Draft Addendum to Los Angeles County Flood Control District Enhanced Watershed Management Programs Final Program Environmental Impact Report

State Clearing House No. 2014081106

East Los Angeles Sustainable Median Stormwater Capture Project

Prepared for

County of Los Angeles
Department of Public Works

April 2018

Prepared by

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Acronyms and Abbreviations

AB	Assembly Bill
ADA	Americans with Disabilities Act
AF	acre-feet
ARMR	Archaeological Resource Management Reports
AQMP	Air Quality Management Plan
bgs	below ground surface
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CalWater	California Water Services
CDFW	California Department of Fish and Wildlife
CBC	California Building Code
CCAP	County of Los Angeles Community Climate Action Plan
CEQA	California Environmental Quality Act
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	community equivalent noise level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Los Angeles Department of Public Works
CRHP	California Register of Historic Places
CRHR	California Register of Historic Resources
dBA	decibels A-weighted

DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Environmental Site Assessment (Phase I or Phase II)
EWMP	Enhanced Watershed Management Program
GHG	greenhouse gas
I-5	Interstate 5
I-605	Interstate 605
I-710	Interstate 710
LACSD	Sanitation Districts of Los Angeles County
LACFCD	Los Angeles County Flood Control District
LARWQCB	Los Angeles Regional Water Quality Control Board
lbs	pounds
Leq	equivalent noise level
LID	low impact development
LMD	Los Angeles County Zone 35 Montebello Landscape Maintenance District
LST	localized significance threshold
LUST	leaking underground storage tank
Management Group	Upper Los Angeles River Management Group
Metro	Los Angeles County Metropolitan Transportation Authority
mgd	million gallons per day
MS4	municipal separate storm sewer system
MT/yr	metric tons per year
$MTCO_2e$	metric tons of carbon dioxide equivalents
MUTCD	California Manual on Uniform Traffic Control Devices
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NO_2	nitrogen dioxide

NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
PEIR	Los Angeles County Flood Control District Enhanced Water Management Programs Program EIR
PM	particulate matter
$PM_{2.5}$	PM less than 2.5 microns in aerodynamic diameter
PM_{10}	PM less than 10 microns in aerodynamic diameter
PPV	peak particle velocity
Proposed Project	East Los Angeles Sustainable Median Stormwater Capture Project
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SEA	Significant Ecological Area
SO_2	sulfur dioxide
SO_x	sulfur oxides
SR-60	State Route 60
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TMDL	total maximum daily load
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	urban water management plan
WDR	Waste Discharge Requirements
WRP	Water Reclamation Plant

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SECTION 1

Background Information

1.1 Program Environmental Impact Report (PEIR)

Los Angeles County Flood Control District Enhanced Watershed Management Programs (EWMPs) Final Program Environmental Impact Report, State Clearinghouse Number 2014081106, certified May 26, 2015[1]

1.2 Addendum Lead Agency

County of Los Angeles Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803

1.3 Project Title

East Los Angeles Sustainable Median Stormwater Capture Project

1.4 Project Contact Person and Phone Number

Ms. Leslie J. Levy, Environmental Engineering Specialist
Stormwater Quality Division
County of Los Angeles Department of Public Works
(626) 458-7013
Email: llevy@dpw.lacounty.gov

1.5 Project Location

Zone 35 Montebello Landscape Maintenance District
East Los Angeles, Los Angeles County, California 90022

1.6 Project Sponsor's Name and Address

Same as Addendum Lead Agency above.

[1] The Los Angeles Flood Control District (LACFCD) was the Lead Agency for the PEIR. The County of Los Angeles Department of Public Works was a Responsible Agency (one of the agency that has discretionary approval over the best management practices described in the EWMPs).

1.7 General Plan Designation/Zoning

R-1 (Single-Family Residence), R-3 (Limited Density Multiple Residence), R-4 (Medium Density Multiple Residence), and C-3 (General Commercial).

1.8 Purpose of the Addendum

This document, prepared pursuant to the California Environmental Quality Act (CEQA), constitutes an Addendum to the Los Angeles County Flood Control District Enhanced Water Management Programs Program Environmental Impact Report (PEIR) (State Clearinghouse No. 2014081106) certified in May 2015 (referred to herein as the PEIR).[2] The PEIR and this Addendum together serve as the environmental review of the Proposed Project, as required pursuant to the provisions of CEQA.

As the Proposed Project is a subsequent activity to a previously certified PEIR, CEQA Guidelines Section 15168(c) applies. Section 15168(c) requires that subsequent activities in a program be examined in light of the PEIR to determine whether any additional environmental document must be prepared. The Proposed Project involves site specific operations, and thus, this evaluation must comply with CEQA Guidelines Section 15168(c)(4) which states, "Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR." Accordingly, this Addendum includes a written checklist and evaluation of the Project site and activity to determine whether an additional environmental document must be prepared. Based on this evaluation presented herein, it has been determined that the Proposed Project is within the scope of the program covered by the PEIR and that no new significant impacts that are not examined in the PEIR occur and that no new mitigation measures would be required. Therefore, pursuant to CEQA Guidelines Section 15164, an Addendum to the PEIR has been prepared to address specific impacts associated with the Proposed Project, and no conditions calling for the preparation of a subsequent EIR have occurred. The basis for this determination is discussed further below, and supported by the written checklist and evaluation presented in the subsequent sections of this Addendum.

1.8.1 Basis for Addendum

CEQA Guidelines Section 15164 states that: "The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR have occurred." Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, no subsequent EIR may be required for the Project unless the County determines, on the basis of substantial evidence, that one or more of the following conditions are met:

[2] The Program EIR is available at the County of Los Angeles Department of Public Works located at 900 S. Fremont Avenue Alhambra, California 91803 or online at https://dpw.lacounty.gov/lacfcd/ewmppeir/

Section 15162

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

1.8.2 Lead Agency

LACFCD was the Lead Agency for the PEIR. The County was among the Responsible Agencies identified in the PEIR. Responsible Agencies consists of agencies that have discretionary approval over the BMPs described in the EWMPs. As defined in CEQA Section 21069, Responsible Agency means "a public agency, other than the lead agency, which has responsibility for carrying out or approving a project."

CEQA Guidelines Section 15164, described further below, provides for preparation of an addendum to a previously certified EIR by a Lead Agency or a Responsible Agency. The County is the public agency that has the principal responsibility for approving and implementing the Proposed Project that may have a significant effect upon the environment, and thus, the County is charged with the responsibility of determining whether the

Proposed Project would result in new information or new significant effects which were not previously addressed in the certified PEIR. As part of the decision-making process, the County is required to review and consider the potential environmental effects that could result from implementation of the Proposed Project, and as a designated Responsible Agency of the PEIR, has the authority for subsequent project approval and certification of the accompanying environmental documentation.

1.8.3 Previous Environmental Documentation and Scope of the Addendum

The PEIR was prepared pursuant to CEQA to assess the potential environmental effects of 12 EWMPs being prepared by the Permittees covered under a Municipal Separate Storm Sewer System (MS4) Permit (Order No. R4-2012-0175; National Pollutant Discharge Elimination System [NPDES] Permit No. CAS004001) for the discharge of urban runoff to waters of the United States collectively.

The 12 EWMPs are prepared by Permittees within 12 distinct watershed groups within Los Angeles County and each Permittee has the responsibility of implementing the applicable EMWP. The Proposed Project is included in the Upper Los Angeles River (ULAR) EWMP.

The EWMPs identify management strategies including hundreds of structural best management practices (BMPs) that may be designed and implemented by the Permittees to meet permit compliance objectives. The PEIR performed a program-level evaluation of both structural BMPs (described below) and non-structural control measures/institutional BMPs, which are policies, actions, and activities intended to minimize or eliminate pollutant sources. The Proposed Project does not include non-structural control measures/institutional BMPs and, thus, this Addendum addresses only the potential impacts associated with implementation of centralized structural BMPs that would occur under the Proposed Project. The PEIR identifies three categories of structural BMPs:

- *Distributed Structural BMPs* treat runoff close to the source and typically implemented at a single- or few-parcel level (e.g., facilities typically serving a contributing area less than one acre).
- *Centralized Structural BMPs* treat runoff from a contributing area of multiple parcels (e.g., facilities typically serving a contributing area on the order of tens or hundreds of acres or larger).
- *Regional Structural BMPs* retain the 85th percentile storm over 24 hours from a contributing area.

The major functions of each of the three categories of structural BMPs are infiltration, treatment, and storage that may be used individually or in combination. The Proposed Project consists of a centralized structural BMP that includes infiltration and treatment.

Several of the structural BMPs planned under the EWMPs were well defined at the time the PEIR was prepared but most, including the Proposed Project, were yet to be fully developed. As such, the PEIR analysis does not focus on the site-specific construction and operation details of each management strategy and project included in the EWMPs, but instead serves as a first-tier environmental document that focuses on the programmatic effects of implementing the EWMP program to reduce urban runoff pollution. The PEIR

analysis assesses worst case situations where construction or operation of projects may significantly impact environmental resources. The analysis outlines mitigation strategies to be followed by implementing agencies, such as the County of Los Angeles Department of Public Works (County), to avoid or minimize impacts wherever feasible.

The PEIR states that it can be used by the LACFCD or other Permittees (including the County) to streamline environmental review of individual EWMP projects. "As individual projects identified in the EWMPs are fully developed, the implementing agency (i.e., the Permittee responsible for implementing a project) will conduct CEQA analysis for individual projects as appropriate or may determine that no additional CEQA analysis is required or that a project is exempt from CEQA."[3]

This Addendum addresses the implementation of an individual EWMP project, specifically implementation of a centralized structural BMP in East Los Angeles under the Upper Los Angeles River EWMP (such as the Proposed Project). The Proposed Project is identified in Appendix 4B of the PEIR, in Attachment A, page A-D4 (figure) and Attachment C, page C1, as parcel number 6351025015 in the table. The primary objective of this Addendum is to document the site and activity and evaluate if environmental effects of the Proposed Project's construction and operation were covered in the PEIR and to determine if the overall conclusions of the PEIR, particularly as related to the identification of significant impacts, would be materially changed by the Proposed Project. As described in detail herein, there are no new significant impacts resulting from the Proposed Project nor is there any substantial increase in the severity of any previously identified environmental impacts. The Proposed Project impacts would either be the same or lessened from the anticipated levels identified in the PEIR.

1.9 Evaluation of Environmental Impacts

This Addendum uses an Environmental Checklist Form, pursuant to Section 15063(d)(3) of the State CEQA Guidelines, to compare the anticipated environmental effects of the Proposed Project with those disclosed in the previous PEIR and to review whether any of the conditions set forth in Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent EIR are met and whether there are new significant impacts resulting from the Proposed Project. The Environmental Checklist Form is used to review the potential environmental effects of the Proposed Project for each of the following areas/impact categories.

- Aesthetic Resources
- Biological Resources
- Geologic and Mineral Resources
- Hazards and Hazardous Materials
- Land Use and Agriculture
- Population and Housing and Environmental Justice
- Transportation and Circulation
- Air Quality
- Cultural Resources
- Greenhouse Gases
- Hydrology and Water Quality
- Noise
- Public Services and Recreation
- Utilities, Service Systems and Energy

[3] Los Angeles County Flood Control District. 2015. Los Angeles County Flood Control District Enhanced Water Management Programs Program Environmental Impact Report (EIR). State Clearinghouse No. 2014081106. July. Draft EIR, Page ES-2.

The Environmental Checklist Form prepared for this Project is found in Section 3 of this Addendum. It contains two questions about the Proposed Project for each of the impact categories.

There are two possible responses to each of the questions included on the Environmental Checklist form with the description of each located in Section 3:

- New Significant Impacts Not Identified in Previous PEIR.
- No Changes or New Information Requiring Preparation of a Subsequent EIR.

The Environmental Checklist Form and accompanying evaluation of the environmental issues (Section 3 and Section 4, respectively) provide information and analysis upon which the County has based its determination that no environmental review beyond this Addendum is required for the Proposed Project.

1.10 Summary of Findings

Based on the Environmental Checklist Form prepared for the Project and supporting environmental analysis, the Proposed Project would not result in any new significant impacts which were not previously addressed in the PEIR.

SECTION 2

Project Description

2.1 Description of the Proposed Project

2.1.1 Project Overview

The East Los Angeles Sustainable Median Stormwater Capture Project (the "Proposed Project" or "Project") would capture and treat approximately 232 acre-feet (AF) of stormwater in an average rainfall year from a 3,000-acre tributary area. The stormwater would be diverted, captured, and infiltrated to reduce pollutants (specifically metals, nutrients, and bacteria) entering the Los Angeles and Rio Hondo Rivers. The stormwater flows would be diverted from a nearby storm drain using a diversion structure and approximately 7,000 linear feet of reinforced concrete pipe. The flows would then be directed into various filtration units and/or underground infiltration wells with a total design capacity of 21 AF, located at various medians, where it would infiltrate into the ground. Bioswales and a structural cell module system would also be included in the parkways to capture and infiltrate surface runoff. The medians would also be enhanced by the installation of drought tolerant landscaping and recreational amenities, providing aesthetic and public use benefits to adjacent residential community.

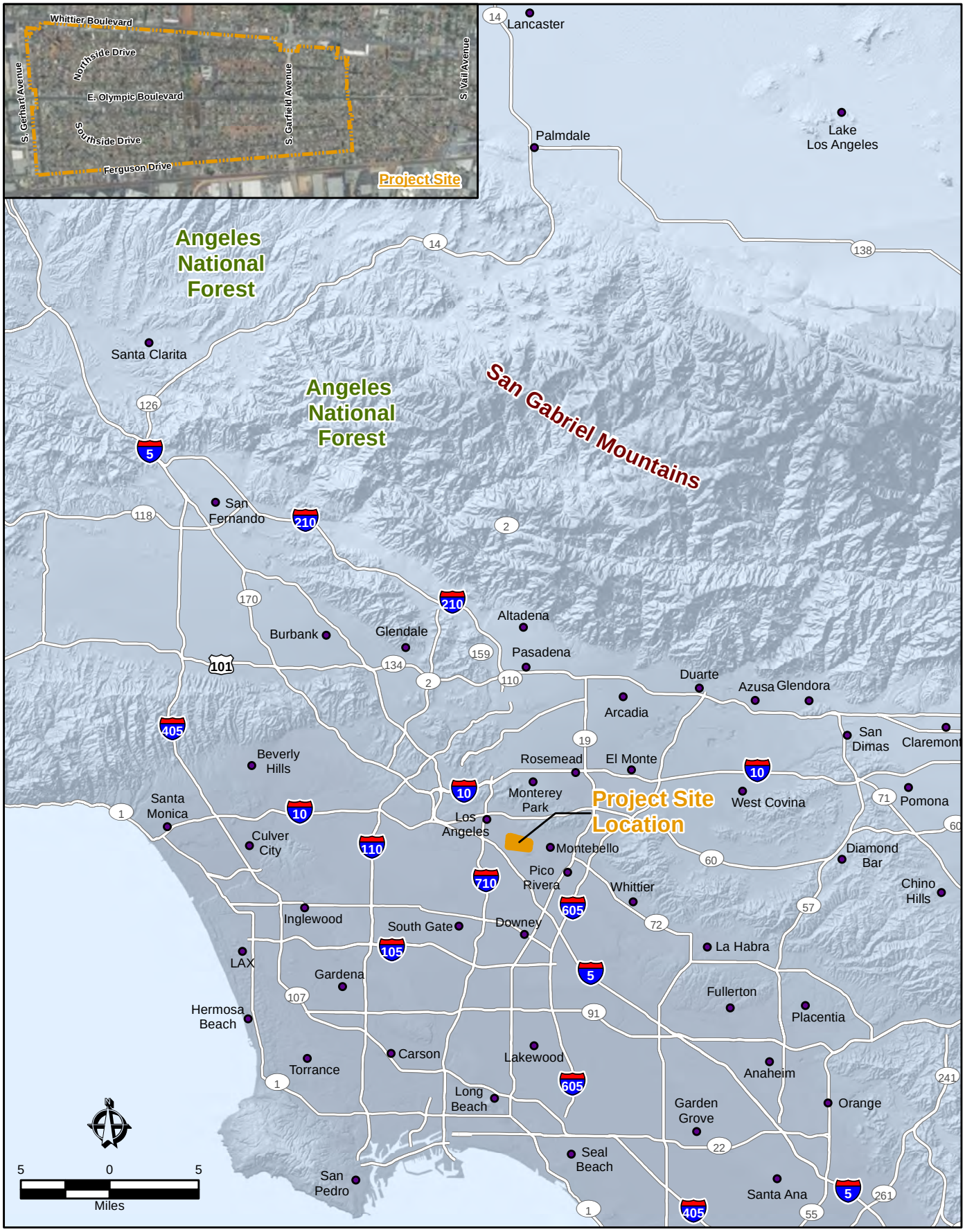
The Proposed Project has received a portion of the funding from the State's Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1), which authorizes $7.545 billion in bonds to fund projects for ecosystems and watershed protection and restoration, and water supply infrastructure, including surface and groundwater storage, and drinking water protection. As part of meeting the Proposition 1 requirements, the Proposed Project would include educational signage at the Project site.

The Proposed Project is identified in the Upper Los Angeles River Enhanced Watershed Management Program plan as a high tier priority regional project for the County, who would implement and manage the Proposed Project.

2.1.2 Project Site

The Project area is the Los Angeles County Zone 35 Montebello Landscape Maintenance District (LMD) located within the Community of East Los Angeles, near the intersection of Olympic Boulevard and Garfield Avenue. It is south and west of the City of Montebello, south of the City of Monterey Park and approximately six miles east of downtown Los Angeles. The regional location is depicted on Figure 1.

As shown on Figure 1, the LMD is within a distinct geographic subdivision centered along the oblong loop road of Northside Drive and Southside Drive. It is surrounded by Whittier Boulevard to the north, Vail Avenue to the east, Ferguson Drive to the south, and Gerhart Avenue to the west. It is bisected by Garfield Avenue and Olympic Boulevard. As shown on Figure 2, the LMD occupies most of this geographical area, extending from approximately one block east of Gerhart Avenue on the west to one block east of Concourse



Source: https://dpw.lacounty.gov/rmd/lmd/docs/zone35/boundary.pdf, 2017

Figure 1
Regional Location Map

Source: https://dpw.lacounty.gov/rmd/lmd/docs/zone35/boundary.pdf, 2017

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Figure 2
Zone 35 Montebello Landscape Maintenance District

Avenue on the east. The primary land use in the LMD is single-family residential units and commercial uses located along the busier streets and intersections (i.e., Garfield Avenue, Whittier Boulevard and portions of Olympic Boulevard). There are also multi-family residential units, a school (Montebello Park Elementary School), plant nurseries, and one small public park (Saybrook Park).

In addition to the loop roadway configuration, another distinguishing characteristic of the LMD is the large medians located along Northside and Southside Drives and several of the connecting streets. In total, the LMD consists of 11.24 acres of irrigated turf located in 32 different size medians ranging from approximately 0.03-acre to 2.72-acre. Within the LMD, the County levies and collects special assessments to maintain the landscape improvements along the medians and public rights-of-way.

As shown on Figure 3, the Project site includes several locations at medians and sidewalks to the west of Garfield Avenue. Pipelines and diversion structures connecting to existing storm drains would also be installed in roadways adjacent to the medians and sidewalks. The Proposed Project medians are all relatively flat, consisting of turf grass and trees which are primarily alder, pine, Chinese elm, and jacaranda. The medians have raised curbs and may also have infrastructure such as street lights, power poles, irrigation controls and connections, and/or signage. Except where noted in the description of each Project site location below, parking is limited to certain hours on one day per week corresponding to the times/days parking along the outer edge of the street is prohibited due to street sweeping. One site (Northside Drive at Olympic Boulevard) includes both medians and sidewalks along the adjacent roadway. Each individual Project location is described in greater detail below.

Northside Drive at Garfield Avenue

The Northside Drive Median is approximately 2.7-acre in size and located in Northside Drive between Garfield Avenue and Server Avenue (see Figure 4). The median is approximately 1,325 feet in length and varies from 125 feet to 50 feet in width. Two unconnected segments of a slightly raised grouted stone strip meander in an east-west direction along the middle of the median. The strip resembles a path or dry creek bed, but the stones are raised and grouted, thereby making it unsuitable for either walking or surface water infiltration. A paved north-south cement walkway crosses at the approximate mid-point of the median. The surrounding land uses are single-family residential. Additionally, Montebello Park Elementary School is located immediately to the southwest. One parcel at the eastern end of the median, near Garfield Avenue, is zoned R-3 (Limited Density Multiple Residence Zone) and the remainder is zoned R-1 (Single-Family Residence Zone).

Southside Drive Median

The Southside Drive Median is located in Southside Drive between Garfield Avenue and Server Avenue and is similar in configuration and composition as described above for the median at Northside Drive, including the grouted stone strip and a north-south walkway (see Figure 4). The Southside Drive Median site is slightly smaller at 2.5 acres. It is surrounded by residential uses. The parcel on the eastern end of the median is zoned R-3 and the remainder is zoned R-1.

Source: https://dpw.lacounty.gov/rmd/lmd/docs/zone35/boundary.pdf, 2017
https://dpw.lacounty.gov/rmd/lmd/docs/zone35/Presentation-%20December2015, 2015

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Figure 3
Project Area and Sites

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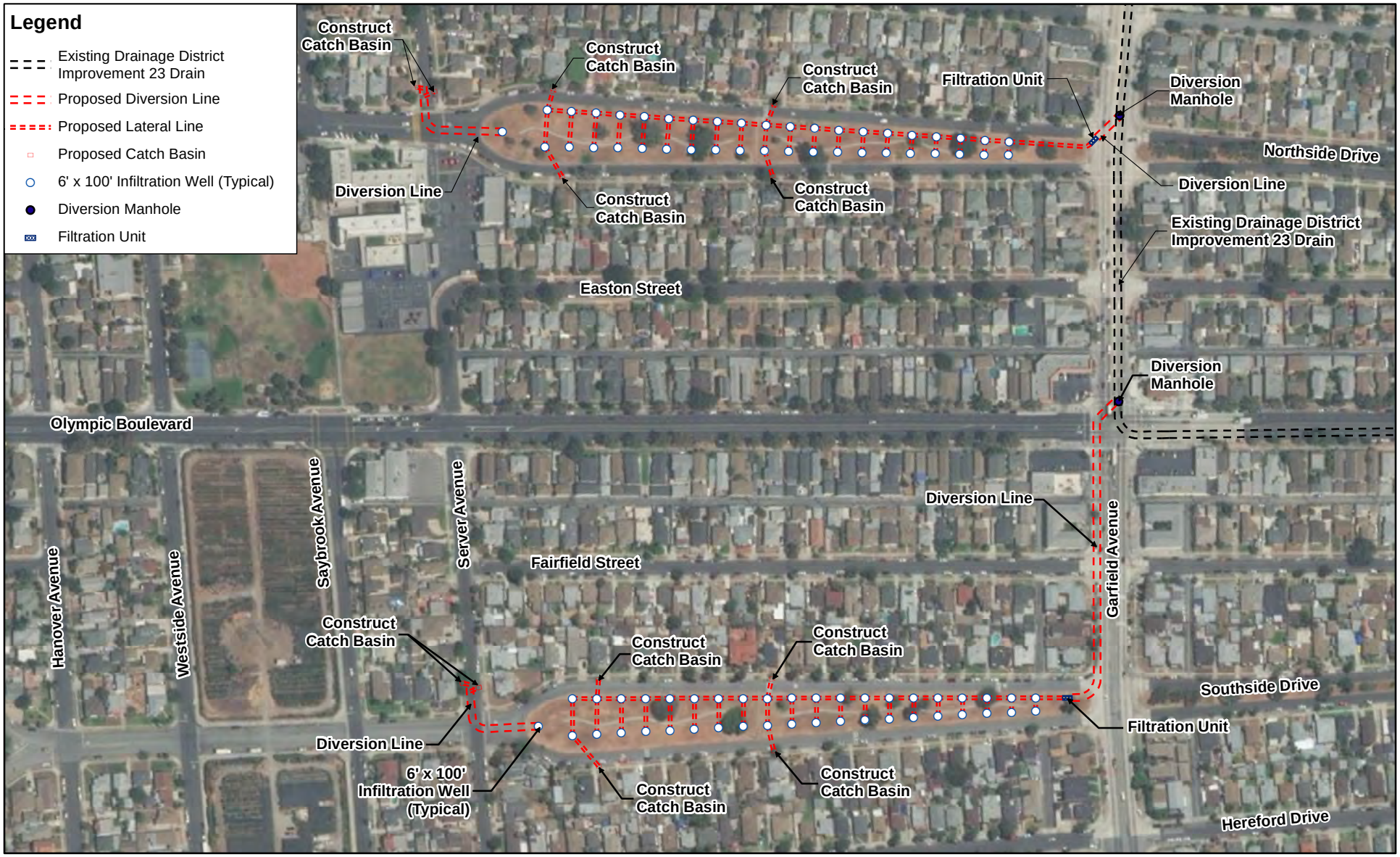

Source: County of Los Angeles Department of Public Works, 2017

300 0 300
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Figure 4
Northside Drive and Southside Drive Medians

Southside Drive Median at Coolidge Way

As shown on Figure 5, the Project site consists of the curved median in Southside Drive located north of the Southside Drive/Coolidge Way intersection. The median is approximately 0.4-acre and zoned R-1.

Montebello Parkway Medians at Leonard Avenue

As shown on Figure 6, the medians at Montebello Parkway and Leonard Avenue are generally triangular in shape. The larger median, southeast of Montebello Parkway, is approximately 0.5-acre and the smaller median, northwest of Montebello Parkway is approximately 0.2-acre. Along both medians, parking is allowed on Montebello Avenue (except one day per week for street sweeping). All other parking is prohibited along the smaller median. The larger median prohibits parking along Leonard Avenue and only allows parking along Leonard Place one day per week (when parking along outside edge of Leonard Place is restricted for street sweeping). Both medians have sidewalks with curb cuts along Montebello Avenue. The medians are zoned R-3.

Northside Drive at Olympic Boulevard

As shown on Figure 7, the Project site at Northside Drive at Olympic Boulevard consists of four rectangular sidewalk segments and two medians on Northside Drive between Olympic Boulevard and Easton Street. The four sidewalk segments range in size from approximately 325 square feet to 670 square feet, totaling approximately 2,148 square feet. The two medians are approximately 0.1-acre in size, totaling 0.2-acre. The Project site is adjacent to commercial uses, parking for commercial uses, and single and multi-family residential uses. The sidewalk area south of the alley between Easton Street and Olympic Boulevard is adjacent to an area zoned C-3 (General Commercial), and the sidewalk area north of the alley between Easton Street and Olympic Boulevard is adjacent to an area that is zoned R-3. The medians are zoned R-4 (Medium Density Multiple Residential Zone).

2.1.3 Project Background

The MS4 Permit issued by the Los Angeles Regional Water Quality Control Board (LARWQCB)[4] to regulate discharges from MS4 systems allows permittees (municipalities and other public agencies in Los Angeles County, including County) to establish an EWMP. An EWMP implements MS4 permit requirements on a watershed scale through customized strategies, control measures, and BMPs. It addresses the highest watershed priorities and identifies multi-benefit regional projects that are capable of retaining stormwater runoff and achieving other benefits, including flood control, water supply, conservation, and recreational improvements.

[4]LARWQCB. 2012. NPDES Permit No. CAS004001, Order No. R4-2012-0175, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach.

Source: County of Los Angeles Department of Public Works, 2017

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Figure 5
Southside Drive Median at Coolidge Way

Source: County of Los Angeles Department of Public Works, 2017

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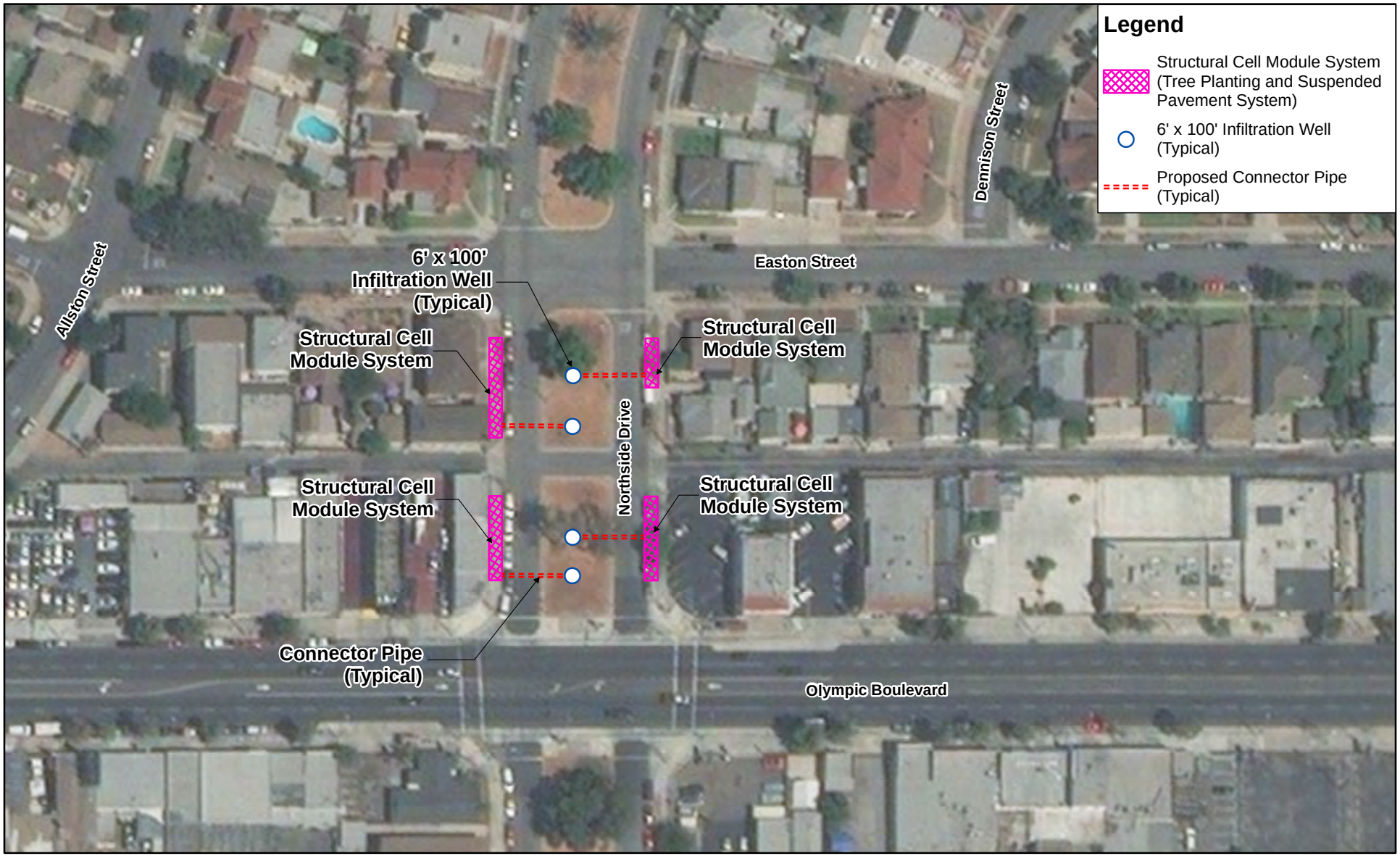
For Deliberative Purposes Only

Figure 6
Montebello Parking Medians at Leonard Avenue



Source: County of Los Angeles Department of Public Works, 2017

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Figure 7
Northside Drive at Olympic Boulevard

The Project site is located within the EWMP planning area for the Upper Los Angeles River Watershed. This planning area encompasses 485 square miles of watershed and over 50 miles of the Los Angeles River from the headwaters to just upstream of the estuary. The County is one of 19 MS4 permittees that comprise the Upper Los Angeles River Watershed Management Group (Management Group). [5] The Management Group developed the Upper Los Angeles River EWMP[6] to establish a multi-pollutant approach to maximize retention and use of urban runoff to implement the MS4 permit requirements. The EWMP, approved by the LARWQB in 2016, was developed with the objective of determining control measures to achieve pollutant reductions, while also providing multiple benefits to the community and leveraging sustainable infrastructure practices. Water quality priorities identified in the EWMP include providing a pathway for the Management Group members to meet total maximum daily load (TMDL) requirements (a maximum limit for a specific pollutant that a water body can receive and still meet water quality standards).[7]

To meet the water quality priorities, the EWMP identifies strategies and structural BMPs to be implemented, individually or collectively, at watershed-scale. The structural BMPs to be implemented include regional projects, green streets, and low-impact development (LID). As described in Appendix 4.B to the EWMP, the EWMP defines a broader group of projects as regional projects than those classified as regional projects in the PEIR. This is because the Management Group members determined that it would be useful to identify and include the broadest group of all potential regional BMP projects and locations, and not only the subset of projects that could capture the 85th percentile storm. Only structural BMPs that capture the 85th percentile storm are classified as regional structural BMP projects under the PEIR.[8] The Proposed Project does not meet this threshold and is thus classified as a centralized structural BMP under the PEIR. However, the Proposed Project is considered a regional project under the EWMP, which defines regional projects as follows:

> Regional projects are centralized facilities located near the downstream ends of large drainage areas (typically treating 10s to 100s of acres…). Regional projects receive large volumes of runoff from extensive upstream areas and can provide a cost-effective mechanism for infiltration and pollutant reduction. Runoff is typically diverted to regional projects after it has already entered storm drains. Routing offsite runoff to public parcels (versus treating surface runoff near its

[5] The agencies in the EWMP consists of: City of Los Angeles, County of Los Angeles, Los Angles Flood Control District, and the Cities of Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Canada Flintridge, Montebello, Monterey Park, Pasadena, Rosemead, San Fernando, San Gabriel, San Marino, South El Monte, South Pasadena, and Temple City.

[6] Upper Los Angeles River Watershed Management Group. 2016. Enhanced Watershed Management Program (EWMP) for the Upper Los Angeles River Watershed. January.

[7] The Federal Clean Water Act provides the legal framework for several water quality regulations, policies and programs, including the NPDES, effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge regulation, and wetlands protection. The United States Environmental Protection Agency has delegated the responsibility for administration of portions of the Clean Water Act to the states, which are required to develop a list, known as the 303(d) List, of impaired water bodies within their jurisdictions and the pollutants for which they are impaired. The states must then establish a TMDL (a maximum limit for a specific pollutant that a water body can receive and still meet water quality standards) for the listed pollutants of each impaired water body found within its region.

[8] Upper Los Angeles River Watershed Management Group. 2016. Enhanced Watershed Management Program (EWMP) for the Upper Los Angeles River Watershed, Appendix 4.B Regional Project Selection Process & Preliminary List of Projects. Page 3. January.

source, as with green streets and LID) often allows regional BMPs to be placed in cost effective locations.[9]

As part of the EWMP development process, potential regional BMP projects (as defined in the Upper Los Angeles River EWMP) and locations to collect and treat runoff from a larger contributing area were identified and screened for their potential to accomplish significant water quality benefits. The regional project opportunities were then classified into three tiers: very high, high, and medium. The Proposed Project is identified in the EWMP as a high tier priority regional project for the County.[10]

2.1.4 Project Elements

"Phase 3" (the Proposed Project) is part of a larger three-phase effort being implemented by the County within the LMD. However, all individual phases of the larger effort are separate and independent endeavors, and each phase will be completed independent of and uninfluenced by the other phases. Each phase involves different improvements and, as shown on Figure 3, would occur at different locations and different medians within the LMD. Phase 1 involves the removal of turf and unhealthy or dying trees, and replaces them with drought tolerant plants and trees. The irrigation system is being retrofitted to a more efficient irrigation system. Phase 2 consists of Phase 1 activities with the addition of decomposed granite walkways and picnic tables. The Proposed Project ("Phase 3") is a multi-benefit level type of project. The Project aims to implement sustainable features including stormwater capture and treatment, consistent with the EWMP, while enhancing the usability of the medians and providing quality open spaces to the community. The amenities include decomposed granite walkways, benches, picnic tables, par course exercise stations, and educational garden with interpretive signages throughout. All phases have independent utility (each phase has functional aspects separate from project features of the other phases). Phase 1 and 2 are exempt from CEQA and would occur independently of the Proposed Project.

The goals and objectives of the Proposed Project are to (1) aid in meeting MS4 permit compliance by capturing and treating approximately 232 AF of stormwater during an average rainfall year from a 3,000-acre tributary area; (2) reduce pollutants entering the Los Angeles and Rio Hondo Rivers; and (3) aid in meeting TMDLs for the Los Angeles River Reach 2 and the Rio Hondo River Reach 1.[11] The Proposed Project would help reduce the level of bacteria and metals discharging into receiving waters by capturing and infiltrating stormwater runoff volume of 21 AF from a 3,000-acre tributary area. In addition, non-point source pollution at the Project site would be addressed by constructing LID features such as bioswales filled with native and drought tolerant plants at various locations within the large medians.

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[9] Upper Los Angeles River Watershed Management Group. 2016. Enhanced Watershed Management Program (EWMP) for the Upper Los Angeles River Watershed, Page ES-4. January.

[10] Upper Los Angeles River Watershed Management Group. 2016. Enhanced Watershed Management Program (EWMP) for the Upper Los Angeles River Watershed, Appendix 4. January.

[11] Los Angeles Reach 2 TMDLs are for ammonia, coniform bacteria, copper, lead, oil, scum/foam, taste and odor, and trash and TMDLs for Rio Hondo Reach 1 are for coliform bacteria, copper, lead, pH, toxicity, trash, and zinc (State Water Resources Control Board. 2012, Final 2012 California Integrated Report [Clean Water Act Section 303(d) List/305(b) Report.)

Based on the Watershed Management Modeling System modeling results, the Proposed Project is expected to reduce 3.04 pounds of copper, 2.82 pounds of lead, and 28.91 pounds of zinc from stormwater runoff from the site for an average rainfall year.

Further, by infiltrating the captured flows, the Proposed Project would contribute towards groundwater recharge of the Central Basin. The Proposed Project is located above the unconfined aquifers of the Central Basin, and the quality of the soil underlying the Project site was determined to have an adequate infiltration potential. The Proposed Project would potentially provide 232 AF of stormwater per year based on the average annual rainfall from the nearest rain gauge.

To help alleviate the impacts of the extended drought and state-mandated water use restrictions, the Proposed Project would create an urban green space by adding pervious walkways, recreational and public use areas, and re-vegetate the landscape with drought tolerant plans and native trees. The implementation of green infrastructure and installation of a water-efficient irrigation system would reduce the amount of water needed to maintain the existing water-intensive (turf grass) landscape. As a result, the cost savings from decreased water use would provide funding for the community to make upgrades in other areas.

The Proposed Project would help combat the loss of vegetation in the Project area through a comprehensive tree planting plan that would help reduce greenhouse gas emissions and increase the overall tree canopy coverage of the area. The Proposed Project would reduce carbon dioxide by planting approximately 300 or more trees along with native and drought tolerant landscaping. All tree species would be appropriate for the climate and neighborhood to ensure the best chance for survival and help prevent insect and disease infestation.

The centralized structural BMPs that would be implemented under the Proposed Project to capture and treat surface and stormwater flows would rely on infiltration to reduce the amount and flow rates of potentially contaminated runoff from surface water and/or storm drain flow while using primary treatment and soils to filter out contaminants such as fecal bacteria and metals. The 3,000-acre tributary area from which flows would be captured is shown on Figure 1. The centralized structural BMPs to be implemented under the Proposed Project are the following:

- Infiltration Well: underground chamber designed to hold water in the soil for a longer time than would otherwise occur, allowing the water to slowly seep into the ground without surface runoff.

- Structural Cell Module System: a plastic or fiberglass structure with posts and beams that can contain a large amount of soil while supporting paving above. The soil that fills the cell would be a mixture (such as biochar and sand wrapped by fabric) that provides additional cleaning to the stormwater runoff before infiltration, as well as support tree growth.

- Bioswale: earthen stormwater conveyance systems that can be incorporated into landscaping to absorb low surface water flows or direct runoff from heavy rains into storm drain catch basins.

As described further below, infiltration wells and bioswales would be installed at the Project site medians and a structural cell module system would be installed in the parkways at Northside Drive at Olympic Boulevard. Diversion structures would be installed at existing storm drains to direct flows into new pipeline connections that lead to filtration units and then to infiltration wells at each of the Project site medians. New catch basins and replacement catch basins would also be installed to collect surface runoff water and direct it into the filtration units and then to infiltration wells instead of conveying it into the storm drain as currently occurs.

Stormwater and Surface Water Capture and Treatment

The Proposed Project would capture and treat stormwater flow from the local storm drain to reduce pollutants entering the Los Angeles and Rio Hondo Rivers. The capture rate would be approximately 232 AF of stormwater in an average rainfall year and potentially higher in years with above-average rainfall.

Two different types of stormwater treatment configurations would be used in the Project site. The first configuration would utilize a diversion structure, a filtration unit, a redesigned catch basin, and a series of infiltration wells to capture stormwater pollutants. This configuration features a three-step treatment process that would involve diversion, filtration, and infiltration. The second type of treatment configuration would consist of a redesigned catch basin, a filtration unit, a structural cell module system, and a infiltration well. This configuration features a four-step treatment process that involves diversion, adsorption, absorption, and infiltration. The filtration unit that would be constructed upstream from the structural cell module system would filter out the pollutants from the stormwater runoff. Inside the filtration unit would be a series of filter cartridges that would be filled with biochar and sand mixture. The filter cartridges would be made up of 30 percent biochar and 70 percent sand wrapped by fabric. Openings would be available on top of the filtration unit for easy access and replacement of the filter cartridges.

The stormwater flows would be diverted from existing storm drains via a diversion structure and a total of approximately 7,000 linear feet of reinforced 24-inch concrete pipe. The pipeline would be installed at various depths, at maximum depth of 10 feet below ground surface (bgs). The diversion structures would consist of an approximately 6-inch high concrete berm that would direct the flow into new pipeline connections to the underground infiltration wells. One hundred percent of the captured storm water would then infiltrate into the ground, thereby providing filtration, groundwater recharge and reducing amount of storm water flowing into the rivers. The infiltration wells would be 6-foot in diameter and vary in depth based on the infiltration properties and other considerations at each median. It is estimated that there would be a total of five 50-foot wells, ten60-foot wells and one-hundred 100-foot wells. The wells would be located to avoid the need to remove any existing healthy trees and to avoid any existing infrastructure to remain such as streetlights, power poles, and underground utilities such as a water pipes and telephone lines. Pre-treatment filtration units would be installed at several medians, which would provide initial stormwater treatment prior its entry into the infiltration wells. The filtration units filter bulk trash from the stormwater via a filter screen and convey the stormwater across three chambers to filter out sediment. The filtration unit also features an oil-absorbing material to separate and collect hydrocarbons from the passing stormwater. Periodic cleanouts of these filtration units would be required for these units as needed

following any storms in the area to remove bulk trash and accumulated sediment and to replace the oil-absorbing material.

During periods of high rainfall, when capacity of the infiltration wells are reached, instead of flowing through the diversion, the drainage system is designed to backflow into the diverted storm drain. This flow would then be carried through the existing storm drain, ultimately entering the Los Angeles and Rio Hondo Rivers. This is what occurs under existing conditions, however, with implementation of the Proposed Project, the amount of flow would be reduced even during storm conditions.

Metal cabinets housing water quality monitoring equipment would be installed at the medians. The cabinets would be 2 feet in length by 2.5 feet in width, and approximately 6 feet in height. Currently, the Proposed Project includes approximately five cabinets plus one solar panel mounted on a metal pole (location to be determined). The need for this equipment would depend on the post-construction water quality monitoring (or BMP performance monitoring) plan; however, the length of time required for monitoring has not been determined by the State Water Quality Control Board.

Additional improvements would include new and reconstructed catch basins, which will be retrofitted with trash capture devices, along the medians that capture surface runoff and convey this water into the infiltration wells, instead of into the storm drain as currently occurs. If capacity of the catch basin is reached (during periods of high flow) the surface flows would continue flowing downstream along the gutter flowline line ultimately entering the storm drain, as occurs under current conditions.

The implementation of bioswales within the medians would serve as both an aesthetic and functional feature to capture surface water (i.e., rainfall) for infiltration. Curb cuts would be implemented along the edges of the median to divert flows along the road edges into bioswales, where it would then infiltrate into the ground or be diverted into infiltration wells, instead of entering the storm drain. As further discussed under Other Median Improvements below, drought tolerant landscaping, water efficient irrigation, and permeable surfaces would also serve to reduce surface water runoff and increase surface water infiltration.

Following is a short description of the proposed stormwater and surface water capture at each Project site.

Northside Drive and Southside Drive Medians

A total of approximately 80 infiltration wells would be installed near the center of the large medians in Northside Drive and Southside Drive west of Garfield Avenue. The infiltration wells would have a total design capacity of approximately 16 AF and would be approximately 6 feet in diameter and up to 100 feet in depth. As shown on Figure 4, diversion structures would be installed at the existing storm drain located within Garfield Avenue near the intersection with Northside Drive and near the intersection with Olympic Boulevard. A new pipeline in Garfield Avenue would direct flows into the infiltration wells at the Northside Drive and Southside Drive Medians. Catch basins would be also installed at several locations near the medians and near Server Avenue to collect surface drainage or runoff that would also be directed into the infiltration wells.

Southside Drive Median at Coolidge Way

As shown on Figure 5, a filtration unit and approximately five infiltration wells would be installed at the southern end of the median. A diversion and new pipeline connections from the existing storm drain would be installed in the intersection of Southside Drive and Coolidge Way to direct flows to the infiltration wells. Existing catch basins at the intersection would be reconstructed to collect surface runoff that would be directed into the infiltration wells.

Montebello Parkway Medians at Leonard Avenue

As shown on Figure 6, a filtration unit and approximately ten infiltration wells would be installed within the largest medians at Montebello Parkway and Leonard Avenue. A diversion and new pipeline connection from the existing storm drain would be installed in the Montebello Parkway and Leonard Avenue to direct flows to the infiltration wells. Existing catch basins along the median would be reconstructed. Along the smaller median to the east, one infiltration well would be installed. Two existing catch basins would be reconstructed to direct surface runoff into the infiltration well.

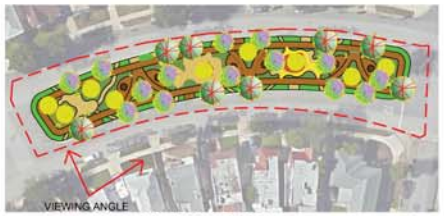
Northside Drive at Olympic Boulevard

As shown on Figure 7, structural cell module systems would be installed in the parkway on both sides of the street. A pipeline would direct surface runoff captured in the structural cell module systems (which would include a filtration unit) to infiltration wells installed in the medians at this location. Two wells would be installed in each of the two medians. Trees would be planted in the structural cell module systems to provide sidewalk shade and visual enhancement.

Other Median Improvements

Each of the medians described would also be improved to provide additional aesthetic, recreational and sustainable benefits. The aesthetic improvements would include removal of any unhealthy/dying trees and the replacement of the existing turf with drought tolerant landscaping and native trees. Figures 8 through 11 show conceptual view of the proposed landscaping and recreational enhancements. East Los Angeles has a limited number of public parks space and the large medians provide an opportunity to improve the open space amenities available to the community. The recreational improvements would include new pathways, benches, picnic tables, educational stations, and par course equipment for use by the surrounding community. The pathways would meet Americans with Disabilities Act (ADA) accessibility requirements. The new trees and other landscaping would also provide additional shade and visual interest along the pathways and seating areas. Existing healthy trees would be retained and incorporated into the new landscape design.

Typical Median Perspective



Conceptual Plan View

Existing View

Source: County of Los Angeles Department of Public Works, 2017

Note:
For discussion purposes only. Actual development and placement details may vary.

Figure 8
Existing and Conceptual Views - Southside Drive and Northside Drive Medians

Source: County of Los Angeles Department of Public Works, 2017

Note:
For discussion purposes only. Actual development and placement details may vary.

Figure 9
Conceptual Plan View - Montebello Parkway Medians at Leonard Avenue

Source: County of Los Angeles Department of Public Works, 2017

Note:
For discussion purposes only. Actual development and placement details may vary.

Figure 10
Conceptual Plan View - Northside Drive Median

Source: County of Los Angeles Department of Public Works, 2017

Note:
For discussion purposes only. Actual development and placement details may vary.

Figure 11
Conceptual Renderings - Northside Drive and Southside Drive Medians

Sustainable features at the Project site include the reduction of water use by replacing turf with drought tolerant landscaping and installing of water efficient irrigation. Additionally, permeable surfaces, such as decomposed granite, would be used for the pathways, which would allow for the infiltration of surface water. As described previously, bioswales would be installed in several of the medians, which would both contribute to the landscape design as well as provide a water quality benefit. These areas would vary from approximately six inches to three feet in depth.

The Proposed Project would comply with the County's adopted County Environmental Sustainability Policy, which is part of the County's effort to help conserve natural resources and protect the environment. The policy is to conduct operations and maintain facilities in a manner that reduces environmental impacts associated with the consumption of energy, water and other natural resources, promotes use of renewable energy sources, and enhances environmental justice and quality of life for residents.[12]

2.1.5 Construction

Proposed Project construction activities would include site clearing, installation of the connecting pipelines and infiltration wells, and installation of landscaping and other site amenities described above within the Project site boundaries. Construction activities at the medians include removal of existing turf and hardscaping, site preparation, site grading, excavation for the infiltration wells to a depth of up to 100 feet, and landscaping and irrigation installation. Construction activities associated with the connecting pipelines and diversion structures include asphalt removal, excavation, trenching, pipelaying, backfill, and surface restoration.

Construction is expected to begin in Fall 2018 and last for approximately 12 months. Anticipated duration for each construction phase is summarized in Table 2-1. For the purposes of capturing peak emissions, it was assumed that the peak phase of each median's construction would occur simultaneously, which represents the "worst-case" construction scenario, thereby presenting a conservative analysis of potential impacts. Construction of the Proposed Project would require temporary staging and storage areas for materials and equipment and a maximum of 291 workers during the peak construction period. The materials staging and storage would be located within each the Project site and along the edge of the medians. Should it be necessary, additional staging area may be available at nearby schools, parks, or other similar facilities. If use of these nearby public facilities is necessary, approval for use and coordination with facility managers would occur prior to materials staging and storage on the facility.

All materials for Project construction would be delivered by truck on existing roadways. A maximum of 48 construction delivery trips, 291 construction worker trips, and 42 haul truck trips are anticipated to occur to and from the Project site per day during construction. It is anticipated that approximately 10,400 cubic yards of soil would be removed from the Project site. No new soil would be imported.

[12] Los Angeles County. Board of Supervisors Policy Manual. 3.045 Countywide Environmental Sustainability Policy. Last issued June 30, 2015.

Construction would be scheduled for eight-hours per day between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, and no holidays. No nighttime construction is anticipated. Temporary lane closures would be required for installation of the diversion and connecting pipelines.

Table 2-1: Anticipated Construction Phases and Approximate Duration

Construction Phase	Duration (days)*
Northside Drive Median	
Demolition (paved area) and site clearing	20
Pipeline installation	70
Infiltration well installation	205
Paving, landscape and hardscape installation	10
Southside Drive Median	
Demolition (paved area) and site clearing	20
Pipeline installation	67
Infiltration well installation	205
Paving, landscape and hardscape installation	10
Southside Drive Median at Coolidge Way	
Demolition (paved area) and site clearing	10
Pipeline installation	12
Infiltration well installation	50
Paving, landscape and hardscape installation	5
Montebello Parkway Medians at Leonard Avenue	
Demolition (paved area) and site clearing	10
Pipeline installation	21
Infiltration well installation	110
Paving, landscape and hardscape installation	5
Northside Drive at Olympic Boulevard	
Demolition (paved area) and site clearing	10
Pipeline installation	6
Infiltration well installation	40
Paving, landscape and hardscape installation	5

* For purposes of the air quality analysis a 11-month duration was assumed for construction, which represents a worst case (conservative) scenario.

Construction Equipment

Construction at the individual median and sidewalk sites are assumed to overlap with one another, resulting in multiple concurrent construction zones. The types of equipment associated with the worst-case or most extensive construction phase are provided in Table 2-2.

Table 2-2: Median Site Construction Equipment and Workforce Estimates*

Construction Task	Equipment	Number	Horsepower (HP)	Usage Amount (hours per day)
Demolition (paved area) and site clearing	Concrete/Industrial Saws	1	81	8
	Dozers	1	247	8
	Backhoes	3	97	8
	Workers	13	-	-
	Haul Trips/Day	12	-	-
	Supply Trips/Day	-	-	-
Well construction/installation	Bore/Drill Rigs	2	221	8
	Cranes	1	231	8
	Forklifts	2	89	6
	Generator Sets	1	84	8
	Grout Pumps	2	84	8
	Backhoes	1	97	6
	Welders	2	46	8
	Workers	51	-	-
	Haul Trips/Day	-	-	-
	Supply Trips/Day	20	-	-
Pipeline Installation	Cranes	1	231	8
	Dumpers/Tenders	2	16	6
	Excavators	2	158	6
	Generator sets	1	84	6
	Auger	1	172	6
	Plate Compactor	1	8	4
	Workers	33	-	-
	Haul Trips/Day	-	-	-
	Supply Trips/Day	-	-	-
	Off-Highway Trucks/Day	3	402	8
Paving, landscape and hardscape installation	Cement and Mortar Mixer	1	9	8
	Pavers	1	130	8
	Paving Equipment	1	132	8
	Rollers	2	80	8
	Backhoes	1	97	8
	Workers	15	-	-
	Haul Trips/Day	-	-	-
	Supply Trips/Day	-	-	-
	Cement Trucks/Day	-	-	-

Construction Task	Equipment	Number	Horsepower (HP)	Usage Amount (hours per day)

Notes and Assumptions: Workers travel 14.7 miles one-way. Haul trucks travel 20 miles one-way. Supply trucks travel 6.9 miles one-way.

* Information provided in Table 2-2 is an estimate only; the actual equipment types and uses shall be decided by the contractor at a later date.

* Estimate for one median site. The same types and relative equipment numbers are assumed for each location. Although duration of construction of each site would vary.

Analysis assumes that all five sites would be under construction at the same time (worst-case scenario).

Analysis assumes that Pipeline Installation and Well Construction phases overlap.

Analysis assumes that Well Construction and Paving, Landscape and Hardscape Installation phases overlap.

All delivered material subsumed in Well Construction phase supply trips.

2.1.6 Operation

Operation and maintenance of the medians and stormwater capture infrastructure would be the responsibility of the County. As currently occurs, the LMD assessments would be used to maintain the landscape improvements. In addition to regular landscape maintenance, anticipated operations and maintenance activities would include, but not be limited to, maintenance of new irrigation systems and recreational amenities, and inspection of the infiltration wells annually in conjunction with annual preventative maintenance. In addition, maintenance activities associated with the structural BMPs includes filtration unit cleanouts and catch basin cleanouts, etc. The frequency of maintenance and repair activities occurring at the Project site is anticipated to be similar to current activities.

2.2 Project Actions and Approvals

The environmental document (i.e., this Addendum) and Proposed Project, would require certification and approval respectively by the County of Los Angeles Board of Supervisors. Additional anticipated approval/permitting for the Proposed Project includes, but is not limited, to the following:

- State Water Resources Control Board/LARWQCB, Project review and NPDES General Construction Permit
- LACFCD, permit for modification to storm drain system (under County jurisdiction)
- Los Angeles County Metropolitan Transportation Authority, Traffic Control Plan review
- Los Angeles County Building and Safety, building and grading permits

The analysis in this document assumes that, unless otherwise stated, the Proposed Project would be designed, constructed and operated following all applicable laws, regulations, ordinances and formally adopted County of Los Angeles standards (e.g., Los Angeles County Code), and that all applicable permits would be obtained. Construction would also follow, as applicable, the uniform practices established by the Southern California Chapter of the American Public Works Association (e.g., Standard Specifications for Public Works Construction and the Work Area Traffic Control Handbook).

SECTION 3

Environmental Determination

3.1 Environmental Factors Potentially Affected

The Summary of PEIR Environmental Checklist for the Proposed Project Environmental Checklist (Table 3-1) below is marked with the findings of the potential environmental effects of the Proposed Project in comparison with the findings of the previous PEIR. This comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the factual basis for determining whether any changes in the Project, any changes in the circumstances, or any new information since the previous PEIR was adopted necessitate additional environmental review or preparation of a subsequent EIR. The basis for each of the findings listed in the following Environmental Checklist is detailed in Section 4, Environmental Assessment

1) "New Significant Impacts Not Identified in Previous PEIR" is indicated if a substantial change in the proposed project, substantial changes in the circumstances under which the project is undertaken, or new information of substantial importance not known at that time the PEIR was certified shows that the project will have one or more significant effects not discussed in the PEIR; or, significant effects previously examined will be substantially more severe than shown in the PEIR.

2) "No Changes or New Information Requiring Preparation of a Subsequent EIR" is indicated if a potential impact is 1) determined to be "no impact" or "less than significant;" or, 2) on the basis of substantial evidence in the light of the whole record, an EIR has been certified or a negative declaration has been adopted for a project, and none of the conditions listed above apply.

Table 3-1: Summary of PEIR Environmental Checklist for the Proposed Project

Resource Areas	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Aesthetic Resources		X
Air Quality		X
Biological Resources		X
Cultural Resources		X
Geologic and Mineral Resources		X
Greenhouse Gases		X
Hazards and Hazardous Materials		X
Hydrology and Water Quality Resources		X

Resource Areas	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Land Use and Agriculture		X
Noise		X
Population and Housing and Environmental Justice		X
Public Services and Recreation		X
Transportation and Circulation		X
Utilities, Service Systems and Energy		X

3.2 Determination

The information and analysis in this Addendum has been undertaken, pursuant to the provisions of CEQA and the CEQA Guidelines, to provide decision makers with a factual basis for determining whether any substantial modifications to the Project, substantial changes in circumstances, or receipt of new information not available during preparation of the PEIR would require additional review or preparation of a subsequent or supplemental EIR.

Based on substantial evidence provided herein, as supported by the Environmental Checklist Form presented above and supporting environmental analysis in Section 4 of this Addendum, implementation of the Proposed Project is adequately addressed by the PEIR, and none of the conditions warranting preparation of a supplemental or subsequent EIR, as set forth in CEQA Section 21166 and State CEQA Guidelines Section 15162 exist. Pursuant to Section 15164 of the State CEQA Guidelines, preparation of an Addendum to the EWMP PEIR fully satisfies the CEQA review requirements for the Project.

Determination:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT, including revisions or mitigation measures that are imposed upon the proposed project.

Leslie Levy

Signature

APRIL 12, 2018

Date

ENVIRONMENTAL
ENGINEERING SPECIALIST

Title

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

Agency:

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SECTION 4

Evaluation of Environmental Impacts

4.1 Aesthetic Resources

	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.1-1: The proposed program could create a substantial adverse effect on a scenic vista.	☐	☒
Impact 3.1-2: The proposed program could substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	☐	☒
Impact 3.1-3: The proposed program could substantially degrade the existing visual character or quality of the site and its surroundings.	☐	☒
Impact 3.1-4: The proposed program could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	☐	☒

4.1.1 Project Setting

The Project site consists of medians and sidewalks in an LMD, which is in an urbanized area in East Los Angeles. The primary land use in the area is single-family residential, with commercial uses located along the busier streets and intersections (i.e., Garfield Avenue, Whittier Boulevard and portions of Olympic Boulevard). There are also multi-family residential uses, a school, plant nurseries, and one small public park (Saybrook Park). The LMD has 32 turf grass medians within the residential streets, ranging in size from 0.03-acre to 2.72 acres. The Project area is densely developed and the medians are a unique feature that provide a visual break to the urban landscape. The Project site includes seven of the larger medians, which are all relatively flat and consist of turf grass and mature trees, primarily alder, pine, Chinese elm, and jacaranda trees. The medians have raised curbs and may also have infrastructure such as street lights, power poles, irrigation controls and connections, and/or signage. The two largest medians, Northside Drive Median and Southside Drive Median, have unconnected segments of a slightly raised grouted stone strip that meander in an east-west direction along the middle of the median. A paved north-south cement walkway crosses at the approximate mid-point of the Northside Drive and Southside Drive Medians. Sidewalks are also located at the Montebello Median along Montebello Avenue. All of the medians are adjacent to residential development except for the southernmost median on Northside Drive at Olympic Drive, which is located adjacent to commercial uses and parking for those uses. The sidewalks in this location just north of

Olympic Drive are also part of the Project site. An elementary school is located near the largest median (Northside Drive Median).

The Project site and surrounding area are predominantly flat. The San Gabriel Mountains are located approximately 10 miles to the north. While views of the mountains are largely obstructed by intervening development, limited and distant views of the mountains are available from some locations. The Puente Hills are approximately three miles to the east, but intervening development largely blocks all views of the hills from the Project area.

Light sources in the Project area are typical of lighting in an urban setting, including street lighting and lighting associated with residences and businesses. Street light poles are located along the street-side edges the medians.

The closest designated scenic highway is the Angeles Crest Highway (Route 2) from the La Canada/Angeles National Forest which is located approximately 13 miles to the north of the Project site. Additionally, Arroyo Parkway, the north extension of Interstate 1-110, is a designated Historic Parkway under the California Scenic Highway Mapping System located approximately six miles northwest of the Project site.[13] The Project site is not visible from either the scenic highway or historic highway.

4.1.2 Impacts Analysis

The PEIR addresses Aesthetic Resources in Section 3.1. The PEIR broadly describes aesthetic resources within each Watershed Management Area. The Los Angeles River Watershed Management Area (which includes Upper Los Angeles EWMP as well as portions of the Rio Hondo/San Gabriel River Quality Group EWMP), is described as being the most diverse in terms of land use patterns. The Los Angeles River headwaters originate in the Santa Monica, Santa Susana, and San Gabriel Mountains, while the rest of the watershed is highly developed, including residential, commercial and industrial areas. There are also lakes located in parks that are heavily used for recreational purposes. No aesthetic resources at or near the Project site are identified in the PEIR.

The following evaluates the extent to which that analysis applies to the Proposed Project.

Impact 3.1-1: The proposed program could create a substantial adverse effect on a scenic vista.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR characterizes scenic vistas that may be located in EWMP program areas as including undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to the urban environment of the Los Angeles Basin. The PEIR states that impacts would occur if the visible scenic landscape itself is altered or when a new contrasting object is introduced that blocks or obstructs a scenic vista from a particular public vantage point. The PEIR determined that while construction equipment and

[13] Caltrans. 2017. California Scenic Highway Mapping System. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed September 2017.

materials for the construction of the centralized structural BMPs would be visible and temporarily introduce contrasting elements into scenic views and vistas, they would be temporary and located at sites with a predominantly urban character, and thus construction impacts are less than significant. During operations, the majority of the centralized structural BMPs would be underground and thus not affect views or scenic vistas. Aboveground structures, such as pump stations, would typically be located in areas with urban development and would be similar to and compatible with surrounding architecture. Although, if they are inappropriately designed or located, aboveground structures could have a significant impact on views and scenic vistas. However, with implementation of Mitigation Measure AES-1, which requires aboveground structures to avoid obstructing scenic vistas or views from public vantage points, the PEIR determined that impacts on views and scenic vistas would be less than significant.

The Project site includes turf medians and sidewalks in a highly urbanized area with residential and commercial development. The nearest scenic resources to the Project site are the San Gabriel Mountains to the north and the Puente Hills to the east. The Los Angeles County Plan describes ridgelines in the County, including San Gabriel Mountains and the Puente Hills as providing dramatic views and includes a policy for their protection and preservation.[14] However, due to the distance and intervening development the ridgelines have very limited to no visibility from the Project site.

The Proposed Project consists of centralized structural BMPs such as those analyzed in the PEIR that would be would primarily be located at or underground, as well as landscaping and recreational enhancements. As described in the PEIR, while construction of the improvements would introduce a contrasting visual element, this would be temporary and would be located within an area with urban character. Further, the Project site does not have a scenic vista or view that would be blocked or obstructed.

The centralized structural BMPs would be primarily at or below the ground surface with the exception of a limited number of mechanical equipment boxes. This would include aboveground metal cabinets for water quality equipment installed at the medians. The need for this equipment would depend on the post-construction water quality monitoring (or BMP performance monitoring) plan; however, the length of time required for monitoring has not been determined by the State Water Quality Control Board. The cabinets would be 4 feet in length by 2.75 feet in width, and approximately 6 feet in height. Currently, the Proposed Project includes approximately five cabinets plus one solar panel mounted on a metal pole (location to be determined). The metal boxes and metal pole would be similar to existing infrastructure located in the area (such as transformer boxes and light poles located on sidewalks). Further Mitigation Measure AES-1 would be applicable to the Proposed Project.

The landscape improvements would include replacing turf grass with low water plants and bushes and native trees. Existing healthy trees would be retained and any unhealthy/dying trees would be removed and replaced, as appropriate. The landscape improvements would

[14] Caltrans. 2017. California Scenic Highway Mapping System. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed September 2017.

be a visual improvement and would not affect a scenic vista or view. The recreational enhancements would include features such as picnic tables and walking paths that would generally be low to the ground and visually compatible with the surroundings without affecting scenic vistas or views. Thus, the Proposed Project would not result in any material difference in impacts on scenic vistas compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetic resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that Project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.1-2: The proposed program could substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

Figure 3.1-1 of the PEIR identifies several highway segments with portions in the Los Angeles River Watershed as eligible scenic highways (not officially designated as scenic highways). The eligible State Scenic Highways identified as being partially within the Los Angeles River Watershed include Highway 101 west of Highway 27 (over 25 miles northwest of the Project site), Highway 118 near Highway 27 (over 30 miles northwest of the Project site), a small segment of Highway 27 south of Highway 101 (approximately 25 miles northwest of the Project site), and Interstate 210 north of Highway 101 (approximately 10 miles north of the Project site). Additionally, the PEIR identifies one historic parkway in the Los Angeles River Watershed, the Arroyo Parkway (north extension of Interstate 1-110) (approximately six miles north of the Project site). The northerly portion of the 2.5-mile designated segment is located within the Los Angeles River Watershed. Additionally, the closest designated scenic highway to the Project site is the Angeles Crest Highway (Route 2) (approximately 13 miles north of the Project), which, as shown on Figure 3.1-1, is not located within the Los Angeles River watershed or other EWMP program area.

The PEIR determined that while some of the EWMP program elements may be visible from State Scenic Highways or locally designated scenic roadways, the majority of the centralized structural BMPs would be located underground and any aboveground features would not substantially damage scenic resources as larger structures would be required to be compatible with existing visual character with implementation of Mitigation Measure AES-1. Therefore, the PEIR determined that impacts on scenic resources within a state scenic highway would be less than significant with implementation of Mitigation Measure AES-1.

The Project site includes turf medians and sidewalks in a developed residential and commercial area. It is in an urbanized area and no scenic resources are present at or near the Project site. There are no official state or county scenic highways in the Project area. As described above, the Angeles Crest Highway (Route 2) is the closest designated State Scenic Highway. The Project site is not visible from this highway, which is 13 miles to the north. In March 2017, subsequent to certification of the PEIR, the portion of Highway 27 deemed a

potentially eligible State Scenic Highway was designated a State Scenic Highway. The Project site is not visible from the newly designated State Scenic Highway, Highway 27, the eligible scenic highways within the Los Angeles River watershed, or the closest designated Historic Parkway, Arroyo Parkway. Thus, the Proposed Project would not result in any material difference in the scenic resource impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetic resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that Project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.1-3: The proposed program could substantially degrade the existing visual character or quality of the site and its surroundings.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that while construction activities would introduce contrasting visual features into the visual landscape such as demolition materials, excavated areas, and materials generated and stored on-site, this would be temporary and adverse effects on the visual character would be less than significant.

The PEIR further determined that during operations, underground facilities would not have a permanent effect on the visual character, and features such as more green space (including bioswales, street trees and vegetated small areas integrated into the built environment) and less impermeable surfaces of pavement and concrete would have an overall positive visual effect.

Aboveground features would be constructed on or adjacent to existing developed and built-up landscapes. Small aboveground facilities would have no significant effect and larger structures such as housing for pump stations and treatment facilities would be compatible with the surrounding visual character as required by Mitigation Measure AES-1. Further, with proper maintenance, as required by Mitigation Measure AES-2, stagnant water would not be allowed to collect and regular removal of trash and debris would occur, thereby preventing odor and preserving aesthetic values. With implementation of Mitigation Measures AES-1 and AES-2, the PEIR determined that impacts on visual character and quality would be less than significant.

The Project site includes turf medians and sidewalks in a developed area with residential and commercial uses. The dense residential neighborhood, which includes primarily single-family houses with some multi-residential uses and commercial uses along the busier streets and intersection, is the defining visual character of the area. The large turf medians, which include mature trees, contribute to the visual character. However, required water conservation due to drought conditions have contributed to deterioration to some of the turf and trees, reducing the overall visual quality of the medians.

The Proposed Project entails centralized structural BMPs and landscape and recreational improvements. During construction, construction equipment and site disturbance would temporarily disrupt the existing visual quality. However, this would be temporary and would not substantially degrade the visual character or quality of the site.

The infiltration wells, connecting pipelines, and suspended pavement system cells would be located underground and would not be visible. The visible features associated with the centralized structural BMPs would include mechanical equipment boxes, temporary at grade access panels, temporary aboveground metal cabinets associated with water quality equipment, irrigation controls within the median, and new and replacement catch basins along the street-side edge of the medians and sidewalks. These would be minor visual elements occurring in a built environment that are similar to features that are currently located within the medians and along the public sidewalks, and as determined in the PEIR, these features would not have a significant effect on the visual character of the area.

Additionally, new landscaping (described below) would be a more prominent visual feature that would suppress visibility of the infrastructure elements. Bioswales would also be installed in some of the medians. The bioswales would incorporate features that are both functional and aesthetic, including vegetation and permeable material such as rocks or gravel. The bioswales would be incorporated into the overall landscape design to be a visually attractive feature.

As shown in Figures 8 through 11, in additional to incorporating bioswales, the landscape improvements would include replacing turf grass with low water plants and bushes and native trees. The new landscaping would improve the visual quality of the medians as well as reducing watering requirements and promoting infiltration of surface water. Existing healthy trees would be retained and incorporated in the landscape design, and any unhealthy/dying trees would be removed and replaced, as appropriate. Other features such as meandering pathways, picnic areas and other seating, and par course exercise stations would be integrated into the overall landscape concept. As described in the PEIR, the landscape improvements would have an overall positive visual effect.

The suspended pavement system cells located within sidewalks would be underground and thus not affect visual character. Further, in addition to providing enhanced surface water infiltration capabilities, suspended pavement system cells improve soil conditions for street trees by providing less compact soils suitable for root system growth. New street trees would be planted within the suspended pavement system cells that would provide a visual enhancement and increase sidewalk shade.

During operation, the County would continue to be responsible for maintaining the medians, including landscape maintenance and trash and debris removal through the LMD. The structural BMPs would be regularly maintained to ensure functional and aesthetic values as required by Mitigation Measure AES-2. Thus, the Proposed Project would not result in any material difference in the visual character and quality impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetic resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the

circumstances under which that Project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.1-4: The proposed program could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR states that light and glare are typical features of urbanized settings in the EWMP program areas. The primary sources are associated with transportation such as car headlights, and commercial and residential areas.

The PEIR determined that security lighting may be used during construction of structural BMPs, which could introduce temporary new sources of light and glare. However, this could be shielded in compliance with design standards of the implementing agency and, thus, would not have a significant impact. Regarding operation, the PEIR determined that structural BMPs would not involve the installation of permanent new outdoor lighting, nor would they create a new source of glare. Aboveground features, such as pump stations or treatment facilities, may require new exterior lighting for operation and security but that the lighting would be shielded to avoid glare or spill over, consistent with the implementing agency's design standards. The PEIR determined that impacts associated with light and glare would be less than significant.

Construction activities for the Proposed Project would occur during daylight hours; therefore, no new sources of artificial lighting would be necessary.

Regarding operation of the Proposed Project, existing street lighting located at the medians would be retained. Additional low-level landscape lighting may be installed; however, this potential new lighting source would be minor and would blend with the existing street and adjacent residential and commercial lighting. It would not create a new source of glare or substantial new lighting. In addition to landscaping, the operation of the Proposed Project would include minimal aboveground features such as water quality equipment cabinets, mechanical boxes, irrigation controls, and recreational features (i.e., benches). These items would not include lighting and would not create a new source of glare. Thus, the Proposed Project would not result in any material difference in the lighting and glare impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to aesthetics. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that Project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.1.3 Applicable PEIR Mitigation Measures

All PEIR mitigation measures for impacts to Aesthetic Resources are applicable to the Proposed Project:

AES-1: Aboveground structures shall be designed to be consistent with local zoning codes and applicable design guidelines and to minimize features that contrast with neighboring development.

AES-2: Implementing agencies shall develop BMP maintenance plans that are approved concurrently with each structural BMP approval. The maintenance plans must include measures to ensure functionality of the structural BMPs for the life of the BMP. These plans may include general maintenance guidelines that apply to a number of smaller distributed BMPs.

4.2 Air Quality

Air Quality Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.2-1: The project could conflict with or obstruct implementation of the applicable air quality plan.	☐	☒
Impact 3.2-2: The project could violate any air quality standard or contribute substantially to an existing or projected air quality violation.	☐	☒
Impact 3.2-3: The program could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	☐	☒
Impact 3.2-4: The project could expose sensitive receptors to substantial pollutant concentrations.	☐	☒
Impact 3.2-5: The proposed program could create objectionable odors affecting a substantial number of people.	☐	☒

4.2.1 Project Setting

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS) and at the state level, these standards are called California Ambient Air Quality Standards (CAAQS). The California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable or breathable particulate matter (PM) with an aerodynamic diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. The pollutants are referred to as "criteria air pollutants" since they are the

most prevalent air pollutants known to be harmful to human health, and extensive health-effects criteria documents are available about their effects on human health and welfare.

The Project site is in a highly urbanized part of East Los Angeles which is located within the South Coast Air Basin (SCAB). The SCAB consists of the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties and all of Orange County. The air basin covers an area of approximately 6,000 square miles and is bounded on the west by the Pacific Ocean; on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains; and on the south by the San Diego County line. As presented in Table 3.2-1 of the PEIR, the SCAB is an area designated as nonattainment for multiple criteria pollutants, including ozone, PM_{10}, and $PM_{2.5}$.

4.2.2 Impacts Analysis

Section 3.2, Air Quality, of the PEIR, addresses potential air quality impacts associated with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.2-1: The project could conflict with or obstruct implementation of the applicable air quality plan.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that, for the purposes of analyzing consistency with the air quality management plan (AQMP), projects that are consistent with the land use designated in the applicable General Plan would also be consistent with the AQMP growth projections, and thus consistent with the AQMP. Implementation of the EWMP program would involve the installation of structural BMPs to reduce the impact of stormwater and non-stormwater on receiving water quality within the EWMP areas. As such, the EWMP program is not a land use project and its implementation would not induce any additional growth within the County. Therefore, the PEIR determined that the EWMP program would not conflict with, or obstruct, implementation of the AQMP, and the impact would be less than significant.

The Proposed Project would implement stormwater, recreational, and landscape improvements and is not a land use project. It would not induce any additional growth within the Project area. Therefore, the Proposed Project would not conflict with, or obstruct, implementation of the AQMP. The Proposed Project would not result in any material difference in AQMP impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to air quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.2-2: The project could violate any air quality standard or contribute substantially to an existing or projected air quality violation.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

Construction

The PEIR determined that construction activities associated with implementation of the structural BMPs would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. Overall construction of the structural BMPs would occur intermittently over the EWMP program implementation period. The construction air-emissions impacts associated with each individual structural BMP would be short-term in nature and limited to the period of time in which construction activity is taking place for that particular portion of the Project. Additionally, the amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring simultaneously.

Using the California Emissions Estimator Model (CalEEMod), the PEIR presented an emissions estimate for a representative "worst-case" construction scenario of each structural BMP type (i.e., distributed, centralized, and regional) to demonstrate the magnitude of the daily emissions that can be generated by each structural BMP type. In addition, the PEIR used year 2015 as the construction analysis year to provide a conservative analysis, since construction equipment used in future years beyond 2015 would likely emit pollutants at a lower rate because of more stringent emission standards, advances in technologies and fuels, and equipment turnover.

The construction-related emissions of criteria air pollutants were modeled based on general information, CalEEMod default settings, and reasonable assumptions based on other similar types of projects. The specific modeling parameters pertaining to the types and amount of construction equipment used during each construction phase for a centralized structural BMP project (such as the Proposed Project) are presented in Tables 3.2-5 of the PEIR.

The PEIR analysis concludes that worst-case peak day construction activities associated with the implementation of centralized BMP would generate pollutant emissions that exceed SCAQMD mass daily thresholds for nitrogen oxides (NO_x). Emissions of other criteria pollutants would be below SCAQMD thresholds. The remaining criteria pollutants (i.e., reactive organic gases [ROG], CO, sulfur oxides [SOx], PM_{10}, and $PM_{2.5}$) would not exceed the SCAQMD thresholds.

The PEIR determined while some individual projects would not exceed the NOx thresholds, for those that do, Mitigation Measures AIR-1 and AIR-2 would need to be implemented. While implementation of Mitigation Measures AIR-1 and AIR-2 requiring the use of low-emission equipment, would reduce construction-related emissions, they may not reduce these emissions to levels below the SCAQMD thresholds for every structural BMP. Therefore, the PEIR determined that construction emissions would be significant and unavoidable during peak periods of construction.

For the Proposed Project, the maximum daily construction emissions for the Project were estimated using CalEEMod which is designed to model construction emissions for land use development projects based on building size, land use and type, disturbed acreage, and allows for the input of project-specific information. To address the "worst-case," the analysis assumed that construction of all individual median and sidewalk sites, including well installation and pipeline installation, would occur simultaneously (i.e., peak day emissions for BMP installation and pipeline construction at each individual location would occur simultaneously).

Detailed construction calculations were performed for the Proposed Project and are provided in Appendix A of this Addendum and summarized in Table 4-1 below. As shown in Table 4-1, the NOx emissions from construction of the Proposed Project would exceed SCAQMD thresholds; while application of Mitigation Measures AIR-1 and AIR-2 would reduce emissions; the NO_x emissions generated as a result of construction activities would remain above the SCAQMD threshold. This determination is consistent with the findings in the PEIR for centralized structural BMP projects. The Proposed Project would not result in any material difference in construction emission impacts compared to those described in the PEIR.

Table 4-1: Estimated Peak Daily Emissions for Proposed Project Construction Activities With and Without Mitigation, Simultaneous Build Schedule

	Estimated Maximum Daily Emissions (lbs/day)					
Construction Activity	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10} [a]**	**$PM_{2.5}$ [a]**
Total Project Peak Daily Emissions without Mitigation	36	351	238	1	17	16
SCAQMD Mass Daily Regional Emissions Threshold	75	100	550	150	150	55
Significant Impact without Mitigation?	No	**Yes**	No	No	No	No
Total Project Peak Daily Emissions after the application of Measures AIR-1 and AIR-2	12	250	308	1	12	12
SCAQMD Mass Daily Regional Emissions Threshold	75	100	550	150	150	55
Significant Impact with Mitigation?	No	**Yes**	No	No	No	No

Note: See Appendix A for CalEEMod model outputs.
[a] PM_{10} and $PM_{2.5}$ emission estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression. Emission estimates assume that peak daily construction emissions for all medians and sidewalks would coincide.

Operation

The PEIR determined that of the proposed program would not result in substantial long-term regional emissions of criteria air pollutants. While visits to the Project site for inspection and maintenance activities may be required, these would occur only periodically throughout the year and would result in minimal emissions. Additionally, any pump stations would be electrically powered and would not generate emissions at the BMP sites.

Therefore, the PEIR determined that operation of the structural BMPs would not result in significant impacts.

As described in the PEIR, periodic visits to the Project site for maintenance and inspection activities would occur. Such visits would be similar to existing conditions (i.e., current landscape maintenance activities) and would result in minimal emissions. Operation of the Proposed Project would not generate daily criteria pollutant emissions or substantial long-term regional emissions of criteria air pollutants. The Proposed Project would not result in any material difference in operational emission impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to air quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.2-3: The program could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

As discussed in the project setting, the SCAB is currently a non-attainment area for O_3, PM_{10}, and $PM_{2.5}$. SCAQMD's cumulative air quality impact methodology recommends that if an individual project results in air emissions of criteria pollutants, such as NO_x, PM_{10}, and $PM_{2.5}$, that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants for which the region is in nonattainment.

As discussed under Impact 3.2-2 above, the worst-case centralized BMP project analyzed in the PEIR would result in NO_x emissions which would exceed SCAQMD's recommended daily thresholds for project-specific impacts.

Even with implementation of Mitigation Measures AIR-1 and AIR-2, the NOx emissions would not be reduced to levels below the SCAQMD thresholds. Further, should multiple structural BMP projects associated with the EWMP program be constructed concurrently, pollutants for which the SCAB is in nonattainment (i.e., ozone, PM_{10}, and $PM_{2.5}$) could exceed SCAQMD's respective thresholds for construction. Thus, the PEIR considered construction-related air quality impacts associated with the EWMP program significant and unavoidable. These pollutant emissions would, in conjunction with other past, current, and probable future projects, be cumulatively considerable, and cumulative impacts would be significant and unavoidable.

With respect to operational emissions, EWMP program implementation would not result in substantial long-term regional emissions of criteria air pollutants and would not exceed the SCAQMD thresholds of significance for criteria pollutants. Thus, the EWMP program's

operational emissions would not be cumulatively considerable and cumulative air quality impacts would be less than significant.

Even with the implementation of Mitigation Measures AIR-1 and AIR-2, construction of the Proposed Project would result in NO_x emissions that would exceed SCAQMD's recommended daily thresholds for project-specific impacts. Further, as discussed in the PEIR, should other structural BMP projects associated with the EWMP program be constructed concurrently with the Proposed Project, pollutants for which the SCAB is in nonattainment (i.e., ozone, PM_{10}, and $PM_{2.5}$) could exceed SCAQMD's respective thresholds for construction. This determination is consistent with the findings in the PEIR for centralized structural BMP projects. The Proposed Project would not result in any material difference in construction emission impacts compared to those described in the PEIR.

As discussed under Impact 3.2-2, operation of the Proposed Project would not exceed the SCAQMD thresholds of significance for criteria pollutants.

The Proposed Project would not result in any material difference in cumulative emission impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to air quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.2-4: The project could expose sensitive receptors to substantial pollutant concentrations.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR address the potential for construction and operation of structural BMPs that would occur under the EWMP program to expose sensitive receptors to localized air quality impacts from criteria pollutants and toxic air contaminants (TACs) as described below.

Carbon Monoxide Hotspots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. The PEIR determined that construction-related traffic on the local roadways would occur during the construction of the Proposed Project, but would lead to relatively small volumes of traffic and would not result in CO hotspots. Additionally, because trip-generating land uses are not associated with the operation, and maintenance visits to the Project site would be minimal, operation of the structural BMPs would not result in CO hotspots.

Similarly, the Proposed Project would not generate sufficient vehicle trips during construction and operation to result in CO hotspots.

The Proposed Project would not result in any material difference in CO hot spot impacts compared to those described in the PEIR.

Localized Construction Air Quality Impacts – Criteria Air Pollutants

The PEIR determined that during construction of the individual structural BMP projects, existing sensitive receptors located near these structural BMP construction sites could be exposed to significant adverse localized air quality impacts. Depending on the size and scale of a particular structural BMP project and the intensity of the construction effort that would be required, the construction emissions generated by a new structural BMP project could potentially cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards at the existing sensitive uses located in the vicinity of that project.

For individual structural BMP projects that could potentially cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards at the existing sensitive uses located in the vicinity of that project, Mitigation Measure AIR-3 would be implemented, which requires a project-level Localized Significance Threshold (LST) analysis to be prepared to demonstrate that the construction emissions of a structural BMP project would not exceed SCAQMD's LSTs or result in pollutant emissions that would cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards. With implementation of Mitigation Measure AIR-3, the PEIR determined this impact would be reduced to less than significant.

The Proposed Project site is located in close proximity to sensitive residential land uses, and therefore a project-level LST analysis was prepared as described below in compliance with Mitigation Measure AIR-3.

During construction of the Proposed Project, existing sensitive receptors which happen to be located adjacent to or near the Project site could be exposed to significant adverse localized air quality impacts. The LST methodology developed by SCAQMD recommends that projects greater than five acres in size should perform air quality dispersion modeling to determine whether construction activities would cause of contribute to adverse localized air quality impacts. For projects less than five acres in size, SCAQMD provides mass-lookup screening tables to conservatively determine the maximum allowable daily emissions that would satisfy LST methodology without conducting project-specific dispersion modeling. The Proposed Project consists of multiple medians with sizes ranging from 0.27 to 2.75 acres; these medians are spaced far apart, and it is projected that fewer than five acres of the Project site would be worked on at any given time across all medians. For the purposes of determining localized construction air quality impacts, LST mass-emission lookup screening tables were used to evaluate localized impacts for the construction associated with each median in the Proposed Project. The size of each median was used in determining LST thresholds for that median.

As shown in Table 4-2, the localized significance thresholds for emissions generated as a result of construction activities would not be exceeded. Mitigation Measures AIR-1 and AIR-2, implemented to reduce regional air emissions, would serve to further reduce less than significant localized concentrations. Therefore, the Proposed Project would not result in any material difference in LST impacts compared to those described in the PEIR.

Table 4-2: Localized Significance Thresholds And Peak Daily Emissions For Each Median

	Estimated Maximum Daily Emissions (lbs/day)					
Construction Activity	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10} [a]**	**$PM_{2.5}$ [a]**
Northside Drive Median Peak Daily Emissions without Mitigation	8	80	53	<1	4	4
SCAQMD LST Threshold [b]	-	121	1031	-	7	5
Significant Impact without Mitigation?	No	No	No	No	No	No
Southside Drive Median Peak Daily Emissions without Mitigation	8	80	53	<1	4	4
SCAQMD LST Threshold [b]	-	121	1031	-	7	5
Significant Impact without Mitigation?	No	No	No	No	No	No
Montebello Parkway Medians Peak Daily Emissions without Mitigation	7	69	45	<1	3	3
SCAQMD LST Threshold [c]	-	83	673	-	5	4
Significant Impact without Mitigation?	No	No	No	No	No	No
Coolidge Way Medians Peak Daily Emissions without Mitigation	6	61	43	<1	3	3
SCAQMD LST Threshold [c]	-	83	673	-	5	4
Significant Impact without Mitigation?	No	No	No	No	No	No
Northside Drive at Olympic Boulevard Peak Daily Emissions without Mitigation	6	61	43	<1	3	3
SCAQMD LST Threshold [c]	-	83	673	-	5	4
Significant Impact without Mitigation?	No	No	No	No	No	No

Note: See Appendix A for CalEEMod model outputs.
[a] PM_{10} and $PM_{2.5}$ emission estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.
[b] LSTs for were developed for South San Gabriel Valley for 2-acre construction disturbance and 25-meter receptor distance.
[c] LSTs for were developed for South San Gabriel Valley for 1-acre construction disturbance and 25-meter receptor distance.

Localized Air Quality Impacts – Toxic Air Contaminants

The PEIR determined that intermittent construction activities occurring throughout the EWMP program area over the implementation period of the individual structural BMPs would result in short-term emissions of diesel particulate matter, which is a TAC. As stated in the PEIR, the effect of TACs on health risk is positively correlated with the length of the exposure period. The Office of Environmental Health Hazard Assessment recommends a 70-year exposure period for determining the exposure of sensitive receptors to TAC emissions. The construction period for any individual structural BMP that would occur

under the EWMP program would be finite and much less than the 70-year period used for risk determination. Because off-road heavy-duty diesel equipment would be used only temporarily at each individual structural BMP site, the construction activities associated with each structural BMP project would not expose sensitive receptors to substantial emissions of TACs. The PEIR determined this impact would be less than significant.

During construction of the Proposed Project, the exhaust of off-road heavy-duty diesel equipment would emit diesel particulate matter during general construction activities. Similar to the localized criteria pollutant emissions during construction, the short-term emissions of diesel particulate matter associated with construction would only affect its own remote group of existing sensitive receptors that are located nearby. As stated above and in the PEIR, the effect of TACs on health risk is positively correlated with the length of the exposure period. The construction period for the Proposed Project would last one year and operation of the Proposed Project would not generate any substantial source of TACs. Because off-road heavy-duty equipment would be used only temporarily at the Project site and operations would not generate substantial sources of TACs, the Proposed Project would not expose sensitive receptors to substantial emissions of TACs. The Proposed Project would not result in any material difference in TAC impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to air quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.2-5: The proposed program could create objectionable odors affecting a substantial number of people.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

As determined in the PEIR, exhaust from construction equipment may produce discernible odors typical of most construction sites. Such odors would be a temporary source of nuisance to adjacent uses, but because they are temporary and intermittent in nature, would not be considered a significant environmental impact. Therefore, impacts associated with objectionable odors during construction would be less than significant.

Some structural BMPs may involve retaining intermittent stormwater or dry weather flows on a site that may result in organic odors as water levels fluctuate and decomposition occurs in saturated mud. Standing water may emit odors if algal blooms occur for periods of time before the water dries or percolates. If these facilities are near sensitive receptors such as residential areas, these odors may result in a nuisance. Mitigation Measure AES-2 (see Section 4.1, Aesthetic Resources) requires implementing agencies to prepare and implement maintenance plans for all BMPs installed. The regular maintenance may be sufficient to reduce odors in some situations. Further, implementation of Mitigation Measure AIR-4 promotes the consideration of odors when siting BMP locations and types. With

implementation of Mitigation Measures AES-2 and AIR-4, the PEIR determined that odor impacts are less than significant.

As described in the PEIR, during the construction of the Proposed Project, exhaust from construction equipment may produce discernable odors. Such odors would be a temporary source of nuisance to adjacent uses, but because they are temporary and intermittent in nature, would not be considered a significant environmental impact.

The structural BMPs implemented under the Proposed Project primarily consists of installation of infiltration wells and connecting pipelines, which would be located underground. Infiltration wells are, by design, intended to encourage water infiltration into the ground and not long-term accumulation. Thus, the infiltration wells and pipeline connection would not be source of objectionable odor once in operation. The Proposed Project also includes implementation of bioswales. These features would be located within the medians and would be designed to capture and infiltrate surface water directly into the ground or via pipeline connection to the infiltration wells. The size of these features would be small and given the infrequency of rainfall events in southern California, along with the fact that the features would be designed to encourage infiltration, the potential standing water to accumulate such that an algal bloom could occur to is very unlikely. Further, during operation, the County would continue to be responsible for maintaining the medians, including landscape maintenance and trash and debris removal through the LMD and the Proposed Project would comply with Mitigation Measure AES-2 requiring a maintenance operation plan. The Proposed Project would not result in any material difference in odor impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to air quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.2.3 Applicable PEIR Mitigation Measures

The analysis contained in this Addendum determined that the Proposed Project would not exceed the applicable LSTs and therefore, Mitigation Measure AIR-3 (listed below), requiring a project-specific LST analysis where necessary, has been completed and no further action is required. This Addendum also completes Mitigation Measure AIR-4 by assessing the potential for nuisance odors to affect a substantial number of people. Mitigation Measures AIR-1 and AIR-2 are applicable to the Proposed Project. The applicable and completed mitigation measures are listed below:

AIR-1: Implementing agencies shall require for large Regional or Centralized BMPs the use of low-emission equipment meeting Tier II emissions standards at a minimum and Tier III and IV emissions standards where available as CARB-required emissions technologies become readily available to contractors in the region.

AIR-2: For large construction efforts that may result in significant air emissions, implementing agencies shall encourage contractors to use lower-emission equipment through the bidding process where appropriate.

AIR-3: For large construction efforts associated with Regional or Centralized BMPs, implementing agencies shall conduct a project-specific LST analysis where necessary to determine local health impacts to neighboring land uses. Where it is determined that construction emissions would exceed the applicable LSTs or the most stringent applicable federal or state ambient air quality standards, the structural BMP project shall reduce its daily construction intensity (e.g., reducing the amount of equipment used daily, reducing the amount of soil graded/excavated daily) to a level where the structural BMP project's construction emissions would no longer exceed SCAQMD's LSTs or result in pollutant emissions that would cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards. **[Completed]**

AIR-4: During planning of structural BMPs, implementing agencies shall assess the potential for nuisance odors to affect a substantial number of people. BMPs that minimize odors shall be considered the priority when in close proximity to sensitive receptors. **[Completed]**

4.3 Biological Resources

Biological Resources Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.3-1: The proposed project could have a substantial adverse effect, either directly or through habitat modifications, on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	☐	☒
Impact 3.3-2: The proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.	☐	☒
Impact 3.3-3: The proposed project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	☐	☒
Impact 3.3-4: The proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native	☐	☒

resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.		
Impact 3.3-5: The proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	☐	☒
Impact 3.3-6: The proposed project could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.	☐	☒

4.3.1 Project Setting

The Project site is located in East Los Angeles, which a dense urban area. In general, open space in East Los Angeles consists of public parks, a cemetery, and utility easements. The LMD consists of a primarily residential area with some general commercial uses. The Project site consists of approximately non-contiguous turf medians and sidewalk area. Mature trees, including alder, pine, Chinese elm, and jacaranda trees, are located on the medians and at one of the sidewalk locations. Adjacent uses are residential uses, a school (west of southwest of the Northside Drive Median), and commercial uses and parking lot (adjacent to the sidewalk and median at Northside Drive north of Olympic Boulevard).

The nearest large open space area is the Whittier Narrows Recreation Area, approximately three miles northeast of the Project site, which is a large park in South El Monte. It includes an approximately 300-acre natural area bordering the San Gabriel River. Los Angeles County has established significant ecological areas (SEAs); however, the Project site is not located within or adjacent to an SEA. A portion of the Whittier Narrow Recreation Area is within the Puente Hills SEA.

A search of the California Natural Diversity Database (CNDDB), managed by CDFW, was conducted for the PEIR, which identified 20 natural communities of special management concern within the broad-ranging EWMP areas. None of these habitat areas were identified in the vicinity of the Proposed Project as shown on Figure 3.3-7 of the PEIR. The CNDDB database search conducted for the PEIR yielded 72 plant species and 83 wildlife species within the overall EWMP area and immediate vicinity.

Wildlife at the Project site is limited to species adapted to urban settings with a moderate level of human activity such as the north American opossum. Bird species that utilize the trees at the Project site are likely to include species such as the American crow, house finch, and house sparrow. Migratory birds, including the house finch and other common species that may utilize the trees and other vegetation at the site for nesting, are federally protected by the Migratory Bird Treaty Act. No endangered or sensitive plant or animal species are likely to occur at the Project site given the urban setting and lack of suitable habitat at or near the site.

4.3.2 Impact Analysis

Section 3.3, Biological Resources, of the PEIR, addresses potential impacts to biological resources with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project. As described in Section 4.3.1 above,

the Project site is in a developed area that does not have native or riparian habitat. As such, the discussion of impacts identified in the PEIR focuses on those that are most applicable to the Proposed Project, and does not describe potential impacts associated with projects located within open space and riparian areas.

Impact 3.3-1: The proposed project could have a substantial adverse effect, either directly or through habitat modifications, on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that construction of structural BMPs would occur primarily within high-density urban, commercial, industrial, and transportation areas where they will either replace or improve upon existing stormwater infrastructure (such as the Proposed Project). The majority of the construction impact area would occur within developed and disturbed areas adjacent to existing infrastructure that do not support native vegetation or undisturbed habitat. Although, some individual BMPs may require working within or adjacent to sensitive communities (i.e., streams or wetlands) that could support special-status wildlife species. Mitigation Measure BIO-1 requires that implementing agencies evaluate the suitability of potential BMP sites for their potential to impact valued habitats such as oak woodland and riparian willow forests.

Common and protected migratory birds and raptors are likely to nest or forage in habitats found within the EWMP area. Implementation of the structural BMPs may result in temporary or permanent loss of foraging habitat for migratory birds, including raptor species. Construction activities could impact nesting birds or roosting bats. Potential bat roost sites in the vicinity were identified as including abandoned structures and bridges (none of which occur within the Project site).

With implementation of Mitigation Measures BIO-2 through BIO-8, which require impact characterization, minimization and compensation for impacts to highly valued habitats in consultation with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), impacts were determined to be less than significant.

During operations, the PEIR determined that BMPs designed to retain peak storm flows would have no impact on downstream biological resources, since peak storm flows do not support perennial vegetation and that urbanization has increased the speed of water flows through the system. The BMPs would slow water flows and return to a hydrology closer to predevelopment conditions, resulting in improved natural habitat functions with little direct impact to protected sensitive species.

Although the gradual decrease in dry-weather flows in the region may reduce riparian vegetation in certain locations that may support sensitive species, the overall reduction is not expected to be significant, since the high-value habitats are limited and largely dependent on groundwater or wastewater treatment discharges.

Specific to the Upper Los Angeles River watershed, the PEIR identifies that if construction occurs in an area exhibiting native vegetation, implementing agencies would need to implement measures to avoid, reduce, or compensate for significant impacts. However, these construction effects would be temporary and would not result in significant reduction in habitat values within the watershed.

The PEIR further determined that stormwater retention in the Upper Los Angeles River watershed could result in substantial modifications to hydrologic conditions in the smaller channels and streams. While much of the higher value habitat occurs on the perimeter of the watershed and would not be affected by the BMPs, the vegetated channels in the mid and lower portions of the watershed could be cut off from perennial flows, resulting in a reduction of wetted area and associated habitat. Implementation of Mitigation Measures BIO-1 through BIO-8 would ensure that implementing agencies identify potentially affected resources and implement measures to avoid or reduce impacts to less-than-significant levels.

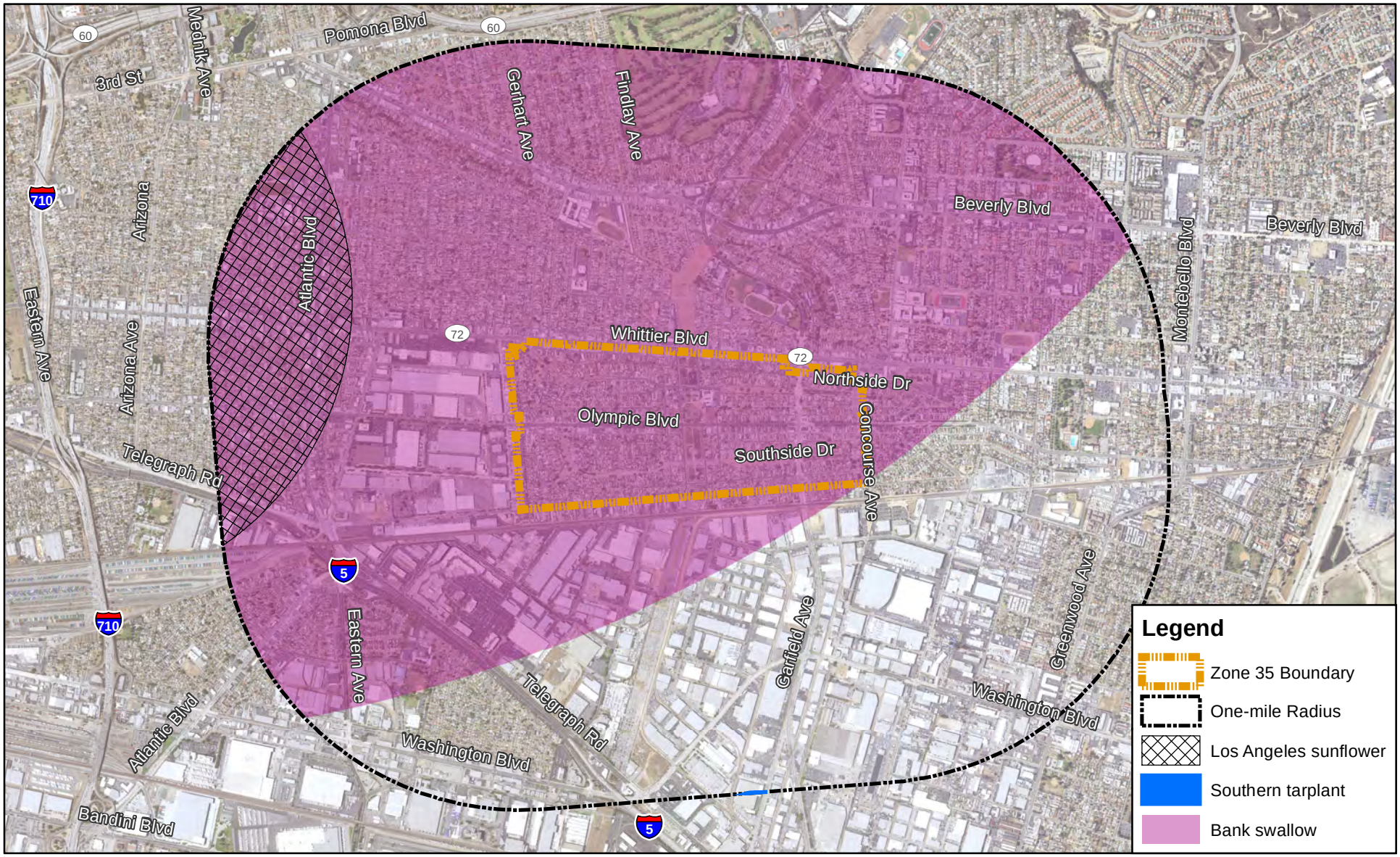
The Project site consists of landscaped medians and sidewalks in a developed area. As shown on Figure 3.3-7 on the PEIR, the CNDDB search shows that no natural communities of special management concern are located within the vicinity of the Proposed Project.

A site-specific CNDDB search was conducted for the Proposed Project. The Project site is in highly urbanized area and surrounded by existing development, and thus, the search area encompassed the Project site and a one-mile radius from the LMD. The search identified three sensitive species that could occur with a one-mile radius of the Project site, as listed in Table 4-3 and illustrated on Figure 12.

Table 4-3: CNDDB Search Results – One-Mile Radius from LMD

Scientific Name	Common Name	Federal List	California List	Habitat
Riparia riparia	Bank swallow	None	Threatened	Typically lives in low areas along rivers, streams, ocean coasts and reservoirs. It needs vertical banks and cliffs to form their colonies of nests. May be found in human-made sites such as sand and gravel quarries Foraging habitats include wetlands, large bodies of water, grasslands, agricultural areas, and open woodlands.
Helianthus nuttalli ssp. Parishii	Los Angeles sunflower	None	None	Occurs usually in coastal salt and freshwater wetlands Last seen in 1937 and believed to be extinct.
Centromadia parryi ssp. Australis	Southern tarplant	None	CNPS 1B.1	Seasonally moist valley grassland, freshwater wetlands, vernal pools, coastal scrub

Source: CDFW, 2017



Source: California Department of Fish and Wildlife, 2017

Figure 12
One-mile Radius Search of CNDDB

As shown on Figure 12, the bank swallow (*Riparia riparia*), a state threatened species, is identified as having the potential to occur throughout the Project site. Bank swallows are typically found in areas along rivers, streams, reservoir and coasts and they build their nests in vertical banks and cliffs. The Project site consists of small turf medians with no water features that are surrounded by urban development. There is no suitable habitat at or near the Project site, and thus bank swallows are not expected to be present. Two sensitive plants ranked by the California Native Plant Society (CNPS) are identified as potentially occurring within one-mile of the Project site. The Los Angeles sunflower (*Helianthus nuttalli* ssp. *Parishiiis*) is a CNPS 1A (presumed extinct) species that is identified as having the potential to occur west of the Project site, near Atlantic Avenue. The Los Angeles sunflower, last seen in 1937, is found in wetland areas. There is no suitable habitat at or near the Project site and the Los Angles sunflower is not present. The southern tarplant (*Centromadia parryi* ssp. *Australis*) is a CNPS 1B.1 (rare or endangered in California and elsewhere) species that is identified as having the potential to occur in a small area approximately one-mile south of the LMD. The southern tarplant occurs in near wetlands and seasonal wetlands. The Project site consists of small turf medians surrounded by urban development and no wetlands or seasonal wetlands are present. Thus, there is no suitable habitat at or near the Project site, and southern tarplant is not expected to occur.

Based on the urban setting and lack of habitat at or near the Project site, no endangered or sensitive plant or animal species are likely to occur. Additionally, all construction and construction staging would occur within the Project site and adjacent roadways or other developed areas (such as nearby schools, parks, or other similar facilities, if needed). However, there are mature trees located within the medians, which could provide nesting sites for birds. As described in the PEIR, nesting sites could be disturbed by construction activities. Therefore, Mitigation Measure BIO-5 applies to the Proposed Project.

The capture of stormwater that would occur under the operation of the Proposed Project would reduce the amount of stormwater flowing into the storm drains from a 3,000-acre tributary area, resulting a small reduction in stormwater ultimately flowing into the Los Angeles River, Rio Hondo River and ultimately the Pacific Ocean. Currently, this stormwater flows through the storm drain system quickly and does not support riparian habitat or other biological resources downstream of the Project site. Further, the groundwater seepage would continue to support the riparian corridors in the Upper Los Angeles River watershed. Retention of flows would augment these groundwater resources, offsetting any impacts from surface flow reductions. Moreover, improved water quality would be beneficial to habitat health. There would be no substantial adverse effect, directly or indirectly, to special-status species or habitat from the Project and Mitigation Measures BIO-2 through BIO-4, and BIO-6 through BIO-8 are not applicable to the Proposed Project. As described herein, the Proposed Project would not result in any material difference in the impacts on sensitive species compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.3-2: The proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that most structural BMPs would not occur within or adjacent to areas containing sensitive habitat, including SEAs, riparian, and other sensitive communities. Further, future project-level environmental review processes would determine whether an individual project would impact riparian or other sensitive natural communities and where it is necessary, would require the implementation of site-specific mitigation measures to minimize and reduce potentially significant impacts. Impacts would be reduced to less-than-significant levels with the implementation of Mitigation Measures BIO-1 through BIO-8.

The Project site consists of turf grass and non-native trees in an urbanized area. Adjacent land uses include residential and commercial uses. There is no SEA, riparian habitat, other sensitive natural community, or ecologically significant or critical areas located within or adjacent to the Project site and therefore, no direct impact would occur.

As described under Impact 3.3-1 above, the capture of stormwater that would occur under the operation of the Proposed Project would reduce the amount of stormwater flowing into the storm drains, ultimately resulting in a small reduction in stormwater flowing into the Los Angeles and Rio Hondo Rivers and the Pacific Ocean. Currently, this stormwater flows through the storm drain system quickly and does not benefit riparian or other sensitive natural community that may be located in river channels downstream of the Project site. Moreover, the Proposed Project would have water quality benefits that would be beneficial to habitat health. The Proposed Project would not adversely impact riparian habitat or other sensitive natural communities and Mitigation Measures BIO-2 through BIO-4, and BIO-6 through BIO-8 are not applicable to the Proposed Project. As described herein, the Proposed Project would not result in any material difference in the impacts on riparian or other sensitive habitats compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.3-3: The proposed project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

Wetlands occur throughout the EWMP areas ranging from isolated segments of improved urban channels to the open river segments of the Santa Clara, Los Angeles, and San Gabriel Rivers. The PEIR determined that for projects impacting native vegetation within jurisdictional drainages, compliance with state and federal regulations relating to potentially jurisdictional features and implementation of Mitigation Measures BIO-1 through BIO-9, impacts would be less than significant.

The Project site consists of turf grass and non-native trees in an urbanized area. There are no jurisdictional wetlands or drainage features on or adjacent to the Project site. As described under Impact 3.3-1 and Impact 3.3-2 above, the capture of stormwater associated with the operation of the Proposed Project would not adversely impact areas downstream from the Project site, and would have benefits associated with augmentation of groundwater resources and improved water quality. Therefore, the Proposed Project would not have a substantial adverse effect on federally protected wetlands. There would be no substantial adverse effect, directly or indirectly, to special-status species or habitat from the Project and Mitigation Measures BIO-1 through BIO-4, and BIO-6 through BIO-9 are not applicable to the Proposed Project. Thus, the Proposed Project would not result in any material difference in the wetlands impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.3-4: The proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that no established wildlife movement corridors within the EWMP area described within the Los Angeles County General Plan would be directly affected by implementation of the EWMPs and that structural BMPs would primarily be constructed within existing stormwater facilities or disturbed areas that would not affect wildlife movement or nursery sites. Furthermore, the structural BMPs would not reduce open water features used by migratory birds or reduce fresh water flows that support sensitive fish species. Implementation of the EWMP would not be expected to interfere with wildlife movement or any migratory corridor/linkage, and would not be constructed within a native wildlife nursery site. The PEIR determined that impacts on wildlife corridors and wildlife movement and nursey sites would be less than significant.

The Project site is located within an urban area surrounded by developed properties and does not provide habitat that is utilized as a wildlife corridor. Due to the developed nature of the Project site and the surroundings, it is unlikely that any substantial wildlife movement currently occurs though the Project area.

The structural BMPs would be regularly maintained and the LMD would continue to be responsible for maintaining the medians, including landscape maintenance and trash and debris removal. Other than landscaping, the operation of the Proposed Project would include minimal aboveground features such as water quality equipment cabinets, mechanical boxes and irrigation controls. These operational features would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Thus, the Proposed Project would not result in any material difference in the impacts on wildlife corridors and wildlife movement and nursey sites compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.3-5: The proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that structural BMPs would mainly be constructed within highly urbanized and disturbed areas with existing infrastructure and no impacts to oak trees or other protected tree species is anticipated. However, under the PEIR, the exact locations of the BMP projects had not been established and the PEIR determined that implementation of Mitigation Measure BIO-10 requiring avoidance of protected trees and/or compliance with any required tree preservation permits would reduce any potential impacts to protected tree species to a less-than-significant level.

The Project site consists of turf grass and non-native trees in an urbanized area. Pruning, trimming or removal of existing plants, including unhealthy and dying trees, would be subject to a permit in compliance with Los Angeles County Code, Title 16 - Highways, Division 5 - Miscellaneous Provisions, Chapter 16.76. This includes replacement of unhealthy or dying tree with another tree of a type and quality to be determined by the Assistant Deputy Director of the Road Maintenance Division of the County. None of the trees within the Project site are oak trees that are subject to the Los Angeles County Oak Tree Ordinance. As such, the Proposed Project would not conflict with any local policies or ordinances protecting biological resources, including protected trees and Mitigation Measure BIO-10 is not applicable to the Proposed Project. Thus, the Proposed Project would not result in any material difference in the impacts related to conflict with local policies or ordinances protecting biological resources compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.3-6: The proposed project could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that SEAs are located within the boundary of the EWMP area (Figure 3.3-1 in the PEIR). However, the majority of the structural BMPs would occur in developed or disturbed areas that are outside of adopted SEAs. Any that do occur within or adjacent to SEAs would provide multi-beneficial water quality and habitat restoration improvements and would comply with the SEA design compatibility criteria and other standards. Therefore, the PEIR determined that impacts would be less than significant.

The Project site is located within urbanized East Los Angeles, which does not provide habitat for special-status species, and is not within or near a Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan. The Project site is not in a SEA, nor are there protected oak trees in the area. The closest SEA to the Project site is the Puente Hills SEA, approximately three miles to the east, which would not be affected by the Proposed Project. Therefore, the Proposed Project would not conflict with the provisions of a Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan and no impact would occur. Thus, the Proposed Project would not result in any material difference in biological impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.3.3 Applicable PEIR Mitigation Measures

The analysis contained in this Addendum, specifically under Impacts 3.3-1 through 3.3-6, addresses Mitigation Measure BIO-1 (listed below), requiring an evaluation of the suitability of the Proposed Project as a structural BMP location. As described herein, the Project location is an urban area and does not impact areas of native habitats and would not result in significant impacts resulting from flow diversions. As such Mitigation Measures BIO-2 through BIO-4, and BIO-6 through BIO-10 are not applicable to the Proposed Project. The applicable and completed mitigation measures are listed below.

BIO-1: Prior to approving a Regional or Centralized BMP, the Permittee shall conduct an evaluation of the suitability of the BMP location.

Appropriate BMP sites should avoid impacting large areas of native habitats including upland woodlands and riparian forests that support sensitive species to the extent feasible. The evaluation shall include an assessment of potential downstream impacts resulting from flow diversions. **[Completed]**

BIO-5: If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors within 500-feet of the construction limits to determine and map the location and extent of breeding birds that could be affected by the project. Active nest sites located during the pre-construction surveys shall be avoided until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist.

4.4 Cultural Resources

Cultural Resources Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.4-1: The proposed program could cause a substantial adverse change in the significance of an historical resource as defined in §15064.5.	☐	☒
Impact 3.4-2: The program could cause a substantial adverse change in the significance of unique archaeological resources as defined in §15064.5.	☐	☒
Impact 3.4-3: The program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	☐	☒
Impact 3.4-4: The program could disturb any human remains, including those interred outside of a formal cemetery.	☐	☒

4.4.1 Project Setting

The Project site lies within the Los Angeles Basin, which is characterized by relatively flat (slightly dipping to the south), alluviated areas punctuated by tectonically uplifted highlands that drain into lower-lying areas and eventually the Pacific Ocean. It is these drainages that are, in part, responsible for the thick sequence of terrestrial sedimentary rocks that underlie much of the greater Los Angeles area and the diversity of fossils contained therein. During much of the early geological history of the program area, from the Early Miocene (approximately 23 million years before present) to the Late Pleistocene (approximately 11,000 years before present) sea level was much higher than today, and much of the area was under water. Thick, richly fossiliferous (fossil-bearing) marine

sedimentary sequences underlie much of the area, and where significant uplift has occurred because of tectonic forces, these fossil-rich rocks are exposed at the surface.[15]

Geologic mapping indicates that the Project area is situated entirely upon Quaternary alluvial fan deposits. The majority of the Project area consists of fan alluvium of middle to late Pleistocene age (units Qof, Qof2, and Qof3); these are overlain by a narrow strip of late Pleistocene and Holocene alluvial fan deposits (unit Qyf) in portions of the northern and western Project area. Numerous localities are known from throughout the County of Los Angeles in Quaternary alluvial fan deposits. Quaternary younger fan alluvium is typically not old enough to contain fossils. However, based on the local geology, these sediments cover older, fossiliferous formations. Further, the PEIR identifies Pleistocene units as having high sensitivity for paleontological resources.

A records search conducted as part of a Paleontological Resources Assessment prepared for the Proposed Project (Appendix B) showed that there are no known fossil localities within the Project area; however, two localities are present within upon Quaternary alluvial fan deposits within two miles of the Project area.

The abundant and diverse environmental resources of the coastal Los Angeles Basin have attracted human inhabitants from the earliest times, dating to at least 9,000 years before the present. The natural resources within the region area, including rivers and creeks and the flora and fauna associated with these water features, would have attracted and sustained human settlement.

East Los Angeles is within the historic boundaries of Rancho La Laguna, part of the land holdings belonging to Don Abel Stearns and his wife, Dona Arcadia Bandini. Stearns acquired the first parcels of land in 1857, and until his death in 1871, Stearns and his wife hosted social and political functions at the rancho. Following Dona Arcadia Bandini's death in 1912, subdivision of the rancho and the eastward development of Los Angeles were delayed because of a legal proceeding over the estate and land claims by various descendants. However, by 1921 the last remaining cattle on the rancho had been removed to make way for new suburbs. Montebello Park was subdivided and recorded in five separate tracts over a period of two and half years spanning 1925 to 1927, the owner of each tract is listed as Security Trust & Savings Bank. Although Security Trust & Savings Bank technically owned the tracts that comprise Montebello Park, it was the J.B. Ransom Corporation that developed the subdivision, working with the renowned city planning and landscape architecture firm of Cook & Hall. Ransom's organization was not new to the Los Angeles real estate development arena, having previously subdivided the nearby 100-acre Bandini development in 1924. Ransom's promotion of Montebello Park shared one important theme with that of Bandini: emphasis on the tract's proximity to rapidly expanding industrial districts and its suitability for the development of highly profitable worker housing. In spite of this important similarity between the two Ransom tracts, Montebello Park was a different product than Bandini in substantive ways, primarily its careful, cutting-edge community and landscape planning.

[15] Los Angeles County Flood Control District. 2015. Los Angeles County Flood Control District Enhanced Water Management Programs Program Environmental Impact Report (EIR). State Clearinghouse No. 2014081106. July. Draft EIR, Section 3.4.

Industrial and real estate interests worked together to provide housing for industrial workers associated with industrial development in Los Angeles that began in the late 19th century when the flat lands adjacent to the Los Angeles River became the initial location of a vast East Los Angeles industrial district. Development of the area that begun in the 1920s stalled during the Great Depression but resumed at a rapid pace following World War II until the mid-1950s when the area was almost completely built out.

The Project site is within a master-planned residential subdivision within East Los Angeles that dates from the mid-1920s. It represents one of the largest and most defined planned communities in the Los Angeles region from the period. The community is identified in the Eastside Transit Corridor Phase 2 Environmental Impact Statement/Environmental Impact Report[16] as being eligible for the National Register of Historic Places at the local level of significance, and the California Register of Historic Resources (CRHR) as an important example of community planning in the Los Angeles region during the 1920s. It is also eligible because of its association with the development of the east side and east side industrial areas, and because it is an important early example of subdivision, site planning, and design in response to the automobile.

As the Project site is located at sidewalks and medians, there are no structures located at the Project site or other features that could be considered historic resources.

One other site within one quarter-mile of the LMD is identified in the Eastside Transit Corridor Phase 2 Environmental Impact Statement/Environmental Impact Report as a being potentially eligible for the NRHP. Cantwell High School, located at 315 Garfield Avenue, Montebello approximately 0.1-mile to the north of the LMD, was constructed in 1947 and appears eligible as an intact example of a post–World War II Catholic secondary school in Los Angeles County, deriving its primary significance from its association with the education of male students of Mexican origin from 1947 to 1990. [17]

An Archaeological Investigation was conducted for the Project site (Appendix B). The review of available literature, archaeological site archives, and relevant historical maps conducted at the South Central Coastal Information Center indicated that there are no known archaeological resources within the Project site or 0.5-mile search radius. No previous surveys/reports have included the Project site, but 12 have occurred within the search area (0.5-mile radius from the outside edge of the Project site). A historic Resources Inventory identified over 60 properties, 44 of which have been evaluated. No registered local, state or national resources/landmarks were identified. Additional findings are discussed in Section 4.4.2 below.

There are no known tribal cultural resources, as defined in Public Resources Code Section 21074 on the Project site or immediate vicinity. The Project site is in an urban area that is highly disturbed. The County requested that a Sacred Lands Search be performed by the Native American Heritage Commission (NAHC) which did not identify any known tribal

[16] Los Angeles County Metropolitan Transportation Authority. 2014. Eastside Transit Corridor Phase 2 Draft Environmental Impact Statement/Environmental Impact Report. State Clearinghouse No. 2010011062. Appendix Y. August.

[17] Los Angeles County Metropolitan Transportation Authority. 2014. Eastside Transit Corridor Phase 2 Draft Environmental Impact Statement/Environmental Impact Report. State Clearinghouse No. 2010011062. Appendix Y. August.

cultural resources within the vicinity. Additionally, the County initiated consultation with California Native American tribes with a traditional or cultural affiliation with the geographic area of the Proposed Project, as identified by the NAHC. Letters were sent on November 1, 2017, to five Native American tribes identified by NAHC, including one that had specifically requested to be notified by the County of future projects pursuant to State Assembly Bill 52, providing formal notification of the County's intent to undertake the Proposed Project and identifying the opportunity to request consultation. One request for consultation was received from the Gabrieleño Band of Mission Indians – Kizh Nation. As discussed under Impact 3.4-1 below, consultation between the County and Gabrieleño Band of Mission Indians – Kizh Nation commenced in January 2018 and is anticipated to be concluded on April 12, 2018.

4.4.2 Impacts Analysis

Section 3.4, Cultural Resources, of the PEIR, addresses impacts from implementation of the EWMP program on cultural resources, including prehistoric and historic sites, structures, districts, places, and landscapes, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.4-1: The proposed program could cause a substantial adverse change in the significance of an historical resource as defined in §15064.5.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that implementation of structural BMPs occurring under the proposed program could impact significant historic built environment resources that exist within the program area. Built environment resources were identified as including buildings and structures as well as built infrastructure such as concrete channels, dams, sidewalks, and roads. Impacts could include not only physical demolition or alteration of built environment resources, but also changes to the historic setting of a resource, and impacts that may adversely affect that ability of a resource to convey its significance.

Mitigation Measure CUL-1, which requires evaluation of structures that are over 45 years old for historical significance and avoidance or documentation of any eligible historic resources to be demolished would reduce impacts to significant historic built resources. However, in some circumstances, mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur. Therefore, the PEIR determined that, in some cases, impacts on built historical resources would be significant and unavoidable.

Historical resources can also include not only buildings and structures, but also any object, site area, place, record, or manuscript which a lead agency determines to be historically significant, or which is listed in or determined eligible for listing in the CRHR. Archaeological resources that may be unearthed during construction activities associated with implementation of structural BMPs and may qualify as historic resources, could be impacted by individual projects. This includes resources of importance to Native American

Tribes or other cultural groups that may qualify as historical resources, which may be present within individual EWMP areas.

Although the structural BMPs would largely be located in highly developed areas, any structural BMP that involves grading, trenching, excavation, vegetation removal, or other form of ground disturbance could impact archaeological resources or other cultural resources. Thus, the PEIR determined that disturbance of previously unknown and unrecorded archaeological resources can occur even in already developed areas, and if artifacts or buried archaeological resources are uncovered during excavation or construction, significant impacts could occur. Indirect impacts to archaeological resources, as a result of erosion or vandalism resulting from increased access to or visibility of resources, could also occur.

Implementation of Mitigation Measures CUL-2, CUL-3, and CUL-4 would reduce impacts to archaeological and other cultural resources that qualify as historical resources. However, because the degree of impact and the applicability, feasibility, and success of these measures cannot be accurately predicted for each specific project, and the PEIR determined that in some circumstances, documentation and data recovery for impacts to an historical resource of an archaeological nature will not fully mitigate the effects. Therefore, the PEIR determined that the program level impact related to archaeological and cultural resources that qualify as historical resources is significant and unavoidable.

However, the PEIR further determined that not all individual EWMP projects would result in a significant and unavoidable impact with regard to historical resources, as the impacts associated with each individual EWMP project would be dependent on its location; the presence, nature, and significance of any historical resources within the construction area; and specific impacts to historical resources. The PEIR anticipated that the implementing agencies of the EWMP projects would, through the environmental review process, consider each discretionary EWMP project on a case-by-case basis to ascertain whether an individual project would impact cultural resources.

The Project site consists of turf grass medians with scattered trees and sidewalks in an urbanized/developed area in East Los Angeles. There are no structures. Prior to development of the area, the Project site was used for agricultural purposes. The possibility of any potentially historical archaeological deposit being located on-site associated with past uses is unlikely, given that it has been previously disturbed.

As described in Section 4.4.1 above, the subdivision where the Project site is located has been identified as eligible for the NRHP and CRHP because it is an important example of community planning in the Los Angeles region during the 1920s, it is associated with the development of the east side and east side industrial areas, and it is an important early example of subdivision and site planning in response to the automobile. The large medians located throughout the subdivision are a component of the distinctive site planning. Under the Proposed Project, this design and the character defining features of the neighborhood would not be compromised because the median and street layout, as well as building placement, would not change. The integrity of the community site plan, which gives the neighborhood its historic significance, would remain unaltered because the street layout and structure of the neighborhood would not change. The structural BMPs would largely be located underground and the landscaping would result in aesthetic enhancements to the

medians while retaining their layout and basic function. Therefore, the integrity of location and design would not be diminished by the implementation (construction and operation) of the Proposed Project, and the historic setting would remain largely intact. There would be no change in the historic use of the neighborhood or the medians themselves as a character defining feature of the subdivision and public space.

Cantwell High School, identified as eligible for the NRHP is located approximately 0.1-mile to the north of the LMD and approximately 0.2-mile from the nearest Project median (Northside Drive Median). No impacts to Cantwell High School would occur as a result of the Proposed Project.

To address archaeological resources that qualify as historical resources, an Archaeological Investigation of the Project site was completed in December 2017 (Appendix B) in compliance with Mitigation Measure CUL-2, requiring a Phase I Cultural Resources Inventory to be conducted prior to Project approval. The Archaeological Investigation included records search that did not reveal any known archaeological resources at the Project site or within 0.5-mile of the edge of the Project boundary. The field survey observed trash and some patches of isolated gravel throughout the Project area. No evidence of archaeological deposits or features was observed. Therefore, the Phase I Cultural Resources Inventory determined that it not necessary for archaeological monitors to be present during ground-disturbing activities (Mitigation Measure CUL-3). Should any resources unexpectedly be encountered, the Cultural Resources Inventory determined that implementation of Mitigation Measures CUL-4, which requires cessation of work and assessment by a qualified archaeologist should archaeological resources be discovered, and CUL-7, which requires cessation of work and implementation of specific procedures and protocols if human remains are undercover during Project construction (see also Impact 3.4-4), would address potential impacts associated archaeological resources.

As described in Section 4.3-1 above, the County received a request for consultation pursuant to State Assembly Bill 52 from the Gabrieleño Band of Mission Indians – Kizh Nation. Consultation between the County and Gabrieleño Band of Mission Indians – Kizh Nation commenced on January 18, 2018 and is anticipated to be concluded on April 12, 2018. As part of the consultation process, the Kizh Nation provided the County with information indicating that due to past Native American activities occurring in the vicinity of the Project area, disturbance of native soils would have a higher than average potential for the discovery of tribal cultural resources. Therefore, given that there is a potential to impact sensitive Native American resources, a Native American monitor will be retained, as specified under implementation of Mitigation Measure CUL-3. The monitor would be approved by the Tribal representatives and would be retained during ground disturbance activities of grading, trenching, and other planar or horizontal excavation activities that have the potential to reach native soils. The Native American monitor would complete monitoring logs daily and provide descriptions of the daily activities including construction activities, monitoring locations, soil type, and any cultural materials identified. Additionally, the monitor shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification if the site has hazardous waste concerns. However, as discussed in Section 4.7.2 Hazards and Hazardous Materials below, the proposed BMPs sites are within a residential neighborhood and not located in areas where hazardous material use or management may have occurred. Therefore, no hazardous waste

concerns have been identified. In addition, the monitor would be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in CEQA Section 21083.2 (a) through (k). The on-site monitoring would end when construction-related ground disturbance activities with the potential to impact sensitive Native American resources are completed, or when the Tribal Representatives and monitor have indicated that the site has a low potential for archeological resources. With implementation of Mitigation Measure CUL-3 and the provisions outlined above, adverse impacts on cultural tribal resources would be lessened; however, as analyzed in the PEIR, potential impacts could be significant and unavoidable. Thus, the Proposed Project would not result in any material difference in impacts on historic resources compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to cultural resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.4-2: The program could cause a substantial adverse change in the significance of unique archaeological resources as defined in §15064.5.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

As discussed above, the PEIR determined that the while archaeological sensitivity varies across the EWMP program area based on specific environmental factors, archaeological resources could potentially be present in any individual structural BMP project area.

Any structural BMP which involves grading, trenching, excavation, vegetation removal, or other form of ground disturbance could impact archaeological resources, some of which may qualify as unique archaeological resources. The PEIR determined that implementation of Mitigation Measures CUL-2, CUL-3, and CUL-4 which require that unique archaeological resources be treated in accordance with the provisions of Section 21083.2, would reduce impacts to unique archaeological resources to a less-than-significant level.

The Proposed Project consists of sidewalks and medians located within a highly urbanized area of East Los Angeles. The potential of encountering intact archeological resources is low given that the Project site has been previously graded and developed and no known resources were identified at the Project site or vicinity (see Impact 3.4-1 above and Appendix B). However, as the Proposed Project involves excavation and well installation, there is still a potential to encounter previously unknown subsurface archaeological material. An Archaeological Investigation completed for the Proposed Project in compliance with CUL-2 (Appendix B), determined that with implementation of Mitigation Measures CUL-4 and CUL-7, substantial adverse impacts to archaeological resources would be avoided. Thus, the Proposed Project would not result in any material difference in archaeological resource impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to cultural resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.4-3: The program could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the EWMP program area is underlain by a number of high or undetermined paleontological sensitivity units that may contain significant paleontological resources. The Los Angeles County General Plan Conservation Element requires that a paleontologist be retained to mitigate potential impacts to nonrenewable paleontological resources. However, the PEIR determined that significant paleontological resources can be uncovered even in areas of low sensitivity, and it is possible that ground-disturbing construction activities associated with implementation of the EWMP program could result in the inadvertent discovery of paleontological resources, which could be a significant impact. The PEIR determined that implementation of Mitigation Measures CUL-5 and CUL-6 would reduce these impacts to less-than-significant levels at this program-level of analysis.

As described above, the Project site is located within an area that has a sensitivity for paleontological resources. Much of the Project site is located within public rights-of-way that have been previously disturbed with development of the streets, medians, and utility connections, and thus, surface grading or shallow excavations are unlikely to encounter paleontological materials.

A pedestrian survey of the undeveloped ground surface areas of the Project area was completed as part of Paleontological Resources Assessment prepared for the Proposed Project in compliance with Mitigation Measure CUL-5 (see Appendix B). No fossils were observed during the survey. During the survey, native sediments were generally not visible, either due to development or to overlying fill dirt. Surficial sediments consisted primarily of any areas of either top soil, artificial fill, or a mixture of both.

However, excavations extending into undisturbed areas with late Pleistocene sediments may impact fossilized remains. Based upon the planned depths of cut and the proposed methods of excavation, the Paleontological Resources Assessment determined that paleontological monitoring would be needed during grading, trenching, and other planar or horizontal excavation activities to ensure that no significant impacts to fossils would occur. Drilling or auger activities impacting these sediments would not require monitoring, because any specimens encountered would be (a) likely to be destroyed by the equipment, and (b) unlikely to meet significance criteria, since they would not be associated with necessary contextual information. With implementation of PEIR Mitigation Measure CUL-5 that requires compliance with recommendations provided by a qualified paleontologist (as presented in the Paleontological Resources Assessment [Appendix B]) and CUL-6, which

requires evaluation by and compliance with recommendations provided by a qualified paleontologist in the event that paleontological resources are discovered during construction, paleontological resources impacts would be reduced to less than significant levels.

Impact 3.4-4: The program could disturb any human remains, including those interred outside of a formal cemetery.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that program-level development involving ground disturbance within the EWMP program area could impact human remains. In the event that human remains are discovered, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact. The PEIR determined that implementation of Mitigation Measure CUL-7 which requires cessation of work and implementation of specific procedures and protocols if human remains are undercover during Project construction, would reduce impacts to less than-significant levels at this program-level of analysis.

The Project site is not within a known formal cemetery. Much of the Project site is located within public rights-of-way that have been previously disturbed with development of the streets, medians, and utility connections. Given the previous disturbance, it is extremely unlikely that human remains would be encountered at the site and thus impacts would be less than significant. However, in the event that unknown human remains that may be buried beneath the surface in the work area, the following mitigation measure (CUL-7) from the PEIR would be implemented, further reducing impacts:

During operation, the LMD would continue to be responsible for maintaining the medians, including landscape maintenance and trash and debris removal. The structural BMPs would be regularly maintained to ensure functional and aesthetic values. No impact on human remains would occur during operation of the Proposed Project.

Thus, the Proposed Project would not result in any material difference in the impacts regarding potential to uncover human remains compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to cultural resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.4.3 Applicable PEIR Mitigation Measures

A Phase I cultural resources inventory was completed for the Proposed Project (Appendix B) which partially satisfies Mitigation Measure CUL-2, and supports a determination that Mitigation Measure CUL-3 is not applicable to the Proposed Project for non-tribal archaeological resources. Consultation was conducted with the Gabrieleño Band of Mission Indians – Kizh Nation which completes Mitigation Measure CUL-2 and supports and determination that Mitigation Measure CUL-3 is required relative to a Native American

monitor. A paleontological resources evaluation (Appendix B) was completed in partial compliance Mitigation Measure CUL-5; implementation of recommendations identified in the paleontological resources evaluation report are also required as part of Mitigation Measure CUL-5. Mitigation Measures CUL-2, CUL-3 (pertaining to tribal resources), CUL-4, CUL-5 (compliance with recommendations identified in the paleontological resources evaluation report), CUL-6, and CUL-7 are applicable to the Proposed Project. The applicable and completed mitigation measures are listed below:

CUL-2: Implementing agencies shall ensure that individual EWMP projects that require ground disturbance shall be subject to a Phase I cultural resources inventory on a project-specific basis prior to the implementing agency's approval of project plans. The study shall be conducted or supervised by a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, and shall be conducted in consultation with the local Native American representatives expressing interest. The cultural resources inventory shall include a cultural resources records search to be conducted at the South Central Coastal Information Center; scoping with the NAHC and with interested Native Americans identified by the NAHC; a pedestrian archaeological survey where deemed appropriate by the qualified archaeologist; and formal recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms and significance evaluation of such resources presented in a technical report following the guidelines in Archaeological Resource Management Reports (ARMR): Recommended Contents and Format, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990.

If potentially significant archaeological resources are encountered during the survey, the implementing agency shall require that the resources are evaluated by the qualified archaeologist for their eligibility for listing in the CRHR and for significance as a historical resource or unique archaeological resource per CEQA Guidelines Section 15064.5. Recommendations shall be made for treatment of these resources if found to be significant, in consultation with the implementing agency and the appropriate Native American groups for prehistoric resources. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred manner of mitigation to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project re-route or re-design, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, which may include data recovery or other appropriate measures, in consultation with the implementing agency, and any local Native American representatives expressing interest in prehistoric or tribal resources. If

an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2. **[Completed]**

CUL-3: The implementing agency shall retain archaeological monitors during ground-disturbing activities that have the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources, as determined by a qualified archaeologist in consultation with the implementing agency, and any local Native American representatives expressing interest in the project. Native American monitors shall be retained for projects that have a high potential to impact sensitive Native American resources, as determined by the implementing agency in coordination with the qualified archaeologist.

CUL-4: During project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project re-route or re-design, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2

CUL-5: For individual structural BMP projects that require ground disturbance, the implementing agency shall evaluate the sensitivity of the project site for paleontological resources. If deemed necessary, the implementing agency shall retain a qualified paleontologist to evaluate the project and provide recommendations regarding additional work, potentially including testing or construction monitoring.

CUL-6: In the event that paleontological resources are discovered during construction, the implementing agency shall notify a qualified paleontologist. The paleontologist will evaluate the potential resource, assess the significance of the find, and recommend further actions to protect the resource.

CUL-7: The implementing agency shall require that, if human remains are uncovered during project construction, work in the vicinity of the find shall cease and the County Coroner shall be contacted to evaluate the remains, following the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the Coroner will contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then designate a Most Likely Descendant of the deceased Native American, who will engage in consultation to determine the disposition of the remains.

4.5 Geologic and Mineral Resources

Geologic and Mineral Resources Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.5-1: The proposed program could locate new facilities in areas susceptible to seismic impacts such as (1) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, (2) strong seismic groundshaking, or (3) seismically induced liquefaction or landslides, which could expose people, structures, or habitat to potential risk of loss, damage, injury, or death.	☐	☒
Impact 3.5-2: The proposed program could result in substantial soil erosion or the loss of topsoil.	☐	☒
Impact 3.5-3: The proposed program could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the program, and potentially result in on-site or off-site non-seismically induced geologic hazards such as landslides, lateral spreading, subsidence, collapse or sinkholes, settlement, or slope failure.	☐	☒
Impact 3.5-4: The proposed program could be located on expansive soil as defined in 24 CCR 1803.5.3 of the California Building Code (2013), creating substantial risks to life or structures.	☐	☒
Impact 3.5-5: The proposed program could have soils incapable of adequately supporting the use of a septic tank	☐	☒

or alternative wastewater treatment systems where sewers are not available for the disposal of wastewater.		
Impact 3.5-6: The proposed program could result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.	☐	☒

4.5.1 Project Setting

East Los Angeles, including the Project site, has a generally flat topography. Major topographical features consist of the San Gabriel Mountains and Puente Hills, located north and east, respectively. The Project site is located approximately 165 to 190 feet above mean sea level.

An infiltration feasibility investigation determined that subsurface conditions within two feet of the ground surface at testing locations within the LMD consisted of lean clay, clayey silt, and silt in a very soft to medium-stiff condition.[18] Groundwater was not encountered during subsurface exploration for the Infiltration Feasibility Investigation which included borings drilled to a depth of 100 feet. According to the California Department of Conservation Seismic Hazard Zone Report for the Los Angeles Quadrangle, the historic high groundwater level in this region is reported to be greater than 50 to 70 feet bgs. [19] Site investigations conducted for properties in the general vicinity of the LMD have detected groundwater at levels ranging from approximately 80 feet bgs to 115 feet bgs.[20]

California Geological Survey's Earthquake Zones of Required Investigation of the Los Angeles Quadrangle[21] that includes the Project site, shows Alquist-Priolo Earthquake Fault Zones and Seismic Hazards Zone. No Alquist-Priolo Earthquake Zones or other Seismic Hazards Zones are located at the Project site. The nearest Alquist-Priolo Fault Zone runs east-west from South Pasadena to Monrovia, approximately 6.7 miles to the north of the Project site, and north-south in a small section of El Monte approximately 3.5 miles to the northeast of the Project site. A liquification zone is located to the south and east of the Project site. The nearest earthquake induced landside zone is approximately 1.7 miles to the northeast.[22]

[18] County of Los Angeles Department of Public Works, Geotechnical and Materials Engineering Division, Geology and Soils Investigation Units. 2016. Infiltration Feasibility Investigation Montebello LMD. Prepared for Watershed Management Division, County of Los Angeles Department of Public Works. June 1.

[19] County of Los Angeles Department of Public Works, Geotechnical and Materials Engineering Division, Geology and Soils Investigation Units. 2016. Infiltration Feasibility Investigation Montebello LMD – Phase II. Prepared for Watershed Management Division, County of Los Angeles Department of Public Works. December 4.

[20] Lindmark Engineering. 2012. Phase II additional Site Assessment and Closure Report La Tourette Family Survivors' Trust 1800 and 1808 West Whittier Boulevard Montebello California. Prepared for Ms. Paulette La Tourette, Trustee La Tourette Family Survivors' Trust. October 2.

[21] California Department of Conservation California Geological Survey. 2017. Earthquake Zones of Required Investigation Los Angeles Quadrangle. June 15. Available: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/LOS_ANGELES_EZRIM.pdf. Accessed September 2017.

[22] California Department of Conservation California Geological Survey. 2017. Earthquake Zones of Required Investigation El Monte Quadrangle. June 15. Available: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/EL_MONTE_EZRIM.pdf. Accessed September 2017.

Mineral resources include non-renewable deposits of ore, stone, and earth materials. Gold, copper, lead, silver, zinc, and manganese deposits are scattered throughout the San Gabriel Mountains. The largest known resources of titanium in California are found in the western San Gabriel Mountains, located north of the Project site. However, the majority of these mines have been inactive for many years. None of these resources are found near the Project site. There is an Oil and Gas Recovery Zone identified in the Los Angeles County General Plan that occurs in the south-central portion of the East Los Angeles Community Area, but no oil fields are present under the Project site. Likewise, Figure 3.5-4 of the PEIR identifies that oil and gas resources are located to the north and south of the Project vicinity, but not underlying the Project site. There are no oil, gas, or mineral extraction activities located on or near the site.

4.5.2 Impact Analysis

Section 3.5, Geologic and Mineral Resources, of the PEIR, addresses potential impacts to geology, soils, seismicity, and the availability of minerals as with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.5-1: The proposed program could locate new facilities in areas susceptible to seismic impacts such as (1) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, (2) strong seismic groundshaking, or (3) seismically induced liquefaction or landslides, which could expose people, structures, or habitat to potential risk of loss, damage, injury, or death.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The EWMP area lies in a region that is seismically active and includes numerous active faults. In the event of an earthquake, fault rupture and seismic groundshaking could be experienced in the Project area, as is typical throughout Southern California. The seismic groundshaking could trigger seismically induced liquefaction, landslides, or other slope failure. The PEIR identifies 10 active faults known within the EWMP program area (PEIR Table 3.5-2 and Figure 3.5-2). Facilities constructed on or within up to 500 feet of an active fault trace could be damaged by fault rupture. The PEIR does not identify any faults within 500 feet of the Project site. Seismic groundshaking and seismically induced liquefaction, landslides, or other slope failure could result in structural damage to facilities, which in turn could affect operation of related systems. The PEIR identifies that subsurface infiltration, retention, or storage structures (e.g., trenches and wells) and structures generally flush with the surrounding area (e.g., permeable pavement, swales) would be less vulnerable to significant seismic damage than aboveground structure, but could still be damaged during large earthquakes.

Potential damage to underground systems includes structural damage to the underground vaults, connection to the existing MS4, and underdrains that connect to the MS4. Potential infiltration of water as result of seismic damage to the underlying soil can result in an

increased potential for soil instability and liquefaction, which could result in threats to the safety of people in downslope areas or damage to other downslope facilities.

To ensure impacts to public safety are minimized, a design-level geotechnical investigation is required for individual BMP projects to identify the potential geologic and seismic hazards and recommend site-specific design criteria to abate seismic hazards. The PEIR determined that completion of a comprehensive design-level geotechnical investigation, adherence to the current California Building Code (CBC), County of Los Angeles LID Standards, and local ordinances and laws regulating construction, and the application of proven seismic design criteria as standard engineering practice would ensure that structures are designed to withstand seismic events without sustaining substantial damage or collapsing. Therefore, the PEIR determined that impacts would be less than significant.

The Project site is not located within the boundaries of an Alquist-Priolo Special Studies Zone. The Project site is located in a seismically active area, as is most of southern California. However, no active faults are known to cross the Project site or be within 500 feet of the Project site. Nonetheless, the pipeline connections and infiltration wells would be designed and constructed in conformance with applicable grading and seismic code requirements and industry standards, including the most recent edition of the Los Angeles County Building Code (which references the CBC), which reduces potential impacts by ensuring that development is designed to withstand seismic or other geologic hazards.

