DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	138			

Chris Hoadley 12-27-12
CERTIFIED ENGINEERING GEOLOGIST

PROFESSIONAL GEOLOGIST — Chris Hoadley — No. 2309 — Exp. 11-23-13 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

PLANS APPROVAL DATE

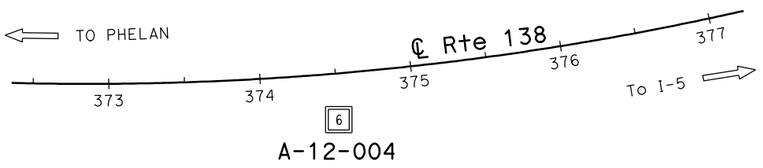
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

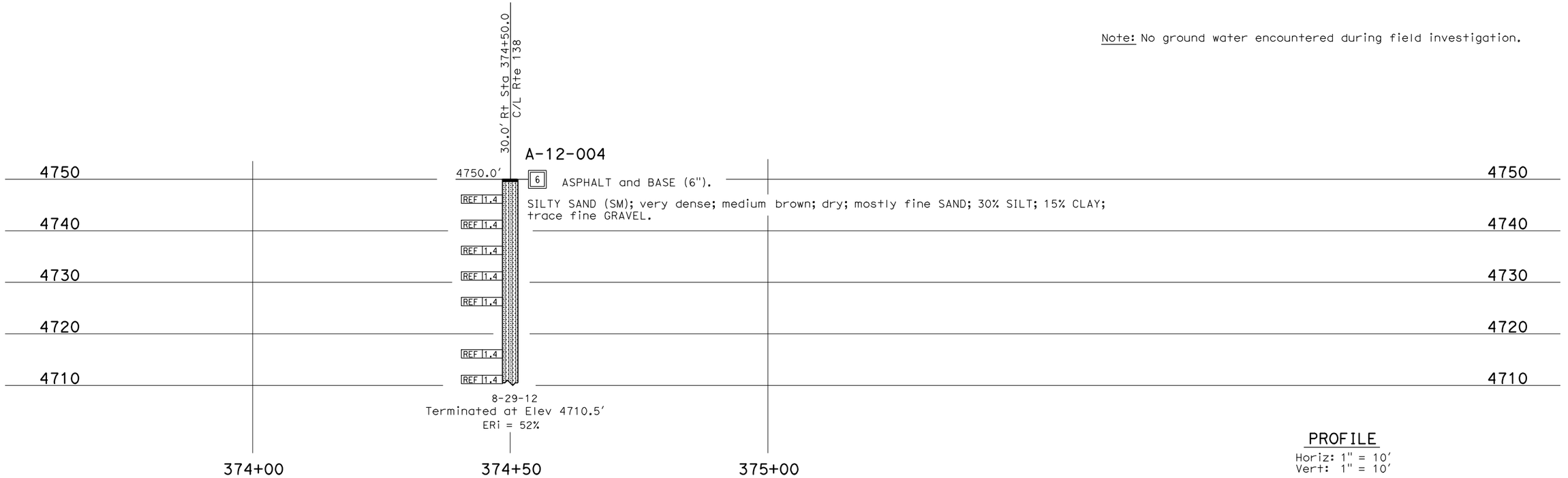
BENCH MARK

SET STD DISK IN CONC DN 3"
STAMPED "P1-71-P1-21",
29' RIGHT OF ?? PM 7.12
NAD83 (VERTICAL)
ZONE 5



PLAN

1" = 50'



Note: No ground water encountered during field investigation.

PROFILE

Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. 376
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 10/12	FIELD INVESTIGATION BY:	DESIGN BRANCH X	POST MILE	LOG OF TEST BORINGS
NAME: S. Wei	CHECKED BY: M. Wilson	C. Hoadley		7.1	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006091 CONTRACT NO.: 08-3401U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
11-09-12	12-07-12				X	X

FILE => rw376.dgn

USERNAME => s128444 DATE PLOTTED => 28-DEC-2012 TIME PLOTTED => 13:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	138			

Chris Hoadley 12-27-12
CERTIFIED ENGINEERING GEOLOGIST

PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST — Chris Hoadley No. 2309 Exp. 11-23-13 CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

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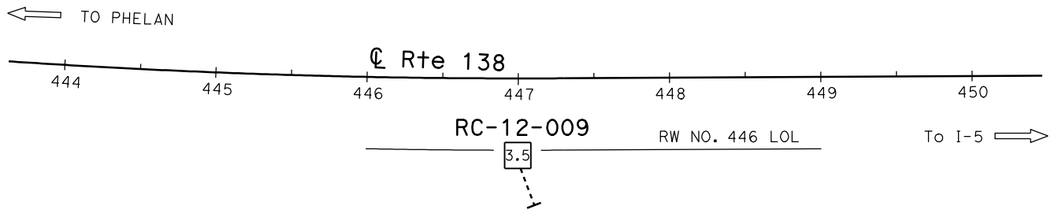
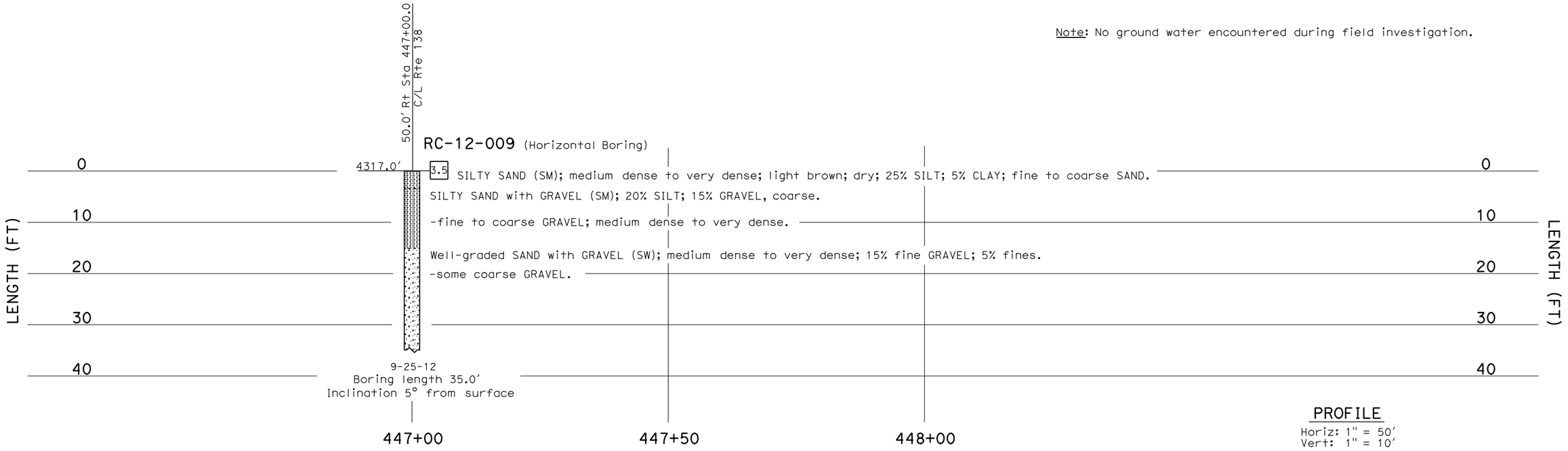
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

BENCH MARK

FD 6X6" CONC R/W MONUMONT 100' RT
STATION 674+48.18 EC, PM8.64.
NAD83 (VERTICAL)
ZONE 5



PLAN
1" = 50'



Note: No ground water encountered during field investigation.

PROFILE
Horiz: 1" = 50'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. 446
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 10/12		DESIGN BRANCH X	RW446	LOG OF TEST BORINGS
NAME: S. Wei	CHECKED BY: M. Wilson	FIELD INVESTIGATION BY: C. Hoadley		POST MILE 8.5	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006091
CONTRACT NO.: 08-3401U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
10-15-12	11-14-12	12-07-12		X	X

FILE => rw446.dgn

USERNAME => s128444 DATE PLOTTED => 28-DEC-2012 TIME PLOTTED => 13:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	138			

Chris Hoadley 12-27-12
CERTIFIED ENGINEERING GEOLOGIST

PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST — Chris Hoadley No. 2309 Exp. 11-23-13 CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

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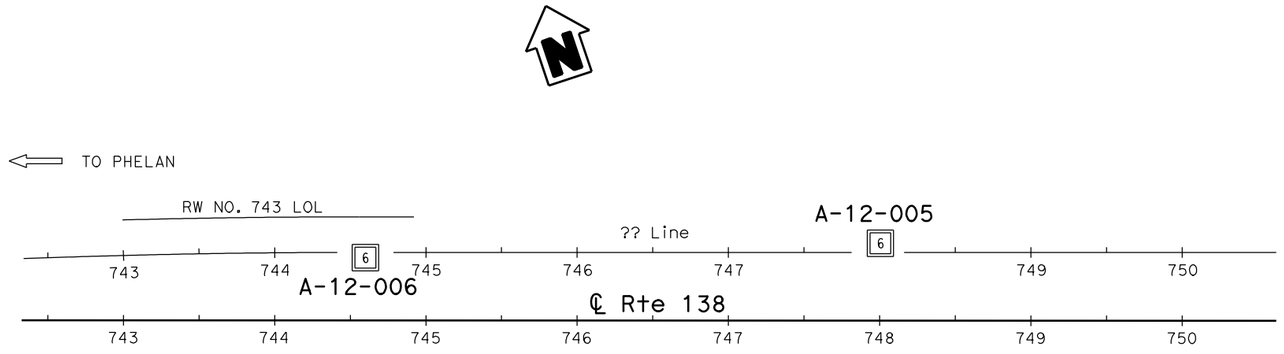
This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



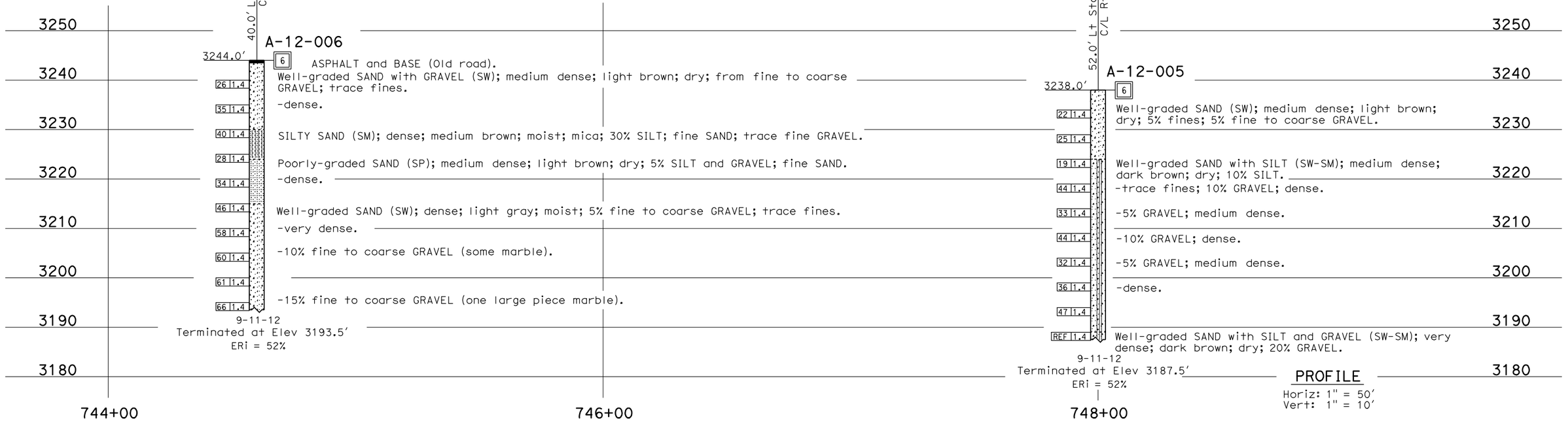
BENCH MARK

SET STD DISK STAMPED "SBd 138 GPS 9 1999" 100′ +/-
N'LY Y.S. Rte 138 ON TOP OF CUT S'WLY OF R/R OVERCROSS,
23′ S'LY SPLIT R/R TRACKS, 10′ W'LY CONC ENCASED CMP, PM14.1.
NAD83 (VERTICAL)
ZONE 5

PLAN

1" = 50′

Note: No ground water encountered during field investigation.



PROFILE

Horiz: 1" = 50′
Vert: 1" = 10′

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. 743
FUNCTIONAL SUPERVISOR NAME: S. Wei	DRAWN BY: W. Tang 10/12 CHECKED BY: M. Wilson	FIELD INVESTIGATION BY: C. Hoadley	DESIGN BRANCH X	POST MILE 14.1/14.2	LOG OF TEST BORINGS

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006091 CONTRACT NO.: 08-3401U1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

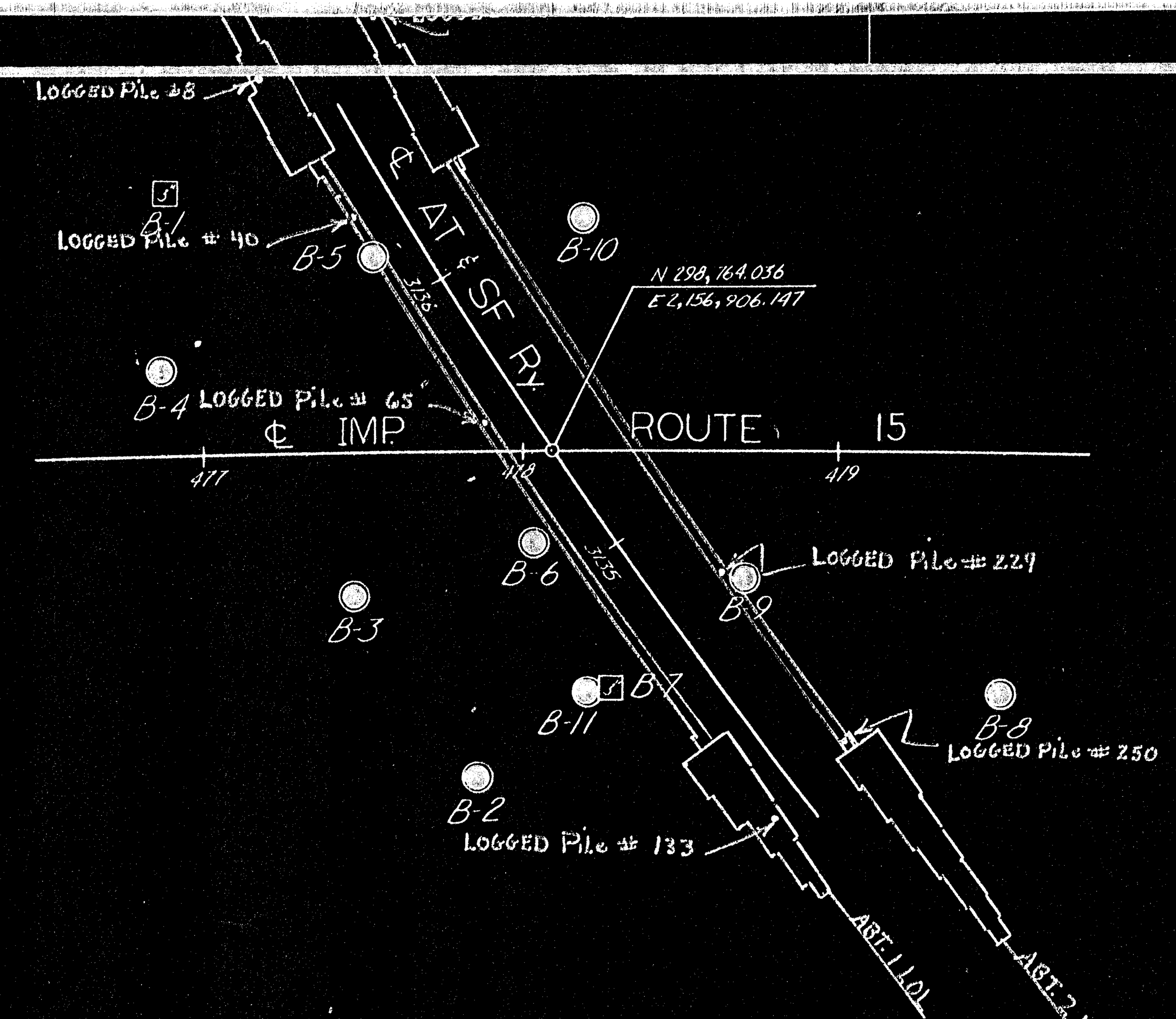
REVISION DATES				SHEET	OF
10-15-12	11-09-12	12-03-12	12-14-12	X	X

FILE => rw743.dgn

USERNAME => s128444 DATE PLOTTED => 28-DEC-2012 TIME PLOTTED => 13:41

Gish Overhead

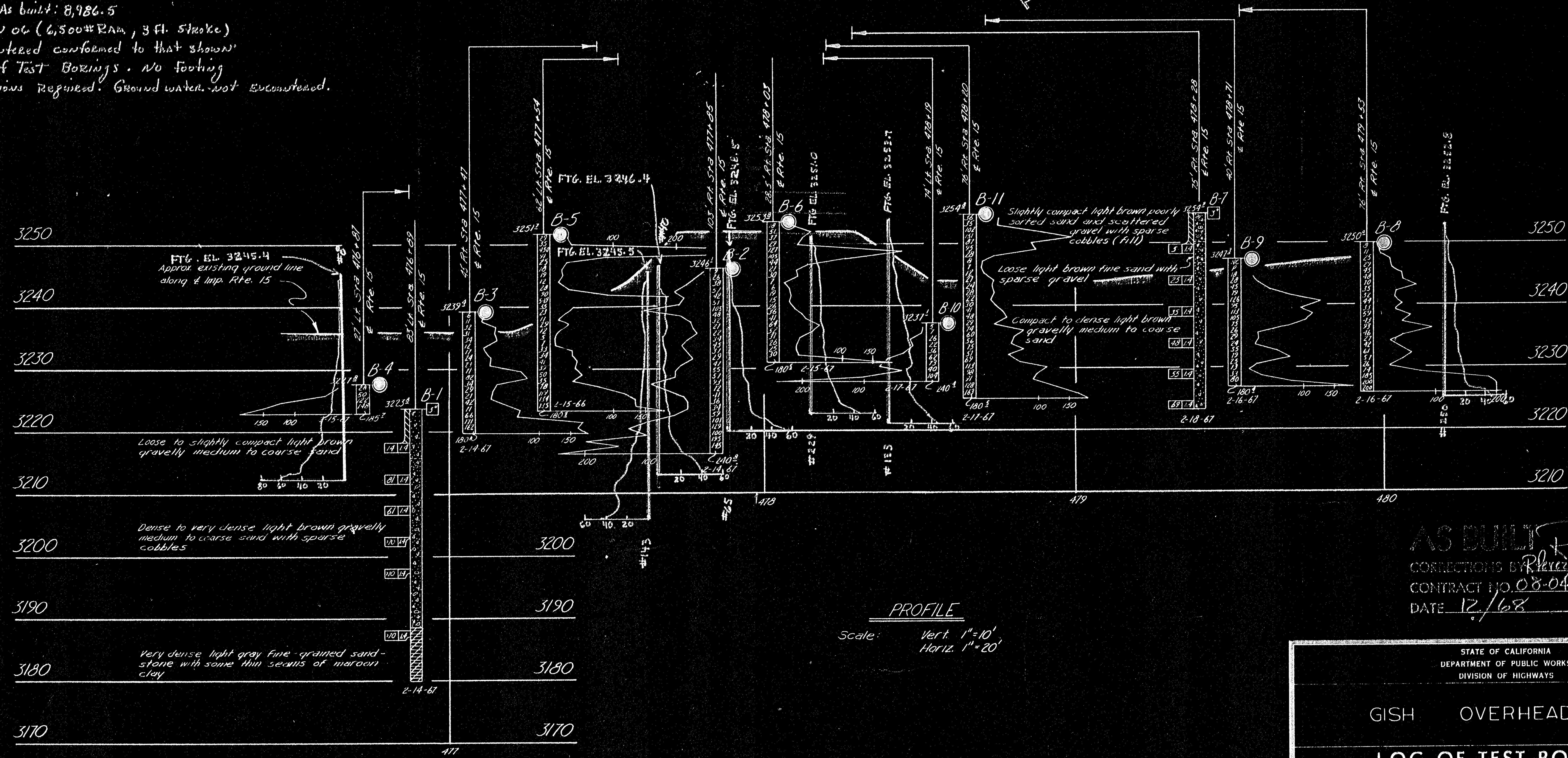
March 18, 1968



BENCH MARK

B.M. K-2 USC & GS — Elev. 3267.396
Std. disk in top of NW end of NE conc. abut. of exist. Rte. 15 UP. 364' Rt. Sta 481+69± POC ℄ Imp.

Pile Footing:
Design Pile Load: 45T
Pile Type: 10BP42
Total Piles: 291 EA.
Lin. Ft. Piles, Plans: 8,045
" " ", As built: 8,986.5
Hammer: Vulcan 06 (6,500# Ram, 3 Ft. Stroke)
Material encountered conformed to that shown on this log of Test Borings. No footing elevation revisions required. Ground water not encountered.



AS BUILT
CORRECTIONS BY R. Perez
CONTRACT NO. 08-049124
DATE 12/68

LEGEND OF BORING OPERATIONS

LEGEND OF EARTH MATERIALS: Gravel; Sand; Silt; Clay; Sandy Clay or Clayey Sand; Sandy Silt or Silty Sand; Silty Clay or Clayey Silt; Peat and/or Organic Matter; Fill Material; Igneous Rock; Sedimentary Rock; Metamorphic Rock

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 7 OF 7

GISH OVERHEAD

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 54-796 | PM 22.1 | DRAWING

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR–

Alray Overhead

FED. ROAD DIV. NO.	STATE	F. A. PROJECT NO.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
08	S.Bd.	15	R20.5/R28.9	105	114

BRIDGE ENGINEER — CIVIL ENGINEER — LICENSE NOS.

DATE APPROVED March 18, 1968

CIDH Pile Footing:

Pile type: 16" CIDH
Total Piles: 101
Lin. ft., Plans: 2,585
Lin. ft., As built: 2,621
MATERIAL EXCAVATED FROM CIDH piles conformed substantially to that shown on this Log of Test Boring. No ground water Encountered.

Spread Footing:

Foundation material encountered at spread footing (El.) Locations conformed to that shown on this log of Test Borings. No footing elevation Revisions Required. Ground water not Encountered.

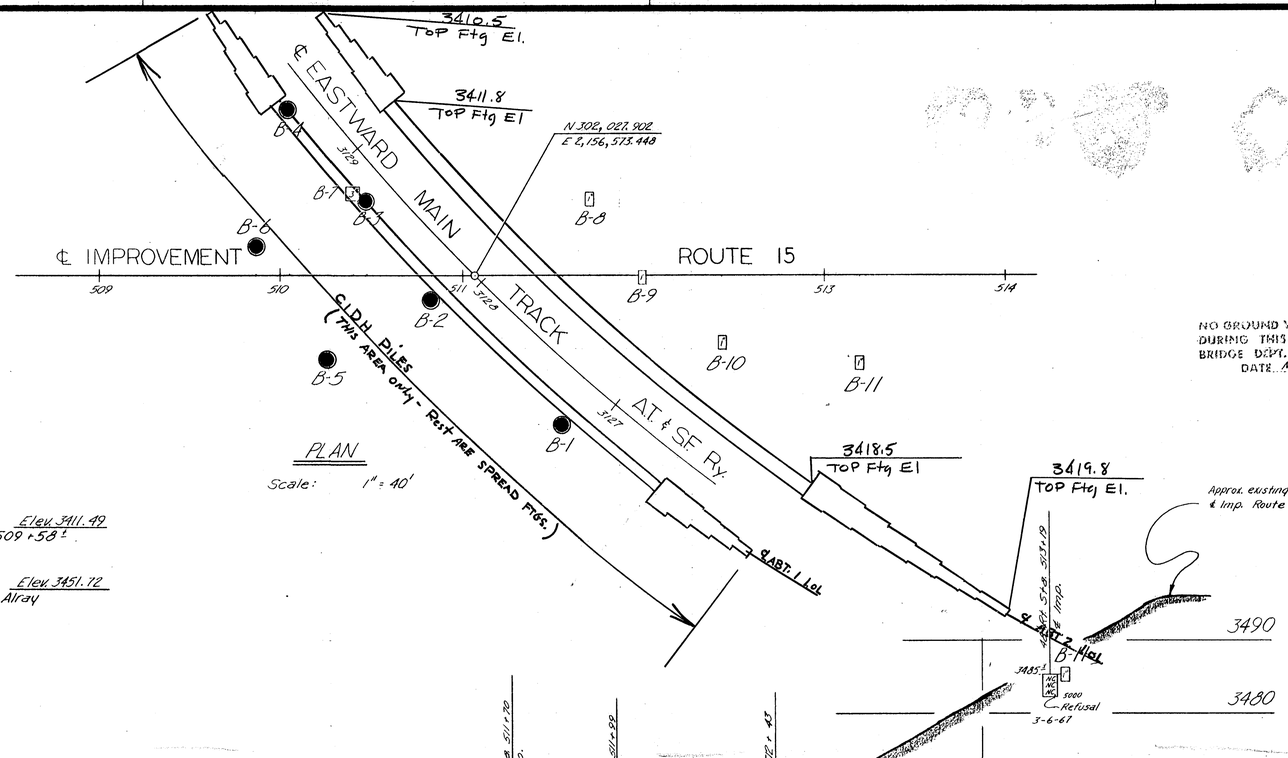
BENCH MARKS

BM 8 Alray 65 — Elev. 3411.49
Sphd. nail in 2"x2" hub buried 0.8' 156' ± Lt. 509 +58 ±
POT ℄ Imp.

BM 59-A-50 — Elev. 3451.72
Sphd. nail in lead in S'ly end of E'ly abut. of Alray Underpass. Bridge No. 54-23

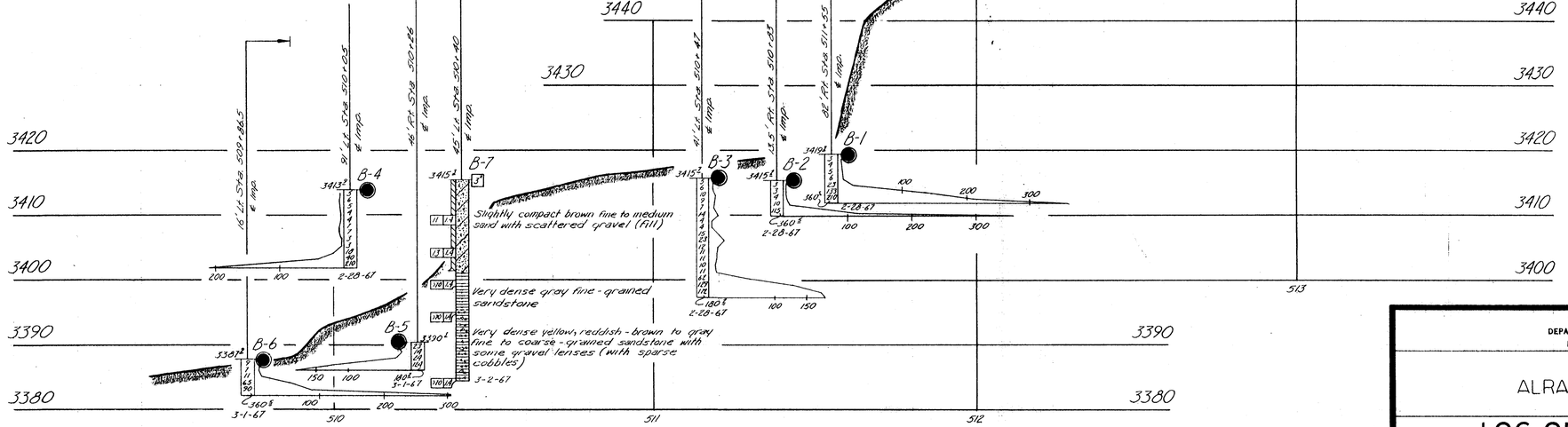
PLAN

Scale: 1" = 40'

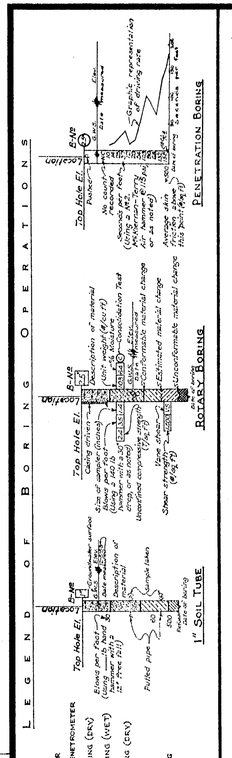


PROFILE

Scale: Vert. 1" = 10'
Horiz. 1" = 20'



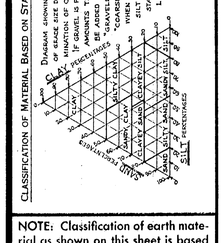
LEGEND OF BOREHOLE OPERATIONS



LEGEND OF EARTH MATERIALS

Gravel; Sand; Silt; Clay; Silty Clay or Clayey Silt; Sandy Clay or Clayey Sand; Sandy Silt or Silty Sand; Organic Matter; Fill Material; Igneous Rock; Sedimentary Rock; Metamorphic Rock

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS



NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	By: D. Crawford 11-6-67
DRAWN	By: R. Allen 5-15-67
CHECKED	By: D. Crawford 3-28-67

Approved Recommended by: Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

105

AS BUILT
CORRECTIONS BY K. Perez
CONTRACT NO. 08-049124
DATE 12/68

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 11 OF 11

ALRAY OVERHEAD

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 54-797 | P.M. 22.7 | DRAWING

Chg. 08201
W.A. 049121

Disregard prints bearing earlier numbers → PREL. DRAWING NO. PR- 12/5

North Alray Overhead

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE

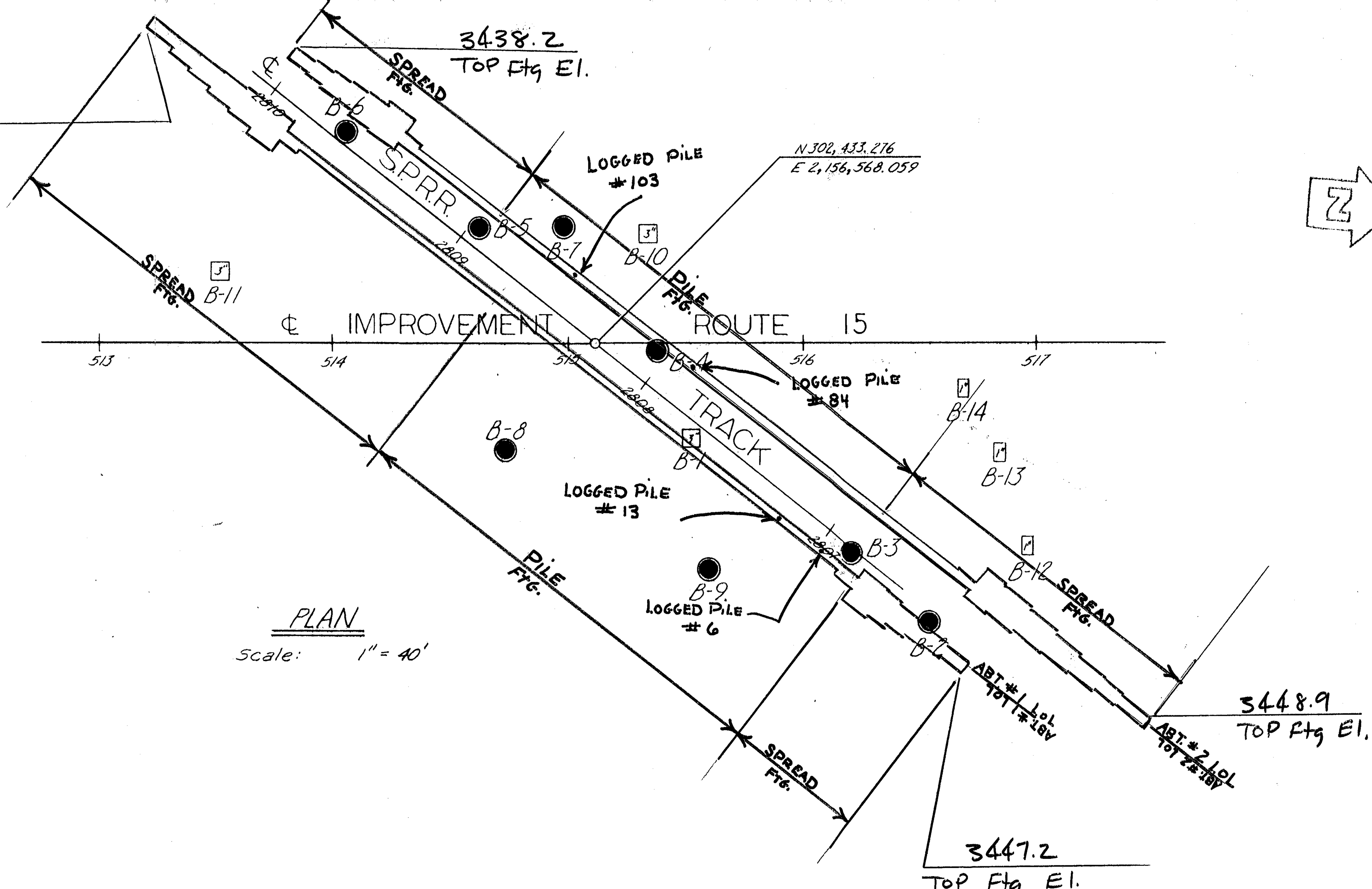
DATE APPROVED March 18, 1968

Pile Footing:
Design Pile Load: 45T
Pile Type: 10BP42
Total Piles: 116
Lin. Ft. Piles, Plans: 1,955
" " ", As Built: 1,875
Hammer: Vulcan 06 (6,500# Ram, 3 Ft. stroke)

Spread Footing:
Foundation material encountered at spread footing locations conformed to that shown on this Log of Test Borings. No footing elevation Revisions Required. Ground Water not encountered.

BENCH MARK

B.M.# B-Alray-65 Elev. 3411.49
Sphd. nail in 2"x2" hub buried 0.8' 156' ± Lt. 509+58 ± P.O.T. ¢ Imp.

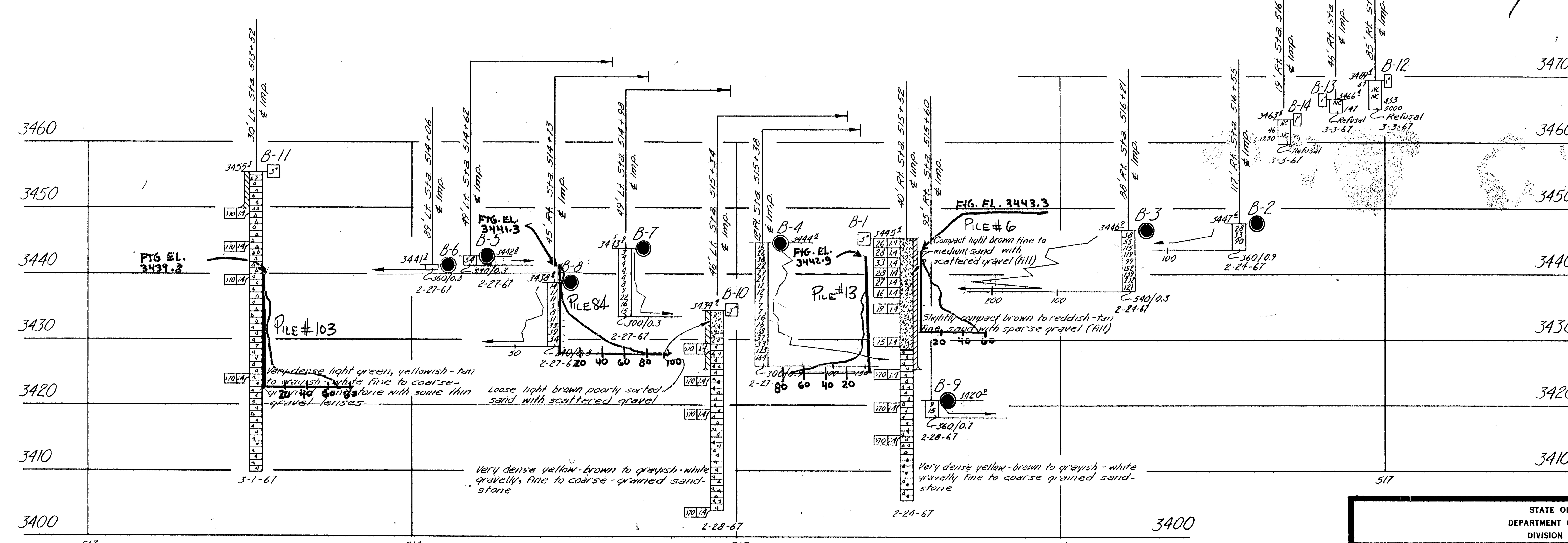


PLAN
Scale: 1" = 40'

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE March, 1967

AS BUILT [illegible]
CORRECTIONS BY R Perez
CONTRACT NO. 08-049124
DATE 12/68

PROFILE
Scale: Vert. 1" = 10' Horiz. 1" = 20'



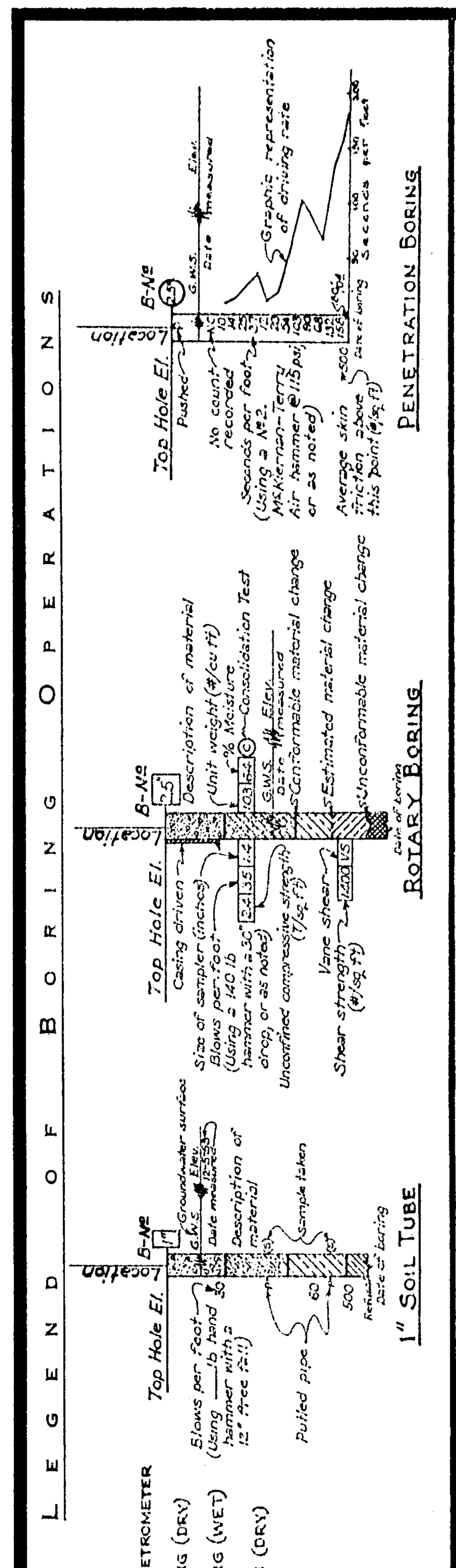
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 8 OF 8

NORTH ALRAY OVERHEAD

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 54-827 | P.M. 22.7 | DRAWING 54477-8

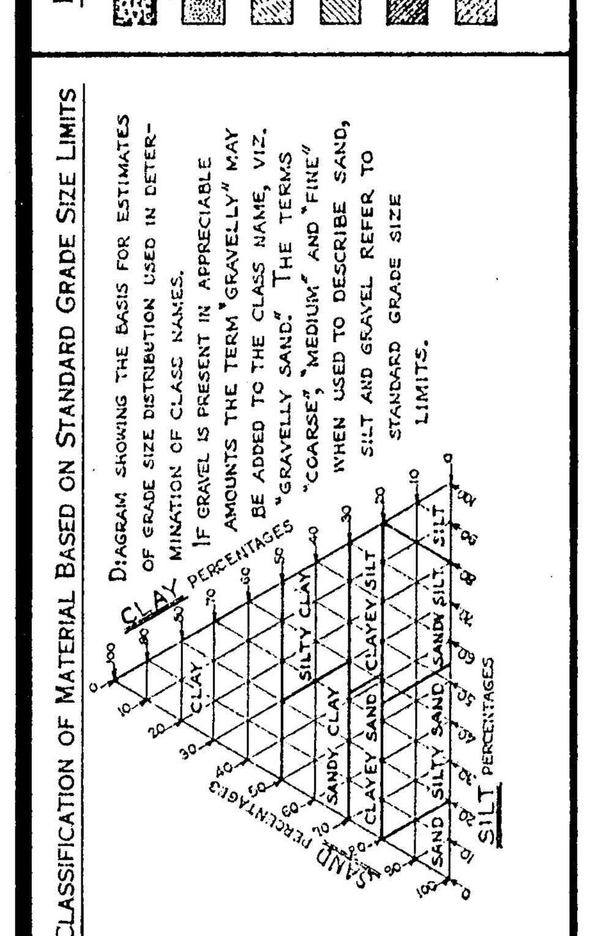


Penetrometer
2½" Cone Penetrometer
Sampler Boring (Dry)
Rotary Boring (Wet)
Auger Boring (Dry)
Jet Boring
Core Boring
Test Pit

LEGEND OF EARTH MATERIALS

Gravel — Sand — Silt — Clay — Sandy Clay or Clayey Sand — Sandy Silt or Silty Sand — Silty Clay or Clayey Silt — Peat and/or Organic Matter — Fill Material — Igneous Rock — Sedimentary Rock — Metamorphic Rock

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS



NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	By D. Crawford 3-3-67
DRAWN	By B. Allen 3-20-67
CHECKED	By D. Crawford 3-22-67

Approval Recommended by — Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

Chg. 08201
W.A. 049121

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR-

South Forest Road

No As-Builts nor any LOTBs for the South Forest Road Undercrossing (Santa Fe Rd) Caltrans Bridge No. 54-0940R can be located within the online Caltrans GEODog database https://geodog.dot.ca.gov/.

Oak Hill Road OC

FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CAL.				

