

INFORMATION HANDOUT

For Contract No. 11-407604
At 11-SD-5,8,52-Var

Identified by
Project ID 1100020422

11-407604
11-SD-5,8,52-Var
Project ID 1100020422

MATERIALS INFORMATION

Geotechnical Design Report

- Geotechnical Design Report, dated February 12, 2015

Site Investigation Report

- Lead Investigation Report, dated September 2014

Memorandum

*Flex Your Power!
Be energy efficient!*

To: Richard Estrada
Traffic Project Development
District 11 MS 230

Date: February 12, 2015

File: 11-SD-5, 8, & 52
EA: 11-40760
EFIS: 1100020422

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Geotechnical Services
Office of Geotechnical Design–South 2, Branch D

Subject: **Geotechnical Design Report for Proposed Concrete Barriers at Various Locations on Interstate 5, Interstate 8, and State Route 52.**

Introduction

Pursuant to your request dated January 29, 2015, the Office of Geotechnical Design-South 2 (OGDS2) is providing this Geotechnical Design Report to be used for project design and construction. Layout plans received January 29, 2015 depict construction of concrete barriers at five locations along Interstate 5 (I-5), Interstate 8 (I-8), and State Route 52 (SR-52) at various locations. Layout plans are presented in Appendix I.

No cross sections were provided by District 11 Design staff showing the exact position of the concrete barriers. However, in a spread sheet prepared by the District 11 Design staff, the positions of the concrete barriers relative to the existing slopes have been described. The spread sheet is included in the Appendix I.

Exploration

No drilling or soil sampling was performed for this report. All soil information gathered for this report was obtained from geologic maps and field observations.

Geotechnical Conditions

The following subsections describe the geotechnical conditions at the proposed barrier locations of geotechnical significance.

Location 2

The proposed concrete barrier is located close to the top of the existing slope at the left shoulder of the eastbound State Route 75 (Palm Avenue) to northbound I-5 connector at “I-5, PM 4.7”. The off ramp has been constructed on fill. The slope is inclined as steep as 2.5:1. The height of the slope is approximately 15 feet. The slope is well vegetated and performing well. The site is underlain by engineered fill predominantly comprised of fine to medium grained sand derived from materials excavated from nearby cuts in the Bay Point Formation.

Location 7

The proposed concrete barrier is located at the right shoulder of northbound I-5 at the Damon Street Undercrossing (PM 23.7) at the toe of an existing cut slope which borders the northbound freeway shoulder. The slope is inclined as steep as 2.5:1. The height of the slope is approximately 7 feet. The slope is well vegetated and performing well. The subsurface materials in the area are predominantly comprised of fine and medium grained sandstone of the Bay Point Formation.

Location 17

The proposed concrete barrier is located at the toe of the existing slope at left shoulder of westbound I-8 off ramp at the Morena Boulevard Undercrossing (PM R0.6). The slope is inclined as steep as 3:1. The height of the slope is approximately 8 feet. The slope is well vegetated and performing well. The site is underlain by engineered fill, which is underlain by alluvium.

Location 19

The proposed concrete barrier is located at the right shoulder of eastbound I-8 (PM 1.1) at the toe of an existing cut slope which borders the eastbound freeway shoulder. The slope is inclined as steep as 2:1. The height of the slope is approximately 20 feet. The slope is well vegetated and performing well. The site is underlain by medium grained sandstone of the Mission Valley Formation.

Location 26

The proposed concrete barrier is located at the toe of the existing fill slope at the left shoulder of eastbound SR-52 off ramp at the San Clemente Creek Bridge (PM 2.3). The slope is inclined as steep as 3:1. The height of the slope is approximately 8 feet. The slope is well vegetated and performing well. The site is underlain by engineered fill, which is underlain by alluvium.

Recommendations and Conclusions

Recommendations for the concrete barriers are presented in Table 1. The following paragraph presents a guideline for selecting concrete barrier type relative to the amount of shoulder backing and steepness of the slopes:

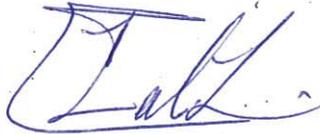
The proposed concrete barriers may be designed and constructed utilizing Caltrans Standard Plan Type 60, and Type 60 Modified. A Type 60 barrier is appropriate where 3 feet or more of level shoulder backing exists between the barrier and a descending slope inclined no steeper than 2:1. A Type 60 Modified barrier is appropriate at locations where 3 feet of level shoulder backing exists adjacent to slopes inclined more steeply than 2:1. Also a Type 60 Modified barrier is appropriate at locations where concrete barrier is located at the toe of the slope and retains soil.

A Type 60 modified concrete barrier is similar to a Caltrans Standard Plan Concrete Barrier Type 60 Section B (sheet A76B), except that the embedment depth should be a minimum of 24 inches to provide sufficient lateral resistance to forces that will act on the barrier. Two illustrative sketches of a Type 60 modified concrete barrier are provided in Figure 1.

Other Considerations

1. The on-site soils may generally be excavated with conventional equipment.
2. Concentrated surface water should not be allowed to pond behind the concrete barriers. Surface water should be contained by appropriate drainage improvements.

Our Office will be available for further assistance as needed. Should you have any questions, please call Ali Lari at (858) 467-6922.



Ali Lari, P.E.
Transportation Engineer (Civil)
Office of Geotechnical Design - South 2



Attachments:

- Figure 1: Type 60 Modified Concrete Barrier
- Table 1: Recommended Concrete Barrier Types
- Appendix I: Documents provided by District-11-Design

CC List:

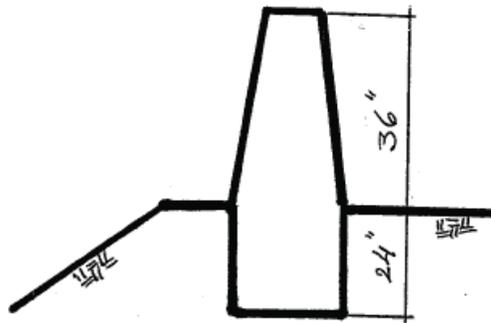
Art Padilla
Abbas Abghari
Shawn Wei
Brian Hinman - RICHARD RUSNAK FOR
Barzan Aran B. HINMAN

<http://10.160.173.158/>
District Construction RE Pending File

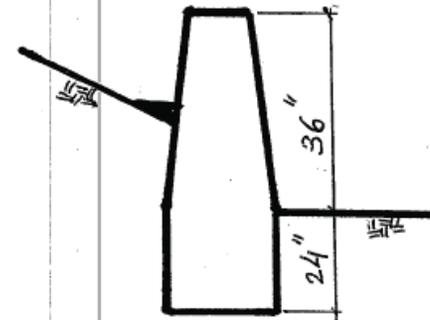
District Materials Engineer
Office Chief, OGDS2
Branch Chief, OGDS2-Branch D
Lead Worker, OGDS2-Branch D
Project Engineer
Geotechnical Services Archives
RE_Pending_File@dot.ca.gov

Modified Concrete Barrier

Type 60



Barrier At Slope Top Hinge



Barrier At Slope Toe Hinge

Figure 1

Table 1
Concrete Barriers Types

Location	Route	PM	Direction	Side	Begin Station	End Station	Barrier Type	Length (feet)
2	I-5	4.7	EB (SR-75)	Left	272+34	274+21	Type 60	187
7	I-5	23.7	NB (I-5)	Right	1282+95	1283+96	Modified Type 60	100
17	I-8	R0.6	WB (I-8)	Left	100+10	100+40	Type 60	30
19	I-8	1.1	EB I-8)	Right	191+03	192+42	Modified Type 60	140
26	SR-52	2.5	EB (SR-52)	Left	147+89	149+88	Type 60	200

Appendix I

District	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5,8,52	Var		

REGISTERED CIVIL ENGINEER	DATE
BARZAN A. ARAN	
No. C75167	
Exp. 12/31/15	
CIVIL	
STATE OF CALIFORNIA	

PLANS APPROVAL DATE _____

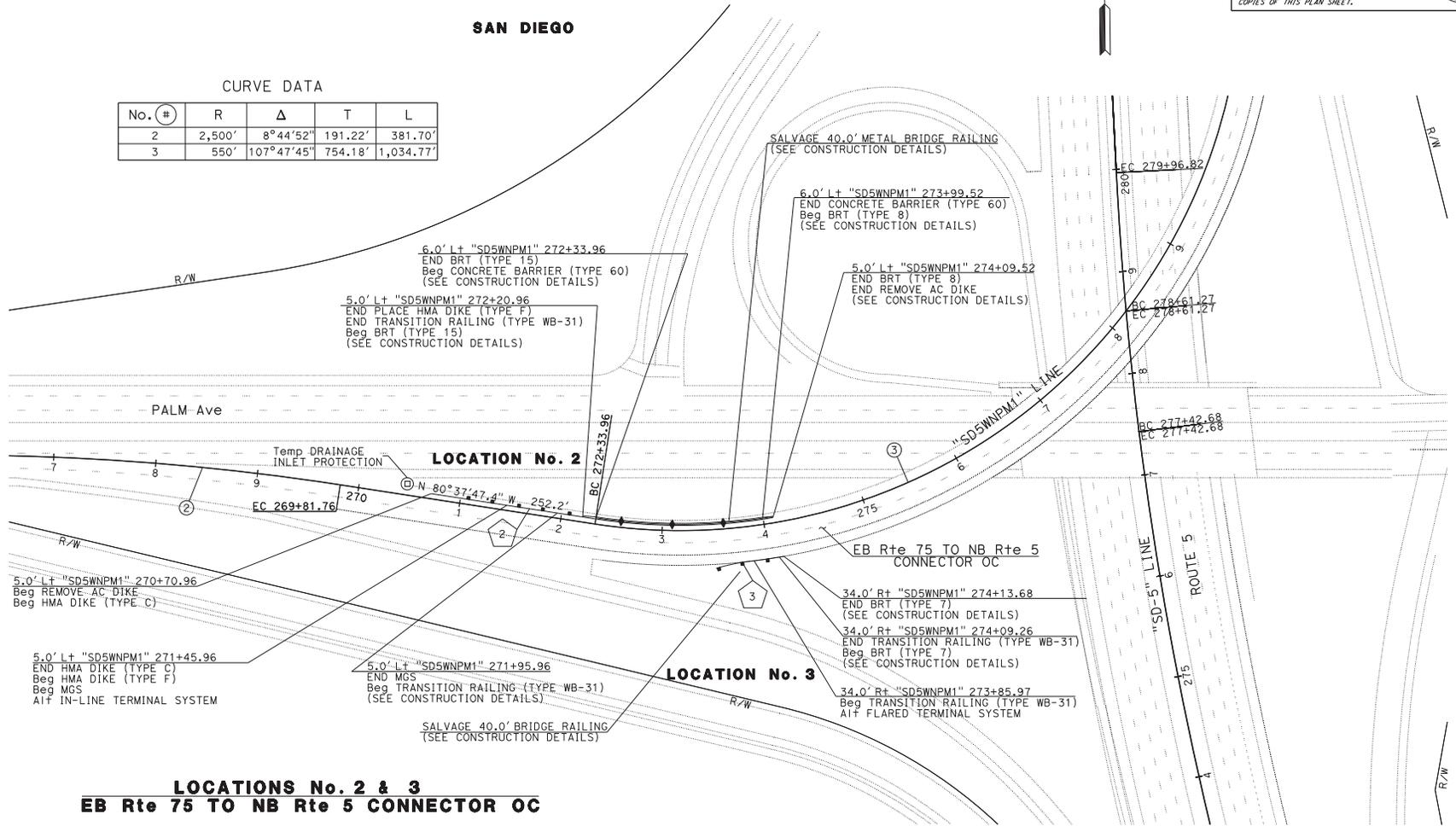
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SAN DIEGO

CURVE DATA

No. (#)	R	Δ	T	L
2	2,500'	8°44'52"	191.22'	381.70'
3	550'	107°47'45"	754.18'	1,034.77'



**LOCATIONS No. 2 & 3
 EB Rte 75 TO NB Rte 5 CONNECTOR OC**

SCALE: 1" = 50'

**LAYOUT
 L-2**

BORDER LAST REVISED 7/1/2010

USERNAME => s109745
 DGN FILE => 1100020422ea002.dgn

RELATIVE BORDER SCALE
 15 IN. INCHES



UNIT 2771

PROJECT NUMBER & PHASE

11000204221

LAST REVISION DATE PLOTTED => 29-JAN-2015
 10-13-14 TIME PLOTTED => 09:08

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11	SD	5, 8, 52	Var	

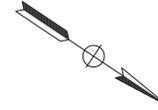
REGISTERED CIVIL ENGINEER	DATE
BARZAN A. ARAN	
No. C75167	
Exp. 12/31/15	
CIVIL	

PLANS APPROVAL DATE _____

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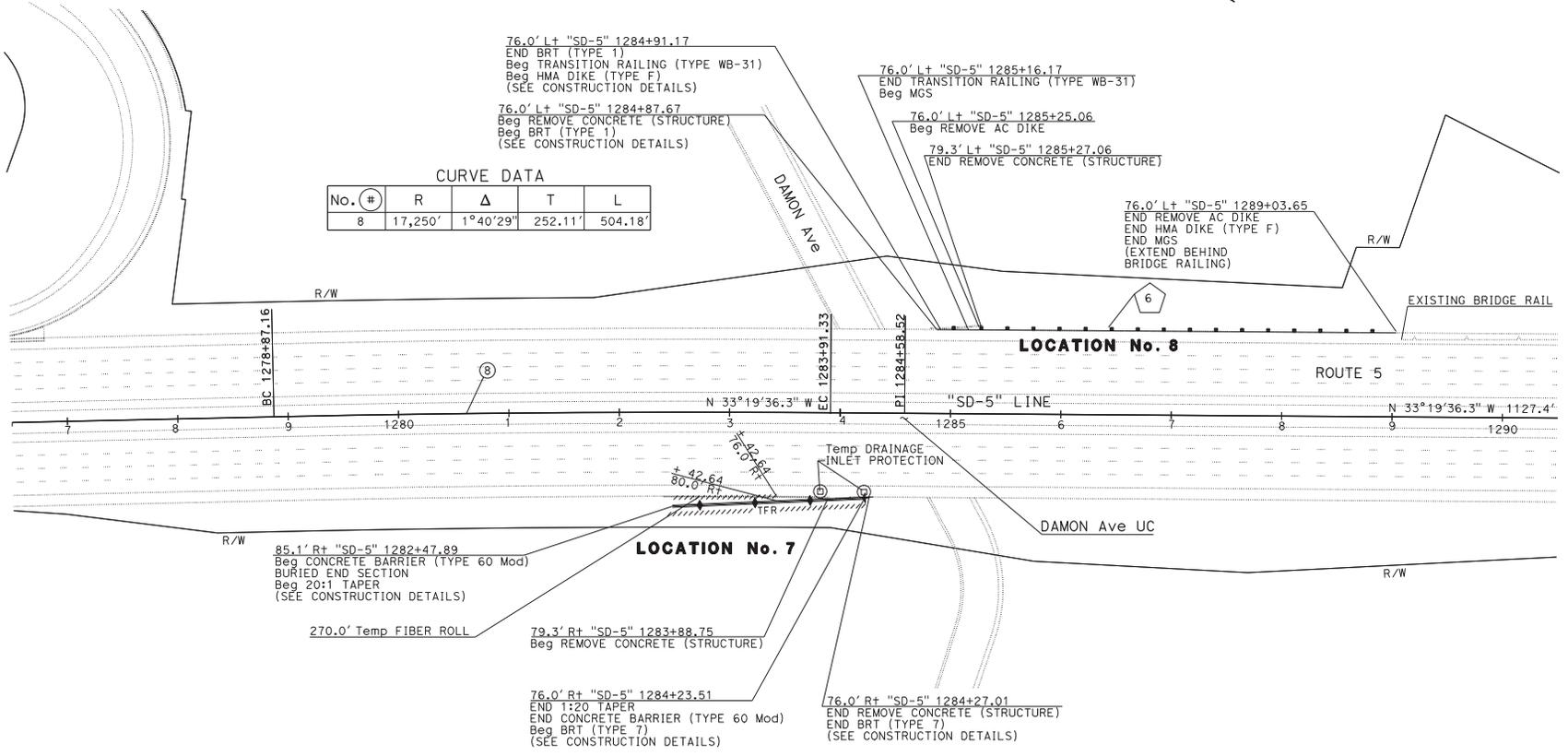
NOTE:
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SAN DIEGO



CURVE DATA

No. (#)	R	Δ	T	L
8	17,250'	1°40'29"	252.11'	504.18'



**LOCATIONS No. 7 & 8
 DAMON Ave UC**

SCALE: 1" = 50'

**LAYOUT
 L-6**

BORDER LAST REVISED 7/1/2010

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 DGN FILE => 1100020422ea006.dgn



UNIT 2771

PROJECT NUMBER & PHASE

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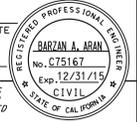
LAST REVISION | DATE PLOTTED => 29-JAN-2015
 10-13-14 | TIME PLOTTED => 09:08

District	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5, 8, 52	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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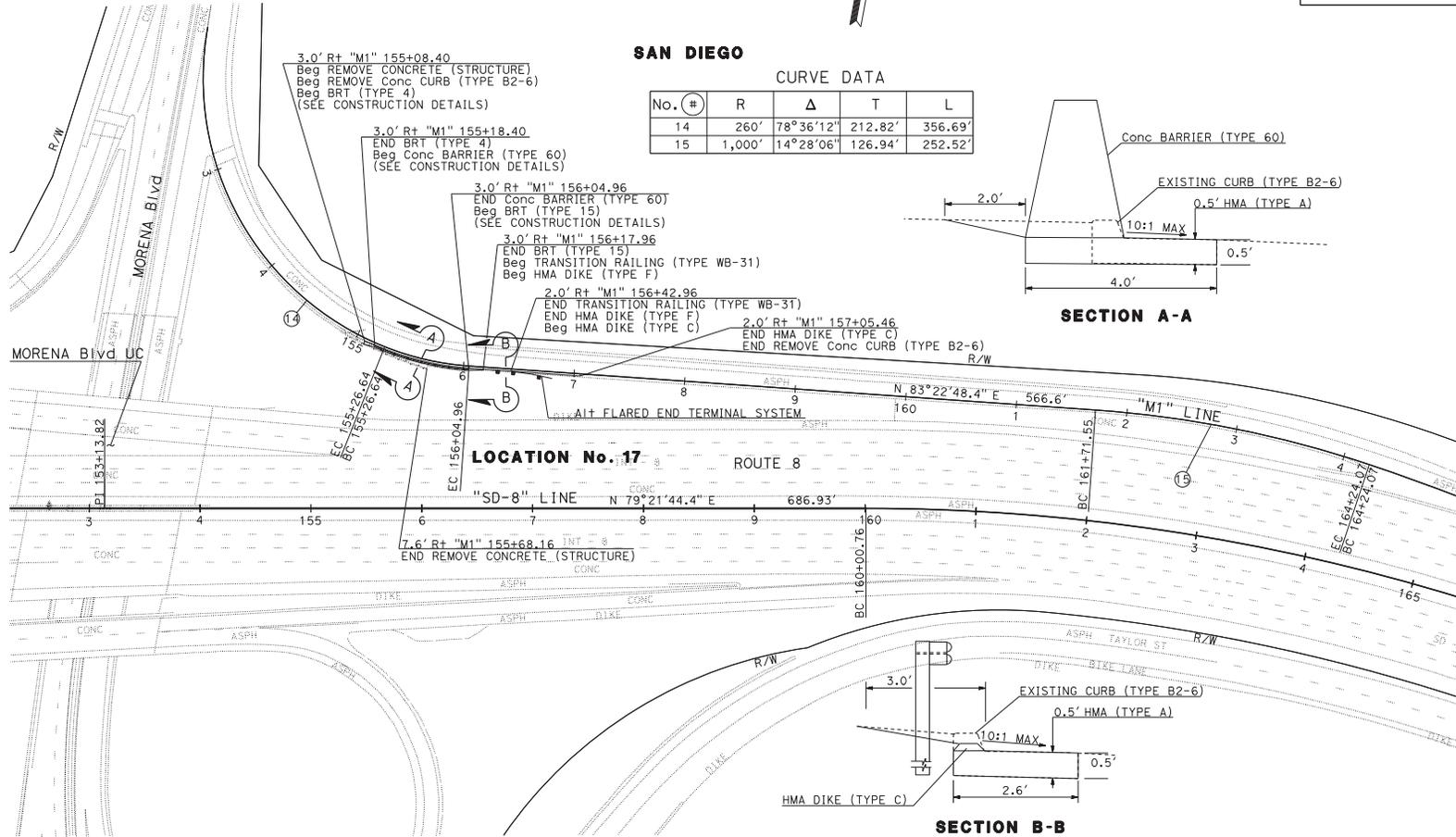


NOTE:
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

SAN DIEGO

CURVE DATA

No. #	R	Δ	T	L
14	260'	78°36'12"	212.82'	356.69'
15	1,000'	14°28'06"	126.94'	252.52'



**LOCATION No. 17
 SAN DIEGO RIVER BR (MORENA Blvd)**

SCALE: 1" = 50'

**LAYOUT
 L-14**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DRAWN BY	REVISIONS
Caltrans PROJECT DEVELOPMENT	RICHARD ESTRADA	DESIGNED BY	DATE
		CHECKED BY	REVISED BY
			DATE
			REVISOR
			DATE
			REVISOR
			DATE

LAST REVISION DATE PLOTTED => 29-JAN-2015
 10-13-14 TIME PLOTTED => 09:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5, 8, 52	Var		

REGISTERED CIVIL ENGINEER DATE _____
 BARZAN A. ARAN
 No. C75167
 Exp. 12/31/15
 CIVIL
 STATE OF CALIFORNIA

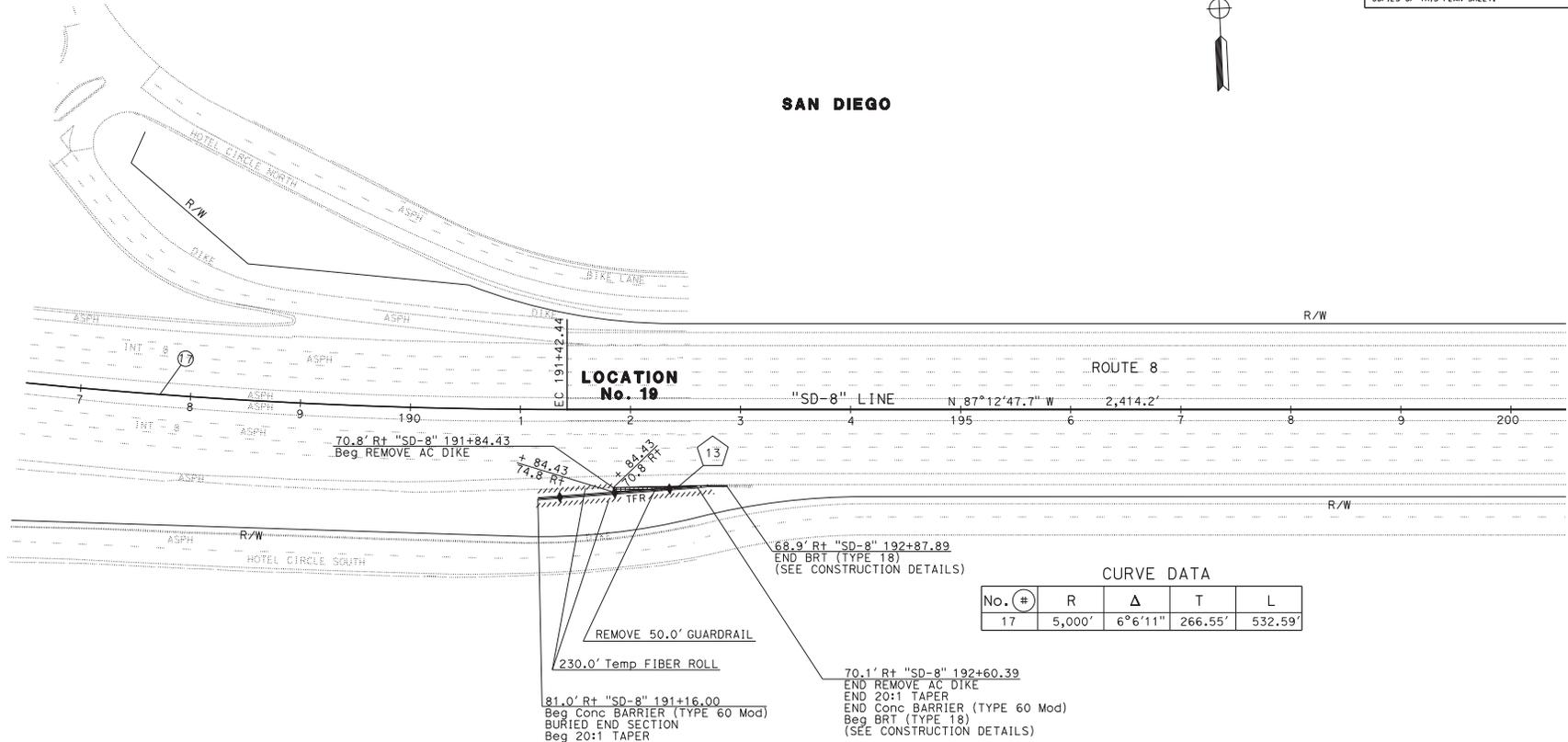
PLANS APPROVAL DATE _____

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REVISOR: BARZAN ARAN, DONI DE CASTRO, RICHARD ESTRADA
 DESIGNED BY: CALICULATED-DESIGNED BY
 CHECKED BY: CHECKED BY
 SUPERVISOR: RICHARD ESTRADA
 PROJECT: TRAFFIC PROJECT DEVELOPMENT



CURVE DATA

No. (⊕)	R	Δ	T	L
17	5,000'	6°6'11"	266.55'	532.59'

**LOCATION No. 19
 EAST OF PRESIDIO PARK OC**

SCALE: 1" = 50'

**LAYOUT
 L-16**

LAST REVISION: DATE PLOTTED => 29-JAN-2015
 10-13-14 TIME PLOTTED => 09:08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5, 8, 52	Var		

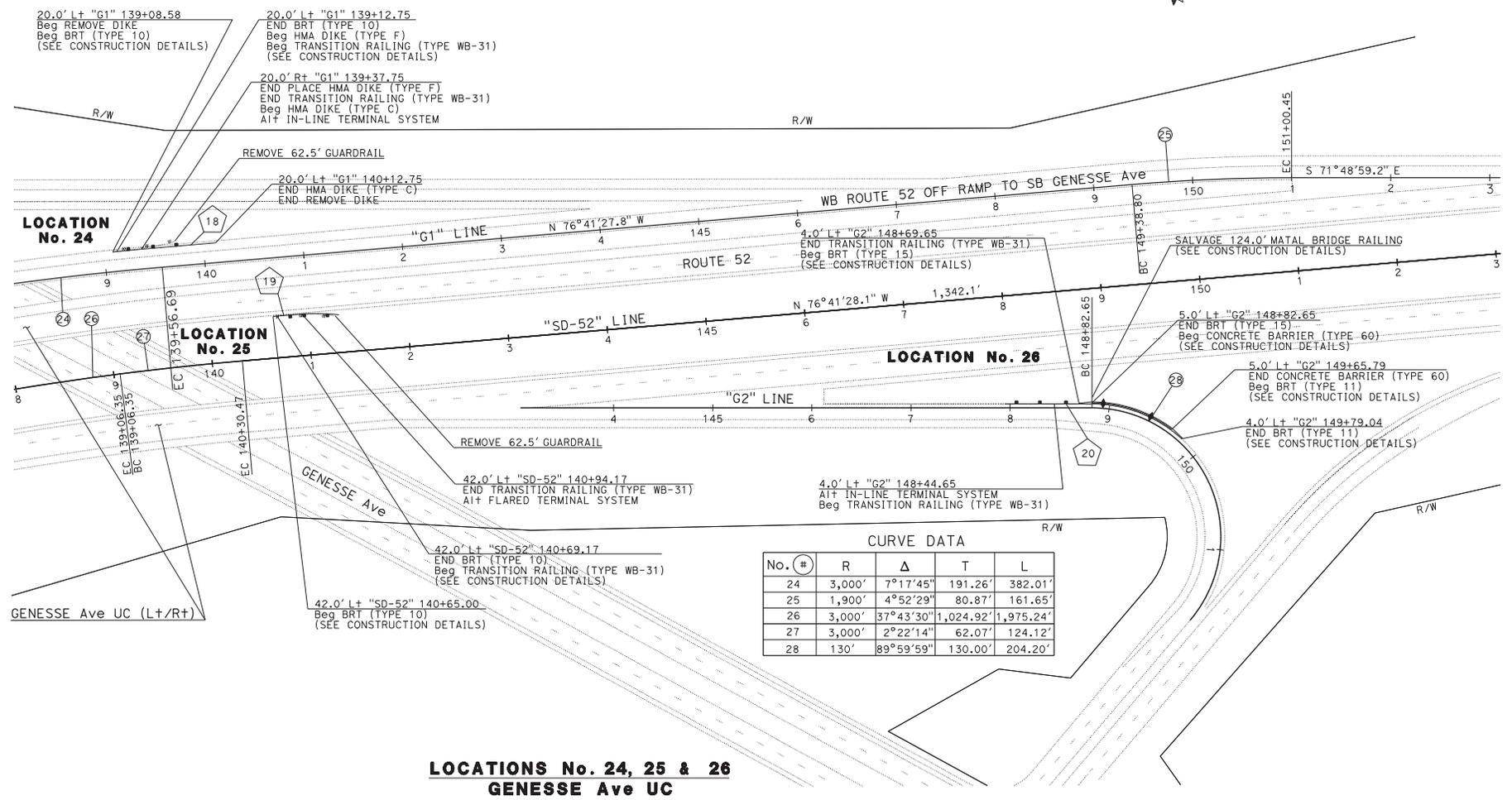
REGISTERED CIVIL ENGINEER DATE
 BARZAN A. ARAN No. C75167 Exp. 12/31/15
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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SAN DIEGO



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 FUNCTIONAL SUPERVISOR RICHARD ESTRADA
 CALCULATED/DESIGNED BY CHECKED BY
 BARZAN ARAN DONI DE CASTRO
 REVISED BY DATE REVISED



CURVE DATA

No. (●)	R	Δ	T	L
24	3,000'	7°17'45"	191.26'	382.01'
25	1,900'	4°52'29"	80.87'	161.65'
26	3,000'	37°43'30"	1,024.92'	1,975.24'
27	3,000'	2°22'14"	62.07'	124.12'
28	130'	89°59'59"	130.00'	204.20'

**LOCATIONS No. 24, 25 & 26
 GENESSEE Ave UC**

SCALE: 1" = 50'

**LAYOUT
 L-20**

LAST REVISION DATE PLOTTED => 29-JAN-2015 10-13-14 TIME PLOTTED => 09:08

11-407601
LOCATIONS PER PDGR
1/22/2015

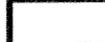
Location # per PGDR	Location # per Latest Plans (1/22/2015)	Rte	PM	Dir	Side	Beg STA	End STA	Location Description	Recommendations per PDGR	Proposed Concrete Barrier per Plans (1/29/2015)	Comments
2	ELIMINATED	I-5	3.2	SB	Lt	243+27	244+02	SB I-5 TO EB SR-905, NE CONNECTOR OC			
6	2	I-5	4.7	EB	Lt	272+34	274+21	EB SR-75 TO NB I-5 CONNECTOR OC	TYPE 60/TYPE 60 MOD	TYPE 60	Proposed Barrier located at TOP of slope with existing hinge at approximately 3-4 feet
14	7	I-5	23.7	NB	Rt	1282+95	1283+96	DAMON St UC	TYPE 60 MOD	TYPE 60 MOD	Proposed Barrier located at TOE of slope/ES with buried end section
28	17	I-8	R0.6	WB	Lt	100+10	100+40	SAN DIEGO RIVER Br (MORENA Blvd)	TYPE 60 MOD	TYPE 60	Design revised: Proposed Barrier located at TOE of slope/ES with NO buried end section
30	19	I-8	1.1	EB	Rt	191+03	192+42	EAST OF PRESIDIO OC	TYPE 60 MOD	TYPE 60 MOD	Proposed Barrier located at TOE of slope/ES with buried end section
38	26	SR-52	2.5	EB	Lt	147+89	149+88	SAN CLEMENT CREEK Br	TYPE 60 MOD	TYPE 60	Design revised: Proposed Barrier located at TOE of slope/ES with NO buried end section

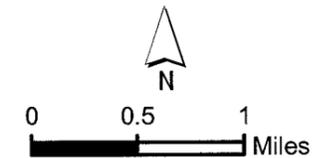


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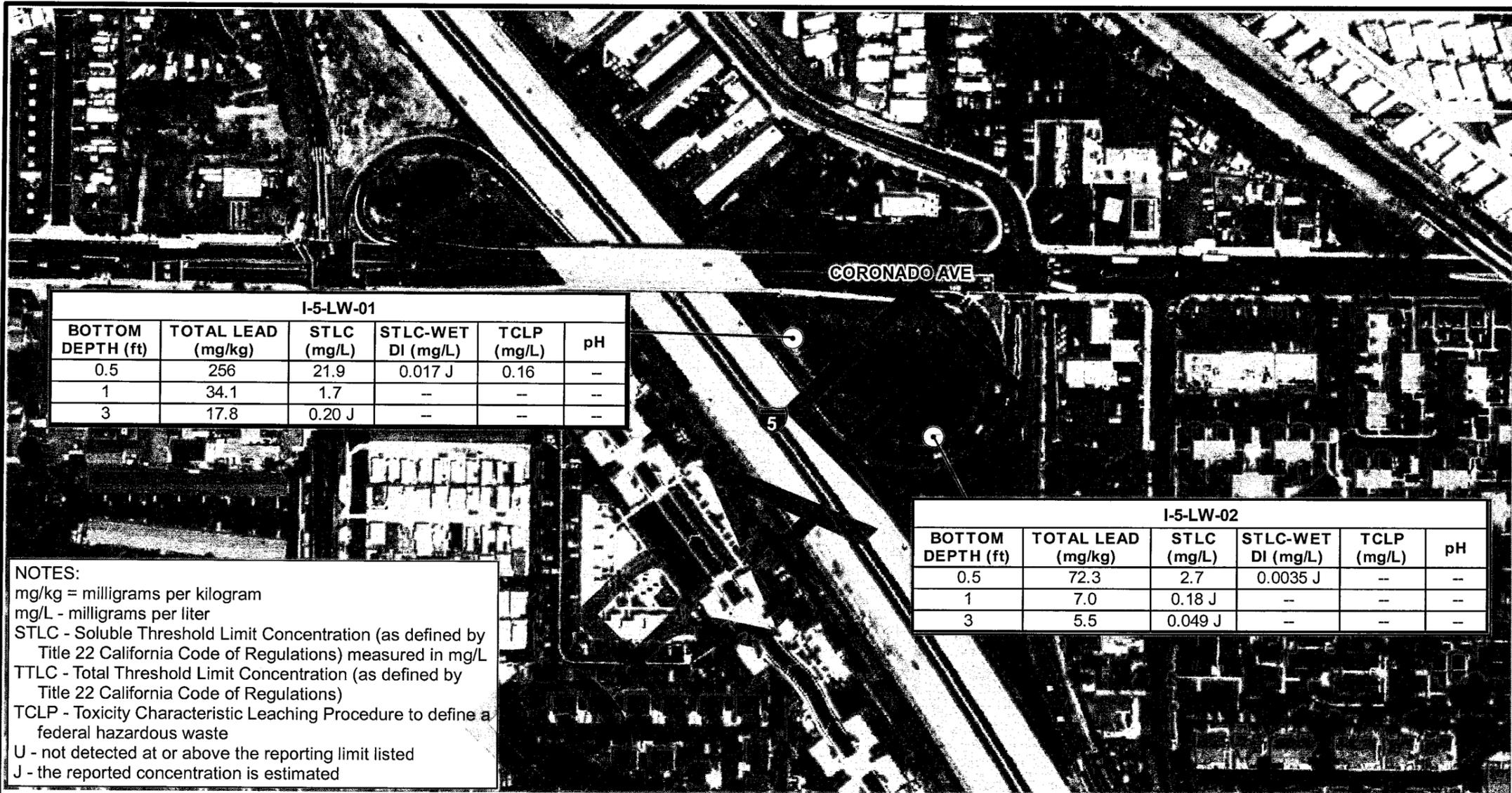
LEGEND

 PLATE BOUNDARY



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 <p>KLEINFELDER Bright People. Right Solutions.</p>	<p>PROJECT NO: 20152475.001A 02-1000 DRAWN BY: E D GOFF CHECKED BY: K MCDONNELL DATE: SEPTEMBER 2014</p> <p>GeomorphIS</p>	<p>SITE LOCATION MAP</p> <p>ADL Study for Ramp Meter Project Caltrans EA 11-14000045 Task Order 21 I-5, San Diego and Chula Vista, California</p>	<p>PLATE</p> <p>1</p>
---	---	--	------------------------------



I-5-LW-01					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	256	21.9	0.017 J	0.16	--
1	34.1	1.7	--	--	--
3	17.8	0.20 J	--	--	--

I-5-LW-02					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	72.3	2.7	0.0035 J	--	--
1	7.0	0.18 J	--	--	--
3	5.5	0.049 J	--	--	--

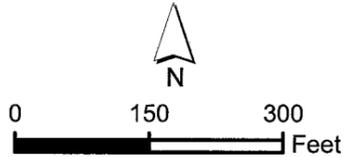
NOTES:
 mg/kg = milligrams per kilogram
 mg/L - milligrams per liter
 STLC - Soluble Threshold Limit Concentration (as defined by Title 22 California Code of Regulations) measured in mg/L
 TTLC - Total Threshold Limit Concentration (as defined by Title 22 California Code of Regulations)
 TCLP - Toxicity Characteristic Leaching Procedure to define a federal hazardous waste
 U - not detected at or above the reporting limit listed
 J - the reported concentration is estimated

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LEGEND

○ SAMPLE LOCATION



PROJECT NO: 20152475.001A 02-3000
 DRAWN BY: E D GOFF
 CHECKED BY: C NOLAND
 DATE: JANUARY 2015

GeomorphIS

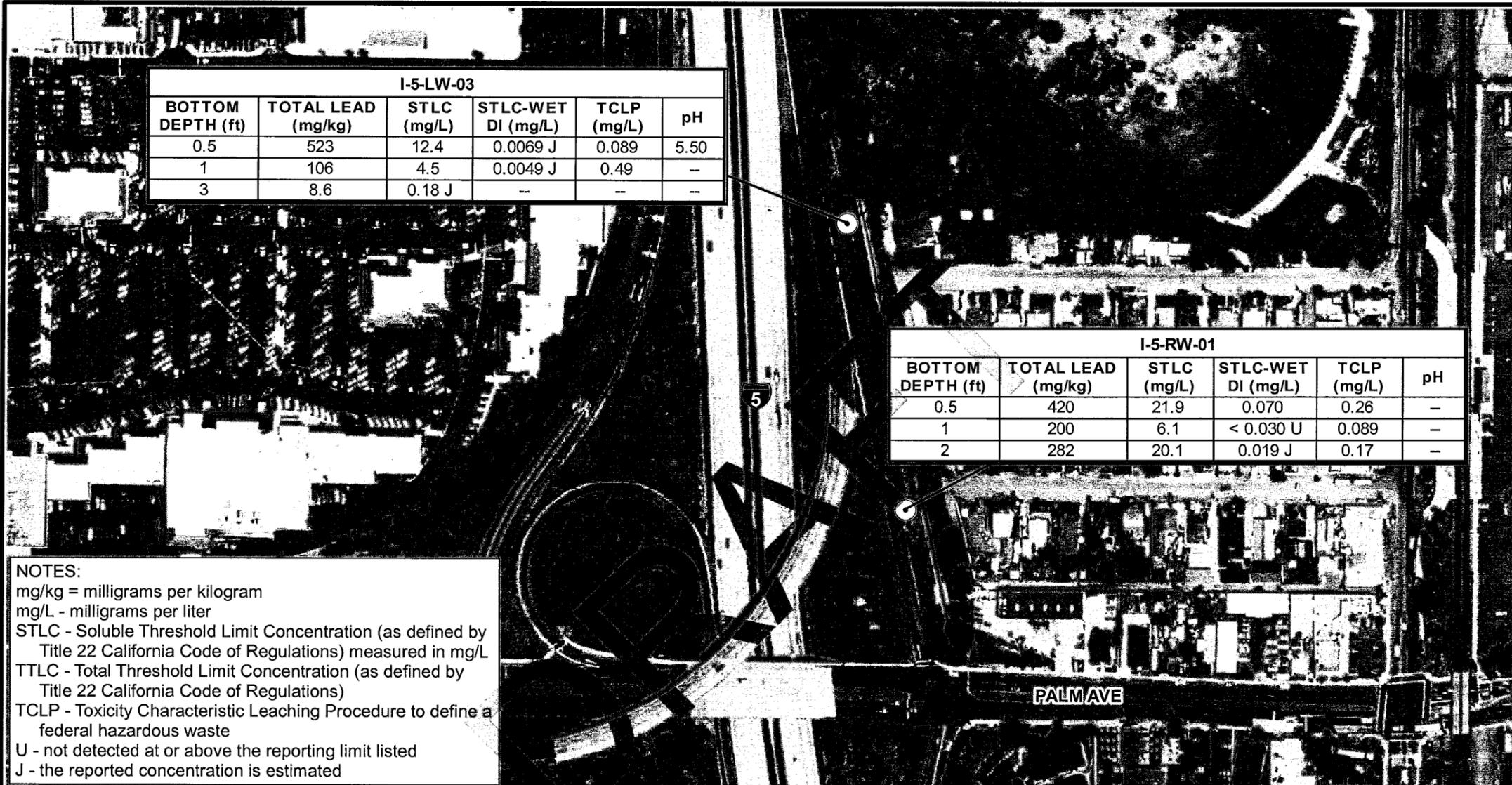
SAMPLE LOCATION MAP

ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE
2a

File: C:\Projects\Kleinfelder\Caltrans\TO21\Mapping\TO21_FinalResults2a.mxd

File: C:\Projects\Kleinfelder\Caltrans\TO21\Mapping\TO21_FinalResults2b.mxd



I-5-LW-03					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	523	12.4	0.0069 J	0.089	5.50
1	106	4.5	0.0049 J	0.49	--
3	8.6	0.18 J	--	--	--

