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

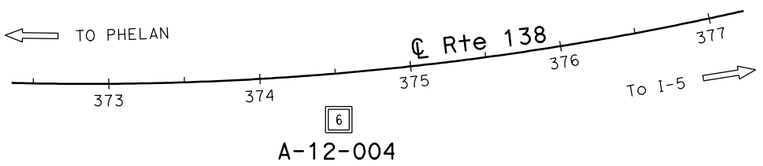
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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.

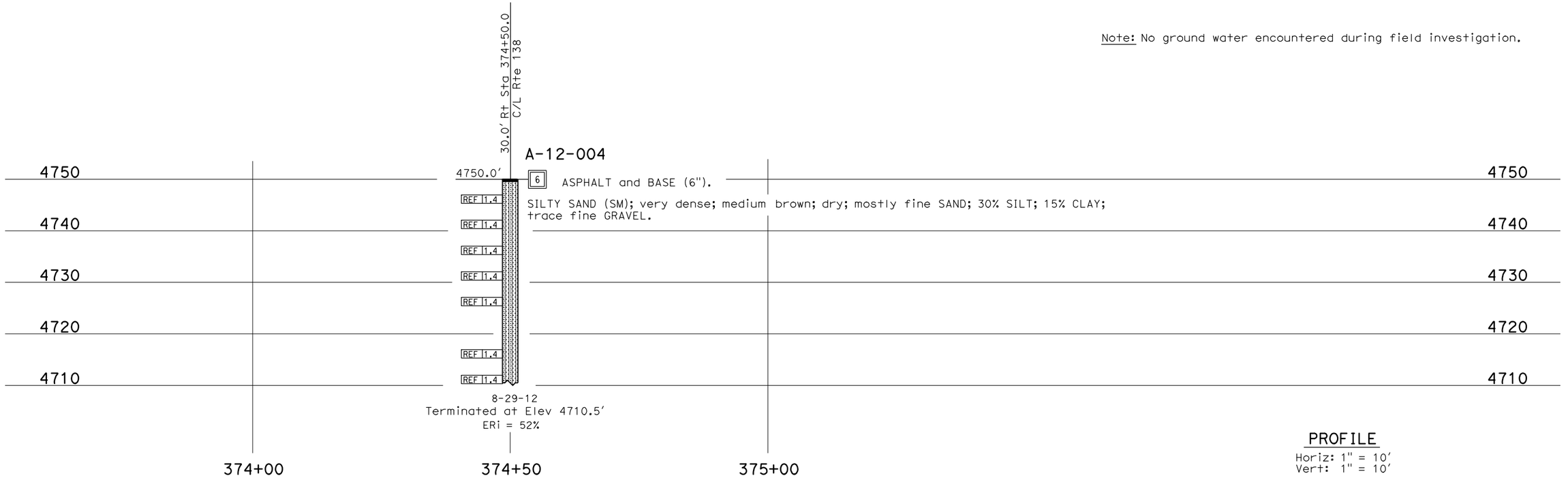
BENCH MARK

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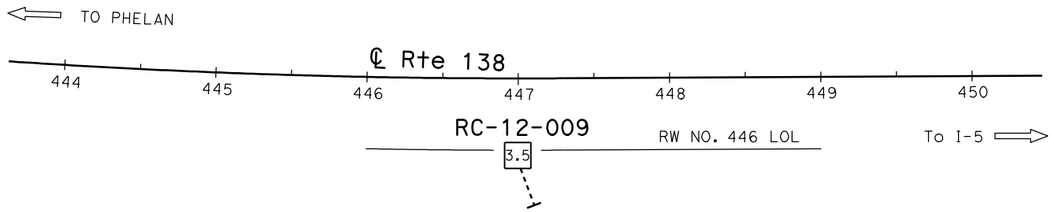
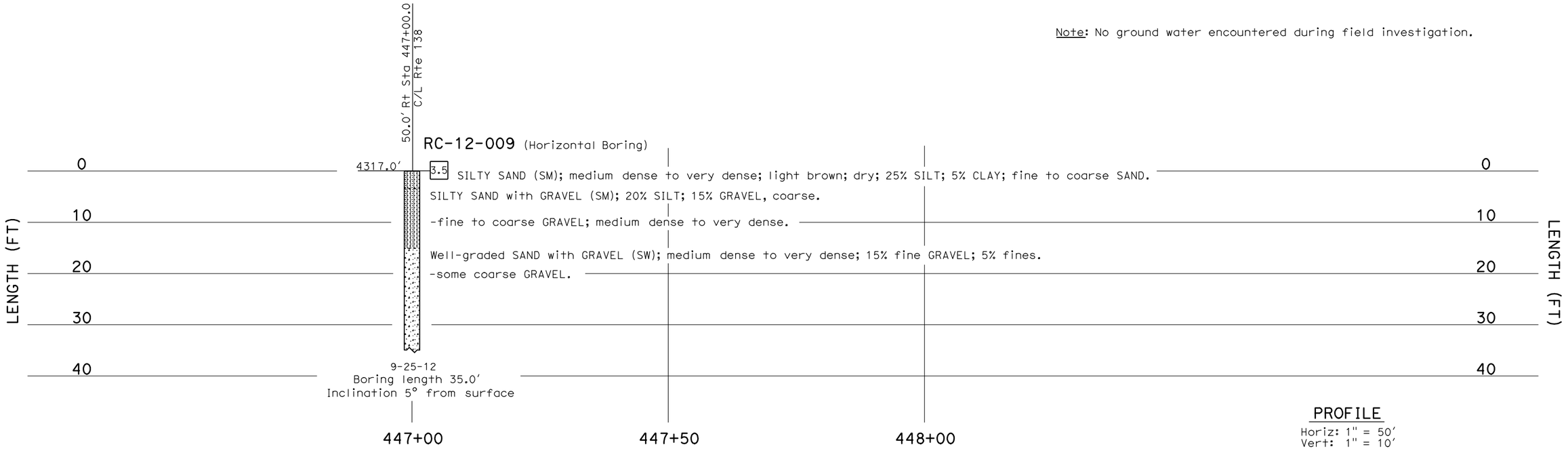
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

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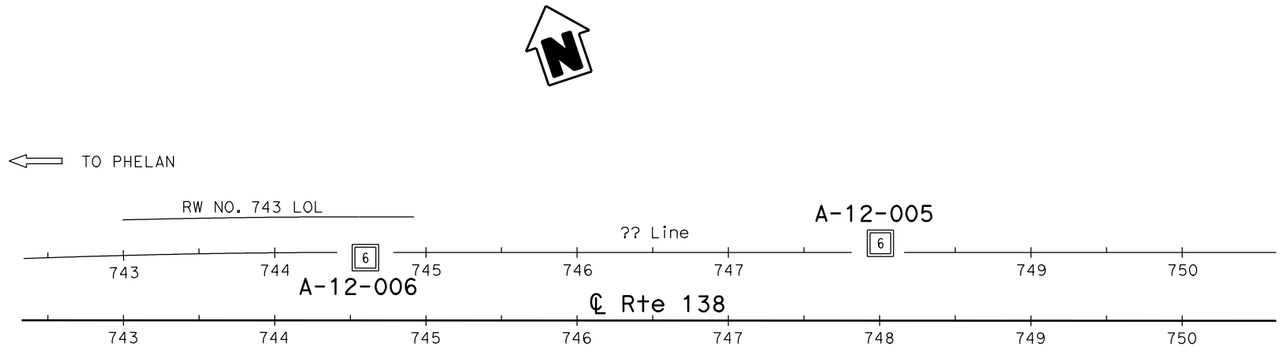
This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



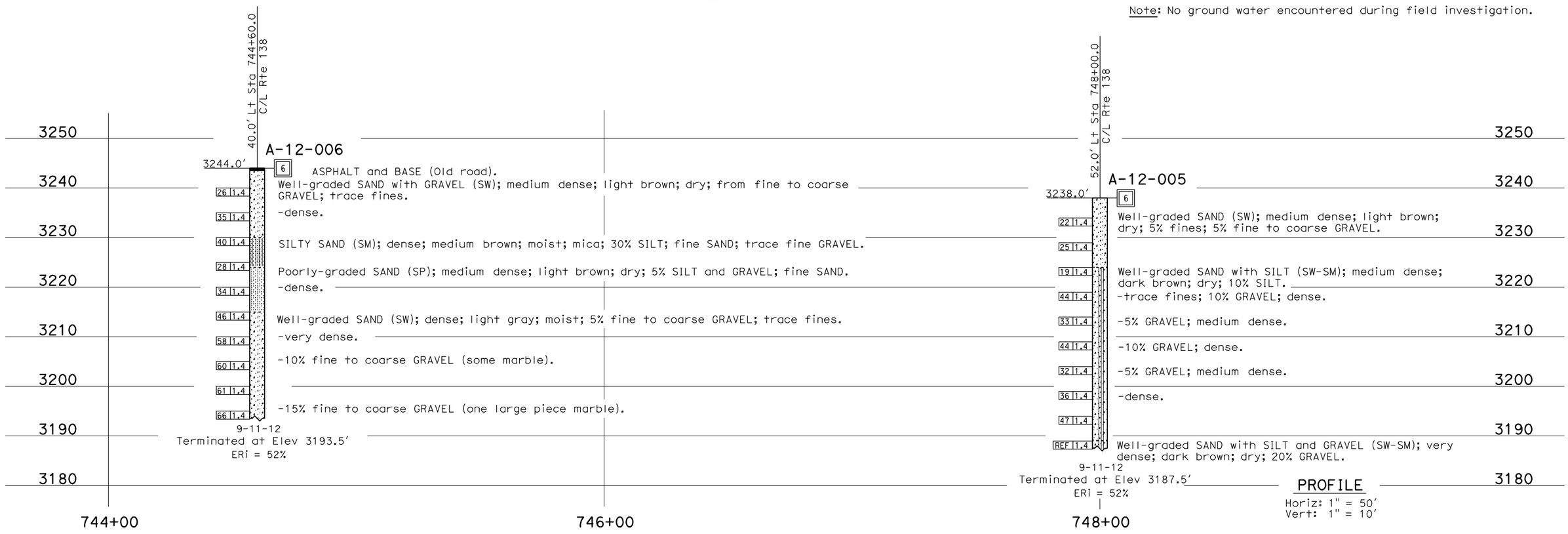
BENCH MARK

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: S. Wei	DRAWN BY: W. Tang 10/12		DESIGN BRANCH X	POST MILE 14.1/14.2	LOG OF TEST BORINGS
	CHECKED BY: M. Wilson	FIELD INVESTIGATION BY: C. Hoadley			

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

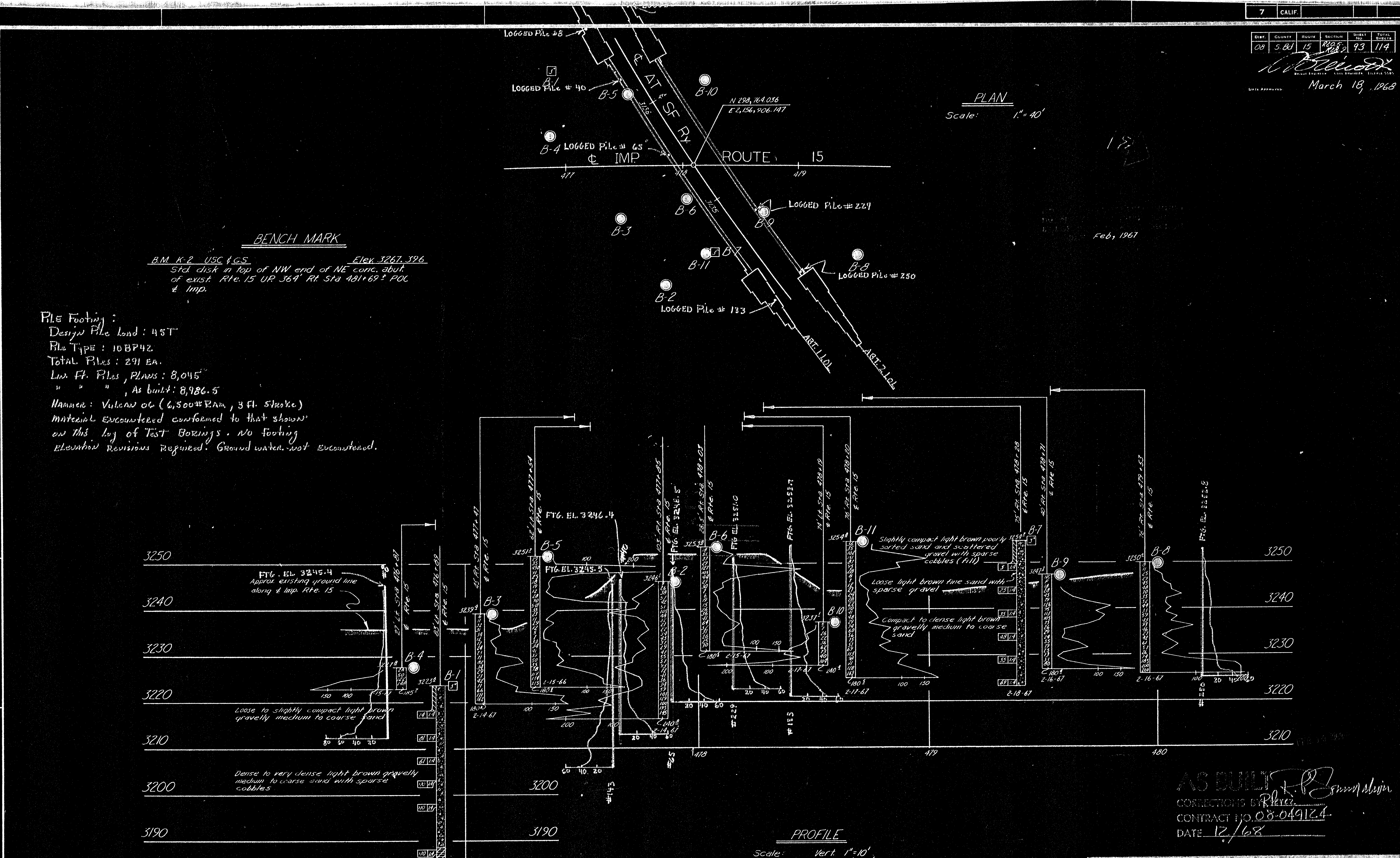
FILE => rw743.dgn

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

Gish Overhead

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
08	S.Bd	15		93	114

March 18, 1968



PLAN
Scale: 1" = 40'
LOGGED Pile #8
LOGGED Pile # 40
LOGGED Pile # 65
LOGGED Pile # 229
LOGGED Pile # 250
LOGGED Pile # 133
℄ AT & SF RY
N 298,764.056
E 2,156,906.147
℄ IMP. ROUTE 15
ABT. 1 LOL
ABT. 2 LOL
Feb, 1967
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.
FTG. EL. 3245.4
Approx. existing ground line along ℄ Imp. Rte. 15
FTG. EL. 3246.4
FTG. EL. 3245.5
Loose to slightly compact light brown gravelly medium to coarse sand
Dense to very dense light brown gravelly medium to coarse sand with sparse cobbles
Very dense light gray fine-grained sandstone with some thin seams of maroon clay
Slightly compact light brown poorly sorted sand and scattered gravel with sparse cobbles (Fill)
Loose light brown fine sand with sparse gravel
Compact to dense light brown gravelly medium to coarse sand
PROFILE
Scale: Vert. 1" = 10' Horiz. 1" = 20'

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

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

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

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.

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	SBd.	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.

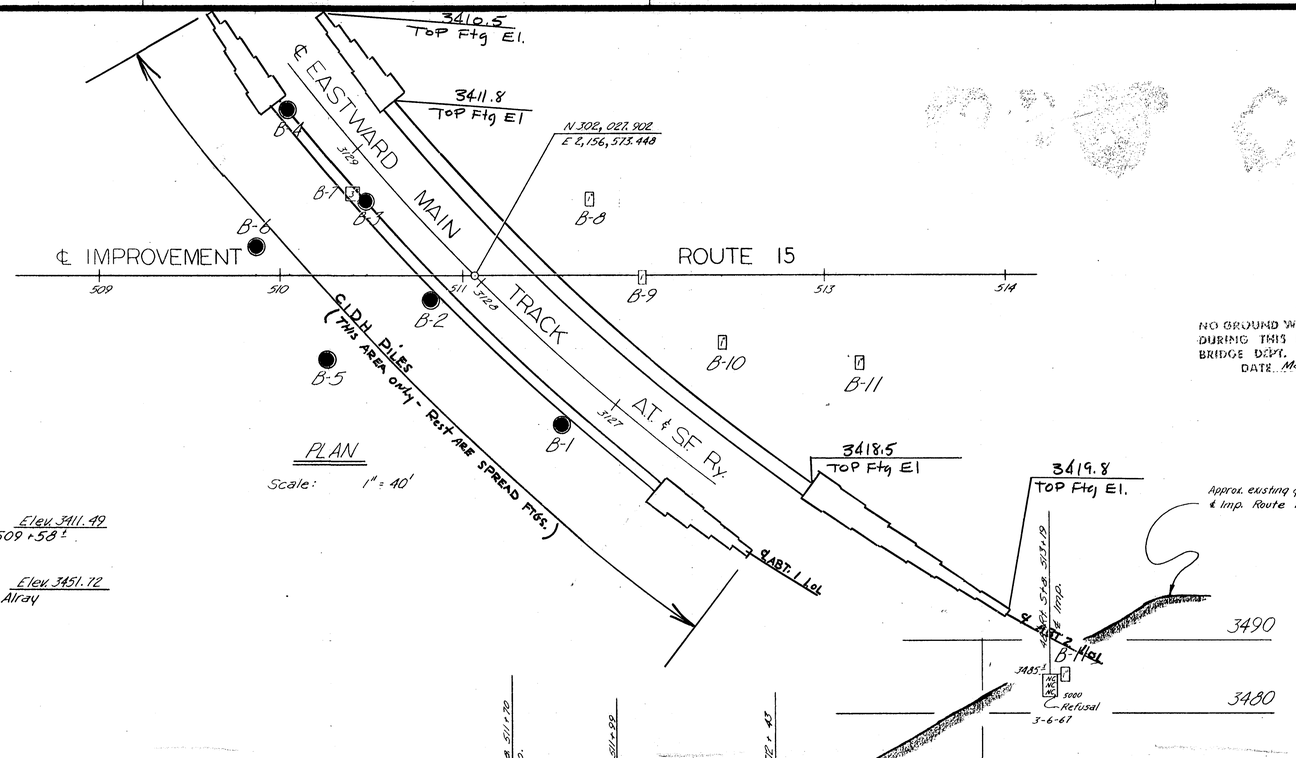
BENCH MARKS

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

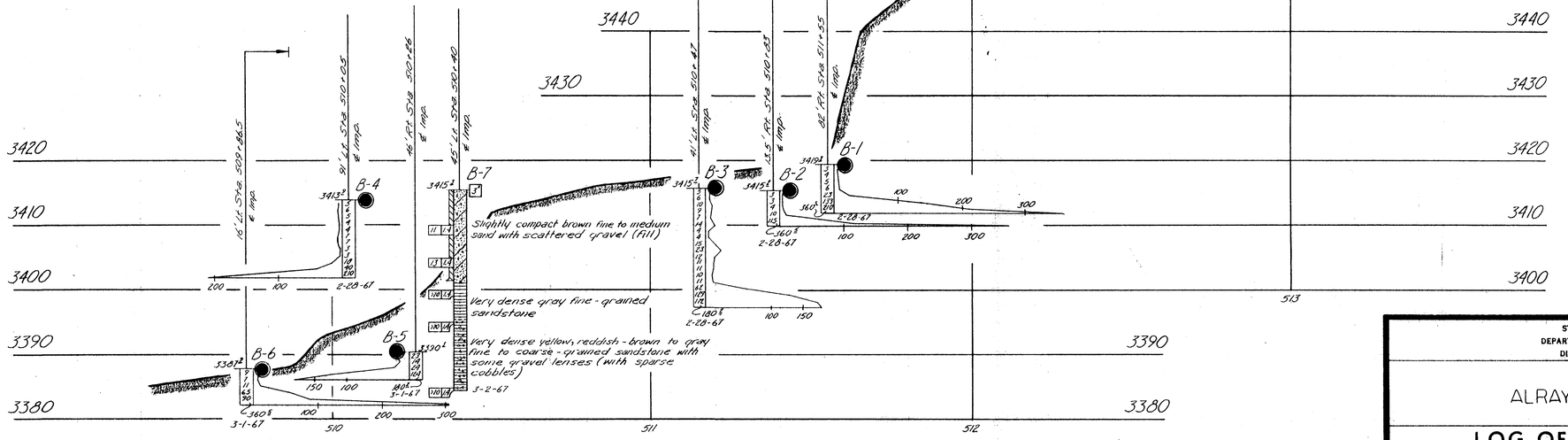
Scale: 1" = 40'



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

PROFILE

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



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

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

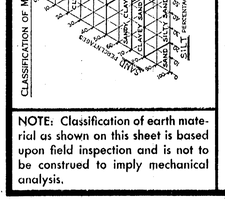
LEGEND OF BORING OPERATIONS

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

1" Soil Tube — Rotary Boring — Penetration Boring

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

Diagram showing the basis for estimates of relative proportions of various sizes in determination of class names. If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, e.g. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, refer to 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 3-15-67
CHECKED	By: D. Crawford 3-28-67

Approx. Recommended by: Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

105

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

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

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
08	SBd	15	R20.8/R24.9	113	114

BRIDGE ENGINEER — CIVIL ENGINEER — LICENSE 9885

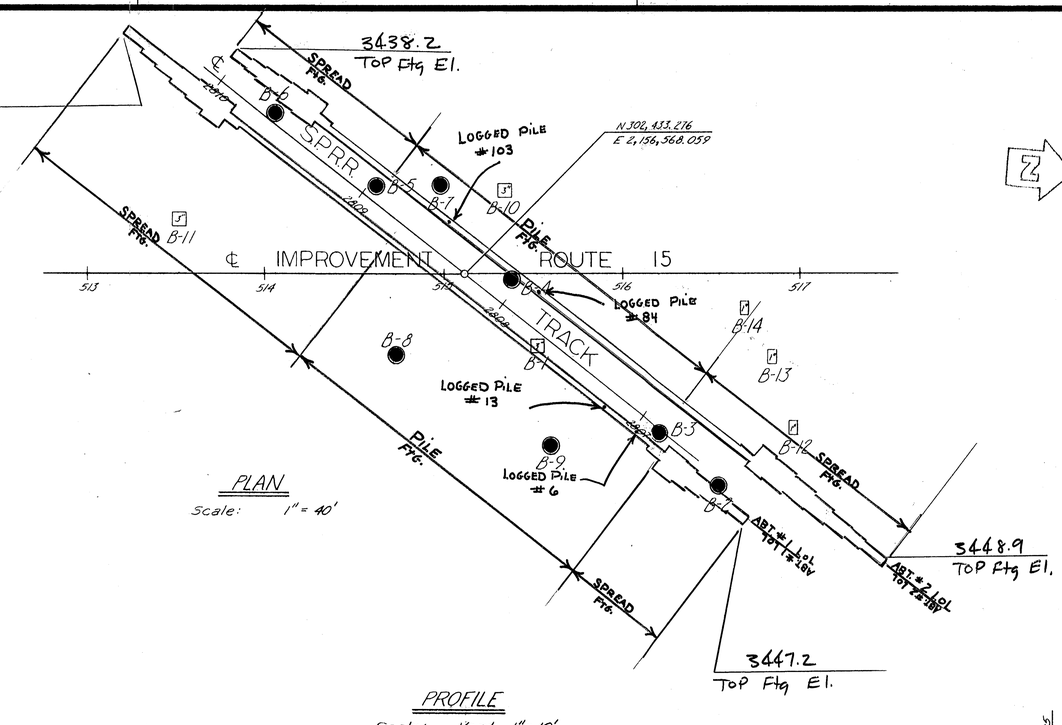
DATE APPROVED March 18, 1968

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

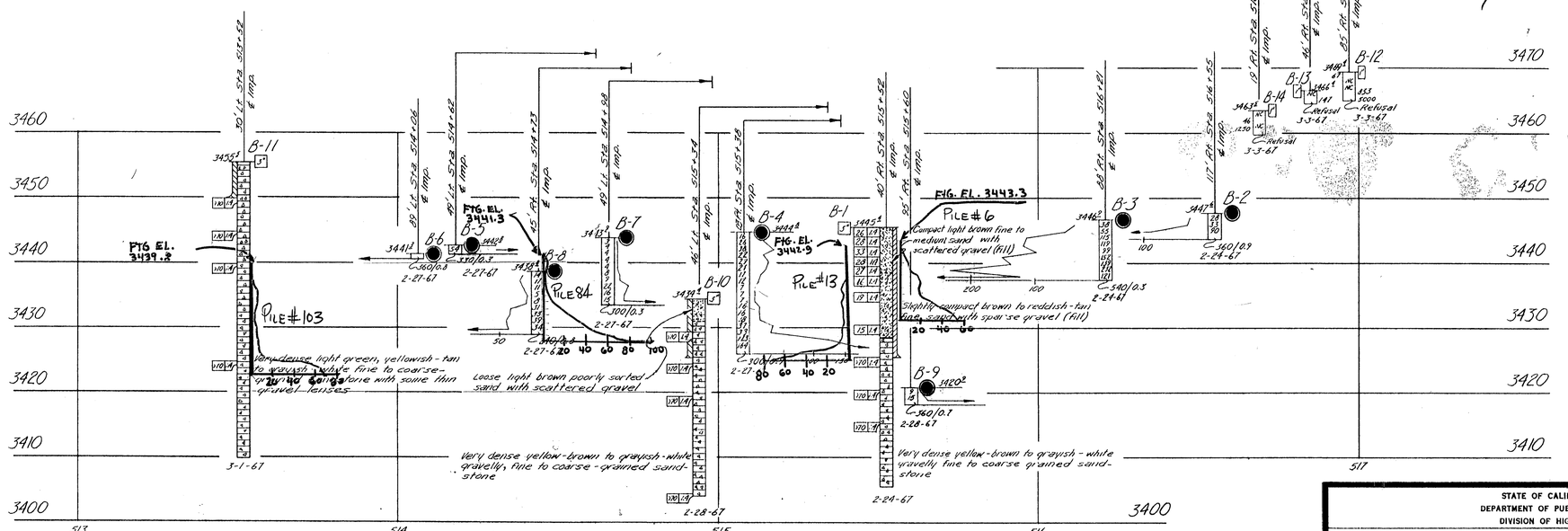
B.M.# B-Alray-65
Sphd. nail in 2"x2" hub buried 0.8' 156° S
Lt. 509+58 P.O.T. & Imp.
Elev. 3411.49



PLAN
Scale: 1" = 40'

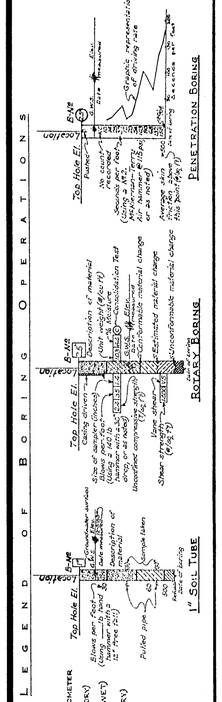
NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE March, 1968

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



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

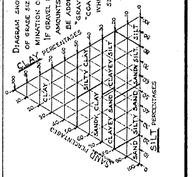
LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

Gravel; Sand; Silt; Clay; Silty Clay or Clayey Silt; Peat and/or Organic Matter; Fill Material; Igneous Rock; Sandy Clay or Clayey Sand; Sandy Silt or Silty Sand; 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	3-27-67
DRAWN	By: G. Allen	3-20-67
CHECKED	By: D. Crawford	3-27-67

Approval Recommended by: [signature] Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

113

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

Chg. 08201
W.A. 049121

Disregard prints bearing earlier numbers →

PREL. DRAWING NO. PR- 67

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	27.3/31.1	55	55

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 5585

DATE APPROVED September 7, 1965

AS BUILT
CORRECTIONS BY [illegible]
CONTRACT NO. [illegible]
DATE [illegible]

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

SHEET	OF
12	12

BRIDGE DEPARTMENT

FIELD STUDY	By C.G. Bemis 8-20-64
DRAWN	By V.J. Ryan 9-10-64
CHECKED	By Z.H. Faranish 9-10-64

Approval Recommended by Charles E. Clark
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	▨	SILTY CLAY OR CLAYEY SILT
▨	SAND	▨	PEAT AND/OR ORGANIC MATTER
▨	SILT	▨	FILL MATERIAL
▨	CLAY	▨	IGNEOUS ROCK
▨	SANDY CLAY OR CLAYEY SAND	▨	SEDIMENTARY ROCK
▨	SANDY SILT OR SILTY SAND	▨	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

OAK HILL ROAD OVERCROSSING

LOG OF TEST BORINGS

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

Charge: 08201 WA: 039641

55

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	15								
3874.00	6					6									
	7					9									
3872.00	8														
	9														
3870.00	10		Dense; few fine GRAVEL ; weak cementation.		S-2	5	26								
	11					12									
3868.00	12					14									
	13														
3866.00	14														
	15		CLAYEY SAND (SC); very dense; dark brown; dry; mostly fine and medium SAND; little fines; moderate cementation.		S-3	11	50								
3864.00	16					25									
	17					25									
3862.00	18														
	19														
3860.00	20				S-4	21	48								
	21					22									
3858.00	22					26									
	23														
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				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.												
3845.00	26		Well-graded SAND (SW) *(continued)*.		S-5	13 14 17	31								
	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

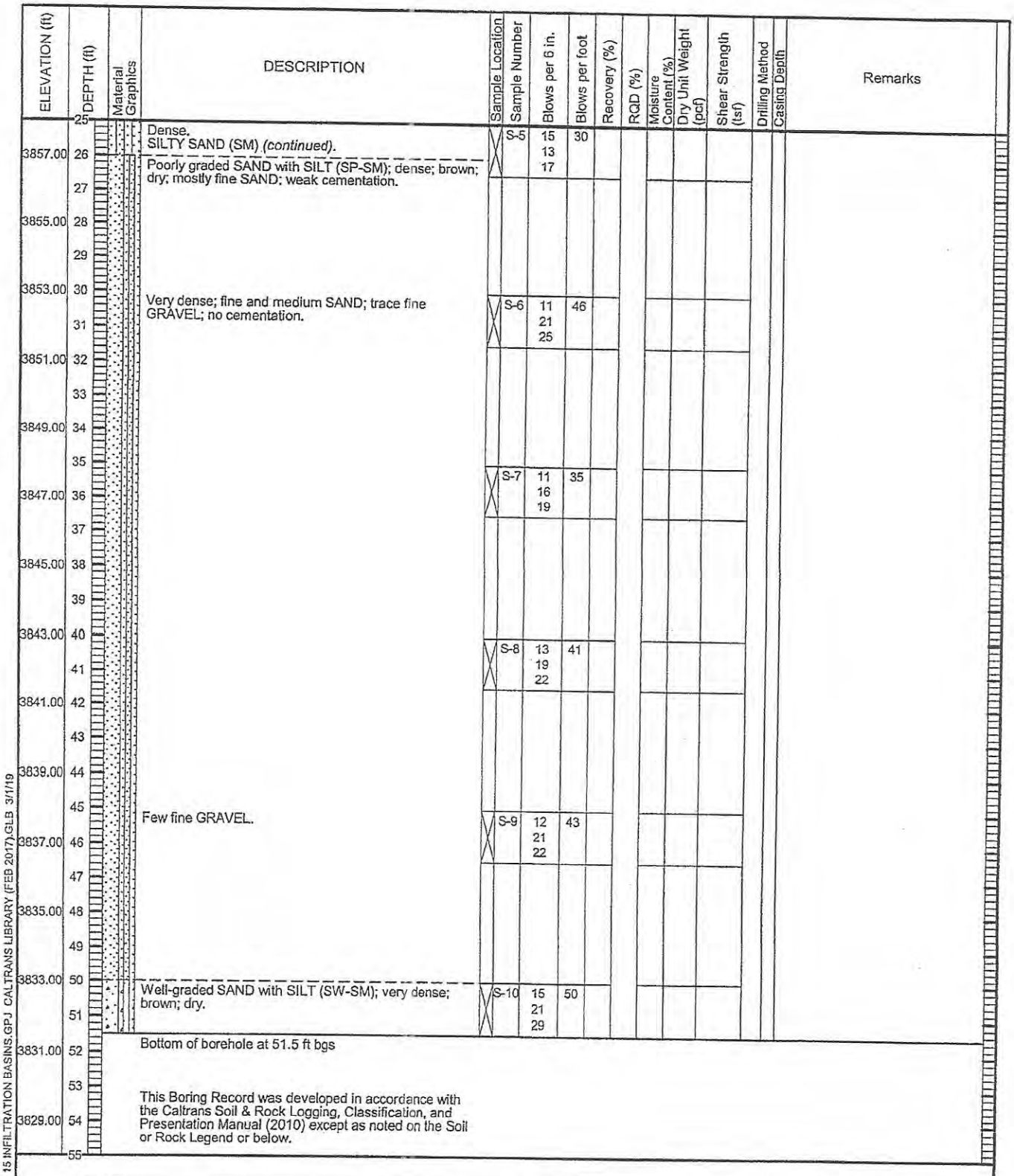
ELEVATION (ft)	DEPTH (ft)	Material Graphics	DESCRIPTION	Sample Location	Sample Number	Blows per 6 in.	Blows per foot	Recovery (%)	RQD (%)	Moisture Content (%)	Dry Unit Weight (pcf)	Shear Strength (tsf)	Drilling Method	Casing Depth	Remarks
	0		CLAYEY SAND (SC); dark brown; moist; mostly from fine to coarse 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)

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-19-003
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	



ELEVATION (ft)	DEPTH (ft)	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. SILTY SAND (SM) *(continued)*.												
3857.00	26			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													
	31	Very dense; fine and medium SAND; trace fine GRAVEL; no cementation.		S-6	11 21 25	46								
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													
	51	Well-graded SAND with SILT (SW-SM); very dense; brown; dry.		S-10	15 21 29	50								
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				HOLE ID
BORING RECORD				A-19-003
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	

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

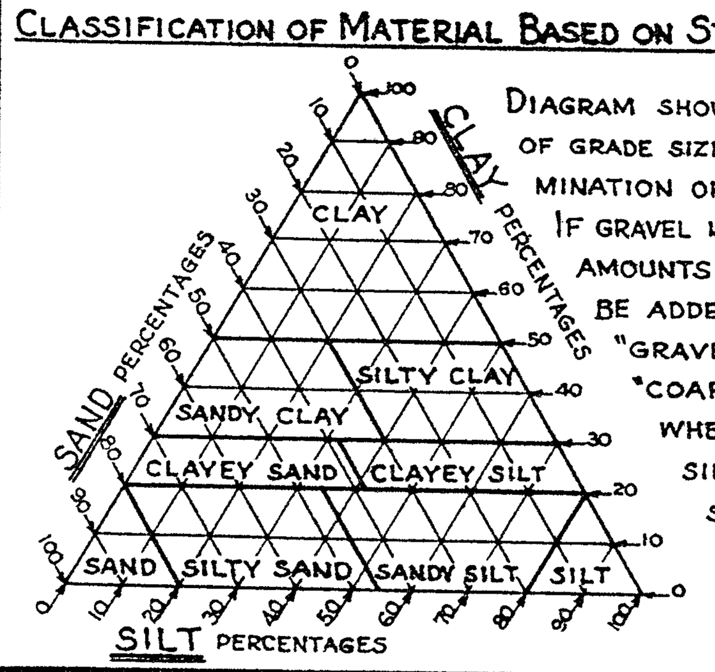
FIELD STUDY	by Eagan 6-20-62
DRAWN	by Erskine 7-10-62
CHECKED	by Eagan 7-11-62

Approval Recommended by ______ Advance Planning Engineer, 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.

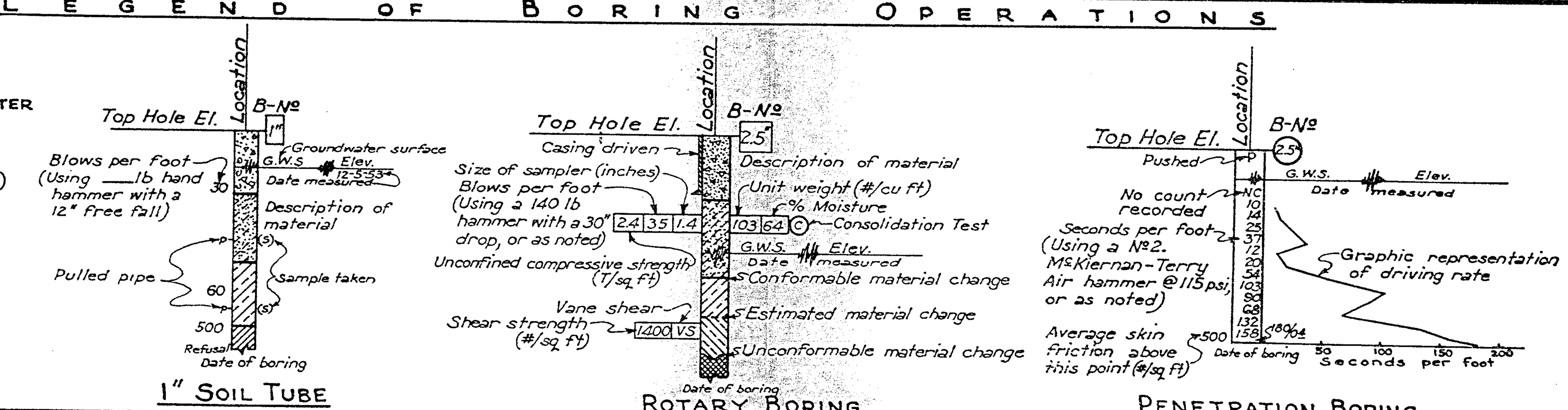


LEGEND OF EARTH MATERIALS

- 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.

