INFORMATION HANDOUT

For Contract No. 07-294704
At 07-LA-101-11.8/35.3

Identified by
Project ID 0713000013

MATERIALS INFORMATION

Site Investigation for Maintenance Vehicle (MVP) Pullout Locations 170/101 Interchange to Kanan Road

Fiber Optic System As-built Drawings

Locate Communication System Details

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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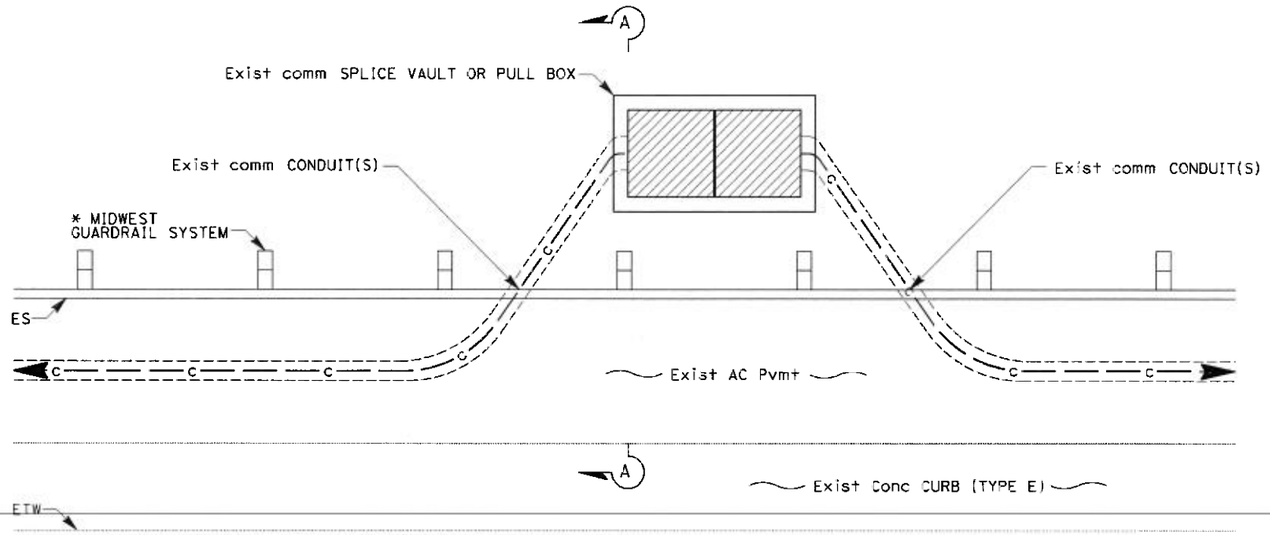
NOTE:

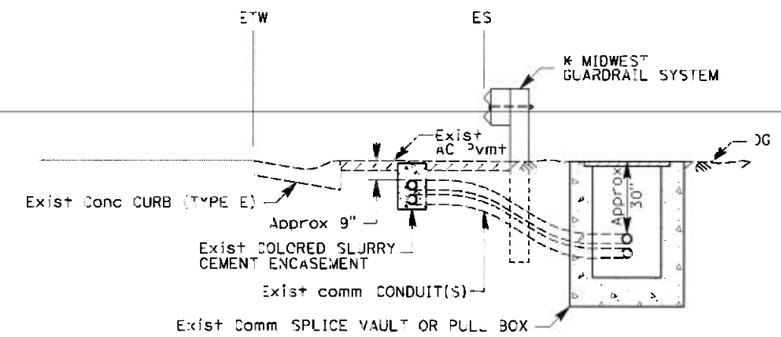
* VERIFY LOCATIONS OF POSSIBLE FIBER OPTIC CONDUIT CONFLICTS.

TRAFFIC RATED PULL BOX LID



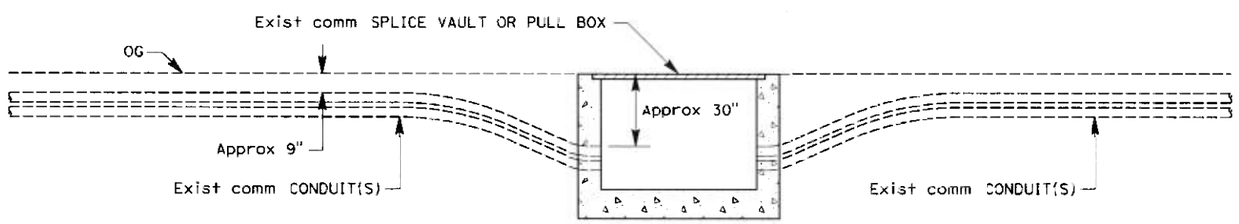
TYPICAL PLAN

NO SCALE



TYPICAL SECTION A-A

NO SCALE



TYPICAL ELEVATION

NO SCALE

LOCATE COMMUNICATION SYSTEM DETAILS

NO SCALE

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 15 NOV 2013 | TIME PLOTTED => 14:13

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ven	23,101	Var	1	160

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

ACNH-000C(276)E

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN LOS ANGELES AND VENTURA COUNTIES IN LOS ANGELES, WOODLAND HILLS, HIDDEN HILLS, CALABASAS, AGOURA HILLS, WESTLAKE VILLAGE AND THOUSAND OAKS ON ROUTE 101 FROM ROUTE 27/101 SEPARATION TO ROUTE 23/101 SEPARATION AND FROM ROUTE 23/101 SEPARATION TO HILLCREST DRIVE AND AT THE REGIONAL TRAFFIC MANAGEMENT CENTER AND AT NORTH HOLLYWOOD HUB BUILDING

To be supplemented by Standard Plans dated July, 2004

INDEX OF SHEETS

Sheet No.	Description
1	Title and Location Map
2-15	Construction Details
16-39	Utility Plans
40-46	Traffic Handling Plans
47	Construction Area Signs
48	Summary of Quantities
49-53	Retaining Wall Plan, Details and Quantities
54-115	Electrical Plans
116-130	Revised Standard Plans
STRUCTURE PLANS	
131-133	Hampshire Road UC
134-135	Conejo School Road UC
136-138	Thousand Oaks Blvd UC
139-141	Rancho Road UC
142-144	Medea Creek Bridge
145-147	Chesbro Creek Bridge
148-150	Ventura Blvd UC
151-153	Fallbrook Avenue UC
154-156	Shoup Avenue UC
157-160	Liberty Canyon Road UC

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO CONTRACTORS AND SPECIAL PROVISIONS BOOK.

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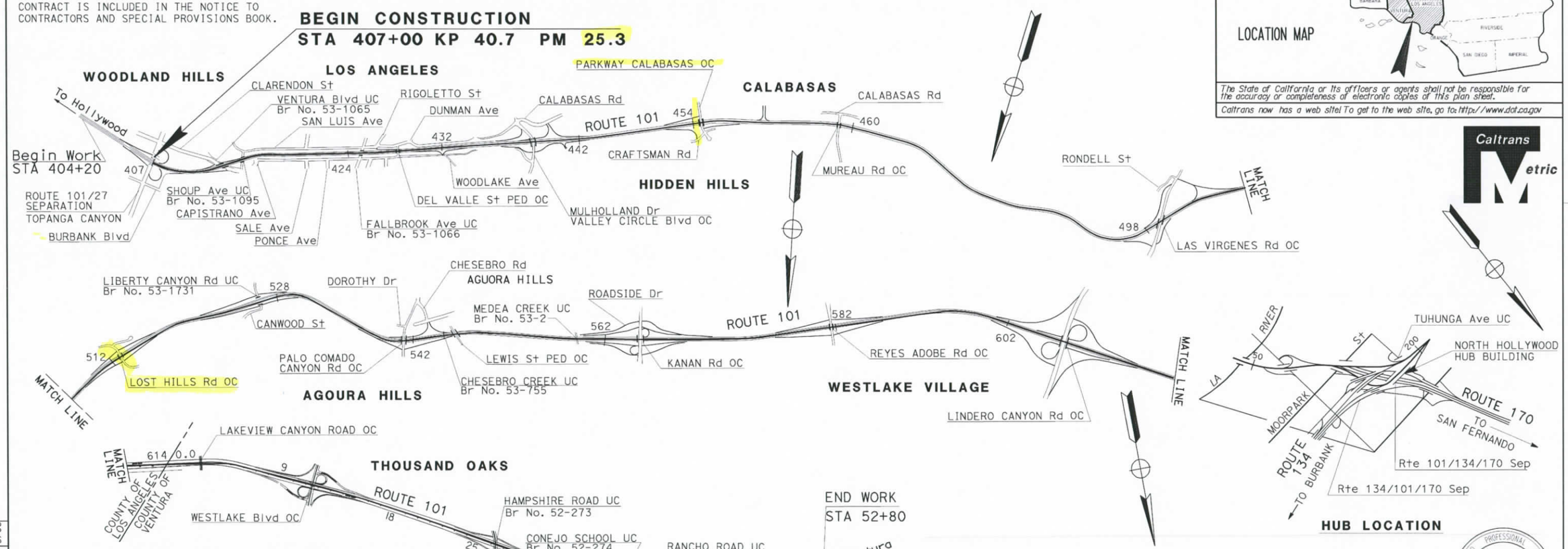

Loc	COUNTY	ROUTE	KP	PM	DESCRIPTION
1	LA	101	40.7/61.4	25.6/38.6	TOPANGA CANYON TO LA/VENTURA COUNTY LINE
2	Ven	101	0.0/5.2	0.0/3.3	LA/VENTURA COUNTY LINE TO ROUTE101/23 SEPARATION
3	Ven	23	3.0/3.7	2.1/2.3	ROUTE 101/23 SEPARATION TO HILLCREST DRIVE
4	LA	ROUTE 101/170/134 SEPARATION			NORTH HOLLYWOOD COMMUNICATIONS HUB BUILDING
5	LA	ROUTE 134/2 SEPARATION			REGIONAL TRAFFIC MANAGEMENT CENTER

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

PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE
D. PADILLA	3/05	D. CHMIELEWSKI	3/05

AS-BUILT
Contract No. 07- 120884
Resident Engineer: Hossein Ranjbar
Completion Date: 05/28/08

Registered Electrical Engineer

June 27, 2005
Plans Approval Date

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-08 ELECTRICAL STATE OF CALIFORNIA

Contract No. 07-120884

FORM DC-OE-93-PF (REV. 3/88)

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

USERNAME => s123048
DGN FILE => 712088ab001.dgn

CU 07388 EA 120881

GENERAL NOTES:

1. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AT EACH TMS AND RMS SITE AND VERIFYING THE INSTALLATION IS OPERATIONAL. ALL EXISTING TPC SHALL BE REMOVED AND EXISTING TELEPHONE BRIDGE AND TERMINAL BLOCK SHALL REMAIN IN THE CABINETS.
2. ALL IRRIGATION CONTROLLERS ARE EXISTING UNLESS OTHERWISE NOTED ON THE PLANS.
3. ALL CONDUIT CONTAINING FIBER OPTIC CABLE SHALL ENTER PULL BOXES ON THE SHORT SIDE ONLY. PULL BOXES SHALL NOT BE USED TO CHANGE ALIGNMENT OF COMMUNICATION CONDUIT. FIBER CABLES SHALL BE INSTALLED IN THE LOWER CONDUIT.
4. ALL NEW SERVICE EQUIPMENT ENCLOSURES SHALL ALSO HAVE:
   24- BREAKER PANEL
   (1) 1P, 20 A CIRCUIT BREAKER (SPARE)
   (1) 1P, 30 A CIRCUIT BREAKER (SPARE)
   (1) 2P, (SPACE FOR FUTURE)

   ALL RACEWAYS FOR SERVICE FEEDERS AND ANY OTHER ENERGIZED RACEWAYS SHALL BE BONDED BY APPROVED METHODS IN EVERY PULL BOX TO MAINTAIN A CONTINUOUS GROUND RETURN FROM THE SERVICE POINT TO THE LOAD.
5. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
6. WHENEVER ANY EQUIPMENT IS TO BE REMOVED, ALL ABANDONED COMPONETS SUCH AS PULL BOXES, FOUNDATIONS AND CABLES SHALL BE REMOVED AND CONDUIT SHALL BE ABANDONED IN PLACE.
7. ALL EXISTING IRRIGATION TO REMAIN AND BE MAINTAINED. EXISTING IRRIGATION NOT SHOWN FOR CLARITY.
8. ALL 12SMFO CABLES TERMINATING AT A COMMUNICATIONS PULL BOX MUST BE SPLICED IN THE NEW FIBER OPTIC SPLICE CLOSURE.
9. THE CONTRACTOR SHALL PROTECT ALL UTILITY FACILITIES IN PLACE DURING CONSTRUCTION.
10. IN LOCATIONS WHERE A SERVICE EQUIPMENT ENCLOSURE WILL BE UPGRADED, ALL EXISTING CIRCUITS MUST BE RECONNECTED TO THE NEW SERVICE CABINET AS DIRECTED BY THE ENGINEER. POWER CABLE AND CONDUITS MAY NEED TO BE EXTENDED. EXISTING SERVICE PANELS SHALL BE REMOVED. DETAILS OF THOSE CONDUITS ARE NOT SHOWN FOR CLARITY OF PLANS.
11. EXISTING CONDUITS AND FREEWAY ELEMENTS ARE SHOWN FOR REFERENCE ONLY UNLESS OTHERWISE NOTED.
12. WHENEVER THERE IS A NEED FOR SERVICE REMOVAL. THE SERVICE COMPANY AND THE ENGINEER SHALL BE NOTIFIED THREE DAYS IN ADVANCE.
13. EXCEPT FOR LOCATIONS APPROVED BY THE ENGINEER, EXISTING RMS LOCATIONS WITH METER-ON FOUNDATIONS, RAMP SIGNAL FOUNDATIONS AND WIRING SHALL BE REMOVED AND REPLACED.
14. INSTALL CONTROLLER CABINETS A MINIMUM OF 12 m FROM EDGE OF TRAVEL WAY.

Caltrans Metric

07 LA,Ven 23,101 | Var 54 160

6-27-05

DAVID PADILLA No. E16233 Exp.12-31-06 ELECTRICAL

ABBREVIATIONS: (NOT LISTED IN CALTRANS STANDARD PLANS)

4WTO	-	FOUR WIRE TRANSMIT ONLY
#	-	NUMBER
AWG	-	AMERICAN WIRE GAUGE
BOH	-	BRIDGE AND OVERHEAD
CCR	-	CAMERA CONTROL RECEIVER
CIA	-	CONTROLLER INTERFACE ASSEMBLY
CHAN	-	CHANNEL
C-MIC	-	CABINET MOUNT INTERFACE CENTER
CTX	-	CLEAR TO SEND
COAX	-	COAXIAL CABLE
COMM	-	COMMUNICATION
CONT	-	CONTROLLER
DN	-	DATA NODE
D4	-	4TH VERSION OF D-SIGNAL FOR TDM
DCS	-	DIGITAL CROSS CONNECT SWITCH
DEC	-	DECODER
DS1	-	DIGITAL TRANSMISSION RATE-1.544 MEGABITS PER SECOND
DTMF	-	DUAL-TONE MULTI-FREQUENCY DECODER
DWP	-	LA DEPARTMENT OF WATER AND POWER
(E)	-	EXISTING
FDU	-	FIBER DISTRIBUTION UNIT
FOAM	-	FIBER OPTIC AUDIO MODEM
FXO	-	FOREIGN EXCHANGE OFFICE
FXS	-	FOREIGN EXCHANGE SUBSCRIBER
INTRFCE	-	INTERFACE
IRR	-	IRRIGATION CONTROLLER
JKFD	-	JACKFIELD
MUX	-	MULTIPLEX
NHB	-	NORTH HOLLYWOOD HUB
P22	-	PAIR 22 AMERICAN WIRE GAUGE
PDA	-	POWER DISTRIBUTION ASSEMBLY
PR	-	PAIR
RX	-	RECEIVER
RMC	-	RAMP METER CONTROLLER
RMS	-	RAMP METERING SYSTEM
RTS	-	REQUEST TO SEND
SCE	-	SOUTHERN CALIFORNIA EDISON
SCADA	-	SUPERVISORY CONTROL AND DATA AQUISITION
SCGAS	-	SOUTHERN CALIFORNIA GAS COMPANY
SCWC	-	SOUTHERN CALIFORNIA WATER COMPANY
48SMFO	-	48 SINGLE MODE FIBER OPTIC CABLE
STC	-	SCREENED TRANSMISSION CABLE
TPC	-	TWISTED PAIR CABLE
TS	-	TRAFFIC SIGNAL
TX	-	TRANSMIT
VSAT	-	VERY SMALL APERTURE TERMINAL
VN	-	VIDEO NODE
VEN	-	VENTURA
VC	-	VENTURA COUNTY
VMX	-	VIDEO MULTIPLEXER
V-RX	-	VIDEO RECEIVER
V-TX	-	VIDEO TRANSMITTER
WIM	-	WEIGH IM MOTION CONTROLLER
XMTR	-	TRANSMITTER
TELCO	-	TELEPHONE COMPANY

LEGEND: (NOT LISTED IN CALTRANS STANDARD PLANS)

- NEW SPLICE VAULT
- EXISTING SPLICE VAULT
- MODEL 334 TV CABINET, FOR: CCTV, CABLE NODE DATA AND VIDEO NODES
- CCTV CAMERA POLE LOCATION
- EXISTING VSAT ANTENNA
- COMMUNICATION PULL BOX
- EXISTING DATA,VIDEO OR CABLE NODE MODEL 334 TV CABINET
- 170 MODEL 170 CONTROLLER
- OPTICAL FIBER CABLE
- EXISTING ELECTRIC VAULT
- —E—E ELECTRICAL POWER CONDUIT(S)
- EXISTING ELECTRICAL POWER CONDUIT(S)
- EXISTING DRAINAGE FLOW LINE

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

COMMUNICATION SYSTEM ROUTING
LEGEND AND NOTES

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DESIGN

PROJECT ENGINEER DAVID PADILLA

CALCULATED/DESIGNED BY DAVID PADILLA | DATE REVISED BY 6-05
CHECKED BY DAVID PADILLA | 6-05 DATE REVISED

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

CU 07388 EA 120881

CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 1				
48SMFO CABLE	MULTIPLEXED DATA/VIDEO	1				
48SMFO CABLE	VOICE/DATA		1			
48SMFO CABLE	VIDEO DISTRIBUTION			1		
	SIZE 25 INNERDUCT	1	1	1	1	
CONDUIT SIZE		103				103

AS-BUILT

Contract No. 07- 120884

Resident Engineer: H. MANNAA

Completion Date: 05/28/08

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	55	160

REGISTERED ELECTRICAL ENGINEER

6-27-05

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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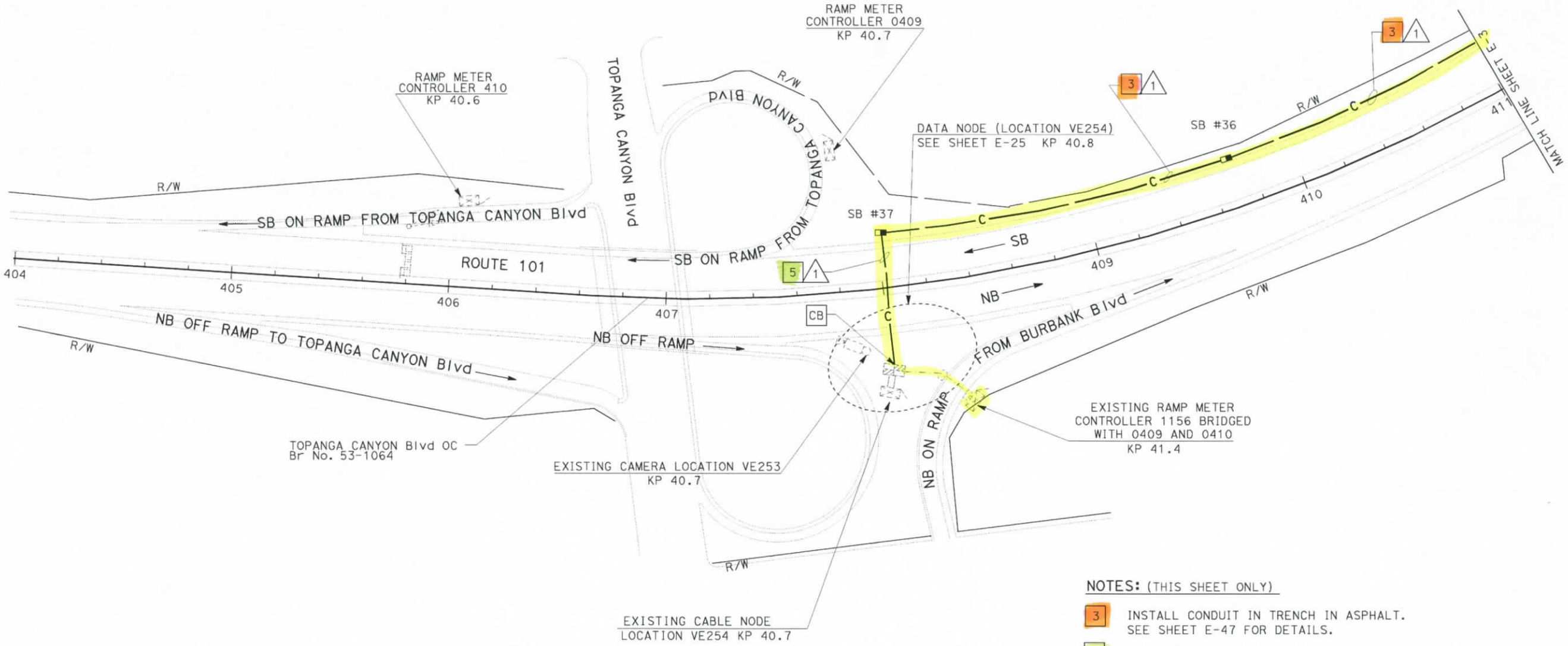

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.

5 JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-2

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans ITS DESIGN

PROJECT ENGINEER DAVID PADILLA

CALCULATED/DESIGNED BY DAVID PADILLA DATE 6-05

CHECKED BY DAVID PADILLA DATE REVISED 6-05

REVISED BY

LAST REVISION 00-00-00

DATE PLOTTED => 17-SEP-2008

TIME PLOTTED => 11:11

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DGN FILE => 712088ua002.dgn

CU 07388

EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA,Ven	23,101	Var	56	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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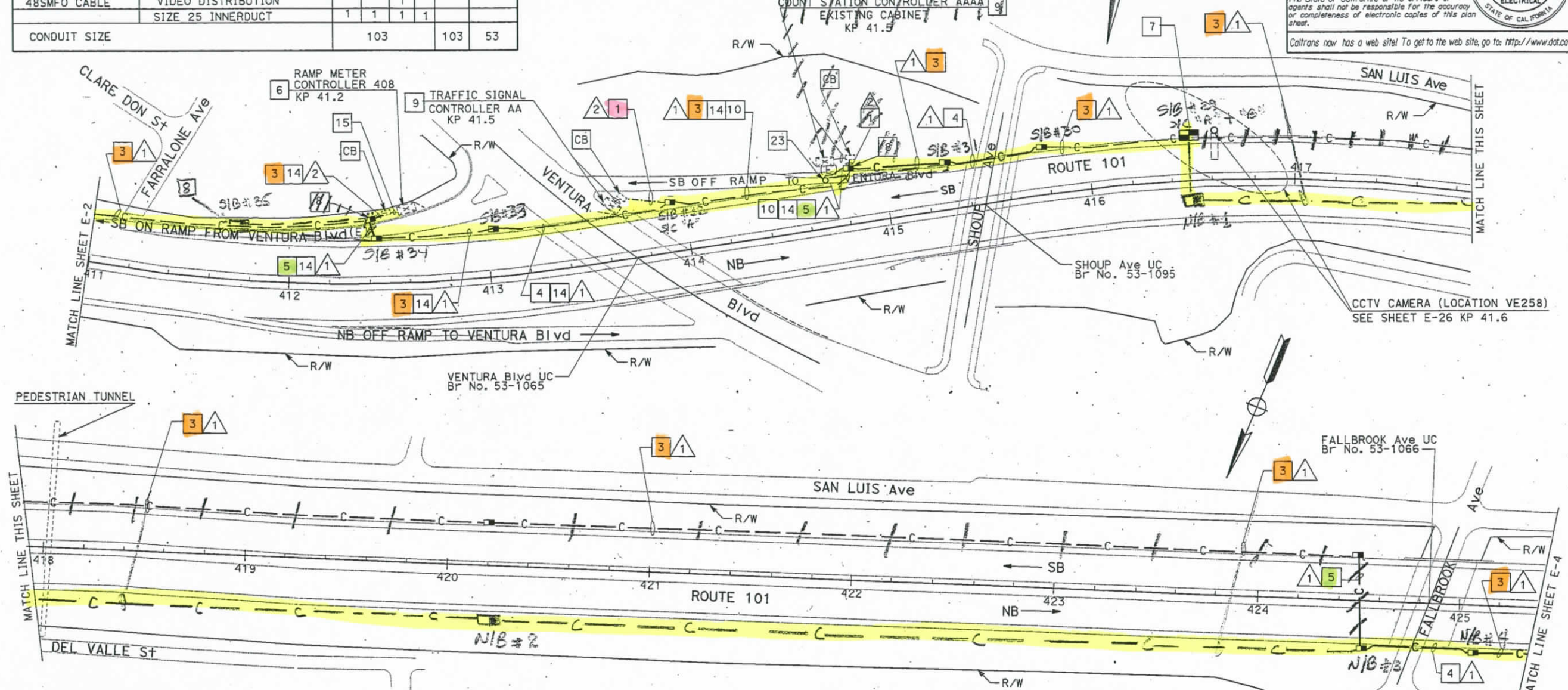
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1				RUN 2
12SMFO CABLE	VOICE/DATA					1
48SMFO CABLE	MULTIPLEXED DATA/VIDEO	1				
48SMFO CABLE	VOICE/DATA		1			
48SMFO CABLE	VIDEO DISTRIBUTION			1		
	SIZE 25 INNERDUCT	1	1	1	1	
CONDUIT SIZE		103			103	53



NOTES:(THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. INSTALL CONDUIT IN STRUCTURE. SEE STRUCTURAL PLANS FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, FOAM AND STATE-FURNISHED LOOP SENSOR IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL C-MIC, FOAM IN EXISTING CONTROLLER CABINET. INSTALL 12SMFO IN EXISTING CONDUIT. SEE SHEET E-51.
10. ADD 12SMFO IN COMMUNICATION SYSTEM ROUTING CONDUIT.
14. INSTALL 1 DLC.
15. INSTALL 1-12SMFO AND 1 DLC IN EXISTING CONDUIT.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-3

DATE	REVISED BY	DATE REVISED
6-05	DAVID PADILLA	6-05

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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TIME PLOTTED => 07:02

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USERNAME => trlenard
DGN FILE => 712088ua003.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	57A	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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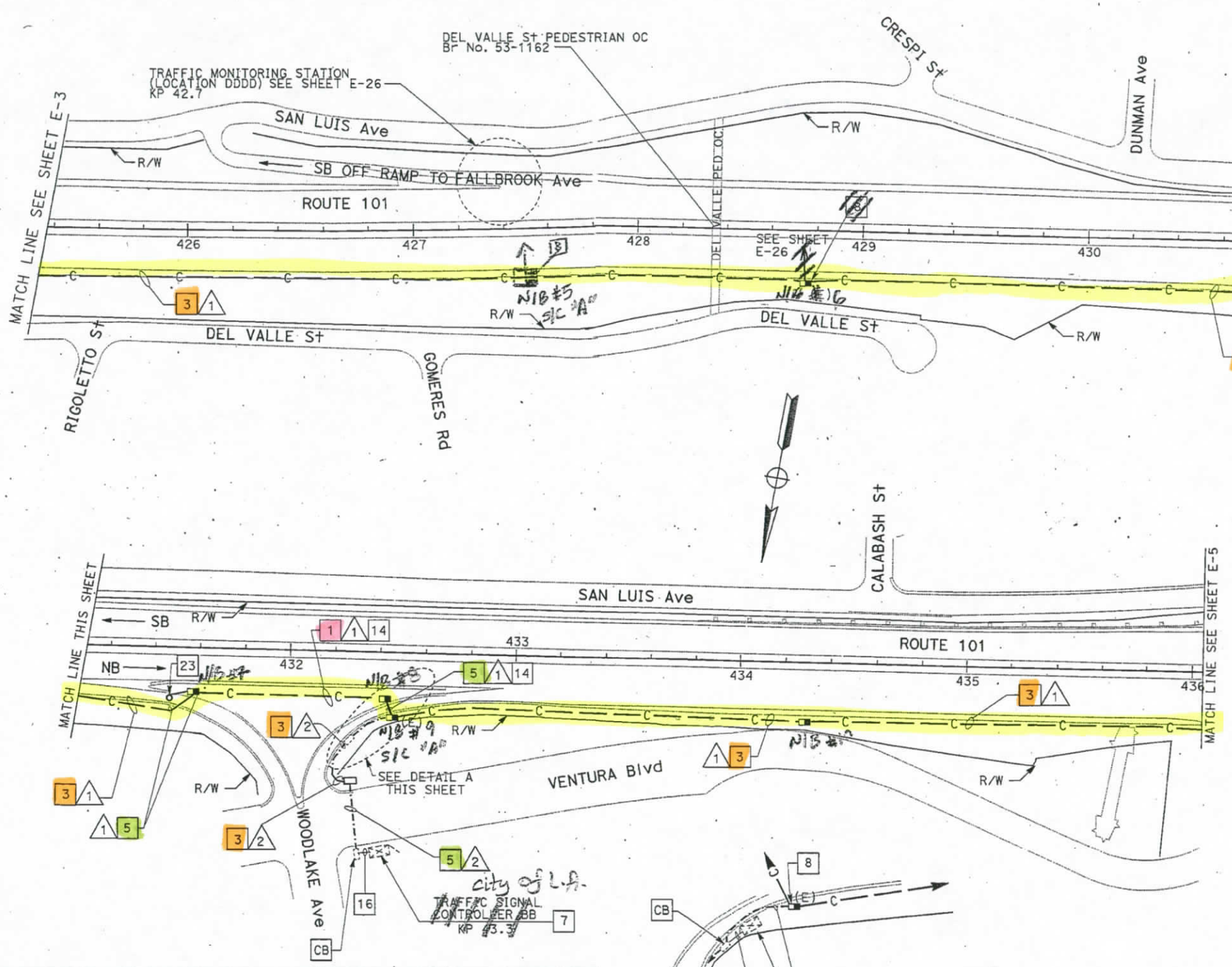
AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08



DETAIL A
NO SCALE

NOTES:(THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, FOAM AND STATE-FURNISHED LOOP SENSOR IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHET E-51.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
14. INSTALL 1 DLC.
15. INSTALL 1-12SMFO AND 1 DLC CABLES IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET. INSTALL STATE FURNISHED LOOP DETECTOR SENSOR.
16. INSTALL 1-12SMFO IN EXISTING CONDUIT.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3
12SMFO CABLE	VOICE/DATA						1	2
48SMFO CABLE	MULTIPLEXED DATA/VIDEO	1						
48SMFO CABLE	VOICE/DATA		1					
48SMFO CABLE	VIDEO DISTRIBUTION			1				
	SIZE 25 INNERDUCT	1	1	1	1			
CONDUIT SIZE		103				103	53	53

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COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	ITS DESIGN	PROJECT ENGINEER	DAVID PADILLA
CALCULATED/DESIGNED BY	DAVID PADILLA	DATE 6-05	REVISED BY
CHECKED BY	DAVID PADILLA	6-05	DATE REVISED

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

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DGN FILE => 71208ua004.dgn

CU 07388 | EA 120881

LAST REVISION 00-00-00 | DATE PLOTTED => 07-JUL-2005 | TIME PLOTTED => 07:02

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	58	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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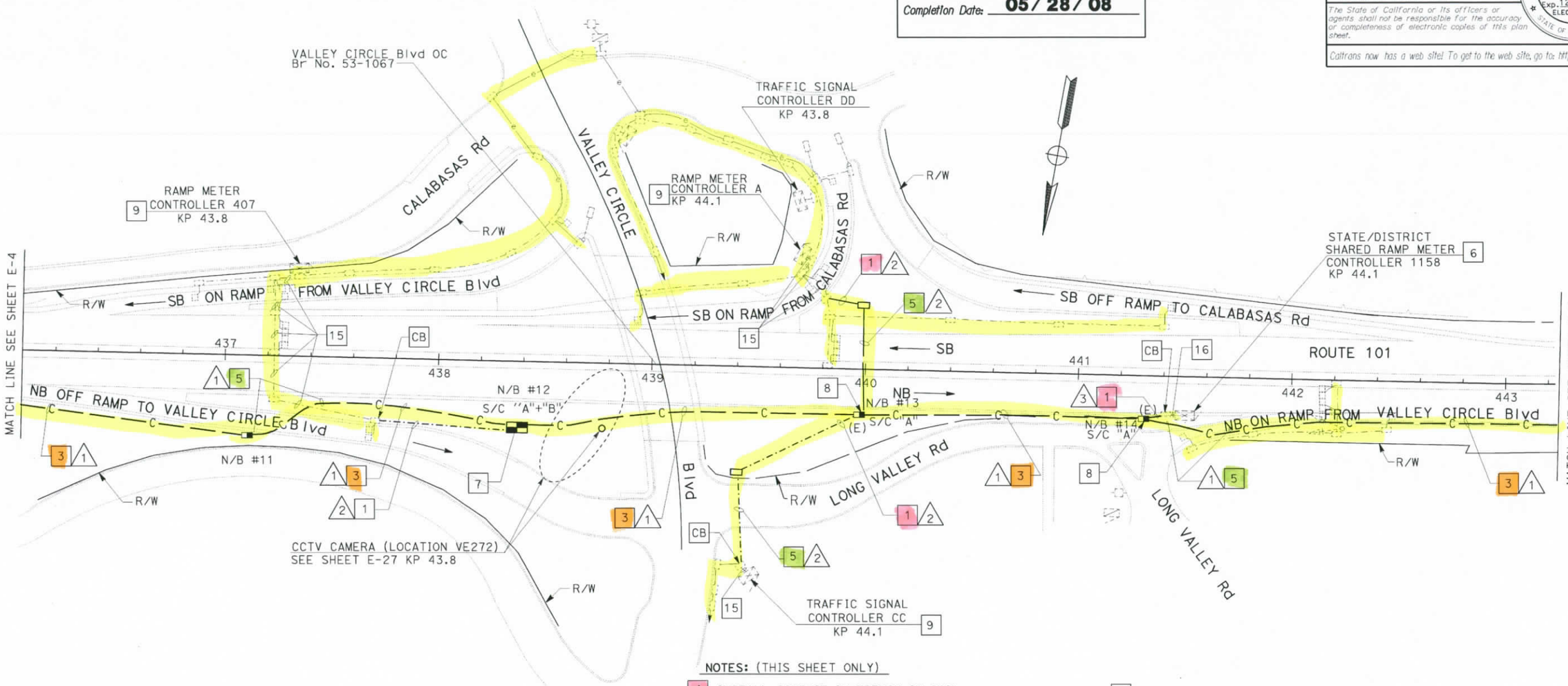
AS-BUILT
Contract No. 07- **120884**
Resident Engineer: **H. MANNAA**
Completion Date: **05/28/08**



CONDUCTOR SCHEDULE								
CONDUCTOR TYPE	FUNCTION	RUN						
		1					2	3
12SMFO CABLE	VOICE/DATA						1	2
48SMFO CABLE	MULTIPLEXED DATA/VIDEO	1						
48SMFO CABLE	VOICE/DATA		1					
48SMFO CABLE	VIDEO DISTRIBUTION			1				
	SIZE 25 INNERDUCT	1	1	1	1			
CONDUIT SIZE		103				103	53	53

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL 2-C-MIC, AND 2 FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL C-MIC AND FOAM IN CONTROLLER CABINET.
15. INSTALL 12SMFO CABLE IN EXISTING CONDUIT AND CONNECT TO CONTROLLER CABINET.
16. INSTALL 2-12SMFO CABLES IN EXISTING CONDUIT.
17. EXISTING ELEMENTS ARE SHOWN FOR REFERENCE ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-5

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED
6-05	DAVID PADILLA	6-05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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TIME PLOTTED => 11:12

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USERNAME => s123048
DGN FILE => 712088ua005.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	59 A160	

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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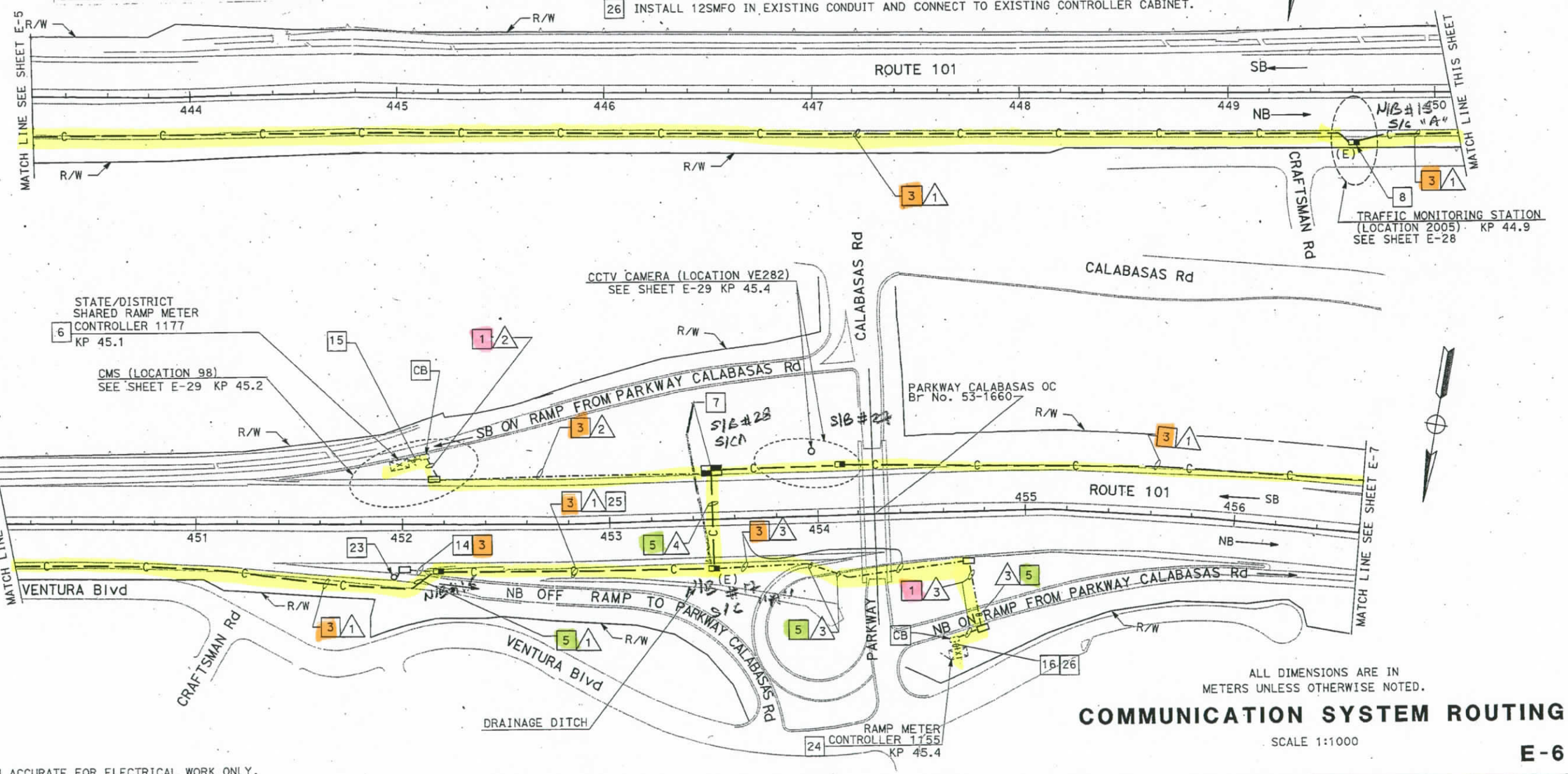
Caltrans Metric

CONDUCTOR SCHEDULE													
CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3	RUN 4				
12SMFO CABLE	VOICE/DATA						2	1			1		
48SMFO CABLE	MULTIPLEXED DATA/VIDEO	1								1			
48SMFO CABLE	VOICE/DATA		1								1		
48SMFO CABLE	VIDEO DISTRIBUTION			1								1	
DLC CABLE								1					
	SIZE 25 INNERDUCT	1	1	1	1				1	1	1	1	
CONDUIT SIZE		103				103	53	53	103				103

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL 2-C-MIC, 2-FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEETS E-49 FOR DETAILS.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
14. INSTALL 53C, 1DLC.
15. INSTALL 2-12SMFO CABLE IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.
16. INSTALL 1DLC CABLE IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. INSTALL C-MIC, 1-FOAM, AND STATE-FURNISHED LOOP DETECTOR SENSOR IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
25. ADD 1DLC IN NEW CONDUIT.
26. INSTALL 12SMFO IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-6

.THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED BY
6-05	DAVID PADILLA	6-05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
DATE PLOTTED => 29-JUN-2005
TIME PLOTTED => 08:37

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

USERNAME => trlenard
DGN FILE => 712088ua006.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	60 A160	

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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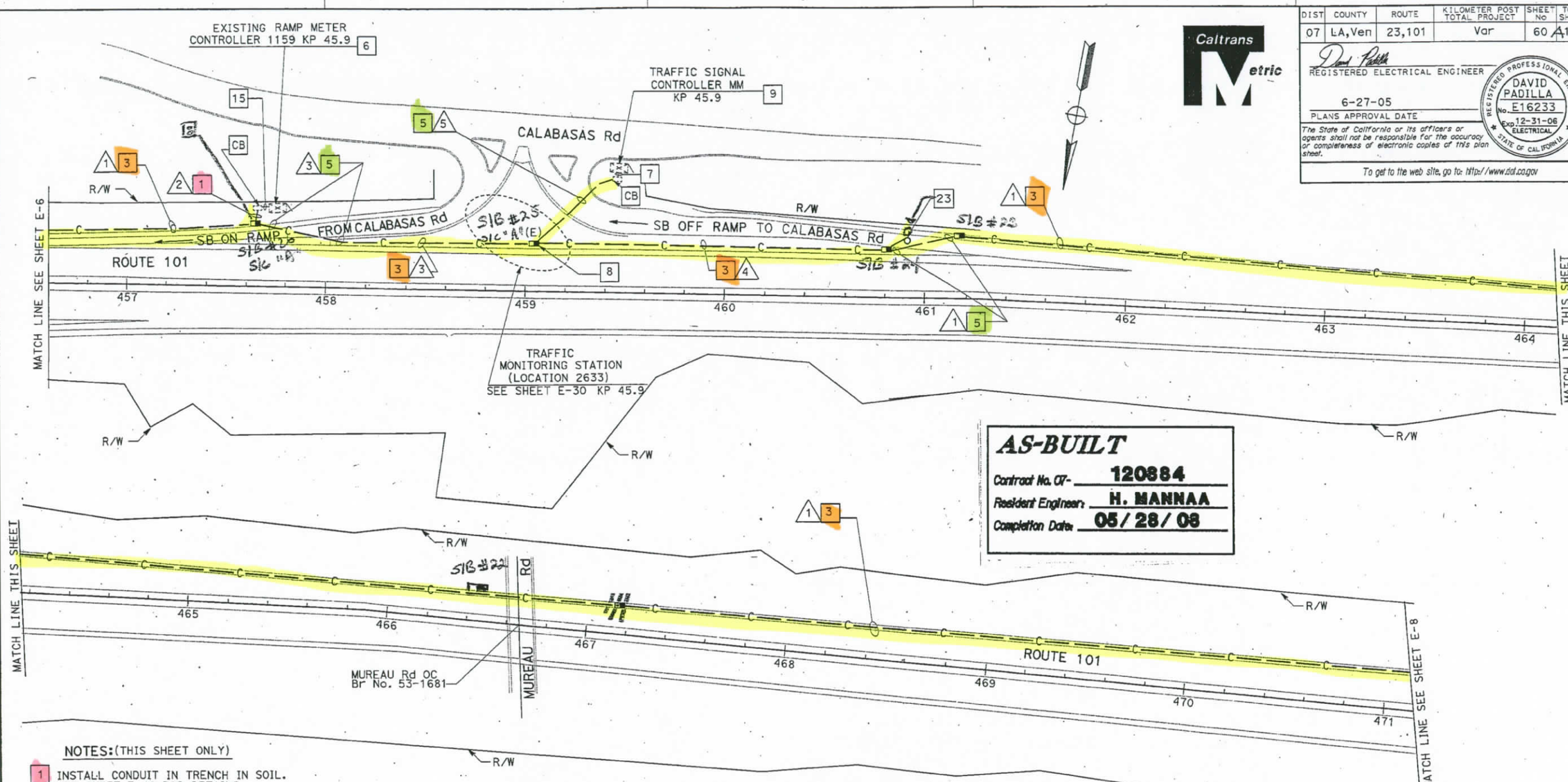

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

NOTES:(THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, FOAM, AND STATE-FURNISHED LOOP DETECTOR SENSOR IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL 12SMFO IN EXISTING CONDUIT.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL C-MIC, AND FOAM, IN EXISTING CONTROLLER CABINET. SEE SHEET E-51 FOR DETAILS.
15. INSTALL 1-12SMFO AND 1 DLC CABLES IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3					RUN 4					RUN 5	
12SMFO CABLE	VOICE/DATA						1	1										1	
48SMFO CABLE	VOICE/DATA	1						1					1						
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1						1					1					
48SMFO CABLE	VIDEO DISTRIBUTION			1						1					1				
DLC CABLE							1				1					1			
	SIZE 25 INNERDUCT	1	1	1	1			1	1	1	1		1	1	1	1			
CONDUIT SIZE		103				103	53	103				103	103				103	53	

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-7

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
DATE REVISED BY: 6/05
DATE REVISED: 6/05

LAST REVISION 00-00-00
DATE PLOTTED => 29-JUN-2005
TIME PLOTTED => 10:57

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USERNAME => trmnguye
DGN FILE => 712088uc007.dgn

CU 07388

EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	61	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 EXP. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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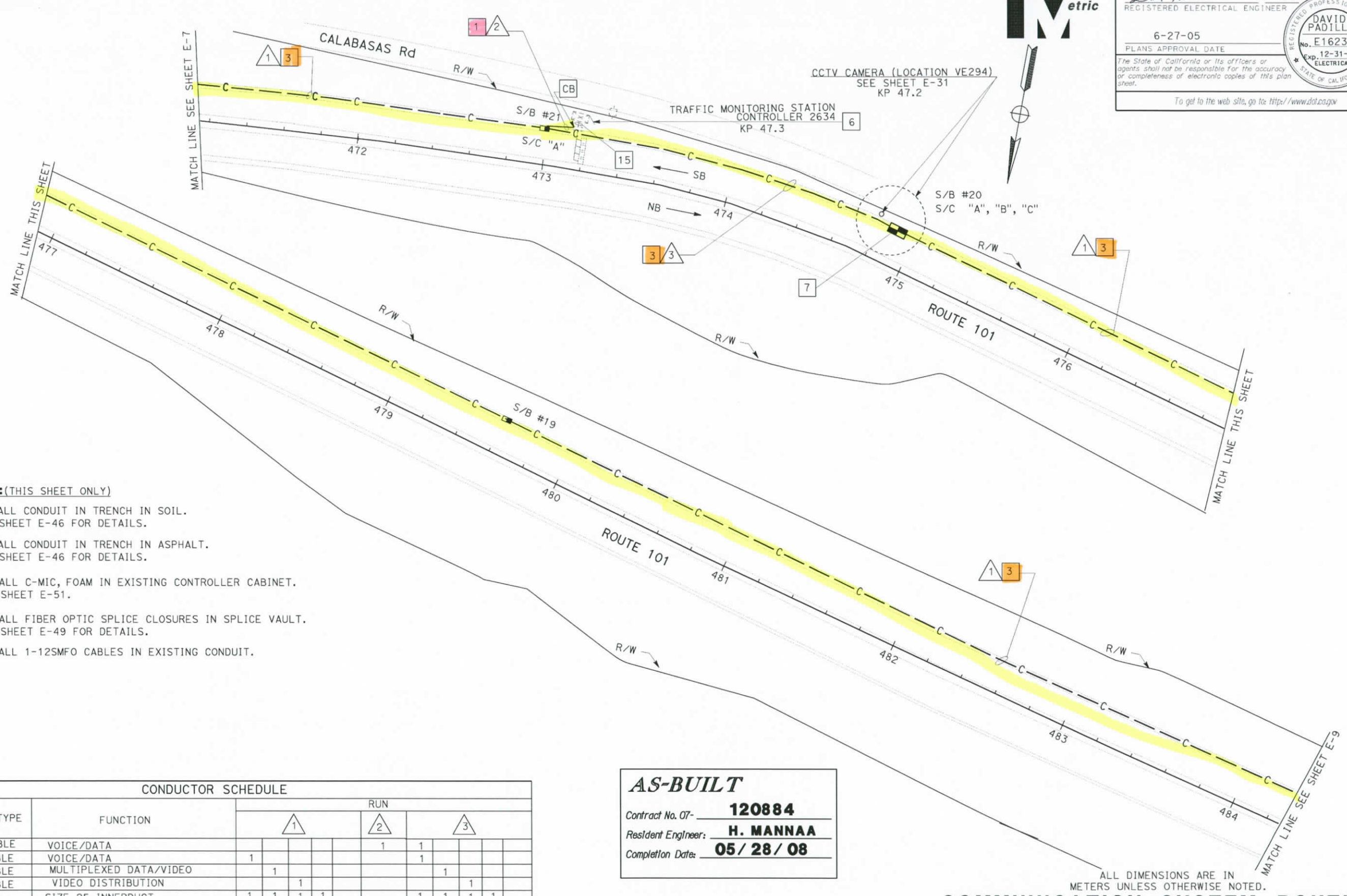

NOTES:(THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-46 FOR DETAILS.
6. INSTALL C-MIC, FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
15. INSTALL 1-12SMFO CABLES IN EXISTING CONDUIT.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3				
12SMFO CABLE	VOICE/DATA						1	1				
48SMFO CABLE	VOICE/DATA	1						1				
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1						1			
48SMFO CABLE	VIDEO DISTRIBUTION			1						1		
	SIZE 25 INNERDUCT	1	1	1	1			1	1	1	1	
CONDUIT SIZE		103				103	53	103				103

AS-BUILT

Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-8

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER DAVID PADILLA

CALCULATED/DESIGNED BY DAVID PADILLA DATE 6/05 REVISED BY
CHECKED BY DAVID PADILLA 6/05 DATE REVISED

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

USERNAME => s123048
DGN FILE => 712088ua008.dgn

CU 07388 EA 120881

LAST REVISION 00-00-00
DATE PLOTTED => 17-SEP-2008
TIME PLOTTED => 12:08

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	62A	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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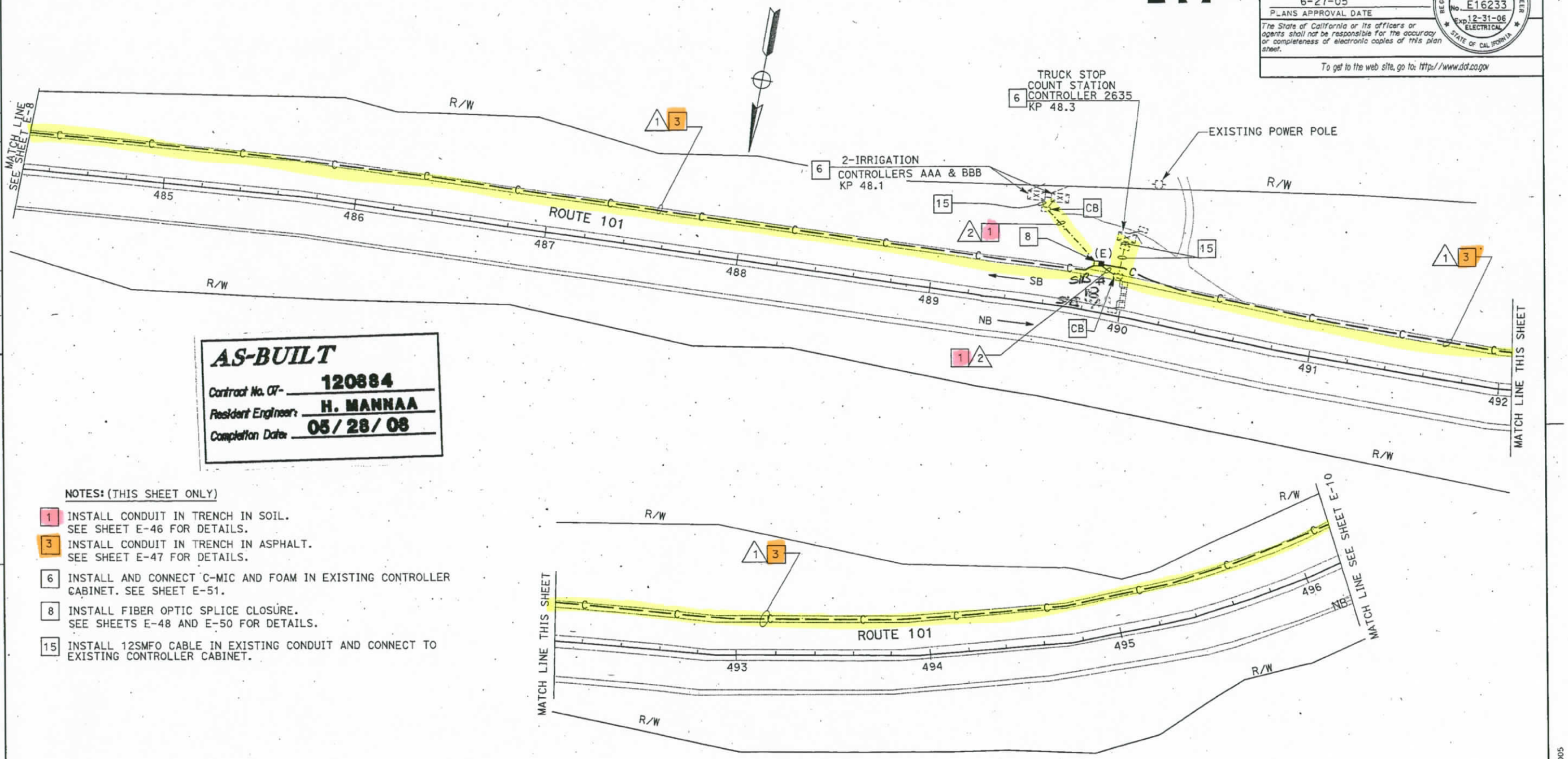
Caltrans Metric



AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
6. INSTALL AND CONNECT C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
15. INSTALL 12SMFO CABLE IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2
12SMFO CABLE	VOICE/DATA						1
48SMFO CABLE	VOICE/DATA	1					
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1				
48SMFO CABLE	VIDEO DISTRIBUTION			1			
	SIZE 25 INNERDUCT	1	1	1	1		
CONDUIT SIZE		103				103	53

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

SCALE 1:1000

E-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DESIGN

PROJECT ENGINEER DAVID PADILLA
CALCULATED/DESIGNED BY DAVID PADILLA
CHECKED BY DAVID PADILLA
DATE 6/05 REVISED BY 6/05 DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 29-JUN-2005
TIME PLOTTED => 10:28

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trenguye
DGN FILE => 712088uc009.dgn
CU 07388
EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	63	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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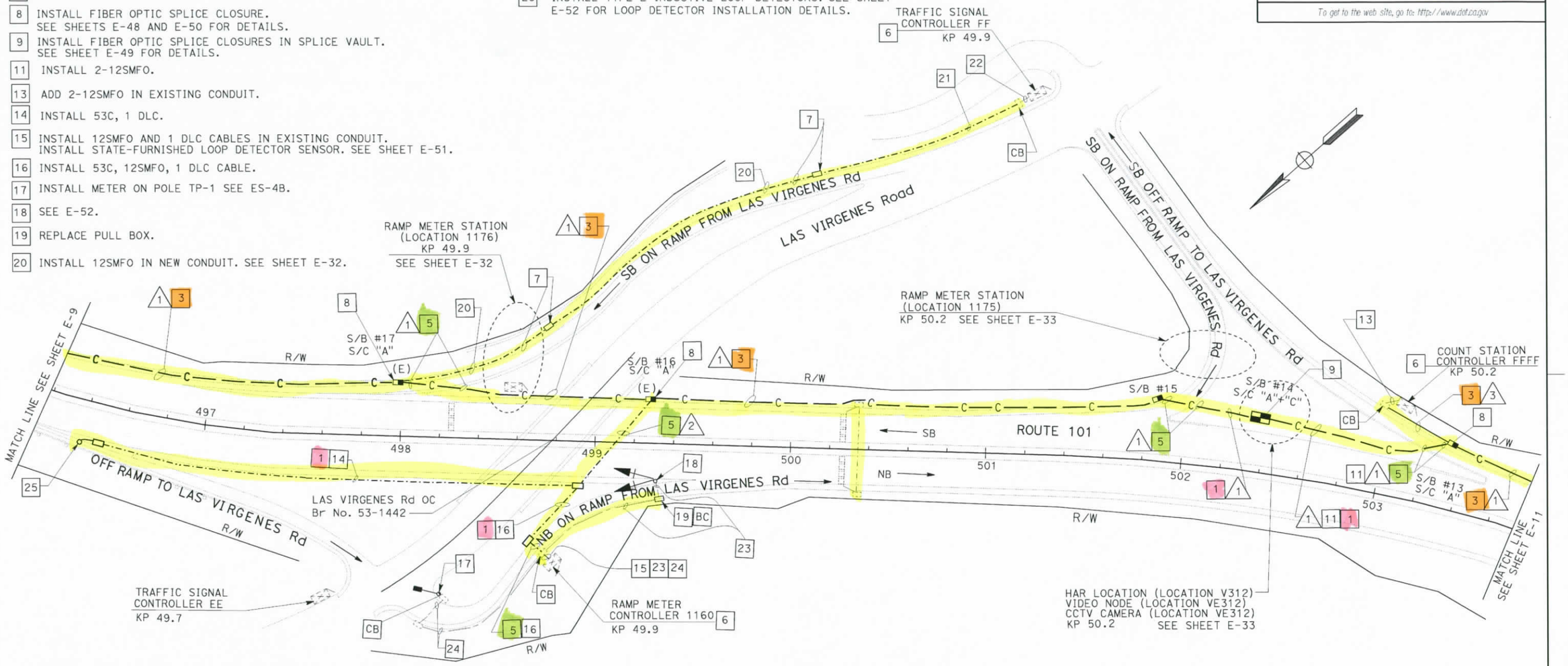
NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INCLUDED IN SHEET E-32.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
11. INSTALL 2-12SMFO.
13. ADD 2-12SMFO IN EXISTING CONDUIT.
14. INSTALL 53C, 1 DLC.
15. INSTALL 12SMFO AND 1 DLC CABLES IN EXISTING CONDUIT. INSTALL STATE-FURNISHED LOOP DETECTOR SENSOR. SEE SHEET E-51.
16. INSTALL 53C, 12SMFO, 1 DLC CABLE.
17. INSTALL METER ON POLE TP-1 SEE ES-4B.
18. SEE E-52.
19. REPLACE PULL BOX.
20. INSTALL 12SMFO IN NEW CONDUIT. SEE SHEET E-32.
21. INSTALL 53C IN ASPHALT. INSTALL 12SMFO.
22. ADD 12SMFO TO EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.
23. INSTALL 6#14, 1#10.
24. INSTALL 3#10.
25. INSTALL TYPE E INDUCTIVE LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3
12SMFO CABLE	VOICE/DATA						1	2
48SMFO CABLE	VOICE/DATA	1						
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1					
48SMFO CABLE	VIDEO DISTRIBUTION			1				
	SIZE 25 INNERDUCT	1	1	1	1			
CONDUIT SIZE		103				103	53	53

AS-BUILT

Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-10

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DATE	REVISED BY	DATE	REVISED BY
6/05	DAVID PADILLA	6/05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s123048
DGN FILE => 712088ua010.dgn

CU 07388 EA 120881

DATE PLOTTED => 17-SEP-2008
TIME PLOTTED => 12:08

00-00-00

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. SEE E-34 FOR CONDUIT INSTALLATION. INSTALL 12SMFO FOR IRRIGATION CABINET.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL 12SMFO.
10. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
14. INSTALL 53C WITH 1 DLC.
15. INSTALL 12SMFO CABLE IN EXISTING CONDUIT AND CONNECT TO CONTROLLER CABINET.
16. INSTALL 3#10.
17. INSTALL 6#14, 1#10.
18. SEE SHEET E-52.
23. INSTALL TYPE E INDUCTIVE LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. ADD 1 DLC IN EXISTING CONDUIT AND INSTALL STATE-FURNISHED DETECTOR SENSOR IN CONTROLLER CABINET.
25. SEE SHEET E-34 FOR ADDITIONAL CONDUCTORS TO BE ADDED TO COMMUNICATION CONDUIT.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3
12SMFO CABLE	VOICE/DATA						1	1
48SMFO CABLE	VOICE/DATA	1						
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1					
48SMFO CABLE	VIDEO DISTRIBUTION			1				
	SIZE 25 INNERDUCT	1	1	1	1			
CONDUIT SIZE		103				103	53	103

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	64 A	160

REGISTERED ELECTRICAL ENGINEER
6-27-05
PLANS APPROVAL DATE
DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA
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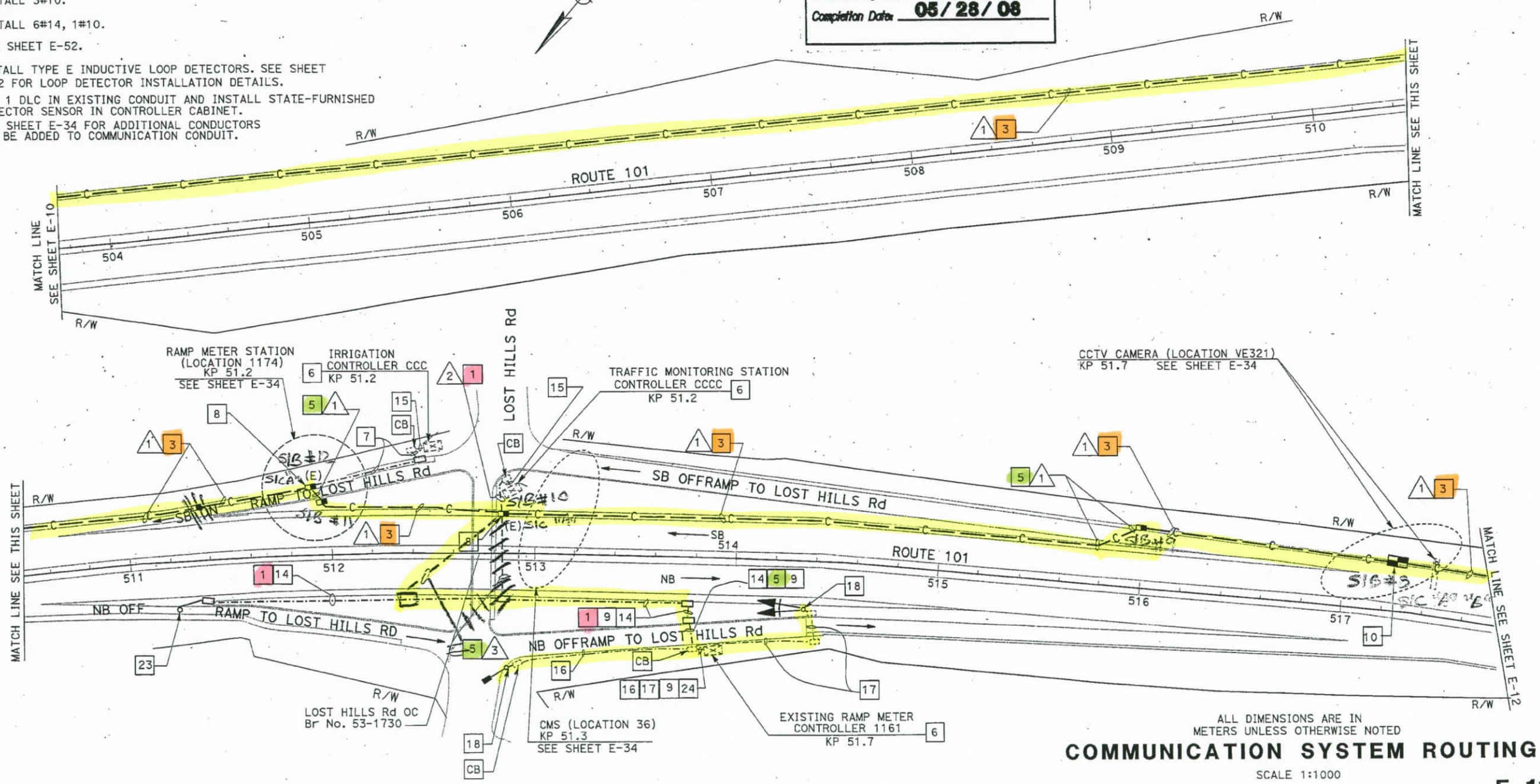

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-11

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DATE	REVISED BY	DATE REVISED
6/05	DAVID PADILLA	6/05

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
DATE PLOTTED => 29-JUN-2005
TIME PLOTTED => 10:58

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

USERNAME => trmnguye
DGN FILE => T12088ua011.dgn

CU 07388 EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA,Ven	23,101	Var	65	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 EXP. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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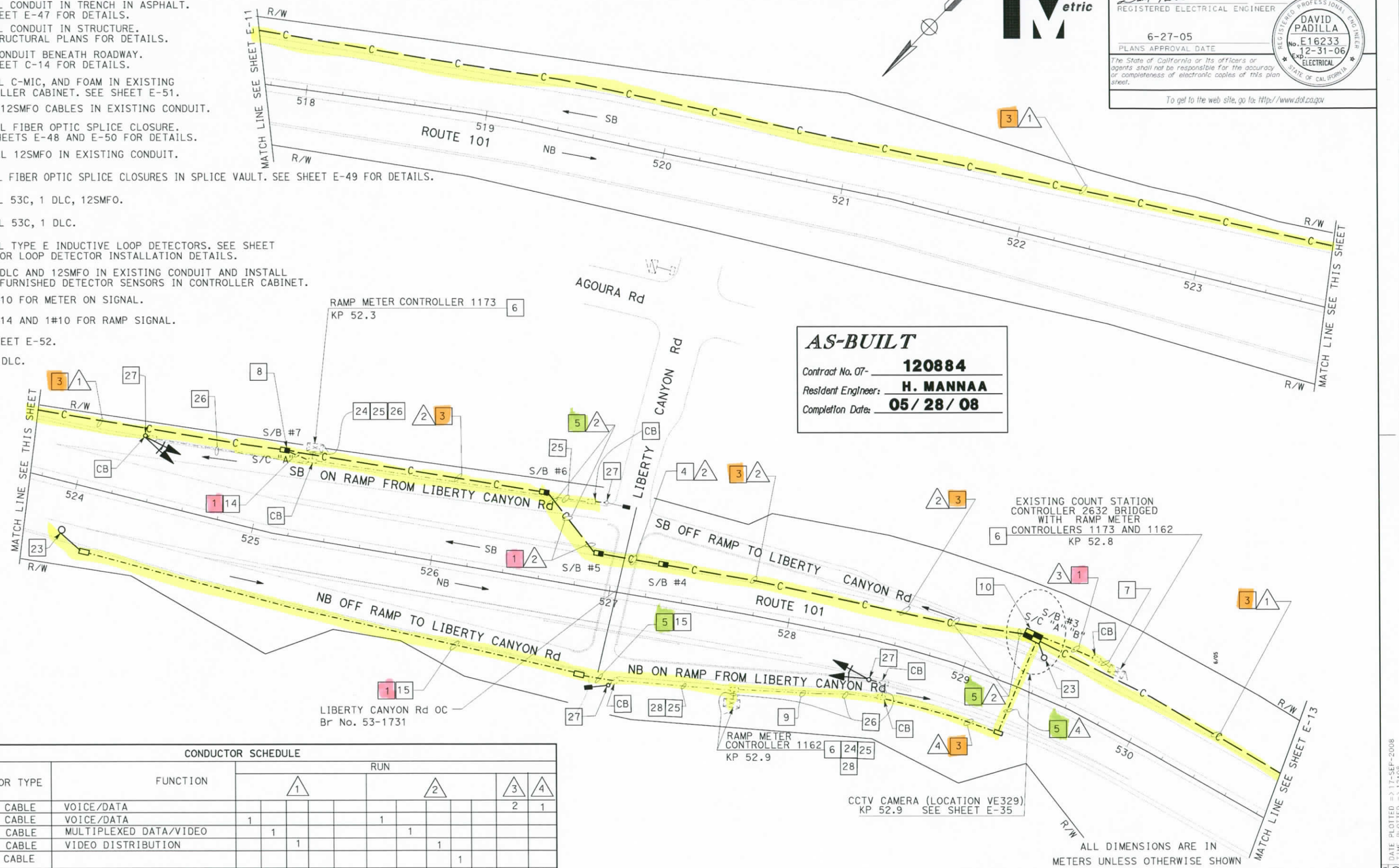
NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. INSTALL CONDUIT IN STRUCTURE. SEE STRUCTURAL PLANS FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. ADD 2-12SMFO CABLES IN EXISTING CONDUIT.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL 12SMFO IN EXISTING CONDUIT.
10. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
14. INSTALL 53C, 1 DLC, 12SMFO.
15. INSTALL 53C, 1 DLC.
23. INSTALL TYPE E INDUCTIVE LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. ADD 1 DLC AND 12SMFO IN EXISTING CONDUIT AND INSTALL STATE-FURNISHED DETECTOR SENSORS IN CONTROLLER CABINET.
25. ADD 3#10 FOR METER ON SIGNAL.
26. ADD 6#14 AND 1#10 FOR RAMP SIGNAL.
27. SEE SHEET E-52.
28. ADD 1 DLC.



AS-BUILT

Contract No. 07- **120884**
Resident Engineer: **H. MANNAA**
Completion Date: **05/28/08**

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2					RUN 3	RUN 4
12SMFO CABLE	VOICE/DATA											2	1
48SMFO CABLE	VOICE/DATA	1					1						
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1					1					
48SMFO CABLE	VIDEO DISTRIBUTION			1					1				
DLC CABLE										1			
	SIZE 25 INNERDUCT	1	1	1	1		1	1	1	1			
CONDUIT SIZE		103				103	103				103	53	53

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ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-12

DATE	REVISED BY	DATE	REVISED BY
6/05	DAVID PADILLA	6/05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
DATE PLOTTED => 17-SEP-2008
TIME PLOTTED => 12:08

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DGN FILE => 712088ua012.dgn
CU 07388
EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA,Ven	23,101	Var	66	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 EXP. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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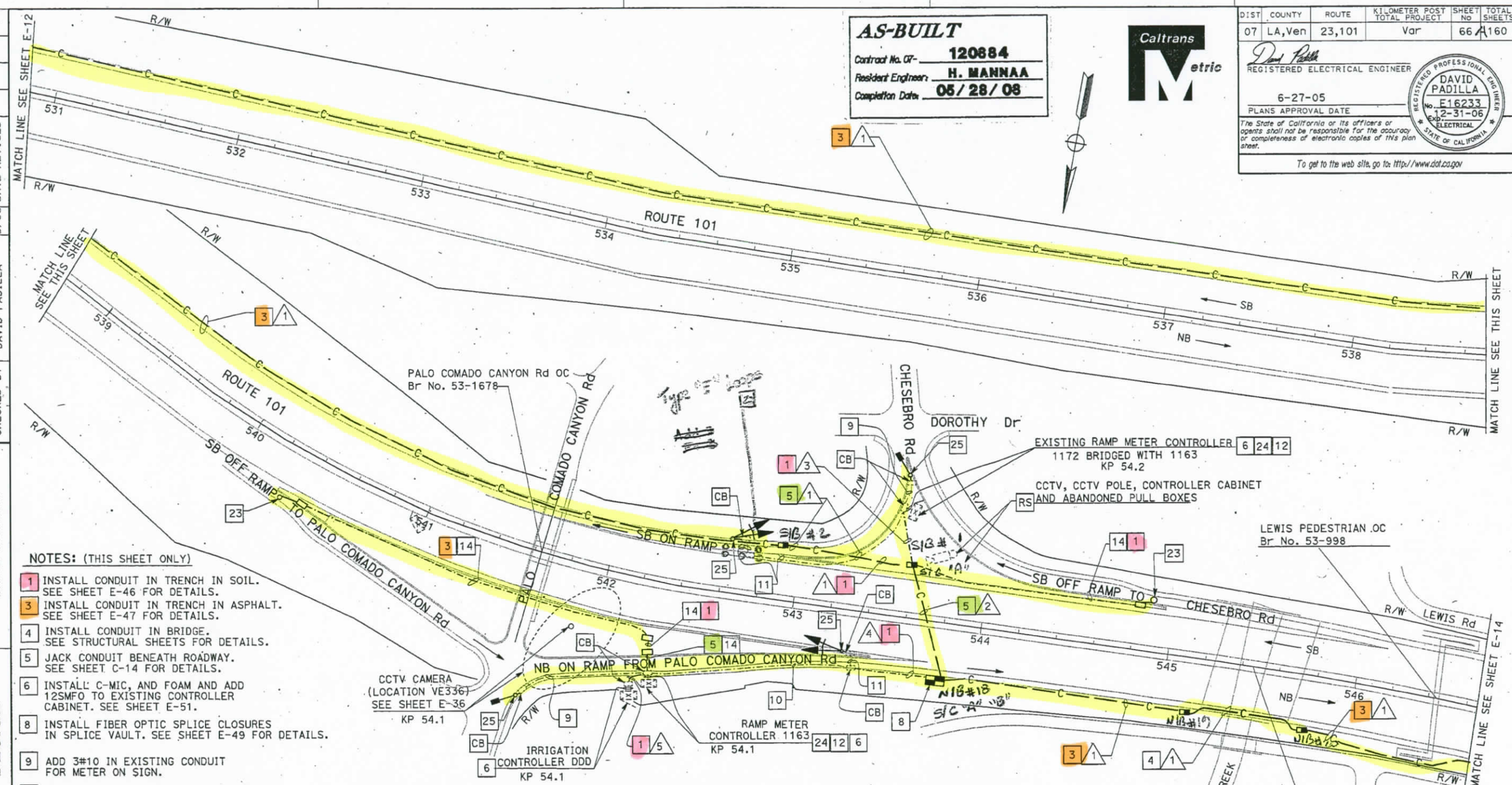
AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

Caltrans Metric



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. INSTALL CONDUIT IN BRIDGE. SEE STRUCTURAL SHEETS FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, AND FOAM AND ADD 12SMFO TO EXISTING CONTROLLER CABINET. SEE SHEET E-51.
8. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
9. ADD 3#10 IN EXISTING CONDUIT FOR METER ON SIGN.
10. ADD 2-12SMFO AND 6#14 AND 1#10 FOR RAMP SIGNAL IN EXISTING CONDUIT.
11. INSTALL 6#14 AND 1#10 FOR RAMP SIGNAL IN EXISTING CONDUIT.
12. INSTALL 3#10, 6#14 AND 1#10 IN EXISTING CONDUIT.
14. INSTALL 53C, 1 DLC.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. ADD 1 DLC IN EXISTING CONDUIT AND INSTALL STATE-FURNISHED DETECTOR SENSORS IN CONTROLLER CABINET.
25. SEE SHEET E-52.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2					RUN 3	RUN 4	RUN 5
12SMFO CABLE	VOICE/DATA									1		1	2	1
48SMFO CABLE	VOICE/DATA	1					1							
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1					1						
48SMFO CABLE	VIDEO DISTRIBUTION			1					1					
DLC CABLE												1		
	SIZE 25 INNERDUCT	1	1	1	1		1	1	1	1				
CONDUIT SIZE		103				103	103				103	53	53	53

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-13

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER: DAVID PADILLA

CALCULATED/DESIGNED BY	DAVID PADILLA	DATE 6/05	REVISED BY
CHECKED BY	DAVID PADILLA	6/05	DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 29-JUN-2005 | TIME PLOTTED => 10:58

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

USERNAME => trmnguye
DGN FILE => 712088ua013.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	67	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 EXP. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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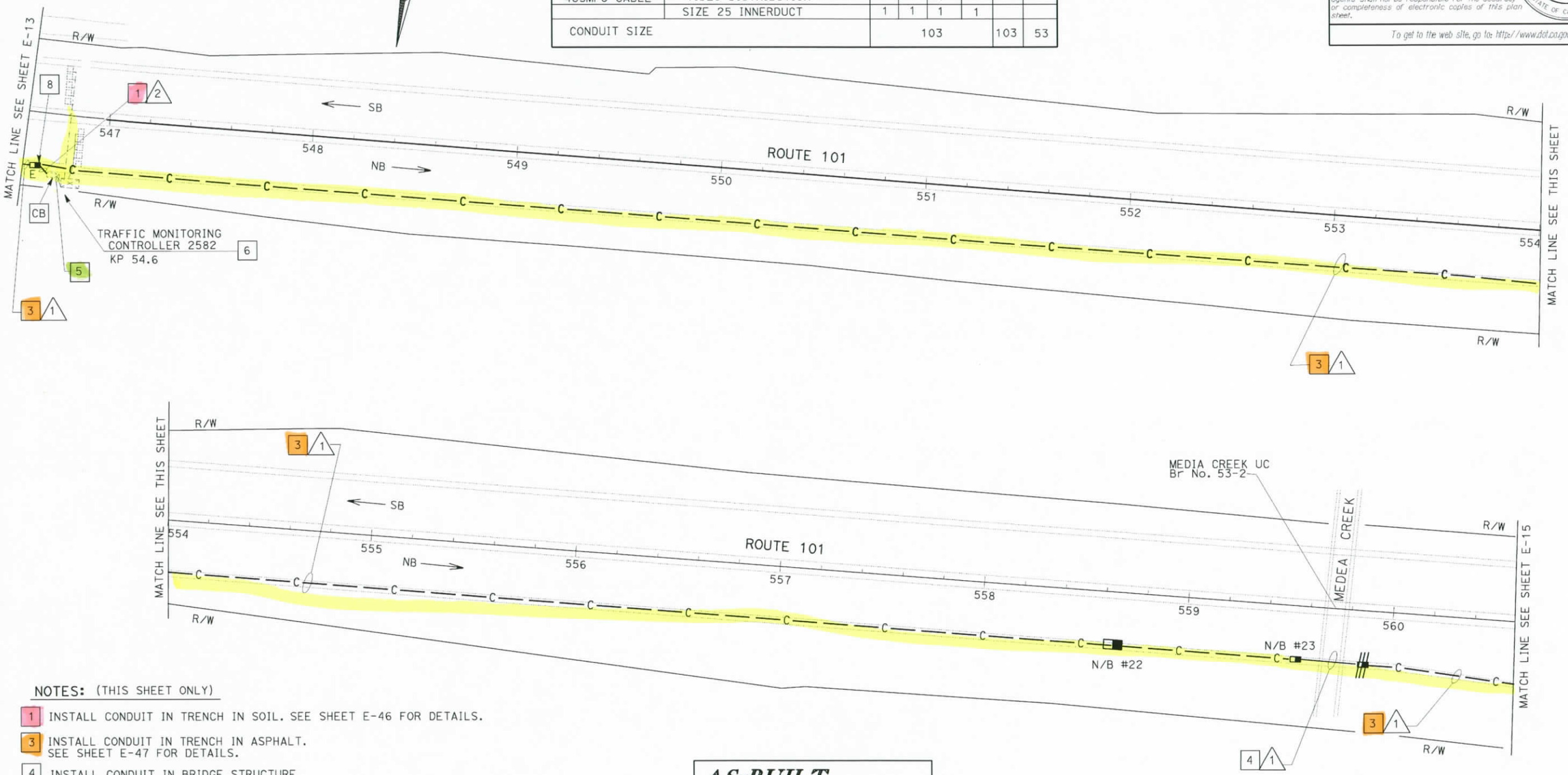
To get to the web site, go to: http://www.dot.ca.gov

Caltrans Metric

CONDUCTOR SCHEDULE							
CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2
12SMFO CABLE	VOICE/DATA						1
48SMFO CABLE	VOICE/DATA	1					
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1				
48SMFO CABLE	VIDEO DISTRIBUTION			1			
	SIZE 25 INNERDUCT	1	1	1	1		
CONDUIT SIZE		103				103	53



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. INSTALL CONDUIT IN BRIDGE STRUCTURE. SEE STRUCTURAL SHEETS FOR DETAILS.
5. INSTALL 12SMFO IN EXISTING CONDUIT.
6. INSTALL C-MIC, AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.

AS-BUILT

Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-14

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED
6/05	DAVID PADILLA	6/05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

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

USERNAME => s123048
DGN FILE => 712088u0014.dgn

CU 07388 EA 120881

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2008 TIME PLOTTED => 12:08

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA,Ven	23,101	Var	68	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 EXP. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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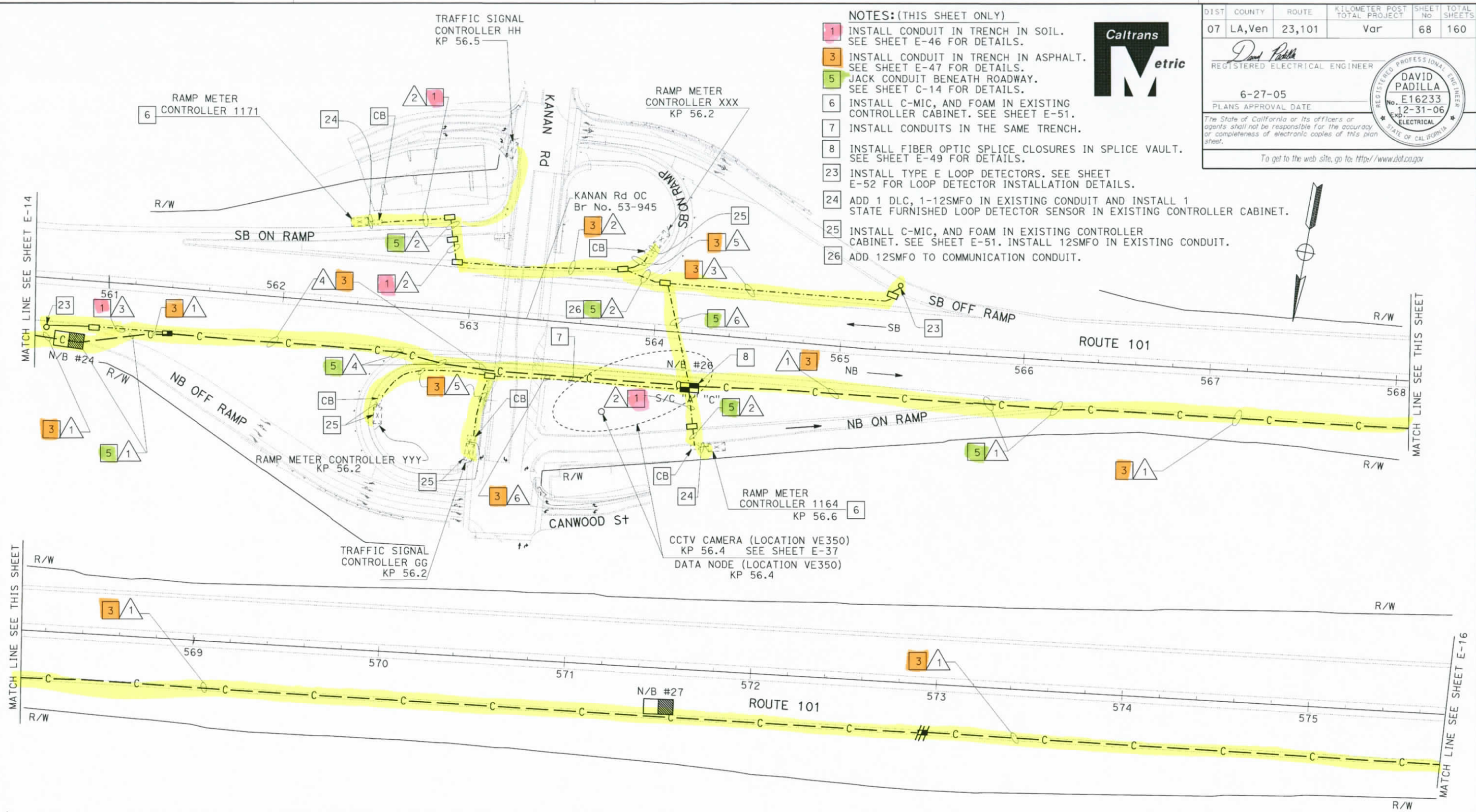
NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC, AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL CONDUITS IN THE SAME TRENCH.
8. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. ADD 1 DLC, 1-12SMFO IN EXISTING CONDUIT AND INSTALL 1 STATE FURNISHED LOOP DETECTOR SENSOR IN EXISTING CONTROLLER CABINET.
25. INSTALL C-MIC, AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51. INSTALL 12SMFO IN EXISTING CONDUIT.
26. ADD 12SMFO TO COMMUNICATION CONDUIT.