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
08	SBd	15	27.3/81	55	55

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE

DATE APPROVED September 7, 1965

AS BUILT
CORRECTIONS BY
CONTRACT NO.
DATE

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE August 1964

SHEET	OF
12	12

FIELD STUDY	By C.G. Bemis	8-20-64
DRAWN	By	9-10-64
CHECKED	By	9-10-64

Approved: Charles [illegible], Engineering Geologist

BRIDGE DEPARTMENT

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

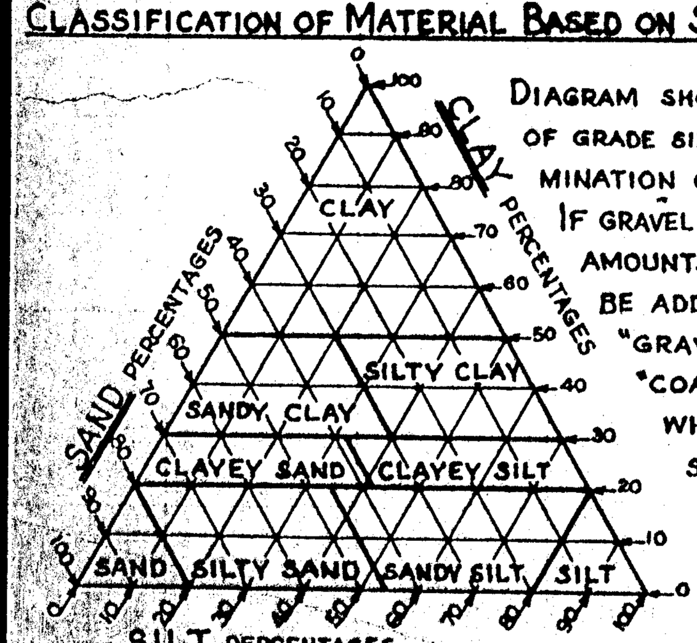


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

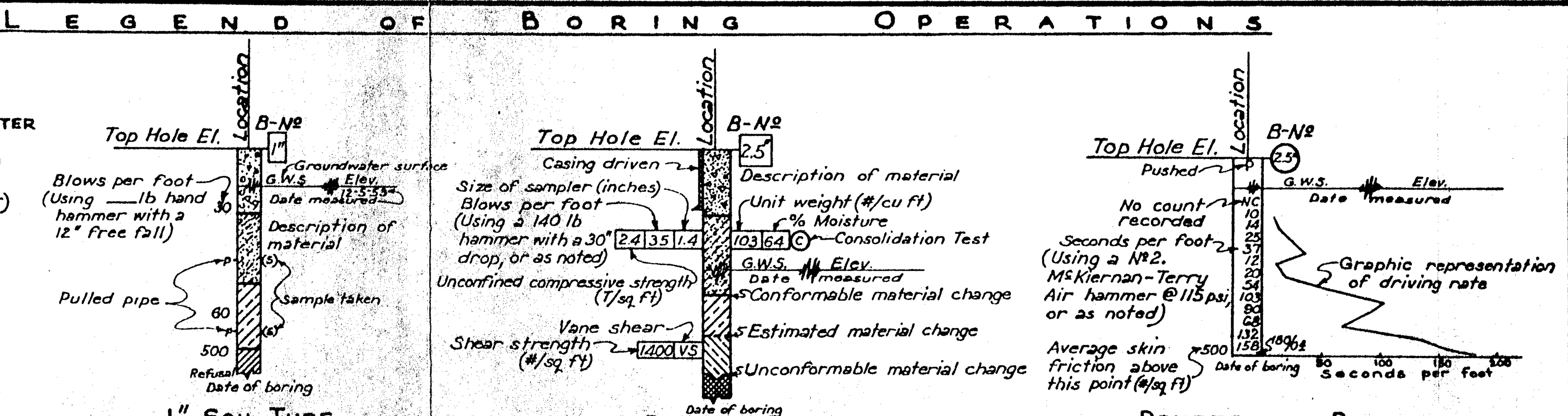
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND". THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

LEGEND OF BORING OPERATIONS

- Penetrometer
- 2¼" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit



NOTE

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

OAK HILL ROAD OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 54-740	P.M. 28.6	DRAWING 54740-10

Charge: 08201 WA: 039641

Ranchero Road OC

No As-Builts nor any LOTBs for the Ranchero Road OC Caltrans Bridge No. 54-1285 can be located within the online Caltrans GEODog database https://geodog.dot.ca.gov/.
Logs of nearby borings performed for infiltration basins were found in the database.

st Location Plan

LOGGED BY	BEGIN DATE	COMPLETION DATE	BOREHOLE LOCATION (Lat/Long or North/East and Datum)	HOLE ID
K. Barker	2-27-19	2-27-19	34° 23' 1.22" / -117° 24' 56.72" NAD83	A-19-001
DRILLING CONTRACTOR: Caltrans			BOREHOLE LOCATION (Offset, Station, Line)	SURFACE ELEVATION: ~3880.0 ft NAVD88
DRILLING METHOD: Hollow-Stem Auger			DRILL RIG: CS 2000 (truck)	BOREHOLE DIAMETER: 8 in
SAMPLER TYPE(S) AND SIZE(S) (ID): SPT (1.4")			SPT HAMMER TYPE: Automatic	HAMMER EFFICIENCY, ERi: 94%
BOREHOLE BACKFILL AND COMPLETION: grout			GROUNDWATER READINGS: DURING DRILLING N/A; AFTER DRILLING (DATE)	TOTAL DEPTH OF BORING: 50.0 ft

ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	0		Well-graded SAND with CLAY (SW-SC); dark brown; moist; few to little medium plasticity fines; few fine GRAVEL.												
3878.00	2														
3876.00	4		SILTY SAND (SM); medium dense; brown; dry; mostly fine and medium SAND; little fines.												
	5			S-1	13 6 9	15									
3874.00	6														
3872.00	8														
3870.00	10		Dense; few fine GRAVEL ; weak cementation.	S-2	5 12 14	26									
3868.00	12														
3866.00	14														
	15		CLAYEY SAND (SC); very dense; dark brown; dry; mostly fine and medium SAND; little fines; moderate cementation.	S-3	11 25 25	50									
3864.00	16														
3862.00	18														
3860.00	20			S-4	21 22 26	48									
3858.00	22														
3856.00	24														
	25														

(continued)

5 BR - STANDARD RTE 15 INFILTRATION BASINS.GPJ CALTRANS LIBRARY (FEB 2017).GLB 3/1/19

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South

REPORT TITLE				HOLE ID
BORING RECORD				A-19-001
DIST.	COUNTY	ROUTE	POSTMILE	PROJECT ID
08	SBD	15	30.4	0815000244
PROJECT OR BRIDGE NAME				
BRIDGE NUMBER	PREPARED BY		DATE	SHEET: 1 of 2

ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	25		SILTY SAND (SM); very dense; brown; dry; mostly fine and medium SAND; little fines; moderate cementation.		S-5	13 17 21	38								
3854.00	26														
	27														
3852.00	28														
	29														
3850.00	30		Well-graded SAND with SILT (SW-SM); dense; brown; dry; mostly from fine to coarse SAND; weak cementation.		S-6	9 12 13	25								
	31														
3848.00	32														
	33														
3846.00	34														
	35		Very dense; uncemented.		S-7	12 20 23	43								
3844.00	36														
	37														
3842.00	38														
	39														
3840.00	40		Trace fine GRAVEL.		S-8	12 17 23	40								
	41														
3838.00	42														
	43														
3836.00	44														
	45				S-9	12 18 25	43								
3834.00	46														
	47														
3832.00	48														
	49														
3830.00	50		Bottom of borehole at 50.0 ft bgs												
	51														
3828.00	52		This Boring Record was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010) except as noted on the Soil or Rock Legend or below.												
	53														
3826.00	54														
	55														

5 BR - STANDARD RTE 15 INFILTRATION BASINS.GPJ CALTRANS LIBRARY (FEB 2017).GLB 3/1/19

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South

REPORT TITLE				HOLE ID
BORING RECORD				A-19-001
DIST.	COUNTY	ROUTE	POSTMILE	PROJECT ID
08	SBD	15	30.4	0815000244
PROJECT OR BRIDGE NAME				
BRIDGE NUMBER	PREPARED BY		DATE	SHEET 2 of 2

LOGGED BY	BEGIN DATE	COMPLETION DATE	BOREHOLE LOCATION (Lat/Long or North/East and Datum)	HOLE ID
K. Barker	2-26-19	2-26-19	34° 23' 3.93" / -117° 24' 53.21" NAD83	A-19-002
DRILLING CONTRACTOR			BOREHOLE LOCATION (Offset, Station, Line)	SURFACE ELEVATION
Caltrans				~3871.0 ft NAVD88
DRILLING METHOD			DRILL RIG	BOREHOLE DIAMETER
Hollow-Stem Auger			CS 2000 (truck)	8 in
SAMPLER TYPE(S) AND SIZE(S) (ID)			SPT HAMMER TYPE	HAMMER EFFICIENCY, ERi
SPT (1.4")			Automatic	94%
BOREHOLE BACKFILL AND COMPLETION			GROUNDWATER READINGS DURING DRILLING / AFTER DRILLING (DATE)	TOTAL DEPTH OF BORING
grout			N/A	50.0 ft

ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	0		Well-graded SAND with CLAY and GRAVEL (SW-SC); medium dense; dark brown; moist; little to some fine and coarse GRAVEL.												
3869.00	2														
3867.00	4														
	5				S-1	3 4 5	9								
3865.00	6														
3863.00	8														
3861.00	10		CLAYEY SAND (SC); dense; dark brown; moist; mostly fine and mediu SAND; little fines.		S-2	10 12 16	28								
3859.00	12														
3857.00	14														
	15		Medium dense.		S3	26 6 9	15								
3855.00	16		Well-graded SAND (SW); medium dense; brown; dry; few fine GRAVEL.												
3853.00	18														
3851.00	20		Dense.		S-4	7 10 12	22								
3849.00	22														
3847.00	24														
	25														

(continued)

5 BR - STANDARD RTE 15 INFILTRATION BASINS.GPJ CALTRANS LIBRARY (FEB 2017).GLB 3/1/19

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South

REPORT TITLE				HOLE ID
BORING RECORD				A-19-002
DIST.	COUNTY	ROUTE	POSTMILE	PROJECT ID
08	SBD	15	30.4	0815000244
PROJECT OR BRIDGE NAME				
BRIDGE NUMBER	PREPARED BY		DATE	SHEET
				1 of 2

ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	25		Weak cementation. Well-graded SAND (SW) *(continued)*.		S-5	13 14 17	31								
3845.00	26														
	27														
3843.00	28														
	29														
3841.00	30		Very dense.		S-6	10 14 20	34								
	31														
3839.00	32														
	33														
3837.00	34														
	35				S-7	13 17 20	37								
3835.00	36														
	37														
3833.00	38														
	39														
3831.00	40				S-8	13 19 22	41								
	41														
3829.00	42														
	43														
3827.00	44														
	45				S-9	10 17 26	43								
3825.00	46														
	47														
3823.00	48														
	49														
3821.00	50		Bottom of borehole at 50.0 ft bgs												
	51														
3819.00	52		This Boring Record was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010) except as noted on the Soil or Rock Legend or below.												
	53														
3817.00	54														
	55														

5 BR - STANDARD RTE 15 INFILTRATION BASINS.GPJ CALTRANS LIBRARY (FEB 2017).GLB 3/1/19

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South

REPORT TITLE				HOLE ID
BORING RECORD				A-19-002
DIST.	COUNTY	ROUTE	POSTMILE	PROJECT ID
08	SBD	15	30.4	0815000244
PROJECT OR BRIDGE NAME				
BRIDGE NUMBER	PREPARED BY		DATE	SHEET 2 of 2

LOGGED BY	BEGIN DATE	COMPLETION DATE	BOREHOLE LOCATION (Lat/Long or North/East and Datum)	HOLE ID
K. Barker	2-26-19	2-26-19	34° 22' 55.38" / -117° 24' 55.29" NAD83	A-19-003
DRILLING CONTRACTOR: Caltrans			BOREHOLE LOCATION (Offset, Station, Line)	SURFACE ELEVATION: ~3883.0 ft NAVD88
DRILLING METHOD: Hollow-Stem Auger			DRILL RIG: CS 2000 (truck)	BOREHOLE DIAMETER: 8 in
SAMPLER TYPE(S) AND SIZE(S) (ID): SPT (1.4")			SPT HAMMER TYPE: Automatic	HAMMER EFFICIENCY, ERi: 94%
BOREHOLE BACKFILL AND COMPLETION: grout			GROUNDWATER READINGS: DURING DRILLING N/A; AFTER DRILLING (DATE)	TOTAL DEPTH OF BORING: 51.5 ft

ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	0		CLAYEY SAND (SC); dark brown; moist; mostly from fine to coarse SAND; little fines; few fine GRAVEL.												
3881.00	2														
3879.00	4		SILTY SAND (SM); dense; brown; dry; mostly from fine to coarse SAND; little fines; few fine GRAVEL.												
3877.00	6				S-1	11 14 16	30								
3875.00	8														
3873.00	10		Very dense; trace fine GRAVEL; moderate cementation.		S-2	17 17 19	36								
3871.00	12														
3869.00	14														
3867.00	16				S3	11 15 17	32								
3865.00	18														
3863.00	20		Weak cementation.		S-4	15 19 24	43								
3861.00	22		Few fine and coarse GRAVEL.												
3859.00	24														
	25														

(continued)

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South

REPORT TITLE				HOLE ID
BORING RECORD				A-19-003
DIST. 08	COUNTY SBD	ROUTE 15	POSTMILE 30.4	PROJECT ID 0815000244
PROJECT OR BRIDGE NAME				
BRIDGE NUMBER	PREPARED BY	DATE	SHEET 1 of 2	

5 BR - STANDARD RTE 15 INFILTRATION BASINS.GPJ CALTRANS LIBRARY (FEB 2017).GLB 3/1/19

ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	25		Dense.												
3857.00	26		SILTY SAND (SM) *(continued)*.		S-5	15 13 17	30								
	27		Poorly graded SAND with SILT (SP-SM); dense; brown; dry; mostly fine SAND; weak cementation.												
3855.00	28														
	29														
3853.00	30		Very dense; fine and medium SAND; trace fine GRAVEL; no cementation.		S-6	11 21 25	46								
	31														
3851.00	32														
	33														
3849.00	34														
	35														
3847.00	36				S-7	11 16 19	35								
	37														
3845.00	38														
	39														
3843.00	40														
	41				S-8	13 19 22	41								
3841.00	42														
	43														
3839.00	44														
	45		Few fine GRAVEL.												
3837.00	46				S-9	12 21 22	43								
	47														
3835.00	48														
	49														
3833.00	50		Well-graded SAND with SILT (SW-SM); very dense; brown; dry.		S-10	15 21 29	50								
	51														
3831.00	52		Bottom of borehole at 51.5 ft bgs												
	53														
3829.00	54		This Boring Record was developed in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010) except as noted on the Soil or Rock Legend or below.												
	55														

5 BR - STANDARD RTE 15 INFILTRATION BASINS.GPJ CALTRANS LIBRARY (FEB 2017).GLB 3/1/19

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - South

REPORT TITLE: BORING RECORD				HOLE ID: A-19-003
DIST.: 08	COUNTY: SBD	ROUTE: 15	POSTMILE: 30.4	PROJECT ID: 0815000244
PROJECT OR BRIDGE NAME				
BRIDGE NUMBER	PREPARED BY	DATE	SHEET: 2 of 2	

West Hesperia Overhead

FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CAL.				

DIST	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	SBd	31	C		

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 5583

DATE APPROVED

BRIDGE DEPARTMENT

FIELD STUDY	by Eggen 6-20-62
DRAWN	by Erskine 7-10-62
CHECKED	by Eggen 7-11-62

Approval Recommended: [signature] Engineering Geologist

Classification of Material Based on Standard Grade Size Limits

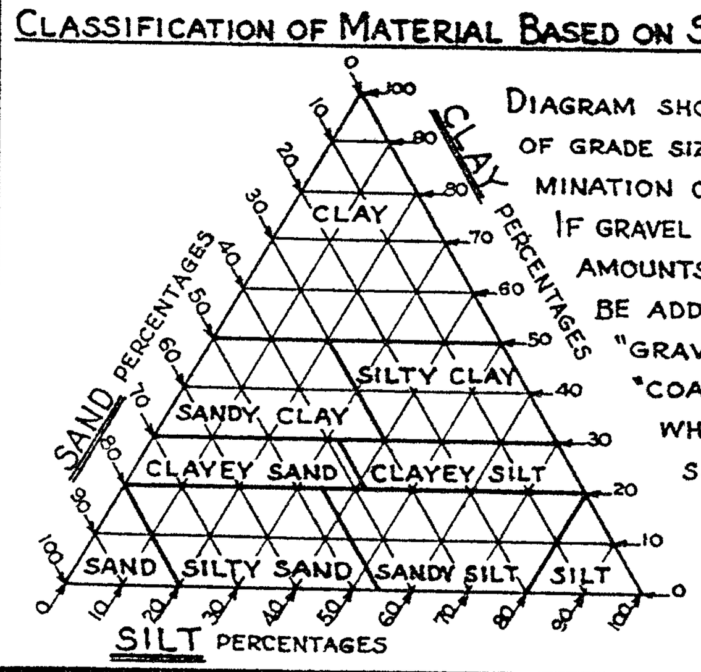


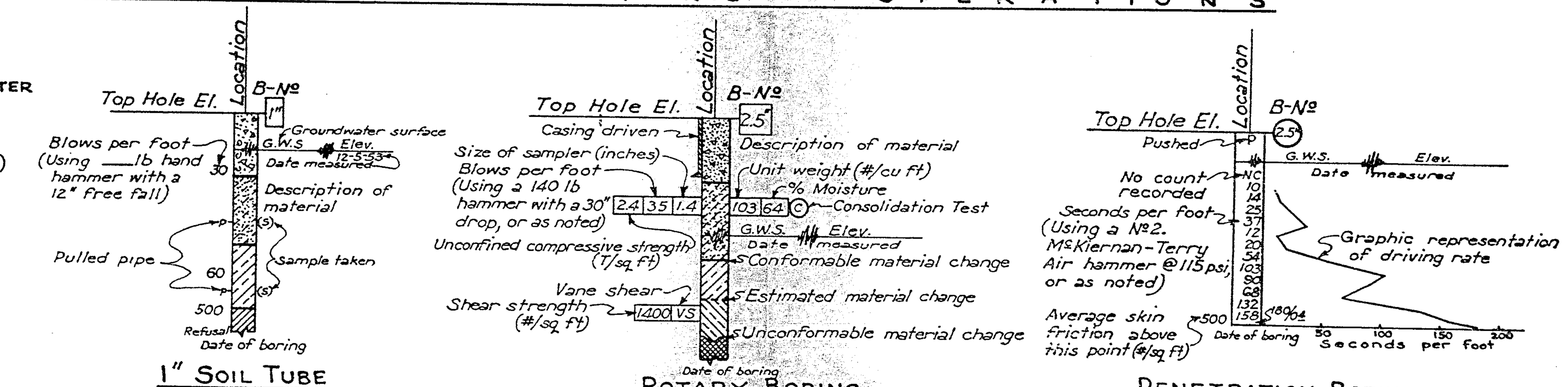
Diagram showing the basis for estimates of grade size distribution used in determination of class names. If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

Legend of Earth Materials

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

Legend of Boring Operations

- Penetrometer
- 2¼" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit



Note

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

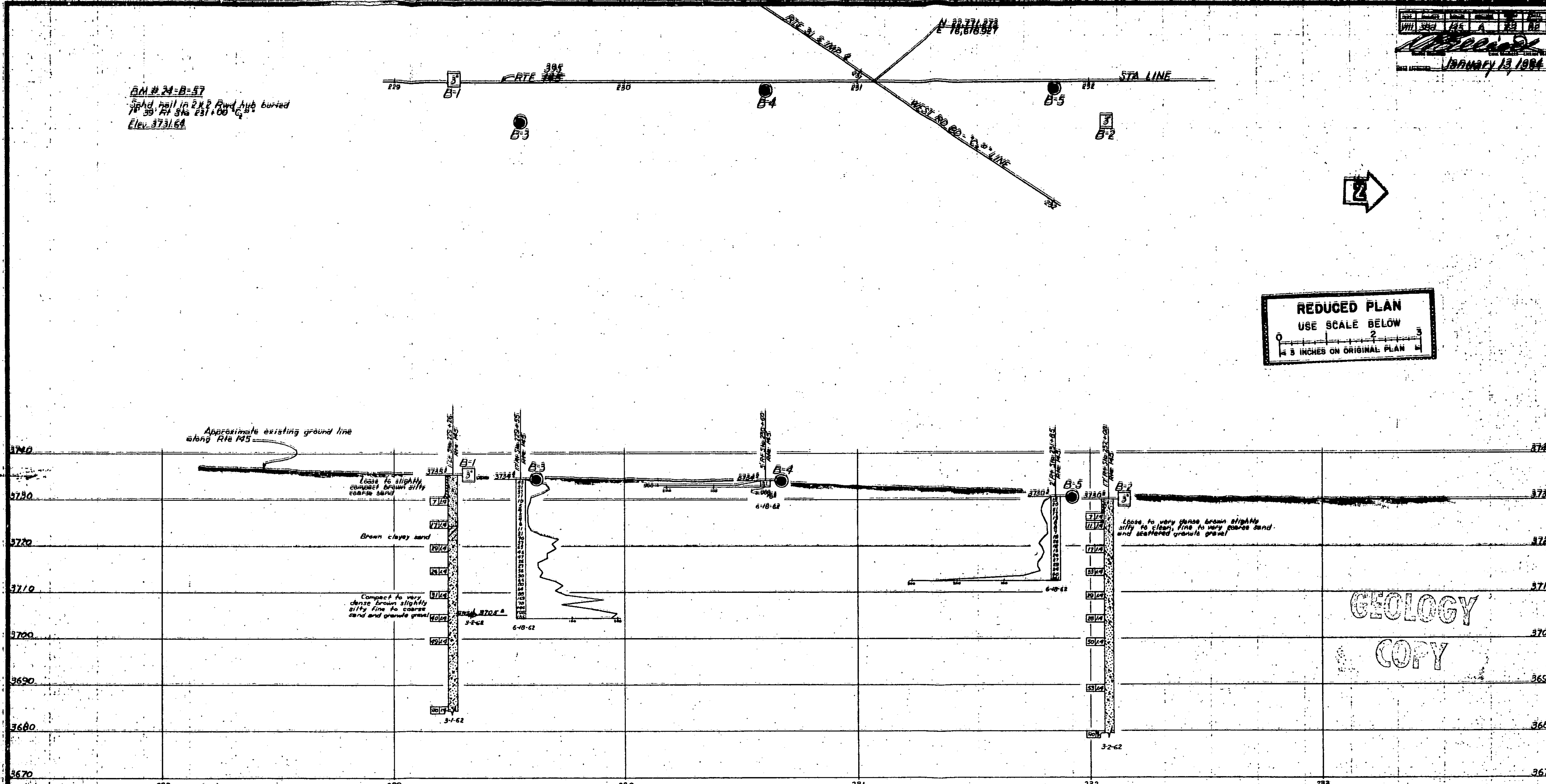
WEST HESPERIA OVERHEAD

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 54-664	FILE	DRAWING

N15-N395 Connector OC

New VIII-SBd 395/15



BRIDGE DEPARTMENT

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

LEGEND OF BORING OPERATIONS

- Penetrometer
- 2½" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit

1" SOIL TUBE — ROTARY BORING — PENETRATION BORING

NOTE

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 12 OF 12

RTE 395/15 SEPARATION

LOG OF TEST BORINGS

SCALE Horiz 1"=20' Vert 1"=10' | BRIDGE 54-665 | DRAWING 54665-10

January 13, 1964

PREL. DRAWING NO. P-54665-10

Joshua Street (Palm Avenue) OC

PRINTED ON CLEARPRINT 1000H
FED. ROAD DIV. No. 7 STATE CAL.
(New VIII-SBd-15)
DIST. VIII COUNTY SBd ROUTE 31 SECTION C SHEET No. 82 TOTAL SHEETS 82
BRIDGE ENGINEER
DATE APPROVED January 13, 1964
N 25,206,471
E 18,064,941
BENCH MARK #26-B-57
Spkd. nail in 2"x2" Rwd. Hub buried 1" 39' Rt Sta 257+00 "C2 51" Line
El. 3680.75
℄ PALM AVENUE
B-1
B-2
B-3
B-4
B-5
℄ Bent 3
℄ Bent 4
℄ Abut 5
℄ IMP ℄ WEST RDBD
℄ EAST RDBD
NO. OF PILES IN FOOTING OF Abt 1 = 5
ACTUAL LENGTH OF PILES:
AV. 34.0 MAX 40.2 MIN. 37.
PILE TIP ELEVATION:
AV. 3657.8 MAX 3659.5 MIN. 3656.6
SPECIFIED PILE TIP ELEV. 3654.0
NO. OF PILES IN FOOTING OF Bent 2 = 12
ACTUAL LENGTH OF PILES:
AV. 15.7 MAX 16.6 MIN. 15.4
PILE TIP ELEVATION:
AV. 3654.2 MAX 3654.7 MIN 3658.3
SPECIFIED PILE TIP ELEV. 3659.0
NO. OF PILES IN FOOTING OF Bent 3 = 12
ACTUAL LENGTH OF PILES:
AV. 15.9 MAX. 16.4 MIN. 15.5
PILE TIP ELEVATION:
AV. 3659.0 MAX 3659.5 MIN 3658.6
SPECIFIED PILE TIP ELEV. 3654.0
NO. OF PILES IN FOOTING OF Bent 4 = 12
ACTUAL LENGTH OF PILES:
AV. 15.9 MAX. 16.4 MIN. 15.4
PILE TIP ELEVATION:
AV. 3659.1 MAX 3659.6 MIN. 3658.5
SPECIFIED PILE TIP ELEV. 3659.0
NO. OF PILES IN FOOTING OF Ab. 5 = 5
ACTUAL LENGTH OF PILES:
AV. 37.4 MAX 38.1 MIN. 37.3
PILE TIP ELEVATION:
AV. 3657.9 MAX 3658.4 MIN. 3657.1
SPECIFIED PILE TIP ELEV. 3654.0
PILE DATA
TYPE OF PILE
HAMMER DATA
PILE DIAMETER: TIP BUTT
PILE DESIGN LOAD —
FOR THE STRUCTURE:
NUMBER OF PILES —
EST. LENGTH OF PILING —
PILE DATA
TYPE OF PILE CIDH
HAMMER DATA P&C Auger Rig
PILE DIAMETER: TIP 16" BUTT 16"
PILE DESIGN LOAD — 45 T
FOR THE STRUCTURE:
NUMBER OF PILES — 46
EST. LENGTH OF PILING — 950 l.f.
ACTUAL — 954.2 l.f.
AS BUILT
CORRECTIONS BY P.P. Sommariva
CONTRACT NO. 08039624 (64-8V13C24-F)
DATE 8/24/64
BRIDGE DEPARTMENT
Approximate existing ground line along ℄ Palm Ave
Slightly compact to very dense buff to light brown poorly sorted fine to coarse sand, some silt binder, occasional gravel
6-15-62
6-14-62
3680 3670 3660 3650 3640 3630
255 256 257 258 259 260 261
NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE JUNE, 1962
FIELD STUDY by Rammelkamp 6-15-62
DRAWN by Erskine 7-16-62
CHECKED
Approval Recommended by

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND". THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

Gravel; Sand; Silt; Clay; Sandy Clay or Clayey Sand; Sandy Silt or Silty Sand; Silty Clay or Clayey Silt; Peat and/or Organic Matter; Fill Material; Igneous Rock; Sedimentary Rock; Metamorphic Rock

LEGEND OF BORING OPERATIONS

Penetrometer; 2¼" Cone Penetrometer; Sampler boring (dry); Rotary boring (wet); Auger boring (dry); Jet boring; Core boring; Test pit

1" SOIL TUBE — ROTARY BORING — PENETRATION BORING

NOTE

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 9 OF 9

PALM AVENUE OVERCROSSING

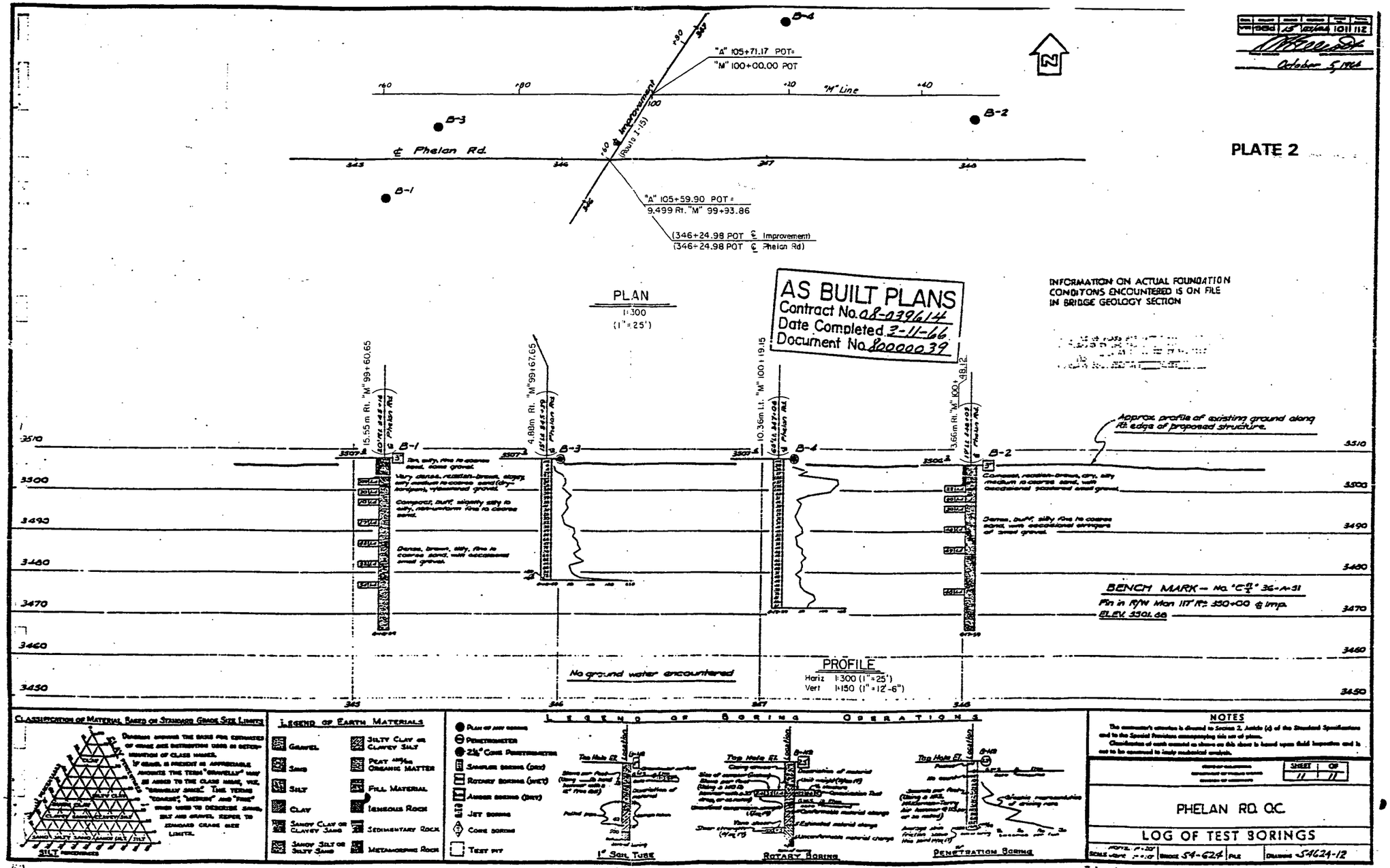
LOG OF TEST BORINGS

SCALE Horiz: 1" = 20' Vert: 1" = 10' | BRIDGE 54-666 | FILE | DRAWING 54666-9

82

Main Street

	DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
TO ACCOMPANY PLANS DATED	08	SBd				



DESIGN OVERSIGHT	NOTE: ADDITIONAL AS-BUILT FOUNDATION DATA MAY BE AVAILABLE AT THE DIVISION OF NEW TECHNOLOGY, MATERIALS AND RESEARCH 5900 FOLSOM BOULEVARD, SACRAMENTO, CALIFORNIA 95819	DESIGN	BY M. Maechler	CHECKED E. Tsai	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	M. Maechler PROJECT ENGINEER
SIGNOFF DATE		DETAILS	BY C. Houghton	CHECKED E. Tsai		
		QUANTITIES	BY E. Wong	CHECKED Y. Ton		

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08325
EA 37020K

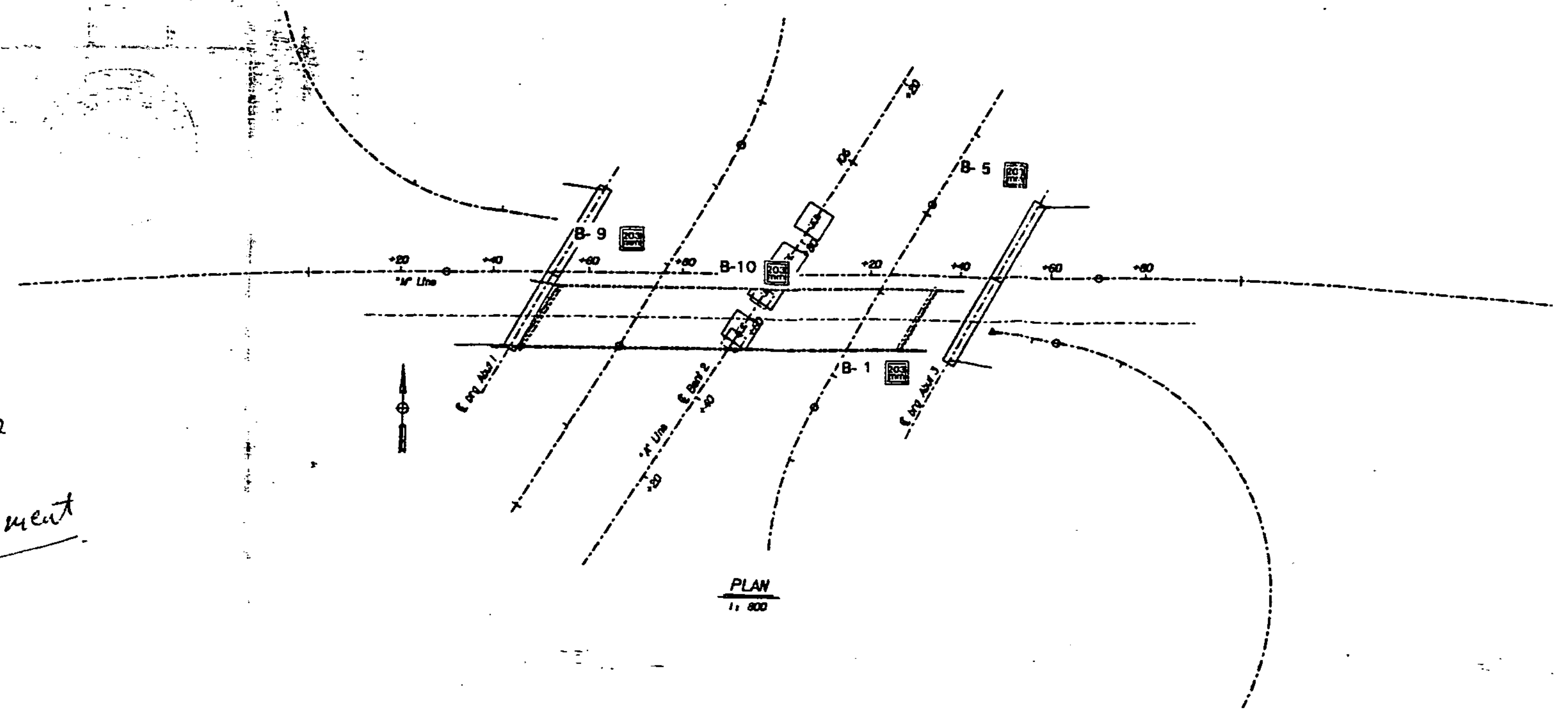
54-1273

BRIDGE NO.	MAIN STREET OVERCROSSING
54624	
POST MILE	AS-BUILT LOG OF TEST BORINGS
5.472	

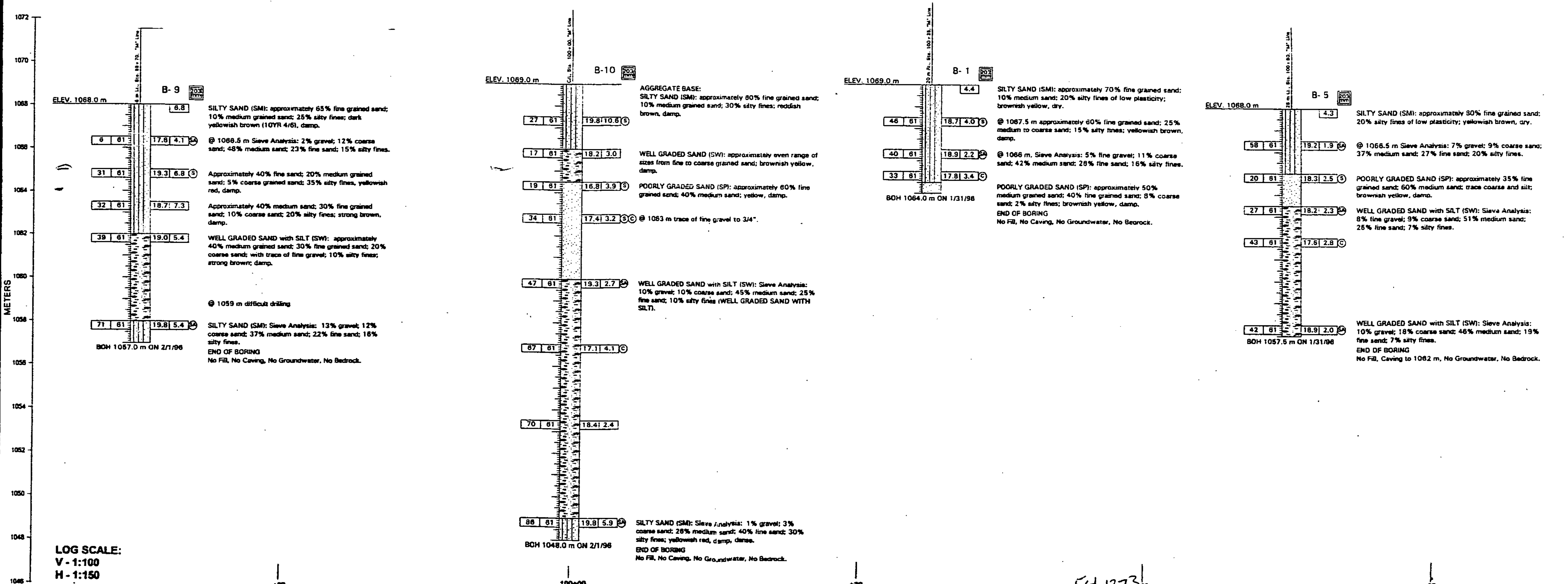
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY) , ,

SHEET 18 OF 18



0.5m remove of fill embankment



B-9

ELEV. 1068.0 m

SILTY SAND (SM): approximately 65% fine grained sand; 10% medium grained sand; 25% silty fines; dark yellowish brown (10YR 4/6), damp.

@ 1066.5 m Sieve Analysis: 2% gravel; 12% coarse sand; 48% medium sand; 23% fine sand; 15% silty fines.

Approximately 40% fine sand; 20% medium grained sand; 5% coarse grained sand; 35% silty fines, yellowish red, damp.

Approximately 40% medium sand; 30% fine grained sand; 10% coarse sand; 20% silty fines; strong brown, damp.

WELL GRADED SAND with SILT (SW): approximately 40% medium grained sand; 30% fine grained sand; 20% coarse sand; with trace of fine gravel; 10% silty fines; strong brown; damp.

@ 1059 m difficult drilling

SILTY SAND (SM): Sieve Analysis: 13% gravel; 12% coarse sand; 37% medium sand; 22% fine sand; 18% silty fines.

END OF BORING

No Fill, No Caving, No Groundwater, No Bedrock.

BOH 1057.0 m ON 2/1/96

Blows	Sampler (mm)	Dry unit weight	% Moisture	Test
			6.8	
6	61	17.6	4.1	SA
31	61	19.3	6.8	S
32	61	18.7	7.3	
39	61	19.0	5.4	
71	61	19.8	5.4	SA

B-10

ELEV. 1069.0 m

AGGREGATE BASE:
SILTY SAND (SM): approximately 60% fine grained sand; 10% medium grained sand; 30% silty fines; reddish brown, damp.

WELL GRADED SAND (SW): approximately even range of sizes from fine to coarse grained sand; brownish yellow, damp.

POORLY GRADED SAND (SP): approximately 60% fine grained sand; 40% medium sand; yellow, damp.

@ 1063 m trace of fine gravel to 3/4".

WELL GRADED SAND with SILT (SW): Sieve Analysis: 10% gravel; 10% coarse sand; 45% medium sand; 25% fine sand; 10% silty fines (WELL GRADED SAND WITH SILT).

SILTY SAND (SM): Sieve Analysis: 1% gravel; 3% coarse sand; 26% medium sand; 40% fine sand; 30% silty fines; yellowish red, damp, dense.

END OF BORING

No Fill, No Caving, No Groundwater, No Bedrock.

BOH 1048.0 m ON 2/1/96

Blows	Sampler (mm)	Dry unit weight	% Moisture	Test
27	61	19.8	10.6	S
17	61	18.2	3.0	
19	61	16.8	3.9	S
34	61	17.4	3.2	S C
47	61	19.3	2.7	SA
67	61	17.1	4.1	C
70	61	18.4	2.4	
86	61	19.8	5.9	SA

B-1

ELEV. 1069.0 m

SILTY SAND (SM): approximately 70% fine grained sand; 10% medium sand; 20% silty fines of low plasticity; brownish yellow, dry.

@ 1067.5 m approximately 60% fine grained sand; 25% medium to coarse sand; 15% silty fines; yellowish brown, damp.

@ 1066 m, Sieve Analysis: 5% fine gravel; 11% coarse sand; 42% medium sand; 26% fine sand; 16% silty fines.

POORLY GRADED SAND (SP): approximately 50% medium grained sand; 40% fine grained sand; 8% coarse sand; 2% silty fines; brownish yellow, damp.

END OF BORING

No Fill, No Caving, No Groundwater, No Bedrock.

BOH 1064.0 m ON 1/31/96

Blows	Sampler (mm)	Dry unit weight	% Moisture	Test
			4.4	
46	61	18.7	4.0	S
40	61	18.9	2.2	SA
33	61	17.8	3.4	C

B-5

ELEV. 1068.0 m

SILTY SAND (SM): approximately 80% fine grained sand; 20% silty fines of low plasticity; yellowish brown, dry.

@ 1066.5 m Sieve Analysis: 7% gravel; 9% coarse sand; 37% medium sand; 27% fine sand; 20% silty fines.

POORLY GRADED SAND (SP): approximately 35% fine grained sand; 60% medium sand; trace coarse and silt; brownish yellow, damp.

WELL GRADED SAND with SILT (SW): Sieve Analysis: 8% fine gravel; 9% coarse sand; 51% medium sand; 25% fine sand; 7% silty fines.

WELL GRADED SAND with SILT (SW): Sieve Analysis: 10% gravel; 18% coarse sand; 46% medium sand; 19% fine sand; 7% silty fines.

END OF BORING

No Fill, Caving to 1062 m, No Groundwater, No Bedrock.

BOH 1057.5 m ON 1/31/96

Blows	Sampler (mm)	Dry unit weight	% Moisture	Test
			4.3	
58	61	19.2	1.9	SA
20	61	18.3	2.5	S
27	61	18.2	2.3	SA
43	61	17.6	2.8	C
42	61	18.9	2.0	SA

LOG SCALE:
V - 1:100
H - 1:150

NOTES:
-BLOWS ARE CONVERTED TO STANDARD PENETRATION TEST DATA.
-BORING ELEVATIONS ARE BASED ON TOPOGRAPHY FROM CONCEPTUAL GEOMETRIC DRAWING MAIN STREET/ RTE 15 INTERCHANGE (12/14/95).

LEGEND OF BORING OPERATIONS

LEGEND OF EARTH MATERIALS

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Index (Blows / 0.3 m)	Granular	Cohesive
0-4	Very Loose	Very Soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very Stiff
35-49	Dense	Hard
>70	Very Dense	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DIST.	COUNTY	ROUTE	KILOMETER POSTS TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd				

Caltrans Metric

REGISTERED ENGINEERING GEOLOGIST 4/3/97

REGISTERED GEOLOGIST JEFFREY J. JOHNSTON No. 1993 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

54-1273

ENGINEERING SERVICE CENTER	STRUCTURE FOUNDATIONS	FIELD INVESTIGATION BY: J. JOHNSTON, LOR Geotechnical Group, Inc., 6121 Quail Valley Court, Riverside, California 92507	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION
DRAWN BY	JJJ		
CHECKED BY	JPL		

DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. ~~54-624~~
KILOMETER POST 15-53.9/55.9

MAIN STREET OVERCROSSING
LOG OF TEST BORINGS

ORIGINAL V-SCALE IN MILLIMETERS FOR REDUCED PLANS → 0 1 2 3 4 5 6 7 8 9 10

CU: 08325
EA: 37020K

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 4/96 | 11/96 | 4/97 | 6/97

SHEET 17 OF 18

California Aqueduct

7 CALIF.
08 S.Bd. 15 31.3
DATE APPROVED
N 33, 991.016
E 23, 887.308
FRONT ROAD
IMP
℄ CALIFORNIA AQUEDUCT
ROAD
℄ LT.
℄ RT. FRONT
B-2
B-3
B-1
1779
1780
1781
PLAN
Scale: 1" = 20'
NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
BENCH MARK
B.M.# 37-A-57 Sp. hd. nail in lead top S.E. cor. D.I. 31' Rt. ℄ Imp. 362+59 Elev. 3475.96
Approx. existing ground line along ℄ of Aqueduct
3470
3460
3450
3440
3430
3420
Slightly compact to compact brown to reddish-tan poorly sorted sand, in part silty, with sparse gravel
Dense to very dense light brown gravelly poorly sorted sand, in part silty
Brown silty sand
Very dense light brown gravelly poorly sorted sand
1-26-67
Slightly compact to compact brown to reddish-tan gravelly poorly sorted sand, in part silty
Dense to very dense light brown to reddish-tan gravelly poorly sorted sand, in part silty
1-27-67
Dense to very dense brown to reddish-tan gravelly poorly sorted sand, in part silty
Dense to very dense light brown gravelly poorly sorted sand with sparse silty sand
1-25-67
1782
PROFILE
Scale: Vert. 1" = 10' Horiz. 1" = 20'
LEGEND OF BORING OPERATIONS
1" SOIL TUBE
ROTARY BORING
PENETRATION BORING
LEGEND OF EARTH MATERIALS
Gravel
Sand
Silt
Clay
Sandy Clay or Clayey Sand
Sandy Silt or Silty Sand
Silty Clay or Clayey Silt
Peat and/or Organic Matter
Fill Material
Igneous Rock
Sedimentary Rock
Metamorphic Rock
CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.
FIELD STUDY
DRAWN
CHECKED
BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
CALIFORNIA AQUEDUCT
LOG OF TEST BORINGS
SCALE As Noted
BRIDGE 54-828
FILE
DRAWING
Chg. 08201
W.A. 101701
Disregard prints bearing earlier numbers
PREL. DRAWING No. PR-

Bear Valley Road OC

FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CAL.				

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	SBd	15	37.1/44.6	112	112

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 5563

DATE APPROVED October 5, 1964

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

Gravel, Sand, Silt, Clay, Sandy Clay or Clayey Sand, Sandy Silt or Silty Sand, Silty Clay or Clayey Silt, Peat and/or Organic Matter, Fill Material, Igneous Rock, Sedimentary Rock, Metamorphic Rock

LEGEND OF BORING OPERATIONS

Plan of any boring; Penetrometer; 2¼" Cone Penetrometer; Sampler boring (dry); Rotary boring (wet); Auger boring (dry); Jet boring; Core boring; Test pit

1" Soil Tube — Rotary Boring — Penetration Boring

NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 11 OF 11

BEAR VALLEY CUTOFF O.C.

LOG OF TEST BORINGS

SCALE Horiz. 1"=20' Vert. 1"=10' — BRIDGE 54-625 — FILE — DRAWING 54625-12

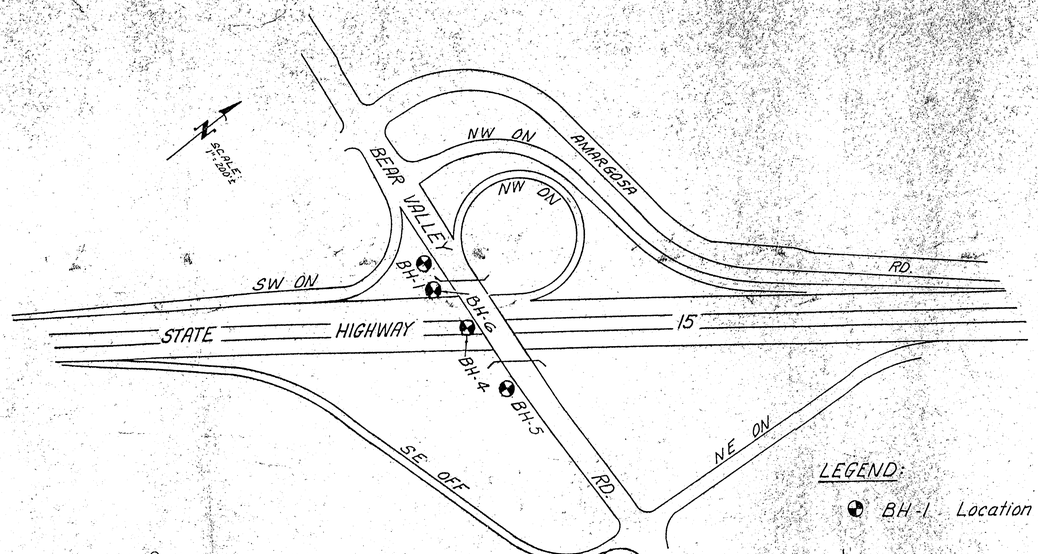
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15			

Ronald F. Carducci
GEOTECHNICAL PROFESSIONAL

PLANS APPROVAL DATE

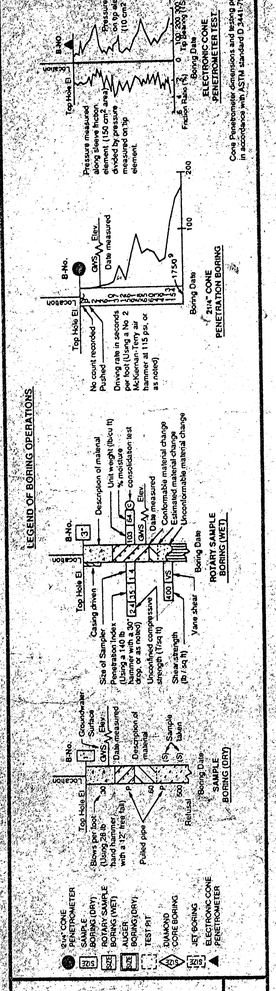
REGISTERED PROFESSIONAL ENGINEER
RONALD F. CARDUCCI
No. 1851
Exp. 12/30/93
GEOTECHNICAL
STATE OF CALIFORNIA

CAL-WEST Consultants
12210 MICHIGAN AVE. #26
GRAND TERRACE, CA 92324
(714) 824-1777



LEGEND:

● BH-1 Location of Test Boring (Typ.)



LEGEND OF EARTH MATERIALS

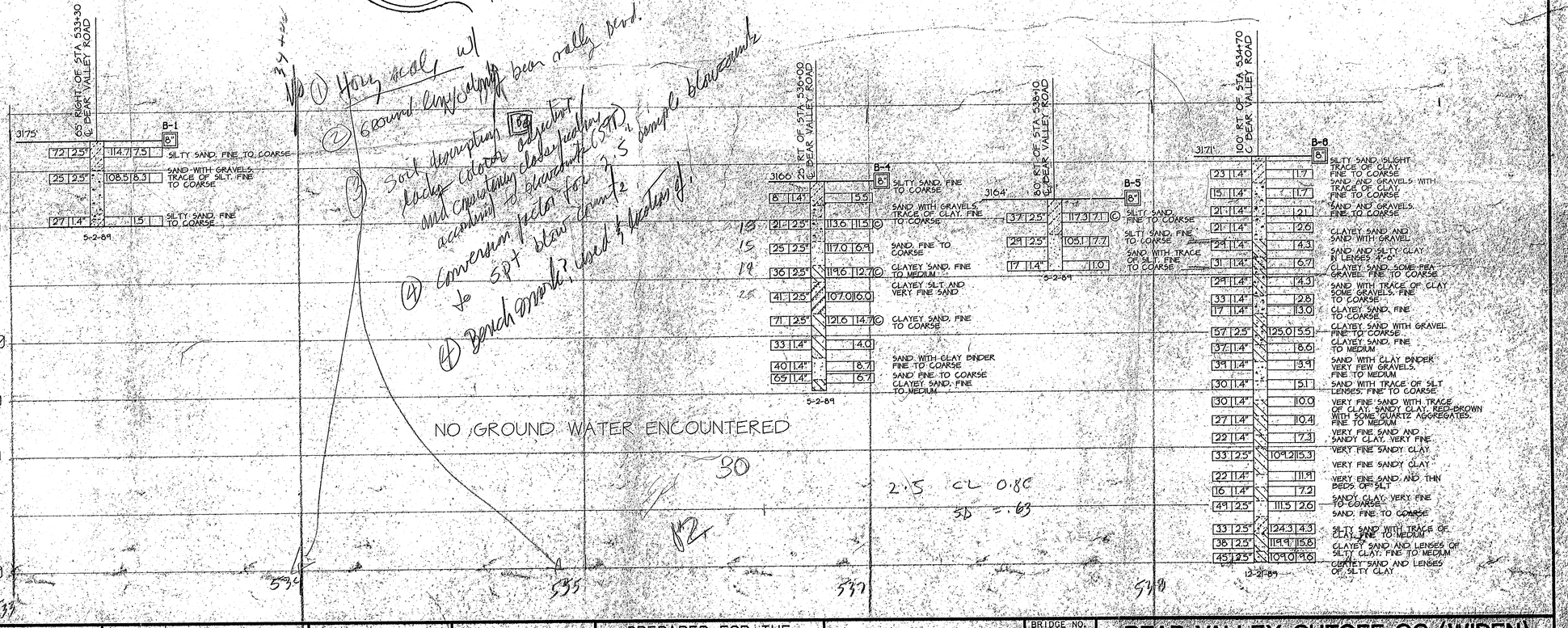
GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT (with ORGANIC MATTER) · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Resistance (Blows/Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Slightly stiff
20-34	Compact	Stiff
35-69	Dense	Very stiff
70+	Very dense	Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



DESIGN OVERSIGHT	DRAWN BY	N. BEDLION	R.F. CARDUCCI FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 54-625
SIGN OFF DATE	CHECKED BY	R.F. CARDUCCI	DATE 5-3 & 12-21-89	PROJECT ENGINEER	POST MILE 37.6
				CU 08103 EA 345000	

BEAR VALLEY CUTOFF OC (WIDEN)

LOG OF TEST BORINGS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET OF 15 15

MAY 16 1990

La Mesa Nisqualli Road OC

BENCHMARKS

MONUMENTS	COORDINATES NORTHING	COORDINATES EASTING	ELEVATIONS	DESCRIPTION
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 60D Spk 1 m westerly of the northbound edge of pavement I-15, Station 160+78.653 centerline I-15, 2.838 meters right.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
8	SBd	15	61.5 / 63.4		

REGISTERED CIVIL ENGINEER DATE

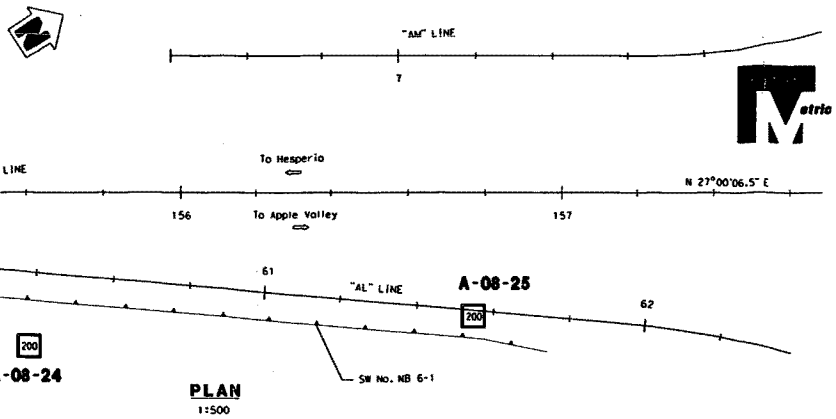
Eric Brown No. 60249 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708

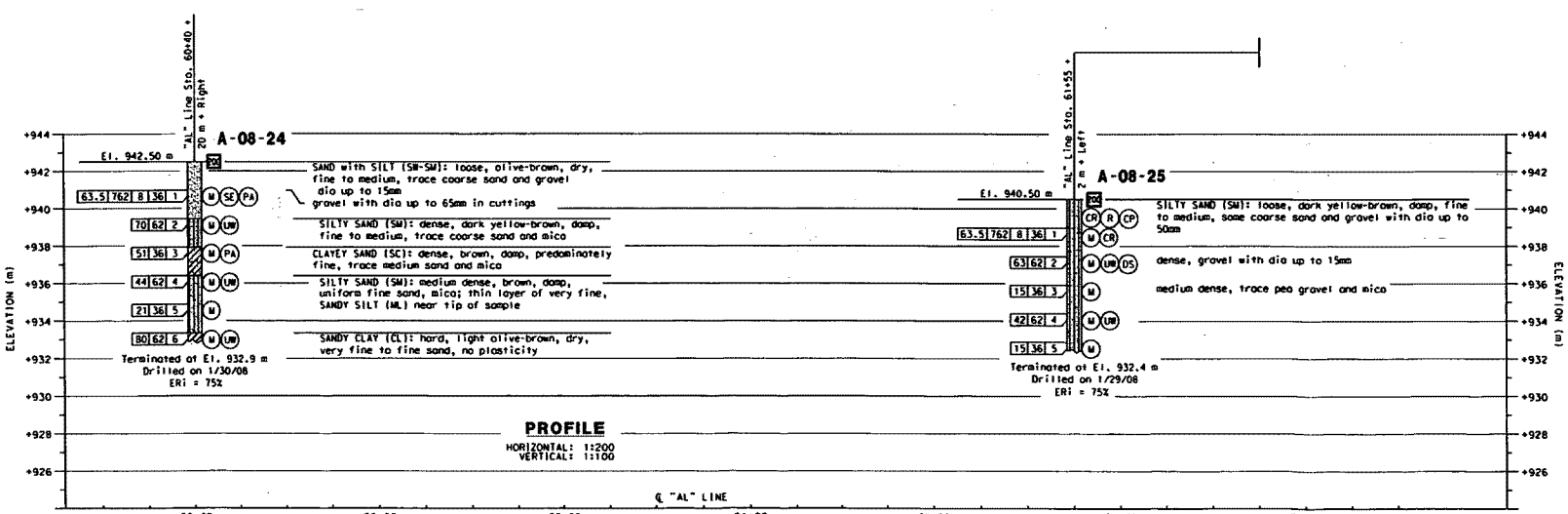


NOTES

62mm samples were taken using a California split-barrel sampler with an inside diameter (I.D) of 62mm and an outside diameter (O.D) of 83mm.