I-5-RW-01					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	420	21.9	0.070	0.26	--
1	200	6.1	< 0.030 U	0.089	--
2	282	20.1	0.019 J	0.17	--

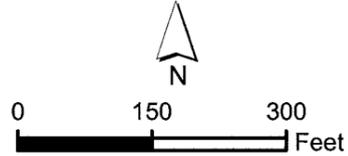
NOTES:
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LEGEND

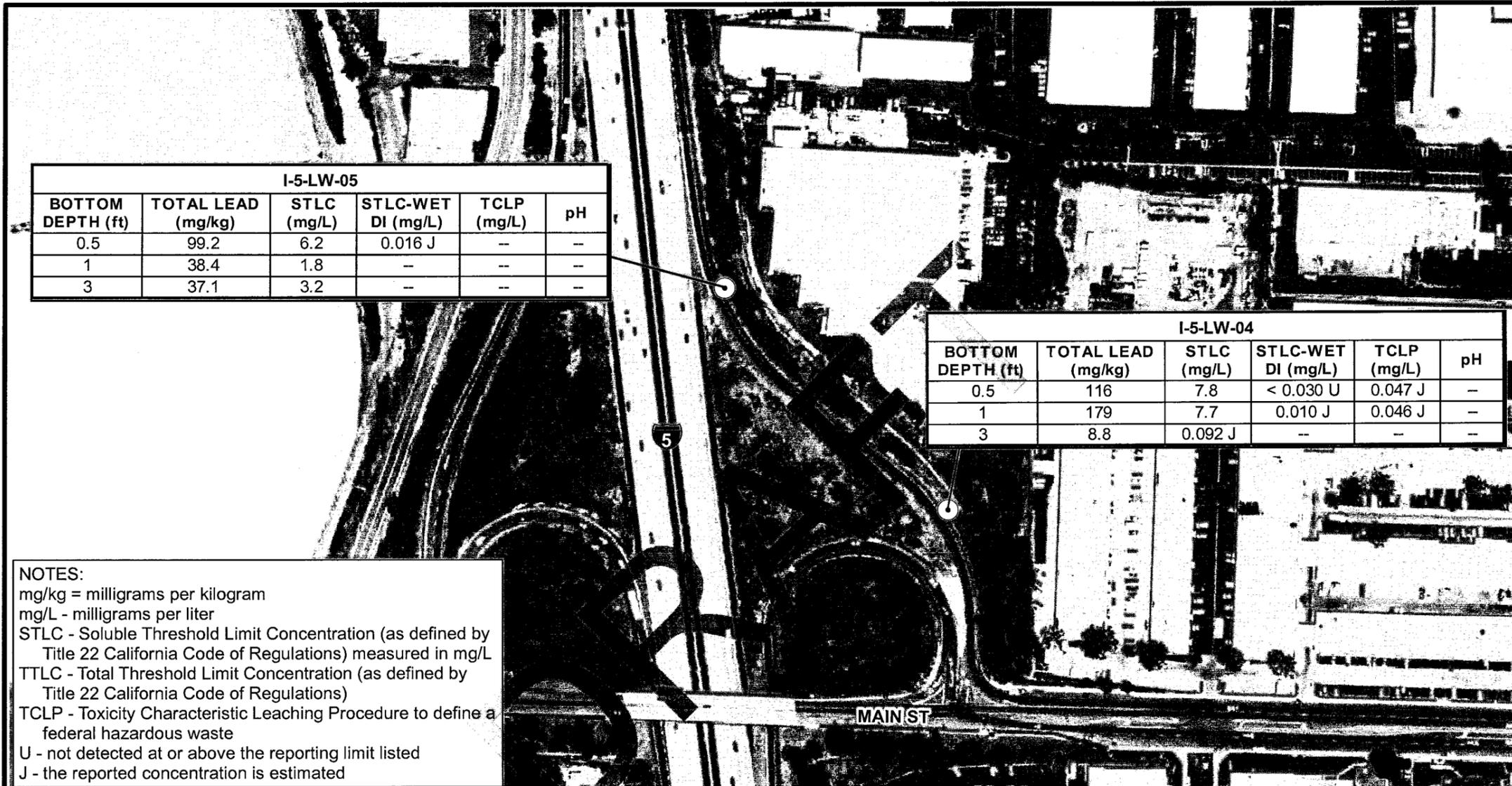
○ SAMPLE LOCATION



PROJECT NO: 20152475.001A 02-3000
 DRAWN BY: E D GOFF
 CHECKED BY: C NOLAND
 DATE: JANUARY 2015

SAMPLE LOCATION MAP
 ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE
2b



I-5-LW-05					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	99.2	6.2	0.016 J	--	--
1	38.4	1.8	--	--	--
3	37.1	3.2	--	--	--

I-5-LW-04					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	116	7.8	< 0.030 U	0.047 J	--
1	179	7.7	0.010 J	0.046 J	--
3	8.8	0.092 J	--	--	--

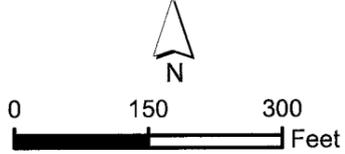
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LEGEND

○ SAMPLE LOCATION



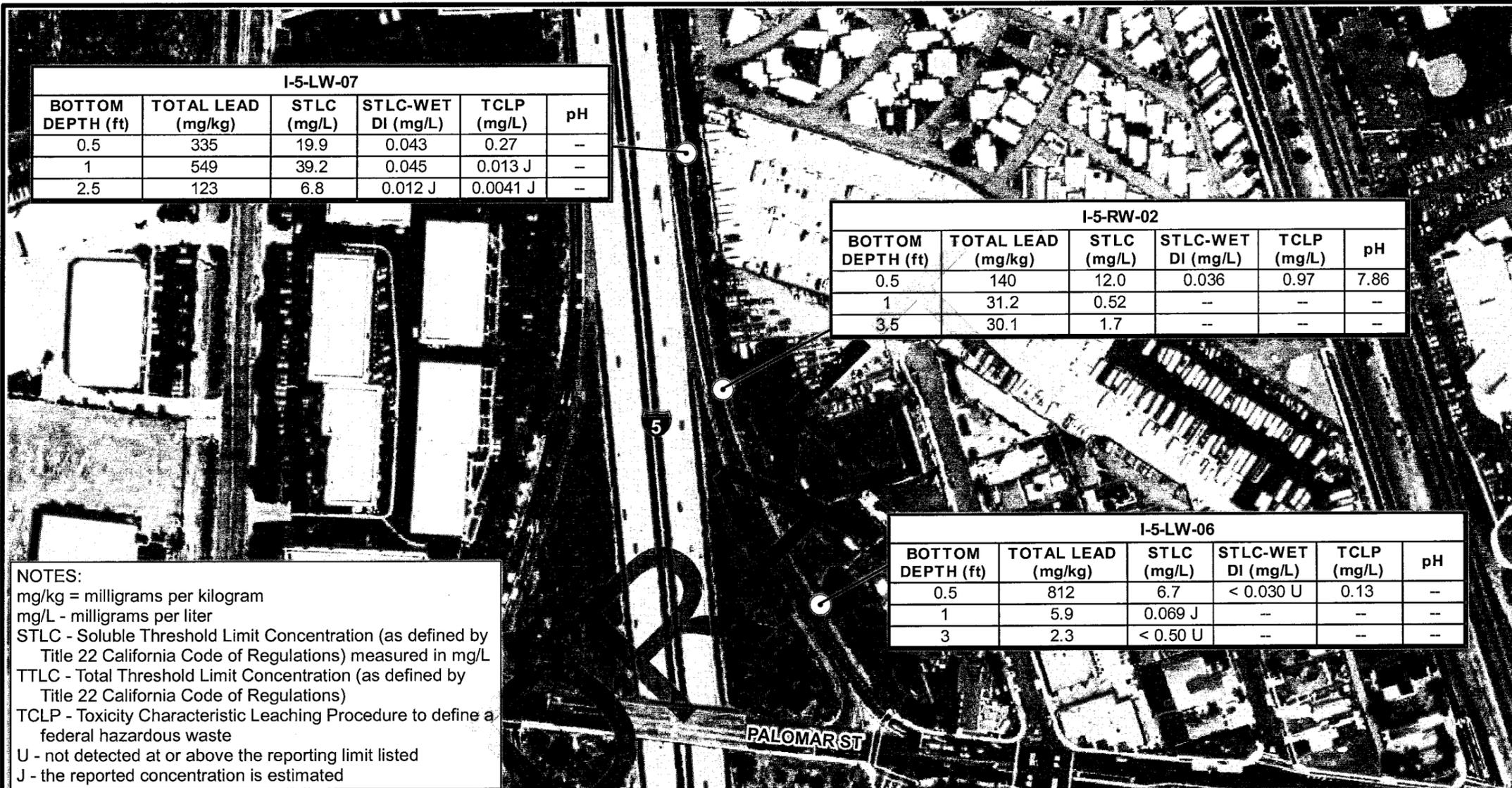
PROJECT NO: 20152475.001A 02-3000
 DRAWN BY: E D GOFF
 CHECKED BY: C NOLAND
 DATE: JANUARY 2015

SAMPLE LOCATION MAP
 ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE
2c

File: C:\Projects\Kleinfelder\Caltrans\TO21\Maping\TO21_FinalResults2c.mxd

File: C:\Projects\Kleinfelder\Caltrans\TO21\Mapping\TO21_FinalResults2d.mxd



I-5-LW-07					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	335	19.9	0.043	0.27	--
1	549	39.2	0.045	0.013 J	--
2.5	123	6.8	0.012 J	0.0041 J	--

I-5-RW-02					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	140	12.0	0.036	0.97	7.86
1	31.2	0.52	--	--	--
3.5	30.1	1.7	--	--	--

I-5-LW-06					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	812	6.7	< 0.030 U	0.13	--
1	5.9	0.069 J	--	--	--
3	2.3	< 0.50 U	--	--	--

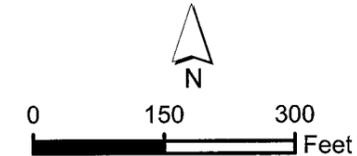
NOTES:
 mg/kg = milligrams per kilogram
 mg/L - milligrams per liter
 STLC - Soluble Threshold Limit Concentration (as defined by Title 22 California Code of Regulations) measured in mg/L
 TTLC - Total Threshold Limit Concentration (as defined by Title 22 California Code of Regulations)
 TCLP - Toxicity Characteristic Leaching Procedure to define a federal hazardous waste
 U - not detected at or above the reporting limit listed
 J - the reported concentration is estimated

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LEGEND

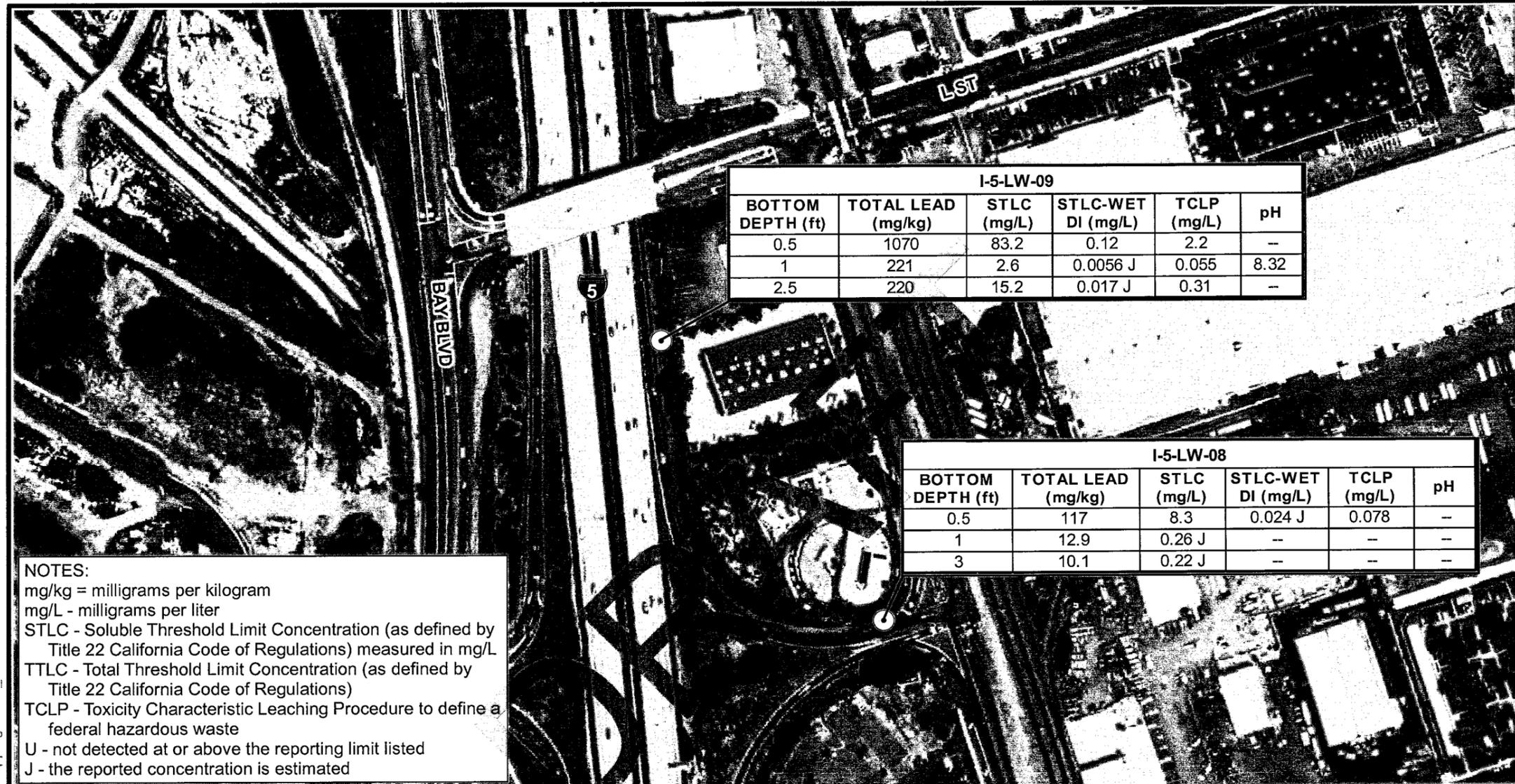
○ SAMPLE LOCATION



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 ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE
2d



I-5-LW-09					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	1070	83.2	0.12	2.2	--
1	221	2.6	0.0056 J	0.055	8.32
2.5	220	15.2	0.017 J	0.31	--

I-5-LW-08					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	117	8.3	0.024 J	0.078	--
1	12.9	0.26 J	--	--	--
3	10.1	0.22 J	--	--	--

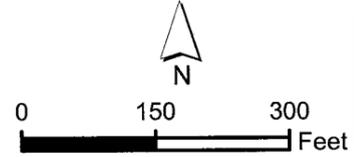
NOTES:
 mg/kg = milligrams per kilogram
 mg/L - milligrams per liter
 STLC - Soluble Threshold Limit Concentration (as defined by Title 22 California Code of Regulations) measured in mg/L
 TTLC - Total Threshold Limit Concentration (as defined by Title 22 California Code of Regulations)
 TCLP - Toxicity Characteristic Leaching Procedure to define a federal hazardous waste
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GeomorphIS

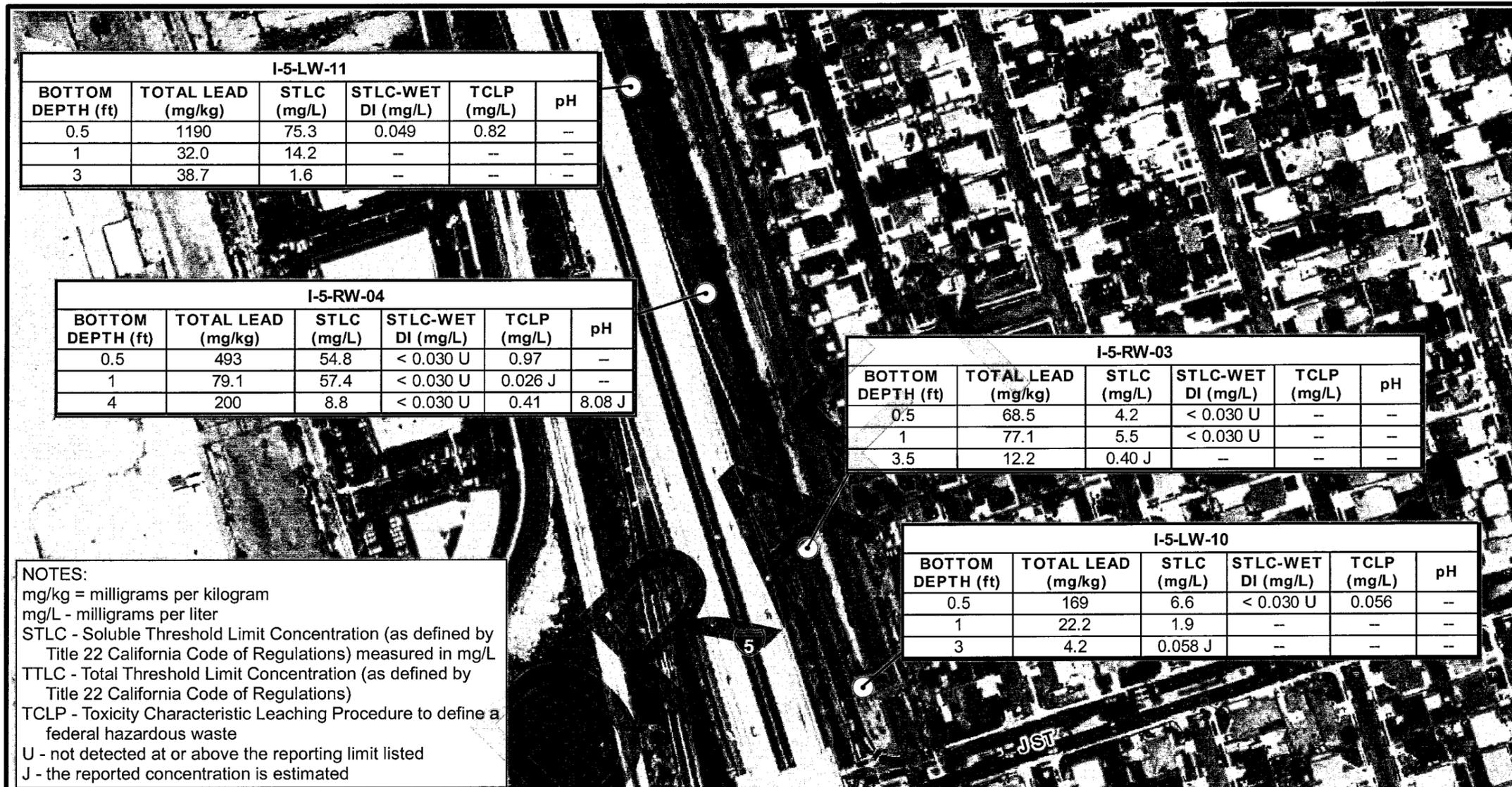
SAMPLE LOCATION MAP

ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE

2e

File: C:\Projects\Kleinfelder\Caltrans\TO21\Maping\TO21_FinalResults2e.mxd



I-5-LW-11					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	1190	75.3	0.049	0.82	--
1	32.0	14.2	--	--	--
3	38.7	1.6	--	--	--

I-5-RW-04					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	493	54.8	< 0.030 U	0.97	--
1	79.1	57.4	< 0.030 U	0.026 J	--
4	200	8.8	< 0.030 U	0.41	8.08 J

I-5-RW-03					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	68.5	4.2	< 0.030 U	--	--
1	77.1	5.5	< 0.030 U	--	--
3.5	12.2	0.40 J	--	--	--

I-5-LW-10					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	169	6.6	< 0.030 U	0.056	--
1	22.2	1.9	--	--	--
3	4.2	0.058 J	--	--	--

NOTES:
 mg/kg = milligrams per kilogram
 mg/L - milligrams per liter
 STLC - Soluble Threshold Limit Concentration (as defined by Title 22 California Code of Regulations) measured in mg/L
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○ SAMPLE LOCATION



File: C:\Projects\Kleinfelder\Caltrans\TO21\Maping\TO21_FinalResults2f.mxd

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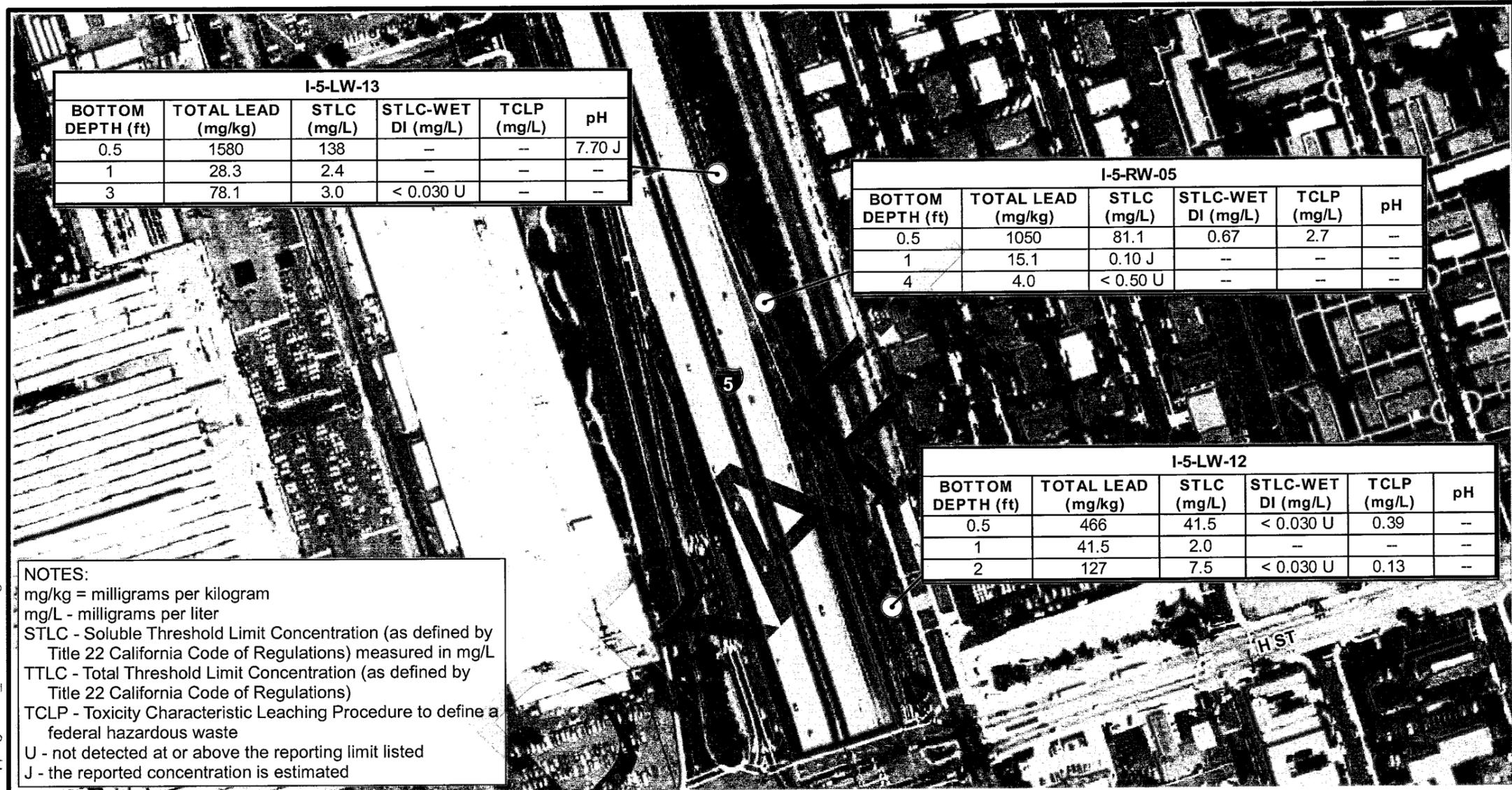
GeomorphIS

SAMPLE LOCATION MAP

ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE

2f



I-5-LW-13					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	1580	138	--	--	7.70 J
1	28.3	2.4	--	--	--
3	78.1	3.0	< 0.030 U	--	--

I-5-RW-05					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	1050	81.1	0.67	2.7	--
1	15.1	0.10 J	--	--	--
4	4.0	< 0.50 U	--	--	--

I-5-LW-12					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	466	41.5	< 0.030 U	0.39	--
1	41.5	2.0	--	--	--
2	127	7.5	< 0.030 U	0.13	--

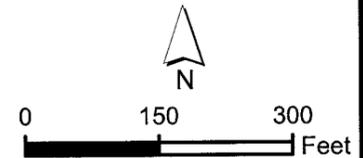
NOTES:
 mg/kg = milligrams per kilogram
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○ SAMPLE LOCATION



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SAMPLE LOCATION MAP

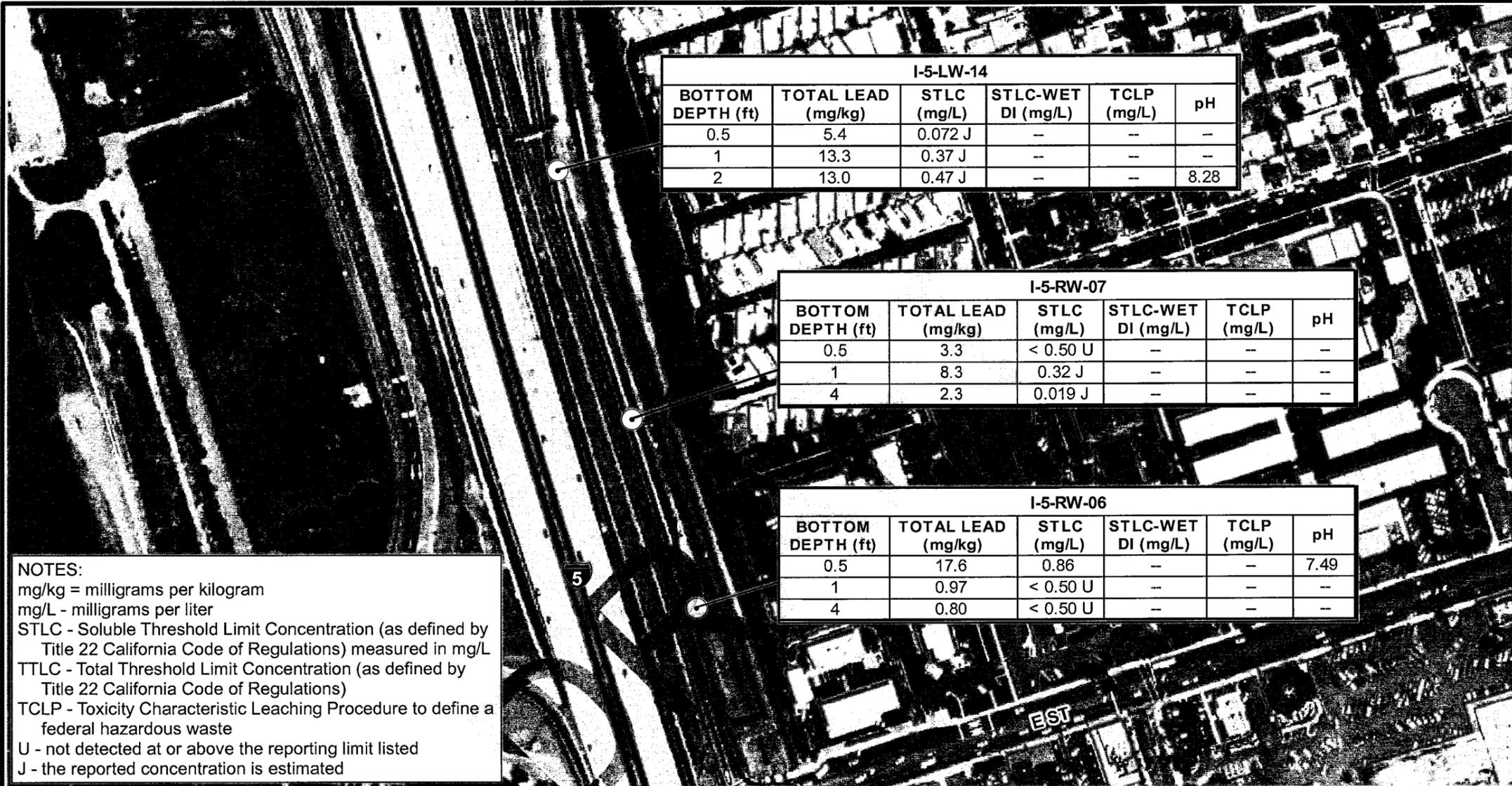
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 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE

2g

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File: C:\Projects\Kleinfelder\Caltrans\TO21\Mapping\TO21_FinalResults2h.mxd



I-5-LW-14					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	5.4	0.072 J	--	--	--
1	13.3	0.37 J	--	--	--
2	13.0	0.47 J	--	--	8.28

I-5-RW-07					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	3.3	< 0.50 U	--	--	--
1	8.3	0.32 J	--	--	--
4	2.3	0.019 J	--	--	--

I-5-RW-06					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	STLC (mg/L)	STLC-WET DI (mg/L)	TCLP (mg/L)	pH
0.5	17.6	0.86	--	--	7.49
1	0.97	< 0.50 U	--	--	--
4	0.80	< 0.50 U	--	--	--

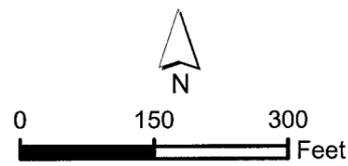
NOTES:
 mg/kg = milligrams per kilogram
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 STLC - Soluble Threshold Limit Concentration (as defined by Title 22 California Code of Regulations) measured in mg/L
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○ SAMPLE LOCATION



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SAMPLE LOCATION MAP

ADL Survey for I-5 Ramp Meter Project
 Caltrans EA 11-244000
 Task Order 21
 San Diego and Chula Vista, California

PLATE

2h

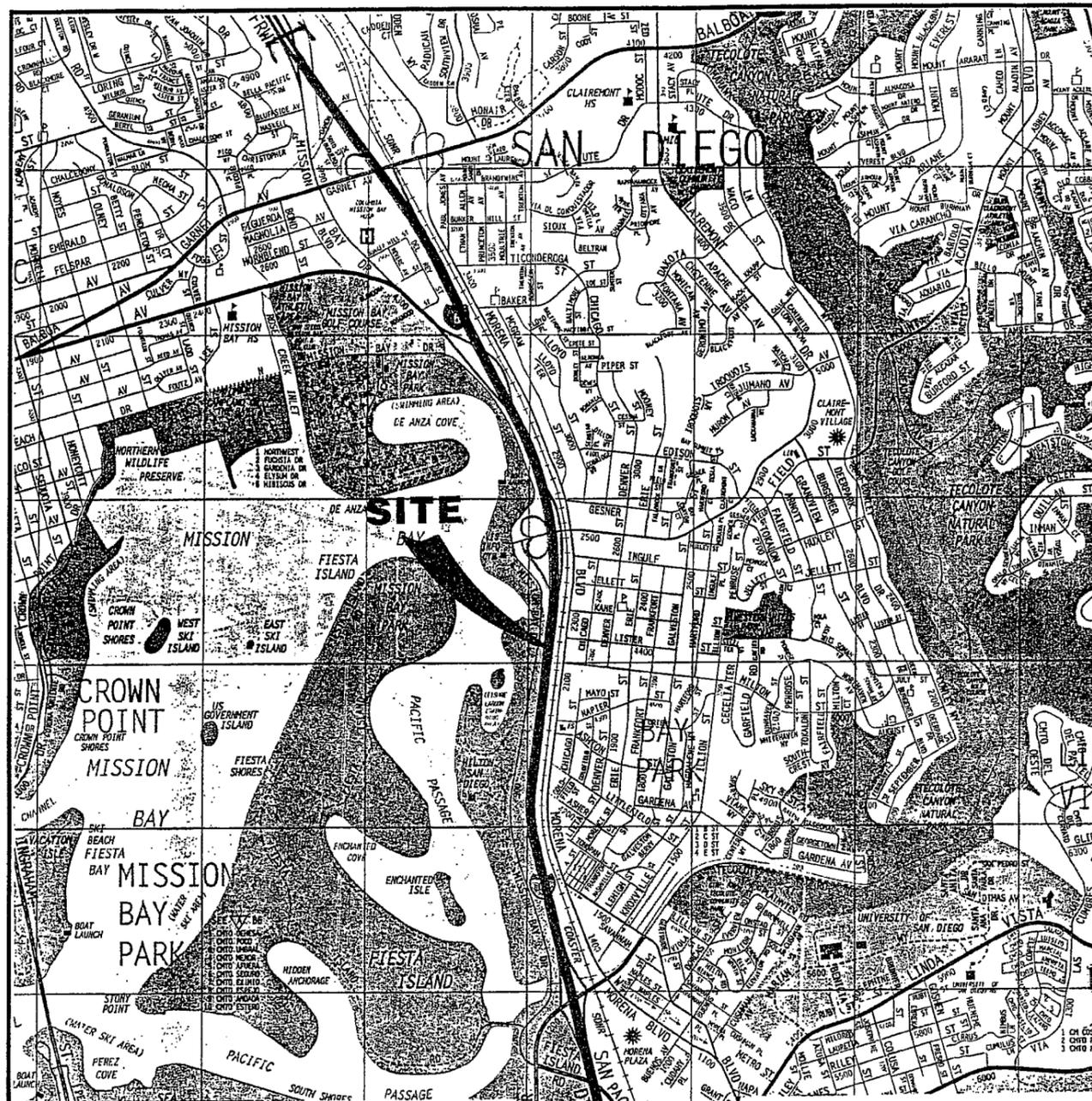
Table 1
Soil Analytical Results



Location Name	Sample Name	Date	Chemical Method Preparation		Lead SW6010B TTLC mg/kg	Lead SW6010B STLC-WET mg/L	Lead SW6010B STLC-WET_DI mg/L	Lead SW6010B TCLP mg/L	pH SW9045D METHOD pH units
			Units	Depth					
I-5-LW-01	I-5-LW-01-0.5	11/03/2014	0.5		256	21.9	0.017 J	0.16	--
I-5-LW-01	I-5-LW-01-1.0	11/03/2014	1		34.1	1.7	--	--	--
I-5-LW-01	I-5-LW-01-3.0	11/03/2014	3		17.8	0.20 J	--	--	--
I-5-LW-02	I-5-LW-02-0.5	11/03/2014	0.5		72.3	2.7	0.0035 J	--	--
I-5-LW-02	I-5-LW-02-1.0	11/03/2014	1		7.0	0.18 J	--	--	--
I-5-LW-02	I-5-LW-02-3.0	11/03/2014	3		5.5	0.049 J	--	--	--
I-5-LW-02	I-5-LW-02-100	11/03/2014	3		4.3	0.018 J	--	--	--
I-5-LW-03	I-5-LW-03-0.5	11/03/2014	0.5		523	12.4	0.0069 J	0.089	5.50
I-5-LW-03	I-5-LW-03-1.0	11/03/2014	1		106	4.5	0.0049 J	0.49	--
I-5-LW-03	I-5-LW-03-3.0	11/03/2014	3		8.6	0.18 J	--	--	--
I-5-LW-04	I-5-LW-04-0.5	11/04/2014	0.5		116	7.8	<0.030 U	0.047 J	--
I-5-LW-04	I-5-LW-04-1.0	11/04/2014	1		179	7.7	0.010 J	0.046 J	--
I-5-LW-04	I-5-LW-04-3.0	11/04/2014	3		8.8	0.092 J	--	--	--
I-5-LW-05	I-5-LW-05-0.5	11/04/2014	0.5		89.2	6.2	0.016 J	--	--
I-5-LW-05	I-5-LW-05-1.0	11/04/2014	1		38.4	1.8	--	--	--
I-5-LW-05	I-5-LW-05-3.0	11/04/2014	3		37.1	3.2	--	--	--
I-5-LW-06	I-5-LW-06-0.5	11/04/2014	0.5		812	6.7	<0.030 U	0.13	--
I-5-LW-06	I-5-LW-06-1.0	11/04/2014	1		5.9	0.069 J	--	--	--
I-5-LW-06	I-5-LW-06-3.0	11/04/2014	3		2.3	<0.50 U	--	--	--
I-5-LW-07	I-5-LW-07-0.5	11/04/2014	0.5		335	19.9	0.043	0.27	--
I-5-LW-07	I-5-LW-07-1.0	11/04/2014	1		549	39.2	0.045	0.013 J	--
I-5-LW-07	I-5-LW-07-2.5	11/04/2014	2.5		123	6.8	0.012 J	0.0041 J	--
I-5-LW-08	I-5-LW-08-0.5	11/04/2014	0.5		117	8.3	0.024 J	0.078	--
I-5-LW-08	I-5-LW-08-1.0	11/04/2014	1		12.9	0.26 J	--	--	--
I-5-LW-08	I-5-LW-08-3.0	11/04/2014	3		10.1	0.22 J	--	--	--
I-5-LW-09	I-5-LW-09-0.5	11/04/2014	0.5		1070	83.2	0.12	2.2	--
I-5-LW-09	I-5-LW-09-1.0	11/04/2014	1		221	2.6	0.0056 J	0.055	8.32
I-5-LW-09	I-5-LW-09-2.5	11/04/2014	2.5		220	15.2	0.017 J	0.31	--
I-5-LW-10	I-5-LW-10-0.5	11/05/2014	0.5		169	6.6	<0.030 U	0.056	--
I-5-LW-10	I-5-LW-10-100	11/05/2014	0.5		122	6.5	--	--	--
I-5-LW-10	I-5-LW-10-1.0	11/05/2014	1		22.2	1.9	--	--	--
I-5-LW-10	I-5-LW-10-3.0	11/05/2014	3		4.2	0.058 J	--	--	--
I-5-LW-11	I-5-LW-11-0.5	11/05/2014	0.5		1190	75.3	0.049	0.82	--
I-5-LW-11	I-5-LW-11-1.0	11/05/2014	1		32.0	14.2	--	--	--
I-5-LW-11	I-5-LW-11-3.0	11/05/2014	3		38.7	1.6	--	--	--
I-5-LW-12	I-5-LW-12-0.5	11/05/2014	0.5		466	41.5	<0.030 U	0.39	--
I-5-LW-12	I-5-LW-12-1.0	11/05/2014	1		41.5	2.0	--	--	--
I-5-LW-12	I-5-LW-12-2.0	11/05/2014	2		127	7.5	<0.030 U	0.13	--
I-5-LW-13	I-5-LW-13-0.5	11/05/2014	0.5		1580	138	--	--	7.70 J
I-5-LW-13	I-5-LW-13-1.0	11/05/2014	1		28.3	2.4	--	--	--
I-5-LW-13	I-5-LW-13-3.0	11/05/2014	3		78.1	3.0	<0.030 U	--	--
I-5-LW-14	I-5-LW-14-0.5	11/06/2014	0.5		5.4	0.072 J	--	--	--
I-5-LW-14	I-5-LW-14-1.0	11/06/2014	1		13.3	0.37 J	--	--	--
I-5-LW-14	I-5-LW-14-2.0	11/06/2014	2		13.0	0.47 J	--	--	8.28
I-5-LW-14	I-5-LW-14-100	11/06/2014	2		12.7	0.45 J	--	--	--
I-5-RW-01	I-5-RW-01-0.5	11/03/2014	0.5		420	21.9	0.070	0.26	--
I-5-RW-01	I-5-RW-01-1.0	11/03/2014	1		200	6.1	<0.030 U	0.089	--
I-5-RW-01	I-5-RW-01-2.0	11/03/2014	2		282	20.1	0.019 J	0.17	--
I-5-RW-02	I-5-RW-02-0.5	11/04/2014	0.5		140	12.0	0.036	0.97	7.86
I-5-RW-02	I-5-RW-02-1.0	11/04/2014	1		31.2	0.52	--	--	--
I-5-RW-02	I-5-RW-02-3.5	11/04/2014	3.5		30.1	1.7	--	--	--
I-5-RW-03	I-5-RW-03-0.5	11/05/2014	0.5		68.5	4.2	<0.030 U	--	--
I-5-RW-03	I-5-RW-03-1.0	11/05/2014	1		77.1	5.5	<0.030 U	--	--
I-5-RW-03	I-5-RW-03-3.5	11/05/2014	3.5		12.2	0.40 J	--	--	--
I-5-RW-04	I-5-RW-04-0.5	11/05/2014	0.5		493	54.8	<0.030 U	0.97	--
I-5-RW-04	I-5-RW-04-1.0	11/05/2014	1		79.1	57.4	<0.030 U	0.026 J	--
I-5-RW-04	I-5-RW-04-4.0	11/05/2014	4		200	8.8	<0.030 U	0.41	8.08 J
I-5-RW-05	I-5-RW-05-0.5	11/05/2014	0.5		1050	81.1	0.67	2.7	--
I-5-RW-05	I-5-RW-05-1.0	11/05/2014	1		15.1	0.10 J	--	--	--
I-5-RW-05	I-5-RW-05-4.0	11/05/2014	4		4.0	<0.50 U	--	--	--
I-5-RW-06	I-5-RW-06-0.5	11/06/2014	0.5		17.6	0.86	--	--	7.49
I-5-RW-06	I-5-RW-06-100	11/06/2014	0.5		14.2	0.78	--	--	--
I-5-RW-06	I-5-RW-06-1.0	11/06/2014	1		0.97	<0.50 U	--	--	--
I-5-RW-06	I-5-RW-06-4.0	11/06/2014	4		0.80	<0.50 U	--	--	--
I-5-RW-07	I-5-RW-07-0.5	11/06/2014	0.5		3.3	<0.50 U	--	--	--
I-5-RW-07	I-5-RW-07-1.0	11/06/2014	1		8.3	0.32 J	--	--	--
I-5-RW-07	I-5-RW-07-4.0	11/06/2014	4		2.3	0.019 J	--	--	--

Notes:

- J = Estimated value
- mg/kg = milligrams per kilogram
- mg/L = milligrams per liter
- pH = hydrogen ion potential
- STLC = soluble threshold limit concentration
- STLC-WET = STLC using citric acid extractant
- STLC-WET-DI = STLC using deionized water as extractant
- TCLP = toxicity characteristics leaching procedure
- TTLC = total threshold limit concentration
- U = concentration below laboratory reporting limit
- BOLD** indicates total lead concentrations exceeding 1,000 mg/kg and STLC concentrations exceeds 5.0 mg/L.



