

FOR CONTRACT NO.: 07-273104

INFORMATION HANDOUT

MATERIALS INFORMATION

SITE INVESTIGATION REPORT

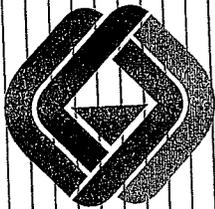
FIBER OPTIC SYSTEM AS-BUILT DRAWINGS

ROUTE: 07-LA-105, 110-Var

204 176 ^{File Over 5}

SITE INVESTIGATION REPORT

**LEAD INVESTIGATION OF ROUTE 110
BETWEEN KP 18.3 AND KP 34.3
IN LOS ANGELES, CALIFORNIA
CONTRACT 43A0012
TASK ORDER NO. 07-168101-JJ**



GEOCON

GEOTECHNICAL
&
ENVIRONMENTAL
CONSULTANTS

PREPARED FOR

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
LOS ANGELES, CALIFORNIA

PREPARED BY

GEOCON ENVIRONMENTAL CONSULTANTS, INC.
6970 FLANDERS DRIVE
SAN DIEGO, CALIFORNIA 92121
TEL. 619.558.6100 FAX. 619.558.8437
email: environmental@geoconinc.com

176

APRIL 1999



Project No. 08900-06-20
 Task Order No. 07-168101-JJ
 April 8, 1999

HAND-DELIVERED

Mr. George Ghebranius
 California Department of Transportation
 District 7
 120 South Spring Street
 Los Angeles, California 90012

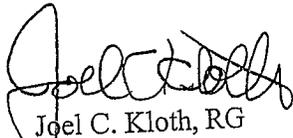
Subject: SITE INVESTIGATION REPORT
 LEAD INVESTIGATION OF
 ROUTE 110 BETWEEN KP 18.3 AND KP 34.3
 LOS ANGELES, CALIFORNIA
 CONTRACT 43A0012
 TASK ORDER NO. 07-168101-JJ

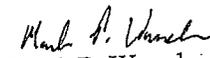
Dear Mr. Ghebranius:

In accordance with Caltrans Contract No. 43A0012 and the Task Order No. 07-168101-JJ, Geocon Environmental Consultants, Inc. (Geocon) has performed environmental engineering services at the subject site. The site consisted of the exposed soil adjacent to the shoulders of northbound and southbound Route 110 between KP 18.3 and KP 34.3 in Los Angeles, California. The accompanying report summarizes the services performed, including the advancement of hand-auger borings, limited soil sampling, laboratory analyses, and statistical data evaluation. If questions concerning the contents of this report arise, or if Geocon may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON ENVIRONMENTAL CONSULTANTS, INC.

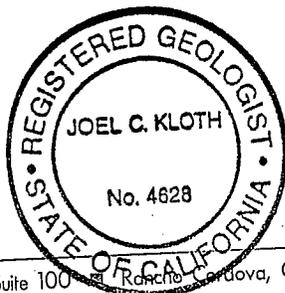

 Joel C. Kloth, RG
 Project Geologist


 Mark P. Wanek
 Staff Geologist


 Marc A. Barton
 Staff Environmental Scientist

MAB:MPW:JCK:sc

(5) Addressee



I. EXECUTIVE SUMMARY

Pursuant to the California Department of Transportation (Caltrans) Task Order (TO) No 43A0012, Geocon Environmental Consultants, Inc. (Geocon) has performed a site investigation on exposed soil adjacent to the shoulders of northbound and southbound Route 110 between KP 18.3 and KP 34.3 in Los Angeles, California. Caltrans proposes to install closed-circuit television (CCTV) equipment at the site. The investigation was performed to evaluate for the presence of lead due to the historical combustion of leaded fuels from freeway traffic. Data from the investigation was used to determine the re-use method for soil excavated at the site during the proposed construction, and to inform Caltrans of potential health and safety issues for workers at the site during construction activities. A total of 30 samples were collected from 16 boring locations. Two (2) soil samples were collected from each boring at the depths of approximately 0.15 meters and 0.6 meters below the ground surface.

i.i. Conclusions

Based on the data presented in Section 3.0, a portion of the soil excavated at the site has the potential to be classified as a hazardous waste per Title 22 of the California Code of Regulations (CCR). Boring locations B1 and B2 may be classified as non-hazardous, while boring locations B3 through B15 may be classified as hazardous waste. Therefore, the re-use of the soil at the site will be performed according to a variance issued to Caltrans by the Department of Toxic Substances Control (DTSC).

i.ii. Recommendations

Based upon the lead results of the soil samples analyzed, in conjunction with the statistical evaluation performed, soil at the site may be re-used within the Caltrans right-of-way at the site. Soil excavated from boring locations B1 and B2 should be re-used on-site as clean fill material with regard to lead impacts. Soil excavated from boring locations B3 through B15 are suitable for re-use on-site as hazardous material with respect to lead concentrations in accordance with a variance. The boring locations are depicted on the Boring Location Map, presented as Figures 2 through 14. Additional sampling and analyses may improve the degree of uncertainty with respect to the statistical analysis. It is further recommended 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.

TABLE OF CONTENTS

SITE INVESTIGATION REPORT

Page

I. EXECUTIVE SUMMARYi
i.i. Conclusions.....i
i.ii. Recommendations.....i

1. INTRODUCTION1
1.1 Project Description and Objectives1
1.2 Scope of Work1
1.2.1 Pre-field Activities.....1
1.2.2 Limited Soil Sampling.....2
1.2.3 Laboratory Analyses.....2
1.2.4 Report Preparation2
1.3 Previous Site Investigations.....2

2. INVESTIGATIVE METHODS.....2
2.1 Field Methods2
2.2 Deviations from Work Plan.....2

3. INVESTIGATIVE RESULTS AND FIELD OBSERVATIONS.....3
3.1 Site Geology, Hydrology, and Site Characteristics3
3.2 Analytical Laboratory Results3
3.3 Total Lead4
3.4 Soluble Lead (WET).....4
3.5 Soluble Lead (WET-DI)4
3.6 pH.....4
3.7 Statistical Data Evaluation.....5
3.8 Data Validation5

4. CONCLUSIONS5

5. RECOMMENDATIONS6

6. REPORT LIMITATIONS7

Figures:

- 1. Vicinity Map
- 2-14. Boring Location Maps

Table:

- I. Summary of Analytical Laboratory Results

Appendixes:

- A. Geocon Standard Operating Procedures
- B. Laboratory Reports and Chain-of-Custody Documentation
- C. Statistical Data Evaluation

SITE INVESTIGATION REPORT

1. INTRODUCTION

1.1 Project Description and Objectives

Pursuant to the California Department of Transportation (Caltrans) Task Order (TO) No 43A0012, Geocon Environmental Consultants, Inc. (Geocon) has performed a site investigation on exposed soil adjacent to the shoulders of northbound and southbound Route 110 between KP 18.3 and KP 34.3 in Los Angeles, California. Caltrans proposes to install closed-circuit television (CCTV) equipment at the location. The investigation was performed to evaluate for the presence of lead due to the historical combustion of leaded fuels from freeway traffic. Data from the investigation was used to determine the re-use method for soil excavated at the site during the proposed construction, and to inform Caltrans of potential health and safety issues for workers at the site during construction activities. The approximate site location is depicted on the Vicinity Map, presented as Figure 1.

1.2 Scope of Work

Geocon performed the following tasks:

1.2.1 Pre-field Activities

- Attended a task order meeting on March 25, 1999, to discuss issues such as field methods, boring locations, health and safety measures, and the completion schedule.
- Prepared a Health and Safety Plan dated March 1, 1999, for the proposed activities. The Health and Safety Plan included guidelines for the use of personal protective equipment for Geocon employees during the field activities.
- Contacted Underground Service Alert (USA) to notify utility companies of the field activities. Geocon was provided with USA Ticket Numbers 362945, 362956, 362960, 362974, 362978, and 362985.

1.2.2 Limited Soil Sampling

- Utilized a 7.62 centimeter diameter hand auger to collect 30 soil samples from 15 boring locations on March 3, 1999. The borings were located adjacent to the shoulders of the northbound and southbound Route 110 between KP 18.3 and KP 34.3 in Los Angeles, California. Two soil samples were collected from each boring at depths of approximately 0.15 meters and 0.6 meters below the ground surface. The approximate boring locations are depicted on the Boring Location Maps, presented as Figures 2 through 14.

- Backfilled the borings with the soil cuttings generated.

1.2.3 Laboratory Analyses

Submitted the soil samples to a California Department of Health Services (CDOHS)-certified analytical laboratory. The soil samples were analyzed for total lead following Environmental Protection Agency (EPA) Test Method 6010. Soil samples that exhibited total lead concentrations greater than or equal to 50 milligrams per kilogram (mg/kg) and less than 1,000 mg/kg were analyzed for soluble lead via the standard Waste Extraction Test (WET) following EPA Test Method 7420 using citric acid. Samples exhibiting WET concentrations in excess of 5 milligrams per liter (mg/l) were subsequently analyzed for soluble lead using deionized water (WET-DI) as the extractant. In addition, 16 samples were analyzed for pH via EPA Test Method 9045A. The laboratory analyses were performed on a 48- hour turn-around-time basis.

1.2.4 Report Preparation

Prepared this report, as outlined in Contract 43A0012, summarizing the results of the site investigation activities requested by Caltrans.

1.3 Previous Site Investigations

Geocon has not performed a previous investigations at the site. In addition, Caltrans has not notified Geocon of previous investigations performed at the site.

2. INVESTIGATIVE METHODS

2.1 Field Methods

The field methods used by Geocon to complete this TO are outlined in the following Geocon Standard Operating Procedures (SOPs) presented as Appendix A:

- SOP No. 11 - Hand-Augering and Soil Sample Collection
- SOP No. 31 - Soil Sample Handling Procedures

2.2 Deviations from Work Plan

A work plan was not prepared for this TO; however, Geocon performed the scope of work as described in TO No. 07-168101-JJ.

3. INVESTIGATIVE RESULTS AND FIELD OBSERVATIONS

3.1 Site Geology, Hydrology, and Site Characteristics

The soil conditions encountered at the site consisted generally of dry to moist, brown to brownish-yellow, sandy loam with layers gravel to the maximum depth of exploration. Groundwater was not encountered during the advancement of the borings.

TABLE 3.1

BORING LOCATION SITE CHARACTERISTICS

BORING NUMBER	APPROXIMATE DISTANCE FROM EOP IN METERS	SLOPING OR RELATIVELY FLAT	ELEVATION IN METERS BELOW ROADWAY	CUT OR FILL	WIND DIRECTION	LAND-SCAPED	BORING DEPTH IN METERS
B1	0.90	Flat	0.15	Fill	Westerly	Yes	0.60
B2	0.90	Flat	0.15	Fill	Westerly	Yes	0.60
B3	0.90	Flat	-0.15	Cut	Westerly	Yes	0.60
B4	1.20	Sloping	3.0	Cut	Westerly	Yes	0.60
B5	0.90	Flat	0.15	Cut	Westerly	Yes	0.60
B6	0.90	Flat	0.30	Cut	Westerly	Yes	0.60
B7	0.90	Flat	0.15	Cut	Westerly	Yes	0.60
B8	1.50	Flat	0.30	Fill	Westerly	Yes	0.60
B9	0.90	Flat	0.15	Cut	Westerly	Yes	0.60
B10	0.90	Flat	0.15	Cut	Westerly	Yes	0.60
B11	0.90	Sloping	0.15	Cut	Westerly	Yes	0.60
B12	1.05	Flat	0.15	Fill	Westerly	Yes	0.60
B13	1.50	Flat	0.90	Cut	Westerly	Yes	0.60
B14	0.90	Flat	0.30	Cut	Westerly	Yes	0.60
B15	1.50	Sloping	0.75	Cut	Westerly	Yes	0.60

3.2 Analytical Laboratory Results

A summary of the analytical laboratory results is presented as Table I. Reproductions of the laboratory reports and chain-of-custody documentation are presented as Appendix B.

3.3 Total Lead

Concentrations of total lead ranged from 1.3 mg/kg to 213 mg/kg. Soil samples did not exhibit total lead concentrations greater than the Total Threshold Limit Concentration (TTLC) of 1,000 mg/kg. Nine (9) soil samples exhibited total lead concentrations greater than 50 mg/kg and less than 1,000 mg/kg.

3.4 Soluble Lead (WET)

Nine (9) soil samples were analyzed for soluble lead via the WET. Concentrations of soluble lead ranged from 3.5 milligrams per liter (mg/l) to 18 mg/l. Four (4) soil samples exhibited soluble lead concentrations greater than the soluble threshold limit concentration (STLC) of 5.0 mg/l.

3.5 Soluble Lead (WET-DI)

Four (4) soil samples were analyzed for soluble lead via the WET-DI. Concentrations of soluble lead using deionized water as the extractant ranged from not detected above the laboratory detection limit of 0.15 mg/l to 0.18 mg/l for the samples analyzed.

3.6 pH

Sixteen (16) soil samples were analyzed for pH via EPA Test Method 9045A. The pH values ranged from 7.4 to 9.0.

3.7 Statistical Data Evaluation

The analytical laboratory results from the boring locations advanced for the CCTV construction were evaluated statistically in conformance with a document entitled *Contract 43Y097 Lead Investigation Reporting*, prepared by Caltrans and dated January 20, 1997. This procedure was used in order to determine the best method of re-use for on-site soil. A histogram of the numerical data set was initially developed to determine normality in the data set. During this procedure, the data was determined to be lognormal, and the numerical data set was transformed using the natural logarithm function. The Caltrans letter of January 20, 1997 indicates that there should be a correlation factor ("r") of 0.8 or greater. The statistical analysis for the data set indicated an 'r' value of 0.98. The mean concentrations of the total lead in on-site soil were calculated for each sampling depth, and the data was evaluated using both an 80 percent and 95 percent upper confidence limit (UCL). However, according to a document issued by the US Environmental Protection Agency (EPA) entitled *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A) Interim Final*, (RAGS) dated December, 1989, "If contaminant concentrations in an area are highly variable and only a few samples can be obtained, then the risk assessor should anticipate (1) a great deal of uncertainty in estimating mean concentrations at the site, (2) difficulty in defining the distribution of the data (e.g. normal), and (3) upper confidence limits much higher than the mean." A reproduction of the results of the statistical data evaluation for the boring locations are presented in Appendix C.

3.8 Data Validation

Prior to submitting the soil samples to the laboratory, the chain-of-custody documentation was reviewed for accuracy and completeness. The laboratory reports were reviewed for accuracy and consistency with chain-of-custody documentation. The matrix-spikes and duplicates were reviewed to ensure the laboratory results were within tolerance control limits. Based upon this validation process, the data quality is adequate for the purposes of this report.

4. CONCLUSIONS

Based on the data presented in Section 3.0, a portion of the soil excavated at the site has the potential to be classified as a hazardous waste per Title 22 of the California Code of Regulations (CCR). Boring locations B1 and B2 may be classified as non-hazardous, while boring locations B3 through B 15 may be classified as hazardous waste. Therefore, the re-use of the soil at the site will be performed according to a variance issued to Caltrans by the Department of Toxic Substances Control (DTSC).

5. RECOMMENDATIONS

Based upon the lead results of the soil samples analyzed, soil at the site may be re-used within the Caltrans right-of-way at the site. Soil excavated from boring locations B1 and B2 should be re-used on-site as clean fill material with regard to lead impacts. Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations in accordance with a variance. The boring locations are depicted on the Boring Location Map, presented as Figures 2 through 14.

As specified in Section 3.7, "Statistical Data Evaluation," a low number of samples and a high variability in lead concentrations may result in a high degree of uncertainty. In order to reduce the level of uncertainty in the data analysis, it is recommended that additional soil samples be collected and analyzed for total and soluble lead. It is further recommended 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.

6. REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information obtained is only relevant as of the date of the latest site visit. The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

The Client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The appropriate regulatory agency may require additional investigation. The findings and conclusions as presented in this report are predicated on the results of the limited soil sampling and laboratory analyses performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence, or consultation, either expressed or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

TABLE I

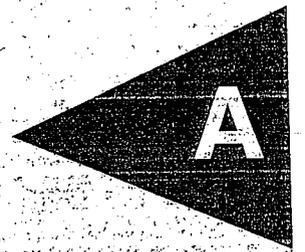
SUMMARY OF ANALYTICAL LABORATORY RESULTS

SAMPLE ID	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B1-1	0.15	52	3.5	---	7.5
B1-2	0.60	8.2	---	---	---
B2-1	0.15	23	---	---	---
B2-2	0.60	23	---	---	7.9
B3-1	0.15	59	4.3	---	8.0
B3-2	0.60	42	---	---	---
B4-1	0.15	2.1	---	---	8.9
B4-2	0.60	5.7	---	---	---
B5-1	0.15	61	4.1	---	8.8
B5-2	0.60	18	---	---	---
B6-1	0.15	14	---	---	8.2
B6-2	0.60	18	---	---	---
B7-1	0.15	5.5	---	---	8.5
B7-2	0.60	✓ 1.3	VERNON / 45 th	---	---
B8-1	0.15	23	---	---	8.3
B8-2	0.60	48	---	---	8.5
B9-1	0.15	31	---	---	8.7
B9-2	0.60	14	---	---	---
B10-1	0.15	142	9.2	0.18	8.3
B10-2	0.60	127	8.5	ND	---
B11-1	0.15	✓ 213	FLOWER.	0.28	---
B11-2	0.60	10	---	---	7.8
B12-1	0.15	209	18	ND	7.5
B12-2	0.60	109	5.9	ND	---
B13-1	0.15	17	---	---	9.0
B13-2	0.60	31	---	---	---
B14-1	0.15	20	---	---	8.5
B14-2	0.60	10	---	---	---
B15-1	0.15	52	3.6	---	---
B15-2	0.60	2.2	---	---	7.4

Note:
 mg/kg = milligrams per kilogram
 mg/l = milligrams per liter
 WET = Waste Extraction Test

WET-DI = WET with deionized water
 used as the extractant
 --- = analysis not performed

APPENDIX



APPENDIX A

GEOCON ENVIRONMENTAL CONSULTANTS INCORPORATED STANDARD OPERATING PROCEDURE (SOP) NO. 11 HAND-AUGERING AND SOIL SAMPLE COLLECTION

Purpose

The purpose of this SOP is to outline procedures and methods to be used to advance hand-augers and collect soil samples for chemical analyses.

Hand-Augering and Soil Sample Collection Procedures

1. Initiate boring using a hand-held 7.6-centimeter diameter stainless steel auger.
2. Advance boring to initial sample depth of approximately 0 to 0.15 meter below the ground surface.
3. Transfer the soil sample from the hand-auger into a glass jar supplied by the laboratory.
4. Repeat the procedure and collect soil samples at subsequent depths as specified in the Task Order, if possible.
5. Backfill the borings to surface grade with soil cuttings generated.
6. Clean and rinse sampling equipment prior to the collection of each soil sample by washing the equipment with a trisodium phosphate solution followed by subsequent tap water and deionized water rinses.

APPENDIX A (continued)

**GEOCON ENVIRONMENTAL CONSULTANTS INCORPORATED
STANDARD OPERATING PROCEDURE (SOP) NO. 31
SOIL SAMPLE HANDLING PROCEDURES**

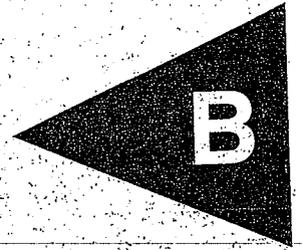
Purpose

The purpose of this SOP is to outline procedures and methods to be used to package and transport soil samples to an analytical laboratory.

Soil Sample Handling Procedures

1. Soil samples will be retrieved directly from the hand auger.
2. After extracting the sample from the auger, the soil sample will be placed in laboratory supplied glass jars with Teflon-lined lids.
3. Sample labels will be placed on the outside of the jar to indicate the boring number and from what depth the sample was obtained, the time the sample was obtained, and the date the sample was obtained.
4. Each prepared sample jar will be placed into a container for transport to Advanced Technology Laboratories.

APPENDIX



March 22, 1999

ELAP No.: 1838

Geocon Environmental
6970 Flanders Drive
San Diego, CA 92121

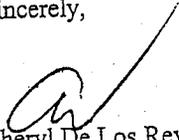
ATTN: Marc Barton

Client's Project: Rte 110, #08900-06-20
Lab No.: 33643-001/030

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,


Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.



Client: Geocon Environmental
 Attn: Marc Barton

Client's Project: Rte 110, 08900-06-20

Date Received: 03/04/99
 Date Sampled: 03/03/99
 Date Digested: 03/09/99
 Digestion Method: EPA 3050

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
33643-001	B1-1	EPA 6010 (Lead)	03/09/99	52	Soil, mg/kg	0.25	0.25	LP
33643-002	B1-2	EPA 6010 (Lead)	03/09/99	8.2	Soil, mg/kg	0.25	0.25	LP
33643-003	B2-1	EPA 6010 (Lead)	03/09/99	23	Soil, mg/kg	0.25	0.25	LP
33643-004	B2-2	EPA 6010 (Lead)	03/09/99	23	Soil, mg/kg	0.25	0.25	LP
33643-005	B3-1	EPA 6010 (Lead)	03/09/99	59	Soil, mg/kg	0.25	0.25	LP
33643-006	B3-2	EPA 6010 (Lead)	03/09/99	42	Soil, mg/kg	0.25	0.25	LP
33643-007	B4-1	EPA 6010 (Lead)	03/09/99	2.1	Soil, mg/kg	0.25	0.25	LP
33643-008	B4-2	EPA 6010 (Lead)	03/09/99	5.7	Soil, mg/kg	0.25	0.25	LP
33643-009	B5-1	EPA 6010 (Lead)	03/09/99	61	Soil, mg/kg	0.25	0.25	LP
33643-010	B5-2	EPA 6010 (Lead)	03/09/99	18	Soil, mg/kg	0.25	0.25	LP
33643-010Dup	B5-2	EPA 6010 (Lead)	03/09/99	9.4	Soil, mg/kg	0.25	0.25	LP
33643-011	B7-1	EPA 6010 (Lead)	03/09/99	5.5	Soil, mg/kg	0.25	0.25	LP
33643-012	B7-2	EPA 6010 (Lead)	03/09/99	1.3	Soil, mg/kg	0.25	0.25	LP
33643-013	B8-1	EPA 6010 (Lead)	03/09/99	23	Soil, mg/kg	0.25	0.25	LP
33643-014	B8-2	EPA 6010 (Lead)	03/09/99	48	Soil, mg/kg	0.25	0.25	LP
33643-015	B11-1	EPA 6010 (Lead)	03/09/99	213	Soil, mg/kg	0.25	0.25	LP
33643-016	B11-2	EPA 6010 (Lead)	03/09/99	10	Soil, mg/kg	0.25	0.25	LP

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DF = Dilution Factor (DLR/MDL)

Reviewed/Approved By: _____

Cheryl de los Reyes
 Cheryl de los Reyes
 Technical Operations Manager

Date: 3/15/99





FAX

Date *March 19, 1999*

Number of pages including cover sheet *1*

TO: *Puri
ATL*

FROM: *Marc A. Barton
Geocon Environmental
Consultants, Inc.
6970 Flanders Drive
San Diego CA 92121*

Phone *562-989-4045*
Fax Phone *562-989-4040*

Phone *619.558.6100*
Fax Phone *619.558.8437*

CC:

REMARKS: *Urgent* *For your review* *Reply ASAP* *Please Comment*

Subject: *Route 110 CCTV 08900-06-20*

lab # *33643*

Please correct the sample ID #'s as follows:

- 33643-017-→B15-1*
- 33643-019→B12--- both STLC and STLC DI*
- 33643-030→B10-2 ---both STLC and STLC DI*
- 33643-015→B11-1*
- 33643-019→B12-1---both STLC and STLC DI*

Thanks,

Marc Barton



1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Method of Transport
 Walk-in
 Courier
 UPS
 FED. EXP.
 ATL

Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
 City: San Diego State: CA Zip Code: 92121
 Address: 6970 Flanders Drive
 TEL: (619) 558-6100 FAX: (619) 558-8437

Project Name: Rte 110 Project #: 08900-06-20 Sampler: *MARC BARTON*
 Relinquished by: *Marc Barton* Date: 3/4/99 Time: 13:20
 Relinquished by: *Marc Barton* Date: 3/4/99 Time: 13:20
 Relinquished by: *Marc Barton* Date: 3/4/99 Time: 13:20

SHIP TO LAB: _____
 EST: _____
 TL #: _____
 DATE: _____
 CLIENT I.D.: _____

Send Report To:
 Alt: *SAME*
 Co: _____
 Address: _____
 City: _____ State: _____ Zip: _____

LAB USE ONLY: Batch #: Lab No.	Sample I.D.	Sample Description	Date	Time	Emergency Next workday	Overnight ≤ 24 hr	TAT: A=	Container Types:	Urgent 3 Workdays	D=	Critical 2 Workdays	Routine 7 Workdays	Preservatives:
-021	B14-1		3/3/99	2:06									
-022	B14-2			2:08									
-023	B9-1			2:12									
-024	B9-2			2:14									
-025	B6-1			2:20									
-026	B6-2			2:22									
-027	B13-1			2:26									
-028	B13-2			2:28									
-029	B10-1			2:52									
-030	B10-2			2:55									

Circle of Add Analysis(es) Requested:
 601910 (Halogenated Volatiles-GC)
 608000 (Pesticides-CB-GC)
 624240 (Volatiles-GC)
 625270 (Volatiles-GC)
 6013M TPH-GCMS
 6013M TPH-GTEX (COMBINATION)
 418.1 (PH-IH)
 418.1 (PH-IH) (Diesel-GC)
 418.1 (PH-IH) (CAC-80107000)

CIRCLE APPROPRIATE MATRIX
 SOLID (SOP) • SLUDGE
 WATER • WASTEWATER
 DRINKING WATER
 AIR
 WIFE • FILTER
 OTHER

Special Instructions/Comments:
 See Page #17

QA/QC
 RTNE
 RWQCB
 WIP
 NAVY
 CT
 OTHER

• TAT starts 8 a.m. following day if samples received after 5 p.m.
 TAT: A= Overnight ≤ 24 hr
 B= Emergency Next workday
 C= Critical 2 Workdays
 D= Urgent 3 Workdays
 E= Routine 7 Workdays
 Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tedlar G=Glass P=Plastic M=Metal
 Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C Z=Zn(Ac)₂ O=NaOH T=Na₂S₂O₃
 DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

March 17, 1999

ELAP No.: 1838

Geocon Environmental
6970 Flanders Drive
San Diego, CA 92121

ATTN: Marc A. Barton

Client's Project: Rt 110 CCTV, #08900-06-20
Lab No.: 33947-001/005

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,


Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.





FAX

Date March 15, 1999
Number of pages including cover sheet 1

TO: *Rachelle Arada*
ATL

FROM: *Marc A. Barton*
Geocon Environmental
Consultants, Inc.
6970 Flanders Drive
San Diego CA 92121

Phone *562-989-4045*
Fax Phone *562-989-4040*

Phone *619.558.6100*
Fax Phone *619.558.8437*

CC:

REMARKS: *Urgent* *For your review* *Reply ASAP* *Please Comment*

Subject: *Route110 CCTV 08900-06-20*

lab # *33643*

Could you please analyze these samples for pH EPA 9045A on a 48-hour TAT:

B14-1, B9-2, B13-1, B10-1, B6-1 per Marc 3/15/99 (CA)

If you have any questions please give me a call.

Thanks,

Marc



**Advanced Technology
Laboratories**

1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
 P.O. #: _____ Date: 3-15 Time: 1725
 Logged By: (Signature)

Method of Transport
 Walk-in
 Courier
 UPS
 FED. EXP.
 ATL

Sample Condition Upon Receipt
 Y 1. CHILLED
 N 4. SEALED
 Y 2. HEADSPACE (VOA)
 N 5. # OF SPLS MATCH COC
 Y 3. CONTAINER INTACT
 N 6. PRESERVED
 Y

Client: Gecon Address: 6940 Sanders Drive State CA Zip Code 92221 TEL: (619) 558-6100
 Attn: MARC A. BARTON City SAN DIEGO (Printed Name)
 Project Name: R4110CCTV Project #: 08900-06-20 Sampler: (Signature) FAX: (619) 558-8437

Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Received by: (Signature and Printed Name) _____ Date: 3-4-99 Time: _____
 Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
 Received by: (Signature and Printed Name) _____ Date: _____ Time: _____

SHIP TO LAB: _____
 (SUB CONTRACT) _____
 TEST: _____
 ATL #: _____
 DATE: _____
 CLIENT I.D.: _____

Print Name _____ Date: _____
 Co: _____
 Address _____
 City _____ State _____ Zip _____

I hereby authorize ATL to perform the work indicated below:
 Project Mgr /Submitter: _____
 Signature _____
 Date: _____

Sample Archive/Disposal:
 Laboratory Standard
 Other
 Return To:
 * \$10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

LAB USE ONLY: Batch #:	Sample Description	Sample I.D.	Date	Time
33947-001		33643-021/B14-1	3/3	
002		024/B9-2		
003		027/B13-1		
004		029/B10-1		
005		025/B6-1		

Special Instructions/Comments: _____

Send Report To:
 Attn: _____
 Co: _____
 Address _____
 City _____ State _____ Zip _____

Circle or Add Analysis(es) Requested:
 60160 (Halogenated Volatiles-GC)
 602020/BTEX (Aromatic Volatiles-GC)
 6248240 (Pesticides-PCB-GC)
 6250 (Volatiles-GCMS)
 625270 (BNA-GCMS)
 6015M TPH/8TEX (COMBINATION)
 418.1 (TPH-IR)
 Metals-Total (CAC-6010700)
 4575057 - HD

CIRCLE APPROPRIATE MATRIX:
 SOLID • SOIL • SLUDGE
 WATER • WASTEWATER
 DRINKING WATER
 AIR
 WIFE • FILTER
 OTHER

Container(s) # Type

QA/QC
 RTNE (412)
 RWOCB
 WIP
 NAVY
 CT
 OTHER

REMARKS

TAT: A= Overnight ≤ 24 hr
 B= Emergency Next workday
 C= Critical 2 Workdays
 D= Urgent 3 Workdays
 E= Routine 7 Workdays

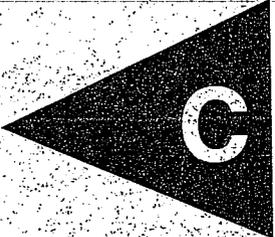
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives:
 H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC) O=NaOH T=Na₂S₂O₃

• TAT starts 8 a.m. following day if samples received after 5 p.m.

