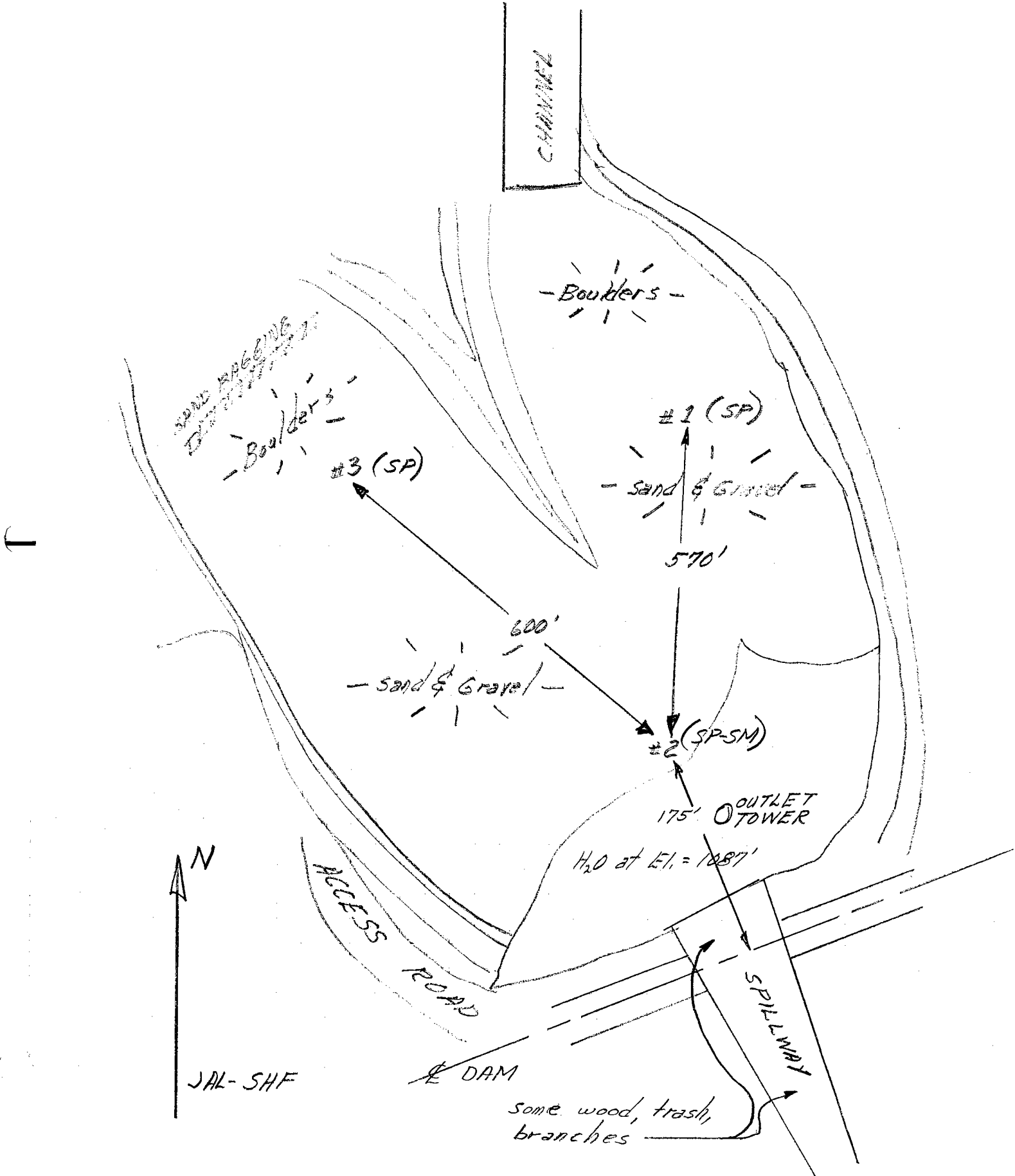


Sierra Madre Villa Debris Basin 2/25/69  
from 2/19/69

(E)



**LOS ANGELES COUNTY FLOOD CONTROL DISTRICT**

Soils and Materials Engineering Division

SP (50)