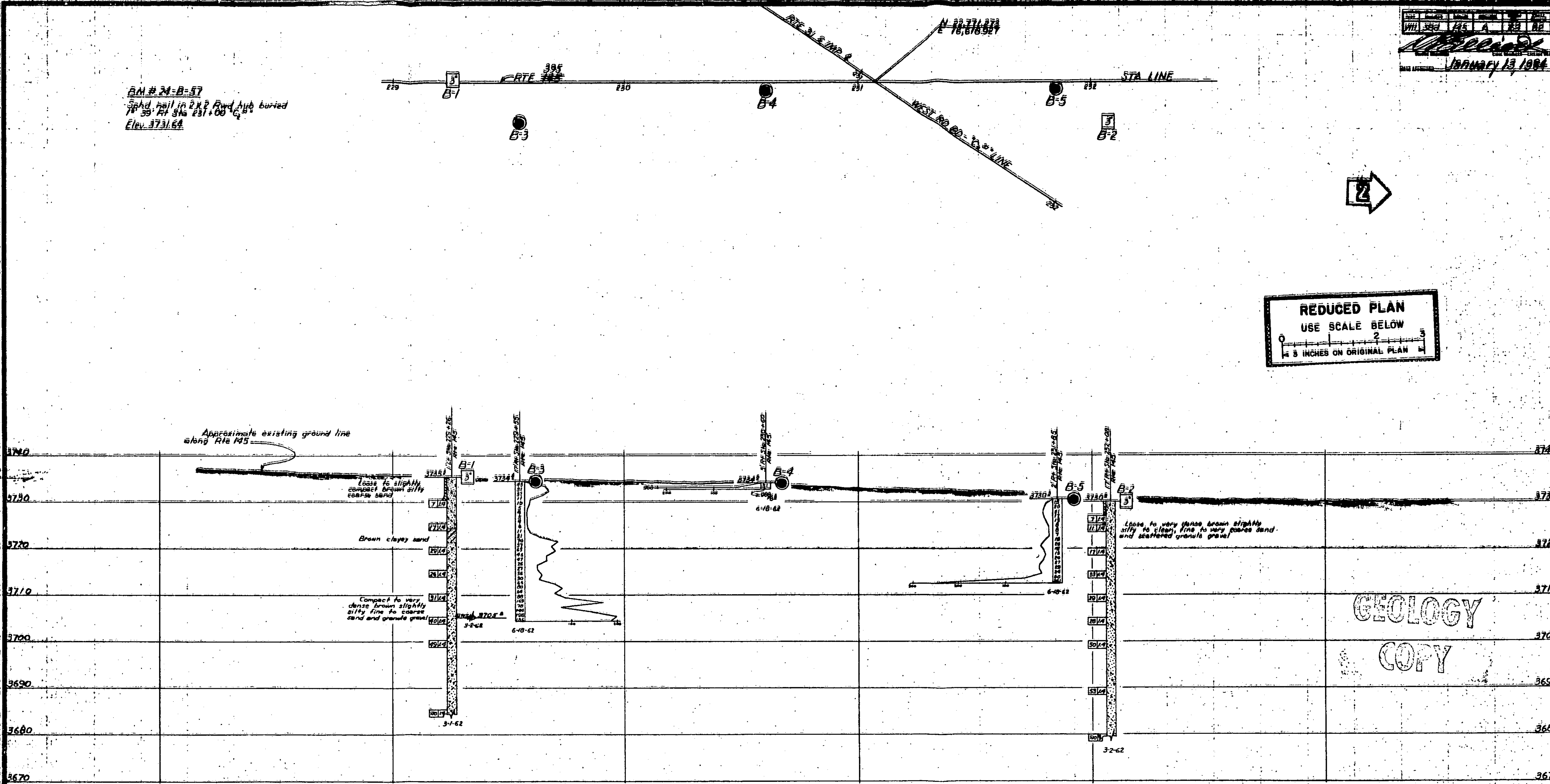
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

WEST HESPERIA OVERHEAD

LOG OF TEST BORINGS

SCALE	BRIDGE	FILE	DRAWING
As Noted	54-664		

N15-N395 Connector OC



Classification of Material Based on Standard Grade Size Limits

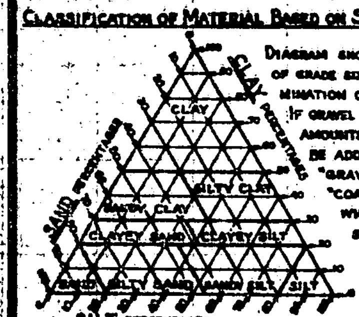


Diagram showing the basis for estimates of grade size distribution used in determination of class names.

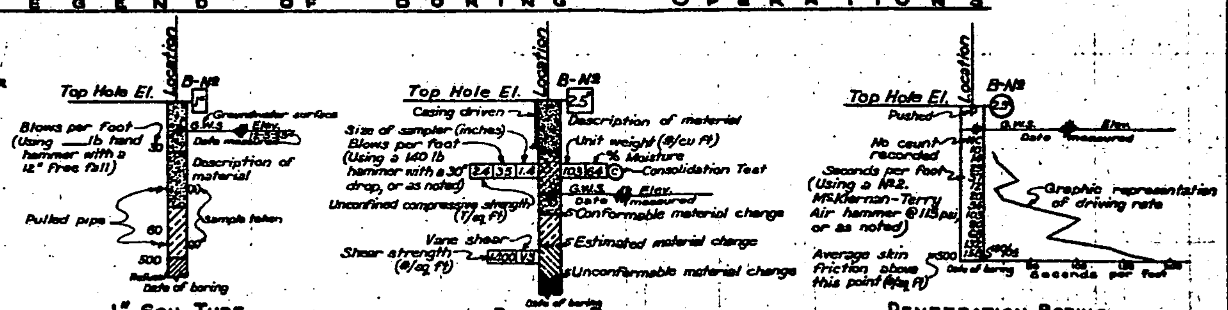
If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand." The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

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



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 ~~145/31~~ 395/15 SEPARATION

LOG OF TEST BORINGS

Scale: Horiz 1" = 20', Vert. 1" = 10' | Bridge 54-665 | File | Drawing 54665-10

PREL. DRAWING NO. P-54665-10

Joshua Street (Palm Avenue) OC

PRINTED ON CLEARPRINT 1000 H

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

(New VIII-SBd-15)

DIST	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	SBd	31	C	82	82

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE

DATE APPROVED January 13, 1964

BRIDGE DEPARTMENT

FIELD STUDY	by Rammelkamp 6-15-62
DRAWN	by Erskine 7-16-62
CHECKED	by

Approval Recommended by

Classification of Material Based on Standard Grade Size Limits

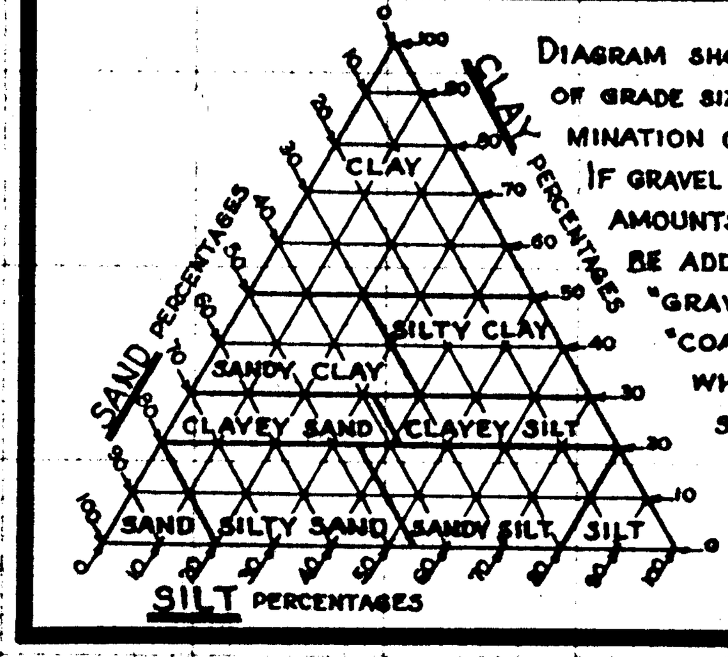


Diagram showing the basis for estimates of grade size distribution used in determination of class names.

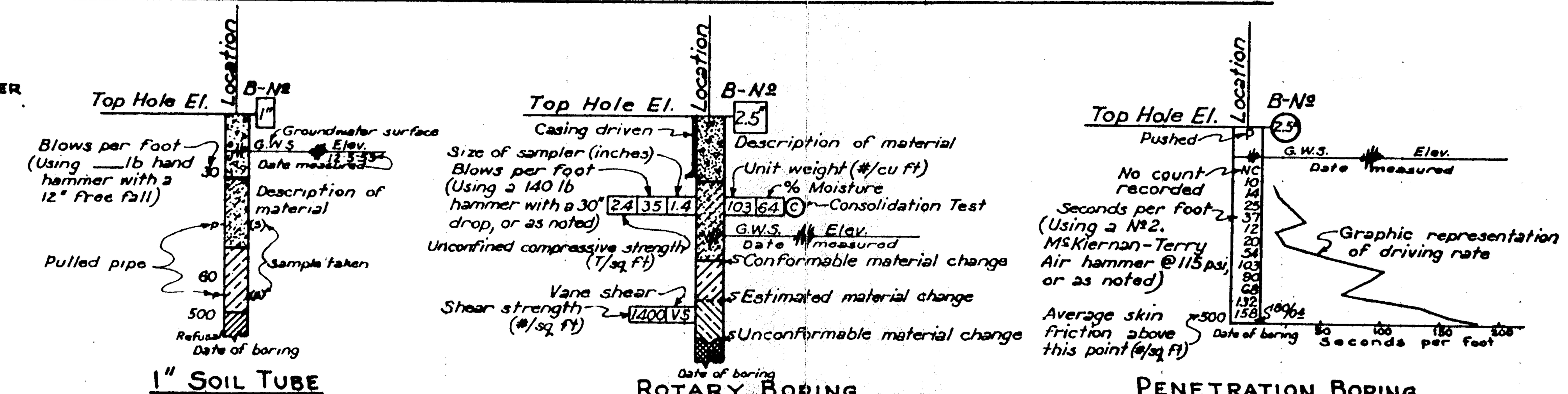
If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand." The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

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; 2 1/4" 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

SHEET	OF
9	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				

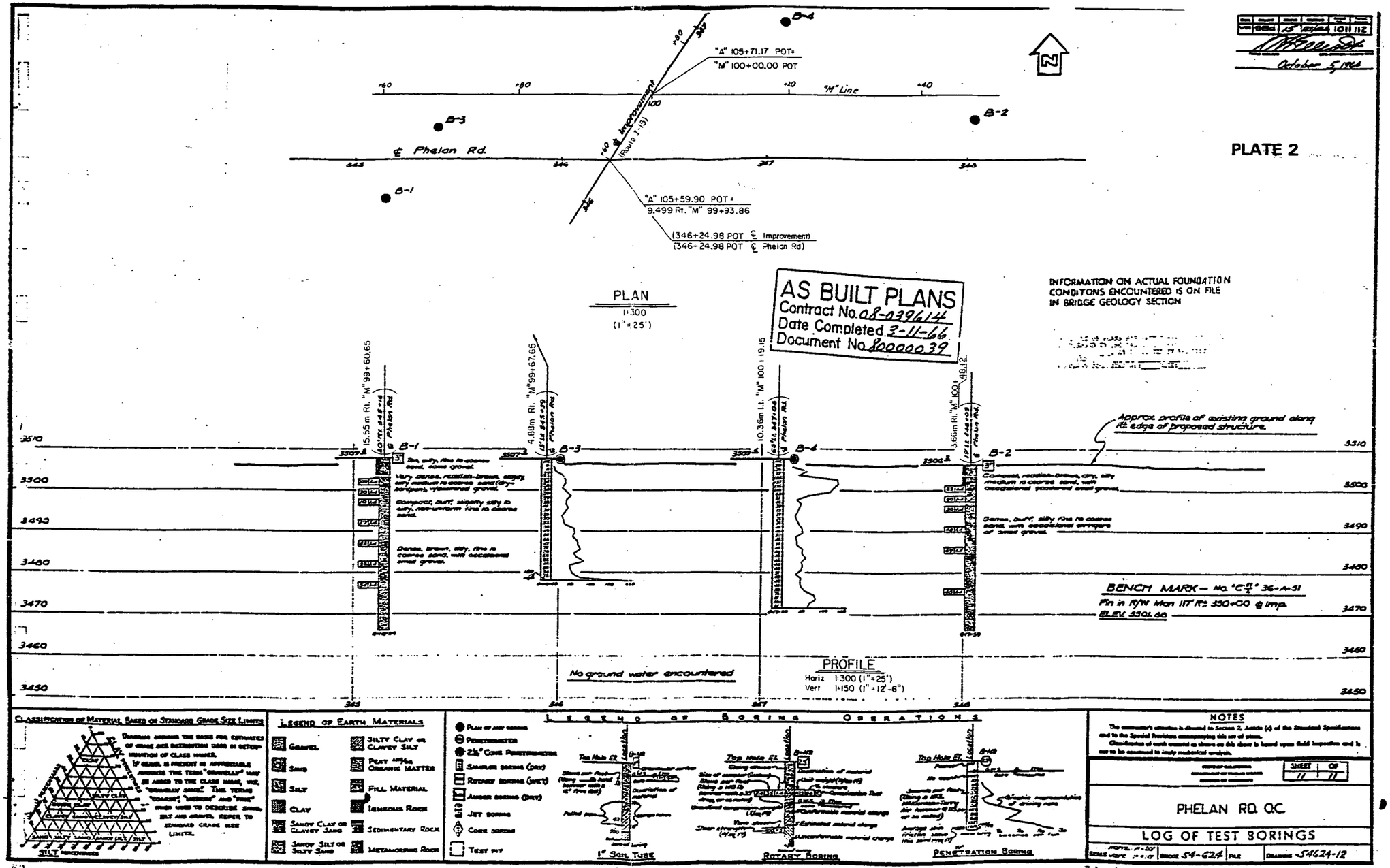


PLATE 2

NOTES

The contractor's attention is directed to Section 2, Article (d) of the Standard Specifications and to the Special Provisions concerning this use 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.

SHEET 11 OF 11

PHELAN RD. OC.

LOG OF TEST BORINGS

SCALE: HORIZ. 1"=20' VERT. 1"=10' | BRIDGE 54-624 | FILE | DRAWING 54624-12

54-1273

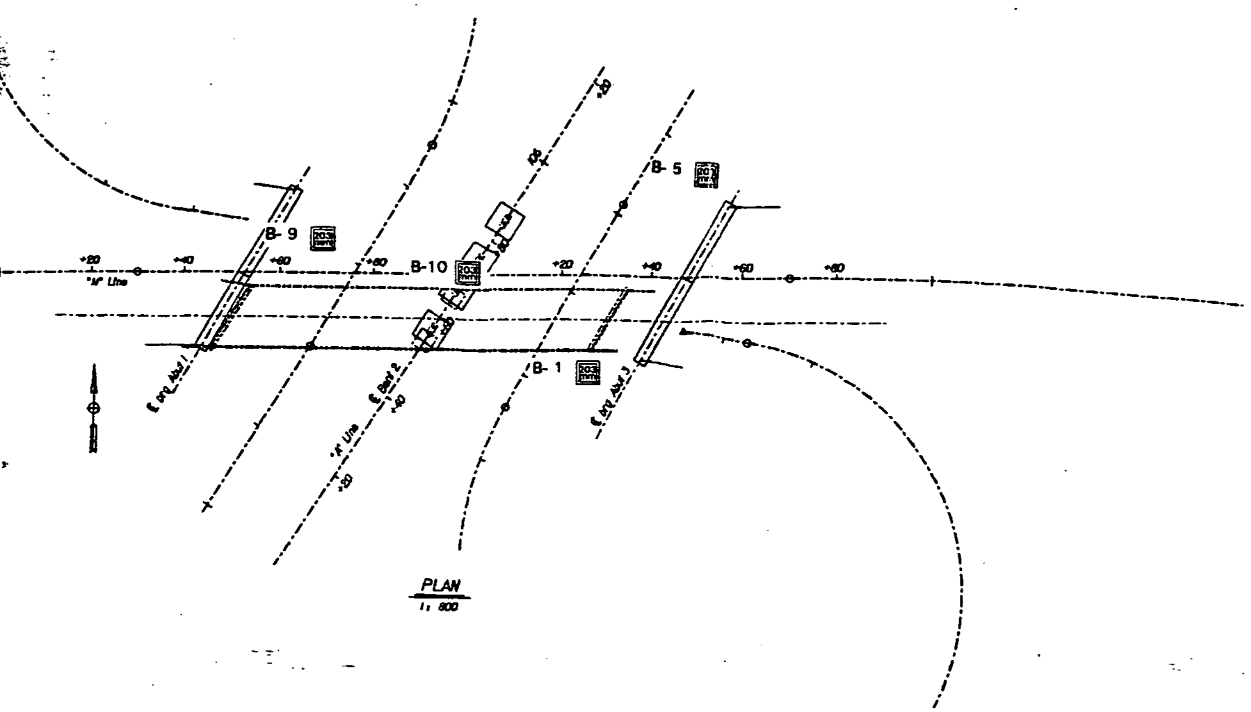
DESIGN OVERSIGHT	NOTE: ADDITIONAL AS-BUILT FOUNDATION DATA MAY BE AVAILABLE AT THE DIVISION OF NEW TECHNOLOGY, MATERIALS AND RESEARCH 5900 FOLSOM BOULEVARD, SACRAMENTO, CALIFORNIA 95819	DESIGN	BY M. Maechler	CHECKED E. Tsai	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
SIGNOFF DATE		DETAILS	BY C. Houghton	CHECKED E. Tsai	M. Maechler PROJECT ENGINEER
		QUANTITIES	BY E. Wong	CHECKED Y. Ton	CU 08325 EA 370201K

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

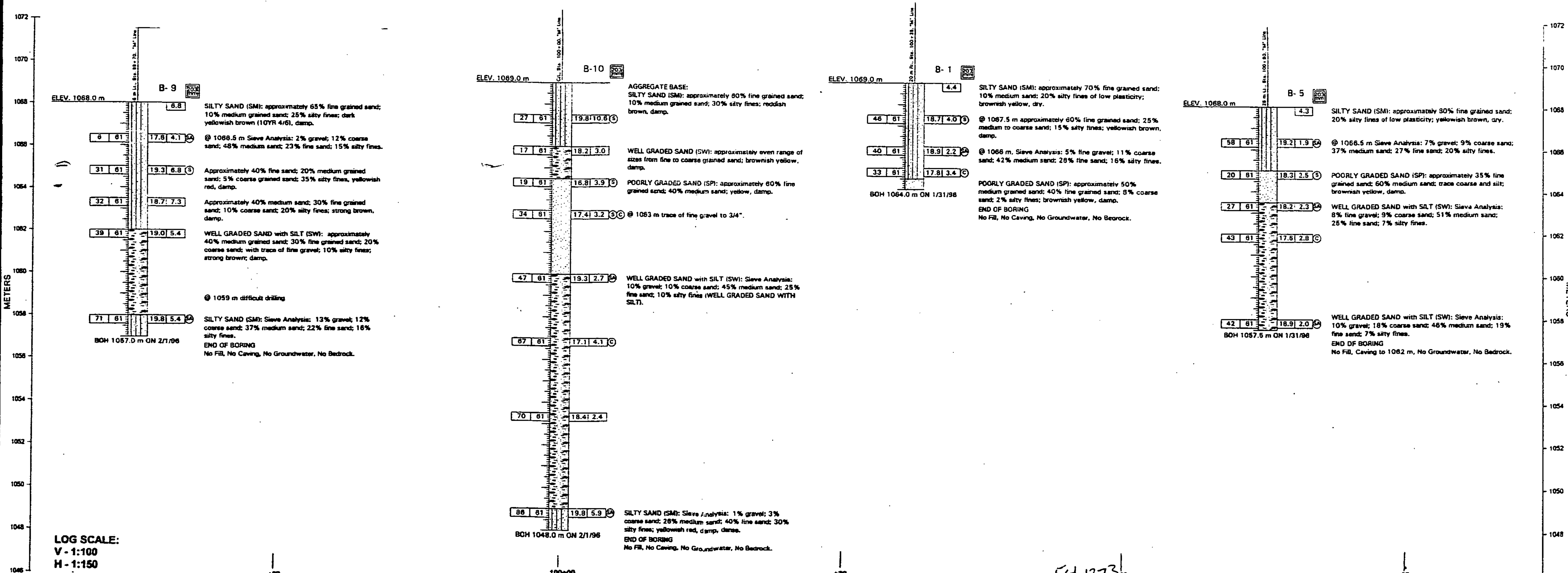
BRIDGE NO.	MAIN STREET OVERCROSSING
54-624	
POST MILE	AS-BUILT LOG OF TEST BORINGS
5.472	

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

SHEET 18 OF 18



0.5m remove of embankment



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. 1693 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

ENGINEERING SERVICE CENTER	STRUCTURE FOUNDATIONS
DRAWN BY	JJJ
CHECKED BY	JPL

FIELD INVESTIGATION BY:
J. JOHNSTON
LOR Geotechnical Group, Inc.
6121 Quail Valley Court
Riverside, California 92507

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. ~~54-624~~ 54-1273
KILOMETER POST 15-53.9/55.9

MAIN STREET OVERCROSSING
LOG OF TEST BORINGS

ORIGINAL V-SCALE IN MILLIMETERS FOR REDUCED PLANS

CU: 08325
EA: 37020K

DISREGARD PRINTS BEARING EARLIER REVISION DATES

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

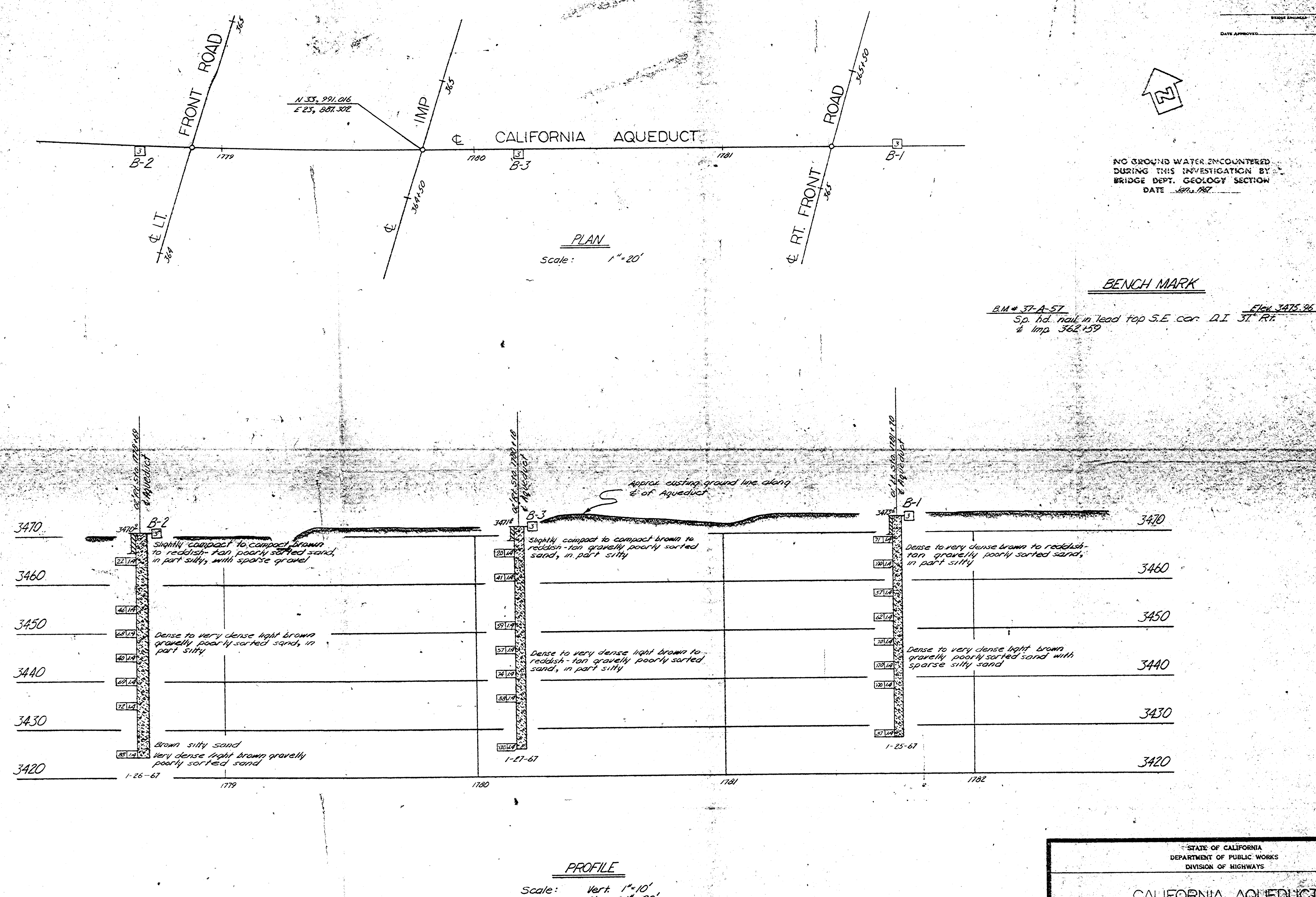
SHEET 17 OF 18

California Aqueduct

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	31.3		

DATE APPROVED



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

BENCH MARK

B.M.# 37-A-57 — Elev. 3475.96
Sp. hd. nail in lead top S.E. cor. D.I. 31' Rt. ℄ Imp. 362+59

LEGEND OF BORING OPERATIONS: PENETROMETER; 2½" CORE PENETROMETER; SAMPLER BORING; ROTARY BORING; AUGER BORING; JET BORING; CORE BORING; TEST PIT

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	By D. Crawford
DRAWN	By
CHECKED	By

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

Crg. 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	27.1/44.6	112	112

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 5563

DATE APPROVED October 5, 1964

AS BUILT
CORRECTIONS BY William Crawford
CONTRACT NO. 08-039614
DATE 25 June 1965

BRIDGE DEPARTMENT

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

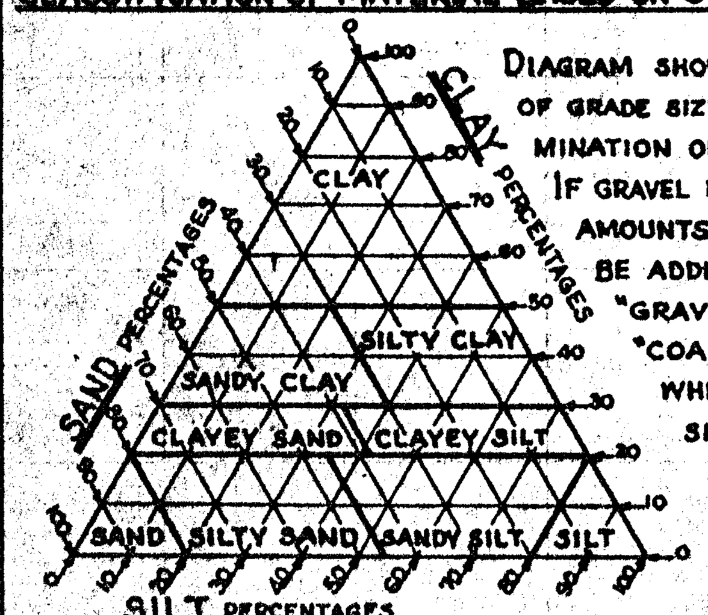


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

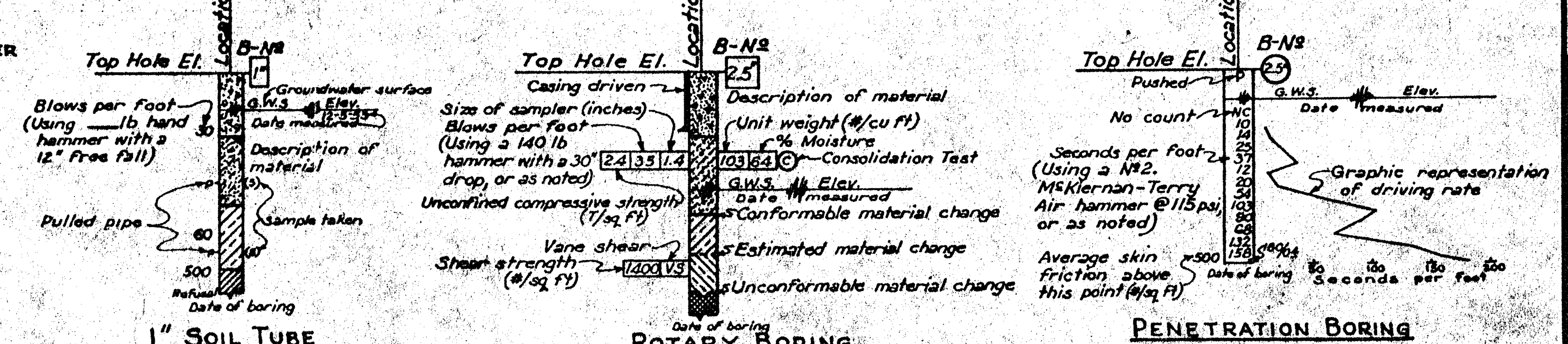
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

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
- 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

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

54625-12

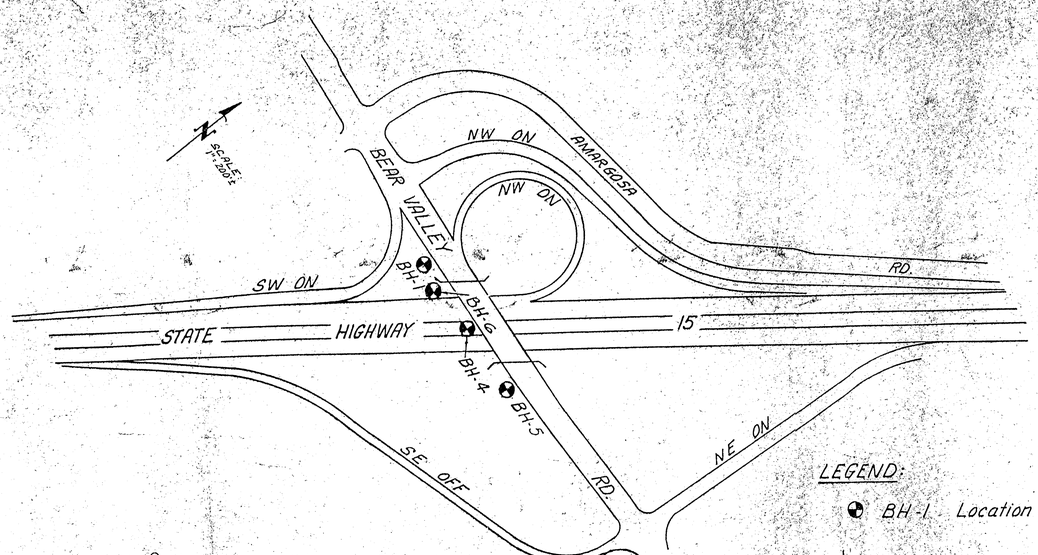
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15			

Ronald F. Carducci
GEOTECHNICAL PROFESSIONAL

PLANS APPROVAL DATE

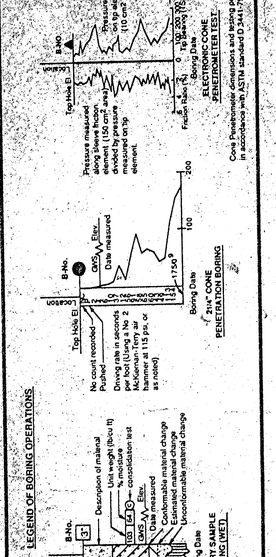
REGISTERED PROFESSIONAL ENGINEER — RONALD F. CARDUCCI — No. 185 — Exp. 12/30/93 — GEOTECHNICAL — STATE OF CALIFORNIA

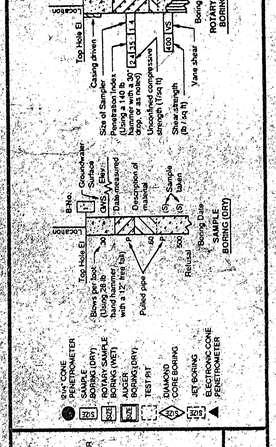
CAL-WEST Consultants
12210 MICHIGAN AVE. #26
GRAND TERRACE, CA 92324
(714) 824-1777



LEGEND:

● BH-1 Location of Test Boring (Typ.)

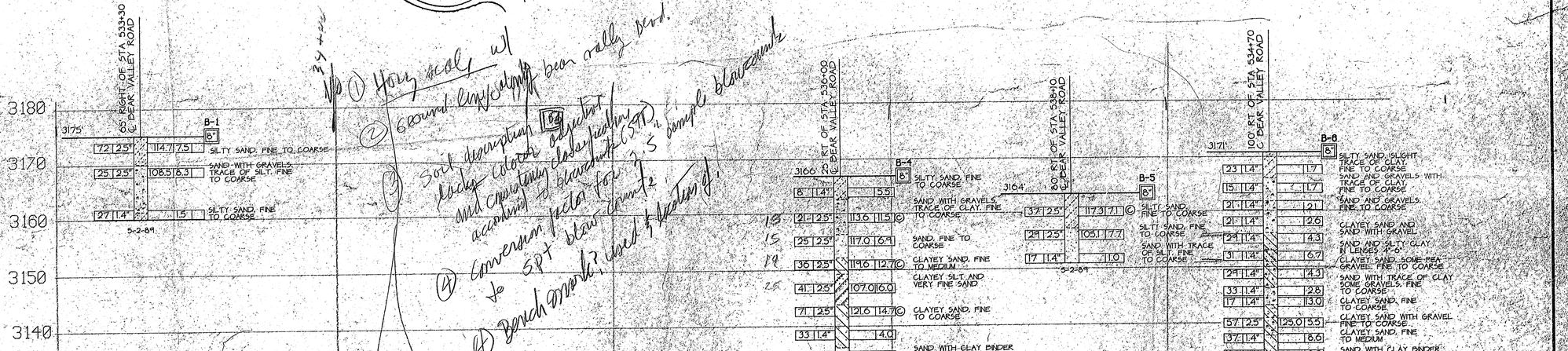




CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

Penetration Resistance (Blows / Ft)	Granular	Cohesive
0-4	Very loose	Very soft
5-9	Loose	Soft
10-19	Slightly compact	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 N. BEDLION	R.F. CARDUCCI FIELD INVESTIGATOR	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 54-625	BEAR VALLEY CUTOFF OC (WIDEN)
SIGN OFF DATE	CHECKED BY R.F. CARDUCCI	DATE 5-2 & 12-21-89	PROJECT ENGINEER	POST MILE 37.6	LOG OF TEST BORINGS
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3			CU 08103 EA 345000	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) SHEET 15 OF 15

MAY 16 1990

La Mesa Nisqualli Road OC

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+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

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

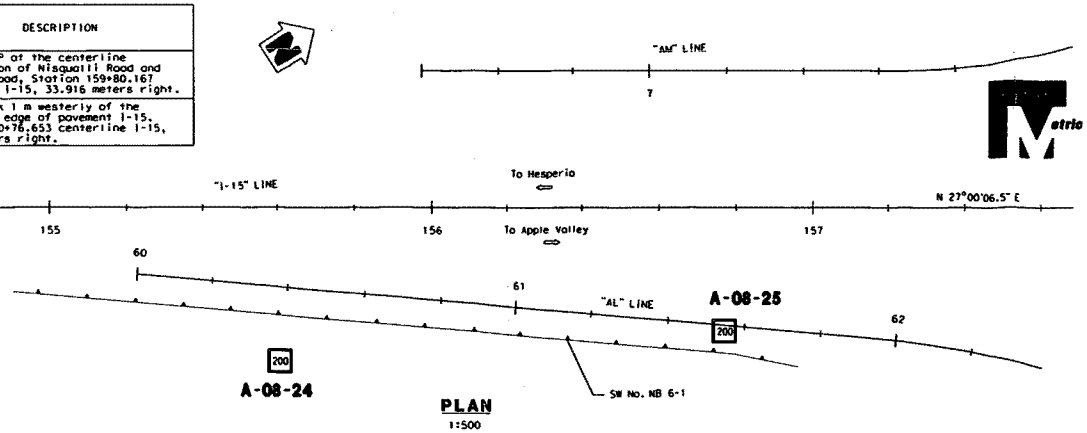
EARTH MECHANICS, INC
17660 NEWHOPE STREET, SUITE E
FOUNTAIN VALLEY, CA 92708

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
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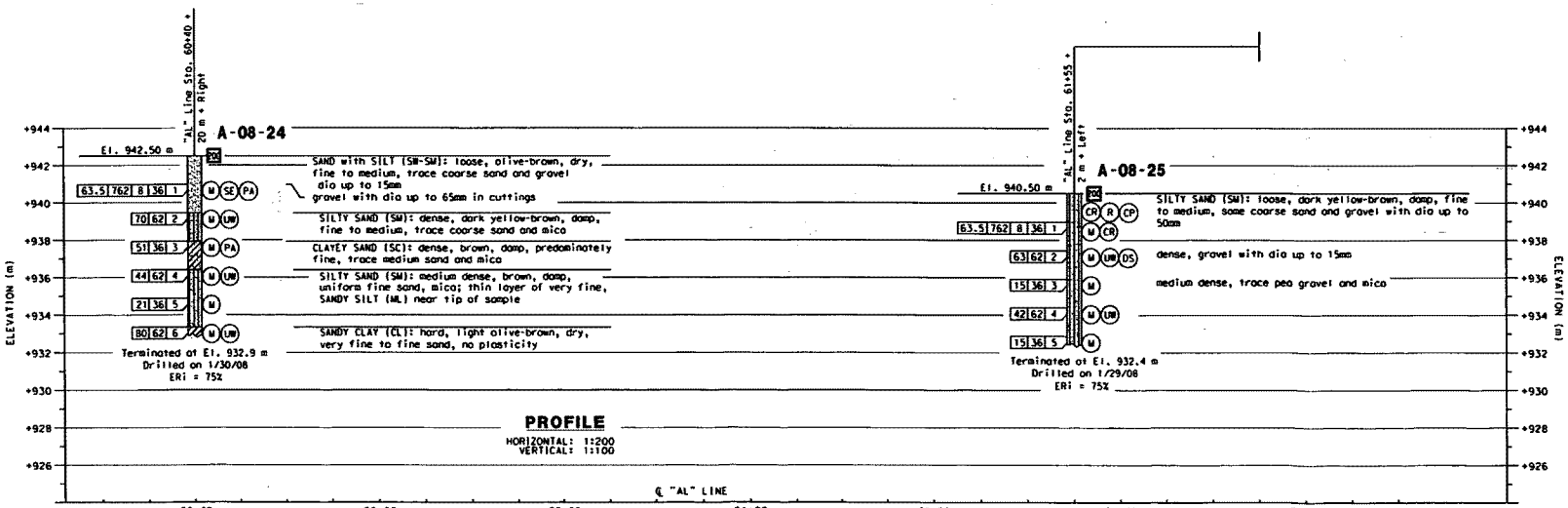

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		BRIDGE NO. XX-XXXX	SOUND WALL NO. NB 6-1
FUNCTIONAL SUPERVISOR: K. Arulmoli	DRAWN BY: E. Brown; CHECKED BY: R. Gunaranjan	FIELD INVESTIGATION BY: R. Jie	E. Brown, PROJECT ENGINEER	KILOMETER POST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

FILE => $REQUEST

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

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.