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

APPENDIX



C

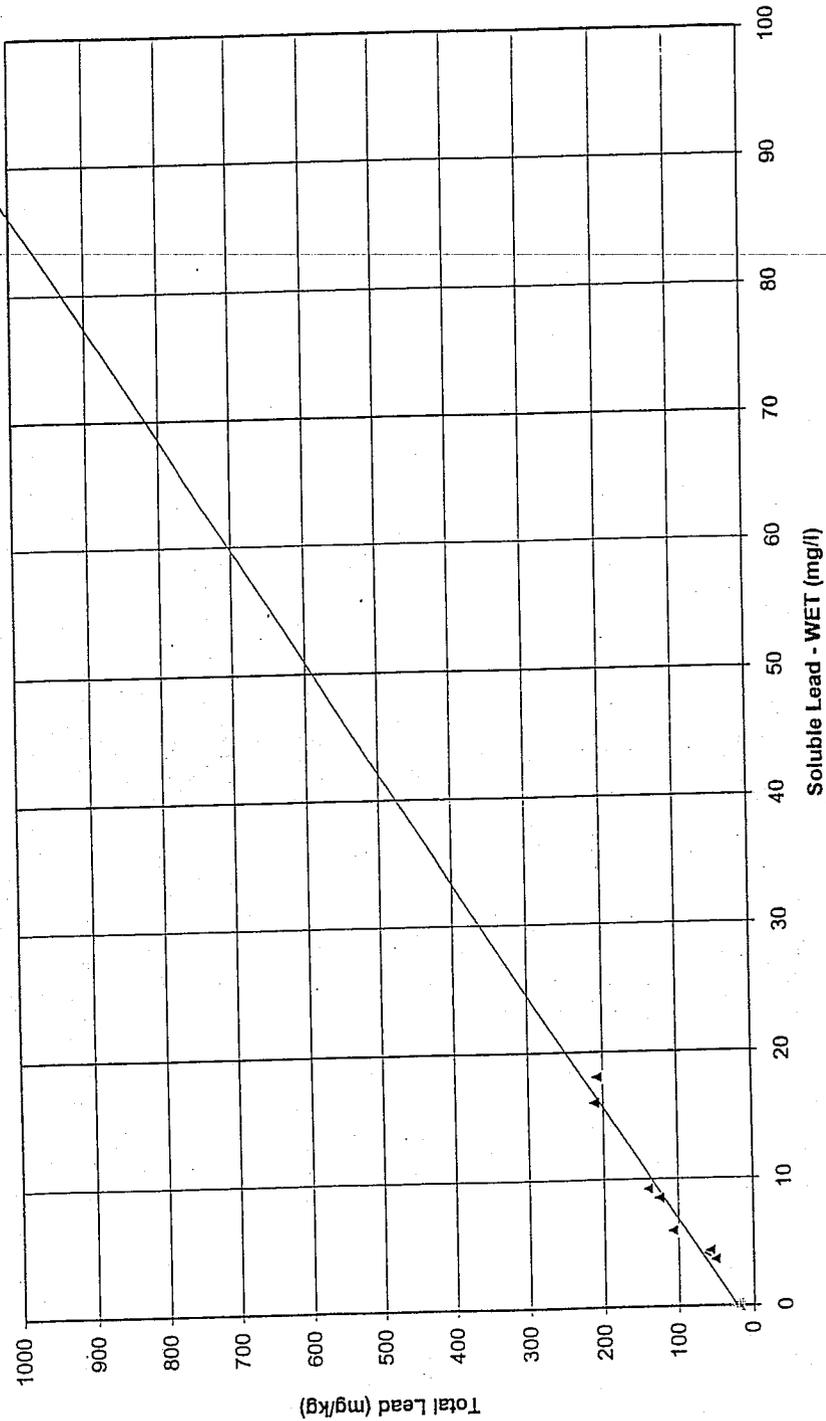
Project Name: Route 110 From KP 18.3 to KP 34.3
Project Number: 08900-06-20
Task Order Number: 07-16810-JJ

Regression Analysis Results for Total Lead vs. Soluble Lead (WET)

Regression Output:

Constant (b)	22.77
Slope (m)	11.35
Correlation (r)	0.98
Number of Observatons	8
Total Lead Mean	122
Total Lead Standard Deviation	64
Soluble Lead (WET) Mean	9
Soluble Lead (WET) Standard Deviation	6

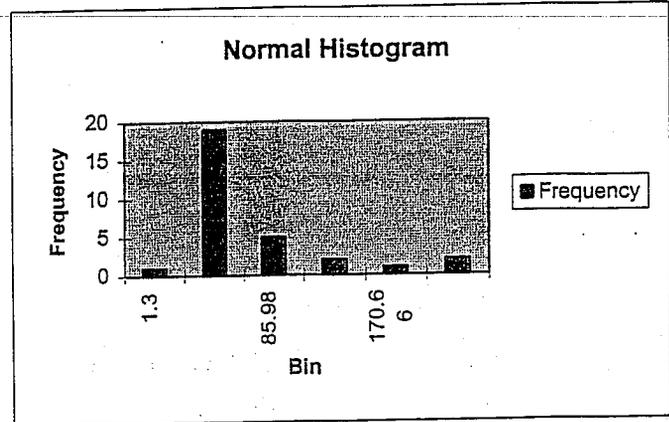
Total Lead vs. Soluble Lead (WET)



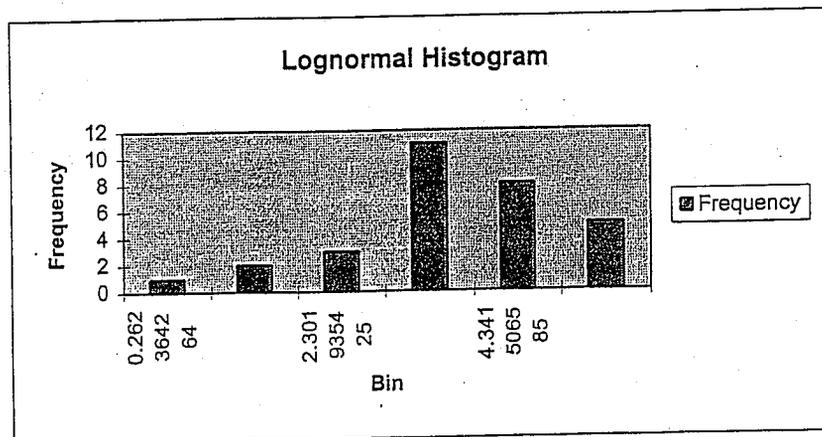
Histograms

SAMPLE ID	Total Lead Conc.	Ln(Total Lead Conc.)
B3-1	59	4.0775
B3-2	42	3.7377
B4-1	2.1	0.7419
B4-2	5.7	1.7405
B5-1	61	4.1109
B5-2	18	2.8904
B6-1	14	2.6391
B6-2	18	2.8904
B7-1	5.5	1.7047
B7-2	1.3	0.2624
B8-1	23	3.1355
B8-2	48	3.8712
B9-1	31	3.4340
B9-2	14	2.6391
B10-1	142	4.9558
B10-2	127	4.8442
B11-1	213	5.3613
B11-2	10	2.3026
B12-1	209	5.3423
B12-2	109	4.6913
B13-1	17	2.8332
B13-2	31	3.4340
B14-1	20	2.9957
B14-2	10	2.3026
B15-1	52	3.9512
B15-2	2.2	0.7885

Bin	Frequency	Bin	Frequency
1.3	1	43.64	19
43.64	19	85.98	5
85.98	5	128.32	2
128.32	2	More	2
170.66	1	1.3	1
More	2	170.66	1



Bin	Frequency
0.26236426	1
1.28214984	2
2.30193542	3
3.32172101	11
4.34150659	8
More	5



Project Name: Route 110 From KP 18.3 to KP 34.3
 Project No.: 08900-06-20
 Task Order No.: 07-16810-JJ

Block Diagrams - 80% UCL for Lognormal Distribution

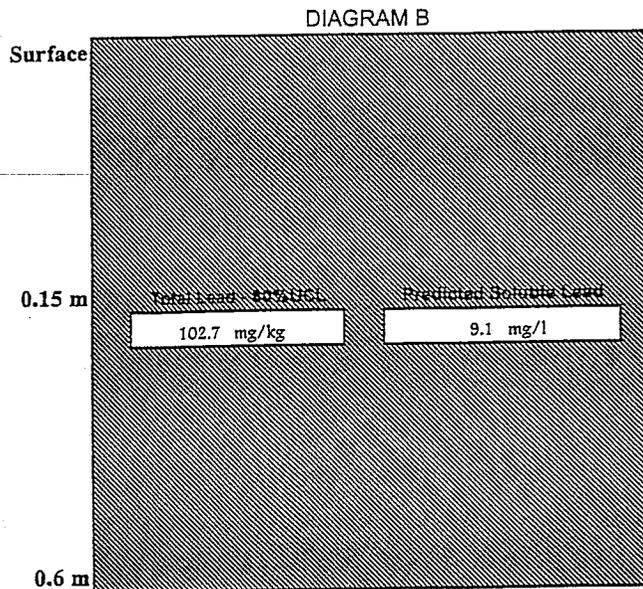
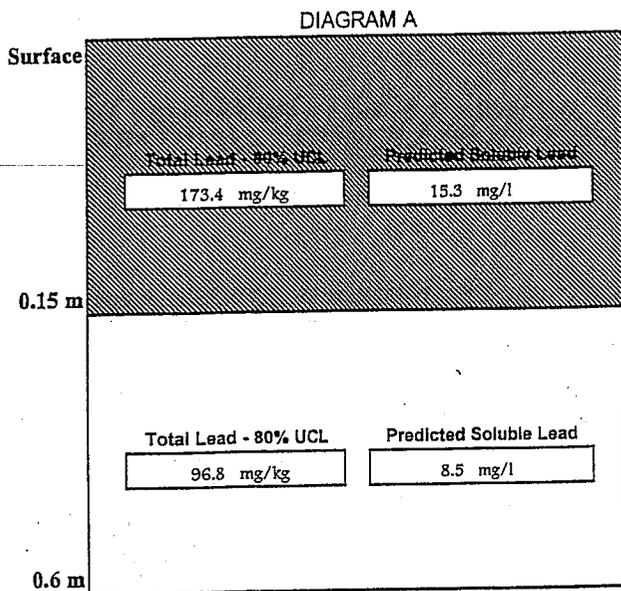


DIAGRAM A -- Separate the top of soil from the remaining underlying soil
 DIAGRAM B -- Analysis of the entire as a single unit

The above diagrams show the total and predicted soluble lead concentrations in each grouping of soil depending on how the various levels of soil are segregated. For instance, Diagram A shows a scenario where the top of soil is excavated and kept separate from the underlying soil. In this case, the top of soil would be expected to exhibit an average total lead concentration of mg/kg and an average (WET-Citric Acid) soluble lead concentration of mg/l. The underlying soil would be expected to exhibit an average total lead concentration of mg/kg and an average (WET-Citric Acid) soluble lead concentration of mg/l.

Project Name: Route 110 From KP 18.3 to KP 34.3
 Project No.: 08900-06-20
 Task Order No.: 07-16810-JJ

Block Diagrams - 95% UCL for Lognormal Distribution

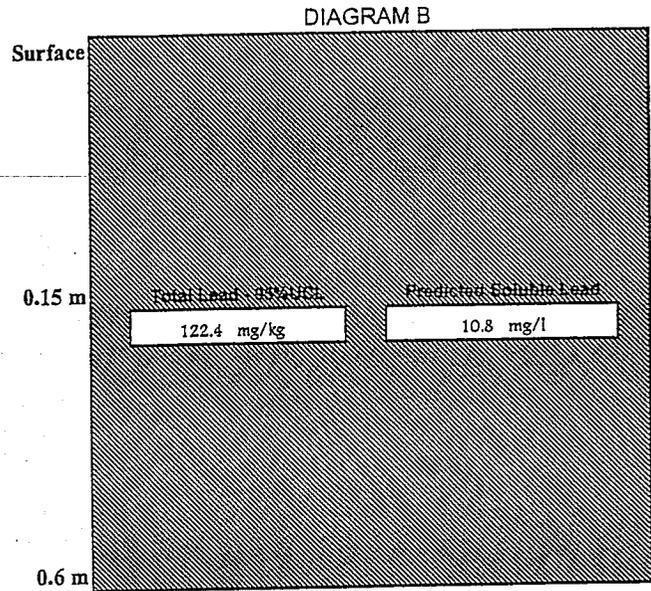
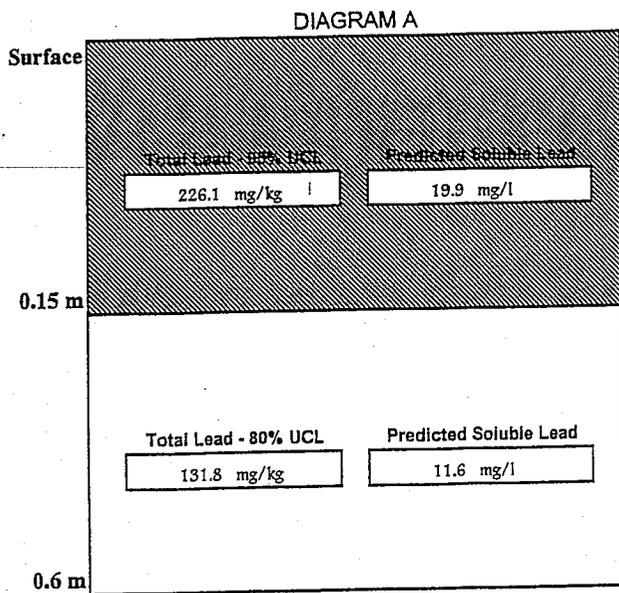


DIAGRAM A - Separate the top 0.15 m of soil from the remaining underlying soil
 DIAGRAM B - Analysis of the entire 0.6 m as a single unit

The above diagrams show the total and predicted soluble lead concentrations in each grouping of soil depending on how the various levels of soil are segregated. For instance, Diagram A shows a scenario where the top 0.15 m of soil is excavated and kept separate from the underlying soil. In this case, the top 0.15 m of soil would be expected to exhibit an average total lead concentration of 226.1 mg/kg and an average (WET-Citric Acid) soluble lead concentration of 19.9 mg/l. The underlying soil would be expected to exhibit an average total lead concentration of 131.8 mg/kg and an average (WET-Citric Acid) soluble lead concentration of 11.6 mg/l.

