INFORMATION HANDOUT

For Contract No. 07-3X9104
At 07-LA-10, 90,110-Var

Identified by
Project ID 0713000324

MATERIALS INFORMATION

FIBER OPTIC CABLE AS-BUILT DRAWINGS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	9	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEIW AVE., SUITE 260
LA MIRADA, CA 90638

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ABBREVIATIONS

12P22	TWISTED PAIR CABLE, 12PAIR 22AWG CONDUCTORS
24SMFO	FIBER OPTIC CABLE, 24 SINGLEMODE FIBERS
27C18	27 CONDUCTOR, 18AWG CABLE
2MMFO	FIBER OPTIC CABLE, 2 MULTIMODE FIBERS
2SMFO	FIBER OPTIC CABLE, 2 SINGLEMODE FIBERS
48SMFO	FIBER OPTIC CABLE, 48 SINGLEMODE FIBERS
50P22	TWISTED PAIR CABLE, 50 PAIR 22AWG CONDUCTORS
6P19	TWISTED PAIR CABLE, 6PAIR 19AWG CONDUCTORS
72SMFO	FIBER OPTIC CABLE, 72 SINGLEMODE FIBERS
8MMFO	FIBER OPTIC CABLE, 8 MULTIMODE FIBERS
ø	DIAMETER
AIS	EXISTING ACCIDENT INVESTIGATION SITE
B/O	BREAKOUT CABLE
CCR	CAMERA CONTROL RECEIVER
CCTV	CLOSED CIRCUIT TELEVISION
CHAN #	CHANNEL NUMBER
DEMARC	DEMARCATION
DEMUX	DEMULTIPLEXER
DIST	DISTRIBUTION
EXIST	EXISTING
FDP	FIBER DISTRIBUTION PANEL
FLEX	FLEXIBLE
F/O	FIBER OPTIC
INTRFCE	INTERFACE
MDF	MAIN DISTRIBUTION FRAME
MM	MULTIMODE
MOD	MODEM
MUX	MULTIPLEXER
MWR	MICROWAVE RECEIVER
M/W	MICROWAVE
NOM	NOMINAL
OC	ON CENTER
OW	ORDER WIRE
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
REQ'D	REQUIRED
RMS	RAMP METERING SYSTEM OR STATION
RSC	RIGID STEEL CONDUIT
RX	RECEIVER
SCHED	SCHEDULE
SM	SINGLEMODE
TELCO	TELEPHONE COMPANY
TOC	TRAFFIC OPERATIONS CENTER
TOS	EXISTING TRAFFIC OPERATION SYSTEM ELEMENTS
TP	TWISTED PAIR
TX	TRANSMITTER
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPEXER
VR	VIDEO RECEIVER
VX	VIDEO TRANSMITTER
#X	X AWG CONDUCTOR, ie #10 MEANS 10 AWG CONDUCTOR
YP	Y PAIRS OF CONDUCTORS, ie 2P MEANS 2 PAIRS

PROJECT NOTES:

[1] INSTALL CONDUIT(S) IN 6-in WIDE TRENCH IN DIRT OFF SHOULDER. WITHIN 10' OF EDGE OF SHOULDER. SEE SHEET E-44 FOR DETAILS.

[2] INSTALL CONDUIT(S) IN 6-in WIDE TRENCH IN PAVEMENT MAINTAINING 4' MINIMUM DISTANCE FROM EDGE OF TRAVELWAY. SEE SHEET E-45 FOR DETAILS.

[3] INSTALL CONDUIT(S) UNDER SOUNDWALL. SEE SHEET E-47 FOR DETAILS.

[4] JACK RIGID STEEL CONDUITS BENEATH ROADWAY. SEE DETAIL B, SHEET E-46.

[5] ADD COMMUNICATIONS CABLE(S) TO EXISTING CONDUIT.

[6] INSTALL 12 PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEETS E-60 AND E-62 FOR DETAILS.

[7] [RS] EXISTING MICROWAVE TRANSMITTER.
[RS] EXISTING 960 MHZ RECEIVER.
INSTALL VIDEO TRANSMITTER AND 6 PAIR TERMINAL BLOCK IN EXISTING CCTV CABINET.
SEE SHEET E-61 FOR DETAILS.

[8] INSTALL NO 6(T) (MODIFIED) PULLBOX WITH TWISTED PAIR CABLE SPLICE CLOSURE. SEE DETAIL B SHEET E-57. SEE SHEET E-76 THROUGH E-78 TO IDENTIFY THE TWISTED PAIRS TO BE SPLICED.

[9] WING WALL/ABUTMENT SIDE
ATTACH CONDUIT TO FACE OF WING WALL AND/OR ABUTMENT SIDE WALL WITH TWO-HOLE PIPE STRAPS.
LOCATE CONDUIT IN LINE WITH CONDUIT LOCATION ON STRUCTURE.
SEE CONDUIT ATTACHMENT DETAILS SHEET E-49, DETAIL A.

[10] BACK OF RAIL ENCLOSURE (RAIL TYPE 1,2,9 AND 25)
ATTACH ENCLOSURE TO OUTSIDE OF BRIDGE RAIL. PLACE CONDUIT WITHIN ENCLOSURE AND INSTALL COVER. SEE CONDUIT ATTACHMENT DETAILS, SHEET E-52, DETAIL D.

GENERAL NOTES:

1. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON PLAN WERE OBTAINED FROM OWNER'S RECORDS AND/OR OWNERS PLANS.
2. THE LOCATION OF UNDERGROUND FACILITIES SHOWN ON PLANS ARE APPROXIMATE.
3. THE LOCATIONS OF EXISTING CONTROLLER CABINETS, EXISTING SERVICE ENCLOSURES, POWER POLES AND EXISTING DEMARCATION BOXES ARE APPROXIMATE.
4. THE LOCATIONS OF PROPOSED PULL BOXES AND SPLICE VAULTS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
5. EXISTING DETECTOR LOOPS AND CONDUITS ARE SHOWN IN THE VICINITY OF PROPOSED CONDUIT TRENCHES. CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO EXISTING CONDUITS. TRENCHING WITH HAND TOOLS SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER.
6. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL FACILITIES, THE CONTRACTOR SHALL PROVIDE 72 HOUR ADVANCED WRITTEN NOTICE TO ALL AGENCIES CONCERNED.
7. UNLESS OTHERWISE NOTED, ALL CONDUIT BENDS SHALL BE 4 FOOT RADIUS FACTORY BENDS.
8. ALL CONDUITS AND CONDUCTORS IN CONDUCTOR SCHEDULE TABLES ARE EXISTING UNLESS MARKED (N) INDICATING NEW.
9. THE LOCATION OF ELECTRICAL HIGHWAY LIGHTING CONDUITS AND PULL BOXES ARE APPROXIMATE AND WERE OBTAINED FROM LIMITED LIGHTING RECORDS. CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO EXISTING LIGHTING CONDUITS.
10. ALL NO 5 PULL BOXES SHALL BE NO 5(T) TRAFFIC PULL BOXES.

LEGEND

- PROPOSED SPLICE VAULT — SEE SHEET E-58 FOR DETAILS
- PROPOSED NO. 6(T) PULLBOX (MODIFIED) — SEE SHEETS E-56 AND E-57 FOR DETAILS
- PROPOSED COMMUNICATIONS CONDUIT(S)
- CONDUIT LINE DELIMITER FOR CONSTRUCTION NOTES
- DETAIL CALLOUT FOR DETAIL B ON SHEET E-75 (B / E75)
- EXISTING MICROWAVE ANTENNA
- EXISTING CCTV CAMERA ASSEMBLY WITH PAN\TILT UNIT
- TELEPHONE BRIDGE
- EXISTING TOWER
- FIBER OPTIC CABLE

AS BUILT 115444
Contract No. 07-
Resident Engineer:
Completion Date: May 14, 1997

LEGEND AND NOTES

E-1

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

/usr/jlmt/P3/711544u01.dgn 21-OCT-1993 14:50 jlmt

TIME PLOTTED => 21-OCT-1993 14:50
LAST REVISION 00-00-00

FORM DC-OE-92-PF (REV. 3/83)

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

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DGN FILE => /usr/jlmt/P3/711544u01.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	10	96

Joseph A. Kwak 6/18/93
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE., SUITE 260
LA MIRADA, CA 90638

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8
50P22 CABLE	DATA /PHONE	1	1 (N)						
6P19 CABLE	DATA /PHONE								
12P22 CABLE	DATA /PHONE			1	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)
48 SMFO	VIDEO TRUNK	1	1 (N)						
8 MMFO CABLE	SHORT HAUL VIDEO	1	1 (N)						
2 MMFO B/O	SHORT HAUL VIDEO								
RG-6A/U COAX	BASEBAND VIDEO		1						
27C18 CABLE	CONTROL		1						
# 8	GROUND								
# 8	POWER								
# 14	POWER								
# 12	POWER								
# 8	POWER								2
2 - #14	TELCO								
2 - #18	TELCO								
DLC	RAMP/COUNT				3	5	7	10	10
CONDUIT	SIZE	4" (N)	3"	2" (N)	1"	2"	2"	2"	3"

Y 1,834,500

SERVICE POINT (5,000 V.) #103359M

Match Line

R/W

SW CONNECTOR OC
BR NO 53-1630G PM R5.44

NE CONNECTOR OC
BR NO 53-1629F PM R5.45

SE CONNECTOR OC
BR NO 53-1637F PM R5.65

WB RTE 10 TO NB RTE 405

NB RTE 405

SB RTE 405

Gen Tel Co

2-4" ϕ CONDUITS SEE CONTRACT 07-120714

SEPULVEDA

WB RTE 10

EB RTE 10

18" CMP DD

24" RCP

39" RCP

51" SD

H046

H047

H048

SEPULVEDA BLVD UC
BR NO 53-1623 PM R5.56

SB RTE 405 TO EB RTE 10

2-4" ϕ CONDUITS SEE CONTRACT No. 7-120714

2-4" ϕ CONDUITS OF OTHERS — UC

27" S D (Abn)

SEE DETAIL A

EB RTE 10 TO SB RTE 405

NB RTE 405 TO WB RTE 10

2" Galv Pipe In 6" ACP (Abn)

SB RTE 405

NB RTE 405

RTE 10/405 SEP
BR NO 53-1628 PM R5.43 (10)

2-4" ϕ CONDUITS SEE CONTRACT 07-120714

BLVD.

2" Galv Pipe In 4" ACP

NB RTE 405 TO EB RTE 10

8" RCP

24" RCP WSP

CB

ETW

E62A A, B

DETAIL A

RS ANTENNAS MOUNTED ON TOWER AT 60' HEIGHT
1 - 23 GHZ ANTENNA, 2FT DIAMETER
1 - 960 MHZ ANTENNA, 2FT DIAMETER

SCALE: 1"=50'

AS BUILT 115444
Contract No. 07-
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

E-1A

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
BJ	JK	6/93	SK	7/93

DESIGN OVERSIGHT — GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

711544UIA.DGN EBASCO 5/25/93

TIME PLOTTED => 21-OCT-1993 14:50

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

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CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	11	96

Joseph A. Kwak 6/18/93
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER * JOSEPH A. KWAK * No. 10991 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW, SUITE 260
LA MIRADA, CA 90638

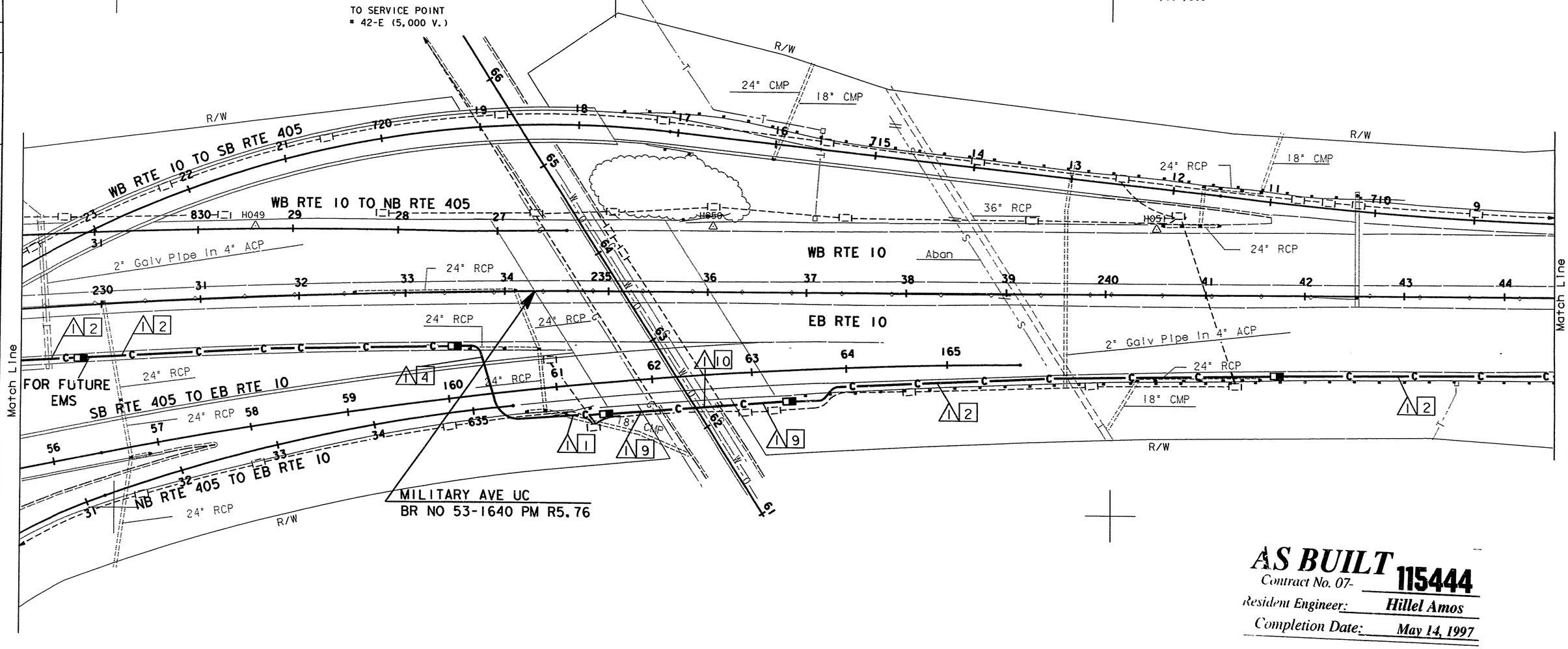
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1
50P22 CABLE	DATA /PHONE	1
6P19 CABLE	DATA /PHONE	
8P22 CABLE	DATA /PHONE	
48 SMFO	VIDEO TRUNK	1
8 MMFO CABLE	SHORT HAUL VIDEO	1
2 MMFO B/O	SHORT HAUL VIDEO	
RG-6A/U COAX	BASEBAND VIDEO	
27C18 CABLE	CONTROL	
* 8	GROUND	
* 8	POWER	
* 14	POWER	
* 12	POWER	
* 10	TELCO	
2 - *14	TELCO	
2 - *18	TELCO	
DLC	RAMP/COUNT STA.	
CONDUIT	SIZE	4" (N)

X 6,431,500
Y 1,834,500

X 6,432,000
Y 1,834,500

X 6,432,500
Y 1,834,500



AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-1B

REVISED BY	DATE	CALCULATED/ DESIGNED BY	BJ
DATE REVISED	6/93	CHECKED BY	JK

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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

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DGN FILE => /usr/normk/P0/711544u1b.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	12	96

Joseph A. Kwak 6/18/93
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW, SUITE 260
LA MIRADA, CA 90638

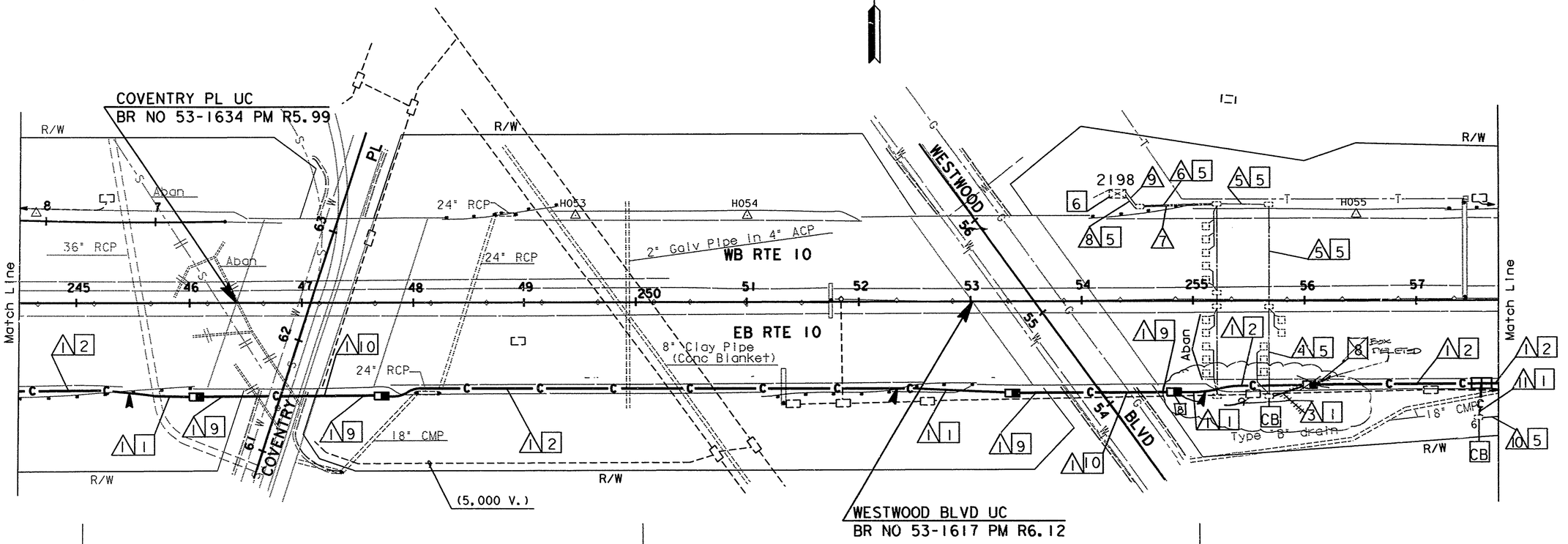
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	3	4	5	6	7	8	9	10	11
50P22 CABLE	DATA /PHONE	1								2 (N)	2
6P19 CABLE	DATA /PHONE										
12P22 CABLE	DATA /PHONE		1	1 (N)	1 (N)	1 (N)		1 (N)			
48 SMFO	VIDEO TRUNK	1									
8 MMFO CABLE	SHORT HAUL VIDEO	1								2 (N)	2
2 SMFO B/O	SHORT HAUL VIDEO									3 (N)	2
RG-6A/U COAX	BASEBAND VIDEO										
27C18 CABLE	CONTROL										
# 8	POWER								2		
# 8	GROUND										
# 14	POWER										
# 12	POWER										
# 10	POWER										
2 - #14	TELCO										
2 - #18	TELCO										
DLC	RAMP/COUNT STA			3	5	5	5	10			
1" FLEX CONDUIT									1		
CONDUIT	SIZE	4" (N)	2" (N)	2"	2"	2"	2"	3"	2"	4"	4" (N)

X 6,433,000
Y 1,834,500

X 6,433,500
Y 1,834,500

X 6,434,000
Y 1,834,500



AS BUILT
Contract No 07- **115444**
Resident Engineer: ***Hillel Amos***
Completion Date: ***May 14, 1997***

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-1C

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — BJ — DATE 6/93 — REVISED BY
CHECKED BY — JK — 6/93 — DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Gibbs
711544ULC.DGN EBASCO 5/25/93
TIME PLOTTED => 22-OCT-1993 10:08

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

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CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	13	96

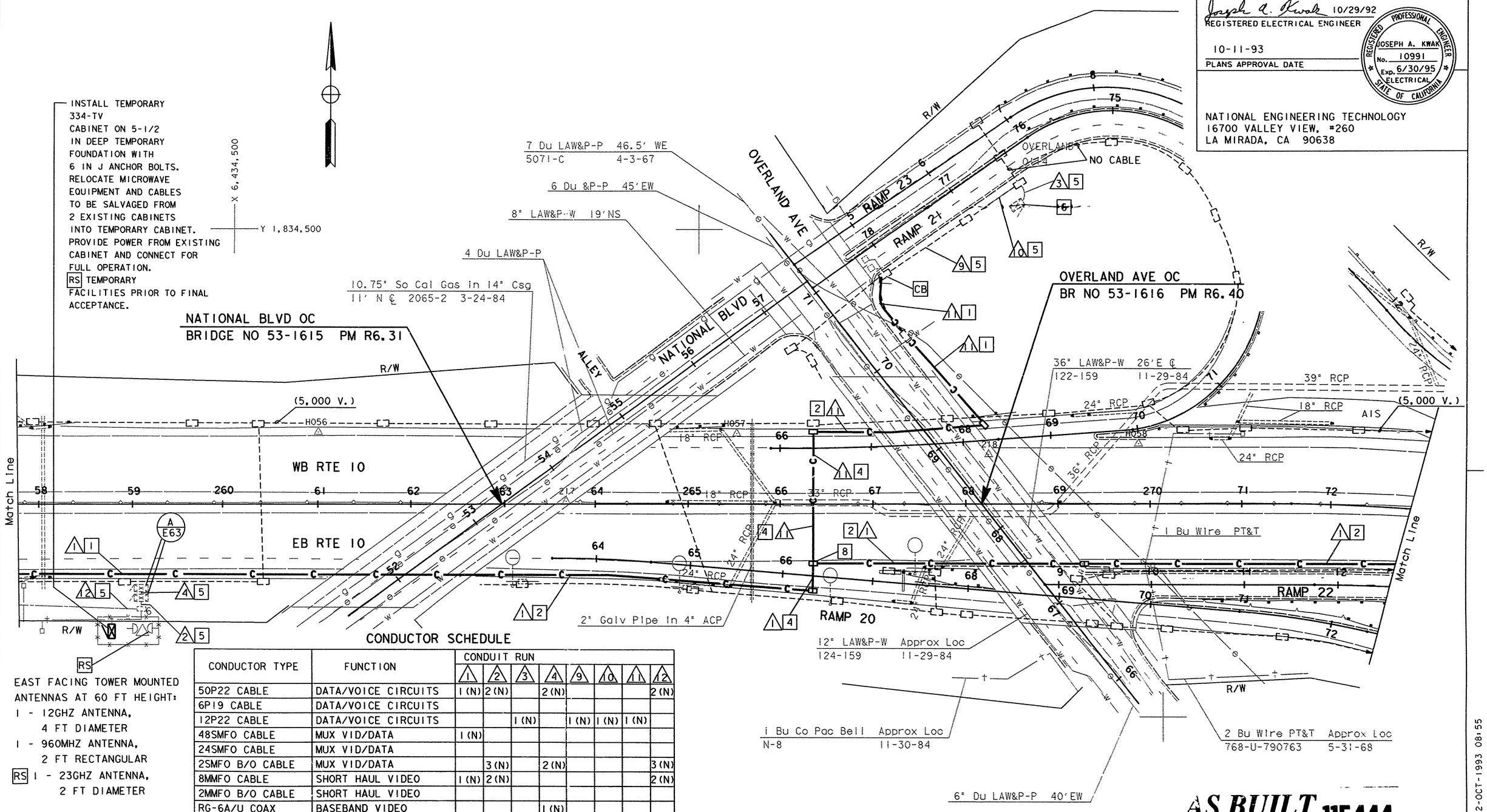
Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW, #260
LA MIRADA, CA 90638

INSTALL TEMPORARY 334-TV CABINET ON 5-1/2 IN DEEP TEMPORARY FOUNDATION WITH 6 IN J ANCHOR BOLTS. RELOCATE MICROWAVE EQUIPMENT AND CABLES TO BE SALVAGED FROM 2 EXISTING CABINETS INTO TEMPORARY CABINET. PROVIDE POWER FROM EXISTING CABINET AND CONNECT FOR FULL OPERATION.
RS TEMPORARY FACILITIES PRIOR TO FINAL ACCEPTANCE.



EAST FACING TOWER MOUNTED ANTENNAS AT 60 FT HEIGHT:
1 - 12GHZ ANTENNA, 4 FT DIAMETER
1 - 960MHZ ANTENNA, 2 FT RECTANGULAR
RS 1 - 23GHZ ANTENNA, 2 FT DIAMETER

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	2	3	4	9	10	11	12
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)	2 (N)		2 (N)				2 (N)
6P19 CABLE	DATA/VOICE CIRCUITS								
12P22 CABLE	DATA/VOICE CIRCUITS			1 (N)		1 (N)	1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)							
24SMFO CABLE	MUX VID/DATA								
2SMFO B/O CABLE	MUX VID/DATA		3 (N)		2 (N)				3 (N)
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)	2 (N)						2 (N)
2MMFO B/O CABLE	SHORT HAUL VIDEO								
RG-6A/U COAX	BASEBAND VIDEO				1 (N)				
27C18 CABLE	CONTROL								
#14	POWER			11			2		
#10	POWER			1					
#8	POWER			2			2		
#14 1p	DLC			13		2	4		
#19 1p	DLC								
#18 2p	EXISTING TELCO LINE			1					
1" FLEX CONDUIT									
CONDUIT SIZE		4" (N)	3"	2-3"	4"	2"	2"	2" (N)	4"

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

NOTE: FOR WORK AT NATIONAL BLVD SEE SHEETS E-63 AND E-64

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-2

DATE	REVISED BY	DESIGNED BY	DESIGN OVERSIGHT
	JK	SK	GREGORY DAMICO
	DATE REVISED	CHECKED BY	
	6/93	7/93	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

TIME PLOTTED => 22-OCT-1993 08:55
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FORM DC-OE-92-PF (REV. 3/88)
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DGN FILE => /usr/normk/P0/711544u02.dgn
CU 07387
EA 115441

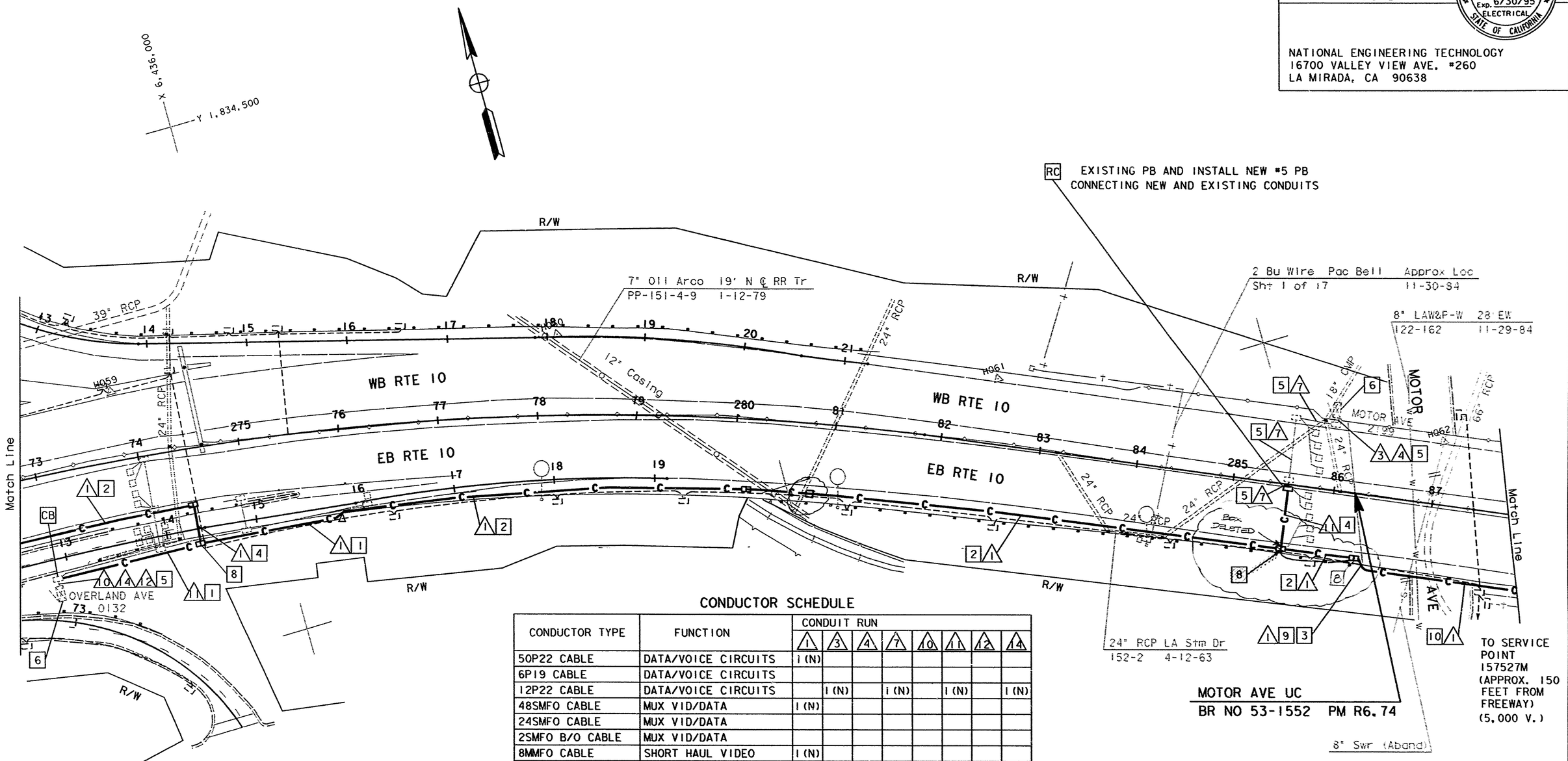
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	14	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	7	10	11	12	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)							
6P19 CABLE	DATA/VOICE CIRCUITS								
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)		1 (N)		1 (N)		1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)							
24SMFO CABLE	MUX VID/DATA								
2SMFO B/O CABLE	MUX VID/DATA								
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)							
2MMFO B/O CABLE	SHORT HAUL VIDEO								
RG-6A/U COAX	BASEBAND VIDEO								
27C18 CABLE	CONTROL								
#14	POWER					6		1	3
#10	POWER					4			3
#8	POWER			2					
#14 1p	DLC		4	5	5	4		8	
#19 1p	DLC					4		4	
#14 2p	EXISTING TELCO LINE								1
1" FLEX CONDUIT			1						
CONDUIT SIZE		4" (N)	3"	3"	2"	2"	2" (N)	2"	1½"

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07-115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-3

SCALE: 1"=50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DESIGN OVERSIGHT GREGORY DAMICO

CALCULATED/DESIGNED BY | CHECKED BY | DATE | REVISED BY | DATE REVISED

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USERNAME => lenard
DGN FILE => /usr/lenard/P0/711544u03.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	15	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

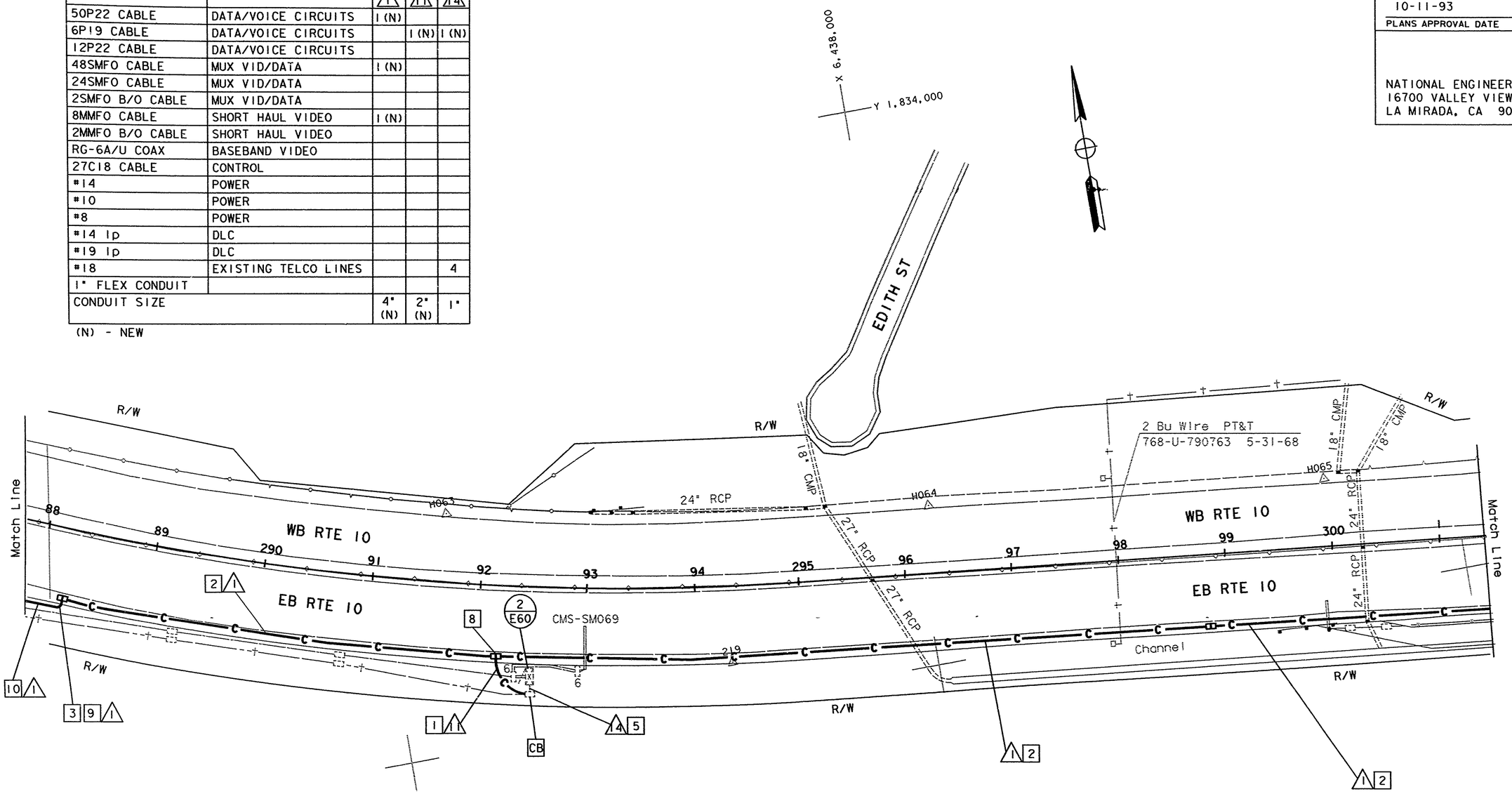
REGISTERED PROFESSIONAL ENGINEER
JOSEPH A. KWAK
No. 10991
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 11	CONDUIT RUN 14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)		
6P19 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA	1 (N)		
24SMFO CABLE	MUX VID/DATA			
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)		
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#18	EXISTING TELCO LINES			4
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	2" (N)	1"