**SIEVE ANALYSIS WORK SHEET**

LAB SERIAL NO. 22880  
 Project SIERRA MADRA VILLA DB  
 Station \_\_\_\_\_  
 Location \_\_\_\_\_  
 Boring No. 1 Sample No. \_\_\_\_\_  
 Sampled By \_\_\_\_\_ Lab Tested By NR-FK

Total Weight of Sample 1.09 lbs.  
 \_\_\_\_\_ grams.  
 Moisture Content of Fines \_\_\_\_\_ %.  
 Date Tested 3/3/69 Plotted By \_\_\_\_\_  
 Remarks NP  
 Intended Use \_\_\_\_\_

GRAVEL (Plus No. 4)

| ASTM SIEVE NUMBER    | SIZE (mm) | RETAINED    |            | % OF TOTAL OVEN-DRY RETAINED | ACCUM. % RETAINED | ACCUM. % PASSING |            |
|----------------------|-----------|-------------|------------|------------------------------|-------------------|------------------|------------|
|                      |           | LBS.        | GRAMS      |                              |                   | ACTUAL           | SPEC. REQ. |
| 3"                   | 76.2      |             |            |                              |                   |                  |            |
| 1 1/2"               | 38.1      |             |            |                              |                   |                  |            |
| (1")                 | (25.4)    |             |            |                              |                   |                  |            |
| 3/4"                 | 19.1      |             |            |                              |                   |                  |            |
| 3/8"                 | 9.52      | <u>.01</u>  |            | <u>1.0</u>                   | <u>1.0</u>        |                  |            |
| No. 4                | 4.76      | <u>.04</u>  | <u>.05</u> | <u>3.9</u>                   | <u>4.9</u>        | <u>95.1</u>      |            |
| Pan                  | 0         | <u>1.04</u> |            | xxxxx                        |                   |                  |            |
| Total Fractions      |           | <u>1.09</u> |            | xxxxx                        |                   |                  |            |
| Sieve Loss-Gain      |           |             |            |                              |                   |                  |            |
| Calc. Oven-Dry Fines |           | <u>.97</u>  |            | <u>95.1</u>                  |                   |                  |            |
| Total Oven-Dry       |           | <u>1.02</u> |            | 100.00                       |                   |                  |            |

Moisture Determination of Fines:  
 Cup No. 1  
 Dry Weight 167.4 grams  
 Moisture 7.1 %

WEIGHT, GRAMS 100 FINES (Minus No. 4) (CALC.) OVEN-DRY WEIGHT 93.4 grams.  
 WEIGHT OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY 98.2 grams.

| ASTM SIEVE NUMBER                  | SIZE (mm) | RETAINED GRAMS | % OF TOTAL SAMPLE RETAINED | ACCUM. % OF TOTAL RETAINED | ACCUM. % PASSING |            |
|------------------------------------|-----------|----------------|----------------------------|----------------------------|------------------|------------|
|                                    |           |                |                            |                            | ACTUAL           | SPEC. REQ. |
| 8                                  | 2.38      | <u>17.9</u>    | <u>18.2</u>                | <u>23.1</u>                |                  |            |
| 16                                 | 1.19      | <u>30.2</u>    | <u>30.8</u>                | <u>53.9</u>                |                  |            |
| 30                                 | 0.59      | <u>25.9</u>    | <u>26.4</u>                | <u>80.3</u>                |                  |            |
| 50                                 | .297      | <u>10.5</u>    | <u>10.7</u>                | <u>91.0</u>                |                  |            |
| 100                                | .149      | <u>4.1</u>     | <u>4.2</u>                 | <u>95.2</u>                |                  |            |
| 200                                | .074      | <u>2.0</u>     | <u>2.0</u>                 | <u>96.9</u>                | <u>3.1</u>       |            |
| Pan                                | 0         | <u>—</u>       |                            |                            |                  |            |
| Total Fractions                    |           | <u>90.6</u>    |                            |                            |                  |            |
| Total Dry Weight After Wet Sieving |           | <u>210.5</u>   | <u>92.0</u>                |                            |                  |            |
| Sieve Loss-Gain                    |           | <u>120.2</u>   | <u>+13</u>                 |                            |                  |            |

Calculated by NR Date 3/3/69  
 Checked by SHE Date 3/2/69

Note: Cross out sieve numbers not used.