SOURCE: 1999 THOMAS BROTHERS MAP
SAN DIEGO COUNTY, CALIFORNIA

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6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
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MAB / GBP

DSK / E0000

VICINITY MAP

ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE
TO 0.2km NORTH OF THE
MISSION BAY DRIVE OVERCROSSING
SAN DIEGO, CALIFORNIA

DATE 4-4-99

PROJECT NO. 08900 - 06 - 18

FIG. 1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER

CALCULATED/
DESIGNED BY

DATE

REVISED BY

DATE

REVISED BY

DATE

REVISED BY

DATE

DATE REVISED BY

DATE CHECKED BY

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B1-S	0.15	785	68	ND	--
B1-1	0.30	612	45	ND	--
B1-2	0.60	14	--	--	--
B3-S	0.15	197	23	ND	--
B3-1	0.30	237	20	ND	--
B3-2	0.60	72	--	--	--
B56-S	0.15	1500	--	3.9	8.2
B56-1	0.30	33	--	--	--
B56-2	0.60	176	12	ND	--
B58-S	0.15	741	37	--	--
B58-1	0.30	105	7.4	ND	9.3
B58-1.5	0.45	641	32	ND	--



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R32.5/R38.7		

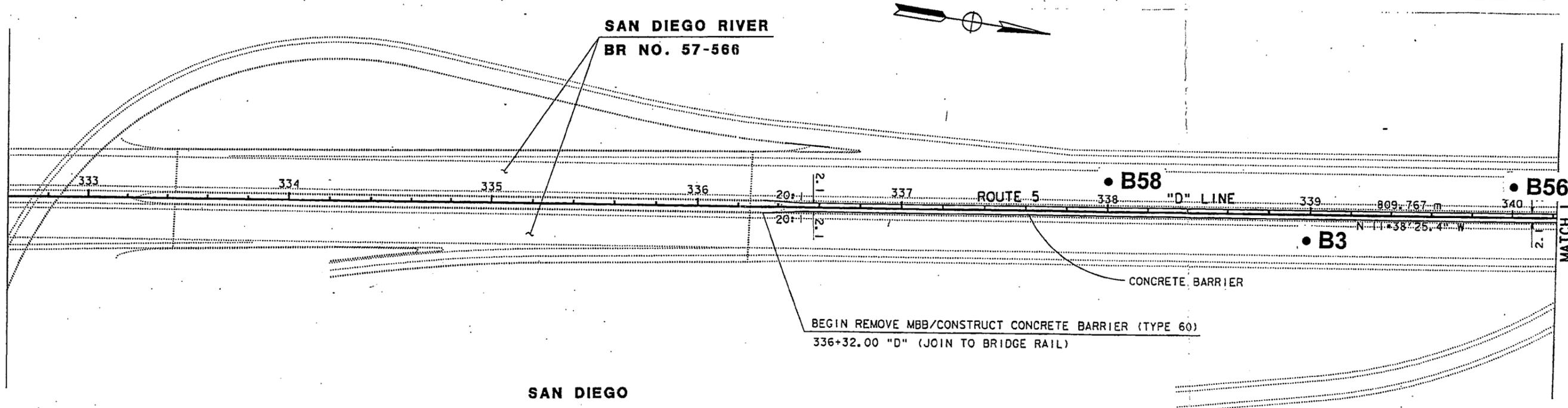
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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RECOMMENDATIONS FOR RE-USE

It is recommended that if the soil excavated along the median of the roadway is to be re-used on-site, the upper 0.6 meters of soil be placed under pavement or 0.15 meters of clean-fill material, at least 1.5 meters above the maximum groundwater level in accordance with the Department of Toxic Substances Control (DTSC) variance issued to Caltrans. If the soil excavated is to be exported to another Caltrans right-of-way location, the soil should be re-used in the same manner as described above. Should the soil be disposed of, it should be handled as a hazardous material with respect to lead impacts as indicated by the Caltrans Lead Variance (Variance Suitability). It is recommended that Caltrans notify the contractors performing the construction activities that hazardous concentrations of lead may be present in on-site soil



GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
 6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619 558-6100 - FAX 619 558-8437

BORING LOCATION MAP		
ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE TO 0.2 KM NORTH OF THE MISSION BAY OVERCROSSING IN SAN DIEGO, CA		
DATE 4-4-99	PROJECT NO. 08900-06-18	FIGURE 2

SCALE: 1:1000 L-1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET TOTAL NO SHEETS
11	SD	5	R32.5/R38.7	



REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

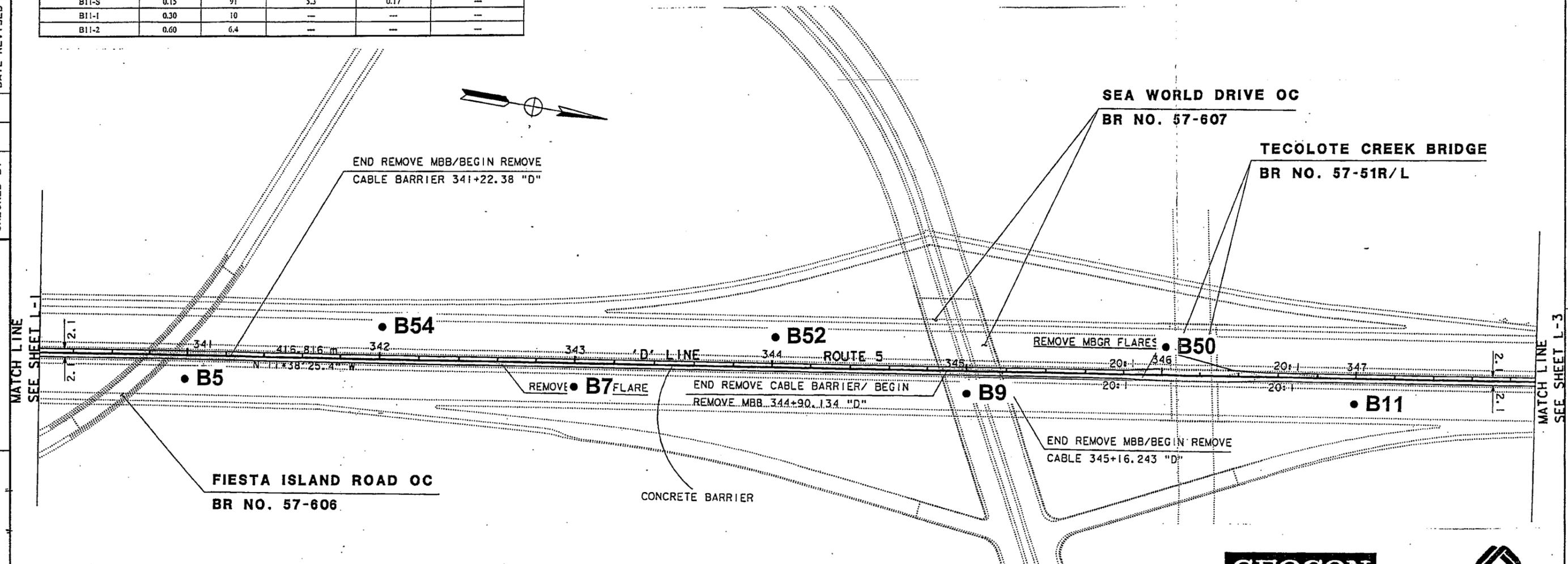
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SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B5-S	0.15	247	19	ND	8.4
B5-I	0.30	36	---	---	---
B7-S	0.15	150	7.8	ND	---
B7-I	0.30	15	---	---	---
B7-2	0.60	13	---	---	---
B9-S	0.15	1420	---	ND	---
B9-I	0.30	122	9.7	ND	---
B9-1.5	0.45	287	23	ND	---
B11-S	0.15	91	5.3	0.17	---
B11-I	0.30	10	---	---	---
B11-2	0.60	6.4	---	---	---

RECOMMENDATIONS FOR RE-USE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 PROJECT ENG. - R
 CALCULATED/DESIGNED BY
 CHECKED BY
 DATE
 REVISOR
 DATE REVISOR



SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B50-S	0.15	49	---	---	---
B50-I	0.30	28	---	---	---
B52-S	0.15	16	---	---	---
B52-I	0.30	14	---	---	---
B54-S	0.15	199	9.9	ND	---
B54-I	0.30	5.0	---	---	---
B54-2	0.60	ND	---	---	---

GEOCON

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 6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619 558-6100 - FAX 619 558-8437

BORING LOCATION MAP

ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE TO 0.2 KM NORTH OF THE MISSION BAY OVERCROSSING IN SAN DIEGO, CA

DATE 4-4-99 PROJECT NO. 08900-06-18 FIGURE 3



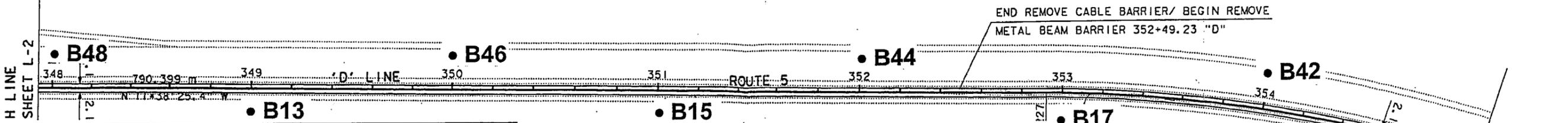
RECOMMENDATIONS FOR RE-USE

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CURVE	R	Δ	T	L
①	762.027	20° 39' 37.6"	138.899	274.782



H LINE
SHEET L-2



SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B13-S	0.15	436	25	ND	8.8
B13-I	0.30	8.3	--	--	--
B13-I.5	0.45	193	10	ND	--
B15-S	0.15	61	--	--	--
B15-I	0.30	36	--	--	8.8
B15-2	0.60	24	--	--	--
B17-S	0.15	163	2.1	--	--
B17-I	0.30	123	8.4	ND	--
B17-2	0.60	23	--	--	--
B19-S	0.60	1790	--	--	--
B19-I	0.15	154	4.8	--	--
B19-2	0.60	22	--	--	--

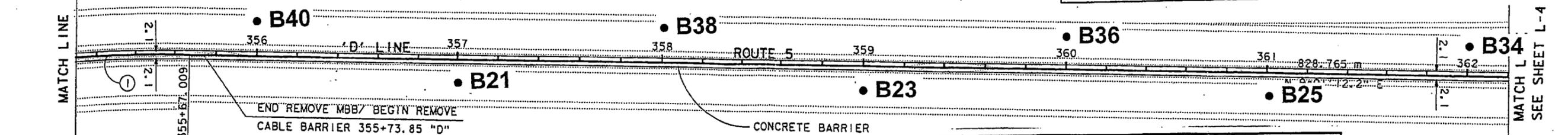
SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B42-S	0.15	ND	--	--	--
B42-I	0.30	ND	--	--	--
B42-2	0.60	ND	--	--	--
B44-S	0.15	168	8.8	ND	--
B44-I	0.30	83	19	ND	--
B44-2	0.60	16	--	--	--
B46-S	0.15	6.8	--	--	--
B46-I	0.30	14	--	--	--
B46-2	0.60	32	--	--	9.7
B48-S	0.15	153	12	ND	--
B48-I	0.30	16	--	--	--
B48-2	0.60	141	3.7	--	--

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B21-S	0.15	176	0.60	--	--
B21-I	0.30	55	--	--	--
B21-2	0.60	6.1	--	--	--
B23-S	0.15	266	14	ND	--
B23-I	0.30	237	0.62	--	--
B23-2	0.60	6.2	--	--	--
B25-S	0.15	18	--	--	--
B25-I	0.30	18	--	--	--
B25-2	0.60	8.1	--	--	--

T	L
38.899	274.782



SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B34-S	0.15	649	27	0.36	--
B34-I	0.30	24	--	--	--
B34-2	0.60	15	--	--	--
B36-S	0.15	881	55	0.18	--
B36-I	0.30	9.7	--	--	--
B36-2	0.60	13	--	--	--
B38-S	0.15	62	--	--	--
B38-I	0.30	ND	--	--	--
B38-2	0.60	9.6	--	--	--
B40-S	0.15	ND	--	--	8.6
B40-I	0.30	ND	--	--	--
B40-2	0.60	8.2	--	--	--



GEOCON

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SAN DIEGO

BORING LOCATION MAP

ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE TO 0.2 KM NORTH OF THE MISSION BAY OVERCROSSING IN SAN DIEGO, CA

DATE 4-4-99 PROJECT NO. 08900-06-18 FIGURE 4

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LAYOUT ALTERNATIVE 1

SCALE: 1:1000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER

CALCULATED/DESIGNED BY

CHECKED BY

DATE REVISID BY

DATE REVISID BY



MATCH L
SEE SHEET L-4

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEET
11	SD	5	R32.5/R38.7		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B27-S	0.15	46	--	--	--
B27-1	0.30	17	--	--	8.8
B27-2	0.60	23	--	--	--
B29-S	0.15	8.4	--	--	--
B29-1	0.30	5.7	--	--	--
B29-2	0.60	15	--	--	--
B31-S	0.15	33	--	--	--
B31-1	0.30	10	--	--	--
B31-2	0.60	14	--	--	8.4
B33-S	0.15	77	0.44	--	--
B33-1	0.30	20	--	--	--
B33-2	0.60	9.1	--	--	--

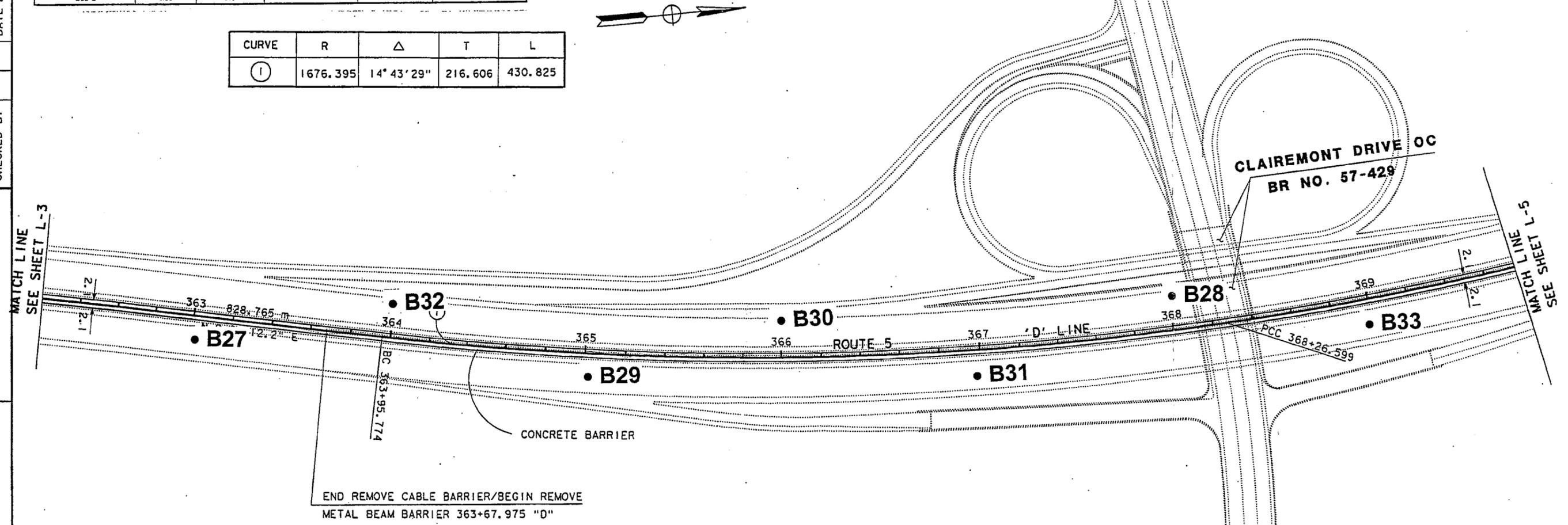
SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B28-S	0.15	1620	--	--	--
B28-1	0.30	13	--	--	--
B28-2	0.60	ND	--	--	--
B30-S	0.15	1290	--	3.3	--
B30-1	0.30	ND	--	--	--
B30-2	0.60	ND	--	--	--
B32-S	0.15	703	58	0.22	--
B32-1	0.30	324	13	ND	8.7
B32-2	0.60	443	21	ND	--

CURVE	R	Δ	T	L
①	1676.395	14° 43' 29"	216.606	430.825



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISIONS: DATE, REVISION BY, DATE REVISSED



RECOMMENDATIONS FOR RE-USE

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SAN DIEGO

GEOCON

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BORING LOCATION MAP

ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE TO 0.2 KM NORTH OF THE MISSION BAY OVERCROSSING IN SAN DIEGO, CA

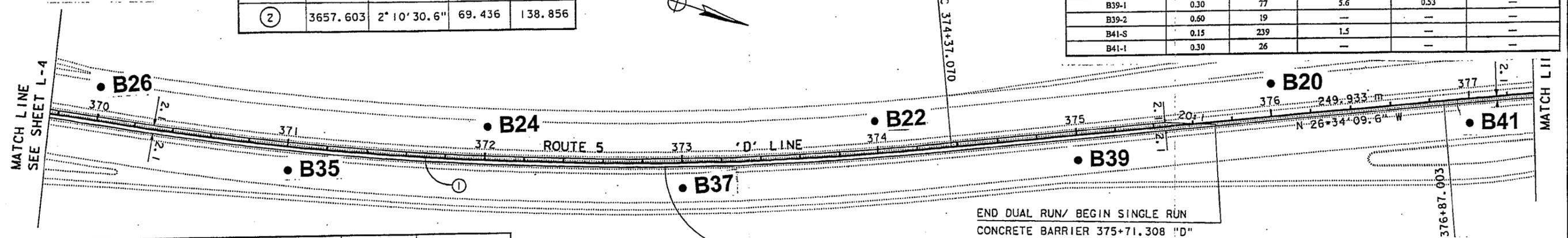
DATE 4-4-99 PROJECT NO. 08900-06-18 FIGURE 5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER
 CALCULATED/DESIGNED BY
 CHECKED BY
 DATE REVISED BY
 DATE REVISED

RECOMMENDATIONS FOR RE-USE
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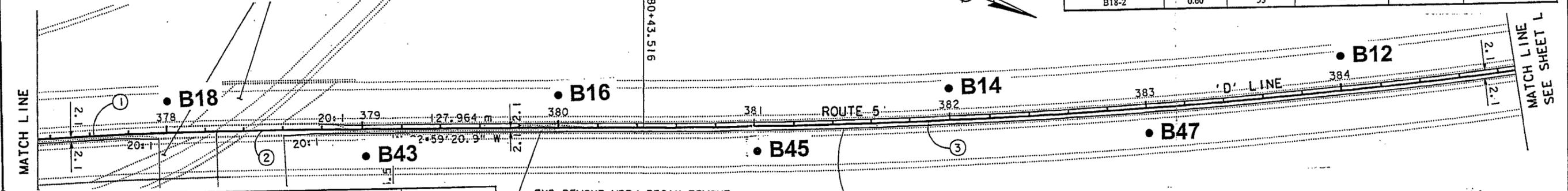
T	L
16.606	430.825
② 3657.603	2° 10' 30.6"
69.436	138.856

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B35-S	0.15	13	--	--	--
B35-1	0.30	12	--	--	--
B35-2	0.60	1.5	--	--	--
B37-S	0.15	18	--	--	8.6
B37-1	0.30	34	--	--	--
B37-2	0.60	9.7	--	--	--
B39-S	0.15	1010	--	0.25	--
B39-1	0.30	77	5.6	0.53	--
B39-2	0.60	19	--	--	--
B41-S	0.15	239	1.5	--	--
B41-1	0.30	26	--	--	--



SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B20-S	0.15	1030	--	ND	--
B20-1	0.30	314	17	ND	--
B22-S	0.15	812	93	ND	--
B22-1	0.30	413	20	ND	--
B22-2	0.60	68	--	--	--
B24-S	0.15	1080	--	0.82	--
B24-1	0.30	114	4.2	--	--
B24-2	0.60	33	--	--	9.3
B26-S	0.15	832	67	0.16	--
B26-1	0.30	ND	--	--	--
B26-2	0.60	55	--	--	--

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B12-S	0.15	560	55	ND	--
B12-1	0.30	65	--	--	--
B12-2	0.60	27	--	--	--
B14-S	0.15	390	13	ND	--
B14-1	0.30	36	--	--	--
B14-2	0.60	65	--	--	--
B16-S	0.15	1200	--	ND	--
B16-1	0.30	87	2.0	--	8.8
B18-S	0.15	578	30	0.21	--
B18-1	0.30	63	--	--	--
B18-2	0.60	53	--	--	--



SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B43-S	0.15	197	6.5	--	--
B43-1	0.30	60	3.1	--	--
B43-2	0.60	146	18	0.38	--
B45-S	0.15	17	--	--	--
B45-1	0.30	21	--	--	9.3
B45-2	0.60	17	--	--	--
B47-S	0.15	82	0.44	--	--
B47-1	0.30	13	--	--	--
B47-2	0.60	159	2.7	--	--

BORING LOCATION MAP
 ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE TO 0.2 KM NORTH OF THE MISSION BAY OVERCROSSING IN SAN DIEGO, CA
 DATE 4-4-99 PROJECT NO. 08900-06-18 FIGURE 6

GEOCON
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
 6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619 558-6100 - FAX 619 558-8437

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R32.5/R38.7		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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B49-S	0.15	55	--	--	--
B49-I	0.30	89	0.47	--	8.8
B49-2	0.60	51	--	--	--
B51-S	0.15	46	--	--	--
B51-I	0.30	46	--	--	--
B51-2	0.60	90	5.0	0.19	--
B53-S	0.15	75	0.48	--	--
B53-I	0.30	22	--	--	--
B53-I.S	0.45	10	--	--	--
B55-S	0.15	79	1.5	--	--
B55-I	0.30	19	--	--	--
B55-2	0.60	64	--	--	--

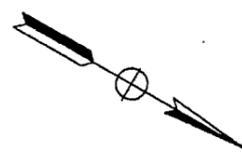
DATE REVISIED BY
CALCULATED/DESIGNED BY
CHECKED BY

DATE REVISIED
PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans logo

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B2-S	0.15	ND	--	--	8.6
B2-I	0.30	ND	--	--	--
B2-2	0.60	24	--	--	--
B4-S	0.15	85	4.2	--	--
B4-I	0.30	36	--	--	--
B4-2	0.60	ND	--	--	--
B6-S	0.15	90	5.2	ND	--
B6-I	0.30	10	--	--	--
B6-2	0.60	8.6	--	--	--
B8-S	0.15	2690	--	--	--
B8-I	0.30	13	--	--	8.5
B8-2	0.60	12	--	--	--
B10-S	0.15	90	8.6	ND	--
B10-I	0.30	8.0	--	--	--
B10-2	0.60	6.7	--	--	--



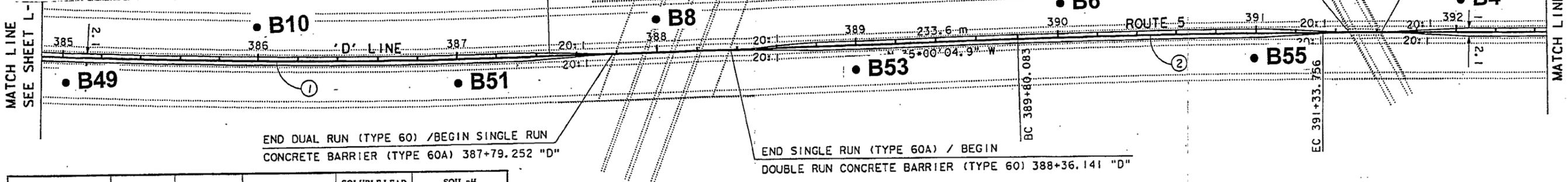
EC 387+46.441

END SINGLE RUN (TYPE 60A) / BEGIN

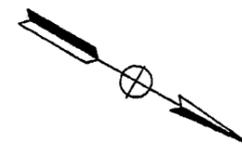
DOUBLE RUN CONCRETE BARRIER (TYPE 60) 391+62.050 "D"

END DUAL RUN (TYPE 60)/BEGIN SINGLE RUN

CONCRETE BARRIER (TYPE 60A) 391+53.062 "D"



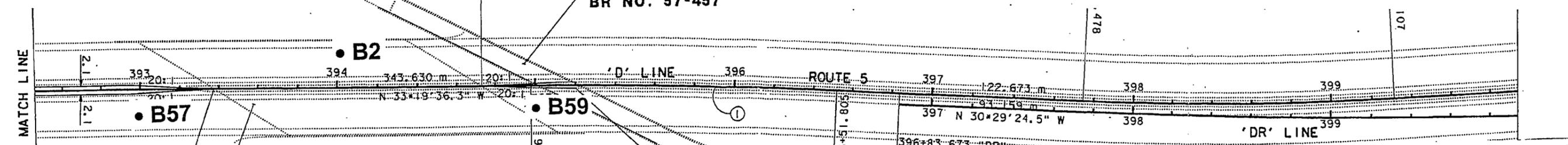
SAN DIEGO



SINGLE RUN (TYPE 60A)/BEGIN DOUBLE
CONCRETE BARRIER (TYPE 60) 394+72.916 "D"

MISSION BAY OVERCROSSING
BR NO. 57-457

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD WET DI WATER EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B57-S	0.15	293	1.2	--	--
B57-I	0.30	496	1.9	--	--
B57-2	0.60	101	0.70	--	--
B59-S	0.15	379	0.98	--	8.2
B59-I	0.30	83	3.4	--	--
B59-2	0.60	7.2	--	--	--



ROSE CANYON CREEK BRIDGE
BR NO. 57-289

END DOUBLE RUN (TYPE 60) /BEGIN SINGLE
RUN CONCRETE BARRIER (TYPE 60A) 393+37.407 "D"

END REMOVE CABLE BARRIER/ BEGIN
REMOVE MBB 393+37.407 "D"

GEOCON
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 619 558-6100 - FAX 619 558-8437

BORING LOCATION MAP

ROUTE 5 FROM THE SAN DIEGO RIVER BRIDGE TO 0.2 KM NORTH OF THE MISSION BAY OVERCROSSING IN SAN DIEGO, CA

DATE 4-4-99 PROJECT NO. 08900-06-18 FIGURE 7

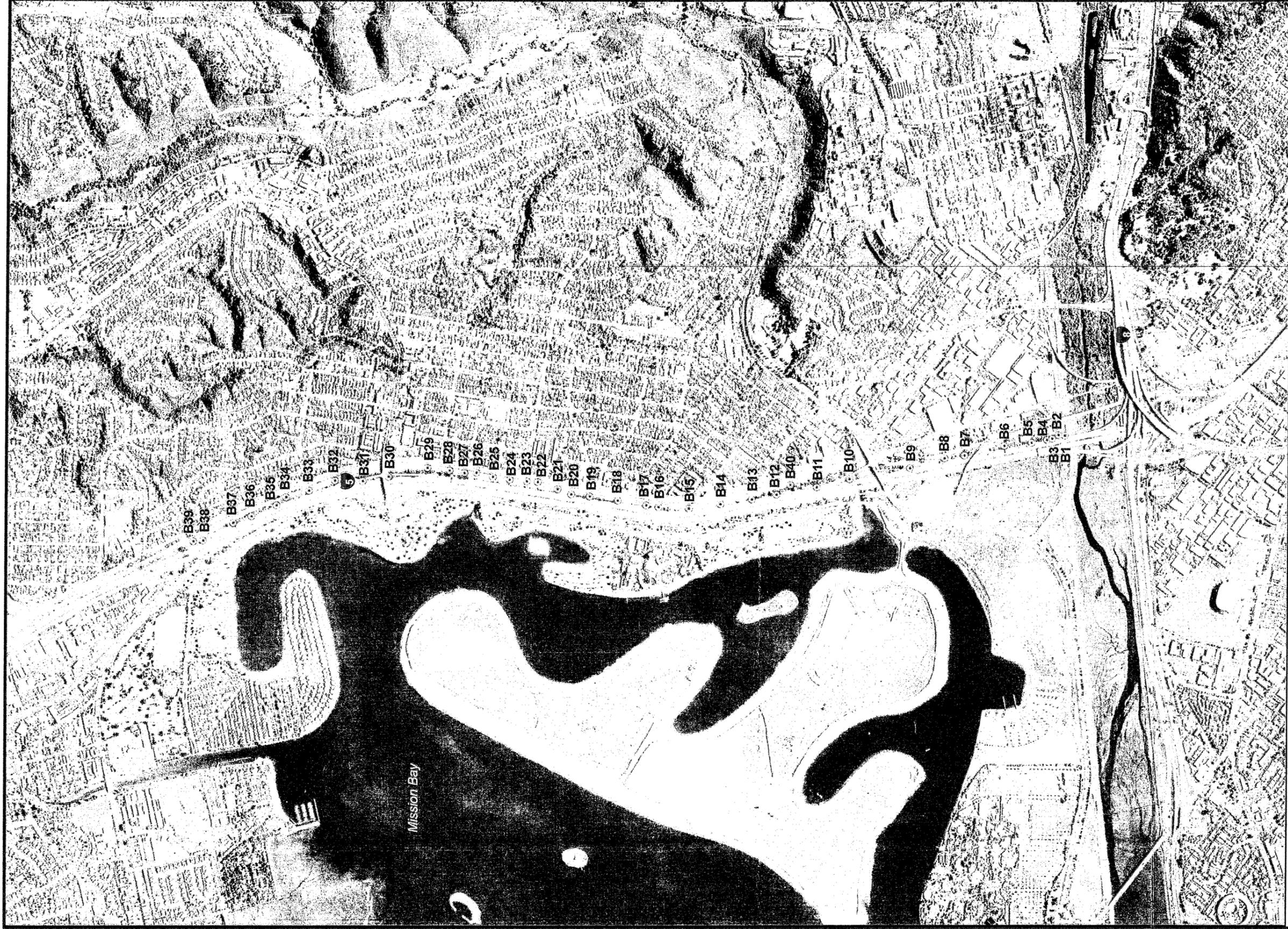
SCALE: 1:1000

L-6

TABLE I

SUMMARY OF ANALYTICAL LABORATORY RESULTS

SAMPLE IDENTIFICATION	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD VIA WET DI WATER (mg/l)	SOIL pH EPA TEST METHOD 9045
B1-S	0.15	785	68	ND	---
B1-1	0.30	612	45	ND	---
B1-2	0.60	14	---	---	---
B2-S	0.15	ND	---	---	8.6
B2-1	0.30	ND	---	---	---
B2-2	0.60	24	---	---	---
B3-S	0.15	197	23	ND	---
B3-1	0.30	237	20	ND	---
B3-2	0.60	72	---	---	---
B4-S	0.15	85	4.2	---	---
B4-1	0.30	36	---	---	---
B4-2	0.60	ND	---	---	---
B5-S	0.15	247	19	ND	8.4
B5-1	0.30	36	---	---	---
B6-S	0.15	90	5.2	ND	---
B6-1	0.30	10	---	---	---
B6-2	0.60	8.6	---	---	---
B7-S	0.15	150	7.8	ND	---
B7-1	0.30	15	---	---	---
B7-2	0.60	13	---	---	---
B8-S	0.15	2690	---	---	---
B8-1	0.30	13	---	---	---
B8-2	0.60	12	---	---	8.5
B9-S	0.15	1420	---	ND	---
B9-1	0.30	122	9.7	ND	---
B9-1.5	0.45	287	23	ND	---
B10-S	0.15	90	8.6	ND	---
B10-1	0.30	8.0	---	---	---
B10-2	0.60	6.7	---	---	---
B11-S	0.15	91	5.3	0.17	---
B11-1	0.30	10	---	---	---



SOURCE: GOOGLE EARTH AERIAL IMAGE

LEGEND

B40 Approximate location of hand auger borings (Ninyo & Moore 2006)



Ninyo & Moore

HAND AUGER LOCATIONS

FIGURE

PROJECT NO.
105388019

DATE
4/07

INTERSTATE 5 AERIALY DEPOSITED LEAD SURVEY
SAN DIEGO COUNTY, CALIFORNIA

2

NOTE: ALL DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

Table 1 - Summary of Z1 Soil Sample Results

Sample ID	Depth (meters)	Depth (feet)	Sample Date	Total Lead (mg/kg)	WET (mg/L)	WET DI (mg/L)	TCLP (mg/L)	Lead by XRF (mg/kg)	Lead by XRF with Protocol (mg/kg)	pH
B1-Z1-1.5	0.46	1.5	1/17/2007	940	67	1.0	ND	856.0±55.0	--	--
B2-Z1-0.8	0.24	0.8	1/17/2007	2700	220	16	3.1	2998.0±102.0	--	--
B3-Z1-1.8	0.55	1.8	1/17/2007	40	1.9	--	--	<50	--	--
B4-Z1-1.4	0.43	1.4	1/17/2007	270	21	1.1	ND	319.0±40.0	--	--
B5-Z1-1.4	0.43	1.4	1/17/2007	160	5.1	ND	ND	115.0±31.0	--	--
B6-Z1-1.0	0.30	1	1/17/2007	23	1.2	--	--	<50	--	--
B7-Z1-1.5	0.46	1.5	1/17/2007	250	16	ND	ND	216.0±34.0	--	--
B8-Z1-0.4	0.12	0.4	1/17/2007	410	27	2.3	ND	612.0±49.0	--	--
B9-Z1-0.6	0.18	0.6	1/16/2007	71	4.3	ND	--	96±33.0	187.0±40.0	--
B10-Z1-0.3	0.09	0.3	1/16/2007	260	16	ND	ND	235.0±41.0	--	6.2
B11-Z1-0.5	0.15	0.5	1/16/2007	470	36	0.87	ND	348.0±42.0	--	--
B12-Z1-0.5	0.15	0.5	1/16/2007	120	4.2	ND	ND	70.0±31.0	--	6.1
B13-Z1-0.9	0.27	0.9	1/16/2007	35	1.1	--	--	<50	--	--
B14-Z1-0.4	0.12	0.4	1/16/2007	200	12	ND	ND	133.0±38.0	--	7.2
B15-Z1-1.3	0.40	1.3	1/16/2007	13	0.27	--	--	<50	--	--
B16-Z1-1.5	0.46	1.5	1/16/2007	9.1	ND	--	--	<50	--	5.9
B17-Z1-1.2	0.37	1.2	1/16/2007	130	6.3	ND	ND	77.3±34.0	--	--
B18-Z1-0.5	0.15	0.5	1/16/2007	64	4.4	ND	--	82±31	--	--
B19-Z1-0.2	0.06	0.2	1/16/2007	110	5.8	ND	ND	104±32.0	--	--
B20-Z1-1.1	0.34	1.1	1/16/2007	48	1.8	--	--	<50	--	--
B21-Z1-0.9	0.27	0.9	1/16/2007	36	1.8	--	--	58.4±29.0	--	--
B22-Z1-1.4	0.43	1.4	1/17/2007	54	2.7	ND	--	69.5±30.0	--	--
B23-Z1-1.1	0.34	1.1	1/17/2007	90	3.0	ND	--	54.2±30.0	--	7.1
B24-Z1-1.9	0.58	1.9	1/17/2007	52	2.7	ND	--	48.6±30.0	--	--
B25-Z1-1.1	0.34	1.1	1/17/2007	34	1.4	--	--	<50	--	--
B26-Z1-1.6	0.49	1.6	1/17/2007	28	1.4	--	--	<50	58.6±34.0	6.7
B27-Z1-1.2	0.37	1.2	1/17/2007	18	1.0	--	--	<50	--	--
B28-Z1-0.4	0.12	0.4	1/17/2007	420	29	1.9	ND	413.0±43.0	--	--
B29-Z1-0.5	0.15	0.5	1/18/2007	95	3.1	ND	--	66.0±27.0	--	--
B30-Z1-1.5	0.46	1.5	1/18/2007	24	1.1	--	--	36.4±31.0	--	--
B31-Z1-0.8	0.24	0.8	1/18/2007	190	9.7	0.57	ND	174.0±35.0	--	--
B32-Z1-0.4	0.12	0.4	1/18/2007	75	3.7	ND	--	68.1±31.0	55.8±33.0	--
B33-Z1-0.2	0.06	0.2	1/18/2007	490	35	0.47	ND	430.0±45.0	--	--
B34-Z1-1.7	0.52	1.7	1/18/2007	21	0.61	--	--	<50	108±32.0	6.5
B35-Z1-2.0	0.61	2	1/18/2007	9.6	0.42	--	--	<50	--	--
B36-Z1-2.5	0.76	2.5	1/18/2007	12	0.37	--	--	<50	--	--
B37-Z1-0.5	0.15	0.5	1/18/2007	160	10	ND	ND	121.0±31.0	--	--
B38-Z1-0.7	0.21	0.7	1/18/2007	140	7.9	0.39	ND	139.0±33.0	--	7.0
B39-Z1-0.6	0.18	0.6	1/18/2007	29	1.2	--	--	<50	--	--
B40-Z1-0.5	0.15	0.5	1/18/2007	99	8.3	0.28	--	177.0±32.0	--	--

Notes:

Bold indicates the sample result exceeded a screening and/or hazardous waste criterion.

<50 = Not detected at the specified detection limit of the XRF

mg/kg = Milligrams per kilogram

mg/L = Milligrams per liter

ND = Not detected above the laboratory reporting limit.

-- = not analyzed

WET = waste extraction test

TCLP = toxicity characteristic leaching procedure

XRF = X-ray fluorescence

Table 2 - Summary of Z3 Soil Sample Results

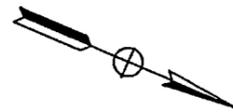
Sample ID	Sample Date	Total Lead (mg/kg)	WET (mg/L)	WET DI (mg/L)	TCLP (mg/L)	Lead by XRF(mg/ kg)	Lead by XRF with Protocol (mg/kg)	pH
Z3-A	2/27/2007	230	13	ND	ND	182 ±22	--	--
Z3-B	2/27/2007	190	14	ND	ND	167 ±31	--	--
Z3-C	2/27/2007	170	13	ND	ND	191 ±27	--	--
Z3-D	2/27/2007	160	10	ND	ND	199 ±26	--	6.2
Z3-E	2/27/2007	170	14	ND	ND	169 ±34	--	--
Z3-F	2/27/2007	140	14	ND	ND	159 ±25	--	--
Z3-G	2/27/2007	170	13	ND	ND	180 ±25	--	--
Z3-H	2/27/2007	170	12	ND	ND	181 ±26	--	6.7
Z3-I	2/27/2007	190	11	ND	ND	181 ±26	--	--
Z3-J	2/27/2007	140	11	ND	ND	182 ±25	280 ±30	--

Notes:
mg/kg = Milligrams per kilogram
mg/l = Milligrams per liter
-- = Not analyzed
XRF - X-Ray Fluorescence

INDEX OF SHEETS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR HIGHWAY PLANTING ON
STATE HIGHWAY
IN SAN DIEGO COUNTY IN CARLSBAD AND
OCEANSIDE ON ROUTE 5 FROM BUENA VISTA LAGOON
BRIDGE TO BROOKS STREET OVERCROSSING

To be supplemented by Standard Plans dated July, 1999



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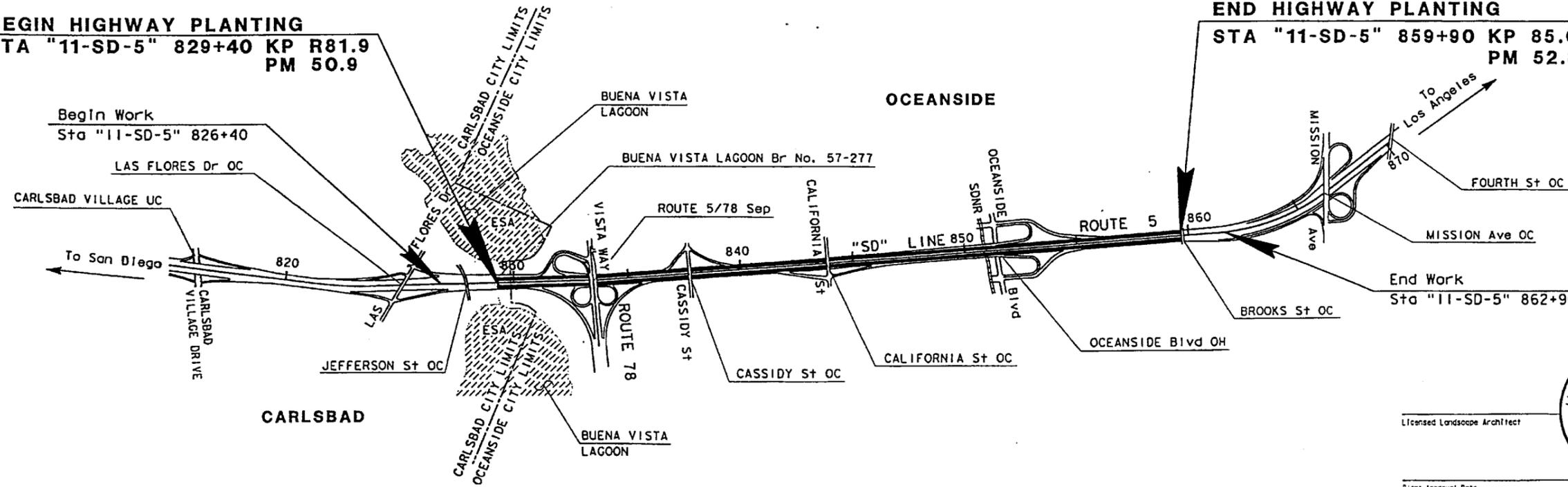


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BEGIN HIGHWAY PLANTING
Sta "11-SD-5" 829+40 KP R81.9
PM 50.9

END HIGHWAY PLANTING
Sta "11-SD-5" 859+90 KP 85.0
PM 52.8



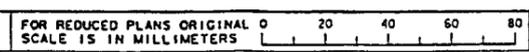
PROJECT MANAGER
ISMAEL SALAZAR

PROJECT LANDSCAPE ARCHITECT
STEPHEN WARREN

The Contractor shall possess the Class (or classes) of license as specified in the "Notice to Contractors" on page 1 of the Special Provisions.