A rope and cathead hammer system consisting of a hammer weight of 63.5KN falling a distance of 762mm was used to advance the drive sampler(s)

This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION			
FUNCTIONAL SUPERVISOR: K. Arulmoli	DRAWN BY: E. Brown	FIELD INVESTIGATION BY: R. Jie	E. Brown PROJECT ENGINEER	BRIDGE NO. XX-XXXX	SOUND WALL NO. NB 6-1
	CHECKED BY: R. Gunaranjan			KILOMETER POST XX.XX	LOG OF TEST BORINGS

OSF CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (ENI REV. 2-4-09)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 20 40 60 80 100

CU EA 0A04501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

FILE => $REQUEST

DATE PLOTTED => $TIME

TIME PLOTTED => $TIME

USERNAME => $USER

BENCHMARKS

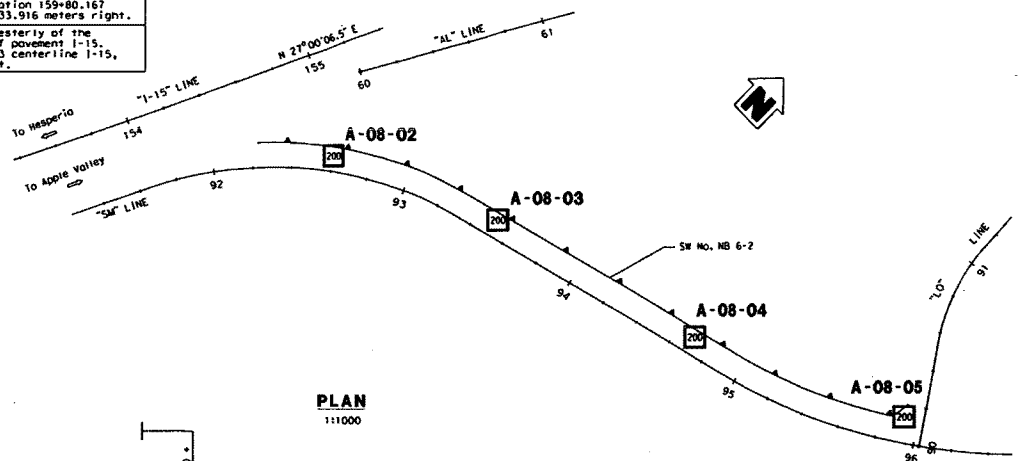
MONUMENTS	COORDINATES		ELEVATIONS	DESCRIPTION
	NORTHING	EASTING		
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 60D Spk 1 m westerly of the northbound edge of pavement I-15, Station 160+76.653 centerline I-15, 2.838 meters right.

NOTES

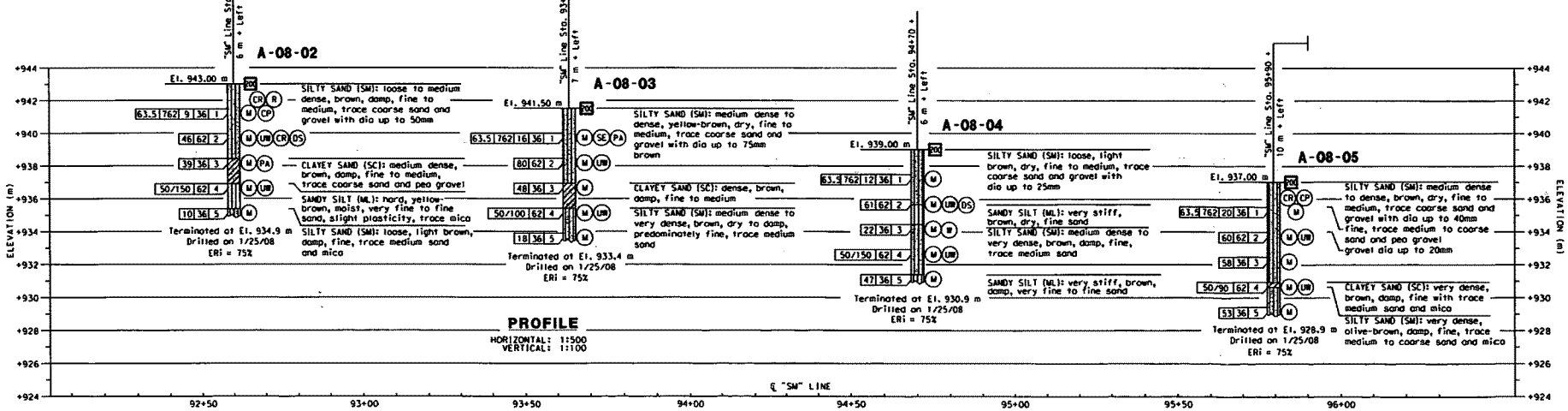
62mm samples were taken using a California split-barrel sampler with an inside diameter (I.D) of 62mm and an outside diameter (O.D) of 83mm.

A rope and cathead hammer system consisting of a hammer weight of 63.5kN falling a distance of 762mm was used to advance the drive sampler(s)

This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



PLAN
1:1000



PROFILE
HORIZONTAL: 1:500
VERTICAL: 1:100

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
8	SBd	15	61.5 / 63.4		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Eric Brown — No. 60249 — Exp. 6/30/10 — CIVIL — STATE OF CALIFORNIA

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		BRIDGE NO. XX-XXXX	SOUND WALL NO. NB 6-2
FUNCTIONAL SUPERVISOR	DRAWN BY: E. Brown	FIELD INVESTIGATION BY: R. Jie	E. Brown PROJECT ENGINEER	KILOMETER POST XX.XX	LOG OF TEST BORINGS
NAME: K. Arulmoli	CHECKED BY: R. Gunaranjan				

OSF CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (EM) REV. 2-6-09)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 20 40 60 80 100

CU EA 0A04501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

FILE => $REQUEST

DATE PLOTTED => $DATE TIME PLOTTED => $TIME USERNAME => $USER

BENCHMARKS

MONUMENTS	COORDINATES		ELEVATIONS	DESCRIPTION
	NORTHING	EASTING		
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 60D Spk 1 m westerly of the northbound edge of pavement I-15, Station 160+76.653 centerline I-15, 2.838 meters right.

NOTES

62mm samples were taken using a California split-barrel sampler with an inside diameter (I.D) of 62mm and an outside diameter (O.D) of 83mm.

A rope and cathead hammer system consisting of a hammer weight of 63.5kN falling a distance of 762mm was used to advance the drive sampler(s)

This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
8	SBd	15	61.5 / 63.4		

REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER Eric Brown No. 60249 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

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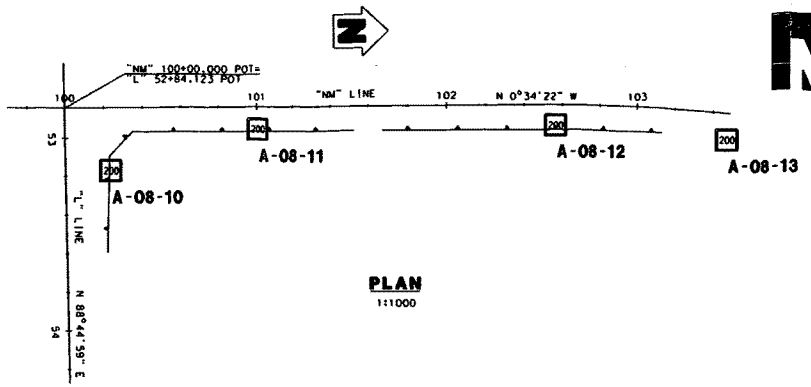
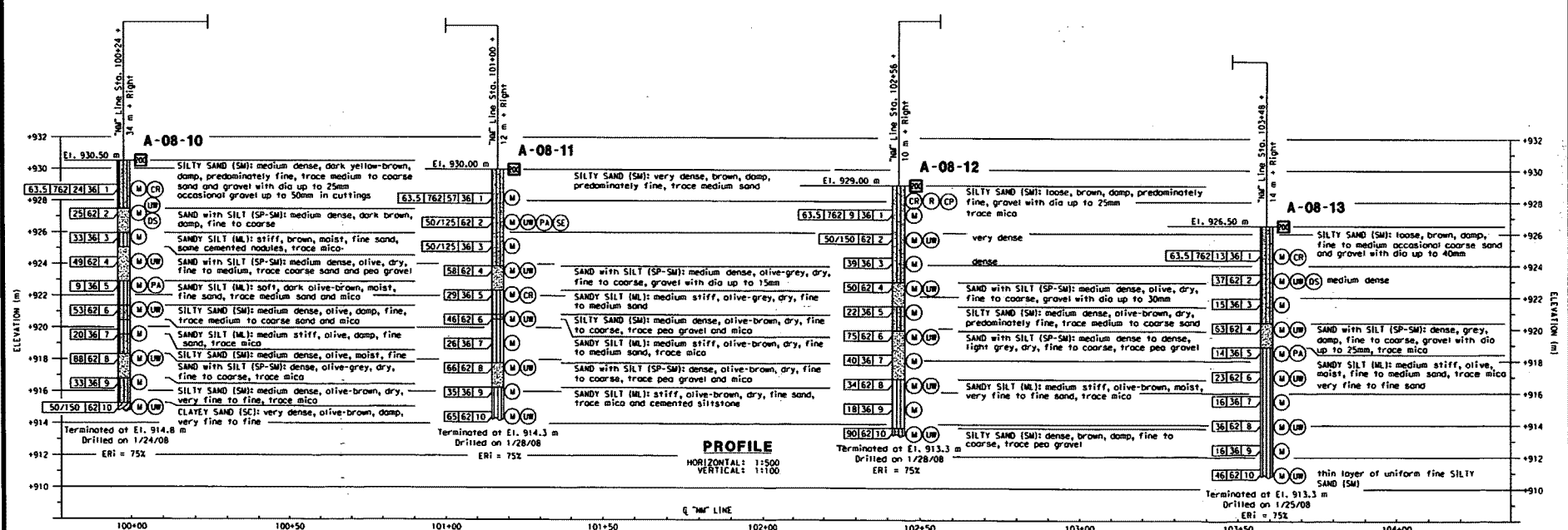
CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708



PLAN
1:1000



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION			
FUNCTIONAL SUPERVISOR: K. Arulmoli	DRAWN BY: E. Brown; CHECKED BY: R. Gunaranjan	FIELD INVESTIGATION BY: R. Jie	E. Brown PROJECT ENGINEER	BRIDGE NO. XX-XXXX; KILOMETER POST XX.XX	RETAINING WALL NO. NB 6-3 (A/B) LOG OF TEST BORINGS

DSF CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (EH) REV. 2-4-09

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 20 40 60 80 100

CU EA 0404501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

FILE => $REQUEST

USERNAME => $USER DATE PLOTTED => $DATE TIME PLOTTED => $TIME

BENCHMARKS

MONUMENTS	COORDINATES NORTHING	COORDINATES EASTING	ELEVATIONS	DESCRIPTION
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 600 Spk 1 m westerly of the northbound edge of pavement I-15, Station 160+76.653 centerline I-15, 2.838 meters right.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
8	SBd	15	61.5 / 63.4		

REGISTERED CIVIL ENGINEER DATE

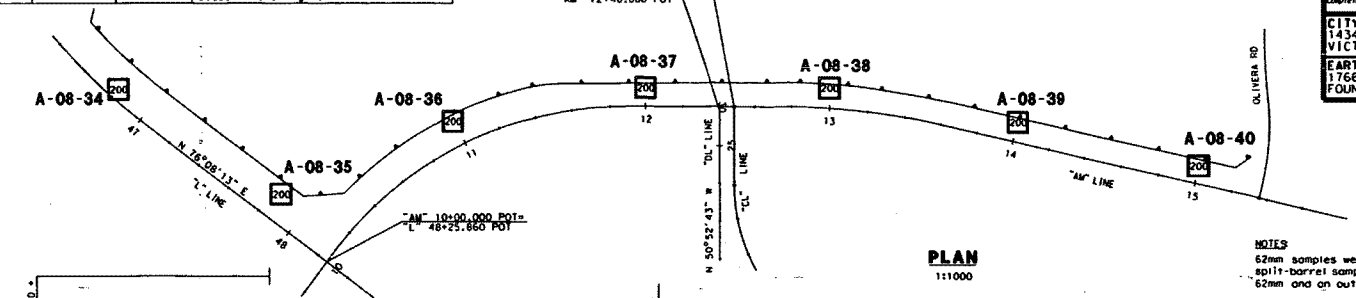
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Eric Brown — 60249 — exp. 6/30/10 — CIVIL — STATE OF CALIFORNIA

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708



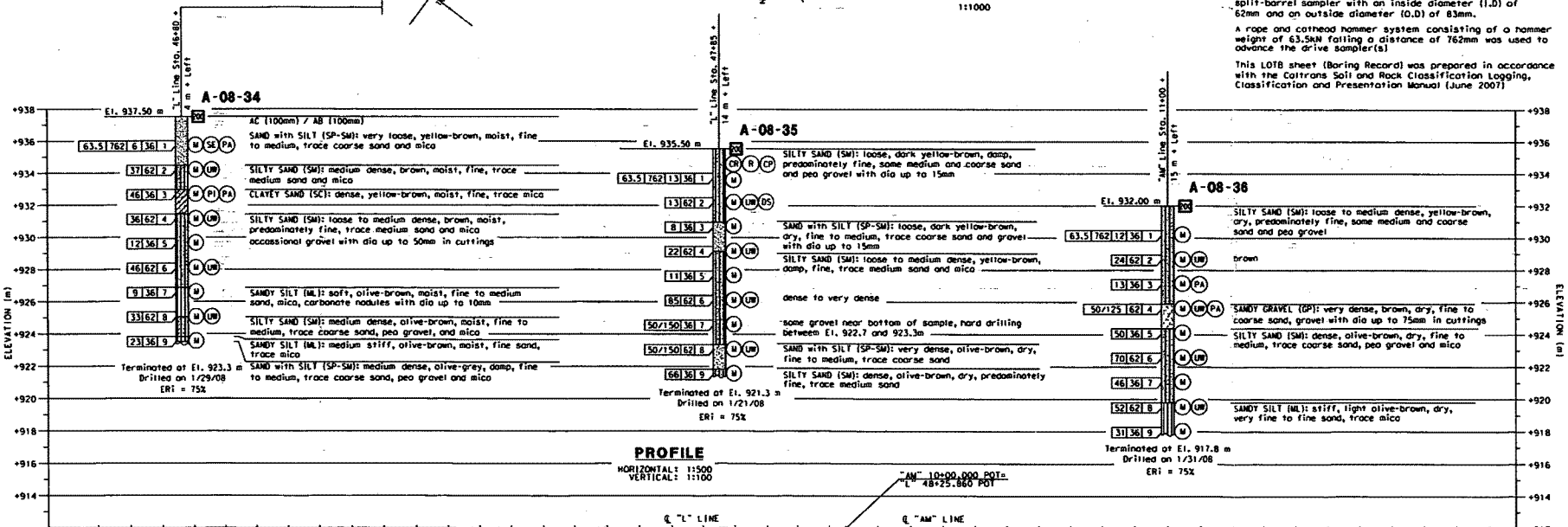
PLAN
1:1000

NOTES

62mm samples were taken using a California split-barrel sampler with an inside diameter (I.D) of 62mm and an outside diameter (O.D) of 83mm.

A rope and cathead hammer system consisting of a hammer weight of 63.5kN falling a distance of 762mm was used to advance the drive sampler(s)

This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION			
FUNCTIONAL SUPERVISOR NAME: R. Arulmoli	DRAWN BY: E. Brown; CHECKED BY: R. Gunaranjan	FIELD INVESTIGATION BY: R. Jie	E. Brown PROJECT ENGINEER	BRIDGE NO. XX-XXXX; KILOMETER POST XX.XX	RETAINING WALL NO. NB 6-5
			CU EA 0A0450I		LOG OF TEST BORINGS (1 OF 2)

OSF CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (INT REV. 2-4-08)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 20 40 60 80 100

FILE => WREQUEST

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

DATE PLOTTED => %TIME

USERNAME => %USER

BENCHMARKS

MONUMENTS	COORDINATES		ELEVATIONS	DESCRIPTION
	NORTHING	EASTING		
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 60D Spk 1 m westerly of the northbound edge of pavement I-15, Station 160+76.653 centerline I-15, 2.838 meters right.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
8	SBd	15	61.5 / 63.4		

REGISTERED CIVIL ENGINEER DATE

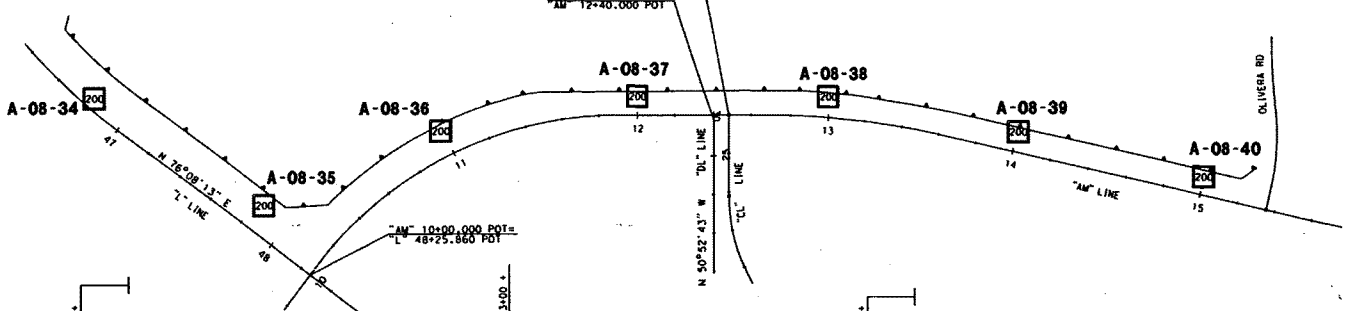
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Eric Brown — NO. 60249 — EXP. 6/30/10 — CIVIL — STATE OF CALIFORNIA

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708

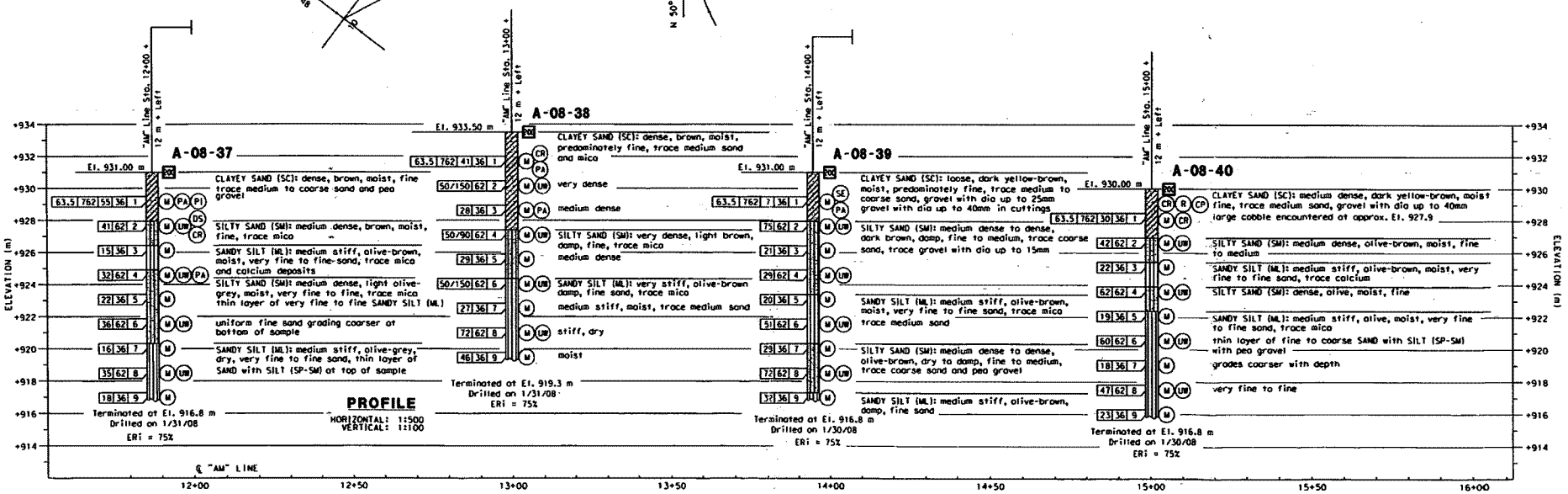


NOTES :

62mm samples were taken using a California split-barrel sampler with an inside diameter (I.D) of 62mm and an outside diameter (O.D) of 83mm.

A rope and cathead hammer system consisting of a hammer weight of 63.5kN falling a distance of 762mm was used to advance the drive sampler(s)

This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION			
FUNCTIONAL SUPERVISOR: K. Arulmoli	DRAWN BY: E. Brown	FIELD INVESTIGATION BY: R. Jie	E. Brown PROJECT ENGINEER	BRIDGE NO. XX-XXXX	RETAINING WALL NO. NB 6-5
	CHECKED BY: R. Gunaranjan			KILOMETER POST XX.XX	LOG OF TEST BORINGS (2 OF 2)

OSP CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (ENI REV. 2-4-09)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 20 40 60 80 100

CU XXXXXX
EA 0A0450

FILE =>$REQUEST

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

DATE PLOTTED => $DATE

TIME PLOTTED => $TIME

USERNAME => $USER

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
8	SBd	15	61.5 / 63.4		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Eric Brown — No. 60249 — Exp. 6/30/10 — CIVIL — STATE OF CALIFORNIA

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

PARSONS BRINCKERHOFF
985 EAST CARNEGIE DRIVE, SUITE 210
SAN BERNARDINO, CA 92408

EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708

BENCHMARKS

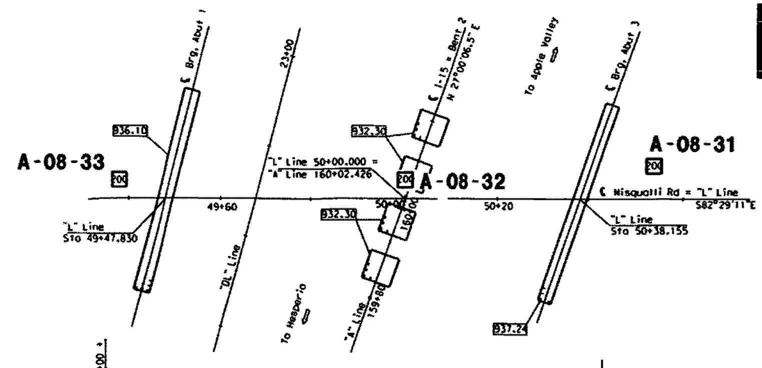
MONUMENTS	COORDINATES		ELEVATIONS	DESCRIPTION
	NORTHING	EASTING		
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 60D Spk 1 m westerly of the northbound edge of pavement I-15. Station 160+76.653 centerline I-15, 2.838 meters right.

NOTES

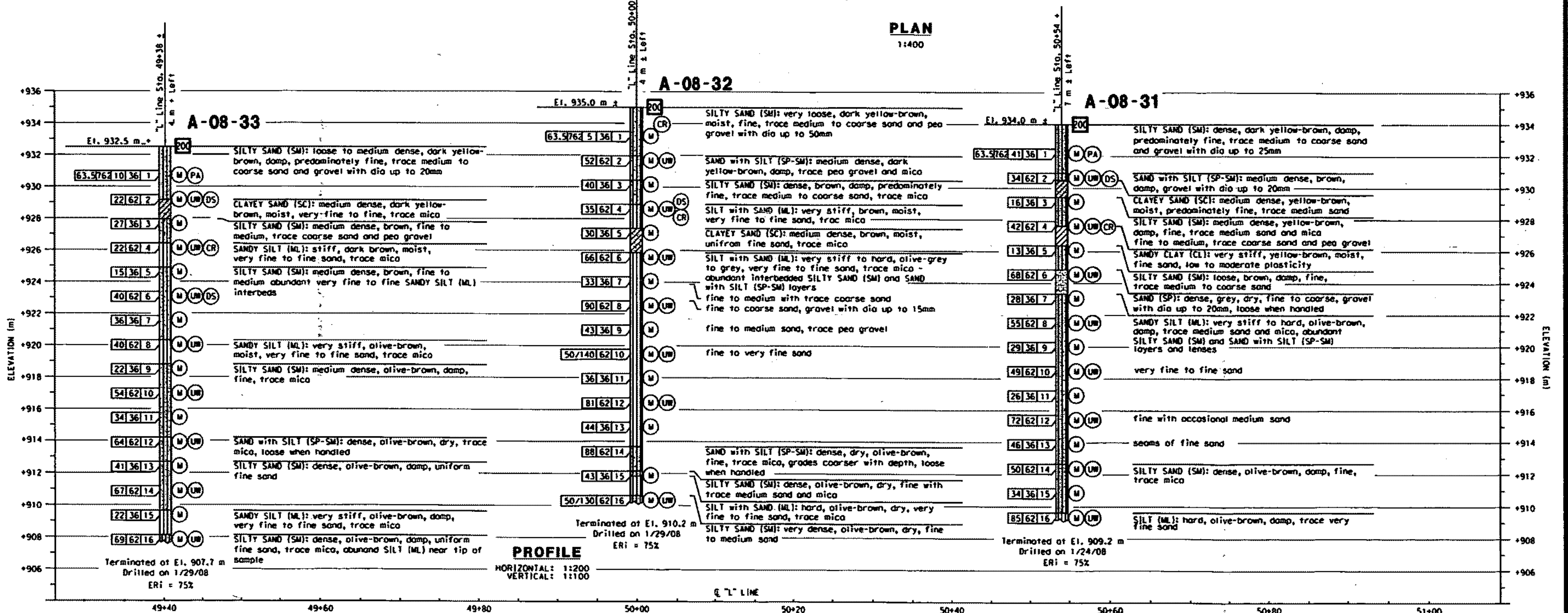
62mm samples were taken using a California split-barrel sampler with an inside diameter (I.D) of 62mm and an outside diameter (O.D) of 83mm.

A rope and cathead hammer system consisting of a hammer weight of 63.5kN falling a distance of 762mm was used to advance the drive sampler(s)

This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



PLAN
1:400



PROFILE
HORIZONTAL: 1:200
VERTICAL: 1:100

X DESIGN OVERSIGHT X SIGN OFF DATE	GEOTECHNICAL SERVICES DRAWN BY: E. Brown CHECKED BY: R. Gunoranjon FIELD INVESTIGATION BY: R. Jie	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	E. Brown PROJECT ENGINEER

BRIDGE NO. 54-1284
KILOMETER POST 62.41

LA MESA ROAD - NISQUALLI ROAD OVERCROSSING
LOG OF TEST BORINGS NO. 3

OSF CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (EH) REV. 2-4-08)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 08224
EA 0A4501

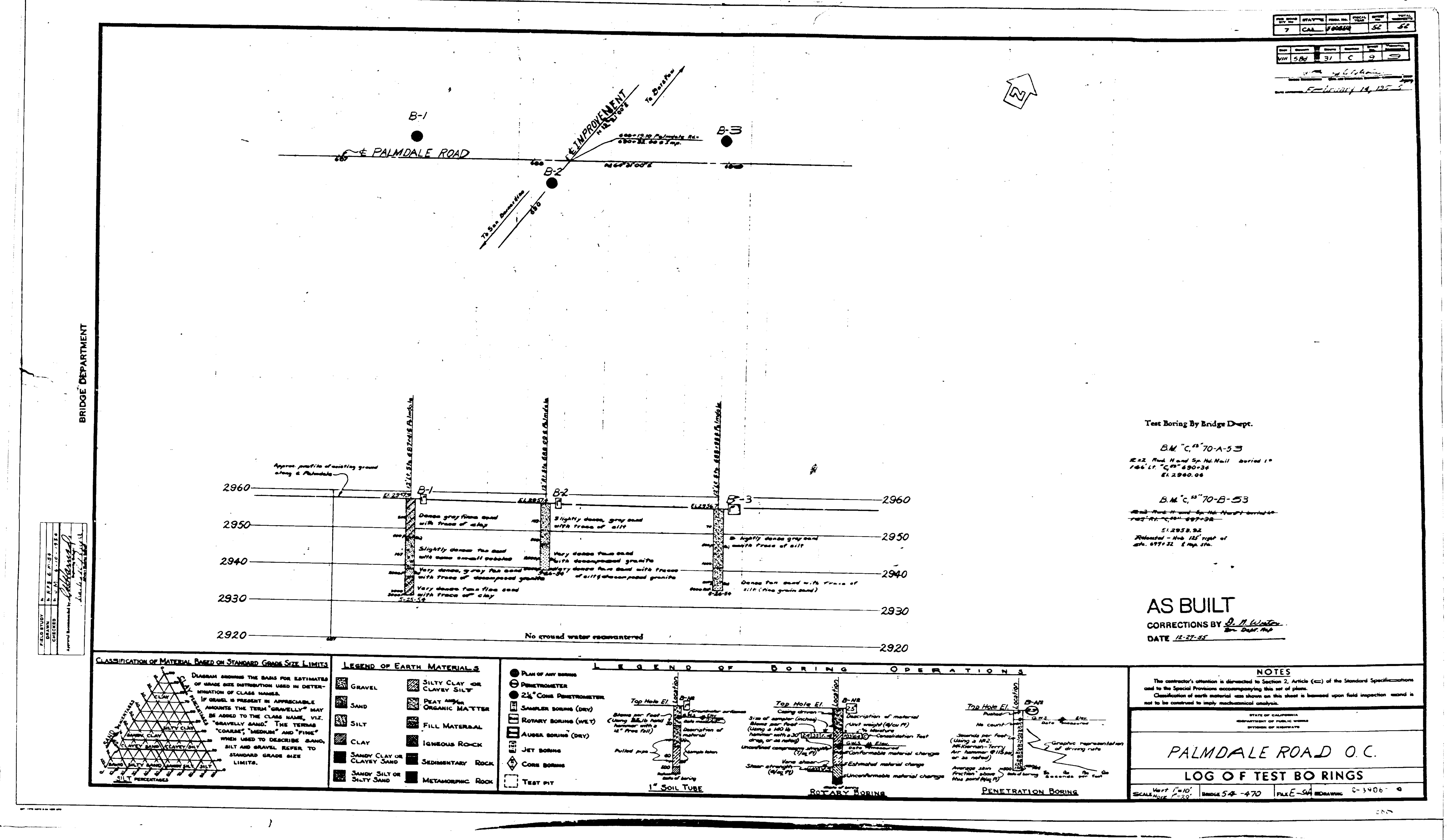
DISREGARD PRINTS BEARING EARLIER REVISION DATES

SHEET 24 OF 24

FILE => $REQUEST

USERNAME => $USER DATE PLOTTED => $DATE TIME PLOTTED => $TIME

SR 18/I 15 Separation

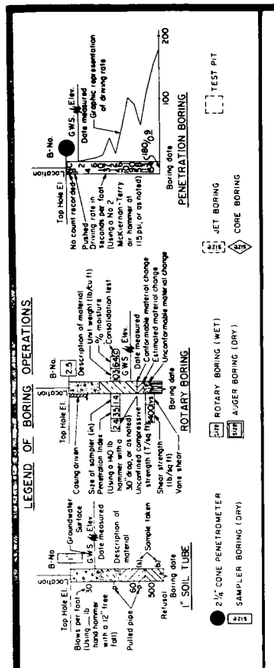

B-1
B-2
B-3
℄ PALMDALE ROAD
℄ IMPROVEMENT
To Barstow
To San Bernardino
BRIDGE DEPARTMENT
Approx. profile of existing ground along ℄ Palmdale
2960
2950
2940
2930
2920
Dense gray fine sand with trace of clay
Slightly dense tan sand with some small cobbles
Very dense, gray tan sand with trace of decomposed granite
Very dense tan fine sand with trace of clay
5-25-54
Slightly dense, gray sand with trace of silt
Very dense tan sand with decomposed granite
Very dense tan sand with traces of silt & decomposed granite
Slightly dense gray sand with trace of silt
Dense tan sand with trace of silt (fine grain sand)
No ground water encountered
Test Boring By Bridge Dept.
B.M. "C,53" 70-A-53
El. 2940.06
B.M. "C,53" 70-B-53
El. 2958.92
Relocated - Hub 125' right of Sta. 697+32 ℄ Hwy. Sta.
AS BUILT
CORRECTIONS BY
DATE 12-27-55
CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS
DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.
CLAY
SILTY CLAY
SANDY CLAY
CLAYEY SAND
CLAYEY SILT
SAND
SILTY SAND
SANDY SILT
SILT
SAND PERCENTAGES
CLAY PERCENTAGES
SILT PERCENTAGES
LEGEND OF EARTH MATERIALS
GRAVEL
SAND
SILT
CLAY
SANDY CLAY OR CLAYEY SAND
SANDY SILT OR SILTY SAND
SILTY CLAY OR CLAYEY SILT
PEAT AND/OR ORGANIC MATTER
FILL MATERIAL
IGNEOUS ROCK
SEDIMENTARY ROCK
METAMORPHIC ROCK
LEGEND OF BORING OPERATIONS
PLAN OF ANY BORING
PENETROMETER
2½" CONE PENETROMETER
SAMPLER BORING (DRY)
ROTARY BORING (WET)
AUGER BORING (DRY)
JET BORING
CORE BORING
TEST PIT
1" SOIL TUBE
ROTARY BORING
PENETRATION BORING
NOTES
The contractor's attention is directed to Section 2, Article ( ) of the Standard Specifications and to the Special Provisions accompanying this set of plans.
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
PALMDALE ROAD O.C.
LOG OF TEST BORINGS
SCALE Vert 1"=10' Horiz 1"=20'
BRIDGE 54-470
FILE E-5A
DRAWING C-3406

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD	18, 15	96.6/96.9 R0.1/R0.7	57	69

Robert L. Reynolds #165
CERTIFIED ENGINEERING GEOLOGIST — NUMBER

DATE APPROVED: July 8, 1974

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SILTY CLAY or CLAYEY SILT · PEAT and/or ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test ASTM Designation D1586-67

Penetration Resistance (Blows/Ft.)	Granular	Cohesive
0-5	Very loose	Very soft
5-10	Loose	Soft
10-20	Slightly compact	Stiff
20-35	Compact	Very stiff
35-70	Dense	Hard
>70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

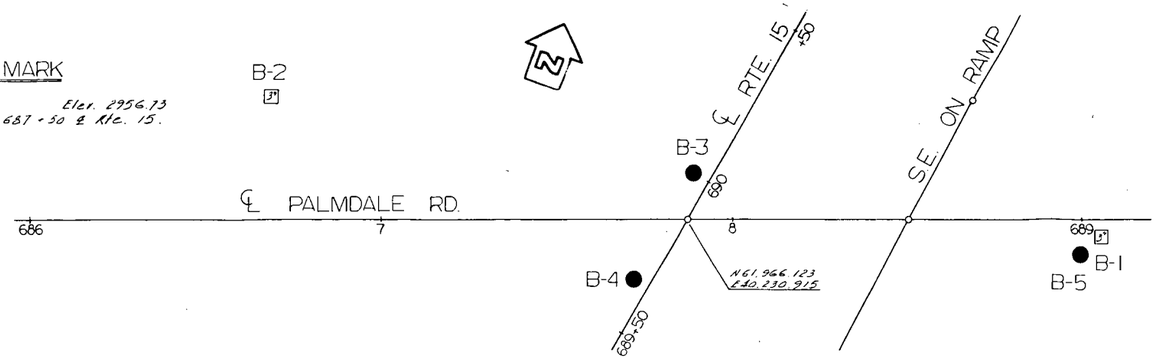
UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions	Group Symbols	Typical Names
Coarse grained Soils — Gravels — Clean gravels (little or no fines)	GW	Well graded gravels, gravel sand mixtures, little or no fines
	GP	Poorly graded gravels, gravel sand mixtures, little or no fines
Gravels with fines (Appreciable amount of fines)	GM	Silty gravels, gravel sand silt mixtures
	GC	Clayey gravels, gravel sand clay mixtures
Sands — Clean sands (little or no fines)	SW	Well graded sands, gravelly sands, little or no fines
	SP	Poorly graded sands, gravelly sands, little or no fines
Sands with fines (Appreciable amount of fines)	SM	Silty sands, sand silt mixtures
	SC	Clayey sands, sand clay mixtures
Fine grained Soils — Silts and Clays (Liquid limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	OL	Organic silts and organic silty clays of low plasticity
Silts and Clays (Liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
	CH	Inorganic clays of high plasticity, fat clays
	OH	Organic clays of medium to high plasticity, organic silts
Highly Organic Soils	Pt	Peat and other highly organic soils

HBD 0146

BENCH MARK

B.M. #69-A-70 Elev. 2956.73
T Bar and cap 90' Lt. 687 + 50 ℄ Rte. 15.



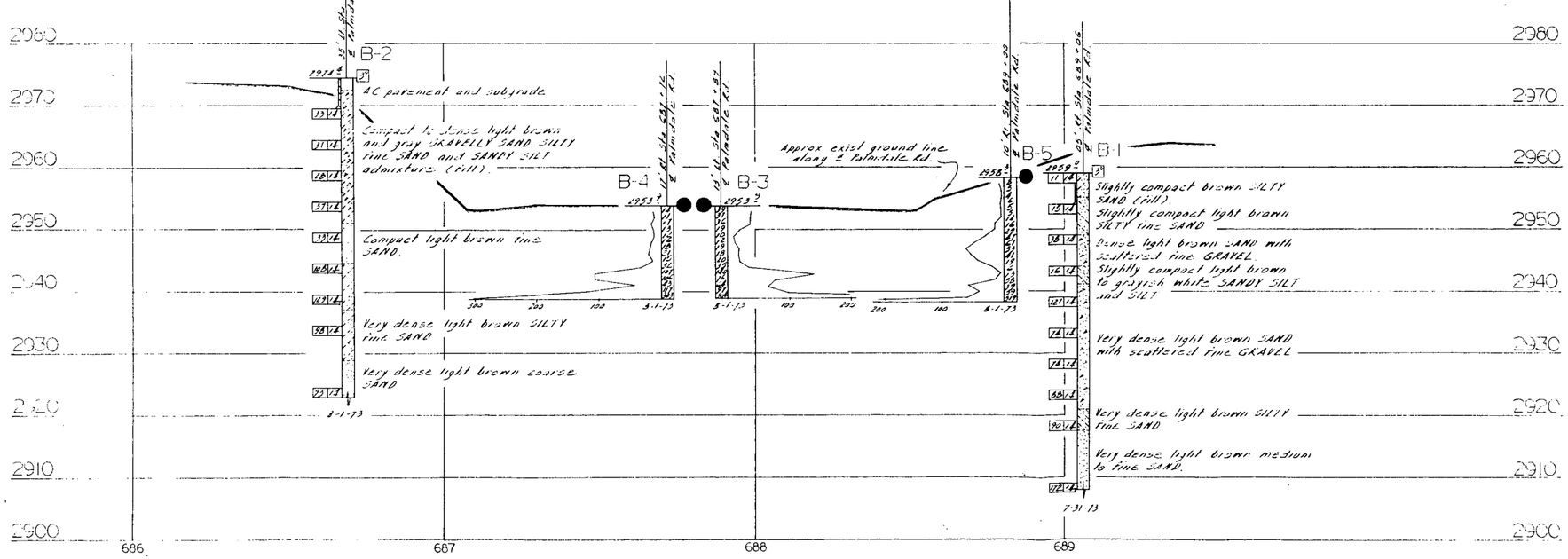
PLAN

Scale. 1" = 20'

REDUCED PLAN
USE SCALE BELOW
0 1 2 3
3 INCHES ON ORIGINAL PLAN

PROFILE

Scale. Vert. 1" = 10'
Horiz. 1" = 20'



GEOLOGY

ENGINEERING GEOLOGY SECTION			
FIELD STUDY	By D. Mikes	8-3-73	Approval Recommended By: Robert L. Reynolds — ENGINEERING GEOLOGIST
DRAWN	By J. Lan	8-8-73	
CHECKED	By M. Cain	7-5-73	CERTIFIED ENGINEERING GEOLOGIST NUMBER 40

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE DEPARTMENT
DESIGN SECTION 2
PROJECT ENGINEER Gilbert Johnston

BRIDGE NO.	POST MILE
54-470	96.57

PALMDALE ROAD SEPARATION (RTE 18/15)

LOG OF TEST BORINGS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08202
WO 131811

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 12 OF -


DIST. 08 COUNTY SBD ROUTE 18
CERTIFIED ENGINEERING GEOLOGIST
BENCH MARK
B.M. #64-A-70 Elev 2956.13
I. Bar and cap 90' Lt 687+50 ℄ Rte. 15
PLAN
Scale 1" = 20'
℄ PALMDALE RD
℄ RTE 15
SE ON RAMP
B-1
B-2
B-3
B-4
B-5
NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE August 1973
PROFILE
Scale Vert 1" = 10' Horiz 1" = 20'
Compact to dense light brown and gray GRAVELLY SAND, SILTY fine SAND and SANDY SILT admixture (fill)
Compact light brown fine SAND
Very dense light brown SILTY fine SAND
Very dense light brown coarse SAND
Approx exist ground line along ℄ Palmdale Rd
Abut 1
Bent 2
Abut 3
Slightly compact brown SILTY SAND (fill)
Slightly compact light brown SILTY fine SAND
As Built 3.0 TSF @ 2950.0
light brown SAND with scattered fine GRAVEL
Slightly compact light brown to grayish white SANDY SILT and SILT
Very dense light brown SAND with scattered fine GRAVEL
Very dense light brown SILTY fine SAND
Very dense light brown medium to fine SAND
2960
2950
2940
2930
2920
2910
2900
NOTE: Abutments and Bent locations obtained from General Plan, Sept. 20, 1973.
LEGEND OF BORING OPERATIONS
LEGEND OF EARTH MATERIALS
CONSISTENCY CLASSIFICATION FOR SOILS
OCT 5 1973
ENGINEERING GEOLOGY SECTION
FIELD STUDY
DRAWN
CHECKED
State of CALIFORNIA DEPARTMENT OF TRANSPORTATION
BRIDGE DEPARTMENT DESIGN SECTION
PROJECT ENGINEER
BRIDGE NO. 54-470
POST MILE 9.57
PALMDALE ROAD SEPARATION (18/15) (REPLACE)
LOG OF TEST BORINGS
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
CU 08202
WO 131811
Disregard prints bearing earlier revision dates
REVISION DATES (PRELIMINARY STAGE ONLY)

Roy Rogers Drive OC

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	2	5

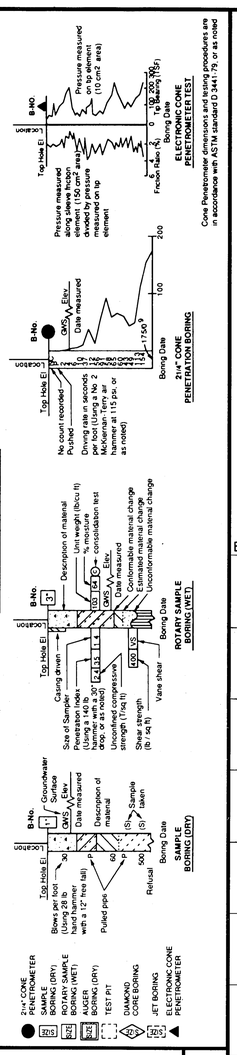
Steven P Alford
GEOTECHNICAL PROFESSIONAL

12-7-90
PLANS APPROVAL DATE

REGISTERED CIVIL ENGINEER — STEVEN P ALFORD — No. 34276 — Exp. 9/30/91 — STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT and/or ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

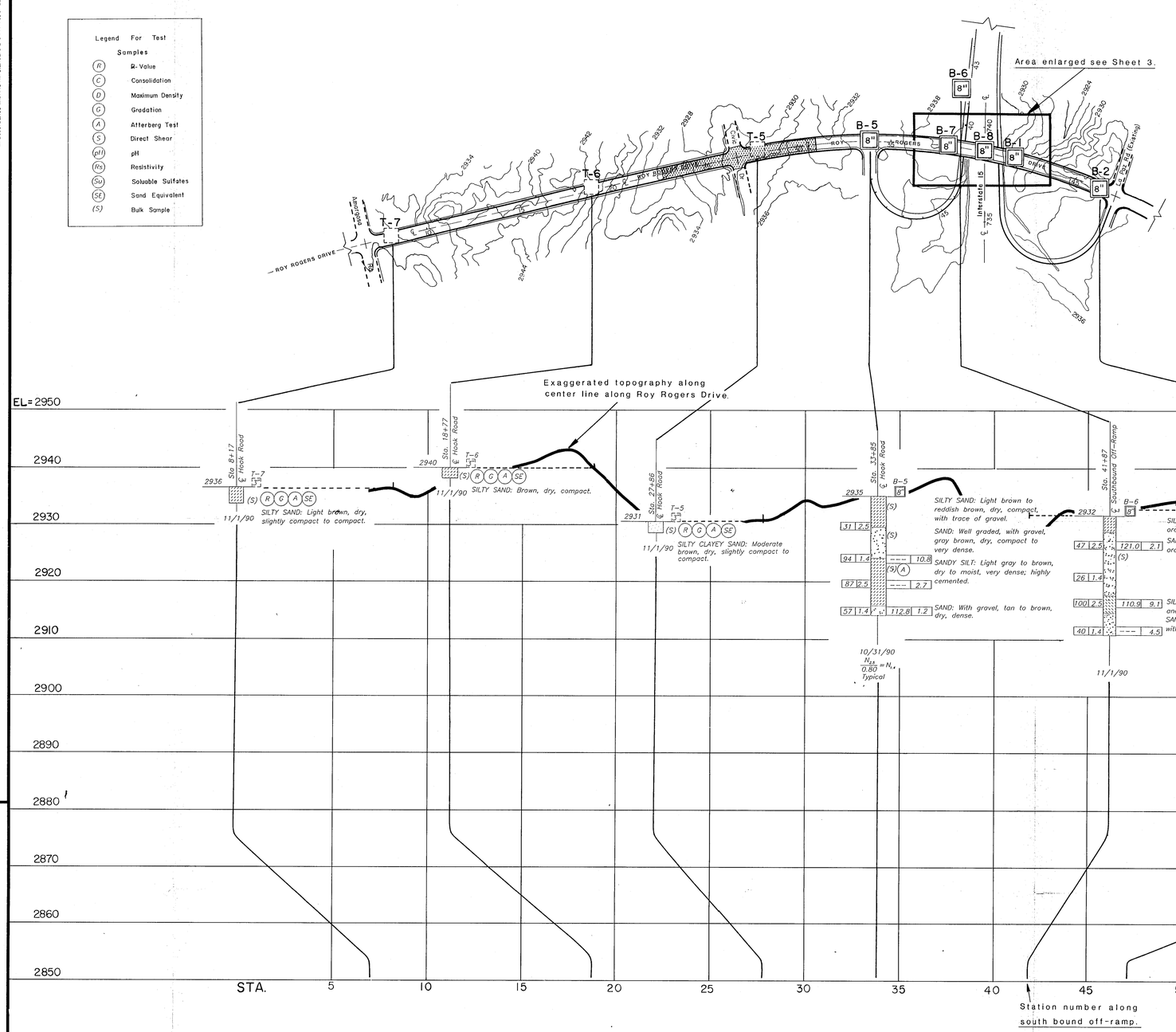
According to the Standard Penetration Test

Penetration Index (Blows / Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-65	Dense	Hard
>70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

Legend For Test Samples

- (R) R-Value
- (C) Consolidation
- (D) Maximum Density
- (G) Gradation
- (A) Atterberg Test
- (S) Direct Shear
- (pH) pH
- (Rs) Resistivity
- (Su) Soluable Sulfates
- (SE) Sand Equivalent
- (S) Bulk Sample



GEOTECHNICAL LEGEND

- T-7 — Approximate location of exploratory trench.
- B-8 / 8" — Approximate location of exploratory boring.
- 2936 — Contour line with elevation in feet above mean sea level.
- 35 ℄ — Center line of street with station number indicated.
- Center line for intersection.
- G.W. — Groundwater: No groundwater was encountered.
- Approximate location of deleterious material.