(N) - NEW



AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-4

REVISED BY | DATE | DATE REVISED
CALCULATED/ DESIGNED BY | CHECKED BY
DESIGN OVERSIGHT
GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 08:55

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

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

USERNAME => normk
DGN FILE => /usr/normk/P0/711544u04.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	16	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

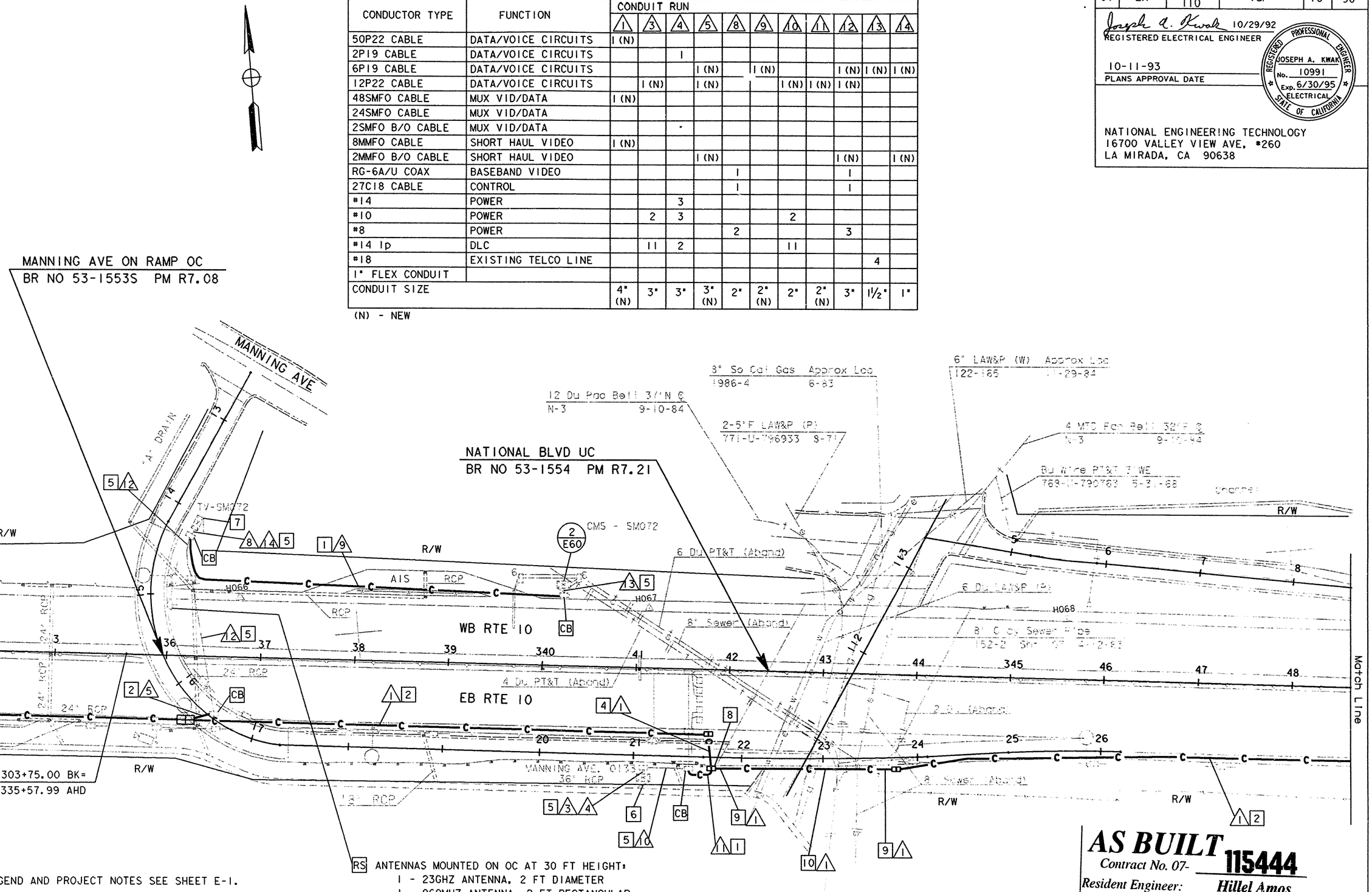
PROFESSIONAL ENGINEER — REGISTERED — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, *260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN										
		1	3	4	5	8	9	10	11	12	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)										
2P19 CABLE	DATA/VOICE CIRCUITS			1								
6P19 CABLE	DATA/VOICE CIRCUITS				1 (N)		1 (N)			1 (N)	1 (N)	1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)		1 (N)			1 (N)	1 (N)	1 (N)		
48SMFO CABLE	MUX VID/DATA	1 (N)										
24SMFO CABLE	MUX VID/DATA											
2SMFO B/O CABLE	MUX VID/DATA			·								
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)										
2MMFO B/O CABLE	SHORT HAUL VIDEO				1 (N)					1 (N)		1 (N)
RG-6A/U COAX	BASEBAND VIDEO					1				1		
27C18 CABLE	CONTROL					1				1		
#14	POWER			3								
#10	POWER		2	3				2				
#8	POWER					2				3		
#14 lp	DLC		11	2				11				
#18	EXISTING TELCO LINE										4	
1" FLEX CONDUIT												
CONDUIT SIZE		4" (N)	3"	3"	3" (N)	2"	2" (N)	2"	2" (N)	3"	1½"	1"

(N) - NEW



RS ANTENNAS MOUNTED ON OC AT 30 FT HEIGHT:
1 - 23GHZ ANTENNA, 2 FT DIAMETER
1 - 960MHZ ANTENNA, 2 FT RECTANGULAR

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- **115444**
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-5

DESIGN OVERSIGHT — GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans
CALCULATED/DESIGNED BY — CHECKED BY
DATE — REVISED BY — DATE REVISED
LAST REVISION 00-00-00
TIME PLOTTED => 20-OCT-1993 17:23

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

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

USERNAME => bobe
DGN FILE => /usr/bobe/P7/711544u05.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	17	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

12-14-92
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, *260
LA MIRADA, CA 90638

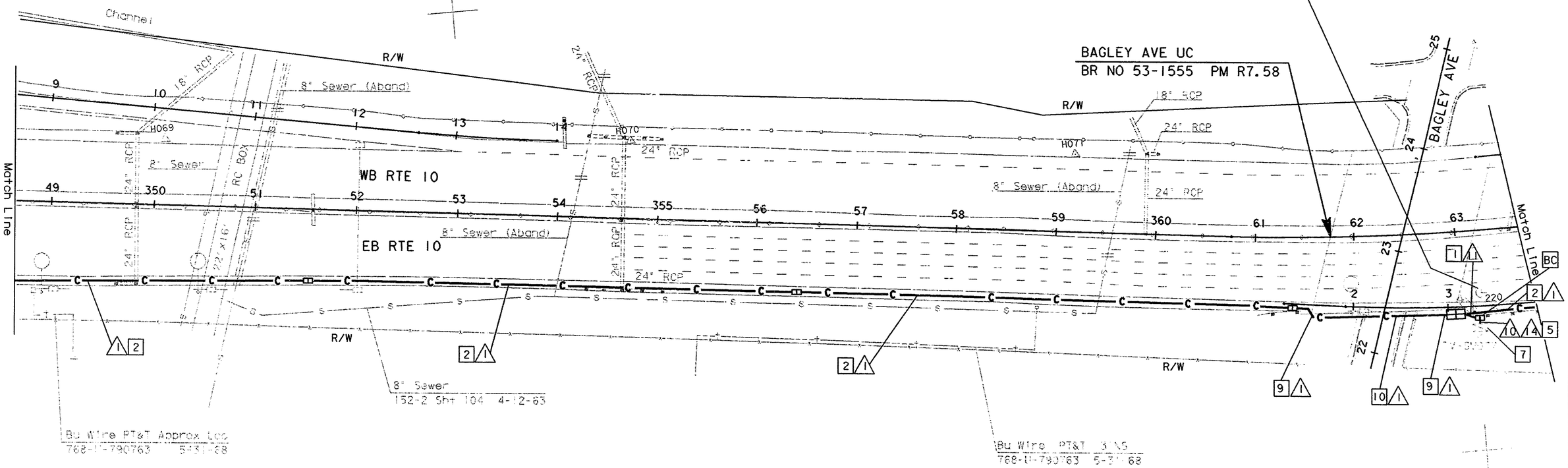
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN			
		1	10	11	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)			
6P19 CABLE	DATA/VOICE CIRCUITS			1 (N)	1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS				
48SMFO CABLE	MUX VID/DATA	1 (N)			
24SMFO CABLE	MUX VID/DATA				
2SMFO B/O CABLE	MUX VID/DATA				
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)			
2MMFO B/O CABLE	SHORT HAUL VIDEO			1 (N)	1 (N)
RG-6A/U COAX	BASEBAND VIDEO		1		
27C18 CABLE	CONTROL		1		
#14	POWER				
#10	POWER		3		
#8	POWER				
#14 2p	DLC				
#19 2p	DLC				
#14 2p	EXISTING TELCO LINE				
1" FLEX CONDUIT					
CONDUIT SIZE		4" (N)	2"	3" (N)	1"

(N) - NEW

X 6,441,000
Y 1,833,500

R1 ANTENNAS MOUNTED ON POST OF SINGLE POST OVERHEAD TRUSS SIGN AT 30 FT HEIGHT:
1 - 23 GHZ ANTENNA, 2 FT DIAMETER
1 - 960 MHZ ANTENNA, 2 FT RETANGULAR



AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-6

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — CHECKED BY
DATE — REVISED BY — DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00 — TIME PLOTTED => 20-OCT-1993 17:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	18	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

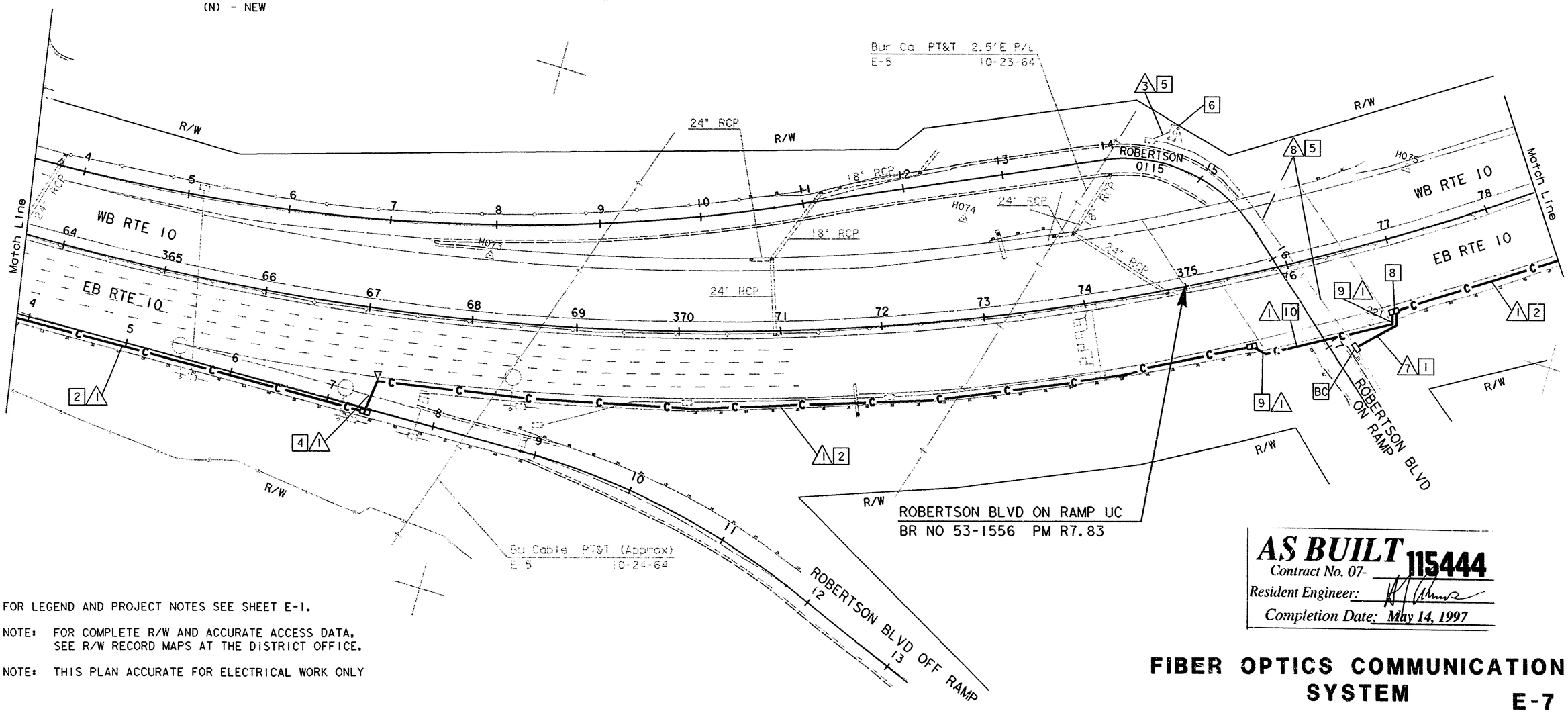
NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. *260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	7	8
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)			
6P19 CABLE	DATA/VOICE CIRCUITS				
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)			
24SMFO CABLE	MUX VID/DATA				
2SMFO B/O CABLE	MUX VID/DATA				
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)			
2MMFO B/O CABLE	SHORT HAUL VIDEO				
RG-6A/U COAX	BASEBAND VIDEO				
27C18 CABLE	CONTROL				
#14	POWER		16		7
#10	POWER		1		
#8	POWER		2		
#14 1p	DLC		16		2
#19 1p	DLC				
#18 2p	EXISTING TELCO LINE		1		
1" FLEX CONDUIT					
CONDUIT SIZE		4" (N)	2-3"	2" (N)	2"

(N) - NEW

X 6,441,500
Y 1,833,500



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT Contract No. 07-115444
Resident Engineer:
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-7

SCALE: 1"=50'

DESIGN OVERSIGHT: GREGORY DAMICO
CALCULATED/DESIGNED BY:
CHECKED BY:
DATE
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 20-OCT-1993 17:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	19	96

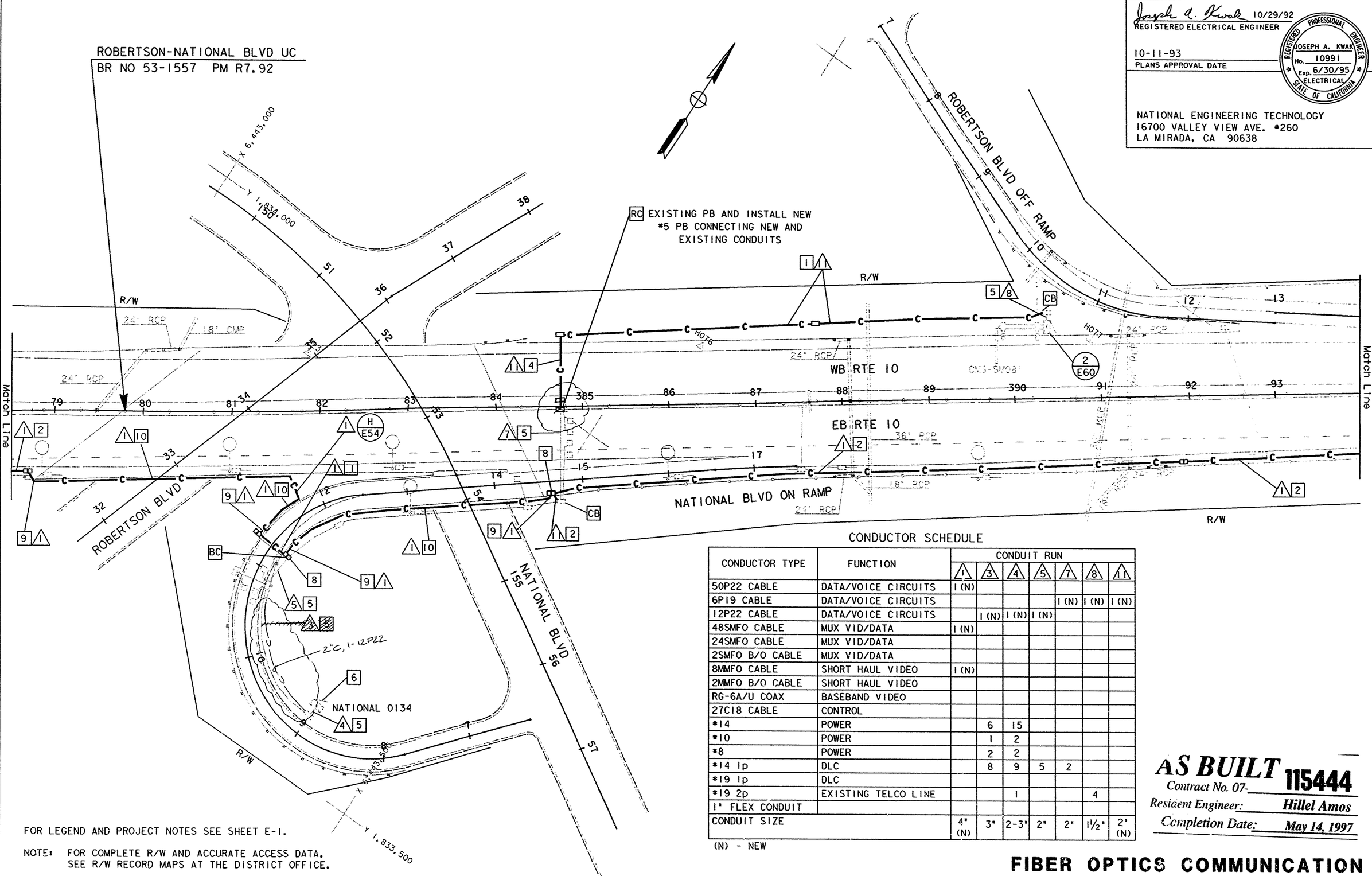
Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

ROBERTSON-NATIONAL BLVD UC
BR NO 53-1557 PM R7.92



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN						
		1	3	4	5	7	8	11
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)						
6P19 CABLE	DATA/VOICE CIRCUITS					1 (N)	1 (N)	1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)			
48SMFO CABLE	MUX VID/DATA	1 (N)						
24SMFO CABLE	MUX VID/DATA							
2SMFO B/O CABLE	MUX VID/DATA							
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)						
2MMFO B/O CABLE	SHORT HAUL VIDEO							
RG-6A/U COAX	BASEBAND VIDEO							
27C18 CABLE	CONTROL							
#14	POWER		6	15				
#10	POWER		1	2				
#8	POWER		2	2				
#14 1p	DLC		8	9	5	2		
#19 1p	DLC							
#19 2p	EXISTING TELCO LINE			1			4	
1" FLEX CONDUIT								
CONDUIT SIZE		4" (N)	3"	2-3"	2"	2"	1½"	2" (N)

(N) - NEW

AS BUILT
Contract No. 07-115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-8

SCALE: 1"=50'

CALCULATED/DESIGNED BY | DATE | REVISED BY | DATE REVISED
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U08.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 20-OCT-1993 17:22

FORM DC-OE-92-PF (REV. 3/86)

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

USERNAME => bobe
DGN FILE => /usr/bobe/P7/711544u08.dgn

CU 07387

EA 115441

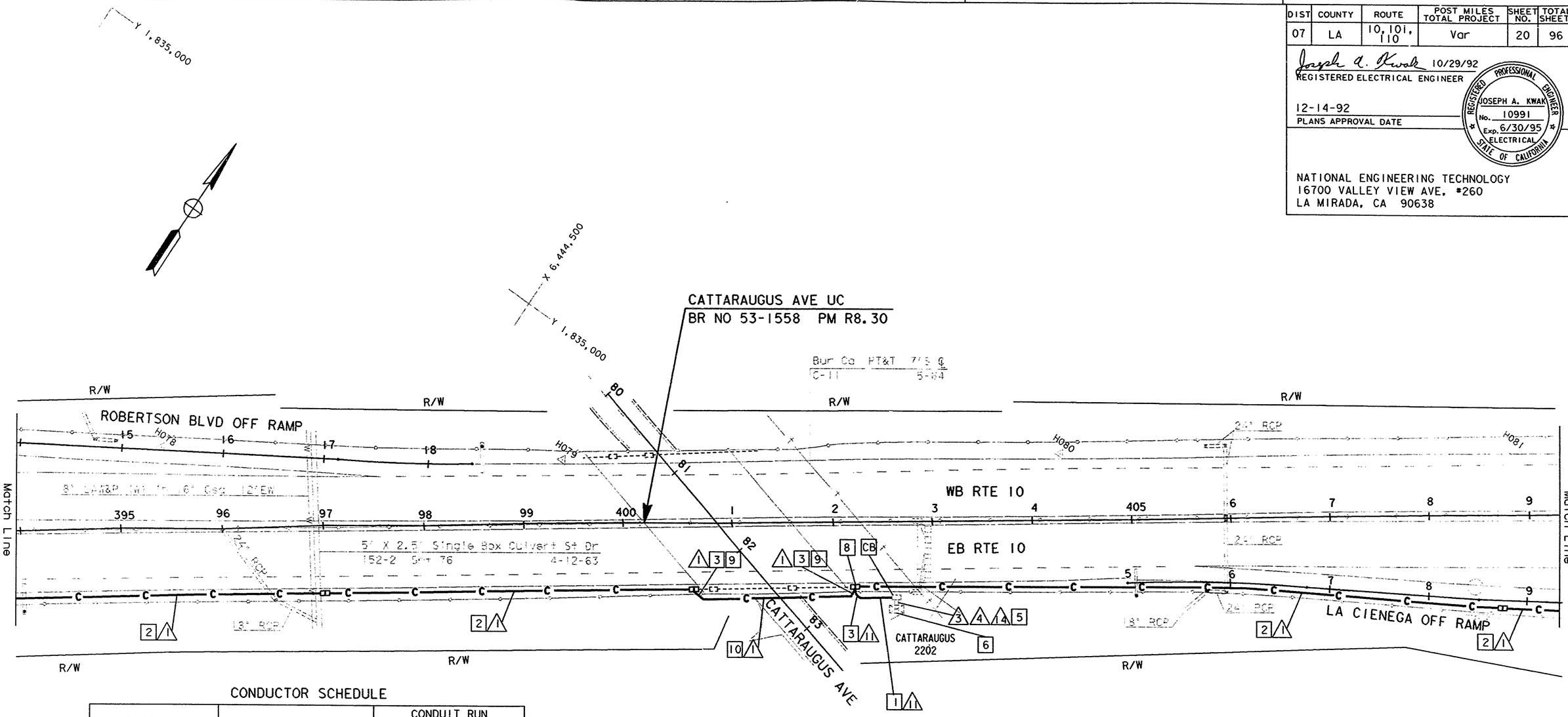
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 10i, 110	Var	20	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

12-14-92
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH A. KWAK
No. 10991
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN				
		1	3	4	11	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)				
6P19 CABLE	DATA/VOICE CIRCUITS					
12P22 CABLE	DATA/VOICE CIRCUITS			1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)				
24SMFO CABLE	MUX VID/DATA					
2SMFO B/O CABLE	MUX VID/DATA					
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)				
2MMFO B/O CABLE	SHORT HAUL VIDEO					
RG-6A/U COAX	BASEBAND VIDEO					
27C18 CABLE	CONTROL					
#14	POWER					
#10	POWER					
#8	POWER					2
#14 1p	DLC		11			
#19 1p	DLC					
#19 1p	EXISTING TELCO LINE		1			
1" FLEX CONDUIT				1		
CONDUIT SIZE		4" (N)	3"	3"	2" (N)	1"

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA. SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

X 6,445,500
Y 1,835,000

FIBER OPTICS COMMUNICATION SYSTEM

E-9

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U09.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 26-OCT-1993 12:26

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

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

USERNAME => bobe
DGN FILE => /usr/bobe/P7/711544u09.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	var	21	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

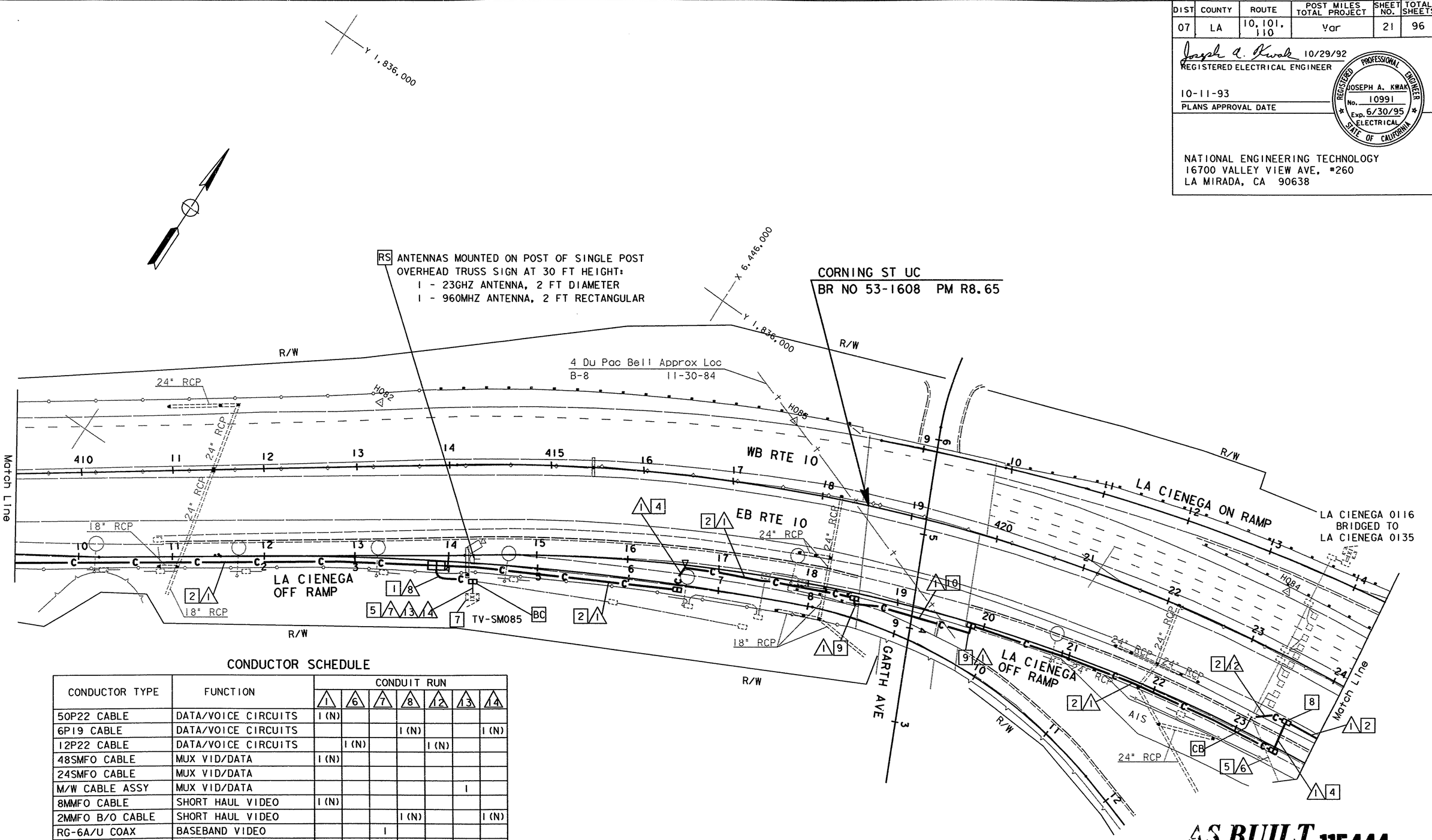
DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U10.DGN EBASCO 10/22/92



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	6	7	8	12	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)						
6P19 CABLE	DATA/VOICE CIRCUITS				1 (N)			1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)			1 (N)		
48SMFO CABLE	MUX VID/DATA	1 (N)						
24SMFO CABLE	MUX VID/DATA							
M/W CABLE ASSY	MUX VID/DATA						1	
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)						
2MMFO B/O CABLE	SHORT HAUL VIDEO				1 (N)			1 (N)
RG-6A/U COAX	BASEBAND VIDEO			1				
27C18 CABLE	CONTROL			1				
#14	POWER							
#10	POWER			3				
#8	POWER							
#14 1p	DLC		6					
#19 1p	DLC							
#19 2p	EXISTING TELCO LINE		1					
1" FLEX CONDUIT								
CONDUIT SIZE		4" (N)	2"	2"	3" (N)	2" (N)	2"	1"

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-10

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 16:02

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

USERNAME => lenard
DGN FILE => /usr/lenard/PO/711544u10.dg

CU 07387

EA 115441

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	22	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

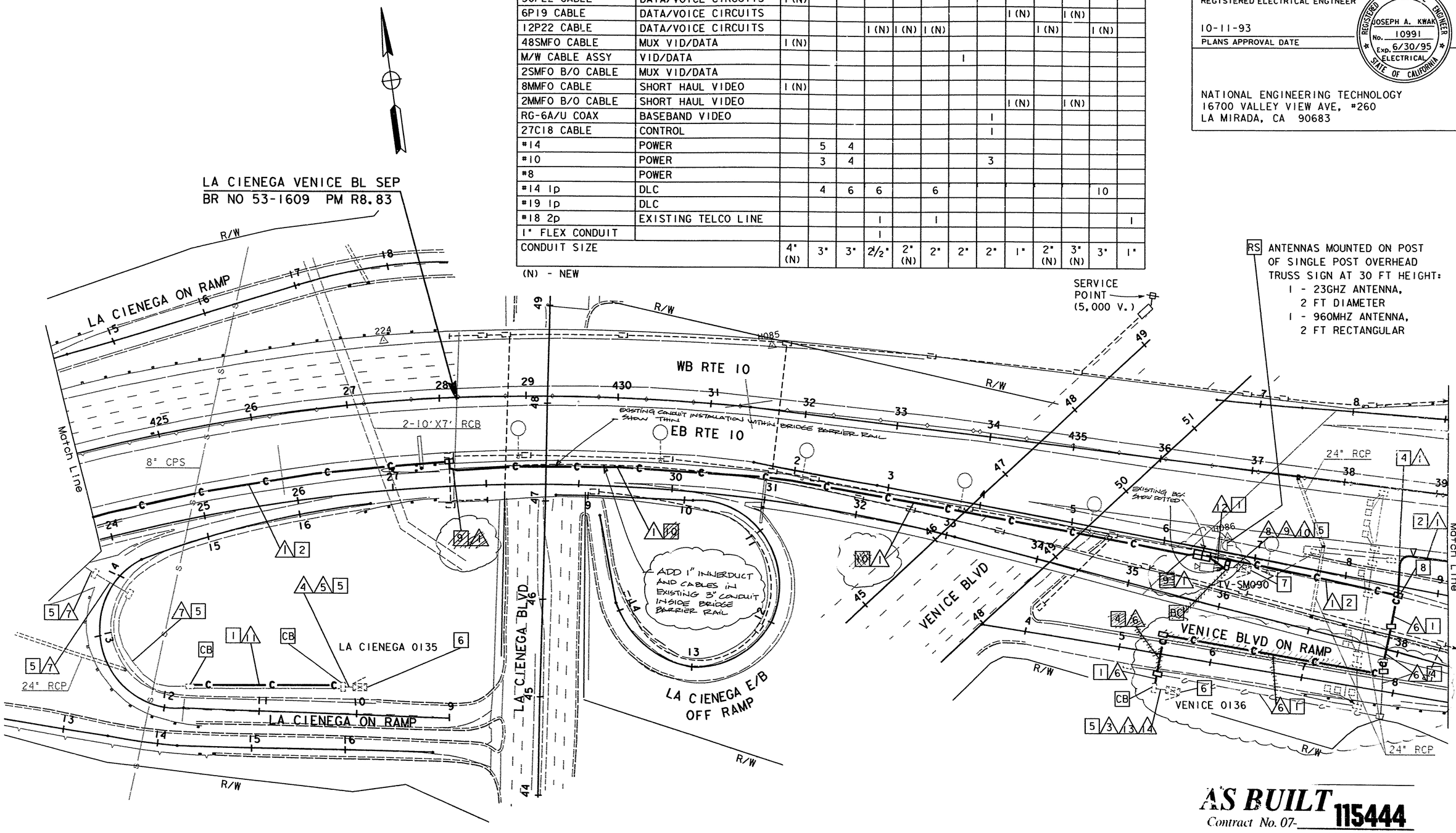
NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, #260
LA MIRADA, CA 90683

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)												
6P19 CABLE	DATA/VOICE CIRCUITS									1 (N)		1 (N)		
12P22 CABLE	DATA/VOICE CIRCUITS				1 (N)	1 (N)	1 (N)				1 (N)		1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)												
M/W CABLE ASSY	VID/DATA							1						
2SMFO B/O CABLE	MUX VID/DATA													
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)												
2MMFO B/O CABLE	SHORT HAUL VIDEO									1 (N)		1 (N)		
RG-6A/U COAX	BASEBAND VIDEO								1					
27C18 CABLE	CONTROL								1					
#14	POWER		5	4										
#10	POWER		3	4					3					
#8	POWER													
#14 1p	DLC		4	6	6		6						10	
#19 1p	DLC													
#18 2p	EXISTING TELCO LINE				1		1							1
1" FLEX CONDUIT					1									
CONDUIT SIZE		4" (N)	3"	3"	2½"	2" (N)	2"	2"	2"	1"	2" (N)	3" (N)	3"	1"

(N) - NEW

RS ANTENNAS MOUNTED ON POST OF SINGLE POST OVERHEAD TRUSS SIGN AT 30 FT HEIGHT:
1 - 23GHZ ANTENNA, 2 FT DIAMETER
1 - 960MHZ ANTENNA, 2 FT RECTANGULAR



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-11

DESIGN OVERSIGHT — STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
GREGORY DAMICO
Caltrans
DATE | REVISED BY | DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY
711544ull.DGN EBASCO 10/23/92
LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 16:03

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => lenard
DGN FILE => /usr/lenard/P0/711544ull.dg
CU 07387
EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	23	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	7	8	9	10	12	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)											
6P19 CABLE	DATA/VOICE CIRCUITS												
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)		1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)											
24SMFO CABLE	MUX VID/DATA												
2SMFO B/O CABLE	MUX VID/DATA												
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)											
2MMFO B/O CABLE	SHORT HAUL VIDEO												
RG-6A/U COAX	BASEBAND VIDEO												
27C18 CABLE	CONTROL												
#14	POWER			7									
#10	POWER			2									
#14 1p	DLC		2	4									
#19 1p	DLC		9		7		3	5	9	10	11	2	9
#19 2p	EXISTING TELCO LINE											1	
1" FLEX CONDUIT													
CONDUIT SIZE		4" (N)	3"	3"	2"	2" (N)	2"	2"	2"	2"	2"	2"	2"

(N) - NEW

SERVICE POINT (5,000 V.)