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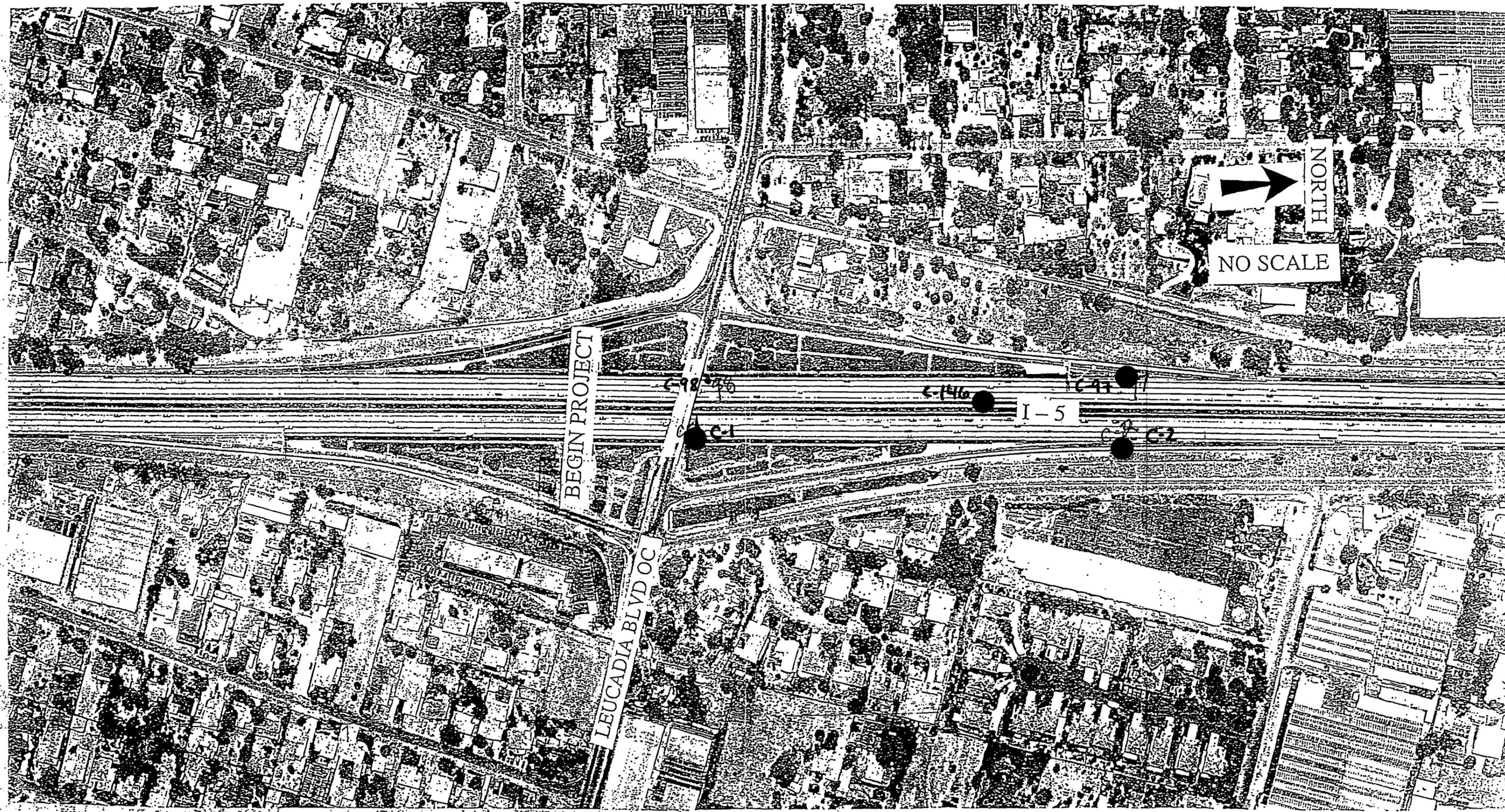
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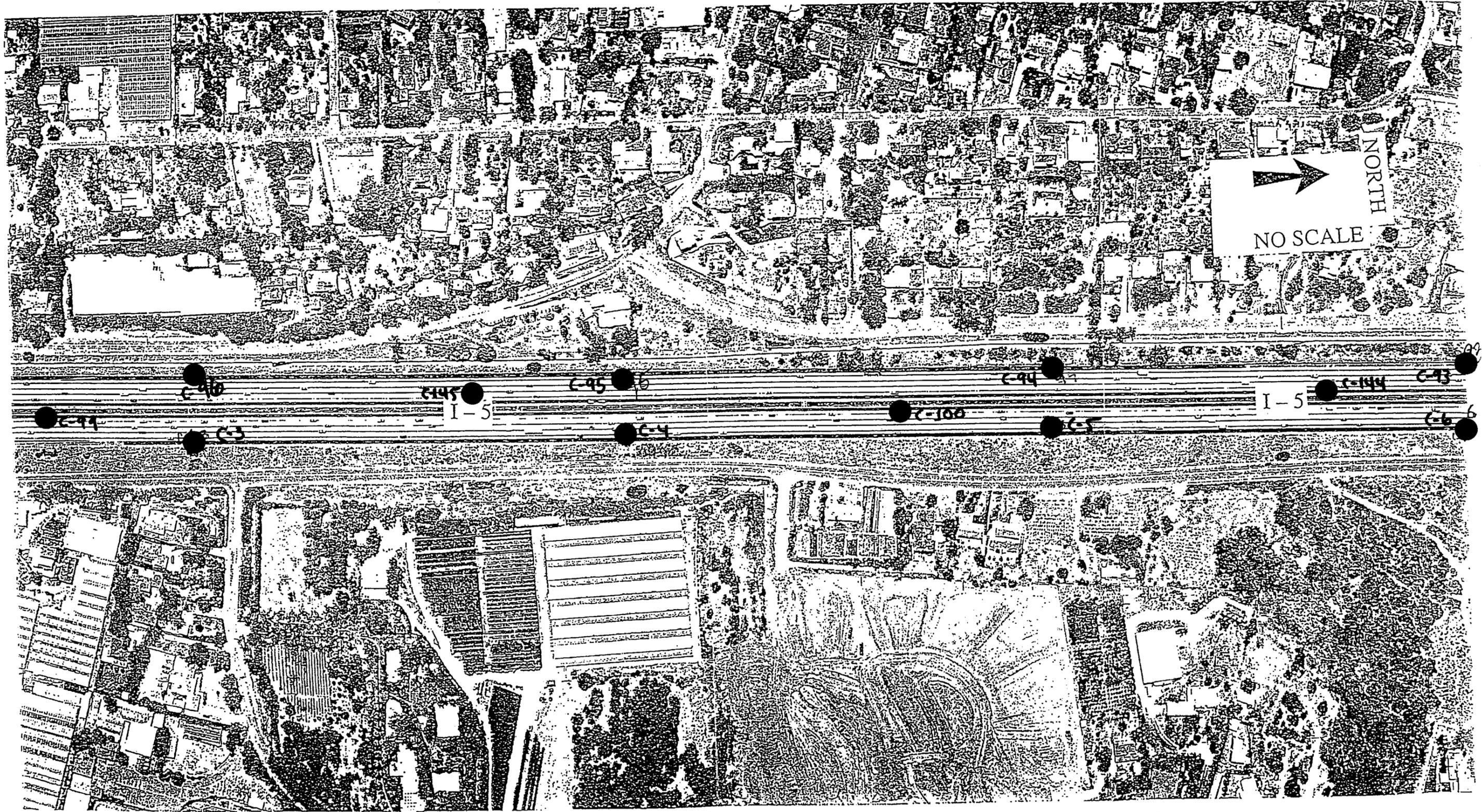
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Contract No. **11-239604**

EA 239601

DATE PLOTTED: 02-20-FEB-2001
 TIME PLOTTED: 02:08:58:22
 PLOT NUMBER: 02-5-00





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C-94

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I-5

I-5

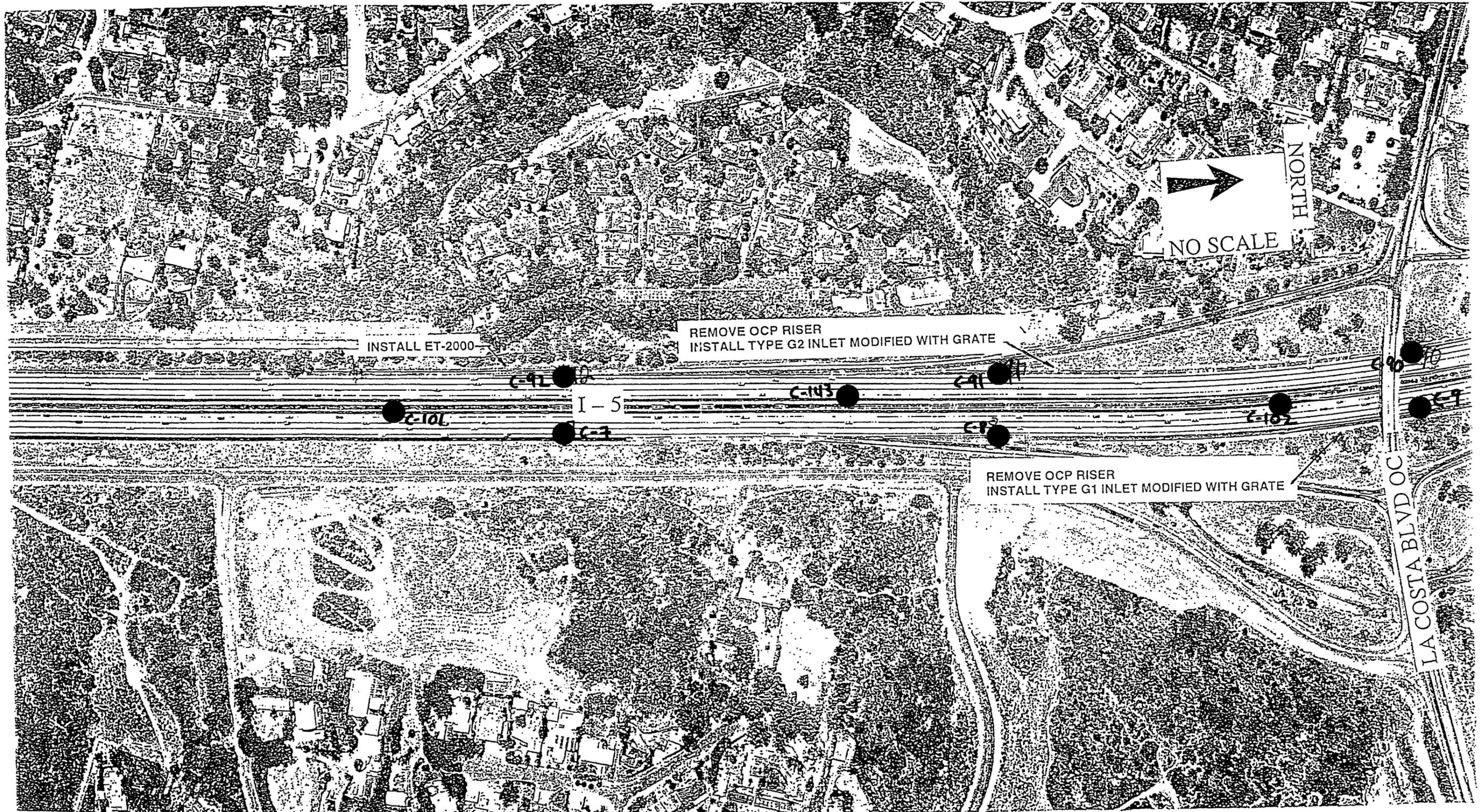
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NORTH
NO SCALE

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REMOVE OCP RISER
INSTALL TYPE G2 INLET MODIFIED WITH GRATE

REMOVE OCP RISER
INSTALL TYPE G1 INLET MODIFIED WITH GRATE

LA COSTA BLVD OC

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C-92

I-5

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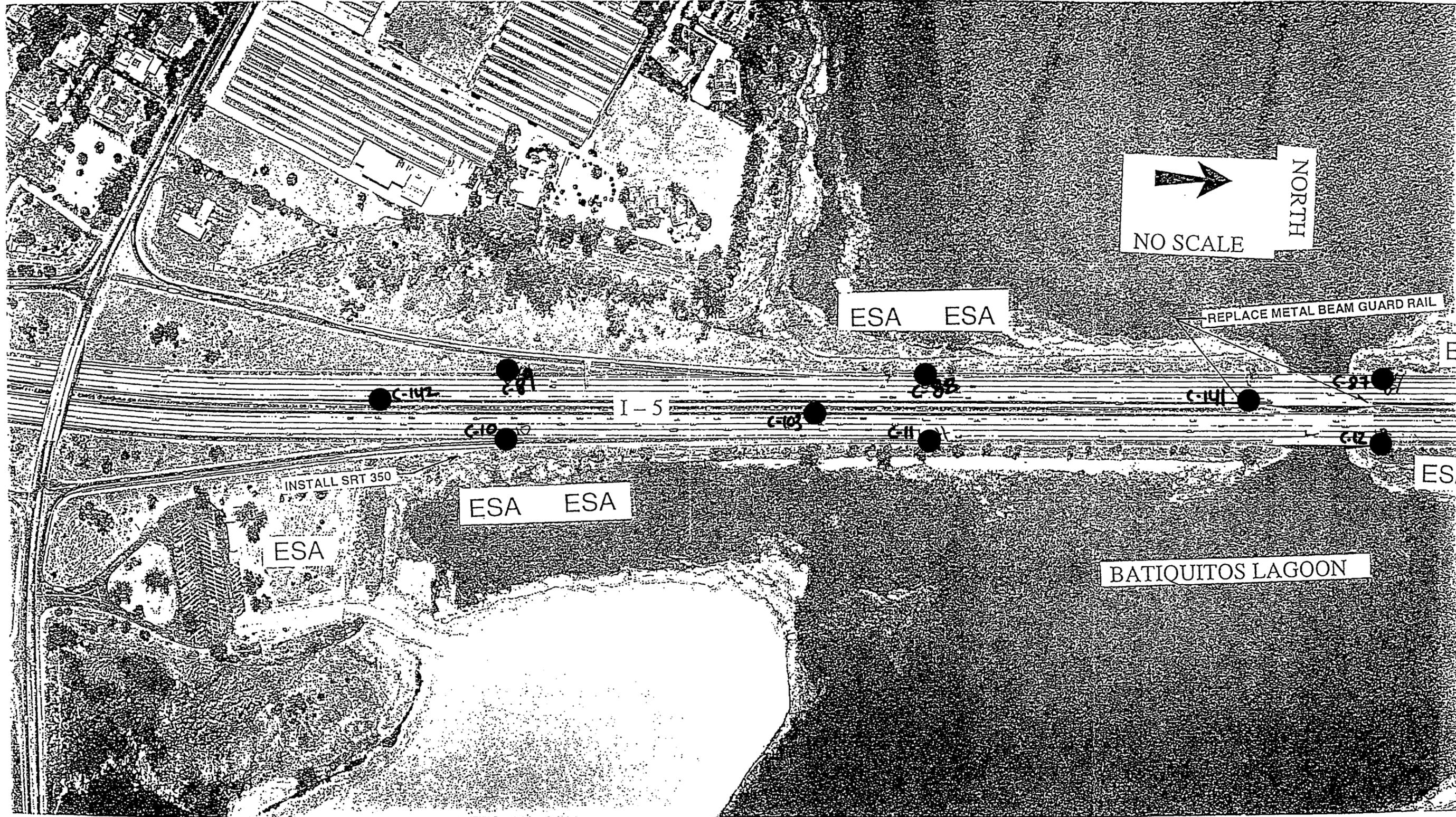
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REPLACE METAL BEAM GUARD RAIL

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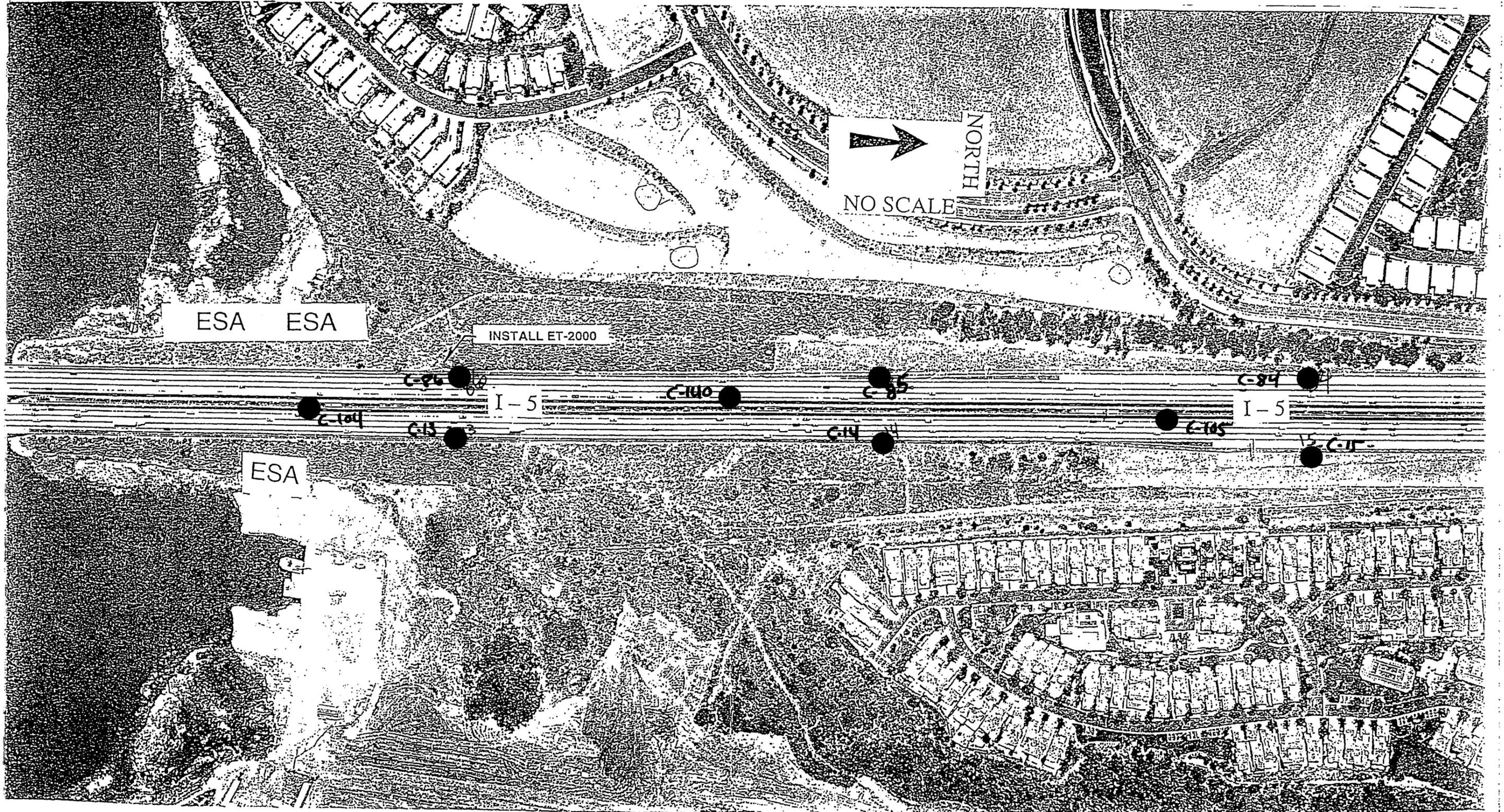
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ESA ESA

ESA

BATIQUITOS LAGOON

ES



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ESA ESA

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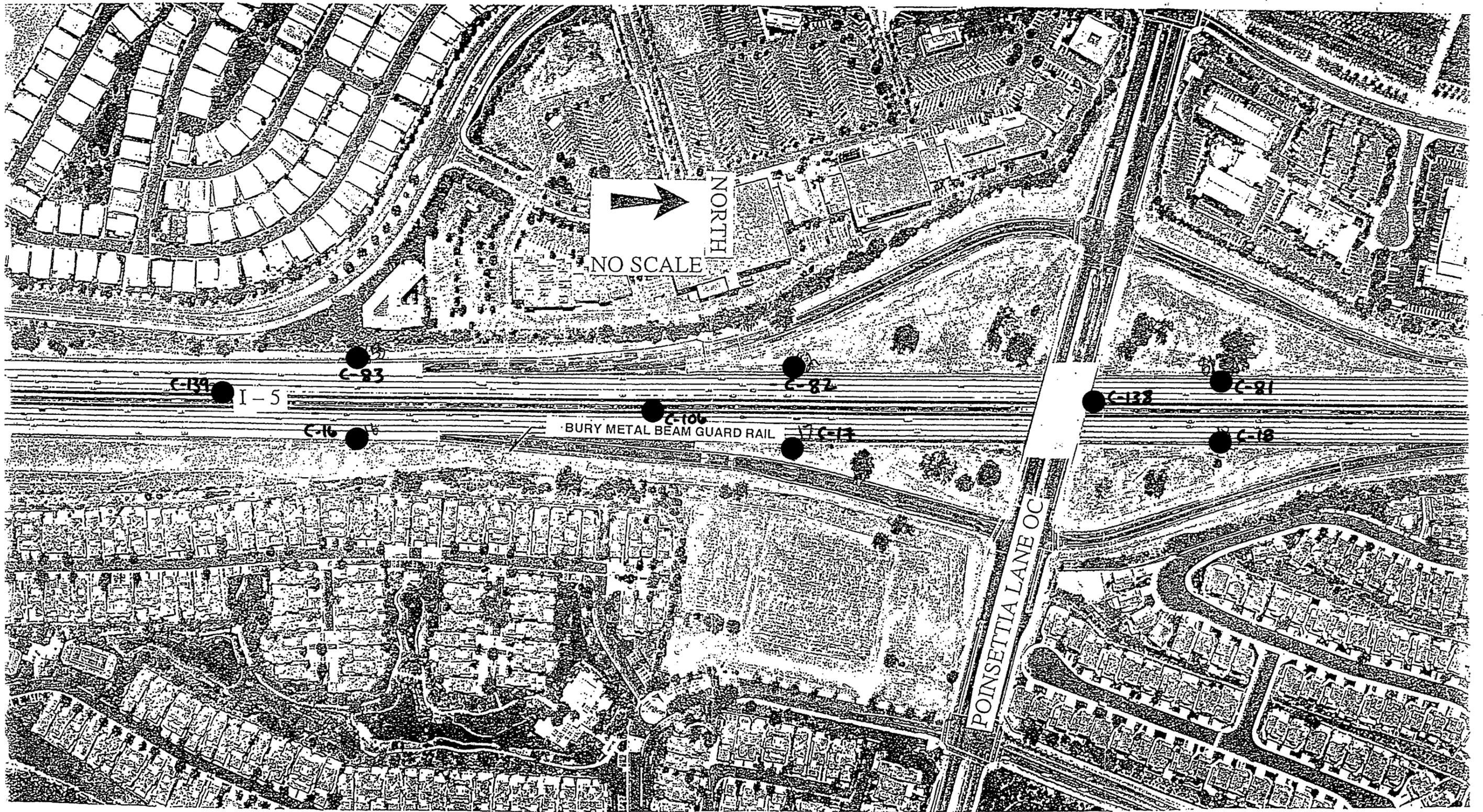
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ESA



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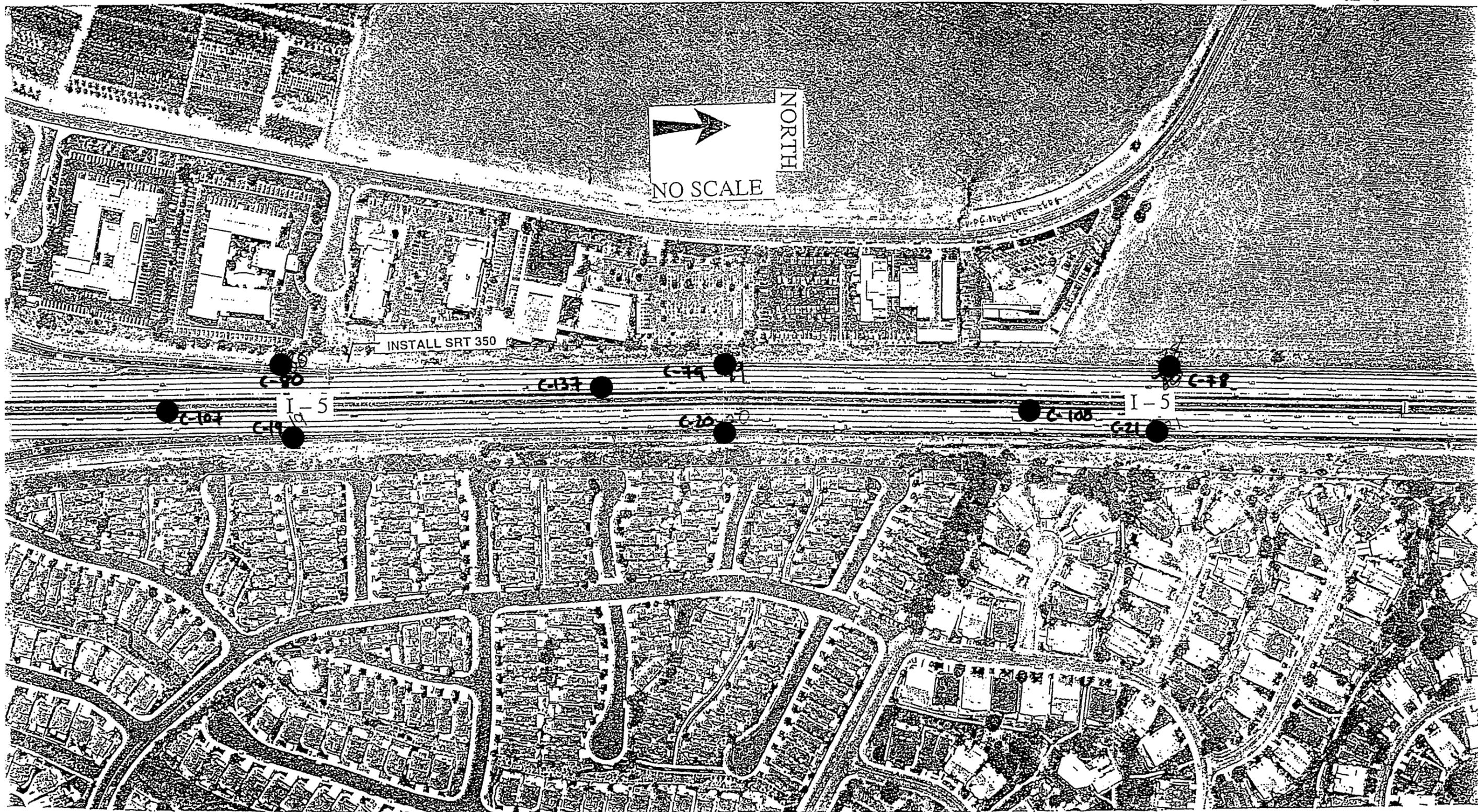
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BURY METAL BEAM GUARD RAIL

C-18

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POINSETTIA LANE OC



NORTH
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I-5

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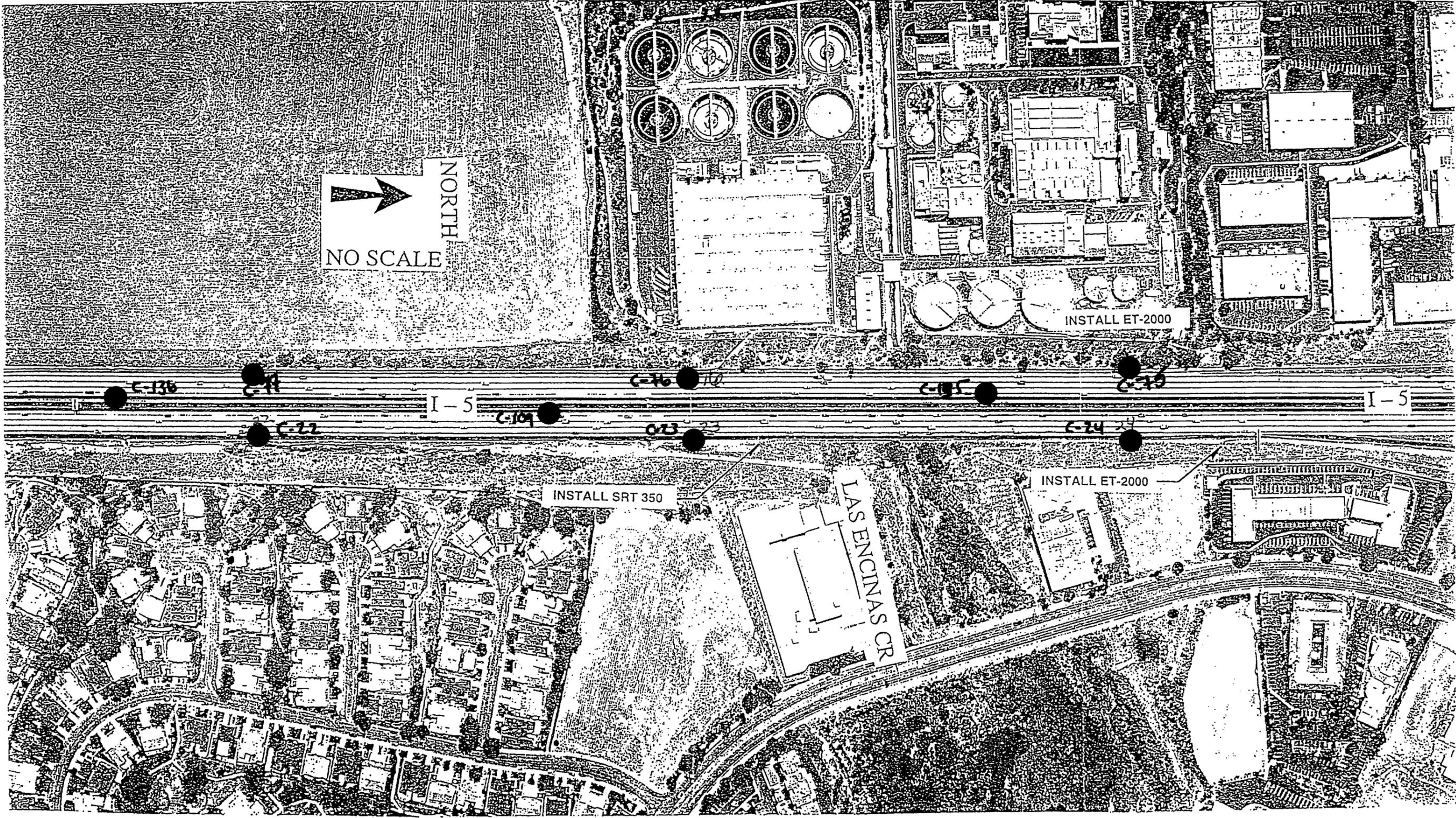
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INDUSTRIAL

RESIDENTIAL

NORTH
NO SCALE



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INSTALL SRT 350

LAS ENCINAS CR

INSTALL ET-2000

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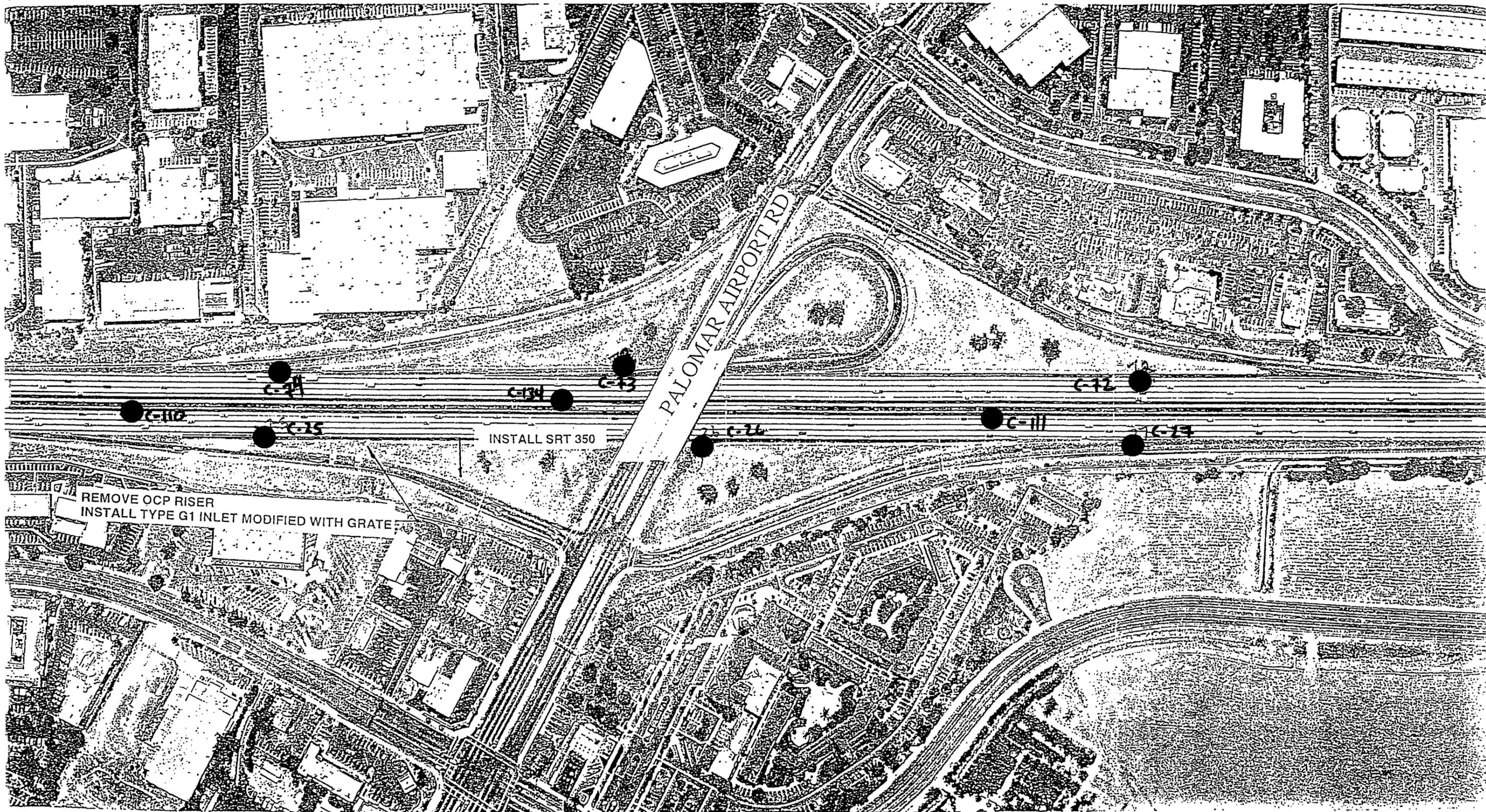
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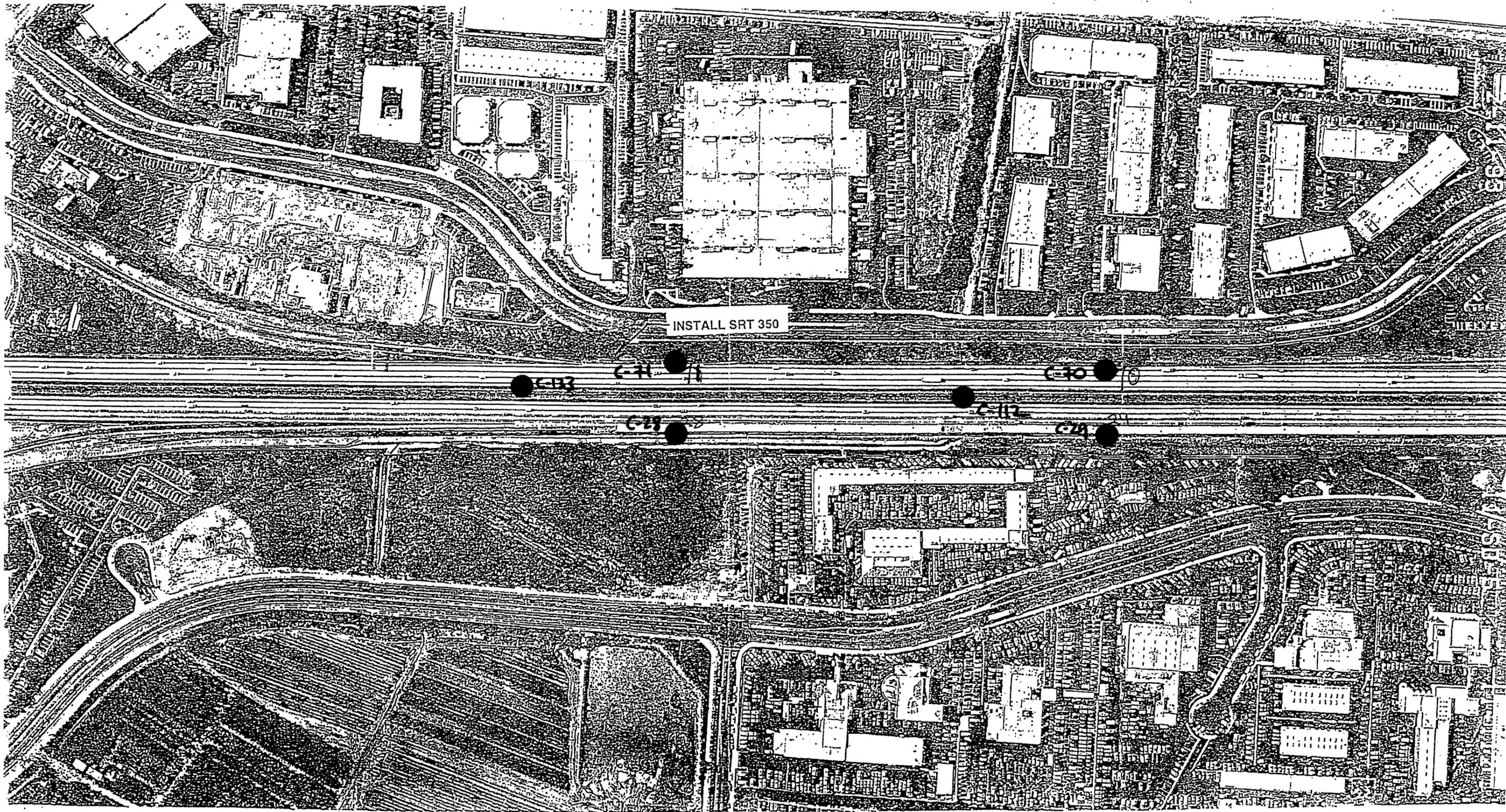
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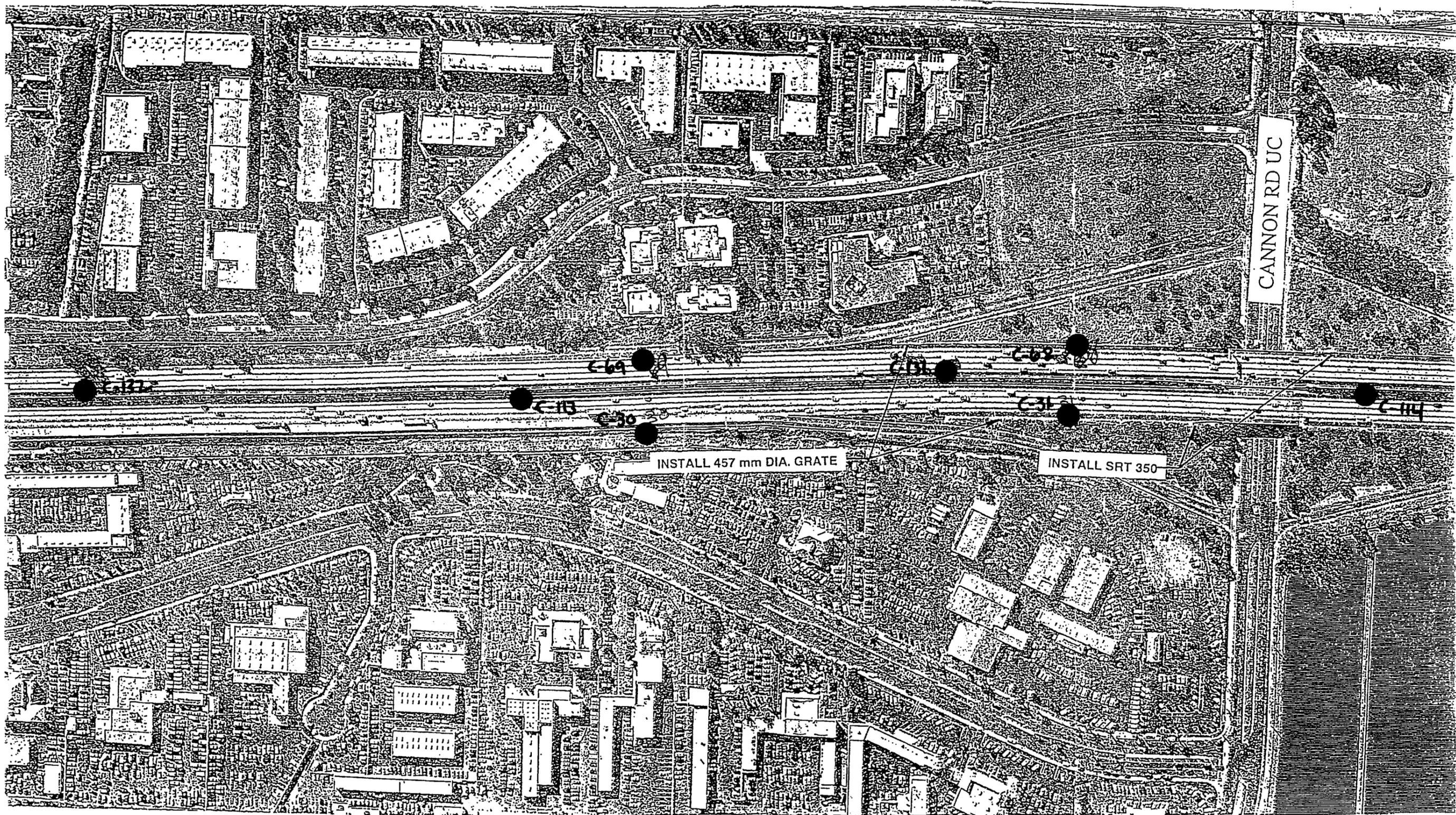
REMOVE OCP RISER
INSTALL TYPE G1 INLET MODIFIED WITH GRATE