PROFILE

Horizontal: 1" = 300'
Vertical : 1" = 10'

100 0 100 200 300 (feet)

DESIGN OVERSIGHT	DRAWN BY	MILES D. KENNEY 12/7/90	GREG UECKER/FRED WINKLER FIELD INVESTIGATOR	LEIGHTON & ASSOCIATES, INC.	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
SIGN OFF DATE	CHECKED BY	STEVEN P. ALFORD 12/7/90	DATE 10/31/90 & 11/1/90	P.N. 12900307-03	PROJECT ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08103
EA 251901

BRIDGE NO. 54-1118
POST MILE 40.52

ROY ROGERS DRIVE OVERCROSSING
LOG OF TEST BORINGS

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 2 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	3	5

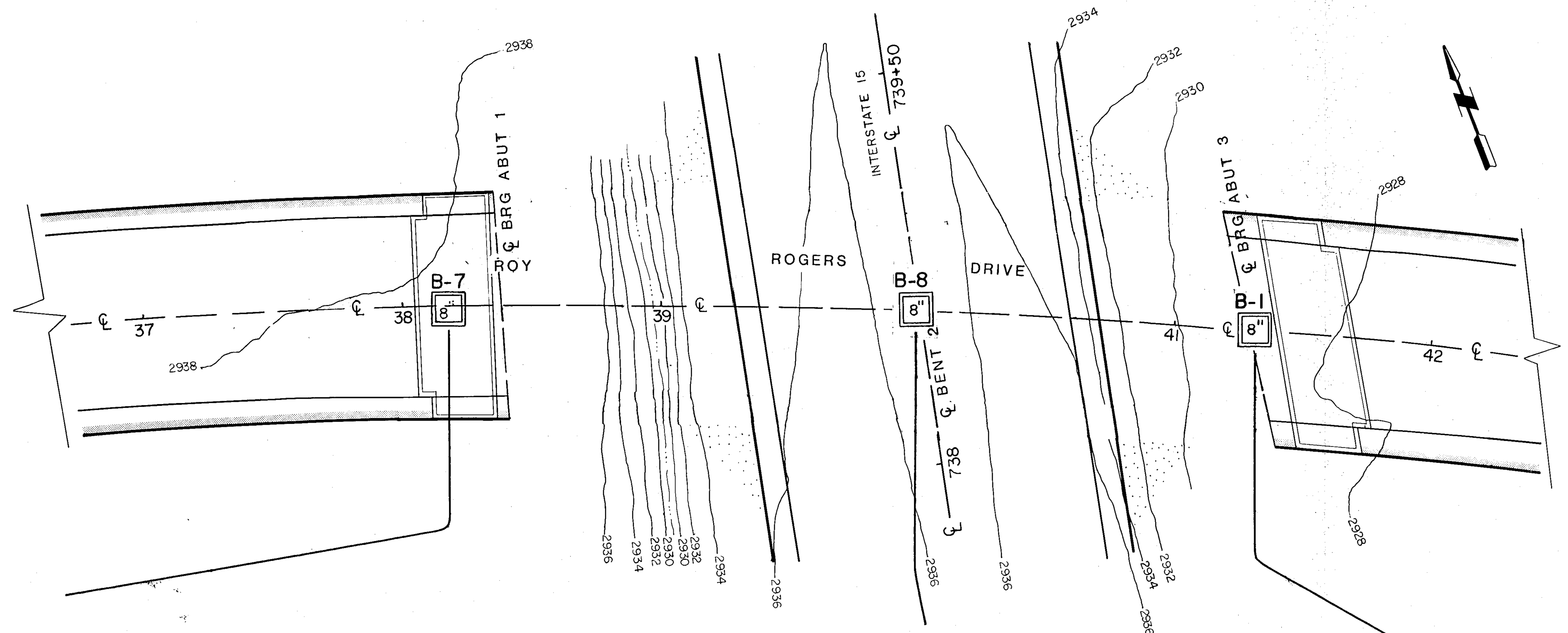
GEOTECHNICAL PROFESSIONAL

12-7-90

PLANS APPROVAL DATE

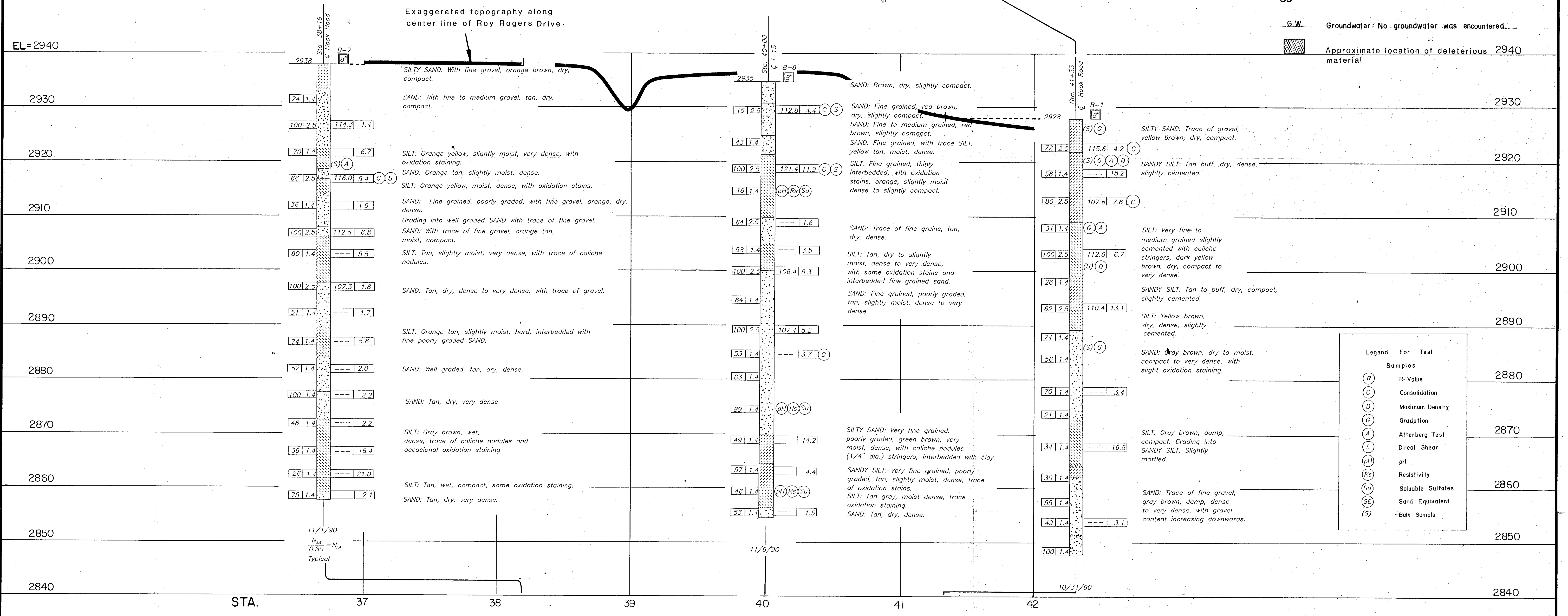
REGISTERED CIVIL ENGINEER STEVEN P. ALFORD No. 34276 Exp. 9/30/91 STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.



GEOTECHNICAL LEGEND

- B-8 [8"] — Approximate location of exploratory boring.
- 2936 — Contour line with elevation in feet above mean sea level.
- Low point for wash.
- 39 ℄ — Center line of street with station number indicated
- G.W. — Groundwater: No groundwater was encountered.
- Approximate location of deleterious material.



Exaggerated topography along center line of Roy Rogers Drive.
EL=2940
2930
2920
2910
2900
2890
2880
2870
2860
2850
2840
Sta. 38+18 ℄ Hook Road
B-7
2938
SILTY SAND: With fine gravel, orange brown, dry, compact.
SAND: With fine to medium gravel, tan, dry, compact.
SILT: Orange yellow, slightly moist, very dense, with oxidation staining.
SAND: Orange tan, slightly moist, dense.
SILT: Orange yellow, moist, dense, with oxidation stains.
SAND: Fine grained, poorly graded, with fine gravel, orange, dry, dense.
Grading into well graded SAND with trace of fine gravel.
SAND: With trace of fine gravel, orange tan, moist, compact.
SILT: Tan, slightly moist, very dense, with trace of caliche nodules.
SAND: Tan, dry, dense to very dense, with trace of gravel.
SILT: Orange tan, slightly moist, hard, interbedded with fine poorly graded SAND.
SAND: Well graded, tan, dry, dense.
SAND: Tan, dry, very dense.
SILT: Gray brown, wet, dense, trace of caliche nodules and occasional oxidation staining.
SILT: Tan, wet, compact, some oxidation staining.
SAND: Tan, dry, very dense.
24 1.4
100 2.5 114.3 1.4
70 1.4 --- 6.7 (S)(A)
68 2.5 116.0 5.4 (C)(S)
36 1.4 --- 1.9
100 2.5 112.6 6.8
80 1.4 --- 5.5
100 2.5 107.3 1.8
51 1.4 --- 1.7
74 1.4 --- 5.8
62 1.4 --- 2.0
100 1.4 --- 2.2
48 1.4 --- 2.2
36 1.4 --- 16.4
26 1.4 --- 21.0
75 1.4 --- 2.1
11/1/90
$\frac{N_{28}}{0.80} = N_s$ Typical
Sta. 40+00 ℄ I-15
B-8
2935
SAND: Brown, dry, slightly compact.
SAND: Fine grained, red brown, dry, slightly compact.
SAND: Fine to medium grained, red brown, slightly comapct.
SAND: Fine grained, with trace SILT, yellow tan, moist, dense.
SILT: Fine grained, thinly interbedded, with oxidation stains, orange, slightly moist dense to slightly compact.
SAND: Trace of fine grains, tan, dry, dense.
SILT: Tan, dry to slightly moist, dense to very dense, with some oxidation stains and interbedded fine grained sand.
SAND: Fine grained, poorly graded, tan, slightly moist, dense to very dense.
SILTY SAND: Very fine grained, poorly graded, green brown, very moist, dense, with caliche nodules (1/4" dia.) stringers, interbedded with clay.
SANDY SILT: Very fine grained, poorly graded, tan, slightly moist, dense, trace of oxidation stains.
SILT: Tan gray, moist, dense, trace oxidation staining.
SAND: Tan, dry, dense.
15 2.5 112.8 4.4 (C)(S)
43 1.4
100 2.5 121.4 11.9 (C)(S)
18 1.4 (pH)(Rs)(Su)
64 2.5 --- 1.6
58 1.4 --- 3.5
100 2.5 106.4 6.3
64 1.4
100 2.5 107.4 5.2
53 1.4 --- 3.7 (G)
63 1.4
89 1.4 (pH)(Rs)(Su)
49 1.4 --- 14.2
57 1.4 --- 4.4
46 1.4 (pH)(Rs)(Su)
53 1.4 --- 1.5
11/6/90
Sta. 41+33 ℄ Hook Road
B-1
2928
SILTY SAND: Trace of gravel, yellow brown, dry, compact.
SANDY SILT: Tan buff, dry, dense, slightly cemented.
SILT: Very fine to medium grained slightly cemented with caliche stringers, dark yellow brown, dry, compact to very dense.
SANDY SILT: Tan to buff, dry, compact, slightly cemented.
SILT: Yellow brown, dry, dense, slightly cemented.
SAND: Gray brown, dry to moist, compact to very dense, with slight oxidation staining.
SILT: Gray brown, damp, compact. Grading into SANDY SILT, Slightly mottled.
SAND: Trace of fine gravel, gray brown, damp, dense to very dense, with gravel content increasing downwards.
(S)(G)
72 2.5 115.6 4.2 (C)
(S)(G)(A)(D)
58 1.4 --- 15.2
80 2.5 107.6 7.6 (C)
31 1.4 (G)(A)
100 2.5 112.6 6.7
(S)(D)
26 1.4
62 2.5 110.4 13.1
74 1.4
(S)(G)
56 1.4
70 1.4 --- 3.4
21 1.4
34 1.4 --- 16.8
30 1.4
55 1.4
49 1.4 --- 3.1
100 1.4
10/31/90
STA. 37 38 39 40 41 42

Legend For Test Samples

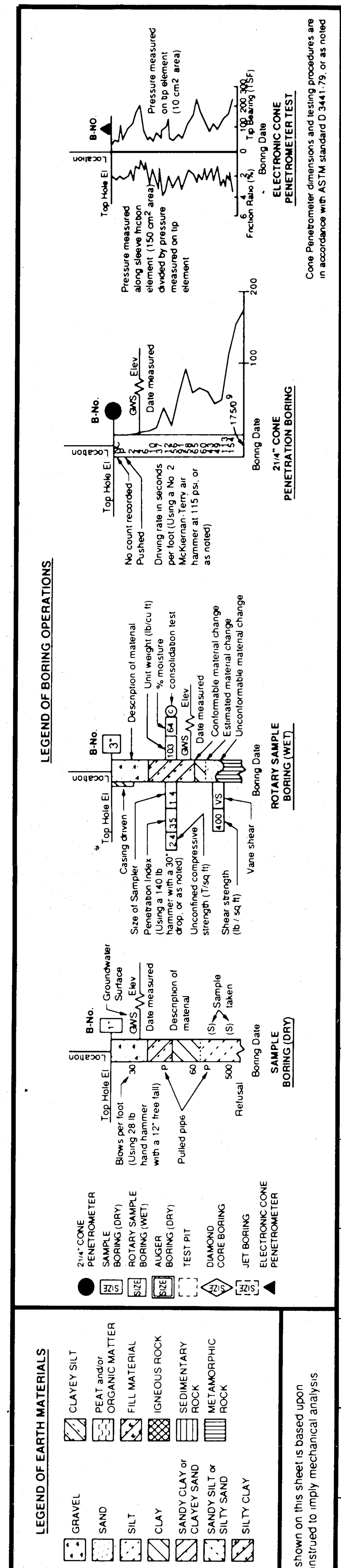
- (R) R-Value
- (C) Consolidation
- (D) Maximum Density
- (G) Gradation
- (A) Atterberg Test
- (S) Direct Shear
- (pH) pH
- (Rs) Resistivity
- (Su) Soluable Sulfates
- (SE) Sand Equivalent
- (S) Bulk Sample

PROFILE

Horizontal : 1" = 40'

Vertical : 1" = 10'

0 20 40 (feet)



LEGEND OF BORING OPERATIONS
ELECTRONIC CONE PENETROMETER TEST
2 1/4" CONE PENETRATION BORING
ROTARY SAMPLE BORING (WET)
SAMPLE BORING (DRY)
Cone Penetrometer dimensions and testing procedures are in accordance with ASTM standard D 3441-79, or as noted
2 1/4" CONE PENETROMETER
SAMPLE BORING (DRY)
ROTARY SAMPLE BORING (WET)
AUGER BORING (DRY)
TEST PIT
DIAMOND CORE BORING
JET BORING
ELECTRONIC CONE PENETROMETER
LEGEND OF EARTH MATERIALS
GRAVEL
SAND
SILT
CLAY
SANDY CLAY or CLAYEY SAND
SANDY SILT or SILTY SAND
SILTY CLAY
CLAYEY SILT
PEAT and/or ORGANIC MATTER
FILL MATERIAL
IGNEOUS ROCK
SEDIMENTARY ROCK
METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Index (Blows / Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis

DESIGN OVERSIGHT	
SIGN OFF DATE	
DRAWN BY	MILES D. KENNEY 12/7/90
CHECKED BY	STEVEN P. ALFORD 12/7/90
FIELD INVESTIGATOR	GREG UECKER/FRED WINKLER
DATE	10/31/90 & 11/1/90
LEIGHTON & ASSOCIATES, INC.	P.N. 12900307-03

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER

BRIDGE NO. 54-1118

POST MILE 40.52

ROY ROGERS DRIVE OVERCROSSING

LOG OF TEST BORINGS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08103

EA 251901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 3 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	4	5

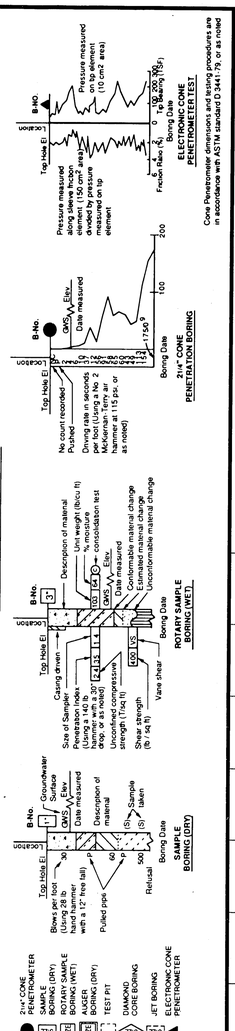
GEOTECHNICAL PROFESSIONAL

12-7-90
PLANS APPROVAL DATE

REGISTERED CIVIL ENGINEER — STEVEN P ALFORD — No. 34276 — Exp. 9/30/91 — STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

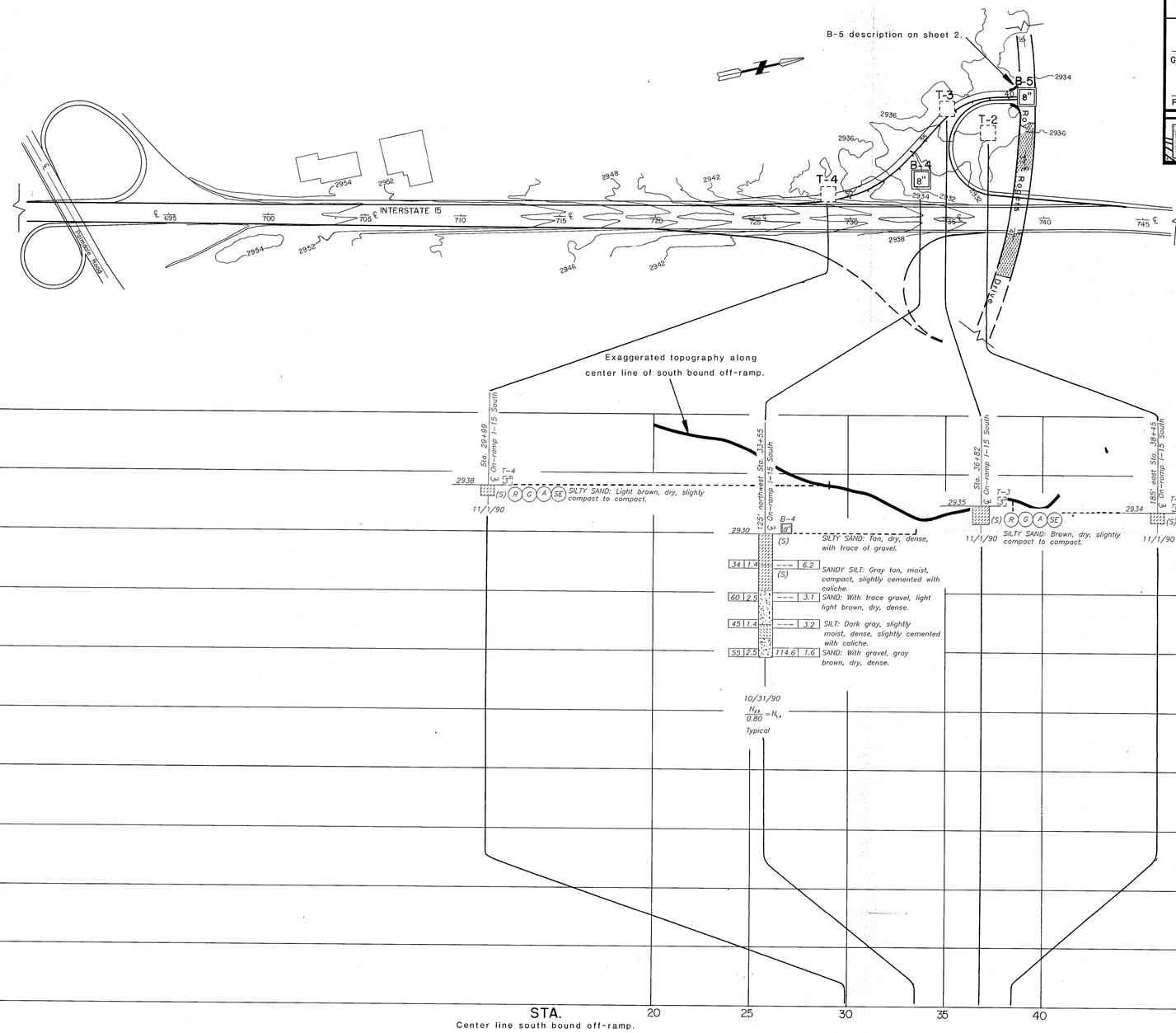
GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT and/or ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Index (Blows / Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

NOTE Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



GEOTECHNICAL LEGEND

- T-4 — Approximate location of exploratory trench.
- B-5 (8") — Approximate location of exploratory boring.
- 2936 — Contour line with elevation in feet above mean sea level.
- 730 ℄ — Center line of street with station number indicated.
- 35 — Station number along south-bound Interstate 15 entrance from Hook Rd.
- G.W. — Groundwater: No groundwater was encountered.
- Approximate location of deleterious material.

Legend For Test Samples

R	R-Value
C	Consolidation
D	Maximum Density
G	Gradation
A	Atterberg Test
S	Direct Shear
pH	pH
Rs	Resistivity
SW	Soluable Sulfates
SE	Sand Equivalent
(S)	Bulk Sample

PROFILE
Horizontal : 1"=300'
Vertical : 1"=10'

100 0 100 200 300 (feet)

DESIGN OVERSIGHT
SIGN OFF DATE

DRAWN BY MILES D. KENNEY 12/7/90
CHECKED BY STEVEN P. ALFORD 12/7/90

GREG UECKER/FRED WINKLER
FIELD INVESTIGATOR
DATE 10/31/90 & 11/1/90

LEIGHTON & ASSOCIATES, INC.
P.N. 12900307-03

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08103
EA 251901

BRIDGE NO. 54-1118
POST MILE 40.52

ROY ROGERS DRIVE OVERCROSSING
LOG OF TEST BORINGS

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 4 OF 5

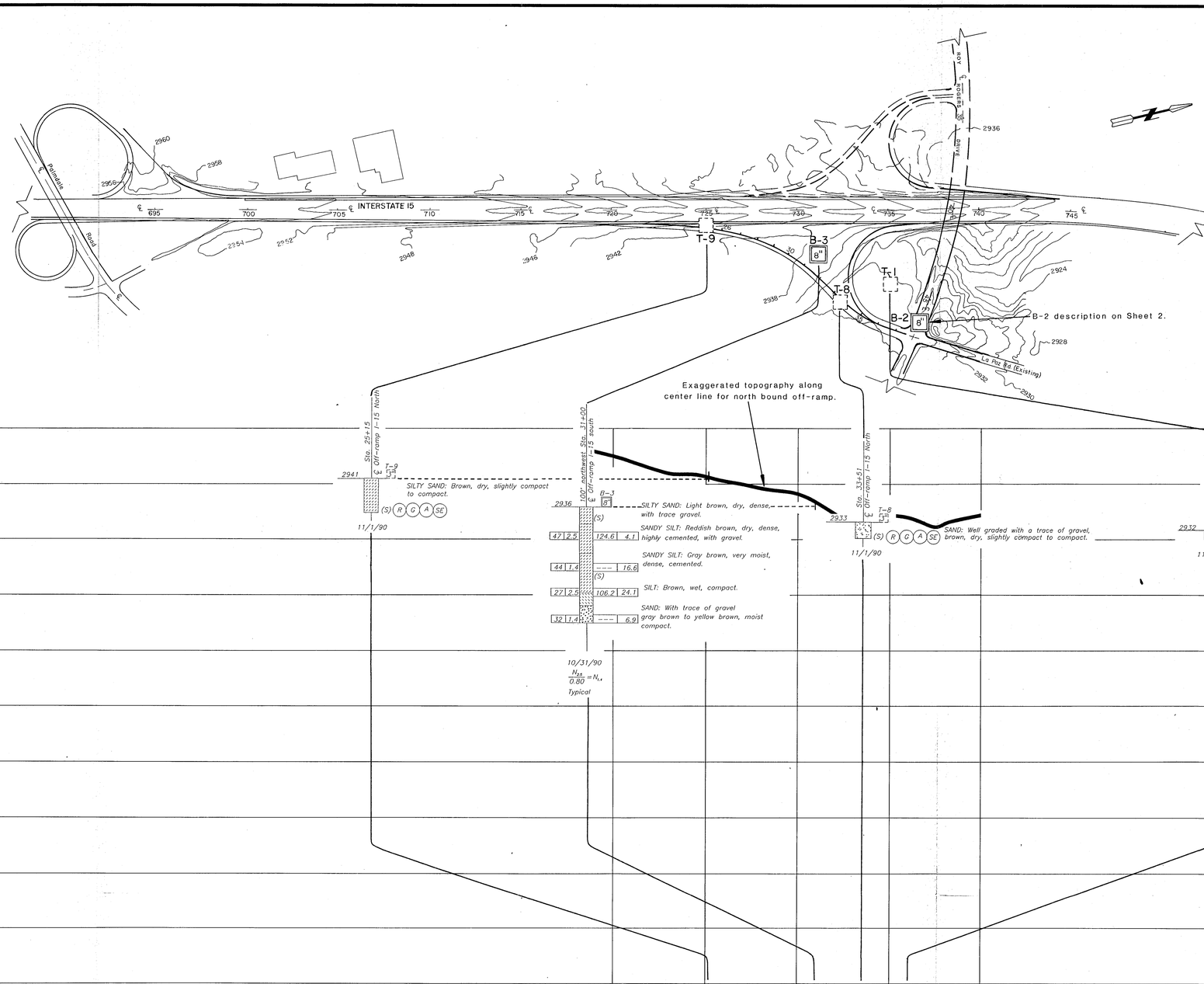
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	5	5

GEOTECHNICAL PROFESSIONAL

12-7-90
PLANS APPROVAL DATE

REGISTERED CIVIL ENGINEER
STEVEN P. ALFORD
No. 34276
Exp. 9/30/91
STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.



GEOTECHNICAL LEGEND

- T-9 — Approximate location of exploratory trench.
- B-3, 8" — Approximate location of exploratory boring.
- 2930 — Contour line with elevation in feet above mean sea level.
- 730 ℄ — Center line of street with station number indicated.
- 30 — Station number along north bound Interstate 15 exit for Hook Rd.
- G.W. — Groundwater: No groundwater was encountered.
- Approximate location of deleterious material.

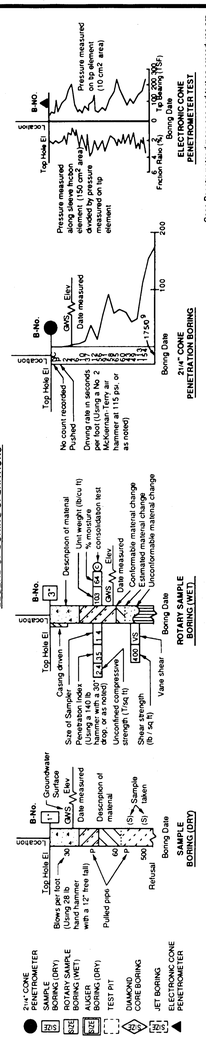
Legend For Test Samples

(R)	R-Value
(C)	Consolidation
(D)	Maximum Density
(G)	Gradation
(A)	Atterberg Test
(S)	Direct Shear
(pH)	pH
(Rs)	Resistivity
(Su)	Soluable Sulfates
(SE)	Sand Equivalent
(S)	Bulk Sample

PROFILE
Horizontal: 1"= 300'
Vertical : 1"= 10'

100 0 100 200 300 (feet)

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT and/or ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Index (Blows / Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

NOTE Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

DESIGN OVERSIGHT	DRAWN BY	MILES D. KENNEY 12/7/90	GREG UECKER/FRED WINKLER, FIELD INVESTIGATOR
SIGN OFF DATE	CHECKED BY	STEVEN P. ALFORD 12/7/90	DATE 10/31/90 & 11/1/90

LEIGHTON & ASSOCIATES, INC.
P.N. 12900307-03

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER

CU 08103
EA 251901

BRIDGE NO.	ROY ROGERS DRIVE OVERCROSSING
54-1118	
POST MILE 40.52	**LOG OF TEST BORINGS**

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 5 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 / 41.8	1	6

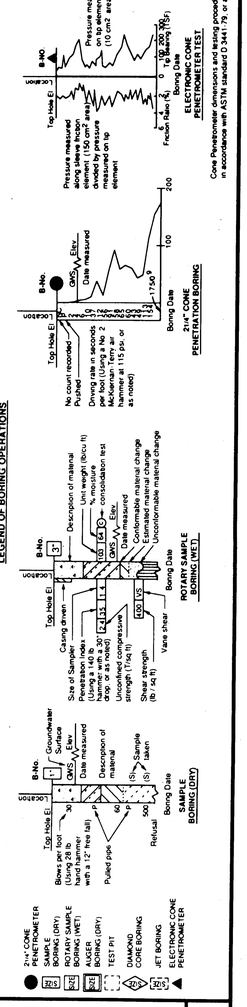
Steven P Alford
GEOTECHNICAL PROFESSIONAL

5/5/92
PLANS APPROVAL DATE

REGISTERED CIVIL ENGINEER
STEVEN P ALFORD
No. 34276
Exp. 9/30/95
STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT and/or ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

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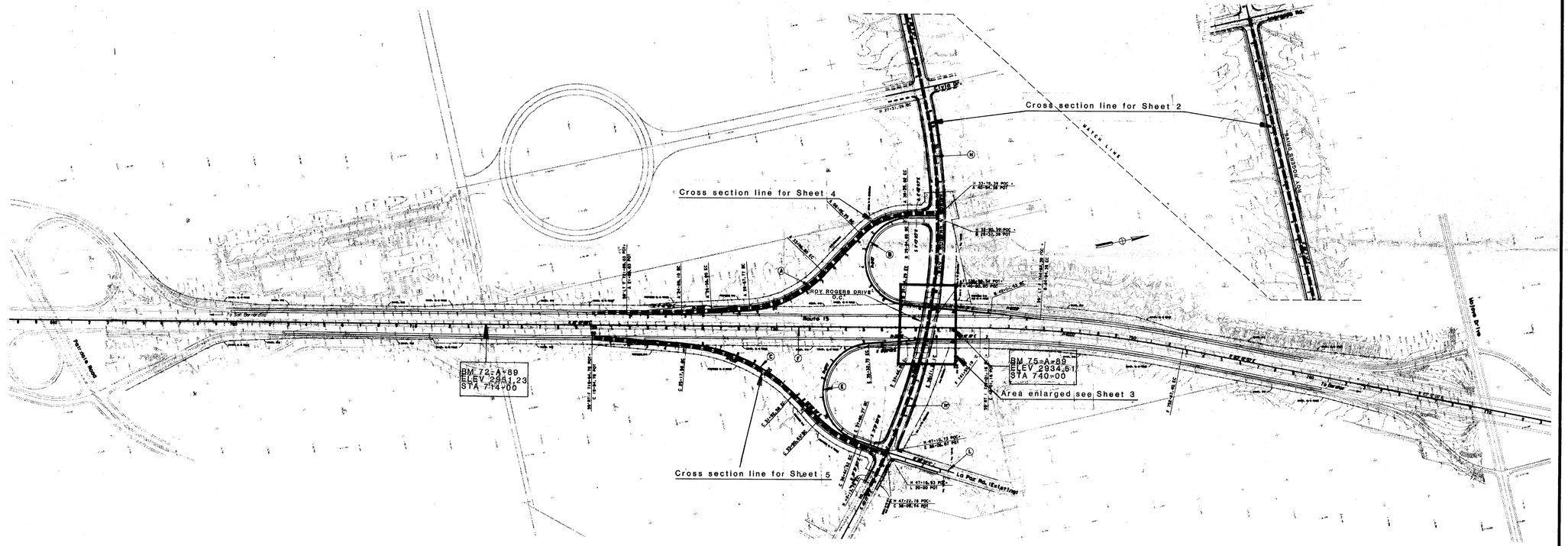
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

NOTE Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis



SCALE
1"= 300'

100 0 100 200 300
(feet)

BENCH LEVEL SUMMARY:
DATUM: SEA LEVEL DATUM OF 1929 & SUPPLEMENTAL ADJUSTMENT OF 1980

BENCH MARK	ELEVATION	DESCRIPTION
72-A-89	2951.23	Std "CAL 301" brass disk in 2" IP stamped "BM72-A-89" down 0.2 in AC shldr, 65.3' rt C/L Imp 714+00 NAD 1929 adj 1980
75-A-89	2934.51	Chis "+" on NW bolt PCC sign structure "Mojave Dr. Next Right" 87.5' rt C/L Imp 740+00. Bolt stamped "BM 75-A-89" NAD 1929 adj 1980

HORIZONTAL CONTROL:
Standard Disk stamped "C/L Imp CI-53 714+20.72 POT" N = 64342.62 E = 40751.27

Standard Disk stamped "C/L Imp CI-53 741+51.19 BC" N = 61966.12 E = 40230.92

DESIGN OVERSIGHT	DRAWN BY	MILES D. KENNEY 12/7/90	GREG UECKER/FRED WINKLER	LEIGHTON & ASSOCIATES, INC.	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	BRIDGE NO. 54-1118
SIGN OFF DATE	CHECKED BY	STEVEN P. ALFORD 12/7/90	FIELD INVESTIGATOR	P.N. 12900307-03			POST MILE 40.52
			DATE 10/31/90 & 11/1/90				

ROY ROGERS DRIVE OVERCROSSING
LOG OF TEST BORINGS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08108
EA 251904

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 1 OF 6

12900307-1

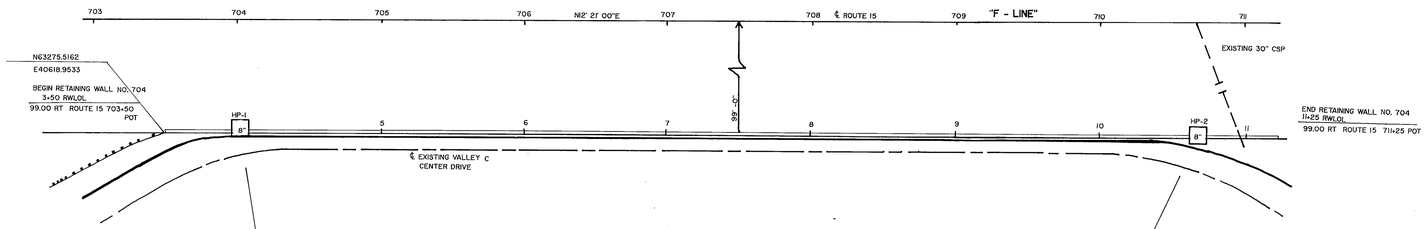
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	1	6

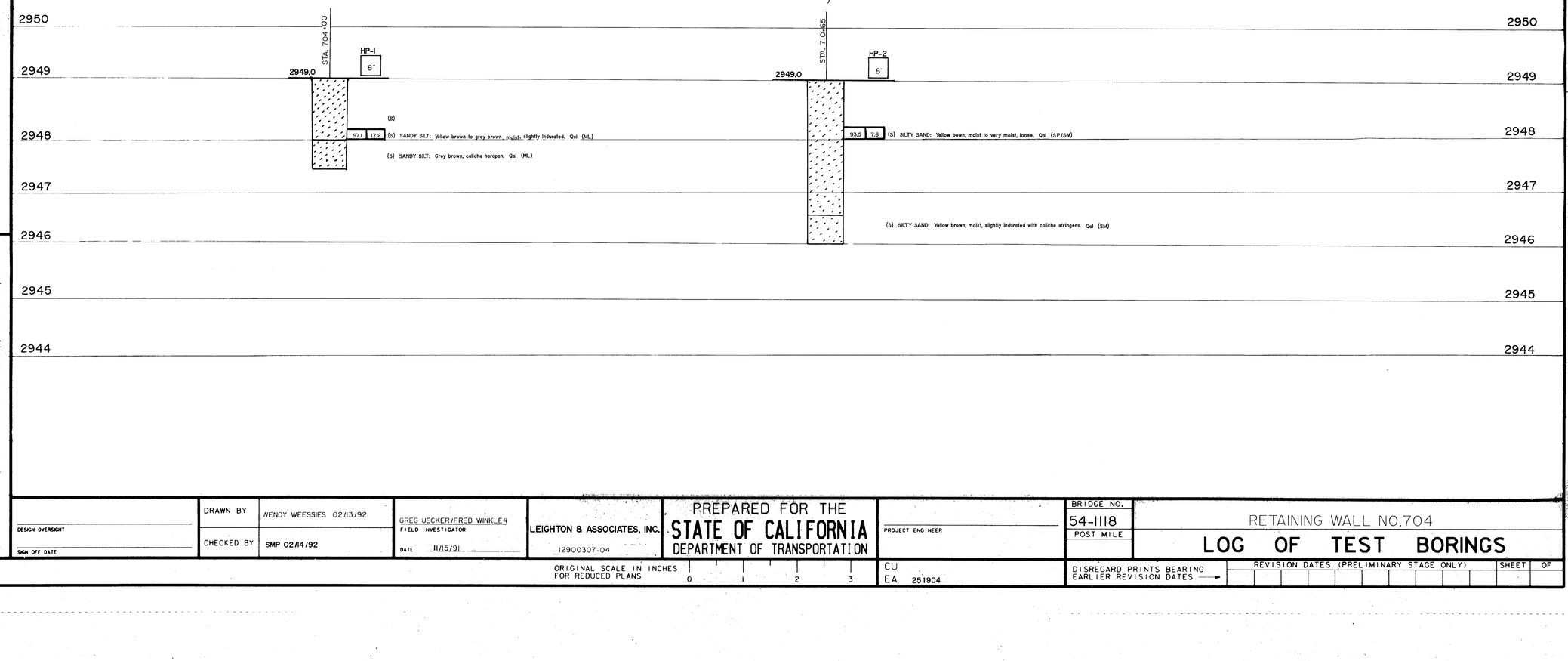
Stephen M. Poole
GEOTECHNICAL PROFESSIONAL

5/6/92
PLANS APPROVAL DATE

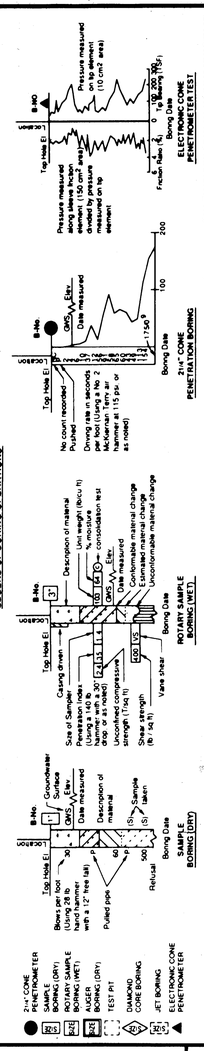
REGISTERED GEOTECHNICAL ENGINEER
STEPHEN M. POOLE
No. 692
Exp. 9/30/94
STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.





LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT and/or ORGANIC MATTER · FILL MATERIAL · GNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK · AGGREGATE BASE

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

Penetration Index (Blows / Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-39	Compact	Very stiff
40-59	Dense	Hard
>70	Very dense	Very hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis

DESIGN OVERSIGHT	DRAWN BY	WENDY WEESSIES 02/13/92	GREG UECKER/FRED WINKLER FIELD INVESTIGATOR	LEIGHTON & ASSOCIATES, INC.	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
SIGN OFF DATE	CHECKED BY	SMP 02/14/92	DATE 11/15/91	12900307-04	PROJECT ENGINEER

BRIDGE NO. 54-1118
POST MILE

RETAINING WALL NO. 704

LOG OF TEST BORINGS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU
EA 251904

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET | OF

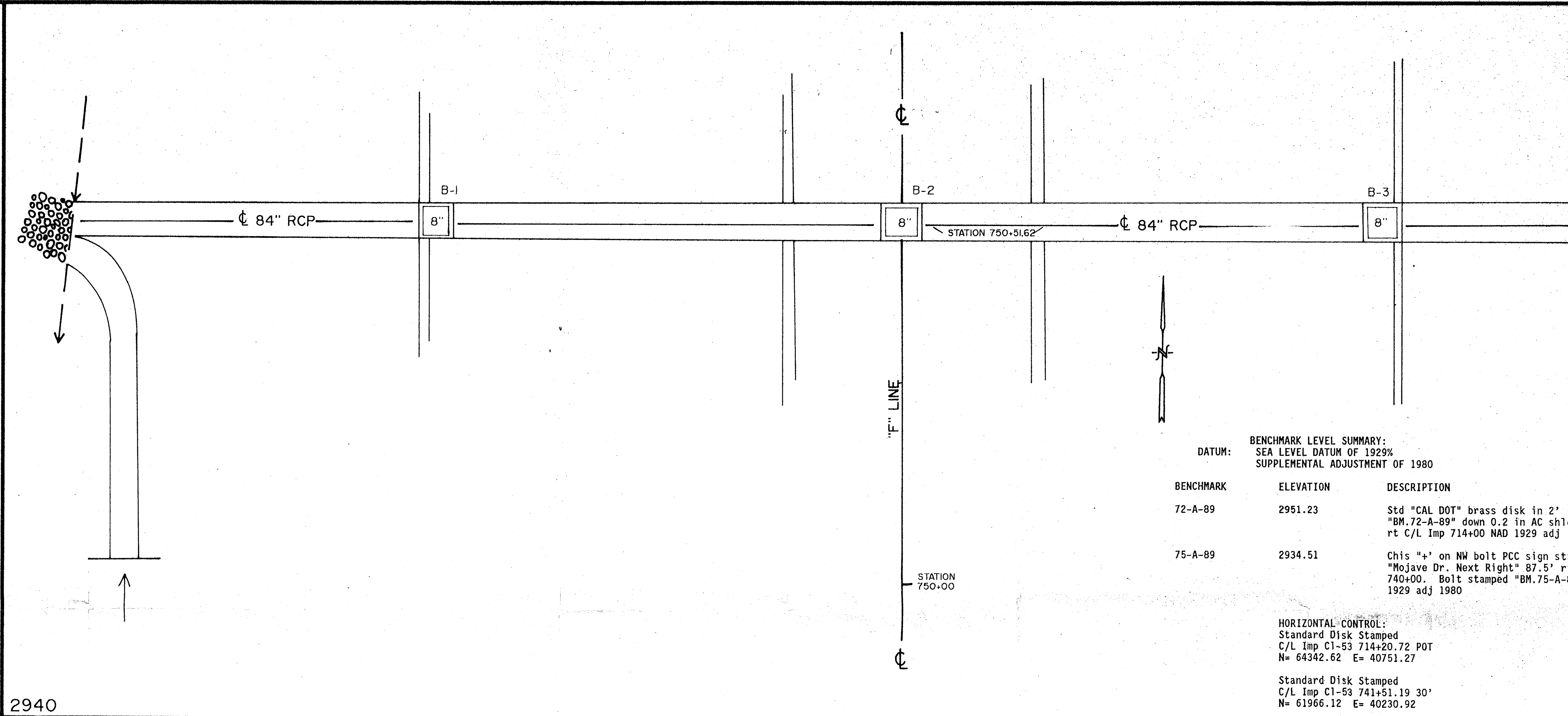
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	6	6

Stephen M. Poole
GEOTECHNICAL PROFESSIONAL

5/5/92
PLANS APPROVAL DATE

REGISTERED GEOTECHNICAL ENGINEER
STEPHEN M. POOLE
No. 692
Exp. 9/30/94
STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.