R/W

TO VENICE BLVD

Bu Ca PT&T 3'S of R/W
768-790764 6-68

BALLONA CREEK BR
BR NO 53-1579 PM R9.12

18" CMP

RAMP 33

24" CMP

FAIRFAX 0117

FAIRFAX AVE. ON RAMP

FAIRFAX AVE OFF RAMP

(5,000 V.)

WB RTE 10

EB RTE 10

FAIRFAX AVE OFF RAMP

24" RCP

VENICE BLVD ON RAMP

VENICE BLVD OFF RAMP

AIS

24" RCP

Match Line

Match Line

Bu Ca PT&T Approx Loc
768-790764 6-68

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-12

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544ul2.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 10:00

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/PO/711544ul2.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	24	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

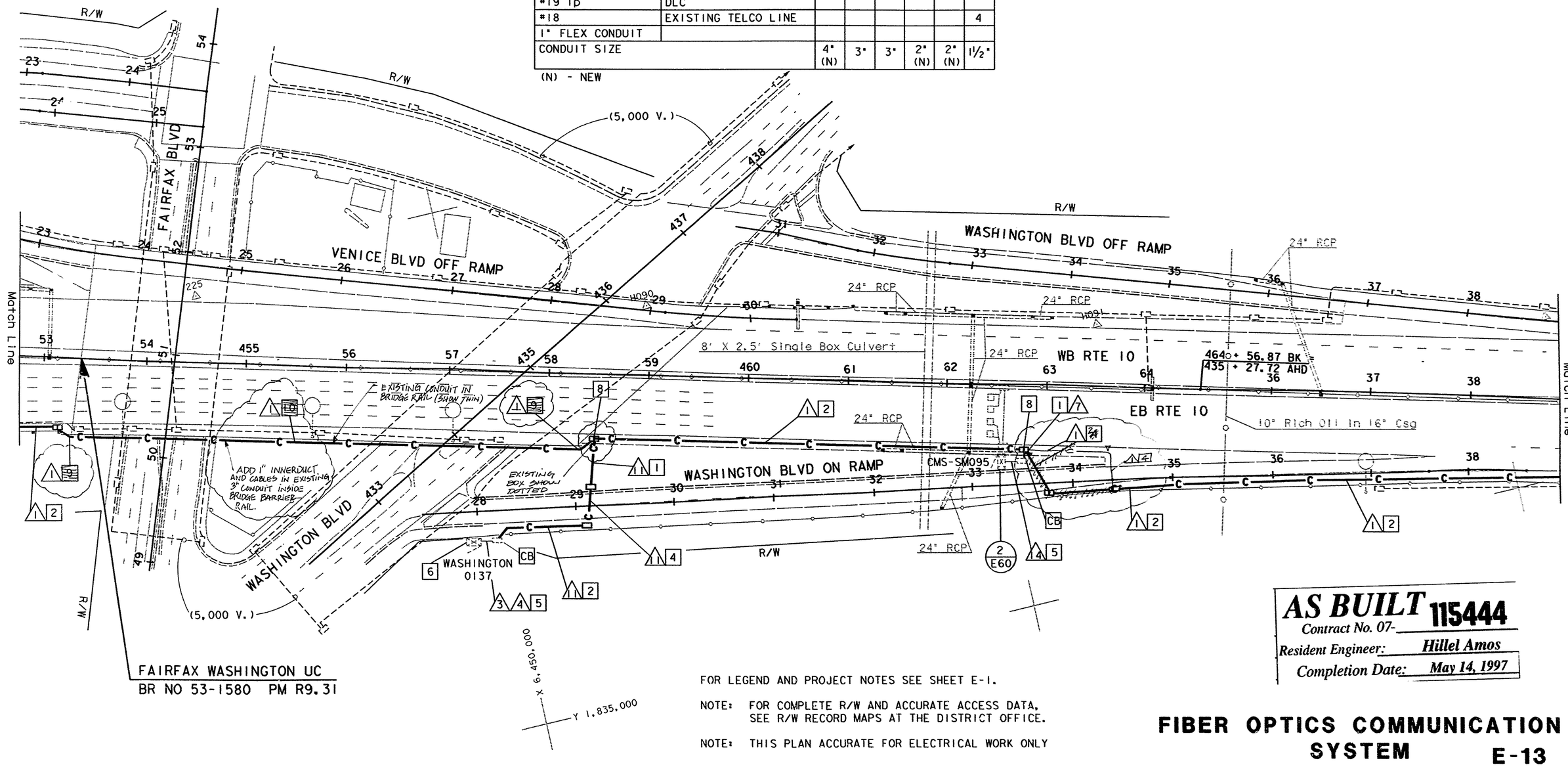
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90683

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	7	11	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)					
6P19 CABLE	DATA/VOICE CIRCUITS				1 (N)		1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS			1 (N)		1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)					
24SMFO CABLE	MUX VID/DATA						
2SMFO B/O CABLE	MUX VID/DATA						
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)					
2MMFO B/O CABLE	SHORT HAUL VIDEO						
RG-6A/U COAX	BASEBAND VIDEO						
27C18 CABLE	CONTROL						
#14	POWER		6				
#10	POWER		2	1			
#8	POWER						
#14 lp	DLC		5	8			
#19 lp	DLC						
#18	EXISTING TELCO LINE						4
1" FLEX CONDUIT							
CONDUIT SIZE		4" (N)	3"	3"	2" (N)	2" (N)	1½"

(N) - NEW



FAIRFAX WASHINGTON UC
BR NO 53-1580 PM R9.31

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-13

SCALE: 1"=50'

DESIGN OVERSIGHT: GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
CALCULATED/DESIGNED BY
CHECKED BY
DATE
REVISED BY
DATE REVISED
711544ul3.DGN EBASCO 10/22/92
LAST REVISION 00-00-00
TIME PLOTTED => 26-OCT-1993 12:13

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => lenard
DGN FILE => /usr/lenard/PO/711544ul3.dg
CU 07387
EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	25	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

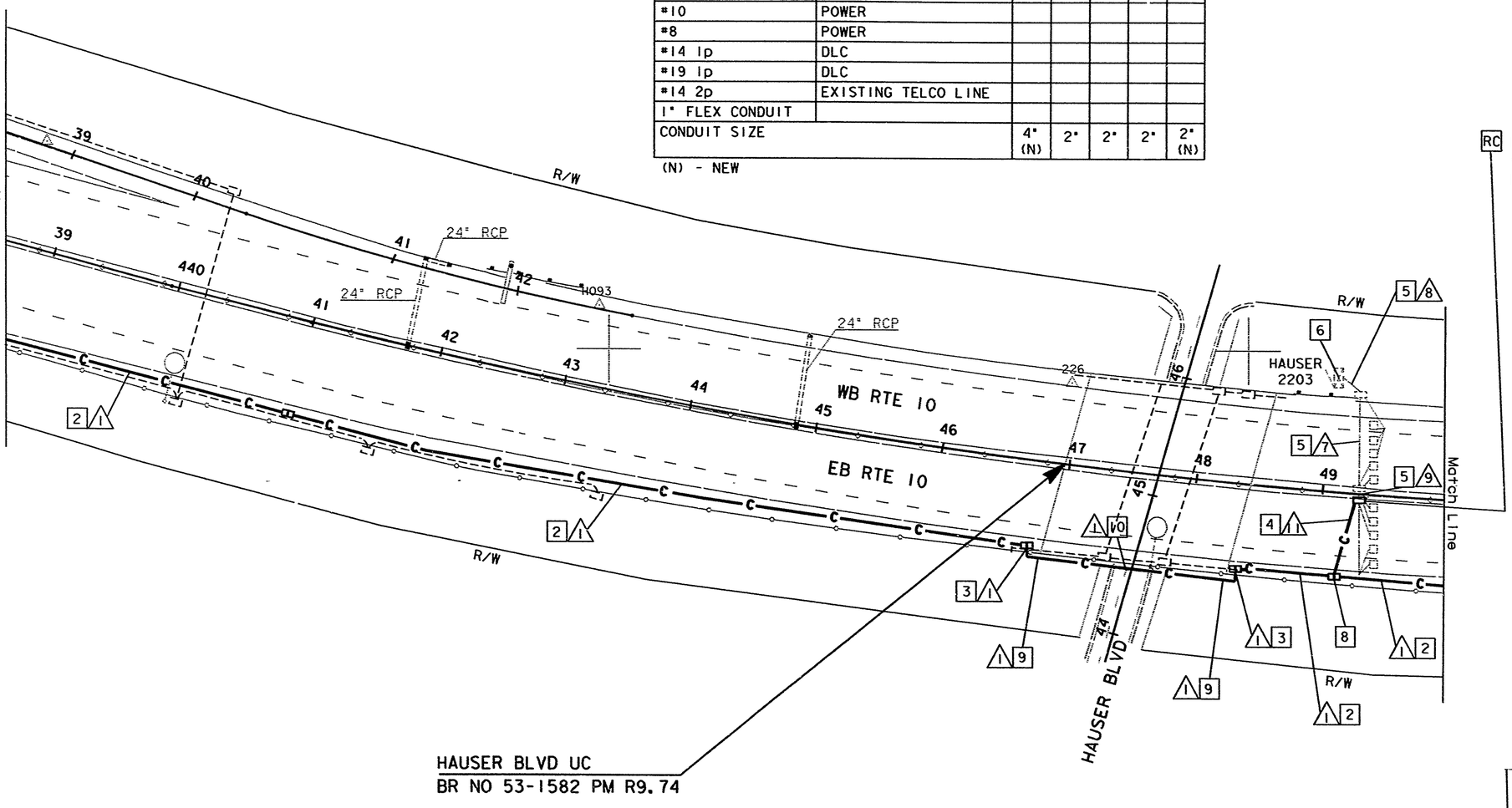
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN				
		1	7	8	9	11
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)				
6P19 CABLE	DATA/VOICE CIRCUITS					
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)	1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)				
24SMFO CABLE	MUX VID/DATA					
2SMFO B/O CABLE	MUX VID/DATA					
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)				
2MMFO B/O CABLE	SHORT HAUL VIDEO					
RG-6A/U COAX	BASEBAND VIDEO					
27C18 CABLE	CONTROL					
#14	POWER		7	10	5	
#10	POWER					
#8	POWER					
#14 1p	DLC					
#19 1p	DLC					
#14 2p	EXISTING TELCO LINE					
1" FLEX CONDUIT						
CONDUIT SIZE		4" (N)	2"	2"	2"	2" (N)

(N) - NEW



RC EXISTING PB AND INSTALL NEW #5 PB CONNECTING NEW AND EXISTING CONDUITS

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

E-14

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT
GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U14.DGN EBASCO 10/27/92
TIME PLOTTED => 22-OCT-1993 10:00
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 => lenard
DGN FILE => /usr/lenard/PO/711544u14.dg
CU 07387
EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	26	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

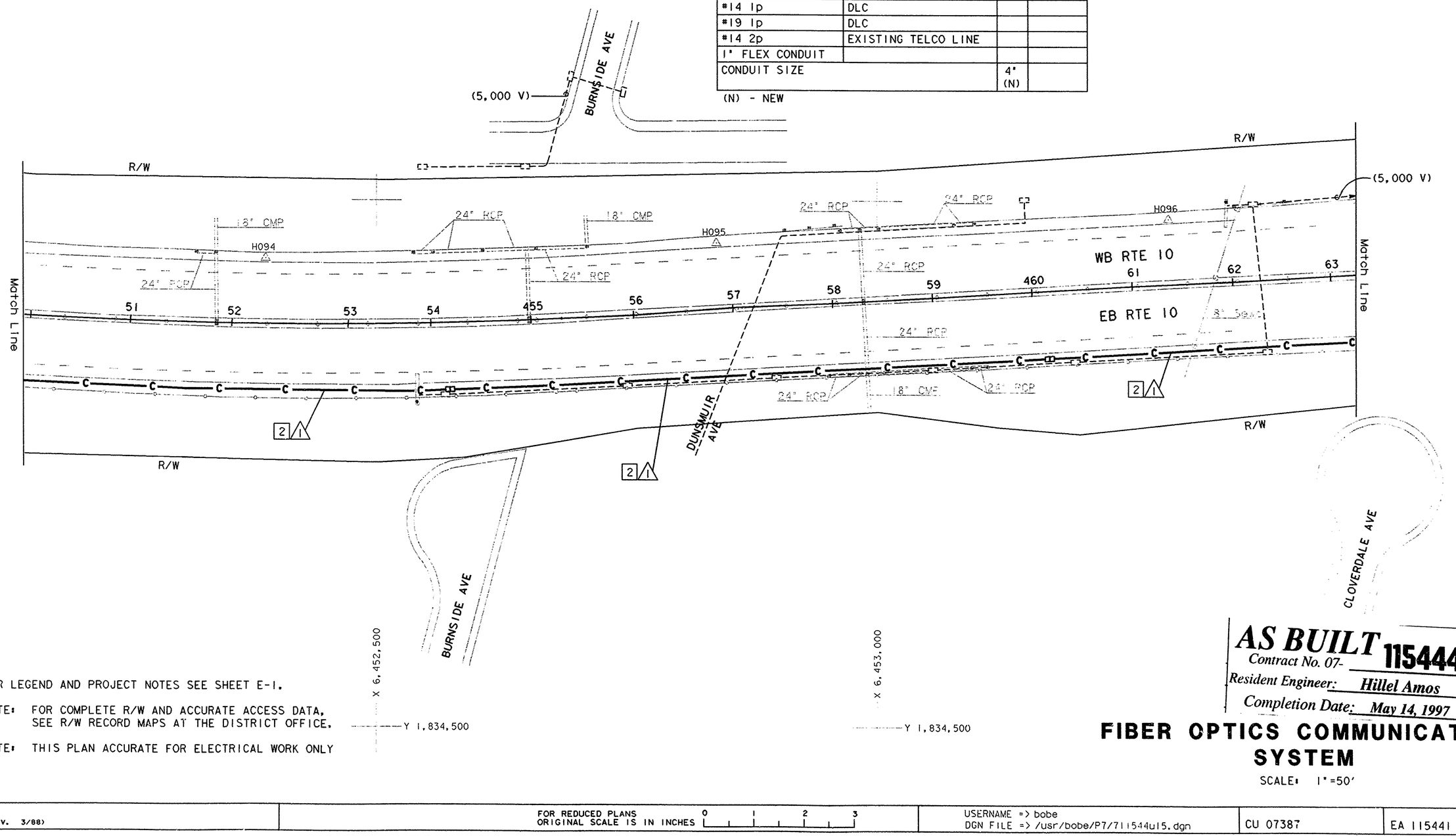
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN ⚠1	
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)	
6P19 CABLE	DATA/VOICE CIRCUITS		
12P22 CABLE	DATA/VOICE CIRCUITS		
48SMFO CABLE	MUX VID/DATA	1 (N)	
24SMFO CABLE	MUX VID/DATA		
2SMFO B/O CABLE	MUX VID/DATA		
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)	
2MMFO B/O CABLE	SHORT HAUL VIDEO		
RG-6A/U COAX	BASEBAND VIDEO		
27C18 CABLE	CONTROL		
#14	POWER		
#10	POWER		
#8	POWER		
#14 1p	DLC		
#19 1p	DLC		
#14 2p	EXISTING TELCO LINE		
1" FLEX CONDUIT			
CONDUIT SIZE		4" (N)	

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-15

DESIGN OVERSIGHT: GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
CALCULATED/DESIGNED BY | CHECKED BY
DATE | REVISED BY | DATE REVISED
711544ul5.DGN EBASCO 10/22/92
LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 18:23

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => bobe
DGN FILE => /usr/bobe/P7/711544ul5.dgn
CU 07387
EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	27	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

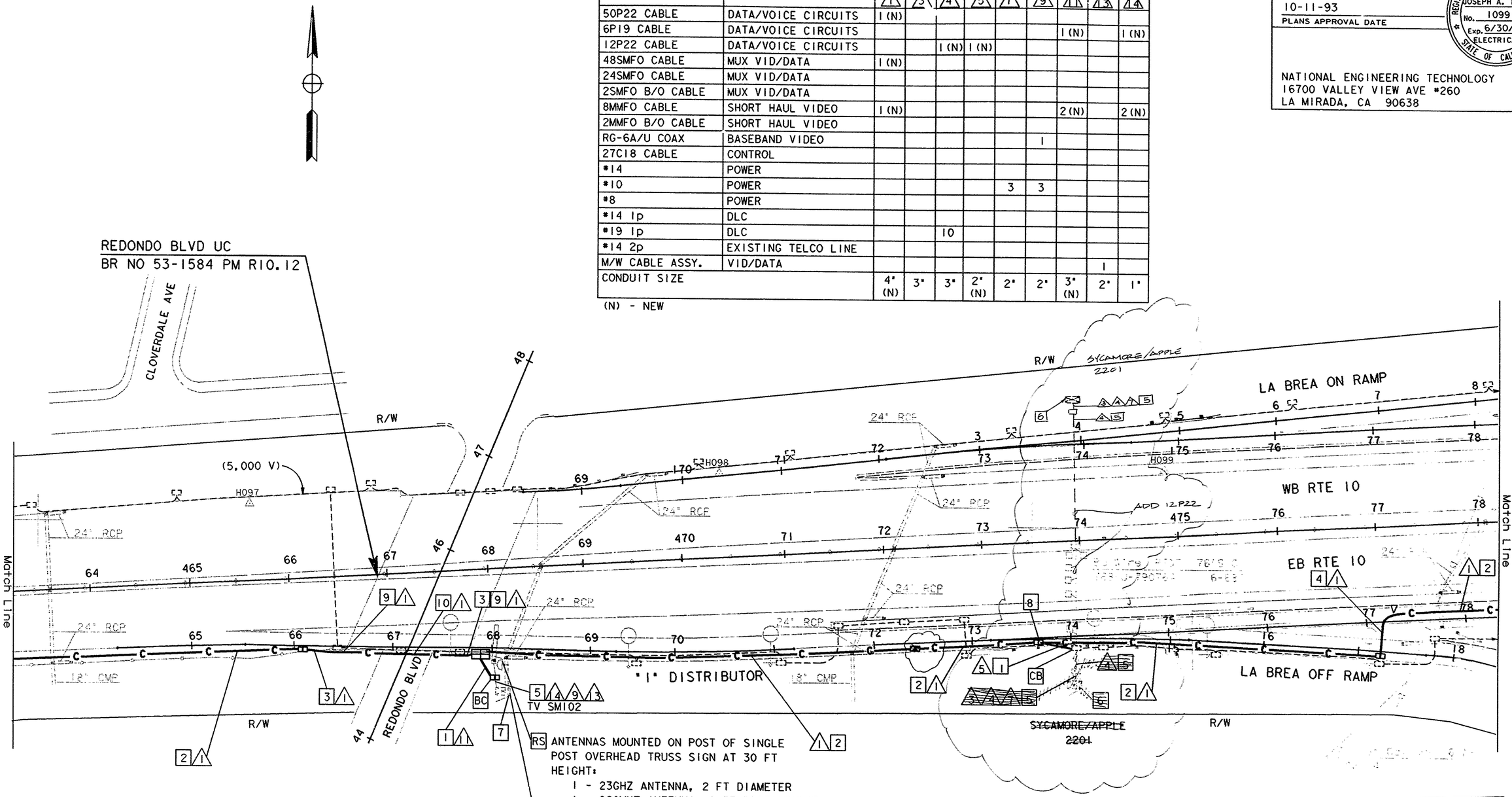
REGISTERED PROFESSIONAL ENGINEER JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	7	9	11	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)								
6P19 CABLE	DATA/VOICE CIRCUITS							1 (N)		1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS			1 (N)	1 (N)					
48SMFO CABLE	MUX VID/DATA	1 (N)								
24SMFO CABLE	MUX VID/DATA									
2SMFO B/O CABLE	MUX VID/DATA									
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)						2 (N)		2 (N)
2MMFO B/O CABLE	SHORT HAUL VIDEO									
RG-6A/U COAX	BASEBAND VIDEO						1			
27C18 CABLE	CONTROL									
*14	POWER									
*10	POWER					3	3			
*8	POWER									
*14 1p	DLC									
*19 1p	DLC			10						
*14 2p	EXISTING TELCO LINE									
M/W CABLE ASSY.	VID/DATA								1	
CONDUIT SIZE		4" (N)	3"	3"	2" (N)	2"	2"	3" (N)	2"	1"

(N) - NEW



RS ANTENNAS MOUNTED ON POST OF SINGLE POST OVERHEAD TRUSS SIGN AT 30 FT HEIGHT:
1 - 23GHZ ANTENNA, 2 FT DIAMETER
1 - 960MHZ ANTENNA, 2 FT RECTANGULAR

FIBERS NOT TERMINATED ON VIDEO TRANSMITTER SHALL BE CONNECTORIZED, CAPPED AND NEATLY DRESSED FOR STORAGE

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer:
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-16

SCALE: 1"=50'

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CALCULATED/ DESIGNED BY
CHECKED BY

DATE	REVISED BY	DATE REVISED

711544U16.DGN EBASCO 10/22/92

TIME PLOTTED => 21-OCT-1993 18:23

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 => bobe
DGN FILE => /usr/bobe/P7/711544u16.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	28	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

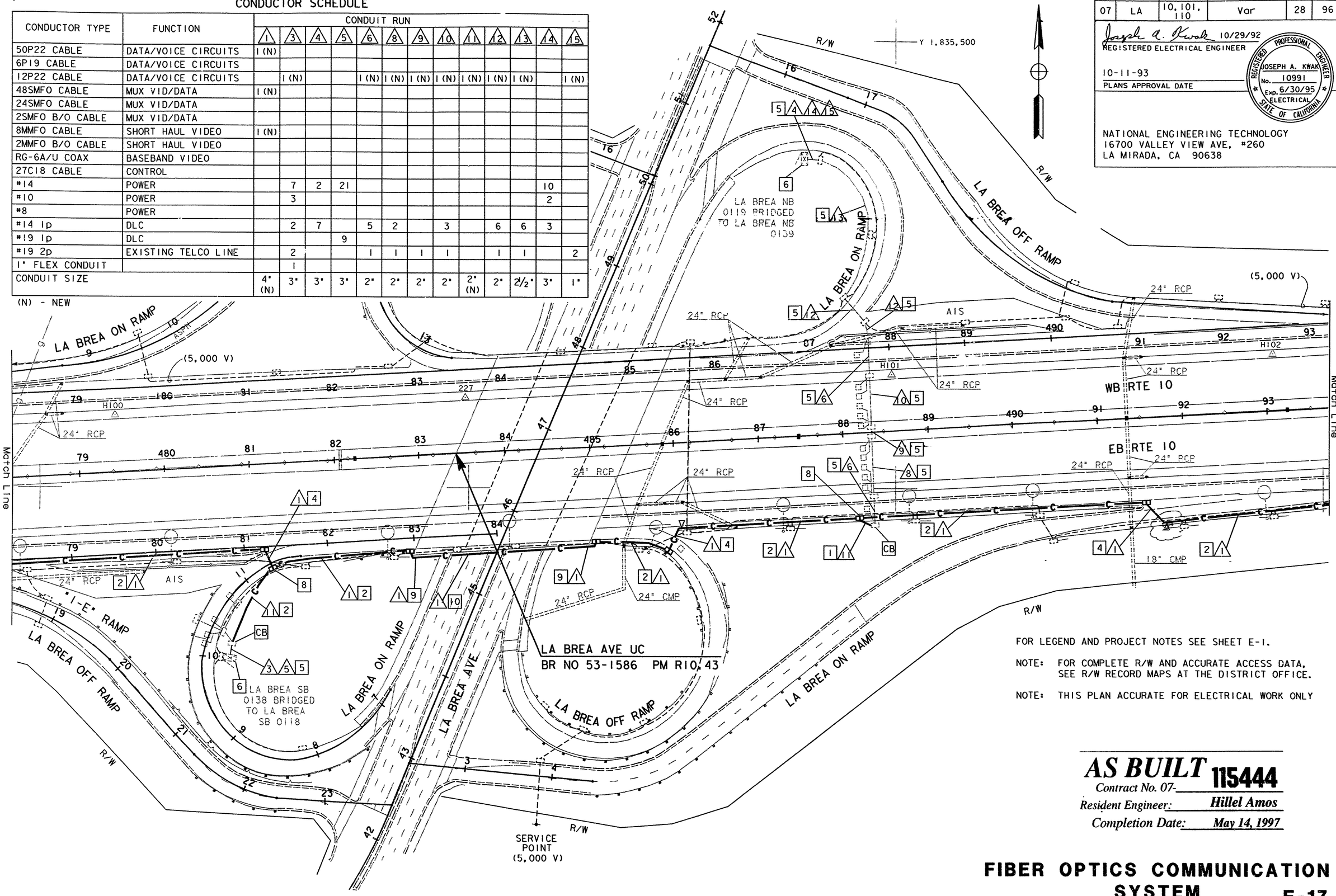
REGISTERED PROFESSIONAL ENGINEER JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	8	9	10	11	12	13	14	15
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)												
6P19 CABLE	DATA/VOICE CIRCUITS													
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)			1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)												
24SMFO CABLE	MUX VID/DATA													
2SMFO B/O CABLE	MUX VID/DATA													
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)												
2MMFO B/O CABLE	SHORT HAUL VIDEO													
RG-6A/U COAX	BASEBAND VIDEO													
27C18 CABLE	CONTROL													
#14	POWER		7	2	21								10	
#10	POWER		3										2	
#8	POWER													
#14 1p	DLC		2	7		5	2		3		6	6	3	
#19 1p	DLC				9									
#19 2p	EXISTING TELCO LINE		2			1	1	1	1		1	1		2
1" FLEX CONDUIT			1											
CONDUIT SIZE		4" (N)	3"	3"	3"	2"	2"	2"	2"	2" (N)	2"	2½"	3"	1"

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-17

SCALE: 1"=50'

DESIGN OVERSIGHT: GREGORY DAMICO
CALCULATED/DESIGNED BY | CHECKED BY | DATE | REVISED BY | DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
711544U17.DGN EBASCO 10/21/92
TIME PLOTTED => 22-OCT-1993 12:35
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 => bobs
DGN FILE => /usr/bobs/P20/711544u17.dgn
CU 07387
EA 115441

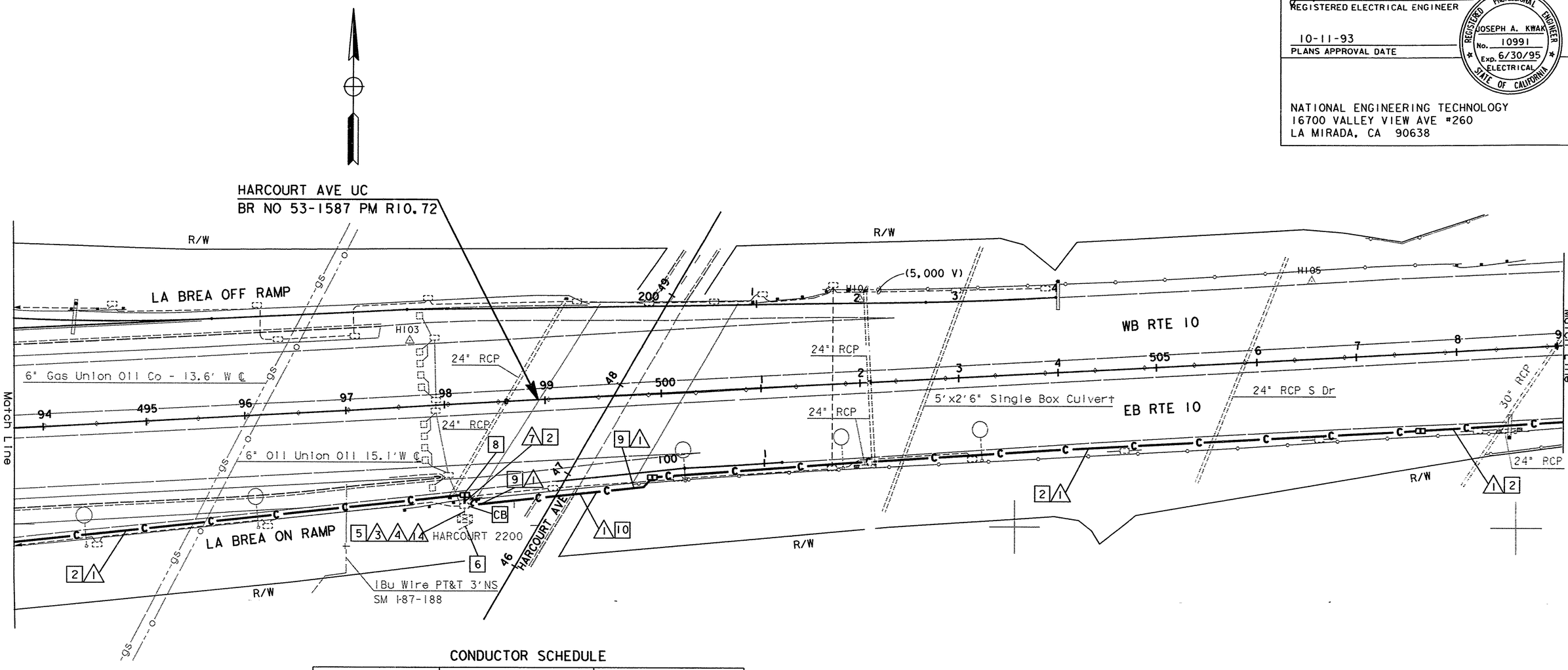
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	29	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

10-11-93
PLANS APPROVAL DATE

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN				
		/1\	/3\	/4\	/7\	/14\
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)				
6P19 CABLE	DATA/VOICE CIRCUITS					
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)		1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)				
24SMFO CABLE	MUX VID/DATA					
2SMFO B/O CABLE	MUX VID/DATA					
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)				
2MMFO B/O CABLE	SHORT HAUL VIDEO					
RG-6A/U COAX	BASEBAND VIDEO					
27C18 CABLE	CONTROL					
#14	POWER					
#10	POWER					
#8	POWER					2
#14 1p	DLC		5	5		
#19 1p	DLC					
#19 2p	EXISTING TELCO LINE			1		1
1" FLEX CONDUIT				1		
CONDUIT SIZE		4" (N)	3"	3"	2" (N)	1"

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- **115444**
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-18

DESIGN OVERSIGHT
GREGORY DAMICO

CALCULATED/ DESIGNED BY
CHECKED BY

DATE REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U18.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 09:00

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN						
		1	3	4	7	8	12	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)						
6P19 CABLE	DATA/VOICE CIRCUITS							
12P22 CABLE	DATA/VOICE CIRCUITS			1 (N)	1 (N)	1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)						
24SMFO CABLE	MUX VID/DATA							
2SMFO B/O CABLE	MUX VID/DATA							
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)						
2MMFO B/O CABLE	SHORT HAUL VIDEO							
RG-6A/U COAX	BASEBAND VIDEO							
27C18 CABLE	CONTROL							
#14	POWER							
#10	POWER							
#8	POWER							2
#14 lp	DLC		5	5	3	5		
#19 lp	DLC							
#14 lp	EXISTING TELCO LINE							
1" FLEX CONDUIT			1					
CONDUIT SIZE		4" (N)	3"	3"	2"	2"	2" (N)	1"

(N) - NEW

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	30	96

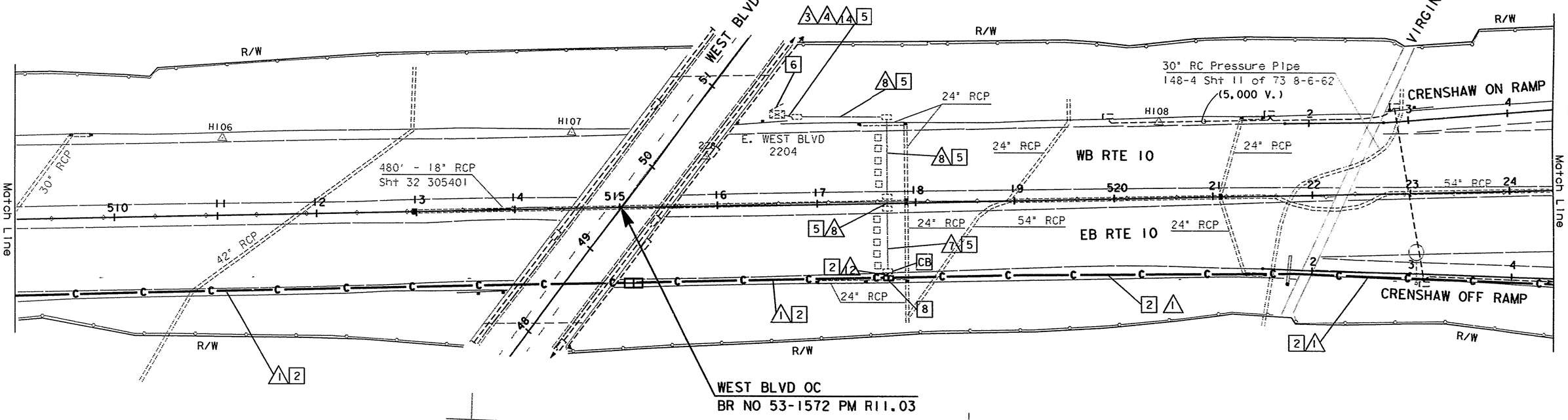
Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK No. 10991 Exp. 6/30/95 ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

X 6,459,000
Y 1,835,500



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07-115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-19

SCALE: 1"=50'

DESIGN OVERSIGHT: GREGORY DAMICO
CALCULATED/DESIGNED BY:
CHECKED BY:
DATE REVISED BY:
DATE REVISED:
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
711544U19.DGN EBASCO 10/22/92
TIME PLOTTED => 22-OCT-1993 12:12
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 => lenard
DGN FILE => /usr/lenard/PO/711544u19.dg
CU 07387
EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	31	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