INSTALL SRT 350



INSTALL SRT 350

C-13 C-11 C-12 C-14



CANNON RD UC

INSTALL 457 mm DIA. GRATE

INSTALL SRT 350

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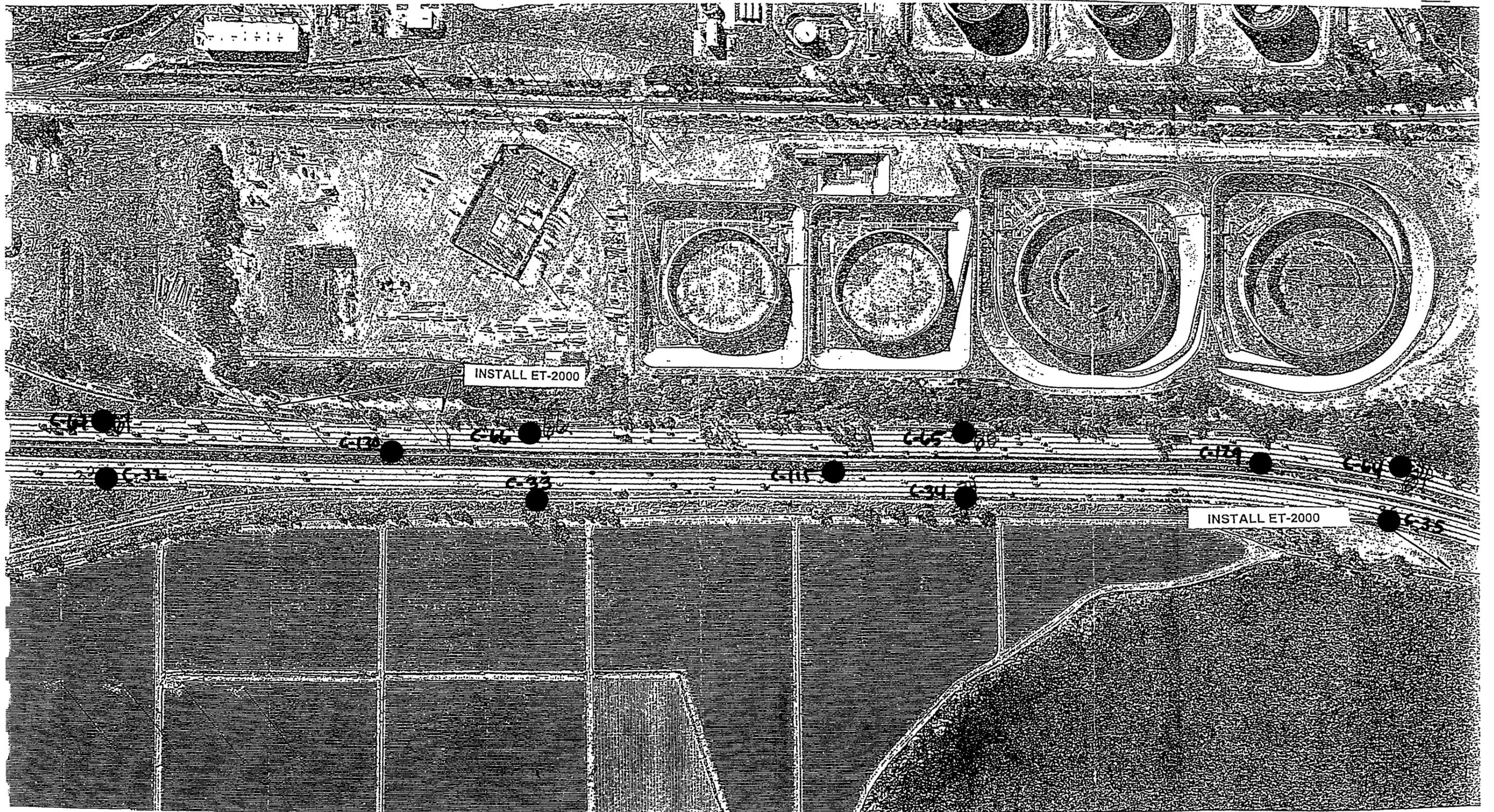
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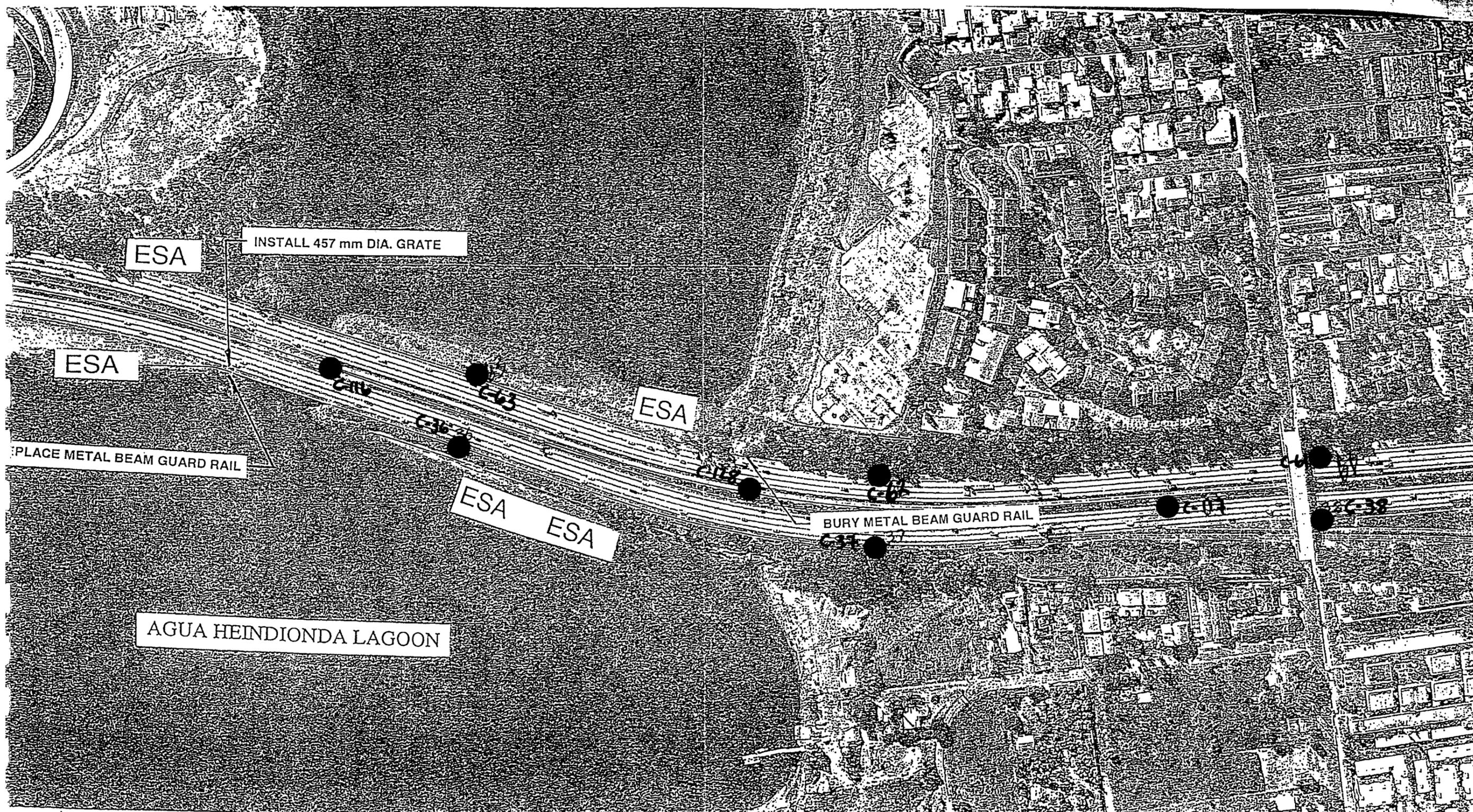
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ESA

INSTALL 457 mm DIA. GRATE

ESA

PLACE METAL BEAM GUARD RAIL

ESA

ESA ESA

BURY METAL BEAM GUARD RAIL

AGUA HEINDIONDA LAGOON

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TAMARACK AV

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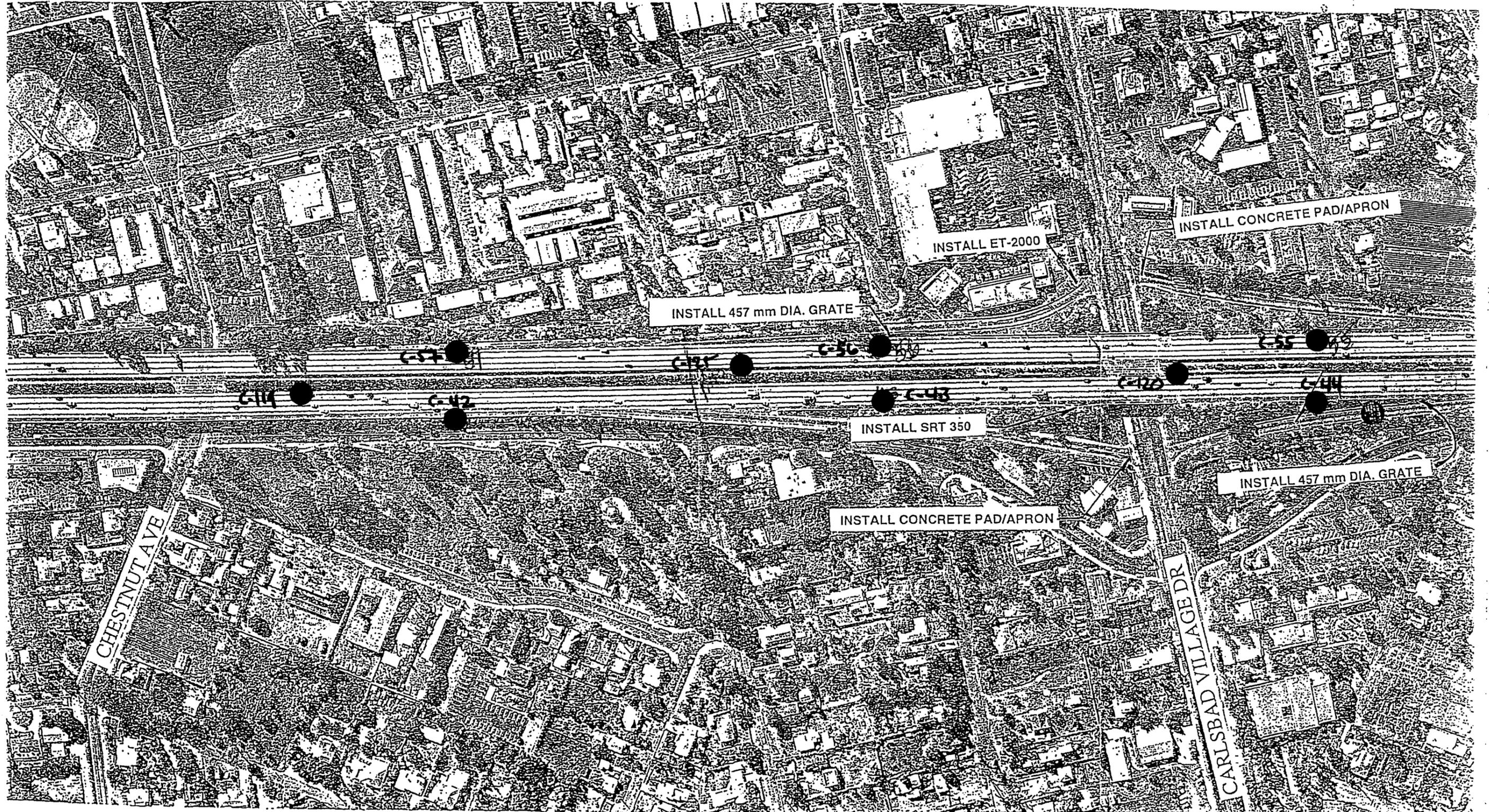
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INSTALL ET-2000

INSTALL ET-2000



INSTALL 457 mm DIA. GRATE

INSTALL ET-2000

INSTALL CONCRETE PAD/APRON

INSTALL SRT 350

INSTALL CONCRETE PAD/APRON

INSTALL 457 mm DIA. GRATE

CHESTNUT AVE

CARLSBAD VILLAGE DR

VILLAGE DR

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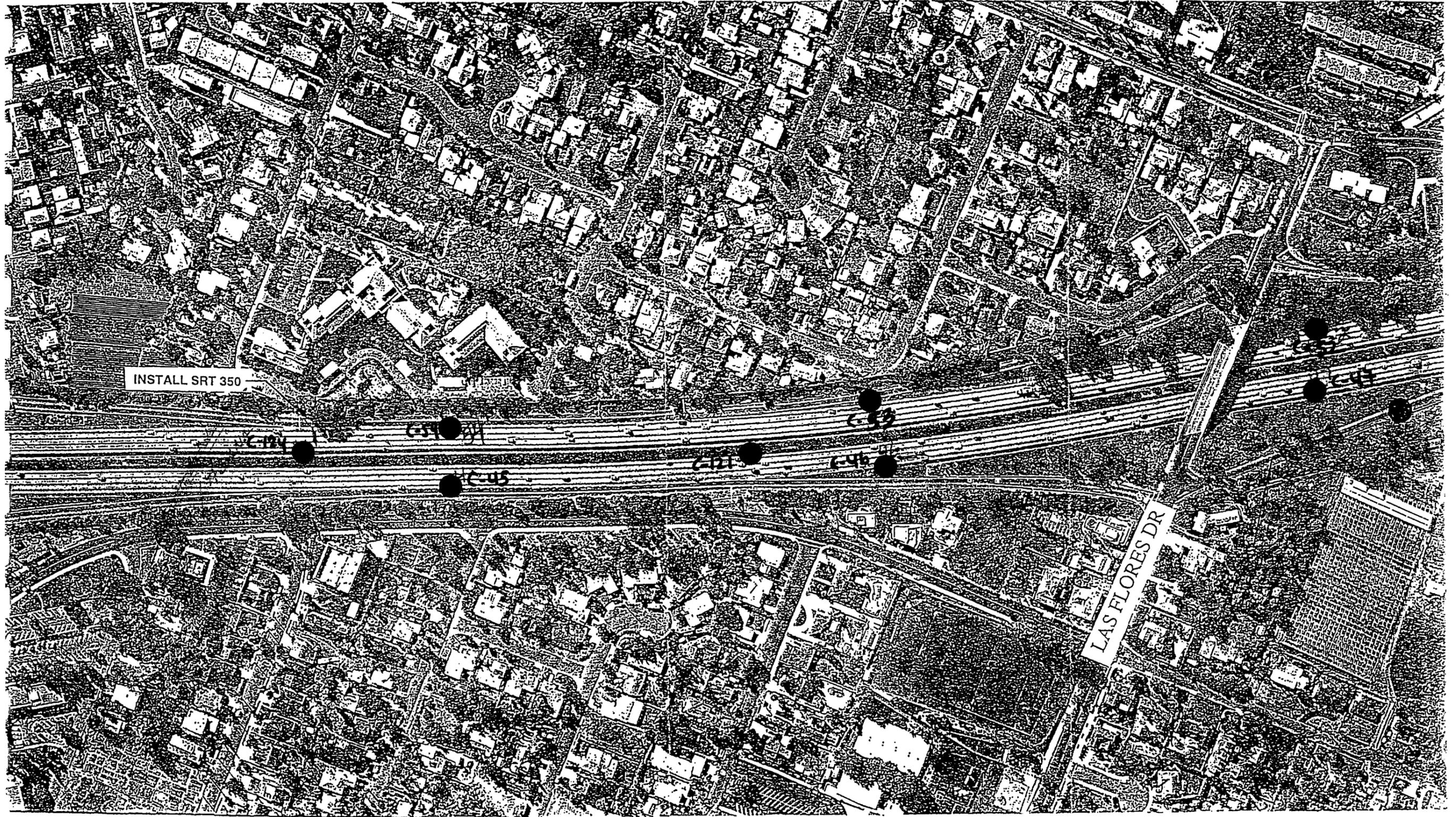
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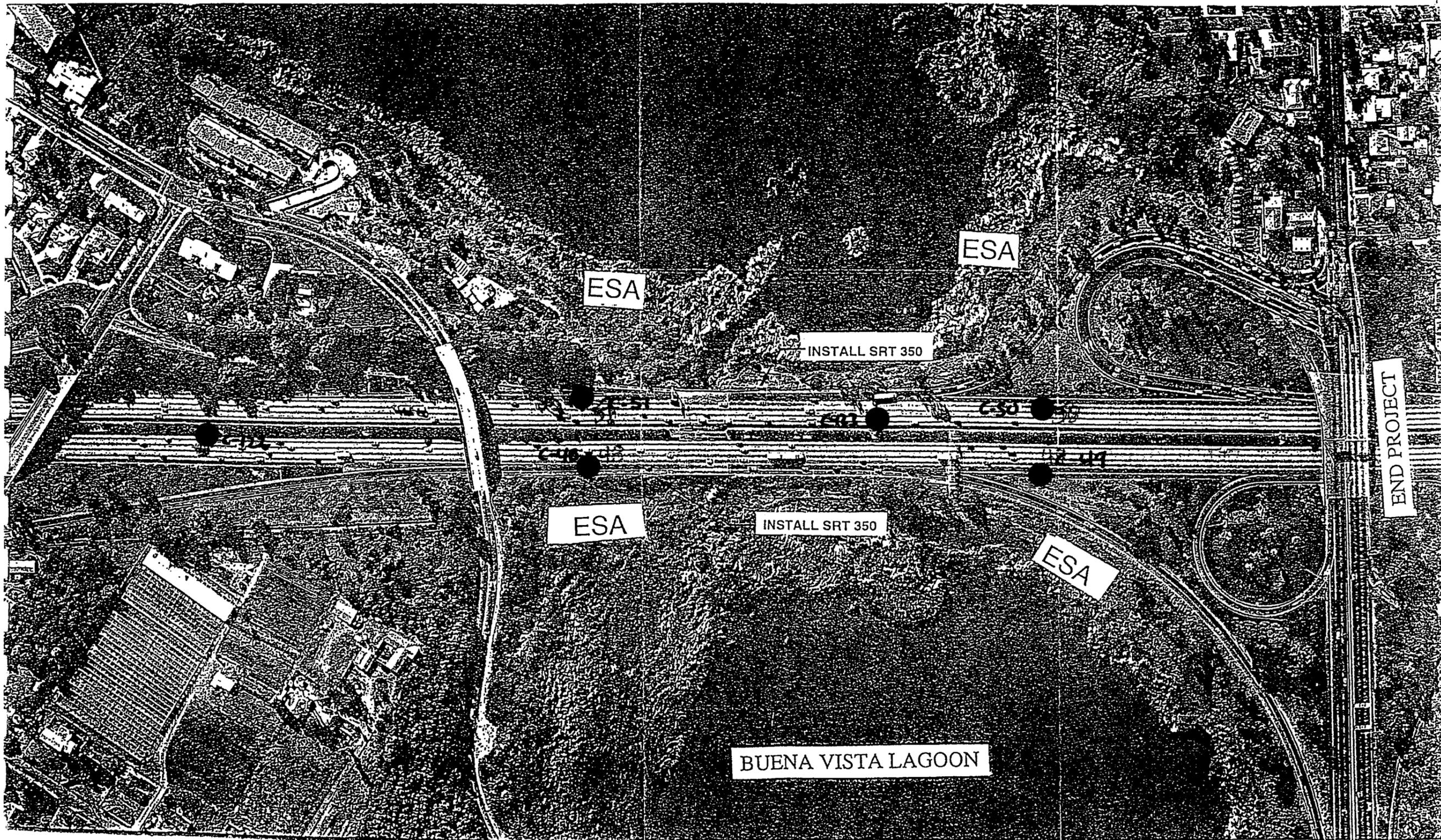
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ESA

ESA

INSTALL SRT 350

END PROJECT

ESA

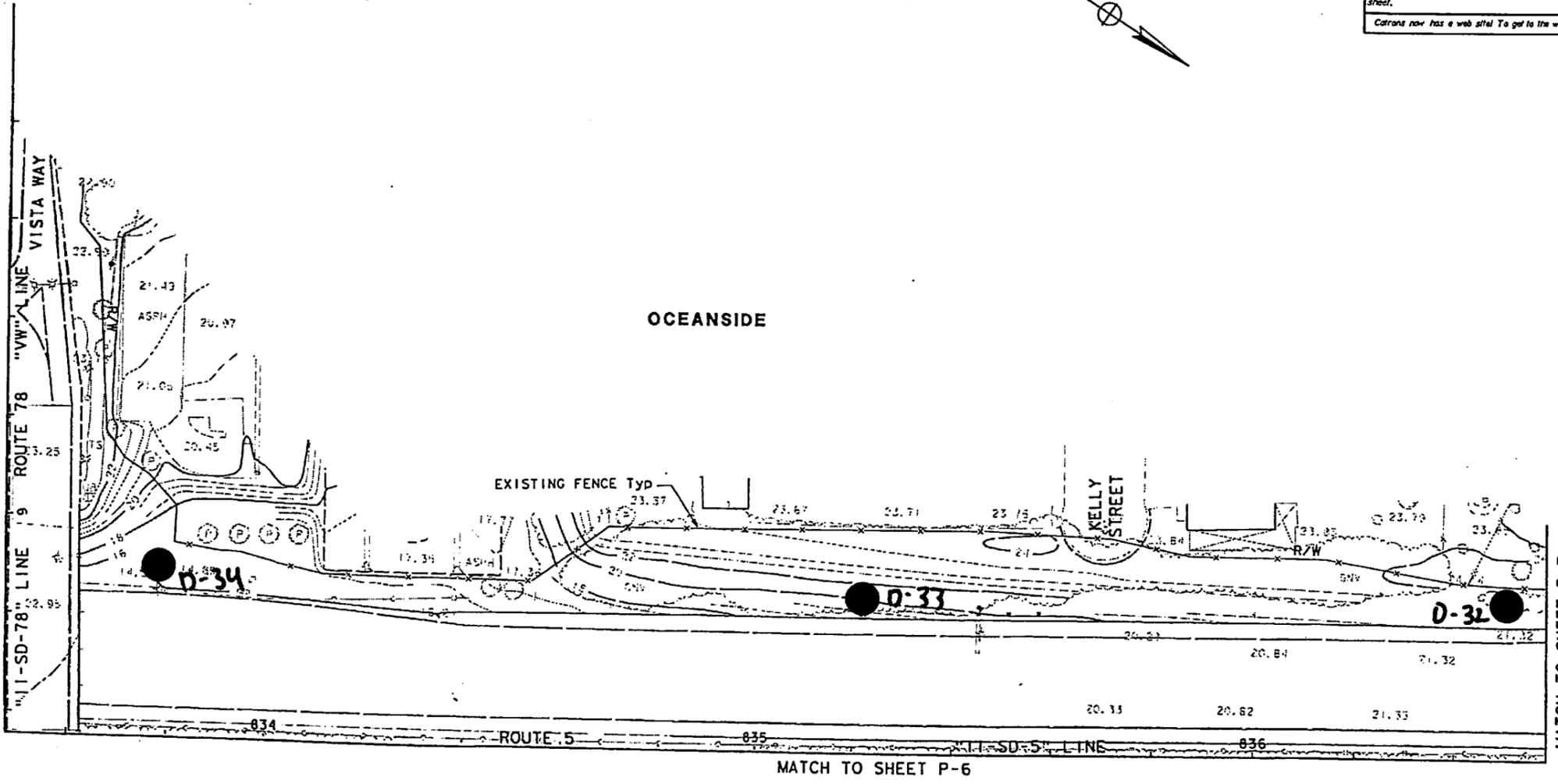
INSTALL SRT 350

ESA

BUENA VISTA LAGOON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
 PROJECT LANDSCAPE ARCHITECT
STEPHEN WARREN

CALCULATED/ RM DESIGNED BY XX	DATE MM/YY	REVISOR BY	DATE MM/YY
CHECKED BY		DATE REVISOR REVISOR	DATE REVISOR
		JN	12/99



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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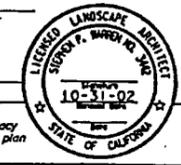
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

10-31-02

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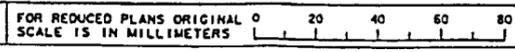
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(THIS PLAN ACCURATE FOR PLANTING WORK ONLY)

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PLANTING PLAN
 SCALE 1:500
P-5



FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

CU 11342

EA 239601

LAST REVISION DATE PLOTTED 20 FEB 2001 01-31-01 TIME PLOTTED 08:10:41

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
STEPHEN WARREN

DESIGNED BY	RM DATE	REVISOR	DATE
CHECKED BY	XX MM/YY	JN	12/99



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R81.9/R85.0	XX	

LICENSED LANDSCAPE ARCHITECT

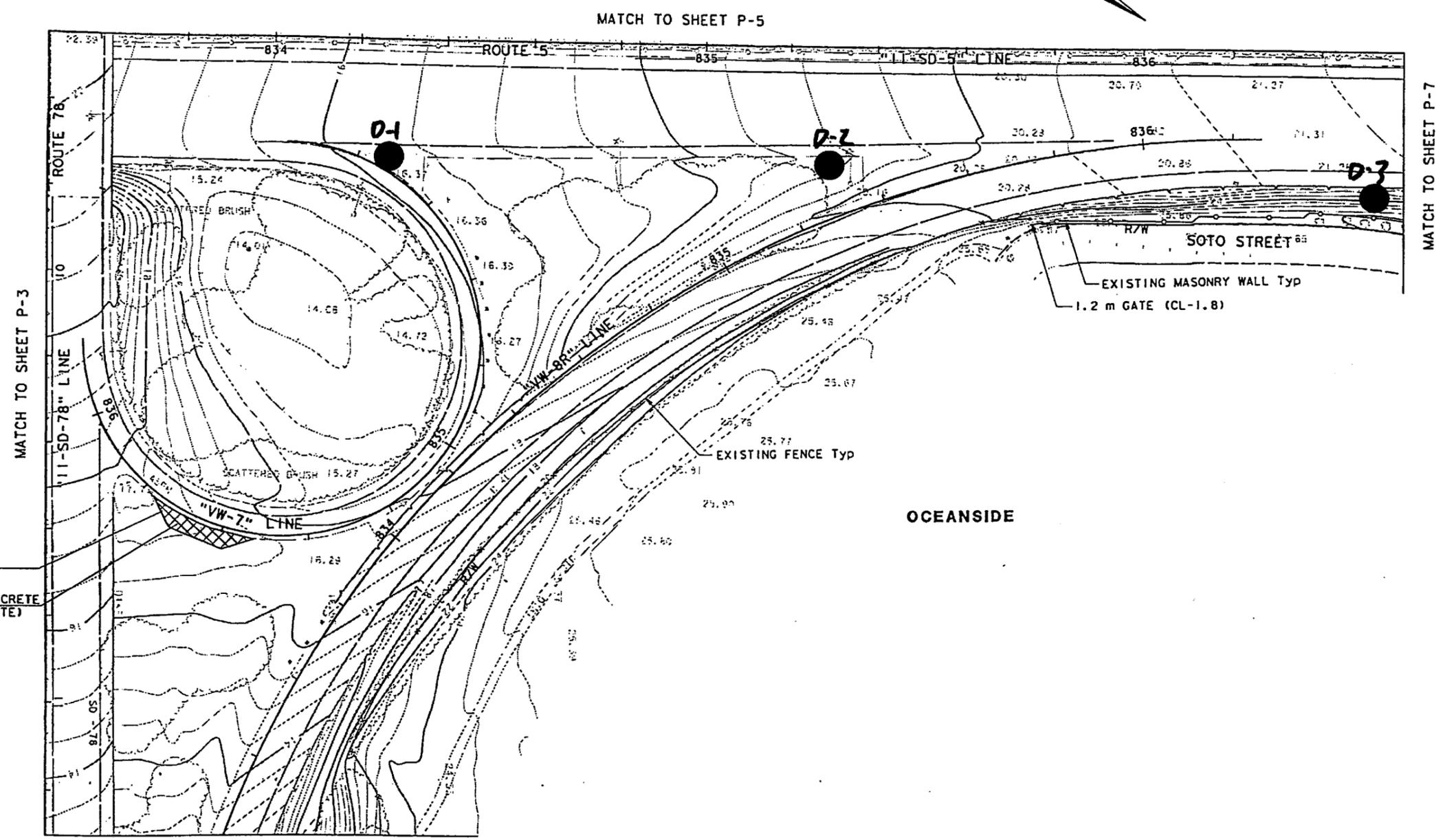
PLANS APPROVAL DATE

10-31-02

STATE OF CALIFORNIA

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MVP
 70 m² MINOR CONCRETE
 (STAMPED CONCRETE)

(THIS PLAN ACCURATE FOR PLANTING WORK ONLY)

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PLANTING PLAN
 SCALE 1:500
P-6

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

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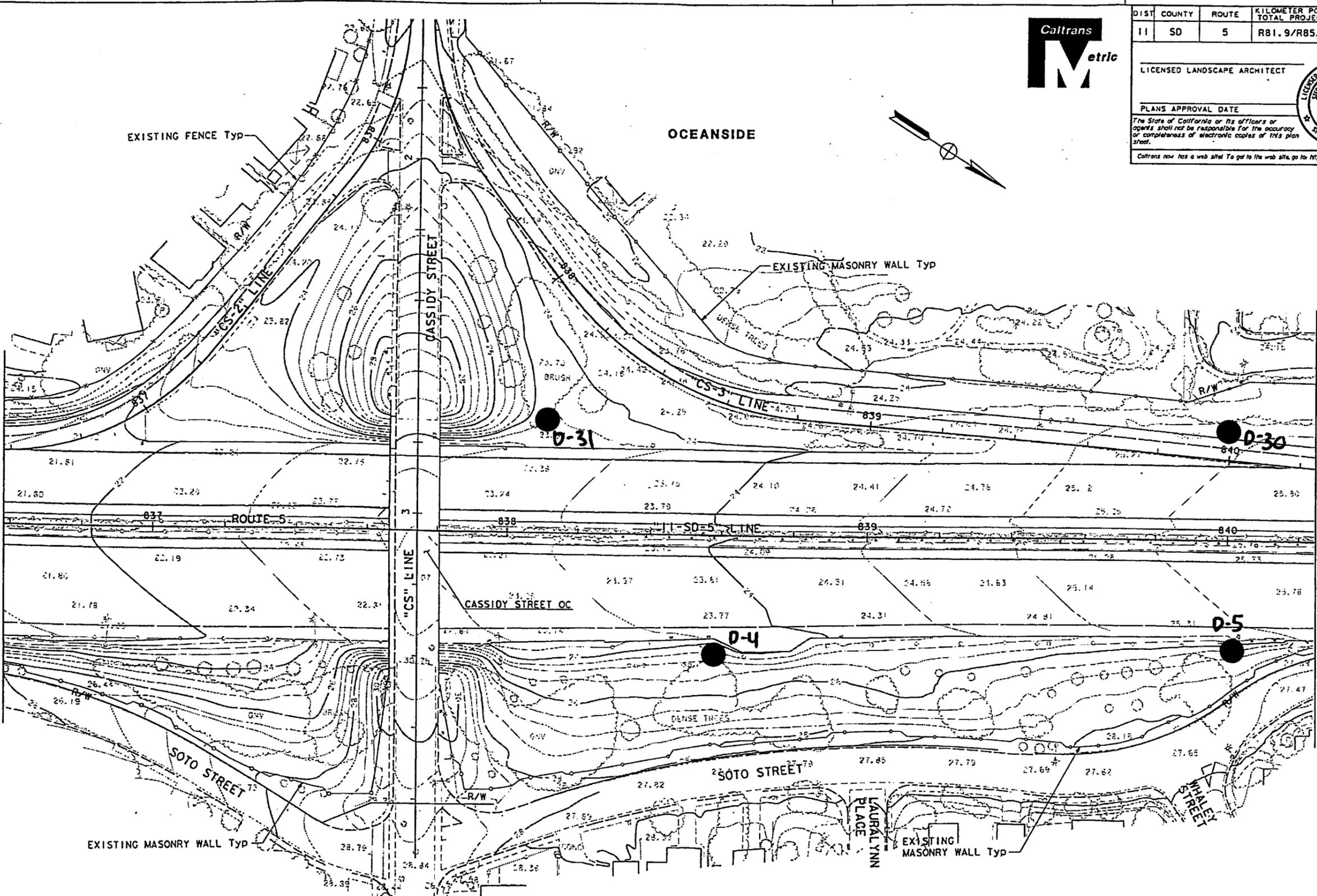
CU 11342

EA 239601

DATE PLOTTED => 20 FEB 2001
 TIME PLOTTED => 08:11:05

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
 PROJECT LANDSCAPE ARCHITECT
STEPHEN WARREN

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SO	5	R81.9/R85.0	XX	

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PLANS APPROVAL DATE

10-31-02

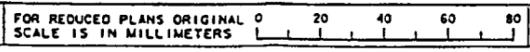
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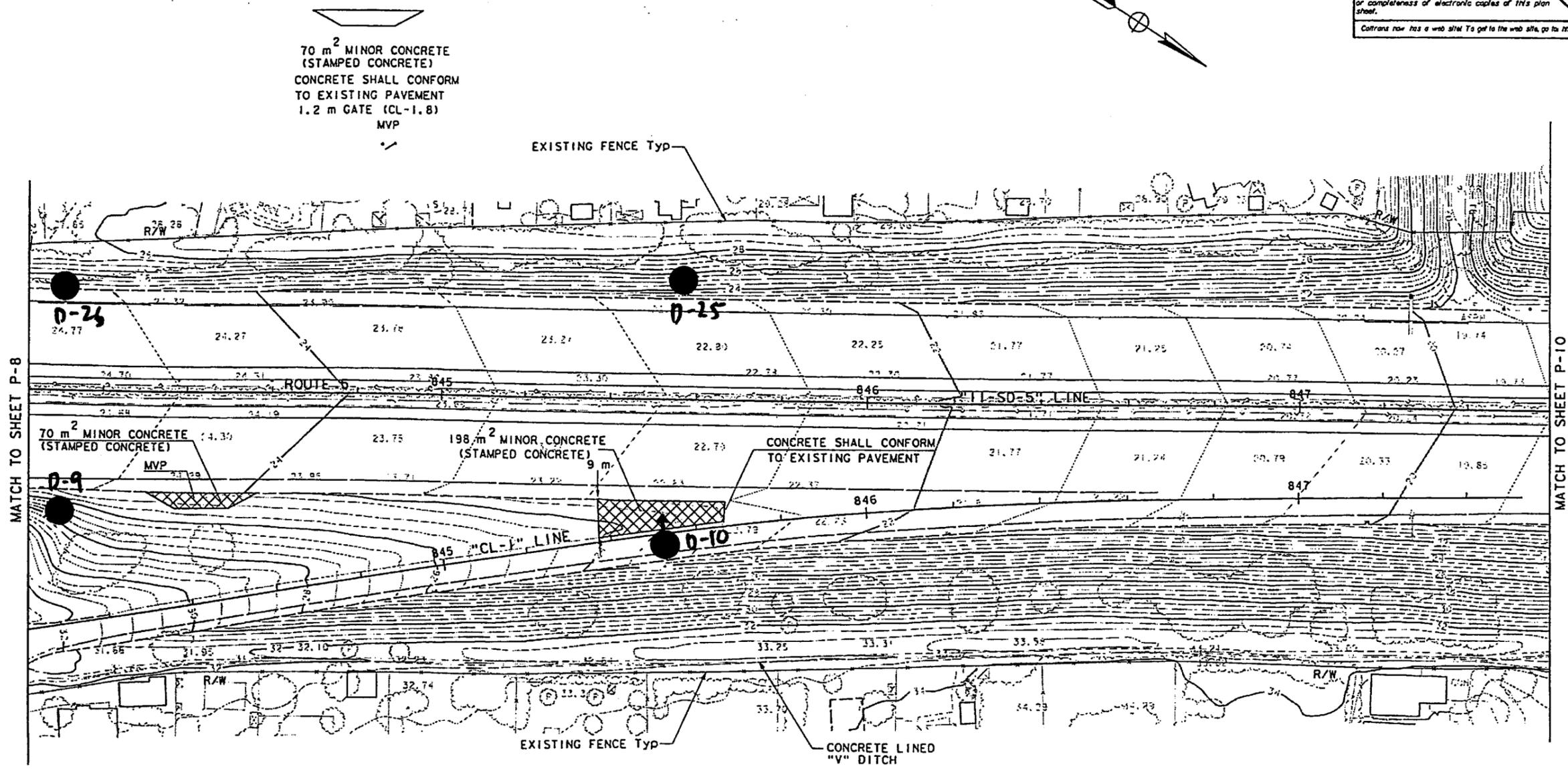
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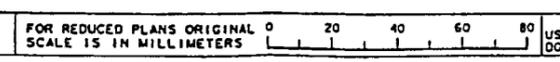
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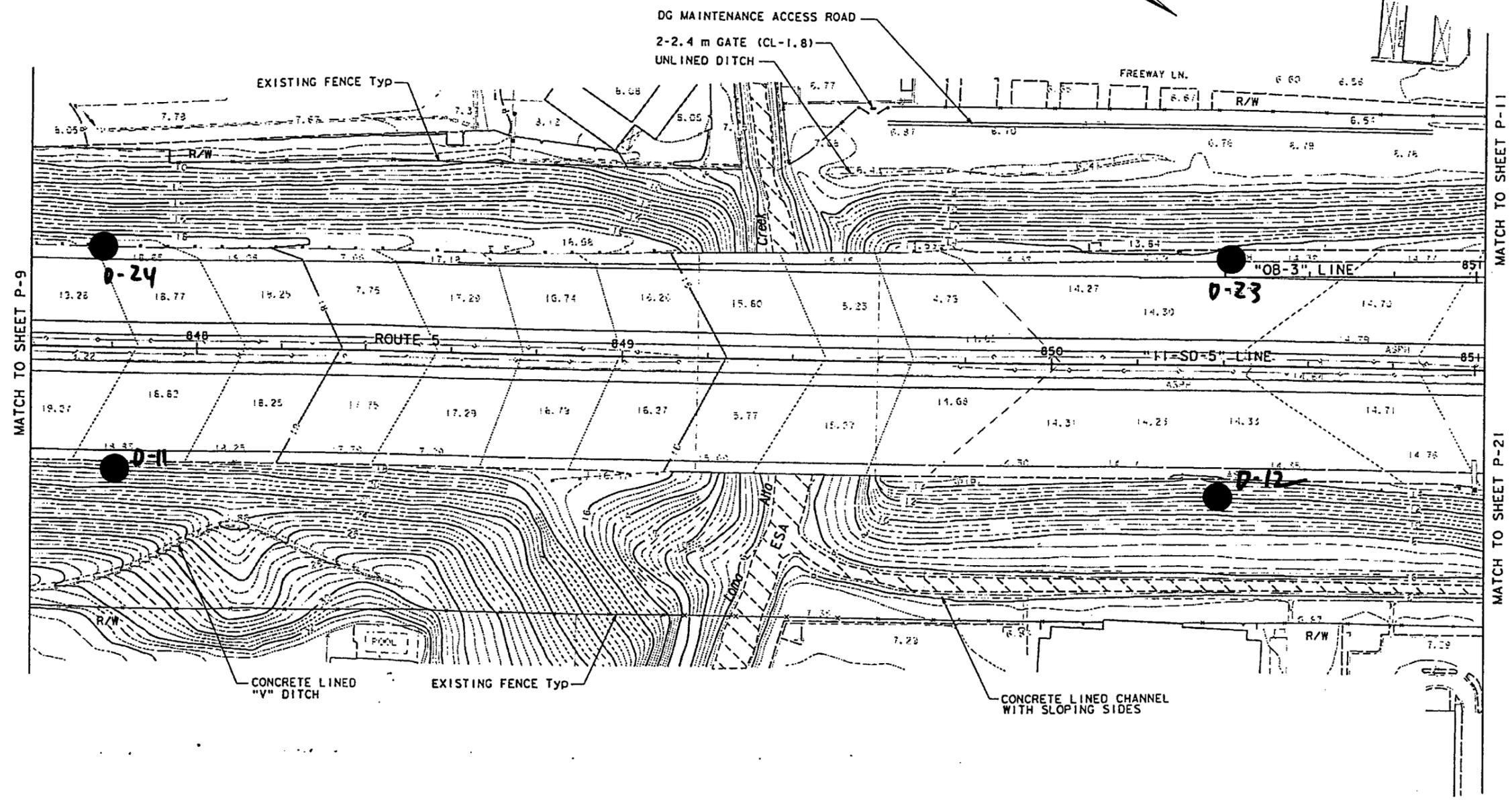
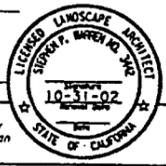
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11	SD	5	R81.9/R85.0	XX