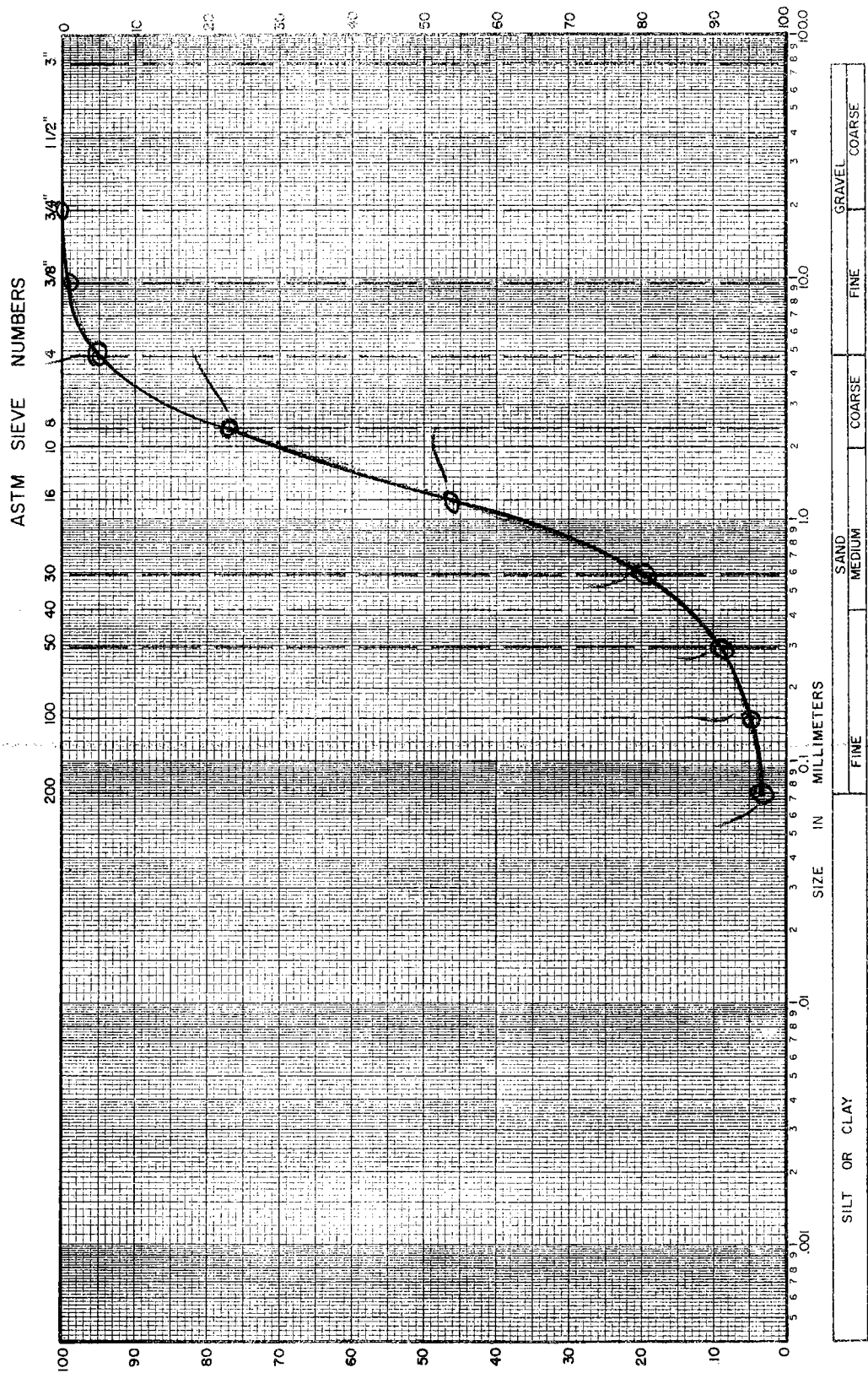
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**LOS ANGELES COUNTY FLOOD CONTROL DISTRICT**  
Soils and Materials Engineering Division  
**MECHANICAL ANALYSIS**