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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

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

PLANS APPROVAL DATE

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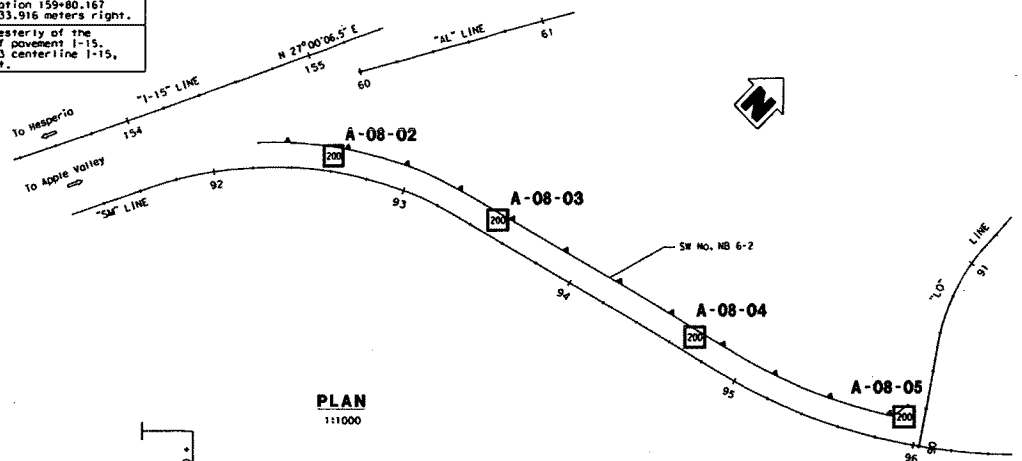
CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

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



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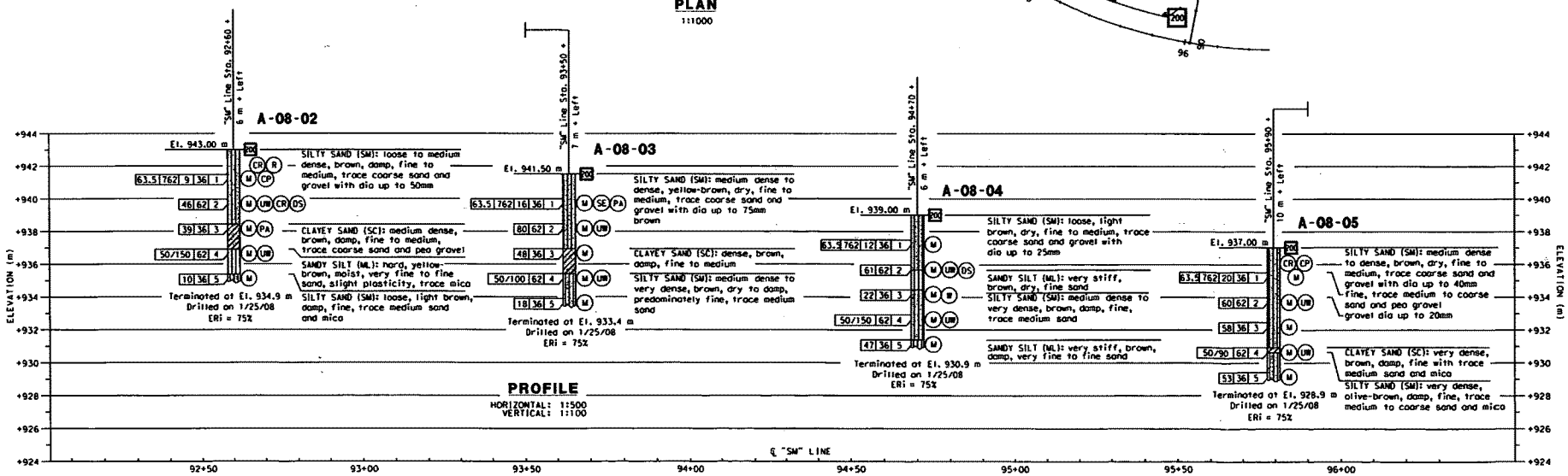


PROFILE
HORIZONTAL: 1:500
VERTICAL: 1:100

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: K. Arulkoli	DRAWN BY: E. Brown; CHECKED BY: R. Gunaranjan	FIELD INVESTIGATION BY: R. Jie	E. Brown PROJECT ENGINEER	KILOMETER POST XX.XX	LOG OF TEST BORINGS

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

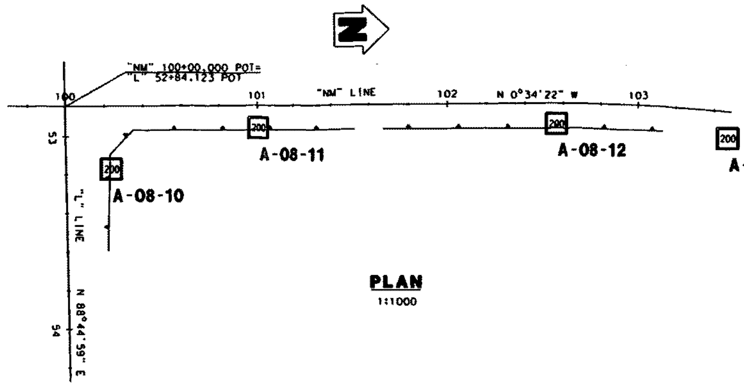
MONUMENTS	COORDINATES		ELEVATIONS	DESCRIPTION
	NORTHING	EASTING		
AE Pt. No.1005	609471.897	2061071.613	935.301	Found 1" IP at the centerline intersection of Nisqualli Road and Mariposa Road, Station 159+80.167 centerline I-15, 33.916 meters right.
AE Pt. No.1076	609571.976	2061087.730	933.858	Set 60D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



PLAN
1:1000

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

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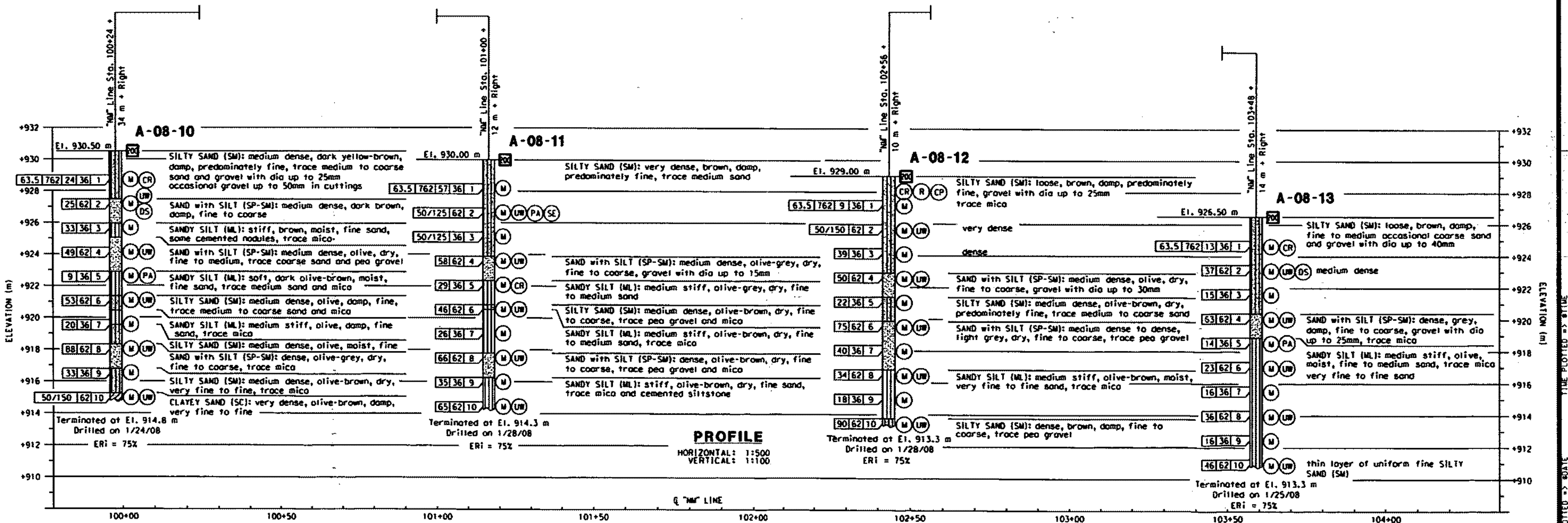
REGISTERED PROFESSIONAL ENGINEER — Eric Brown — No. 60249 — Exp. 6/30/10 — CIVIL — STATE OF CALIFORNIA

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.	RETAINING WALL NO. NB 6-3 (A/B)
FUNCTIONAL SUPERVISOR	DRAWN BY: E. Brown	FIELD INVESTIGATION BY: R. Jie		E. Brown PROJECT ENGINEER	XX-XXXX	
NAME: K. Arulmoli	CHECKED BY: R. Gunaranjan				KILOMETER POST XX.XX	LOG OF TEST BORINGS

GSF CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (EM) REV. 2-4-05

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

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

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

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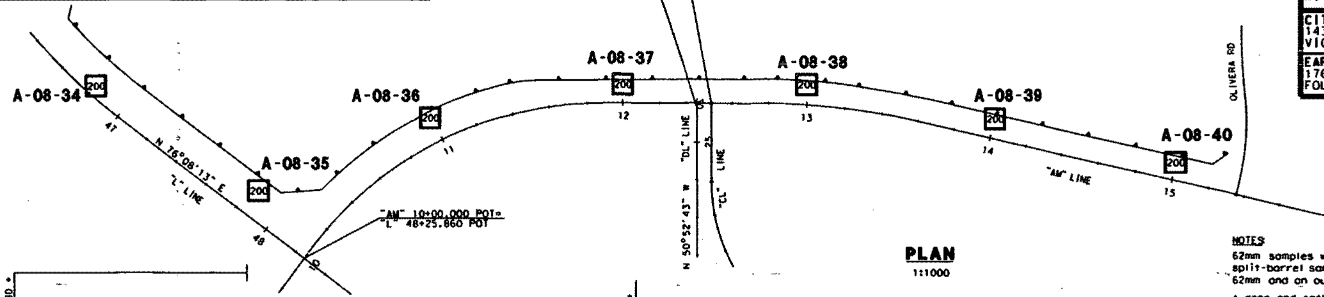
REGISTERED PROFESSIONAL ENGINEER Eric Brown No. 60249 Exp. 6/30/10 CIVIL STATE OF CALIFORNIA

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

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

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 600 Spk 1 m westerly of the northbound edge of pavement I-15. Station 160+76.653 centerline I-15, 2.838 meters right.



PLAN
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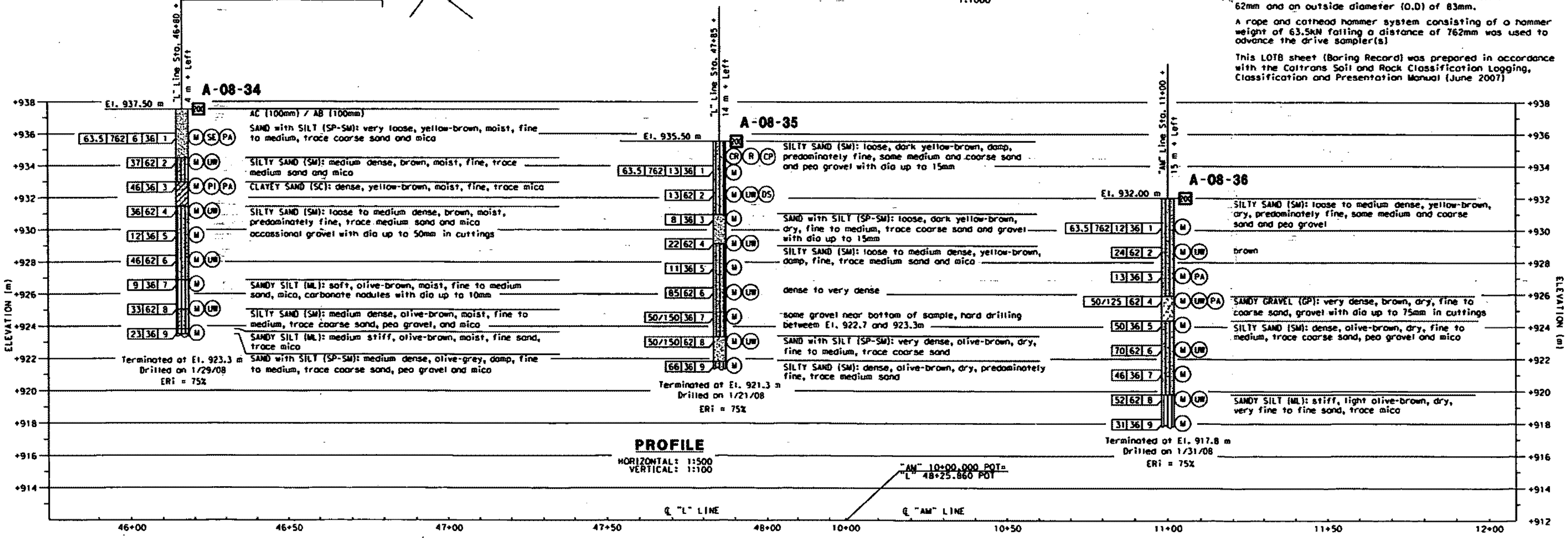
NOTES:

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)



PROFILE
HORIZONTAL: 1:500
VERTICAL: 1:100

ENGINEERING SERVICES		GEOTECHNICAL SERVICES	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	
FUNCTIONAL SUPERVISOR NAME: 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 6-5
LOG OF TEST BORINGS (1 OF 2)

GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (EM) 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

SHEET XX OF XX

FILE => $REQUEST

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

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

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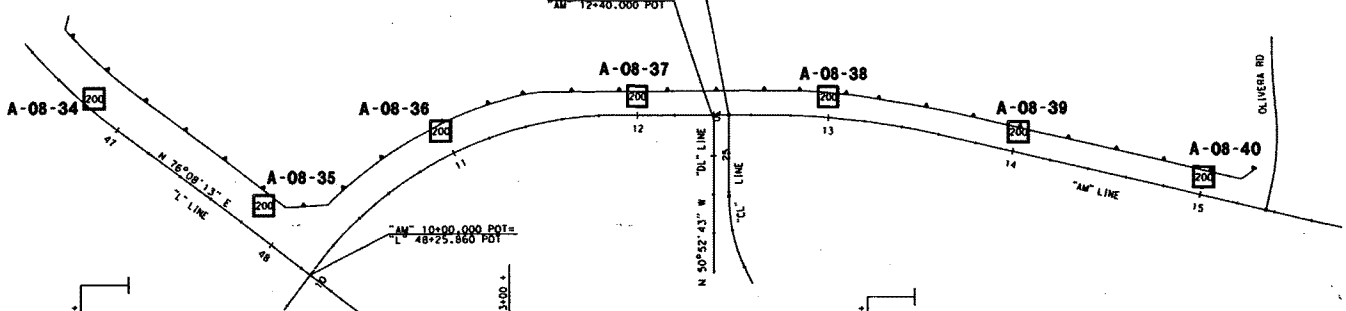
REGISTERED PROFESSIONAL ENGINEER — Eric Brown — NO. 60249 — EXP. 6/30/10 — CIVIL — STATE OF CALIFORNIA

CITY OF VICTORVILLE
14343 CIVIC DRIVE
VICTORVILLE, CA 92393

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



NOTES :

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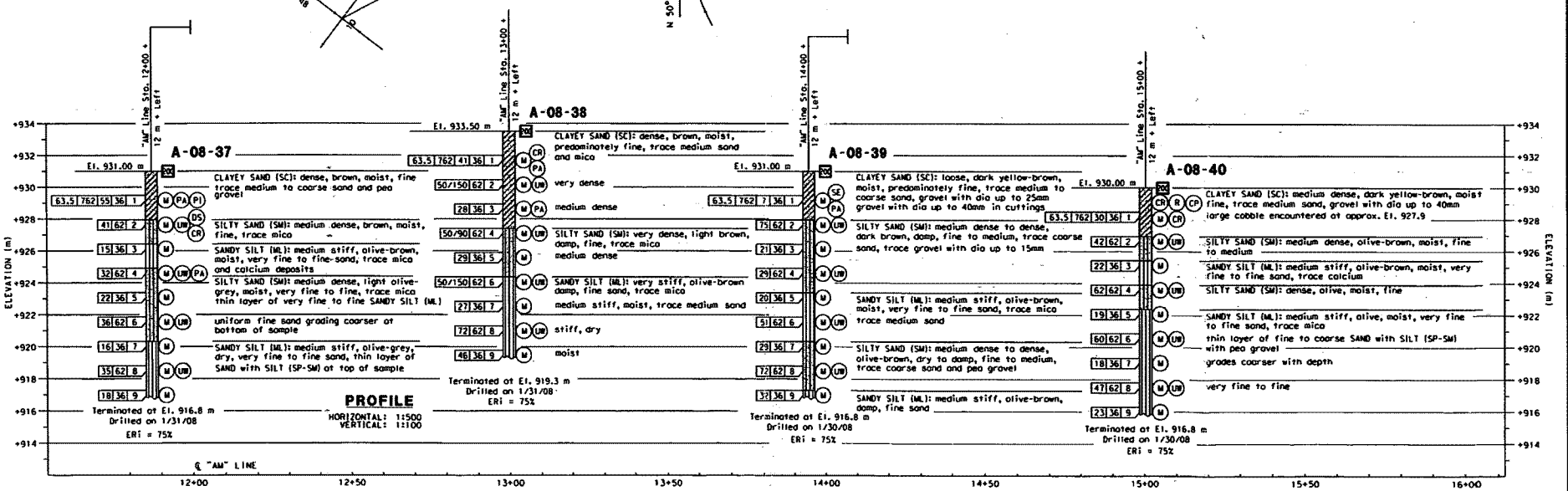
This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



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

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

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

CU EA 0A0450

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET XX OF XX

FILE =>REQUEST

DATE PLOTTED =>

USERNAME =>

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+78.653 centerline I-15, 2.838 meters right.

NOTES

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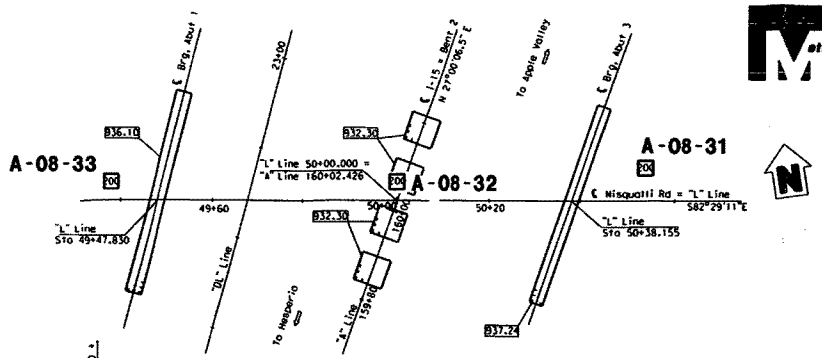
This LOTB sheet (Boring Record) was prepared in accordance with the Caltrans Soil and Rock Classification Logging, Classification and Presentation Manual (June 2007)



PLAN
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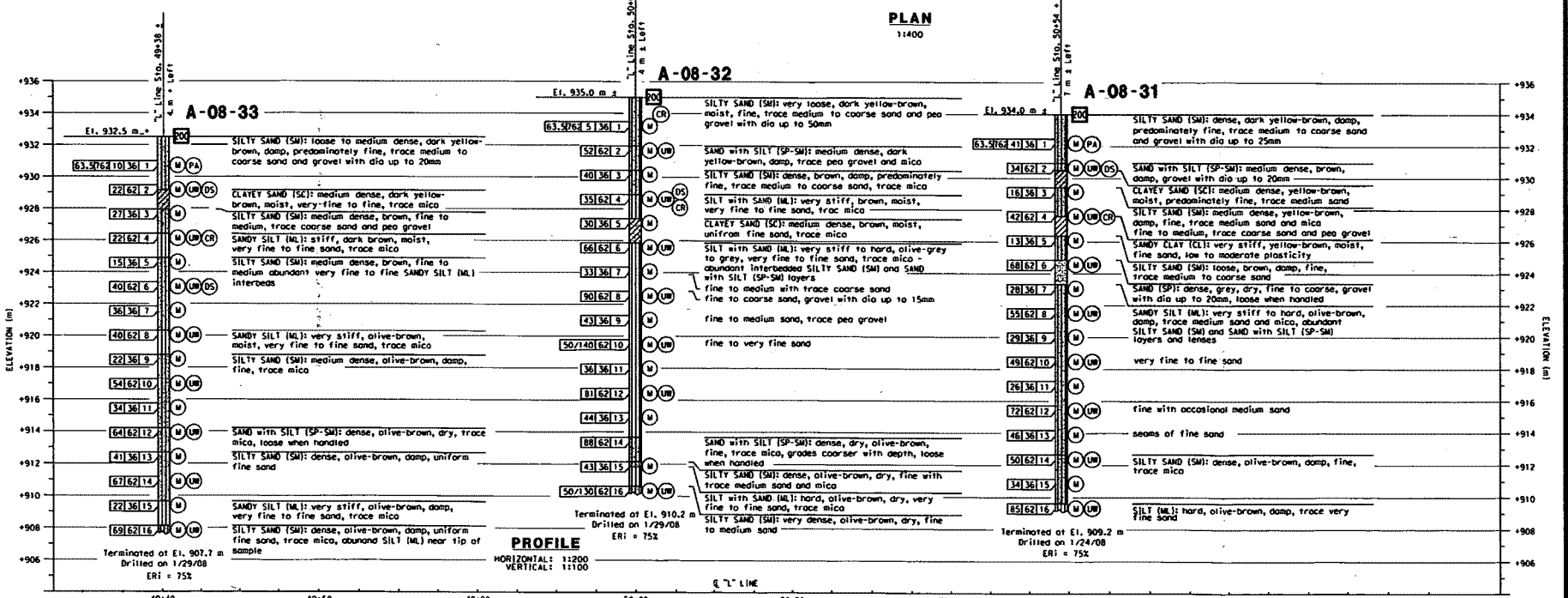

PROFILE
HORIZONTAL: 1:200
VERTICAL: 1:100

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

REGISTERED CIVIL ENGINEER — DATE

Eric Brown 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

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

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

X DESIGN OVERSIGHT
X SIGN OFF DATE

GEOTECHNICAL SERVICES

DRAWN BY: E. Brown
CHECKED BY: R. Gunaranjan
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

CU 08224
EA 0A4501

SHEET 24 OF 24

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

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

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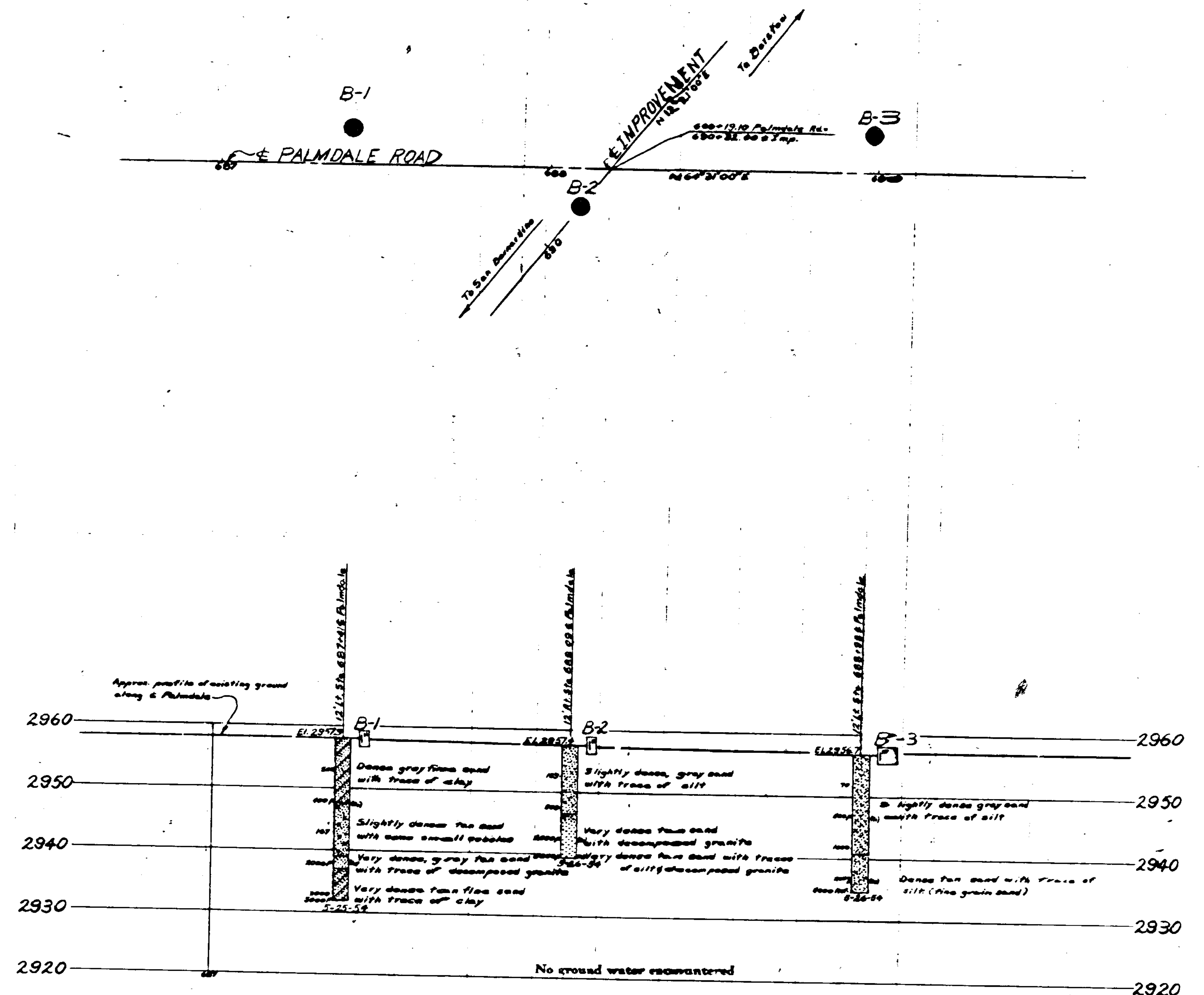
USERNAME => %USER

DATE PLOTTED => %TIME

SR 18/I 15 Separation



Test Boring By Bridge Dept.

B.M. "C,53" 70-A-53
2x2 Red. H and Sp. Hd. Nail buried 1"
166' Lt. "C,53" 690+34
El. 2940.06

B.M. "C,53" 70-B-53
El. 2958.92
Relocated - Hub 125' right of sta. 697+32 ℄ Imp. sta.

AS BUILT
CORRECTIONS BY D. M. Water
DATE 12-27-55

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.

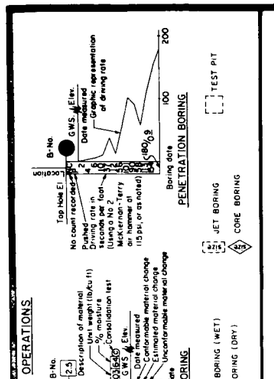
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PALMDALE ROAD O.C.

LOG OF TEST BORINGS

SCALE Vert 1"=10' Horiz 1"=30' | BRIDGE 54-470 | FILE E-54 | DRAWING C-3406

BRIDGE DEPARTMENT



DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBD	18, 15	96.6/96.9, 40.1/40.7	59	59

Robert W Reynolds #165
CERTIFIED ENGINEERING GEOLOGIST NUMBER

DATE APPROVED July 8, 1974

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.

GEOLOGY

ENGINEERING GEOLOGY SECTION			
FIELD STUDY	By D. Mikes	8-3-73	Approval Recommended By Charles E. Frank
DRAWN	By J. Law	8-8-73	ENGINEERING GEOLOGIST
CHECKED	By M. Ca..	9-5-73	CERTIFIED ENGINEERING GEOLOGIST NUMBER 40

State of
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

BRIDGE DEPARTMENT
DESIGN SECTION 2
PROJECT ENGINEER Ellon Dawson

BRIDGE NO. 54-470
POST MILE 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 12

HBD D 146

59
60

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT
08	SBD	18	

CERTIFIED ENGINEERING GEOLOGIST

LEGEND OF BORING OPERATIONS
PENETRATION BORING
ROTARY BORING
1" SOIL TUBE
JET BORING
CORE BORING
TEST PIT
ROTARY BORING (ACT)
AUGER BORING (DRY)
SAMPLER BORING (DRY)
2½" CONE PENETROMETER
LEGEND OF EARTH MATERIALS
CONSISTENCY CLASSIFICATION FOR SOILS
BENCH MARK
B.M. #64-A-70 Elev 2956.13
T. Bar and cap 90' Lt 687+50 ℄ Rte. 15
B-2
B-3
B-4
B-5
B-1
℄ PALMDALE RD
686
7
8
RTE 15
SE ON RAMP
PLAN
Scale 1" = 20'
NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE August 1973
PROFILE
Scale Vert 1" = 10' Horiz 1" = 20'
2980
2970
2960
2950
2940
2930
2920
2910
2900
Abut 1
Bent 2
Abut 3
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
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
NOTE: Abutments and Bent locations obtained from General Plan, Sept. 20, 1973

OCT 5 1973

ENGINEERING GEOLOGY SECTION		
FIELD STUDY	D. Mikes	8-8-73
DRAWN	J. Lau	8-8-73
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 0 1 2 3

CU 08202
WO 131811

Disregard prints bearing earlier revision dates

REVISION DATES (PRELIMINARY STAGE ONLY)

Roy Rogers Drive OC

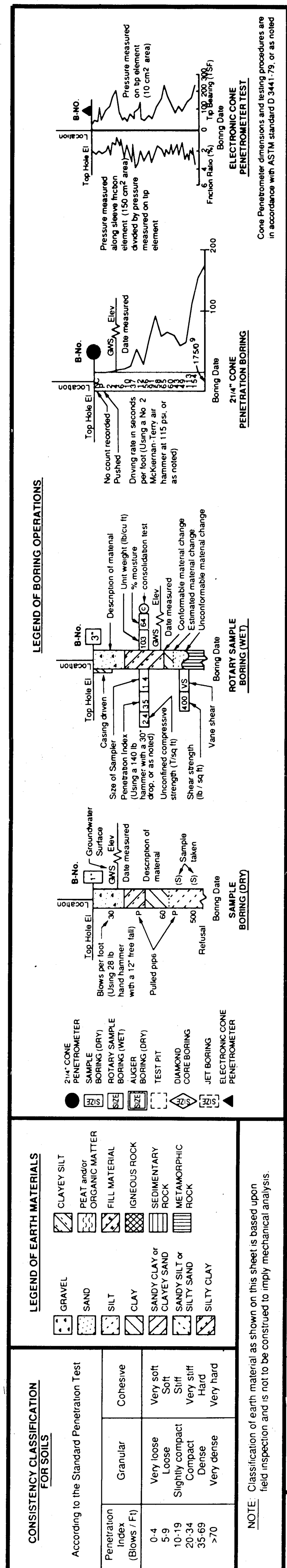
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	2	5

Steven P Alford
GEOTECHNICAL PROFESSIONAL

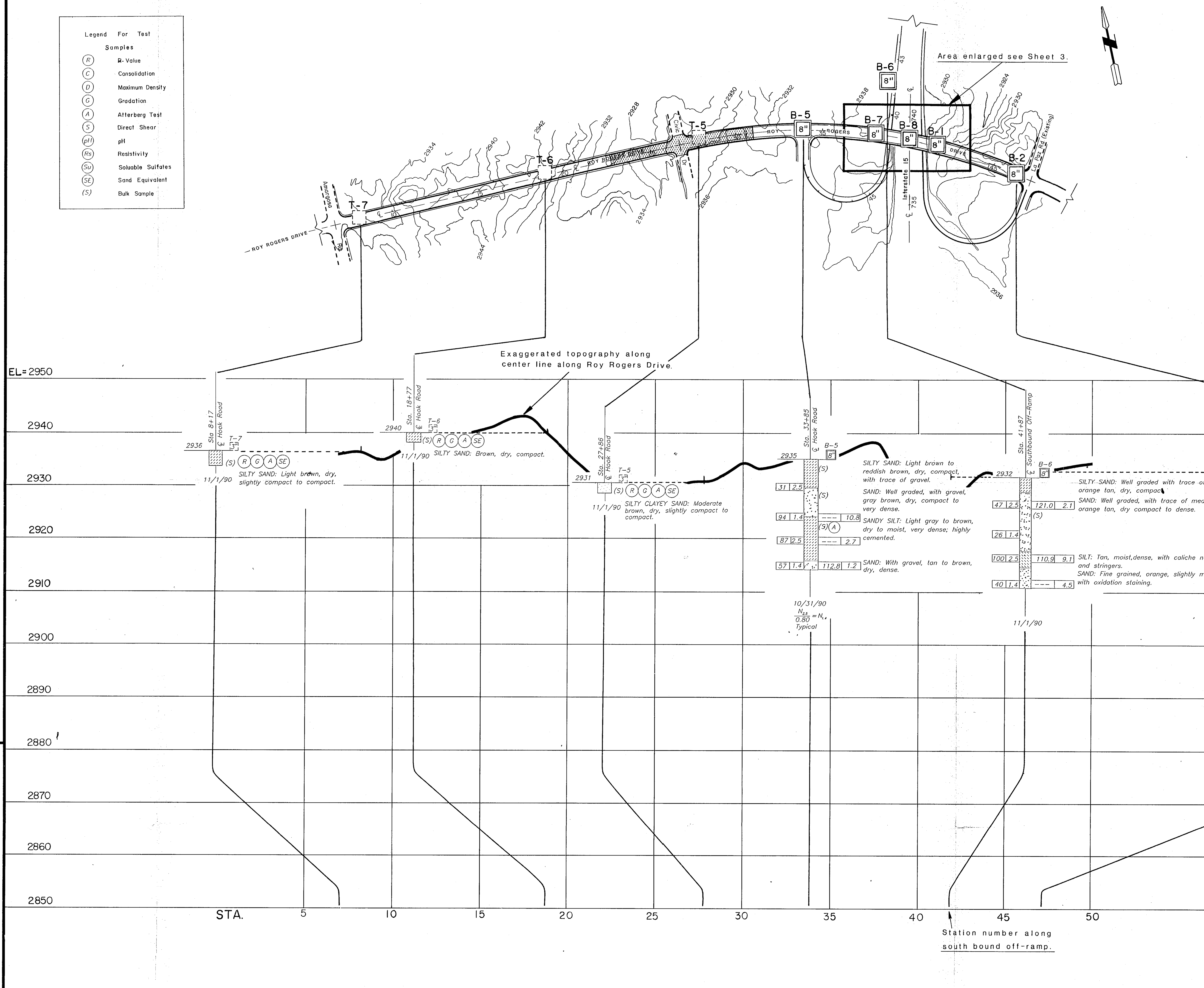
12-7-90
PLANS APPROVAL DATE

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

LEIGHTON AND ASSOCIATES, INC.