In addition, an Infiltration Feasibility Investigation has been prepared for the Proposed Project in compliance with the PEIR mitigation measure requirements and County of Los Angeles LID Standards, which require that all structural BMPs that include ground disturbance activities conduct a site assessment and identify design considerations. The Infiltration Feasibility Investigation consists of a subsurface investigation and identifies design considerations specific to each infiltration site.

Adherence to the recommendations in the Infiltration Feasibility Investigation, the current CBC, LID Standards, and County ordinances and laws, including the Los Angeles County Building Code regulating construction, and the application of proven seismic design criteria as standard engineering practice would ensure that structures are designed to withstand seismic events without sustaining substantial damage or collapsing would reduce potential adverse effects associated with seismic ground shaking.

The Project site is not located in areas with liquefaction susceptibility, as identified in the California Geological Survey's Earthquake Zones of Required Investigation of the Los Angeles Quadrangle[23] and Figure 3.5-3 of the PEIR. Further, according to the California Department of Conservation Seismic Hazard Zone Report for the Los Angeles Quadrangle, the historic high groundwater level in this region is reported to be greater than 50 feet below ground. Absence of groundwater within 50 feet indicates liquefaction potential is very low and potential for seismically-induced settlement is negligible.

[23] California Department of Conservation California Geological Survey. 2017. Earthquake Zones of Required Investigation Los Angeles Quadrangle. June 15. Available: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/LOS_ANGELES_EZRIM.pdf. Accessed September 2017.

Landslides and mudflows are most likely in the foothill and mountain areas where fractured and steep slopes are present (as in the San Gabriel Mountains). The Project site is located within a predominantly flat area of East Los Angeles and not within an area susceptible to, or affected by, landslides. Therefore, there is no impact or potential risks associated with landslides with implementation of the Proposed Project. Thus, the Proposed Project would not result in any material difference in the impacts associated with seismicity compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geological and mineral resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.5-2: The proposed program could result in substantial soil erosion or the loss of topsoil.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that construction activities such as excavation and grading could result in soil erosion or loss of topsoil during rain or high-wind events. Erosion could damage facilities, pose risk to people, or damage habitat or improvements downslope of a proposed program, resulting in potentially significant impacts. However, structural BMPs would generally serve to slow down or fully retain stormwater runoff, which would act to reduce erosion potential compared with existing conditions.

During construction, required compliance with the stormwater pollution prevention plan (SWPPP) for sites over an acre and implementation of erosion control BMPs required at projects that are less than acre, would ensure that soil erosion and loss of topsoil would be minimized to levels considered less than significant. Therefore, the PEIR determined that impacts associated with erosion and loss of top soil would be less than significant.

Under the Proposed Project, construction activities would include grading, trenching for pipelines, well installation, temporary staging, and construction on flat terrain. Site preparation would require removal of vegetation, asphalt and concrete paving. These activities could create the potential for soil erosion to occur, although soil exposure would be temporary and short-term in nature.

Since the site is relatively flat and is surrounded by streets and developed areas, soil erosion is expected to be confined on-site. Further, construction projects resulting in the disturbance of one acre or more are required to obtain a NPDES permit issued by the Regional Water Quality Control Board (RWQCB) to control soil erosion due to storm water. In addition, compliance with a SWPPP that includes BMPs to provide erosion control and sediment control strategies would minimize the potential for soil erosion and sedimentation. After construction is completed, the Project site would be covered by landscaping or hardscaping and no large areas of exposed soil that would be exposed to erosion effects of wind or water would remain.

As determined in the PEIR, the required compliance with the SWPPP and implementation of erosion and sediment control BMPs would ensure that soil erosion and loss of topsoil would be minimized to levels considered less than significant.

During operation, the LMD would continue to be responsible for maintaining the medians, including landscape maintenance and trash and debris removal. The structural BMPs would be regularly maintained to ensure functional (including maintaining topsoil) and aesthetic values.

Thus, the Proposed Project would not result in any material difference in erosion and loss of topsoil impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geological and mineral resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.5-3: The proposed program could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the program, and potentially result in on-site or off-site non-seismically induced geologic hazards such as landslides, lateral spreading, subsidence, collapse or sinkholes, settlement, or slope failure.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that structural BMPs could be susceptible to unstable soils. Furthermore, infiltration could result in saturated soils which could reduce the strength of the soils, resulting in an increased susceptibility to failure (e.g., lateral spreading, settlement, instability, soil piping, reduced or loss of shear strength) and/or raise the local groundwater levels such that infrastructure foundations and underground structures could be affected by unstable soils. Additionally, infiltrated water could become perched or find preferential pathways such as utility trenches and potentially inundate or destabilize subterranean structures and utilities, or breakout downstream and damage aboveground structures. To ensure that structural BMPs are not undermined by unstable soils or impact adjacent infrastructure and buildings, Mitigation Measure GEO-1 requires that each specific project conduct a design-level geotechnical investigation that identifies the potential for geologic hazards and recommends site-specific design criteria to abate geologic hazards that would be incorporated into the design of individual projects.

The PEIR determined that implementation of Mitigation Measure GEO-1 and the design requirements in the CBC and County of Los Angeles ordinances would ensure that all structures are constructed in compliance with the applicable laws, regulations, and policies, including the applicable LID Ordinance and therefore, the impact is less than significant.

Further, the PEIR requires implementation of Mitigation Measure GEO-2 which requires that the implementing agency notify groundwater managers of local infiltration projects to provide better coordination between stormwater retention and groundwater levels

management to address cumulative impacts associated with potential impacts to soil stability from elevated groundwater levels.

At the Project site, no groundwater was detected within 100 feet bgs and thus infiltration associated with the Proposed Project is not expected to result in saturated soils which could reduce the strength of the soils. Further, as required by Mitigation Measure GEO-1, an Infiltration Feasibility Investigation was conducted for the Proposed Project that recommends site-specific design criteria for each infiltration site. Additionally, design and construction of the Project would comply with applicable building and safety requirements (such as the grading standards). Additionally, while the Project site is not located within an area that has elevated groundwater levels, compliance with Mitigation Measure GEO-2 would require notification of the Proposed Project to groundwater managers. Thus, the Proposed Project would not result in any material difference in the impacts associated with an unstable geologic unit or soils compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geological and mineral resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.5-4: The proposed program could be located on expansive soil as defined in 24 CCR 1803.5.3 of the California Building Code (2013), creating substantial risks to life or structures.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that all structural BMPs would be susceptible to damage from soil expansion if placed on susceptible soil. Completion of a comprehensive design-level geotechnical investigation (Mitigation Measure GEO-1), implementing the design requirements in the CBC and local County ordinances, and ensuring that all structures are constructed in compliance with the applicable laws, regulations, and policies, including the County of Los Angeles LID Ordinance, would ensure that structural BMPs are constructed in a manner that avoids impacts from expansive soils. Therefore, this impact is considered less than significant.

In compliance with the PEIR mitigation measure requirements, an Infiltration Feasibility Investigation has been prepared for the Proposed Project to ensure that the structural BMPs are not undermined by unstable soils and that they would not impact adjacent infrastructure and buildings. The Infiltration Feasibility Investigation recommends site-specific design criteria to abate geologic hazards, such as shoring recommendations and continued monitoring of subsurface conditions, and these recommendations would be incorporated into the design and implementation of the Proposed Project.

Implementing the design requirements in the CBC and County ordinances and recommendations of infiltration investigations would ensure that the Proposed Project would be constructed in a manner that avoids impacts from expansive soils. Thus, the

Proposed Project would not result in any material difference in the impacts associated with expansive soils compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geological and mineral resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.5-5: The proposed program could have soils incapable of adequately supporting the use of a septic tank or alternative wastewater treatment systems where sewers are not available for the disposal of wastewater.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that implementation of the proposed program would not include facilities that require the use of septic systems or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater. Therefore, the PEIR determined that no impact would occur related to soil suitability for septic or alternative wastewater disposal systems.

The Proposed Project involves stormwater and landscaping improvements. It would not require the use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur. Thus, the Proposed Project would have no impact and would not result in any material difference in impacts related to septic tanks or alternative wastewater disposal systems compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geological and mineral resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.5-6: The proposed program could result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR identifies that the EWMP program area includes mineral resource areas in Los Angeles County that contain known or potentially productive petroleum fields, natural gas, construction aggregate, and mineral deposits. However, typical structural BMPs would be constructed within areas that are already urbanized and disturbed, and that are not available for mineral resource activities. Further, siting of BMPs would be required to

comply with General Plan and zoning restrictions and therefore, impacts regarding the loss of availability of mineral resources would be less than significant.

The Project site is located in an urbanized area and the Proposed Project would not result in the loss of availability of a known mineral because there are no existing or proposed mineral resource recovery activities in or around the Project site. The Project would not impact or result in the loss of availability of any known mineral or other available resource; therefore, no impact would result from construction or operation of the Project.

Thus, the Proposed Project would have no impact and would not result in any material difference in the availability of mineral resource impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to geological and mineral resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.5.3 Applicable PEIR Mitigation Measures

All PEIR mitigation measures for impacts to Geological and Mineral Resources are applicable to the Proposed Project. The Infiltration Feasibility Investigation prepared for the Proposed Project completes Mitigation Measure GEO-1 (listed below), requiring an evaluation of the suitability of each infiltration site. The applicable and completed mitigation measures are listed below:

GEO-1: Prior to approval of infiltration BMPs, implementing agencies shall conduct a geotechnical investigation of each infiltration BMP site to evaluate infiltration suitability. If infiltration rates are sufficient to accommodate an infiltration BMP, the geotechnical investigation shall recommend design measures necessary to prevent excessive lateral spreading that could destabilize neighboring structures. Implementing agencies shall implement these measures in project designs. **[Completed]**

GEO-2: Prior to installing BMPs designed to recharge local groundwater supplies, the Implementing Agency shall notify local groundwater managers including the Upper Los Angeles River Area Water Master, the Water Replenishment District of Southern California, or the San Gabriel Water Master as well as local water producers such as local municipalities and water companies. The Implementing Agency shall coordinate BMP siting efforts with groundwater managers and producers to mitigate high groundwater levels while increasing local water supplies.

4.6 Greenhouse Gas Emissions

Greenhouse Gas Emissions Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.6-1: The proposed program could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	☐	☒
Impact 3.6-2: The proposed program could conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	☐	☒

4.6.1 Project Setting

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases (GHGs) are transparent to solar radiation, but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect.

Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity. Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors.

In 2012, California statewide GHG emissions were 440.4 million metric tons CO_2-equivalent ($MTCO_2e$) per year. Transportation contributes the most to the GHG emissions, followed by industrial activities.[24]

The LMD is a highly urbanized part of the Community of East Los Angeles which is located within the SCAB. The SCAB lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climate is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. Although there are not directly quantifiable localized impacts associated with the release of GHGs, according to much of the scientific

[24] California Air Resources Board. 2017. California Greenhouse Gas Emission Inventory - 2017 Edition. Webpage. June 6. Available: https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed December 2017.

literature on the topic, local emissions of GHGs would contribute to the overall effect of global climate change.

4.6.2 Impact Analysis

Section 3.6, Greenhouse Gases, of the PEIR, addresses potential impacts associated greenhouse gas emissions with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.6-1: The proposed program could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR explains on page 3.6-12 that there is no adopted GHG threshold that would be applicable to the Proposed Project in the SCAB. However, SCAQMD's proposed threshold of 3,000 $MTCO_2e$/year for non-industrial projects was determined to be the most appropriate threshold proposed for projects within the EWMP program.

The PEIR determined that construction-related GHG emissions associated with each structural BMP development would be short-term in nature and limited to the period of time when construction activity is taking place for that particular development. The amount of program-related construction that would occur on an annual basis could not be determined with any certainty in the PEIR. However, the PEIR estimated the maximum annual construction-related GHG emissions for the three structural BMP project types were estimated using CalEEMod based on general information, CalEEMod default settings, and reasonable assumptions based on other similar types of projects. The PEIR determined that construction-related greenhouse gas emissions for the largest BMP projects (i.e., regional structural BMPs) would total 2,227.89 $MTCO_2e$/year. For construction GHG emissions, SCAQMD recommends that total construction emissions be amortized over 30 years and added to the operational GHG emissions of a project. When amortized over 30 years, this equates to 74.26 $MTCO_2e$ per year. Because these annual emissions represent only approximately 2.5 percent of the SCAQMD's recommended threshold of 3,000 MTCO2e/year for non-industrial projects, the PEIR determined that construction-related GHG emissions generated would be relatively minimal.

During operations, the PEIR determined that only periodic worker trips for inspection and maintenance activities would occur, and the mobile GHG emissions generated by these worker trips would be negligible. Thus, because the total GHG emissions generated by the largest structural BMP projects under a worst-case scenario would not exceed the 3,000 MTCO2e/year benchmark, the PEIR determined that impacts associated with GHG emissions generated by the structural BMPs would be less than significant.

For the Proposed Project, GHG emissions were estimated for construction using the same approach as in Section 4.2, Air Quality, using CalEEMod and project-specific construction assumptions. Table 4-4 below summarizes the estimated GHG emissions for the construction of the Proposed Project.

Table 4-4: Estimated Construction-Related Greenhouse Gas Emissions

Emissions Source	Proposed Project Emissions CO_2e (MT/yr)
Construction	
Total	1,440
Amortized over 30 years	48

Note: See Appendix A for CalEEMod model outputs; CO_2e = Carbon dioxide equivalent; MT/yr = metric tons per year

As shown in the table, construction-related GHG emissions would total 1,440 $MTCO_2e$. Amortized over 30 years, the Proposed Project would result in 48 $MTCO_2e$/yr. This equals only 1.6 percent of the 3,000 $MTCO_2e$ benchmark. During operations, maintenance and repair activities are expected to be similar to existing conditions and thus any increase in operational GHG emissions would be minimal. Therefore, amortized construction emissions under the Proposed Project would be less than emissions assumed for worst-case structural BMPs under the PEIR and would not exceed the 3,000 $MTCO_2e$ benchmark. Therefore, the Proposed Project would not result in any material difference in the GHG emission impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to greenhouse gases. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.6-2: The proposed program could conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR addresses program-level consistency with multiple GHG reduction plans or policies and determined that implementation of the structural BMPs in the EWMP program would not generate substantial amounts of GHG emissions that would hinder the State's ability to achieve Assembly Bill (AB) 32's goal of achieving 1990 levels of GHG emissions by 2020.

Further, implementation of the structural BMPs in the EWMP areas would serve as GHG emission reduction measures that are consistent with the CARB Scoping Plan and County of Los Angeles Community Climate Action Plan (CCAP). Specifically, the structural BMPs are consistent with Action W-4 (Reuse Urban Runoff) in the CARB Scoping Plan, which aims to reduce urban runoff by capturing and treating the runoff, and Measure WAW-2 (Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff) from the CCAP that aims to promote recycled water use and policies to better manage stormwater to protect local groundwater supplies. Therefore, the EWMP program would not conflict with

applicable plans, policies, or regulations to reduce emissions of GHG, and the PEIR determined that impacts would be less than significant.

Consistent with the PEIR, the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. The short-term construction GHG emissions would not interfere with the AB 32 Scoping Plan and the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Operation of the Proposed Project would result in minor GHG emissions from occasional vehicle travel associated with periodic repair and maintenance, which would be similar to existing activities occurring at the Project site. GHG emissions associated with both construction and operation of the Proposed Project are negligible compared to the statewide GHG inventory. In addition, the Proposed Project would implement passive stormwater treatment and water saving smart irrigation and drought tolerant landscaping, which is consistent with actions recommended in CARB's Scoping Plan (specifically Action W-4 [Reuse Urban Runoff]) and the CCAP (specifically WAW-2 [Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff]), that support reducing water demand and reducing urban runoff through capture and treatment. Therefore, the Proposed Project would not result in any material difference in the impacts associated with conflict with plans, policies, or regulations intended to reduce GHGs compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to greenhouse gases. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.6.3 Applicable PEIR Mitigation Measures

The PEIR does not identify any significant Greenhouse Gas Emissions impacts requiring mitigation.

4.7 Hazards and Hazardous Materials

Hazards and Hazardous Materials Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.7-1: The proposed program would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the accidental release during construction and maintenance activities.	☐	☒
Impact 3.7-2: The proposed program could create a significant hazard to the public or the environment through the accumulation of potentially hazardous materials into BMPs.	☐	☒
Impact 3.7-3: The proposed program could emit hazardous emissions or handle hazardous or acutely	☐	☒

hazardous material, substances, or waste within one-quarter mile of an existing school.		
Impact 3.7-4: The proposed program could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.	☐	☒
Impact 3.7-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, for a project within the vicinity of a private airstrip, the project could result in a safety hazard for people residing or working in the project area.	☐	☒
Impact 3.7-6: The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	☐	☒
Impact 3.7-7: The proposed program could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	☐	☒

4.7.1 Project Setting

A hazardous material is defined as any substance that may be hazardous to humans, animals, or plants, and may include pesticides, herbicides, toxic metals and chemicals, volatile chemicals, explosives, and even nuclear fuels or low-level radioactive wastes. The County has a wide variety of industries and land uses, which generate, use, or handle hazardous materials. These sites present hazards associated with accidental spills, contamination, fire, explosion, and improper disposal. Railroads and major truck routes also pose hazards associated with accidental spills during transport.

The Project site consists of turf medians and sidewalks adjacent to land uses that include residential and commercial development. There is one school, Montebello Park Elementary School, located within the LMD, approximately 50 feet southwest of the Northside Drive Median and 700 feet northwest of the Southside Drive Median. One other school, Cantwell Sacred Heart of Mary High School, is located approximately 0.1-mile north of the LMD, approximately 0.2-mile from the nearest Project median (Northside Drive Median). No other schools are located within one quarter mile of the Project site. The Project site is not located in the vicinity of an airport or private airstrip. The nearest public airport is San Gabriel Valley Airport, located approximately 7.5 miles northeast of the Project site. Various helipads are located in vicinity. The closest is approximately 1.4 miles to the northwest at the Los Angeles County Sheriff's Department East Los Angeles Station.

Regional groundwater flow in the region is generally downgradient west-southwest towards the Pacific Ocean. Site investigations conducted for properties in the general vicinity of the LMD have detected groundwater ranging from approximately 80 feet bgs to

115 feet bgs.[25] Groundwater was not encountered during subsurface exploration for the Infiltration Feasibility Investigation which included borings drilled to a depth of 100 feet.

The State Water Resources Control Board's GeoTracker is a data management system for sites that impact groundwater or have the potential to impact groundwater. It includes sites that require groundwater cleanup and permitted facilities that could impact groundwater.

Within the LMD, the State Water Resources Control Board GeoTracker data management system identifies one leaking underground storage tank (LUST) cleanup site. LUST cleanup sites include all underground storage tank (UST) sites that have had an unauthorized release or a hazardous substance that is being or has been cleaned. The site with the LMD, located at 5900 Olympic Boulevard, was identified as having potential soil contamination associated with gasoline and waste oil. The contaminated soil was excavated in 2004 and the LUST case was closed in 2005. The site is located approximately 0.08-mile southwest of the Northside Drive at Olympic Boulevard Site and approximately 0.9-mile northwest of the Southside Drive at Coolidge Way Median. There are several other LUST cleanup cases located at the edge of the LMD, along of Ferguson Drive south of the LMD, and along Whittier Boulevard, northwest and northeast of the LMD, all of which have also been closed.

One open LUST case is located at 1901 Whittier Boulevard in Montebello, approximately 0.27-mile east of the LMD, associated with an UST that was removed in 1987. Gasoline in the soil is listed as the contaminant of concern. The area of impact is near the intersection of Whittier Boulevard and South 19th Street.[26] Given the depth of groundwater in the region, groundwater is not likely to be affected. There is ongoing assessment and clean-up at the Project site but additional assessment is needed is before the site can be closed.[27] The site is located approximately 0.5-mile away from the closest median (Northside Drive Median).

Cleanup Program sites are non-federally owned sites regulated under the State Water Resource Control Board's Site Cleanup Program or similar program under one of the regional water boards (i.e., LARWQCB). Geotracker identifies a Cleanup Program Site at 1800 and 1808 West Whittier Boulevard at the site of various former auto service facilities, approximately 0.35 mile east of the LMD. The identified contamination includes detection of groundwater contamination of gasoline, benzene, toluene, ethylbenzene, and xylenes at one location on-site. A clean-up program was implemented that included groundwater well monitoring. [28] The case is listed as open; however, clean-up of the site has occurred and the Los Angeles Fire Department issued a letter concurring that the known site contamination

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[25] Lindmark Engineering. 2012. Phase II additional Site Assessment and Closure Report La Tourette Family Survivors' Trust 1800 and 1808 West Whittier Boulevard Montebello California. Prepared for Ms. Paulette La Tourette, Trustee La Tourette Family Survivors' Trust. October 2.

[26] ACT Associates Inc. 2012. Limited Phase II Environmental Site Assessment 1901 West Whittier Boulevard Montebello California 90640 ACT Project Number 52.42181.0001. January.

[27] SWRCB. 2017. Review Summary Report – Concur with Additional Work First Review – May 2017. May.

[28] Lindmark Engineering. 2012. Phase II additional Site Assessment and Closure Report La Tourette Family Survivors' Trust 1800 and 1808 West Whittier Boulevard Montebello California. Prepared for Ms. Paulette La Tourette, Trustee La Tourette Family Survivors' Trust. October 2.

has been satisfactorily addressed and no further action is required.[29] The site is located approximately 0.6-mile away from the closest median (Northside Drive Median).

Other active Clean Up sites are located south of the LMD, including a former facility that manufactured steel tubing primarily for the aerospace industry located approximately 0.17-mile south of the LMD, and approximately 0.44-mile from the closest Project site median (Southside Drive and Coolidge Way Median). Groundwater is contaminated with tetrachloroethene and trichloroethylene, the plume extends from the former Project site to beneath the Citadel Outlet Stores shopping center. A cleanup program was implemented in 1999, including installation of groundwater monitoring wells and installation of a Subgrade Permanent Surface Water Management System in 2003. Groundwater monitoring reports, which were last submitted in 2008, indicate that the groundwater plume is shrinking.[30]

A Clean Up site is located at 601 Vail Avenue, approximately 0.22-mile southeast of the LMD, approximately 0.47-mile from the closest Project site median (Southside Drive Median). This area was the site of petroleum storage and transfer activities since 1915 and contaminants of concern include arsenic, benzene, diesel, gasoline and other petroleum, toluene, and xylene. Cleanup activities, including soil excavation and soil vapor extraction, have been occurring at the site since the late 1980s. Groundwater monitoring at the site has indicated that the existing groundwater plume is stable and primarily constrained within the site boundaries. Further, California Maximum Contaminant Levels have not been exceeded in any off-site wells since 2001. Groundwater at the site is currently at approximately 145 feet bgs.[31]

A historical Waste Discharge Requirement (WDR) site is located at the southern boundary of the LMD near Ferguson Drive and Westside Drive (approximately 0.19-mile southwest of the Southside Drive Median.) Waste Discharge Requirement (WDR) sites include those that operate under WDRs issued by the State Water Resources Control Board or a RWQCB. WDRs address non-designated waste discharges that are typically applied to land.

4.7.2 Impacts Analysis

Section 3.7, Hazards and Hazardous Materials, of the PEIR, addresses potential hazards and hazardous materials impacts associated with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.7-1: The proposed program would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous

[29] County of Los Angeles Fire Department. 2012. Letter to Paula Tourette. 1800 and 1808 West Whittier Boulevard, Montebello California 90604 (SMU File #11-863/RO0001487). November 19.

[30] Waterstone Environmental, Inc. 2008. Groundwater Monitoring Report Second and Third Quality 2007 Subject Property Located at Assessor's Parcel Number 6336-018-020-00-000 City of Commerce, California. Submitted to Department of Toxic Substances Control. February 15; Waterstone Environmental, Inc. 2008. September 2008 Groundwater Monitoring Summary for the Former PATCO Property know as -018-020-00-000 Located in the City of Commerce, California. Letter to Dr. Gabriel Farkas, Project Manager, Department of Toxic Substances Control. November 20.

[31] Los Angeles Water Quality Control Board. 2017.Response to the Groundwater Delineation Evaluation and Contingent Work Plan Addendum #6, Pursuant to Cleanup and Abatement Order NO. R4-2014-0194. Letter to Mr. Ted Moise, Chevron Environmental Management Group. April 4.

materials or the accidental release during construction and maintenance activities.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR identified that construction and maintenance activities associated with implementation of structural BMPs would require the transport, storage, use, and disposal of small amounts of paint, and other similarly related materials in varying quantities on each Project site. The release of these materials could occur during routine transport, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect habitats, surface water bodies, or groundwater. Impacts associated with release, although likely localized and short-term, could potentially create a significant hazard to the public or the environment. Hazardous materials, including fuels (e.g., gasoline, diesel), hydraulic fluids, oils and lubricants are relatively common to store, transport, and handle, and in the unlikely event of a spill, are relatively easy to clean up, treat, or biodegrade. Hazardous materials that are more difficult to treat, such as solvents and metals, would not be expected to be used or released in large quantities. Because the implementing agency and its contractor would be required to comply with all relevant laws and regulations associated with the transport, storage, use, and disposal of hazardous materials and waste, the PEIR determined that construction impacts would be less than significant.

Operation of the structural BMPs would generally require minimal to no transport, usage, or disposal of hazardous materials, other than require periodic transport and use of chemicals for purposes of operating equipment (e.g., weed-whackers), maintenance activities, and the transport of workers in vehicles. Further, the implementing agency would be required to comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste during operation of the proposed program; therefore, the PEIR determined that the impacts would be less than significant.

As addressed in the PEIR, the Proposed Project would involve use of small quantities of hazardous materials such as fuels and lubricants during Project construction. Transport, handling, disposal, and storage of these materials to and from the Project site would occur in compliance with applicable regulations and best management practices would be used during construction to prevent and control spills and leaks of these substances.

The County would be required to comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste. Therefore, the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The Proposed Project would not result in any material difference in the impacts associated with use and transport of hazardous materials compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new

information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.7-2: The proposed program could create a significant hazard to the public or the environment through the accumulation of potentially hazardous materials into BMPs.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that operation of proposed stormwater improvements would divert the existing flows from existing storm drains to infiltration basins and existing surface flows into catch basins and bioswales leading to infiltration wells, which would not increase the potential for accidental releases of hazardous materials into the environment.

The entire stormwater drainage system, as augmented by structural BMPs, would collect and retain sediment and chemicals from urban runoff, along with any accidental or illicit spills of hazardous materials, which could occur in a large event such as a catastrophic spill, or could in small concentrations as in contaminants picked up and carried by stormwater in urban runoff from the streets. Contaminants in the runoff water or as concentrated spills could accumulate in the soils and vegetation of the structural BMPs.

In the case of large spills that occur within the capture area of a BMP, BMPs would retain the spill and prevent or reduce any further contamination downstream since they would be designed to capture flows up a to a certain volume. This retention would help to minimize impacts of large spills compared to existing conditions.

As under current conditions, agencies such as the Los Angeles County Office of Emergency Management would have the responsibility for responding to and remediating spills, in compliance with applicable regulations and coordination with regulatory agencies such as the LARWQCB or the Department of Toxic Substance Control (DTSC).

In the case of small concentrations of contaminants either from small spills or the accumulation of contaminants from urban runoff, structural BMPs would collect and retain pollutants on site. Over time, infiltration of stormwater runoff could increase contaminant loading in shallow soils and groundwater. Over a long period of time, concentrations of these contaminants could increase, ultimately resulting in contaminated soils and groundwater. The proposed filtration units would capture contaminants in filter media, thereby assisting in reducing contaminant loading to receiving waters compared with existing conditions. Further, the vegetation and microbial activity in soil would work to biodegrade the typical fuels, oil, and grease in local urban runoff.

To address the accumulation of contaminants in the soil at the infiltration BMPs, Mitigation Measure HAZ-1 would be implemented, which would require periodic removal and replacement of surface soils and media to reduce the potential for long-term loading that could lead to hazardous concentrations in soils and groundwater. The PEIR determined that with implementation of Mitigation Measure HAZ-1, potential impacts associated with accumulation of contaminants in soils would reduce the potential for impacts to less-than-significant levels.

The Proposed Project would include the capture and infiltration of stormwater and surface water flows. As described in the PEIR, there is the potential that contaminants in the stormwater or concentrated spills could accumulate in the soils and vegetation of the BMPs that would be implemented under the Proposed Project. The proposed filtration systems that would be located at some of the medians would capture contaminants in filter media and the vegetation, and microbial activity in soil would work to biodegrade the typical fuels, oil, and grease in local urban runoff, which would reduce the potential for accumulative of contaminants. Further, Mitigation Measure HAZ-1, which requires a maintenance plan for the BMPs, that includes periodic removal and replacement of potentially impacted surface materials would ensure no accumulation of potentially hazardous materials into BMPs would occur. Thus, the Proposed Project would not result in any material difference in the impacts associated with accumulation of hazard materials in the BMPs compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.7-3: The proposed program could emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing school.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that some structural BMPs may be installed in the vicinity of a school, and because construction and operation activities could potentially involve hazardous materials, the proposed program would have the potential to emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. As discussed in Impact 3.7-1, individual structural BMP projects would be required to comply with regulations that would avoid or minimize the potential for releases of hazardous materials during the construction of the BMPs or as a result of the BMP collecting contaminants from an off-site spill, and, thus, the PEIR determined that potential impacts to nearby schools are considered less than significant.

The PEIR further determined that structural BMPs constructed on school properties may collect spills from off-site sources or accumulate contaminants from urban runoff in soil in the BMPs over time. However, with implementation of Mitigation Measure HAZ-1, discussed under Impact 3.7-2 above, impacts would be less than significant.

The nearest school to the Project site, Montebello Park Elementary School, is located approximately 50 feet (0.01-mile) southwest of the Northside Drive Median and 700 feet (0.13-mile) northwest of the Southside Drive Median. As addressed in the PEIR, the Proposed Project would be required to comply with regulations that would avoid or minimize the potential for releases of hazardous materials during the construction of the Proposed Project and in response to accidental spills. No BMPs would be installed on

school property. Thus, the Proposed Project would not result in any material difference in the hazard materials impacts within one quarter mile of school compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.7-4: The proposed program could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined if a structural BMP were to be located on a hazardous materials site or downslope or downgradient of a hazardous materials site, construction workers could be exposed to hazardous materials at the site or migrating from the nearby site. Further, earth-moving activities could mobilize hazardous materials to downslope or downgradient locations. The PEIR determined that review of lists of hazard materials sites would identify known hazardous material sites, but it is also possible that a site may be on an unknown hazardous materials site not yet included in the databases. Therefore, contaminated soil and/or groundwater could be encountered during excavation posing a health hazard to construction crews, the public, and the environment. The PEIR determined that implementation of Mitigation Measure HAZ-2 requiring a Phase I Environmental Site Assessment (ESA) in areas where hazardous material use or management may have occurred would reduce the potential impact to less than significant.

As described in Section 4.7.1 above, the GeoTracker database identifies one LUST site within the LMD and several near the edge of LMD. All of these sites have been closed and, further, none are located adjacent to a Project median site or located downslope or downgradient. There is one open LUST site approximately 0.27-mile east of the Project site when cleanup actions are being taken. Groundwater is not likely to be affected at this site, and further given the distance from the Project site (0.5-mile from the nearest Project site median), the Proposed Project would not pose of risk of hazard to the public or the environment associated with the LUST sites.

There are open Clean Up sites located southeast, southwest, and northeast of the Project site. As described in Section 4.7.1 above, none of the Clean Up sites are located adjacent to any Project medians or sidewalks, and, additionally, remediation and monitoring has or is occurring at these sites. Groundwater plumes at the sites to the south are generally constrained at or near the Clean Up site boundaries and are stable or decreasing. Additionally, groundwater in the region is generally downgradient in a west-southwest direction and, thus, the sites to the south would not pose a risk of groundwater contamination to the LMD. The LMD is downgradient to the Clean Up site located to the

northeast at 1800 and 1808 Whittier Boulevard. Clean Up actions have occurred at this site and based on a Phase II assessment completed in 2012, as described in Section 4.7.1, site contamination has been addressed and no further cleanup action at the site is recommended. Therefore, construction of the Proposed Project would not pose of risk of hazard to the public or the environment associated with the Clean Up sites. Further, the proposed BMPs sites are within a residential neighborhood and not located in areas where hazardous material use or management may have occurred and therefore, no further evaluations (i.e., Mitigation Measure HAZ-2) is required for the Proposed Project.

Thus, the Proposed Project would not result in any material difference in the impacts relative to hazardous material sites compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.7-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, for a project within the vicinity of a private airstrip, the project could result in a safety hazard for people residing or working in the project area.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the proposed structural BMPs would result not in the construction of structures of significant height or generate significant glare or distracting light. However, BMPs in the vicinity of an airport that would attract wildlife (i.e., constructed wetlands) could result in less than significant impacts with implementation of Mitigation Measure HAZ-3 requiring compliance with Federal Aviation Administrative criteria for stormwater management facilities within an airport land use plan.

The Project site is not located within an airport land use plan or in the vicinity of a public airport or public use airport. San Gabriel Valley Airport is the closest airport, located approximately 7.5 miles northeast of the Project site. The Proposed Project would not attract wildlife in the vicinity of an airport or otherwise result in any airport-related safety hazard for people working in the Project area. Therefore, no impact would result and compliance with Mitigation Measure HAZ-3 is not required for the Proposed Project. Thus, the Proposed Project would not result in any material difference in hazards associated with proximity to an airport compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.7-6: The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that construction activities associated with implementation of structural BMPs may involve installation of pipelines or other infrastructure within roadway rights-of-way that could result in temporary lane or roadway closures or block access to roadways and driveways for emergency vehicles. Such construction-related impacts, although temporary, could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. However, notification to emergency services providers would ensure that emergency responsiveness was not impaired.

Once installed, the BMPs would have no effect on emergency response plans or evacuations plans. Therefore, the PEIR determined that impacts on an emergency plan or evacuation plan are less than significant.

The Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Temporary lane closures would be required during construction. Lane closures would occur in compliance with standard traffic control requirements. Further, as discussed in greater detail in under Impact 3.12.1 in Section 4.12 below, notification to emergency services providers would occur, which would ensure that emergency responsiveness was not impaired and that no impairment of emergency response plan or evacuation plan would occur. Project operations would be confined to the medians, sidewalks and underground and would not impair or interfere with an adopted emergency response plan or emergency evacuation plan. Thus, the Proposed Project would not result in any material difference in the impacts on an emergency plan or evacuation plan compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.7-7: The proposed program could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined most of the BMPs are likely to be constructed within developed urban areas with no possibility for wildfires. For BMPs located in undeveloped areas, adherence to federal and state regulations would reduce the potential impacts from wildfires to less

than significant. Therefore, impacts associated with wildlands fire was determined to be less than significant.

The Project site is in an urban area surrounded by developed lands. It is not within a high fire severity zone. Therefore, no impact would result. Thus, the Proposed Project would not result in any material difference in the wildlands fire impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hazards and hazardous materials. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.7.3 Applicable PEIR Mitigation Measures

Mitigation Measure HAZ-1 is the only PEIR mitigation measure for impacts to Hazardous and Hazardous Materials applicable to the Proposed Project:

HAZ-1: Implementing agencies shall prepare and implement maintenance practices that include periodic removal and replacement of surface soils and media that may accumulate constituents that could result in further migration of constituents to sub-soils and groundwater. A BMP Maintenance Plan shall be prepared by Implementing Agencies upon approval of the individual BMP projects that identifies the frequency and procedures for removal and/or replacement of accumulated debris, surface soils and/or media (to depth where constituent concentrations do not represent a hazardous conditions and/or have the potential to migrate further and impact groundwater) to avoid accumulation of hazardous concentrations and the potential to migrate further to sub-soils and groundwater. The Maintenance Plan shall include vector control requirements.

The BMP Maintenance Plan may consist of a general maintenance guideline that applies to several types of smaller distributed BMPs. For smaller distributed BMPs on private property, these plans may consist of a maintenance covenant that includes requirements to avoid the accumulation of hazardous concentrations in these BMPs that may impact underlying sub-soils and groundwater. Structural BMPs shall be designed to prevent migration of constituents that may impact groundwater.

4.8 Hydrology and Water Quality

Hydrologic Resources Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.8-1: The proposed project would violate water quality standards or waste discharge requirements or further degrade water quality.	☐	☒
Impact 3.8-2: The proposed project would result in higher groundwater levels and could potentially affect groundwater quality.	☐	☒
Impact 3.8-3: The proposed project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site.	☐	☒
Impact 3.8-4: The project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.	☐	☒
Impact 3.8-5: The proposed project could create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	☐	☒
Impact 3.8-6: The project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.	☐	☒
Impact 3.8-7: The project could place within a 100-year flood hazard area structures that would impede or redirect flood flows.	☐	☒
Impact 3.8-8: The proposed project could expose structures to a significant risk of loss, including flooding as a result of the failure of a levee or dam.	☐	☒
Impact 3.8-9: The proposed project could place structures in areas subject to inundation by seiche, tsunami, or mudflow.	☐	☒

4.8.1 Project Setting

The Project site is located in an area that has a mild climate with warm dry summers and cool winters. Average annual precipitation in the East Los Angeles region is 15 inches

which occurs mostly during late autumn, winter, and early spring. There is little precipitation during the summer months.[32]

The Project area is within the East Los Angeles District of the California Water Services Company (Cal Water). The East Los Angeles District, which includes East Los Angeles and portions of surrounding cities, has 10 groundwater wells, 17 storage tanks, 26 booster pumps, four imported water connections and 260 miles of pipeline.[33]

No permanent surface water is present on the Project site which is occupied by turf, hardscaping, and trees. Run-off from the Project site is discharged into underground pipes that ultimately discharge into the Los Angeles and Rio Hondo Rivers.

The Project site is located within the Los Angeles River watershed and specifically the Project site is located within the EWMP planning area for the Upper Los Angeles River. This planning area encompasses 485 square miles of watershed and over 50 miles of the Los Angeles River from the headwaters to just upstream of the estuary.

4.8.2 Impact Analysis

Section 3.8, Hydrology and Water Quality, of the PEIR, provides a discussion regarding the existing hydrology and water quality conditions within the Project area and evaluates whether the proposed program would result in significant hydrology or water impacts. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.8-1: The proposed project would violate water quality standards or waste discharge requirements or further degrade water quality.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that construction, demolition, and renovation activities associated with the installation of some BMPs could lead to ground disturbance and polluted runoff, although compliance with the NPDES construction general permit (discussed under Impact 3.5-2 in Section 4.5 above) would ensure that the construction of the structural BMPs would have no temporary or permanent impact to water quality.

Operationally, the PEIR determined that structural BMPs are designed to reduce the transport of pollutants in stormwater, thereby helping improve water quality. The PEIR specifically identified that the structural BMPs that have stormwater retention and infiltration functions are designed to reverse the impacts from urbanization on the natural hydrograph and water quality. Furthermore, the widespread implementation of BMPs with these functions will significantly reduce stormwater flow volumes and pollutant loading to creeks and rivers. The increased infiltration of stormwater from the widespread

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[32] California Water Services. 2016. 2015 Urban Water Management Plan East Los Angeles District. June. Available: https://www.calwater.com/docs/uwmp2015/ela/2015_Urban_Water_Management_Plan_Final_(ELA).pdf. Accessed September 2017.

[33] California Water Services. 2016. 2015 Urban Water Management Plan East Los Angeles District. June. Available: https://www.calwater.com/docs/uwmp2015/ela/2015_Urban_Water_Management_Plan_Final_(ELA).pdf. Accessed September 2017.

implementation of these projects will have the effect of increasing recharge to the groundwater, reducing peak storm flows and altering the hydrograph toward more natural conditions. The increase in infiltration of stormwater from these BMPs will also raise groundwater levels and increase groundwater seepage to creeks and rivers following storm events.

These structural BMPs would provide improved water quality through infiltration and treatment (e.g., filtration, settling, sedimentation, absorption, straining, and biological or chemical transformations) that would minimize the off-site transport of typical urban runoff pollutants. Therefore, the PEIR determined that implementation of the proposed BMPs would have no adverse impacts to surface water quality.

The Project site consists of turf medians and sidewalks with relatively flat topography. During construction of the Proposed Project, soil exposure would occur during site clearing and excavation allowing for possible erosion and runoff into storm drains. The Proposed Project would disturb more than an acre and thus would be required to develop a SWPPP to prevent the transport of polluted runoff in compliance with General Permit for Construction Activities. Further, construction would also be required to comply with the County's Construction Site Best Management Practices Manual. Compliance with regulatory requirements, including implementation of construction BMPs required by the SWPPP would ensure that the Proposed Project would not potentially violate water quality standards or waste discharge requirements during construction.

The Proposed Project would implement structural BMPs to that treat and capture stormwater, resulting in water quality improvements by reducing the amount of pollutants entering the Los Angeles and Rio Hondo Rivers from a 3,000-acre tributary area. The structural BMPs would include infiltration wells within medians to infiltrate stormwater from surface flows tributary to the Project area and diverted from nearby storm drains. The water diverted from the storm drains would be passed through filtration units for pretreatment. Catch basins would also be constructed and reconfigured near the medians and sidewalks to capture surface flows tributary to the Project area. The proposed catch basins would be fitted with automatic retractable screens and connector pipe screens for pretreatment. Flows from the catch basins and diverted from the storm drains would be directed toward various infiltration wells within the medians.

Tree wells integrated with infiltration cells would also be installed within the sidewalk along Northside Drive north of Olympic Boulevard. This type of treatment configuration would consist of a redesigned catch basin, a filtration unit, a structural cell module system, and a infiltration well. This configuration features a four-step treatment process that involves diversion, adsorption, absorption, and infiltration. The filtration unit that would be constructed upstream from the structural cell module system would filter out the pollutants from the stormwater runoff. Inside the filtration unit would be a series of filter cartridges that would be filled with biochar and sand mixture. The filter cartridges would be made up of 30 percent biochar and 70 percent sand wrapped by fabric. The moisture retaining property of the biochar in the structural cell module system may reduce the frequency of watering the tree planted on top of the structural cell module system. Curb cuts at the tree wells would allow passage of surface flows to enter the tree wells and the underlying infiltration cells. The tree wells and fill material within the infiltration cells would treat the surface flows. An under drain pipe would convey any excess water within

the tree wells and cells into infiltration wells located within the medians at Northside Drive and Olympic Boulevard.

The capture and treatment of stormwater via the structural BMPs implemented as part of the Proposed Project, would reduce contaminant loading to the Los Angeles and Rio Hondo Rivers compared with existing conditions. This would contribute to regional efforts in meeting TMDL waste load allocations. Also, as described in the PEIR, the increased infiltration with implementation of the Proposed Project would contribute to the overall EWMP-wide increase in recharge to the groundwater, reduction of peak storm flows and alteration of the hydrograph toward more natural conditions. Therefore, operation of the Proposed Project would be a benefit to water quality and would not violate any water quality standards. Thus, the Proposed Project would not result in any material difference in the water quality impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-2: The proposed project would result in higher groundwater levels and could potentially affect groundwater quality.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that increased capture of stormwater is a key element to integrated water supply planning in southern California. The increased water supplies captured by the infiltration basins through the EWMP areas would be a beneficial impact. However, in areas with shallow groundwater tables or impermeable soils, recharge could result in mounding that affects subsurface infrastructure such as building or bridge foundations. Infiltration BMPs would not be suitable in areas of low permeability where subsurface structures could be adversely affected by groundwater mounding. Mitigation Measure HYDRO-1 requires evaluation of the suitability of BMP locations for groundwater recharge.

Further, infiltration of stormwater runoff could increase contaminant loading in shallow soils and groundwater and over a long period of time, concentrations of these contaminants could increase, resulting in contaminated soils and groundwater. With filtration of source water in areas with the potential for heavy contaminant loading, non-structural source control BMPs, LID standards for the County, and implementation of Mitigation Measure HYDRO-2 which would require the implementing agencies to evaluate the need for pretreatment at each infiltration BMP, impacts to groundwater quality would be less than significant.

Proposed projects that recharge the shallow aquifers have the potential to mobilize shallow contamination and alter groundwater flow directions. If infiltration facilities are located over contaminated groundwater plumes, groundwater flow patterns could be modified such that contaminated groundwater migrates into areas that are not currently contaminated or is pushed away from existing treatment systems. Mitigation Measure

HYDRO-3 requires an evaluation of site conditions and the existence of contaminated groundwater plumes during planning stages prior to construction of infiltration galleries, trenches, and basins. With implementation of Mitigation Measures HYDRO-1, HYDRO-2, and HYDRO-3, the PEIR determined that impacts on groundwater would be less than significant.

The Proposed Project would divert stormwater and surface water from storm drains to infiltration wells. Other improvements include installation of bioswales and permeable surfaces which would also increase infiltration and reduce stormwater runoff. Therefore, the Proposed Project would have a beneficial effect on groundwater recharge by increasing infiltration and reducing the amount of runoff that is ultimately discharged to the ocean. Consistent with Mitigation Measures HYDRO-1 and HYDRO-2, an Infiltration Feasibility Investigation was conducted for the Project site (see Appendix C). The infiltration investigation concluded that, in general, all of the Project sites tested are moderately conducive to infiltrating water within the tested depths. The Infiltration Feasibility Investigation includes recommendations on depths for placement of the infiltration wells which would be implemented to maximize the infiltration capabilities of the infiltration wells and therefore, maximize recharge capabilities.

The Project site is not located in an area of shallow groundwater. Groundwater was not encountered during subsurface exploration for the Infiltration Feasibility Investigation which included borings drilled to a depth of 100 feet. Therefore, the infiltration wells would not raise local groundwater levels such that mounding affecting local infrastructure could occur, nor it is not anticipated that contaminants found in stormwater runoff collected in the structural BMPs would migrate to the groundwater and result in a lowering of groundwater quality. Additionally, filtration units would be installed at several medians to reduce the potential for contaminant loading to occur in groundwater and soils.

As discussed in Section 4.7, a database search of potential hazard sites has been conducted as required by Mitigation Measure HYDRO-3. The database search indicates that there are no groundwater plumes underlying the site or immediately adjacent to the Project site. Thus, the Proposed Project would not result in any material difference in the groundwater impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-3: The proposed project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the structural BMPs would be designed to minimize off-site discharge of urban runoff pollutants including siltation and sedimentation. Further, on-site infiltration of stormwater runoff would minimize erosion or transport of sedimentation into receiving waters. Through increased infiltration prior to discharge into receiving waters, flows within existing streams or rivers would receive reduced stormwater flow volumes thereby decreasing flow energies. As a result, the PEIR determined that the potential for erosion or siltation within existing streams or rivers would be reduced and the potential impact less than significant. Further, Mitigation Measure HYDRO-4 would further ensure implementing agencies would design BMP discharge locations to minimize any hydromodification impacts including erosion and scour.

The Project site consists of turf medians and sidewalks with relatively flat topography, adjacent to roadways in an urban area with residential and commercial uses. There are no streams, rivers or other waterways located at or near the Project site. As discussed under Impact 3.8-1 above, soil exposure would occur during site clearing and excavation; however, through compliance with required permits, BMPs would be implemented to minimize any possible on-site erosion during construction. There are no areas of exposed soils near the Project site that could experience off-site erosion due to construction activities.

The Proposed Project would implement structural BMPs, including infiltration wells and bioswales that would improve capture and treatment of stormwater flows. This would reduce the amount of water flowing through existing storm drains and entering the Los Angeles and Rio Hondo Rivers. This diversion of stormwater from existing storm drains would have benefits to the existing drainage pattern by increasing groundwater recharge and reducing the quantity of stormwater and thereby decreasing flow energies of discharge into the Los Angeles and Rio Hondo Rivers. As a result, the potential for erosion or siltation within existing streams or rivers would be reduced. Additionally, no hydromodification impacts, including flooding, erosion or scour would occur; therefore, Mitigation Measure HYDRO-4 is not applicable to the Proposed Project. Thus, the Proposed Project would not result in any material difference in drainage pattern impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-4: The project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the widespread implementation of BMPs that increase stormwater retention and encourage on-site infiltration in urban areas of all the EWMP groups will significantly reduce stormwater flow volumes especially during peak storm flow events. By retaining stormwater flows and either infiltrating or releasing these flows closer to the natural hydrograph, the change in drainage patterns would result in reduced peak flows and as a result a reduced potential for flooding on- or off-site. Therefore, the potential impact would be less than significant.

The Project site consists of turf medians and sidewalks with relatively flat topography, adjacent to roadways in an urban area with residential and commercial uses. There are no streams, rivers or other waterways located at or near the Project site. The Proposed Project would divert stormwater flows that have already entered the storm drain system from a 3,000-acre tributary area, as well as diverting surface flows by implementing bioswales, permeable surfaces, and catch basins that direct waters into the infiltration wells. This would reduce the rate and amount of surface water flowing into the storm drains from the Project area, as well as the rate and amount of storm drain runoff entering the receiving waters (Los Angeles and Rio Hondo Rivers) from the Project site and 3,000-acre tributary area. During storm conditions, any stormwater and surface water that cannot be captured by the infiltration wells would flow through the existing storm drain system as currently occurs. However, as a portion of the flows would continue to be captured by the structural BMPs, the amount of flows entering the storm drain system would be less than existing conditions. Therefore, the existing storm drain system has the capacity to accommodate the flows from the Proposed Project and the Project would not result in flooding conditions on- or off-site. Further, the Proposed Project would contribute to the overall EWMP program benefits addressed in the PEIR of reduced peak flows and as a result a reduced potential for flooding on- or off-site. Thus, the Proposed Project would not result in any material difference in the on- or off-site flooding impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-5: The proposed project could create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the structural BMPs would have an overall effect of reducing off-site stormwater flows through on-site infiltration and detention. As a result of having a net effect of reducing stormwater runoff volumes, there would be a less-than significant effect on the capacity of existing or planned stormwater drainage systems. Further, the BMPs

would also provide improvements to water quality of receiving waters as that is the primary purpose of these BMPs. Therefore, the PEIR determined that impacts on stormwater drainage system would be less than significant.

As addressed in the PEIR, the Proposed Project would implement structural BMPs that would improve stormwater infiltration and reduce the amount of stormwater flowing through the existing storm drain system, and thus no exceedance of existing stormwater capacity would occur. Further, the infiltration of stormwater would reduce the amount of pollutants entering the receiving waters.

Construction activities typically involve equipment that has the potential to leak hazardous materials that may include oil and gasoline. It is expected that the construction contractor would use standard containment and handling protocols to ensure that these vehicles do not leak any material that may add sources of polluted runoff to the storm drain system. As discussed under Impact 3.8-1 above, construction BMPs would be implemented during construction, which would minimize the potential for any polluted runoff to occur.

Therefore, the Proposed Project would not contribute runoff water during construction or operation that would exceed the capacity of existing or planned storm water drainage systems or provide a substantial additional source of polluted runoff. The Proposed Project would not result in any material difference in the impacts on the stormwater drainage system compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-6: The project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the structural BMPs would not include the construction of any housing and therefore there would be no impact related to placement of housing in a flood hazard area.

The Project site is located within an area that is determined to be outside the 100- and 500-year floodplains as mapped on the federal Flood Insurance Rate Map # 06037C1663F (2008). In addition, no housing would be constructed as a part of the Project. Thus, the Proposed Project would not result in any material difference in the flooding impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new

information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-7: The project could place within a 100-year flood hazard area structures that would impede or redirect flood flows.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the majority of the structural BMPs would consist of either features with a very low profile (e.g., drainage swales, infiltration trenches, galleries, and pervious pavement) or features that are subterranean (e.g., detention basins, dry wells). However, structural BMPs could include aboveground detention basins, which would be required to adhere to any local flood zone construction permitting requirements such that they would not be impede or redirect flood flows. As a result, the PEIR determined the impact of structural BMPs would be less than significant.

As noted in Impact 3.8-6 above, the Project site is located outside of the 100- and 500-year floodplain hazard areas. Further, no aboveground detention basins or aboveground structures with the potential to impede or redirect flood flows would be constructed. No flood flows in the Project area would be impeded or redirected. Thus, the Proposed Project would not result in any material difference in the flooding impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-8: The proposed project could expose structures to a significant risk of loss, including flooding as a result of the failure of a levee or dam.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that majority of the structural BMPs would consist of features with a very low profile and would be designed to aid in the conveyance of runoff and high flows. Aboveground detention basins would not be staffed and not likely to be susceptible to substantive damage in the event of a catastrophic failure of a levee or dam. As a result, the PEIR determined that impact of structural BMPs would be less than significant.

The Proposed Project would be very low profile and not result in the construction aboveground detention basins or any habitable structures and there would be no impact related to the exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Thus, the Proposed Project would not result in any material difference in the flooding impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.8-9: The proposed project could place structures in areas subject to inundation by seiche, tsunami, or mudflow.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The EWMP program area includes some coastal areas and areas that are adjacent to enclosed bodies of water that could be subject to seiche, tsunami, or mudflow. Any larger structures, such as aboveground detention basins would not be staffed and any potential damage they would incur would likely be easily repaired. As a result, the PEIR determined that the potential impact to structures subject to inundation by seiche, tsunami, or mudflow would be less than significant.

The Project site is located in East Los Angeles, over 17 miles from the coast and not near an area at risk for mudflow or large water body where a seiche could occur. Therefore, the Proposed Project would not expose people or structures to hazards associated with seiches, tsunamis, or mudflows and no impact would occur. Thus, the Proposed Project would have no impact and would not result in any material difference in the seiche, tsunami, or mudflow impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to hydrology and water quality. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.8.3 Applicable PEIR Mitigation Measures

The Infiltration Feasibility Investigation prepared for the Proposed Project addresses Mitigation Measures HYDRO-1 and HYDRO-2 (listed below), requiring an evaluation of the suitability of each infiltration site. A regulatory database review conducted herein (see Section 4.7) addresses Mitigation Measure HYDRO-3. Mitigation Measure HYDRO-4 is not applicable to the Proposed Project. The applicable and completed mitigation measures are listed below:

HYDRO-1: Prior to approving an infiltration BMP, the Permittee shall conduct an evaluation of the suitability of the BMP location. Appropriate infiltration BMP sites should avoid areas with low permeability where recharge could adversely affect neighboring subsurface infrastructure. **[Completed]**

HYDRO-2: Prior to approving an infiltration BMP, the Permitee shall identify pretreatment technologies, type, and depth of filtration media; depth to groundwater; and other design considerations necessary to prevent contaminants from impacting groundwater quality. The design shall consider stormwater quality data within the BMP's collection area to assess the need and type of treatment and filtration controls. Local design manuals and ordinances requiring minimum separation distance to groundwater shall also be met as part of the design. **[Completed]**

HYDRO-3: Prior to the installation of an infiltration BMP, the Permittee shall conduct a regulatory database review for contaminated groundwater sites within a quarter mile of the proposed infiltration facility. The review shall include locations of on-site wastewater treatment systems that could be affected by the BMP. The Permittee shall identify whether any contaminated groundwater plumes or leach fields are present within close proximity to the BMP location that could be affected by infiltrated water and whether coordination with the local and state environmental protection overseeing agency and responsible party is warranted prior to final design of infiltration facility. **[Completed]**

4.9 Land Use and Agriculture

Land Use and Agriculture Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.9-1: The proposed program could physically divide an established community.	☐	☒
Impact 3.9-2: The proposed program could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the program (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	☐	☒
Impact 3.9-3: The proposed program could conflict with any applicable habitat conservation plan or natural community conservation plan.	☐	☒
Impact 3.9-4: The proposed program could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The proposed program could involve other changes in the existing environment which, due to their location or nature, could result in conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use.	☐	☒

Impact 3.9-5: The proposed program could conflict with existing zoning for agricultural use, or a Williamson Act contract.	☐	☒
Impact 3.9-6: The proposed program could conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). The proposed program could result in the loss of forest land or conversion of forest land to non-forest use.	☐	☒

4.9.1 Project Setting

The County manages land use through the Land Use Element of the Los Angeles General Plan and the Zoning Ordinance (Title 22 of the Los Angeles County Code). The General Plan sets forth a county-wide policy framework and presents goals and policies to guide county-wide activities; it also consists of area-wide and community plans that address local issues of unincorporated portions of the county and are extensions or refinements of the county-wide policy. The current General Plan was adopted in 2015.

The project site is within the boundaries of the East Los Angeles Community Plan, which establishes a framework of goals, policies, and programs to provide guidance that affects development within the plan boundaries. The Community Plan was first adopted in 1978, and comprehensively revised in 1988. The Community Plan includes Physical Environmental Goals that include retaining the single family residential lifestyle of the community, protecting community health, safety, and general welfare, and encouraging high standards of development and improve the aesthetic qualities of the community.

The Zoning Ordinance regulates the location, height, and size of buildings, structures; parcel size, regulates land uses; establishes requirements for off-street parking; establishes building setback lines; and use matters related to land use. The Project site is primarily zoned residential with varying densities, with the exception of a portion of the sidewalks on Northside Drive immediately north of Olympic Boulevard, which are adjacent to land zoned for commercial uses. (The sidewalks are within the public right of way and do not have a designated zoning classification).

Section 22.44.118 of the Los Angeles County Code is the East Los Angeles Community Standards District, which consists of supplemental zoning regulations applicable only East Los Angeles. The Community Standards District was established to ensure that goals and policies of the East Los Angeles Community Plan are accomplished in a manner that protects the health, safety, and general welfare of the community. Section 22.44.118 sets development regulations for future development, such as height limitations and other standards applicable to residential, commercial, and industrial development. No development regulations set forth in Section 22.44.118 are directly applicable to the Proposed Project improvements.

The Project site is located in East Los Angeles, which is a densely developed urban area east of downtown Los Angeles with no agricultural land or forests. The Project site is not

located on or near land designated for agricultural use as defined by the Farmland Mapping and Monitoring Program or the Williamson Act, nor is there designated forest land at or near the site. As described above, the Project site is in an area zoned for residential and commercial land uses.

4.9.2 Impact Analysis

Section 3.9, Land Use and Agriculture, of the PEIR, discusses existing land uses and agricultural resources that may be affected by EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.9-1: The proposed program could physically divide an established community.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that BMPs are most likely to be implemented in high-density urban, commercial, industrial, and transportation areas where they would either replace or improve upon existing stormwater infrastructure. The BMPs would augment the physical structure of established communities, blending in as part of the existing landscape; enhancing water quality of existing communities. Additionally, much of the implementation would consist of the retrofitting of already-established stormwater infrastructure, and would not physically divide an established community. The PEIR determined that no impact would occur.

The Proposed Project consists of stormwater and landscape improvements within existing medians and sidewalks. The Proposed Project would occur within the LMD boundaries and neither construction nor operation would include features such as a highway, above-ground infrastructure, or an easement that would cause a permanent disruption to an established community or otherwise create a physical barrier within an established community. Thus, the Proposed Project would not result in any material difference in the land use impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and agriculture resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.9-2: The proposed program could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the program (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that implementing agencies will identify appropriate locations based on the local zoning codes. Approval by local jurisdictions of these land use conditions

would ensure consistency with local plans. The proposed EWMP Program would implement LID techniques the implementation of structural BMPs would support implementation of the County's LID Ordinance. The structural BMPs associated with the proposed program would complement the Los Angeles County's land use goals and policies for the built environment under the 1980 General Plan (in effect at the time the PEIR was certified).

Implementation of BMPs to enhance water quality in the region would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the PEIR determined that no impact would occur.

The existing land use of the Project site includes residential and commercial development. The Proposed Project consists of stormwater, recreation, and landscape improvements in existing medians and sidewalks. The improvements would be compatible with the surrounding uses and would not conflict with existing zoning or general plan designations. Further, the Project would provide aesthetic, water quality, and recreational benefits, which it is supportive of goals, policies, and vision of the County of Los Angeles General Plan and East Los Angeles Community Plan. Thus, the Proposed Project would not result in any material difference in the land use impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and agriculture resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.9-3: The proposed program could conflict with any applicable habitat conservation plan or natural community conservation plan.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The structural BMPs would be located primarily in high-density urban, commercial, industrial, and transportation areas, where they would either replace or improve upon existing stormwater infrastructure. Only one habitat conservation plan or natural community conservation plan has been adopted within the EWMP areas, the City of Rancho Palos Verdes Natural Community Conservation Plan (NCCP) Subarea Plan, which has consistent goals with the EWMP program. The PEIR determined that impacts would be less than significant.

The Project site is in an urban area in East Los Angeles and not located within or a near a habitat conservation plan or natural community conservation plan, including the City of Rancho Palos Verdes NCCP Subarea Plan. The Project site is also not located within any SEA. The Puente Hills SEA is located approximately eight miles northeast of the Project site. Therefore, the Proposed Project would not conflict with such plans. Thus, the Proposed Project would have no impact and would not result in any material difference in land use impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and agriculture resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.9-4: The proposed program could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The proposed program could involve other changes in the existing environment which, due to their location or nature, could result in conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that only small areas of designated farmlands exist within the EWMP program area. Further, structural BMPs associated with the EWMPs would be located primarily in high-density urban, commercial, industrial, and transportation areas where they would replace or improve upon existing stormwater infrastructure. None of the BMPs would replace designated farmland. As such, the PEIR determined that no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur.

The Proposed Project would be located in an urban area with residential and commercial uses and would not be located on or near agricultural or forest land, nor would it convert prime agricultural lands to non-agricultural use. No other changes in the existing environment or uses would occur which, due to their location or nature, could result in conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use. Thus, the Proposed Project would have no impact and would not result in any material difference in the impacts of conversion of agricultural or forest land uses compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and agriculture resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.9-5: The proposed program could conflict with existing zoning for agricultural use, or a Williamson Act contract.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the structural BMPs associated with the EWMPs would be constructed primarily on streets, sidewalks, and in parks or other city-owned lands and,

therefore, would not conflict with existing zoning for agricultural uses and there are no Williamson Act contracts in the Project area. As such, the PEIR determined that there would be no impact on agricultural zoning or land under a Williamson Act contract.

The Project site and surrounding area is zoned for residential and commercial uses. The Project site is not located on or near land zoned for agriculture use or under a Williamson Act contract. Thus, the Proposed Project would have no impact and would not result in any material difference in agricultural impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and agriculture resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.9-6: The proposed program could conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). The proposed program could result in the loss of forest land or conversion of forest land to non-forest use.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that there is no land within the EMWP areas zoned as forest land or timberland and, therefore, no impact would occur.

The Project site includes medians and sidewalks in a developed area and is not located near timberland. There is no state or federally designated forests or timberland zoning at the Project site or in the Project vicinity. Thus, the Proposed Project would have no impact and would not result in any material difference in impacts on land used and/or zoned for forest land or timberland compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to land use and agriculture resources. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.9.3 Applicable PEIR Mitigation Measures

The PEIR does not identify any significant Land Use and Agriculture impacts requiring mitigation.

4.10 Noise

Noise Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.10-1: The proposed program could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	☐	☒
Impact 3.10-2: The proposed program could result in exposure of persons to, or generation of, excessive groundborne vibration.	☐	☒
Impact 3.10-3: The proposed program could result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	☐	☒
Impact 3.10-4: The proposed program could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	☐	☒
Impact 3.10-5: For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within 2 miles of a public airport or public use airport, implementation of the proposed program could expose people residing or working in the area to excessive noise levels.	☐	☒
Impact 3.10-6: For a project located in the vicinity of a private airstrip, the proposed program could expose people residing or working in the project area to excessive noise levels.	☐	☒

4.10.1 Project Setting

The LMD is within a distinct geographic area generally surrounded by Whittier Boulevard to the north, Vail Avenue to the east, Ferguson Drive to the south and Gerhart Avenue to the west as shown on Figure 1. The LMD is bisected by Garfield Avenue and Olympic Boulevard. The closest freeway is Interstate 5 (I-5) as shown on Figure 1, which, at the closet point is approximately 0.5-mile southwest of the LMD. A Metrolink rail line is located one block south of Ferguson Drive (approximately 0.05-mile from the LMD).

The Project is in an area of primarily residential uses, with neighborhood commercial uses along the major roadways and intersections. The LMD is bordered by residential and commercial uses to the north and east and industrial uses to the south and west. Noise receptors include the residences within the LMD located closest to the Project site medians and sidewalks, and Montebello Park Elementary School and Saybrook Park located within the LMD to the west of the Northside Drive Median.

Figure 11.2, Los Angeles County Roadway Noise Contours, in the Los Angeles County General Plan identifies noise contours of 70 community equivalent noise level (CNEL)[34] along Whittier Boulevard and Olympic Boulevard. The areas within the LMD that furthest from those roadways are in the 60 CNEL contours.

4.10.2 Impact Analysis

Section 3.10, Noise, of the PEIR, evaluates the potential for noise and ground-borne vibration impacts to result from implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.10-1: The proposed program could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that overall construction of the various structural BMPs that would be implemented under the EWMP program would occur intermittently over the program implementation period. The construction noise impacts associated with each individual structural BMP project would be short-term in nature and limited to the period of time when construction activity is taking place for that particular project.

Construction activity noise levels at and near each structural BMP construction site would fluctuate depending on the particular type, number, and duration of usage of various pieces of construction equipment. Noise levels would vary based on the amount and type of equipment in operation and the location of the activity.

The PEIR (Table 3.10-8) identifies excavation activities as the construction activity that typically generates the highest level of construction noise - 89 A-weighted decibels (dBA) equivalent noise level (Leq)[35] at 50 feet from the construction noise source. Given the urbanized environment of many of the EWMP areas, many of the structural BMP projects would be constructed in proximity or adjacent to existing land uses, including those that are noise-sensitive uses.

The construction activities for each structural BMP project would temporarily expose their respective existing off-site surrounding land uses to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels in the area while construction activities are ongoing.

Mitigation Measure NOISE-1 would reduce construction noise impacts by requiring construction activities to be conducted in accordance with the applicable local noise

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[34] CNEL, or Community Noise Equivalent Level, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 P.M. and 10:00 P.M. and after an addition of 10 dBA to noise levels between the hours of 10:00 P.M. and 7:00 A.M. to account for noise sensitivity in the evening and nighttime, respectively.

[35] The Leq, or equivalent sound level, is used to describe noise over a specified period of time in terms of a single numerical value; the Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.

regulations and standards, the implementation of noise reduction devices and techniques during construction activities, and advance notification to the surrounding noise-sensitive receptors of a structural BMP site about upcoming construction activities and their hours of operation. This would serve to reduce the construction-related noise levels at nearby receptors to the maximum extent feasible. However, for implementing agencies such as the County that have established numerical noise standards for construction activities, there may be circumstances where the construction activities for a particular structural BMP project may exceed established thresholds. The PEIR determined that if construction noise levels exceed a jurisdiction's established construction noise standards, the impact would be significant and unavoidable.

During operations, the PEIR determined that the majority of the structural BMPs would operate passively and not require the use of mechanized stationary equipment. No significant impacts were identified in associated with operation of structural BMP sites that do not employ stationary mechanized equipment.

The Proposed Project is located in a residential and commercial area. The nearest sensitive uses are residential uses, a school and park. The distance from the boundary of the proposed construction activities to the closest sensitive receptors located adjacent to the Proposed Project is less than 100 feet and, at some locations, as close as within 25 feet for pipeline installation.

The Los Angeles County Code Section 12.08.440 places limits both on the permitted hours of construction activities and on the maximum noise levels that may affect nearby properties. Construction activities are not permitted during the evening/nighttime hours of 7:00 p.m. to 7:00 a.m. or at any time on Sundays or holidays, where they could create a noise disturbance across a residential or commercial property line. During the allowable construction hours, mobile equipment shall not exceed noise levels in excess of 75 dBA at single-family residential uses, 80 dBA at multi-family residential uses, and 85 dBA at commercial and semi (mixed)-residential uses. The Municipal Code also requires that all mobile or stationary internal combustion engine–powered equipment or machinery must be equipped with suitable exhaust and air-intake silencers in proper working order.

However, the County has determined that construction noise from the Proposed Project is exempt from regulation by the Municipal Code as specified in Section 12.08.570 H, which exempts:

> Public Health and Safety Activities. All transportation, flood control, and utility company maintenance and construction operations at any time on public right-of-way, and those situations which may occur on private real property deemed necessary to serve the best interest of the public and to protect the public's health and well-being, including but not limited to street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, snow removal, house moving, vacuuming catch basins, removal of damaged poles and vehicles, repair of water hydrants and mains, gas lines, oil lines, sewers, etc.

Under the Proposed Project, construction noise would be produced from mobile construction equipment. The construction noise impacts would be short-term in nature and limited to the period of time when construction activity is taking place for that particular project. Further, construction activity noise levels at and near each construction site would fluctuate depending on the particular type, number, and duration of usage of various pieces of construction equipment. Generally, development at each median and sidewalk site may require the use of heavy construction equipment for activities such as site preparation, grading and excavation, and the infiltration well installation. Development activities could also involve the use of smaller power tools, generators, and other sources of noise. During each stage of, there would be a different mix of equipment operating and noise levels would vary based on the amount and type of equipment in operation and the location of the activity. Table 3.10-9 of the PEIR shows the typical maximum and average noise levels produced by various types of construction equipment. The table identifies a maximum noise level of 89 or 90 dBA L_{max}[36] at 50 feet and a maximum average noise level of 82 to 83 dBA L_{eq} at 50 feet during use of a concrete saw, pavement scarifier and jack hammer. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance.

Mitigation Measure NOISE-1 would reduce construction noise impacts, requiring construction activities to be conducted in accordance with the applicable local noise regulations and standards, the implementation of noise reduction devices and techniques during construction activities, and advance notification to the surrounding noise-sensitive receptors of a structural BMP site about upcoming construction activities and their hours of operation. This would serve to reduce the construction-related noise levels at nearby receptors to the maximum extent feasible. While, as described in the PEIR, temporary construction noise levels may continue to exceed the established Los Angeles County construction noise limits with implementation of Mitigation Measure NOISE-1, the Proposed Project consists of public health and safety improvements within a public right-of-way and is therefore exempt pursuant to Code Section 12.08.570 H. Therefore, the Proposed Project would be in compliance with the County's Noise Control Ordinance.

Operation of the structural BMPs implemented under the Proposed Project would be passive, no stationary mechanized equipment would be installed at the Project site. Maintenance of the BMPs site would not be a major source of noise and would occur infrequently. This level of activity would be similar to the maintenance that currently occurs (i.e., landscape maintenance). Similarly, vehicle trips associated with repair and maintenance would be minimal and irregular. This would not cause an increase in traffic noise levels that could exceed noise ordinance limits.

The enhanced recreational uses would encourage passive uses such as picnicking and walking and jogging. These uses are compatible with the residential setting and are similar to uses that may currently occur in the area on the public medians and rights-of-way and would not result in generation of noise levels in excess of noise ordinance standards.

[36] Lmax: The maximum, instantaneous noise level experienced during a given period of time.

Thus, the Proposed Project would not result in any material difference in the construction or operational noise impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.10-2: The proposed program could result in exposure of persons to, or generation of, excessive groundborne vibration.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that existing off-site receptors that are located immediately adjacent to structural BMP sites could be exposed to some degree of low level groundborne vibration associated with construction activities such as site preparation, grading, and excavation structural BMP project. The PEIR identified that vibration velocities could reach as high as approximately 0.089-inch-per-second peak particle velocity (PPV) at 25 feet from the operation of a large bulldozer. This vibration level at nearby sensitive receptors would not approach the California Department of Transportation (Caltrans) damage thresholds (presented in Table 3.10-3 of the PEIR). Although some vibration may be experienced locally, the PEIR determined that vibration-related impacts from implementation of structural BMPs would be less than significant.

As described in the PEIR, construction of Proposed Project would include activities such as site preparation, grading, and excavation that involve equipment such as dozers and rollers which have the potential to generate low levels of groundborne vibration. Persons residing and working in an area located in proximity to a Project site could be exposed to some degree of groundborne vibration or groundborne noise levels related to construction activities. Ground vibrations from construction activities only rarely reach the levels that can damage structures, but they can be perceived in the audible range and be felt in buildings very close to a construction site. As described in the PEIR, construction of the Proposed Project could result in vibration velocities as high as approximately 0.089-inch-per-second PPV at 25 feet from the operation of a large bulldozer. This would not approach damage thresholds identified in the PEIR.

Project operations would not involve mechanical equipment or activities that could generate vibration or groundborne noise, or otherwise expose persons to such impacts. Therefore, Project operation would not generate groundborne vibration.

Thus, the Proposed Project would not result in any material difference in the vibration impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information

indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.10-3: The proposed program could result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that given that the majority of the structural BMPs would operate in a passive manner (i.e., would not require the use of mechanized stationary equipment) after their construction, no operational noise levels would be generated by these structural BMPs and as such impacts associated with these types of structural BMPs would be less than significant.

The Proposed Project consists of implementation of structural BMPs, recreation enhancements, and landscape improvements. The operation of the structural BMPs would be passive and would not have motorized equipment or other noise generating features. While public use of the medians may increase due to the implementation of recreational enhancements, the medians are currently available for use by the public and increased use would not result in a substantial permanent increase in ambient noise levels. Operation of the Proposed Project would generate only minimal and irregular vehicle trips associated with occasional repair and maintenance activities. This would not cause an increase in traffic noise levels, that could exceed noise ordinance limits. Therefore, roadway noise impacts associated with the Proposed Project would not increase noise levels. The Proposed Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

Thus, the Proposed Project would not result in any material difference in permanent noise impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.10-4: The proposed program could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the construction activities for each individual structural BMP project would expose their respective nearby existing land uses to increased noise levels. When there is a structural BMP site located within 25 feet of an existing noise-sensitive land use, the resulting construction noise levels at that existing land use could reach as high as 95

dBA Leq during excavation activities, which would result in a substantial noise increase over existing ambient noise levels at that existing land use. Although implementation of Mitigation Measure NOISE-1 would reduce construction noise levels associated with the EWMP program to the maximum extent feasible, under circumstances where future structural BMP sites are located immediately adjacent to existing sensitive land uses, the noise impacts related to a substantial temporary or periodic increase in ambient noise levels above levels existing without the structural BMPs would remain significant. Therefore, this impact for the proposed program would be significant and unavoidable. Although individual structural BMP projects may have less-than-significant impacts.

As described under Impact 3.10-1 above, at some locations, construction of the Proposed Project would occur without 25 feet of noise-sensitive uses. As determined in the PEIR, the implementation of Mitigation Measure NOISE-1 would reduce construction noise impacts, requiring construction activities to be conducted in accordance with the applicable local noise regulations and standards, the implementation of noise reduction devices and techniques during construction activities, and advance notification to the surrounding noise-sensitive receptors of a structural BMP site about upcoming construction activities and their hours of operation. However, as determined in the PEIR, given the close proximity to sensitive uses, the noise impacts related to a substantial temporary or periodic increase in ambient noise levels above levels existing without the structural BMPs could remain significant with implementation of Mitigation Measure NOISE-1.

Traffic from construction worker commute, deliveries, and hauling would not result in a doubling of traffic and traffic noise associated with construction vehicles is anticipated to be negligible.

Thus, the Proposed Project would not result in any material difference in noise impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.10-5: For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within 2 miles of a public airport or public use airport, implementation of the proposed program could expose people residing or working in the area to excessive noise levels.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the EWMP program would not introduce permanent future residents or workers to the structural BMP areas and while future structural BMP sites could be located within an airport land use plan, the structural BMPs would not expose persons to excessive airport-related noise levels. The PEIR determined that exposure to airport noise would be a less than significant impact.

The Project site is located approximately 7.5 miles southwest of San Gabriel Valley Airport and is beyond the 65 CNEL contour from activities at San Gabriel Valley Airport.[37] The Project area is not considered to have excessive noise levels and is suitable for commercial and residential land use. Further, the Proposed Project consists of stormwater and landscape improvements and would only involve workers being located at the site during construction and intermittently for maintenance and repair during operations. Thus, the Proposed Project would not result in any material difference in noise impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.10-6: For a project located in the vicinity of a private airstrip, the proposed program could expose people residing or working in the project area to excessive noise levels.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

As discussed under Impact 3.10-5 above, the EWMP program would not introduce permanent future residents or workers to the structural BMP areas, and while future structural BMP sites could be located in the vicinity of private airstrips, no persons would be exposed to excessive airstrip-related noise levels. The PEIR determined that exposure to airstrip-related noise would be a less than significant impact.

No private airstrips are located within the vicinity of the Project area. The closest private airstrips are the Goodyear Blimp Base Airport located approximately 13 miles southwest of the Project site. The Los Angeles County Sherriff's Department East Los Angeles Station approximately 1.4 miles north of the Project site has a heliport; however, the heliport is used infrequently and is not a source of consistent or excessive noise. Further, the Proposed Project would not introduce permanent future residents or workers to the Project site and therefore, the Project would not expose people residing or working in the Project area to excessive noise levels. Thus, the Proposed Project would not result in any material difference in noise impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to noise. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

[37] County of Los Angeles Department of Regional Planning Airport Land Use Commission. 2017. GIS Interactive Map (A-Net). Link available at: http://planning.lacounty.gov/aluc/airports#anc-apm. Accessed September 2017.

4.10.3 Applicable PEIR Mitigation Measures

Mitigation Measure NOISE-1 is the only mitigation measure for noise impacts applicable to the Proposed Project:

NOISE-1: The implementing agencies shall implement the following measures during construction as needed:

- Include design measures necessary to reduce the construction noise levels where feasible. These measures may include noise barriers, curtains, or shields.
- Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise-sensitive land uses.
- Locate stationary construction noise sources as far from adjacent noise sensitive receptors as possible.
- If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.
- For the centralized and regional BMP projects located adjacent to noise sensitive land uses, identify a liaison for these off-site sensitive receptors, such as residents and property owners, to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For the centralized and regional BMP projects located adjacent to noise sensitive land uses, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least 2 weeks prior to groundbreaking.

4.11 Population and Housing and Environmental Justice

Population and Housing and Environmental Justice Checklist

Would the project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.11-1: Implementation of the proposed program could induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	☐	☒

Impact 3.11-2: Implementation of the proposed program could displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	☐	☒
Impact 3.11-3: Implementation of the proposed program could displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	☐	☒
Impact 3.11-4: Implementation of the proposed program could affect the health or environment of minority or low-income populations disproportionately.	☐	☒

4.11.1 Project Setting

The project site is turf medians and sidewalks in a primarily residential area. The medians and sidewalks are adjacent to residential and commercial uses. There are no housing units or other structures on the project site.

4.11.2 Impact Analysis

Section 3.11, Population and Housing and Environmental Justice, of the PEIR, addresses population, housing and employment conditions and considers socioeconomic considerations with implementation of the EWMP program to the extent that they could create adverse impacts on the physical environment. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.11-1: Implementation of the proposed program could induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the structural BMPs associated with the EWMP program would be installed to treat existing water quality impairments and would not induce population growth in the EWMP areas directly because no habitable structures would be built, or indirectly, because no extension of roads or other infrastructure that creates a growth opportunity would be developed. Further, the construction work force anticipated to support implementation of the Proposed Project would be drawn from the local Los Angeles region workforce and would not require housing. While a main goal of the EWMP is to increase infiltration and potentially increase recharge of stormwater into the groundwater basin, the amount of water potentially recharged would not be enough to indirectly support population growth. This potential additional recharge would contribute to local water supplies, but would not alter population demographics. Therefore, the PEIR determined there would be no impact on population growth, either directly or indirectly.

As addressed in the PEIR, the Proposed Project would include stormwater and landscape improvements at existing medians and sidewalks and would not build new housing or develop new infrastructure that provides growth opportunities, nor would construction

workers generate a new housing demand. The Proposed Project would implement infiltration BMPs that would promote groundwater recharge, but as described in the PEIR, this recharge would not be of sufficient amount to support population growth. Thus, the Proposed Project would not result in any material difference in the population and housing impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to population, housing, and environmental justice. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.11-2: Implementation of the proposed program could displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that implementation of structural BMPs would not impact existing housing or necessitate construction of additional or replacement housing elsewhere. Any new construction would be implemented along sidewalks and streets, in parks, and on publicly owned lands and would have no direct impact on existing homes. If projects are implemented in residential areas or streets, the projects would likely provide an improvement to the community in terms of aesthetic appearance. Therefore, the PEIR determined there would be no impact on housing.

The Proposed Project would include stormwater and landscape improvements at existing public medians and sidewalks. No displacement of existing housing would occur. Neither construction nor operation would result in the displacement of existing housing nor would it necessitate the construction of any replacement housing. Thus, the Proposed Project would have no impact and thus would not result in any material difference in the population and housing impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to population, housing, and environmental justice. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.11-3: Implementation of the proposed program could displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that implementation of structural BMPs would not displace any housing or people. Structural BMPs would generally be implemented along sidewalks and

streets, in parks, and on publicly owned lands and would have no direct impact on existing homes or residents. Therefore, the PEIR determined there would be no displacement of people and no impact would occur.

The Proposed Project would include stormwater, recreational, and landscape improvements at existing public medians and sidewalks and displacement of people or housing would occur. Thus, the Proposed Project would have no impact and would not result in any material difference in the population and housing impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to population and housing. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.11-4: Implementation of the proposed program could affect the health or environment of minority or low-income populations disproportionately.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that structural BMPs would be located throughout the County based on water quality priorities and site suitability factors, and would not be concentrated in any one area in particular. Further, the structural BMPs would generally be located on public lands (e.g., schools, parks, sidewalks, and road rights-of-way) and would treat surface water runoff in a manner that would not result in human contact with surface flows that are potentially harmful to health. Structural BMPs would not disproportionately affect the health or environment of minority or low-income populations and the PEIR determined that impacts would be less than significant.

The Proposed Project includes several medians and sidewalks at various locations in community in East Los Angeles. The community of East Los Angeles is primarily Latino (97 percent) with a median household income of $38,986, which is significantly lower than the County's median income of $56,200. [38] Additionally, the community only has 0.6-acre of parkland per 1,000 residents, which is well below the General Plan standard.

The Project would include stormwater capture and landscape and recreational improvements that would result in benefits such as improved water quality, improved recreational opportunities, and improved aesthetics. Therefore, while the Proposed Project would be implemented in a community with a sizeable minority and low-income population, it would result in community benefit overall and would not result adversely affect the health or environment of a minority or low-income population. Thus, the

[38] Los Angeles County Department of Parks and Recreation. 2016. East Los Angeles Community Parks and Recreation Plan. February.

Proposed Project would not result in any material difference in the environmental justice impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to population, housing, and environmental justice. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.11.3 Applicable PEIR Mitigation Measures

The PEIR does not identify any significant Population and Housing and Environmental Justice requiring mitigation.

4.12 Public Services and Recreation

Public Services and Recreation Checklist

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	**New Significant Impacts Not Identified in previous PEIR**	**No Changes or New Information Requiring Preparation of a Subsequent EIR**
Impact 3.12-1: The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.	☐	☒
Impact 3.12-2: The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.	☐	☒
Impact 3.12-3: The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.	☐	☒
Impact 3.12-4: The proposed program could increase the use of existing neighborhood and regional parks or other recreational facilities such	☐	☒

that substantial physical deterioration of the facility would occur or be accelerated.		
Impact 3.12-5: The proposed program could include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	☐	☒

4.12.1 Project Setting

Public services and facilities are provided and maintained by Los Angeles County. The Los Angeles County Sheriff provides police protection services to East Los Angeles. The closest Los Angeles County Sheriff Station is the East Los Angeles Station, located approximately 1.4 miles to the northwest.

Fire protection services are provided to the site by the Los Angeles County Fire Department. The nearest Fire Station, Fire Station 22 located just outside of the LMD at 928 South Gerhart Avenue, Commerce, is approximately 0.1-mile from the Project site. Additionally, Fire Station 50 at 2327 Saybrook Avenue, Commerce, is approximately 0.6-mile south of the Project and Fire Station 3 at 930 S Eastern Avenue, East Los Angeles, is approximately 1.6 miles from the Project site.

Montebello Park Elementary School is located within the LMD, approximately 50 feet southwest of the Northside Drive Median and 700 feet northwest of the Southside Drive Median. One other school, Cantwell Sacred Heart of Mary High School, is located approximately 0.1-mile north of the LMD and approximately 0.2-mile from the nearest Project median (Northside Drive Median). No other schools are located within one quarter mile of the Project site.

A standard of 4 acres of local parks per 1,000 residents in Los Angeles County is established in the Los Angeles County General Plan. However, according to the 2016 East Los Angeles Community Parks and Recreation Plan, East Los Angeles has only 0.6acre of parkland per 1,000 residents, which is well below the General Plan standard. [39]

The East Los Angeles Community Parks and Recreation Plan sets goals for improving parks and recreation in East Los Angeles, including increasing overall green space, integrating parks and healthy activities into the everyday lives of residents, enhancing public spaces that support community interaction and cultural identity, and focusing on multi-benefits urban greening projects that optimize environmental services, including improving water conservation and water quality and maximizing the urban tree canopy. The East Los Angeles Community Parks and Recreation identifies one public park within the LMD, Saybrook Park, which is located approximately 0.08 mile from the Northside Drive Median and 0.15-mile from the Southside Drive Median. The Project site medians and other medians in the LMD are identified in the plan as "other existing green space." Ashiya Park in the City of Montebello is located approximately 0.5-mile to the north. No other parks are located within 0.5-mile of the Project site.

[39] Los Angeles County Department of Parks and Recreation. 2016. East Los Angeles Community Parks and Recreation Plan. February.

4.12.2 Impact Analysis

Section 3.12, Public Services and Recreation, of the PEIR, addresses potential impacts on public services, including law enforcement services, fire protection services, parks, and schools associated with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.12-1: The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that structural BMPs associated with the EWMP would be implemented in urban areas where they would replace or improve upon existing stormwater infrastructure. They would be installed to treat existing water quality impairments and would not contribute to an increased need for fire protection services. The structural BMPs are not habitable structures, would not be constructed with flammable materials, and would not require fire protection services. The construction of the structural BMPs are not expected to result in the need for new or physically altered fire protection facilities. However, the PEIR determined that the construction of new structural BMPs in streets, sidewalks, parkland, or other facilities within existing high-density urban could temporarily disrupt the provision of fire services, resulting in potentially significant impacts. The PEIR determined that implementation of Mitigation Measure PS-1, requiring advanced notification to service providers such as fire, police, and emergency medical services, and local businesses, homeowners, about the extent and duration of construction activities would reduce potential impacts to a less-than-significant level.

The Proposed Project would implement stormwater, recreational, and landscape improvements in an area currently served by fire protection services and would not involve the construction of habitable structures or otherwise increase in the demand for fire protection services or generate a need for new fire stations in the area.

Construction activities would occur on-site, although some equipment may be staged along the edge of the street, typically along the edge of the median and outside of the traffic lanes and thus would not impede traffic movement. Temporary lane closures would be required during construction of the connecting pipelines. This could result in a temporary increase in emergency response time. As part of standard construction specifications, any partial or complete street closures must occur in compliance with the Requirements For Temporary Controls in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) Part 6 (Temporary Traffic Control) and the traffic control plan approved as part of the construction permit. The includes notifying police and fire departments of the closing or partial closing, and reopening of streets at least 48 hours in advance. Compliance with the traffic control requirements during construction would ensure that emergency vehicle access would remain available and, thus, construction of the Proposed Project would not require the addition of a new fire station or the expansion, consolidation or relocation of an

existing facility to maintain service. Compliance with the standard construction traffic control requirement and Mitigation Measure PS-1 would further reduce impacts.

During operations, all pipelines would be located underground and no operational impact to emergency response time would occur. Thus, the Proposed Project would not result in any material difference in fire service impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.12-2: The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that structural BMPs associated with the proposed program would not contribute to an increase in population requiring police protection services. The structural BMPs are not habitable structures; they include mostly unobtrusive structures, such as bioswales and pervious pavement, and are not expected to be of a nature that would require police protection services. While larger BMPs could be located in public open spaces such as parks and large parking lots, this would not result in an increased need for police services. The structural BMPs would therefore not result in the need for new or physically altered police protection facilities, as there would be no increase in the demand for police protection services. Therefore, the PEIR determined that impacts on police protection services would be less than significant.

The Proposed Project would implement stormwater, recreational, and landscape improvements in an area currently served by police protection services and would not result in an increase in the demand for police protection or generate a need for new sheriff stations in the area. Therefore, the existing law enforcement services would be adequate. As described under Impact 3.12-1 above, compliance with standard construction traffic control requirement would ensure that temporary construction impacts on emergency response times would be less than significant. Construction and operation of the Proposed Project would not result in adverse physical impacts associated with the provision of new or physically altered facilities, need for new or physically altered facilities, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection. Thus, the Proposed Project would not result in any material difference in impacts on police services compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require

substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.12-3: The proposed program could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that structural BMPs associated with the proposed program would not increase the population in the Project area, so it would not generate additional students. However, per the PEIR, some of the structural BMPs may be installed on school facilities, and these would be analyzed on a site-specific under a subsequent CEQA process. However, because of the short construction period of the types of structural BMPs under consideration, construction activities would not be anticipated to significantly affect the operation of existing school facilities such that new or physically altered facilities would be required. In addition, the long-term operation of the structural BMPs would not likely affect the operation of existing school facilities because of the relatively small scale and design of these structural BMPs. The PEIR determined that impacts on schools would be less than significant.

The Proposed Project involves implementation of stormwater, recreational, and landscape improvements, which would not generate additional population or student enrollment. While no BMPs would be installed at a school site, the Montebello Park Elementary School is located approximately 50 feet southwest of the Northside Drive Median and 700 feet northwest of the Southside Drive Median. Construction at the Northside Drive Median would be a short duration, and thus, construction activities would not be anticipated to significantly affect the operation of existing school facilities such that new or physically altered facilities would be required. Additionally, Mitigation Measure PS-1 (see Impact 3.12-1 above) would require that facilities adjacent to areas of construction would be given advance notice of the nature, extent and duration of the construction activities. Further, as described under Impact 3.12-1 above, connecting pipeline construction occurring within Northside Drive would be temporary and would occur in compliance with standard construction traffic control requirements.

Should additional area be required for construction staging, Montebello Park Elementary School may be used, as could other nearby schools, parks, or other similar facilities. Use of the Montebello park Elementary school, or other public facilities, if necessary, would only occur in coordination with the facility managers prior to materials staging and storage on the facility, and would occur in a manner such that safety and operation would not be affected, and new or physically altered facilities would be not required. Thus, the Proposed Project would not result in any material difference in impacts on schools compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.12-4: The proposed program could increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the structural BMPs would not contribute to an increase in population and an associated increase in existing recreational facilities that could result in physical deterioration of existing facilities. The PEIR further determined that some of the structural BMPs would be located on existing parkland and that during construction of some of the structural BMPs, certain parts of parks and recreational facilities would temporarily be removed from service. Bike lanes and other linear recreational resources may also be affected by construction activities. Therefore, the construction of structural BMPs could temporarily limit the usage of the parks on which they are located and create increased demand on other parks and recreational resources within the EWMP area. However, the PEIR anticipated construction periods for each BMP to be relatively short, typically several months to a year. Because the construction will be temporary, the physical deterioration of park and recreational facilities to which recreational activities were diverted would not be substantial.

The structural BMPs operated as part of the EWMP program would be compatible with recreational and park-set activities; therefore, no impacts would occur during operation. Thus, the PEIR determined that construction and operation of structural BMPs would not increase the use of recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated and no significant impacts would occur.

Saybrook Park is located within the LMD, approximately 0.08-mile from the Northside Drive Median and 0.15-mile from the Southside Drive Median. The Proposed Project involves stormwater and landscape improvements on medians and sidewalks and would not result in an increase in population that would generate demand for parks or recreational facilities. Further, the Proposed Project would not eliminate any existing park space. The Project site medians include public green space with shade trees and turf that is available for recreational activities. However, given the limited amenities at the medians, their use for recreational activities is very limited. During construction activities, the medians would be closed for public use. However, as described in the PEIR, construction would be short-term and closure of the medians would not result in a substantial increase in use Saybrook Park or other facilities such that substantial deterioration of would occur at a rate greater than normal.

While the medians are currently available for use by the public as passive open space, they do not provide amenities other than shade trees and open turf area. The hardscaping on the

Northside Drive and Southside Drive Medians consists of uneven raised stones and does not provide a usable path for walking or other activities such as skateboarding. Under the Proposed Project, recreational enhancements would be implemented, such as par course exercise equipment, seating, paths and education garden and educational signage, that would enhance the medians as public recreational areas. Therefore, recreational use of the medians is expected to increase. However, the recreational features provided are designed to be a resource for the local community and are not expected to draw large number of visitors from outside of the community such that physical deterioration of the amenities would be accelerated. Further, the medians would continue to be regularly maintained by the County LMD and no substantial physical deterioration of the medians would occur or be accelerated. Therefore, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Thus, the Proposed Project would not result in any material difference in impacts on recreational facilities compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.12-5: The proposed program could include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR identified that implementation of some structural BMPs associated with the EWMP program would be located within existing parks or would create new public park space. Those BMPs located on existing recreational facilities would be compatible with recreational uses during operation. Therefore, the PEIR determined that the structural BMPs would not impact parkland in such a way that would require its expansion or the creation of new parkland and that impacts would be less than significant.

The Proposed Project would occur on public medians that are currently available for passive recreational uses. While the Proposed Project would not create new parkland, it would include recreational enhancements of the existing public medians. As addressed throughout this Addendum, physical effects associated with construction and operation of the Proposed Project, including the recreational amenities, are addressed in the PEIR and no material difference in impacts compared to those described in the PEIR would occur.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to public services. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information

indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.12.3 Applicable PEIR Mitigation Measures

All PEIR mitigation measures for impacts to Public Services and Recreation are applicable to the Proposed Project:

PS-1: The Permittee implementing the EWMP project shall provide reasonable advance notification to the service providers such as fire, police, local businesses, home owners and residents of adjacent to and within areas potentially affected by the proposed EWMP project about the nature, extent and duration of construction activities. Interim updates should be provided to inform them of the status of the construction activities.

4.13 Transportation and Circulation

Transportation and Circulation Checklist

Would the Project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.13-1: The proposed program could intermittently and temporarily increase traffic levels and traffic delays due to vehicle trips generated by construction workers and construction vehicles on area roadways.	☐	☒
Impact 3.13-2: Construction of the proposed program could potentially cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, and could increase traffic hazards due to possible road wear.	☐	☒
Impact 3.13-3: The proposed program could result in inadequate emergency access during construction.	☐	☒

4.13.1 Project Setting

The Project site is located in Montebello LMD in the unincorporated Los Angeles County. As shown on Figure 1, relative to regional access routes, it is northeast of I-5, west of Interstate 710 (I-710), south of State Route 60 (SR-60), and east of Interstate 605 (I-605). The LMD is within a distinct geographic subdivision centered along the oblong loop road of Northside Drive and Southside Drive that is surrounded by Whittier Boulevard to the north, Vail Avenue to the east, Ferguson Drive to the south, and Gerhart Avenue to the west, and bisected by Garfield Avenue and Olympic Boulevard.

The Los Angeles County Metropolitan Transportation Authority (Metro) Orange Line Montebello/Commerce Station serves the area, and is located walking distance southeast of the LMD. The Project site is also in the vicinity of bus services provided by Metro and the

City of Montebello. The Los Angeles County Bicycle Master Plan[40] does not identify any existing bikeways in the Project vicinity.

The Project site is located within existing medians along residential streets, and medians and sidewalks adjacent to commercial and residential uses. The medians are available for public access, but there are no crosswalks extending to the medians or curb cuts along the edge. With the exception of a sidewalk along the Montebello Parkway at the Montebello Parkway and Leonard Avenue medians and a cement path that cross the Northside Drive and Southside Drive Medians, there are no pedestrian facilities on the medians.

4.13.2 Impact Analysis

Section 3.13, Transportation and Circulation, of the PEIR, addresses potential impacts on traffic and transportation systems associated with implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

The PEIR discussion of traffic and transportation is limited to potential impacts that could result in some level of potentially significant environmental change, as defined by CEQA The PEIR determined that no impact would occur under the following three categories: (1) long-term traffic impacts resulting from future development; (2) air traffic patterns of airports in the program area, and (3) direct or indirect elimination of existing or planned alternative transportation corridors or facilities (bicycle paths, lanes, bus turnouts, etc.), including changes in policies or programs that support alternative transportation, or construction of facilities in locations in which future alternative transportation facilities are planned. As described below, the Proposed Project would not result in changes or new information requiring preparation of a subsequent EIR relative to the three transportation and traffic categories that were determined to have no impact and were not further evaluated in the PEIR.

Proposed Project Impacts:

1. Long-Term traffic impacts

During operations, the Proposed Project would generate periodic traffic trips associated with maintenance and repair of the landscaping, recreational amenities, and stormwater capture features. The trips would occur irregularly and would be similar in number to existing trips associated with landscape maintenance. Thus, given that the number of vehicle trips associated with repair and maintenance would be similar to existing conditions, the existing circulation system would not be affected. While the pathways and other recreational amenities provided at the medians could increase the use of the medians for public recreational purposes, the users are expected to be residents of the local community who would walk or bicycle from close proximity. No increase in vehicle trips is anticipated. Pedestrian and non-motorized vehicles accessing the medians is expected to occur in small numbers throughout the day and be typical of pedestrian and non-motorized vehicle activity that commonly occurs in residential neighborhoods. There are existing sidewalks on the neighboring streets which are expected to be used by pedestrians to get to

[40] County of Los Angeles Department of Public Works. 2012. County of Los Angeles Bicycle Master Plan. Prepared by Alta Planning + Design. March.

and from street crossings to the medians. New crosswalks would be provided at the Northside Drive and Southside Drive Medians as an added safety feature. Crosswalks and presence of pedestrians and non-motorized vehicle users are typical in residential area would not conflict with the performance of the existing circulation system.

Thus, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to transportation and circulation. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR as described below.

2. Air traffic Patterns

The Project site is not located near an airport. The Proposed Project entails construction and operation of structural BMPs, recreation enhancements and landscape improvements in existing medians and sidewalks within existing medians and sidewalks and would not affect air traffic patterns.

Thus, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to transportation and circulation. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR as described below.

3. Alternative Transportation

The Proposed Project entails construction and operation of structural BMPs, recreation enhancements, and landscape improvements in existing medians and sidewalks and it would not affect use of an alternative transportation mode. The improvements are primarily located on medians and sidewalks along local streets that do not have bus routes or designated bicycle routes. While construction occurring on the sidewalks would temporarily preclude access to small portions of the sidewalk on Northside Drive north of Olympic Boulevard, this would be for a short period of time and detours and signage would be provided to ensure safe passage for pedestrians. Construction would only occur on one side of the street at a time, ensuring that the sidewalk on the opposite side of the street remains open. The reconstructed portion of the sidewalks would comply with County standard plans and specifications, including ADA requirements. The Montebello Parkway Medians at Leonard Avenue include a sidewalk segment along Montebello Parkway. Should construction occur on both medians at the same time, sidewalk users would be required to use the sidewalks along Leonard Place to bypass the medians under construction. Signage would be provided directing sidewalk users to a safe path of travel. While this would be a small increase in distance, it would be temporary and would not substantially decrease safety or performance of the sidewalks. Once constructed, new ADA pathways installed on the medians would replace the existing sidewalks. Curb cuts would also be installed, which would improve the accessibility of the pathways as compared to the existing sidewalks.

Non-ADA compliant cement pathways currently exist on the Northside Drive and Southside Drive Medians, providing access across the median. During construction, pedestrians would be required to travel around the median instead of across. Pedestrian crossings are available on either side of medians at Garfield Avenue and Server Avenue, and, thus, safe pedestrian crossing would remain available during construction. Following construction, new curb cuts, ADA compliant pathways, and crosswalks would be provided within the Northside Drive and Southside Drive Medians, thereby improving pedestrian access and safety.

Construction of the pipeline connections would occur within roadways, requiring temporary lane closures. Standard construction specifications would include measures to ensure safe passage of traffic during such closures. This would also include providing for safe pedestrian and bicycle traffic during construction activities. During operations, pipelines would be located underground and would not affect the transportation network.

Within the Project area, the County of Los Angeles Bicycle Master Plan[41] identifies a potential future Class I (multi-use path separated from traffic) bicycle route along Olympic Boulevard and a Class III (signed shared roadway) bicycle route along Hendricks Avenue. The Proposed Project would be located within the existing medians, existing sidewalks, and underground and would not prevent future implementation of bicycle routes within the Project area. Therefore, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Thus, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to transportation and circulation. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.13-1: The proposed program could intermittently and temporarily increase traffic levels and traffic delays due to vehicle trips generated by construction workers and construction vehicles on area roadways.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that vehicle trips would be generated primarily by construction workers commuting to and from the BMP work sites, and by trucks hauling materials and equipment to and from the sites. The added traffic would be most apparent on the local roadways serving the facility sites. The number of such trips would vary depending on the intensity and nature of the construction activity required for the different structural BMPs. Additionally, the construction activity would be short-term in nature and limited to the period of time when construction activity is taking place for a particular project.

[41] County of Los Angeles Department of Public Works. 2012. County of Los Angeles Bicycle Master Plan. Prepared by Alta Planning + Design. March.

Although project related traffic would be temporary, for certain projects, supplemental project-level analysis could determine that addition of project-generated traffic would be substantial in relation to traffic flow conditions on local roadways. Therefore, the PEIR considered this impact potentially significant. Implementation of Mitigation Measure TRAF-1 would require all construction activities to be conducted in accordance with an approved construction traffic control plan, which would reduce the construction-related traffic impacts to the maximum extent feasible. With implementation of Mitigation Measure TRAF-1, the PEIR determined that impacts would be less than significant.

The Proposed Project consists of stormwater and landscape improvements within existing medians and sidewalks. The structural BMPs would be passive and primarily located underground. The landscape improvements, as well as associated recreational features, would be designed to enhance the existing community and would not affect the surrounding roadways.

Construction is anticipated to begin in the fall of 2018 and last approximately 12 months. Construction would be scheduled for eight hours a day between 7:00 a.m. and 5:00 p.m., Monday through Friday. If all median and sidewalk sites are constructed simultaneously, it is estimated that a maximum of 48 construction delivery trips, 291 construction worker trips, and 42 haul truck trips would occur to and from the Project site per day during construction. These trips would occur through-out the day and be spread across each of the individual construction sites and occur in accordance with an approved construction traffic control plan required by Mitigation Measure TRAF-1.

Also, construction staging would be located on the Project site to the degree feasible and is not anticipated to disrupt roadway operations or restrict pedestrian facilities. In addition, construction traffic is temporary in nature. Temporary lane closures would be required during pipeline construction. However, temporary lane closures would comply with standard traffic controls and with implementation of Mitigation Measure TRAF-1 that requires a traffic control plan, the Proposed Project would not result in a significant decrease in the performance of the circulation system. Thus, the Proposed Project would not result in any material difference in impacts on traffic and circulation compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to transportation and circulation. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.13-2: Construction of the proposed program could potentially cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, and could increase traffic hazards due to possible road wear.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that the construction activities for the structural BMPs would not alter the physical configuration of the existing roadway network and would not introduce unsafe

design features, and that any curb and traffic flow designs would be subject to the design requirements imposed by local requirements. Further, freeways, major arterials, and collectors are designed to accommodate a mix of vehicle types, including heavy trucks needed for construction. Therefore, the PEIR determined that impacts to traffic safety would be less than significant.

The Proposed Project involves structural BMPs, recreational enhancements, and landscape improvements within existing medians and sidewalk and would not alter any adjacent roadways or include dangerous design features or incompatible uses. The median improvements would occur within the confines of the existing medians and would not alter the roadway configuration or layout. Further, while new recreational amenities would be constructed within the medians, the medians are currently accessible to the public and the new amenities would not constitute an incompatible use. A total of 16 new ADA compliant curb cuts would be installed along the edge of the medians to improve pedestrian safety and access. Similarly, new crosswalks would be installed at both the western and eastern ends of the Northside Drive and Southside Drive Medians. The curb cuts and crosswalks would be installed in compliance with the County's standard plans and specifications, and would improve pedestrian safety and would not increase hazards.

While some construction would occur along the edge of the roadways (new and replacement catch basins) and within roadways (underground pipelines), construction and operation of these features would not affect use or configuration of the roadways. Standard construction specifications and the traffic control plan required under Mitigation Measure TRAF-1 would include measures to ensure safe passage of traffic, bicyclists and pedestrians during construction.

Parking is currently allowed along most edges of the medians one day a week when parking is prohibited on the opposite side of the street due to street sweeping. During construction, parking may be limited or prohibited along the medians. This parking limitation would be temporary and only affect a small portion of available parking in the area (i.e., street cleaning restrictions only affect one side of the street at a time, and parking on the opposite side of the street would continue to be allowed), and no increase in hazards would occur.

As described in the PEIR, the roadways in the Project area are designed to accommodate a mix of vehicle types, including heavy trucks that would use the roadways during construction. Therefore, the Proposed Project would not cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, or increase traffic hazards due to possible road wear.

Thus, the Proposed Project would not result in any material difference in traffic hazard impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to traffic and transportation. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.13-3: The proposed program could result in inadequate emergency access during construction.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that during construction of structural BMPs, construction trucks would interact with other vehicles on Project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network. Further, construction vehicles are required to yield to emergency vehicles using a siren and red lights. Additionally, lane closures would be subject to requirements of the applicable local traffic department, which would require coordination with emergency providers. Therefore, the PEIR determined that impact is less than significant.

For the Proposed Project, access to the Project site would be from existing arterial roadways such as Garfield Avenue and Olympic Boulevard and the local streets adjacent to the Project site medians and sidewalks during construction and operation. Construction staging for construction occurring at the medians and sidewalks would occur within the Project site as feasible. Some vehicles and equipment may need to be located along the edge of adjacent roadways, but this would occur outside of the traffic lane and would not impede emergency access, including access to fire hydrants. Construction of the pipeline connections would occur within the roadways, and require temporary lane closures. During the temporary closures, measures, such as flaggers and/or signage, would be put in place to ensure that emergency vehicles and other vehicles could safely pass through the construction zone. Therefore, emergency vehicle access would be maintained during construction. Additionally, as part of standard construction specifications, any partial or complete street closures would be required to occur in compliance with the Requirements For Temporary Controls in the current edition of the MUTCD and the traffic control plan approved as part of the construction permit and required under Mitigation Measure TRAF-1. The requirements would include notifying police and fire departments of the closing or partial closing, and reopening of streets at least 48 hours in advance.

During operations, all above-ground features would be located within the existing medians and sidewalks and no impediment to emergency access would occur. Therefore, construction and operation of the Proposed Project would not result in inadequate emergency access.

Thus, the Proposed Project would not result in any material difference in impacts on emergency access compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to transportation and circulation. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.13.3 Applicable PEIR Mitigation Measures

All PEIR mitigation measures for impacts to Transportation and Circulation are applicable to the Proposed Project:

TRAF-1: For projects that may affect traffic, implementing agencies shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator.

4.14 Utilities, Service Systems, and Energy

Utilities, Service Systems, and Energy Checklist

Would the Project:	New Significant Impacts Not Identified in previous PEIR	No Changes or New Information Requiring Preparation of a Subsequent EIR
Impact 3.14-1: Implementation of the proposed program could exceed wastewater treatment requirements of the applicable RWQCB or result in the construction of new treatment facilities or expansion of existing facilities if the wastewater treatment provider has inadequate capacity to serve the proposed program.	☐	☒
Impact 3.14-2: The proposed program could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	☐	☒

Impact 3.14-3: The proposed program could require new or expanded water supply resources or entitlements or require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	☐	☒
Impact 3.14-4: The proposed program could be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs or the project could not comply with federal, state, and local statutes and regulations related to solid waste.	☐	☒
Impact 3.14-5: Construction and operation of the proposed program would require additional energy use that could result in wasteful consumption, affect local and regional energy supplies, or conflict with applicable energy efficiency policies or standards.	☐	☒

4.14.1 Project Setting

The Sanitation Districts of Los Angeles County (LACSD), which is comprised of 24 independent districts, provide wastewater treatment services to approximately 5.6 million residents in 78 cities and unincorporated areas in Los Angeles County, including East Los Angeles.[42] The Project site is served by District 2, which is a part of the Joint Outfall System, a shared regional interconnected sewerage system shared by 17 of the LACSD districts.

LACSD operates ten water reclamation plants (WRPs) and one ocean discharge facility (Joint Water Pollution Control Plant), which treat approximately 510 million gallons per day (mgd), 165 mgd of which are available for reuse. [43] There are six treatment plants within the Joint Outfall System, including Whittier Narrows WRP located approximately 4.5 miles east of the Project site in El Monte and the San Jose Creek WRP. The San Jose Creek WRP is the largest of the water reclamation plants with a capacity of 100 mgd.

LACSD serves the solid waste management needs of a large portion of Los Angeles County, including the Project site, with several solid waste landfills, recycling centers, materials recovery/transfer facilities, and waste to energy facilities. The County also has 17 composting/chipping and grinding facilities in operation that are permitted to receive 100 tons or more of waste per operating day, as well as smaller facilities that take in a lower volume.[44] The County anticipates adequate solid waste disposal capacity to be available over the next 15-year planning period (2015 to 2030) with implementation of actions such as increasing waste and diversion efforts, encouraging development of alternative

[42] Los Angeles County Sanitation Districts. 2017. About the Sanitation Districts webpage. Available: http://www.lacsd.org/aboutus/default.asp. Accessed September 2017.

[43] Los Angeles County Sanitation Districts. 2017. Wastewater Facilities webpage. Available: http://www.lacsd.org/wastewater/wwfacilities/default.asp. Accessed September 2017.

[44] County of Los Angeles Department of Public Works. 2016. County Integrated Waste Management Plan 2015 Annual Report. Available: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF. Accessed September 2017.

technologies, export of waste to out-of-facilities, and utilizing the Waste-by-Rail system to the Mesquite Regional Landfill in Imperial County. [45]

Southern California Edison and Southern California Gas Company provide electricity and natural gas services, respectively, to East Los Angeles.

California Water Service's East Los Angeles District (the East Los Angeles District) provides potable water services to the Project area. The water supply sources are a combination of local groundwater and surface water purchased from Central Basin Municipal Water District, which is imported from the Colorado River and the State Water Project. The East Los Angeles District, which includes East Los Angeles and portions of surrounding cities, has 10 groundwater wells, 17 storage tanks, 26 booster pumps, four imported water connections and 260 miles of pipeline.

In 2015, the East Los Angeles District's total water demand was 14,268 AF, which reflects mandated reductions in potable water uses in place at the time due to emergency drought restrictions. Based on historic growth rates, the East Los Angeles Urban Water Management Plan (UWMP) projects water demand to increase to 17,468 AF in 2020 and then to begin to gradually decrease to demand of 16,861 AF in 2040. The decrease reflects future water savings from stricter plumbing codes and appliance standards. Stricter regulations governing landscape water are also expected to lower demand but are not reflected in the water demand projections.[46]

The Central Basin Municipal Water District, has a regional water recycling program, that is delivered through a distribution network that is separate from California Water Service's distribution system. However, the Central Basin Municipal Water District, has developed a feasibility study and preliminary design report for an East Los Angeles Recycled Water System Expansion. While, recycled water is not available for the East Los Angeles District at this time, the East Los Angeles District estimates that 500 AF would be used within the East Los Angeles District after 2020. [47]

The LACFCD provides flood protection and water conservation for an area of over 3,000 square miles. It includes drainage infrastructure within 86 cities and unincorporated County areas. The infrastructure 3,330 miles of underground storm drains and an estimated 82,000 catch basins. The Los Angeles County Department of Public Works Flood Maintenance and Water Resources Divisions, respectively, oversee its maintenance and operational efforts. [48]

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[45] County of Los Angeles Department of Public Works. 2016. County Integrated Waste Management Plan 2015 Annual Report. Available: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF. Accessed September 2017.

[46] California Water Services. 2016. 2015 Urban Water Management Plan East Los Angeles District. June. Available: https://www.calwater.com/docs/uwmp2015/ela/2015_Urban_Water_Management_Plan_Final_(ELA).pdf. Accessed September 2017.

[47] California Water Services. 2016. 2015 Urban Water Management Plan East Los Angeles District. June. Available: https://www.calwater.com/docs/uwmp2015/ela/2015_Urban_Water_Management_Plan_Final_(ELA).pdf. Accessed September 2017.

[48] Los Angeles County Department of Public Works. 2017. Los Angeles County Flood Control District webpage. Available: https://dpw.lacounty.gov/lacfcd/. Accessed October 2017.

4.14.2 Impact Analysis

Section 3.14, Utilities, Service Systems, and Energy, of the PEIR, addresses potential impacts to utilities and service systems that could result from implementation of the EWMP program. The following evaluates the extent to which those analyses applies to the Proposed Project.

Impact 3.14-1: Implementation of the proposed program could exceed wastewater treatment requirements of the applicable RWQCB or result in the construction of new treatment facilities or expansion of existing facilities if the wastewater treatment provider has inadequate capacity to serve the proposed program.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The EWMP program analyzed in the PEIR involves the construction of structural BMPs intended to treat stormwater and non-stormwater runoff. The PEIR determined that the EWMP program would comply with the MS4 Permit issued by the LARWQCB and that implementation of facilities meant to improve water quality and meet water quality objectives of the MS4 Permit would be consistent with LARWQCB discharge requirements.

Most structural BMPs, such as the Proposed Project, would be constructed in developed areas, including parking lots, roads, or sidewalks, and would not require new treatment facilities or expansion of existing facilities.

The PEIR further determined that the operational purpose of the structural BMPs associated with the proposed EWMPs is to meet the surface water treatment requirements of the LARWQCB for stormwater and non-stormwater discharges. The main functions of the structural BMPs would be to infiltrate, treat, and store runoff to help reduce the impact of stormwater and non-stormwater discharges on receiving water quality, which would not produce wastewater during operation. Therefore, the structural BMPs would be designed to meet wastewater treatment requirements of the RWQCB permit and impacts were determined to be less than significant.

The PEIR identified that construction requiring ground disturbance could encounter buried utilities including wastewater conveyance infrastructure. As standard construction practices require, implementing agencies would conduct an underground utility search prior to excavation and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers. The PEIR determined that impacts to wastewater infrastructure would be less than significant. Additionally, the PEIR incorporated Mitigation Measure UTIL-1 to further reduce impacts, which requires that the Implementing Agencies conduct a search for local utilities above and below ground.

Consistent with the purposes of the structural BMPs identified in the PEIR, the Proposed Project would support the County's efforts to comply with current and future stormwater regulations for the Upper Los Angeles River and Rio Hondo River. The proposed BMPs would accomplish this through reducing the level of bacteria and metals discharging into the receiving water by capturing and infiltrating stormwater runoff volume of approximately 21 AF from a 3,000-acre tributary area. In addition, non-point source pollution at the Project site would be addressed by constructing LID features such as

bioswales filled with native and drought tolerant plants. Based on the Watershed Management Modeling System modeling results, the Proposed Project is expected to reduce 3.04 pounds of copper, 2.82 pounds of lead, and 28.91 pounds of zinc from stormwater runoff from the site for an average rainfall year. The Proposed Project would be beneficial for water quality and would not exceed wastewater treatment requirements of the LARWQCB nor would the Project result in the construction of new treatment facilities, or expansion of existing facilities.

During construction, water would be required primarily for dust suppression, but would also be used for concrete washout and soil compaction. This water percolates into the ground after use, requiring no wastewater treatment.

As identified in the PEIR, as standard construction practices require, the County would conduct an underground utility search prior to excavation and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers.

Thus, the Proposed Project would not result in any material difference in impacts on wastewater treatment and treatment facilities compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to utilities, service systems and energy. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.14-2: The proposed program could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR analyzed impacts associated with improvements to existing storm drainage facilities as well as new storm drain facilities within the EWMP program areas. The PEIR determined that an analysis on the potential environmental effects that might result from the installation of storm drainage facilities identified in the proposed EWMPs was contained within the PEIR and that no additional analysis is required under this impact discussion.

Consistent with the types of structural BMPs analyzed in the PEIR, the Proposed Project includes modifications to the existing stormwater system through the implementation of diversions, connecting pipelines and infiltration wells that would capture and treat stormwater, allowing it to infiltrate into the ground instead of flowing through the existing storm drain. This results in a reduction in flows passing through the storm drain system and benefits water quality. Physical effects associated with construction and operation of the stormwater system improvements that would occur under the Proposed Project are addressed at a programmatic level in the PEIR and at a project level in this Addendum. As described throughout this Addendum, the Proposed Project would not result in any material difference relative to the construction of new stormwater facilities and expansion of existing facilities impacts compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to utilities. It would not require substantial revisions of PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.14-3: The proposed program could require new or expanded water supply resources or entitlements or require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that implementation of the EWMP program would not increase water demands. Construction of the structural BMPs would require some water usage for dust control and concrete washout activities, but construction periods would be relatively short (several months to a year) and the water demand during construction would not require new or expanded water supply resources. Additionally, some of the BMPs would augment local water supplies through enhanced stormwater recharge. The PEIR determined impacts to the existing water supplies would be beneficial as a result of the stormwater and nonstormwater runoff infiltration and conservation BMPs implemented across the EWMP areas. No adverse impacts related to new or expanded water supply resources or entitlements would occur.

Construction requiring ground disturbance could encounter buried utilities including water supply infrastructure. As standard construction practices require, implementing agencies would conduct an underground utility search prior to excavation and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers. Additionally, Mitigation Measure UTIL-1, which requires that the implementing agencies conduct a search for local utilities above and below ground further reduced impacts.

The PEIR further determined that construction of BMPs to detain stormwater and dry-weather flows may reduce flows downstream, thereby reducing access to beneficial uses downstream. If installation of BMPs would reduce water available to downstream diverters such that their water rights would be impinged, this would be a significant impact. Although, typically, stormwater flows are conveyed downstream quickly and detention of storm flows upstream would not substantially reduce storm flows downstream or significantly impede access to storm flow. However, implementation of Mitigation Measure UTIL-2 would ensure that downstream water rights would not be affected by upstream diversions. The PEIR determined that with implementation of Mitigation Measure UTIL-2, impacts to water supply and water supply infrastructure would be less than significant.

For the Proposed Project, during construction, water would be required primarily for dust suppression, and would also be used for concrete washout and soil compaction. Water required for construction would be obtained from the California Water Service East Los Angeles District and/or water trucks. Construction water volumes would be minimal and would not require new or expanded entitlements. Consistent with standard construction

practices, the County would conduct an underground utility search prior to excavation and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers.

During operations, the only water demand is associated with landscape irrigation. The medians are currently irrigated and the amount of irrigation required under the Proposed Project is not expected to increase. Conversely, the water demand is likely to decrease because the new landscaping that would be installed under the Proposed Project would be drought tolerant with lower irrigation requirements than the existing turf. Additionally, water efficient irrigation systems would be installed to control the amount and the timing of irrigation and thereby reducing water needs. As an additional benefit to water supplies, the installation of bioswales and highly permeable surfaces would increase the likelihood that any excess irrigation water would infiltrate into the ground, contributing to groundwater recharge, instead of running off into the street to enter the storm drain system. Further, the capture of stormwater and surface water runoff in the infiltration wells would contribute to groundwater recharge, which would benefit water supplies. Therefore, the Project would result in a less than significant impact to potable water supply.

The Proposed Project would not reduce access to beneficial uses downstream, including water rights. The Proposed Project would capture and infiltrate a stormwater runoff volume of 21 AF from a 3,000-acre tributary area reducing the amount of stormwater entering the Los Angeles and Rio Hondo Rivers. This represents a small percentage of overall flows in the rivers and would not result in a reduction of beneficial uses. Further, currently, large volumes of stormwater flow into the ocean through the Los Angeles and Rio Hondo Rivers as an underutilized water resource.[49, 50] An analysis of storm flows through the Los Angeles River conducted for the Water Replenishment District of Southern California's Groundwater Basin Master Plan determined that an average of 5,000 AF per year is considered to be available above baseflow conditions for capture and recharge of the Central Groundwater Basin. Additionally, the City of Los Angeles has full water rights to flows within the Los Angeles River and as described in the City's UWMP, the majority of stormflows from urban areas are ultimately channeled into the ocean, carrying pollutants that are harmful to marine life and public health, and contributing to a reduction in recharge of groundwater aquifers. The City of Los Angeles Department of Water and Power prepared a Stormwater Capture Master Plan in 2015 to evaluate the stormwater capture in the City, which determined that stormwater capture by increasing infiltration into groundwater basins is essential for protecting the safe yield of groundwater basins.[51] While the Proposed Project would capture flows outside of the City boundaries, it would contribute to groundwater recharge of the Central Groundwater Basin, which would result in regional benefits and not adversely affect water rights. Thus, the Proposed Project would not result in any material difference in impacts on water demand compared to those described in the PEIR.

[49] Water Replenishment District of Southern California. 2016. Groundwater Basins Master Plan Final Report. Prepared by Ch2m in Association with RMC. September.

[50] Los Angeles Department of Water and Power. 2015. Urban Water Management Plan.

[51] Los Angeles Department of Water and Power. 2015. Urban Water Management Plan.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to utilities and service systems. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.14-4: The proposed program could be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs or the project could not comply with federal, state, and local statutes and regulations related to solid waste.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that construction activities associated with the structural BMPs would include excavation and demolition of some existing infrastructure, which would produce solid waste requiring disposal in the nearest landfill. The largest potential source of solid waste during construction would be excavated soil. The PEIR assumed that most clean soil would be recycled, reused offsite, or stockpiled and reused as backfill, the analysis assumes that a portion of soil would be disposed in landfills. Recycling and reuse of construction and demolition material would considerably reduce the amount of debris sent to landfills. Mitigation Measure UTIL-3 requires development of a waste management or recycling plan to reduce this impact.

The PEIR identifies that several EWMP are required to implement trash TMDL and associated trash removal structures, such as screens to prevent trash from entering storm drains. Based on landfill capacity in the Los Angeles region, the PEIR determined that there is ample availability to receive trash that would be collected as part of compliance with the trash TMDLs and that impacts related to insufficient permitted landfill capacity from implementation of the proposed program would be less than significant.

The PEIR determined that the EWMP program would comply with all federal, state, and local statutes and regulations related to solid waste, including the Los Angeles County Construction and Demolition Debris Recycling and Reuse Program and impacts regarding noncompliance with solid waste regulations would be less than significant.

Under the Proposed Project, construction activities would generate some demolition debris, including asphalt and removal of hardscaping at the Northside Drive and Southside Drive Medians. There are a number of operations within Los Angeles County that recycle construction and demolition material and the demolition debris would be recycled or reused as feasible. It is anticipated that excavated soil would be reused on-site and no disposal would be required. The Infiltration Feasibility Investigation (Appendix C) prepared for the Proposed Project identified that the material obtained from the open trench excavations cannot be used as bedding material but may be used as trench backfill provided that provisions identified in the report are met and that all organic material, rubbish, debris, and other objectionable materials are removed.

Additionally, for any materials that could not be recycled or reused, there is currently sufficient inert waste disposal capacity available in Los Angeles County.[52] Other waste would include green waste associated with removal existing turf and any unhealthy/dying trees. Green waste would be separated and diverted from landfills through composting. Demolition debris and green waste would be temporary in nature and would not exceed landfill capacity; therefore, impacts associated with construction debris would be less than significant.

During operations, similar to existing conditions, green waste would be generated during regular maintenance activities (such as pruning). Additionally, any trash that is accumulated would be collected for disposal by the County. The green waste would be composted and accumulated trash would be disposed of at a landfill. There is no trash TMDL that would require implementation of structural BMPs to increase diversion of trash from the storm drain/stormwater run-off and thus the amount of trash accumulation is anticipated remain similar to existing conditions. Public-use trash cans may be installed in the medians to provide a location for trash disposal by users of the medians. The trash cans would be emptied as part of regular maintenance activities. Trash generation would be incidental to use of the medians (i.e., picnic trash) and the amount of trash disposal at the medians site could be accommodated by existing landfills. The amount of green waste and accumulated trash would not substantially change from existing conditions. Sufficient landfill capacity exists to accommodate the Project's solid waste disposal needs. The Proposed Project would not require the development of new landfills, nor would it require existing landfills to be expanded.

Under the Proposed Project, all solid waste disposal would be managed in accordance with applicable federal, state and local statutes and regulations. Construction waste is accepted at local disposal facilities and recycling is encouraged. Thus, the Proposed Project would not result in any material difference in impacts on solid waste compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to utilities, service systems, and energy. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

Impact 3.14-5: Construction and operation of the proposed program would require additional energy use that could result in wasteful consumption, affect local and regional energy supplies, or conflict with applicable energy efficiency policies or standards.

[52] County of Los Angeles Department of Public Works. 2016. County Integrated Waste Management Plan 2015 Annual Report. Available: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF. Accessed September 2017.

NO CHANGES OR NEW INFORMATION REQUIRING PREPARATION OF A SUBSEQUENT EIR.

The PEIR determined that construction of the structural BMPs would require use of non-renewable energy in the form of gasoline and diesel to power construction equipment. However, use of this fuel for construction would not be at such a large scale that it could be seen as wasteful or as affecting local or regional energy supplies. Impacts to energy supplies for construction would be less than significant.

Construction requiring ground disturbance could encounter buried or overhead utilities, including electric or gas conveyance infrastructure. As standard construction practices require, implementing agencies would conduct a utility search prior to construction and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers. Additionally, the Final PEIR incorporated Mitigation Measure UTIL-1, which requires that the implementing agencies conduct a search for local utilities above and below ground.

Some of the centralized and regional structural BMPs may require the installation of pump stations and ancillary components that would be electrically powered. This use of energy is minor when compared to the County-wide use of electricity. In addition, the EWMP program would be supporting water conservation efforts and water quality requirements of the MS4 Permit, which would not result in wasteful consumption, affect local and regional energy supplies, or conflict with applicable energy efficiency policies or standards. Therefore, the PEIR determined that impacts to energy supplies for operation would be less than significant.

As described in the PEIR, construction of the Proposed Project would require use of non-renewable energy in the form of gasoline and diesel to power construction equipment. However, it would not be wasteful or as affect local or regional energy supplies.

As identified in the PEIR, as standard construction practices require, the County would conduct an underground utility search prior to excavation and would coordinate with utility providers in advance to ensure no disruption in services to the utility customers.

Operation of the Proposed Project would be passive (no pump stations or other electrically powered equipment would be used). Maintenance and repair activities would require use of small amounts of non-renewable energy in the form of gasoline and diesel to transport vehicles to and from the site and power equipment such as pruners. However, these activities would be infrequent and similar to existing landscape maintenance activities, and thereby, not be wasteful or as affect local or regional energy supplies. Thus, the Proposed Project would not result in any material difference in impacts on energy compared to those described in the PEIR.

Based on the above, the Proposed Project does not involve new significant impacts or a substantial increase in previously identified impacts to utilities, service systems, and energy. It would not require substantial revisions of the PEIR and no changes occur with respect to the circumstances under which that project is undertaken. Further, there is no substantial new information indicating there would be a new significant impact requiring major revisions of the certified PEIR.

4.14.3 Applicable PEIR Mitigation Measures

The analysis contained in this Addendum for Impact 3.14-1 through 3.14-3, addresses Mitigation Measure UTIL-2 (listed below), requiring an evaluation of the suitability of the Proposed Project as a structural BMP location. Mitigation Measures UTIL-1 and UTIL-3 are also applicable to the Proposed Project. The applicable and completed mitigation measures are listed below:

UTIL-1: Prior to implementation of BMPs, the implementing agency shall conduct a search for local utilities above and below ground that could be affected by the project. The implementing agencies shall contact each utility potentially affected to address relocation of the utility if necessary to ensure access and services are maintained.

UTIL-2: Prior to approval of BMPs, implementing agencies shall evaluate the potential for impacts to downstream beneficial uses including surface water rights. Implementing agencies shall not approve BMPs that result in preventing access to previously appropriated surface water downstream. **[Completed]**

UTIL-3: Implementing agencies shall encourage construction contractors to recycle construction materials and divert inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill where feasible. Implementing agencies shall incentivize construction contractors with waste minimization goals in bid specifications where feasible.

SECTION 5

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SECTION 6

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Appendix A
CalEEMod Emissions Output

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East Los Angeles Sustainable Median Stormwater Capture Project

Localized Significant Threshold Summary

Northside Drive Median - South San Gabriel Valley Localized Significant Threshold (LST)

Thresholds based on 2 acres disturbed and 25 meter distance to receptor

Pollutant	Threshold (lbs/day)	Northside Drive Median (without Mitigation)		Northside Drive Median (with Mitigation)	
NO2	121	80.05	Less than Significant	55.89	Less than Significant
CO	1031	53.21	Less than Significant	68.42	Less than Significant
PM10	7	4.06	Less than Significant	2.79	Less than Significant
PM25	5	3.72	Less than Significant	2.79	Less than Significant
SO2	N/A	0.12	N/A	0.12	N/A
ROG	N/A	8.36	N/A	2.80	N/A
CO2e	N/A	11,487.22	N/A	11,487.22	N/A

Southside Drive Median - South San Gabriel Valley Localized Significant Threshold (LST)

Thresholds based on 2 acres disturbed and 25 meter distance to receptor

Pollutant	Threshold (lbs/day)	Southside Drive Median (without Mitigation)		Southside Drive Median (with Mitigation)	
NO2	121	80.07	Less than Significant	55.96	Less than Significant
CO	1031	53.22	Less than Significant	68.50	Less than Significant
PM10	7	4.12	Less than Significant	2.79	Less than Significant
PM25	5	3.72	Less than Significant	2.79	Less than Significant
SO2	N/A	0.12	N/A	0.12	N/A
ROG	N/A	8.36	N/A	2.80	N/A
CO2e	N/A	11,502.88	N/A	11,502.88	N/A

Montebello Parkway Medians - South San Gabriel Valley Localized Significant Threshold (LST)

Thresholds based on 1 acre disturbed and 25 meter distance to receptor

Pollutant	Threshold (lbs/day)	Montebello Parkway Medians (without Mitigation)		Montebello Parkway Medians (with Mitigation)	
NO2	83	68.81	Less than Significant	46.08	Less than Significant
CO	673	44.54	Less than Significant	56.98	Less than Significant
PM10	5	3.32	Less than Significant	2.26	Less than Significant
PM25	4	3.13	Less than Significant	2.26	Less than Significant
SO2	N/A	0.10	N/A	0.10	N/A
ROG	N/A	6.95	N/A	2.30	N/A
CO2e	N/A	9,596.92	N/A	9,596.92	N/A

Coolidge Way Medians - South San Gabriel Valley Localized Significant Threshold (LST)

Thresholds based on 1 acre disturbed and 25 meter distance to receptor

Pollutant	Threshold (lbs/day)	Coolidge Way Medians (without Mitigation)		Coolidge Way Medians (with Mitigation)	
NO2	83	61.15	Less than Significant	46.08	Less than Significant
CO	673	43.32	Less than Significant	56.98	Less than Significant
PM10	5	2.88	Less than Significant	2.26	Less than Significant
PM25	4	2.71	Less than Significant	2.26	Less than Significant
SO2	N/A	0.10	N/A	0.10	N/A
ROG	N/A	6.25	N/A	2.30	N/A
CO2e	N/A	9,472.10	N/A	9,472.10	N/A

Olympic Boulevard Medians - South San Gabriel Valley Localized Significant Threshold (LST)

Thresholds based on 1 acre disturbed and 25 meter distance to receptor

Pollutant	Threshold (lbs/day)	Olympic Boulevard Medians (without Mitigation)		Olympic Boulevard Medians (with Mitigation)	
NO2	83	61.15	Less than Significant	46.08	Less than Significant
CO	673	43.32	Less than Significant	56.98	Less than Significant
PM10	5	2.88	Less than Significant	2.26	Less than Significant
PM25	4	2.71	Less than Significant	2.26	Less than Significant
SO2	N/A	0.10	N/A	0.10	N/A
ROG	N/A	6.25	N/A	2.30	N/A
CO2e	N/A	9,472.10	N/A	9,472.10	N/A

East Los Angeles Sustainable Median Stormwater Capture Project

Emissions Summaries

Proposed Proejct Construction Emissions, Staggered Schedule

SCAQMD mass daily construction thresholds pertain to any consturction project within the South Coast Air Basin.

Pollutant	Threshold (lbs/day)	Peak Emissions without Mitigation		Peak Emissions with Mitigation	
NO_2	100	282	Significant	204	Significant
CO	550	193	Less than Significant	251	Less than Significant
PM_{10}	150	14	Less than Significant	10	Less than Significant
PM_{25}	55	13	Less than Significant	10	Less than Significant
SO2	150	0	Less than Significant	0	Less than Significant
ROG	75	29	Less than Significant	10	Less than Significant
CO_{2e}	N/A	41,934	N/A	41,934	N/A

Proposed Proejct Construction Emissions, Simultaneous Schedule

SCAQMD mass daily construction thresholds pertain to any consturction project within the South Coast Air Basin.

Pollutant	Threshold (lbs/day)	Peak Emissions without Mitigation		Peak Emissions with Mitigation	
NO_2	100	351	Significant	250	Significant
CO	550	238	Less than Significant	308	Less than Significant
PM_{10}	150	17	Less than Significant	12	Less than Significant
PM_{25}	55	16	Less than Significant	12	Less than Significant
SO2	150	1	Less than Significant	1	Less than Significant
ROG	75	36	Less than Significant	12	Less than Significant
CO_{2e}	N/A	51,531	N/A	51,531	N/A

Peak Daily Emissions for Each Project Component without Mitigation (lbs/day)

	Northside	Southside	Montebello	Coolidge	Olympic	Total Project, Staggered Schedule	Total Project, Simultaneous Schedule
NO_2	80	80	69	61	61	282	351
CO	53	53	45	43	43	193	238
PM_{10}	4	4	3	3	3	14	17
PM_{25}	4	4	3	3	3	13	16
SO2	0	0	0	0	0	0	1
ROG	8	8	7	6	6	29	36
CO_{2e}	11,487	11,503	9,597	9,472	9,472	41,934	51,531

Peak Daily Emissions for Each Project Component with Mitigation (lbs/day)

	Northside	Southside	Montebello	Coolidge	Olympic	Total Project, Staggered Schedule	Total Project, Simultaneous Schedule
NO_2	56	56	46	46	46	204	250
CO	68	68	57	57	57	251	308
PM_{10}	3	3	2	2	2	10	12
PM_{25}	3	3	2	2	2	10	12
SO2	0	0	0	0	0	0	1
ROG	3	3	2	2	2	10	12
CO_{2e}	11,487	11,503	9,597	9,472	9,472	41,934	51,531

Total CO_2e	
Northside Drive	537
Southside Drive	521
Montebello Parkway	164
Coolidge Way	125
Olympic Boulevard	92
Total Project	1,440
Amortized 30 yrs	**48**

East Los Angeles Sustainable Median Stormwater Capture Project

Potential Peak Daily Trips

	Northside Drive Medians				
	WORKERS	VENDOR	DURATION	TOTAL HAUL	DAILY HAUL
Demolition	13		20	243	12.15
Pipeline Installation	33				
Well Installation	51	20			
Paving, Landscaping, and Hardscaping	15				
MAX	84	20	20	243	12.15

Proposed Project Peak Day Trips		
WORKERS	291	*Worker Trips*
VENDOR	48	*Truck Hauls*
DAILY HAUL	43	*Truck Hauls*

Assume all Pipe and Well Installation occurs simultaneously across all project components (worst case).