FIBER OPTIC ASBUILT DRAWING

INDEX OF SHEETS

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

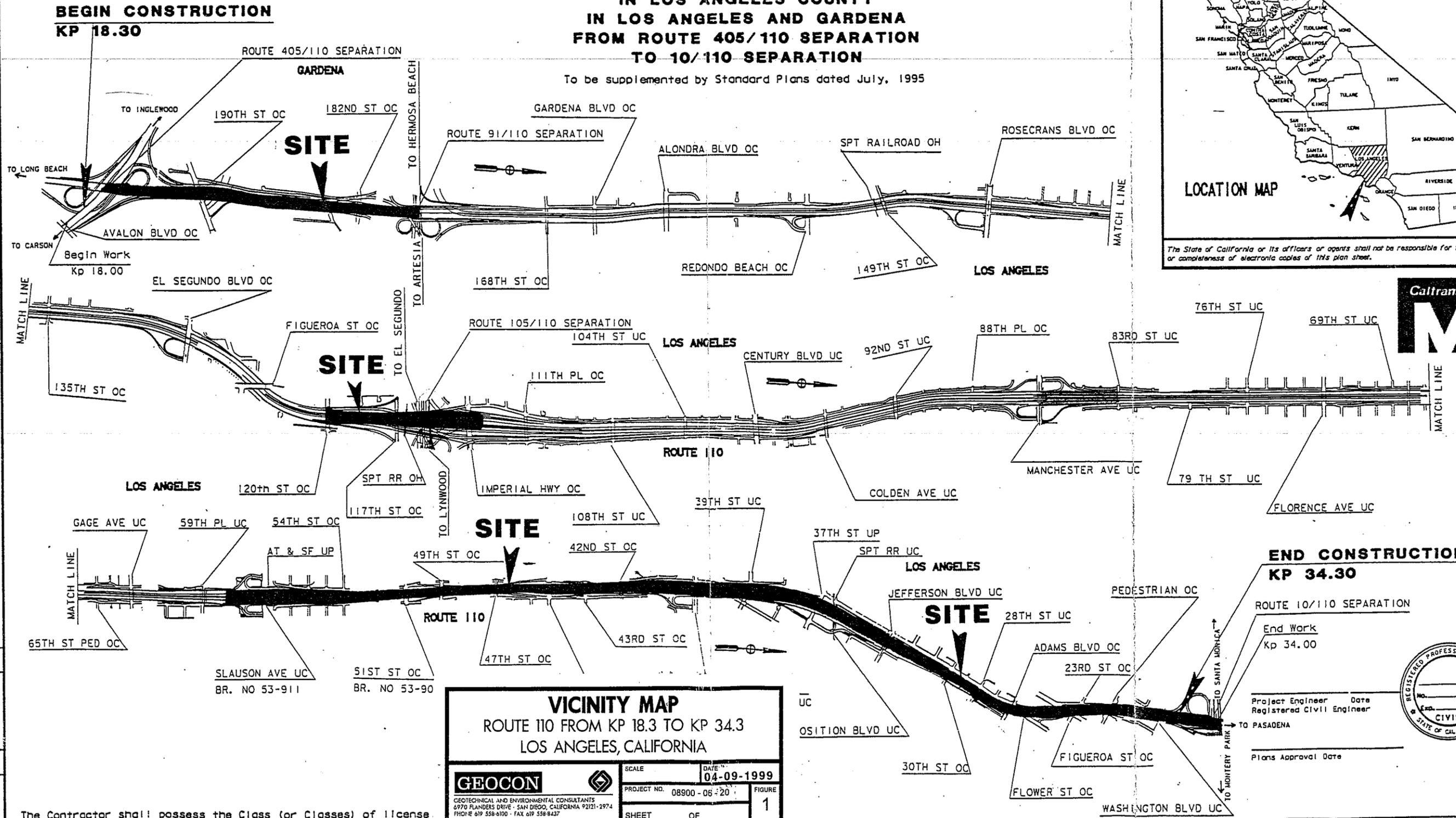
IN LOS ANGELES COUNTY IN LOS ANGELES AND GARDENA FROM ROUTE 405/110 SEPARATION TO 10/110 SEPARATION

To be supplemented by Standard Plans dated July, 1995

DIST	COUNTY	ROUTE	ALLOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	110			

Caltrans

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.



PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE
DAVID PAOLILLA		PAT MALIVAN	

The Contractor shall possess the Class (or Classes) of license as specified in the "Notice to Contractors".

VICINITY MAP
ROUTE 110 FROM KP 18.3 TO KP 34.3
LOS ANGELES, CALIFORNIA

GEOCON
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 619 558-6100 - FAX 619 558-9437

SCALE	DATE
PROJECT NO. 08900-06-20	04-09-1999
SHEET OF	FIGURE 1



**END CONSTRUCTION
KP 34.30**

End Work
Kp 34.00

Project Engineer Date
Registered Civil Engineer

Plans Approval Date

Contract No. 07-168104

PROJECT ENGINEER: DAVID PADILLA
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring location B2 should be re-used on-site as clean fill material with regard to lead impacts. It is further recommended that Caltrans notify the contractors performing the construction activities that lead may be present in on-site soil and that appropriate health and safety measures should be taken to minimize the exposure to lead.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	110			

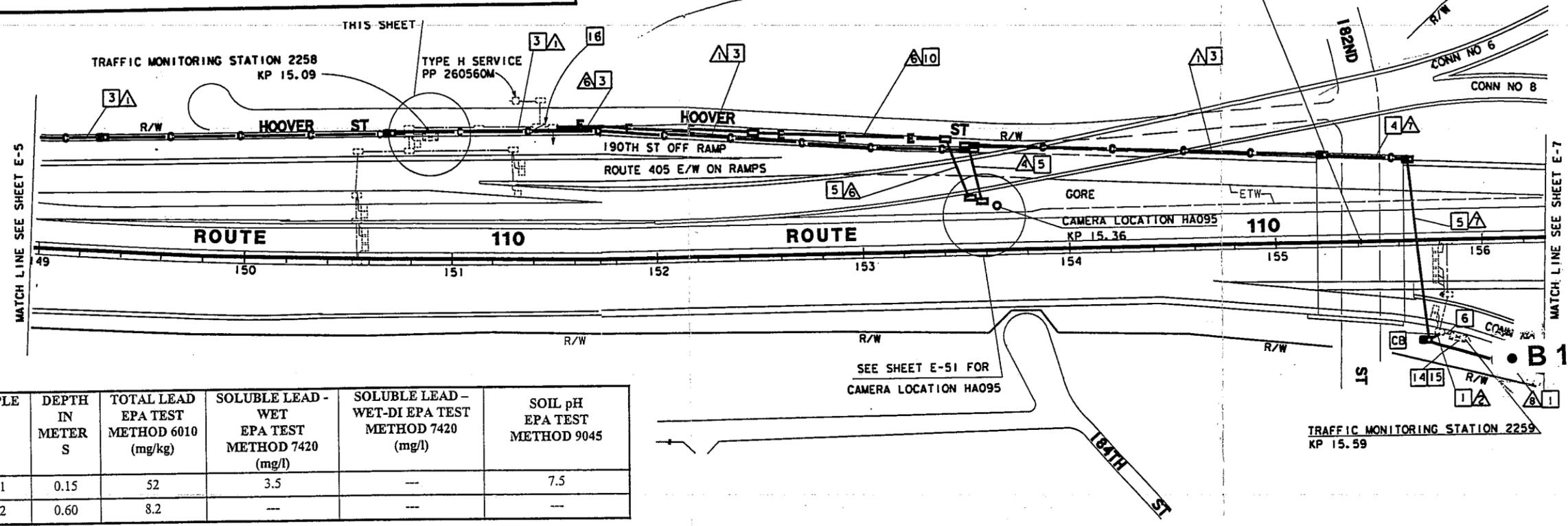
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
 TAN ACQUELINE
 E015611
 12-31-01
 CIVIL
 STATE OF CALIFORNIA

182ND ST UC BR NO 53-0959
155+41.14



SAMPLE ID	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B1-1	0.15	52	3.5	---	7.5
B1-2	0.60	8.2	---	---	---

- 3. INSTALL FIBERGLASS REINFORCED PLAST (FRP) CONDUITS ON STRUCTURE. SEE SHEET C-2 TO C-5 FOR DETAILS.
- 5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103 C, SEE SHEET E-69 FOR DETAILS.
- 6. ADD CABLE(S) AND CONNECT TO CONTROLLER.
- 10. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-68 FOR DETAILS.
- 14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-73 AND DETAIL I SHEET E-76.
- INSTALL EXISTING TELCO DEMARCATION CABLE ONLY AFTER ATION

GEOCON

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

CTV CAMERA.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN					
		3	4	5	6	7	8
50P22 CABLE	DATA/PHONE						
24SMFO CABLE	VIDEO/DATA						
36SMF							
12SM							
6P22							
2SMF							
2"							

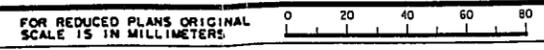
BORING LOCATION MAP

ROUTE 110 FROM KP 18.3 TO KP 34.3
IN LOS ANGELES, CA

DATE 04-09-1999	PROJECT NO. 08900-06-20	FIGURE 2
-----------------	-------------------------	----------

COMMUNICATION SYSTEM ROUTING
SCALE = 1:1000 **E-6**

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME => *****USER*****
 DGN FILE => *****DGN\$SPEC*****
 CU 07396 EA 168101

TIME PLOTTED -> *****TIMES*****
 00-00-00

SAMPLE ID	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B2-1	0.15	23	---	---	---
B2-2	0.60	23	---	---	7.9

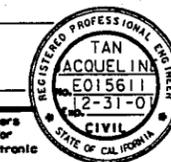


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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



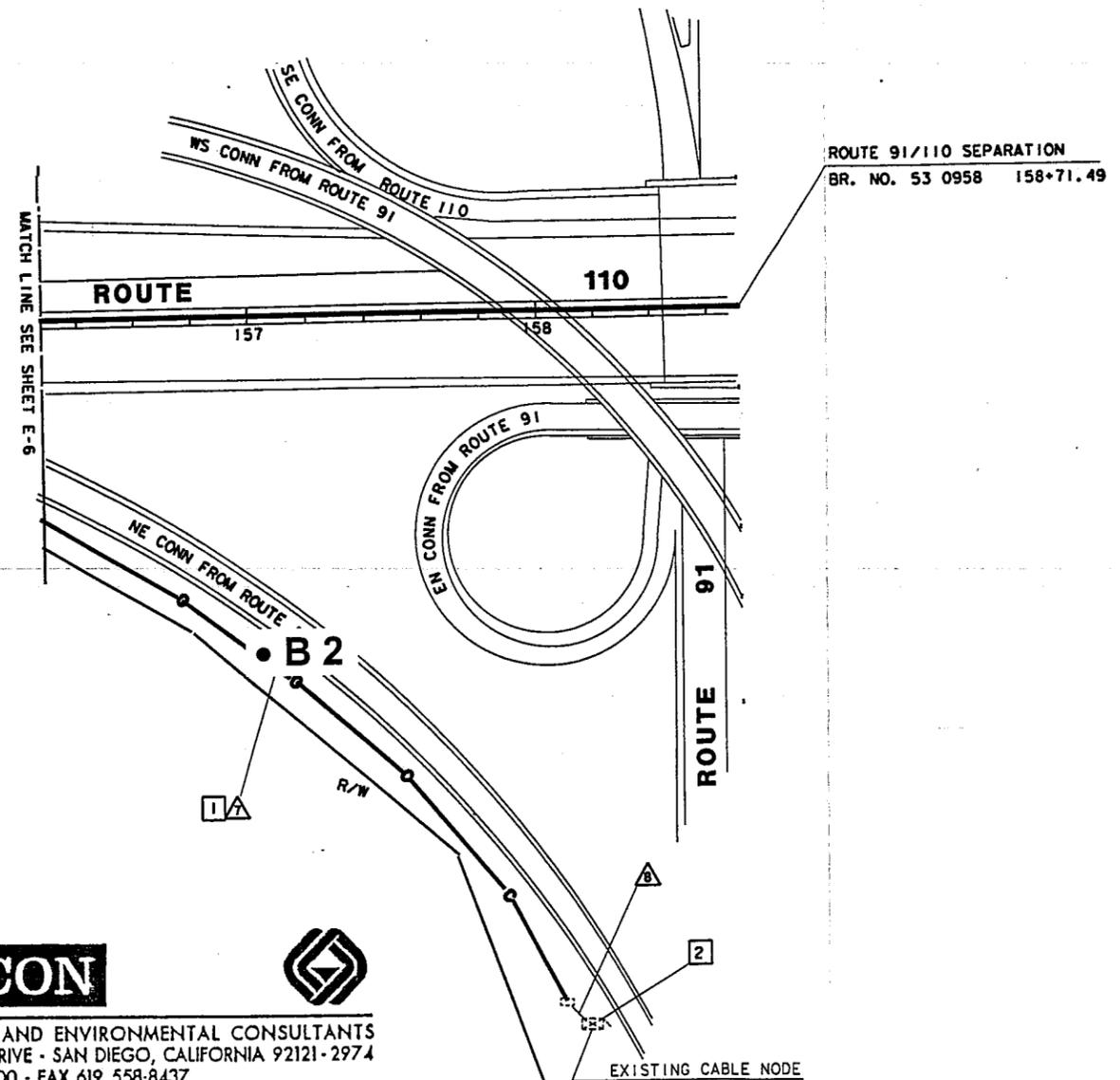
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER: DAVID PADILLA

DATE REVISIONS: (Table with columns for DATE, REVISION, BY, DATE)

CALCULATED/DESIGNED BY: (Blank)

CHECKED BY: (Blank)



RECOMMENDATIONS FOR RE-USE

Soil excavated from boring location B1 should be re-used on-site as clean fill material with regard to lead impacts. It is further recommended that Caltrans notify the contractors performing the construction activities that lead may be present in on-site soil and that appropriate health and safety measures should be taken to minimize the exposure to lead.

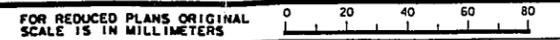
- NOTES:** (THIS SHEET ONLY)
- INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103 CONDUITS OR OTHER TYPES SEE SHEET E-68 FOR DETAILS.
 - CONNECT 36SMFO CABLE TO EXISTING CABLE NODE.

BORING LOCATION MAP		
ROUTE 110 FROM KP 18.3 TO KP 34.3 IN LOS ANGELES, CA		
DATE 04-09-1999	PROJECT NO. 08900-06-20	FIGURE 3

GEOCON

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

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

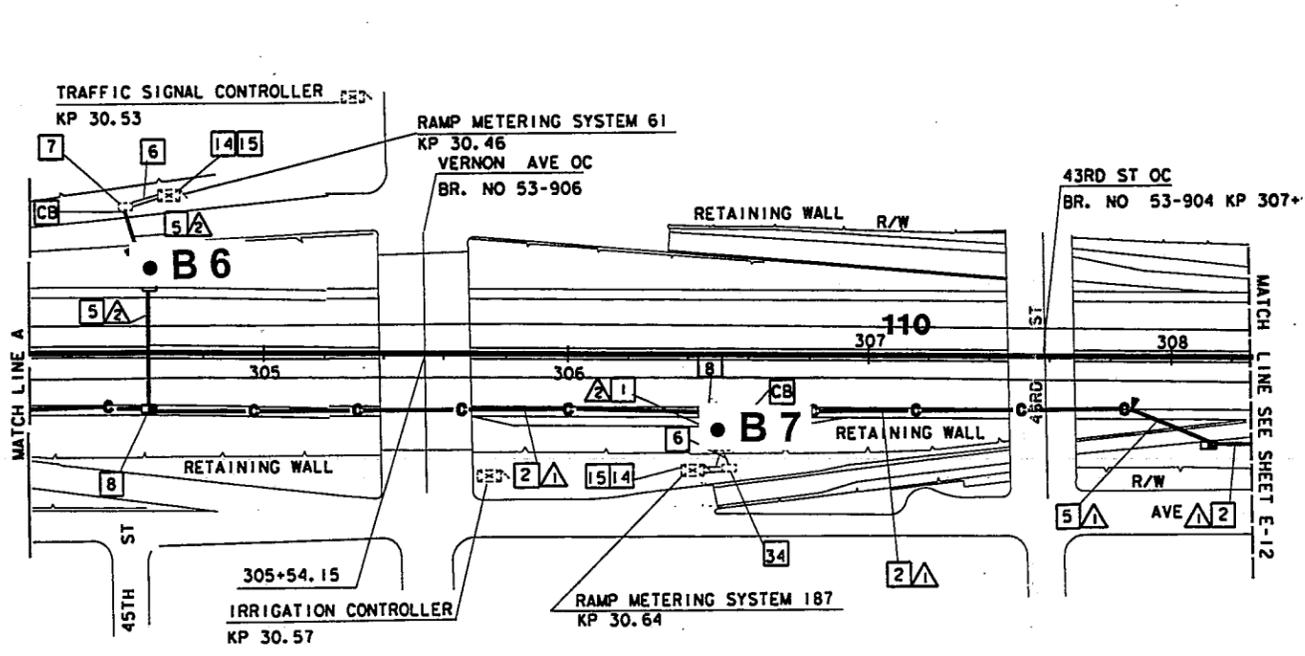
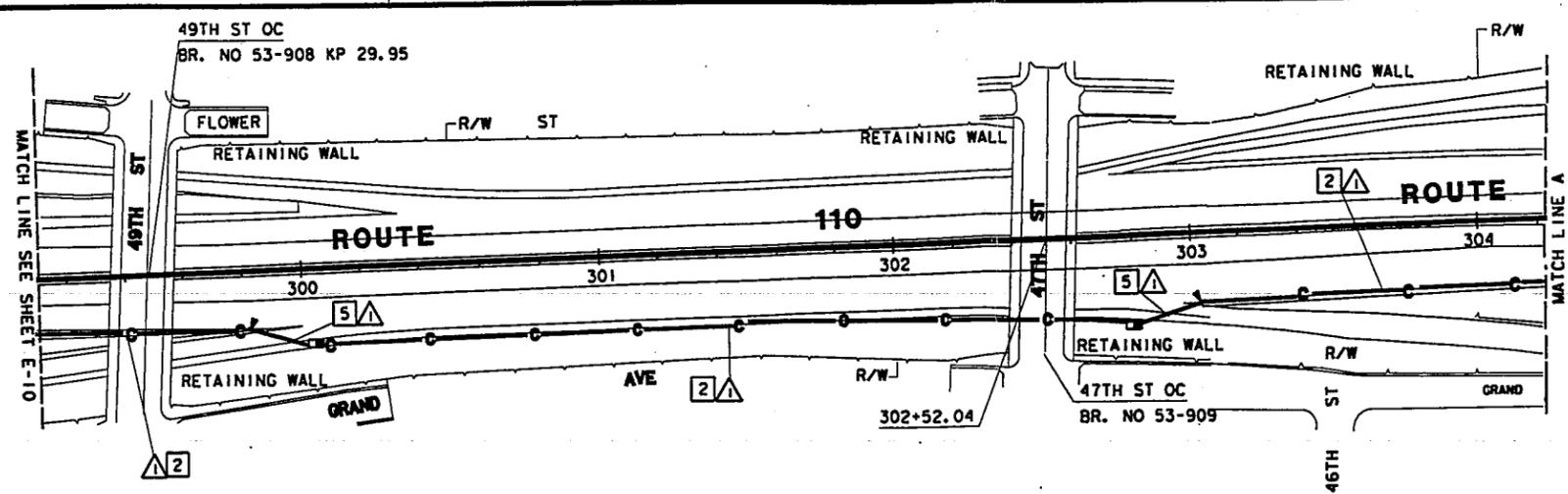


