LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

Materials Engineering Division

MECHANICAL ANALYSIS

Project DEBRIS QUALITY STUDY

Source Sierra Madre Dam and Reservoir

Depth Ranges: 0'-27'

Sampled by FD, JHE, HCH Date 7/30 - 9/5/73

Remarks Composite of Borings

Gradation of Soil Deposits
Each Boring Represents 16 2/3% of Reservoir Deposits

FIGURE 11

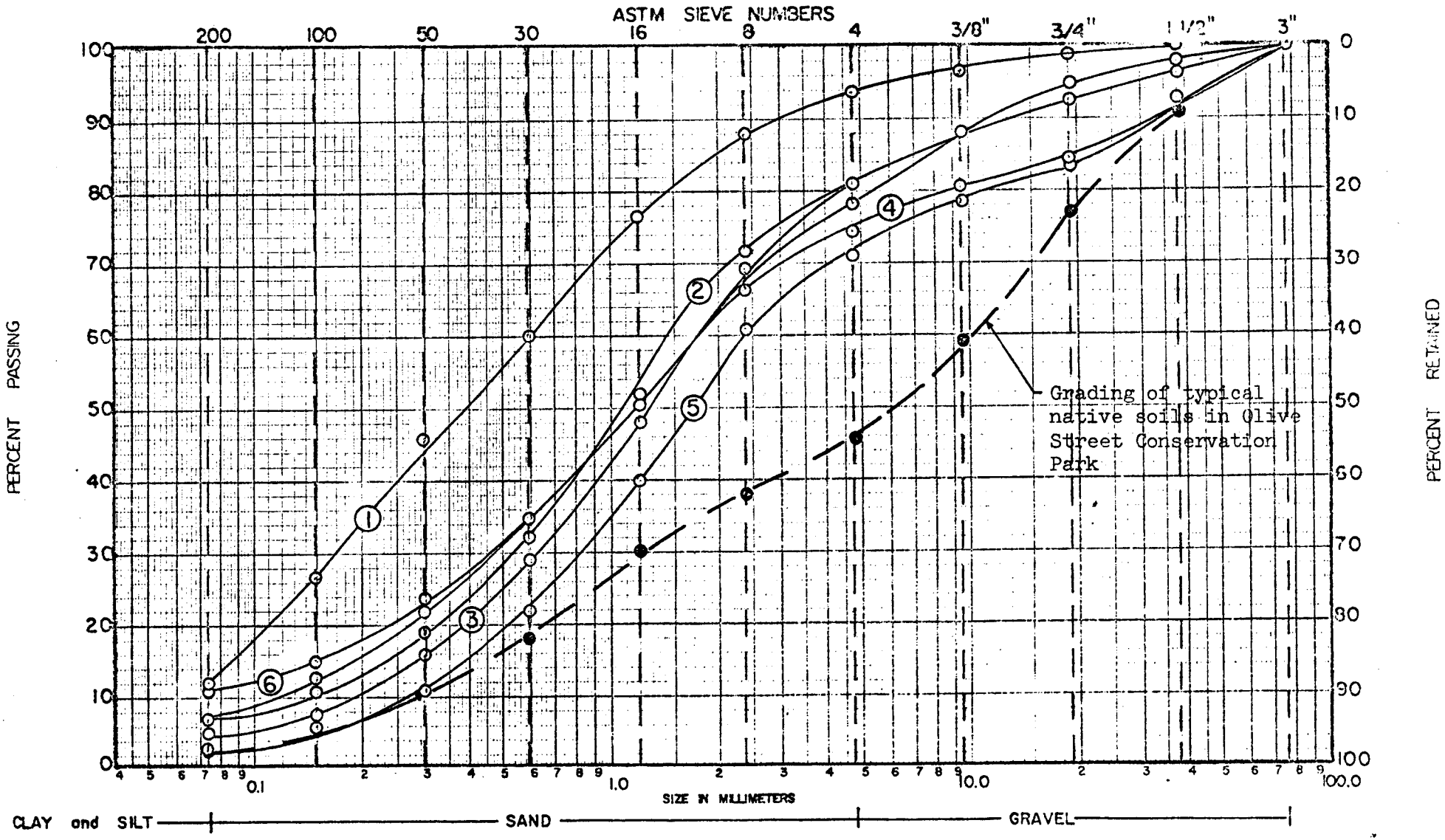


FIGURE 11

TABLE 5

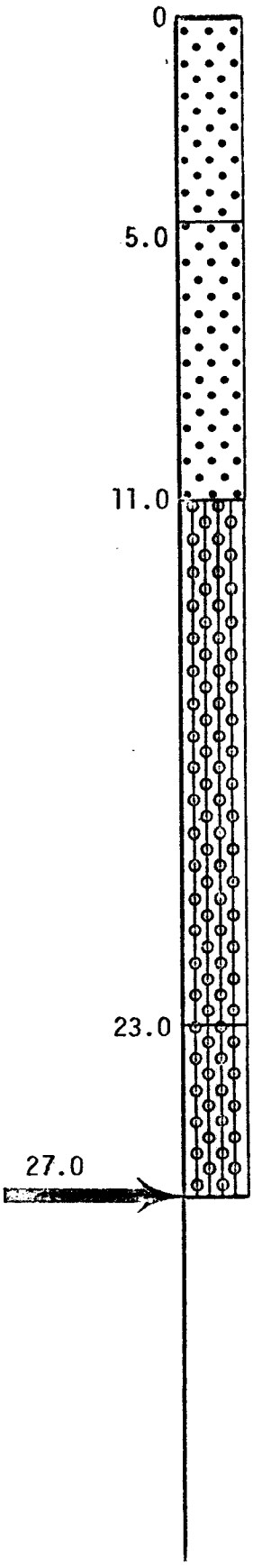
SUMMARY SHEET

SIERRA MADRE DAM AND RESERVOIR

BORING NO.	BORING DEPTH (ft)	CLASSIFICATION RANGE	COMPOSITE CLASSIFICATION	COMPOSITE O.M. (%)	COMPOSITE PERMEABILITY (ft/day)
1	27	SP to SM	SP	2.7	6
2	27	SW to ML	SW-SM	1.7	62
3	26	GP to SP-SM	SW	0.7	113