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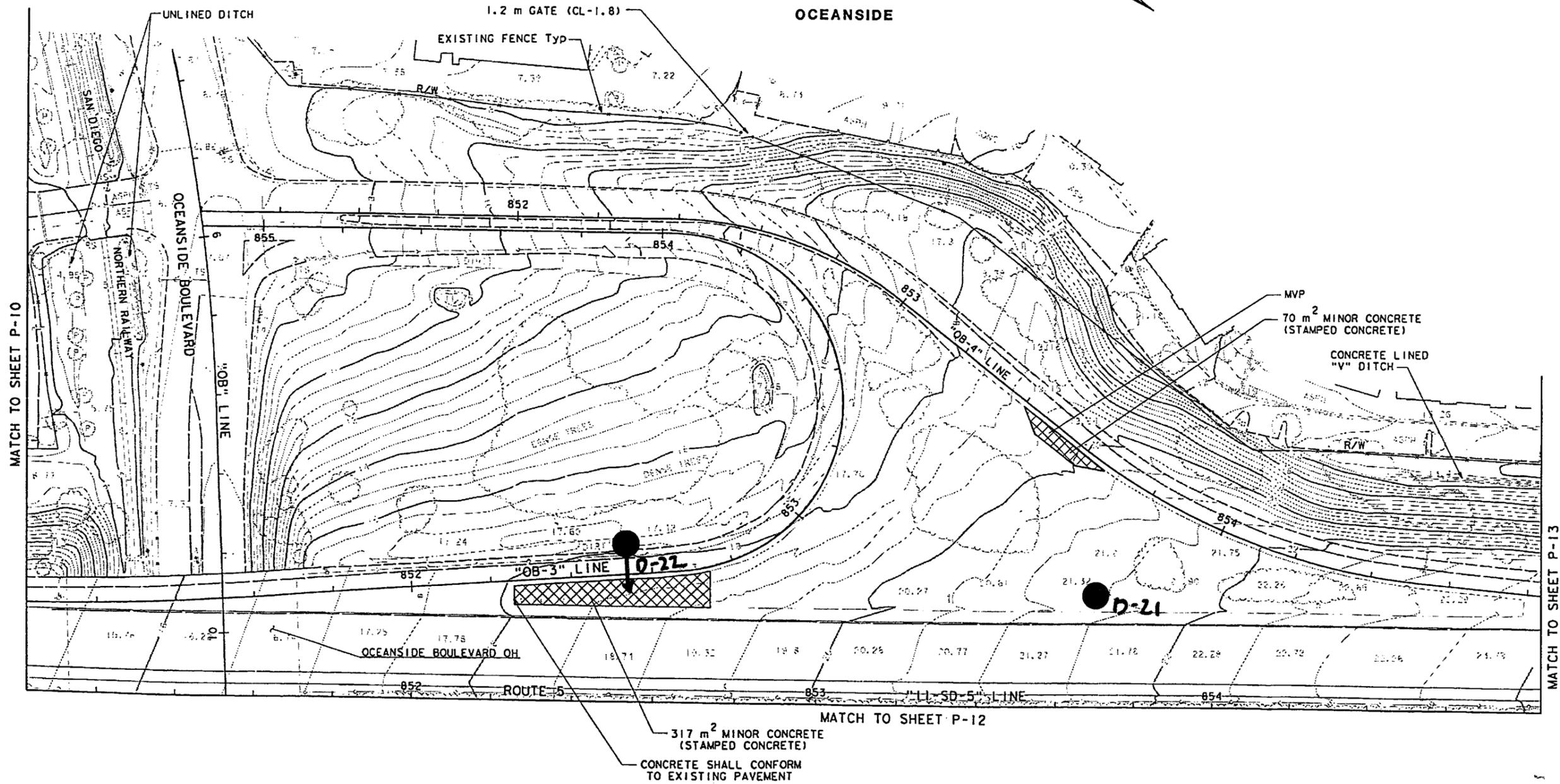
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11	SD	5	R81.9/R85.0	XX	

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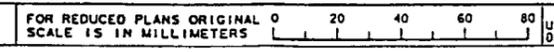
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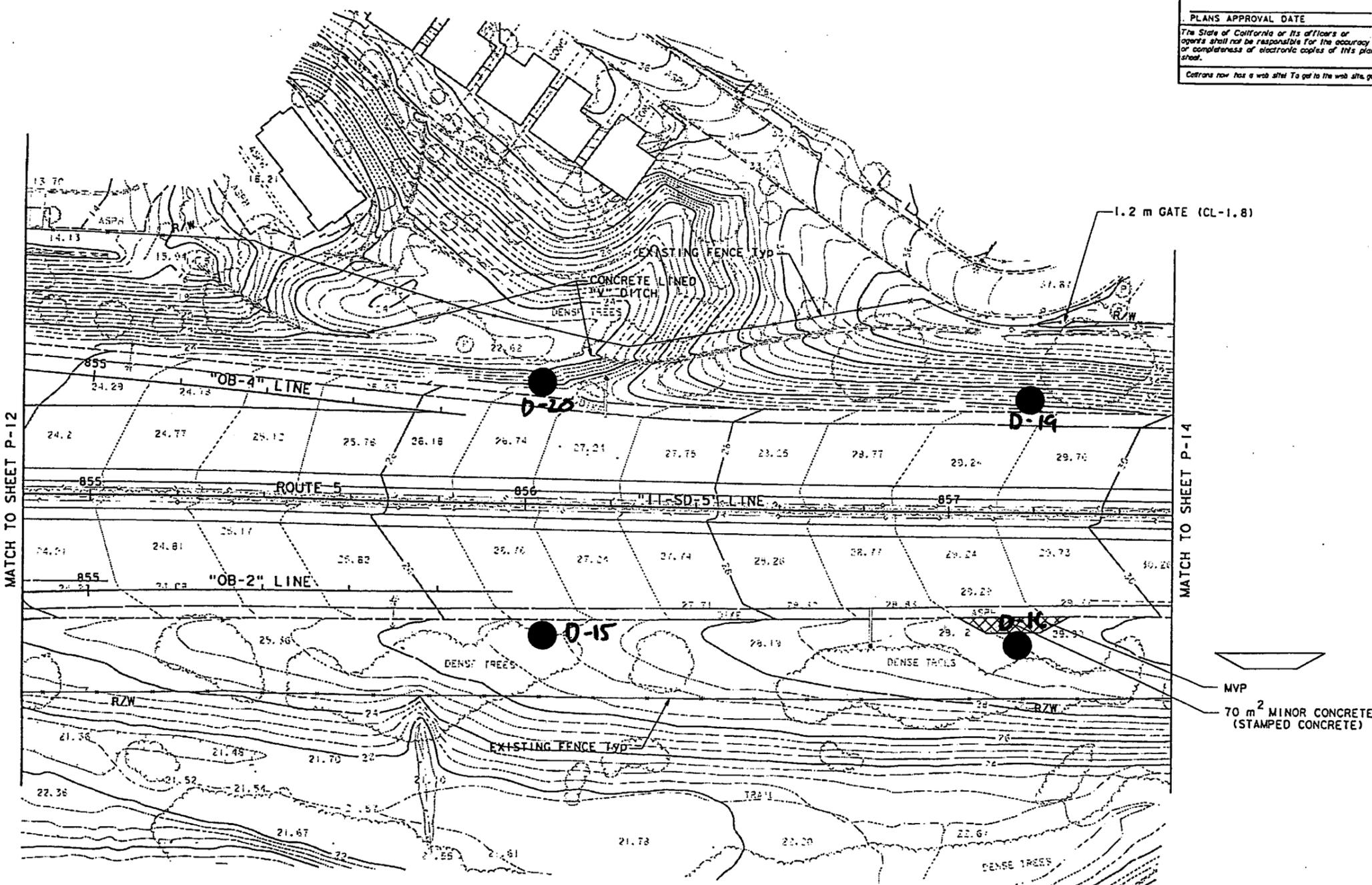
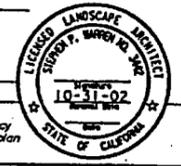
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11	SD	5	R81.9/R85.0	XX	
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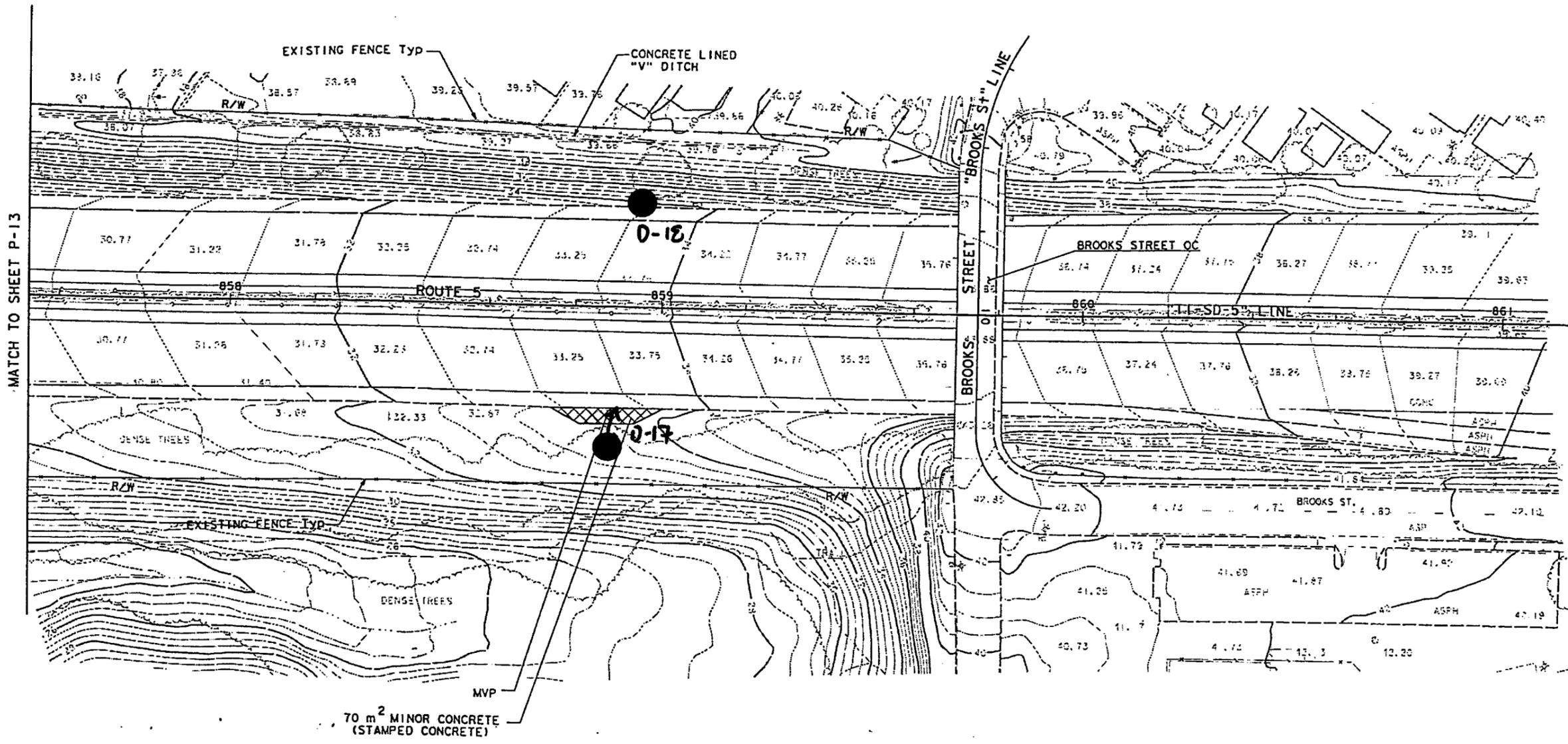
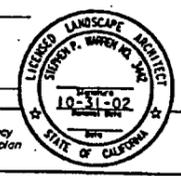
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11	SD	5	R81.9/R85.0	XX	

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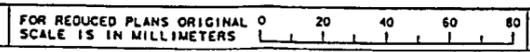
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Table 2: Summary of Analytical Results - Total Lead and Soluble Lead

Sample ID	Depth (m)	Lead Concentration (mg/kg)	Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)	
				Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)
C-1	0.15	64	4.3	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-2	0.15	360	27	NA	NA
	0.3	77	1.8	NA	NA
	0.6	94	5.5	NA	NA
C-3	0.15	11	NA	NA	NA
	0.3	18	NA	NA	NA
	0.6	ND	NA	NA	NA
C-4	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-5	0.15	81	4.1	NA	NA
	0.3	9.8	NA	NA	NA
	0.6	7.4	NA	NA	NA
C-6	0.15	9.6	NA	NA	NA
	0.3	12	NA	NA	NA
	0.6	ND	NA	NA	NA
C-7	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-8	0.15	95	4.1	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-9	0.15	5.4	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-10	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.15	9.2	NA	NA	NA
C-11	0.3	19	NA	NA	NA
	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
C-12	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
	0.15	180	5.5	NA	NA
C-13	0.3	91	5.9	ND	0.24
	0.6	38	NA	NA	NA
	0.15	ND	NA	NA	NA
C-14	0.3	ND	NA	NA	NA
	0.6	12	NA	NA	NA

Sample ID	Depth (m)	Lead		Citric Acid Lead		De-Ionized Water Lead	
		Concentration (mg/kg)	Concentration (mg/L)	Concentration (mg/L)	Concentration (mg/L)		
B-30	0.15	19	NA	NA	NA		
	0.3	8.8	NA	NA	NA		
	0.6	ND	NA	NA	NA		
C-31	0.15	ND	NA	NA	NA		
	0.3	ND	NA	NA	NA		
	0.6	ND	NA	NA	NA		
C-32	0.15	49	NA	NA	NA		
	0.3	35	NA	NA	NA		
	0.6	44	NA	NA	NA		
C-33	0.15	17	NA	NA	NA		
	0.3	12	NA	NA	NA		
	0.6	25	NA	NA	NA		
C-34	0.15	55	1	NA	NA		
	0.3	73	0.92	NA	NA		
	0.6	ND	NA	NA	NA		
C-35	0.15	ND	NA	NA	NA		
	0.3	ND	NA	NA	NA		
	0.6	11	NA	NA	NA		
C-36	0.15	40	NA	NA	NA		
	0.3	51	8.9	ND	ND		
C-37	0.15	360	13	ND	ND		
	0.3	36	NA	NA	NA		
	0.6	61	12	ND	ND		
C-38	0.15	9.8	NA	NA	NA		
	0.3	ND	NA	NA	NA		
	0.6	14	NA	NA	NA		
C-39	0.15	9.8	NA	NA	NA		
	0.3	25	NA	NA	NA		
	0.6	76	2.2	NA	NA		
C-40	0.15	130	18	ND	ND		
	0.3	55	2.9	NA	NA		
	0.6	24	NA	NA	NA		
C-41	0.15	ND	NA	NA	NA		
	0.3	5	NA	NA	NA		
	0.6	ND	NA	NA	NA		
C-42	0.15	31	NA	NA	NA		
	0.3	ND	NA	NA	NA		
	0.6	ND	NA	NA	NA		
C-43	0.15	570	14	0.2	0.2		
	0.3	26	NA	NA	NA		
C-44	0.15	110	18	ND	ND		
	0.3	8.2	NA	NA	NA		
	0.6	21	NA	NA	NA		

Sample ID	Depth (m)	Lead Concentration (mg/kg)	Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)	
				Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)
C-60	0.15	12	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	8.1	NA	NA	NA
C-61	0.15	130	9.5	ND	ND
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-62	0.15	120	9	ND	ND
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-63	0.15	280	31	ND	ND
	0.3	190	13	ND	ND
	0.6	ND	NA	NA	NA
C-64	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-65	0.15	15	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-66	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	81	5.2	1.2	1.2
C-67	0.15	14	NA	NA	NA
	0.3	14	NA	NA	NA
	0.6	9.3	NA	NA	NA
C-68	0.15	7.5	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	6	NA	NA	NA
C-69	0.15	7.8	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-70	0.15	190	12	1	1
	0.3	5	NA	NA	NA
	0.6	ND	NA	NA	NA
C-71	0.15	6.5	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-72	0.15	24	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-73	0.15	260	30	ND	ND
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA

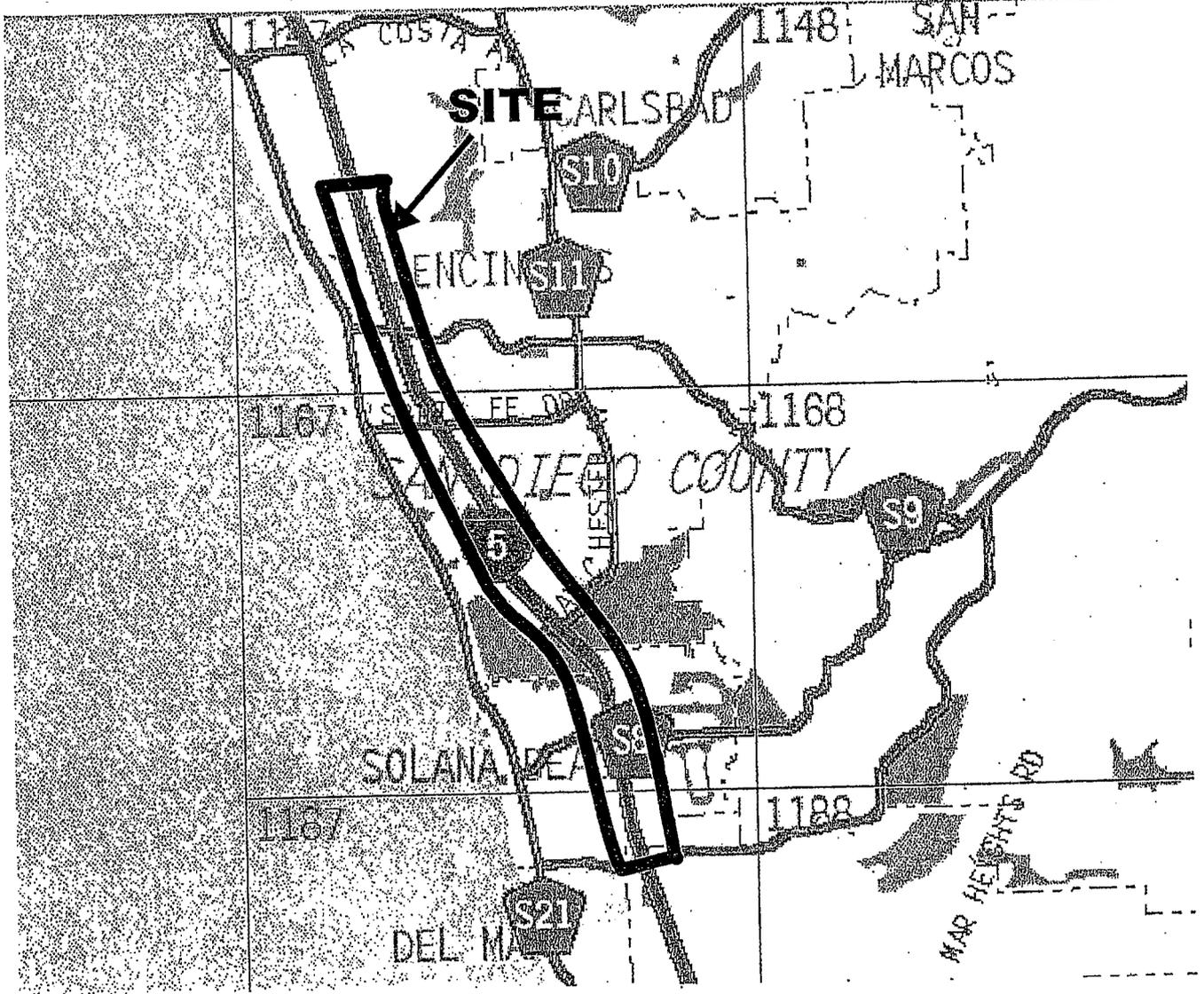
Sample ID	Depth (m)	Lead Concentration (mg/kg)	Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)	
				Citric Acid Lead Concentration (mg/L)	Water Lead Concentration (mg/L)
C-89	0.15	ND	NA	NA	NA
	0.3	5.7	NA	NA	NA
C-90	0.15	200	14	ND	ND
	0.3	8.6	NA	NA	NA
	0.6	ND	NA	NA	NA
C-91	0.15	ND	NA	NA	NA
	0.3	6.9	NA	NA	NA
	0.6	ND	NA	NA	NA
C-92	0.15	130	14	ND	ND
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-93	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-94	0.15	9.5	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-95	0.15	250	28	ND	ND
	0.3	620	74	0.27	0.27
	0.6	560	56	0.41	0.41
C-96	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-97	0.15	7.5	NA	NA	NA
	0.3	44	NA	NA	NA
	0.6	12	NA	NA	NA
C-98	0.15	68	5.4	2.6	2.6
	0.3	61	4.4	NA	NA
C-99	0.15	49	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA
C-100	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	9.9	NA	NA	NA
C-101	0.15	64	5.2	ND	ND
	0.3	35	NA	NA	NA
	0.6	31	NA	NA	NA
C-102	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	5.2	NA	NA	NA
C-103	0.15	ND	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	ND	NA	NA	NA

Sample ID	Depth (m)	Lead		Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead	
		Concentration (mg/kg)	Concentration (mg/L)		Concentration (mg/L)	Concentration (mg/L)
C-119	0.15	5	NA	NA	NA	NA
	0.3	ND	NA	NA	NA	NA
C-120	0.6	ND	NA	NA	NA	NA
	0.15	ND	NA	NA	NA	NA
C-121	0.3	55	3.5	3.5	NA	NA
	0.6	ND	NA	NA	NA	NA
C-122	0.15	51	3.4	3.4	NA	NA
	0.3	ND	NA	NA	NA	NA
C-123	0.6	ND	NA	NA	NA	NA
	0.15	120	7.2	7.2	NA	ND
C-124	0.3	5.2	NA	NA	NA	NA
	0.6	12	NA	NA	NA	NA
C-125	0.15	6.5	NA	NA	NA	NA
	0.3	ND	NA	NA	NA	NA
C-126	0.6	ND	NA	NA	NA	NA
	0.15	43	NA	NA	NA	NA
C-127	0.3	7.9	NA	NA	NA	NA
	0.6	ND	NA	NA	NA	NA
C-128	0.15	13	NA	NA	NA	NA
	0.3	ND	NA	NA	NA	NA
C-129	0.6	71	5.9	5.9	NA	ND
	0.15	33	NA	NA	NA	NA
C-130	0.3	ND	NA	NA	NA	NA
	0.6	ND	NA	NA	NA	NA
C-131	0.15	7.5	NA	NA	NA	NA
	0.3	ND	NA	NA	NA	NA
C-132	0.6	ND	NA	NA	NA	NA
	0.15	ND	NA	NA	NA	NA
C-133	0.3	55	8.2	8.2	ND	ND
	0.6	ND	NA	NA	NA	NA
C-134	0.15	6.1	NA	NA	NA	NA
	0.3	40	NA	NA	NA	NA
C-135	0.6	ND	NA	NA	NA	NA
	0.15	ND	NA	NA	NA	NA
C-136	0.3	16	NA	NA	NA	NA
	0.6	13	NA	NA	NA	NA
C-137	0.15	19	NA	NA	NA	NA
	0.3	ND	NA	NA	NA	NA
C-138	0.6	110	6.2	6.2	0.44	0.44
	0.15	7.1	NA	NA	NA	NA
C-139	0.3	ND	NA	NA	NA	NA
	0.6	95	10	10	NA	ND

Sample ID	Depth (m)	Lead Concentration (mg/kg)	Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)
D-1	0.15	170	24	ND
	0.3	ND	NA	NA
	0.6	300	25	ND
D-2	0.15	1000	130	ND
	0.3	ND	NA	NA
	0.6	ND	NA	NA
D-3	0.15	41	NA	NA
	0.3	ND	NA	NA
	0.6	ND	NA	NA
D-4	0.15	36	NA	NA
	0.3	16	NA	NA
	0.6	31	NA	NA
D-5	0.15	ND	NA	NA
	0.3	ND	NA	NA
	0.6	ND	NA	NA
D-6	0.15	5.6	NA	NA
	0.3	7.2	NA	NA
	0.6	ND	NA	NA
D-7	0.15	ND	NA	NA
	0.3	11	NA	NA
	0.6	11	NA	NA
D-8	0.15	6.7	NA	NA
	0.3	5	NA	NA
	0.6	ND	NA	NA
D-9	0.15	12	NA	NA
	0.3	ND	NA	NA
	0.6	ND	NA	NA
D-10	0.15	ND	NA	NA
	0.3	ND	NA	NA
	0.6	ND	NA	NA
D-11	0.15	280	15	ND
	0.3	ND	NA	NA
	0.6	ND	NA	NA
D-12	0.15	41	NA	NA
	0.3	57	5.6	ND
	0.6	120	9.4	ND
D-13	0.15	350	24	ND
	0.3	ND	NA	NA
	0.6	22	NA	NA
D-14	0.15	ND	NA	NA
	0.3	ND	NA	NA
	0.6	16	NA	NA

Sample ID	Depth (m)	Lead Concentration (mg/kg)	Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)	
				Citric Acid Lead Concentration (mg/L)	De-Ionized Water Lead Concentration (mg/L)
D-30	0.15	7.2	NA	NA	NA
	0.3	27	NA	NA	NA
	0.6	ND	NA	NA	NA
D-31	0.15	11	NA	NA	NA
	0.3	ND	NA	NA	NA
	0.6	42	NA	NA	NA
D-32	0.15	17	NA	NA	NA
	0.3	13	NA	NA	NA
	0.6	14	NA	NA	NA
D-33	0.15	24	NA	NA	NA
	0.3	37	NA	NA	NA
	0.6	ND	NA	NA	NA
D-34	0.15	ND	NA	NA	NA
	0.3	11	NA	NA	NA
	0.6	ND	NA	NA	NA

ND = Non-Detect
NA = Not Analyzed



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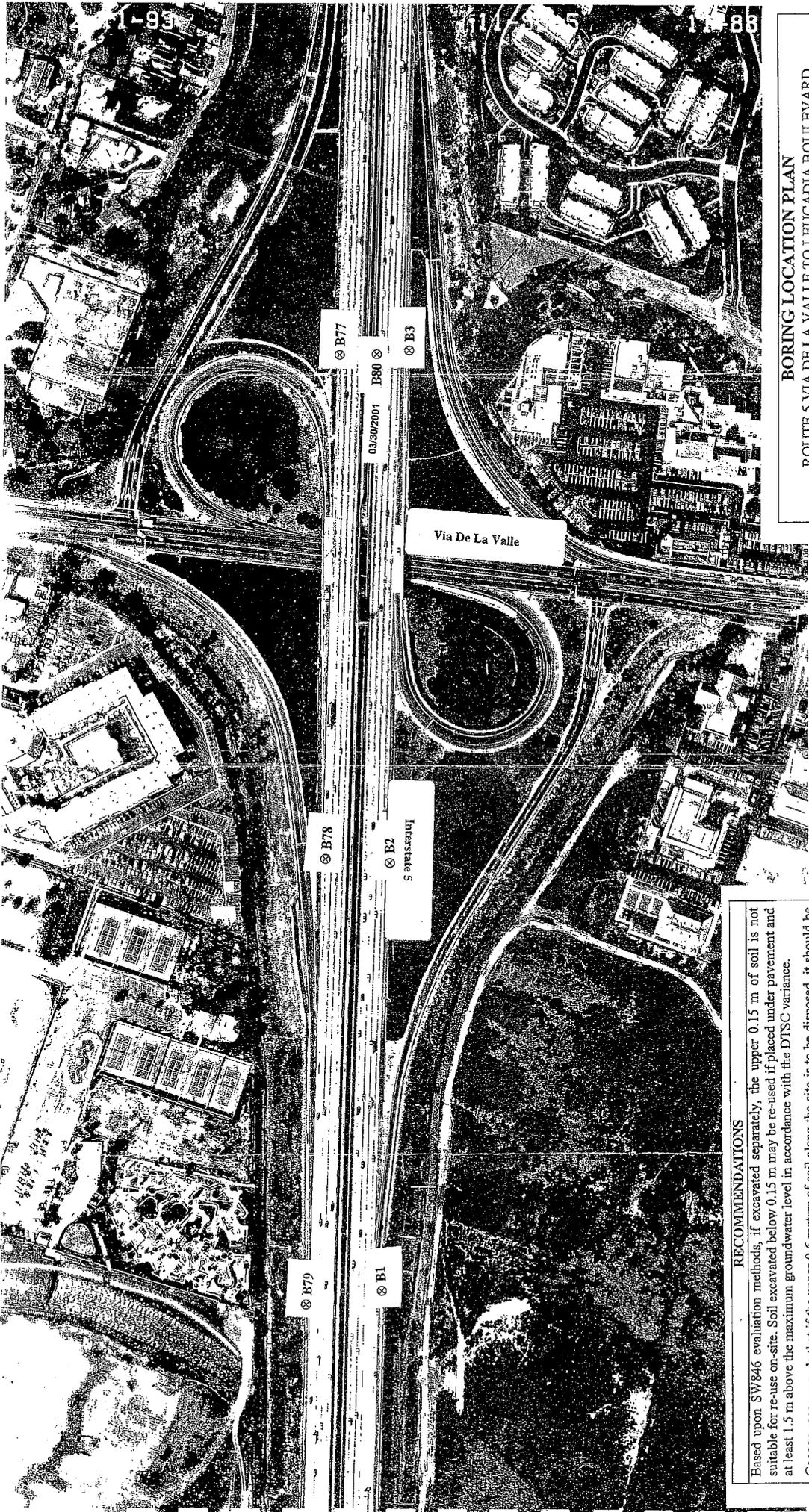
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121 - 2974
PHONE 858 558-6100 - FAX 858 558-8437

RCO/SC | VM-Rt 5 VDLV to Leucadia-107-052401

VICINITY MAP

ROUTE 5, VIA DE LA VALLE
TO LEUCADIA BOULEVARD
SAN DIEGO, SOLANA BEACH, AND
ENCINITAS, CALIFORNIA

DATE 6-22-2001 | PROJECT NO. 08900-06-107 | FIG. 1



BORING LOCATION PLAN
 ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

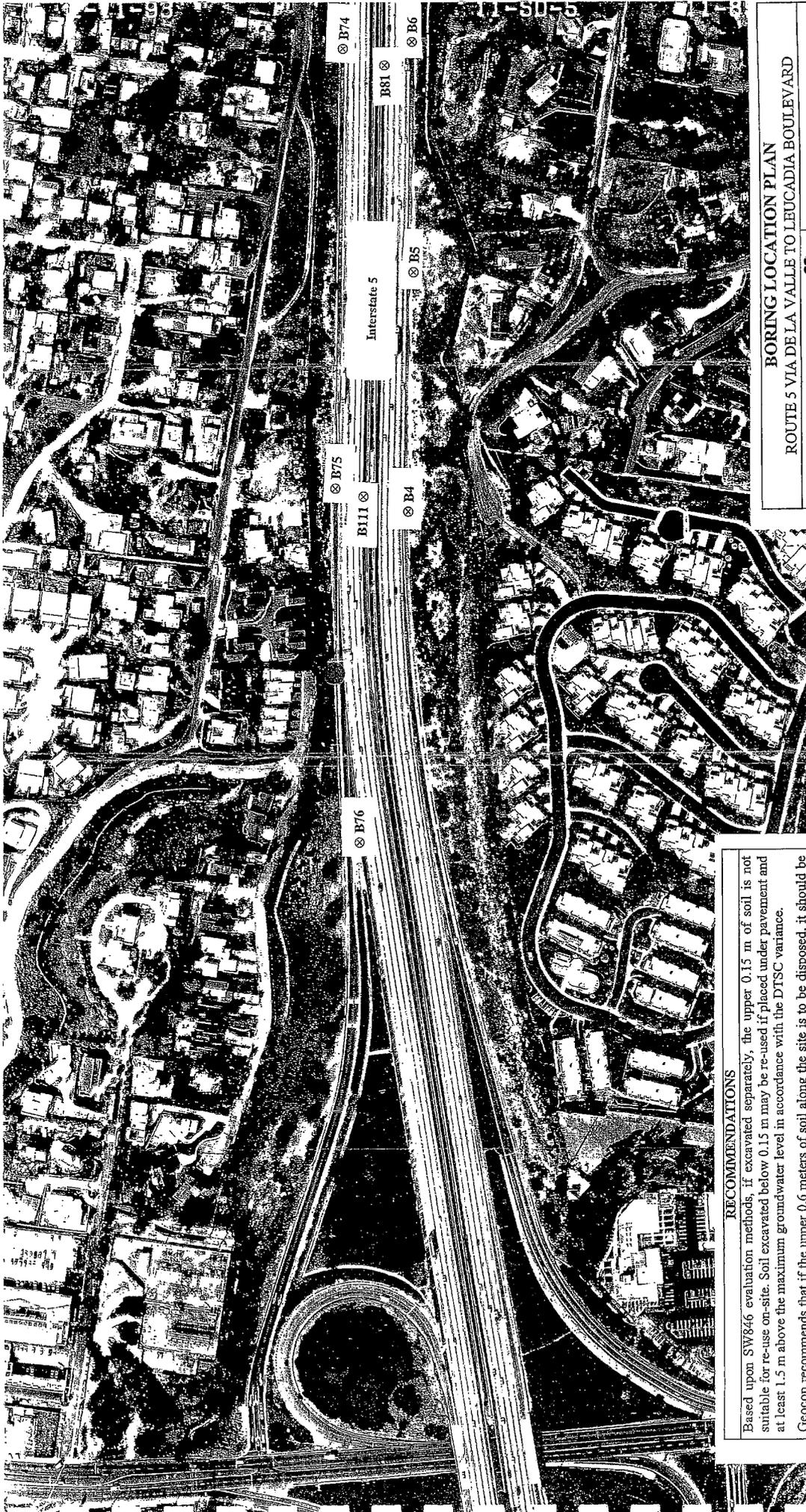
 GEOCON CONSULTANTS, INC. ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS 1100 F STREET, SUITE 1000 ■ CALIFORNIA 92311-2974 PHONE: 951-558-0800 ■ FAX: 951-558-6837	PROJECT NO. 08900-06-107 FIGURE 2, PLATE 1 DATE: 6-22-2001
---	--

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

Geocon recommends that if the upper 0.6 meters of soil along the site is to be disposed, it should be handled as a hazardous material with respect to lead concentrations.

Geocon recommends that Caltrans notify the contractors performing the construction activities that hazardous concentrations of lead may be present in on-site soil and that appropriate health and safety measures should be taken to minimize the exposure to lead.



BORING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

PROJECT NO. 08900-06-107
 FIGURE 2, PLATE 2
 DATE: 6-22-2001

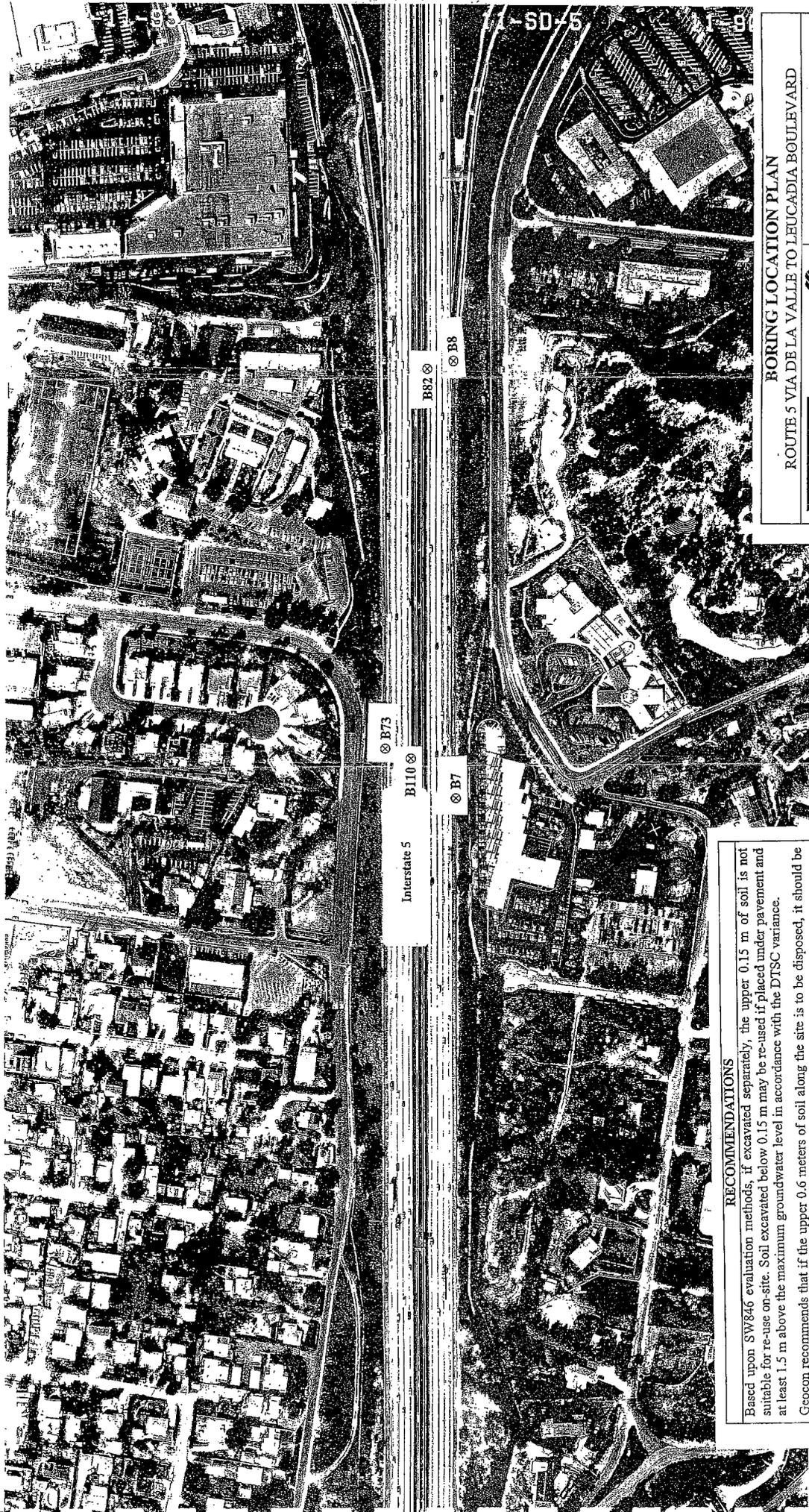
GEOCON
 CONSULTANTS, INC.
 ENVIRONMENTAL, GEOTECHNICAL & MATERIALS
 ENGINEERING DIVISION - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619-558-9300 - FAX 619-558-9427

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN

ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

GEOCON
CONSULTANTS, INC.