USERNAME => \$\$\$\$\$\$USER\$\$\$\$\$\$
DGN FILE => \$\$\$\$\$\$DGN\$SPEC\$\$\$\$\$

CU 07396 EA 168101

TIME PLOTTED -> \$\$\$\$\$\$TIME\$\$\$\$\$

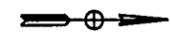
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER: DAVID PADILLA
 CHECKED BY: []
 DESIGNED BY: []
 CALCULATED BY: []
 DATE REVISIONS: []
 REVISOR: []
 DATE: []



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER
 TAN JACQUELIN
 E015611
 12-31-01
 CIVIL
 STATE OF CALIFORNIA

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



SAMPLE ID	DEPTH IN METER	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B6-1	0.15	14	---	---	8.2
B6-2	0.60	18	---	---	---
B7-1	0.15	5.5	---	---	8.5
B7-2	0.60	1.3	---	---	---

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.

- SPICE CLOSURE. SEE SHEETS E-10 AND E-11 FOR DETAILS.
- [14] INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-73 AND DETAIL 1 SHEET E-76.
 - [15] DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TEST IS OK
 - [34] SPL I

GEOCON

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

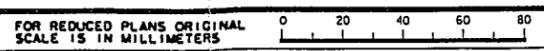
BORING LOCATION MAP

ROUTE 110 FROM KP 18.3 TO KP 34.3
 IN LOS ANGELES, CA

DATE 04-09-1999	PROJECT NO. 08900-06-20	FIGURE 7
--------------------	----------------------------	----------

COMMUNICATION SYSTEM ROUTING
 SCALE = 1:1000
E-11

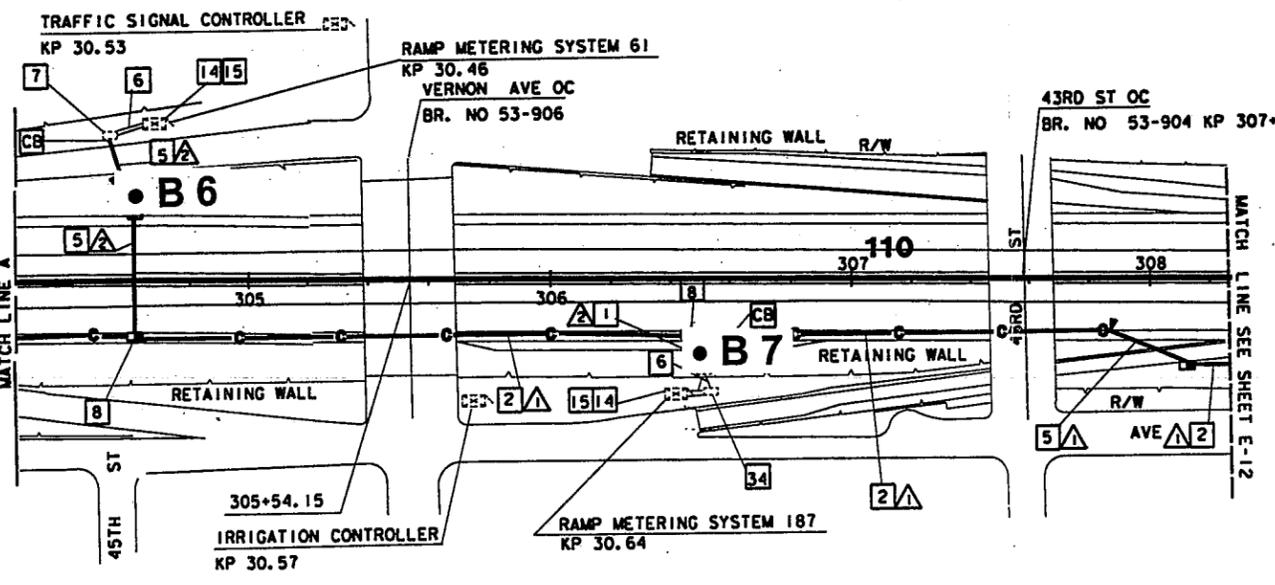
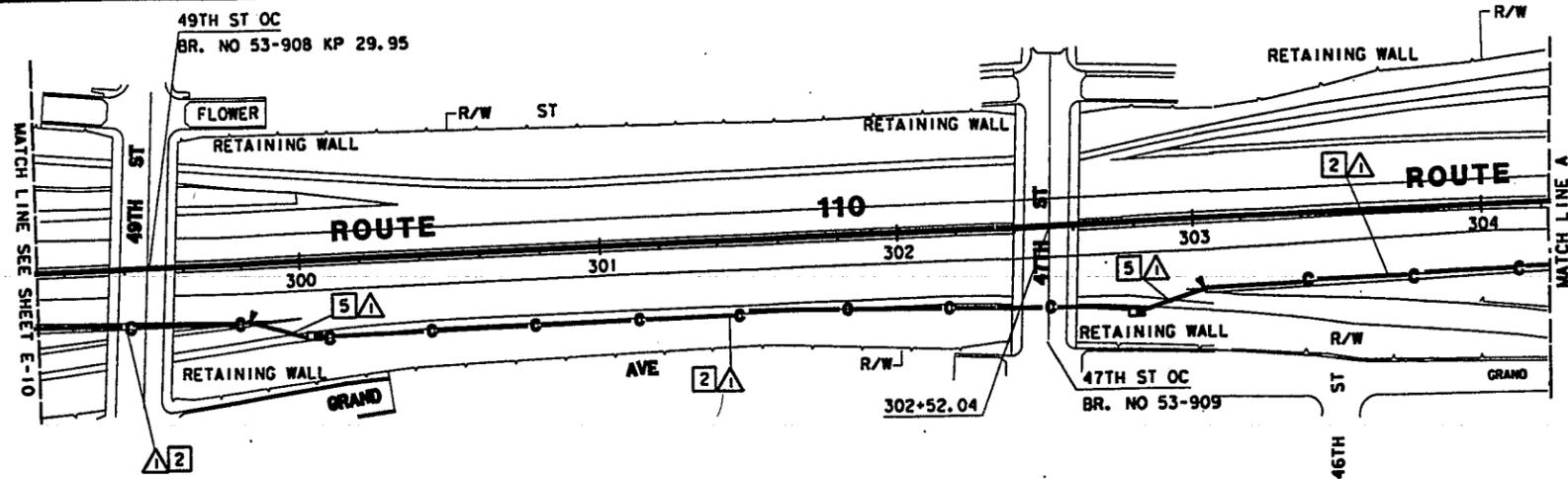
NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME => sssssUSERsssss
 DGN FILE => sssssssDGNSPCsssssssss
 CU 07396 EA 168101

TIME PLOTTED -> sssssSYTIMEsssss 00-00-00

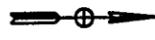
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 PROJECT ENGINEER: DAVID PADILLA
 CHECKED BY: []
 DESIGNED BY: []
 CALCULATED BY: []
 DATE REVISIONS: []
 DATE REVISOR: []



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER
 T. TAN JACQUELIN
 E015611
 12-31-01
 CIVIL
 STATE OF CALIFORNIA

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



SAMPLE ID	DEPTH IN METER S	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B6-1	0.15	14	---	---	8.2
B6-2	0.60	18	---	---	---
B7-1	0.15	5.5	---	---	8.5
B7-2	0.60	1.3	---	---	---

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.

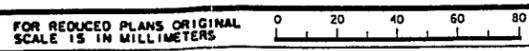
- SPLICE CLOSURE. SEE SHEETS E-70 AND E-71 FOR DETAILS.
- [14] INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-73 AND DETAIL 1 SHEET E-76.
 - [15] DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TEST IS OK
 - [34] SPL 1

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 110 FROM KP 18.3 TO KP 34.3 IN LOS ANGELES, CA		
DATE 04-09-1999	PROJECT NO. 08900-06-20	FIGURE 7

COMMUNICATION SYSTEM ROUTING
 SCALE = 1:1000
E-11

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME -> SSSSSUSERSSSSSS
 DGN FILE -> SSSSSSSSSDGNSSPECSSSSSSSSSSS
 CU 07396 EA 168101

TIME PLOTTED -> SSSSSSYTIMESSSSSS
 00-00-00

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

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.



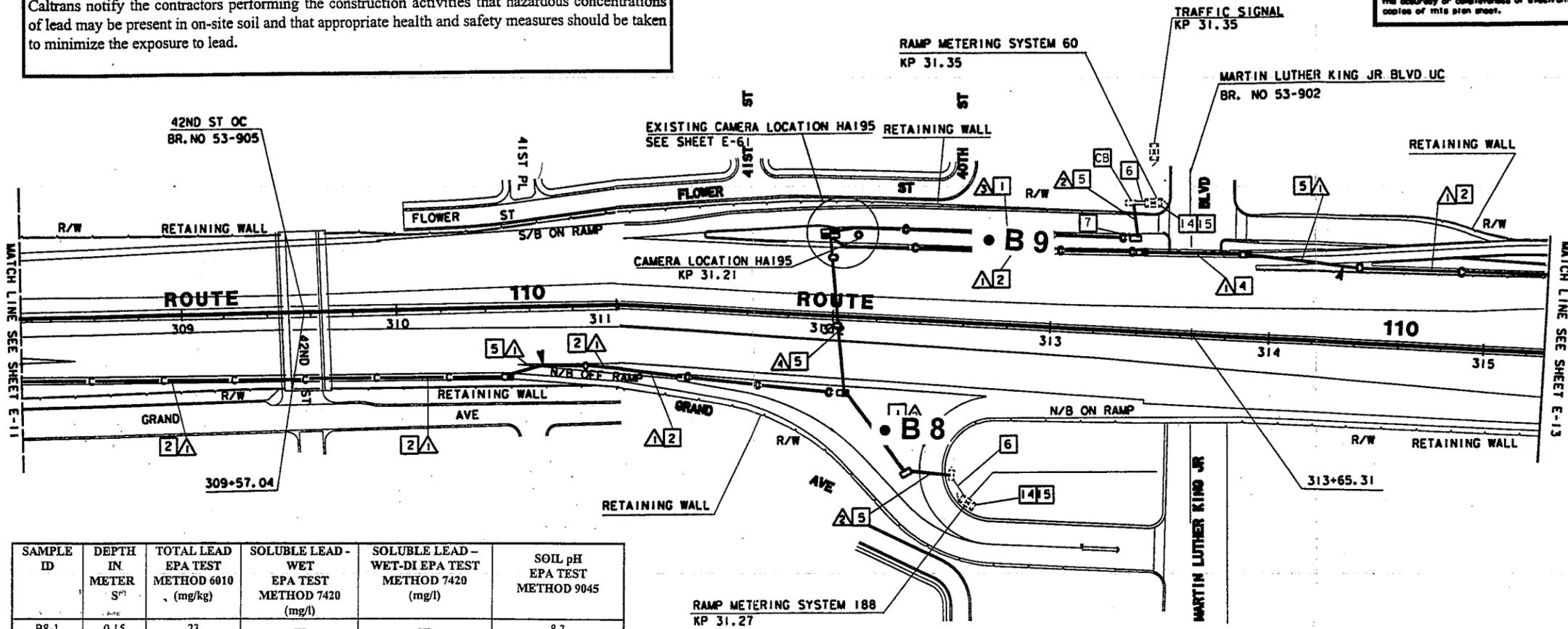
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
 TAN ACQUELIN
 E015611
 12-31-01
 CIVIL
 STATE OF CALIFORNIA



SAMPLE ID	DEPTH IN METER S ¹	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B8-1	0.15	23	---	---	8.3
B8-2	0.60	48	---	---	8.5
B9-1	0.15	31	---	---	8.7
B9-2	0.60	14	---	---	---

- 6 ADD CABLE(S) AND CONNECT TO CONTROLLER.
- 7 COIL 30 METERS OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR 1 SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS AT SPLICE VAULT.
- 14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-73 AND DETAIL 1 SHEET E-76.
- 15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

GEOCON

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

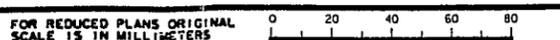
BORING LOCATION MAP

ROUTE 110 FROM KP 18.3 TO KP 34.3
 IN LOS ANGELES, CA

DATE 04-09-1999 PROJECT NO. 08900-06-20 FIGURE 8

COMMUNICATION SYSTEM ROUTING
 SCALE = 1:1000
E-12

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME => *****USER*****
 DGN FILE => *****DGNSPEC*****
 CU 07396 EA 168101