LEGEND OF BORING OPERATIONS
ELECTRONIC CONE PENETROMETER TEST
2¼" CONE PENETRATION BORING
ROTARY SAMPLE BORING (WET)
SAMPLE BORING (DRY)
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
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-Value
Consolidation
Maximum Density
Gradation
Atterberg Test
Direct Shear
pH
Resistivity
Soluable Sulfates
Sand Equivalent
Bulk Sample
Area enlarged see Sheet 3.
ROY ROGERS DRIVE
Interstate 15
Exaggerated topography along center line along Roy Rogers Drive.
EL=2950
SILTY SAND: Light brown, dry, slightly compact to compact.
SILTY SAND: Brown, dry, compact.
SILTY CLAYEY SAND: Moderate brown, dry, slightly compact to compact.
SILTY SAND: Light brown to reddish brown, dry, compact, with trace of gravel.
SAND: Well graded, with gravel, gray brown, dry, compact to very dense.
SANDY SILT: Light gray to brown, dry to moist, very dense; highly cemented.
SAND: With gravel, tan to brown, dry, dense.
SILTY SAND: Well graded with trace of fine gravel, orange tan, dry, compact.
SAND: Well graded, with trace of medium grained gravel, orange tan, dry compact to dense.
SILT: Tan, moist, dense, with caliche nodules and stringers.
SAND: Fine grained, orange, slightly moist, dense, with oxidation staining.
SILTY SAND: Well graded, trace of gravel, light to yellow brown, dry, compact
SAND: Well graded, trace of gravel, light brown, dry, compact
SILT: Cemented with caliche stringers, yellow brown, dry, compact. Grading into sand.
SAND: Fine grained, light brown, dry dense.
STA.
Station number along south bound off-ramp.
PROFILE
Horizontal: 1" = 300'
Vertical: 1" = 10'

GEOTECHNICAL LEGEND

Symbol	Description
T-7	Approximate location of exploratory trench.
B-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.

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
DESIGN OVERSIGHT
SIGN OFF DATE

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)

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

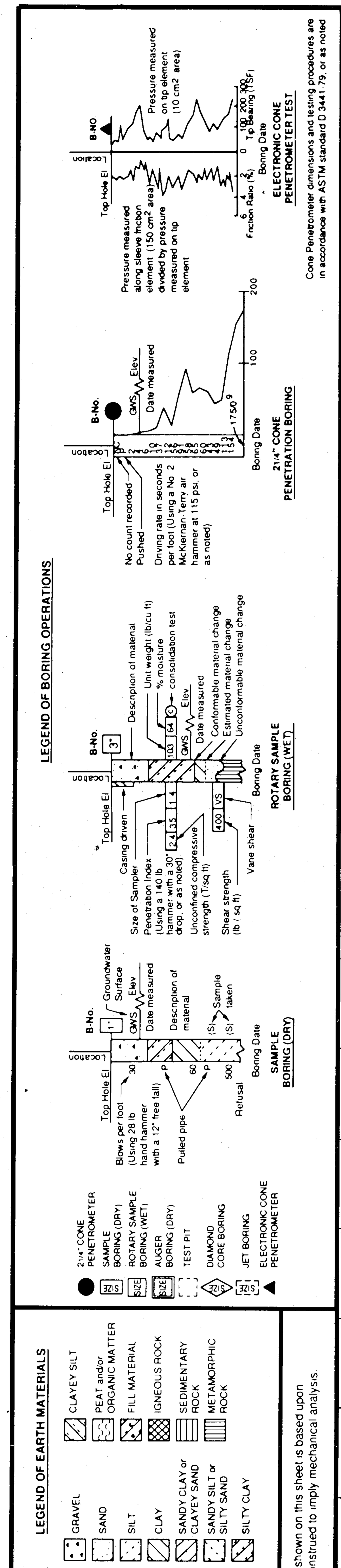
GEOTECHNICAL PROFESSIONAL

12-7-90

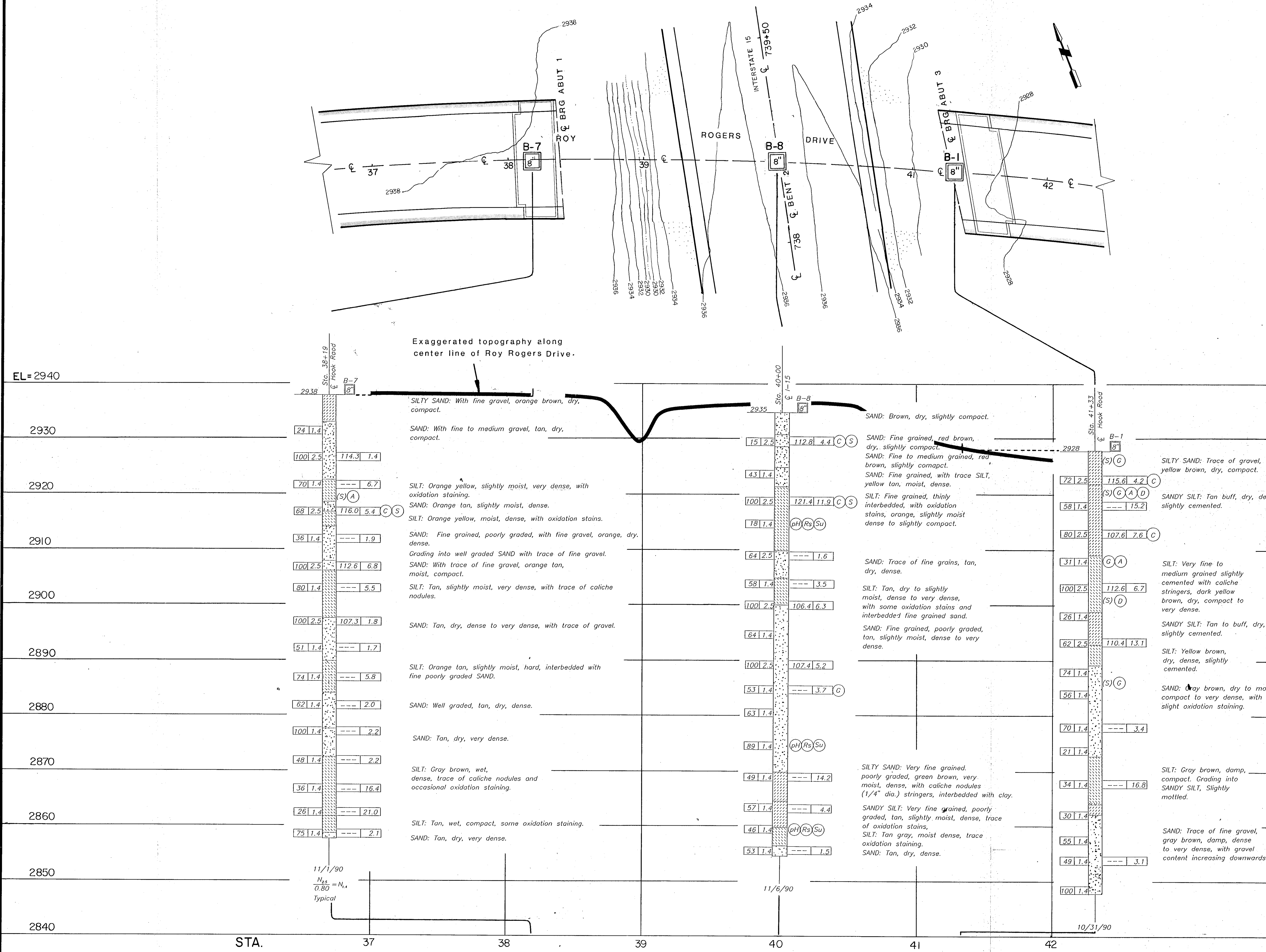
PLANS APPROVAL DATE

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

LEIGHTON AND ASSOCIATES, INC.


LEGEND OF BORING OPERATIONS
SAMPLE BORING (DRY)
ROTARY SAMPLE BORING (WET)
2¼" CONE PENETRATION BORING
ELECTRONIC CONE PENETROMETER TEST
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
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

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


B-7
B-8
B-1
¢ BRG ABUT 1
ROY
ROGERS
DRIVE
INTERSTATE 15
739+50
¢ BENT 2
738
¢ BRG ABUT 3
Exaggerated topography along center line of Roy Rogers Drive.
EL = 2940
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.
11/1/90
Typical
SAND: Brown, dry, slightly compact.
SAND: Fine grained, red brown, dry, slightly compact.
SAND: Fine to medium grained, red brown, slightly compact.
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.
11/6/90
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.
10/31/90
STA. 37 38 39 40 41 42

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.

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)

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

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

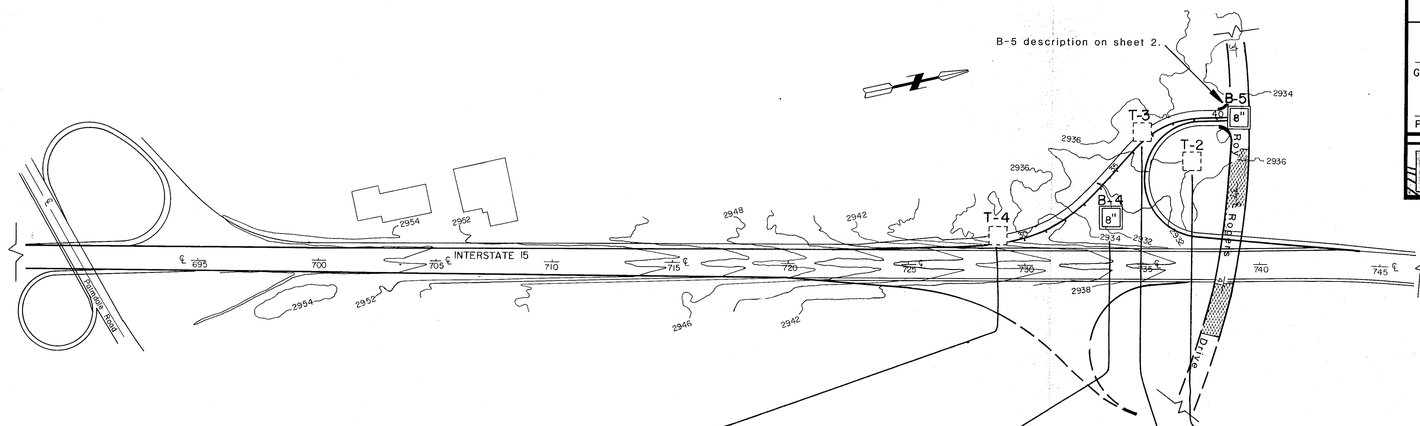
GEOTECHNICAL PROFESSIONAL

12-7-90
PLANS APPROVAL DATE

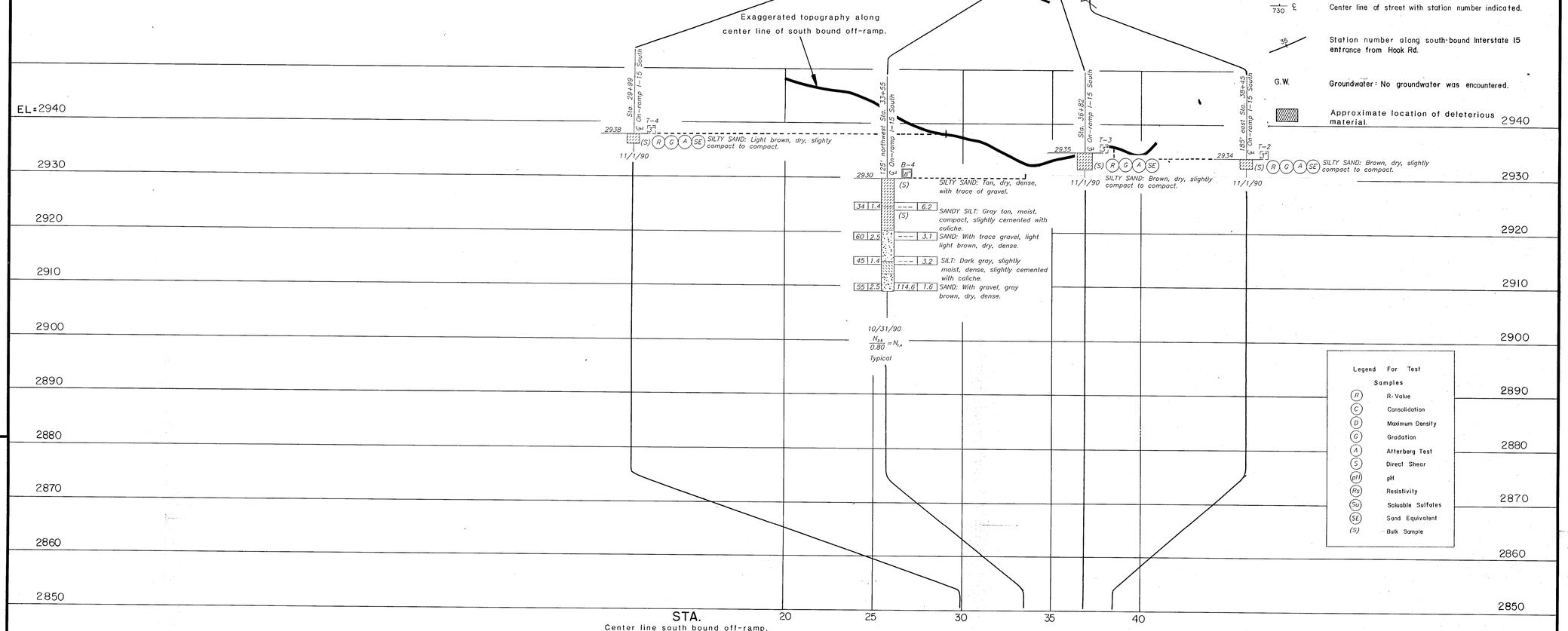
REGISTERED CIVIL ENGINEER — STEVEN P ALFORD — No. 34276 — Exp. 9/30/91 — STATE OF CALIFORNIA

LEIGHTON AND ASSOCIATES, INC.

B-5 description on sheet 2.



Exaggerated topography along center line of south bound off-ramp.



Legend For Test Samples

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

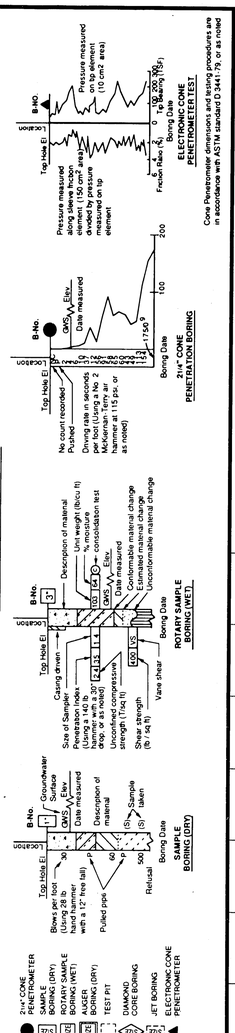
PROFILE
Horizontal : 1"=300'
Vertical : 1"=10'

100 0 100 200 300 (feet)

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

BRIDGE NO.	54-1118
POST MILE	40.52
CU	08103
EA	251901

ROY ROGERS DRIVE OVERCROSSING
LOG OF TEST BORINGS

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

SHEET 4 OF 5

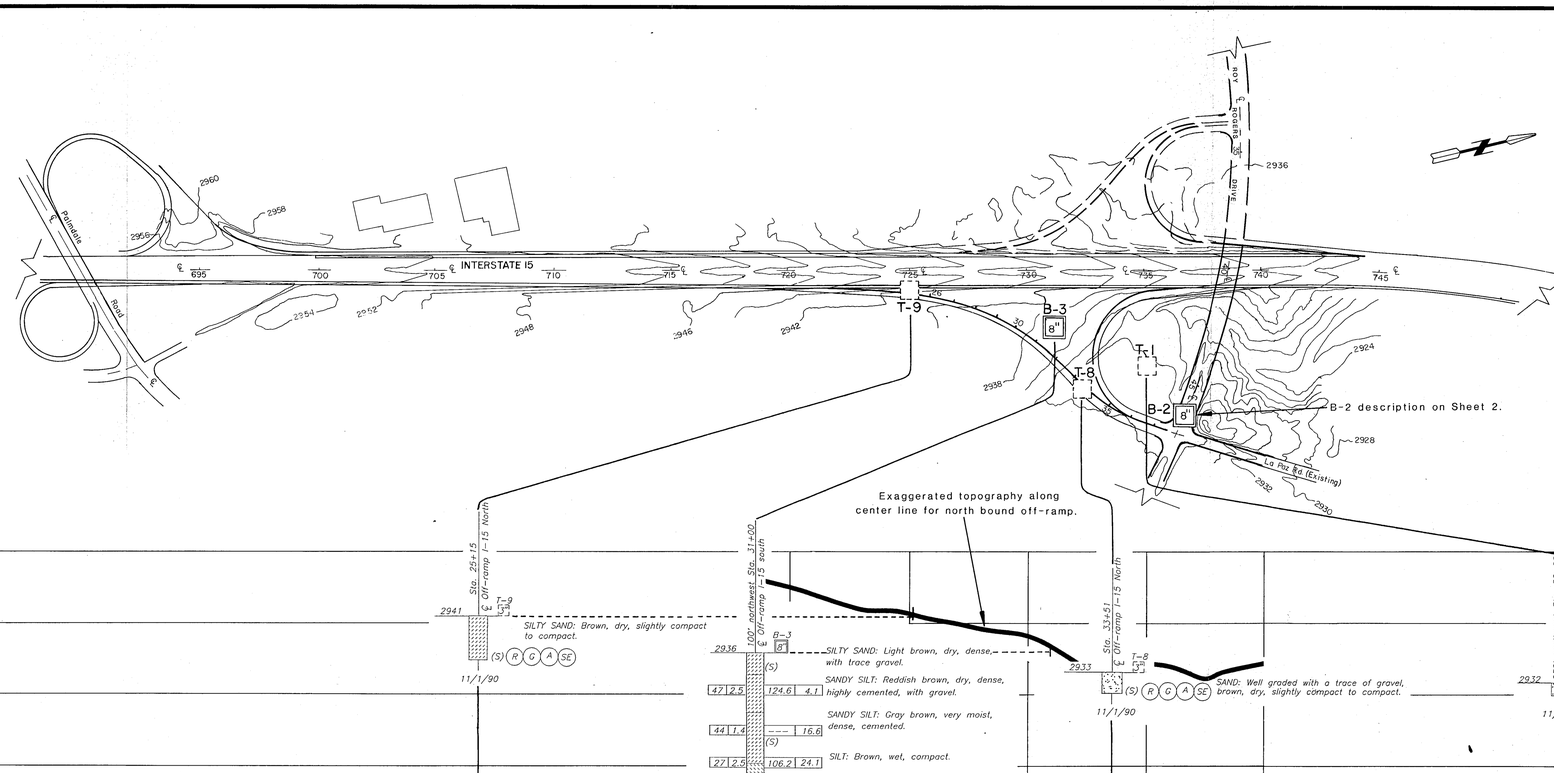
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	5	5

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.

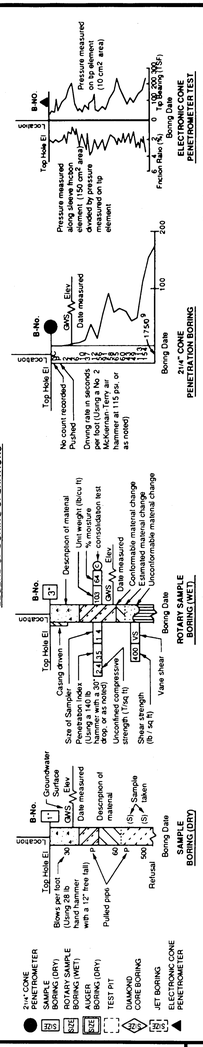
Legend For Test Samples

(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

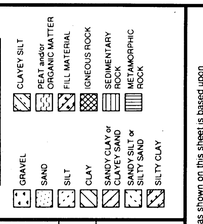
PROFILE
Horizontal: 1"= 300'
Vertical : 1"= 10'

100 0 100 200 300 (feet)

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS



CONSISTENCY CLASSIFICATION FOR SOILS

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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
SIGN OFF DATE	CHECKED BY	STEVEN P. ALFORD 12/7/90	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

CU 08103
EA 251901

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

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

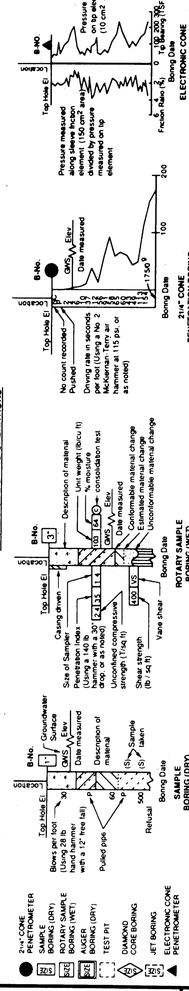
5/5/92
PLANS APPROVAL DATE

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

LEIGHTON AND ASSOCIATES, INC.

12900307-1

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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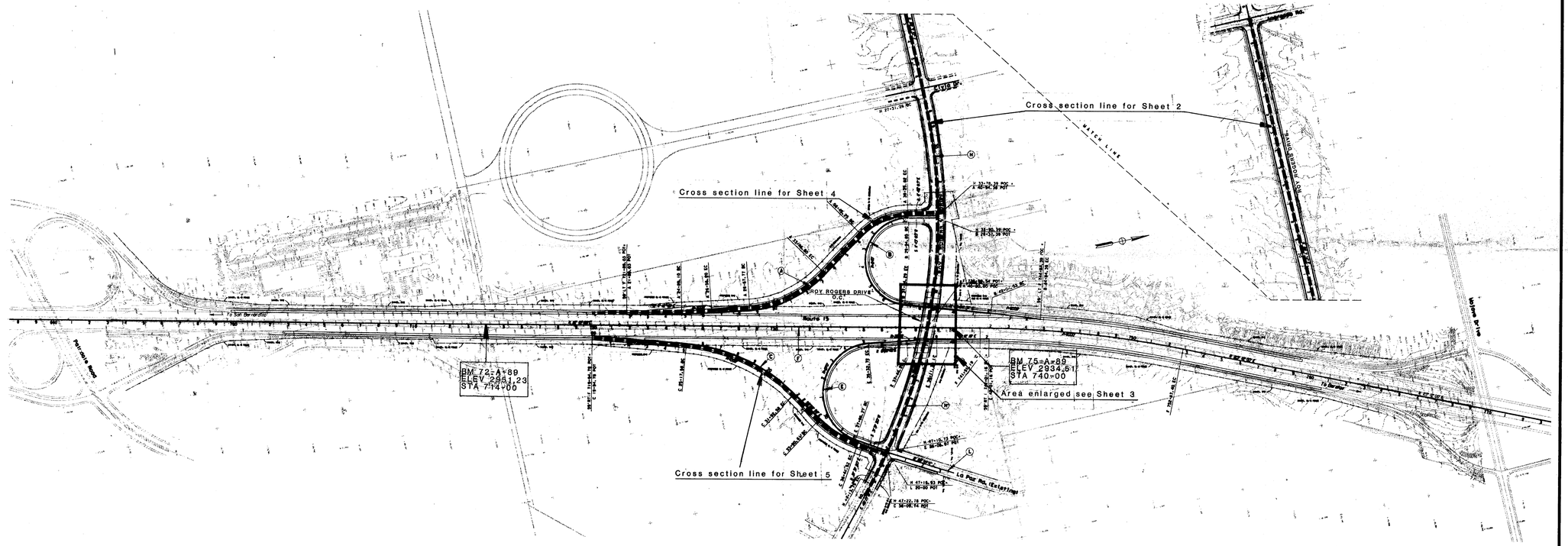
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very stiff
35-69	Dense	Hard
>70	Very dense	Very hard

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



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 "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 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 DATE 10/31/90 & 11/1/90	P.N. 12900307-03			POST MILE 40.52

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

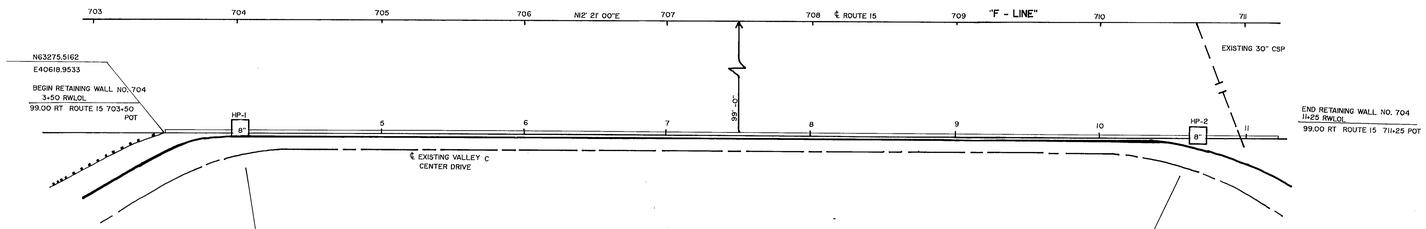
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	1	6

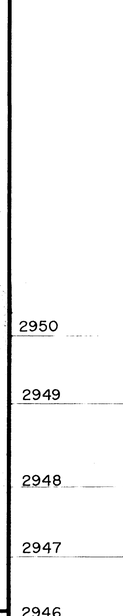
Stephen M. Poole
GEOTECHNICAL PROFESSIONAL

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.



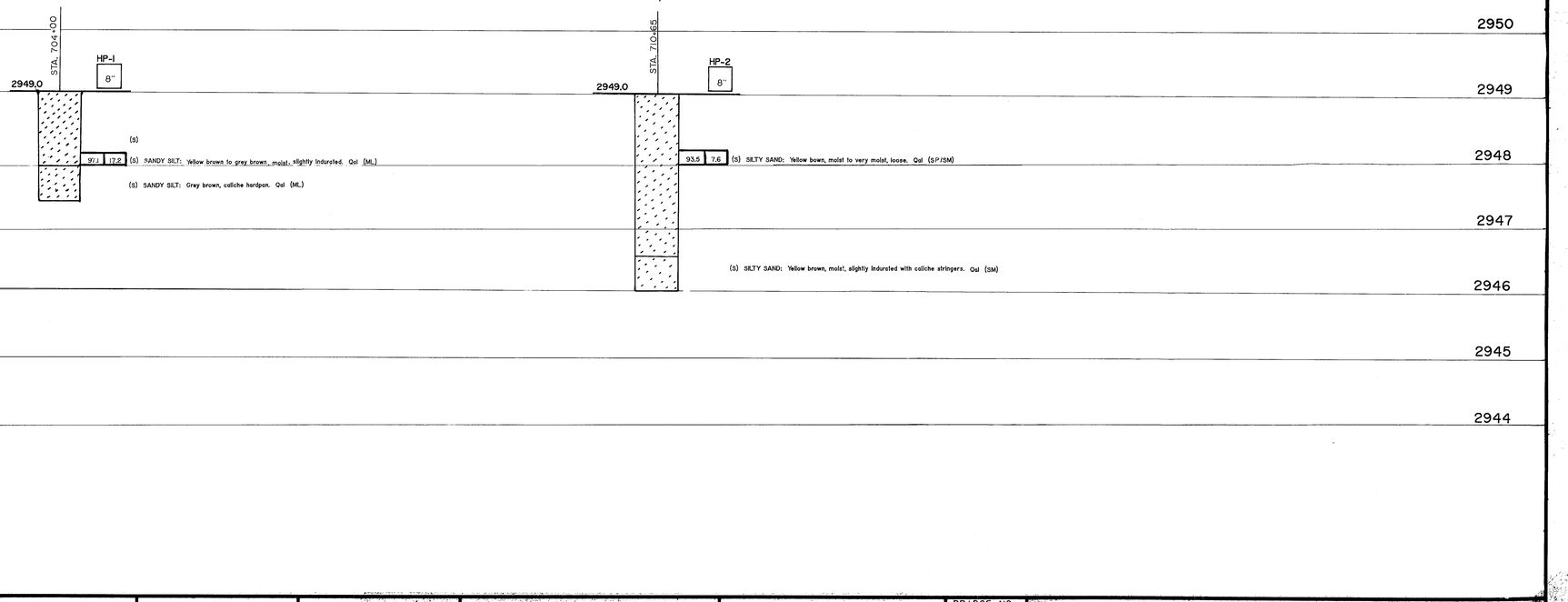


CONSISTENCY CLASSIFICATION FOR SOILS

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	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.	RETAINING WALL NO.704
54-1118	LOG OF TEST BORINGS
POST MILE	

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

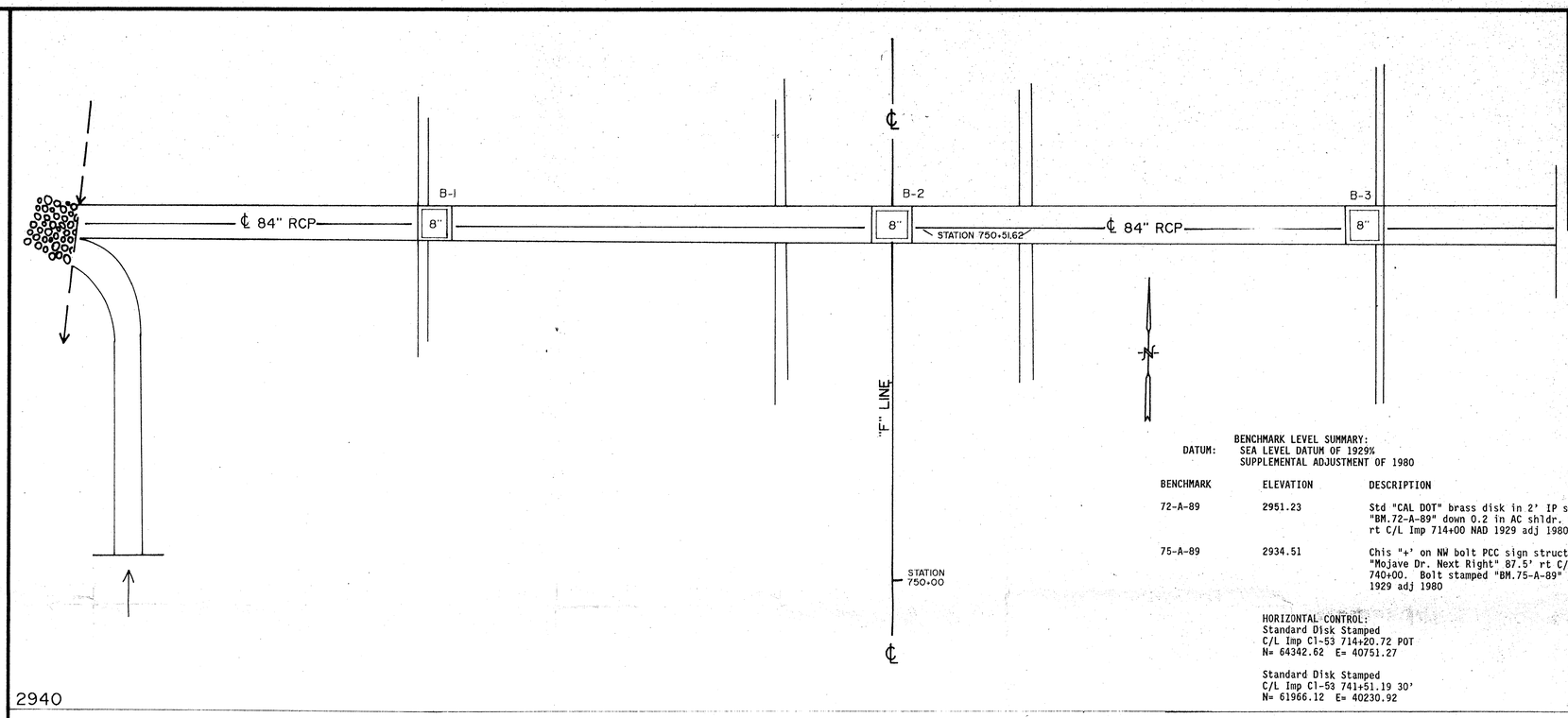
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
8	SBd	15	40.7 - 41.8	6	6

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

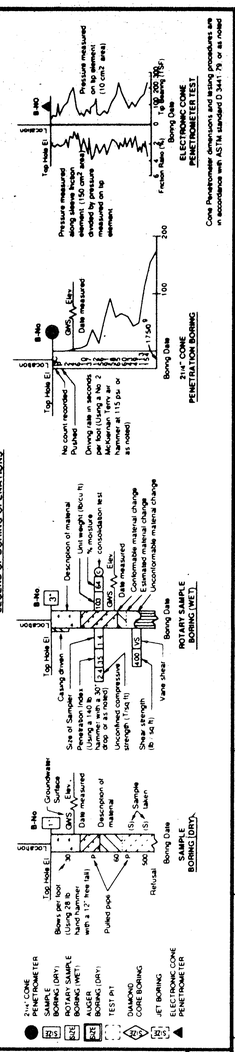
Horizontal 1" = 10'
Vertical 1" = 5'

DATUM: BENCHMARK LEVEL SUMMARY:
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 C1-53 714+20.72 POT
N= 64342.62 E= 40751.27

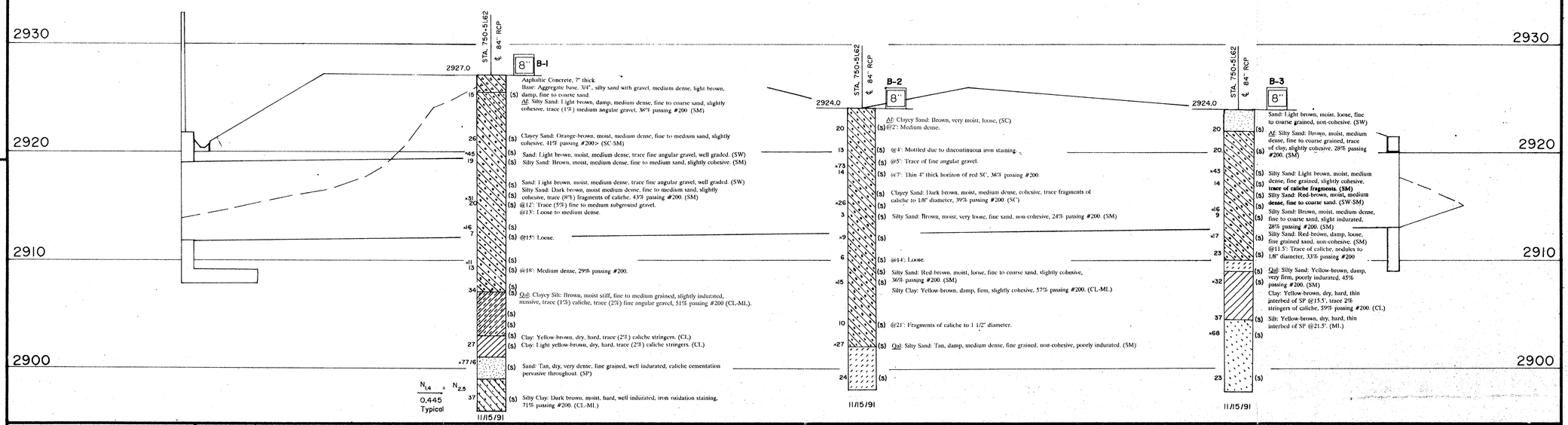
Standard Disk Stamped
C/L Imp C1-53 741+51.19 30'
N= 61966.12 E= 40230.92



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

BRIDGE NO. 54-1118
POST MILE

84" RCP

LOG OF TEST BORINGS

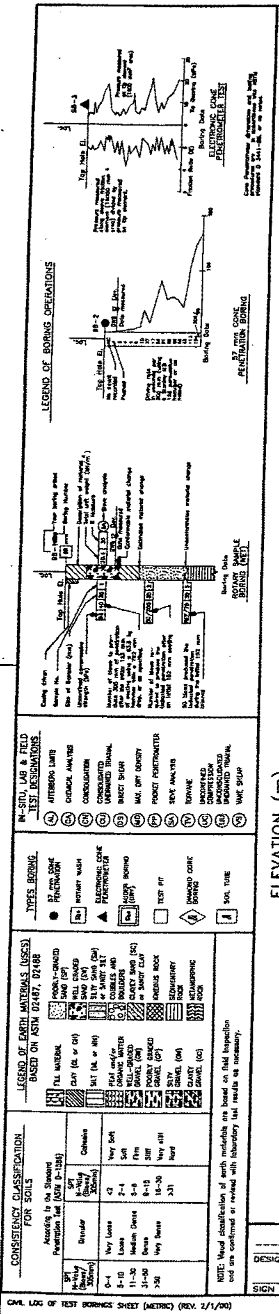
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 08103
EA 251904

DISREGARD PRINTS BEARING EARLIER REVISION DATES

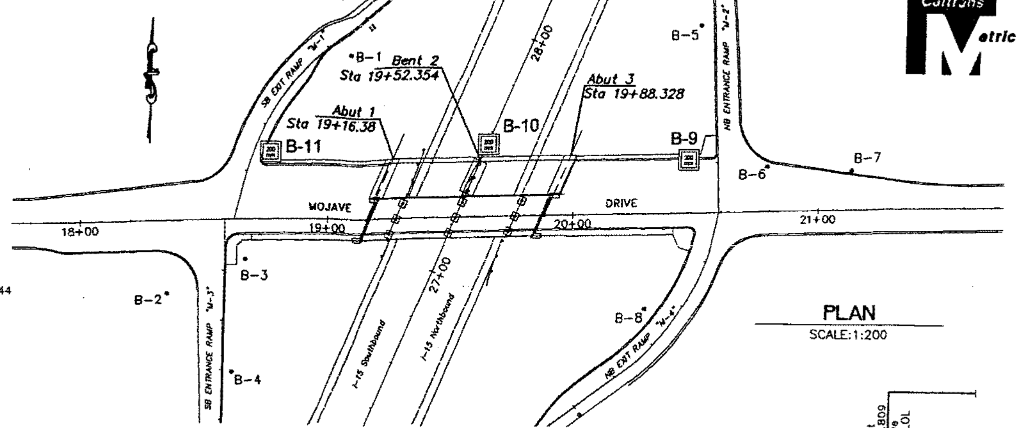
REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET | OF