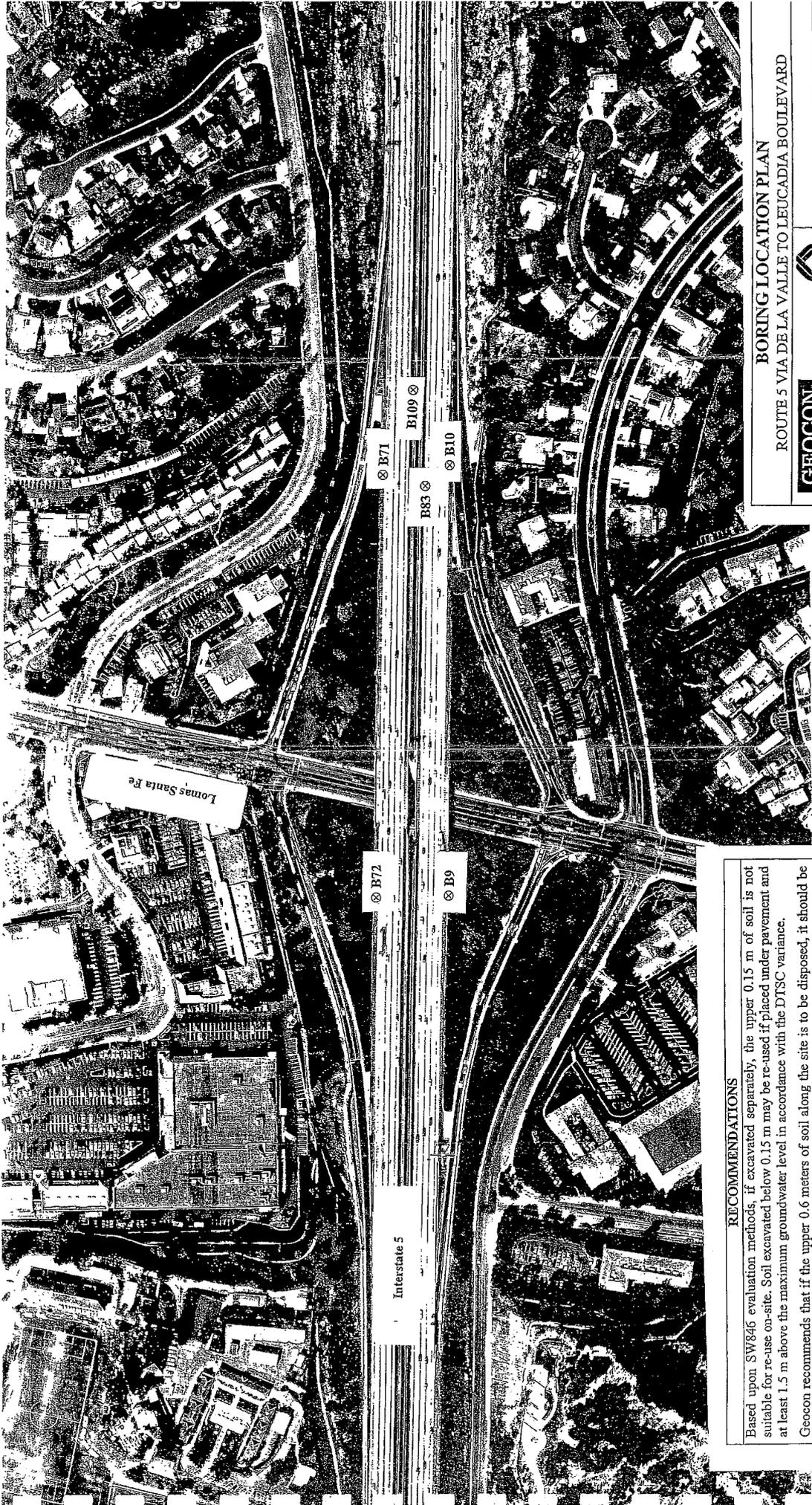
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
10000 CALIFORNIA STREET
SAN DIEGO, CALIFORNIA 92121-2974
PHONE 619-558-0000 - FAX 619-558-8407



PROJECT NO. 08900-06-107

FIGURE 2, PLATE 3

DATE: 6-22-2001



RECOMMENDATIONS

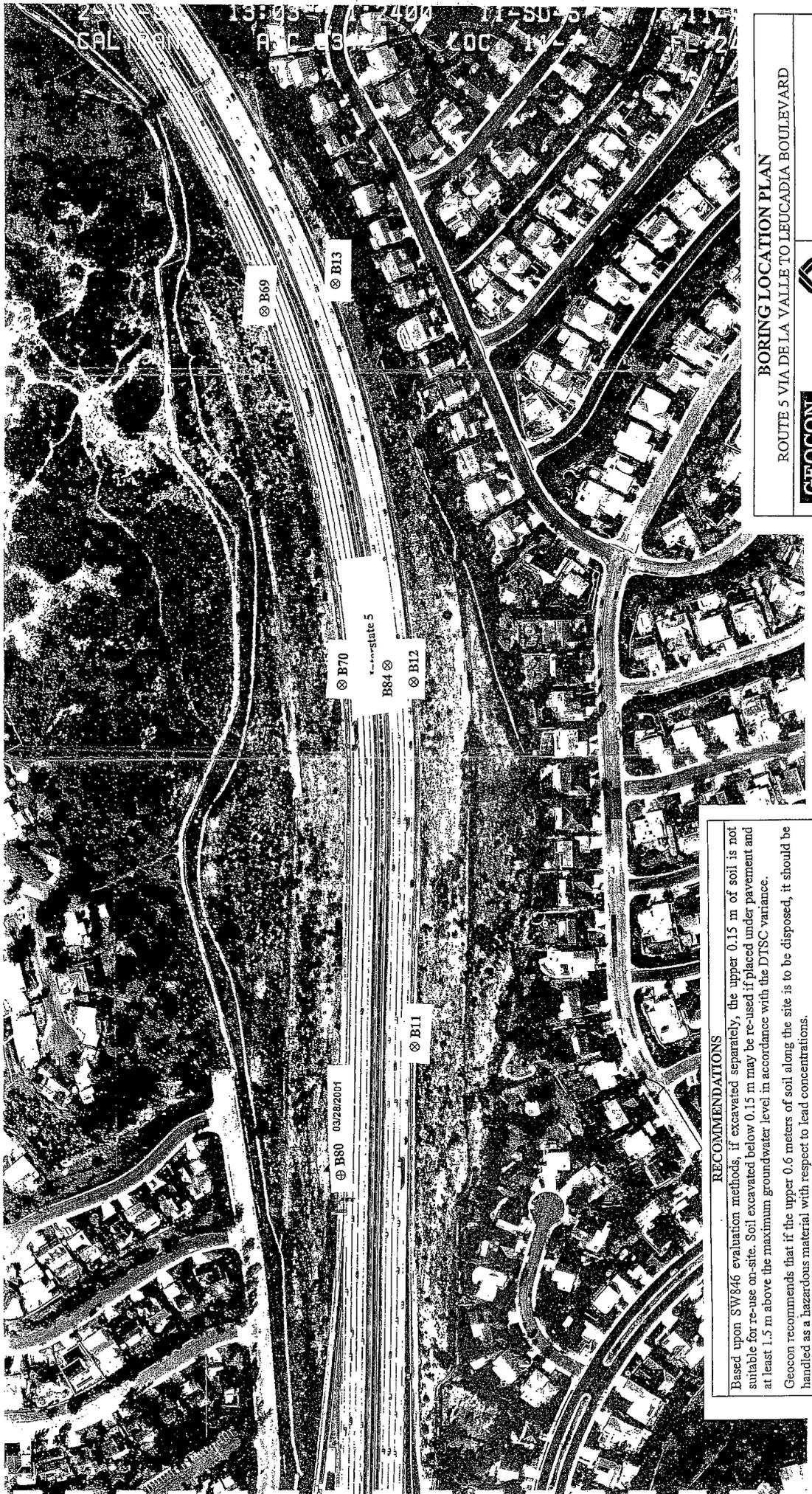
Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

 GEOCON CONSULTANTS, INC. ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS 6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974 PHONE 619-538-9100 - FAX 619-538-9457	PROJECT NO. 08900-06-107
	FIGURE 2, PLATE 4
	DATE: 6-22-2001



BORING LOCATION PLAN

ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

GEOCON CONSULTANTS, INC.		PROJECT NO. 08900-06-107
ENVIRONMENTAL & GEOTECHNICAL MATERIALS		FIGURE 2, PLATE 5
6970 PLANER DRIVE - SAN DIEGO, CALIFORNIA 92121-2774		DATE: 6-22-2001
PHONE 619-558-6100 - FAX 619-558-8437		

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN

ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

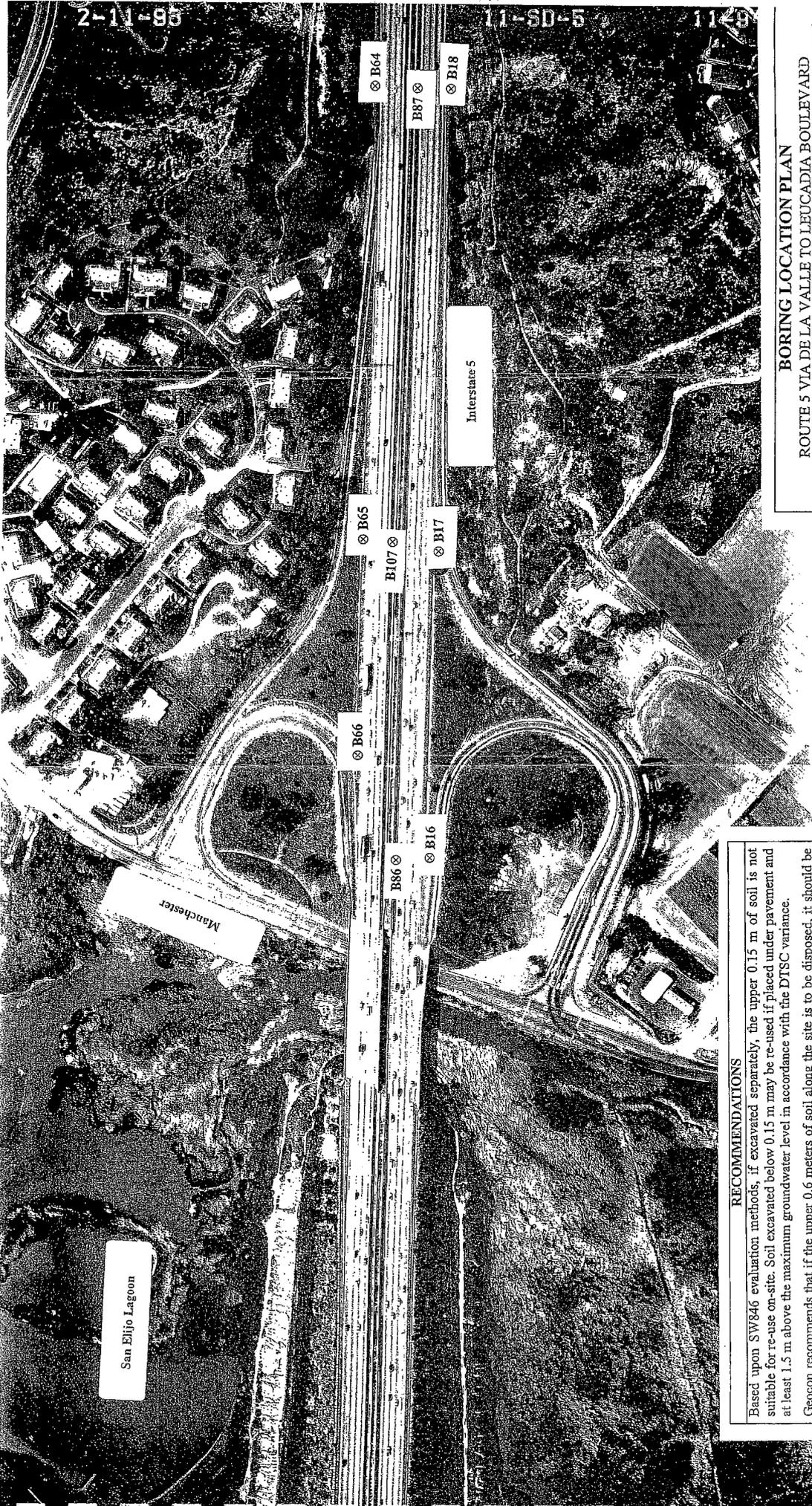
GEOCON CONSULTANTS, INC.	PROJECT NO. 08900-06-107
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS	FIGURE 2, PLATE 6
6770 FLANDERS DRIVE ■ SAN DIEGO, CALIFORNIA 92121-2974	DATE: 6-22-2001
PHONE 858-558-6100 ■ FAX 858-558-9437	

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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2-11-95

11-SD-5

11-95

BORING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

PROJECT NO. 08900-06-107	
FIGURE 2, PLATE 7	
DATE: 6-22-2001	

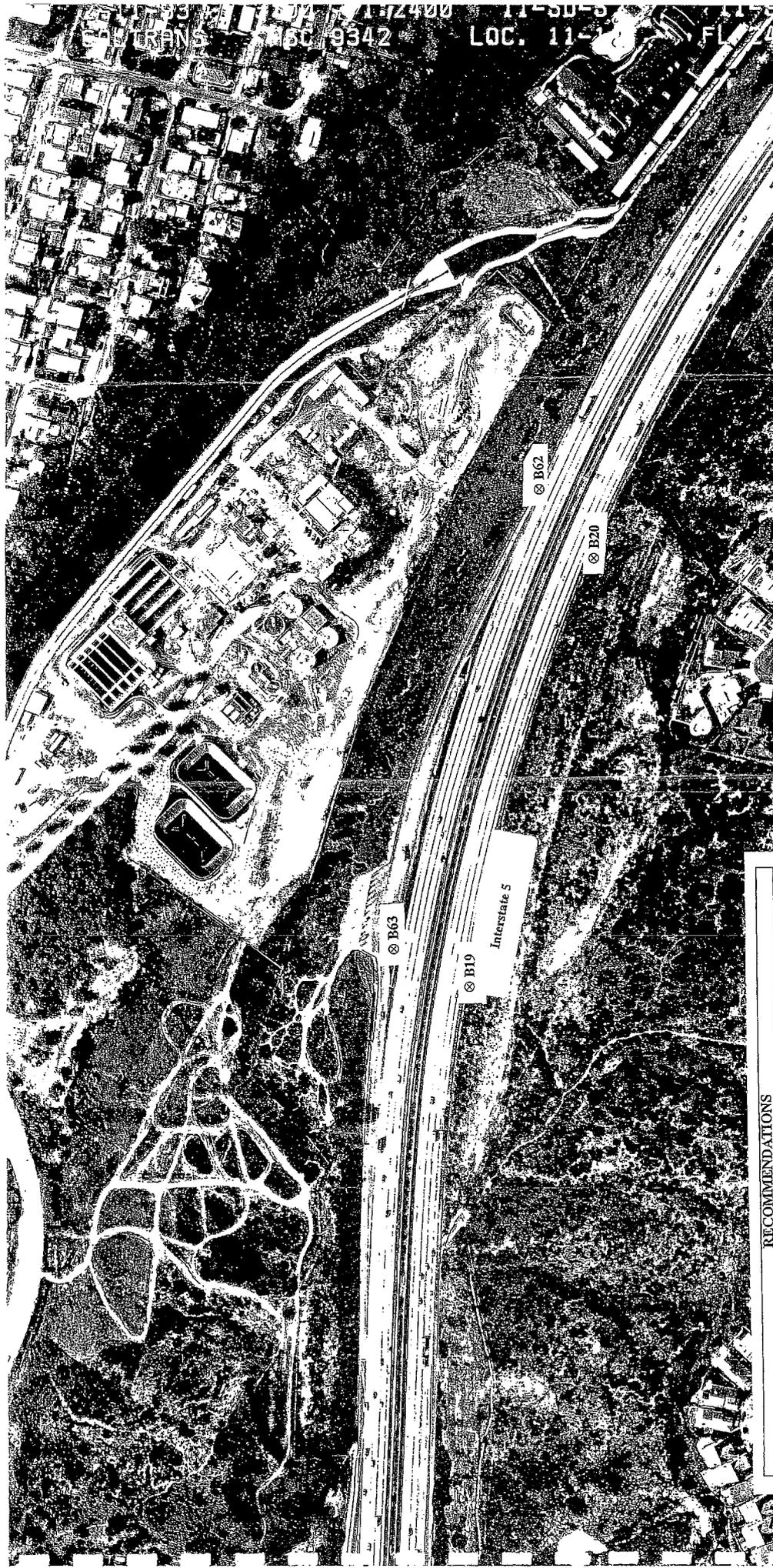
GEOCOON
CONSULTANTS, INC.
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
8970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 619-598-6100 - FAX 619-598-6157

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

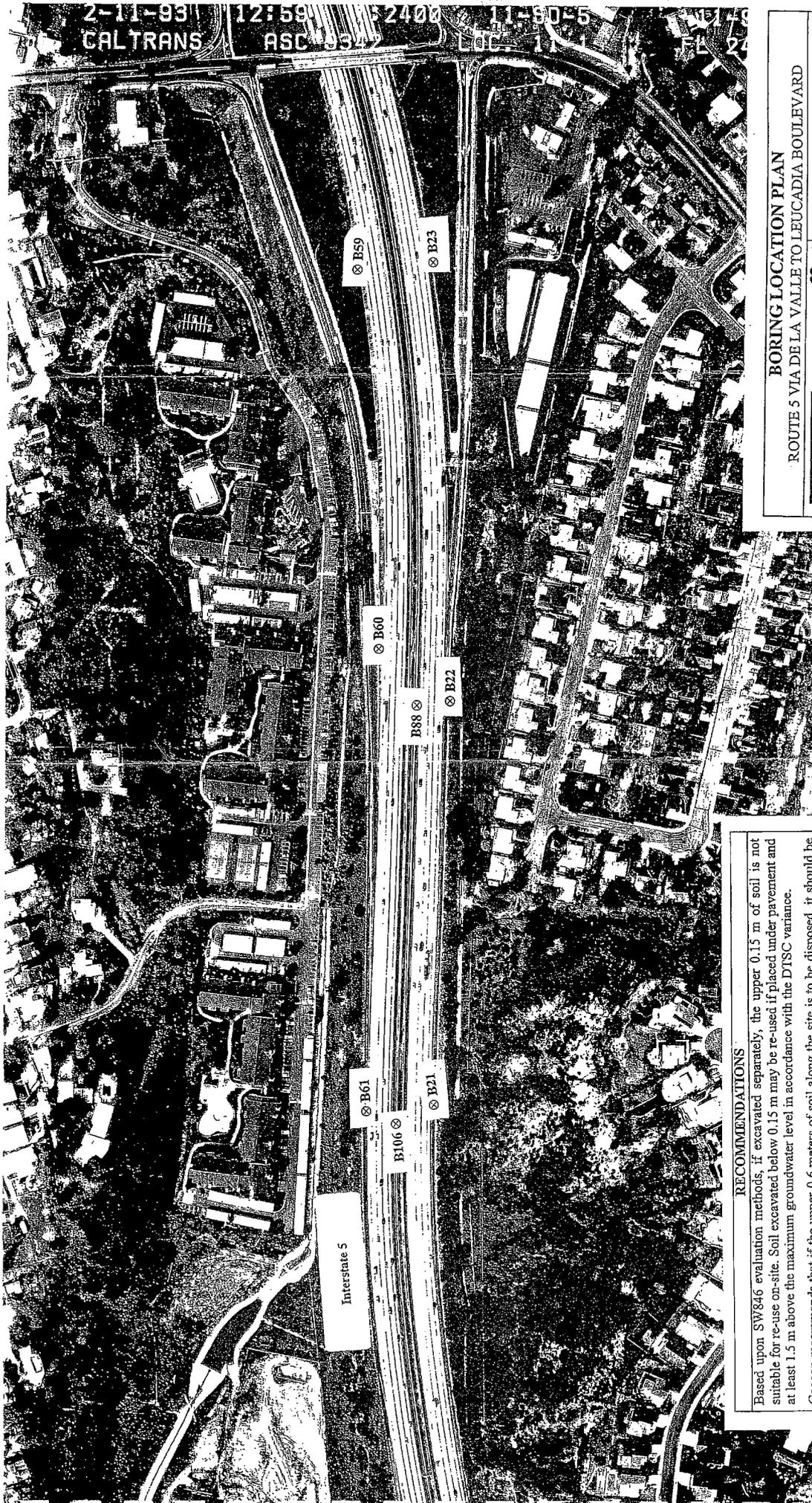
	PROJECT NO. 08900-06-107
GEOCON	FIGURE 2, PLATE 8
CONSULTANTS, INC.	DATE: 6-22-2001
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS	
6970 FLANDERS DRIVE • SAN DIEGO, CALIFORNIA 92121-2974	
PHONE 659-588-6100 • FAX 659-588-6437	

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN
 ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

GEOCON
 CONSULTANTS, INC.
 ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
 6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 858-558-6100 - FAX 858-558-8437

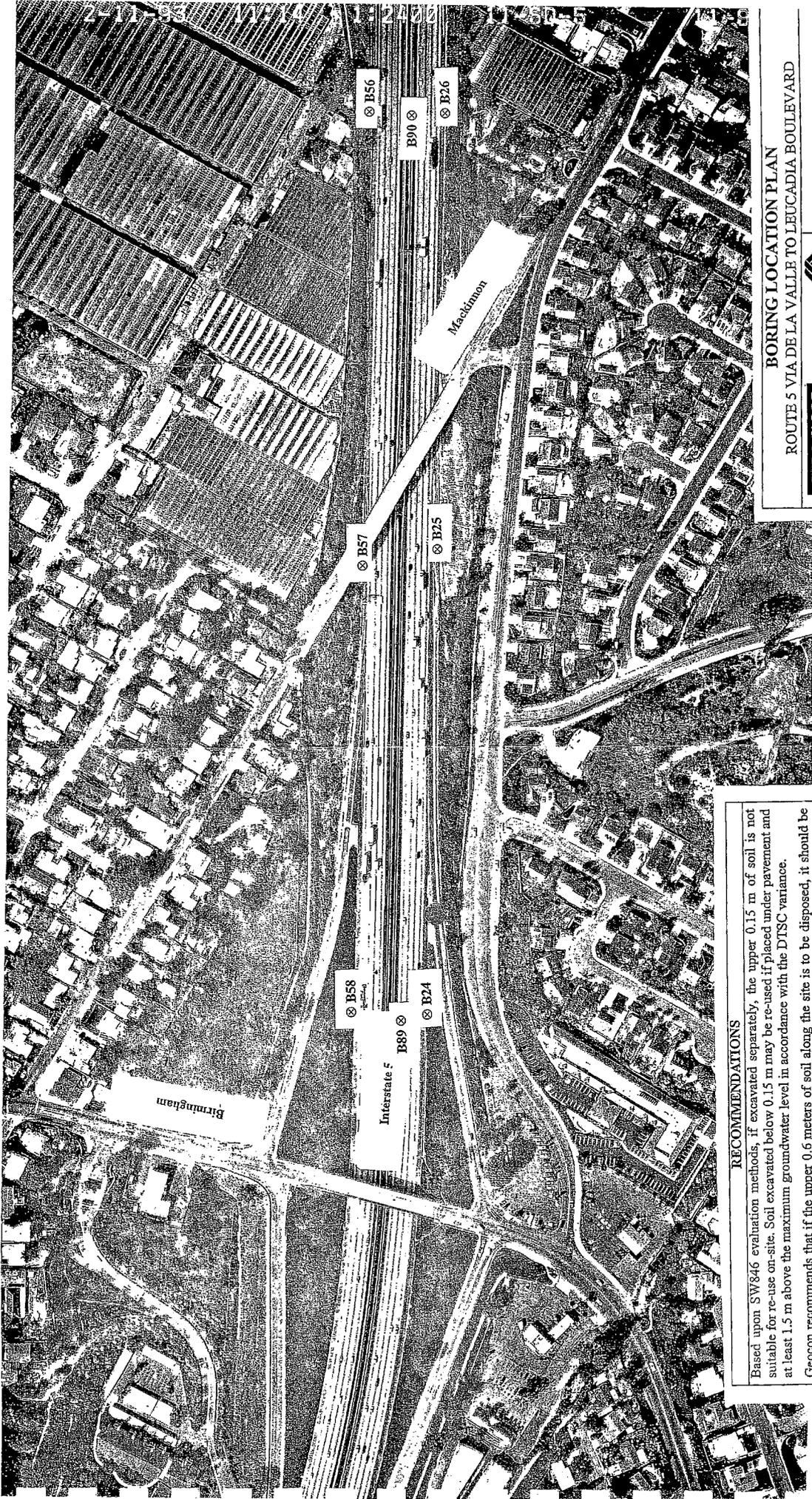
PROJECT NO. 08900-06-107
 FIGURE 2, PLATE 9
 DATE: 6-22-2001

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN

ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

GEOCOON
 CONSULTANTS, INC.
 ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
 6970 HANDBS DRIVE • SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619 558-6100 • FAX 619 558-8437

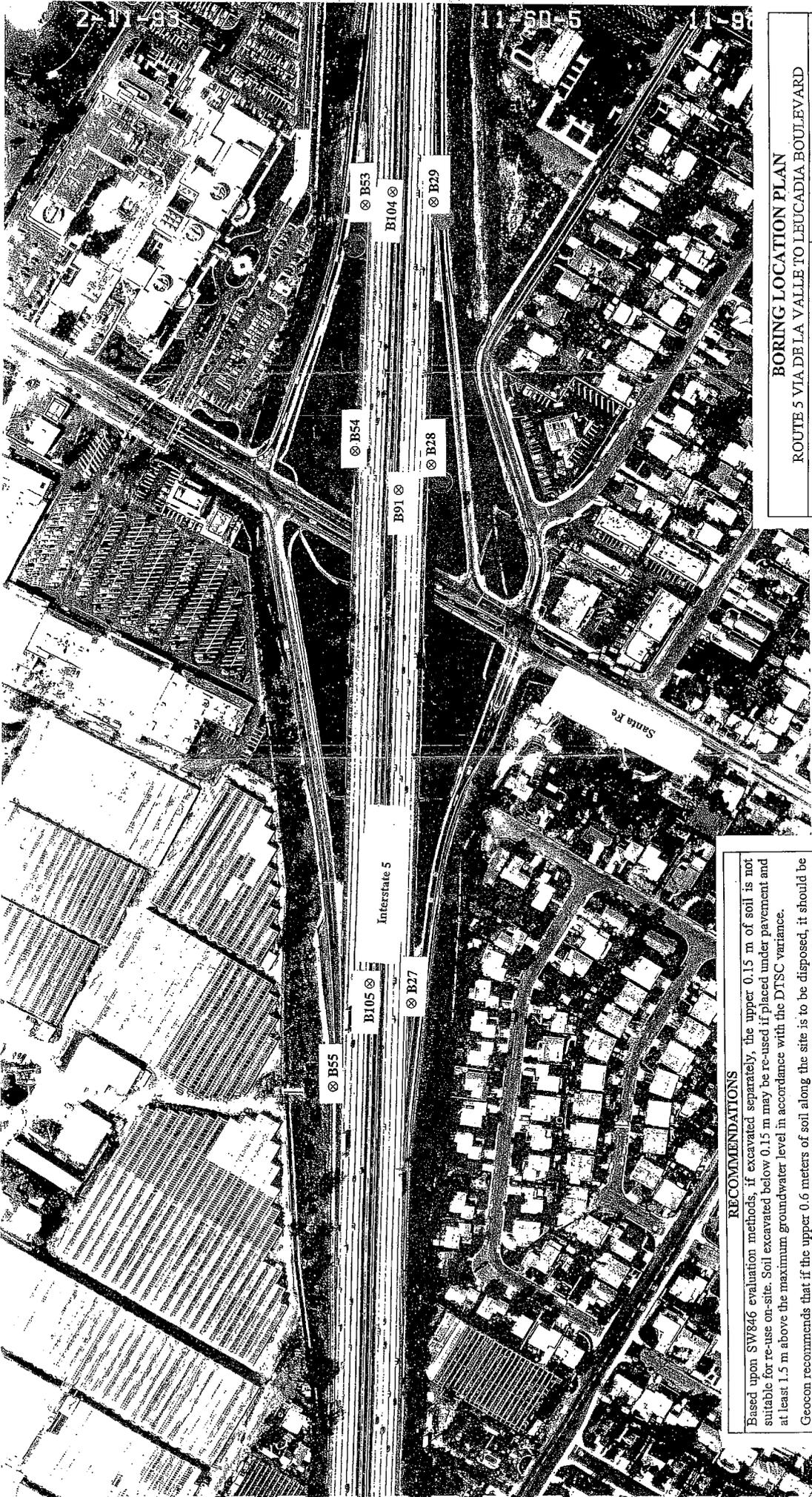
PROJECT NO. 08900-06-107
 FIGURE 2, PLATE 10
 DATE: 8-22-2001

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

GEOCON
 CONSULTANTS, INC.
 ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
 6770 PLANNERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619 556-9100 - FAX 619 556-6457

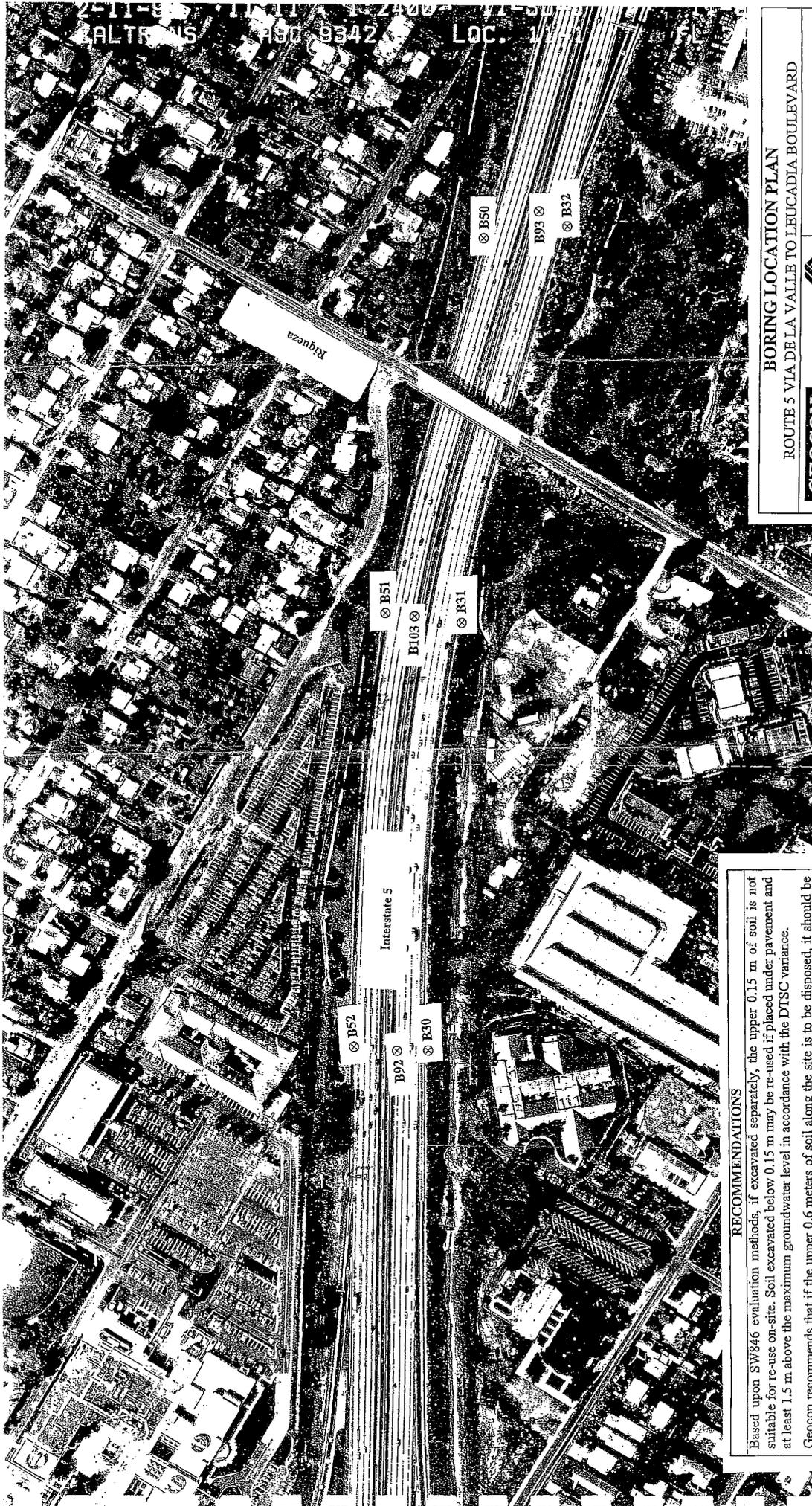
PROJECT NO. 08900-06-107
 FIGURE 2, PLATE 11
 DATE: 6-22-2001

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN

ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD



GEOCON
 CONSULTANTS, INC.
 ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
 6770 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 658-558-9100 - FAX 658-558-8437

PROJECT NO. 08900-06-107

FIGURE 2, PLATE 12

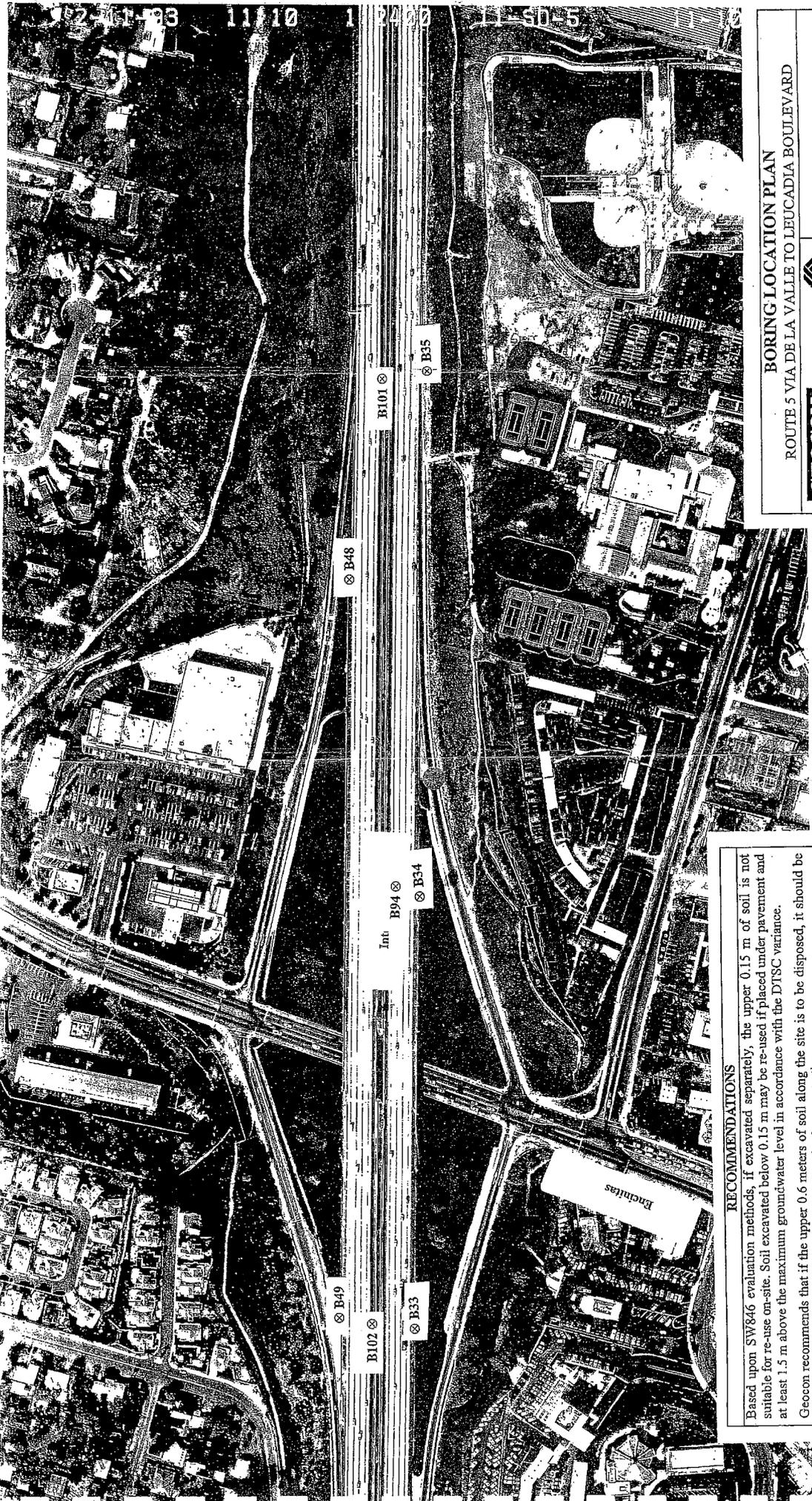
DATE: 6-22-2001

RECOMMENDATIONS

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BORING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

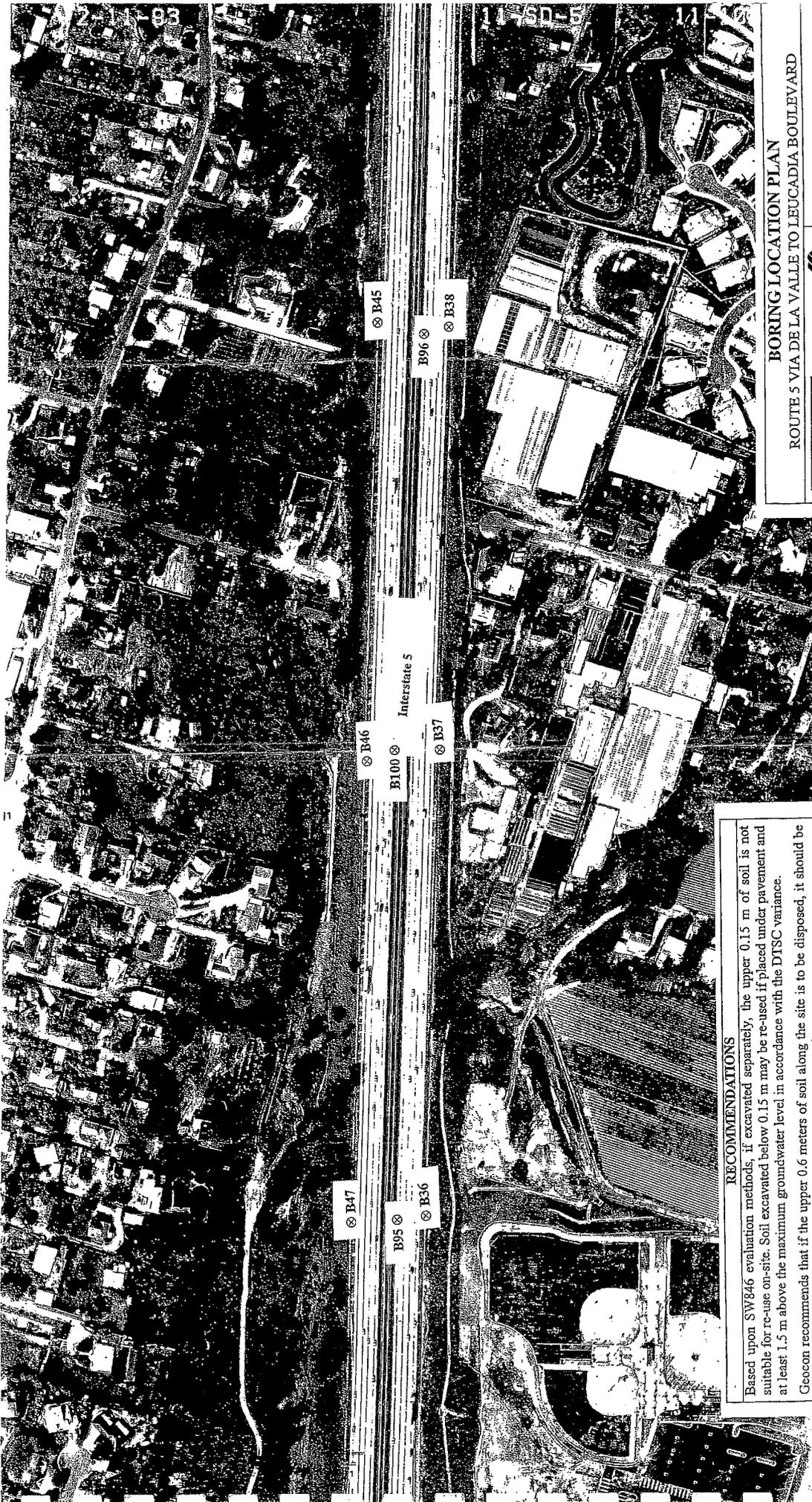
GEOCON	PROJECT NO. 08900-06-107
CONSULTANTS, INC.	FIGURE 2, PLATE 13
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS	DATE: 6-22-2001
6970 FLANDERS DRIVE ■ SAN DIEGO, CALIFORNIA 92121-2974	
PHONE 658-558-6100 ■ FAX 658-558-6157	

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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BORING LOCATION PLAN
 ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

GEOCON
 CONSULTANTS, INC.
 ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
 4270 BLANCKS DRIVE ■ SAN DIEGO, CALIFORNIA 92121-2974
 PHONE 619-558-0100 ■ FAX 619-558-8437

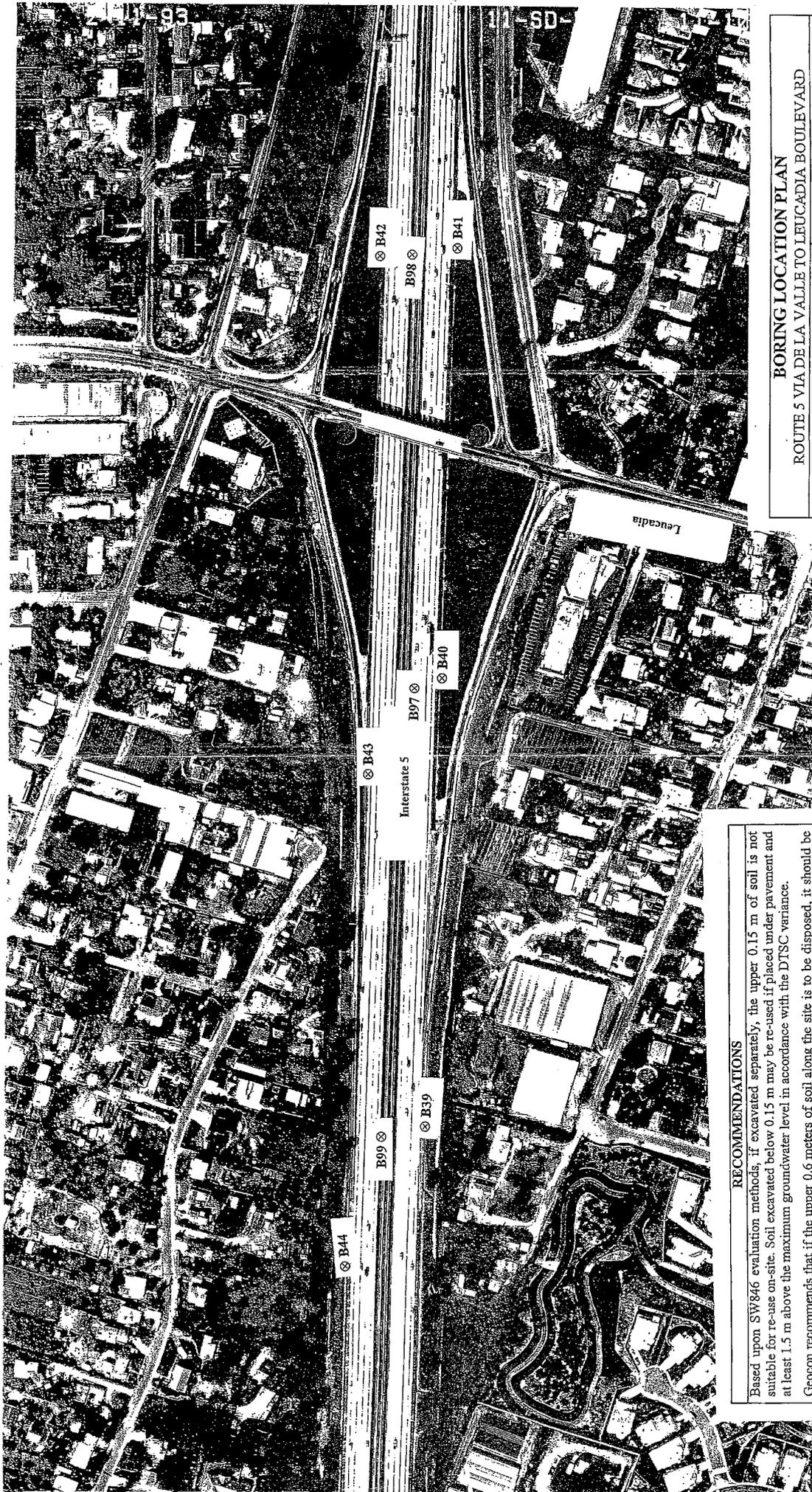
PROJECT NO. 08900-06-107
 FIGURE 2, PLATE 14
 DATE: 6-22-2001

RECOMMENDATIONS

Based upon SW846 evaluation methods, if excavated separately, the upper 0.15 m of soil is not suitable for re-use on-site. Soil excavated below 0.15 m may be re-used if placed under pavement and at least 1.5 m above the maximum groundwater level in accordance with the DTSC variance.