East Los Angeles Sustainable Med

Potential Peak Daily Trips

	Southside Drive Medians				
	WORKERS	VENDOR	DURATION	TOTAL HAUL	DAILY HAUL
Demolition	13		20	248	12.4
Pipeline Installation	33				
Well Installation	47	18			
Paving, Landscaping, and Hardscaping	15				
MAX	80	18	20	248	12.4

East Los Angeles Sustainable Med

Potential Peak Daily Trips

	Coolidge Way Medians				
	WORKERS	VENDOR	DURATION	TOTAL HAUL	DAILY HAUL
Demolition	10		10	44	4.4
Pipeline Installation	33				
Well Installation	8	3			
Paving, Landscaping, and Hardscaping	18				
MAX	41	3	10	44	4.4

East Los Angeles Sustainable Med

Potential Peak Daily Trips

	Montebello Parkway Medians				
	WORKERS	VENDOR	DURATION	TOTAL HAUL	DAILY HAUL
Demolition	10		10	62	6.2
Pipeline Installation	33				
Well Installation	14	5			
Paving, Landscaping, and Hardscaping	18				
MAX	47	5	10	62	6.2

East Los Angeles Sustainable Med

Potential Peak Daily Trips

	Olympic Boulevard Medians				
	WORKERS	VENDOR	DURATION	TOTAL HAUL	DAILY HAUL
Demolition	10		10	69	6.9
Pipeline Installation	33				
Well Installation	6	2			
Paving, Landscaping, and Hardscaping	18				
MAX	39	2	10	69	6.9

ELA Medians Project - Northside Drive Median

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.40	1000sqft	0.03	1,400.00	0
City Park	2.75	Acre	2.75	119,790.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - CalEEMod Default Values

Demolition - 253 tons of debris from asphalt removal.
2,200 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Annual

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Annual

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	205.00
tblConstructionPhase	PhaseEndDate	9/12/2019	8/9/2019
tblConstructionPhase	PhaseEndDate	9/26/2019	8/23/2019
tblConstructionPhase	PhaseEndDate	10/31/2018	2/1/2019
tblConstructionPhase	PhaseStartDate	11/9/2018	10/27/2018
tblConstructionPhase	PhaseStartDate	9/13/2019	8/10/2019
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2318	2.1927	1.5045	3.3800e-003	0.0538	0.1055	0.1593	0.0114	0.0996	0.1110	0.0000	303.5061	303.5061	0.0689	0.0000	305.2283
2019	0.3710	3.2848	2.6155	6.0600e-003	0.0596	0.1574	0.2170	0.0161	0.1508	0.1669	0.0000	534.4765	534.4765	0.1059	0.0000	537.1238
Maximum	**0.3710**	**3.2848**	**2.6155**	**6.0600e-003**	**0.0596**	**0.1574**	**0.2170**	**0.0161**	**0.1508**	**0.1669**	**0.0000**	**534.4765**	**534.4765**	**0.1059**	**0.0000**	**537.1238**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0848	1.5145	1.8575	3.3800e-003	0.0378	0.0720	0.1098	8.9600e-003	0.0720	0.0809	0.0000	303.5058	303.5058	0.0689	0.0000	305.2280
2019	0.1548	2.7285	3.2938	6.0600e-003	0.0596	0.1366	0.1962	0.0161	0.1365	0.1525	0.0000	534.4760	534.4760	0.1059	0.0000	537.1232
Maximum	**0.1548**	**2.7285**	**3.2938**	**6.0600e-003**	**0.0596**	**0.1366**	**0.1962**	**0.0161**	**0.1365**	**0.1525**	**0.0000**	**534.4760**	**534.4760**	**0.1059**	**0.0000**	**537.1232**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.25**	**22.54**	**-25.03**	**0.00**	**14.11**	**20.67**	**18.69**	**8.82**	**16.76**	**15.98**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2018	12-31-2018	2.4539	1.6218
2	1-1-2019	3-31-2019	1.7360	1.3494
3	4-1-2019	6-30-2019	1.2497	1.0054
4	7-1-2019	9-30-2019	0.6191	0.4890
		Highest	2.4539	1.6218

3.0 Construction Detail

Construction Phase

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/26/2018	5	20	Demolition and site clearing
2	Pipeline Installation	Trenching	10/27/2018	2/1/2019	5	70	Trenching and installation of new pipelines
3	Well Installation	Building Construction	10/27/2018	8/9/2019	5	205	Installation of infiltration wells
4	Paving	Paving	8/10/2019	8/23/2019	5	10	Repaving of roadways

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.03

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Well Installation	Bore/Drill Rigs	2	8.00	221	0.50
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Excavators	2	6.00	158	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Paving Equipment	1	8.00	132	0.36
Well Installation	Forklifts	2	6.00	89	0.20
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	2	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	243.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	11	51.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0263	0.0000	0.0263	3.9700e-003	0.0000	3.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2436	0.1511	2.4000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	**0.0248**	**0.2436**	**0.1511**	**2.4000e-004**	**0.0263**	**0.0144**	**0.0406**	**3.9700e-003**	**0.0134**	**0.0174**	**0.0000**	**21.6923**	**21.6923**	**5.5000e-003**	**0.0000**	**21.8297**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2200e-003	0.0406	8.3700e-003	1.0000e-004	2.0900e-003	1.5000e-004	2.2400e-003	5.7000e-004	1.4000e-004	7.2000e-004	0.0000	9.5835	9.5835	6.8000e-004	0.0000	9.6004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	6.2000e-004	6.6300e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.4154	1.4154	5.0000e-005	0.0000	1.4168
Total	**1.9400e-003**	**0.0412**	**0.0150**	**1.2000e-004**	**3.5100e-003**	**1.6000e-004**	**3.6800e-003**	**9.5000e-004**	**1.5000e-004**	**1.1100e-003**	**0.0000**	**10.9989**	**10.9989**	**7.3000e-004**	**0.0000**	**11.0171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0102	0.0000	0.0102	1.5500e-003	0.0000	1.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6200e-003	0.1210	0.1542	2.4000e-004		7.1800e-003	7.1800e-003		7.1800e-003	7.1800e-003	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	**5.6200e-003**	**0.1210**	**0.1542**	**2.4000e-004**	**0.0102**	**7.1800e-003**	**0.0174**	**1.5500e-003**	**7.1800e-003**	**8.7300e-003**	**0.0000**	**21.6923**	**21.6923**	**5.5000e-003**	**0.0000**	**21.8297**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2200e-003	0.0406	8.3700e-003	1.0000e-004	2.0900e-003	1.5000e-004	2.2400e-003	5.7000e-004	1.4000e-004	7.2000e-004	0.0000	9.5835	9.5835	6.8000e-004	0.0000	9.6004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	6.2000e-004	6.6300e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.4154	1.4154	5.0000e-005	0.0000	1.4168
Total	**1.9400e-003**	**0.0412**	**0.0150**	**1.2000e-004**	**3.5100e-003**	**1.6000e-004**	**3.6800e-003**	**9.5000e-004**	**1.5000e-004**	**1.1100e-003**	**0.0000**	**10.9989**	**10.9989**	**7.3000e-004**	**0.0000**	**11.0171**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0981	1.0275	0.6407	1.4300e-003		0.0466	0.0466		0.0433	0.0433	0.0000	129.2688	129.2688	0.0375	0.0000	130.2050
Total	**0.0981**	**1.0275**	**0.6407**	**1.4300e-003**		**0.0466**	**0.0466**		**0.0433**	**0.0433**	**0.0000**	**129.2688**	**129.2688**	**0.0375**	**0.0000**	**130.2050**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2100e-003	3.6000e-003	0.0387	9.0000e-005	8.3200e-003	8.0000e-005	8.3900e-003	2.2100e-003	7.0000e-005	2.2800e-003	0.0000	8.2640	8.2640	3.1000e-004	0.0000	8.2717
Total	**4.2100e-003**	**3.6000e-003**	**0.0387**	**9.0000e-005**	**8.3200e-003**	**8.0000e-005**	**8.3900e-003**	**2.2100e-003**	**7.0000e-005**	**2.2800e-003**	**0.0000**	**8.2640**	**8.2640**	**3.1000e-004**	**0.0000**	**8.2717**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0338	0.6699	0.8407	1.4300e-003		0.0304	0.0304		0.0304	0.0304	0.0000	129.2686	129.2686	0.0375	0.0000	130.2048
Total	**0.0338**	**0.6699**	**0.8407**	**1.4300e-003**		**0.0304**	**0.0304**		**0.0304**	**0.0304**	**0.0000**	**129.2686**	**129.2686**	**0.0375**	**0.0000**	**130.2048**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2100e-003	3.6000e-003	0.0387	9.0000e-005	8.3200e-003	8.0000e-005	8.3900e-003	2.2100e-003	7.0000e-005	2.2800e-003	0.0000	8.2640	8.2640	3.1000e-004	0.0000	8.2717
Total	**4.2100e-003**	**3.6000e-003**	**0.0387**	**9.0000e-005**	**8.3200e-003**	**8.0000e-005**	**8.3900e-003**	**2.2100e-003**	**7.0000e-005**	**2.2800e-003**	**0.0000**	**8.2640**	**8.2640**	**3.1000e-004**	**0.0000**	**8.2717**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0465	0.4728	0.3242	7.5000e-004		0.0211	0.0211		0.0196	0.0196	0.0000	66.4448	66.4448	0.0195	0.0000	66.9320
Total	**0.0465**	**0.4728**	**0.3242**	**7.5000e-004**		**0.0211**	**0.0211**		**0.0196**	**0.0196**	**0.0000**	**66.4448**	**66.4448**	**0.0195**	**0.0000**	**66.9320**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9800e-003	1.6500e-003	0.0180	5.0000e-005	4.3400e-003	4.0000e-005	4.3800e-003	1.1500e-003	4.0000e-005	1.1900e-003	0.0000	4.1713	4.1713	1.4000e-004	0.0000	4.1749
Total	**1.9800e-003**	**1.6500e-003**	**0.0180**	**5.0000e-005**	**4.3400e-003**	**4.0000e-005**	**4.3800e-003**	**1.1500e-003**	**4.0000e-005**	**1.1900e-003**	**0.0000**	**4.1713**	**4.1713**	**1.4000e-004**	**0.0000**	**4.1749**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0176	0.3495	0.4386	7.5000e-004		0.0159	0.0159		0.0159	0.0159	0.0000	66.4447	66.4447	0.0195	0.0000	66.9319
Total	**0.0176**	**0.3495**	**0.4386**	**7.5000e-004**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**66.4447**	**66.4447**	**0.0195**	**0.0000**	**66.9319**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9800e-003	1.6500e-003	0.0180	5.0000e-005	4.3400e-003	4.0000e-005	4.3800e-003	1.1500e-003	4.0000e-005	1.1900e-003	0.0000	4.1713	4.1713	1.4000e-004	0.0000	4.1749
Total	**1.9800e-003**	**1.6500e-003**	**0.0180**	**5.0000e-005**	**4.3400e-003**	**4.0000e-005**	**4.3800e-003**	**1.1500e-003**	**4.0000e-005**	**1.1900e-003**	**0.0000**	**4.1713**	**4.1713**	**1.4000e-004**	**0.0000**	**4.1749**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0941	0.8136	0.5831	1.2400e-003		0.0438	0.0438		0.0422	0.0422	0.0000	108.8880	108.8880	0.0236	0.0000	109.4787
Total	**0.0941**	**0.8136**	**0.5831**	**1.2400e-003**		**0.0438**	**0.0438**		**0.0422**	**0.0422**	**0.0000**	**108.8880**	**108.8880**	**0.0236**	**0.0000**	**109.4787**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0576	0.0162	1.2000e-004	2.9000e-003	4.0000e-004	3.3000e-003	8.4000e-004	3.8000e-004	1.2200e-003	0.0000	11.6227	11.6227	8.0000e-004	0.0000	11.6426
Worker	6.5000e-003	5.5600e-003	0.0598	1.4000e-004	0.0129	1.2000e-004	0.0130	3.4100e-003	1.1000e-004	3.5200e-003	0.0000	12.7716	12.7716	4.8000e-004	0.0000	12.7836
Total	**8.6500e-003**	**0.0632**	**0.0760**	**2.6000e-004**	**0.0158**	**5.2000e-004**	**0.0163**	**4.2500e-003**	**4.9000e-004**	**4.7400e-003**	**0.0000**	**24.3942**	**24.3942**	**1.2800e-003**	**0.0000**	**24.4262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0306	0.6157	0.7330	1.2400e-003		0.0337	0.0337		0.0337	0.0337	0.0000	108.8878	108.8878	0.0236	0.0000	109.4785
Total	**0.0306**	**0.6157**	**0.7330**	**1.2400e-003**		**0.0337**	**0.0337**		**0.0337**	**0.0337**	**0.0000**	**108.8878**	**108.8878**	**0.0236**	**0.0000**	**109.4785**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0576	0.0162	1.2000e-004	2.9000e-003	4.0000e-004	3.3000e-003	8.4000e-004	3.8000e-004	1.2200e-003	0.0000	11.6227	11.6227	8.0000e-004	0.0000	11.6426
Worker	6.5000e-003	5.5600e-003	0.0598	1.4000e-004	0.0129	1.2000e-004	0.0130	3.4100e-003	1.1000e-004	3.5200e-003	0.0000	12.7716	12.7716	4.8000e-004	0.0000	12.7836
Total	**8.6500e-003**	**0.0632**	**0.0760**	**2.6000e-004**	**0.0158**	**5.2000e-004**	**0.0163**	**4.2500e-003**	**4.9000e-004**	**4.7400e-003**	**0.0000**	**24.3942**	**24.3942**	**1.2800e-003**	**0.0000**	**24.4262**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2888	2.5424	1.9752	4.2900e-003		0.1310	0.1310		0.1263	0.1263	0.0000	372.6809	372.6809	0.0797	0.0000	374.6722
Total	**0.2888**	**2.5424**	**1.9752**	**4.2900e-003**		**0.1310**	**0.1310**		**0.1263**	**0.1263**	**0.0000**	**372.6809**	**372.6809**	**0.0797**	**0.0000**	**374.6722**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7300e-003	0.1878	0.0514	4.1000e-004	0.0100	1.1800e-003	0.0112	2.8900e-003	1.1300e-003	4.0200e-003	0.0000	39.7603	39.7603	2.6500e-003	0.0000	39.8266
Worker	0.0203	0.0169	0.1841	4.7000e-004	0.0444	3.9000e-004	0.0448	0.0118	3.6000e-004	0.0122	0.0000	42.7084	42.7084	1.4700e-003	0.0000	42.7451
Total	**0.0270**	**0.2047**	**0.2354**	**8.8000e-004**	**0.0545**	**1.5700e-003**	**0.0560**	**0.0147**	**1.4900e-003**	**0.0162**	**0.0000**	**82.4686**	**82.4686**	**4.1200e-003**	**0.0000**	**82.5717**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1057	2.1280	2.5335	4.2900e-003		0.1164	0.1164		0.1164	0.1164	0.0000	372.6805	372.6805	0.0797	0.0000	374.6718
Total	**0.1057**	**2.1280**	**2.5335**	**4.2900e-003**		**0.1164**	**0.1164**		**0.1164**	**0.1164**	**0.0000**	**372.6805**	**372.6805**	**0.0797**	**0.0000**	**374.6718**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7300e-003	0.1878	0.0514	4.1000e-004	0.0100	1.1800e-003	0.0112	2.8900e-003	1.1300e-003	4.0200e-003	0.0000	39.7603	39.7603	2.6500e-003	0.0000	39.8266
Worker	0.0203	0.0169	0.1841	4.7000e-004	0.0444	3.9000e-004	0.0448	0.0118	3.6000e-004	0.0122	0.0000	42.7084	42.7084	1.4700e-003	0.0000	42.7451
Total	**0.0270**	**0.2047**	**0.2354**	**8.8000e-004**	**0.0545**	**1.5700e-003**	**0.0560**	**0.0147**	**1.4900e-003**	**0.0162**	**0.0000**	**82.4686**	**82.4686**	**4.1200e-003**	**0.0000**	**82.5717**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	4.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.2700e-003**	**0.0628**	**0.0593**	**9.0000e-005**		**3.6500e-003**	**3.6500e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.1000e-004	3.4000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7900	0.7900	3.0000e-005	0.0000	0.7907
Total	**3.8000e-004**	**3.1000e-004**	**3.4000e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7900**	**0.7900**	**3.0000e-005**	**0.0000**	**0.7907**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-003	0.0443	0.0649	9.0000e-005		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	4.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1400e-003**	**0.0443**	**0.0649**	**9.0000e-005**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.1000e-004	3.4000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7900	0.7900	3.0000e-005	0.0000	0.7907
Total	**3.8000e-004**	**3.1000e-004**	**3.4000e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7900**	**0.7900**	**3.0000e-005**	**0.0000**	**0.7907**

ELA Medians Project - Northside Drive Median

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.40	1000sqft	0.03	1,400.00	0
City Park	2.75	Acre	2.75	119,790.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - CalEEMod Default Values

Demolition - 253 tons of debris from asphalt removal.
2,200 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Summer

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Summer

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	205.00
tblConstructionPhase	PhaseEndDate	9/12/2019	8/9/2019
tblConstructionPhase	PhaseEndDate	9/26/2019	8/23/2019
tblConstructionPhase	PhaseEndDate	10/31/2018	2/1/2019
tblConstructionPhase	PhaseStartDate	11/9/2018	10/27/2018
tblConstructionPhase	PhaseStartDate	9/13/2019	8/10/2019
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	8.9117	82.8511	58.4122	0.1321	2.9823	3.9550	5.0220	0.4942	3.7409	4.0268	0.0000	13,030.4968	13,030.4968	3.0037	0.0000	13,105.5898
2019	8.0113	74.0064	56.5285	0.1316	1.0670	3.4314	4.4984	0.2859	3.2456	3.5315	0.0000	12,847.5090	12,847.5090	2.9652	0.0000	12,921.6401
Maximum	**8.9117**	**82.8511**	**58.4122**	**0.1321**	**2.9823**	**3.9550**	**5.0220**	**0.4942**	**3.7409**	**4.0268**	**0.0000**	**13,030.4968**	**13,030.4968**	**3.0037**	**0.0000**	**13,105.5898**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3534	58.6929	73.6270	0.1321	1.3813	2.8119	3.8789	0.2859	2.8105	3.0964	0.0000	13,030.4968	13,030.4968	3.0037	0.0000	13,105.5898
2019	3.3001	58.5145	73.0846	0.1316	1.0670	2.8091	3.8761	0.2859	2.8078	3.0937	0.0000	12,847.5090	12,847.5090	2.9652	0.0000	12,921.6401
Maximum	**3.3534**	**58.6929**	**73.6270**	**0.1321**	**1.3813**	**2.8119**	**3.8789**	**0.2859**	**2.8105**	**3.0964**	**0.0000**	**13,030.4968**	**13,030.4968**	**3.0037**	**0.0000**	**13,105.5898**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.68**	**25.28**	**-27.64**	**0.00**	**39.54**	**23.90**	**18.54**	**26.70**	**19.58**	**18.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/26/2018	5	20	Demolition and site clearing
2	Pipeline Installation	Trenching	10/27/2018	2/1/2019	5	70	Trenching and installation of new pipelines
3	Well Installation	Building Construction	10/27/2018	8/9/2019	5	205	Installation of infiltration wells
4	Paving	Paving	8/10/2019	8/23/2019	5	10	Repaving of roadways

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.03

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Well Installation	Bore/Drill Rigs	2	8.00	221	0.50
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Excavators	2	6.00	158	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Paving Equipment	1	8.00	132	0.36
Well Installation	Forklifts	2	6.00	89	0.20
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	2	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	243.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	11	51.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6246	0.0000	2.6246	0.3974	0.0000	0.3974			0.0000			0.0000
Off-Road	2.4838	24.3641	15.1107	0.0241		1.4365	1.4365		1.3429	1.3429		2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**2.4838**	**24.3641**	**15.1107**	**0.0241**	**2.6246**	**1.4365**	**4.0610**	**0.3974**	**1.3429**	**1.7403**		**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1206	3.9252	0.8122	9.8500e-003	0.2124	0.0149	0.2274	0.0582	0.0143	0.0725		1,063.8717	1,063.8717	0.0732		1,065.7027
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0718	0.0542	0.7021	1.6400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		162.9797	162.9797	6.1100e-003		163.1325
Total	**0.1924**	**3.9794**	**1.5143**	**0.0115**	**0.3577**	**0.0162**	**0.3740**	**0.0968**	**0.0155**	**0.1122**		**1,226.8514**	**1,226.8514**	**0.0794**		**1,228.8352**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0236	0.0000	1.0236	0.1550	0.0000	0.1550			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**0.5621**	**12.1033**	**15.4154**	**0.0241**	**1.0236**	**0.7182**	**1.7418**	**0.1550**	**0.7182**	**0.8732**	**0.0000**	**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1206	3.9252	0.8122	9.8500e-003	0.2124	0.0149	0.2274	0.0582	0.0143	0.0725		1,063.8717	1,063.8717	0.0732		1,065.7027
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0718	0.0542	0.7021	1.6400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		162.9797	162.9797	6.1100e-003		163.1325
Total	**0.1924**	**3.9794**	**1.5143**	**0.0115**	**0.3577**	**0.0162**	**0.3740**	**0.0968**	**0.0155**	**0.1122**		**1,226.8514**	**1,226.8514**	**0.0794**		**1,228.8352**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2634	44.6758	27.8549	0.0622		2.0272	2.0272		1.8833	1.8833		6,195.4112	6,195.4112	1.7947		6,240.2796
Total	**4.2634**	**44.6758**	**27.8549**	**0.0622**		**2.0272**	**2.0272**		**1.8833**	**1.8833**		**6,195.4112**	**6,195.4112**	**1.7947**		**6,240.2796**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1823	0.1376	1.7822	4.1600e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		413.7176	413.7176	0.0155		414.1056
Total	**0.1823**	**0.1376**	**1.7822**	**4.1600e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**413.7176**	**413.7176**	**0.0155**		**414.1056**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4679	29.1241	36.5524	0.0622		1.3218	1.3218		1.3218	1.3218	0.0000	6,195.4112	6,195.4112	1.7947		6,240.2796
Total	**1.4679**	**29.1241**	**36.5524**	**0.0622**		**1.3218**	**1.3218**		**1.3218**	**1.3218**	**0.0000**	**6,195.4112**	**6,195.4112**	**1.7947**		**6,240.2796**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1823	0.1376	1.7822	4.1600e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		413.7176	413.7176	0.0155		414.1056
Total	**0.1823**	**0.1376**	**1.7822**	**4.1600e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**413.7176**	**413.7176**	**0.0155**		**414.1056**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8762	39.4033	27.0191	0.0621		1.7605	1.7605		1.6358	1.6358		6,103.5727	6,103.5727	1.7901		6,148.3250
Total	**3.8762**	**39.4033**	**27.0191**	**0.0621**		**1.7605**	**1.7605**		**1.6358**	**1.6358**		**6,103.5727**	**6,103.5727**	**1.7901**		**6,148.3250**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4679	29.1241	36.5524	0.0621		1.3218	1.3218		1.3218	1.3218	0.0000	6,103.5727	6,103.5727	1.7901		6,148.3250
Total	**1.4679**	**29.1241**	**36.5524**	**0.0621**		**1.3218**	**1.3218**		**1.3218**	**1.3218**	**0.0000**	**6,103.5727**	**6,103.5727**	**1.7901**		**6,148.3250**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0923	35.3739	25.3505	0.0540		1.9022	1.9022		1.8334	1.8334		5,218.6273	5,218.6273	1.1324		5,246.9370
Total	**4.0923**	**35.3739**	**25.3505**	**0.0540**		**1.9022**	**1.9022**		**1.8334**	**1.8334**		**5,218.6273**	**5,218.6273**	**1.1324**		**5,246.9370**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0920	2.4512	0.6702	5.2900e-003	0.1280	0.0173	0.1453	0.0369	0.0165	0.0534		563.3588	563.3588	0.0371		564.2862
Worker	0.2818	0.2126	2.7544	6.4300e-003	0.5701	5.0800e-003	0.5751	0.1512	4.6900e-003	0.1559		639.3818	639.3818	0.0240		639.9813
Total	**0.3738**	**2.6638**	**3.4246**	**0.0117**	**0.6981**	**0.0224**	**0.7205**	**0.1880**	**0.0212**	**0.2093**		**1,202.7406**	**1,202.7406**	**0.0611**		**1,204.2676**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3294	26.7674	31.8678	0.0540		1.4645	1.4645		1.4645	1.4645	0.0000	5,218.6273	5,218.6273	1.1324		5,246.9370
Total	**1.3294**	**26.7674**	**31.8678**	**0.0540**		**1.4645**	**1.4645**		**1.4645**	**1.4645**	**0.0000**	**5,218.6273**	**5,218.6273**	**1.1324**		**5,246.9370**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0920	2.4512	0.6702	5.2900e-003	0.1280	0.0173	0.1453	0.0369	0.0165	0.0534		563.3588	563.3588	0.0371		564.2862
Worker	0.2818	0.2126	2.7544	6.4300e-003	0.5701	5.0800e-003	0.5751	0.1512	4.6900e-003	0.1559		639.3818	639.3818	0.0240		639.9813
Total	**0.3738**	**2.6638**	**3.4246**	**0.0117**	**0.6981**	**0.0224**	**0.7205**	**0.1880**	**0.0212**	**0.2093**		**1,202.7406**	**1,202.7406**	**0.0611**		**1,204.2676**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6323	31.9801	24.8450	0.0540		1.6480	1.6480		1.5883	1.5883		5,167.4266	5,167.4266	1.1044		5,195.0371
Total	**3.6323**	**31.9801**	**24.8450**	**0.0540**		**1.6480**	**1.6480**		**1.5883**	**1.5883**		**5,167.4266**	**5,167.4266**	**1.1044**		**5,195.0371**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0831	2.3146	0.6142	5.2300e-003	0.1280	0.0148	0.1428	0.0369	0.0141	0.0510		557.6292	557.6292	0.0357		558.5226
Worker	0.2548	0.1873	2.4590	6.2100e-003	0.5701	4.9200e-003	0.5750	0.1512	4.5300e-003	0.1557		618.6060	618.6060	0.0213		619.1372
Total	**0.3379**	**2.5018**	**3.0732**	**0.0114**	**0.6981**	**0.0197**	**0.7178**	**0.1880**	**0.0187**	**0.2067**		**1,176.2352**	**1,176.2352**	**0.0570**		**1,177.6598**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3294	26.7674	31.8678	0.0540		1.4645	1.4645		1.4645	1.4645	0.0000	5,167.4266	5,167.4266	1.1044		5,195.0371
Total	**1.3294**	**26.7674**	**31.8678**	**0.0540**		**1.4645**	**1.4645**		**1.4645**	**1.4645**	**0.0000**	**5,167.4266**	**5,167.4266**	**1.1044**		**5,195.0371**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0831	2.3146	0.6142	5.2300e-003	0.1280	0.0148	0.1428	0.0369	0.0141	0.0510		557.6292	557.6292	0.0357		558.5226
Worker	0.2548	0.1873	2.4590	6.2100e-003	0.5701	4.9200e-003	0.5750	0.1512	4.5300e-003	0.1557		618.6060	618.6060	0.0213		619.1372
Total	**0.3379**	**2.5018**	**3.0732**	**0.0114**	**0.6981**	**0.0197**	**0.7178**	**0.1880**	**0.0187**	**0.2067**		**1,176.2352**	**1,176.2352**	**0.0570**		**1,177.6598**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728		1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2532**	**12.5685**	**11.8507**	**0.0178**		**0.7301**	**0.7301**		**0.6728**	**0.6728**		**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
Total	**0.0749**	**0.0551**	**0.7233**	**1.8300e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**181.9429**	**181.9429**	**6.2500e-003**		**182.0992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4208	8.8511	12.9737	0.0178		0.5291	0.5291		0.5291	0.5291	0.0000	1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4286**	**8.8511**	**12.9737**	**0.0178**		**0.5291**	**0.5291**		**0.5291**	**0.5291**	**0.0000**	**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
Total	**0.0749**	**0.0551**	**0.7233**	**1.8300e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**181.9429**	**181.9429**	**6.2500e-003**		**182.0992**

ELA Medians Project - Northside Drive Median

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.40	1000sqft	0.03	1,400.00	0
City Park	2.75	Acre	2.75	119,790.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - CalEEMod Default Values

Demolition - 253 tons of debris from asphalt removal.
2,200 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Winter

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Winter

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	205.00
tblConstructionPhase	PhaseEndDate	9/12/2019	8/9/2019
tblConstructionPhase	PhaseEndDate	9/26/2019	8/23/2019
tblConstructionPhase	PhaseEndDate	10/31/2018	2/1/2019
tblConstructionPhase	PhaseStartDate	11/9/2018	10/27/2018
tblConstructionPhase	PhaseStartDate	9/13/2019	8/10/2019
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	8.9652	82.8942	58.1191	0.1313	2.9823	3.9553	5.0223	0.4942	3.7412	4.0270	0.0000	12,954.0220	12,954.0220	3.0040	0.0000	13,029.1222
2019	8.0604	74.0426	56.2579	0.1309	1.0670	3.4316	4.4986	0.2859	3.2458	3.5317	0.0000	12,772.9435	12,772.9435	2.9656	0.0000	12,847.0842
Maximum	**8.9652**	**82.8942**	**58.1191**	**0.1313**	**2.9823**	**3.9553**	**5.0223**	**0.4942**	**3.7412**	**4.0270**	**0.0000**	**12,954.0220**	**12,954.0220**	**3.0040**	**0.0000**	**13,029.1222**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.4069	58.7360	73.3340	0.1313	1.3813	2.8122	3.8791	0.2859	2.8108	3.0967	0.0000	12,954.0220	12,954.0220	3.0040	0.0000	13,029.1222
2019	3.3492	58.5507	72.8140	0.1309	1.0670	2.8094	3.8763	0.2859	2.8081	3.0939	0.0000	12,772.9435	12,772.9435	2.9656	0.0000	12,847.0842
Maximum	**3.4069**	**58.7360**	**73.3340**	**0.1313**	**1.3813**	**2.8122**	**3.8791**	**0.2859**	**2.8108**	**3.0967**	**0.0000**	**12,954.0220**	**12,954.0220**	**3.0040**	**0.0000**	**13,029.1222**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.32**	**25.26**	**-27.78**	**0.00**	**39.54**	**23.90**	**18.54**	**26.70**	**19.58**	**18.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/26/2018	5	20	Demolition and site clearing
2	Pipeline Installation	Trenching	10/27/2018	2/1/2019	5	70	Trenching and installation of new pipelines
3	Well Installation	Building Construction	10/27/2018	8/9/2019	5	205	Installation of infiltration wells
4	Paving	Paving	8/10/2019	8/23/2019	5	10	Repaving of roadways

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.03

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians Project - Northside Drive Median - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Well Installation	Bore/Drill Rigs	2	8.00	221	0.50
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Excavators	2	6.00	158	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Paving Equipment	1	8.00	132	0.36
Well Installation	Forklifts	2	6.00	89	0.20
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	2	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	243.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	11	51.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6246	0.0000	2.6246	0.3974	0.0000	0.3974			0.0000			0.0000
Off-Road	2.4838	24.3641	15.1107	0.0241		1.4365	1.4365		1.3429	1.3429		2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**2.4838**	**24.3641**	**15.1107**	**0.0241**	**2.6246**	**1.4365**	**4.0610**	**0.3974**	**1.3429**	**1.7403**		**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1237	3.9790	0.8689	9.6800e-003	0.2124	0.0152	0.2276	0.0582	0.0146	0.0728		1,046.0702	1,046.0702	0.0761		1,047.9727
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0795	0.0600	0.6465	1.5400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		153.4749	153.4749	5.7800e-003		153.6193
Total	**0.2031**	**4.0390**	**1.5153**	**0.0112**	**0.3577**	**0.0165**	**0.3742**	**0.0968**	**0.0158**	**0.1125**		**1,199.5451**	**1,199.5451**	**0.0819**		**1,201.5919**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0236	0.0000	1.0236	0.1550	0.0000	0.1550			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**0.5621**	**12.1033**	**15.4154**	**0.0241**	**1.0236**	**0.7182**	**1.7418**	**0.1550**	**0.7182**	**0.8732**	**0.0000**	**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1237	3.9790	0.8689	9.6800e-003	0.2124	0.0152	0.2276	0.0582	0.0146	0.0728		1,046.0702	1,046.0702	0.0761		1,047.9727
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0795	0.0600	0.6465	1.5400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		153.4749	153.4749	5.7800e-003		153.6193
Total	**0.2031**	**4.0390**	**1.5153**	**0.0112**	**0.3577**	**0.0165**	**0.3742**	**0.0968**	**0.0158**	**0.1125**		**1,199.5451**	**1,199.5451**	**0.0819**		**1,201.5919**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2634	44.6758	27.8549	0.0622		2.0272	2.0272		1.8833	1.8833		6,195.4112	6,195.4112	1.7947		6,240.2796
Total	**4.2634**	**44.6758**	**27.8549**	**0.0622**		**2.0272**	**2.0272**		**1.8833**	**1.8833**		**6,195.4112**	**6,195.4112**	**1.7947**		**6,240.2796**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2018	0.1524	1.6410	3.9200e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		389.5901	389.5901	0.0147		389.9566
Total	**0.2018**	**0.1524**	**1.6410**	**3.9200e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**389.5901**	**389.5901**	**0.0147**		**389.9566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4679	29.1241	36.5524	0.0622		1.3218	1.3218		1.3218	1.3218	0.0000	6,195.4112	6,195.4112	1.7947		6,240.2796
Total	**1.4679**	**29.1241**	**36.5524**	**0.0622**		**1.3218**	**1.3218**		**1.3218**	**1.3218**	**0.0000**	**6,195.4112**	**6,195.4112**	**1.7947**		**6,240.2796**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2018	0.1524	1.6410	3.9200e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		389.5901	389.5901	0.0147		389.9566
Total	**0.2018**	**0.1524**	**1.6410**	**3.9200e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**389.5901**	**389.5901**	**0.0147**		**389.9566**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8762	39.4033	27.0191	0.0621		1.7605	1.7605		1.6358	1.6358		6,103.5727	6,103.5727	1.7901		6,148.3250
Total	**3.8762**	**39.4033**	**27.0191**	**0.0621**		**1.7605**	**1.7605**		**1.6358**	**1.6358**		**6,103.5727**	**6,103.5727**	**1.7901**		**6,148.3250**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4679	29.1241	36.5524	0.0621		1.3218	1.3218		1.3218	1.3218	0.0000	6,103.5727	6,103.5727	1.7901		6,148.3250
Total	**1.4679**	**29.1241**	**36.5524**	**0.0621**		**1.3218**	**1.3218**		**1.3218**	**1.3218**	**0.0000**	**6,103.5727**	**6,103.5727**	**1.7901**		**6,148.3250**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0923	35.3739	25.3505	0.0540		1.9022	1.9022		1.8334	1.8334		5,218.6273	5,218.6273	1.1324		5,246.9370
Total	**4.0923**	**35.3739**	**25.3505**	**0.0540**		**1.9022**	**1.9022**		**1.8334**	**1.8334**		**5,218.6273**	**5,218.6273**	**1.1324**		**5,246.9370**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0959	2.4567	0.7367	5.1500e-003	0.1280	0.0176	0.1456	0.0369	0.0168	0.0537		548.2997	548.2997	0.0396		549.2887
Worker	0.3119	0.2355	2.5361	6.0500e-003	0.5701	5.0800e-003	0.5751	0.1512	4.6900e-003	0.1559		602.0937	602.0937	0.0227		602.6602
Total	**0.4077**	**2.6922**	**3.2728**	**0.0112**	**0.6981**	**0.0226**	**0.7207**	**0.1880**	**0.0215**	**0.2095**		**1,150.3935**	**1,150.3935**	**0.0622**		**1,151.9490**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3294	26.7674	31.8678	0.0540		1.4645	1.4645		1.4645	1.4645	0.0000	5,218.6273	5,218.6273	1.1324		5,246.9370
Total	**1.3294**	**26.7674**	**31.8678**	**0.0540**		**1.4645**	**1.4645**		**1.4645**	**1.4645**	**0.0000**	**5,218.6273**	**5,218.6273**	**1.1324**		**5,246.9370**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0959	2.4567	0.7367	5.1500e-003	0.1280	0.0176	0.1456	0.0369	0.0168	0.0537		548.2997	548.2997	0.0396		549.2887
Worker	0.3119	0.2355	2.5361	6.0500e-003	0.5701	5.0800e-003	0.5751	0.1512	4.6900e-003	0.1559		602.0937	602.0937	0.0227		602.6602
Total	**0.4077**	**2.6922**	**3.2728**	**0.0112**	**0.6981**	**0.0226**	**0.7207**	**0.1880**	**0.0215**	**0.2095**		**1,150.3935**	**1,150.3935**	**0.0622**		**1,151.9490**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6323	31.9801	24.8450	0.0540		1.6480	1.6480		1.5883	1.5883		5,167.4266	5,167.4266	1.1044		5,195.0371
Total	**3.6323**	**31.9801**	**24.8450**	**0.0540**		**1.6480**	**1.6480**		**1.5883**	**1.5883**		**5,167.4266**	**5,167.4266**	**1.1044**		**5,195.0371**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0867	2.3177	0.6770	5.0900e-003	0.1280	0.0150	0.1430	0.0369	0.0144	0.0512		542.5542	542.5542	0.0381		543.5071
Worker	0.2824	0.2074	2.2566	5.8500e-003	0.5701	4.9200e-003	0.5750	0.1512	4.5300e-003	0.1557		582.4867	582.4867	0.0200		582.9877
Total	**0.3691**	**2.5251**	**2.9336**	**0.0109**	**0.6981**	**0.0199**	**0.7180**	**0.1880**	**0.0189**	**0.2069**		**1,125.0409**	**1,125.0409**	**0.0582**		**1,126.4947**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3294	26.7674	31.8678	0.0540		1.4645	1.4645		1.4645	1.4645	0.0000	5,167.4266	5,167.4266	1.1044		5,195.0371
Total	**1.3294**	**26.7674**	**31.8678**	**0.0540**		**1.4645**	**1.4645**		**1.4645**	**1.4645**	**0.0000**	**5,167.4266**	**5,167.4266**	**1.1044**		**5,195.0371**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0867	2.3177	0.6770	5.0900e-003	0.1280	0.0150	0.1430	0.0369	0.0144	0.0512		542.5542	542.5542	0.0381		543.5071
Worker	0.2824	0.2074	2.2566	5.8500e-003	0.5701	4.9200e-003	0.5750	0.1512	4.5300e-003	0.1557		582.4867	582.4867	0.0200		582.9877
Total	**0.3691**	**2.5251**	**2.9336**	**0.0109**	**0.6981**	**0.0199**	**0.7180**	**0.1880**	**0.0189**	**0.2069**		**1,125.0409**	**1,125.0409**	**0.0582**		**1,126.4947**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728		1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2532**	**12.5685**	**11.8507**	**0.0178**		**0.7301**	**0.7301**		**0.6728**	**0.6728**		**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003		171.4670
Total	**0.0831**	**0.0610**	**0.6637**	**1.7200e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**171.3196**	**171.3196**	**5.8900e-003**		**171.4670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4208	8.8511	12.9737	0.0178		0.5291	0.5291		0.5291	0.5291	0.0000	1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	7.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4286**	**8.8511**	**12.9737**	**0.0178**		**0.5291**	**0.5291**		**0.5291**	**0.5291**	**0.0000**	**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003		171.4670
Total	**0.0831**	**0.0610**	**0.6637**	**1.7200e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**171.3196**	**171.3196**	**5.8900e-003**		**171.4670**

ELA Medians - Southside Drive Median

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Other Asphalt Surfaces	3.10	1000sqft	0.07	3,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.
Land Use

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Grading -

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

Demolition - 574 tons of debris from asphalt removal.
1938 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	205.00
tblConstructionPhase	PhaseEndDate	9/4/2019	8/9/2019
tblConstructionPhase	PhaseEndDate	10/31/2018	1/29/2019
tblConstructionPhase	PhaseEndDate	9/18/2019	8/23/2019
tblConstructionPhase	PhaseStartDate	11/1/2018	10/27/2018
tblConstructionPhase	PhaseStartDate	9/5/2019	8/10/2019
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2312	2.1878	1.4988	3.3600e-003	0.0532	0.1054	0.1586	0.0111	0.0996	0.1107	0.0000	301.8637	301.8637	0.0689	0.0000	303.5859
2019	0.3627	3.2056	2.5539	5.8900e-003	0.0546	0.1546	0.2092	0.0147	0.1482	0.1629	0.0000	518.8279	518.8279	0.1032	0.0000	521.4083
Maximum	**0.3627**	**3.2056**	**2.5539**	**5.8900e-003**	**0.0546**	**0.1546**	**0.2092**	**0.0147**	**0.1482**	**0.1629**	**0.0000**	**518.8279**	**518.8279**	**0.1032**	**0.0000**	**521.4083**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0842	1.5108	1.8531	3.3600e-003	0.0368	0.0720	0.1088	8.6600e-003	0.0720	0.0807	0.0000	301.8634	301.8634	0.0689	0.0000	303.5855
2019	0.1503	2.6672	3.2202	5.8900e-003	0.0546	0.1345	0.1891	0.0147	0.1344	0.1491	0.0000	518.8274	518.8274	0.1032	0.0000	521.4078
Maximum	**0.1503**	**2.6672**	**3.2202**	**5.8900e-003**	**0.0546**	**0.1345**	**0.1891**	**0.0147**	**0.1344**	**0.1491**	**0.0000**	**518.8274**	**518.8274**	**0.1032**	**0.0000**	**521.4078**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.52**	**22.54**	**-25.18**	**0.00**	**15.21**	**20.56**	**18.99**	**9.60**	**16.67**	**16.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2018	12-31-2018	2.4482	1.6173
2	1-1-2019	3-31-2019	1.6804	1.3087
3	4-1-2019	6-30-2019	1.2408	0.9975
4	7-1-2019	9-30-2019	0.6152	0.4856
		Highest	2.4482	1.6173

3.0 Construction Detail

Construction Phase

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/26/2018	5	20	
2	Pipeline Installation	Trenching	10/27/2018	1/29/2019	5	67	
3	Well Installation	Building Construction	10/27/2018	8/9/2019	5	205	
4	Paving	Paving	8/10/2019	8/23/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Pipeline Installation	Excavators	2	6.00	158	0.38
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Bore/Drill Rigs	2	8.00	221	0.50
Paving	Paving Equipment	1	8.00	132	0.36
Well Installation	Cranes	1	8.00	231	0.29
Well Installation	Forklifts	2	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	2	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	2	8.00	46	0.45

Trips and VMT

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	248.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	11	47.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0269	0.0000	0.0269	4.0700e-003	0.0000	4.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2436	0.1511	2.4000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	**0.0248**	**0.2436**	**0.1511**	**2.4000e-004**	**0.0269**	**0.0144**	**0.0412**	**4.0700e-003**	**0.0134**	**0.0175**	**0.0000**	**21.6923**	**21.6923**	**5.5000e-003**	**0.0000**	**21.8297**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2400e-003	0.0414	8.5400e-003	1.0000e-004	2.1300e-003	1.5000e-004	2.2800e-003	5.9000e-004	1.5000e-004	7.3000e-004	0.0000	9.7807	9.7807	6.9000e-004	0.0000	9.7979
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	6.2000e-004	6.6300e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.4154	1.4154	5.0000e-005	0.0000	1.4168
Total	**1.9600e-003**	**0.0420**	**0.0152**	**1.2000e-004**	**3.5500e-003**	**1.6000e-004**	**3.7200e-003**	**9.7000e-004**	**1.6000e-004**	**1.1200e-003**	**0.0000**	**11.1961**	**11.1961**	**7.4000e-004**	**0.0000**	**11.2147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0105	0.0000	0.0105	1.5900e-003	0.0000	1.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6200e-003	0.1210	0.1542	2.4000e-004		7.1800e-003	7.1800e-003		7.1800e-003	7.1800e-003	0.0000	21.6923	21.6923	5.5000e-003	0.0000	21.8297
Total	**5.6200e-003**	**0.1210**	**0.1542**	**2.4000e-004**	**0.0105**	**7.1800e-003**	**0.0177**	**1.5900e-003**	**7.1800e-003**	**8.7700e-003**	**0.0000**	**21.6923**	**21.6923**	**5.5000e-003**	**0.0000**	**21.8297**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2400e-003	0.0414	8.5400e-003	1.0000e-004	2.1300e-003	1.5000e-004	2.2800e-003	5.9000e-004	1.5000e-004	7.3000e-004	0.0000	9.7807	9.7807	6.9000e-004	0.0000	9.7979
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	6.2000e-004	6.6300e-003	2.0000e-005	1.4200e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.4154	1.4154	5.0000e-005	0.0000	1.4168
Total	**1.9600e-003**	**0.0420**	**0.0152**	**1.2000e-004**	**3.5500e-003**	**1.6000e-004**	**3.7200e-003**	**9.7000e-004**	**1.6000e-004**	**1.1200e-003**	**0.0000**	**11.1961**	**11.1961**	**7.4000e-004**	**0.0000**	**11.2147**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0981	1.0279	0.6409	1.4300e-003		0.0466	0.0466		0.0433	0.0433	0.0000	129.4713	129.4713	0.0375	0.0000	130.4090
Total	**0.0981**	**1.0279**	**0.6409**	**1.4300e-003**		**0.0466**	**0.0466**		**0.0433**	**0.0433**	**0.0000**	**129.4713**	**129.4713**	**0.0375**	**0.0000**	**130.4090**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2100e-003	3.6000e-003	0.0387	9.0000e-005	8.3200e-003	8.0000e-005	8.3900e-003	2.2100e-003	7.0000e-005	2.2800e-003	0.0000	8.2640	8.2640	3.1000e-004	0.0000	8.2717
Total	**4.2100e-003**	**3.6000e-003**	**0.0387**	**9.0000e-005**	**8.3200e-003**	**8.0000e-005**	**8.3900e-003**	**2.2100e-003**	**7.0000e-005**	**2.2800e-003**	**0.0000**	**8.2640**	**8.2640**	**3.1000e-004**	**0.0000**	**8.2717**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0338	0.6709	0.8417	1.4300e-003		0.0304	0.0304		0.0304	0.0304	0.0000	129.4711	129.4711	0.0375	0.0000	130.4089
Total	**0.0338**	**0.6709**	**0.8417**	**1.4300e-003**		**0.0304**	**0.0304**		**0.0304**	**0.0304**	**0.0000**	**129.4711**	**129.4711**	**0.0375**	**0.0000**	**130.4089**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2100e-003	3.6000e-003	0.0387	9.0000e-005	8.3200e-003	8.0000e-005	8.3900e-003	2.1100e-003	7.0000e-005	2.2800e-003	0.0000	8.2640	8.2640	3.1000e-004	0.0000	8.2717
Total	**4.2100e-003**	**3.6000e-003**	**0.0387**	**9.0000e-005**	**8.3200e-003**	**8.0000e-005**	**8.3900e-003**	**2.1100e-003**	**7.0000e-005**	**2.2800e-003**	**0.0000**	**8.2640**	**8.2640**	**3.1000e-004**	**0.0000**	**8.2717**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0407	0.4138	0.2838	6.5000e-004		0.0185	0.0185		0.0172	0.0172	0.0000	58.2301	58.2301	0.0171	0.0000	58.6571
Total	**0.0407**	**0.4138**	**0.2838**	**6.5000e-004**		**0.0185**	**0.0185**		**0.0172**	**0.0172**	**0.0000**	**58.2301**	**58.2301**	**0.0171**	**0.0000**	**58.6571**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7400e-003	1.4500e-003	0.0157	4.0000e-005	3.8000e-003	3.0000e-005	3.8300e-003	1.0100e-003	3.0000e-005	1.0400e-003	0.0000	3.6499	3.6499	1.3000e-004	0.0000	3.6530
Total	**1.7400e-003**	**1.4500e-003**	**0.0157**	**4.0000e-005**	**3.8000e-003**	**3.0000e-005**	**3.8300e-003**	**1.0100e-003**	**3.0000e-005**	**1.0400e-003**	**0.0000**	**3.6499**	**3.6499**	**1.3000e-004**	**0.0000**	**3.6530**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0154	0.3063	0.3843	6.5000e-004		0.0139	0.0139		0.0139	0.0139	0.0000	58.2300	58.2300	0.0171	0.0000	58.6570
Total	**0.0154**	**0.3063**	**0.3843**	**6.5000e-004**		**0.0139**	**0.0139**		**0.0139**	**0.0139**	**0.0000**	**58.2300**	**58.2300**	**0.0171**	**0.0000**	**58.6570**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7400e-003	1.4500e-003	0.0157	4.0000e-005	3.8000e-003	3.0000e-005	3.8300e-003	1.0100e-003	3.0000e-005	1.0400e-003	0.0000	3.6499	3.6499	1.3000e-004	0.0000	3.6530
Total	**1.7400e-003**	**1.4500e-003**	**0.0157**	**4.0000e-005**	**3.8000e-003**	**3.0000e-005**	**3.8300e-003**	**1.0100e-003**	**3.0000e-005**	**1.0400e-003**	**0.0000**	**3.6499**	**3.6499**	**1.3000e-004**	**0.0000**	**3.6530**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0941	0.8136	0.5832	1.2400e-003		0.0437	0.0437		0.0422	0.0422	0.0000	109.0099	109.0099	0.0237	0.0000	109.6015
Total	**0.0941**	**0.8136**	**0.5832**	**1.2400e-003**		**0.0437**	**0.0437**		**0.0422**	**0.0422**	**0.0000**	**109.0099**	**109.0099**	**0.0237**	**0.0000**	**109.6015**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9400e-003	0.0519	0.0146	1.1000e-004	2.6100e-003	3.6000e-004	2.9700e-003	7.5000e-004	3.4000e-004	1.1000e-003	0.0000	10.4604	10.4604	7.2000e-004	0.0000	10.4783
Worker	5.9900e-003	5.1200e-003	0.0551	1.3000e-004	0.0119	1.1000e-004	0.0120	3.1500e-003	1.0000e-004	3.2500e-003	0.0000	11.7699	11.7699	4.4000e-004	0.0000	11.7809
Total	**7.9300e-003**	**0.0570**	**0.0697**	**2.4000e-004**	**0.0145**	**4.7000e-004**	**0.0149**	**3.9000e-003**	**4.4000e-004**	**4.3500e-003**	**0.0000**	**22.2303**	**22.2303**	**1.1600e-003**	**0.0000**	**22.2593**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0306	0.6163	0.7337	1.2400e-003		0.0337	0.0337		0.0337	0.0337	0.0000	109.0097	109.0097	0.0237	0.0000	109.6014
Total	**0.0306**	**0.6163**	**0.7337**	**1.2400e-003**		**0.0337**	**0.0337**		**0.0337**	**0.0337**	**0.0000**	**109.0097**	**109.0097**	**0.0237**	**0.0000**	**109.6014**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9400e-003	0.0519	0.0146	1.1000e-004	2.6100e-003	3.6000e-004	2.9700e-003	7.5000e-004	3.4000e-004	1.1000e-003	0.0000	10.4604	10.4604	7.2000e-004	0.0000	10.4783
Worker	5.9900e-003	5.1200e-003	0.0551	1.3000e-004	0.0119	1.1000e-004	0.0120	3.1500e-003	1.0000e-004	3.2500e-003	0.0000	11.7699	11.7699	4.4000e-004	0.0000	11.7809
Total	**7.9300e-003**	**0.0570**	**0.0697**	**2.4000e-004**	**0.0145**	**4.7000e-004**	**0.0149**	**3.9000e-003**	**4.4000e-004**	**4.3500e-003**	**0.0000**	**22.2303**	**22.2303**	**1.1600e-003**	**0.0000**	**22.2593**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2888	2.5425	1.9758	4.3000e-003		0.1310	0.1310		0.1263	0.1263	0.0000	373.0942	373.0942	0.0798	0.0000	375.0888
Total	**0.2888**	**2.5425**	**1.9758**	**4.3000e-003**		**0.1310**	**0.1310**		**0.1263**	**0.1263**	**0.0000**	**373.0942**	**373.0942**	**0.0798**	**0.0000**	**375.0888**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0600e-003	0.1690	0.0462	3.7000e-004	9.0100e-003	1.0600e-003	0.0101	2.6000e-003	1.0200e-003	3.6200e-003	0.0000	35.7842	35.7842	2.3900e-003	0.0000	35.8440
Worker	0.0187	0.0156	0.1696	4.4000e-004	0.0409	3.6000e-004	0.0413	0.0109	3.3000e-004	0.0112	0.0000	39.3587	39.3587	1.3500e-003	0.0000	39.3925
Total	**0.0248**	**0.1846**	**0.2159**	**8.1000e-004**	**0.0500**	**1.4200e-003**	**0.0514**	**0.0135**	**1.3500e-003**	**0.0148**	**0.0000**	**75.1429**	**75.1429**	**3.7400e-003**	**0.0000**	**75.2365**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1058	2.1303	2.5360	4.3000e-003		0.1165	0.1165		0.1165	0.1165	0.0000	373.0938	373.0938	0.0798	0.0000	375.0883
Total	**0.1058**	**2.1303**	**2.5360**	**4.3000e-003**		**0.1165**	**0.1165**		**0.1165**	**0.1165**	**0.0000**	**373.0938**	**373.0938**	**0.0798**	**0.0000**	**375.0883**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0600e-003	0.1690	0.0462	3.7000e-004	9.0100e-003	1.0600e-003	0.0101	2.6000e-003	1.0200e-003	3.6200e-003	0.0000	35.7842	35.7842	2.3900e-003	0.0000	35.8440
Worker	0.0187	0.0156	0.1696	4.4000e-004	0.0409	3.6000e-004	0.0413	0.0109	3.3000e-004	0.0112	0.0000	39.3587	39.3587	1.3500e-003	0.0000	39.3925
Total	**0.0248**	**0.1846**	**0.2159**	**8.1000e-004**	**0.0500**	**1.4200e-003**	**0.0514**	**0.0135**	**1.3500e-003**	**0.0148**	**0.0000**	**75.1429**	**75.1429**	**3.7400e-003**	**0.0000**	**75.2365**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2300e-003	0.0628	0.0593	9.0000e-005		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	9.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.3200e-003**	**0.0628**	**0.0593**	**9.0000e-005**		**3.6500e-003**	**3.6500e-003**		**3.3600e-003**	**3.3600e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.1000e-004	3.4000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7900	0.7900	3.0000e-005	0.0000	0.7907
Total	**3.8000e-004**	**3.1000e-004**	**3.4000e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7900**	**0.7900**	**3.0000e-005**	**0.0000**	**0.7907**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-003	0.0443	0.0649	9.0000e-005		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	7.9208	7.9208	2.4600e-003	0.0000	7.9823
Paving	9.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1900e-003**	**0.0443**	**0.0649**	**9.0000e-005**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**	**0.0000**	**7.9208**	**7.9208**	**2.4600e-003**	**0.0000**	**7.9823**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.1000e-004	3.4000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7900	0.7900	3.0000e-005	0.0000	0.7907
Total	**3.8000e-004**	**3.1000e-004**	**3.4000e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7900**	**0.7900**	**3.0000e-005**	**0.0000**	**0.7907**

ELA Medians - Southside Drive Median

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Other Asphalt Surfaces	3.10	1000sqft	0.07	3,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.
Land Use

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Grading -

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Summer

Demolition - 574 tons of debris from asphalt removal.
1938 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Summer

Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	205.00
tblConstructionPhase	PhaseEndDate	9/4/2019	8/9/2019
tblConstructionPhase	PhaseEndDate	10/31/2018	1/29/2019
tblConstructionPhase	PhaseEndDate	9/18/2019	8/23/2019
tblConstructionPhase	PhaseStartDate	11/1/2018	10/27/2018
tblConstructionPhase	PhaseStartDate	9/5/2019	8/10/2019
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	8.8822	82.6072	58.1477	0.1312	3.0493	3.9518	4.9612	0.5048	3.7378	4.0082	0.0000	12,939.5593	12,939.5593	3.0030	0.0000	13,014.6336
2019	7.9848	73.7714	56.2932	0.1307	1.0094	3.4284	4.4379	0.2703	3.2428	3.5132	0.0000	12,758.4972	12,758.4972	2.9648	0.0000	12,832.6180
Maximum	**8.8822**	**82.6072**	**58.1477**	**0.1312**	**3.0493**	**3.9518**	**4.9612**	**0.5048**	**3.7378**	**4.0082**	**0.0000**	**12,939.5593**	**12,939.5593**	**3.0030**	**0.0000**	**13,014.6336**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3260	58.5033	73.4200	0.1312	1.4101	2.8122	3.8216	0.2703	2.8109	3.0812	0.0000	12,939.5593	12,939.5593	3.0030	0.0000	13,014.6336
2019	3.2756	58.3405	72.9062	0.1307	1.0094	2.8096	3.8191	0.2703	2.8085	3.0788	0.0000	12,758.4971	12,758.4971	2.9648	0.0000	12,832.6180
Maximum	**3.3260**	**58.5033**	**73.4200**	**0.1312**	**1.4101**	**2.8122**	**3.8216**	**0.2703**	**2.8109**	**3.0812**	**0.0000**	**12,939.5593**	**12,939.5593**	**3.0030**	**0.0000**	**13,014.6336**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.86**	**25.28**	**-27.86**	**0.00**	**40.39**	**23.83**	**18.71**	**30.25**	**19.50**	**18.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/26/2018	5	20	
2	Pipeline Installation	Trenching	10/27/2018	1/29/2019	5	67	
3	Well Installation	Building Construction	10/27/2018	8/9/2019	5	205	
4	Paving	Paving	8/10/2019	8/23/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Pipeline Installation	Excavators	2	6.00	158	0.38
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Bore/Drill Rigs	2	8.00	221	0.50
Paving	Paving Equipment	1	8.00	132	0.36
Well Installation	Cranes	1	8.00	231	0.29
Well Installation	Forklifts	2	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	2	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	248.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	11	47.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6872	0.0000	2.6872	0.4069	0.0000	0.4069			0.0000			0.0000
Off-Road	2.4838	24.3641	15.1107	0.0241		1.4365	1.4365		1.3429	1.3429		2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**2.4838**	**24.3641**	**15.1107**	**0.0241**	**2.6872**	**1.4365**	**4.1236**	**0.4069**	**1.3429**	**1.7498**		**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1231	4.0060	0.8289	0.0101	0.2168	0.0152	0.2320	0.0594	0.0146	0.0740		1,085.7621	1,085.7621	0.0748		1,087.6307
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0718	0.0542	0.7021	1.6400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		162.9797	162.9797	6.1100e-003		163.1325
Total	**0.1949**	**4.0602**	**1.5310**	**0.0117**	**0.3621**	**0.0165**	**0.3786**	**0.0980**	**0.0158**	**0.1137**		**1,248.7417**	**1,248.7417**	**0.0809**		**1,250.7632**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0480	0.0000	1.0480	0.1587	0.0000	0.1587			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**0.5621**	**12.1033**	**15.4154**	**0.0241**	**1.0480**	**0.7182**	**1.7662**	**0.1587**	**0.7182**	**0.8769**	**0.0000**	**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1231	4.0060	0.8289	0.0101	0.2168	0.0152	0.2320	0.0594	0.0146	0.0740		1,085.7621	1,085.7621	0.0748		1,087.6307
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0718	0.0542	0.7021	1.6400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		162.9797	162.9797	6.1100e-003		163.1325
Total	**0.1949**	**4.0602**	**1.5310**	**0.0117**	**0.3621**	**0.0165**	**0.3786**	**0.0980**	**0.0158**	**0.1137**		**1,248.7417**	**1,248.7417**	**0.0809**		**1,250.7632**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2653	44.6927	27.8671	0.0623		2.0264	2.0264		1.8826	1.8826		6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**4.2653**	**44.6927**	**27.8671**	**0.0623**		**2.0264**	**2.0264**		**1.8826**	**1.8826**		**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1823	0.1376	1.7822	4.1600e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		413.7176	413.7176	0.0155		414.1056
Total	**0.1823**	**0.1376**	**1.7822**	**4.1600e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**413.7176**	**413.7176**	**0.0155**		**414.1056**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0623		1.3231	1.3231		1.3231	1.3231	0.0000	6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**1.4703**	**29.1679**	**36.5962**	**0.0623**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1823	0.1376	1.7822	4.1600e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		413.7176	413.7176	0.0155		414.1056
Total	**0.1823**	**0.1376**	**1.7822**	**4.1600e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**413.7176**	**413.7176**	**0.0155**		**414.1056**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8780	39.4133	27.0305	0.0622		1.7597	1.7597		1.6350	1.6350		6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**3.8780**	**39.4133**	**27.0305**	**0.0622**		**1.7597**	**1.7597**		**1.6350**	**1.6350**		**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0622		1.3231	1.3231		1.3231	1.3231	0.0000	6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**1.4703**	**29.1679**	**36.5962**	**0.0622**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0921	35.3749	25.3569	0.0541		1.9018	1.9018		1.8330	1.8330		5,224.4693	5,224.4693	1.1342		5,252.8245
Total	**4.0921**	**35.3749**	**25.3569**	**0.0541**		**1.9018**	**1.9018**		**1.8330**	**1.8330**		**5,224.4693**	**5,224.4693**	**1.1342**		**5,252.8245**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0828	2.2061	0.6032	4.7600e-003	0.1152	0.0156	0.1308	0.0332	0.0149	0.0481		507.0230	507.0230	0.0334		507.8576
Worker	0.2597	0.1960	2.5384	5.9200e-003	0.5254	4.6800e-003	0.5300	0.1393	4.3200e-003	0.1436		589.2342	589.2342	0.0221		589.7867
Total	**0.3425**	**2.4020**	**3.1415**	**0.0107**	**0.6406**	**0.0202**	**0.6608**	**0.1725**	**0.0192**	**0.1917**		**1,096.2572**	**1,096.2572**	**0.0555**		**1,097.6443**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3309	26.7958	31.9000	0.0541		1.4656	1.4656		1.4656	1.4656	0.0000	5,224.4693	5,224.4693	1.1342		5,252.8245
Total	**1.3309**	**26.7958**	**31.9000**	**0.0541**		**1.4656**	**1.4656**		**1.4656**	**1.4656**	**0.0000**	**5,224.4693**	**5,224.4693**	**1.1342**		**5,252.8245**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0828	2.2061	0.6032	4.7600e-003	0.1152	0.0156	0.1308	0.0332	0.0149	0.0481		507.0230	507.0230	0.0334		507.8576
Worker	0.2597	0.1960	2.5384	5.9200e-003	0.5254	4.6800e-003	0.5300	0.1393	4.3200e-003	0.1436		589.2342	589.2342	0.0221		589.7867
Total	**0.3425**	**2.4020**	**3.1415**	**0.0107**	**0.6406**	**0.0202**	**0.6608**	**0.1725**	**0.0192**	**0.1917**		**1,096.2572**	**1,096.2572**	**0.0555**		**1,097.6443**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6323	31.9813	24.8526	0.0540		1.6478	1.6478		1.5880	1.5880		5,173.1566	5,173.1566	1.1062		5,200.8125
Total	**3.6323**	**31.9813**	**24.8526**	**0.0540**		**1.6478**	**1.6478**		**1.5880**	**1.5880**		**5,173.1566**	**5,173.1566**	**1.1062**		**5,200.8125**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0748	2.0831	0.5527	4.7000e-003	0.1152	0.0133	0.1285	0.0332	0.0127	0.0459		501.8663	501.8663	0.0322		502.6703
Worker	0.2348	0.1726	2.2662	5.7300e-003	0.5254	4.5300e-003	0.5299	0.1393	4.1700e-003	0.1435		570.0879	570.0879	0.0196		570.5774
Total	**0.3096**	**2.2557**	**2.8189**	**0.0104**	**0.6406**	**0.0178**	**0.6584**	**0.1725**	**0.0169**	**0.1894**		**1,071.9542**	**1,071.9542**	**0.0517**		**1,073.2477**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3309	26.7958	31.9000	0.0540		1.4656	1.4656		1.4656	1.4656	0.0000	5,173.1566	5,173.1566	1.1062		5,200.8125
Total	**1.3309**	**26.7958**	**31.9000**	**0.0540**		**1.4656**	**1.4656**		**1.4656**	**1.4656**	**0.0000**	**5,173.1566**	**5,173.1566**	**1.1062**		**5,200.8125**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0748	2.0831	0.5527	4.7000e-003	0.1152	0.0133	0.1285	0.0332	0.0127	0.0459		501.8663	501.8663	0.0322		502.6703
Worker	0.2348	0.1726	2.2662	5.7300e-003	0.5254	4.5300e-003	0.5299	0.1393	4.1700e-003	0.1435		570.0879	570.0879	0.0196		570.5774
Total	**0.3096**	**2.2557**	**2.8189**	**0.0104**	**0.6406**	**0.0178**	**0.6584**	**0.1725**	**0.0169**	**0.1894**		**1,071.9542**	**1,071.9542**	**0.0517**		**1,073.2477**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728		1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0183					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2637**	**12.5685**	**11.8507**	**0.0178**		**0.7301**	**0.7301**		**0.6728**	**0.6728**		**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
Total	**0.0749**	**0.0551**	**0.7233**	**1.8300e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**181.9429**	**181.9429**	**6.2500e-003**		**182.0992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4208	8.8511	12.9737	0.0178		0.5291	0.5291		0.5291	0.5291	0.0000	1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0183					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4391**	**8.8511**	**12.9737**	**0.0178**		**0.5291**	**0.5291**		**0.5291**	**0.5291**	**0.0000**	**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
Total	**0.0749**	**0.0551**	**0.7233**	**1.8300e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**181.9429**	**181.9429**	**6.2500e-003**		**182.0992**

ELA Medians - Southside Drive Median

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.50	Acre	2.50	108,900.00	0
Other Asphalt Surfaces	3.10	1000sqft	0.07	3,100.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.
Land Use

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Grading -

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Winter

Demolition - 574 tons of debris from asphalt removal.
1938 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Winter

Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	220.00	205.00
tblConstructionPhase	PhaseEndDate	9/4/2019	8/9/2019
tblConstructionPhase	PhaseEndDate	10/31/2018	1/29/2019
tblConstructionPhase	PhaseEndDate	9/18/2019	8/23/2019
tblConstructionPhase	PhaseStartDate	11/1/2018	10/27/2018
tblConstructionPhase	PhaseStartDate	9/5/2019	8/10/2019
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	8.9328	82.6480	57.8651	0.1305	3.0493	3.9520	4.9615	0.5048	3.7381	4.0084	0.0000	12,867.5150	12,867.5150	3.0031	0.0000	12,942.5929
2019	8.0314	73.8058	56.0322	0.1300	1.0094	3.4287	4.4381	0.2703	3.2430	3.5134	0.0000	12,688.2720	12,688.2720	2.9651	0.0000	12,762.3989
Maximum	**8.9328**	**82.6480**	**57.8651**	**0.1305**	**3.0493**	**3.9520**	**4.9615**	**0.5048**	**3.7381**	**4.0084**	**0.0000**	**12,867.5150**	**12,867.5150**	**3.0031**	**0.0000**	**12,942.5929**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.3766	58.5441	73.1374	0.1305	1.4101	2.8124	3.8219	0.2703	2.8111	3.0814	0.0000	12,867.5150	12,867.5150	3.0031	0.0000	12,942.5929
2019	3.3222	58.3749	72.6453	0.1300	1.0094	2.8099	3.8193	0.2703	2.8087	3.0790	0.0000	12,688.2720	12,688.2720	2.9651	0.0000	12,762.3989
Maximum	**3.3766**	**58.5441**	**73.1374**	**0.1305**	**1.4101**	**2.8124**	**3.8219**	**0.2703**	**2.8111**	**3.0814**	**0.0000**	**12,867.5150**	**12,867.5150**	**3.0031**	**0.0000**	**12,942.5929**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.51**	**25.27**	**-27.99**	**0.00**	**40.39**	**23.82**	**18.71**	**30.25**	**19.50**	**18.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/26/2018	5	20	
2	Pipeline Installation	Trenching	10/27/2018	1/29/2019	5	67	
3	Well Installation	Building Construction	10/27/2018	8/9/2019	5	205	
4	Paving	Paving	8/10/2019	8/23/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Southside Drive Median - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Pipeline Installation	Excavators	2	6.00	158	0.38
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Bore/Drill Rigs	2	8.00	221	0.50
Paving	Paving Equipment	1	8.00	132	0.36
Well Installation	Cranes	1	8.00	231	0.29
Well Installation	Forklifts	2	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	2	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	248.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	11	47.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6872	0.0000	2.6872	0.4069	0.0000	0.4069			0.0000			0.0000
Off-Road	2.4838	24.3641	15.1107	0.0241		1.4365	1.4365		1.3429	1.3429		2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**2.4838**	**24.3641**	**15.1107**	**0.0241**	**2.6872**	**1.4365**	**4.1236**	**0.4069**	**1.3429**	**1.7498**		**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1262	4.0609	0.8868	9.8800e-003	0.2168	0.0155	0.2323	0.0594	0.0149	0.0743		1,067.5943	1,067.5943	0.0777		1,069.5359
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0795	0.0600	0.6465	1.5400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		153.4749	153.4749	5.7800e-003		153.6193
Total	**0.2057**	**4.1209**	**1.5332**	**0.0114**	**0.3621**	**0.0168**	**0.3789**	**0.0980**	**0.0161**	**0.1140**		**1,221.0692**	**1,221.0692**	**0.0834**		**1,223.1552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0480	0.0000	1.0480	0.1587	0.0000	0.1587			0.0000			0.0000
Off-Road	0.5621	12.1033	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,391.1659	2,391.1659	0.6058		2,406.3105
Total	**0.5621**	**12.1033**	**15.4154**	**0.0241**	**1.0480**	**0.7182**	**1.7662**	**0.1587**	**0.7182**	**0.8769**	**0.0000**	**2,391.1659**	**2,391.1659**	**0.6058**		**2,406.3105**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1262	4.0609	0.8868	9.8800e-003	0.2168	0.0155	0.2323	0.0594	0.0149	0.0743		1,067.5943	1,067.5943	0.0777		1,069.5359
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0795	0.0600	0.6465	1.5400e-003	0.1453	1.3000e-003	0.1466	0.0385	1.1900e-003	0.0397		153.4749	153.4749	5.7800e-003		153.6193
Total	**0.2057**	**4.1209**	**1.5332**	**0.0114**	**0.3621**	**0.0168**	**0.3789**	**0.0980**	**0.0161**	**0.1140**		**1,221.0692**	**1,221.0692**	**0.0834**		**1,223.1552**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2653	44.6927	27.8671	0.0623		2.0264	2.0264		1.8826	1.8826		6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**4.2653**	**44.6927**	**27.8671**	**0.0623**		**2.0264**	**2.0264**		**1.8826**	**1.8826**		**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2018	0.1524	1.6410	3.9200e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		389.5901	389.5901	0.0147		389.9566
Total	**0.2018**	**0.1524**	**1.6410**	**3.9200e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**389.5901**	**389.5901**	**0.0147**		**389.9566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0623		1.3231	1.3231		1.3231	1.3231	0.0000	6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**1.4703**	**29.1679**	**36.5962**	**0.0623**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2018	0.1524	1.6410	3.9200e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		389.5901	389.5901	0.0147		389.9566
Total	**0.2018**	**0.1524**	**1.6410**	**3.9200e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**389.5901**	**389.5901**	**0.0147**		**389.9566**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8780	39.4133	27.0305	0.0622		1.7597	1.7597		1.6350	1.6350		6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**3.8780**	**39.4133**	**27.0305**	**0.0622**		**1.7597**	**1.7597**		**1.6350**	**1.6350**		**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0622		1.3231	1.3231		1.3231	1.3231	0.0000	6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**1.4703**	**29.1679**	**36.5962**	**0.0622**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0921	35.3749	25.3569	0.0541		1.9018	1.9018		1.8330	1.8330		5,224.4693	5,224.4693	1.1342		5,252.8245
Total	**4.0921**	**35.3749**	**25.3569**	**0.0541**		**1.9018**	**1.9018**		**1.8330**	**1.8330**		**5,224.4693**	**5,224.4693**	**1.1342**		**5,252.8245**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0863	2.2110	0.6630	4.6300e-003	0.1152	0.0158	0.1310	0.0332	0.0151	0.0483		493.4697	493.4697	0.0356		494.3599
Worker	0.2874	0.2170	2.3372	5.5800e-003	0.5254	4.6800e-003	0.5300	0.1393	4.3200e-003	0.1436		554.8707	554.8707	0.0209		555.3928
Total	**0.3737**	**2.4280**	**3.0002**	**0.0102**	**0.6406**	**0.0205**	**0.6611**	**0.1725**	**0.0194**	**0.1919**		**1,048.3404**	**1,048.3404**	**0.0565**		**1,049.7526**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3309	26.7958	31.9000	0.0541		1.4656	1.4656		1.4656	1.4656	0.0000	5,224.4693	5,224.4693	1.1342		5,252.8245
Total	**1.3309**	**26.7958**	**31.9000**	**0.0541**		**1.4656**	**1.4656**		**1.4656**	**1.4656**	**0.0000**	**5,224.4693**	**5,224.4693**	**1.1342**		**5,252.8245**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0863	2.2110	0.6630	4.6300e-003	0.1152	0.0158	0.1310	0.0332	0.0151	0.0483		493.4697	493.4697	0.0356		494.3599
Worker	0.2874	0.2170	2.3372	5.5800e-003	0.5254	4.6800e-003	0.5300	0.1393	4.3200e-003	0.1436		554.8707	554.8707	0.0209		555.3928
Total	**0.3737**	**2.4280**	**3.0002**	**0.0102**	**0.6406**	**0.0205**	**0.6611**	**0.1725**	**0.0194**	**0.1919**		**1,048.3404**	**1,048.3404**	**0.0565**		**1,049.7526**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6323	31.9813	24.8526	0.0540		1.6478	1.6478		1.5880	1.5880		5,173.1566	5,173.1566	1.1062		5,200.8125
Total	**3.6323**	**31.9813**	**24.8526**	**0.0540**		**1.6478**	**1.6478**		**1.5880**	**1.5880**		**5,173.1566**	**5,173.1566**	**1.1062**		**5,200.8125**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0780	2.0859	0.6093	4.5800e-003	0.1152	0.0135	0.1287	0.0332	0.0129	0.0461		488.2988	488.2988	0.0343		489.1564
Worker	0.2603	0.1911	2.0796	5.3900e-003	0.5254	4.5300e-003	0.5299	0.1393	4.1700e-003	0.1435		536.8015	536.8015	0.0185		537.2632
Total	**0.3383**	**2.2770**	**2.6889**	**9.9700e-003**	**0.6406**	**0.0180**	**0.6586**	**0.1725**	**0.0171**	**0.1896**		**1,025.1003**	**1,025.1003**	**0.0528**		**1,026.4195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3309	26.7958	31.9000	0.0540		1.4656	1.4656		1.4656	1.4656	0.0000	5,173.1566	5,173.1566	1.1062		5,200.8125
Total	**1.3309**	**26.7958**	**31.9000**	**0.0540**		**1.4656**	**1.4656**		**1.4656**	**1.4656**	**0.0000**	**5,173.1566**	**5,173.1566**	**1.1062**		**5,200.8125**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0780	2.0859	0.6093	4.5800e-003	0.1152	0.0135	0.1287	0.0332	0.0129	0.0461		488.2988	488.2988	0.0343		489.1564
Worker	0.2603	0.1911	2.0796	5.3900e-003	0.5254	4.5300e-003	0.5299	0.1393	4.1700e-003	0.1435		536.8015	536.8015	0.0185		537.2632
Total	**0.3383**	**2.2770**	**2.6889**	**9.9700e-003**	**0.6406**	**0.0180**	**0.6586**	**0.1725**	**0.0171**	**0.1896**		**1,025.1003**	**1,025.1003**	**0.0528**		**1,026.4195**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2453	12.5685	11.8507	0.0178		0.7301	0.7301		0.6728	0.6728		1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0183					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2637**	**12.5685**	**11.8507**	**0.0178**		**0.7301**	**0.7301**		**0.6728**	**0.6728**		**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003		171.4670
Total	**0.0831**	**0.0610**	**0.6637**	**1.7200e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**171.3196**	**171.3196**	**5.8900e-003**		**171.4670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4208	8.8511	12.9737	0.0178		0.5291	0.5291		0.5291	0.5291	0.0000	1,746.2432	1,746.2432	0.5418		1,759.7870
Paving	0.0183					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4391**	**8.8511**	**12.9737**	**0.0178**		**0.5291**	**0.5291**		**0.5291**	**0.5291**	**0.0000**	**1,746.2432**	**1,746.2432**	**0.5418**		**1,759.7870**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003		171.4670
Total	**0.0831**	**0.0610**	**0.6637**	**1.7200e-003**	**0.1677**	**1.4500e-003**	**0.1691**	**0.0445**	**1.3300e-003**	**0.0458**		**171.3196**	**171.3196**	**5.8900e-003**		**171.4670**

ELA Medians - Coolidge Way Medians

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.40	Acre	0.40	17,424.00	0
Other Asphalt Surfaces	0.71	1000sqft	0.02	710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 132 tons of debris from asphalt removal.
316 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

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Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

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Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	PhaseEndDate	8/28/2019	6/14/2019
tblConstructionPhase	PhaseEndDate	4/8/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	4/11/2019	4/6/2019
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.20	0.20

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0925	0.8604	0.6520	1.4100e-003	0.0111	0.0425	0.0536	2.4000e-003	0.0404	0.0428	0.0000	124.4769	124.4769	0.0277	0.0000	125.1700
Maximum	**0.0925**	**0.8604**	**0.6520**	**1.4100e-003**	**0.0111**	**0.0425**	**0.0536**	**2.4000e-003**	**0.0404**	**0.0428**	**0.0000**	**124.4769**	**124.4769**	**0.0277**	**0.0000**	**125.1700**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0345	0.6573	0.8123	1.4100e-003	8.1200e-003	0.0342	0.0423	1.9600e-003	0.0342	0.0361	0.0000	124.4767	124.4767	0.0277	0.0000	125.1698
Maximum	**0.0345**	**0.6573**	**0.8123**	**1.4100e-003**	**8.1200e-003**	**0.0342**	**0.0423**	**1.9600e-003**	**0.0342**	**0.0361**	**0.0000**	**124.4767**	**124.4767**	**0.0277**	**0.0000**	**125.1698**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**62.73**	**23.60**	**-24.59**	**0.00**	**26.52**	**19.61**	**21.02**	**18.33**	**15.50**	**15.66**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2019	6-22-2019	0.9489	0.6916
2	6-23-2019	9-22-2019	0.0221	0.0129
		Highest	0.9489	0.6916

3.0 Construction Detail

Construction Phase

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/23/2019	4/5/2019	5	10	
2	Pipeline Installation	Trenching	4/6/2019	4/23/2019	5	12	
3	Well Installation	Building Construction	4/6/2019	6/14/2019	5	50	
4	Paving	Paving	8/29/2019	9/4/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Excavators	2	6.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	44.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	8.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7900e-003	0.0000	4.7900e-003	7.3000e-004	0.0000	7.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	**4.7700e-003**	**0.0430**	**0.0385**	**6.0000e-005**	**4.7900e-003**	**2.6900e-003**	**7.4800e-003**	**7.3000e-004**	**2.5600e-003**	**3.2900e-003**	**0.0000**	**5.2601**	**5.2601**	**1.0000e-003**	**0.0000**	**5.2852**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	6.9600e-003	1.4800e-003	2.0000e-005	3.8000e-004	2.0000e-005	4.0000e-004	1.0000e-004	2.0000e-005	1.3000e-004	0.0000	1.7131	1.7131	1.2000e-004	0.0000	1.7161
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.1000e-004	2.2700e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5267	0.5267	2.0000e-005	0.0000	0.5271
Total	**4.6000e-004**	**7.1700e-003**	**3.7500e-003**	**3.0000e-005**	**9.3000e-004**	**2.0000e-005**	**9.5000e-004**	**2.5000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**2.2398**	**2.2398**	**1.4000e-004**	**0.0000**	**2.2433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8700e-003	0.0000	1.8700e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	**1.3300e-003**	**0.0298**	**0.0397**	**6.0000e-005**	**1.8700e-003**	**2.0100e-003**	**3.8800e-003**	**2.8000e-004**	**2.0100e-003**	**2.2900e-003**	**0.0000**	**5.2601**	**5.2601**	**1.0000e-003**	**0.0000**	**5.2852**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1000e-004	6.9600e-003	1.4800e-003	2.0000e-005	3.8000e-004	2.0000e-005	4.0000e-004	1.0000e-004	2.0000e-005	1.3000e-004	0.0000	1.7131	1.7131	1.2000e-004	0.0000	1.7161
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.1000e-004	2.2700e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5267	0.5267	2.0000e-005	0.0000	0.5271
Total	**4.6000e-004**	**7.1700e-003**	**3.7500e-003**	**3.0000e-005**	**9.3000e-004**	**2.0000e-005**	**9.5000e-004**	**2.5000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**2.2398**	**2.2398**	**1.4000e-004**	**0.0000**	**2.2433**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.2365	0.1622	3.7000e-004		0.0106	0.0106		9.8100e-003	9.8100e-003	0.0000	33.2743	33.2743	9.7600e-003	0.0000	33.5183
Total	**0.0233**	**0.2365**	**0.1622**	**3.7000e-004**		**0.0106**	**0.0106**		**9.8100e-003**	**9.8100e-003**	**0.0000**	**33.2743**	**33.2743**	**9.7600e-003**	**0.0000**	**33.5183**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	8.3000e-004	8.9900e-003	2.0000e-005	2.1700e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	5.9000e-004	0.0000	2.0857	2.0857	7.0000e-005	0.0000	2.0874
Total	**9.9000e-004**	**8.3000e-004**	**8.9900e-003**	**2.0000e-005**	**2.1700e-003**	**2.0000e-005**	**2.1900e-003**	**5.8000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.0857**	**2.0857**	**7.0000e-005**	**0.0000**	**2.0874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8200e-003	0.1750	0.2196	3.7000e-004		7.9400e-003	7.9400e-003		7.9400e-003	7.9400e-003	0.0000	33.2743	33.2743	9.7600e-003	0.0000	33.5183
Total	**8.8200e-003**	**0.1750**	**0.2196**	**3.7000e-004**		**7.9400e-003**	**7.9400e-003**		**7.9400e-003**	**7.9400e-003**	**0.0000**	**33.2743**	**33.2743**	**9.7600e-003**	**0.0000**	**33.5183**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	8.3000e-004	8.9900e-003	2.0000e-005	2.1700e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	5.9000e-004	0.0000	2.0857	2.0857	7.0000e-005	0.0000	2.0874
Total	**9.9000e-004**	**8.3000e-004**	**8.9900e-003**	**2.0000e-005**	**2.1700e-003**	**2.0000e-005**	**2.1900e-003**	**5.8000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.0857**	**2.0857**	**7.0000e-005**	**0.0000**	**2.0874**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0594	0.5434	0.4072	8.6000e-004		0.0280	0.0280		0.0269	0.0269	0.0000	74.7677	74.7677	0.0159	0.0000	75.1640
Total	**0.0594**	**0.5434**	**0.4072**	**8.6000e-004**		**0.0280**	**0.0280**		**0.0269**	**0.0269**	**0.0000**	**74.7677**	**74.7677**	**0.0159**	**0.0000**	**75.1640**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	8.8600e-003	2.4200e-003	2.0000e-005	4.7000e-004	6.0000e-005	5.3000e-004	1.4000e-004	5.0000e-005	1.9000e-004	0.0000	1.8755	1.8755	1.3000e-004	0.0000	1.8786
Worker	1.0000e-003	8.3000e-004	9.0800e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.1067	2.1067	7.0000e-005	0.0000	2.1085
Total	**1.3200e-003**	**9.6900e-003**	**0.0115**	**4.0000e-005**	**2.6600e-003**	**8.0000e-005**	**2.7400e-003**	**7.2000e-004**	**7.0000e-005**	**7.9000e-004**	**0.0000**	**3.9822**	**3.9822**	**2.0000e-004**	**0.0000**	**3.9871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0208	0.4227	0.5095	8.6000e-004		0.0234	0.0234		0.0234	0.0234	0.0000	74.7676	74.7676	0.0159	0.0000	75.1639
Total	**0.0208**	**0.4227**	**0.5095**	**8.6000e-004**		**0.0234**	**0.0234**		**0.0234**	**0.0234**	**0.0000**	**74.7676**	**74.7676**	**0.0159**	**0.0000**	**75.1639**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2000e-004	8.8600e-003	2.4200e-003	2.0000e-005	4.7000e-004	6.0000e-005	5.3000e-004	1.4000e-004	5.0000e-005	1.9000e-004	0.0000	1.8755	1.8755	1.3000e-004	0.0000	1.8786
Worker	1.0000e-003	8.3000e-004	9.0800e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.1067	2.1067	7.0000e-005	0.0000	2.1085
Total	**1.3200e-003**	**9.6900e-003**	**0.0115**	**4.0000e-005**	**2.6600e-003**	**8.0000e-005**	**2.7400e-003**	**7.2000e-004**	**7.0000e-005**	**7.9000e-004**	**0.0000**	**3.9822**	**3.9822**	**2.0000e-004**	**0.0000**	**3.9871**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1000e-003**	**0.0196**	**0.0179**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0400e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4740	0.4740	2.0000e-005	0.0000	0.4744
Total	**2.3000e-004**	**1.9000e-004**	**2.0400e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4740**	**0.4740**	**2.0000e-005**	**0.0000**	**0.4744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0119	0.0173	3.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9000e-004**	**0.0119**	**0.0173**	**3.0000e-005**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0400e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4740	0.4740	2.0000e-005	0.0000	0.4744
Total	**2.3000e-004**	**1.9000e-004**	**2.0400e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4740**	**0.4740**	**2.0000e-005**	**0.0000**	**0.4744**

ELA Medians - Coolidge Way Medians

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.40	Acre	0.40	17,424.00	0
Other Asphalt Surfaces	0.71	1000sqft	0.02	710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 132 tons of debris from asphalt removal.
316 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Summer

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Summer

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	PhaseEndDate	8/28/2019	6/14/2019
tblConstructionPhase	PhaseEndDate	4/8/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	4/11/2019	4/6/2019
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.20	0.20

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	6.4708	61.6474	45.3863	0.1023	1.1474	2.8874	3.3649	0.1959	2.7177	2.8448	0.0000	9,990.7573	9,990.7573	2.5145	0.0000	10,053.6201
Maximum	**6.4708**	**61.6474**	**45.3863**	**0.1023**	**1.1474**	**2.8874**	**3.3649**	**0.1959**	**2.7177**	**2.8448**	**0.0000**	**9,990.7573**	**9,990.7573**	**2.5145**	**0.0000**	**10,053.6201**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.5176	46.5748	59.0440	0.1023	0.5626	2.2643	2.7418	0.1271	2.2639	2.3910	0.0000	9,990.7573	9,990.7573	2.5145	0.0000	10,053.6201
Maximum	**2.5176**	**46.5748**	**59.0440**	**0.1023**	**0.5626**	**2.2643**	**2.7418**	**0.1271**	**2.2639**	**2.3910**	**0.0000**	**9,990.7573**	**9,990.7573**	**2.5145**	**0.0000**	**10,053.6201**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**61.09**	**24.45**	**-30.09**	**0.00**	**50.97**	**21.58**	**18.52**	**35.13**	**16.70**	**15.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/23/2019	4/5/2019	5	10	
2	Pipeline Installation	Trenching	4/6/2019	4/23/2019	5	12	
3	Well Installation	Building Construction	4/6/2019	6/14/2019	5	50	
4	Paving	Paving	8/29/2019	9/4/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Excavators	2	6.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	44.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	8.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9587	0.0000	0.9587	0.1452	0.0000	0.1452			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.9587**	**0.5371**	**1.4958**	**0.1452**	**0.5125**	**0.6576**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0414	1.3477	0.2873	3.5200e-003	0.0769	4.9500e-003	0.0819	0.0211	4.7300e-003	0.0258		380.3852	380.3852	0.0262		381.0401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.0913**	**1.3844**	**0.7695**	**4.7400e-003**	**0.1887**	**5.9100e-003**	**0.1946**	**0.0507**	**5.6200e-003**	**0.0564**		**501.6805**	**501.6805**	**0.0304**		**502.4395**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3739	0.0000	0.3739	0.0566	0.0000	0.0566			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.3739**	**0.4017**	**0.7756**	**0.0566**	**0.4017**	**0.4583**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0414	1.3477	0.2873	3.5200e-003	0.0769	4.9500e-003	0.0819	0.0211	4.7300e-003	0.0258		380.3852	380.3852	0.0262		381.0401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.0913**	**1.3844**	**0.7695**	**4.7400e-003**	**0.1887**	**5.9100e-003**	**0.1946**	**0.0507**	**5.6200e-003**	**0.0564**		**501.6805**	**501.6805**	**0.0304**		**502.4395**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8780	39.4133	27.0305	0.0622		1.7597	1.7597		1.6350	1.6350		6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**3.8780**	**39.4133**	**27.0305**	**0.0622**		**1.7597**	**1.7597**		**1.6350**	**1.6350**		**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0622		1.3231	1.3231		1.3231	1.3231	0.0000	6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**1.4703**	**29.1679**	**36.5962**	**0.0622**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3755	21.7364	16.2869	0.0343		1.1216	1.1216		1.0769	1.0769		3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**2.3755**	**21.7364**	**16.2869**	**0.0343**		**1.1216**	**1.1216**		**1.0769**	**1.0769**		**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.3472	0.0921	7.8000e-004	0.0192	2.2100e-003	0.0214	5.5300e-003	2.1200e-003	7.6500e-003		83.6444	83.6444	5.3600e-003		83.7784
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0524**	**0.3766**	**0.4779**	**1.7500e-003**	**0.1086**	**2.9800e-003**	**0.1116**	**0.0292**	**2.8300e-003**	**0.0321**		**180.6806**	**180.6806**	**8.6900e-003**		**180.8980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0343		0.9351	0.9351		0.9351	0.9351	0.0000	3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**0.8300**	**16.9092**	**20.3788**	**0.0343**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.3472	0.0921	7.8000e-004	0.0192	2.2100e-003	0.0214	5.5300e-003	2.1200e-003	7.6500e-003		83.6444	83.6444	5.3600e-003		83.7784
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	**0.0524**	**0.3766**	**0.4779**	**1.7500e-003**	**0.1086**	**2.9800e-003**	**0.1116**	**0.0292**	**2.8300e-003**	**0.0321**		**180.6806**	**180.6806**	**8.6900e-003**		**180.8980**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8404**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.2908	0.2908		0.2908	0.2908	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2344**	**4.7579**	**6.9028**	**0.0113**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

ELA Medians - Coolidge Way Medians

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.40	Acre	0.40	17,424.00	0
Other Asphalt Surfaces	0.71	1000sqft	0.02	710.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 132 tons of debris from asphalt removal.
316 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Winter

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Winter

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	PhaseEndDate	8/28/2019	6/14/2019
tblConstructionPhase	PhaseEndDate	4/8/2019	4/23/2019
tblConstructionPhase	PhaseStartDate	4/11/2019	4/6/2019
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.20	0.20

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	6.4936	61.6640	45.2330	0.1020	1.1474	2.8875	3.3649	0.1959	2.7177	2.8448	0.0000	9,959.4590	9,959.4590	2.5139	0.0000	10,022.3064
Maximum	**6.4936**	**61.6640**	**45.2330**	**0.1020**	**1.1474**	**2.8875**	**3.3649**	**0.1959**	**2.7177**	**2.8448**	**0.0000**	**9,959.4590**	**9,959.4590**	**2.5139**	**0.0000**	**10,022.3064**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.5403	46.5914	58.8907	0.1020	0.5626	2.2643	2.7418	0.1271	2.2639	2.3910	0.0000	9,959.4590	9,959.4590	2.5139	0.0000	10,022.3064
Maximum	**2.5403**	**46.5914**	**58.8907**	**0.1020**	**0.5626**	**2.2643**	**2.7418**	**0.1271**	**2.2639**	**2.3910**	**0.0000**	**9,959.4590**	**9,959.4590**	**2.5139**	**0.0000**	**10,022.3064**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.88**	**24.44**	**-30.19**	**0.00**	**50.97**	**21.58**	**18.52**	**35.13**	**16.70**	**15.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/23/2019	4/5/2019	5	10	
2	Pipeline Installation	Trenching	4/6/2019	4/23/2019	5	12	
3	Well Installation	Building Construction	4/6/2019	6/14/2019	5	50	
4	Paving	Paving	8/29/2019	9/4/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Coolidge Way Medians - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Excavators	2	6.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	44.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	8.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9587	0.0000	0.9587	0.1452	0.0000	0.1452			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.9587**	**0.5371**	**1.4958**	**0.1452**	**0.5125**	**0.6576**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0424	1.3656	0.3068	3.4600e-003	0.0769	5.0400e-003	0.0820	0.0211	4.8200e-003	0.0259		373.9339	373.9339	0.0272		374.6137
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.0978**	**1.4063**	**0.7492**	**4.6100e-003**	**0.1887**	**6.0000e-003**	**0.1947**	**0.0507**	**5.7100e-003**	**0.0564**		**488.1469**	**488.1469**	**0.0311**		**488.9250**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3739	0.0000	0.3739	0.0566	0.0000	0.0566			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.3739**	**0.4017**	**0.7756**	**0.0566**	**0.4017**	**0.4583**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0424	1.3656	0.3068	3.4600e-003	0.0769	5.0400e-003	0.0820	0.0211	4.8200e-003	0.0259		373.9339	373.9339	0.0272		374.6137
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.0978**	**1.4063**	**0.7492**	**4.6100e-003**	**0.1887**	**6.0000e-003**	**0.1947**	**0.0507**	**5.7100e-003**	**0.0564**		**488.1469**	**488.1469**	**0.0311**		**488.9250**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8780	39.4133	27.0305	0.0622		1.7597	1.7597		1.6350	1.6350		6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**3.8780**	**39.4133**	**27.0305**	**0.0622**		**1.7597**	**1.7597**		**1.6350**	**1.6350**		**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0622		1.3231	1.3231		1.3231	1.3231	0.0000	6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**1.4703**	**29.1679**	**36.5962**	**0.0622**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3755	21.7364	16.2869	0.0343		1.1216	1.1216		1.0769	1.0769		3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**2.3755**	**21.7364**	**16.2869**	**0.0343**		**1.1216**	**1.1216**		**1.0769**	**1.0769**		**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0130	0.3477	0.1015	7.6000e-004	0.0192	2.2500e-003	0.0215	5.5300e-003	2.1500e-003	7.6800e-003		81.3831	81.3831	5.7200e-003		81.5261
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0573**	**0.3802**	**0.4555**	**1.6800e-003**	**0.1086**	**3.0200e-003**	**0.1117**	**0.0292**	**2.8600e-003**	**0.0321**		**172.7536**	**172.7536**	**8.8600e-003**		**172.9751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0343		0.9351	0.9351		0.9351	0.9351	0.0000	3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**0.8300**	**16.9092**	**20.3788**	**0.0343**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0130	0.3477	0.1015	7.6000e-004	0.0192	2.2500e-003	0.0215	5.5300e-003	2.1500e-003	7.6800e-003		81.3831	81.3831	5.7200e-003		81.5261
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	**0.0573**	**0.3802**	**0.4555**	**1.6800e-003**	**0.1086**	**3.0200e-003**	**0.1117**	**0.0292**	**2.8600e-003**	**0.0321**		**172.7536**	**172.7536**	**8.8600e-003**		**172.9751**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8404**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.2908	0.2908		0.2908	0.2908	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2344**	**4.7579**	**6.9028**	**0.0113**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

ELA Medians - Montebello Parkway Medians

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.74	Acre	0.74	32,234.40	0
Other Asphalt Surfaces	0.30	1000sqft	0.01	300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 55 tons of debris from asphalt removal.
576 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

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Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.
Sequestration -

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

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Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	PhaseEndDate	3/6/2019	3/15/2019
tblConstructionPhase	PhaseEndDate	3/13/2019	3/22/2019
tblConstructionPhase	PhaseEndDate	10/15/2018	11/12/2018
tblConstructionPhase	PhaseStartDate	10/18/2018	10/13/2018
tblConstructionPhase	PhaseStartDate	3/7/2019	3/16/2019
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1305	1.2233	0.8457	1.8300e-003	0.0168	0.0610	0.0778	3.7200e-003	0.0579	0.0616	0.0000	163.5378	163.5378	0.0371	0.0000	164.4644
2019	0.0689	0.6242	0.4812	1.0400e-003	5.4900e-003	0.0315	0.0370	1.4800e-003	0.0302	0.0317	0.0000	90.9738	90.9738	0.0182	0.0000	91.4284
Maximum	**0.1305**	**1.2233**	**0.8457**	**1.8300e-003**	**0.0168**	**0.0610**	**0.0778**	**3.7200e-003**	**0.0579**	**0.0616**	**0.0000**	**163.5378**	**163.5378**	**0.0371**	**0.0000**	**164.4644**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0453	0.8412	1.0418	1.8300e-003	0.0127	0.0423	0.0550	3.0900e-003	0.0423	0.0454	0.0000	163.5376	163.5376	0.0371	0.0000	164.4642
2019	0.0257	0.4862	0.5911	1.0400e-003	5.4900e-003	0.0261	0.0316	1.4800e-003	0.0261	0.0276	0.0000	90.9737	90.9737	0.0182	0.0000	91.4283
Maximum	**0.0453**	**0.8412**	**1.0418**	**1.8300e-003**	**0.0127**	**0.0423**	**0.0550**	**3.0900e-003**	**0.0423**	**0.0454**	**0.0000**	**163.5376**	**163.5376**	**0.0371**	**0.0000**	**164.4642**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**64.40**	**28.15**	**-23.06**	**0.00**	**18.48**	**26.03**	**24.55**	**12.12**	**22.34**	**21.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2018	12-31-2018	1.3885	0.9086
2	1-1-2019	3-31-2019	0.6788	0.5012
		Highest	1.3885	0.9086

3.0 Construction Detail

Construction Phase

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/12/2018	5	10	
2	Pipeline Installation	Trenching	10/13/2018	11/12/2018	5	21	
3	Well Installation	Building Construction	10/13/2018	3/15/2019	5	110	
4	Paving	Paving	3/16/2019	3/22/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Excavators	2	6.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.7500e-003	0.0000	6.7500e-003	1.0200e-003	0.0000	1.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0472	0.0389	6.0000e-005		3.1100e-003	3.1100e-003		2.9700e-003	2.9700e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3297
Total	**5.3200e-003**	**0.0472**	**0.0389**	**6.0000e-005**	**6.7500e-003**	**3.1100e-003**	**9.8600e-003**	**1.0200e-003**	**2.9700e-003**	**3.9900e-003**	**0.0000**	**5.3041**	**5.3041**	**1.0200e-003**	**0.0000**	**5.3297**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	0.0104	2.1400e-003	2.0000e-005	5.3000e-004	4.0000e-005	5.7000e-004	1.5000e-004	4.0000e-005	1.8000e-004	0.0000	2.4452	2.4452	1.7000e-004	0.0000	2.4495
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.4000e-004	2.5500e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5444	0.5444	2.0000e-005	0.0000	0.5449
Total	**5.9000e-004**	**0.0106**	**4.6900e-003**	**3.0000e-005**	**1.0800e-003**	**4.0000e-005**	**1.1200e-003**	**3.0000e-004**	**4.0000e-005**	**3.3000e-004**	**0.0000**	**2.9896**	**2.9896**	**1.9000e-004**	**0.0000**	**2.9944**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6300e-003	0.0000	2.6300e-003	4.0000e-004	0.0000	4.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	5.3041	5.3041	1.0200e-003	0.0000	5.3296
Total	**1.3300e-003**	**0.0298**	**0.0397**	**6.0000e-005**	**2.6300e-003**	**2.0100e-003**	**4.6400e-003**	**4.0000e-004**	**2.0100e-003**	**2.4100e-003**	**0.0000**	**5.3041**	**5.3041**	**1.0200e-003**	**0.0000**	**5.3296**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1000e-004	0.0104	2.1400e-003	2.0000e-005	5.3000e-004	4.0000e-005	5.7000e-004	1.5000e-004	4.0000e-005	1.8000e-004	0.0000	2.4452	2.4452	1.7000e-004	0.0000	2.4495
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.4000e-004	2.5500e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5444	0.5444	2.0000e-005	0.0000	0.5449
Total	**5.9000e-004**	**0.0106**	**4.6900e-003**	**3.0000e-005**	**1.0800e-003**	**4.0000e-005**	**1.1200e-003**	**3.0000e-004**	**4.0000e-005**	**3.3000e-004**	**0.0000**	**2.9896**	**2.9896**	**1.9000e-004**	**0.0000**	**2.9944**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0448	0.4693	0.2926	6.5000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	59.1065	59.1065	0.0171	0.0000	59.5346
Total	**0.0448**	**0.4693**	**0.2926**	**6.5000e-004**		**0.0213**	**0.0213**		**0.0198**	**0.0198**	**0.0000**	**59.1065**	**59.1065**	**0.0171**	**0.0000**	**59.5346**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	1.6400e-003	0.0177	4.0000e-005	3.8000e-003	3.0000e-005	3.8300e-003	1.0100e-003	3.0000e-005	1.0400e-003	0.0000	3.7727	3.7727	1.4000e-004	0.0000	3.7762
Total	**1.9200e-003**	**1.6400e-003**	**0.0177**	**4.0000e-005**	**3.8000e-003**	**3.0000e-005**	**3.8300e-003**	**1.0100e-003**	**3.0000e-005**	**1.0400e-003**	**0.0000**	**3.7727**	**3.7727**	**1.4000e-004**	**0.0000**	**3.7762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0154	0.3063	0.3843	6.5000e-004		0.0139	0.0139		0.0139	0.0139	0.0000	59.1064	59.1064	0.0171	0.0000	59.5345
Total	**0.0154**	**0.3063**	**0.3843**	**6.5000e-004**		**0.0139**	**0.0139**		**0.0139**	**0.0139**	**0.0000**	**59.1064**	**59.1064**	**0.0171**	**0.0000**	**59.5345**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9200e-003	1.6400e-003	0.0177	4.0000e-005	3.8000e-003	3.0000e-005	3.8300e-003	1.0100e-003	3.0000e-005	1.0400e-003	0.0000	3.7727	3.7727	1.4000e-004	0.0000	3.7762
Total	**1.9200e-003**	**1.6400e-003**	**0.0177**	**4.0000e-005**	**3.8000e-003**	**3.0000e-005**	**3.8300e-003**	**1.0100e-003**	**3.0000e-005**	**1.0400e-003**	**0.0000**	**3.7727**	**3.7727**	**1.4000e-004**	**0.0000**	**3.7762**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0751	0.6752	0.4670	9.6000e-004		0.0364	0.0364		0.0349	0.0349	0.0000	84.5596	84.5596	0.0182	0.0000	85.0141
Total	**0.0751**	**0.6752**	**0.4670**	**9.6000e-004**		**0.0364**	**0.0364**		**0.0349**	**0.0349**	**0.0000**	**84.5596**	**84.5596**	**0.0182**	**0.0000**	**85.0141**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0175	4.9300e-003	4.0000e-005	8.8000e-004	1.2000e-004	1.0000e-003	2.5000e-004	1.2000e-004	3.7000e-004	0.0000	3.5373	3.5373	2.4000e-004	0.0000	3.5434
Worker	2.1700e-003	1.8600e-003	0.0200	5.0000e-005	4.3000e-003	4.0000e-005	4.3300e-003	1.1400e-003	4.0000e-005	1.1800e-003	0.0000	4.2681	4.2681	1.6000e-004	0.0000	4.2721
Total	**2.8300e-003**	**0.0194**	**0.0249**	**9.0000e-005**	**5.1800e-003**	**1.6000e-004**	**5.3300e-003**	**1.3900e-003**	**1.6000e-004**	**1.5500e-003**	**0.0000**	**7.8054**	**7.8054**	**4.0000e-004**	**0.0000**	**7.8155**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0232	0.4735	0.5706	9.6000e-004		0.0262	0.0262		0.0262	0.0262	0.0000	84.5595	84.5595	0.0182	0.0000	85.0140
Total	**0.0232**	**0.4735**	**0.5706**	**9.6000e-004**		**0.0262**	**0.0262**		**0.0262**	**0.0262**	**0.0000**	**84.5595**	**84.5595**	**0.0182**	**0.0000**	**85.0140**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0175	4.9300e-003	4.0000e-005	8.8000e-004	1.2000e-004	1.0000e-003	2.5000e-004	1.2000e-004	3.7000e-004	0.0000	3.5373	3.5373	2.4000e-004	0.0000	3.5434
Worker	2.1700e-003	1.8600e-003	0.0200	5.0000e-005	4.3000e-003	4.0000e-005	4.3300e-003	1.1400e-003	4.0000e-005	1.1800e-003	0.0000	4.2681	4.2681	1.6000e-004	0.0000	4.2721
Total	**2.8300e-003**	**0.0194**	**0.0249**	**9.0000e-005**	**5.1800e-003**	**1.6000e-004**	**5.3300e-003**	**1.3900e-003**	**1.6000e-004**	**1.5500e-003**	**0.0000**	**7.8054**	**7.8054**	**4.0000e-004**	**0.0000**	**7.8155**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0641	0.5869	0.4398	9.3000e-004		0.0303	0.0303		0.0291	0.0291	0.0000	80.7491	80.7491	0.0171	0.0000	81.1771
Total	**0.0641**	**0.5869**	**0.4398**	**9.3000e-004**		**0.0303**	**0.0303**		**0.0291**	**0.0291**	**0.0000**	**80.7491**	**80.7491**	**0.0171**	**0.0000**	**81.1771**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.7000e-004	0.0160	4.3600e-003	3.0000e-005	8.5000e-004	1.0000e-004	9.5000e-004	2.5000e-004	1.0000e-004	3.4000e-004	0.0000	3.3759	3.3759	2.3000e-004	0.0000	3.3815
Worker	1.8900e-003	1.5800e-003	0.0172	4.0000e-005	4.1400e-003	4.0000e-005	4.1800e-003	1.1000e-003	3.0000e-005	1.1300e-003	0.0000	3.9817	3.9817	1.4000e-004	0.0000	3.9851
Total	**2.4600e-003**	**0.0175**	**0.0215**	**7.0000e-005**	**4.9900e-003**	**1.4000e-004**	**5.1300e-003**	**1.3500e-003**	**1.3000e-004**	**1.4700e-003**	**0.0000**	**7.3576**	**7.3576**	**3.7000e-004**	**0.0000**	**7.3666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0224	0.4566	0.5502	9.3000e-004		0.0253	0.0253		0.0253	0.0253	0.0000	80.7490	80.7490	0.0171	0.0000	81.1770
Total	**0.0224**	**0.4566**	**0.5502**	**9.3000e-004**		**0.0253**	**0.0253**		**0.0253**	**0.0253**	**0.0000**	**80.7490**	**80.7490**	**0.0171**	**0.0000**	**81.1770**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.7000e-004	0.0160	4.3600e-003	3.0000e-005	8.5000e-004	1.0000e-004	9.5000e-004	2.5000e-004	1.0000e-004	3.4000e-004	0.0000	3.3759	3.3759	2.3000e-004	0.0000	3.3815
Worker	1.8900e-003	1.5800e-003	0.0172	4.0000e-005	4.1400e-003	4.0000e-005	4.1800e-003	1.1000e-003	3.0000e-005	1.1300e-003	0.0000	3.9817	3.9817	1.4000e-004	0.0000	3.9851
Total	**2.4600e-003**	**0.0175**	**0.0215**	**7.0000e-005**	**4.9900e-003**	**1.4000e-004**	**5.1300e-003**	**1.3500e-003**	**1.3000e-004**	**1.4700e-003**	**0.0000**	**7.3576**	**7.3576**	**3.7000e-004**	**0.0000**	**7.3666**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0800e-003**	**0.0196**	**0.0179**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0400e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4740	0.4740	2.0000e-005	0.0000	0.4744
Total	**2.3000e-004**	**1.9000e-004**	**2.0400e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4740**	**0.4740**	**2.0000e-005**	**0.0000**	**0.4744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0119	0.0173	3.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7000e-004**	**0.0119**	**0.0173**	**3.0000e-005**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0400e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4740	0.4740	2.0000e-005	0.0000	0.4744
Total	**2.3000e-004**	**1.9000e-004**	**2.0400e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4740**	**0.4740**	**2.0000e-005**	**0.0000**	**0.4744**

ELA Medians - Montebello Parkway Medians

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.74	Acre	0.74	32,234.40	0
Other Asphalt Surfaces	0.30	1000sqft	0.01	300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 55 tons of debris from asphalt removal.
576 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Summer

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.
Sequestration -

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Summer

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	PhaseEndDate	3/6/2019	3/15/2019
tblConstructionPhase	PhaseEndDate	3/13/2019	3/22/2019
tblConstructionPhase	PhaseEndDate	10/15/2018	11/12/2018
tblConstructionPhase	PhaseStartDate	10/18/2018	10/13/2018
tblConstructionPhase	PhaseStartDate	3/7/2019	3/16/2019
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	7.2296	69.6158	47.2504	0.1038	1.5705	3.3336	3.8909	0.2638	3.1375	3.2860	0.0000	10,264.1536	10,264.1536	2.5449	0.0000	10,327.7750
2019	2.4662	22.3664	17.1155	0.0374	0.2012	1.1266	1.3151	0.0534	1.0817	1.1324	0.0000	3,605.9110	3,605.9110	0.7137	0.0000	3,623.7542
Maximum	**7.2296**	**69.6158**	**47.2504**	**0.1038**	**1.5705**	**3.3336**	**3.8909**	**0.2638**	**3.1375**	**3.2860**	**0.0000**	**10,264.1536**	**10,264.1536**	**2.5449**	**0.0000**	**10,327.7750**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.5830	46.8858	59.6809	0.1038	0.7468	2.2671	2.8245	0.1485	2.2666	2.4151	0.0000	10,264.1536	10,264.1536	2.5449	0.0000	10,327.7750
2019	0.9207	17.5392	21.2073	0.0374	0.2012	0.9401	1.1286	0.0534	0.9399	0.9906	0.0000	3,605.9110	3,605.9110	0.7137	0.0000	3,623.7542
Maximum	**2.5830**	**46.8858**	**59.6809**	**0.1038**	**0.7468**	**2.2671**	**2.8245**	**0.1485**	**2.2666**	**2.4151**	**0.0000**	**10,264.1536**	**10,264.1536**	**2.5449**	**0.0000**	**10,327.7750**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**63.86**	**29.96**	**-25.67**	**0.00**	**46.49**	**28.09**	**24.07**	**36.34**	**24.00**	**22.92**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/12/2018	5	10	
2	Pipeline Installation	Trenching	10/13/2018	11/12/2018	5	21	
3	Well Installation	Building Construction	10/13/2018	3/15/2019	5	110	
4	Paving	Paving	3/16/2019	3/22/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Excavators	2	6.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3503	0.0000	1.3503	0.2044	0.0000	0.2044			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**1.3503**	**0.6228**	**1.9730**	**0.2044**	**0.5943**	**0.7987**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0615	2.0030	0.4145	5.0300e-003	0.1084	7.6200e-003	0.1160	0.0297	7.2900e-003	0.0370		542.8810	542.8810	0.0374		543.8154
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0553	0.0417	0.5401	1.2600e-003	0.1118	1.0000e-003	0.1128	0.0296	9.2000e-004	0.0306		125.3690	125.3690	4.7000e-003		125.4865
Total	**0.1168**	**2.0447**	**0.9545**	**6.2900e-003**	**0.2202**	**8.6200e-003**	**0.2288**	**0.0594**	**8.2100e-003**	**0.0676**		**668.2500**	**668.2500**	**0.0421**		**669.3019**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5266	0.0000	0.5266	0.0797	0.0000	0.0797			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.5266**	**0.4017**	**0.9283**	**0.0797**	**0.4017**	**0.4814**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0615	2.0030	0.4145	5.0300e-003	0.1084	7.6200e-003	0.1160	0.0297	7.2900e-003	0.0370		542.8810	542.8810	0.0374		543.8154
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0553	0.0417	0.5401	1.2600e-003	0.1118	1.0000e-003	0.1128	0.0296	9.2000e-004	0.0306		125.3690	125.3690	4.7000e-003		125.4865
Total	**0.1168**	**2.0447**	**0.9545**	**6.2900e-003**	**0.2202**	**8.6200e-003**	**0.2288**	**0.0594**	**8.2100e-003**	**0.0676**		**668.2500**	**668.2500**	**0.0421**		**669.3019**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2653	44.6927	27.8671	0.0623		2.0264	2.0264		1.8826	1.8826		6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**4.2653**	**44.6927**	**27.8671**	**0.0623**		**2.0264**	**2.0264**		**1.8826**	**1.8826**		**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1823	0.1376	1.7822	4.1600e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		413.7176	413.7176	0.0155		414.1056
Total	**0.1823**	**0.1376**	**1.7822**	**4.1600e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**413.7176**	**413.7176**	**0.0155**		**414.1056**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0623		1.3231	1.3231		1.3231	1.3231	0.0000	6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**1.4703**	**29.1679**	**36.5962**	**0.0623**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1823	0.1376	1.7822	4.1600e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		413.7176	413.7176	0.0155		414.1056
Total	**0.1823**	**0.1376**	**1.7822**	**4.1600e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**413.7176**	**413.7176**	**0.0155**		**414.1056**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6816	24.1144	16.6774	0.0344		1.2982	1.2982		1.2464	1.2464		3,328.9644	3,328.9644	0.7157		3,346.8576
Total	**2.6816**	**24.1144**	**16.6774**	**0.0344**		**1.2982**	**1.2982**		**1.2464**	**1.2464**		**3,328.9644**	**3,328.9644**	**0.7157**		**3,346.8576**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0230	0.6128	0.1676	1.3200e-003	0.0320	4.3200e-003	0.0363	9.2200e-003	4.1300e-003	0.0134		140.8397	140.8397	9.2700e-003		141.0716
Worker	0.0774	0.0584	0.7561	1.7600e-003	0.1565	1.4000e-003	0.1579	0.0415	1.2900e-003	0.0428		175.5166	175.5166	6.5800e-003		175.6812
Total	**0.1004**	**0.6712**	**0.9237**	**3.0800e-003**	**0.1885**	**5.7200e-003**	**0.1942**	**0.0507**	**5.4200e-003**	**0.0561**		**316.3563**	**316.3563**	**0.0159**		**316.7527**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0344		0.9351	0.9351		0.9351	0.9351	0.0000	3,328.9644	3,328.9644	0.7157		3,346.8576
Total	**0.8300**	**16.9092**	**20.3788**	**0.0344**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,328.9644**	**3,328.9644**	**0.7157**		**3,346.8576**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0230	0.6128	0.1676	1.3200e-003	0.0320	4.3200e-003	0.0363	9.2200e-003	4.1300e-003	0.0134		140.8397	140.8397	9.2700e-003		141.0716
Worker	0.0774	0.0584	0.7561	1.7600e-003	0.1565	1.4000e-003	0.1579	0.0415	1.2900e-003	0.0428		175.5166	175.5166	6.5800e-003		175.6812
Total	**0.1004**	**0.6712**	**0.9237**	**3.0800e-003**	**0.1885**	**5.7200e-003**	**0.1942**	**0.0507**	**5.4200e-003**	**0.0561**		**316.3563**	**316.3563**	**0.0159**		**316.7527**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3755	21.7364	16.2869	0.0343		1.1216	1.1216		1.0769	1.0769		3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**2.3755**	**21.7364**	**16.2869**	**0.0343**		**1.1216**	**1.1216**		**1.0769**	**1.0769**		**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0699	0.0514	0.6750	1.7100e-003	0.1565	1.3500e-003	0.1578	0.0415	1.2400e-003	0.0427		169.8134	169.8134	5.8300e-003		169.9592
Total	**0.0907**	**0.6301**	**0.8286**	**3.0200e-003**	**0.1885**	**5.0400e-003**	**0.1935**	**0.0507**	**4.7700e-003**	**0.0555**		**309.2207**	**309.2207**	**0.0148**		**309.5899**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0343		0.9351	0.9351		0.9351	0.9351	0.0000	3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**0.8300**	**16.9092**	**20.3788**	**0.0343**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0699	0.0514	0.6750	1.7100e-003	0.1565	1.3500e-003	0.1578	0.0415	1.2400e-003	0.0427		169.8134	169.8134	5.8300e-003		169.9592
Total	**0.0907**	**0.6301**	**0.8286**	**3.0200e-003**	**0.1885**	**5.0400e-003**	**0.1935**	**0.0507**	**4.7700e-003**	**0.0555**		**309.2207**	**309.2207**	**0.0148**		**309.5899**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8352**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.2908	0.2908		0.2908	0.2908	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2291**	**4.7579**	**6.9028**	**0.0113**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

ELA Medians - Montebello Parkway Medians

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.74	Acre	0.74	32,234.40	0
Other Asphalt Surfaces	0.30	1000sqft	0.01	300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 55 tons of debris from asphalt removal.
576 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Winter

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.
Sequestration -

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Winter

Mobile Commute Mitigation - N/A

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	PhaseEndDate	3/6/2019	3/15/2019
tblConstructionPhase	PhaseEndDate	3/13/2019	3/22/2019
tblConstructionPhase	PhaseEndDate	10/15/2018	11/12/2018
tblConstructionPhase	PhaseStartDate	10/18/2018	10/13/2018
tblConstructionPhase	PhaseStartDate	3/7/2019	3/16/2019
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	7.2583	69.6382	47.0659	0.1035	1.5705	3.3337	3.8910	0.2638	3.1376	3.2861	0.0000	10,226.0253	10,226.0253	2.5443	0.0000	10,289.6317
2019	2.4747	22.3727	17.0756	0.0372	0.2012	1.1267	1.3152	0.0534	1.0817	1.1324	0.0000	3,592.2272	3,592.2272	0.7140	0.0000	3,610.0770
Maximum	**7.2583**	**69.6382**	**47.0659**	**0.1035**	**1.5705**	**3.3337**	**3.8910**	**0.2638**	**3.1376**	**3.2861**	**0.0000**	**10,226.0253**	**10,226.0253**	**2.5443**	**0.0000**	**10,289.6317**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.6117	46.9082	59.4963	0.1035	0.7468	2.2672	2.8246	0.1485	2.2667	2.4152	0.0000	10,226.0253	10,226.0253	2.5443	0.0000	10,289.6317
2019	0.9292	17.5455	21.1675	0.0372	0.2012	0.9402	1.1287	0.0534	0.9399	0.9906	0.0000	3,592.2272	3,592.2272	0.7140	0.0000	3,610.0770
Maximum	**2.6117**	**46.9082**	**59.4963**	**0.1035**	**0.7468**	**2.2672**	**2.8246**	**0.1485**	**2.2667**	**2.4152**	**0.0000**	**10,226.0253**	**10,226.0253**	**2.5443**	**0.0000**	**10,289.6317**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**63.62**	**29.95**	**-25.76**	**0.00**	**46.49**	**28.09**	**24.07**	**36.34**	**24.00**	**22.92**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	10/12/2018	5	10	
2	Pipeline Installation	Trenching	10/13/2018	11/12/2018	5	21	
3	Well Installation	Building Construction	10/13/2018	3/15/2019	5	110	
4	Paving	Paving	3/16/2019	3/22/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Excavators	2	6.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Well Installation	Cranes	1	8.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Montebello Parkway Medians - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	14.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3503	0.0000	1.3503	0.2044	0.0000	0.2044			0.0000			0.0000
Off-Road	1.0643	9.4295	7.7762	0.0120		0.6228	0.6228		0.5943	0.5943		1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**1.0643**	**9.4295**	**7.7762**	**0.0120**	**1.3503**	**0.6228**	**1.9730**	**0.2044**	**0.5943**	**0.7987**		**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0631	2.0304	0.4434	4.9400e-003	0.1084	7.7700e-003	0.1162	0.0297	7.4300e-003	0.0371		533.7972	533.7972	0.0388		534.7679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0612	0.0462	0.4973	1.1900e-003	0.1118	1.0000e-003	0.1128	0.0296	9.2000e-004	0.0306		118.0576	118.0576	4.4400e-003		118.1687
Total	**0.1243**	**2.0766**	**0.9406**	**6.1300e-003**	**0.2202**	**8.7700e-003**	**0.2289**	**0.0594**	**8.3500e-003**	**0.0677**		**651.8548**	**651.8548**	**0.0433**		**652.9366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5266	0.0000	0.5266	0.0797	0.0000	0.0797			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,169.3502	1,169.3502	0.2254		1,174.9857
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.5266**	**0.4017**	**0.9283**	**0.0797**	**0.4017**	**0.4814**	**0.0000**	**1,169.3502**	**1,169.3502**	**0.2254**		**1,174.9857**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0631	2.0304	0.4434	4.9400e-003	0.1084	7.7700e-003	0.1162	0.0297	7.4300e-003	0.0371		533.7972	533.7972	0.0388		534.7679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0612	0.0462	0.4973	1.1900e-003	0.1118	1.0000e-003	0.1128	0.0296	9.2000e-004	0.0306		118.0576	118.0576	4.4400e-003		118.1687
Total	**0.1243**	**2.0766**	**0.9406**	**6.1300e-003**	**0.2202**	**8.7700e-003**	**0.2289**	**0.0594**	**8.3500e-003**	**0.0677**		**651.8548**	**651.8548**	**0.0433**		**652.9366**

3.3 Pipeline Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2653	44.6927	27.8671	0.0623		2.0264	2.0264		1.8826	1.8826		6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**4.2653**	**44.6927**	**27.8671**	**0.0623**		**2.0264**	**2.0264**		**1.8826**	**1.8826**		**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2018	0.1524	1.6410	3.9200e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		389.5901	389.5901	0.0147		389.9566
Total	**0.2018**	**0.1524**	**1.6410**	**3.9200e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**389.5901**	**389.5901**	**0.0147**		**389.9566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0623		1.3231	1.3231		1.3231	1.3231	0.0000	6,205.1152	6,205.1152	1.7978		6,250.0592
Total	**1.4703**	**29.1679**	**36.5962**	**0.0623**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,205.1152**	**6,205.1152**	**1.7978**		**6,250.0592**

3.3 Pipeline Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2018	0.1524	1.6410	3.9200e-003	0.3689	3.2900e-003	0.3722	0.0978	3.0300e-003	0.1009		389.5901	389.5901	0.0147		389.9566
Total	**0.2018**	**0.1524**	**1.6410**	**3.9200e-003**	**0.3689**	**3.2900e-003**	**0.3722**	**0.0978**	**3.0300e-003**	**0.1009**		**389.5901**	**389.5901**	**0.0147**		**389.9566**

3.4 Well Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6816	24.1144	16.6774	0.0344		1.2982	1.2982		1.2464	1.2464		3,328.9644	3,328.9644	0.7157		3,346.8576
Total	**2.6816**	**24.1144**	**16.6774**	**0.0344**		**1.2982**	**1.2982**		**1.2464**	**1.2464**		**3,328.9644**	**3,328.9644**	**0.7157**		**3,346.8576**

3.4 Well Installation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0240	0.6142	0.1842	1.2900e-003	0.0320	4.3900e-003	0.0364	9.2200e-003	4.2000e-003	0.0134		137.0749	137.0749	9.8900e-003		137.3222
Worker	0.0856	0.0646	0.6962	1.6600e-003	0.1565	1.4000e-003	0.1579	0.0415	1.2900e-003	0.0428		165.2806	165.2806	6.2200e-003		165.4361
Total	**0.1096**	**0.6788**	**0.8804**	**2.9500e-003**	**0.1885**	**5.7900e-003**	**0.1943**	**0.0507**	**5.4900e-003**	**0.0562**		**302.3556**	**302.3556**	**0.0161**		**302.7583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0344		0.9351	0.9351		0.9351	0.9351	0.0000	3,328.9644	3,328.9644	0.7157		3,346.8576
Total	**0.8300**	**16.9092**	**20.3788**	**0.0344**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,328.9644**	**3,328.9644**	**0.7157**		**3,346.8576**

3.4 Well Installation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0240	0.6142	0.1842	1.2900e-003	0.0320	4.3900e-003	0.0364	9.2200e-003	4.2000e-003	0.0134		137.0749	137.0749	9.8900e-003		137.3222
Worker	0.0856	0.0646	0.6962	1.6600e-003	0.1565	1.4000e-003	0.1579	0.0415	1.2900e-003	0.0428		165.2806	165.2806	6.2200e-003		165.4361
Total	**0.1096**	**0.6788**	**0.8804**	**2.9500e-003**	**0.1885**	**5.7900e-003**	**0.1943**	**0.0507**	**5.4900e-003**	**0.0562**		**302.3556**	**302.3556**	**0.0161**		**302.7583**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3755	21.7364	16.2869	0.0343		1.1216	1.1216		1.0769	1.0769		3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**2.3755**	**21.7364**	**16.2869**	**0.0343**		**1.1216**	**1.1216**		**1.0769**	**1.0769**		**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.0775	0.0569	0.6195	1.6100e-003	0.1565	1.3500e-003	0.1578	0.0415	1.2400e-003	0.0427		159.8983	159.8983	5.5000e-003		160.0358
Total	**0.0992**	**0.6363**	**0.7887**	**2.8800e-003**	**0.1885**	**5.1000e-003**	**0.1936**	**0.0507**	**4.8300e-003**	**0.0555**		**295.5369**	**295.5369**	**0.0150**		**295.9126**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0343		0.9351	0.9351		0.9351	0.9351	0.0000	3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**0.8300**	**16.9092**	**20.3788**	**0.0343**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.0775	0.0569	0.6195	1.6100e-003	0.1565	1.3500e-003	0.1578	0.0415	1.2400e-003	0.0427		159.8983	159.8983	5.5000e-003		160.0358
Total	**0.0992**	**0.6363**	**0.7887**	**2.8800e-003**	**0.1885**	**5.1000e-003**	**0.1936**	**0.0507**	**4.8300e-003**	**0.0555**		**295.5369**	**295.5369**	**0.0150**		**295.9126**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8352**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.2908	0.2908		0.2908	0.2908	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2291**	**4.7579**	**6.9028**	**0.0113**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

ELA Medians - Olympic Boulevard Medians

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.68	1000sqft	0.06	2,680.00	0
City Park	0.27	Acre	0.27	11,761.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 495 tons of debris from asphalt removal.
206 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	PhaseEndDate	8/28/2019	6/5/2019
tblConstructionPhase	PhaseEndDate	4/8/2019	4/15/2019
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes

tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0681	0.6326	0.4810	1.0400e-003	0.0118	0.0316	0.0434	2.2900e-003	0.0301	0.0324	0.0000	91.0988	91.0988	0.0196	0.0000	91.5893
Maximum	**0.0681**	**0.6326**	**0.4810**	**1.0400e-003**	**0.0118**	**0.0316**	**0.0434**	**2.2900e-003**	**0.0301**	**0.0324**	**0.0000**	**91.0988**	**91.0988**	**0.0196**	**0.0000**	**91.5893**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0251	0.4844	0.5922	1.0400e-003	7.2100e-003	0.0255	0.0327	1.5900e-003	0.0255	0.0271	0.0000	91.0987	91.0987	0.0196	0.0000	91.5892
Maximum	**0.0251**	**0.4844**	**0.5922**	**1.0400e-003**	**7.2100e-003**	**0.0255**	**0.0327**	**1.5900e-003**	**0.0255**	**0.0271**	**0.0000**	**91.0987**	**91.0987**	**0.0196**	**0.0000**	**91.5892**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**63.23**	**23.43**	**-23.11**	**0.00**	**38.85**	**19.27**	**24.59**	**30.57**	**15.37**	**16.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-23-2019	6-22-2019	0.7029	0.5137
2	6-23-2019	9-22-2019	0.0222	0.0129
		Highest	0.7029	0.5137

3.0 Construction Detail

Construction Phase

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/23/2019	4/5/2019	5	10	
2	Pipeline Installation	Trenching	4/6/2019	4/15/2019	5	6	
3	Well Installation	Building Construction	4/11/2019	6/5/2019	5	40	
4	Paving	Paving	8/29/2019	9/4/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Pipeline Installation	Excavators	2	6.00	158	0.38
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Well Installation	Cranes	1	8.00	231	0.29
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	69.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	6.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	**4.7700e-003**	**0.0430**	**0.0385**	**6.0000e-005**	**7.5000e-003**	**2.6900e-003**	**0.0102**	**1.1400e-003**	**2.5600e-003**	**3.7000e-003**	**0.0000**	**5.2601**	**5.2601**	**1.0000e-003**	**0.0000**	**5.2852**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0109	2.3200e-003	3.0000e-005	5.9000e-004	4.0000e-005	6.3000e-004	1.6000e-004	4.0000e-005	2.0000e-004	0.0000	2.6865	2.6865	1.9000e-004	0.0000	2.6912
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.1000e-004	2.2700e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5267	0.5267	2.0000e-005	0.0000	0.5271
Total	**5.8000e-004**	**0.0111**	**4.5900e-003**	**4.0000e-005**	**1.1400e-003**	**4.0000e-005**	**1.1800e-003**	**3.1000e-004**	**4.0000e-005**	**3.5000e-004**	**0.0000**	**3.2131**	**3.2131**	**2.1000e-004**	**0.0000**	**3.2183**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9300e-003	0.0000	2.9300e-003	4.4000e-004	0.0000	4.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0298	0.0397	6.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	**1.3300e-003**	**0.0298**	**0.0397**	**6.0000e-005**	**2.9300e-003**	**2.0100e-003**	**4.9400e-003**	**4.4000e-004**	**2.0100e-003**	**2.4500e-003**	**0.0000**	**5.2601**	**5.2601**	**1.0000e-003**	**0.0000**	**5.2852**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0109	2.3200e-003	3.0000e-005	5.9000e-004	4.0000e-005	6.3000e-004	1.6000e-004	4.0000e-005	2.0000e-004	0.0000	2.6865	2.6865	1.9000e-004	0.0000	2.6912
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.1000e-004	2.2700e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5267	0.5267	2.0000e-005	0.0000	0.5271
Total	**5.8000e-004**	**0.0111**	**4.5900e-003**	**4.0000e-005**	**1.1400e-003**	**4.0000e-005**	**1.1800e-003**	**3.1000e-004**	**4.0000e-005**	**3.5000e-004**	**0.0000**	**3.2131**	**3.2131**	**2.1000e-004**	**0.0000**	**3.2183**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0116	0.1182	0.0811	1.9000e-004		5.2800e-003	5.2800e-003		4.9100e-003	4.9100e-003	0.0000	16.6372	16.6372	4.8800e-003	0.0000	16.7592
Total	**0.0116**	**0.1182**	**0.0811**	**1.9000e-004**		**5.2800e-003**	**5.2800e-003**		**4.9100e-003**	**4.9100e-003**	**0.0000**	**16.6372**	**16.6372**	**4.8800e-003**	**0.0000**	**16.7592**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.1000e-004	4.4900e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0428	1.0428	4.0000e-005	0.0000	1.0437
Total	**5.0000e-004**	**4.1000e-004**	**4.4900e-003**	**1.0000e-005**	**1.0800e-003**	**1.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0428**	**1.0428**	**4.0000e-005**	**0.0000**	**1.0437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4100e-003	0.0875	0.1098	1.9000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	16.6372	16.6372	4.8800e-003	0.0000	16.7592
Total	**4.4100e-003**	**0.0875**	**0.1098**	**1.9000e-004**		**3.9700e-003**	**3.9700e-003**		**3.9700e-003**	**3.9700e-003**	**0.0000**	**16.6372**	**16.6372**	**4.8800e-003**	**0.0000**	**16.7592**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.1000e-004	4.4900e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0428	1.0428	4.0000e-005	0.0000	1.0437
Total	**5.0000e-004**	**4.1000e-004**	**4.4900e-003**	**1.0000e-005**	**1.0800e-003**	**1.0000e-005**	**1.0900e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0428**	**1.0428**	**4.0000e-005**	**0.0000**	**1.0437**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0475	0.4347	0.3257	6.9000e-004		0.0224	0.0224		0.0215	0.0215	0.0000	59.8141	59.8141	0.0127	0.0000	60.1312
Total	**0.0475**	**0.4347**	**0.3257**	**6.9000e-004**		**0.0224**	**0.0224**		**0.0215**	**0.0215**	**0.0000**	**59.8141**	**59.8141**	**0.0127**	**0.0000**	**60.1312**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7000e-004	4.7200e-003	1.2900e-003	1.0000e-005	2.5000e-004	3.0000e-005	2.8000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	1.0003	1.0003	7.0000e-005	0.0000	1.0019
Worker	6.0000e-004	5.0000e-004	5.4500e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2640	1.2640	4.0000e-005	0.0000	1.2651
Total	**7.7000e-004**	**5.2200e-003**	**6.7400e-003**	**2.0000e-005**	**1.5600e-003**	**4.0000e-005**	**1.6100e-003**	**4.2000e-004**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**2.2643**	**2.2643**	**1.1000e-004**	**0.0000**	**2.2671**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0166	0.3382	0.4076	6.9000e-004		0.0187	0.0187		0.0187	0.0187	0.0000	59.8141	59.8141	0.0127	0.0000	60.1311
Total	**0.0166**	**0.3382**	**0.4076**	**6.9000e-004**		**0.0187**	**0.0187**		**0.0187**	**0.0187**	**0.0000**	**59.8141**	**59.8141**	**0.0127**	**0.0000**	**60.1311**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7000e-004	4.7200e-003	1.2900e-003	1.0000e-005	2.5000e-004	3.0000e-005	2.8000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	1.0003	1.0003	7.0000e-005	0.0000	1.0019
Worker	6.0000e-004	5.0000e-004	5.4500e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2640	1.2640	4.0000e-005	0.0000	1.2651
Total	**7.7000e-004**	**5.2200e-003**	**6.7400e-003**	**2.0000e-005**	**1.5600e-003**	**4.0000e-005**	**1.6100e-003**	**4.2000e-004**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**2.2643**	**2.2643**	**1.1000e-004**	**0.0000**	**2.2671**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1500e-003**	**0.0196**	**0.0179**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0400e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4740	0.4740	2.0000e-005	0.0000	0.4744
Total	**2.3000e-004**	**1.9000e-004**	**2.0400e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4740**	**0.4740**	**2.0000e-005**	**0.0000**	**0.4744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	0.0119	0.0173	3.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4000e-004**	**0.0119**	**0.0173**	**3.0000e-005**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0400e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4740	0.4740	2.0000e-005	0.0000	0.4744
Total	**2.3000e-004**	**1.9000e-004**	**2.0400e-003**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4740**	**0.4740**	**2.0000e-005**	**0.0000**	**0.4744**

ELA Medians - Olympic Boulevard Medians

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.68	1000sqft	0.06	2,680.00	0
City Park	0.27	Acre	0.27	11,761.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 495 tons of debris from asphalt removal.
206 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Summer

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Summer

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	PhaseEndDate	8/28/2019	6/5/2019
tblConstructionPhase	PhaseEndDate	4/8/2019	4/15/2019
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes

tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	6.4566	61.5243	45.2592	0.1018	1.7325	2.8865	3.3352	0.2898	2.7168	2.8361	0.0000	9,938.6168	9,938.6168	2.5119	0.0000	10,001.4141
Maximum	**6.4566**	**61.5243**	**45.2592**	**0.1018**	**1.7325**	**2.8865**	**3.3352**	**0.2898**	**2.7168**	**2.8361**	**0.0000**	**9,938.6168**	**9,938.6168**	**2.5119**	**0.0000**	**10,001.4141**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.5034	46.4517	58.9169	0.1018	0.8175	2.2634	2.7121	0.1513	2.2630	2.3823	0.0000	9,938.6168	9,938.6168	2.5119	0.0000	10,001.4141
Maximum	**2.5034**	**46.4517**	**58.9169**	**0.1018**	**0.8175**	**2.2634**	**2.7121**	**0.1513**	**2.2630**	**2.3823**	**0.0000**	**9,938.6168**	**9,938.6168**	**2.5119**	**0.0000**	**10,001.4141**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**61.23**	**24.50**	**-30.18**	**0.00**	**52.82**	**21.59**	**18.68**	**47.80**	**16.70**	**16.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/23/2019	4/5/2019	5	10	
2	Pipeline Installation	Trenching	4/6/2019	4/15/2019	5	6	
3	Well Installation	Building Construction	4/11/2019	6/5/2019	5	40	
4	Paving	Paving	8/29/2019	9/4/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Pipeline Installation	Excavators	2	6.00	158	0.38
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Well Installation	Cranes	1	8.00	231	0.29
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	69.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	6.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5001	0.0000	1.5001	0.2271	0.0000	0.2271			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**1.5001**	**0.5371**	**2.0372**	**0.2271**	**0.5125**	**0.7396**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0648	2.1134	0.4506	5.5100e-003	0.1206	7.7500e-003	0.1284	0.0331	7.4200e-003	0.0405		596.5131	596.5131	0.0411		597.5401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.1148**	**2.1501**	**0.9328**	**6.7300e-003**	**0.2324**	**8.7100e-003**	**0.2411**	**0.0627**	**8.3100e-003**	**0.0710**		**717.8084**	**717.8084**	**0.0453**		**718.9396**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5850	0.0000	0.5850	0.0886	0.0000	0.0886			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.5850**	**0.4017**	**0.9867**	**0.0886**	**0.4017**	**0.4903**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0648	2.1134	0.4506	5.5100e-003	0.1206	7.7500e-003	0.1284	0.0331	7.4200e-003	0.0405		596.5131	596.5131	0.0411		597.5401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.1148**	**2.1501**	**0.9328**	**6.7300e-003**	**0.2324**	**8.7100e-003**	**0.2411**	**0.0627**	**8.3100e-003**	**0.0710**		**717.8084**	**717.8084**	**0.0453**		**718.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8780	39.4133	27.0305	0.0622		1.7597	1.7597		1.6350	1.6350		6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**3.8780**	**39.4133**	**27.0305**	**0.0622**		**1.7597**	**1.7597**		**1.6350**	**1.6350**		**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0622		1.3231	1.3231		1.3231	1.3231	0.0000	6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**1.4703**	**29.1679**	**36.5962**	**0.0622**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	**0.1649**	**0.1212**	**1.5911**	**4.0200e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**400.2745**	**400.2745**	**0.0138**		**400.6182**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3755	21.7364	16.2869	0.0343		1.1216	1.1216		1.0769	1.0769		3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**2.3755**	**21.7364**	**16.2869**	**0.0343**		**1.1216**	**1.1216**		**1.0769**	**1.0769**		**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0300	0.0220	0.2893	7.3000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		72.7772	72.7772	2.5000e-003		72.8397
Total	**0.0383**	**0.2535**	**0.3507**	**1.2500e-003**	**0.0799**	**2.0600e-003**	**0.0819**	**0.0215**	**1.9400e-003**	**0.0234**		**128.5401**	**128.5401**	**6.0700e-003**		**128.6919**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0343		0.9351	0.9351		0.9351	0.9351	0.0000	3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**0.8300**	**16.9092**	**20.3788**	**0.0343**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0300	0.0220	0.2893	7.3000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		72.7772	72.7772	2.5000e-003		72.8397
Total	**0.0383**	**0.2535**	**0.3507**	**1.2500e-003**	**0.0799**	**2.0600e-003**	**0.0819**	**0.0215**	**1.9400e-003**	**0.0234**		**128.5401**	**128.5401**	**6.0700e-003**		**128.6919**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8614**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.2908	0.2908		0.2908	0.2908	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2553**	**4.7579**	**6.9028**	**0.0113**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.0899**	**0.0661**	**0.8679**	**2.1900e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**218.3315**	**218.3315**	**7.5000e-003**		**218.5190**

ELA Medians - Olympic Boulevard Medians

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.68	1000sqft	0.06	2,680.00	0
City Park	0.27	Acre	0.27	11,761.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - No substantial operational emissions associated with the project. Maintenance requirements would be negligible.

Land Use - Areas for roadways and medians developed from CAD files provided by client.

Construction Phase - Any hardscaping or landscaping requiring the use of heavy duty offroad equipment is assumed to be performed during pipeline installation and well installation phases. Phase durations based on similar activities evaluated for Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - Equipment list based on similar tasks analyzed in Yorba Linda Annexation Program EIR.

Off-road Equipment - CalEEMod Default Values

Demolition - 495 tons of debris from asphalt removal.
206 tons of removed median (sqft-weighted fraction of 10,400 CY of total median material to be hauled off-site)

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Winter

Trips and VMT - CalEEMod Default Values

On-road Fugitive Dust - CalEEMod Default Values

Architectural Coating - CalEEMod Default Values

Vehicle Trips - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Vehicle Emission Factors - N/A

Road Dust - N/A

Woodstoves - N/A

Consumer Products - N/A

Area Coating - N/A

Landscape Equipment - N/A

Energy Use - N/A

Water And Wastewater - N/A

Solid Waste - N/A

Operational Off-Road Equipment - N/A

Stationary Sources - Emergency Generators and Fire Pumps EF - N/A

Stationary Sources - Process Boilers - N/A

Stationary Sources - Process Boilers EF - N/A

Stationary Sources - User Defined - N/A

Land Use Change - Vegetation increased as a result of the project. No credit taken for this benefit to air quality.

Sequestration - Vegetation increased as a result of the project. No credit taken for this carbon sequestration.

Construction Off-road Equipment Mitigation - Program-Level EIR requires maximum use of Tier 4 equipment. Tier 3 to be used if Tier 4 not available, Tier 2 to be used only if Tier 3 not available. Conservatively assumed 0% Tier 4 equipment available. 100% Tier 3 equipment is assumed. No increase in DPF level is assumed to be conservative.
Watering of exposed area required per SCAQMD Rule 403.
Low on-site vehicle speeds assumed.

Mobile Land Use Mitigation - N/A

Mobile Commute Mitigation - N/A

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Winter

Area Mitigation - N/A

Energy Mitigation - N/A

Water Mitigation - N/A

Waste Mitigation - N/A

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	PhaseEndDate	8/28/2019	6/5/2019
tblConstructionPhase	PhaseEndDate	4/8/2019	4/15/2019
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes

tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	6.4782	61.5400	45.1107	0.1016	1.7325	2.8865	3.3352	0.2898	2.7168	2.8361	0.0000	9,909.4887	9,909.4887	2.5112	0.0000	9,972.2688
Maximum	**6.4782**	**61.5400**	**45.1107**	**0.1016**	**1.7325**	**2.8865**	**3.3352**	**0.2898**	**2.7168**	**2.8361**	**0.0000**	**9,909.4887**	**9,909.4887**	**2.5112**	**0.0000**	**9,972.2688**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.5249	46.4674	58.7684	0.1016	0.8175	2.2634	2.7121	0.1513	2.2630	2.3823	0.0000	9,909.4887	9,909.4887	2.5112	0.0000	9,972.2688
Maximum	**2.5249**	**46.4674**	**58.7684**	**0.1016**	**0.8175**	**2.2634**	**2.7121**	**0.1513**	**2.2630**	**2.3823**	**0.0000**	**9,909.4887**	**9,909.4887**	**2.5112**	**0.0000**	**9,972.2688**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**61.02**	**24.49**	**-30.28**	**0.00**	**52.82**	**21.59**	**18.68**	**47.80**	**16.70**	**16.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/23/2019	4/5/2019	5	10	
2	Pipeline Installation	Trenching	4/6/2019	4/15/2019	5	6	
3	Well Installation	Building Construction	4/11/2019	6/5/2019	5	40	
4	Paving	Paving	8/29/2019	9/4/2019	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Cranes	1	8.00	231	0.29
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Dumpers/Tenders	2	6.00	16	0.38
Pipeline Installation	Excavators	2	6.00	158	0.38
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Pipeline Installation	Generator Sets	1	6.00	84	0.74
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Pipeline Installation	Off-Highway Trucks	2	8.00	402	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Pipeline Installation	Off-Highway Trucks	1	4.00	402	0.38
Pipeline Installation	Other Construction Equipment	1	6.00	172	0.42
Pipeline Installation	Plate Compactors	1	4.00	8	0.43
Pipeline Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Well Installation	Bore/Drill Rigs	1	8.00	221	0.50
Well Installation	Cranes	1	8.00	231	0.29
Well Installation	Forklifts	1	6.00	89	0.20
Well Installation	Generator Sets	1	8.00	84	0.74
Well Installation	Pumps	1	8.00	84	0.74
Well Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Well Installation	Welders	1	8.00	46	0.45

Trips and VMT

ELA Medians - Olympic Boulevard Medians - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	69.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Installation	7	6.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5001	0.0000	1.5001	0.2271	0.0000	0.2271			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**1.5001**	**0.5371**	**2.0372**	**0.2271**	**0.5125**	**0.7396**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0665	2.1416	0.4810	5.4200e-003	0.1206	7.9000e-003	0.1285	0.0331	7.5600e-003	0.0406		586.3963	586.3963	0.0427		587.4625
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.1218**	**2.1822**	**0.9235**	**6.5700e-003**	**0.2324**	**8.8600e-003**	**0.2413**	**0.0627**	**8.4500e-003**	**0.0712**		**700.6094**	**700.6094**	**0.0466**		**701.7738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5850	0.0000	0.5850	0.0886	0.0000	0.0886			0.0000			0.0000
Off-Road	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**	**0.5850**	**0.4017**	**0.9867**	**0.0886**	**0.4017**	**0.4903**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0665	2.1416	0.4810	5.4200e-003	0.1206	7.9000e-003	0.1285	0.0331	7.5600e-003	0.0406		586.3963	586.3963	0.0427		587.4625
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.1218**	**2.1822**	**0.9235**	**6.5700e-003**	**0.2324**	**8.8600e-003**	**0.2413**	**0.0627**	**8.4500e-003**	**0.0712**		**700.6094**	**700.6094**	**0.0466**		**701.7738**

3.3 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8780	39.4133	27.0305	0.0622		1.7597	1.7597		1.6350	1.6350		6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**3.8780**	**39.4133**	**27.0305**	**0.0622**		**1.7597**	**1.7597**		**1.6350**	**1.6350**		**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4703	29.1679	36.5962	0.0622		1.3231	1.3231		1.3231	1.3231	0.0000	6,113.1119	6,113.1119	1.7931		6,157.9396
Total	**1.4703**	**29.1679**	**36.5962**	**0.0622**		**1.3231**	**1.3231**		**1.3231**	**1.3231**	**0.0000**	**6,113.1119**	**6,113.1119**	**1.7931**		**6,157.9396**

3.3 Pipeline Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	**0.1827**	**0.1342**	**1.4602**	**3.7900e-003**	**0.3689**	**3.1800e-003**	**0.3720**	**0.0978**	**2.9300e-003**	**0.1008**		**376.9032**	**376.9032**	**0.0130**		**377.2273**

3.4 Well Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3755	21.7364	16.2869	0.0343		1.1216	1.1216		1.0769	1.0769		3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**2.3755**	**21.7364**	**16.2869**	**0.0343**		**1.1216**	**1.1216**		**1.0769**	**1.0769**		**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.0332	0.0244	0.2655	6.9000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		68.5279	68.5279	2.3600e-003		68.5868
Total	**0.0419**	**0.2562**	**0.3332**	**1.2000e-003**	**0.0799**	**2.0800e-003**	**0.0819**	**0.0215**	**1.9600e-003**	**0.0234**		**122.7833**	**122.7833**	**6.1700e-003**		**122.9375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	16.9092	20.3788	0.0343		0.9351	0.9351		0.9351	0.9351	0.0000	3,296.6903	3,296.6903	0.6990		3,314.1644
Total	**0.8300**	**16.9092**	**20.3788**	**0.0343**		**0.9351**	**0.9351**		**0.9351**	**0.9351**	**0.0000**	**3,296.6903**	**3,296.6903**	**0.6990**		**3,314.1644**

3.4 Well Installation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.0332	0.0244	0.2655	6.9000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		68.5279	68.5279	2.3600e-003		68.5868
Total	**0.0419**	**0.2562**	**0.3332**	**1.2000e-003**	**0.0799**	**2.0800e-003**	**0.0819**	**0.0215**	**1.9600e-003**	**0.0234**		**122.7833**	**122.7833**	**6.1700e-003**		**122.9375**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8614**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2239	4.7579	6.9028	0.0113		0.2908	0.2908		0.2908	0.2908	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0314					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2553**	**4.7579**	**6.9028**	**0.0113**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.0997**	**0.0732**	**0.7965**	**2.0700e-003**	**0.2012**	**1.7300e-003**	**0.2029**	**0.0534**	**1.6000e-003**	**0.0550**		**205.5836**	**205.5836**	**7.0700e-003**		**205.7604**

Appendix B
Cultural Resources

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Historical Resources Review: East Los Angeles Sustainable Median Stormwater Capture Project

Submitted to:

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Greenwood and Associates

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December 21, 2017

INTRODUCTION

Greenwood and Associates has conducted a review of findings contained within the draft cultural resources analysis for the East Los Angeles Sustainable Median Stormwater Capture Project in the community of East Los Angeles. This study was prepared by CDM Smith for submission to the Los Angeles County Department of Public Works to support the preparation of an Addendum to the Los Angeles County Flood Control District Enhanced Water Management Programs Program Environmental Impact Report.