CONDUCTOR SCHEDULE															
CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3	RUN 4					RUN 5	RUN 6
12SMFO CABLE	VOICE/DATA						1							1	2
48SMFO CABLE	VOICE/DATA	1							1						
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1							1					
48SMFO CABLE	VIDEO DISTRIBUTION			1							1				
DLC CABLE							1	1				1			
	SIZE 25 INNERDUCT	1	1	1	1				1	1	1	1			
CONDUIT SIZE		103				103	53	53	103				103	53	53

AS-BUILT

Contract No. 07- **120884**
Resident Engineer: **H. MANNAA**
Completion Date: **05/28/08**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-15

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE	REVISED
DAVID PADILLA	DAVID PADILLA	6/05		6/05	

PROJECT ENGINEER DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2008 TIME PLOTTED => 12:08

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

USERNAME => s123048
DGN FILE => 712088ua015.dgn

CU 07388 EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	69A	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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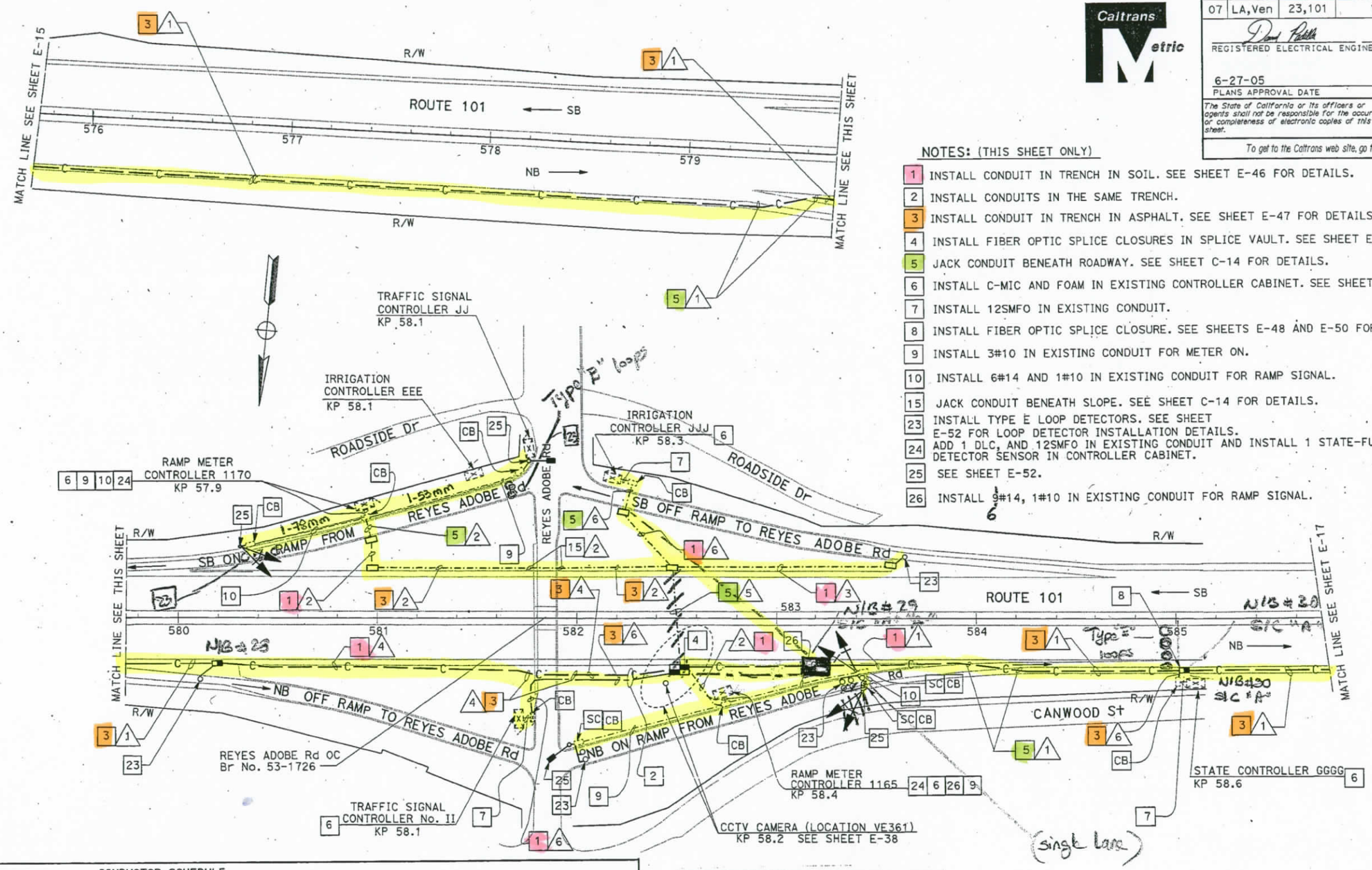

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
2. INSTALL CONDUITS IN THE SAME TRENCH.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL 12SMFO IN EXISTING CONDUIT.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL 3#10 IN EXISTING CONDUIT FOR METER ON.
10. INSTALL 6#14 AND 1#10 IN EXISTING CONDUIT FOR RAMP SIGNAL.
15. JACK CONDUIT BENEATH SLOPE. SEE SHEET C-14 FOR DETAILS.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. ADD 1 DLC, AND 12SMFO IN EXISTING CONDUIT AND INSTALL 1 STATE-FURNISHED LOOP DETECTOR SENSOR IN CONTROLLER CABINET.
25. SEE SHEET E-52.
26. INSTALL 6#14, 1#10 IN EXISTING CONDUIT FOR RAMP SIGNAL.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3	RUN 4					RUN 5	RUN 6
12SMFO CABLE	VOICE/DATA						1							2	1
48SMFO CABLE	VOICE/DATA	1							1						
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1							1					
48SMFO CABLE	VIDEO DISTRIBUTION			1							1				
DLC CABLE							1	1				1			
	SIZE 25 INNERDUCT	1	1	1	1				1	1	1	1			
CONDUIT SIZE		103				103	53	53	103				103	103	53

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DESIGN
PROJECT ENGINEER DAVID PADILLA
CALCULATED/DESIGNED BY DAVID PADILLA
CHECKED BY DAVID PADILLA
REVISED BY DATE REVISED
DATE 6/05 6/05

LAST REVISION 00-00-00
DATE PLOTTED => 08-JUL-2005
TIME PLOTTED => 09:19

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

USERNAME => trlenard
DGN FILE => 712088uc016.dgn

CU 07388 EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	70	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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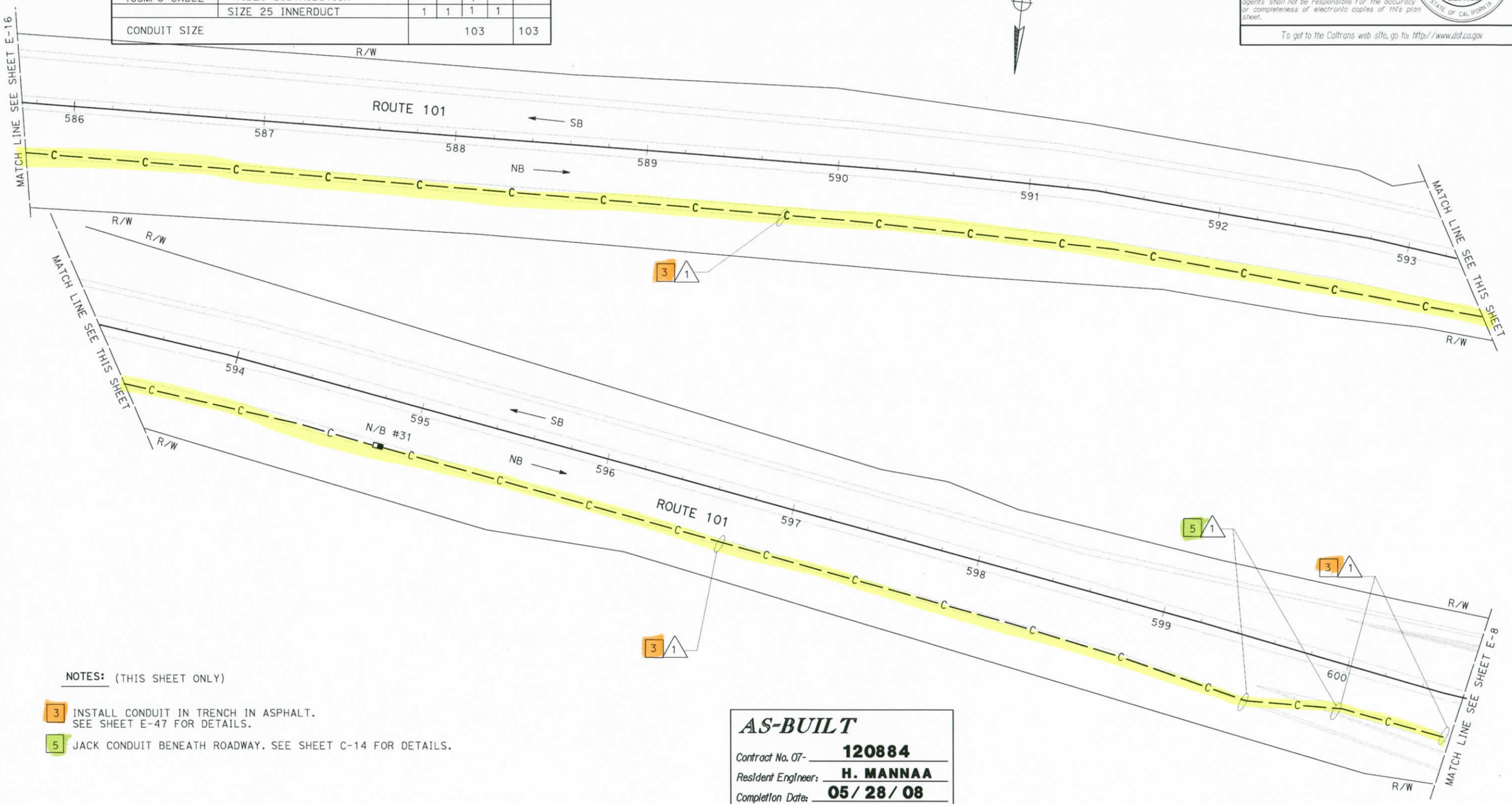
CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 1				
48SMFO CABLE	VOICE/DATA	1				
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1			
48SMFO CABLE	VIDEO DISTRIBUTION			1		
	SIZE 25 INNERDUCT	1	1	1	1	
CONDUIT SIZE		103				103



NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.

5 JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.

AS-BUILT

Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

SCALE 1:1000

E-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER DAVID PADILLA
CALCULATED/DESIGNED BY DAVID PADILLA
CHECKED BY
REVISED BY
DATE REVISED
DATE 6-05
6-05

LAST REVISION 00-00-00
DATE PLOTTED => 17-SEP-2008
TIME PLOTTED => 12:08

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

USERNAME => s123048
DGN FILE => 712088ug017.dgn

CU 07388
EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	71 A	160

Caltrans Metric

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 EXP. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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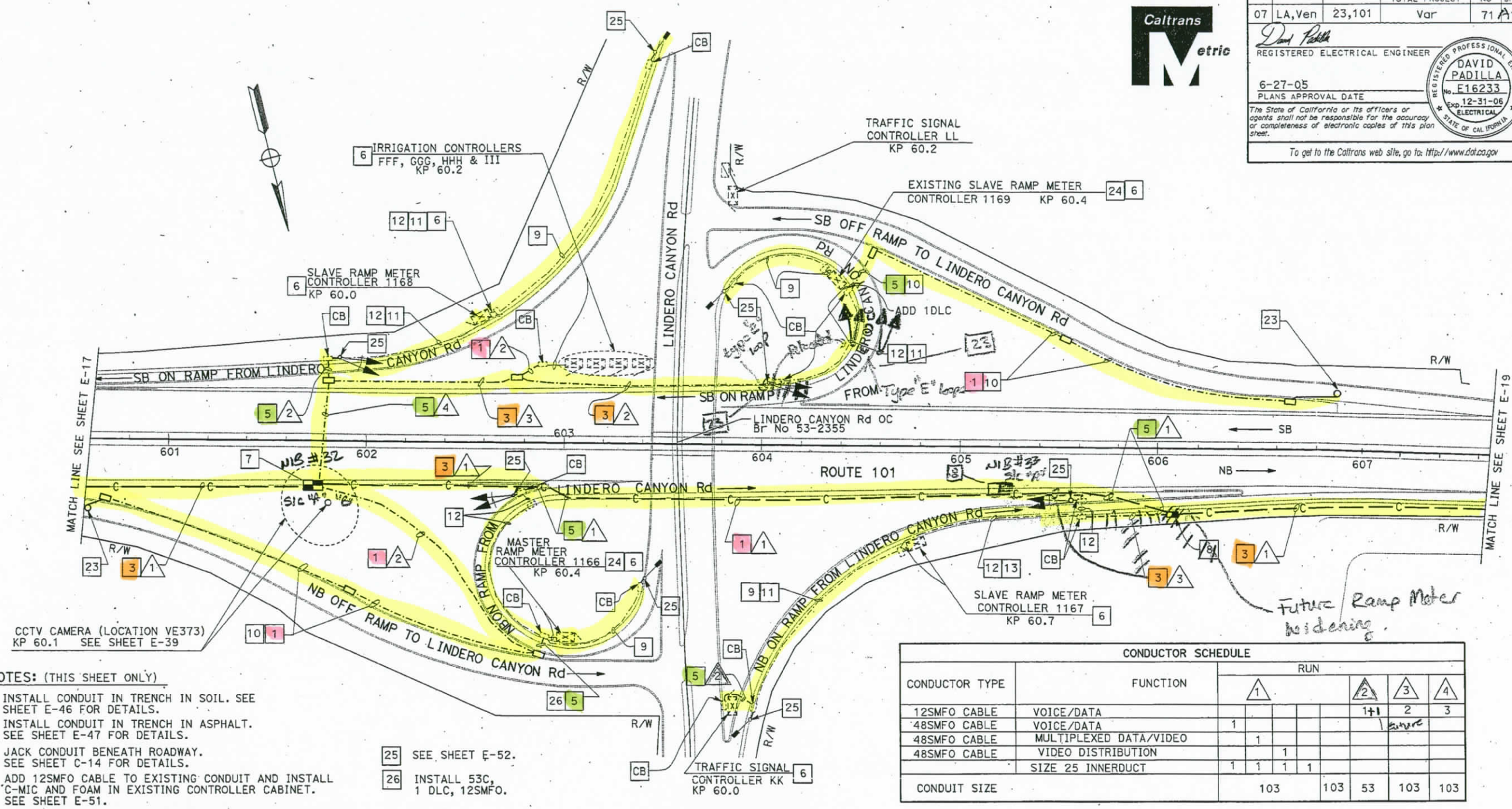

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. ADD 12SMFO CABLE TO EXISTING CONDUIT AND INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT. SEE SHEET E-49 FOR DETAILS.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL 3#10 IN EXISTING CONDUIT FOR METER ON SIGN.
10. INSTALL 53C, 1 DLC.
11. INSTALL 12SMFO IN EXISTING CONDUIT.
12. INSTALL 6#14 AND 1#10 IN EXISTING CONDUIT.
13. INSTALL 2-12SMFO IN EXISTING CONDUIT.
23. INSTALL TYPE E LOOP DETECTORS. SEE SHEET E-52 FOR LOOP DETECTOR INSTALLATION DETAILS.
24. ADD 1 DLC IN EXISTING CONDUIT AND INSTALL 1 STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
25. SEE SHEET E-52.
26. INSTALL 53C, 1 DLC, 12SMFO.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3	RUN 4
12SMFO CABLE	VOICE/DATA						1+1	2	3
48SMFO CABLE	VOICE/DATA	1						future	
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1						
48SMFO CABLE	VIDEO DISTRIBUTION			1					
	SIZE 25 INNERDUCT	1	1	1	1				
CONDUIT SIZE		103				103	53	103	103

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-18

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

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

USERNAME => trlenard
DGN FILE => 712088uc018.dgn

CU 07388 | EA 120881

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DESIGN

PROJECT ENGINEER DAVID PADILLA
CALCULATED BY / DESIGNED BY DAVID PADILLA
CHECKED BY DAVID PADILLA
DATE 6-05 REVISED BY
6-05 DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 07-JUL-2005
TIME PLOTTED => 07:03

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	72	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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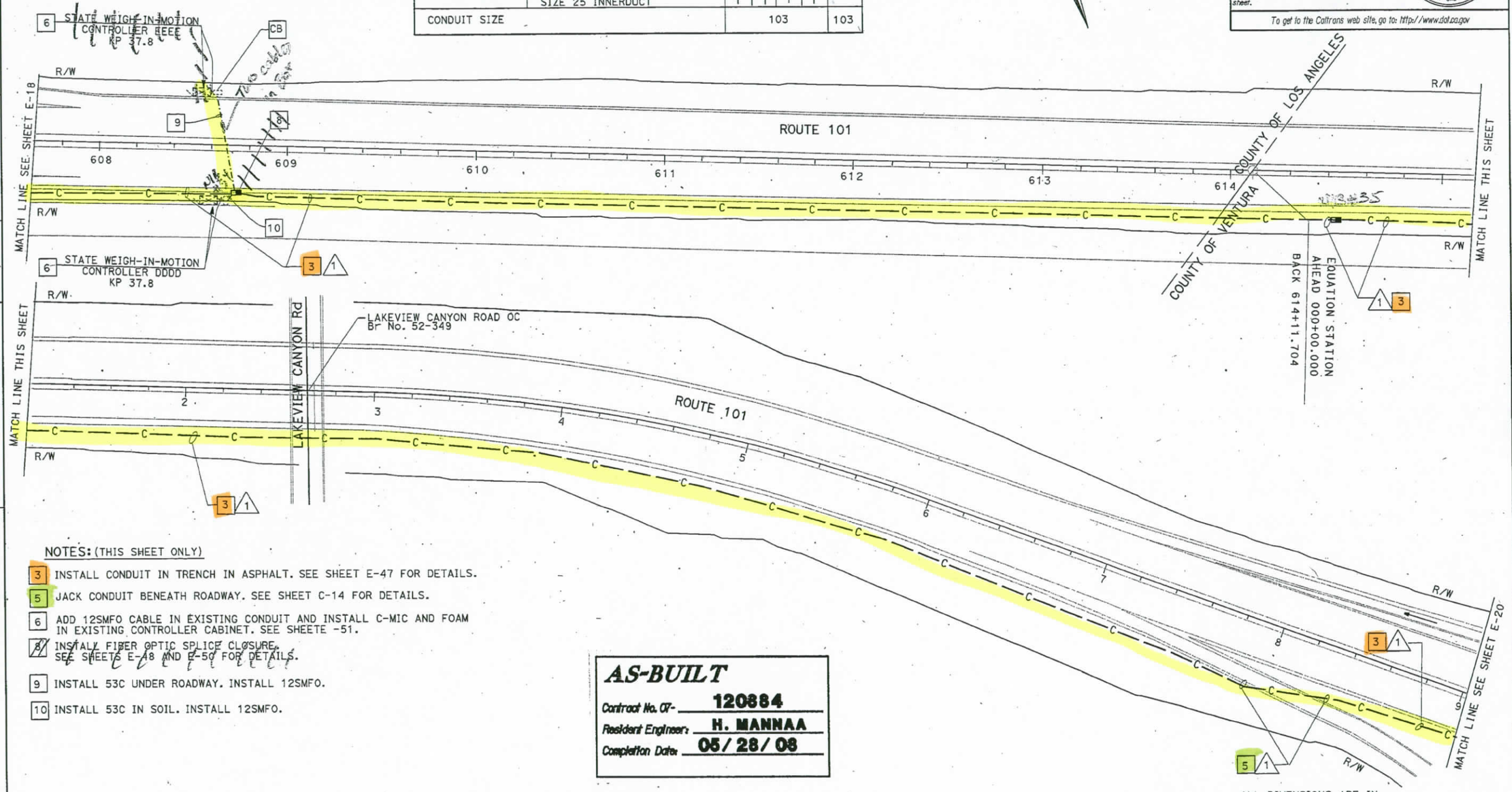
CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 1				
48SMFO CABLE	VOICE/DATA	1				
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1			
48SMFO CABLE	VIDEO DISTRIBUTION			1		
	SIZE 25 INNERDUCT	1	1	1	1	
CONDUIT SIZE		103				103



NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.

5 JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.

6 ADD 12SMFO CABLE IN EXISTING CONDUIT AND INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEETE -51.

8 INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.

9 INSTALL 53C UNDER ROADWAY. INSTALL 12SMFO.

10 INSTALL 53C IN SOIL. INSTALL 12SMFO.

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-19

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

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

USERNAME => trlenard
DGN FILE => 712088uc019.dgn

CU 07388 | EA 120881

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER: DAVID PADILLA

CALCULATED/DESIGNED BY	DAVID PADILLA	DATE 6-05	REVISED BY
CHECKED BY	DAVID PADILLA	6-05	DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 05-JUL-2005
TIME PLOTTED => 07:12

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	73	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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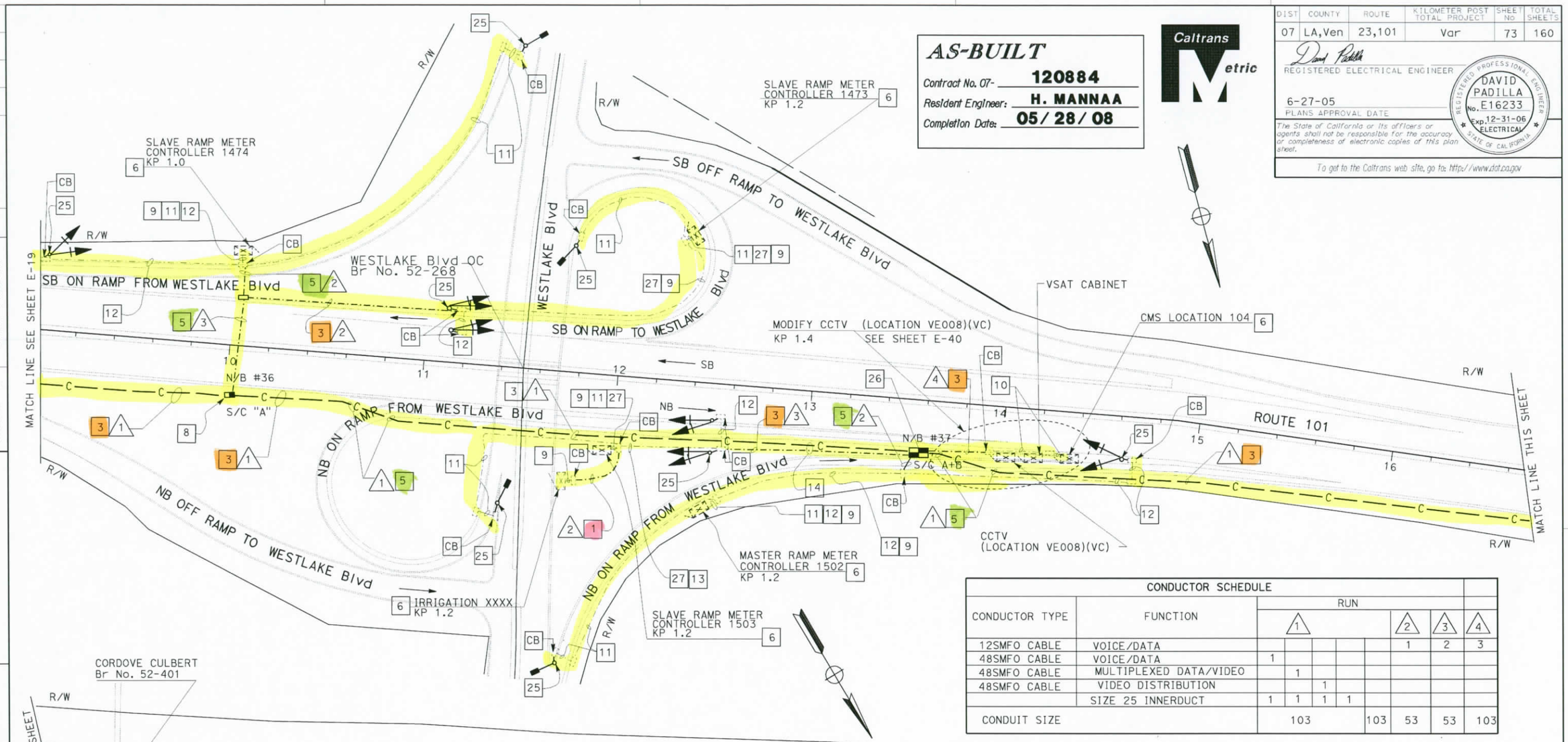
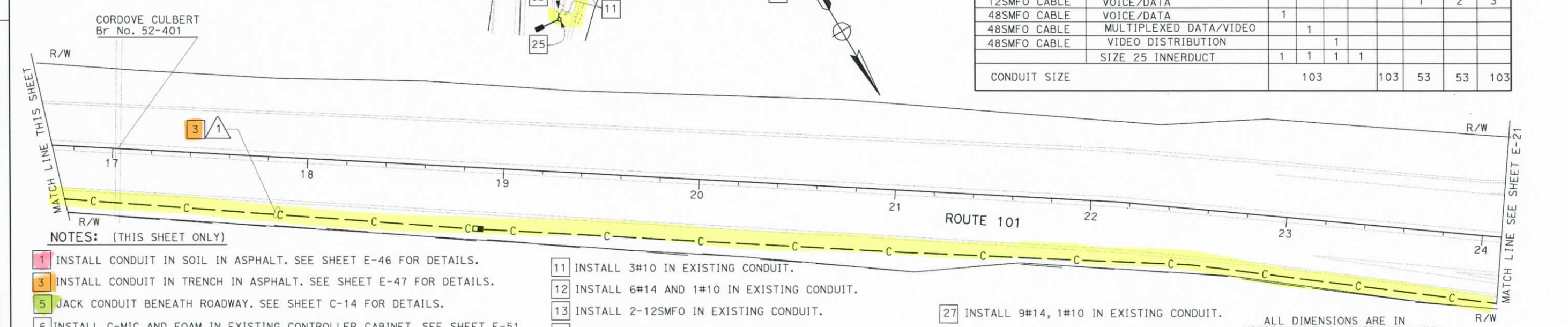
AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

Caltrans Metric



CONDUCTOR SCHEDULE								
CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3	RUN 4
12SMFO CABLE	VOICE/DATA						1	2	3
48SMFO CABLE	VOICE/DATA	1							
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1						
48SMFO CABLE	VIDEO DISTRIBUTION			1					
	SIZE 25 INNERDUCT	1	1	1	1				
CONDUIT SIZE		103				103	53	53	103



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN SOIL IN ASPHALT. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51. ADD 12SMFO AND CONNECT TO CONTROLLER.
8. INSTALL FIBER OPTIC SPLICE CLOSURE.
9. ADD 12SMFO IN EXISTING CONDUIT.
10. RC 12P22 CABLE. INSTALL 1-12SMFO IN EXISTING CONDUIT.
11. INSTALL 3#10 IN EXISTING CONDUIT.
12. INSTALL 6#14 AND 1#10 IN EXISTING CONDUIT.
13. INSTALL 2-12SMFO IN EXISTING CONDUIT.
14. INSTALL CONDUITS IN THE SAME TRENCH.
25. SEE SHEET E-52.
26. INSTALL FIBER OPTIC SPLICE CLOSURES IN SPLICE VAULT SEE SHEET E-49 FOR DETAILS.
27. INSTALL 9#14, 1#10 IN EXISTING CONDUIT.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-20

DATE	REVISED BY	DATE	REVISED BY
6-05	DAVID PADILLA	6-05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2008 | TIME PLOTTED => 12:08

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

USERNAME => s123048
DGN FILE => 712088ua020.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	74	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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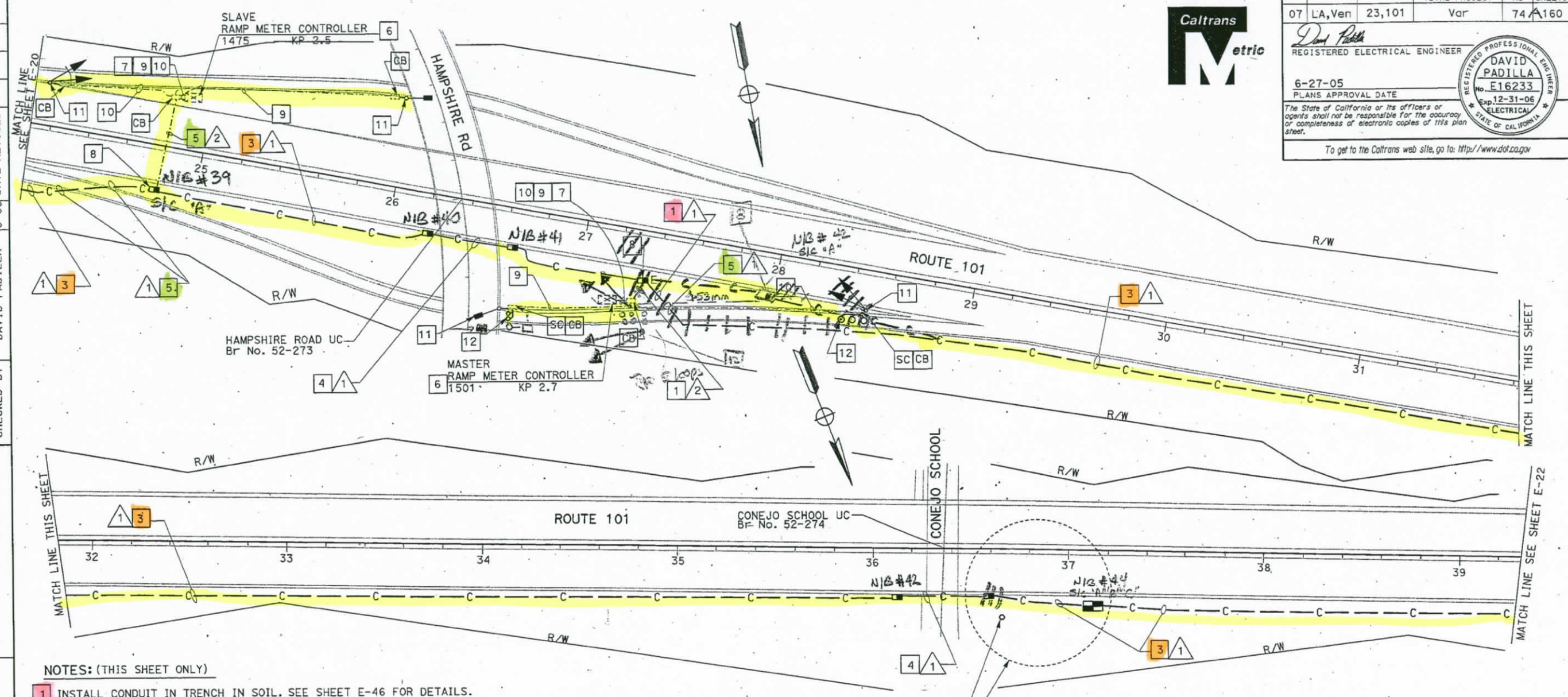

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL. SEE SHEET E-46 FOR DETAILS.
3. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-46 FOR DETAILS.
4. INSTALL CONDUIT IN BRIDGE. SEE STRUCTURAL SHEETS FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC AND FODM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. ADD 1-12SMFO IN EXISTING CONDUIT AND CONNECT TO CONTROLLER.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL 3#10 IN EXISTING CONDUIT FOR METER ON SIGN.
10. INSTALL 6#14 AND 1#10 IN EXISTING CONDUIT FOR RAMP METER SIGNAL.
11. SEE SHEET E-52.
12. INSTALL TYPE E DETECTOR LOOPS. SEE SHEET E-52.

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2
12SMFO CABLE	VOICE/DATA						1
48SMFO CABLE	VOICE/DATA	1					
48SMFO CABLE	MULTIPLEXED DATA/VIDEO		1				
48SMFO CABLE	VIDEO DISTRIBUTION			1			
	SIZE 25 INNERDUCT	1	1	1	1		
CONDUIT SIZE		103				103	53

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

SCALE: 1:1000

E-21

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
REVISED BY: DATE REVISED
DATE: 6-05

LAST REVISION 00-00-00
DATE PLOTTED => 07-JUL-2005
TIME PLOTTED => 07:03

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

USERNAME => trienard
DGN FILE => T:\2088ua021.dgn

CU 07388 EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	75A	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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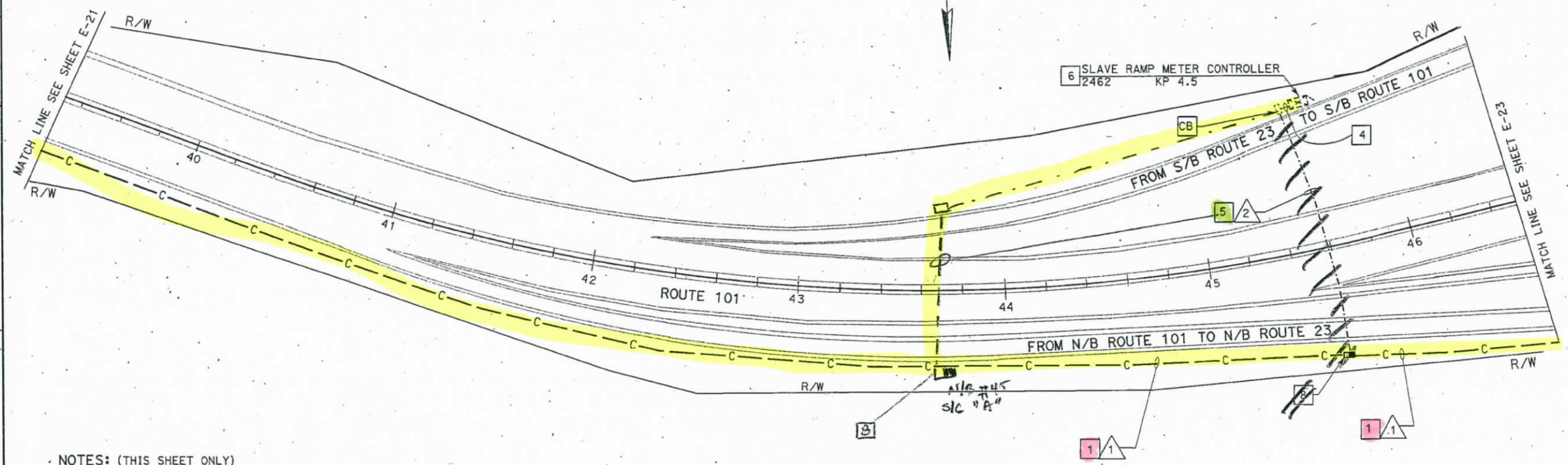
CONDUCTOR SCHEDULE							
CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2
12SMFO CABLE							1
48SMFO CABLE	VOICE/DATA		1				
48SMFO CABLE	MULTIPLEXED DATA/VIDEO			1			
48SMFO CABLE	VIDEO DISTRIBUTION				1		
	SIZE 25 INNERDUCT	1	1	1	1		
CONDUIT SIZE		103				103	103



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. ADD 12SMFO IN EXISTING CONDUIT AND CONNECT TO EXISTING CONTROLLER CABINET.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/08

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-22

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	CALCULATED/DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans ITS DESIGN	DAVID PADILLA	DAVID PADILLA	DAVID PADILLA	DATE 6-05	6-05

LAST REVISION 00-00-00 | DATE PLOTTED => 05-JUL-2005 | TIME PLOTTED => 08:07

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

USERNAME => trienard
DGN FILE => T12088ud022.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA,Ven	23,101	Var	76	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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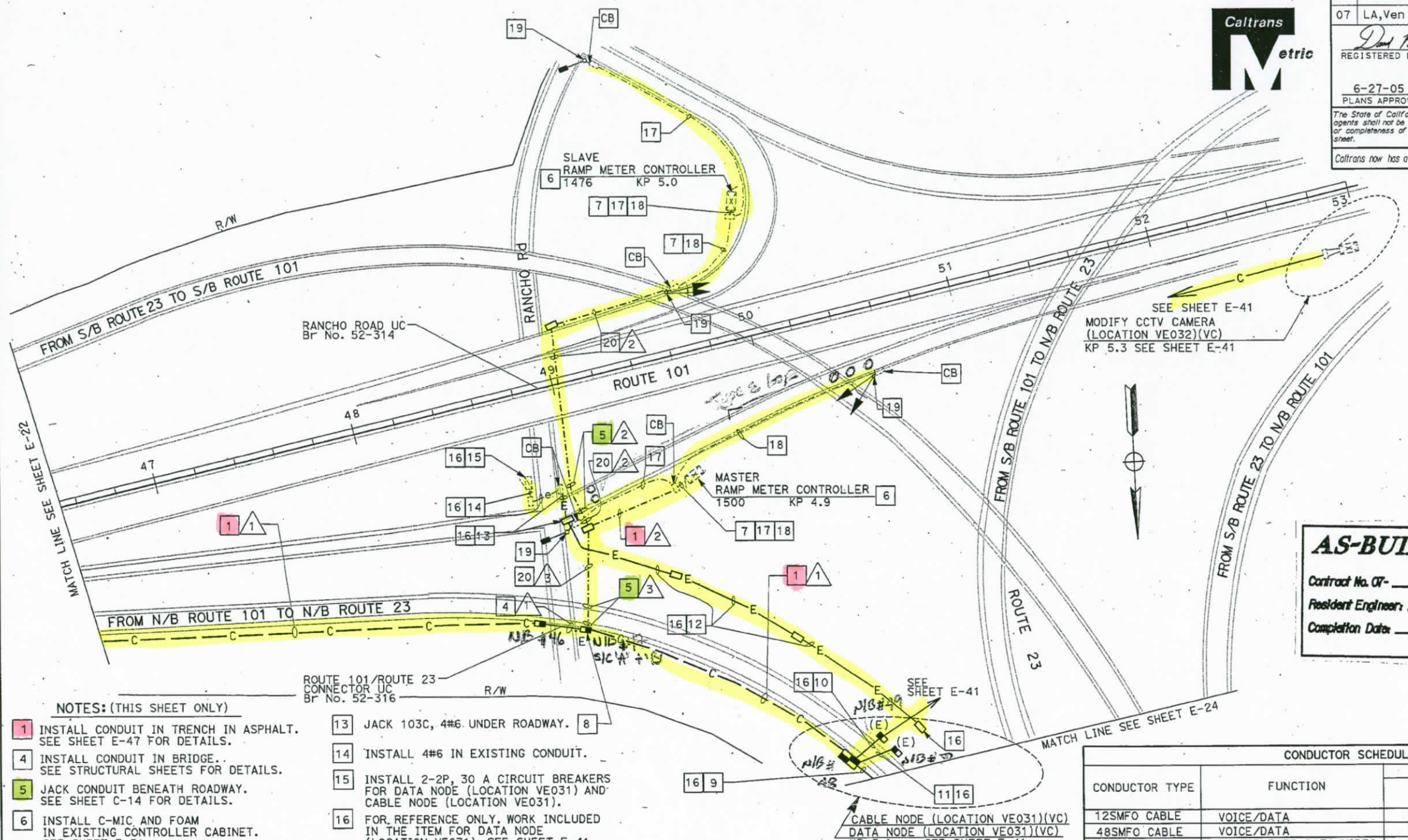

AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/06

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.
4. INSTALL CONDUIT IN BRIDGE. SEE STRUCTURAL SHEETS FOR DETAILS.
5. JACK CONDUIT BENEATH ROADWAY. SEE SHEET C-14 FOR DETAILS.
6. INSTALL C-MIC AND FOAM IN EXISTING CONTROLLER CABINET. SEE SHEET E-51.
7. ADD 12SMFO CABLE IN EXISTING CONDUIT.
8. INSTALL FIBER OPTIC SPLICE CLOSURE. SEE SHEETS E-48 AND E-50 FOR DETAILS.
9. INSTALL 2-103C IN ASPHALT. INSTALL 2-72SMFO AND 1-48SMFO FROM EXISTING SPLICE VAULT AT STATION 34+40. SEE SHEET E-24.
10. JACK 2-103C UNDER ROADWAY. INSTALL 48SMFO AND 72SMFO.
11. JACK 2-103C UNDER ROADWAY. INSTALL 3-48SMFO AND 1-72SMFO.
12. INSTALL 103C, 4#6 TRENCH IN SOIL.
13. JACK 103C, 4#6 UNDER ROADWAY.
14. INSTALL 4#6 IN EXISTING CONDUIT.
15. INSTALL 2-2P, 30 A CIRCUIT BREAKERS FOR DATA NODE (LOCATION VE031) AND CABLE NODE (LOCATION VE031).
16. FOR REFERENCE ONLY. WORK INCLUDED IN THE ITEM FOR DATA NODE (LOCATION VE031). SEE SHEET E-41.
17. INSTALL 3#10 IN EXISTING CONDUIT FOR METER ON SIGN.
18. INSTALL 6#14 AND 1#10 IN EXISTING CONDUIT FOR RAMP METER SIGNAL.
19. SEE SHEET E-52.
20. INSTALL CONDUIT IN SOIL. SEE SHEET E-46 FOR DETAILS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1					RUN 2	RUN 3
12SMFO CABLE	VOICE/DATA						1	2
48SMFO CABLE	VOICE/DATA		1					
48SMFO CABLE	MULTIPLEXED DATA/VIDEO			1				
48SMFO CABLE	VIDEO DISTRIBUTION				1			
	SIZE 25 INNERDUCT	1	1	1	1			
CONDUIT SIZE		103				103	53	53

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-23

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY: DAVID PADILLA — DATE 6/05
CHECKED BY: DAVID PADILLA — REVISED BY — DATE REVISED

LAST REVISION 00-00-00 — DATE PLOTTED => 05-JUL-2005 — TIME PLOTTED => 09:53

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

USERNAME => trstrk
DGN FILE => 712088ua023.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA,Ven	23,101	Var	77 A	160

REGISTERED ELECTRICAL ENGINEER

6-27-05
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID PADILLA No. E16233 Exp. 12-31-06 ELECTRICAL STATE OF CALIFORNIA

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NOTES:(THIS SHEET ONLY)

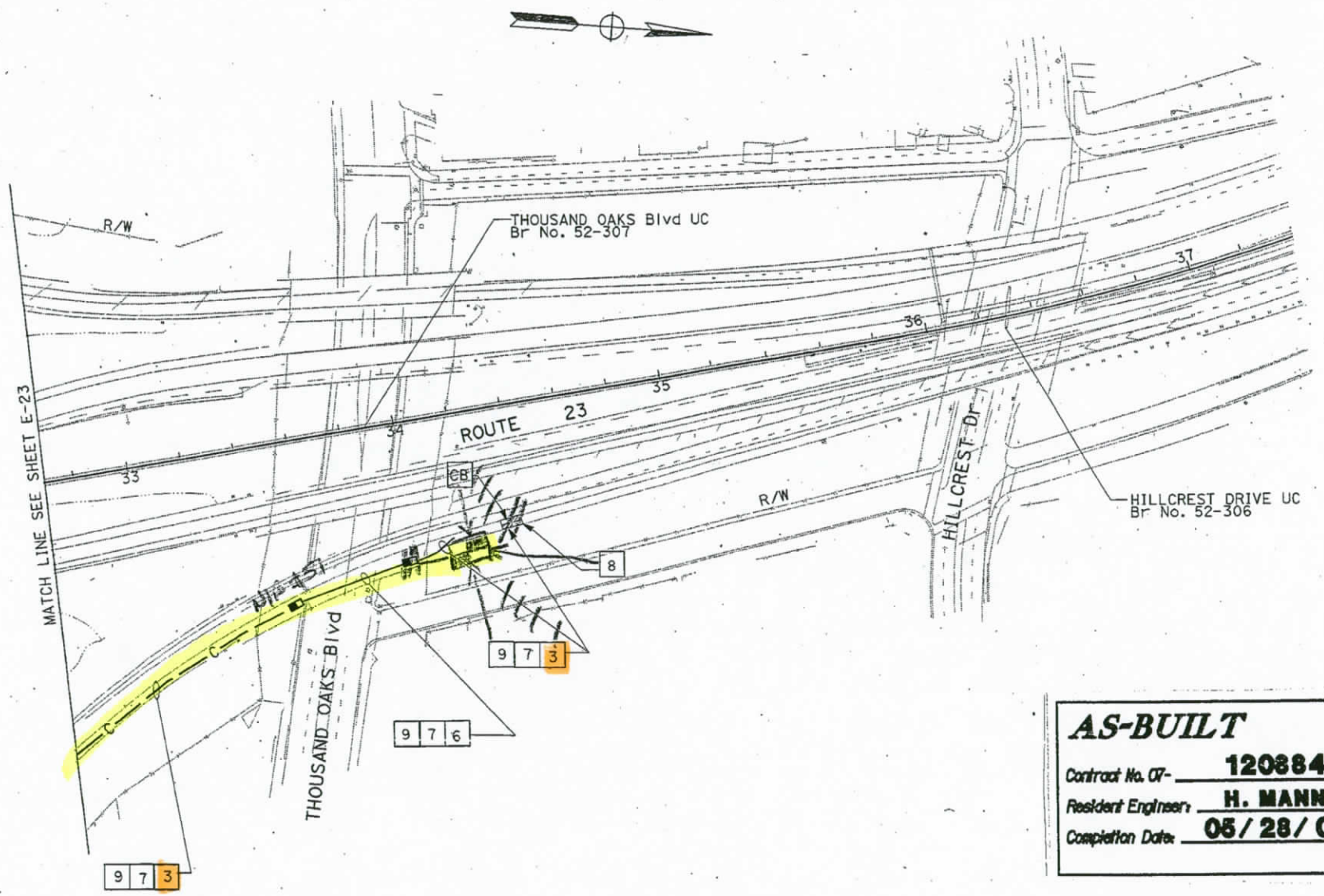
3 INSTALL 2-103C IN TRENCH IN ASPHALT. SEE SHEET E-47 FOR DETAILS.

6 INSTALL 2-103C IN BRIDGE STRUCTURE SEE STRUCTURE PLANS FOR DETAILS.

7 INSTALL COILED 2-72SMFO AND 48SMFO FROM EXISTING SPLICE VAULT AT STATION 34+40 TO CABLE NODE (LOCATION VE031) AND DATA NODE (LOCATION VE031).

8 INCLUDED IN ON-GOING CONTRACT.

9 FOR REFERENCE ONLY. CABLE WORK INCLUDED IN THE ITEM FOR DATA NODE (LOCATION VE031). SEE SHEET E-41.



AS-BUILT
Contract No. 07- 120884
Resident Engineer: H. MANNAA
Completion Date: 05/28/06

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-24

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED
6/05	DAVID PADILLA	6/05	DAVID PADILLA

CALCULATED/DESIGNED BY: DAVID PADILLA
CHECKED BY: DAVID PADILLA
PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 05-JUL-2005
TIME PLOTTED => 09:53

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

USERNAME => trstrk
DGN FILE => 712088ua024.dgn

CU 07388 | EA 120881

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	1	178

STATE OF CALIFORNIA **ACNH-P101(985)E**

DEPARTMENT OF TRANSPORTATION

Caltrans Metric

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

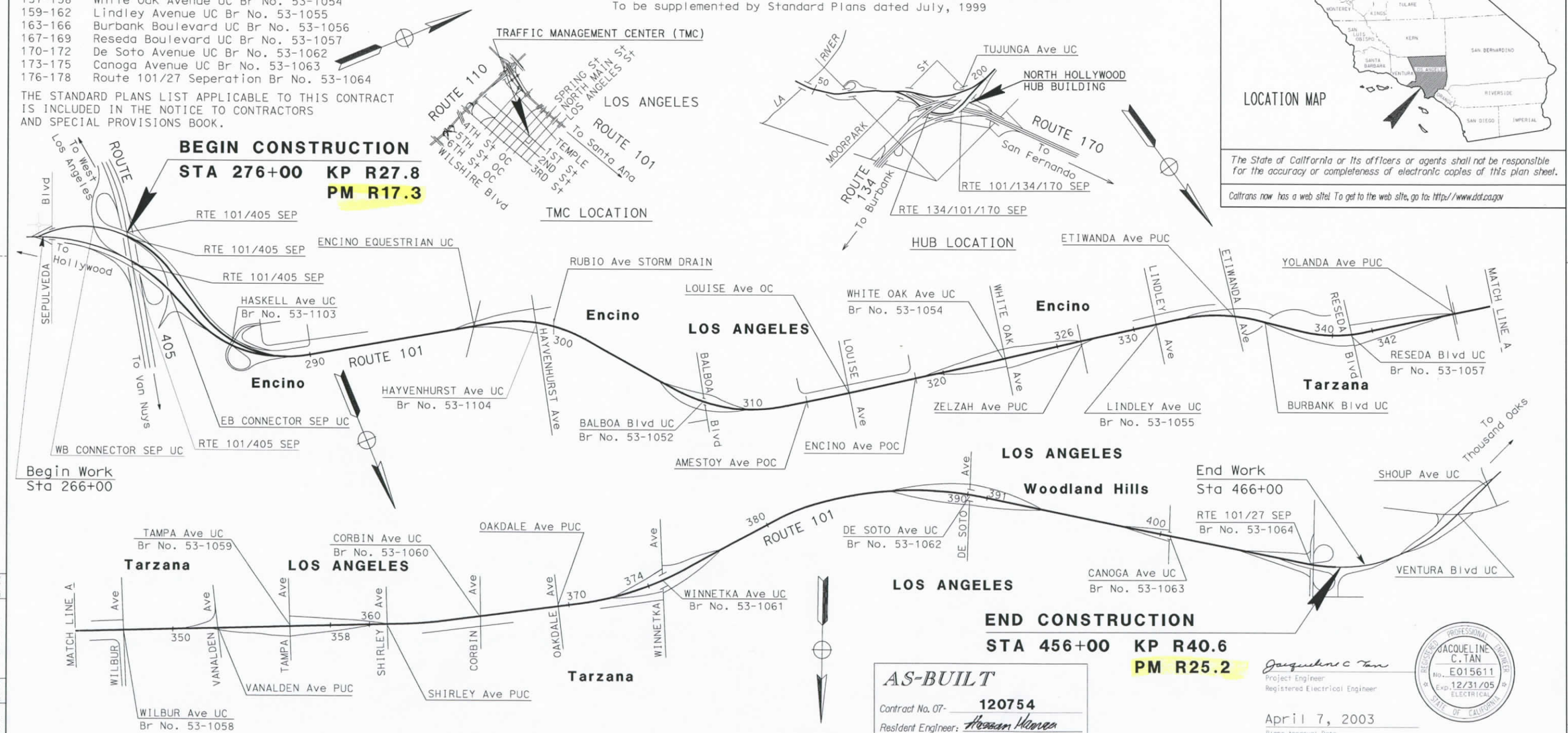
IN LOS ANGELES COUNTY IN LOS ANGELES FROM ROUTE 405/101 SEPARATION TO 0.2 km NORTH OF ROUTE 101/27 SEPARATION, AT NORTH HOLLYWOOD HUB BUILDING, AND AT TRAFFIC MANAGEMENT CENTER

To be supplemented by Standard Plans dated July, 1999

INDEX OF SHEETS

Sheet No.	Description
1	Title and Location Map
2-3	Layouts
4-12	Construction Details
13-32	Utility Plans
33-37	Traffic Handling Plans
38	Construction Area Signs
39	Summary of Quantities
40-51	Sign Plans, Details and Quantities
52-63	Retaining Wall Plans
64-132	Electrical Plans
133-142	Revised Standard Plans
STRUCTURE PLANS	
143-146	EB Connector Seperation UC Br No. 53-1147R
147-149	Haskell Avenue UC Br No. 53-1103R
150-153	Hayvenhurst Avenue UC Br No. 53-1104
154-156	Balboa Boulevard UC Br No. 53-1052
157-158	White Oak Avenue UC Br No. 53-1054
159-162	Lindley Avenue UC Br No. 53-1055
163-166	Burbank Boulevard UC Br No. 53-1056
167-169	Reseda Boulevard UC Br No. 53-1057
170-172	De Soto Avenue UC Br No. 53-1062
173-175	Canoga Avenue UC Br No. 53-1063
176-178	Route 101/27 Seperation Br No. 53-1064

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO CONTRACTORS AND SPECIAL PROVISIONS BOOK.



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

NO SCALE

AS-BUILT

Contract No. 07- 120754

Resident Engineer: Hossam Hamza

Completion Date: 6/17/05

Jacqueline C. Tan
Project Engineer
Registered Electrical Engineer

April 7, 2003
Plans Approval Date

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

Contract No. **07-120754**

PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE
H. TRINH	2/03	J. TAN	2/03

LAST REVISION 00-00-00

TIME PLOTTED => 18-SEP-2007 15:30

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80 USERNAME => s124928

07 LA 101 R27.8-R40.6 64 178

Jacqueline C Tan 3/20/03

4-7-03

JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL

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TABLE OF CONTENTS - ELECTRICAL PLANS

E-1,E-2	COMMUNICATIONS SYSTEM ROUTING (LEGEND AND NOTES)
E-3 TO E-21	INDUCTIVE LOOP DETECTORS, CABLE NODE, VIDEO NODE DATA NODE AND COMMUNICATIONS SYSTEM ROUTING
E-22 TO E-30	CCTV CAMERA LOCATIONS
E-31 TO E-36	TMS LOCATIONS
E-37	CMS NO. 129
E-38 TO E-41	COMMUNICATIONS SYSTEM ROUTING (SCHEMATIC)
E-42	TRENCH IN SOIL DETAILS
E-43	TRENCH IN PAVEMENT DETAILS
E-44	JACKED CONDUITS DETAILS
E-45	ELECTRICAL DIAGRAM FOR CCTV AND PAN/TILT UNIT
E-46	COMMUNICATIONS PULL BOX DETAILS
E-47	NO. 5 AND COMMUNICATIONS PULL BOX DETAILS
E-48	SPLICE VAULT DETAILS
E-49	COMMUNICATIONS SYSTEM ROUTING (CONTROLLER CABINET DETAILS)
E-50	CCTV AND COMMUNICATIONS SYSTEM DETAILS (VIDEO/DATA/CABLE NODE DETAILS)
E-51	334-TV CABINET LAYOUTS
E-52	NORTH HOLLYWOOD COMMUNICATIONS HUB BUILDING (SCHEMATIC)
E-53 TO E-54	COMMUNICATIONS SYSTEM ROUTING (FIBER ASSIGNMENT TABLE)
E-55 TO E-58	COMMUNICATIONS SYSTEM ROUTING (FIBER ASSIGNMENT)
E-59	COMMUNICATIONS SYSTEM ROUTING (FIBER ASSIGNMENT TABLE)
E-60 TO E-61	COMMUNICATIONS SYSTEM ROUTING (FIBER ASSIGNMENT)
E-62	DATA NODE LOCATION VE213 (CIRCUIT ASSIGNMENT TABLE)
E-63	VIDEO NODE AND VIDEO SWITCH (CIRCUIT ASSIGNMENT TABLES)
E-64	NORTH HOLLYWOOD COMMUNICATIONS HUB BUILDING (EXISTING EQUIPMENT PLAN)
E-65	CCTV AND COMMUNICATIONS SYSTEM ROUTING (ELECTRICAL QUANTITIES)
E-66	TMS AND RMS (TYPICAL INDUCTIVE LOOP DETECTOR DETAILS FOR SINGLE & MULTILANE INSTALLATIONS)
E-67	334 CABINET PAD DETAILS
E-68	CMS (WIRING DETAILS)
E-69	SOUNDWALL CROSSING DETAIL

TABLE 1 - CMS CONTROL CABLE

CONDUCTOR TYPE	FUNCTION	QTY
24P18 AWG CABLE *	CMS CONTROL CABLE *	1
6P18 AWG CABLE *	CMS CONTROL CABLE *	1

* STATE-FURNISHED CABLES

ABBREVIATIONS

12SMFO	FIBER OPTIC CABLE, 12 SINGLE MODE FIBERS
48SMFO	FIBER OPTIC CABLE, 48 SINGLE MODE FIBERS
Ø	DIAMETER
BB	BASE BAND
B/O	BREAKOUT CABLE
CCK	CAMERA CONTROL KEYBOARD
CCR	CAMERA CONTROL RECEIVER
CCT	CAMERA CONTROL TRANSMITTER
CHAN #	CHANNEL NUMBER
CS	CONTROL STATION
DEMARC	DEMARCATION
DEMUX	DEMULTIPLEXER
DIST	DISTRIBUTION
DLC	DETECTOR LEAD-IN CABLE
DWP	DEPARTMENT OF WATER & POWER, CITY OF LOS ANGELES
DN	DATA NODE
FDF	FIBER DISTRIBUTION FRAME
FDU	FIBER DISTRIBUTION UNIT
FLEX	FLEXIBLE
F/O OR FO	FIBER OPTIC
FODM	FIBER OPTIC DATA MODEM
FRE	FIBERGLASS REINFORCED EPOXY
GRS	GALVANIZED RIGID STEEL
INTRFCE	INTERFACE
IRR	IRRIGATION
J-BOX	JUNCTION BOX
MOD	MODEM
MUX	MULTIPLEXER
NOM	NOMINAL
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
PTZ	PAN, TILT AND ZOOM
REQ'D	REQUIRED
RMS	RAMP METERING SYSTEM OR STATION
RX	RECEIVER
SCE	SOUTHERN CALIFORNIA EDISON
SCHED	SCHEDULE
SH	SHORT HAUL
SM	SINGLE MODE
STL	STEEL
TDM	TIME DOMAIN MULTIPLEXER
TELCO	TELEPHONE COMPANY
TMC	TRANSPORTATION MANAGEMENT CENTER
TMS	TRAFFIC MONITORING STATION
TP	TWISTED PAIR
TS	TRAFFIC SIGNAL
TX	TRANSMITTER
VN	VIDEO NODE
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPLEXER
VR	SINGLE VIDEO RECEIVER
VX	SINGLE VIDEO TRANSMITTER
#X	X AWG CONDUCTOR, ie #10 MEANS 10 AWG CONDUCTOR
YP	Y PAIRS OF CONDUCTORS, ie 2P MEANS 2 PAIRS

LEGEND

- SPLICE VAULT
- EXISTING SPLICE VAULT
- FIBER OPTIC PATCH CORD
- COMMUNICATIONS PULL BOX
- EXISTING COMMUNICATIONS PULL BOX
- —E— SERVICE CONDUIT
- EXISTING SERVICE CONDUIT
- 1 2 CONDUIT LINE DELIMITER FOR CONSTRUCTION NOTES
- TYPE 334-TV CABINET
- EXISTING TELEPHONE BRIDGE
- FIBER OPTIC CABLE
- COAXIAL CABLE

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
(LEGEND AND NOTES)

FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

FOR REDUCED PLANS ORIGINAL

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

Jacqueline C. Tan 3/20/03

4-7-03

JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL

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GENERAL NOTES:

1. FOR COMPLETE R/W DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
2. MODEM NUMBERS FOR SOME CONTROLLERS HAVE NOT YET BEEN ASSIGNED, AND THEREFORE SUCH LOCATIONS HAVE BEEN ASSIGNED TO MODEM ID. VERIFY MODEM NUMBERS BEFORE CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY PROPOSED CCTV POLE LOCATIONS WITH THE ENGINEER PRIOR TO PLACEMENT OF FOUNDATIONS. SEE L - SHEETS FOR EXACT LOCATION OF CCTV CAMERA .
4. THE LOCATIONS OF PROPOSED COMMUNICATIONS SYSTEM ELEMENTS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED OR APPROVED BY THE ENGINEER. SEE L-SHEETS FOR EXACT LOCATION OF CCTV CAMERAS.
5. TYPE 334-TV CONTROLLER CABINET DOOR INDICATES THE FRONT OF THE CABINET.
6. WHEN EXISTING DETECTOR LOOPS AND CONDUITS ARE SHOWN IN THE VICINITY OF PROPOSED CONDUIT TRENCHES THE CONTRACTOR SHALL AVOID DAMAGING THE EXISTING CONDUIT. TRENCHING WITH HAND TOOLS MAY BE REQUIRED.
7. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELCO FACILITIES, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO ALL AGENCIES CONCERNED, AND THE ENGINEER 72 HOURS PRIOR TO COMMENCING WORK.
8. IDENTIFICATION FORMAT OF TRAFFIC OPERATION SYSTEM (TOS) ELEMENTS:

FYXXX

- KILO METER POST (TO NEAREST 10TH)
- FREEWAY NAME SHORT FORM

9. UNLESS OTHERWISE NOTED, ALL COMMUNICATION CONDUIT BENDS SHALL BE 1.2 m RADIUS FACTORY BENDS. ALL OTHER CONDUITS SHALL HAVE A MINIMUM BEND RADIUS OF NO LESS THAN 6 TIMES THE CONDUIT DIAMETER.
10. CONDUITS AND CONDUCTORS IN CONDUIT AND CONDUCTOR SCHEDULE TABLES ARE NEW UNLESS MARKED (E) INDICATING EXISTING.
11. PVC, WHERE CALLED OUT IN THESE PLANS, SHALL MEAN RIGID NON-METALLIC CONDUIT AS DEFINED IN THE STANDARD SPECIFICATIONS.
12. CONDUIT(S) SHALL BE INSTALLED WHERE SHOWN ON THE PLANS RELATIVE TO THE EXISTING SHOULDER.

PROJECT NOTES: (FOR E-3 TO E-37)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE. SEE SHEETS E-45 AND STD PLANS ES-16A FOR DETAILS.
8. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON EXISTING SIGN STRUCTURE. SEE SHEETS E-45 AND STD PLAN ES-16B FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
12. INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CONTROLLER CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.
13. INSTALL TYPE 334-TV CONTROLLER CABINETS ON NEW FOUNDATION. CONTROLLER CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE. SEE DETAIL 3, SHEET E-50.
14. INSTALL COMMUNICATIONS PULL BOX APPROXIMATELY 5 m FROM EDGE OF STRUCTURE.
16. INSTALL FDU AND FIBER OPTIC MODEM IN CONTROLLER CABINET. SEE SHEETS E-49 AND E-68 FOR DETAILS.
17. INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER CABINET.
19. INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.
20. INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 78C, TYPE 1. ELECTRIC COMPANY TO INSTALL CONDUCTORS.
22. INSTALL TYPE 1 CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.
23. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
26. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
29. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR CONTROL STATION.
30. INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CONTROLLER CABINET SHALL INCLUDE EQUIPMENT AT DATA NODE. SEE DETAIL 3, SHEET E-50 AND DETAIL B SHEET E-51.
31. INSTALL TYPE I CONDUIT(S) IN TRENCH IN PAVED SHOULDER. CONDUIT(S) SHALL BE INSTALLED AS CLOSE TO THE EDGE OF TRAVELED WAY AS POSSIBLE.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
(NOTES)

E-2

CALCULATED/ DESIGNED BY	HT	DATE 7/02	REVISED BY CS
CHECKED BY	DL	7/02	DATE REVISED 7/02

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
14. INSTALL COMMUNICATIONS PULL BOX APPROXIMATELY 5 m FROM EDGE OF STRUCTURE.
31. INSTALL TYPE I CONDUIT(S) IN TRENCH IN PAVED SHOULDER. CONDUIT(S) SHALL BE INSTALLED AS CLOSE TO THE EDGE OF TRAVELED WAY AS POSSIBLE.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8-R40.6	66	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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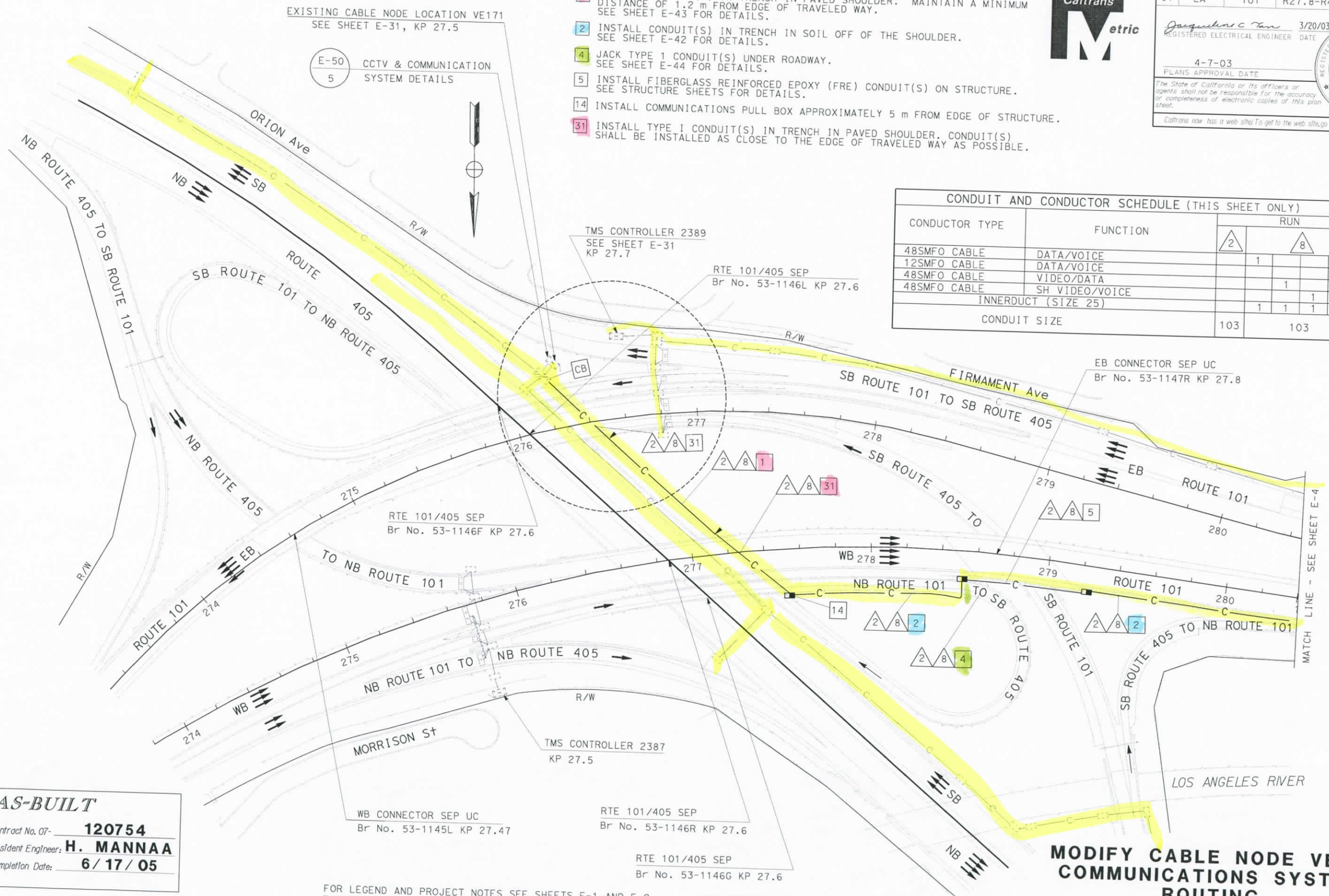

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 2	RUN 8			
48SMFO CABLE	DATA/VOICE		1			
12SMFO CABLE	DATA/VOICE					
48SMFO CABLE	VIDEO/DATA			1		
48SMFO CABLE	SH VIDEO/VOICE				1	
INNERDUCT (SIZE 25)			1	1	1	1
CONDUIT SIZE		103	103			

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

MODIFY CABLE NODE VE171 COMMUNICATIONS SYSTEM ROUTING

SCALE 1:1000

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:41

00-00-00

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	101	R27.8-R40.6	67	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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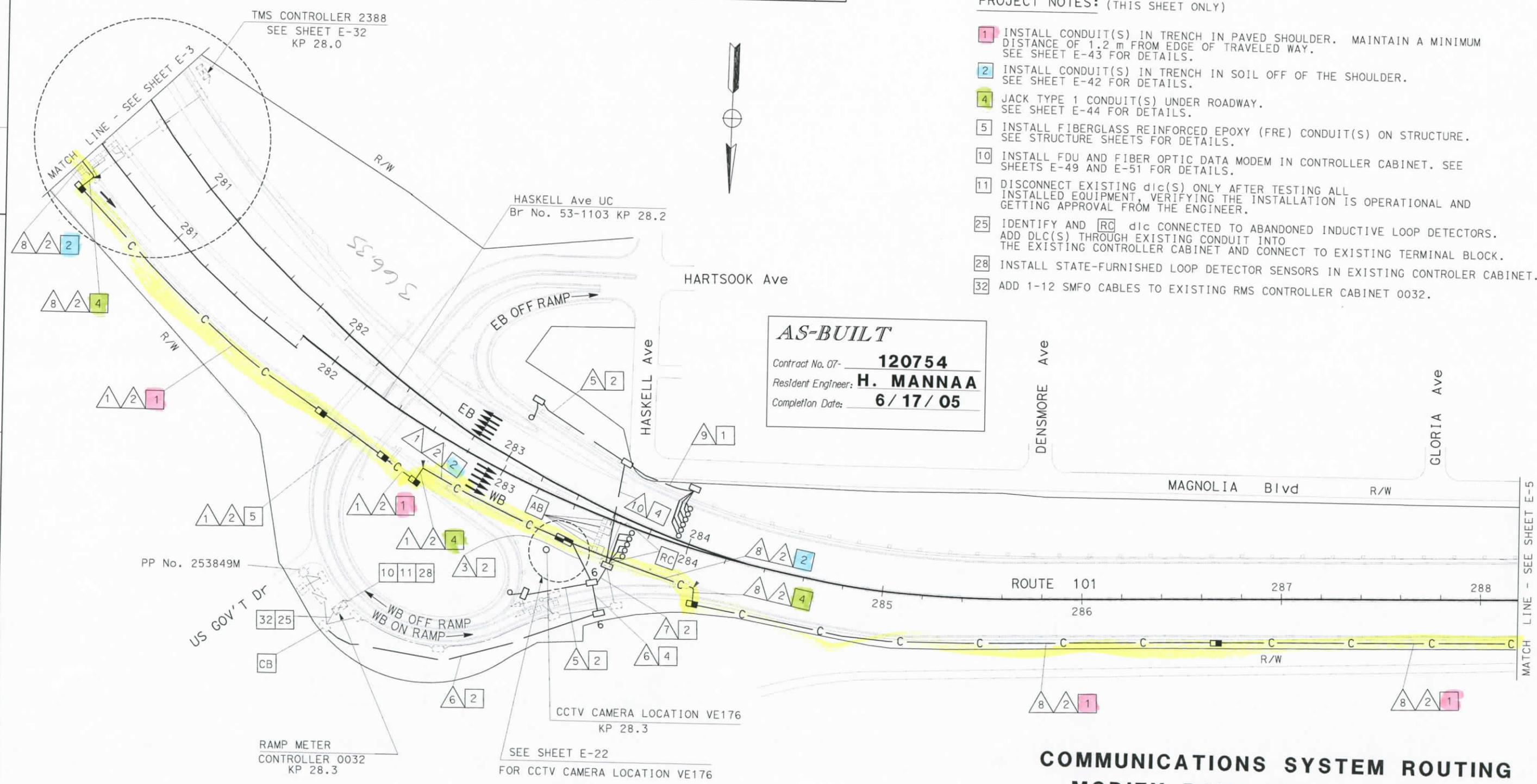
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT/ CONDUCTOR	FUNCTION	RUN 1				2	3	5	6		7	8				9	10
48SMFO CABLE	DATA/VOICE	1										1					
12SMFO CABLE	DATA/VOICE				1		1			1							
48SMFO CABLE	VIDEO/DATA		1														
48SMFO CABLE	SH VIDEO/VOICE			1									1				
DLC	RAMP/COUNT													1			
INNERDUCT (SIZE 25)		1	1	1	1			1	13		12					6	7
INNERDUCT (SIZE 32)										1		1	1	1	1		
CONDUIT SIZE		103				103	53	53	78		53	103				53	53



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(S) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLER CABINET.
32. ADD 1-12 SMFO CABLES TO EXISTING RMS CONTROLLER CABINET 0032.

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0032)

SCALE 1:1000

E-4

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT
PROJECT ENGINEER HENRY H. TRINH
CALCULATED/DESIGNED BY HT CHECKED BY DL
DATE 7/02 REVISED BY CS DATE REVISED 7/02
LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8-R40.6	68	178

Jacqueline C Tan 12/31/05
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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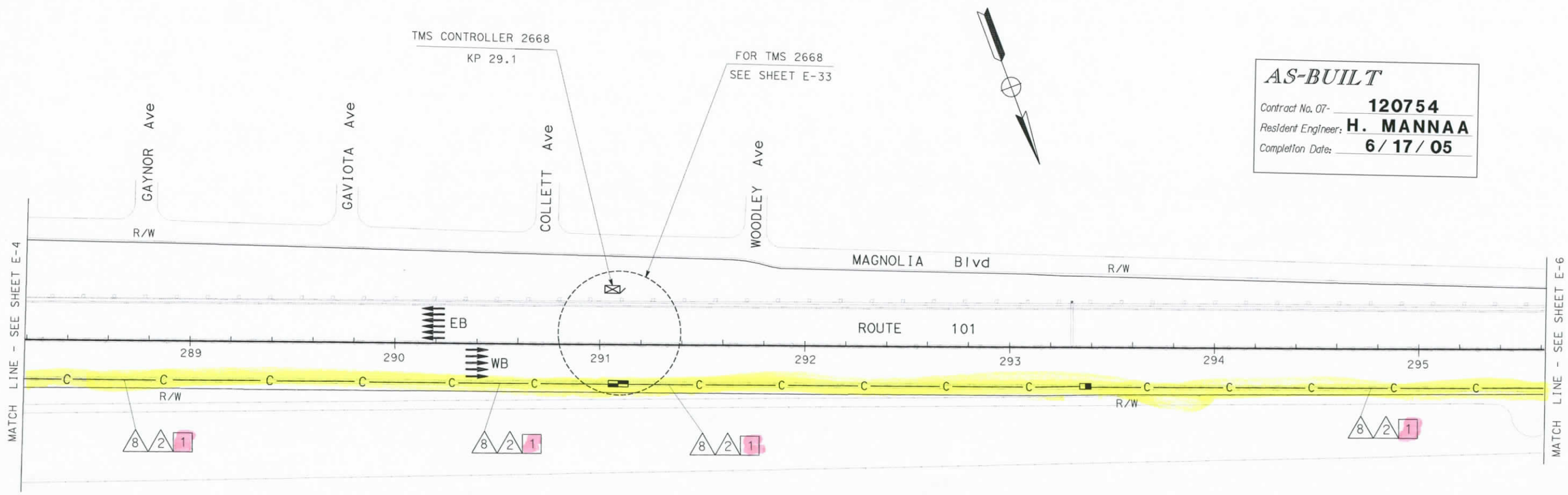
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT/CONDUCTOR	FUNCTION	RUN 8				RUN 2
48SMFO CABLE	DATA/VOICE	1				
12SMFO CABLE	DATA/VOICE					
48SMFO CABLE	VIDEO/DATA		1			
48SMFO CABLE	SH VIDEO/VOICE			1		
DLC	RAMP/COUNT					
INNERDUCT (SIZE 25)		1	1	1	1	
CONDUIT SIZE		103				103

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05



COMMUNICATIONS SYSTEM ROUTING

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER
HENRY H. TRINH

CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

E-5

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8-R40.6	69	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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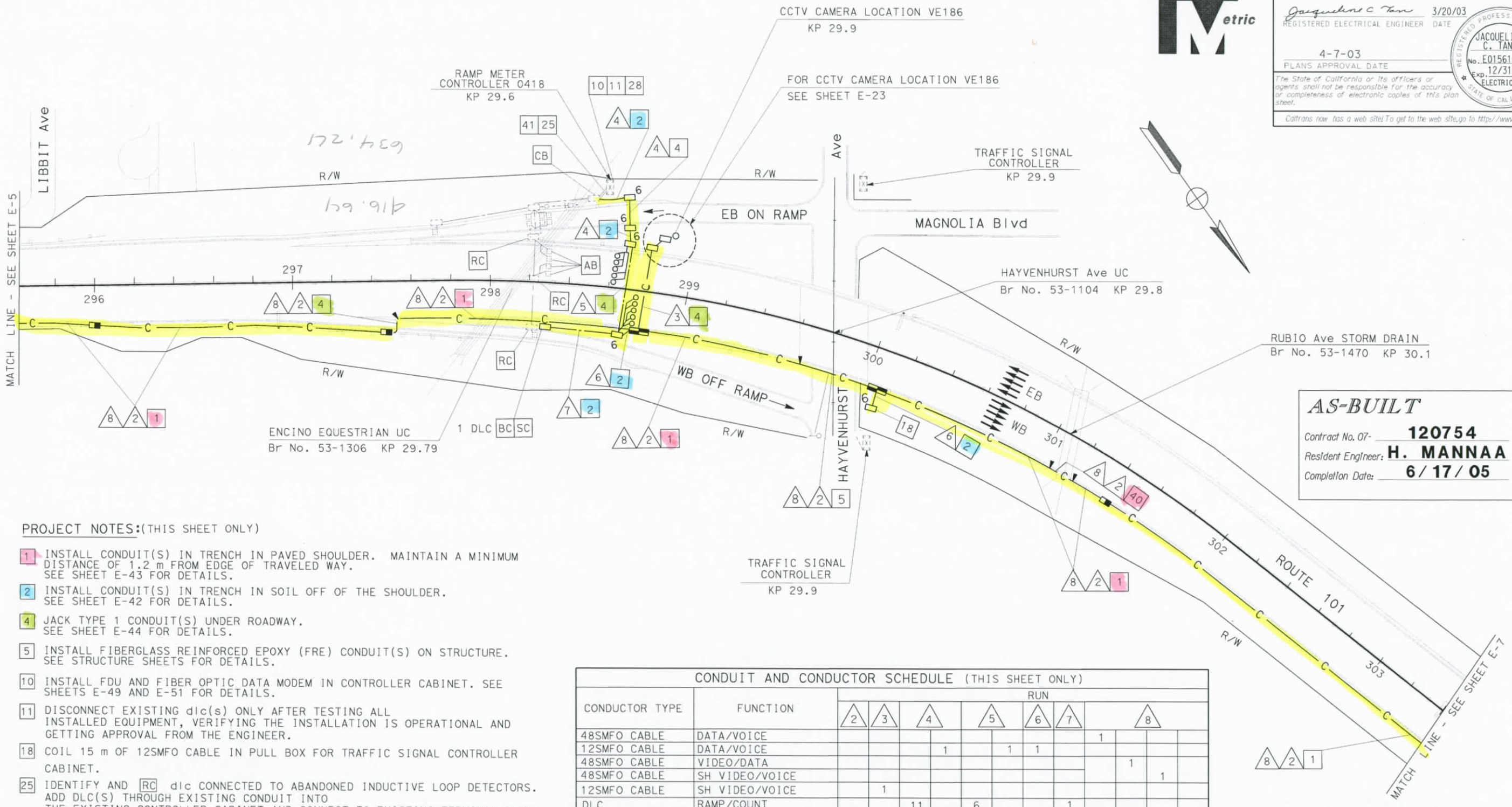

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

PROJECT NOTES:(THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER CABINET.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
40. INSTALL CONDUIT(S) SIDE BY SIDE, IN TRENCH, IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
41. ADD 1-12 SMFO CABLES TO EXISTING RMS CONTROLLER CABINET 0418.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 2	3	4		5		6	7	8			
48SMFO CABLE	DATA/VOICE									1			
12SMFO CABLE	DATA/VOICE				1		1	1					
48SMFO CABLE	VIDEO/DATA										1		
48SMFO CABLE	SH VIDEO/VOICE											1	
12SMFO CABLE	SH VIDEO/VOICE		1										
DLC	RAMP/COUNT			11		6			1				
INNERDUCT (SIZE 25)										1	1	1	1
INNERDUCT (SIZE 32)					1		1						
CONDUIT SIZE		103	53	78		103		53	53	103			

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0418)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT
PROJECT ENGINEER HENRY H. TRINH
CALCULATED/DESIGNED BY DL
CHECKED BY HT
REVISED BY CS DATE REVISED 7/02
DATE 7/02

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s124928
DGN FILE => 712075u06.dgn
CU 07388
EA 120751
LAST REVISION 00-00-00
DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8-R40.6	70	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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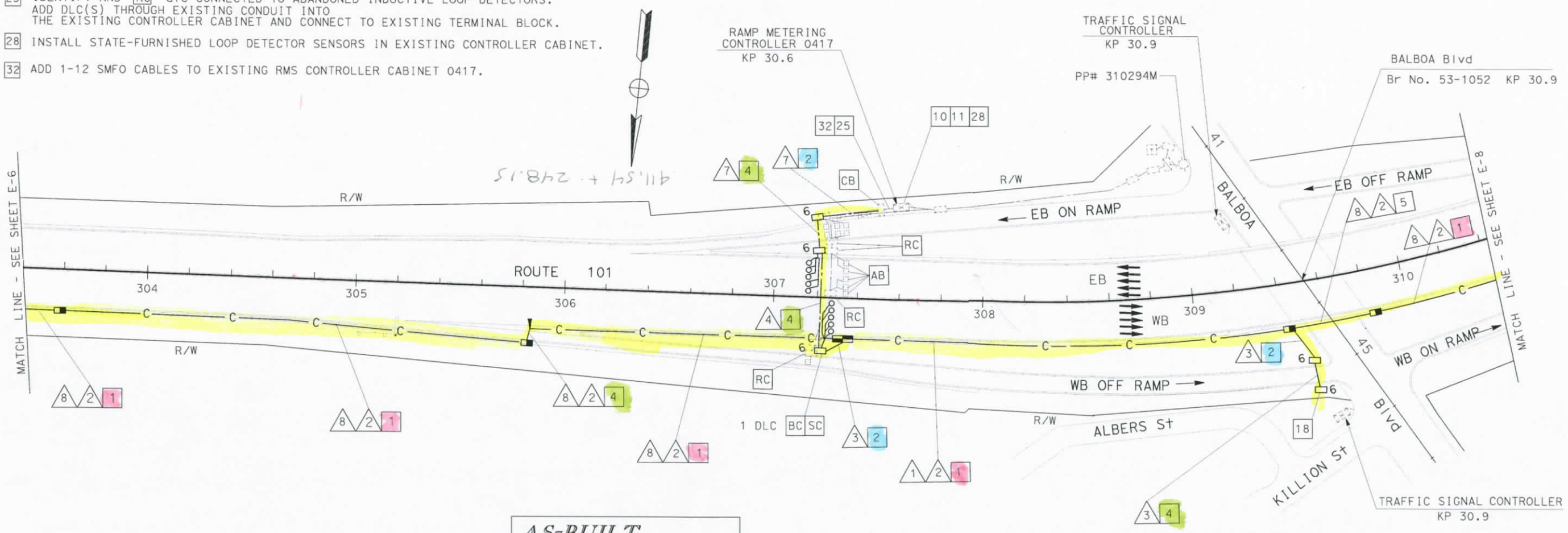
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
32. ADD 1-12 SMFO CABLES TO EXISTING RMS CONTROLLER CABINET 0417.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				RUN 2	RUN 3	RUN 4		RUN 7		RUN 8			
48SMFO CABLE	DATA/VOICE	1										1			
12SMFO CABLE	DATA/VOICE				1		1		1		1				
48SMFO CABLE	VIDEO/DATA		1										1		
48SMFO CABLE	SH VIDEO/VOICE			1										1	
DLC	RAMP/COUNT									11					
INNERDUCT (SIZE 25)		1	1	1	1			6				1	1	1	1
INNERDUCT (SIZE 32)									1		1				
CONDUIT SIZE		103				103	53	103		78		103			



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0417)

SCALE 1:1000

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FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

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E-7

DATE 7/02	REVISED BY	CS	7/02
7/02	DATE REVISED		

CALCULATED/DESIGNED BY: HT
CHECKED BY: DL

PROJECT ENGINEER: HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => s124928
DGN FILE => 712075u07.dgn

CU 07388 EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	71	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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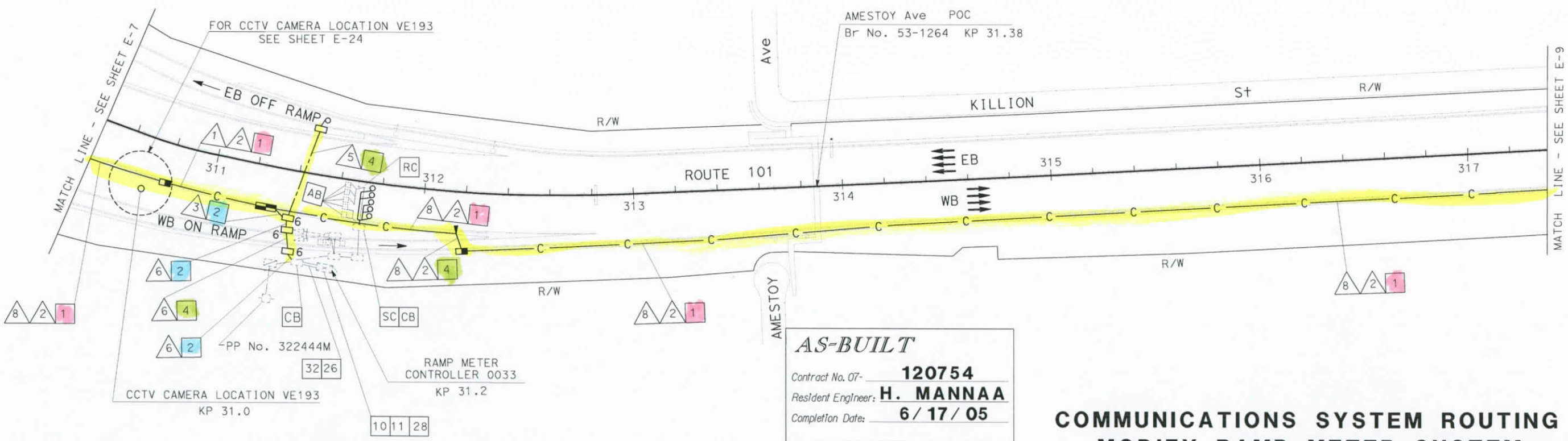
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVEL WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
26. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
32. ADD 1-12 SMFO CABLES TO EXISTING RMS CONTROLLER CABINET 0033.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				RUN 2	RUN 3	RUN 5	RUN 6		RUN 8			
48SMFO CABLE	DATA/VOICE	1									1			
12SMFO CABLE	DATA/VOICE				1		1			1				
48SMFO CABLE	VIDEO/DATA		1									1		
48SMFO CABLE	SH VIDEO/VOICE			1									1	
DLC	RAMP/COUNT							1	1					
INNERDUCT (SIZE 25)		1	1	1	1						1	1	1	1
INNERDUCT (SIZE 32)										1				
CONDUIT SIZE		103				103	53	53	78		103			



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0033)

SCALE 1:1000

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FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

E-8

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

USERNAME => s124928
DGN FILE => 712075u08.dgn

CU 07388 EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	72	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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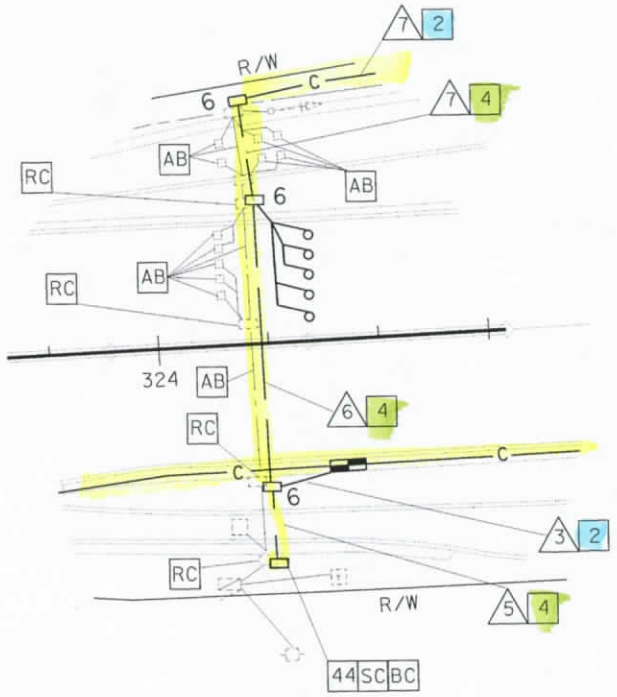
PROJECT NOTES: (THIS SHEET ONLY)

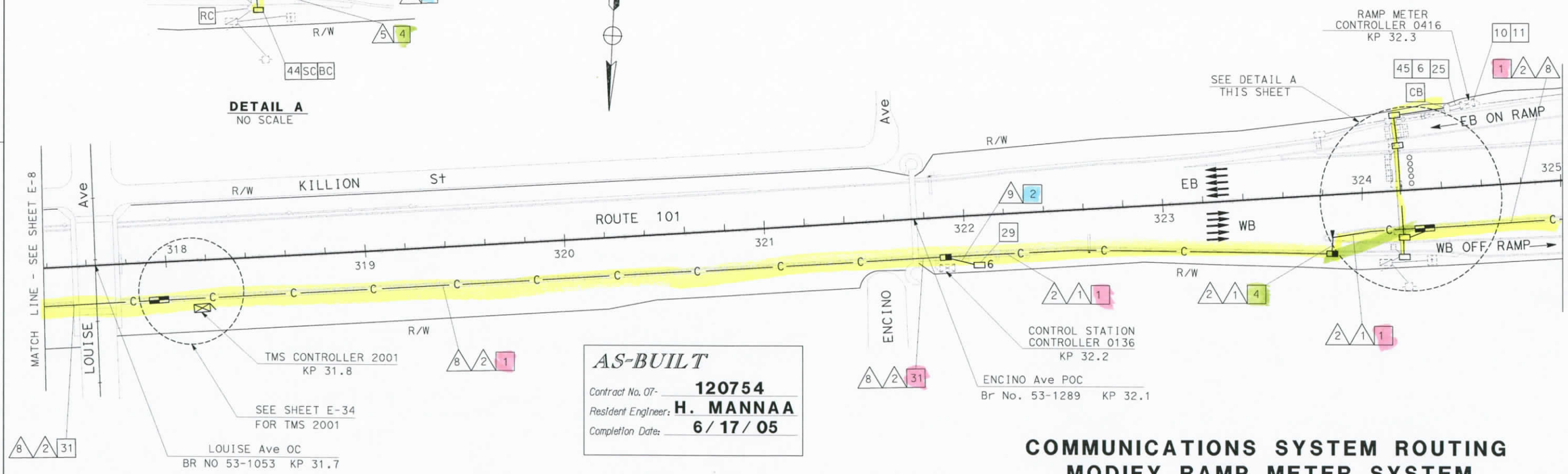
1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
29. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR CONTROL STATION.
31. INSTALL TYPE I CONDUIT(S) IN TRENCH IN PAVED SHOULDER. CONDUIT(S) SHALL BE INSTALLED AS CLOSE TO THE EDGE OF TRAVELED WAY AS POSSIBLE.
44. ADD 1 DLC AND 2 # 8.
45. ADD 1-12 SMFO CABLES TO EXISTING RMS CONTROLLER CABINET 0416.



DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				2	3	5	6		7		8				9
48SMFO CABLE	DATA/VOICE	1											1				
12SMFO CABLE	DATA/VOICE				1		1			1		1					1
48SMFO CABLE	VIDEO/DATA		1											1			
48SMFO CABLE	SH VIDEO/VOICE			1											1		
DLC	RAMP/COUNT							1	1		6						
#8	POWER							2	2		2						
INNERDUCT (SIZE 25)		1	1	1	1								1	1	1	1	
INNERDUCT (SIZE 32)										1		1					
CONDUIT SIZE		103				103	53	53	103		78		103				53



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0416)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-9

DATE	REVISED BY	DATE REVISED
7/02	CS	7/02

CALCULATED/DESIGNED BY HT
CHECKED BY DL
PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:41

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s124928 DGN FILE => T12075u09.dgn
CU 07388
EA 120751

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	73	178

REGISTERED ELECTRICAL ENGINEER — DATE 3-20-03

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL — STATE OF CALIFORNIA

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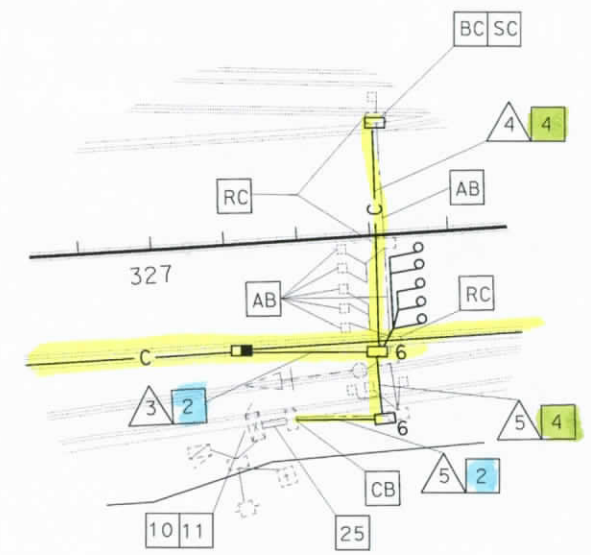
Caltrans Metric

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

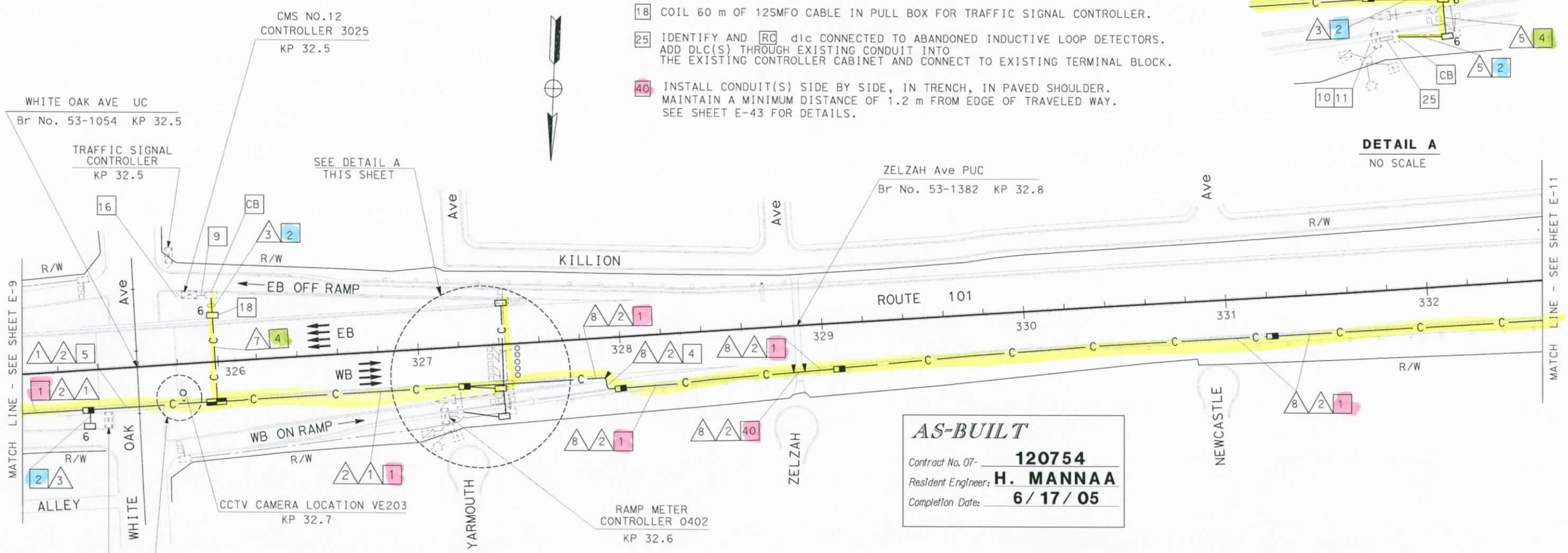
CONDUCTOR TYPE	FUNCTION	RUN 1				2	3	4	5		7		8			
48SMFO CABLE	DATA/VOICE	1											1			
12SMFO CABLE	DATA/VOICE				1		1			1	1	1				
48SMFO CABLE	VIDEO/DATA		1											1		
48SMFO CABLE	SH VIDEO/VOICE			1											1	
DLC	RAMP/COUNT							1	6							
INNERDUCT (SIZE 25)		1	1	1	1								1	1	1	1
INNERDUCT (SIZE 32)										1	1	1				
CONDUIT SIZE		103				103	53	53	78		103		103			

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
9. ADD 1-12 SMFO CABLES AND CONNECT TO EXISTING CMS CONTROLLER 3025
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL FDU AND FIBER OPTIC MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-68 FOR DETAILS.
18. COIL 60 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
40. INSTALL CONDUIT(S) SIDE BY SIDE, IN TRENCH, IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.



DETAIL A
NO SCALE



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0402)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT
PROJECT ENGINEER HENRY H. TRINH
CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s124928
DGN FILE => 712075u10.dgn
CU 07388
EA 120751
LAST REVISION 00-00-00
DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	74	178

REGISTERED ELECTRICAL ENGINEER 3-20-03 DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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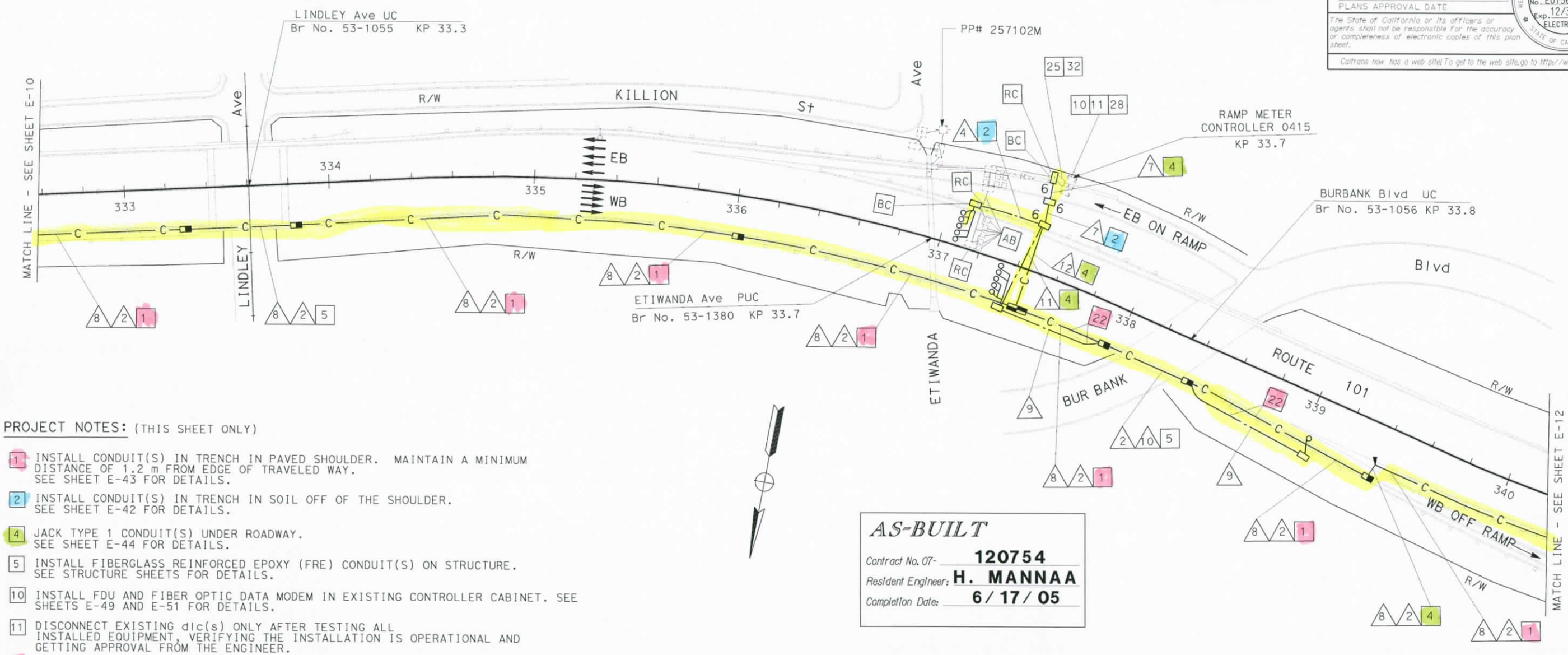

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
22. INSTALL TYPE 1 CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
32. ADD 1-12 SMFO CABLES IN EXISTING CONDUITS AND CONNECT TO EXISTING RMS CONTROLLER 0415.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				2	4	7		8				9	10				11	12
48SMFO CABLE	DATA/VOICE	1								1					1					
12SMFO CABLE	DATA/VOICE				1				1											1
48SMFO CABLE	VIDEO/DATA		1								1					1				
48SMFO CABLE	SH VIDEO/VOICE			1								1					1			
DLC	RAMP/COUNT						5	11						1				1	6	
INNERDUCT (SIZE 25)		1	1	1	1					1	1	1	1		1	1	1			
INNERDUCT (SIZE 32)									1											1
CONDUIT SIZE		103				103	53	78		103				53	103				53	78

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0415)

SCALE 1:1000

E-11

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

USERNAME => s124928
DGN FILE => 712075u11.dgn

CU 07388

EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

CALCULATED/ DESIGNED BY	HT	DATE 7/02	REVISED BY	CS	DATE 7/02
CHECKED BY	DL	7/02	DATE REVISED		7/02

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	75	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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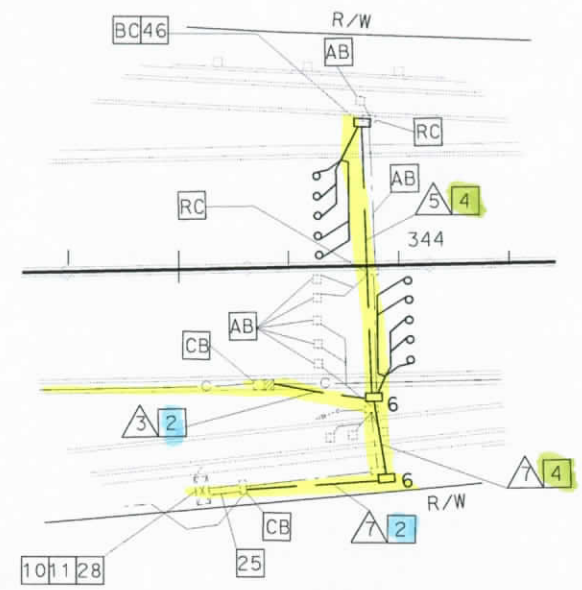
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A FIBER OPTIC SPLICE CLOSURE.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
44. INSTALL CONDUCTORS AND INNERDUCTS IN EXISTING EMPTY CONDUIT.
45. INSTALL 1-12 SMFO TO RUN 9 FOR RMS CONTROLLER (KP 34.4)
46. INSTALL 1 DLC.



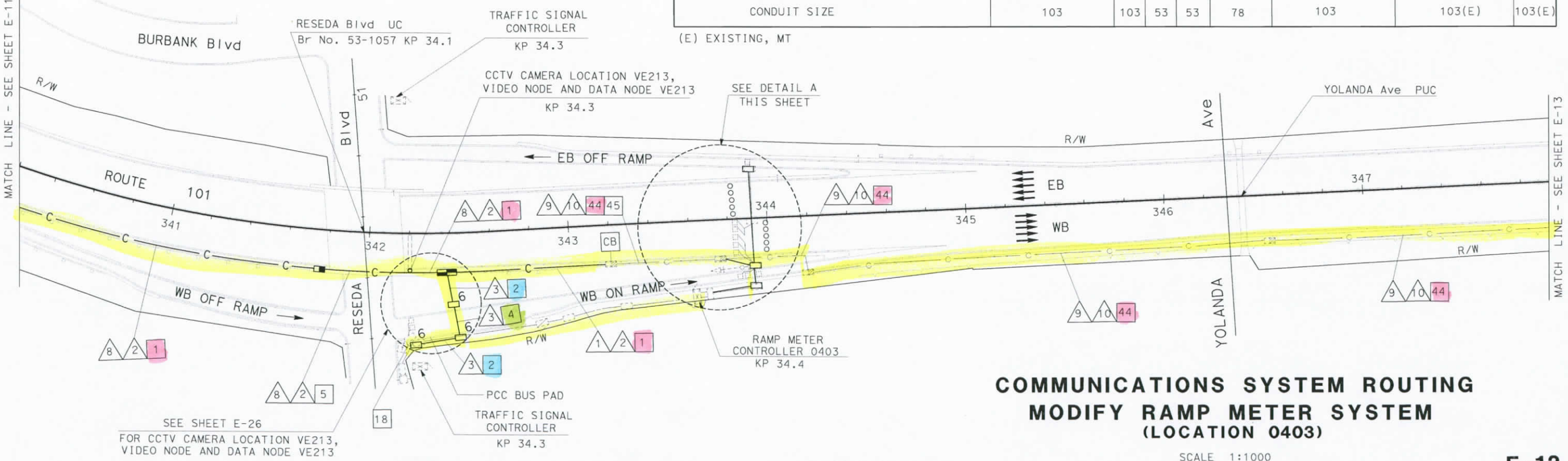
DETAIL A
NO SCALE

AS-BUILT
Contract No. 07- **120754**
Resident Engineer: **H. MANNAA**
Completion Date: **6/17/05**

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				RUN 2	RUN 3	RUN 5	RUN 7		RUN 8				RUN 9				RUN 10
48SMFO CABLE	DATA/VOICE	1									1				1				
12SMFO CABLE	DATA/VOICE				1		1			1									
48SMFO CABLE	VIDEO/DATA		1									1				1			
48SMFO CABLE	SH VIDEO/VOICE			1									1				1		
DLC	RAMP/COUNT							6	11										
INNERDUCT (SIZE 25)		1	1	1	1						1	1	1	1	1	1	1	1	
INNERDUCT (SIZE 32)										1									
CONDUIT SIZE		103				103	53	53	78		103				103(E)				103(E)

(E) EXISTING, MT



COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0403)

SCALE 1:1000

E-12

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **ITS DEVELOPMENT**

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY	HT	DATE 7/02	REVISED BY	CS
CHECKED BY	DL	7/02	DATE REVISED	7/02

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

USERNAME => s124928
DGN FILE => 712075u12.dgn

CU 07388 EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	76	178

Caltrans Metric

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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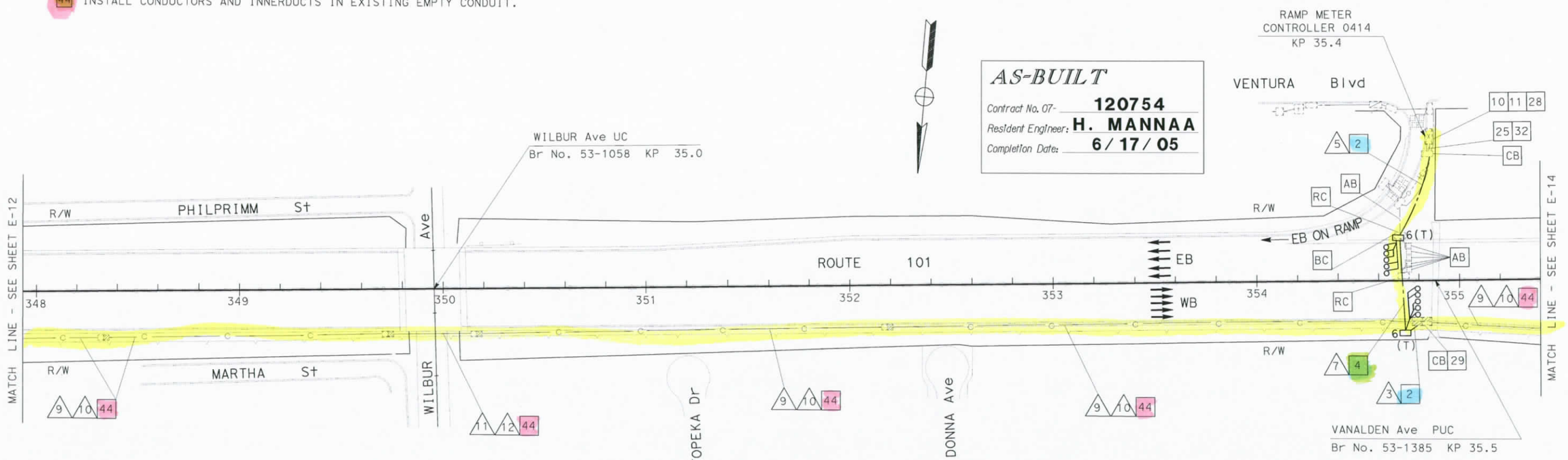
PROJECT NOTES: (THIS SHEET ONLY)

- 4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
- 10 INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
- 11 DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
- 25 IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD 10 DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
- 28 INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
- 29 INSTALL FIBER OPTIC SPLICE CLOSURE IN EXISTING SPLICE VAULT.
- 32 ADD 1-12 SMFO CABLES IN EXISTING CONDUITS AND CONNECT TO EXISTING RMS CONTROLLER 0414.
- 44 INSTALL CONDUCTORS AND INNERDUCTS IN EXISTING EMPTY CONDUIT.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 3	5		7		9				10	11				12
48SMFO CABLE	DATA/VOICE						1					1				
12SMFO CABLE	DATA/VOICE	1		1		1										
48SMFO CABLE	VIDEO/DATA							1					1			
48SMFO CABLE	SH VIDEO/VOICE								1					1		
DLC	RAMP/COUNT		10		5											
INNERDUCT (SIZE 25)							1	1	1	1		1	1	1	1	
INNERDUCT (SIZE 32)				1		1										
CONDUIT SIZE		53	78		103		103(E)				103(E)	78(E)				78(E)

(E) EXISTING, MT



COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0414)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-13

CALCULATED/DESIGNED BY	HT	DATE 7/02	REVISED BY	CS
CHECKED BY	DL	7/02	DATE REVISED	7/02

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => s124928
DGN FILE => T12075u13.dgn

CU 07388 EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	77	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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AS-BUILT
Contract No. 07- **120754**
Resident Engineer: **H. MANNAA**
Completion Date: **6/17/05**

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.

10 INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.

11 DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

18 COIL 15 m OF 12 SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.

25 IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.

29 INSTALL FIBER OPTIC SPLICE CLOSURE IN EXISTING SPLICE VAULT.

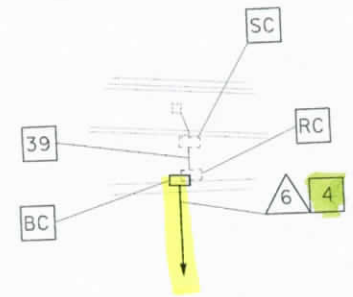
32 ADD 1-12 SMFO INTO EXISTING CONDUITS AND CONNECT TO EXISTING RMS CONTROLLER 0404.

39 RC dlc. INSTALL NEW DLC IN THE EXISTING CONDUIT.

42 SEE SHEET E-69 FOR SOUNDWALL CROSSING DETAILS.

44 INSTALL CONDUCTORS AND INNERDUCTS IN EXISTING EMPTY CONDUIT.

45 INSTALL 1-12 SMFO TO RUN 9 FOR TS CONTROLLER (KP 35.7).

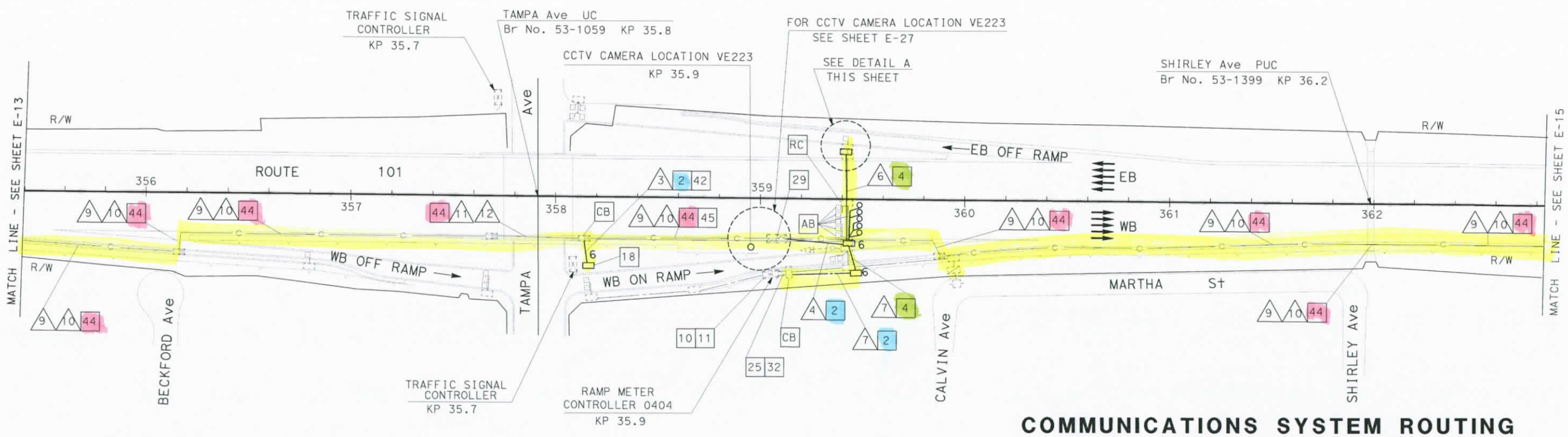


DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 3	4	6	7		9				10	11				12
48SMFO CABLE	DATA/VOICE						1					1				
12SMFO CABLE	DATA/VOICE	1	1			1										
48SMFO CABLE	VIDEO/DATA							1					1			
48SMFO CABLE	SH VIDEO/VOICE								1					1		
DLC	RAMP/COUNT			1	6											
INNERDUCT (SIZE 25)							1	1	1	1		1	1	1	1	
INNERDUCT (SIZE 32)						1										
CONDUIT SIZE		53	53	53	78		103(E)				103(E)	78(E)				78(E)

(E) EXISTING, MT



COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0404)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-14

	DATE	REVISED BY	REVISED
	7/02	CS	7/02
	7/02	HT	DL

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **ITS DEVELOPMENT**

ART REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

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

USERNAME => s124928
DGN FILE => 712075u14.dgn

CU 07388 EA 120751

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	78	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)											
CONDUCTOR TYPE	FUNCTION	RUN									
		9				10	11				12
48SMFO CABLE	DATA/VOICE	1					1				
12SMFO CABLE	DATA/VOICE										
48SMFO CABLE	VIDEO/DATA		1					1			
48SMFO CABLE	SH VIDEO/VOICE			1					1		
INNERDUCT (SIZE 25)		1	1	1	1		1	1	1	1	
CONDUIT SIZE		103(E)				103(E)	78(E)				78(E)

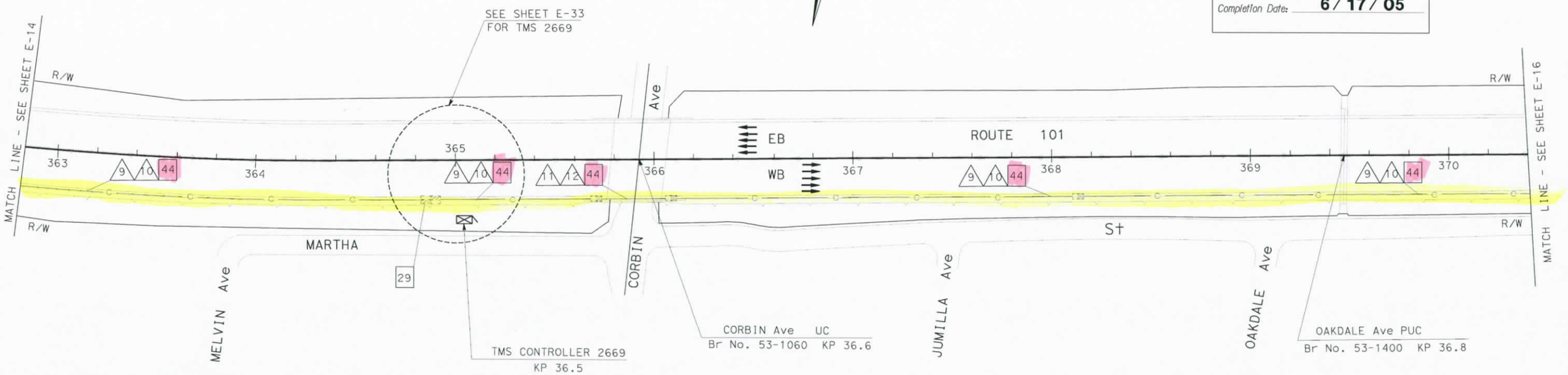
(E) EXISTING, MT

PROJECT NOTES: (THIS SHEET ONLY)

29 INSTALL FIBER OPTIC SPLICE CLOSURE IN EXISTING SPLICE VAULT.

44 INSTALL CONDUCTORS AND INNERDUCTS IN EXISTING EMPTY CONDUIT.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05



COMMUNICATIONS SYSTEM ROUTING

SCALE 1:1000

E-15

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

USERNAME => s124928
DGN FILE => T12075u15.dgn

CU 07388

EA 120751

LAST REVISION 00-00-00
DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:42

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	79	178

Jacqueline C. Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

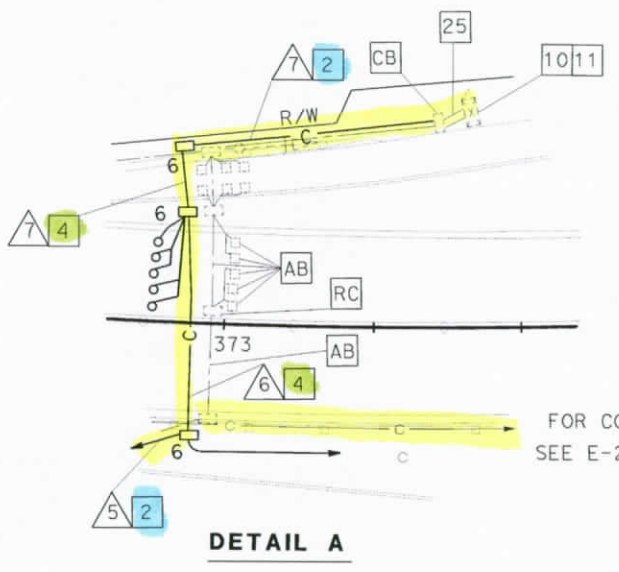
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
26. ADD 1 DLC
29. INSTALL FIBER OPTIC SPLICE CLOSURE IN EXISTING SPLICE VAULT.
32. ADD 1-12 SMFO INTO EXISTING CONDUIT AND CONNECT TO EXISTING RMS CONTROLLER 0405.
44. INSTALL CONDUCTORS AND INNERDUCTS IN EXISTING EMPTY CONDUIT.
45. INSTALL 1-12 SMFO TO RUN 9 FOR RMS 0405 (KP 37.6).

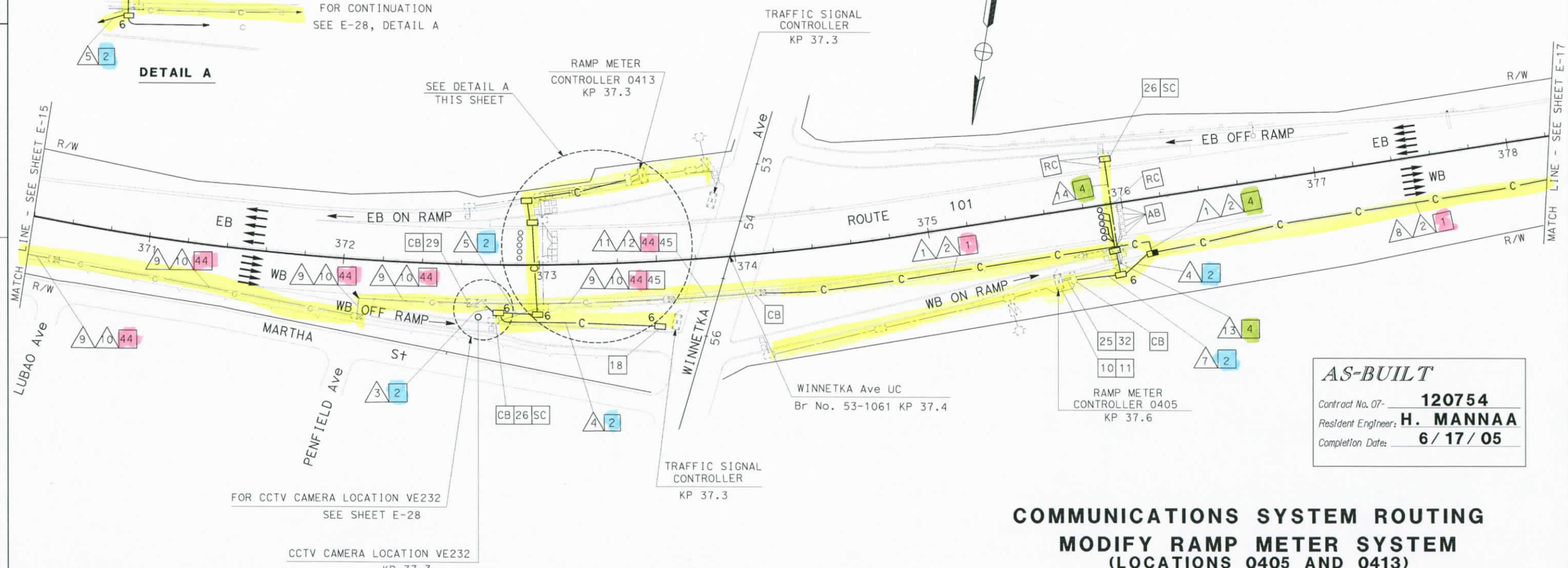
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				2	3	4	5		6		7		8				9				10	11				12	13	14
48SMFO CABLE	DATA/VOICE	1													1				1					1						
12SMFO CABLE	DATA/VOICE				1		2	1		1		1		1																
48SMFO CABLE	VIDEO/DATA		1													1				1					1					
48SMFO CABLE	SH VIDEO/VOICE			1													1				1					1				
DLC	RAMP/COUNT								1		1		6																6	1
INNERDUCT (SIZE 25)		1	1	1	1										1	1	1	1	1	1	1	1		1	1	1	1			
INNERDUCT (SIZE 32)										1		1		1																
CONDUIT SIZE		103				103	53	53	78		103		78		103				103(E)				103(E)	78(E)				78(E)	53	53

(E) EXISTING, MT



DETAIL A



AS-BUILT

Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATIONS 0405 AND 0413)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-16

CS	REVISED BY
7/02	DATE REVISED
HT	DATE
DL	7/02
CALCULATED/DESIGNED BY	
CHECKED BY	

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

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

USERNAME => s124928
DGN FILE => 712075u16.dgn

CU 07388 EA 120751

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	80	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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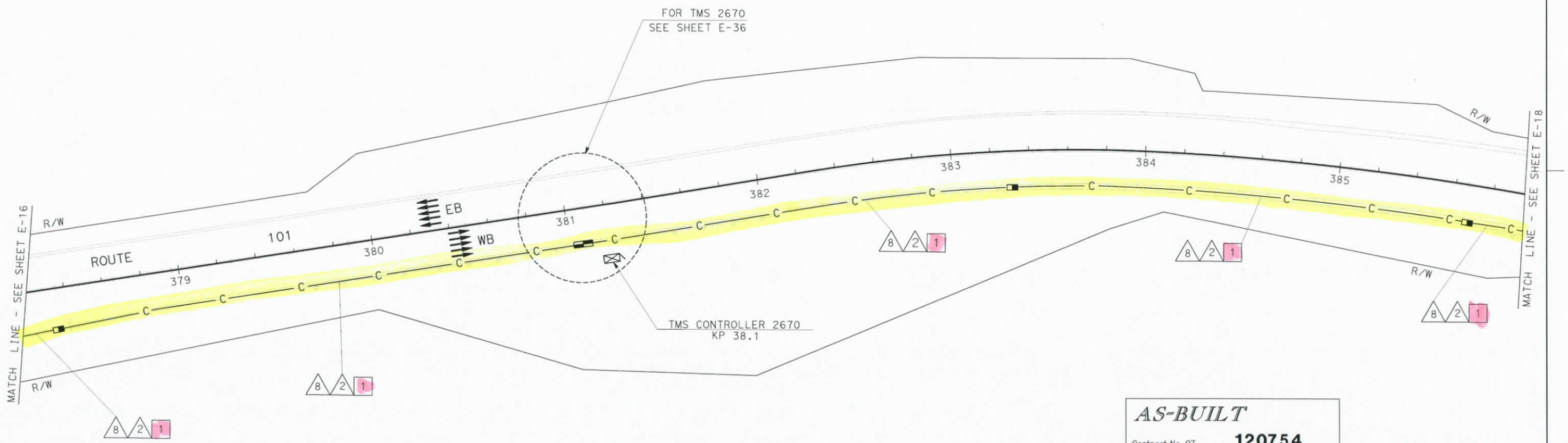
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUCTOR TYPE	FUNCTION	RUN				
		8				2
48SMFO CABLE	DATA/VOICE	1				
12SMFO CABLE	DATA/VOICE					
48SMFO CABLE	VIDEO/DATA		1			
48SMFO CABLE	SH VIDEO/VOICE			1		
INNERDUCT (SIZE 25)		1	1	1	1	
CONDUIT SIZE		103				103



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.

COMMUNICATIONS SYSTEM ROUTING

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH
CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s124928
DGN FILE => 712075u17.dgn
CU 07388
EA 120751
LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	81	178

Caltrans Metric

Jacqueline C. Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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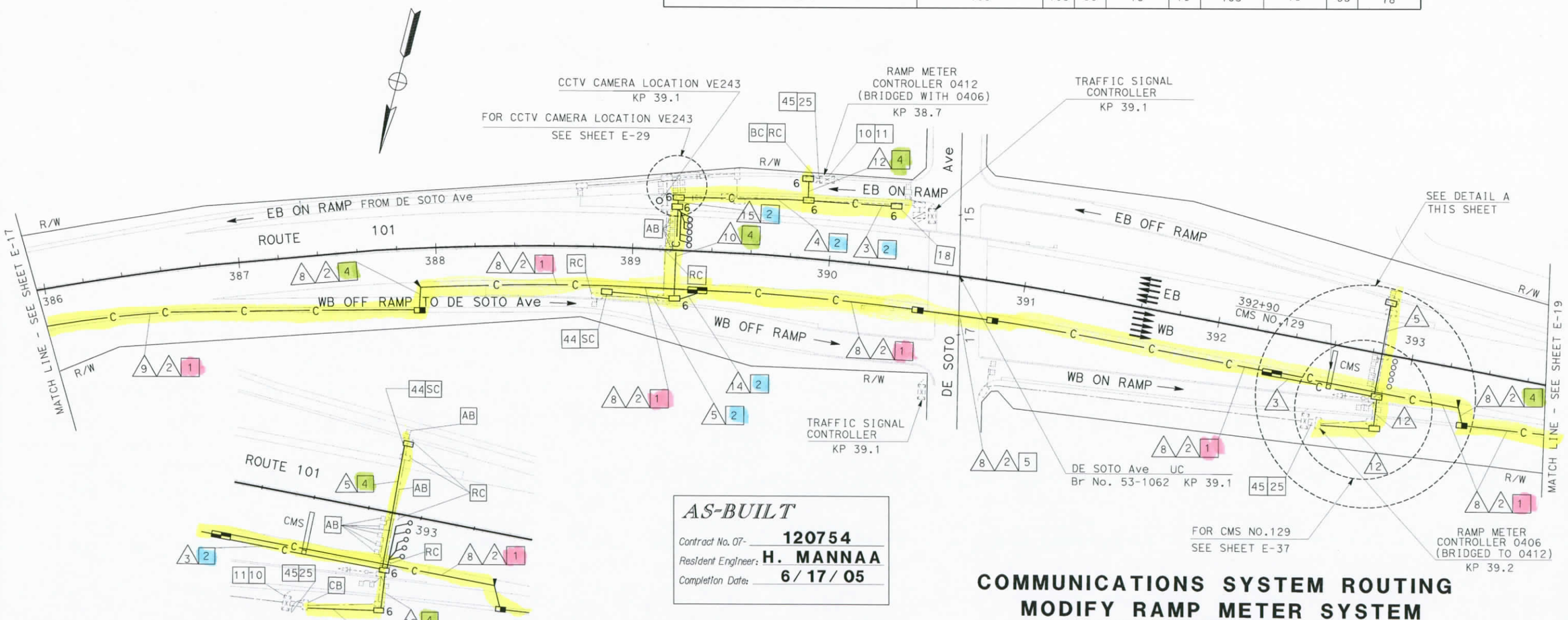
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING RMS CONTROLLER CABINETS 0406 & 0412. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
44. ADD 1 DLC
45. ADD 1-12 SMFO IN EXISTING CONDUITS AND CONNECT TO EXISTING RMS CONTROLLER CABINETS (0406& 0412)

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 8				2	3	4		5	10		12		14	15	
48SMFO CABLE	DATA/VOICE	1															
12SMFO CABLE	DATA/VOICE						1		2			3		1	3		2
48SMFO CABLE	VIDEO/DATA		1														
48SMFO CABLE	SH VIDEO/VOICE			1													
12SMFO CABLE	SH VIDEO/VOICE											1			1		1
DLC	RAMP/COUNT							6		1	1		6			6	
INNERDUCT (SIZE 25)		1	1	1	1												
INNERDUCT (SIZE 32)									1			1		1			1
CONDUIT SIZE		103				103	53	78		78	103		78		53	78	



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATIONS 0412 & 0406)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT | CHECKED BY DL | REVISED BY CS | DATE REVISED 7/02 | DATE 7/02 | DATE 7/02

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2007 | TIME PLOTTED => 14:42

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

USERNAME => s124928
DGN FILE => 712075u18.dgn

CU 07388 | EA 120751

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	82	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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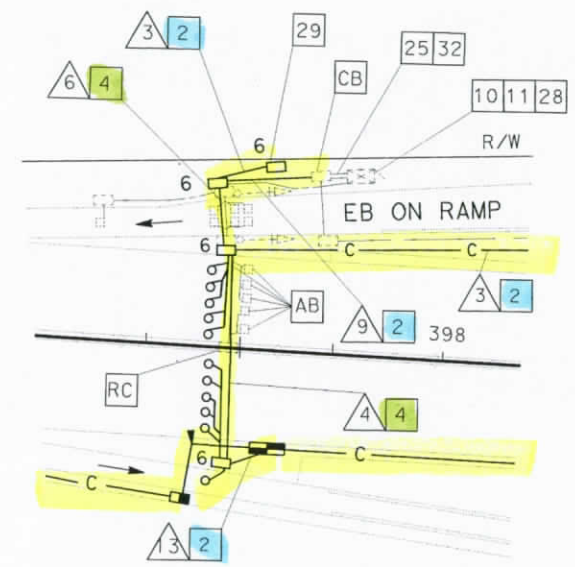
Caltrans Metric

PROJECT NOTES:(THIS SHEET ONLY)

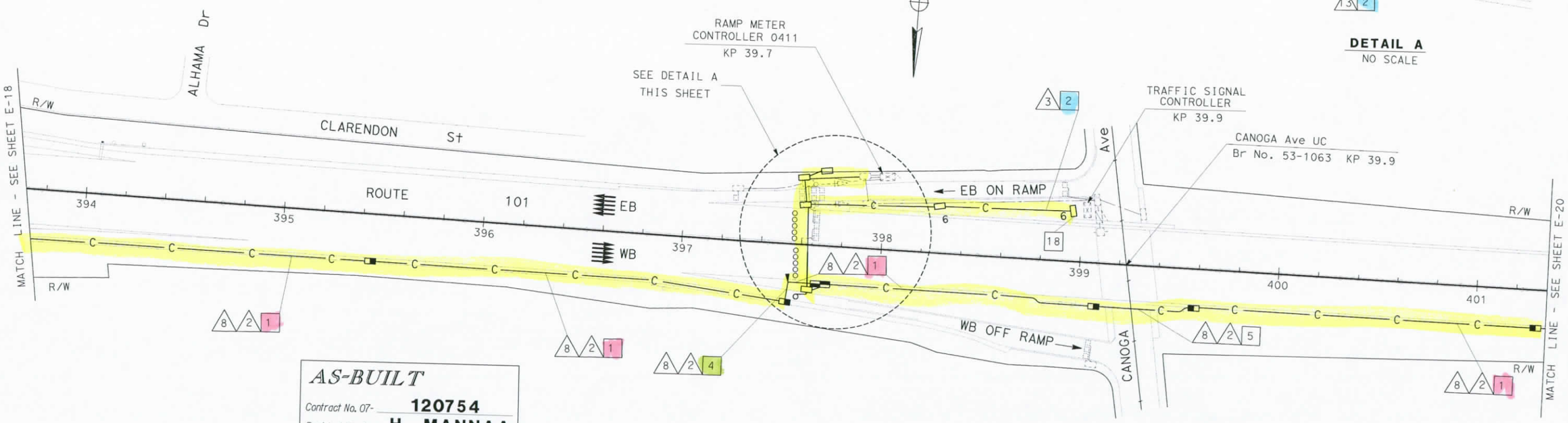
1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
18. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
29. COIL 15 m OF 12SMFO CABLE IN PULL BOX FOR CONTROL STATION.
32. ADD 1-12 SMFO INTO EXISTING CONDUIT AND CONNECT TO EXISTING RMS CONTROLLER 0411.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 8				2	3	4		6		9		13
48SMFO CABLE	DATA/VOICE	1												
12SMFO CABLE	DATA/VOICE						1		3		2		1	3
48SMFO CABLE	VIDEO/DATA		1											
48SMFO CABLE	SH VIDEO/VOICE			1										
DLC	RAMP/COUNT							6		11		11		
INNERDUCT (SIZE 25)		1	1	1	1									
INNERDUCT (SIZE 32)									1		1		1	
CONDUIT SIZE		103				103	53	103		103		78		53



DETAIL A
NO SCALE



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0411)

SCALE 1:1000

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT
CHECKED BY DL
REVISED BY CS
DATE REVISED 7/02
DATE 7/02

LAST REVISION 00-00-00 DATE PLOTTED = 17-SEP-2007 TIME PLOTTED = 14:42

E-19

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	83	178

Caltrans Metric

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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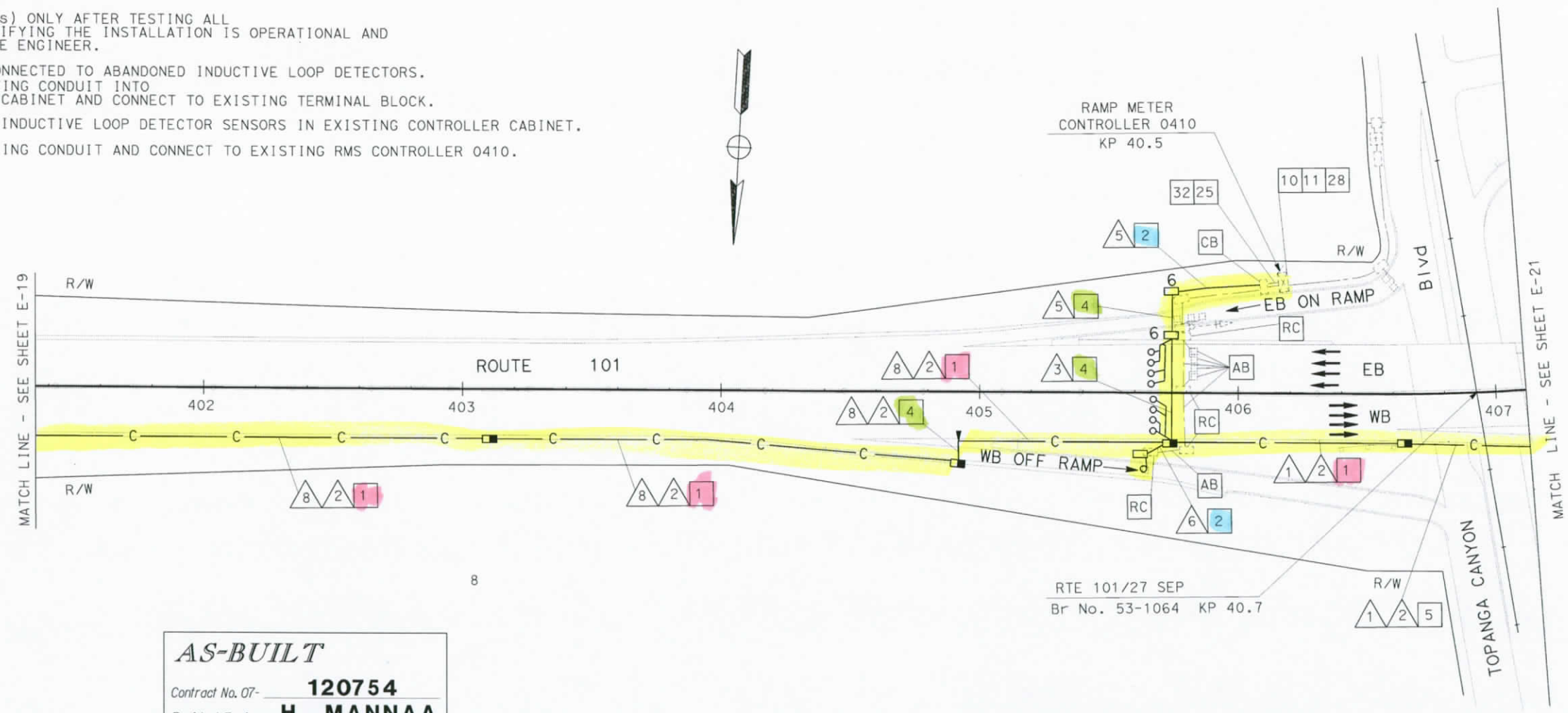
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC dlc CONNECTED TO ABANDONED INDUCTIVE LOOP DETECTORS. ADD DLC(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CONTROLLER CABINET AND CONNECT TO EXISTING TERMINAL BLOCK.
28. INSTALL STATE-FURNISHED INDUCTIVE LOOP DETECTOR SENSORS IN EXISTING CONTROLLER CABINET.
32. ADD 1-12 SMFO INTO EXISTING CONDUIT AND CONNECT TO EXISTING RMS CONTROLLER 0410.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				2	3		5		6	8			
48SMFO CABLE	DATA/VOICE	1										1			
12SMFO CABLE	DATA/VOICE				1			1		1					
48SMFO CABLE	VIDEO/DATA		1										1		
48SMFO CABLE	SH VIDEO/VOICE			1										1	
DLC	RAMP/COUNT						5		9		1				
INNERDUCT (SIZE 25)		1	1	1	1							1	1	1	1
INNERDUCT (SIZE 32)								1		1					
CONDUIT SIZE		103				103	78		78		53	103			



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATION 0410)

SCALE 1:1000

E-20

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CALCULATED/DESIGNED BY	HT	DATE 7/02	REVISED BY CS
CHECKED BY	DL	7/02	DATE REVISED 7/02

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => s124928
DGN FILE => 712075u20.dgn

CU 07388 EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	84	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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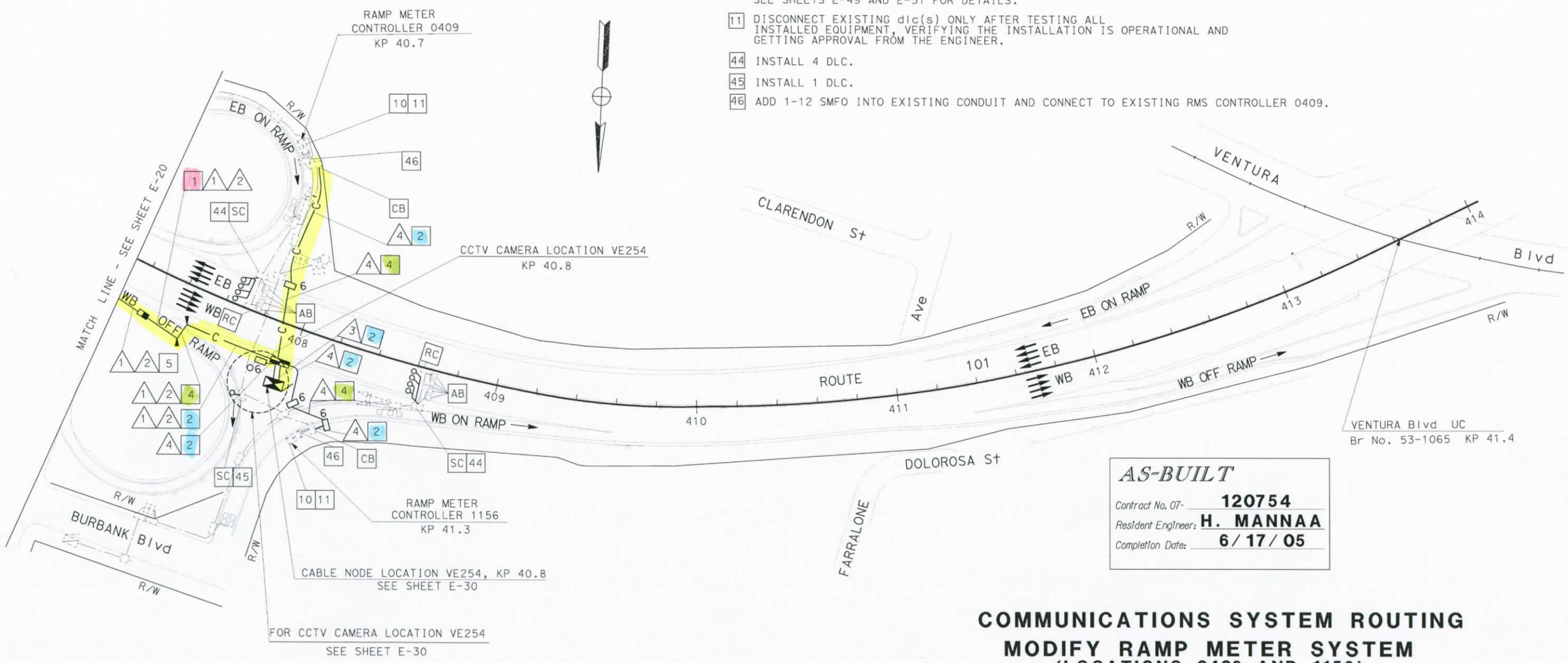
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN 1				2	3		4
48SMFO CABLE	DATA/VOICE	1					1		
12SMFO CABLE	DATA/VOICE				1		2		1
48SMFO CABLE	VIDEO/DATA		1					1	
48SMFO CABLE	SH VIDEO/VOICE			1				1	
INNERDUCT (SIZE 25)		1	1	1	1				
CONDUIT SIZE		103				103	78	78	53

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-43 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE STRUCTURE SHEETS FOR DETAILS.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
44. INSTALL 4 DLC.
45. INSTALL 1 DLC.
46. ADD 1-12 SMFO INTO EXISTING CONDUIT AND CONNECT TO EXISTING RMS CONTROLLER 0409.



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
MODIFY RAMP METER SYSTEM
(LOCATIONS 0409 AND 1156)

SCALE 1:1000

E-21

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

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

USERNAME => s124928
DGN FILE => 712075u21.dgn

CU 07388 EA 120751

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	85	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.

7 INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE.

12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CONTROLLER CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.

17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.

19 INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.

20 INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.

21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

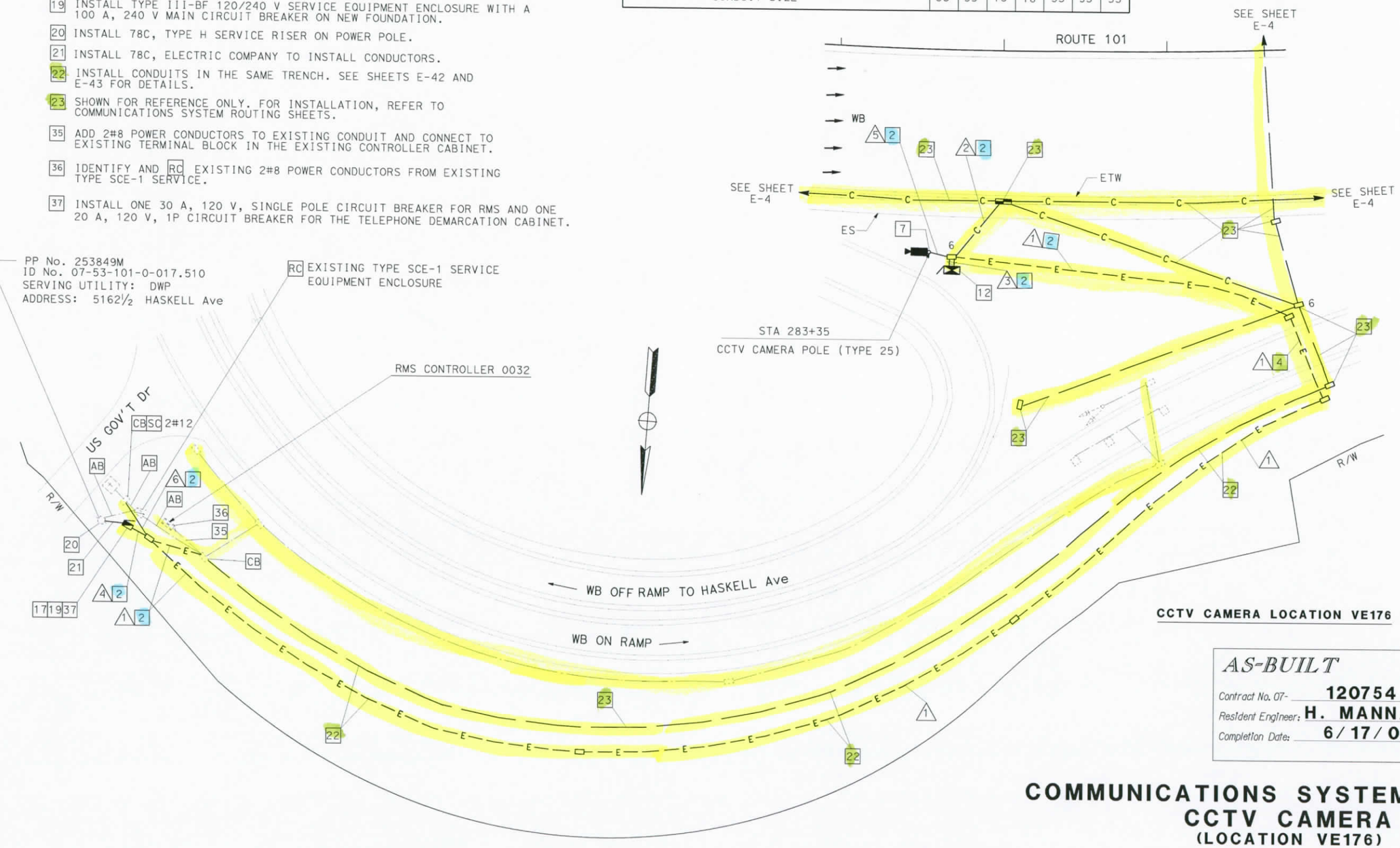
35 ADD 2#8 POWER CONDUCTORS TO EXISTING CONDUIT AND CONNECT TO EXISTING TERMINAL BLOCK IN THE EXISTING CONTROLLER CABINET.

36 IDENTIFY AND RC EXISTING 2#8 POWER CONDUCTORS FROM EXISTING TYPE SCE-1 SERVICE.

37 INSTALL ONE 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR RMS AND ONE 20 A, 120 V, 1P CIRCUIT BREAKER FOR THE TELEPHONE DEMARCATION CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3		4	5	6
12SMFO	SH VIDEO/VOICE		1		1			
RG-6A/U COAX	BB VIDEO				1		1	
#8	POWER	2		2		4		
#12	POWER					2		2
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1		1	
INNERDUCT (SIZE 32)								
CONDUIT SIZE		53	53	78	78	53	53	53



CCTV CAMERA LOCATION VE176

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
CCTV CAMERA
(LOCATION VE176)

SCALE 1:200

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT | CHECKED BY DL | REVISED BY CS | DATE REVISED 7/02 | DATE 7/02 | 7/02

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

USERNAME => s124928 | DGN FILE => s120754-22.dgn

CU 07388 | EA 120751

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2007 | TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	86	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

EXISTING TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE 17
SERVING UTILITY: DWP
ID# 05-53-101-0-R018.600
ADDRESS: 5132½ HAYVENHURST Ave
EXISTING CIRCUIT BREAKERS:
1 - 100 A, 2P MAIN
1 - 100 A, 2P SPARE
1 - 50 A, 1P SPARE
1 - 20 A, 1P SPARE
1 - 15 A, 1P SPARE

PROJECT NOTES: (THIS SHEET ONLY)

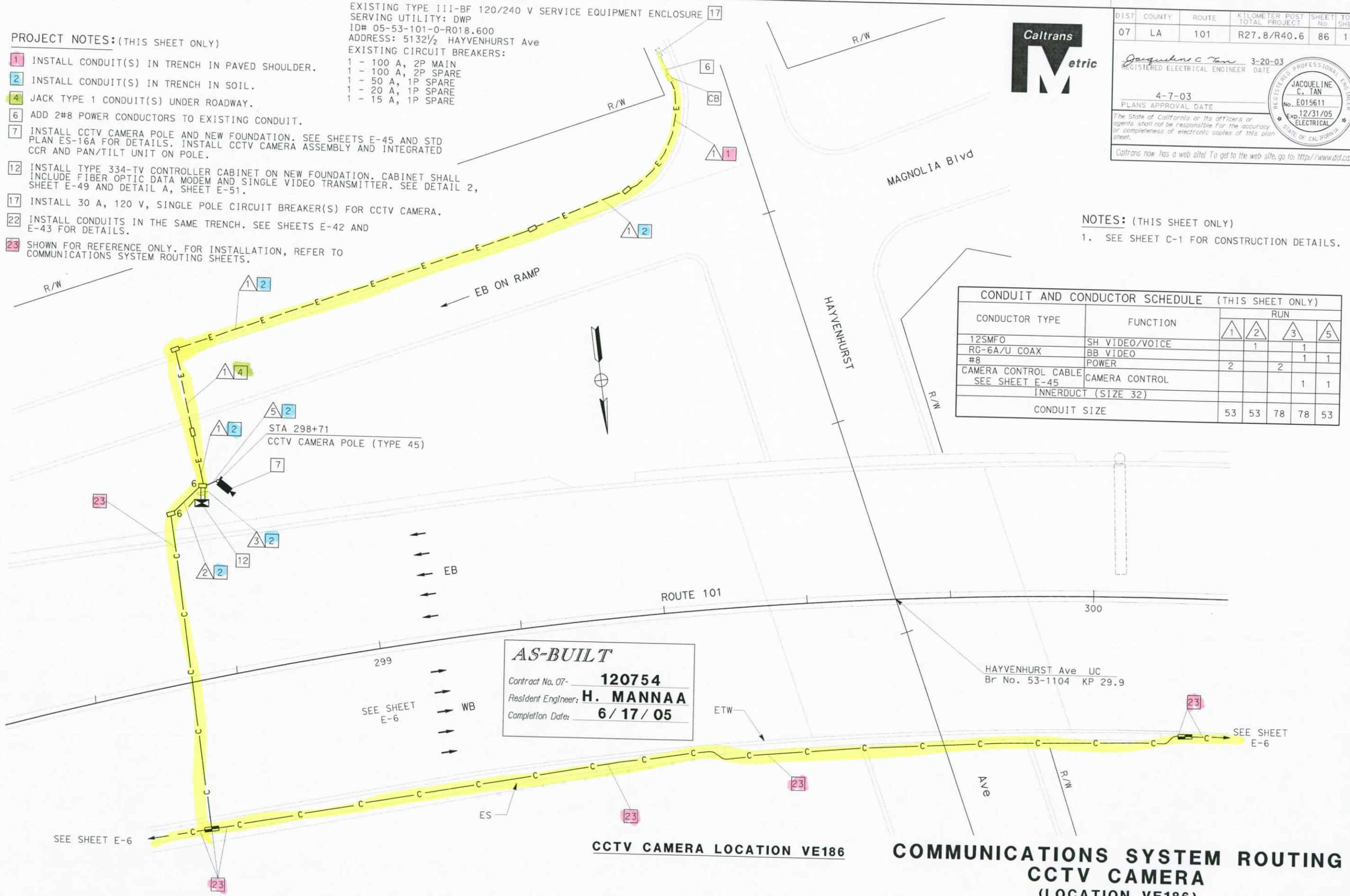
1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY.
6. ADD 2#8 POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE.
12. INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.
17. INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.
23. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

NOTES: (THIS SHEET ONLY)

1. SEE SHEET C-1 FOR CONSTRUCTION DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3		RUN 5
12SMFO	SH VIDEO/VOICE		1		1	
RG-6A/U COAX	BB VIDEO				1	1
#8	POWER	2		2		
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1	1
INNERDUCT (SIZE 32)						
CONDUIT SIZE		53	53	78	78	53



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CCTV CAMERA LOCATION VE186

COMMUNICATIONS SYSTEM ROUTING CCTV CAMERA (LOCATION VE186)

SCALE 1:200

FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY HT
CHECKED BY DL

DATE 7/02	REVISED BY CS
7/02	DATE REVISED 7/02

LAST REVISION 00-00-00 DATE PLOTTED => 11-SEP-2007 TIME PLOTTED => 14:42

E-23

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	101	R27.8/R40.6	87	178

Jacqueline C Tan 3-20-03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 3	RUN 5
12SMFO	SH VIDEO/VOICE		1		1	
RG-6A/U COAX	BB VIDEO				1	1
#8	POWER	2		2		
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1	1
INNERDUCT (SIZE 32)						
CONDUIT SIZE		53	53	78	78	53

NOTES: (THIS SHEET ONLY)

1. SEE SHEET C-2 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL.

4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY.

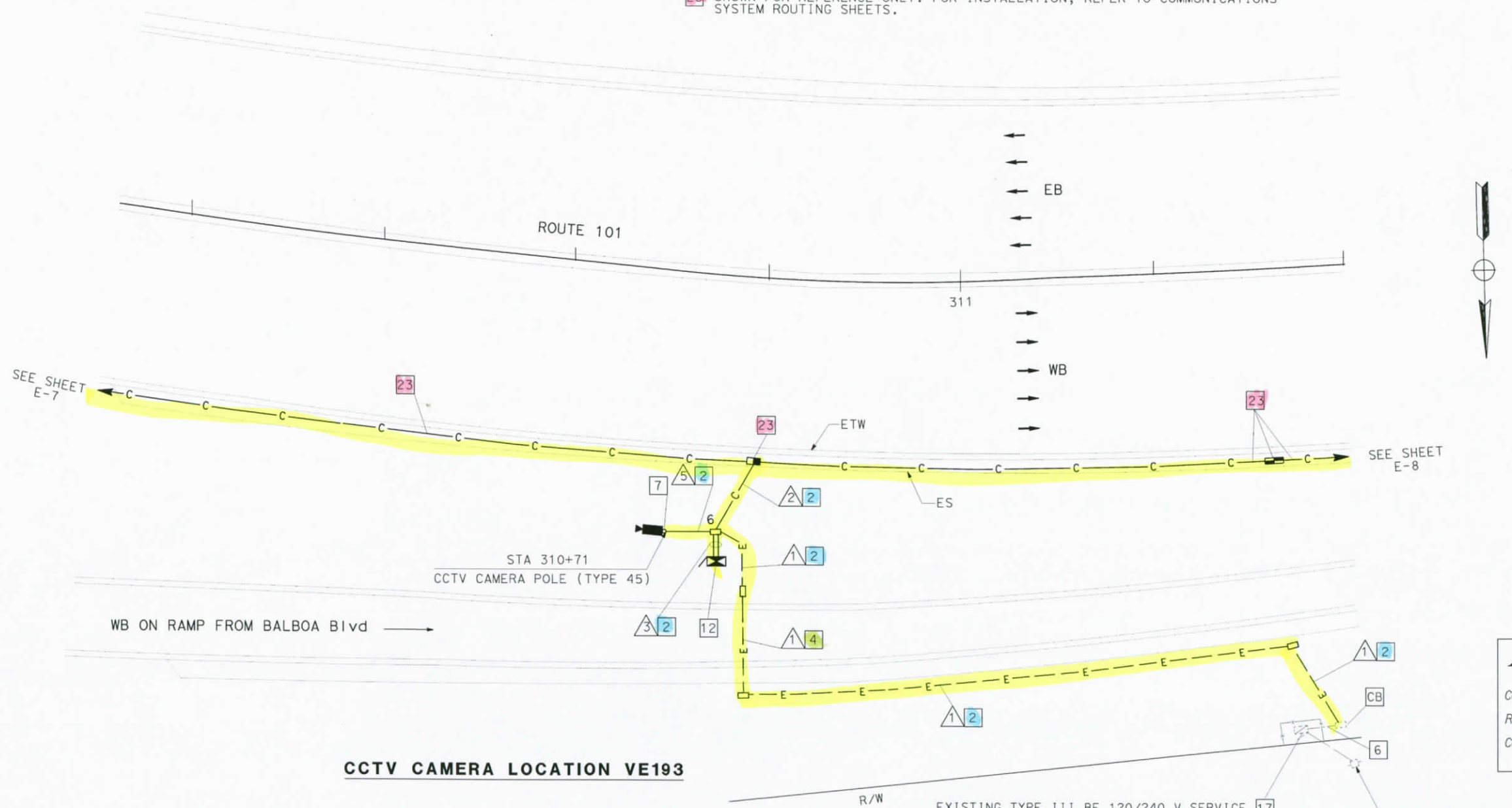
6 ADD 2#8 POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE.

12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.

17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.



CCTV CAMERA LOCATION VE193

EXISTING TYPE III BF 120/240 V SERVICE EQUIPMENT ENCLOSURE 17
SERVING UTILITY: DWP
ID No. 07-53-101-0-R019.300
ADDRESS: 16946 ½ BURBANK Blvd
EXISTING CIRCUIT BREAKERS:
1 - 100 A, 2P MAIN
1 - 30 A, 2P SIGN
1 - 15 A, 2P RAMP METER

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING CCTV CAMERA (LOCATION VE193)

SCALE 1:200

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-24

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER H. TRINH

CALCULATED/DESIGNED BY HT | CHECKED BY DL | DATE 7/02 | REVISED BY CS | DATE REVISED 7/02

LAST REVISION 00-00-00 | DATE PLOTTED => 17-SEP-2007 | TIME PLOTTED => 14:42

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => s124928 | CU 07388 | EA 120751

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	88	178

REGISTERED ELECTRICAL ENGINEER — 3-20-03 DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL — STATE OF CALIFORNIA

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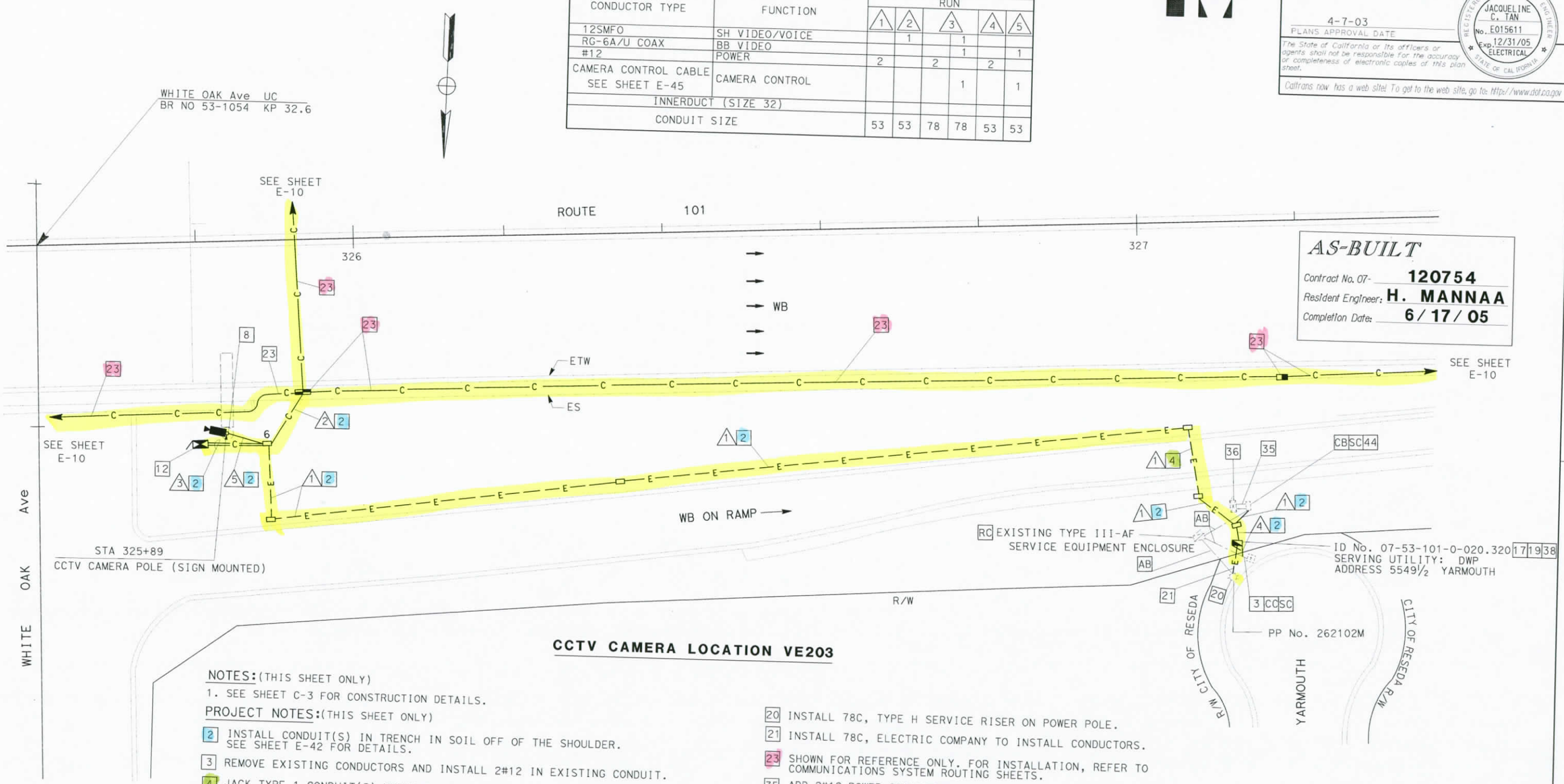
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN 1	2	3		4	5
12SMFO	SH VIDEO/VOICE		1		1		
RG-6A/U COAX	BB VIDEO				1		1
#12	POWER	2		2		2	
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1		1
INNERDUCT (SIZE 32)							
CONDUIT SIZE		53	53	78	78	53	53



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CCTV CAMERA LOCATION VE203

NOTES: (THIS SHEET ONLY)

1. SEE SHEET C-3 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

3 REMOVE EXISTING CONDUCTORS AND INSTALL 2#12 IN EXISTING CONDUIT.

4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.

8 INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON EXISTING SIGN STRUCTURE. SEE SHEETS E-45 AND STD PLAN ES-16B FOR DETAILS.

12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.

17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.

19 INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.

20 INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.

21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

35 ADD 2#12 POWER CONDUCTORS TO EXISTING CONDUIT.

36 IDENTIFY AND RC EXISTING 2#8 POWER CONDUCTORS FROM EXISTING TYPE II-A SERVICE EQUIPMENT ENCLOSURE.

38 INSTALL ONE 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR RMS AND ONE 15 A, 120 V, 1P CIRCUIT BREAKER FOR THE TELEPHONE DEMARCATION CABINET.

44 INSTALL 2#12 CONDUCTORS.

FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

COMMUNICATIONS SYSTEM ROUTING
CCTV CAMERA
(LOCATION VE203)

SCALE 1:200

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

E-25

DATE 7/02	REVISED BY CS	DATE 7/02	REVISED BY CS
7/02	DATE REVISED 7/02		

CALCULATED/DESIGNED BY HT — CHECKED BY DL

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:42
00-00-00

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	89	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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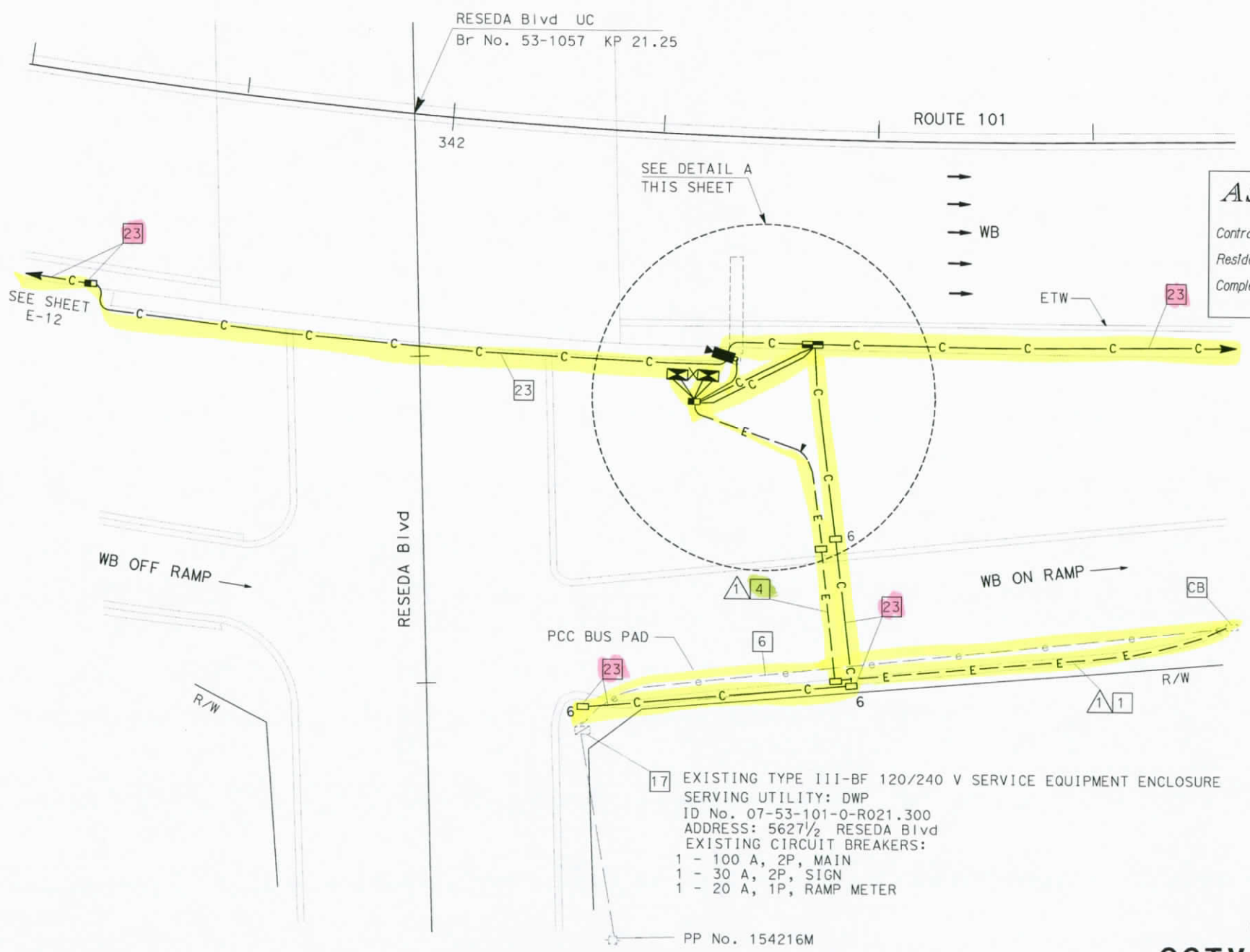
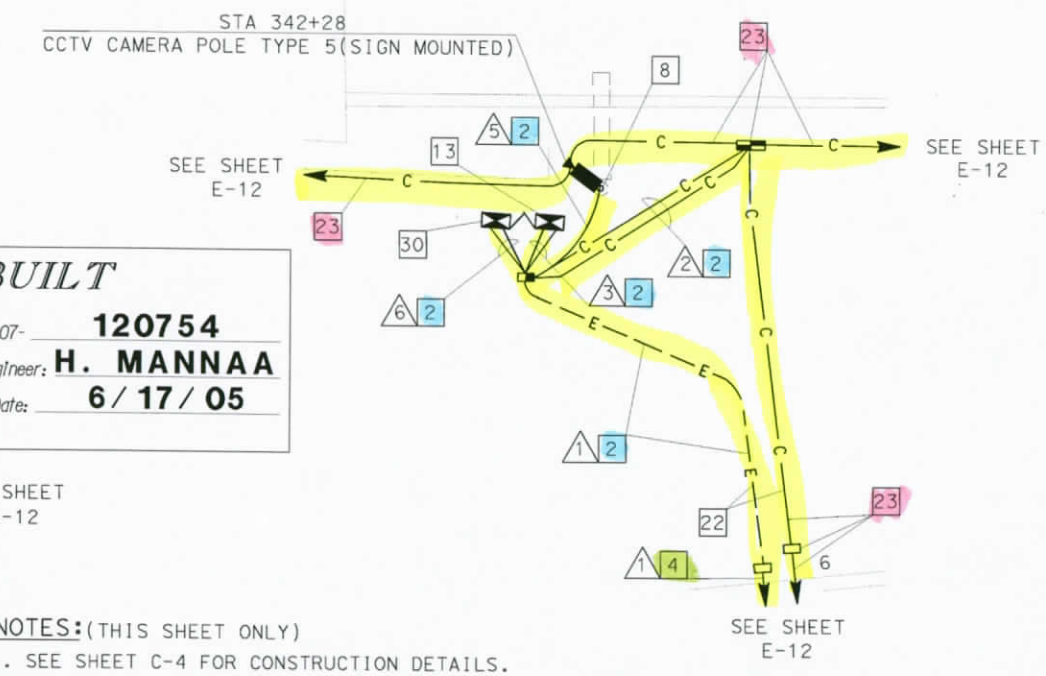
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2								3		5	6	
FO JUMPERS	DATA											6			6
48SMFO CABLE	DATA/VOICE		2												2
48SMFO CABLE	SH VIDEO/VOICE							2				2			
12SMFO CABLE	VIDEO/DATA						1					1			
RG-6A/U COAX	BB VIDEO											1	1		2
#8	POWER	4									2			2	
CAMERA CONTROL CABLE SHEET E-45	CAMERA CONTROL												1		1
INNERDUCT (SIZE 25)			1	1	1	1	1	1	1	1					
INNERDUCT (SIZE 32)															
CONDUIT SIZE		53	103				103				78	78	53	78	78



CCTV CAMERA LOCATION VE213

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05



DETAIL A
NO SCALE

NOTES: (THIS SHEET ONLY)
1. SEE SHEET C-4 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY.
6. ADD 4#8 POWER CONDUCTORS TO EXISTING CONDUIT.
8. INSTALL CCTV CAMERA ASSEMBLY WITH INTEGRATED CCR AND PAN/TILT UNIT ON EXISTING SIGN STRUCTURE. SEE STD PLAN ES-16B FOR DETAILS.
13. INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE. SEE DETAIL 3, SHEET E-50.
17. INSTALL TWO 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR VIDEO AND DATA NODE.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.
23. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.
30. INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT DATA NODE. SEE DETAIL 3, SHEET E-50 AND DETAIL B SHEET E-51.