TIME PLOTTED -> *****
 LAST REVISION 00-00-00

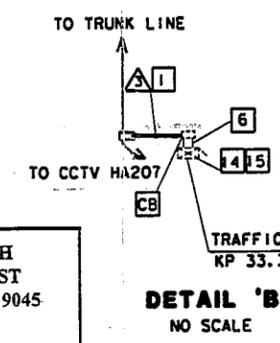
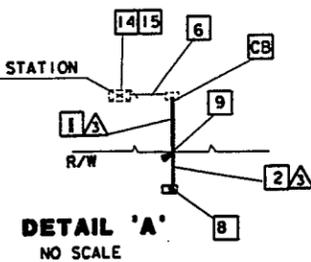
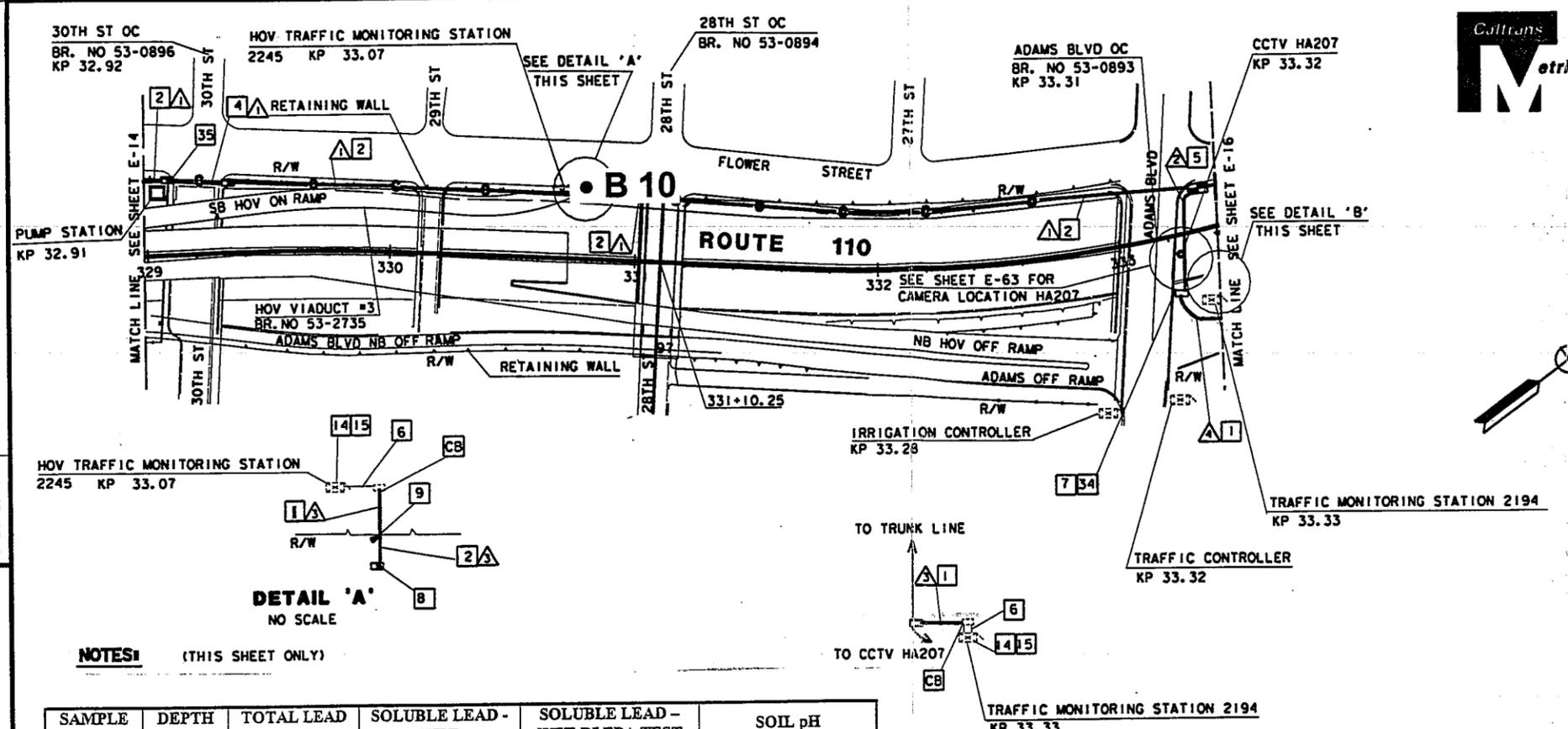
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

TAN JACQUELIN
E015611
2-31-01
CIVIL
STATE OF CALIFORNIA



NOTES: (THIS SHEET ONLY)

SAMPLE ID	DEPTH IN METER S	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI-EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B10-1	0.15	142	9.2	0.18	8.3
B10-2	0.60	127	8.5	ND	---

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.

- [34] COIL 30 METERS OF 6P22 TWISTED PAIR CABLE FOR FUTURE USE. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE AT SPLICE VAULT.
- [35] COIL 20 METERS 6P22 TWISTED PAIR CABLE FOR FUTURE USE.



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

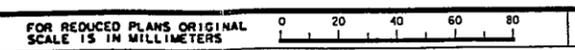
BORING LOCATION MAP			
ROUTE 110 FROM KP 18.3 TO KP 34.3 IN LOS ANGELES, CA			
DATE	PROJECT NO.	FIGURE	
04-09-1999	08900-06-20	9	

CCTV AND COMMUNICATION SYSTEM ROUTING

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

SCALE = 1:1000

E-15



USERNAME => \$\$\$\$\$\$USER\$\$\$\$\$\$
DGN FILE => \$\$\$\$\$\$DGN\$SPEC\$\$\$\$\$
CU 07396 EA 000000

PROJECT ENGINEER: DAVID PADILLA
 CHECKED BY: []
 DESIGNED BY: []
 REVISIONS: []
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans

TIME PLOTTED -> \$\$\$\$\$\$SYTIME\$\$\$\$\$\$
 00-00-00

PROJECT ENGINEER
DAVID PADILLA

CALCULATED/DESIGNED BY
CHECKED BY

DATE REVISED BY
DATE REVISED

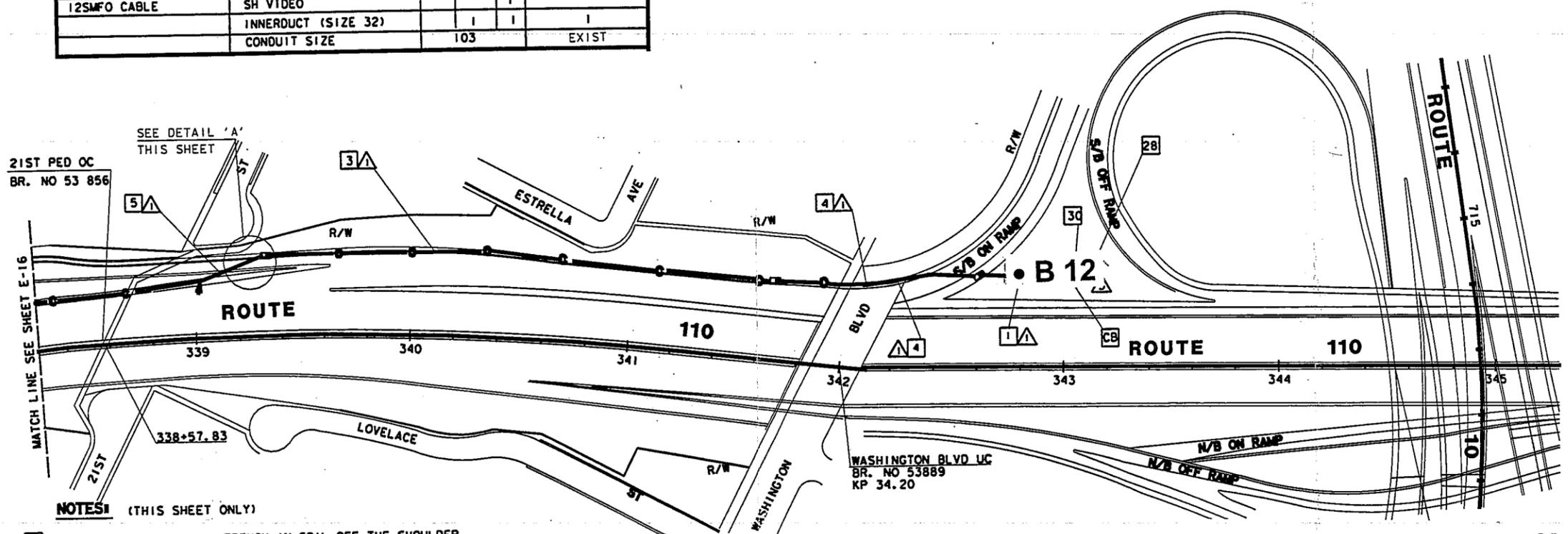
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)			
CONDUCTOR TYPE	FUNCTION	RUN	
		△	△
50P22 CABLE	DATA/PHONE		
24SMFO CABLE	VIDEO/DATA		
12SMFO CABLE	SH VIDEO		
	INNERDUCT (SIZE 32)		
	CONDUIT SIZE	103	EXIST

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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



NOTES (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103 C, SEE SHEET E-68 FOR DETAILS.

SAMPLE ID	DEPTH IN METER S	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B12-1	0.15	209	18	ND	7.5
B12-2	0.60	109	5.9	ND	---

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.

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 110 FROM KP 18.3 TO KP 34.3
IN LOS ANGELES, CA

DATE 04-09-1999	PROJECT NO. 08900-06-20	FIGURE 11
--------------------	----------------------------	-----------

COMMUNICATION SYSTEM ROUTING
SCALE = 1:1000
E-17

PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

USERNAME => sssssUSERsssss
DGN FILE => sssssssssDGNSSPECssssssssss

CU 07396 EA 168101

TIME PLOTTED => sssssssTTIMEsssss

00-00-00

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

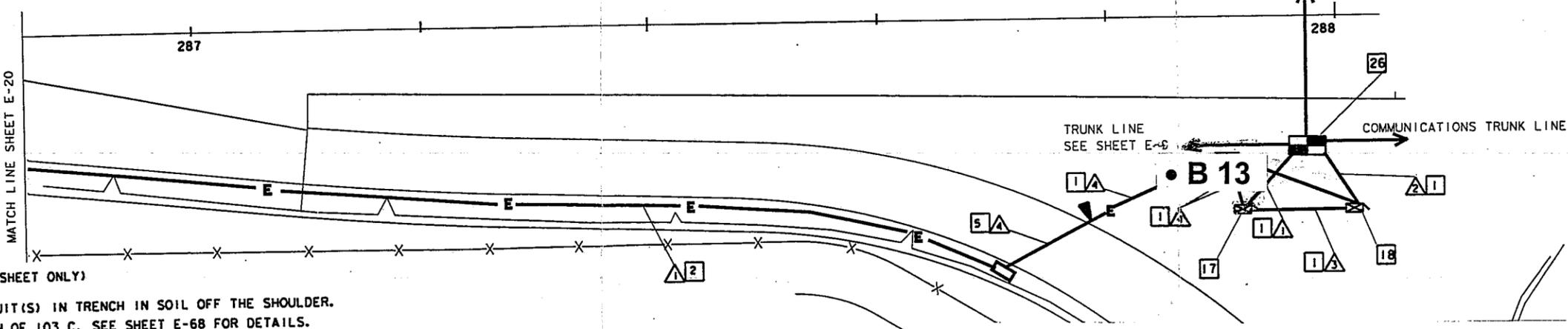
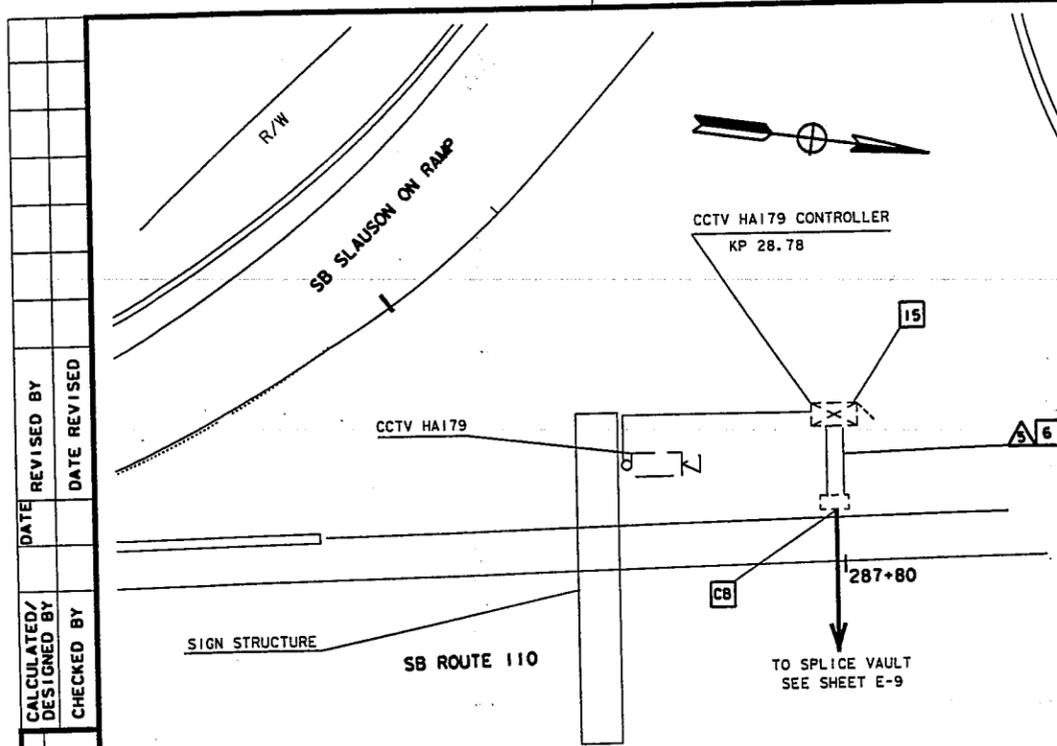
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



SAMPLE ID	DEPTH IN METER	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B13-1	0.15	17	---	---	9.0
B13-2	0.60	31	---	---	---

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.



DATE	REVISOR	DATE	REVISOR
DATE	DESIGNED BY	DATE	DESIGNED BY
DATE	CHECKED BY	DATE	CHECKED BY
PROJECT ENGINEER	DAVID PADILLA		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

- NOTES (THIS SHEET ONLY)**
- INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103 C. SEE SHEET E-68 FOR DETAILS.
 - TRENCH AND INSTALL CONDUIT IN CONCRETE. SEE SHEET E-68 FOR DETAILS.
 - JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION SEE SHEET E-69 FOR DETAILS.
 - ADD CABLES AND CONNECT TO CONTROLLER.
 - REMOVE EXISTING CAMERA CONTROL VICON 1300 R-2, CODEC- GV; DSU-VERLINK. INSTALL EQUIPMENT AS SHOWN SHEET DETAIL .
 - INSTALL NEW 334 CABINET IN NEW FOUNDATION. CABINET SHALL INCLUDE DATA NODE EQUIPMENT. SEE DETAIL B SHEET E-75 AND DETAIL 5 SHEET E-77 FOR EQUIPMENT ARRANGEMENT.
 - INSTALL TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE. SEE DETAIL B SHEET E-75 AND DETAIL 5 SHEET E-77 FOR DETAILS.
 - THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

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 110 FROM KP 18.3 TO KP 34.3
 IN LOS ANGELES, CA

DATE	PROJECT NO.	FIGURE
04-09-1999	08900-06-20	12

CCTV CAMERA EQUIPMENT AT DATA NODE AND VIDEO NODE (LOCATION HA179)

SCALE = 1:200

E-60

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME -> sssssUSERsssss	CU 07396	EA 168101
DGN FILE -> sssssssssDGNSSPECsssssssssss		

LAST REVISION 00-00-00 TIME PLOTTED -> sssssSYTIMEsssss

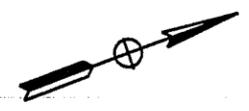
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

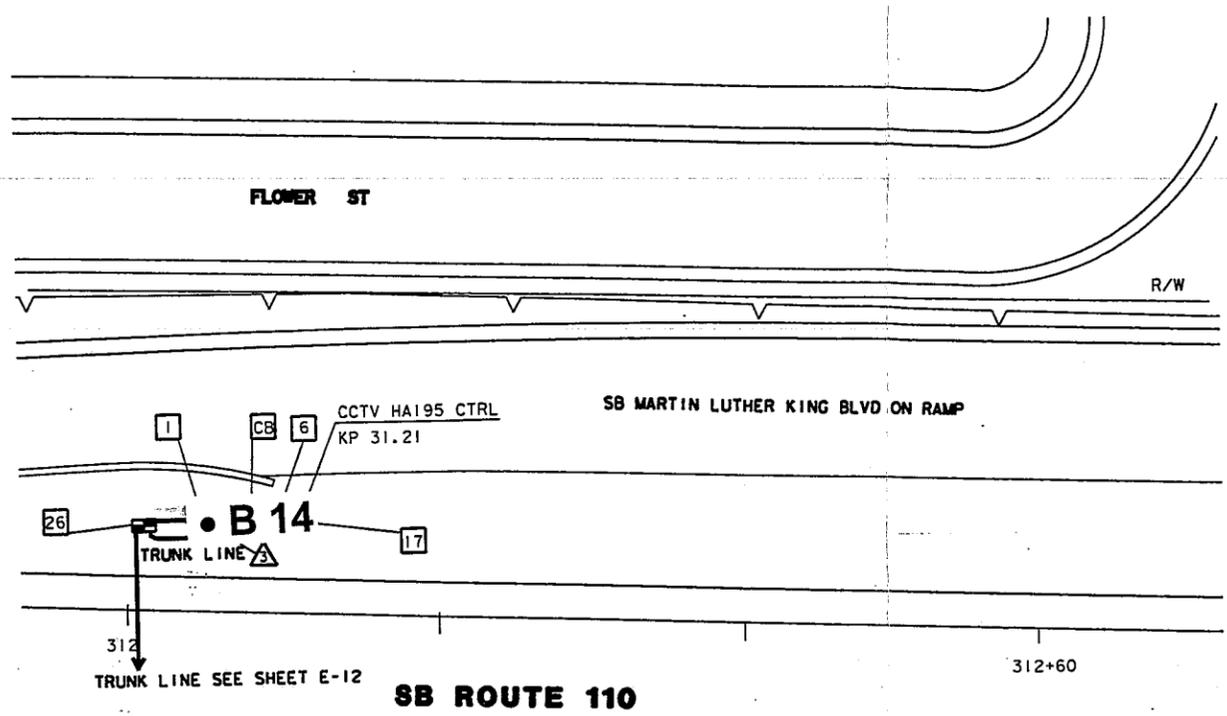
PLANS APPROVAL DATE

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

TAN ACQUELIN
E015611
2-31-01
CIVIL
STATE OF CALIFORNIA



PROJECT ENGINEER	DAVID PADILLA
CALCULATED/DESIGNED BY	
CHECKED BY	
DATE	
REVISED BY	
DATE	
REVISED BY	
DATE	
REVISED BY	
DATE	
REVISED BY	
DATE	



NOTES: (THIS SHEET ONLY)
SEE SHEET L-7 FOR LAYOUT.