4	17.5	GP to SM	SW	0.8	53
5	13	GP to SW-SM	SW	0.2	252
6	7	SW-SM	SW-SM	0.7	37

BORING NO. 1

LOCATION : N 10,215
E 10,130
ELEVATION 1145
DATE DRILLED 7/30/73



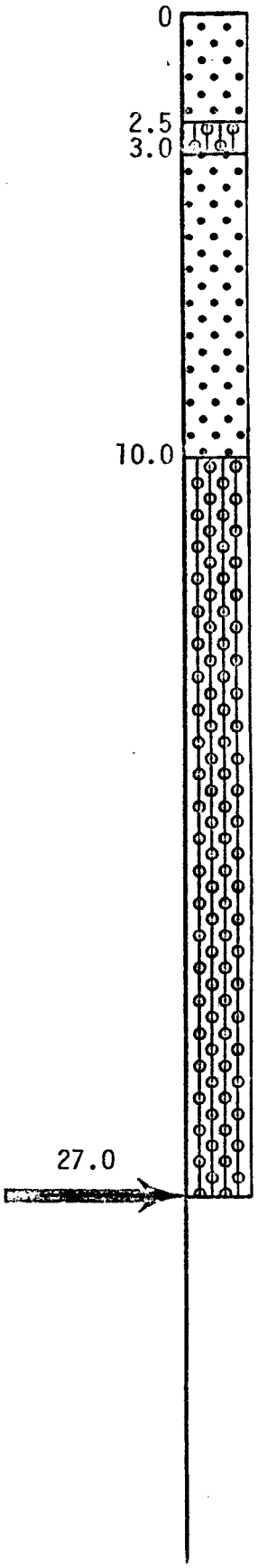
SOIL CLASSIFICATION TYPICAL NAME, (Symbol), Description	% PASSING NO 4	% PASSING NO 200	% ORGANIC
GRAVELLY-WELL GRADED SAND (SW), clean, damp, yellowish brown. Cobbles to 4-inch size (less than 5%)	88.8	1.9	0.2
POORLY-GRADED SAND (SP), medium to fine, clean, damp, yellowish brown. Rocks to 3-foot size (5%).	96.8	0.4	0.2
SILTY SAND (SM), fine, damp, medium brown, twigs, rocks to 3-foot size (20%)	98.6	24.4	3.3
GRAVELLY SAND (SW-SM), well graded, slightly silty, damp, dark brown, gravel.	80.1	8.6	0.6