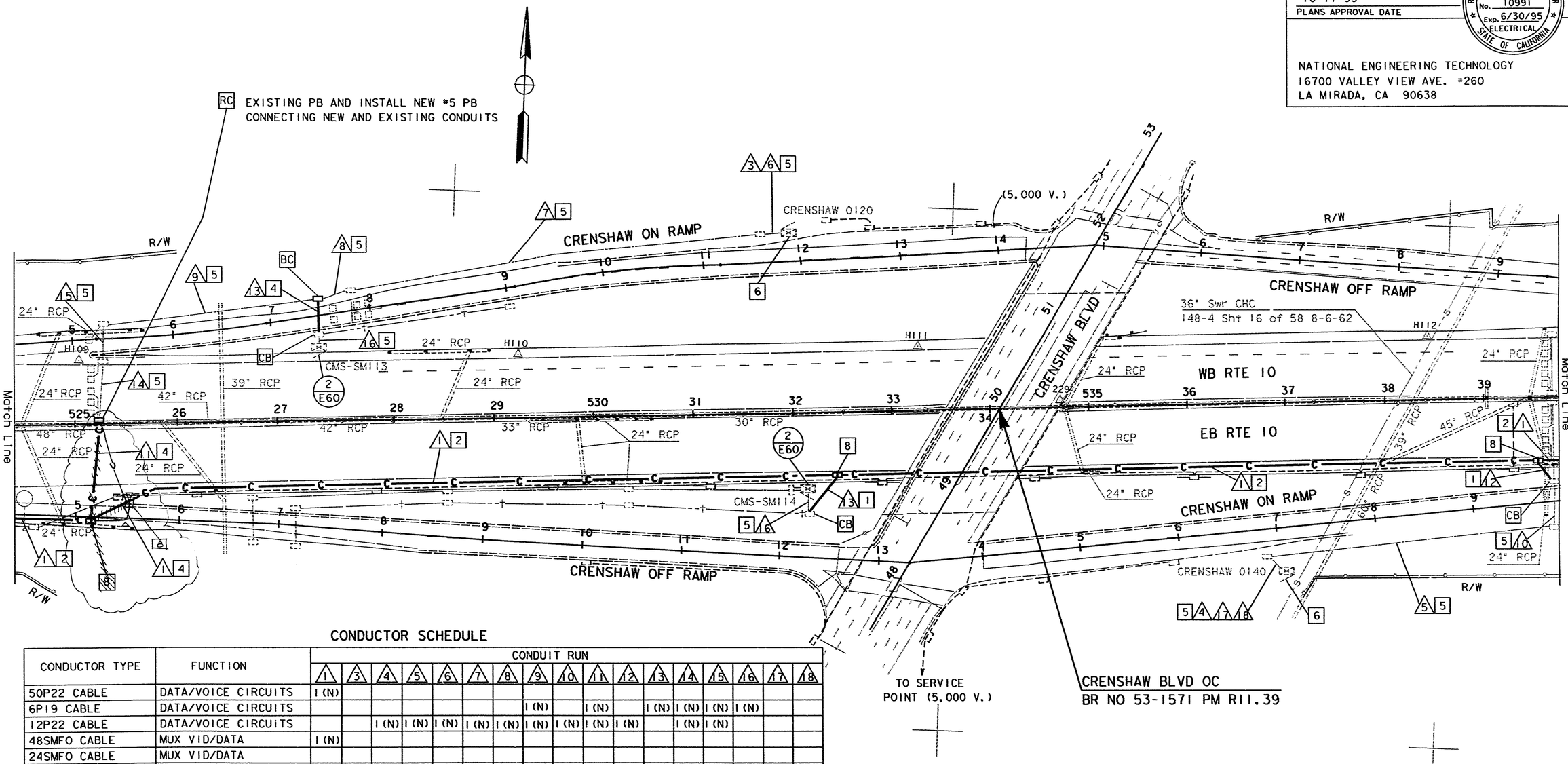
NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)																
6P19 CABLE	DATA/VOICE CIRCUITS								1 (N)		1 (N)		1 (N)	1 (N)	1 (N)	1 (N)		
12P22 CABLE	DATA/VOICE CIRCUITS			1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)	1 (N)			
48SMFO CABLE	MUX VID/DATA	1 (N)																
24SMFO CABLE	MUX VID/DATA																	
2SMFO B/O CABLE	MUX VID/DATA																	
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)																
2MMFO B/O CABLE	SHORT HAUL VIDEO																	
RG-6A/U COAX	BASEBAND VIDEO																	
27C18 CABLE	CONTROL																	
#14	POWER		6	5	5													
#10	POWER		2	2	2					6								
#8	POWER		1														2	
#14 1p	DLC		4	4	4	1												2
#19 1p	DLC					7	7	6	6					3	5			12
#18	EXISTING TELCO LINE															4		
1" FLEX CONDUIT						1												1
CONDUIT SIZE		4" (N)	3"	3"	2 1/2"	3"	2"	2"	2"	2"	2" (N)	2" (N)	2" (N)	1"	1 1/2"	1 1/2"	1"	3"

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-20

SCALE: 1"=50'

LAST REVISION 00-00-00

TIME PLOTTED => 21-OCT-1993 13:23

/usr/jimt/P3/711544u20.dgn 21-OCT-1993 13:23 jimt

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

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

USERNAME => jimt
DGN FILE => /usr/jimt/P3/711544u20.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
7	LA	10, 101, 110	Var	32	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

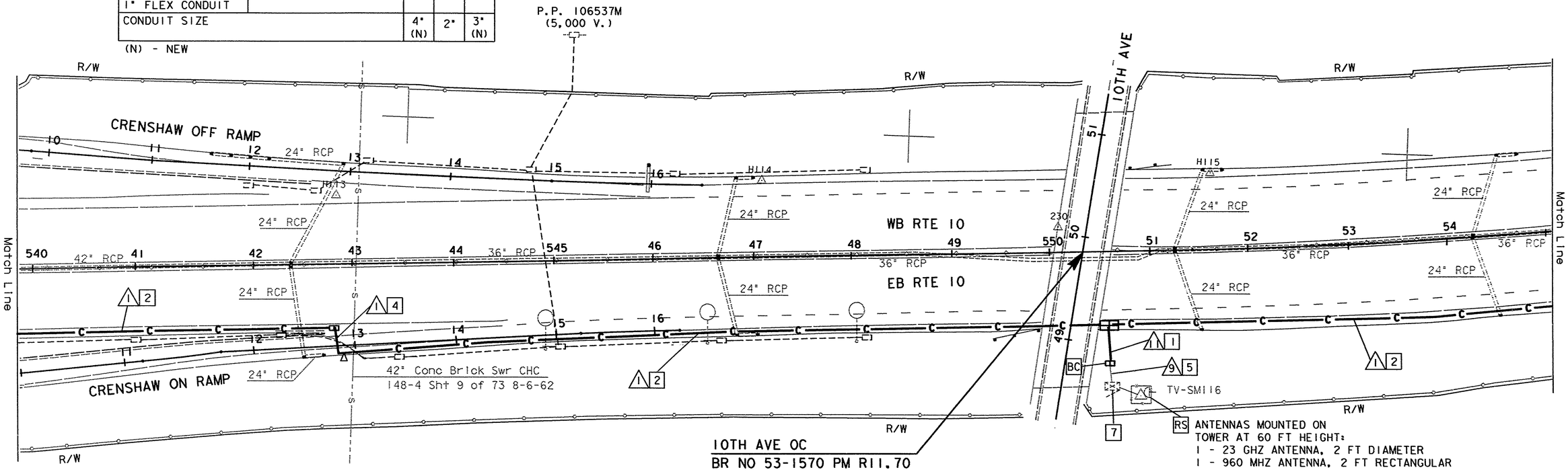
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	9	11
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)		
6P19 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA	1 (N)		
24SMFO CABLE	MUX VID/DATA			
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)		
2MMFO B/O CABLE	SHORT HAUL VIDEO		1 (N)	1 (N)
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	2"	3" (N)

(N) - NEW



X 6,462,000
Y 1,835,000

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-21

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 12:11

/usr/jlmt/P3/711544u21.dgn 21-OCT-1993 12:11 jlmt

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

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

USERNAME => jlmt
DGN FILE => /usr/jlmt/P3/711544u21.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	33	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

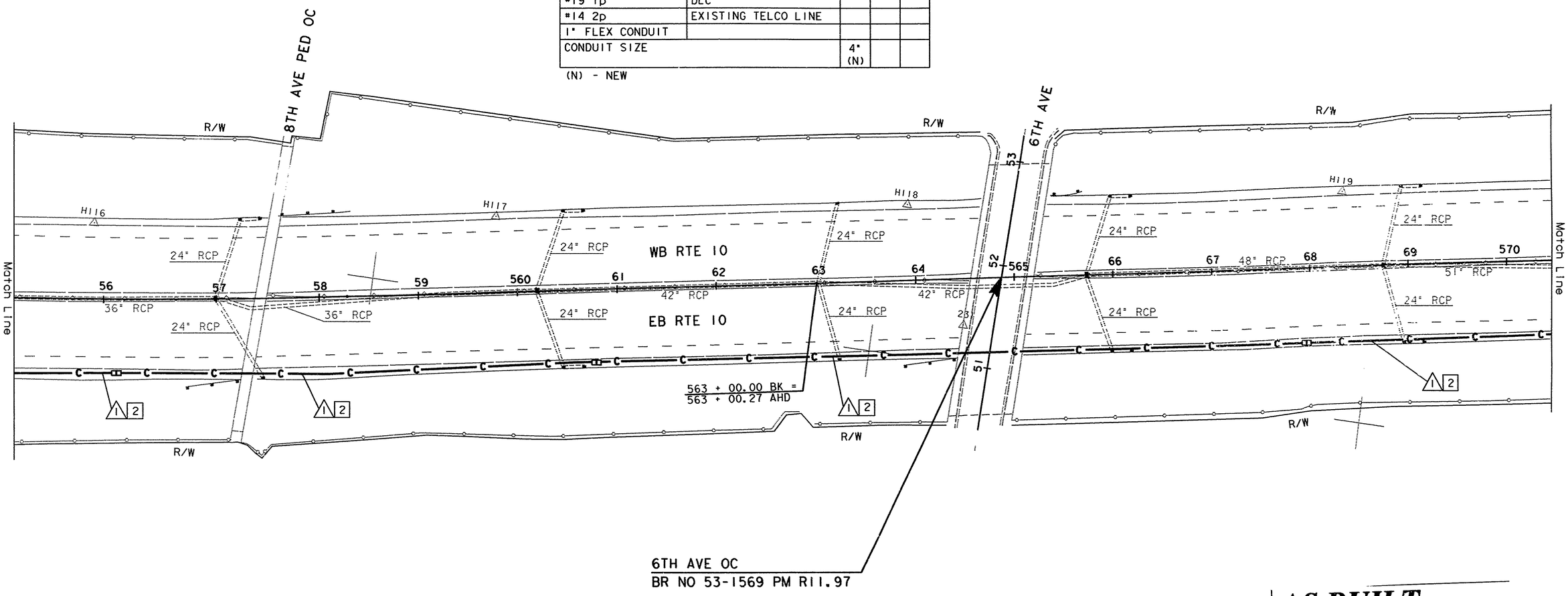
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1		
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)		
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA	1 (N)		
24SMFO CABLE	MUX VID/DATA			
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)		
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)		

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-22

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:24

/usr/jimt/P3/711544u22.dgn 21-OCT-1993 13:24 jimt

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

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

USERNAME => jimt
DGN FILE => /usr/jimt/P3/711544u22.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	34	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

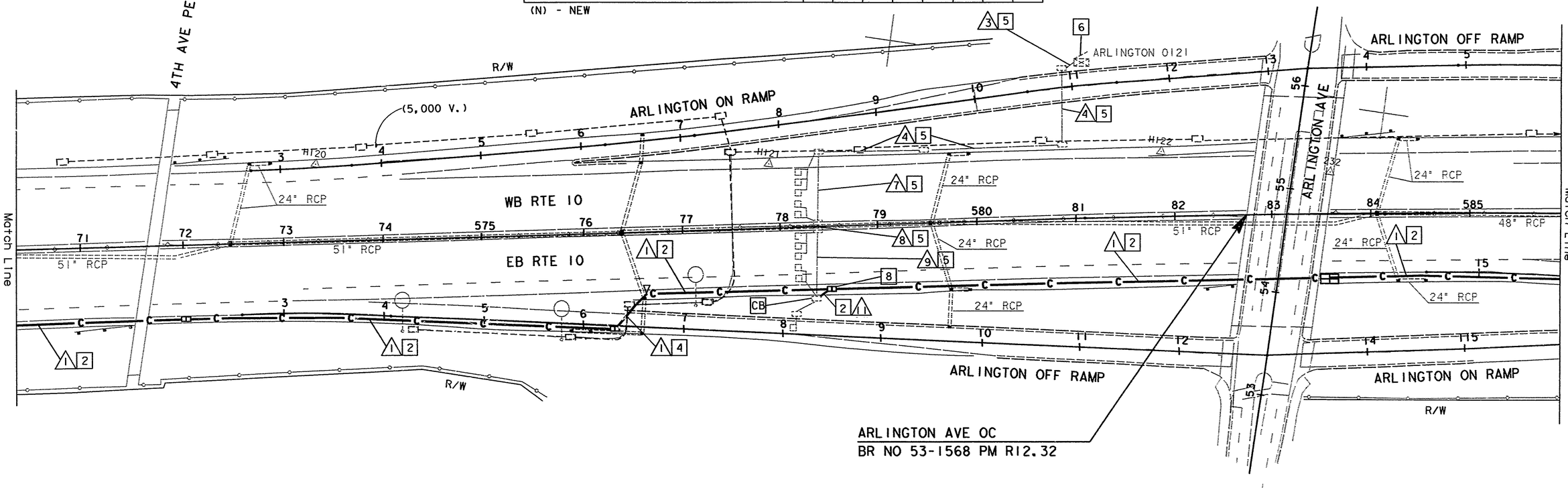
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	7	8	9	11
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)							
6P19 CABLE	DATA/VOICE CIRCUITS								
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)							
24SMFO CABLE	MUX VID/DATA								
2SMFO B/O CABLE	MUX VID/DATA								
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)							
2MMFO B/O CABLE	SHORT HAUL VIDEO								
RG-6A/U COAX	BASEBAND VIDEO								
27C18 CABLE	CONTROL								
#14	POWER		11						
#10	POWER		1						
#8	POWER		2						
#14 1p	DLC								
#19 1p	DLC		18	11	12	8	6	3	
#18 2p	EXISTING TELCO LINE		1						
1" FLEX CONDUIT									
CONDUIT SIZE		4" (N)	2-3"	3"	2 1/2"	2"	2"	2"	2" (N)

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-23

SCALE: 1"=50'

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

LAST REVISION 00-00-00

TIME PLOTTED => 21-OCT-1993 13:24

/usr/jimt/P3/711544u23.dgn 21-OCT-1993 13:24 jimt

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

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

USERNAME => jimt
DGN FILE => /usr/jimt/P3/711544u23.dgn

CU 07387

EA 115441

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN									
		1	3	4	5	6	7	8	9	11	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)									
6P19 CABLE	DATA/VOICE CIRCUITS										
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)									
24SMFO CABLE	MUX VID/DATA										
2SMFO B/O CABLE	MUX VID/DATA										
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)									
2MMFO B/O CABLE	SHORT HAUL VIDEO										
RG-6A/U COAX	BASEBAND VIDEO										
27C18 CABLE	CONTROL										
#14	POWER		11		6						
#10	POWER		1	3	1						
#8	POWER		2								2
#14 1p	DLC		12	6		7					
#19 1p	DLC			8			13				
#18 2p	EXISTING TELCO LINE		1								
1" FLEX CONDUIT								1			
CONDUIT SIZE		4" (N)	2-3"	3"	2"	2"	3"	3"	2" (N)	2" (N)	1"

(N) - NEW

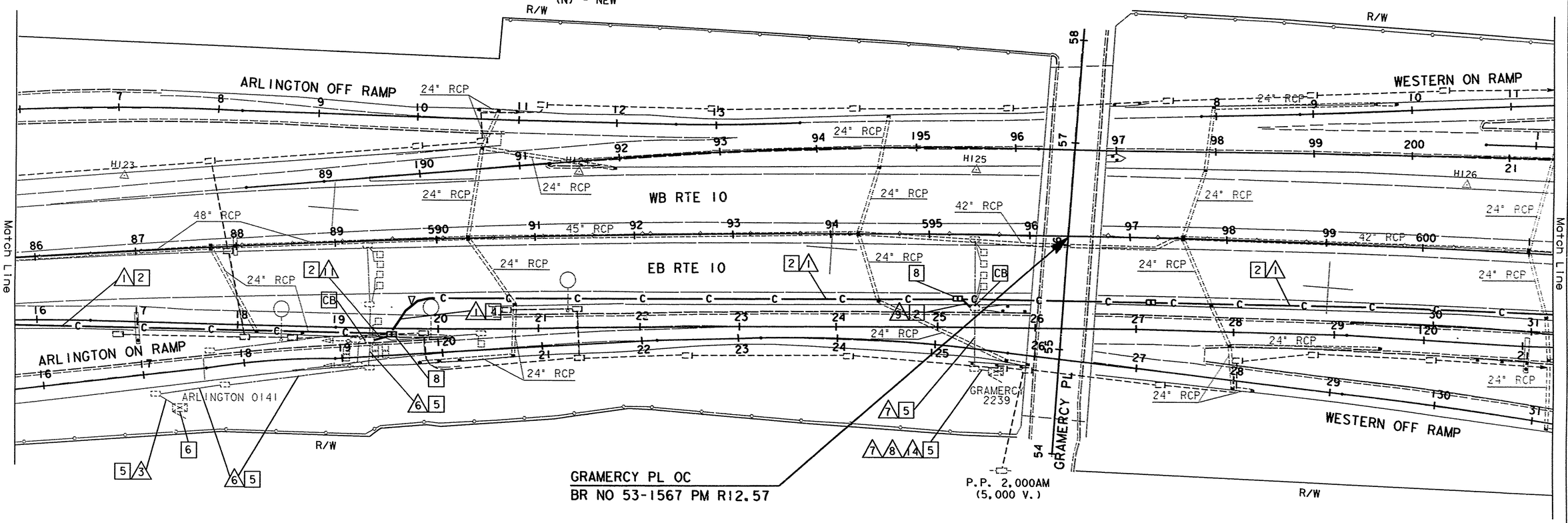
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	35	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

10-11-93
PLANS APPROVAL DATE

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638



AS BUILT
Contract No. 07- 115444
Resident Engineer:
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

E-24

SCALE: 1"=50'

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

LAST REVISION 00-00-00

TIME PLOTTED => 21-OCT-1993 13:24

/usr/jlmt/P3/711544u24.dgn 21-OCT-1993 13:24 jlmt

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

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

USERNAME => jlmt
DGN FILE => /usr/jlmt/P3/711544u24.dgn

CU 07387

EA 115441

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	20	21	22
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)																		
6P19 CABLE	DATA/VOICE CIRCUITS					1 (N)	1 (N)	1 (N)	1 (N)	1 (N)				1 (N)		1 (N)				1 (N)
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)				1 (N)		1 (N)	1 (N)	1 (N)					1 (N)	1 (N)	
M/W CABLE ASSY	VID/DATA														1					
2SMFO B/O CABLE	MUX VID/DATA																			
48SMFO B/O CABLE	MUX VID/DATA	1 (N)																		
2MMFO B/O CABLE	SHORT HAUL VIDEO															1 (N)				1 (N)
8MMFO B/O CABLE	SHORT HAUL VIDEO	1 (N)																		
RG-6A/U COAX	BASEBAND VIDEO															1				
27C18 CABLE	CONTROL															1				
#14	POWER			5	6							6						6		
#10	POWER			3	1							1				3				
#4	POWER				2															
#14 lp	DLC			2								5					2		2	
#19 lp	DLC		6		13	3	5	7									12	21		
#18	EXISTING TELCO LINE									4			4							
1" FLEX CONDUIT																	1			
CONDUIT SIZE		4" (N)	3"	3"	2-2"	2½"	2½"	2½"	2" (N)	1½"	2" (N)	3"	1"	2" (N)	2"	2"	3"	3"	2"	3" (N)

(N) - NEW

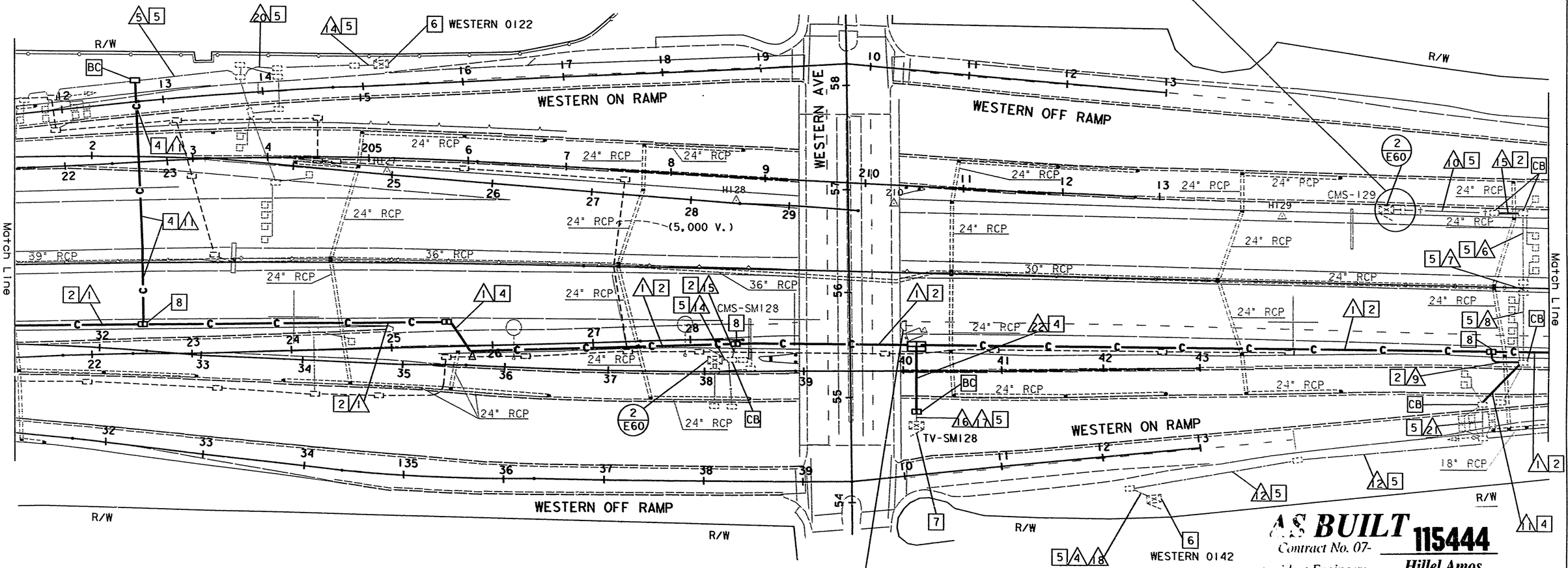
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	36	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

10-11-93
PLANS APPROVAL DATE

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

RS ANTENNAS MOUNTED ON OC AT 30 FT HEIGHT:
1 - 23 GHZ ANTENNA, 2 FT DIAMETER
1 - 960 MHZ ANTENNA, 2 FT RECTANGULAR

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-25

SCALE: 1"=50'

DESIGN OVERSIGHT — GRGEORY DAMICO
DEPARTMENT OF TRANSPORTATION - STATE OF CALIFORNIA
Caltrans
711544U25.DGN EBASCO 10/27/92

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

LAST REVISION 00-00-00 TIME PLOTTED => 21-OCT-1993 13:02

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/P0/711544u25.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	37	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

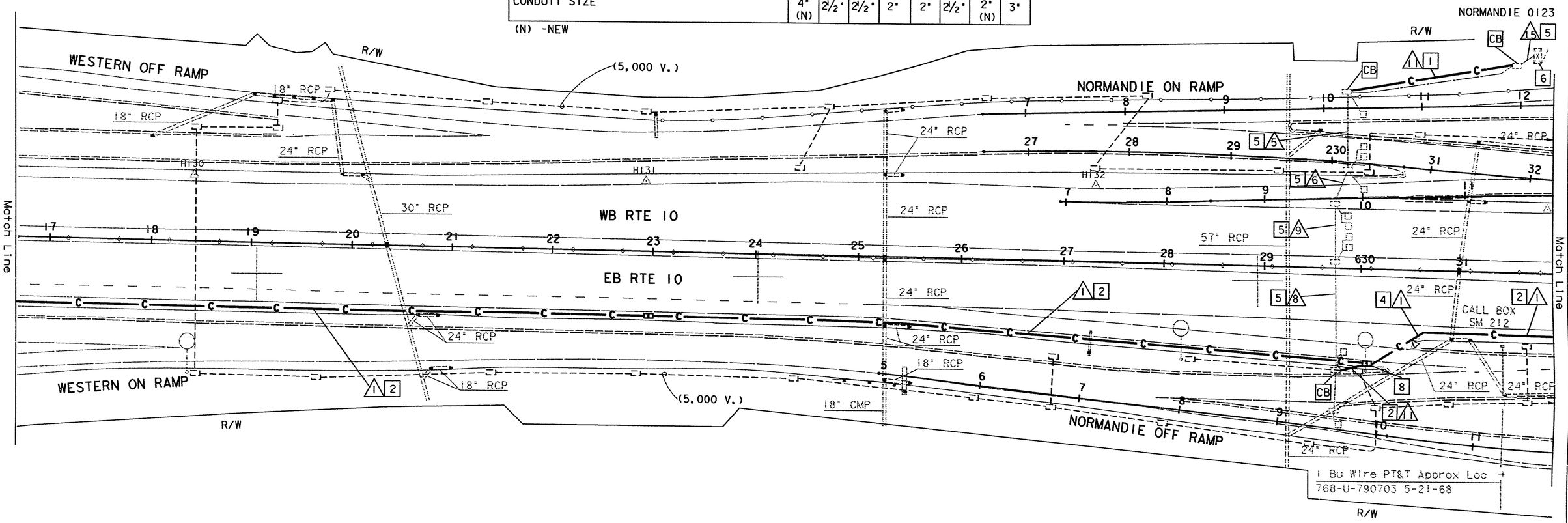
REGISTERED PROFESSIONAL ENGINEER
JOSEPH A. KWAK
No. 10991
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN							
		1	5	6	7	8	9	11	15
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)							
6P19 CABLE	DATA/VOICE CIRCUITS								
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)		1 (N)	1 (N)	1 (N)	1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)							
24SMFO CABLE	MUX VID/DATA								
2SMFO B/O CABLE	MUX VID/DATA								
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)							
2MMFO B/O CABLE	SHORT HAUL VIDEO								
RG-6A/U COAX	BASEBAND VIDEO								
27C18 CABLE	CONTROL								
#14	POWER								
#10	POWER				1				
#8	POWER				1				1
#14 1p	DLC		3	2	9	2	2		
#19 1p	DLC		6	4			2		9
#14 2p	EXISTING TELCO LINE								2
1" FLEX CONDUIT									
CONDUIT SIZE		4" (N)	2½"	2½"	2"	2"	2½"	2" (N)	3"

(N) -NEW



AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

E-26

SCALE: 1"=50'

DESIGN OVERSIGHT
GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

711544U26.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:02

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/P0/711544u26.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	38	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

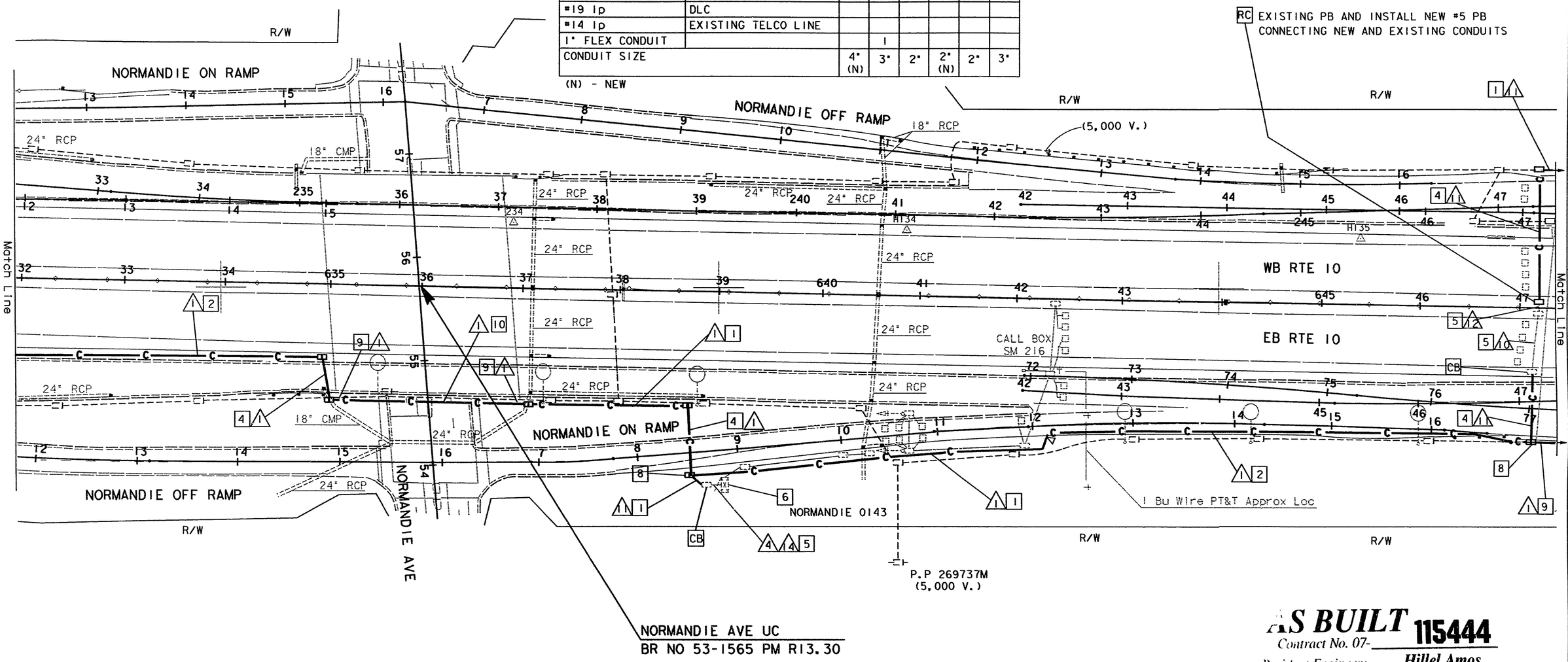
NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	4	10	11	12	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)					
6P19 CABLE	DATA/VOICE CIRCUITS						
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)					
24SMFO CABLE	MUX VID/DATA						
2SMFO B/O CABLE	MUX VID/DATA						
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)					
2MMFO B/O CABLE	SHORT HAUL VIDEO						
RG-6A/U COAX	BASEBAND VIDEO						
27C18 CABLE	CONTROL						
#14	POWER		2				5
#10	POWER						3
#8	POWER						
#14 lp	DLC		3	3		5	3
#19 lp	DLC						
#14 lp	EXISTING TELCO LINE						
1" FLEX CONDUIT			1				
CONDUIT SIZE		4" (N)	3"	2"	2" (N)	2"	3"

(N) - NEW

RC EXISTING PB AND INSTALL NEW #5 PB CONNECTING NEW AND EXISTING CONDUITS



AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-27

DESIGN OVERSIGHT
GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
711544u27.DGN EBASCO 10/22/92

DATE	REVISED BY	DATE REVISED
	CALCULATED/ DESIGNED BY	CHECKED BY

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:02

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/PO/711544u27.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	39	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

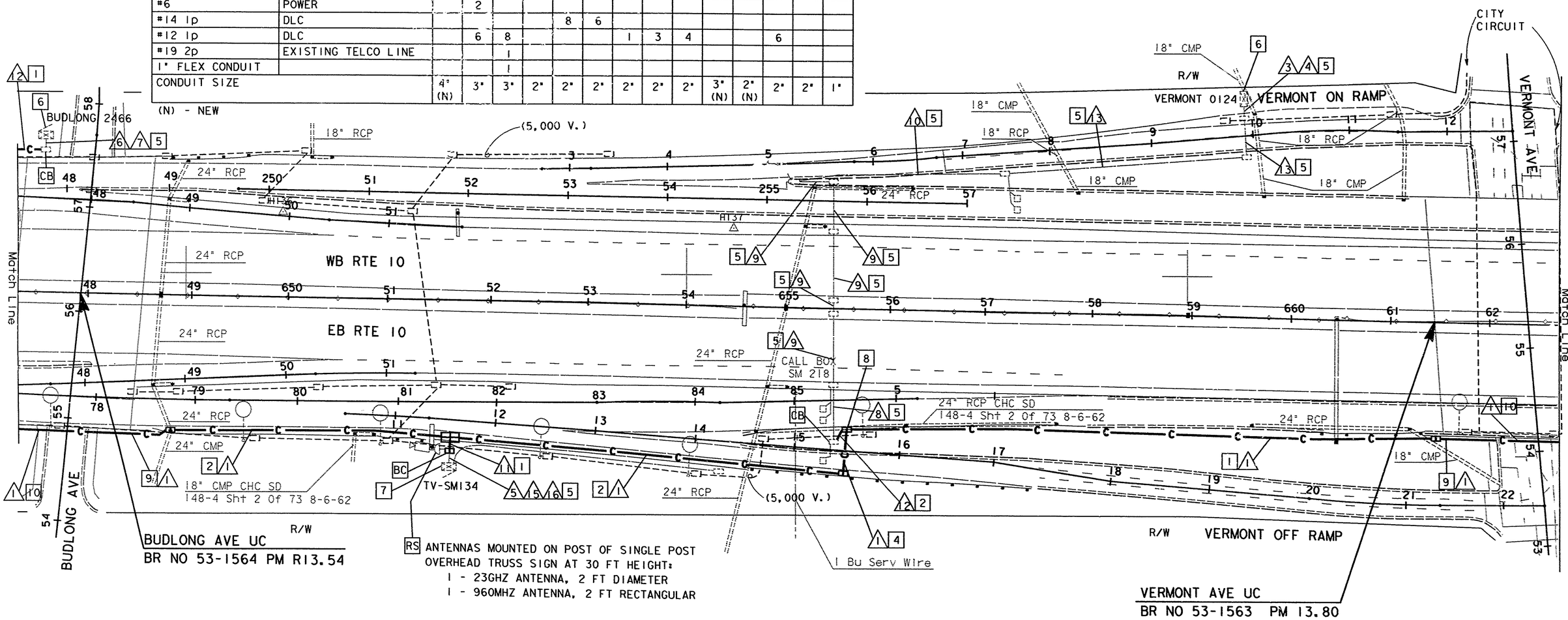
PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	7	8	9	10	11	12	13	15	16
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)									1 (N)				1 (N)
6P19 CABLE	DATA/VOICE CIRCUITS			1 (N)			1 (N)	1 (N)	1 (N)	1 (N)		1 (N)	1 (N)		
12P22 CABLE	DATA/VOICE CIRCUITS														
48SMFO CABLE	MUX VID/DATA	1 (N)													
M/W CABLE ASSY	VID/DATA				1										
2SMFO B/O CABLE	MUX VID/DATA														
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)													
2MMFO B/O CABLE	SHORT HAUL VIDEO										1 (N)				1 (N)
RG-6A/U COAX	BASEBAND VIDEO													1	
27C18 CABLE	CONTROL													1	
#14	POWER		7												
#10	POWER													3	
#6	POWER		2												
#14 1p	DLC					8	6								
#12 1p	DLC		6	8				1	3	4			6		
#19 2p	EXISTING TELCO LINE			1											
1" FLEX CONDUIT				1											
CONDUIT SIZE		4" (N)	3"	3"	2"	2"	2"	2"	2"	2"	3" (N)	2" (N)	2"	2"	1"