Mojave Drive WB



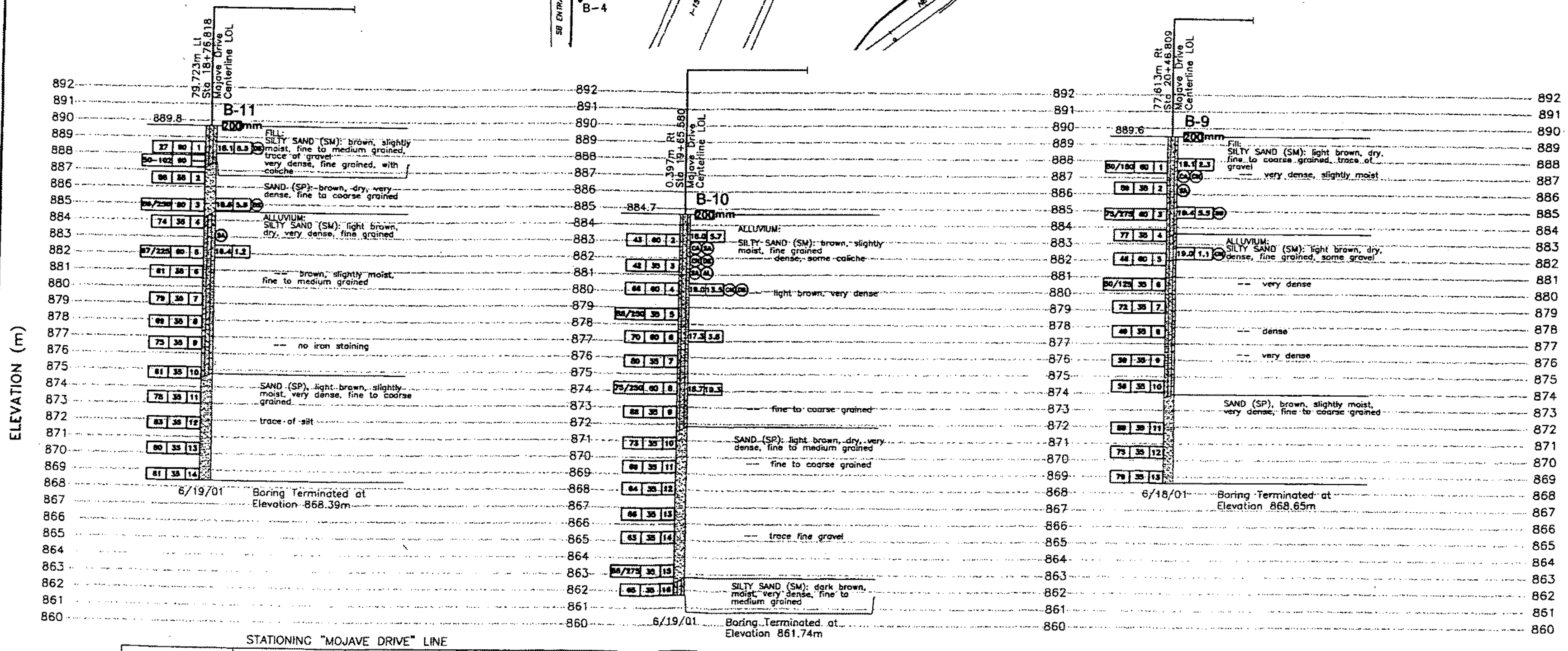
Note:

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



PROFILE

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

PLATE 3A

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

Caltrans Metric

DESIGN OVERSIGHT

SIGN OFF DATE

DRAWN BY: D. FAHRNEY
CHECKED BY: M. SIERADZKI

FIELD INVESTIGATION BY: SCOTT LAWSON, STAFF ENGINEER

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)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS

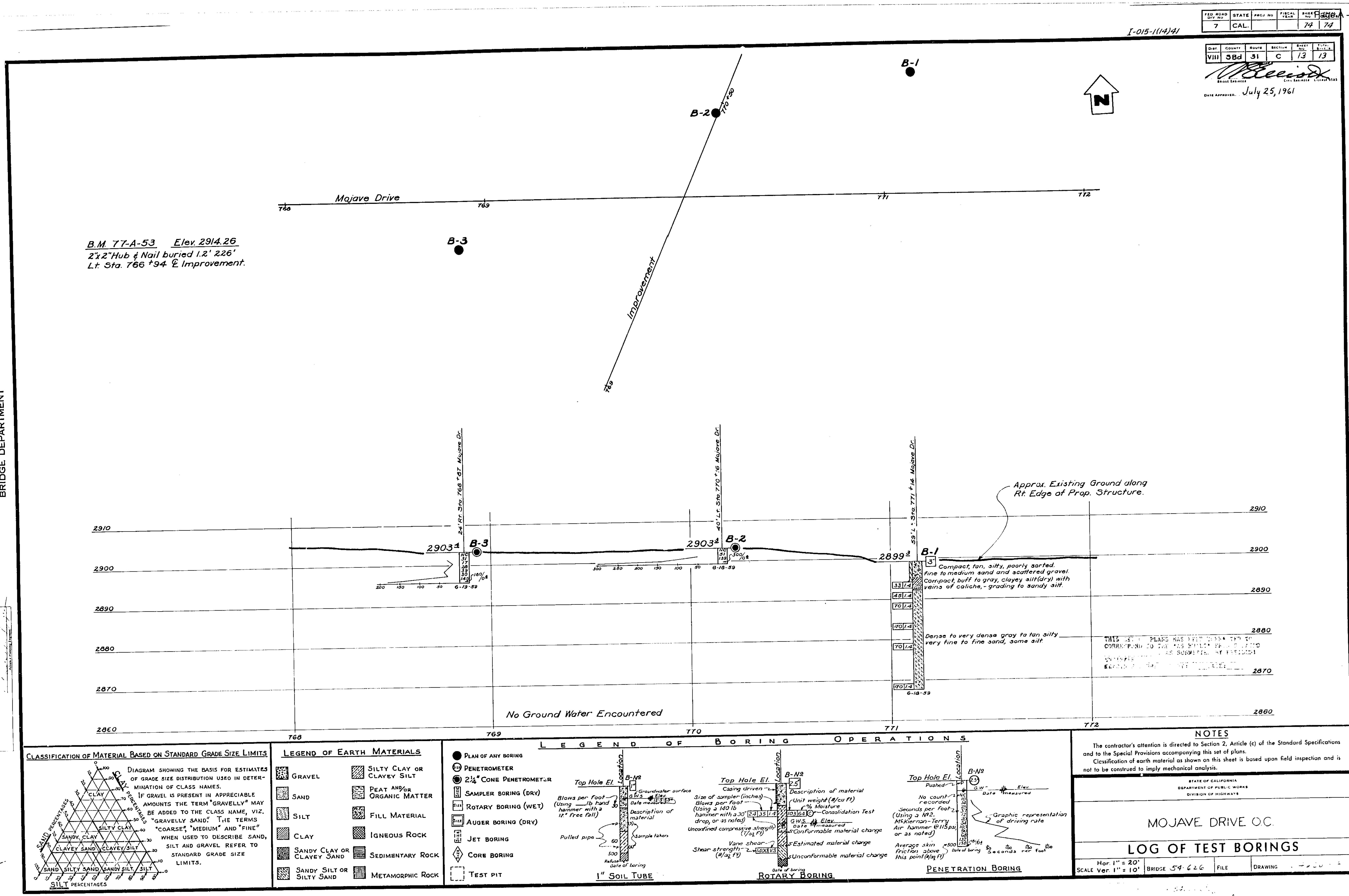
CU 221
EA 354500

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


I-015-1(14)41
FED ROAD DIV NO 7 | STATE CAL. | SHEET NO 74 | TOTAL SHEETS 74
DIST VIII | COUNTY SBd | ROUTE 31 | SECTION C | SHEET NO 13 | TOTAL SHEETS 13
DATE APPROVED July 25, 1961
N
B-1
B-2
770+50
Mojave Drive
768
769
771
772
B.M. 77-A-53 Elev. 2914.26
2"x2" Hub & Nail buried 1.2' 226' Lt. Sta. 766+94 ℄ Improvement.
B-3
Improvement
769
BRIDGE DEPARTMENT
24' Rt. Sta. 768+87 Mojave Dr.
40' Lt. Sta. 770+16 Mojave Dr.
59' L. Sta. 771+14 Mojave Dr.
Approx. Existing Ground along Rt. Edge of Prop. Structure.
2910
2900
2890
2880
2870
2860
2903.4 B-3
2903.3 B-2
2899.3 B-1
6-19-59
6-18-59
6-18-59
Compact, tan, silty, poorly sorted, fine to medium sand and scattered gravel
Compact, buff to gray, clayey silt (dry) with veins of caliche, - grading to sandy silt.
Dense to very dense gray to tan silty very fine to fine sand, some silt
No Ground Water Encountered
FIELD STUDY Rammel Ramp 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.
CLAY
SILTY CLAY
SANDY CLAY
CLAYEY SAND
CLAYEY SILT
SAND
SILTY SAND
SANDY SILT
SILT
CLAY PERCENTAGES
SAND 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
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
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	SHEET No.	TOTAL SHEETS
VIII	SBd	31	D		

BRIDGE ENGINEER — CIVIL AND STRUCTURAL ENGINEER — LICENSE 5545

DATE APPROVED

C,53 847+73.03 P.O.T. = D,54 0+00.38 P.O.T.
To San Bernardino
D ST.
℄ Bent 4
℄ A. T. & S. F. R.R. N 21° 48' 50" W
℄ Bent 5
℄ Ditch
E ST.
℄ Bent 6
To Victorville
846
N 53° 37' E
B-1
847
0+00
B-2
1+00
B-3
2+00
B-4
3+00
℄ IMPROVEMENT
To Barstow
#1
#2
#3
#4
#5
Abut 7 L.o.L.
Approx. Profile Grade & Section of Proposed Overhead
Prestressed Spun Precast Concrete Pile Shell (Except for battered piles in Abutments, where Union Metal Shells were used)
16" Butts - 10" Tips.
Vulcan #1 Hammer
45 Ton Design Load
Estimated Total Length of Piles - 5600.0 l.f.
Actual Total Length Used - 5206.1 l.f.
846+73 ℄ Impr.
0+30.38 ℄ Impr.
1+30.38 ℄ Impr.
2+15.83 ℄ Impr.
2700
2690
2680
2670
2660
El. 2699.1
El. 2698.8
El. 2697.5
El. 2699.2
Very Loose, Brown to Grey, Fine to Medium Silty Sand, Trace of Clay.
Very Loose to Slightly Compact, Grey, Fine to Coarse Sand; Some Gravel, Silt, Trace of Clay.
Loose to Slightly Compact, Brown, Coarse, Gravelly Sand, Some Silt; Trace of Clay.
Very Dense, Brown Sandy Silt; Some Clay.
Very Loose, Dark Grey, Sandy Silt, Trace of Clay.
Slightly Compact, Dark Grey, Silty Sand, Trace of Clay.
Dense to Slightly Compact, Brown Gravelly Silty Sand; Some Clay.
Very Dense, Brown, Gravelly Silty Sand; Some Clay
Loose, Brown, Silty Clayey Sand.
Very Loose, Grey, Fine to Coarse Sand; Some Silt & Clay.
Slightly Compact, Brown-Grey, Pebbly Sandy Gravel; Some Silt, Trace of Clay.
Loose, Brown, Pebbly, Gravelly Silty Sand; Some Clay.
Very Dense, Brown, Clayey, Gravelly Sand.
Very Loose, Brown, Fine to Coarse Silty Sand, Some Clay.
Loose, Brown-Grey, Silty Gravelly Sand, Some Clay.
Soft, Blue-Grey, Clay.
Very Dense, Brown, Silty Gravelly Sand, Some Clay.
See Plan Above for Locations
Approx. Profile of Existing Ground Along ℄ Improvement
in 25' drilled hole
Test Boring By Bridge Dept.
B.M. "C,53" 85-A-54 2"x2" Redwood Hub & Sp. Hd. Nail Buried 1.1' 147' Lt. ℄ Impr. 840+89 Elev. 2737.32
B.M. "D" 5-A-53 Pin in P.C.C. R/W Mon. 1.0' Above Ground 30' Rt. ℄ Survey 40+00 Elev. 2698.19
BRIDGE DEPARTMENT

	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}

Concrete piles are recommended for foundation support. Estimated pile tip el for 45 T. Load ... piles at 2660. ... the piles should not be used and in ... should be in place 30 days before ... surface ... The boring will be made with ... drill.

FIELD STUDY: L. J. Manchy 12-20-1954
DRAWN: A. Robbins 12-21-54
CHECKED
Approval Recommended by ... Engineering Geologist ... Materials & Research Engineer

Classification of Material Based on Standard Grade Size Limits

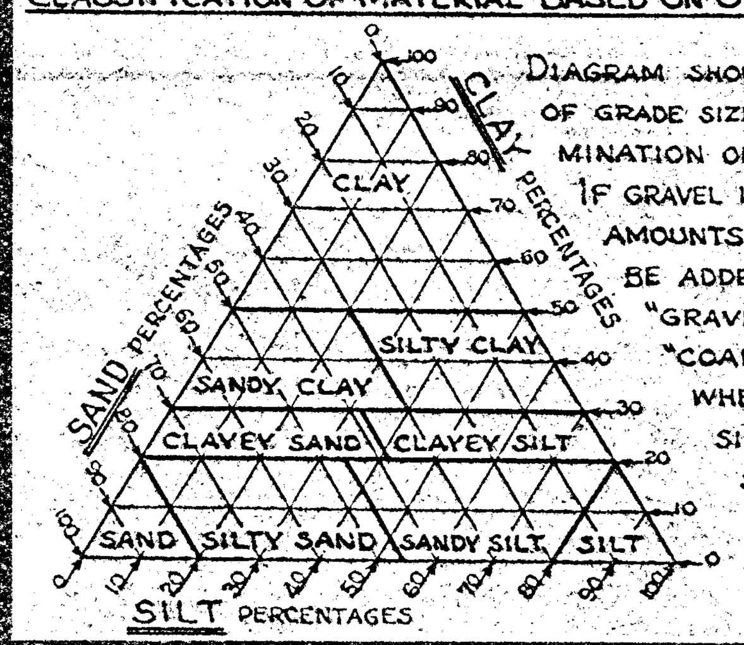


Diagram showing the basis for estimates of grade size distribution used in determination of class names.

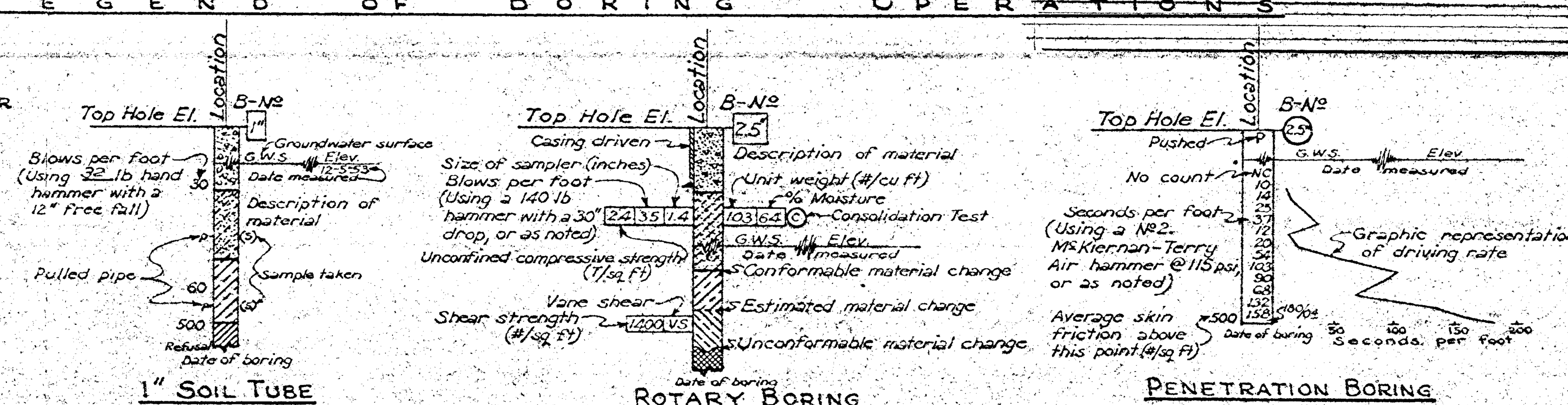
If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

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



Top Hole El.
Location
B-No
Groundwater surface
Blows per foot (Using 32 lb hand hammer with 2 ft free fall)
Date measured
Description of material
Pulled pipe
Sample taken
Refusal
Date of boring
1" Soil Tube
Casing driven
Size of sampler (inches)
Blows per foot (Using a 140 lb hammer with a 30" drop, or as noted)
Unconfined compressive strength (T/sq ft)
Vane shear
Shear strength (#/sq ft)
Description of material
Unit weight (#/cu ft)
% Moisture
Consolidation Test
Conformable material change
Estimated material change
Unconformable material change
Rotary Boring
Pushed
No count
Seconds per foot (Using a No 2 McKiernan-Terry Air hammer @ 115 psi or as noted)
Average skin friction above this point (#/sq ft)
Graphic representation of driving rate
Seconds per foot
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

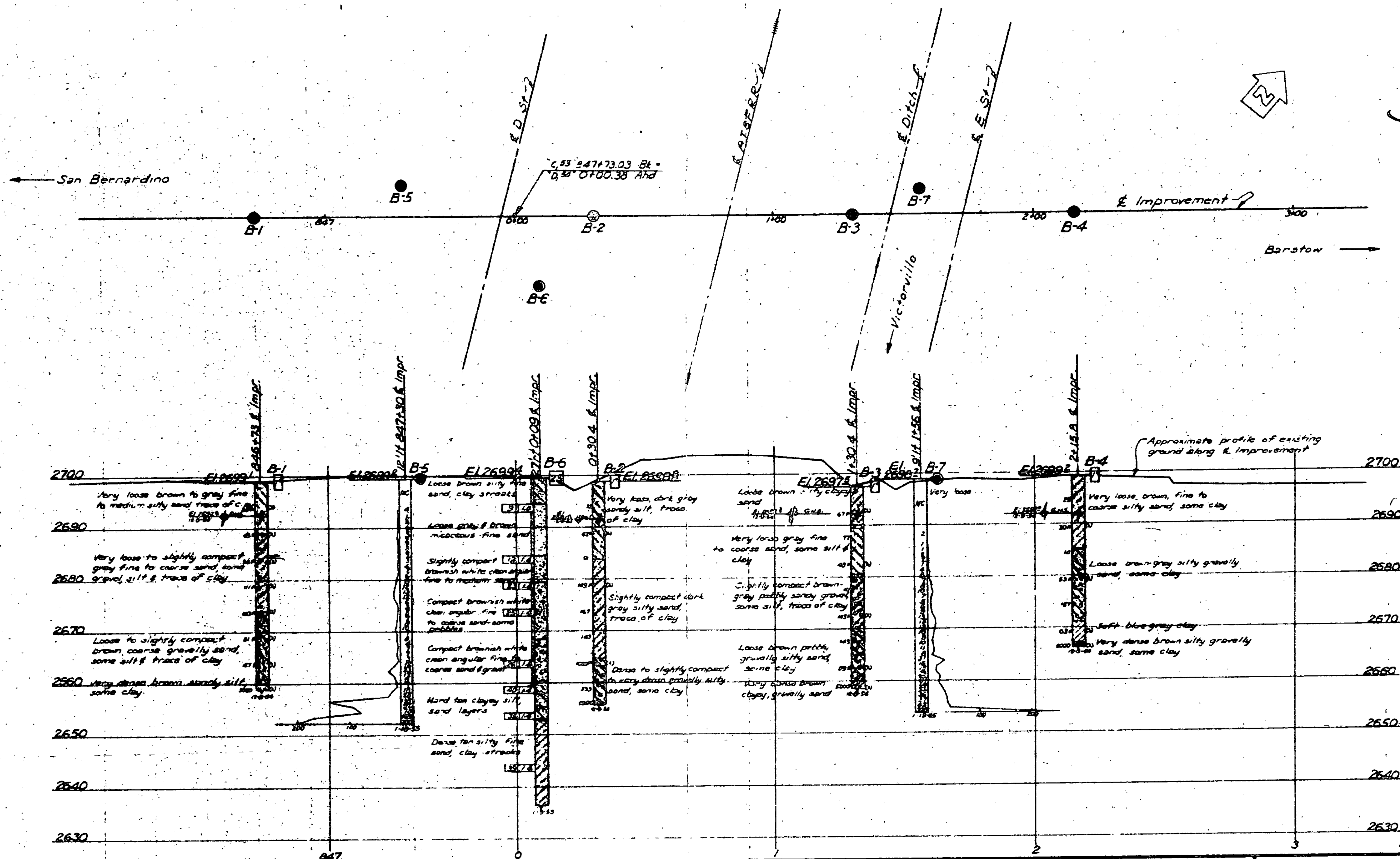
VICTORVILLE OVERHEAD

LOG OF TEST BORINGS

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

39

BRIDGE DEPARTMENT


San Bernardino
Barstow
℄ Improvement
℄ D St
℄ A.T.&S.F. R.R.
℄ Ditch
℄ E St
Victorville
C53 247+73.03 Bk = D53 0+00.38 Ahd
B-1
B-2
B-3
B-4
B-5
B-6
B-7
Approximate profile of existing ground along ℄ Improvement
Very loose brown to gray fine to medium silty sand, trace of clay
Very loose to slightly compact gray fine to coarse sand and gravel, silt & trace of clay
Loose to slightly compact brown, coarse gravelly sand, some silt & trace of clay
Very dense brown sandy silt, some clay
Loose brown silty fine sand, clay streaks
Slightly compact brownish white clean angular fine to medium sand
Compact brownish white clean angular fine to coarse sand - some pebbles
Hard tan clayey silt, sand layers
Dense tan silty fine sand, clay streaks
Very loose, dark gray sandy silt, trace of clay
Slightly compact dark gray silty sand, trace of clay
Dense to slightly compact to very dense gravelly silty sand, some clay
Loose brown silty clayey sand
Very loose gray fine to coarse sand, some silt & clay
Slightly compact brown-gray pebbly sandy gravel, some silt, trace of clay
Loose brown pebbly gravelly silty sand, some clay
Very dense brown clayey, gravelly sand
Very loose
Very loose, brown, fine to coarse silty sand, some clay
Loose brown-gray silty gravelly sand, some clay
Soft blue-gray clay
Very dense brown silty gravelly sand, some clay
2700
2690
2680
2670
2660
2650
2640
2630
847
0
1
2
3

Test Borings by Bridge Dept.

B.M. "C53" 85-A-54
2"x2" Redwood Hub & Sp. No. 1
Buried 1.1' 147' lt ℄ Impr. Sta 840+89
Elev. 2737.32

BM "D" 5-A-53
Pin in PCC R/W Monument 0.3' above ground 30' rt ℄ Survey 40+00
Elev 2658.19

AS BUILT 6, 1958 OR REP

Classification of Material Based on Standard Grade Size Limits

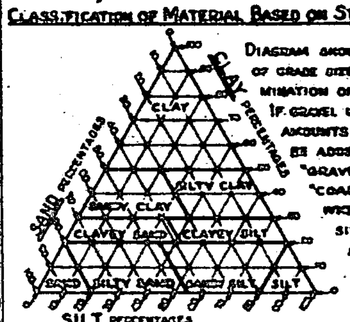


Diagram showing the basis for estimates of grade size distribution used in determination of class names.

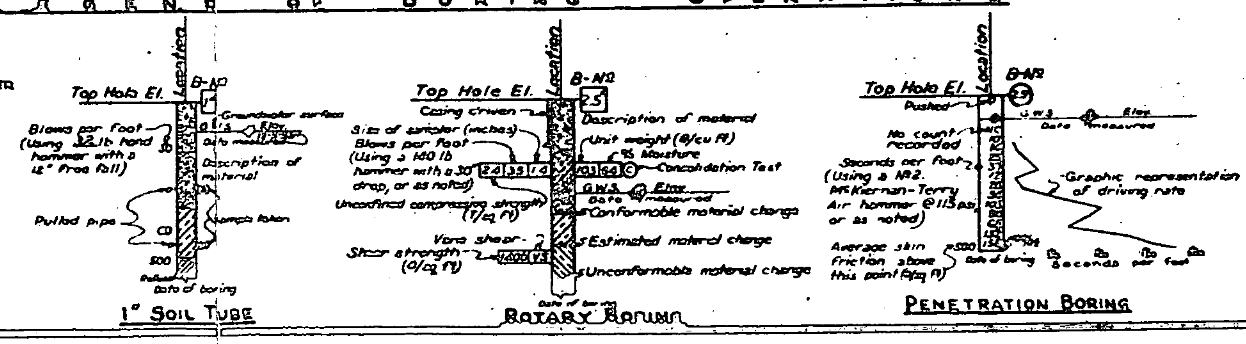
If gravel is present in appreciable amounts the term "gravelly" may be added to the class name, viz. "gravelly sand". The terms "coarse", "medium" and "fine" when used to describe sand, silt and gravel refer to standard grade size limits.

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 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


Top Hole El.
Location
Groundwater surface
Date measured
Description of material
Blows per foot (Using 32 lb hand hammer with a 12" free fall)
Pulled pipe
Sample taken
Date of boring
1" Soil Tube
Top Hole El.
Casing driven
Size of sampler (inches)
Blows per foot (Using a 100 lb hammer with a 30" drop, or as noted)
Unconfined compressive strength (T/sq ft)
Vane shear
Shear strength (T/sq ft)
Unit weight (#/cu ft)
% Moisture
Consolidation Test
Date measured
Conformable material change
Estimated material change
Unconformable material change
Date of boring
Rotary Boring
Top Hole El.
Pushed
No count recorded
Seconds per foot (Using a No. 2 McKiernan-Terry Air hammer @ 115 psi or as noted)
Average skin friction above this point (T/sq ft)
Graphic representation of driving rate
Seconds per foot
Date of 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

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

LOG OF TEST BORINGS

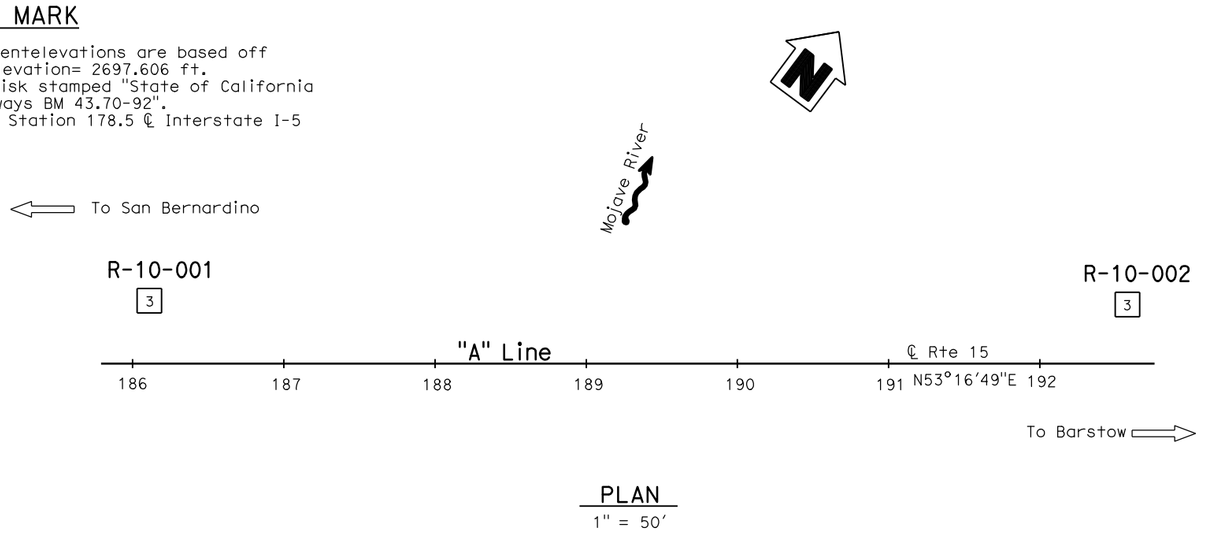
SCALE	BRIDGE 54-484	FILE	DRAWING C-4269-13

PREL. DRAWING NO. P-4269 3

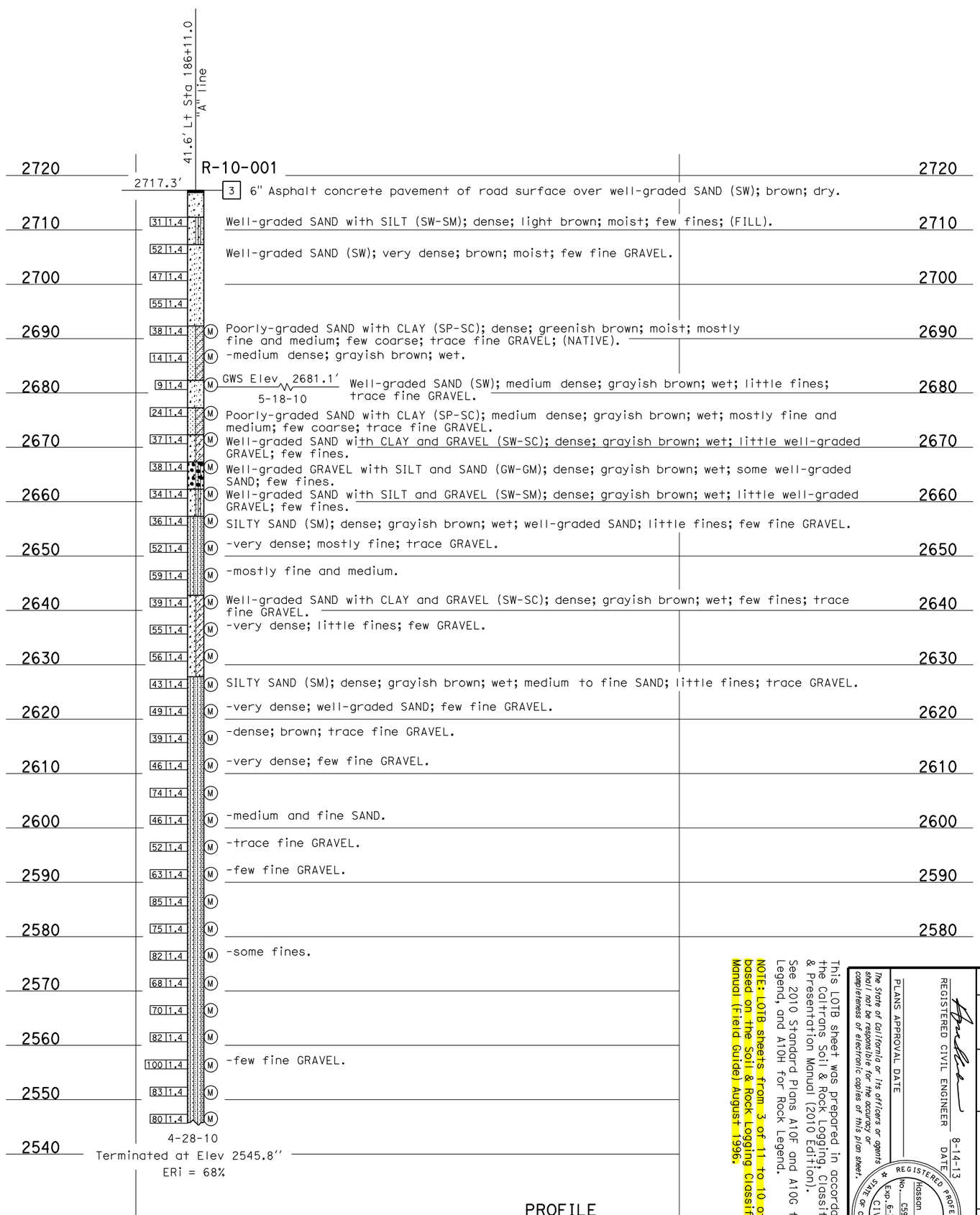
Mojave River Bridge

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
REGISTERED CIVIL ENGINEER
8-14-13
DATE

PLANS APPROVAL DATE

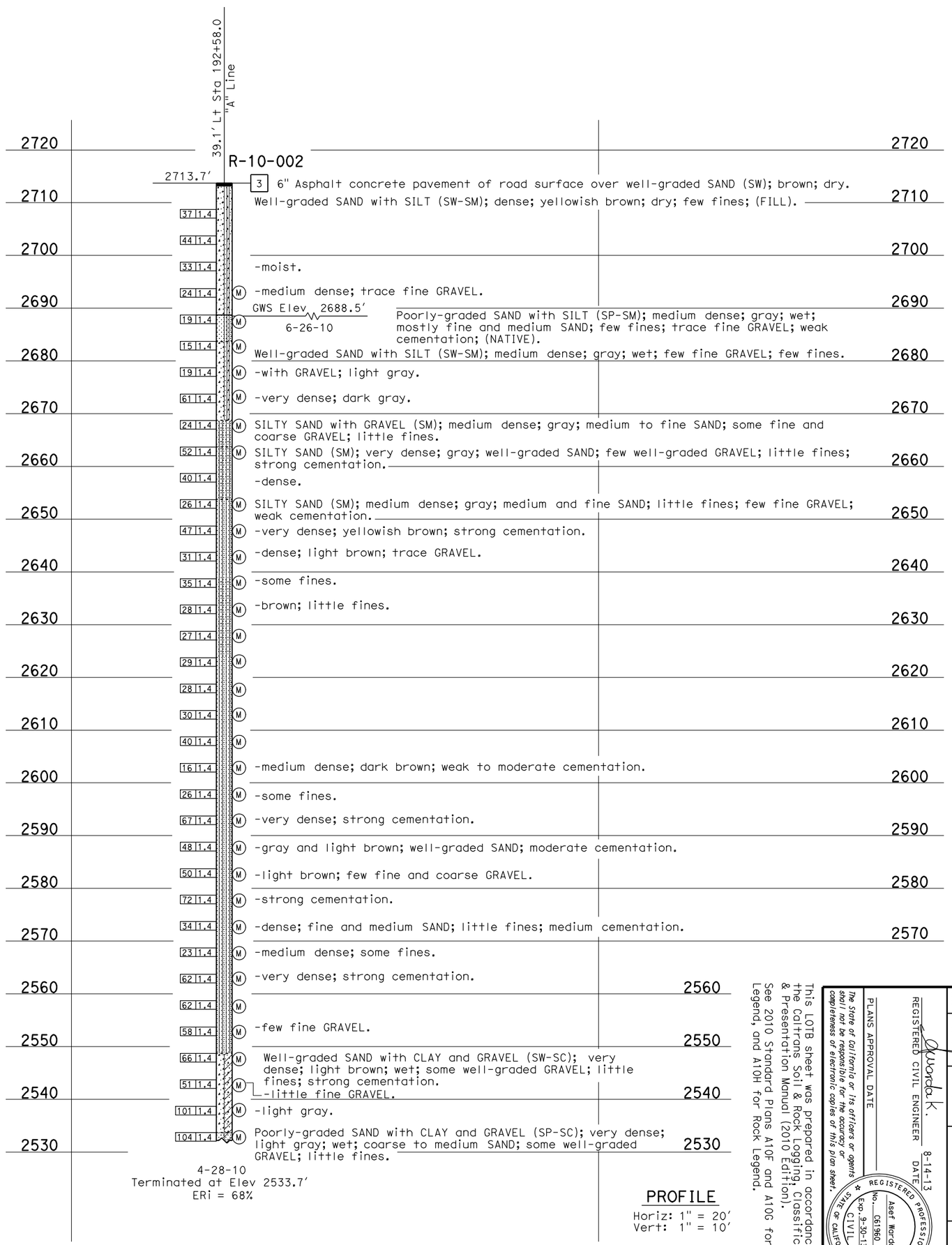
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
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
DOS 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
DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES
SHEET X
OF X
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.

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 X OF X

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3

DGS CIVIL LOG OF TEST BORINGS SHEET

FILE =>mojave-v02.dgn

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			

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

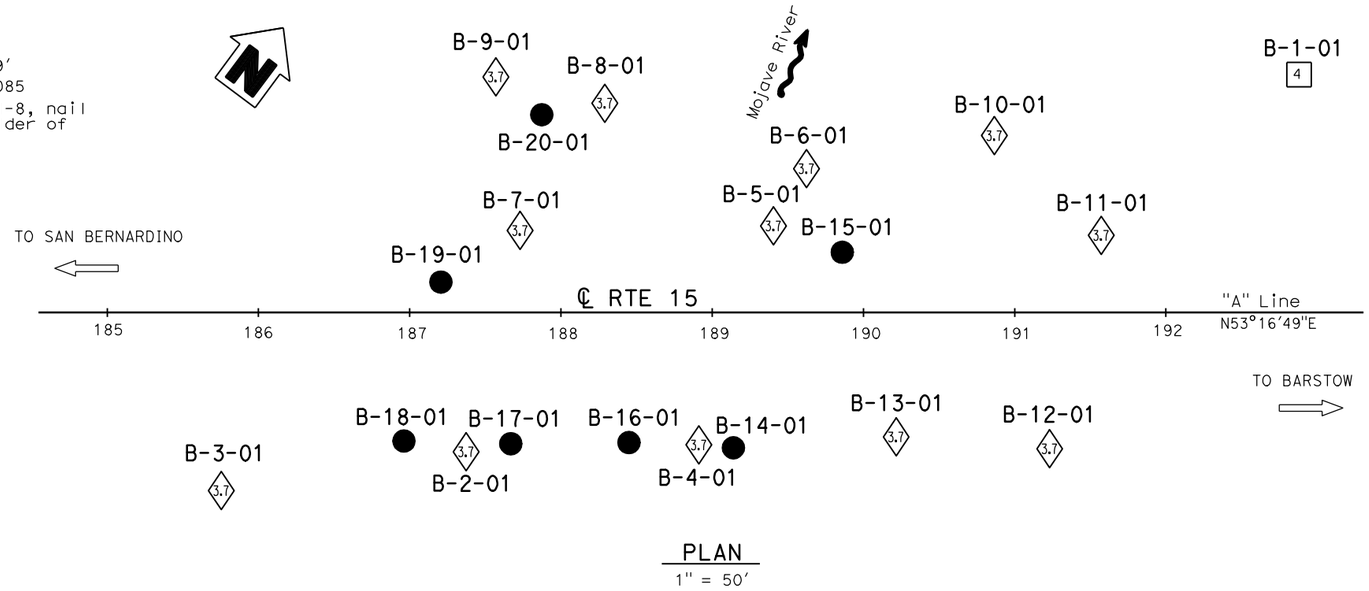
PLANS APPROVAL DATE

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.