BORING NO. 2

LOCATION : N 10,225
E 10,195

ELEVATION 1147

DATE DRILLED 8/1/73



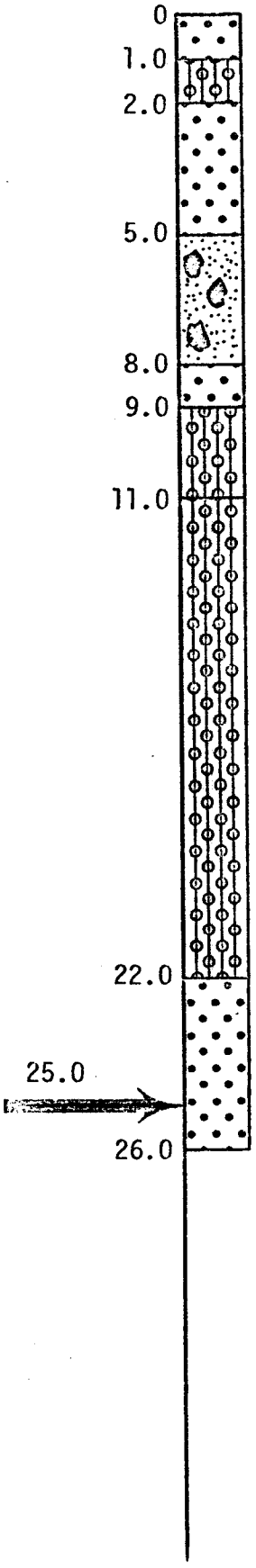
SOIL CLASSIFICATION TYPICAL NAME, (Symbol), Description	% PASSING NO 4	% PASSING NO 200	% ORGANIC
GRAVELLY WELL-GRADED SAND (SW), clean, damp, light yellowish brown, angular gravel to 3/4 inch.	89.9	3.9	0.5
SILTY SAND (SM), fine, damp, light brown.	100	53.2	4.7
GRAVELLY POORLY-GRADED SAND (SP), medium moist, light yellowish brown, subrounded rocks to 4-inch size (10%).	75.8	1.1	0.1
SAND (SW-SM), well-graded, slightly silty, moist, light yellowish brown.	94.0	6.6	0.7
Gravelly below 12 feet, color change to medium brown, subrounded rocks to 5 foot size (30%).	82.2	9.2	1.6
	68.3	10.0	1.8
	79.5	8.6	0.5