LAB. SERIAL NO. 22-880  
 JOB \_\_\_\_\_  
 BORING NO. \_\_\_\_\_ SAMPLE NO. \_\_\_\_\_  
 STATION \_\_\_\_\_ DEPTH \_\_\_\_\_ FT.  
 LOCATION \_\_\_\_\_  
 SAMPLED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 FIELD CLASSIFICATION \_\_\_\_\_ BY \_\_\_\_\_  
 PLAS. IND. \_\_\_\_\_ LIQ. LIM. \_\_\_\_\_  
 REMARKS \_\_\_\_\_

**CLASSIFICATION DATA**

PERCENT (+) NO. 200 \_\_\_\_\_ PERCENT (+) NO. 40 \_\_\_\_\_  
 % (+) NO. 4 / % (+) NO. 200 \_\_\_\_\_ D<sub>10</sub> 0.33 mm  
 D<sub>30</sub> \_\_\_\_\_ mm D<sub>60</sub> 1.16 mm  
 C<sub>u</sub> = D<sub>60</sub>/D<sub>10</sub> \_\_\_\_\_ PLOTTED BY NR  
 C<sub>c</sub> = (D<sub>30</sub>)<sup>2</sup> / (D<sub>10</sub> x D<sub>60</sub>) \_\_\_\_\_ CHECKED BY SMP  
 GROUP SYMBOL \_\_\_\_\_ DATE 3/8/69  
 NOTE: D<sub>x</sub> = PARTICLE DIA. AT X% PASSING



**LOS ANGELES COUNTY FLOOD CONTROL DISTRICT**  
Soils and Materials Engineering Division

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**SIEVE ANALYSIS WORK SHEET**

LAB SERIAL NO. 22881 Total Weight of Sample 1.37 lbs.  
 Project SIERRA MADRE VILLA DE \_\_\_\_\_ grams.  
 Station \_\_\_\_\_ Moisture Content of Fines \_\_\_\_\_ %.  
 Location \_\_\_\_\_ Date Tested 2/26 Plotted By \_\_\_\_\_  
 Boring No. 2 Sample No. \_\_\_\_\_ Remarks NP  
 Sampled By \_\_\_\_\_ Lab Tested By AR Intended Use \_\_\_\_\_

GRAVEL (Plus No. 4)

| ASTM SIEVE NUMBER    | SIZE (mm) | RETAINED |       | % OF TOTAL OVEN-DRY RETAINED | ACCUM. % RETAINED | ACCUM. % PASSING |            |
|----------------------|-----------|----------|-------|------------------------------|-------------------|------------------|------------|
|                      |           | LBS.     | GRAMS |                              |                   | ACTUAL           | SPEC. REQ. |
| 3"                   | 76.2      |          |       |                              |                   |                  |            |
| 1½"                  | 38.1      |          |       |                              |                   |                  |            |
| (1")                 | (25.4)    |          |       |                              |                   |                  |            |
| ¾"                   | 19.1      |          |       |                              |                   |                  |            |
| ⅜"                   | 9.52      | 0.17     |       | 13.1                         | 13.1              |                  |            |
| No. 4                | 4.76      | 0.27     | 44    | 20.8                         | 33.9              | 66.2             |            |
| Pan                  | 0         | 0.93     |       | xxxxx                        |                   |                  |            |
| Total Fractions      |           | 1.37     |       | xxxxx                        |                   |                  |            |
| Sieve Loss-Gain      |           |          |       |                              |                   |                  |            |
| Calc. Oven-Dry Fines |           | .86      |       | 66.2                         |                   |                  |            |
| Total Oven-Dry       |           | 1.30     |       | 100.00                       |                   |                  |            |

Moisture Determination of Fines:  
Cup No. 16  
Dry Weight 166.1 grams  
Moisture 8.6 %

FINES (Minus No. 4)

WEIGHT, GRAMS 100 (CALC.) OVEN-DRY WEIGHT 92.1 grams.  
 WEIGHT OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY 139.1 grams.