COMMUNICATIONS SYSTEM ROUTING
CCTV CAMERA, VIDEO NODE AND DATA NODE
(LOCATION VE213)

SCALE 1:200

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-26

	CS	REVISED BY	DATE 7/02	HT	CALCULATED/DESIGNED BY
	7/02	DATE REVISED	7/02	DL	CHECKED BY

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s124928
DGN FILE => 712075U26.dgn
CU 07388
EA 120751

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	90	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

NOTES: (THIS SHEET ONLY)

1. SEE SHEET C-5 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

3 REMOVE EXISTING CONDUCTORS AND INSTALL 2#12 POWER CONDUCTORS.

4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.

7 INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE.

12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.

17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.

19 INSTALL TYPE III-BF, 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.

20 INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.

21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

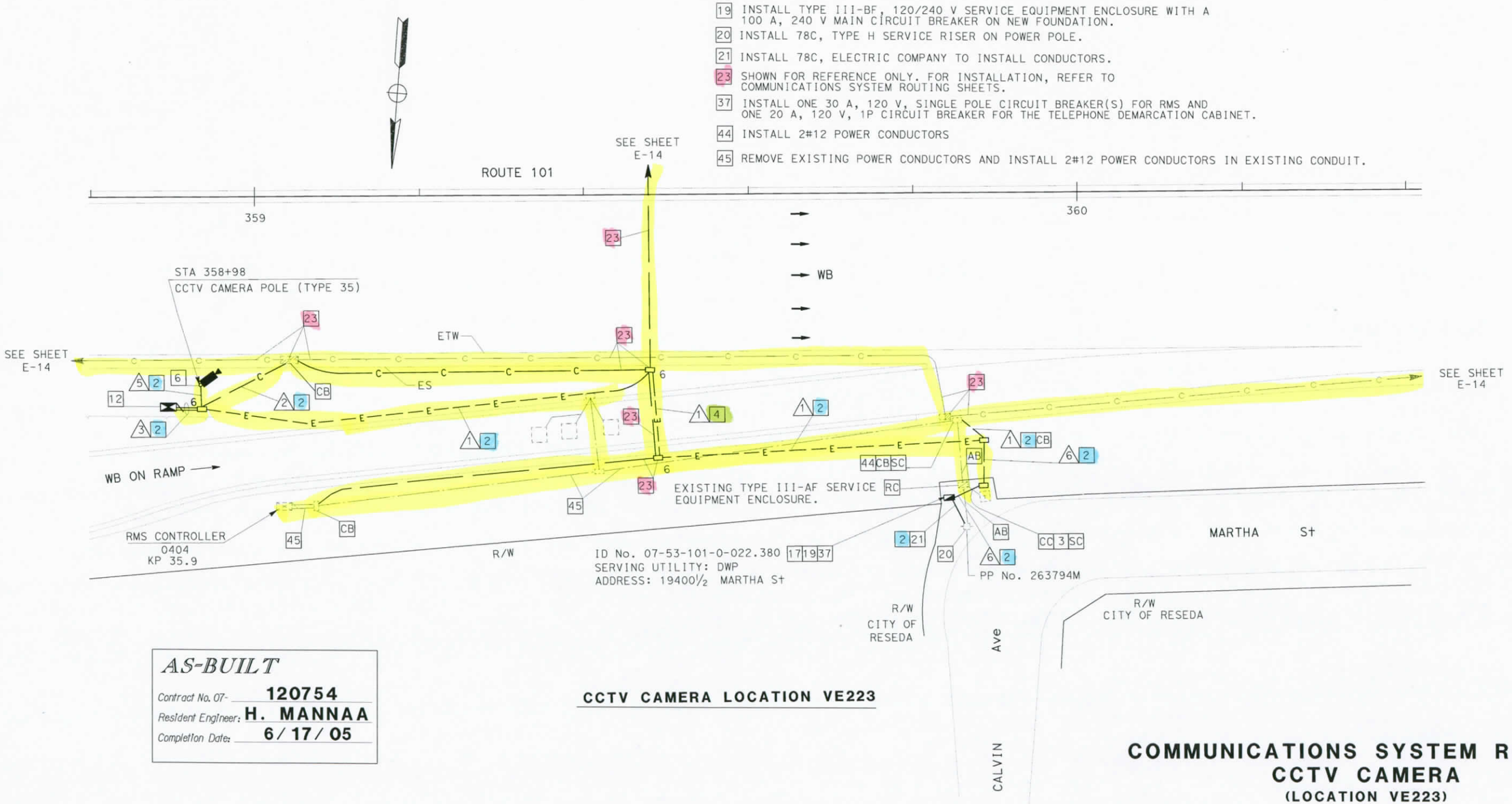
37 INSTALL ONE 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR RMS AND ONE 20 A, 120 V, 1P CIRCUIT BREAKER FOR THE TELEPHONE DEMARCATION CABINET.

44 INSTALL 2#12 POWER CONDUCTORS

45 REMOVE EXISTING POWER CONDUCTORS AND INSTALL 2#12 POWER CONDUCTORS IN EXISTING CONDUIT.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 3	RUN 5	RUN 6
12SMFO	SH VIDEO/VOICE		1		1		
RG-6A/U COAX	BB VIDEO				1	1	
#12	POWER	2		2			4
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1	1	
INNERDUCT (SIZE 32)							
CONDUIT SIZE		53	53	78	78	53	53



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CCTV CAMERA LOCATION VE223

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

COMMUNICATIONS SYSTEM ROUTING
CCTV CAMERA
(LOCATION VE223)

SCALE 1:200

E-27

DATE 7/02	REVISED BY	CS
7/02	DATE REVISED	7/02

CALCULATED/DESIGNED BY HT
CHECKED BY DL

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	91	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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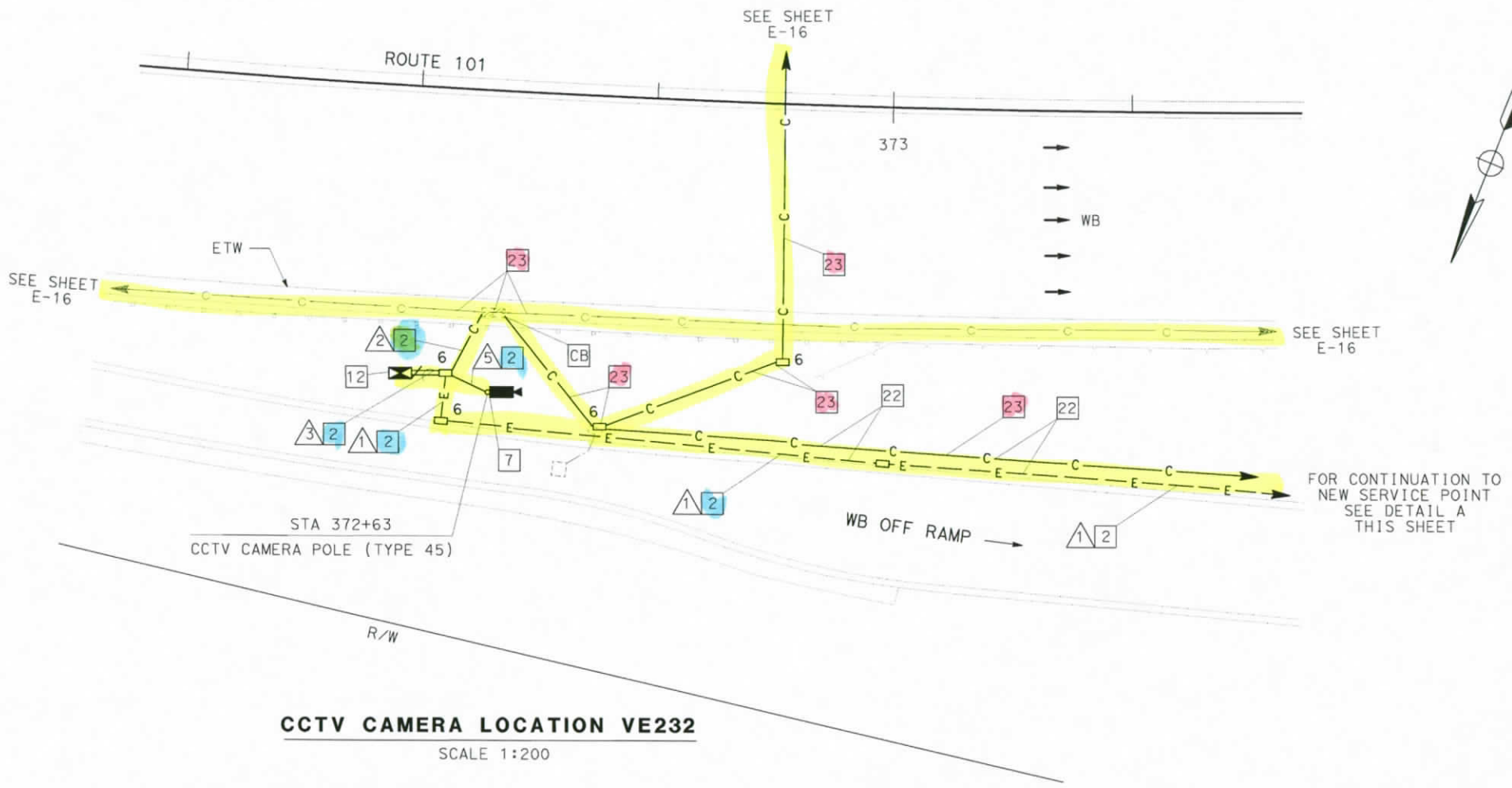


CCTV CAMERA LOCATION VE232

SCALE 1:200

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

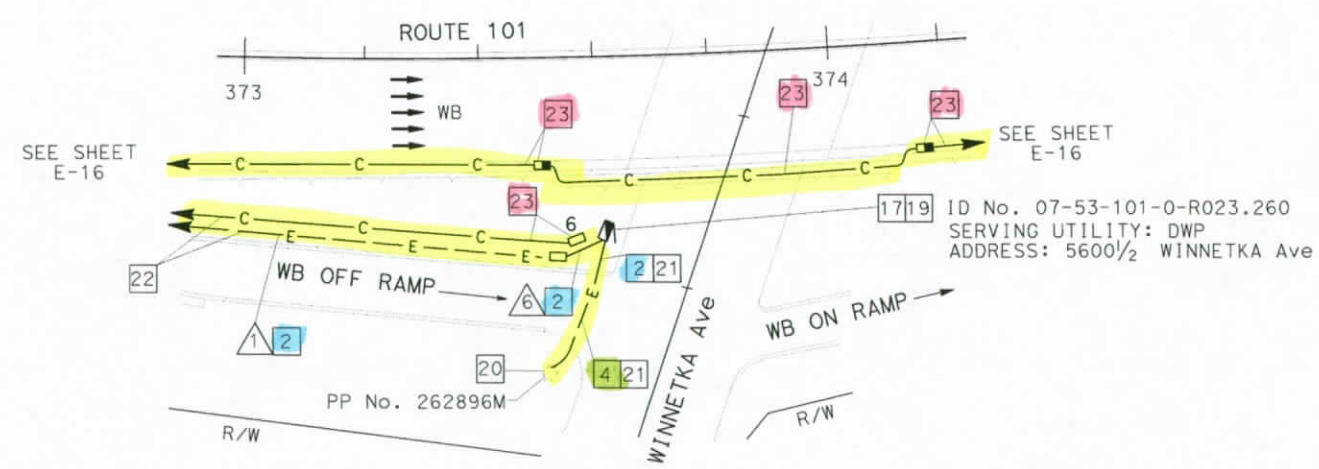
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3		RUN 5	RUN 6	
12SMFO	SH VIDEO/VOICE		1		1			
RG-6A/U COAX	BB VIDEO				1	1		
#8	POWER	2		2			2	
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1	1		
INNERDUCT (SIZE 32)								
CONDUIT SIZE		53	53	78	78	53	78	78

NOTES: (THIS SHEET ONLY)

1. SEE SHEET C-6 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

- 2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
- 4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE SEE SHEET E-44 FOR DETAILS.
- 7 INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE.
- 12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.
- 17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV.
- 19 INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.
- 20 INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.
- 21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.
- 22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.
- 23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.



DETAIL A

SCALE 1:500

COMMUNICATIONS SYSTEM ROUTING
CCTV CAMERA
(LOCATION VE232)

SCALE AS NOTED

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

E-28

CS	REVISED BY	DATE 7/02	CALCULATED/DESIGNED BY HT
7/02	DATE REVISED	7/02	CHECKED BY DL

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:42

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	92	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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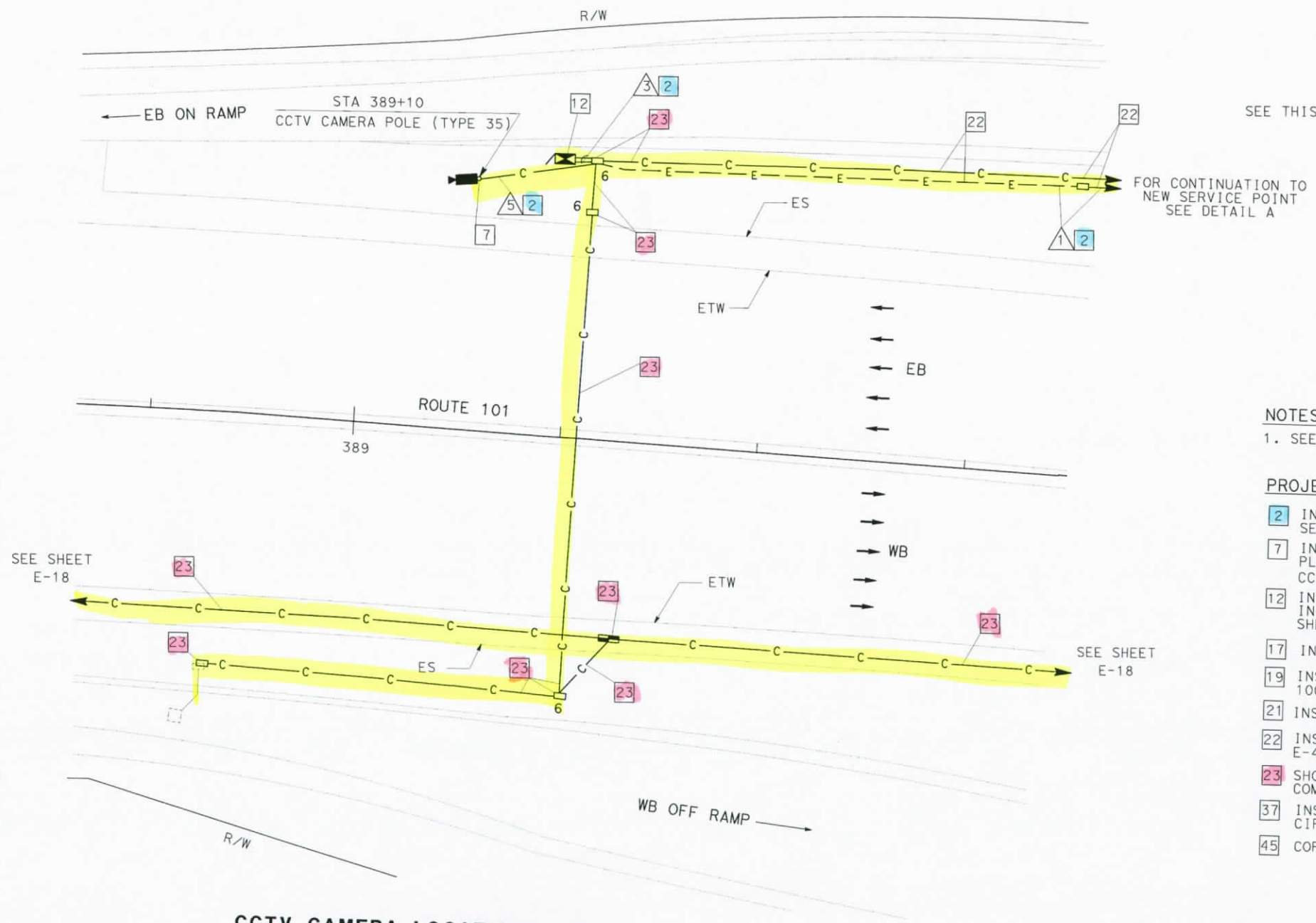
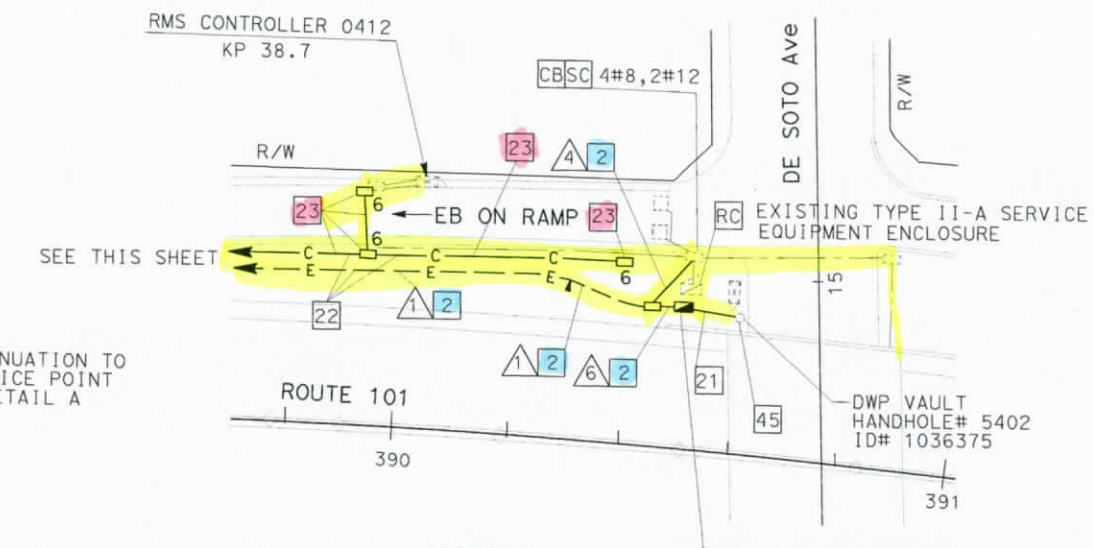
Caltrans Metric

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN 1	3		4	5	6
12SMFO	SH VIDEO/VOICE			1			
RG-6A/U COAX	BB VIDEO			1		1	
#8	POWER	2	2		4		6
#12	POWER				2		2
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL			1		1	
INNERDUCT (SIZE 32)							
CONDUIT SIZE		53	78	78	53	53	53

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05



CCTV CAMERA LOCATION VE243
SCALE 1:200



DETAIL A
NO SCALE

17 19 37 ID No. 07-53-101-0-R024.310
SERVING UTILTY: DWP
ADDRESS: 5326¾ DE SOTO Ave

NOTES: (THIS SHEET ONLY)
1. SEE SHEET C-7 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND INTEGRATED CCR AND PAN/TILT UNIT ON POLE.

12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.

17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV.

19 INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.

21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

37 INSTALL TWO 30 A, 120 V, 1P CIRCUIT BREAKER FOR RMS AND ONE 15 A, 120 V, 1P CIRCUIT BREAKER FOR THE TELEPHONE DEMARCATION CABINET.

45 CORE THROUGH EXISTING DWP VAULT, DWP REPRESENTATIVE TO BE PRESENT WHILE CORING.

COMMUNICATIONS SYSTEM ROUTING
CCTV CAMERA
(LOCATION VE243)
SCALE AS NOTED

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/ DESIGNED BY	HT	DATE 7/02	REVISED BY	CS
CHECKED BY	DL	7/02	DATE REVISED	7/02

ASI REVISION 0-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	93	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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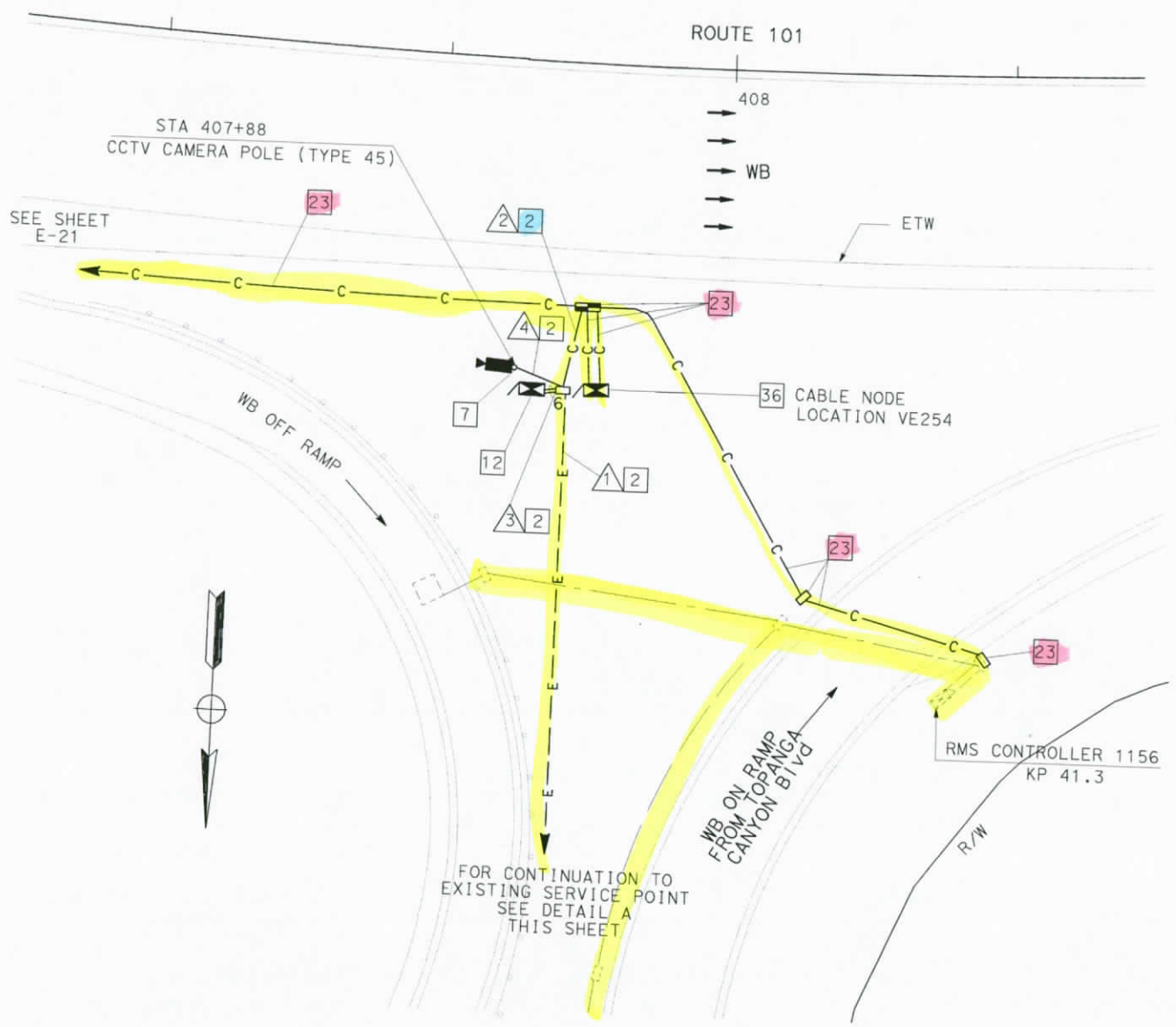


CCTV CAMERA AND CABLE NODE LOCATION VE254

SCALE 1:200

NOTES: (THIS SHEET ONLY)

1. SEE SHEET C-8 FOR CONSTRUCTION DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

6 ADD 2#8 POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-45 AND STD PLAN ES-16A FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY WITH INTEGRATED CCR AND PAN/TILT UNIT ON POLE.

12 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE FIBER OPTIC DATA MODEM AND SINGLE VIDEO TRANSMITTER. SEE DETAIL 2, SHEET E-49 AND DETAIL A, SHEET E-51.

17 ADD 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV CAMERA.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

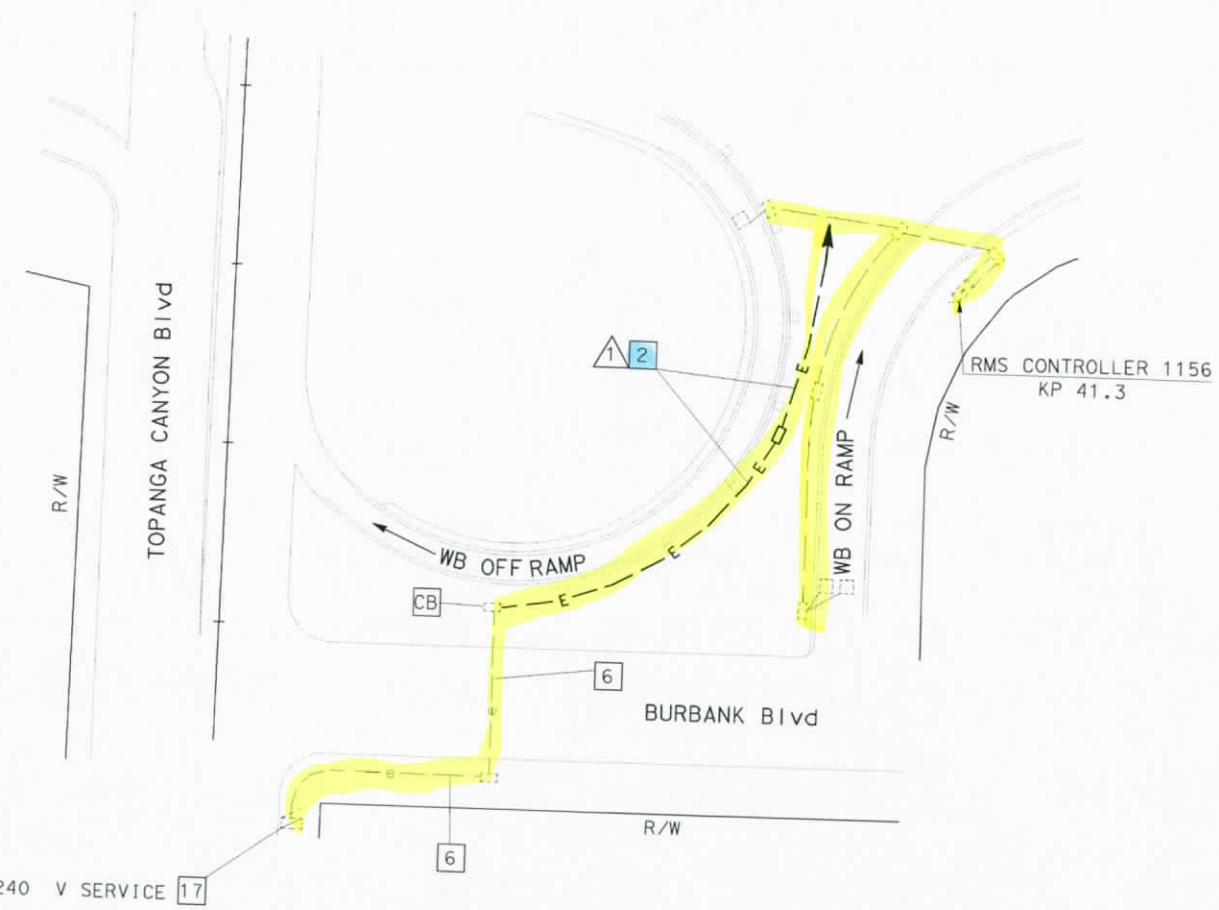
36 INSTALL TYPE 334 CONTROLLER CABINET. SEE SHEET E-50, DETAIL 4.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3		RUN 4
12SMFO	SH VIDEO/VOICE		1		1	
RG-6A/U COAX	BB VIDEO				1	1
#8	POWER	2		2		
CAMERA CONTROL CABLE SEE SHEET E-45	CAMERA CONTROL				1	1
INNERDUCT (SIZE 32)						
CONDUIT SIZE		53	53	78	78	53

EXISTING TYPE III BF 120/240 V SERVICE 17
EQUIPMENT ENCLOSURE
SERVING UTILITY: DWP
ID No. 07-53-101-0-R025.340
ADDRESS: 21999½ BURBANK Blvd
EXISTING CIRCUIT BREAKERS:
1 - 50 A, 1P SPARE
1 - 30 A, 1P RAMP METER
1 - 15 A, 1P TELCO DEMARCATION CABINET



DETAIL A

SCALE 1:200

COMMUNICATIONS SYSTEM ROUTING CCTV CAMERA AND CABLE NODE (LOCATION VE254)

SCALE AS NOTED

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH
CALCULATED/DESIGNED BY HT DATE 7/02 REVISED BY CS
CHECKED BY DL 7/02 DATE REVISED 7/02

DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	94	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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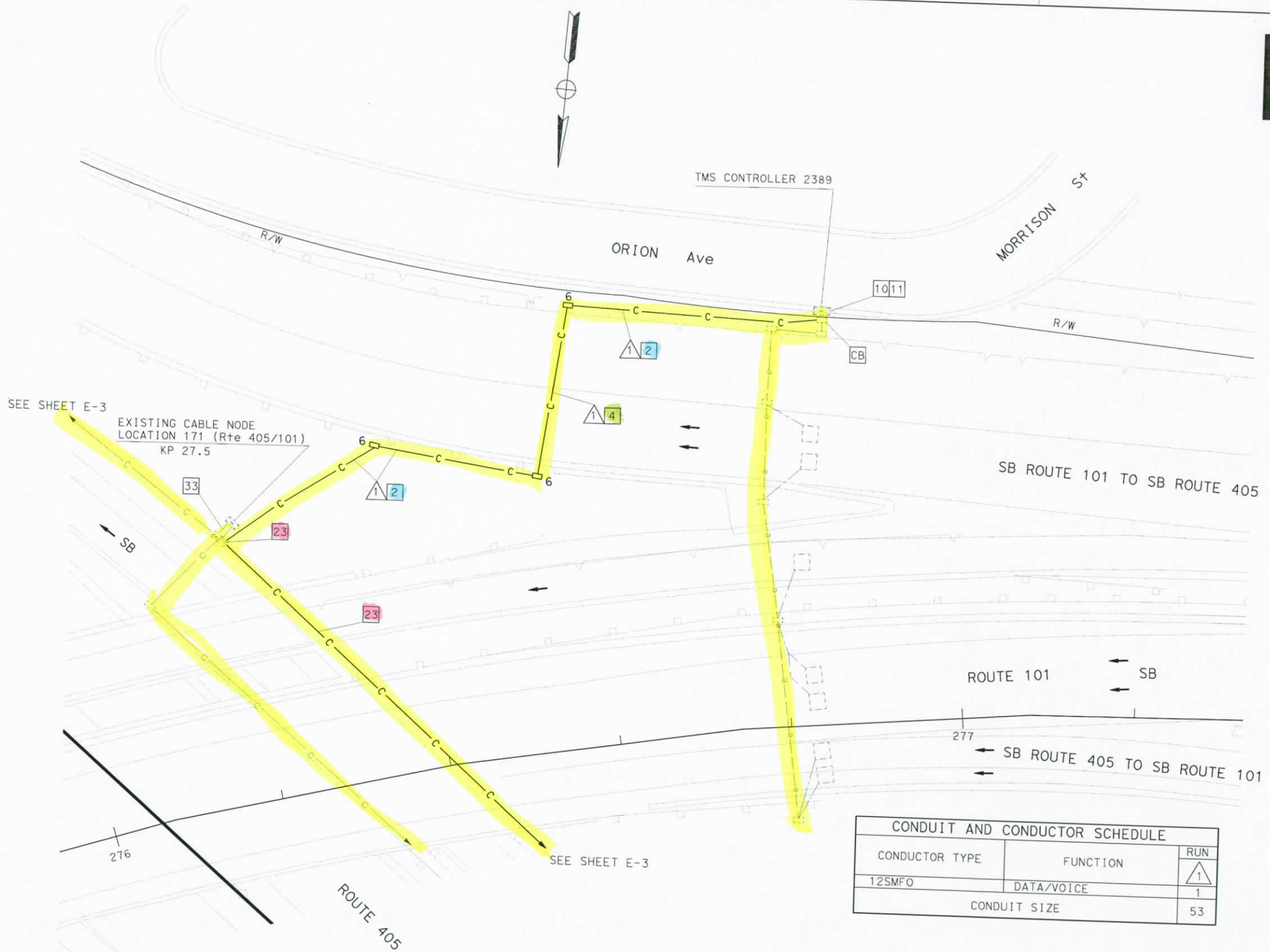

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.

10 INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING TMS 2389 CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.

11 DISCONNECT EXISTING dlc(s) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

33 INSTALL 3-48SMFO IN EXISTING CONDUIT AND TERMINATE IN NEW FDU'S IN EXISTING CABLE NODE. SEE SHEET E-50 FOR DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE		
CONDUCTOR TYPE	FUNCTION	RUN 1
12SMFO	DATA/VOICE	1
CONDUIT SIZE		53

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

CABLE NODE LOCATION VE171 AND TMS LOCATION 2389

COMMUNICATIONS SYSTEM ROUTING
MODIFY CABLE NODE
(LOCATION VE171)
MODIFY TRAFFIC MONITORING STATION
(LOCATION 2389)

SCALE 1:200

THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY CS
CHECKED BY DL

DATE 7/02	REVISED BY	CS
7/02	DATE REVISED	7/02

DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	95	178

REGISTERED ELECTRICAL ENGINEER 3/20/03 DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 EXP. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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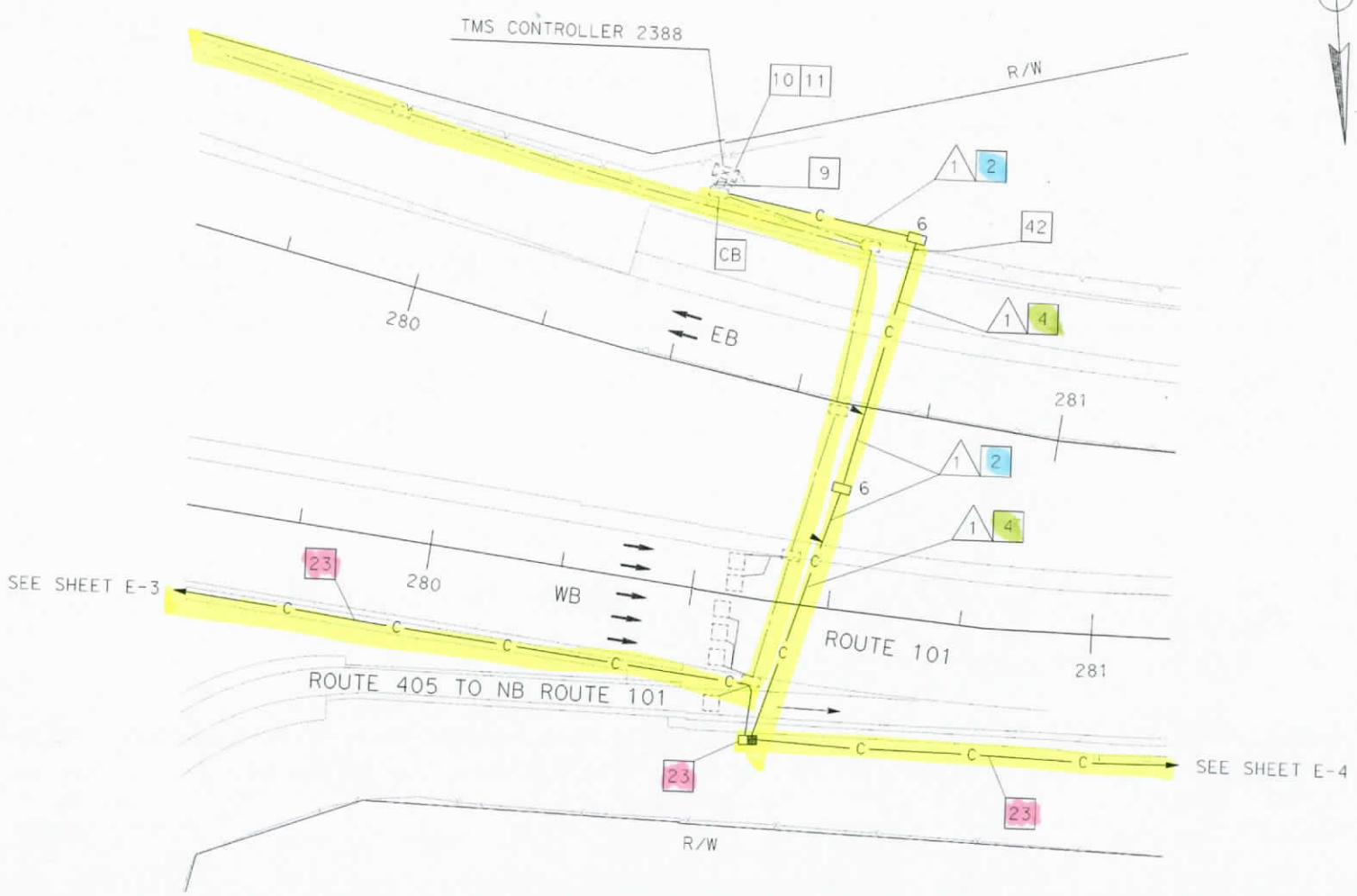

TMS LOCATION 2388

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1
12SMFO CABLE	DATA/VOICE	1
CONDUIT SIZE		53

PROJECT NOTES: (THIS SHEET ONLY)

2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
9. ADD COMMUNICATION CABLE(S) AND CONNECT TO EXISTING TMS CONTROLLER CABINET.
10. INSTALL FDU AND FIBER OPTIC DATA MODEM IN EXISTING TMS CONTROLLER CABINET. SEE SHEETS E-49 AND E-51 FOR DETAILS.
11. DISCONNECT EXISTING COMMUNICATIONS(S) ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
23. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.
42. SEE SHEET E-69 FOR SOUNDWALL CROSSING DETAIL.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATIONS SYSTEM ROUTING
MODIFY TRAFFIC MONITORING STATION
(LOCATION 2388)

SCALE 1:500

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

	CALCULATED/ DESIGNED BY	CS	DATE 7/02	REVISED BY	CS
	CHECKED BY	DL	7/02	DATE REVISED	7/02

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 20 40 60 80

REVISION 00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	96	178

REGISTERED ELECTRICAL ENGINEER Jacqueline C. Tan DATE 3/20/03

PLANS APPROVAL DATE 4-7-03

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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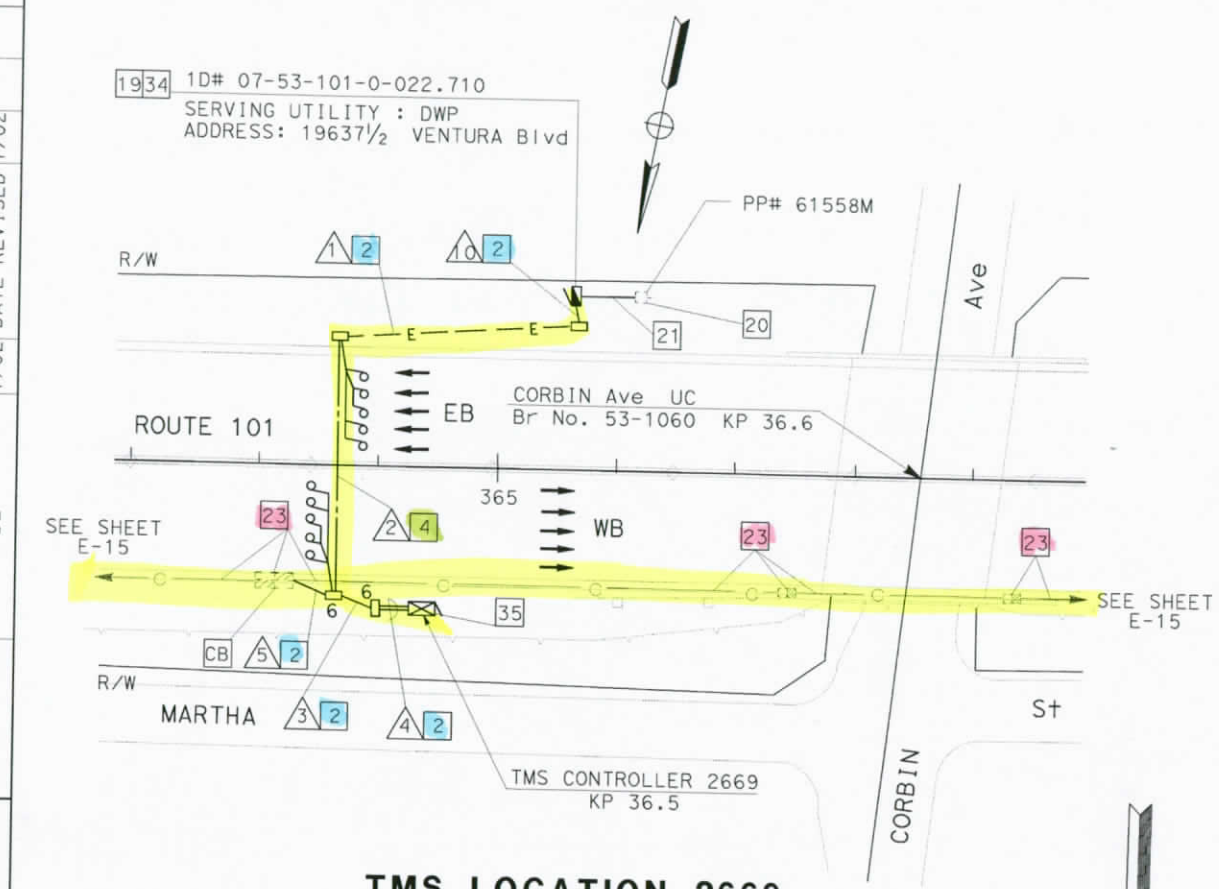


TMS LOCATION 2669

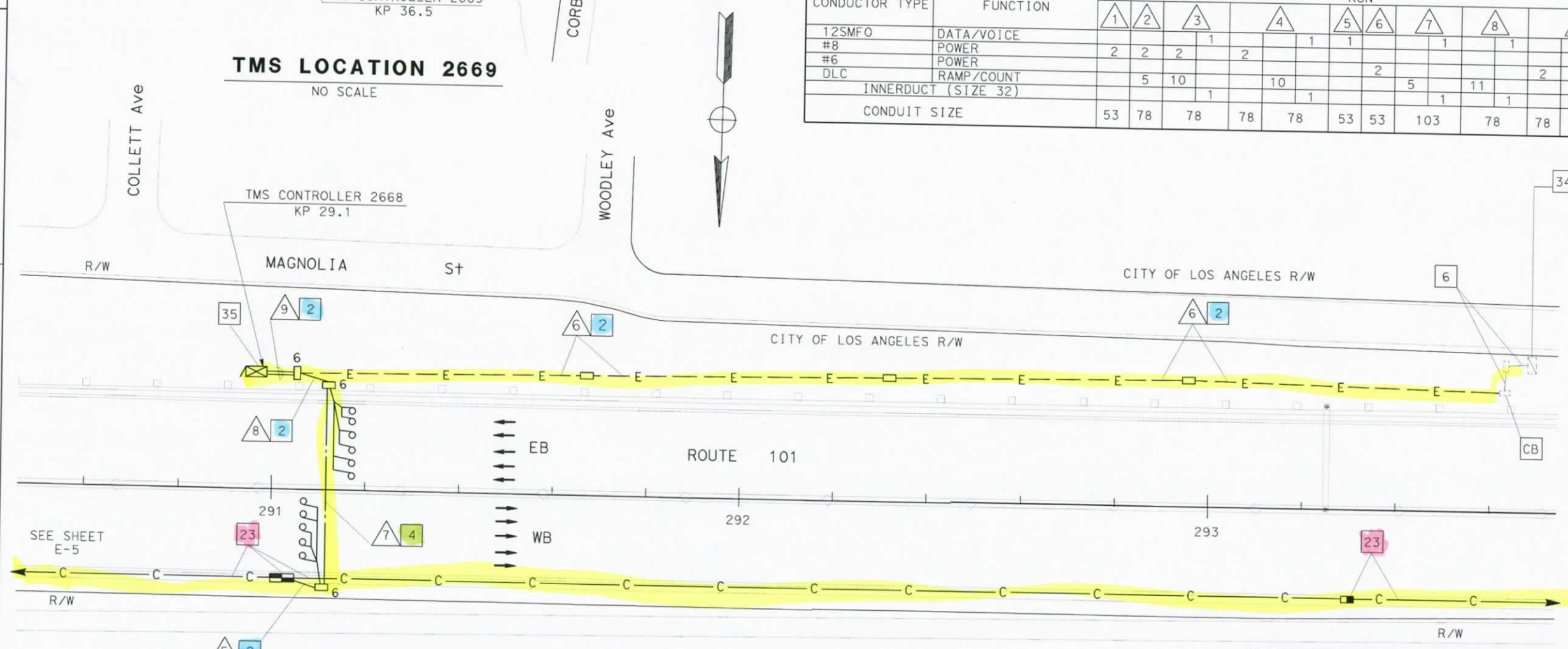
NO SCALE

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL.
4. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. SEE SHEET E-44 FOR DETAILS.
6. ADD 2#6 POWER CONDUCTORS TO EXISTING CONDUIT.
19. INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.
20. INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.
23. SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.
34. ADD ONE 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR TMS.
35. INSTALL STATE-FURNISHED MODEL 334 CONTROLLER CABINET ASSEMBLY WITH LOOP DETECTOR SENSOR ON NEW FOUNDATION. INSTALL FDU AND FIBER OPTIC DATA MODEM. SEE SHEET E-49 AND E-51.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3		RUN 4		RUN 5	RUN 6	RUN 7		RUN 8		RUN 9		RUN 10	
12SMFO	DATA/VOICE				1		1	1			1		1		1		
#8	POWER	2	2	2		2											
#6	POWER								2								
DLC	RAMP/COUNT		5	10			10			5		11		2		2	
INNERDUCT (SIZE 32)					1		1				1		1		11		
CONDUIT SIZE		53	78	78		78	78	53	53	103		78		78	78	78	78



34 EXISTING TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE, SERVING UTILITY: DWP
ID: 07-53-101-0-018.210
ADDRESS: 161701/2 MAGNOLIA Blvd
EXISTING CIRCUIT BREAKERS;
1-40 A, 240 V, 2P LIGHTING
1-30 A, 240 V, 2P SIGN
1-15 A, 120 V, 10 PEU

TMS LOCATION 2668

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

COMMUNICATIONS SYSTEM ROUTING TRAFFIC MONITORING STATION

(LOCATIONS 2668 AND 2669)

SCALE 1:500

E-33

DATE 7/02	REVISED BY CS	DATE 7/02	REVISED BY CS
7/02	DATE REVISED 7/02	DL	CHECKED BY

CALCULATED/DESIGNED BY

PROJECT ENGINEER HENRY H. TRINH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans ITS DEVELOPMENT

AST REVISION 00-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:43

17 EXISTING TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE
SERVING UTILITY: DWP
ID: 07-53-101-0-R019.472
ADDRESS: 5528½ EDWARD E HORTON LN
EXISTING CIRCUIT BREAKER:
1-30 A, 240 V, 2P-SIGN

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 4		
12SMFO CABLE	DATA/VOICE			1			1
DLC	RAMP/COUNT		5			10	
#4	POWER	2			2		
INNERDUCT (SIZE 32)							1
CONDUIT SIZE		53	53	53	2-78		

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	101	R27.8/R40.6	97	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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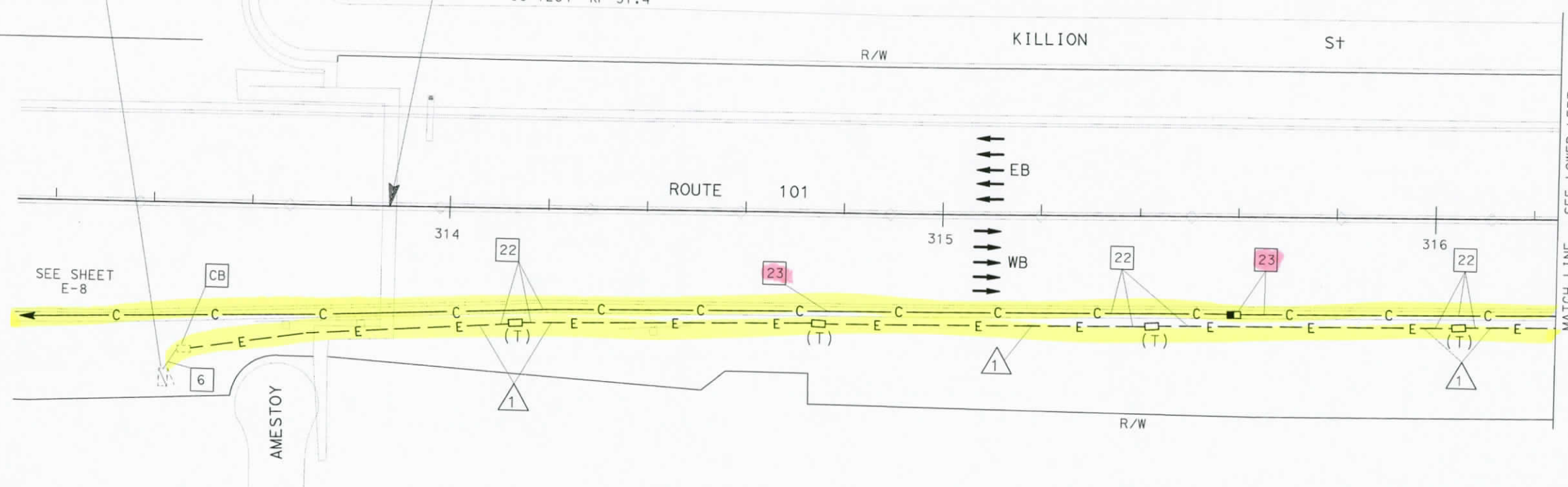

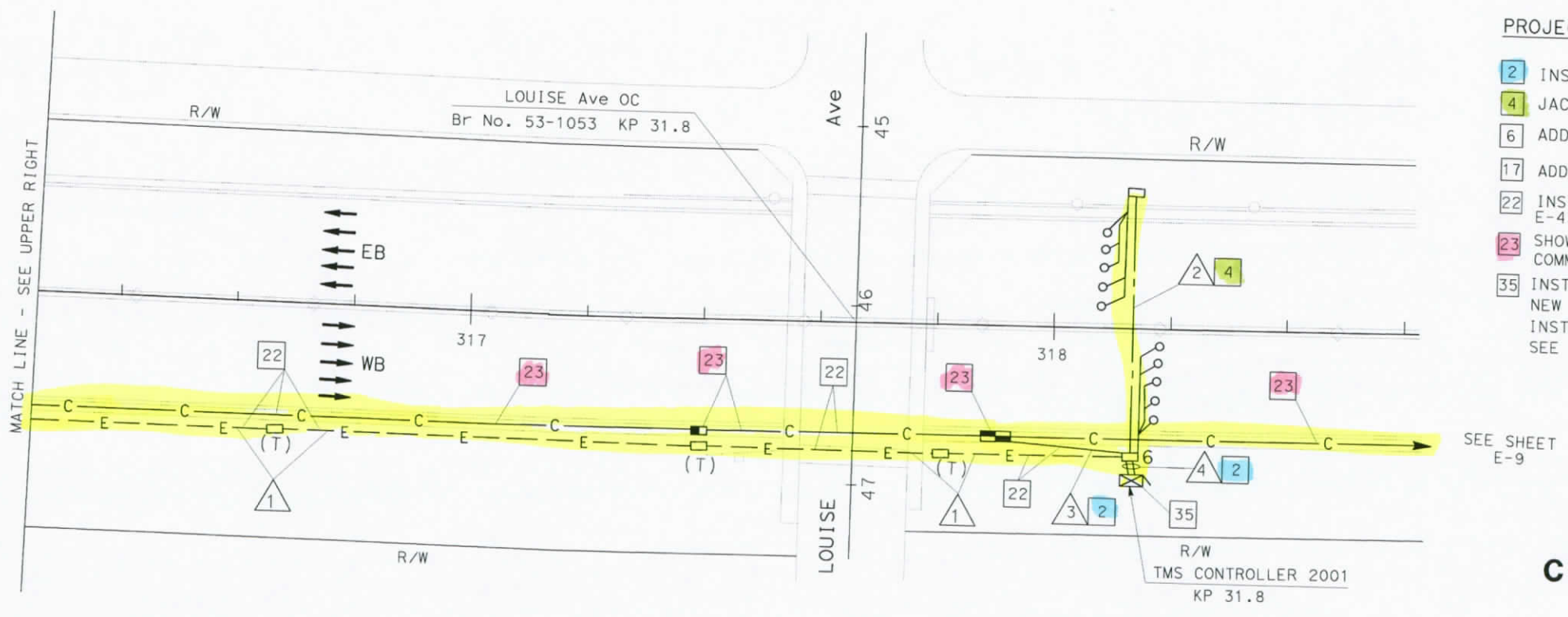

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL.
4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY.
6 ADD 2#4 POWER CONDUCTORS TO EXISTING CONDUIT.
17 ADD 1-30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR TMS 2001.
22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.
23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.
35 INSTALL STATE-FURNISHED MODEL 334 CONTROLLER CABINET ASSEMBLY ON NEW FOUNDATION.
INSTALL LOOP DETECTOR SENSORS, FDU AND FIBER OPTIC DATA MODEM. SEE SHEET E-49 AND E-51.

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
TRAFFIC MONITORING STATION
(LOCATION 2001)

SCALE 1:500

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 20 40 60 80

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY CS
CHECKED BY DL
REVISED BY CS DATE REVISED 7/02
DATE 7/02 7/02

ASI REVISION 0-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	R27.8/R40.6	98	178

Jacqueline C. Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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Caltrans Metric

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 3
12SMFO CABLE	DATA/VOICE				
#2	POWER	2		2	
DLC	RAMP/COUNT				
#8	POWER		2		2
CONDUIT SIZE		53	78	78	53

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL.

17 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR TMS.

19 INSTALL TYPE III-BF 120/240 V SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.

20 INSTALL 78C, TYPE H SERVICE RISER ON POWER POLE.

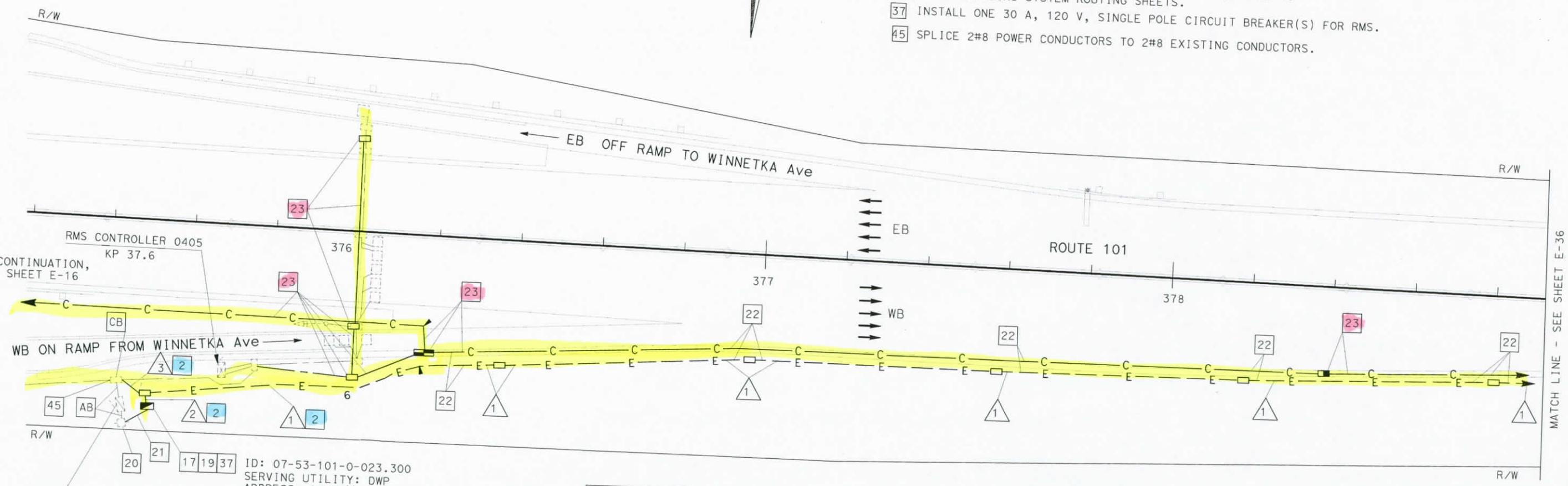
21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

37 INSTALL ONE 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER(S) FOR RMS.

45 SPLICE 2#8 POWER CONDUCTORS TO 2#8 EXISTING CONDUCTORS.



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
TRAFFIC MONITORING STATION
(LOCATION 2670)

SCALE 1:500

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH
CALCULATED/DESIGNED BY CS
CHECKED BY DL

DATE	REVISED BY	
7/02	CS	
7/02	DATE REVISED	7/02

DATE PLOTTED => 17-SEP-2007
TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	101	R27.8/R40.6	99	178

Jacqueline C Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/05 ELECTRICAL STATE OF CALIFORNIA

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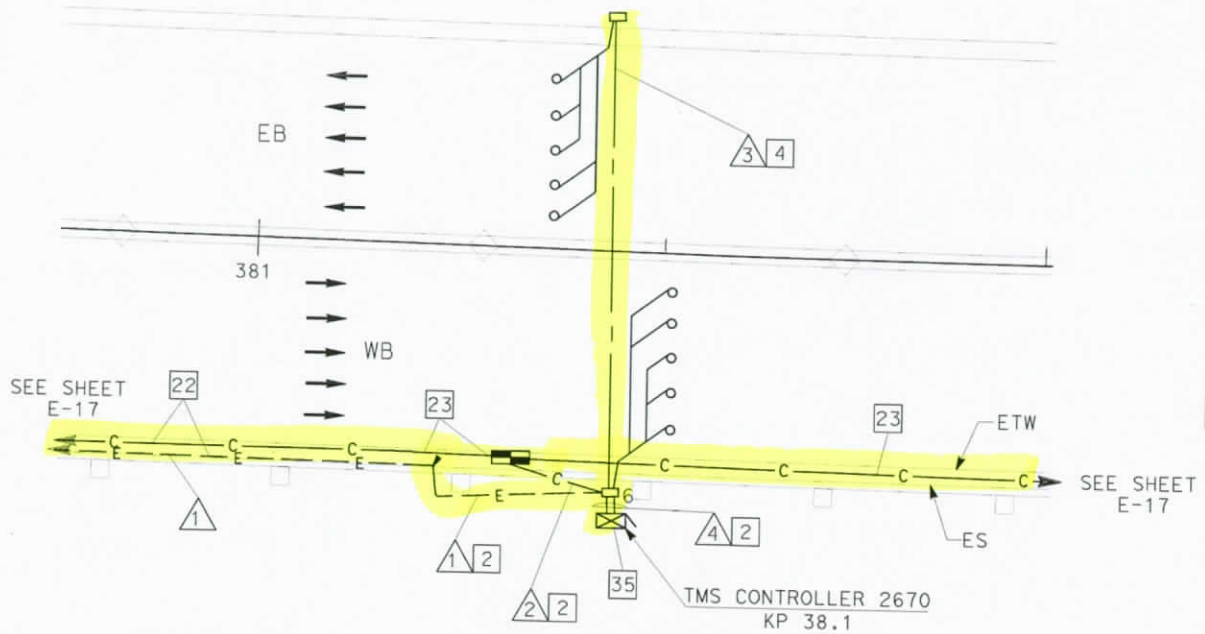


DETAIL A

NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN					
		1	2	3	4		
12SMFO CABLE	DATA/VOICE		1				1
#2	POWER	2			2		
DLC	RAMP/COUNT			5		10	
INNERDUCT (SIZE 32)			1				1
CONDUIT SIZE		53	53	78	78	78	

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL.

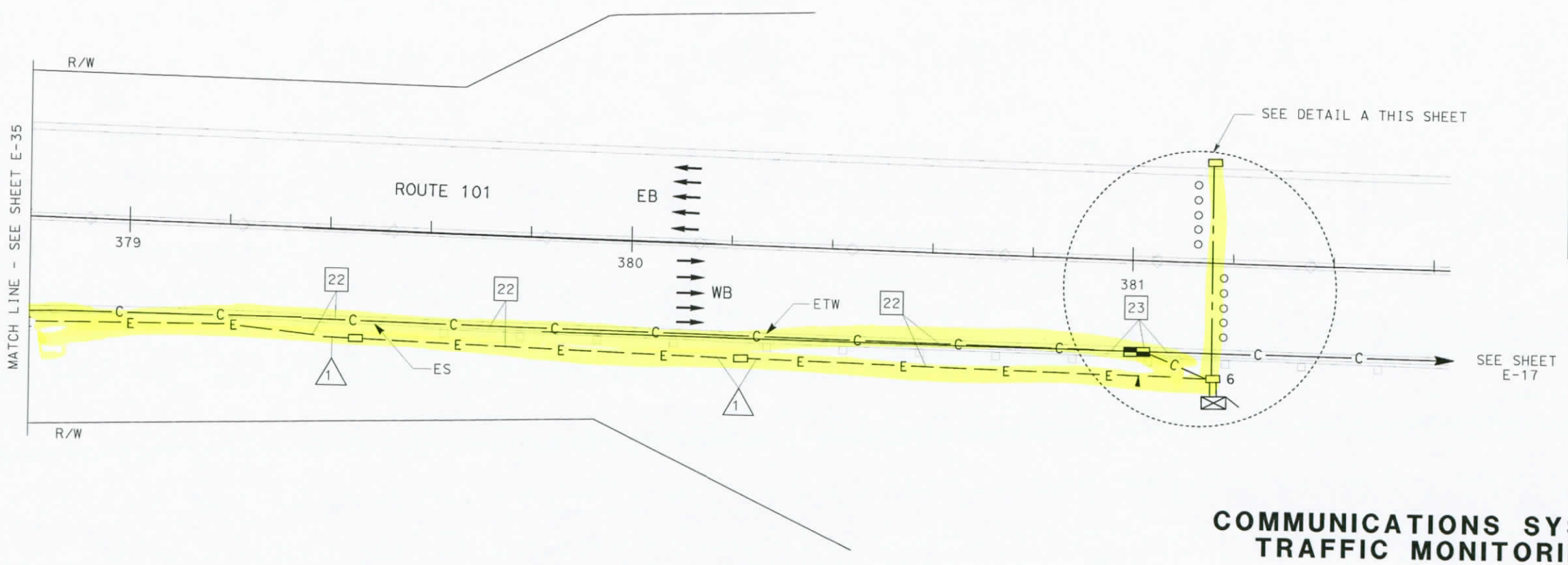
4 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-42 AND E-43 FOR DETAILS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

35 INSTALL STATE-FURNISHED MODEL 334 CABNET ON NEW FOUNDATION. INSTALL STATE FURNISHED MODEL MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL FDU AND FIBER OPTIC DATA MODEM. SEE SHEET E-49 AND E-51.

36 INSTALL TYPE 334 TV CABINET. SEE SHEET E-48, DETAIL B.



AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING
TRAFFIC MONITORING STATION
(LOCATION 2670)

SCALE 1:500

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER HENRY H. TRINH

CALCULATED/DESIGNED BY CS
CHECKED BY DL
REVISED BY CS
DATE REVISED 7/02
DATE 7/02

AST REVISION 0-00-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	101	R27.8/R40.6	100	178

Jacqueline C. Tan 3/20/03
REGISTERED ELECTRICAL ENGINEER DATE

4-7-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JACQUELINE C. TAN
No. E015611
Exp. 12/31/05
ELECTRICAL
STATE OF CALIFORNIA

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Caltrans Metric

PROJECT NOTES: (THIS SHEET ONLY)

SEE SHEET L-2 FOR CONSTRUCTION DETAILS.

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-42 FOR DETAILS.

19 INSTALL TYPE III-BF 120/240 V, SERVICE EQUIPMENT ENCLOSURE WITH A 100 A, 240 V MAIN CIRCUIT BREAKER ON NEW FOUNDATION.

20 RC EXISTING TYPE II-A SERVICE EQUIPMENT ENCLOSURE.

21 INSTALL 78C, ELECTRIC COMPANY TO INSTALL CONDUCTORS.

23 SHOWN FOR REFERENCE ONLY. FOR INSTALLATION, REFER TO COMMUNICATIONS SYSTEM ROUTING SHEETS.

26 INSTALL STATE-FURNISHED MODEL 500-X CMS PANEL AND SUPPORTING HARDWARE.

27 TRENCH AND INSTALL 78C IN SOIL AREA. FOR WIRING SEE NOTE 1 ON SHEET E-68.

28 TRENCH AND INSTALL 2-78C, STATE-FURNISHED CMS CONTROL CABLES, (6P18, 24P18) IN SOIL AREA. SEE TABLE 1 - SHEET E-1.

29 TRENCH AND INSTALL 78C, 12#1/0, IN SOIL AREA.

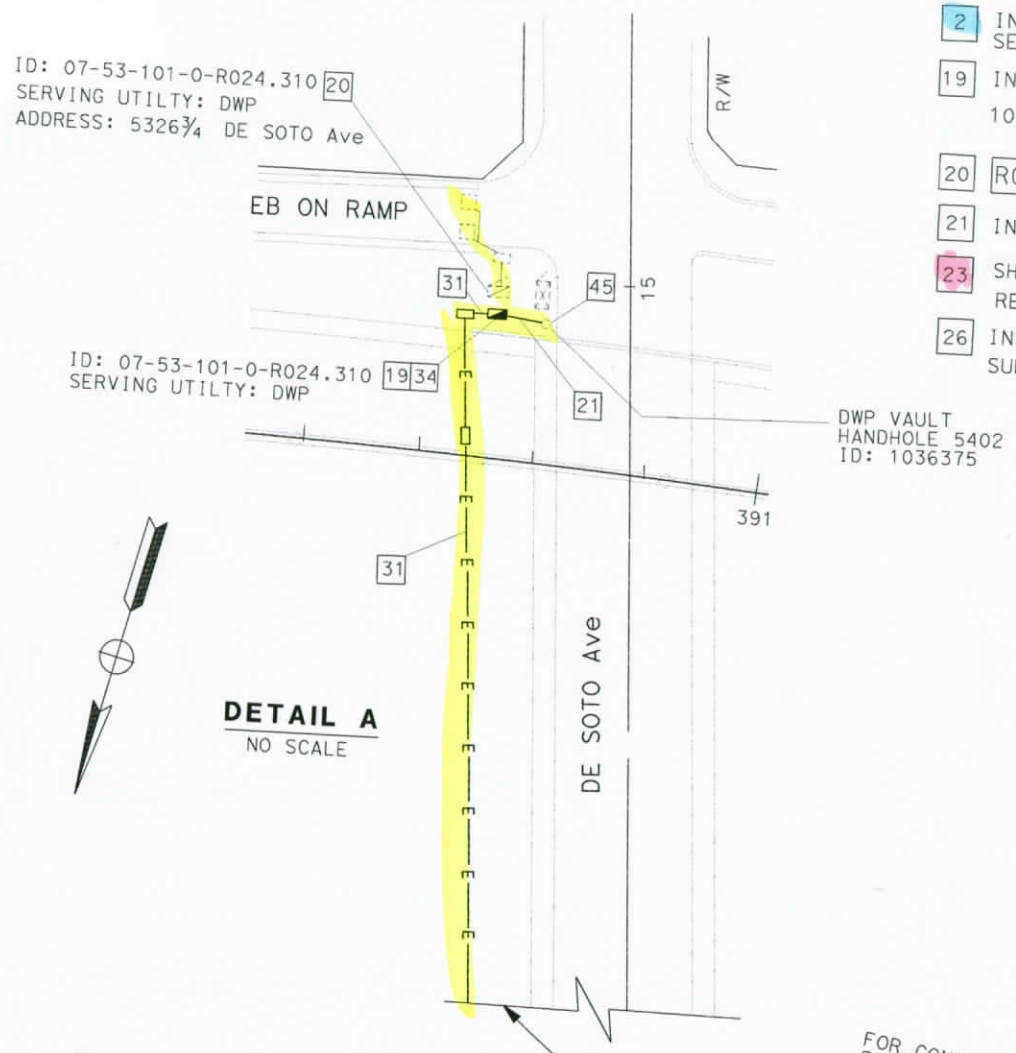
30 TRENCH AND INSTALL 2-78C, 2#6, STATE-FURNISHED CMS CONTROL CABLE (6P18, 24P18) IN SOIL AREA.

31 TRENCH AND INSTALL 2-78C, 2#6,12#1/0, IN SOIL AREA.

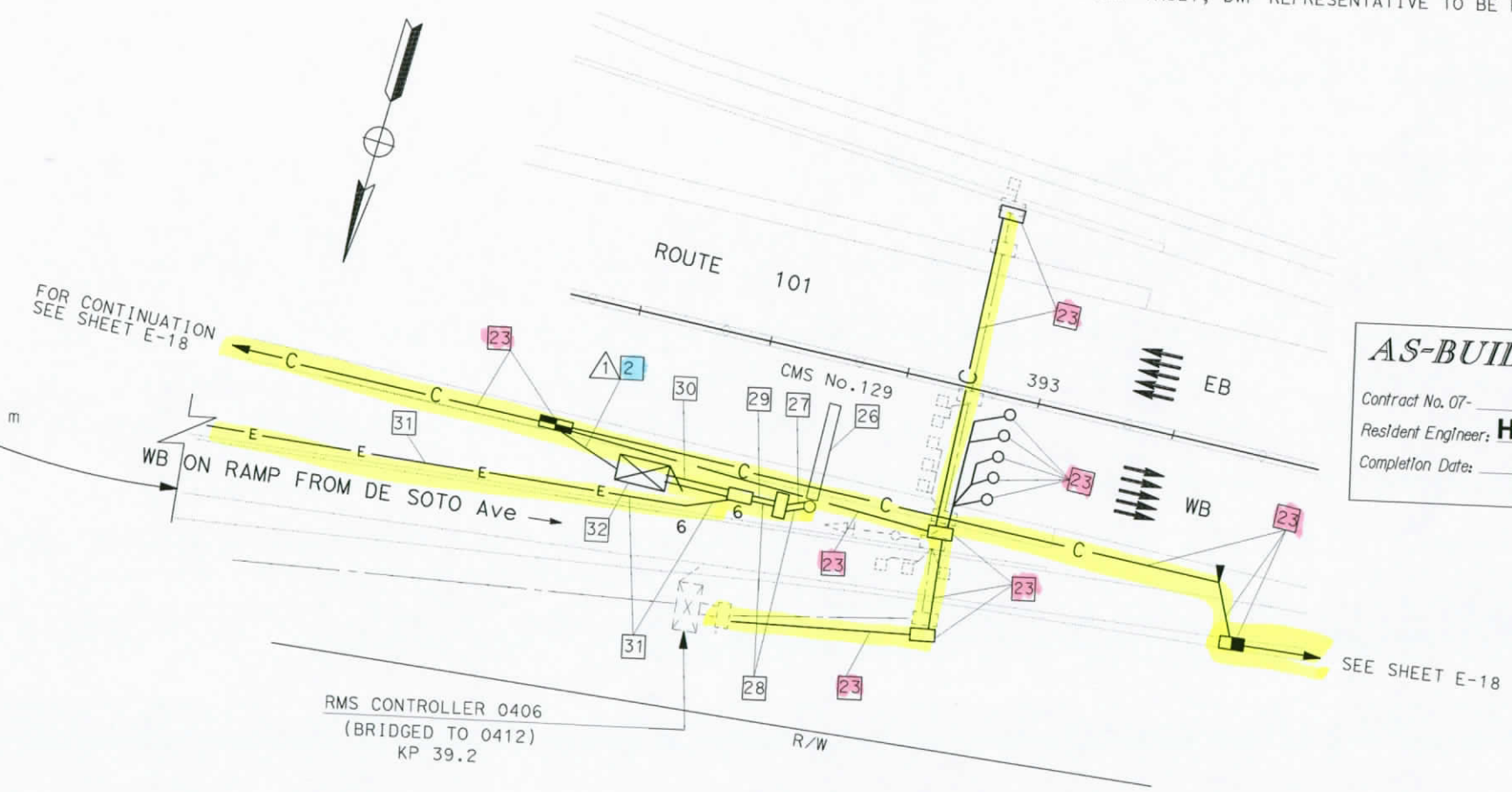
32 INSTALL STATE-FURNISHED TYPE 334 CMS CONTROLLER CABINET AND MODEL 170 CONTROLLER. CONSTRUCT CONCRETE PAD. INSTALL FDU AND FIBER OPTIC DATA MODEM, SEE SHEET E-68 AND E-49 FOR MORE DETAILS.

34 INSTALL ONE 120 V-1P-30 A CIRCUIT BREAKER FOR CMS CONTROLLER CABINET AND FOUR 120 V-1P-40 A CIRCUIT BREAKER FOR MODEL 500-X CMS PANEL.