(N) - NEW



RS ANTENNAS MOUNTED ON POST OF SINGLE POST OVERHEAD TRUSS SIGN AT 30 FT HEIGHT:
1 - 23GHZ ANTENNA, 2 FT DIAMETER
1 - 960MHZ ANTENNA, 2 FT RECTANGULAR

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-28

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544u28.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:02

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/P0/711544u28.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101 110	Var	40	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

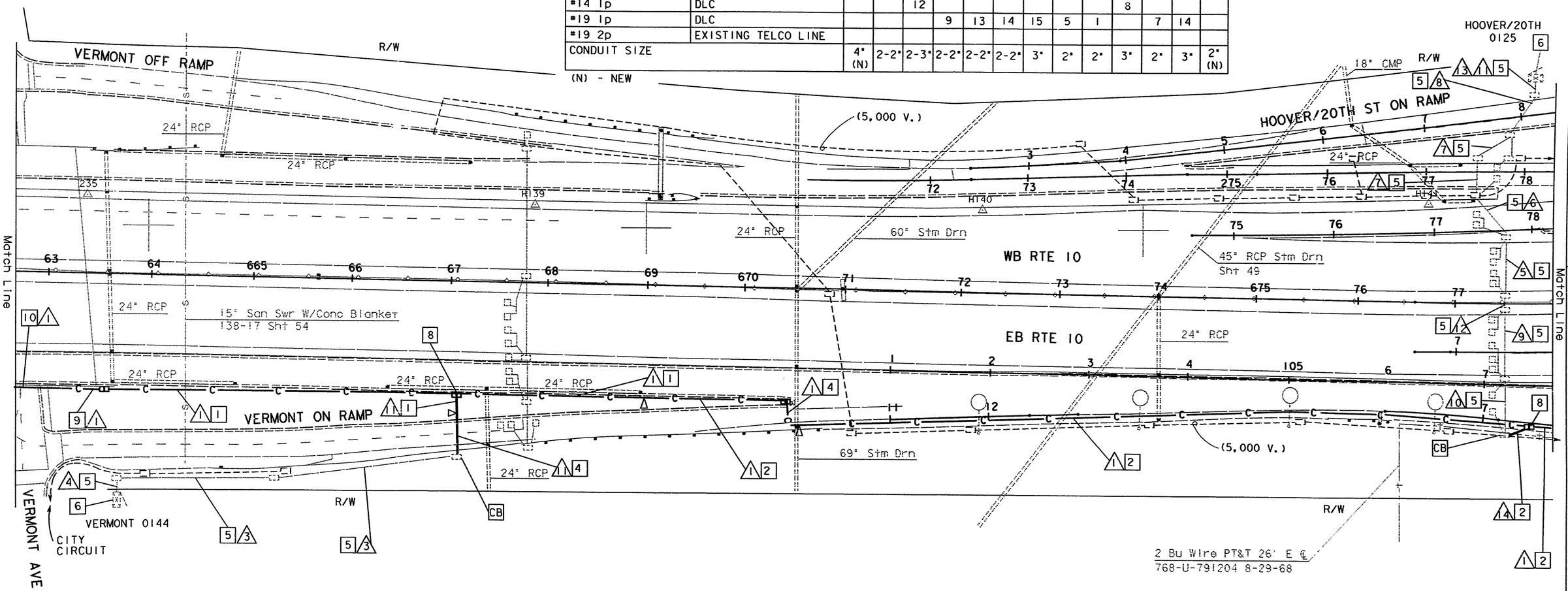
REGISTERED PROFESSIONAL ENGINEER
JOSEPH A. KWAK
No. 10991
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)												
6P19 CABLE	DATA/VOICE CIRCUITS													
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)												
24SMFO CABLE	MUX VID/DATA													
2SMFO B/O CABLE	MUX VID/DATA													
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)												
2MMFO B/O CABLE	SHORT HAUL VIDEO													
RG-6A/U COAX	BASEBAND VIDEO													
27C18 CABLE	CONTROL													
#14	POWER		6	6									10	
#10	POWER			1	2	2	2	2	2			2	2	
#6	POWER				2	2	2	2	2			2	2	
#8	POWER			2										
#14 lp	DLC			12							8			
#19 lp	DLC				9	13	14	15	5	1		7	14	
#19 2p	EXISTING TELCO LINE													
CONDUIT SIZE		4" (N)	2-2"	2-3"	2-2"	2-2"	2-2"	3"	2"	2"	3"	2"	3"	2" (N)

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- **115444**
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-29

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

711544u29.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:03

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/PO/711544u29.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	41	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

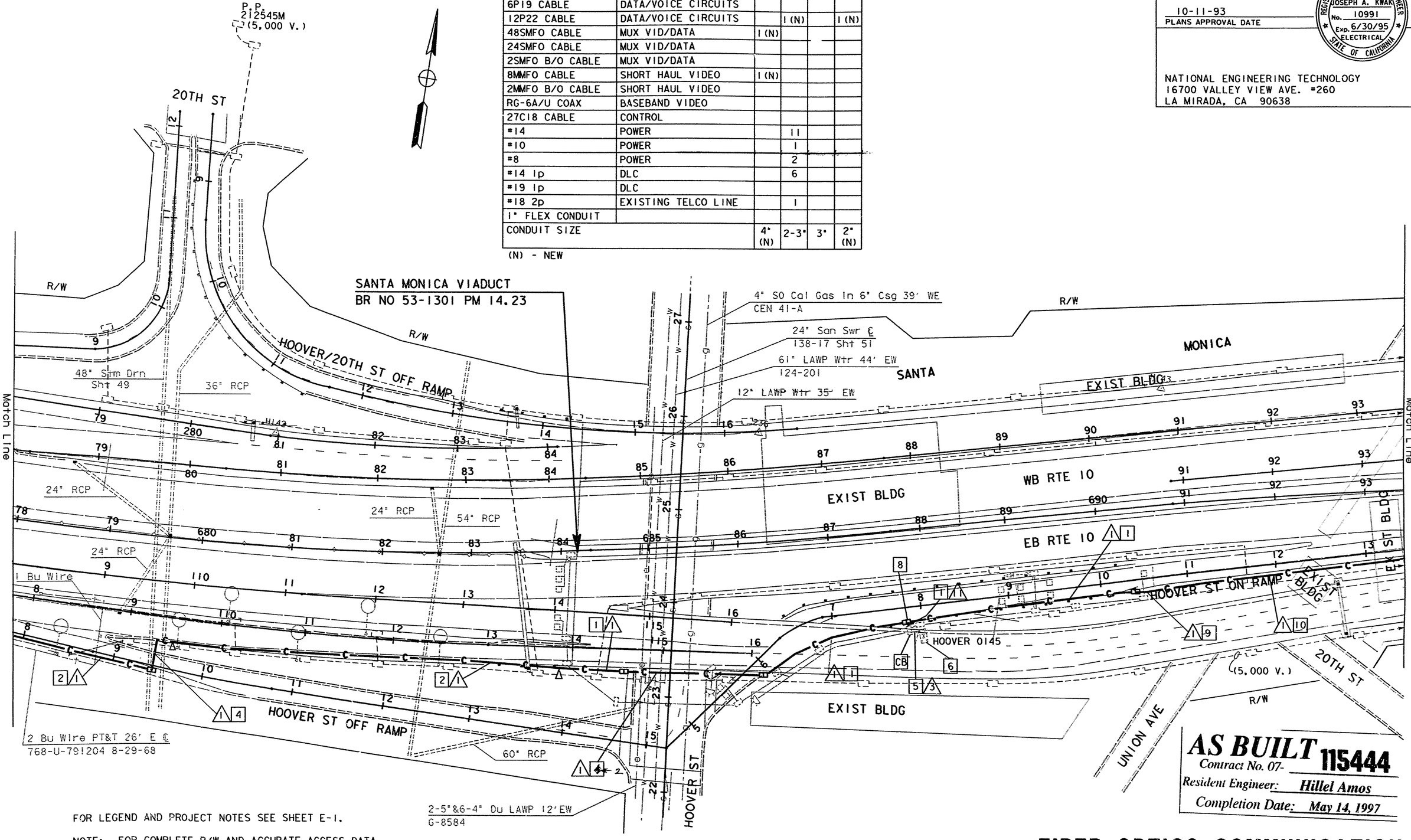
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	3	4	11
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)			
6P19 CABLE	DATA/VOICE CIRCUITS				
12P22 CABLE	DATA/VOICE CIRCUITS		1 (N)		1 (N)
48SMFO CABLE	MUX VID/DATA	1 (N)			
24SMFO CABLE	MUX VID/DATA				
2SMFO B/O CABLE	MUX VID/DATA				
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)			
2MMFO B/O CABLE	SHORT HAUL VIDEO				
RG-6A/U COAX	BASEBAND VIDEO				
27C18 CABLE	CONTROL				
#14	POWER		11		
#10	POWER		1		
#8	POWER		2		
#14 1p	DLC		6		
#19 1p	DLC				
#18 2p	EXISTING TELCO LINE		1		
1" FLEX CONDUIT					
CONDUIT SIZE		4" (N)	2-3"	3"	2" (N)

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT Contract No. 07- **115444**
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-30

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U30.DGN EBASCO 10/26/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 01:38

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

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

USERNAME => tomd
DGN FILE => /usr/tomd/P0/711544u30.dgn

CU 07387

EA 115441

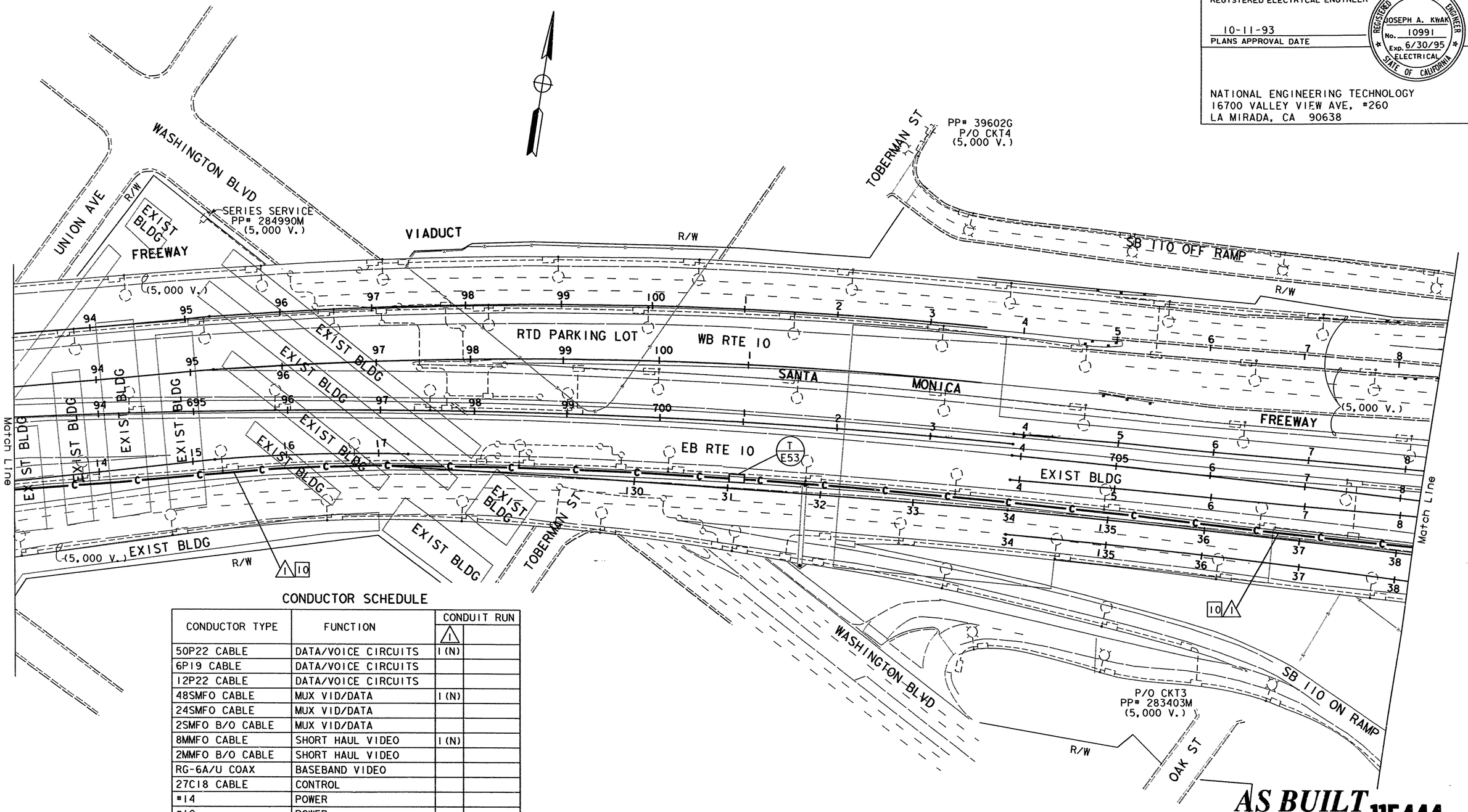
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	42	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

PROFESSIONAL ENGINEER — REGISTERED — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

10-11-93
PLANS APPROVAL DATE

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, #260
LA MIRADA, CA 90638



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)	
6P19 CABLE	DATA/VOICE CIRCUITS		
12P22 CABLE	DATA/VOICE CIRCUITS		
48SMFO CABLE	MUX VID/DATA	1 (N)	
24SMFO CABLE	MUX VID/DATA		
2SMFO B/O CABLE	MUX VID/DATA		
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)	
2MMFO B/O CABLE	SHORT HAUL VIDEO		
RG-6A/U COAX	BASEBAND VIDEO		
27C18 CABLE	CONTROL		
#14	POWER		
#10	POWER		
#8	POWER		
#14 1p	DLC		
#19 1p	DLC		
#14 2p	EXISTING TELCO LINE		
1" FLEX CONDUIT			
CONDUIT SIZE		4" (N)	

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

E-31

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED
CALCULATED/ DESIGNED BY	CHECKED BY	

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U31.DGN EBASCO 10/22/92

LAST REVISION 00-00-00

TIME PLOTTED => 22-OCT-1993 01:38

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

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

USERNAME => tomd
DGN FILE => /usr/tomd/PO/711544u31.dgn

CU 07387

EA 115441

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	2	3	5	8	9	10	12	13	14
50P22 CABLE	DATA/VOICE CIRCUITS	1 (N)								1 (N)	
6P19 CABLE	DATA/VOICE CIRCUITS										2 (N)
12P22 CABLE	DATA/VOICE CIRCUITS				1 (N)	1 (N)			1 (N)	1 (N)	
48SMFO CABLE	MUX VID/DATA	1 (N)								1 (N)	
72SMFO CABLE	MUX VID/DATA		1 (N)		1 (N)					1 (N)	
2SMFO B/O CABLE	MUX VID/DATA										2 (N)
8MMFO CABLE	SHORT HAUL VIDEO	1 (N)								1 (N)	1 (N)
2MMFO B/O CABLE	SHORT HAUL VIDEO										
RG-6A/U COAX	BASEBAND VIDEO										
27C18 CABLE	CONTROL										
#14	POWER						6				
#10	POWER						1				
#8	POWER							2			3 (N)
#14 1p	DLC							4	6		
#19 1p	DLC						3				
#14 2p	TELEMETRY								1		
1" FLEX CONDUIT											
CONDUIT SIZE		4" (N)	4" (N)	4" (N)	4" (N)	2" (N)	3"	3"	3"	4" (N)	4" (N)

(N) - NEW

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10,101, 110	Var	43	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MARIDA, CA 90638

Match Line

VENICE BLVD UC
BR NO. 53-0888 PM 21.50

N CONNECTOR UC
BR NO. 53-1319 PM 21.48

110/10 WB SEPARATION
BR NO. 53-1318 PM 21.45

INSTALL TEMPORARY 334-TV CABINET ON 5-1/2 IN DEEP TEMPORARY FOUNDATION WITH 6 IN J ANCHOR BOLTS. RELOCATE MICROWAVE EQUIPMENT AND CABLES TO BE SALVAGED FROM CABINET 1 INTO TEMPORARY CABINET. PROVIDE POWER FROM CABINET 1 AND CONNECT FOR FULL OPERATION.
RS TEMPORARY FACILITIES PRIOR TO FINAL ACCEPTANCE.

INSTALL 334-TV CABINET AND EQUIPMENT AS SHOWN ON E-65 THROUGH E-67.

INSTALL 4" CONDUIT BETWEEN CABINET WALLS, SEE SHEET E-67

EXISTING ANTENNA TOWER

P/O CKT3

TO EXIST TELEPHONE DEMARCATION BOX

DETAIL A
NOT TO SCALE

RS ANTENNAS MOUNTED TO TOWER AT 150 FT HEIGHT:
1 - 12 GHZ ANTENNAS, 4 FT Ø (POINTED WEST)
2 - 23 GHZ ANTENNAS, 2 FT Ø
1 - 960 MHZ ANTENNA, 2 FT RECTANGULAR

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FOR WORK AT I-10/I-110 INTERCHANGE SEE SHEETS E-65, E-66 AND E-67

AS BUILT
Contract No. 07-115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-32

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED
	SK	7/93

CALCULATED/DESIGNED BY — CHECKED BY

GREGORY DAMICO - DESIGN OVERSIGHT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U32.DGN EBASCO 10/27/92

LAST REVISION 00-00-00
TIME PLOTTED => 25-OCT-1993 00:42

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

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

USERNAME => tomd
DGN FILE => /usr/tomd/P0/711544u32.dgn

CU 07387

EA 115441

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN ⚠1	CONDUIT RUN ⚠2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	TELEMETRY			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	44	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

PICO BLVD UC
BR NO 53-0887 PM 21.76

CKT 4
CKT 5

to PP#83855M
(5,000V.)

8" RCP St Dr

33" RCP Stm Dr
135-15 Sht 66

60" RCP Stm Dr
135-15 Sht 66 & Sht 17

SB RTE 110

NB RTE 110

18" RCP Stm Dr
135-15 Sht 58

48" RCP Stm Dr
114-14 3-30-53

15" RCP Stm Dr
114-14 3-30-53

15" RCP Stm Dr
114-14 3-30-53

P/O CK76
PP#211703M
(5,000 V.)

SIGN 17

R/W

NB 110 ON RAMP

EB 10 OFF RAMP

SENTOUS ST AND
PICO BLVD OFF RAMP

PICO BLVD

Match Line

N
E-53A

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- **115444**
Resident Engineer: ***Hillel Amos***
Completion Date: ***May 14, 1997***

FIBER OPTICS COMMUNICATION SYSTEM

E-33

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U33.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 25-OCT-1993 10:36

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

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

USERNAME => lenard
DGN FILE => /usr/lenard/P0/711544u33.dg

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	45	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

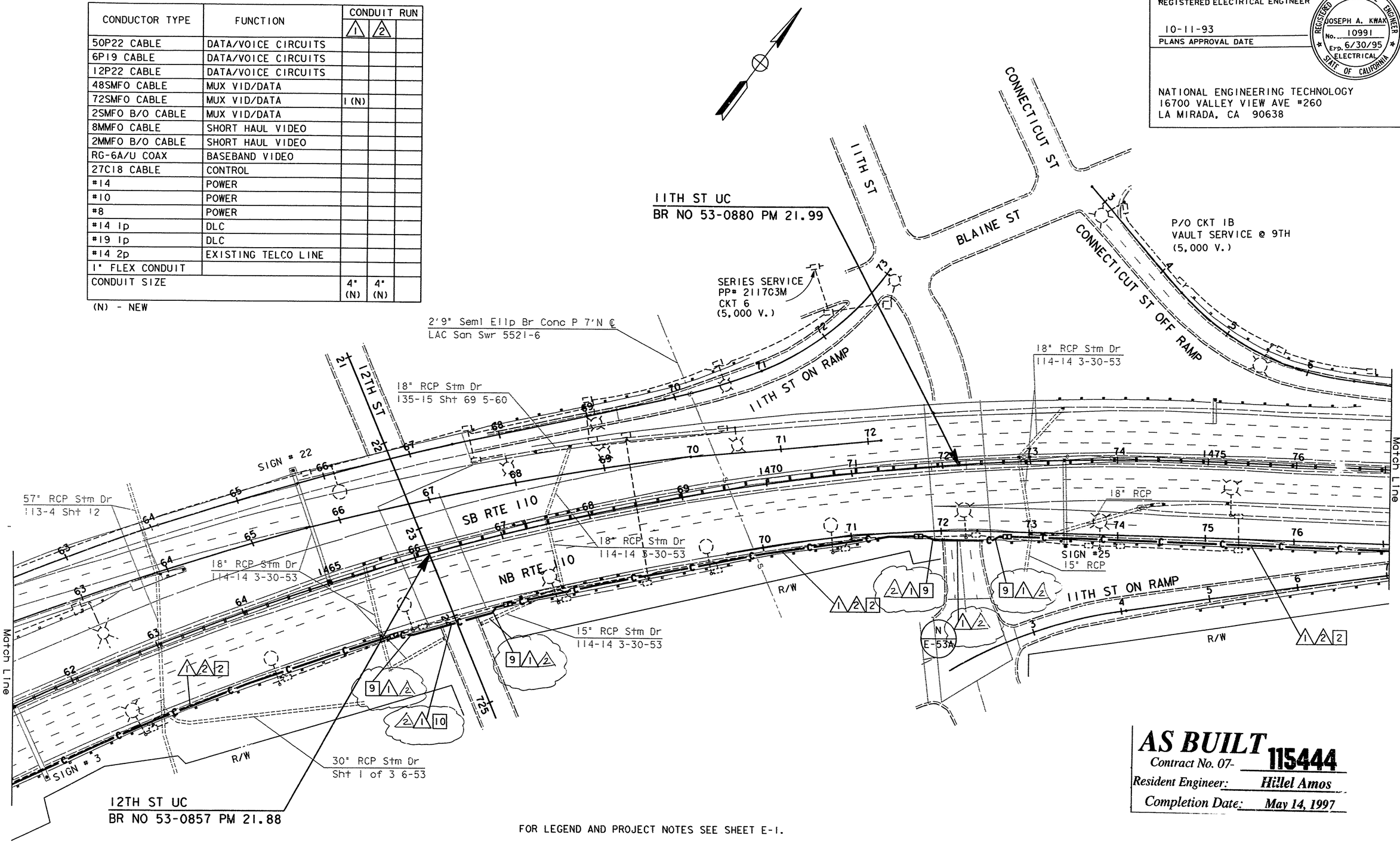
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW



SIGN #72 ON SERIES CKT #6
SIGN #3 AND SIGN #25 ON 120 V

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-34

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
711544U34.DGN EBASCO 10/22/92

Caltrans

/usr/jlmt/P4/711544u34.dgn 25-OCT-1993 10:24 jlmt

TIME PLOTTED => 25-OCT-1993 10:24

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 => jlmt
DGN FILE => /usr/jlmt/P4/711544u34.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	46	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

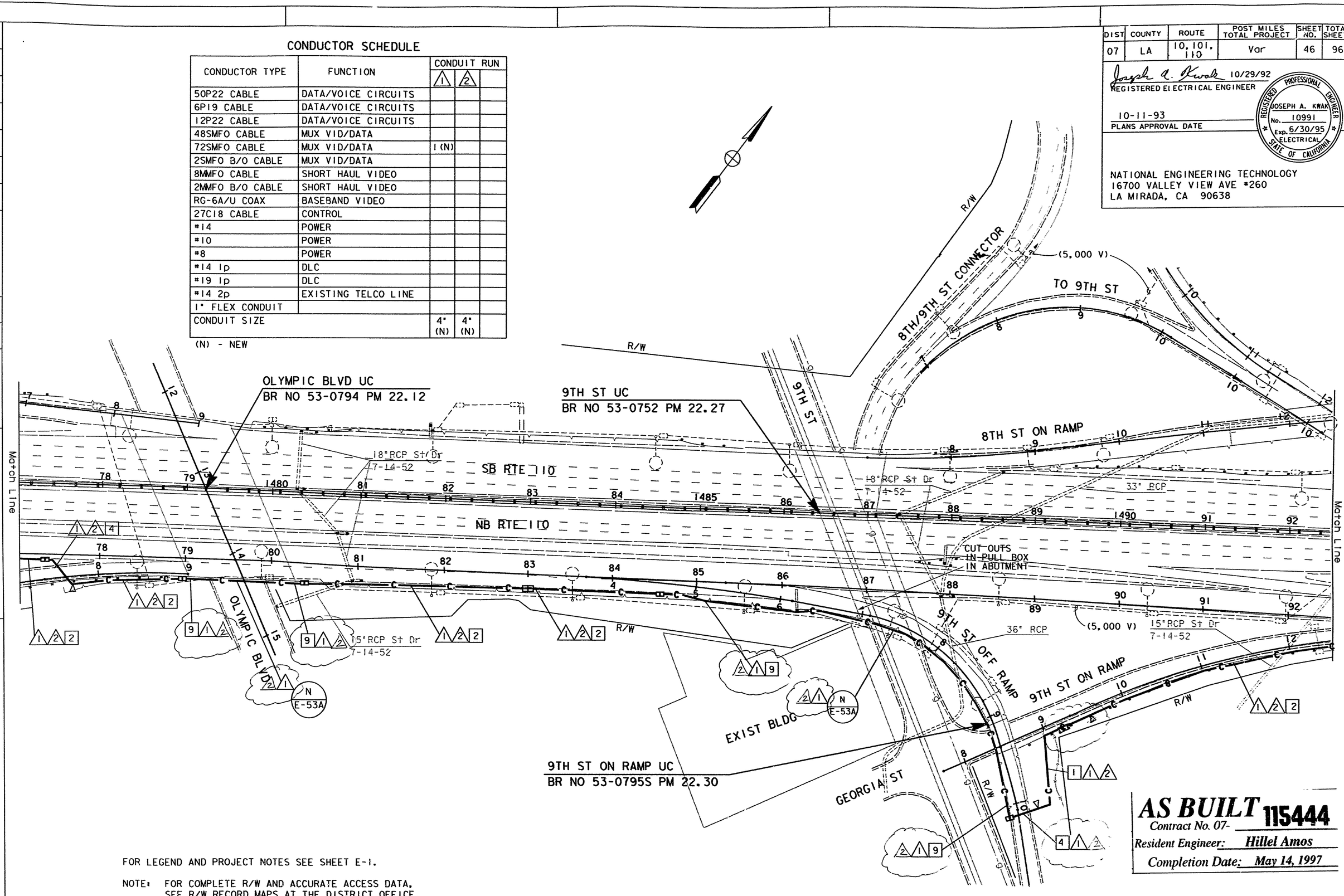
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE *260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-35

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U35.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:31

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

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

USERNAME => tome
DGN FILE => /usr/tome/P0/711544u35.dgn

CU 07387

EA 115441

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW

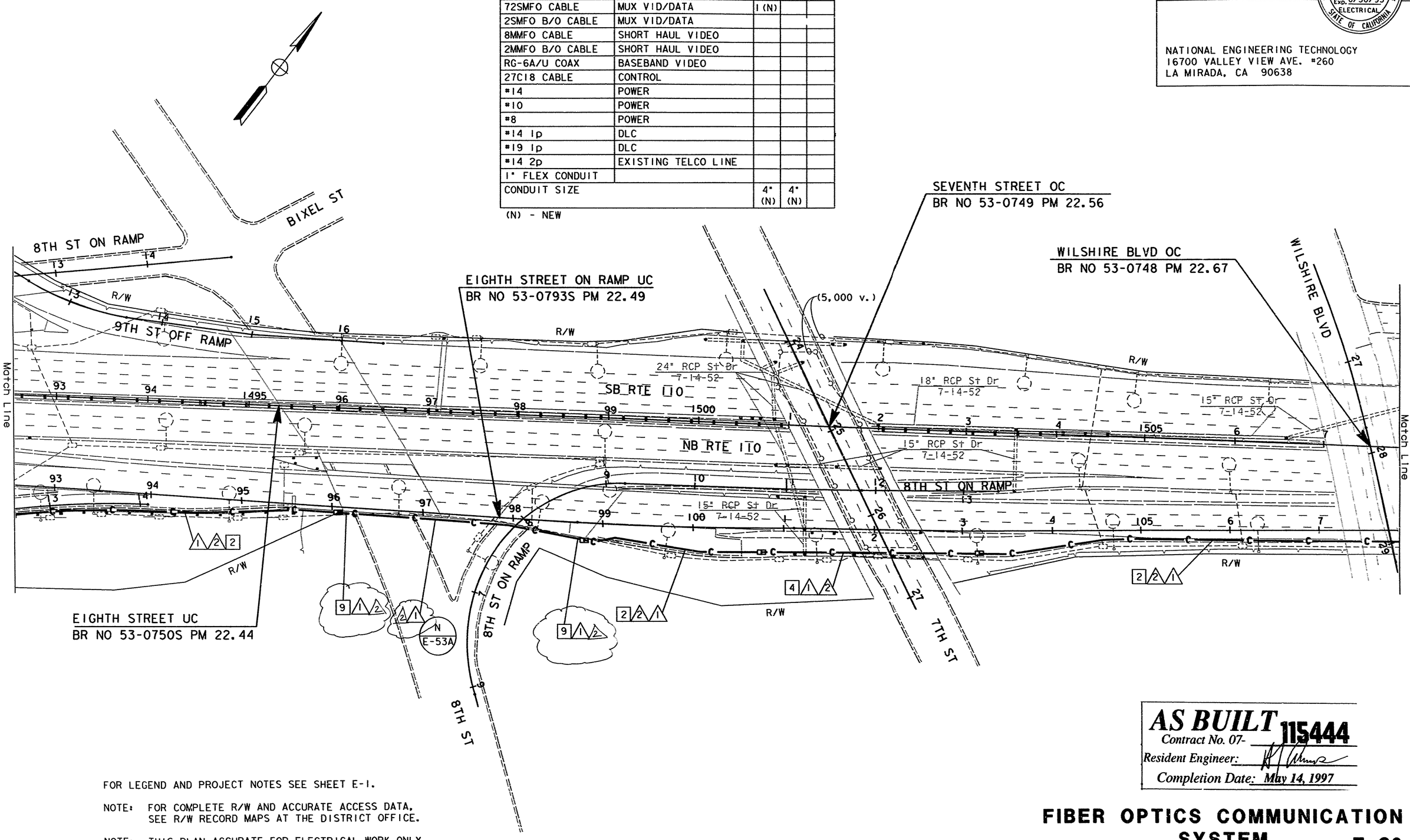
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	47	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT Contract No. 07-115444
Resident Engineer:
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-36

SCALE: 1"=50'

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — CHECKED BY
DATE — REVISED BY — DATE REVISED
JK — 6/93
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
711544U36.DGN EBASCO 10/22/92
LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 11:13

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => richard
DGN FILE => /usr/richard/PO/711544u36.d
CU 07387
EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	48	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

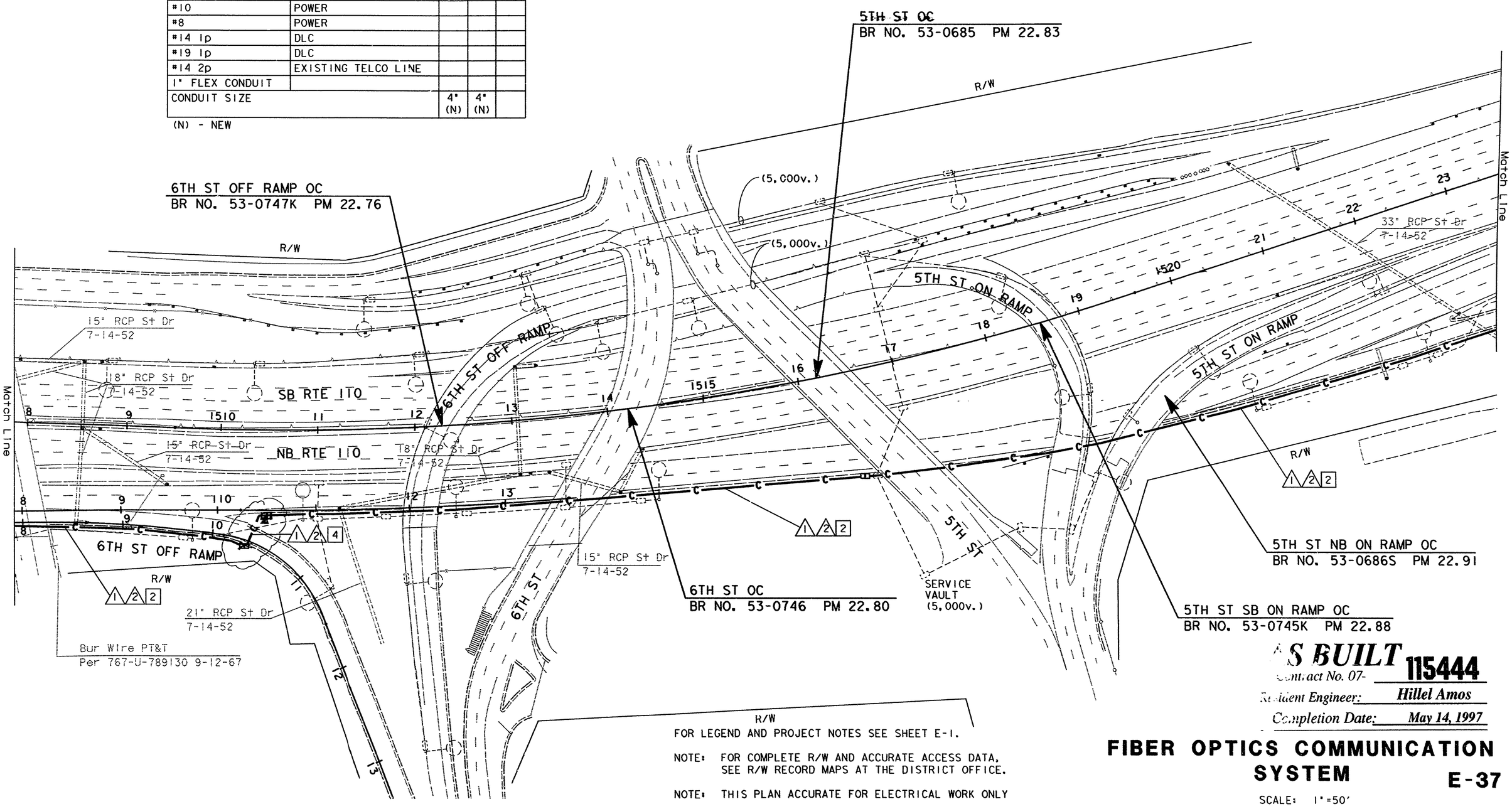
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW



R/W

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-37

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U37.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 14:34

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

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

USERNAME => richard
DGN FILE => /usr/richard/P0/711544u37.d

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	49	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