- 1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103 C. SEE SHEET E-68 FOR DETAILS.
- 6 ADD CABLE(S) AND CONNECT TO CONTROLLER.

SAMPLE ID	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B14-1	0.15	20	---	---	8.5
B14-2	0.60	10	---	---	---

GEOCON

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

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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 MAP

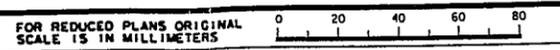
**ROUTE 110 FROM KP 18.3 TO KP 34.3
IN LOS ANGELES, CA**

DATE 04-09-1999 PROJECT NO. 08900-06-20 FIGURE 13

**CCTV CAMERA
(LOCATION HA195)**

SCALE = 1:200 **E-22**

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME => \$\$\$\$\$\$USER\$\$\$\$\$\$
DGN FILE => \$\$\$\$\$\$DGN\$SPEC\$\$\$\$\$\$\$\$\$

CU 07396 EA 168101

SAMPLE ID	DEPTH IN METERS	TOTAL LEAD EPA TEST METHOD 6010 (mg/kg)	SOLUBLE LEAD - WET EPA TEST METHOD 7420 (mg/l)	SOLUBLE LEAD - WET-DI EPA TEST METHOD 7420 (mg/l)	SOIL pH EPA TEST METHOD 9045
B15-1	0.15	52	3.6	---	---
B15-2	0.60	2.2	---	---	7.4

CONDUIT SCHEDULE (THIS SHEET ONLY)	
FUNCTION	RUN
VIDEO INTERFACE CABLE	1
PAN/TILT CONTROL CABLE	1
LENS CONTROL CABLE	1
CONDUIT SIZE	53

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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

BORING LOCATION MAP

**ROUTE 110 FROM KP 18.3 TO KP 34.3
IN LOS ANGELES, CA**

DATE 04-09-1999 PROJECT NO. 08900-06-20 FIGURE 14

RECOMMENDATIONS FOR RE-USE

Soil excavated from boring locations B3 through B15 is suitable for re-use on-site as hazardous material with respect to lead concentrations and should be placed under 0.3 meters of clean fill material, at least 1.5 meters above the maximum groundwater level. It is further recommended 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.

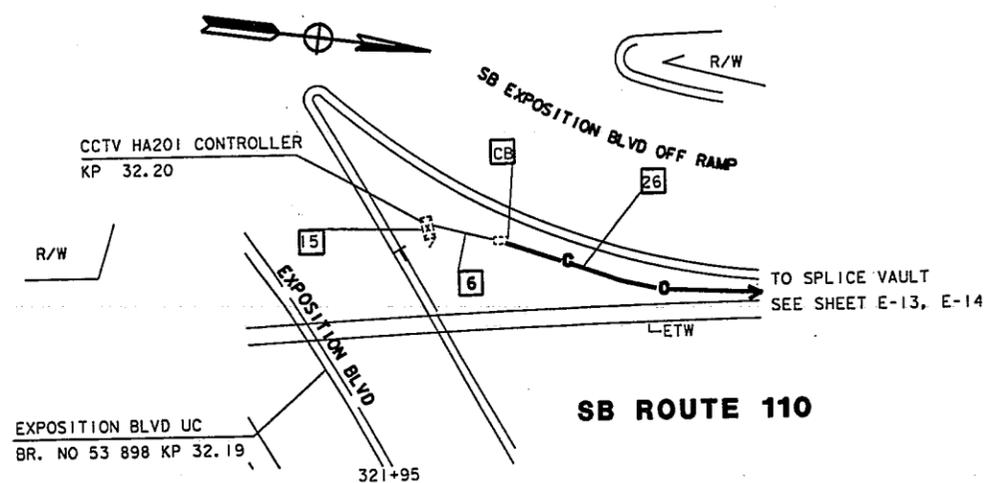
DATE REVISIONS BY DATE REVISIONS BY

CALCULATED/DESIGNED BY CHECKED BY

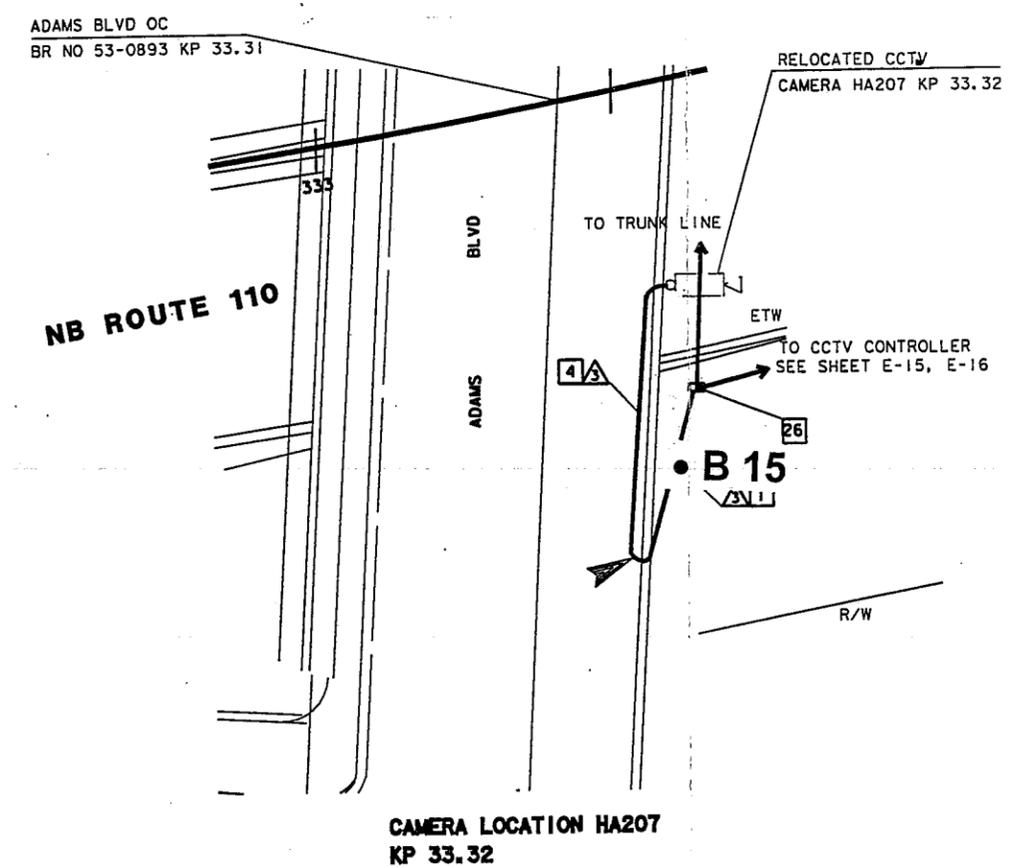
PROJECT ENGINEER DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



**CAMERA LOCATION HA201
KP 32.20**



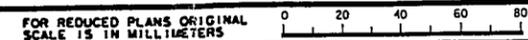
**CAMERA LOCATION HA207
KP 33.32**

GEOCON

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

**CCTV CAMERA
(LOCATIONS HA205 AND HA207)
SCALE = 1:200
E-23**

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME -> sssssUSERsssss
DGN FILE -> sssssssssDGNSSPCSSSSSSSSSS
CU 07396 EA 168101

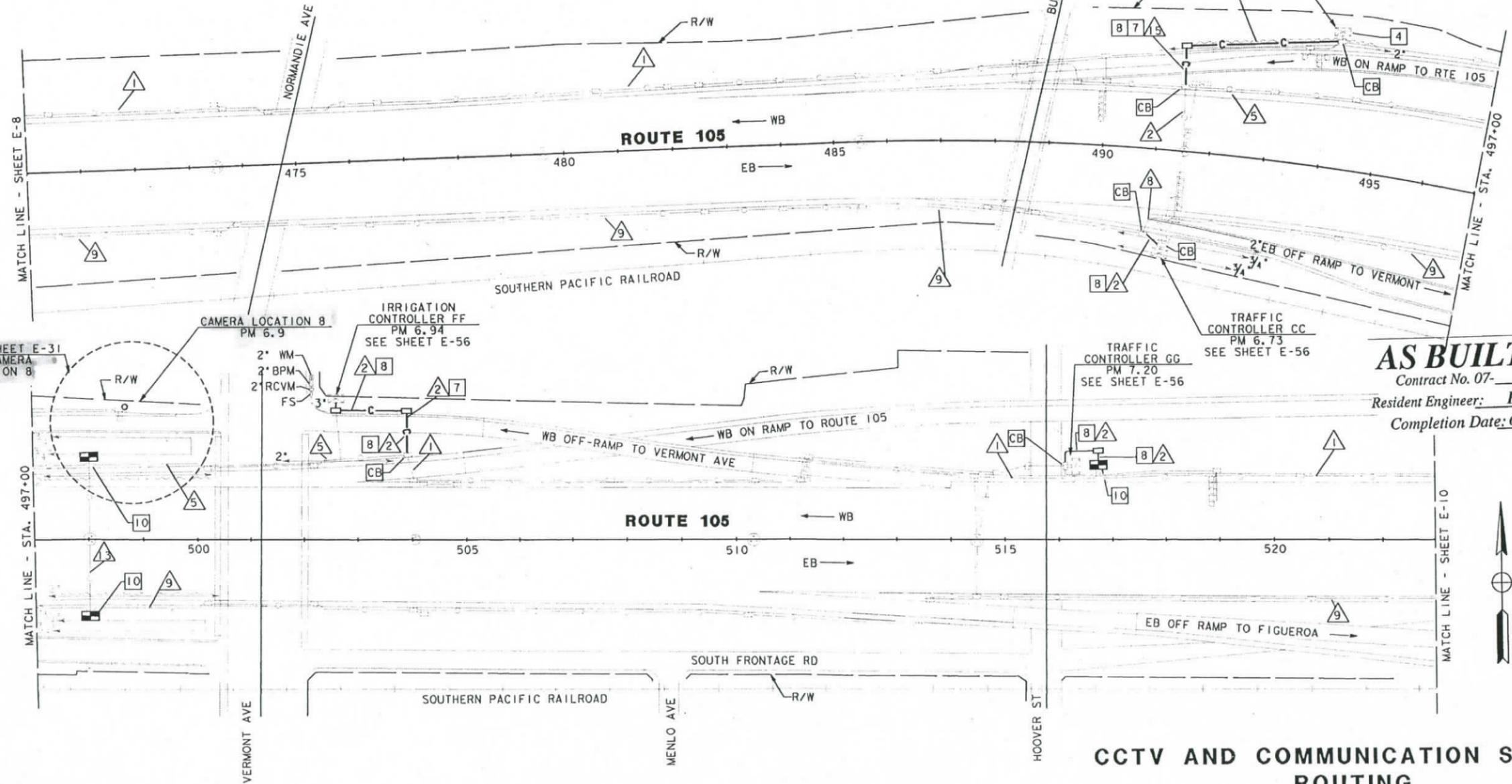
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	RO. 5/17.8	28	92

Kenneth D. Camp 3/23/93
 REGISTERED ELECTRICAL ENGINEER
 4-26-93
 PLANS APPROVAL DATE



DKS ASSOCIATES
 1055 WEST SEVENTH ST., SUITE 2850
 LOS ANGELES, CA 90017
 IN ASSOCIATION WITH
 KDC ARCHITECTS - ENGINEERS
 1055 WEST SEVENTH ST., SUITE 2890
 LOS ANGELES, CA 90017

CONDUCTOR SCHEDULE		RUN						
CONDUCTOR TYPE	FUNCTION	1	2	5	8	9	13	15
50P22 CABLE	COMMUNICATION DATA	1	1	1				
6P22 CABLE	CONTROLLER DATA		1	1	1			2
8 MMFO	CAMERA VIDEO				1	1		
2 MMFO	SHORT HAUL VIDEO						1	1
24 SMFO	NODE LINK				1	1		
	CONDUIT SIZE	2"	2"	2"	2"	2"	2"	2"



AS BUILT 119904
 Contract No. 07-
 Resident Engineer: *Hillel Amos*
 Completion Date: *October 3, 1997*

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-9

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.
 SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.