45 CORE THROUGH EXISTING DWP VAULT, DWP REPRESENTATIVE TO BE PRESENT WHILE CORING.



DETAIL A
NO SCALE



CMS No. 129
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE		
CONDUCTOR TYPE	FUNCTION	RUN 1
12SMFO CABLE	DATA/VOICE	1
INNERDUCT (SIZE 32)		
CONDUIT SIZE		53

AS-BUILT
Contract No. 07- 120754
Resident Engineer: H. MANNAA
Completion Date: 6/17/05

COMMUNICATIONS SYSTEM ROUTING CHANGEABLE MESSAGE SIGN (No.129)

NO SCALE

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

FOR REDUCED PLANS ORIGINAL SCALE IS 1:1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER
HENRY H. TRINH

CALCULATED/DESIGNED BY CS
CHECKED BY DL
DATE 7/02 REVISED BY
7/02 DATE REVISED 7/02

REVISION 0-00 DATE PLOTTED => 17-SEP-2007 TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	POST MILE TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	1	154

INDEX OF SHEETS

Sheet No 1		Title and Location Map
" "	2-3	Standard Plans List
" "	4-5	Key Map and Line Index
" "	6-17	Layouts
" "	18-32	Construction Details
" "	33-57	Utility Plans
" "	58	Traffic Handling Plan
" "	59-60	Consrruction Area Signs
" "	61	Summary of Quantities
" "	62-64	Retaining Wall Plans
" "	65-137	Electrical Plans
" "	138-139	Revised and New Standard Plans
Architectural Plans		
" "	140-154	101/134/170 Communications Hub Building

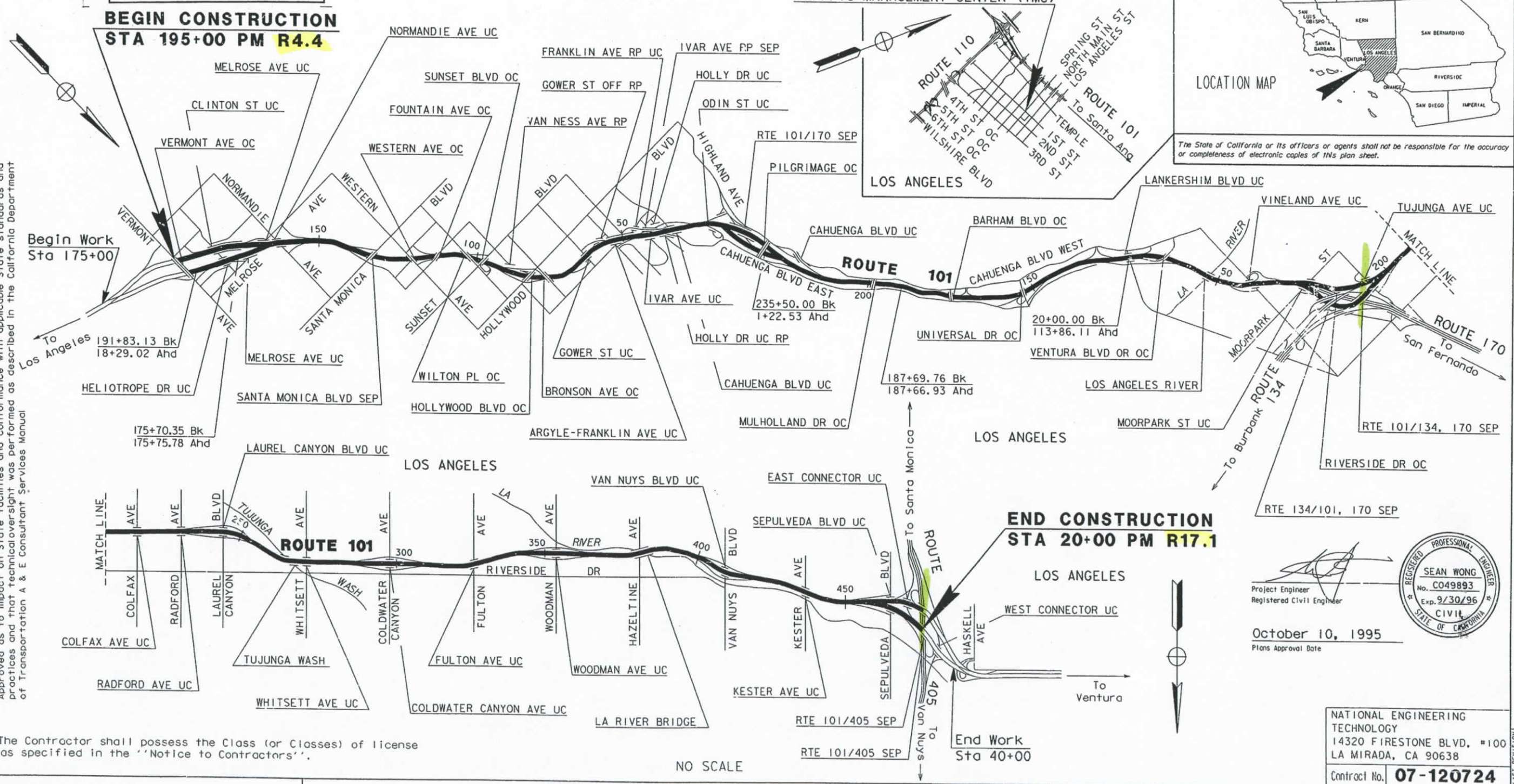
AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hassan Mazaei
Completion Date: 04/20/1999

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN LOS ANGELES COUNTY IN LOS ANGELES FROM VERMONT AVENUE TO ROUTE 101/405 SEPARATION

To be supplemented by Standard Plans dated July, 1992



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Approved as to impact on State facilities and conformance with applicable State standards and practices and that technical oversight was performed as described in the California Department of Transportation A & E Consultant Services Manual

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

Project Engineer
Registered Civil Engineer
October 10, 1995
Plans Approval Date

REGISTERED PROFESSIONAL ENGINEER SEAN WONG No. C049893 Exp. 9/30/96 CIVIL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD. #100
LA MIRADA, CA 90638

Contract No. 07-120724

PROJECT ENGINEER	DESIGN OVERSIGHT APPROVAL	REGISTRATION NO.	DATE
N TONG	PRINTED NAME PAT SULLIVAN SIGNATURE	C30912	5-22-95

LAST REVISION 00-00-00
TIME PLOTTED => 16-OCT-1995 10:54

FORM DC-OE-93-PF (REV. 3/88)
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CU 07387
EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	65	154

REGISTERED ELECTRICAL ENGINEER (Date) 4/3/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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TABLE OF CONTENTS-ELECTRICAL PLANS

E-1, E-2	CCTV AND COMMUNICATION SYSTEM (LEGEND AND NOTES)
E-3-E-26	CCTV AND COMMUNICATION SYSTEM AND UTILITY
E-27-E-47	CCTV AND COMMUNICATION SYSTEM (CAMERA LOCATIONS)
E-48-E-50	CCTV AND COMMUNICATION SYSTEM (SCHEMATICS)
E-51	TRENCH IN DIRT DETAILS
E-52	TRENCH IN PAVEMENT DETAILS
E-53	JACKING DETAILS
E-54	ELECTRICAL DIAGRAM FOR CCTV AND PAN/TILT UNIT
E-55	COMMUNICATION PULL BOX
E-56	DETAILS FOR 5(T) AND COMMUNICATION PULL BOX
E-57	SPLICE VAULT DETAILS
E-58	MODEL 170 CONTROLLER INTERFACE
E-59	334-TV CABINET DETAILS
E-60-E-62	CCTV AND COMMUNICATION SYSTEM DETAILS
E-63-E-65	CCTV AND COMMUNICATION SYSTEM (TWISTED PAIR ASSIGNMENT TABLE)
E-66	CCTV AND COMMUNICATION SYSTEM (FIBER ASSIGNMENTS)
E-67	DATA NODE CIRCUIT ASSIGNMENT TABLES
E-68	COMMUNICATION SYSTEM DETAIL
E-69	VIDEO NODE CIRCUIT ASSIGNMENT TABEL
E-70	CCTV AND COMMUNICATION SYSTEM (HUB EQUIPMENT LAYOUT)
E-71	CMS CONTROLLER INTERFACE
E-72	CCTV AND COMMUNICATION SYSTEM (ELECTRICAL QUANTITIES)

ABBREVIATIONS

12SMFO	FIBER OPTIC CABLE, 12 SINGLEMODE FIBERS
2SMFO	FIBER OPTIC CABLE, 2 SINGLEMODE FIBERS
48SMFO	FIBER OPTIC CABLE, 48 SINGLEMODE FIBERS
50P22	TWISTED PAIR CABLE, 50 PAIR 22 AWG CONDUCTORS
6P22	TWISTED PAIR CABLE, 6 PAIR 22 AWG CONDUCTORS
Ø	DIAMETER
BB	BASE BAND
B/O	BREAKOUT CABLE
CCR	CAMERA CONTROL RECEIVER
CCT	CAMERA CONTROL TRANSMITTER
CCTV	CLOSED CIRCUIT TELEVISION
CHAN #	CHANNEL NUMBER
CMS	CHANGEABLE MESSAGE SIGN
DEMARC	DEMARCATION
DEMUX	DEMULTIPLEXER
DIST	DISTRIBUTION
DWP	DEPARTMENT OF POWER & WATER
FDF	FIBER DISTRIBUTION FRAME
FDU	FIBER DISTRIBUTION UNIT
FLEX	FLEXIBLE
F/O OR FO	FIBER OPTIC
FRE	FIBERGLASS REINFORCED EPOXY CONDUIT
INTRFCE	INTERFACE
J-BOX	JUNCTION BOX
MDF	MAIN DISTRIBUTION FRAME
MUX	MULTIPLEXER
NOM	NOMINAL
OC	ON CENTER
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
PTZ	PAN, TILT AND ZOOM
REQ'D	REQUIRED
RMS	RAMP METERING SYSTEM OR STATION
RX	RECEIVER
SCE	SOUTHERN CALIFORNIA EDISON
SCHED	SCHEDULE
SH	SHORT HAUL
SM	SINGLEMODE
SONET	SYNCHRONOUS NETWORK
STL	STEEL
TDM	TIME DIVISON MULTIPLEXER
TELCO	TELEPHONE COMPANY
TMC	TRAFFIC MANAGEMENT CENTER
TMS	TRAFFIC MONITORING STATION
TP	TWISTED PAIR
TX	TRANSMITTER
VDS	VEHICLE DETECTOR STATION
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPLEXER
VR	SINGLE VIDEO RECEIVER
VX	SINGLE VIDEO TRANSMITTER
#X	X AWG CONDUCTOR, Ie #10 MEANS 10 AWG CONDUCTOR
YP	Y PAIRS OF CONDUCTORS, Ie 2P MEANS 2 PAIRS

LEGEND

- CCTV CAMERA
- EXISTING CCTV CAMERA
- SPLICE VAULT
- EXISTING SPLICE VAULT
- FIBER OPTIC PATCH CORD
- COMMUNICATION PULL BOX
- C — COMMUNICATIONS CONDUIT(S)
- E — SERVICE CONDUIT(S)
- 1 2 — CONDUIT LINE DELIMITER FOR CONSTRUCTION NOTES
- TYPE 334-TV CABINET
- EXISTING TELEPHONE BRIDGE
- TELEPHONE BRIDGE
- FIBER OPTIC CABLE

TABLE 1 - CCTV WIRING		
CONDUCTOR TYPE	FUNCTION	QUANTITY
RG-6A/U	CAMERA VIDEO INTERFACE CABLE	1
9# 18 CABLE	PAN/TILT CONTROL CABLE	1
12# CABLE	LENS CONTROL CABLE	1
1# 8	CAMERA GROUND CABLE	1

AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hasan Mawasi
Completion Date: 04/20/1999

CCTV AND COMMUNICATIONS SYSTEM
(LEGEND AND NOTES)

E-1

DATE	REVISED BY	DATE	REVISED BY
2/95	ES	5/95	JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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CU 07387

EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	66	154

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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GENERAL NOTES:

1. THE LOCATION OF ELECTRICAL HIGHWAY LIGHTING CONDUITS AND PULL BOXES ARE APPROXIMATE AND WERE OBTAINED FROM LIMITED LIGHTING RECORDS. CONTRACTOR SHALL AVOID DAMAGING EXISTING LIGHTING CONDUITS.
2. THE LOCATIONS OF EXISTING DETECTOR LOOPS, EXISTING CONTROLLER CABINETS, EXISTING SERVICE ENCLOSURES, POWER POLES AND EXISTING DEMARCATION BOXES ARE APPROXIMATE.
3. THE CONTRACTOR SHALL VERIFY PROPOSED CCTV POLE LOCATIONS WITH THE ENGINEER PRIOR TO PLACEMENT OF FOUNDATIONS.
4. THE LOCATIONS OF PROPOSED ELEMENTS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED OR APPROVED BY THE ENGINEER. SEE L-SHEETS FOR EXACT LOCATION OF CCTV CAMERAS.
5. WHEN EXISTING DETECTOR LOOPS AND CONDUITS ARE SHOWN IN THE VICINITY OF PROPOSED CONDUIT TRENCHES, THE CONTRACTOR SHALL AVOID DAMAGING THE EXISTING CONDUIT. TRENCHING WITH HAND TOOLS MAY BE REQUIRED.
6. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELCO FACILITIES, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE ENGINEER AND ALL AGENCIES CONCERNED 72 HOURS PRIOR TO COMMENCING WORK.
7. PULL ROPE SHALL BE INSTALLED IN ALL EMPTY CONDUITS.
8. UNLESS OTHERWISE NOTED, ALL FIBER OPTIC CONDUIT BENDS SHALL BE 4 FT RADIUS FACTORY BENDS. ALL OTHER CONDUITS SHALL HAVE A MINIMUM BEND RADIUS OF NO LESS THAN 6 TIMES THE CONDUIT DIAMETER.
9. CONDUITS AND CONDUCTORS IN CONDUIT AND CONDUCTOR SCHEDULE TABLES ARE NEW UNLESS MARKED (E) INDICATING EXISTING.
10. PVC, WHERE CALLED OUT IN THESE PLANS, SHALL MEAN RIGID NON-METALLIC CONDUIT AS DEFINED IN THE STANDARD SPECIFICATIONS.
11. ALL NO.5, COMMUNICATION PULL BOXES AND SPLICE VAULTS SHALL BE TRAFFIC TYPE. SEE SHEETS E-55, E-56 AND E-57 FOR DETAILS.
12. LOCATIONS OF ROADWAY SHOULDER AND EDGE OF TRAVELWAY WERE OBTAINED FROM AS-BUILT PLANS , ARE APPROXIMATE, AND DO NOT INCLUDE ANY RELOCATION DUE TO RECENT ROADWAY CONSTRUCTION. LOCATIONS OF EXISTING SHOULDER MAY VARY. CONDUIT(S) SHALL BE INSTALLED WHERE SHOWN ON THE PLANS RELATIVE TO THE EXISTING SHOULDER.
13. IDENTIFICATION FORMAT OF TRAFFIC OPERATION SYSTEM (TOS) ELEMENTS:

TV-FYXXX

- POST MILE (TO NEAREST 10TH)
- FREEWAY NAME SHORT FORM
- TOS ELEMENT TYPE: TV = CCTV CAMERA; CMS = CHANGEABLE MESSAGE SIGN; HAR = HIGHWAY ADVISORY RADIO

14. MODEM NUMBERS FOR SOME CONTROLLERS HAVE NOT YET BEEN ASSIGNED, AND THEREFORE SUCH LOCATIONS HAVE (X,X,X-X) FOR CABLE PAIR ASSIGNMENTS. VERIFY MODEM NUMBERS BEFORE CONSTRUCTION. WHERE CONTROLLER NUMBERS ARE NOT ASSIGNED, XXXX HAS BEEN SHOWN.
15. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

PROJECT NOTES: (MASTER LIST)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.
8. INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
13. INSTALL TWO TYPE 334-TV CABINETS ON NEW FOUNDATIONS. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO AND DATA NODES. SEE DETAIL C , SHEET E-59 AND DETAIL 5, SHEET E-61 FOR DETAILS.
14. REMOVE EXISTING SIGN FROM BACK OF BRIDGE RAIL BEFORE INSTALLING CONDUIT. RE-INSTALL SIGN AFTER CONDUIT IS INSTALLED.
15. TRANSITION CONDUIT UNDER SOUNDWALL. DIG WITH HAND TOOLS AS REQUIRED. SEE SHEET C-15 FOR DETAILS.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
17. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
24. ADD CABLE TO EXISTING CONDUIT.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
31. INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-60 AND SHEET E-11 FOR DETAILS.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV AND COMMUNICATION SYSTEM (NOTES)

NO SCALE

E-2

CALCULATED/ DESIGNED BY	ES	DATE 2/95	REVISED BY
CHECKED BY	JZ	5/95	DATE REVISED

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

TIME PLOTTED: 19-OCT-1995 15:32
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	67	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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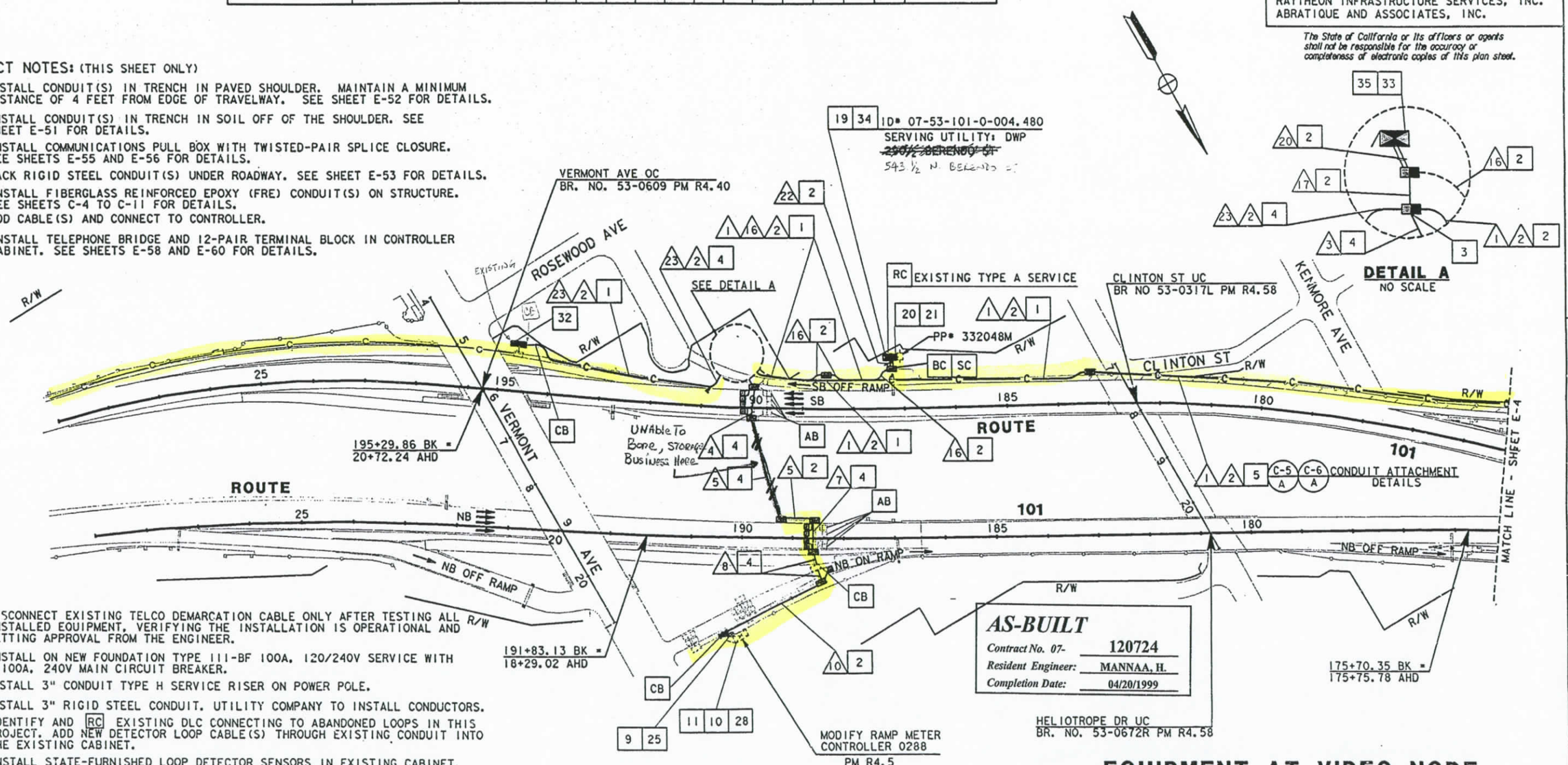
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	20	21	22	23	24
50P22 CABLE	DATA/PHONE	1																	
6P22 CABLE	DATA/PHONE					1	1	1	1	1	1								
48 SMFO CABLE	VIDEO/DATA		1															1	
12 SMFO CABLE	SH VIDEO			1									1			1			
2 SMFO B/O CABLE	SH VIDEO												1			1		1	
#12	POWER																2		
#8	POWER											2			2		2		
DLC	RAMP/COUNT					2	4	6	8	9									
	INNERDUCT		1¼"	1¼"														1¼"	1¼"
CONDUIT	SIZE		4"		4"	2"	2"	2"	2"	2"	2"	2"	3"	3"	3"	2"		4"	

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATIONS PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
32. SPLICE 48SMFO AND 2SMFO B/O CABLE TO EXISTING 60SMFO CABLE IN EXISTING SPLICE VAULT PER CONTRACT EA 1186C4. SEE SHEET E-66 FOR FIBER ASSIGNMENTS.
33. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE SEE DETAIL 4, SHEET E-61.
34. INSTALL 1-30A AND 1-20A 120V SINGLE POLE CIRCUIT BREAKERS FOR VIDEO NODE AND FOR EXISTING IRRIGATION CABINET. REUSE EXISTING CONDUCTORS TO PROVIDE POWER TO IRRIGATION CABINET.

35. ITEM INCLUDED IN BID ITEM "EQUIPMENT AT VIDEO NODE."

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

EQUIPMENT AT VIDEO NODE, LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-3

REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY	CHECKED BY
ES	JZ

DATE 2/95 5/95

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Gilbane

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => /usr/mikesl/PO/712072u03.dg

CU 07387 EA 120721

TIME PLOTTED => 19-OCT-1995 16:36

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	68	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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.

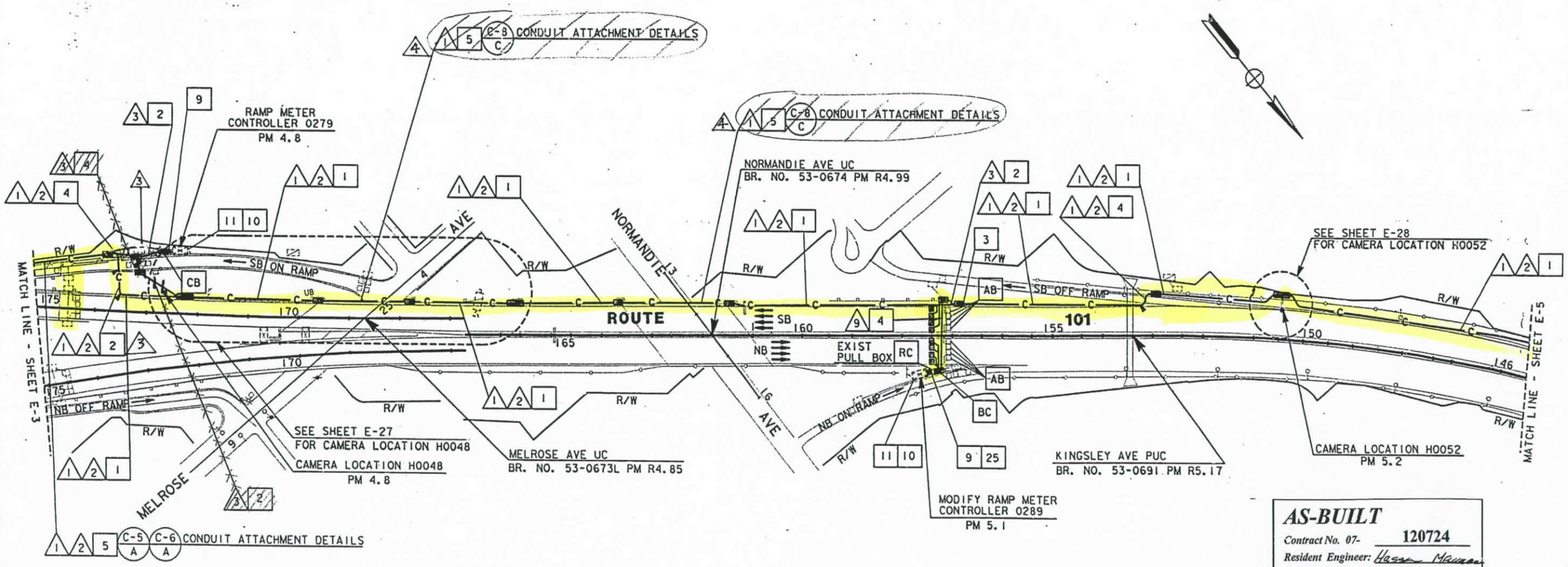
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALLTELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	5	9	4		
50P22 CABLE	DATA/PHONE	1					1		
6P22 CABLE	DATA/PHONE				1	1			
48 SMFO CABLE	VIDEO/DATA		1					1	
12 SMFO CABLE	SH VIDEO			1					1
DLC	RAMP/COUNT					4			
	INNERDUCT		1¼"	1¼"				1¼"	1¼"
CONDUIT	SIZE	4"			4"	2"	2"**	3"**	

** EXISTING TO BE REUSED
CHANGED PER CCO #6



AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hassan Mansour
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-4

DATE	REVISED BY	DATE	REVISED

CALCULATED/DESIGNED BY ES DATE 2/95
CHECKED BY JZ 5/95

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 10:17

FORM DC-CE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => /usr/trmarlak/P2/712072u04.

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	69	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA C. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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PROJECT NOTES: (THIS SHEET ONLY)

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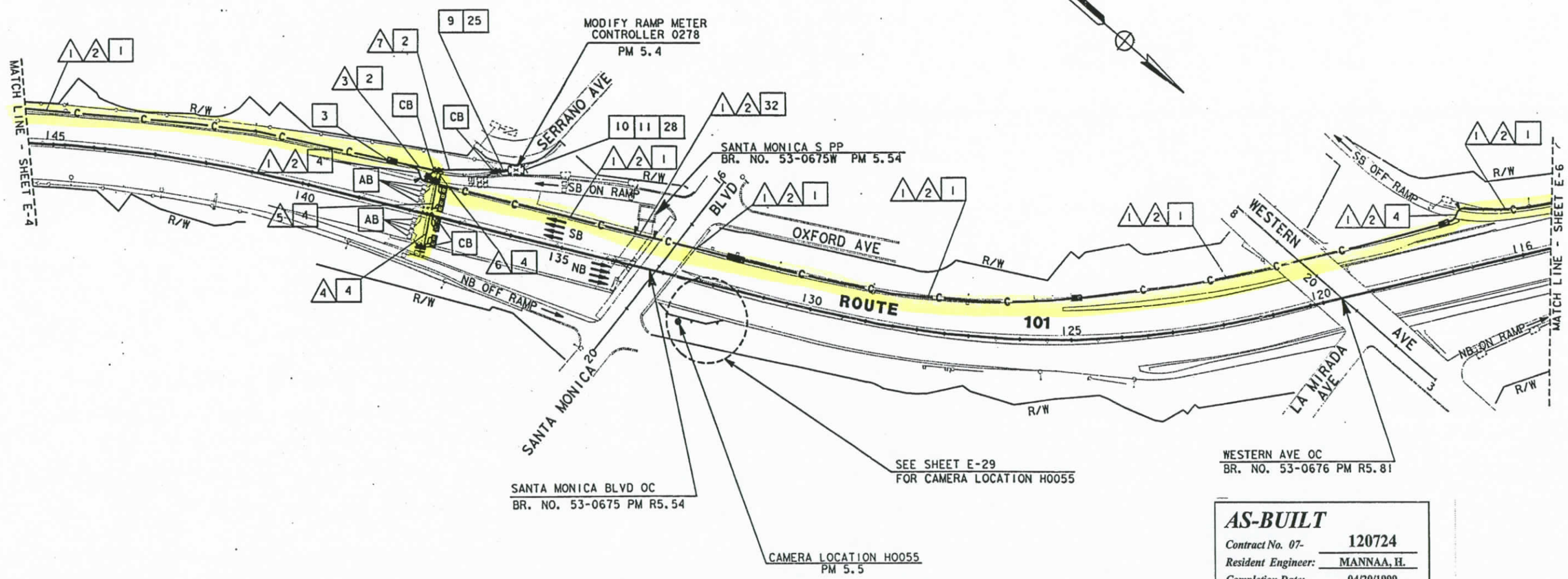
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. ADD DETECTOR LOOP CABLE(S) TO EXISTING CONDUIT.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
32. INSTALL CONDUIT(S) IN TRENCH OVER UNDERGROUND STRUCTURE. MAINTAIN A MINIMUM OF 4 FEET FROM EDGE OF TRAVEL WAY. SEE SHEET E-52 FOR DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA/PHONE	1								
6P22 CABLE	DATA/PHONE					1				1
48 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1						
DLC	RAMP/COUNT						2	6	8	9
	INNERDUCT		1 1/4"	1 1/4"						
CONDUIT	SIZE		4"		4"	2"	2"	2"	2"	2"



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-5

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED

CALCULATED/DESIGNED BY ES 2/95
CHECKED BY JZ 5/95

PROJECT ENGINEER PAT SULLIVAN

XXXXXXXXXXXXXXXXXXXXXXXX STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 10:17

FORM DC-CT-92-FF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => /usr/trmarlak/P2/712072u05.

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	70	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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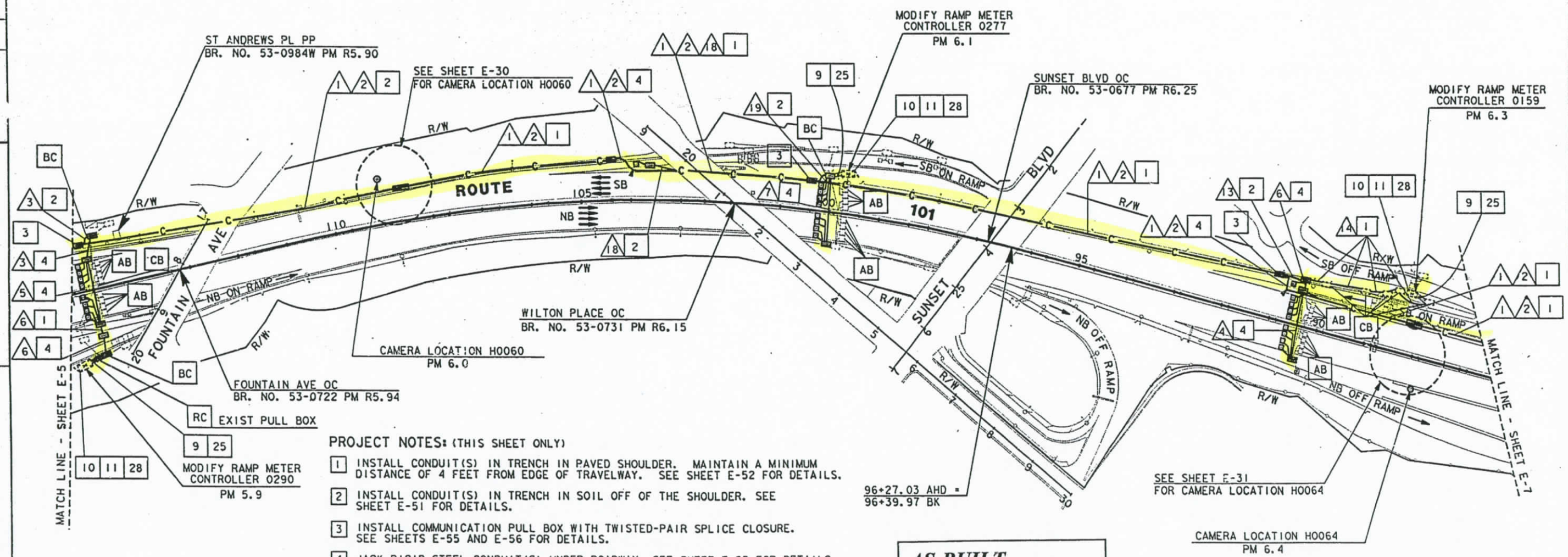
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1A	1B	1C	2	3	4	5	6	7	13	14	18	19
50P22 CABLE	DATA/PHONE	1												
6P22 CABLE	DATA/PHONE					1		1			1	1		1
48 SMFO CABLE	VIDEO/DATA		1											
12 SMFO CABLE	SH VIDEO			1										
DLC	RAMP/COUNT						4	4	8	4		9	1	1
	INNERDUCT		1¼"	1¼"										
CONDUIT	SIZE	4"			4"	2"	2"	2"	2"	2"	2"	2	2"	2"



PROJECT NOTES: (THIS SHEET ONLY)

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3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
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25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-6

DATE	REVISED BY	DATE REVISED
2/95	ES	5/95 JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 08:29

FORM OC-GE-92-PF (REV. 3/88)
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CU 07387
EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	71	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ELIA G. SAGHIR
No. E014922
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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PROJECT NOTES: (THIS SHEET ONLY)

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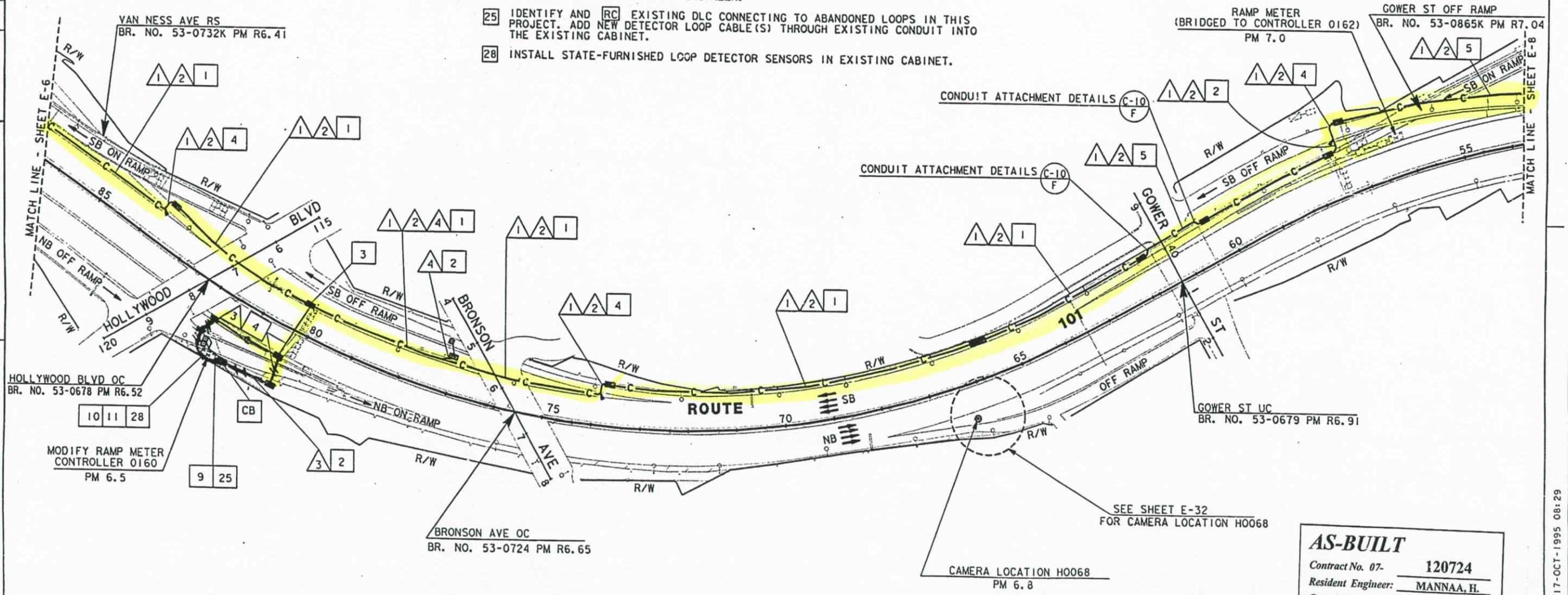
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6
50P22 CABLE	DATA/PHONE	1					
6P22 CABLE	DATA/PHONE					1	
48 SMFO CABLE	VIDEO/DATA		1				
12 SMFO CABLE	SH VIDEO			1			
DLC	RAMP/COUNT					1	1
	INNERDUCT		1¼"	1¼"			
CONDUIT	SIZE		4"		4"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-7

CALCULATED/DESIGNED BY	ES	DATE 2/95	REVISED BY
CHECKED BY	JZ	5/95	DATE REVISED

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 08:29

FORM CS-CE 92-PF (REV. 3/88)

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CU 07397 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	72	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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PROJECT NOTES: (THIS SHEET ONLY)

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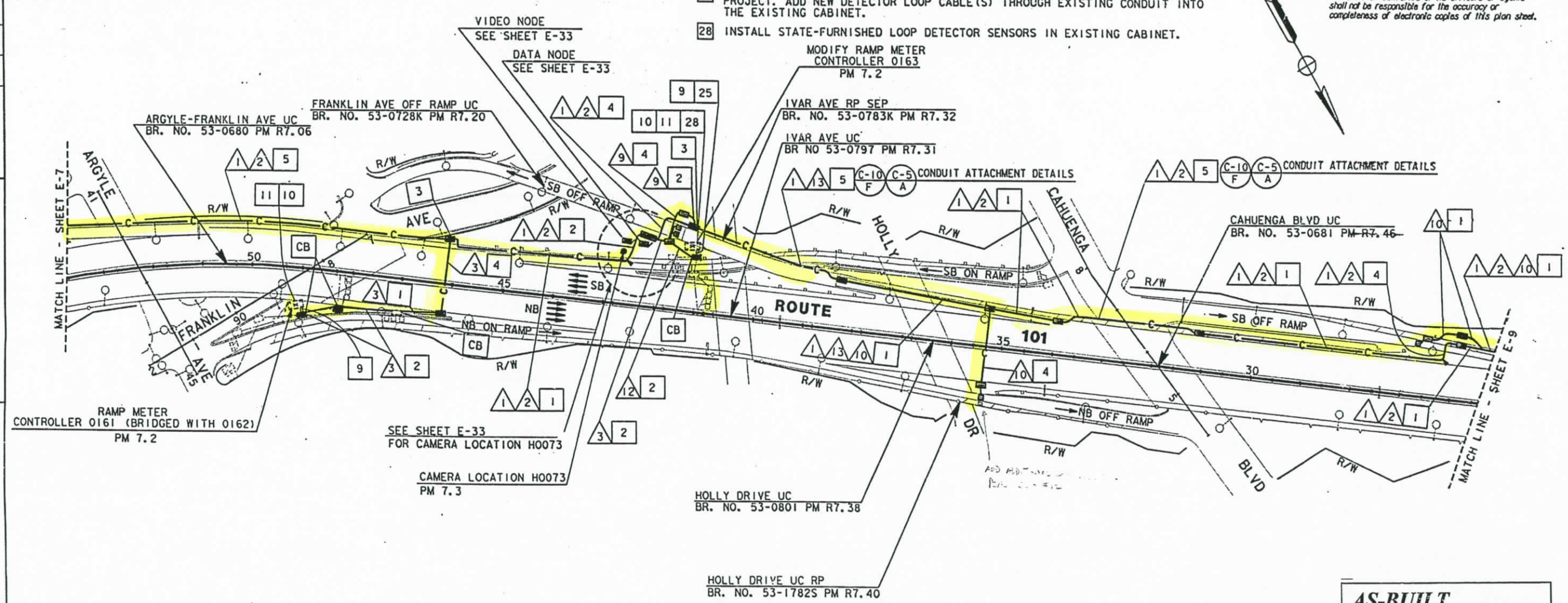
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1			2	3	8	9	10	12	13		
50P22 CABLE	DATA /PHONE	1											
6P22 CABLE	DATA /PHONE					1				1			
48 SMFO CABLE	VIDEO/DATA		1										
12 SMFO CABLE	SH VIDEO			1			2						
DLC	RAMP/COUNT						1	1	1	3			1
	INNERDUCT		1¼"	1¼"				1¼"			1¼"	1¼"	1¼"
CONDUIT	SIZE		4"		4"	2"	2"	3"	2"	2"	4"		



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-8

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE REVISED
2/95	ES	5/95

CALCULATED/DESIGNED BY: JZ
CHECKED BY:
PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

TIME PLOTTED => 17-OCT-1995 08:29
LAST REVISION 00-00-00

FORM DC-CF-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
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DGN FILE => /usr/mikes1/P0/712072u08.dg
CU 07387
EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	73	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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PROJECT NOTES: (THIS SHEET ONLY)

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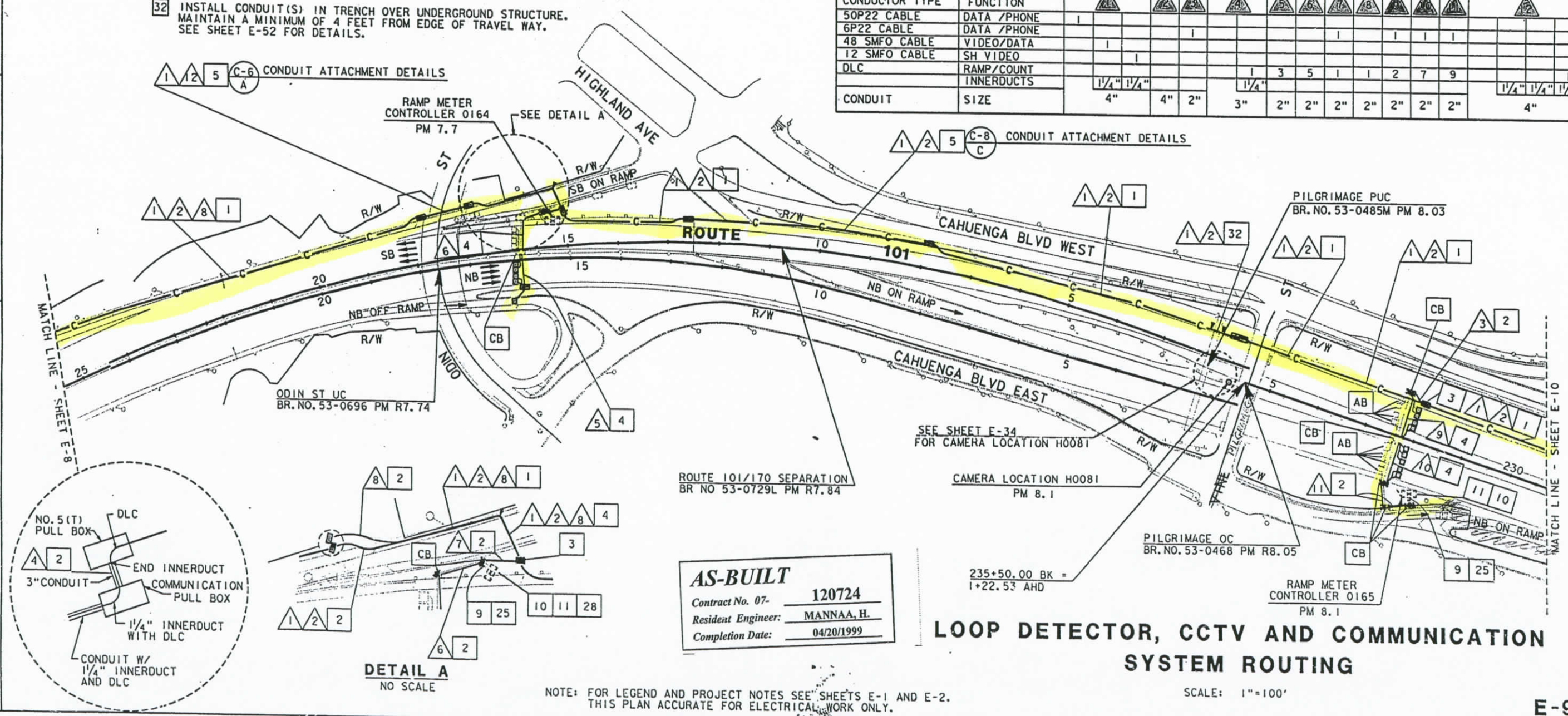
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12		
50P22 CABLE	DATA /PHONE	1													
6P22 CABLE	DATA /PHONE			1				1		1	1	1			
48 SMFO CABLE	VIDEO/DATA	1													
12 SMFO CABLE	SH VIDEO		1												
DLC	RAMP/COUNT				1	3	5	1	1	2	7	9			1
	INNERDUCTS	1¼"	1¼"		1¼"									1¼"	1¼"	1¼"
CONDUIT	SIZE	4"		4" 2"	3"	2"	2"	2"	2"	2"	2"	2"	4"		

1 2 5 C-8 C CONDUIT ATTACHMENT DETAILS

1 2 5 C-6 A CONDUIT ATTACHMENT DETAILS



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-9

CALCULATED/DESIGNED BY	ES
CHECKED BY	JZ
DATE	2/95
REVISED BY	5/95
DATE REVISED	
PROJECT ENGINEER	PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 09:07

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
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DGN FILE => /usr/tomd/P39/712072u09.dgn
CU 07387
EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	74	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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.

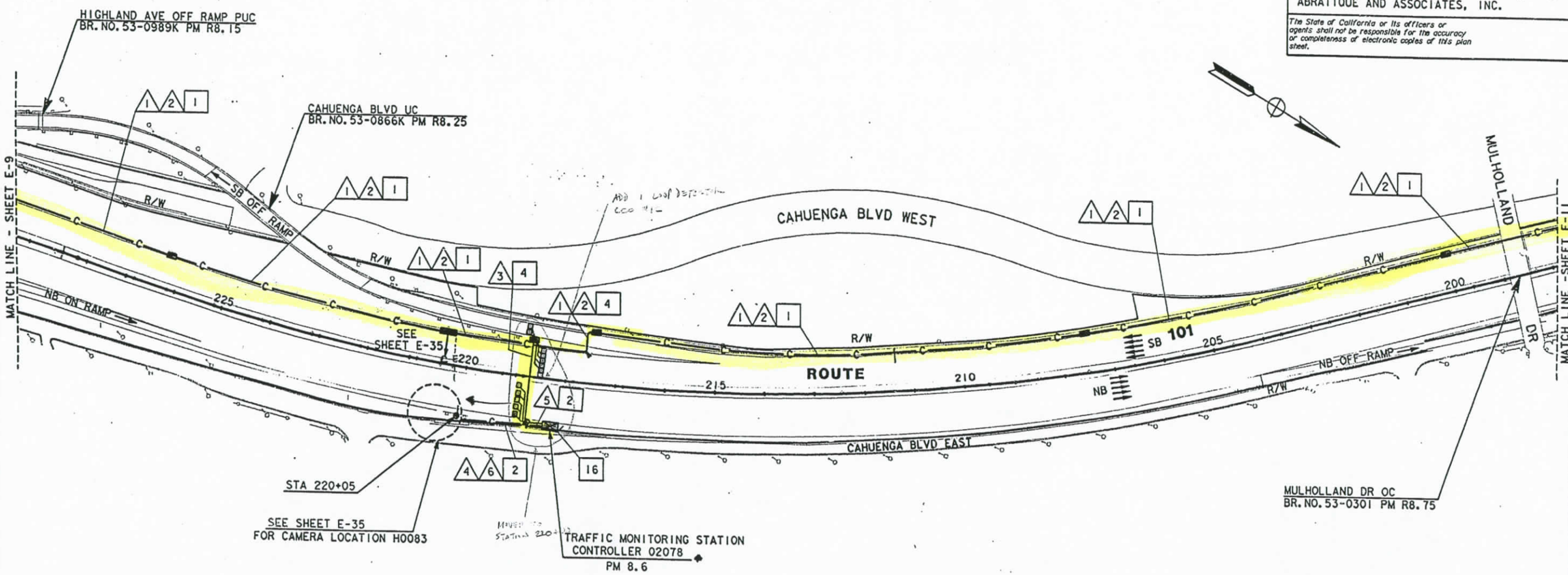
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	1(E)	1	2	3	4	5		6
50P22 CABLE	DATA /PHONE	1								
6P22 CABLE	DATA /PHONE							1		1
48 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1						
#6	POWER						2		2	
DLC	RAMP/COUNT					7		12		
	INNERDUCT		1¼"	1¼"						
CONDUIT	SIZE		4"		4"	2"	2"	3"	3"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

TRAFFIC MONITORING STATION, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-10

REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY	ES	DATE 2/95
CHECKED BY	JZ	5/95

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

TIME PLOTTED => 19-OCT-1995 15:33
LAST REVISION 00-00-00

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
DGN FILE => /usr/mikesl/PO/712072u10.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	75	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

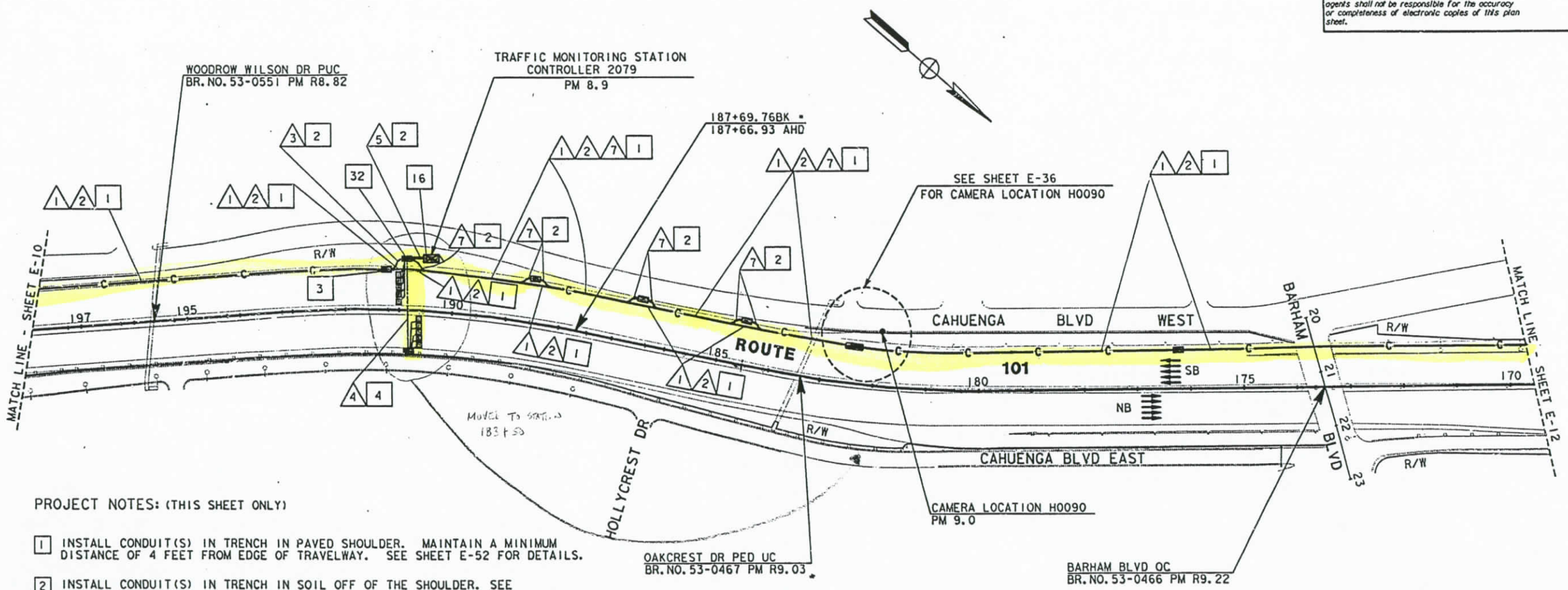
IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)									
CONDUCTOR TYPE	FUNCTION	1	1	1	2	3	4	5	7
50P22 CABLE	DATA/PHONE	1							
6P22 CABLE	DATA/PHONE					1		1	
48 SMFO CABLE	VIDEO/DATA		1						
12 SMFO CABLE	SH VIDEO			1					
#4	POWER						2		2
DLC	TMS						5	10	
	INNERDUCT		1¼"	1¼"					
CONDUIT	SIZE	4"			4"	2"	2"	3"	3"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE [illegible] BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
32. INSTALL A MINIMUM 2KVA, SINGLE PHASE 240/120V STEP DOWN TRANSFORMER.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

TRAFFIC MONITORING STATION, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-11

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE REVISED
2/95	ES	5/95 JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 12:39

FORM SC-CE-92-FF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => tomd
DGN FILE => /usr/tomd/P39/712072ul1.dgn

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	76	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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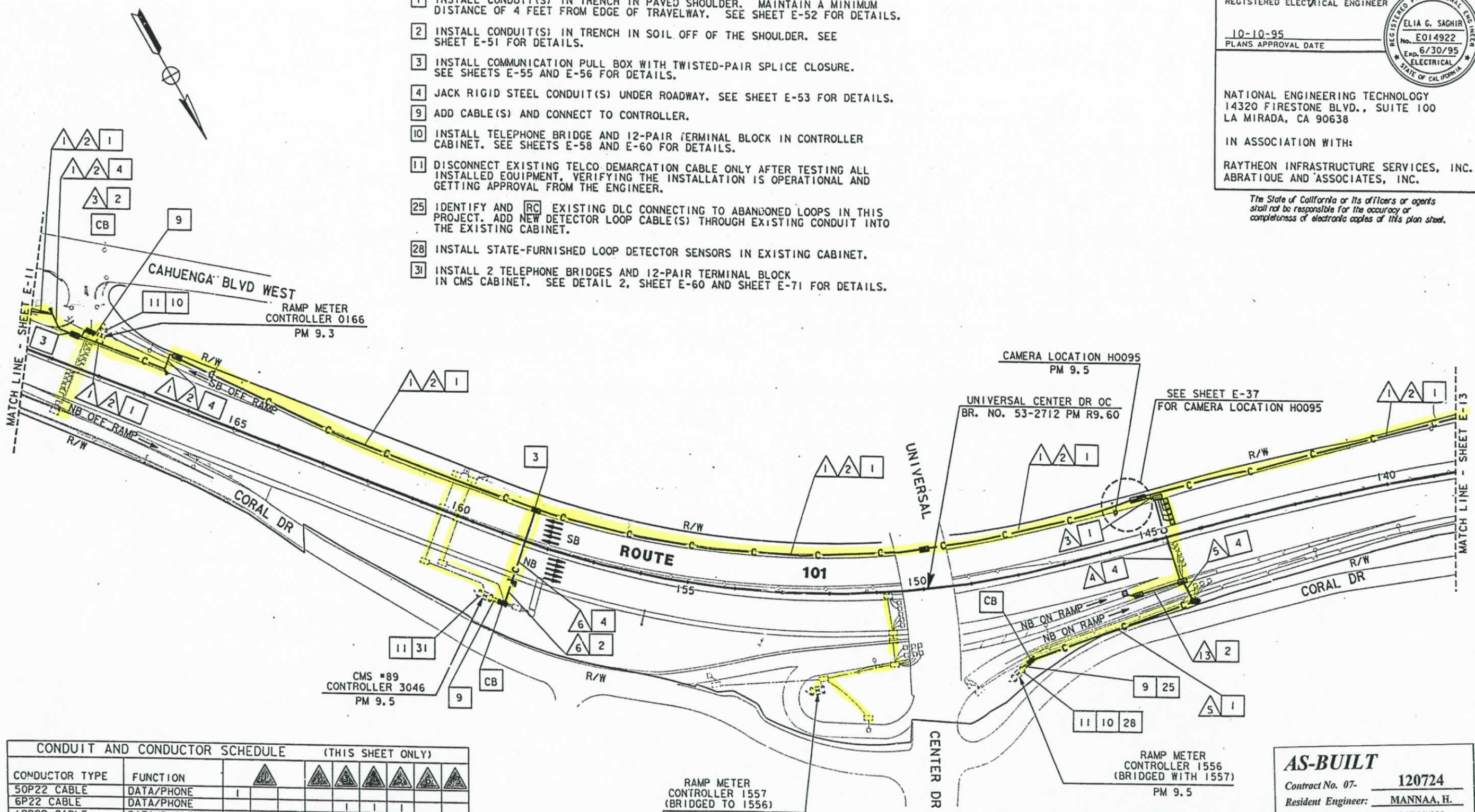
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
31. INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-60 AND SHEET E-71 FOR DETAILS.



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA/PHONE	1								
6P22 CABLE	DATA/PHONE					1	1	1		
12P22 CABLE	DATA/PHONE								1	
48 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1				1		
DLC	RAMP/COUNT						5	6		21
	INNERDUCT		1 1/4"	1 1/4"						
CONDUIT	SIZE		4"		4"	2"	2"	2"	2"	2"

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-12

DATE	REVISED BY	DATE	REVISED BY
2/95	ES	5/95	JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ
PROJECT ENGINEER PAT SULLIVAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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FORM DC-1E-9a OF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => richard
DGN FILE => /usr/richard/P11/712072u12.

CU 07387 EA 120721

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 10:52

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	77	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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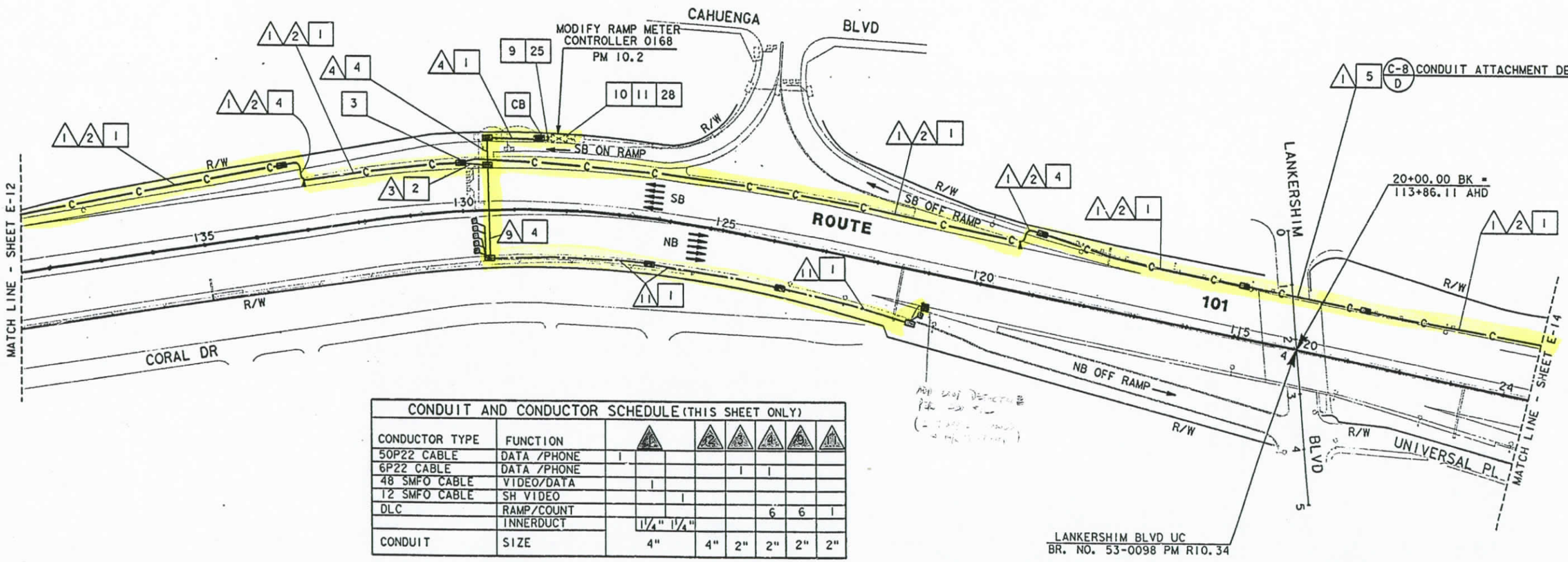
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	9	10
50P22 CABLE	DATA /PHONE	1						
6P22 CABLE	DATA /PHONE				1	1		
48 SMFO CABLE	VIDEO/DATA		1					
12 SMFO CABLE	SH VIDEO			1				
DLC	RAMP/COUNT					6	6	1
	INNERDUCT		1¼" 1¼"					
CONDUIT	SIZE		4"		4"	2"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-13

DATE	REVISED BY	DATE REVISED
2/95	ES	JZ 5/95

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

TIME PLOTTED => 19-OCT-1995 15:33

LAST REVISION 00-00-00

FORM 55-SE-92-PF (PE.. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
DGN FILE => /usr/mikesl/PO/712072ui3.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	78	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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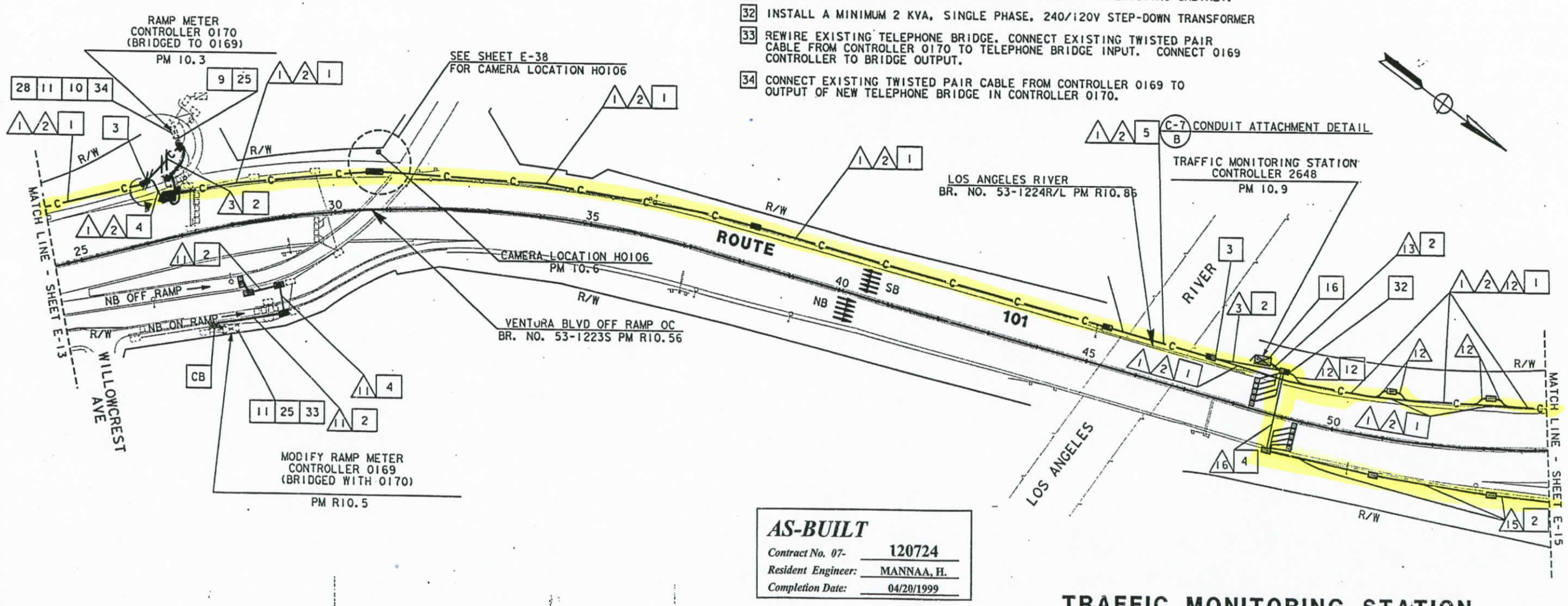
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE DETAIL B, SHEET E-56.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. CONNECT 6P22 TWISTED PAIR CABLE TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
32. INSTALL A MINIMUM 2 KVA, SINGLE PHASE, 240/120V STEP-DOWN TRANSFORMER
33. REWIRE EXISTING TELEPHONE BRIDGE. CONNECT EXISTING TWISTED PAIR CABLE FROM CONTROLLER 0170 TO TELEPHONE BRIDGE INPUT. CONNECT 0169 CONTROLLER TO BRIDGE OUTPUT.
34. CONNECT EXISTING TWISTED PAIR CABLE FROM CONTROLLER 0169 TO OUTPUT OF NEW TELEPHONE BRIDGE IN CONTROLLER 0170.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1			2	3	11	12	13		15	16
50P22 CABLE	DATA/PHONE	1										
6P22 CABLE	DATA/PHONE					1			1			
48 SMFO CABLE	VIDEO/DATA		1									
12 SMFO CABLE	SH VIDEO			1								
#4	POWER							2		2		
DLC	RAMP/COUNT						2		11		1	6
	INNERDUCT		1¼"	1¼"								
CONDUIT	SIZE		4"		4"	2"	2"	2"	3"	3"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

TRAFFIC MONITORING STATION, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-14

CALCULATED/DESIGNED BY	ES
CHECKED BY	JZ
DATE	2/95
DATE	5/95
REVISED BY	
DATE REVISED	
PROJECT ENGINEER	PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FORM DC-CE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => richard
DGN FILE => /usr/richard/PII/712072u14.

CU 07387 EA 120721

LAST REVISION 00-00-00

TIME PLOTTED => 17-OCT-1995 12:23

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	12	3	4	6	7	12	13	14
50P22 CABLE	DATA/PHONE	1										
6P22 CABLE	DATA/PHONE					1	1		1			
48 SMFO CABLE	VIDEO/DATA		1									
12 SMFO CABLE	SH VIDEO			1								
#4	POWER										2	
DLC	RAMP/COUNT						10	5	4	2		1
	INNERDUCT		1 1/4"	1 1/4"								
CONDUIT	SIZE	4"			4"	2"	2"	2"	2"	2"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	79	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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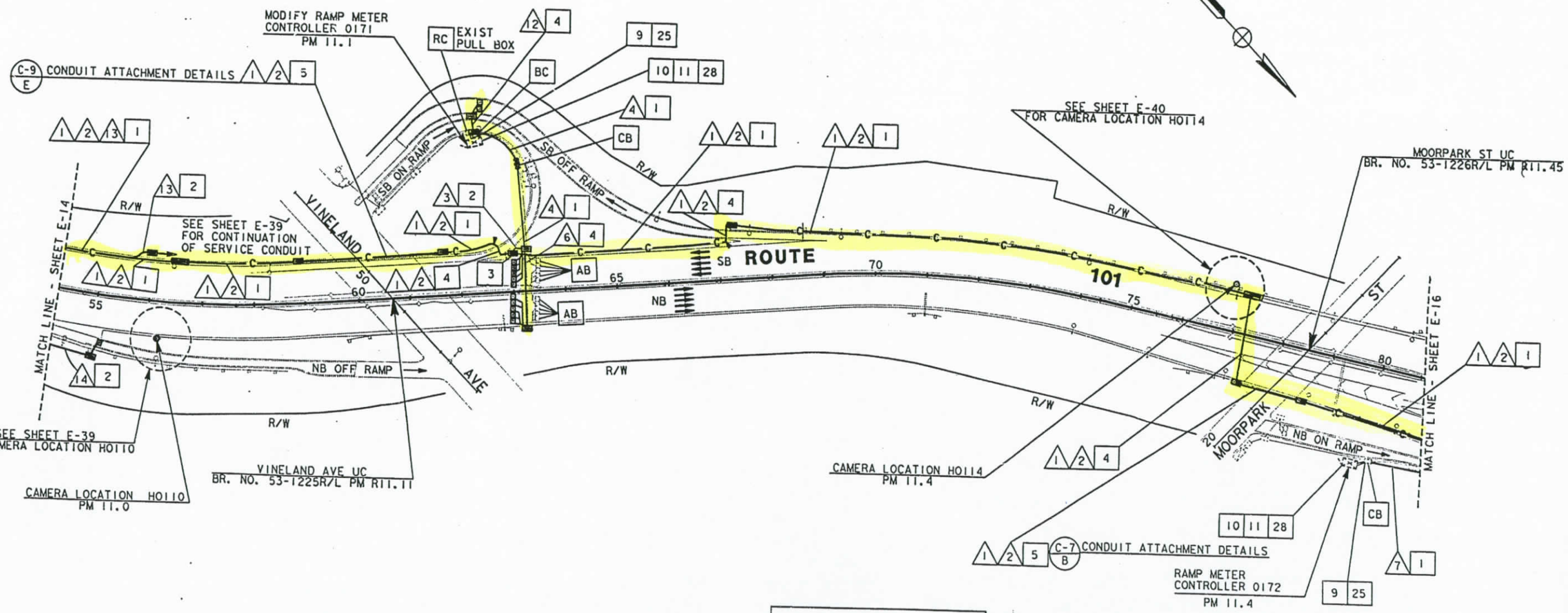


AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-15

CALCULATED/DESIGNED BY	ES
DATE	2/95
REVISED BY	
CHECKED BY	JZ
DATE	5/95
REVISED	

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => richard
DGN FILE => /usr/richard/P11/712072u15.

CU 07387 EA 120721

TIME PLOTTED => 17-OCT-1995 10:53

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	80	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

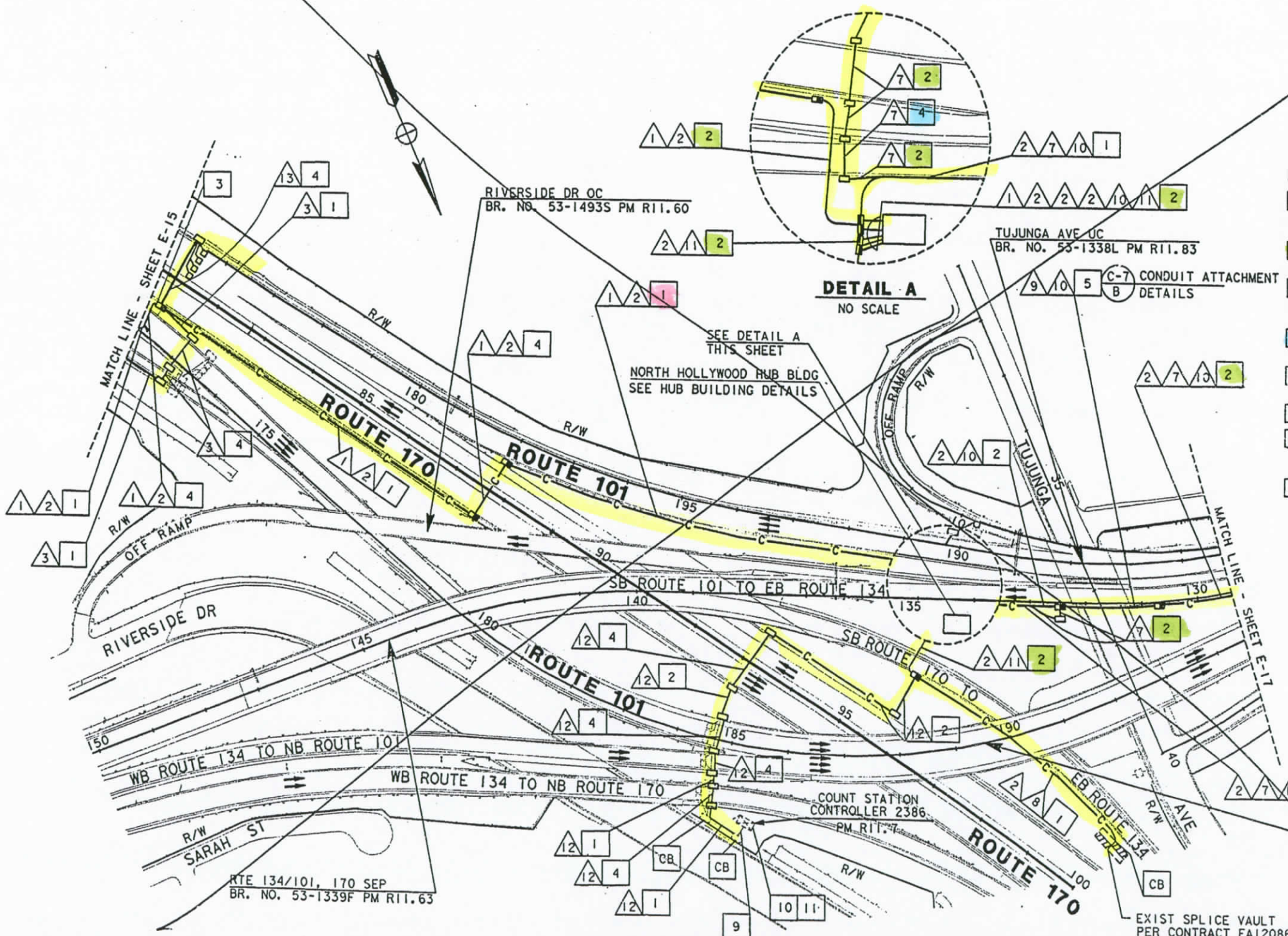
RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1			2	3	5	7	8			9			10			11			12	13
50P22 CABLE	DATA/PHONE	1																				
6P22 CABLE	DATA/PHONE					1	1								1							
72 SMFO CABLE	VIDEO/DATA																	1			1	
48 SMFO CABLE	VIDEO/DATA		1													1						
12 SMFO CABLE	SH VIDEO			1																		
24 SMFO CABLE	SH VIDEO																1					
DLC	RAMP/COUNT					4	7	1	1			1							1			
	INNERDUCT		1¼"	1¼"					1¼"	1¼"	1¼"	1¼"	1¼"		1¼"	1¼"		1¼"	1¼"			4
CONDUIT	SIZE		4"		4"	2"	2"	2"	4"			4"			4"			4"			2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND SHEET E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-16

DATE 2/95	REVISED BY	ES
5/95	DATE REVISED	JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

FORM DC-OE-92-PE (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => /usr/mikesl/P0/712072ul6.dg

CU 07387 EA 120721

LAST REVISION 00-00-00
TIME PLOTTED => 19-OCT-1995 15:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	81	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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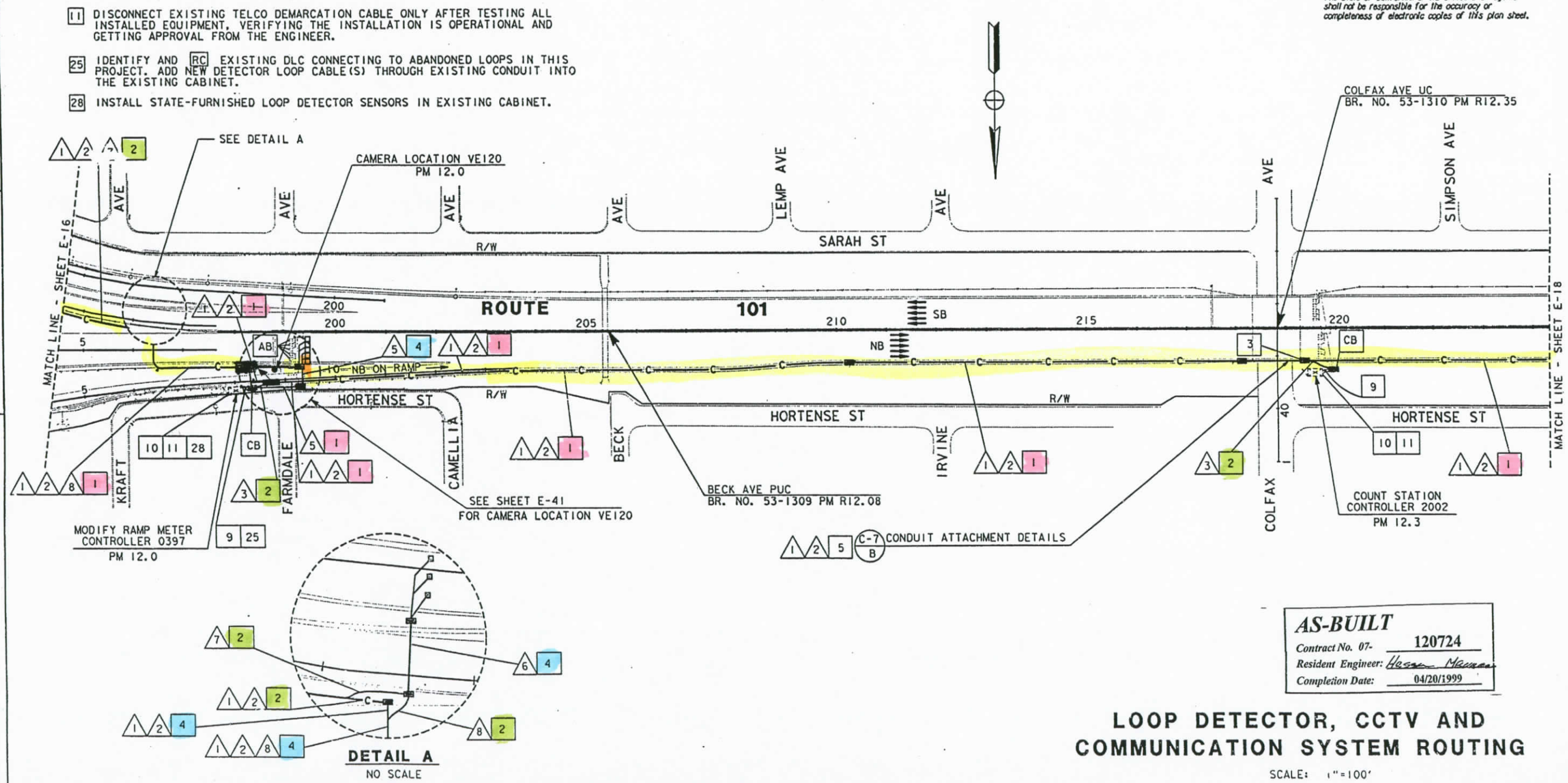
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA /PHONE	1								
6P22 CABLE	DATA /PHONE					1				
72 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1						
DLC	RAMP/COUNT						5	3	1	4
	INNERDUCT		1¼"	1¼"						
CONDUIT	SIZE		4"		4"	2"	2"	2"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hasan Mazaei
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-17

DATE	REVISED BY	DATE	REVISED BY

CALCULATED/DESIGNED BY ES 2/95
CHECKED BY JZ 5/95

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 08:48

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => /usr/lenard/P23/712072ui7.d

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	82	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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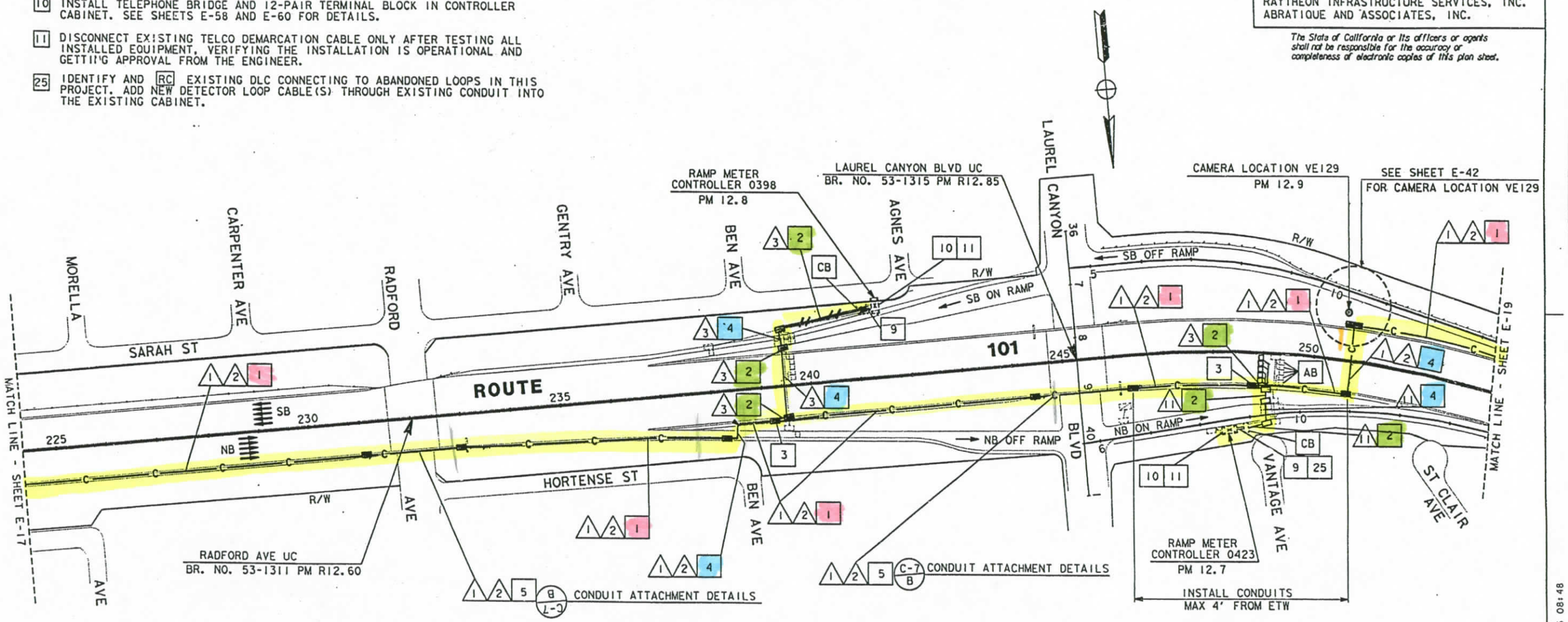
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1			2	3	10
50P22 CABLE	DATA/PHONE	1					
6P22 CABLE	DATA/PHONE					1	1
72 SMFO CABLE	VIDEO/DATA		1				
12 SMFO CABLE	SH VIDEO			1			
DLC	RAMP/COUNT						5
	INNERDUCT		1¼"	1¼"			
CONDUIT	SIZE	4"			4"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR



AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hasan Mirzaei
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-18

DATE	REVISED BY	DATE REVISED
2/95	ES	5/95 JZ

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 08:48

FORM DC-CE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
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DGN FILE => /usr/lenard/P23/712072u18.d
CU 07387
EA 120721

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	83	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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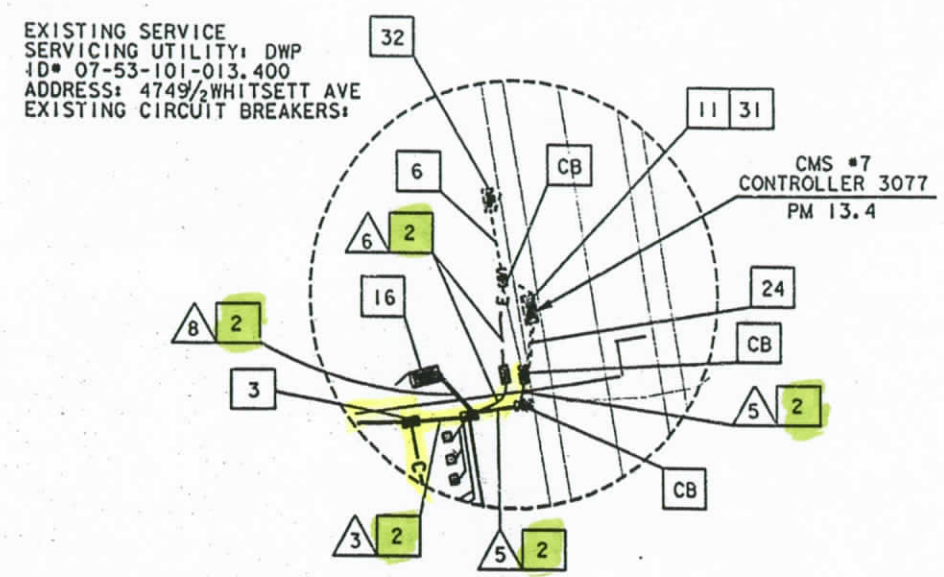
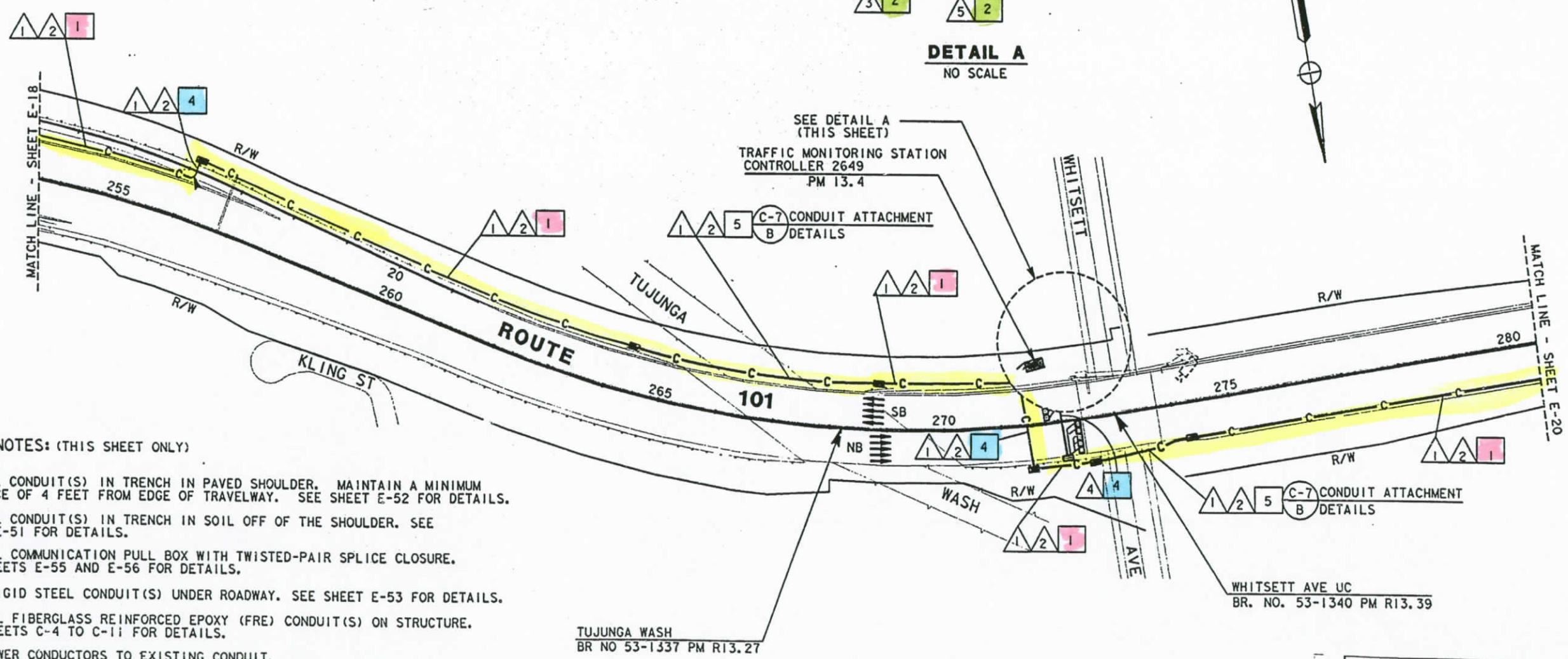
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1		2	3	4	5	6	7	8
50P22 CABLE	DATA/PHONE	1								
6P22 CABLE	DATA/PHONE				1				1	
72 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1						
12P22 CABLE	DATA/PHONE				1		1			
#8	POWER							2		2
DLC	TMS					5			10	
	INNERDUCT		1¼"	1¼"						
CONDUIT	SIZE		4"		4"	2"	2"	2"	2"	3"	3"

(E) - EXISTING CONDUIT OR CONDUCTOR



DETAIL A
NO SCALE



PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE- FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
24. ADD CABLE TO EXISTING CONDUIT.
31. INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-60 AND SHEET E-71 FOR DETAILS.
32. ADD ONE 30A, SINGLE POLE CIRCUIT BREAKER FOR TMS.