BORING NO. 3

LOCATION : N 10,295
E 10,185

ELEVATION 1148

DATE DRILLED 9/5/73



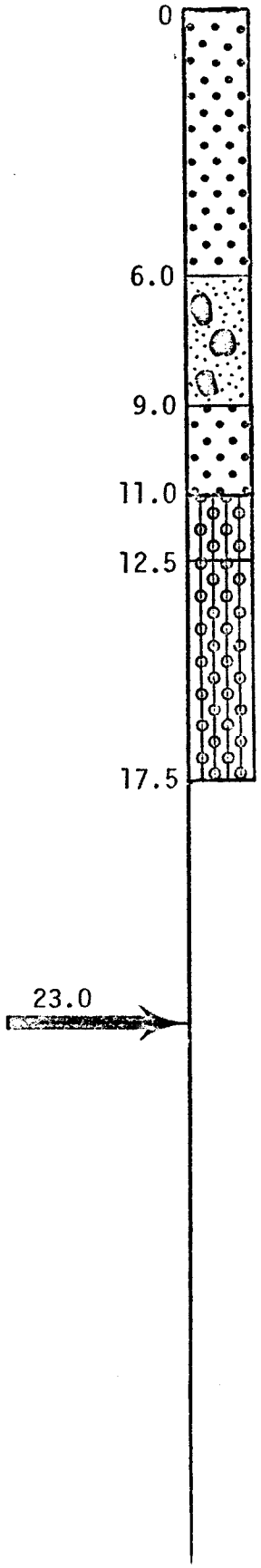
SOIL CLASSIFICATION TYPICAL NAME, (Symbol), Description	% PASSING NO 4	% PASSING NO 200	% ORGANIC
GRAVELLY WELL-GRADED SAND (SW), clean, damp, light yellowish brown	81.9	4.2	0.2
SAND (SP-SM), poorly graded, slightly silty, light brown.	100	5.8	0.4
GRAVELLY POORLY-GRADED SAND (SP), clean, medium to fine, damp, light yellowish brown. Subangular rocks to 8 inch size (less than 5%)	73.6	1.5	0.2
SANDY POORLY-GRADED GRAVEL (GP), fine, clean, damp, light yellowish brown. Angular and subangular rocks to 2-foot size (10%)	44.6	1.0	0.3
GRAVELLY WELL-GRADED SAND (SW), clean moist, medium brown,	67.7	4.9	0.6
SAND (SP-SM), poorly graded, slightly silty, very moist, dark brown. No rock.	100	6.2	2.0
SAND (SW-SM), well-graded, slightly silty, moist, dark brown. Rounded rocks to 3-foot size (10%-30%)	98.4	7.0	1.7
	90.6	5.7	0.5
Gravelly below 19-feet.	83.5	7.6	0.8
WELL-GRADED SAND (SW), clean, moist, medium brown. Rounded rocks to 3-foot size (15%).	74.9	3.1	0.3

BORING NO. 4

LOCATION : N 10,325
E 10,240

ELEVATION 1148

DATE DRILLED 8/1 & 13/73



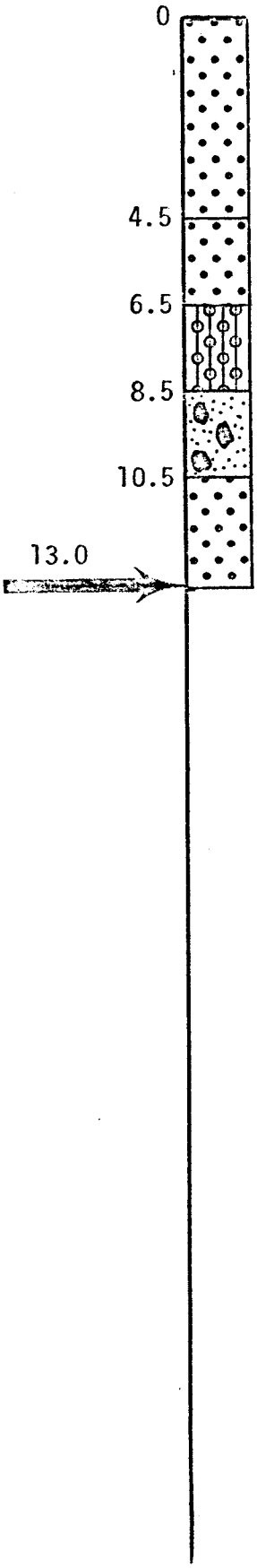
SOIL CLASSIFICATION TYPICAL NAME, (Symbol), Description	% PASSING		% ORGANIC
	NO 4	NO 200	
GRAVELLY WELL-GRADED SAND (SW), clean, moist, light yellowish brown. Subrounded rocks to 18-inch size (5%-15%).	83.5	3.6	0.2
SANDY POORLY-GRADED GRAVEL (GP), coarse, damp, light yellowish brown, angular and subangular rocks to 3 foot size (10%-20%).	40.3	3.5	0.8
GRAVELLY POORLY-GRADED SAND (SP), medium, damp, light yellowish brown.	84.1	1.8	1.7
SAND (SP-SM), poorly graded, slightly silty, fine, very moist, medium brown.	100	11.7	0.8
GRAVELLY SAND (SM), medium to coarse, very moist, dark gray, rocks to 2-foot size (30%).	71.6	13.9	1.1