| ASTM SIEVE NUMBER                  | SIZE (mm) | RETAINED GRAMS           | % OF TOTAL SAMPLE RETAINED | ACCUM. % OF TOTAL RETAINED | ACCUM. % PASSING |            |
|------------------------------------|-----------|--------------------------|----------------------------|----------------------------|------------------|------------|
|                                    |           |                          |                            |                            | ACTUAL           | SPEC. REQ. |
| 8                                  | 2.38      | 24.9                     | 17.9                       | 51.8                       |                  |            |
| 16                                 | 1.19      | 30.9                     | 22.2                       | 74.0                       |                  |            |
| 30                                 | 0.59      | 11.9                     | 8.6                        | 82.6                       |                  |            |
| 50                                 | .297      | 5.3                      | 3.8                        | 86.4                       |                  |            |
| 100                                | .149      | 4.2                      | 3.0                        | 89.4                       |                  |            |
| 200                                | .074      | 2.5                      | 1.8                        | 91.0                       | 9.0              |            |
| Pan                                | 0         | 0.1                      | -                          |                            |                  |            |
| Total Fractions                    |           | 79.8                     |                            |                            |                  |            |
| Total Dry Weight After Wet Sieving |           | 199.6                    | 79.4                       | 57.1                       |                  |            |
| Sieve Loss-Gain                    |           | <del>170.2</del><br>79.4 | + .4                       |                            |                  |            |

Calculated by AR Date 2/28/69  
 Checked by SHE Date 2/29/69

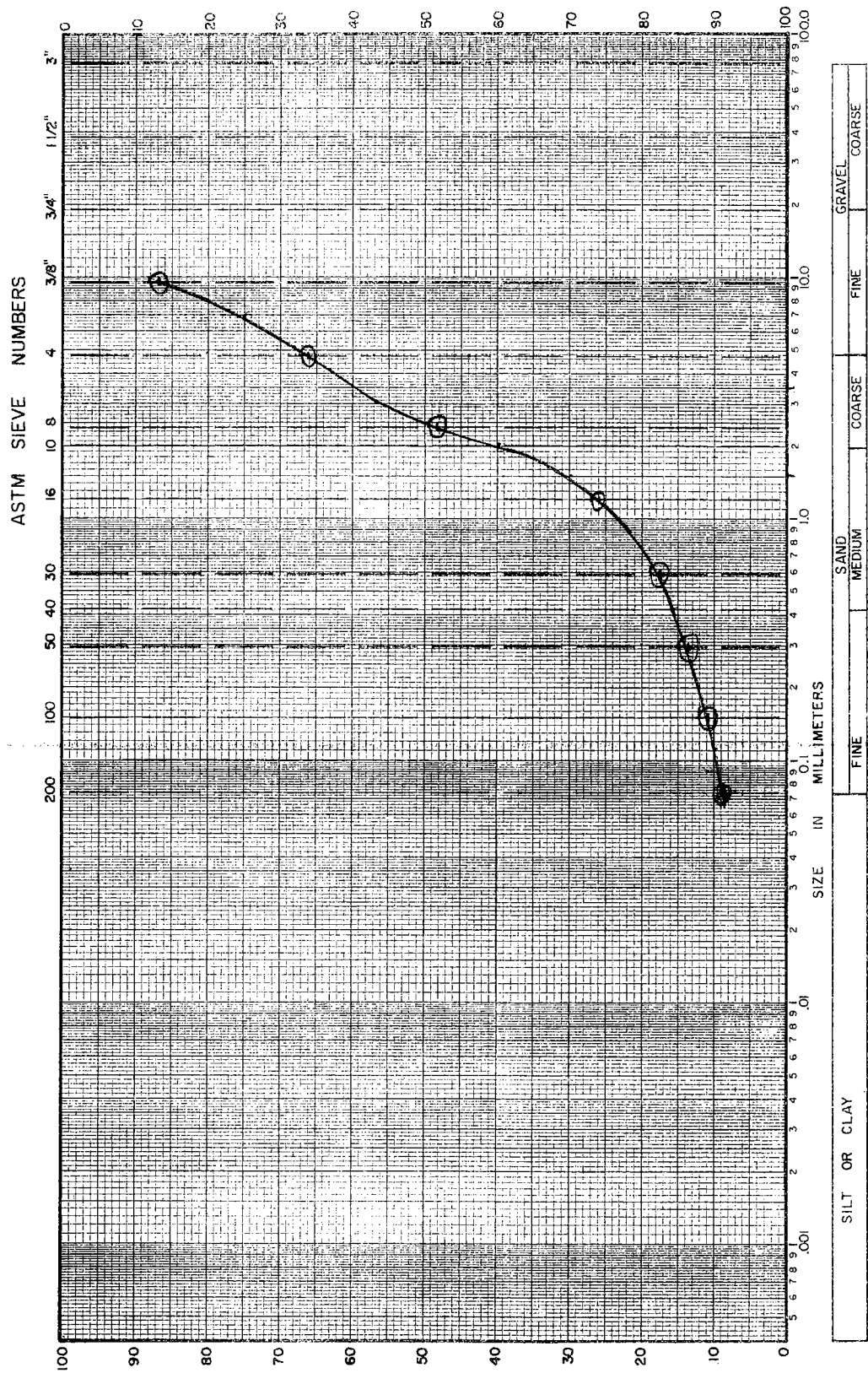
Note: Cross out sieve numbers not used.