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hasan Mawasi
Completion Date: 04/20/1999

TRAFFIC MONITORING STATION AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-19

REVISED BY	DATE REVISED		
DATE 2/95	5/95		
CALCULATED/DESIGNED BY ES	JZ		
CHECKED BY			
PROJECT ENGINEER PAT SULLIVAN			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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TIME PLOTTED => 19-OCT-1995 15:34
LAST REVISION 00-00-00

FORM DC-OF-92-PF (REV. 3/98)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
DGN FILE => /usr/mikesl/P0/712072J19.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	84	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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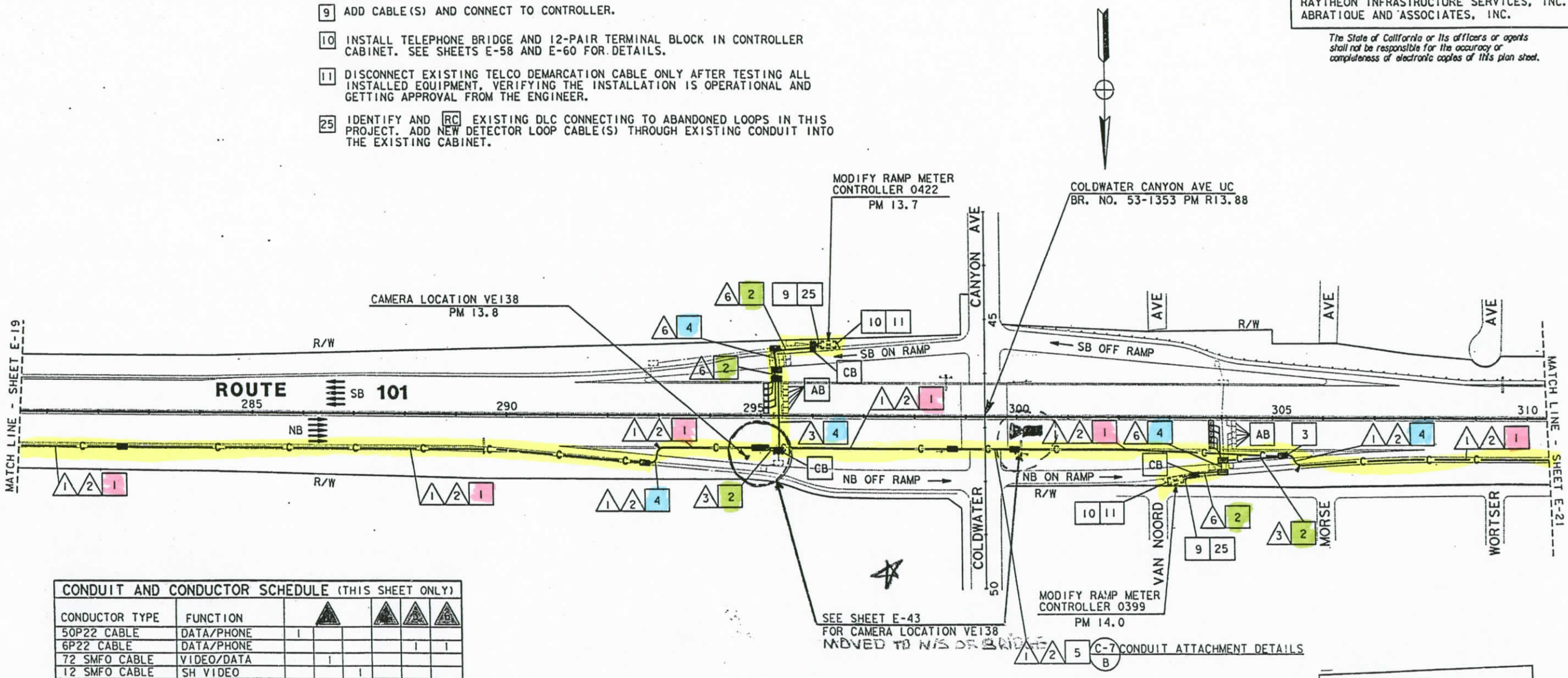
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6
50P22 CABLE	DATA/PHONE	1					
6P22 CABLE	DATA/PHONE					1	1
72 SMFO CABLE	VIDEO/DATA		1				
12 SMFO CABLE	SH VIDEO			1			
DLC	RAMP/COUNT						5
	INNERDUCT		1¼"	1¼"			
CONDUIT	SIZE		4"		4"	2"	2"

(E) = EXISTING CONDUIT OR CONDUCTOR

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-20

CALCULATED/ DESIGNED BY	ES	DATE 2/95	REVISED BY
CHECKED BY	JZ	5/95	DATE REVISED

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 09:21

FORM DC-CE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => anndo
DGN FILE => /usr/anndo/P54/712072u20.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	85	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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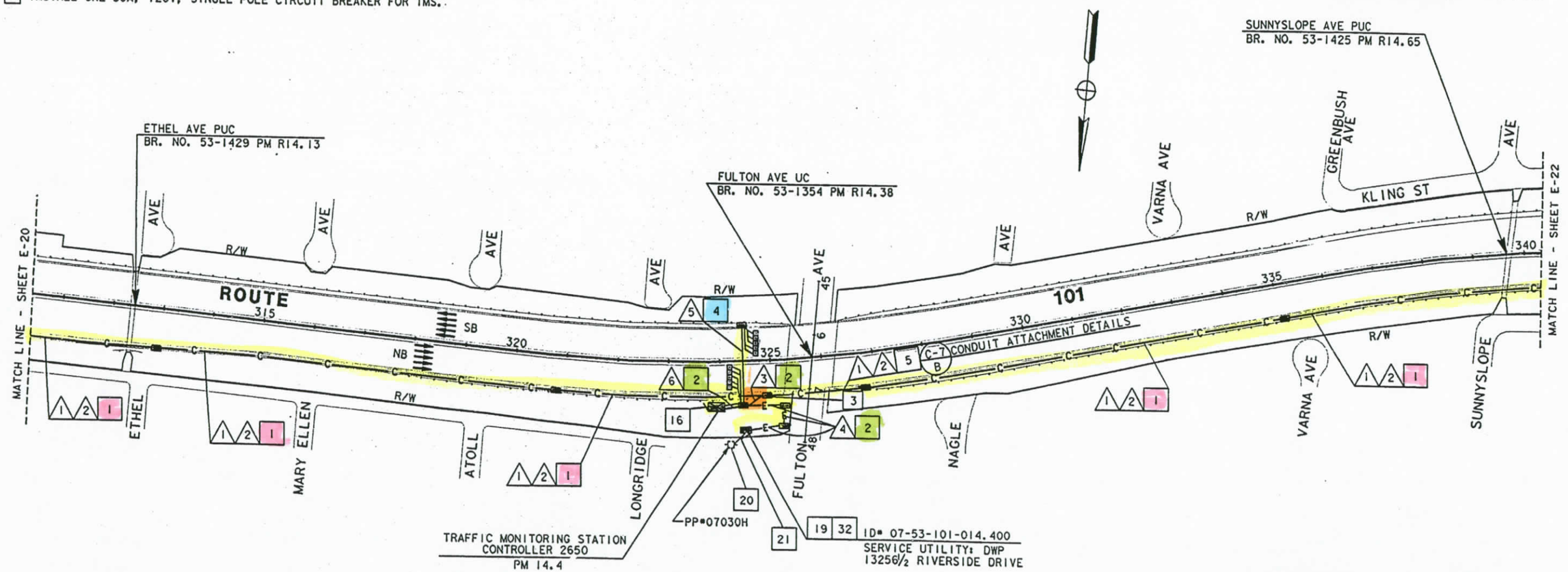
PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATON PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
32. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR TMS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA /PHONE	1								
6P22 CABLE	DATA /PHONE					1			1	
72 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1						
#8	POWER						2			2
DLC	TMS							5	10	
	INNERDUCT		1¼"	1¼"						
CONDUIT	SIZE		4"		4"	2"	2"	2"	3"	3"

(E) - EXISTING CONDUIT OR CONDUCTOR



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

TRAFFIC MONITORING STATION AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-21

DATE	REVISED BY	DATE REVISED
2/95	ES	5/95 JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FORM 01-07-92-PE (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
DGN FILE => /usr/mikesl/PO/712072u21.dg

CU 07387 EA 120721

LAST REVISION 00-00-00
TIME PLOTTED => 19-OCT-1995 15:36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	86	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

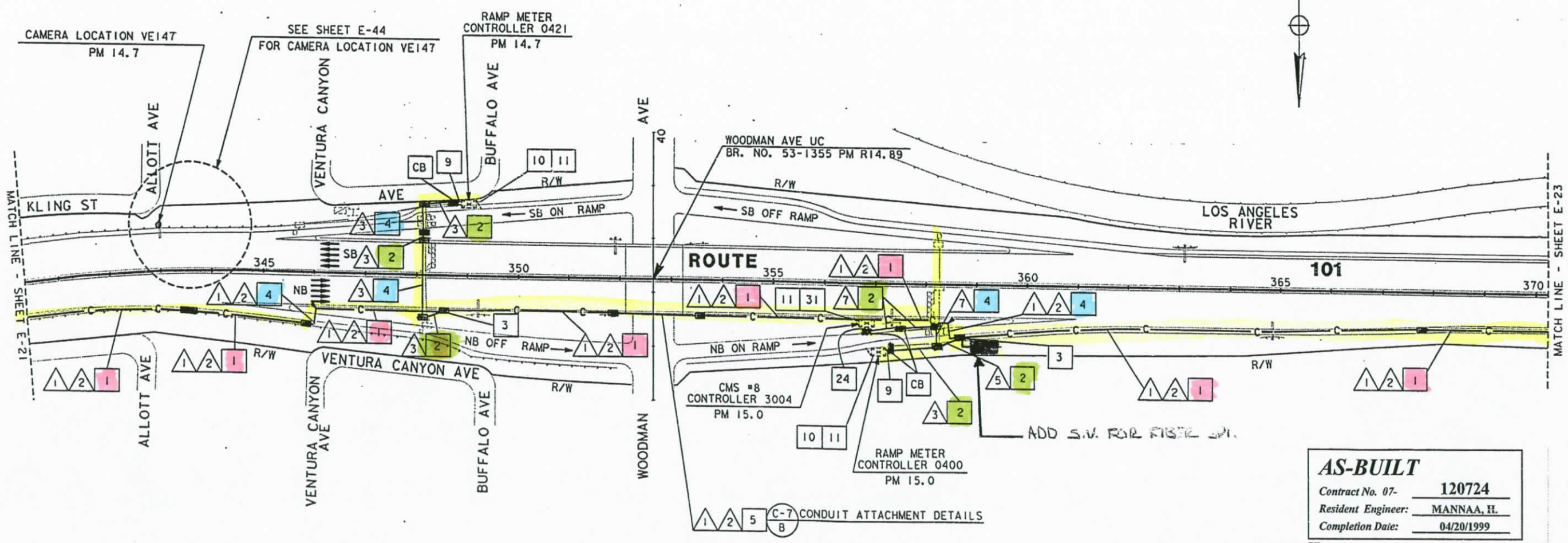
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
24. ADD CABLE TO EXISTING CONDUIT.
31. INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-60 AND SHEET E-71 FOR DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1			2	3	5	7
50P22 CABLE	DATA/PHONE	1						
6P22 CABLE	DATA/PHONE					1	1	
72 SMFO CABLE	VIDEO/DATA		1					
12 SMFO CABLE	SH VIDEO			1				
12 P22 CABLE	DATA/PHONE						1	1
	INNERDUCT		1¼"	1¼"				
CONDUIT	SIZE		4"		4"	2"	2"	2"



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-22

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED BY
2/95	ES	5/95	JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00

TIME PLOTTED => 17-OCT-1995 09:03

FORM DC-OE-92-PF (REV. 3/88)

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CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	87	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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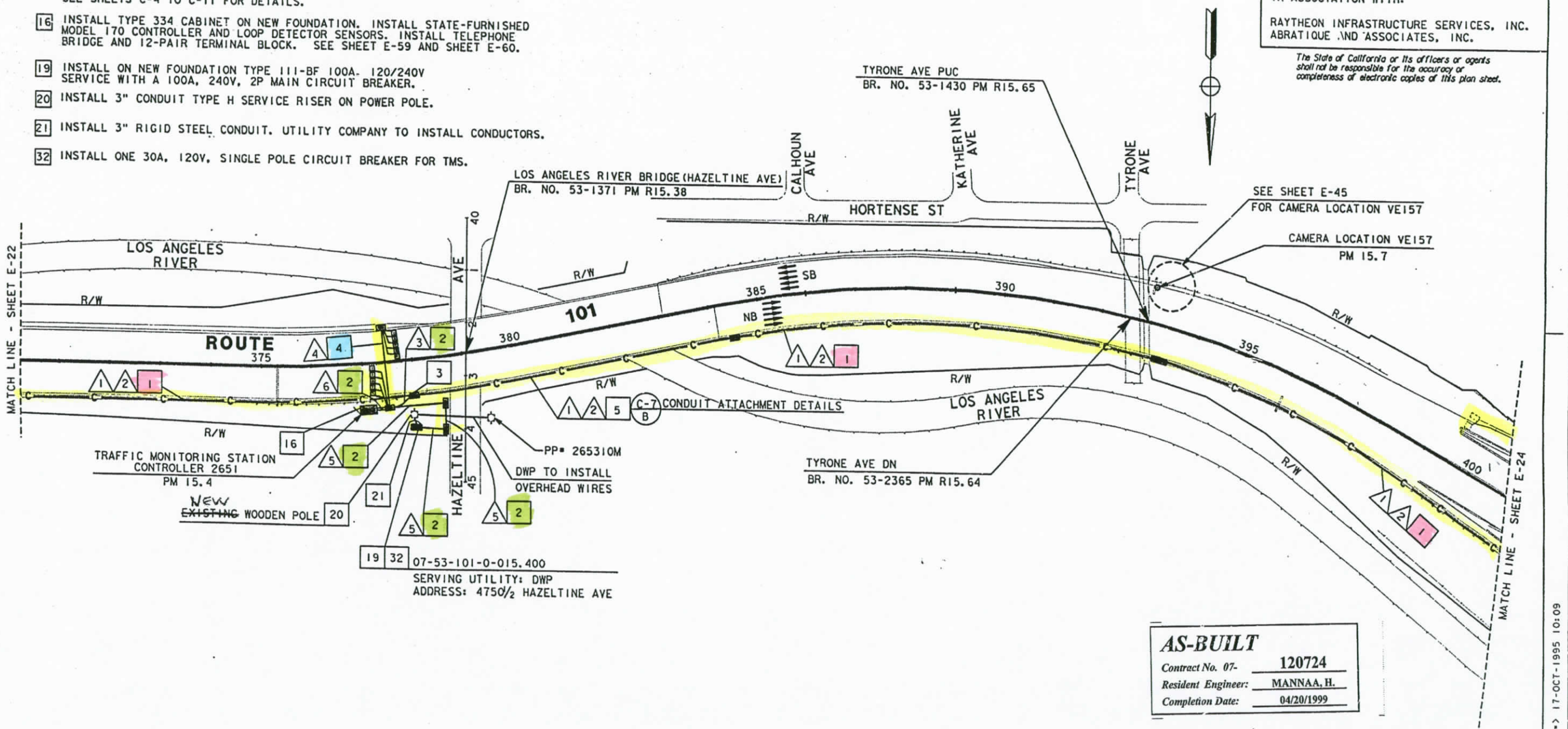
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A. 120/240V SERVICE WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
32. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR TMS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA/PHONE	1								
6P22 CABLE	DATA/PHONE					1				1
72 SMFO CABLE	VIDEO/DATA		1							
12 SMFO CABLE	SH VIDEO			1						
#8	POWER							2	2	
DLC	TMS					5				10
	INNERDUCT		1¼"	1¼"						
CONDUIT	SIZE		4"		4"	2"	2"	2"	3"	3"



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

TRAFFIC MONITORING STATION, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-23

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE	REVISED BY
2/95	ES	5/95	JZ

CALCULATED/DESIGNED BY ES
CHECKED BY JZ

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

TIME PLOTTED => 17-OCT-1995 10:09
LAST REVISION 00-00-00

FORM DC-E-92-FF REV. 3/88

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DGN FILE => /usr/mikesl/PO/712072u23.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	88	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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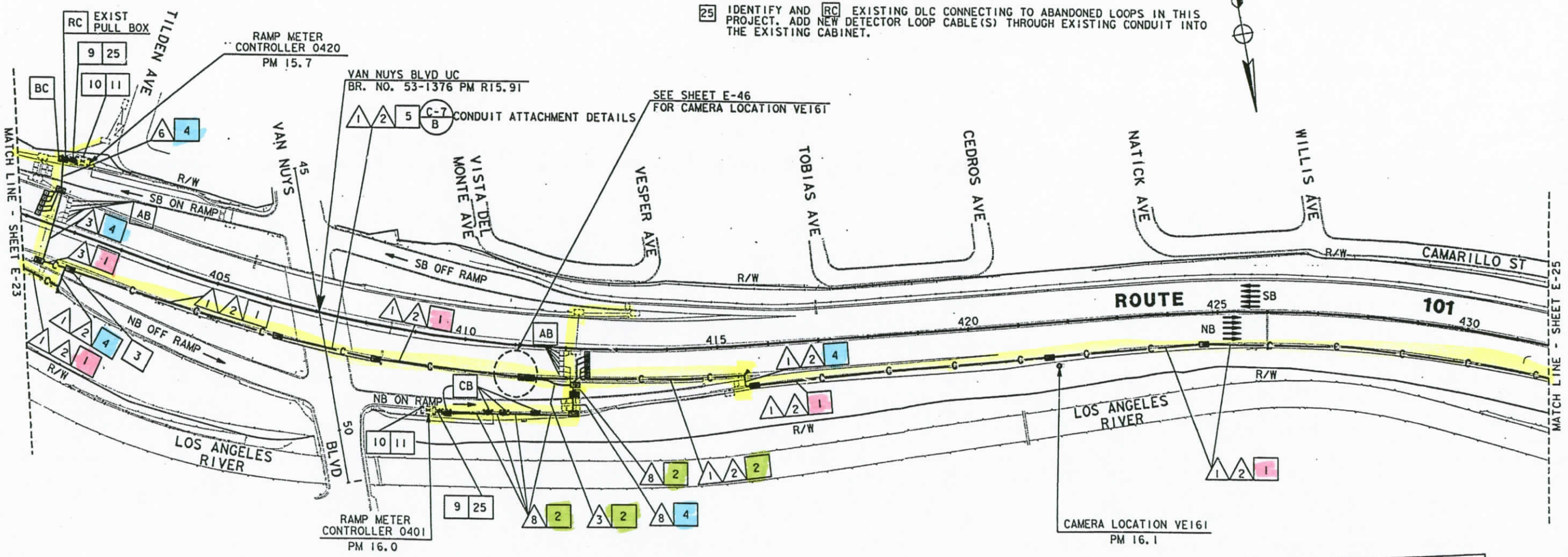
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7
50P22 CABLE	DATA/PHONE	1						
6P22 CABLE	DATA/PHONE					1	1	1
72 SMFO CABLE	VIDEO/DATA		1					
12 SMFO CABLE	SH VIDEO			1				
DLC	RAMP/COUNT						5	5
	INNERDUCT		1¼"	1¼"				
CONDUIT	SIZE		4"		4"	2"	2"	2"



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-24

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

DATE	REVISED BY	DATE REVISED
2/95	JZ	5/95

CALCULATED/DESIGNED BY: ES
CHECKED BY: JZ
PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
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DGN FILE => /usr/mikesl/P0/712072u24.dg
CU 07387
EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	89	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. E014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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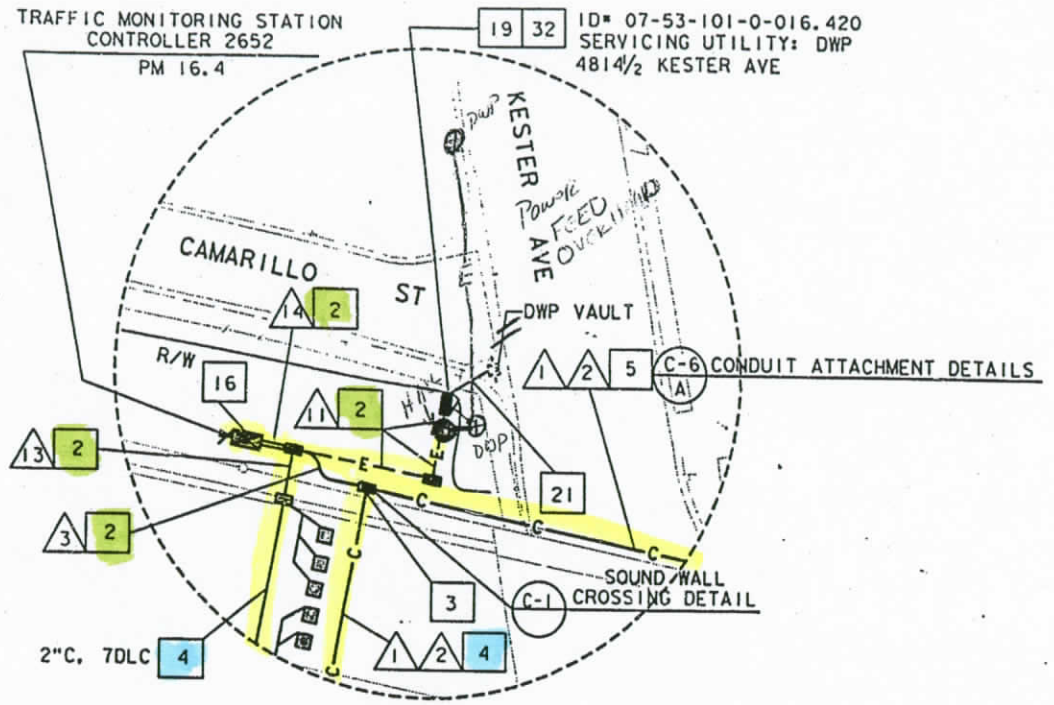
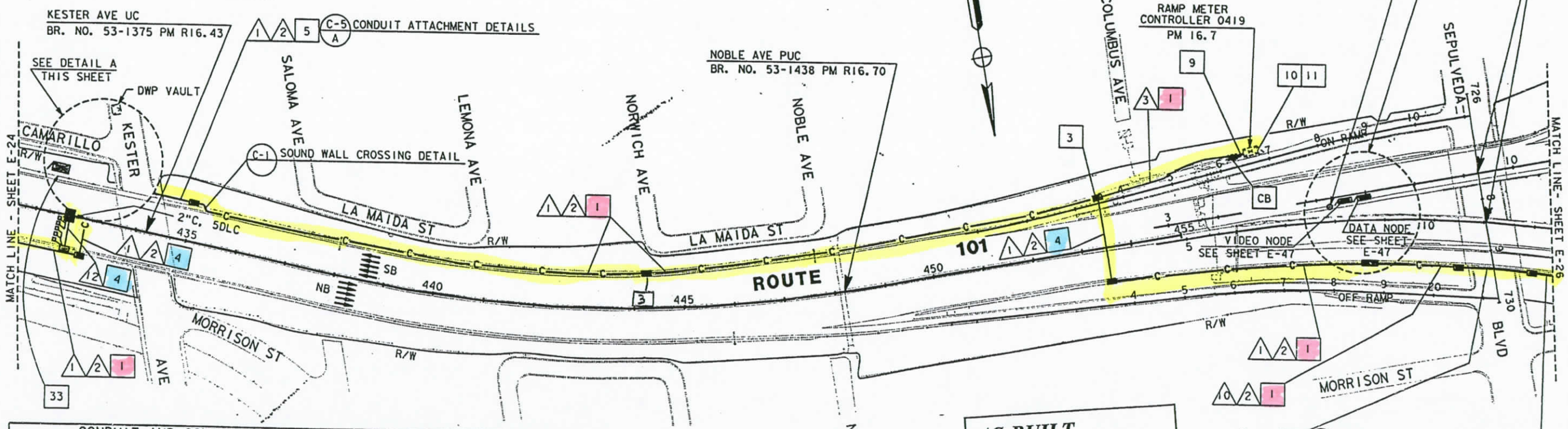


DETAIL A
NO SCALE



PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
5. INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
32. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR TMS.
33. INSTALL GATE IN EXISTING SOUNDWALL. SEE SHEETS C-2 AND C-3 FOR DETAILS.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1	1	1	2	2	2	2	2	2	2	2	2
50P22 CABLE	DATA /PHONE	1											
6P22 CABLE	DATA /PHONE					1							
72 SMFO CABLE	VIDEO/DATA		1					1				1	
12 SMFO CABLE	SH VIDEO			1									
#8	POWER								2				2
DLC	TMS												
	INNERDUCT		1¼"	1¼"			1¼"	1¼"		3	10	10	
CONDUIT	SIZE		4"		4"	2"	4"		2"	2"	2"	3"	3"

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

TRAFFIC MONITORING STATION, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-25

CALCULATED/ DESIGNED BY	ES	DATE 2/95	REVISED BY
CHECKED BY	JZ	5/95	DATE REVISED

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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TIME PLOTTED => 17-OCT-1995 10:10

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FORM DL-E-92-PF (REV. 3/88)

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CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	90	154

REGISTERED ELECTRICAL ENGINEER 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ELIA G. SAGHIR
No. E014922
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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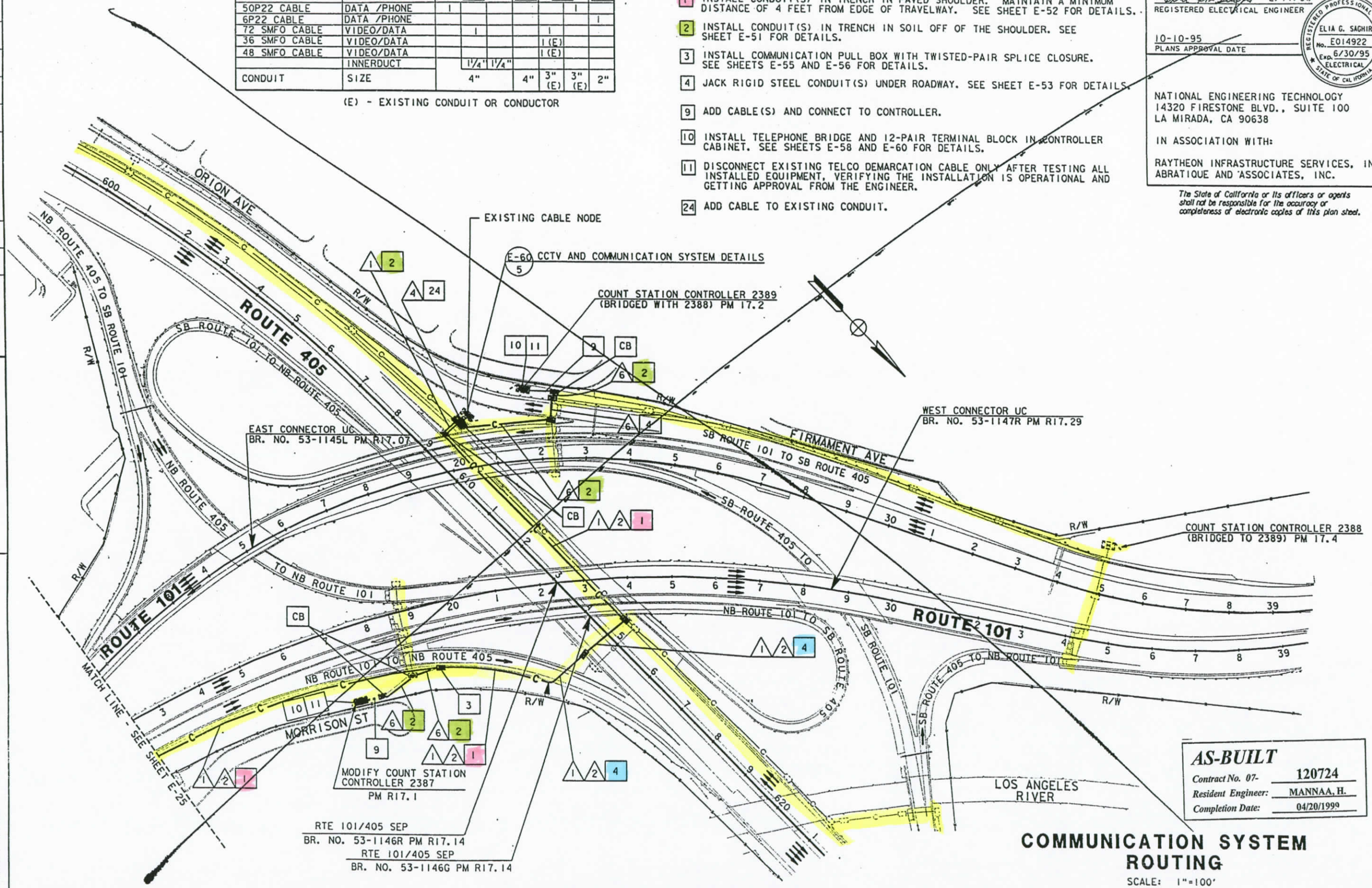
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	1			2	4		6
50P22 CABLE	DATA /PHONE	1					1	
6P22 CABLE	DATA /PHONE							1
72 SMFO CABLE	VIDEO/DATA		1			1		
36 SMFO CABLE	VIDEO/DATA					1 (E)		
48 SMFO CABLE	VIDEO/DATA					1 (E)		
	INNERDUCT		1¼"	1¼"				
CONDUIT	SIZE	4"			4"	3" (E)	3" (E)	2"

(E) - EXISTING CONDUIT OR CONDUCTOR

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
3. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
9. ADD CABLE(S) AND CONNECT TO CONTROLLER.
10. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
11. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
24. ADD CABLE TO EXISTING CONDUIT.



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

NOTE: FOR LEGEND AND PROJECT NOTES SEE SHEETS E-1 AND E-2.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-26

DATE	REVISED BY	DATE REVISED
2/95		5/95

CALCULATED/DESIGNED BY: ES
CHECKED BY: JZ

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 10:05

FORM DC-C1-92-PF (REV. 3/88)

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DGN FILE => /usr/lenard/P23/712072u26.d

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	91	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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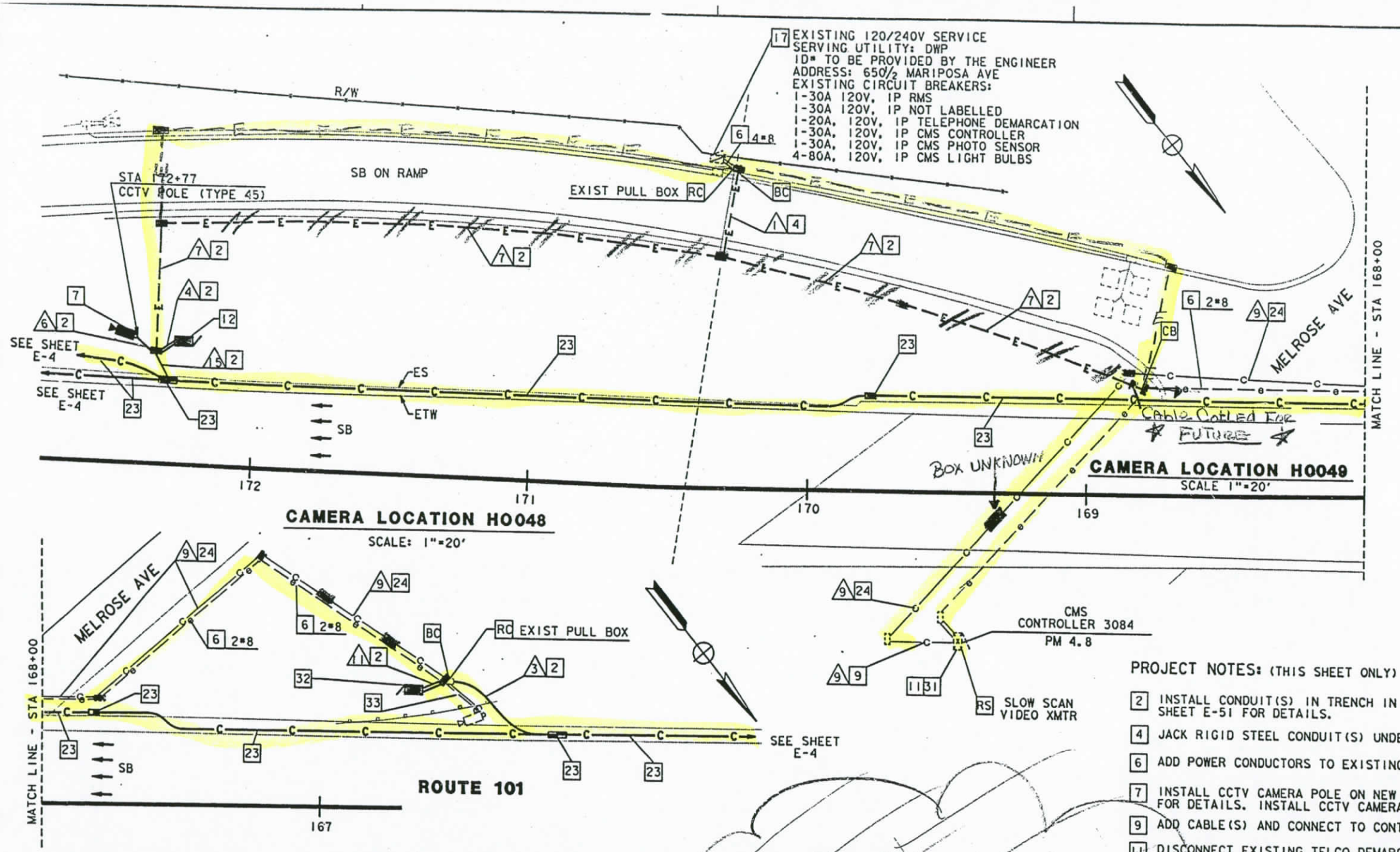


NOTE: (THIS SHEET ONLY)

1. SEE SHEET L-1 FOR LAYOUT DETAILS.

AS-BUILT

Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

9 ADD CABLE(S) AND CONNECT TO CONTROLLER.

11 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL TWO 30A, 120V SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

24 ADD CABLE TO EXISTING CONDUIT.

31 INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-60 AND SHEET E-71 FOR DETAILS.

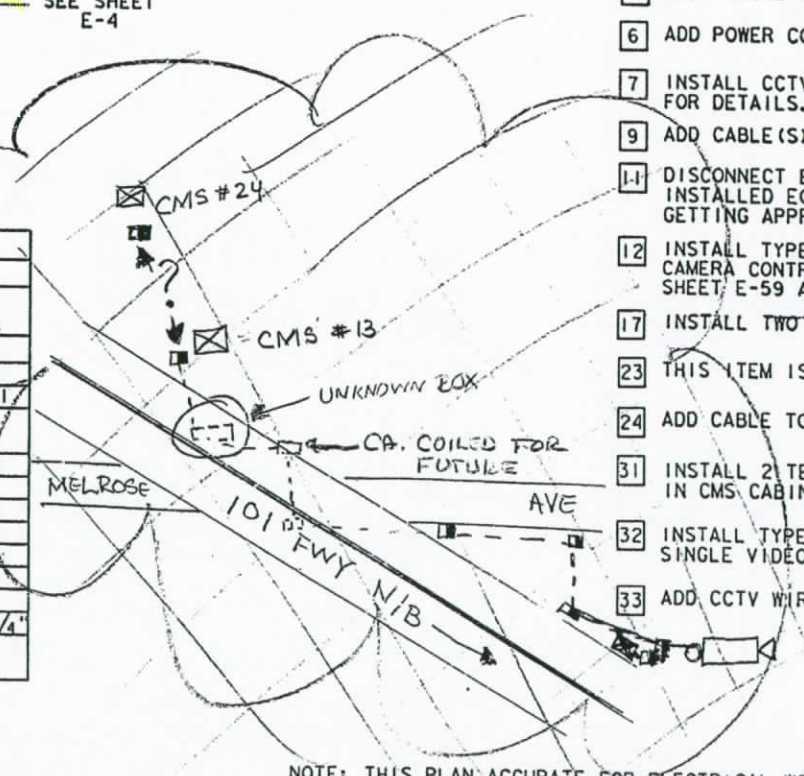
32 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE SINGLE VIDEO TRANSMITTER. SEE DETAIL A SHEET E-59 AND DETAIL 3 SHEET E-60.

33 ADD CCTV WIRING TO EXISTING CONDUIT.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8	9	10	11
6P22 CABLE	DATA /PHONE		1		1					1		1
12P22	DATA /PHONE		1						1			
2SMFO B/O CABLE	SH VIDEO			1	1					1		1
SEE TABLE 1, SHEET E-1	CCTV WIRING				1		1			1		
#8	POWER	4				2		2			2	
2P18	TELCO				1				1 (E)			
	INNERDUCT			1¼"								1¼"
	CONDUIT SIZE	2"	3"	3"	3"	2"	2"	2" (E)	3"	3"		

(E) - EXISTING CONDUIT OR CONDUCTOR



NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA (LOCATION H0048 AND LOCATION H0049)

SCALE: 1"=20'

E-27

REVISED BY	DATE REVISED	DM	DATE 2/95	CALCULATED/ DESIGNED BY	ES	CHECKED BY	5/95

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION 00-00-00

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FORM DC-E-92-PF (REV. 3/88)

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USERNAME => mikesl /usr/mikesl/P0/712072u27.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	92	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

8 INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

15 TRANSITION CONDUIT UNDER SOUNDWALL. DIG WITH HAND TOOLS AS REQUIRED. SEE SHEET C-1 TO C-3 FOR DETAILS.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

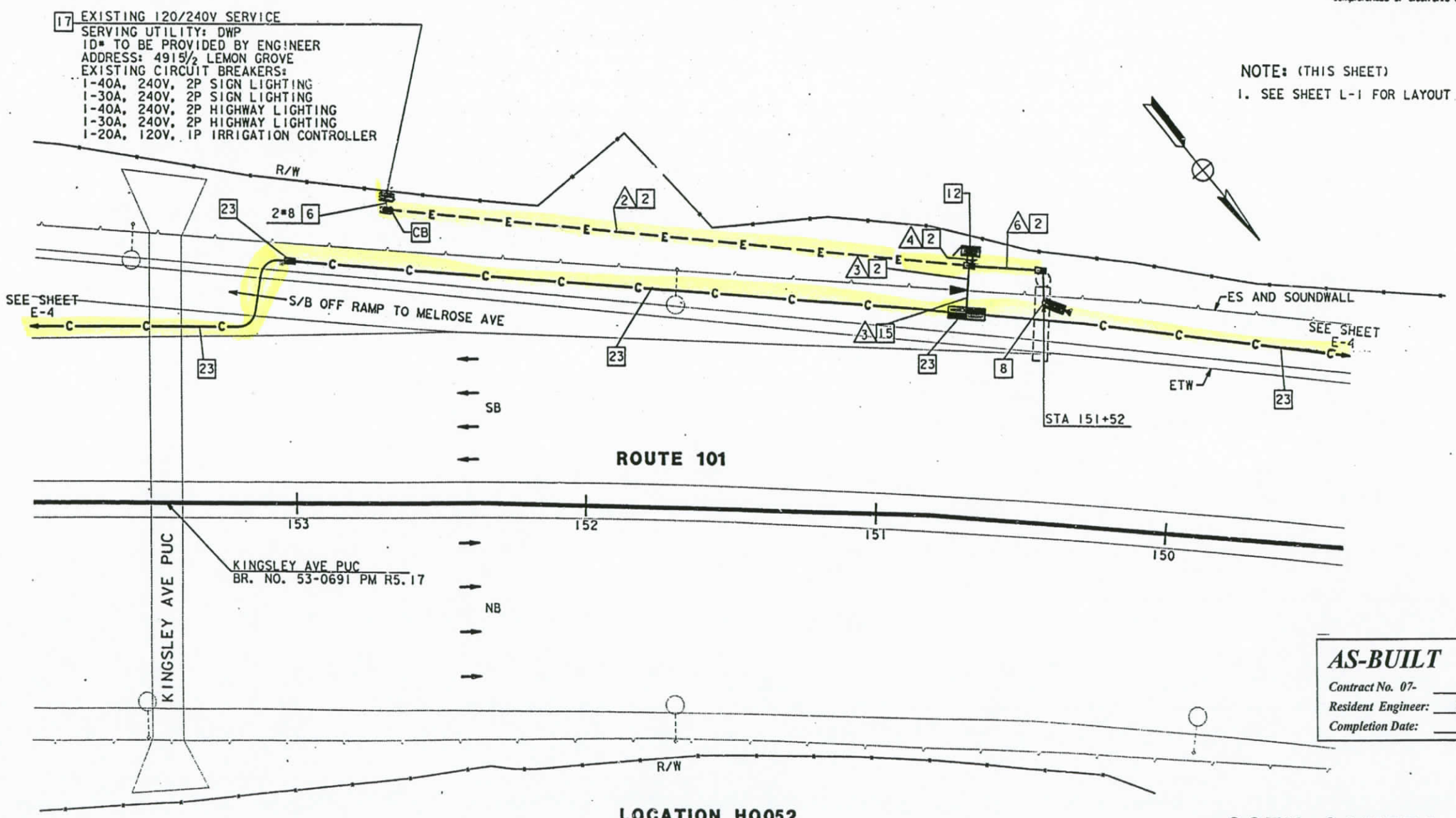
23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 3		RUN 4
6P22 CABLE	DATA /PHONE		1			1	
2SMFO B/O CABLE	SH VIDEO			1		1	
SEE TABLE 1, SHEET E-1	CCTV WIRING					1	1
#8	POWER	2			2		
	INNERDUCT			1 1/4"			
	CONDUIT SIZE	2"	3"		3"	3"	2"

NOTE: (THIS SHEET)

1. SEE SHEET L-1 FOR LAYOUT DETAILS.



LOCATION H0052

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION H0052)

SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-28

	DATE	REVISED BY	DATE REVISED
CALCULATED/DESIGNED BY	DM		
CHECKED BY	ES		

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 17-OCT-1995 10:06

FORM DC-CE-92 PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => lenord /usr/lenord/P23/712072u28.d
CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	93	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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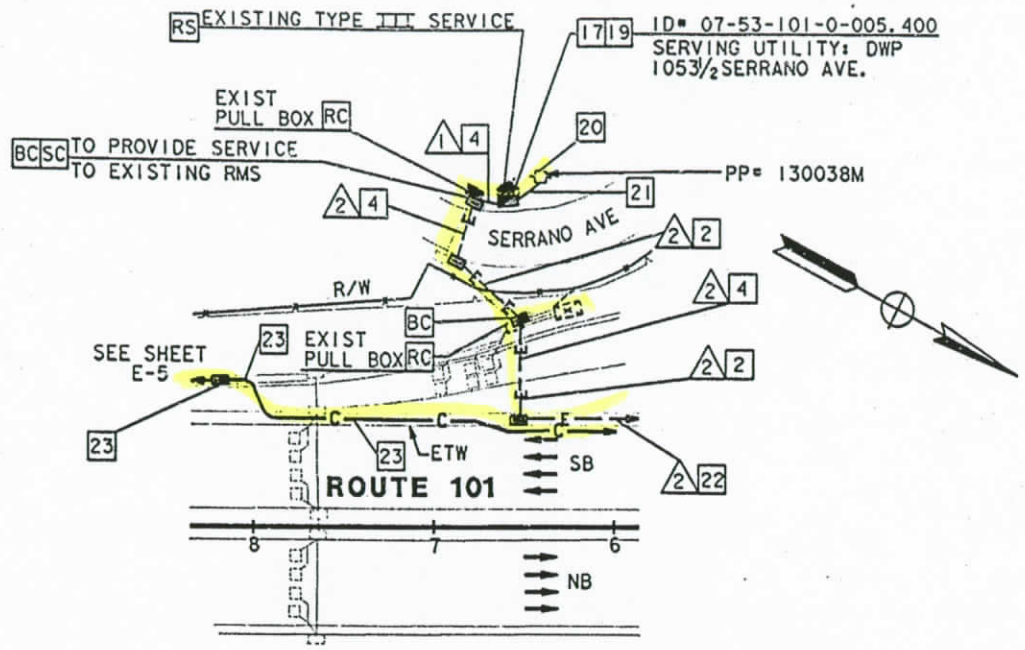
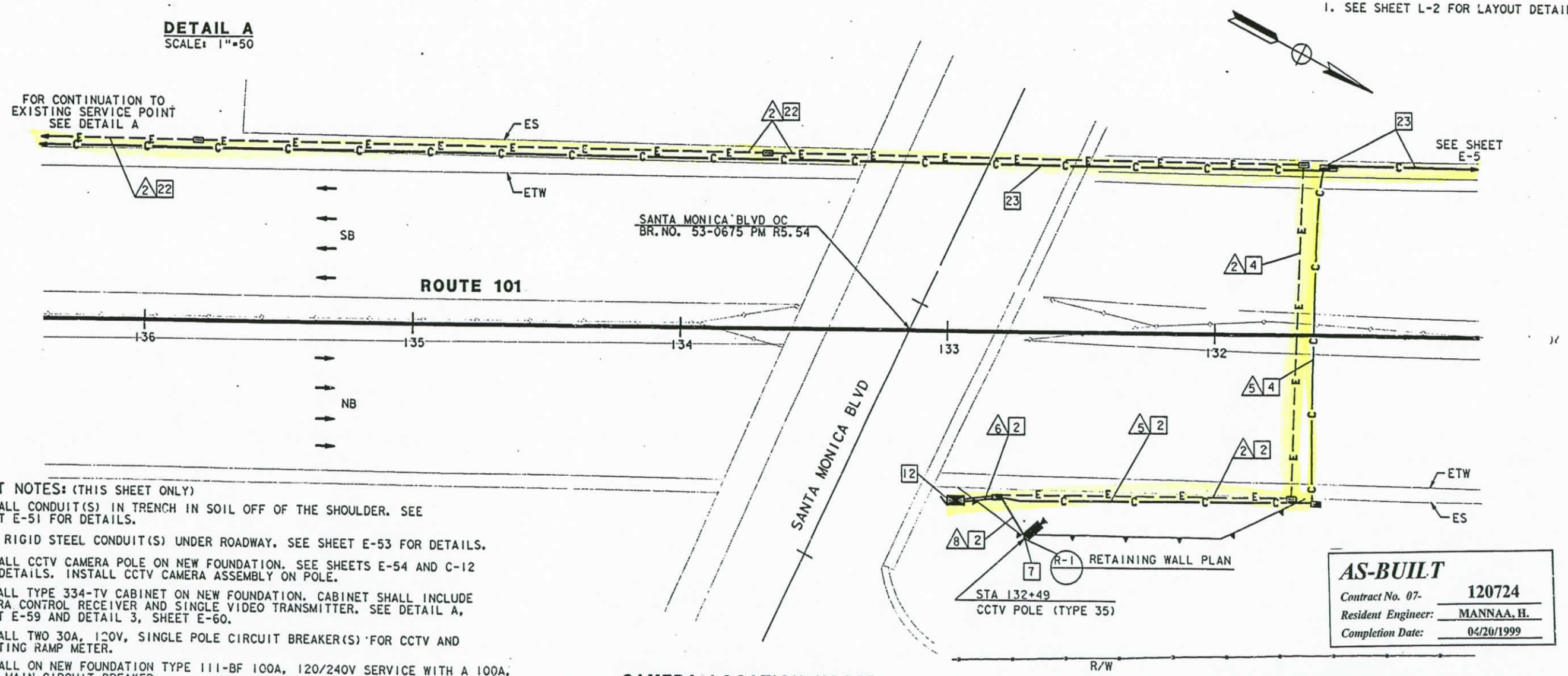


DETAIL A
SCALE: 1"=50

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN 1	2	5	6	7	8
6P22 CABLE	DATA /PHONE			1		1	
2SMFO B/O CABLE	SH VIDEO			1		1	
SEE TABLE 1, SHEET E-1	CCTV WIRING					1	1
#8	POWER	2					
#4	POWER	2	2		2		
	INNERDUCT			1¼"			
	CONDUIT SIZE	2"	2"	3"	3"	3"	2"

NOTE: (THIS SHEET)
1. SEE SHEET L-2 FOR LAYOUT DETAILS.



CAMERA LOCATION H0055
SCALE: 1"=20'

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL TWO 30A, 120V, SINGLE POLE CIRCUIT BREAKER(S) FOR CCTV AND EXISTING RAMP METER.

19 INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.

20 INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.

21 INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION H0055)

AS NOTED

E-29

REVISED BY	DATE REVISED
DM 2/95	ES 5/95

CALCULATED/DESIGNED BY DM
CHECKED BY ES

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans

LAST REVISION 00-00-00 TIME PLOTTED => 19-OCT-1995 15:36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	94	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

10-10-95
PLANS APPROVAL DATE

PROFESSIONAL ENGINEER — ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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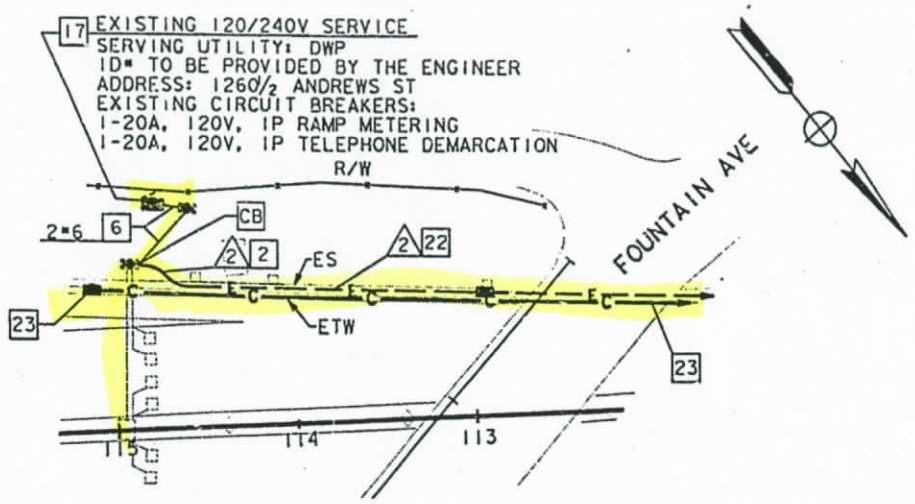
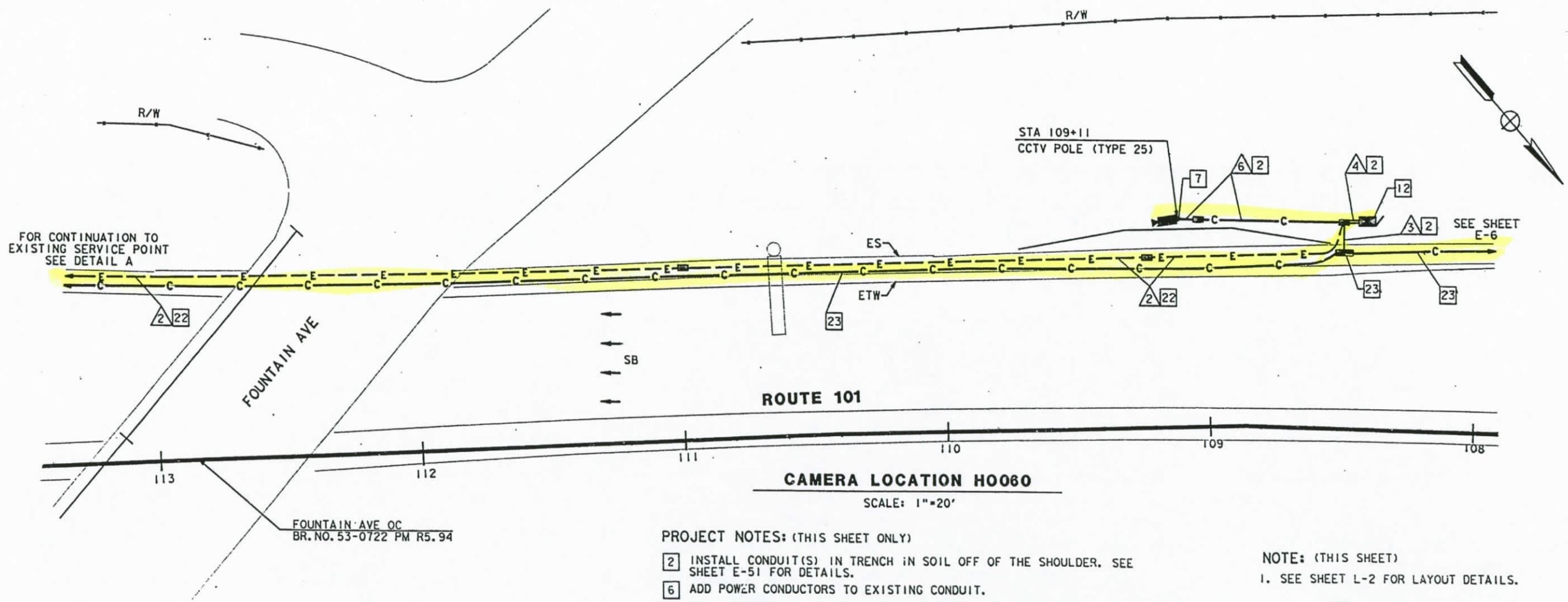


DETAIL A
SCALE: 1"=50

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5
6P22 CABLE	DATA /PHONE		1		1	
2SMFO B/O CABLE	SH VIDEO			1	1	
SEE TABLE 1, SHEET E-1	CCTV WIRING				1	1
#6	POWER	2		2		
	INNERDUCT		1¼"			
	CONDUIT SIZE	2"	3"	3"	3"	2"



CAMERA LOCATION H0060
SCALE: 1"=20'

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

NOTE: (THIS SHEET)
1. SEE SHEET L-2 FOR LAYOUT DETAILS.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION ~~H0060~~)

SCALE: AS NOTED

E-30

REVISED BY	DATE REVISED
DM	5/95

CALCULATED/DESIGNED BY: DM
CHECKED BY: ES
DATE: 2/95

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

TIME PLOTTED => 23-OCT-1995 12:19

FORM DC-OT-92-PF (REV. 3/88)

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USERNAME => mikesi
/usr/mikesi/PO/712072u30.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	95	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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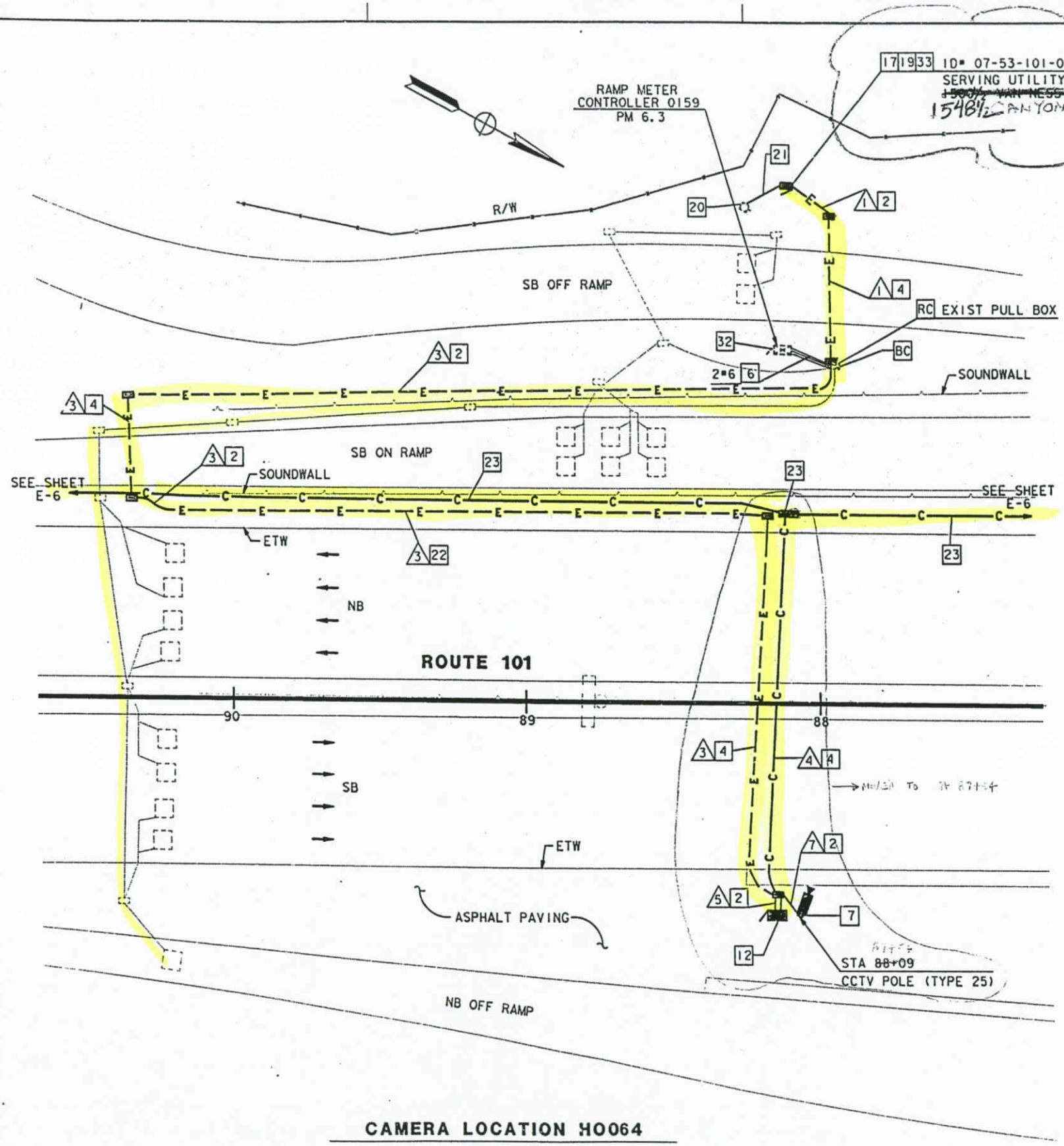

CAMERA LOCATION H0064

SCALE: 1"=20'

NOTE: (THIS SHEET)

1. SEE SHEET L-3 FOR LAYOUT DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 3	RUN 4		RUN 5		RUN 7
6P22 CABLE	DATA /PHONE			1			1	
2SMFO B/O CABLE	SH VIDEO				1		1	
SEE TABLE 1, SHEET E-1	CCTV WIRING						1	1
#6	POWER	4	2			2		
	INNERDUCT				1¼"			
	CONDUIT SIZE	2"	2"	3"		3"	3"	2"

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

PROJECT NOTES: (THIS SHEET ONLY)

2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
17. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
32. DISCONNECT EXISTING SERVICE WIRES AND CONNECT NEW SERVICE WIRES, ONLY AFTER INSTALLING AND VERIFYING THAT THE NEW SERVICE IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
33. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR EXISTING RAMP METER.

CCTV CAMERA (LOCATION H0064)

SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-31

	DATE	REVISED BY
	2/95	DM
	5/95	ES

DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

TIME PLOTTED => 17-OCT-1995 13:23

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 2	RUN 3	RUN 4	RUN 9	RUN 10	RUN 11	RUN 13	RUN 14 *
6P22 CABLE	DATA /PHONE				1				
2SMFO B/O CABLE	SH VIDEO				1		1		
SEE TABLE 1, SHEET E-1	CCTV WIRING						1	1	
#6	POWER	2	2			2	2		2
DLC	RAMP/COUNT		2	3		1			1
	INNERDUCT				1¼"				1¼"
	CONDUIT SIZE	2"	2"	2"	3"	2"	3"	2"	4"

* - CONDUIT RUN 14 INCLUDED IN THE QUANTITES FOR PAYMENT ON SHEET E-7

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
17. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
25. IDENTIFY AND RC EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
28. INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	96	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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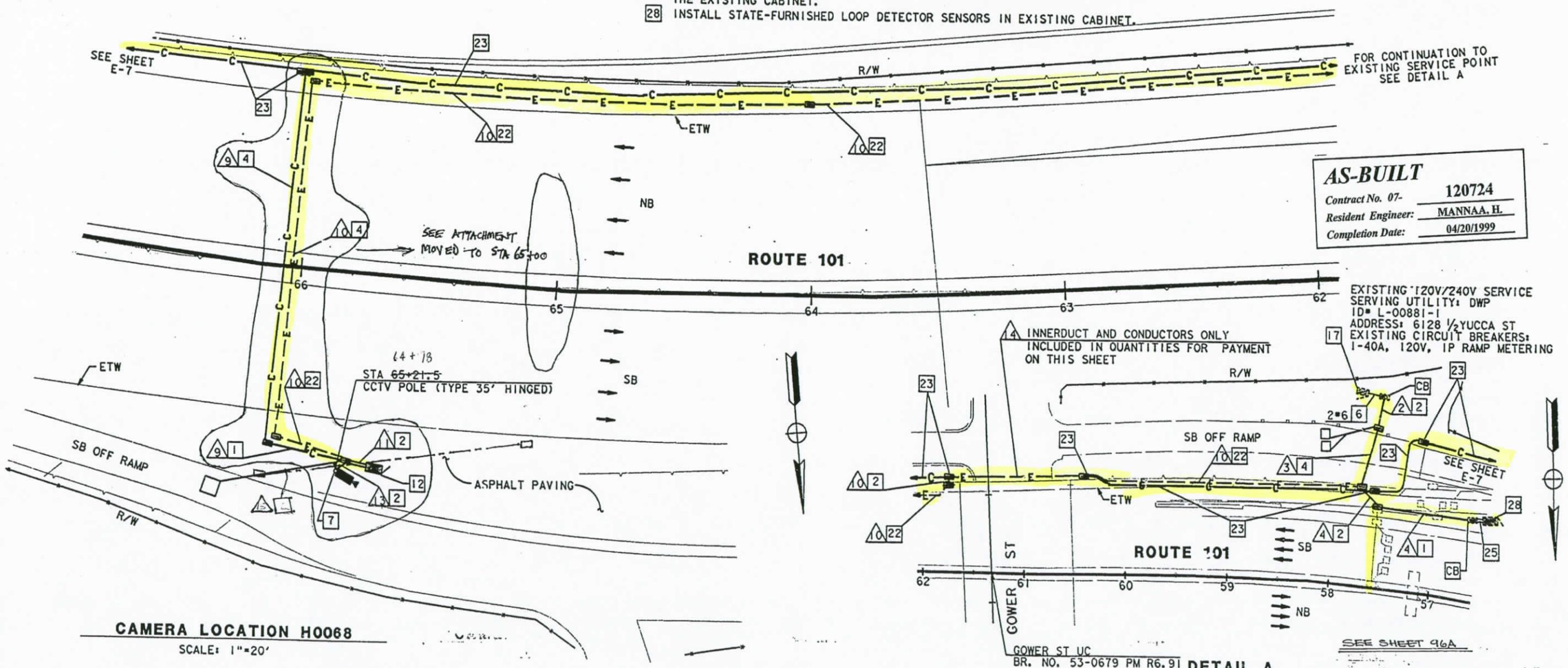
AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999



CAMERA LOCATION H0068
SCALE: 1"=20'

DETAIL A
SCALE: 1"=50'

NOTE: (THIS SHEET)
1. SEE SHEET L-3 FOR LAYOUT DETAILS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA (LOCATION H0068)

AS NOTED

E-32

DATE	DM	CALCULATED/ DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
2/95					
5/95	ES				

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

TIME PLOTTED => 19-OCT-1995 15:37

LAST REVISION 00-00-00

FORM DC-CE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesi /usr/mikesi/P0/712072u32.dg

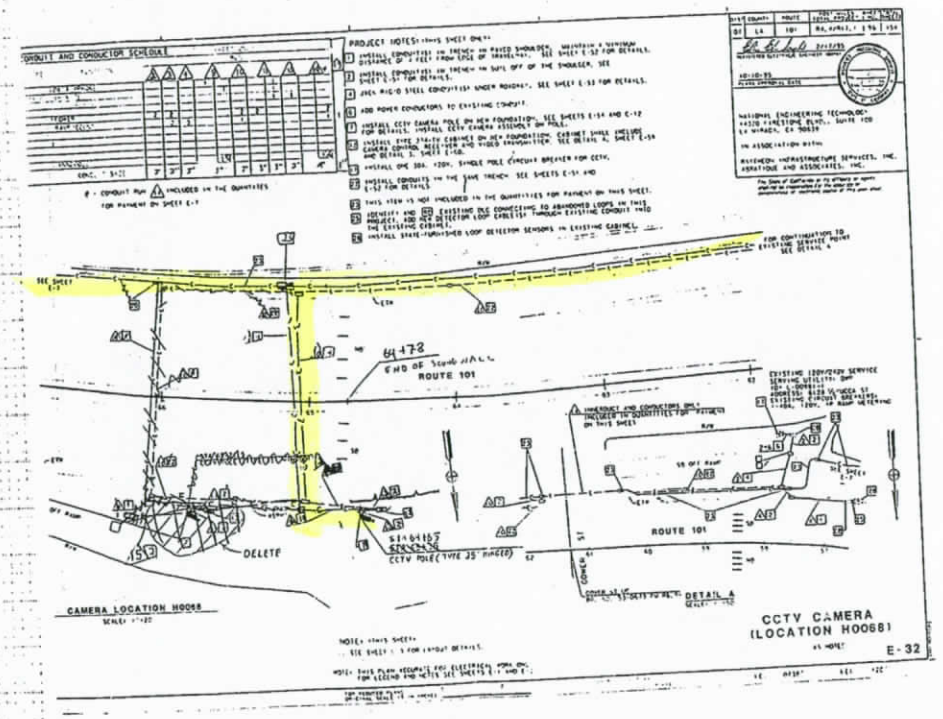
CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
				96A	

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA



AS-BUILT

Contract No. 07- 120724

Resident Engineer: MANNAA, H.

Completion Date: 04/20/1999

	DATE	REVISED BY
		DATE REVISED

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Station:

Cu.

Yds.

Exc.

Emb.

FOR REDUCED PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	97	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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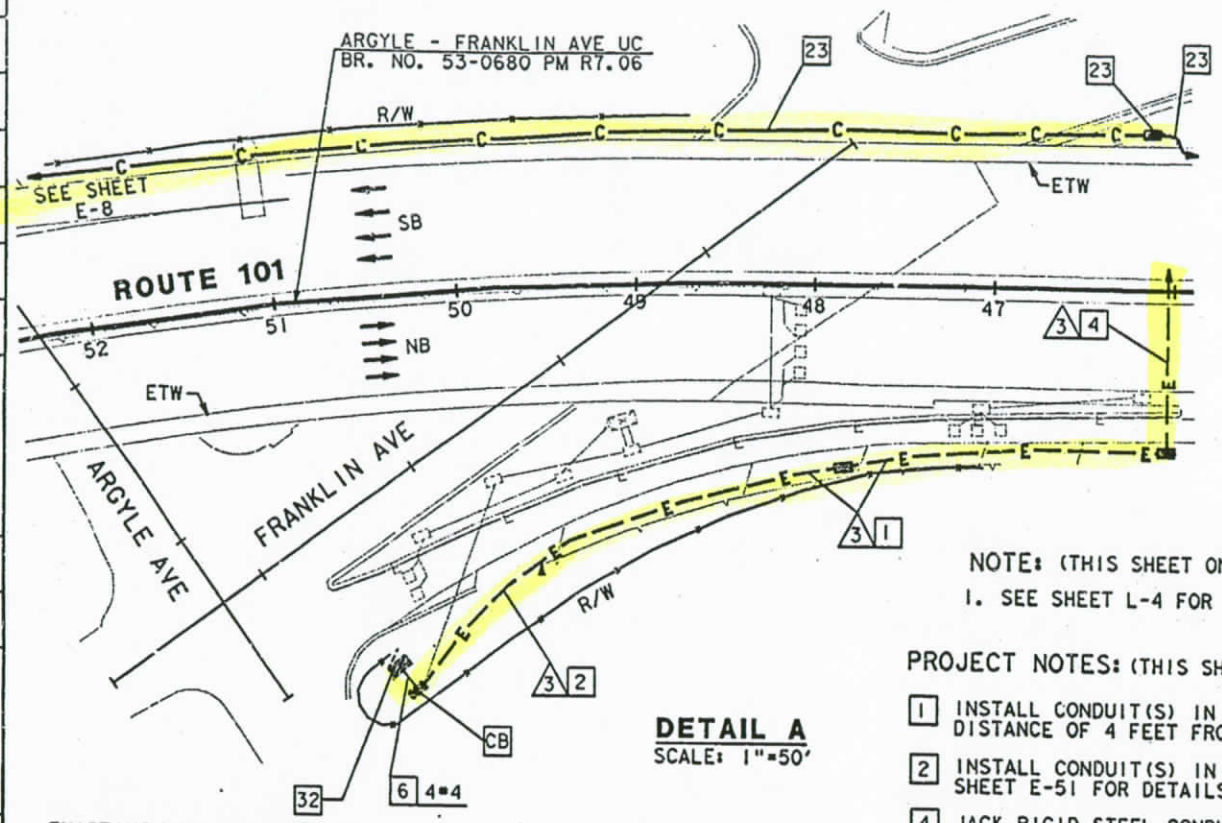


DETAIL A
SCALE: 1"=50'

EXISTING 120/240V SERVICE
SERVING UTILITY: SCE
ID# 07-53-210-029.650
ADDRESS: 1900½N VINE ST
EXISTING CIRCUIT BREAKERS:
1-40A, 120V, IP SIGN LIGHTING
1-20A, 120V, IP TELEPHONE DEMARCATION

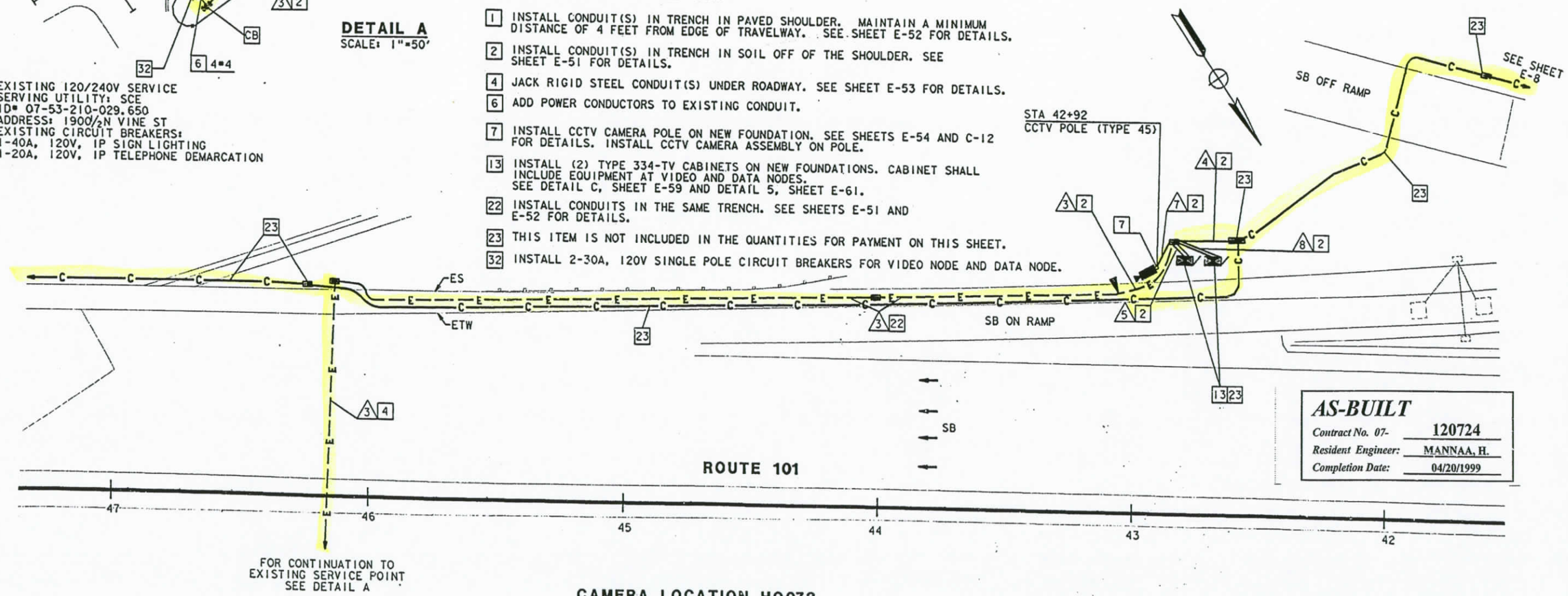
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 2	RUN 3	RUN 4	RUN 5	RUN 6	RUN 7	RUN 8
50P22 CABLE	DATA /PHONE		2					
6P22 CABLE	DATA /PHONE							2
12SMFO CABLE	SH VIDEO			2	2			
2SMFO B/O CABLE	SH VIDEO			1	1			
SEE TABLE 1, SHEET E-1	CCTV WIRING				1		1	
FO PATCH CORDS	DATA				2			2
#4	POWER	4						
	INNERDUCT			1¼"				
	CONDUIT SIZE	2"	4"		3"		2"	3"

NOTE: (THIS SHEET ONLY)
1. SEE SHEET L-4 FOR LAYOUT DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.
13. INSTALL (2) TYPE 334-TV CABINETS ON NEW FOUNDATIONS. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO AND DATA NODES. SEE DETAIL C, SHEET E-59 AND DETAIL 5, SHEET E-61.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
32. INSTALL 2-30A, 120V SINGLE POLE CIRCUIT BREAKERS FOR VIDEO NODE AND DATA NODE.



CAMERA LOCATION H0073
SCALE: 1"=20'

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA, EQUIPMENT AT DATA NODE AND EQUIPMENT AT VIDEO NODE (LOCATION H0073)

SCALE: AS NOTED

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-33

DATE	REVISED BY	DATE REVISED
2/95	ES	5/95

CALCULATED/DESIGNED BY: DM
CHECKED BY: ES
PROJECT ENGINEER: PAT SULLIVAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => mikesl
/usr/mikesl/P0/712072u33.dg
CU 07387
EA 120721
LAST REVISION 00-00-00
TIME PLOTTED => 19-OCT-1995 15:37

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R:7.1	98	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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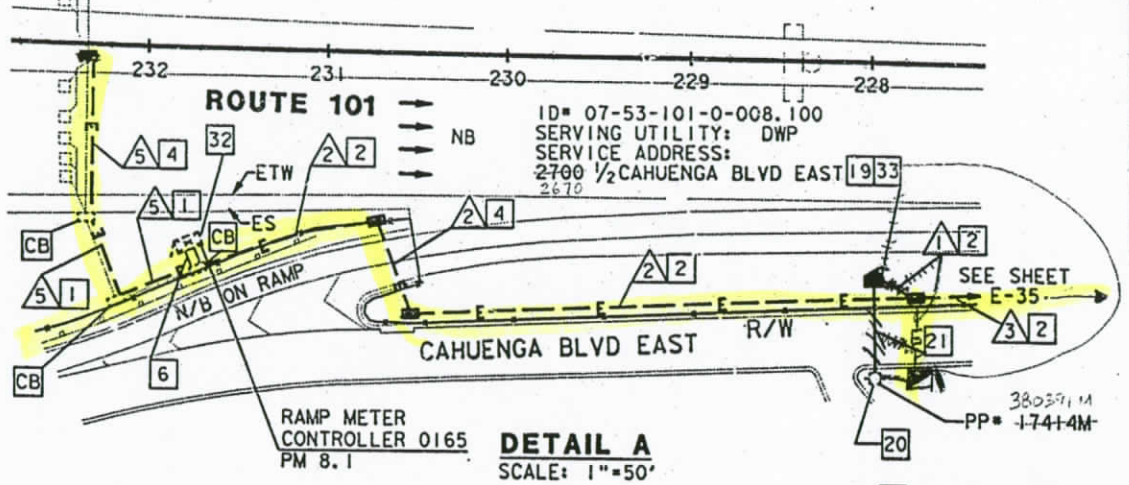
NOTE: (THIS SHEET)

1. SEE SHEET L-5 FOR LAYOUT DETAILS.

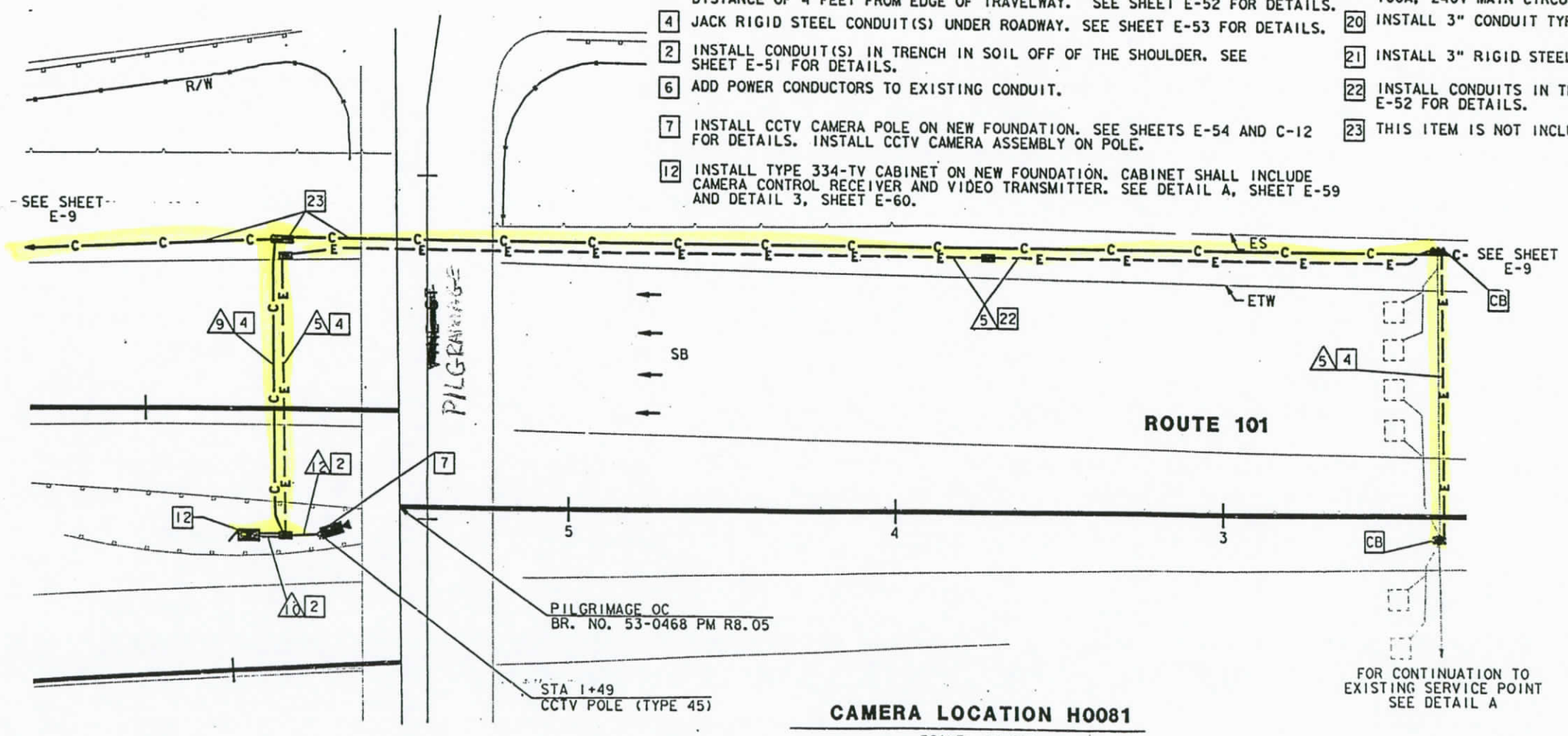


DETAIL A
SCALE: 1"=50'

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	5	8			10	12
6P22 CABLE	DATA /PHONE					1			1	
2SMFO B/O CABLE	SH VIDEO							1	1	
SEE TABLE 1, SHEET E-1	CCTV WIRING								1	1
#8	POWER	2	2							
#4	POWER	2	2		2				2	
#6	POWER	4		4						
	CONDUIT SIZE	2"	2"	2"	2"	1¼" 4"	1¼" 1¼"		3"	3" 2"

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ~~ON POWER POLE~~.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
32. DISCONNECT EXISTING SERVICE WIRES AND CONNECT NEW SERVICE WIRES. ONLY AFTER INSTALLING AND VERIFYING THAT THE NEW SERVICE IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
33. INSTALL 4-30A, 120V, SINGLE PHASE, CIRCUIT BREAKERS FOR CCTV, EXISTING RMS, AND TMS.



CAMERA LOCATION H0081
SCALE: 1"=20'

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION H0081)

AS NOTED

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-34

REVISED BY	DATE REVISED
DM	5/95

CALCULATED/DESIGNED BY	CHECKED BY
ES	

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

TIME PLOTTED => 17-OCT-1995 10:41

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => anndo
/usr/anndo/P54/712072u34.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	99	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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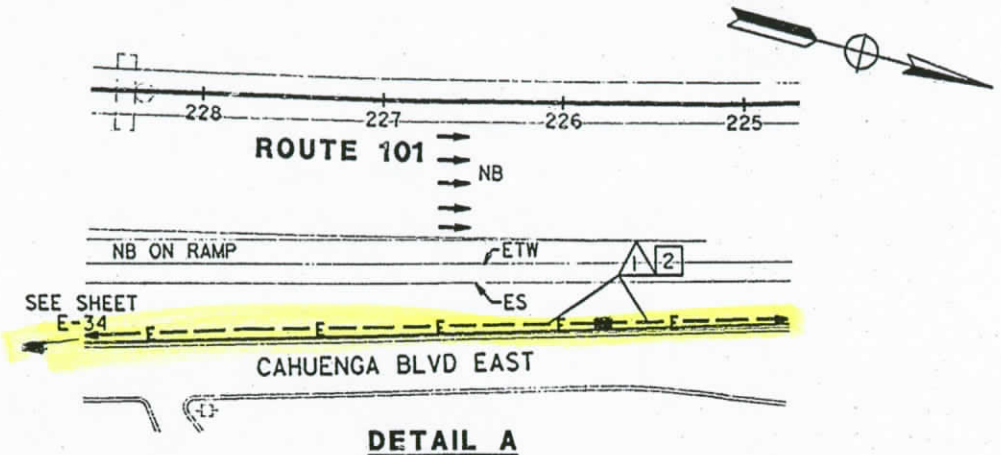


DETAIL A
SCALE: 1"=50'

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7
6P22 CABLE	DATA /PHONE		2		1		1	
12SMFO CABLE	SH VIDEO							
2SMFO B/O CABLE	SH VIDEO		1		1			
SEE TABLE 1, SHEET E-1	CCTV WIRING				1	1		
#6	POWER	4		2				2
	INNERDUCT		1 1/4"					
	CONDUIT SIZE	2"	3"	3"	3"	2"	2"	2"

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

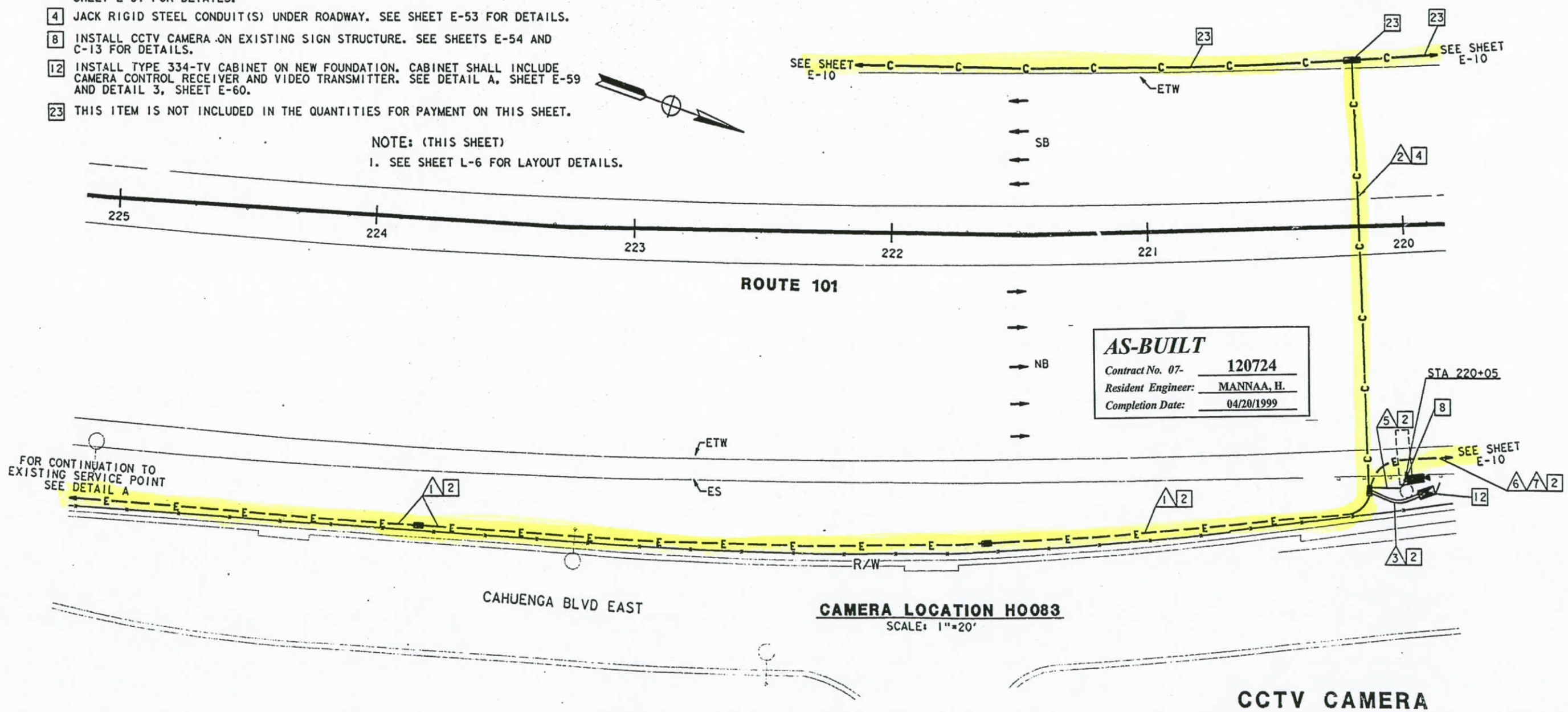
4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

8 INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

NOTE: (THIS SHEET)
1. SEE SHEET L-6 FOR LAYOUT DETAILS.



AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CAMERA LOCATION H0083
SCALE: 1"=20'

CCTV CAMERA (LOCATION H0083)

SCALE: AS NOTED

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-35

DATE	REVISED BY	DATE	REVISED BY
2/95	DM	5/95	ES

CALCULATED/DESIGNED BY DM
CHECKED BY ES

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

FORM DC-OE-92-PE (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	100	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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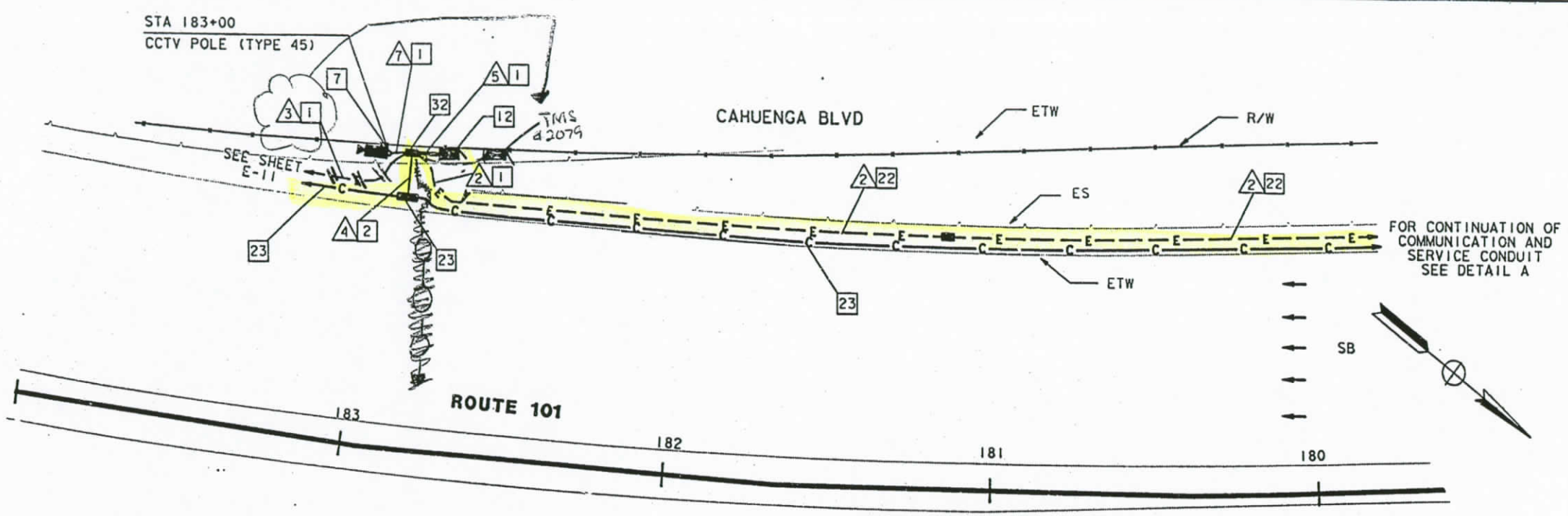


CAMERA LOCATION H0090

SCALE: 1"=20'

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
	FUNCTION	RUN					
6P22 CABLE	DATA /PHONE			1		1	
2SMFO B/O CABLE	SH VIDEO				1	1	
SEE TABLE 1, SHEET E-1	CCTV WIRING					1	1
#6	POWER	2			2		
#4	POWER	2	2				1
	INNERDUCT			1 1/4"			
	CONDUIT SIZE	2"	2"	3"	3"	3"	2"

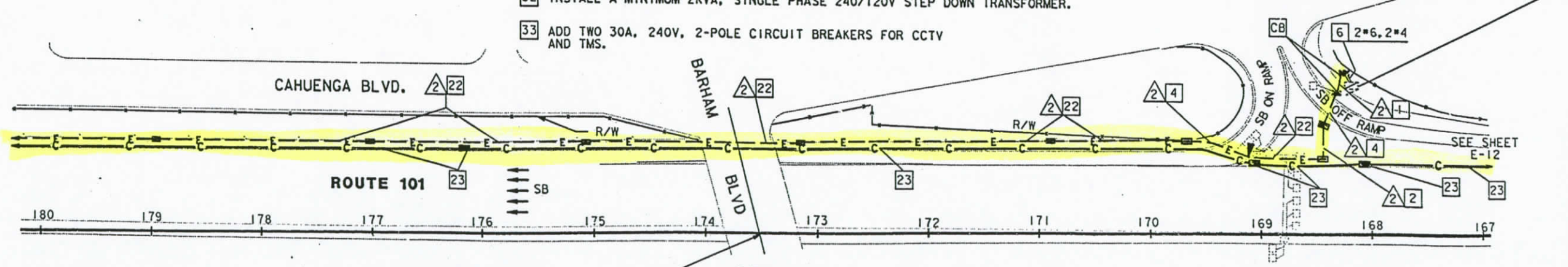
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
7. INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
32. INSTALL A MINIMUM 2KVA, SINGLE PHASE 240/120V STEP DOWN TRANSFORMER.
33. ADD TWO 30A, 240V, 2-POLE CIRCUIT BREAKERS FOR CCTV AND TMS.

NOTE: (THIS SHEET ONLY)

1. SEE SHEET L-6 FOR LAYOUT DETAILS.

EXISTING 120/240V SERVICE
SERVING UTILITY: DWP
ID# 712086
ADDRESS: 3216½ BARHAM BLVD
EXISTING CIRCUIT BREAKERS:
1-40A, 120V, IP RAMP METER
1-40A, 120V, IP RAMP METER
1-20A, 120V, IP TELEPHONE DEMARCATION 33



BARHAM BLVD OC
BR. NO. 53-0466 PM R9.22

DETAIL A

SCALE: 1"=50'

AS-BUILT
Contract No. 07- 120724
Resident Engineer: Hasan Mawas
Completion Date: 04/20/1999

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA (LOCATION H0090)

SCALE: AS NOTED

E-36

DATE	REVISED BY	DATE	REVISED BY
2/95	DM	5/95	ES

CALCULATED/DESIGNED BY DM
CHECKED BY ES

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

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DGN FILE => /usr/mikesl/P0/712072u36.dg

CU 07387 EA 120721

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 10:52

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	101	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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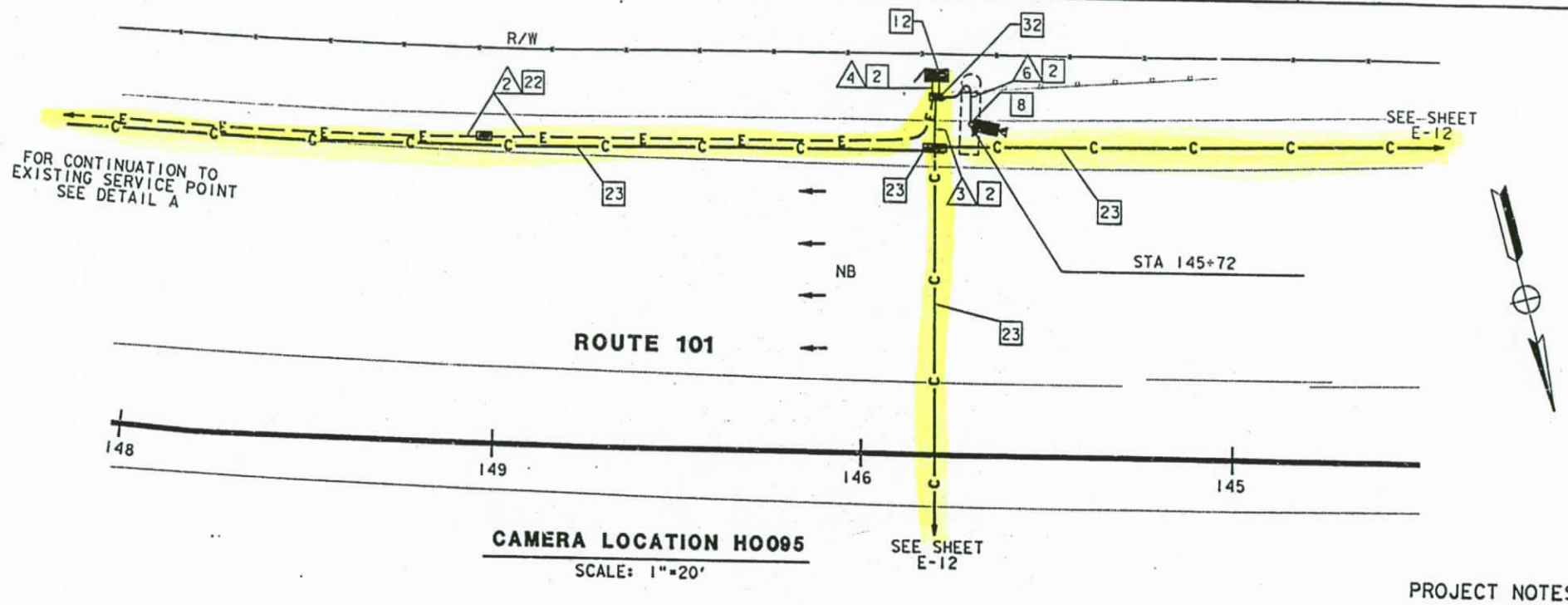


CAMERA LOCATION HO095

SCALE: 1"=20'

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN				
		1	2	3	4	5
6P22 CABLE	DATA /PHONE		1		1	
12SMFO CABLE	SH VIDEO					
2SMFO B/O CABLE	SH VIDEO			1	1	
SEE TABLE 1, SHEET E-1	CCTV WIRING				1	1
#6	POWER	2			2	
	INNERDUCT			1 1/4"		
	CONDUIT SIZE	2"	3"	3"	3"	2"

PROJECT NOTES (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

8 INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.

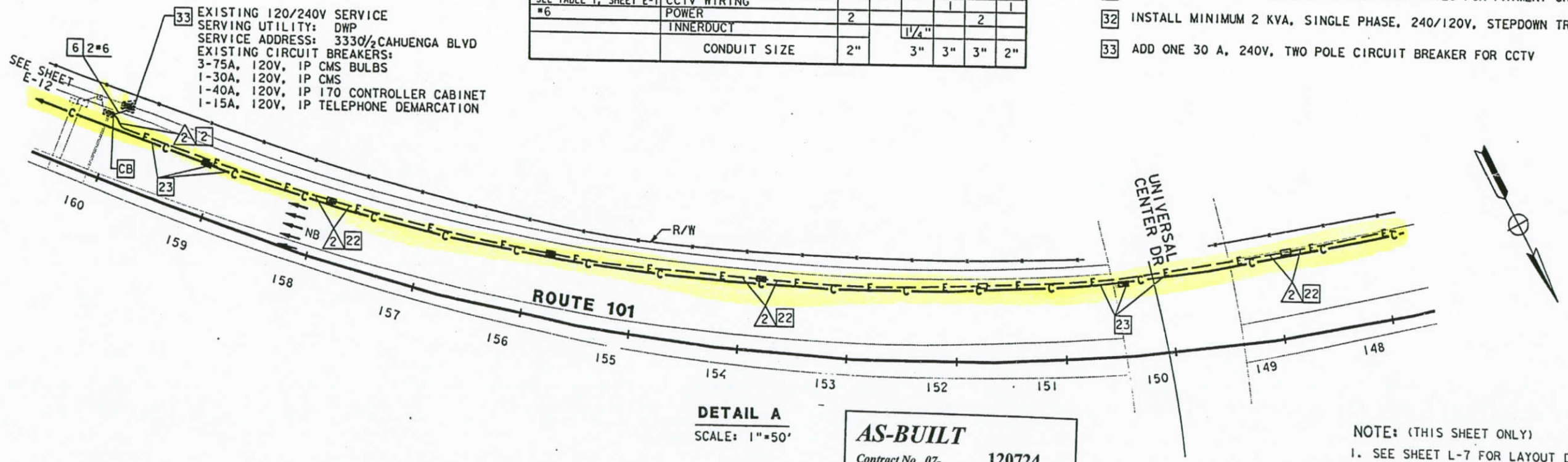
12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

32 INSTALL MINIMUM 2 KVA, SINGLE PHASE, 240/120V, STEPDOWN TRANSFORMER

33 ADD ONE 30 A, 240V, TWO POLE CIRCUIT BREAKER FOR CCTV

33 EXISTING 120/240V SERVICE
SERVING UTILITY: DWP
SERVICE ADDRESS: 3330½ CAHUENGA BLVD
EXISTING CIRCUIT BREAKERS:
3-75A, 120V, IP CMS BULBS
1-30A, 120V, IP CMS
1-40A, 120V, IP 170 CONTROLLER CABINET
1-15A, 120V, IP TELEPHONE DEMARCATION



DETAIL A

SCALE: 1"=50'

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

NOTE: (THIS SHEET ONLY)
1. SEE SHEET L-7 FOR LAYOUT DETAILS.

CCTV CAMERA (LOCATION HO095)

AS NOTED

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-37

DATE	REVISED BY	DATE REVISED
2/95	DM	ES 5/95

CALCULATED/DESIGNED BY — CHECKED BY

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 10:37

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikes!
/usr/mikesl/P0/712072u37.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	102	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 4		RUN 5
6P22 CABLE	DATA /PHONE		1		1		
12SMFO CABLE	SH VIDEO						
25MFO B/O CABLE	SH VIDEO			1	1		
SEE TABLE 1, SHEET E-1	CCTV WIRING				1		1
#6	POWER	2				2	
	INNERDUCT			1 1/4"			
	CONDUIT SIZE	2"	3"		3"	3"	2"

NOTE: (THIS SHEET)

1. SEE SHEET L-7 FOR LAYOUT DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

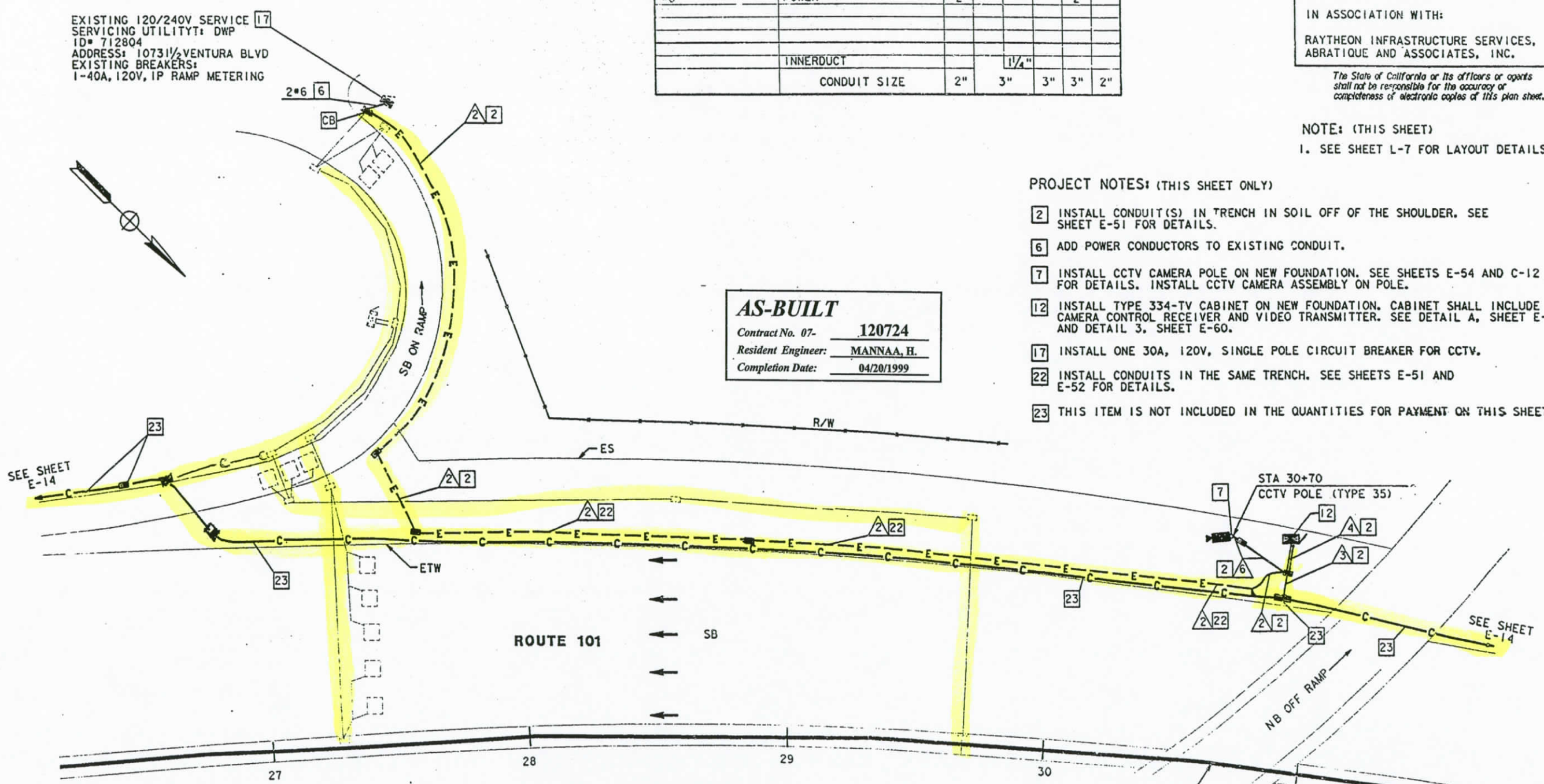
12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999



CAMERA LOCATION H0106
SCALE 1"=20'

CCTV CAMERA (LOCATION H0106)
SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-38

	DATE	DM	CALCULATED/ DESIGNED BY
REVISED BY	2/95	DM	CALCULATED/ DESIGNED BY
DATE REVISED	5/95	ES	CHECKED BY

PROJECT ENGINEER
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

XXXXXXXXXXXXXXXXXXXXXXXX

LAST REVISION 00-00-00 TIME PLOTTED => 19-OCT-1995 15:38

CGPV 05-07-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
/usr/mikesl/P0/712072u38.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	103	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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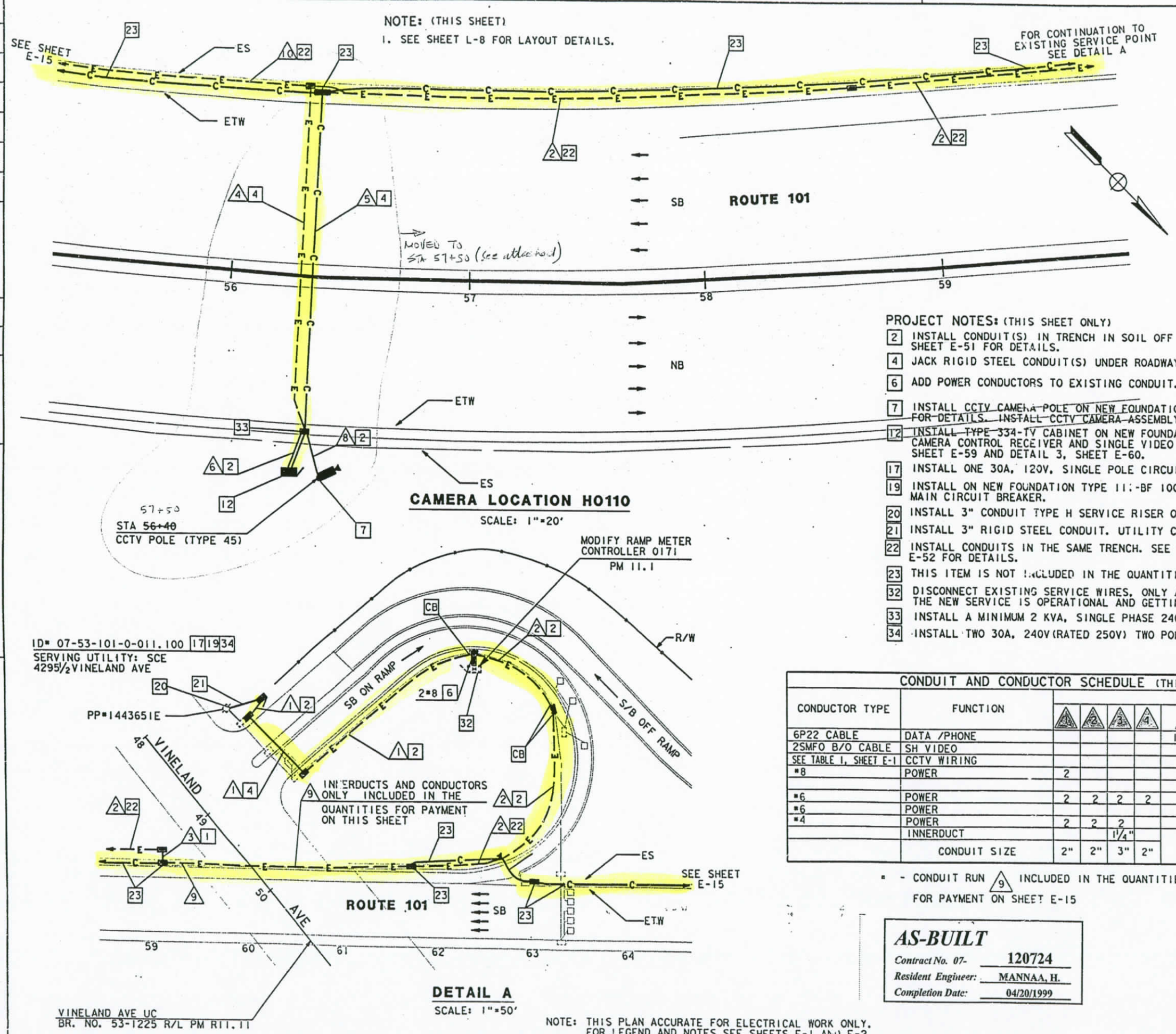
NOTE: (THIS SHEET)

1. SEE SHEET L-8 FOR LAYOUT DETAILS.



PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR RMS.

19 INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.

20 INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.

21 INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

32 DISCONNECT EXISTING SERVICE WIRES, ONLY AFTER INSTALLING AND VERIFYING THE NEW SERVICE IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

33 INSTALL A MINIMUM 2 KVA, SINGLE PHASE 240/120V STEP DOWN TRANSFORMER.

34 INSTALL TWO 30A, 240V (RATED 250V) TWO POLE CIRCUIT BREAKERS FOR CCTV AND TMS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8	9*			10
6P22 CABLE	DATA /PHONE					1	1						
2SMFO B/O CABLE	SH VIDEO					1	1						
SEE TABLE 1, SHEET E-1	CCTV WIRING						1		1				
#8	POWER	2											
#6	POWER	2	2	2	2			2				2	
#6	POWER												
#4	POWER	2	2	2								2	2
	INNERDUCT			1¼"		1¼"				1¼"	1¼"	1¼"	
	CONDUIT SIZE	2"	2"	3"	2"	3"	3"	3"	2"	4"			2"

* - CONDUIT RUN 9 INCLUDED IN THE QUANTITIES FOR PAYMENT ON SHEET E-15

SEE SHEET 103A

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA (LOCATION H0110)

SCALE: AS NOTED

E-39

DATE	REVISED BY	DATE	REVISED
2/95	DM	5/95	ES

CALCULATED/DESIGNED BY — CHECKED BY

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

TIME PLOTTED => 17-OCT-1995 14:31

LAST REVISION 00-00-00

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesi /usr/mikesi/P0/712072u39.dg

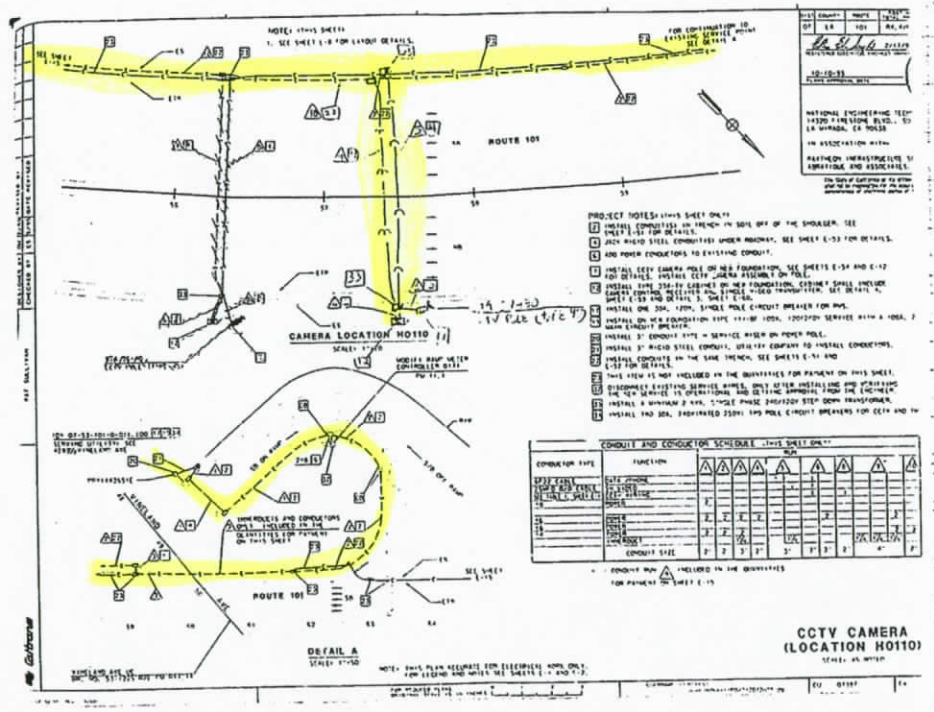
CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
				103A	

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — NO. — EXP. — CIVIL — STATE OF CALIFORNIA



AS-BUILT

Contract No. 07- 120724

Resident Engineer: MANNAA, H.

Completion Date: 04/20/1999

DATE	REVISED BY
	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Station

Eng.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	104	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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.

NOTE: (THIS SHEET)

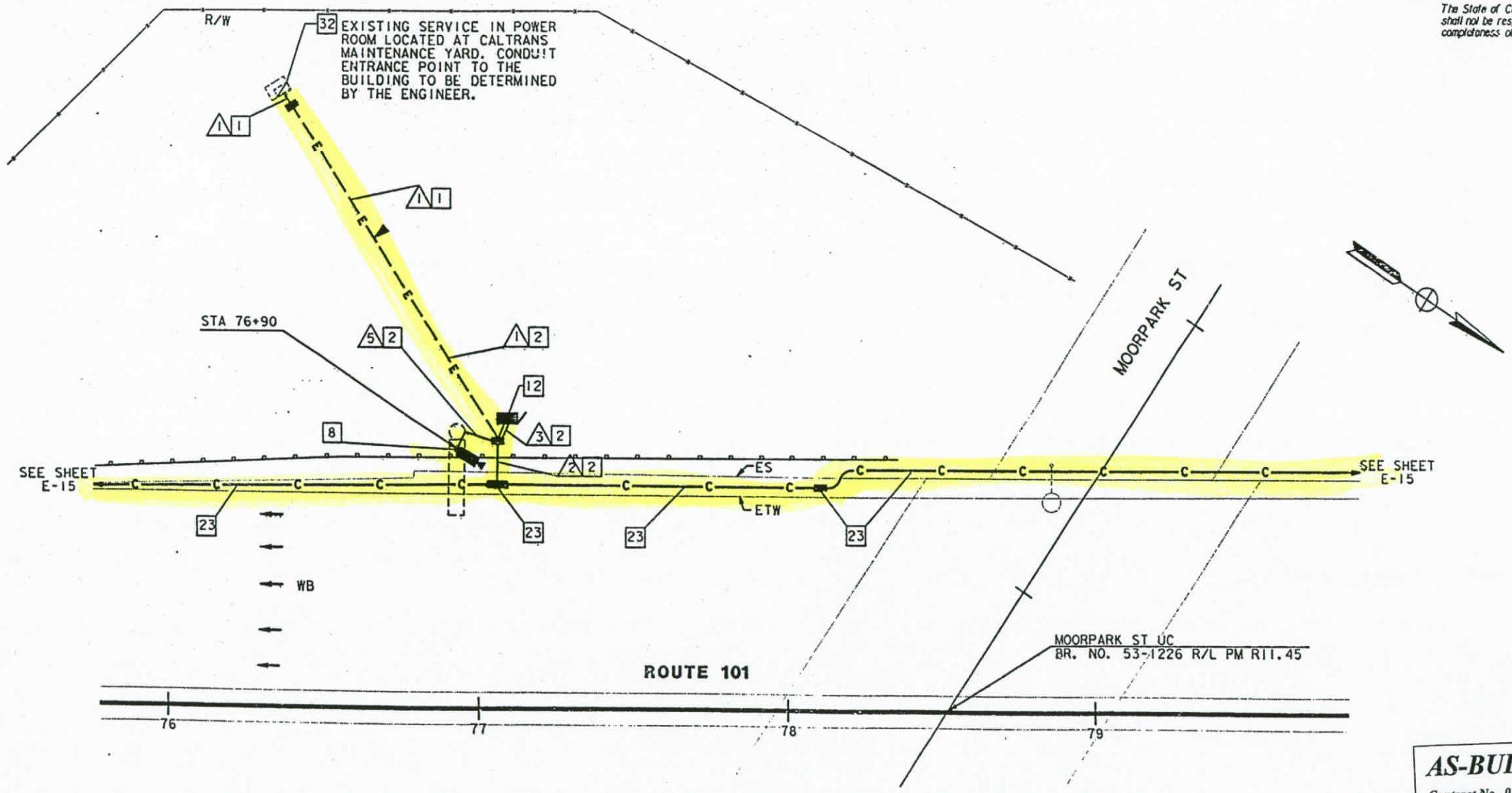
1. SEE SHEET L-8 FOR LAYOUT DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
8. INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
32. ADD ONE 30A, 120V SINGLE POLE CIRCUIT BREAKER FOR CCTV.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 3		RUN 5
6P22 CABLE	DATA /PHONE		1			1	
2SMFO D/O CABLE	SH VIDEO			1		1	
SEE TABLE 1, SHEET E-1	CCTV WIRING					1	1
#8	POWER	2			2		
	INNERDUCT			1 1/4"			
	CONDUIT SIZE	2"	3"		3"	3"	2"



CAMERA LOCATION VE114
SCALE: 1"=20'

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION HO114)

SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-40

REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY	DATE 2/95
CHECKED BY	5/95

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

XXXXXXXXXXXXXXXXXXXXXXXXXX

TIME PLOTTED => 17-OCT-1995 14:31

LAST REVISION 00-00-00

FORM DC-CE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
/usr/mikesl/P0/712072u40.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	105	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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 NOTES: (THIS SHEET ONLY)

[2] INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

[4] JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

[6] ADD POWER CONDUCTORS TO EXISTING CONDUIT.

[8] INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.

[12] INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

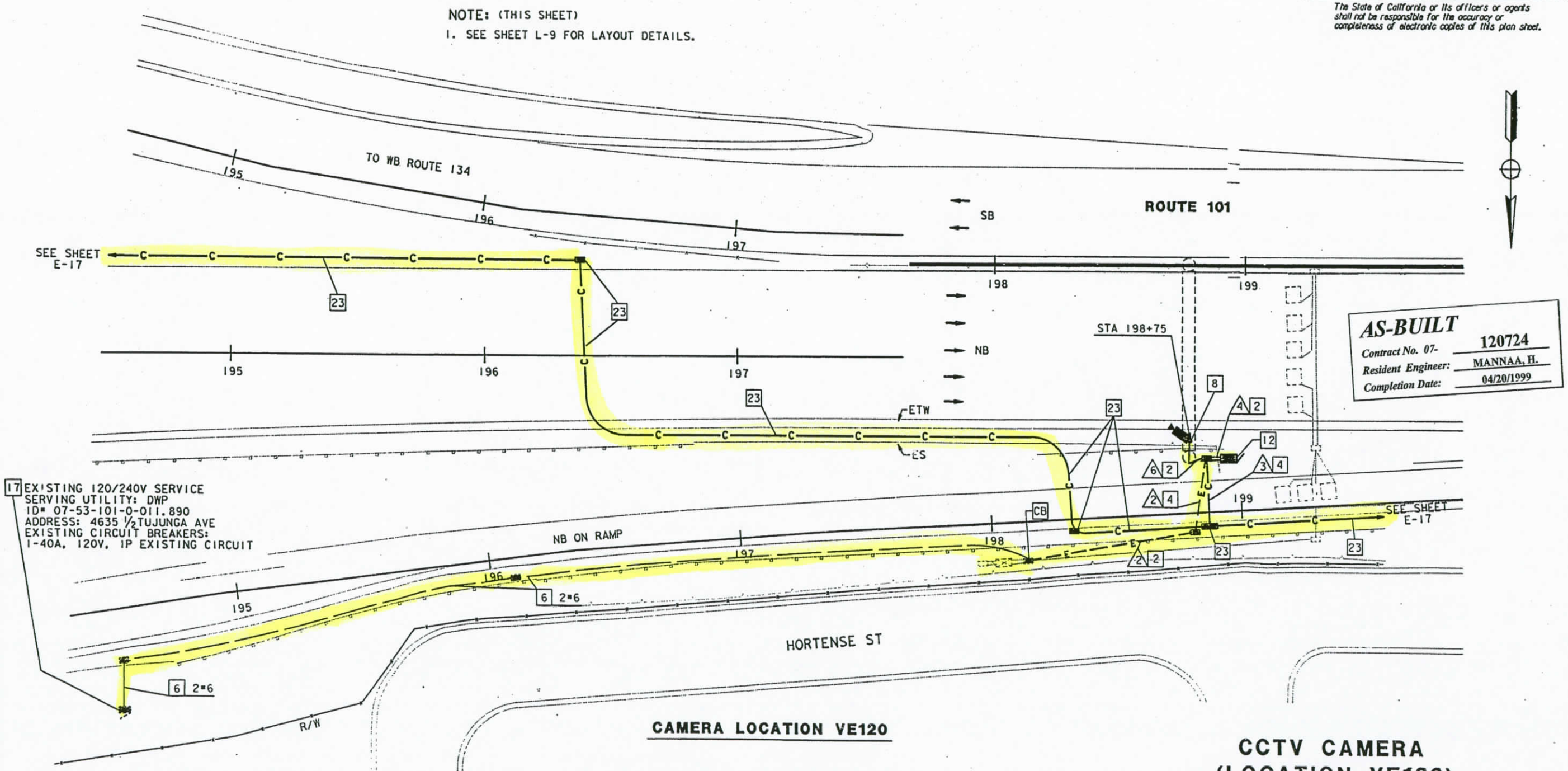
[17] INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

[23] THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5
6P22 CABLE	DATA /PHONE		1		1	
2SMFO B/O CABLE	SH VIDEO			1	1	
SEE TABLE 1, SHEET E-1	CCTV WIRING				1	1
*6	POWER	2		2		
	INNERDUCT		1 1/4"			
	CONDUIT SIZE	2"	3"	3"	3"	2"

NOTE: (THIS SHEET)
1. SEE SHEET L-9 FOR LAYOUT DETAILS.



CAMERA LOCATION VE120

CCTV CAMERA (LOCATION VE120)

SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-41

REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY	DATE 2/95
DM	
CHECKED BY	DATE 5/95
ES	

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

TIME PLOTTED => 17-OCT-1995 14:31
LAST REVISION 00-00-00

FORM DC-CE-92-FF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesi
/usr/mikesi/P0/712072u41.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	106	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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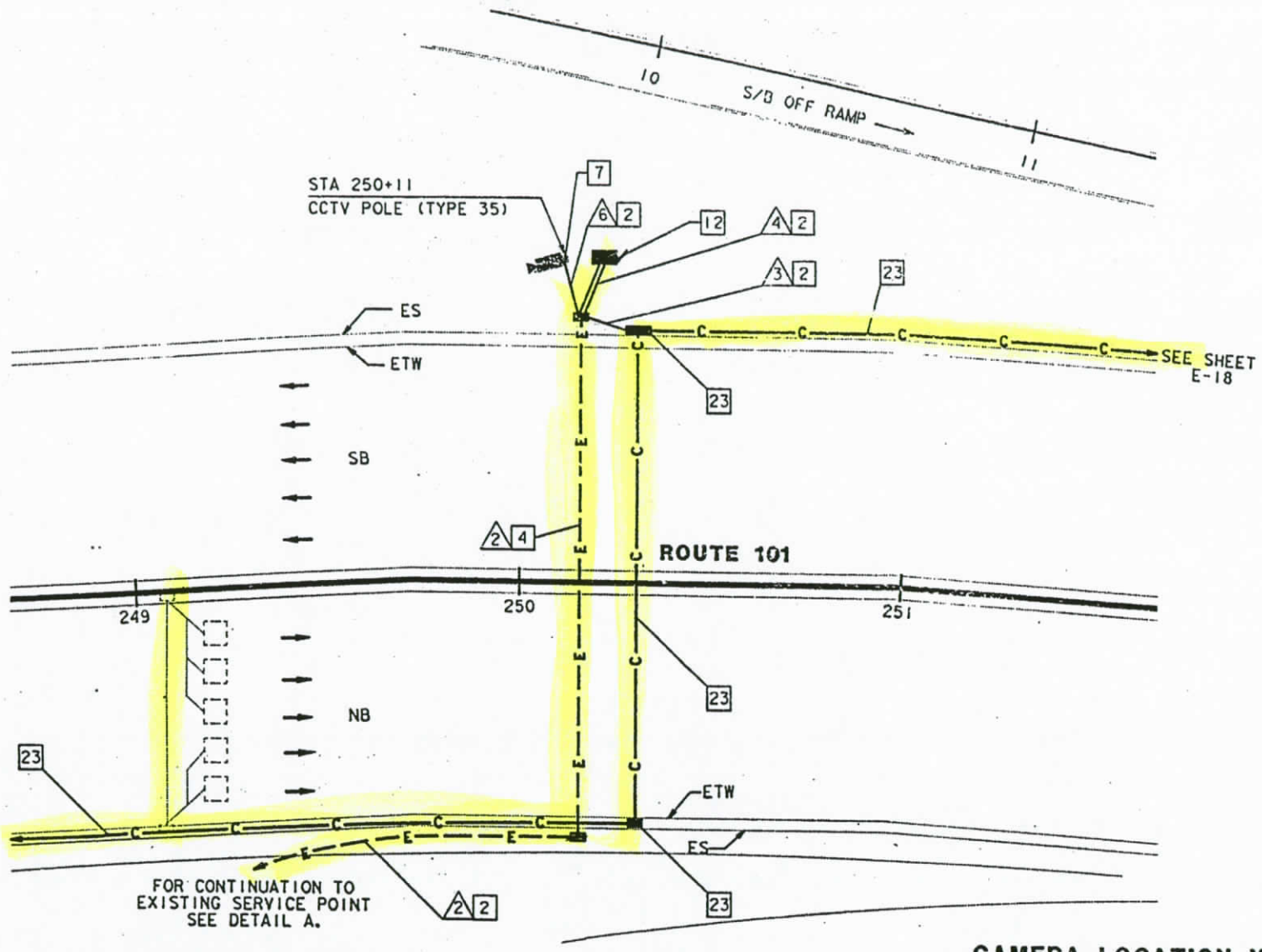
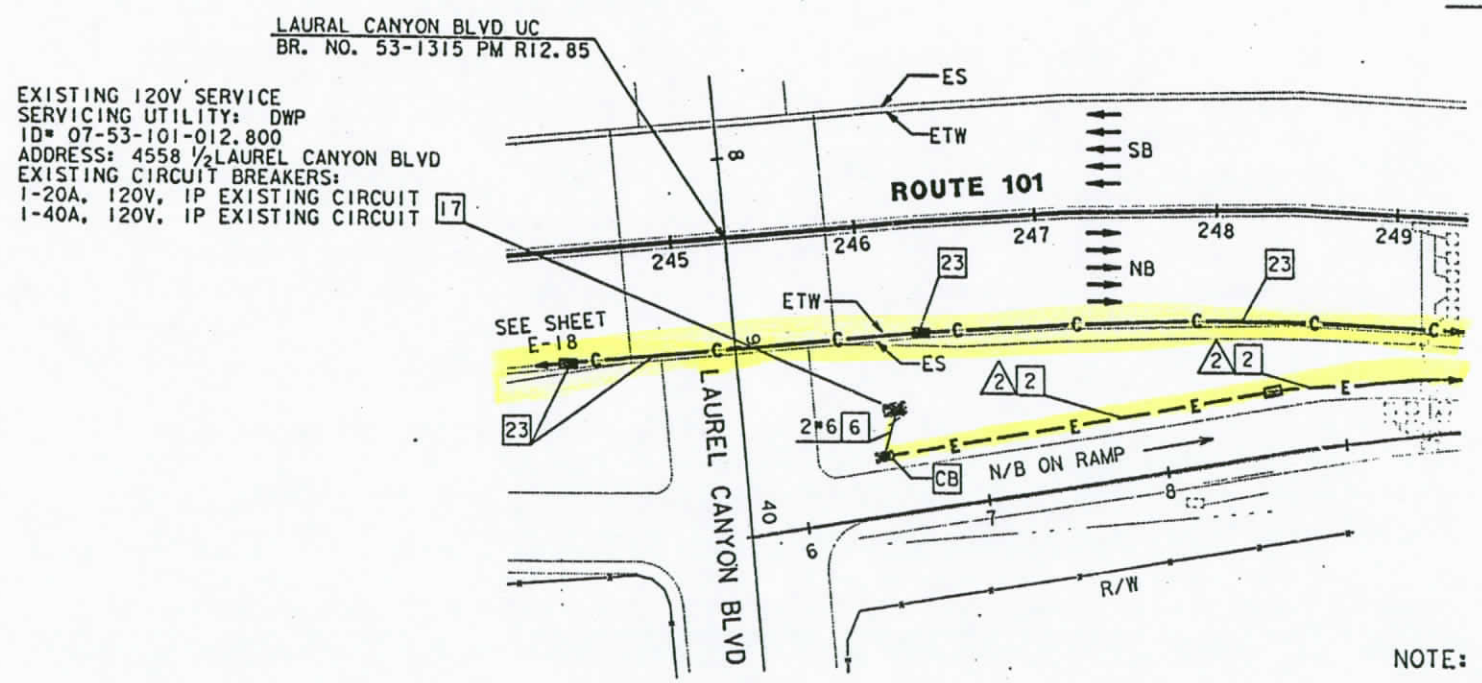


CAMERA LOCATION VE129

SCALE: 1"=20'

CONDUCTOR TYPE	FUNCTION	RUN 2	RUN 3		RUN 4		RUN 6
6P22 CABLE	DATA /PHONE		1		1		
2SMFO B/O CABLE	SH VIDEO			1	1		
SEE TABLE 1, SHEET E-1	CCTV WIRING				1		1
#6	POWER	2				2	
	INNERDUCT			1 1/4"			
	CONDUIT SIZE	2"	3"		3"	3"	2"

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999



DETAIL A

SCALE: 1"=50'

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

NOTE: (THIS SHEET)

1. SEE SHEET L-9 FOR LAYOUT DETAILS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA (LOCATION VE129)

SCALE: AS NOTED

E-42

CALCULATED/ DESIGNED BY	DM	DATE 2/95	REVISED BY
CHECKED BY	ES	5/95	DATE REVISED

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FORM DC-CE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => trmarlak /usr/trmarlak/P2/712072u42.

CU 07387 EA 120721

TIME PLOTTED => 17-OCT-1995 12:56

LAST REVISION 00-00-00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	107	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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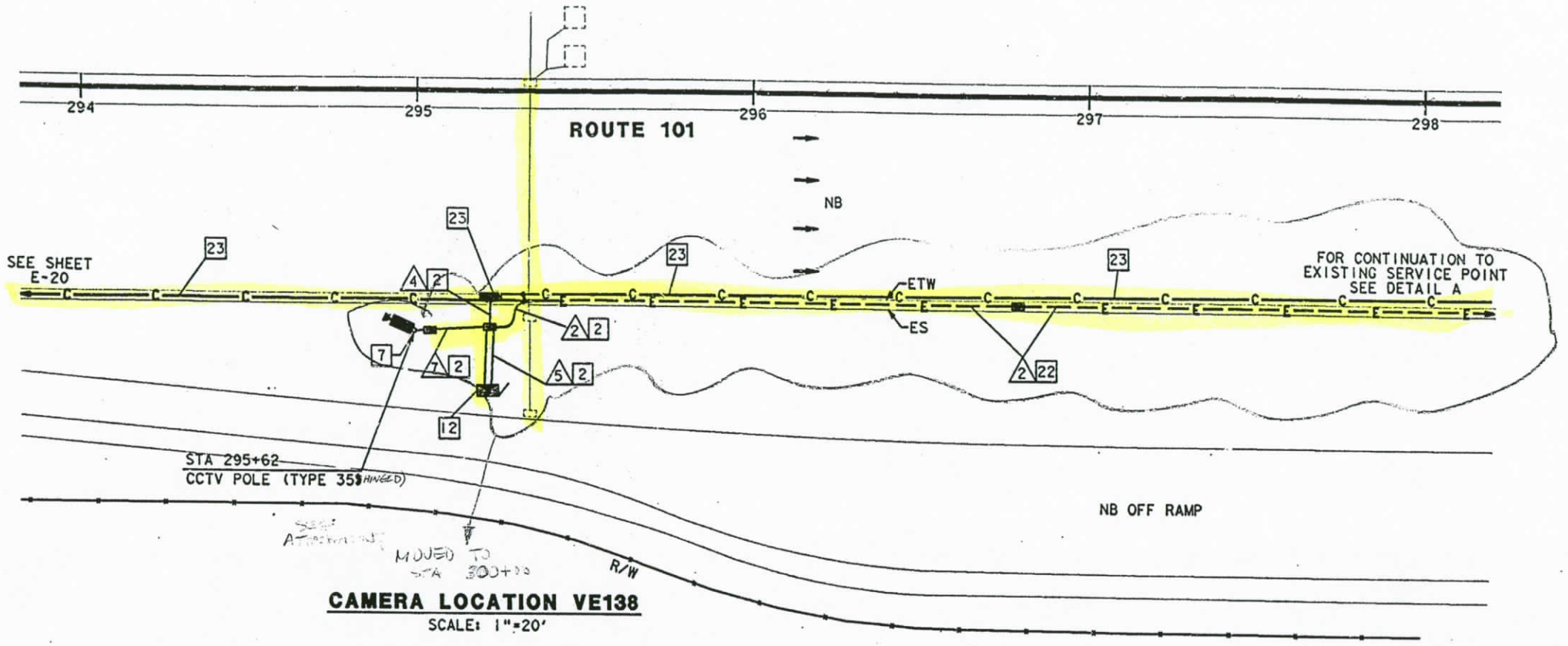
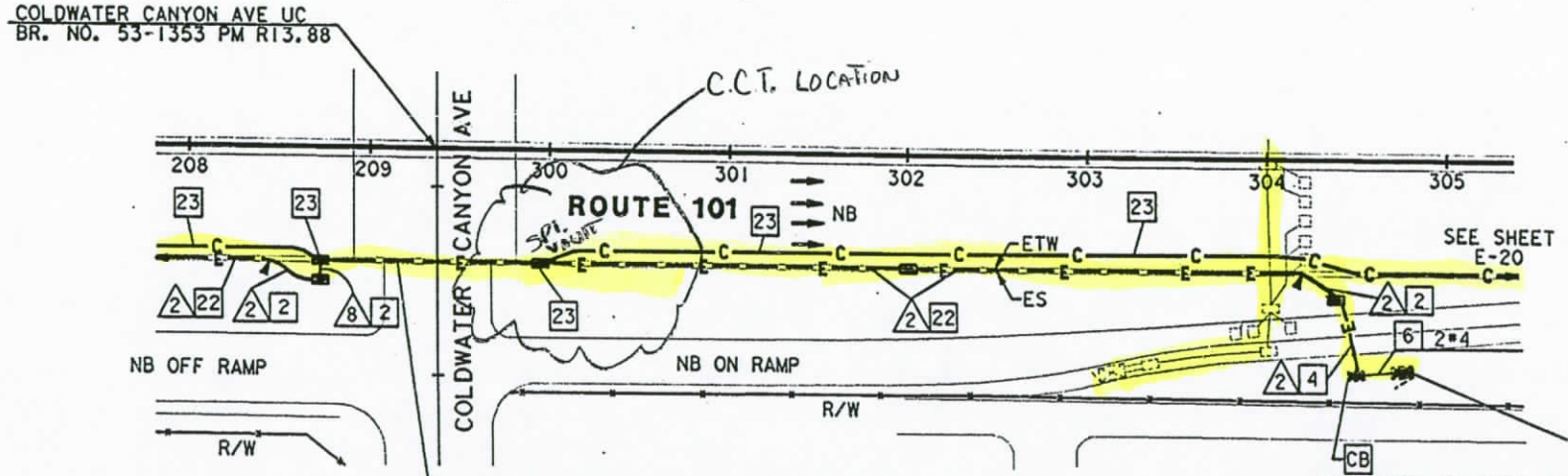


CAMERA LOCATION VE138
SCALE: 1"=20'



3 INNERDUCTS AND CONDUCTORS ONLY INCLUDED IN QUANTITIES FOR PAYMENT ON THIS SHEET.

DETAIL A
SCALE: 1"=50'

EXISTING 120/240V SERVICE 17
SERVING UTILITY: DWP
ID# 07-53-101-1-039.820
ADDRESS: 12952½ RIVERSIDE DR
EXISTING CIRCUIT BREAKERS:
1-30A, 240V, 2P SIGN LIGHTING
1-20A, 120V, 1P RAMP METER

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2*	RUN 3	RUN 4	RUN 5	RUN 6
6P22 CABLE	DATA /PHONE			1	1		
2SMFO B/O CABLE	SH VIDEO			1	1		
SEE TABLE 1, SHEET E-1	CCTV WIRING				1	1	
#4	POWER	2	2		2	2	2
	INNERDUCT		1¼" 1¼" 1¼"	1¼"			1¼"
	CONDUIT SIZE	2"	4"	3"	3"	3"	2" 2"

* - CONDUIT RUN 3 INCLUDED IN THE QUANTITIES FOR PAYMENT ON SHEET E-20

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

22 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

SEE SHEET 107A

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION VE138)

SCALE: AS NOTED

E-43

REVISED BY	DATE REVISED
DM	2/95
ES	5/95

CALCULATED/DESIGNED BY DM
CHECKED BY ES

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Gilbane

XXXXXXXXXXXXXXXXXXXXXXXX

LAST REVISION 00-00-00

TIME PLOTTED => 19-OCT-1995 15:30

FORM DC-DE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesi /usr/mikesi/PO/712072u43.dg

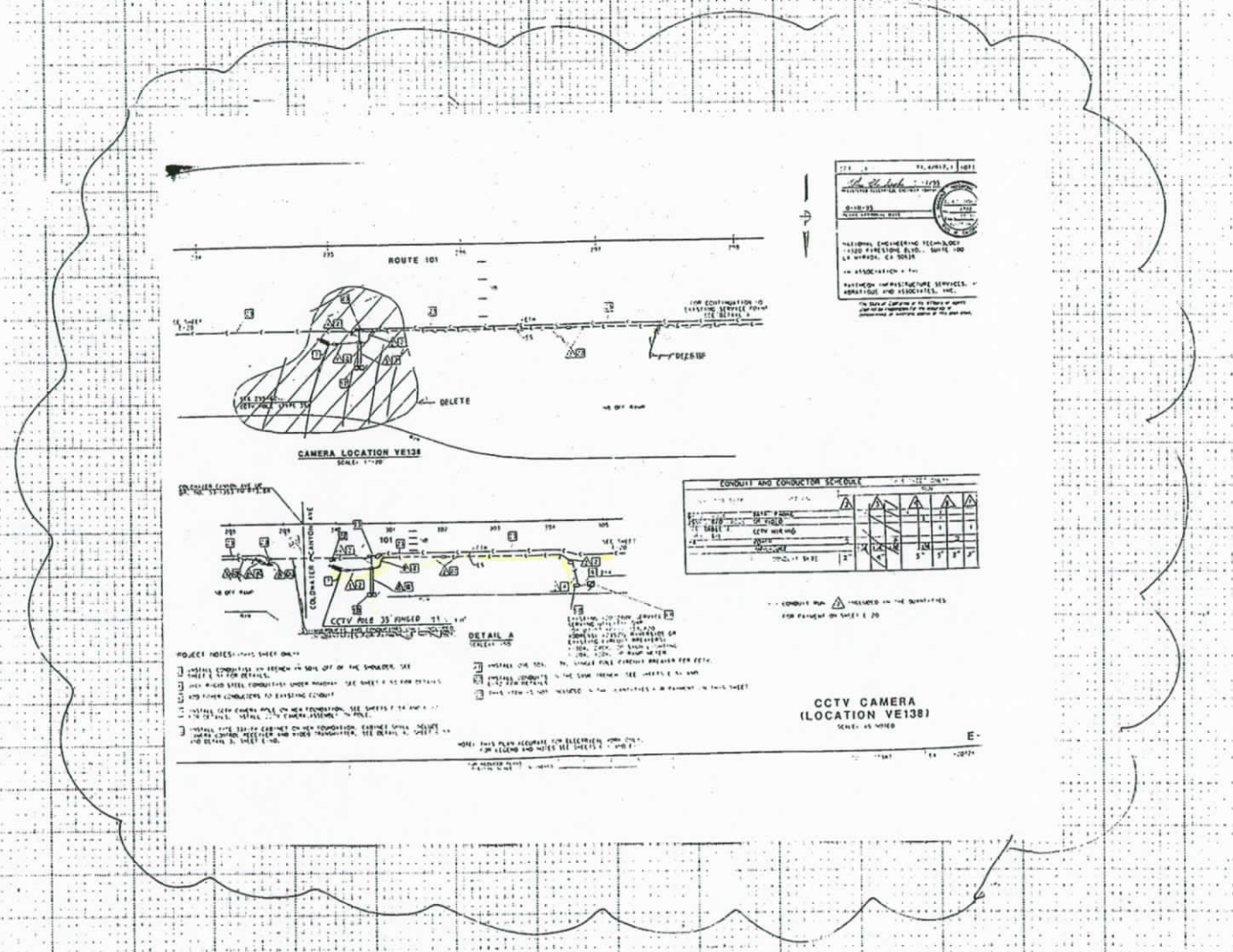
CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
				107A	

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA



AS-BUILT

Contract No. 07-	120724
Resident Engineer:	MANNAA, H.
Completion Date:	04/20/1999

CALCULATED/ DESIGNED BY		DATE	REVISED BY
CHECKED BY			DATE REVISED

PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Station
Cu.
Yds. Exc.
Emb.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	108	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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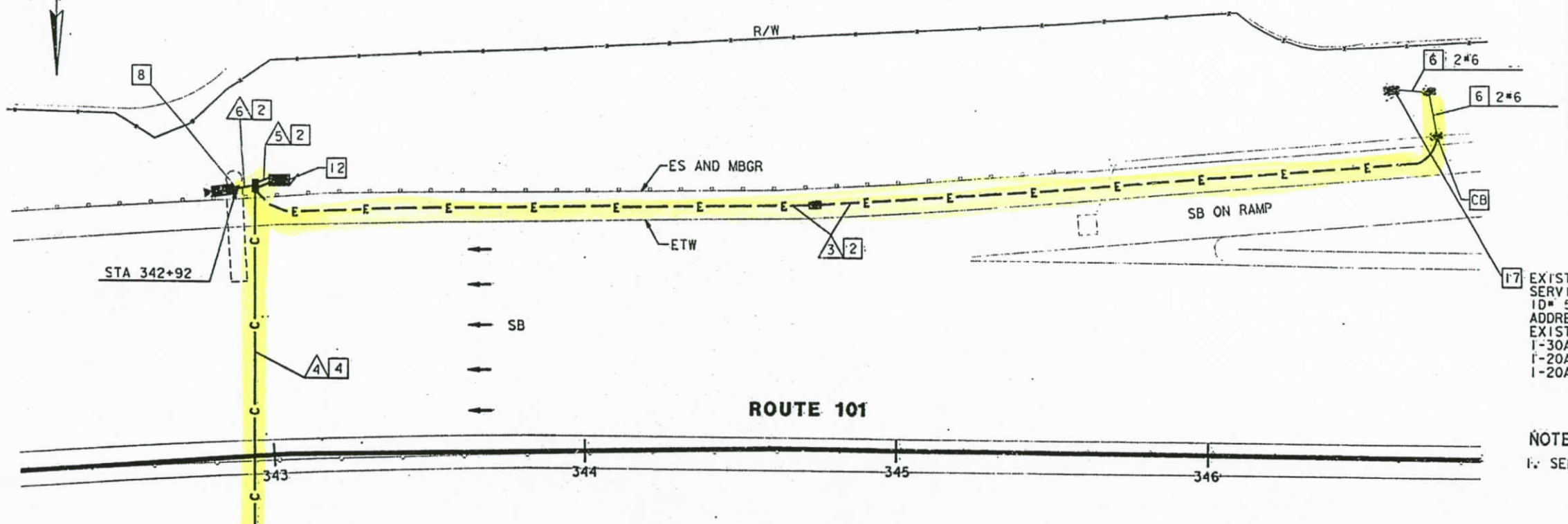
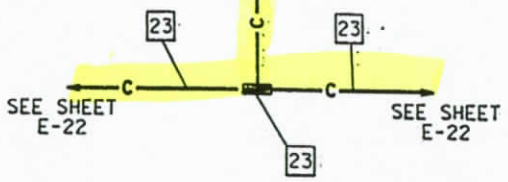


17 EXISTING 120/240V SERVICE
SERVICING UTILITY: DWP
ID# 53-101-014.781
ADDRESS: 4635½ BUFFALO AVE
EXISTING CIRCUIT BREAKERS:
1-30A, 240V, 2P SIGN LIGHTING
1-20A, 120V, 1P RAMP METER
1-20A, 120V, 1P TELEPHONE DEMARCATION CABINET

NOTE: (THIS SHEET)
1. SEE SHEET L-10 FOR LAYOUT DETAILS.

CAMERA LOCATION VE147

SCALE: 1"=20'



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 3	RUN 4		RUN 5		RUN 6
6P22 CABLE	DATA /PHONE		1		1		
2SMFO B/O CABLE	SH VIDEO			1	1		
SEE TABLE 1, SHEET E-1	CCTV WIRING				1		1
#6		2				2	
	INNERDUCT		1¼"				
	CONDUIT SIZE	2"	3"		3"	3"	2"

PROJECT NOTES (THIS SHEET ONLY):

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

8 INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.

12 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.

17 INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION VE147)

SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

E-44

DATE	REVISED BY	DATE	REVISED BY
2/95	DM	5/95	ES

CALCULATED/DESIGNED BY DM
CHECKED BY ES

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FOR REDUCED PLANS ORIGINAL SCALE IS 3" IN INCHES 0 1 2 3

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CU 07367 EA 120721

TIME PLOTTED => 17-OCT-1995 12:56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	109	154

Elia G. Saghir 2/17/95
REGISTERED ELECTRICAL ENGINEER (Date)

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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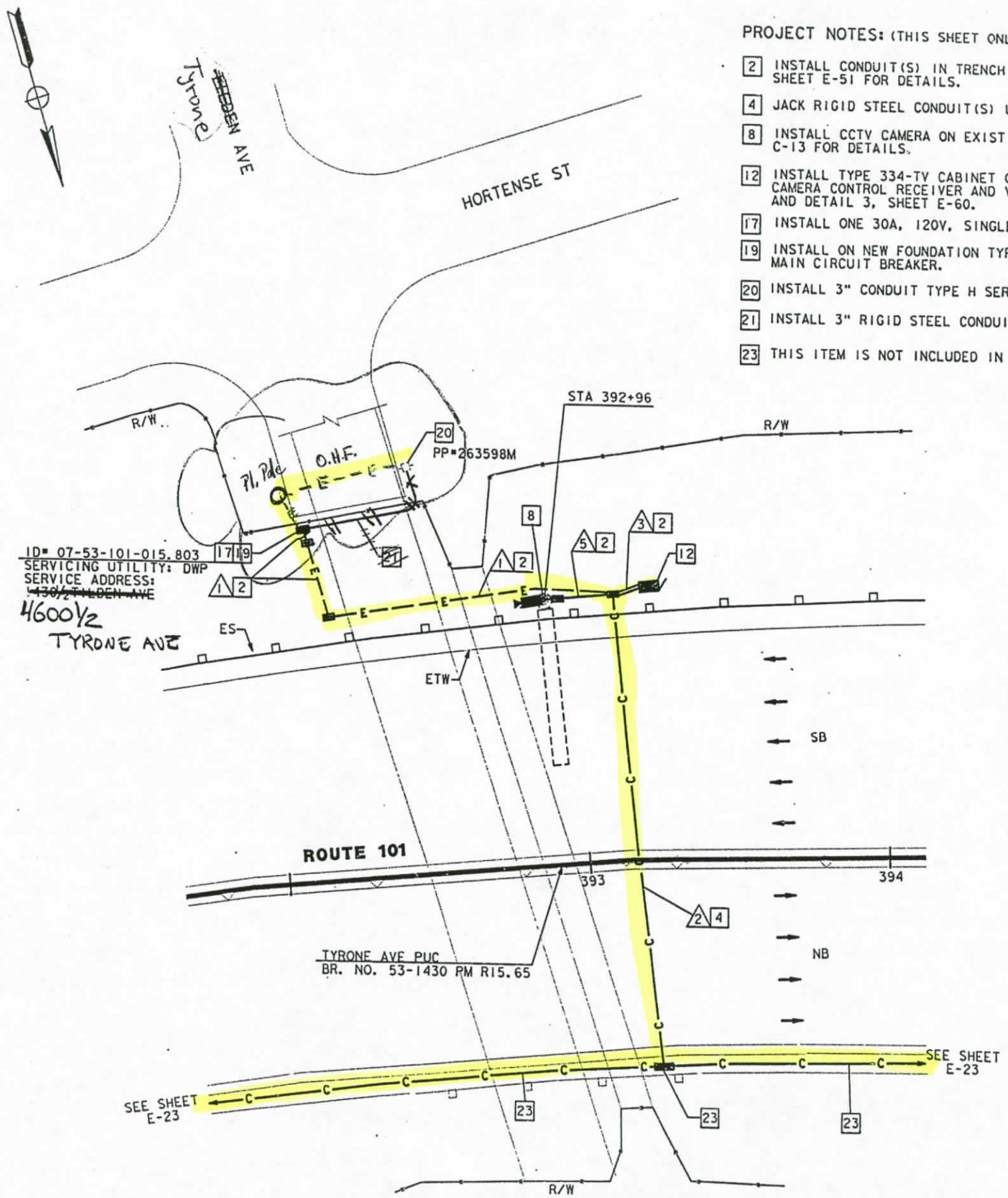
PROJECT NOTES: (THIS SHEET ONLY)

2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
8. INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-54 AND C-13 FOR DETAILS.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
17. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.
19. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE WITH A 100A, 240V MAIN CIRCUIT BREAKER.
20. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
21. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

NOTE: (THIS SHEET)

1. SEE SHEET L-11 FOR LAYOUT DETAILS.



CAMERA LOCATION VE157

SCALE: 1"=20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 3		RUN 4
6P22 CABLE	DATA /PHONE		1			1	
2SMFO B/O CABLE	SH VIDEO			1		1	
SEE TABLE 1, SHEET E-1	CCTV WIRING					1	1
#8	POWER	2			2		
	INNERDUCT			1¼"			
	CONDUIT SIZE	2"	3"		3"	3"	2"

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CCTV CAMERA (LOCATION VE157)

SCALE: 1"=20'

E-45

PROJECT ENGINEER: PAT SULLIVAN
CALCULATED/DESIGNED BY: DM
CHECKED BY: ES
DATE: 2/95
REVISED BY: 5/95
DATE REVISED:
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
/usr/mikesl/P0/712072u45.dg

CU 07387 EA 120721

LAST REVISION 00-00-00 TIME PLOTTED => 17-OCT-1995 12:46

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	110	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

PLANS APPROVAL DATE 10-10-95

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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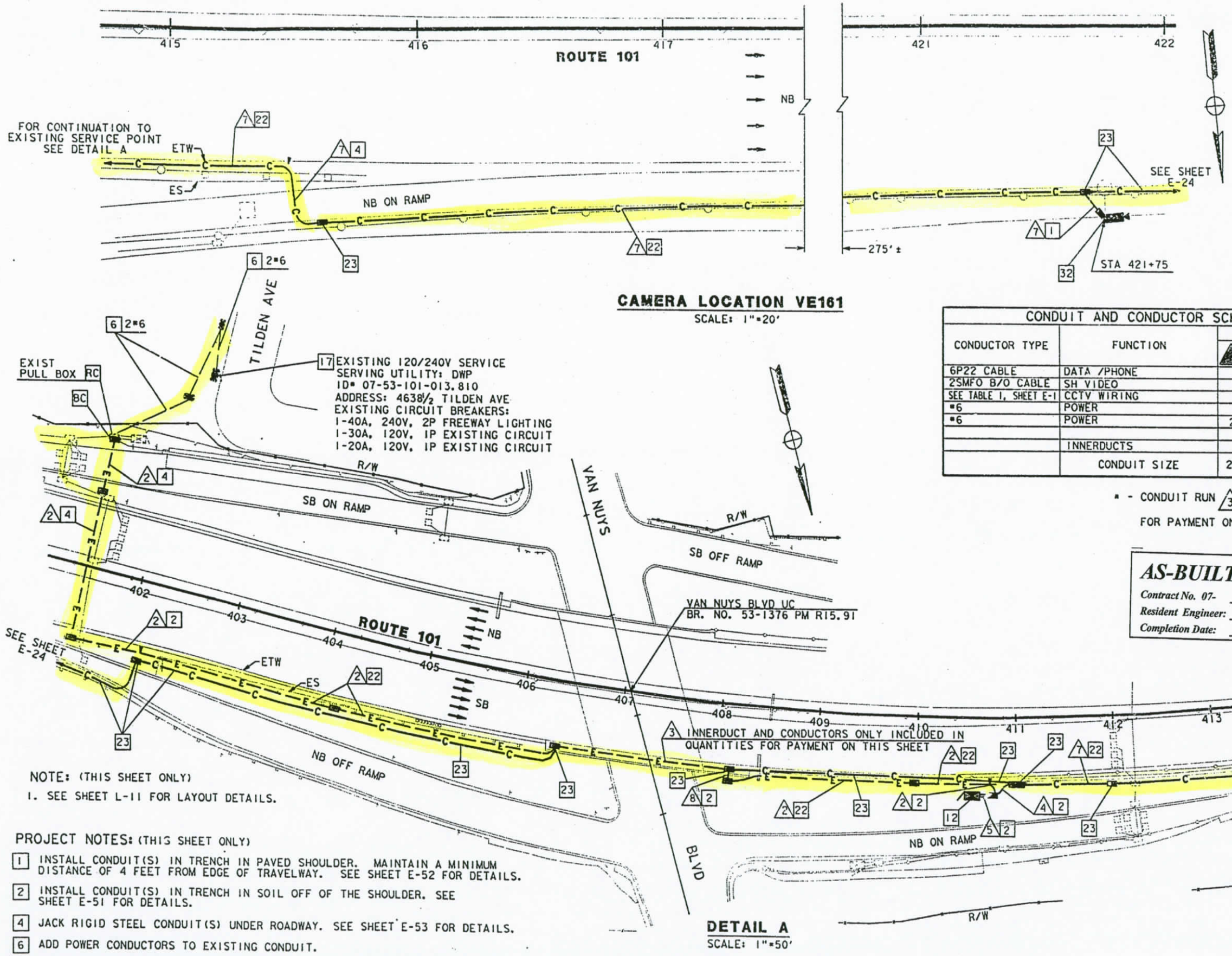


CAMERA LOCATION VE161

SCALE: 1"=20'

DETAIL A

SCALE: 1"=50'

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2*		RUN 3		RUN 5		RUN 7	RUN 8
6P22 CABLE	DATA /PHONE				1		1			
2SMFO B/O CABLE	SH VIDEO					1	1			
SEE TABLE 1, SHEET E-1	CCTV WIRING				1		1		1	
#6	POWER			2						
#6	POWER	2						2		2
	INNERDUCTS		1¼"	1¼" 1¼"		1¼"				1¼"
	CONDUIT SIZE	2"	4"		3"		3"	3"	2"	2"

* - CONDUIT RUN 3 INCLUDED IN THE QUANTITIES FOR PAYMENT ON SHEET E-24

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

NOTE: (THIS SHEET ONLY)

1. SEE SHEET L-11 FOR LAYOUT DETAILS.

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
6. ADD POWER CONDUCTORS TO EXISTING CONDUIT.
12. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-59 AND DETAIL 3, SHEET E-60.
17. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.
22. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-51 AND E-52 FOR DETAILS.
23. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
32. INSTALL CCTV CAMERA ON EXISTING LUMINAIRE. SEE SHEETS E-54 AND C-14 FOR DETAILS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA (LOCATION VE161)

SCALE: AS NOTED

E-46

DATE	REVISED BY	DATE REVISED
2/95	DM	5/95 ES

CALCULATED/DESIGNED BY DM
CHECKED BY ES

PROJECT ENGINEER PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans

XXXXXXXXXXXXXXXXXXXXXXXX

LAST REVISION 00-00-00

TIME PLOTTED => 17-OCT-1995 12:46

FORM DC-CT-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesi /usr/mikesi/PO/712072u46.dg

CU 07387 EA 120721

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	111	154

REGISTERED ELECTRICAL ENGINEER (Date) 2/17/95

10-10-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ELIA G. SAGHIR No. 014922 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

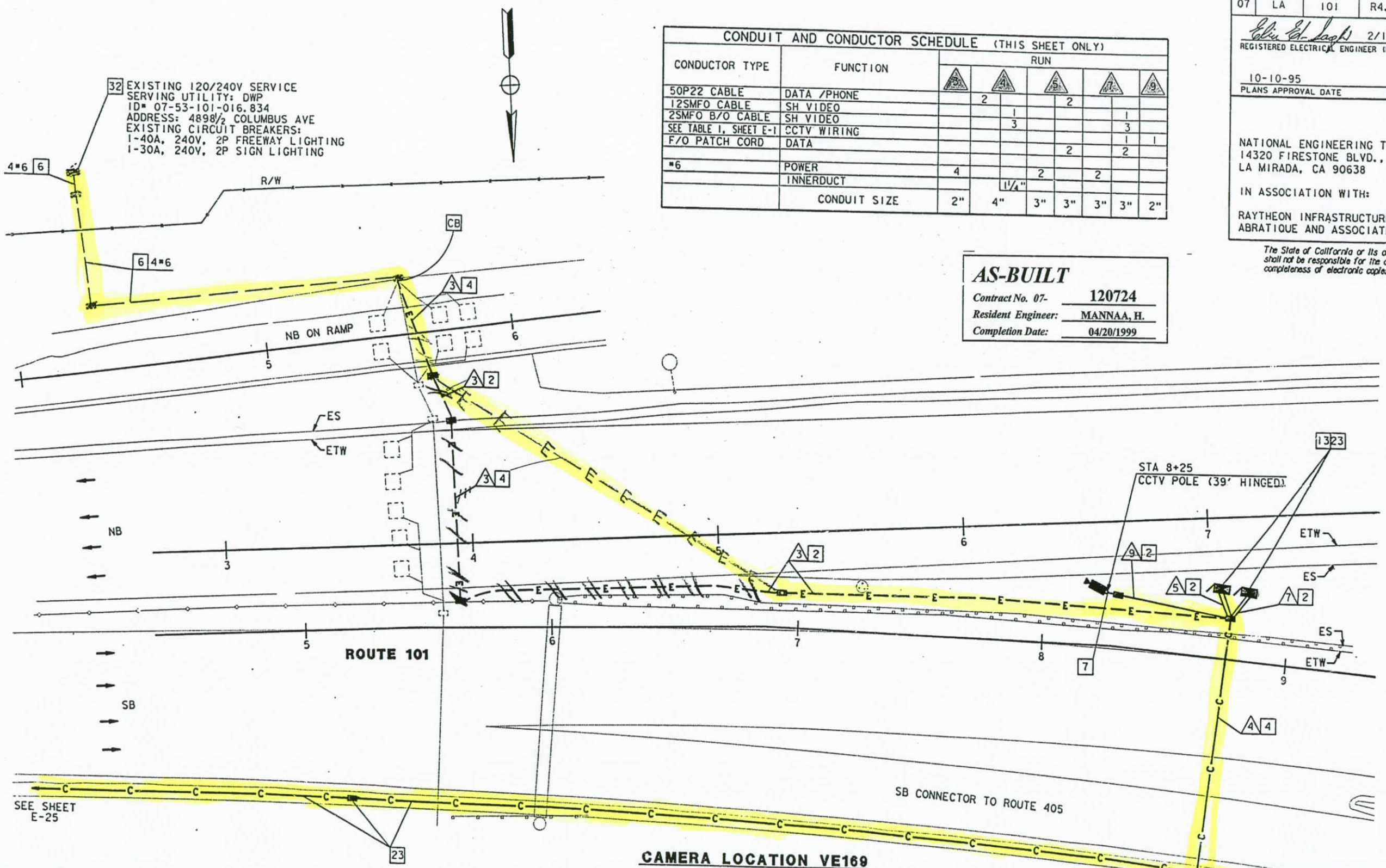
RAYTHEON INFRASTRUCTURE SERVICES, INC.
ABRATIQUE AND ASSOCIATES, INC.

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.

AS-BUILT
Contract No. 07- 120724
Resident Engineer: MANNAA, H.
Completion Date: 04/20/1999

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 3	RUN 4	RUN 5	RUN 6	RUN 7	RUN 8	RUN 9
50P22 CABLE	DATA /PHONE		2		2			
12SMFO CABLE	SH VIDEO		1				1	
2SMFO B/O CABLE	SH VIDEO		3				3	
SEE TABLE 1, SHEET E-1	CCTV WIRING						1	1
F/O PATCH CORD	DATA				2		2	
#6	POWER	4		2		2		
	INNERDUCT		1 1/4"					
	CONDUIT SIZE	2"	4"	3"	3"	3"	3"	2"



CAMERA LOCATION VE169
SCALE: 1"=20'

PROJECT NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.

4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.

6 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

7 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEETS E-54 AND C-12 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY ON POLE.

13 INSTALL (2) TYPE 334-TV CABINETS ON NEW FOUNDATIONS. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO AND DATA NODES. SEE DETAIL D, SHEET E-59 AND DETAIL 6, SHEET E-62 FOR DETAILS.

23 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

32 INSTALL TWO 30A, 120V SINGLE POLE CIRCUIT BREAKERS FOR VIDEO NODE AND DATA NODE.

NOTE: (THIS SHEET)

1. SEE SHEET L-12 FOR LAYOUT DETAILS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND NOTES SEE SHEETS E-1 AND E-2.

CCTV CAMERA, EQUIPMENT AT VIDEO NODE AND EQUIPMENT AT DATA NODE (LOCATION VE169)

SCALE: 1"=20'

E-47

DATE	DM	CALCULATED/ DESIGNED BY	REVISED BY	DATE REVISED
2/95	ES	CHECKED BY		5/95

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FORM DC-OE-92-PF (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

USERNAME => mikesl
/usr/mikesl/P0/712072u47.dg

CU 07387 EA 120721

LAST REVISION 00-00-00

TIME PLOTTED => 17-OCT-1995 12:46

SITE INVESTIGATION REPORT

SITE INVESTIGATION FOR MAINTENANCE VEHICLE (MVP) PULLOUT LOCATIONS 170/101 INTERCHANGE TO KANAN ROAD, LOS ANGELES COUNTY, CALIFORNIA LOCATION: LA-101; PM 11.8/35.3

E-FIS NUMBER: 0713000013
EA NUMBER: 294701
TASK ORDER NO. 10

STANTEC PROJECT NO.: 185832010

Submitted to:
California Department of Transportation,
District 7 – 07A3322
100 South Main Street
Los Angeles, California 90012

Submitted by:
Stantec Consulting Services Inc.
25864-F Business Center Drive
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REGISTERED PROFESSIONAL ENGINEER
KEVIN KOY MISKIN
No. C48458
Exp. 6/14
CIVIL
STATE OF CALIFORNIA

September 30, 2013

EXECUTIVE SUMMARY

At the request of the California Department of Transportation (Caltrans) District 7 North (07A3322), a Site Investigation (SI) was conducted at nine (9) maintenance vehicle pullout (MVP) locations from the 170/101 Highway interchange to the Kanan Road/101 overcrossing in Los Angeles County. This scope of work was conducted in support of Caltrans' request to evaluate the potential presence of aerially deposited lead (ADL) and other Title 22 heavy metals in subsurface soils within the proposed excavation areas. The data from the SI will be used to evaluate the proper disposal and handling of the surplus excavated soil generated during construction. The work was conducted pursuant to the provisions in Stantec's Agreement 07A3322, and with the Task Order request dated August 28, 2013.

The objective of the SI is to evaluate potential constituents of concern in the subsurface soil profile within the excavation areas and, if necessary, make recommendations for special handling or disposal of impacted soil.

A total of 18 hand auger borings were advanced to one foot bgs with soil samples collected from surface to one foot bgs. Soil samples were analyzed for total lead and soluble lead using California Waste Extraction Test (Cal WET-Citric), Federal Toxicity Characteristic Leaching Procedure (TCLP) and the Cal WET modified deionized water (Cal WET DI) extraction methods. Select soil samples were also analyzed for Title 22 metals and pH.

Total lead was reported at concentrations ranging from 40 to 3,300 mg/kg. Six of the 18 samples reported lead in excess of the California Total Threshold Limit Concentration (TTLC) of 1,000 mg/kg. Cal WET-Citric soluble lead concentrations were reported at concentrations ranging from 1.8 to 160 mg/L. Sixteen (16) of 18 samples reported soluble lead above the California Soluble Threshold Limit Concentration (STLC) of 5 mg/L. TCLP soluble lead concentrations were reported at 0.0059 and 2.6 mg/L. None of the samples reported lead concentrations above the Federal toxicity characteristic threshold of 5 mg/L. Cal WET DI soluble lead concentrations were reported in the range of <0.056 to 1.1 mg/L. Other Title 22 metals were reported at concentrations generally consistent with expected background with the exception of cadmium and selenium. However, the reported cadmium and selenium concentrations were several orders of magnitude below their respective U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for non-residential soil. The pH in tested soil samples ranged from 6.0 to 7.5.

Based on the findings and results of the investigation, soil in the investigation areas is impacted by aerially deposited lead. Based on the findings and conclusions presented in the attached report, the following are recommended:

1. Surplus soil in the upper one foot qualifies as a non-RCRA California hazardous waste at eight (as shown in Figures 2 through 9) of the nine locations sampled. However, soil may be used on Site in accordance with the conditions of Caltrans Lead Variance with the California Environmental Protection Agency (Cal EPA). As indicated in Table 3, the lead concentrations in soil samples from boring 1216-117 and 1216-118 (MVP location

L-61, post mile 28.60) did not exceed California or Federal hazardous waste thresholds. Soil at this location may be released to the contractor for disposition as non hazardous waste in accordance with local, state and federal agency requirements. Soil at all other MVP locations should be managed as Non-RCRA California hazardous waste (surplus soil) or managed in accordance with Caltrans Lead Variance as indicated on Table 3.

2. All work should be conducted under the guidance of a Lead Compliance Plan (LCP) prepared in accordance with Section 14-11.03 Material Containing Hazardous Waste Concentrations of Aerially Deposited Lead of the 2010 Standard Specifications. The purpose of the LCP is to identify measures that will be implemented during construction to reduce potential exposure to workers and the general public.

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

1.1 PROJECT DESCRIPTION 1-1
1.2 PURPOSE AND OBJECTIVES 1-1
1.3 BACKGROUND 1-1

2.0 PROJECT SETTING 2-1

2.1 SITE DESCRIPTION 2-1
2.2 PHYSIOGRAPHIC SETTING 2-1
2.3 REGIONAL GEOLOGY AND HYDROGEOLOGY 2-1
2.4 SITE VICINITY 2-1

3.0 SCOPE OF WORK 3-1

4.0 SOIL INVESTIGATION METHODOLOGY 4-1

4.1 PRE-FIELD ACTIVITIES 4-1
4.2 FIELD INVESTIGATIONS 4-1
4.2.1 Soil Borings and Sampling 4-1
4.2.2 Sample Collection and Preservation 4-2
4.2.3 Boring Locations 4-2
4.2.4 Decontamination 4-2
4.2.5 Borehole Abandonment 4-2
4.2.6 Field Quality Assurance/Quality Control 4-2
4.3 DEVIATIONS FROM TASK ORDER SCOPE OF WORK 4-2

5.0 LABORATORY ANALYSIS 5-1

6.0 INVESTIGATIVE RESULTS 6-1

6.1 FIELD FINDINGS 6-1
6.2 ANALYTICAL RESULTS 6-1
6.2.1 Total Lead 6-1
6.2.2 Soluble Lead (Cal WET- Citric) 6-1
6.2.3 Soluble Lead (TCLP) 6-1
6.2.4 Soluble Lead (Cal WET- DI) 6-1
6.2.5 pH 6-2
6.2.6 Title 22 Metals 6-2
6.3 DATA VALIDATION 6-2
6.3.1 Field QA/QC 6-2
6.3.2 Laboratory QA/QC 6-2

7.0 CONCLUSIONS 7-1

8.0 RECOMMENDATIONS 8-1

9.0 REFERENCES 9-1

TABLES

Table 1 Maintenance Vehicle Pullout (MVP) Locations
Table 2 Boring GPS Coordinates
Table 3 Summary of Soil Analytical Test Results – ADL
Table 4 Summary of Soil Analytical Test Results – Title 22 Metals

FIGURES

Figure 1 Site Location Map
Figure 2 Maintenance Vehicle Pullout Location (L-13, PM 15.23)
Figure 3 Maintenance Vehicle Pullout Location (L-30, PM 19.89)
Figure 4 Maintenance Vehicle Pullout Location (L-34, PM 21.00)
Figure 5 Maintenance Vehicle Pullout Location (L-43, PM 23.54)
Figure 6 Maintenance Vehicle Pullout Location (L-44, PM 23.90)
Figure 7 Maintenance Vehicle Pullout Location (L-45, PM 24.12)
Figure 8 Maintenance Vehicle Pullout Location (L-48, PM 24.84)
Figure 9 Maintenance Vehicle Pullout Location (L-50, PM 25.32)
Figure 10 Maintenance Vehicle Pullout Location (L-61, PM 28.60)

APPENDICES

Appendix A HASP Field Form
Appendix B Analytical Laboratory Reports and Chain-of-Custody Records
Appendix C Data Validation Records

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

At the request of the California Department of Transportation (Caltrans) District 7 North (07A3322), a Site Investigation (SI) was conducted at nine (9) maintenance vehicle pullout (MVP) locations (Table 1) from the 170/101 Highway interchange to the Kanan Road/101 overcrossing in Los Angeles County. This scope of work was conducted in support of Caltrans' request to evaluate the potential presence of aerially deposited lead (ADL) and other Title 22 heavy metals in subsurface soils within the proposed excavation areas. The data from the SI will be used to evaluate the proper disposal and handling of the surplus excavated soil generated during construction. The work was conducted pursuant to the provisions in Stantec's Agreement 07A3322, and with the Task Order request dated August 28, 2013.

Table 1. Maintenance Vehicle Pullout (MVP) Locations

Priority	***Layout Sheet***	***PM***	***KP***	***Location/ Description***
6	L-13	15.23	24.49	NB 101 Right Shoulder
10	L-30	19.89	31.98	NB 101 Right Shoulder
11	L-34	21	33.77	SB 101 Burbank Blvd Right Shoulder
15	L-43	23.54	37.85	SB 101 Right Shoulder
16	L-44	23.9	38.43	NB 101 Right Shoulder
17	L-45	24.12	38.78	NB 101 Right Shoulder
19	L-48	24.84	39.94	NB 101 Off Ramp @ Canoga Ave/ Right Shoulder
21	L-50	25.32	40.72	NB 101 Off Ramp @ Topanga Canyon Blvd./ Right Shoulder
24	L-61	28.6	46.00	SB 101 Right Shoulder

1.2 PURPOSE AND OBJECTIVES

The objective of the SI is to evaluate potential constituents of concern in the subsurface soil profile within the excavation areas and, if necessary, make recommendations for special handling or disposal of impacted soil.

1.3 BACKGROUND

According to the Task Order No. 10 Request, dated August 28, 2013, Caltrans is currently preparing the Plans, Specifications, and Estimates (PS&E) to construct nine MVP locations and four overhead sign post locations within the Caltrans right-of-way (ROW), from the 170/101 Highway interchange to the Kanan Road/101 overcrossing in Los Angeles County. The previously completed ADL site investigation reports indicate the presence of elevated levels of lead in unpaved areas up to a depth of 2.0 to 3.0 feet.

The remainder of this report describes the scope of work, methodology, findings, results, conclusions and recommendations of the SI.

2.0 PROJECT SETTING

This section describes the project setting including a description of the study area, the physiographic setting of the study area, the geology and hydrogeology, and a description of the site vicinity.

2.1 SITE DESCRIPTION

The study area is located along the northbound and southbound shoulders of the 101 Highway within Caltrans ROW through portions of Calabasas, Hidden Hills, Woodland Hills, Tarzana, Encino, and Sherman Oaks, in Los Angeles County.

2.2 PHYSIOGRAPHIC SETTING

The area of the site is located on the Calabasas (1967 and photorevised in 1976), Canoga Park (1952 and photorevised in 1967), and Van Nuys (1966 and photorevised in 1972) Quadrangle topographic maps produced by the United States Geological Survey (USGS). The topography along the 101 Highway slopes easterly as the roadway descends from rolling hills to the San Fernando Valley from an approximate elevation of 1,000 feet above mean sea level (amsl) to to an approximate elevation of 640 feet amsl at Woodman Avenue.

2.3 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Site is located within the Transverse Ranges Geomorphic Province of California, within the Los Angeles Basin. The Site area is underlain by the lower Pleistocene Saugus Formation, and Pleistocene and Holocene age alluvium. Holocene age alluvium consists primarily of coarse-grained unsorted gravel and sand deposited by coalescing alluvial fans emanating from the surrounding highlands. The Saugus Formation is composed of continental and shallow marines (Sunshine Ranch Member) deposits of conglomerates, sands, silts, and clays, with permeability less than that of the Pleistocene alluvium (CDCDMG, 1986).

According to the *Site Assessment Report*, dated May 13, 2013, prepared for the Former ExxonMobil station 14FY9 located on the corner of Ventura Boulevard and Corbin Avenue in Tarzana (Cardno ERI, 2013), groundwater measured from the wells in this area ranged from 25.31 to 27.15 feet below top of casing. The groundwater was reported to be flowing in a general northeast direction with a horizontal gradient of 0.008.