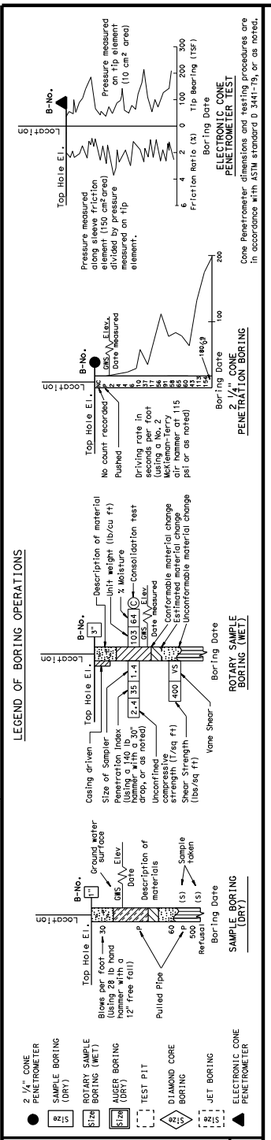
6. Test boring B-2-01 and B-4-01 through B-13-01utilized a Dietrich auto hammer to advance the sampler using a 140 lb hammer with a 30" drop. Penetration index values shown are the actual blow counts recorded in the field. Soil Consistency Classifications for those borings are based on a conversion factor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

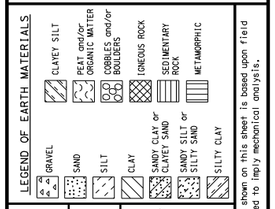
8. E= Blow count for 1′ penetration extrapolated from blow count for less than 1′ (due to change in material or hard driving).

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

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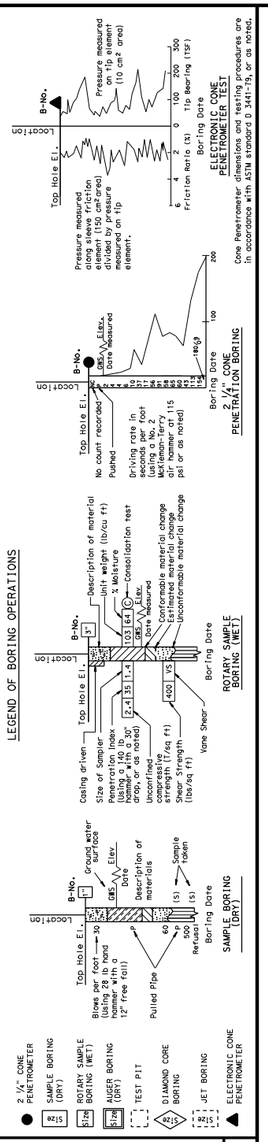
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · 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

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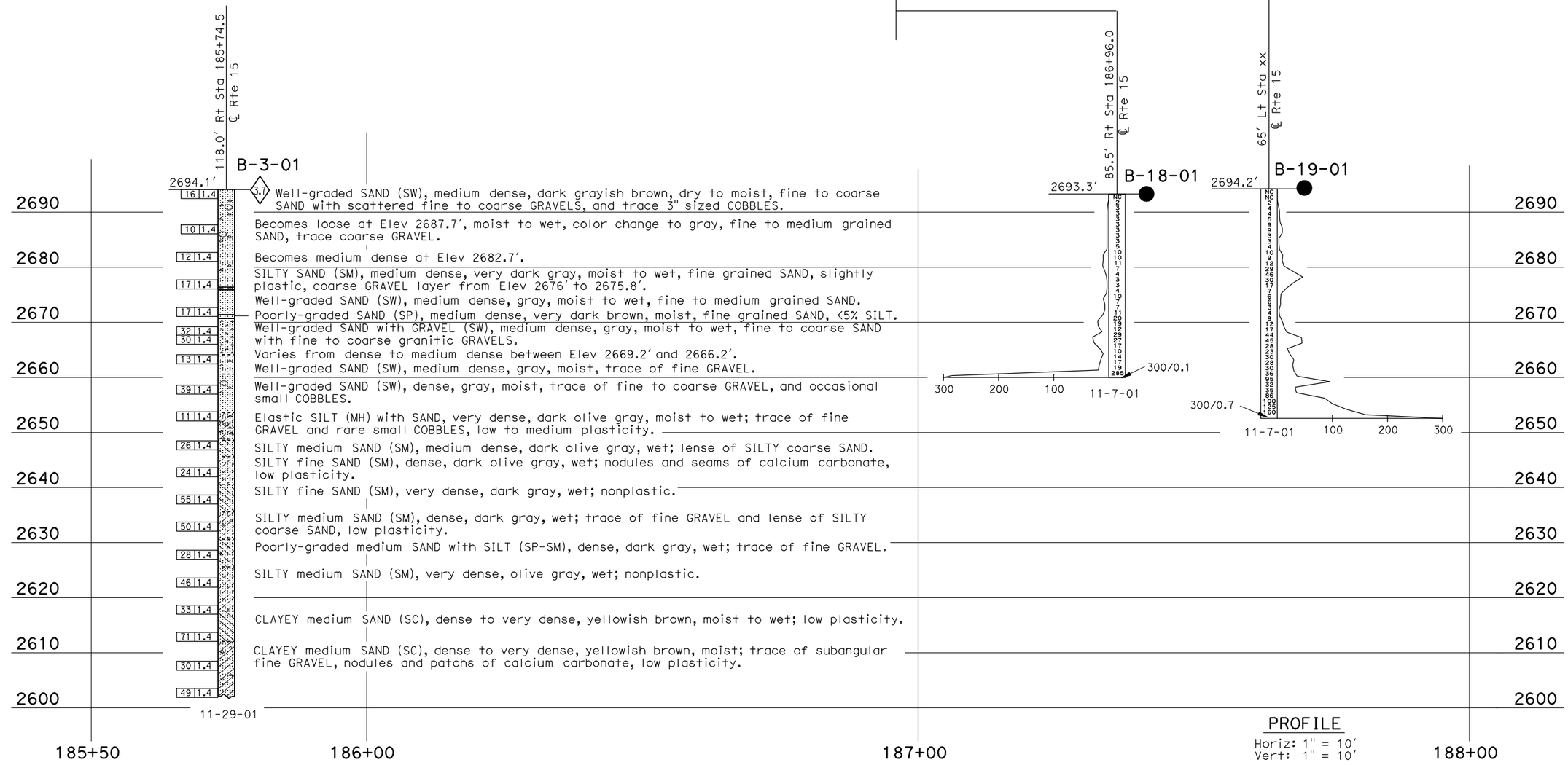
11-30	Medium Dense	5-8	Medium stiff
31-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

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'

185+50 186+00 187+00 188+00

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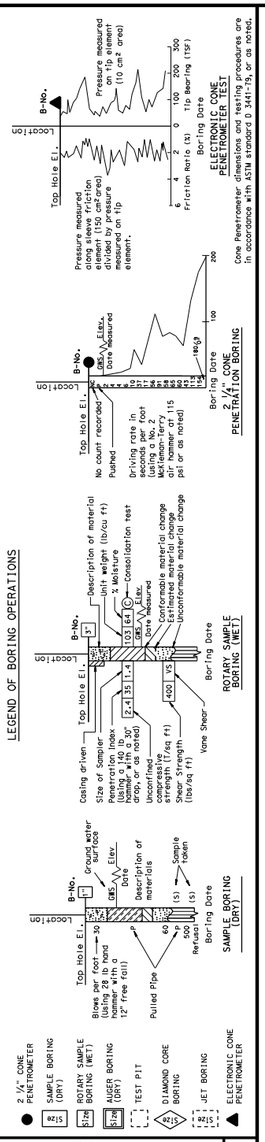
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

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 · 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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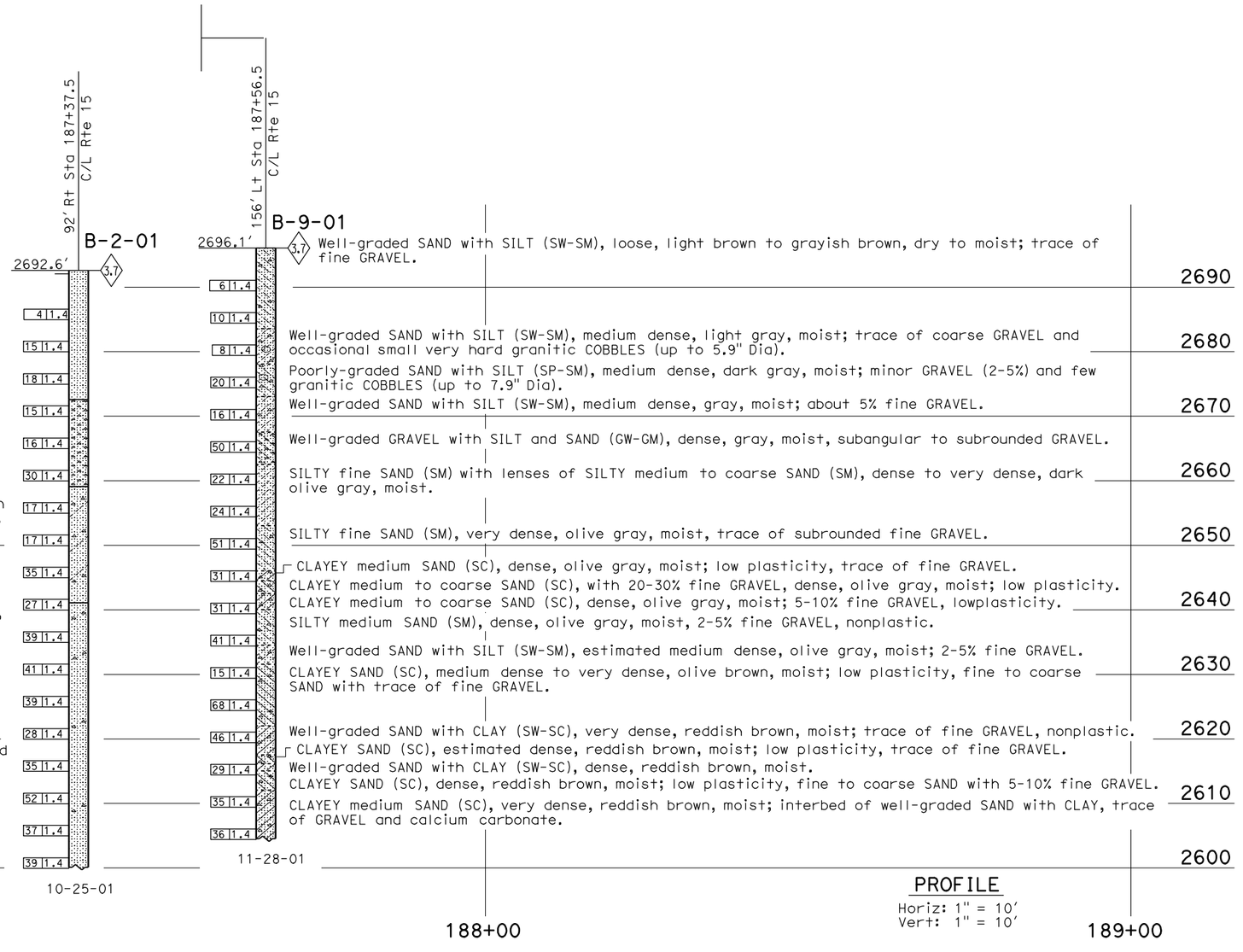
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

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 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

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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

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

PLANS APPROVAL DATE

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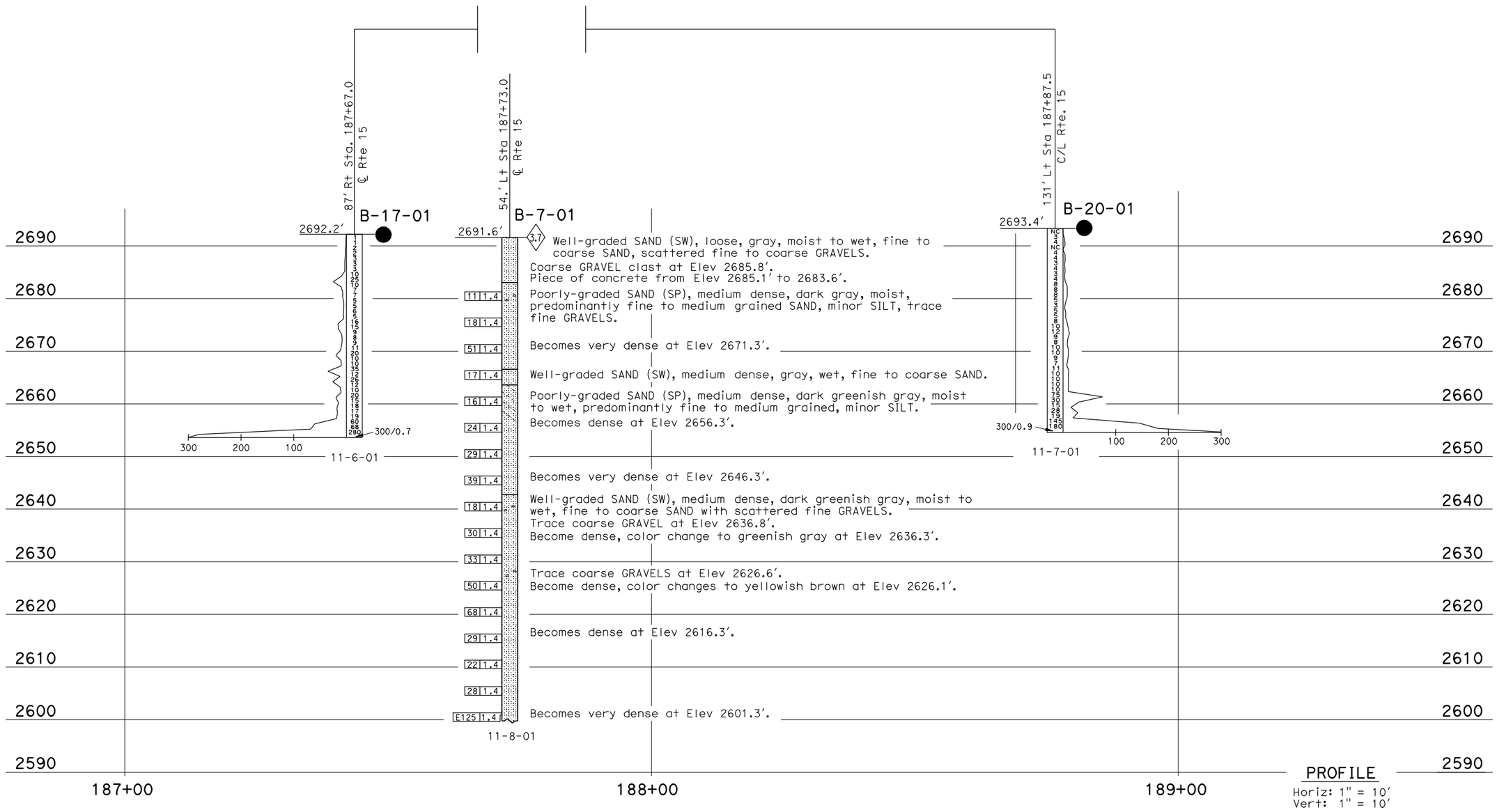
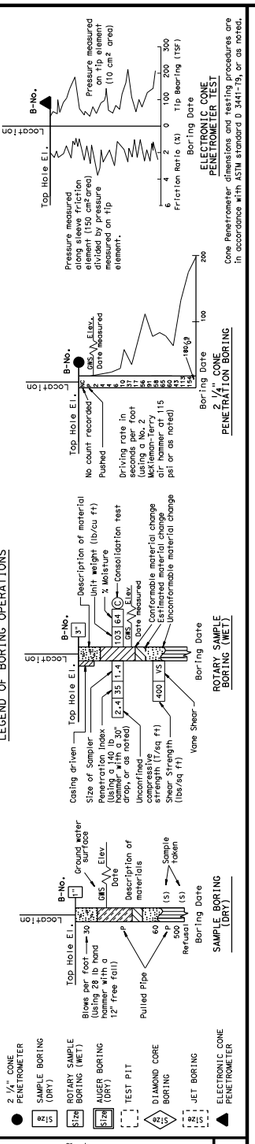
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

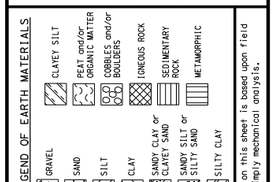


PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

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
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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 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

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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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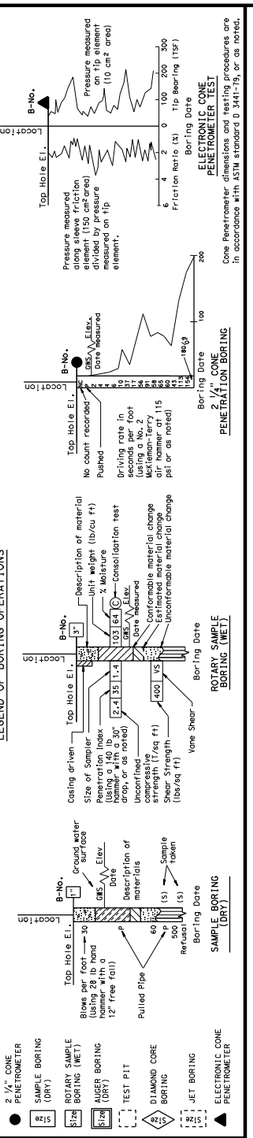
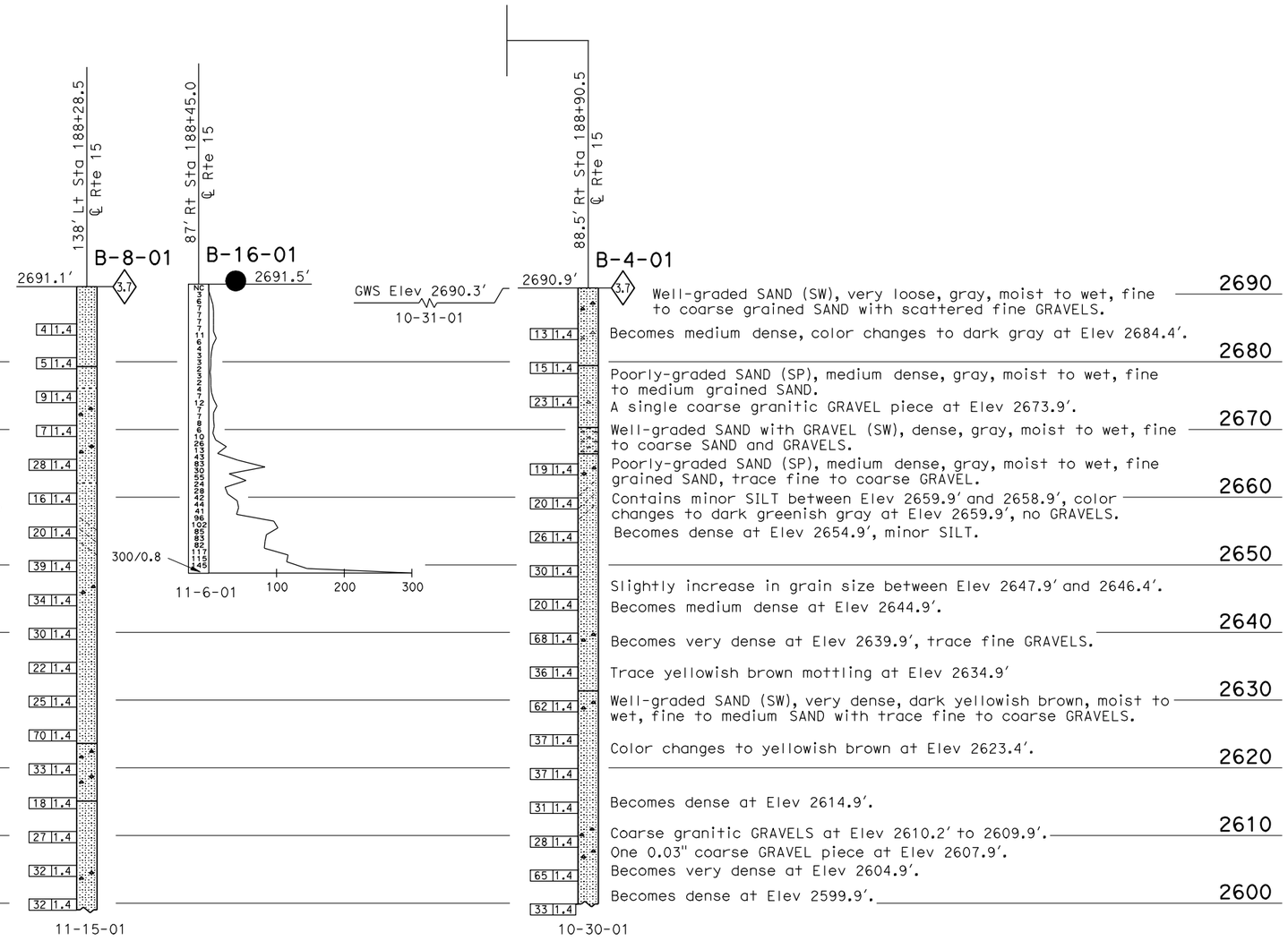


FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"



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

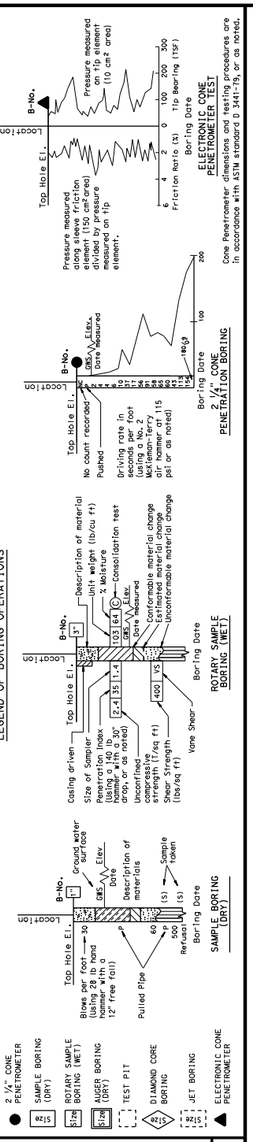
PLANS APPROVAL DATE

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

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.

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

LEGEND OF BORING OPERATIONS



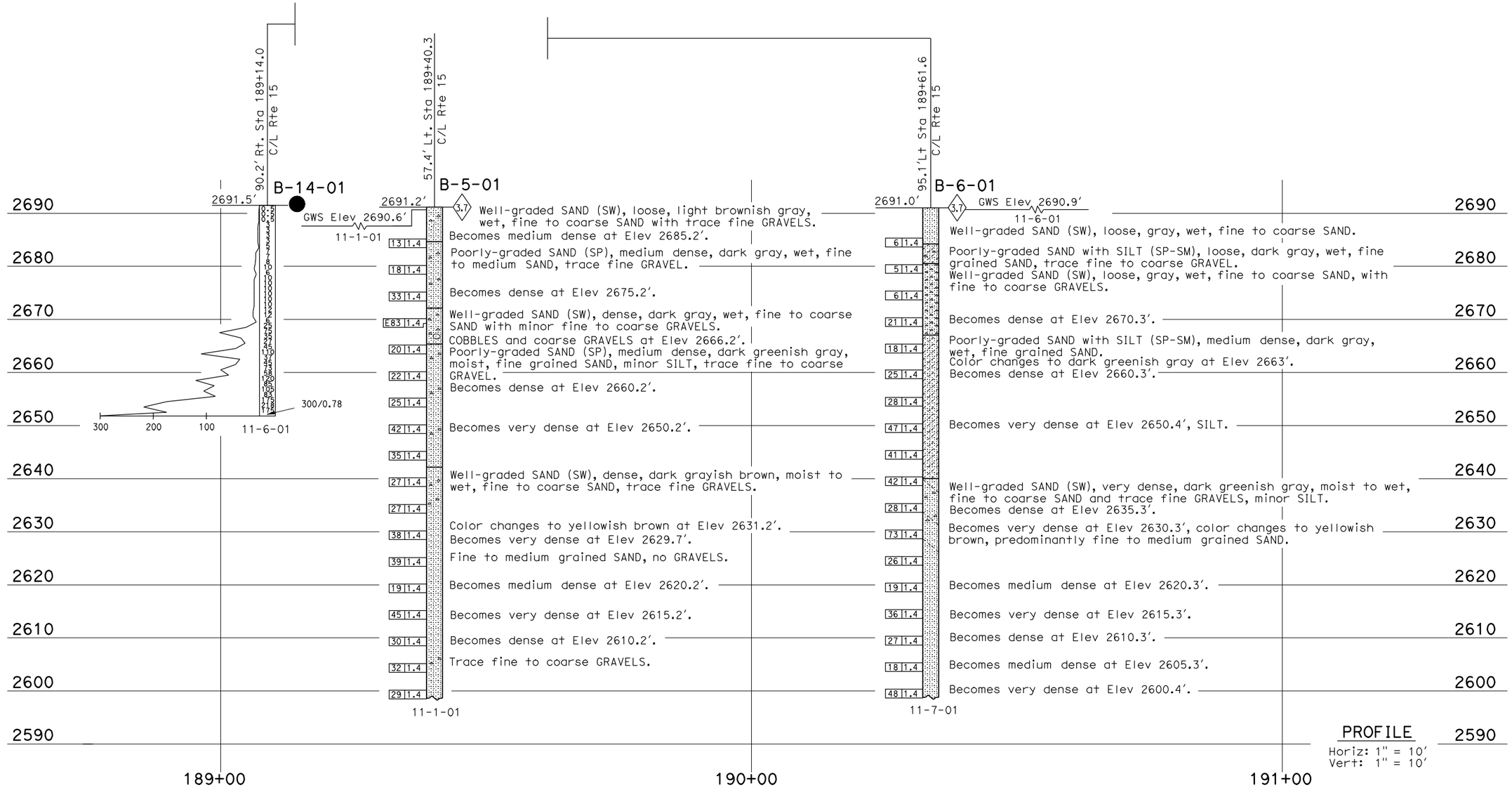
LEGEND OF EARTH MATERIALS

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 · 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.



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 8 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-v08.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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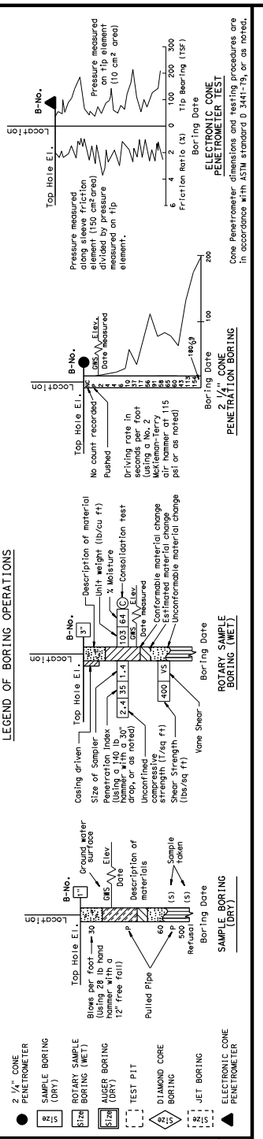
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

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 · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

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>50	Very Dense	16-30	Very Stiff
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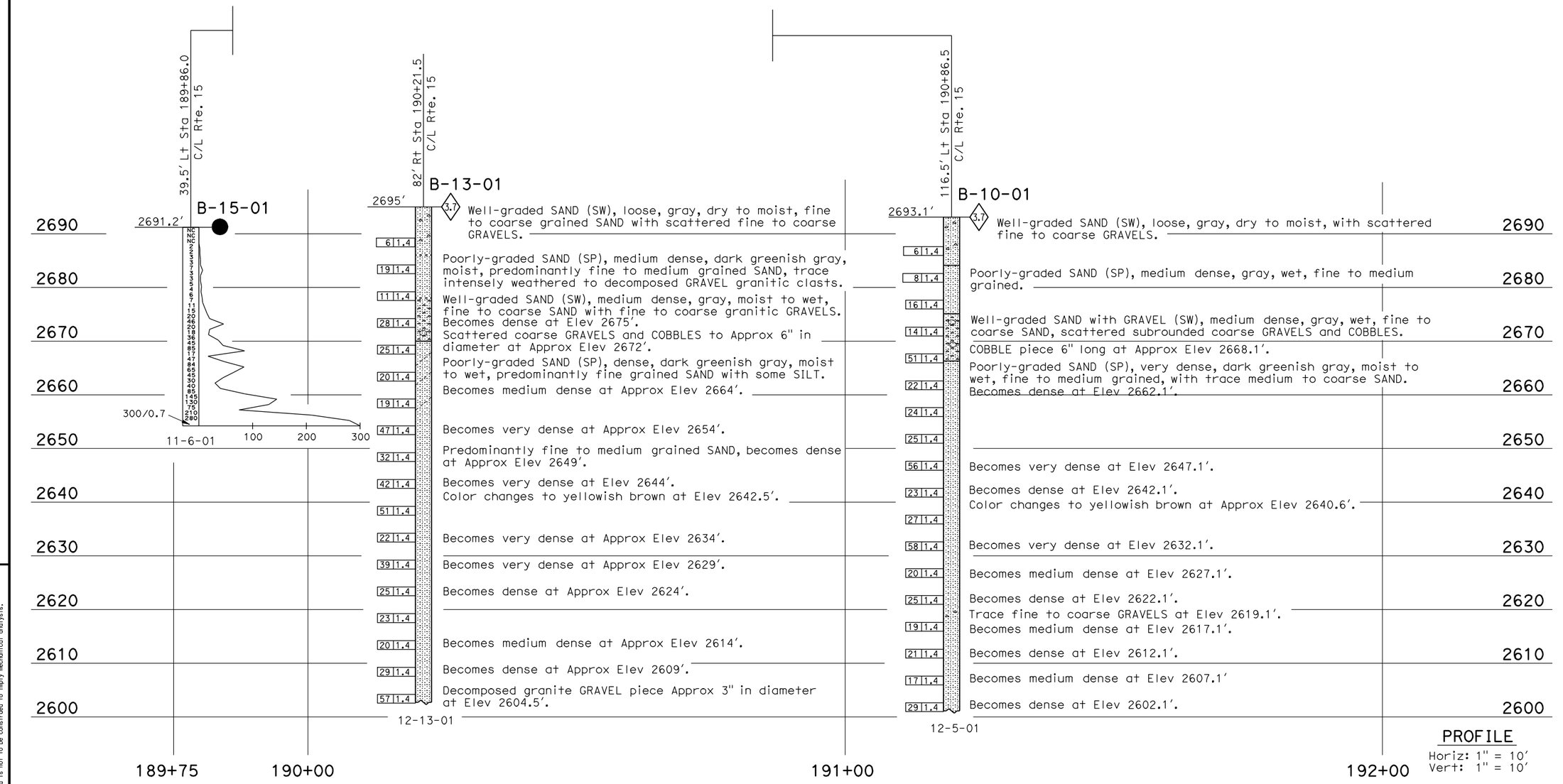
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.