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ROUTING LOCATION PLAN
ROUTE 5 VIA DE LA VALLE TO LEUCADIA BOULEVARD

PROJECT NO. 08900-06-107	
FIGURE 2, PLATE 15	
DATE: 6-22-2001	



GEOCON
CONSULTANTS, INC.

ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS
 6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-3974
 PHONE 619-538-9100 - FAX 619-538-8457

RECOMMENDATIONS

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Geocon recommends that if the upper 0.6 meters of soil along the site is to be disposed, it should be handled as a hazardous material with respect to lead concentrations.

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**TABLE I
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B1-S	0.15	39	---	---	7.9
B1-1	0.3	9.0	---	---	---
B1-2	0.6	3.0	---	---	---
B2-S	0.15	1123	---	---	---
B2-1	0.3	10	---	---	---
B2-2	0.6	7.0	---	---	---
B3-S	0.15	1848	---	---	---
B3-1	0.3	27	---	---	---
B4-S	0.15	61	2.7	---	---
B4-1	0.3	52	2.2	---	---
B5-S	0.15	ND	---	---	5.6
B5-1	0.3	ND	---	---	---
B5-2	0.6	3.0	---	---	---
B6-S	0.15	401	30	0.22	---
B6-1	0.3	10	---	---	---
B6-2	0.6	5.0	---	---	---
B7-S	0.15	321	23	0.31	---
B7-1	0.3	6.0	---	---	---
B7-2	0.6	3.0	---	---	---
B8-S	0.15	166	16	0.61	---
B8-1	0.3	7.0	---	---	---
B8-2	0.6	ND	---	---	9.1
B9-S	0.15	998	54	0.47	---
B9-1	0.3	34	---	---	---
B9-2	0.6	18	---	---	---
B10-S	0.15	285	13	0.48	---
B10-1	0.3	8.0	---	---	---
B10-2	0.6	ND	---	---	---
B11-S	0.15	105	7.7	0.35	---
B11-1	0.3	ND	---	---	---
B11-2	0.6	4.0	---	---	---

**TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B12-S	0.15	12	---	---	---
B12-1	0.3	9.0	---	---	5.3
B13-S	0.15	27	---	---	---
B13-1	0.3	6.0	---	---	---
B13-2	0.6	3.0	---	---	---
B14-S	0.15	504	57	1.6	---
B14-1	0.3	23	---	---	---
B14-2	0.6	4.0	---	---	---
B15-S	0.15	50	---	0.27	7.6
B15-1	0.3	ND	---	---	---
B15-2	0.6	ND	---	---	---
B16-S	0.15	1074	---	---	---
B16-1	0.3	ND	---	---	8.1
B16-2	0.6	ND	---	---	---
B17-S	0.15	8.0	---	---	---
B17-1	0.3	ND	---	---	---
B17-2	0.6	ND	---	---	---
B18-S	0.15	44	---	---	---
B18-1	0.3	5.0	---	---	---
B19-S	0.15	112	6.6	0.16	---
B19-1	0.3	24	---	---	---
B20-S	0.15	ND	---	---	---
B20-1	0.3	ND	---	---	---
B20-2	0.6	ND	---	---	7.9
B21-S	0.15	108	5.6	0.78	---
B21-1	0.3	ND	---	---	---
B21-2	0.6	ND	---	---	---
B22-S	0.15	129	9.9	0.65	---
B22-1	0.3	ND	---	---	---
B22-2	0.6	18	---	---	---
B23-S	0.15	276	13	ND	---
B23-1	0.3	33	---	---	---
B23-2	0.6	ND	---	---	---

TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B24-S	0.15	34	---	---	---
B24-1	0.3	ND	---	---	6.3
B24-2	0.6	ND	---	---	---
B25-S	0.15	21	---	---	---
B25-1	0.3	ND	---	---	---
B26-S	0.15	743	49	0.46	---
B26-1	0.3	ND	---	---	---
B26-2	0.6	ND	---	---	---
B27-S	0.15	460	32	0.74	---
B27-1	0.3	ND	---	---	---
B27-2	0.6	ND	---	---	---
B28-S	0.15	472	20	1.1	---
B28-1	0.3	ND	---	---	4.6
B28-2	0.6	ND	---	---	---
B29-S	0.15	798	68	3.6	---
B29-1	0.3	1.0	---	---	---
B29-2	0.6	8.0	---	---	---
B30-S	0.15	ND	---	---	---
B30-1	0.3	393	69	6.1	---
B30-2	0.6	ND	---	---	---
B32-S	0.15	73	5.4	0.28	---
B32-1	0.3	ND	---	---	---
B32-2	0.6	ND	---	---	---
B33-S	0.15	300	30	1.9	7.7
B33-1	0.3	210	14	0.27	---
B33-2	0.6	397	36	1.3	---
B34-S	0.15	181	16	0.56	---
B34-1	0.3	5.0	---	---	---
B34-2	0.6	ND	---	---	---
B35-S	0.15	589	50	4.5	---
B35-1	0.3	ND	---	---	---
B35-2	0.6	6.0	---	---	---

**TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B36-S	0.15	739	46	3.7	---
B36-1	0.3	123	14	2.3	---
B36-2	0.6	120	7.8	0.91	6.5
B37-S	0.15	235	23	1.4	---
B37-1	0.3	ND	---	---	---
B37-2	0.6	ND	---	---	---
B38-S	0.15	924	65	2.0	---
B38-1	0.3	ND	---	---	---
B38-2	0.6	5.0	---	---	---
B39-S	0.15	387	29	2.3	---
B39-1	0.3	11	---	---	---
B39-2	0.6	ND	---	---	---
B40-S	0.15	18	---	---	---
B40-1	0.3	5.0	---	---	---
B40-2	0.6	ND	---	---	4.8
B41-S	0.15	124	6.1	0.21	---
B41-1	0.3	150	6.6	0.88	---
B41-2	0.6	ND	---	---	---
B42-S	0.15	50	---	---	4.3
B42-1	0.3	15	---	---	---
B42-2	0.6	ND	---	---	---
B43-S	0.15	ND	---	---	---
B43-1	0.3	ND	---	---	---
B43-2	0.6	ND	---	---	---
B44-S	0.15	332	20	2.1	---
B44-1	0.3	63	12	ND	---
B44-2	0.6	ND	---	---	5.8
B45-S	0.15	902	57	2.7	---
B45-1	0.3	15	---	---	---
B45-2	0.6	ND	---	---	---
B46-S	0.15	669	50	1.2	---
B46-1	0.3	ND	---	---	---
B46-2	0.6	ND	---	---	---

**TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B47-S	0.15	9.0	---	---	---
B47-1	0.3	ND	---	---	---
B47-2	0.6	ND	---	---	---
B48-S	0.15	133	9.5	ND	---
B48-1	0.3	ND	---	---	4.9
B48-2	0.6	ND	---	---	---
B49-S	0.15	544	54	1.8	---
B49-1	0.3	3.0	---	---	---
B49-2	0.6	ND	---	---	---
B50-S	0.15	40	---	---	---
B50-1	0.3	174	13	ND	---
B50-2	0.6	112	10	ND	---
B51-S	0.15	92	7.4	0.68	---
B51-1	0.3	278	21	1.1	---
B52-S	0.15	561	38	2.8	6.8
B52-1	0.3	51	7.2	0.22	---
B52-2	0.6	ND	---	---	---
B53-S	0.15	179	13	0.2	---
B53-1	0.3	15	---	---	---
B53-2	0.6	ND	---	---	---
B54-S	0.15	45	---	---	---
B54-1	0.3	ND	---	---	---
B54-2	0.6	ND	---	---	---
B55-S	0.15	626	65	4.0	---
B55-1	0.3	7.0	---	---	4.6
B55-2	0.6	5.0	---	---	---
B56-S	0.15	388	18	1.6	---
B56-1	0.3	ND	---	---	---
B56-2	0.6	ND	---	---	---
B57-S	0.15	23	---	---	---
B57-1	0.3	ND	---	---	---
B57-2	0.6	ND	---	---	---

**TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B58-S	0.15	147	4.8	---	---
B58-1	0.3	ND	---	---	---
B58-2	0.6	ND	---	---	5.6
B59-S	0.15	284	36	0.45	---
B59-1	0.3	77	4.4	---	---
B59-2	0.6	ND	---	---	---
B60-S	0.15	5.0	---	---	---
B60-1	0.3	ND	---	---	---
B60-2	0.6	ND	---	---	---
B62-S	0.15	283	18	0.75	---
B62-1	0.3	ND	---	---	---
B62-2	0.6	ND	---	---	---
B63-S	0.15	36	---	---	7.4
B63-1	0.3	ND	---	---	---
B63-2	0.6	ND	---	---	---
B64-S	0.15	279	20	ND	---
B64-1	0.3	ND	---	---	---
B65-S	0.15	600	35	0.85	---
B65-1	0.3	ND	---	---	---
B65-2	0.6	ND	---	---	---
B66-S	0.15	860	73	ND	---
B66-1	0.3	ND	---	---	---
B67-S	0.15	373	38	0.78	5.7
B67-1	0.3	ND	---	---	---
B67-2	0.6	ND	---	---	---
B68-S	0.15	339	44	0.69	---
B68-1	0.3	ND	---	---	---
B68-2	0.6	ND	---	---	7.9
B69-S	0.15	18	---	---	---
B69-1	0.3	7.0	---	---	---
B70-S	0.15	21	---	---	---
B70-1	0.3	7.0	---	---	---

TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B71-S	0.15	802	53	0.23	---
B71-1	0.3	23	---	---	---
B71-2	0.6	10	---	---	3.9
B72-S	0.15	394	15	ND	---
B72-1	0.3	24	---	---	---
B72-2	0.6	11	---	---	---
B73-S	0.15	194	15	ND	---
B73-1	0.3	7.0	---	---	---
B73-2	0.6	9.0	---	---	---
B74-S	0.15	169	8.9	ND	---
B74-1	0.3	8.0	---	---	---
B74-2	0.6	10	---	---	---
B75-S	0.15	226	16	ND	5.8
B75-1	0.3	6.0	---	---	---
B76-S	0.15	98	8.5	ND	---
B76-1	0.3	83	4.3	ND	---
B77-S	0.15	351	23	2.0	---
B77-1	0.3	45	---	---	---
B77-2	0.6	25	---	---	---
B78-S	0.15	654	21	ND	---
B78-1	0.3	27	---	---	---
B78-2	0.6	7.0	---	---	---
B79-S	0.15	50	---	---	7.4
B79-1	0.3	7.0	---	---	---
B79-2	0.6	9.0	---	---	8.4
B80-S 03/28/01	0.15	204	15	ND	---
B80-1 03/28/01	0.3	7.0	---	---	---
B80-2 03/28/01	0.6	21	---	---	---

TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B80-S 03/30/01	0.15	702	90	2.8	---
B80-1 03/30/01	0.3	9.0	---	---	---
B80-2 03/30/01	0.6	8.0	---	---	---
B81-S	0.15	2128	---	---	---
B81-1	0.3	12	---	---	---
B81-2	0.6	17	---	---	7.4
B82-S	0.15	401	76	0.23	---
B82-1	0.3	10	---	---	---
B82-2	0.6	13	---	---	---
B83-S	0.15	1497	---	---	---
B83-1	0.3	14	---	---	---
B83-2	0.6	62	14	0.64	6.7
B84-S	0.15	ND	---	---	7.9
B84-1	0.3	ND	---	---	---
B84-2	0.6	ND	---	---	---
B85-S	0.15	ND	---	---	---
B85-1	0.3	ND	---	---	---
B85-2	0.6	ND	---	---	---
B86-S	0.15	180	16	0.95	---
B86-1	0.3	ND	---	---	---
B86-2	0.6	ND	---	---	---
B87-S	0.15	86	62	1.0	---
B87-1	0.3	ND	---	---	4.6
B87-2	0.6	ND	---	---	---
B88-S	0.15	820	89	15	---
B88-1	0.3	ND	---	---	---
B88-2	0.6	ND	---	---	---
B89-S	0.15	ND	---	---	---
B89-1	0.3	ND	---	---	---
B89-2	0.6	ND	---	---	---

**TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B90-S	0.15	840	14	9.5	---
B90-1	0.3	ND	---	---	---
B90-2	0.6	ND	---	---	7.9
B91-S	0.15	81	29	ND	---
B91-1	0.3	ND	---	---	---
B91-2	0.6	12	---	---	---
B92-S	0.15	11	---	---	---
B92-1	0.3	ND	---	---	---
B92-2	0.6	ND	---	---	---
B93-S	0.15	ND	---	---	---
B93-1	0.3	47	---	---	---
B94-S	0.15	10	---	---	---
B94-1	0.3	ND	---	---	8.2
B94-2	0.6	ND	---	---	---
B95-S	0.15	760	86	0.26	---
B95-1	0.3	79	13	1.5	---
B95-2	0.6	190	10	2.9	---
B96-S	0.15	ND	---	---	---
B96-1	0.3	ND	---	---	---
B96-2	0.6	ND	---	---	---
B97-S	0.15	20	---	---	---
B97-1	0.3	5.5	---	---	---
B97-2	0.6	ND	---	---	---
B98-S	0.15	ND	---	---	---
B98-1	0.3	ND	---	---	7.6
B98-2	0.6	ND	---	---	---
B99-S	0.15	2100	---	---	---
B99-1	0.3	ND	---	---	---
B99-2	0.6	5.0	---	---	---
B100-S	0.15	11	---	---	7.7
B100-1	0.3	ND	---	---	---
B100-2	0.6	ND	---	---	---

**TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS**

Sample ID	Depth (meters)	Total Lead (mg/kg)	Soluble Lead WET Citric (mg/l)	Soluble Lead WET-DI (mg/l)	Soil pH
B101-S	0.15	180	69	7.3	---
B101-1	0.3	ND	---	---	---
B102-S	0.15	ND	---	---	---
B102-1	0.3	ND	---	---	---
B102-2	0.6	7.0	---	---	---
B103-S	0.15	32	---	---	---
B103-1	0.3	ND	---	---	---
B103-2	0.6	ND	---	---	---
B104-S	0.15	1200	---	---	---
B104-1	0.3	ND	---	---	---
B104-2	0.6	ND	---	---	8.1
B105-S	0.15	260	130	31	---
B105-1	0.3	ND	---	---	---
B105-2	0.6	ND	---	---	---
B106-S	0.15	54	7.2	1.7	---
B106-1	0.3	28	---	---	---
B106-2	0.6	40	---	---	---
B107-S	0.15	200	6.8	0.25	---
B107-1	0.3	5.5	---	---	---
B107-2	0.6	10	---	---	---
B108-S	0.15	16	---	---	7.4
B108-1	0.3	ND	---	---	---
B108-2	0.6	ND	---	---	---
B109-S	0.15	440	180	17	---
B109-1	0.3	ND	---	---	---
B109-2	0.6	ND	---	---	---
B110-S	0.15	270	26	2.1	---
B110-1	0.3	ND	---	---	---
B110-2	0.6	ND	---	---	---
B111-S	0.15	880	31	1.8	---
B111-1	0.3	ND	---	---	7.2
B111-2	0.6	11	---	---	---

TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS

Notes:

mg/kg	= milligrams per kilogram
mg/l	= milligrams per liter
---	= analysis not performed
EPA	= United States Environmental Protection Agency
Total Lead	= Total Lead by EPA Test Method 6010.
Soluble Lead WET Citric	= Soluble Lead by WET Method. Extractant analyzed by EPA Test Method 7420.
Soluble Lead WET DI	= Soluble Lead by WET Method modified with deionized water. Extractant analyzed by EPA Test Method 7420.
Soil pH	= Soil pH by EPA Test Method 9045

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 PROJECT ENGINEER
M. H. ORSO
 DATE REVISIONS BY DATE REVISIONS BY

NOTE:
 FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,
 SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



DISTRICT	COUNTY	ROUTE	KILOMETERS PROJECT TOTAL AND DIST
11	SD	8	7.9/8.7, 10.0/11.4

REGISTERED CIVIL ENGINEER
 5-5-98
 7-27-98
 PLANS APPROVAL DATE

M.H. ORSO
 No. C 56217
 Exp. 6-30-01
 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.

CURVE DATA				
No.	R	Δ	T	L
①	914.402	31° 35' 59.8"	258.749	504.314

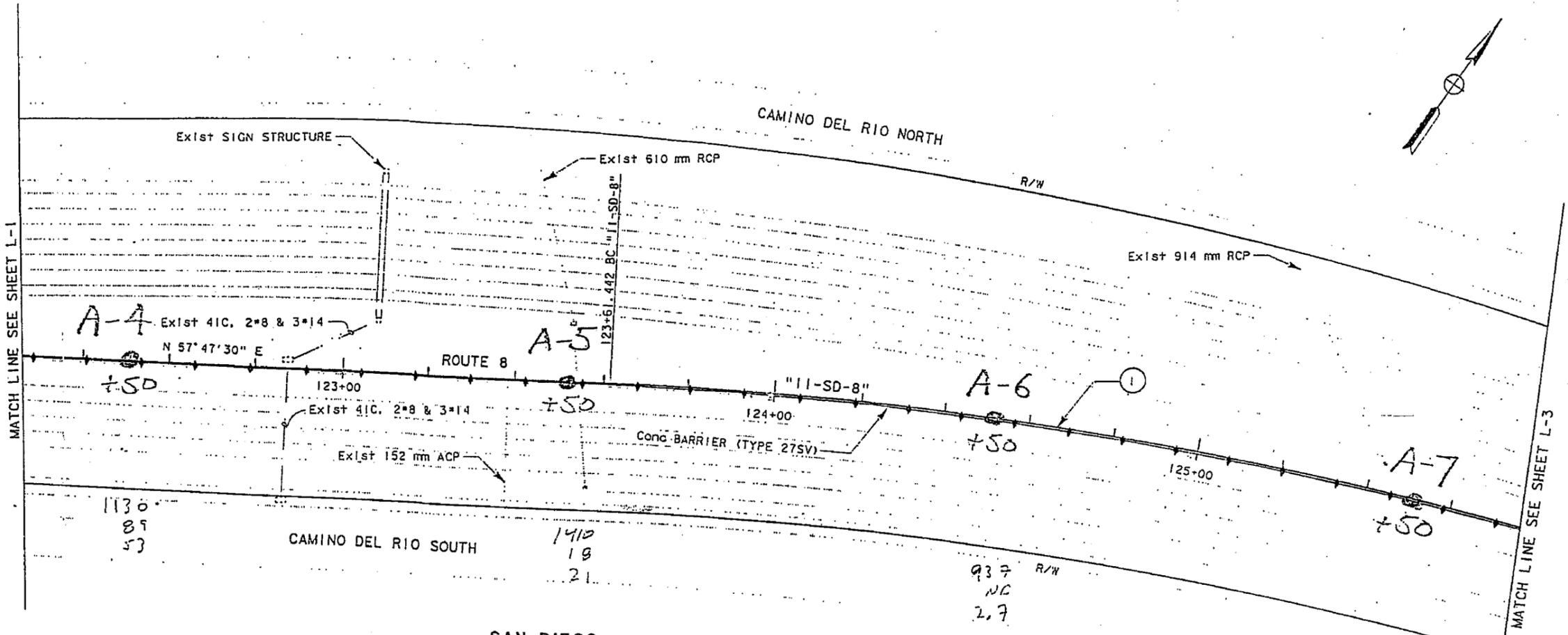


FIGURE 2B
 Soil Borings Locations
 Aerial Lead Investigation
 Median Barrier Replacement on I-8
 W.O. #11-1998-06, Contract #43A0010
 APEX Project No. 276DT

LAYOUT
 LOCATION 1

SCALE: 1:500

L-2

DATE PLOTTED: 03-26-1998
 PLOT NUMBER: 10043A0010-01

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 PROJECT ENGINEER
M. H. ORSO

DATE REVISIONS BY DATE REVISIONS BY
 CALCULATED/DESIGNED BY CHECKED BY

NOTE:
 FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,
 SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

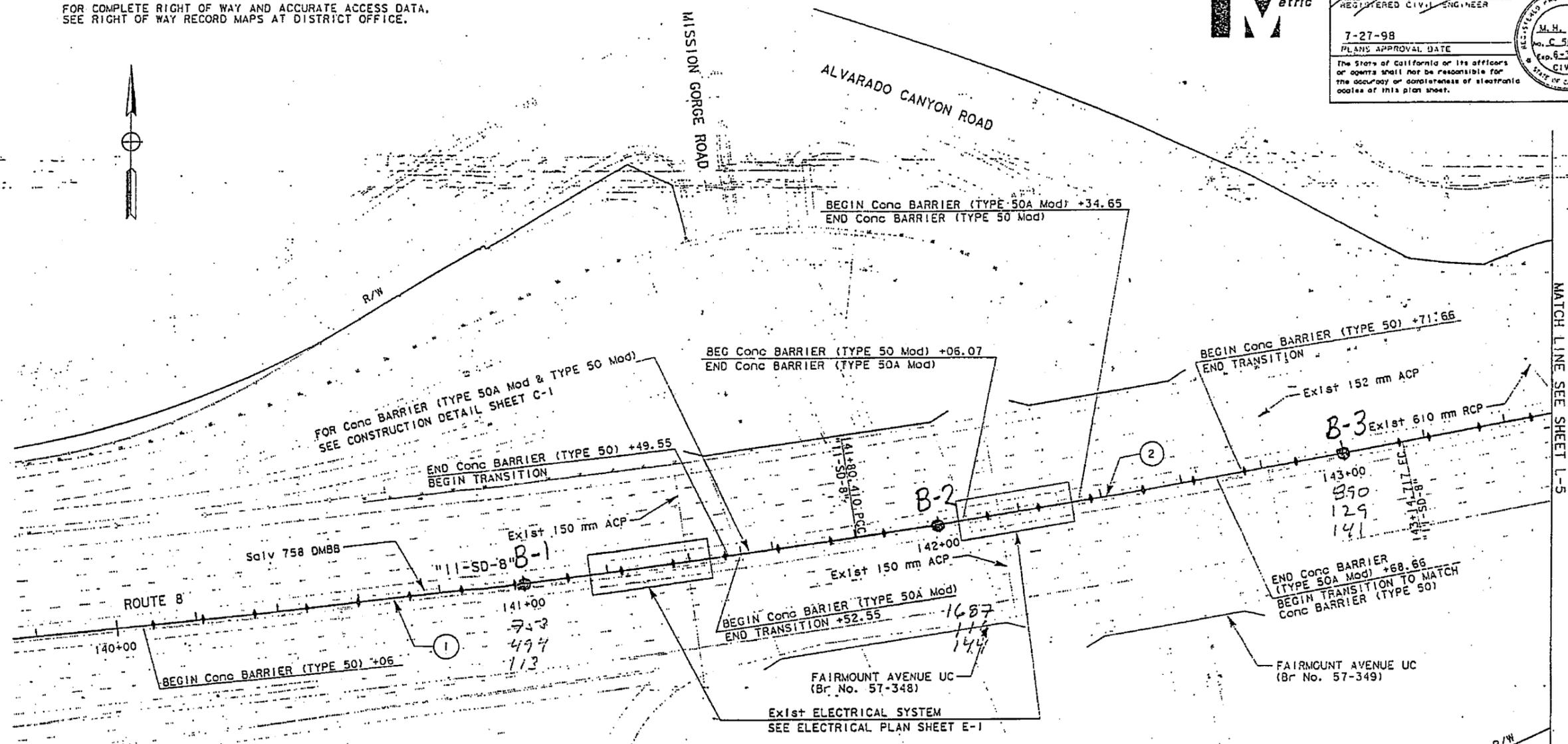


DISTRICT: SD PROJECT: 8 TOTAL PROJECT: 7.9/8.7.10.0/11.4 9 5

REGISTERED CIVIL ENGINEER
 M.H. ORSO
 No. C 56817
 Exp. 6-30-01
 CIVIL
 STATE OF CALIFORNIA

7-27-98
 PLANS APPROVAL DATE

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CURVE DATA				
No.	R	Δ	T	L
①	3352.807	-8° 08' 39.7"	238.696	476.588
②	3352.807	-2° 17' 42.6"	67.162	134.307

NOTE: ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

FIGURE 2D
 Soil Borings Locations
 Aerial Lead Investigation
 Median Barrier Replacement on I-8
 W.O. #11-1998-06, Contract #43A0010
 APEX Project No. 276DT

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

DATE PLOTTED: 02/23/99 BY: J. B. B. 11-22-98

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	REVISOR	DATE
		DESIGNED BY	CHECKED BY
Caltrans	PROJECT DEVELOPMENT	REVISOR	DATE
		DESIGNED BY	CHECKED BY
M. H. ORSO		REVISOR	DATE
		DESIGNED BY	CHECKED BY

NOTE:
FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



DISTRICT	COUNTY	ROUTE	STATIONING	SHEET NO.	TOTAL SHEETS
11	SD	8	7.9/8.7, 10.0/11.4	10	51

REGISTERED CIVIL ENGINEER
M. H. ORSO
No. C 56817
Exp. 6-30-01
CIVIL
STATE OF CALIFORNIA

7-27-98
PLANS APPROVAL DATE

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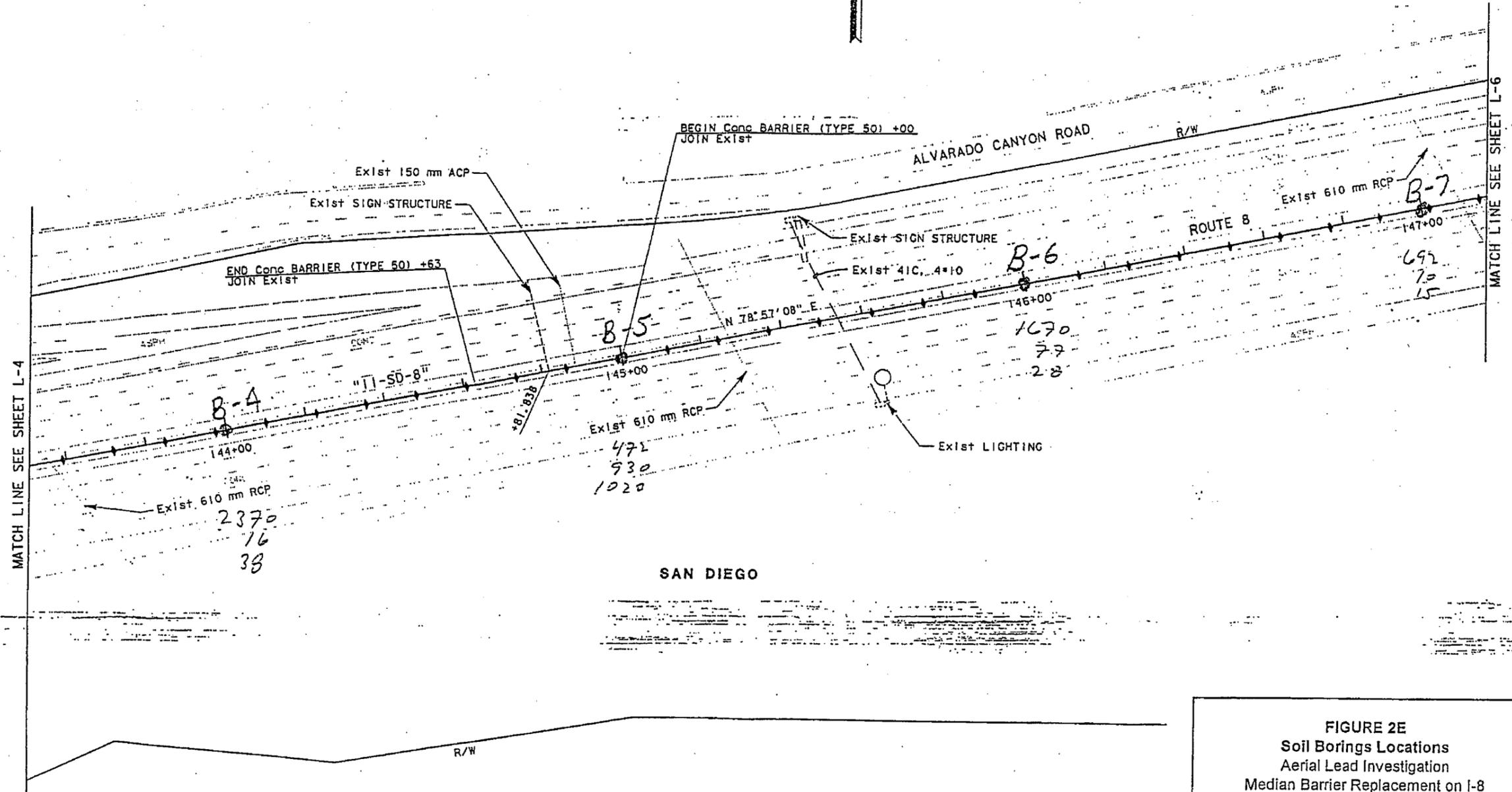


FIGURE 2E
Soil Borings Locations
Aerial Lead Investigation
Median Barrier Replacement on I-8
W.O. #11-1998-06, Contract #43A0010
APEX Project No. 276DT

NOTE: ALL DIMENSIONS ARE METERS UNLESS OTHERWISE S

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

CU 11233 IE4 13940

DATE PLOTTED: 03-30-1999 TIME PLOTTED: 11:04:19

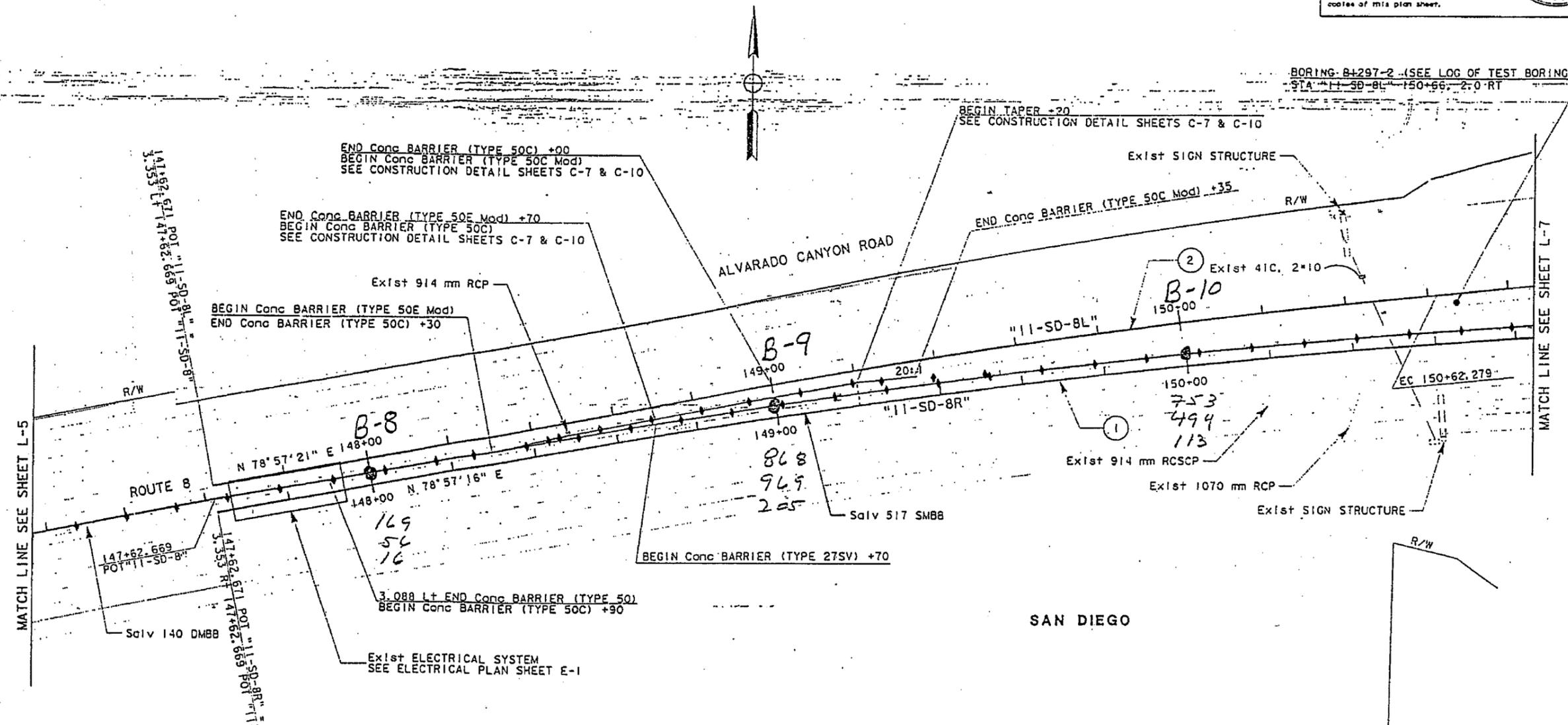
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 PROJECT ENGINEER
M. H. ORSO

DATE REVISIONS BY DATE REVISIONS BY
 CALCULATED BY DESIGNED BY CHECKED BY

NOTE:
 FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,
 SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



PROJECT NO. 11-SD-8-17.9/8.7.10.0/11.4: 11 51
 DATE 7-27-98
 REGISTERED CIVIL ENGINEER
 M. H. ORSO
 No. C 56817
 Exp. 8-30-01
 CIVIL
 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.



CURVE DATA				
No.	R	Δ	T	L
①	2133.604	8° 35' 18.1"	160.208	319.817
②	1829.049	5° 28' 38.7"	87.495	174.856

NOTE: ALL DIMENSIONS ARE IN METERS
 UNLESS OTHERWISE SHOWN

FIGURE 2F
 Soil Borings Locations
 Aerial Lead Investigation
 Median Barrier Replacement on I-8
 W.O. #11-1998-06, Contract #43A0010
 APEX Project No. 276DT

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

CU 233 EA 13940

NOTE:

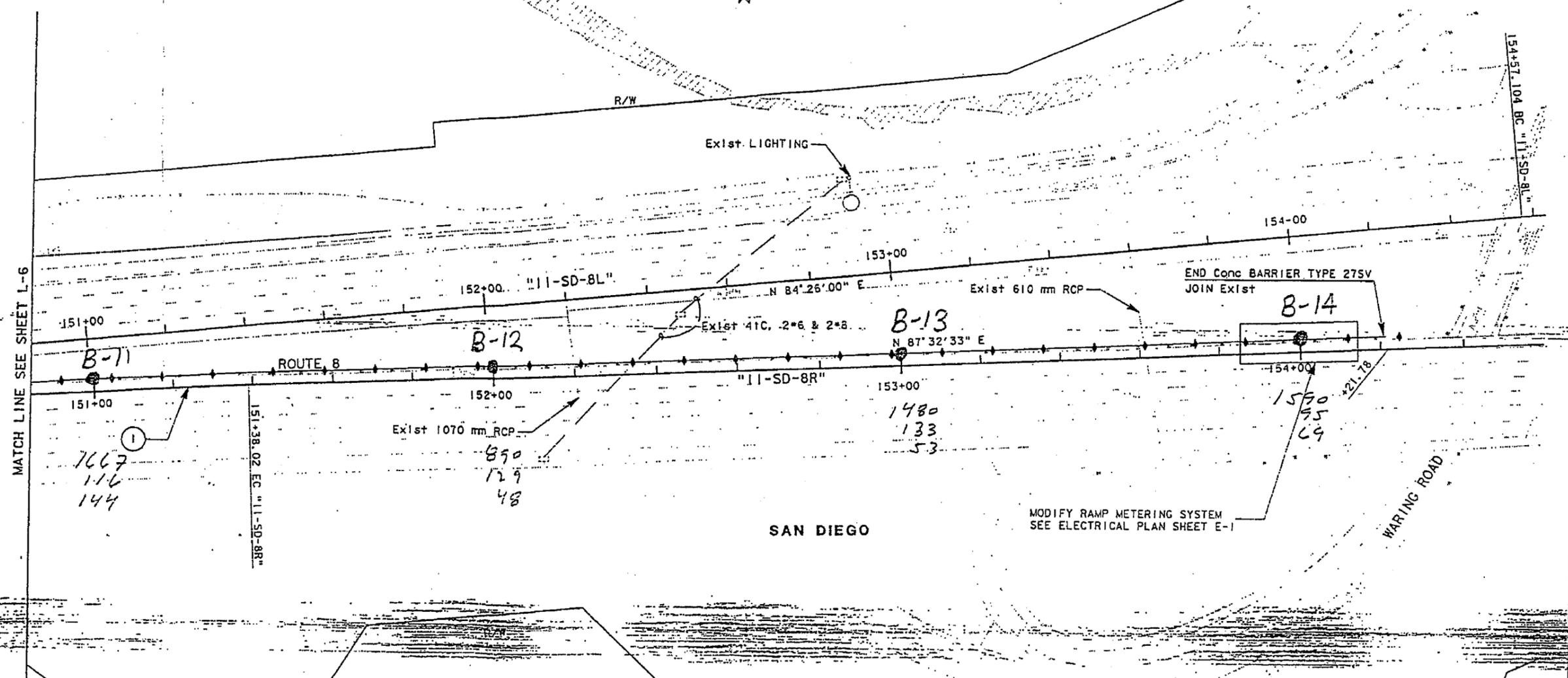
FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



DISTRICT/ROUTE	REGISTERED CIVIL ENGINEER	SHEET NO.	TOTAL SHEETS
11 SD 8	5-5-98	12	51
PLANS APPROVAL DATE		7-27-98	
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
M. H. ORSO
No. C 56817
Exp. 6-30-01
CIVIL
STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 PROJECT ENGINEER
M. H. ORSO
 DATE REVISIED BY
 DATE REVISIED
 CALCULATED/DESIGNED BY
 CHECKED BY



MATCH LINE SEE SHEET L-6

CURVE DATA				
No.	R	Δ	T	L
①	2133.604	8° 35' 18.1"	160.208	319.817

FIGURE 2G
 Soil Borings Locations
 Aerial Lead Investigation
 Median Barrier Replacement on I-8
 W.O. #11-1998-06, Contract #43A0010
 APEX Project No. 276DT

LAYOUT
LOCATION 2

L-7

FOR REDUCED PLANS ORIGINAL
SCALE IS IN MILLIMETERS

CU 11233

EA 139401

DATE PLOTTED -> 30-JUL-1998
 TIME PLOTTED -> 09:00
 04-22-98

TABLE 1
ANALYTICAL SUMMARY FOR SOIL
Total Lead
I-8 and I-15 Interchange
W.O. #11-1998-06, Contract # 43A0010
APEX Project No. 276DT

Sample ID	Pb, mg/kg	STLC Citric mg/l	STLC Di mg/l
A1A	1380	NA	14
A1B	1090	NA	8.2
A1C	186	37.3	NA
A2A	905	87	4.6
A2B	108	208	NA
A2C	745	39	7.7
A3A	1570	NA	7.7
A3B	2430	NA	12.4
A3C	32	NA	NA
A4A	1130	608	6.5
A4B	89	NA	NA
A4C	53	NA	NA
A5A	1410	NA	28.6
A5B	18	NA	NA
A5C	21	NA	NA
A6A	937	127	1.6
A6B	NA	NA	NA
A6C	2.7	NA	NA
A7A	905	128	13.6
A7B	NA	NA	NA
A7C	NA	NA	NA
A8A	130	28.9	NA
A8B	931	148	25
A8C	2.7	NA	NA
A9A	868	75.6	5.78
A9B	969	77.3	15.3
A9C	205	32	5.3

Notes: (1) ND, non-detected at concentrations greater than the laboratory detection limit.
(2) NA, not analyzed.



TABLE 2
ANALYTICAL SUMMARY FOR SOIL
Total Lead
I-8 and I-15 Interchange
W.O. #11-1998-06, Contract # 43A0010
APEX Project No. 276DT

Sample ID	Pb mg/kg	STLC Citric mg/l	STLC Di mg/l
B1A	753	16	NA
B1B	494	33.6	12.9
B1C	113	12.4	NA
B2A	1687	NA	24
B2B	116	15.3	NA
B2C	144	4.4	NA
B3A	890	25.8	5.1
B3B	129	1.1	NA
B3C	141	0.2	NA
B4A	2370	31.1	NA
B4B	16	NA	NA
B4C	38	NA	NA
B5A	472	51.7	19.2
B5B	930	90.7	11.1
B5C	1020	NA	16
B6A	1670	NA	16.9
B6B	77	16.9	NA
B6C	28	NA	NA
B7A	692	77.4	13.3
B7B	10	NA	NA
B7C	15	NA	NA
B8A	169	110	NA
B8B	56	NA	NA
B8C	16	NA	NA
B9A	868	86.2	2.7
B9B	969	129	21.3
B9C	205	20.3	NA
B10A	753	97.2	8.3
B10B	494	15.7	3.1
B10C	113	18.4	NA
B11A	1667	14.7	5.33
B11B	116	NA	NA
B11C	144	66.7	NA
B12A	890	387	28.4
B12B	129	6.2	NA
B12C	48	NA	NA
B13A	1480	NA	31.2
B13B	133	34.4	NA
B13C	53	NA	NA
B14A	1590	NA	39.5
B14B	95	4.9	NA
B14C	69	NA	NA

Notes: (1) ND, non-detected at concentrations greater than the laboratory detection limit.
(2) NA, not analyzed.