According to DWR's Bulletin 118, the Site lies in the San Fernando Valley Groundwater Basin the South Coast Hydrologic Region. According to the California Groundwater Bulletin 118 (California Department of Water Resources (DWR), February 27, 2004), the San Fernando Valley Groundwater Basin includes the water-bearing sediments beneath the San Fernando Valley, Tujunga Valley, Browns Canyon, and the alluvial areas surrounding the Verdugo Mountains near La Crescenta and Eagle Rock. The basin is bounded on the north and northwest by the Santa Susana Mountains, on the north and northeast by the San Gabriel Mountains, on the east by the San Rafael Hills, on the south by the Santa Monica Mountains and Chalk Hills, and on the west by Simi Hills. The valley is drained by the Los Angeles River and its tributaries (DWR, 2004).

2.4 SITE VICINITY

The area surrounding the site is comprised of the following uses within the Calabasas area:

- North and east: Vacant undeveloped land mixed with residential and commercial properties.
- South and west: Vacant undeveloped land mixed with commercial properties.

The area surrounding the site is comprised of mixed residential and commercial properties in the north, south, east, and west directions within the San Fernando Valley area.

3.0 SCOPE OF WORK

The scope of the SI consisted of the following general elements:

- Pre-field activities:
  - Development of a project work plan to guide task order activities;
  - Development of a site specific health and safety plan;
  - Coordination of equipment and subcontractors;

- Field Investigations:
  - Advancement of eighteen (18) shallow hand auger borings to a depth of one (1) foot below ground surface (bgs) at nine MVP locations (two borings per MVP location);
  - Collection and preservation of one (1) composite soil sample from surface to 1.0 foot bgs for each boring at the nine MVP locations;
  - Boring location survey using global positioning system (GPS);
  - Boring abandonment;

- Laboratory analysis of select soil samples pursuant to the requirements of Task Order No. 10 for,
  - Total lead;
  - Soluble lead by California Waste Extraction Test citric acid extract (Cal WET-Citric);
  - Soluble lead by modified Cal WET deionized water extract (Cal WET-DI);
  - Soluble lead by Toxicity Characteristic Leaching Procedure (TCLP);
  - pH; and
  - Title 22 metals.

- Data evaluation, statistical analysis and preparation of this report.

4.0 SOIL INVESTIGATION METHODOLOGY

The soil investigation was conducted in general accordance with the methods and requirements of Contract 07A3322, Task Order 10. The following subsections summarize the methodology implemented in completing the required scope of work. In addition, any deviations from the scope of work are also identified in the following subsections.

4.1 PRE-FIELD ACTIVITIES

Prior to beginning field work, the scope of work was reviewed and approved by Caltrans. Proposed sample locations designated on site plans by Caltrans were checked for accessibility in the field through Site reconnaissance.

As required by Task Order 10, a site-specific Health and Safety Plan (HASP) was developed in accordance with California Occupational Safety and Health Administration (Cal OSHA) requirements to guide field sampling activities. The HASP describes health and safety procedures and was submitted to Caltrans for approval prior to initiating field activities. A pre-field tail gate health and safety meeting was conducted at the Site with field personnel prior to beginning work each day. During the tail gate meeting, daily work activities and health and safety issues were discussed, including the following:

- Field tasks to be conducted throughout the day,
- Project schedule,
- Hazard awareness,
- General health and safety practices, procedures and issues,
- Specific health and safety issues related to the day's work,
- Health and Safety procedures, controls, etc.;
- Engineering controls; personal protective equipment and monitoring;
- Traffic control and safety;
- Emergency procedures and contacts.

Field documentation of health and safety meetings and monitoring were maintained throughout the duration of field activities. A copy of the completed field forms are provided in Appendix A.

4.2 FIELD INVESTIGATIONS

Field investigations were conducted on September 6, 2013. The weather was warm and sunny throughout the day; as a result, no weather-related restrictions occurred in the field. The following subsections describe the methodology and procedures following in conducting field investigations.

4.2.1 *Soil Borings and Sampling*

The proposed borings were located off the shoulder of the 101 Highway in the Calabasas and San Fernando Valley area of Los Angeles County, California. Two borings were advanced at each of the nine MVP locations (total of 18 borings). There were no accessibility issues related to the boring locations

4.2.2 *Sample Collection and Preservation*

Soil samples were collected from surface to one foot bgs. At the desired depth, soil samples were collected and discharged directly from the hand-auger bailer into a plastic zipper lock bag and manually homogenized in the field to minimize sample heterogeneity. The soil was then discharged to eight-ounce laboratory-provided glass sample jars and sealed with a Teflon®-lined screw cap lid.

Each sample jar was labeled with a specific sample I.D., boring I.D., project I.D., EA number, sample date, and sample time, and then placed in an ice-filled cooler. Each sample was also recorded on a chain-of-custody (CoC) form and delivered to an environmental laboratory for analysis in accordance with the methods described in Contract 07A3322, Task Order 10.

4.2.3 *Boring Locations*

All boring locations were identified and plotted on a field map with a unique boring identification (I.D.) number to represent each borehole. In addition, the spatial coordinates for each borehole were obtained using a handheld field GPS Trimble unit and recorded on field data sheets. The latitude and longitude for each boring is provided in Table 2.

4.2.4 *Decontamination*

All sampling equipment was decontaminated prior to sampling at each sample interval using a non-phosphate detergent solution and rinsed with distilled water.

4.2.5 *Borehole Abandonment*

The depth of the borings was less than five feet bgs and soil was believed to be non-hazardous. As a result, excess soil cuttings were replaced in the borehole.

4.2.6 *Field Quality Assurance/Quality Control*

In accordance with Task Order 10, two equipment blanks were collected to evaluate the adequacy of field decontamination efforts. One equipment blank (1216-EB-1) was collected prior to beginning sampling activities. A second equipment blank (1216-EB-2) was collected at the completion of sampling activities. The equipment blanks were collected by pouring deionized water over the sampling equipment and collecting the water in appropriate sample containers.

4.3 DEVIATIONS FROM TASK ORDER SCOPE OF WORK

The following summarizes deviations or changes from the task order scope of work:

1. The task order called for borings at four sign post locations in addition to the MVP locations. The sign post location borings were removed from the scope of work in an email from Tuanchi Liu dated September 4, 2013.

2. At the direction of Caltrans, boring location 1216-106 was moved north from the marked location. The GPS coordinates in Table 2 reflect the revised location.

3. Sample 1216-117-1 was reanalyzed for total lead and Cal WET-Citric soluble lead. The laboratory reported an initial total lead result of 39 milligrams per kilogram (mg/kg) and a Cal WET-Citric soluble lead concentration of 25 milligrams per liter (mg/L). The reanalyzed sample reported total lead at 40 mg/kg and a Cal WET-Citric soluble lead concentration of 1.8 mg/L. Reanalysis confirmed the original total lead concentration and corrected the erroneously reported Cal WET-Citric soluble lead concentration. The reanalyzed sample results are presented in Table 3.

5.0 LABORATORY ANALYSIS

Eighteen (18) soil samples were submitted under CoC to Advanced Technology Laboratories (ATL). ATL is certified through the California Environmental Laboratory Accreditation Program (ELAP) to conduct the analyses required in this task order. The lab was directed to perform the following analyses based on Caltrans Task Order No. 10:

- *Total lead by EPA test method 6010B*—used to evaluate total lead concentrations against health screening limits, California hazardous waste total threshold limit concentration (TTLC), and the conditions of Caltrans' lead variance.

- *Soluble lead by CAL WET-Citric*—used to assess soluble lead concentrations with respect to California hazardous waste Soluble Threshold Limit Concentration (STLC).

- *Soluble lead by Cal WET DI*—used to evaluate requirements for on-site soil management against the Caltrans lead variance.

- *Soluble lead by TCLP (EPA test method 1311)*—used to evaluate waste characteristics and the requirements for disposal against Federal hazardous waste toxicity characteristic threshold limit of 5 mg/L.

- *pH (EPA test method 9045C)*—the sample reporting the highest total lead concentration from each MVP location was analyzed for pH to evaluate the requirements for managing and disposing of soil disposal against the conditions of the Caltrans lead variance.

- *Title 22 metals (EPA test method 6010B/7470)*—all samples were analyzed for the full suite of Title 22 metals (except for lead) to screen soil samples for other potentially elevated heavy metal analytes to further characterize excess soil for off-site disposal.

Copies of the laboratory CoCs and analytical reports are attached in Appendix B.

6.0 INVESTIGATIVE RESULTS

6.1 FIELD FINDINGS

The soils encountered during sampling were generally dark brown in color and consisted primarily of silt with fine-grained coarse sands.

Groundwater was not encountered in any of the boreholes and not expected to be present in shallow soils.

6.2 ANALYTICAL RESULTS

A summary of the analytical results is presented in Tables 3 and 4. Copies of the laboratory reports and chain-of-custody forms are included in Appendix B.

6.2.1 *Total Lead*

Eighteen (18) soil samples were analyzed for total lead by EPA test method 6010B. Total lead concentrations ranged from 40 to 3,300 mg/kg with a mean concentration of 881 mg/kg (see Table 3).

Total lead concentrations exceeded the Total Threshold Limit Concentrations (TTLC) of 1,000 mg/kg in six samples (1216-101, -102, -103, -105, -106, and -109). In additional six samples reported lead in excess of the California Human Health Screening Level (CHHSL) of 320 mg/kg (1216-104, -108, -110, -111, -112, and -115).

6.2.2 *Soluble Lead (Cal WET- Citric)*

Eighteen (18) soil samples were analyzed for soluble lead by Cal WET-Citric. Soluble lead concentrations ranged from 1.8 to 160 mg/L with a mean concentration of 45.7 mg/L (see Table 3).

Soluble lead concentrations exceeded the Soluble Threshold Limit Concentration (STLC) of 5 mg/L in all samples with exception to 1216-117 and 1216-118.

6.2.3 *Soluble Lead (TCLP)*

Eighteen (18) soil samples were analyzed for TCLP lead analysis. TCLP soluble lead concentrations ranged from 0.0059 to 2.6 mg/L (see Table 3).

Soluble lead concentrations did not exceed the TCLP threshold of 5 mg/L in any of the samples submitted for analysis.

6.2.4 *Soluble Lead (Cal WET- DI)*

The Caltrans variance allows for reuse of materials exceeding the STLC if the Cal WET-DI soluble lead concentrations do not exceed 150 mg/L using a less rigorous extraction test that incorporates distilled water as the solvent rather than the Cal WET citric acid or TCLP acetic acid extractant. This method is often identified as the DHS modified Cal WET DI test.

Eighteen (18) soil samples were submitted for soluble lead analyses by the Cal WET DI extraction method. The Cal WET DI concentrations ranged from non-detect (less than the laboratory method reporting limit of 0.056 mg/L) to 1.1 mg/L (Table 3).

Soluble lead concentrations did not exceed the Caltrans variance threshold limit of 1.5 mg/L in any of the samples submitted for analysis.

6.2.5 *pH*

The sample with the highest total lead concentration from each MVP location was analyzed for pH. The pH values ranged from 6.0 to 7.5, well above the Caltrans variance thresholds (Table 3).

6.2.6 *Title 22 Metals*

As directed in the Task Order No. 10 request, the sample with the highest total lead concentration from each MVP location was analyzed for Title 22 metals to evaluate whether potentially elevated concentrations of heavy metals, in addition to lead, pose a concern in the construction area.

With the exception of lead, Title 22 metals were reported at concentrations generally consistent with expected background with the exception of cadmium and selenium. However, the reported cadmium and selenium concentrations were several orders of magnitude below their respective health risk-based U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for non-residential soil.

6.3 DATA VALIDATION

6.3.1 *Field QA/QC*

Quality assurance and quality control (QA/QC) procedures were performed in general accordance with the Work Plan and Task Order No. 10 request. Field QA/QC procedures included analyses of equipment blanks. None of the analytes tested in the field equipment blanks reported analytes above laboratory reporting limits.

6.3.2 *Laboratory QA/QC*

Laboratory quality assurance and quality control data (method blanks, laboratory control samples and duplicates, matrix spike samples and duplicates) were also reviewed for compliance with QA/QC objectives. As indicated in the laboratory reports, the following data qualifiers were noted:

- Method Blank:
    - Chromium, copper, and nickel were reported at J-flagged concentrations between the MDL and PQL in method blank B3I0285.
    - Lead was reported at a J-flagged concentration between the MDL and PQL in method blank B3I0132-BLK1.

- Duplicate Samples:
    - Antimony, beryllium, and silver were reported at J-flagged concentrations between the MDL and PQL in duplicate sample B3I0285-DUP1.
    - Lead was reported at a J-flagged concentration between the MDL and PQL in duplicate sample B3I0166-DUP1.
    - The relative percent difference (RPD) was out of control for molybdenum, selenium, and silver in B3I0285-DUP1. The reported concentrations in the original and duplicate samples were all reported in the natural range of background in soil. This variability is not uncommon in soil samples and is the result of sample heterogeneity.
    - The RPD was out of control for lead in duplicate sample B3I0132-DUP1 B3I0216-DUP2, and B3I0166-DUP1.

- Matrix Spike / Matrix Spike Duplicate Samples:
    - The matrix spike recovery was detected outside the acceptance limit for copper in matrix spike sample B3I0285-MS1 and lead in matrix spike duplicate sample B3I0167-MSD1. The analytical batch was validated by the laboratory control sample.
    - Lead was reported at a J-flagged concentration between the MDL and PQL in duplicate sample B3I0166-DUP1.
    - The relative percent difference (RPD) was out of control for molybdenum, selenium, and silver in B3I0285-DUP1. The reported concentrations in the original and duplicate samples were all reported in the natural range of background in soil. This variability is not uncommon in soil samples and is the result of sample heterogeneity.
    - The RPD was out of control for lead in duplicate sample B3I0132-DUP1 B3I0216-DUP2, and B3I0166-DUP1.

Based upon review, the data, as qualified, are acceptable for the purposes described in this document. Data validation records are included in Appendix C.

7.0 CONCLUSIONS

At the request of the California Department of Transportation (Caltrans) District 7 North (07A3322), a Site Investigation (SI) was conducted at nine (9) maintenance vehicle pullout (MVP) locations from the 170/101 Highway interchange to the Kanan Road/101 overcrossing in Los Angeles County. This scope of work was conducted in support of Caltrans' request to evaluate the potential presence of aerially deposited lead (ADL) and other Title 22 heavy metals in subsurface soils within the proposed excavation areas. The data from the SI will be used to evaluate the proper disposal and handling of the surplus excavated soil generated during construction. The work was conducted pursuant to the provisions in Stantec's Agreement 07A3322, and with the Task Order request dated August 28, 2013.

The objective of the SI is to evaluate potential constituents of concern in the subsurface soil profile within the excavation areas and, if necessary, make recommendations for special handling or disposal of impacted soil.

A total of 18 hand auger borings were advanced to one foot bgs with soil samples collected from surface to one foot bgs. Soil samples were analyzed for total lead and soluble lead using California Waste Extraction Test (Cal WET-Citric), Federal Toxicity Characteristic Leaching Procedure (TCLP) and the Cal WET modified deionized water (Cal WET DI) extraction methods. Select soil samples were also analyzed for Title 22 metals and pH.

Total lead was reported at concentrations ranging from 40 to 3,300 mg/kg. Six of the 18 samples reported lead in excess of the California Total Threshold Limit Concentration (TTLC) of 1,000 mg/kg. Cal WET-Citric soluble lead concentrations were reported at concentrations ranging from 1.8 to 160 mg/L. Sixteen (16) of 18 samples reported soluble lead above the California Soluble Threshold Limit Concentration (STLC) of 5 mg/L. TCLP soluble lead concentrations were reported at 0.0059 and 2.6 mg/L. None of the samples reported lead concentrations above the Federal toxicity characteristic threshold of 5 mg/L. Cal WET DI soluble lead concentrations were reported in the range of <0.056 to 1.1 mg/L. Other Title 22 metals were reported at concentrations generally consistent with expected background with the exception of cadmium and selenium. However, the reported cadmium and selenium concentrations were several orders of magnitude below their respective U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for non-residential soil. The pH in tested soil samples ranged from 6.0 to 7.5 and was well within the conditions of the Caltrans Lead Variance.

8.0 RECOMMENDATIONS

Based on the findings and results of the investigation, soil in the investigation areas is impacted by aerially deposited lead. Based on the findings and conclusions presented in the attached report, the following are recommended:

1. Surplus soil in the upper one foot qualifies as a non-RCRA California hazardous waste at eight (as shown in Figures 2 through 9) of the nine locations sampled. However, soil may be used on Site in accordance with the conditions of Caltrans Lead Variance with the California Environmental Protection Agency (Cal EPA). As indicated in Table 3, the lead concentrations in soil samples from boring 1216-117 and 1216-118 (MVP location L-61, post mile 28.60) did not exceed California or Federal hazardous waste thresholds. Soil at this location may be released to the contractor for disposition as non hazardous waste in accordance with local, state and federal agency requirements. Soil at all other MVP locations should be managed as Non-RCRA California hazardous waste (surplus soil) or managed on Site in accordance with Caltrans Lead Variance as indicated on Table 3.

2. All work should be conducted under the guidance of a lead compliance plan (LCP) prepared in accordance with Section 14-11.03 Material Containing Hazardous Waste Concentrations of Aerially Deposited Lead of the 2010 Standard Specifications. The purpose of the LCP is to identify measures that will be implemented during construction to reduce potential exposure to workers and the general public.

9.0 REFERENCES

California Department of Conservation Division of Mines and Geology (CDCDMG), 1986, Geomorphic Provinces and Some Principal Faults of California, May.

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TABLES

TABLE 2
BORING GPS COORDINATES
SITE INVESTIGATION FOR MAINTENANCE VEHICLE PULLOUT LOCATIONS
LA-101-PM 11.8/35.3
LOS ANGELES COUNTY, CALIFORNIA
EFIS:0713000013 (EA#294701)
TASK ORDER #10
CONTRACT 07A3322

Boring ID	Latitude [1] (degrees north)	Longitude [1] (degrees west)	Northing (UTM)	Easting[2] (UTM)
1216-101-1	34°09'21.034"	118°26'10.988"	3780367.70	367590.47
1216-102-1	34°09'21.083"	118°26'11.931"	3780369.55	367566.34
1216-103-1	34°10'16.951"	118°30'46.375"	3782192.11	360563.80
1216-104-1	34°10'16.940"	118°30'47.105"	3782192.05	360545.10
1216-105-1	34°10'16.633"	118°31'53.057"	3782207.80	358856.33
1216-106-1	34°10'16.796"	118°31'53.798"	3782213.10	358837.43
1216-107-1	34°10'13.724"	118°34'30.276"	3782179.49	354829.50
1216-108-1	34°10'13.261"	118°34'31.360"	3782165.66	354801.52
1216-109-1	34°10'09.280"	118°34'46.688"	3782049.10	354407.16
1216-110-1	34°10'09.652"	118°34'45.424"	3782060.06	354439.70
1216-111-1	34°10'05.807"	118°35'03.909"	3781948.95	353964.56
1216-112-1	34°10'05.788"	118°35'04.518"	3781948.61	353948.95
1216-113-1	34°10'11.231"	118°35'48.822"	3782133.97	352817.17
1216-114-1	34°10'11.082"	118°35'48.188"	3782129.13	352833.33
1216-115-1	34°10'15.847"	118°36'18.574"	3782288.13	352057.61
1216-116-1	34°10'15.659"	118°36'18.114"	3782282.15	352069.30
1216-117-1	34°09'05.846"	118°39'24.957"	3780208.07	347250.34
1216-118-1	34°09'06.023"	118°39'24.286"	3780213.24	347267.62

Notes:

[1] North American Datum 83 (WPS 84)

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS - LEAD
SITE INVESTIGATION FOR MAINTENANCE VEHICLE PULLOUT LOCATIONS
LA-101-PM 11.8/35.3
LOS ANGELES COUNTY, CALIFORNIA
EFIS:0713000013 (EA#294701)
TASK ORDER #10
CONTRACT 07A3322

MVP Location		Sample ID	Total Lead [1] (mg/kg)	Soluble Lead [1] Cal WET-Citric (mg/L)	Soluble Lead [1] Cal WET-DI (mg/L)	Soluble Lead [1] TCLP (mg/L)	pH [2]	Recommendations	
								Surplus Soil	Onsite Reuse
Raw Sample Data	L-13 / PM 15.23	1216-101-1	**3,300**	**140**	1.1	1.1	6.0	Non-RCRA Cal-Haz	Y2
		1216-102-1	**3,000**	**160**	0.15	1.4	--		
	L-30 / PM 19.89	1216-103-1	**1,100**	**59**	0.13	0.60	6.0	Non-RCRA Cal-Haz	Y1
		1216-104-1	**820**	**42**	<0.056	0.46	--		
	L-34 / PM 21.00	1216-105-1	**1,000**	**79**	<0.056	2.6	--	Non-RCRA Cal-Haz	Y2
		1216-106-1	**1,500**	**120**	0.11	2.1	7.4		
	L-43 / PM 23.54	1216-107-1	300	**13**	<0.056	0.11	--	Non-RCRA Cal-Haz	Y1
		1216-108-1	**400**	**18**	<0.056	0.18	7.2		
	L-44 / PM 23.90	1216-109-1	**1,300**	**62**	0.17	0.38	6.2	Non-RCRA Cal-Haz	Y1
		1216-110-1	**380**	**14**	0.082	0.074	--		
	L-45 / PM 24.12	1216-111-1	**430**	**20**	0.089	0.013	--	Non-RCRA Cal-Haz	Y1
		1216-112-1	**640**	**31**	0.11	0.04	6.7		
	L-48 / PM 24.84	1216-113-1	130	**6.4**	<0.056	0.056	--	Non-RCRA Cal-Haz	Y1
		1216-114-1	270	**10**	<0.056	0.16	6.2		
	L-50 / PM 25.32	1216-115-1	**870**	**33**	<0.056	0.27	6.2	Non-RCRA Cal-Haz	Y1
		1216-116-1	300	**11**	<0.056	0.031	--		
	L-61 / PM 28.60	1216-117-1*	40	1.8	<0.056	--	--	Release to Contractor	X
		1216-118-1	78	2.3	<0.056	0.0059	7.5		
	QA / QC	1216-EB-1**	<0.0022	<0.056	<0.056	<0.0022	--	--	--
		1216-EB-2**	<0.0022	<0.056	<0.056	<0.0022	--	--	--
Threshold Limits	California Hazardous Waste		1,000	5	--	--	--	--	--
	RCRA Hazardous Waste		--	--	--	5	≤2 or ≥12.5	--	--
	X		1,000	5	--	5	--	--	--
	Y1		1,411	--	1.5	5	>5.5	--	--
	Y2		3,397	--	150	5	>5	--	--
	California Human Health Screening Level[3]		320	--	--	--	--	--	--
	Regional Screening Level[4]		800	--	--	--	--	--	--

Notes:
(1) Total Lead, California Waste Extraction Test (Cal WET - Citric), and Toxicity Characteristic Leaching Procedure (TCLP) analysis done using EPA method 6010B. Extraction methods vary.
(2) pH determined with EPA method 9045B.
(3) California Human Health Screening Levels for Commercial/Industrial and Residential Land Use, Soil, California Environmental Protection Agency, January 2005; updated 2010 Office of Environmental Health Hazard Assessment Table 1.
(4) United States Environmental Protection Agency (Region 9) Regional Screening Levels (RSLs; in mg/Kg) for VOCs for industrial and residential soil (last updated May 2013)
* Sample was re-run for total lead and soluble lead Cal WET-Citric
** QA/QC samples consisted of liquid equipment blanks (mg/L)
MVP = Maintenance Vehicle Pullout Location / Post Mile
mg/kg = milligrams per kilogram -- = Not analyzed or not applicable
mg/L = milligrams per liter Bold = Exceeds threshold limit

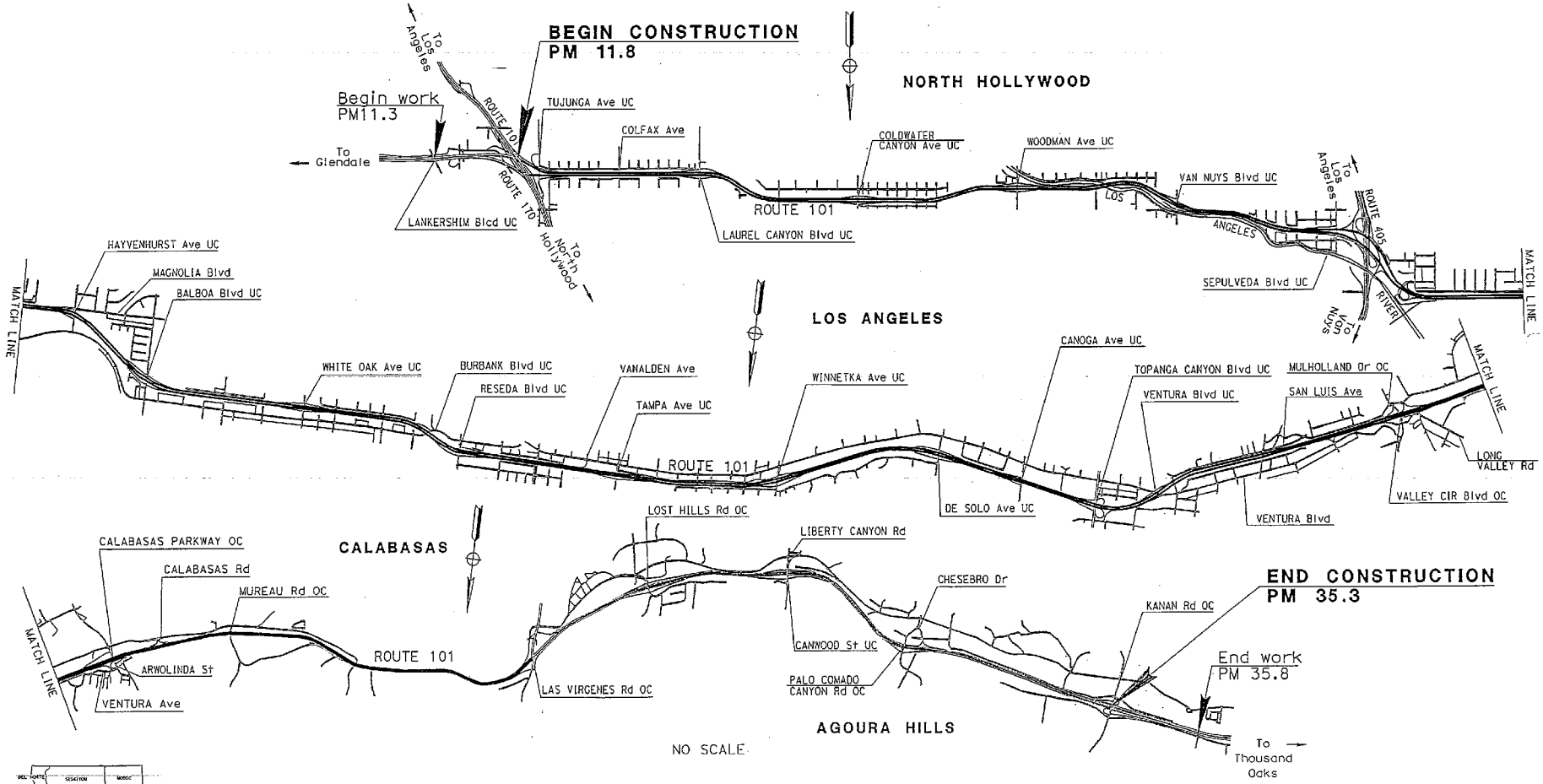
TABLE 4
SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS
SITE INVESTIGATION FOR MAINTENANCE VEHICLE PULLOUT LOCATIONS
LA-101-PM 11.8/35.3
LOS ANGELES COUNTY, CALIFORNIA
EFIS:0713000013 (EA#294701)
TASK ORDER #10
CONTRACT 07A3322

Caltrans Unique Sample ID	Sample Depth (feet bgs)	Sample Date	TITLE 22 METALS by EPA Test Method 6010/7470																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
CHHSLs - Residential Use (1)			*30*	*0.07*	*5,200*	*16*	*1.7*	*100,000*	*660*	*3,000*	*80*	*380*	*1,600*	*380*	*380*	*5*	*530*	*23,000*	*18*
CHHSLs - Industrial Use (1)			*380*	*0.24*	*63,000*	*190*	*7.5*	*100,000*	*3,200*	*38,000*	*320*	*4,800*	*16,000*	*4,800*	*4,800*	*63*	*6,700*	*100,000*	*180*
USEPA RSLs - Residential Use (2)			*31*	*0.61*	*15,000*	*160*	*70*	*120,000*	*23*	*3,100*	*400*	*390*	*1,500*	*390*	*390*	*0.78*	*390*	*23,000*	*10*
USEPA RSLs - Industrial Use (2)			*410*	*2.4*	*190,000*	*2,000*	*800*	*1,500,000*	*300*	*41,000*	*800*	*5,100*	*20,000*	*5,100*	*5,100*	*10*	*5,100*	*310,000*	*43*
Expected Background Concentrations (3)			*0.15-1.95*	*12 (4)*	*133-1400*	*0.25-2.70*	*0.05-1.70*	*23-1579*	*2.7-46.9*	*9.1-96.4*	*12.4-97.1*	*0.1-9.6*	*9-509*	*0.015-0.430*	*13.2-39.4*	*9.8-36.2*	*75-288*	*133-236*	*0.05-0.90*
California TTLC			*500*	*500*	*10,000*	*75*	*100*	*2,500*	*8,000*	*2,500*	*1,000*	*3,500*	*2,000*	*100*	*500*	*700*	*2,400*	*5,000*	*20*
10 x California STLC			*150*	*50*	*1,000*	*7.5*	*10*	*50*	*800*	*250*	*50*	*3,500*	*200*	*10*	*50*	*70*	*240*	*2,500*	*2*
SOIL SAMPLES																			
1216-101-1	1	9/6/2013	1.5 J	5.8	170	0.17 J	2.1	24	4.7	100	See Table 2	5.2	20	1.0	0.26 J	<0.30	19	550	0.15
1216-103-1	1	9/6/2013	0.53 J	8.6	150	0.46 J	1.3	29	6.7	72		3.3	26	1.1	0.11 J	<0.30	33	260	0.07 J
1216-106-1	1	9/6/2013	<0.22	4.5	110	0.23 J	1.1	17	4.4	35		4.3	18	0.99 J	<0.06	<0.30	25	240	0.06 J
1216-108-1	1	9/6/2013	<0.22	8.7	120	0.31 J	3.5	26	4.6	41		7.2	35	2.7	0.2 J	<0.30	31	120	0.04 J
1216-109-1	1	9/6/2013	<0.22	11	120	0.31 J	4.0	26	4.7	44		9.2	35	2.6	0.1 J	<0.30	30	170	0.06 J
1216-112-1	1	9/6/2013	<0.22	9.3	180	0.29 J	3.5	27	4.9	51		5.0	36	0.85 J	<0.06	<0.30	41	210	0.06 J
1216-114-1	1	9/6/2013	<0.22	4.5	72	0.15 J	0.61 J	8.3	1.7	15		1.5	7.8	0.24 J	<0.06	<0.30	13	68	0.01 J
1216-115-1	1	9/6/2013	0.27 J	4.2	110	0.21 J	1.3	16	3.5	36		3.0	15	1.1	<0.06	<0.30	17	190	0.05 J
1216-118-1	1	9/6/2013	<0.22	4.8	160	0.36 J	1.6	19	5.1	45		3.8	30	0.88 J	< 0.06	<0.30	39	170	0.04 J

NOTES:

All soil results in mg/Kg
CHHSLs = California Human Health Screening Levels
RSLs = Regional Screening Levels
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration
bgs = below ground surface
Sample depth in feet below the ground surface
<0.5 - Analyte not reported at or above stated method detection limit
(1) Soil, California Human Health Screening Levels for Commercial/Industrial and Residential Land Use, California Environmental Protection Agency, January 2005; updates 2009 & 2010 Office of Environmental Health Hazard Assessment Table 1.
(2) United States Environmental Protection Agency (Region 9) Regional Screening Levels (RSLs; in mg/Kg) for VOCs for industrial and residential soil (last updated May 2013) - - Traditional Table with a Target Cancer Risk Level of 1.0x10-6 and a Target Hazard Quotient of 1.0.
(3) G.R. Bradford, A.C. Chang, A.L. Page, D. Bakhtar, J.A. Frampton, and H. Wright, Background Concentrations of Trace and Major Elements in California Soils, March 1996.
(4) California Department of Toxic Substances Control (DTSC), 2008, Determination of a Southern California Regional Background Arsenic Concentration in Soil, March.
= Shaded cells indicate a concentration that exceeds either the RSL, CHHSL, and/or the background concentration for that particular metal.
J - Concentration is reported between the practical quantitation limit and the method detection limit.

FIGURES



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FOR: ADL SITE INVESTIGATION Agreement No. 07A2047 Task Order No. 10 LOS ANGELES & AGOURA HILL From 11.8 mile SR 170 to North of Kanan Road overcrossing		SITE LOCATION MAP		FIGURE: 1
JOB NUMBER: 185832010	DRAWN BY: J. RESENDIZ	CHECKED BY: K. EDBLAD	APPROVED BY: -	DATE: SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 23, 2013 at 21:08|Layout: F1-SLM

KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

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FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-13, PM 15.23)

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 24, 2013 at 23:12|Layout: F2-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	820	42	0.46	--

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	1,100	59	0.60	6.0

KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

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Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-30, PM 19.89)

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 24, 2013 at 23:11|Layout: F3-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	1,500	120	2.1	7.4

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	1,000	79	2.6	--

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE: (909) 335-6116 FAX: (909) 556-6516

FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-34, PM 21.00)

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 24, 2013 at 23:09|Layout: F4-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	300	13	0.11	--

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	400	18	0.18	7.2

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

KEY:

Depth FEET	ANALYTE ##.##	SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION
	Total Pb	TOTAL LEAD (mg/kg)
	Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
	TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
	mg/kg	MILLIGRAMS PER KILOGRAM
	mg/L	MILLIGRAMS PER LITER
	<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
	--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE:(909) 335-6116 FAX:(909) 556-6516

FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-43, PM 23.54)

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 24, 2013 at 23:08|Layout: F5-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	1,300	62	0.38	6.2

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	380	14	0.074	--

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE:(909) 335-6116 FAX:(909) 556-6516

FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-44, PM 23.90)

FIGURE: 6

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg\jresendiz\Sep 24, 2013 at 23:08\Layout: F6-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	640	31	0.04	6.7

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	430	20	0.013	--

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE:(909) 335-6116 FAX:(909) 556-6516

FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-45, PM 24.12)

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg\jresendiz\Sep 24, 2013 at 23:07\Layout: F7-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	130	6.4	0.056	--

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	270	10	0.16	6.2

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KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE:(909) 335-6116 FAX:(909) 556-6516

FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-48, PM 24.84)

FIGURE: 8

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|resendiz|Sep 24, 2013 at 23:05|Layout: F8-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	870	33	0.27	6.2

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	300	11	0.031	--

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KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE:(909) 335-6116 FAX:(909) 556-6516

FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-50, PM 25.32)

FIGURE: 9

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 24, 2013 at 23:05|Layout: F9-SP

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	40	1.8	--	--

Depth	Total Pb	Cal-WET	TCLP	pH
1.0'	78	2.3	0.0059	7.5

KEY:

Depth	ANALYTE
FEET	##.##

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE AND ANALYTE CONCENTRATION

Total Pb	TOTAL LEAD (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
mg/kg	MILLIGRAMS PER KILOGRAM
mg/L	MILLIGRAMS PER LITER
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED

HAND AUGER BORING LOCATION

0 60 120

APPROXIMATE SCALE IN FEET

N

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Stantec
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FOR: ADL SITE INVESTIGATION
Agreement No. 07A2047
Task Order No. 10
LOS ANGELES & AGOURA HILL
From 11.8 mile SR 170 to North of Kanan Road overcrossing

MAINTENANCE VEHICLE PULLOUT LOCATION (L-61, PM 28.60)

FIGURE: 10

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185832010	J. RESENDIZ	K. EDBLAD	-	SEP. 2013

FILEPATH:P:\CADD\PROJECTS\CalTrans\07A3322 TO-10\07A3322 TO-10.dwg|jresendiz|Sep 24, 2013 at 23:04|Layout: F10-SP

APPENDIX A
HASP FIELD FORM

Purpose and Approval

Our work can be hazardous, and it is imperative that we never forget that! It is the purpose of this Health and Safety Plan (HASP) to proactively aid Stantec employees in:

- Identifying and understanding the potential risks/hazards they may encounter at the site.
- Mitigating those potential risks/hazards.

Stantec's policy is to complete our work on this site without any type of incident (injury, illness, impact to the environment, impact to property and equipment). In order to achieve this goal, the project team will work together to perform an effective hazard assessment. The team will then establish appropriate precautions and communicate these daily among project staff. Staff will be responsible for communicating changing field conditions to the project management so these conditions and appropriate precautions may be re-evaluated as needed. Staff will implement **STOP WORK AUTHORITY** at any time they believe that conditions may be inherently unsafe or might cause damage to property or harm to the environment. Staff may refuse to participate in work they believe will be unsafe. If it is believed that such conditions exist, staff will communicate immediately with the Project Manager to resolve the situation. We expect all subcontractors and project personnel to share this goal.

Client: The State of California, Department of Transportation	**Site Name:** Aerially Deposited Lead Site Investigation, Location: LA-101, PM 11.8/35.3
Project Name: TASK ORDER NO. 10 – ADL	**Project Number:** 185832010
Start Date: August 29, 2013	**End Date:** November 30, 2013
Plan Review Date: November 30, 2013 (*Last day of expected fieldwork or no longer than 6 months*).	

Kevin Miskin Project Manager	Signature: DRB for	Date: 9/5/13
Dan Feldt, MPH, CIH Health and Safety Manager, HASP review	Signature: D. G. Feldt	Date: 9-3-13
Anne Perez Office Safety Environmental Coordinator	Signature: DRB for	Date: 9/5/13
Jason Stagno Site Health and Safety Officer	Signature:	Date: 9/5/13
Anuya Sawant Peer Reviewer	Signature: Anuya	Date: 9/5/13
Kristy Edblad HASP Originator	Signature:	Date: 5 SEPT 2013

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located in Attachment A) if site conditions, scope of work, training dates, personnel, or other critical items change before the scheduled HASP review date above. This HASP is intended to be available on site. Contents of this binder are listed in Attachment 1.

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE INCORPORATED
CERTIFICATION NUMBER 3741 CP
EXPIRES 6-1-2015
PENNSYLVANIA • 1960
DANIEL G. FELDT, CIH

Acknowledgement and Agreement Form

"Zero Tolerance for Incidents of ANY Kind. Work Together to Ensure a SAFE and High Quality Project"

This HASP has been developed for the purpose of proactively aiding Stantec employees in identifying, understanding, and mitigating the potential risks/hazards they are may encounter at the site. This HASP may also be used as a reference document by properly trained and experienced Stantec subcontractors and clients. However, sub-contractors and other contractors at the site must develop their own HASP to address the potential risks/hazards faced by their own employees.

All parties conducting site activities are required to coordinate their activities and practices with the Stantec Site Health and Safety Officer (SHSO). Stantec has provided a copy of this HASP to contractors in the interest of full disclosure of potential risks/hazards which we may be aware of. Similarly, contractors shall inform Stantec of any potential site risks/hazards which they are aware of including the contractor's work, equipment, procedures and chemicals.

This HASP should NOT be understood by contractors or anyone other than Stantec employees to provide information on all of the potential risks/hazards to which they may be exposed as a result of their work. Stantec claims no responsibility for use of this HASP by others.

Your signature below confirms the following: that you have read and understand the potential risks/hazards and associated mitigation measures discussed in this HASP; that you have received training and medical surveillance according to this HASP and the OSHA Standard on Hazardous Waste Operations and Emergency Response (29 CFR 1910.120); that you understand that sub-contractors and contractors must develop their own HASP for their employees and shall not rely on this HASP in any manner; and that you understand that you could be prohibited by the SHSO or other authorized Stantec personnel from working on this project for not complying with any aspect of this or any other applicable HASP.

(All Stantec and subcontractor personnel must sign.)

Name	Signature	Company	Date
Mike A Clayton	Mike A Clayton	Stantec	9/6/13
Keith Poseklian	Keith Poseklian	Stantec	9/6/13

DAILY PRODUCTION HEALTH AND SAFETY BRIEFING LOG

Date: 9/6/13 **Start Time:** 0630

Scope of Work: ADL Survey

Issues Discussed:

1. HASP/Scope
2. Hospital Route
3. Traffic
4. Weather
5. PPE
6. Biohazard
7. Traffic Control
8. Slip/Trip/Fall
9. Lifting/strains
10. Sample Handling

Attendees

Print Name and Company	Signature	Second Meeting (Initial)
Keith Poseklian/Stantec	Keith Poseklian	

Meeting Conducted by:	Signature:
Mike A Clayton	MAC
Name (Site Health and Safety Coordinator):	**Signature:**

APPENDIX B
ANALYTICAL LABORATORY REPORTS and CHAIN-OF-CUSTODY RECORDS

ADVANCED TECHNOLOGY LABORATORIES

September 20, 2013

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Anne Perez/Kristy Edblad
Stantec
290 Conejo Ridge Avenue, Suite 200
Thousand Oaks, CA 91361
Tel: (805) 230-1266
Fax:(805) 230-1277

Re: ATL Work Order Number : 1302724

Client Reference : 185832010, Task: 200.0004, 07A3322-10-Calabasas

Enclosed are the results for sample(s) received on September 06, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1216-101-1	1302724-01	Soil	9/06/13 7:40	9/06/13 16:00
1216-102-1	1302724-02	Soil	9/06/13 8:44	9/06/13 16:00
1216-103-1	1302724-03	Soil	9/06/13 9:55	9/06/13 16:00
1216-104-1	1302724-04	Soil	9/06/13 10:11	9/06/13 16:00
1216-105-1	1302724-05	Soil	9/06/13 11:06	9/06/13 16:00
1216-106-1	1302724-06	Soil	9/06/13 11:15	9/06/13 16:00
1216-107-1	1302724-07	Soil	9/06/13 11:52	9/06/13 16:00
1216-108-1	1302724-08	Soil	9/06/13 12:00	9/06/13 16:00
1216-109-1	1302724-09	Soil	9/06/13 15:19	9/06/13 16:00
1216-110-1	1302724-10	Soil	9/06/13 15:23	9/06/13 16:00
1216-111-1	1302724-11	Soil	9/06/13 14:58	9/06/13 16:00
1216-112-1	1302724-12	Soil	9/06/13 15:01	9/06/13 16:00
1216 113-1	1302724-13	Soil	9/06/13 14:21	9/06/13 16:00
1216 114-1	1302724-14	Soil	9/06/13 14:30	9/06/13 16:00
1216 115-1	1302724-15	Soil	9/06/13 13:44	9/06/13 16:00
1216 116-1	1302724-16	Soil	9/06/13 13:53	9/06/13 16:00
1216 117-1	1302724-17	Soil	9/06/13 13:11	9/06/13 16:00
1216 118-1	1302724-18	Soil	9/06/13 13:16	9/06/13 16:00
1216-EB-1	1302724-19	Water	9/06/13 7:30	9/06/13 16:00
1216-EB-1	1302724-19	Water	9/06/13 7:30	9/06/13 16:00
1216-EB-2	1302724-20	Water	9/06/13 16:00	9/06/13 16:00
1216-EB-2	1302724-20	Water	9/06/13 16:00	9/06/13 16:00

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-101-1
Lab ID: 1302724-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**1.5**	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 13:54	J
Arsenic	**5.8**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 13:54	
Barium	**170**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 13:54	
Beryllium	**0.17**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 13:54	J
Cadmium	**2.1**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 13:54	
Chromium	**24**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 13:54	
Cobalt	**4.7**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 13:54	
Copper	**100**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 13:54	
Molybdenum	**5.2**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 13:54	
Nickel	**20**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 13:54	
Selenium	**1.0**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 13:54	
Silver	**0.26**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 13:54	J
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 13:54	
Vanadium	**19**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 13:54	
Zinc	**550**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 13:54	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3300**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:20	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.1**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 13:44	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**140**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:35	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-101-1
Lab ID: 1302724-01

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.1**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:42	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.15**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 11:44	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.0**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-102-1
Lab ID: 1302724-02

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3000**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:21	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.4**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 13:47	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**160**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:37	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.15**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:44	J

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-103-1
Lab ID: 1302724-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.53**	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:01	J
Arsenic	**8.6**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:01	
Barium	**150**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:01	
Beryllium	**0.46**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:01	J
Cadmium	**1.3**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:01	
Chromium	**29**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:01	
Cobalt	**6.7**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:01	
Copper	**72**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:01	
Molybdenum	**3.3**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:01	
Nickel	**26**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:01	
Selenium	**1.1**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:01	
Silver	**0.11**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:01	J
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:01	
Vanadium	**33**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:01	
Zinc	**260**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:01	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1100**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:22	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.60**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 13:50	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**59**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:40	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-103-1
Lab ID: 1302724-03

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.13**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:46	J

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.07**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 11:54	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.0**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-104-1
Lab ID: 1302724-04

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**820**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:22	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.46**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 13:52	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**42**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:42	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:49	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-105-1
Lab ID: 1302724-05

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1000**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:23	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.6**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 13:55	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**79**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:44	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:51	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-106-1
Lab ID: 1302724-06

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:02	
Arsenic	**4.5**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:02	
Barium	**110**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:02	
Beryllium	**0.23**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:02	J
Cadmium	**1.1**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:02	
Chromium	**17**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:02	
Cobalt	**4.4**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:02	
Copper	**35**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:02	
Molybdenum	**4.3**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:02	
Nickel	**18**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:02	
Selenium	**0.99**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:02	J
Silver	ND	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:02	
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:02	
Vanadium	**25**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:02	
Zinc	**240**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:02	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1500**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:24	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.1**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:01	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**120**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:46	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-106-1
Lab ID: 1302724-06

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.11**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:53	J

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.06**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 11:56	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.4**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-107-1
Lab ID: 1302724-07

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**300**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:24	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.11**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:04	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**13**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:49	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 12:55	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-108-1
Lab ID: 1302724-08

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:04	
Arsenic	**8.7**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:04	
Barium	**120**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:04	
Beryllium	**0.31**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:04	J
Cadmium	**3.5**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:04	
Chromium	**26**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:04	
Cobalt	**4.6**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:04	
Copper	**41**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:04	
Molybdenum	**7.2**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:04	
Nickel	**35**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:04	
Selenium	**2.7**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:04	
Silver	**0.20**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:04	J
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:04	
Vanadium	**31**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:04	
Zinc	**120**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:04	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**400**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:27	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.18**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:06	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**18**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 14:51	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-108-1
Lab ID: 1302724-08

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:01	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.04**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 11:58	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.2**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-109-1
Lab ID: 1302724-09

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:05	
Arsenic	**11**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:05	
Barium	**120**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:05	
Beryllium	**0.31**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:05	J
Cadmium	**4.0**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:05	
Chromium	**26**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:05	
Cobalt	**4.7**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:05	
Copper	**44**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:05	
Molybdenum	**9.2**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:05	
Nickel	**35**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:05	
Selenium	**2.6**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:05	
Silver	**0.10**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:05	J
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:05	
Vanadium	**30**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:05	
Zinc	**170**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:05	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1300**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:28	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.38**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:09	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**62**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:04	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-109-1
Lab ID: 1302724-09

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.17**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:03	J

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.06**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 12:04	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.2**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-110-1
Lab ID: 1302724-10

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**380**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:28	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.074**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:11	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**14**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:36	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.082**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:05	J

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-111-1
Lab ID: 1302724-11

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**430**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:30	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.013**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:18	J

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**20**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:08	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.089**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:14	J

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-112-1
Lab ID: 1302724-12

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:11	
Arsenic	**9.3**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:11	
Barium	**180**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:11	
Beryllium	**0.29**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:11	J
Cadmium	**3.5**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:11	
Chromium	**27**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:11	
Cobalt	**4.9**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:11	
Copper	**51**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:11	
Molybdenum	**5.0**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:11	
Nickel	**36**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:11	
Selenium	**0.85**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:11	J
Silver	ND	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:11	
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:11	
Vanadium	**41**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:11	
Zinc	**210**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:11	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**640**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:31	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.040**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:20	J

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**31**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:10	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-112-1
Lab ID: 1302724-12

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.11**	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:16	J

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.06**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 12:06	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.7**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 113-1
Lab ID: 1302724-13

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**130**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:32	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.056**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:23	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**6.4**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:13	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:18	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 114-1
Lab ID: 1302724-14

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:12	
Arsenic	**4.5**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:12	
Barium	**72**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:12	
Beryllium	**0.15**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:12	J
Cadmium	**0.61**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:12	J
Chromium	**8.3**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:12	
Cobalt	**1.7**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:12	
Copper	**15**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:12	
Molybdenum	**1.5**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:12	
Nickel	**7.8**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:12	
Selenium	**0.24**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:12	J
Silver	ND	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:12	
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:12	
Vanadium	**13**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:12	
Zinc	**68**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:12	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**270**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:32	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.16**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:29	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**10**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:15	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 114-1
Lab ID: 1302724-14

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:20	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.01**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 12:08	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.2**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 115-1
Lab ID: 1302724-15

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.27**	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:14	J
Arsenic	**4.2**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:14	
Barium	**110**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:14	
Beryllium	**0.21**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:14	J
Cadmium	**1.3**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:14	
Chromium	**16**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:14	
Cobalt	**3.5**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:14	
Copper	**36**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:14	
Molybdenum	**3.0**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:14	
Nickel	**15**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:14	
Selenium	**1.1**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:14	
Silver	ND	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:14	
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:14	
Vanadium	**17**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:14	
Zinc	**190**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:14	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**870**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:33	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.27**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:31	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**33**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:17	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 115-1
Lab ID: 1302724-15

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:26	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.05**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 12:10	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**6.2**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 116-1
Lab ID: 1302724-16

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**300**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:36	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.031**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:33	J

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**11**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:19	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:28	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 117-1
Lab ID: 1302724-17

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**39**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:36	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.0047**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:36	J

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**25**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:21	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:30	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 118-1
Lab ID: 1302724-18

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3I0285	09/18/2013	09/18/13 14:16	
Arsenic	**4.8**	1.0	0.38	1	B3I0285	09/18/2013	09/18/13 14:16	
Barium	**160**	1.0	0.08	1	B3I0285	09/18/2013	09/18/13 14:16	
Beryllium	**0.36**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:16	J
Cadmium	**1.6**	1.0	0.02	1	B3I0285	09/18/2013	09/18/13 14:16	
Chromium	**19**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:16	
Cobalt	**5.1**	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:16	
Copper	**45**	2.0	0.11	1	B3I0285	09/18/2013	09/18/13 14:16	
Molybdenum	**3.8**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:16	
Nickel	**30**	1.0	0.04	1	B3I0285	09/18/2013	09/18/13 14:16	
Selenium	**0.88**	1.0	0.24	1	B3I0285	09/18/2013	09/18/13 14:16	J
Silver	ND	1.0	0.06	1	B3I0285	09/18/2013	09/18/13 14:16	
Thallium	ND	1.0	0.30	1	B3I0285	09/18/2013	09/18/13 14:16	
Vanadium	**39**	1.0	0.17	1	B3I0285	09/18/2013	09/18/13 14:16	
Zinc	**170**	1.0	0.51	1	B3I0285	09/18/2013	09/18/13 14:16	

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**78**	1.0	0.14	1	B3I0132	09/10/2013	09/11/13 10:37	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.0059**	0.050	0.0022	1	B3I0216	09/13/2013	09/13/13 14:38	J

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.3**	1.0	0.056	20	B3I0167	09/11/2013	09/11/13 15:27	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 118-1
Lab ID: 1302724-18

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0166	09/11/2013	09/11/13 13:32	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.04**	0.10	0.008	1	B3I0324	09/19/2013	09/20/13 12:12	J

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	**7.5**	0.10	0.10	1	B3I0336	09/19/2013	09/20/13 11:21	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-EB-1
Lab ID: 1302724-19

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.0050	0.0022	1	B3I0154	09/11/2013	09/12/13 09:02	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.050	0.0022	1	B3I0152	09/11/2013	09/12/13 08:37	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0168	09/11/2013	09/11/13 15:52	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0170	09/11/2013	09/11/13 16:10	

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
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Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216-EB-2
Lab ID: 1302724-20

Lead by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.0050	0.0022	1	B3I0154	09/11/2013	09/12/13 09:23	

TCLP Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.050	0.0022	1	B3I0152	09/11/2013	09/12/13 08:51	

STLC Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0168	09/11/2013	09/11/13 15:54	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0170	09/11/2013	09/11/13 16:14	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0285 - EPA 3050B									
Blank (B3I0285-BLK1)				Prepared: 9/18/2013 Analyzed: 9/18/2013					
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.111100	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.115238	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.129731	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	ND	1.0			NR				
LCS (B3I0285-BS1)				Prepared: 9/18/2013 Analyzed: 9/18/2013					
Antimony	49.9000	2.0	50.0000		99.8	80 - 120			
Arsenic	49.4701	1.0	50.0000		98.9	80 - 120			
Barium	53.0816	1.0	50.0000		106	80 - 120			
Beryllium	53.8618	1.0	50.0000		108	80 - 120			
Cadmium	50.7772	1.0	50.0000		102	80 - 120			
Chromium	54.3874	1.0	50.0000		109	80 - 120			
Cobalt	51.8825	1.0	50.0000		104	80 - 120			
Copper	53.1362	2.0	50.0000		106	80 - 120			
Molybdenum	53.8631	1.0	50.0000		108	80 - 120			
Nickel	50.7093	1.0	50.0000		101	80 - 120			
Selenium	46.9570	1.0	50.0000		93.9	80 - 120			
Silver	49.4996	1.0	50.0000		99.0	80 - 120			
Thallium	51.8422	1.0	50.0000		104	80 - 120			
Vanadium	51.6414	1.0	50.0000		103	80 - 120			
Zinc	48.5106	1.0	50.0000		97.0	80 - 120			
Duplicate (B3I0285-DUP1)		**Source: 1302724-01**		Prepared: 9/18/2013 Analyzed: 9/18/2013					
Antimony	1.47141	2.0		1.52737	NR		3.73	20	J
Arsenic	5.98002	1.0		5.75624	NR		3.81	20	
Barium	189.749	1.0		172.639	NR		9.44	20	
Beryllium	0.172852	1.0		0.165543	NR		4.32	20	J
Cadmium	2.39341	1.0		2.07978	NR		14.0	20	
Chromium	25.2428	1.0		23.8013	NR		5.88	20	

Certificate of Analysis

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290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0285 - EPA 3050B (continued)									
Duplicate (B3I0285-DUP1) - Continued		**Source: 1302724-01**		Prepared: 9/18/2013 Analyzed: 9/18/2013					
Cobalt	4.99542	1.0		4.67234	NR		6.68	20	
Copper	118.230	2.0		102.721	NR		14.0	20	
Molybdenum	8.99456	1.0		5.22456	NR		53.0	20	R
Nickel	22.7787	1.0		19.6964	NR		14.5	20	
Selenium	1.41797	1.0		1.01347	NR		33.3	20	R
Silver	0.148135	1.0		0.255995	NR		53.4	20	R, J
Thallium	ND	1.0		ND	NR			20	
Vanadium	19.9842	1.0		19.3786	NR		3.08	20	
Zinc	606.334	1.0		549.084	NR		9.91	20	
Matrix Spike (B3I0285-MS1)		**Source: 1302724-01**		Prepared: 9/18/2013 Analyzed: 9/18/2013					
Antimony	88.5384	2.0	125.000	1.52737	69.6	21 - 109			
Arsenic	120.165	1.0	125.000	5.75624	91.5	55 - 102			
Barium	290.950	1.0	125.000	172.639	94.6	40 - 130			
Beryllium	114.083	1.0	125.000	0.165543	91.1	60 - 104			
Cadmium	103.925	1.0	125.000	2.07978	81.5	52 - 100			
Chromium	140.450	1.0	125.000	23.8013	93.3	53 - 113			
Cobalt	112.052	1.0	125.000	4.67234	85.9	53 - 104			
Copper	260.586	2.0	125.000	102.721	126	51 - 122			M1
Molybdenum	120.329	1.0	125.000	5.22456	92.1	55 - 103			
Nickel	127.631	1.0	125.000	19.6964	86.3	48 - 112			
Selenium	114.202	1.0	125.000	1.01347	90.6	53 - 104			
Silver	114.238	1.0	125.000	0.255995	91.2	61 - 109			
Thallium	101.228	1.0	125.000	ND	81.0	44 - 103			
Vanadium	132.864	1.0	125.000	19.3786	90.8	55 - 115			
Zinc	704.668	1.0	125.000	549.084	124	24 - 130			
Matrix Spike Dup (B3I0285-MSD1)		**Source: 1302724-01**		Prepared: 9/18/2013 Analyzed: 9/18/2013					
Antimony	83.9035	2.0	125.000	1.52737	65.9	21 - 109	5.38	20	
Arsenic	116.793	1.0	125.000	5.75624	88.8	55 - 102	2.85	20	
Barium	292.610	1.0	125.000	172.639	96.0	40 - 130	0.569	20	
Beryllium	110.226	1.0	125.000	0.165543	88.0	60 - 104	3.44	20	
Cadmium	101.462	1.0	125.000	2.07978	79.5	52 - 100	2.40	20	
Chromium	139.368	1.0	125.000	23.8013	92.5	53 - 113	0.773	20	
Cobalt	116.325	1.0	125.000	4.67234	89.3	53 - 104	3.74	20	
Copper	244.730	2.0	125.000	102.721	114	51 - 122	6.28	20	
Molybdenum	113.168	1.0	125.000	5.22456	86.4	55 - 103	6.13	20	
Nickel	132.261	1.0	125.000	19.6964	90.1	48 - 112	3.56	20	
Selenium	111.249	1.0	125.000	1.01347	88.2	53 - 104	2.62	20	
Silver	112.928	1.0	125.000	0.255995	90.1	61 - 109	1.15	20	
Thallium	97.7264	1.0	125.000	ND	78.2	44 - 103	3.52	20	
Vanadium	131.707	1.0	125.000	19.3786	89.9	55 - 115	0.875	20	

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
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Thousand Oaks , CA 91361		Reported :	09/20/2013

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0285 - EPA 3050B (continued)									
Matrix Spike Dup (B3I0285-MSD1) - Continued		**Source: 1302724-01**		Prepared: 9/18/2013 Analyzed: 9/18/2013					
Zinc	665.548	1.0	125.000	549.084	93.2	24 - 130	5.71	20	

Certificate of Analysis

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290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0132 - EPA 3050 Modified									
Blank (B3I0132-BLK1)				Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	0.293394	1.0			NR				J
Blank (B3I0132-BLK2)				Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	ND	1.0			NR				
LCS (B3I0132-BS1)				Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	51.6712	1.0	50.0000		103	80 - 120			
Duplicate (B3I0132-DUP1)		**Source: 1302724-18**		Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	59.3062	1.0		78.0450	NR		27.3	20	R
Duplicate (B3I0132-DUP2)		**Source: 1302724-10**		Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	378.822	1.0		378.192	NR		0.167	20	
Matrix Spike (B3I0132-MS1)		**Source: 1302724-18**		Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	291.356	1.0	250.000	78.0450	85.3	51 - 106			
Matrix Spike (B3I0132-MS2)		**Source: 1302724-10**		Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	626.660	1.0	250.000	378.192	99.4	51 - 106			
Matrix Spike Dup (B3I0132-MSD1)		**Source: 1302724-18**		Prepared: 9/10/2013 Analyzed: 9/11/2013					
Lead	289.652	1.0	250.000	78.0450	84.6	51 - 106	0.587	20	
Batch B3I0154 - EPA 3010A									
Blank (B3I0154-BLK1)				Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	ND	0.0050			NR				
LCS (B3I0154-BS1)				Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	0.949466	0.0050	1.00000		94.9	80 - 120			
Duplicate (B3I0154-DUP1)		**Source: 1302724-19**		Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	ND	0.0050		ND	NR			20	
Matrix Spike (B3I0154-MS1)		**Source: 1302724-19**		Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	2.38254	0.0050	2.50000	ND	95.3	76 - 109			
Matrix Spike Dup (B3I0154-MSD1)		**Source: 1302724-19**		Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	2.35706	0.0050	2.50000	ND	94.3	76 - 109	1.08	20	

Certificate of Analysis

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290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0152 - EPA 3010A TCLP									
Blank (B3I0152-BLK1)				Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	ND	0.050			NR				
LCS (B3I0152-BS1)				Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	0.947301	0.050	1.00000		94.7	80 - 120			
Duplicate (B3I0152-DUP1)		**Source: 1302724-19**		Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	ND	0.050		ND	NR			20	
Matrix Spike (B3I0152-MS1)		**Source: 1302724-19**		Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	2.37798	0.050	2.50000	ND	95.1	76 - 109			
Matrix Spike Dup (B3I0152-MSD1)		**Source: 1302724-19**		Prepared: 9/11/2013 Analyzed: 9/12/2013					
Lead	2.36890	0.050	2.50000	ND	94.8	76 - 109	0.382	20	
Batch B3I0216 - EPA 3010A_SOIL									
Blank (B3I0216-BLK1)				Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	ND	0.050			NR				
Blank (B3I0216-BLK2)				Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	ND	0.050			NR				
Blank (B3I0216-BLK3)				Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	ND	0.050			NR				
Blank (B3I0216-BLK4)				Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	ND	0.050			NR				

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
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Thousand Oaks , CA 91361		Reported :	09/20/2013

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0216 - EPA 3010A_SOIL (continued)									
LCS (B3I0216-BS1)				Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	0.945757	0.050	1.00000		94.6	80 - 120			

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TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0216 - EPA 3010A_SOIL (continued)									
Duplicate (B3I0216-DUP1)			**Source: 1302740-03**		Prepared: 9/13/2013 Analyzed: 9/13/2013				
Lead	0.406858	0.050		0.415600	NR		2.13	20	

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Thousand Oaks , CA 91361		Reported :	09/20/2013

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0216 - EPA 3010A_SOIL (continued)									
Duplicate (B3I0216-DUP2)			**Source: 1302724-10**		Prepared: 9/13/2013 Analyzed: 9/13/2013				
Lead	0.093014	0.050		0.073692	NR		23.2	20	R

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Thousand Oaks , CA 91361		Reported :	09/20/2013

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0216 - EPA 3010A_SOIL (continued)									
Matrix Spike (B3I0216-MS1)			**Source: 1302740-03**		Prepared: 9/13/2013 Analyzed: 9/13/2013				
Lead	2.59988	0.050	2.50000	0.415600	87.4	76 - 109			

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Thousand Oaks , CA 91361		Reported :	09/20/2013

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0216 - EPA 3010A_SOIL (continued)									
Matrix Spike (B3I0216-MS2)		**Source: 1302724-10**		Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	2.37526	0.050	2.50000	0.073692	92.1	76 - 109			

Certificate of Analysis

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290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0216 - EPA 3010A_SOIL (continued)									
Matrix Spike Dup (B3I0216-MSD1)		**Source: 1302740-03**		Prepared: 9/13/2013 Analyzed: 9/13/2013					
Lead	2.63700	0.050	2.50000	0.415600	88.9	76 - 109	1.42	20	

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Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction									
Blank (B3I0167-BLK1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	ND	1.0			NR				

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290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
Blank (B3I0167-BLK2)					Prepared: 9/11/2013 Analyzed: 9/11/2013				
Lead	ND	1.0			NR				

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
LCS (B3I0167-BS1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.05551	1.0	2.00000		103	80 - 120			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
Duplicate (B3I0167-DUP1)		**Source: 1302724-08**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	15.4660	1.0		18.3161	NR		16.9	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
Duplicate (B3I0167-DUP2)			**Source: 1302724-18**		Prepared: 9/11/2013 Analyzed: 9/11/2013				
Lead	1.95984	1.0		2.28504	NR		15.3	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
Matrix Spike (B3I0167-MS1)		**Source: 1302724-08**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	19.8478	1.0	2.50000	18.3161	61.3	33 - 131			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
Matrix Spike (B3I0167-MS2)		**Source: 1302724-18**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	5.42240	1.0	2.50000	2.28504	125	33 - 131			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0167 - STLC Extraction (continued)									
Matrix Spike Dup (B3I0167-MSD1)		**Source: 1302724-08**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	18.8890	1.0	2.50000	18.3161	22.9	33 - 131	4.95	20	M1

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0168 - STLC Extraction									
Blank (B3I0168-BLK1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	ND	1.0			NR				

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0168 - STLC Extraction (continued)									
LCS (B3I0168-BS1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.09367	1.0	2.00000		105	80 - 120			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0168 - STLC Extraction (continued)									
Duplicate (B3I0168-DUP1)		**Source: 1302724-20**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	ND	1.0		ND	NR			20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0168 - STLC Extraction (continued)									
Matrix Spike (B3I0168-MS1)		**Source: 1302724-20**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.61336	1.0	2.50000	ND	105	33 - 131			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0168 - STLC Extraction (continued)									
Matrix Spike Dup (B3I0168-MSD1)		**Source: 1302724-20**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.66904	1.0	2.50000	ND	107	33 - 131	2.11	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction									
Blank (B3I0166-BLK1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	ND	1.0			NR				

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
Blank (B3I0166-BLK2)					Prepared: 9/11/2013 Analyzed: 9/11/2013				
Lead	ND	1.0			NR				

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
LCS (B3I0166-BS1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.16022	1.0	2.00000		108	80 - 120			

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
Duplicate (B3I0166-DUP1)			**Source: 1302724-10**		Prepared: 9/11/2013 Analyzed: 9/11/2013				
Lead	0.064422	1.0		0.081854	NR		23.8	20	R, J

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290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
Duplicate (B3I0166-DUP2)			**Source: 1302724-18**	Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	ND	1.0		ND	NR			20	

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
Matrix Spike (B3I0166-MS1)		**Source: 1302724-10**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.56713	1.0	2.50000	0.081854	99.4	70 - 130			

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Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
Matrix Spike (B3I0166-MS2)		**Source: 1302724-18**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.61452	1.0	2.50000	ND	105	70 - 130			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0166 - STLC DI Extraction (continued)									
Matrix Spike Dup (B3I0166-MSD1)		**Source: 1302724-10**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.70768	1.0	2.50000	0.081854	105	70 - 130	5.33	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0170 - STLC DI Extraction									
Blank (B3I0170-BLK1)					Prepared: 9/11/2013 Analyzed: 9/11/2013				
Lead	ND	1.0			NR				

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0170 - STLC DI Extraction (continued)									
LCS (B3I0170-BS1)				Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.08031	1.0	2.00000		104	80 - 120			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0170 - STLC DI Extraction (continued)									
Duplicate (B3I0170-DUP1)			**Source: 1302724-20**	Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	ND	1.0		ND	NR			20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0170 - STLC DI Extraction (continued)									
Matrix Spike (B3I0170-MS1)		**Source: 1302724-20**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.59260	1.0	2.50000	ND	104	70 - 130			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0170 - STLC DI Extraction (continued)									
Matrix Spike Dup (B3I0170-MSD1)		**Source: 1302724-20**		Prepared: 9/11/2013 Analyzed: 9/11/2013					
Lead	2.62644	1.0	2.50000	ND	105	70 - 130	1.30	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0324 - EPA 7471									
Blank (B3I0324-BLK1)				Prepared: 9/19/2013 Analyzed: 9/20/2013					
Mercury	ND	0.10			NR				

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0324 - EPA 7471 (continued)									
LCS (B3I0324-BS1)				Prepared: 9/19/2013 Analyzed: 9/20/2013					
Mercury	0.784579	0.10	0.833333		94.1	80 - 120			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0324 - EPA 7471 (continued)									
Duplicate (B3I0324-DUP1)		**Source: 1302724-01**		Prepared: 9/19/2013 Analyzed: 9/20/2013					
Mercury	0.152032	0.10		0.151709	NR		0.212	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0324 - EPA 7471 (continued)									
Matrix Spike (B3I0324-MS1)		**Source: 1302724-01**		Prepared: 9/19/2013 Analyzed: 9/20/2013					
Mercury	0.864417	0.10	0.833333	0.151709	85.5	70 - 130			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0324 - EPA 7471 (continued)									
Matrix Spike Dup (B3I0324-MSD1)		**Source: 1302724-01**		Prepared: 9/19/2013 Analyzed: 9/20/2013					
Mercury	0.841189	0.10	0.833333	0.151709	82.7	70 - 130	2.72	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0324 - EPA 7471 (continued)									
Post Spike (B3I0324-PS1)		**Source: 1302724-01**		Prepared: 9/19/2013 Analyzed: 9/20/2013					
Mercury	0.006377		5.00000E-3	0.001821	91.1	85 - 115			

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0336 - Prep_WC_1_S									
Duplicate (B3I0336-DUP1)		**Source: 1302724-01**		Prepared: 9/19/2013 Analyzed: 9/20/2013					
pH	5.86000	0.10		6.00000	NR		2.36	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

STANTEC CHAIN-OF-CUSTODY RECORD

Stantec

COC # _____ Page 1 of 2

FIELD OFFICE INFORMATION

OFFICE: Stantec Thousand Oaks

Send Report to:
Stantec
290 Conejo Ridge Avenue
Thousand Oaks, CA 91361

Telephone: 805-230-1266

Fax/E-Mail: kristy.edblad@stantec.com
anne.perez@stantec.com

PROJECT INFORMATION

Project No.: 185832010 Task: 200.0004

Project Name: 07A3322-10-Calabasas

Project Manager: Anne Perez/Kristy Edblad

Laboratory: Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

ANALYSES / METHOD REQUEST

Sample No. / Identification		SAMPLE Date	Time	Matrix *	Container & Size **	Preservative	Number of Containers	Total Lead (EPA 6010)	TTLC (EPA 6010)	Di-WET	STLC	TCLP	Title 22 Metals (Highest total lead sample)	pH-EPA 9045(highest total lead sample)	Title 22 Metals		REMARKS/ PRECAUTIONS
1216-101-1	1302720-1	9/6/13	0740	Soil	8 oz glass Jar	Ice		X	X	X	X	X	a	a			highest lead samples from these
1216-102-1	-2		0844										a	a			(a,a) analyzed for Title 22 and pH
1216-103-1	-3		0955										b	b			highest lead samples from these
1216-104-1	-4		1011										b	b			(b,b) analyzed for Title 22 and pH
1216-105-1	-5		1106										c	c			highest lead samples from these
1216-106-1	-6		1115										c	c			(c,c) analyzed for Title 22 and pH
1216-107-1	-7		1152										d	d			highest lead samples from these
1216-108-1	-8		1200										d	d			(d,d) analyzed for Title 22 and pH
1216-109-1	-9		1519										e	e			highest lead samples from these
1216-110-1	-10		1523										e	e			(e,e) analyzed for Title 22 and pH
1216-111-1	-11		1453										f	f			highest lead samples from these (f,f) analyzed for Title 22 and pH

TAT: ☐ Normal ☐ Rush ☒ Other: 5 days

REPORTING REQUIREMENTS: ☐ MB & SURGS ☐ Dup/MS/MSD ☐ Raw Data ☐ CLP Rpt ☒ EDD ☐ Other

Possible Hazard Identification: ☐ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Sampled by: *Shipment Method:* *Airbill Number:*

	Signature	Print Name	Company	Date	Time
1(a) *Relinquished by:*		Mike A Clayton	Stantec	9/6/13	1600
1(b) *Received by:*		Edward Rodriguez	Advanced Tech Labs	9-6-13	1600
2(a) *Relinquished by:*		Edward Rodriguez	Advanced Tech Labs	9-6-13	17:50
2(b) *Received by:*	FEDWA	FERNANDO DIWA	AT	9/6/13	1750
3(a) *Relinquished by:*					
3(b) *Received by:*					

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other **Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

STANTEC CHAIN-OF-CUSTODY RECORD

Stantec

COC # _____

Page 2 of 2

FIELD OFFICE INFORMATION

OFFICE: Stantec Thousand Oaks

Send Report to:
Stantec
290 Conejo Ridge Avenue
Thousand Oaks, CA 91361

Telephone: 805-230-1266

Fax/E-Mail: kristy.edblad@stantec.com
anne.perez@stantec.com

PROJECT INFORMATION

Project No.: 185832010 Task: 200.0004

Project Name: 07A3322-10-Calabasas

Project Manager: Anne Perez/Kristy Edblad

Laboratory: Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

ANALYSES / METHOD REQUEST

Sample No. / Identification		SAMPLE Date	Time	Matrix*	Container & Size**	Preservative	Number of Containers	Total Lead (EPA 6010)	TTLC (EPA 6010)	Di-WET	STLC	TCLP	Title 22 Metals (Highest total lead sample)	pH-EPA 9045(highest total lead sample)	Title 22 Metals		REMARKS/ PRECAUTIONS
1216-112-1	1302724-12	9/6/13	1501	Soil	802 Glass Jar	Ice		X	X	X	X	X	f	f			highest lead samples from these (f,f) analyzed for Title 22 and pH
1216 113-1	-13	↓	1421	↓	↓	↓		↓	↓	↓	↓	↓	g	g			highest lead samples from these (g,g) analyzed for Title 22 and pH
1216 114-1	-14		1430										g	g			
1216 115-1	-15		1344										h	h			highest lead samples from these (h,h) analyzed for Title 22 and pH
1216 116-1	-16		1353										h	h			
1216 117-1	-17		1311										i	i			highest lead samples from these (i,i) analyzed for Title 22 and pH
1216 118-1	-18		1316	↓	↓								i	i			
1216 - EB-1	-19		0730	Water	500 ML Poly												
1216 - EB-2	-20	↓	1600	↓	↓	↓		↓	↓	↓	↓	↓					

TAT

- ☐ Normal
- ☐ Rush
- ☒ Other: 5 days

REPORTING REQUIREMENTS

- ☐ MB & SURGS
- ☐ Dup/MS/MSD
- ☐ Raw Data
- ☐ CLP Rpt
- ☒ EDD
- ☐ Other

Possible Hazard Identification
☐ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Sampled by: *Shipment Method:* *Airbill Number:*

	Signature	Print Name	Company	Date	Time
1(a) *Relinquished by:*		Mike A Clayton	Stantec	9/6/13	1600
1(b) *Received by:*		Edward Rodriguez	Advanced Tech Labs	9-6-13	16:00
2(a) *Relinquished by:*		Edward Rodriguez	Advanced Tech Labs	9-6-13	17:50
2(b) *Received by:*		FERNANDO DIWA	ATL	9/6/13	1750
3(a) *Relinquished by:*					
3(b) *Received by:*					

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other **Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

ADVANCED TECHNOLOGY LABORATORIES

September 20, 2013

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Anne Perez/Kristy Edblad
Stantec
290 Conejo Ridge Avenue, Suite 200
Thousand Oaks, CA 91361
Tel: (805) 230-1266
Fax:(805) 230-1277

Re: ATL Work Order Number : 1302724

Client Reference : 185832010, Task: 200.0004, 07A3322-10-Calabasas

Enclosed are the results for sample(s) received on September 06, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1216 117-1	1302724-17	Soil	9/06/13 13:11	9/06/13 16:00

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Client Sample ID 1216 117-1
Lab ID: 1302724-17

Lead by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**40**	1.0	0.14	1	B3I0352	09/20/2013	09/20/13 12:25	

STLC Metals by ICP-AES by EPA 6010B

Analyst: SB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.8**	1.0	0.045	20	B3I0369	09/20/2013	09/20/13 17:19	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0352 - EPA 3050 Modified									
Blank (B3I0352-BLK1)				Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	ND	1.0			NR				
LCS (B3I0352-BS1)				Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	49.9292	1.0	50.0000		99.9	80 - 120			
Duplicate (B3I0352-DUP1)		**Source: 1302724-17RE1**		Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	33.4808	1.0		39.6704	NR		16.9	20	
Matrix Spike (B3I0352-MS1)		**Source: 1302724-17RE1**		Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	230.493	1.0	250.000	39.6704	76.3	51 - 106			
Matrix Spike Dup (B3I0352-MSD1)		**Source: 1302724-17RE1**		Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	232.306	1.0	250.000	39.6704	77.1	51 - 106	0.784	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0369 - STLC Extraction									
Blank (B3I0369-BLK1)				Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	ND	1.0			NR				
LCS (B3I0369-BS1)				Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	2.01845	1.0	2.00000		101	80 - 120			
Duplicate (B3I0369-DUP1)		**Source: 1302724-17RE1**		Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	1.75974	1.0		1.79328	NR		1.89	20	
Matrix Spike (B3I0369-MS1)		**Source: 1302724-17RE1**		Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	4.12063	1.0	2.50000	1.79328	93.1	33 - 131			
Matrix Spike Dup (B3I0369-MSD1)		**Source: 1302724-17RE1**		Prepared: 9/20/2013 Analyzed: 9/20/2013					
Lead	4.15037	1.0	2.50000	1.79328	94.3	33 - 131	0.719	20	

Certificate of Analysis

Stantec		Project Number :	185832010, Task: 200.0004, 07A3322-10
290 Conejo Ridge Avenue, Suite 200		Report To :	Anne Perez/Kristy Edblad
Thousand Oaks , CA 91361		Reported :	09/20/2013

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.

Rachelle Arada

From: Miskin, Kevin [Kevin.Miskin@stantec.com]
Sent: Wednesday, September 18, 2013 5:38 PM
To: Rachelle Arada
Subject: Re: Results - 185832010, Task: 200.0004, 07A3322-10-Calabasas (ATL# 1302724)

Please make sure the sample is well homogenized

From: Rachelle Arada [mailto:Rachelle@atlglobal.com]
Sent: Wednesday, September 18, 2013 06:00 PM
To: Edblad, Kristy
Cc: Miskin, Kevin; Perez, Anne; customer.relations@atlglobal.com <customer.relations@atlglobal.com>
Subject: RE: Results - 185832010, Task: 200.0004, 07A3322-10-Calabasas (ATL# 1302724)

Hi Kristy,

The supervisor checked the data and he confirmed the results reported are good. We are going to reanalyze the samples for both Total lead and WET lead.

Rachelle

From: Rachelle Arada
Sent: Wednesday, September 18, 2013 4:44 PM
To: 'Edblad, Kristy'
Cc: Miskin, Kevin; Perez, Anne; customer.relations@atlglobal.com
Subject: RE: Results - 185832010, Task: 200.0004, 07A3322-10-Calabasas (ATL# 1302724)

Hi Kristy,

I got your email and forwarded it to the lab supervisor for review.

Rachelle

From: Edblad, Kristy [mailto:Kristy.Edblad@stantec.com]
Sent: Wednesday, September 18, 2013 4:40 PM
To: Rachelle Arada; Perez, Anne
Cc: Miskin, Kevin
Subject: RE: Results - 185832010, Task: 200.0004, 07A3322-10-Calabasas (ATL# 1302724)
Importance: High

Hi Rachelle,

Can you confirm the result for sample 17 (lab ID 1302724-17)? The total lead is 39 mg/kg and the soluble lead is 25 mg/l. Please reanalyze the sample if necessary (hopefully you still have the extract for the Cal WET sample).

Thanks,

Kristy Edblad, PE, QSD/QSP, CAPP
Senior Engineer

Stantec
290 Conejo Ridge Avenue Thousand Oaks CA 91361

Phone: (805) 719-9331
Cell: (661) 754-0863
Fax: (805) 230-1277

Kristy.Edblad@stantec.com

Stantec

Design with community in mind

stantec.com

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Please consider the environment before printing this email.

From: Rachelle Arada [mailto:Rachelle@atlglobal.com]
Sent: Monday, September 16, 2013 2:55 PM
To: Perez, Anne; Edblad, Kristy
Subject: Results - 185832010, Task: 200.0004, 07A3322-10-Calabasas (ATL# 1302724)

Hi Anne/Kristy,

Attached are results for the above project. Title 22 Metals and pH analyses were added per COC instructions.

Rachelle Arada
Project Manager

Advanced Technology Laboratories
www.atlglobal.com
Tel: (562) 989-4045 ext. 237
Fax: (562) 989-4040

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Oregon (Air) and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

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APPENDIX C
DATA VALIDATION RECORDS

Stantec Analytical Validation Checklist — Report No. 092613-EC-01

Project Name: Caltrans TO-10 Calabasas	Project Number: 185832010
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 09/26/13	Laboratory Project Number: 1302724
Sample Start-End Date: 09/06/13	Laboratory Report Date: 09/20/13

Parameters Validated: Total Metals, TCPL Lead, STLC M Lead, and STLC-DI Lead by SW 846 6010B, Mercury by 7471A and pH by 9045C

Samples Validated:18 solid field samples and 4 Equipment Blanks

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments:		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments:		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments		
5. Were sample holding times met?	X	
Comments:		
6. Were correct concentration units reported?	X	
Comments:		
7. Were detections found in laboratory blank samples?	X	

Comments: 6010B batch B3I0285 – Chromium = 0.111 mg/Kg, Copper = 0.120 mg/Kg and Nickel = 0.130 mg/Kg. Batch B3I0132 – Lead = 0.293 mg/Kg. Sample results below the blank concentration are validated to non-detect and flagged "UJB". The detection limit is changed to the blank concentration. Sample results greater than the blank concentration and less than 10 times the blank concentration are flagged "JB". Sample concentrations greater than 10 times the blank concentration require no qualifying. Reason Code – MB			
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?		Yes	No X
Comments: .			
9. Were instrument calibrations within method criteria?	NA	Yes	No
Comments: Level II data package and validation, no data provided.			
10. Were surrogate recoveries within control limits?	NA	Yes	No
Comments: No organic analyses requested.			
11. Were laboratory control (LC/LD) sample recoveries within control limits?		Yes X	No
Comments:			
12. Were matrix spike (MS/MD) recoveries within control limits?		Yes X	No
Comments:			
13. Were RPDs within control limits?		Yes	No X
Comments: 6010B Total Metals batch B3I0285 – Lab Duplicate RPD above limits for Molybdenum and Selenium for 1216-101-1. 6010B batch B3I0198 – Lab Duplicate RPD above limits for Lead for 1216-118-1 6010B batch B3I0216 – TCLP Lab Duplicate above limits for Lead for 1216-110-1. Associated sample results flagged "J" for duplicate samples only. Reason Code – DUP MS/DS RPDs within limits, no additional qualifying action required.			
14. Were dilutions required on any samples?		Yes X	No
Comments: No action required.			
15. Were Tentatively Identified Compounds (TIC) present?		Yes X	No
Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL			

16. Were organic system performance criteria met?	NA	Yes	No
Comments: No organic analyses requested.			
17. Were GC/MS internal standards within method criteria?	NA	Yes	No
Comments: No organic analyses requested.			
18. Were inorganic system performance criteria met?	NA	Yes	No
Comments: Level II data package and validation, no data provided.			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.		Yes	No X
Comments:			
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other?		Yes	No X
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT

Precision:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			

Stantec Analytical Validation Checklist — Report No. 092613-EC-02

Project Name: Caltrans TO-10 Calabasas	Project Number: 185832010
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 09/26/13	Laboratory Project Number: 1302724 re-analysis
Sample Start-End Date: 09/06/13	Laboratory Report Date: 09/20/13

Parameters Validated: Total and TCPL Lead by SW 846 6010B

Samples Validated:2 solid field samples

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.
J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments:		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments:		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments		
5. Were sample holding times met?	X	
Comments:		
6. Were correct concentration units reported?	X	
Comments:		
7. Were detections found in laboratory blank samples?		X
Comments:		

8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?		Yes	No X
Comments: Equipment blanks previously reported. .			
9. Were instrument calibrations within method criteria?	NA	Yes	No
Comments: Level II data package and validation, no data provided.			
10. Were surrogate recoveries within control limits?	NA	Yes	No
Comments: No organic analyses requested.			
11. Were laboratory control (LC/LD) sample recoveries within control limits?		Yes X	No
Comments:			
12. Were matrix spike (MS/MD) recoveries within control limits?		Yes X	No
Comments:			
13. Were RPDs within control limits?		Yes X	No
Comments:			
14. Were dilutions required on any samples?		Yes	No X
Comments: No action required.			
15. Were Tentatively Identified Compounds (TIC) present?		Yes	No X
Comments:			
16. Were organic system performance criteria met?	NA	Yes	No
Comments: No organic analyses requested.			
17. Were GC/MS internal standards within method criteria?	NA	Yes	No
Comments: No organic analyses requested.			
18. Were inorganic system performance criteria met?	NA	Yes	No
Comments: Level II data package and validation, no data provided.			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.		Yes	No X
Comments:			

20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other?	Yes	No X	
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT			
Precision:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			