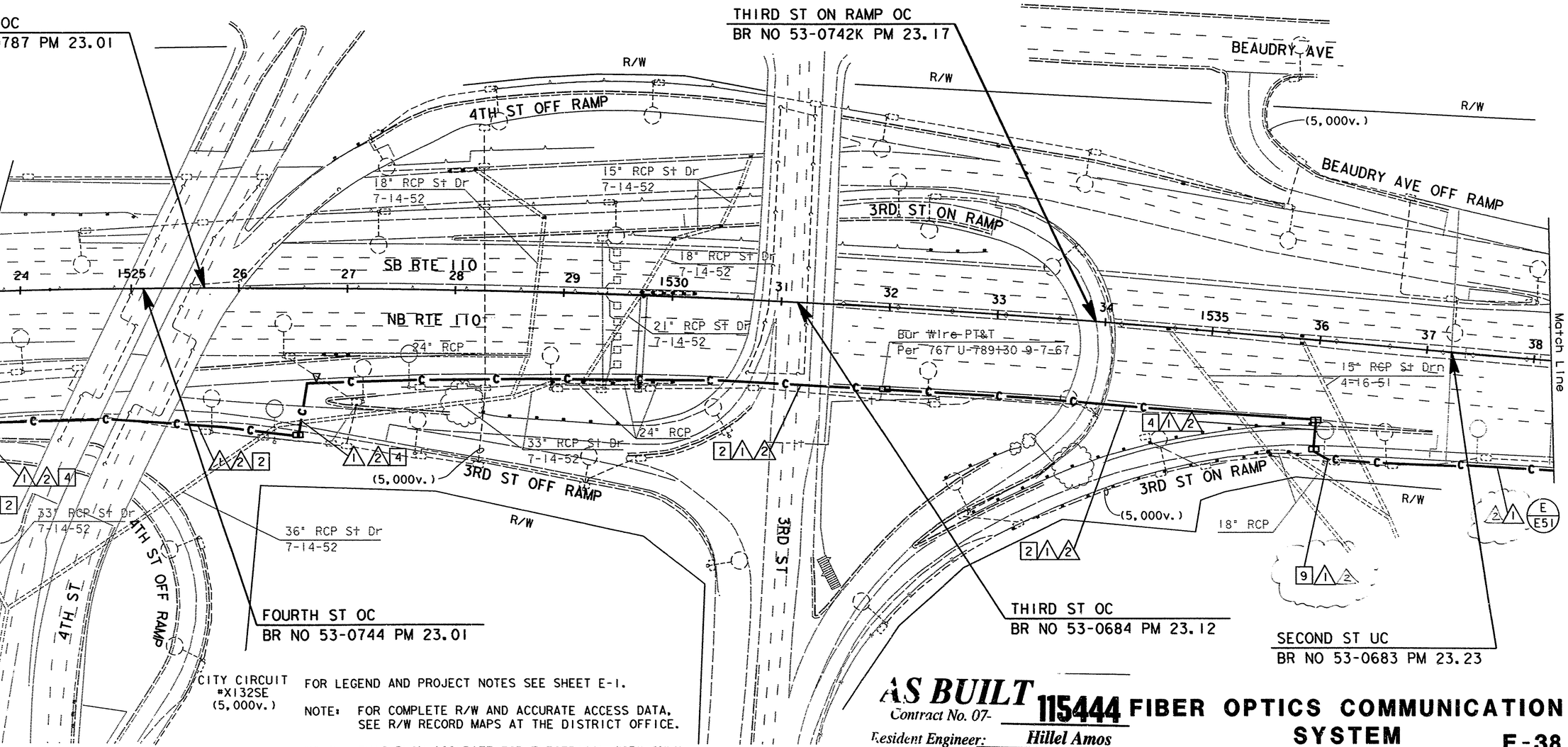
REGISTERED PROFESSIONAL ENGINEER
JOSEPH A. KWAK
No. 10991
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE. #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT
Contract No. 07- 115444 FIBER OPTICS COMMUNICATION SYSTEM
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

E-38

SCALE: 1"=50'

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CALCULATED/ DESIGNED BY
CHECKED BY
DRAWN BY CO
DATE
REVISED BY
DATE REVISED

711544U38.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 13:45

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

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

USERNAME => richard
DGN FILE => /usr/richard/P0/711544u38.d

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	50	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

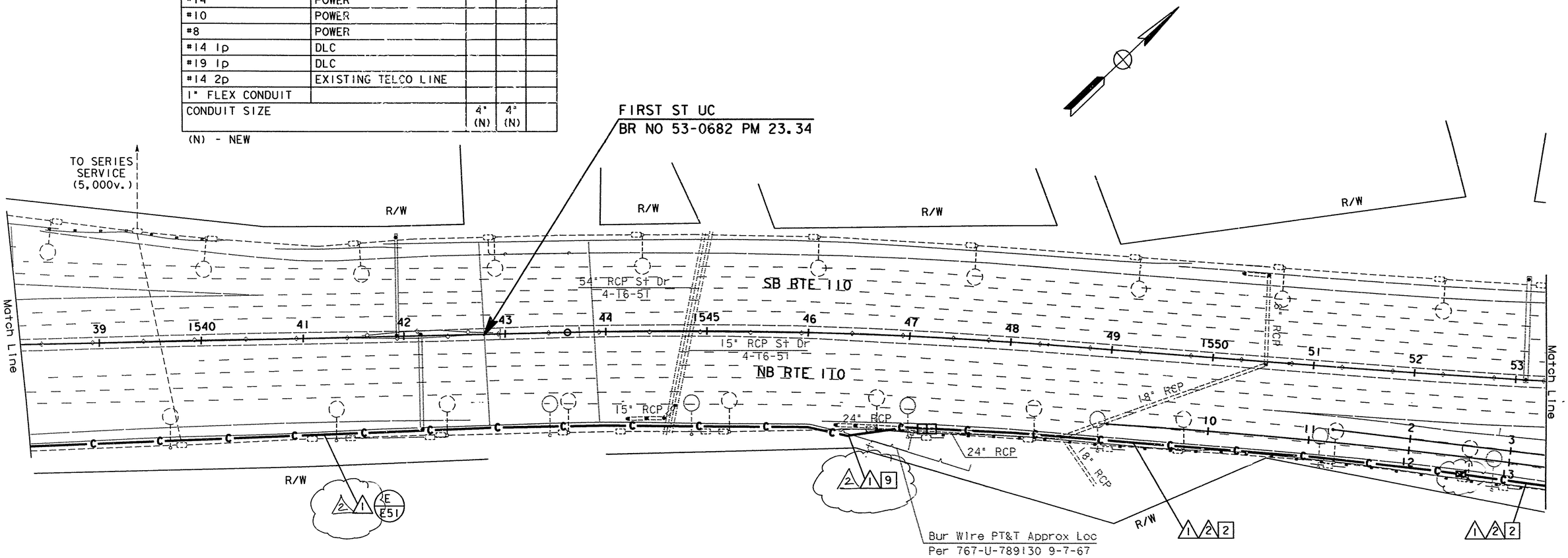
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW



AS BUILT
Contract No. 07-115444
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

E-39

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U39.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 15:20

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

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

USERNAME => richard
DGN FILE => /usr/richard/PO/711544u39.d

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	51	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

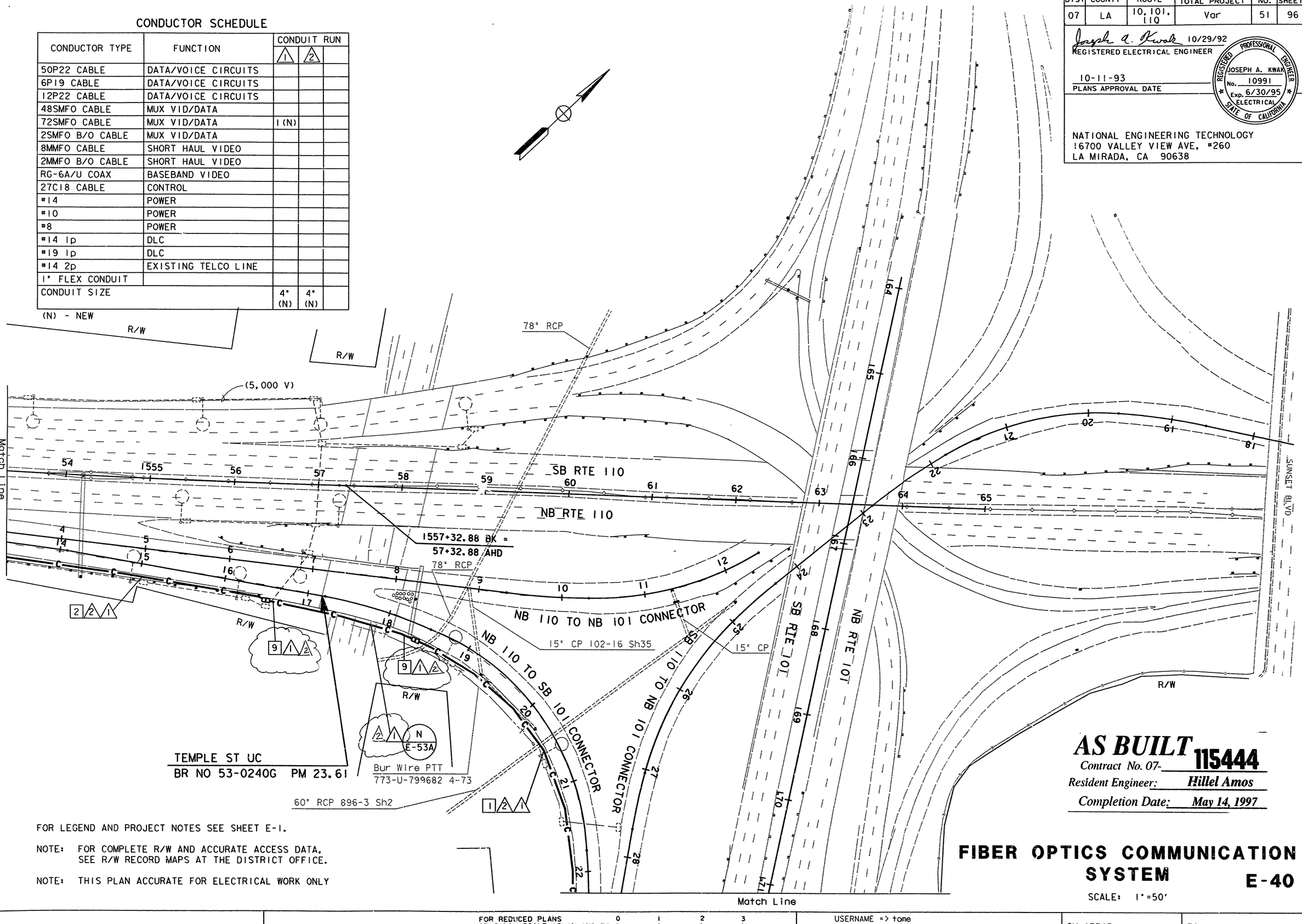
REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-40

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U40.DGN EBASCO 10/22/92

LAST REVISION 00-00-00
TIME PLOTTED => 22-OCT-1993 10:17

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

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

USERNAME => tome
DGN FILE => /usr/tome/PO/711544u40.dgn

CU 07387

EA 115441

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	2	3
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		1 (N)
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	4"

(N) - NEW

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	52	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

R/W

NB RTE 101

SB RTE 101

RTE 110 TO RTE 101 CONNECTOR

RTE 110 ON RAMP

GRAND AVE ON RAMP

GRAND AVE OFF RAMP

GRAND AVE

GRAND AVE OC
BR NO 53-0624 PM 1.32

Match Line

FIGUEROA ST UC
BR NO 53-0623H PM 23.68(RTE110)

FIGUEROA ST

21" pipe

15" CP

EXISTING CONDUIT MAKE THIN & DOTTED

EXISTING BOX MAKE DOTTED

18" CP
102-16 Sh 38

15" CP

18" CP
102-16 Sh38

15" RCP Strm Drn
108-1 Sht 15

TEMPLE ST OFF RAMP

TEMPLE ST OFF RAMP

TEMPLE ST ON RAMP

3 Bu Wire PT&T Approx Loc
768-U-79'125 7-30-68

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS BUILT 115444
Contract No. 07-
Resident Engineer: *Hillel Amos*
Completion Date: *May 14, 1997*

FIBER OPTICS COMMUNICATION SYSTEM

SCALE: 1"=50'

E-41

REVISED BY | DATE REVISED
CALCULATED/DESIGNED BY | CHECKED BY
DESIGN OVERSIGHT: GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

/usr/jlmt/P3/711544u41.dgn 21-OCT-1993 13:46 jlmt
711544U41.DGN EBASCO 10/27/92
TIME PLOTTED => 21-OCT-1993 13:46
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 => jlmt
DGN FILE => /usr/jlmt/P3/711544u41.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	53	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTR.CAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH A. KWAK
No. 10991
Exp. 6/30/95
ELECTRICAL
STATE OF CALIFORNIA

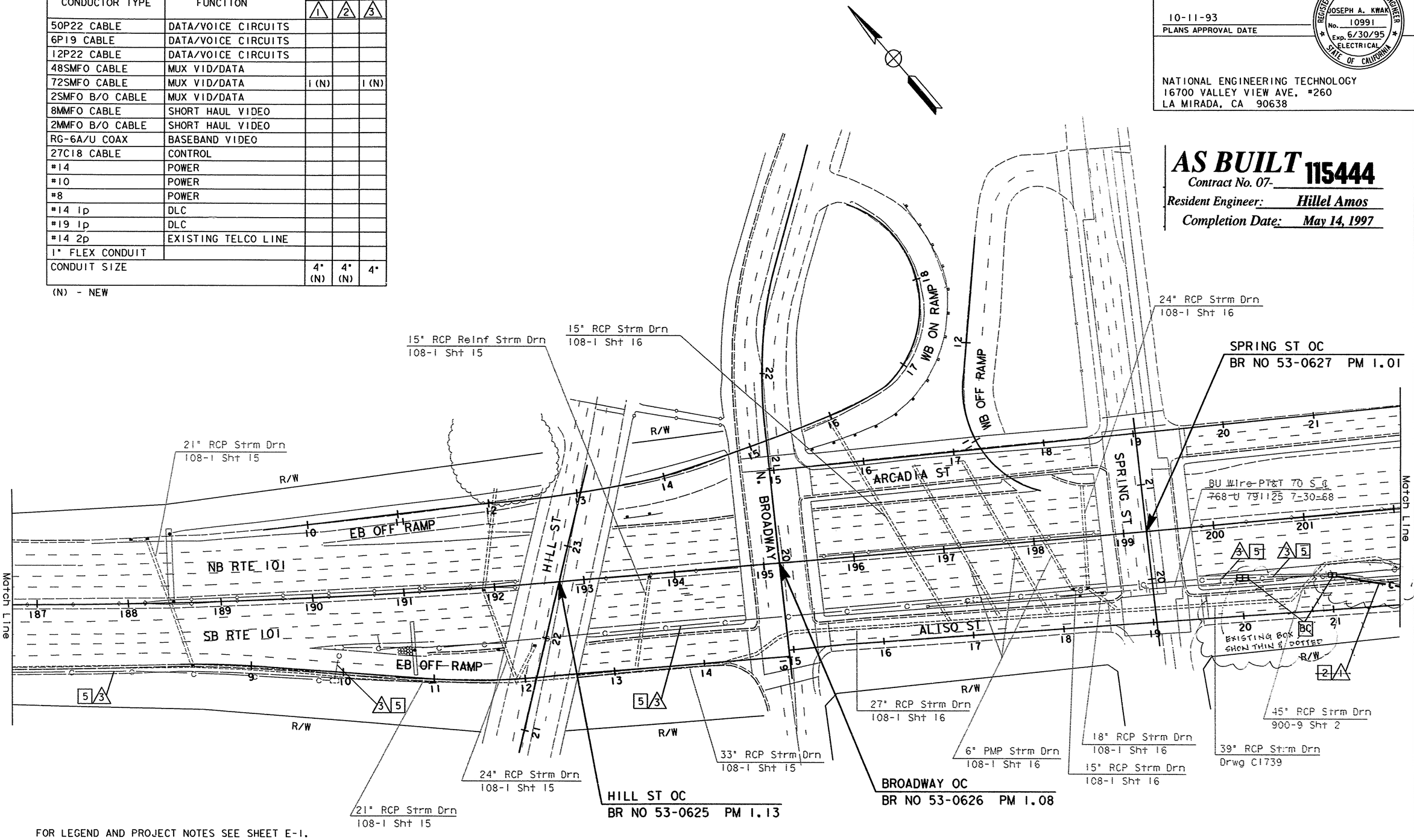
NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE, #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	2	3
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	1 (N)		1 (N)
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	4"

(N) - NEW

AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997



FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FIBER OPTICS COMMUNICATION SYSTEM

E-42

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U42.DGN EBASCO 10/22/92
/usr/jlmt/P3/711544u42.dgn 21-OCT-1993 13:47 jlmt

LAST REVISION 00-00-00
TIME PLOTTED => 21-OCT-1993 13:47

FORM DC-OE-92-PF (REV. 3/89)

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

USERNAME => jlmt
DGN FILE => /usr/jlmt/P3/711544u42.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10, 101, 110	Var	54	96

Joseph A. Kwak 10/29/92
REGISTERED ELECTRICAL ENGINEER

10-11-93
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. KWAK — No. 10991 — Exp. 6/30/95 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
16700 VALLEY VIEW AVE #260
LA MIRADA, CA 90638

CONDUCTOR SCHEDULE

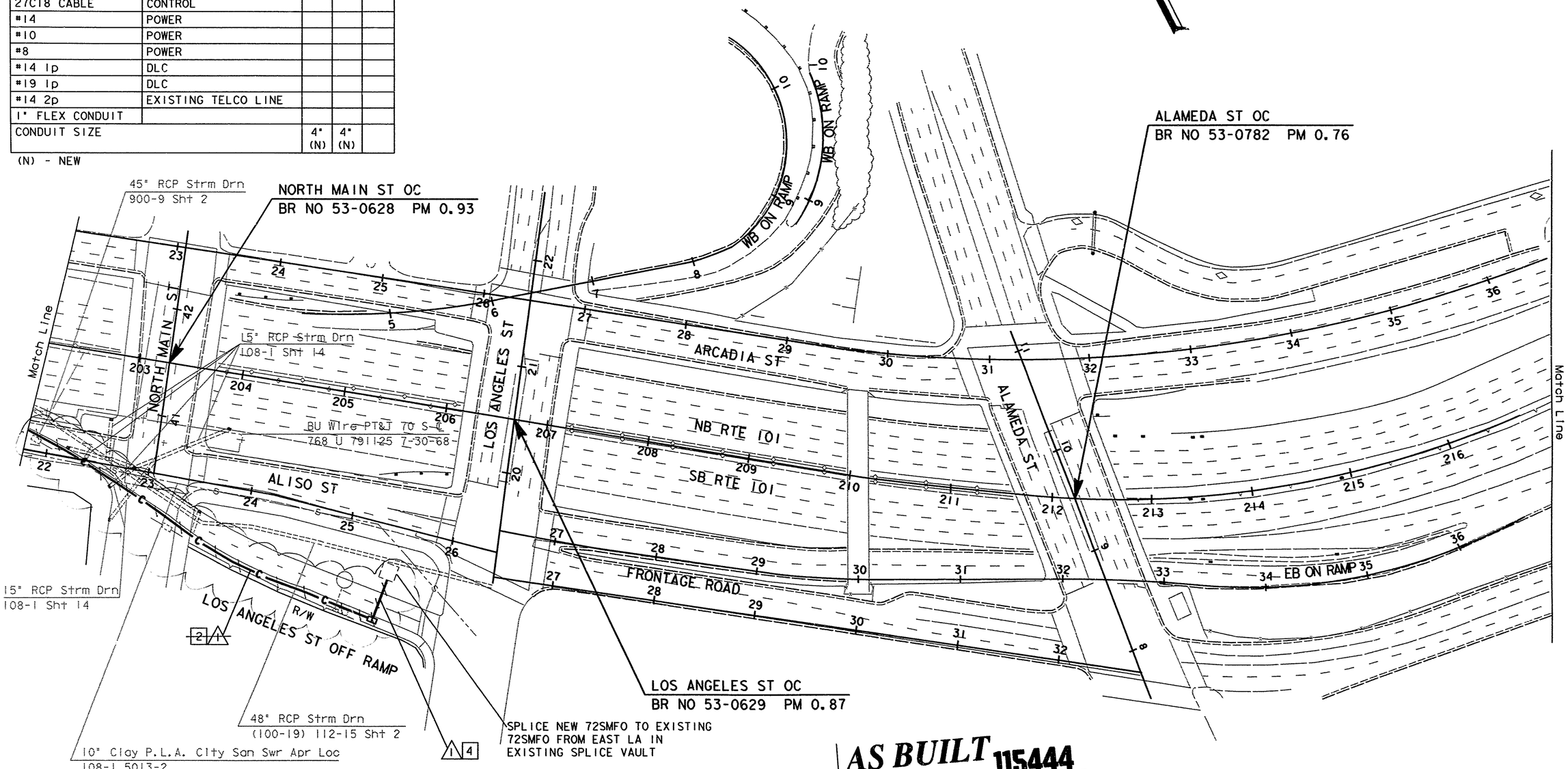
CONDUCTOR TYPE	FUNCTION	CONDUIT RUN 1	CONDUIT RUN 2	
50P22 CABLE	DATA/VOICE CIRCUITS			
6P19 CABLE	DATA/VOICE CIRCUITS			
12P22 CABLE	DATA/VOICE CIRCUITS			
48SMFO CABLE	MUX VID/DATA			
72SMFO CABLE	MUX VID/DATA	!(N)		
2SMFO B/O CABLE	MUX VID/DATA			
8MMFO CABLE	SHORT HAUL VIDEO			
2MMFO B/O CABLE	SHORT HAUL VIDEO			
RG-6A/U COAX	BASEBAND VIDEO			
27C18 CABLE	CONTROL			
#14	POWER			
#10	POWER			
#8	POWER			
#14 1p	DLC			
#19 1p	DLC			
#14 2p	EXISTING TELCO LINE			
1" FLEX CONDUIT				
CONDUIT SIZE		4" (N)	4" (N)	

(N) - NEW

FOR LEGEND AND PROJECT NOTES SEE SHEET E-1.

NOTE: FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



AS BUILT 115444
Contract No. 07-
Resident Engineer: Hillel Amos
Completion Date: May 14, 1997

FIBER OPTICS COMMUNICATION SYSTEM

E-43

SCALE: 1"=50'

DATE	REVISED BY	DATE REVISED
	JK	6/93

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

711544U43.DGN EBASCO 10/22/92
/usr/jimt/P3/711544u43.dgn 21-OCT-1993 13:47 jimt

TIME PLOTTED => 21-OCT-1993 13:47
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 => jimt
DGN FILE => /usr/jimt/P3/711544u43.dgn

CU 07387

EA 115441

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	30	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 ELECTRICAL — STATE OF CALIFORNIA

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

PROJECT NOTES (FOR SHEETS E-2 THROUGH E-9):

[1] TRENCH CONDUIT IN SOIL.

[2] TRENCH CONDUIT IN CONCRETE.

[3] TRENCH CONDUIT IN ASPHALT.

~~[4] ATTACH CONDUIT TO STRUCTURE.~~ DELETED BY CCO #9

[5] JACK RIGID STEEL CONDUIT BENEATH ROADWAY.

[6] INSTALL MODEL 170 CONTROLLER INTERFACE IN THE CONTROLLER CABINET, SEE SHEET E-24 FOR DETAILS.

[7] INSTALL AN ADDITIONAL MODEL 170 CONTROLLER INTERFACE IN THE CONTROLLER CABINET, SEE SHEET E-24 FOR DETAILS.

GENERAL NOTES:

1. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL FACILITIES, THE CONTRACTOR SHALL GIVE 72 HOURS ADVANCE NOTICE IN WRITING TO THE ENGINEER.
2. SERVICE EQUIPMENT ENCLOSURE SHALL BE LOCATED 10' MINIMUM FROM THE POWER POLE OR VAULT.
3. ELECTRICAL SERVICE INSTALLATION SHALL MEET THE UTILITY COMPANY REQUIREMENTS SERVING IN THE LOCAL JURISDICTION.
4. TRENCH FOR CONDUIT INSTALLATION BETWEEN POWER POLE OR VAULT AND SERVICE ENCLOSURE SHALL BE LEFT OPEN FOR INSPECTION AND APPROVAL BY CONCERNED UTILITY COMPANY INSPECTOR BEFORE BACKFILL.
5. STENCIL CAMERA IDENTICATION NUMBER ON POLE IN 3" CHARACTERS 10 FEET ABOVE BASE. SEE SHEET K1.

ABBREVIATIONS:

CCR	CAMERA CONTROL RECEIVER
CCTV	CLOSED CIRCUIT TELEVISION
CH	CHANNEL
COMM	COMMUNICATION
DACCS	DIGITAL CROSS CONNECTION SWITCH
DEMUX	DEMULTIPLEXER
DSI OTU	DSI OPTICAL TRANSMISSION UNIT
E/O	ELECTRICAL TO OPTICAL
FDF	FIBER DISTRIBUTION FRAME
F/O, FO	FIBER OPTIC
FXO	FOREIGN EXCHANGE OFFICE
JKFD	JACKFIELD
MM	MILTIMODE
MMFO	MULTIMODE FIBER OPTIC CABLE
MOD	MODEM
MUX	MULTIPLEXER
NC	NORMALLY CLOSE
O/E	OPTICAL TO ELECTRICAL
OHS	OVERHEAD SIGN
OW	ORDER WIRE
RMS	RAMP METERING STATION
RX	RECEIVER
SM	SINGLEMODE
SMFO	SINGLEMODE FIBER OPTIC CABLE
T	TERMINATE
TX	TRANSMITTER
VDX	VIDEO DEMULTIPLEXER
VID	VIDEO
VMX	VIDEO MULTIPLEXER
VR	VIDEO RECEIVER
VX	VIDEO TRANSMITTER
4WTO	4 WIRE TRANSMISSION ONLY
2WFXS	2 WIRE FOREIGN EXCHANGE SERVICE
4WE&M	4 WIRE ANALOG WITH E&M SIGNALING

LEGEND:

	CCTV ASSEMBLY CAMERA AND POLE
	EXISTING CCTV ASSEMBLY CAMERA AND POLE
	NEW CCTV 334-TV CABINET
	EXISTING 334 CABINET
	334 CABINET
	SPLICE VAULT
	EXISTING SPLICE VAULT
	TELEPHONE BRIDGE
	EXISTING TELEPHONE BRIDGE
R	DUPLEX RECEPTACLE
	CIRCUIT BREAKER
	SURGE PROTECTOR
	THERMOSTATIC CONTROL
	RELAY CONTACT NC
F	FAN
L	INDICATOR LAMP
HT	RELAY COIL - HIGH TEMPERATURE
THERMO	ADJUSTABLE CALIBRATED THERMOSTAT
	EQUIPMENT GROUND
PP# xxx	POWER POLE NUMBER
HOxxx	CCTV IDENTIFICATION NUMBER: (HO = HOLLYWOOD FREEWAY) (xxx = POST MILE DESIGNATOR TO ONE DECIMAL PLACE)
x W	x-WIRE CIRCUIT
xP22	x-PAIR 22AWG CONDUCTORS

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

LEGEND AND NOTES

E-1

DATE	REVISED BY	DATE	CALCULATED/ DESIGNED BY	CHECKED BY
5/94	PW	5/94	AC	

PROJECT ENGINEER: ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

LAST REVISION 00-00-00 TIME PLOTTED => 18-MAR-1995 14:49

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

USERNAME => tomd
DGN FILE => /usr/tomd/P2/71186cu01.dgn

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	31	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

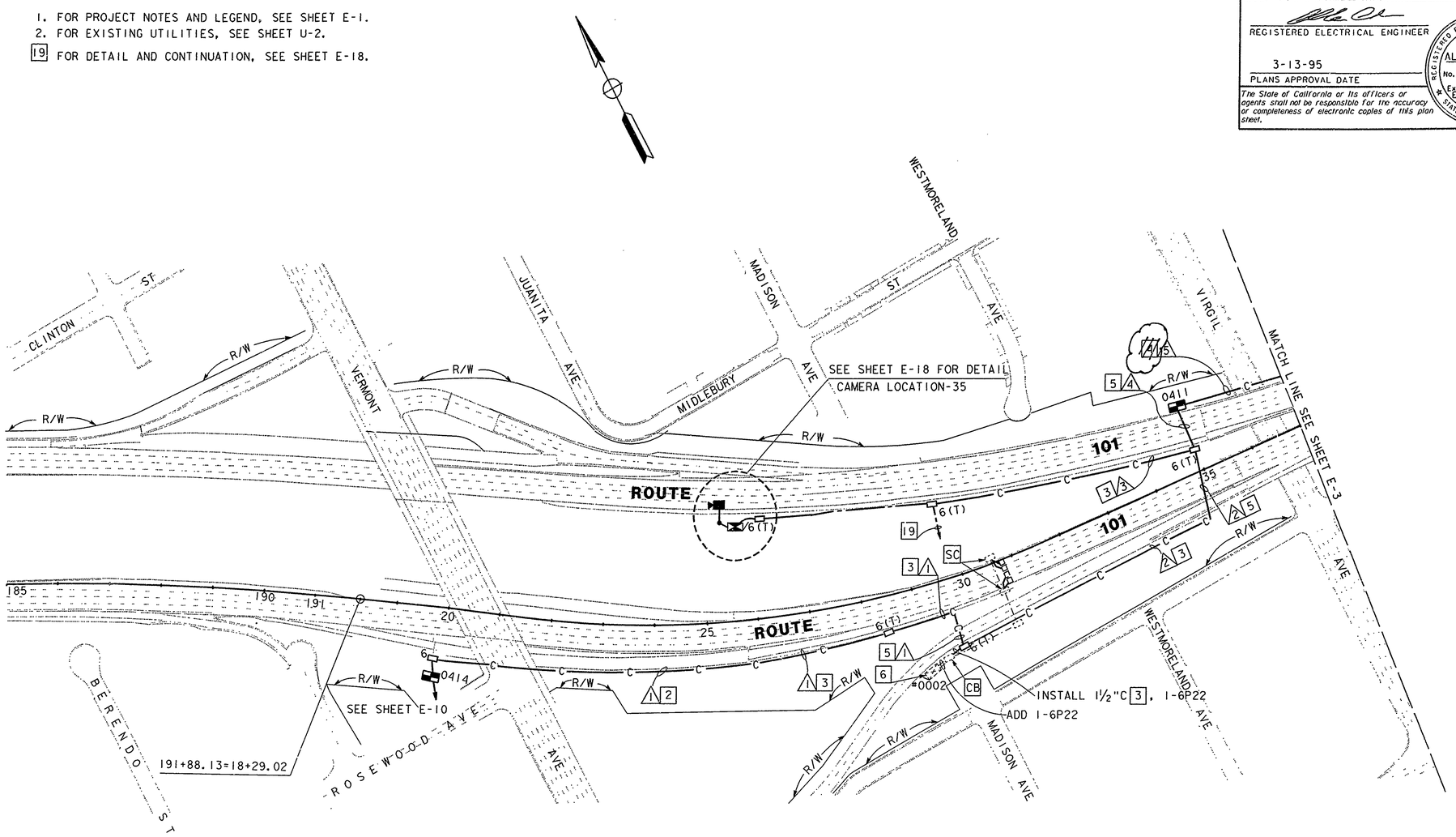
REGISTERED PROFESSIONAL ENGINEER
ALLEN CHEN
No. 14106
Exp. 6/30/97
ELECTRICAL
STATE OF CALIFORNIA

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

NOTES (THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-2.

[19] FOR DETAIL AND CONTINUATION, SEE SHEET E-18.



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1	2	3	4	5
50P22 CABLE					1
6P22 CABLE			1	2	
2SMFO			1	1	
60SMFO	1	1		1	1
12SMFO	1	1		1	1
DLC					
INNERDUCT	1	1		1	1
CONDUIT SIZE	4"	4"	2"	4"&3"	4"

* EXISTING TO BE REUSED

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1"=100'

E-2

PROJECT ENGINEER: ALLEN CHEN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

	CALCULATED/ DESIGNED BY	DATE	REVISED BY
	CHECKED BY	AC	DATE REVISED

LAST REVISION 08-31-94
TIME PLOTTED => 18-MAR-1995 14:34

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

USERNAME => tomd
DGN FILE => /usr/tomd/P2/71186cu02.dgn

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	32	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

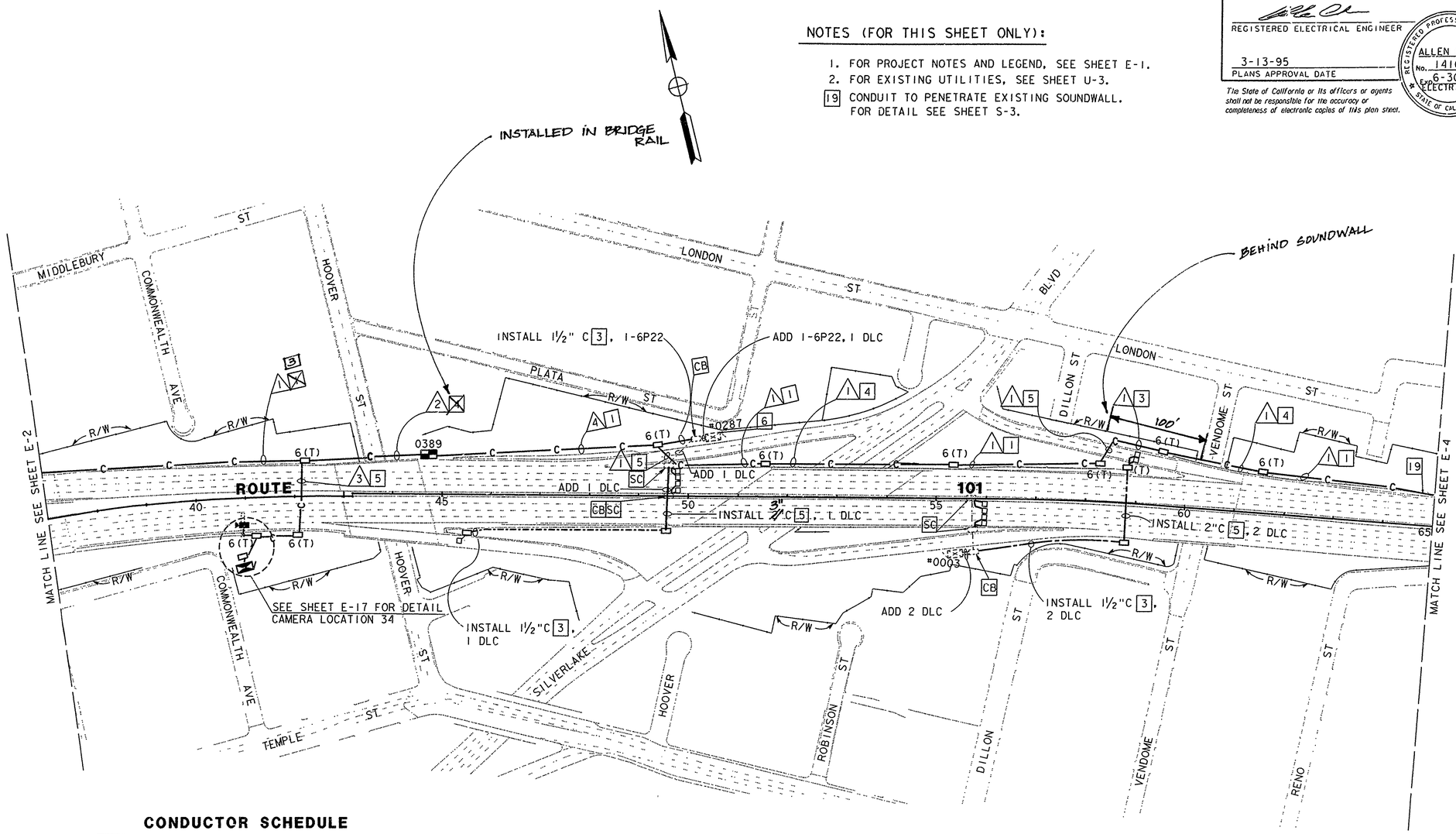
REGISTERED PROFESSIONAL ENGINEERS — ALLEN CHEN — No. 14106 — Exp. 6-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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

NOTES (FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-3.