PROJECT LOCATION

The project area is the Los Angeles County Zone 35 Montebello Landscape Maintenance District (LMD) located within the Community of East Los Angeles, near the intersection of Olympic Boulevard and Garfield Avenue. The LMD is within a distinct geographic subdivision centered along the oblong loop road of Northside Drive and Southside Drive. It is surrounded by Whittier Boulevard to the north, Vail Avenue to the east, Ferguson Drive to the south, and Gerhart Avenue to the west and bisected by Garfield Avenue and Olympic Boulevard.

PROJECT SUMMARY

The East Los Angeles Sustainable Median Stormwater Capture Project (the "proposed project") would capture and treat approximately 232 acre-feet of stormwater in an average rainfall year from a 3,000-acre tributary area. The stormwater would be diverted, captured, and infiltrated to reduce pollutants (specifically metals, nutrients, and bacteria) entering the Los Angeles River and Rio Hondo River. The storm water flows would be diverted from a nearby storm drain using a diversion structure and approximately 2,500 linear feet of reinforced concrete pipe. The flow would then be directed into various underground infiltration wells with a total design capacity of 21 acre-feet, located at various medians, where it would infiltrate into the ground. The medians would also be enhanced by the installation of drought tolerant landscaping and recreational amenities, providing aesthetic and public use benefits to adjacent residential community.

The project area includes several sites at medians and sidewalks located to the west of Garfield Avenue. Pipelines and diversion structures connecting to existing storm drains would also be installed in roadways adjacent to the medians. The proposed project medians are all relatively flat, consisting of turf grass and [scattered] trees which are primarily alder, pine, Chinese elm, and jacaranda. The medians have raised curbs and streetlights, and may also have infrastructure such as power poles, irrigation controls and connections, and signage.

The stormwater flows would be diverted from existing storm drains via a diversion structure and a total of approximately 7,100 linear feet of reinforced 24-inch concrete pipe which would connect to the infiltration wells. The pipelines would be installed at various depths, to a

maximum depth of 10 feet below ground surface (bgs). The infiltration wells would be 6 feet in diameter and vary in depth based on the infiltration properties and other considerations at each median. It is estimated that there would be approximately five 50-foot wells, ten 60-foot wells and one hundred 100-foot wells. The wells would be located to avoid the need to remove any existing healthy trees and to avoid any existing infrastructure to remain such as streetlights, power poles, and underground utilities such as a water pipes and telephone lines. Pretreatment filtration units would be installed at several medians, which would provide initial stormwater treatment prior its entry into the infiltration wells.

Sustainable features at the project sites include the reduction of water use by replacing turf with drought tolerant landscaping and installing of water efficient irrigation. Additionally, permeable surfaces, such as decomposed granite, would be used for the pathways, which would allow for the infiltration of surface water. As described previously, bioswales and bioretention would be installed in several of the medians, which would both contribute to the landscape design as well as provide a water quality benefit. These areas would vary from approximately six inches to three feet in depth.

The draft cultural resources analysis addressed by this review was prepared in order to comply with Program EIR mitigation measure CUL-1, which entails that for individual EWMP projects that could impact buildings or structures (including infrastructure) 45 years old or older, implementing agencies shall ensure that a historic built environment survey is conducted or supervised by a qualified historian or architectural historian meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History.

This review was prepared by Dana N. Slawson, M. Arch., an architectural historian with 25 years of professional experience in Southern California who meets the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, and Historic Architecture.

SUMMARY OF REVIEW FINDINGS

The follow section summarizes our review of the draft historical resources analysis.

The Montebello Park Historic District was first recorded during the course of historical resource investigations for the Eastside Transit Corridor Phase II EIS-EIR Project, completed by ICF International in 2012. That document identified Montebello Park Historic District as eligible for National Register and California Register listing. In completing this review, particular reference was made to the Historic District Record Form (DPR 523) completed for the Montebello Park development (Davis 2010, Attachment A). The District Record provides the primary documentation of the history and historic context of the development, establishes what the contributing constituents of the district are, and identifies their character-defining features.

1. Paragraph 1 of the draft analysis contains inaccuracies regarding the development of the Montelbello Park tract. According to the Historic District Record form, the subdivision was not developed by the Janss Investment Company. It is recommend that language comparable to following passage derived from the Historic District Record replace the original passage:

> *East Los Angeles is within the historic boundaries of Rancho La Laguna, part of the land holdings belonging to Don Abel Stearns and his wife, Dona Arcadia Bandini. Stearns acquired the first parcels of land in 1857, and until his death in 1871, Stearns and his wife hosted social and political functions at the rancho. Following Dona Arcadia Bandini's death in 1912, subdivision of the rancho and the eastward development of Los Angeles were delayed because of a legal proceeding over the estate and land claims by various descendants. However, by 1921 the last remaining cattle on the rancho had been removed to make way for…* ***new suburbs. Montebello Park was subdivided and recorded in five separate tracts over a period of two and half years spanning 1925 to 1927, the owner of each tract is listed as Security Trust & Savings Bank. Although Security Trust & Savings Bank technically owned the tracts that comprise Montebello Park, it was the J.B. Ransom Corporation that developed the subdivision, working with the renowned city planning and landscape architecture firm of Cook & Hall. Ransom's organization was not new to the Los Angeles real estate development arena, having previously subdivided the nearby 100-acre Bandini development in 1924. Ransom's promotion of Montebello Park shared one important theme with that of Bandini: emphasis on the tract's proximity to rapidly expanding industrial districts and its suitability for the development of highly profitable worker housing. In spite of this important similarity between the two Ransom tracts, Montebello Park was a different product than Bandini in substantive ways, primarily its careful, cutting-edge community and landscape planning.***
>
> *Industrial and real estate interests worked together to provide housing for industrial workers associated with industrial development in Los Angeles that began in the late 19th century when the flat lands adjacent to the Los Angeles River became the initial location of a vast East Los Angeles industrial district. Development of the area that begun in the 1920s stalled during the Great Depression but resumed at a rapid pace following World War II until the mid-1950s when the area was almost complete built out.*

2. Paragraph 3. The following changes are recommended:

> *The project site consists of turf grass medians* ***with scattered trees*** *and sidewalks in a urbanized/developed area in East Los Angeles. There are no structures. Prior to development of the area, the project site was used for agricultural purposes. The possibility of any potentially historical* ***archaeological deposit*** *being located on-site associated with past uses is unlikely, given that it has been previously disturbed.*

By way of historical background, the District Record form relates that "In addition to the landscaping of 30 acres of parkways and medians with California live oaks, eucalyptus, pine, black walnut, camphor, carob, and gingko, improvements included concrete sidewalks and curbs, oil macadamized street paving, gas and water mains, and ornamental street lights."

Elements called out by District Record form as character-defining that pertain to the current project area are limited to "the symmetrical street plan [that] features an extensive network of landscaped parkways and medians that gently curve around the ellipsis which, echoing the overall site plan, [which] is wider at the west end than it is at the east end…."

It should be noted that of the tree varieties originally included in the landscaping, only pines presently exist. Apparently none of the existing trees correspond to the period of significance (1925-1929), and trees and other vegetation are not mentioned on the District Record as character defining features. Also not identified as character-defining are infrastructure elements such as sidewalks, curbs, and streetlights.

On this basis of the Historic District Record, it may be concluded that the form of the medians and parkways, along with their essential 'planted' or landscaped nature, are the principal character-defining features of these elements. Project plans call for retention of existing mature trees, and presumably surviving trees corresponding to the period of significance, if any remain, would be preserved.

CONCLUSIONS

On the basis of our review of the draft historical resources analysis for the proposed East Los Angeles Sustainable Median Stormwater Capture Project and supporting documents, it is the conclusion of Greenwood and Associates that implementation of the project will not result in any significant alteration or destruction of historical resources. *Impacts associated with the project would be less than significant and no mitigation measures are required.*

REFERENCES

Ames. David L.. and Linda Flint McClelland
2002 *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Reaister of Historic Places.* U.S. Department of the Interior, National Park Service, Washington, D.C.

CDM Smith
2017 East Los Angeles Sustainable Median Stormwater Capture Project, Los Angeles, California, IS/MND (Draft). Prepared for the Los Angeles County Department of Public Works.

Davis, Coleen
2010 *Montebello Park Historic District Record.* Prepared for ICF International for submission to the Los Angeles County Transportation Authority, Los Angeles.

ESA
2015 Mitigation Monitoring and Reporting Program. Included in *LA County Flood Control District Enhanced Watershed Management Programs Final Program Environmental Impact Report.*

ICF International
2012 *Eastside Transit Corridor Phase 2, Cultural Resources Technical Memorandum.* Los Angeles County Transportation Authority, Los Angeles.

ATTACHMENT A

Montebello Park Historic District Record

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191006
HR #
Trinomial
NRHP Status Code 3S
Other Listings
Review Code _____ Reviewer _____ Date _____

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* Resource Name or #: Montebello Park Historic District
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address _____ City Montebello, Commerce Zip 90640
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)
Straddling the City of Montebello, the City of Commerce, and unincorporated portions of the County of Los Angeles, Montebello Park consists of approximately 2,500 parcels set within a carefully designed landscape crafted by Cook & Hall in 1925. The district extends approximately 1.5 miles from east to west. Trapezoidal in shape, the western end of the district is wider than its eastern end. At the west end, the south to north width is approximately a half mile while at the east end the width tapers to less than a quarter mile. The district's trapezoidal shape is emphasized by its elegant street plan based on the ellipsis. The symmetrical street plan features an extensive network of landscaped parkways and medians that gently curve around the ellipsis which, echoing the overall site plan, is wider at the west end than it is at the east end. Montebello Park's long blocks east-west blocks lend its residential streets a particularly pleasing uninterrupted streetscape rhythm. Mid-block walkways arranged at strategic points along the long east-west blocks assist safe and efficient pedestrian movement without sacrificing visual rhythm along the streets. A Southern California Edison right-of–way that extends from the intersection of Garfield Avenue and Gage Avenue in Bell Gardens on the south to the northern boundary of Montebello on the north runs through the tract. It is incorporated into the district as park space.

* P3b. Resource Attributes: (List attributes and codes) HP02. Single-family property
* P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☐ Site ☑ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
Parkway looking north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both

* P7. Owner and Address:
Private

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/8/2010

* P10. Survey Type: (Describe)
Intensive level survey

* P11. Report Citation: (Cite survey report/other sources or "none")

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
DISTRICT RECORD

Primary# _____
HRI# _____
Trinomial

 *NRHP Status Code 3S

*Resource Name or # (Assigned by recorder) Montebello Park Historic District

D1. Historic Name: None D2.Common Name: None

*D3. Detailed Description (Discuss overall coherence of the district, its setting, visual characteristics, and minor features. List all elements of district.):

The district includes both residential and commercial uses. Commercial uses are found along the main thoroughfares: Whittier and Olympic Boulevards. Gerhart Avenue features light industry. The other streets within the district are residential: primarily single family but with duplexes, triplexes, four-plexes and small apartment buildings mixed in. Although the majority of buildings are one-story, two-story buildings also appear. Most of the buildings were constructed during the 1940s and reflect the popular architectural styles of the pre- and post- World War II era, predominantly the Minimal Traditional style. The buildings all display similar scale, massing, and setbacks and provide a lending the district a consistent and cohesive appearance.

*D4. Boundary Description (Describe limits of district and attach map showing boundary and district elements.):

The district is generally bounded by Whittier Boulevard on the north, Gerhart Avenue on the west, Vail Avenue on the east and Ferguson Drive on the south.

(Continued on page 3)

*D5. Boundary Justification:

The boundary for the district reflects the original development for the Montebello Park neighborhood as conceived and implemented by its developer J.B. Ransom Corporation and designed by landscape architecture firm Cook & Hall. It also reflects the boundaries of Tract Nos. 8366, 9033, 8649, 10083, 10178 recorded between 1925 and 1927.

D6. Significance: Theme Community Planning &Development, Landscape Architecture Area Montebello Park
Period of Significance 1925-1929 Applicable Criteria A
(Discuss district's importance in terms of its historical context as defined by theme, period of significance, and geographic scope. Also address the integrity of the district as a whole.)

Montebello Park appears to be eligible for listing in the National Register of Historic Places at the regional level of significance under Criterion A as an example of a manufacturing suburb developed during the period of industrial decentralization in the 1920s. Deliberately conceived to house a mixed-class group of industrial workers and their families, Montebello Park was consciously located directly adjacent to what its developers saw as the inevitable eastward march of Los Angeles's Central Manufacturing District. Montebello Park vividly illustrates many of the important urban planning and housing themes of the late-nineteenth and early-twentieth centuries. Planned and promoted by Los Angeles area residential/industrial developer J.B. Ransom Corporation, Montebello Park represents a carefully designed manufacturing suburb that not only responded to 1920s era best practices with respect to housing working people but simultaneously incorporated contemporary cutting-edge concepts of integrated suburban planning and design.

(Continued on page 4)

*D7. References (Give full citations including the names and addresses of any informants, where possible.):

(See pages 13 and 14)

*D8. Evaluator: Colleen Davis Date: October 2010
Affiliation and Address: ICF International, 811 W. 7th Street, Suite 800, Los Angeles, CA 90017

D6. Boundary Description (continued)

The streets and address ranges included in the district include:

112-201 18th Street , Montebello
109-148 19th Street , Montebello
108-116 22nd Street , Montebello
2005-2241 Allston Street, Montebello
5825 -6685 Allston Street, Los Angeles
5810-5840 Brookfield Street, Los Angeles
5802-5845 Clarendon Street, Los Angeles
1700-1912 Colegrove Avenue, Montebello
917 Concourse Avenue, Montebello
930-1519 Concourse Avenue, Los Angeles
6001-6166 Dennison Street, Los Angeles
2101-2241 Easton Street, Montebello
5906-6675 Easton Street, Los Angeles
1501-1523 Elton Avenue, Los Angeles
2100-2221 Fairfield Street, Montebello
5901-6689 Fairfield Street, Los Angeles
1808-1836 Ferguson Drive, Montebello (even numbers only)
2100-2220 Ferguson Drive, Montebello (even numbers only)
5903-6673 Ferguson Drive, Los Angeles (odd numbers only)
110-111 Garfield Avenue, Montebello
934-1516 Garfield Avenue, Los Angeles
1510-1539 Gaspar Avenue, Los Angeles
914-1538 Gerhart Avenue, City of Commerce (even numbers only)
6000-6185 Gloucester Street, Los Angeles
940-1413 Hanover Avenue, Los Angeles
914-1513 Hendriks Avenue, Los Angeles
312 Hereford Drive, (even numbers only)
2008-2221 Hereford Drive, Montebello
5816-6675 Hereford Drive, Los Angeles
201-227 Kensington Way, Montebello
910-1077 Leonard Avenue, Los Angeles
911-1043 Leonard Place, Los Angeles (odd numbers only)
1701-1736 Malden Drive, Montebello
1817-1912 Medford Drive, Montebello
1905-2013 Millis Street, Montebello
5802-5942 Montebello Park Way, Los Angeles
1501-1539 Nairn Avenue, Los Angeles
2021-2241 Northside Drive, Montebello
5912-6685 Northside Drive, Los Angeles
1701-2223 Olympic Boulevard, Montebello
5724-6701 Olympic Boulevard, Los Angeles
305-429 Pickering Way, Montebello
930-1422 Saybrook Avenue, Los Angeles (even numbers only)
1517 Saybrook Avenue, Los Angeles
931-950 Server Avenue, Los Angeles
1215-1419 Server Avenue, Los Angeles
913-1541 Simmons Avenue

2009-2221 Southside Drive, Montebello
5906-6675 Southside Drive, Los Angeles
115-149 Vail Avenue, Montebello (odd numbers only)
201-215 Vail Avenue, Montebello (odd numbers only)
425 Vail Avenue, Montebello
925-1519 Westside Drive, Los Angeles (odd numbers only)
1701-2513 Whittier Boulevard, Montebello (odd numbers only)
5750-6548 Whittier Boulevard, Los Angeles (odd numbers only)

D6. Significance (continued)

Housing the Working Class:

The industrial revolution of the nineteenth century radically changed the way many Americans lived and worked. Profound changes in the social relations of Americans and major shifts in how and where they were housed represent, arguably, the most significant of these changes. By the late nineteenth century, labor unrest was becoming increasingly commonplace. Reformers decried the housing and general social conditions of the throngs of often disenfranchised and sometimes exploited workers who, along with their families, flocked to American cities from rural hinterlands within the United States and many points across the globe. Over-crowding coupled with sub-standard construction and poor maintenance often resulted in unhealthful living conditions that poor and powerless workers had little hope of remedying. Simultaneously, many industrialists sought to control radicalizing workers who, with increasing frequency and diminishing diffidence, demanded higher wages and better working conditions.

Reformers sought solutions to the urban housing crisis in both new buildings and new building forms. Rooted in the communitarian ideology of the nineteenth century, these reformers considered open and communal space as vital to well-functioning social systems. Pioneering late nineteenth century East Coast reformer/developers such as Alfred Tredway White crafted working class housing developments that placed well-designed and solidly built low-rise multi-family structures within large parcels that allowed plentiful light and ventilation, access to sanitary facilities, and ample open space to facilitate children's play and neighborly interactions. Tredway's projects provided a vastly superior housing product than the typical tenement of the time, albeit netting a lower profit than its poorly designed, shoddily constructed, and densely packed contemporaries. These housing developments ultimately served as model for both the private quasi-philanthropic housing developments of the 1920s and the public housing of the late 1930s and 1940s.

Industrialists in early twentieth century Los Angeles faced something of a conundrum. While they possessed a strong desire to shape Los Angeles into a highly lucrative industrial powerhouse, they simultaneously and passionately wished to avoid the pitfalls of the nineteenth century industrial city, chiefly labor unrest. By the early twentieth century, Los Angeles's industrialists were beginning to see the advantages of low-density housing and view them as a panacea for urban ills. Moreover, they increasingly considered home-ownership among workers as a tool for maintaining a placid, productive, and stable workforce. In Los Angeles, city boosters elevated this particular formula for the new industrial city to a fine art. So successful were the city's boosters in promoting a vision of Southern California as single-family dwelling landscape accessible to the masses that the region has become synonymous with mass suburbanization. Moreover, many of Los Angeles capitalists viewed the prospect of providing such housing as a potentially lucrative business opportunity. Thus, residential real estate development – specifically the subdivision of land for sale as individual home sites - worked hand in glove with the region's industrial development during the 1920s.

Industrial Decentralization:

Throughout the first wave of mass industrialization in the nineteenth and early twentieth centuries, manufacturing activities concentrated in cities. While there were always exceptions to this rule (the nineteenth century textile mills in Lowell, Massachusetts and Chicago's stockyards are among the best known exceptions), industry began to move away from central cities in a more directed way during the 1920s. Several factors drove this process. The advent of electric power meant that

factories no longer needed to locate near traditional sources of powers such as waterfalls. This liberated industrialists to establish plants in far flung locations where land was cheaper. In addition, electric power made possible the horizontally orientated assembly line style of manufacturing housed in sprawling one-to-two story buildings as opposed to multi-story buildings with smaller footprints. The rise of heavy industries, such as steel, automotive, and oil, which required significant amounts of land and/or functioned most efficiently in large horizontal plants, accelerated the decentralization of industry during this period. Overall, as the twentieth century progressed, it became increasingly unattractive to operate manufacturing concerns in densely built urban centers.[endnote 1]

Los Angeles was at the forefront of industrial decentralization during the 1920s. Los Angeles had a core of industry that clustered around its traditional downtown business district in the late nineteenth and early twentieth centuries. As with many American cities, scattered examples of industrial uses were located outside the central city. One prime example is the Simons Brick Factory, established in 1905, which was located in present-day Montebello near the project area. In 1922, a consortium of Chicago-based investors announced the formation of a Central Manufacturing District (CMD) to be located on a 300 acre parcel south east of the business district and adjacent to the Los Angeles River. During the same period, several additional industrial districts were formed out of land owned by the Union Pacific Railway. The Union Pacific Industrial Districts and Bandini Industrial District were located north and east of the original Central Manufacturing District, on the north side of the Los Angeles River. Another Union Pacific industrial tract was located directly west of Montebello Park. Although they encompassed far more than the original 300 acre CMD parcel south and west of the Los Angeles River, this collection of individual districts was sometimes collectively referred to as the "Central Manufacturing District." Another term that was often used to identify them was the Eastside Industrial District.[endnote 2]

The developer of Montebello Park, J.B. Ransom Corporation, was heavily involved in efforts to promote Los Angeles as an industrial center during the 1920s and early 1930s. Active in the Central Manufacturing District Club, a group of entrepreneurs actively promoting the city's industrial development, the Ransom organization's industrial advocacy activities extended far beyond merely the narrow promotion of its own projects[endnote 3].

O. Nicholas Gabriel, one of Ransom's partners in Montebello Park, endorsed a $1 million fund proposed by the California Forward Movement of the All-Year Club designed to fund a national advertising campaign promoting Southern California. Gabriel specifically pointed to the importance of emphasizing the Los Angeles area's strong industrial base in the advertising campaign.[endnote 4] The Ransom organization hosted an exhibition, held at Montebello Park, highlighting a "series of six relief maps and one large cabinet [that] show[ed] development scenes from the industrial harbor, Panama Canal, and the hinterland, with the object in view of emphasizing the future permanence and growth of Los Angeles."[endnote 5] The general public was encouraged to attend. Ransom Corporation, along with numerous other industrial concerns such as Studebaker automobile manufacturers and the General Petroleum Company, participated in a four-day long, 42 city, 70 automobile and bus industrial booster caravan to disseminate this information across the state.[endnote 6]

Manufacturing Suburbs:

Historians long considered suburbs to be exclusively the province of middle and upper status people and predominantly residential in use. More recently, however, scholars have expanded their view of suburbs to include settlements that include both industry and working people. In fact, historians have realized that manufacturing suburbs, like residential suburbs, trace their beginnings to the nineteenth century. Encapsulating this point, Richard Walker and Robert Lewis write "Residential areas have not singularly led the way outward from a previously concentrated city, but have always been joined at the hip by industry locating at the urban fringe. The outward spread of factories and manufacturing districts has been a decisive feature of North American urbanization since the middle of the nineteenth century."[endnote 7] A well known example of this phenomenon is the town of Pullman on southern outskirts of Chicago where the railroad car factory and housing for its workforce was designed and constructed simultaneously.

In Los Angeles, several 1920s era Eastside residential subdivisions were specifically conceived for workforce housing. As Greg Hise explains, "Concomitant with [the Eastside's] industrial program, other firms, such as the Janss Investment Company, J.B. Ransom Corporation, and Carlin G. Smith were promoting Belvedere Gardens, Samson Park, Bandini, Montebello Park, and

Eastmont as working class suburbs." [endnote 8] Viewing the placement of job intensive industrial uses in these previously agricultural areas as a potential gold mine for residential development, these real estate subdividers fully exploited the nearness of the various Eastside industrial districts in their advertising campaigns. In one such 1924 advertisement for the Bandini development, the subdivider – who later developed Montebello Park - explained that while industrialists were bringing jobs and workers to the area, housing those workers was an as-yet untapped market. Eastside industrialists "are leaving to the people of Los Angeles the task of providing accommodations for the workers. " This particular advertisement for the Bandini subdivision featured extensive and detailed facts regarding the extent of industrial investment and the numbers of existing or anticipated workers and juxtaposed those facts against a conjectural demand for housing. "As a result," the Bandini advertisement read, "600 men will go to work on May 1st [1924] in the $2,000,000 Union Pacific shops just completed and there isn't a single convenient home for them to live in!"[endnote 9] What was the take-away message from these advertisements? "Homes Must Be Built For These People."[endnote 10] In other words, homebuilders would be foolish not to purchase and develop lots in these tracts.

Planned Communities & Landscape Architecture:

Beginning in the nineteenth century and largely in response to what they considered the increasingly intolerable conditions in America's cities, elites began retreating to picturesque enclaves designed to provide them with uncongested and salubrious surroundings that evoked the countryside but remained within relatively easy reach of urban centers. Many of these early suburbs were carefully planned, developed, and controlled. They are best exemplified by suburbs such as the Frederick Law Olmsted and Calvert Vaux-designed Riverside outside Chicago and Llewellyn Park, designed by Andrew Jackson Davis, in West Orange New Jersey. Such places share a number of design features. Perhaps most important among them are the curvilinear street plans and irregularly shaped parcels that characterize these areas. Reacting against the rigidity of the urban grid, these plans purported to work with rather than against nature. Such artfully planned suburbs included communal park lands and took advantage of existing topographical features, engineered others, and fully exploited scenic vistas. Beautifully designed suburban communities such as Riverside and Llewellyn Park, however, were not necessarily the rule. Many late nineteenth and early twentieth suburbs evinced a more workmanlike approach. Rectilinear street grids and standard rectangular lots prevailed in such developments.

Nevertheless, by the 1920s highly planned and creatively designed suburban communities continued to appeal to housing consumers. These communities were increasingly conceived to be self-sufficient with the inclusion of zones for shopping and other business services in addition to the residential areas. The designs for these communities carefully considered the automobile in their planning. Traffic flow and parking were managed such that automobiles were seamlessly accommodated while maintaining a pedestrian orientation. Nationally, the Country Club District in Kansas City, developed by J.C. Nichols, may be the most prominent among them. In Los Angeles, developers such as Walter Leimert and the Janss Investment Company were simultaneously developing carefully planned, intricately designed, mixed use communities in the Los Angeles area. Leimert Park and Westwood, respectively, are prime examples of this type of community in Los Angeles.[endnote 11] Leimert Park, nestled on 230 acres at the base of Baldwin Hills on the city's southwest side, employed the talents of the Olmstead Brothers who designed the plaza that anchors the development and Franz Herding for its formal street layout. Westwood's residential areas lacked a formal plan but Janss hired Harland Bartholomew and L. Deming Tilton to design the commercial center. These professionally designed developments were almost exclusively pitched at moderate to upper status groups.

Such developments were contemporaneous with the advent of the Regional Planning Association of America (RPAA) in 1923. The RPAA viewed decentralization as a key solution to the urban ills wrought by nearly a century of urban/industrial expansion and population growth. RPAA members included such giants of the planning profession as architects Clarence Stein and Henry Wright who, in 1924, designed Sunnyside Gardens in Queens New York on land formerly owned by the Pennsylvania Railroad Company. Intended to provide adequate, even uplifting, housing for working people, Sunnyside Gardens consists of a collection of low-rise brick multi-family buildings. The buildings are carefully arranged to maximize light and ventilation and the development integrates ample garden and communal park spaces. These developments were inspired by many of the same philosophies of the more elite planned communities that were their contemporaries but were executed on a much more modest scale.

Montebello Park:

In Montebello Park, these impulses and strategies converge. Consciously conceived as a mixed class suburb that would house a broad range of workers employed in nearby industries, Montebello Park was also an intricately planned development designed by the renowned city planning and landscape architectural firm Cook & Hall. These multivalent historic associations and contexts have brought Montebello Park to the attention of several Los Angeles scholars including William Deverell, Gregory Hise, Kevin Starr, and Richard Longstreth.[endnote 12]

Subdivided and recorded in five separate tracts over a period of two and half years spanning 1925 to 1927, the owner of each tract is listed as Security Trust & Savings Bank.[endnote 13] In a 1921 promotional book titled Los Angeles: A Summary of the City's Physical and Financial Resources and distributed with the bank's compliments, Bond Department Manager George R. Martin, identified Security Trust & Savings as "the largest financial institution" in the city.[endnote 14] With three branches (two in the downtown area and one in Hollywood) in 1921, the bank steadily expanded throughout the course of 1920s adding branches in Long Beach, Highland Park, North Hollywood, and San Pedro.[endnote 15] Although identified on the tract map as the owner, the bank very likely loaned money to the syndicate of real estate developers who purchased, planned, improved, and promoted the subdivision.

Although Security Trust & Savings Bank technically owned the tracts that comprise Montebello Park, it was the J.B. Ransom organization that developed the subdivision. Ransom's organization was not new to the Los Angeles real estate development arena. In concert with a group of real estate developers including his Montebello Park colleague O. Nicholas Gabriel, Ransom subdivided Bandini in 1924.[endnote 16] Set on a 100 acre site along the south side of the Union Pacific right-of-way at the intersection of Eastern Avenue and Atlantic Boulevard in what is now the City of Commerce, the Bandini subdivision was located within easy reach east of the Central Manufacturing District.[endnote 17] The Bandini Syndicate explicitly pitched the subdivision as an industrial suburb. Bandini advertisements in the Los Angeles Times throughout 1924 emphasize the presence of new Union Pacific shops and predict the arrival of additional industrial concerns in the area. The newspaper advertising campaign simultaneously emphasized the affordability of the parcels and the tract's proximity to the burgeoning industrial districts in the vicinity. The advertisements emphasize the large number of workers expected to staff these industries, juxtaposing them against the lack of area housing. Bandini's subdividers exhorted housing developers to exploit what they characterized as a huge, growing, and largely untapped market by building and marketing suitable worker housing in the new subdivision.[endnote 18] Ransom's promotion of Montebello Park shared one important theme with that of Bandini: emphasis on the tract's proximity to rapidly expanding industrial districts and its suitability for the development of highly profitable worker housing. In spite of this important similarity between the two Ransom tracts, Montebello Park was a different product than Bandini in substantive ways, primarily its careful, cutting-edge community and landscape planning.

Situated on the north side of the Union Pacific right-of-way, Montebello Park is located approximately one mile northwest of the Bandini subdivision. While the Montebello Park's promoters emphasized the adjacency of existing, planned, and speculative industrial development, they additionally underscored the desirability of its general location within the Southern California region. With Whittier Boulevard as its northern boundary, the subdivision was located along the primary artery connecting Los Angeles to other major cities in California. Part of the San Francisco–Los Angeles–San Diego highway, Los Angeles County transportation planners placed tremendous emphasis on Whittier Boulevard. Historian Matthew William Roth writes, "The most important stretch was some eight miles of highway east of the Los Angeles city boundary (Indiana Street) and west of the city of Whittier."[endnote 19] The eight mile stretch Roth highlights skirts along the northern boundary of Montebello Park. In fact, Roth further opines that the extensive County investment in improving Whittier Boulevard directly spurred East Side developments such as Montebello Park.[endnote 20] Moreover, Ninth/Tenth Street (renamed Olympic in honor of the Los Angeles-hosted 1932 summer games) bisected the subdivision. Promoters emphasized it, without the necessity for hyperbole, as the main thoroughfare west to downtown, the Westside, and Santa Monica. In the context of East Side locations, Montebello Park was exceptionally well situated.

Covering over 400 acres, Montebello Park was a large, carefully planned, highly integrated, and sophisticatedly promoted subdivision. The Montebello Park syndicate hired Leo Stein and Lockwood Shackelford Co. to prepare and produce a lavishly

illustrated 24 page subdivision prospectus subtitled, "The Model Community of the New Eastside" which lays out a vision of Montebello Park as a utopian industrial suburb.[endnote 21] Opening with the heading, "The Industrial Age is Here," the prospectus confidently predicts Los Angeles's future as an industrial powerhouse in the dawning age of industrial decentralization. Explaining Los Angeles' industry-friendly culture, the prospectus echoes the Chamber of Commerce party line touting the city as possessing "no congested tenement districts" and "ideal labor conditions."[endnote 22] As early as 1907, the Los Angeles Chamber of Commerce sought to portray Los Angeles as a "city of homes," emphasizing its single-family dwellings, luxuriously landscaped open-space, and worker-owned housing.[endnote 23] This strategy echoed prevailing notions of homeownership as a social balm. Workers, the thinking went, who owned their own homes would be too pre-occupied by their pride of ownership and too afraid to jeopardize their ability to make mortgage payments to foment labor unrest. While this strategy for controlling labor is not overtly stated in the prospectus, it is plainly written between the lines.

While home ownership as a balm for labor problems is not explicitly stated in the Montebello Park prospectus, it clearly describes the East Side's industrial growth and future prospects, emphasizing the lack of suitable housing in the area for workers. The definition of suitable housing, however, was not left to chance: the prospectus called out "homes, apartment houses, [and] bungalow courts"[endnote 24] as building types. Notably absent from this list was the tenement. Not content merely to advertise their intentions with respect to building types, Montebello Park's promoters wrote them into the property deed restrictions. The deeds carried building restrictions with the intention that "an artistic type of small home [would] predominate."[endnote 25] In addition to the mix of housing types Montebello Park's promoters anticipated, they conceived of it as a mixed-class subdivision. "Within its confines will live the skilled workers and high priced executives of the great manufacturing plants, the business and professional men of the East Side, and people from all over the county who appreciate beautiful, high-class development and nearness to downtown Los Angeles."[endnote 26] Mixed-class, however, did not imply mixed-race. "This community has been safeguarded by . . . race restrictions," the Los Angeles Times reported.[endnote 27]

In addition to the diverse housing types and mixed-class demographic its developer envisioned, Montebello Park was also designed as a self-contained community. The prospectus underscores the need for "banks, stores, and offices to house and cater to the army of workers and their families."[endnote 28] To fill this need, general plan for the subdivision provided for "business lots" arranged along main thoroughfares Whittier Boulevard and Ninth Street . Two additional clusters of business lots strategically placed at the west and east ends of the subdivision were also called out in the general plan.[endnote 29]

Beyond this carefully considered social engineering and community planning, Montebello Park's promoters paid close attention to the physical planning of their new subdivision. They hired Cook & Hall to design it, touting the firm as "famous city planning consultants and landscape architects."[endnote 30] This praise was well-earned. By the time of their work on Montebello Park, Cook & Hall had already won accolades for their designs for Beverly Hills, Los Angeles's Carthay Circle neighborhood, San Diego's Mission Beach, and the Los Angeles Civic Center.

By any reckoning, Cook & Hall's plan for Montebello Park, illustrated in the subdivision prospectus, is exceedingly well-designed. With Whittier Boulevard as its northern boundary, Montebello Park extends from Gerhart Avenue on the west to Vail Avenue on the east with Ferguson Drive as its southern boundary.[endnote 31] An exceptionally large subdivision, Montebello Park comprises more than 1,500 parcels. The district extends approximately 1.5 miles from east to west. Trapezoidal in shape, the western end of the district is wider than its eastern end. At the west end, the south to north width is approximately a half mile while at the east end the width tapers to less than a quarter mile. Cook & Hall exploited the trapezoidal shape of the subdivision by designing an elegant street plan based on the ellipsis. The symmetrical street plan features an extensive network of landscaped parkways and medians that gently curve around the ellipsis which, echoing the overall site plan, is wider at the west end than it is at the east end. Montebello Park's long blocks east-west blocks lend its residential streets a particularly pleasing uninterrupted streetscape rhythm. Mid-block walkways arranged at strategic points along the long east-west blocks assist safe and efficient pedestrian movement without sacrificing visual rhythm along the streets. A Southern California Edison right-of –way that extends from the intersection of Garfield Avenue and Gage Avenue in Bell Gardens on the south to the northern boundary of Montebello on the north runs through the tract.[endnote 32] It was incorporated into Cook & Hall's design as public park space.

Montebello Park's promoters invested $650,000 in subdivision improvements.[endnote 33] (This is comparable to the

$330,000 in improvements made in Leimert Park, which is approximately half the size of Montebello Park.[endnote 34]) In addition to the landscaping of 30 acres of parkways and medians with California live oaks, eucalyptus, pine, black walnut, camphor, carob, and gingko, improvements included concrete sidewalks and curbs, oil macadamized street paving, gas and water mains, and ornamental street lights. The Los Angeles Times reported that seventy trains, each consisting of fifty cars, were required to transport the construction materials to affect these improvements.[endnote 35]

Beyond the subdivision prospectus, Montebello Park's subdividers employed an extensive Los Angeles Times advertising campaign to promote the district. The Times campaign included numerous full page advertisements featuring highly detailed illustrations. The illustrations in both the newspaper advertisements and the prospectus feature wood cut images in the German Expressionist style. Many of these images feature industrial scenes: factories with smoke billowing from their stacks to emphasize their productivity. Others depict what contemporary viewers might consider a hackneyed urban scene: skyscrapers in profile. But in 1925, with skyscrapers just beginning to rise in America's downtowns, what is now the classic urban skyline was a brand new vista. Still others represent very early manifestations of the Social Realism movement that would reach its American apotheosis during the Depression of the 1930s. These images depict workers in heroic poses, celebrating the conjectural population of Montebello Park as noble people engaged in important industrial tasks. Some, however, illustrate a modest streetscape of relatively humble Spanish Colonial Revival single-family residences surrounded by lush, diverse trees and plants. Evidently, Montebello Park's promoters envisioned this as the subdivision's physical and aesthetic landscape.[endnote 36]

In addition to the subdivision prospectus and newspaper advertising campaign, Montebello Park promotions also included a variety of on-site events. "Pre-Opening" celebrations, for example, were held in May and June of 1925.[endnote 37] To host these, and later, promotional events, an extensive and lushly landscaped complex of buildings and tents was erected along Whittier Boulevard east of Garfield Avenue to house sales activities. The sales complex included a Display Room, Auditorium, several towers, and offices.[endnote 38] Promotional activities held at the side included presentations by Montebello Park landscape designer Wilbur C. Cook and education lectures given by Claude D. Adams on the Eastside industrial district.[endnote 39] Salesmanship, however, was not restricted to the didactic. Potential customers were lured to the site after dark with a "powerful marine searchlight" mounted atop a 60 foot observation tower.[endnote 40] Families with children were encouraged to visit the site. The sales building complex at Garfield and Whittier included play structures for children and a "nurse in charge" was provided to care for them while their parents toured the area in Ransom automobiles. Even lunch was provided to visitors.[endnote 41]

According to Los Angeles Times reports, which may have been exaggerated, sales were brisk. In a November 1925 article announcing that a "second unit" within Montebello Park was open for sale, the Times reported that "one-fourth" of the subdivision had already been sold.[endnote 42] Combined sales for the Bandini development and Montebello Park for the first third of 1926 were reported to total more than $2.5 million.[endnote 43]

In spite of extensive promotion and robust sales claims, a relatively small number of Montebello Park parcels were developed in the years that followed the initial promotional efforts of 1925. Certainly Ransom's development syndicate intended that the subdivision be built out within short span of time. In addition to selling land, the subdivision's promoters formed a corporation for the express purpose of building and selling houses within it. Montebello Park Corporation officers and directors included J.B. Ransom, O. Nicholas Gabriel, David Farios, Edward Ferguson (after whom one the subdivision's streets was named), C.J. Fitzgerald, Frederick Williamson, and George D. Hall (partner in the landscape architecture firm responsible for the subdivision's design).[endnote 44] Several Los Angeles Times articles refer to housing starts. In August, for example, J.J. Newell reported to the Times that the Union Towel and Case Company had broken ground on three five room house with plans to construct 12 more during the course of the year.[endnote 45]

The full reasons for Montebello Park's slow development start may never be known. While many Los Angeles neighborhoods were fully developed during this period, many were like Montebello Park: platted, recorded, and sold but not fully built out until years later. By 1930, the tough economic times of the Depression would have had a chilling effect on construction. But whether other, non structural, elements discouraged the build out of Montebello Park is unknown.

The period of significance for the district is 1925 through 1929. This period reflects the span of time during which Montebello Park was conceived, designed, and implemented. Although fully platted and improved within the period of significance, the majority of individual parcels within the district were not built out until the 1940s and 50s. As such, the buildings predominantly reflect the popular architectural styles of that period, including the Minimal Traditional style. The architectural style of these buildings, however, is not what makes the district significant. Although built decades after the tract was designed, recorded, and promoted, the buildings are largely compatible with the original design of Montebello Park's designers and developers. Their modest scale, horizontal/rectangular massing, and front/side setbacks are important aspects of the original design intention and these elements are clearly conveyed by the existing buildings. While these buildings do not necessarily contribute to the district, neither do they detract from it.

Montebello Park appears to be eligible for listing the National Register of Historic Places at the regional level of significance under Criterion A as an example of a manufacturing suburb developed during the period of industrial decentralization in the 1920s. Planned and promoted by Los Angeles area residential/industrial developer J.B. Ransom Corporation, Montebello Park represents a carefully designed manufacturing suburb that not only responded to 1920s era best practices with respect to housing working people but simultaneously incorporated contemporary cutting-edge concepts of integrated suburban planning and design. Although the district was not fully built-out until after World War II, its essential character-defining features all date to its period of significance and retain sufficient integrity to convey their significance. These character-defining features include Cook & Hall's street lay-out including the curving streets and elliptical forms, parcel shapes and sizes, land uses, street widths; arrangement of parks, parkways and medians; the building set-backs; and general landscaping plan.

[1] Howard P. Chudacoff and Judith E. Smith, The Evolution of American Society, 6th ed., (Upper Saddle River, New Jersey: Pearson Prentice Hall, 2005), 203-210.

[2] The industrial Eastside/Central Manufacturing District continued to grow and expand eastward for decades after the 1920s. For example, 400 acres of the former Vail Field, a 99 acre parcel near the site of the former Simons Brick Factory, and the 330 acre La Mirada site were all added to the Central Manufacturing District in the 1950s. "Vail Field, one of U.S. Oldest, Closes," Los Angeles Times, July 8, 1952, A6; "Industrial Area Purchased for Developments," Los Angeles Times, November 20, 1955, F1; "New Buildings Readied in Big Development," Los Angeles Times, May 19, 1957, H1; "Simons Brickyard is Top Industrial Area," Los Angeles Times, November 18, 1956, F1; "CMD Adds 330 Acres to Its Extensive Area," Los Angeles Times, October 6, 1957, F1.

[3] "Rubber Exhibit Displays Goods Produced Here," Los Angeles Times, June 16, 1929, E8; "Expansion of Section Predicted," Los Angeles Times, January 19, 1930, D6.

[4] "Urges Support for Publicity," Los Angeles Times, October 11, 1925, F7.

[5] "Invite Public to View Maps," Los Angeles Times, December 13, 1925, E9.

[6]"Four-Day [T]our To Aid Project," Los Angeles Times, June 20, 1926, H11.

[7] Richard Walker and Robert Lewis, "Beyond the Crabgrass Frontier: Industry and the Spread of North American Cities, 1850-1950," in Manufacturing Suburbs: Building Work and Home on the Metropolitan Fringe, ed. Robert Lewis (Philadelphia: Temple University Press, 2004), 16-17.

[8] Greg Hise, "'Nature's Workshop:' Industry and Urban Expansion in Southern California, 1900-1950" in Manufacturing Suburbs: Building Work and Home on the Metropolitan Fringe, ed. Robert Lewis (Philadelphia: Temple University Press, 2004), 193.

[9] "At Bandini" display advertisement, Los Angeles Times, April 13, 1924, D15.

[10] "600 Men" display advertisement, Los Angeles Times, April 20, 1924, D6.

[11] Janss was simultaneously developing manufacturing suburbs on the Eastside such as Belvedere and Belvedere Gardens.

[12] William Deverell, Whitewashed Adobe: The Rise of Los Angeles and the Remaking of its Mexican Past (Berkeley: University of California Press, 2004), 164-166; Richard Longstreth, City Center to Regional Mall: Architecture, the Automobile, and Retailing in Los Angeles, 1920-1950 (Cambridge, Massachusetts: MIT Press, 1997), 10-11; Kevin Starr, Material Dreams: Southern California Through the 1920s (New York: Oxford University Press, 1990), 406; Hise, "'Nature's Workshop:' Industry and Urban Expansion in Southern California, 1900-1950", 178.

[13] Tract No. 8366, Map Book 115-of the County of Los Angeles, July 10, 1925, 61-94; Tract No. 9033, Map Book 121 of the County of Los Angeles, January 7, 1926, 78; Tract No. 8649, Map Book 131 of the County of Los Angeles, October 6, 1926, 33-35; Tract No. 10083, Map Book 142 of the County of Los Angeles, September 27, 1926, 85-86; and Tract No. 10178, Map Book 144-of the County of Los Angeles, October 31, 1927, 9-14.

[14] George R. Martin, The City of Los Angeles: Its Industries, Commerce and Banks, A Summer of Its Physical and Financial Resources (Los Angeles: Security Trust and Savings Bank, 1921).

[15] Los Angeles Public Library, California Index, www.lapl.org.

[16] Tract No. 8047, Sheet Nos. 1-2, Map Book 86 of the County of Los Angeles, 95-96; Tract No. 8047, Sheet Nos. 4-5, Map Book 95 of the County of Los Angeles, 19-20.

[17] The City of Commerce incorporated in 1960.

[18] "This is What Wise Men Have Done at Bandini," Los Angeles Times, March 30, 1924, D6; "At Bandini 'Balanced Prosperity' is being built!" Los Angeles Times, April 13, 1924, D15; "'We'll Bring the Factories You Build The Homes,'" Los Angeles Times, April 6, 1924, E11; '"The First Six Hundred,'" Los Angeles Times, April 27, 1924, D9; "Homes Must Be Built for These People," Los Angeles Times, April 20, 1924, D6; "Factories Proximity Enhances this District," Los Angeles Times, October 23, 1927, E4..

[19] Matthew William Roth, "Concrete Utopia: The Development of Roads and Freeways in Los Angeles, 1910-1950" (PhD diss., University of Southern California, 2007), 276.

[20] Roth, 279.

[21] J.B. Ransom Organization, "Montebello Park: The Model Community of the New Eastside," (Los Angeles: J.B. Ransom, 1925).

[22] J.B. Ransom Organization, 5.

[23] Robert Phelps, "Dangerous Class on the Plains of Id: Ideology and Homeownership in Southern California, 1880-1920" (PhD diss., University of California, Riverside, 1996), 51.

[24] J.B. Ransom Organization, 11.

[25] "Tract Featured by Landscaping," Los Angeles Times, December 13, 1928, E6.

[26] J.B. Ransom Organization. 14-15.

[27] "Tract Featured by Landscaping," Los Angeles Times, December 13, 1928, E6.

[28] J.B. Ransom Organization, 11.

[29] J.B. Ransom Organization, 12-13.

[30] J.B. Ransom Organization, 12-13.

[31] Ferguson Drive runs parallel to the Union Pacific right-of-way.

[32] Tract No. 7185 Los Angeles County Map Book 135, February 10, 1927, 65-80.

[33] "Trainloads of Material are Needed," Los Angeles Times, June 21, 1925, G9; "Construction Activity at Montebello," Los Angeles Times, June 21, 1925, G9.

[34] Greg Hise, Magnetic Los Angeles: Planning the Twentieth-Century Metropolis (Baltimore: Johns Hopkins Press, 1997, 1999), 15.

[35] Trainloads of Material are Needed," Los Angeles Times, June 21, 1925, G9; "Tract's Paving Work Launched on Large Scale," Los Angeles Times, July 5, 1925, G6.

[36] "Blazing Prosperity's Trail," Los Angeles Times, April 26, 1925, F16; "Now Comes Big Industry," Los Angeles Times, May 10, 1925, F14; "Industry – Westward Ho!"Los Angeles Times, May 17, 1925, F14; "Pre-Opening," Los Angeles Times, May 31, 1925, A12; "A Record," Los Angeles Times, June 7, 1925, G11; "Formal Opening," Los Angeles Times, June 17, 1925, F12; "Look Now to the East Side," Los Angeles Times, June 17, 1925, A3.

[37] "Pre Opening," Los Angeles Times, May 28, 1925, A12; "Pre Opening," Los Angeles Times, May 31, 1925, F14; "Pre Opening," Los Angeles Times, June 2, 1925, A14; "A Record," Los Angeles Times, June 7, 1925, G11.

[38] Sanborn Map Company, "Fire Insurance Maps of Los Angeles, California," volume 33 (New York: Sanborn Map Company, 1929), 23.

[39] "Invite Public to See Plants," Los Angeles Times, July 12, 1925, F7; "Montebello Park to be Landscaped," Los Angeles Times, August 30, 1925, G10.

[40] "Subdivision Sales Made After Dark," Los Angeles Times, August 23, 1925, F10;

[41] "Invite Public to See Plants," Los Angeles Times, July 12, 1925, F7.

[42] "Open Ninth Across New Subdivision," Los Angeles Times, November 29, 1925, E11.

[43] "East Side Area Active," Los Angeles Times, May 2, 1926, E12.

[44] "Stock Fund to Build Up Area," Los Angeles Times, November 1, 1925, E13.

[45] "Work Started on Montebello Park Houses," Los Angeles Times, August 2, 1925, F6.

D7. References

Secondary Sources:

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Martin, George R. The City of Los Angeles: Its Industries, Commerce and Banks, A Summer of Its Physical and Financial Resources. Los Angeles: Security Trust and Savings Bank, 1921.

Los Angeles Public Library, California Index, www.lapl.org.

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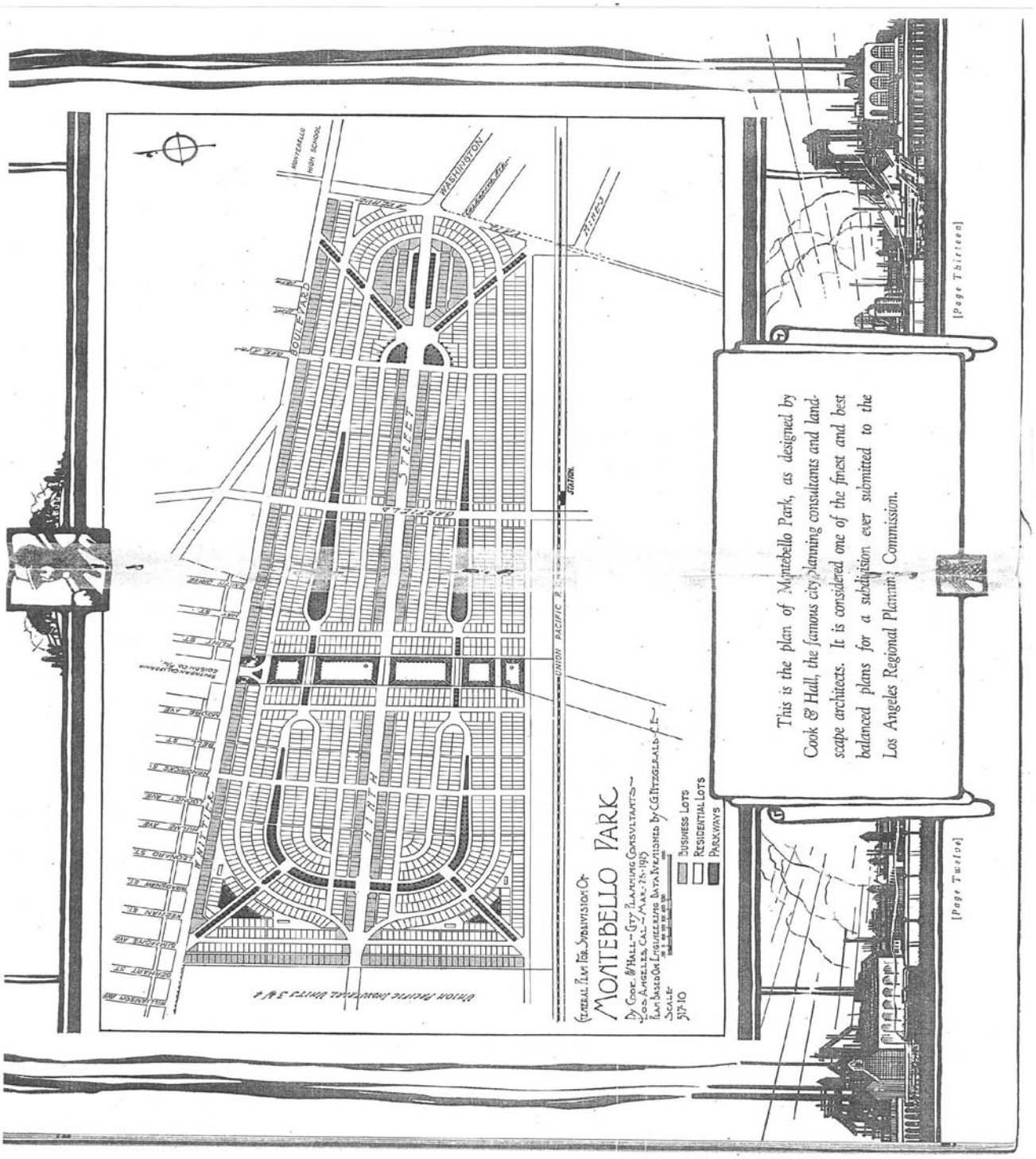
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 14 **of** 14 ***Resource Name or #:** Montebello Park Historic District

***Map Name:** Historic Subdivision Plan ***Scale:** ***Date of Map:** 1925



State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-176660
HR # 020644
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6614 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6614 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351011001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation, small octagonal window
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1941 (Estimated) Tax Assessor

* P7. Owner and Address:
Rosas, Reylene M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191097
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6621 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6621 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351010026

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn, metal awning
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Valle, Rudy & Xochitl Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191096
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6620 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6620 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351011002

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: side gabled
- Entrance: metal security door
- Windows: original wood frame sash
- Related features: grassy lawn, exterior brick chimney, pair of dual wood porch supports, octagonal window
- Style: Minimal Traditional
- Character defining features present: roof form, stucco finish, minimal ornamentation, original windows
- Character defining features not present: none
- Status: exhibits a high level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Gallegos, Daniel

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191095
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6615 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6615 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351010027

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco, flagstone veneer water table, vertical boards
- Roof: hipped
- Entrance: non-original
- Windows: altered, vinyl
- Related features: grassy lawn, X-patterned wood porch railing
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation; projecting bay window with metal roof
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1946 (Estimated) Tax Assessor

* P7. Owner and Address:
Siguenas, Segundo

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191094
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6600 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6600 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351013013

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple family residence
- Stories: 2
- Construction: wood frame
- Cladding: rough textured stucco, brick veneer
- Roof: low pitched hipped
- Entrance: metal security doors
- Windows: altered, vinyl
- Related features: bits of grass lawn and mature bushes, wrought iron railings
- Style: Vernacular Modern
- Character defining features present: roof form, stucco finish, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Gonzales, Alfonso J Et Al

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191093
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6563 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6563 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351016020

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple family residence
- Stories: 2
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, aluminum sliders
- Related features: grassy lawn, perimeter fence, wrought iron railings, metal security bars
- Style: Vernacular Modern
- Character defining features present: low pitched hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg northwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1953 (Estimated) Tax Assessor

* P7. Owner and Address:
Reynoso, Alfonso & Maria Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191092
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6556 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6556 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351015012

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1 and 2
- Construction: wood frame
- Cladding: rough textured stucco, vertical T-111 siding
- Roof: cross gabled
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn, two story addition to the rear, exterior brick chimney, recessed porch area, vent dormer
- Style: Ranch
- Character defining features present: roof form, stucco finish
- Character defining features not present: original windows, original stucco finish, one-story design
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Vazquez, Martin & Maribel

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191091
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6555 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6555 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351016021

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, rock veneer
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl within non-original openings; metal security bars
- Related features: grassy lawn
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg northwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Valencia, Jose & Paula A

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191090
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6551 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6551 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351016022

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: cross gabled
- Entrance: not visible
- Windows: original wood frame sash
- Related features: mature landscaping, bay window
- Style: Minimal Traditional
- Character defining features present: roof form, stucco finish, minimal ornamentation, original windows
- Character defining features not present: none
- Status: exhibits a high level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Melone, Deborah & Michael E

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191089
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6550 Southside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6550 Southside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351015011

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation; octagonal window
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Airada, Frances C

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191088
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6619 East Olympic Blvd
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6619 East Olympic Blvd City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351007032

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: flat
- Entrance: metal security door
- Windows: altered, aluminum
- Related features: small grassy lawn, metal awning, metal security bars
- Style: Vernacular Modern
- Character defining features present: flat roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg northwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1952 (Estimated) Tax Assessor

* P7. Owner and Address:
Torres, Monserrate Q & Maria D

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191087
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6618 East Olympic Blvd

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6618 East Olympic Blvd City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351008001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: gable on hip
- Entrance: not visible
- Windows: altered, vinyl
- Related features: grassy lawn, metal security bars
- Style: Minimal Traditional
- Character defining features present: roof form, stucco finish, minimal ornamentation
- Character defining features not present: original windows
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1952 (Estimated) Tax Assessor

* P7. Owner and Address:
De La Cruz, Salvador & Maria C

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191086
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6615 East Olympic Blvd

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6615 East Olympic Blvd City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351007033

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn, metal awnings; metal security bars
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Isaias, Ismael & Zita M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191085
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6557 East Olympic Blvd

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6557 East Olympic Blvd City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351018018

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: non-original
- Windows: altered, vinyl
- Related features: perimeter fence
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows, standard stucco finish, original front door
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Vallin, Armando

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191084
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6555 East Olympic Blvd

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6555 East Olympic Blvd City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351018019

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: perimeter wall, front gabled porch roof with triangular braces
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows, standard stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1951 (Estimated) Tax Assessor

* P7. Owner and Address:
Gonzalez, Salvador & Margarita

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191083
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6554 East Olympic Blvd
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6554 East Olympic Blvd City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351017019

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn, metal perimeter fence
- Style: Minimal Traditional
- Character defining features present: hipped roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Aguilera, Rodrigo & Lupe Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191082
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6553 East Olympic Blvd

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6553 East Olympic Blvd City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351018020

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, brick veneer
- Roof: flat with deep eaves
- Entrance: metal security door
- Windows: altered, aluminum; metal security bars
- Related features: concrete block and metal perimeter fence
- Style: Vernacular Modern
- Character defining features present: flat roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Zamarripa, Juan E & Martha

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191081
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6620 Northside Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6620 Northside Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351005002

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: original
- Windows: altered, vinyl
- Related features: grassy lawn, diamond patterned wood porch roof support
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Perez, Jesus & Leticia

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191080
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6615 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6615 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351004033

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, brick veneer water table
- Roof: hipped
- Entrance: not visible
- Windows: altered, vinyl
- Related features: grassy lawn
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation
- Character defining features not present: original windows, standard stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Franco, David & Denise M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191079
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6612 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6612 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351005001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco and flagstone veneer
- Roof: hipped and gabled
- Entrance: metal security door
- Windows: appear original
- Related features: mature landscaping, exterior brick chimney, turned porch posts, octagonal window, metal awnings
- Style: Minimal Traditional
- Character defining features present: cross-gabled roof, stucco finish, limited exterior embellishments, brick chimney
- Character defining features not present: none
- Status: exhibits a high level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Beilke, Lester M & Rosa M Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191078
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6603 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6603 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351003013

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered, vinyl
- Related features: grassy lawn
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation, projecting bay window
- Character defining features not present: original windows
- Status: exhibits a moderate level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg northeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Murphy, Edith E Co Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191077
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6600 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6600 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple family residence
- Stories: 1
- Construction: wood frame
- Cladding: lap siding
- Roof: low pitched side gabled
- Entrance: not visible
- Windows: altered, aluminum
- Related features: shrubs, exterior chimney
- Style: Ranch
- Character defining features present: horizontal massing, brick chimney
- Character defining features not present: original windows
- Status: exhibits a moderate level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)

4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:

☐ Prehistoric ☑ Historic ☐ Both

1948 (Estimated) Tax Assessor

* P7. Owner and Address:

Blanco, Henry J

* P8. Recorded by: (Name, affiliation, address)

Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)

Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")

Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191076
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6565 Northside Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6565 Northside Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351020018

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: not visible; recessed
- Windows: altered, vinyl
- Related features: grassy lawn; metal security bars
- Style: Minimal Traditional
- Character defining features present: hipped roof, stucco finish, minimal ornamentation; recessed entrance
- Character defining features not present: original windows
- Status: exhibits a moderate level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg northwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Salazar, Jose M & Maria I

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191075
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6555 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6555 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351020019

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: not visible
- Windows: altered, vinyl
- Related features: grassy lawn
- Style: Minimal Traditional
- Character defining features present: hipped roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Rodriguez, Roberto P

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191074
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6554 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6554 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351019012

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, natural rock veneer water table
- Roof: hipped
- Entrance: metal security door
- Windows: altered, aluminum
- Related features: grassy lawn; metal security bars
- Style: Minimal Traditional
- Character defining features present: hipped roof, original stucco finish, minimal ornamentation; hexagonal window
- Character defining features not present: original windows, standard stucco finish
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1941 (Estimated) Tax Assessor

* P7. Owner and Address:
Deolarte, Armando

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191073
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6550 Northside Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6550 Northside Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351019011

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: side gabled with steeply pitched front gables
- Entrance: not visible
- Windows: original wood frame, metal security bars
- Related features: grassy lawn
- Style: Tudor Revival
- Character defining features present: steeply pitched gabled roof with front gables, stucco finish, window fenestration; rolled eaves
- Character defining features not present: none
- Status: exhibits a high level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1928 (Estimated) Tax Assessor

* P7. Owner and Address:
Ornelas, Angelita A

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Portia Lee
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191072
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6619 Hereford Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6619 Hereford Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351011033

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: recessed
- Windows: altered; vinyl
- Related features: shrubs in front area, wrought iron fence
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, medium pitched hipped roof
- Character defining features not present: original stucco finish, original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Garcia, John P

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191071
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6616 Hereford Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6616 Hereford Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351012002

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco; tiled water table
- Roof: hipped
- Entrance: recessed; metal security door
- Windows: altered; vinyl
- Related features: grassy front lawn, shrubs
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, medium pitched hipped roof
- Character defining features not present: standard stucco finish, original wood windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Becerra, Felipe & Maria

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191070
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6615 Hereford Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6615 Hereford Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351011034

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: recessed; non-original wood door
- Windows: altered; vinyl and aluminum
- Related features: grassy front lawn, shrubs
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, medium pitched hipped roof
- Character defining features not present: standard stucco finish, original windows and door
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1941 (Estimated) Tax Assessor

* P7. Owner and Address:
Lopez, Jesus & Maria

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191069
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6614 Hereford Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6614 Hereford Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351012001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: recessed; metal security door
- Windows: altered; vinyl with raised surrounds
- Related features: grassy front lawn, white picket fence, shrubs and bushes; decorative wood porch supports
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, medium pitched hipped roof
- Character defining features not present: standard stucco finish, original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Gutierrez, Jose

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191068
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6564 Hereford Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6564 Hereford Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351014015

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: drop wood siding
- Roof: side gabled
- Entrance: pent roof porch shelter; metal security door
- Windows: altered; vinyl
- Related features: grassy front lawn, chain link fence, wood balustrades; metal security bars
- Style: elements of the Colonial Revival and Minimal Traditional
- Character-defining features: wood siding, shutters, symmetrical façade
- Character-defining features not present: original wood windows and door
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1944 (Estimated) Tax Assessor

* P7. Owner and Address:
Alata Incorp

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191067
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6557 Hereford Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6557 Hereford Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351015017

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco; flagstone veneer beneath bay window
- Roof: hipped
- Entrance: metal security door
- Windows: altered; vinyl
- Related features: grassy front lawn
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, medium pitched hipped roof
- Character defining features not present: original stucco finish, original wood windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1952 (Estimated) Tax Assessor

* P7. Owner and Address:
Garcia, Oswaldo & Lidia

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191066
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6556 Hereford Dr

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6556 Hereford Dr City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351014014

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: wood shingle
- Roof: cross-gabled
- Entrance: recessed beneath roof overhang; metal security door
- Windows: altered; aluminum
- Related features: grassy front lawn, shrubs and hedges, tree; metal security bars
- Style: Vernacular
- Character defining features present: wood shingles
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1941 (Estimated) Tax Assessor

* P7. Owner and Address:
Rico, Rudy A Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191065
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6551 Hereford Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6551 Hereford Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351015018

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered; vinyl with raised surrounds
- Related features: grassy front lawn, shrubs and hedges; concrete block wall and wrought iron fence; non-original ornamental
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Castillo, Gabriel

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191064
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6550 Hereford Dr
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6550 Hereford Dr City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351014013

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, horizontal wood in gable peak
- Roof: cross-gabled
- Entrance: recessed; metal security door
- Windows: altered; vinyl
- Related features: grassy front lawn, boxwood hedges, raised brick planter beds
- Style: elements of Ranch
- Character defining features present: minimal ornamentation, medium pitched hipped roof
- Character defining features not present: original stucco finish, original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Pfeffer Atanasia A Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191063
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1512 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1512 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351013010

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: front gable
- Entrance: wood multi-light door
- Windows: altered; vinyl
- Related features: grassy front lawn; wrought iron fence
- Style: Vernacular
- Character defining features present: minimal ornamentation, roof form, stucco finish
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Franco, Lorenzo & Carmen

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191062
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1510 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1510 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351013009

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: board and batten, brick veneer water table
- Roof: gable-on-hip
- Entrance: on the sides of the residence; metal security door
- Windows: wood frame diamond pane
- Related features: paved front area; wrought iron fence
- Style: elements of the Ranch
- Character defining features present: attached garage, diamond paned windows; decorative wood elements
- Character defining features not present: L-shaped plan
- Status: displays important character defining features

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1958 (Estimated) Tax Assessor

* P7. Owner and Address:
Silva, Jose L & Alma

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191061
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1509 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1509 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351014017

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: wood lap siding
- Roof: hipped
- Entrance: metal security door
- Windows: altered; aluminum
- Related features: grassy front lawn, tree and wrought iron fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Alata Incorp

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191060
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1507 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1507 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351014016

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security door, decorative wood porch supports
- Windows: original wood double hung sash
- Related features: grassy front lawn; wrought iron fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation; stucco cladding; wood frame double-hung windows; front porch sheltering primary entrance
- Character defining features not present: none
- Status: exhibits important character-defining features

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Alata Incorporated

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191059
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1506 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1506 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351013008

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: recessed
- Windows: altered; vinyl
- Related features: grassy front lawn; concrete block and wrought iron fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Islas, Luz M Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191058
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1502 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1502 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351013007

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered; aluminum
- Related features: shrubs and trees, wrought iron fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1952 (Estimated) Tax Assessor

* P7. Owner and Address:
Vargas, Irene

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191057
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1419 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1419 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351015016

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: wood lap siding
- Roof: hipped
- Entrance: metal security door; sheltered by front gable porch roof
- Windows: altered; vinyl
- Related features: grassy front lawn, wrought iron fence
- Style: elements of the Colonial Revival
- Character defining features present: medium-pitched hipped roof, symmetrical composition, pedimented front porch roof
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Lira, Uvaldo A & Maria E

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191056
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1411 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1411 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351015015

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: unknown
- Roof: side gable
- Entrance: not visible
- Windows: not visible
- Related features: grassy front lawn, hedges and trees, chain link fence
- Style: unknown
- Status: visibility obscured by foliage

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Lewis, Burt Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191055
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1405 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1405 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351015013

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: non-original door; recessed
- Windows: altered; vinyl
- Related features: grassy front lawn, hedges
- Style: Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original door and windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1954 (Estimated) Tax Assessor

* P7. Owner and Address:
Cadilli, Margaret Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191054
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1404 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1404 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351013014

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: on the sides of the residence; metal security doors
- Windows: altered; vinyl
- Related features: grassy front lawn, palms in planter beds, mature trees
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation; projecting bay window
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg northeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1953 (Estimated) Tax Assessor

* P7. Owner and Address:
Ornelas, Gabriel & Wanda L Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191053
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1316 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1316 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351009008

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: masonry construction; brick and concrete block
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: recessed; metal security doors
- Windows: original; wood
- Related features: grassy front lawn; flagstone planter box; a rear one-story building is located on the parcel
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation, attached garage
- Character defining features not present: none
- Status: exhibits key character defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg northeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Perez, Alex V

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191052
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1313 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1313 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351016019

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: front gable
- Entrance: recessed, decorative wood screen
- Windows: altered, vinyl
- Related features: grassy front lawn, hedges and trees
- Style: Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched gabled roof, minimal ornamentation, wood privacy slats
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Crajeda, Victor & Margarita

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191051
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1311 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1311 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351016018

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco, stone veneer
- Roof: front gable
- Entrance: recessed, altered
- Windows: altered; vinyl
- Related features: grassy front lawn, wrought iron fence, decorative fascia board
- Style: Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched gabled roof, minimal ornamentation, hexagonal window
- Character defining features not present: original door and windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Saavaedra, Edwin

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191050
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1310 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1310 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351009007

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, stone veneer water table and planter beds
- Roof: hipped
- Entrance: recessed
- Windows: altered; aluminum
- Related features: grassy front lawn, shrubs
- Style: Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched gabled roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Martinez, Federico & Irais

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191049
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1309 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 1309 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351016017

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: front gable
- Entrance: recessed; metal security door
- Windows: altered; aluminum
- Related features: grassy front lawn, hedges and trees; wrought iron fence; iron balustrade; metal security bars
- Style: Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched gabled roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Barraza, Angelica G

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191048
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1306 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1306 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351009006

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered; aluminum
- Related features: paved front yard; stucco covered concrete block and wrought iron fence; metal security bars
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows, original stucco finish
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1954 (Estimated) Tax Assessor

* P7. Owner and Address:
Olvera, Manuel J

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191047
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1302 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1302 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351009005

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: flat roof in rear with double front-gable
- Entrance: recessed, accessed via poured concrete steps
- Windows: original wood fixed pane and casement
- Related features: grassy front lawn; trees
- Style: elements of Spanish Colonial Revival style
- Character defining features present: recessed front entrance, coved porch, original wood windows
- Character defining features not present: clay tile roof
- Status: exhibits a moderate level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1938 (Estimated) Tax Assessor

* P7. Owner and Address:
Esqueda, Ruben

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191046
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1216 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1216 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351009009

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: wood frame
- Cladding: stucco, flagstone veneer
- Roof: hipped
- Entrance: on the sides of the residence
- Windows: aluminum
- Related features: paved courtyard with trees; wrought iron fence
- Style: Vernacular Modern
- Character defining features present: minimal ornamentation, low pitched roof, horizontal banding
- Character defining features not present: none
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg northeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1959 (Estimated) Tax Assessor

* P7. Owner and Address:
Jcd Investments

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191045
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1215 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1215 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351017041

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: wood frame
- Cladding: stucco, stone veneer, vertical boards
- Roof: low pitched hipped
- Entrance: on the sides of the residence accessed via exterior hallway; metal security doors
- Windows: aluminum
- Related features: hedges, wrought iron fence
- Style: Vernacular Modern
- Character defining features present: minimal ornamentation, building name in applied letters on side of building, stone veneer
- Character defining features not present: none
- Status: exhibits important character-defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1958 (Estimated) Tax Assessor

* P7. Owner and Address:
Flores, Martha

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191044
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1108 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1108 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006009

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: gable-on-hip
- Entrance: metal security doors
- Windows: altered; vinyl; resized
- Related features: grassy front lawn; concrete block and wrought iron fence
- Style: Minimal Traditional
- Character defining features present: gable-on-hip roof, stucco finish; metal hood sheltering front door
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1958 (Estimated) Tax Assessor

* P7. Owner and Address:
Lopez, Javier & Mayra I

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191043
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1107 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 1107 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351018016

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: wood frame
- Cladding: textured stucco, flagstone veneer beneath bay window
- Roof: hipped
- Entrance: on the sides of the residence; metal security doors
- Windows: original wood double hung sash
- Related features: grassy front lawn, hedges; flagstone brick planter; concrete block wall
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, original wood windows, minimal ornamentation, wood shutters, projecting bay window
- Character defining features not present: original stucco finish
- Status: exhibits important character defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Guerrero, Daniel A

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191042
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1106 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1106 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006008

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco, vertical wood siding in gable peak
- Roof: front gable
- Entrance: recessed; metal security door
- Windows: altered; aluminum
- Related features: grassy front lawn, wrought iron fence; metal security bars
- Style: Vernacular
- Character defining features present: recessed front entrance, medium-pitched gabled, minimal ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1951 (Estimated) Tax Assessor

* P7. Owner and Address:
Gonzalez, Myrna A & Frank M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191041
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1019 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1019 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351019017

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: recessed
- Windows: altered; aluminum
- Related features: grassy front lawn, mature hedges and trees
- Style: Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1945 (Estimated) Tax Assessor

* P7. Owner and Address:
Wheeler, Ruth N Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191040
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1016 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1016 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006006

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco, flagstone veneer water table
- Roof: hipped
- Entrance: metal security door
- Windows: metal
- Related features: grassy front lawn, shrubs in planter beds, trees
- Style: elements of the Minimal Traditional
- Character defining features present: recessed front entrance, medium-pitched hipped roof, minimal ornamentation; stucco cladding; most windows
- Character defining features not present: original door and original window in entry porch
- Status: exhibits a high degree of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Celestino, Ramon

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191039
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1015 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1015 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351019016

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 2
- Construction: wood frame
- Cladding: stucco
- Roof: front gable
- Entrance: metal security doors
- Windows: aluminum
- Related features: grassy front lawn, concrete block fence
- Style: Vernacular Modern
- Character defining features present: low-pitched hipped roof, boxed eaves, lack of applied ornamentation
- Character defining features not present: none
- Status: exhibits a high level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1964 (Estimated) Tax Assessor

* P7. Owner and Address:
Moya, Edward & Margarita Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191038
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1012 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1012 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006005

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: altered wood door
- Windows: altered; vinyl and aluminum
- Related features: grassy front lawn, chain-link fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original door and windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1951 (Estimated) Tax Assessor

* P7. Owner and Address:
Bernal, Armando

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191037
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1010 Garfield Ave
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 1010 Garfield Ave City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351006004

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1 and 2
- Construction: wood frame
- Cladding: stucco, brick veneer water table
- Roof: hipped
- Entrance: not visible
- Windows: aluminum
- Related features: grassy front lawn, chain link fence
-- Style: Minimal Traditional
- Character defining features present: stucco cladding, medium-pitched hipped roof, minimal ornamentation; veneer water table; aluminum windows
- Character defining features not present: none
- Status: exhibits important character defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1961 (Estimated) Tax Assessor

* P7. Owner and Address:
Gallegos, Nicolas

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191036
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1009 Garfield Ave
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 1009 Garfield Ave City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351019015

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security doors; slightly recessed
- Windows: altered; aluminum; metal security bars
- Related features: grassy front lawn, hedges in raised planter beds
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation, stucco cladding
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Garcia, Luis & Elia

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191035
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1008 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1008 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006003

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: on the sides of the residence; metal security doors
- Windows: altered; vinyl
- Related features: grassy front lawn, wrought iron fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation; stucco cladding
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Perez, Luis A & Isabel

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191034
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1006 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1006 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351006002

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: flat
- Entrance: metal security door
- Windows: altered; aluminum
- Related features: grassy front lawn
- Style: Vernacular Modern
- Character defining features present: flat roof, shallow boxed eaves, lack of applied ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Campos, Margarito S & Rosa G

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191033
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 1001 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 1001 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351019013

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco, flagstone veneer
- Roof: hipped
- Entrance: metal security door
- Windows: altered aluminum and original double hung sash
- Related features: grassy front lawn, hedges and palms, chain link fence
- Style: Minimal Traditional
- Character defining features present: recessed front porch, medium-pitched hipped roof, minimal ornamentation, stucco cladding
- Character defining features not present: original door and some original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1949 (Estimated) Tax Assessor

* P7. Owner and Address:
Romero, Gilbert S

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191032
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 941 Garfield Ave
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 941 Garfield Ave City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351020017

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco, horizontal wood siding in water table
- Roof: hipped
- Entrance: metal security doors
- Windows: altered, vinyl
- Related features: grassy front lawn; hedges; courtyard arrangement
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1953 (Estimated) Tax Assessor

* P7. Owner and Address:
Cfballos, Cande & Maria

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191031
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 940 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 940 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351003012

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: one and two
- Construction: wood frame
- Cladding: stucco
- Roof: gable-on-hip
- Entrance: on the sides of the residence
- Windows: altered; aluminum
- Related features: grassy front lawn, chain link fence
- Style: Minimal Traditional
- Character defining features present: medium-pitched gable-on-hip and hipped roofs, minimal ornamentation ; stucco cladding
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1958 (Estimated) Tax Assessor

* P7. Owner and Address:
Zaby, Ida

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191030
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 938 Garfield Ave
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 938 Garfield Ave City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351003011

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: Unknown, not visible
- Roof: hipped
- Entrance: metal security door
- Windows: Unknown, not visible
- Related features: tall hedges and trees
- Style: Unknown, not visible
- Status: Unknown, obscured from view by foliage

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Salas, Jesus & Maria

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191029
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 936 Garfield Ave
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 936 Garfield Ave City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351003010

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered; aluminum
- Related features: grassy front lawn, shrubs in raised brick planters, trees; metal security bars
- Style: Minimal Traditional
- Character defining features present: hipped roof, symmetrical facade
- Character defining features not present: original windows and door
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1952 (Estimated) Tax Assessor

* P7. Owner and Address:
Escobedo, Baltazar & Dolores

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191028
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 935 Garfield Ave

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 935 Garfield Ave City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351020016

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: metal security door
- Windows: altered; vinyl; one hexagonal window
- Related features: grassy front lawn, hedges and clipped tree
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, minimal ornamentation, stucco cladding
- Character defining features not present: original door and some original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg west

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Shipleyspero, Charyl M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191027
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 934 Garfield Ave
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 934 Garfield Ave City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351003009

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: metal security door
- Windows: non-original
- Related features: grassy front lawn, wrought iron fence
- Style: Minimal Traditional
- Character defining features present: hipped roof, predominantly symmetrical facade
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single Family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
West elev, lkg east

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Montalvo, Albino E

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Meghan Potter
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191026
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 2

* Resource Name or #: 6620 Fairfield St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6620 Fairfield St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351010002

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: wood frame
- Related features: front porch with decorative metal supports and balustrade, flagstone veneer on porch foundation, exterior brick chimney, grassy lawn with small bushes; metal security bars
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof with overhanging eaves, some original frame windows, rectangular plan, minimal ornamentation
- Character defining features not present: original stucco finish, some original windows
- Status: lacks integrity of design, materials, workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Gomez, Marina

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191025
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6619 Fairfield St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6619 Fairfield St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351008033

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: non-original
- Roof: hipped
- Entrance: altered, metal security door
- Windows: altered, vinyl
- Related features: minimal ornamentation, grassy lawn with mature bushes, low brick garden wall
- Style: Minimal Traditional
- Character defining features present: wood siding, medium-pitched hipped roof with overhanging eaves, minimal ornamentation
- Character defining features not present: wood frame double-hung windows
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Flores, Antonio

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191024
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6615 Fairfield St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6615 Fairfield St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351008034

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: altered, wood door
- Windows: altered, vinyl
- Related features: bay window, tile clad porch steps, narrow grassy lawn with small bushes
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, medium-pitched hipped roof with overhanging eaves, bay window
- Character defining features not present: wood frame double-hung windows, original stucco finish, original primary entrance door and steps
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Monterroso, Luichi I & Rosa I

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191023
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6614 Fairfield St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6614 Fairfield St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351010001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: side-gable
- Entrance: altered, wood and glass
- Windows: wood frame picture window, non-original aluminum sliding
- Related features: front porch with porch wall clad in stucco, exterior chimney, attached carport, narrow grassy lawn with small bushes, stone retaining wall bounding the front lot line, concrete driveway
- Style: Spanish Colonial Revival
- Character defining features present: conical tower, corner entrance with recessed entry, arched picture window, stucco cladding, exterior chimney clad in stucco
- Character defining features not present: clay tile roof, some original windows
- Status: exhibits a moderate level of integrity due to the lack of one or more key character-defining features

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1930 (Estimated) Tax Assessor

* P7. Owner and Address:
Salgado, Raul & Patricia

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191022
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6562 Fairfield St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6562 Fairfield St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351016016

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: altered, metal security doors
- Windows: altered, vinyl
- Related features: grassy lawn with manicured bushes in a low flagstone water table
- Style: Minimal Traditional
- Character defining features present: stucco finish, medium-pitched hipped roof with overhanging eaves, minimal ornamentatior
- Character defining features not present: original windows
- Status: exhibits a low level of integrity due to the alteration of key character-defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North & east elevs, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1956 (Estimated) Tax Assessor

* P7. Owner and Address:
Lucas, Joseph A & Delia E Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191021
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6557 Fairfield St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6557 Fairfield St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351017027

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: gable
- Entrance: obscured from view
- Windows: altered, aluminum
- Related features: brick veneer water table, front porch roof extension with wood supports
- Style: Minimal Traditional
- Character defining features present: medium-pitched gable roof with overhanging eaves
- Character defining features not present: original stucco, wood frame double-hung windows, applied wood elements
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Carrillo, Carlos Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191020
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6556 Fairfield St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6556 Fairfield St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351016014

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: altered, aluminum sliding
- Related features: octagonal window, narrow grassy lawn with small bushes, concrete block and metal fence lining the sidewalk
- Style: Minimal Traditional
-- Character defining features present: medium-pitched hipped roof with overhanging eaves, minimal ornamentation; hexagonal window
-- Character defining features not present: original stucco, wood frame windows
- Status: exhibits a low level of integrity due to the alteration of one or more key character-defining features

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1941 (Estimated) Tax Assessor

* P7. Owner and Address:
Palomera, Ruben & Armida

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191019
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6619 Easton St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6619 Easton St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351005026

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: gable-on-hip
- Entrance: metal security door
- Windows: altered, vinyl and aluminum
- Related features: small grassy lawn with small bushes, flagstone veneer water table and low garden wall
- Style: elements of the Minimal Traditional
- Character defining features present: medium-pitched gable-on-hip roof with overhanging eaves, minimal ornamentation, stucco cladding
- Character defining features not present: wood frame double-hung windows
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Martinez, Gustavo & Elena

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191018
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6618 Easton St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6618 Easton St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351007002

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco, non-original flagstone veneer
- Roof: hipped
- Entrance: altered, metal security door
- Windows: altered, vinyl
- Related features: wood shutters, interior chimney with stucco cladding, minimal ornamentation, grassy lawn with small bushes, concrete driveway
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof with slightly overhanging eaves, minimal ornamentation
- Character defining features not present: wood frame double-hung windows, original stucco
- Status: exhibits a low level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1947 (Estimated) Tax Assessor

* P7. Owner and Address:
Jasso, Hector & Maria E

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191017
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6615 Easton St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6615 Easton St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351005027

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1 1/2
- Construction: wood frame
- Cladding: stucco
- Roof: cross-gable
- Entrance: original wood and multi-pane glass
- Windows: altered, aluminum sliding
- Related features: L-shape plan, projecting front gable end garage wing with non-original garage door, grassy lawn with a mature tree
- Style: Vernacular
- Character defining features present: original primary entrance door, cross-gable roof with slightly overhanging eaves
- Character defining features not present: original windows, original garage door
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Valdovinos, Efren

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191016
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6614 Easton St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6614 Easton St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351007001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: wood clapboard, natural rock veneer
- Roof: hipped
- Entrance: obscured from view
- Windows: altered, metal
- Related features: decorative wood shutters, recessed front entry porch, L-shape plan, bay window, grassy lawn with manicured bushes, exterior brick chimney
- Style: elements of the Minimal Traditional
- Character defining features present: clapboard siding, bay window, medium-pitched hipped roof with slightly overhanging eaves
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Rivera, Teresa Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191015
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6604 Easton St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6604 Easton St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351006007

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1 and 2
- Construction: wood frame
- Cladding: stucco
- Roof: hipped and gable-on-hip
- Entrance: metal security doors
- Windows: steel frame casement
- Related features: metal awnings, grassy lawn, hedges
- Style: Minimal Traditional
- Character defining features present: hipped form, minimal ornamentation, original windows
- Character defining features not present: original stucco finish
- Status: exhibits a high degree of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1955 (Estimated) Tax Assessor

* P7. Owner and Address:
Quinones, Ernesto & Josephine C

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191014
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6566 Easton St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6566 Easton St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351018015

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multiple-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: altered, metal security doors
- Windows: wood frame
- Related features: flagstone veneer water table, recessed porches with metal balustrade, tripartite windows, small grassy lawn with mature bushes
- Style: Minimal Traditional
- Character defining features present: minimal ornamentation, wood frame windows, medium-pitched hipped roof with overhanging eaves, stucco cladding, flagstone veneer
- Character defining features not present: none.
- Status: exhibits important character defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
East elev, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1952 (Estimated) Tax Assessor

* P7. Owner and Address:
Ortega, Fernando M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191013
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6557 Easton St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6557 Easton St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351019018

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: vinyl
- Related features: bay window, natural rock veneer, small recessed porch with decorative metal support and balustrade, grassy lawn with small bushes,
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof with overhanging eaves, minimal ornamentation
- Character defining features not present: original stucco finish, original windows
- Status: exhibits a low level of physical integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Ruiz, Rudolph Sr & Angie Trust

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191012
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6551 Easton St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6551 Easton St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351019019

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: rough textured stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: wood frame
- Related features: metal awnings sheltering windows, projecting bay window, applied decorative wood shelf, recessed front entry porch with metal balustrade, small grassy lawn with mature bushes lining the facade
- Style: Minimal Traditional
- Character defining features present: wood frame windows, medium-pitched hipped roof with overhanging eaves, minimal ornamentation
- Character defining features not present: smooth stucco finish
- Status: exhibits a moderate level of integrity

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg north

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Pulido, Guadalupe

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List)

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191011
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6550 Easton St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.

c. Address 6550 Easton St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351018013

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: stucco
- Roof: hipped
- Entrance: wood
- Windows: altered, vinyl
- Related features: projecting bay window, wood surrounds, fieldstone veneer water table below bay window, grassy lawn with small bushes lining the façade in a low fieldstone planter
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof with overhanging eaves, projecting bay window, minimal ornamentation, stucco cladding
- Character defining features not present: original windows
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southeast

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1948 (Estimated) Tax Assessor

* P7. Owner and Address:
Chiprez, Angela

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191010
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6612 Allston St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___1/4 of Sec___; _____ B.M.
c. Address 6612 Allston St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____mE/ _____mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351004001

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: smooth stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: altered, vinyl
- Related features: small grassy front lawn with small shrubs line the façade, wood fence lining the street elevation
- Style: Minimal Traditional
- Character defining features present: stucco cladding, medium-pitched hipped roof, minimal ornamentation
- Character defining features not present: original window sashes and configuration
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1942 (Estimated) Tax Assessor

* P7. Owner and Address:
Mendez, Miguel A

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191009
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6560 Allston St

P1. Other Identifier:

* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles

b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.

c. Address 6560 Allston St City Unincorporated Los Angeles Zip 90022

d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app

APN(s): 6351020015

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: multi-family residence
- Stories: 1
- Construction: wood frame
- Cladding: smooth stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: wood frame, double-hung
- Related features: metal awnings sheltering windows, small grassy front lawn with small shrubs lining the façade in a low fieldstone garden wall, brick chimney
- Style: Minimal Traditional
- Character defining features present: wood frame double-hung windows, minimal ornamentation, medium-pitched hipped roof, stucco cladding
- Character defining features not present: none.
- Status: exhibits important character-defining features

* P3b. Resource Attributes: (List attributes and codes) HP03 Multiple-family Property

* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev, lkg southwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1951 (Estimated) Tax Assessor

* P7. Owner and Address:
Shipleyspero, Charyl M

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191008
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6557 Allston St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6557 Allston St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351021029

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: smooth stucco
- Roof: hipped
- Entrance: altered, metal security door
- Windows: altered, vinyl
- Related features: recessed front porch, projecting bay window, metal awnings sheltering windows, small grassy front lawn with small shrubs line the façade, fieldstone water table below the bay window, metal balustrade along the front porch
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, stucco cladding, minimal ornamentation, projecting bay window
- Character defining features not present: wood-frame windows
- Status: lacks integrity of design, materials, and workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
South elev, lkg northwest

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1950 (Estimated) Tax Assessor

* P7. Owner and Address:
Camarena, Luis A

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 19-191007
HR #
Trinomial
NRHP Status Code 3D/7
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 1

* Resource Name or #: 6556 Allston St
P1. Other Identifier:
* P2. Location: ☐ Not for Publication ☑ Unrestricted a. County Los Angeles
b. USGS 7.5' Quad _____ Date _____ T____; R____; ___ 1/4 of ___ 1/4 of Sec___; _____ B.M.
c. Address 6556 Allston St City Unincorporated Los Angeles Zip 90022
d. UTM: (Give more than one for large and/or linear feature) Zone _____, _____ mE/ _____ mN
e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as app
APN(s): 6351020014

* P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

- Type: single-family residence
- Stories: 1
- Construction: wood frame
- Cladding: smooth stucco
- Roof: hipped
- Entrance: obscured from the primary facade
- Windows: altered, vinyl
- Related features: small grassy front lawn with small shrubs line the façade, recessed front porch leading to the primary entrance, projecting bay window
- Style: Minimal Traditional
- Character defining features present: medium-pitched hipped roof, stucco cladding, minimal ornamentation, projecting bay window; hexagonal window
- Character defining features not present: wood frame double-hung windows
- Status: lacks integrity of design, materials, or workmanship

* P3b. Resource Attributes: (List attributes and codes) HP02 Single-family Property
* P4. Resources Present: ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☑ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)

P5b. Description of Photo: (View, date, etc.)
4/1/2010
North elev., lkg south

* P6. Date Constructed/Age and Sources:
☐ Prehistoric ☑ Historic ☐ Both
1941 (Estimated) Tax Assessor

* P7. Owner and Address:
Cypert, Manuel

* P8. Recorded by: (Name, affiliation, address)
Colleen Davis, Elizabeth Hilton
ICF International
811 W 7th Street, Suite 800
Los Angeles, CA 90017

* P9. Date Recorded: 10/1/2010

* P10. Survey Type: (Describe)
Reconaissance-Level Survey

* P11. Report Citation: (Cite survey report/other sources or "none")
Long Beach Citywide Historic Context Report. Prepared by Sapphos Engineering, July 2009.

* Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☑ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

Archaeological Investigation, East Los Angeles Sustainable Median Stormwater Capture Project

Submitted to:
CDM Smith
Ms. Dorothy Meyer, Principal Planner
111 Academy Way, Suite 150
Irvine, CA 92617

John M. Foster, RPA

Greenwood and Associates

725 Jacon Way

Pacific Palisades, California 90272

(310) 454-3091

December 13, 2017

Abstract

The County of Los Angeles has requested an archaeological record search, field survey, and archaeological survey report for the East Los Angeles Sustainable Median Stormwater Capture Project. The project area is the Los Angeles County Zone 35 Montebello Landscape Maintenance District (LMD) located within the Community of East Los Angeles, near the intersection of Olympic Boulevard and Garfield Avenue. The project area includes several sites at medians and sidewalks located to the west of Garfield Avenue. Pipelines and diversion structures connecting to existing storm drains would also be installed in roadways adjacent to the medians.

The area of potential adverse impact was subject to both archival research and physical survey to identify archaeological resources within the project area. The documentary study and foot reconnaissance were conducted, and no archaeological resources were recorded or observed.

Should potentially important cultural deposits be encountered during ground disturbing activities, work should be temporarily diverted from the vicinity of the discovery until a qualified archaeologist can identify and evaluate the importance of the find, conduct any appropriate assessment, and implement measures to mitigate impacts on significant resources.

USGS Quadrangle: Los Angeles, 1994
Archaeological Resources: None
Type of Investigation: Archaeological Record Search and Field Survey

Cover Picture: Montebello Parking Median at Leonard Avenue

CONTENTS

Figures

INTRODUCTION

Greenwood and Associates has conducted an archaeological record search, field survey, and evaluation of the potential for archaeological resources for a Cultural Resources analysis to support the preparation of an Addendum to the Los Angeles County Flood Control District Enhanced Water Management Program Environmental Impact Report.

PROJECT LOCATION

The project area is the Los Angeles County Zone 35 Montebello Landscape Maintenance District (LMD) located within the Community of East Los Angeles, near the intersection of Olympic Boulevard and Garfield Avenue. The LMD is within a distinct geographic subdivision centered along the oblong loop road of Northside Drive and Southside Drive. It is surrounded by Whittier Boulevard to the north, Vail Avenue to the east, Ferguson Drive to the south, and Gerhart Avenue to the west and bisected by Garfield Avenue and Olympic Boulevard.

PROJECT SUMMARY

The East Los Angeles Sustainable Median Stormwater Capture Project (the "proposed project") would capture and treat approximately 232 acre-feet of stormwater in an average rainfall year from a 3,000-acre tributary area. The stormwater would be diverted, captured, and infiltrated to reduce pollutants (specifically metals, nutrients, and bacteria) entering the Los Angeles River and Rio Hondo River. The storm water flows would be diverted from a nearby storm drain using a diversion structure and approximately 2,500 linear feet of reinforced concrete pipe. The flow would then be directed into various underground infiltration wells with a total design capacity of 21 acre-feet, located at various medians, where it would infiltrate into the ground. The medians would also be enhanced by the installation of drought tolerant landscaping and recreational amenities, providing aesthetic and public use benefits to adjacent residential community.

The project area includes several sites at medians and sidewalks located to the west of Garfield Avenue. Pipelines and diversion structures connecting to existing storm drains would also be installed in roadways adjacent to the medians. The proposed project medians are all relatively flat, consisting of turf grass and trees which are primarily alder, pine, Chinese elm, and jacaranda. The medians have raised curbs and may also have infrastructure such as street lights, power poles, irrigation controls and connections, and/or signage.

The stormwater flows would be diverted from existing storm drains via a diversion structure and a total of approximately 7,100 linear feet of reinforced 24-inch concrete pipe which would connect to the infiltration wells. The pipelines would be installed at various depths, to a maximum depth of 10 feet below ground surface (bgs). The infiltration wells would be 6 feet in diameter and vary in depth based on the infiltration properties and other considerations at

each median. It is estimated that there would be approximately five 50-foot wells, ten 60-foot wells and one hundred 100-foot wells. The wells would be located to avoid the need to remove any existing healthy trees and to avoid any existing infrastructure to remain such as streetlights, power poles, and underground utilities such as a water pipes and telephone lines. Pretreatment filtration units would be installed at several medians, which would provide initial stormwater treatment prior its entry into the infiltration wells.

Sustainable features at the project sites include the reduction of water use by replacing turf with drought tolerant landscaping and installing of water efficient irrigation. Additionally, permeable surfaces, such as decomposed granite, would be used for the pathways, which would allow for the infiltration of surface water. As described previously, bioswales and bioretention would be installed in several of the medians, which would both contribute to the landscape design as well as provide a water quality benefit. These areas would vary from approximately six inches to three feet in depth.

This study was prepared in order to comply with Program EIR mitigation measure CUL-2, which entails conducting a Phase I Cultural Resources Inventory prior to project approval. The investigation is meant to identify any archaeological resources within the proposed impact areas. The effort included a review of available archaeological site archives, historical maps, documents describing the proposed project area, and a survey of previously identified archaeological sites. This report describes the results of the background research, methods and results of the field investigation, and conclusions regarding the probability of impact to cultural resources due to project-related activities.

BACKGROUND

This section is designed both to indicate the potential for the presence of cultural resources within the project area, and to provide a context for any cultural data that may exist within the study area.

Prehistory

There has been a human presence in southern California for at least 10,000 years. The most commonly used chronology subdivides that time span into the Milling Stone Period from 8000 BP to 3000 BP; the Intermediate Period from 3000 BP to AD 1000; the Late Prehistoric Period from AD 1000 to 1769; and the Historic Period, from the 1769 founding of the California Missions to the present (Wallace 1955).

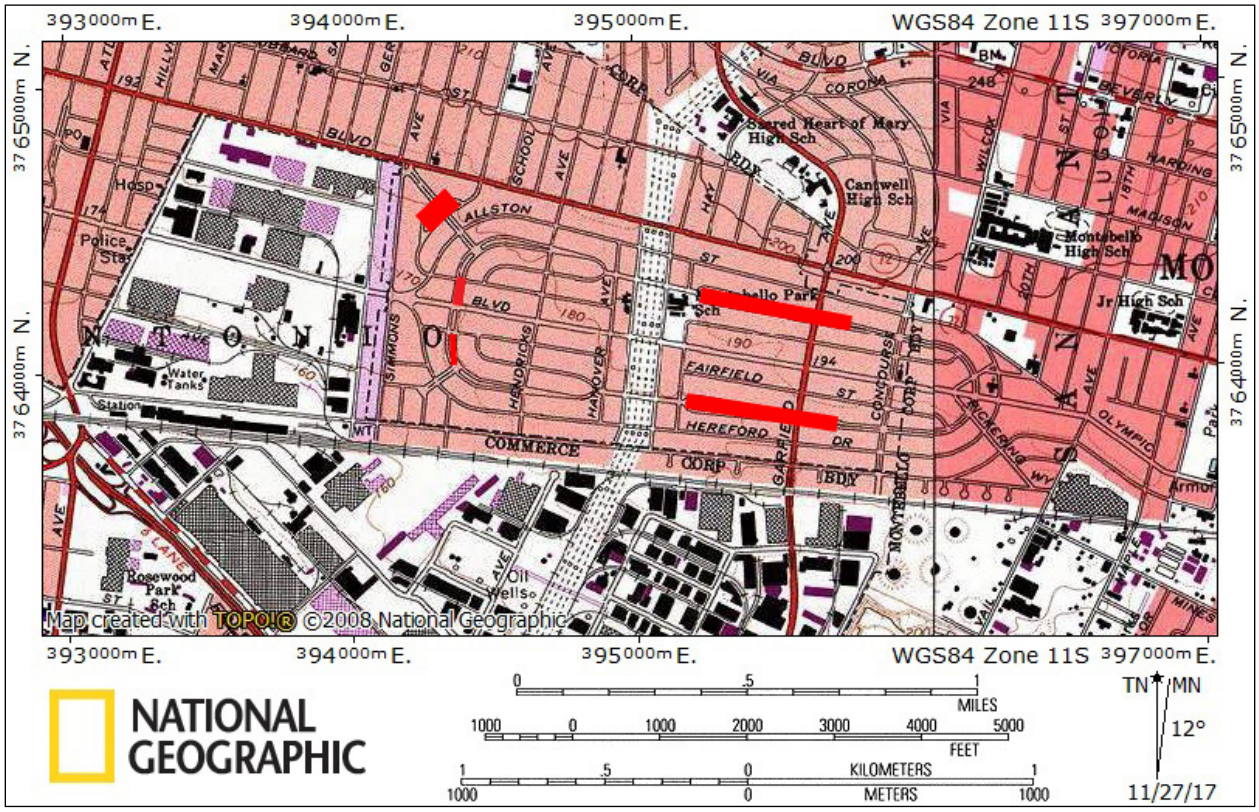


Figure 1. USGS Vicinity Map, Los Angeles 7' Quadrangle (1994).

Traditionally, the Milling Stone Period has been characterized by the portable milling stones and manos used for processing the hard, wild seeds collected as the primary subsistence base. Some terrestrial hunting was practiced, but evidence of marine resources was said to be absent from Milling Stone sites (Wallace 1978:28). However, subsistence remains and radiocarbon dates obtained from human occupation sites on the coast and several of the Channel Islands fall well within the Milling Stone Period range suggesting that maritime adaptation may have a much longer history than previously believed (Breschini et al. 1996).

The subsistence base is believed to have diversified during the Intermediate Period to include a wider variety of plant foods, as evidenced by the appearance of mortars and pestles, and increased marine resources were added to the small animal protein dietary component (Wallace 1978:30).

By the Late Prehistoric, coastal southern California was inhabited by the Canaliño culture, a maritime adapted people who lived in semi-permanent coastal villages and had a high reliance on animal proteins, both terrestrial and marine (Rogers 1929). Canaliño adaptations were practiced by the Gabrieliño as described by the early European explorers to the region.

Ethnography

Based on their association with the Spanish mission establishment of San Gabriel Archangel, the Native American people described as inhabiting the region surrounding the project area during the historical period became known as Gabrieliño. These people were hunters and gatherers with permanent villages, specialized processing sites, formal cemeteries, and trade networks with local and non-local groups. It is believed that they initially practiced a seasonal strategy, moving from location to location exploiting various food resources, but with technological advances they were able to maintain permanent year-round villages with reliance on acorns and marine resources. At the time of European contact, the Gabrieliño occupied an area that included the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers, the Los Angeles Basin, the coast from Orange County's Aliso Creek north to Topanga Canyon, and the Channel Islands of Santa Catalina, San Clemente, and San Nicholas (Bean and Smith 1978: Kroeber 1953; McCawley 1996). Several chronological frameworks have been developed for the Gabrieliño region including those by Wallace (1955) and later McCawley (1996).

Spanish Period

The Spanish Period of American history witnessed exploration of the New World from 1541 to 1769. Spanish explorers were searching for wealth, conquest, and adventure. After conquering the Aztecs in Central America, sailing expeditions undertaken by Hernando Cortes and his men surveyed and roughly recorded the coastlines of the western shores of the Pacific Ocean and the Gulf of California. Inland expeditions were undertaken by Coronado, de Alarcón, and Diaz through Arizona, New Mexico, Texas, and Kansas. Diaz explored the east side of the Colorado River in 1541, entering California in what is now Imperial County (Whitehead 1978). In 1542, Juan Rodrigues Cabrillo undertook a voyage along the Pacific coastline from Puerto de Navidad in Mexico to San Diego, reaching the Channel Islands and as far north as Monterey. Cabrillo met with the Native Americans living along the coast and ventured inland for a short distance. Native Americans related stories to Cabrillo that other contact with Spanish explorers along the Colorado River had resulted in violence and they were afraid of him and his men. Cabrillo died in 1543 and was said to be buried on San Miguel Island. Bartolome Ferrelo continued the voyage to Gold Beach, Oregon and returned to Navidad when his ships needed repairs. Sebastian Vizcaino, backed by the Crown and Church, repeated much of Cabrillo's journey 60 years later. He brought with him four priests, who accurately recorded the coastline and bays and noted all aspects of the land and its peoples. Exploration ceased until Gaspar de Portolá's arrival in the area in 1769 (Whitehead 1978).

California had been claimed by Spain during the sixteenth century as part of the empire it was establishing in the New World. Fearing an invasion of the territory by Russians, Carlos III, King of Spain, ordered that settlements be made in Alta California (Whitehead 1978). To solidify their claims, the Spanish government fortified San Diego and Monterey and started to establish mission outposts. San Gabriel Mission was founded in September 1771. Padres baptized

Native American Indians, calling them neophytes, and used their labor to produce items for trade and provide food. San Gabriel was recognized as the richest of the missions (Black 1975:xvii), trading in hides and cattle. Records were kept by each Mission for all baptisms, marriages, and deaths, and it is from these records that we learn much of what occurred. In conjunction with the founding of the missions, the Spanish governor of California, Felipe de Neve, ordered the establishment of several pueblos to provide food and goods to the presidios that would protect Alta California. One of these locations was Los Angeles, founded by colonists from Sinaloa and Sonora on September 4, 1781. With abundant good land, the town prospered and grew and by 1840, it was the largest settlement in California. Grants of land were made to individuals who had made contributions to the Crown through service in the government or army or through other means. The lands granted, referred to as ranchos, really represented grazing rights for cattle. Individuals also purchased land around the center of the pueblo to establish homes to use when in town.

Mexican Period

Mexico declared independence from Spain in 1821, and the Los Angeles City Council was formed in 1822. Mission lands during the Mexican period were to be held in trust for the Indians. The missions had never held title to the land (Black 1975:190). Political maneuvering by the Spanish grantees, men like Tiburcio Tapia and Antonio Maria Lugo, forced a weak Governor Figueroa to issue Provisional Regulations allowing them to occupy the land (Black 1975).

The Rancho Period has been romanticized in literature and film as a time of easy wealth and leisure notable for dashing horsemanship and Hispanic hospitality on a grand scale. The reality was the more prosaic work of making a living in the cattle business (Greenwood 1989:451-466). Some of the rancheros lost their lands to bad luck or adverse legal rulings; some sold to the small but growing Euro-American population.

American Period

The United States took control of California after the Mexican-American War of 1846. The discovery of gold in northern California created a boom in the cattle industry which fed the hordes of miners searching for gold. During the 1860s, the Euro-American population grew rapidly, partly because many of the old rancho families lost title to their land, leaving a vacuum which was promptly filled by settlers from central and eastern United States.

East Los Angeles is within the historic boundaries of Rancho La Laguna, part of the land holdings belonging to Don Abel Stearns and his wife, Dona Arcadia Bandini. Stearns acquired the first parcels of land in 1857, and until his death in 1871, Stearns and his wife hosted social and political functions at the rancho. Following Dona Arcadia Bandini's death in 1912, subdivision of the rancho and the eastward development of Los Angeles were delayed because of a legal

proceeding over the estate and land claims by various descendants. However, by 1921 the last remaining cattle on the rancho had been removed to make way for "one of the city's newest suburbs," as it was promoted by the Janss Investment Company, which purchased the land and divided it into housing lots. Janss' real estate strategies targeted laborers of Mexican origin who, until that time, had resided in and around the pueblo or in Boyle Heights, by offering various home ownership opportunities through the purchase of inexpensive, company-built dwellings or through the purchase of an empty lot where the owner could build a home. Industrial and real estate interests worked together to provide housing for industrial workers associated with industrial development in Los Angeles that began in the late 19th century when the flat lands adjacent to the Los Angeles River became the initial location of a vast East Los Angeles industrial district. Development of the area that begun in the 1920s stalled during the Great Depression but resumed at a rapid pace following World War II until the mid-1950s when the area was almost complete built out (ICF International 2012).

LITERATURE AND ARCHIVAL REVIEW

A review of available literature, archaeological site archives, and relevant historical maps was conducted at the South Central Coastal Information Center on November 30, 2017, by Dana Slawson, staff researcher with Greenwood and Associates, with the following results:

Archaeological resources within Project Area: None

Archaeological resources within search area (0.5 mi radius): None

Surveys/Reports including Project Area: None

Surveys/Reports within search area: 12

Surveys in Records Search Area			
Information Center Call No.	Investigation Description	Author and Date	Results
L-207	Survey	Los Angeles County, Sanitation District, 1988.	Negative
L-601	Survey	Ancient Enterprises 1979.	Negative
L-3858	Survey	ENSR 1997	Negative
L-3962	Survey	McLean 1998	Negative
L-4521	Monitoring	Romani 1998	Negative
L-4835	Survey	Jones & Stokes, Inc. 1999	Negative
L-6294	Survey	Scheid 1993	Negative
L-6346	Survey	Duke 2002	Negative

Surveys in Records Search Area			
Information Center Call No.	Investigation Description	Author and Date	Results
L-7532	Survey	Wlodarski 2006	Negative
L-8543	Survey	Michael Brandman Associates	Negative
L-10937	Survey	Hooks n.d.	Negative
L-12215	Survey	Bonner and Crawford 2013	Negative
Negative = No archaeological resources.			

Historic Resources Inventory (HRI) results (0.5 mile search radius): 60+

Evaluated Historical Resources: 44

Local Historical Resources: none

County Historical Resources: none

California State Points of Historical Interest: none

California State Historical Landmarks: none

National Register of Historic Places Properties: none

Historical Maps:

1894 USGS Los Angeles, California, 15' quadrangle map. The 1894 map indicates that Whittier Blvd had been established by this date along the northern boundary of the subject property. The railroad alignment which forms the southern boundary of the project area had yet to be constructed. There were no structures within the project limits, the nearest being two dwellings within 0.25 mile to the east near the present location of Vail Avenue, and two others within 0.25 mile north of the parcel near present-day Findlay Avenue.

1900 USGS Los Angeles, California, 15' quadrangle map. This map is identical to the 1894 map.

1924 USGS Alhambra, California, 6' quadrangle map. This map depicts Whittier Blvd. and the Southern Pacific rail alignment bounding the current project area to the north and south, respectively. Vail Avenue was also in place immediately east of the project area, depicted as a paved street. At the west end of the project area, Simmons Avenue had been established, although it remained a dirt road. A number of unpaved streets crossed the project area, all but one in a north to south orientation. Scattered dwellings had been built along several of these

streets, perhaps 35 in total. The densest concentration of residential development was along Whittier Blvd. at the northeast corner of the project area. Southern California Edison transmission lines bisected the parcel, north to south, near its midpoint.

1953 USGS Los Angeles, California 7.5' quadrangle map. The 1953 map illustrates the Montebello Park development completely built out in its current configuration. The area is depicted as densely urbanized and individual structures indicated, with the exception of the Montebello Park School near the center of the community. The power transmission lines of Southern California Edison are shown to occupy a broad swath cut through the middle of the development in a north-south orientation.

1953 USGS El Monte, California 7.5' quadrangle map. This map depicts the eastern tip of the current project area. All portions included in this study are indicated as densely built up urban land and individual buildings are not represented.

1972 USGS El Monte, California 7.5' quadrangle map. The 1972 map depicts no changes to the area considered by the current study since the time of the 1953 map.

1972 USGS Los Angeles, California 7.5' quadrangle map. Like the El Monte map, this map indicates no significant changes to the project area since the 1953 mapping.

1969 USGS Simi Valley East, California 7.5' quadrangle map (updated 1994). This map is identical to the map updated in 1981.

METHODS OF THE INVESTIGATION

The field survey was conducted on December 11, 2017 by John M. Foster, RPA. Transects were spaced at 15 m intervals to increase the potential for observing archaeological resources. Visibility within the project varied between poor (grass cover) and excellent (exposed ground). In general, the overall land form of the project and surrounding residential area was flat suggesting that the topography had been mechanically graded to achieve a uniform surface.

There are essentially five separate areas that were surveyed (Figure 2), designated as Montebello Parkway Medians at Leonard Avenue, Northside Drive at Olympic Boulevard, Southside Drive Median at Coolidge Way, Northside Drive Median, and Southside Drive Median. Each area consisted of closely cropped dead grasses, patches of exposed ground and miscellaneous trees. Both Northside Drive and Southside Drive have a discontinuous serpentine alignment. No rodent burrows were observed which would have allowed some insight into the composition of the subsurface.

Figure 2. Survey Designations and locations.

FINDINGS

The records search for the project area did not reveal any known archaeological resources within 0.5 mile. The field survey observed trash and some patches of isolated gravel throughout the project area. No evidence of archaeological deposits or features was observed.

From a prehistoric perspective, the area is 1.72 miles from the current channel of the Rio Hondo and could have been a possible, but not ideal, location for Native American occupation. The foothills to the east occupy two ecotones, valley floor and foothills, and would have offered greater opportunities for hunting and gathering for prehistoric populations as well as greater visibility of the surrounding area.

The proposed project complies with Program EIR mitigation measure CUL-2, conducting a Phase I Cultural Resources Inventory prior to project approval.

RECOMMENDATIONS

In compliance with the EIR mitigation program, the following measures will apply:

CUL-4:

During project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to

assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources.

Methods of avoidance may include, but shall not be limited to, project re-route or re-design, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources.

If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2

CUL-7:

The implementing agency shall require that, if human remains are uncovered during project construction, work in the vicinity of the find shall cease and the County Coroner shall be contacted to evaluate the remains, following the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the Coroner will contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then designate a Most Likely Descendant of the deceased Native American, who will engage in consultation to determine the disposition of the remains.

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cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

PALEONTOLOGICAL RESOURCES ASSESSMENT REPORT WITH PALEONTOLOGICAL MITIGATION PLAN FOR THE EAST LOS ANGELES COUNTY SUSTAINABLE MEDIAN STORMWATER CAPTURE PROJECT, LOS ANGELES COUNTY, CALIFORNIA

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Principal Investigator:
Sherri Gust
Qualified Principal Paleontologist

January 2018

Cogstone Project Number: 4306
Type of Study: Paleontological Assessment and Mitigation Plan
Localities: None
USGS 7.5' Topographic Quadrangles: Los Angeles, California
Total Area of Impact: 329 acres
Key Words: Quaternary younger alluvial fan deposits at surface, Quaternary older alluvial fan deposits at surface and in subsurface with high sensitivity

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LIST OF ACRONYMS AND ABBREVIATIONS

BLM – Bureau of Land Management
B.A. – Bachelor of Arts
B.S. – Bachelor of Science
CA - California
CEQA – California Environmental Quality Act
IIRMES – Institute for Integrated Research in Materials, Environments & Society
LACM – Natural History Museum of Los Angeles County
M.A. – Master of Arts
M.S. – Master of Science
PFYC – Potential Fossil Yield Classification
PRC – Public Resources Code
PRIMP – Paleontological Resources Impact Mitigation Program
PSA – Project Study Area
USGS – United States Geological Survey

EXECUTIVE SUMMARY

The purpose of this Paleontological Resources Assessment is to assess the potential for impacting fossil resources within the proposed boundaries of the East Los Angeles County Sustainable Median Stormwater Capture Project ("Project"). Specifically the Project Study Area (PSA) is located within the Community of East Los Angeles, Los Angeles County, California. The project involves development of infrastructure for capture and treatment of approximately 232 acre-feet of stormwater in an average rainfall year from a 3,000-acre tributary area. Excavation for stormwater pipelines will extend to a maximum depth of 10 feet below ground surface, while infiltration wells will extend up to 100 feet below ground surface.

The project area is mapped at the surface as Quaternary older alluvial fan deposits, overlain in restricted areas by Quaternary younger alluvium. No fossils are known from within the PSA, but two localities are recorded from within two miles of the PSA, also in Quaternary older alluvium. Paleontological reconnaissance confirmed a lack of native sediments visible at the surface, either due to development or to overlying fill dirt; surficial sediments consisted primarily of any areas of either top soil, artificial fill, or a mixture of both. No fossils were observed during the survey. Based upon the fossils recovered from the near vicinity of the PSA, the Quaternary younger fan alluvium is assigned a PFYC value of 2 with a low sensitivity for fossil resources. However, this unit does cover older, fossiliferous units. The Quaternary older alluvial fan deposits are assigned PFYC 4 with a high potential for fossils based on significant finds adjacent to the PSA.

Paleontological resources may be encountered during construction activities where excavation extends more than six feet below original ground surface in older Quaternary sediments. Horizontal excavation work occurring more than six feet below the current surface shall require full-time monitoring under the supervision of a qualified paleontologist with a graduate degree, more than ten years of experience, and a specialty in vertebrate paleontology. This applies specifically to excavation conducted in a horizontal or planar direction; vertical drilling and augering are unlikely to yield significant fossil resources, and will not require monitoring. A Paleontological Mitigation Plan is provided herein to detail procedures for ensuring that any adverse effects on paleontological resources are mitigated.

This report satisfies mitigation measure CUL-5 for this project. With implementation of mitigation measure CUL-6 and the recommendations in this report, project impacts to paleontological resources would be less than significant.

INTRODUCTION

PURPOSE OF DOCUMENT

The purpose of this Paleontological Literature Study is to assess the potential for impacting fossil resources within the proposed boundaries of the East Los Angeles County Sustainable Median Stormwater Capture Project ("Project"). Specifically the Project Study Area (PSA) is located within the Community of East Los Angeles, Los Angeles County, California (CA) (Figure 1). The lead agency for this project is the County of Los Angeles.

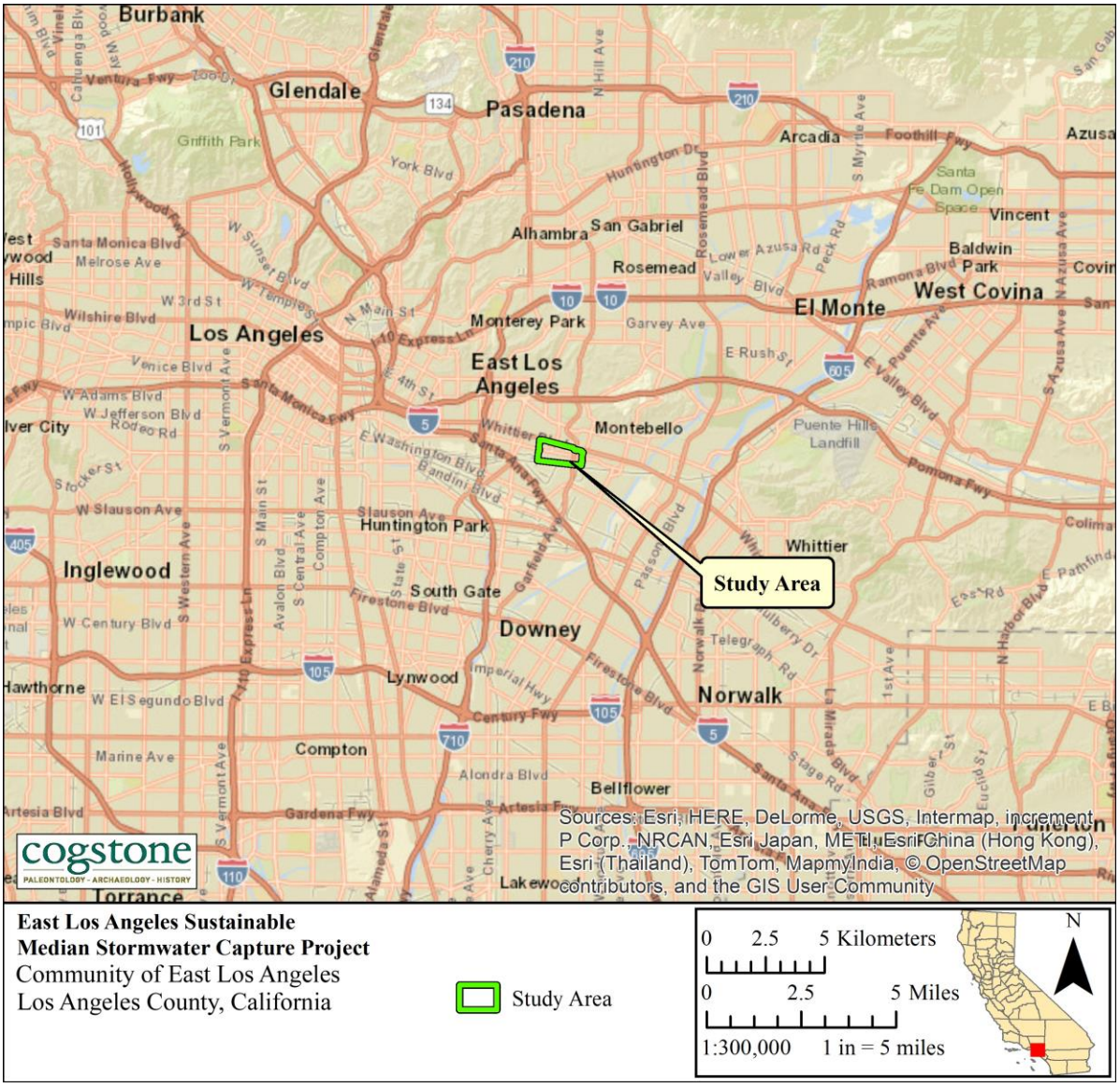

Figure 1. Project Vicinity

PROJECT DESCRIPTION

The East Los Angeles County Sustainable Median Stormwater Recapture Project includes capture and treatment of approximately 232 acre-feet of stormwater in an average rainfall year from a 3,000-acre tributary area. The stormwater would be diverted, captured, and infiltrated to reduce pollutants (specifically metals, nutrients, and bacteria) entering the Los Angeles River and Rio Hondo River. The storm water flows would be diverted from a nearby storm drain using a diversion structure and approximately 2,500 linear feet of reinforced concrete pipe. The flows would then be directed into various underground infiltration wells with a total design capacity of 21 acre-feet, located at various medians, where it would infiltrate into the ground. The medians would also be enhanced by the installation of drought tolerant landscaping and recreational amenities, providing aesthetic and public use benefits to adjacent residential community.

The project area includes several sites at medians and sidewalks located to the west of Garfield Avenue. Pipelines and diversion structures connecting to existing storm drains would also be installed in roadways adjacent to the medians. The proposed project medians are all relatively flat, consisting of turf grass and trees which are primarily alder, pine, Chinese elm, and jacaranda. The medians have raised curbs and may also have infrastructure such as street lights, power poles, irrigation controls and connections, and/or signage.

The stormwater flows would be diverted from existing storm drains via a diversion structure and a total of approximately 7,100 linear feet of reinforced 24-inch concrete pipe which would connect to the infiltration wells. The pipelines would be installed at various depths, at maximum depth of 10 feet below ground surface (bgs). The infiltration wells would be 6-foot in diameter and vary in depth based on the infiltration properties and other considerations at each median. It is estimated that there would be approximately five 50-foot wells, 10 60-foot wells and 100 100-foot wells. The wells would be located to avoid the need to remove any existing healthy trees and to avoid any existing infrastructure to remain such as streetlights, power poles, and underground utilities such as a water pipes and telephone lines. Pretreatment filtration units would be installed at several medians, which would provide initial stormwater treatment prior its entry into the infiltration wells.

Planting Cell and Suspended Pavement Systems would be installed at the sidewalk location [a plastic or fiberglass structure with posts and beams that can contain a large amount of soil while supporting paving above. The soil that fills the cell is un-compacted to support tree growth and provide stormwater management through interception and infiltration]. A pipeline would direct surface runoff captured in the cell to infiltration wells installed in the medians at this location.

Sustainable features at the project sites include the reduction of water use by replacing turf with drought tolerant landscaping and installing of water efficient irrigation. Additionally, permeable surfaces, such as decomposed granite, would be used for the pathways, which would allow for

the infiltration of surface water. As described previously, bioswales and bioretention would be installed in several of the medians, which would both contribute to the landscape design as well as provide a water quality benefit. These areas would vary from approximately six inches to three feet in depth.

PROJECT STUDY AREA

The PSA is located within the Community of East Los Angeles, near the intersection of Olympic Boulevard and Garfield Avenue. It lies within a distinct geographic subdivision centered along the oblong loop road of Northside Drive and Southside Drive. It is surrounded by Whittier Boulevard to the north, Vail Avenue to the east, Ferguson Drive to the south, and Gerhart Avenue to the west and bisected by Garfield Avenue and Olympic Boulevard. The PSA is mapped within sections 9 and 10 of Township 2 South, Range 12 West, San Bernardino Base Meridian, as shown on the Los Angeles, California 7.5-minute United States Geological Survey topographic map (Figure 2). Excavation for stormwater pipelines will extend to a maximum depth of 10 feet below ground surface, while infiltration wells will extend up to 100 feet below ground surface.

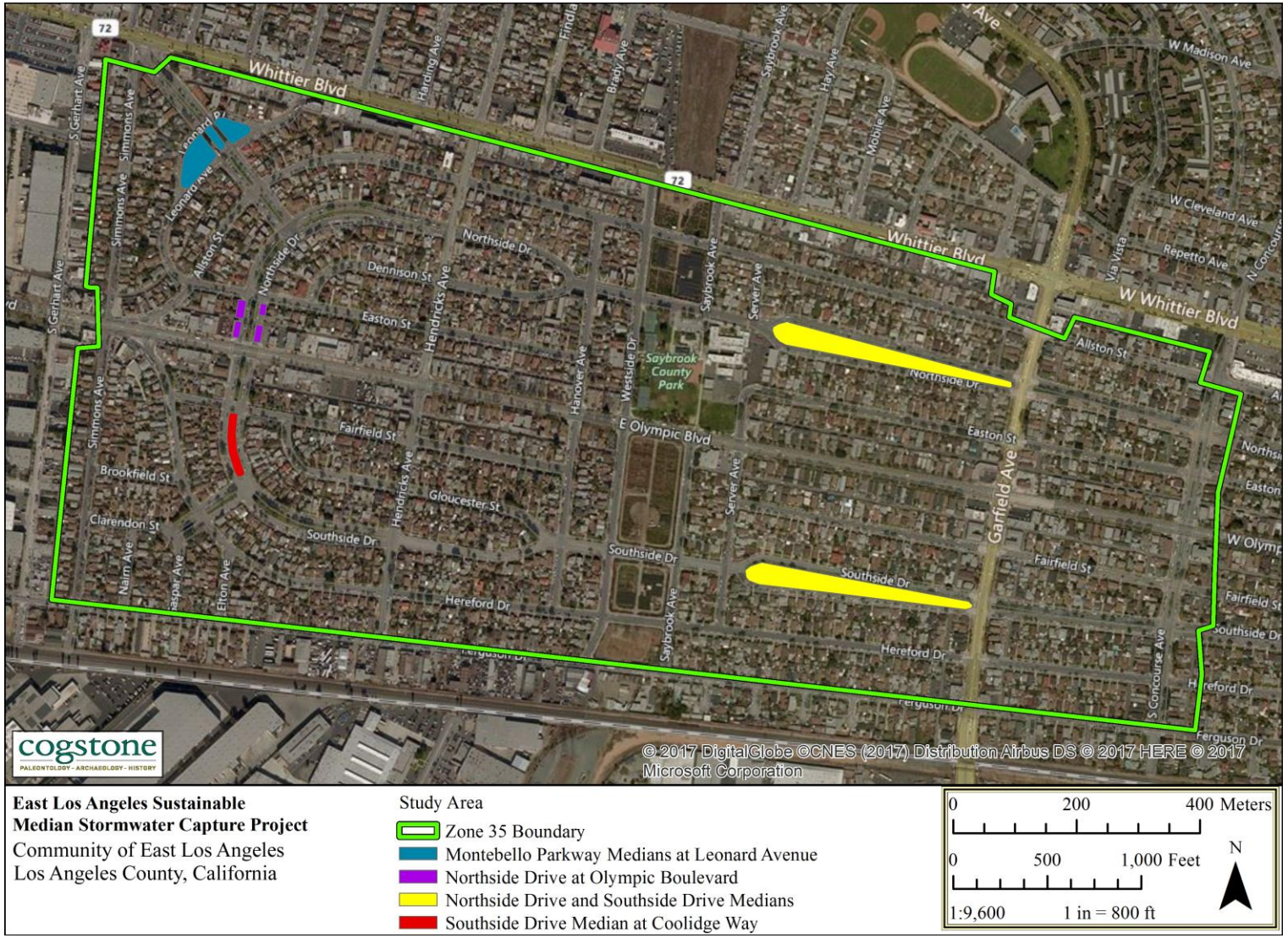

Figure 2. Project Location

PROJECT PERSONNEL

Cogstone Resource Management Inc. (Cogstone) conducted the paleontological resources studies and brief resumes of senior staff are appended (Appendix A).

- Eric Scott served as the Principal Paleontologist for the project and wrote this report. Scott has a M. A. in Anthropology with an emphasis in biological paleoanthropology from the University of California, Los Angeles, and over thirty years of experience in California paleontology and geology.

- Ashley Leger conducted the paleontological reconnaissance. Leger has a Ph.D. in Geology and Geological Engineering with an emphasis on vertebrate paleontology from the South Dakota School of Mines and Technology, a B.S. in Geology magna cum laude from Northwest Missouri State University, and over 9 years of experience in vertebrate paleontology.

- Sherri Gust reviewed this report for quality control. Gust has a M.S. in Anatomy (Evolutionary Morphology) from the University of Southern California, a B.S. in Anthropology from the University of California at Davis, and over 35 years of experience in California.

- Megan Wilson prepared the Geographic Information System (GIS) maps throughout this report. Wilson has an M.A. in Anthropology cum laude from California State University, Fullerton, a B.A. cum laude in Anthropology from the University of California at Los Angeles, cross-training in paleontology, and GIS certification.

REGULATORY ENVIRONMENT

This project is subject to state and local legislation and guidelines regarding paleontological resources.

STATE LAWS AND REGULATIONS

Paleontological resources are protected by state law. This protection covers all vertebrate fossils (animals with backbones) and any unique paleontological locality.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA (Chapter 1, Section 21002) states that: "[i]t is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation

measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects."

If paleontological resources are identified during the environmental review process as being within the proposed project area, the sponsoring agency must take those resources into consideration when evaluating project effects. The level of consideration may vary with the importance of the resource.

PUBLIC RESOURCES CODE (PRC)

Section 50987.5 states that no person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any … vertebrate paleontological site, including fossilized footprints … or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

COUNTY LAWS AND REGULATIONS

Paleontological resources are addressed under the Conservation and Natural Resource Element of the Los Angeles County 2035 General Plan (2012:157), which states the following:

- Goal C/NR 14: Protected historic, cultural, and paleontological resources.
    - Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
    - Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances the County's historic, cultural, and paleontological resources.
    - Policy C/NR 14.5: Promote public awareness of the County's historic, cultural, and paleontological resources.
    - Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer 2003; Scott et al. 2004).

RESOURCE CONTEXT

GEOLOGIC SETTING

The project area is situated in the Los Angeles Basin, south of the Santa Monica Mountains. This basin is bounded to the north by the Santa Monica Mountains, to the east by the Santa Ana Mountains and associated hills (Puente/Chino, San Jose, and Repetto), to the south by the San Joaquin Hills and the Pacific Ocean, and to the west by the Palos Verdes Hills and the Pacific Ocean. This area is part of the northernmost Peninsular Ranges, California geomorphic province. The Peninsular Ranges are a series of ranges separated by northwest trending valleys, subparallel to faults branching from the San Andreas Fault which for the most part lies to the east of this geomorphic province.

STRATIGRAPHY

Geologic mapping by Yerkes and Campbell (2005; Figure 3) indicates that the PSA is situated entirely upon Quaternary alluvial fan deposits. The majority of the PSA consists of fan alluvium of middle to late Pleistocene age (units Qof, Qof2, and Qof3); these are overlain by a narrow strip of late Pleistocene and Holocene alluvial fan deposits (unit Qyf) in portions of the northern and western PSA.

QUATERNARY YOUNGER ALLUVIAL FAN DEPOSITS

Yerkes and Campbell (2005) described these sediments primarily as unconsolidated gravel, sand and silt, deposited chiefly from flooding streams and debris flows, of late Pleistocene and Holocene age.

QUATERNARY OLDER ALLUVIAL FAN DEPOSITS

Yerkes and Campbell (2005) described these sediments primarily as slightly to moderately consolidated silt, sand, and gravel deposits on alluvial fans. There are three such units present within the PSA: Qof, undifferentiated Quaternary older alluvium; Qof2, an intermediate-age subunit; and Qof3, the youngest subunit that can be distinguished.

KNOWN PALEONTOLOGICAL RESOURCES

Searches for paleontological records were completed by the Natural History Museum of Los Angeles County (LACM; McLeod 2017), as well as published resources (Hay 1927; Miller 1971; Jefferson 1991a, 1991b). A copy of the LACM records search is provided (Appendix B).

There are no known fossil localities within the PSA; however two localities are present within two miles of the PSA (McLeod 2017). These localities produced a microvertebrate fauna of

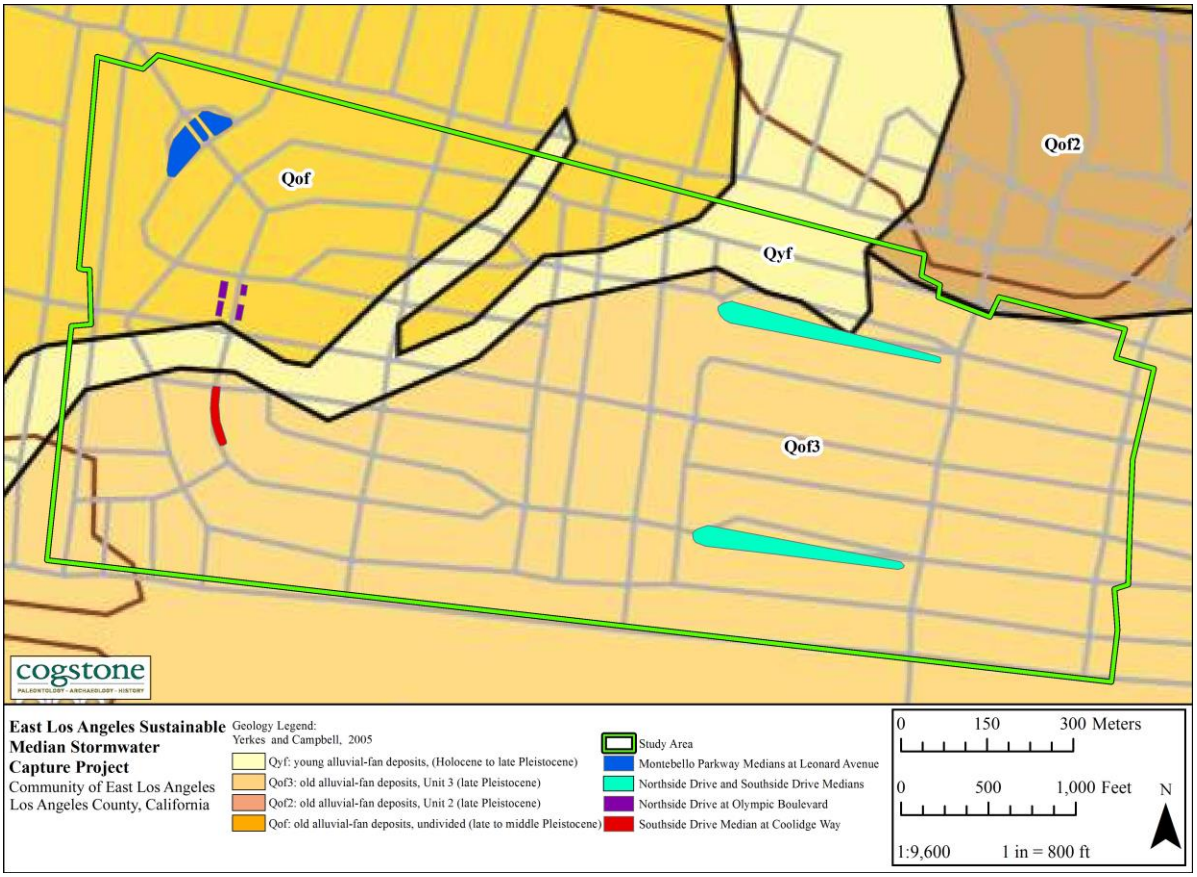

Figure 3. Geology Map (Yerkes and Campbell, 2005)

presumed Pleistocene age, based upon the depth at which remains were recovered, although none of the species identified are time diagnostic (Table 1).

QUATERNARY YOUNGER ALLUVIAL FAN DEPOSITS

Quaternary younger fan alluvium is typically not old enough to contain fossils. However, based on the local geology, these sediments cover older, fossiliferous formations. Additionally, these sediments may themselves contain archaeological resources.

QUATERNARY OLDER ALLUVIAL FAN DEPOSITS

Numerous localities are known from throughout the County of Los Angeles in these sediments, and two localities (LACM 7701 and 7702) are known from the Quaternary older alluvium within 2 miles of the PSA (Table 1).

Quaternary older alluvial sediments have been documented to contain fossils of extinct mammoth, horse, bison, ground sloth, deer, rabbit, shrew and rodents from various resource

localities throughout the Los Angeles basin (Miller, 1971; Langenwalter, 1975; Jefferson, 1991a, 1991b). These sediments therefore have high paleontologic sensitivity.

Table 1. Fossil localities near the PSA in Quaternary older alluvium

Common name	Taxon	Locality; Reference(s)
threespine stickleback	*Gasterosteus aculeatus*	LACM 7701-7702 (McLeod, 2017)
salamander	*Batrachoseps* sp.	
lizard	Lacertilia	
snake	Colubridae	
rabbit	*Sylvilagus* sp.	
pocket mouse	*Microtus* sp.	
harvest mouse	*Reithrodontomys* sp.	
pocket gopher	*Thomomys* sp.	

PALEONTOLOGICAL FIELD RECONNAISSANCE

The paleontological resources survey of a project's environmental assessment phase verifies the exact location of any previously identified paleontological resources, searches for new fossil localities, and reviews the potential for the sediments to contain fossil resources. Surface sediments and existing disturbances (e.g., water eroded cut banks, graded access roads, and berms) are examined to review the deeper sediments, as well as to look for fossils.

Ashley Leger, Cogstone staff paleontologist, completed a pedestrian survey of the undeveloped ground surface areas of the project area on 18 December 2017. No fossils were observed during the survey.

During the survey, native sediments were generally not visible, either due to development or to overlying fill dirt. Surficial sediments consisted primarily of any areas of either top soil, artificial fill, or a mixture of both. Figures 4 and 5 show surface sediments exposed at two of the median sites; these views are representative for each of the median sites.

Figure 4. Median along Northside Drive, facing southwest

Figure 5. Montebello Parkway Median between Leonard Place and Leonard Avenue, facing northeast

PALEONTOLOGICAL SENSITIVITY

A multilevel ranking system was developed by professional resource managers as a practical tool for evaluating potential for paleontological resources. This is the Potential Fossil Yield Classification system (PFYC; BLM 2007; Appendix C).

Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts. This ranking is not intended to be applied to specific paleontological localities or small areas within units. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of localities is intended to be the major determinant

for the value assignment. The system has five numbered scores from 1 to 5 but score 3 is subdivided into a and b subunits (Appendix C).

The Quaternary younger alluvial fan deposits are assigned a PFYC value of 2 with a low sensitivity for fossil resources due to the young age of the sediments. However, these units do cover older, fossiliferous units. The surface and subsurface Quaternary older alluvial fan deposits are assigned PFYC 4 with a high potential for fossils based on significant finds adjacent to the PSA (Table 2).

Table 2. Paleontological Sensitivity Rankings

PFYC ranking	5: very high	4: high	3a: moderate-patchy	3b: moderate-undemonstrated	2: low	1: very low
Rock Units						
Quaternary younger alluvium (Qyf)					X	
Quaternary older alluvium (Qof3)		X				
Quaternary older alluvium (Qof2)		X				
Quaternary older alluvium (Qof)		X				

MITIGATION PLAN

A records search from the Natural History Museum of Los Angeles County (Appendix B) was used as the basis for Mitigation Measure CUL-5: "For individual structural BMP projects that require ground disturbance, the implementing agency shall evaluate the sensitivity of the project site for paleontological resources. If deemed necessary, the implementing agency shall retain a qualified paleontologist to evaluate the project and provide recommendations regarding additional work, potentially including testing or construction monitoring."

This Paleontological Resources Impact Mitigation Program (PRIMP) fulfills the requirements of Mitigation Measure CUL-5. The PRIMP follows guidelines set forth by the County of Los Angeles as well as CEQA to ensure preservation of significant fossils. This PRIMP is prepared in advance of construction. Worker awareness training with spot checking and, if vertebrate fossils are discovered, full-time monitoring with paleontological salvage, are recommended for this project.

Mitigation Measure CUL-6 for the project states, "In the event that paleontological resources are discovered during construction, the implementing agency shall notify a qualified paleontologist. The paleontologist will evaluate the potential resource, assess the significance of the find, and

recommend further actions to protect the resource". With implementation of this measure and the recommendations in this report, project impacts to paleontological resources would be reduced to a less than significant level.

This PRIMP summarizes identified paleontologically sensitive areas within the project, the organization and responsibilities of the paleontological team, the responsibilities of other parties, and the treatment and communications procedures to be implemented if paleontological resources are encountered during the project.

PRELIMINARY SIGNIFICANCE EVALUATION

The potential to impact any fossils varies with depth of impacts, previous disturbance(s), and presence of non-fossiliferous sediments. Excavation for the project will impact late Pleistocene and Holocene sediments. All potential grading-type activities into late Pleistocene sediments, both at the surface and in the subsurface, have the potential to impact significant fossils and should be monitored. Drilling or augering activities impacting these sediments do not require monitoring, because any specimens encountered would be (a) likely to be destroyed by the equipment, and (b) unlikely to meet significance criteria, since they will not be associated with necessary contextual information.

Unidentifiable fossils will generally not meet significance criteria and should not be collected save where the amount and preservation is sufficient for dating purposes (criterion 5 above). For identifiable fossils, significance will need to be assessed subsequent to recovery. Associations of whole or partial skeletons of different animals are likely to meet multiple significance criteria.

PALEONTOLOGICALLY SENSITIVE AREAS

The Project description indicated that the planned depths of cut for pipelines would extend to a maximum of 10 feet deep in some places, while 6-foot diameter infiltration wells would extend to an estimated 50 feet (five wells), 60 feet (10 wells), and 100 feet (100 wells). Based upon the planned depths of cut and the proposed methods of excavation, paleontological monitoring will be needed only for grading, trenching, and other planar or horizontal excavation activities. Monitoring will be limited to mass grading activities and will not include drill and/or auger work. Spot-checking is needed for native sediments only and excludes fill. Full-time monitoring will be provided if vertebrate fossils are discovered.

PALEONTOLOGICAL TEAM

The qualified principal paleontologist will meet the qualifications outlined under County of Los Angeles guidelines. The principal investigator will be responsible to implement the mitigation plan and maintain professional standards of work.

The principal investigator will designate the project team to include a field supervisor and monitors. Sample resumes demonstrating the qualifications of personnel are appended (Appendix A).

CONSTRUCTION PHASE

The principal paleontologist is required to attend the Preconstruction Meeting. A member of the Paleontological Team will provide a training presentation on paleontological awareness. Attendance is mandatory for all earthmoving personnel and other staff who may visit the project. Attendance rosters will be submitted to verify training, and hard-hat stickers will be issued. This allows quick visual assessment of which construction personnel have been trained and which need to be trained. As new construction personnel are added, the training will be presented for those personnel at the end of morning safety meetings.

PALEONTOLOGICAL PERSONNEL

Paleontological monitors will be monitoring or spot-checking all excavations more than 10 feet below the current surface, except for auger and/or drill work. This only applies to native sediments and excludes fill. Full-time monitoring will be provided if vertebrate fossils are discovered. Monitors will work closely with equipment operators to inspect fresh cuts. Methods of monitoring will vary depending on the type of equipment. Monitors will also be available to respond to unanticipated discoveries.

All paleontological personnel will receive a copy of this paleontological mitigation plan, daily forms and appropriate maps and the project code of safe practices. All personnel will be informed that the prime constructor construction contractor has the final authority over all safety matters.

Paleontological monitors are responsible for maintaining close communication with the on-site earthmoving personnel in order to maintain a safe working environment, and to be fully appraised of the upcoming areas of impact and any schedule changes.

Paleontological monitors are responsible for completing daily documentation of their presence and their activities, including the location and type of their activities throughout the day, along with observations of sediment type and distribution, observations regarding fossils, collection of fossils, and other information. Paleontological monitors are responsible for photographing activities, sediments, and paleontological resources for documentation purposes, as well as for filling out a Photograph Record Sheet. All paperwork and photographs will be submitted to the principal paleontologist on a weekly basis. All paperwork and photographs documenting work or geologic/paleontologic conditions on the project will be submitted to the lead agency as the project progresses and as part of the final administrative record. All documentation will be filed

and maintained by the principal paleontologist and submitted to the repository along with any significant fossils upon completion of the project.

REPORTING

Should no fossils be recovered, a letter report will be prepared upon the conclusion of earthmoving. The final report will include the inclusive dates of activity, personnel utilized including qualifications, summarize the paleontological mitigation effort and coverage using text and maps, documentation of paleontological localities discovered, paleontological resources identified, interpretation of fossils, non-compliance issues and their resolution, evaluation of the adequacy of this paleontological resources management plan and suggestions for improving paleontological resource monitoring procedures and include all specialists' reports as appendices. The report will be submitted to the Project Supervisor for approval. Copies of the final report will go to the Project Supervisor, the repository if one is utilized, and other parties as requested.