GEOTECHNICAL LEGEND

B-3 [8"] — Approximate location of exploratory boring

STATION 750+00 — Center line of street with station number indicated

×35 — Denotes 2.5" California Sampler Equivalent SPT blow counts could be estimated by multiplying by 0.445

$$\left(\frac{N_{1.4}}{0.445} = N_{2.5}\right)$$

PROFILE

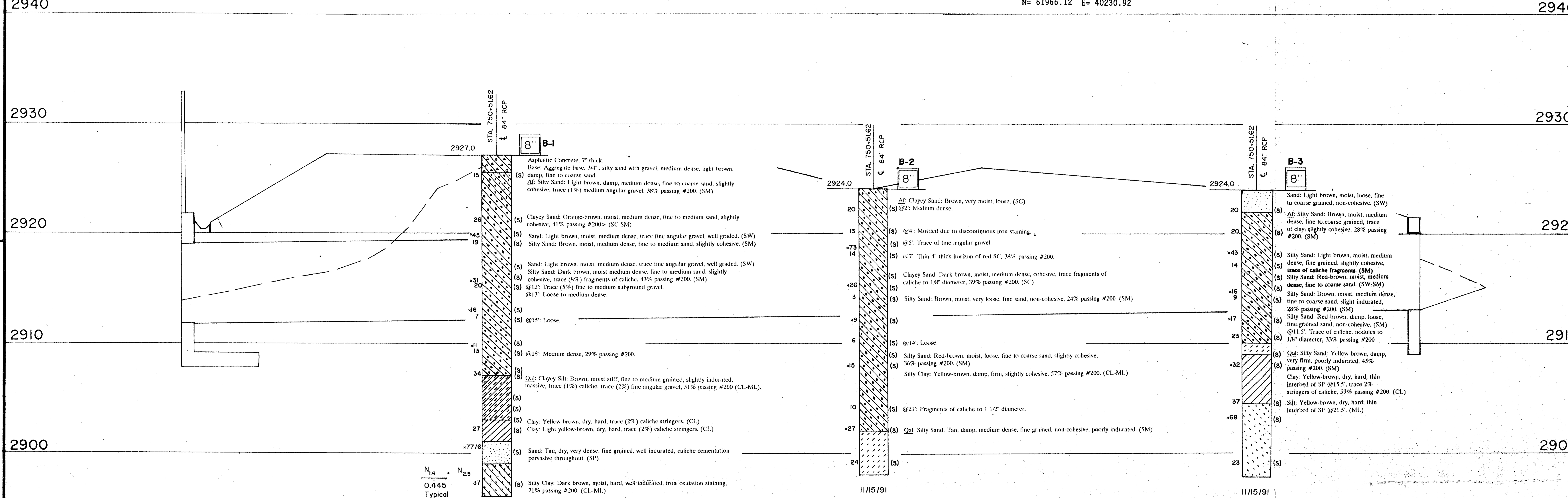
Horizontal 1" = 10'
Vertical 1" = 5'

BENCHMARK LEVEL SUMMARY:
DATUM: SEA LEVEL DATUM OF 1929%
SUPPLEMENTAL ADJUSTMENT OF 1980

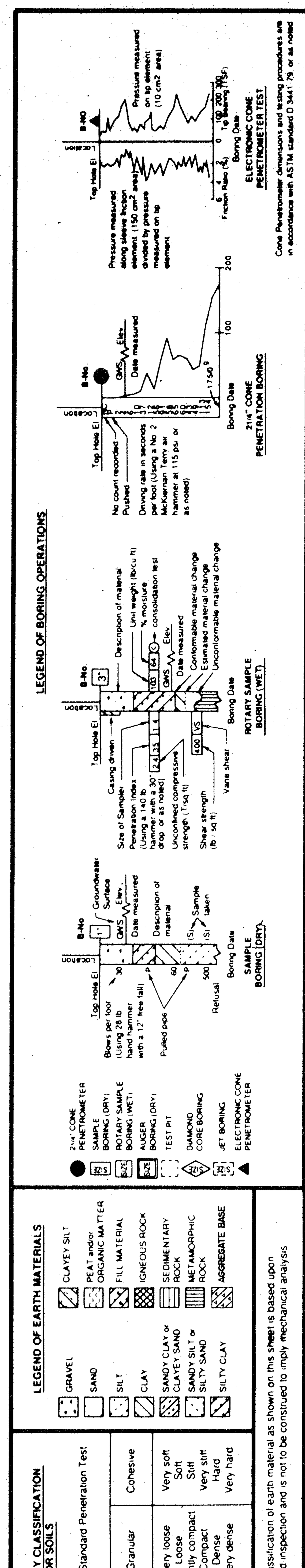
BENCHMARK	ELEVATION	DESCRIPTION
72-A-89	2951.23	Std "CAL DOT" brass disk in 2' IP stamped "BM.72-A-89" down 0.2 in AC shldr. 65.3' rt C/L Imp 714+00 NAD 1929 adj 1980
75-A-89	2934.51	Chis "+' on NW bolt PCC sign structure "Mojave Dr. Next Right" 87.5' rt C/L Imp 740+00. Bolt stamped "BM.75-A-89" NAD 1929 adj 1980

HORIZONTAL CONTROL:
Standard Disk Stamped
C/L Imp Cl-53 714+20.72 POT
N= 64342.62 E= 40751.27

Standard Disk Stamped
C/L Imp Cl-53 741+51.19 30'
N= 61966.12 E= 40230.92



2940
2930
2920
2910
2900
STA. 750+51.62
℄ 84" RCP
2927.0
8" B-1
15
26
×45
19
×31
20
×16
7
×11
13
34
27
×77/6
37
(s)
Asphaltic Concrete, 7" thick.
Base: Aggregate base, 3/4", silty sand with gravel, medium dense, light brown, damp, fine to coarse sand.
Af: Silty Sand: Light brown, damp, medium dense, fine to coarse sand, slightly cohesive, trace (1%) medium angular gravel, 38% passing #200. (SM)
Clayey Sand: Orange-brown, moist, medium dense, fine to medium sand, slightly cohesive, 41% passing #200> (SC-SM)
Sand: Light brown, moist, medium dense, trace fine angular gravel, well graded. (SW)
Silty Sand: Brown, moist, medium dense, fine to medium sand, slightly cohesive. (SM)
Sand: Light brown, moist, medium dense, trace fine angular gravel, well graded. (SW)
Silty Sand: Dark brown, moist medium dense, fine to medium sand, slightly cohesive, trace (8%) fragments of caliche, 43% passing #200. (SM)
@12': Trace (5%) fine to medium subground gravel.
@13': Loose to medium dense.
@15': Loose.
@18': Medium dense, 29% passing #200.
Qal: Clayey Silt: Brown, moist stiff, fine to medium grained, slightly indurated, massive, trace (1%) caliche, trace (2%) fine angular gravel, 51% passing #200 (CL-ML).
Clay: Yellow-brown, dry, hard, trace (2%) caliche stringers. (CL)
Clay: Light yellow-brown, dry, hard, trace (2%) caliche stringers. (CL)
Sand: Tan, dry, very dense, fine grained, well indurated, caliche cementation pervasive throughout. (SP)
Silty Clay: Dark brown, moist, hard, well indurated, iron oxidation staining, 71% passing #200. (CL-ML)
N1.4 / 0.445 = N2.5 Typical
11/15/91
STA. 750+51.62
℄ 84" RCP
B-2
8"
2924.0
20
13
×73
14
×26
3
×9
6
×15
10
×27
24
Af: Clayey Sand: Brown, very moist, loose, (SC)
@2': Medium dense.
@4': Mottled due to discontinuous iron staining.
@5': Trace of fine angular gravel.
@7': Thin 4" thick horizon of red SC, 38% passing #200.
Clayey Sand: Dark brown, moist, medium dense, cohesive, trace fragments of caliche to 1/8" diameter, 39% passing #200. (SC)
Silty Sand: Brown, moist, very loose, fine sand, non-cohesive, 24% passing #200. (SM)
@14': Loose.
Silty Sand: Red-brown, moist, loose, fine to coarse sand, slightly cohesive, 36% passing #200. (SM)
Silty Clay: Yellow-brown, damp, firm, slightly cohesive, 57% passing #200. (CL-ML)
@21': Fragments of caliche to 1 1/2" diameter.
Qal: Silty Sand: Tan, damp, medium dense, fine grained, non-cohesive, poorly indurated. (SM)
11/15/91
STA. 750+51.62
℄ 84" RCP
B-3
8"
2924.0
20
20
×43
14
×16
9
×17
23
×32
37
×68
23
Sand: Light brown, moist, loose, fine to coarse grained, non-cohesive. (SW)
Af: Silty Sand: Brown, moist, medium dense, fine to coarse grained, trace of clay, slightly cohesive, 28% passing #200. (SM)
Silty Sand: Light brown, moist, medium dense, fine grained, slightly cohesive, trace of caliche fragments. (SM)
Silty Sand: Red-brown, moist, medium dense, fine to coarse sand. (SW-SM)
Silty Sand: Brown, moist, medium dense, fine to coarse sand, slight indurated, 28% passing #200. (SM)
Silty Sand: Red-brown, damp, loose, fine grained sand, non-cohesive. (SM)
@11.5': Trace of caliche, nodules to 1/8" diameter, 33% passing #200
Qal: Silty Sand: Yellow-brown, damp, very firm, poorly indurated, 45% passing #200. (SM)
Clay: Yellow-brown, dry, hard, thin interbed of SP @15.5', trace 2% stringers of caliche, 59% passing #200. (CL)
Silt: Yellow-brown, dry, hard, thin interbed of SP @21.5'. (ML)
11/15/91



LEGEND OF BORING OPERATIONS
LEGEND OF EARTH MATERIALS
GRAVEL
SAND
SILT
CLAY
SANDY CLAY or CLAYEY SAND
SANDY SILT or SILTY SAND
SILTY CLAY
CLAYEY SILT
PEAT and/or ORGANIC MATTER
FILL MATERIAL
IGNEOUS ROCK
SEDIMENTARY ROCK
METAMORPHIC ROCK
AGGREGATE BASE
CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test
Penetration Index (Blows / Ft)
Granular
Cohesive
0-4 Very loose Very soft
5-9 Loose Soft
10-19 Slightly compact Stiff
20-34 Compact Very stiff
35-69 Dense Hard
>70 Very dense Very hard
NOTE Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis
SAMPLE BORING (DRY)
ROTARY SAMPLE BORING (WET)
2 1/2" CONE PENETRATION BORING
ELECTRONIC CONE PENETROMETER TEST

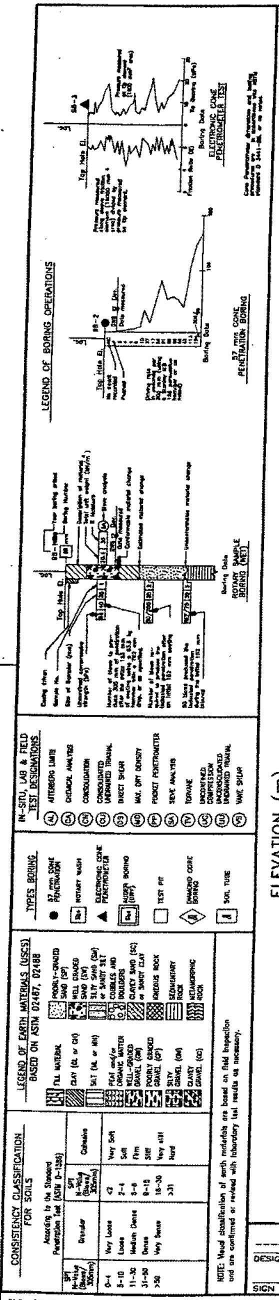
DESIGN OVERSIGHT	DRAWN BY: WENDY S. WEESSIES 12/5/91	GREG UECKER/FRED WINKLER FIELD INVESTIGATOR	LEIGHTON & ASSOCIATES, INC.	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER
SIGN OFF DATE	CHECKED BY: STEPHEN M. POOLE 12/5/91	DATE 11/15/91	12900307-03		

BRIDGE NO. 54-1118
POST MILE

84" RCP
LOG OF TEST BORINGS

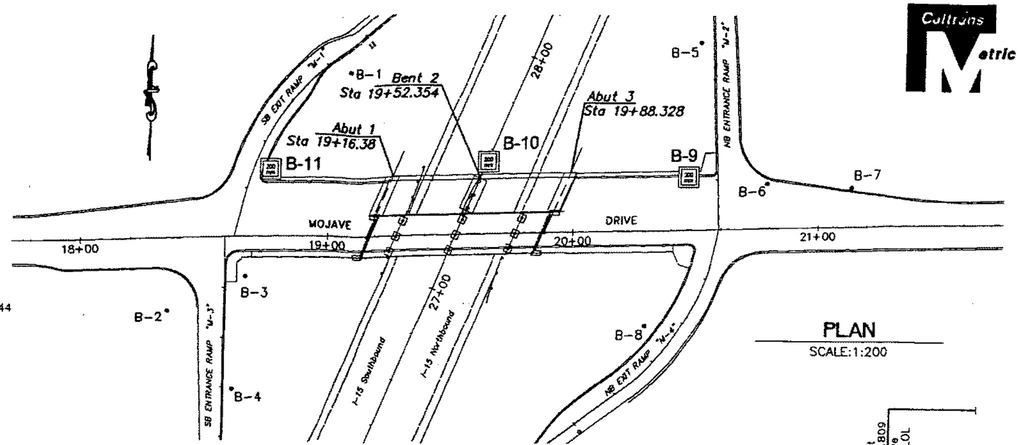
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
CU 08103
EA 251904
DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET | OF

Mojave Drive WB



Note:

1. The boring logs and related information represent the opinion of the geotechnical engineer as to the character of the materials at the locations shown. Soil conditions between adjacent test holes and at other locations may differ from those shown. Borings will be advanced using a truck-mounted drill rig, utilizing 200mm diameter hollow-stem augers.
2. Samples were taken using a Modified California split-barrel sampler with an inside diameter (I.D.) of 60 mm and an outside diameter (O.D.) of 75 mm, a standard penetration split-barrel sampler with an (I.D.) of 35 mm and an O.D. of 50 mm. Samplers will be driven using a 63.4 kg hammer falling 750 mm.
3. Test boring elevations and locations are based on a borehole survey performed by Associated Engineers Inc.
4. Visual classification of earth materials was based on field inspection and was confirmed or revised with laboratory test results.
5. Benchmark:
   ELEVATION = 881.041m N 615445.090 E 2063195.844
   Caltrans Point No. 15-1-94, Centerline Imp. I-15
   STA/OUT 38+83.616/75.914 m



PLAN
SCALE:1:200

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15	67.1/68.2		

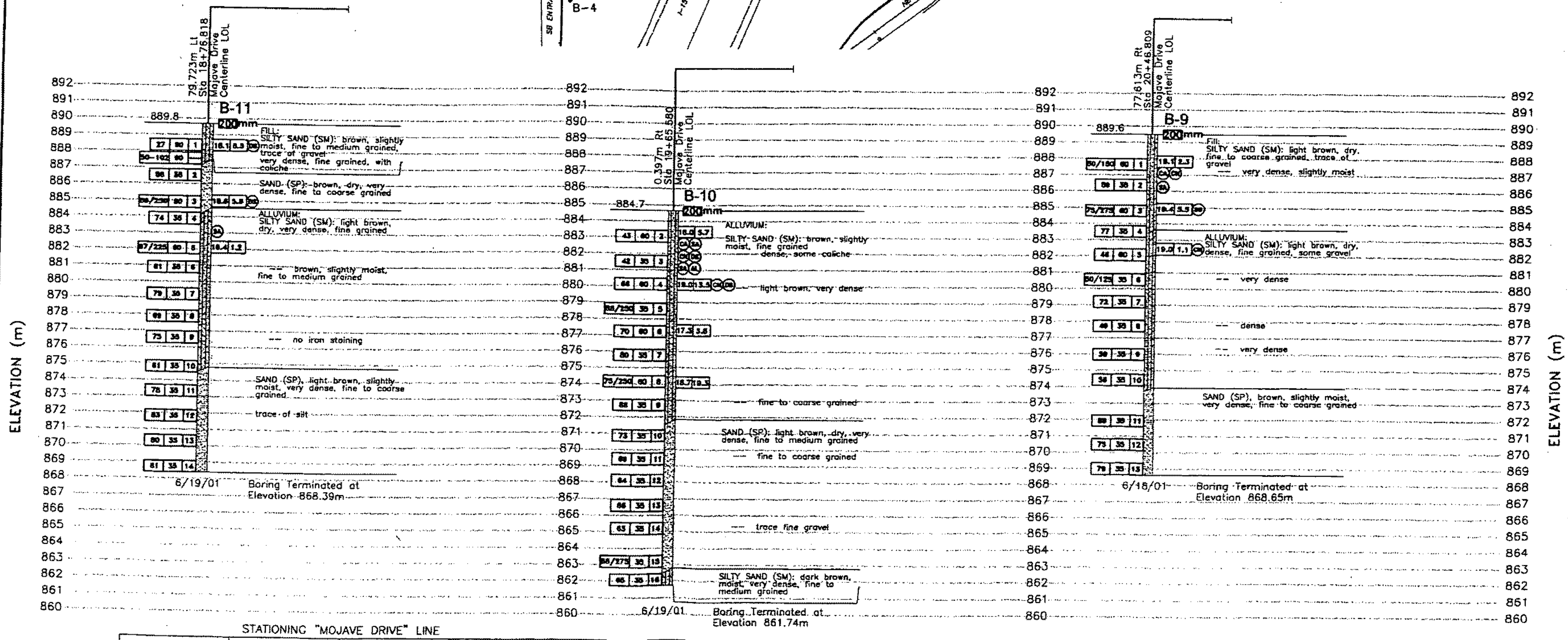
REGISTERED GEOTECHNICAL ENGINEER

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER ALLEN D. EVANS No. 2506 Exp. 6/30/03 GEOTECHNICAL STATE OF CALIFORNIA

KLEINFELDER INC.
1940 ORANGE TREE LANE
REDLANDS, CA 92374



PROFILE
HORIZONTAL SCALE:1:100
VERTICAL SCALE:1:600

PLATE 3A

DESIGN OVERSIGHT	DRAWN BY	D. FAHRNEY	FIELD INVESTIGATION BY: SCOTT LAWSON, STAFF ENGINEER
SIGN OFF DATE	CHECKED BY	M. SIERADZKI	

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER

BRIDGE NO. 54-1214K
KILOMETER POST 19.4

MOJAVE DRIVE WIDENING AT I-15

LOG OF TEST BORINGS (1 OF 1)

CU 221
EA 354500

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 2/1/00)

USERNAME => $USER DATE PLOTTED => $DATE TIME PLOTTED => $TIME

FED ROAD DIV NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
7	CAL.			74	74

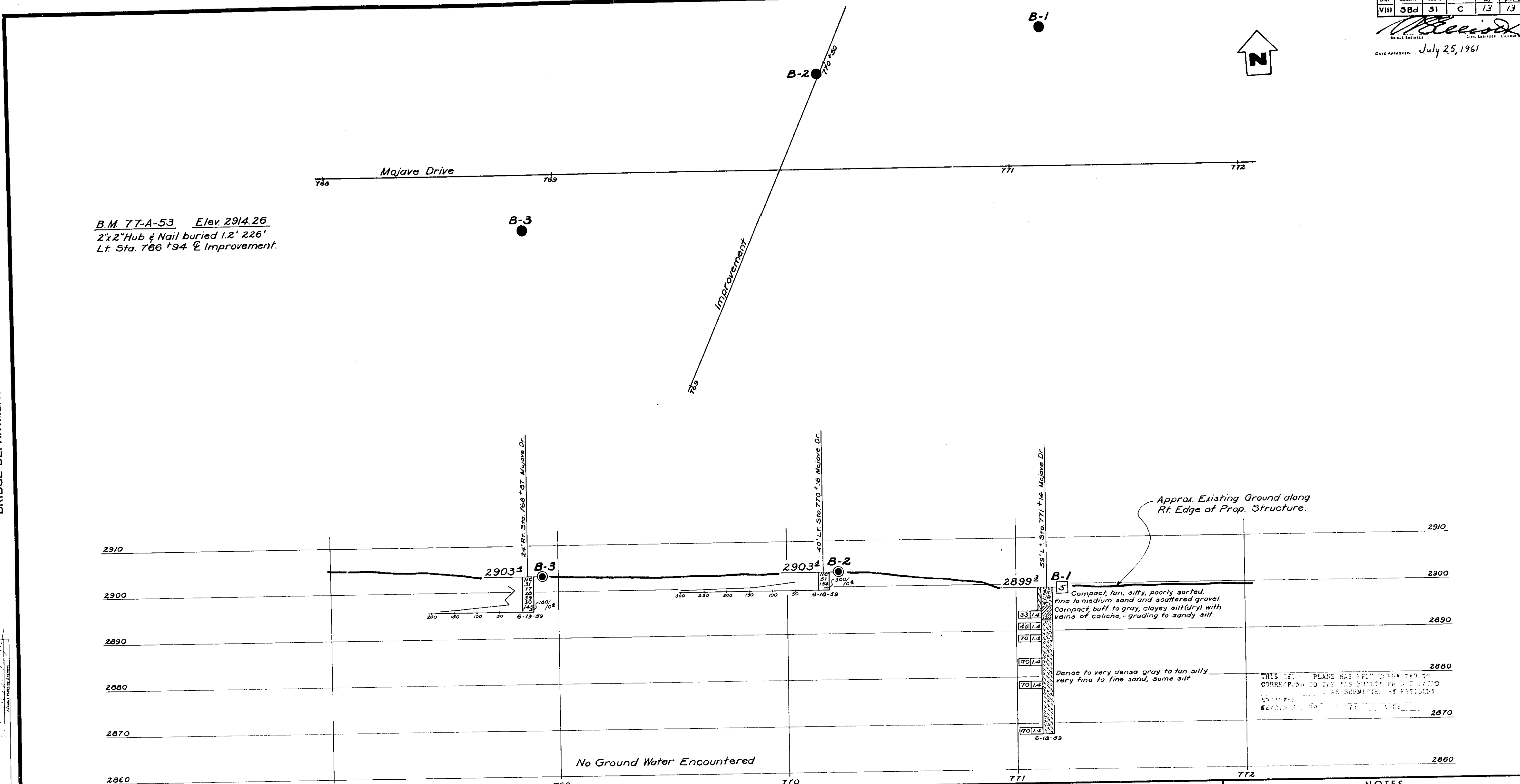
I-015-1(14)41

DIST	COUNTY	ROUTE	SECTION	SHEET NO	TOTAL SHEETS
VIII	SBd	31	C	13	13

BRIDGE ENGINEER

DATE APPROVED July 25, 1961

BRIDGE DEPARTMENT



FIELD STUDY	Rammelkamp 6-12-59
DRAWN	Davenport 1-12-60
CHECKED	5-29-60

Approval Recommended by

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

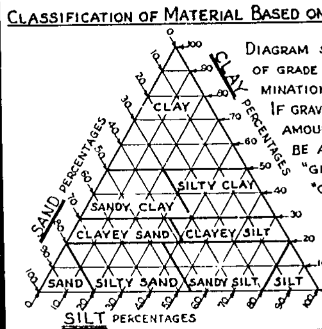


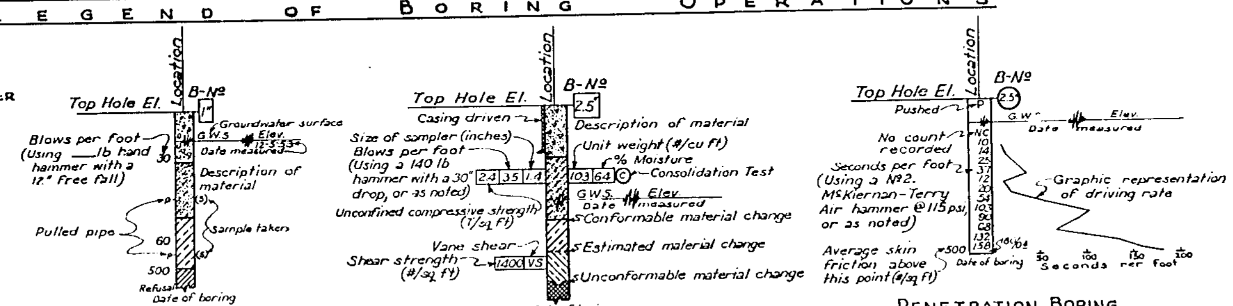
Diagram showing the basis for estimates of grade size distribution used in determination of class names.
If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

LEGEND OF BORING OPERATIONS

- Plan of any boring
- Penetrometer
- 2¼" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit



NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

MOJAVE DRIVE O.C.

LOG OF TEST BORINGS

SCALE Hor. 1" = 20' Ver. 1" = 10'	BRIDGE 54-626	FILE	DRAWING

Victorville Separation OH

FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CAL.				

DIST.	COUNTY	ROUTE	SECTION	SH SHEET No.	TOTAL SHEETS
VIII	SBd	31	D		

BRIDGE ENGINEER — CIVIL AND STRUCTURAL ENGINEER — LICENSE 5545

DATE APPROVED

	Pile Length			Cutoff	Tip Elev		
	Max	Min	Ave	Elev	Max	Min	Ave.
Abut 1	62.0	45.0	49.2	2733.0	2671.0	2688.0	2683.8
✓	51.5	37.5	43.5	2724.9	76.2	87.4	82.9
Bent 2	37.5	37.5	37.5	2694.3	56.8	56.8	56.8
Bent 3	37.5	34.5	37.4	2695.3	57.8	60.8	57.9
Bent 4	37.5	37.5	37.5	2693.3	55.8	55.8	55.8
Bent 5	38.7	29.4	32.5	2692.3	53.6	62.9	59.8
Bent 6	44.3	34.8	36.9	2694.3	50.0	59.5	57.4
✓	36.7	33.3	35.1	2693.3	56.6	60.0	58.2
Abut 7	62.3	58.6	60.1	2728.5	66.2	69.9	68.4
✓	59.4	50.1	56.2	2720.9	62.3	73.4	66.5

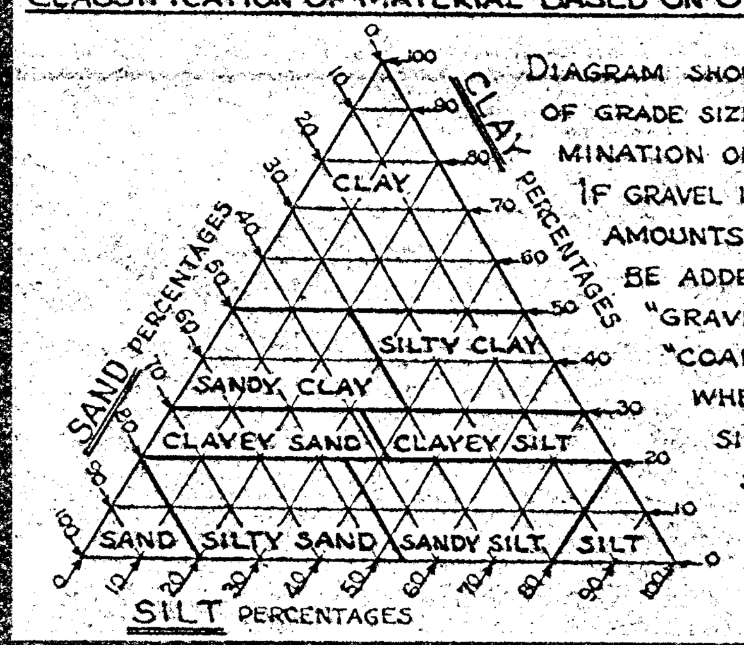
BRIDGE DEPARTMENT

FIELD STUDY		
DRAWN	J. Mensky	12-20-1954
CHECKED	A. Robbins	12-21-54
Approval Recommended by		Engineering Geologist
		Materials Testing Engineer

Classification of Material Based on Standard Grade Size Limits

Diagram showing the basis for estimates of grade size distribution used in determination of class names.

If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

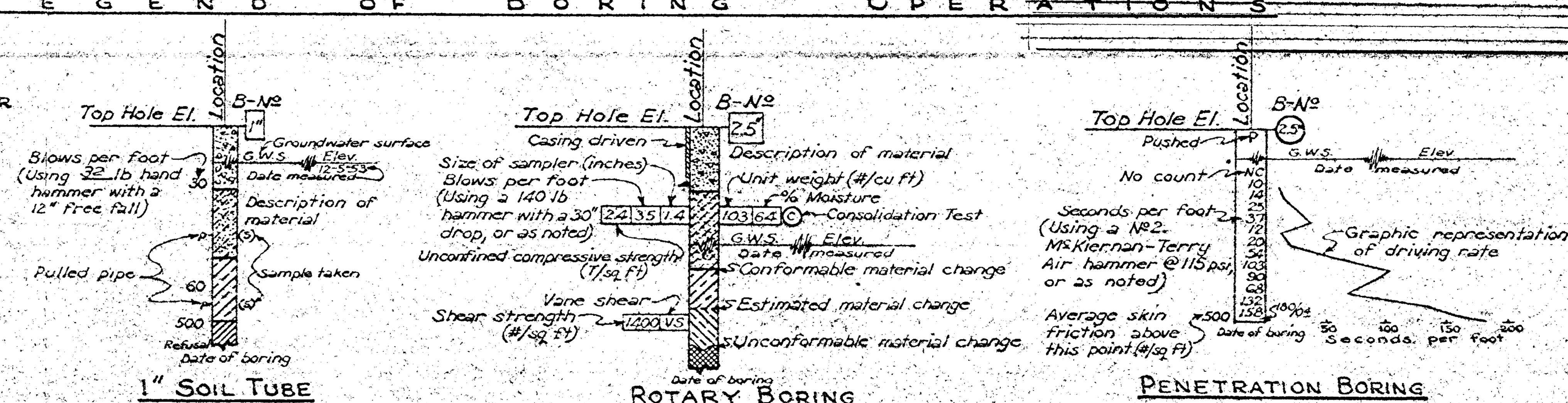


Legend of Earth Materials

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

Legend of Boring Operations

- Plan of any boring
- Penetrometer
- 2¼" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit



Notes

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

VICTORVILLE OVERHEAD

LOG OF TEST BORINGS

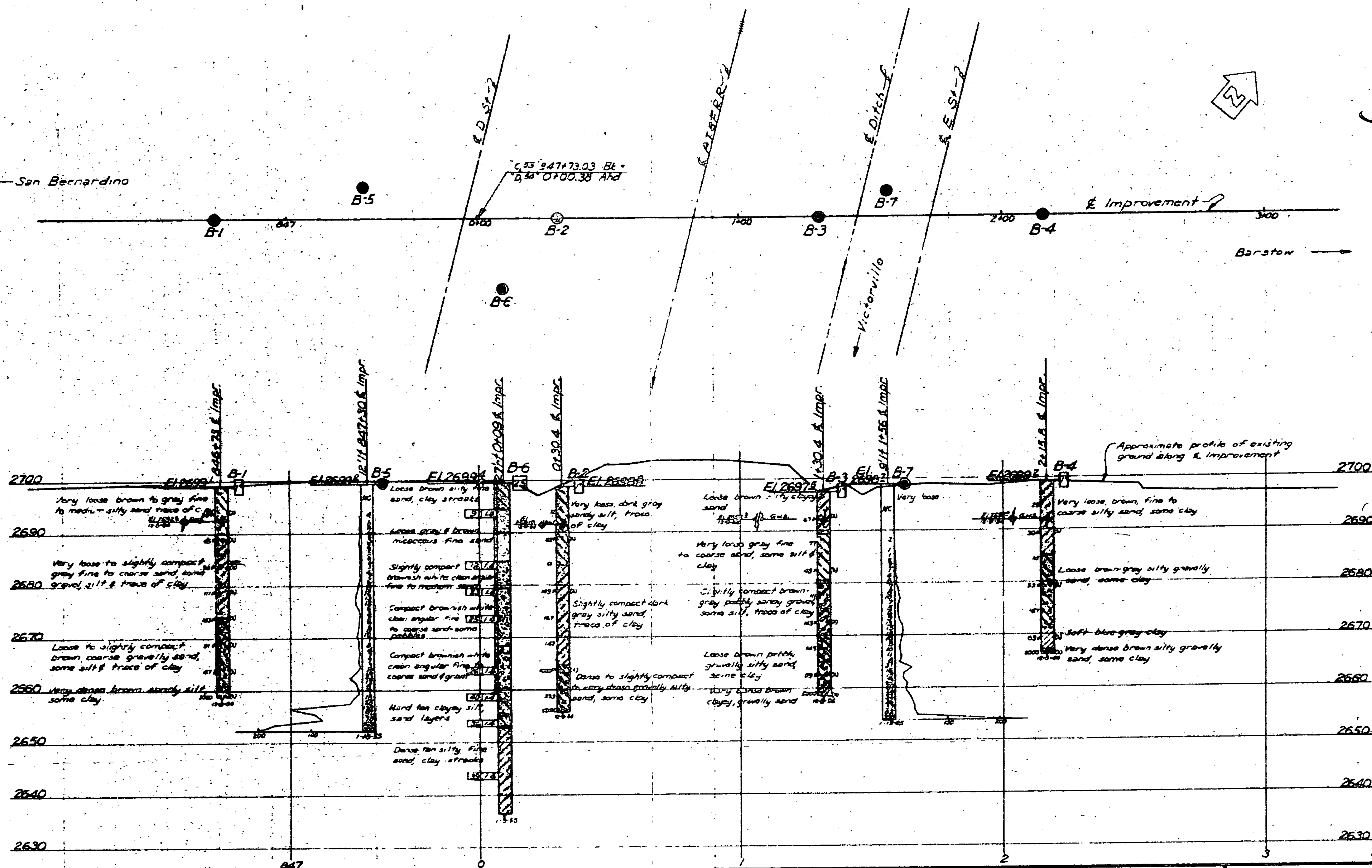
SCALE Horiz. 1" = 20' Vert. 1" = 10' | BRIDGE 54-484 | FILE | DRAWING

FED. ROAD DIST.	STATE				
7	CAL.			35	44

DIST	COUNTY	ROUTE	SECTION		
VIII	S.Bd	31	D	13	13

February 21, 1956

39



Test Borings by Bridge Dept.

B.M. "C53" 85-A-54
2"x2" Redwood Hub & Sp. No. Nail
Buried 1.1' 147' lt ℄ Impr. Sta 840+89
Elev. 2737.32

BM "D" 5-A-53
Pin in PCC R/W Monument .3' above ground 30' rt ℄ Survey 40+00
Elev 2698.19

AS BUILT 6, 1958

BRIDGE DEPARTMENT

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

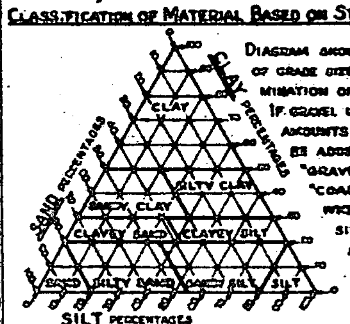


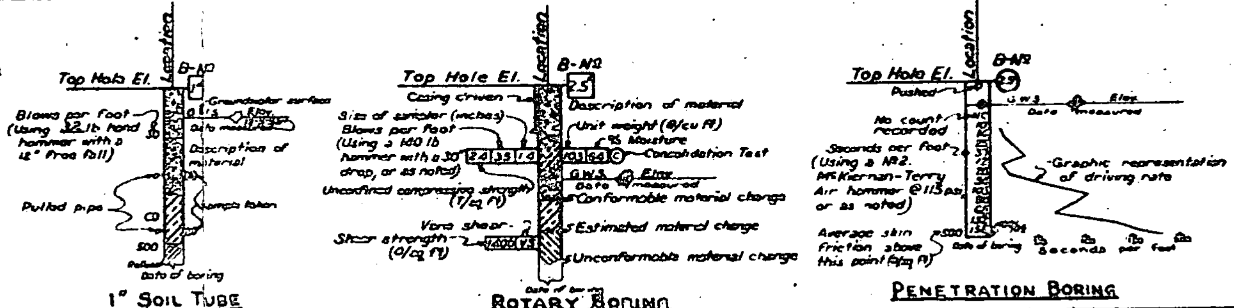
DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

- GRAVEL
- SAND
- SILT
- CLAY
- SANDY CLAY OR CLAYEY SAND
- SANDY SILT OR SILTY SAND
- SILTY CLAY OR CLAYEY SILT
- PEAT AND/OR ORGANIC MATTER
- FILL MATERIAL
- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

- PLAN OF ANY BORING
- PENETROMETER
- 2½" CONE PENETROMETER
- SAMPLER BORING (DRY)
- ROTARY BORING (WET)
- AUGER BORING (DRY)
- JET BORING
- CORE BORING
- TEST PIT



NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

~~VICTORVILLE~~ OVERHEAD
Rt. 31 / 43 Sep & O.H.

LOG OF TEST BORINGS

SCALE	BRIDGE 54-484	FILE	DRAWING C-4269-13

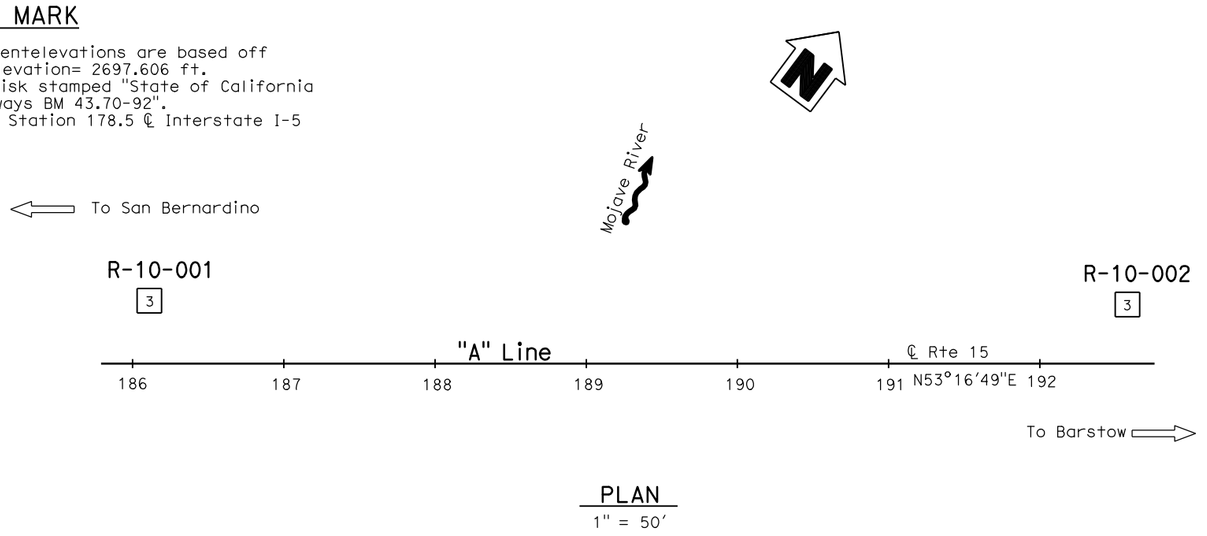
PREL. DRAWING NO. P- 4269 | 3

35

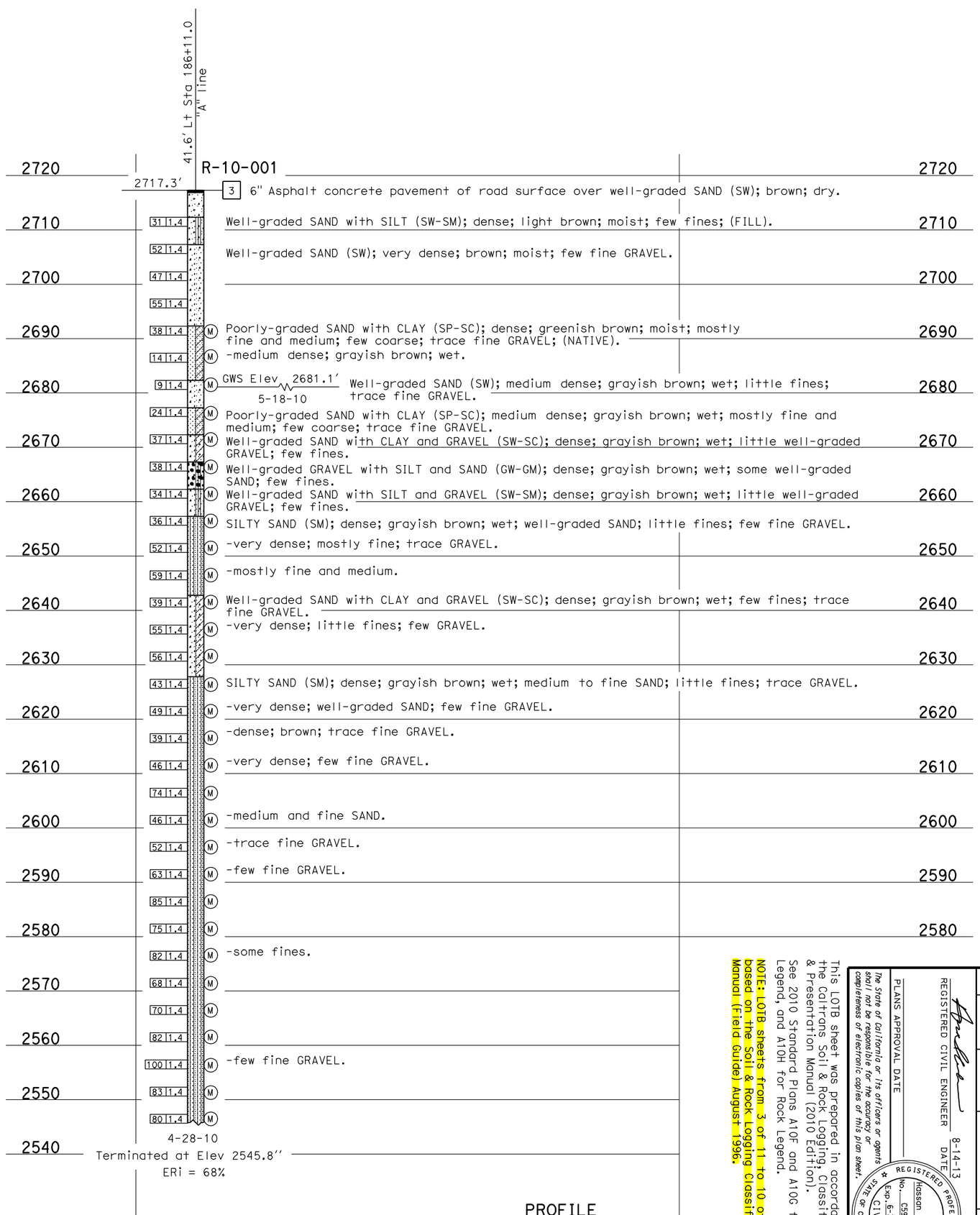
Mojave River Bridge

BENCH MARK

These well monumentelevations are based off of BM 43.7-92, Elevation= 2697.606 ft.
2 inches brass disk stamped "State of California Division of Highways BM 43.70-92".
45.9 Ft right of Station 178.5 ℄ Interstate I-5
NGVD 1929.



PLAN
1" = 50'



PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

NOTE: LOTB sheets from 3 of 11 to 10 of 11, are based on the Soil & Rock Logging Classification Manual (Field Guide) August 1996.

Hasson Ibrahim 8-14-13
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

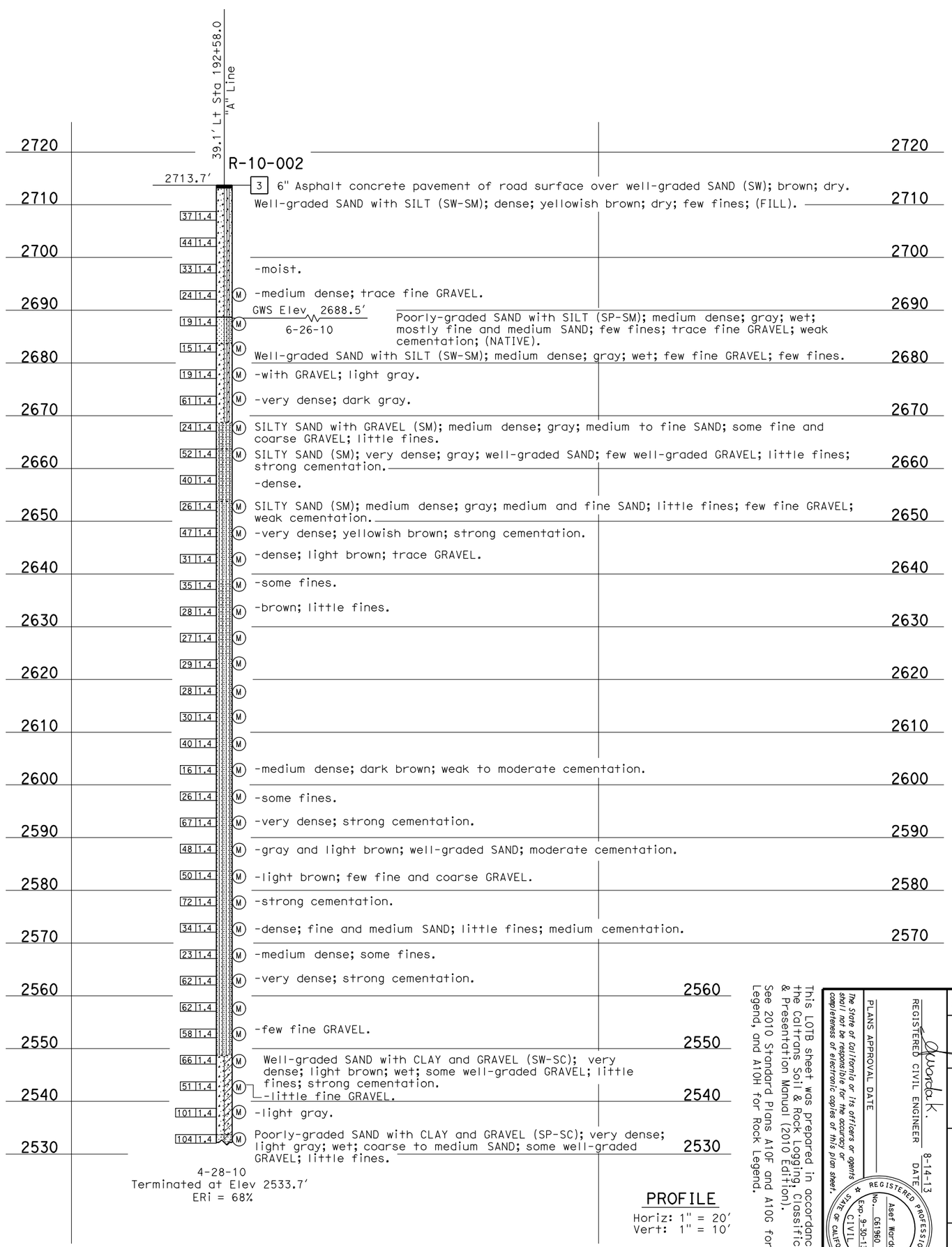
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Hasson Ibrahim
No. C59016
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

ENGINEERING SERVICES
MATERIALS AND GEOTECHNICAL SERVICES
FUNCTIONAL SUPERVISOR
NAME: A. Perez-Cobo
DRAWN BY: F. Nguyen
CHECKED BY: S. Logeswaran
FIELD INVESTIGATION BY:
H. Ibrahim
DGS CIVIL LOG OF TEST BORINGS SHEET
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
0 1 2 3
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X
UNIT: 3643
PROJECT NUMBER & PHASE: 0800000621
CONTRACT NO.: 08-355561
BRIDGE NO. 54-0483
POST MILE 43.93
MOJAVE RIVER BRIDGE (WIDEN)
LOG OF TEST BORINGS 1 OF 11
SHEET X OF X
DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES
FILE => mojave-v01.dgn
USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 12:08

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 11"



PROFILE
Horiz: 1" = 20'
Vert: 1" = 10'

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

Asef Wardak
REGISTERED CIVIL ENGINEER
8-14-13
DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Asef Wardak
No. C61960
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

ENGINEERING SERVICES
MATERIALS AND GEOTECHNICAL SERVICES

FUNCTIONAL SUPERVISOR
NAME: A. Perez-Cobo

DRAWN BY: F. Nguyen
CHECKED BY: S. Logeswaran

FIELD INVESTIGATION BY:
A. Wardak

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 54-0483
POST MILE 43.93

MOJAVE RIVER BRIDGE (WIDEN)

LOG OF TEST BORINGS 2 OF 11

UNIT: 3643
PROJECT NUMBER & PHASE: 0800000621
CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
	X	X

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS
0 1 2 3

DGS CIVIL LOG OF TEST BORINGS SHEET

FILE =>mojave-v02.dgn

USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:39

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

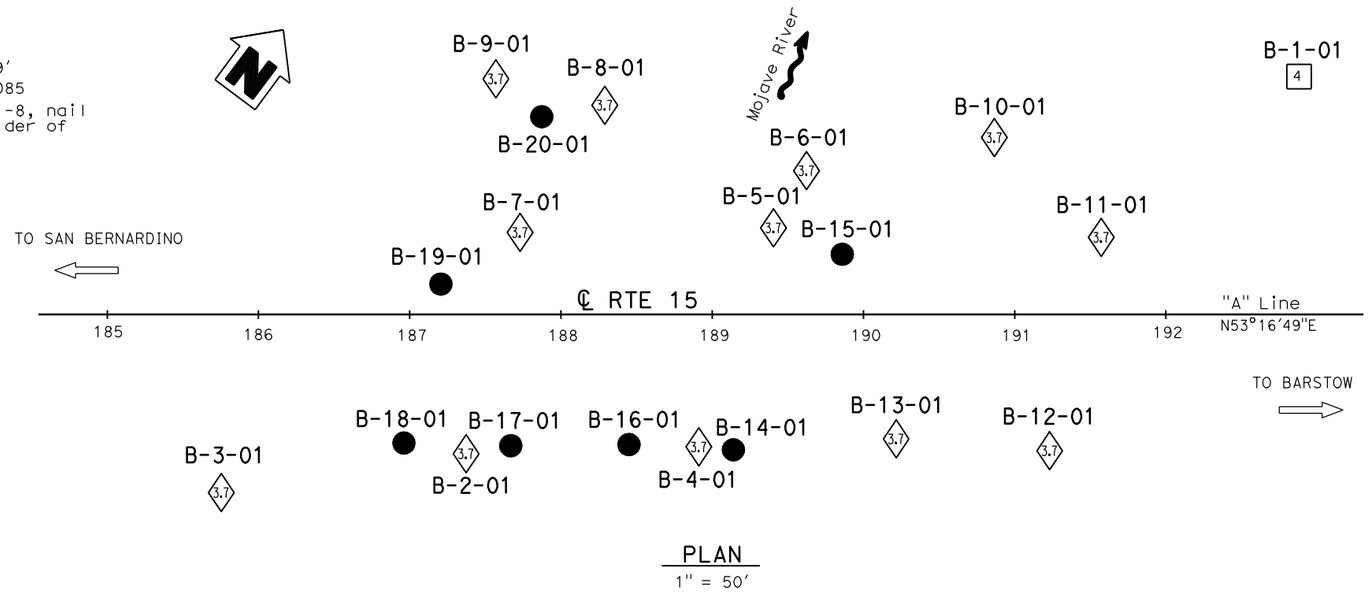
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

BENCH MARK

BM Elev 2718.889′
N 616469.644 E 2064601.085
Caltrans aerial target #1-8, nail in asphalt on right shoulder of northbound I-15



PLAN
1" = 50′

GPS SURVEY NOTES

Test Boring collar position and elevation data has acquired by Differential Global Positioning System methods utilizing a Trimble 12-Channel Pro XRGPS with Minimum Shift Key (MSK) beacon receiver with applied real time differential correction. Horizontal datum : U.S. State Plane 1983 High Precision Geodetic Network (HPGN)

Projection	Zone
California State Plane Coordinate System	5

Boring Number	(N) Coordinate	(E) Coordinate
B-1-01	616692.685	2064795.885
B-2-01	616532.026	2064706.510
B-3-01	616496.053	2064671.152
B-4-01	616560.871	2064743.180
B-5-01	616605.484	2064729.150
B-6-01	616617.208	2064727.563
B-7-01	616574.136	2064688.918
B-8-01	616604.509	2064687.583
B-9-01	616595.539	2064665.938
B-10-01	616645.364	2064755.149
B-11-01	616643.181	2064783.874
B-12-01	616606.170	2064800.878
B-13-01	616585.486	2064774.194
B-14-01	616564.448	2064749.462
B-15-01	616613.711	2064740.071
B-16-01	616553.001	2064732.427
B-17-01	616539.325	2064713.315
B-18-01	616526.572	2064696.005
B-19-01	616567.237	2064674.049
B-20-01	616595.558	2064678.743

NOTES:

1. The descriptions and classifications of rock and/or soil, including consistency and relative density descriptors, used by the field and/or office personnel for the exploration boreholes shown on this sheet are based on the "Soil and Rock Logging Classification Manual (Field Guide)," Engineering Service Center, Office of Structural Foundations, August 1996.

2. Soil colors were determined by using Munsel Soil Color Charts (1994, Revised Edition). Rock colors were determined using Geological Society of America rock color charts (1995, 8th Printing).

3. Ground water was measured in borings B-4-01, B-5-01, and B-6-01. Please refer to those borings for ground water measurements. No attempt was made to measure ground water in borings B-7-01 through B-20-01. Those borings were backfilled immediately after completion of drilling.