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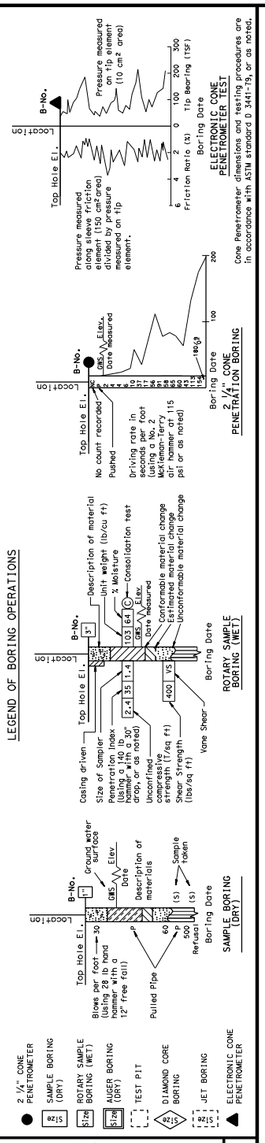
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 3 OF 11"

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 · COHESIVE ROCK · SEDIMENTARY ROCK · METAMORPHIC

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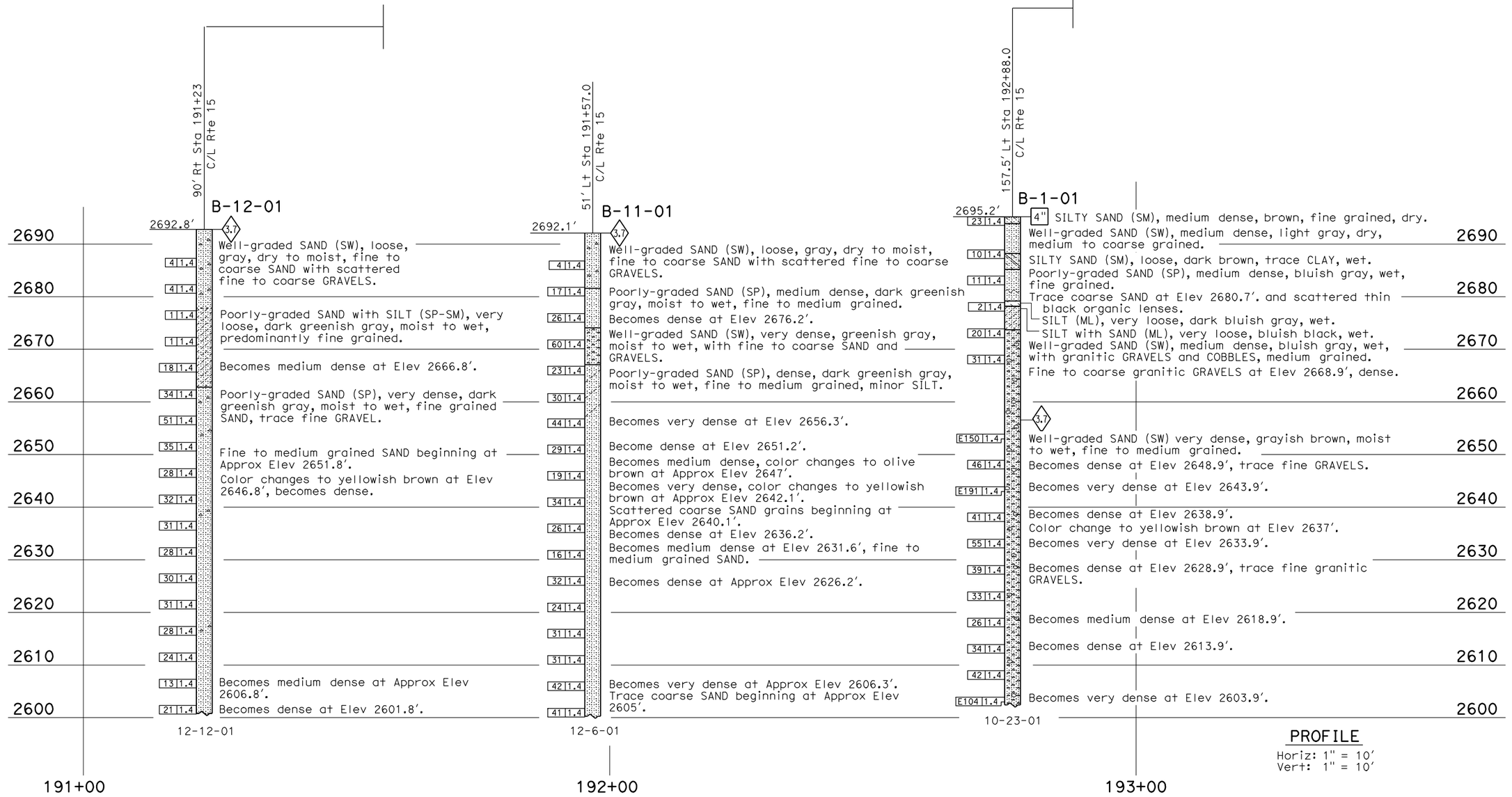
		>60	Very Hard

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 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

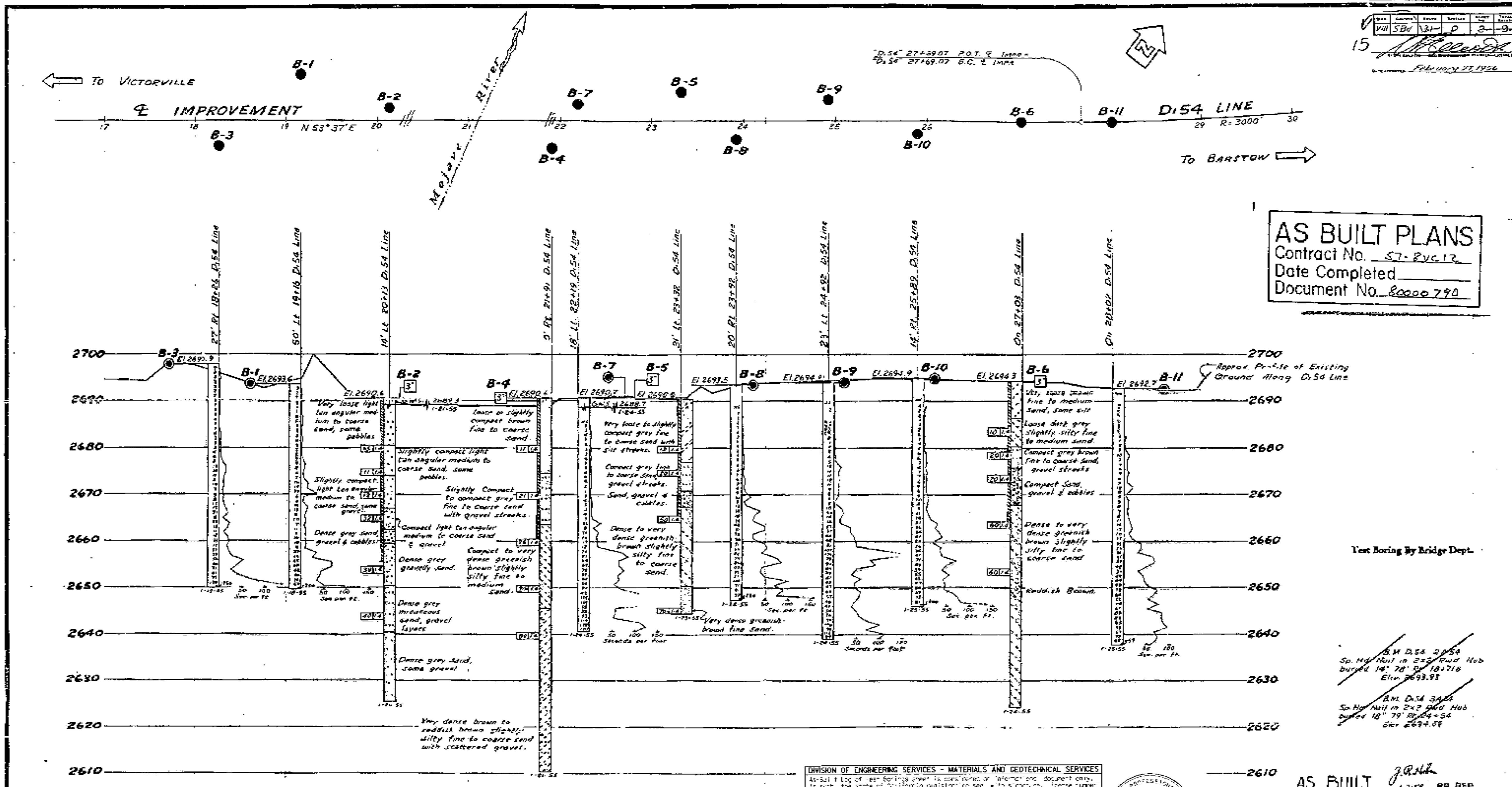
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-07-13				X	X

FILE => mojave-v10.dgn

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

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CAL.	F-008(9)		44	44



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+78
B.M. D.54 3454 Sp. Hd. Nail in 2x2 Rwd Hub buried 18' Rt 24+54

BRIDGE DEPARTMENT

AS BUILT 1-3-58 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 Borings

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
08	SBd	15	

August 14, 2013
REGISTERED CIVIL ENGINEER

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

PROJ. No. & PHASE: 0800000621	UNIT: 3643	CONTRACT No. 08-355561	BRIDGE No. 54-0483

AS-BUILT VERT DATUM: NGVD29 CONVERSION: NGVD29 + 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

44

Stoddard Wells Road

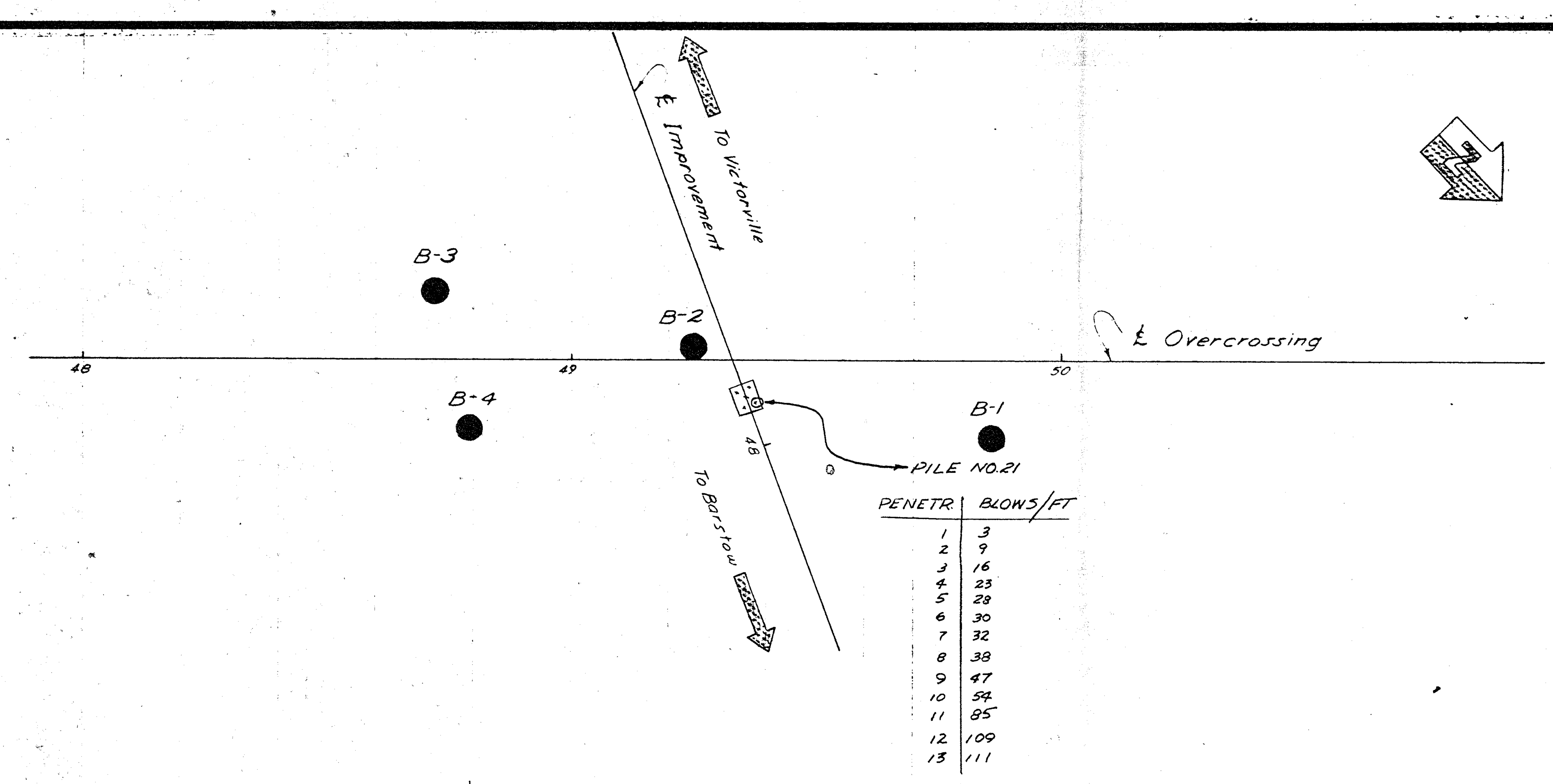
FED. ROAD DIV. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CAL.	I-0085(4)		121	171

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	SBd	31	D	11	11

BRIDGE ENGINEER — CIVIL ENGINEER — LICENSE 6383

DATE APPROVED 1957

BRIDGE DEPARTMENT



NO TEST PILE SPECIFIED

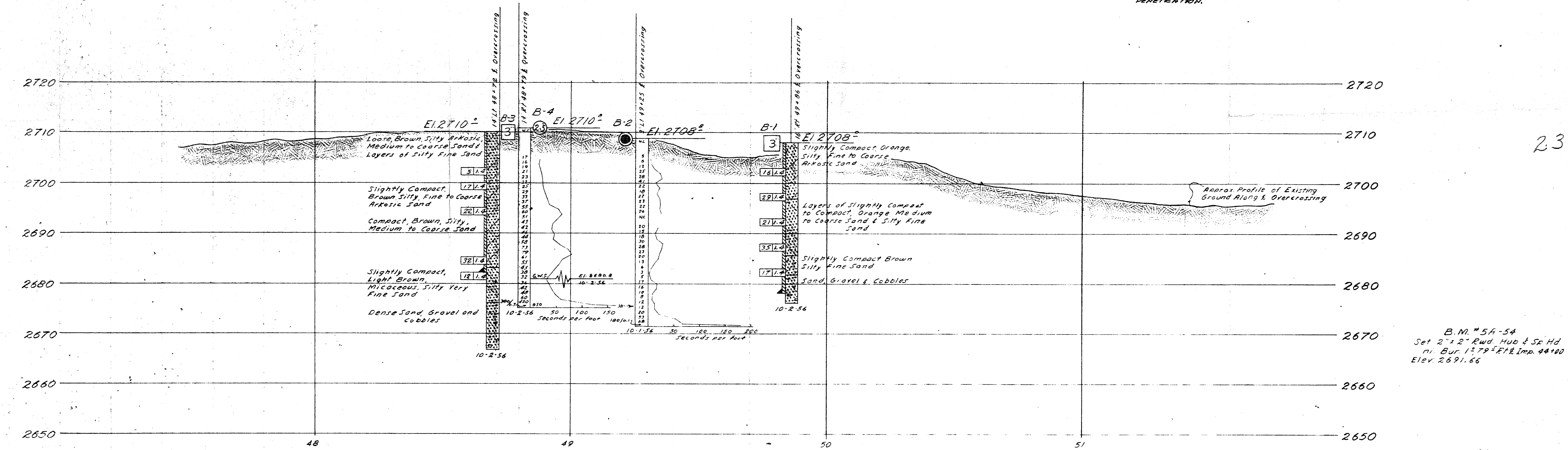
LOCATION - BENT #3 - RIGHT FOOTING - PILE NO.21 - SEE FIELD BOOK NO.2
TYPE - CAST-IN-PLACE CONCRETE PILE ALTERNATIVE "W"
HAMMER - VULCAN NO. 1
DIAM. - 10" TIP & 16" BUTT
ELEV. - CUT-OFF 2703.75 TIP 2690±
LOADS - DESIGN 45 TONS E.N.R. LOAD 82+ TONS

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.



23

B.M. #5A-54
Set 2"x2" Rwd. Hub & Sc. Hd
in Bur. 1.79± Rt ℄ Imp. 44+00
Elev. 2691.66

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

Approval Recommended by — Engineering Geologist — Assistant Planning Engineer

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

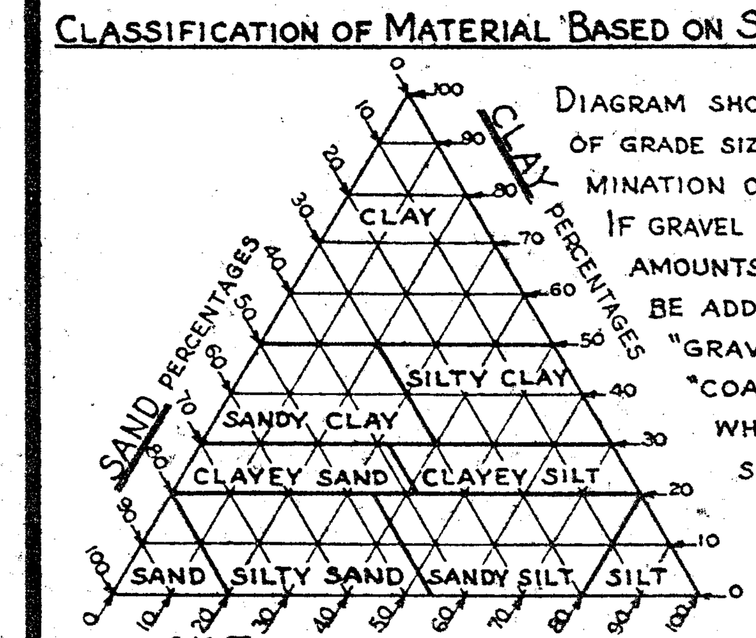


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

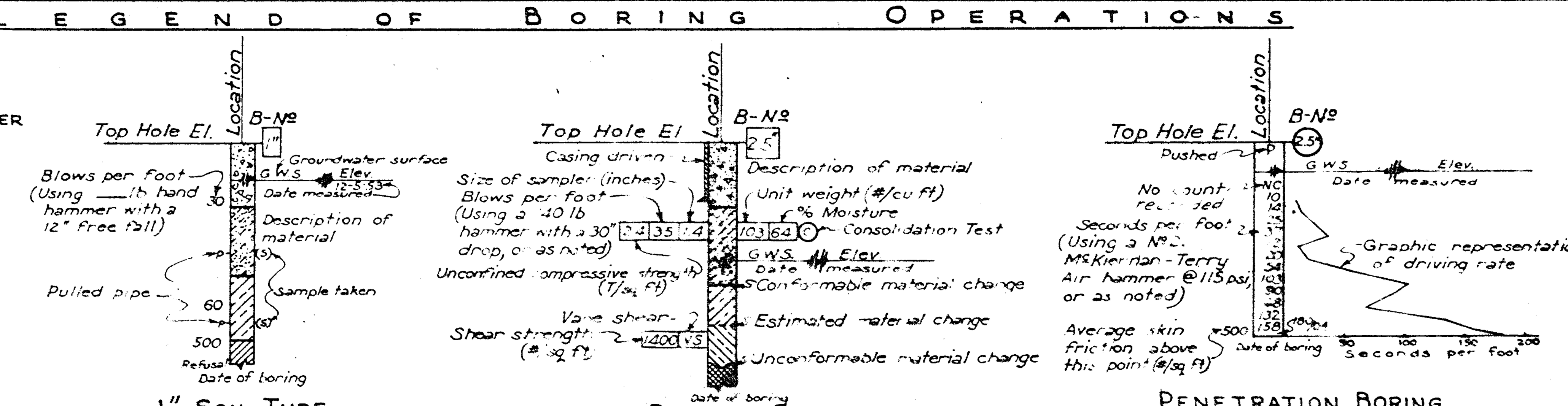
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

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
- 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

STODDARD WELLS RD. OVERCROSSING

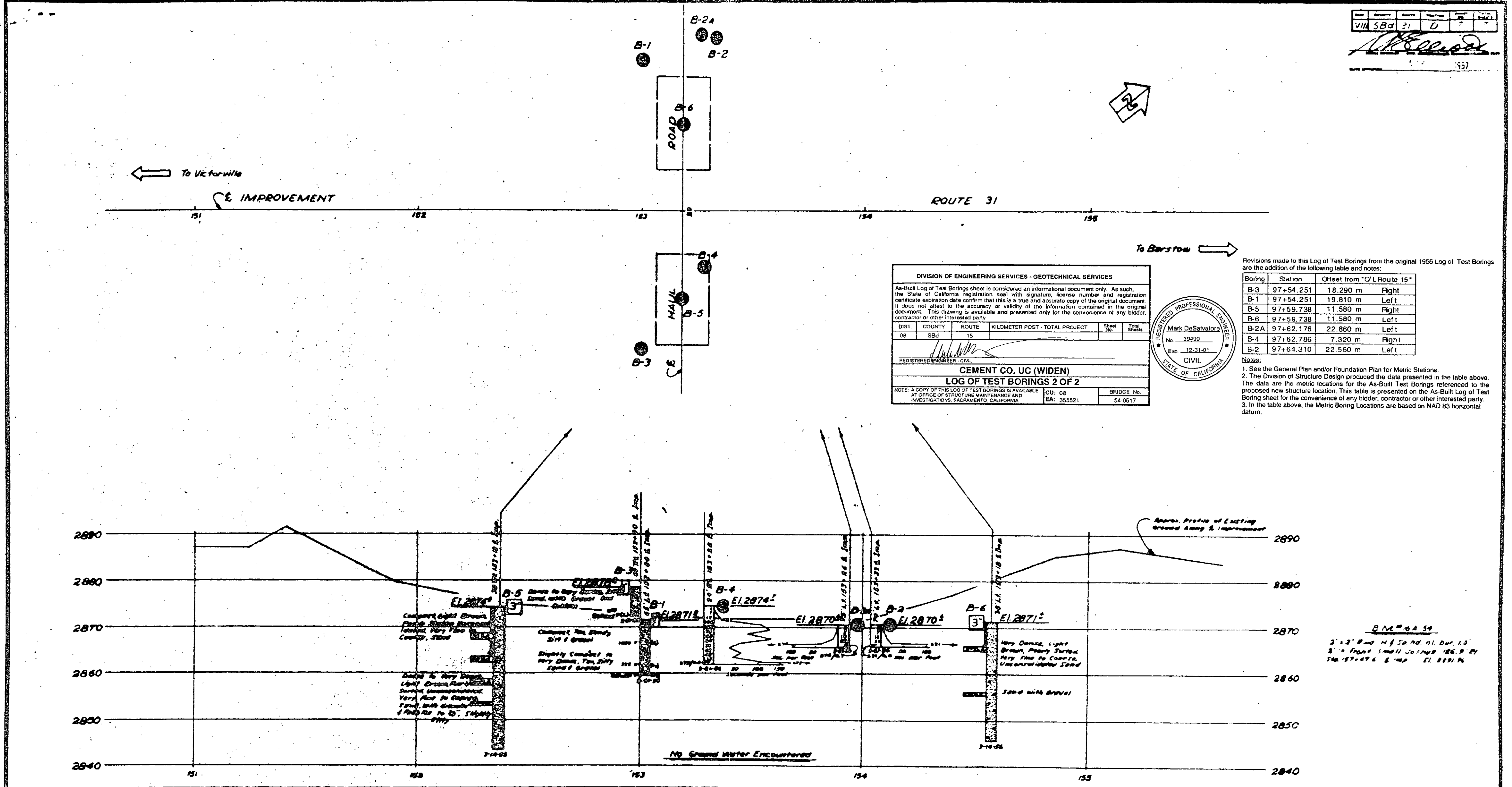
LOG OF TEST BORINGS

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

121

PREL. ... 54 ... 23

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

REGISTERED PROFESSIONAL ENGINEER — 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.

CLASSIFICATION OF MATERIAL BASED ON 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: 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.

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58-BVC4-FI

CEMENT CO. UNDERCROSSING

LOG OF TEST BORINGS

BRIDGE 54-517

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

Caltrans Metric

REGISTERED CIVIL ENGINEER 10-24-01

PLANS APPROVAL DATE

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

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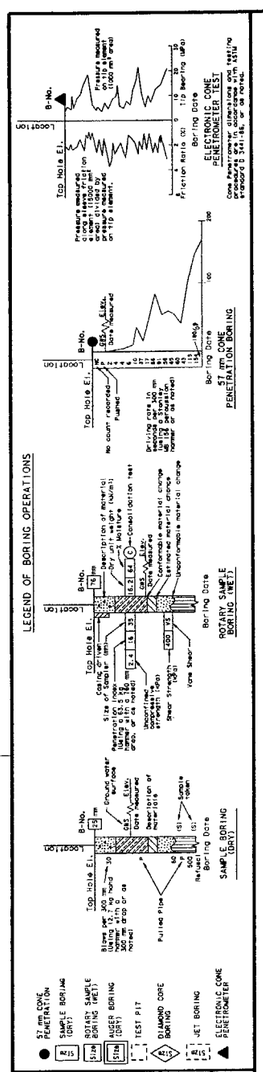
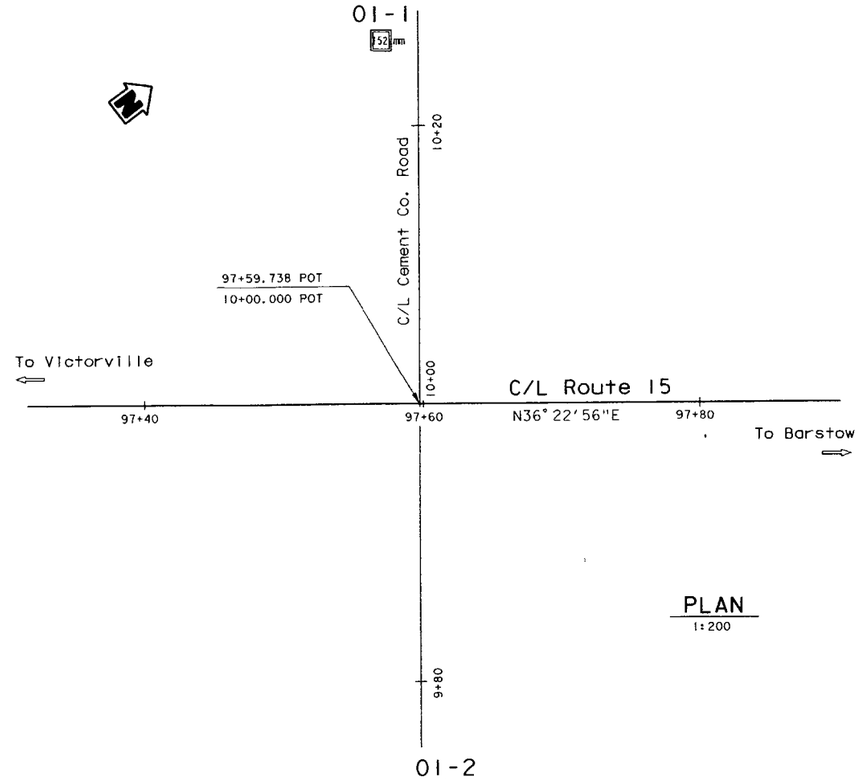




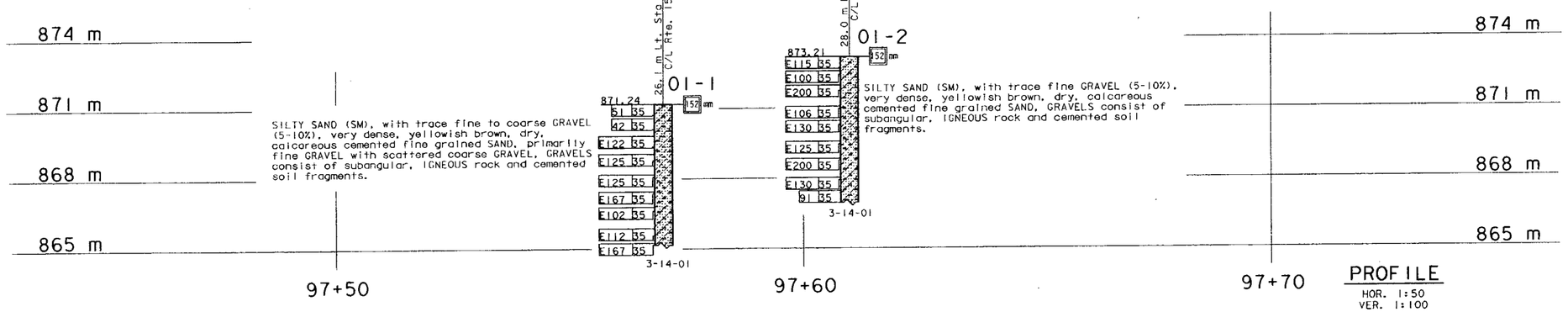
PLAN
1:200

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)

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) | SHEET | OF

10-23-01

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

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

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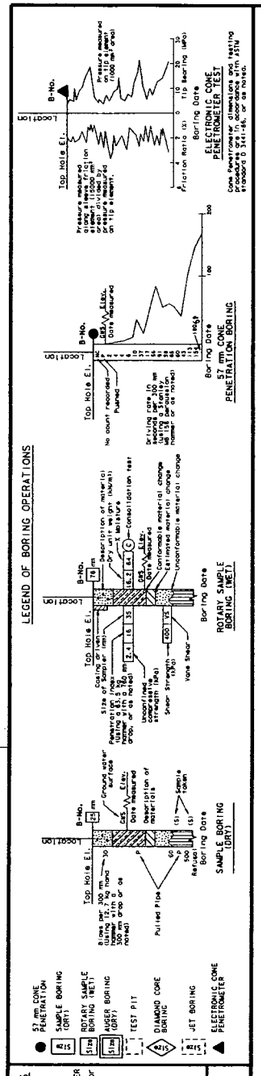
USERNAME => tsdpo DATE PLOTTED => 24 OCT 2001 TIME PLOTTED => 09:22:08

Bell Mountain Wash



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

Caltrans Metric

REGISTERED CIVIL ENGINEER 10-29-01

PLANS APPROVAL DATE

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

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LEGEND OF EARTH MATERIALS

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 Deidrich 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 conistency 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.

01-6:

SILTY SAND (SM), with fine to coarse GRAVEL (20%) and hard COBBLES (5%), medium dense, light yellow brown, moist, fine to coarse grained SAND. (Fill)

Well graded SAND (SW), with fine GRAVEL (5%), medium dense, yellowish brown, moist.

Dense zone from elev. 876.03 to 874.51 m.

GRANODIORITE, light olive gray, decomposed and very intensely weathered, soft, friable.

GRANODIORITE, light olive gray, white and moderate reddish orange, decomposed (70%) and very intensely weathered (30%), soft and moderately soft, fractures dip form 35° to 80°.

GRANODIORITE, olive gray, white and moderate reddish orange, very intensely to intensely weathered, moderately soft to moderately hard, fractures dip form 40° to 60°.

01-4:

SILTY SAND (SM) with GRAVEL, dense to very dense, yellowish brown, moist, comprised of fine to coarse grained, angular SAND with fine to coarse GRAVEL and SILT. (Fill)

Poorly graded SAND with SILT and GRAVEL (SP-SM), estimated dense, yellowish brown, moist, comprised of medium to coarse, angular SAND and SILT with fine to coarse, angular GRAVEL, scattered COBBLES. (Fill)

Poorly graded GRAVEL with SAND (GP) and scattered COBBLES, estimated dense, yellowish brown, moist, (Fill).

Poorly graded SAND with SILT and GRAVEL (SP-SM), dense, yellowish brown, moist, medium to coarse grained angular SAND with SILT and coarse angular GRAVEL. (Fill)

Poorly graded SAND (SP) with scattered fine GRAVEL, medium dense, to dense, dark yellowish brown, moist, comprised of medium to coarse grained, angular arkosic SAND with fine subangular GRAVEL. (Alluvium)

At elev. 874.73 m, scattered fine to coarse GRAVEL, scattered COBBLES, estimated dense.

At elev. 870.83 m, scattered COBBLES.

SILTY SAND (SM) with GRAVEL, estimated dense, dark greenish gray, moist.

DIORITE, dusky yellow green to grayish olive green, moderately weathered, moderately hard, fine grained, intensely to moderately fractured; fracture openess clean to moderately thin filled with light brown CLAY.

At elev. 868.93 m, intensely weathered, moderately soft.

From elev. 868.43 to 868.13 m, decomposed to SAND, medium grained to elev. 868.33 m, thin moderately weathered, medium grained.

At elev. 868.13 m, hard.

At elev. 869.23 m, dusky yellow green.

At elev. 864.83 m, light gray to dark gray (salt and pepper), medium grained.

From elev. 864.83 to 864.73 m, feldspar rich dike.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

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

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

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

Caltrans Metric

REGISTERED CIVIL ENGINEER 10-30-01

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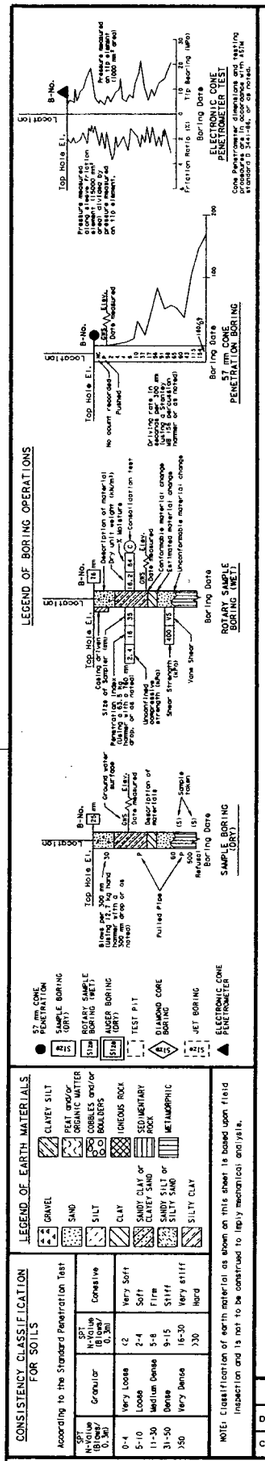
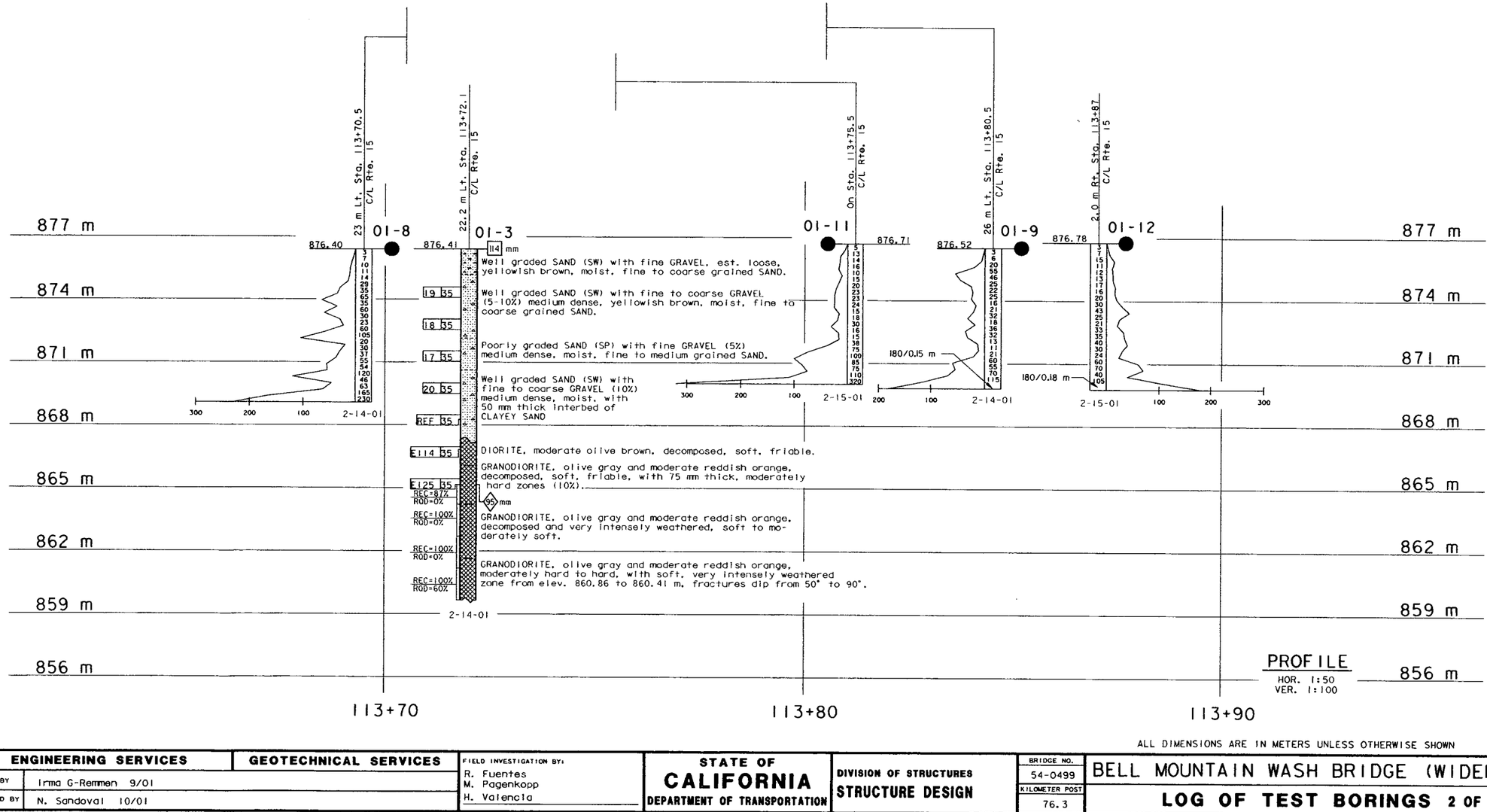
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 7





PROFILE
HOR. 1:50
VER. 1:100

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ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY	Irma G-Remmen 9/01
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FIELD INVESTIGATION BY:
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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

REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 10-25-01 10-30-01

SHEET OF

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

10-30-01
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REGISTERED PROFESSIONAL ENGINEER
Mark DeSalvatore
No. 39499
Exp. 12-31-01
CIVIL
STATE OF CALIFORNIA

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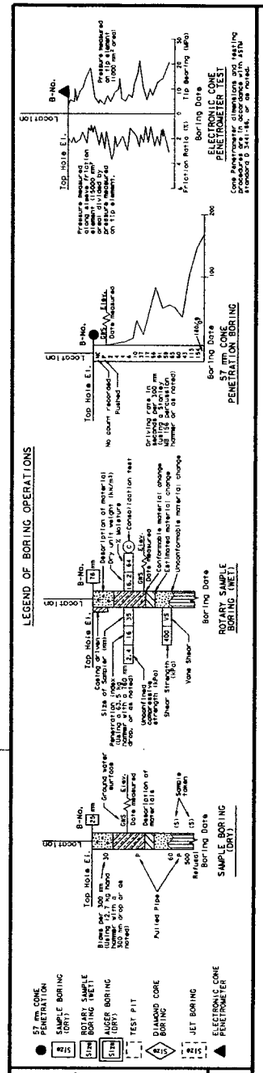
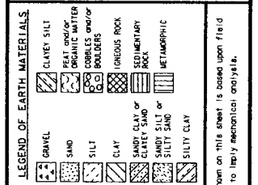
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 7

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

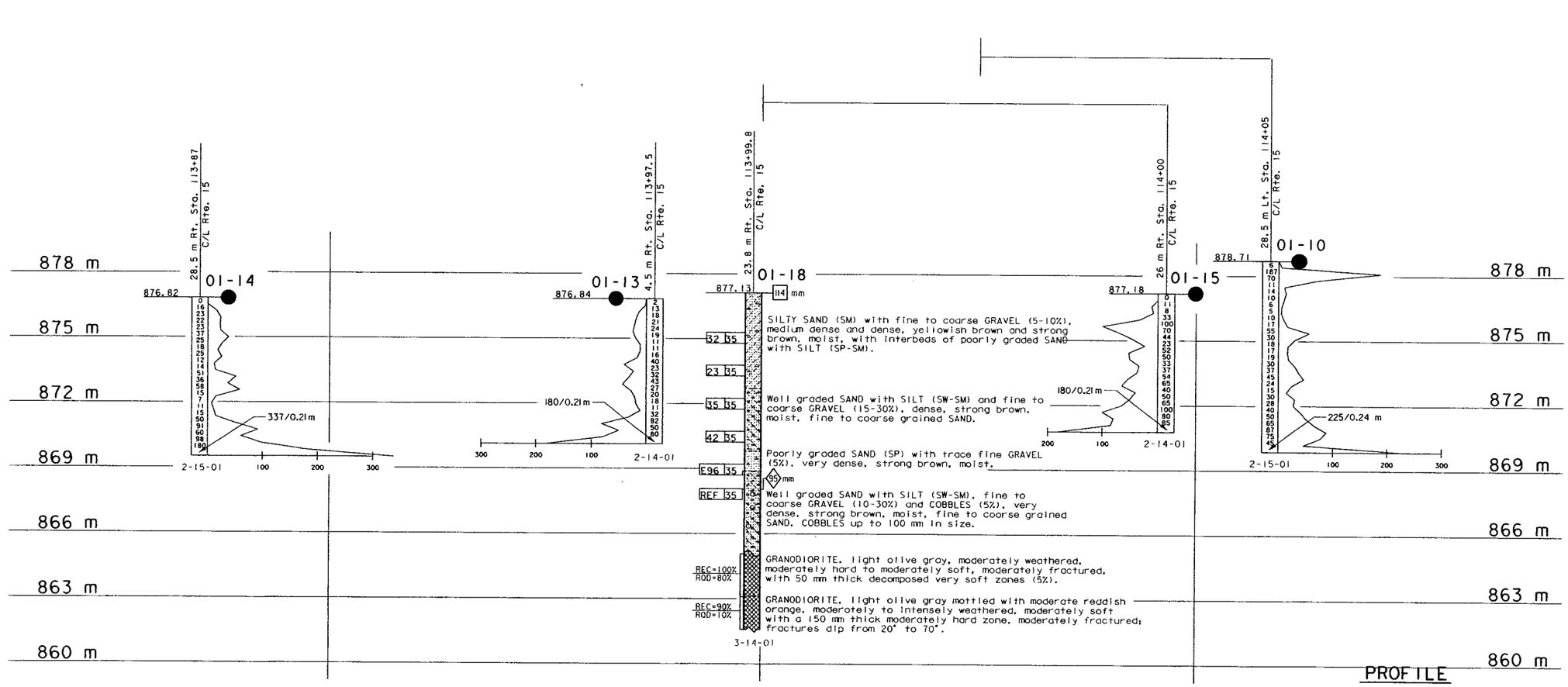


CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

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

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
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M. Pagenkopp
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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)			SHEET	OF
10-24-01	10-25-01	10-30-01		

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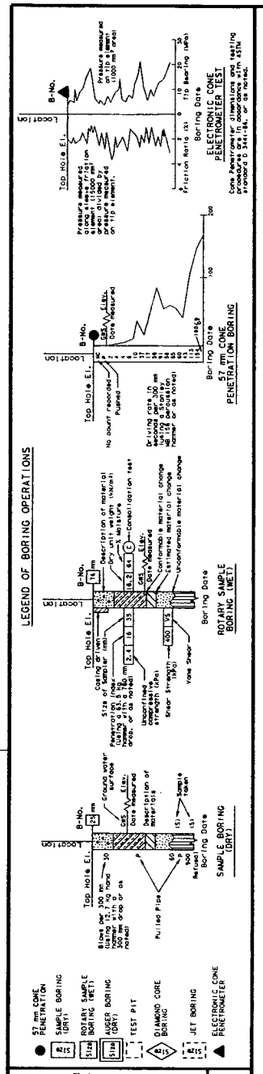

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd	15			

10-30-01
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LEGEND OF BORING OPERATIONS

- ● 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
- ▨ 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/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.