**LOS ANGELES COUNTY FLOOD CONTROL DISTRICT**  
Soils and Materials Engineering Division  
**MECHANICAL ANALYSIS**

LAB. SERIAL NO. \_\_\_\_\_  
 JOB \_\_\_\_\_  
 BORING NO. \_\_\_\_\_ SAMPLE NO. \_\_\_\_\_  
 STATION \_\_\_\_\_ DEPTH \_\_\_\_\_ FT.  
 LOCATION \_\_\_\_\_  
 SAMPLED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 FIELD CLASSIFICATION \_\_\_\_\_ BY \_\_\_\_\_  
 PLAS. IND. \_\_\_\_\_ LIQ. LIM. \_\_\_\_\_  
 REMARKS \_\_\_\_\_

**CLASSIFICATION DATA**

PERCENT (+) NO. 200 \_\_\_\_\_ PERCENT (+) NO. 4 \_\_\_\_\_  
 % (+) NO. 4 / % (+) NO. 200 \_\_\_\_\_ D<sub>10</sub> 0.11 \_\_\_\_\_ mm  
 D<sub>30</sub> 1.15 \_\_\_\_\_ mm D<sub>60</sub> 3.15 \_\_\_\_\_ mm  
 C<sub>u</sub> = D<sub>60</sub>/D<sub>10</sub> 30.1 \_\_\_\_\_ PLOTTED BY EX  
 C<sub>c</sub> = (D<sub>30</sub>)<sup>2</sup> / (D<sub>10</sub> x D<sub>60</sub>) 5.8 \_\_\_\_\_ CHECKED BY RII  
 GROUP SYMBOL \_\_\_\_\_ DATE 2/23/69  
 NOTE: D<sub>x</sub> = PARTICLE DIA. AT X% PASSING



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**LOS ANGELES COUNTY FLOOD CONTROL DISTRICT**  
Soils and Materials Engineering Division

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**SIEVE ANALYSIS WORK SHEET**

LAB SERIAL NO. 22852 Total Weight of Sample \_\_\_\_\_ lbs.  
 Project SIERRA MADRE VILLA DB \_\_\_\_\_ grams.  
 Station \_\_\_\_\_ Moisture Content of Fines \_\_\_\_\_ %.  
 Location \_\_\_\_\_ Date Tested \_\_\_\_\_ Plotted By \_\_\_\_\_  
 Boring No. 3 Sample No. \_\_\_\_\_ Remarks AP  
 Sampled By \_\_\_\_\_ Lab Tested By \_\_\_\_\_ Intended Use \_\_\_\_\_