[19] CONDUIT TO PENETRATE EXISTING SOUNDWALL. FOR DETAIL SEE SHEET S-3.



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1		CONDUCTOR RUN 2		CONDUCTOR RUN 3	CONDUCTOR RUN 4		
50P22 CABLE		1		1				1
6P22 CABLE				1	1			1
2SMFO				1	1			
60SMFO	1		1			1		
12SMFO		1		1			1	
#4 POWER CABLE								
DLC								
INNERDUCT	1	1	1	1		1	1	
CONDUIT SIZE	4"		4"		2"	4"		

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE : 1" = 100'

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

E-3

PROJECT ENGINEER	CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY / DATE REVISED
ALLEN CHEN	AL	AC	5/94	6/94

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

LAST REVISION 08-31-94
TIME PLOTTED => 18-MAR-1995 11:53

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

USERNAME => COOK
DGN FILE => ZH3:[330004]71186CU03.DGN

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	33	83

REGISTERED ELECTRICAL ENGINEER

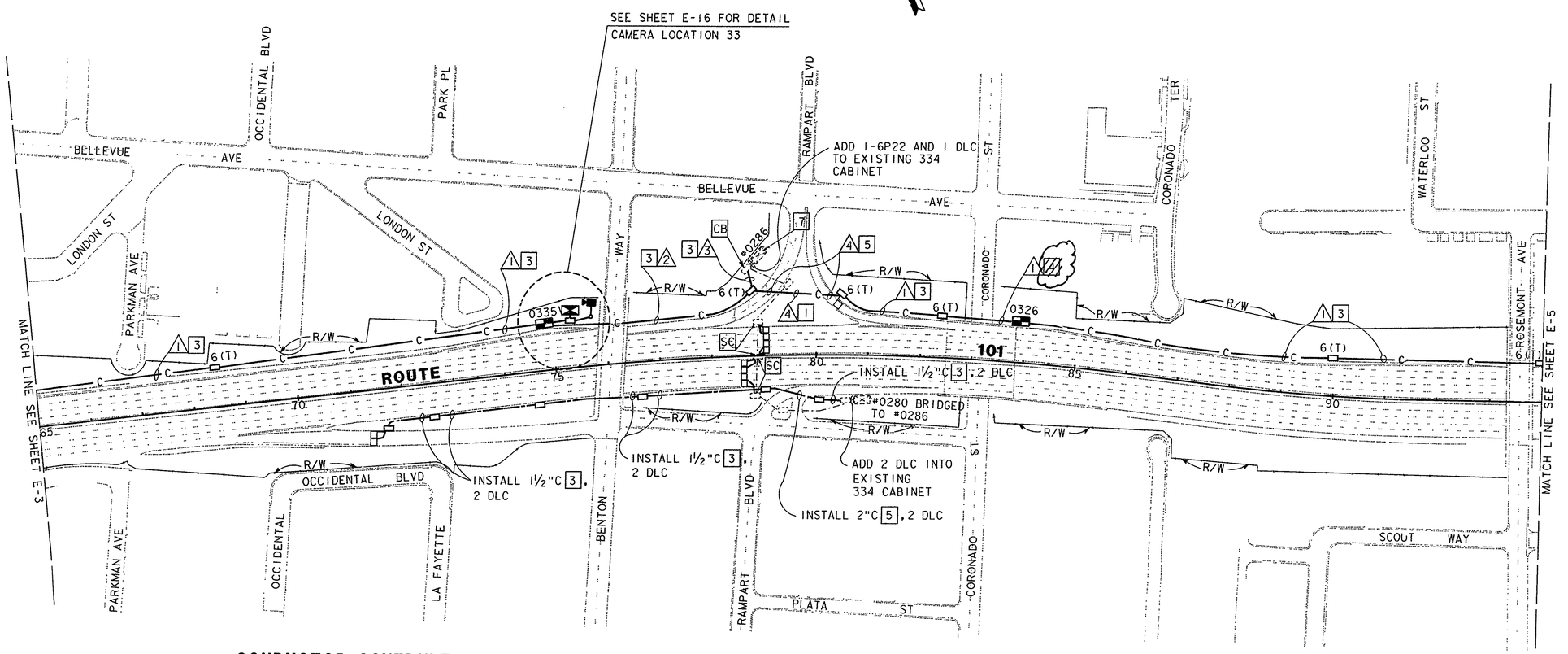
REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. 14106 — Exp. 6/30/97 — ELECTRICAL — STATE OF CALIFORNIA

3-13-95
PLANS APPROVAL DATE

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

NOTES(FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES , SEE SHEET U-4.



CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1	2	3	4
50P22 CABLE		1		1
6P22 CABLE		1	1	
2SMFO				
60SMFO	1	1		1
12SMFO	1	1		1
DLC			1	1
INNERDUCT	1 1	1 1		1 1
CONDUIT SIZE	*3" ϕ"	4"	2"	4"

* EXISTING TO BE REUSED

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	CALCULATED/ DESIGNED BY	AL
Caltrans IVHS DEVELOPMENT	ALLEN CHEN	CHECKED BY	AC

REVISED BY	DATE	DATE REVISED

LAST REVISION 08-31-94

TIME PLOTTED => 18-MAR-1995 11:53

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

USERNAME => mikesl
DGN FILE => /usr/mikesl/P4/71186cu04.dg

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	34	83

REGISTERED ELECTRICAL ENGINEER

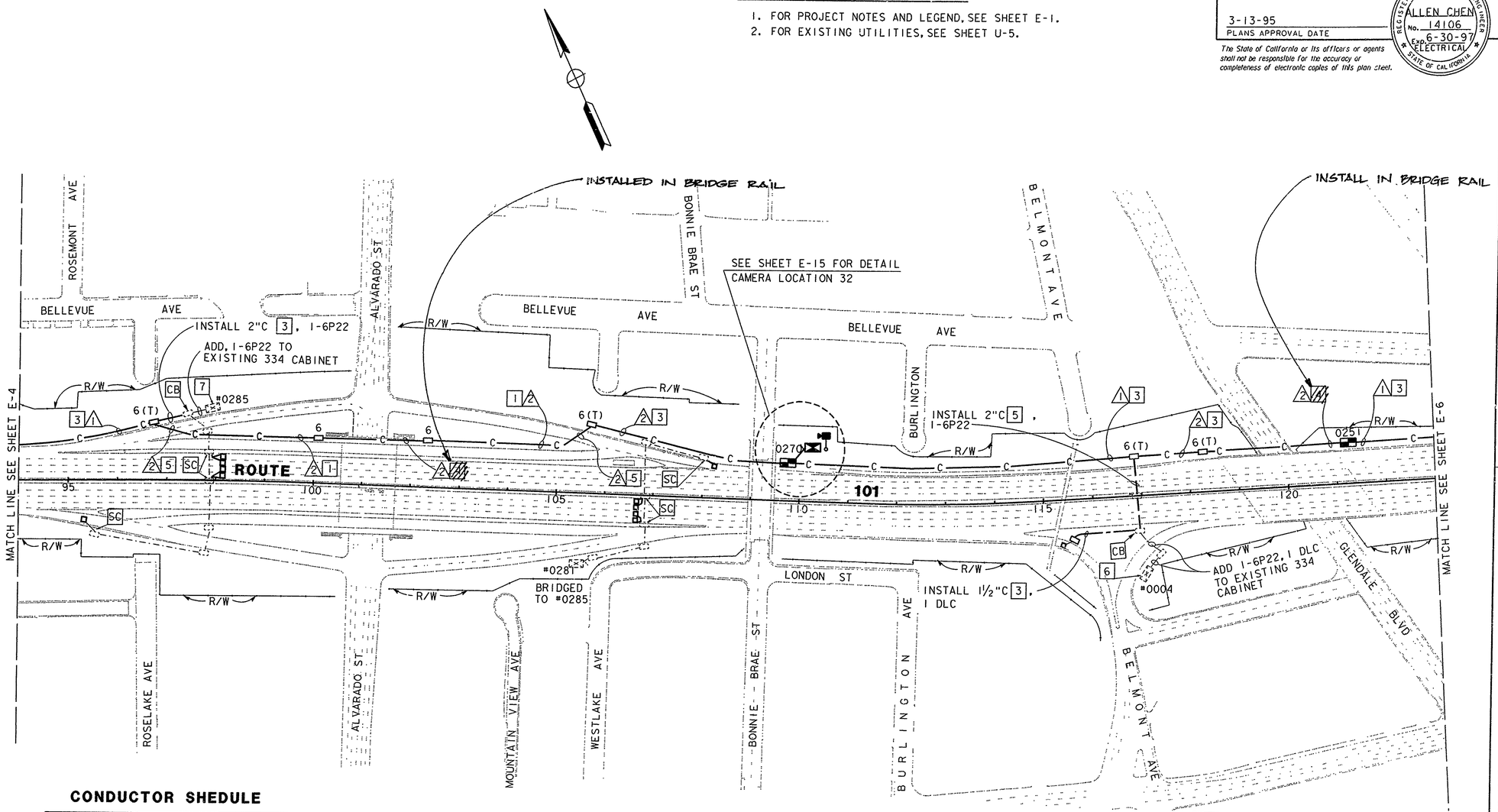
3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ALLEN CHEN
No. 14106
Exp. 6-30-97
ELECTRICAL
STATE OF CALIFORNIA

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

NOTES (FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-5.



CONDUCTOR SHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1			2		
50P22 CABLE			1			1
6P22 CABLE						1
2SMFO						
60SMFO	1			1		
12SMFO		1			1	
DLC						
INNERDUCT	1	1		1	1	
CONDUIT SIZE	4"			*3" 4"		

* EXISTING TO BE REUSED

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1" = 100'

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

PROJECT ENGINEER: ALLEN CHEN
CALCULATED/DESIGNED BY: AL DATE 5/94
CHECKED BY: AC 6/94
REVISED BY
DATE REVISED

LAST REVISION 08-31-94
TIME PLOTTED => 18-MAR-1995 11:54

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

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DGN FILE => /usr/mikesl/P4/71186cu05.dg

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	35	83

REGISTERED ELECTRICAL ENGINEER

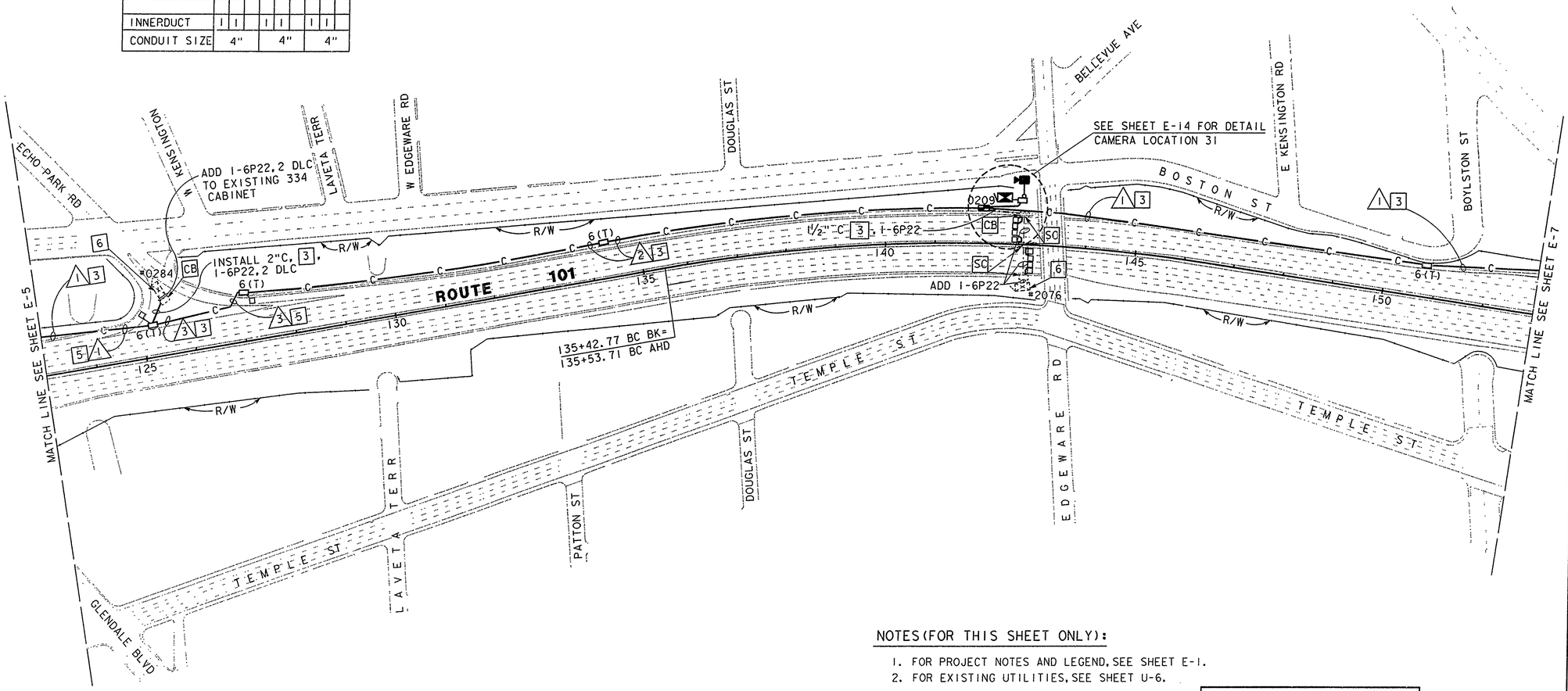
ALLEN CHEN
No. 14106
Exp. 6/30/97
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

3-13-95
PLANS APPROVAL DATE

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

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1		CONDUCTOR RUN 2		CONDUCTOR RUN 3	
50P22 CABLE		1		1		1
6P22 CABLE				1		1
2SMFO						
60SMFO	1		1		1	
12SMFO		1		1		1
DLC						1
INNERDUCT	1	1	1	1	1	1
CONDUIT SIZE	4"		4"		4"	



NOTES (FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-6.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS SYSTEM ROUTING

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.

SCALE: 1"=100'

E-6

CALCULATED/ DESIGNED BY	DATE	REVISED BY	DATE REVISED
AL	5/94		
CHECKED BY			
AC	6/94		

PROJECT ENGINEER: ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

LAST REVISION 08-31-94
TIME PLOTTED => 18-MAR-1995 12:08

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

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CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	36	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. 14106 — Exp. 6-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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

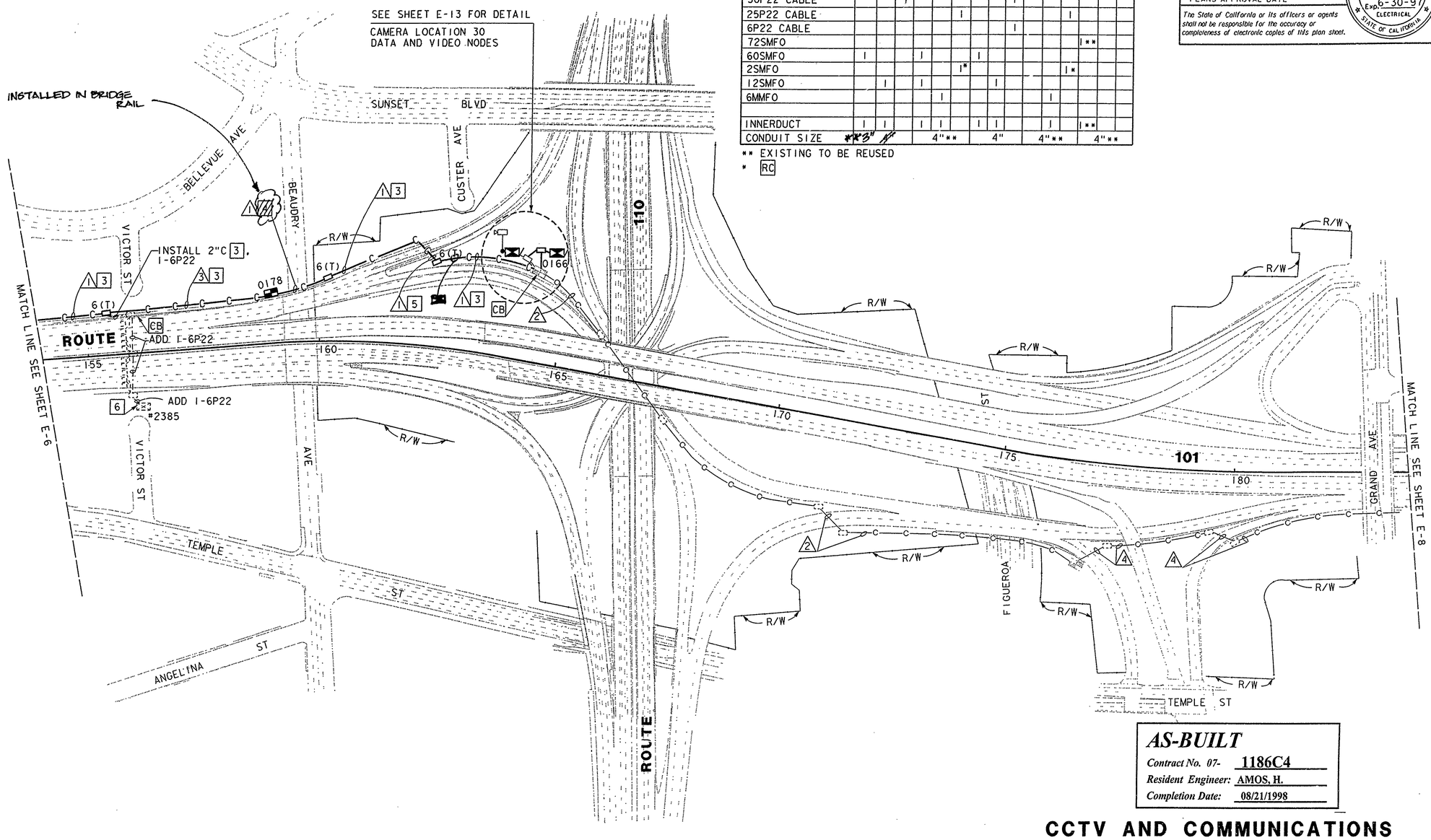
NOTE (FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-7.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1	2	3	4
50P22 CABLE	1		1	
25P22 CABLE		1		1
6P22 CABLE			1	
72SMFO				1**
60SMFO	1	1	1	
2SMFO		1*		1*
12SMFO	1	1	1	
6MMFO		1		1
INNERDUCT	1 1	1 1	1 1	1 1**
CONDUIT SIZE	***3" Ø	4"**	4"	4"** 4"**

** EXISTING TO BE REUSED
* RC



AS-BUILT

Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS ROUTING

SCALE: 1"=100'

E-7

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	CALCULATED/ DESIGNED BY	AL	DATE 5/94	REVISED BY
Caltrans	ALLEN CHEN	CHECKED BY	AC	6/94	DATE REVISED
IVHS DEVELOPMENT					

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

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CU 07396

EA 1186C1

LAST REVISION 08-31-94

TIME PLOTTED => 18-MAR-1995 12:09

< 24

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	37	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ALLEN CHEN
No. 14106
Exp. 6-30-97
ELECTRICAL
STATE OF CALIFORNIA

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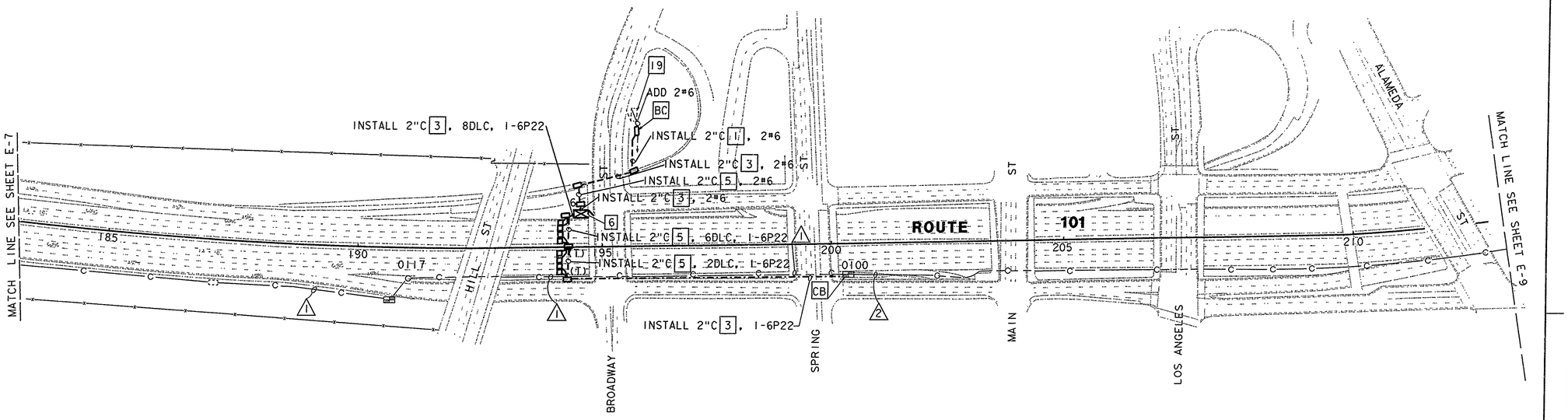

NOTES (FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-8.

19 ADD A 120V-1P-30 AMP CIRCUIT BREAKER TO EXISTING IRRIGATION SERVICE (#433640) FOR COUNT STATION.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1						2		
50P22 CABLE									
25P22 CABLE			1						1**
6P22 CABLE									
72SMFO				1**			1**		
60SMFO									
6MMFO		1						1**	
2SMFO			1*						
INNERDUCT		1		1**			1**	1**	
CONDUIT SIZE		4**		4**					

**-EXISTING TO BE REUSED.
*- RC

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATION SYSTEM ROUTING AND COUNT STATION

SCALE: 1" = 100'

E-8

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

PROJECT ENGINEER: ALLEN CHEN
CALCULATED/DESIGNED BY: AL | DATE 5/94 | REVISED BY
CHECKED BY: AC | 6/94 | DATE REVISED

TIME PLOTTED => 18-MAR-1995 11:41
LAST REVISION 08-19-94

FORM DC-OE-92-PF (REV. 3/88)
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DGN FILE => /usr/trjimt/P2/71186cu08.dg
CU 07396
EA 1186C1

< 24

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN 1			CONDUCTOR RUN 2		
25P22 CABLE			1**			
6P22 CABLE						
72SMFO	1**			1**		
6MMFO		1**				
INNERDUCT	1**	1**		1**	1**	
CONDUIT SIZE	4"**			4"**		

** - EXISTING TO BE REUSED

NOTES (FOR THIS SHEET ONLY):

1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-8.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	38	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. 14106 — Exp. 6-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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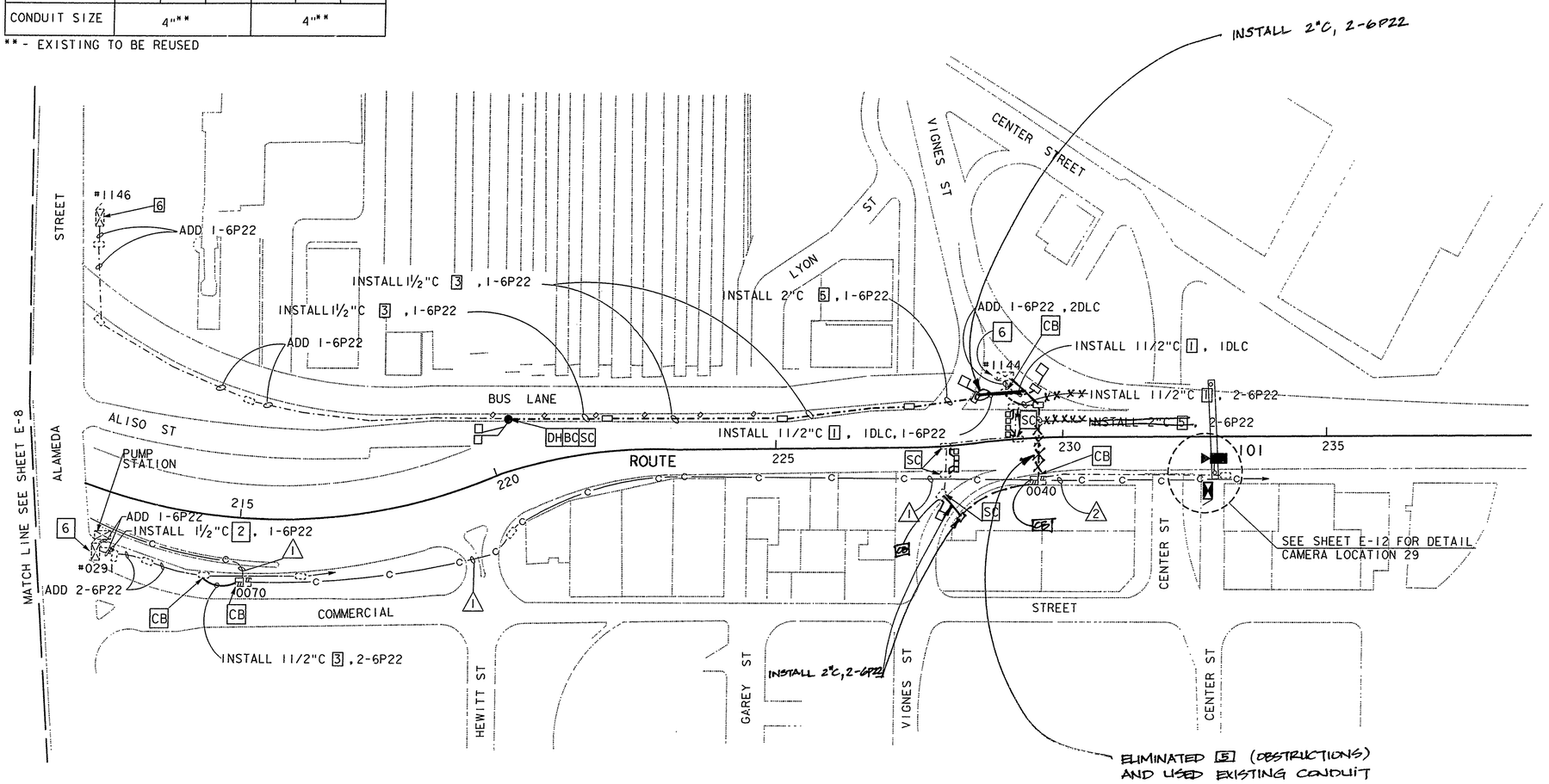


AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1"=100'

E-9

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL ONLY

CALCULATED/ DESIGNED BY	DATE	REVISED BY
AL	8/94	
CHECKED BY	DATE	DATE REVISED
AC	8/94	

PROJECT ENGINEER: ALLEN CHEN

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

LAST REVISION 00-00-00 — TIME PLOTTED => 18-MAR-1995 14:25

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

USERNAME => maria
DGN FILE => /usr/maria/P5/71186cu09.dgn

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	39	83

REGISTERED ELECTRICAL ENGINEER

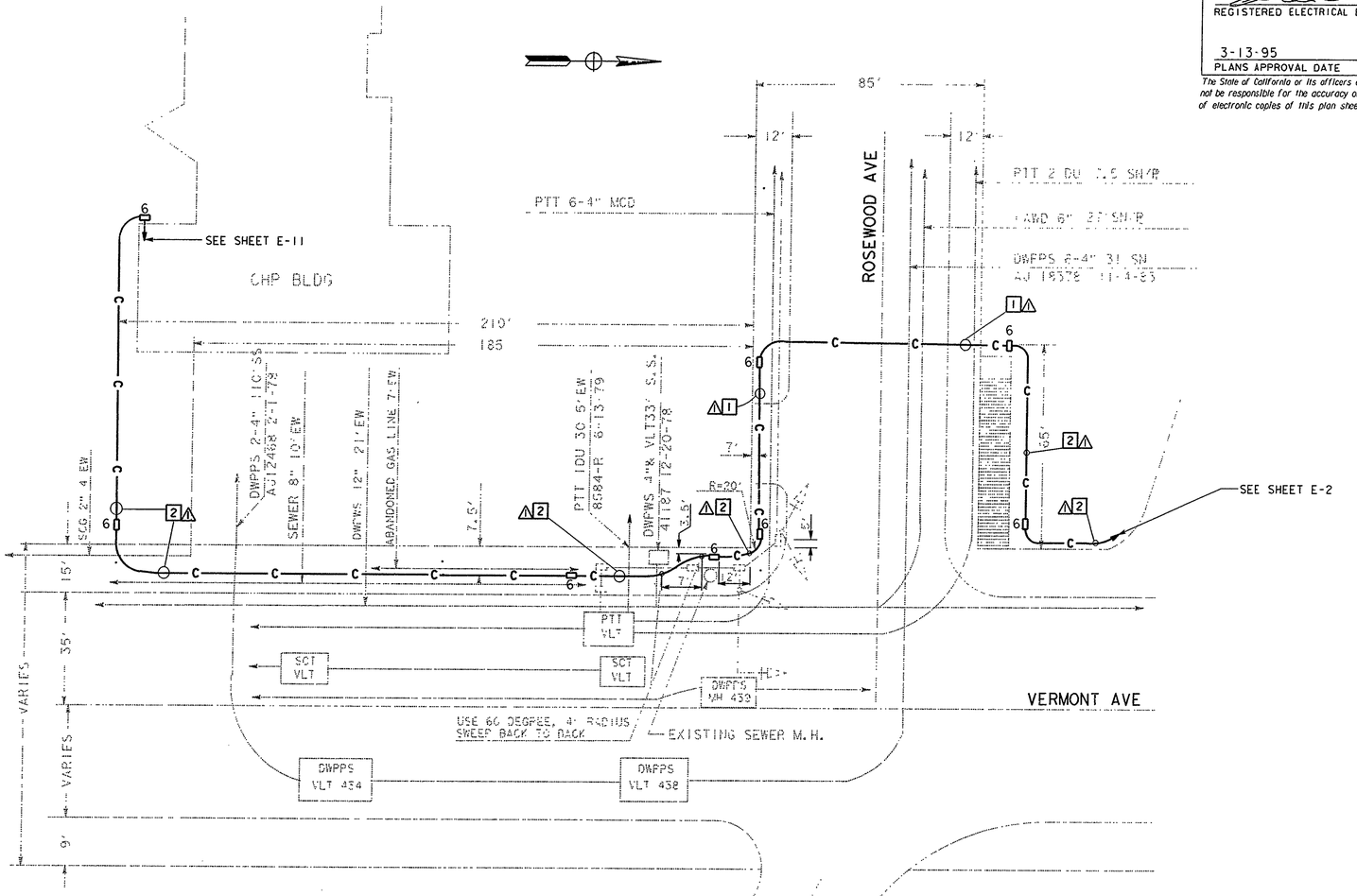
3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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

CONDUCTOR SCHEDULE

	⚠
12 SMFO CABLE	1
INNERDUCT	1
CONDUIT SIZE	3"



NOTES (THIS SHEET ONLY):

1. JACK 3" CONDUIT BENEATH ROADWAY 30" DEEP.
2. TRENCH AND INSTALL 3" CONDUIT 30" DEEP.
3. ALL CONDUIT SWEEP SHOWN ON THIS PLAN SHALL BE 3' RADIUS MINIMUM UNLESS OTHERWISE AS INDICATED.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1"=20'

E-10

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3	USERNAME => maria DGN_FILE => /usr/maria/P5/71186cu10.dgn	CU 07396	EA 1186C1	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT
PROJECT ENGINEER: ALLEN CHEN
CALCULATED/DESIGNED BY
CHECKED BY
PW
AC
DATE 5/94
DATE REVISED 5/94
REVISED BY
LAST REVISION 00-00-00
TIME PLOTTED => 18-MAR-1995 14:25

< 24

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	40	83

REGISTERED ELECTRICAL ENGINEER

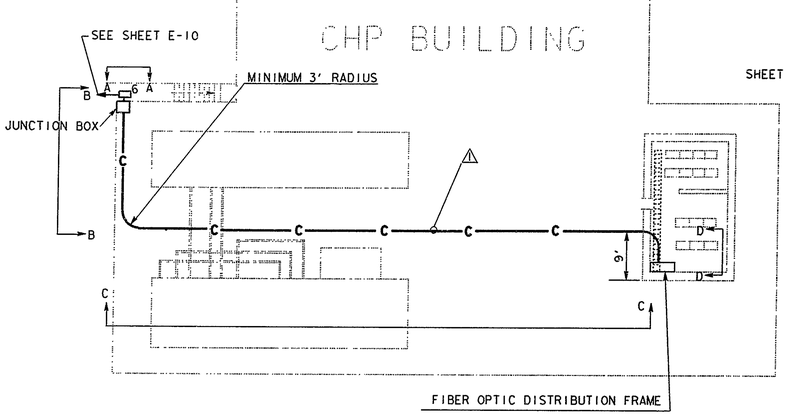
3-13-95
PLANS APPROVAL DATE

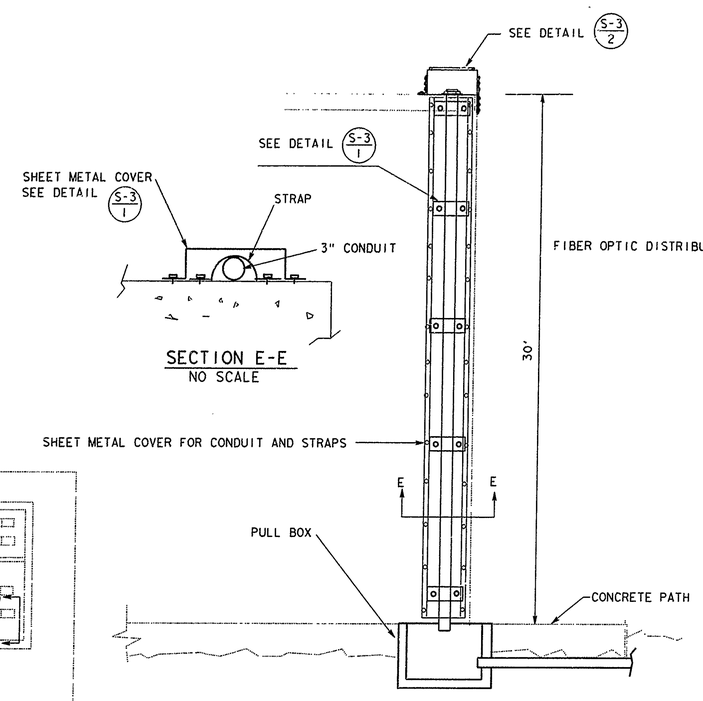
REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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