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

SILTY SAND (SM) with GRAVEL, very dense, brownish yellow, moist; comprised of arkosic SANDS, predominately medium to coarse, subangular to angular grains with SILT and fine to coarse subangular GRAVEL. (Fill)

SILTY SAND (SM), loose, dark yellowish brown, moist; comprised predominately of fine grained SAND with SILT, few scattered fine GRAVEL. (Alluvium)

Poorly graded SAND with SILT and GRAVEL (SP-SM), medium dense, dark yellowish brown; comprised of fine grained SAND with SILT and fine subangular GRAVEL. (Alluvium)

Poorly graded SAND (SP), medium dense, dark yellowish , brown, moist; comprised predominately of medium to coarse, subangular to angular, arkosic SAND with SILT. (Alluvium)

At elev. 873.65 m, ocassional lenses of SILTY SAND (SM) less than 120 mm thick; comprised of fine grained SAND and SILT.

At elev. 872.65 m, few scattered fine to coarse, subangular GRAVEL; no lenses of fine grained SAND with SILT.

At elev. 870.55 m, dense, strong brown.

At elev. 869.15 m, very dense, yellowish red.

At elev. 866.15 m, fine to medium grained SAND with scattered coarse grained SAND.

Well graded SAND (SW) with SILT, very dense, brownish yellow, moist; comprised of fine to coarse grained, subangular to angular, arkosic SAND, scattered fine to coarse GRAVEL. (Alluvium)

DIORITE, olive gray, decomposed, very soft, decomposed to a micaceous SILT.

At elev. 861.25 m, greenish gray to very light gray (salt and pepper appearance), intensely (20%) to moderately weathered, moderately fractured, with zones less than 50 mm thick, intensely fractured, coarse grained.

At elev. 860.55 m, dark greenish gray, fine grained.

At elev. 859.95 m, dark greenish gray, moderately weathered, slightly fractured to very slightly fractured; ocassional healed fractures filled with calcium carbonate.

At elev. 858.45 m, moderately fractured.

From elev. 858.05 to 857.55 m, intensely weathered with yellowish red CLAY filled fractures.

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:
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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)										SHEET	OF
~~10-24-01~~	~~10-29-01~~	10-30-01									

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

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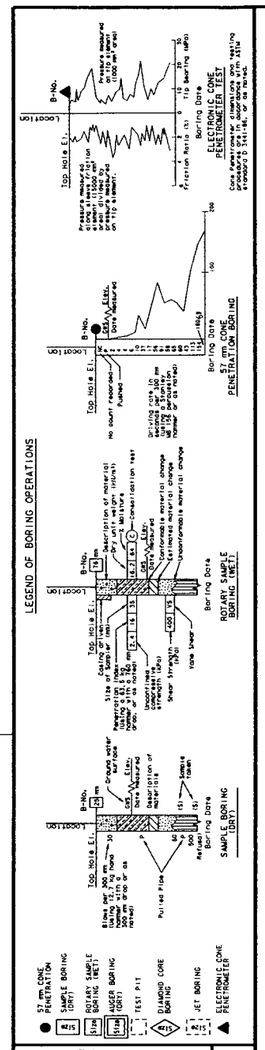
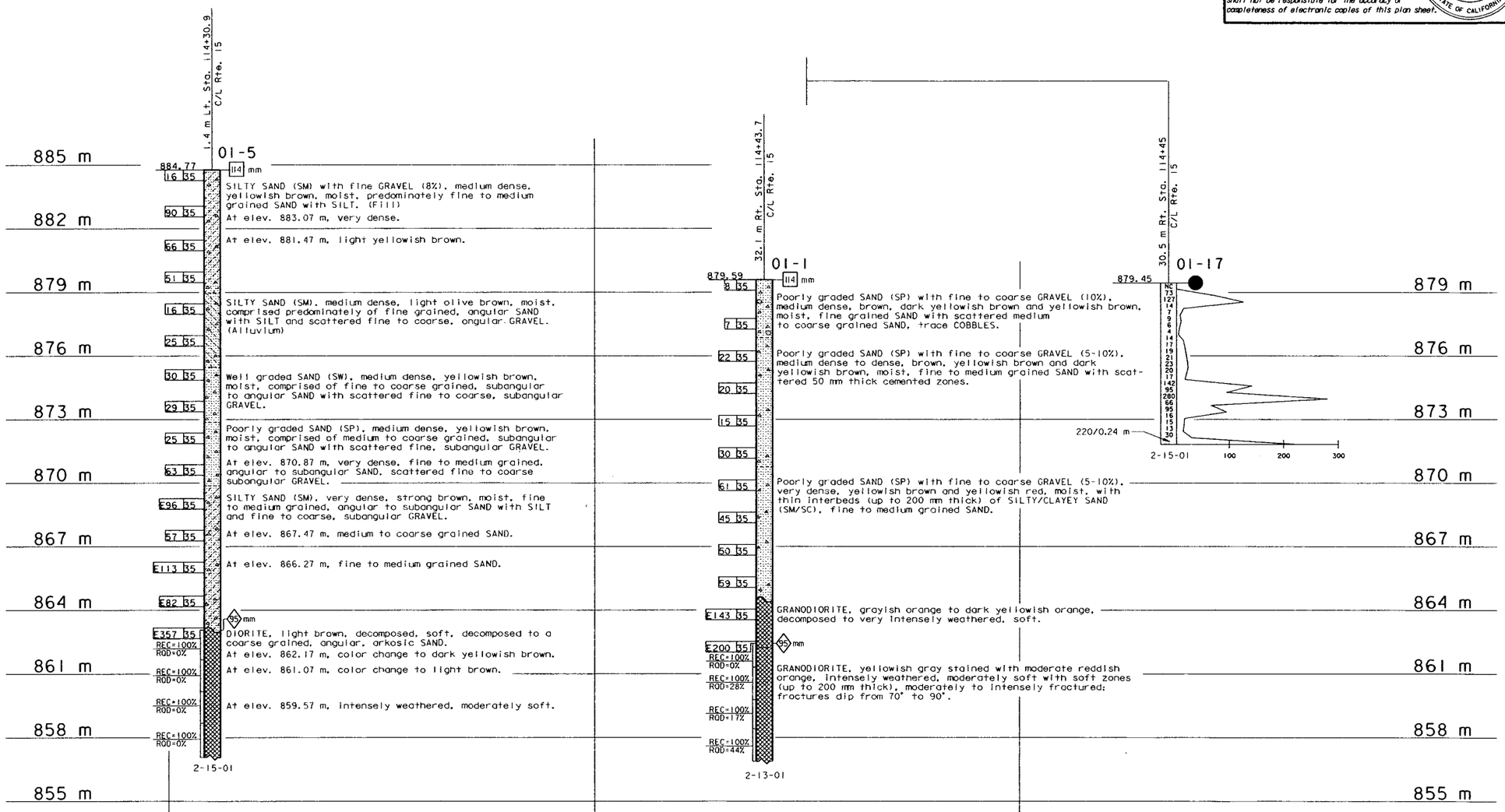
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 7





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

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

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

DISREGARD PRINTS BEARING EARLIER REVISION DATES

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

SHEET OF

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			

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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."

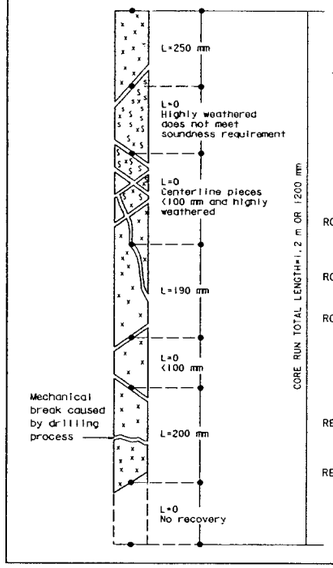
Note: This chart and its horizontal categories are more readily applied to rocks with feldspars and mafic minerals. Weathering in various sedimentary rocks, particularly limestones and poorly indurated sediments, will not always fit the categories established. This chart and weathering categories may 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



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

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

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

ROD = 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 →

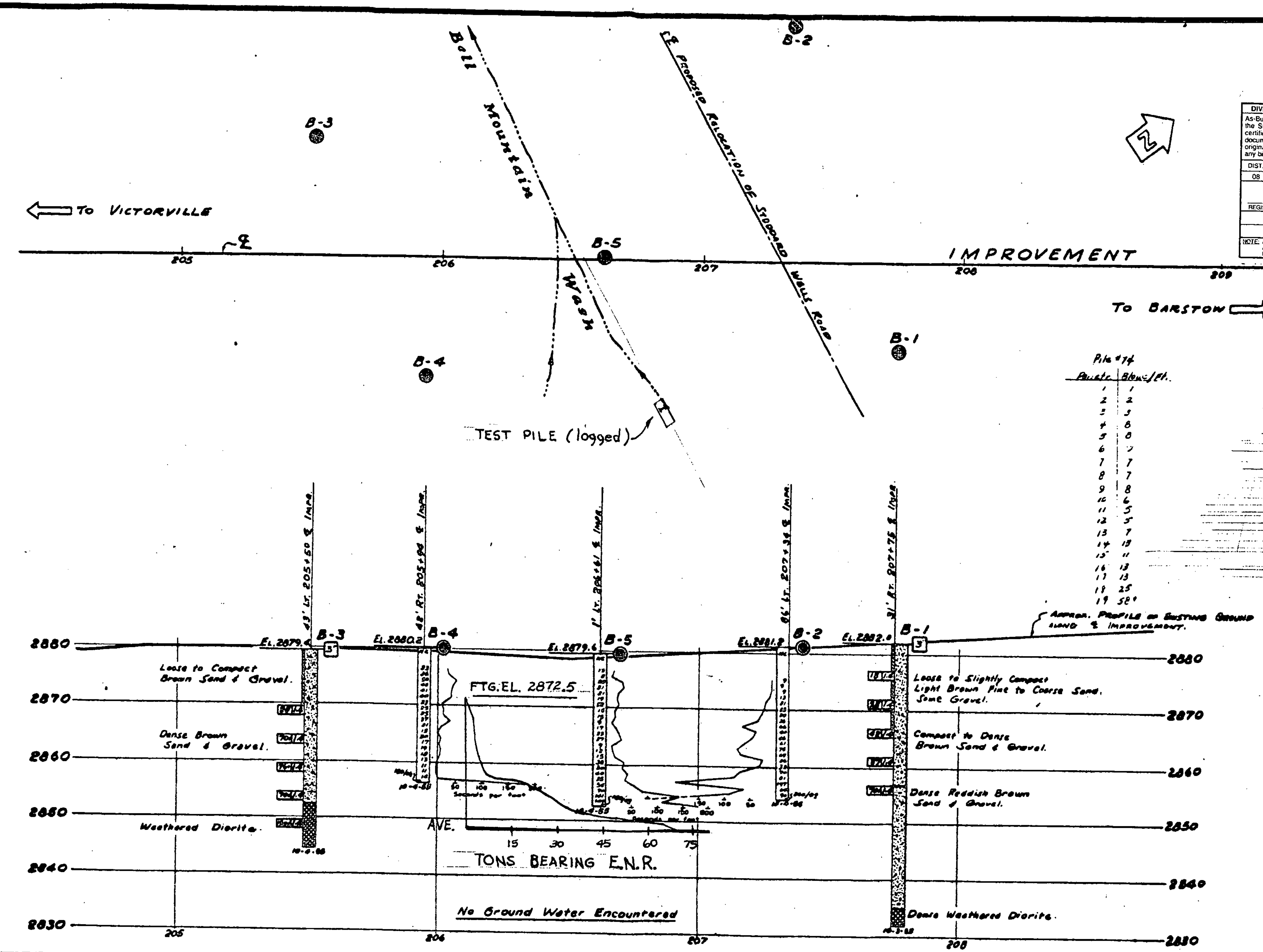
REVISION DATES (PRELIMINARY STAGE ONLY): 10-24-01 | 10-29-01 | 10-30-01

SHEET | OF

FILE => /user/dmslocal/translab/08-355520/bellmtn6.dgn

USERNAME => tabdp DATE PLOTTED => 30 OCT 2001 TIME PLOTTED => 15:43:39

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VIII	SBd	31	D	11	11



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

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.

AS BUILT

CORRECTIONS BY A. Kerchival
CONTRACT NO. 08-119804
DATE 7-25-69

B.M. "D.6" 21-A-54
RWD 2×2 16" Deep, 69½' Rt. Sta. 207+78½ ℄ East Rdbd.
Elev. 2880.12

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			

10/29/01
REGISTERED ENGINEER - CIVIL

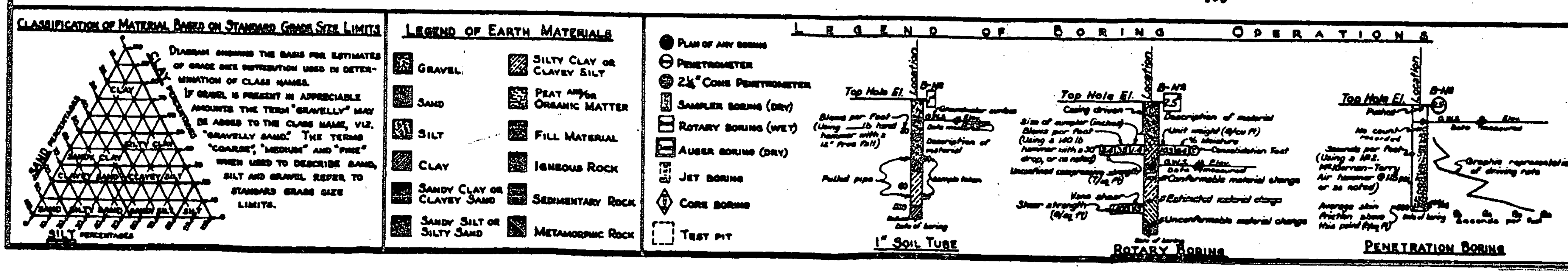
REGISTERED PROFESSIONAL ENGINEER — Mark DeSalvatore — No. 39499 — Exp. 12-31-01 — CIVIL — STATE OF CALIFORNIA

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

BRIDGE DEPARTMENT



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.

58-8VC4-F1

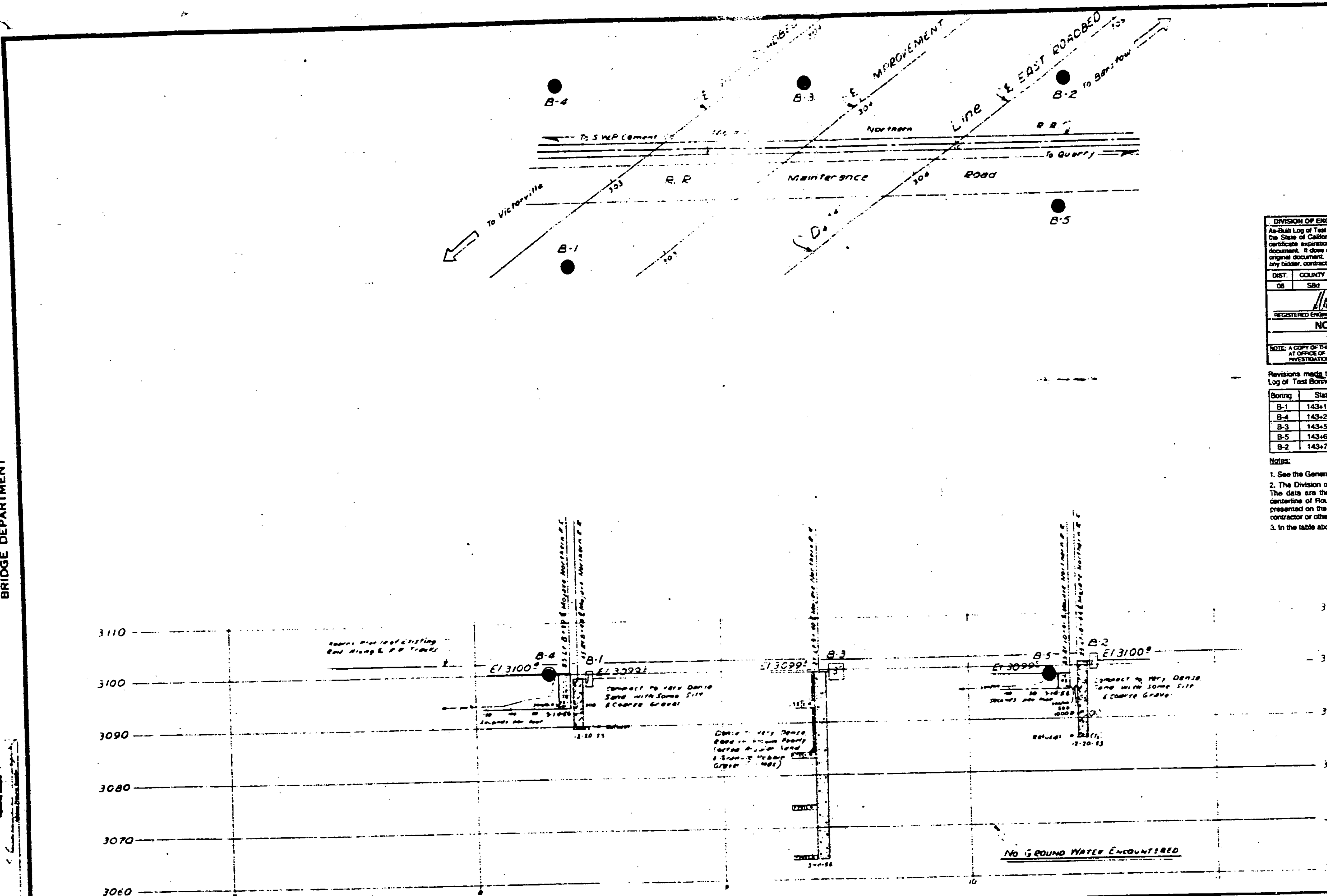
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

BELL MOUNTAIN WASH BRIDGE

LOG OF TEST BORINGS

SCALE Horiz. 1" = 20', Vert. 1" = 10' | BRIDGE 54-499 | FILE E-54 | DRAWING C-4691-11

North Victorville UP



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			

10/29/01

REGISTERED ENGINEER - CIVIL

Registered Professional Engineer — Mark DeSalvatore — No. 39499 — Exp. 12-31-01 — CIVIL — 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

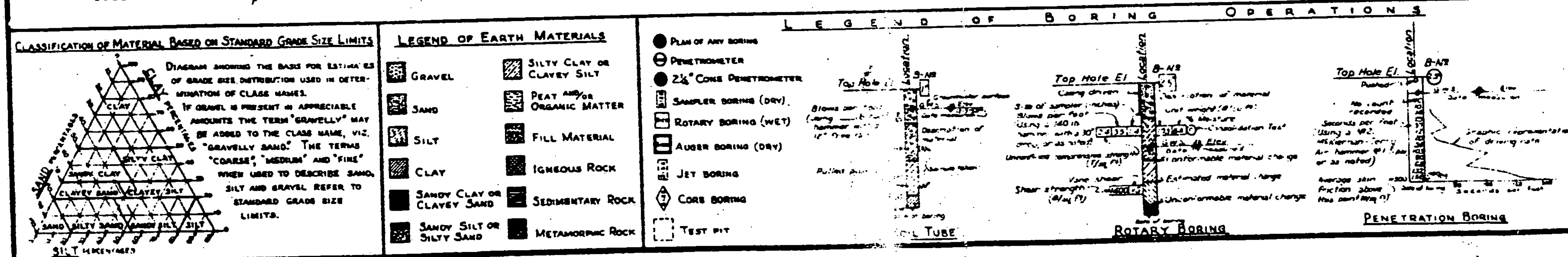
BRIDGE No. 54-1211

Revisions made to this Log of Test Borings from the original 1958 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.



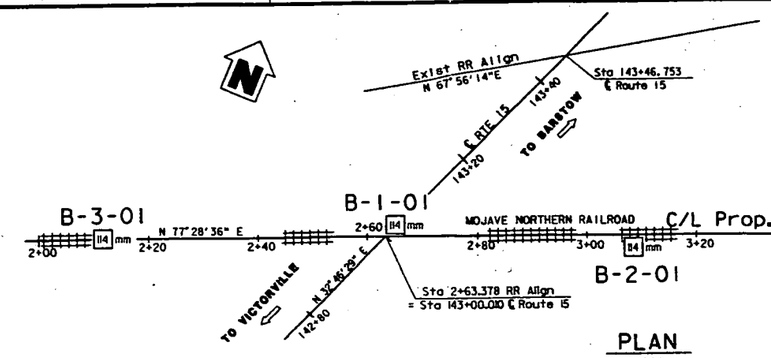
NOTES

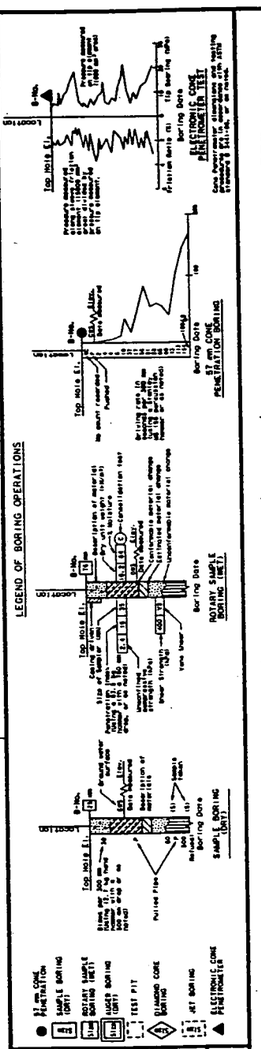
58-8VC-EI

NORTH VICTORVILLE U.P.

LOG OF TEST BORINGS

BRIDGE 54-515





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

Mark DeSalvatore 10-30-01
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 *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

B-3-01

114 mm CLAYEY SAND (SC) with scattered fine to coarse GRAVEL (10%) medium dense, strong brown, moist. (Fill)

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.

From elev. 942.73 to 942.52 m, 200 mm thick interbed of fine SANDY SILT, very dense.

Poorly graded SAND with SILT (SP-SM) and fine GRAVEL (10%), very dense, yellowish brown, moist.

SILTY SAND (SM) with fine GRAVEL (10%), very dense, strong brown, moist.

Poorly graded SAND with SILT (SP-SM) and fine GRAVEL (20%), very dense, yellowish brown, moist.

Well graded SAND (SW) with fine GRAVEL (25%), very dense, yellowish brown, moist.

SILTY SAND (SM) with fine to coarse GRAVEL (10-20%), dense to very dense, moist, primarily fine grained SAND.

From elev. 929.78 to 929.32 m, interbed of poorly graded SAND (SP) with fine GRAVEL (20%), very dense.

B-1-01

114 mm SILTY SAND (SM), medium dense, strong brown, moist, comprised of fine to medium grained SAND & SILT with scattered coarse grained SAND. (Fill)

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)

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)

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)
At elev. 934.96 m, color change to yellowish brown.

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

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.

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)
At elev. 929.56 m, increase in GRAVEL content (25%).

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)
From elev. 927.66 to 927.56 m, moderately cemented zone, cemented with CLAY.
At elev. 925.86 m, decrease in GRAVEL content (7%).

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)

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)
At elev. 923.26 m, increase in GRAVEL content (20%).

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)

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)

B-2-01

114 mm CLAYEY SAND (SC) with fine to coarse GRAVEL (10%), medium dense, brown & strong brown, moist.

SILTY SAND (SM) with scattered GRAVEL (5-10%), very dense, strong brown, moist, primarily fine to medium grained SAND.

Poorly graded SAND (SP), with fine to coarse GRAVEL (10%), very dense and dense, strong brown and yellowish brown, moist.

SILTY SAND (SM) with trace fine GRAVEL (5%), very dense, light yellowish brown, moist.

Poorly graded SAND (SP), with scattered fine GRAVEL (10%), very dense yellowish brown, moist.

SILTY SAND (SM) with scattered fine GRAVEL (5-10%), dense to very dense, strong brown and yellowish brown, moist, primarily fine grained SAND.

SANDY SILT (ML) with trace fine GRAVEL (<5%), very dense, yellowish brown, moist.

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 classificaions 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 pentration 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

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	M. Spahn 10/01

FIELD INVESTIGATION BY:
H. Valencio, M. Pagenkopp

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

BRIDGE NO. 54-1211
KILOMETER POST 79.2

NORTH VICTORVILLE UP (REPLACE)

LOG OF TEST BORINGS 1 OF 2

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

CU 08
EA 355571

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 10-08-01 10-30-01

REVISION DATES (PRELIMINARY STAGE ONLY) SHEET OF

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

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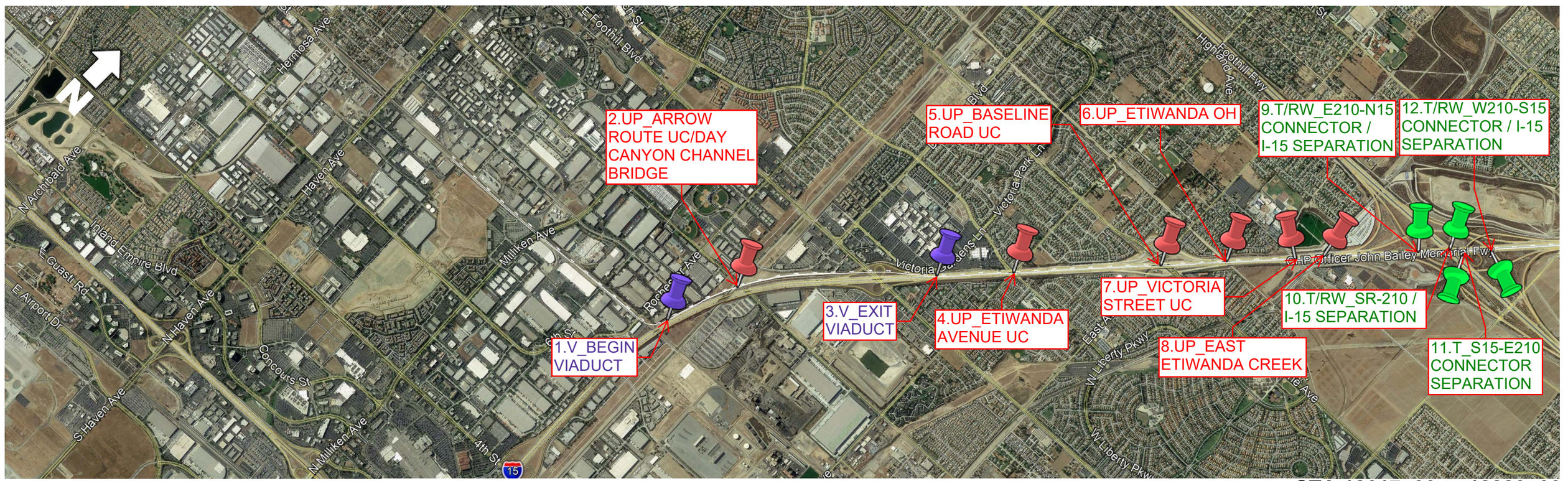
APPENDIX B
LOCATIONS OF PROPOSED STRUCTURES



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

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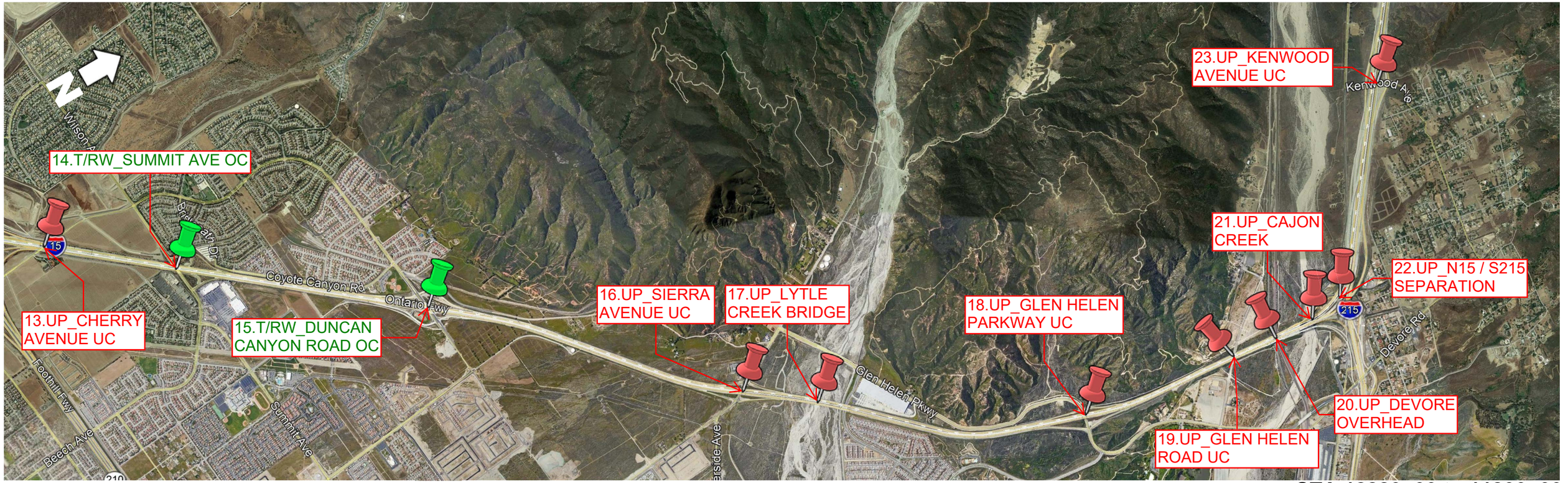

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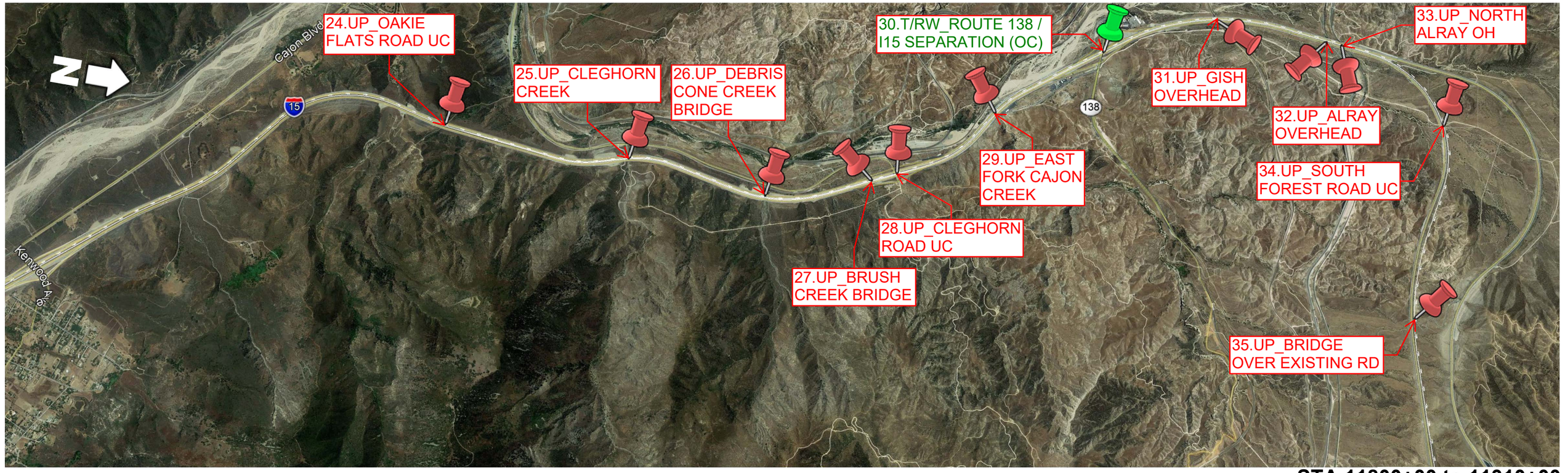
07/31/20



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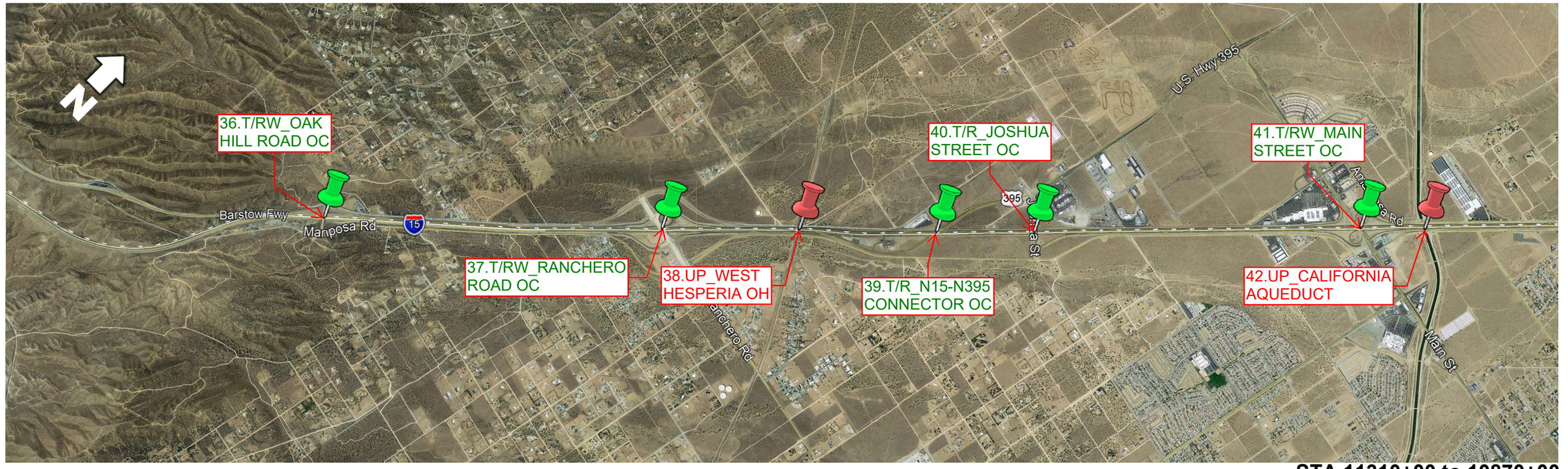

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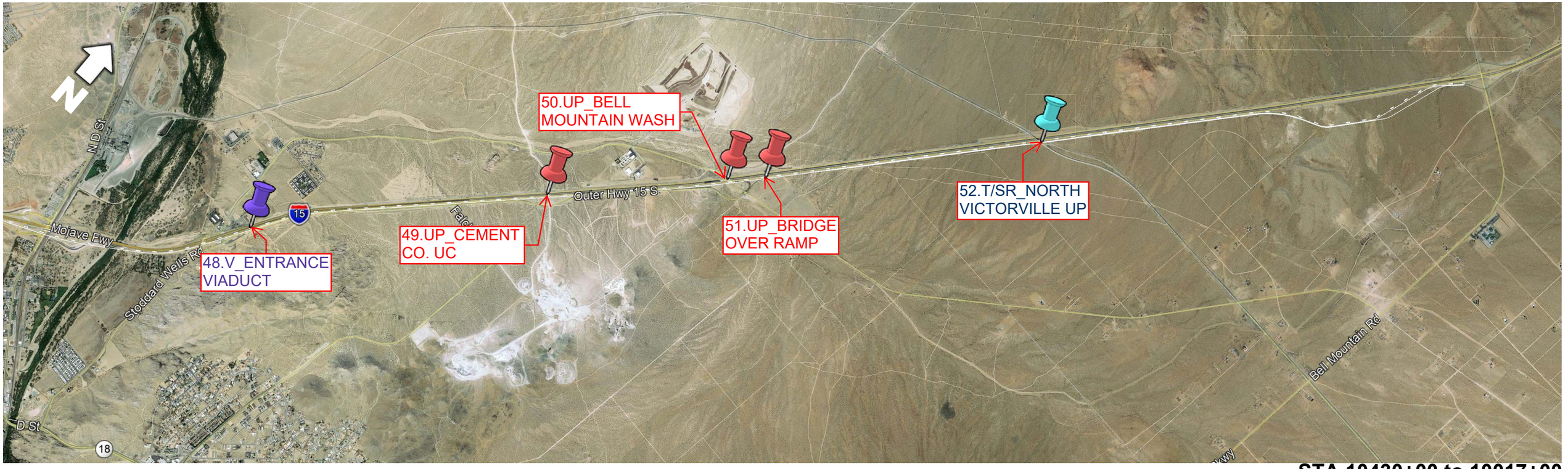
07/31/20

STA 10870+00 to 10430+00



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07/31/20