DISCOVERY AND TREATMENT OF FOSSILS

FOSSIL DISCOVERY AND RECOVERY

Should a fossil or other suspicious item be recovered during any excavations, including both horizontal/planar cuts and drill/auger work, we request that construction personnel:

1) Halt excavations in that area temporarily.
2) Send an onsite photograph of the object to the qualified on-call paleontologist.
3) If it does turn out to be a fossil, the response will depend on if it was recovered from an auger or a different type of excavation equipment as borings regardless of depth, have a low potential to produce fossils meeting significance criteria.

As our closest office is located in Orange County, off of Ball Road and State Route 57, response time to unanticipated finds will depend upon traffic.

Fossils observed will be treated differently depending on type and circumstance. Generally, discovery of identifiable invertebrate fossils (shells, crustaceans, etc.) will require that a scientifically significant sample be collected for identification and analysis and that the locality be documented (see below). Similar procedures are followed for microvertebrates such as rodents. Current professional standards call for testing of 200 lb. samples (4-5 full 5 gallon buckets) from each locality, followed by processing of up to 6000 lbs. of matrix if significant fossils are recovered by testing. Documentation of localities is required.

Larger fossils observed must be evaluated to determine their condition. Generally the monitor will be able to quickly determine if the fossils are sufficiently well-preserved to meet preliminary

significance criteria. If necessary, the monitor will cordon off the immediate area around the fossil to permit a safe work zone to recover the fossil and notify the construction foreman. The monitor will also immediately notify the field supervisor if assistance is needed and sufficient personnel to perform the work will be fielded. Documentation of localities is required.

Discovery of a bone bed or other type of fossil sites containing multiple large fossils may require a formal Stop Work order. The monitor will cordon off the area until evaluation occurs. The project principal paleontologist will consult with the Project Supervisor regarding the amount of time necessary. This type of discovery requires a detailed field map, a sedimentary structure analysis, one or more stratigraphic columns and data for taphonomic analysis.

Depending on the formations being impacted, additional samples collected may include specimens for dating analyses or materials for microfossil, botanical or pollen analyses. All fossils and sediment samples are accompanied by a field tag with project and locality information including a unique field number.

LOCALITY DOCUMENTATION

Every fossil locality requires a standard set of data be taken. This includes one or more coordinate readings using a resource grade high resolution GPS device such as a Trimble GeoXH or better. Currently, the combination of Trimble GeoXH and most recent updates to the post-processing software permit an average accuracy of 4". All field members of the Paleontological Team will be trained in the use of the resource grade GPS prior to start of the project. The Paleontological Team will coordinate with the prime construction contractor to obtain accurate elevation readings. Lithology, paleoenvironmental information and a true north reading are also required. Additional information collected may include one or more stratigraphic columns, sedimentary structure analysis, taphonomic analysis and photographs of the fossil in situ. Depending on the formations being impacted additional samples collected may include specimens for dating analyses or materials for microfossil, botanical or pollen analyses.

Based on our past studies, many Pleistocene finds are not datable even if the material is young enough. Radiocarbon may not be feasible and alternative dating methods will be utilized if possible such as optical luminescence dating. In the past we have contracted with the Institute for Integrated Research in Materials, Environments & Society (IIRMES) at California State University, Long Beach to perform this type of analysis.

FOSSIL PREPARATION

Many fossils require only cleaning and stabilization through the use of hardeners. Others require lab excavation of plaster jackets with gradual cleaning and hardening. Sometimes larger fossils require a "cradle", usually a form-fitted plaster lined with acid-free cloth, to provide support and prevent breakage during storage or transport. Fossils found in bedrock formations may require more tedious preparation using mechanical devices such as zip scribes.

Processing of matrix samples for microvertebrates varies depending on the nature of the sediments and may be washed using water, may require chemical agents to break apart the rock or may require floatation using heavy liquids. Generally, sediment will be transported to the lab for mechanical screen washing as on-site screen washing often is not permitted by the Stormwater Pollution Prevention Plan.

FOSSIL IDENTIFICATION

All fossils will be identified by experts. All identifications will be as specific as possible and include element, portion, side, sex, age, taphonomy and notes. Cataloging, including identification information, is entered into a computer database. Each specimen is maintained with a tag specifying the provenience and identification information.

FOSSIL ANALYSES

Analyses conducted depend to a great extent on the number of fossils recovered and their condition. Guild analysis (relative number of carnivores, herbivores and omnivores of various body weights in an ecosystem), demographic analysis (age and sex structure of populations), habitat analysis (certain types of animals indicate grasslands as opposed to deserts for example), paleoecology (use of botanical and/or pollen analysis to reconstruct the paleoenvironment) and comparative analysis (comparison to other faunas of the same time period regionally) are the most typical. Geological context analyses include stratigraphy of the fossil deposit, dating (to narrow the time range of the fossils), taphonomy (history of alteration of the fossils by scavengers, water transport, etc.) and other ancillary studies.

CURATION AND DISCARD PROTOCOL

Fossils meeting significance criteria will be curated in perpetuity at an accredited repository along with all project data and a copy of the final report. Fossils are only to be removed from a collection at the discretion of the principal investigator. Typically specimens are discarded to educational uses because the fossil was not identifiable to at least family level, was not found *in situ* or was part of a large collection of the same species from the same locality and individual specimens in poor condition were discarded.

REPOSITORY

The Natural History Museum of Los Angeles County (LACM) will be the intended repository for curation of any fossils retrieved from the project. The developer is responsible for providing funds to pay for costs of transporting, curating and housing the collection.

CONCLUSIONS AND RECOMMENDATIONS

No fossils are known within the project area. However, nearby localities of presumed late Pleistocene age (50-11 thousand years old) have produced microvertebrate remains from within two miles of the project, from depths of 11' – 34' below the existing ground surface. Additionally, Pleistocene alluvium from throughout the Los Angeles Basin has produced abundant remains of Ice age megafauna including mammoths, mastodons, ground sloths, camels, bison, horses, dire wolves, and sabre-toothed cats. These Pleistocene sediments therefore have high paleontological sensitivity.

It is likely that paleontological resources may be encountered during construction activities should excavation extend more than six feet below original ground surface in Quaternary sediments. Horizontal and/or planar excavation work shall require full-time monitoring under the supervision of a qualified paleontologist with a graduate degree, more than ten years of experience, and a specialty in vertebrate paleontology. Drilling and augering activities are unlikely to produce significant paleontological resources, and so will not require full-time monitoring.

This report satisfies mitigation measure CUL-5 for this project. With implementation of mitigation measure CUL-6 and the recommendations in this report, project impacts to paleontological resources would be less than significant.

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APPENDIX A. QUALIFICATIONS

SHERRI GUST
Project Manager & Principal Paleontologist

EDUCATION

1994 M. S., Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles
1979 B. S., Anthropology (Physical), University of California, Davis

SUMMARY QUALIFICATIONS

Gust has more than 38 years of experience in California, acknowledged credentials for meeting national standards, and is a certified/qualified principal archaeologist and paleontologist in all California cities and counties that maintain lists. Gust is an Associate of the Natural History Museum of Los Angeles County in the Vertebrate Paleontology and Rancho La Brea Sections. She is a Member of the Society of Vertebrate Paleontology, Society for Archaeological Sciences, Society for Historical Archaeology, the Society for California Archaeology and others.

SELECTED PROJECTS

Purple Line Extension (Westside Subway), Metro/FTA, Los Angeles. The project involves extension of the subway from Wilshire/Western to the VA Facility in Westwood for 9 miles. Cogstone prepared the supplemental Archaeology and Architectural History Reports and the cultural and paleontological sections of the FEIS/FEIR. Cogstone subsequently prepared the cultural and paleontological mitigation and monitoring plans for the entire project. Currently providing monitoring and all other cultural and paleontological services for Section One of the project. Cultural and paleontological resources principal investigator. 2011-present

Exposition Light Rail Phase 2, **Exposition Transit Authority, Culver City to Santa Monic**a. Prepared Paleontological Assessment in support of EIR. Subsequently prepared Cultural and Paleontological Resources Management Plans, Santa Monica Air Line Railroad Data Recovery Plan and Paleontological Resources Management Plan for 7 linear miles of new rail facilities including stations. Supervised monitoring and data recovery programs. Lead author of final reports. Principal Archaeologist and Paleontologist and Project Manager. 2012-2014

Figueroa Central Mixed-Use Development, Tohigh Construction Investment/LendLease, Los Angeles, Los Angeles County, CA. The project involves construction of a new maximum 860-unit residential/35-unit commercial condominium complex in downtown Los Angeles on a 4.6-acre site in proximity to the Staples Center and Los Angeles Convention Center. In compliance with CEQA and the Figueroa Central Mitigation Plan (Gust 2015), Cogstone conducted 8 days of cultural and paleontological monitoring and spot checking over the course of four months during excavation and grading activities with negative results; conducted WEAP training; and prepared a monitoring compliance report. Principal Investigator. 2015

.**Scattergood Olympic Line, LADWP, Los Angeles County**. Prepared Archaeological and Paleontological Assessment in support of EIR for new 11 mile underground electrical transmission line. Principal Archaeologist and Paleontologist and Project Manager. 2009.

Fountain at La Brea Development, West Hollywood. Prepared Archaeological and Paleontological Assessment in support of EIR for construction of mixed-use residential and commercial developments. Principal Archaeologist and Paleontologist and Project Manager. 2009

First Street Trunk Line, LADWP, Los Angeles. Prepared Paleontological Assessment in support of EIR for 2.8 miles of new water line. Subsequently, directed monitoring during construction and provided monitoring compliance report. Project Manager and Principal Investigator. 2006

Eastside Gold Line Extension, Metro/FTA, Los Angeles. Prepared Paleontological and Cultural Resources Management Plan for six mile extension into East Los Angeles and Alhambra. Subsequently provided monitoring oand prepared monitoring compliance report. Principal Archaeologist and Paleontologist and Project Manager. 2006.

ERIC SCOTT
Program Manager/Principal Paleontologist

EDUCATION

1990 M.A., Anthropology (Biological, paleoanthropology), University of California, Los Angeles
1985 B.A., Anthropology (Physical), California State University, Northridge

SUMMARY QUALIFICATIONS

Mr. Scott is a paleontological resource management specialist with over thirty years' professional experience in the recovery, preparation, curation, and preservation of nonrenewable paleontological resources. He is emeritus Curator of Paleontology, San Bernardino County Museum (2015- present) and an adjunct instructor, Department of Biology, California State University, San Bernardino (2005-present). He coordinates, supervises and provides support for field, laboratory, curatorial and technical writing activities for numerous paleontological resource assessment and impact mitigation programs. Mr. Scott is also a highly-trained specialist in the identification of fossil mammals, and is familiar with the skeletal anatomy of land vertebrates dating from the Miocene Epoch to the Pleistocene and Holocene Epochs. He is also proficient in documenting and interpreting taphonomic processes and their effects upon fossil assemblages. He has authored numerous technical resource management reports, and in addition has published several paleontology research articles in professional scientific journals.

SELECTED PROJECTS

Paleontological Survey with Fossil Collection, Joshua Tree National Park, Mojave and Sonoran Deserts, CA. Lead fieldwork to survey, collect, identify and analyze fossils from 1,234 square miles of national park lands. Principal Paleontologist. 2001-2015

Paleontological Evaluation, Tule Springs Fossil Beds National Monument, Bureau of Land Management, Las Vegas, NV. Performed large-scale survey, fossil collection, identification and analysis of late Pleistocene vertebrates. Worked with PFYC to create the National Monument, which was established in 2014. Principal Paleontologist. 2001-2014

Ledi-Geraru Research Project, Institute of Human Origins, Arizona State University, Afar region, Ethiopia. Identification and analysis of late Pleistocene horses and other vertebrates. Researcher. 2015-2016

Diamond Valley Lake Reservoir, Metropolitan Water District of Southern California, Hemet, CA. Directed monitoring, fossil collection, preparation, identification and analysis of more than a two hundred thousand late Pleistocene vertebrates. Author of final mitigation report. Paleontology Field Director. 1993-2000

El Golfo de Santa Clara Project, Arizona Western College, Sonora, Mexico. Long term research project near the Gulf of Mexico to survey, collect, identify and analyze fossils from Colorado River deltaic sediments. Permitted Researcher. 2002-2016

Natural Trap Cave, National Geographic, WY. Part of team reopening excavation of a natural fossil trap to collect, identify and analyze vertebrate fossils. Researcher. 2014-2016

ASHLEY M. LEGER, PH.D.
Paleontological Field Director

EDUCATION

2016 Ph.D. Geology and Geological Engineering with vertebrate paleontology emphasis, South Dakota School of Mines and Technology
2009 B.S., Geology, Northwest Missouri State University, graduated *magna cum laude*

SUMMARY QUALIFICATIONS

Dr. Leger has more than 9 years of experience in Cenozoic paleontology and specializes in Pleistocene megafauna and North American proboscideans. She is a member of the Geological Society of America, the Society of Vertebrate Paleontologists, the American Association of Petroleum Geologists, American Institute of Professional Geologists, the Society for Sedimentary Geology, Society of Economic Geologists, and the SD Archaeological Society. Dr. Leger is also a recipient of the O.R. Grawe Award for Missouri's outstanding geologists. She is assistant safety director for the company.

SELECTED PROJECTS

Purple Line Extension (Westside Subway) Section 1, Metro/FTA, Los Angeles, CA. The project involves extension of the subway from Wilshire/Western to Wilshire/La Cienega for 3 miles. Dr. Leger is directly responsible for daily supervision of the monitoring and fossil recovery efforts. In addition, she participates in all meetings with Metro and the contractor to ensure compliance with the mitigation measures and management plan. About 95% of her time is devoted to PLE. Sub to WEST. Paleontological Field Director. 2016-present

Cherry Avenue Truck Lanes, Caltrans District 6, Kern County, CA. The project involved monitoring excavations for creation of truck climbing lanes on State Route 119 northeast of Taft. More than 80 fossils were recovered. Co-author of Paleontological Monitoring Report. Sub to Parsons Transportation. Paleontological Field Director. 2016

Realignment for High Speed Rail, Caltrans District 6, Fresno, CA. The project involved monitoring excavations for storm water retention basins and associated drainage systems along one section of State Route 99. Co-author of Paleontological Monitoring Report. Sub to Parsons Transportation. Paleontological Field Director. 2016

Duluth Avenue Facilities, Rocklin, CA. The project involved monitoring excavations for a new regional operation center for PG&E. Lead author of Paleontological Monitoring Report. Sub to ECORP. Paleontological Field Director. 2016

Storm Water Improvements, City of Cathedral City, CA. Assessed potential impacts of storm water improvements on paleontological resources. Sub to Michael Baker Intl. Co-author of Paleontological Assessment Report. Paleontological Field Director. 2016

Multiple Residence Construction, Calabasas, CA. The project involved excavations for three new single family residences on Old Topanga Canyon Road in a paleontologically sensitive area. Spot checked and assisted with directing monitors. Sub to Hayne Architects. Paleontological Field Director. 2016

Mammoth Site of Hot Springs, South Dakota. The Mammoth Site of Hot Springs, SD is an active paleontological dig site and museum with the largest concentration of mammoth remains in the world (58 Columbian and 3 woolly). Began working at the site as recipient of an Earthwatch scholarship, moved into an internship, used the collection as the basis of dissertation and became an interpreter. Worked closely with Dr. Larry Agenbroad. Mammoth Site Interpreter and Volunteer 2007-2015

MEGAN PATRICIA WILSON, RPA

Archaeologist/GIS Specialist

EDUCATION

2014 M.A. Anthropology, California State University, Fullerton *cum laude*
2013 GIS Certificate, California State University, Fullerton
2006 B.A., Anthropology, University of California, Los Angeles *cum laude*

SUMMARY QUALIFICATIONS

Ms. Wilson is a Registered Professional Archaeologist (RPA) and cross-trained paleontologist with experience in survey, excavation, laboratory preparation/curation analysis, historic archaeology and historic architecture. Ms. Wilson regularly conducts records searches, tribal consultations, completes DPR site records, and gathers historic building information from local municipalities, and assists in drafting archaeological assessment reports for state, federal, and private development projects. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is GIS proficient and assists with the digitizing and mapping of spatial data for all projects as well as analyzing historic maps. Ms. Wilson has six years of experience in southern California archaeology.

SELECTED PROJECTS

Park Place Extension and Grade Separation EIR EA, Caltrans District 7, El Segundo, Los Angeles County, CA. Conducted a pedestrian survey to record and evaluate cultural resources within the archaeological and architectural APEs for a ~0.5-mile project along NBSF and UPRR rail lines and spur tracks on behalf of the City of El Segundo. Cogstone's services included records search, NAHC consultation, HPSR/ASR/HRER and paleontological reports. Seven built-environment resources were identified, evaluated, and DPR 523 forms were prepared. Sub to Michael Baker. Archaeologist.

Whittier Boulevard / I-605 Arterial Hot Spot Improvements, Environmental Clearance and Preliminary Engineering for Three Intersection Improvements, Whittier, Los Angeles County, CA. Conducted an intensive-level cultural resources survey to support cultural and paleontological resources technical studies for improvements proposed for three intersections in a disturbed urban environment. Conducted mapping, records search, Sacred Lands search, and NAHC consultation for intersections at Colima Road, Santa Fe Springs Road and Painter Avenue. Sub to Michael Baker. Archaeologist. 2016

Hidden Oaks Country Club Specific Plan and TT 18869, Chino Hills, San Bernardino County, CA. Conducted cultural and paleontological resources assessments and assisted the City with SB 18 compliance. Services included records search, Sacred Lands search, NAHC consultation, field survey, and mitigation recommendations. Cogstone responded to the cultural section of the project EIR comment for this proposed 537-acre residential project with minimum 5-acre per lot constraints. Prime. Archaeologist. 2015-2016

On-Call Cultural Resources Services, Sanitation Districts of Los Angeles County, CA. Prepared APE maps, conducted record searches, NAHC consultation, field surveys, and prepared DPR forms to support upgrades and improvements to pipelines at Mesquite Landfill, Clearwater, and Santa Clarita facilities. Prime. Archaeologist. 2015-2016

Accelerated Charter Elementary School, Los Angeles Unified School District, Los Angeles, Los Angeles County, CA. The project involves documentation of five historic-age buildings prior to demolition, background research, mitigation monitoring plans, archaeological and paleontological monitoring and preparation of a monitoring compliance report. LAUSD is constructing a new facility on a 2.3-acre site in South Central Los Angeles consisting of classrooms, open areas and parking. Conducted background research and contributed to preparation of DPR forms. Sub to Gafon. Archaeologist. 2015

APPENDIX B. RECORDS SEARCH

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

12 December 2017

Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865-4157

Attn: Megan Wilson, Archaeologist & GIS Technician

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed East Los Angeles Sustainable Median Stormwater Capture Project, Cogstone Project # 4306, in the City of Los Angeles, Los Angeles County, project area

Dear Megan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed East Los Angeles Sustainable Median Stormwater Capture Project, Cogstone Project # 4306, in the City of Los Angeles, Los Angeles County, project area as outlined on the portion of the Los Angeles USGS topographic quadrangle map that you sent to me via e-mail on 28 November 2017. We do not have any vertebrate fossil localities that lie directly within the proposed project boundaries, but we do have localities nearby from the same sedimentary deposits that may occur at depth in the proposed project area.

Surface deposits in the entire proposed project area consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the Montebello Hills to the northeast. These younger Quaternary deposits usually do not contain significant fossil vertebrates, at least in the uppermost layers, but the underlying older Quaternary deposits found at varying depths may well contain significant vertebrate fossils. Our closest vertebrate fossil localities from these deposits are LACM 7701-7702, just southwest of the proposed project area in the City of Commerce near the intersection of Atlantic Avenue and the Long Beach Freeway (I-710) that produced fossil specimens of threespine stickleback, *Gasterosteus aculeatus*, salamander, *Batrachoseps*, lizard, Lacertilia, snake, Colubridae, rabbit, *Sylvilagus*, pocket mouse, *Microtus*, harvest mouse, *Reithrodontomys*, and pocket gopher, *Thomomys*, at depths of 11 to 34 feet below grade.

Shallow excavations in the younger Quaternary Alluvium exposed in the proposed project area are unlikely to uncover significant vertebrate fossils. Deeper excavations that extend down into older deposits, however, may well encounter significant vertebrate fossil remains. Any substantial excavations in the proposed project area below the uppermost layers, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils collected should be placed in an accredited scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX C. SENSITIVITY RANKING CRITERIA

PFYC Description	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous or metamorphic and Precambrian or older rocks. Assessment or mitigation of paleontological resources is usually unnecessary.	1
Low. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils. Includes rock units too young to produce fossils, sediments with significant physical and chemical changes (e.g., diagenetic alteration) and having few to no fossils known. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Potentially Moderate but Undemonstrated Potential. Units exhibit geologic features and preservational conditions that suggest fossils could be present, but no vertebrate fossils or only common types of plant and invertebrate fossils are known. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3b
Moderate Potential. Units are known to contain vertebrate fossils or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and of low abundance. Common invertebrate or plant fossils may be found. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3a
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. If impacts to significant fossils can be anticipated, on-the-ground surveys prior to authorizing the surface disturbing action will usually be necessary. On-site monitoring or spot-checking may be necessary during construction activities.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. On-the-ground surveys prior to authorizing any surface disturbing activities will usually be necessary. On-site monitoring may be necessary during construction activities.	5

Appendix C
Infiltration Feasibility Investigation

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INFILTRATION FEASIBILITY INVESTIGATION MONTEBELLO LMD - PHASE II

Prepared for

Stormwater Compliance Division
County of Los Angeles
Department of Public Works

Prepared by

Geotechnical and Materials Engineering Division
Soils Investigation Unit
County of Los Angeles
Department of Public Works

December 4, 2017

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FIGURES

APPENDICES

Appendix A — Cone Penetration Test Results
Appendix B — Log of Borings
Appendix C — Amendments to Specifications

BACKGROUND

The project is located in a residential area of unincorporated East Los Angeles along Montebello Parkway, Leonard Avenue, Leonard Place, Northside Drive, Southside Drive, and Coolidge Way. Proposed Low Impact Development (LID) feature consists of drywells to infiltrate stormwater that is collected from surface runoff from surrounding drainage areas.

SITE CONDITION

Existing conditions for all locations consisted of large open grass medians with significant amounts of dried vegetation and disturbed soil areas where trees have been removed.

FIELD INVESTIGATION

40 cone penetration tests (CPTs) were performed (to a maximum depth of 90 feet) to determine if subsurface conditions were suitable for infiltration. A summary of the CPT results is provided in Appendix A.

To determine subsurface conditions, fourteen hollow-stem borings were drilled to a depth of 100 feet using an 8-inch-diameter auger. In-situ samples were collected for laboratory testing. Drywells were then constructed by over-excavating the existing borehole with an 18-inch-diameter auger. The boring logs are provided in Appendix B.

Construction of each drywell consisted of two 4-inch inner polyvinyl chloride (PVC) pipes with the borehole being backfilled with ¾-inch gravel. One pipe extended down approximately 100 feet and was perforated to allow measurement of water levels; the second pipe extended down approximately 20 feet and was not perforated to allow introduction of water into the drywell as part of the infiltration test. The percolation zone covered by infiltration testing extended from 10 to 100 feet below existing grade. Upon conclusion of infiltration testing, vault covers were constructed over each drywell and converted to permanent monitoring wells.

Infiltration testing was performed in accordance with Geotechnical and Materials Engineering Division's Guidelines for Design, Investigation, and Reporting of Low Impact Development Stormwater Infiltration (GS 200.2, Revised 6/30/17).

LABORATORY TESTING

Samples from the hollow-stem borings were collected for laboratory testing to determine geotechnical parameters for hydroconsolidation, shoring and backfill recommendations.

GROUNDWATER CONDITIONS

Groundwater was not encountered during the subsurface exploration. Based on review of the California Department of Conservation Seismic Hazard Zone Report for the Los Angeles Quadrangle, the historic high groundwater level in this region is reported to be between 50 to 70 feet below the ground surface.

HYDROCONSOLIDATION POTENTIAL

Based on results from consolidation tests, the potential of hydroconsolidation is considered to be very low at the proposed invert depths.

CORROSION POTENTIAL

Based on laboratory test results, the corrosion potential for onsite soils is to be considered severely corrosive to ferrous metals. Mitigation measures shall be considered for any buried structures and/or equipment that contains any ferrous metals to minimize development of corrosion.

INFILTRATION FINDINGS AND RECOMMENDATIONS

Subsurface conditions at all locations consist of poorly-graded sand, well-graded sand, clayey sand, silty sand, sandy fat clay, sandy lean clay, sandy silt, fat clay, lean clay, and silt with intermittent layers of gravel. During testing, moderate infiltration rates were observed for the locations of Montebello Parkway at Leonard Place, and western segment of Northside Drive. Acceptable infiltration rates were observed for the locations of western segment Southside Drive, and eastern segments of Southside Drive and Northside Drive. In-situ density at all locations is described as dense to very dense in a dry state for majority of the strata. Intermittent layers of gravel were observed to be found at all locations between the depths ranging from 20 to 60 feet below existing surface.

Based on infiltration results from drywell testing with a constant hydraulic head elevation approximately 10 feet below ground surface, subsurface conditions appear favorable for stormwater infiltration zones between the depths of 10 to 100 feet below ground surface.

The recommended depth of the proposed drywells is 100 feet below ground surface with a minimum spacing of five times the drywell diameter from center to center. It is recommended the proposed drywells should not exceed a design depth over 100 feet since groundwater elevation was not determined in the exploration.

Design infiltration rates are based on test results from constant hydraulic head described in the previous section. The following table presents design infiltration rates for each test location. Design infiltration rates were calculated by applying reduction factors to field infiltration rates as required in GS 200.2. Reduction factors account for the type of infiltration test, site variability, subsurface investigation, long term siltation, long term maintenance, and number of tests conducted. LID features should be designed with an underdrain and overflow pipe where possible.

TABLE 1
INFILTRATION RATES

Boring No.	Location	Design Infiltration Rate (in/hr)
DW-1	Montebello Pkwy at Leonard Pl	4.5
DW-2	Montebello Pkwy at Leonard Pl	5.0
DW-3	Northside Dr at Montebello Pkwy	6.9
DW-4	Northside Dr at Montebello Pkwy	7.4
DW-5	Northside Dr at Easton St	6.4
DW-6	Southside Dr at Coolidge Wy	3.2
DW-7	Southside Dr at Server Ave	5.4
DW-8	Southside Dr at Server Ave	2.4
DW-9	Southside Dr at Garfield Ave	4.4
DW-10	Southside Dr at Garfield Ave	2.2
DW-11	Northside Dr at Garfield Ave	3.1
DW-12	Northside Dr at Garfield Ave	1.4
DW-13	Northside Dr at Server Ave	7.1
DW-14	Northside Dr at Server Ave	5.4

SHORING RECOMMENDATIONS

The recommended amendments to Sections 217 and 306 (see Appendix C) shall be included in the Special Provisions of the Project Specifications.

Temporary excavation should be sloped at a gradient of 1.5:1 (horizontal:vertical) or shored with no additional surcharge loading adjacent to the excavation.

A soils engineer from Geotechnical and Materials Engineering Division must be present during excavation to verify subsurface conditions and to make additional recommendations as necessary.

CONSTRUCTION CONSIDERATIONS

Soil alteration from the in-situ conditions at LID locations and compaction of any kind are common modes of failure for infiltration facilities. Prior to construction, the infiltration area should be roped off to cease entrance by unwanted equipment. The excavation should be performed from the sides of the facility and only light equipment should be used on the infiltration surface.

LIMITATIONS

This report was prepared for the exclusive use of Public Works for the specific site discussed herein and should not be considered transferable to other sites or projects. In the event that any modification in the design, configuration, or use of the site is implemented, the recommendations contained in this report are no longer valid. This study was conducted according to generally accepted geotechnical engineering practice for projects of this magnitude.

The findings and recommendations in this report are based on field and laboratory investigations combined with an extrapolation of subsurface conditions and testing. Our recommendations are professional opinions and are not meant to be a control of nature; therefore, no warranty is herein expressed or implied.

If you have any questions regarding this matter, please contact Jose J. Urquizo or William S. Man at (626) 458-4925.

Prepared by:

Jose J. Urquizo
Principal Civil Engineering Assistant

Reviewed by:

William S. Man
Civil Engineer

JJU:wm
GME-4p:\gmepub\soils investigations\projects\2015\montebello lmd project\report\montebello lmd phase ii - report.docx

Attach.

REFERENCES

California Department of Conservation; *Seismic Hazard Zone Report for Los Angeles 7.5-Minute Quadrangle*, Division of Mines and Geology, Los Angeles County, 1998.

California Department of Transportation (Caltrans); *Corrosion Guidelines Version 2.0*, November 2012.

California Department of Transportation; *Storm Water Quality Handbook: Project Planning and Design Guide*, CTSW-RT-10-254.03, July 2010.

County of Los Angeles Building Code, 2014 Edition.

County of Los Angeles Department of Public Works; *East Los Angeles Median Project, Hydrology Study*, Watershed Management Division, January 19, 2016.

County of Los Angeles Department of Public Works; *Guideline for Design, Investigation, and Reporting, Low Impact Development Stormwater Infiltration* (GS200.2), Geotechnical and Materials Engineering Division, June 30, 2017.

County of Los Angeles Department of Public Works; *Low Impact Development Standards Manual*, February 2014.

County of Los Angeles Department of Public Works; *Request for Services for Montebello LMD,* prepared by Watershed Management Division, November 19, 2015.

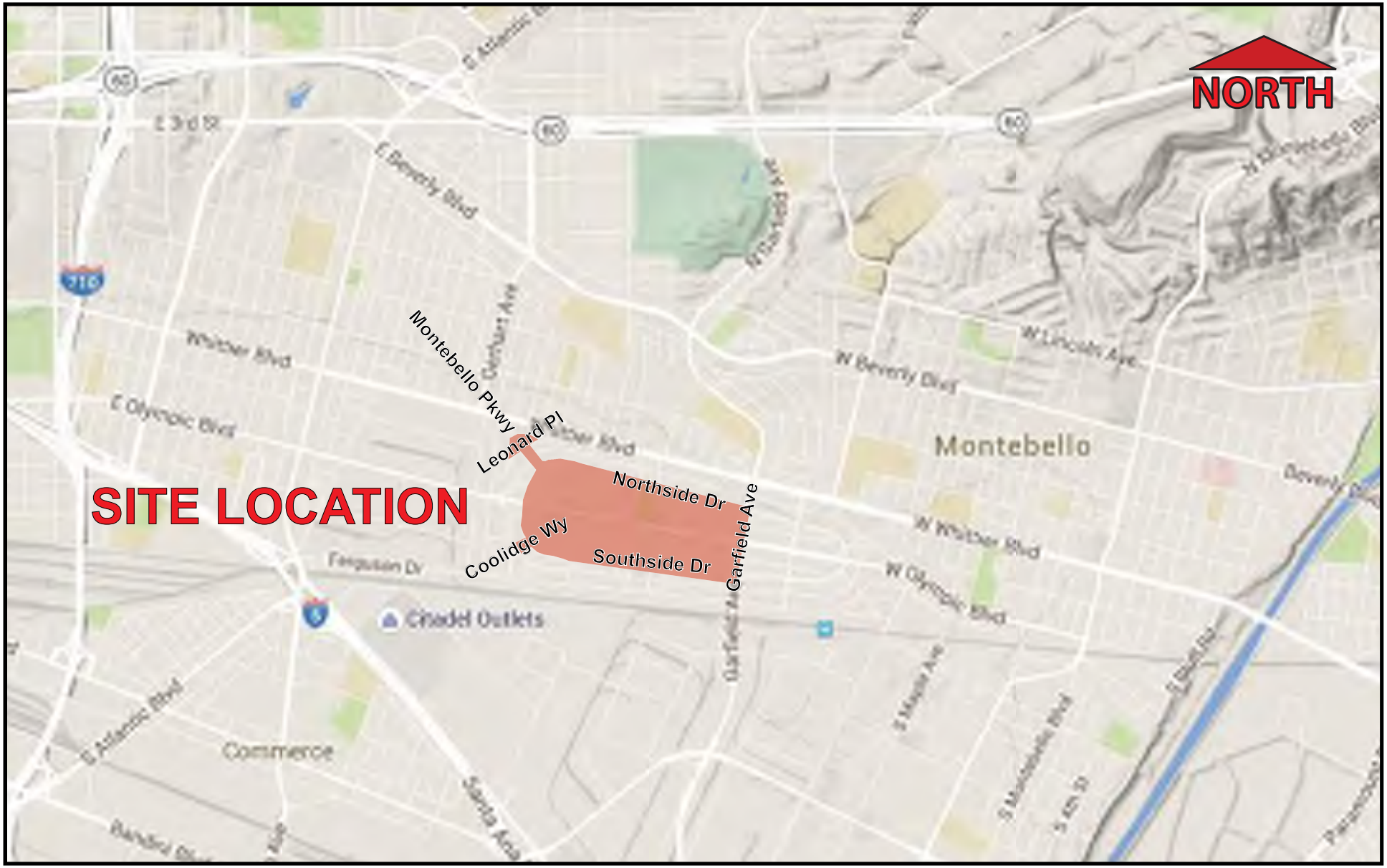
County of Los Angeles Department of Public Works; *Request for Services for Montebello LMD,* prepared by Design Division, March 6, 2017.

California Regional Water Quality Board; *MS4 Discharges within the Coastal Watersheds of Los Angeles County*, Order No. R4-2012-0175, NPDES Permit No. CAS004001, December 10, 2012

Naval Facilities Engineering Command (NAVFAC) Design Manual 7.02, September 1986

Standard Specifications for Public Works Construction, 2015 Edition.

FIGURES



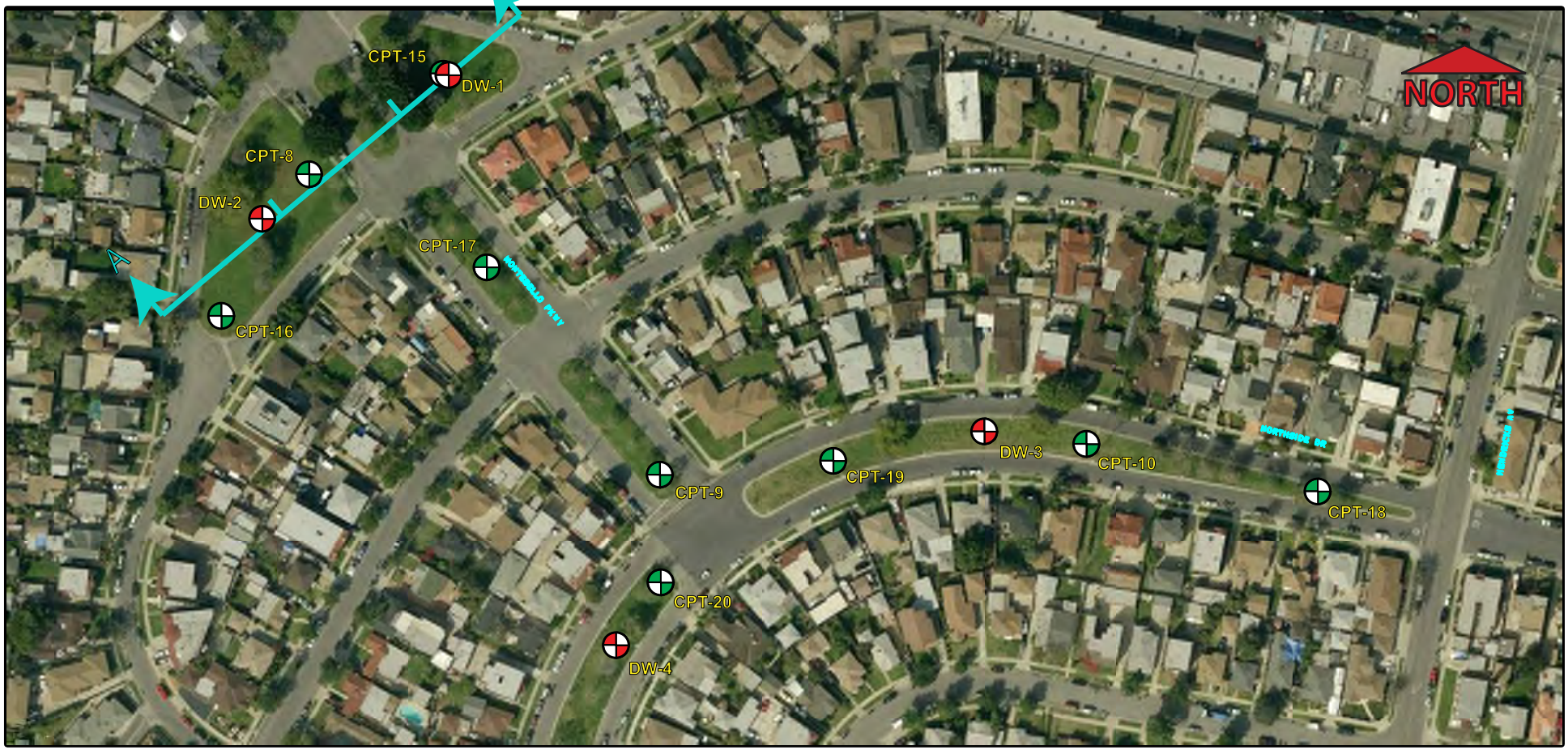
Source: Google Maps

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SITE LOCATION MAP
Montebello LMD - Phase II
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: JJU	Scale: as shown	FIGURE 1



Scale 1"=180'

0' 90' 180' 360'

LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Cross Section Soil Profile (see figure 7 for details)

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

BORING LOCATIONS
Montebello LMD - Phase II
Montebello Parkway: Whittier Boulevard to Northside Drive
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: GM	Scale: as shown	Figure 2

Scale 1"=180'

0' 90' 180' 360'

LEGEND

Cone Penetration Test (CPT)

Drywell Permeability Test

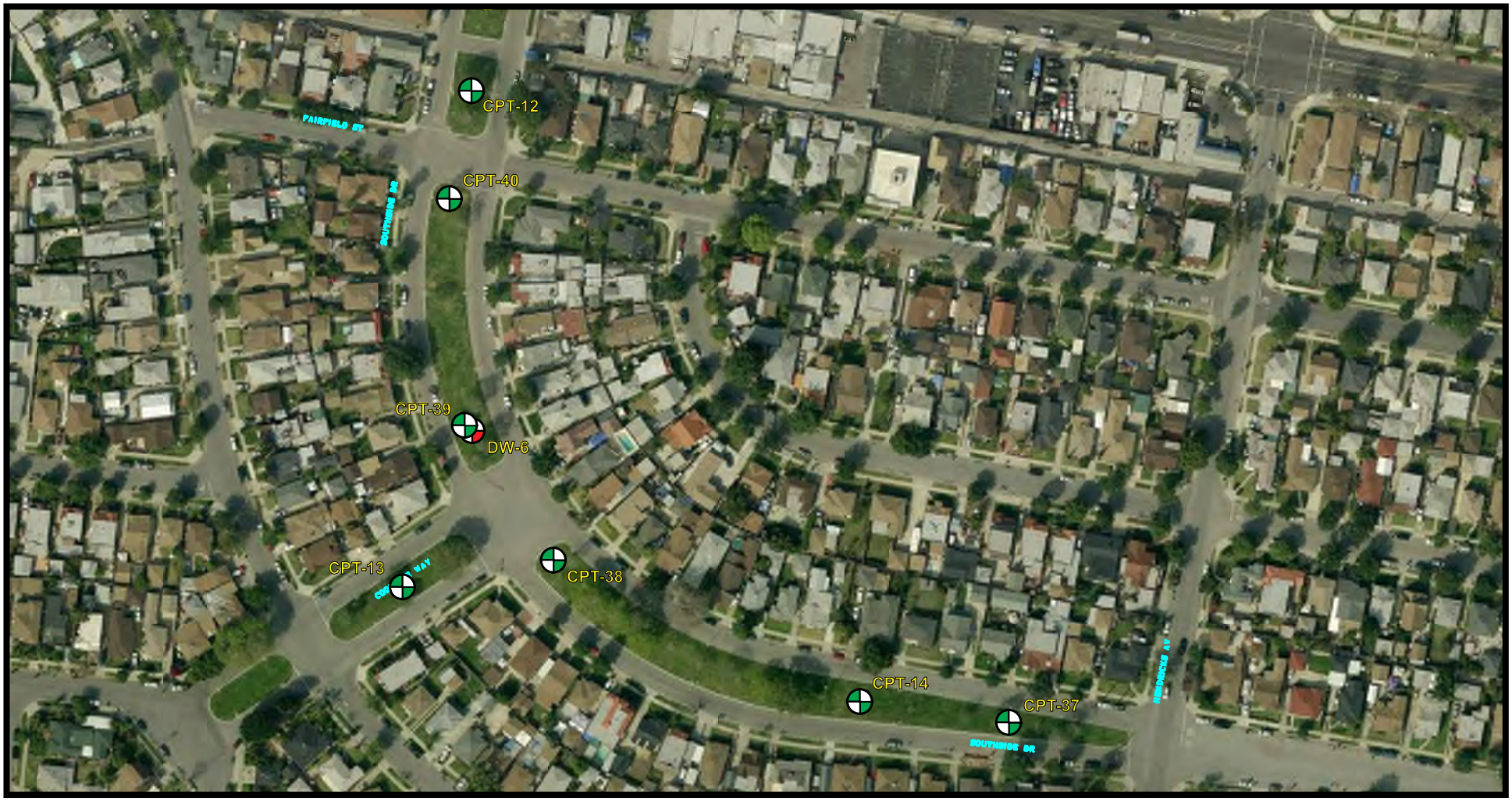
Cross Section Soil Profile (see figure 8 for details)

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

BORING LOCATIONS
Montebello LMD - Phase II
Northside Drive: Olympic Boulevard to Hendricks Avenue
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: GM	Scale: as shown	Figure 3



Scale 1”=180’

0’ 90’ 180’ 360’

LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test

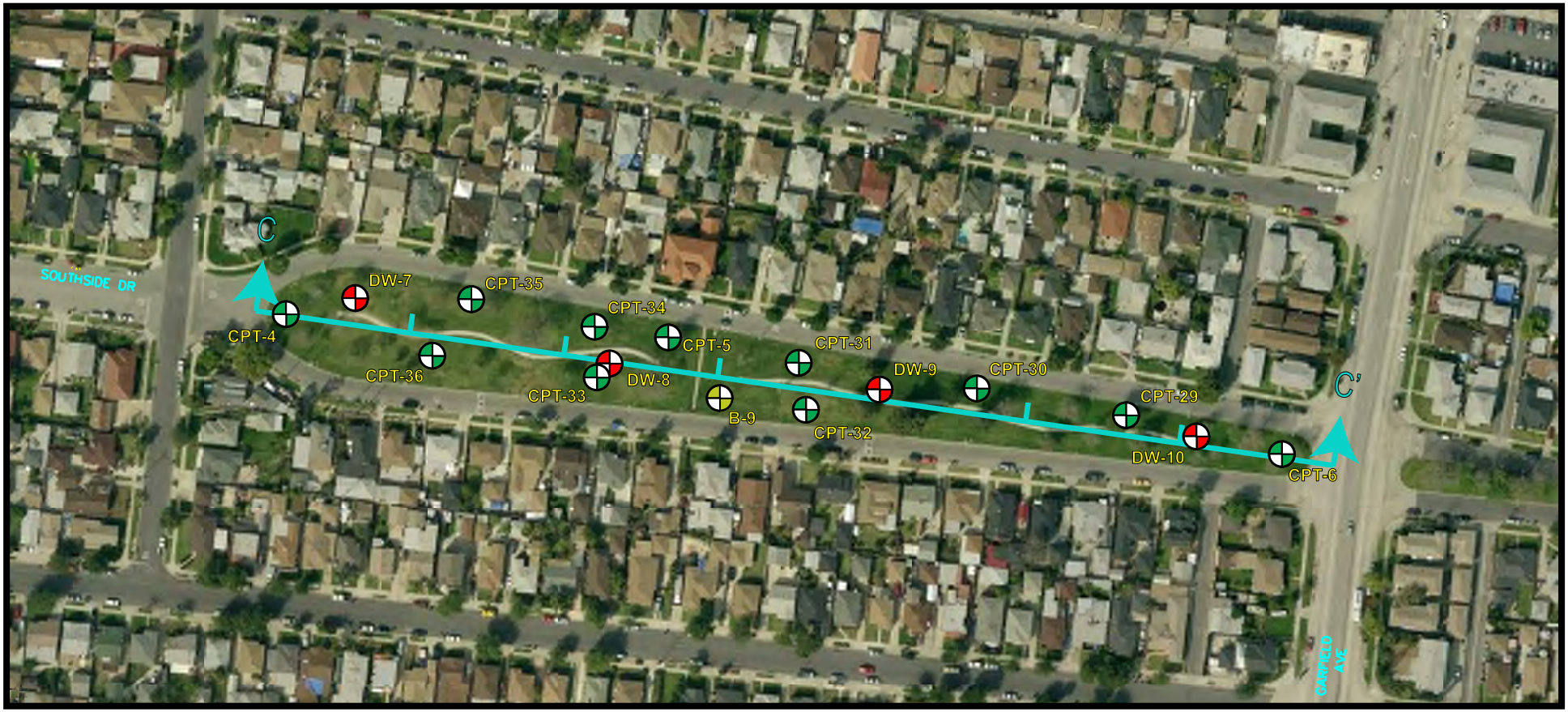
GEOTECHNICAL ENGINEERING

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

BORING LOCATIONS
Montebello LMD - Phase II
Southside Drive: Olympic Boulevard to Hendricks Avenue
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: GM	Scale: as shown	Figure 4



Scale 1"=180'

0' 90' 180' 360'

LEGEND

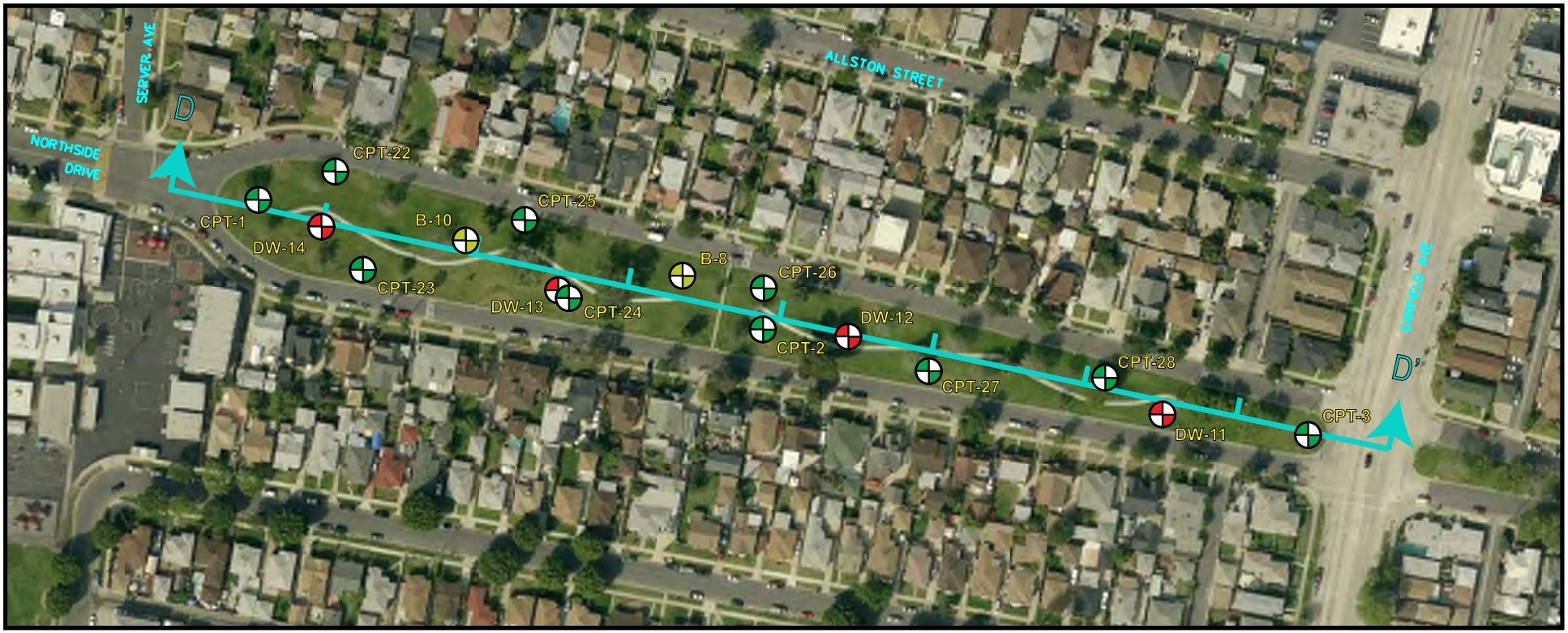
- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Hollow Stem Exploration (Phase I, 2016)
- Cross Section Soil Profile (see figure 9 for details)

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

BORING LOCATIONS
Montebello LMD - Phase II
Southside Drive: Server Avenue to Garfield Drive
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: GM	Scale: as shown	Figure 5



Scale 1"=180'

0' 90' 180' 360'

LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Hollow Stem Exploration (Phase I, 2016)
- Cross Section Soil Profile (see figure 10 for details)

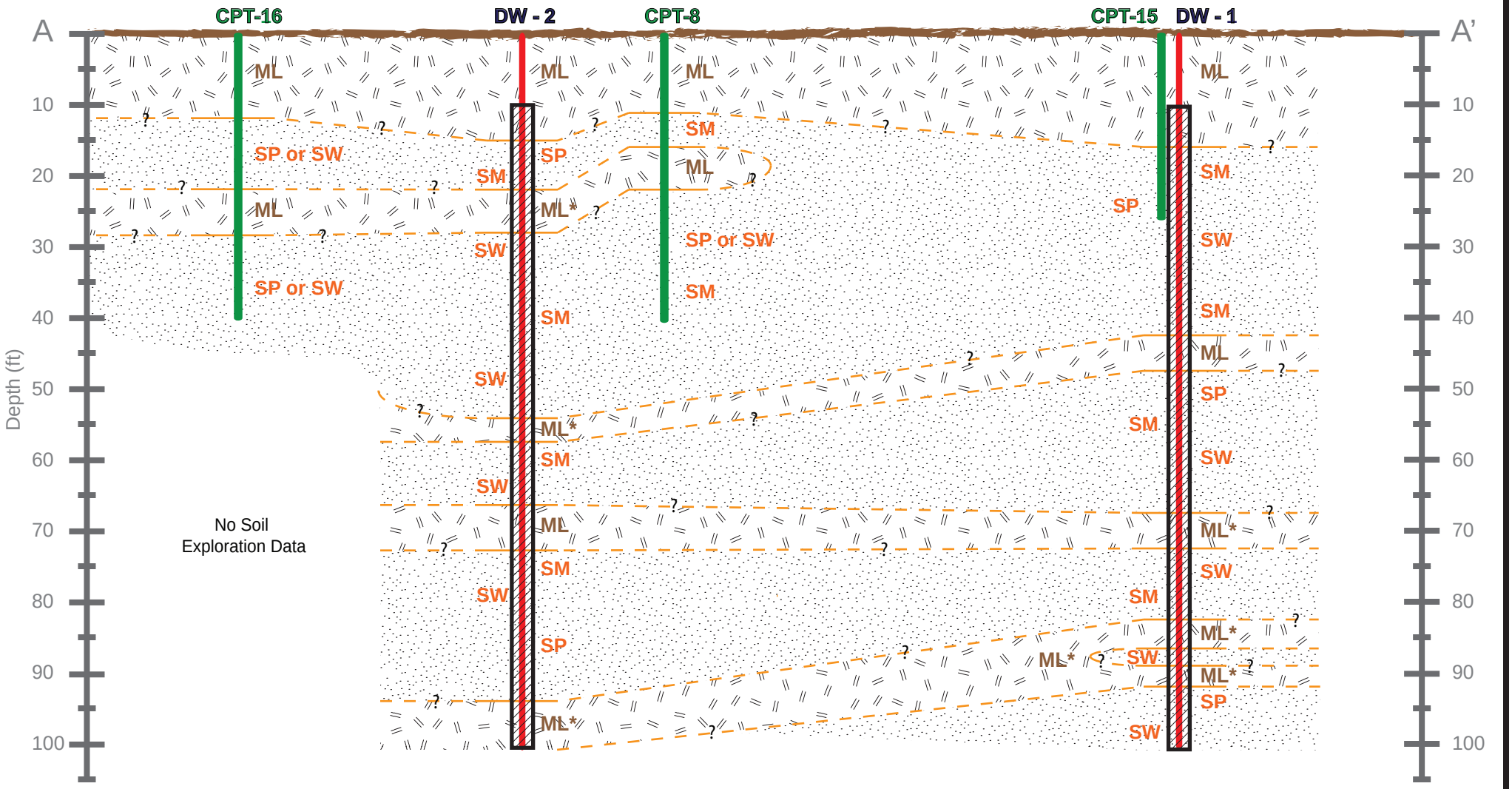
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

BORING LOCATIONS
Montebello LMD - Phase II
Northside Drive: Server Avenue to Garfield Avenue
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: GM	Scale: as shown	Figure 6

CROSS-SECTION A-A'



LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Ground Surface
- Percolation Testing Zones: 10 to 100 feet for DW-1 & DW-2

- ML — Silt, Sandy Silt
- SM — Silty Sand
- SP — Poorly-graded Sand
- SW — Well-graded Sand
- Defined contact
- ? Contact uncertain

ML

SM, SP, SW

0 ft 60 ft 120 ft

Horizontal Scale: 1 in = 60 ft
Vertical Scale: 1 in = 20 ft

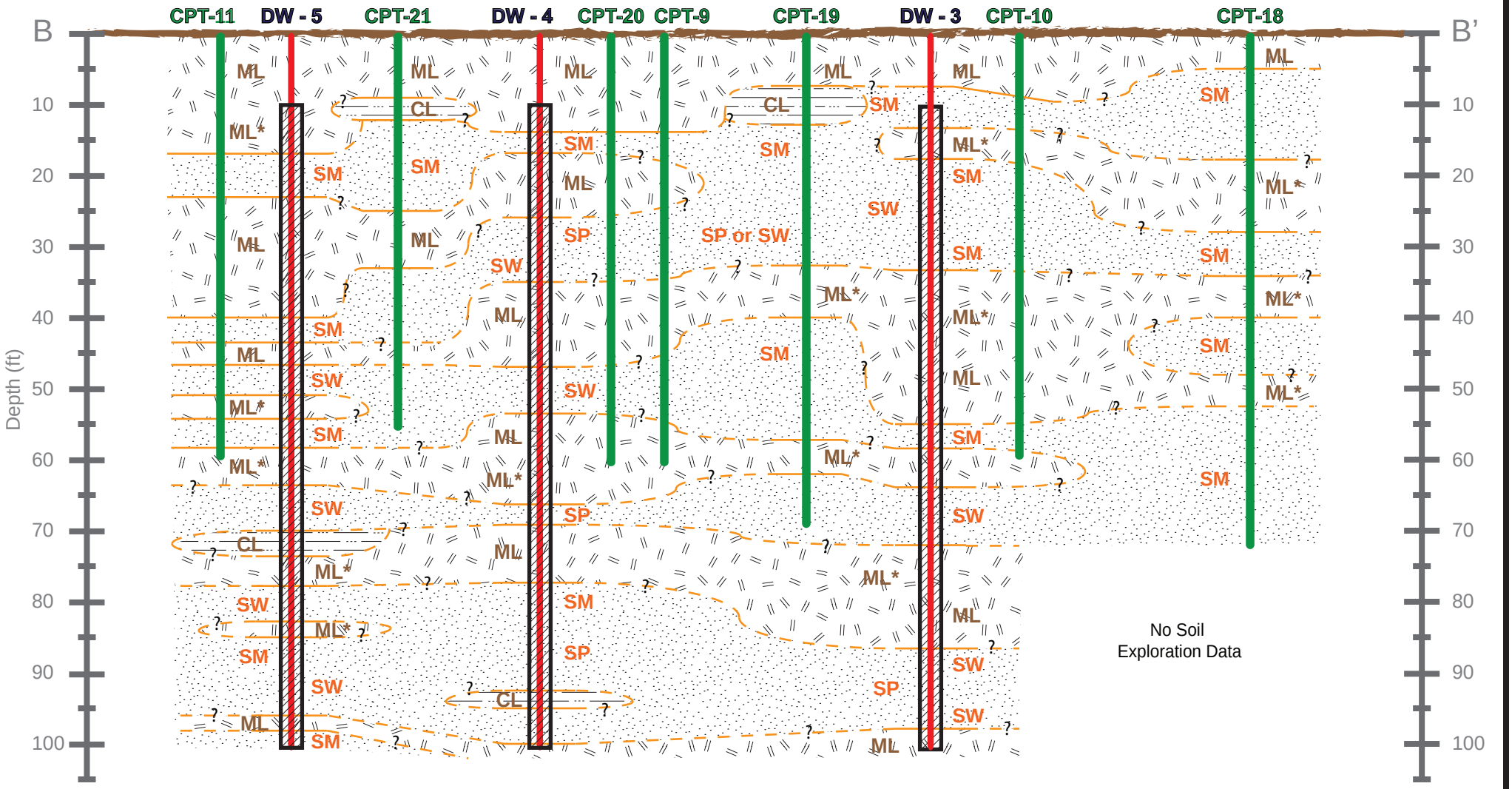
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CROSS SECTION A - A' SOIL PROFILE
Montebello LMD - Phase II
Montebello Parkway: Leonard Place to Leonard Avenue
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: JJU	Scale: as shown	FIGURE 7

CROSS-SECTION B-B'



LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Ground Surface
- Percolation Testing Zones: 10 to 100 feet for DW-3 to DW-5
- Defined contact
- Contact uncertain

CL	Lean Clay
ML	Silt, Sandy Silt
SM	Silty Sand
SP	Poorly-graded Sand
SW	Well-graded Sand

CL

ML

SM, SP, SW

0 ft — 180 ft — 360 ft

Horizontal Scale: 1 in = 180 ft
Vertical Scale: 1 in = 20 ft

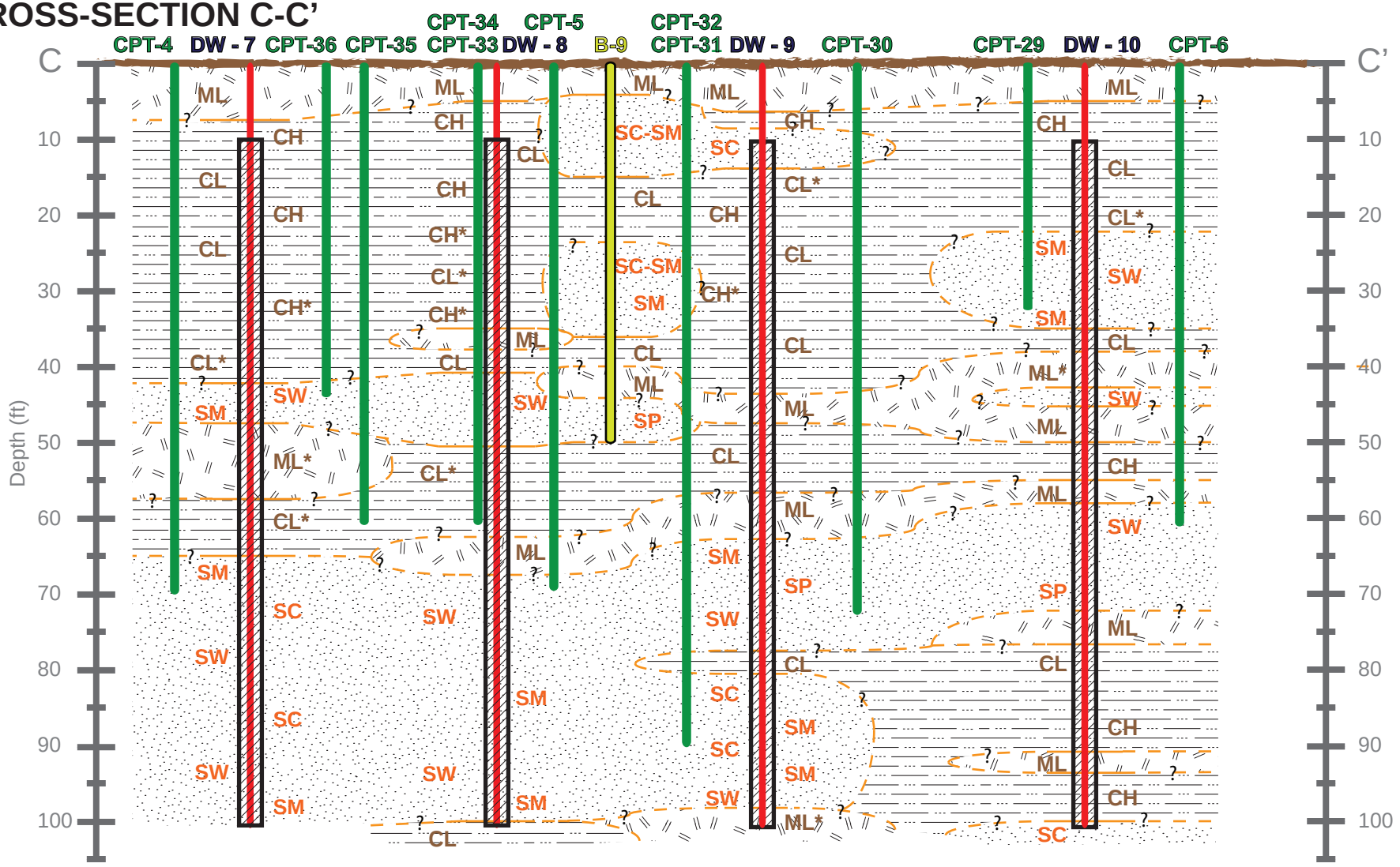
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CROSS SECTION B -B' SOIL PROFILE
Montebello LMD - Phase II
Northside Drive: Olympic Boulevard to Hendricks Avenue
Unincorporated East Los Angeles

Date: Aug 2017	Drafted by: JJU	Scale: as shown	FIGURE 8

CROSS-SECTION C-C'



LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Hollow-stem boring (Phase I, 2016)
- Ground Surface
- Percolation Testing Zones: 10 to 100 feet for DW-7 to DW-10

CH	Fat Clay, Sandy Fat Clay
CL	Lean Clay, Sandy Lean Clay
ML	Silt, Sandy Silt
SC	Clayey Sand
SM	Silty Sand
SP	Poorly-graded Sand
SW	Well-graded Sand

- Defined contact
- Contact uncertain

- CH, CL
- ML
- SC, SM, SP, SW

0 ft — 180 ft — 360 ft

Horizontal Scale: 1 in = 180 ft
Vertical Scale: 1 in = 20 ft

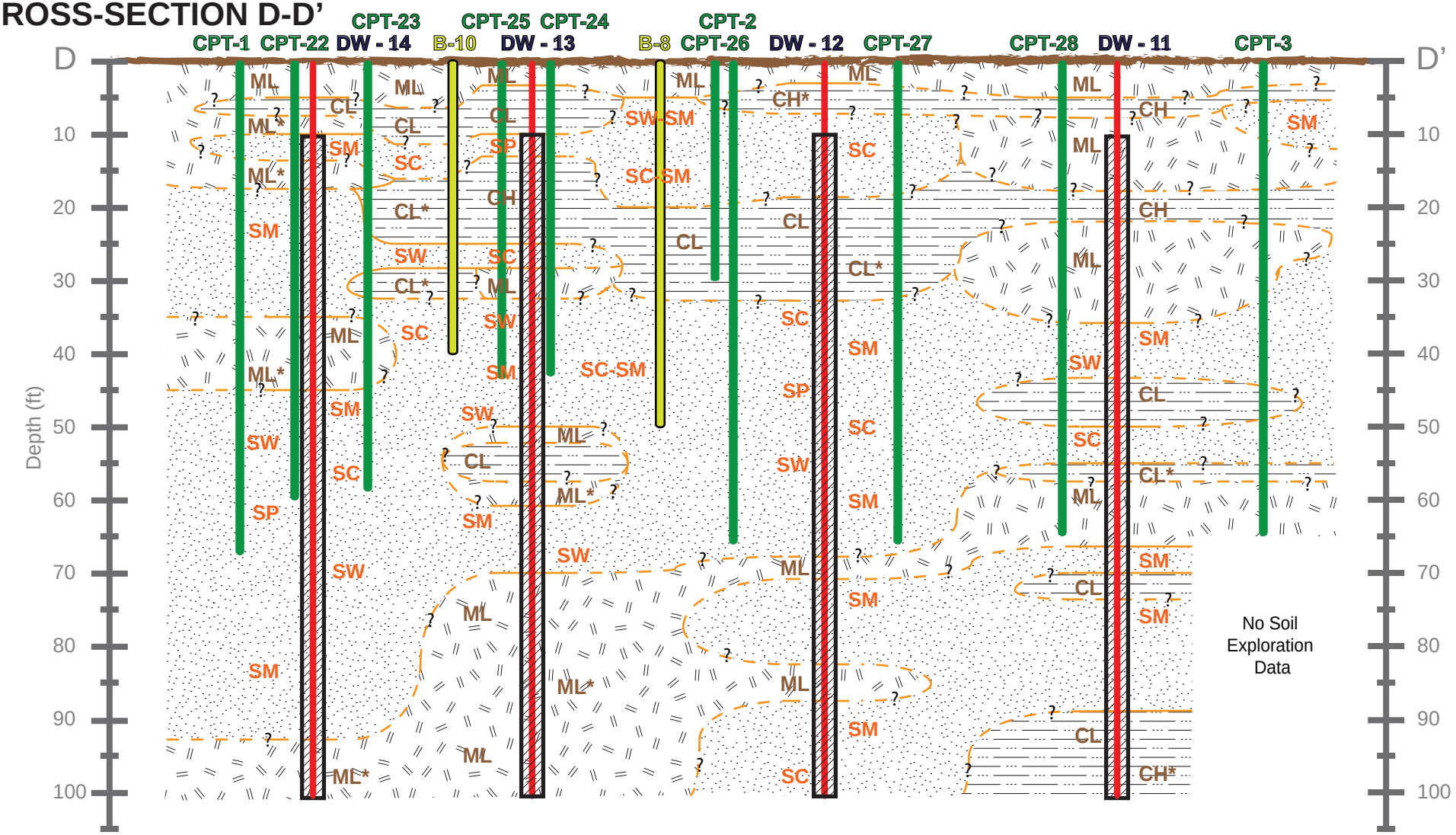
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CROSS SECTION C - C' SOIL PROFILE
Montebello LMD - Phase II
Southside Drive: Server Avenue to Garfield Avenue
Unincorporated East Los Angeles

Date: Sept 2017	Drafted by: JJU	Scale: as shown	FIGURE 9

CROSS-SECTION D-D'



LEGEND

- Cone Penetration Test (CPT)
- Drywell Permeability Test
- Hollow-stem boring (Phase I, 2016)
- Ground Surface
- Percolation Testing Zones: 10 to 100 feet for DW-11 to DW-14

CH	Fat Clay, Sandy Fat Clay
CL	Lean Clay, Sandy Lean Clay
ML	Silt, Sandy Silt
SC	Clayey Sand
SM	Silty Sand
SP	Poorly-graded Sand
SW	Well-graded Sand

- Defined contact
- Contact uncertain

- CH, CL
- ML
- SC, SM, SP, SW

0 ft — 180 ft — 360 ft

Horizontal Scale: 1 in = 180 ft
Vertical Scale: 1 in = 20 ft

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CROSS SECTION D - D' SOIL PROFILE
Montebello LMD - Phase II
Northside Drive: Server Avenue to Garfield Avenue
Unincorporated East Los Angeles

Date: Sept 2017	Drafted by: JJU	Scale: as shown	FIGURE 10

Infiltration Testing Results - Calculations

Percolation Rating Performace
Below recommendation
Acceptable
High Flow

Date:	7/27/2017	**Number of Test:**	14

Project:	Montebello LMD
PCA:	F21815i10

Drywell No.	**Location**	**Unadjusted Percolation Rate (in/hr)**	**(Reduction Factor) RF_{total}**	**Design Percolation Rate (in/hr)**	***Design flow rate by diameter of drywell**			
					20-in diameter (tested) (gpm)	**4-ft diameter (gpm)**	**5-ft diameter (gpm)**	**6-ft diameter (gpm)**
DW-1	Montebello Pkwy at Leonard Pl (north island)	7.77	1.72	4.52	22.12	53.10	66.37	79.64
DW-2	Montebello Pkwy at Leonard Pl (south island)	8.66	1.72	5.04	24.68	59.23	74.04	88.84
DW-3	In front of 6035 Northside Dr	11.83	1.72	6.88	33.70	80.88	101.11	121.33
DW-4	In front of 5951 Northside Dr	15.80	2.15	7.35	35.99	86.39	107.98	129.58
DW-5	In front of 5912 Northside Dr	11.00	1.72	6.40	31.33	75.18	93.98	112.78
DW-6	In front of 5962 Southside Dr	6.92	2.15	3.22	15.77	37.85	47.32	56.78
DW-7	In front of 6421 Southside Dr	11.57	2.15	5.39	26.38	63.30	79.13	94.95
DW-8	In front of 6450 Southside Dr	5.17	2.15	2.41	11.79	28.29	35.36	42.43
DW-9	In front of 6521 Southside Dr	9.52	2.15	4.43	21.69	52.05	65.06	78.07
DW-10	In front of 5551 Southside Dr	4.67	2.15	2.17	10.64	25.54	31.92	38.31
DW-11	In front of 6551 Northside Dr	6.71	2.15	3.12	15.30	36.71	45.89	55.06
DW-12	In front of 6518 Northside Dr	3.00	2.15	1.40	6.83	16.39	20.49	24.59
DW-13	In front of 6444 Northside Dr	13.40	1.89	7.09	34.71	83.30	104.12	124.94
DW-14	In front of 6421 Northside Dr	10.15	1.89	5.37	26.28	63.07	78.83	94.60

NOTE: *based on 90-ft of head, 100-ft deep drywell with water level at 10-ft below surface.

APPENDIX A

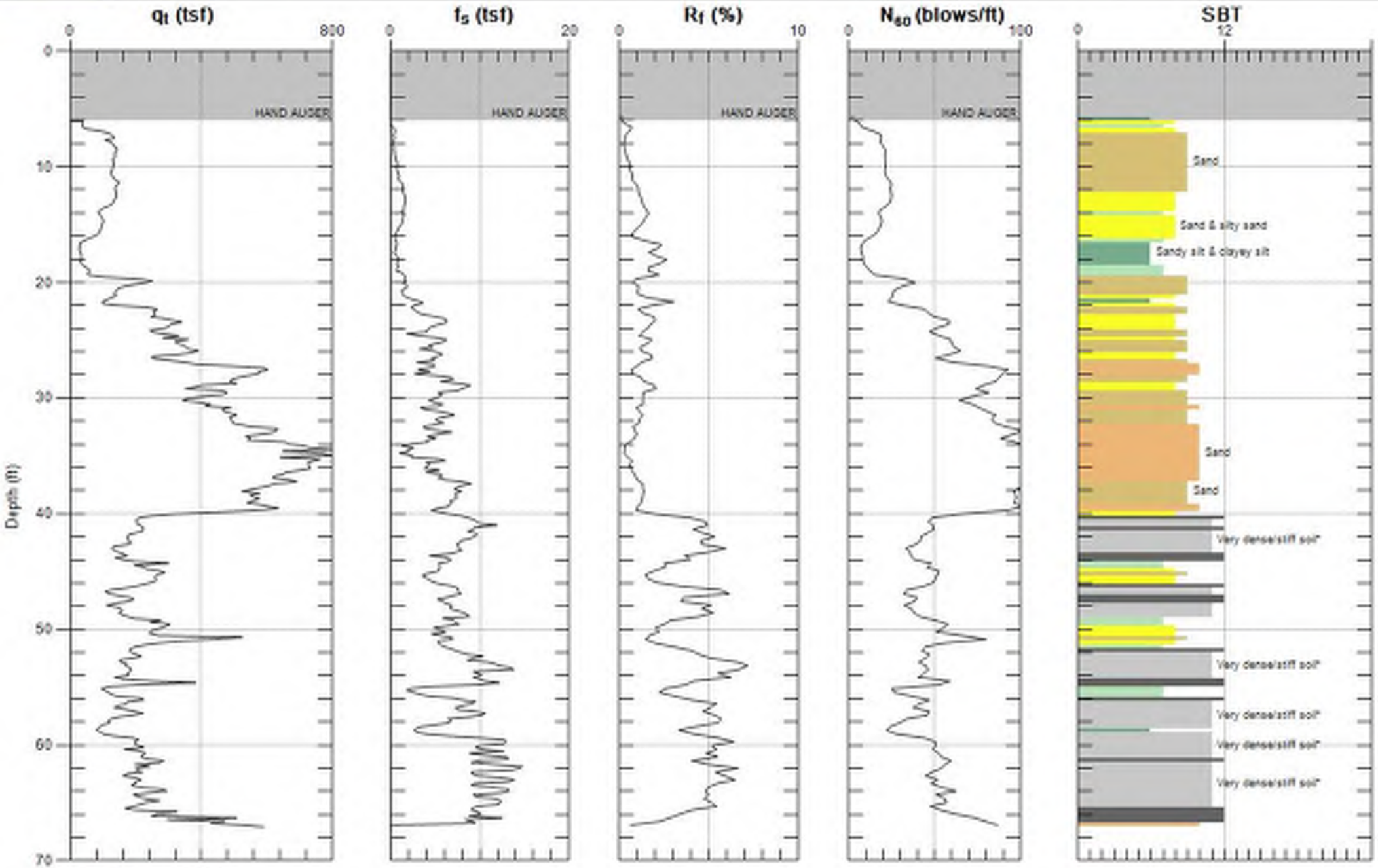
Cone Penetration Test Results

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-1

Engineer: J.URQUIZO
Date: 2/4/2016 08:12



Max. Depth: 67.093 (ft)
Avg. Interval: 0.328 (ft)

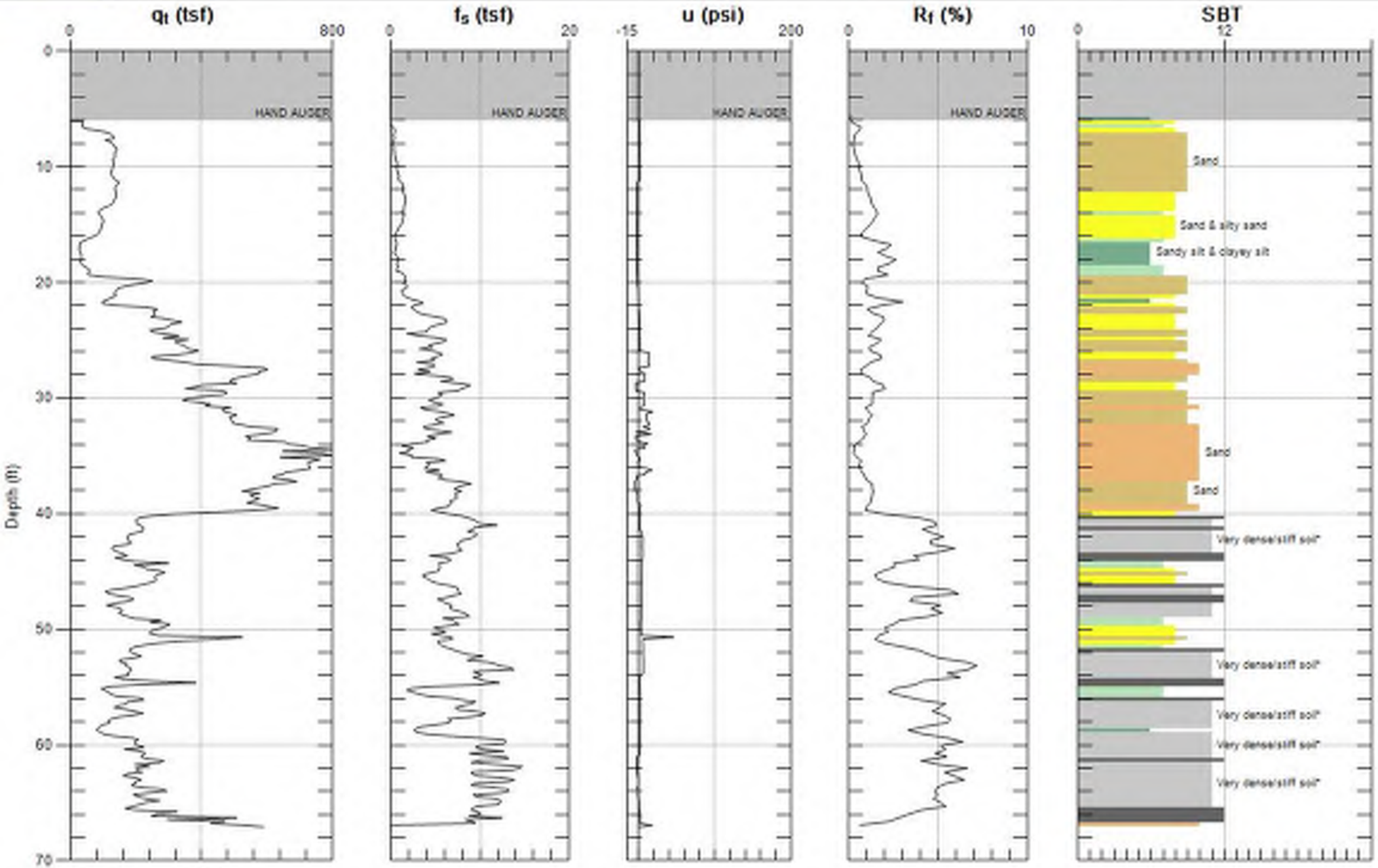
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-1

Engineer: J.URQUIZO
Date: 2/4/2016 08:12



Max. Depth: 67.093 (ft)
Avg. Interval: 0.328 (ft)

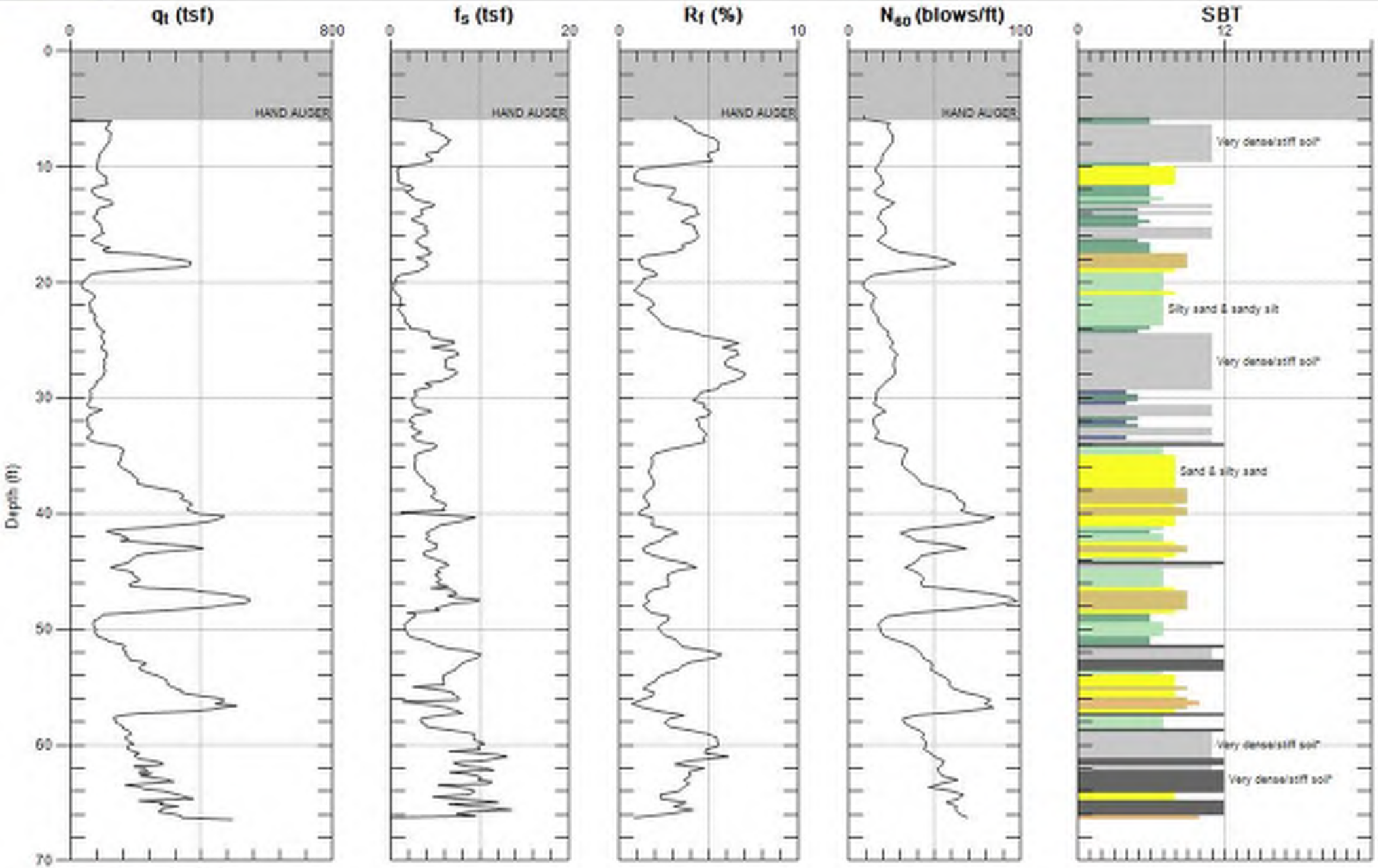
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-2

Engineer: J.URQUIZO
Date: 2/4/2016 09:44



Max. Depth: 66.437 (ft)
Avg. Interval: 0.328 (ft)

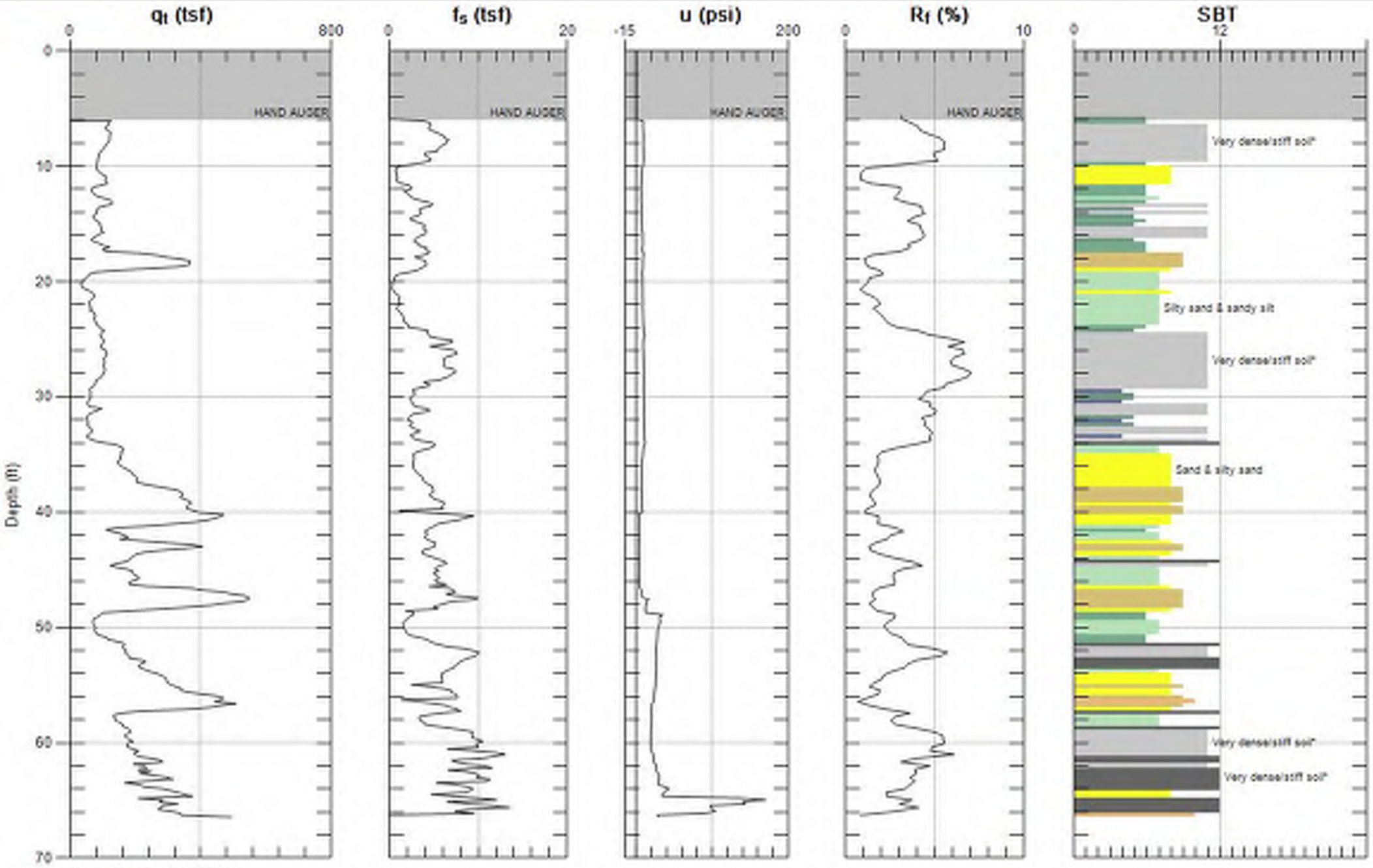
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-2

Engineer: J.URQUIZO
Date: 2/4/2016 09:44



Max. Depth: 66.437 (ft)
Avg. Interval: 0.328 (ft)

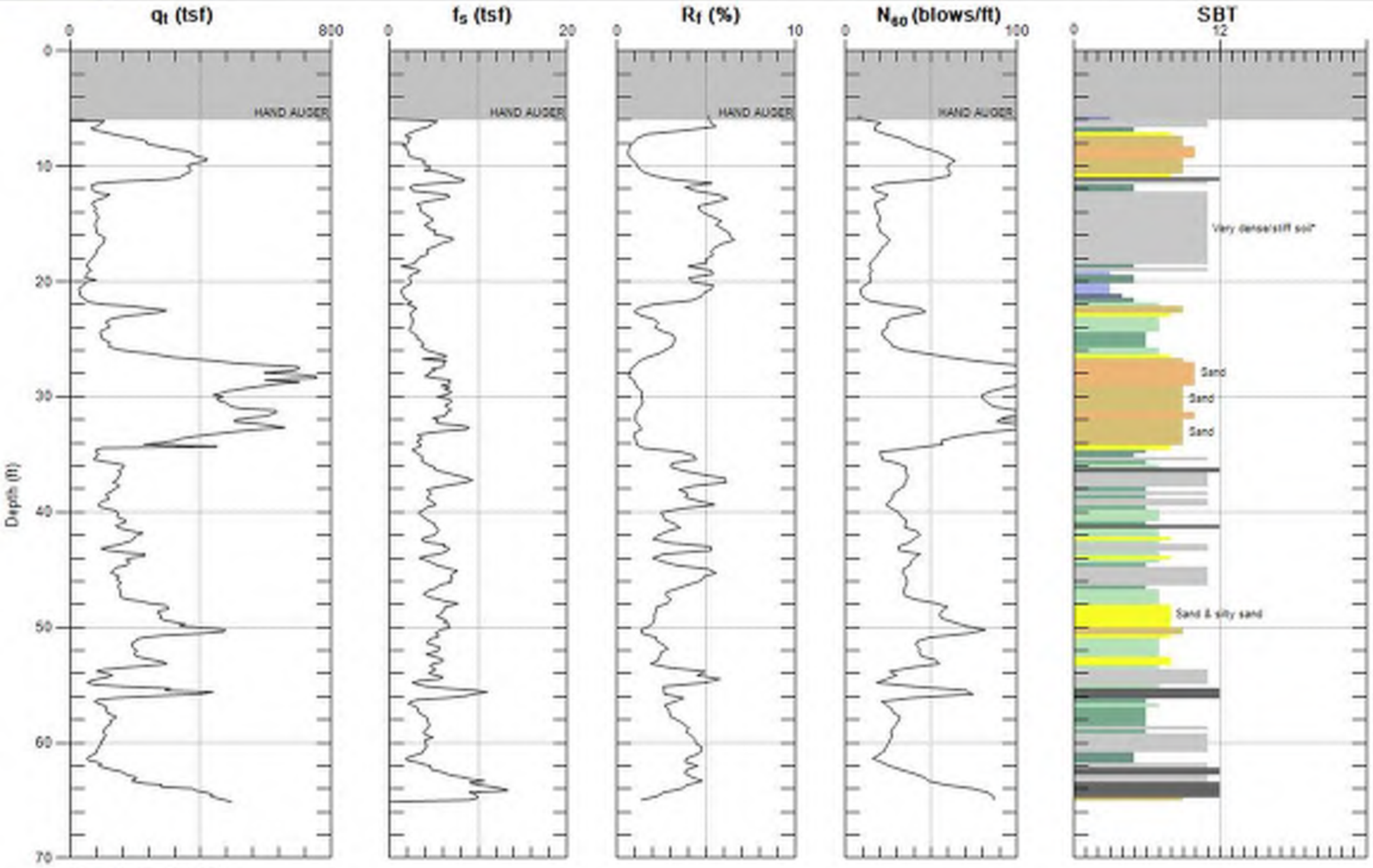
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-3

Engineer: J.URQUIZO
Date: 2/4/2016 10:36



Max. Depth: 65.125 (ft)
Avg. Interval: 0.328 (ft)

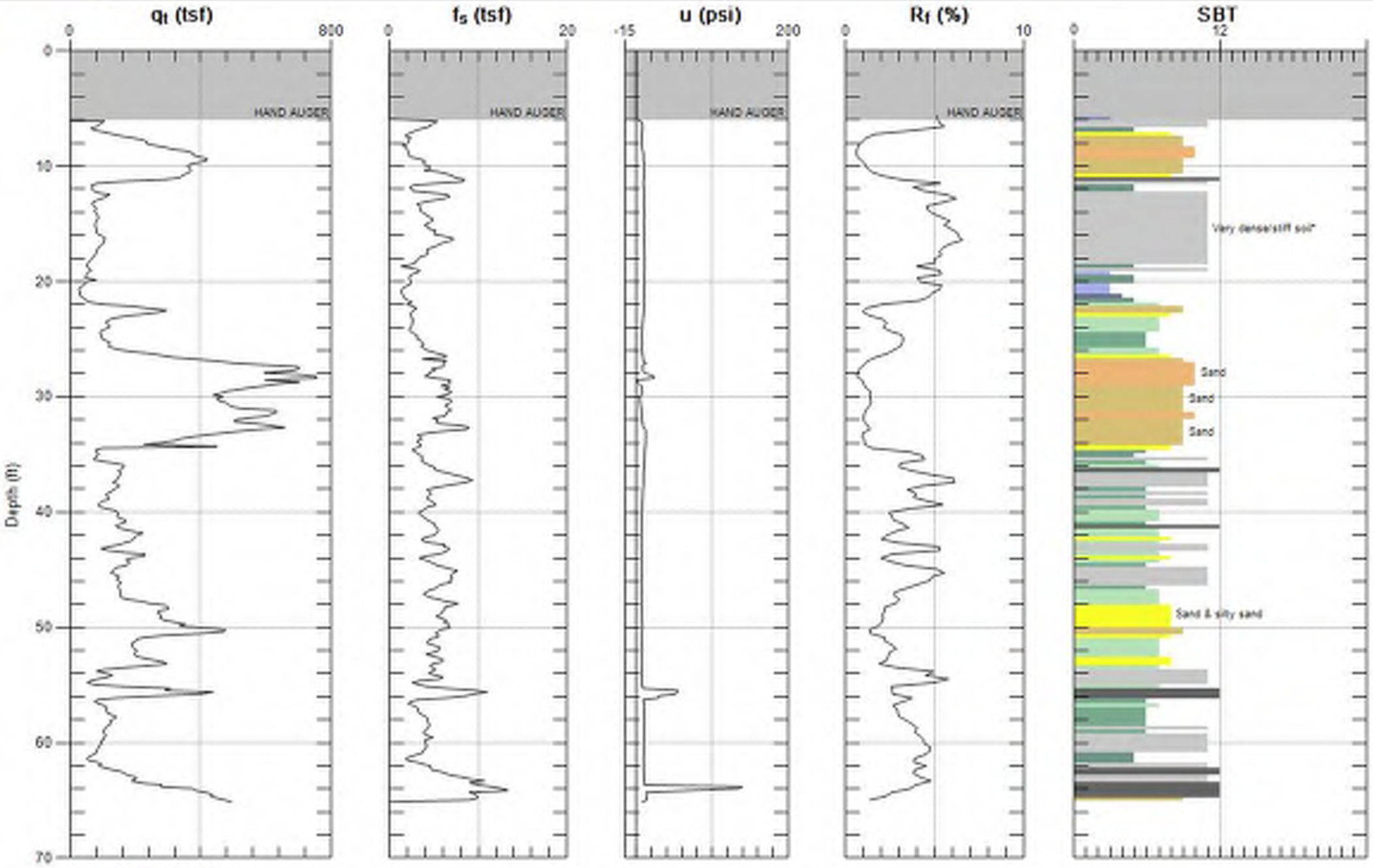
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-3

Engineer: J.URQUIZO
Date: 2/4/2016 10:36



Max. Depth: 65.125 (ft)
Avg. Interval: 0.328 (ft)

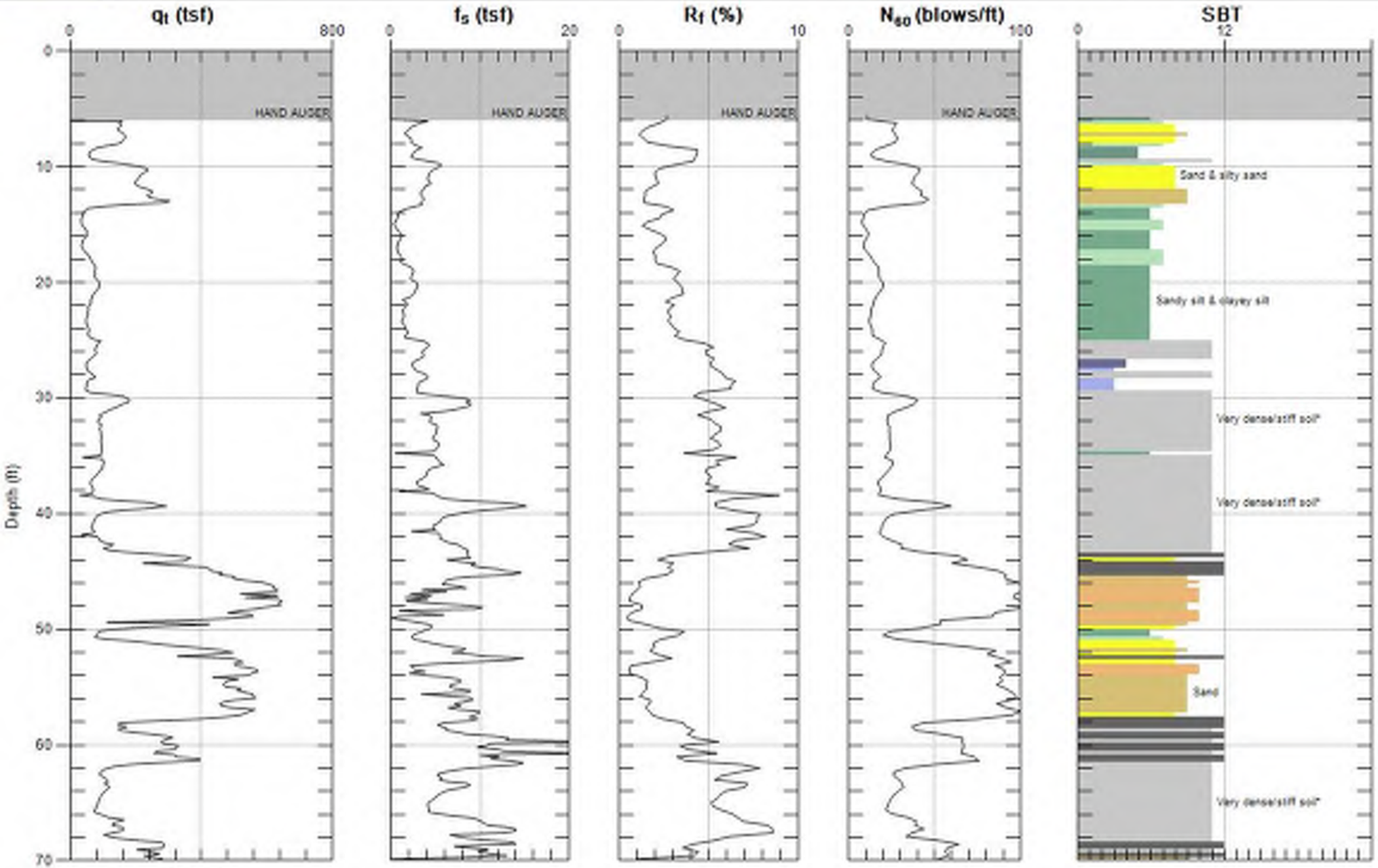
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-4

Engineer: J.URQUIZO
Date: 2/4/2016 11:34



Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

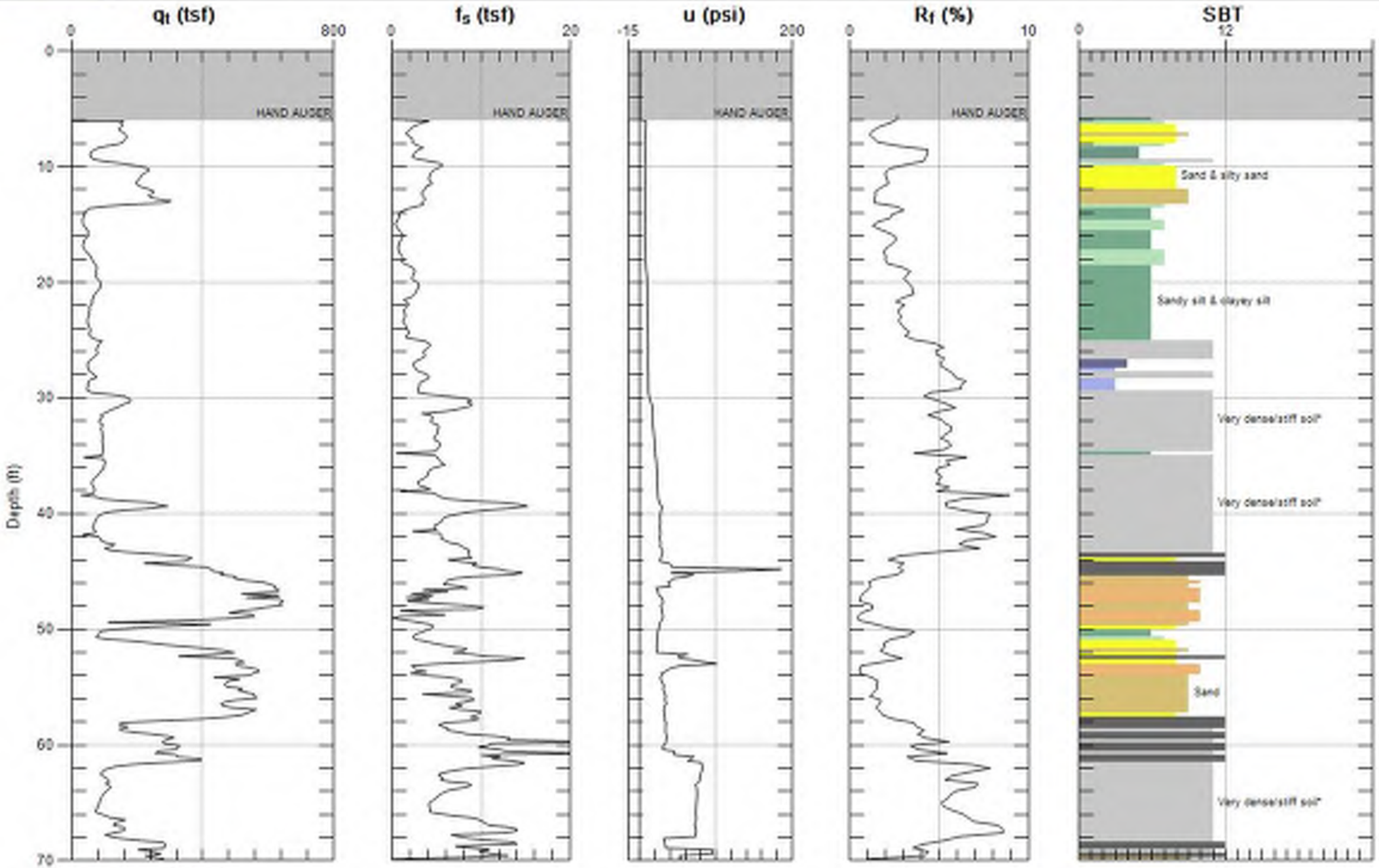
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-4

Engineer: J.URQUIZO
Date: 2/4/2016 11:34



Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

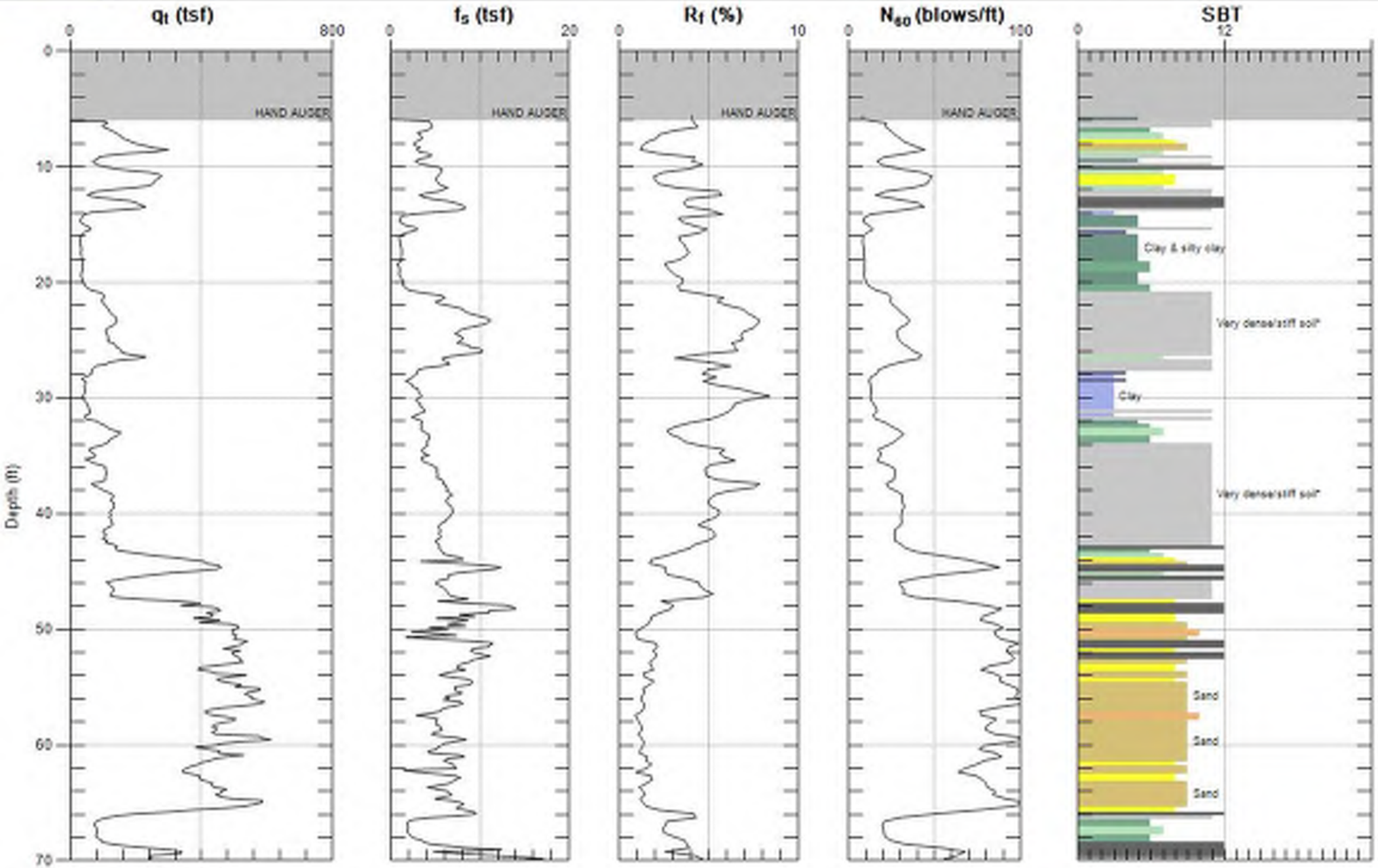
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-5

Engineer: J.URQUIZO
Date: 2/4/2016 01:31



Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

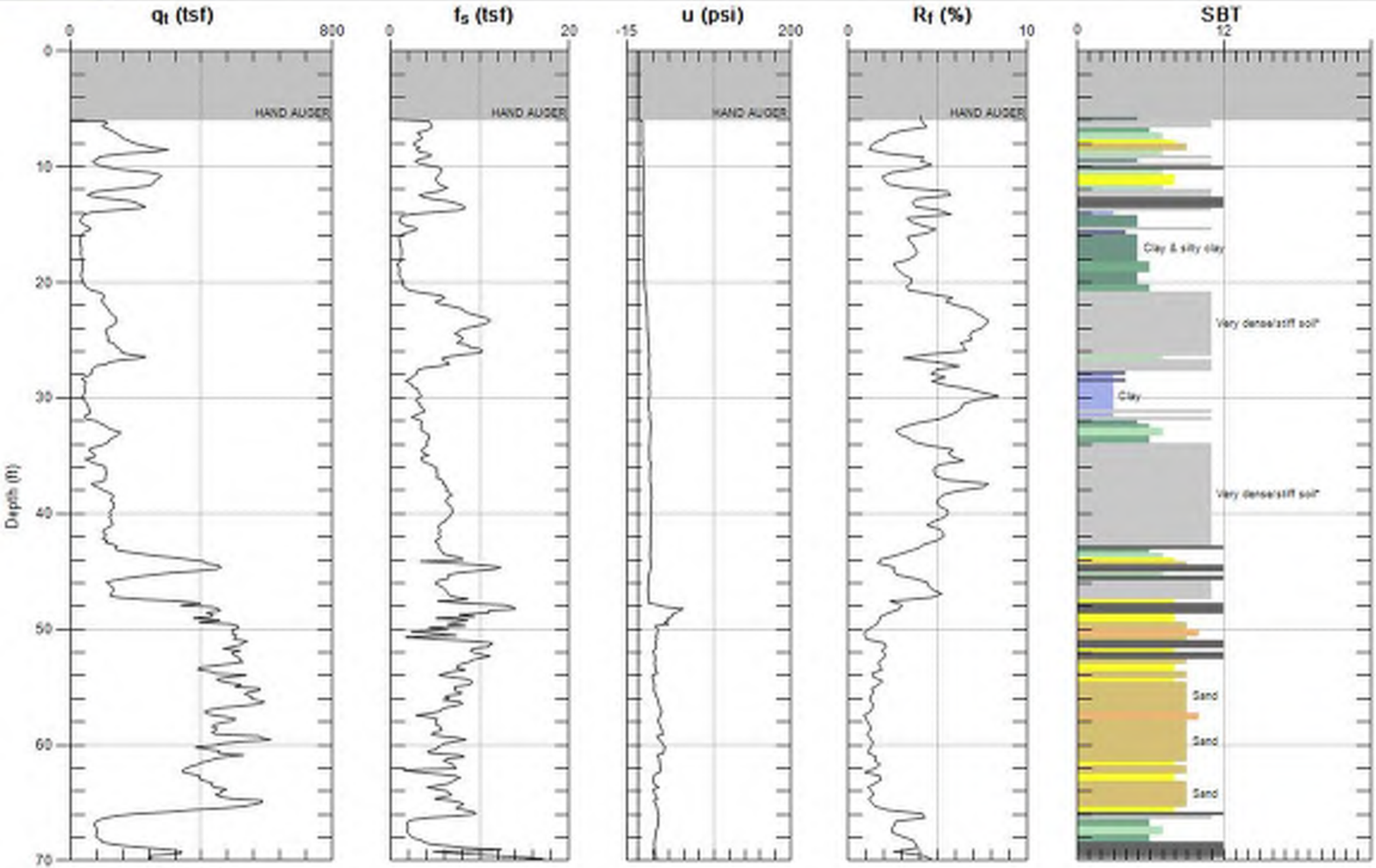
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-5

Engineer: J.URQUIZO
Date: 2/4/2016 01:31



Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

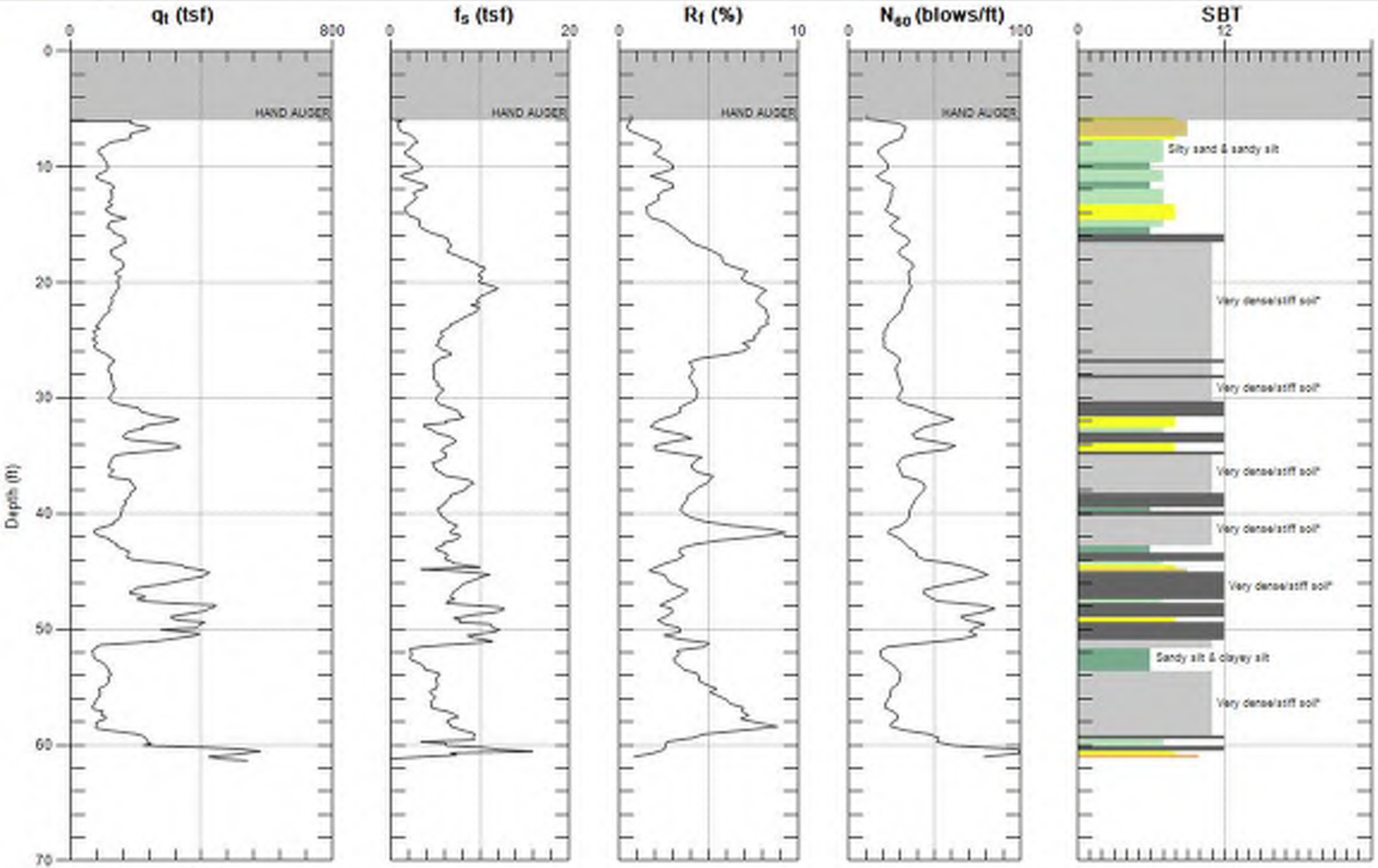
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-6

Engineer: J.URQUIZO
Date: 2/4/2016 02:31



Max. Depth: 61.352 (ft)
Avg. Interval: 0.328 (ft)

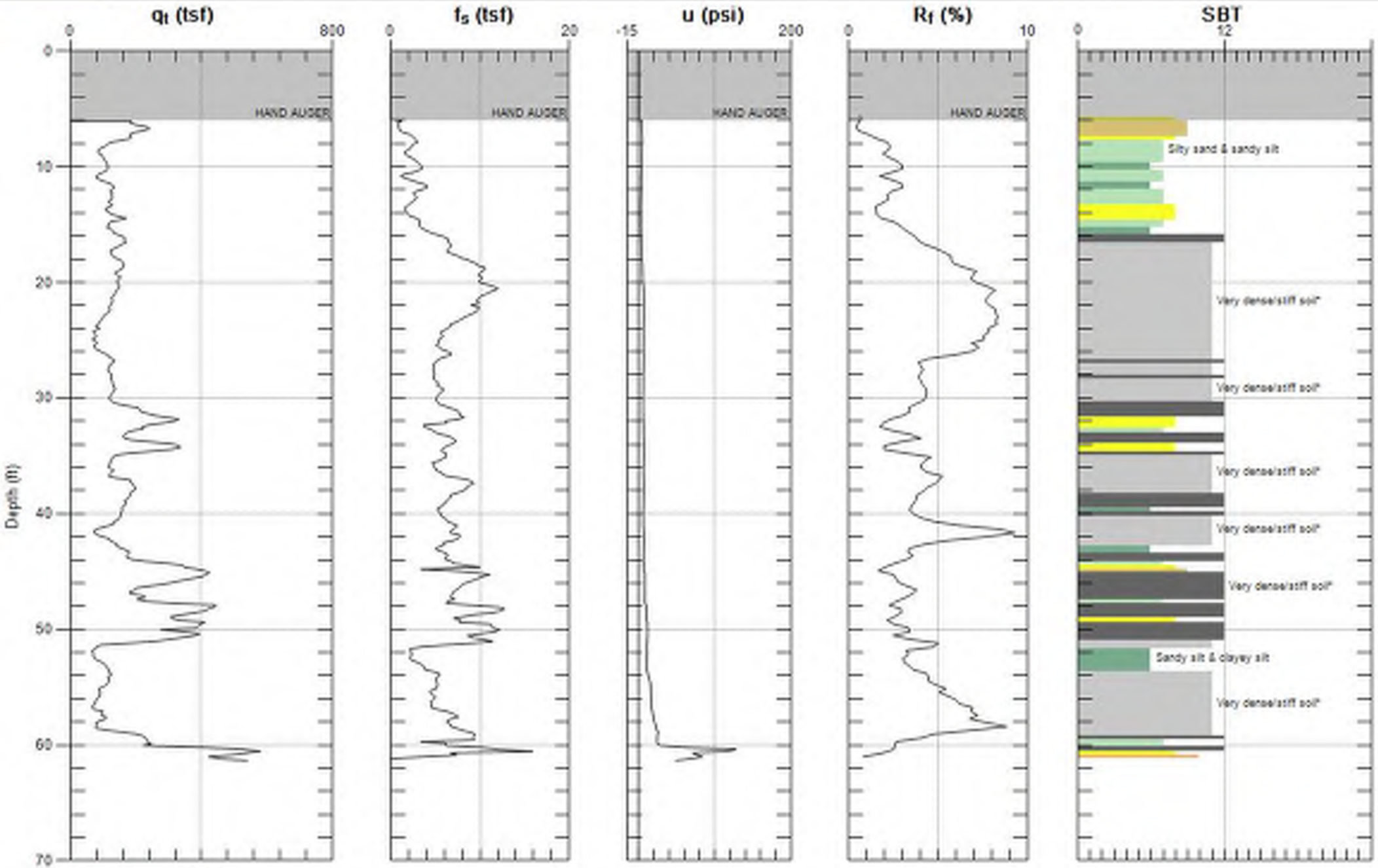
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-6

Engineer: J.URQUIZO
Date: 2/4/2016 02:31



Max. Depth: 61.352 (ft)
Avg. Interval: 0.328 (ft)

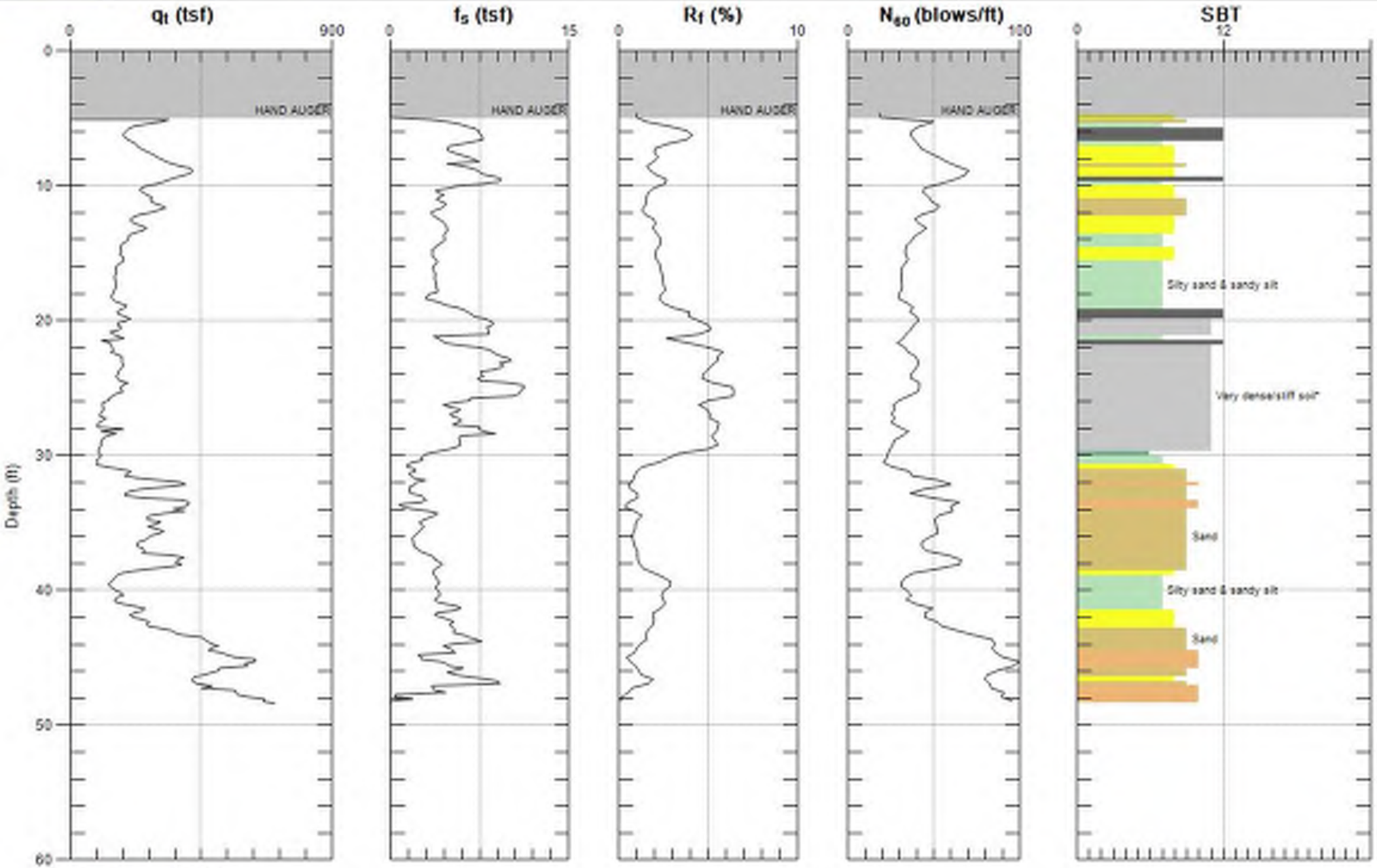
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-7

Engineer: J.URQUIZO
Date: 1/4/17 07:12



Max. Depth: 48.392 (ft)
Avg. Interval: 0.328 (ft)

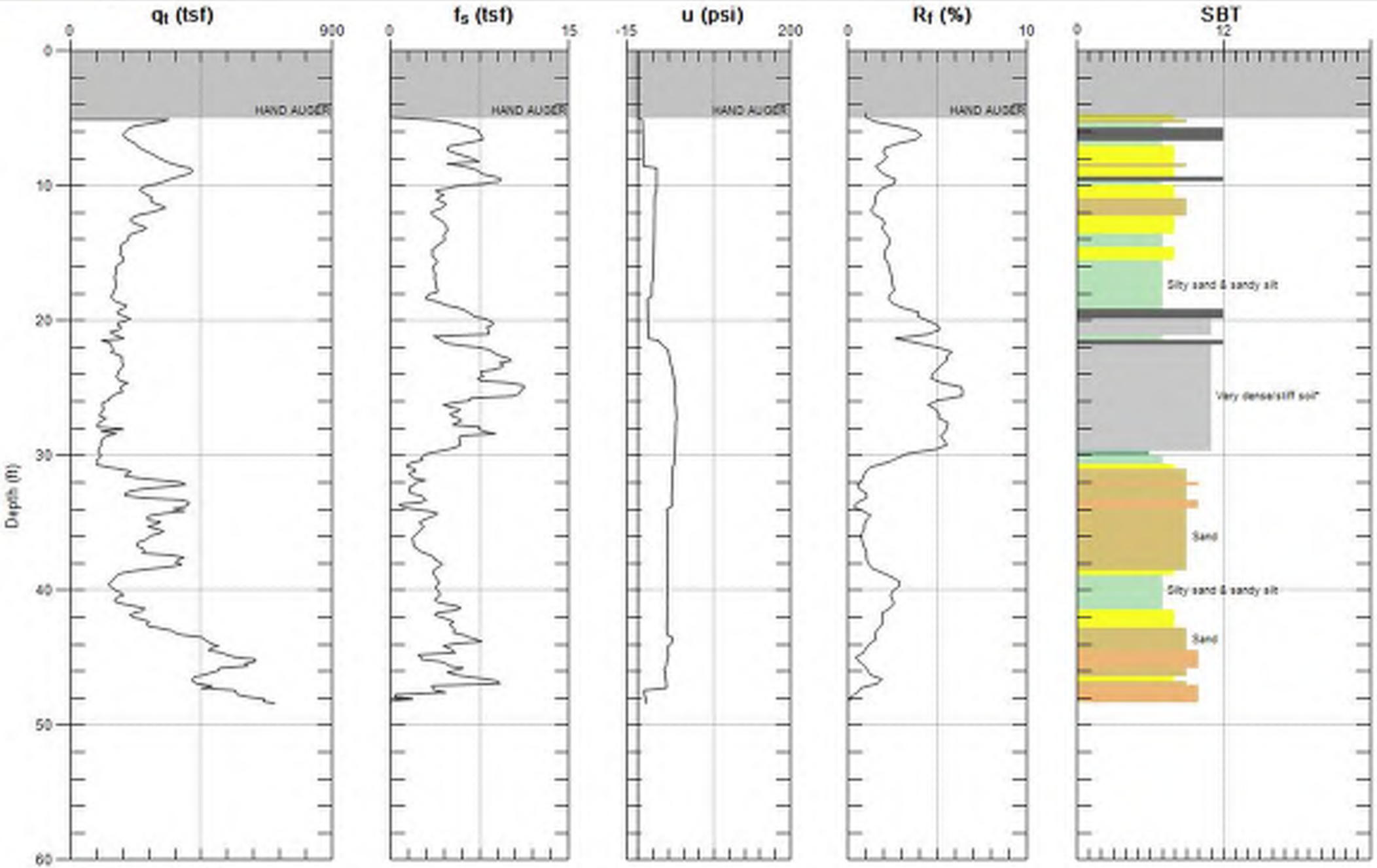
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-7

Engineer: J.URQUIZO
Date: 1/4/17 07:12



Max. Depth: 48.392 (ft)
Avg. Interval: 0.328 (ft)

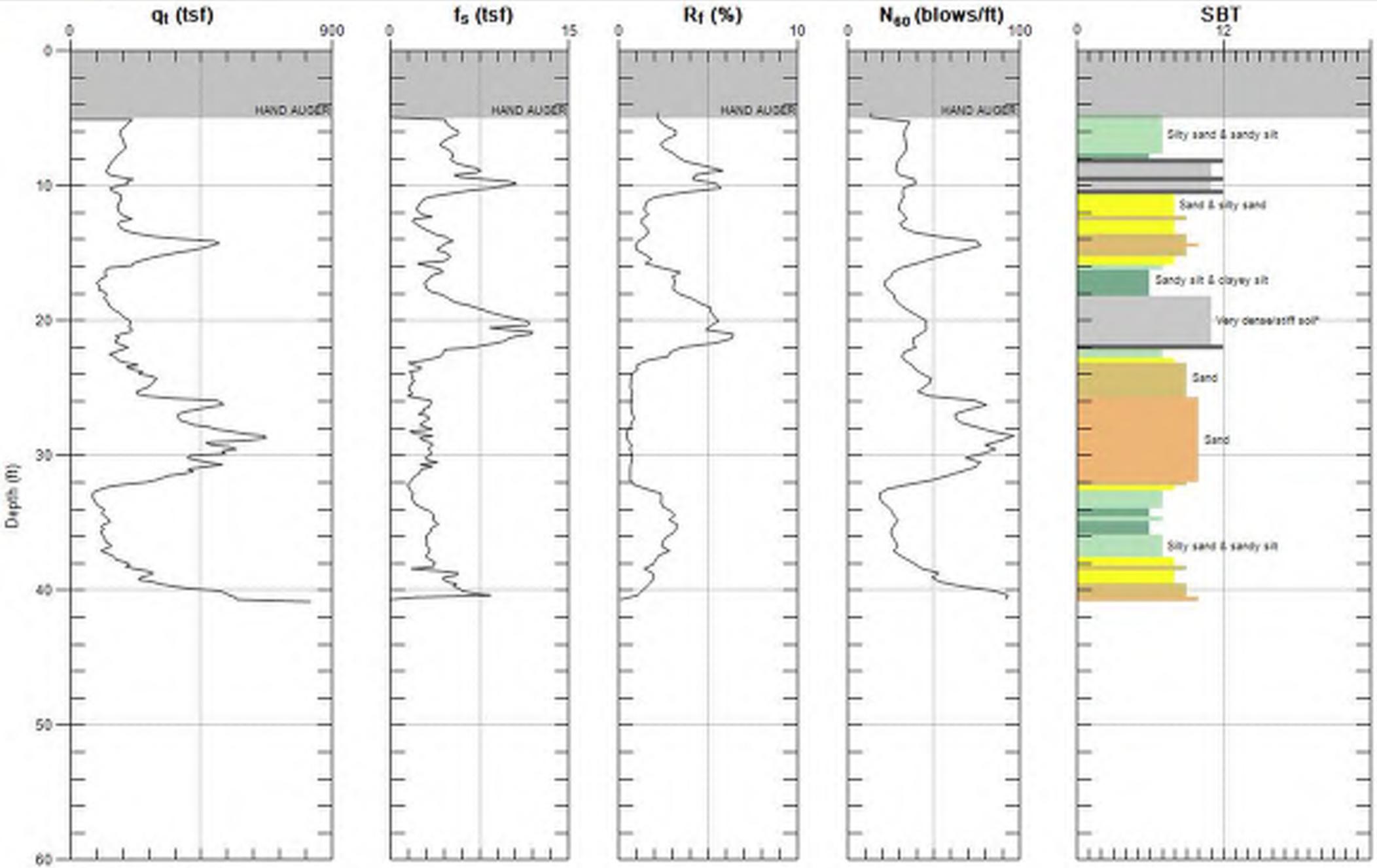
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-8

Engineer: J.URQUIZO
Date: 1/4/17 08:08



Max. Depth: 40.846 (ft)
Avg. Interval: 0.328 (ft)

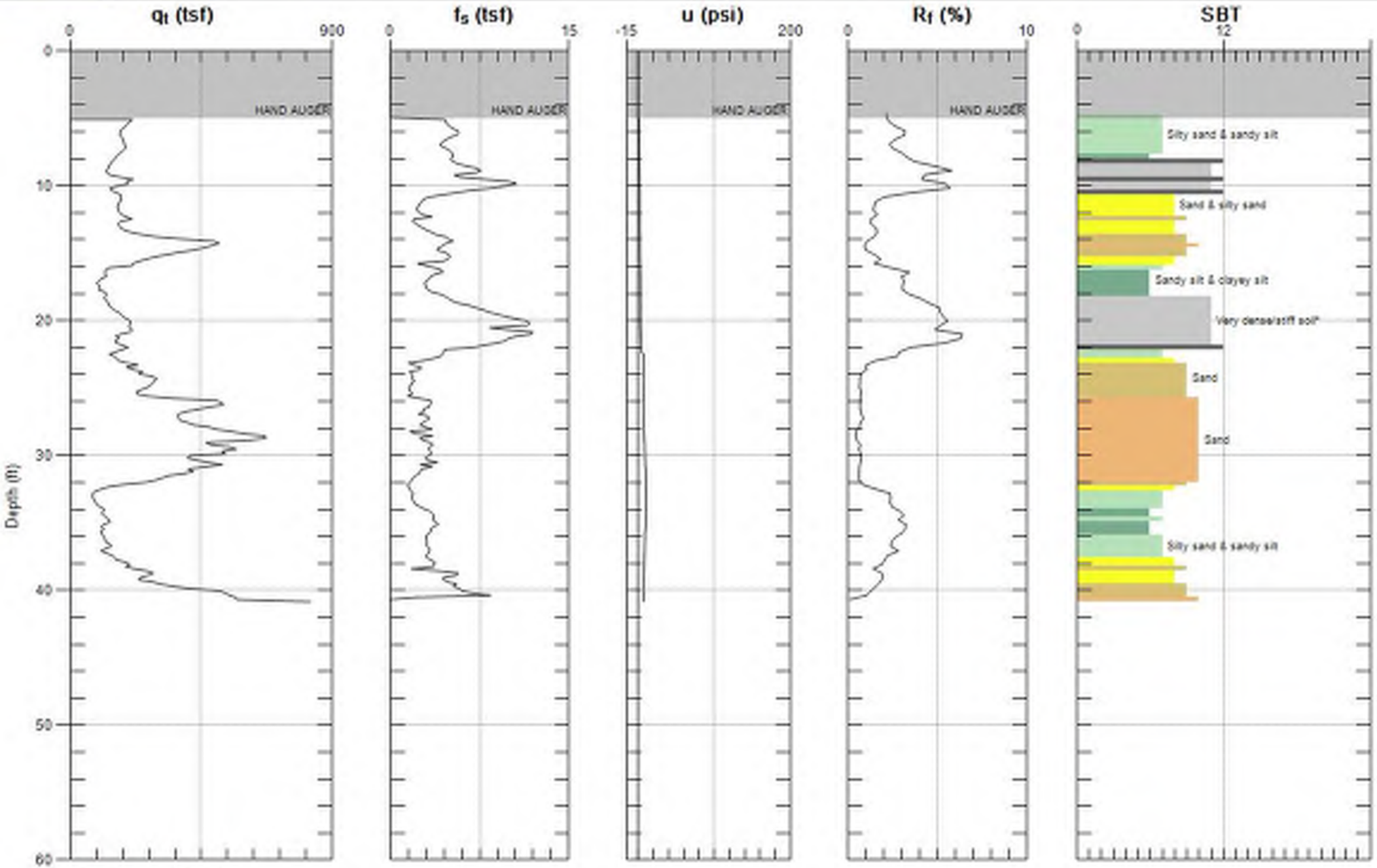
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-8

Engineer: J.URQUIZO
Date: 1/4/17 08:08



Max. Depth: 40.846 (ft)
Avg. Interval: 0.328 (ft)

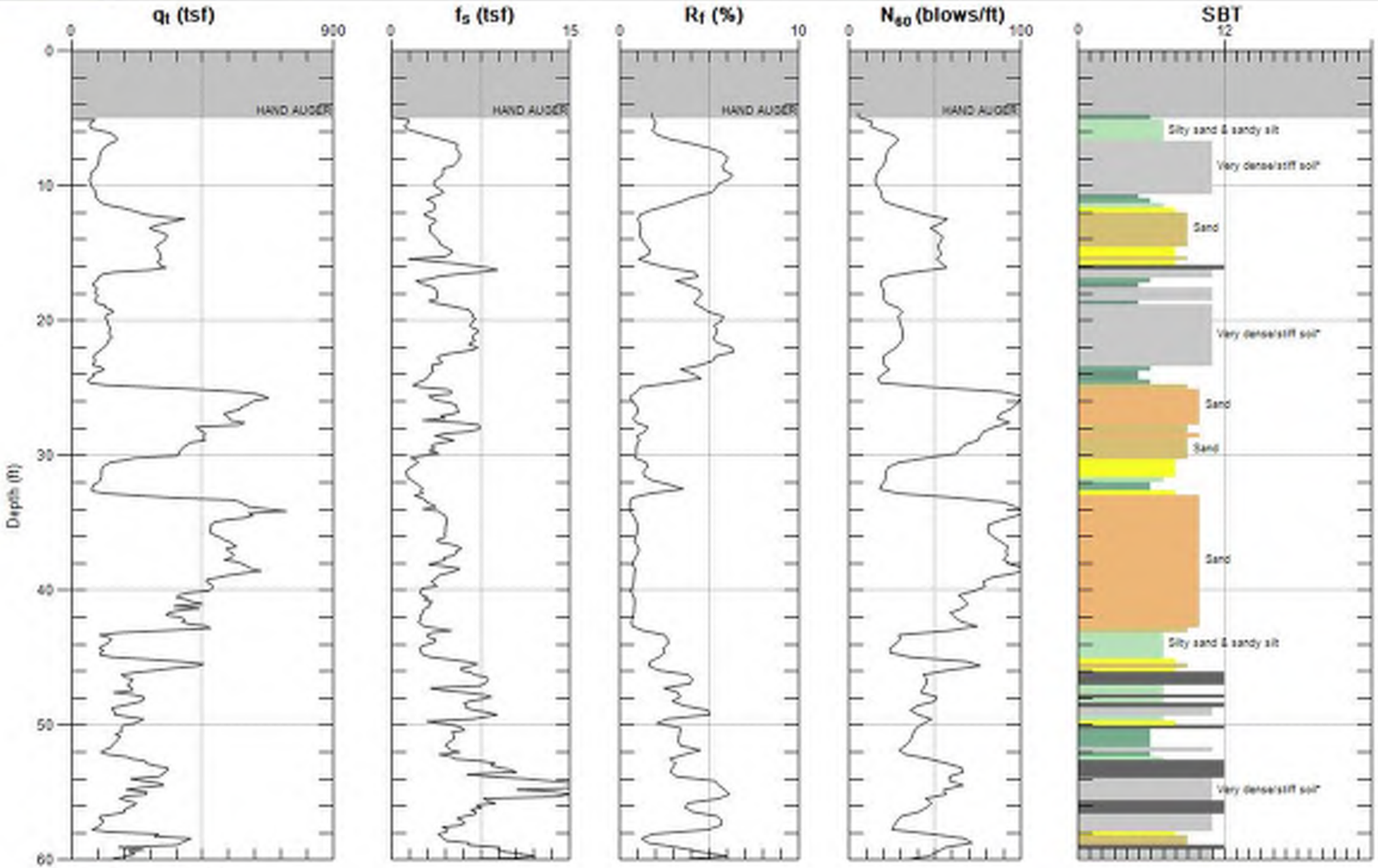
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-9

Engineer: J.URQUIZO
Date: 1/4/17 09:09



Max. Depth: 60.203 (ft)
Avg. Interval: 0.328 (ft)

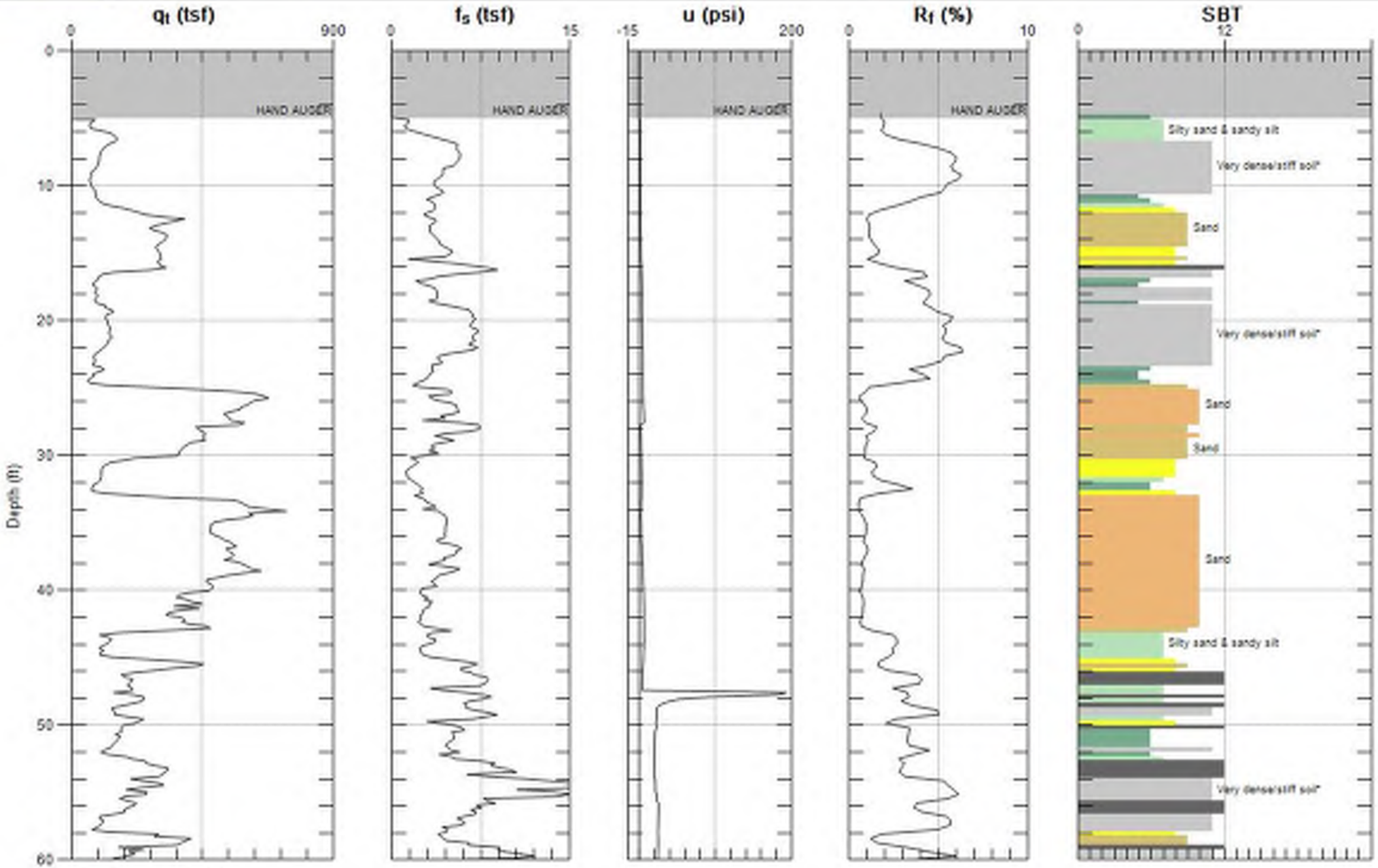
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-9

Engineer: J.URQUIZO
Date: 1/4/17 09:09



Max. Depth: 60.203 (ft)
Avg. Interval: 0.328 (ft)

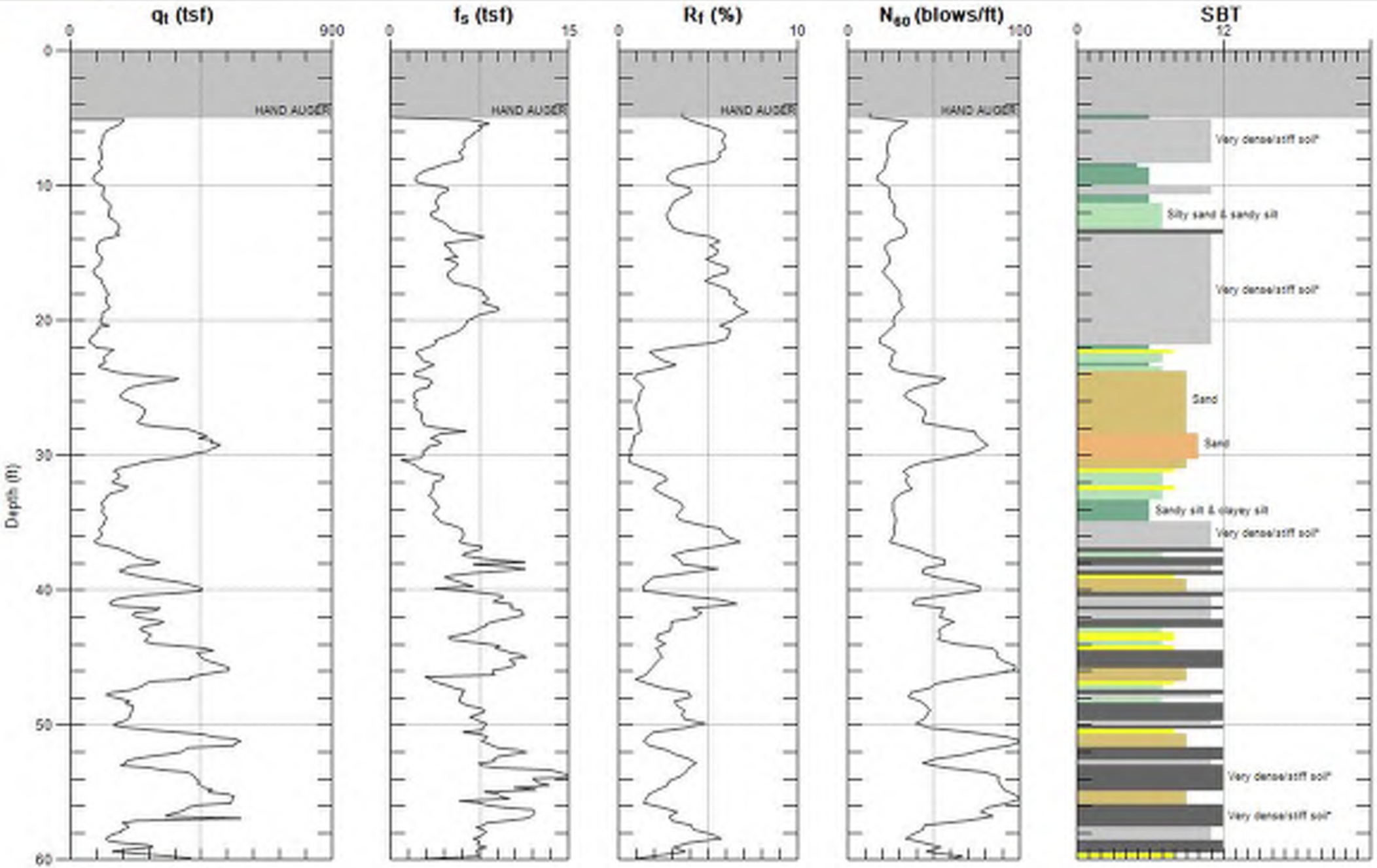
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-10