GRAVEL (Plus No. 4)

| ASTM SIEVE NUMBER    | SIZE (mm) | RETAINED |       | % OF TOTAL OVEN-DRY RETAINED | ACCUM. % RETAINED | ACCUM. % PASSING |            |
|----------------------|-----------|----------|-------|------------------------------|-------------------|------------------|------------|
|                      |           | LBS.     | GRAMS |                              |                   | ACTUAL           | SPEC. REQ. |
| 3"                   | 76.2      |          |       |                              |                   |                  |            |
| 1 1/2"               | 38.1      |          |       |                              |                   |                  |            |
| (1")                 | (25.4)    |          |       |                              |                   |                  |            |
| 3/4"                 | 19.1      |          |       |                              |                   |                  |            |
| 3/8"                 | 9.52      |          |       |                              |                   |                  |            |
| No. 4                | 4.76      | 0.02     |       | 1.0                          | 1.0               | 55.0             | 98.6       |
| Pan                  | 0         | 1.52     |       | xxxxx                        |                   |                  |            |
| Total Fractions      |           | 1.54     |       | xxxxx                        |                   |                  |            |
| Sieve Loss-Gain      |           |          |       | 98.6                         |                   |                  |            |
| Calc. Oven-Dry Fines |           | 1.45     |       | 99.0                         |                   |                  |            |
| Total Oven-Dry       |           | 1.47     |       | 100.00                       |                   |                  |            |

Moisture Determination of Fines:  
 Cup No. 32  
 Dry Weight 169.7 grams  
 Moisture 4.5 %

WEIGHT, GRAMS 100 FINES (Minus No. 4) (CALC.) OVEN-DRY WEIGHT 95.7 grams.  
 WEIGHT OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY 96.6 97.1 grams.

| ASTM SIEVE NUMBER                  | SIZE (mm) | RETAINED GRAMS | % OF TOTAL SAMPLE RETAINED | ACCUM. % OF TOTAL RETAINED | ACCUM. % PASSING |            |
|------------------------------------|-----------|----------------|----------------------------|----------------------------|------------------|------------|
|                                    |           |                |                            |                            | ACTUAL           | SPEC. REQ. |
| 8                                  | 2.38      | 5.9            | 6.1                        | 6.2                        |                  |            |
| 16                                 | 1.19      | 19.6           | 20.3                       | 20.2                       | 26.5             | 26.4       |
| 30                                 | 0.59      | 27.2           | 28.2                       | 28.0                       | 54.7             | 54.4       |
| 50                                 | .297      | 26.8           | 27.7                       | 27.6                       | 82.4             | 82.0       |
| 100                                | .149      | 13.8           | 14.3                       | 14.2                       | 96.7             | 96.2       |
| 200                                | .074      | 2.2            | 2.3                        |                            | 99.0             | 100        |
| Pan                                | 0         |                |                            |                            | 98.4             | 1.6        |
| Total Fractions                    |           | 95.5           | 98.4                       |                            |                  |            |
| Total Dry Weight After Wet Sieving |           | 245.7          | 98.5                       |                            |                  |            |
| Sieve Loss-Gain                    |           | 120.2          | 0                          |                            |                  |            |

Calculated by \_\_\_\_\_ Date \_\_\_\_\_  
 Checked by SHF Date 3/3/69

Note: Cross out sieve numbers not used.