4. The ground water levels indicated in the Log of Test Borings (LOBT) sheets reflect the measured ground water levels measurement in the boreholes on the specified dates. Ground water surface elevations are subject to seasonal fluctuations and will be encountered at higher or lower elevations depending on conditions at time of constructions.

5. Test boring B-1-01 utilized a safety hammer to advance the sampler using a 140 lb hammer with a 30" drop. Penetration index values shown are the actual blow counts recorded in the field. Soil descriptions shown on the LOTB sheets for those borings are based on these index values.

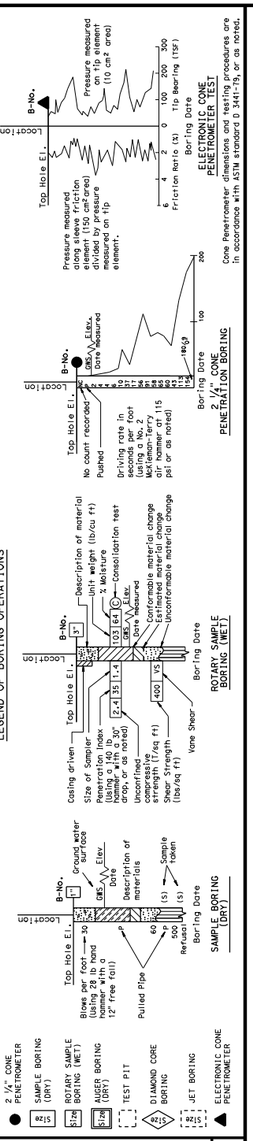
6. Test boring B-2-01 and B-4-01 through B-13-01utilized a Dietrich auto hammer to advance the sampler using a 140 lb hammer with a 30" drop. Penetration index values shown are the actual blow counts recorded in the field. Soil Consistency Classifications for those borings are based on a conversion factor of 1.5 times the blow count.

7. The boring B-3-01 utilized a safety hammer from the top of the down to Elev 2666.3′ and a Dietrich auto hammer from Elev 2666.3′ to the bottom of the boring, to advance the sampler using a 140 lb hammer with a 30" drop. Penetration index values shown are the actual blow counts recorded in the field. Soil consistency classifications shown on the LOTB sheet for boring B-3-01, from the top of the boring down to Elev 2666.3′, are based on the actual blow counts recorded on the field, and from Elev 2666.3′ to bottom of the boring are based on a conversion factors of 1.5 times the field blow count.

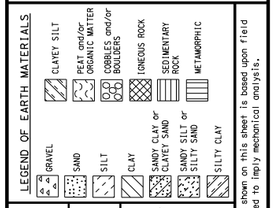
8. E= Blow count for 1′ penetration extrapolated from blow count for less than 1′ (due to change in material or hard driving).

9. Borings B-14-01 through B-20-01 were 2.24" diameter cone penetration borings, advanced using a Mobile 3000 hydraulic operated hoe ram. Due to the variability of the energy output of the Mobile 3000 rig, the rig was only used to estimate the depth to very dense earth material.

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS



CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

SPT N-Value (Blows/Foot)	Granular	SPT N-Value (Blows/Foot)	Cohesive
0-4	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-30	Medium Dense	5-8	Medium stiff
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 54-0483
POST MILE 43.8

MOJAVE RIVER BRIDGE (WIDEN)
LOG OF TEST BORINGS 3 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006211
CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v03.dgn

USERNAME => s1116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:39

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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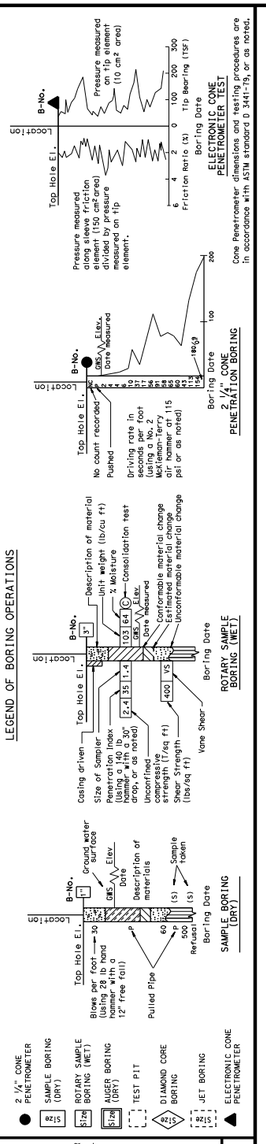
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAYEY SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · PEAT and/or ORGANIC MATTER · COBBLES and/or BOULDERS · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

SPT N-Value (Blows/ foot)	Granular	SPT N-Value (Blows/ foot)	Cohesive
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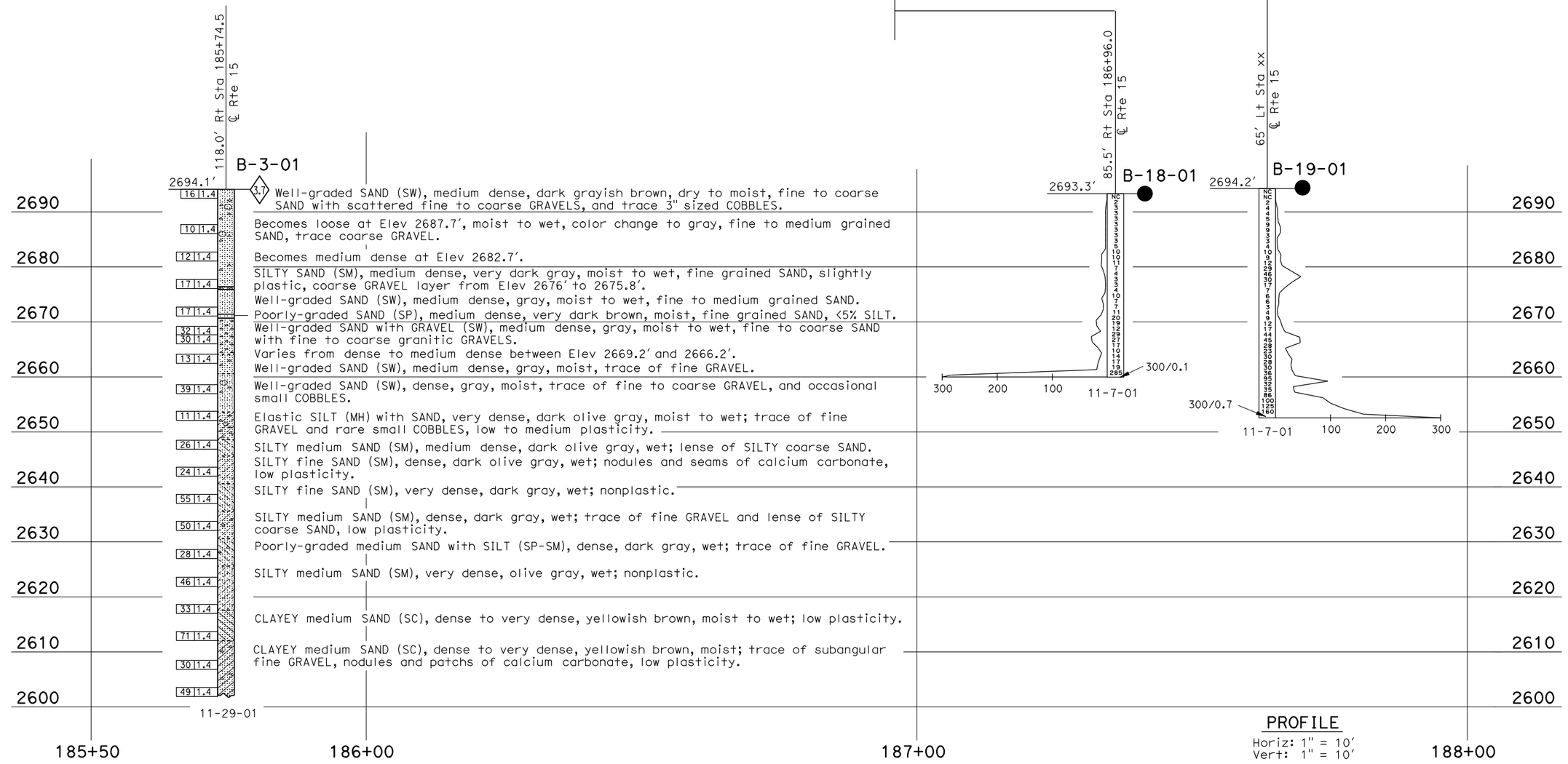
5-10	Loose	2-4	Soft
11-30	Medium Dense	5-8	Medium stiff
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO.	57-1226
POST MILE	0.90

MOJAVE RIVER BRIDGE (WIDEN)

LOG OF TEST BORINGS 4 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11000205191

CONTRACT NO.: 11-056311

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v04.dgn

USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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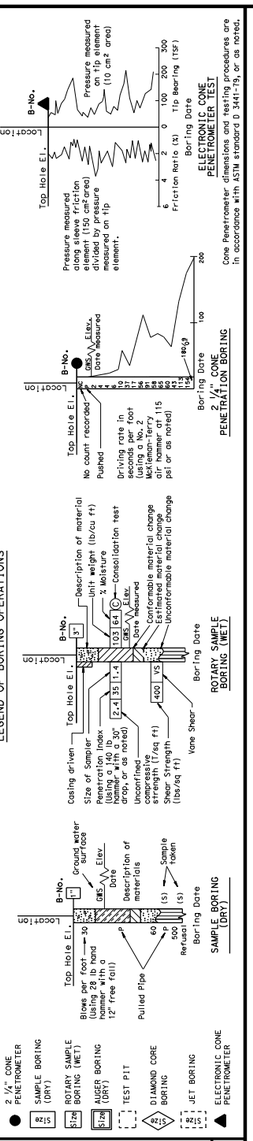
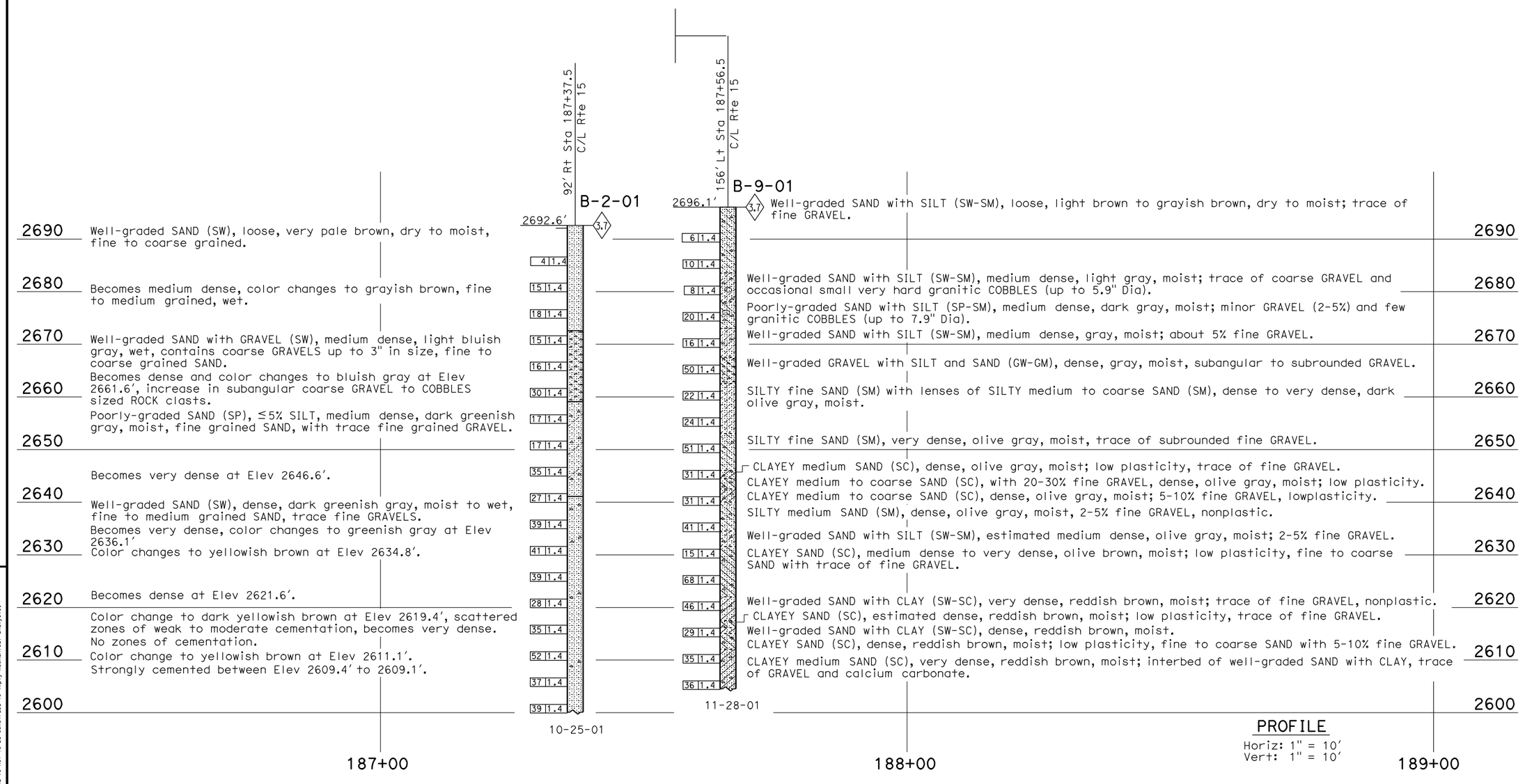
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"





ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 54-0483
POST MILE 43.8

MOJAVE RIVER BRIDGE (WIDEN)
LOG OF TEST BORINGS 5 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006211
CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v05.dgn

USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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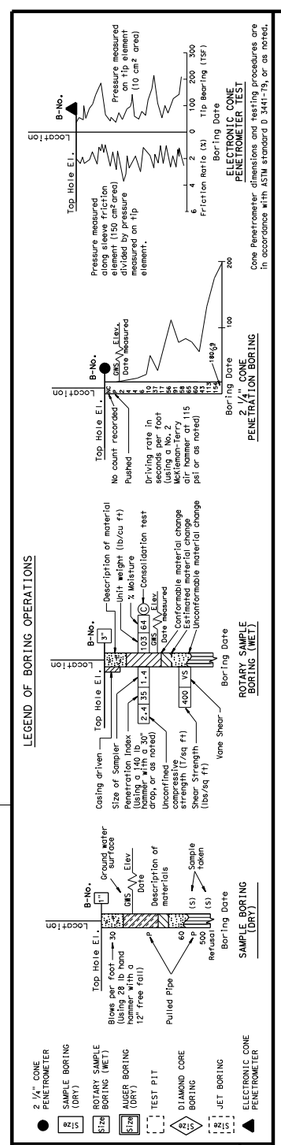
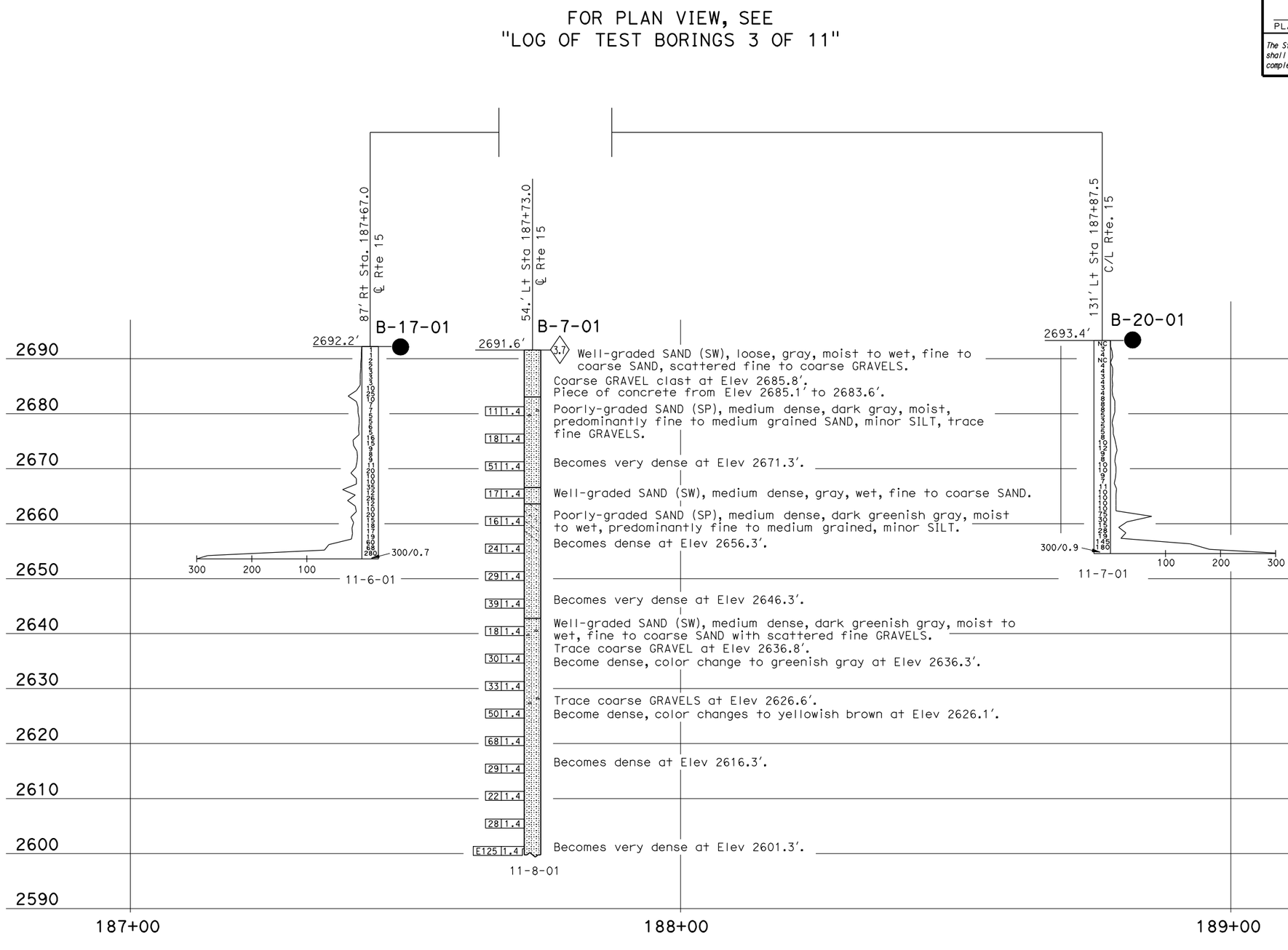
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"



CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

SPT N-Value (Blows/ft)	Granular	SPT N-Value (Blows/foot)	Cohesive
0-4	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-30	Medium Dense	5-8	Medium stiff
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO.	54-0483
POST MILE	43.8

MOJAVE RIVER BRIDGE (WIDEN)
LOG OF TEST BORINGS 6 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006211

CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v06.dgn

USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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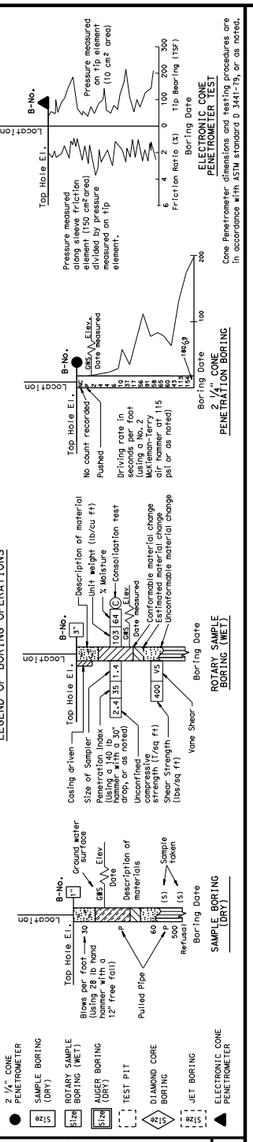
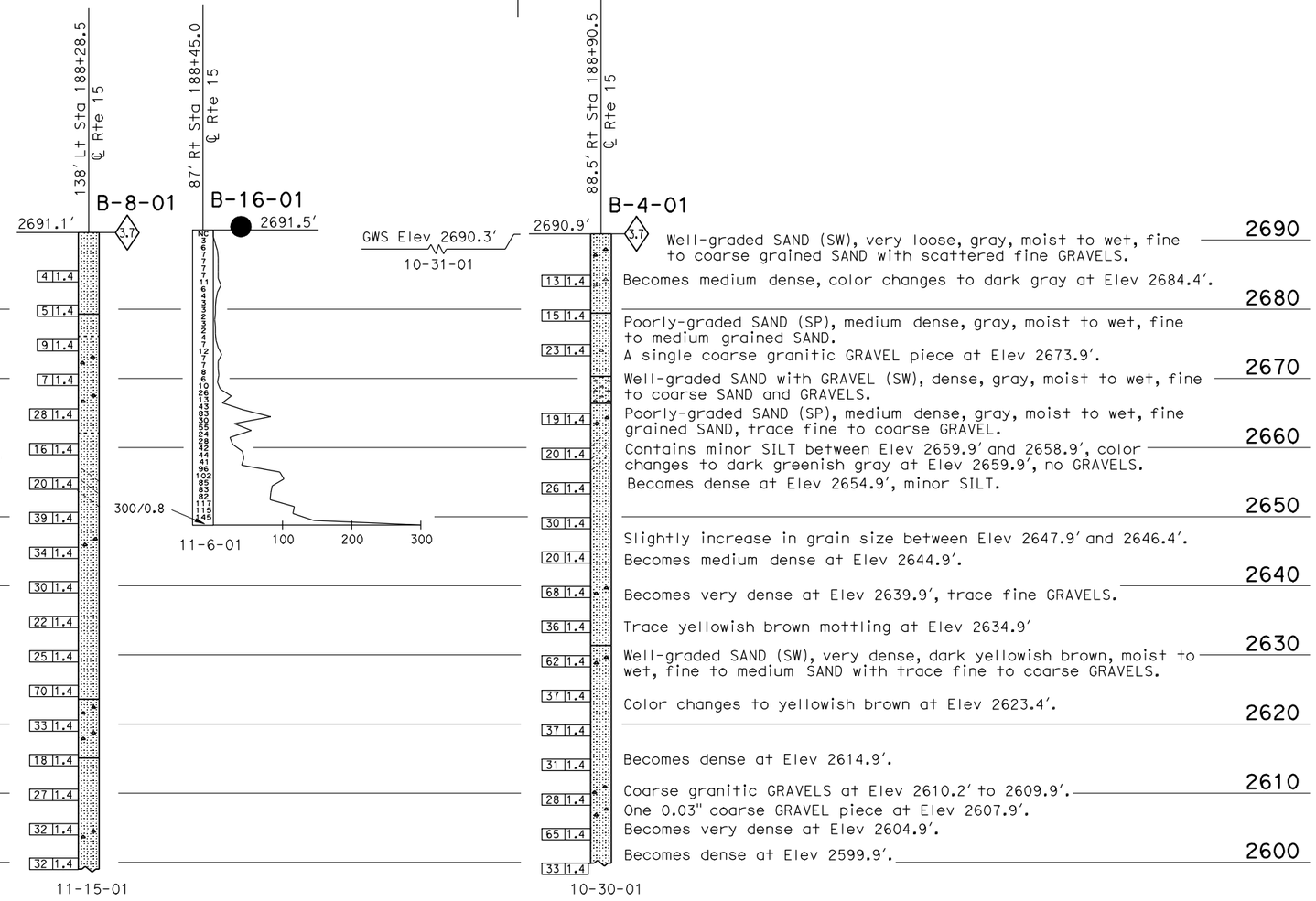
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"





2690 — Well-graded SAND (SW), loose, gray, moist to wet, fine to coarse SAND.

2680 — Poorly-graded SAND (SP), loose, dark gray, moist to wet, predominantly fine grained with some medium grained SAND. Well-graded SAND (SW), medium dense, gray, moist to wet, fine to coarse SAND with trace fine to coarse GRAVELS.

2670 — Becomes dense at Elev 2665.6′.

2660 — Poorly-graded SAND (SP), medium dense, dark greenish gray, wet, predominantly fine to medium grained with trace coarse SAND. Minor amount of SILT content at Elev 2655.6′.

2650 — Becomes very dense at Elev 2645.6′, trace coarse GRAVEL.

2640 — Becomes dense at Elev 2640.6′.

2630 — Color changes to dark yellowish brown at Elev 2629.6′. Becomes very dense at Elev 2625.6′.

2620 — Well-graded SAND (SW), dense, yellowish brown, moist to wet, fine to coarse SAND, trace fine GRAVELS.

2610 — Poorly-graded SAND (SP), medium dense, yellowish brown, moist to wet, predominantly fine to medium grained. Becomes dense at Elev 2610.6′.

2600 — Trace fine GRAVELS at Elev 2604.1′.

2590

188+00

2690 — Well-graded SAND (SW), very loose, gray, moist to wet, fine to coarse grained SAND with scattered fine GRAVELS. Becomes medium dense, color changes to dark gray at Elev 2684.4′.

2680 — Poorly-graded SAND (SP), medium dense, gray, moist to wet, fine to medium grained SAND. A single coarse granitic GRAVEL piece at Elev 2673.9′.

2670 — Well-graded SAND with GRAVEL (SW), dense, gray, moist to wet, fine to coarse SAND and GRAVELS. Poorly-graded SAND (SP), medium dense, gray, moist to wet, fine grained SAND, trace fine to coarse GRAVEL.

2660 — Contains minor SILT between Elev 2659.9′ and 2658.9′, color changes to dark greenish gray at Elev 2659.9′, no GRAVELS. Becomes dense at Elev 2654.9′, minor SILT.

2650 — Slightly increase in grain size between Elev 2647.9′ and 2646.4′. Becomes medium dense at Elev 2644.9′.

2640 — Becomes very dense at Elev 2639.9′, trace fine GRAVELS. Trace yellowish brown mottling at Elev 2634.9′

2630 — Well-graded SAND (SW), very dense, dark yellowish brown, moist to wet, fine to medium SAND with trace fine to coarse GRAVELS. Color changes to yellowish brown at Elev 2623.4′.

2620 — Becomes dense at Elev 2614.9′.

2610 — Coarse granitic GRAVELS at Elev 2610.2′ to 2609.9′. One 0.03" coarse GRAVEL piece at Elev 2607.9′. Becomes very dense at Elev 2604.9′.

2600 — Becomes dense at Elev 2599.9′.

2590

PROFILE
Horiz: 1" = 10′
Vert: 1" = 10′

189+00

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 54-0483
POST MILE 43.8

MOJAVE RIVER BRIDGE (WIDEN)
LOG OF TEST BORINGS 7 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 080000006211

CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v07.dgn

USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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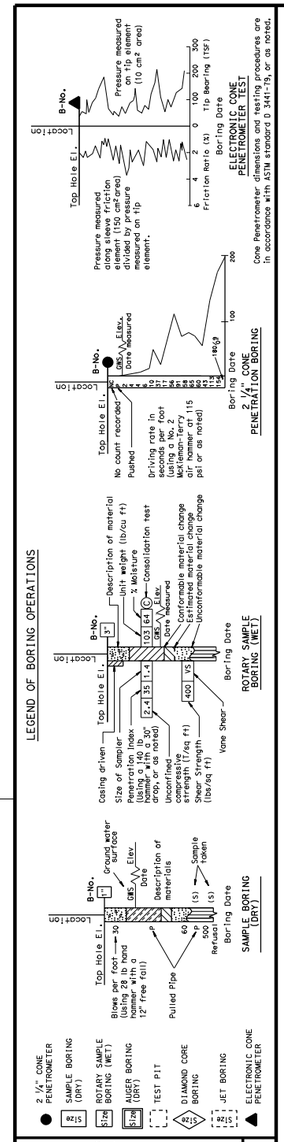
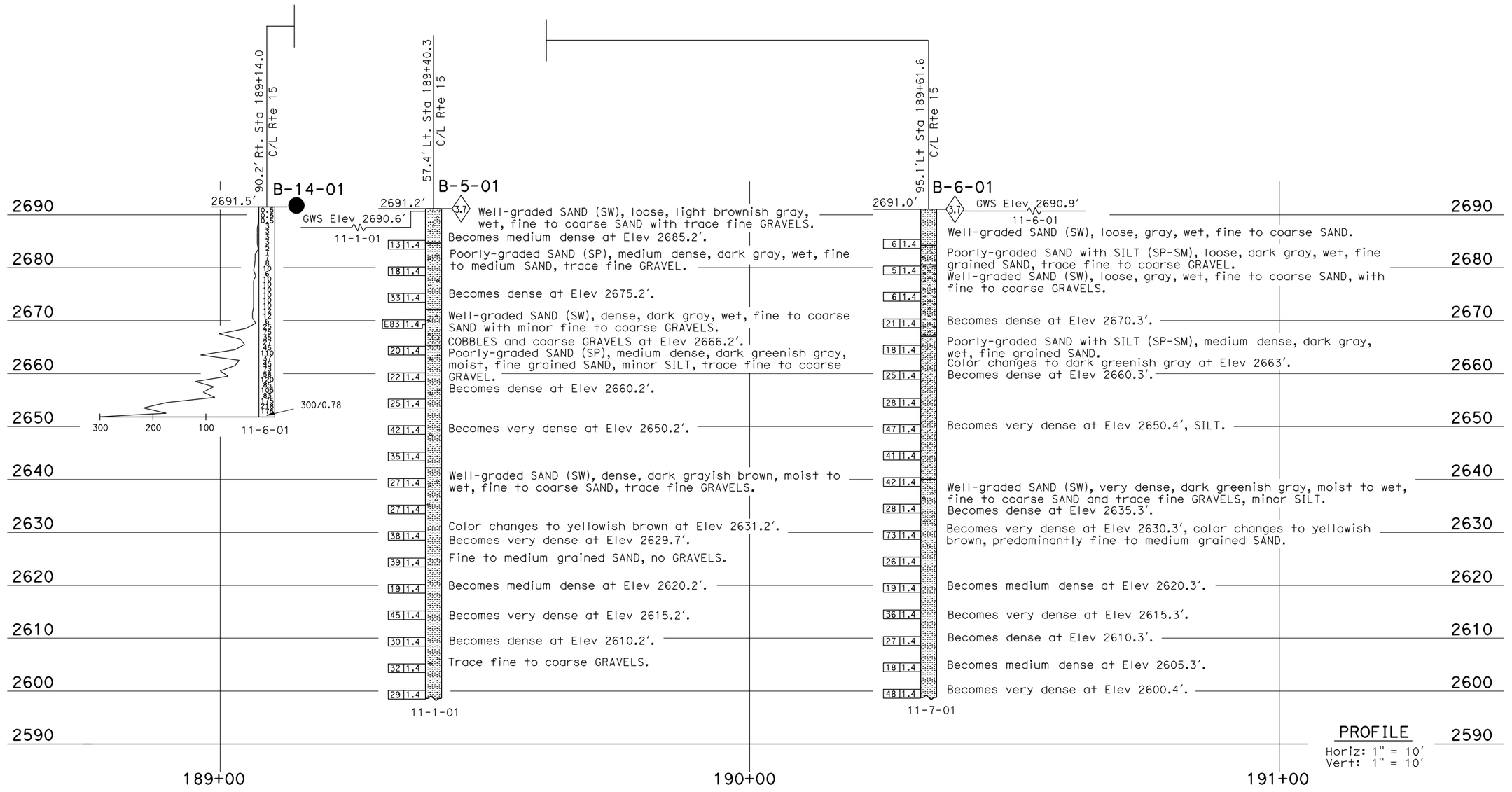
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"





PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO.	MOJAVE RIVER BRIDGE (WIDEN)
54-0483	
POST MILE	LOG OF TEST BORINGS 8 OF 11
43.8	

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006211

CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v08.dgn

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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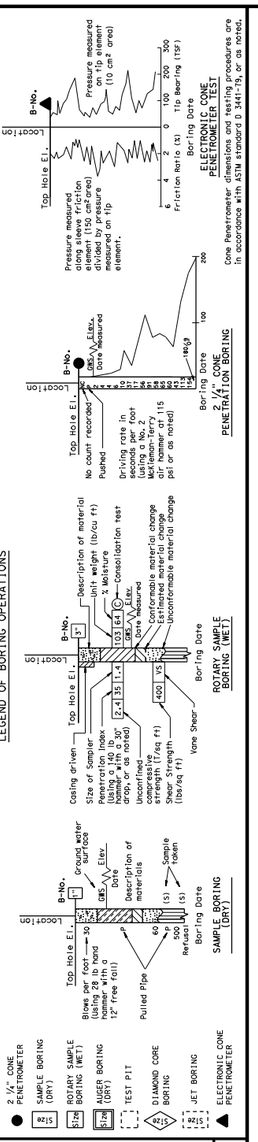
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"



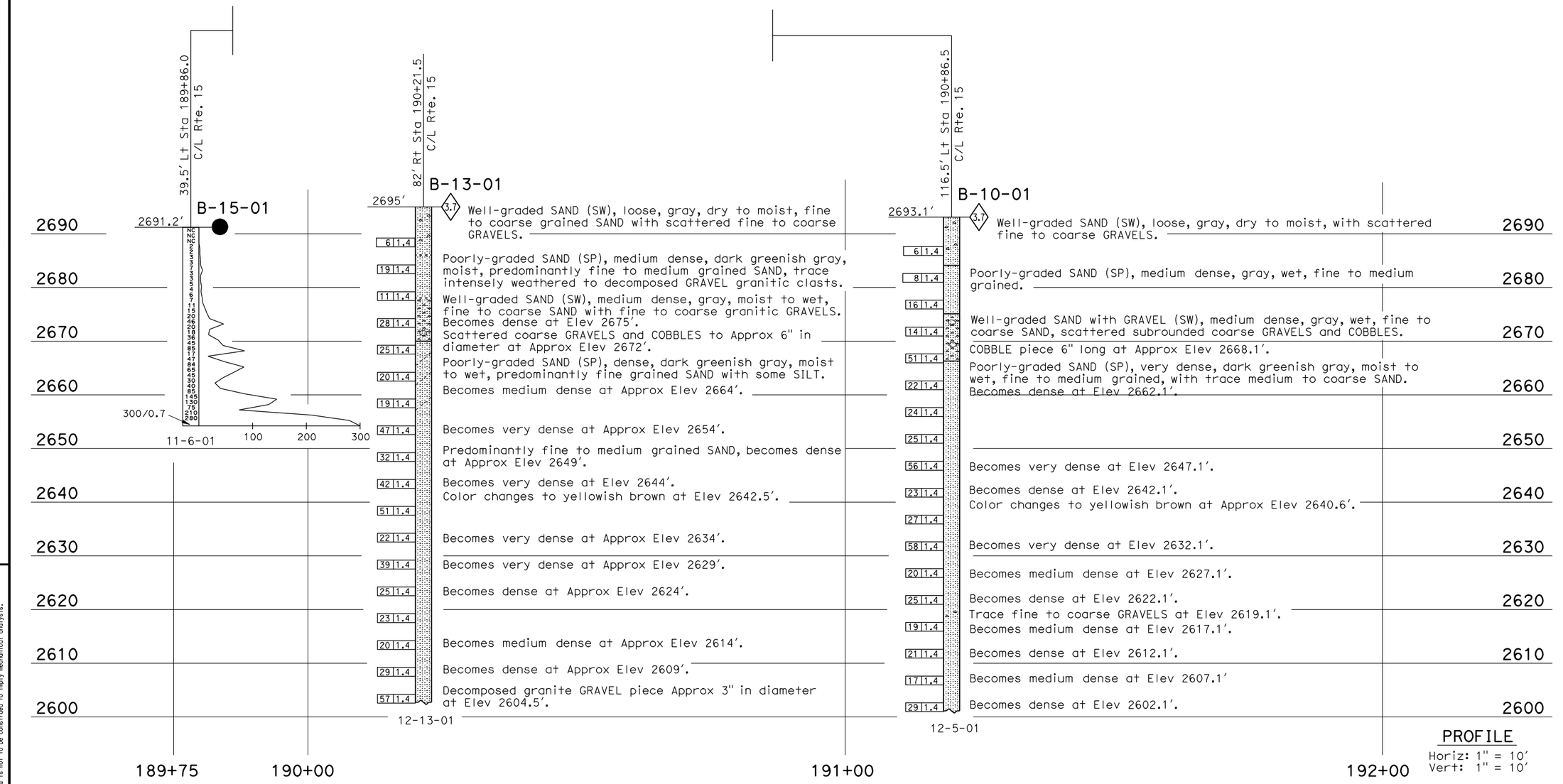
LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT and/or ORGANIC MATTER · COBBLES and/or BOULDERS · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

SPT N-Value (Blows/Foot)	Granular	SPT N-Value (Blows/Foot)	Cohesive
0-4	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-30	Medium Dense	5-8	Medium stiff
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



Well-graded SAND (SW), loose, gray, dry to moist, fine to coarse grained SAND with scattered fine to coarse GRAVELS.

Poorly-graded SAND (SP), medium dense, dark greenish gray, moist, predominantly fine to medium grained SAND, trace intensely weathered to decomposed GRAVEL granitic clasts.

Well-graded SAND (SW), medium dense, gray, moist to wet, fine to coarse SAND with fine to coarse granitic GRAVELS. Becomes dense at Elev 2675′.

Scattered coarse GRAVELS and COBBLES to Approx 6" in diameter at Approx Elev 2672′.

Poorly-graded SAND (SP), dense, dark greenish gray, moist to wet, predominantly fine grained SAND with some SILT.

Becomes medium dense at Approx Elev 2664′.

Becomes very dense at Approx Elev 2654′.

Predominantly fine to medium grained SAND, becomes dense at Approx Elev 2649′.

Becomes very dense at Elev 2644′.
Color changes to yellowish brown at Elev 2642.5′.

Becomes very dense at Approx Elev 2634′.

Becomes very dense at Approx Elev 2629′.

Becomes dense at Approx Elev 2624′.

Becomes medium dense at Approx Elev 2614′.

Becomes dense at Approx Elev 2609′.

Decomposed granite GRAVEL piece Approx 3" in diameter at Elev 2604.5′.

Well-graded SAND (SW), loose, gray, dry to moist, with scattered fine to coarse GRAVELS.

Poorly-graded SAND (SP), medium dense, gray, wet, fine to medium grained.

Well-graded SAND with GRAVEL (SW), medium dense, gray, wet, fine to coarse SAND, scattered subrounded coarse GRAVELS and COBBLES.

COBBLE piece 6" long at Approx Elev 2668.1′.

Poorly-graded SAND (SP), very dense, dark greenish gray, moist to wet, fine to medium grained, with trace medium to coarse SAND. Becomes dense at Elev 2662.1′.

Becomes very dense at Elev 2647.1′.

Becomes dense at Elev 2642.1′.
Color changes to yellowish brown at Approx Elev 2640.6′.

Becomes very dense at Elev 2632.1′.

Becomes medium dense at Elev 2627.1′.

Becomes dense at Elev 2622.1′.
Trace fine to coarse GRAVELS at Elev 2619.1′.
Becomes medium dense at Elev 2617.1′.

Becomes dense at Elev 2612.1′.

Becomes medium dense at Elev 2607.1′

Becomes dense at Elev 2602.1′.

PROFILE
Horiz: 1" = 10′
Vert: 1" = 10′

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO.	54-0483
POST MILE	43.8

MOJAVE RIVER BRIDGE (WIDEN)

LOG OF TEST BORINGS 9 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006211

CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES	SHEET	OF
08-07-13	X	X

FILE => mojave-v09.dgn

USERNAME => s116982 DATE PLOTTED => 14-AUG-2013 TIME PLOTTED => 11:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15			

REGISTERED CIVIL ENGINEER — 8-14-13 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Hassan Ibrahim — No. C59016 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

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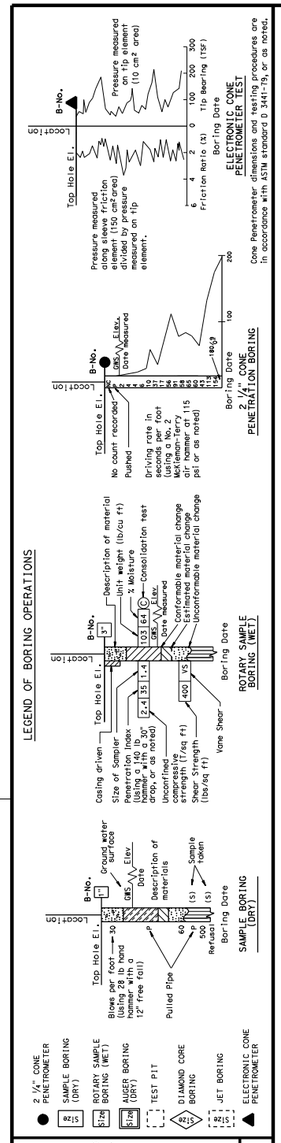
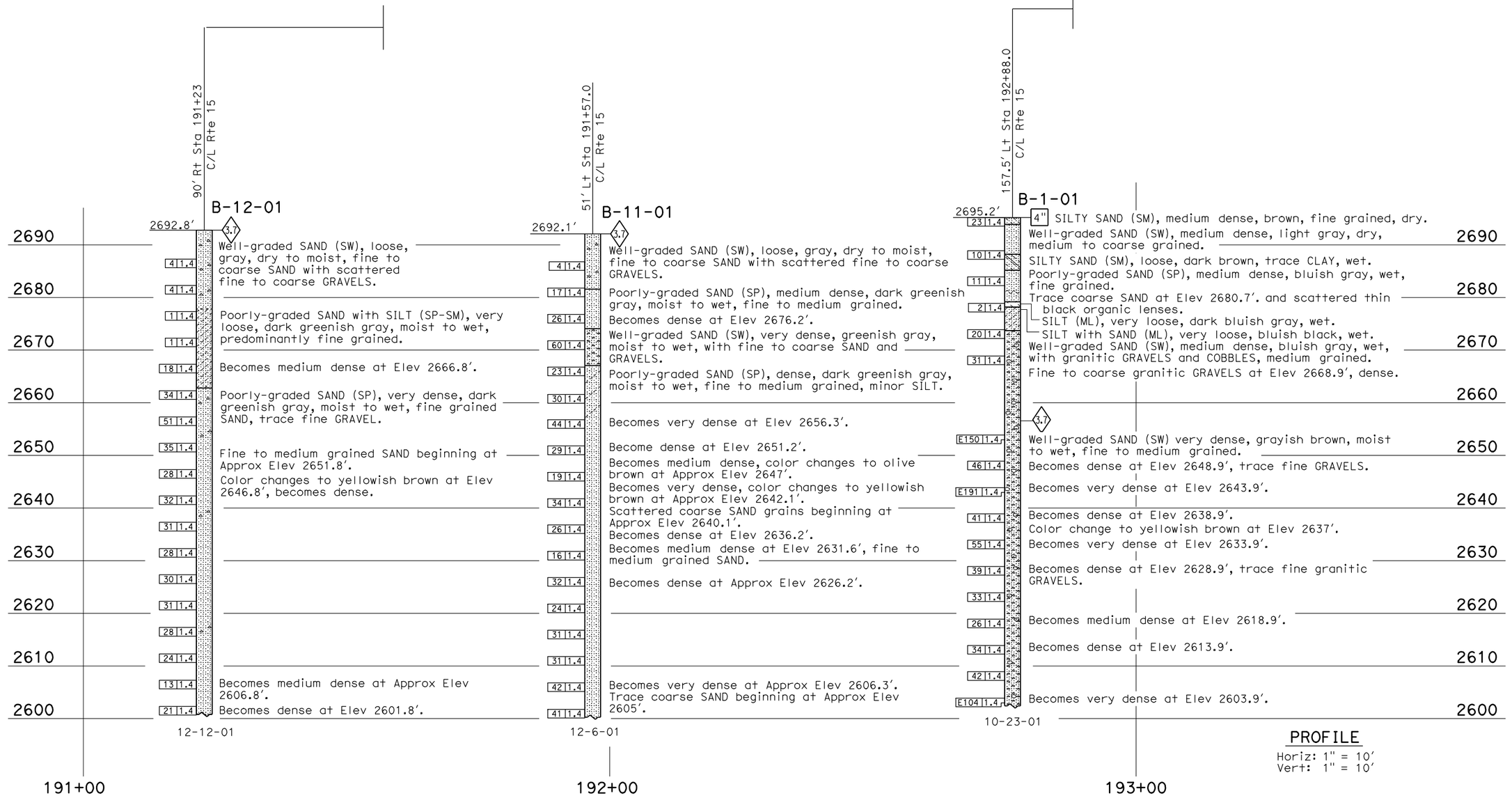
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"





PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS & GEOTECHNICAL SVCS
DRAWN BY	I.G-Remmen
CHECKED BY	A. Wardak

FIELD INVESTIGATION BY: E. Neupert, F. Gerami

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO.	54-0483
POST MILE	43.8

MOJAVE RIVER BRIDGE (WIDEN)

LOG OF TEST BORINGS 10 OF 11

OGS LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 5/25/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 08000006211

CONTRACT NO.: 08-355561

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

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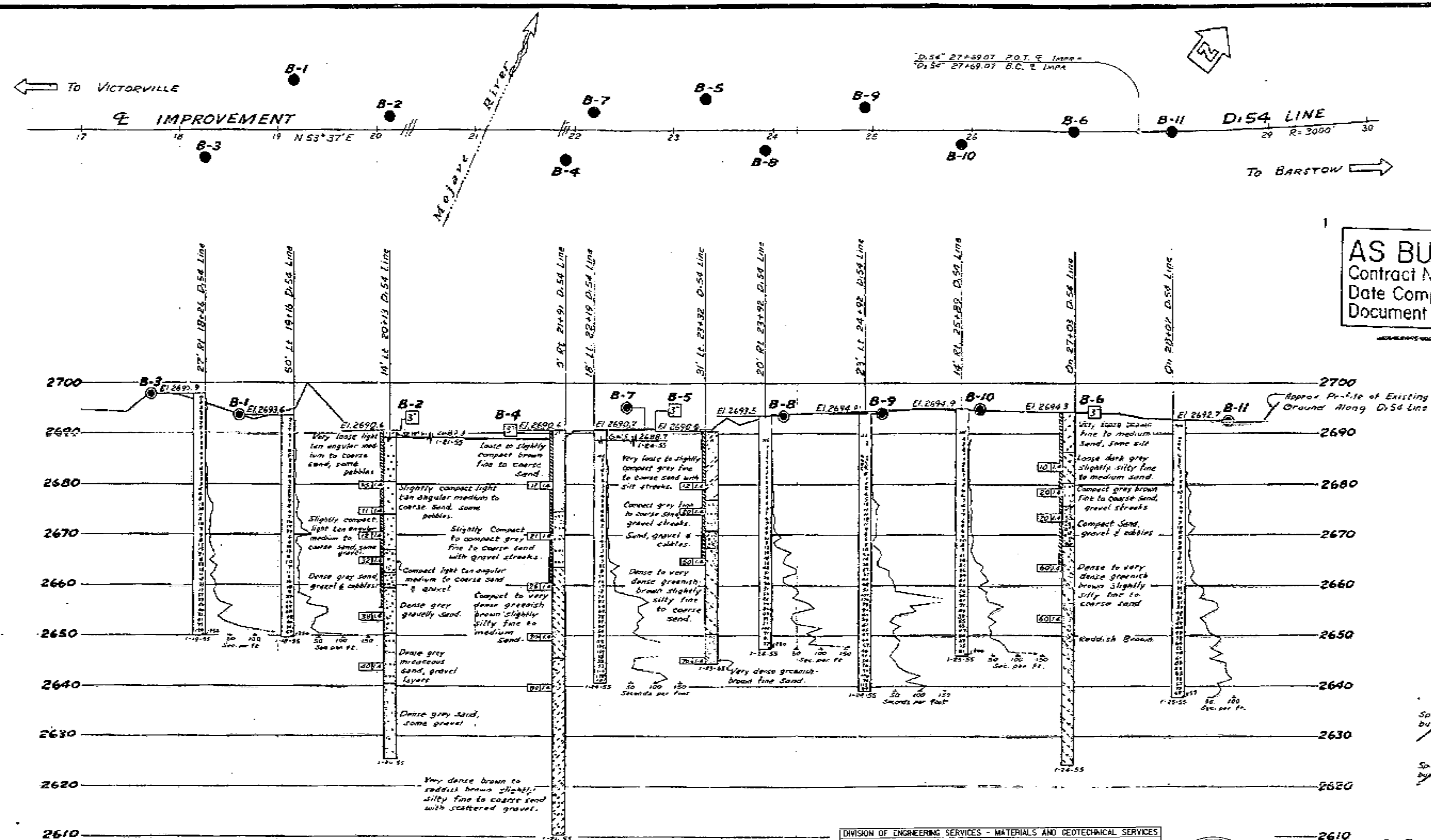
FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CAL.	F-008(5)		44	44

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VIII	SBd	31	D	3	9

February 27, 1956



AS BUILT PLANS
Contract No. 57-8VC12
Date Completed ______
Document No. 80000790

Test Boring By Bridge Dept.