Engineer: J.URQUIZO
Date: 1/4/17 09:58



Max. Depth: 60.203 (ft)
Avg. Interval: 0.328 (ft)

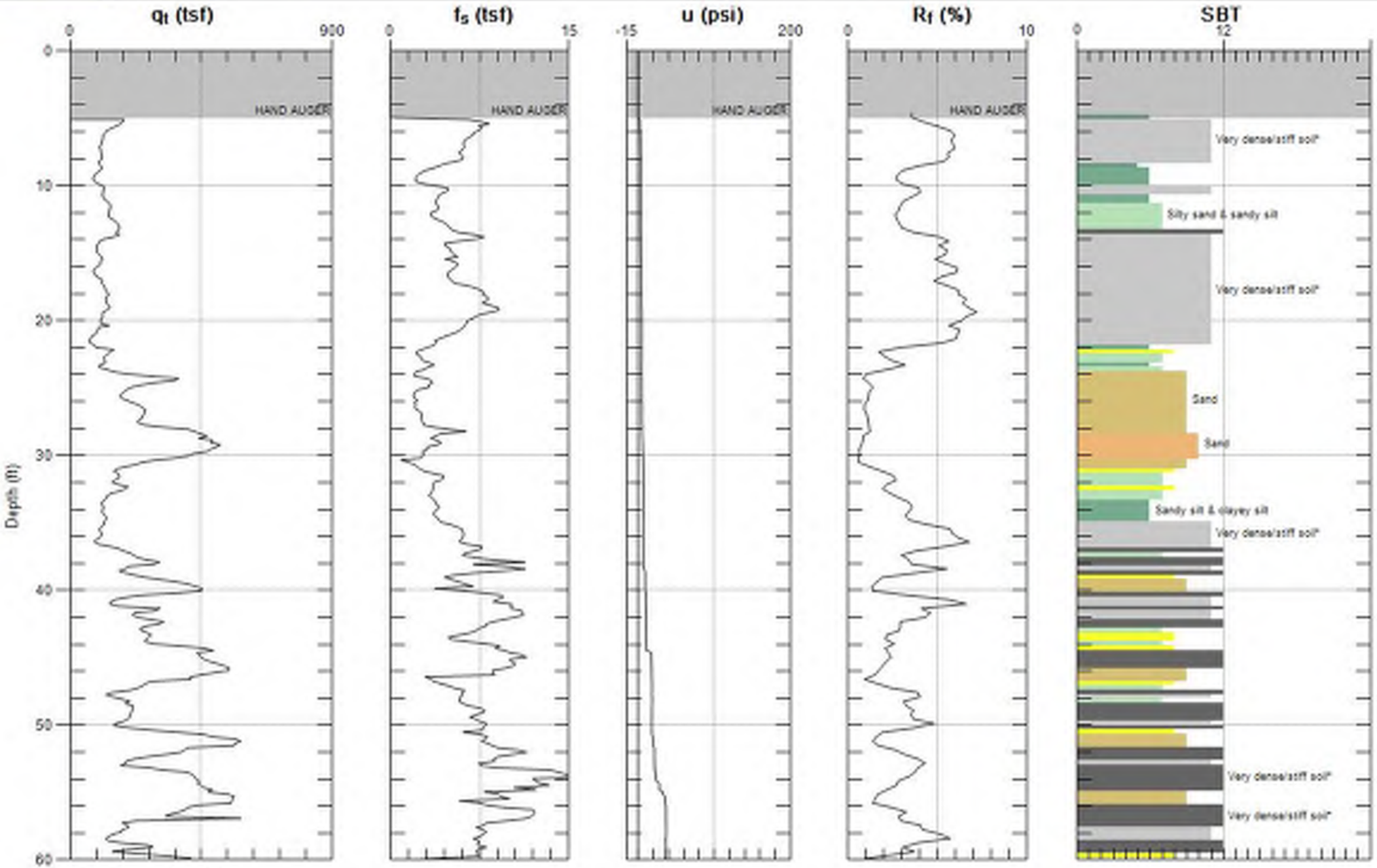
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-10

Engineer: J.URQUIZO
Date: 1/4/17 09:58



Max. Depth: 60.203 (ft)
Avg. Interval: 0.328 (ft)

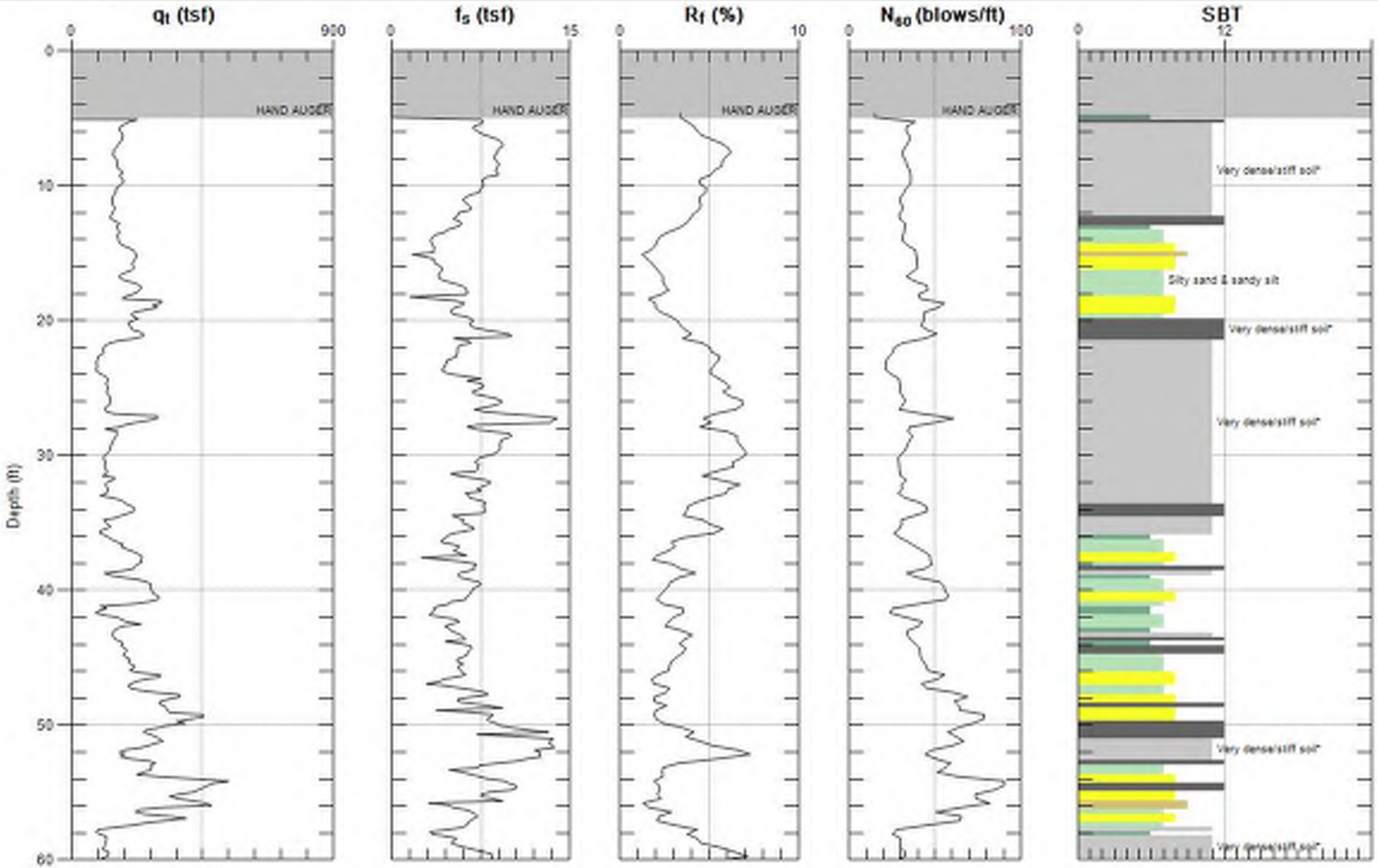
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-11

Engineer: J.URQUIZO
Date: 1/4/17 10:50



Max. Depth: 60.367 (ft)
Avg. Interval: 0.328 (ft)

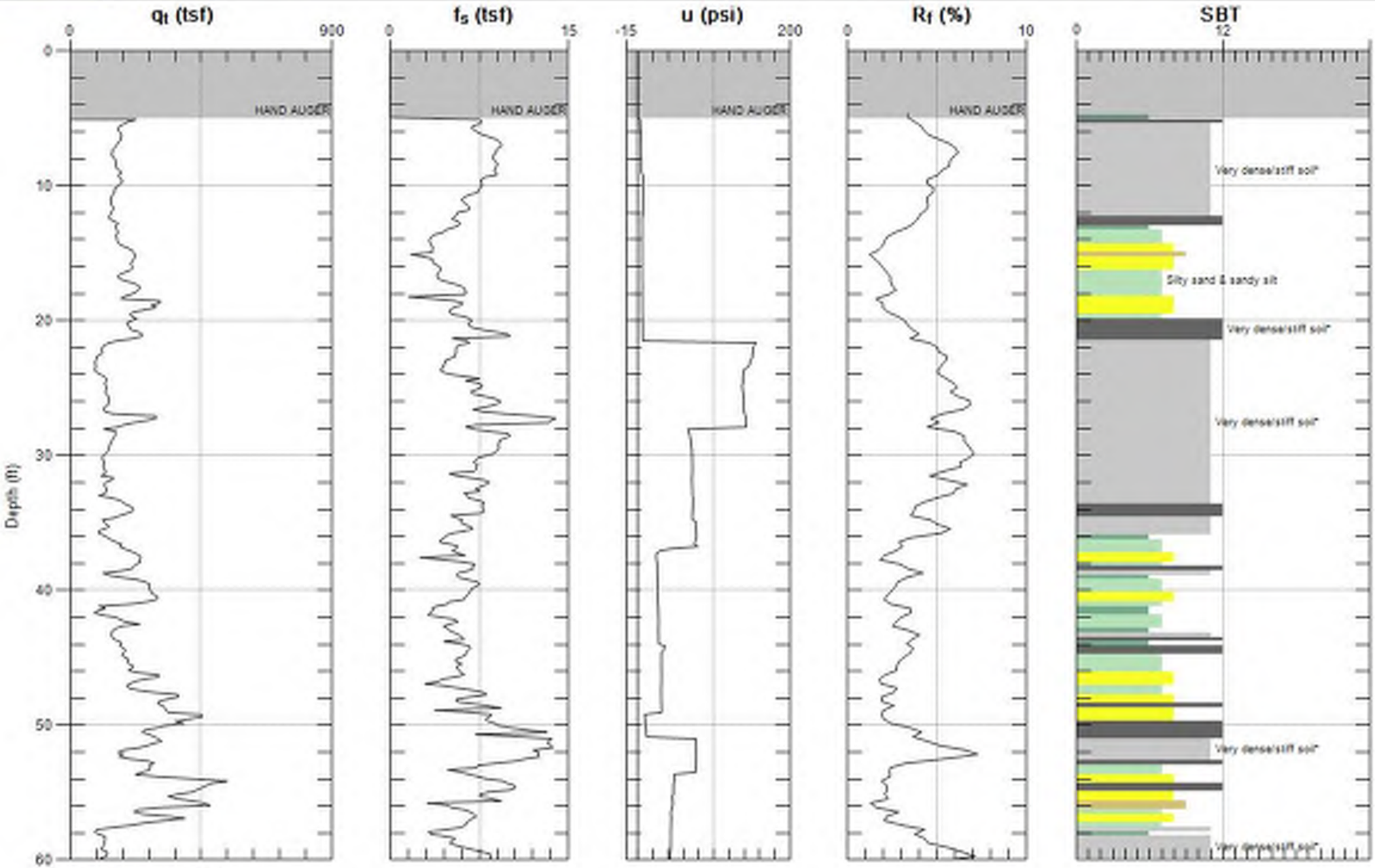
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-11

Engineer: J.URQUIZO
Date: 1/4/17 10:50



Max. Depth: 60.367 (ft)
Avg. Interval: 0.328 (ft)

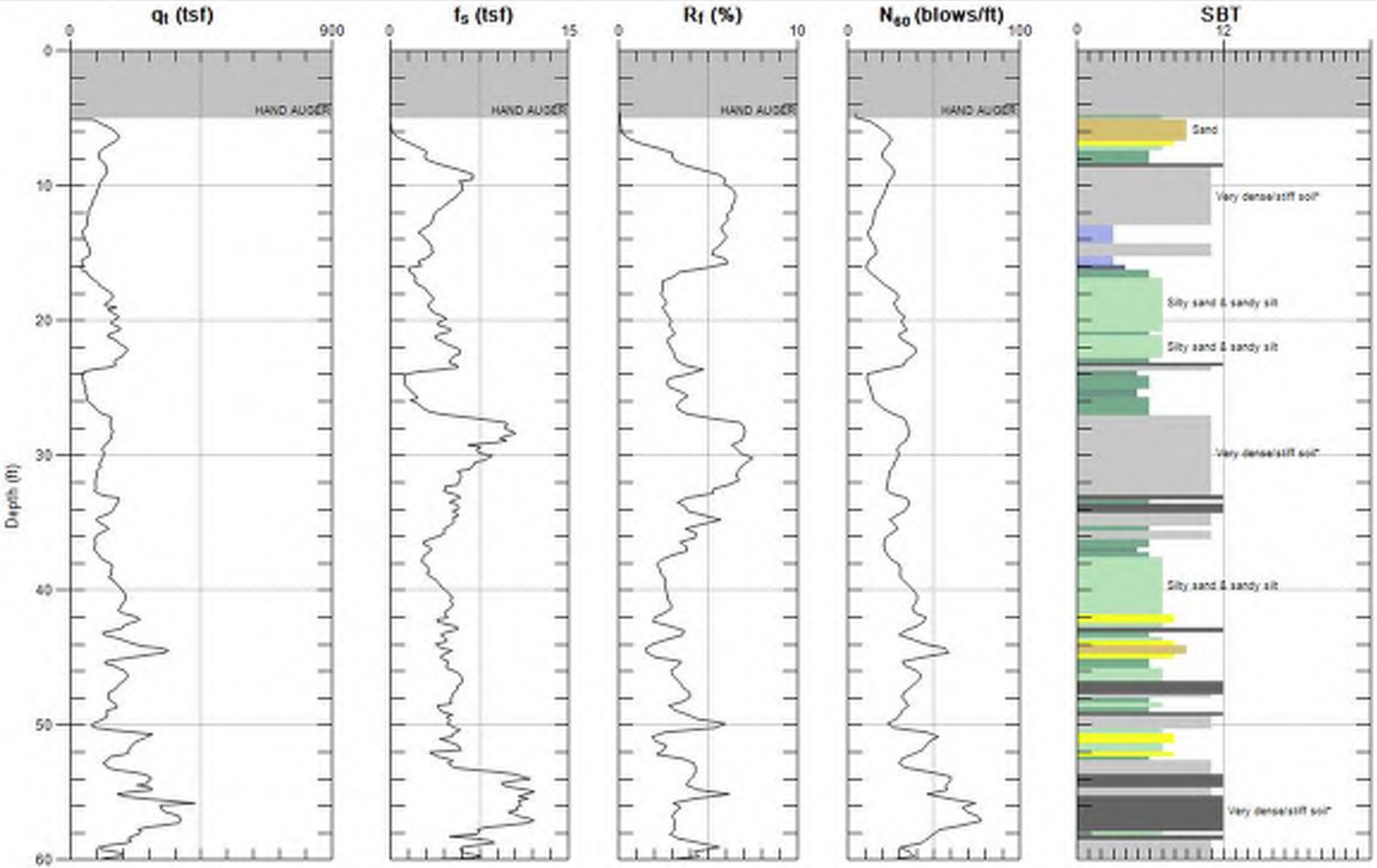
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-12

Engineer: J.URQUIZO
Date: 1/4/17 12:26



Max. Depth: 60.203 (ft)
Avg. Interval: 0.328 (ft)

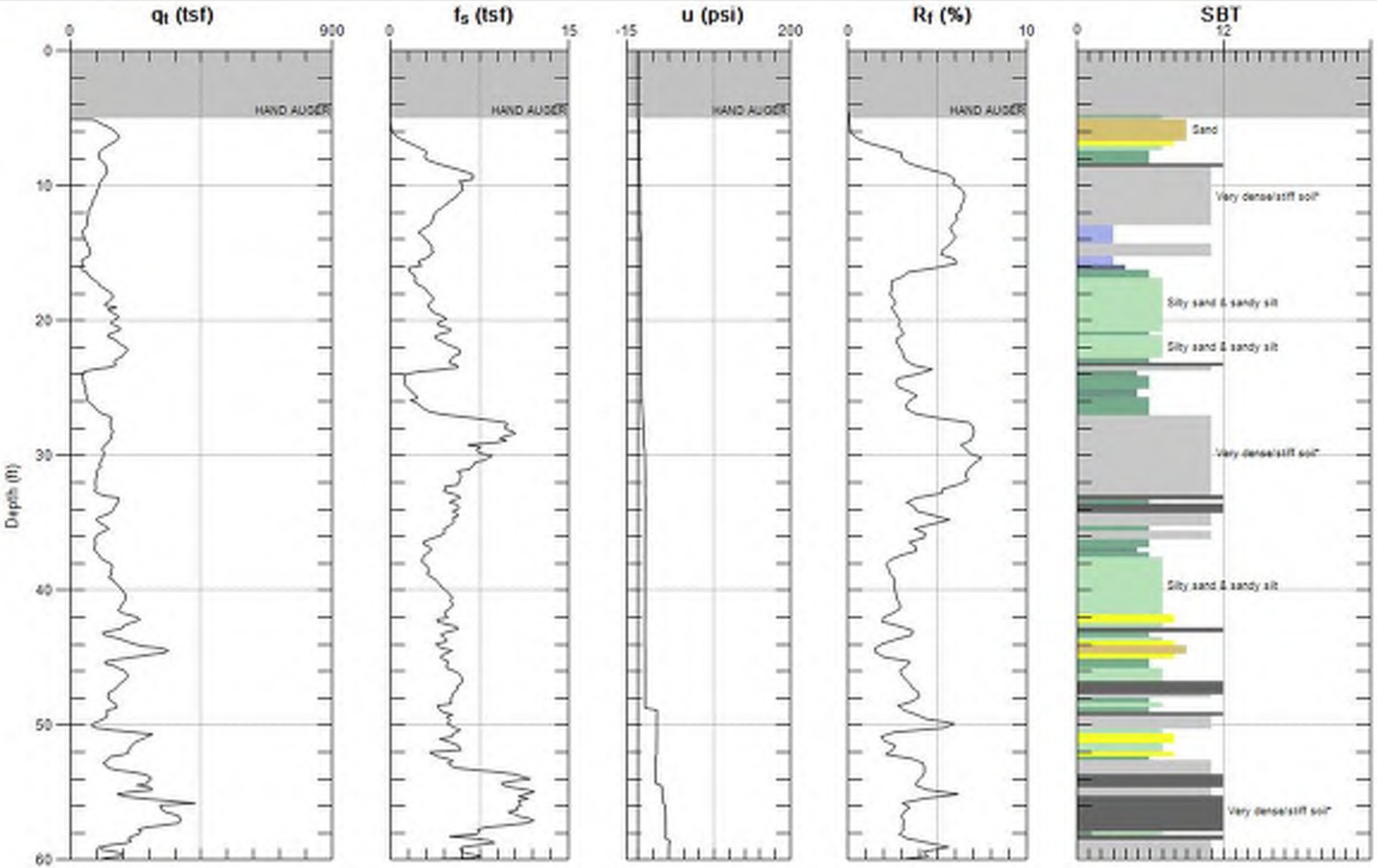
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-12

Engineer: J.URQUIZO
Date: 1/4/17 12:26



Max. Depth: 60.203 (ft)
Avg. Interval: 0.328 (ft)

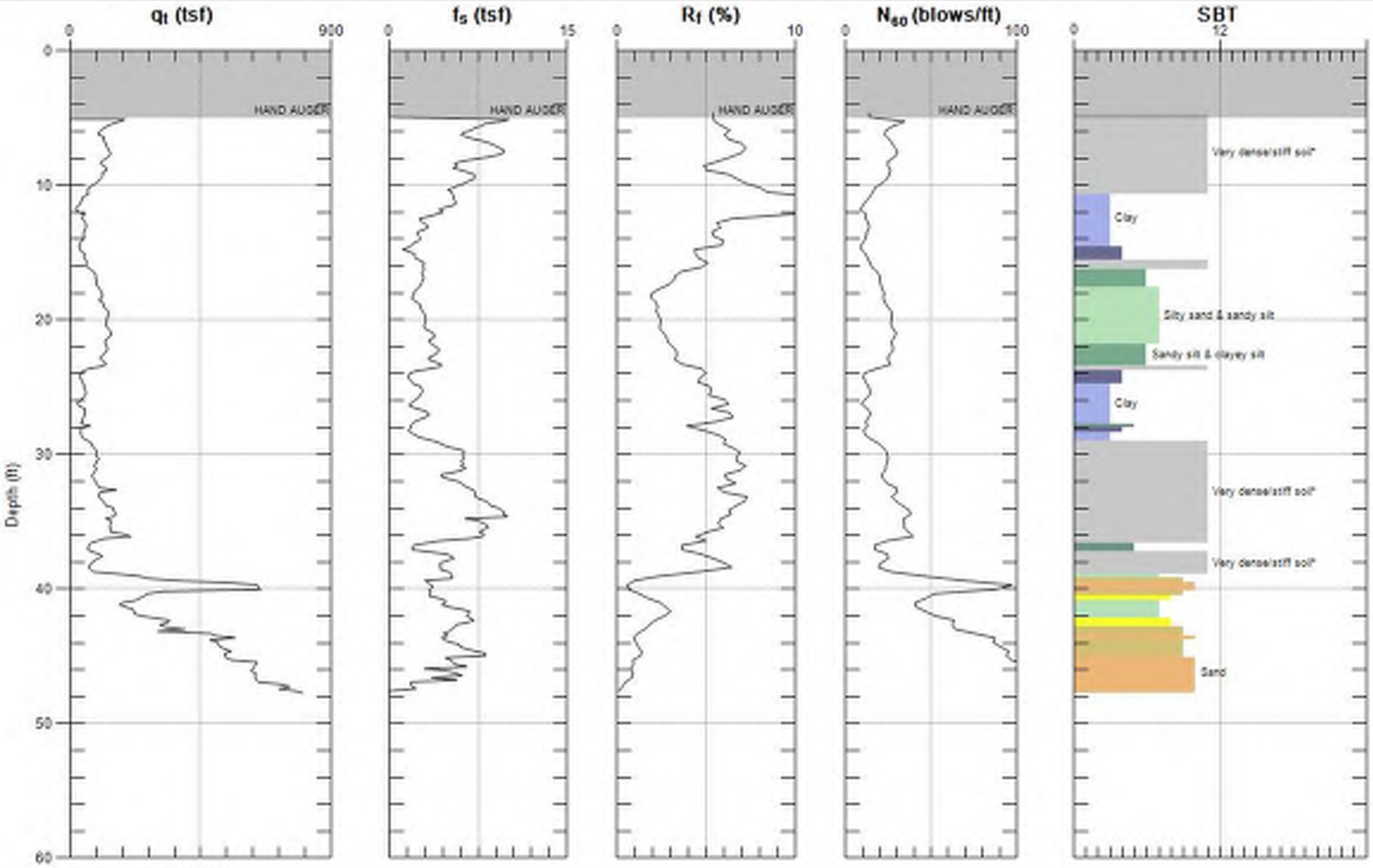
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-13

Engineer: J.URQUIZO
Date: 1/4/17 01:15



Max. Depth: 47.736 (ft)
Avg. Interval: 0.328 (ft)

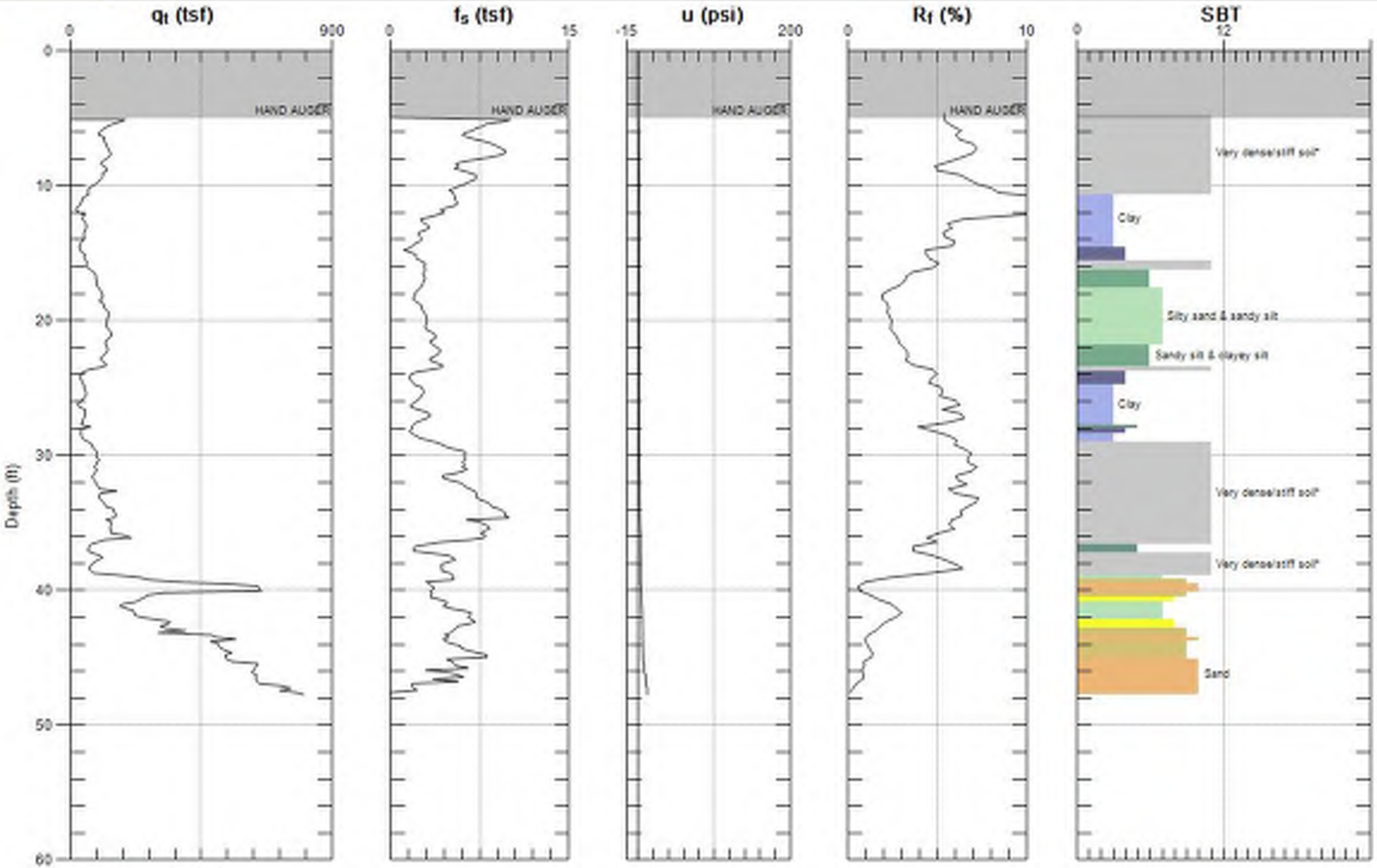
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-13

Engineer: J.URQUIZO
Date: 1/4/17 01:15



Max. Depth: 47.736 (ft)
Avg. Interval: 0.328 (ft)

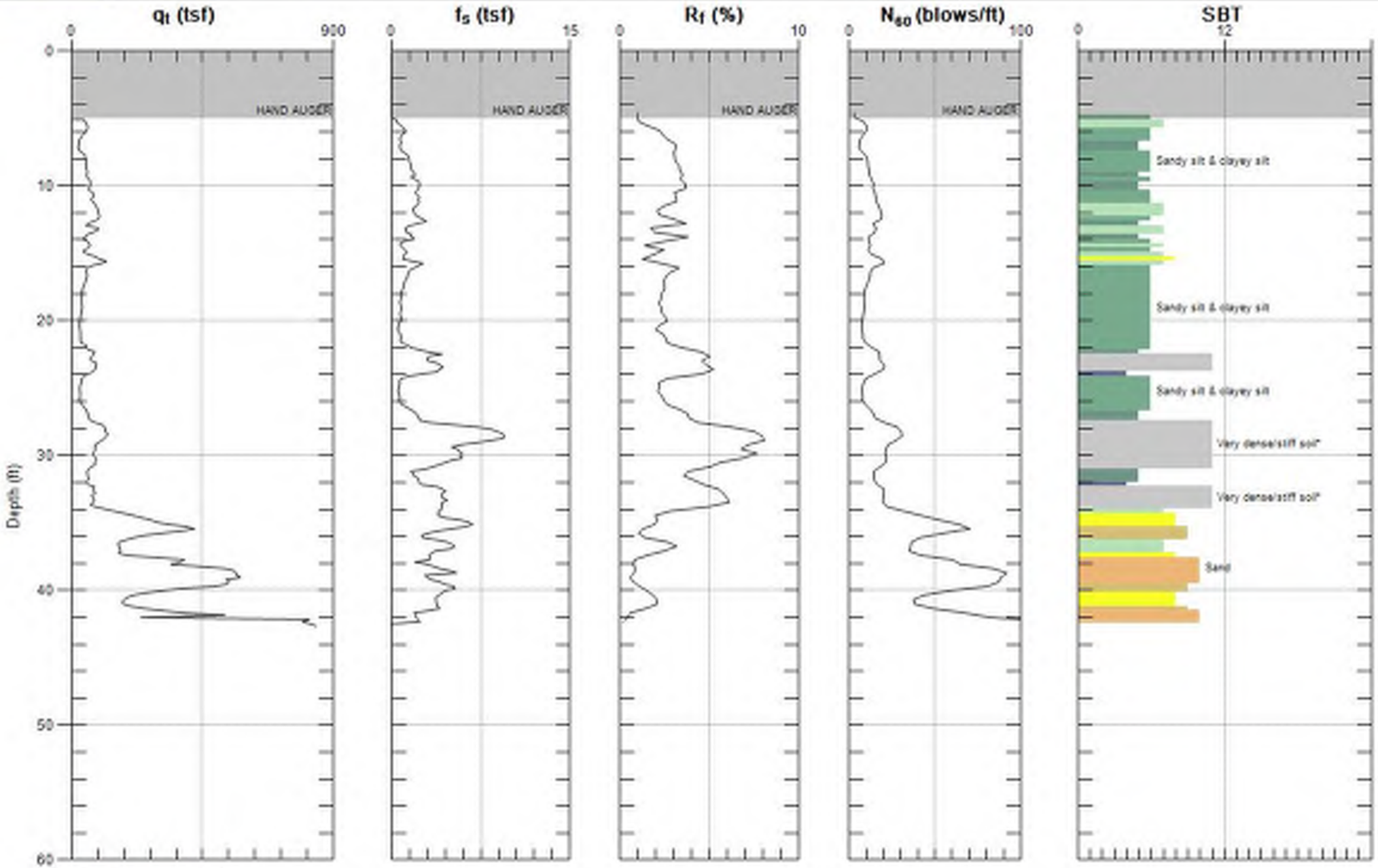
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-14

Engineer: J.URQUIZO
Date: 1/4/17 02:05



Max. Depth: 42.651 (ft)
Avg. Interval: 0.328 (ft)

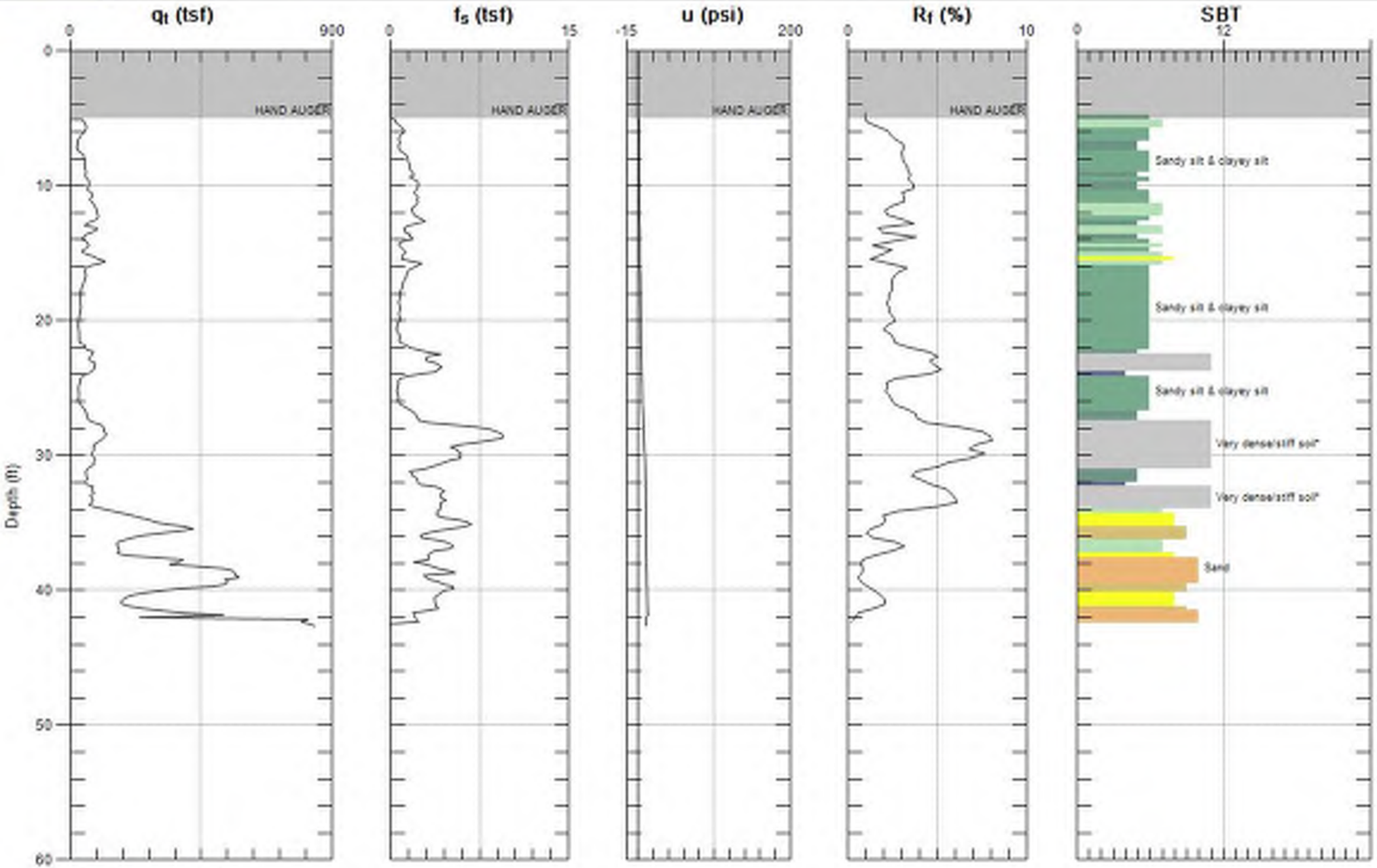
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-14

Engineer: J.URQUIZO
Date: 1/4/17 02:05



Max. Depth: 42.651 (ft)
Avg. Interval: 0.328 (ft)

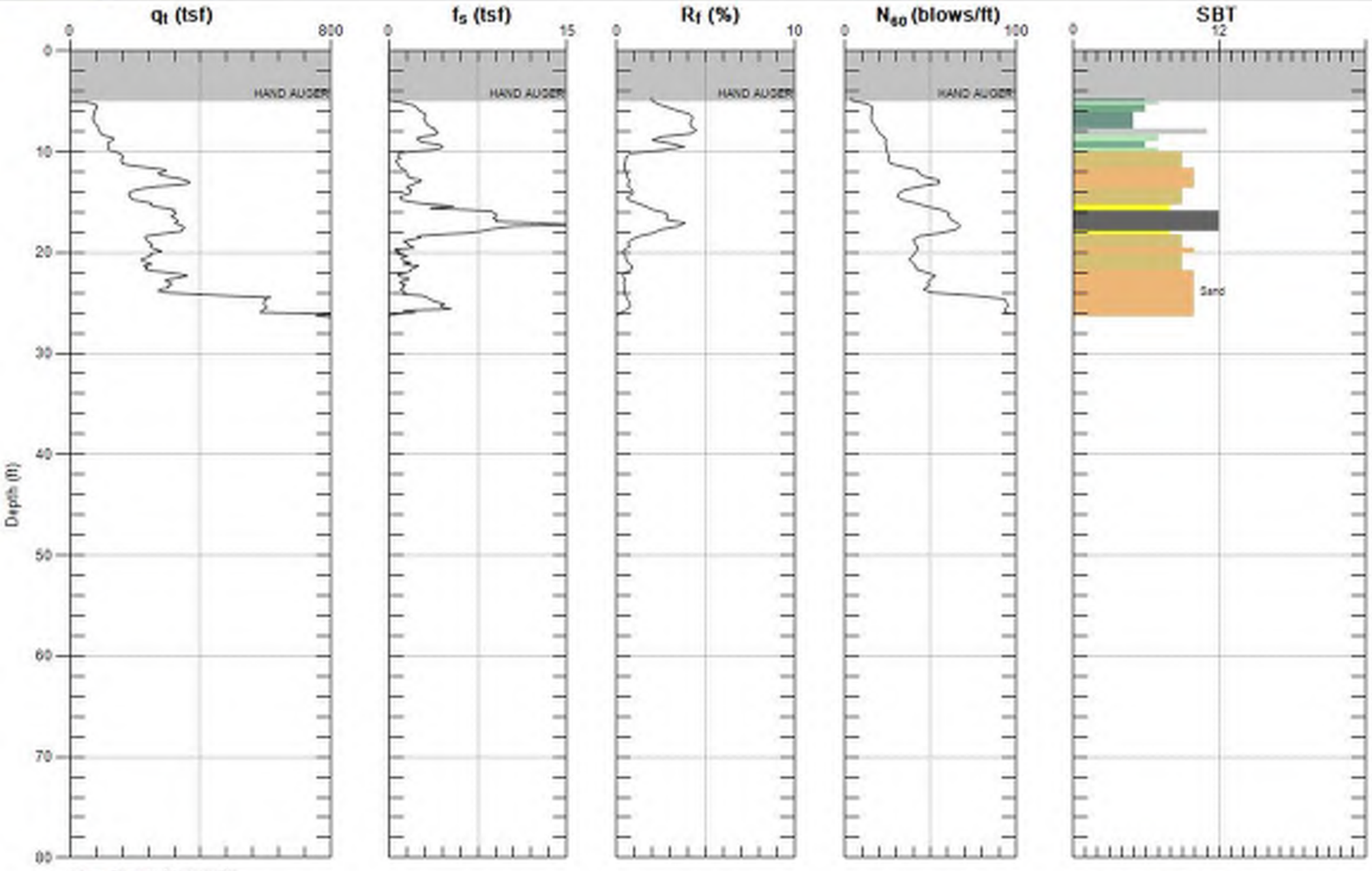
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-15a

Engineer: J.URQUIZO
Date: 4/5/17 08:34



Max. Depth: 26.411 (ft)
Avg. Interval: 0.328 (ft)

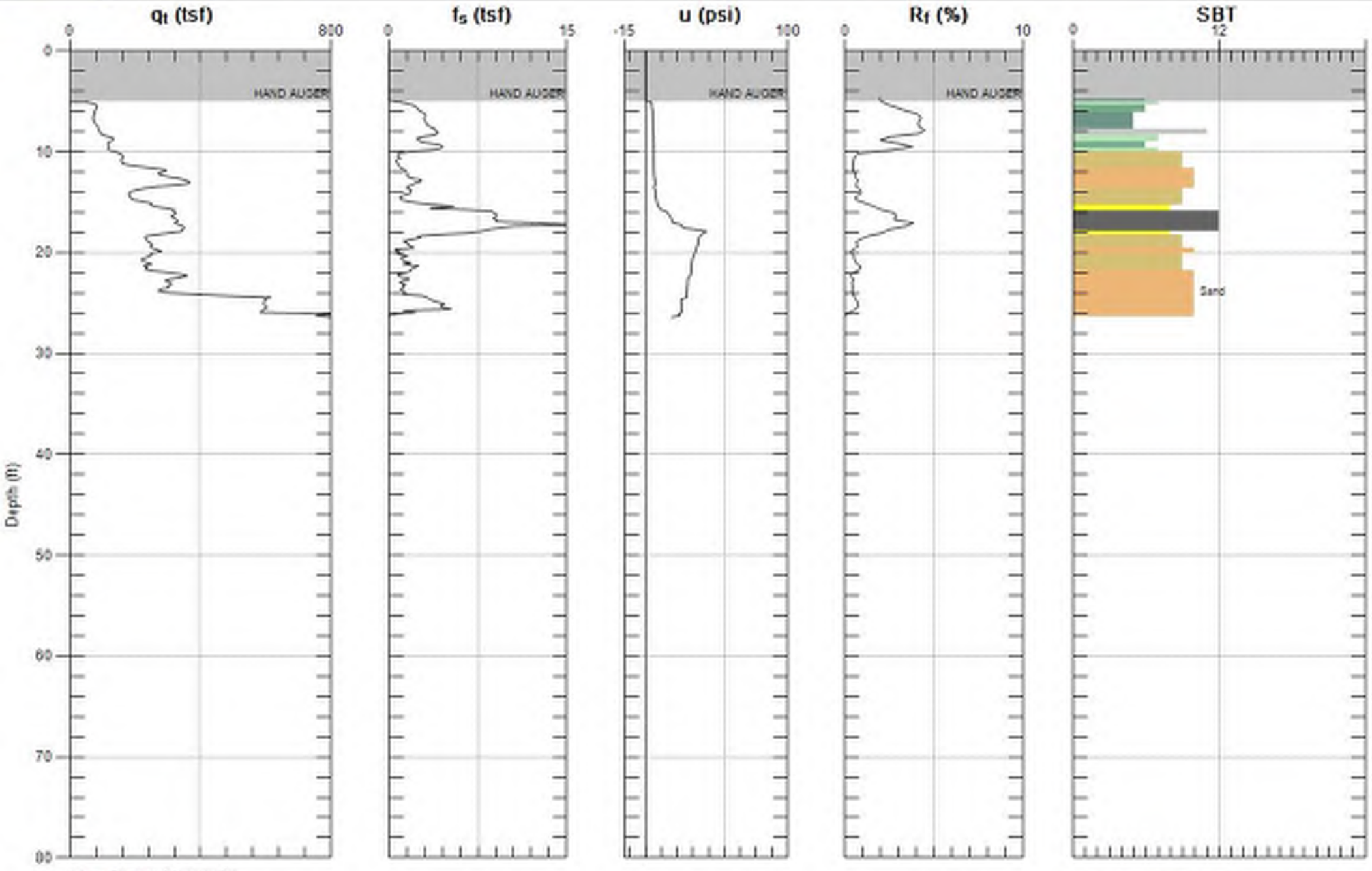
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-15a

Engineer: J.URQUIZO
Date: 4/5/17 08:34



Max. Depth: 26.411 (ft)
Avg. Interval: 0.328 (ft)

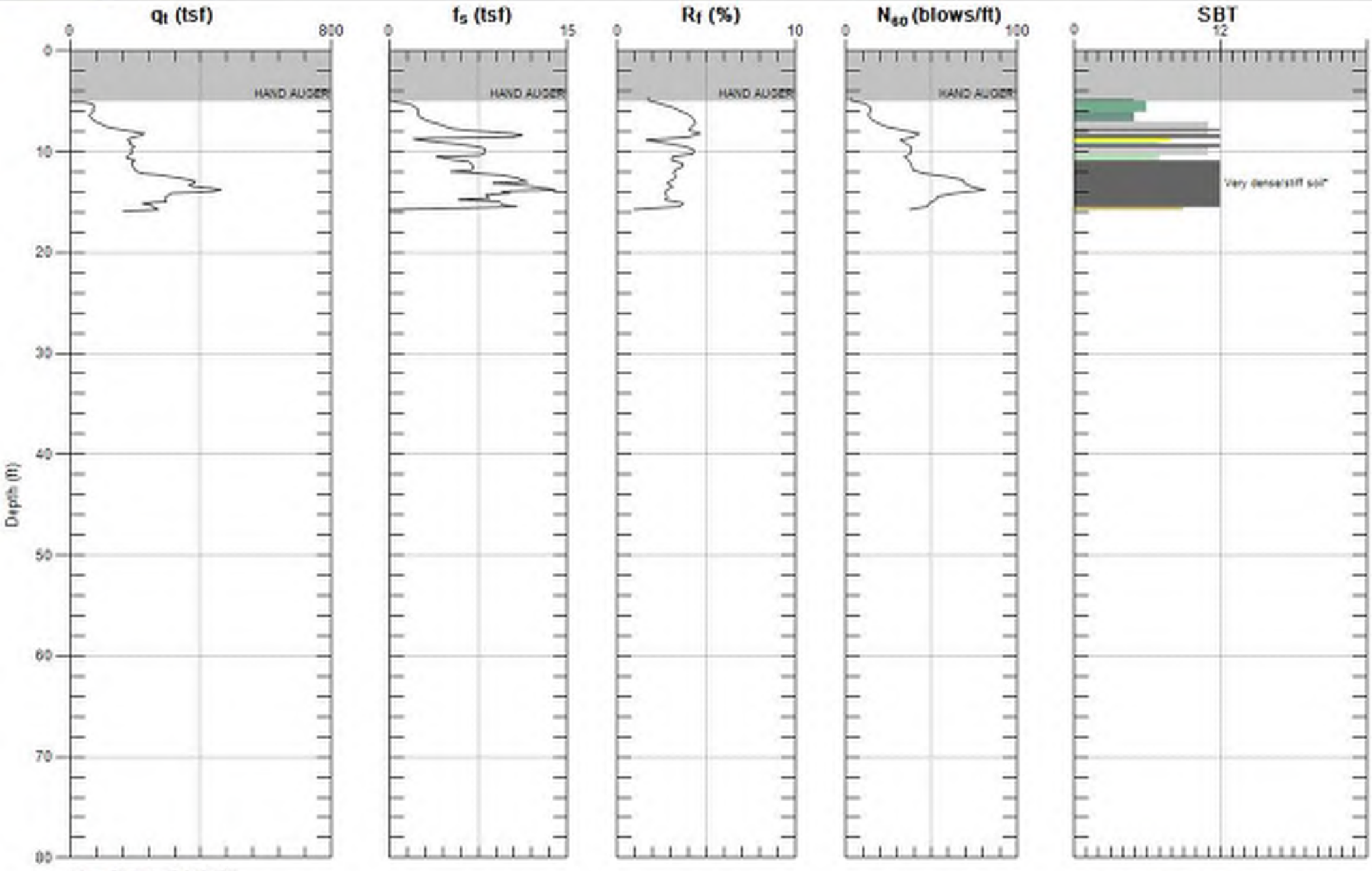
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-1

Engineer: J.URQUIZO
Date: 4/5/17 07:40



Max. Depth: 15.912 (ft)
Avg. Interval: 0.328 (ft)

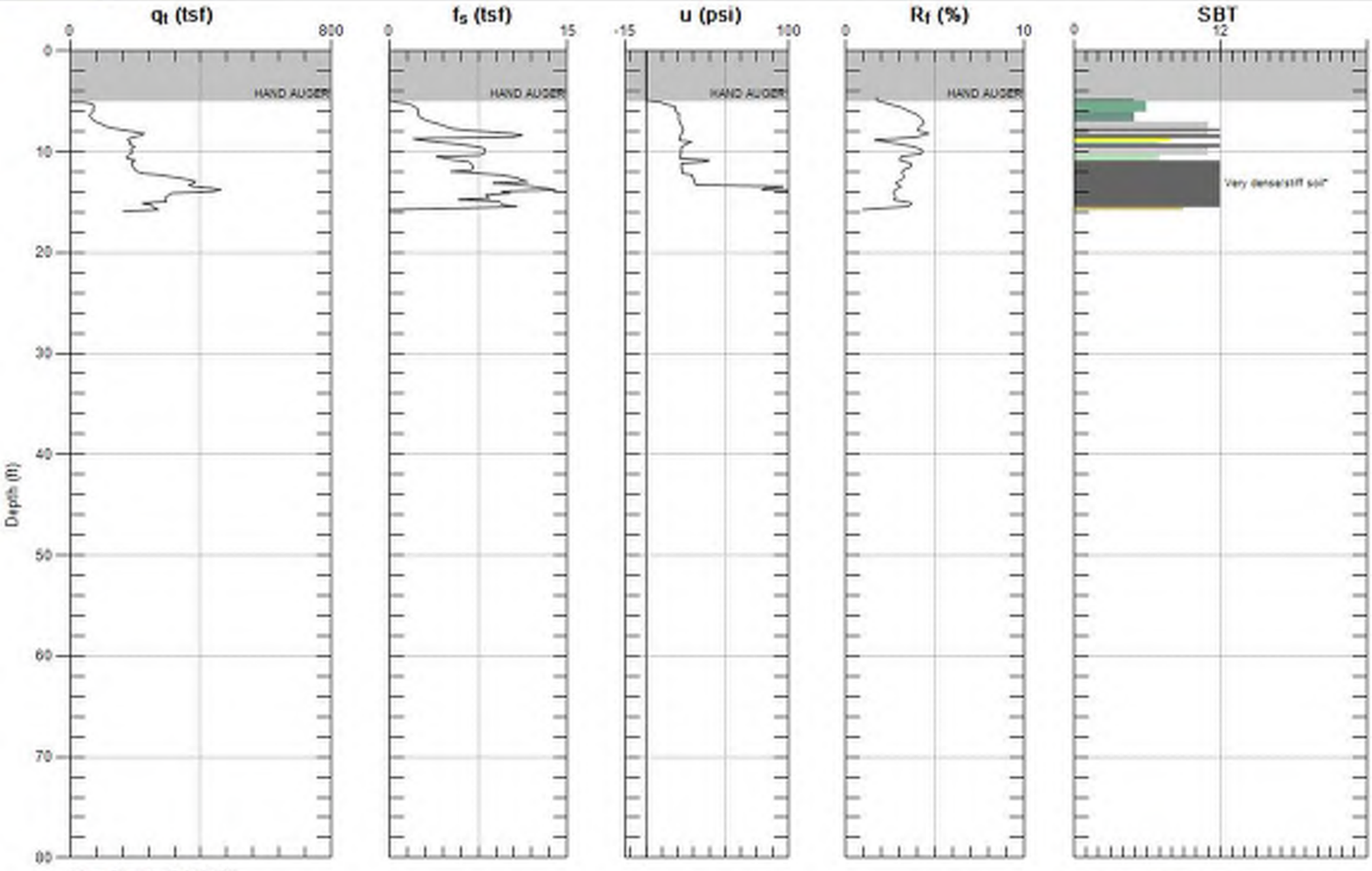
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-1

Engineer: J.URQUIZO
Date: 4/5/17 07:40



Max. Depth: 15.912 (ft)
Avg. Interval: 0.328 (ft)

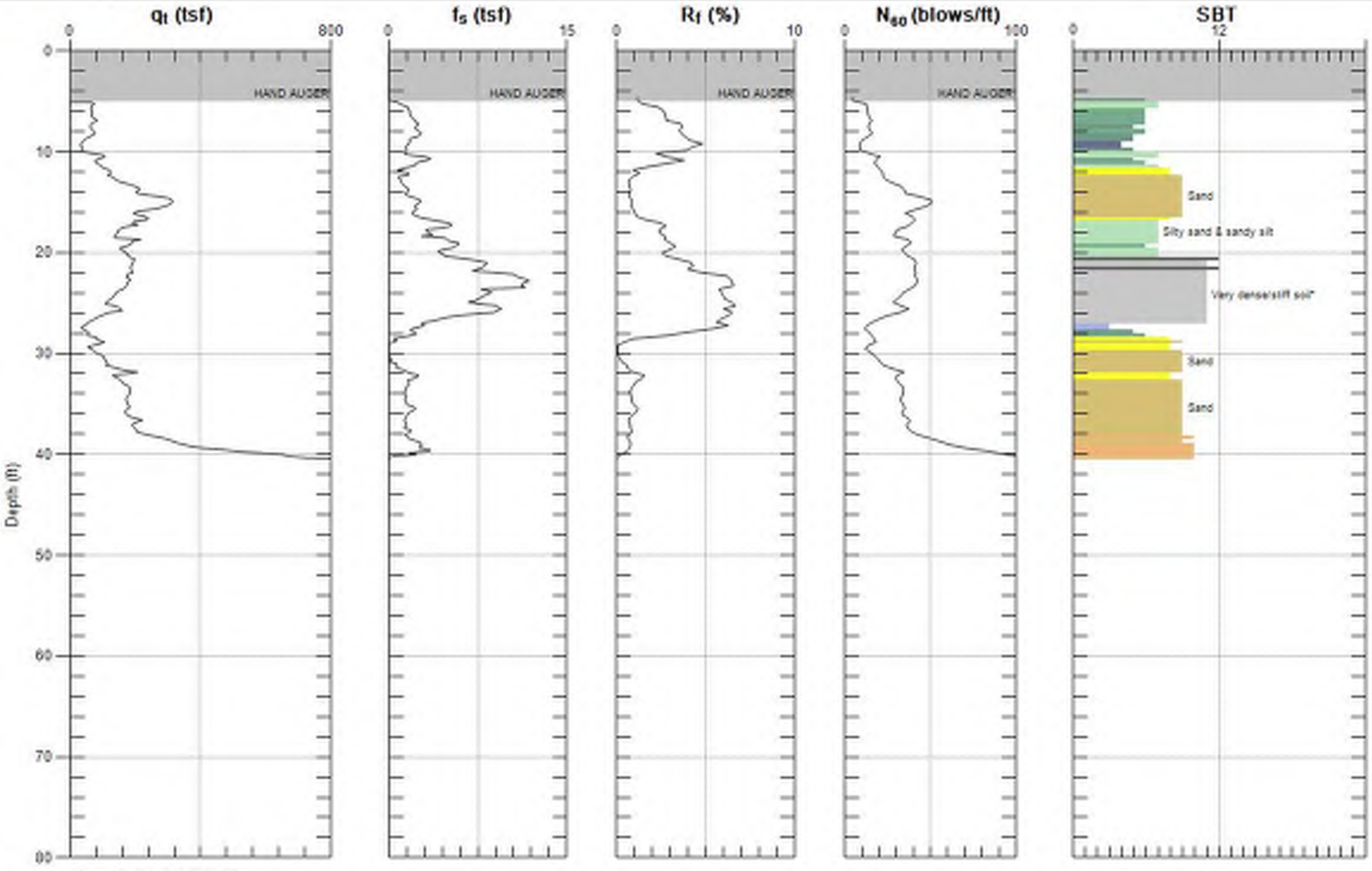
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-16

Engineer: J.URQUIZO
Date: 4/5/17 09:39



Max. Depth: 40.518 (ft)
Avg. Interval: 0.328 (ft)

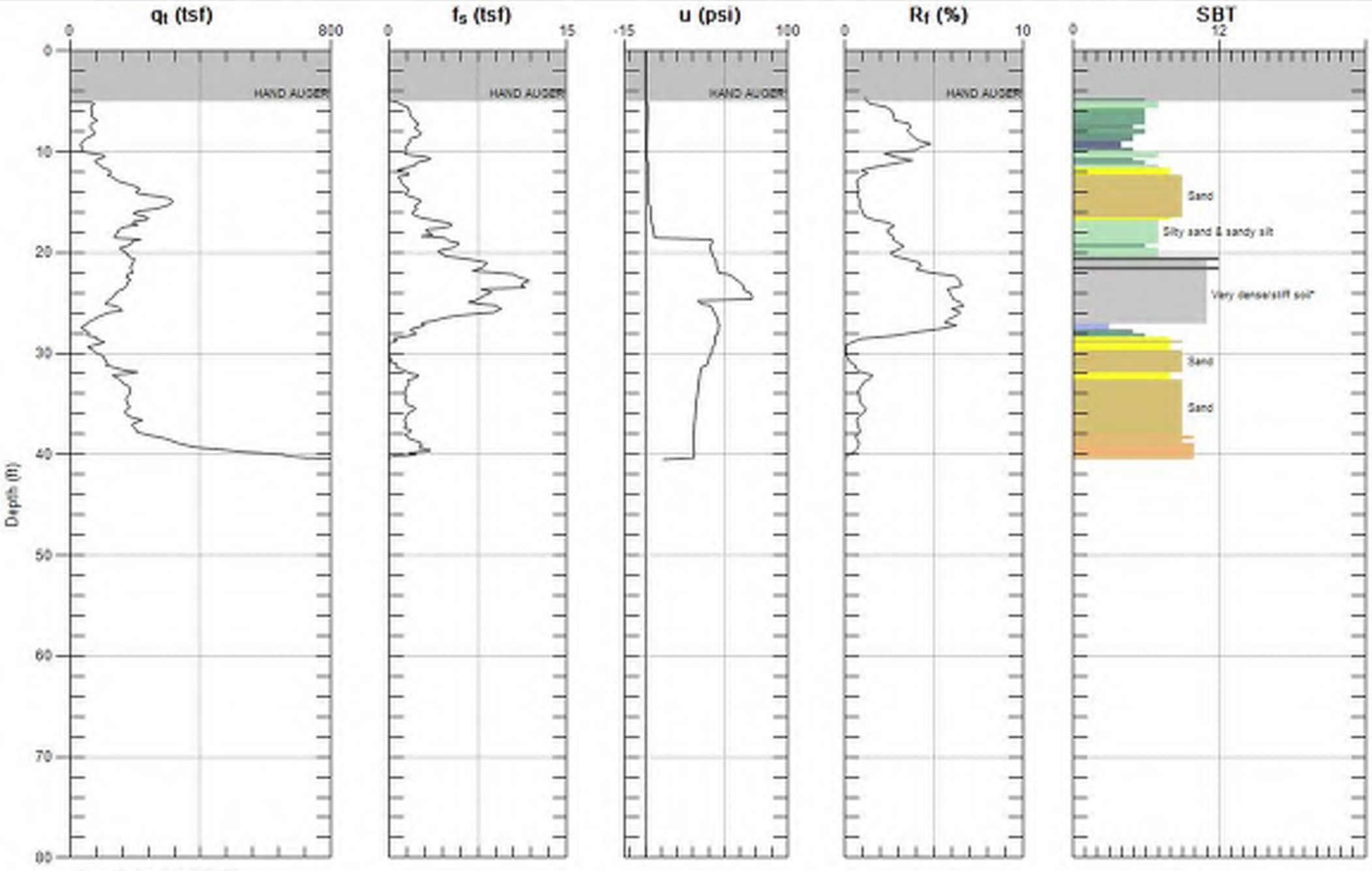
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-16

Engineer: J.URQUIZO
Date: 4/5/17 09:39



Max. Depth: 40.518 (ft)
Avg. Interval: 0.328 (ft)

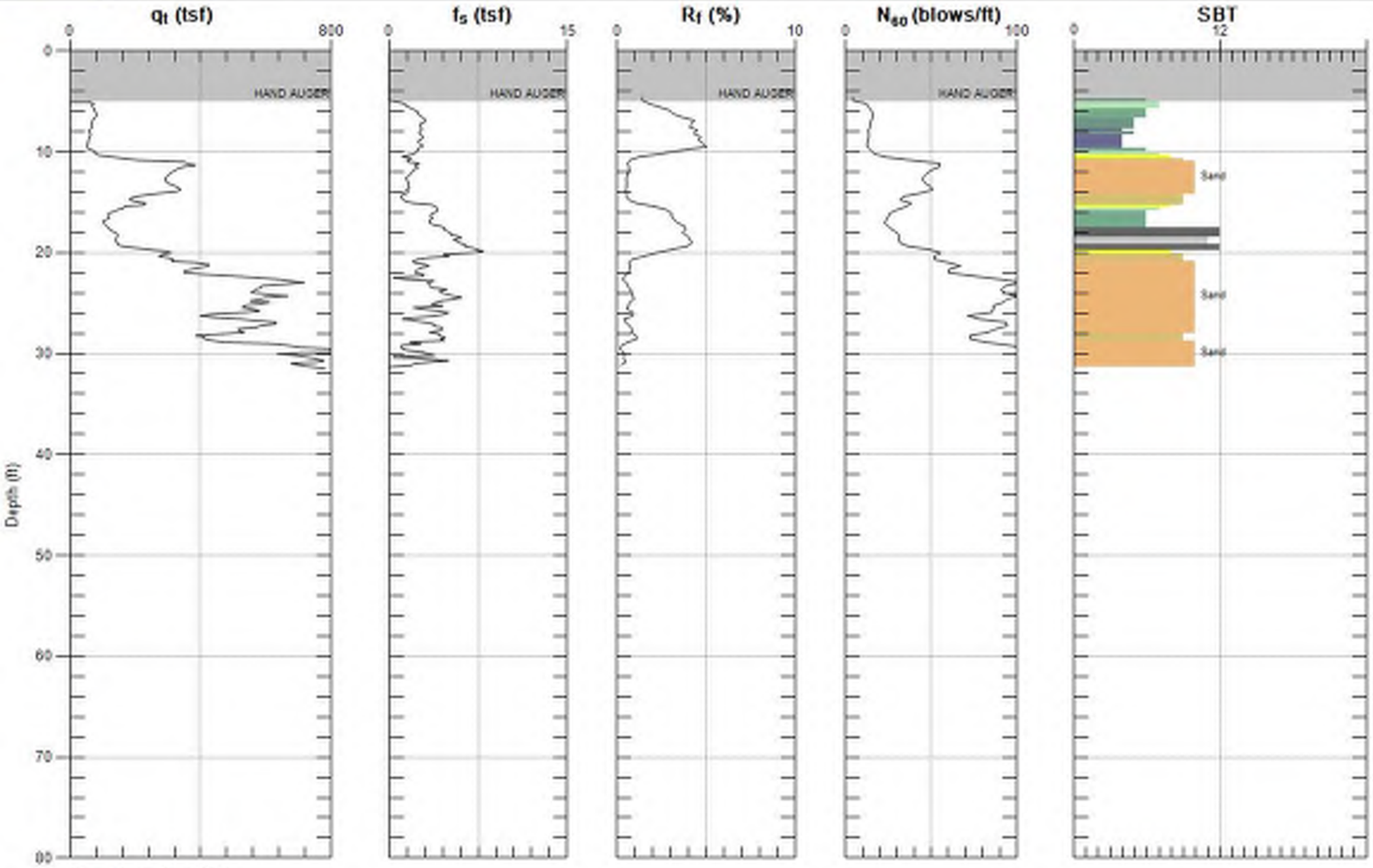
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-17

Engineer: J.URQUIZO
Date: 4/5/17 10:43



Max. Depth: 31.496 (ft)
Avg. Interval: 0.328 (ft)

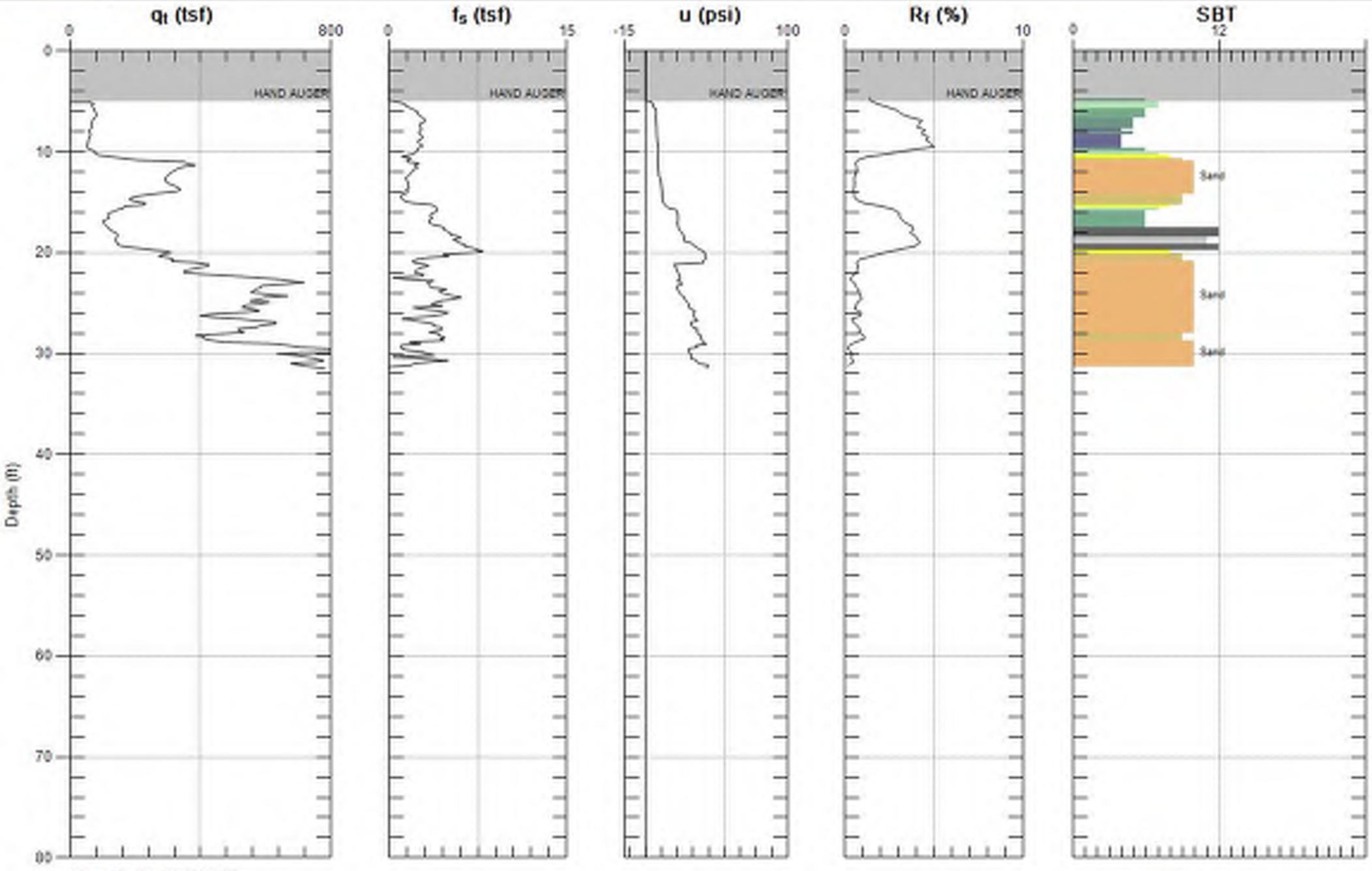
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-17

Engineer: J.URQUIZO
Date: 4/5/17 10:43



Max. Depth: 31.496 (ft)
Avg. Interval: 0.328 (ft)

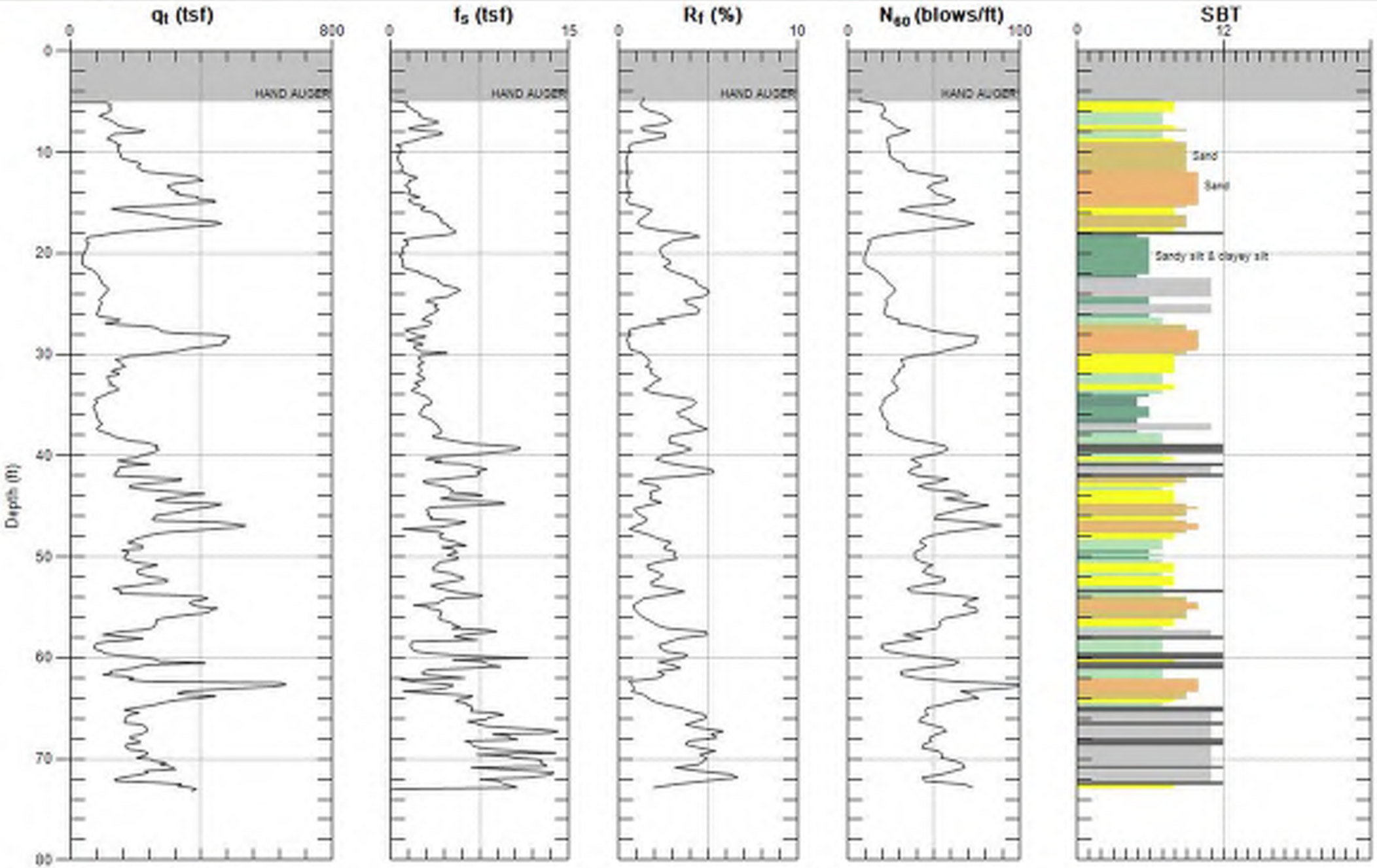
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-18

Engineer: J.URQUIZO
Date: 4/5/17 12:29



Max. Depth: 73.163 (ft)
Avg. Interval: 0.328 (ft)

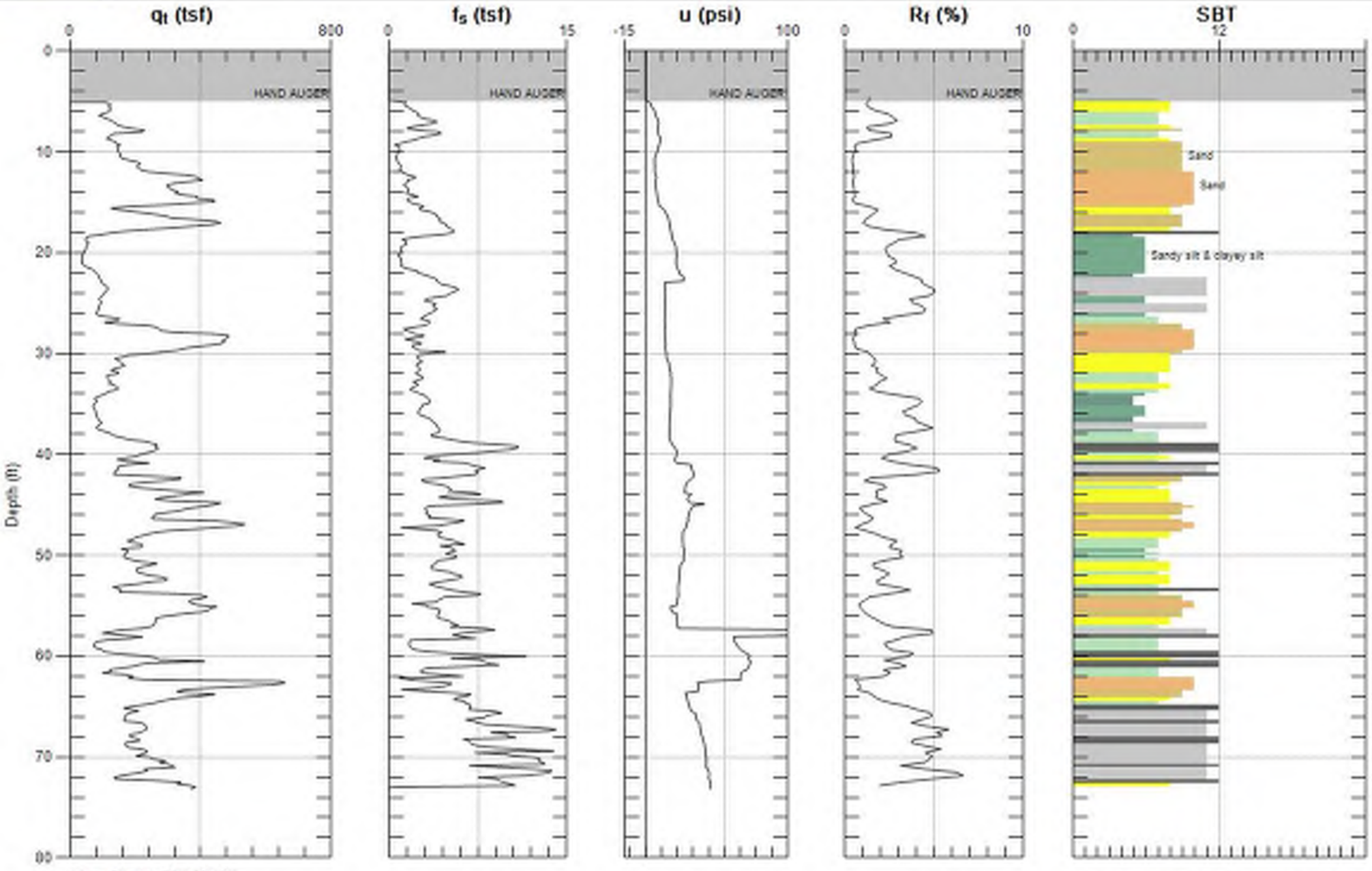
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-18

Engineer: J.URQUIZO
Date: 4/5/17 12:29



Max. Depth: 73.163 (ft)
Avg. Interval: 0.328 (ft)

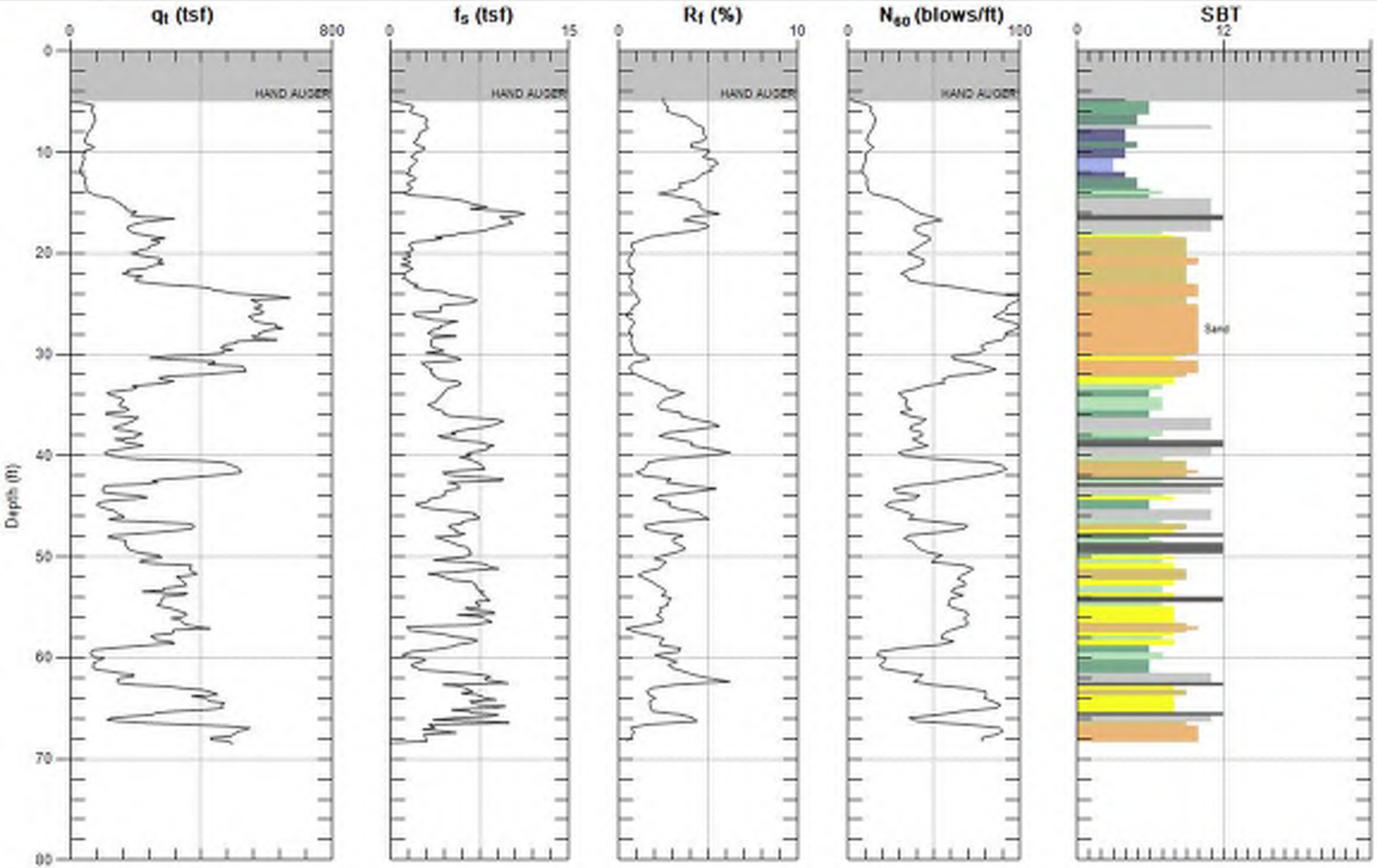
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-19

Engineer: J.URQUIZO
Date: 4/5/17 01:33



Max. Depth: 68.570 (ft)
Avg. Interval: 0.328 (ft)

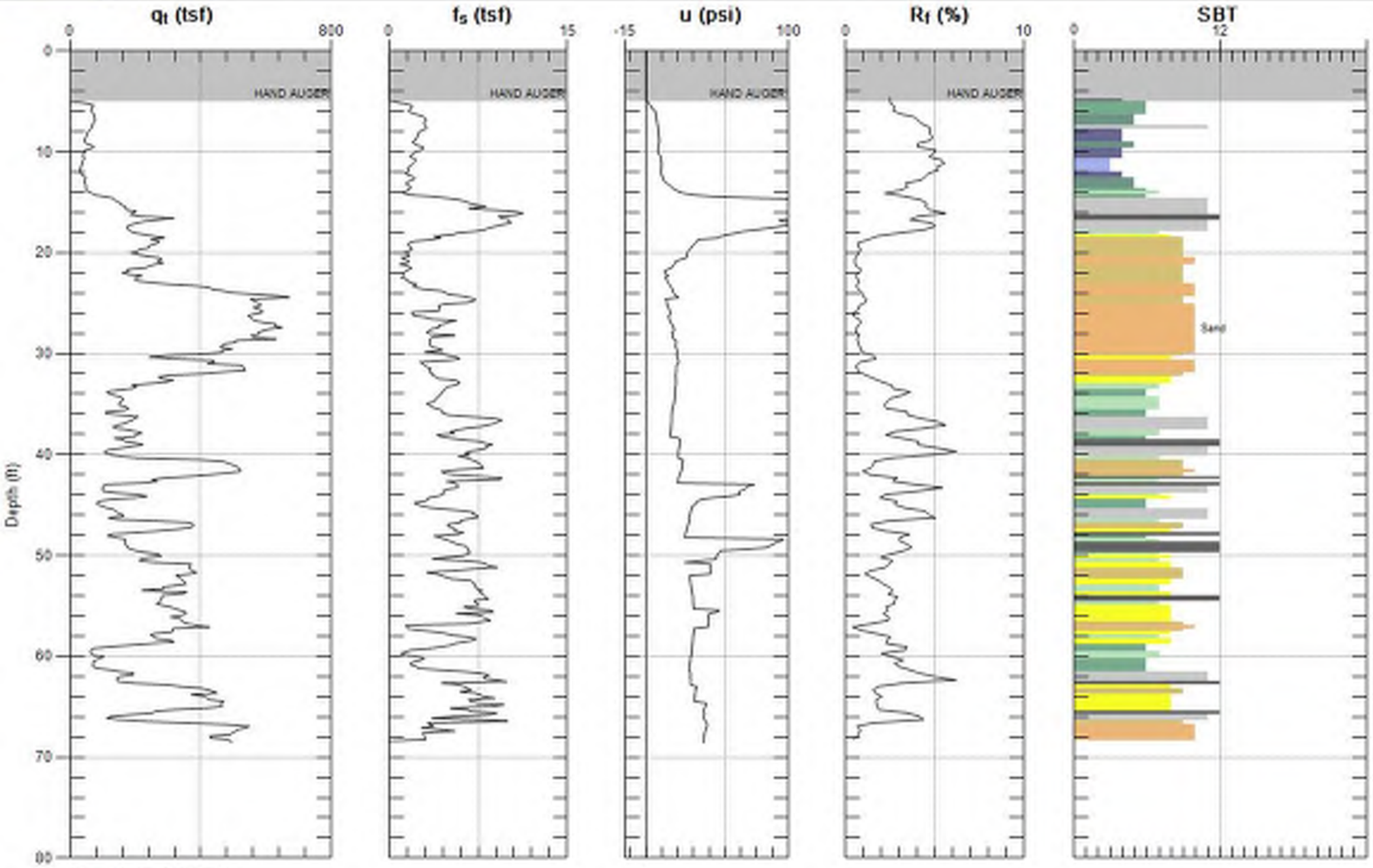
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-19

Engineer: J.URQUIZO
Date: 4/5/17 01:33



Max. Depth: 68.570 (ft)
Avg. Interval: 0.328 (ft)

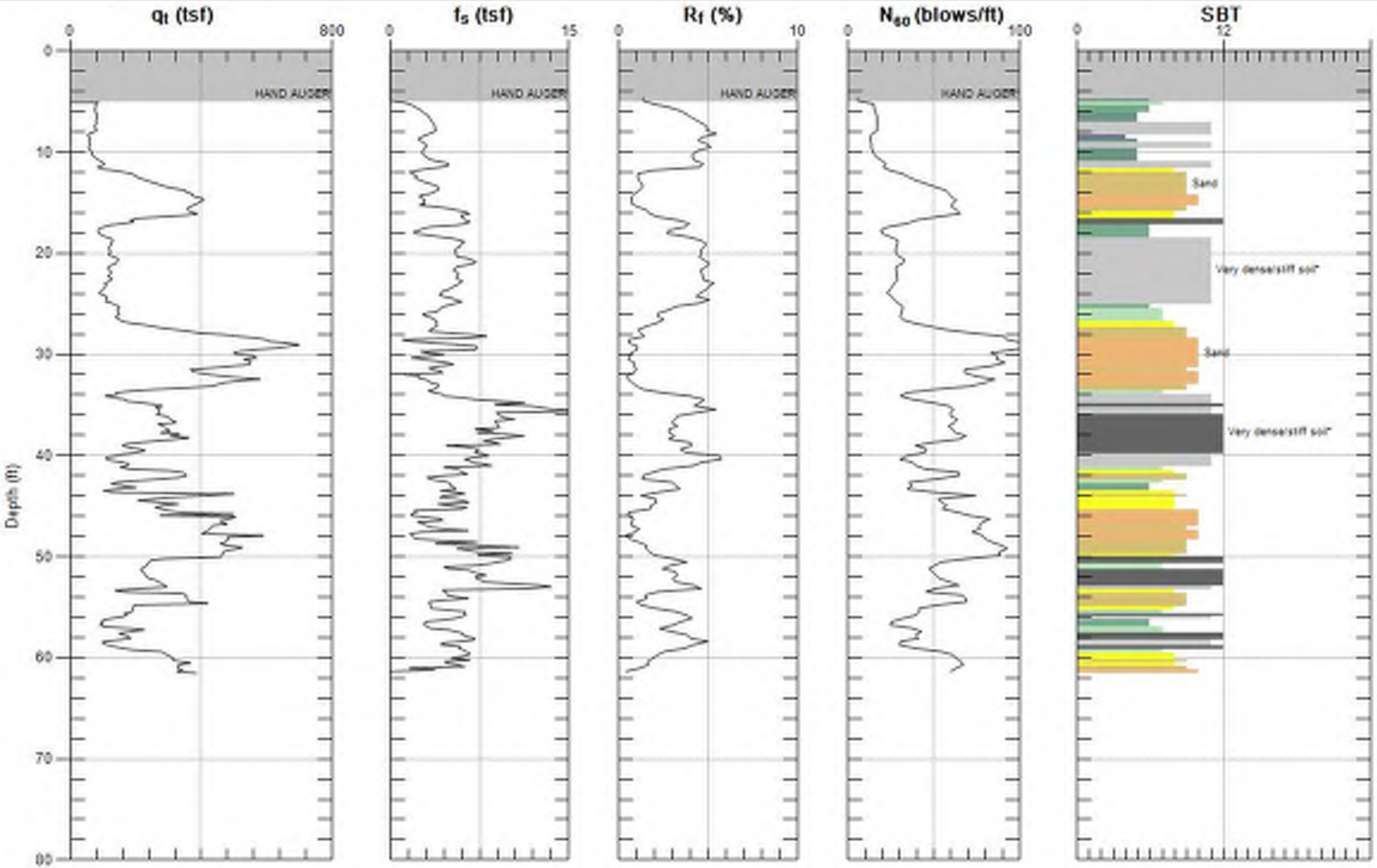
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-20

Engineer: J.URQUIZO
Date: 4/5/17 02:45



Max. Depth: 61.516 (ft)
Avg. Interval: 0.328 (ft)

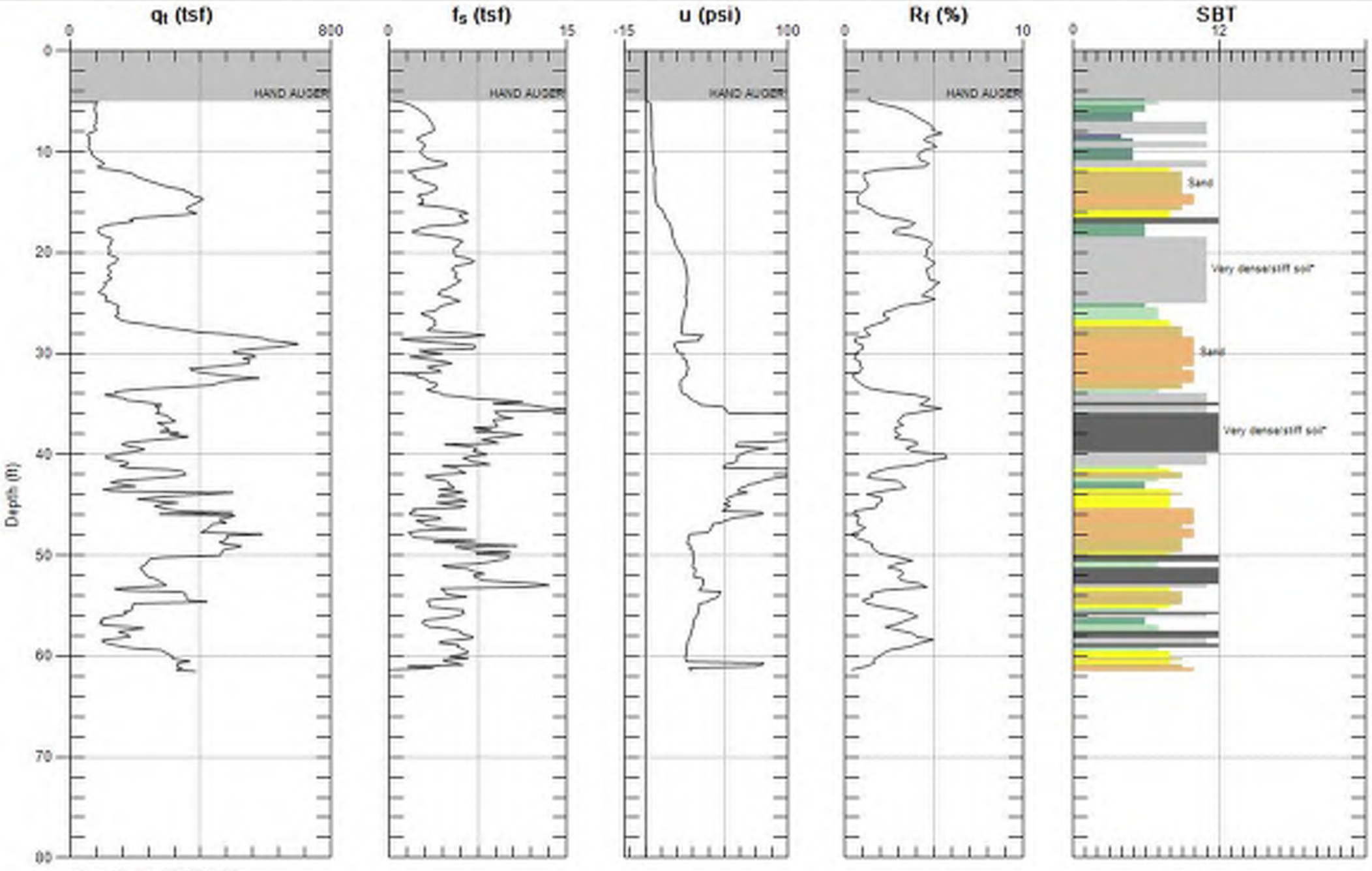
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-20

Engineer: J.URQUIZO
Date: 4/5/17 02:45



Max. Depth: 61.516 (ft)
Avg. Interval: 0.328 (ft)

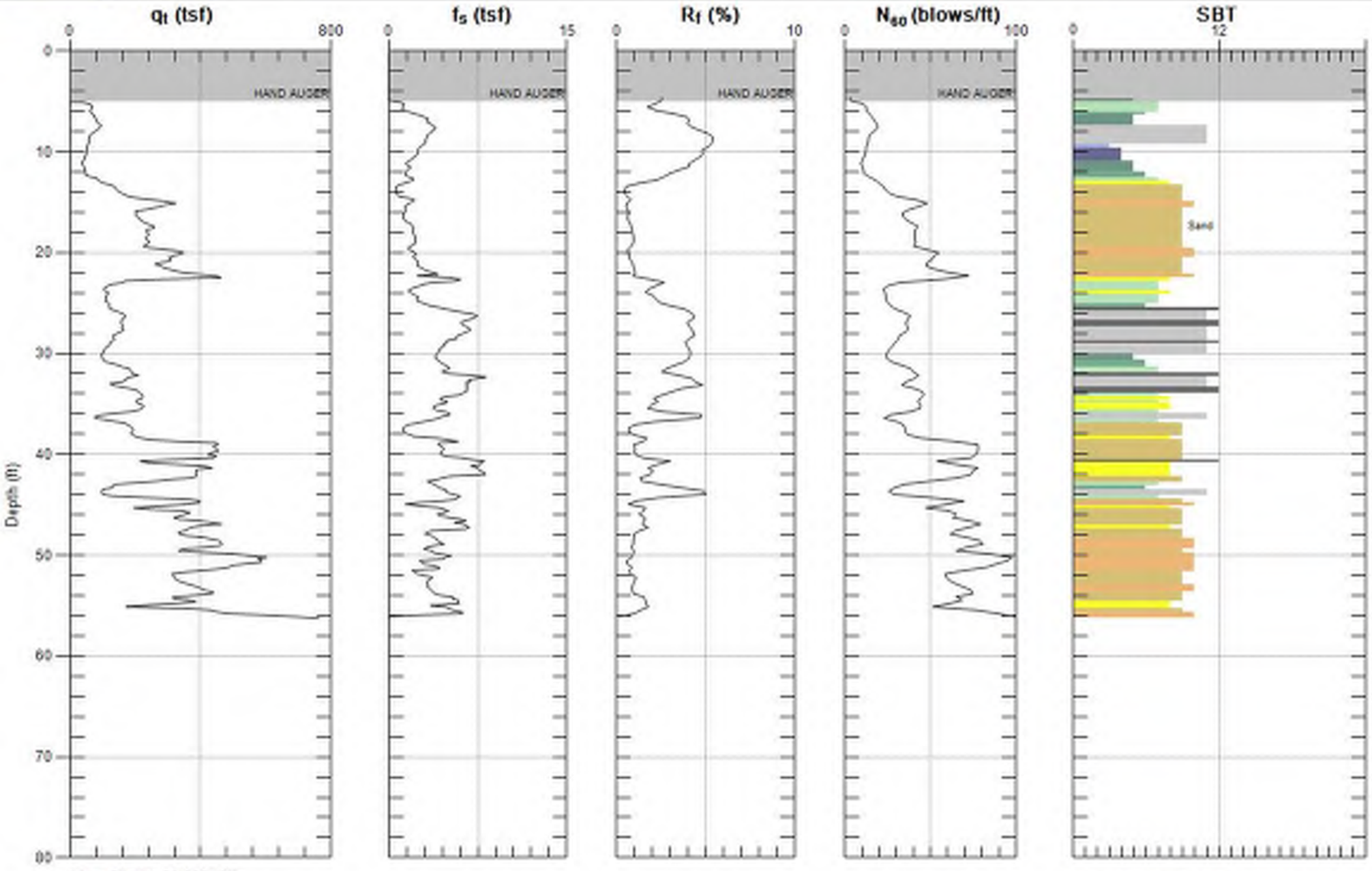
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-21

Engineer: J.URQUIZO
Date: 4/6/17 07:22



Max. Depth: 56.266 (ft)
Avg. Interval: 0.328 (ft)

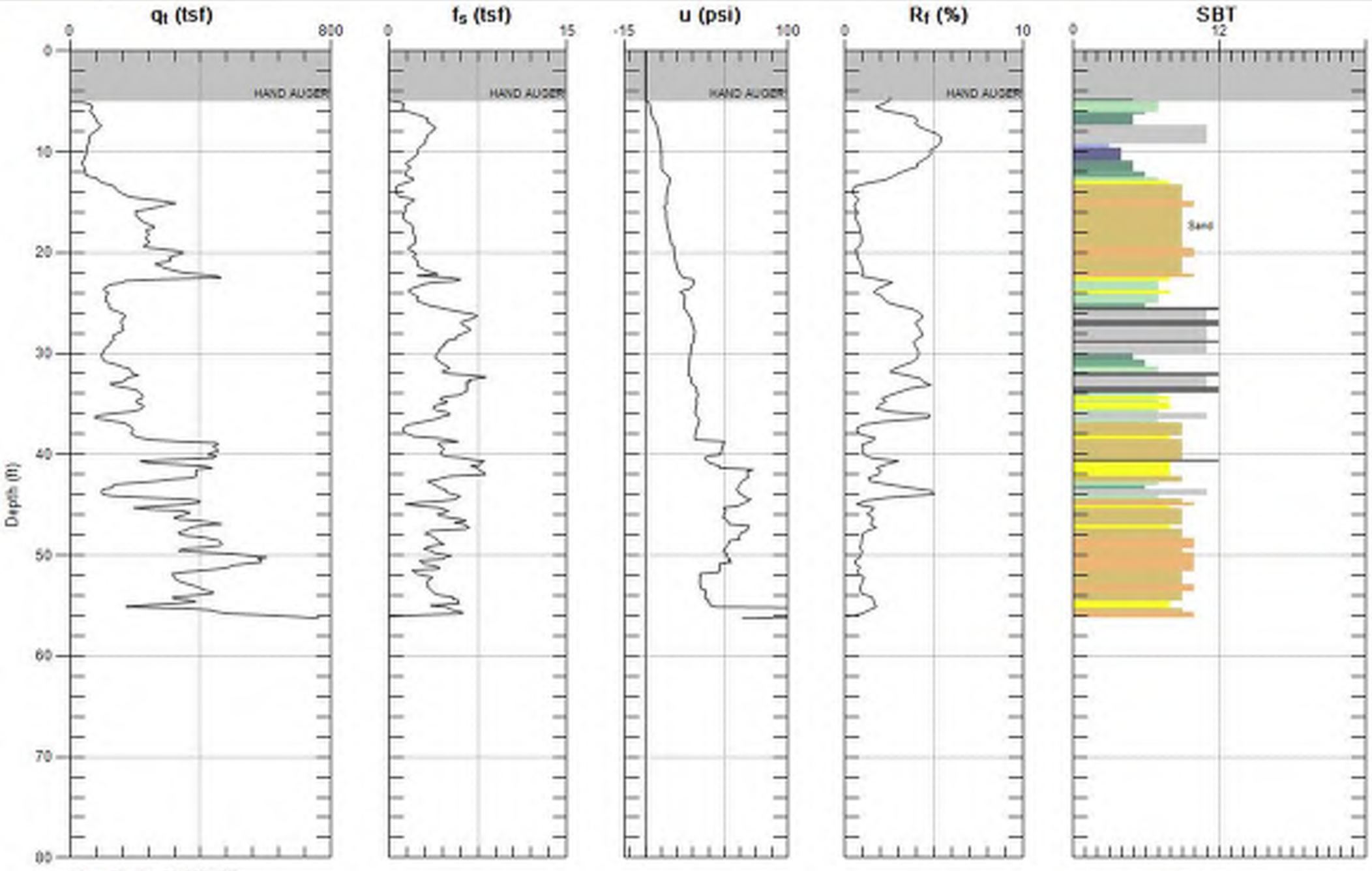
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-21

Engineer: J.URQUIZO
Date: 4/6/17 07:22



Max. Depth: 56.266 (ft)
Avg. Interval: 0.328 (ft)

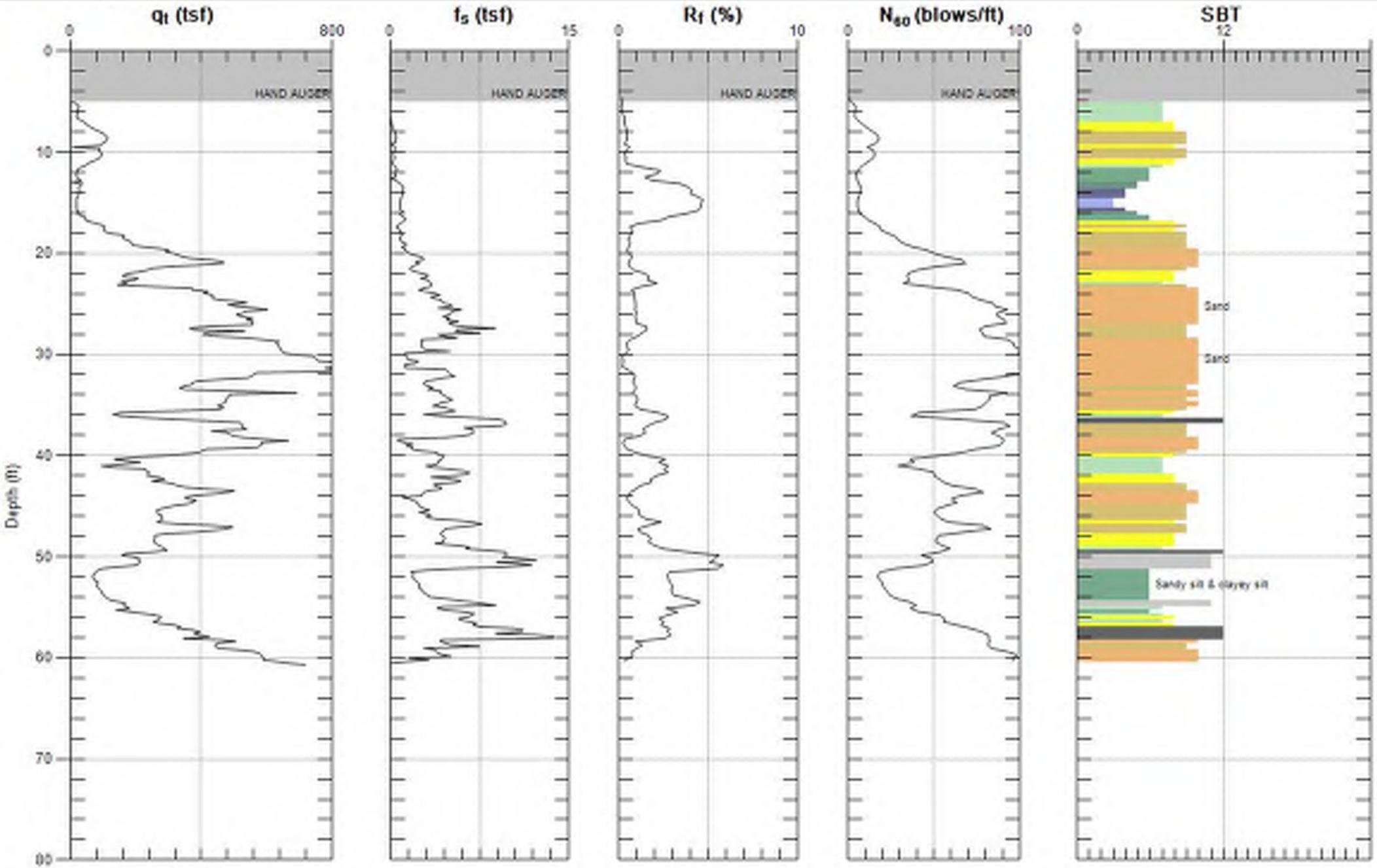
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-22

Engineer: J.URQUIZO
Date: 4/6/17 08:35



Max. Depth: 60.696 (ft)
Avg. Interval: 0.328 (ft)

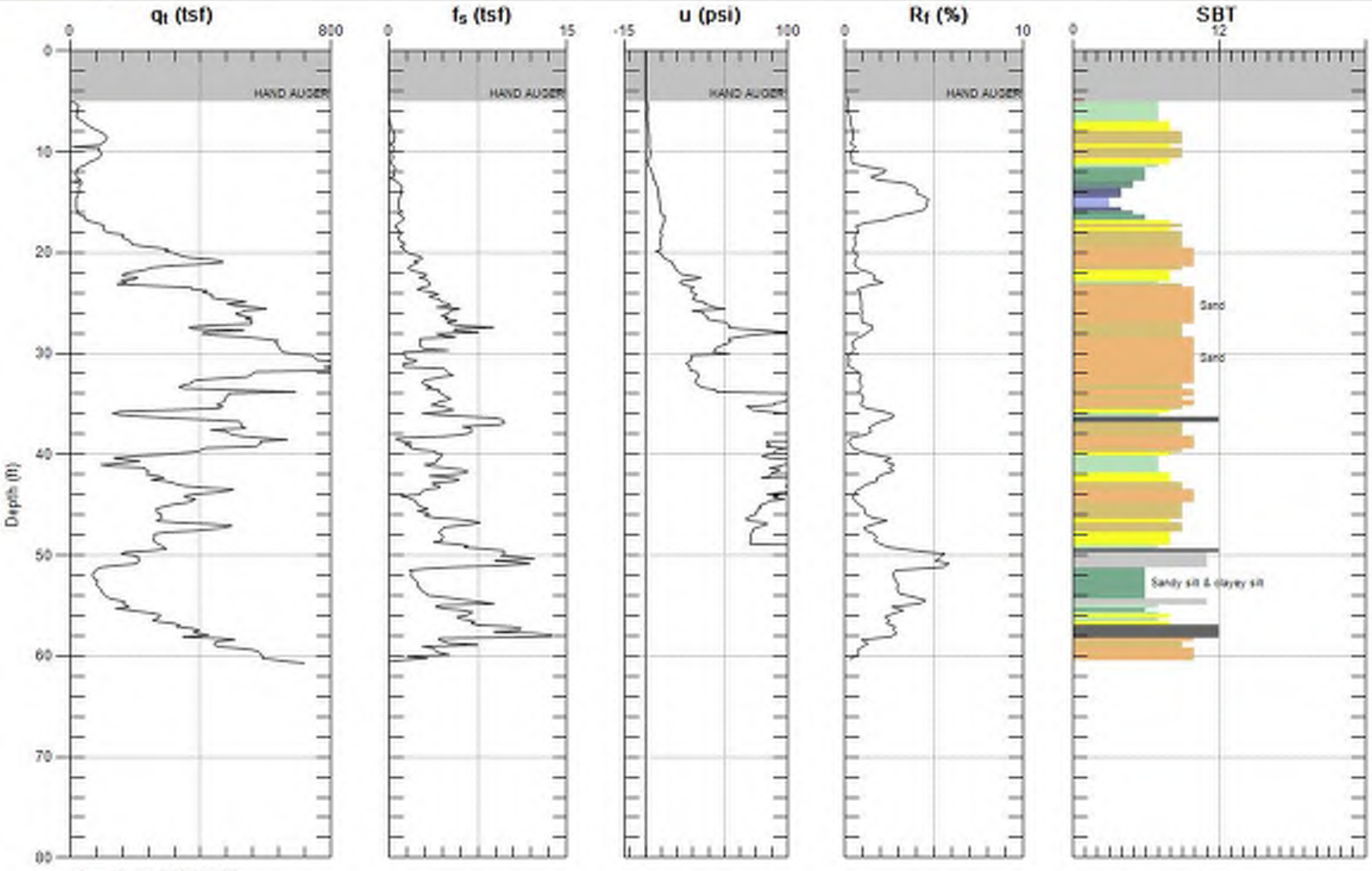
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-22

Engineer: J.URQUIZO
Date: 4/6/17 08:35



Max. Depth: 60.696 (ft)
Avg. Interval: 0.328 (ft)

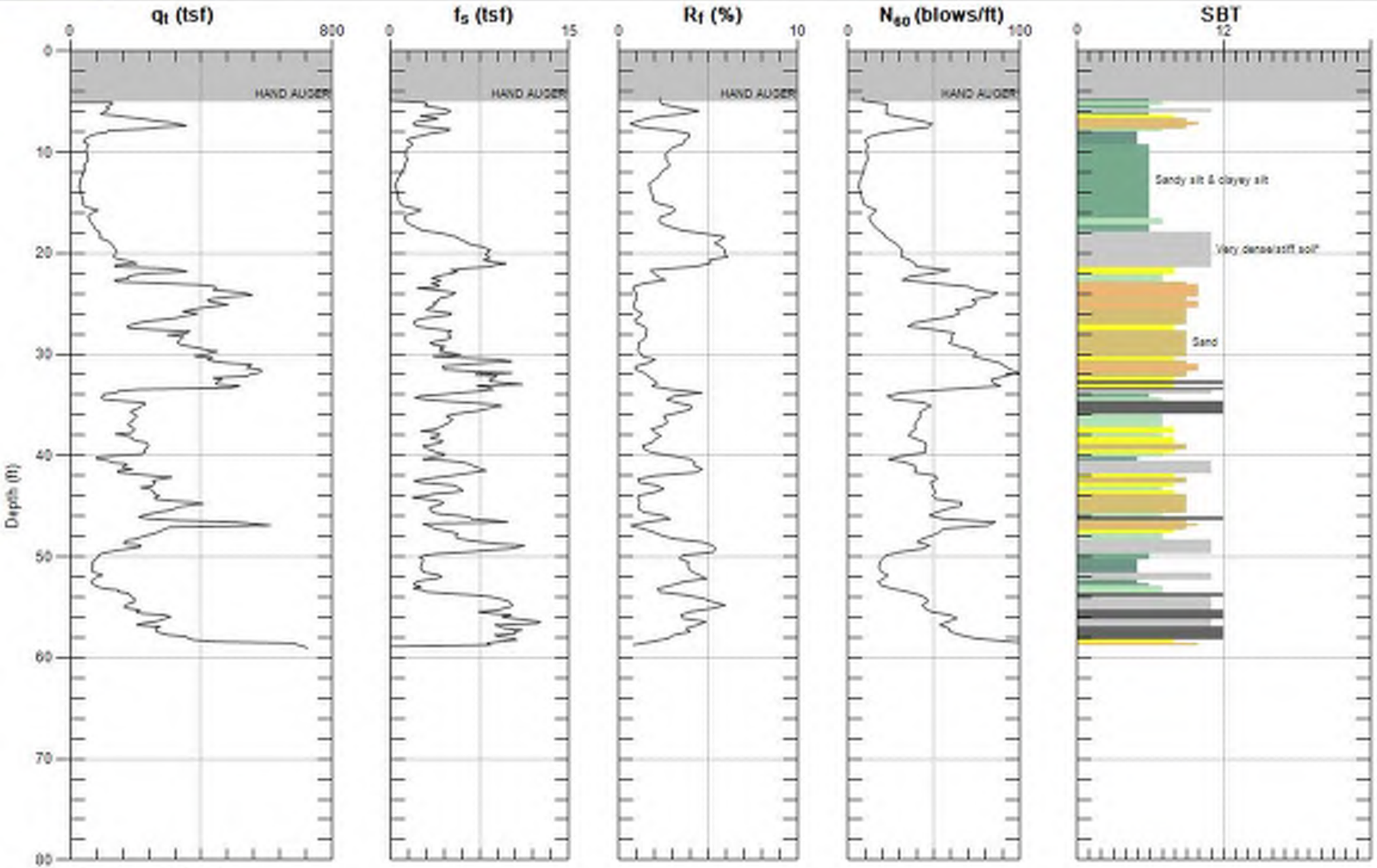
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-23

Engineer: J.URQUIZO
Date: 4/6/17 12:40



Max. Depth: 59.055 (ft)
Avg. Interval: 0.328 (ft)

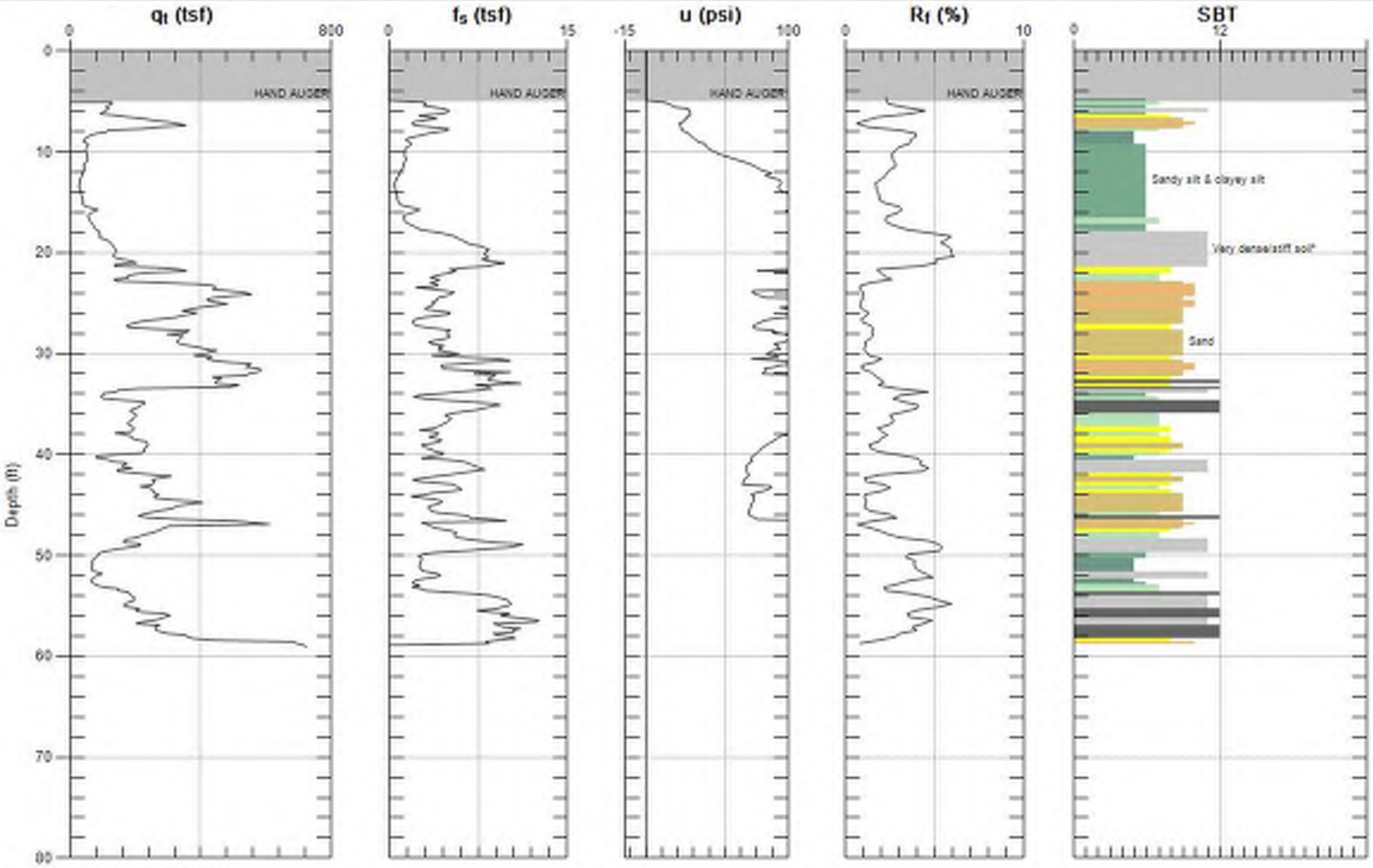
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-23

Engineer: J.URQUIZO
Date: 4/6/17 12:40



Max. Depth: 59.055 (ft)
Avg. Interval: 0.328 (ft)

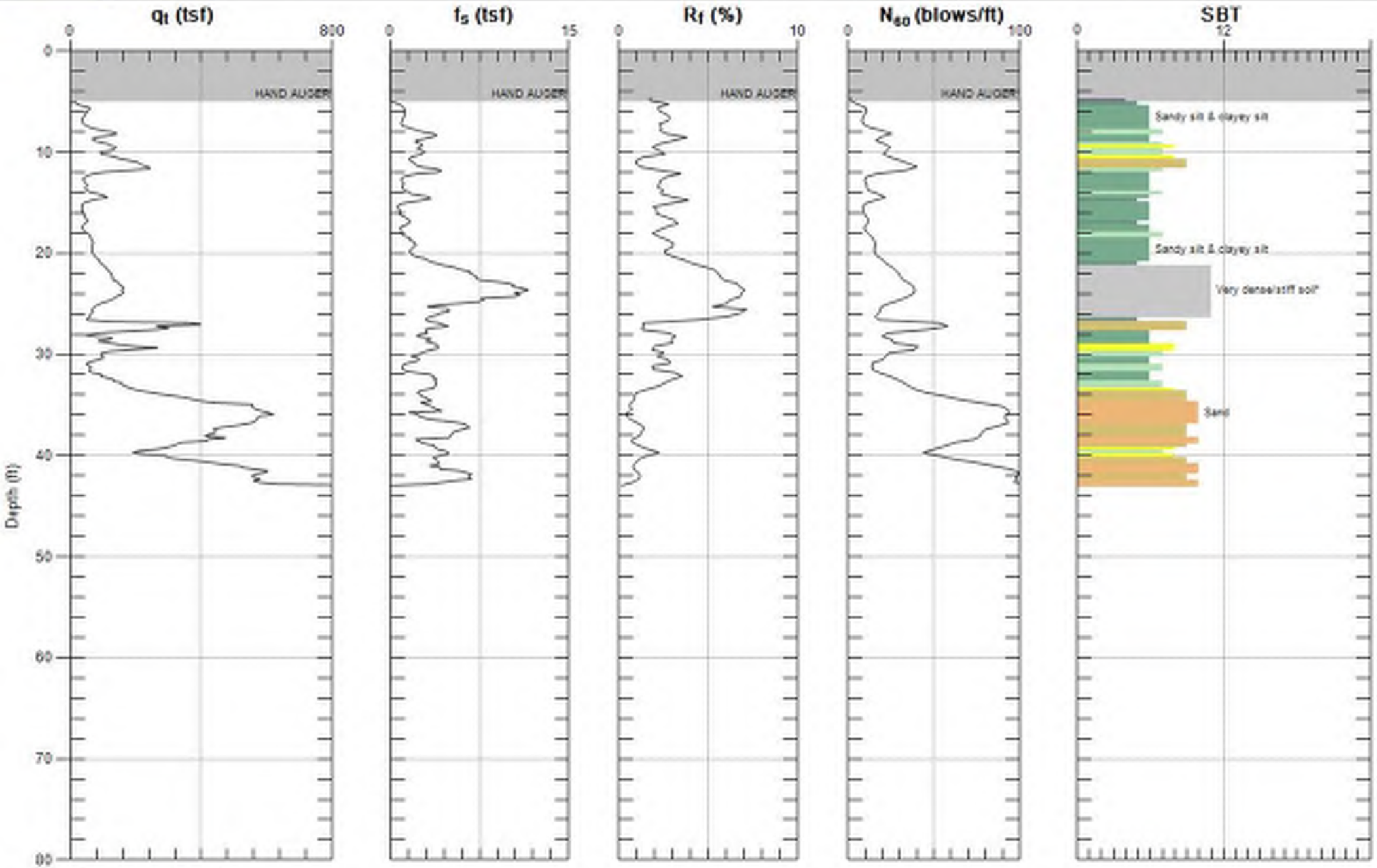
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-24

Engineer: J.URQUIZO
Date: 4/6/17 01:38



Max. Depth: 43.143 (ft)
Avg. Interval: 0.328 (ft)

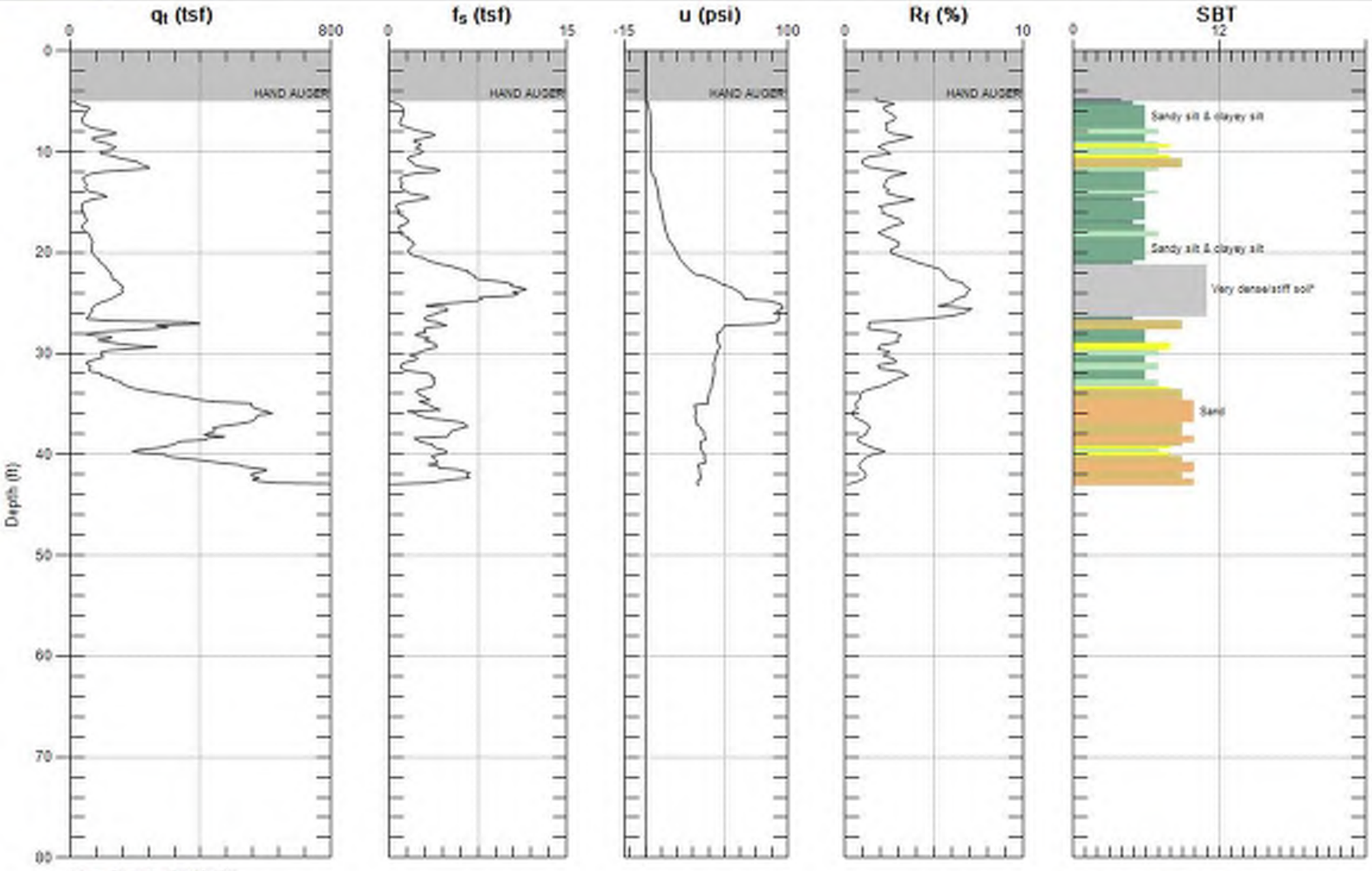
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-24

Engineer: J.URQUIZO
Date: 4/6/17 01:38



Max. Depth: 43.143 (ft)
Avg. Interval: 0.328 (ft)

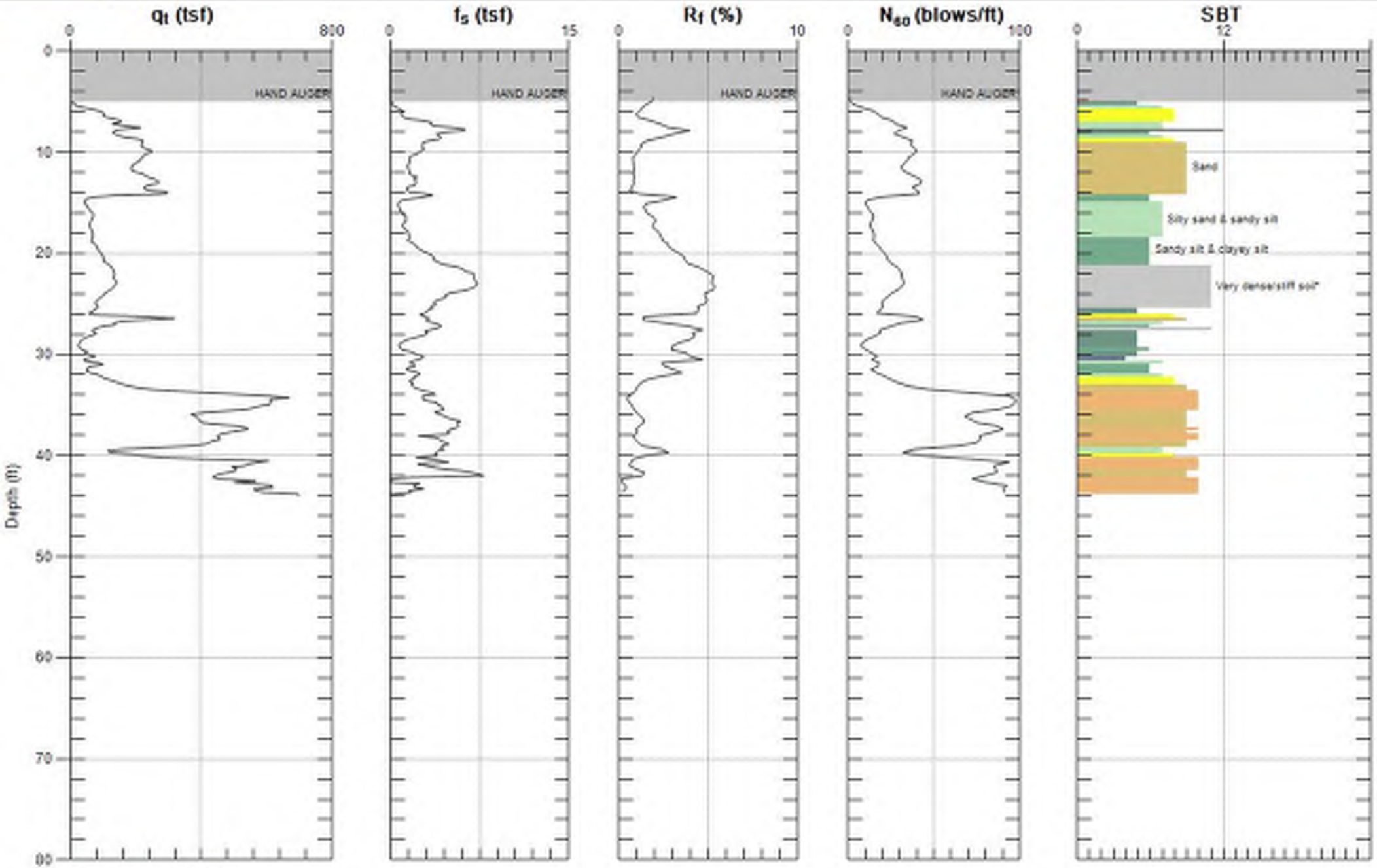
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-25

Engineer: J.URQUIZO
Date: 4/6/17 02:42



Max. Depth: 43.963 (ft)
Avg. Interval: 0.328 (ft)

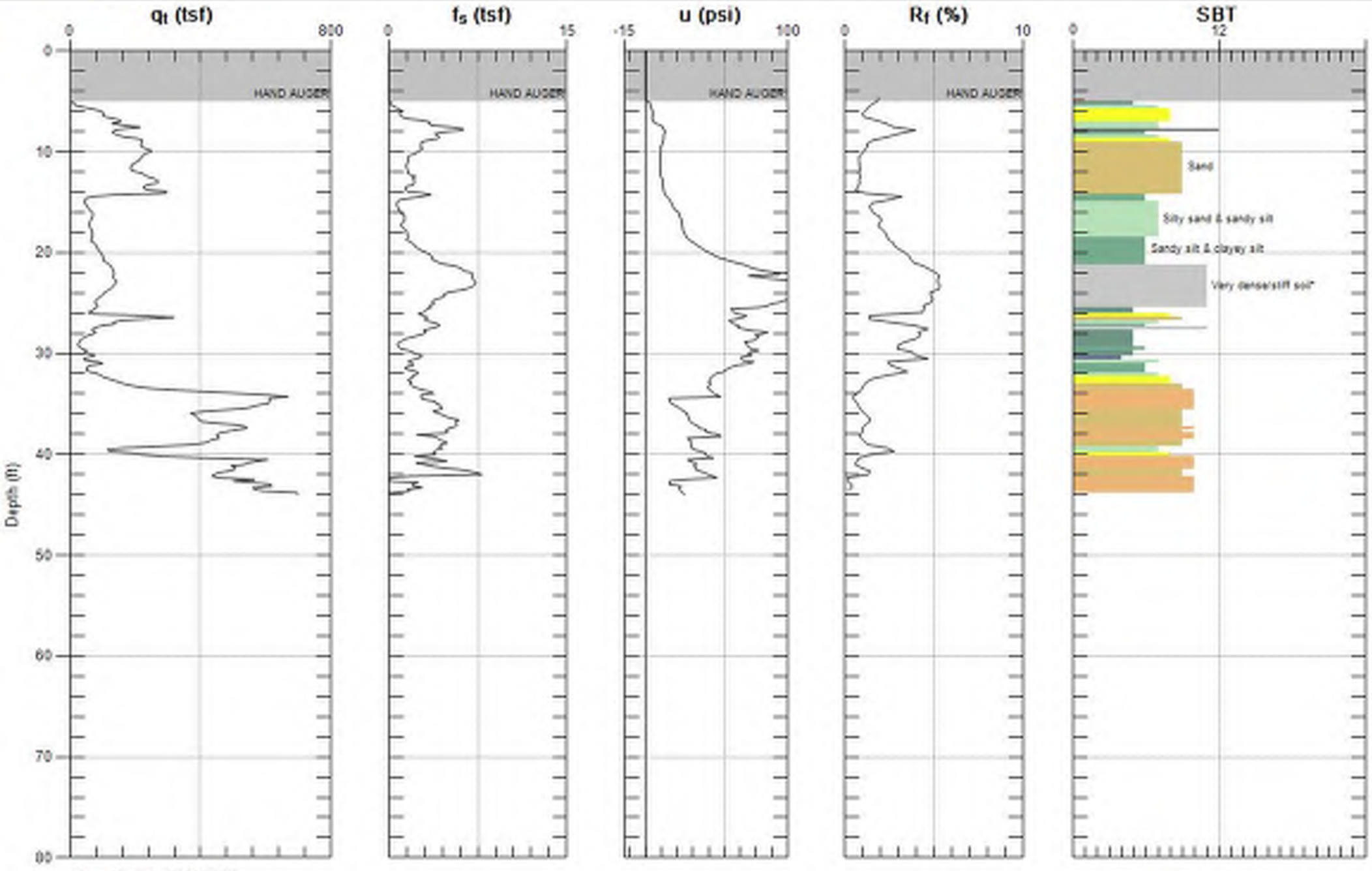
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-25

Engineer: J.URQUIZO
Date: 4/6/17 02:42



Max. Depth: 43.963 (ft)
Avg. Interval: 0.328 (ft)

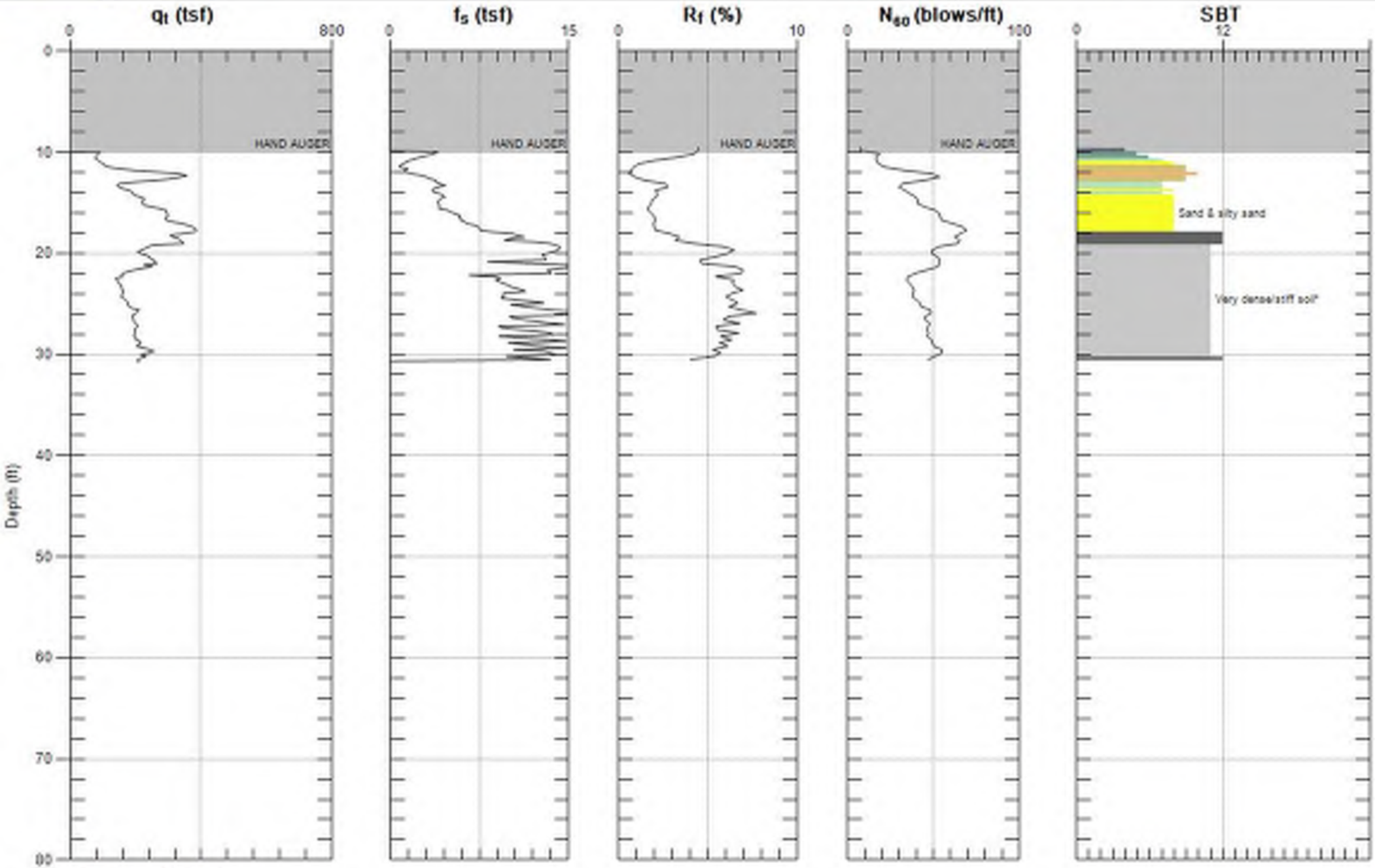
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-26A

Engineer: J.URQUIZO
Date: 4/6/17 04:26



Max. Depth: 30.840 (ft)
Avg. Interval: 0.328 (ft)

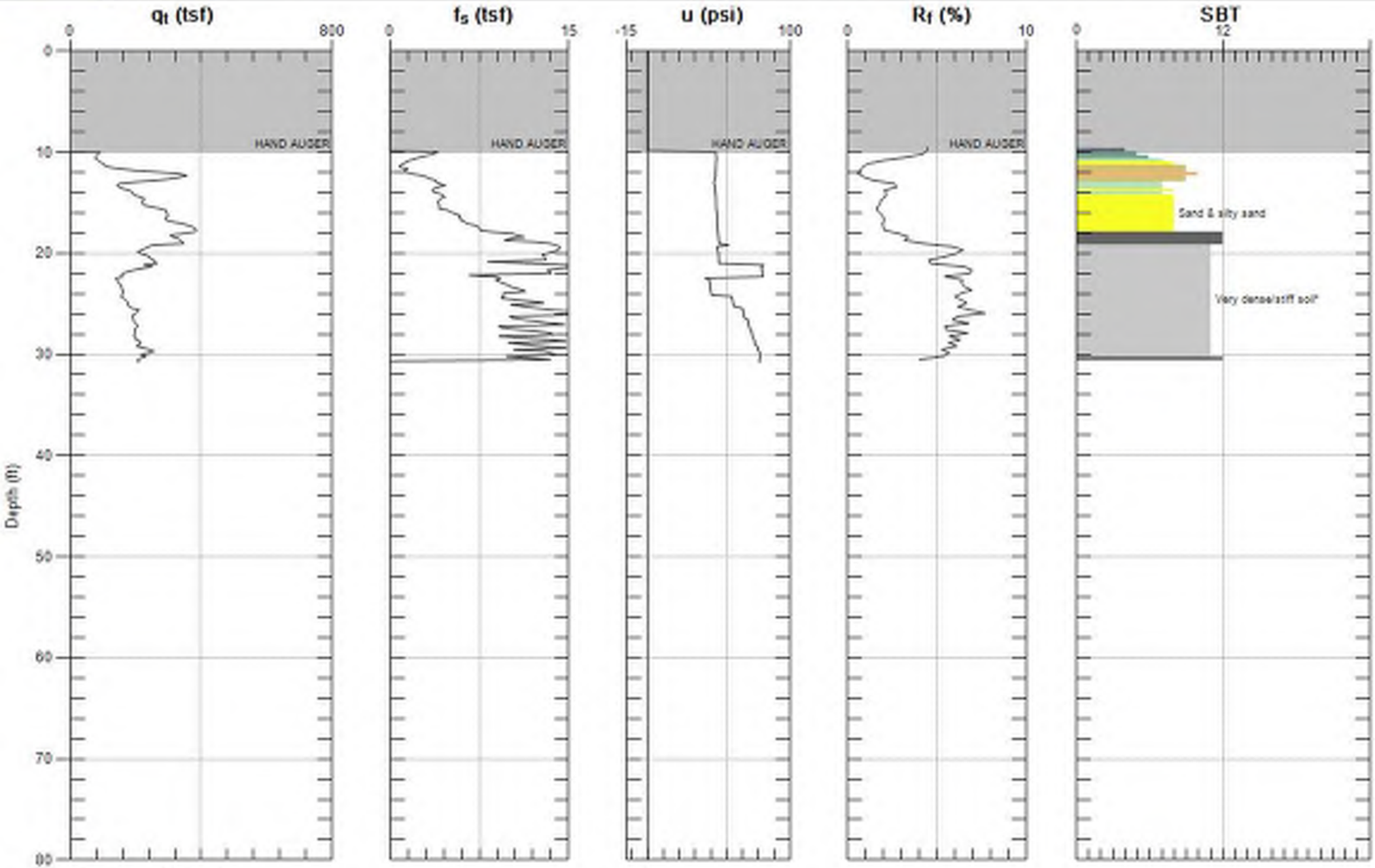
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-26A

Engineer: J.URQUIZO
Date: 4/6/17 04:26



Max. Depth: 30.840 (ft)
Avg. Interval: 0.328 (ft)

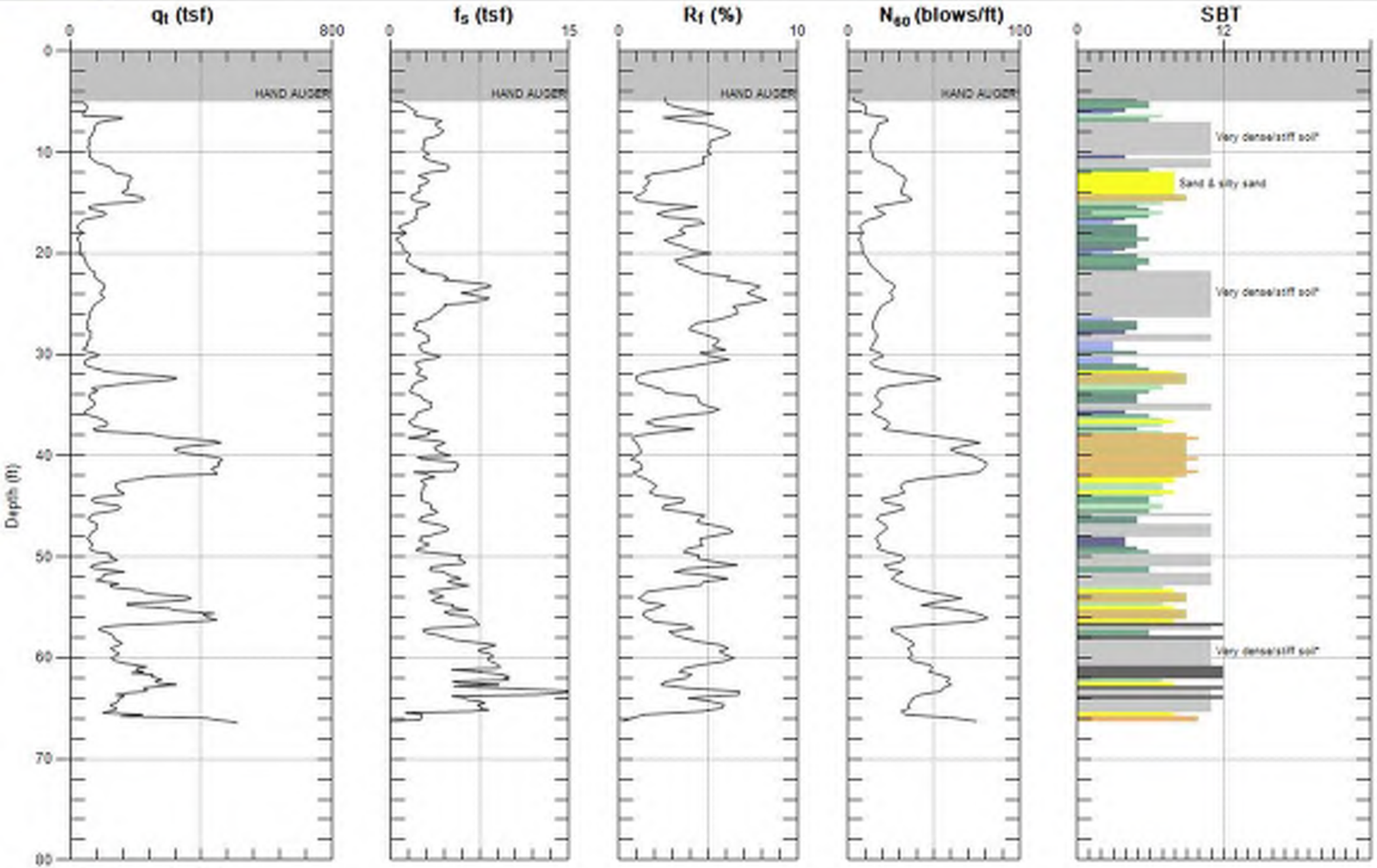
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-27