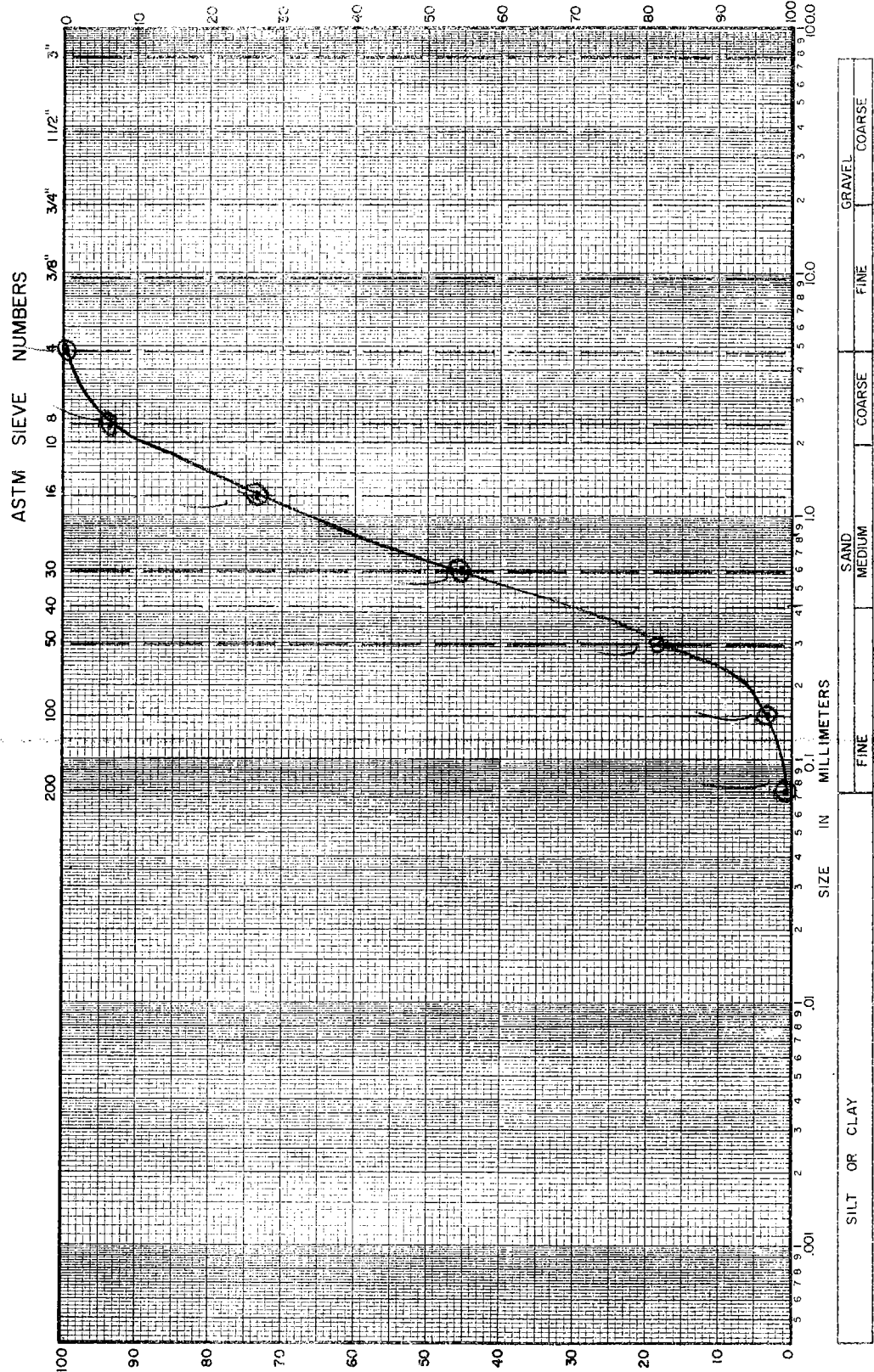
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**LOS ANGELES COUNTY FLOOD CONTROL DISTRICT**  
Soils and Materials Engineering Division  
**MECHANICAL ANALYSIS**

LAB. SERIAL NO. 22852  
 JOB \_\_\_\_\_  
 BORING NO. \_\_\_\_\_ SAMPLE NO. \_\_\_\_\_  
 STATION \_\_\_\_\_ DEPTH \_\_\_\_\_ FT.  
 LOCATION \_\_\_\_\_  
 SAMPLED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 FIELD CLASSIFICATION \_\_\_\_\_ BY \_\_\_\_\_  
 PLAS. IND. \_\_\_\_\_ LIQ. LIM. \_\_\_\_\_  
 REMARKS \_\_\_\_\_

**CLASSIFICATION DATA**

PERCENT (+) NO. 200 \_\_\_\_\_ PERCENT (+) NO. 4 \_\_\_\_\_  
 % (+) NO. 4 / % (+) NO. 200 \_\_\_\_\_  $D_{10}$  0.25 mm  
 $D_{30}$  0.42 mm  $D_{60}$  0.84 mm  
 $Cu = D_{60}/D_{10}$  \_\_\_\_\_ PLOTTED BY \_\_\_\_\_  
 $Cc = (D_{30})^2 / (D_{10} \times D_{60})$  \_\_\_\_\_ CHECKED BY ZHF  
 GROUP SYMBOL \_\_\_\_\_ DATE 3/7/62  
 NOTE:  $D_x$  = PARTICLE DIA. AT X% PASSING



52