B.M. D-54 2654 Sp. Hd. Nail in 2x2 Rwd Hub buried 14' Rt. 18+16 Elev. 2693.93

B.M. D-54 2654 Sp. Hd. Nail in 2x2 Rwd Hub buried 18' Rt. 24+54 Elev. 2694.09

AS BUILT 1-7-58 BR REP

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND". THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

LEGEND OF

- Plan of any boring
- Penetrometer
- 2½" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit

1" SOIL TUBE

DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
08	SBd	15			

REGISTERED CIVIL ENGINEER — August 14, 2013 DATE

Asef Karzai No. C61360 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

MOJAVE RIVER BRIDGE (WIDEN)

LOG OF TEST BORINGS 11 OF 11

UNIT: 3643 CONTRACT No. 08-355561 BRIDGE No. 54-0483

PROJ. No. & PHASE: 0800000621

AS-BUILT VERT DATUM: NGVD29 CONVERSION: NGV329 + 2.7 Ft

NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS

MOJAVE RIVER BRIDGE

LOG OF TEST BORINGS

SCALE Horiz. 1" = 50' Vert. 1" = 10' | BRIDGE 54-483½ | DRAWING C-4170-9

PREL. DRAWING No. P-4170

BRIDGE DEPARTMENT

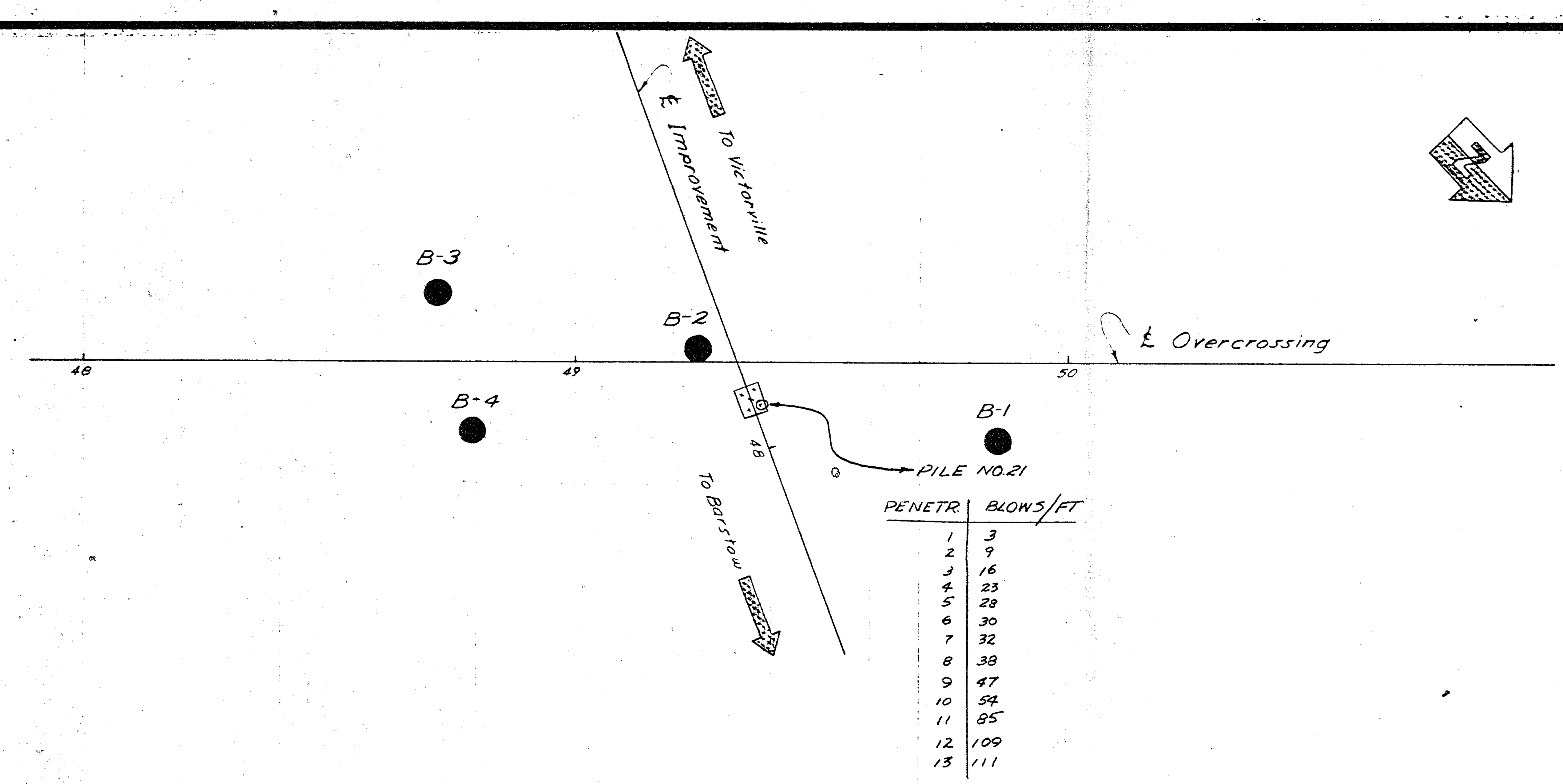
44

Stoddard Wells Road

BRIDGE ENGINEER — CIVIL AND STRUCTURAL ENGINEER — LICENSE 6353

1957

DATE APPROVED



PENETR.	BLOWS/FT
1	3
2	9
3	16
4	23
5	28
6	30
7	32
8	38
9	47
10	57
11	85
12	109
13	111

NO TEST PILE SPECIFIED

LOCATION - BENT #3 - RIGHT FOOTING - PILE NO.21 - SEE FIELD BOOK NO.2
TYPE - CAST-IN-PLACE CONCRETE PILE ALTERNATIVE "W"
HAMMER - VULCAN NO. 1
DIAM. - 10" TIP & 16" BUTT
ELEV. - CUT-OFF 2703.75 TIP 2690±
LOADS - DESIGN 45 TONS E.N.R. LOAD 82+ TONS

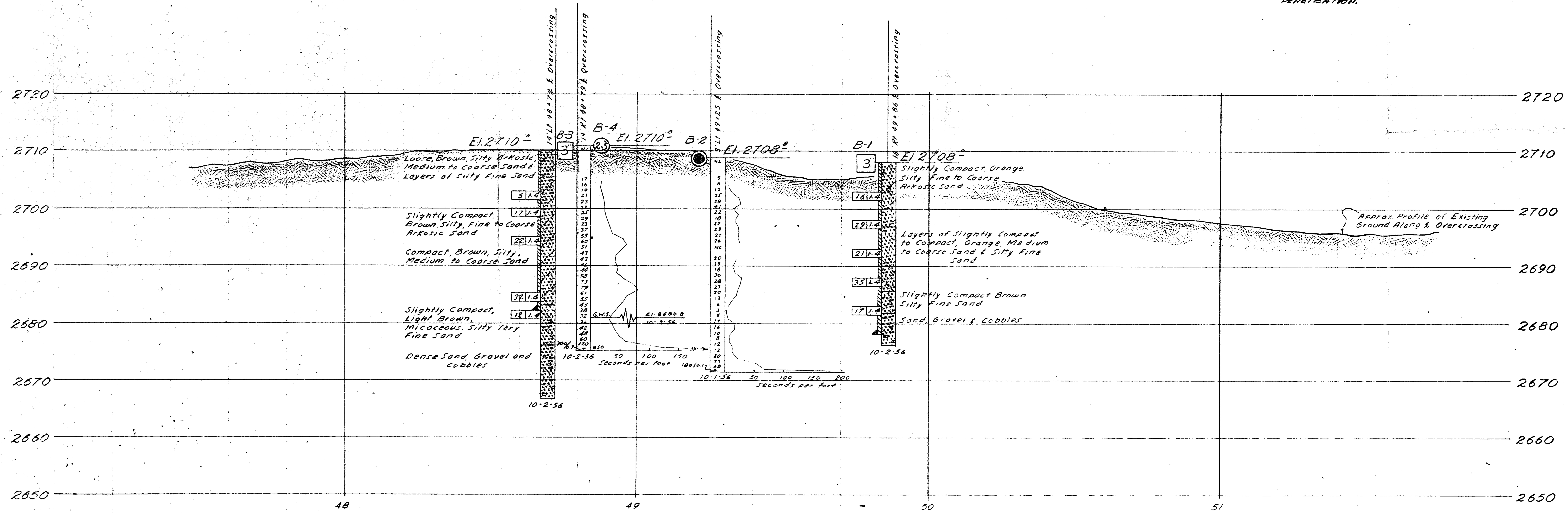
LENGTH -

	MAX.	MIN.	AVE.
ABUT #1	28.2	26.8	27.5
BENT #2L	14.7	12.4	13.1
2R	13.3	12.8	13.0
BENT #3L	12.8	12.7	12.7+
3R	13.4	11.5	12.9
BENT #4L	13.6	12.9	13.1+
4R	12.6	11.6	12.3
ABUT #5	35.0	31.7	32.7

TOTAL - 691.9 L.F.
ESTIMATE - 1350 L.F.

ATTEMPT WAS MADE TO DRIVE PILES THROUGH SOFTER AREA (B-2 & B-4) AT ELEV. 2680 ±, BUT PILES REACHED E.N.R. BEARING WELL BEFORE MIN. PENETRATION.

BRIDGE DEPARTMENT



23

B.M. #5A-54
Set 2"x2" Rwd. Hub & Sc. Hd
Elev. 2691.66

FIELD STUDY	by MILLS	10-2-56
DRAWN	by OLSON	10-4-56
CHECKED		

Approval Recommended by

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

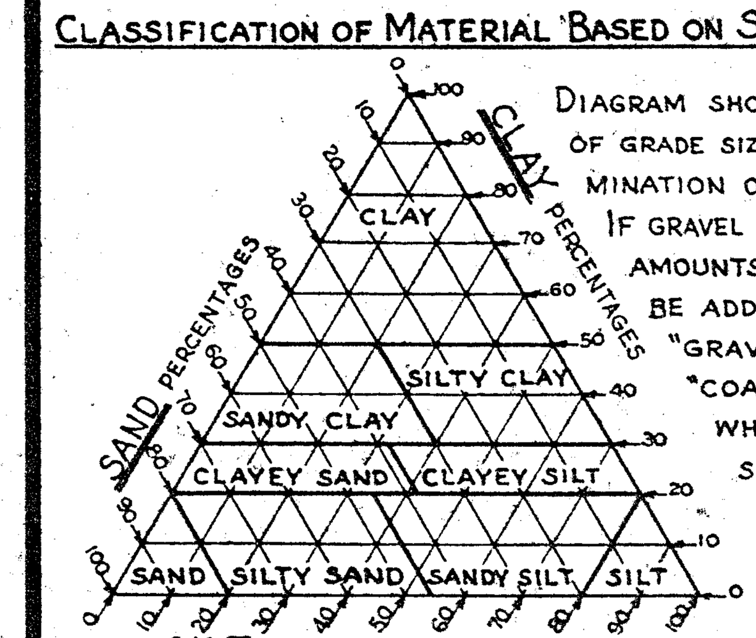


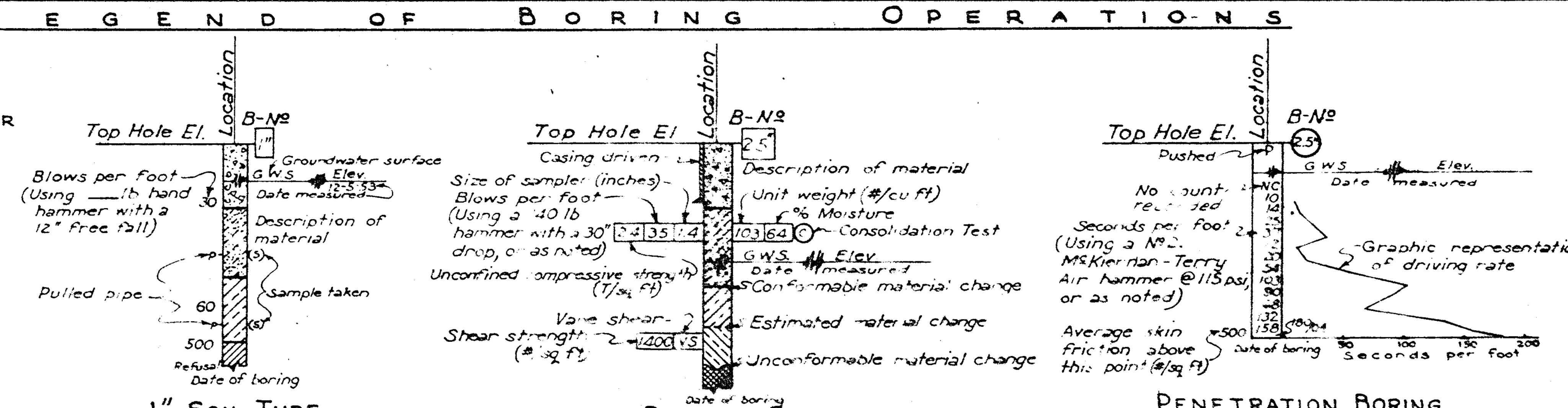
Diagram showing the basis for estimates of grade size distribution used in determination of class names.
If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and/or Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

LEGEND OF BORING OPERATIONS

- Plan of any boring
- Penetrometer
- 2¼" Cone Penetrometer
- Sampler boring (dry)
- Rotary boring (wet)
- Auger boring (dry)
- Jet boring
- Core boring
- Test pit



NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

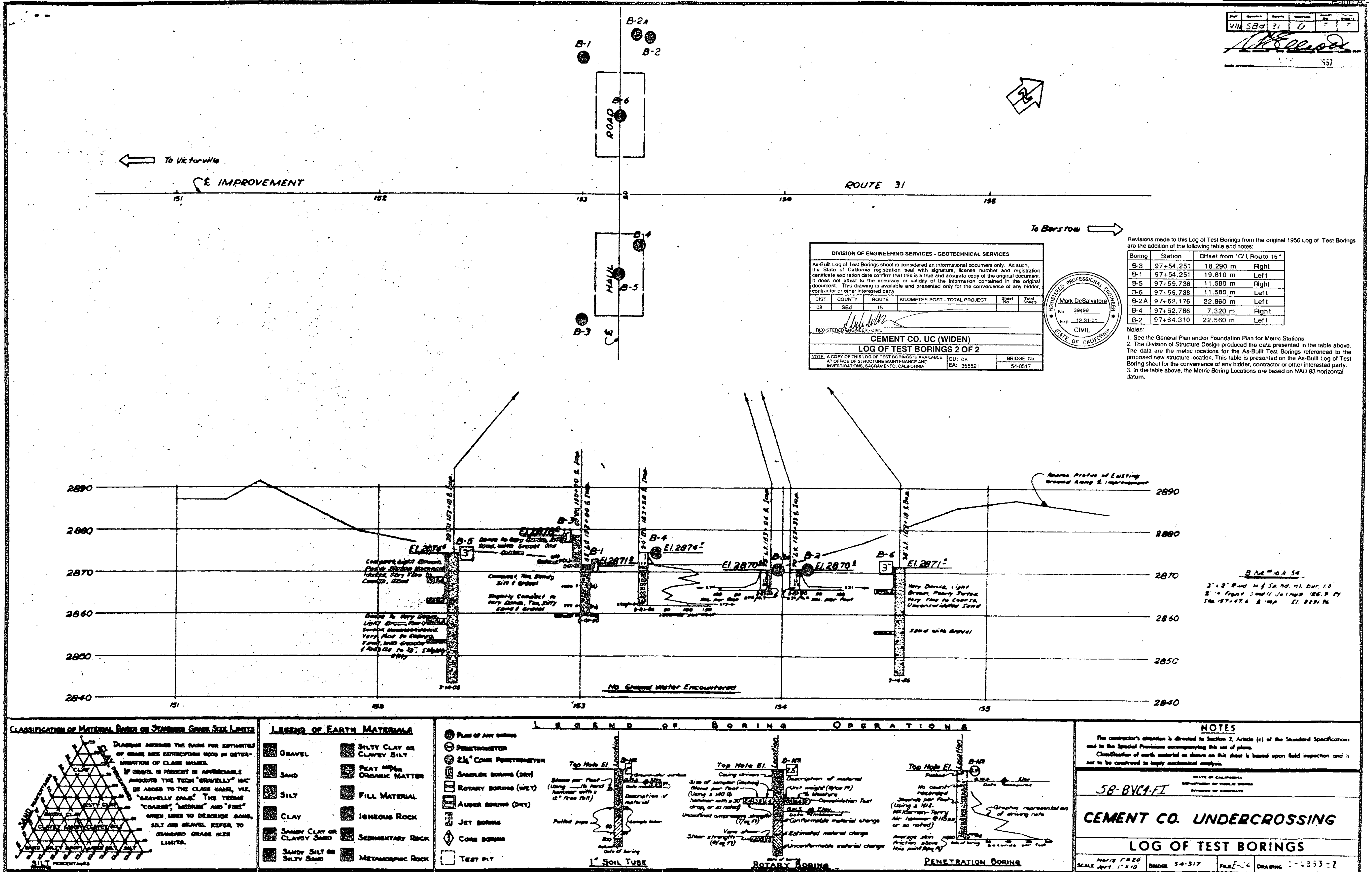
STODDARD WELLS RD. OVERCROSSING

LOG OF TEST BORINGS

SCALE Horiz 1"=20' Vert 1"=10'	BRIDGE 54-535	FILE 54	DRAWING C-5224-11

121

Cement Company Road UC



DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party

DIST.	COUNTY	ROUTE	KILOMETER POST - TOTAL PROJECT	Sheet No.	Total Sheets
08	SBd	15			

REGISTERED ENGINEER - CIVIL

Mark DeSalvatore, No. 39499, Exp. 12-31-01, CIVIL, STATE OF CALIFORNIA

CEMENT CO. UC (WIDEN)

LOG OF TEST BORINGS 2 OF 2

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 08
EA: 355521

BRIDGE No. 54-0517

Revisions made to this Log of Test Borings from the original 1956 Log of Test Borings are the addition of the following table and notes:

Boring	Station	Offset from "C/L Route 15"	
B-3	97+54.251	18.290 m	Right
B-1	97+54.251	19.810 m	Left
B-5	97+59.738	11.580 m	Right
B-6	97+59.738	11.580 m	Left
B-2A	97+62.176	22.860 m	Left
B-4	97+62.786	7.320 m	Right
B-2	97+64.310	22.560 m	Left

Notes:

1. See the General Plan and/or Foundation Plan for Metric Stations.
2. The Division of Structure Design produced the data presented in the table above. The data are the metric locations for the As-Built Test Borings referenced to the proposed new structure location. This table is presented on the As-Built Log of Test Boring sheet for the convenience of any bidder, contractor or other interested party.
3. In the table above, the Metric Boring Locations are based on NAD 83 horizontal datum.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

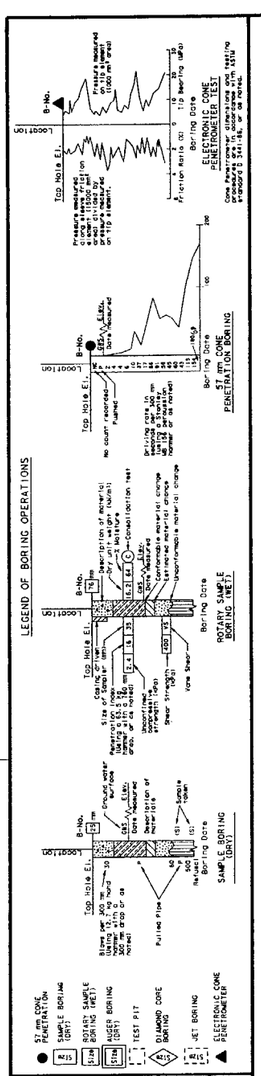
Caltrans Metric

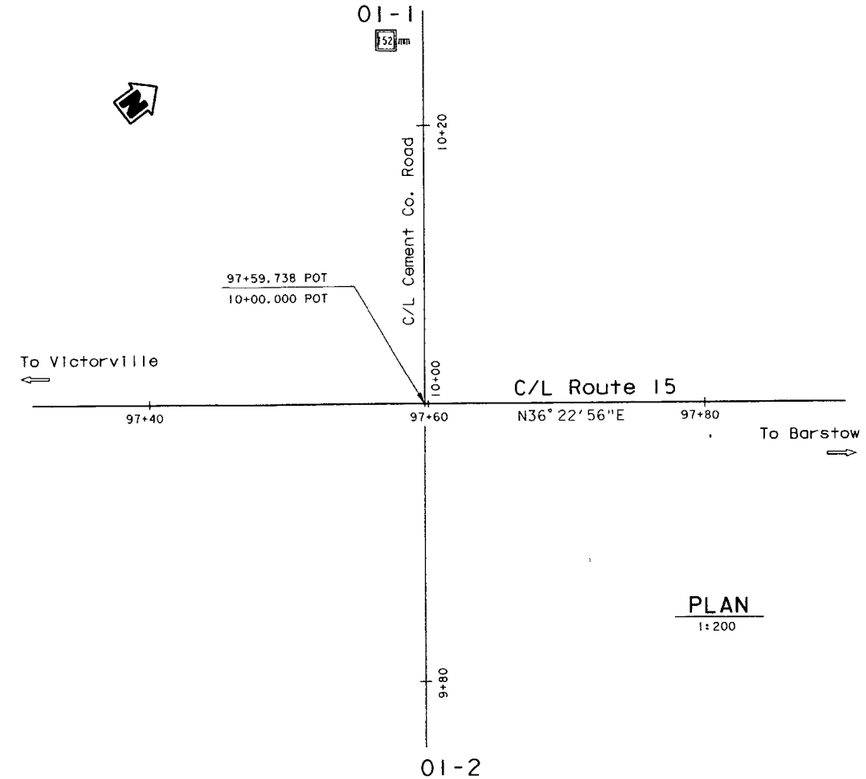
10-24-01
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Mark DeSalvatore — No. 39499 — Exp. 12-31-01 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.





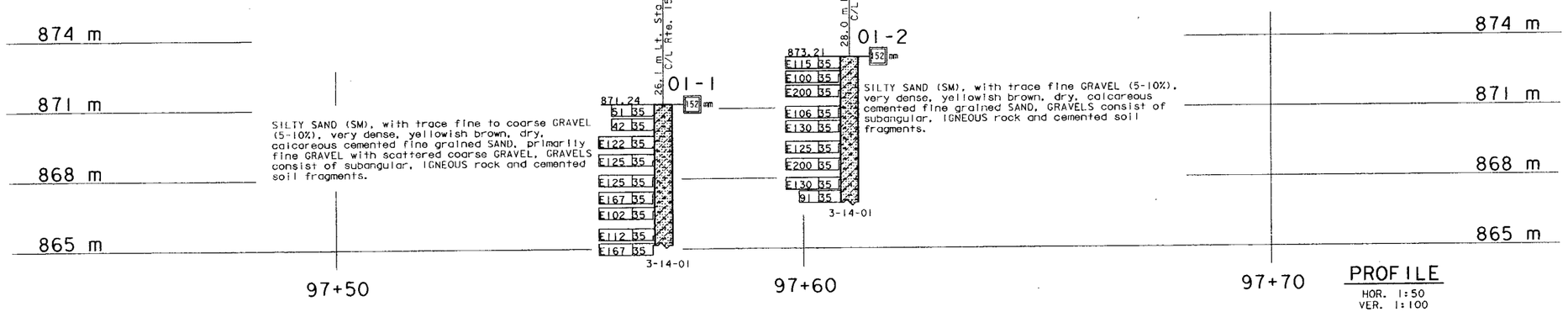
BENCH MARK

BM #46.52-92 Elev. 879.372
Fd. 51 mm with std. br. disk in conc. 4.219 m West of NBnd R/W fence, down 152mm (NGVD 29)

PLAN
1:200

Notes:

1. Ground Water was not encountered during field investigation.
2. The descriptions and classifications of rock and/or soil, including consistency and relative density descriptors, used by the field and/or office personnel for the exploroton boreholes shown on this sheet are based on the "Soil and Rock Logging Classification Manual (Field Guide)". Engineering Service Center, Office of Structural Foundations, August 1996.
3. Soil colors were determined by using Munsel Soil Color Charts (1994, Revised Edition). Rock colors were determined using USGS rock color charts (1995, revised text).
4. Test boring 01-1, 01-2 utilized a safety hammer to advance the sampler using 63.5 kg hammer with a 760 mm drop. Penetration index values shown are the actual blow counts recorded in the field.
5. E= Blow count for 0.3 m penetration extrapolated from blow count for less than 0.3 m penetration (due to change in material or hard driving).



PROFILE
HOR. 1:50
VER. 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Lily Wang 09/01
CHECKED BY	M. Spahn

FIELD INVESTIGATION BY: H. Valencia

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO.	54-0517
KILOMETER POST	74.7

CEMENT CO. UC (WIDEN)
LOG OF TEST BORINGS 1 OF 2

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 10-23-01

SHEET OF

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

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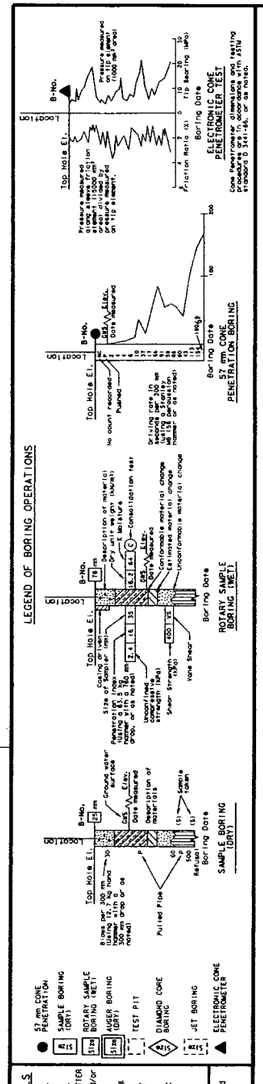
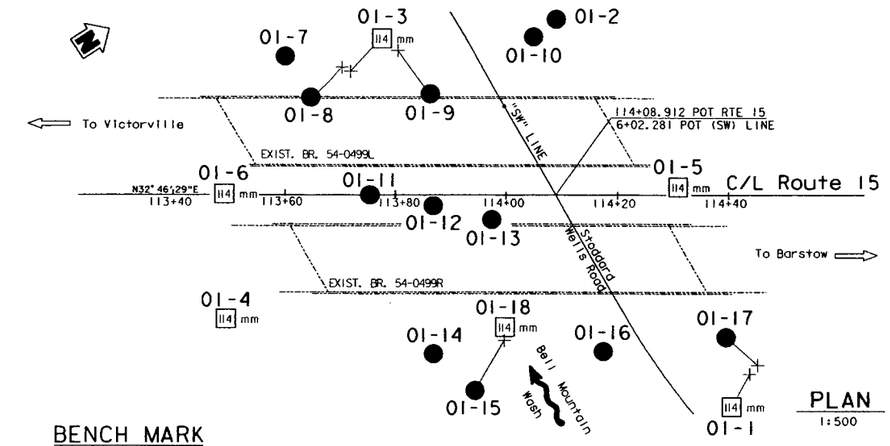
OGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

USERNAME => tsdod DATE PLOTTED => 24 OCT 2001 TIME PLOTTED => 09:22:08

Bell Mountain Wash





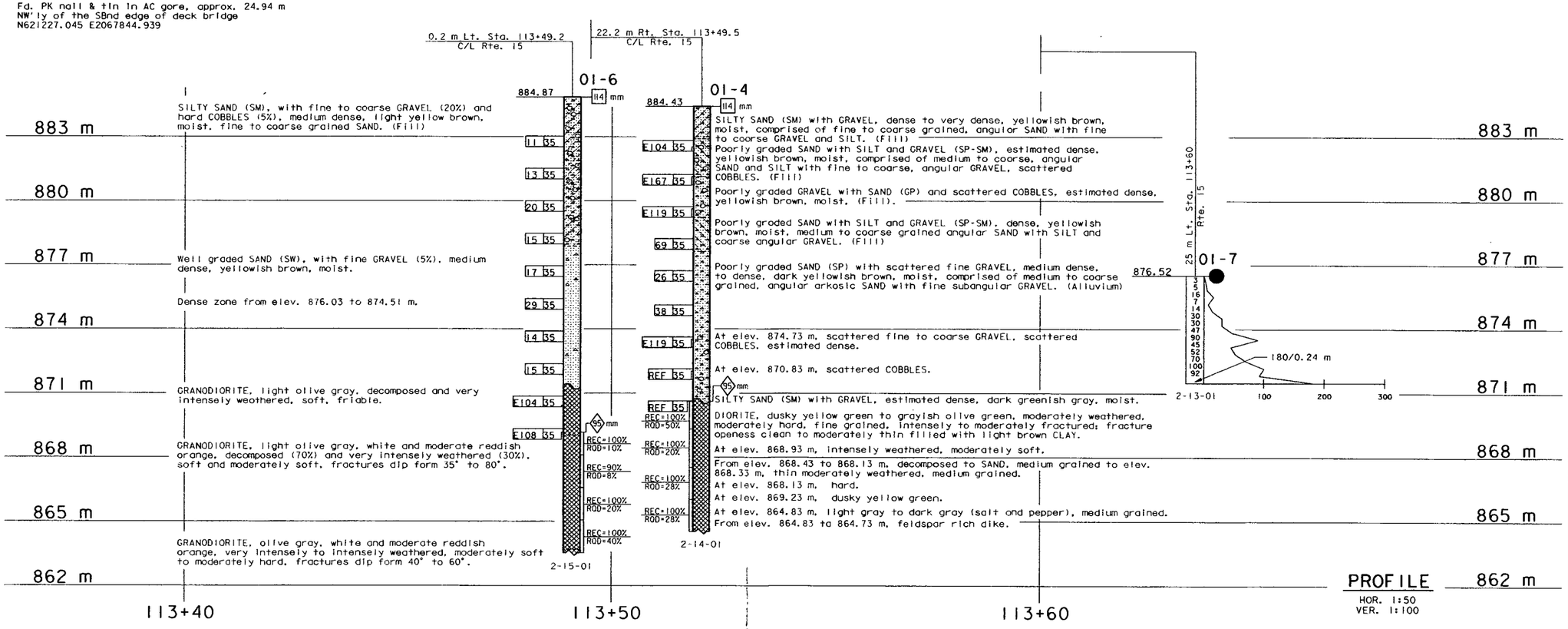
BENCH MARK

BM PT #186 Elev. 878.901 m

Fd. PK nail & tin in AC gore, approx. 24.94 m NW'ly of the SBnd edge of deck bridge
N621227.045 E2067844.939

Notes:

1. No attempt was made to measure ground water in any borings except for boring 01-3 during the 2001 field investigation.
2. Ground water was not encountered in borings 01-3 during the 2001 field investigation.
3. The descriptions and classifications of rock and/or soil, including consistency and relative density descriptors, used by the field and/or office personnel for the exploration boreholes shown on this sheet are based on the "Soil and Rock Logging Classification Manual (Field Guide)". Engineering ServiceCenter, Office of Structural Foundations, August 1996.
4. Soil colors were determined by using Munsel Soil Color Charts (1994, Revised Edition). Rock colors were determined using USGS rock color charts (1995, revised text).
5. Test boring B-1-00 was advanced using a combination of tungsten-carbide drill bits and wireline diamond coring methods.
6. Test borings 01-2, 01-4, 01-5, 01-18 utilized a safety hammer to advance the sampler using a 63.5 kg hammer with a 760 mm drop. Penetration index values shown are the actual blow counts recorded in the field.
7. Test borings 01-1, 01-3, 01-6 utilized a Deldrich automatic hammer to advance the sampler. Penetration index values shown on the LOTB sheets were the actual blow counts recorded in the field.
8. Soil consistency classifications for test borings 01-1, 01-3, 01-6 are based on a conversion factor of 1.5 times the uncorrected blow count.
9. E=Blow count for 0.3 m penetration extrapolated from blow count for less than 0.3 m penetration (due to change in material or hard driving).
10. Penetration index value designated "Ref" means sampler refusal.
11. Refusal in earth material is defined as severely limited or halted penetration (less than 60 mm penetration in 50 blow counts) of the Standard Penetration Test (SPT) sampler due to the presence of GRAVEL, COBBLES, BOULDERS or ROCK formation materials.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LEGEND OF EARTH MATERIALS: GRAVEL, SAND, SILT, CLAY, SANDY CLAY or GRAVELLY SAND, GRAVELLY SILT or SILTY SAND, SILTY CLAY; PEAT (ORGANIC MATERIAL); COBBLES and/or BOULDERS; CONCRETE; ROCK; SEDIMENTARY ROCK; METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS (According to the Standard Penetration Test)

	N-Value (Blows/0.3m)	
Cohesive	<2	Very Soft
	2-4	Soft
	5-8	Firm
	9-15	Stiff
	16-30	Very stiff
	>30	Hard
Granular	0-4	Very Loose
	5-10	Loose
	11-30	Medium Dense
	31-50	Dense
	>50	Very Dense

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01
CHECKED BY	H. Valencia 10/01

FIELD INVESTIGATION BY:
R. Fuentes
M. Pagenkopp
H. Valencia

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. 54-0499
KILOMETER POST 76.3

BELL MOUNTAIN WASH BRIDGE (WIDEN)

LOG OF TEST BORINGS 1 OF 7

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 | 10-29-01 | 10-30-01

SHEET OF

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USERNAME => tsbdp DATE PLOTTED => 30 OCT 2001 TIME PLOTTED => 15:51:18

OGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

Caltrans Metric

10-29-01
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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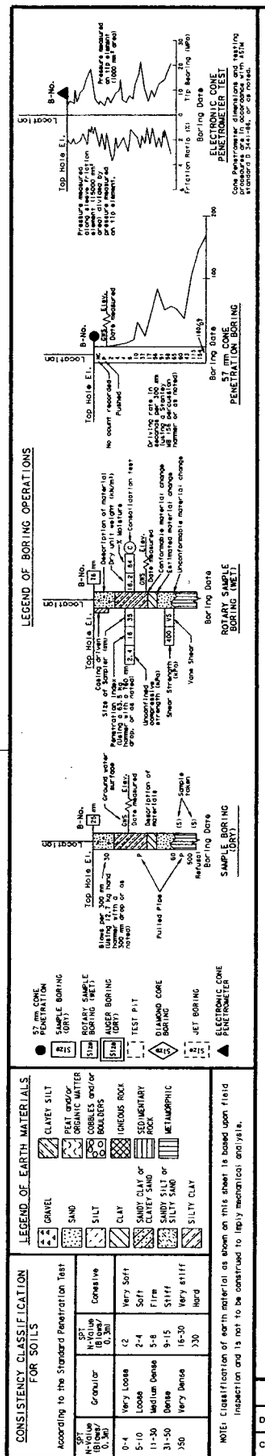
REGISTERED PROFESSIONAL ENGINEER
Mark DeSalvatore
No. 39499
Exp. 12-31-01
CIVIL
STATE OF CALIFORNIA



Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

Uwb Dalt 10-30-01
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Mark DeSalvatore
No. 39499
Exp. 12-31-01
CIVIL
STATE OF CALIFORNIA

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 7

Well graded SAND (SW) with fine GRAVEL, est. loose, yellowish brown, moist, fine to coarse grained SAND.

Well graded SAND (SW) with fine to coarse GRAVEL (5-10%) medium dense, yellowish brown, moist, fine to coarse grained SAND.

Poorly graded SAND (SP) with fine GRAVEL (5%) medium dense, moist, fine to medium grained SAND.

Well graded SAND (SW) with fine to coarse GRAVEL (10%) medium dense, moist, with 50 mm thick interbed of CLAYEY SAND

DIORITE, moderate olive brown, decomposed, soft, friable.

GRANODIORITE, olive gray and moderate reddish orange, decomposed, soft, friable, with 75 mm thick, moderately hard zones (10%).

GRANODIORITE, olive gray and moderate reddish orange, decomposed and very intensely weathered, soft to moderately soft.

GRANODIORITE, olive gray and moderate reddish orange, moderately hard to hard, with soft, very intensely weathered zone from elev. 860.86 to 860.41 m, fractures dip from 50° to 90°.

PROFILE
HOR. 1:50
VER. 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

- ● 57 mm CONE PENETRATION
- SAMPLE BORING (DRY)
- ROTARY SAMPLE BORING (WET)
- AUGER BORING (DRY)
- TEST PIT
- DIAMOND CORE BORING
- JET BORING
- ▲ ELECTRONIC CONE PENETROMETER

LEGEND OF EARTH MATERIALS

▨	GRAVEL	▨	CLAYEY SILT
▨	SAND	▨	PEAT and/or ORGANIC MATTER
▨	SILT	▨	COBBLES and/or BOULDERS
▨	CLAY	▨	IGNEOUS ROCK
▨	SANDY CLAY or CLAYEY SAND	▨	SEDIMENTARY ROCK
▨	SANDY SILT or SILTY SAND	▨	METAMORPHIC
▨	SILTY CLAY		

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

SPT N-Value (Blows/0.3m)	Granular	SPT N-Value (Blows/0.3m)	Cohesive
0-4	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-30	Medium Dense	5-8	Firm
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very stiff
		>30	Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

ENGINEERING SERVICES		GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01	
CHECKED BY	N. Sandoval 10/01	

FIELD INVESTIGATION BY:
R. Fuentes
M. Pagenkopp
H. Valencia

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. 54-0499
KILOMETER POST 76.3

BELL MOUNTAIN WASH BRIDGE (WIDEN)
LOG OF TEST BORINGS 2 OF 7

OGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 10-24-01 10-29-01 10-30-01

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

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Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

10-30-01
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
Mark DeSalvatore
No. 39499
Exp. 12-31-01
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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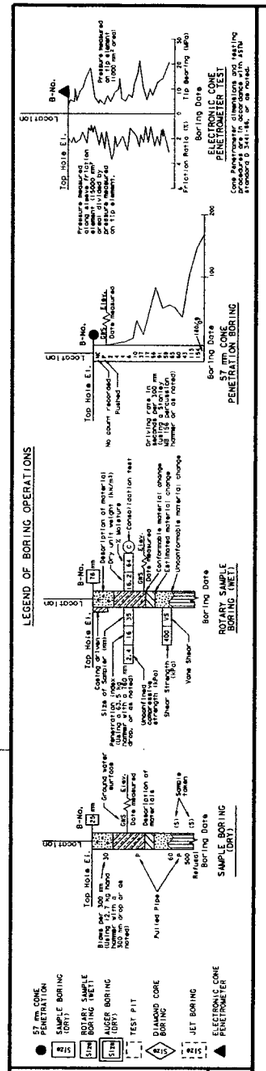
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 7

LEGEND OF BORING OPERATIONS



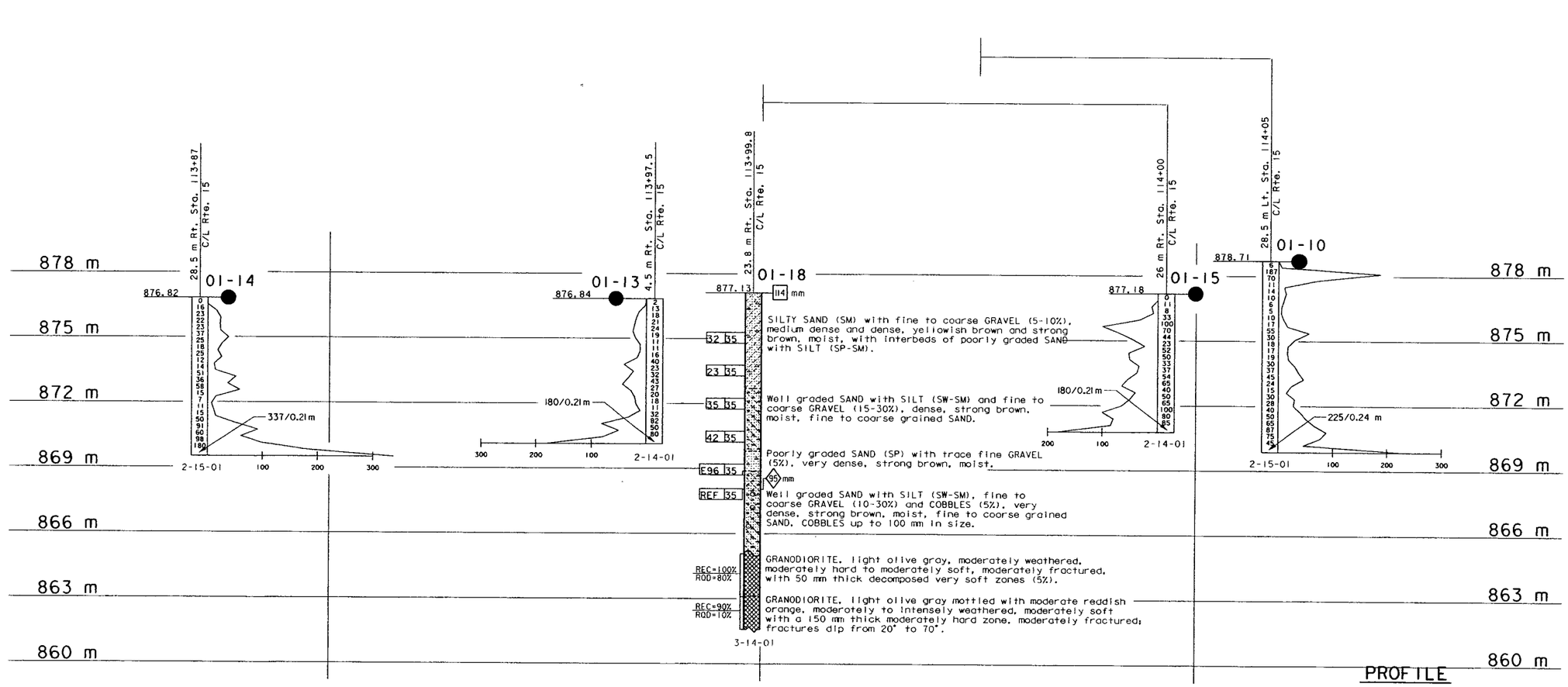
LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · CLAYEY SILT · PEAT AND/OR ORGANIC MATTER · COBBLES AND/OR BOULDERS · CHRONIC ROCK · SEDIMENTARY ROCK · METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

		Cohesive	
SPT N-Value (Blows/0.3m)	Granular	<2	Very Soft
		2-4	Soft
		5-8	Firm
		9-15	Stiff
		16-30	Very stiff
		>30	Hard
	Very Loose	0-4	
	Loose	5-10	
	Medium Dense	11-30	
	Dense	31-50	
	Very Dense	>50	

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



PROFILE
HOR. 1:50
VER. 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01
CHECKED BY	N. Sandoval 10/01

FIELD INVESTIGATION BY:
R. Fuentes
M. Pagenkopp
H. Valencia

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. 54-0499
KILOMETER POST 76.3

BELL MOUNTAIN WASH BRIDGE (WIDEN)
LOG OF TEST BORINGS 3 OF 7

OGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 | 10-29-01 | 10-30-01

SHEET | OF

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DATE PLOTTED => 30 OCT 2001
TIME PLOTTED => 15:27:38

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

Caltrans Metric

10-30-01
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Mark DeSalvatore — No. 39499 — EXP. 12-31-01 — CIVIL — STATE OF CALIFORNIA

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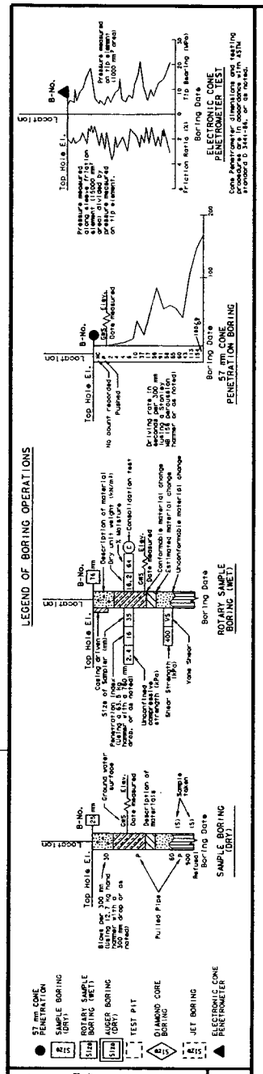
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 7

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAYEY SILT · SILT WITH ORGANIC MATTER · CLAY · COBBLES and/or BOULDERS · SANDY CLAY or CLAYEY SAND · SANDY SILT or SILTY SAND · SILTY CLAY · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

	SPT N-Value (Blows/0.3m)	
Cohesive	<2	Very Soft
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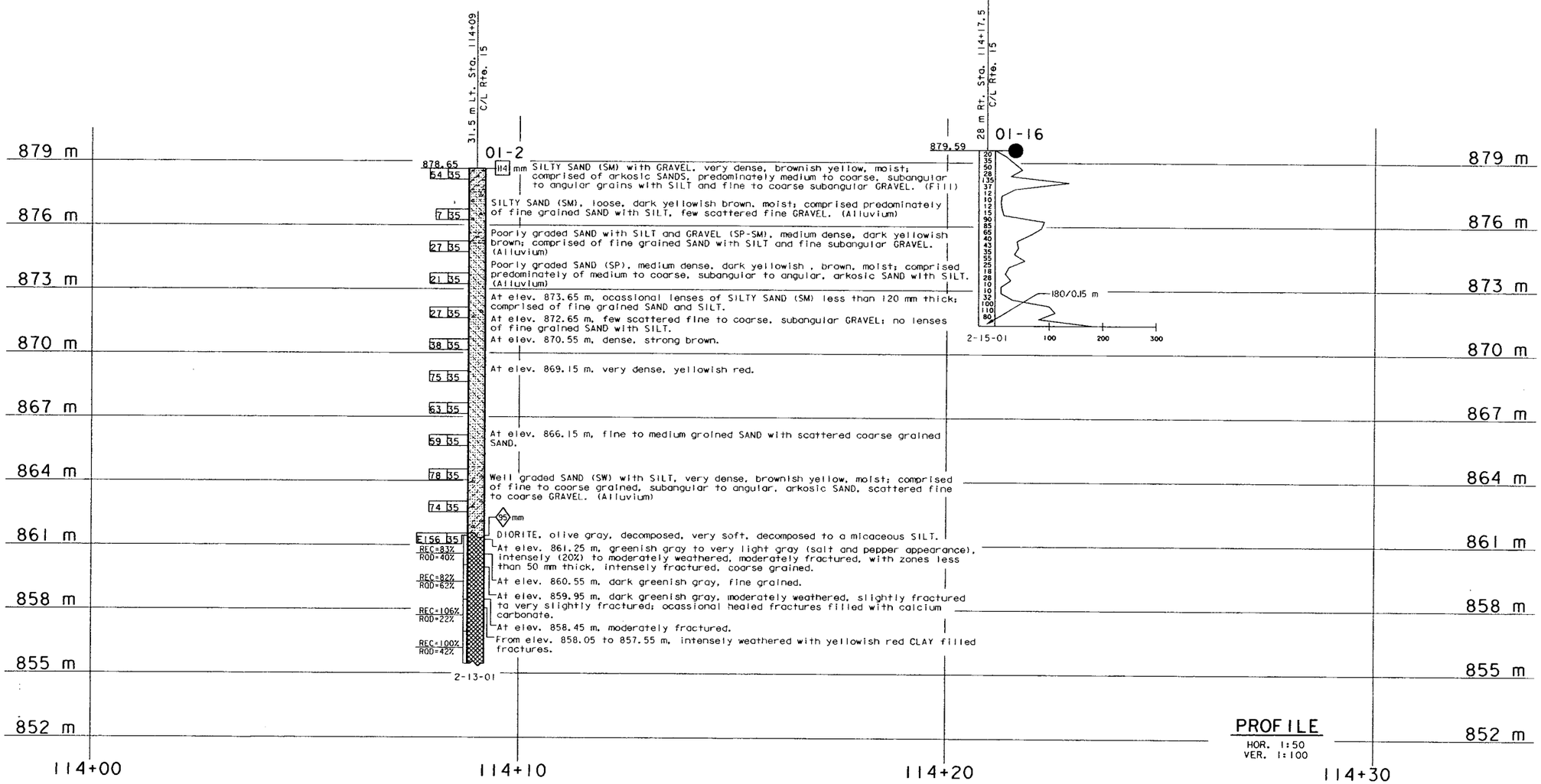
Granular	0-4	Very Loose
	5-10	Loose
	11-30	Medium Dense
	31-50	Dense
	>50	Very Dense

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



PROFILE
HOR. 1:50
VER. 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01
CHECKED BY	H. Valencia 10/01

FIELD INVESTIGATION BY:
R. Fuentes
M. Pagenkopp
H. Valencia

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO.	54-0499
KILOMETER POST	76.3

BELL MOUNTAIN WASH BRIDGE (WIDEN)

LOG OF TEST BORINGS 4 OF 7

OGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 | 10-29-01 | 10-30-01

SHEET | OF

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08-355520/bellmtn4.dgn 10-30-2001 15:46:01

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

Caltrans Metric

REGISTERED CIVIL ENGINEER — 10-30-01

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Mark DeSalvatore — No. 39499 — Exp. 12-31-01 — CIVIL — STATE OF CALIFORNIA

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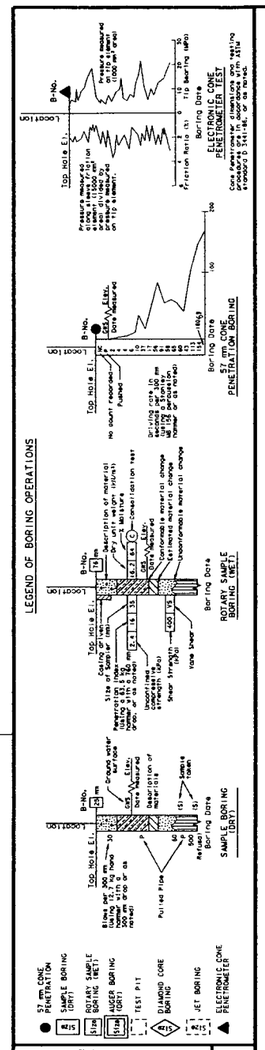
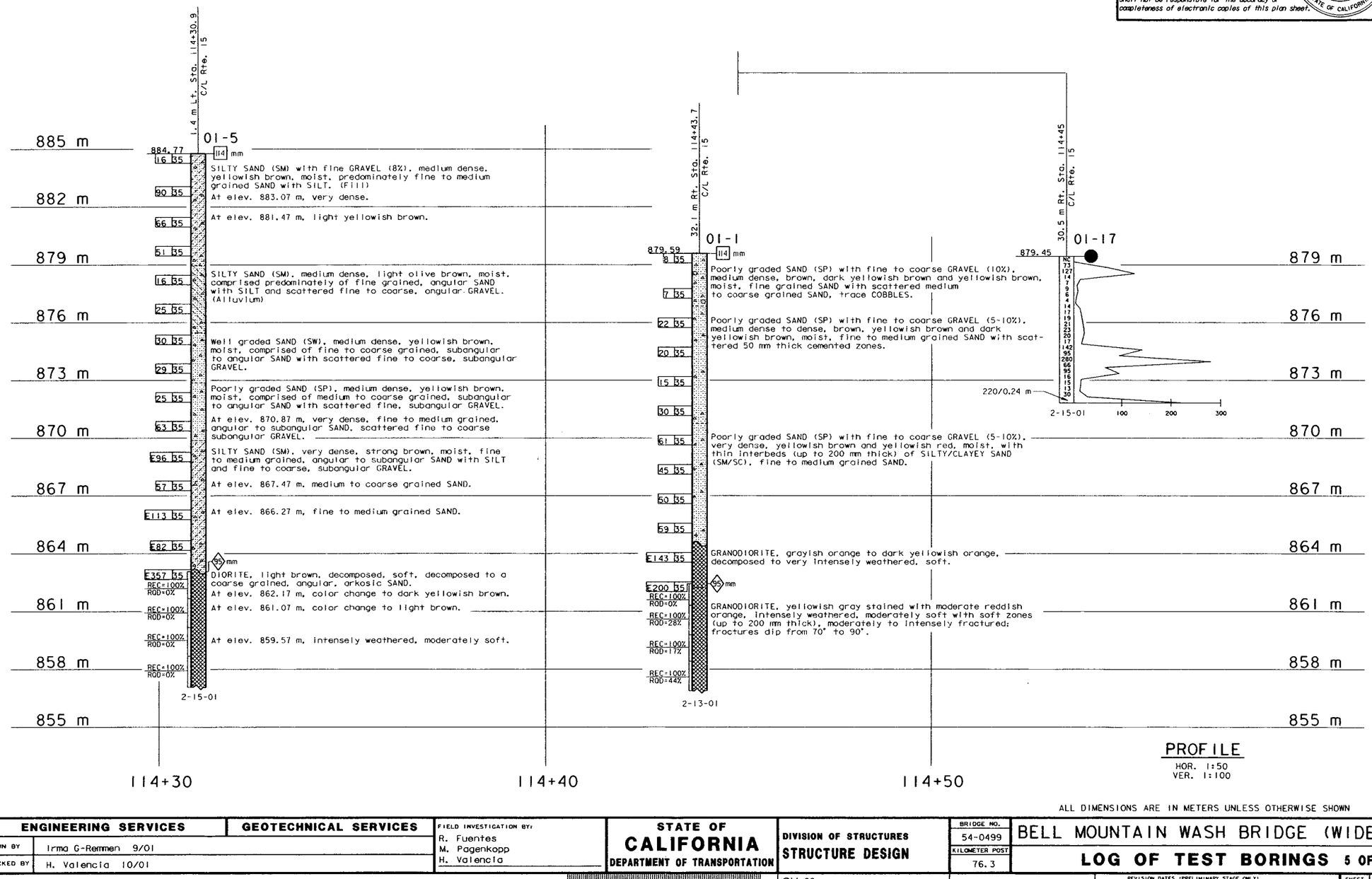
FOR PLAN VIEW, SEE "LOG OF TEST BORINGS" 1 OF 7





PROFILE
HOR. 1:50
VER. 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01
CHECKED BY	H. Valencia 10/01

FIELD INVESTIGATION BY:
R. Fuentes
M. Pagenkopp
H. Valencia

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO.	54-0499
KILOMETER POST	76.3

BELL MOUNTAIN WASH BRIDGE (WIDEN)

LOG OF TEST BORINGS 5 OF 7

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 | 10-29-01 | 10-30-01

SHEET | OF

OGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

FILE => /user/dmsloca1/translab/08-355520/bellmtn5.dgn

USERNAME => tsbpp DATE PLOTTED => 30 OCT 2001 TIME PLOTTED => 15:37:44

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

Caltrans Metric

REGISTERED CIVIL ENGINEER 10-30-01

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Mark DeSalvatore — No. 39499 — Exp. 12-31-01 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

WEATHERING DESCRIPTORS

Modified from United States Bureau of Reclamation, Engineering Geology Field Manual.