BORING NO. 5

LOCATION : N 10,400
E 10,310

ELEVATION 1151

DATE DRILLED 7/30/73, 8/1/73



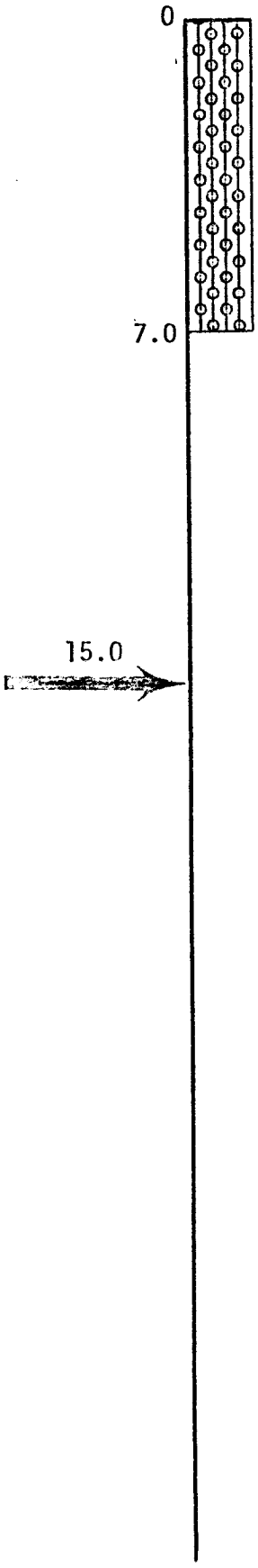
SOIL CLASSIFICATION TYPICAL NAME, (Symbol), Description	% PASSING NO 4	% PASSING NO 200	% ORGANIC
GRAVELLY WELL-GRADED SAND (SW), clean, damp, light yellowish brown, cobbles (20%), boulders to 4-foot size (10%).	67.3	2.8	0.1
POORLY-GRADED SAND (SP), medium to fine, clean, damp, medium brown.	96.9	3.6	0.3
GRAVELLY SAND (SP-SM), poorly graded, slightly silty, damp, medium brown, cobble size rocks (20%), boulders to 4-foot size (5%).	64.2	6.4	0.3
SANDY POORLY-GRADED GRAVEL (GP), clean, coarse, damp, medium brown, subangular rocks to 12 inch size (20%) boulders to 4-foot size (5 %-10%).	43.0	4.1	0.3
GRAVELLY POORLY-GRADED SAND (SP), clean, medium, damp, light yellowish brown.	86.8	2.4	0.2

BORING NO. 6

LOCATION : N 10,525
E 10,415

ELEVATION 1163

DATE DRILLED 8/13/73



SOIL CLASSIFICATION TYPICAL NAME, (Symbol), Description	% PASSING		%
	NO 4	NO 200	ORGANIC
GRAVELLY SAND (SW-SM), well graded, slightly silty, moist, light to medium brown, angular rocks to 12-inch size (10%), boulders to 4-foot size (5%).	76.9	11.2	0.7
	79.6	10.6	0.6