DATE	REVISOR	BY
3/93	RL	RS
3/93	RS	RS

DESIGN OVERSIGHT
 GLORIA GWYNNE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
St. Gobans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105	RO. 5/R17. 8	30	92

Kenneth D. Camp 3/23/93
REGISTERED ELECTRICAL ENGINEER



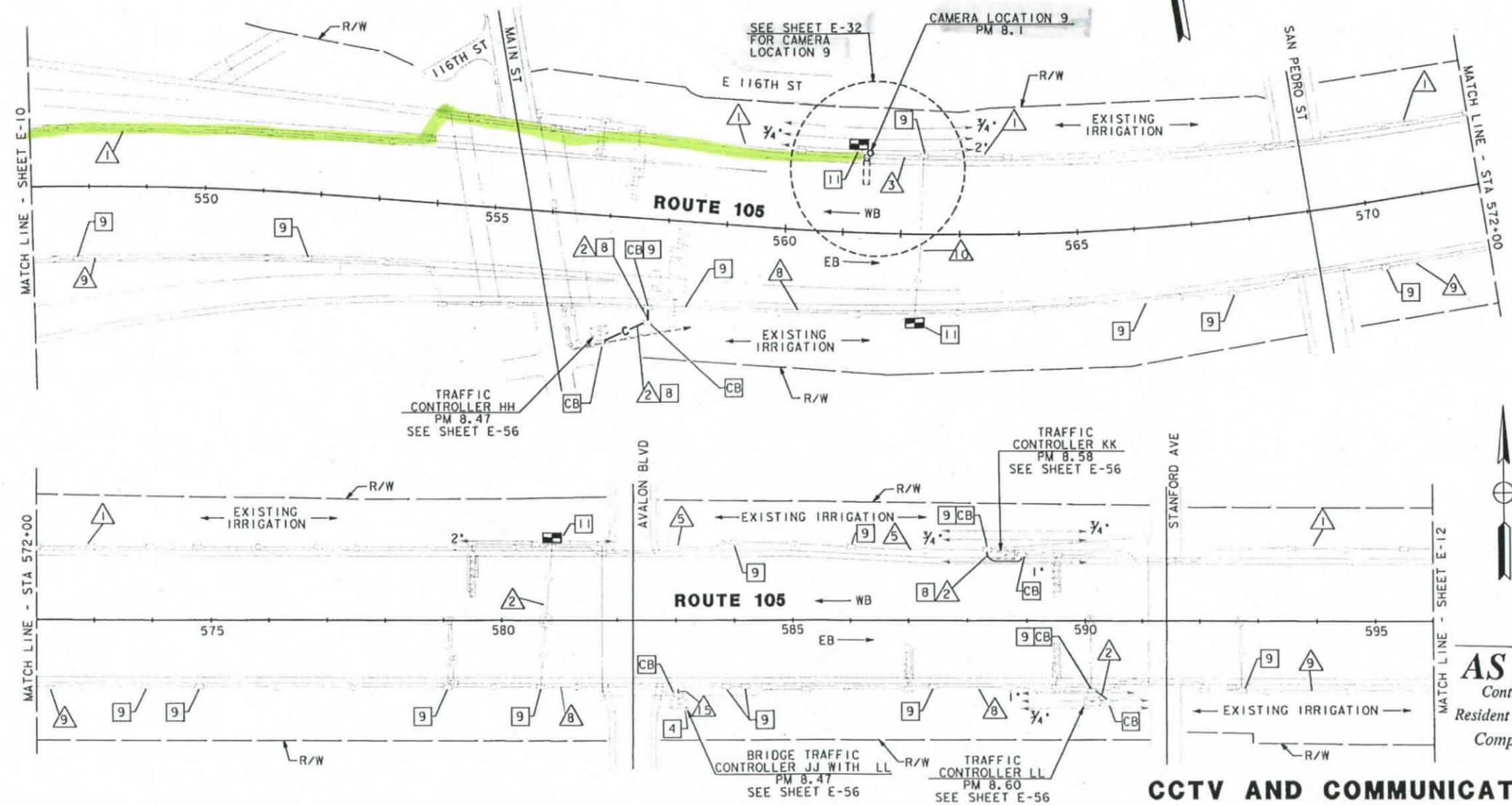
4-26-93
PLANS APPROVAL DATE

DKS ASSOCIATES
1055 WEST SEVENTH ST., SUITE 2850
LOS ANGELES, CA 90017

IN ASSOCIATION WITH:
KDC ARCHITECTS - ENGINEERS
1055 WEST SEVENTH ST., SUITE 2890
LOS ANGELES, CA 90017

CONDUCTOR TYPE	FUNCTION	RUN												
		1	2	3	5	8	9	10	15					
50 P22 CABLE	COMMUNICATION DATA													
6 P22 CABLE	CONTROLLER DATA													2
8 MMFO	CAMERA VIDEO													
2 MMFO	SHORT HAUL VIDEO				1									
24 SMFO	NODE LINK							1	1					
CONDUIT SIZE		2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'	2'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN OVERSIGHT: GLORIA GWYNNE
 REVISIONS: REVISOR, DATE, REVISION BY, DATE, REVISION BY
 CALCULATED/DESIGNED BY: RL, RS
 CHECKED BY: RS, RS
 DATE: 3/7/93, 3/7/93
 PROJECT NO: 06-MAY-1993 07-06 0005
 DRAWING NO: 03-23-93



AS BUILT 119904
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: October 3, 1997

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-11

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.
SEE SHEET E-1 FOR LEGEND AND PROJECT NOTES.



PROJECT ENGINEER
 DAVID PADILLA

REVISOR
 DATE
 REVISION
 CHECKED BY



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	63	165

REGISTERED ELECTRICAL ENGINEER
 JACQUELINE C. TAN 11-02
 No. E15611
 Exp. 12-31-04
 03-17-03
 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
 Caltrans now has a web site! To get to the web site, go to: <http://www.dot.ca.gov>



CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN	
		1	2
50P22 CABLE	DATA/PHONE	1	
24SMFO CABLE	VIDEO/DATA	1	
12SMFO CABLE	VIDEO DISTRIBUTION		1
SIZE 32 INNERDUCT		1	1
CONDUIT SIZE		103	103

NOTES: (THIS SHEET ONLY)

- 1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.
- 2 TRENCH AND INSTALL CONDUIT IN CONCRETE. SEE SHEET E-33 FOR DETAILS.
- 5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

AS-BUILT
 Contract No. 07-168114
 Resident Engineer: **PAUL WANG**
 Completion Date: **8/11/05**

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-14

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



USERNAME => s124928
 DGN FILE => 716811u14.dgn

CU 07388

EA 168111

LAST REVISION
 00-00-00
 DATE PLOTTED => 19-FEB-2008
 TIME PLOTTED => 13:49

DATE	REVISION BY	DATE REVISION

CALCULATED/DESIGNED BY: _____
 CHECKED BY: _____

NOTES: (THIS SHEET ONLY)

- 2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.
- 5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF CONDUIT, SEE SHEET E-34 FOR DETAILS.
- 6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
- 8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.
- 14 INSTALL 2 TELEPHONE BRIDGES AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. USE ONE BRIDGE FOR CMS INTERMEDIATE BRIDGING AND ONE FOR TMS. SEE SHEET E-38 AND E-39 FOR DETAILS.
- 15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN		
		1	2	3
50P22 CABLE	DATA/PHONE	1		
24SMFO CABLE	VIDEO/DATA		1	
12SMFO CABLE	VIDEO DISTRIBUTION			1
6P22 CABLE	DATA/PHONE			2
SIZE 32 INNERDUCT		1	1	
CONDUIT SIZE		103	103	53

AS-BUILT
 Contract No. 07-168114
 Resident Engineer: **PAUL WANG**
 Completion Date: **8/11/05**

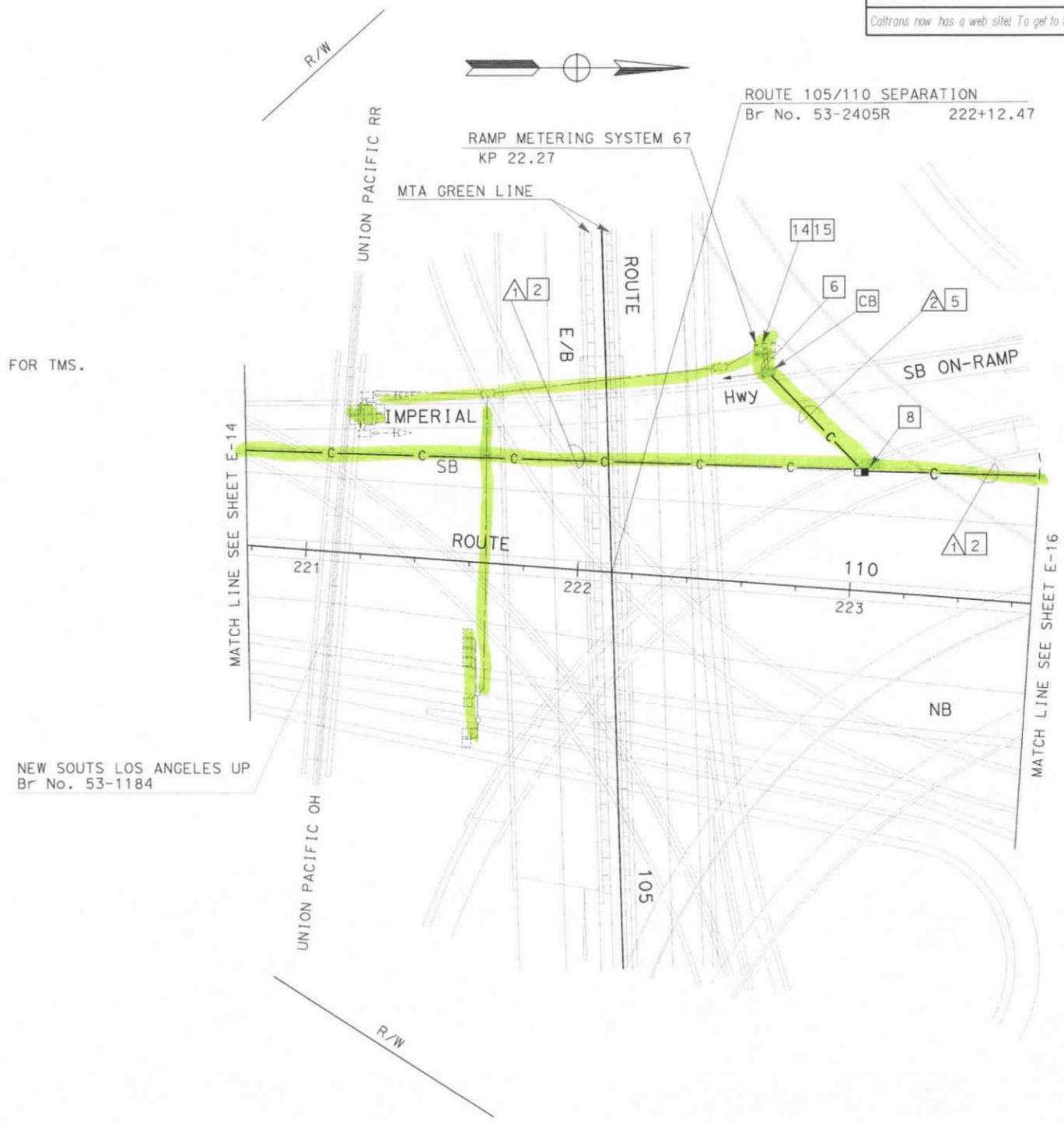


DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	10,91,101,105,110,405	15.3/28.0	64	165

REGISTERED ELECTRICAL ENGINEER
 JACQUELINE C. TAN 11-02
 03-17-03
 PLANS APPROVAL DATE
 No. E15611
 Exp. 12-31-04
 ELECTRICAL
 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.

Caltrans now has a web site! To get to the web site, go to: <http://www.dot.ca.gov>



COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

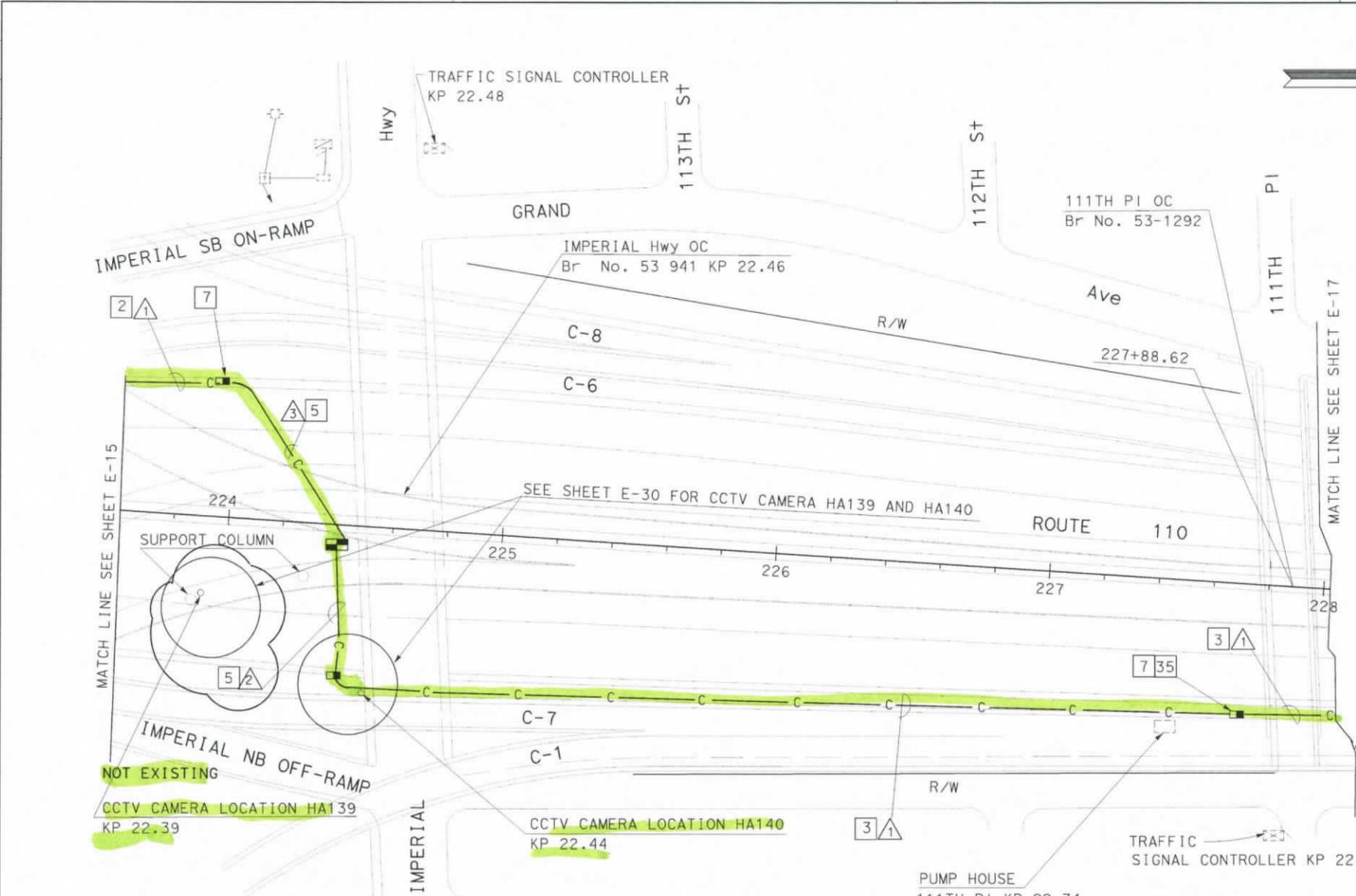
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.



USERNAME => s124928
 DGN FILE => 716811u15.dgn

CU 07396

EA 168101



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	65	165

REGISTERED ELECTRICAL ENGINEER
 T. TAN 11-02
 No. E15611
 Exp. 12-31-04
 ELECTRICAL
 STATE OF CALIFORNIA

03-17-03
 PLANS APPROVAL DATE

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

Caltrans now has a web site! To get to the web site, go to: <http://www.dot.ca.gov>

AS-BUILT

Contract No. 07-168114
 Resident Engineer: PAUL WANG
 Completion Date: 8/11/05

NOTES: (THIS SHEET ONLY)

- [2] INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.
- [3] INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.
- [5] JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.
- [7] COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.
- [35] COIL 30 m OF 6P22 CABLE IN PULL BOX FOR FUTURE PUMP HOUSE CONNECTION. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)		RUN					
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	△1		△2		△3	
		50P22 CABLE	DATA/PHONE	1		1	
24SMFO CABLE	VIDEO/DATA		1		1		1
12SMFO CABLE	VIDEO DISTRIBUTION		1		1		1
6SMFO CABLE	VIDEO/DATA DISTRIBUTION			1	1		
6P22 CABLE	DATA/PHONE					1	
SIZE 32 INNERDUCT		1	1	1	1	1	1
CONDUIT SIZE		103	103	103	103	103	103

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



USERNAME => 6124928
 DGN FILE => 716811u16.dgn

COMMUNICATION SYSTEM ROUTING
 SCALE 1:1000
E-16