Engineer: J.URQUIZO
Date: 4/6/17 05:12



Max. Depth: 66.437 (ft)
Avg. Interval: 0.328 (ft)

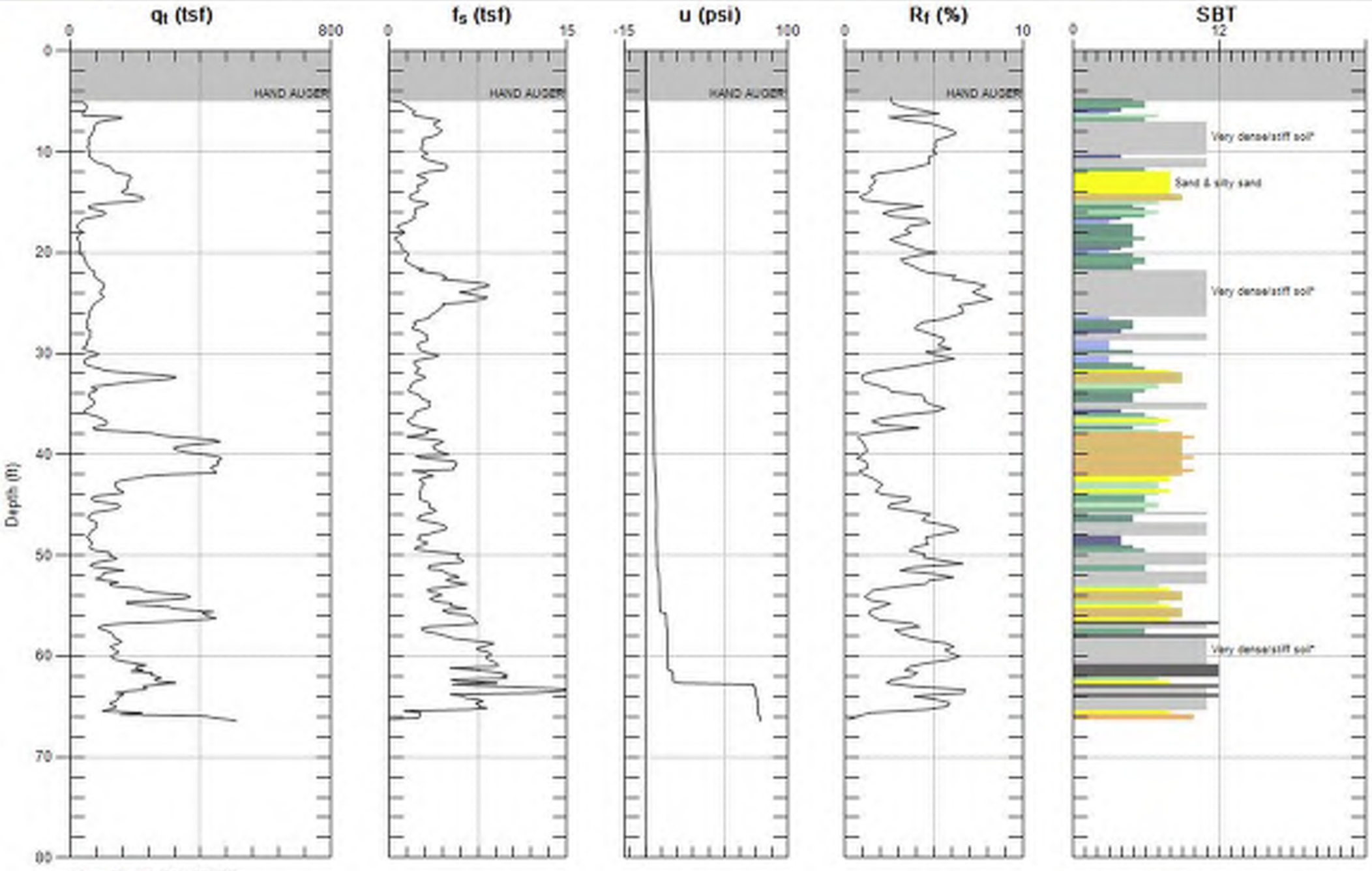
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-27

Engineer: J.URQUIZO
Date: 4/6/17 05:12



Max. Depth: 66.437 (ft)
Avg. Interval: 0.328 (ft)

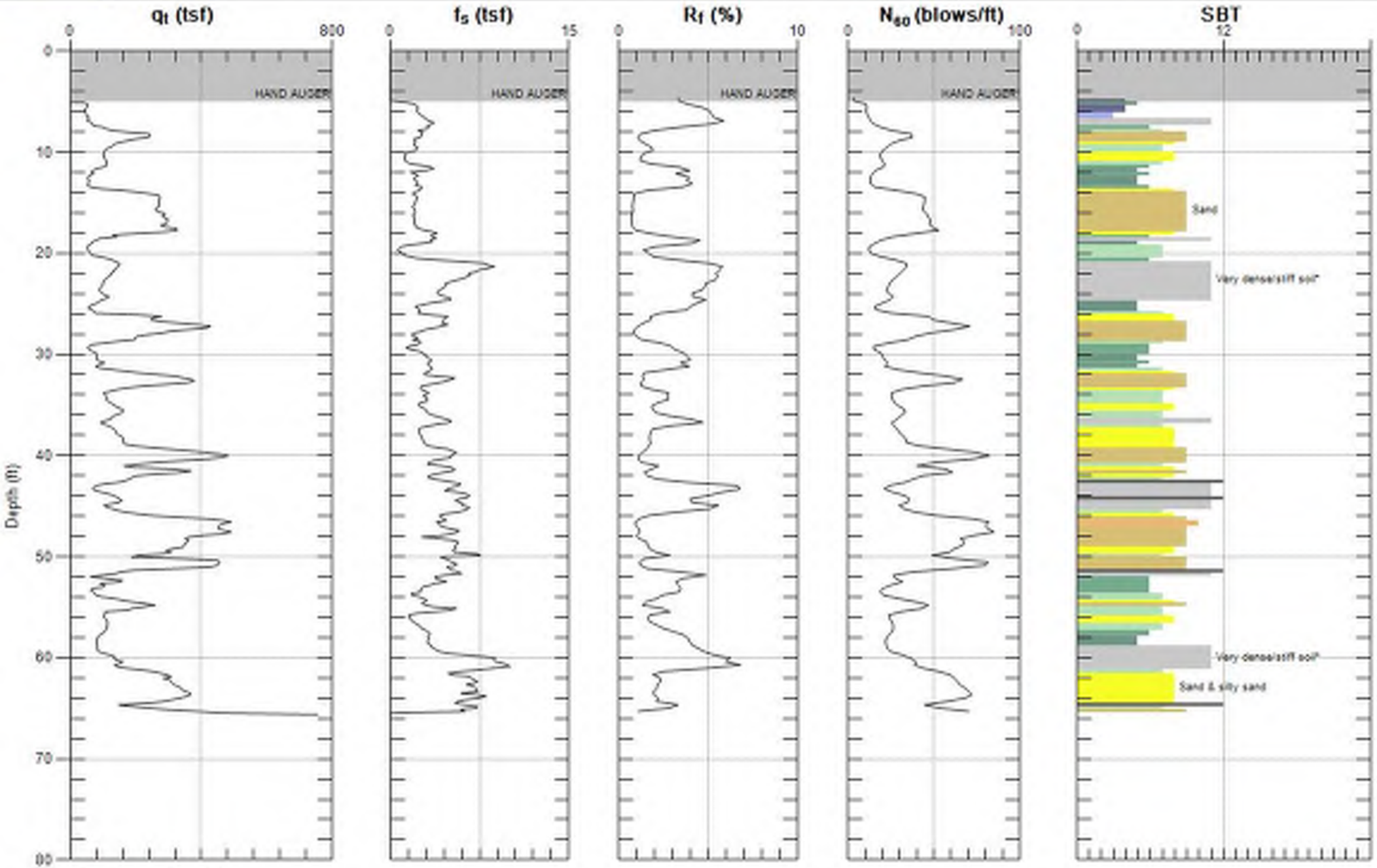
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-28

Engineer: J.URQUIZO
Date: 4/6/17 06:03



Max. Depth: 65.617 (ft)
Avg. Interval: 0.328 (ft)

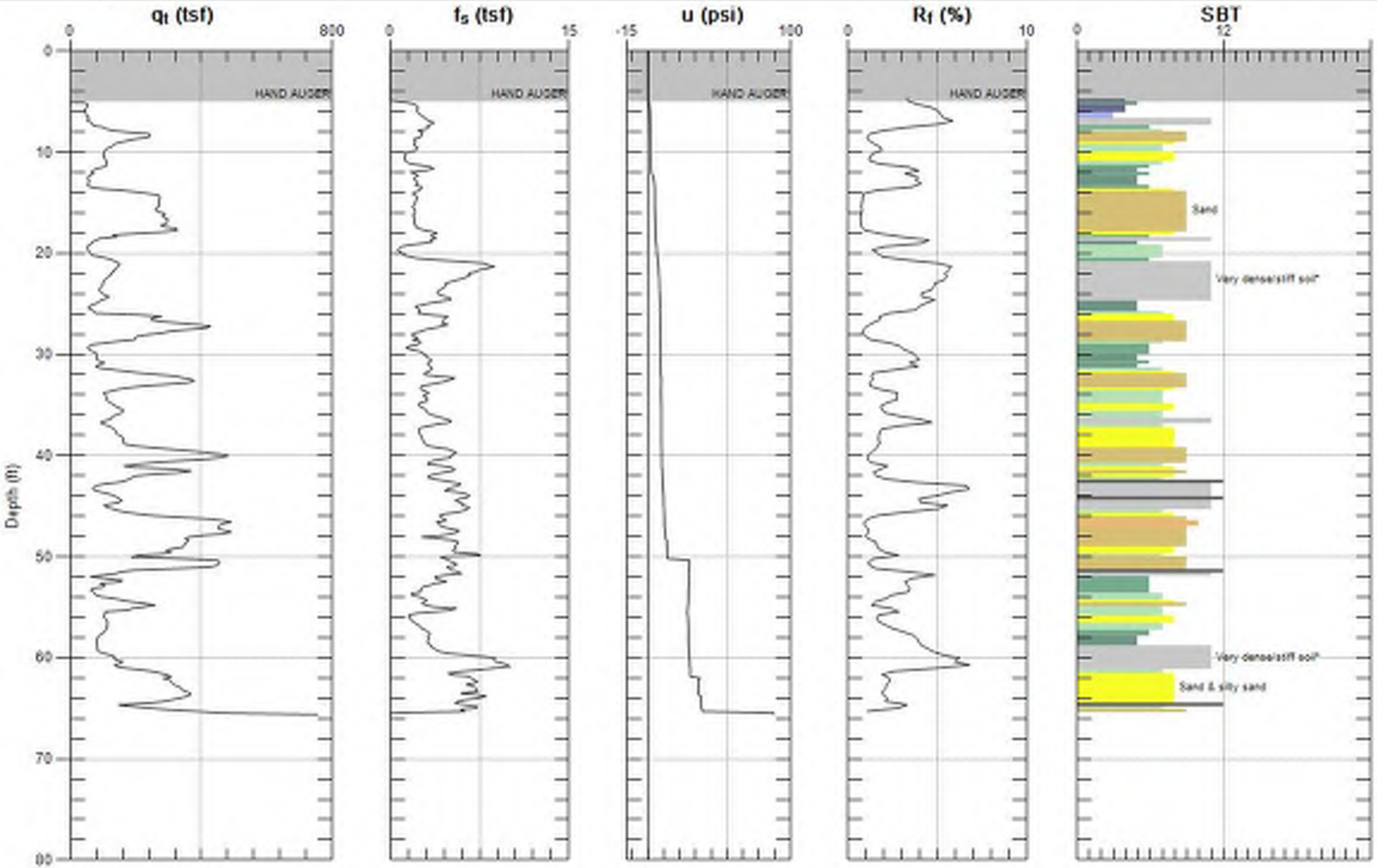
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-28

Engineer: J.URQUIZO
Date: 4/6/17 06:03



Max. Depth: 65.617 (ft)
Avg. Interval: 0.328 (ft)

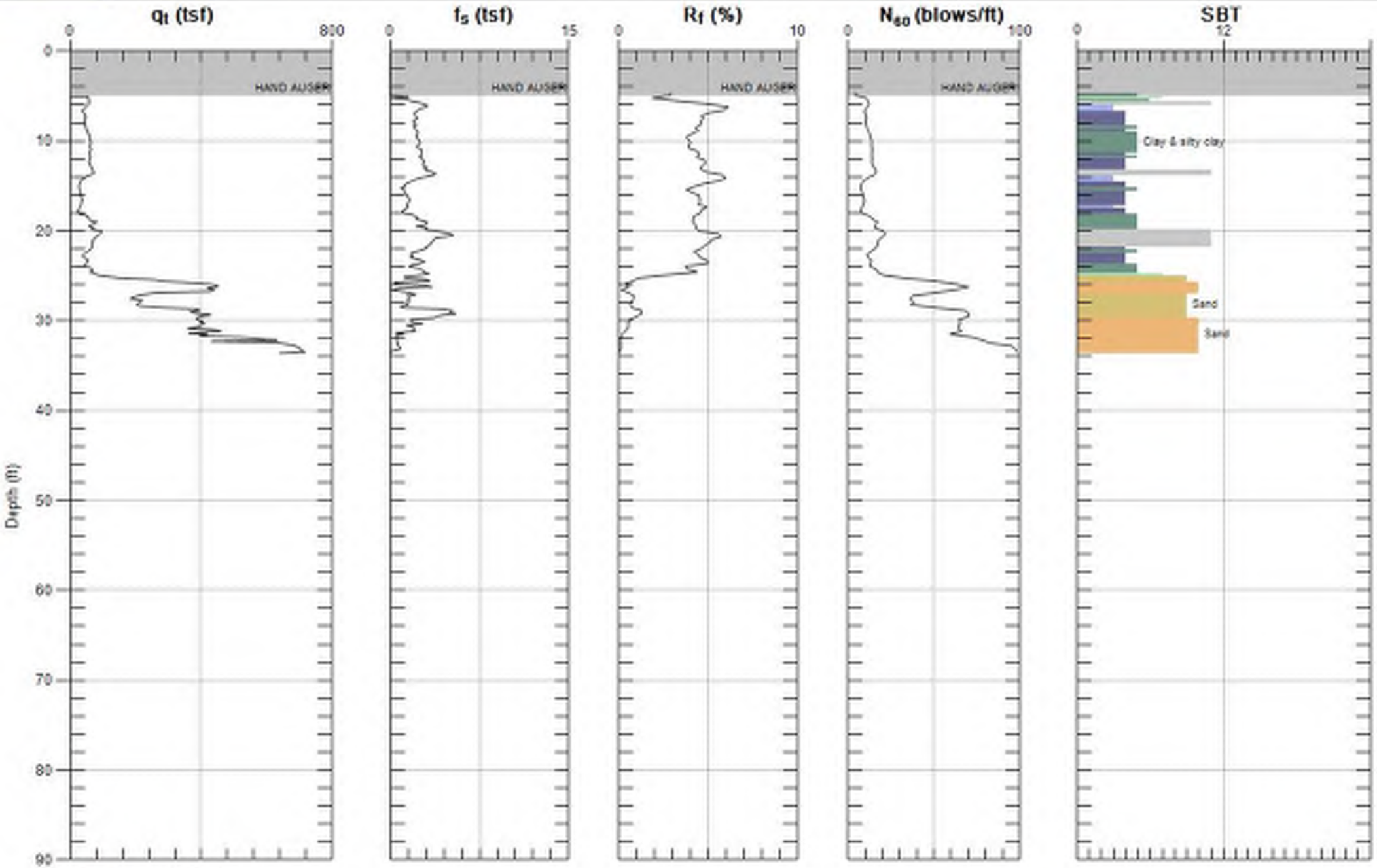
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-29

Engineer: J.URQUIZO
Date: 4/10/17 07:35



Max. Depth: 33.629 (ft)
Avg. Interval: 0.328 (ft)

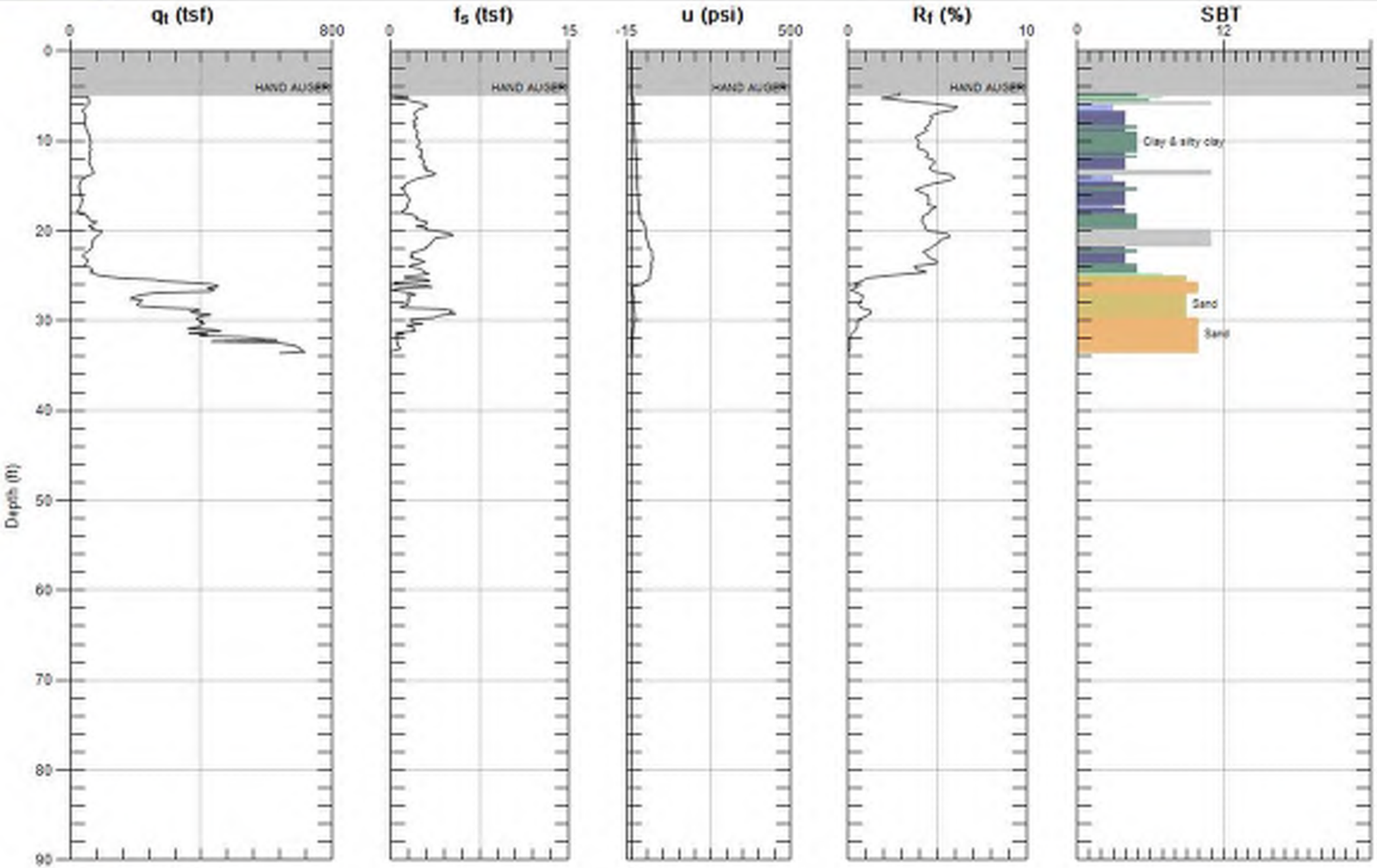
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-29

Engineer: J.URQUIZO
Date: 4/10/17 07:35



Max. Depth: 33.629 (ft)
Avg. Interval: 0.328 (ft)

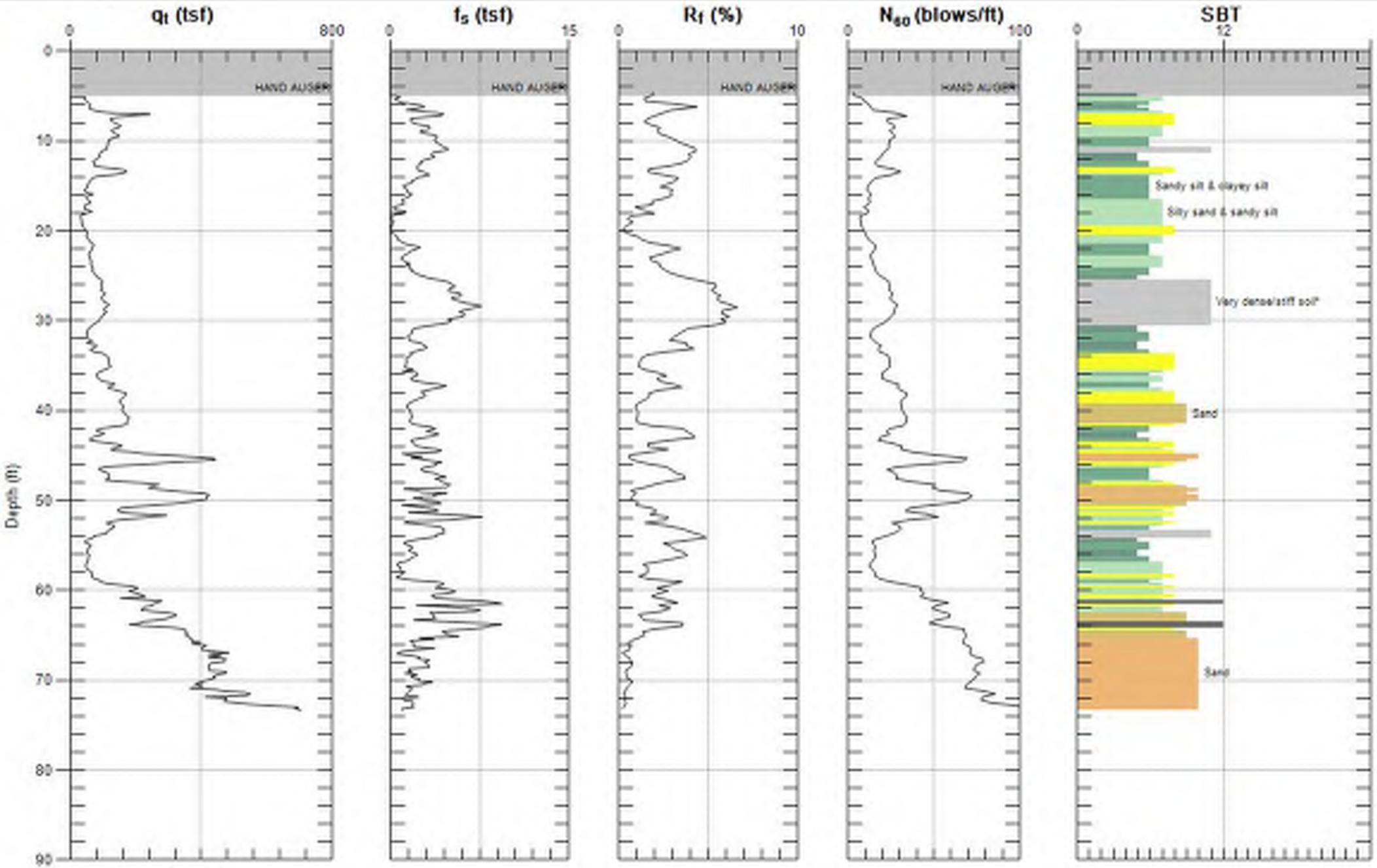
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-30

Engineer: J.URQUIZO
Date: 4/10/17 08:52



Max. Depth: 73.327 (ft)
Avg. Interval: 0.328 (ft)

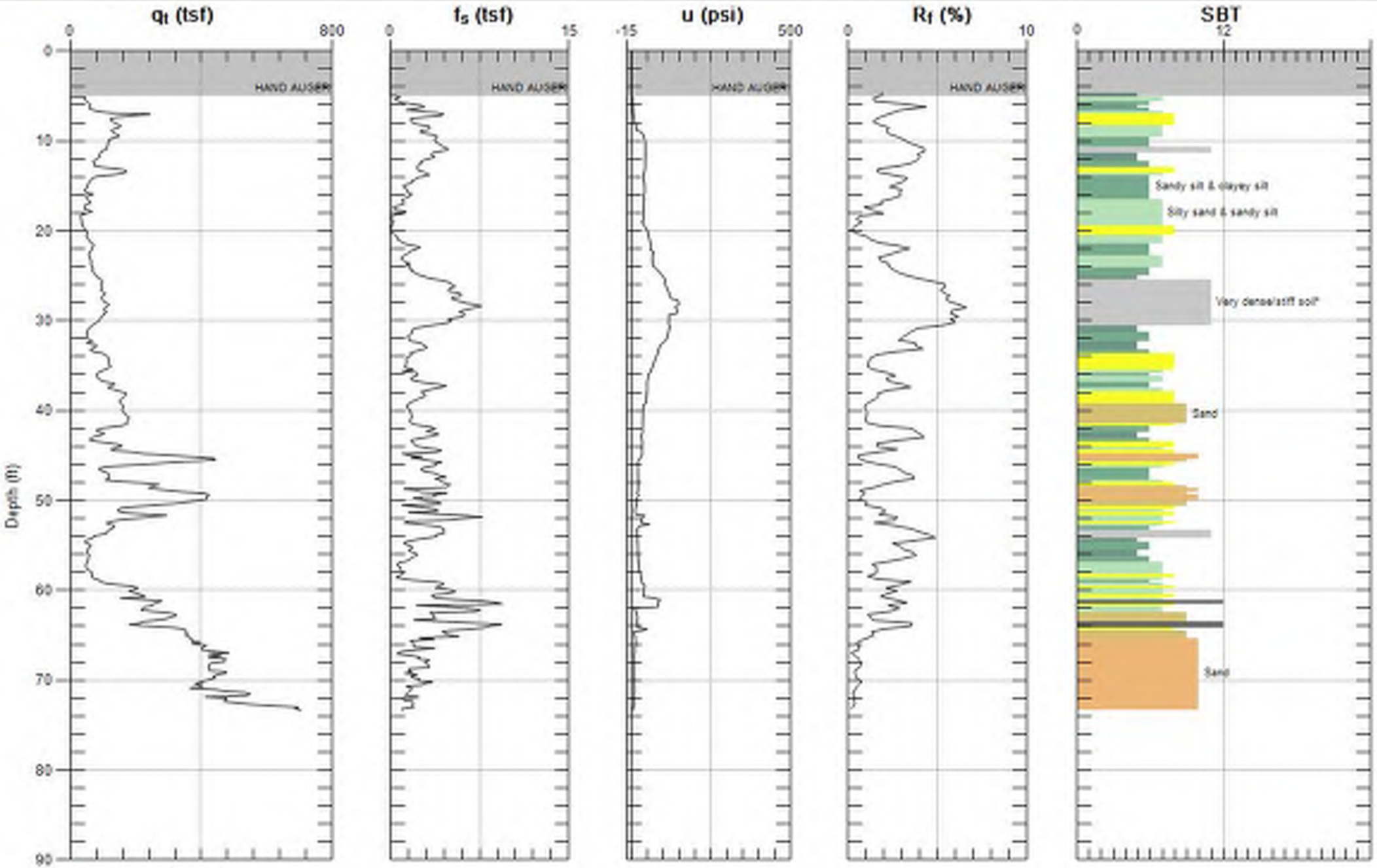
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-30

Engineer: J.URQUIZO
Date: 4/10/17 08:52



Max. Depth: 73.327 (ft)
Avg. Interval: 0.328 (ft)

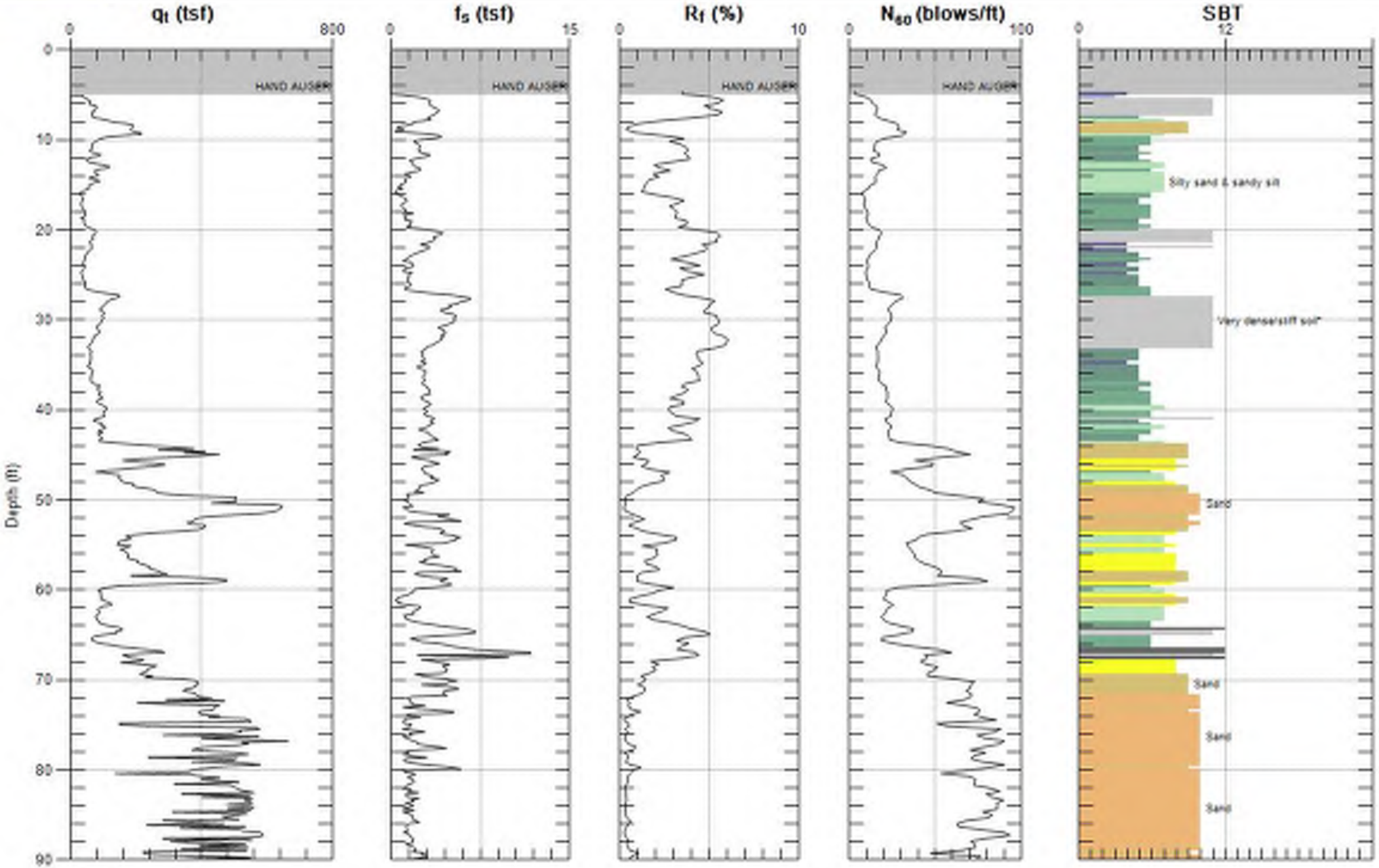
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-31

Engineer: J.URQUIZO
Date: 4/10/17 10:40



Max. Depth: 90.551 (ft)
Avg. Interval: 0.328 (ft)

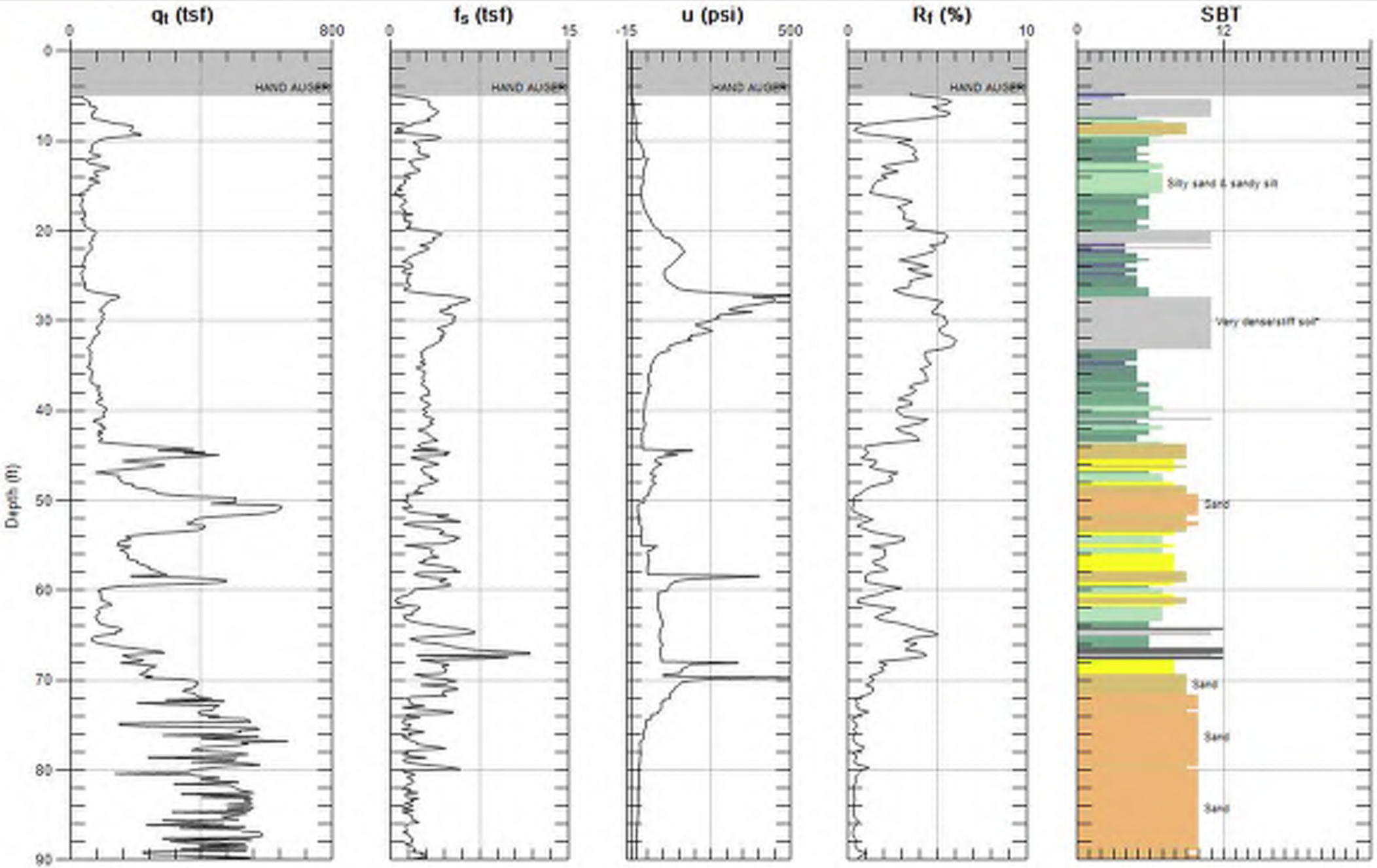
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-31

Engineer: J.URQUIZO
Date: 4/10/17 10:40



Max. Depth: 90.551 (ft)
Avg. Interval: 0.328 (ft)

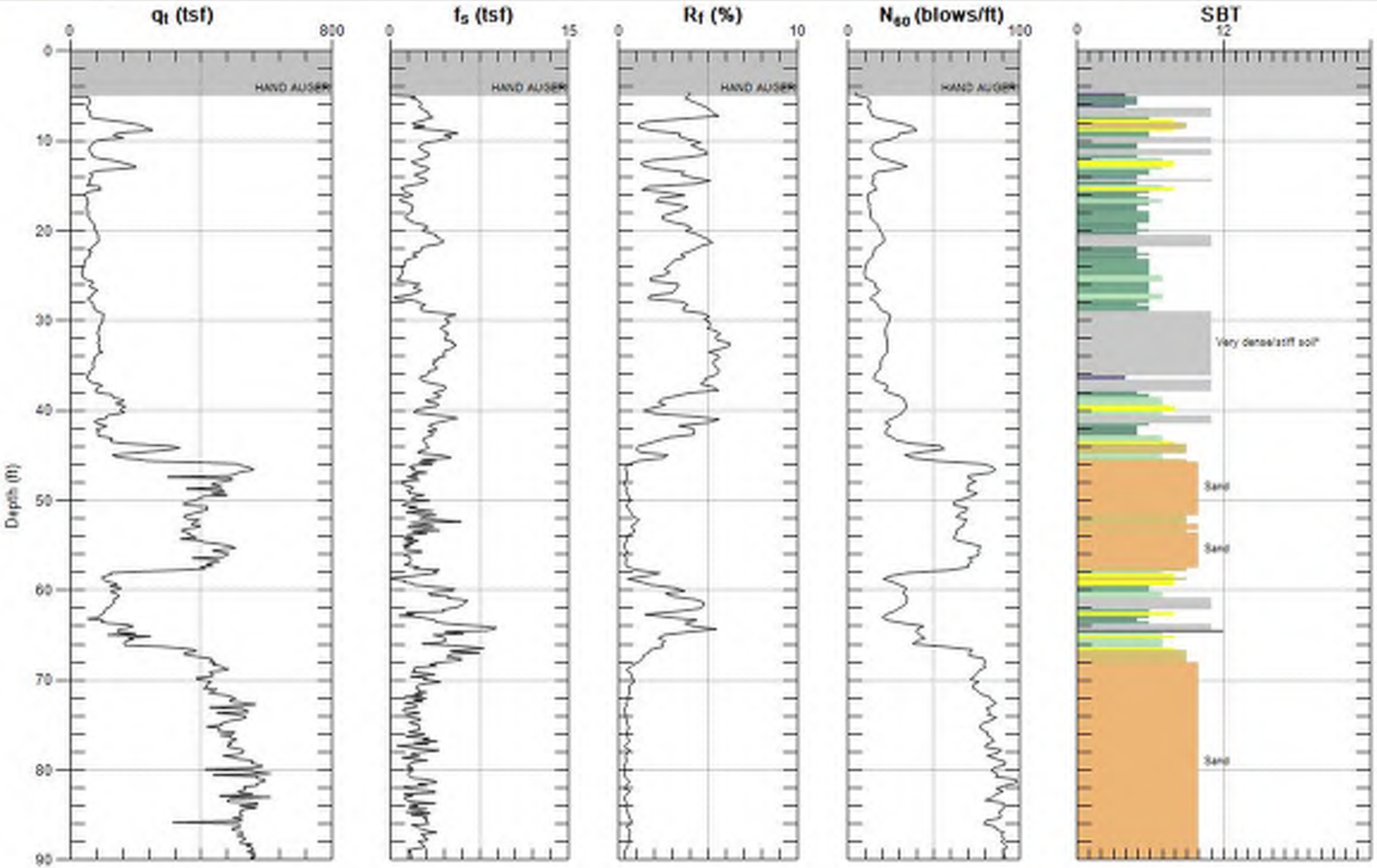
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-32

Engineer: J.URQUIZO
Date: 4/10/17 01:21



Max. Depth: 90.551 (ft)
Avg. Interval: 0.328 (ft)

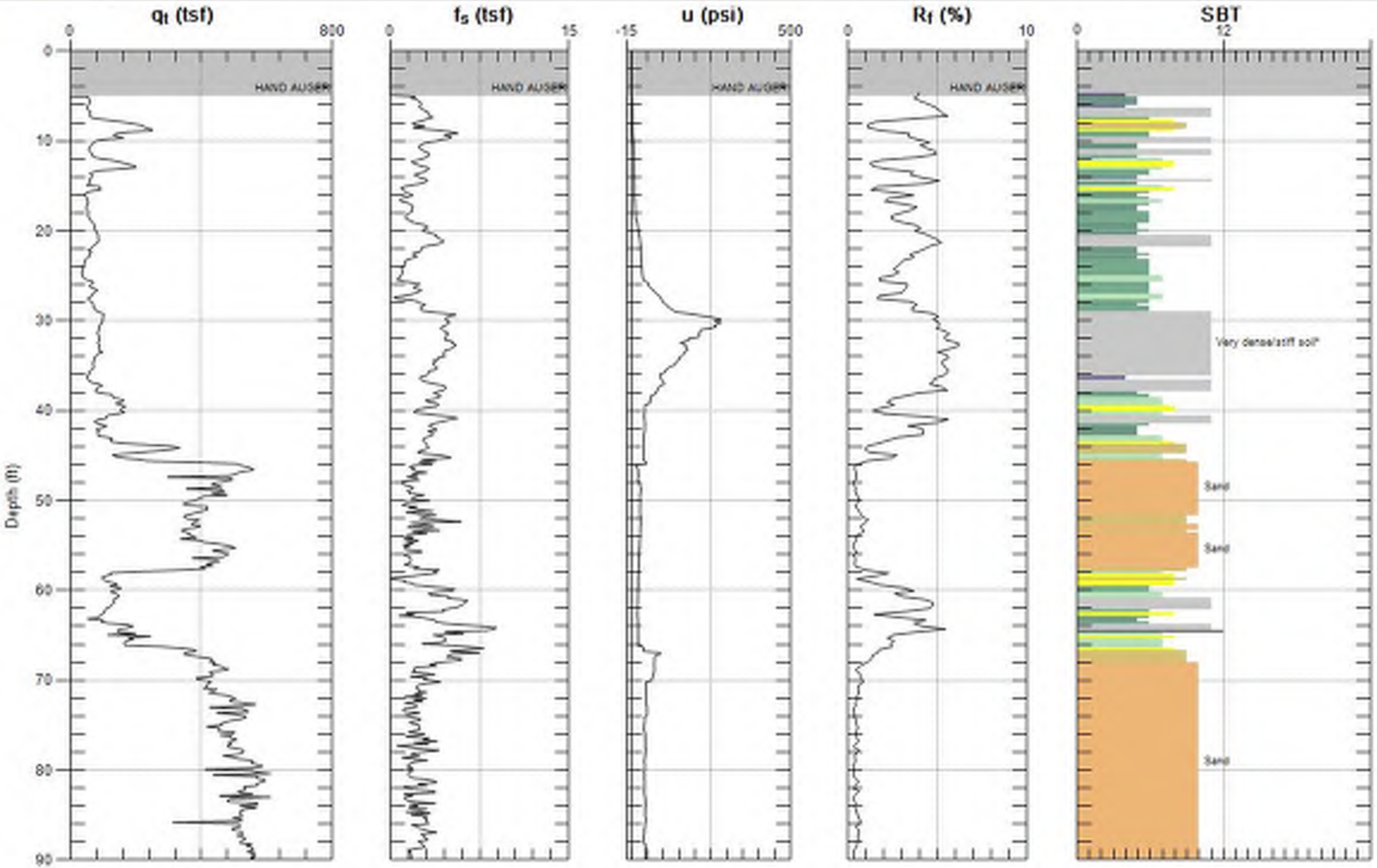
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-32

Engineer: J.URQUIZO
Date: 4/10/17 01:21



Max. Depth: 90.551 (ft)
Avg. Interval: 0.328 (ft)

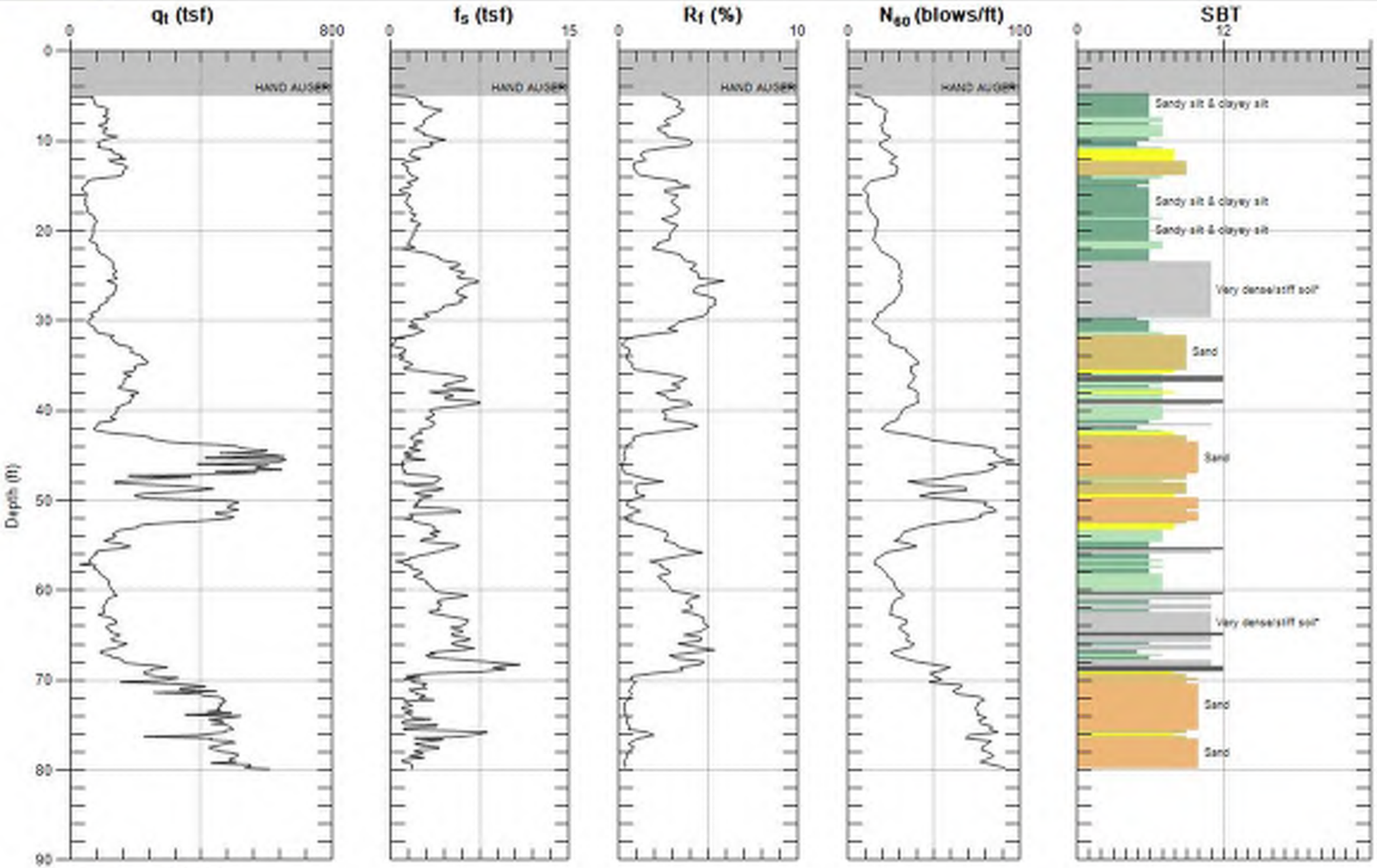
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-33

Engineer: J.URQUIZO
Date: 4/10/17 03:13



Max. Depth: 79.888 (ft)
Avg. Interval: 0.328 (ft)

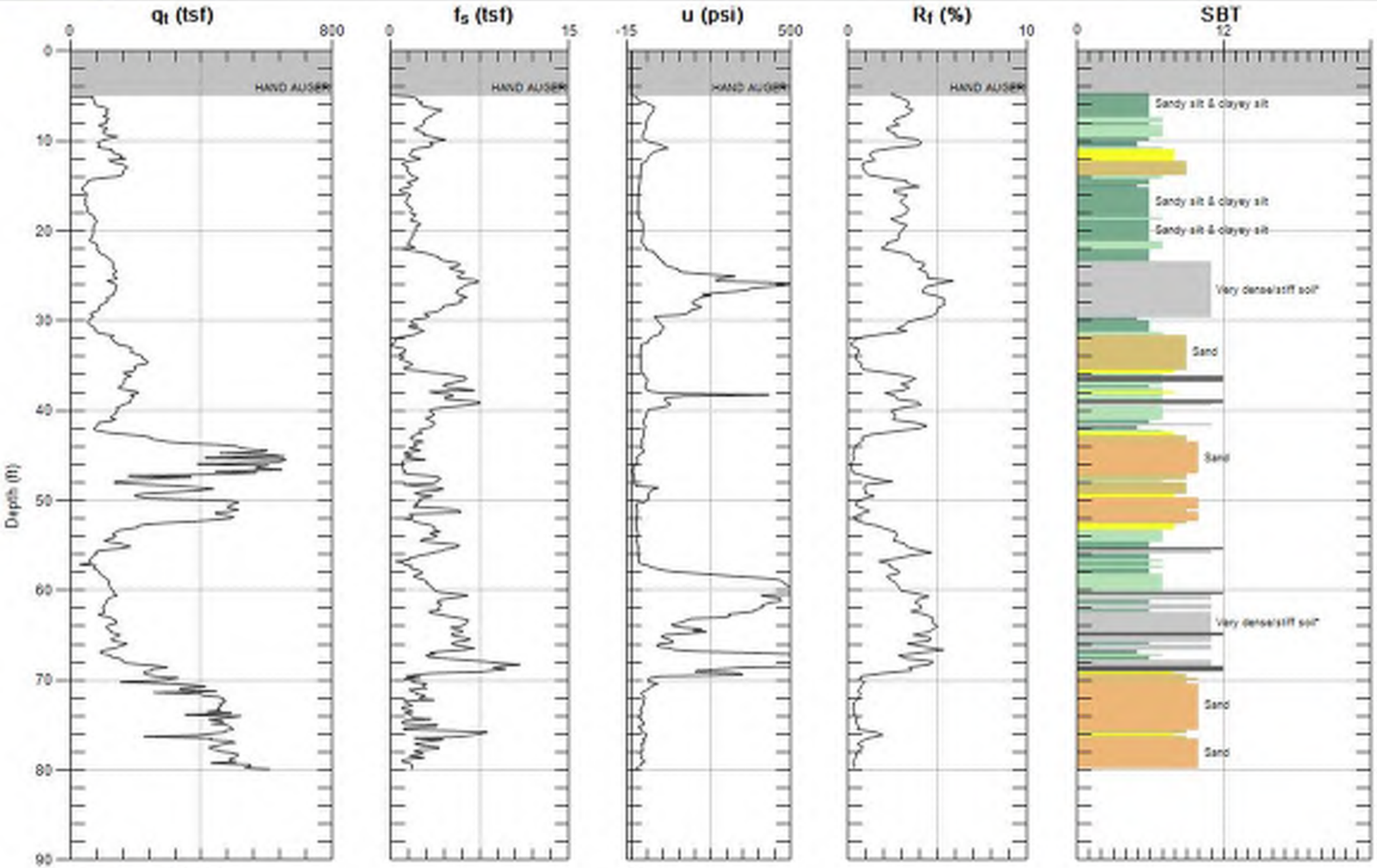
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-33

Engineer: J.URQUIZO
Date: 4/10/17 03:13



Max. Depth: 79.888 (ft)
Avg. Interval: 0.328 (ft)

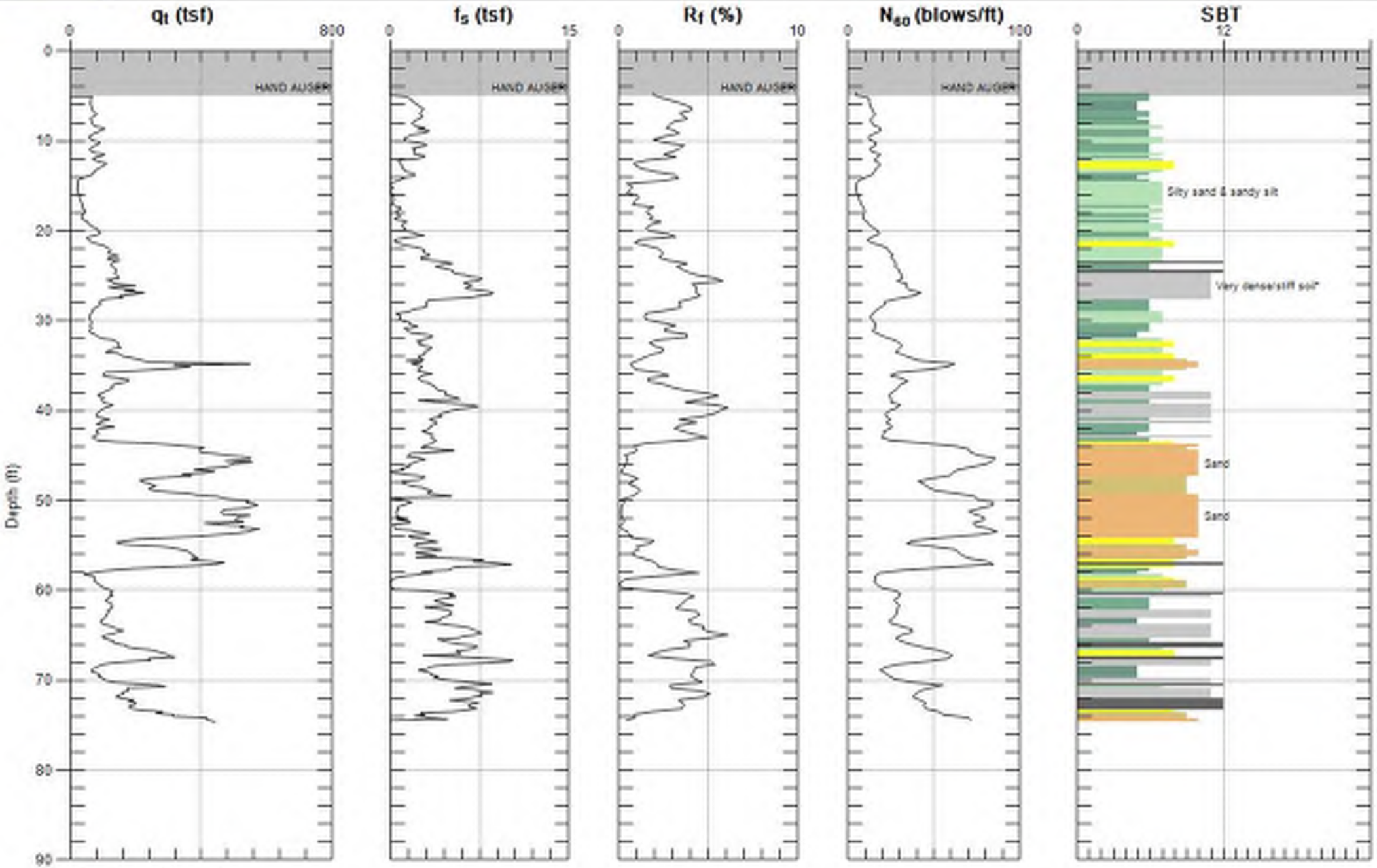
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-34

Engineer: J.URQUIZO
Date: 4/10/17 04:40



Max. Depth: 74.639 (ft)
Avg. Interval: 0.328 (ft)

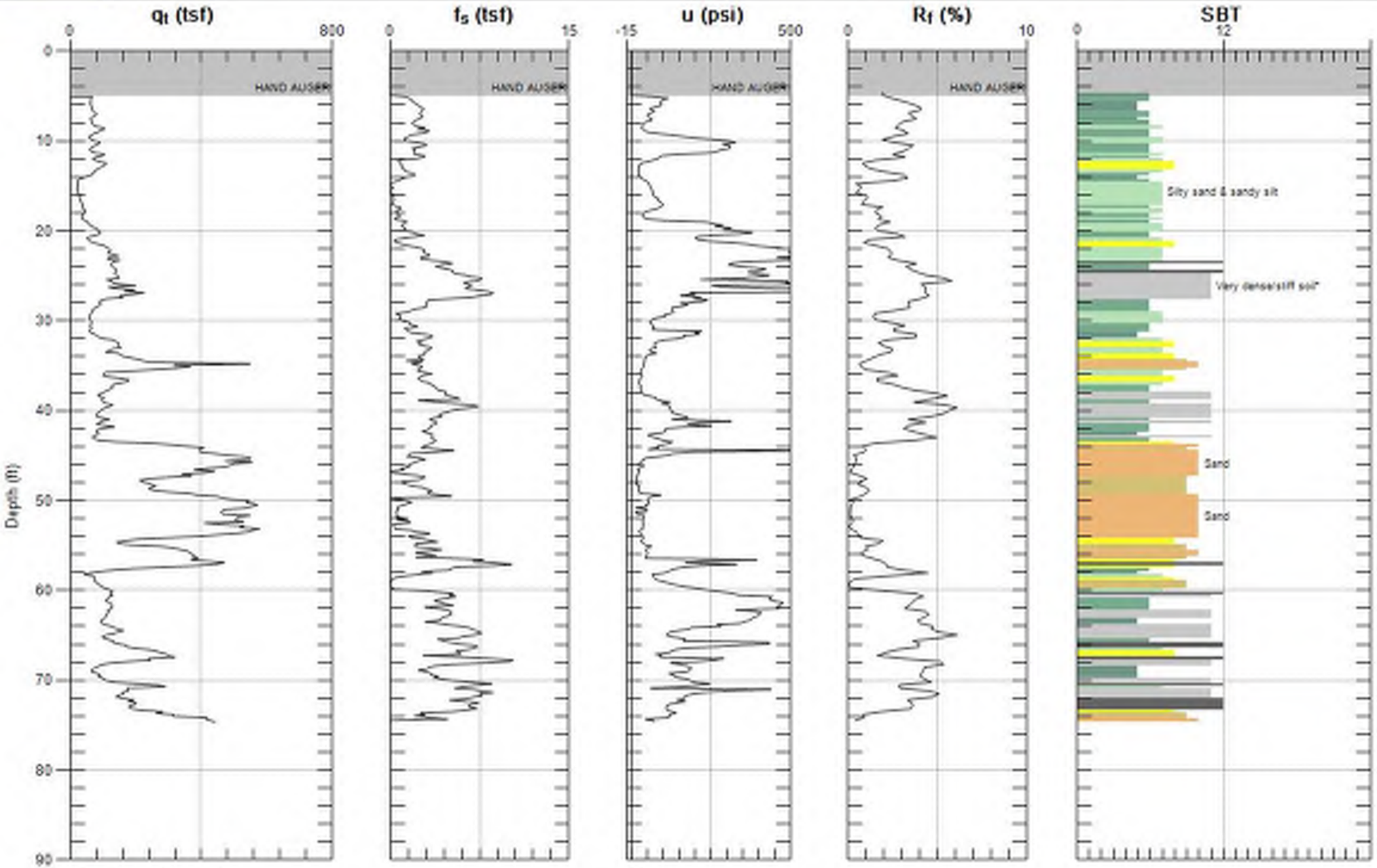
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-34

Engineer: J.URQUIZO
Date: 4/10/17 04:40



Max. Depth: 74.639 (ft)
Avg. Interval: 0.328 (ft)

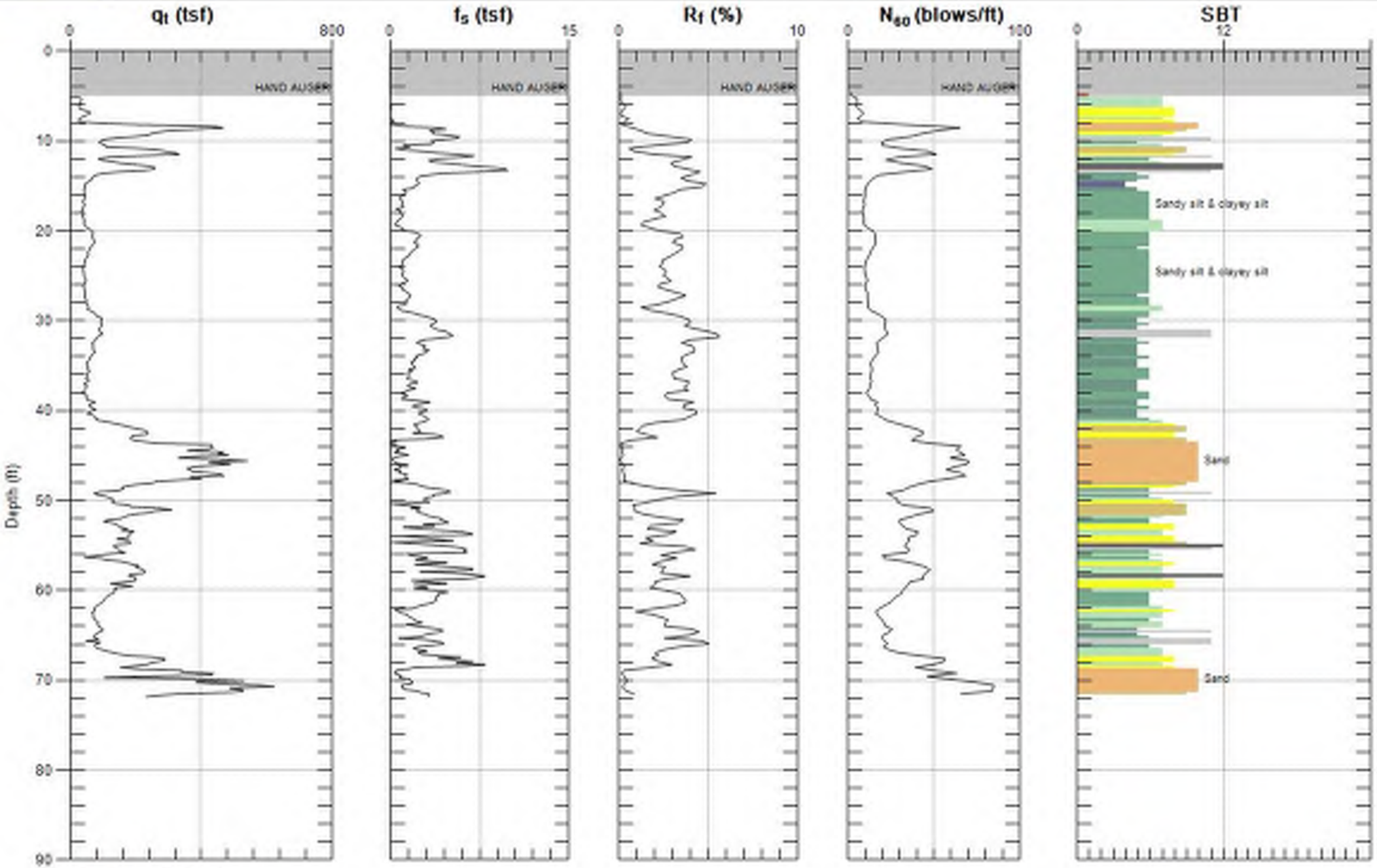
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-35

Engineer: J.URQUIZO
Date: 4/10/17 05:53



Max. Depth: 71.850 (ft)
Avg. Interval: 0.328 (ft)

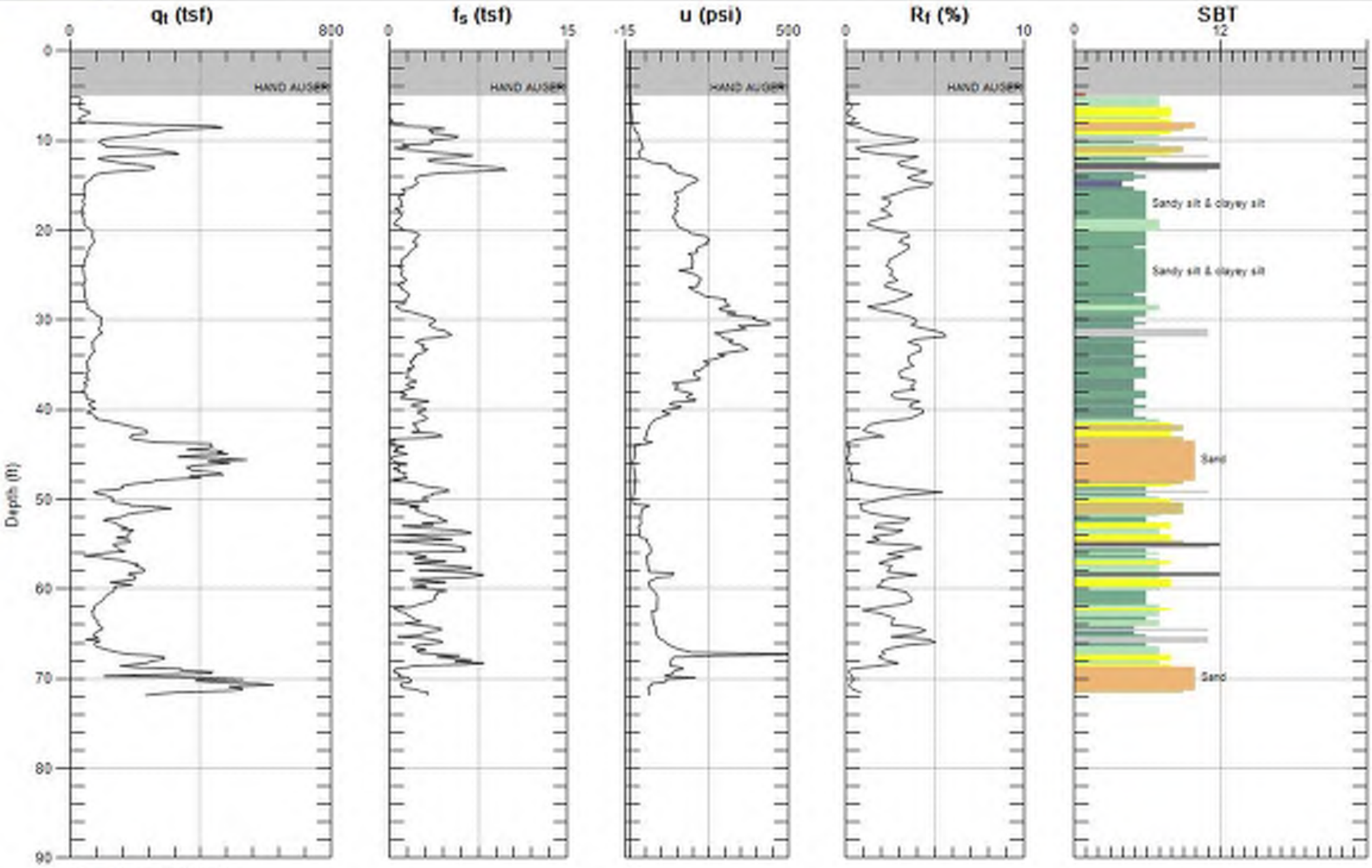
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-35

Engineer: J.URQUIZO
Date: 4/10/17 05:53



Max. Depth: 71.850 (ft)
Avg. Interval: 0.328 (ft)

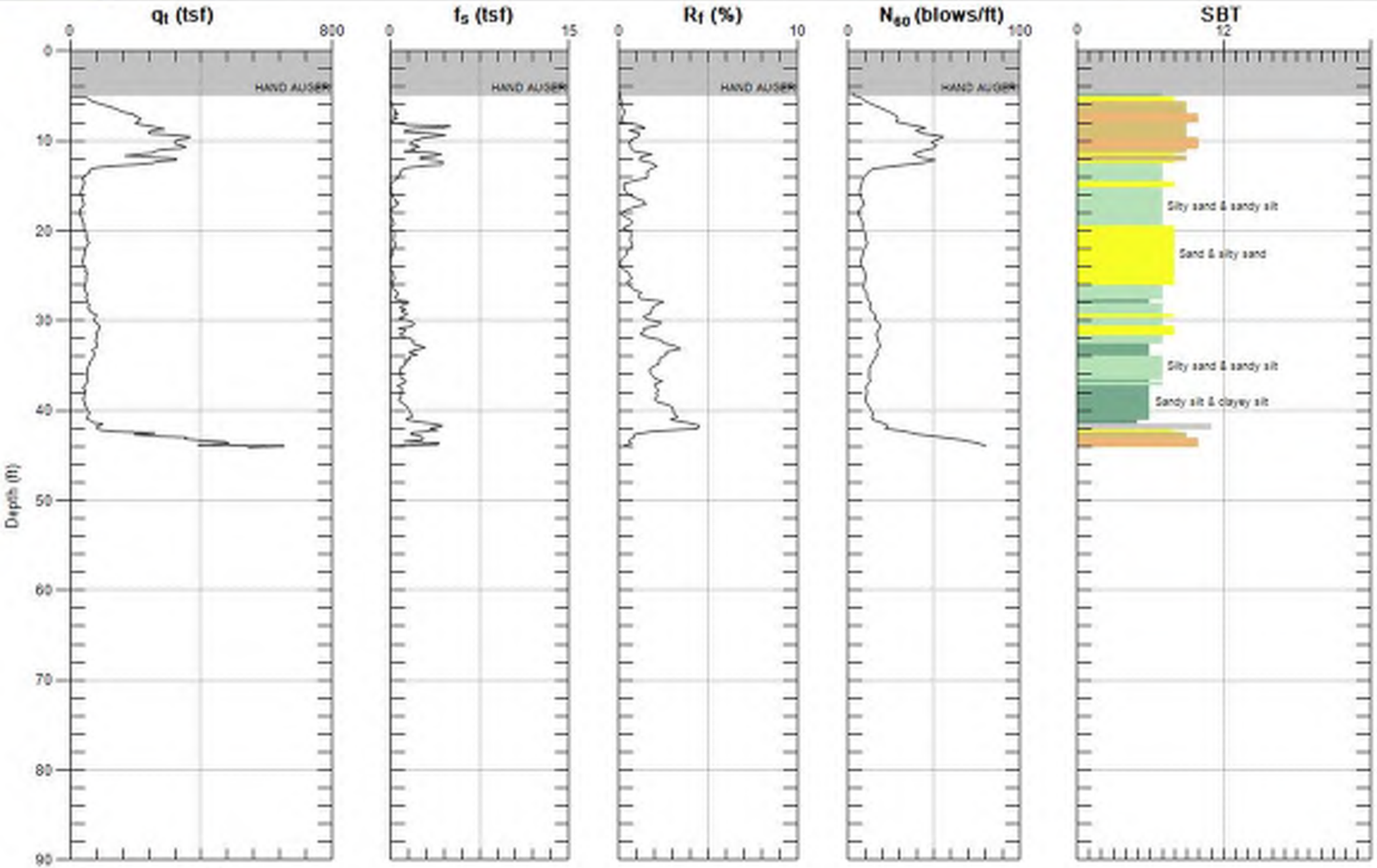
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-36

Engineer: J.URQUIZO
Date: 4/11/17 07:32



Max. Depth: 44.127 (ft)
Avg. Interval: 0.328 (ft)

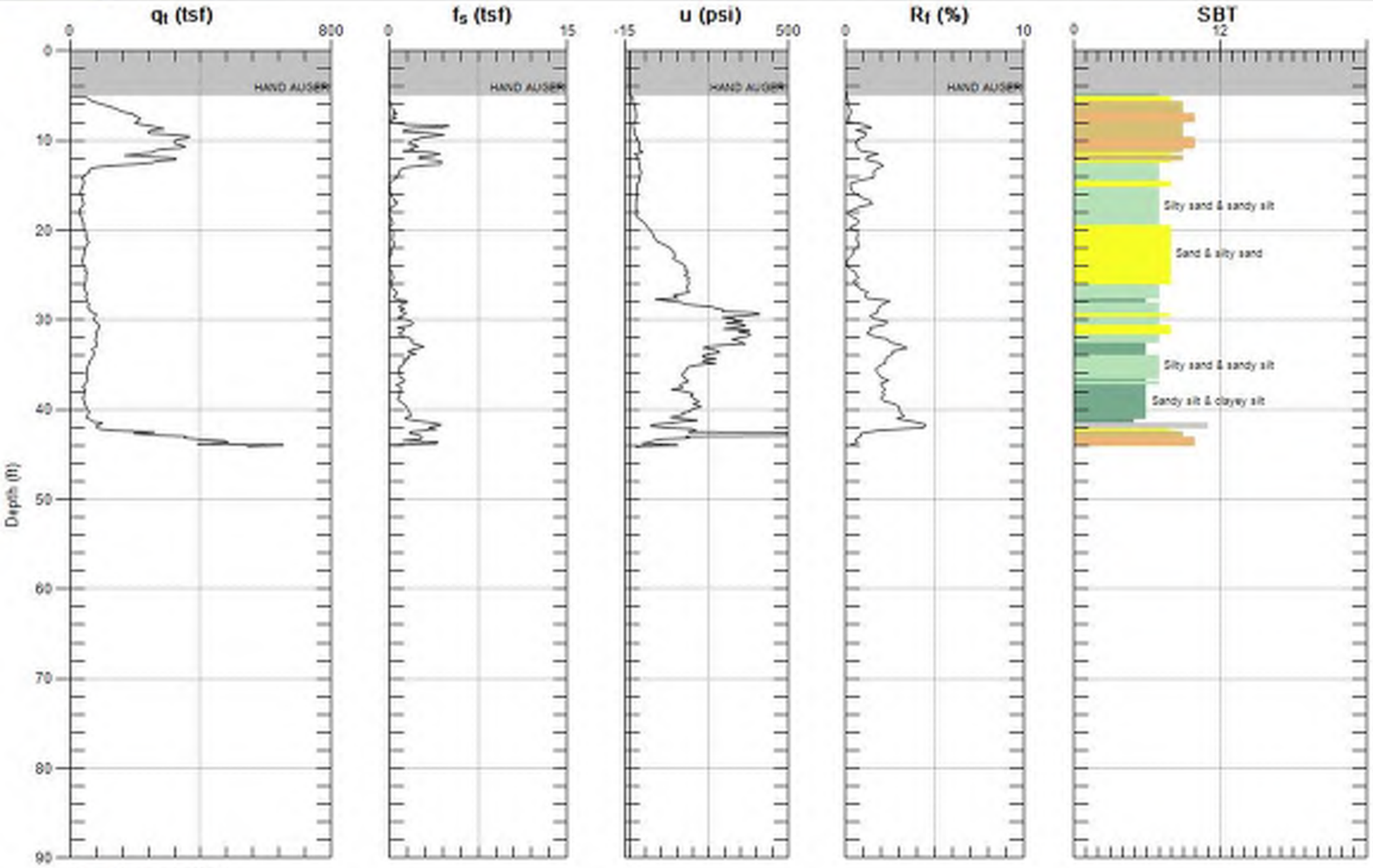
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-36

Engineer: J.URQUIZO
Date: 4/11/17 07:32



Max. Depth: 44.127 (ft)
Avg. Interval: 0.328 (ft)

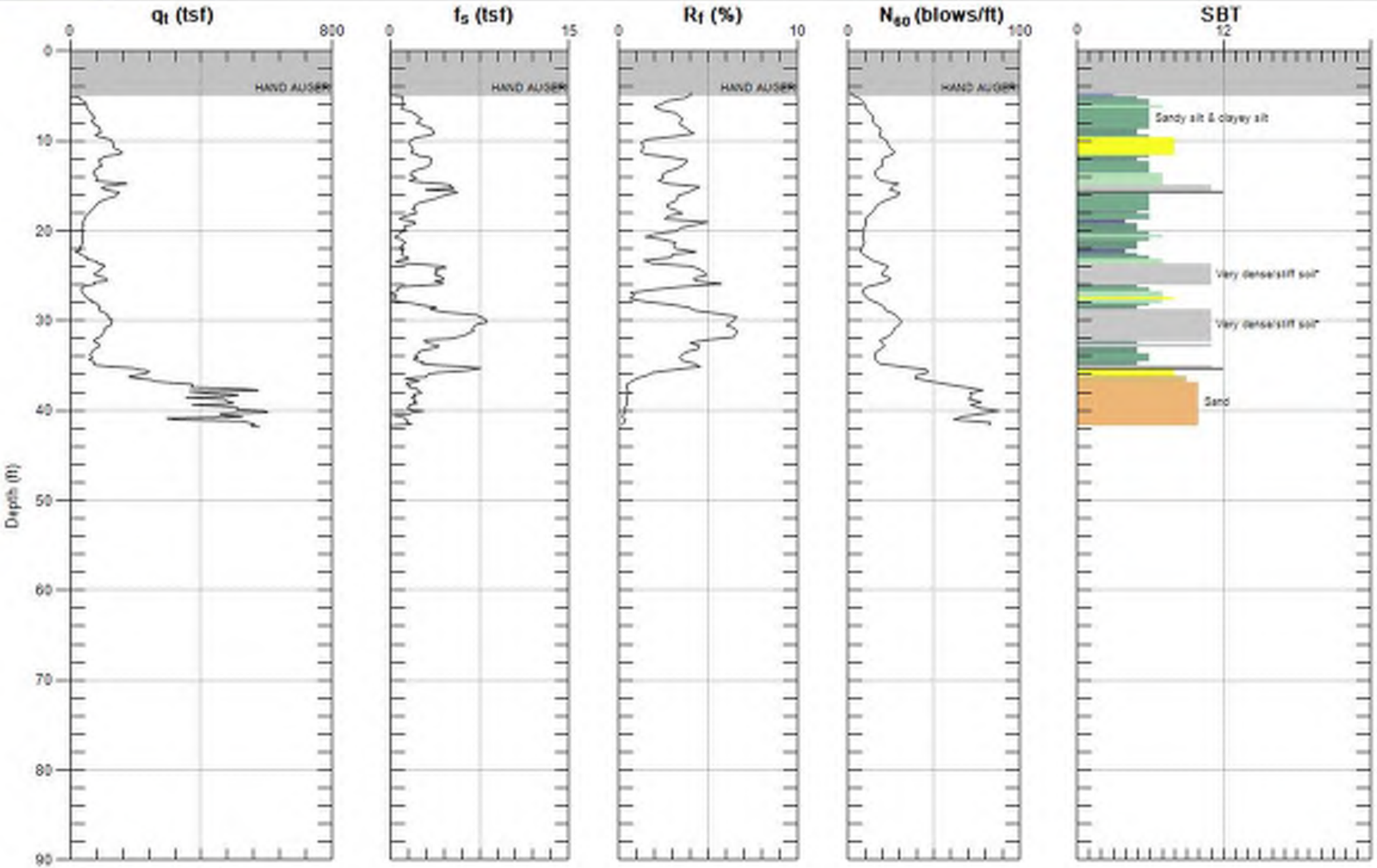
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-37

Engineer: J.URQUIZO
Date: 4/11/17 09:17



Max. Depth: 41.831 (ft)
Avg. Interval: 0.328 (ft)

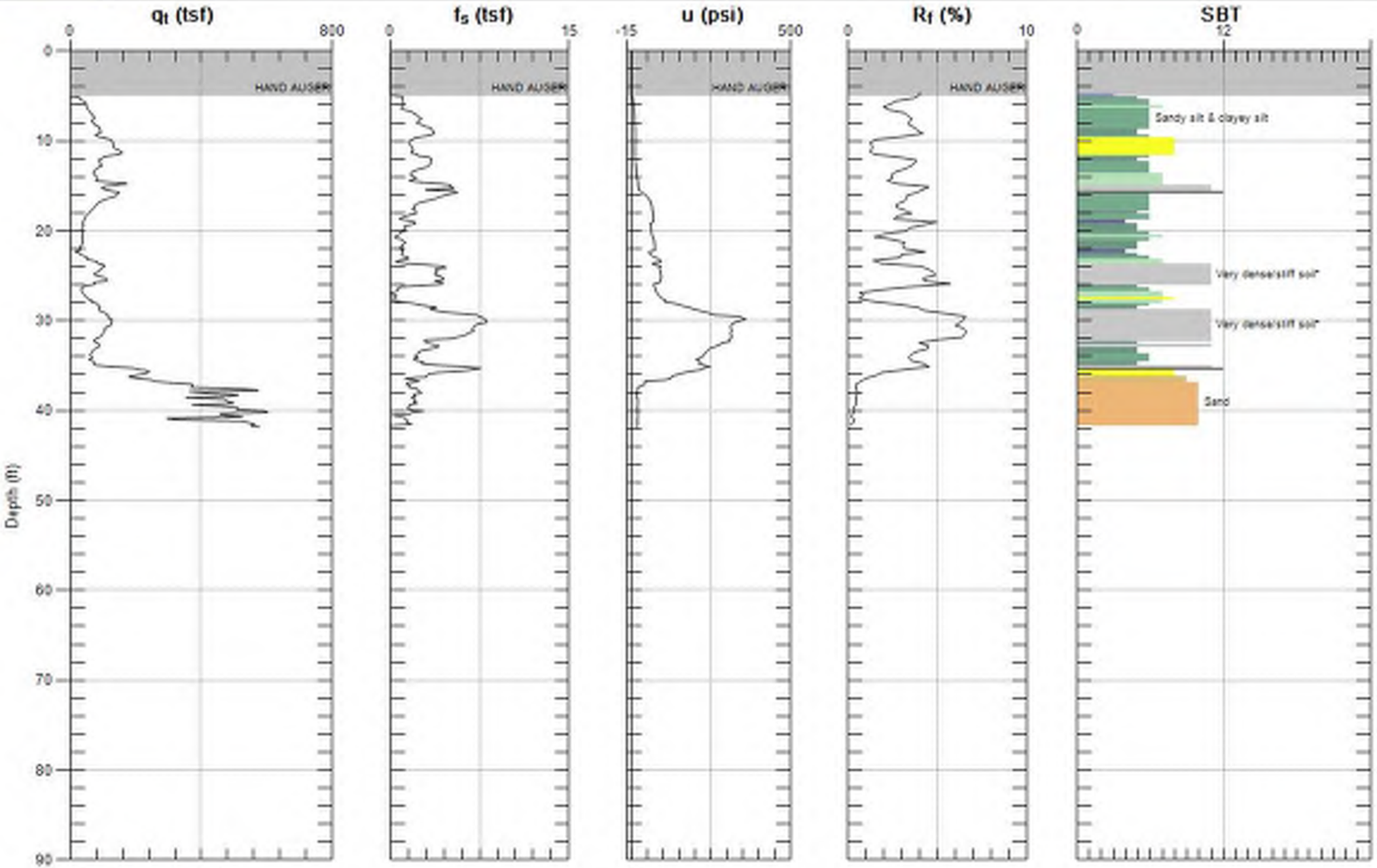
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-37

Engineer: J.URQUIZO
Date: 4/11/17 09:17



Max. Depth: 41.831 (ft)
Avg. Interval: 0.328 (ft)

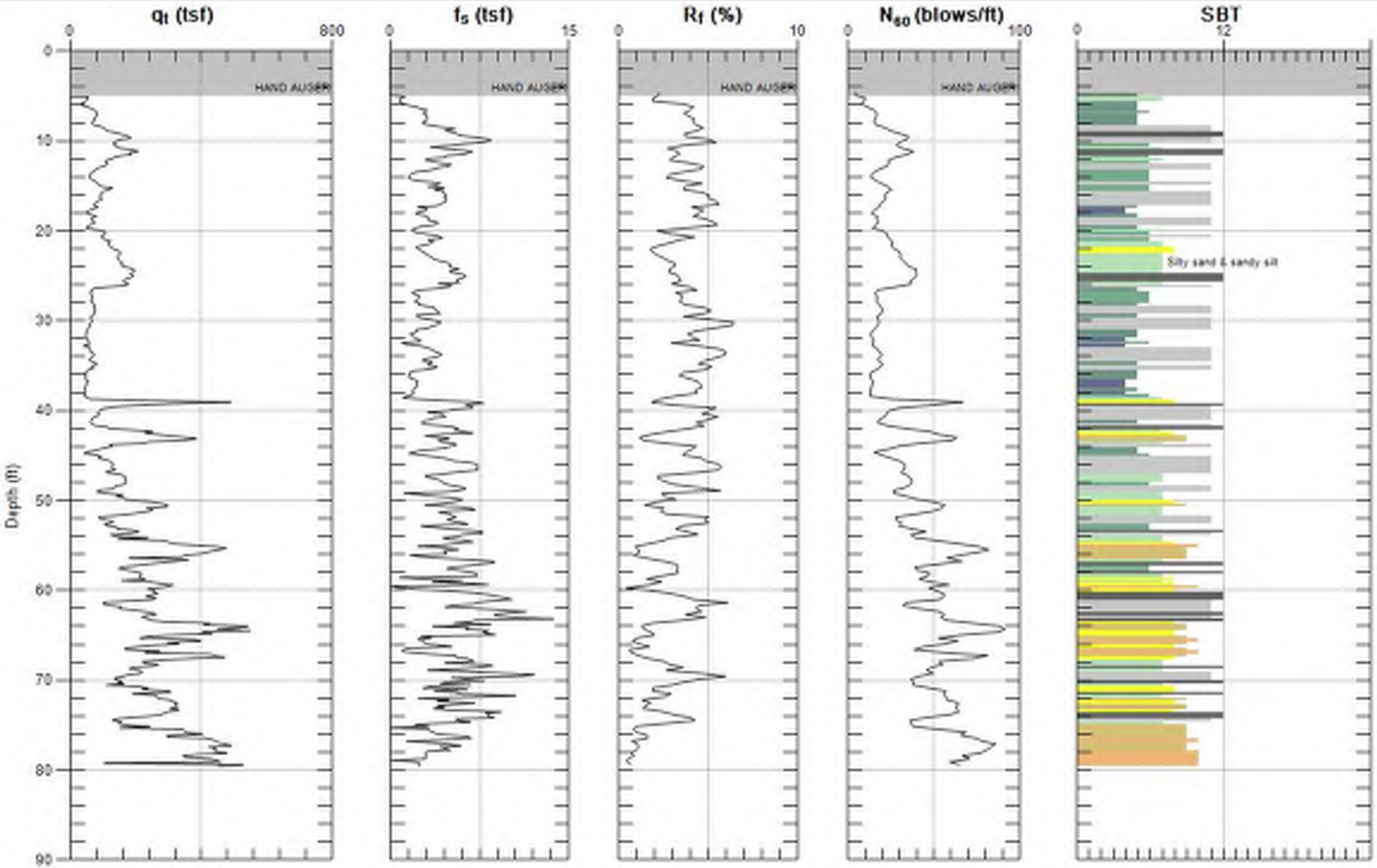
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-38

Engineer: J.URQUIZO
Date: 4/11/17 10:27



Max. Depth: 79.560 (ft)
Avg. Interval: 0.328 (ft)

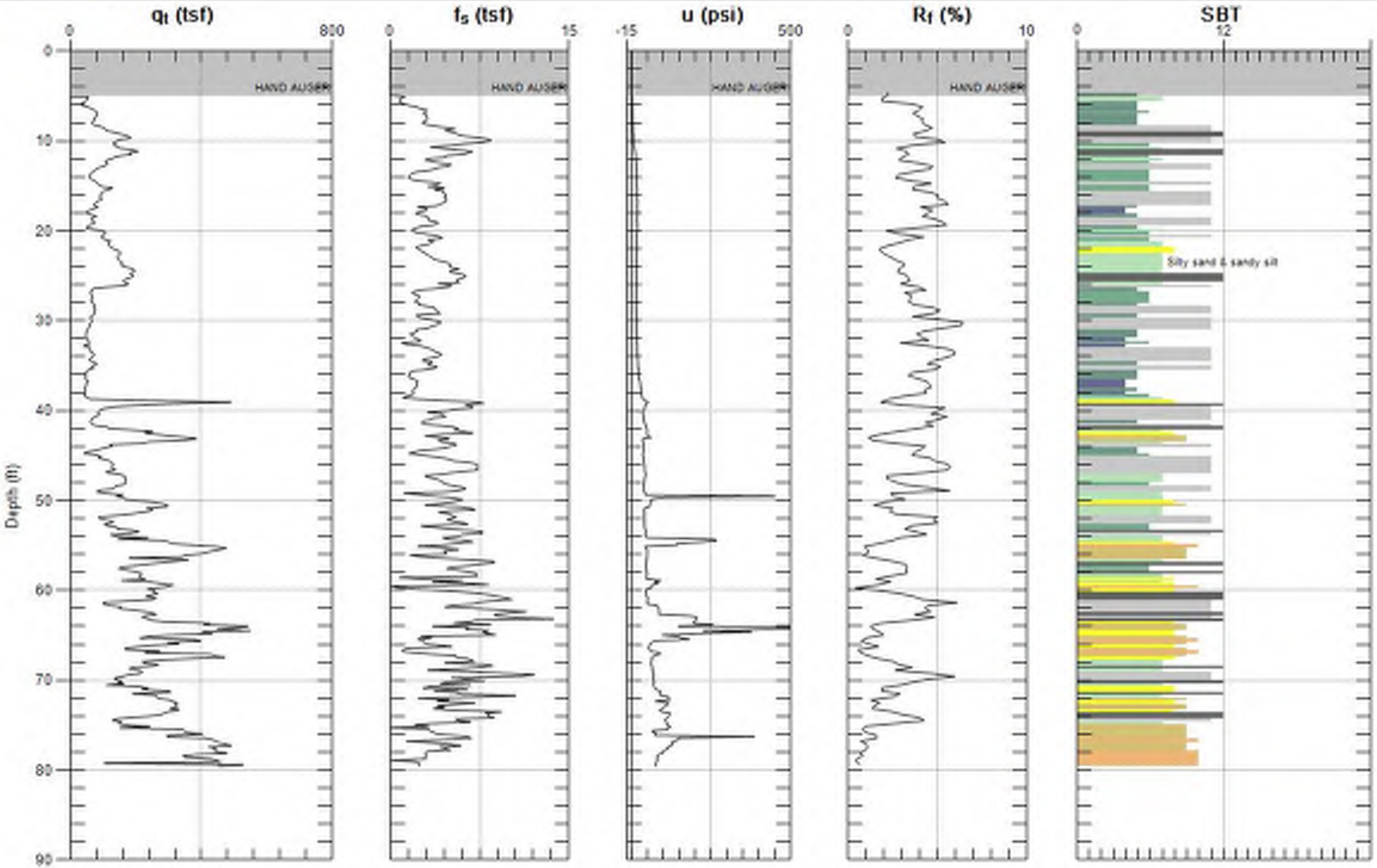
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-38

Engineer: J.URQUIZO
Date: 4/11/17 10:27



Max. Depth: 79.560 (ft)
Avg. Interval: 0.328 (ft)

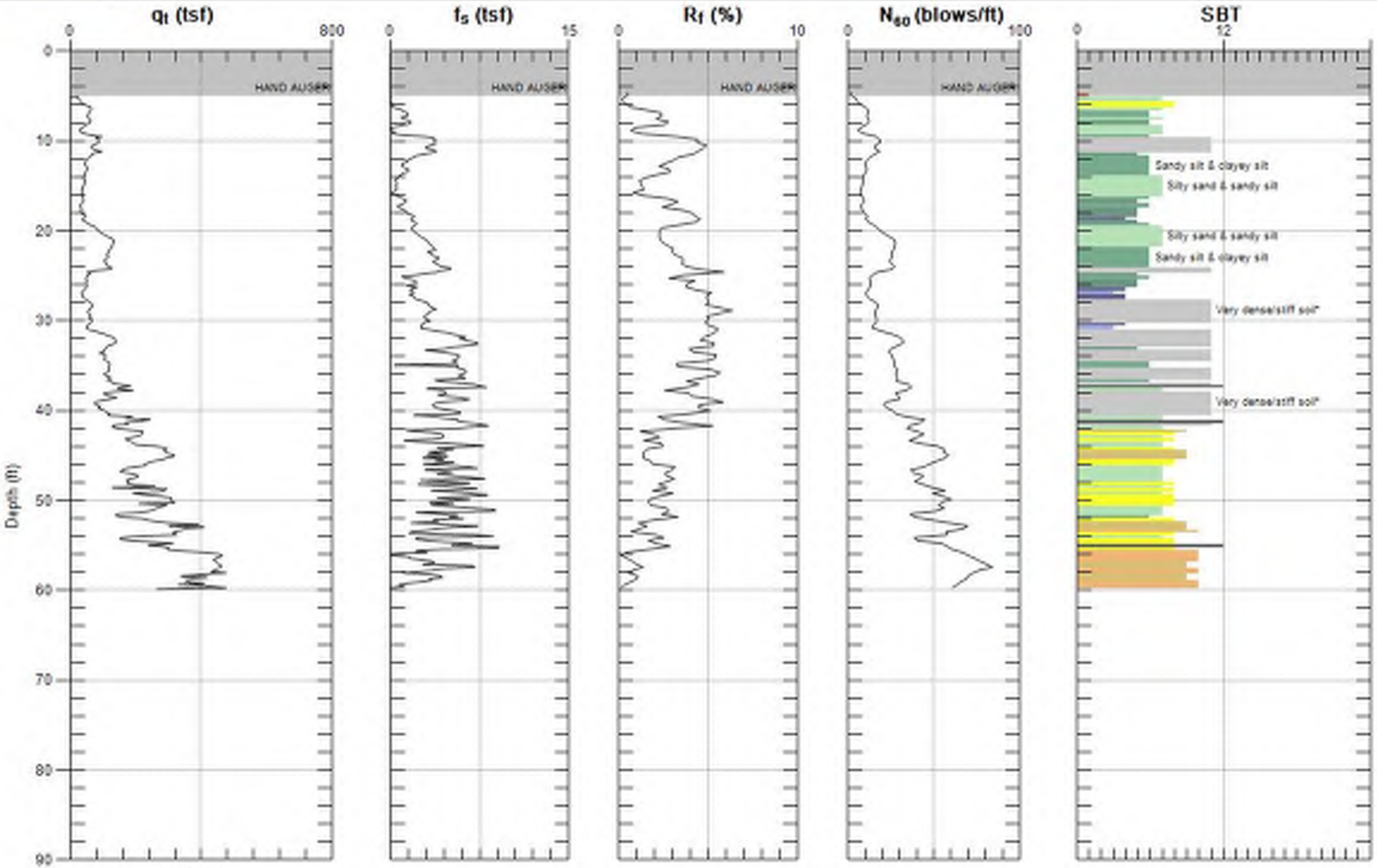
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-39

Engineer: J.URQUIZO
Date: 4/11/17 01:04



Max. Depth: 59.875 (ft)
Avg. Interval: 0.328 (ft)

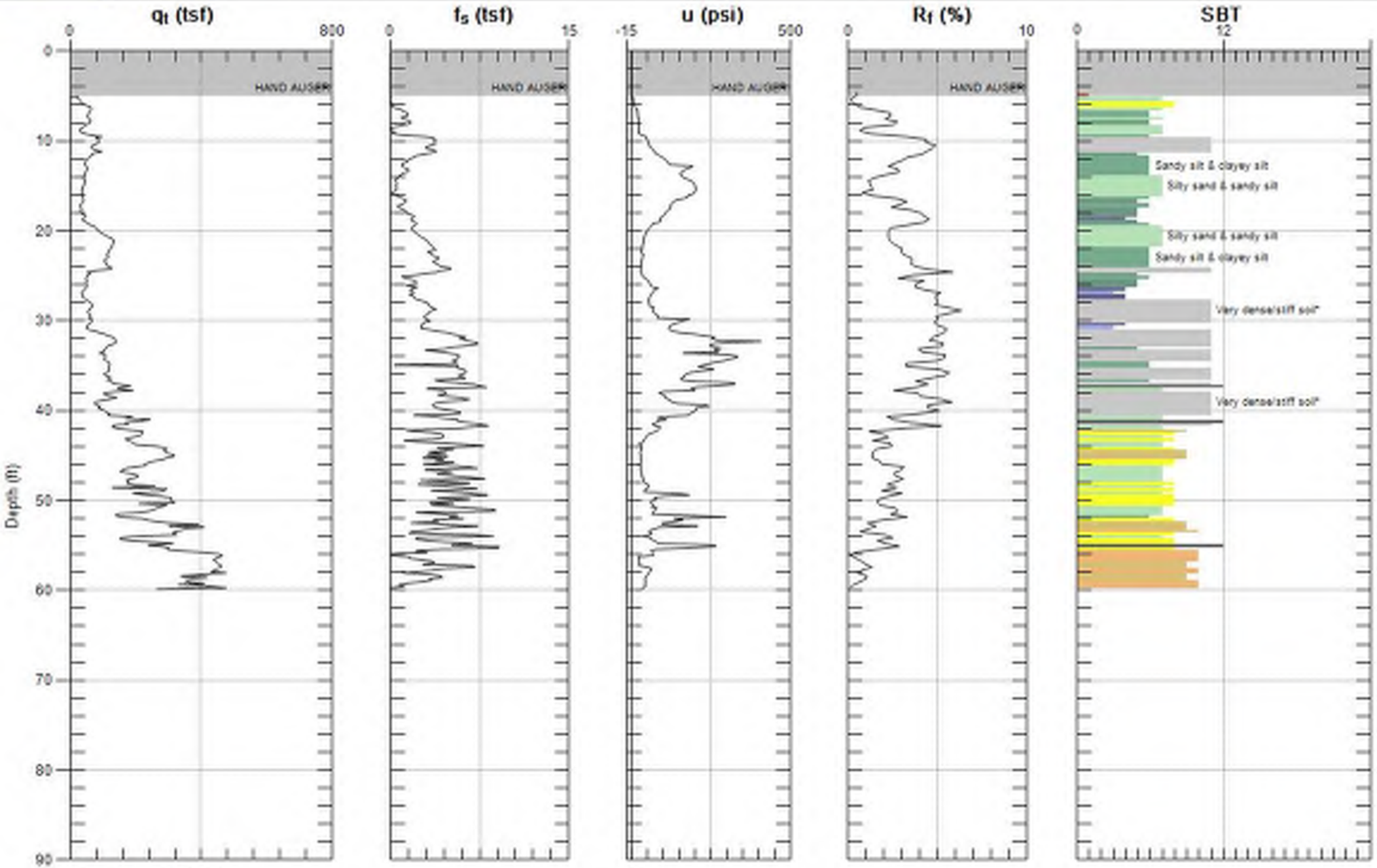
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-39

Engineer: J.URQUIZO
Date: 4/11/17 01:04



Max. Depth: 59.875 (ft)
Avg. Interval: 0.328 (ft)

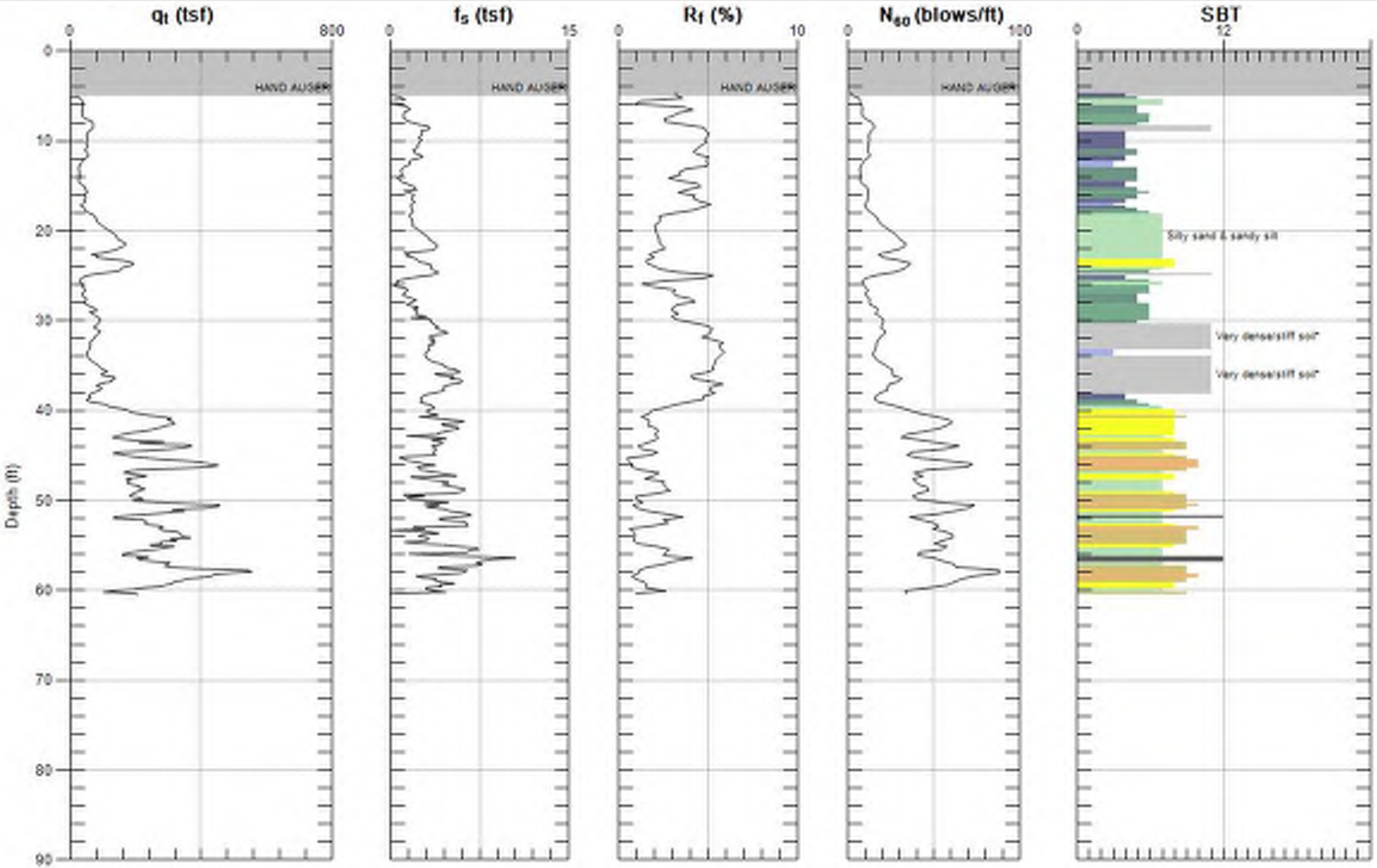
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-40

Engineer: J.URQUIZO
Date: 4/11/17 02:27



Max. Depth: 60.531 (ft)
Avg. Interval: 0.328 (ft)

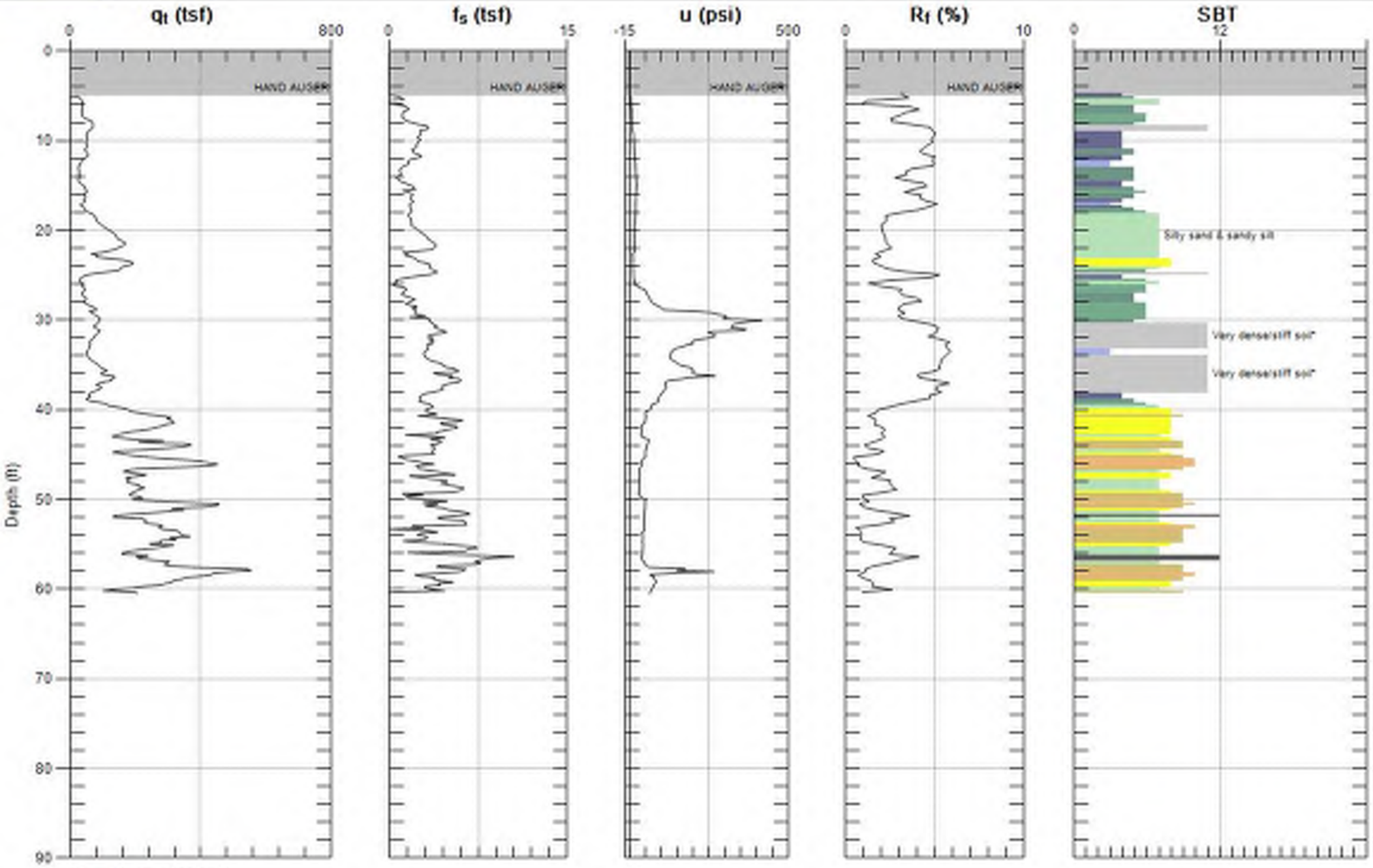
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-40

Engineer: J.URQUIZO
Date: 4/11/17 02:27



Max. Depth: 60.531 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX B

Log of Borings

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-1	Date(s) Drilled: 5/22/17	Logged by: JJU, YG	Boring Diameter: 8 /18 in.	Ground Elevation: ~184’	Page 1 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (north island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01671, -118.14447		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0						SILT; medium stiff, reddish brown, slightly moist; no plasticity; dry turf grass at the surface.							
					ML								
5	1R 2B		07/15/22			very stiff; traces of medium to coarse grained SAND.							CR DS SE
10	3R		6/21/32			hard, dry.							DS
15	4R		28/50 per 3”			some medium to coarse grained SAND.							
					SM	SILTY SAND with GRAVEL; very dense, reddish brown, dry; medium to coarse grained SAND; some fine to coarse GRAVEL.							
20	5R E20		19/35/50 per 5”										
					SP	POORLY-GRADED SAND with GRAVEL; very dense, orange brown, dry; fine to medium grained SAND; some fine to coarse GRAVEL; fragments of cobbles (~3” to 4” diameter); moderate cementation.							
25	6R		28/27/50 per 5”										CO
					SW	WELL-GRADED SAND with GRAVEL; very dense, orange brown, moist; fine to coarse grained SAND; some fine to coarse GRAVEL; fragments of cobbles (~3” to 4” diameter); moderate cementation.							
30	7R		25/38/50 per 5”										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-1	Date(s) Drilled: 5/22/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~184’	Page 2 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (north island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01671, -118.14447		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		25/38/50 per 5”		SW	very dense, grey with brown and orange, dry.							
35	8R		33/50 per 4”		SM	SILTY SAND with GRAVEL; very dense, tan with gray, dry; fine to coarse grained SAND; some angular fine to coarse GRAVEL; moderate cementation.							
40	9R		40/50 per 4”										
	E40												
45	10B		12/16/24		ML	SILT; hard, reddish brown, moist; no plasticity.							
50	11B		17/20/20		SP	POORLY-GRADED SAND; very dense, reddish brown, moist; fine to medium grained SAND; traces of fine GRAVEL.							
55	12B		15/19/21		SM	SILTY SAND; very dense, reddish brown, moist; fine to medium grained SAND; traces of fine to coarse GRAVEL.							
60	E60		22/38/36		SW	WELL-GRADED SAND with GRAVEL; very dense, reddish brown, moist; fine to medium grained SAND; little fine to coarse GRAVEL.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-1	Date(s) Drilled: 5/22/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~184’	Page 3 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (north island), see Figure 2.		Drilled by: GREGG Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01671, -118.14447		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	E60		22/38/36		SW	orange brown; fine to medium grained SAND; some fine to coarse GRAVEL.							
65			19/43/40										
70	13B		20/24/35		ML	SANDY SILT with GRAVEL; hard, orange brown, moist; fine to medium grained SAND; little of fine GRAVEL; no plasticity.							
75	14B		45/50 per 2”		SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
					SM	SILTY SAND; very dense, reddish brown, moist; fine to medium grained SAND.							
80	E80		14/50 per 6”		SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
85			13/14/25		ML	SANDY SILT; hard, orange brown, moist; fine grained SAND; no plasticity.							
					SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
90	15B		10/18/33		ML								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-1	Date(s) Drilled: 5/22/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~184’	Page 4 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (north island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01671, -118.14447		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90	15B	■		10/18/33		ML	SANDY SILT; hard, orange brown, moist; fine to medium grained SAND; no plasticity.							
						SP	POORLY-GRADED SAND; very dense, tan, moist; fine to medium grained SAND; traces of fine to coarse GRAVEL.							
95		■		17/31/40										
						SW	WELL-GRADED SAND with GRAVEL; very dense, tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
100	16B	■		29/50 per 4”										
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation, CR - Corrosion, DS - Direct Shear, EI - Expansion Index, HY - Hydrometer, MD - Maximum Density, PE - Permeability, SA - Sieve Analysis, SE - Sand Equivalence, TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-2	Date(s) Drilled: 5/23/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~182'	Page 1 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (south island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01621, -118.14512		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; stiff, brown, dry; no plasticity; dry turf grass at the surface.							
5	1R		09/10/12			reddish brown.							CR DS SE
	2B												
10	3R		5/16/46			hard, slightly moist; traces of fine to medium grained SAND.							
15	4R		11/19/28		SP	POORLY-GRADED SAND; very dense, light brown, dry; fine to medium grained SAND; traces of fine GRAVEL.							
						SILTY SAND;							
20	5R		9/38/50 per 3"		SM	very dense, reddish brown and tan, dry; fine to medium grained SAND.							CO
	E20												
						SANDY SILT;							
25	6R		14/36/37		ML	hard, reddish brown and tan, dry; fine grained SAND; traces of fine GRAVEL; no plasticity.							
						WELL-GRADED SAND with GRAVEL;							
30	7R		15/28/50		SW	very dense, brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
						intervals of GRAVEL between 25' to 55'.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-2	Date(s) Drilled: 5/23/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~182’	Page 2 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (south island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01621, -118.14512		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R	Drive	15/28/50		SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
					SP	POORLY-GRADED SAND; dense, reddish brown and tan, dry; fine to medium grained SAND; traces of fine to coarse GRAVEL.							
35	8R	Drive	12/14/21										CO
					SM	SILTY SAND with GRAVEL; dense, reddish brown and tan, slightly moist; fine to coarse grained SAND; some fine to coarse GRAVEL; fragments of cobbles (~3” diameter).							
40	9R	Drive	27/16/18										
	E40	Bulk											
					SW	WELL-GRADED SAND with GRAVEL; very dense, brown and gray, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
45	10B	Drive	23/35/29										
50			14/28/47			brown and tan; traces of fine to coarse GRAVEL.							
					ML	SANDY SILT; hard, reddish brown and tan, dry; fine to coarse grained SAND; traces of fine to coarse GRAVEL.							
55	11B	Drive	11/24/38 for 4”										
					SM	SILTY SAND; very dense, reddish brown, moist; fine to coarse grained SAND.							
60	12B	Drive	10/22/50 for 5”										
	E60	Bulk											

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-2	Date(s) Drilled: 5/23/17	Logged by: JJU, YG	Boring Diameter: 8 in.	Ground Elevation: ~182’	Page 3 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (south island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01621, -118.14512		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	12B		10/22/50 per 5”		SM	SILTY SAND; very dense, reddish brown, moist; fine to coarse grained SAND.							
	E60												
65			14/31/22		SW	WELL-GRADED SAND; very dense, reddish brown and tan, dry; fine to coarse grained SAND.							
					ML	SILT; medium stiff, reddish brown, dry; traces of medium to coarse grained SAND; little to no plasticity.							
70	13B		6/9/17			intervals of GRAVEL between 70’ to 80’.							
					SM	SILTY SAND; dense, reddish brown, moist; medium to coarse grained SAND; traces of fine to coarse GRAVEL; moderate cementation.							
75	14B		9/18/25										
					SW	WELL-GRADED SAND with GRAVEL; very dense, reddish brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
80	15B		27/50 per 5”										
	E80												
85			21/29/32		SP	POORLY-GRADED SAND; very dense, reddish brown, moist; fine to medium grained SAND; moderate cementation.							
90			15/23/30			light brown, dry; traces of fine GRAVEL; weak cementation.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-2	Date(s) Drilled: 5/23/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~182’	Page 4 of 4
Boring Location: intersection of Montebello Pkwy and Leonard Pl, (south island), see Figure 2.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01621, -118.14512		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90				15/23/30		SP								
95	16B			14/13/14		ML	SILT; stiff, reddish brown, moist; low plasticity.							
						SP	POORLY-GRADED SAND; very dense, brown and tan, dry; fine to medium grained SAND.							
100	17B			15/20/33		ML	SANDY SILT; hard, reddish brown, dry; fine grained SAND; no plasticity.							
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-3	Date(s) Drilled: 5/25/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~183’	Page 1 of 4
Boring Location: In front of 6031 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01614, -118.14235		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; stiff, reddish brown, dry; no plasticity; dry turf grass at the surface.							
5	1R		10/18/24			very stiff; traces of fine GRAVEL.							CR DS
	2B				SM	SILTY SAND; medium dense, reddish brown, moist; fine grained SAND.							
10	3R		10/11/15										CO
					ML	SANDY SILT; very stiff, reddish brown, dry; fine to coarse grained SAND; no plasticity.							
15	4R		4/11/23										
					SM	SILTY SAND; medium dense, reddish brown, moist; fine to medim grained SAND; traces of fine to coarse GRAVEL.							
20	5R		9/28/24										CO
	E20					intervals of GRAVEL between 20’ to 30’.							
					SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL; moderate cementation.							
25	6R		15/50 per 4”										
					SM	SILTY SAND with GRAVEL; very dense, reddish brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; fragments of cobbles (~3” to 5” diameter); moderate cementation.							
30	7R		50 per 5”										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-3	Date(s) Drilled: 5/25/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~183'	Page 2 of 4
Boring Location: In front of 6031 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01614, -118.14235		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R	Drive	50 for 5"		SM								
						SILT; hard, reddish brown and orange, slightly moist; no plasticity.							
35	8R	Drive	16/25/42		ML								
						SANDY SILT; hard, reddish brown, slightly moist; fine to medium grained SAND; traces of fine GRAVEL; no plasticity.							
40	9R	Drive	5/50 for 6"										
	E40	Bulk											
45	10B	Drive	14/15/16			very stiff.							
50		Drive	6/17/22			orange brown, slightly dry; fine grained SAND.							
55	11B	Drive	17/32/35		SM	SILTY SAND; very dense, reddish brown, dry; fine to coarse grained SAND; traces of fine to coarse GRAVEL.							
					ML	SILT; medium stiff, reddish brown, moist; traces of fine to coarse SAND; low plasticity.							
60	12B	Drive	3/6/8										
	E60	Bulk											

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Boring No.: DW-3	Date(s) Drilled: 5/25/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~183'	Page 3 of 4
Boring Location: In front of 6031 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01614, -118.14235		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	12B		3/6/8		ML								
	E60												
65	13B		14/29/28		SW	WELL-GRADED SAND with GRAVEL; very dense, tan and orange, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
70			12/20/18										
					ML	SILT with interbedded FINE SAND; hard, dark brown, moist; (fine grained SAND, tan, dry); no plasticity.							
75	14B		11/21/27			SANDY SILT with GRAVEL; hard, reddish brown, moist; medium to coarse grained SAND; traces of fine to coarse GRAVEL; no plasticity.							
80	E80		14/18/27			SILT; hard, reddish brown, moist; traces of fine to medium grained SAND; traces of fine to coarse GRAVEL; low plasticity.							
85			12/16/50 for 5"			slightly moist; no plasticity.							
					SW	WELL-GRADED SAND with GRAVEL; very dense, tan and orange, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
90			17/30/35		SP								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-3	Date(s) Drilled: 5/25/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~182’	Page 4 of 4
Boring Location: In front of 6031 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01614, -118.14235		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90	15B	■		15/23/30		SP	POORLY-GRADED SAND with SILT lens (~2” to 3” thick); very dense, light brown, dry; fine to medium grained SAND; (SILT; reddisn brown, moist).							
95				14/13/14		SW	WELL-GRADED SAND with GRAVEL; medium dense, tan and orange, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
100	16B	■		15/20/33		ML	SILT interbedded with LEAN CLAY; hard, orange brown and brown, moist; (LEAN CLAY, orange brown, moist, medium plasticity); low plasticity.							
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-4	Date(s) Drilled: 5/30/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~179'	Page 1 of 4
Boring Location: In front of 5951 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01488, -118.142377		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; medium stiff, reddish brown, dry; no plasticity; turf grass on the surface.							
5	1R		8/13/16			stiff; traces of medium to coarse grained SAND; traces of fine GRAVEL.							SE
	2B												
10	3R		8/13/20			traces of fine to medium grained SAND.							
15	4R		17/25/32		SM	SILTY SAND; very dense, brown, dry; fine to medium grained SAND; traces of fine GRAVEL.							CO
					ML	SILT; hard, reddish brown, dry; traces of medium to coarse grained SAND; traces of fine GRAVEL; no plasticity.							
20	5R		15/30/37										
	E20												
25	6R		19/36/37			low plasticity.							
					SM	SILTY SAND with GRAVEL; very dense, tan and reddish brown, dry; fine to coarse grained SAND; little of fine GRAVEL; moderate cementation.							
30	7R		25/50 for 6"		SP	intervals of GRAVEL between 25' to 35'.							CO

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-4	Date(s) Drilled: 5/30/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~179'	Page 2 of 4
Boring Location: In front of 5951 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01488, -118.14377		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R	Drive	25/50 per 6"		SP	POORLY-GRADED SAND with GRAVEL; very dense, tan, dry; fine to medium grained SAND; little fine to coarse GRAVEL; moderate cementation.							
					SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
35	8R	Drive	15/16/23										
					ML	SILT; hard, brown, dry; traces of fine to medium grained SAND; no plasticity.							
40	9R	Drive	17/40/50 per 4"										
	E40	Bulk				traces of medium to coarse grained SAND.							
45	10B	Drive	5/8/12			medium stiff, moist.							
					SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; little fine to coarse angular GRAVEL.							
50		Drive	21/49/40										
					ML	SILT; hard, reddish brown, slightly moist; traces of fine grained SAND; no plasticity.							
55		Drive	10/30/28										
60		Drive	5/14/23			moist; low plasticity.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-4	Date(s) Drilled: 5/30/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~179'	Page 3 of 4
Boring Location: In front of 5951 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01488, -118.14377		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	11B		5/14/23		ML	SANDY SILT; very stiff, reddish brown, dry; fine to medium grained SAND; no plasticity.							
	E60												
65			6/18/26										
					SP	POORLY-GRADED SAND; dense, orange brown, dry; fine to medium grained SAND.							
70			32/46/29		ML	SILT with WELL-GRADED SAND lens (~6" thick); hard, gray brown, moist; (WELL-GRADED SAND with GRAVEL; tan, dry; fine to coarse grained SAND, some coarse angular GRAVEL); no plasticity.							
75			9/17/16			very stiff, reddish brown, dry; traces of medium to coarse grained SAND; traces of fine GRAVEL.							
					SM	SILTY SAND; very dense, reddish brown and tan, moist; fine to medium grained SAND; traces of fine to coarse GRAVEL. moderate cementation.							
80	12B		24/50 per 5"										
	E80												
85			17/33/50 per 4"			SILT (~1') thick lens at 85'; hard, brown, slightly moist; no plasticty.							
					SP	POORLY-GRADED SAND; very dense, tan and orange, dry; medium to coarse grained SAND.							
90			22/39/47										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-4	Date(s) Drilled: 5/25/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~179’	Page 4 of 4
Boring Location: In front of 5951 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01488, -118.14377		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90		■		22/39/47		SP								
						CL	LEAN CLAY; hard, brown, moist; low to medium plasticity.							
95		■		6/18/23		SW	WELL-GRADED SAND with GRAVEL; dense, tan, dry; fine to coarse grained SAND; little fine to coarse angular GRAVEL.							
100		■		7/50 per 5”		ML	SILT with GRAVEL; hard, brown, dry; little fine angular GRAVEL; no plasticity.							
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation; CR - Corrosion; DS - Direct Shear; EI - Expansion Index; HY - Hydrometer; MD - Maximum Density; PE - Permeability; SA - Sieve Analysis; SE - Sand Equivalence; TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-5	Date(s) Drilled: 5/31/17	Logged by: JJU,YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~176'	Page 1 of 4
Boring Location: In front of 5912 Northside Dr, see Figure 3.		Drilled by: GREGG Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01406, -118.14403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; no plasticity; turf grass on the surface.							
5	1R		9/22/23			hard; traces of medium to coarse grained SAND.							CR DS
	2B												
10	3R		7/23/27			some medium grained SAND; low plasticity.							DS
15	4R		12/16/19			SANDY SILT; very stiff, brown, dry; fine to medium grained SAND; no plasticity.							
20	5R		11/18/20		SM	SILTY SAND; dense, brown, dry; fine to medium grained SAND.							CO
	E20												
25	6R		9/19/42		ML	SILT; hard, reddish brown, moist; no plasticity.							
30	7R		12/23/29			traces of medium to coarse grained SAND.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-5	Date(s) Drilled: 5/31/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~176'	Page 2 of 4
Boring Location: In front of 5912 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01406, -118.14403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		12/23/29		ML								
35	8R		12/22/20										
40	9R		9/29/42		SM	SILTY SAND; very dense, orange brown, dry; fine to medium grained SAND; moderate cementation.							
	E40				ML	SILT; hard, brown and orange, moist; low plasticity.							
45			7/11/18		SM	SILTY SAND; medium dense, brown, dry; fine to medium grained SAND.							
50			11/31/31		SW	WELL-GRADED SANDL; very dense, orange and gray and tan, dry; fine to coarse grained SAND; traces of fine GRAVEL.							
					ML	SANDY SILT; hard, reddish brown, dry; fine to medium grained SAND; no plasticity.							
55			22/50 per 6"		SM	SILTY SAND with GRAVEL; medium dense, reddish brown, dry, fine to coarse grained SAND; little fine to coarse GRAVEL.							
60			5/12/15		ML	SANDY SILT; medium stiff, reddish brown, moist; fine to coarse grained SAND; low plasticity.							
	E40												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-5	Date(s) Drilled: 5/31/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~176’	Page 3 of 4
Boring Location: In front of 5912 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01406, -118.14403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	E60	Drive / Bulk	5/12/15		ML								
65		Drive	20/26/27		SW	WELL-GRADED SAND with GRAVEL; very dense, orange and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL. intervals of GRAVEL between 65’ to 100’.							
70		Drive	11/11/15		CL	LEAN CLAY; medium stiff, brown, moist; traces of fine to medium grained SAND; medium plasticity.							
75	10B	Drive / Bulk	8/14/27		ML	SANDY SILT with GRAVEL; hard, reddish brown and brown, moist; medium to coarse grained SAND; little fine to coarse GRAVEL; low plasticity.							
80	E80	Drive / Bulk	17/41/50		SW	WELL-GRADED SAND with GRAVEL; very dense, reddish brown with orange and tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
85		Drive	22/50 per 5”		ML	SANDY SILT; hard, reddish brown slightly moist; fine to medium grained SAND; no plasticity.							
					SM	SILTY SAND with GRAVEL; very dense, tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
90		Drive	21/40/43		SW								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-5	Date(s) Drilled: 5/31/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~176’	Page 4 of 4
Boring Location: In front of 5912 Northside Dr, see Figure 3.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01406, -118.14403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90	11B	■		21/40/43		SW	WELL-GRADED SAND with GRAVEL; very dense, tan and gray, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
95		■		24/27/21										
						ML	SILT; hard, gray and brown, slightly moist; traces of fine to coarse grained SAND; no plasticity.							
100		■		7/50 per 5”		SM	SILTY SAND with GRAVEL and interbedded layers of SILT; very dense, light brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; (SILT, reddish brown, moist).							
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-6	Date(s) Drilled: 6/02/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~170'	Page 1 of 4
Boring Location: In front of 5962 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01179, -118.14427		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; no plasticity; turf grass on the surface.							
5	1R		13/14/16			stiff; traces of medium to coarse grained SAND.							CR DS
	2B												
10	3R		8/15/27		CL	LEAN CLAY; hard, reddish brown, slightly moist; low to medium plasticity.							
15	4R		5/9/16			medium stiff, moist; medium plasticity.							
20	5R		6/10/17		ML	SANDY SILT; stiff, brown, dry; fine grained SAND; no plasticity.							CO
	E20												
25	6R		8/14/24		CL	LEAN CLAY; very stiff, reddish brown, slightly moist; medium plasticity.							
30	7R		10/19/40			hard, dry; traces of medium to coarse grained SAND.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation, CR - Corrosion, DS - Direct Shear, EI - Expansion Index, HY - Hydrometer, MD - Maximum Density, PE - Permeability, SA - Sieve Analysis, SE - Sand Equivalence, TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-6	Date(s) Drilled: 6/2/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~170'	Page 2 of 4
Boring Location: In front of 5962 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01179, -118.14427		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		10/19/40		CL	traces of fine to coarse grained SAND.							
35	8R		11/23/47		ML	SANDY SILT; hard, reddish brown, dry; fine to coarse grained SAND; traces of fine GRAVEL; low plasticity.							
40	9R		14/21/34										
	E40												
45			10/12/20			very stiff, reddish brown and gray brown, slightly moist; fine to medium grained SAND; no plasticity.							
50			13/27/31		SW	WELL-GRADED SAND with GRAVEL and interbedded SANDY SILT; very dense, tan, dry; fine to coarse grained SAND; little fine GRAVEL; (SANDY SILT, reddish brown, slightly moist, fine to medium grained SAND, no plasticity).							
55			14/28/29			very dense, tan and gray, dry.							
60			11/8/15		CL								
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-6	Date(s) Drilled: 6/2/17	Logged by: JJU	Boring Diameter: 8 / 18 in.	Ground Elevation: ~170'	Page 3 of 4
Boring Location: In front of 5962 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01179, -118.14427		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60			11/8/15										
	E60				CL	SANDY CLAY with GRAVEL; medium stiff, reddish brown and orange brown, slightly moist; fine to medium grained SAND; some fine to coarse GRAVEL; low to medium plasticity.							
65			15/28/50 per 5"		ML	SANDY SILT; hard, brown and orange brown, dry; fine to medium grained SAND; no plasticity.							
					SP	POORLY-GRADED SAND with GRAVEL; very dense, tan and gray, dry; fine to medium grained SAND; little fine GRAVEL.							
70	10B		18/30/44		SW	WELL-GRADED SAND with GRAVEL; very dense, tan and orange with gray, dry; fine to coarse grained SAND; little fine GRAVEL.							
75	11B		6/11/15		CL	LEAN CLAY with SAND; medium stiff, brown and orange brown, dry; little fine to medium grained SAND; low to medium plasticity.							
80	E80		8/12/20			SANDY CLAY; very stiff, brown and reddish brown, slightly moist; fine to medium grained SAND; low to medium plasticity.							
85			12/22/30		SM	SILTY SAND with GRAVEL; very dense, brown and reddish brown, moist; fine to medium grained SAND; little fine to coarse GRAVEL.							
					SW	WELL-GRADED SAND with GRAVEL; very dense, brown and tan with orange, moist; fine to coarse grained SAND; some fine to coarse GRAVEL.							
90			21/30/45										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-6	Date(s) Drilled: 6/2/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~170’	Page 4 of 4
Boring Location: In front of 5962 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01179, -118.14427		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90			21/30/45		SW								
					CH	FAT CLAY with SAND; hard, brown, dry; little fine to medium grained SAND; high plasticity.							
95	12B		5/11/30										
					SM	SILTY SAND; very dense, brown, dry; fine to medium grained SAND.							
100			12/50 per 6”		ML	SANDY SILT, hard, reddish brown, moist; fine to medium grained SAND; no plasticity.							
						End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105													
110													
115													
120													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-7	Date(s) Drilled: 6/08/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186'	Page 1 of 4
Boring Location: In front of 6421 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01040, -118.13504		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; no plasticity; turf grass on the surface.							
5	1R		8/20/29			hard, slightly moist; little medium to coarse grained SAND; traces of fine GRAVEL.							DS
	2B				CH	FAT CLAY with SAND; stiff, brown, moist; little fine to medium grained SAND; medium to high plasticity.							
10	3R		6/8/18										
					CL	LEAN CLAY; medium stiff, reddish brown, moist; medium plasticity.							
15	4R		5/9/14										CO
					CH	FAT CLAY; very stiff, reddish brown, moist; high plasticity.							
20	5R		4/13/26										
	E20				CL	LEAN CLAY; stiff, brown, moist; low to medium plasticity.							
25	6R		6/11/22										
					CH	FAT CLAY with SAND; hard, reddish brown, slightly moist; little medium to coarse grained SAND; traces of fine GRAVEL; high plasticity.							
30	7R		11/28/43										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-7	Date(s) Drilled: 6/8/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186’	Page 2 of 4
Boring Location: In front of 6421 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01040, -118.13504		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		11/28/43		CH	SANDY FAT CLAY with GRAVEL; hard, reddish brown and orange brown, slightly moist; medium to coarse grained SAND; little fine GRAVEL; medium to high plasticity.							
35	8R		9/20/32										
					CL	SANDY LEAN CLAY; stiff, reddish brown, slightly moist; fine to coarse grained SAND; low to medium plasticity.							
40	9R		3/9/26										
	E40				SW	WELL-GRADED SAND with GRAVEL; very dense, tan and orange, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
45			16/20/24		SM	SILTY SAND; very dense, brown, dry; fine to medium grained SAND.							
					ML	SANDY SILT; medium stiff, reddish brown and orange brown, moist; fine to coarse grained SAND; no plasticity.							
50	10B		4/9/13			stiff, reddish brown, slightly moist; fine to medium grained SAND;							
55			5/11/17			interbedded SANDY LEAN CLAY at 55’; reddish brown, moist, low to medium plasticity.							
					CL	SANDY LEAN CLAY with GRAVEL; stiff, reddish brown, moist; medium to coarse grained SAND; little fine GRAVEL; medium plasticity.							
60			8/11/16										
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-7	Date(s) Drilled: 6/8/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186’	Page 3 of 4
Boring Location: In front of 6421 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01040, -118.13504		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	11B		8/11/16		CL								
	E60												
65			10/16/30		SM	SILTY SAND; very dense, reddish brown, dry; fine to medium grained SAND.							
					SC	CLAYEY SAND; very stiff, brown, moist; medium to coarse grained SAND.							
70	12B		6/11/19										
75			12/21/27		SW	WELL-GRADED SAND with GRAVEL; very dense, tan, dry; fine to coarse grained SAND; little fine GRAVEL.							
80			14/20/50 per 6”			tan and orange; some fine to coarse angular GRAVEL.							
	E80												
85	13B		19/48/50 per 5”			tan; little fine GRAVEL.							
					SC	CLAYEY SAND with GRAVEL; very stiff, reddish brown, dry; fine to coarse grained SAND; little fine to coarse GRAVEL; moderate cementation.							
90	14B		22/28/48		SW								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-7	Date(s) Drilled: 6/8/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186’	Page 4 of 4
Boring Location: In front of 6421 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01040, -118.13504		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90	14B		22/28/48		SW	WELL-GRADED SAND with GRAVEL; very dense, grayish brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
						grayish tan; some fine GRAVEL.							
95			39/50 per 5”			interbedded CLAYEY SAND between 94’ to 95 ‘; brown, moist.							
					SM	SILTY SAND; very dense, brown, moist; fine to coarse grained SAND.							
100	15B		13/21/21										
						End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105													
110													
115													
120													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-8	Date(s) Drilled: 6/9/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186’	Page 1 of 4
Boring Location: In front of 6450 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01021, -118.13403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; traces of medium to coarse grained SAND; no plasticity; turf grass on the surface. intervals of fine to coarse grained SAND between 0’ to 40’.							
5	1R 2B		10/14/25		CH	FAT CLAY with SAND; hard, brown, dry; some medium to coarse grained SAND; traces of fine to coarse GRAVEL; high plasticity.							
10	3R		7/20/30		CL	SANDY LEAN CLAY with GRAVEL; hard, brown, moist; medium to coarse grained SAND; little fine GRAVEL; low to medium plasticity.							
15	4R		8/10/15			LEAN CLAY with SAND and interbedded SANDY SILT; stiff, brown, moist; some fine to medium grained SAND; (SANDY SILT, reddish brown, moist); medium plasticity.							
20	5R E20		8/17/33		CH	FAT CLAY with SAND; hard, reddish brown, moist; little fine to coarse grained SAND; high plasticity.							
25	6R		6/22/50 per 5”			SANDY FAT CLAY with GRAVEL; hard, reddish brown, dry; medium to coarse grained SAND; little fine GRAVEL; high plasticity.							
30	7R		7/12/21		CL	SANDY LEAN CLAY; very stiff, reddish brown, moist; fine to medium grained SAND; low plasticity.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-8	Date(s) Drilled: 6/9/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186'	Page 2 of 4
Boring Location: In front of 6450 Southside Dr, see Figure 4.		Drilled by: GREGG Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01021, -118.13403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		7/12/21		CH								
35	8R		9/16/33		ML	SANDY SILT; hard, light brown and orange brown, moist; fine grained SAND; no plasticity.							
					CL	SANDY LEAN CLAY with GRAVEL; hard, reddish brown and orange brown, moist; fine to medium grained SAND; little fine GRAVEL; low plasticity.							
40	9R		12/22/39										
	E40				SW	WELL-GRADED SAND with GRAVEL; very dense, tan and orange, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
45	10B		19/27/27										
50			21/30/17										
					CL	SANDY LEAN CLAY; hard, orange brown, moist; fine to medium grained SAND; low plasticity.							
55	11B		5/11/14			LEAN CLAY; medium stiff, reddish brown, moist; traces of medium to coarse grained SAND; medium plasticity.							
60			7/16/14			stiff, brown and reddish brown; some medium to coarse grained SAND; traces of fine GRAVEL; low plasticity.							
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-8	Date(s) Drilled: 6/9/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186’	Page 3 of 4
Boring Location: In front of 6450 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01021, -118.13403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60			7/16/14		CL								
	E60												
					ML	SILT with SAND; hard, orange brown, moist; little fine grained SAND; no plasticity.							
65			4/21/23										
					SW	WELL-GRADED SAND with GRAVEL; very dense, gray and tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
70			17/17/26										
						little fine GRAVEL.							
75	12B		16/22/35										
						very dense, tan and orange, dry; some fine to coarse angular GRAVEL.							
80			14/23/34										
	E80				SM	SILTY SAND; very dense, tan and brown, moist; fine to medium grained SAND.							
85	13B		22/42/46										
90			23/46/50 per 5”		SW								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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PCA: F21815i10

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Boring No.: DW-8	Date(s) Drilled: 6/9/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~186’	Page 4 of 4
Boring Location: In front of 6450 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01021, -118.13403		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90			23/46/50 per 5”		SW	WELL-GRADED SAND with GRAVEL; very dense, tan with gray and orange, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL.							
95			41/48/50 per 2”			very dense, gray and tan, dry; some fine to coarse angular GRAVEL. ~1’ SILT lense at 94’; reddish brown, moist, no plasticity.							
					SM	SILTY SAND; dense, light brown, moist; fine to medium grained SAND.							
100	14B		11/17/20		CL	LEAN CLAY; very stiff, orange brown, moist; medium plasticity.							
						End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105													
110													
115													
120													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-9	Date(s) Drilled: 6/13/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~188'	Page 1 of 4
Boring Location: In front of 6521 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01014, -118.13300		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; traces of medium to coarse grained SAND; no plasticity; turf grass on the surface.							
5	1R		10/37/26										CR DS
	2B				CH	SANDY FAT CLAY with GRAVEL; hard, reddish brown, dry; fine to coarse grained SAND; little fine GRAVEL; high plasticity.							
10	3R		32/30/33		SC	CLAYEY SAND with GRAVEL; very dense, reddish brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL; moderate cementation.							
15	4R		15/24/24		CL	SANDY LEAN CLAY; hard, reddish brown, moist; fine to coarse grained SAND; little fine GRAVEL; medium plasticity.							
20	5R		5/20/27		CH	FAT CLAY; hard, reddish brown, dry; high plasticity.							
	E20				CL	LEAN CLAY; stiff, orange brown, moist; medium plasticity.							
25	6R		10/11/14			intervals of fine to coarse grained SAND between 25' to 60'.							
					CH	SANDY FAT CLAY with GRAVEL; hard, reddish brown, dry; fine to coarse grained SAND; little fine GRAVEL; medium to high plasticity.							
30	7R		18/32/35										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-9	Date(s) Drilled: 6/13/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~188'	Page 2 of 4
Boring Location: In front of 6521 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01014, -118.13300		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		18/32/35		CH	SANDY FAT CLAY with GRAVEL; hard, reddish brown, dry; fine to coarse grained SAND; little fine GRAVEL; medium to high plasticity.							
35	8R		12/17/24		CL	LEAN CLAY with SAND; hard, reddish brown, dry; fine to coarse grained SAND; low to medium plasticity.							
40	9R		11/16/18			very stiff, orange brown; traces of fine to coarse grained SAND; low plasticity.							
	E40				ML	SANDY SILT; stiff, brown, moist; fine to coarse grained SAND; no plasticity.							
45			8/11/12										
50			8/13/12		CL	LEAN CLAY with interbedded layers of (SILT and WELL-GRADED SAND with GRAVEL); stiff, brown, moist; (SILT; brown, moist, no plasticity. WELL-GRADED SAND with GRAVEL, tan and orange, moist, fine to coarse grained SAND); low plasticity.							
55	10B		8/14/15			very stiff, dry; traces fine to medium grained SAND; medium plasticity.							
60			10/19/16		ML	SILT with SAND; very stiff, orange brown, moist; little of fine to medium grained SAND; no plasticity.							
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-9	Date(s) Drilled: 6/13/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~188'	Page 3 of 4
Boring Location: In front of 6521 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01014, -118.13300		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	E60		7/16/14		ML								
					SM	SILTY SAND; very dense, brown, dry, fine to medium grained SAND.							
65			4/21/23		SP	POORLY-GRADED SAND; very dense, light brown, dry; fine to medium grained SAND. intervals of fine to coarse GRAVEL between 70' to 100'.							
70	11B		17/17/26		SW	WELL-GRADED SAND with GRAVEL; very dense, tan and gray, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL.							
					SM	SILTY SAND; very dense, light brown, dry, fine to medium grained SAND.							
75			16/22/35		SW	WELL-GRADED SAND with GRAVEL; very dense, tan and gray, dry; fine to coarse grained SAND; some fine angular GRAVEL.							
80	12B		14/23/34		CL	LEAN CLAY; hard, orange brown, moist; traces of fine grained SAND; low to medium plasticity.							
	E80				SC	CLAYEY SAND and GRAVEL; very dense, reddish brown, moist; fine to medium grained SAND; little fine to coarse GRAVEL.							
85			22/42/46		SM	SILTY SAND with GRAVEL; very dense, brown and tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
					SC	CLAYEY SAND and GRAVEL; very dense, brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
90			23/46/50 per 5"										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-9	Date(s) Drilled: 6/13/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~188’	Page 4 of 4
Boring Location: In front of 6521 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01014, -118.13300		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90				23/46/50 for 5”		SC								
						SM	SILTY SAND with GRAVEL; very dense, light brown, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL.							
95				41/48/50 for 2”		SW	WELL-GRADED SAND with GRAVEL; very dense, light brown and tan, dry; fine to coarse grained SAND; little fine to coarse angular GRAVEL.							
						ML	SANDY SILT; hard, brown, dry; fine to medium grained SAND; traces of fine to coarse GRAVEL; no plasticity.							
100	14B			11/17/20			End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
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Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-10	Date(s) Drilled: 6/14/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~190’	Page 1 of 4
Boring Location: In front of 5551 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.00998, -118.13179		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; medium stiff, reddish brown, dry; traces of medium grained SAND; no plasticity; turf grass on the surface. intervals of fine to coarse grained SAND between 0’ to 25’.							
5	1R		8/12/19		CH	FAT CLAY with SAND; very stiff, brown, dry; some medium to coarse grained SAND; high plasticity.							
	2B												
10	3R		11/18/25			hard; little fine to coarse grained SAND; traces of fine GRAVEL; medium to high plasticity.							
15	4R		8/13/17		CL	LEAN CLAY with SAND; very stiff, reddish brown, moist; little fine to medium grained SAND; medium plasticity.							
20	5R		18/37/42			SANDY LEAN CLAY with GRAVEL; hard, reddish brown, dry; fine to medium grained SAND; little fine to coarse GRAVEL; medium plasticity.							
	E20												
25	6R		10/30/32		SM	SILTY SAND with GRAVEL; very dense, reddish brown and orange brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; fragments of cobbles (~2” diameter).							CO
					SW	WELL-GRADED SAND with GRAVEL; very dense, light brown, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL.							
30	7R		19/26/50 per 5”		SM								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-10	Date(s) Drilled: 6/14/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~190'	Page 2 of 4
Boring Location: In front of 5551 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.00998, -118.13179		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		19/26/50 per 5"		SW								
					SM	SILTY SAND with GRAVEL; very dense, reddish brown, dry; fine to coarse grained SAND; fine to coarse GRAVEL.							
35	8R		8/15/16		CL	LEAN CLAY with SAND; very stiff, brown, dry; little fine to coarse grained SAND; low plasticity.							
					ML	SANDY SILT; hard, reddish brown, dry; fine to coarse grained SAND; no plasticity.							
40	9R		15/22/26										
	E40												
					SW	WELL-GRADED SAND; medium dense, light brown, dry; fine to coarse grained SAND.							
45			8/9/10		ML	SILT; medium stiff, brown, dry; no plasticity.							
50	10B		4/8/11		CH	FAT CLAY with SAND; medium stiff, reddish brown, dry; little fine to coarse grained SAND; medium to high plasticity. stiff; some fine to coarse grained SAND; high plasticity.							
55			8/13/16		ML	SILT; very stiff, reddish brown, moist; no plasticity.							
60			12/22/28		SW	WELL-GRADED SAND with GRAVEL; very dense, light brown and tan, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-10	Date(s) Drilled: 6/14/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~190'	Page 3 of 4
Boring Location: In front of 5551 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.00998, -118.13179		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	11B		12/22/28		SW	gray and tan; little fine to coarse angular GRAVEL.							
	E60												
65			11/26/18										
70			12/21/26		SP	POORLY-GRADED SAND; very dense, gray and tan, dry; fine to medium grained SAND.							
					ML	SILT; hard, orange brown, dry; no plasticity.							
75	12B		10/20/32										
					CL	LEAN CLAY; very stiff, brown, dry; low to medium plasticity.							
80			7/12/26										
	E80												
85			13/33/43		CH	FAT CLAY with interbedded SANDY SILT; hard, brown, dry; (SANDY SILT, light brown, dry, no plasticity); medium plasticity.							
90			4/14/16			very stiff.							
					ML								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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Geotechnical and Materials Engineering Division