Descriptors		Diagnostic features					General characteristics (strength, excavation, etc.)[§]
		Chemical weathering-Discoloration and/or oxidation		Mechanical weathering-Grain boundary conditions (disaggregation) primarily for granitics and some coarse-grained sediments	Texture and solutioning		
Alphanumeric descriptor	Descriptive term	Body of rock	Fracture surfaces[†]		Texture	Solutioning	
W1	Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change.	No solutioning.	Hammer rings when crystalline rocks are struck. Almost always rock excavation except for naturally weak or weakly cemented rocks such as siltstones or shales.
W2	Slightly weathered to fresh°						
W3	Slightly weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved.	Minor leaching of some soluble minerals may be noted.	Hammer rings when crystalline rocks are struck. Body of rock not weakened. With few exceptions, such as siltstones or shales, classified as rock excavation.
W4	Moderately to slightly weathered°						
W5	Moderately weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved.	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened. Depending on fracturing, usually is rock excavation except in naturally weak rocks such as siltstones or shales.
W6	Intensely to moderately weathered°						
W7	Intensely weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened. Usually common excavation.
W8	Very intensely weathered						
W9	Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Always common excavation. Resistant minerals such as quartz may be present as "stringers" or "dikes."

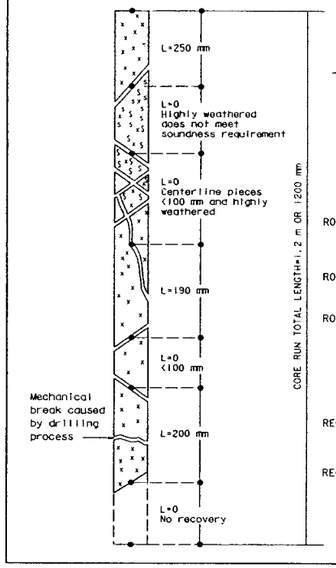
Note: This chart and its horizontal categories are more readily applied to rocks with feldspars and mafic minerals. Weathering in various sedimentary rocks, particularly limestones and poorly indurated sediments, will not always fit the categories established. This chart and weathering categories may have to be modified for particular site conditions or alteration such as hydrothermal effects; however, the basic framework and similar descriptors are to be used.

° Combination descriptors are permissible where equal distribution of both weathering characteristics are present over significant intervals or where characteristics present are "in between" the diagnostic feature. However, dual descriptors should not be used where significant, identifiable zones can be delineated. When given as a range only two adjacent terms may be combined. "Decomposed to slightly weathered." or "moderately weathered to fresh" are not acceptable.

† Does not include directional weathering along shears or faults and their associated features. For example, a shear zone that carried weathering to great depths into a fresh rock mass would not require the rock mass to be classified as weathered.

§ These are generalizations and should not be used as diagnostic features for weathering or excavation classification. These characteristics vary to a large extent based on naturally weak materials or cementation and type of excavation.

ROCK QUALITY DESIGNATION (RQD) & PERCENT RECOVERY (REC) LOGGING



RQD (ROCK QUALITY DESIGNATION)	DESCRIPTION OF ROCK QUALITY
0 - 25%	VERY POOR
25 - 50%	POOR
50 - 75%	FAIR
75 - 90%	GOOD
90 - 100%	EXCELLENT

$$RQD = \frac{\sum \text{Length of sound core pieces} \geq 100\text{ mm}}{\text{Total core run length}}$$

$$RQD = \frac{250+190+200}{1200} \times 100\%$$

RQD = 53% (fair)

REC = Percent Care Recovery

$$REC = \frac{\sum \text{Length of all care pieces}}{\text{Total core run length}}$$

(No Scale)
After Deere & Deere, 1989

FRACTURE DENSITY

Modified from United States Bureau of Reclamation, Engineering Geology Field Manual.

FRACTURE DENSITY- Based on the spacing of all natural fractures in an exposure or core recovery lengths in boreholes; excludes mechanical breaks, shears, and shear zones; however, shear-disturbed zones (fracturing outside the shear) are included. Descriptors for fracture density apply to all rock exposures such as tunnel walls, dozer trenches, outcrops, or foundation cut slopes and inverts, as well as boreholes. Descriptive criteria presented below are based on borehole cores where lengths are measured along the core axis, for other exposures the criteria is distance measured between fractures (size of blocks).

UNFRACTURED (FD0): No fractures.

VERY SLIGHTLY FRACTURED (FD1): Core recovered mostly in lengths greater than 1 m.

SLIGHTLY TO VERY SLIGHTLY FRACTURED (FD2)*

SLIGHTLY FRACTURED (FD3): Core recovered mostly in lengths from 300 to 1000 mm, with few scattered lengths less than 300 mm or greater than 1000 mm.

MODERATELY TO SLIGHTLY FRACTURED (FD4)*

MODERATELY FRACTURED (FD5): Core recovered mostly in 100 to 300 mm lengths with most lengths about 200 mm.

INTENSELY TO MODERATELY FRACTURED (FD6)*

INTENSELY FRACTURED (FD7): Lengths average from 30 to 100 mm with scattered fragmented intervals. Core recovered mostly in lengths less than 100 mm.

VERY INTENSELY TO INTENSELY FRACTURED (FD8)*

VERY INTENSELY FRACTURED (FD9): Core recovered mostly as chips and fragments with a few scattered short core lengths.

* Combinations of fracture densities (e.g. very intensely to intensely fractured, or moderately to slightly fractured) are used where equal distribution of both fracture density characteristics are present over a significant interval or exposure, or where characteristics are "in between" the descriptor definitions.

ROCK HARDNESS DESCRIPTORS

Alphanumeric Descriptor	Descriptor	Criteria
H1	Extremely hard	Core, fragment, or exposure cannot be scratched with knife or sharp pick; can only be chipped with repeated heavy hammer blows.
H2	Very hard	Cannot be scratched with knife of sharp pick. Core or fragment breaks with repeated heavy hammer blows.
H3	Hard	Can be scratched with knife or sharp pick with difficulty (heavy pressure). Heavy hammer blow required to break specimen.
H4	Moderately hard	Can be scratched with knife or sharp pick with light or moderate pressure. Core or fragment breaks with moderate hammer blow.
H5	Moderately soft	Can be grooved 2 mm deep by knife or sharp pick with moderate or heavy pressure. Core or fragment breaks with light hammer blow or heavy manual pressure.
H6	Soft	Can be grooved or gouged easily by knife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
H7	Very soft	Can be readily indented, grooved or gouged with fingernail, or carved with a knife. Breaks with light manual pressure.

Any bedrock unit softer than H7, very soft, is to be described using ASTM D-2488 consistency descriptors.

Note: Although "sharp pick" is included in these definitions, descriptions of ability to be scratched, grooved or gouged by a knife is the preferred criteria.

Modified from United States Bureau of Reclamation, Engineering Geology Field Manual.

BEDDING, FOLIATION, OR FLOW TEXTURE DESCRIPTORS

Descriptors	Thickness / Spacing
Massive	Greater than 3 m
Very thickly (bedded, foliated, or banded)	1 to 3 m
Thickly	300 mm to 1 m
Moderately	100 to 300 mm
Thinly	30 to 100 mm
Very thinly	10 to 30 mm
Laminated (intensely folioted or banded)	Less than 10 mm

Modified from United States Bureau of Reclamation, Engineering Geology Field Manual.

ENGINEERING SERVICE CENTER	STRUCTURE FOUNDATIONS
DRAWN BY	Irma G-Remmen 9/01
CHECKED BY	H. Valencia 10/01

FIELD INVESTIGATION BY:
R. Fuentes
M. Pagenkopp
H. Valencia

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. 54-0499
KILOMETER POST 76.3

BELL MOUNTAIN WASH BRIDGE (WIDEN)
LOG OF TEST BORINGS 6 OF 7

OSF GEOLOGIST LOG OF TEST BORINGS SHEET (METRIC) (REV. 10/5/2000)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 08
EA 355521

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 | 10-29-01 | 10-30-01

SHEET | OF

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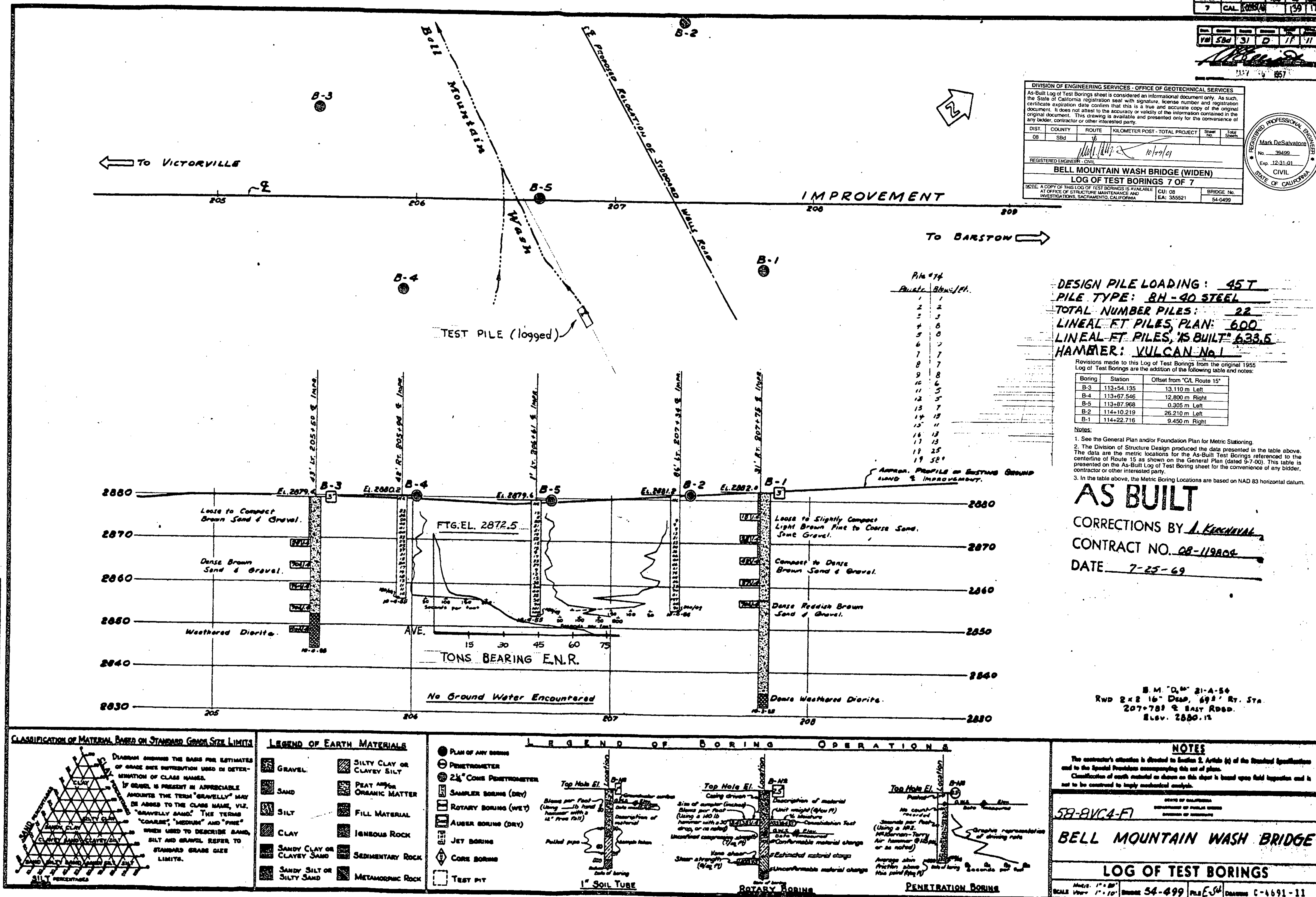


B-3
B-2
B-5
B-1
B-4
Bell Mountain Wash
℄ Proposed Relocation of Stoddard Wells Road
To Victorville
IMPROVEMENT
To Barstow
205
206
207
208
209
TEST PILE (logged)
DESIGN PILE LOADING: 45 T
PILE TYPE: 8H-40 STEEL
TOTAL NUMBER PILES: 22
LINEAL FT PILES, PLAN: 600
LINEAL FT PILES, "AS BUILT" 633.5
HAMMER: VULCAN No. 1
Loose to Compact Brown Sand & Gravel.
Dense Brown Sand & Gravel.
Weathered Diorite.
Loose to Slightly Compact Light Brown Fine to Coarse Sand. Some Gravel.
Compact to Dense Brown Sand & Gravel.
Dense Reddish Brown Sand & Gravel.
Dense Weathered Diorite.
FTG. EL. 2872.5
TONS BEARING E.N.R.
No Ground Water Encountered
Approx. Profile of Existing Ground along ℄ Improvement.
2880
2870
2860
2850
2840
2830
AS BUILT
CORRECTIONS BY
CONTRACT NO. 08-119804
DATE 7-25-69
BRIDGE DEPARTMENT
DIVISION OF ENGINEERING SERVICES - OFFICE OF GEOTECHNICAL SERVICES
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.
DIST. 08 COUNTY SBd ROUTE 15
REGISTERED ENGINEER - CIVIL
BELL MOUNTAIN WASH BRIDGE (WIDEN)
LOG OF TEST BORINGS 7 OF 7
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA
CU: 08
EA: 355521
BRIDGE No. 54-0499
REGISTERED PROFESSIONAL ENGINEER
Mark DeSalvatore
No. 39499
Exp. 12-31-01
CIVIL
STATE OF CALIFORNIA
CLASSIFICATION OF MATERIAL BASED ON STANDARD GRAIN SIZE LIMITS
LEGEND OF EARTH MATERIALS
LEGEND OF BORING OPERATIONS
NOTES
BELL MOUNTAIN WASH BRIDGE
LOG OF TEST BORINGS
54-499
C-4691-11

Revisions made to this Log of Test Borings from the original 1955 Log of Test Borings are the addition of the following table and notes:

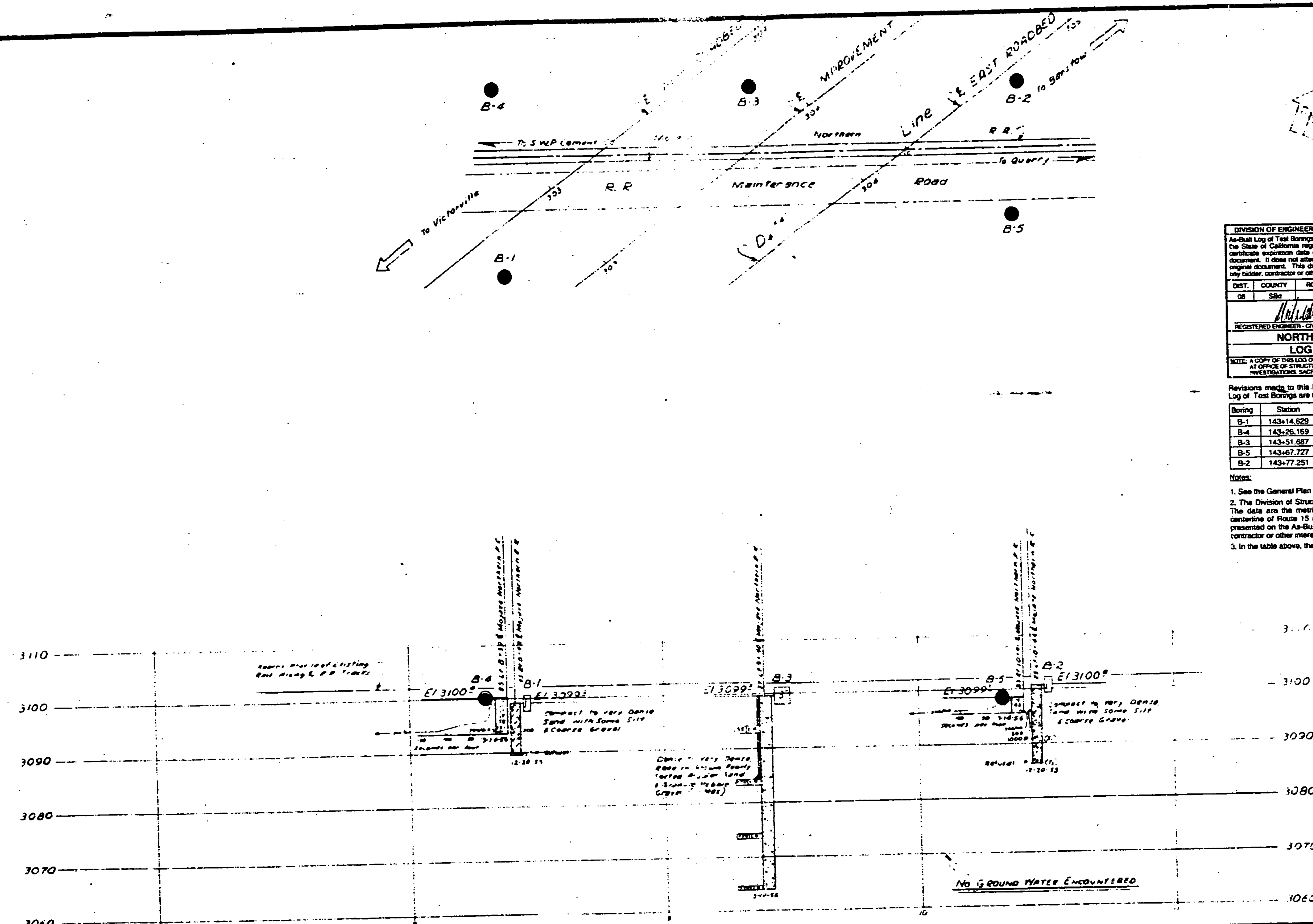
Boring	Station	Offset from "C/L Route 15"
B-3	113+54.135	13.110 m Left
B-4	113+67.546	12.800 m Right
B-5	113+87.968	0.305 m Left
B-2	114+10.219	26.210 m Left
B-1	114+22.716	9.450 m Right

Notes:

1. See the General Plan and/or Foundation Plan for Metric Stationing.
2. The Division of Structure Design produced the data presented in the table above. The data are the metric locations for the As-Built Test Borings referenced to the centerline of Route 15 as shown on the General Plan (dated 9-7-00). This table is presented on the As-Built Log of Test Boring sheet for the convenience of any bidder, contractor or other interested party.
3. In the table above, the Metric Boring Locations are based on NAD 83 horizontal datum.

North Victorville UP

BRIDGE DEPARTMENT



DIVISION OF ENGINEERING SERVICES - OFFICE OF GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	KILOMETER POST - TOTAL PROJECT	Sheet No.	Total Sheets
08	SBd	15			

10/25/01

REGISTERED ENGINEER - CIVIL

Mark DeSalvatore
No. 39499
Exp. 12-31-01
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

NORTH VICTORVILLE UP (REPLACE)

LOG OF TEST BORINGS 2 OF 2

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 08
EA: 358571

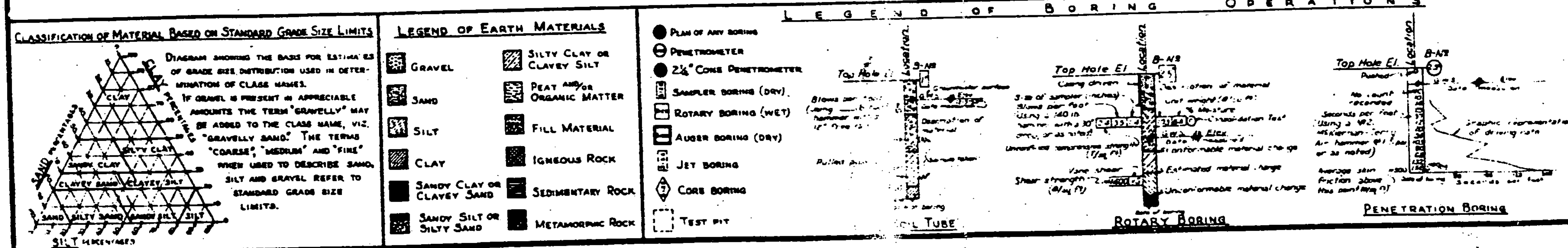
BRIDGE No. 54-1211

Revisions made to this Log of Test Borings from the original 1956 Log of Test Borings are the addition of the following table and notes:

Boring	Station	Offset from C/L Route 15
B-1	143+14.629	5.853 m Left
B-4	143+26.169	23.821 m Left
B-3	143+51.687	6.591 m Left
B-5	143+67.727	24.096 m Right
B-2	143+77.251	12.163 m Right

Notes:

1. See the General Plan and/or Foundation Plan for Metric Stationing.
2. The Division of Structure Design produced the data presented in the table above. The data are the metric locations for the As-Built Test Borings referenced to the centerline of Route 15 as shown on the General Plan (dated 9-14-00). This table is presented on the As-Built Log of Test Boring sheet for the convenience of any bidder, contractor or other interested party.
3. In the table above, the Metric Boring Locations are based on NAD 83 horizontal datum.



NOTES

The contractor's attention is directed to Section 2, Article [illegible] of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

58-8VC1-E1

NORTH VICTORVILLE U.P.

LOG OF TEST BORINGS

SCALE	BRIDGE 54-515	FILE	DRAWING

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

Caltrans Metric

REGISTERED CIVIL ENGINEER 10-30-01

PLANS APPROVAL DATE

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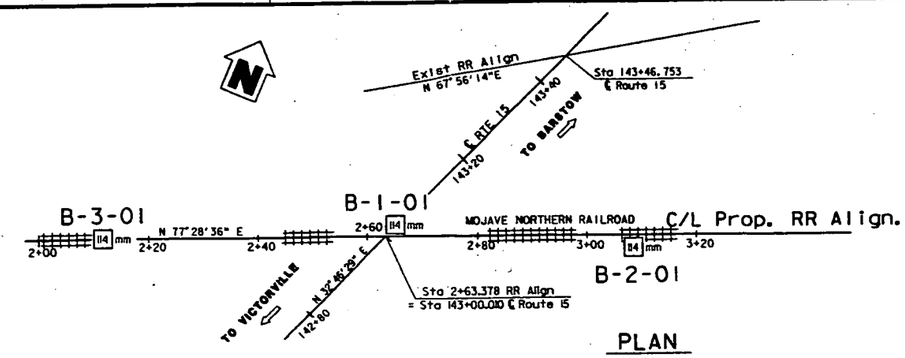
REGISTERED PROFESSIONAL ENGINEER — Mark DeSalvatore — No. 39499 — Exp. 12-31-01 — CIVIL — STATE OF CALIFORNIA

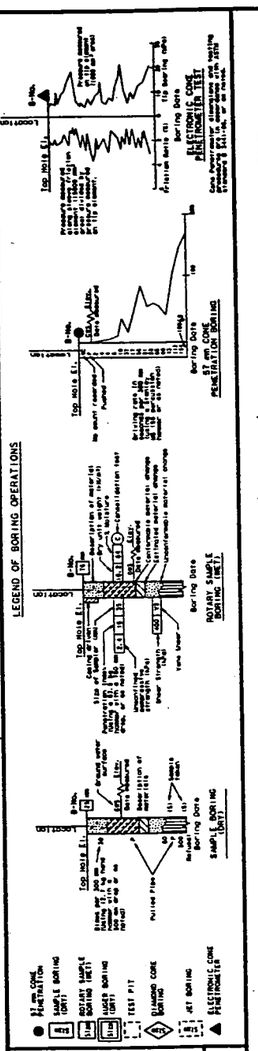
BENCH MARK

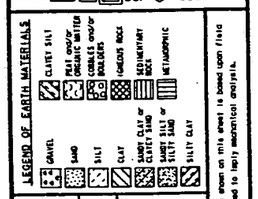
BM #CP-110 Elev. 937.082

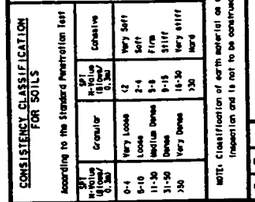
Fd. 2X2 H&T in dirt median Rte. 15, approx. Sta. 142.51
N 623609.920
E 2069428.081
NGVD1929



PLAN
1:500







NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

B-3-01

0.1 m Lt. Sta. 2+11.6 C/L Prop. RR Align.

945 m
942 m
939 m
936 m
933 m
930 m
927 m

945.02	114 mm	CLAYEY SAND (SC) with scattered fine to coarse GRAVEL (10%) medium dense, strong brown, moist. (FILL)
	16 B5	
	45 B5	SILTY SAND (SM) with fine to coarse GRAVEL (10-20%), dense to very dense, strong brown and yellowish brown, moist, primarily fine grained SAND with scattered medium to coarse grained SAND.
	E102 B5	
	E250 B5	From elev. 942.73 to 942.52 m, 200 mm thick interbed of fine SANDY SILT, very dense.
	E104 B5	
	70 B5	Poorly graded SAND with SILT (SP-SM) and fine GRAVEL (10%), very dense, yellowish brown, moist.
	E94 B5	
	64 B5	SILTY SAND (SM) with fine GRAVEL (10%), very dense, strong brown, moist.
	100 B5	Poorly graded SAND with SILT (SP-SM) and fine GRAVEL (20%), very dense, yellowish brown, moist.
	57 B5	Well graded SAND (SW) with fine GRAVEL (25%), very dense, yellowish brown, moist.
	60 B5	SILTY SAND (SM) with fine to coarse GRAVEL (10-20%), dense to very dense, moist, primarily fine grained SAND.
	E146 B5	
	54 B5	
	100 B5	From elev. 929.78 to 929.32 m, interbed of poorly graded SAND (SP) with fine GRAVEL (20%), very dense.
	E128 B5	
	90 B5	

3-8-01

2+00

B-1-01

2.0 m Lt. Sta. 2+65 C/L Prop. RR Align.

938.06	114 mm	SILTY SAND (SM), medium dense, strong brown, moist, comprised of fine to medium grained SAND & SILT with scattered coarse grained SAND. (FILL)
	21 B5	SILTY SAND (SM), with GRAVEL (5%), very dense, dark yellowish brown, moist, comprised of fine grained SAND & SILT with scattered medium to coarse grained SAND and fine to coarse GRAVEL. (Alluvium)
	E128 B5	
	E104 B5	Poorly graded SAND (SP), very dense, dark yellowish brown, moist, comprised of fine to medium grained SAND with scattered fine to coarse GRAVEL (7%). (Alluvium)
	56 B5	Well graded SAND (SW) with GRAVEL (8%), very dense, dark yellowish brown, moist, comprised of fine to coarse grained, angular SAND with subangular fine to coarse GRAVEL. (Alluvium)
	80 B5	
	83 B5	At elev. 934.96 m, color change to yellowish brown.
	43 B5	Poorly graded SAND (SP) with SILT (10%) & GRAVEL (5%), dense, yellowish brown, dry, scattered 5 to 15 mm lenses of caliche coated grains. Comprised of fine grained SAND and SILT with scattered medium to coarse grained SAND and scattered fine to coarse GRAVEL. At elev. 932.26, very dense, no lenses of caliche coated
	E217 B5	
	66 B5	Poorly graded SAND with SILT & GRAVEL (15%) (SP-SM), very dense, yellowish brown, dry, comprised of fine grained SAND & SILT with scattered medium to coarse grained, angular SAND and fine to coarse angular GRAVEL.
	E86 B5	Poorly graded SAND (SP) with SILT and scattered GRAVEL (5%), very dense, yellowish brown, moist, comprised of fine to medium grained angular to subangular SAND with SILT and fine to coarse, subangular GRAVEL. (Alluvium)
	E104 B5	At elev. 929.56 m, increase in GRAVEL content (25%).
	51 B5	Well graded SAND (SW) with SILT & GRAVEL (10%), very dense, dark yellowish brown, moist, comprised of fine to coarse grained, angular to subangular SAND & SILT with scattered fine to coarse, subangular GRAVEL. (Alluvium)
	E104 B5	From elev. 927.66 to 927.56 m, moderately cemented zone, cemented with CLAY.
	96 B5	At elev. 925.86 m, decrease in GRAVEL content (7%).
	E125 B5	Poorly graded SAND (SP) with GRAVEL (10%), very dense, yellowish brown, moist, comprised of fine grained SAND with scattered medium to coarse grained, angular to subangular SAND and fine subangular GRAVEL, occasional lenses (10-50 mm thick) of caliche coated grains. (Alluvium)
	77 B5	Well graded SAND (SW) with GRAVEL (5%), very dense, dark yellowish brown, moist, comprised of fine to coarse grained, angular SAND and fine subangular GRAVEL with scattered coarse GRAVEL. (Alluvium)
	E125 B5	At elev. 923.26 m, increase in GRAVEL content (20%).
	E102 B5	Poorly graded SAND (SP) with GRAVEL (8%), very dense, dark yellowish brown, moist, comprised of fine to medium grained SAND with scattered coarse grained, SAND and fine to coarse, subangular GRAVEL, occasional (10-40 mm thick) lenses of caliche coated grains. (Alluvium)
	E142 B5	
	E143 B5	SILTY SAND (SM), with GRAVEL (10%), very dense, dark yellowish brown, moist, comprised of fine to coarse grained, angular SAND, SILT and fine to coarse, subangular GRAVEL. (Alluvium)

2-22-01

2+50

B-2-01

2.3 m Rt. Sta. 3+09 C/L Prop. RR Align.

945 m
942 m
939 m
936 m
933 m
930 m
927 m
924 m
921 m
918 m
915 m

943.46	114 mm	CLAYEY SAND (SC) with fine to coarse GRAVEL (10%), medium dense, brown & strong brown, moist.
	19 B5	
	72 B5	SILTY SAND (SM) with scattered GRAVEL (5-10%), very dense, strong brown, moist, primarily fine to medium grained SAND.
	E100 B5	
	E167 B5	
	58 B5	Poorly graded SAND (SP), with fine to coarse GRAVEL (10%), very dense and dense, strong brown and yellowish brown, moist.
	44 B5	
	E125 B5	
	E167 B5	
	E108 B5	
	64 B5	SILTY SAND (SM) with trace fine GRAVEL (5%), very dense, light yellowish brown, moist.
	E100 B5	Poorly graded SAND (SP), with scattered fine GRAVEL (10%), very dense yellowish brown, moist.
	49 B5	SILTY SAND (SM) with scattered fine GRAVEL (5-10%), dense to very dense, strong brown and yellowish brown, moist, primarily fine grained SAND.
	E116 B5	
	E167 B5	
	E160 B5	SANDY SILT (ML) with trace fine GRAVEL (<5%), very dense, yellowish brown, moist.

3-8-01

3+50

NOTES:

1. Ground water was not measured in Borings B-1-01 and B-2-01.
2. Ground water was not encountered in Boring B-3-01.
3. The descriptions and classifications of rock and/or soil, including consistency and relative density descriptors, used by the field and/or office personnel for the exploration boreholes shown on this sheet are based on the "Soil and Rock Logging Classification Manual (Field Guide)," Engineering Service Center, Office of Structural Foundations, August 1996.
4. Soil colors were determined by using Munsel Soil Color Charts (1994, Revised Edition). Rock colors were deterined using USGS rock color charts (1995, revised text).
5. Test borings B-1-01, B-2-01, and B-3-01, utilized a safety hammer to advance the sampler using a 63.5 kg hammer with a 760 mm drop. Penetration index values shown are the actual blow counts recorded in the field.
6. E = Blow count for 0.3 m penetration extrapolated from blow count for less than 0.3 m penetration (due to change in material or hard driving).

PROFILE
HOR. 1:250
VER. 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01
CHECKED BY	M. Spahn 10/01

FIELD INVESTIGATION BY: H. Valencia, M. Pagenkopp

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES — STRUCTURE DESIGN

BRIDGE NO. 54-1211
KILOMETER POST 79.2

CU 08
EA 355571

DISREGARD PRINTS DEARING EARLIER REVISION DATES

NORTH VICTORVILLE UP (REPLACE)

LOG OF TEST BORINGS 1 OF 2

REVISION DATES (PRELIMINARY STAGE ONLY) 10-26-01 10-30-01

SHEET OF

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

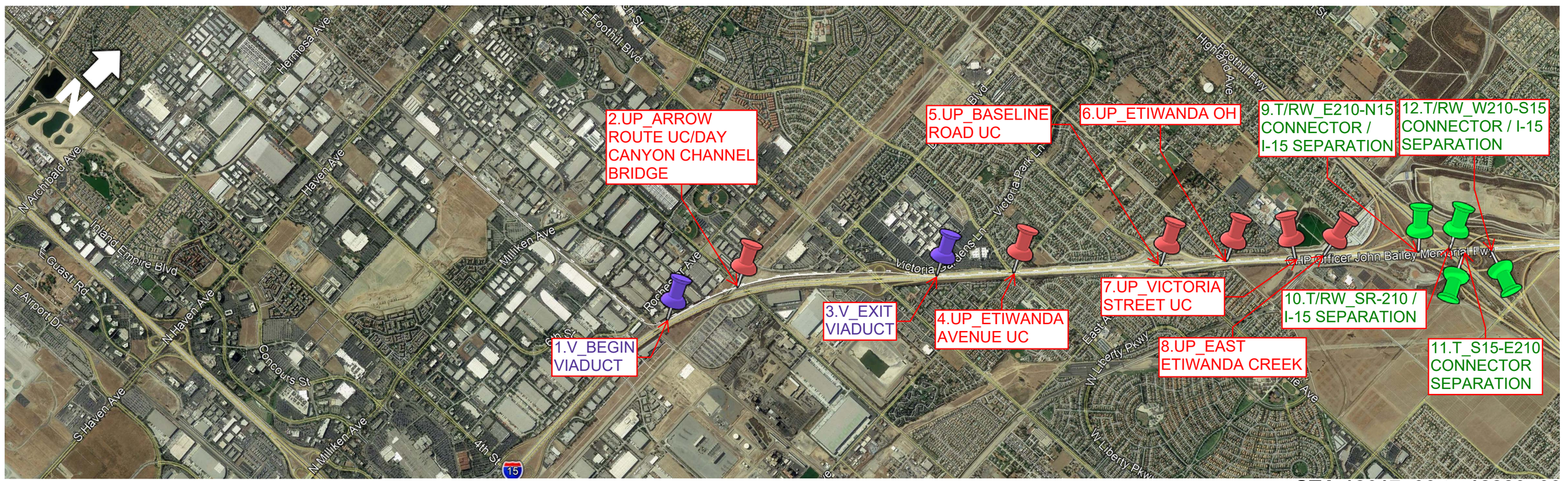
FILE => /user/dmslocal/translab/08-355520/victorvilleiof2.dgn

DGS CIVIL LOG OF TEST BORINGS SHEET (METRIC) (REV. 328/01)

DATE PLOTTED => 30 OCT 2001 TIME PLOTTED => 16:11:52

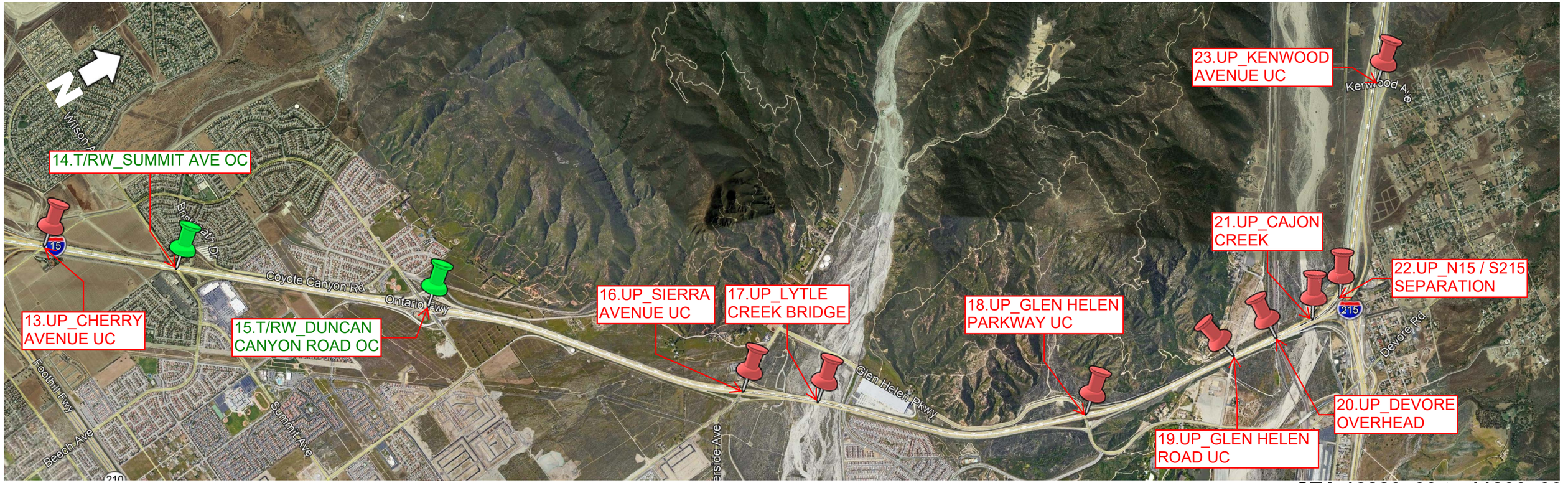
USERNAME => tsDDP

APPENDIX B
LOCATIONS OF PROPOSED STRUCTURES



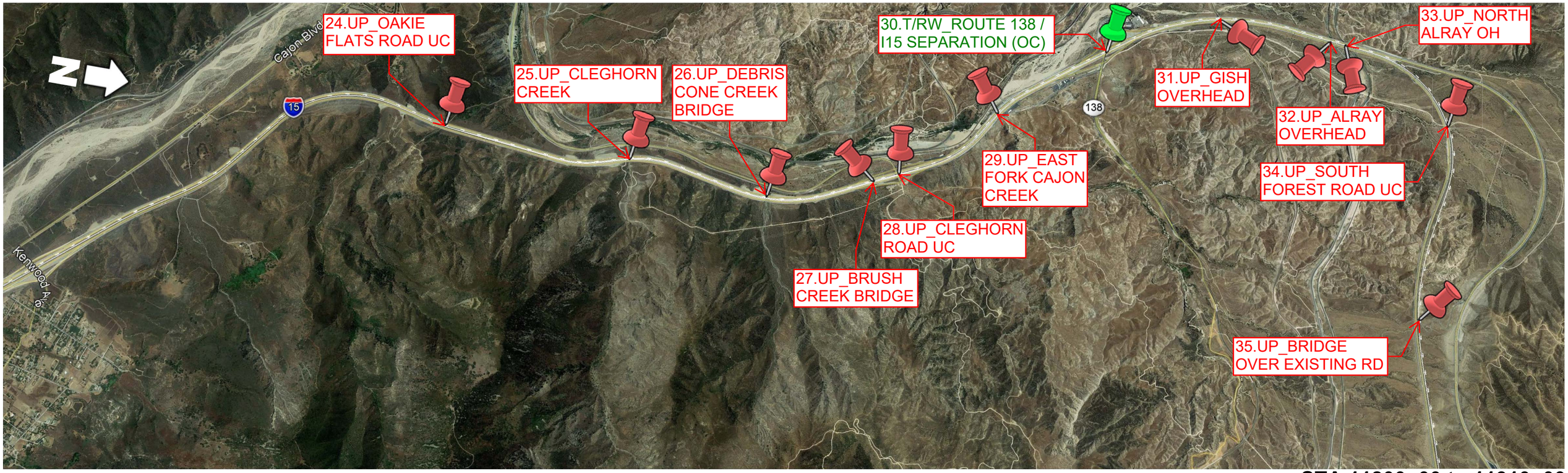
--- Viaduct (V) --- Underpass (UP) --- Trench (T) --- Siderunning Trench (T/SR)

STA 12617+00 to 12280+00



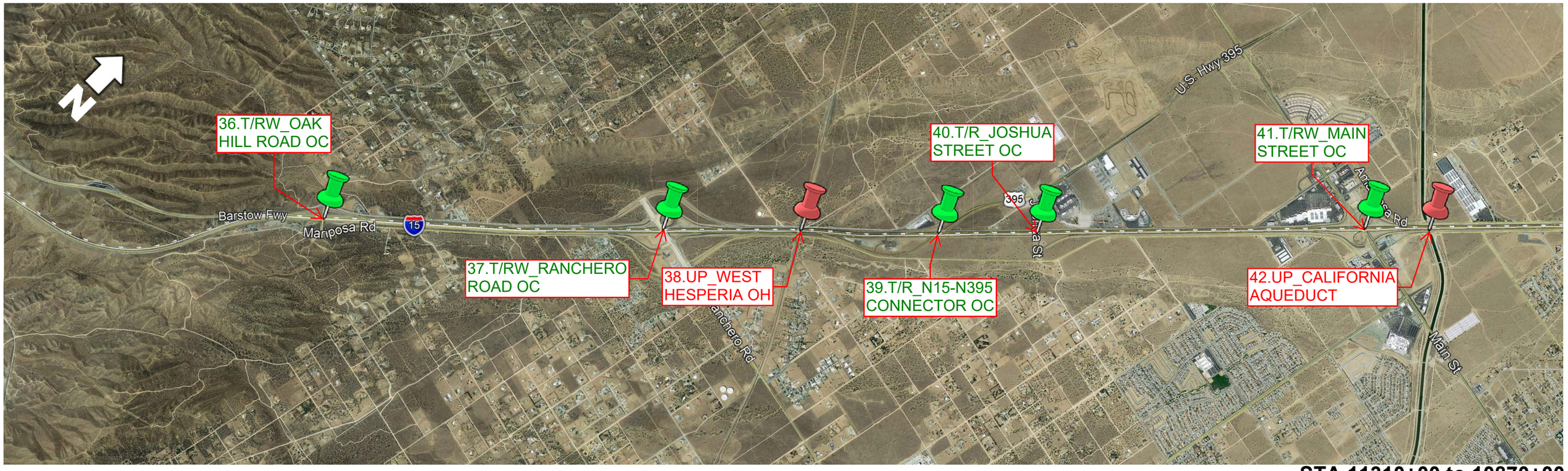
STA 12280+00 to 11800+00

07/31/20



--- Viaduct (V) --- Underpass (UP) --- Trench (T) --- Siderunning Trench (T/SR)

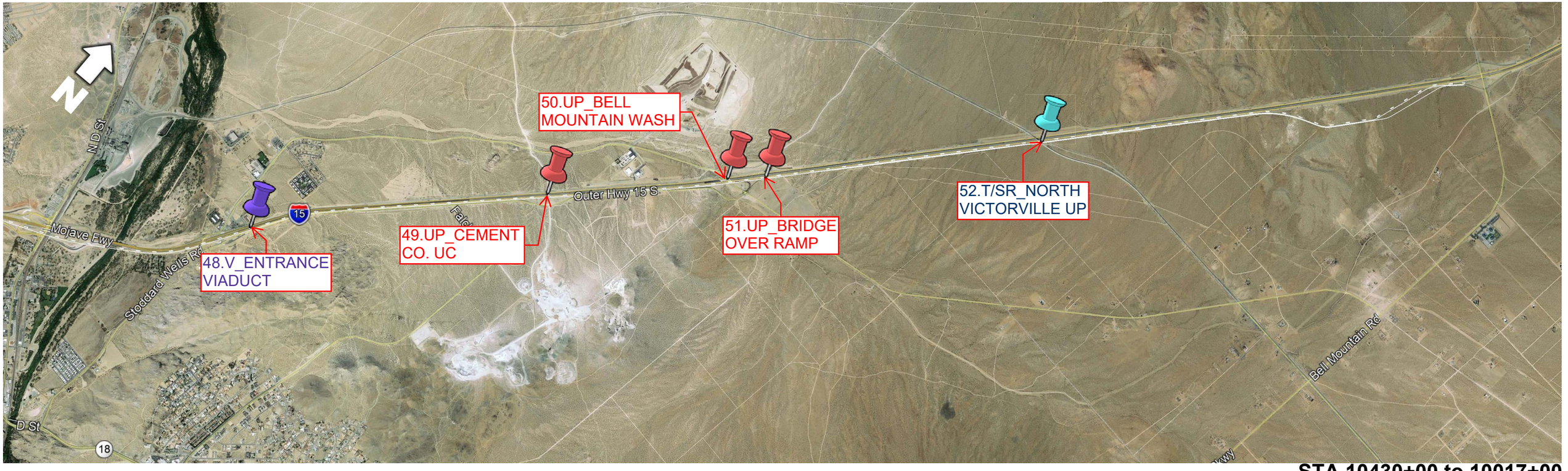
STA 11800+00 to 11310+00



STA 11310+00 to 10870+00

07/31/20

STA 10870+00 to 10430+00



STA 10430+00 to 10017+00

--- Viaduct (V) --- Underpass (UP) --- Trench (T) --- Siderunning Trench (T/SR)

07/31/20