Boring No.: DW-10	Date(s) Drilled: 6/14/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~190'	Page 4 of 4
Boring Location: In front of 5551 Southside Dr, see Figure 4.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.00998, -118.13179		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90		■		4/14/16		CH								
						ML	SILT; very stiff, brown, moist; no plasticity.							
95	13B	■		13/21/28		CH	FAT CLAY with SAND; hard, brown, dry; little fine to coarse grained SAND; high plasticity.							
100	14B	■		11/23/43		SC	CLAYEY SAND with GRAVEL; very dense, brown, dry; fine to coarse grained SAND; little fine to coarse GRAVEL; moderate cementation.							
							End of boring at 101', boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-11	Date(s) Drilled: 6/16/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~198’	Page 1 of 4
Boring Location: In front of 6551 Northside Dr, see Figure 5.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01322, -118.13125		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; no plasticity; turf grass on the surface.							
						intervals of fine to coarse grained SAND and fine to coarse GRAVEL between 5’ to 35’.							
5	1R		13/20/21		CH	FAT CLAY with SAND and GRAVEL; hard, brown, dry; little medium to coarse grained SAND; little fine GRAVEL; medium to high plasticity.							DS
	2B												
10	3R		7/9/11		ML	SILT; medium stiff, reddish brown, moist; traces of fine to medium grained SAND; traces of coarse GRAVEL; little to no plasticity.							CO DS
15	4R		5/17/30			hard; traces of medium to coarse grained SAND; traces of fine GRAVEL.							
20	5R		10/37/50 per 5”		CH	SANDY FAT CLAY with GRAVEL; hard, brown, dry; medium to coarse grained SAND; little fine to coarse GRAVEL; high plasticity.							
	E20												
25	6R		6/12/14		ML	SILT; stiff, reddish brown, moist; traces of fine to medium grained SAND; no plasticity.							CO
30	7R		10/18/22			SANDY SILT with GRAVEL; hard, brown, dry; fine to medium grained SAND; little fine GRAVEL; no plasticity.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
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PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-11	Date(s) Drilled: 6/16/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~198'	Page 2 of 4
Boring Location: In front of 6551 Northside Dr, see Figure 5.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01322, -118.13125		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		10/18/22		ML	SILT with SAND; hard, reddish brown, dry; some fine to coarse grained SAND; traces of fine GRAVEL; no plasticity.							
35	8R		14/30/41		SM	SILTY SAND; very dense, brown, dry; fine to coarse grained SAND.							
40	9R		12/22/41		SW	WELL-GRADED SAND with GRAVEL; very dense, tan and brown, dry; fine to coarse grained SAND; little fine to coarse angular GRAVEL.							CO
	E40				CL	LEAN CLAY with SAND; medium stiff, reddish brown, dry; some fine to coarse grained SAND; low plasticity.							
45			6/10/12										
50			8/9/17		SC	CLAYEY SAND with GRAVEL; medium dense, tan and brown, moist; fine to coarse grained SAND; Little fine to coarse GRAVEL.							
55	10B		9/8/8		CL	SANDY LEAN CLAY; medium stiff, reddish brown, moist; low plasticity.							
					ML	SILT; medium stiff, orange brown, moist; low plasticity.							
60			6/8/10										
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-11	Date(s) Drilled: 6/16/17	Logged by: JJU	Boring Diameter: 8 in.	Ground Elevation: ~198’	Page 3 of 4
Boring Location: In front of 6551 Northside Dr, see Figure 5.		Drilled by: GREGG Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01322, -118.13125		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60			6/8/10		ML	SANDY SILT with GRAVEL; medium stiff, reddish and orange brown, moist; fine to medium grained SAND; little fine GRAVEL; low plasticity.							
	E60												
65			6/11/15										
					SM	SILTY SAND; medium dense, light brown, dry; fine to medium grained SAND.							
70			8/13/13		CL	CLAY with interbedded SANDY SILT; stiff, brown, moist; (SANDY SILT, orange brown, moist, fine to coarse grained SAND, no plasticity); low to medium plasticity.							
					SM	SILTY SAND with GRAVEL; very dense, tan and orange brown, dry; fine to medium grained SAND; some fine to coarse GRAVEL.							
75			19/20/28										
80	11B		10/19/22			light brown.							
	E80												
85	12B		15/28/29										
90			14/17/19		CL	LEAN CLAY with WELL-GRADED SAND lens; very stiff, brown, moist; (WELL-GRADED SAND 2” lens, tan, fine to coarse grained SAND); low to medium plasticity.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-11	Date(s) Drilled: 6/16/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~198’	Page 4 of 4
Boring Location: In front of 6551 Northside Dr, see Figure 5.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01322, -118.13125		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90				14/17/19		CL								
						CH	FAT CLAY; hard, brown, dry; traces of fine to coarse grained SAND; high plasticity.							
95	13B			24/39/44			SANDY FAT CLAY; hard, brown, dry; fine to coarse grained SAND; traces of fine GRAVEL; medium to high plasticity.							
100	14B			8/18/23			End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-12	Date(s) Drilled: 6/19/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~196'	Page 1 of 4
Boring Location: In front of 6518 Northside Dr, see Figure 5.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 101 ft.
Latitude & Longitude: 34.01349, -118.13248		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND; soft, reddish brown, dry; little medium to coarse grained SAND; no plasticity; turf grass on the surface.							
					CL	LEAN CLAY with SAND; soft, brown, dry; little medium to coarse grained SAND; low plasticity.							
5	1R		6/11/26										CR SE
	2B				CH	SANDY FAT CLAY with GRAVEL; very stiff, brown, dry; fine to coarse grained SAND; little fine GRAVEL; high plasticity.							
10	3R		6/14/28		SC	CLAYEY SAND with GRAVEL; very dense, brown, moist; fine to coarse grained SAND; little fine GRAVEL; moderate cementation.							
15	4R		4/11/22			dense, reddish brown. intervals of fine to coarse grained SAND and fine to coarse GRAVEL between 0' to 100'.							CO
					CL	LEAN CLAY; stiff, reddish brown, moist; traces of fine to medium grained SAND; low to medium plasticity.							
20	5R		6/11/15										
	E20												
25	6R		14/25/37			SANDY LEAN CLAY with GRAVEL; hard, brown and orange, moist; fine to coarse grained SAND; little fine GRAVEL; medium plasticity.							
30	7R		7/18/25			increase of fine to coarse grained SAND at 30'.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-12	Date(s) Drilled: 6/19/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~196'	Page 2 of 4
Boring Location: In front of 6518 Northside Dr, see Figure 5.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01349, -118.13248		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R		7/18/25		CL								CO
					SC	CLAYEY SAND with GRAVEL; very dense, brown, moist; fine to coarse grained SAND; little fine to coarse GRAVEL.							
35	8R		8/22/27										
					SM	SILTY SAND with GRAVEL; very dense, orange brown, moist; fine to coarse grained SAND; little fine to coarse GRAVEL.							
40	9R		15/30/24										
	E40												
					SP	POORLY-GRADED SAND with GRAVEL; dense, tan and orange, dry; fine to medium grained SAND; traces of coarse GRAVEL.							
45			10/21/21										
					SC	CLAYEY SAND with GRAVEL; medium dense, reddish brown, moist; fine to coarse grained SAND; some fine to coarse GRAVEL.							
50	10B		6/10/11										
					SW	WELL-GRADED SAND with GRAVEL; dense, orange brown, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
55			12/20/20										
					SM	SILTY SAND with GRAVEL; dense, brown, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
60			9/14/17										
	E60												

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-12	Date(s) Drilled: 6/19/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~196'	Page 3 of 4
Boring Location: In front of 6518 Northside Dr, see Figure 5.		Drilled by: GREGG Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01349, -118.13248		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	E60		9/14/17		SM	some fine to coarse GRAVEL.							
65			12/18/26		ML	SILT with GRAVEL; hard, brown, dry; little fine to coarse GRAVEL; no plasticity.							
70			8/15/23		SW	WELL-GRADED SAND; dense, gray and tan, dry; fine to coarse grained SAND.							
75			9/26/23		SM	SILTY SAND with GRAVEL; very dense, brown, dry; fine to coarse grained SAND; little fine to coarse GRAVEL.							
80	11B E80		20/41/50 per 5"		ML	SILT with interbedded POORLY-GRADED SAND; hard, brown, dry; (POORLY-GRADED SAND, light brown, dry, fine to medium grained SAND); no plasticity.							
85			16/21/32		SM	SILTY SAND; very dense, grayish brown, dry; fine to coarse grained SAND; traces fine to coarse GRAVEL.							
90			17/27/40										

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

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Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-12	Date(s) Drilled: 6/19/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~196’	Page 4 of 4
Boring Location: In front of 6518 Northside Dr, see Figure 5.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01349, -118.13248		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90	12B	■		17/27/40		SM								
							CLAYEY SAND; very dense, reddish brown, moist; fine to coarse grained SAND; moderate cementation.							
95	13B	■		14/32/34		SC								
100	14B	■		7/16/24			dense, brown, dry; little fine to coarse GRAVEL.							
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-13	Date(s) Drilled: 6/21/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194’	Page 1 of 4
Boring Location: In front of 6444 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01358, -118.13358		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND; soft, reddish brown, dry; little fine to coarse grained SAND; no plasticity; turf grass on the surface.							
5	1R		6/10/17		CL	LEAN CLAY and SAND; soft, reddish brown, dry; little fine to coarse grained SAND; low plasticity.							DS
	2B					intervals of fine to coarse grained SAND between 0’ to 100’.							
						stiff, moist; some fine to medium grained SAND.							
10	3R		7/13/18		SP	POORLY-GRADED SAND; dense, tan and orange, dry; fine to medium grained SAND; traces of fine to coarse GRAVEL.							CO
						FAT CLAY; very stiff, reddish brown, dry; traces of medium to coarse grained SAND; high plasticity.							
15	4R		8/14/17		CH								
						intervals of fine to coarse GRAVEL between 10’ to 90’.							
20	5R		8/17/28			hard; some medium to coarse grained SAND; little coarse GRAVEL.							
	E20												
25	6R		24/29/28		SC	CLAYEY SAND with GRAVEL; very dense, orange brown, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
30	7R		6/9/10		ML	SILT with SAND; medium stiff, reddish brown, moist; some medium to coarse grained SAND; no plasticity.							CO

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-13	Date(s) Drilled: 6/21/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194'	Page 2 of 4
Boring Location: In front of 6444 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01358, -118.13358		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R	Drive	6/9/10		ML								CO
					SW	WELL-GRADED SAND with GRAVEL; very dense, tan and orange, dry; fine to coarse grained SAND; some fine to coarse GRAVEL.							
35	8R	Drive	20/35/42		SM	SILTY SAND with GRAVEL; very dense, light brown, dry; fine to medium grained SAND; little fine to coarse GRAVEL.							
40	9R	Drive	10/18/37										
	E40	Bulk											
45			17/28/50 per 5"		SW	WELL-GRADED SAND with GRAVEL; very dense, gray and orange brown, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL.							
50			15/16/17		ML	SILT with SAND; very stiff, light brown, dry; little fine to coarse grained SAND; low plasticity.							
					CL	LEAN CLAY with SAND; very stiff, light brown, dry; little fine to coarse grained SAND; low plasticity.							
55			9/16/19		ML	SANDY SILT with GRAVEL; hard, brown, dry; fine to medium grained SAND; little coarse angular GRAVEL; no plasticity.							
60	10B	Drive	13/16/48										
	E60	Bulk			SM								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-13	Date(s) Drilled: 6/21/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194'	Page 3 of 4
Boring Location: In front of 6444 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01358, -118.13358		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	10B		13/16/48		ML								
	E60				SM	SILTY SAND with GRAVEL; very dense, gray and light brown, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL; moderate cementation.							
65			35/50 per 5"										
					SW	WELL-GRADED SAND with GRAVEL; very dense, gray and tan, dry; medium to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
70			31/21/18		ML	SILT; hard, brown, moist; no plasticity.							
75			19/19/19			very stiif, orange brown; (WELL-GRADED SAND with GRAVEL lens (~8"), tan and orange, dry, fine to coarse grained SAND, little fine GRAVEL).							
80	11B		7/13/19			little fine to medium grained SAND.							
	E80												
85			11/18/30			SANDY SILT; very stiff, light brown, dry; fine to medium grained SAND; no plasticity.							
90			10/42/42			hard, brown, moist; (WELL-GRADED SAND with GRAVEL lens (~6"), tan and orange, dry, fine to coarse grained SAND, little fine GRAVEL).							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-13	Date(s) Drilled: 6/21/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194’	Page 4 of 4
Boring Location: In front of 6444 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01358, -118.13358		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90			10/42/42		ML	SILT with interbedded WELL-GRADED SAND; hard, orange brown, moist; (WELL-GRADED SAND, gray and tan, dry, fine to coarse grained SAND); no plasticity.							
95			13/39/42										
100	12B		17/36/44			brown; (WELL-GRADED SAND, tan and orange, moist, fine to coarse grained SAND).							
						End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105													
110													
115													
120													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-14	Date(s) Drilled: 6/23/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194’	Page 1 of 4
Boring Location: In front of 6421 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01381, -118.13451		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT; soft, reddish brown, dry; no plasticity; turf grass on the surface.							
						intervals of fine to coarse grained SAND between 5’ to 100’; intervals of fine to coarse GRAVEL between 10’ to 95’.							
5	1R		9/12/14		CL	LEAN CLAY with SAND; stiff, brown, dry; little fine to coarse SAND; low plasticity.							
	2B				ML	SANDY SILT; medium stiff, brown, moist; fine to coarse grained SAND; no plasticity.							
10	3R		6/10/11		SM	SILTY SAND with GRAVEL; medium dense, reddish brown, dry; fine to coarse grained SAND; little fine GRAVEL.							CO
15	4R		6/9/9		ML	SANDY SILT with GRAVEL; medium stiff, reddish brown, moist; fine to medium grained SAND; little fine GRAVEL; little to no plasticity.							
20	5R		17/26/22		SM	SILTY SAND with GRAVEL; very dense, reddish and orange brown, moist; fine to coarse grained SAND; some fine to coarse GRAVEL; fragments of COBBLES (~2” to 4” diameter).							CO
	E20					intervals of COBBLES between 15’ to 35’.							
25	6R		28/35/50 per 5”			increase of fine to coarse GRAVEL.							
30	7R		28/50 per 2”			little fine GRAVEL.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-14	Date(s) Drilled: 6/23/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194'	Page 2 of 4
Boring Location: In front of 6421 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01381, -118.13451		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	7R	Drive	28/50 for 2"		SM								
35	8R	Drive	28/45/43		ML	SILT with SAND and GRAVEL; hard, reddish brown, dry; little fine to medium grained SAND; little coarse angular GRAVEL; no plasticity.							
40	9R	Drive	12/16/24			SANDY SILT; hard, brown, moist; fine to medium grained SAND; no plasticity.							
	E40	Bulk											
45		Drive	11/23/20		SM	SILTY SAND; dense, light brown, dry; fine to medium grained SAND.							
50		Drive	21/43/50 per 4"		SW	WELL-GRADED SAND with GRAVEL; very dense, gray and orange brown, moist; fine to coarse grained SAND; some fine to coarse GRAVEL.							
55		Drive	8/14/18		SC	CLAYEY SAND with GRAVEL; dense, gray and reddish brown, moist; fine to coarse grained SAND; little fine to coarse angular GRAVEL.							
60		Drive	20/23/22		SP	POORLY-GRADED SAND with GRAVEL; dense, grayish brown and tan, dry; fine to medium grained SAND; little fine to coarse GRAVEL; fragments of COBBLES (~2' diameter). intervals of COBBLES between 55' to 75'.							
	E60	Bulk											

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-14	Date(s) Drilled: 6/23/17	Logged by: JJU	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194'	Page 3 of 4
Boring Location: In front of 6421 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101'	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01381, -118.13451		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
60	10B		20/23/22		SP								
	E60												
						WELL-GRADED SAND with GRAVEL; very dense, gray and tan, dry; fine to coarse grained SAND; some fine to coarse GRAVEL; fragments of COBBLES (~2" diameter); moderate cementation.							
65			18/44/42		SW								
70			40/50 per 6"			fragments of COBBLES (~3" to 4" diameter).							
75			17/36/50 per 4"			gray and orange brown.							
80			23/16/22			dense, tan and orange, moist; little fine to coarse angular GRAVEL; (SILT lens (~4"), brown, moist, little to no plasticity).							
	E80				SM	SILTY SAND; very dense, orange brown, moist; fine to medium grained SAND.							
85			32/50 per 5"		SW	WELL-GRADED SAND with GRAVEL; very dense, gray and tan, dry; fine to coarse grained SAND; some fine to coarse angular GRAVEL; moderate cementation.							
90			14/14/22		SM								

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: (Yes) / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: DW-14	Date(s) Drilled: 6/23/17	Logged by: JJU, YG	Boring Diameter: 8 / 18 in.	Ground Elevation: ~194’	Page 4 of 4
Boring Location: In front of 6421 Northside Dr, see Figure 6.		Drilled by: Gregg Drilling	Hammer Weight: 140 lbs.	Total Depth: 101’	Depth to Invert: 100 ft.
Latitude & Longitude: 34.01381, -118.13451		Drilling Method: Hollow Stem Auger Equipment: CME-95	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
90				14/14/22		SM	SILTY SAND with GRAVEL; very dense, orange brown, moist; fine to medium grained SAND; little fine to coarse GRAVEL.							
						ML	SILT with interbedded SILTY SAND; hard, reddish brown, moist, (SILTY SAND, light brown and orange, fine to coarse grained SAND); no plasticity.							
95	11B			6/25/25										
100	12B			20/29/22			SILT with interbedded SANDY SILT; hard, orange brown, moist, (SANDY SILT, brown and tan, fine to medium grained SAND); no plasticity.							
							End of boring at 101’, boring terminated at planned depth, no groundwater was encountered.							
105														
110														
115														
120														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: B8	Date(s) Drilled: 1/19/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~196'	Page 1 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50'	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013659, -118.133144		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND soft, reddish brown, dry; some medium to coarse grained SAND; organics at surface.							
5	1R		10/22/21		SW-SM	Well-graded SAND with SILT and GRAVEL dense, red-brown, moist; some non-plastic SILT; little fine to coarse GRAVEL; moderate cementation.	115.6	8.7	100	26.7			DS SA
	2B								92.5	7.7			CR SA
10	3R		7/15/17			Well permeability testing performed at 5'-10'.	76.4	11.4	100	41.5			SA
					SC-SM	SILTY, CLAYEY SAND dense, red-brown, moist; fine to medium grained SAND; moderate cementation.							
15	4R		10/20/23			traces of fine GRAVEL.	114.1	10.7	100	39.7			DS SA
	5B								93.5	27.1	23	5	SA
20	6R		9/24/26				112.5	10.9	100	41.8	25	12	SA
	7B				CL	CLAY with SAND very hard, red-brown, moist; traces of fine to medium grained SAND.			99.8	63.4	31	17	SA
25	8R		7/27/48			little medium to coarse grained SAND.	121.8	12.4	100	70.0			
	9B					some coarse GRAVEL.							
30	10R		7/13/8			little coarse GRAVEL.	112.9	14.2	100	54.6	27	9	SA

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B8	Date(s) Drilled: 1/19/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~196'	Page 2 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50'	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013659, -118.133144		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30						little coarse GRAVEL.							
35	11R		14/27/34		SC-SM	SILTY, CLAYEY SAND with GRAVEL very dense, orange-red and brown, moist; fine to medium grained SAND; some coarse GRAVEL; moderate cementation.	116.8	4.4	100	18.4			
	12B								93.0	29.7	28	11	SA
40	13R		15/20/31			very dense, red-brown, moist; little of medium grained SAND; traces of fine to coarse GRAVEL.	111.7	5.5	100	18.4			
	14B								95.6	27.1	26	10	SA
45	15R		13/20/42			very dense, orange-brown, moist; some fine grained SAND.	107.6	10.3	100	33.0			
	16B								100	41.1	26	11	SA
50	17R		12/23/ 50 per 5"			very dense, orange-red and brown, moist; some fine to coarse GRAVEL; strong cementation.	122.2	11.9	93.9	49.7			
						Boring terminated at 50.5'. End of boring at planned depth. Groundwater or seepage not encountered. Backfilled with cuttings and bentonite.							
55													
60													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
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DS - Direct Shear	SA - Sieve Analysis
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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B9	Date(s) Drilled: 1/20/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~188'	Page 1 of 2
Boring Location: In front of 6502 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50'	Depth to Invert: 10 ft.
Latitude & Longitude: 34.010089, -118.133589		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND soft, red-brown, dry; traces of medium to coarse grained SAND; organics at surface.							
5	1R	Drive	12/25/37		SC-SM	SILTY, CLAYEY SAND and GRAVEL very dense, brown, moist; fine to medium grained SAND; traces of coarse GRAVEL; moderate cementation.	124.2	10.2					DS
	2B	Bulk							92.0	29.4	23	8	CR SA
10	3R	Drive	9/17/26			red-brown, moist; some coarse GRAVEL. Well permeability testing performed at 12'-16'.	116.0	15.3					DS
15	4R	Drive	8/12/12				102.7	19.7					DS
	5B	Bulk			CL	CLAY with SAND very hard, red-brown, moist; little medium to coarse grained SAND.			99.5	72.9	35	19	SA
20	6R	Drive	6/17/30						100	91.2	32	16	SA
	7B	Bulk							100	68.6	35	19	SA
25	8R	Drive	13/43/50 per 4.5"		SC-SM	SILTY, CLAYEY SAND with GRAVEL dense, red-brown, moist; fine to medium grained SAND; some coarse GRAVEL; moderately bedded with thin interbeds of FINE SAND, reddish-orange, dry.	124.2	7.4	81.6	27.5	27	12	SA
	9B	Bulk							90.1	44.8	32	16	SA
30	10R	Drive	8/15/27				110.0	11.6	100	55.8			SA

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B9	Date(s) Drilled: 1/20/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~188'	Page 2 of 2
Boring Location: In front of 6502 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50'	Depth to Invert: 10 ft.
Latitude & Longitude: 34.010089, -118.133589		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30													
	11B				SM	SILTY SAND very dense, reddish-brown, dry; fine to medium grained Sand; non-plastic fines; strong cementation.			99.1	40.9			SA
35	12R		9/27/50 per 4"				104.5	13.7	100	58.3			SA
	13B				CL	CLAY with SAND and GRAVEL very hard, yellowish-orange, dry; little fine to medium grained SAND; little of fine GRAVEL.			99.7	60.2	28	11	SA
40	14R		8/38/50 per 5.5"				104.2	2.4	100	12.8			SA
	15B				ML	SILT with SAND and GRAVEL very hard, yellowish-orange, dry; little fine grained SAND; non-plastic fines; little of fine GRAVEL.			99.4	90.7			SA
45	16R		8/18/49		SP	Poorly-graded SAND with FINES and GRAVEL very dense, yellowish-orange and brown, dry; some non-plastic fines; traces of fine GRAVEL. strong cementation.	104.3	17.6	100	59.3			SA
50	17R		18/39/50 per 5"				90.8	17.9	100	3.2			SA
						Boring terminated at 50.5'. End of boring at planned depth. Groundwater or seepage not encountered. Backfilled with cuttings and bentonite.							
55													
60													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B10	Date(s) Drilled: 4/25/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~195'	Page 1 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 40'	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013734, -118.133978		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND soft, brown, lightly moist; traces of medium to coarse grained SAND; organics at surface.							
5	1R		7/12/20			hard, red-brown, moist; little of fine to medium grained SAND.							
10	2R		3/8/25		ML-CL	CLAYEY SILT with SAND hard, red-brown, moist; little fine to medium grained SAND. traces of fine GRAVEL.							
15	3R		2/11/15		SC	CLAYEY SAND with GRAVEL medium dense, red-brown, moist; medium to coarse grained SAND; some fine GRAVEL; moderate cementation.							
20	4R		2/12/33		CL-ML	SANDY SILTY CLAY very stiff, red-brown, moist; medium to coarse grained SAND.							
					CL	SANDY CLAY hard, red-brown, moist; medium to coarse grained SAND. Well permeability testing performed at 23'-28'.							
25	5R		24/50 per 6"		SW	WELL-GRADED SAND with CLAY and GRAVEL very dense, red-brown, moist; some medium plastic CLAY; some coarse GRAVEL; strong cementation.							
30	6R		5/11/17		CL	SANDY CLAY with GRAVEL very stiff, red-brown, moist; traces of fine to coarse GRAVEL.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B10	Date(s) Drilled: 4/25/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~195'	Page 2 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 40'	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013734, -118.133978		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	6R		5/11/17		CL	SANDY CLAY with GRAVEL very stiff, red-brown, moist; traces of fine to coarse GRAVEL.							
35	7R		8/13/24		SC-SM	SILTY, CLAYEY SAND with GRAVEL dense, orange-red and brown, moist; medium to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
40	8R		9/24/35		SW	Well-graded SAND with CLAY and GRAVEL very dense, orange-red and brown, moist; some fine to coarse GRAVEL; moderate cementation.							
45						Boring terminated at 41'. End of boring at planned depth. Groundwater or seepage not encountered. Backfilled with cuttings and bentonite.							
50													
55													
60													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

APPENDIX C

Amendments to Specifications

SECTION 217 - BEDDING AND BACKFILL MATERIALS

217-1 BEDDING MATERIAL.

217-1.1 General. *Add the following*:

The material obtained from the open trench excavations ***cannot be used*** as bedding material.

Representative samples of material for use as bedding must be approved by the Agency.

217-2 TRENCH BACKFILL. *Add the following:*

217-2.1 General.

The material obtained from the open trench excavations ***can be used*** as trench backfill subject to the provisions specified herein, and provided that all organic material, rubbish, debris, and other objectionable materials are first removed.

217-2.3 Imported Backfill. *Replace the entire subsection with the following*:

If imported backfill is required or if the Contractor elects to import material from a source outside the Project limits for use as backfill, said material shall be clean soil, free from organic material, trash, debris, rubbish, broken Portland cement concrete, bituminous pavement, or other objectionable substances, and shall have a minimum sand equivalent of 20.

The Contractor shall inform the Engineer of the actual street address or location from which the intended material will be furnished not less than 15 Days prior to its proposed use. The Agency will perform other testing as deemed appropriate by the Engineer. The Engineer will determine the suitability of the material for use as imported backfill.

SECTION 306 - OPEN TRENCH CONDUIT CONSTRUCTION

306-4 SHORING AND BRACING. *Add the following:*

306-4.1 General.

The Kw value and soil types for use in the design of shoring of excavations are as follows:

Location	Kw (pcf)	Soil Types
Montebello Pkwy at Leonard Pl	41	ML, SM, SP, SW
Northside Dr at Montebello Pkwy	36	CL, ML, SM, SP, SW
Northside Dr at Easton St	51	CL, ML, SM, SP, SW
Southside Dr at Coolidge Wy	51	CL, ML, SM, SP, SW
Southside Dr at Garfield Ave	25	CL, CH, ML, SC, SM, SP, SW
Northside Dr at Garfield Ave	55	CL, CH, ML, SC, SM, SP, SW

Recommended Kw value is predicated on the water table being at the bottom of the excavation. For a water table above the bottom of the excavation, contact the Agency for a revised Kw value.

306-4.6 Vertical Shores for Supporting Trench Excavations.

The parameters for determining the minimum penetration for vertical shores are as follows:

Location	Case No.	Soil Parameters			Distance D_1 (ft.)
		A (pcf)	B (psf)	E (pcf)	
Montebello Pkwy at Leonard Pl	1	-	-	110	2.8
Northside Dr at Montebello Pkwy	1	-	-	150	1.8

Northside Dr at Easton St	4	45	-	-	6.9
Southside Dr at Coolidge Wy	4	45	-	-	6.9
Southside Dr at Garfield Ave	3b	40	920	-	-
Northside Dr at Garfield Ave	1	-	-	65	6.2

The soils encountered in the borings shall be classified as Type C as defined in the California Code of Regulation Title 8, Division 1, Chapter 4, Subchapter 4, Article 6, Appendix A.

306-12 BACKFILL

306-12.4 Jetted Trench Backfill.

Remove the entire section.

June 1, 2016

TO: Angela R. George
Watershed Management Division

Attention Jolene Guerrero

FROM: Greg Kelley Greg Kelley
Geotechnical and Materials Engineering Division

INFILTRATION FEASIBILITY INVESTIGATION
MONTEBELLO LMD
UNINCORPORATED EAST LOS ANGELES
PROJECT ID GME0000268 (PCA NO. F21815I10)

In accordance with your request dated November 19, 2015, we conducted an infiltration feasibility investigation on the subject locations. Our findings and recommendations are included in the attached report.

If you have any questions regarding this matter, please contact Jose Urquizo or William Man at Extension 4925. To provide feedback on our services, please access http://dpw.lacounty.gov/go/gmedsurvey to complete a Customer Service Survey.

JJU:dm
GME-4p:\gmepub\secretarial\soilsinv\reports\montebello lmd memo report lid.docx

Attach.

cc: Thuan Nguyen

INFILTRATION FEASABILITY INVESTIGATION

MONTEBELLO LMD

Prepared for

Watershed Management Division
County of Los Angeles
Department of Public Works

Prepared by

Geotechnical and Materials Engineering Division
Geology and Soils Investigation Units
County of Los Angeles
Department of Public Works

June 1, 2016

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FIGURES

APPENDICES

BACKGROUND

The project is located in the residential area of unincorporated East Los Angeles along Northside Drive, Montebello Parkway, Leonard Place, Southside Drive, Coolidge Way, and Concourse Avenue. Low Impact Development (LID) features designed to infiltrate stormwater at shallow depths are proposed on the western and eastern limits of the project site. Large infiltration galleries, designed to infiltrate stormwater, are proposed along Northside Drive and Southside Drive within the large grass medians. At the time this investigation was conducted, a proposed invert depth of the large infiltration galleries was not provided. The locations of the proposed improvements are shown in attached Figure 1.

SITE CONDITIONS

Existing conditions for all locations consisted of large open grass medians with significant amounts of dried vegetation and disturbed soil areas where trees have been removed.

FIELD INVESTIGATION AND INFILTRATION TESTING

At the initial phase of the investigation, seven borings were hand-augered to a maximum depth of 4.5 feet to determine subsurface soil conditions along the project alignments. Infiltration testing was not performed within these borings. The Logs of Borings are provided in Appendix A.

At the second phase of the investigation, nine test pits were excavated to a maximum depth of 2 feet along the project alignments. Infiltration testing was performed within each 1-cubic-foot excavation. Logs of Test Pits are provided in Appendix B.

At the final phase of the investigation, three hollow-stem borings and six cone penetration tests (CPTs) were performed, to a maximum depth of 50 feet and 70 feet respectively, to determine subsurface soil conditions and identify suitable percolation zones. Well-permeability testing was performed within each hollow-stem boring with a 4-inch inner diameter perforated polyvinyl chloride (PVC) pipe. The Logs of Borings are provided in Appendix A. CPT results are provided in Appendix C.

Approximate locations for all borings, CPTs, and test pits are shown in Figures 2 through 5. Cross-sections of generalized soil profiles along each alignment are shown in Figures 6 and 7. Infiltration testing was performed in accordance with

Geotechnical and Materials Engineering Division's Guidelines for Design, Investigation, and Reporting of Low Impact Development Stormwater Infiltration (GS 200.1, revised December 31, 2014).

LABORATORY TESTING

Samples from hollow stem, hand auger, and test pits were collected for laboratory testing to confirm soil classifications in the field. A summary of the laboratory test results is provided in Appendix D.

GROUNDWATER CONDITIONS

Groundwater was not encountered during our subsurface exploration. Based on review of the California Department of Conservation Seismic Hazard Zone Report for the Los Angeles Quadrangle, the historic high groundwater level in this region is reported to be greater than 50 feet below ground.

FINDINGS AND RECOMMENDATIONS

Subsurface conditions within 2 feet of the ground surface at all locations consisted of lean clay, clayey silt, and silt in a very soft to medium-stiff condition. Organics were found only within 6 inches from ground surface. During infiltration testing, moderate infiltration rates were observed for all test pits with the exception of TP8. In general, all locations, except for TP8, appear to be moderately conducive to infiltrating water within the tested depths.

Subsurface conditions within the large grass medians on Northside Drive and Southside Drive bisecting Garfield Avenue consisted of alternating layers of silt, clayey silt, silty clay, and lean clay to well-graded and poorly-graded sand. Because the proposed invert depths of infiltration galleries were not provided during this investigation, we assumed that the infiltration invert depths would be less than 30 feet below existing grade. On Southside Drive, one well-permeability test was conducted within boring B9 at a depth interval of 12 to 16 feet. On Northside Drive, 2 well-permeability tests were conducted within borings B8 and B10 at depth intervals of 5 to 10 feet and 23 to 28 feet, respectively.

The grass median along Northside Drive does not appear to be conducive for infiltrating water within the top 20 feet. Well-permeability testing performed within B8 in the silty, clayey sand layer at 5 to 10 feet exhibited low infiltration rates. As shown on cross-section A-A' (see Figure 6), a silty clay layer extends down 25 to 35 feet, except in

the area around B10 and CPT1. In this area, the well-graded sands below a depth of 20 feet appear to be conducive for infiltrating water, as substantiated by well-permeability testing within B10. Infiltration galleries proposed in this area should extend below the silty clay layer and be founded within the well-graded sand layer at a depth below 20 feet, approximately.

The grass median along Southside Drive does not appear to be conducive for infiltrating water. As shown on cross-section B-B' (see Figure 7), clayey sands exist at depths between 5 to 15 feet. However, the design infiltration rate within this layer is marginally acceptable. Below this clayey sand layer, a thick clay layer generally extends down to a depth of 45 feet, which may further impede infiltration.

The following table presents the depths of each infiltration zone tested, the field infiltration rate, and the design infiltration rate for each test location. Design infiltration rates were determined by applying correction factors to field infiltration rates in accordance with procedures in GS 200.1. Correction factors account for the type of infiltration test, site variability, subsurface investigation, long term siltation, long term maintenance, and number of tests conducted. LID features should be designed with an underdrain and overflow pipe where possible. LID features designed for infiltrating water at shallow depths should be lined to prevent lateral migration of water into adjacent pavement structural sections and subgrade.

TABLE 1
INFILTRATION RATES

Test No.	Location	Depth to Percolation Zone (ft.)	Field Infiltration Rate (in/hr.)	Design Infiltration Rate (in/hr.)
TP 1	Montebello Pkwy. at Simmons Ave.	0 to 2	4.08	0.77
TP 2	Montebello Pkwy. at Northside Dr.	0 to 2	3.54	0.66
TP 3	Northside Dr. at Easton St.	0 to 2	3.15	0.58
TP 4	Southside Dr. at Fairfield St.	0 to 2	7.67	1.42
TP 5	Coolidge Wy. at Hereford Dr.	0 to 2	4.15	0.77
TP 6	Southside Dr. at Garfield Ave.	0 to 2	3.72	0.68

(Continued on next page)

Test No.	Location	Depth to Percolation Zone (ft.)	Field Infiltration Rate (in/hr.)	Design Infiltration Rate (in/hr.)
TP 7	Concourse Ave. at Hereford Dr.	0 to 2	5.68	1.06
TP 8	Concourse Ave. at Olympic Blvd.	0 to 2	0.36	0.06
TP 9	In front of 6650 E. Northside Dr.	0 to 2	1.81	0.33
B8	In front of 6461 E. Northside Dr.	5 to 10	0.01	0.01
B9	In front of 6502 E. Southside Dr.	12 to 16	0.35	0.33
B10	In front of 6441 E. Northside Dr.	23 to 28	6.68	1.67

CONSTRUCTION CONSIDERATIONS

Excessive compaction of subsoils at selected LID locations and subsequent failure to correct the problem are common modes of failure for infiltration facilities. Prior to construction, the infiltration area should be roped off to cease entrance by unwanted equipment. The excavation should be performed from the sides of the facility and only light equipment should be used on the infiltration surface.

LIMITATIONS

This report was prepared for the exclusive use of Public Works for the specific site discussed herein and should not be considered transferable to other sites or projects. In the event that any modification in the design, configuration, or use of the site is implemented, the recommendations contained in this memorandum are no longer valid. This study was conducted according to generally accepted geotechnical engineering practice for projects of this magnitude.

The findings and recommendations in this memorandum are based on field and laboratory investigations combined with an extrapolation of subsurface conditions and testing. Our recommendations are professional opinions and are not meant to be a control of nature; therefore, no warranty is herein expressed or implied.

If you have any questions regarding this matter, please contact Jose J. Urquizo or William S. Man at (626) 458-4925.

Prepared by:

Jose J. Urquizo
Principal Civil Engineering Assistant

Reviewed by:

William S. Man
Associate Civil Engineer

JJU:dm
GME-4p:\gmepub\secretarial\soilsinv\reports\montebello lmd memo report lid.docx

REFERENCES

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California Department of Transportation, *Storm Water Quality Handbook: Project Planning and Design Guide*, CTSW-RT-10-254.03, July 2010.

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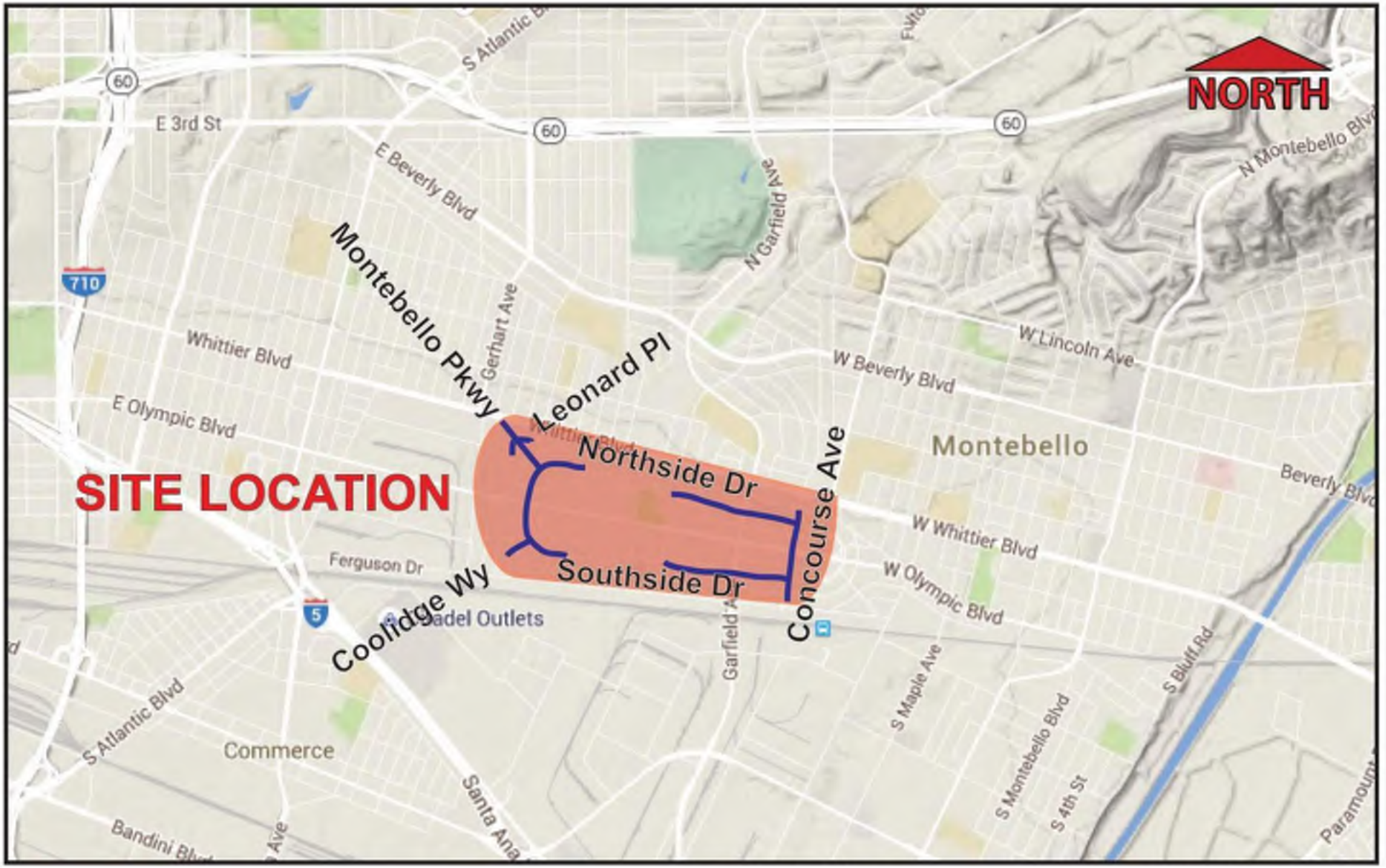


0 ft 2000 ft 4000 ft

Source: Google Maps

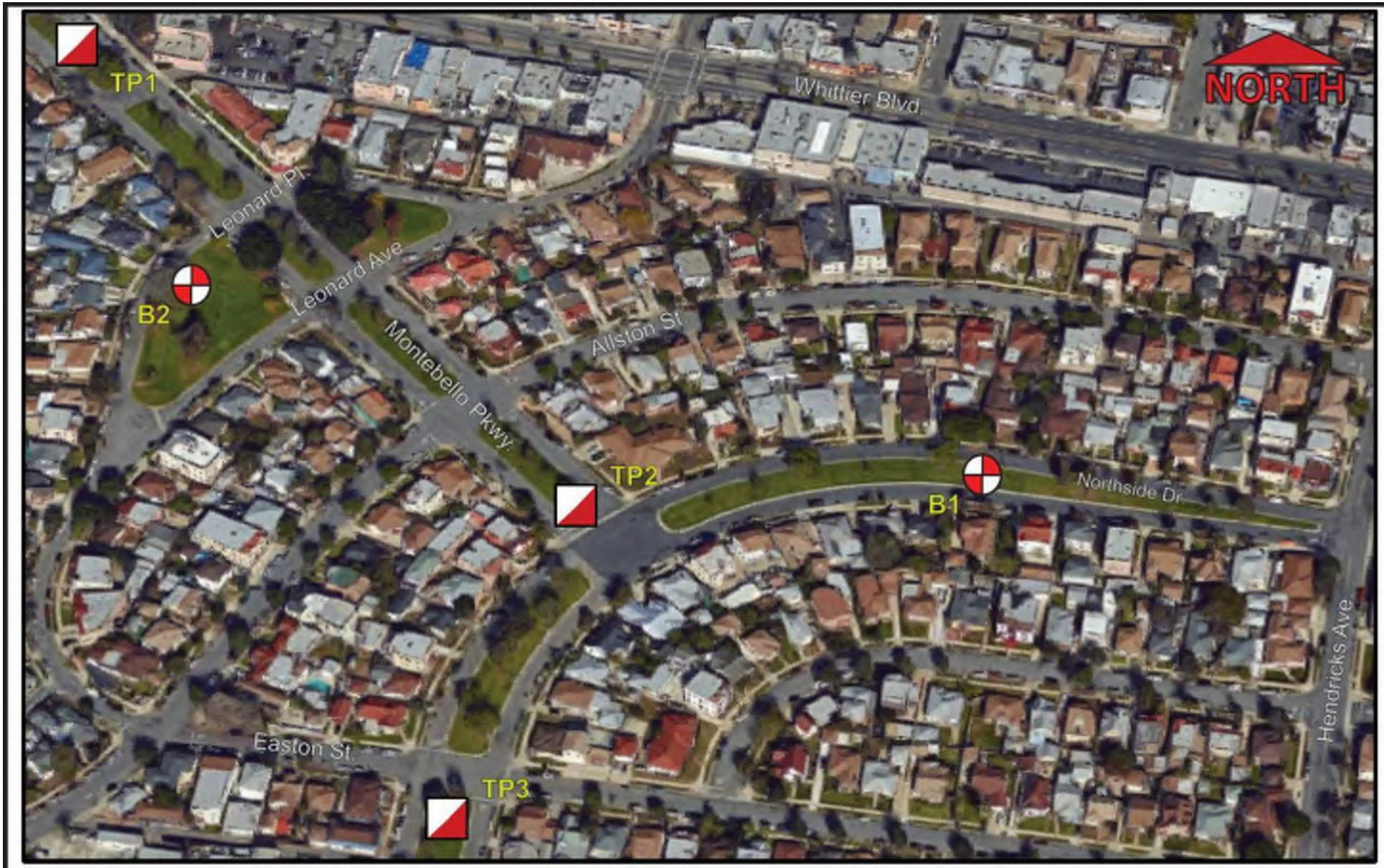
Thomas Guide Pages: 675 J1, J2
676 A2, B2

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SITE LOCATION MAP
Montebello LMD
Unincorporated East Los Angeles

Date: FEB 2016	Drafted by: AK/JJU	Scale: as shown	FIGURE 1



0 ft 200 ft 400 ft

LEGEND

Hand Auger Boring

Percolation Test Pit & Hand Auger Boring

Source: Google Maps

Thomas Guide Pages: 675 J1, J2

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

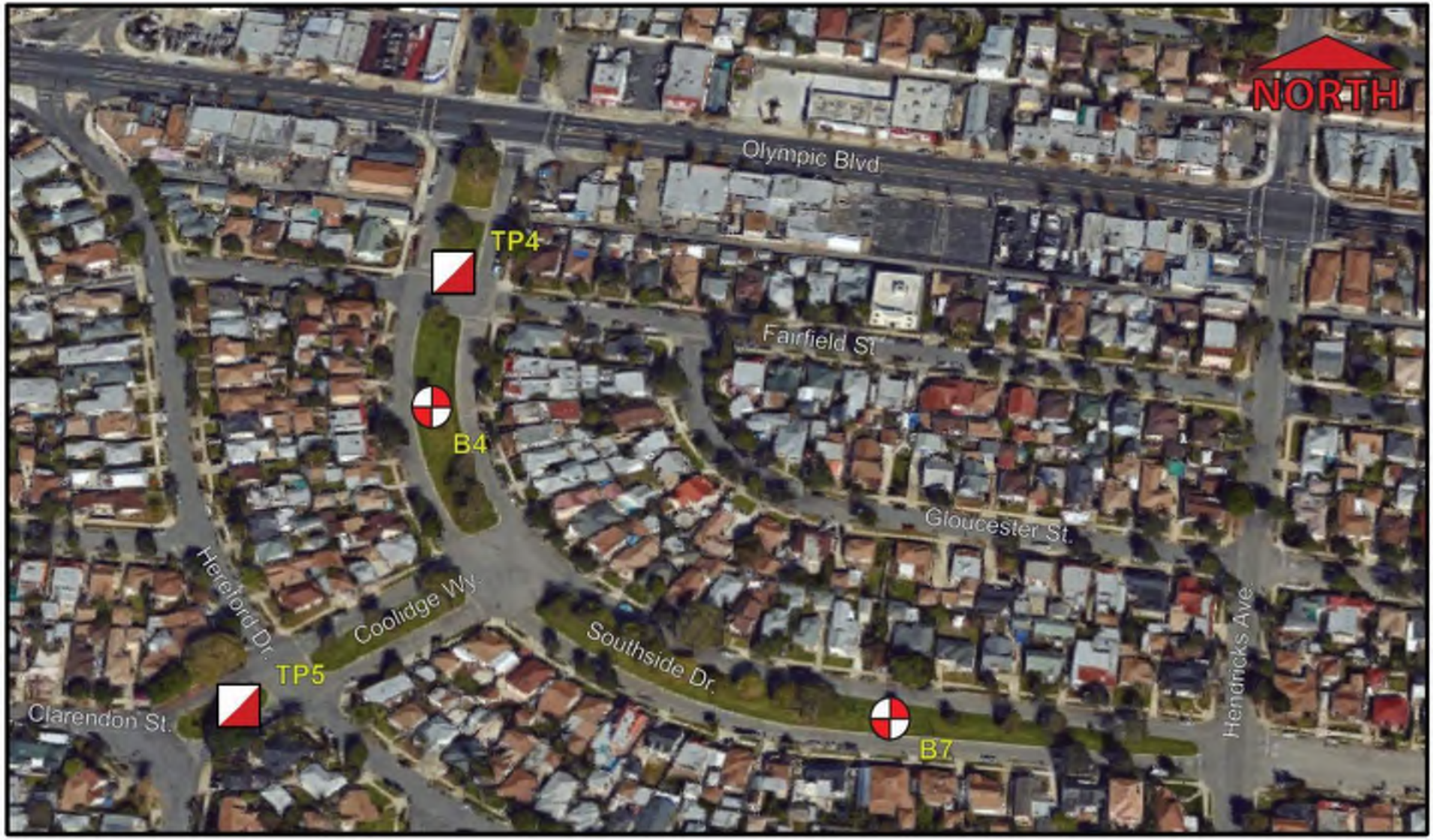
BORING LOCATION MAP

Montebello LMD

Montebello Parkway: Whittier Boulevard to Northside Drive

Northside Drive: Easton Street to Hendricks Avenue

Date: FEB 2016	Drafted by: AK/JJU	Scale: as shown	FIGURE 2



0 ft 200 ft 400 ft

LEGEND

- Hand Auger Boring
- Percolation Test Pit & Hand Auger Boring

Source: Google Maps

Thomas Guide Pages: 675 J2

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

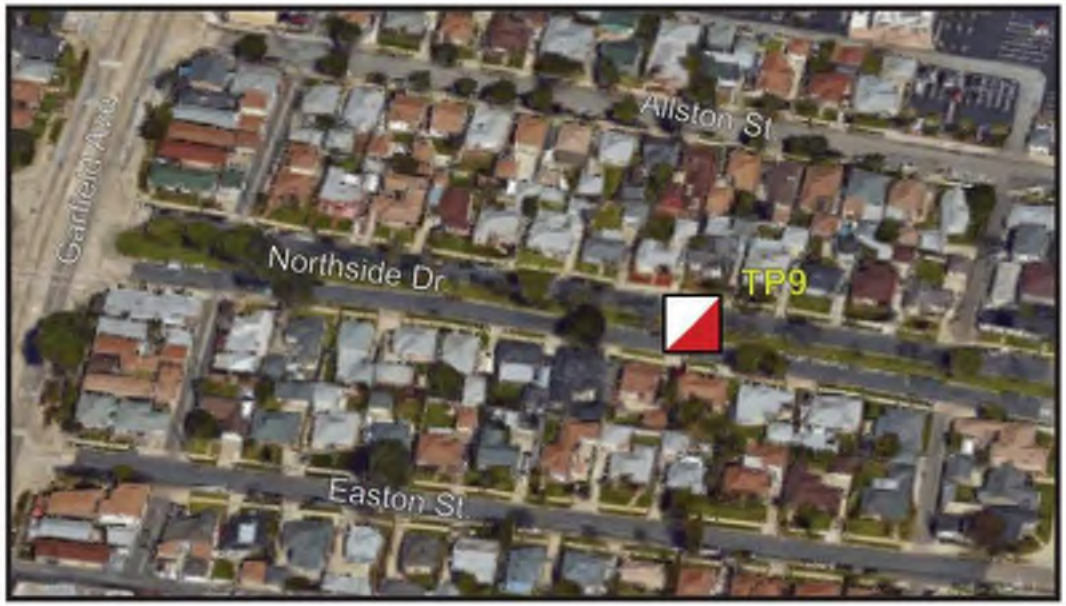
BORING LOCATION MAP

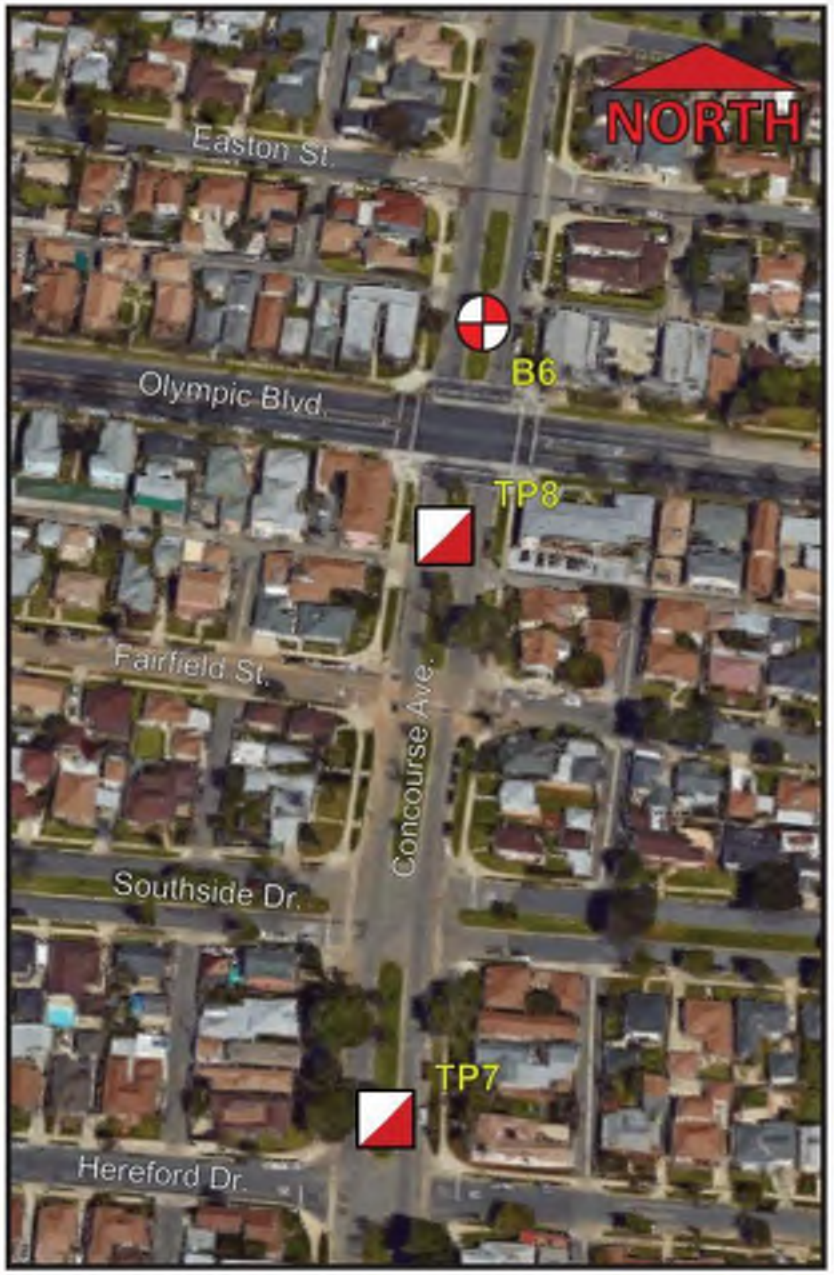
Montebello LMD

Southside Drive: Olympic Boulevard to Hendricks Avenue

Coolidge Way: Clarendon Street to Southside Drive

Date: FEB 2016	Drafted by: AK/JJU	Scale: as shown	FIGURE 3





Source: Google Maps **Thomas Guide Pages:** 676 B2

0 ft 200 ft 400 ft

LEGEND

Hand Auger Boring

Percolation Test Pit & Hand Auger Boring

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

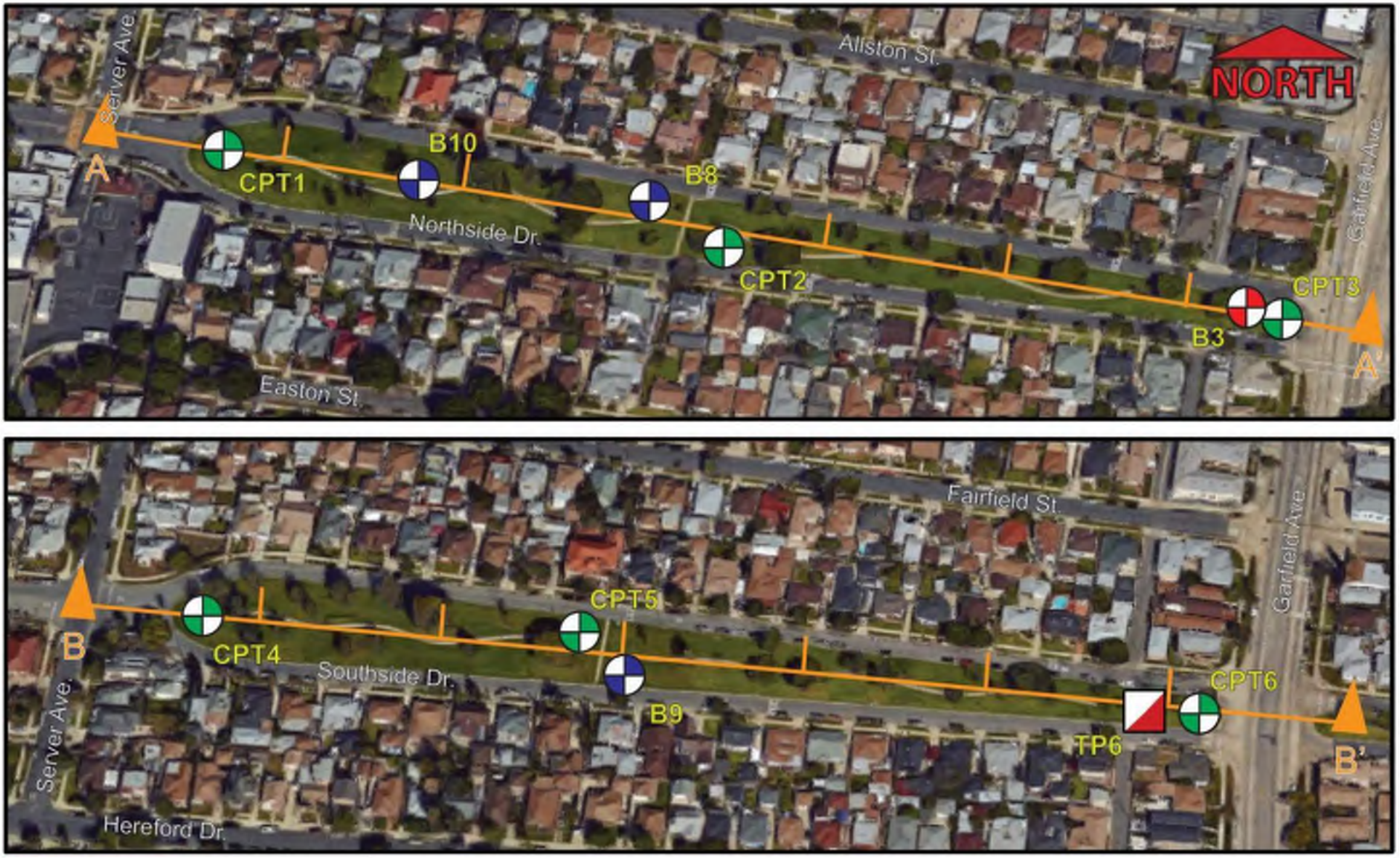
BORING LOCATION MAP

Montebello LMD

Northside Drive and Southside Drive: Garfield Avenue to Concourse Avenue

Concourse Avenue: Northside Drive to Hereford Drive

Date: FEB 2016	Drafted by: AK/JJU	Scale: as shown	FIGURE 4



0 ft 200 ft 400 ft

Source: Google Maps

Thomas Guide Pages: 676 A2, B2

LEGEND

- Cone Penetration Test (CPT)
- Hand Auger Boring
- Hollow Stem Boring & Well Permeability Test
- Cross Section Soil Profile (see figure 6 and 7 for details)
- Percolation Test Pit & Hand Auger Boring

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

BORING LOCATION MAP

Montebello LMD

Northside Drive and Southside Drive: Server Avenue to Garfield Avenue

Date: FEB 2016	Drafted by: AK/JJU	Scale: as shown	FIGURE 5

LEGEND

- Cone Penetration Test Location
- Hollow Stem Boring & Drywell Test Location
- ⊗ Existing Fire Hydrant

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CPT and Drywell Boring Locations

Montebello LMD

Montebello Parkway: Whittier Boulevard to Northside Drive

Unincorporated East Los Angeles

Date: JULY 2017	Drafted by: JJU	Scale: NTS	FIGURE 1

LEGEND

- Cone Penetration Test Location
- Hollow Stem Boring & Drywell Test Location
- ⊗ Existing Fire Hydrant

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

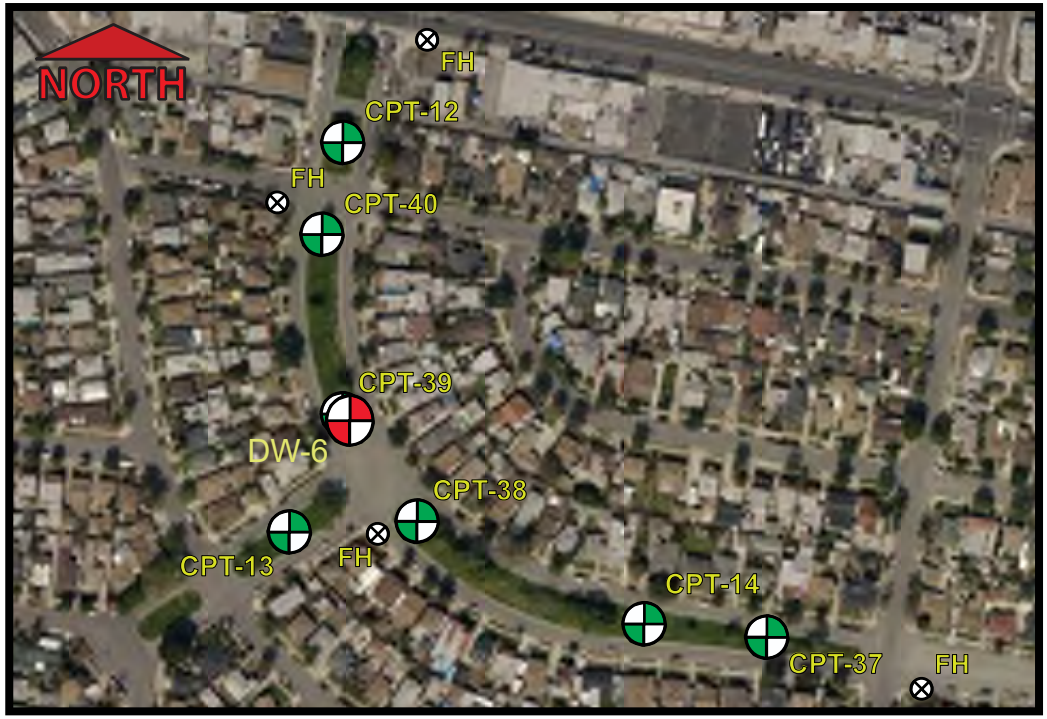
CPT and Drywell Boring Locations

Montebello LMD

Northside Drive: Olympic Boulevard to Hendricks Avenue

Unincorporated East Los Angeles

Date: JULY 2017	Drafted by: JJU	Scale: NTS	FIGURE 2



LEGEND

- Cone Penetration Test
- Hollow Stem Boring & Drywell Test Location
- ⊗ Existing Fire Hydrant

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

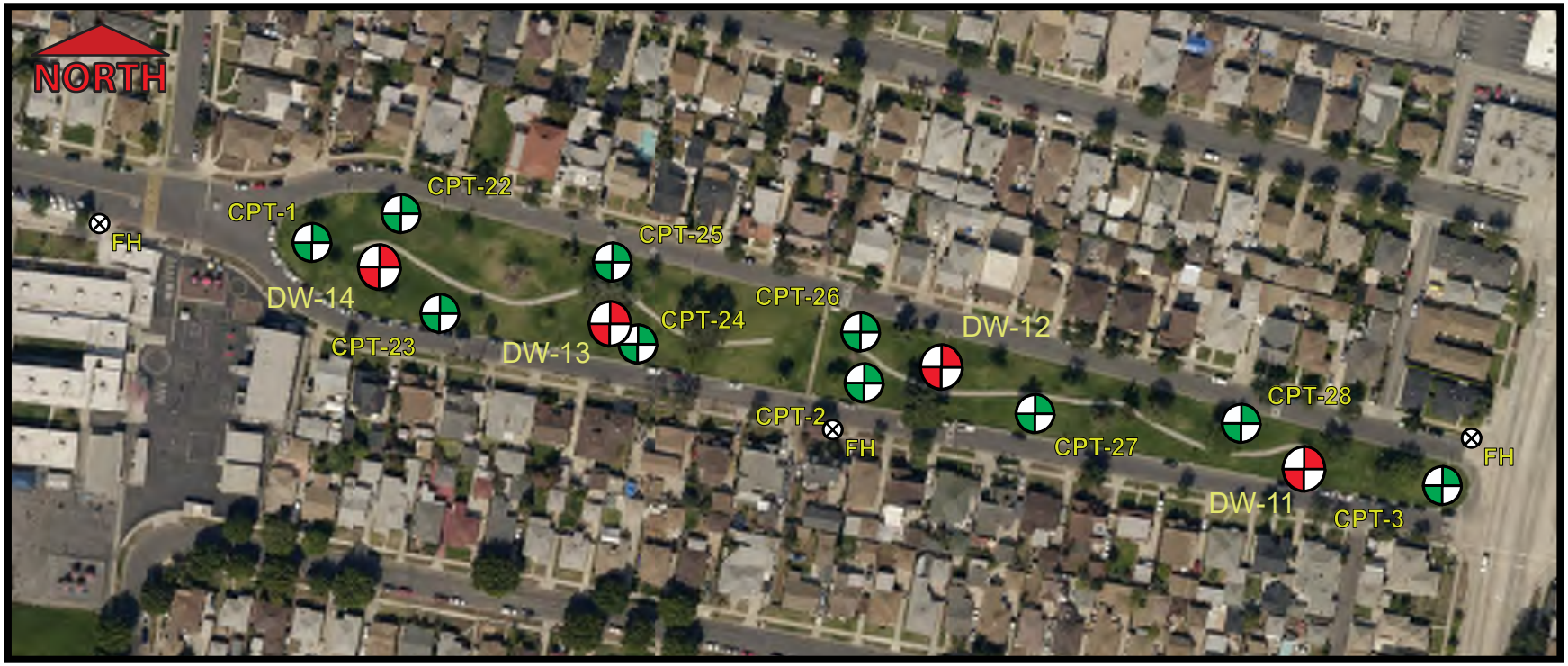
CPT and Drywell Boring Locations

Montebello LMD

Southside Drive: Olympic Boulevard to Hendricks Avenue

Unincorporated East Los Angeles

Date: JULY 2017	Drafted by: JJU	Scale: NTS	FIGURE 3



LEGEND

- Cone Penetration Test Location
- Hollow Stem Boring & Drywell Test Location
- ⊗ Existing Fire Hydrant

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CPT and Drywell Boring Locations

Montebello LMD

Northside Drive: Server Avenue to Garfield Avenue

Unincorporated East Los Angeles

Date: JULY 2017	Drafted by: JJU	Scale: NTS	FIGURE 4

LEGEND

- Cone Penetration Test Location
- Hollow Stem Boring & Drywell Test Location
- ⊗ Existing Fire Hydrant

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

CPT and Drywell Boring Locations

Montebello LMD

Southside Drive: Server Avenue to Garfield Avenue

Unincorporated East Los Angeles

Date: JULY 2017	Drafted by: JJU	Scale: NTS	FIGURE 5

Infiltration Testing Results - Calculations

Percolation Rating Performace
Below recommendation
Acceptable
High Flow

Date:	7/27/2017	**Number of Test:**	14

Project:	Montebello LMD
PCA:	F21815i10

Drywell No.	**Location**	**Unadjusted Percolation Rate (in/hr)**	**(Reduction Factor) RF_{total}**	**Design Percolation Rate (in/hr)**	***Design flow rate by diameter of drywell**			
					20-in diameter (tested) (gpm)	**4-ft diameter (gpm)**	**5-ft diameter (gpm)**	**6-ft diameter (gpm)**
DW-1	Montebello Pkwy at Leonard Pl (north island)	7.77	1.72	4.52	22.12	53.10	66.37	79.64
DW-2	Montebello Pkwy at Leonard Pl (south island)	8.66	1.72	5.04	24.68	59.23	74.04	88.84
DW-3	In front of 6035 Northside Dr	11.83	1.72	6.88	33.70	80.88	101.11	121.33
DW-4	In front of 5951 Northside Dr	15.80	2.15	7.35	35.99	86.39	107.98	129.58
DW-5	In front of 5912 Northside Dr	11.00	1.72	6.40	31.33	75.18	93.98	112.78
DW-6	In front of 5962 Southside Dr	6.92	2.15	3.22	15.77	37.85	47.32	56.78
DW-7	In front of 6421 Southside Dr	11.57	2.15	5.39	26.38	63.30	79.13	94.95
DW-8	In front of 6450 Southside Dr	5.17	2.15	2.41	11.79	28.29	35.36	42.43
DW-9	In front of 6521 Southside Dr	9.52	2.15	4.43	21.69	52.05	65.06	78.07
DW-10	In front of 5551 Southside Dr	4.67	2.15	2.17	10.64	25.54	31.92	38.31
DW-11	In front of 6551 Northside Dr	6.71	2.15	3.12	15.30	36.71	45.89	55.06
DW-12	In front of 6518 Northside Dr	3.00	2.15	1.40	6.83	16.39	20.49	24.59
DW-13	In front of 6444 Northside Dr	13.40	1.89	7.09	34.71	83.30	104.12	124.94
DW-14	In front of 6421 Northside Dr	10.15	1.89	5.37	26.28	63.07	78.83	94.60

NOTE: *based on 90-ft of head, 100-ft deep drywell with water level at 10-ft below surface.

APPENDIX A

LOGS OF BORINGS

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B1	Date(s) Drilled: 12/15/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~184 ft.	Page 1 of 1
Boring Location: In front of 6041 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 2.		Drilled by: AK & JJU	Hammer Weight: N/A lbs.	Total Depth: 4.5 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.015560, -118.142058		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B					CL	LEAN CLAY soft, reddish brown, moist; organics at surface.			99.6	56.0	31	14	SA
5							Boring terminated at 4.5 feet. End of boring at planned depth. No Groundwater encountered.							
10														
15														
20														
25														
30														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: B2	Date(s) Drilled: 12/15/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~182 ft.	Page 1 of 1
Boring Location: In front of 1011-1013 S Leonard Place, center grass median; See BORING LOCATION MAP Figure 2.		Drilled by: AK & JJU	Hammer Weight: N/A lbs.	Total Depth: 3.8 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.016414, -118.145206		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	FIELD DATA: Drive / Bulk	FIELD DATA: Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	LABORATORY TESTING: In-situ MC (%)	LABORATORY TESTING: Sieve % Passing No. 4	LABORATORY TESTING: Sieve % Passing No. 200	LABORATORY TESTING: LL	LABORATORY TESTING: PI	LABORATORY TESTING: Type of Tests
0	1B	Bulk			CH	FAT CLAY soft, reddish brown, dry; organics at surface.			99.8	62.9	75	59	SA
5						Boring terminated at 3.8 feet. End of boring due to refusal. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: B3	Date(s) Drilled: 12/16/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~198 ft.	Page 1 of 1
Boring Location: In front of 6565 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 2.		Drilled by: AK & JJU	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.013203, -118.130876		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive	Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B		■			CL-ML	SILTY CLAY soft, brown, dry; organics at surface.			99.5	54.8	24	6	SA
5							Boring terminated at 4.0 feet. End of boring at planned depth. No Groundwater encountered.							
10														
15														
20														
25														
30														

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: B4	Date(s) Drilled: 12/16/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~171 ft.	Page 1 of 1
Boring Location: In front of 5942 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 3.		Drilled by: AK & JJU	Hammer Weight: N/A lbs.	Total Depth: 4.2 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.012181, -118.144409		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	FIELD DATA: Drive / Bulk	FIELD DATA: Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	LABORATORY TESTING: In-situ MC (%)	LABORATORY TESTING: Sieve % Passing No. 4	LABORATORY TESTING: Sieve % Passing No. 200	LABORATORY TESTING: LL	LABORATORY TESTING: PI	LABORATORY TESTING: Type of Tests
0	1B	Bulk			ML	SILT soft, brown, dry; organics at surface.			99.1	62.0	unrollable to 1/8"		SA
5						Boring terminated at 4.2 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B5	Date(s) Drilled: 12/16/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~195 ft.	Page 1 of 1
Boring Location: In front of 6615 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 4.		Drilled by: AK & JJU	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.009797, -118.130472		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B				CL	LEAN CLAY very soft, red-brown, moist; organics at surface.			99.8	60.8	26	9	SA
5						Boring terminated at 4.0 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B6	Date(s) Drilled: 12/16/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~199 ft.	Page 1 of 1
Boring Location: Adjacent to 6701 E. Olympic Blvd, center grass median; See BORING LOCATION MAP Figure 4.		Drilled by: AK & JJU	Hammer Weight: N/A lbs.	Total Depth: 3.2 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.011341, -118.127542		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	Bulk			CL	LEAN CLAY medium stiff, brown, dry; organics at surface.			99.8	76.8	31	15	SA
5						Boring terminated at 3.2 feet. End of boring due to refusal. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: B7	Date(s) Drilled: 12/16/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~174 ft.	Page 1 of 1
Boring Location: In front of 6057 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 3.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.010904, -118.142841		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	■			CL	LEAN CLAY very soft, brown, moist; traces of sand; organics at surface.							
5					ML-CL	CLAYEY SILT medium stiff, reddish brown, dry.							
						Boring terminated at 4.0 feet. End of boring due to refusal. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: B8	Date(s) Drilled: 1/19/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~196 ft.	Page 1 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50.5 ft.	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013659, -118.133144		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND soft, reddish brown, dry; some medium to coarse grained SAND; organics at surface.							
5	1R		10/22/21		SW-SM	Well-graded SAND with SILT and GRAVEL dense, red-brown, moist; some non-plastic SILT; little fine to coarse GRAVEL; moderate cementation.	115.6	8.7	100	26.7			DS SA
	2B								92.5	7.7			CR SA
10	3R		7/15/17			Well permeability testing performed at 5'-10'.	76.4	11.4	100	41.5			SA
					SC-SM	SILTY, CLAYEY SAND dense, red-brown, moist; fine to medium grained SAND; moderate cementation.							
15	4R		10/20/23			traces of fine GRAVEL.	114.1	10.7	100	39.7			DS SA
	5B								93.5	27.1	23	5	SA
20	6R		9/24/26				112.5	10.9	100	41.8	25	12	SA
					CL	CLAY with SAND very hard, red-brown, moist; traces of fine to medium grained SAND.							
	7B								99.8	63.4	31	17	SA
25	8R		7/27/48			little medium to coarse grained SAND.	121.8	12.4	100	70.0			
	9B					some coarse GRAVEL.							
30	10R		7/13/8			little coarse GRAVEL.	112.9	14.2	100	54.6	27	9	SA

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B8	Date(s) Drilled: 1/19/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~196 ft.	Page 2 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50.5 ft.	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013659, -118.133144		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30						little coarse GRAVEL.							
35	11R		14/27/34		SC-SM	SILTY, CLAYEY SAND with GRAVEL very dense, orange-red and brown, moist; fine to medium grained SAND; some coarse GRAVEL; moderate cementation.	116.8	4.4	100	18.4			
	12B								93.0	29.7	28	11	SA
40	13R		15/20/31			very dense, red-brown, moist; little of medium grained SAND; traces of fine to coarse GRAVEL.	111.7	5.5	100	18.4			
	14B								95.6	27.1	26	10	SA
45	15R		13/20/42			very dense, orange-brown, moist; some fine grained SAND.	107.6	10.3	100	33.0			
	16B								100	41.1	26	11	SA
50	17R		12/23/ 50 per 5"			very dense, orange-red and brown, moist; some fine to coarse GRAVEL; strong cementation.	122.2	11.9	93.9	49.7			
						Boring terminated at 50.5'. End of boring at planned depth. Groundwater or seepage not encountered. Backfilled with cuttings and bentonite.							
55													
60													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B9	Date(s) Drilled: 1/20/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~188 ft.	Page 1 of 2
Boring Location: In front of 6502 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50.5 ft.	Depth to Invert: 10 ft.
Latitude & Longitude: 34.010089, -118.133589		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND soft, red-brown, dry; traces of medium to coarse grained SAND; organics at surface.							
5	1R		12/25/37		SC-SM	SILTY, CLAYEY SAND and GRAVEL very dense, brown, moist; fine to medium grained SAND; traces of coarse GRAVEL; moderate cementation.	124.2	10.2					DS
	2B								92.0	29.4	23	8	CR SA
10	3R		9/17/26			red-brown, moist; some coarse GRAVEL. Well permeability testing performed at 12'-16'.	116.0	15.3					DS
15	4R		8/12/12				102.7	19.7					DS
	5B				CL	CLAY with SAND very hard, red-brown, moist; little medium to coarse grained SAND.			99.5	72.9	35	19	SA
20	6R		6/17/30						100	91.2	32	16	SA
	7B								100	68.6	35	19	SA
25	8R		13/43/50 per 4.5"		SC-SM	SILTY, CLAYEY SAND with GRAVEL dense, red-brown, moist; fine to medium grained SAND; some coarse GRAVEL; moderately bedded with thin interbeds of FINE SAND, reddish-orange, dry.	124.2	7.4	81.6	27.5	27	12	SA
	9B								90.1	44.8	32	16	SA
30	10R		8/15/27				110.0	11.6	100	55.8			SA

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B9	Date(s) Drilled: 1/20/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~188 ft.	Page 2 of 2
Boring Location: In front of 6502 E. Southside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 50.5 ft	Depth to Invert: 10 ft.
Latitude & Longitude: 34.010089, -118.133589		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	11B	Bulk			SM	SILTY SAND very dense, reddish-brown, dry; fine to medium grained Sand; non-plastic fines; strong cementation.			99.1	40.9			SA
35	12R	Drive	9/27/50 per 4"				104.5	13.7	100	58.3			SA
	13B	Bulk			CL	CLAY with SAND and GRAVEL very hard, yellowish-orange, dry; little fine to medium grained SAND; little of fine GRAVEL.			99.7	60.2	28	11	SA
40	14R	Drive	8/38/50 per 5.5"				104.2	2.4	100	12.8			SA
	15B	Bulk			ML	SILT with SAND and GRAVEL very hard, yellowish-orange, dry; little fine grained SAND; non-plastic fines; little of fine GRAVEL.			99.4	90.7			SA
45	16R	Drive	8/18/49		SP	Poorly-graded SAND with FINES and GRAVEL very dense, yellowish-orange and brown, dry; some non-plastic fines; traces of fine GRAVEL. strong cementation.	104.3	17.6	100	59.3			SA
50	17R	Drive	18/39/50 per 5"				90.8	17.9	100	3.2			SA
55						Boring terminated at 50.5'. End of boring at planned depth. Groundwater or seepage not encountered. Backfilled with cuttings and bentonite.							
60													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / No

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B10	Date(s) Drilled: 4/25/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~195 ft.	Page 1 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 41 ft.	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013734, -118.133978		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0					ML	SILT with SAND soft, brown, lightly moist; traces of medium to coarse grained SAND; organics at surface.							
5	1R		7/12/20			hard, red-brown, moist; little of fine to medium grained SAND.							
10	2R		3/8/25		ML-CL	CLAYEY SILT with SAND hard, red-brown, moist; little fine to medium grained SAND. traces of fine GRAVEL.							
15	3R		2/11/15		SC	CLAYEY SAND with GRAVEL medium dense, red-brown, moist; medium to coarse grained SAND; some fine GRAVEL; moderate cementation.							
20	4R		2/12/33		CL-ML	SANDY SILTY CLAY very stiff, red-brown, moist; medium to coarse grained SAND.							
25	5R		24/50 per 6"		CL	SANDY CLAY hard, red-brown, moist; medium to coarse grained SAND. Well permeability testing performed at 23'-28'.							
30	6R		5/11/17		SW	WELL-GRADED SAND with CLAY and GRAVEL very dense, red-brown, moist; some medium plastic CLAY; some coarse GRAVEL; strong cementation.							
					CL	SANDY CLAY with GRAVEL very stiff, red-brown, moist; traces of fine to coarse GRAVEL.							

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: B10	Date(s) Drilled: 4/25/16	Logged by: JJU	Boring Diameter: 10 in.	Ground Elevation: ~195 ft.	Page 2 of 2
Boring Location: In front of 6465 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: FMD	Hammer Weight: 140 lbs.	Total Depth: 41 ft.	Depth to Invert: 10 ft.
Latitude & Longitude: 34.013734, -118.133978		Drilling Method: Hollow Stem Auger Equipment: CME	Drop Height: 30 in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
30	6R		5/11/17		CL	SANDY CLAY with GRAVEL very stiff, red-brown, moist; traces of fine to coarse GRAVEL.							
35	7R		8/13/24		SC-SM	SILTY, CLAYEY SAND with GRAVEL dense, orange-red and brown, moist; medium to coarse grained SAND; some fine to coarse GRAVEL; moderate cementation.							
40	8R		9/24/35		SW	Well-graded SAND with CLAY and GRAVEL very dense, orange-red and brown, moist; some fine to coarse GRAVEL; moderate cementation.							
45						Boring terminated at 41'. End of boring at planned depth. Groundwater or seepage not encountered. Backfilled with cuttings and bentonite.							
50													
55													
60													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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APPENDIX B

LOG OF TEST PITS

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: TP1	Date(s) Drilled: 12/28/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~188 ft.	Page 1 of 1
Boring Location: In front of 5802 E. Montebello Parkway, center grass median; See BORING LOCATION MAP Figure 2.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.017436, -118.145590		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	Bulk			SM	SILTY SAND very loose, brown, dry; fine to medium grained Sand; organics at surface.			100	42.2			SA
						Infiltration test performed at 17 inches.							
5						Boring terminated at 4.0 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: TP2	Date(s) Drilled: 12/28/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~181 ft.	Page 1 of 1
Boring Location: Intersection of Montebello Parkway and Northside Drive, center grass median; See BORING LOCATION MAP Figure 2.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 3.5 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.015400, -118.143588		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	FIELD DATA: Drive / Bulk	FIELD DATA: Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	LABORATORY TESTING: In-situ MC (%)	LABORATORY TESTING: Sieve % Passing No. 4	LABORATORY TESTING: Sieve % Passing No. 200	LABORATORY TESTING: LL	LABORATORY TESTING: PI	LABORATORY TESTING: Type of Tests
0	1B	Bulk			CL	LEAN CLAY soft, brown, dry; organics at surface. Infiltration test performed at 16 inches.			100	56.1	22	8	SA
5						Boring terminated at 3.5 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: TP3	Date(s) Drilled: 12/28/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~176 ft.	Page 1 of 1
Boring Location: Intersection of Easton Street and Northside Drive, center grass median; See BORING LOCATION MAP Figure 2.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 3.25 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.014171, -118.144015		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	■			SC-SM	SILTY, CLAYEY SAND loose, brown, dry; fine to medium grained Sand; organics at surface.			100	46.7	20	4	SA
						Infiltration test performed at 14 inches.							
5						Boring terminated at 3.25 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

CO - Consolidation	MD - Maximum Density
CR - Corrosion	PE - Permeability
DS - Direct Shear	SA - Sieve Analysis
EI - Expansion Index	SE - Sand Equivalence
HY - Hydrometer	TR - Triaxial

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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: TP4	Date(s) Drilled: 12/30/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~172 ft.	Page 1 of 1
Boring Location: Intersection of Fairfield Street and Southside Drive, center grass median; See BORING LOCATION MAP Figure 3.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.012779, -118.144308		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	Bulk			CL	LEAN CLAY soft, brown, dry; organics at surface. Infiltration test performed at 14 inches.			99.8	63.7	28	10	SA
5						Boring terminated at 4.0 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD

Project Location: Unincorporated East Los Angeles

PCA: F21815i10

Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works

Geotechnical and Materials Engineering Division

Boring No.: TP5	Date(s) Drilled: 12/30/15	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~168 ft.	Page 1 of 1
Boring Location: Intersection of Coolidge Way and Hereford Drive, center grass median; See BORING LOCATION MAP Figure 3.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.25 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.010936, -118.145115		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	Bulk			CL	LEAN CLAY soft, brown, dry; organics at surface. Infiltration test performed at 14 inches.			100	54.9	25	8	SA
5						Boring terminated at 4.25 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

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Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: TP6	Date(s) Drilled: 01/13/16	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~191 ft.	Page 1 of 1
Boring Location: Intersection of Southside Drive and Garfield Avenue, center grass median; See BORING LOCATION MAP Figure 5.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.009906, -118.131548		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	Bulk			CL	LEAN CLAY soft, reddish brown, moist; organics at surface. Infiltration test performed at 18 inches.			99.8	60.8	40	25	SA
5						Boring terminated at 4.0 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: TP7	Date(s) Drilled: 01/13/16	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~192 ft.	Page 1 of 1
Boring Location: In front of 1418 S. Concourse Avenue, center grass median; See BORING LOCATION MAP Figure 4.		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 3.75 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.009010, -118.128008		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	■			CL	LEAN CLAY with SAND very soft, brown to reddish-brown, moist; organics at surface; traces of fine to medium Sand.			99.7	75.7	41	24	SA
						Infiltration test performed at 15 inches.							
5						Boring terminated at 3.75 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: TP8	Date(s) Drilled: 01/14/16	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~196 ft.	Page 1 of 1
Boring Location: Intersection of Concourse Avenue and Olympic Boulevard, center grass median; See BORING LOCATION MAP Figure 4		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.0 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.010691, -118.127699		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	Drive / Bulk	Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	In-situ MC (%)	Sieve % Passing No. 4	Sieve % Passing No. 200	LL	PI	Type of Tests
0	1B	Bulk			ML-CL	CLAYEY SILT with SAND very soft, brown, moist; organics at surface; little of fine to medium Sand.							
						Infiltration test performed at 23 inches.							
5						Boring terminated at 4.0 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

Project: Montebello LMD
Project Location: Unincorporated East Los Angeles
PCA: F21815i10
Monitoring Well Installed: Yes / (No)

GEOTECHNICAL LOG OF BORING AND SAMPLING

Los Angeles County Department of Public Works
Geotechnical and Materials Engineering Division

Boring No.: TP9	Date(s) Drilled: 01/14/16	Logged by: JJU	Boring Diameter: 4 in.	Ground Elevation: ~200 ft.	Page 1 of 1
Boring Location: In front of 6653 E. Northside Drive, center grass median; See BORING LOCATION MAP Figure 4		Drilled by: CL & MG	Hammer Weight: N/A lbs.	Total Depth: 4.5 ft.	Depth to Invert: N/A ft.
Latitude & Longitude: 34.012730, -118.128609		Drilling Method: Equipment: Hand Auger	Drop Height: N/A in.	Depth to Groundwater: N/A	Depth to Bedrock: N/A

DEPTH (FEET)	FIELD DATA: Sample No.	FIELD DATA: Drive / Bulk	FIELD DATA: Blow Count (per 6 in.)	Graphic Log	USCS	DESCRIPTION	LABORATORY TESTING: In-situ γ_d (pcf)	LABORATORY TESTING: In-situ MC (%)	LABORATORY TESTING: Sieve % Passing No. 4	LABORATORY TESTING: Sieve % Passing No. 200	LABORATORY TESTING: LL	LABORATORY TESTING: PI	LABORATORY TESTING: Type of Tests
0						CLAYEY SILT very soft, brown, moist; organics at surface.							
	1B				ML-CL	very soft, brown, dry.							
5						Infiltration test performed at 24 inches.							
						Boring terminated at 4.5 feet. End of boring at planned depth. No Groundwater encountered.							
10													
15													
20													
25													
30													

LEGEND

- California Ring (2.5 in. OD) Sample
- California Ring (3 in. OD) Sample
- SPT (2 in. OD) Sample
- Bulk Sample
- Depth to invert
- Seepage Encountered During Drilling
- Groundwater Encountered During Drilling
- Distinct Contact
- Gradational or Uncertain Contact
- γ_d - Dry Density
- MC - Moisture Content

Types of Tests

- CO - Consolidation
- CR - Corrosion
- DS - Direct Shear
- EI - Expansion Index
- HY - Hydrometer
- MD - Maximum Density
- PE - Permeability
- SA - Sieve Analysis
- SE - Sand Equivalence
- TR - Triaxial

Note: This log contains observations and interpretations that are valid only for the specific date and location of the boring. Subsurface conditions vary between borings and with time. Material descriptions are derived using visual classification methods and may vary from descriptions/classifications based on laboratory testing.

APPENDIX C

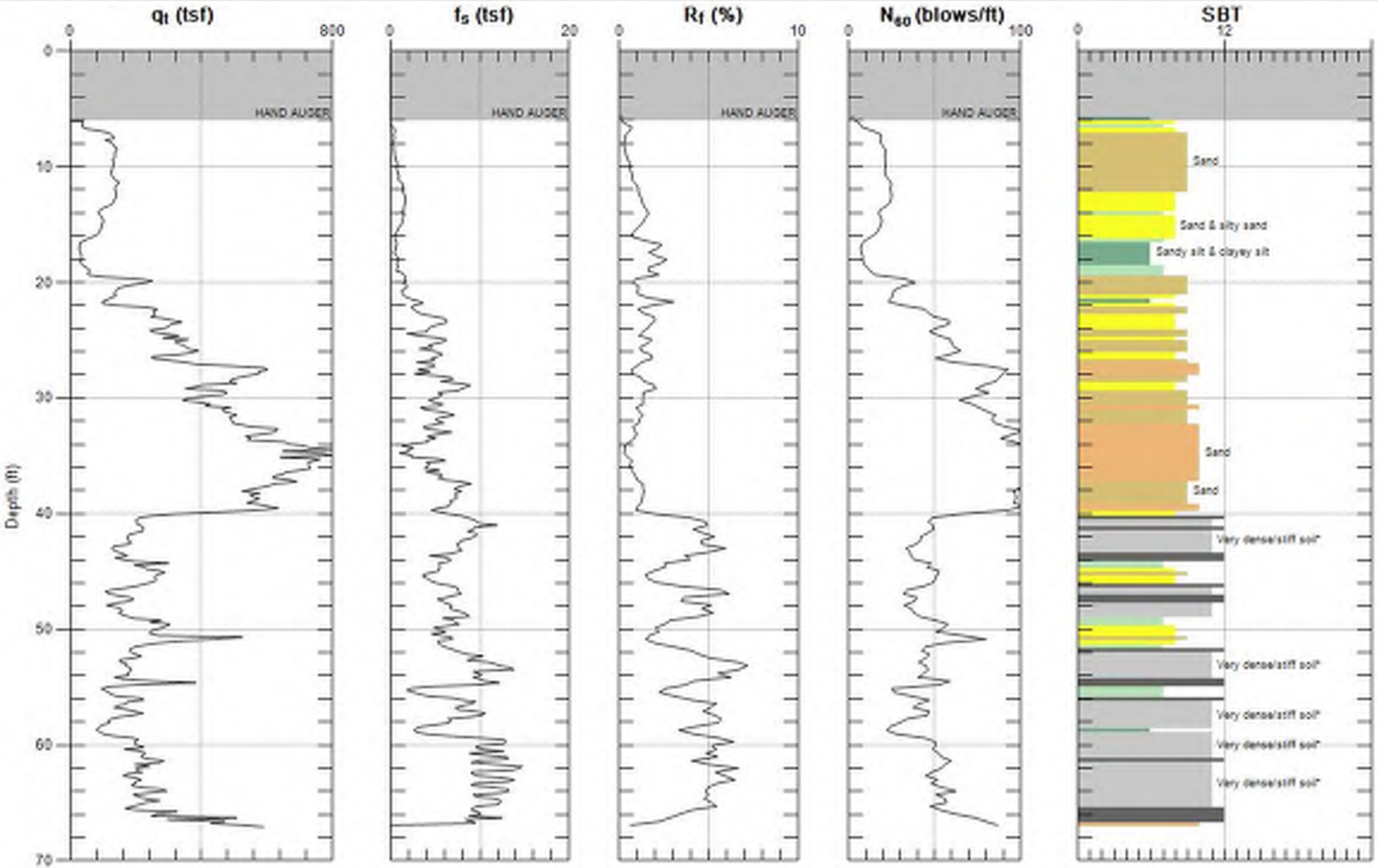
CONE PENETRATION TEST RESULTS

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-1

Engineer: J.URQUIZO
Date: 2/4/2016 08:12



Max. Depth: 67.093 (ft)
Avg. Interval: 0.328 (ft)

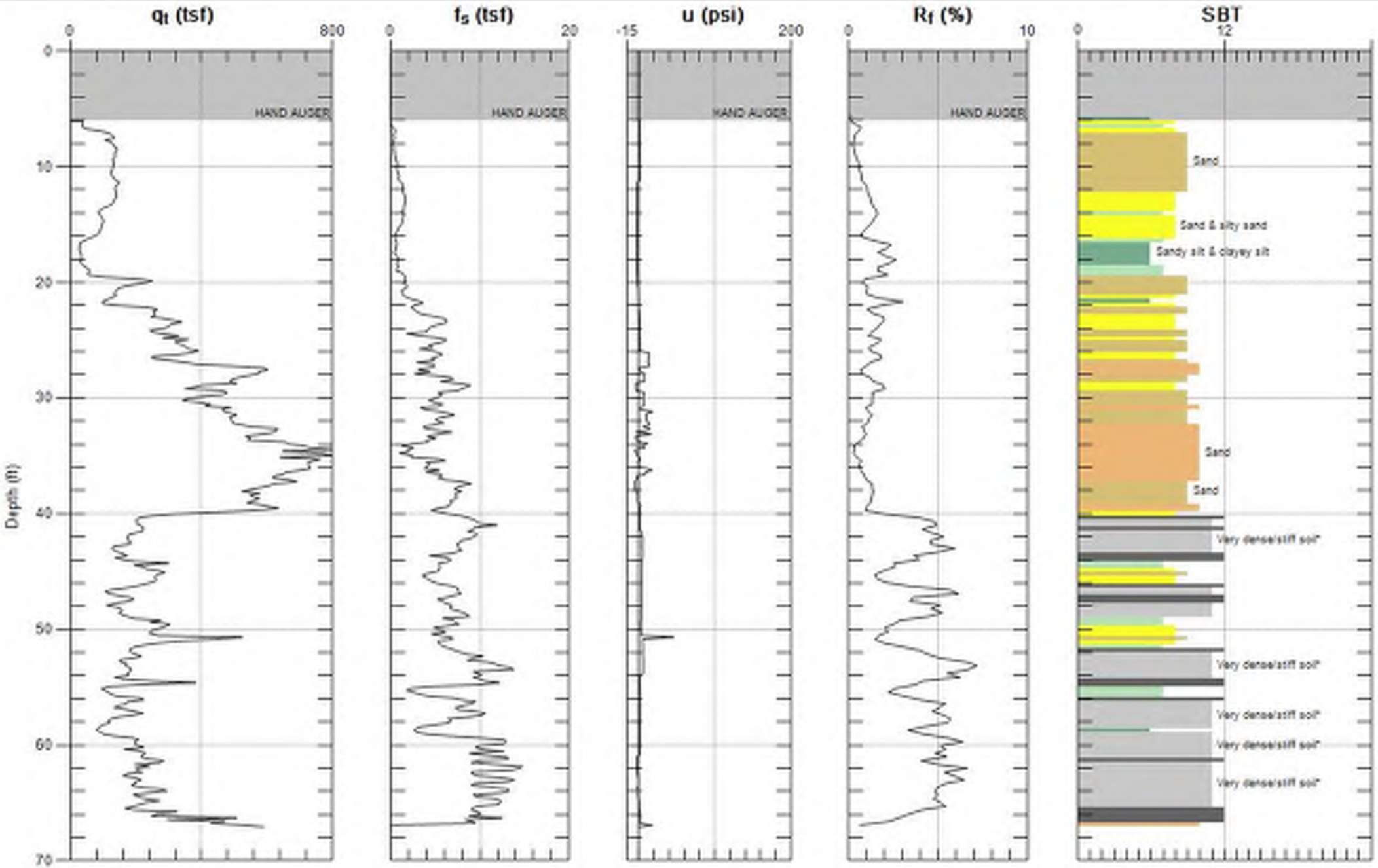
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-1

Engineer: J.URQUIZO
Date: 2/4/2016 08:12



Max. Depth: 67.093 (ft)
Avg. Interval: 0.328 (ft)

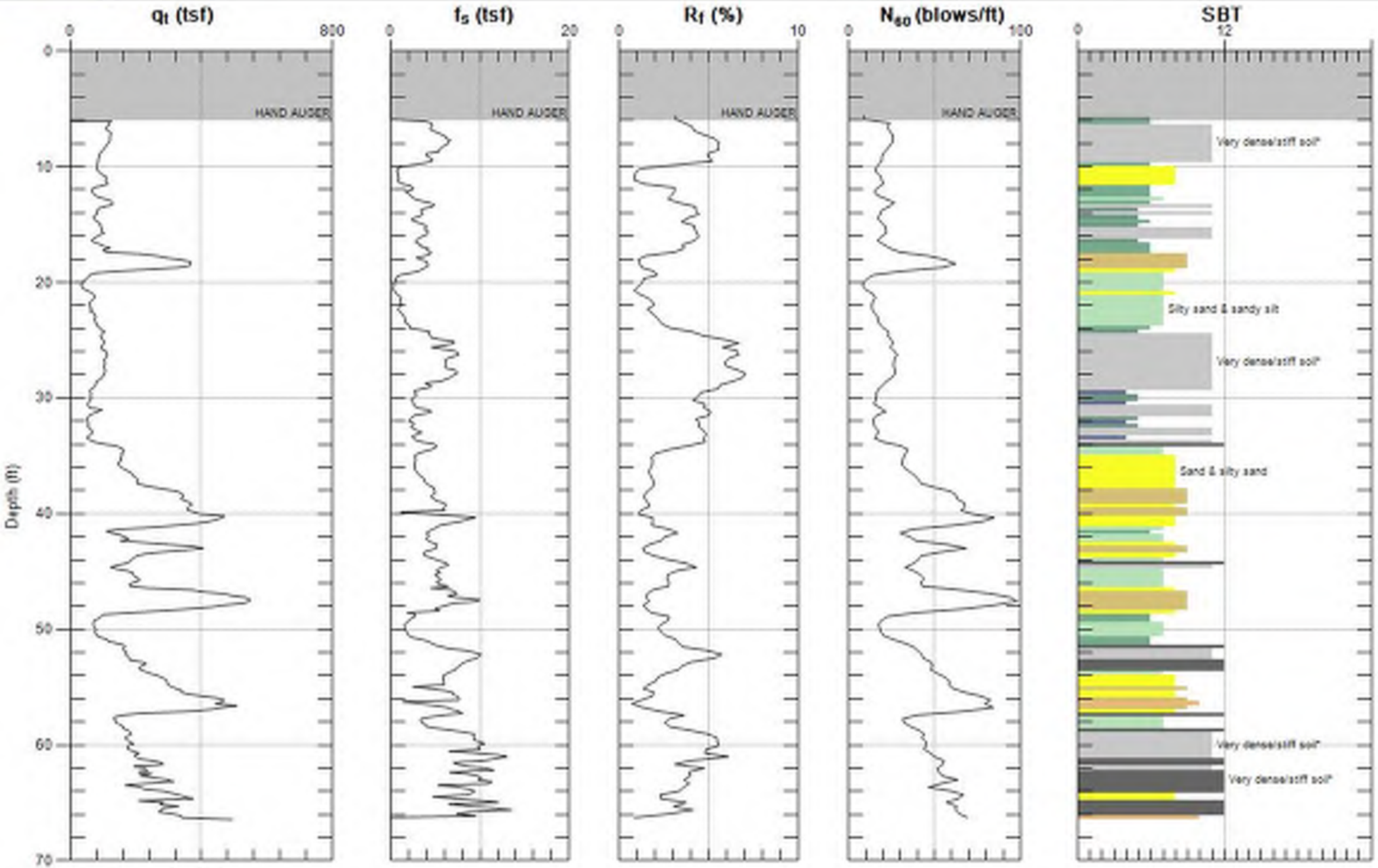
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-2

Engineer: J.URQUIZO
Date: 2/4/2016 09:44



Max. Depth: 66.437 (ft)
Avg. Interval: 0.328 (ft)

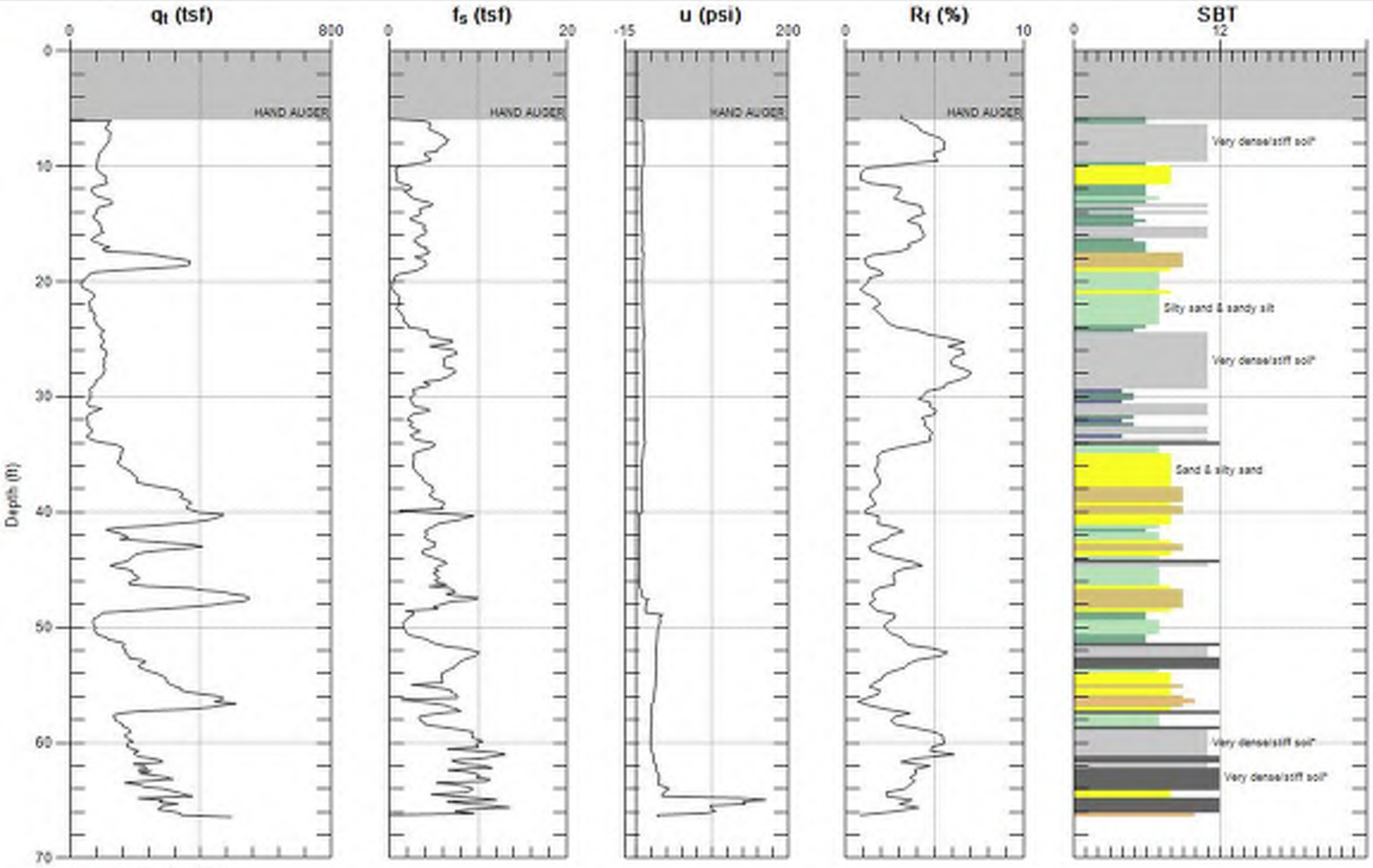
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-2

Engineer: J.URQUIZO
Date: 2/4/2016 09:44



Max. Depth: 66.437 (ft)
Avg. Interval: 0.328 (ft)

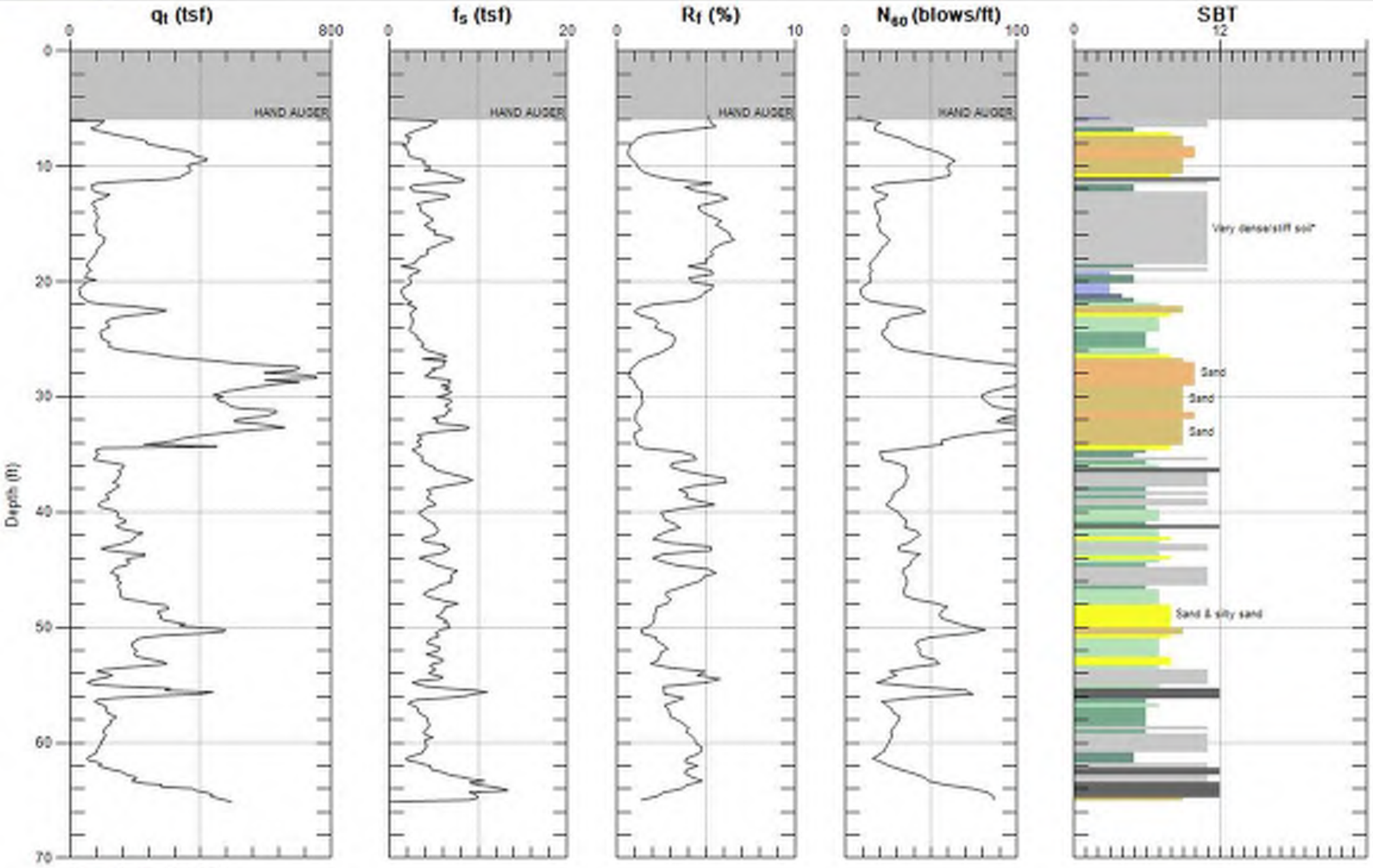
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-3

Engineer: J.URQUIZO
Date: 2/4/2016 10:36



Max. Depth: 65.125 (ft)
Avg. Interval: 0.328 (ft)

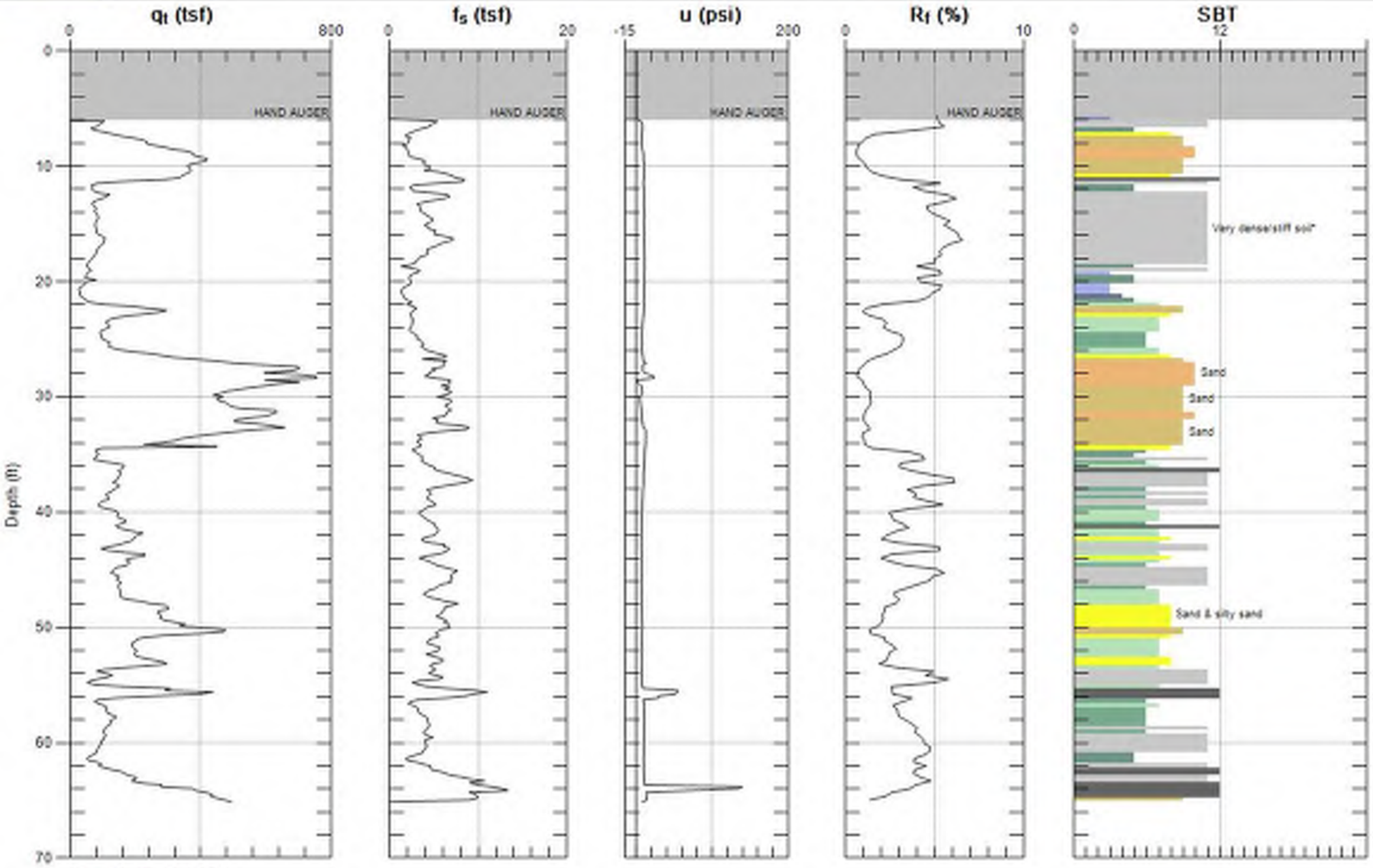
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-3

Engineer: J.URQUIZO
Date: 2/4/2016 10:36



Max. Depth: 65.125 (ft)
Avg. Interval: 0.328 (ft)

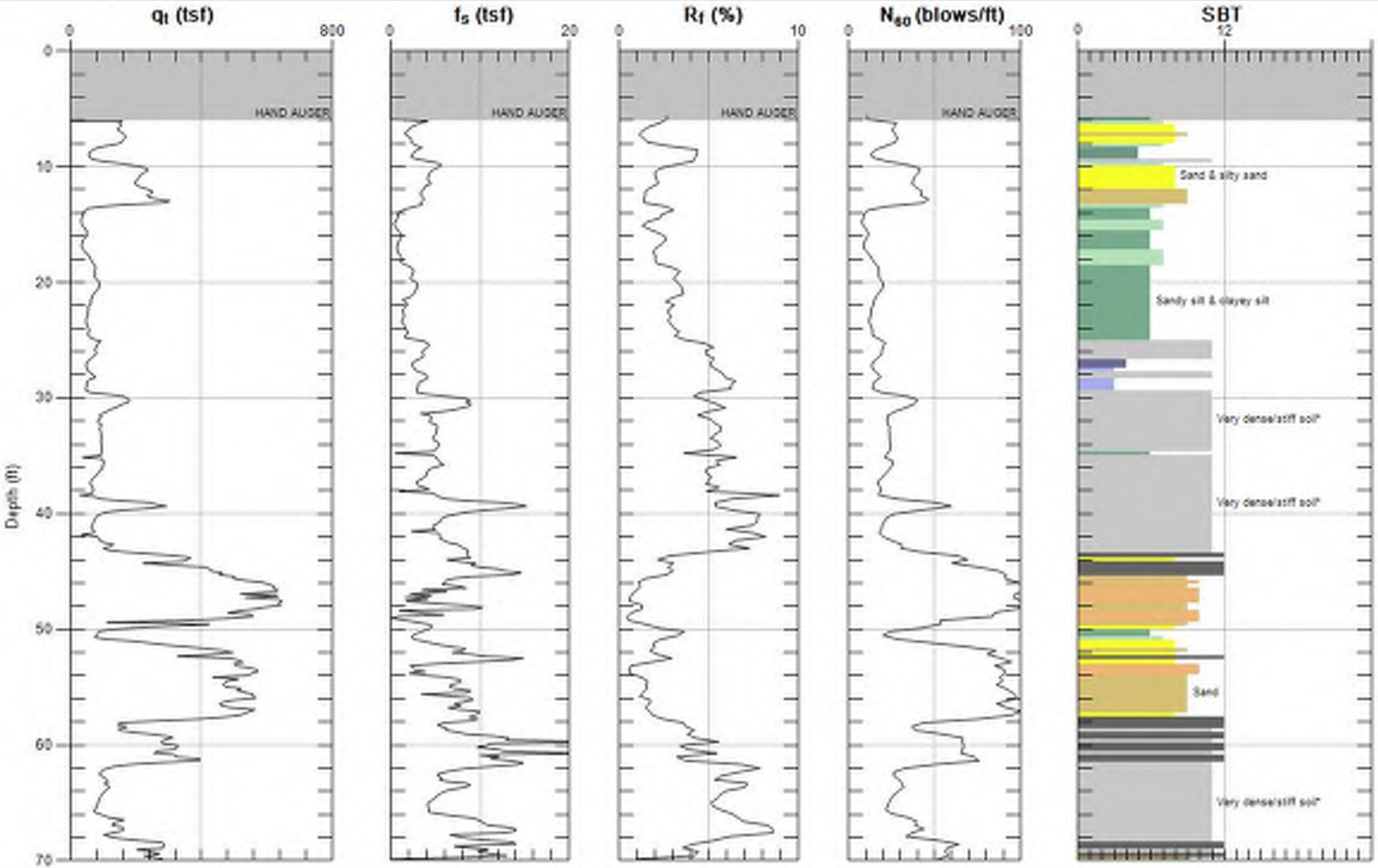
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-4

Engineer: J.URQUIZO
Date: 2/4/2016 11:34



Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

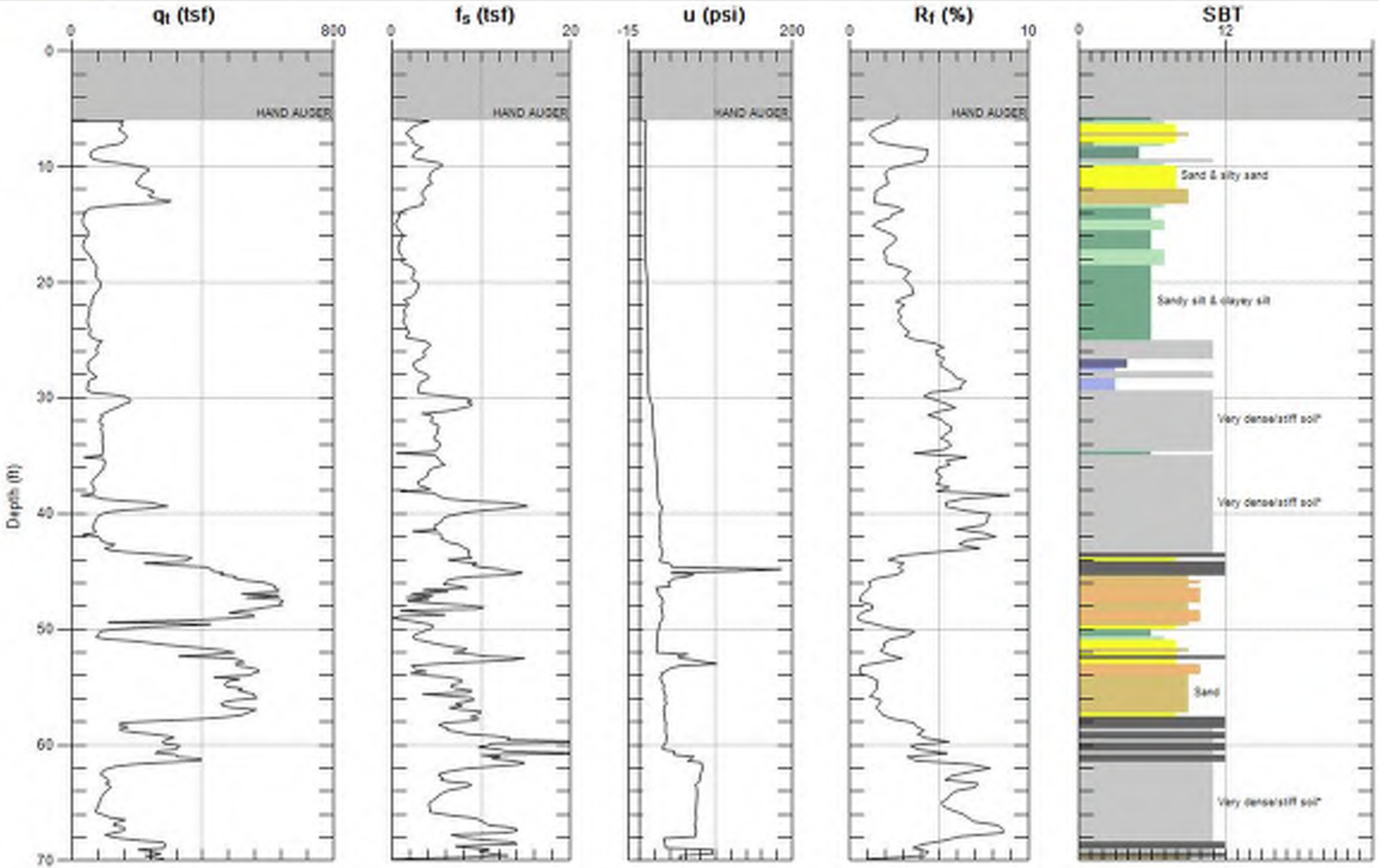
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-4

Engineer: J.URQUIZO
Date: 2/4/2016 11:34



Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

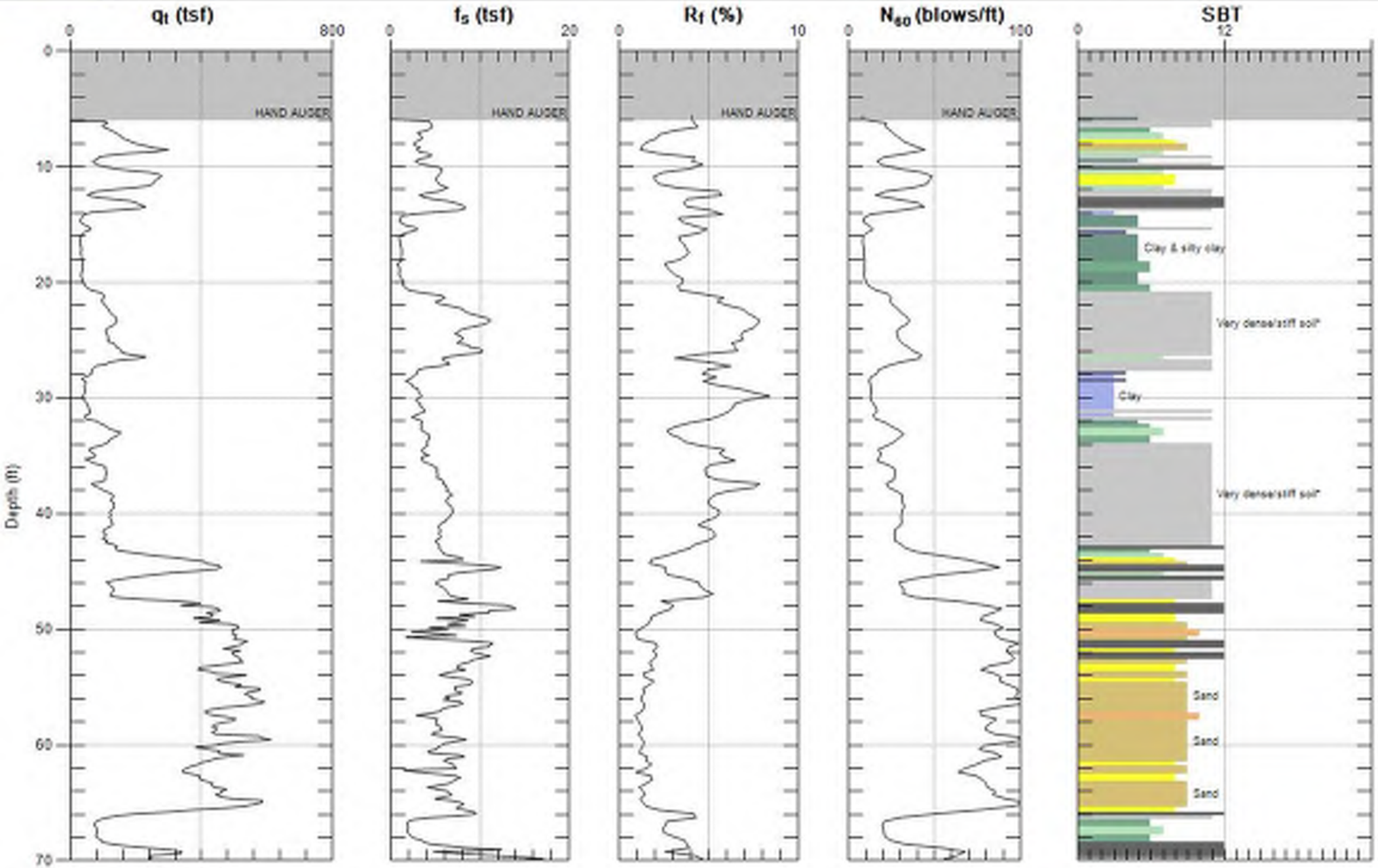
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-5

Engineer: J.URQUIZO
Date: 2/4/2016 01:31



Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

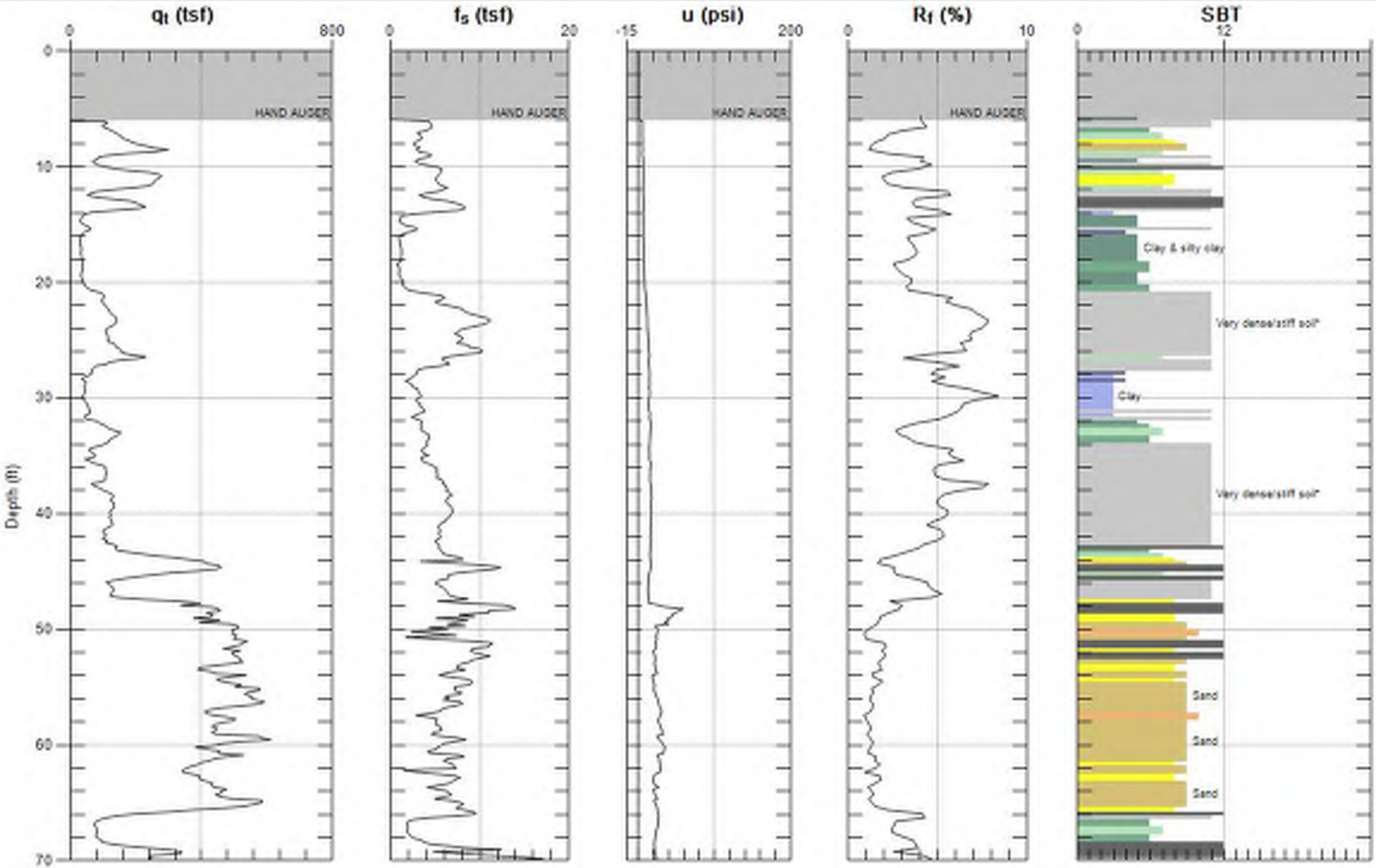
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-5

Engineer: J.URQUIZO
Date: 2/4/2016 01:31



Max. Depth: 70.210 (ft)
Avg. Interval: 0.328 (ft)

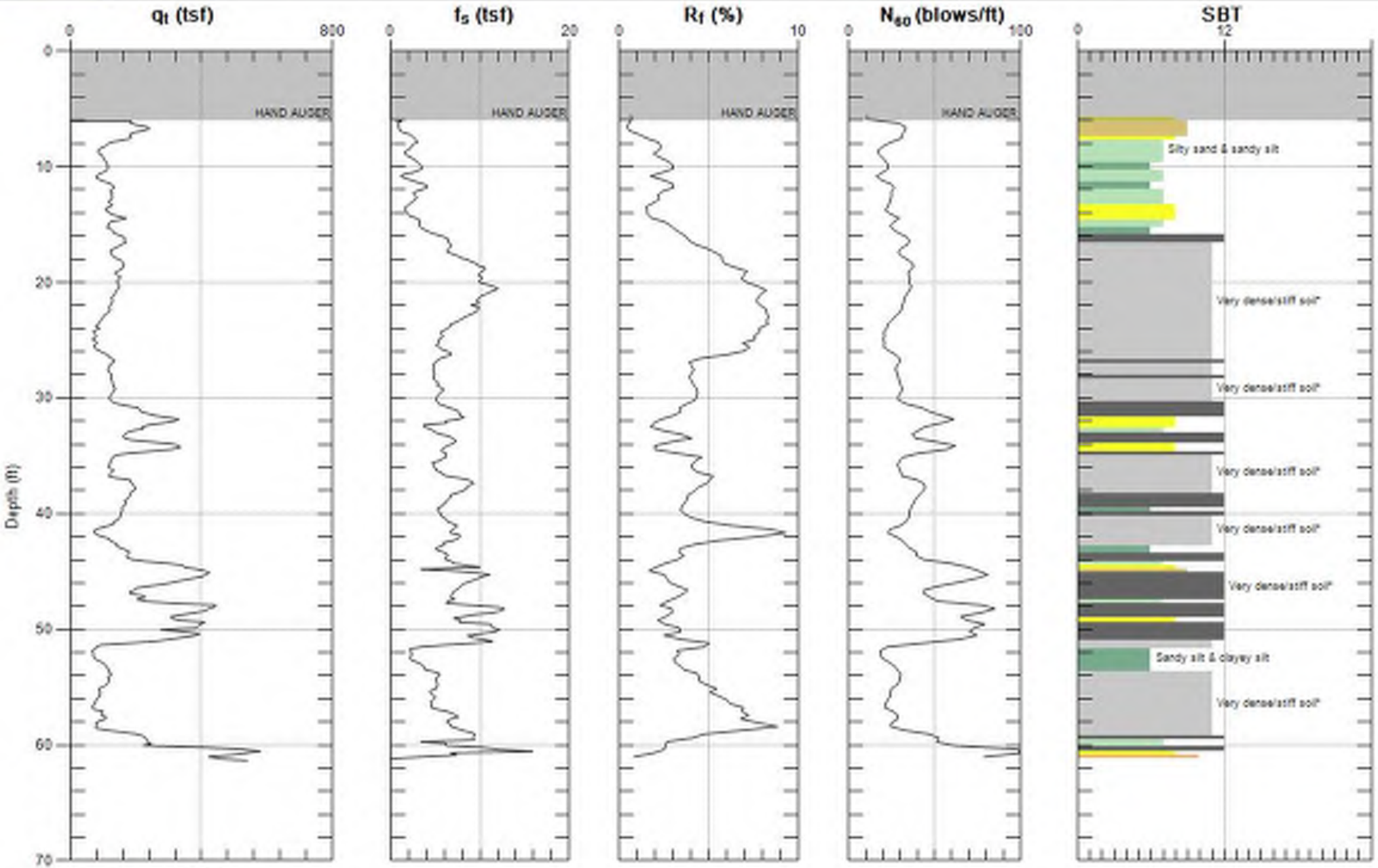
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-6

Engineer: J.URQUIZO
Date: 2/4/2016 02:31



Max. Depth: 61.352 (ft)
Avg. Interval: 0.328 (ft)

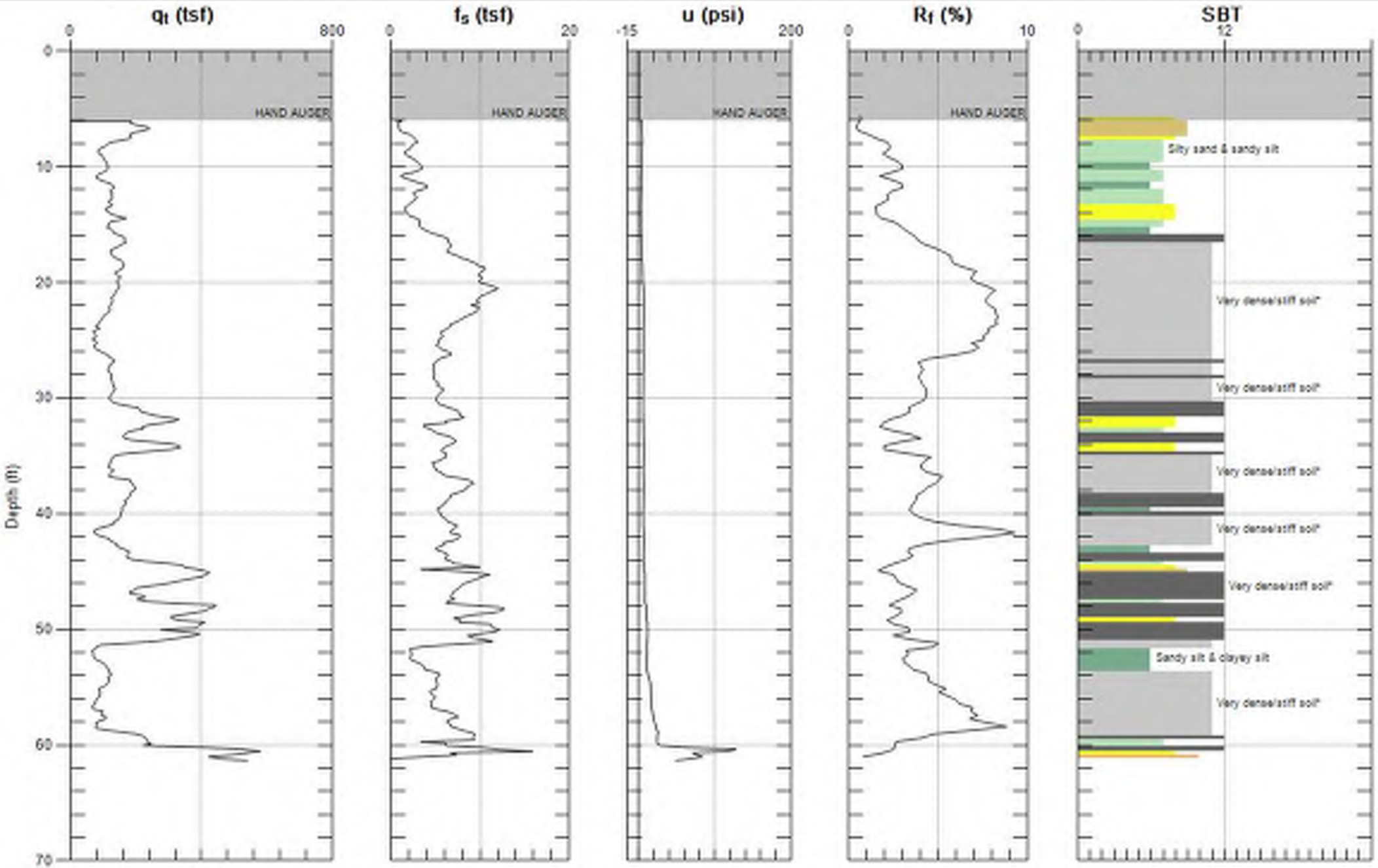
SBT: Soil Behavior Type (Robertson 1990)

GREGG

LACDPW

Site: MONTEBELLO LMD
Sounding: CPT-6

Engineer: J.URQUIZO
Date: 2/4/2016 02:31



Max. Depth: 61.352 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX D

LABORATORY TEST RESULTS

SUMMARY OF LABORATORY TEST RESULTS

Geotechnical Laboratory

PROJECT NAME: **Montebello LMD** (hand auger samples prior to percolation test)
TECHNICIAN: GP, EH
PCA: F21815i10

ENGINEER: J. Urquizo
DATE: 1/6/2016
PAGE: **1** **OF** **1**

updated 2/24/16

BORING/ SAMPLE	DEPTH	UNIFIED SOIL CLASSIFICATION					MOISTURE AND DRY DENSITY				DIRECT SHEAR				CHEMICAL				
		Class.	ATTERBERG LIMITS		#4	#200	γ_{field}	m.c.$_{field}$	$\gamma_{max.}$	m.c.$_{optimum}$	Φ_{ult}	c_{ult}	$\Phi_{maxi.}$	$c_{maxi.}$	pH	Min. Resistivity	Cl	SO_4	
B - S	(ft)		LL	PI	% Pass	% Pass	pcf	%	pcf	%	Degree	psf	Degree	psf		(K ohm-cm)	(ppm)	(ppm)	
B1-1B	2-4	CL	31	14	99.6	56.0													
B2-1B	2-3.8	CH	75	59	99.8	62.9													
B3-1B	2-4	CL-ML	24	6	99.5	54.8													
B4-1B	2-4	ML	unable to roll to 1/8"		99.1	62.0													
B5-1B	2-4	CL	26	9	99.8	60.8													
B6-1B	2-3.2	CL	31	15	99.8	76.8													
TP1-1B		SM	unable to roll to 1/8"		100.0	42.2		19.6											
TP2-1B		CL	22	8	100.0	56.1		25.8											
TP3-1B		SC/SM	20	4	100.0	46.7		22.0											
TP4-1B		CL	28	10	99.8	63.7		6.8											
TP5-1B		CL	25	8	100.0	54.9													
TP6-1B		CL	40	25	99.8	60.8		16.4											
TP7-1B		CL	41	24	99.7	75.7		24.1											
TP8-1B																			
TP9-1B																			

SUMMARY OF LABORATORY TEST RESULTS

Geotechnical Laboratory

PROJECT NAME: **Montebello LMD** (hand auger samples prior to percolation test)
TECHNICIAN: GP, EH
PCA: F21815i10

ENGINEER: J. Urquizo
DATE: 2/23/2016
PAGE: 1 **OF** 1

updated 4/12/16

BORING/ SAMPLE	DEPTH	UNIFIED SOIL CLASSIFICATION					MOISTURE AND DRY DENSITY				DIRECT SHEAR				CHEMICAL				Excavation Pits
B - S	(ft)	Class.	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	#4 % Pass	#200 % Pass	γ_{field} pcf	m.c.$_{field}$ %	$\gamma_{max.}$ pcf	m.c.$_{optimum}$ %	Φ_{ult} Degree	c_{ult} psf	$\Phi_{maxi.}$ Degree	$c_{maxi.}$ psf	pH	Min. Resistivity (K ohm-cm)	Cl (ppm)	SO_4 (ppm)	
B8-1R	4-5.5	SM			100.0	26.7	115.6	8.7			29	181	33	319					
B8-2B	7-9	SW-SM	non rollable to 1/8"		92.5	7.7		4.7							7.50	150.0	25	275	
B8-3R	9-10.5	SM	unrollable		100.0	41.5	76.4	11.4			A. Not enough sample								
		not enough sample			100.0	44.2	112.3	16.2			B. Not enough sample								
B8-4R	14-15.5	SM			100.0	39.7	114.1	10.7			31	0	40	0					
B8-5B	16-18	SM-SC	23	5	93.5	27.1		9.1											
B8-6R	19-20.5	SC	25	12	100.0	41.8	112.5	10.9			Not enough sample								
B8-7B	21-23	CL	31	17	99.8	63.4		12.9											
B8-8R	24-25.5				100.0	70.0	121.8	12.4											
B8-9B	27-29																		
B8-10R	29-30.5	CL	27	9	100.0	54.6	112.9	14.2											
B8-11R	34-35.5				100.0	18.4	116.8	4.4											
B8-12B	36-38	SC	28	11	93.0	29.7		9.9											
B8-13R	39-40.5	SM			100.0	18.4	111.7	5.5											
B8-14B	41-43	SC	26	10	95.6	27.1		8.5											
B8-15R	44-15.5	SM			100.0	33.0	107.6	10.3											
B8-16B	47-49	SC	26	11	100.0	41.1		10.3											
B8-17R	49-50.5	SC (CL)	26	11	93.9	49.7	122.2	11.9											

SUMMARY OF LABORATORY TEST RESULTS

Geotechnical Laboratory

PROJECT NAME: **Montebello LMD** (hand auger samples prior to percolation test)
TECHNICIAN: GP, EH
PCA: F21815i10

ENGINEER: J. Urquizo
DATE: 2/23/2016
PAGE: **1** **OF** **1**

updated 4/12/16

BORING/ SAMPLE	DEPTH (ft)	UNIFIED SOIL CLASSIFICATION					MOISTURE AND DRY DENSITY				DIRECT SHEAR				CHEMICAL				Excavation Pits
		Class.	ATTERBERG LIMITS		#4	#200	γ_{field}	m.c.$_{field}$	$\gamma_{max.}$	m.c.$_{optimum}$	Φ_{ult}	c_{ult}	$\Phi_{maxi.}$	$c_{maxi.}$	pH	Min. Resistivity	Cl	SO_4	
B - S			LL	PI	% Pass	% Pass	pcf	%	pcf	%	Degree	psf	Degree	psf		(K ohm-cm)	(ppm)	(ppm)	
B9-1R	4-5.5						124.2	10.2			36	0	38	350					
B9-2B	7-9	SC	23	8	92.0	29.4		9.5							7.90	205.0	15	250	
B9-3R	9-10.5						116.0	15.3			31	0	32	315					
B9-4R	14-15.5						102.7	19.7			24	182	25	510					
B9-5B	16-18	CL	35	19	99.5	72.9		16.0											
B9-6R	19-20.5	CL	32	16	100.0	91.2					Not enough sample								
B9-7B	21-23	CL	35	19	100.0	68.6		16.7											
B9-8R	24-25.5	SC	27	12	81.6	27.5	124.2	7.4											
B9-9B	27-29	SC	32	16	90.1	44.8		11.5											
B9-10R	29-30.5	SM	unrollable		100.0	55.8	110.0	11.6											
B9-11B	34-35.5	SM	non rollable to 1/8"		99.1	40.9		5.3											
B9-12R	36-38	ML	non rollable to 1/8"		100.0	58.3	104.5	13.7											
B9-13B	39-40.5	CL	28	11	99.7	60.2		12.7											
B9-14R	41-43	SM			100.0	12.8	104.2	2.4											
B9-15B	44-15.5	ML	non rollable to 1/8"		99.4	90.7													
B9-16R	47-49	SM	unrollable		100.0	59.3	104.3	17.6											
B9-17R	49-50.5	SP			100.0	3.2	90.8	17.9											