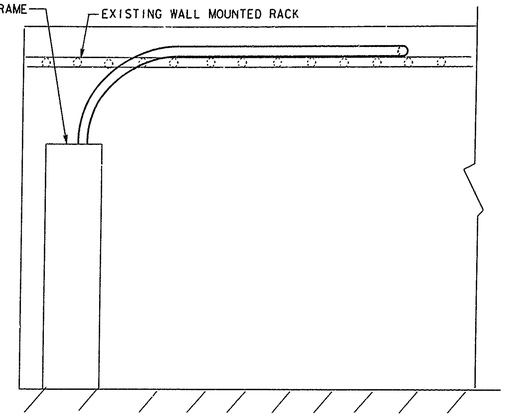
CONDUCTOR SCHEDULE

	⚠
12 SMFO CABLE	1
INNERDUCT	1
CONDUIT SIZE	3"

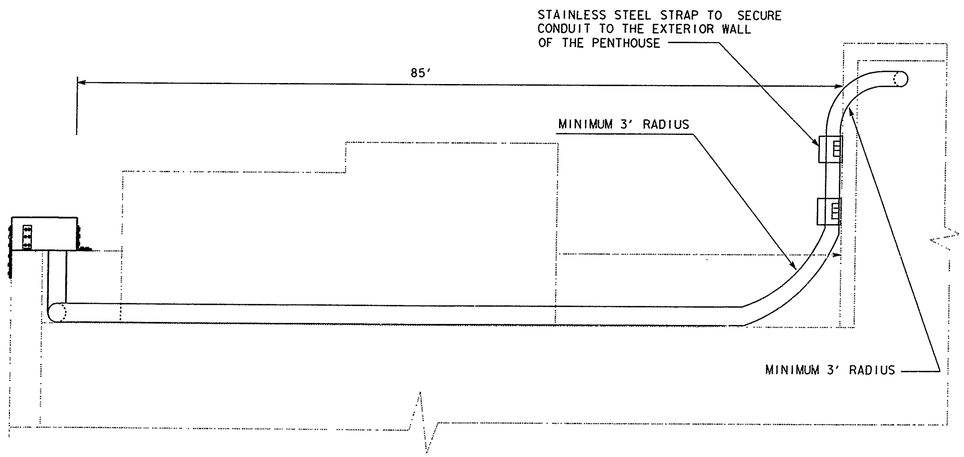




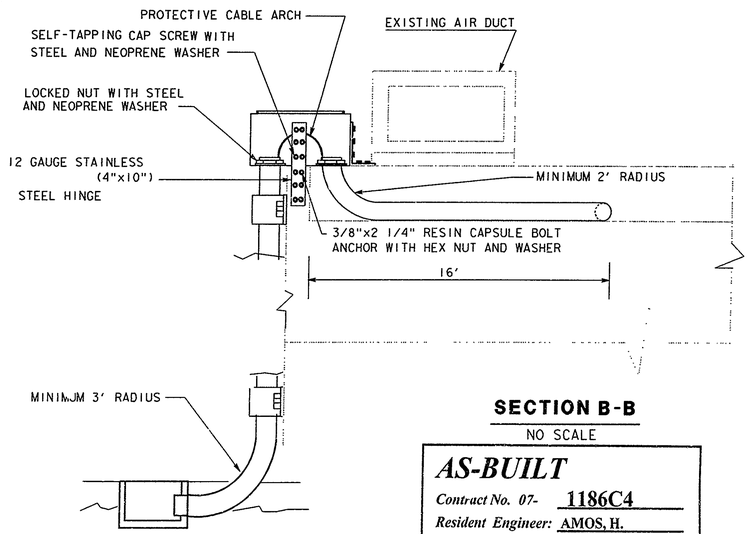
SECTION A-A
NO SCALE



SECTION D-D
NO SCALE



SECTION C-C
NO SCALE



SECTION B-B
NO SCALE

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV AND COMMUNICATION SYSTEM ROUTING

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

E-11

DATE	REVISED BY	DATE	CALCULATED/ DESIGNED BY	DATE	CHECKED BY
5/94	PW	5/94	AC		

PROJECT ENGINEER: ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
IVHS DEVELOPMENT

LAST REVISION 00-00-00
TIME PLOTTED => 18-MAR-1995 14:25

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

USERNAME => maria
DGN FILE => /usr/maria/P5/71186cu11.dgn

CU 07396

EA 1186C1

< 24

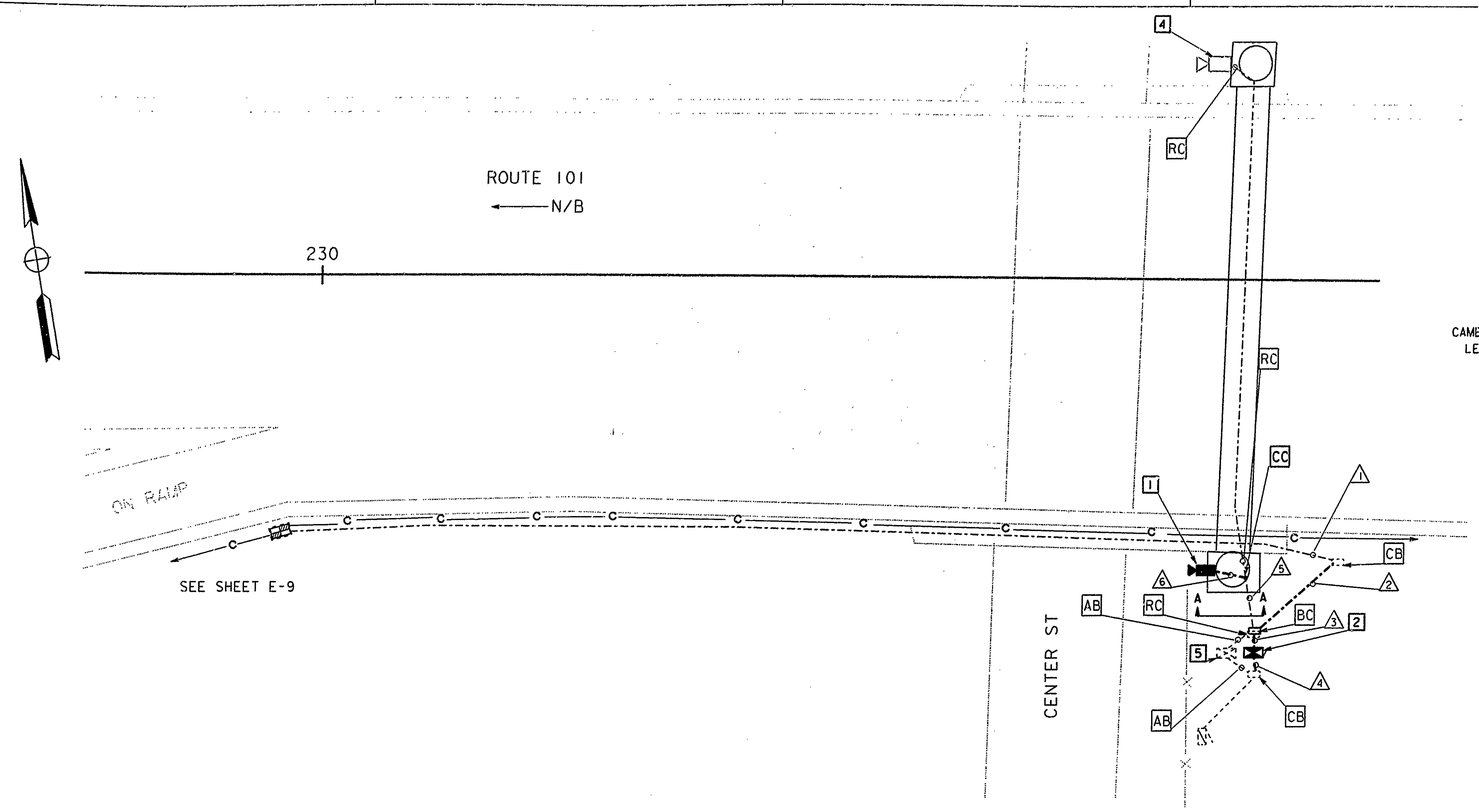
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	41	83

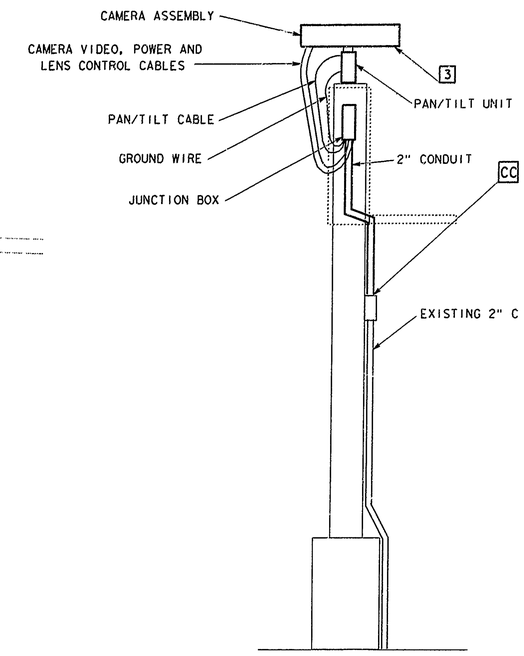
REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
ALLEN CHEN
No. E-14106
Exp. 06-30-97
ELECTRICAL
STATE OF CALIFORNIA





SECTION A-A

NO SCALE

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4	5	6
CAMERA VIDEO INTERFACE CABLE			1		1	1
PAN/TILT CONTROL CABLE			1		1	1
LENS CONTROL CABLE			1		1	1
CAMERA POWER CABLE			1		1	1
CAMERA GROUND CABLE			1		1	1
2 MULTIMODE FIBER OPTIC CABLE	1	1	1			
6P22 COMMUNICATION DIST. CABLE	1	1	1			
#10 POWER CABLE				2		
CONDUIT SIZE	2"(E)	3"	2-3"	2"	2"(E)	2"

(E): EXISTING CONDUIT TO BE REUSED

NOTES (THIS SHEET ONLY):

1. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SET PAN STOPS FOR 350°.
2. INSTALL STATE-FURNISHED CCTV 334 CABINET. SEE CABINET DETAIL PLAN SHEET E-27.
3. FOR CAMERA INSTALLATION DIRECT ON OHS STRUCTURE, SEE CCTV POLE AND MOUNTING DETAILS SHEET E-29.
4. RS EXISTING CAMERA ASSEMBLY AND PAN/TILT UNIT.
5. RS EXISTING CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER.
   RC EXISTING CABINET, EQUIPMENT NOT INDICATED IN THIS PLAN, AND CABINET FOUNDATION.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV CAMERA (LOCATION HO 004)

SCALE: 1" = 20'

E-12

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

PROJECT ENGINEER: ALLEN CHEN
CALCULATED/DESIGNED BY: PW DATE 5/94 REVISED BY
CHECKED BY: AC 5/94 DATE REVISED

TIME PLOTTED => 21-MAR-1995 15:25
LAST REVISION 00-00-00

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

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CU07396

EA1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	42	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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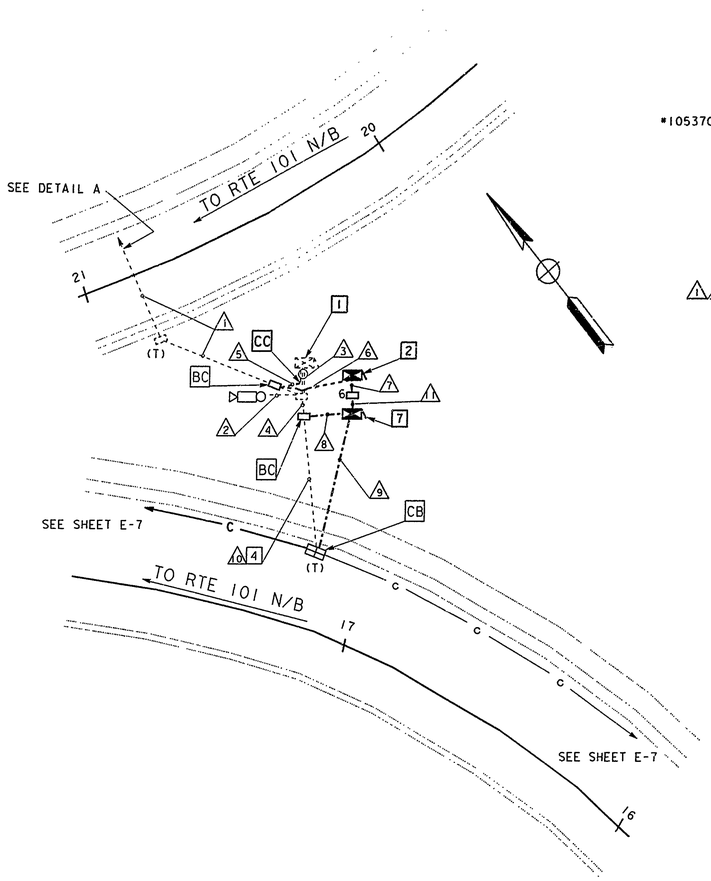
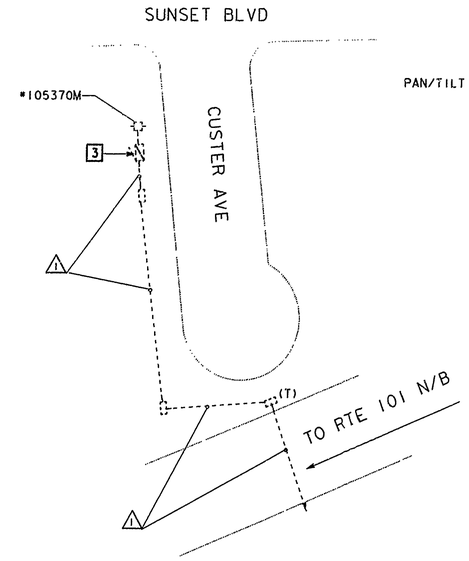
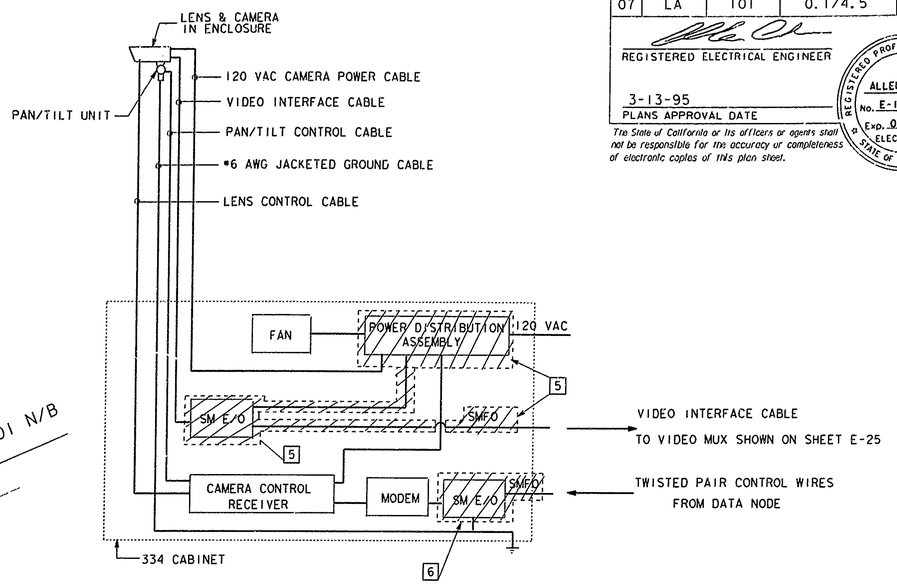




DETAIL A
NO SCALE



DETAIL B
NO SCALE

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11
CAMERA VIDEO INTERFACE CABLE		1 (E)	1 (E)								
PAN/TILT CONTROL CABLE		1 (E)	1 (E)								
LENS CONTROL CABLE		1 (E)	1 (E)								
CAMERA POWER CABLE		1 (E)	1 (E)								
CAMERA GROUND CABLE		1 (E)	1 (E)								
50P22 CABLE							1		1		1
25P22 CABLE							1		1		1
60 SMFO									2		
SMFO BREAK OUT CABLE			2	2			8	2			8
12SMFO CABLE			1	1				1	2		
6MMFO CABLE			1	1				1	1		
6P22 COMMUNICATION DIST. CABLE			1	1			1	1			1
#4 POWER CABLE	2 (E), 4		2 (E)		2 (E)	4	2				2
CONDUIT SIZE	2" (E)	2-2" (E)	3-2" (E)	2" (E)	2"	2"	2-3"	2"	4"	2" (E)	4"

(E): EXISTING TO BE REUSED

NOTES (THIS SHEET ONLY):

1. INSTALL A 16-CHANNEL VIDEO MULTIPLEXER AND 6 VIDEO RECEIVERS IN VIDEO CABINET. FOR DETAILS ON ALL EQUIPMENT LAYOUT, WIRING, AND POWER DISTRIBUTION ASSEMBLY UPGRADE, SEE DETAIL-B THIS SHEET, E-25 AND E-26. INCLUDED IN BID ITEM "EQUIPMENT AT VIDEO NODE".
2. INSTALL STATE-FURNISHED TYPE 334 CABINET. INSTALL ONE D4 CHANNEL BANK IN DATA NODE CABINET. SEE E-26 FOR DETAIL ON ALL EQUIPMENT LAYOUT. INCLUDED IN BID ITEM "EQUIPMENT AT DATA NODE".
3. USE EXISTING 120V-1P-30AMP CCTV CAMERA CIRCUIT BREAKER FOR VIDEO NODE. ADD A METERED 120V-1P-30AMP CIRCUIT BREAKER FOR DATA NODE AND A METERED 120V-1P-30AMP CIRCUIT BREAKER FOR CABLE NODE IN EXISTING TYPE 111-BF SERVICE CABINET. THE DISTANCE OF EXISTING SERVICE TO VIDEO AND DATA NODES IS APPROXIMATELY 260'.
4. RC EXISTING 2SMFO CABLE.
5. RS EXISTING EQUIPMENT AS SHOWN. CONNECT A VIDEO INTERFACE CABLE TO VIDEO MUX AND MATCH EXISTING BNC CONNECTOR INSIDE VIDEO NODE CABINET. SEE E-25 FOR DETAILS. INSTALL NEW POWER DISTRIBUTION ASSEMBLY SHOWN ON SHEET E-26.
6. RS EXISTING EQUIPMENT AS SHOWN. CONNECT TWISTED PAIR CONTROL WIRES FROM DATA NODE TO EXISTING MODEM INSIDE CAMERA CONTROL CABINET.
7. INSTALL A FIBER DISTRIBUTION FRAME IN CABLE NODE (STATE-FURNISHED TYPE 334 CABINET).

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

EQUIPMENT AT DATA NODE, EQUIPMENT AT VIDEO NODE, AND MODIFY CCTV CAMERA (LOCATION HO 017)

SCALE: 1" = 20'

E-13

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

CALCULATED/ DESIGNED BY	CHECKED BY	PW	DATE 5/94	REVISED BY	DATE REVISED
		AC	5/94		

PROJECT ENGINEER: ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

LAST REVISION 00-00-00
TIME PLOTTED => 21-MAR-1995 15:25

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

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CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	43	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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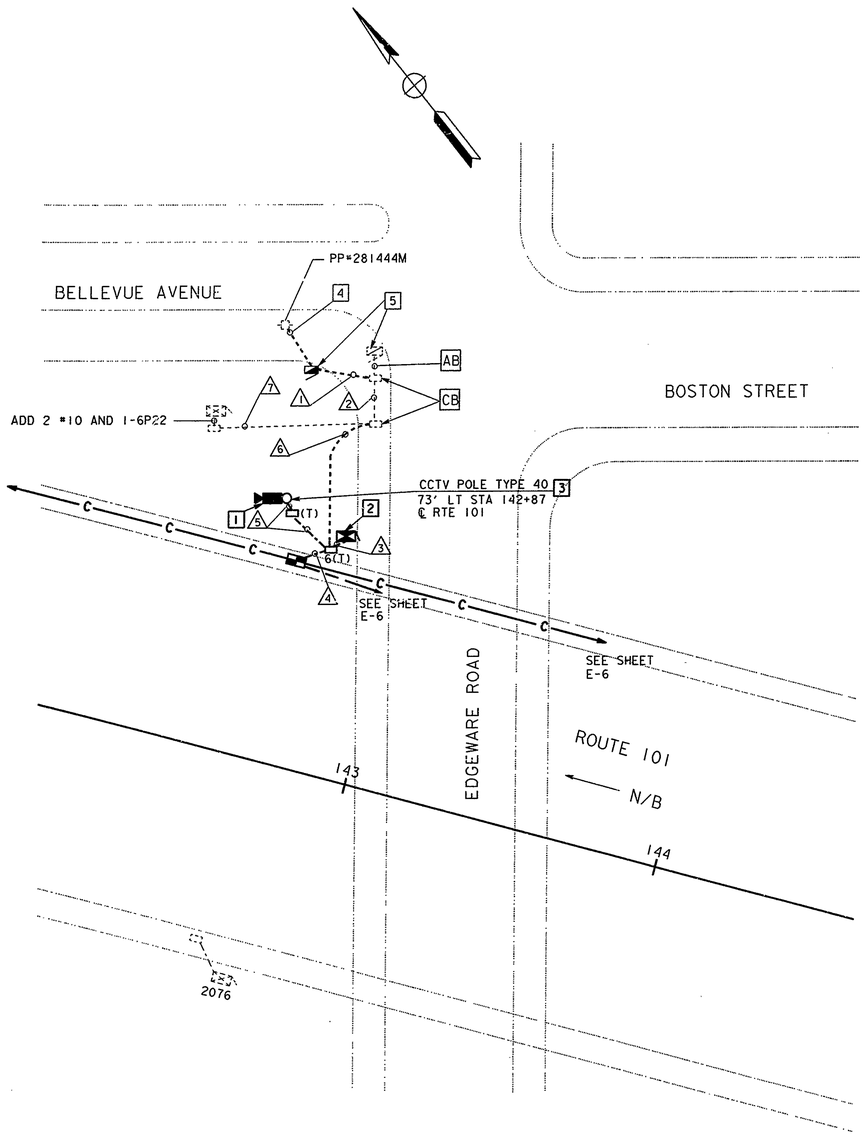

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4	5	6	7
CAMERA VIDEO INTERFACE CABLE			1		1		
PAN/TILT CONTROL CABLE			1		1		
LENS CONTROL CABLE			1		1		
CAMERA POWER CABLE			1		1		
CAMERA GROUND CABLE			1		1		
2 SINGLEMODE FIBER OPTIC CABLE			1	1			
6P22 COMMUNICATION DIST CABLE			1	2		1	1
#10 POWER CABLE	2	2					2
#8 POWER CABLE	2	2	2			2	
CONDUIT SIZE	2"	2"(E)	2-3"	2"	2-2"	2"	2"(E)

(E): EXISTING CONDUIT TO BE REUSED

NOTES (THIS SHEET ONLY):

1. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SET PAN STOPS FOR 350°.
2. INSTALL STATE-FURNISHED CCTV 334 CABINET. SEE CABINET DETAIL PLAN SHEET E-27.
3. INSTALL TYPE 40 CCTV POLE. FOR INSTALLATION AND MOUNTING DETAILS, SEE POLE MOUNT DETAIL PLAN SHEET E-28.
4. INSTALL TYPE 'H' RISER AND 3" CONDUIT. CONDUCTORS BY OTHERS.
5. RC EXISTING SERVICE (ALREADY DISCONNECTED). INSTALL A 120/240V, 3 WIRE SINGLE PHASE 100 AMP TYPE 111-BF SERVICE EQUIPMENT ENCLOSURE WITH 100 AMP MAIN BREAKER, A METERED 120-1P-30 AMP CIRCUIT BREAKER FOR CCTV 334 CABINET, A 120-1P-30 AMP CIRCUIT BREAKER FOR COUNT STATIONS.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV CAMERA (LOCATION HO 021)

SCALE: 1" = 20'

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

E-14

CALCULATED/ DESIGNED BY	DATE	REVISED BY	DATE REVISED
PW	5/94		
AC	5/94		
CHECKED BY			

PROJECT ENGINEER: ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

LAST REVISION 00-00-00
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CU07396

EA1186C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	44	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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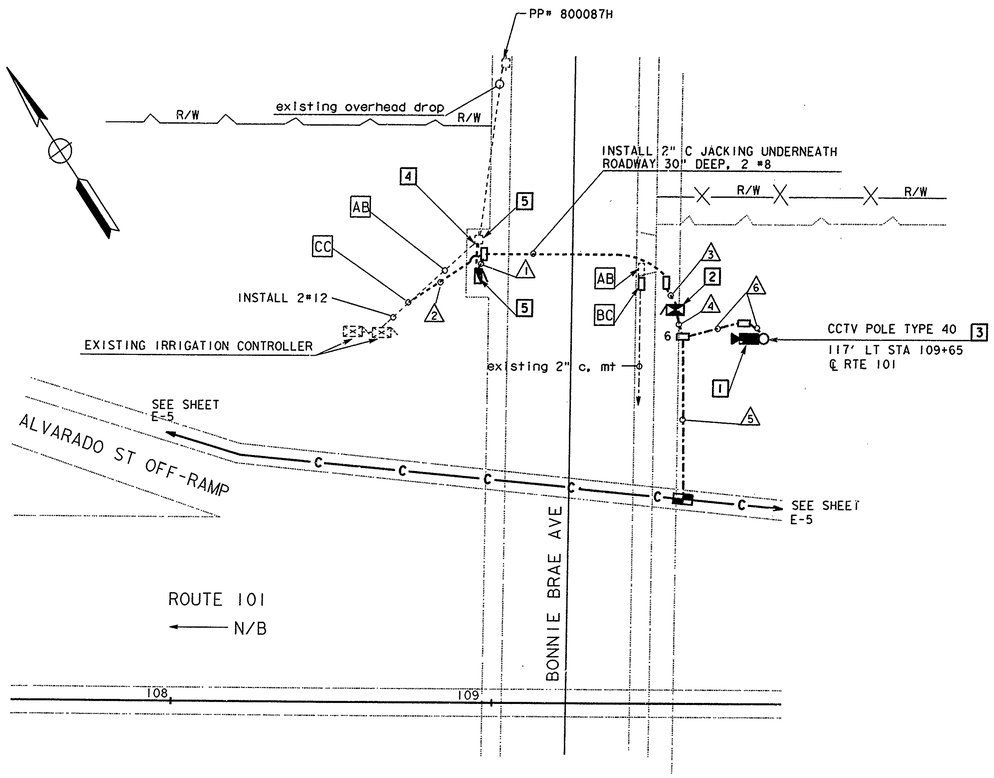

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4	5	6
CAMERA VIDEO INTERFACE CABLE				1		1
PAN/TILT CONTROL CABLE				1		1
LENS CONTROL CABLE				1		1
CAMERA POWER CABLE				1		1
CAMERA GROUND CABLE				1		1
2 SINGLEMODE FIBER OPTIC CABLE				1	1	
6P22 COMMUNICATION DIST. CABLE				1	1	
#12 POWER CABLE	2	2				
#8 POWER CABLE	2		2			
CONDUIT SIZE	2"	2"	2"	2-3"	2"	2-2"

NOTES (THIS SHEET ONLY):

1. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SET PAN STOPS FOR 350°.
2. INSTALL STATE-FURNISHED CCTV 334 CABINET. SEE CABINET DETAIL PLAN SHEET E-27.
3. INSTALL TYPE 40 CCTV POLE. FOR INSTALLATION AND MOUNTING DETAILS, SEE POLE MOUNT DETAIL PLAN SHEET E-28.
4. INSTALL TYPE 'H' RISER AND 3" CONDUIT. CONDUCTORS BY OTHERS.
5. RC EXISTING 120/240V POLE-MOUNTED SERVICE FOR IRRIGATION. INSTALL A 120/240V, 3 WIRE, SINGLE PHASE, 100 AMP TYPE 111-BF SERVICE EQUIPMENT ENCLOSURE WITH 100 AMP MAIN BREAKER, A METERED 120-1P-30 AMP CIRCUIT BREAKER FOR 334 CCTV CABINET, A 120-1P-20 AMP CIRCUIT BREAKER FOR IRRIGATION.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV CAMERA (LOCATION HO 027)
SCALE: 1" = 20'

E-15

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

CALCULATED/ DESIGNED BY	DATE	REVISED BY
PW	5/94	
CHECKED BY	DATE	REVISED
AC	5/94	

PROJECT ENGINEER: ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans IVHS DEVELOPMENT

LAST REVISION 00-00-00 TIME PLOTTED => 20-MAR-1995 06:30

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CU07396

EA1186C1

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	45	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

ALLEN CHEN No. E-14106 Exp. 06-30-97 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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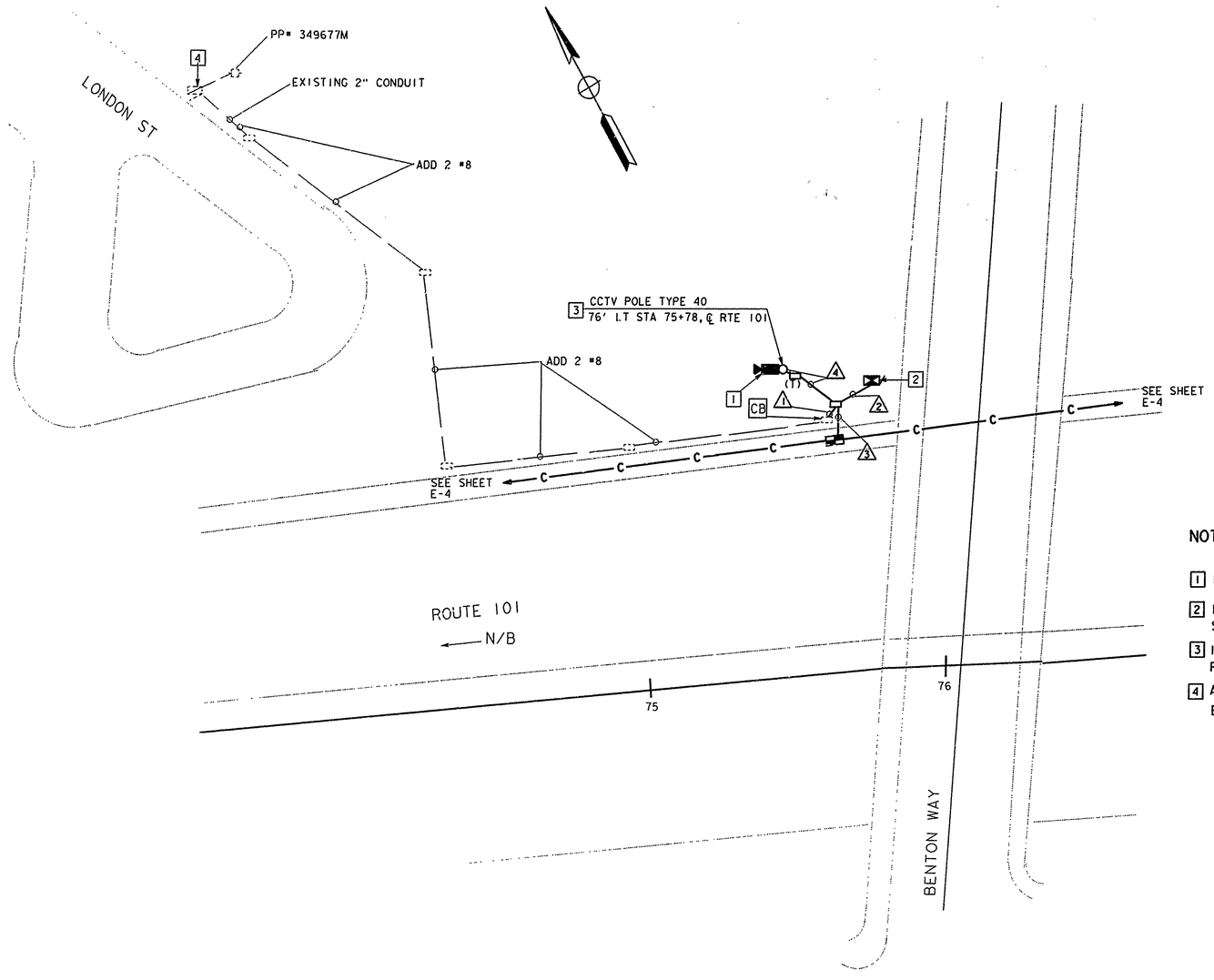

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4
CAMERA VIDEO INTERFACE CABLE		1		1
PAN/TILT CONTROL CABLE		1		1
LENS CONTROL CABLE		1		1
CAMERA POWER CABLE		1		1
CAMERA GROUND CABLE		1		1
2 SINGLEMODE FIBER OPTIC CABLE		1	1	
6P22 COMMUNICATION DIST. CABLE		1	1	
#8 POWER CABLE	2	2		
CONDUIT SIZE	2"	2-3"	2"	2-2"

NOTES (THIS SHEET ONLY):

1. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SET PAN STOPS FOR 350°.
2. INSTALL STATE-FURNISHED CCTV 334 CABINET. SEE CABINET DETAIL PLAN SHEET E-27.
3. INSTALL TYPE 40 CCTV POLE. FOR INSTALLATION AND MOUNTING DETAILS, SEE POLE MOUNT DETAIL PLAN SHEET E-28.
4. ADD A 120-1P-30 AMP CIRCUIT BREAKER TO EXISTING TYPE 111-BF SERVICE EQUIPMENT ENCLOSURE FOR CCTV 334 CABINET.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV CAMERA (LOCATION HO 033)

SCALE: 1" = 20'

E-16

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

DATE	REVISED BY	DATE REVISED
5/94	PW	AC

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER
ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
IVHS DEVELOPMENT

LAST REVISION 00-00-00
TIME PLOTTED => 20-MAR-1995 06:31

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DGN FILE => /usr/mikesl/P4/71186cu16.dg

CU 07396

EA 1186C1

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	46	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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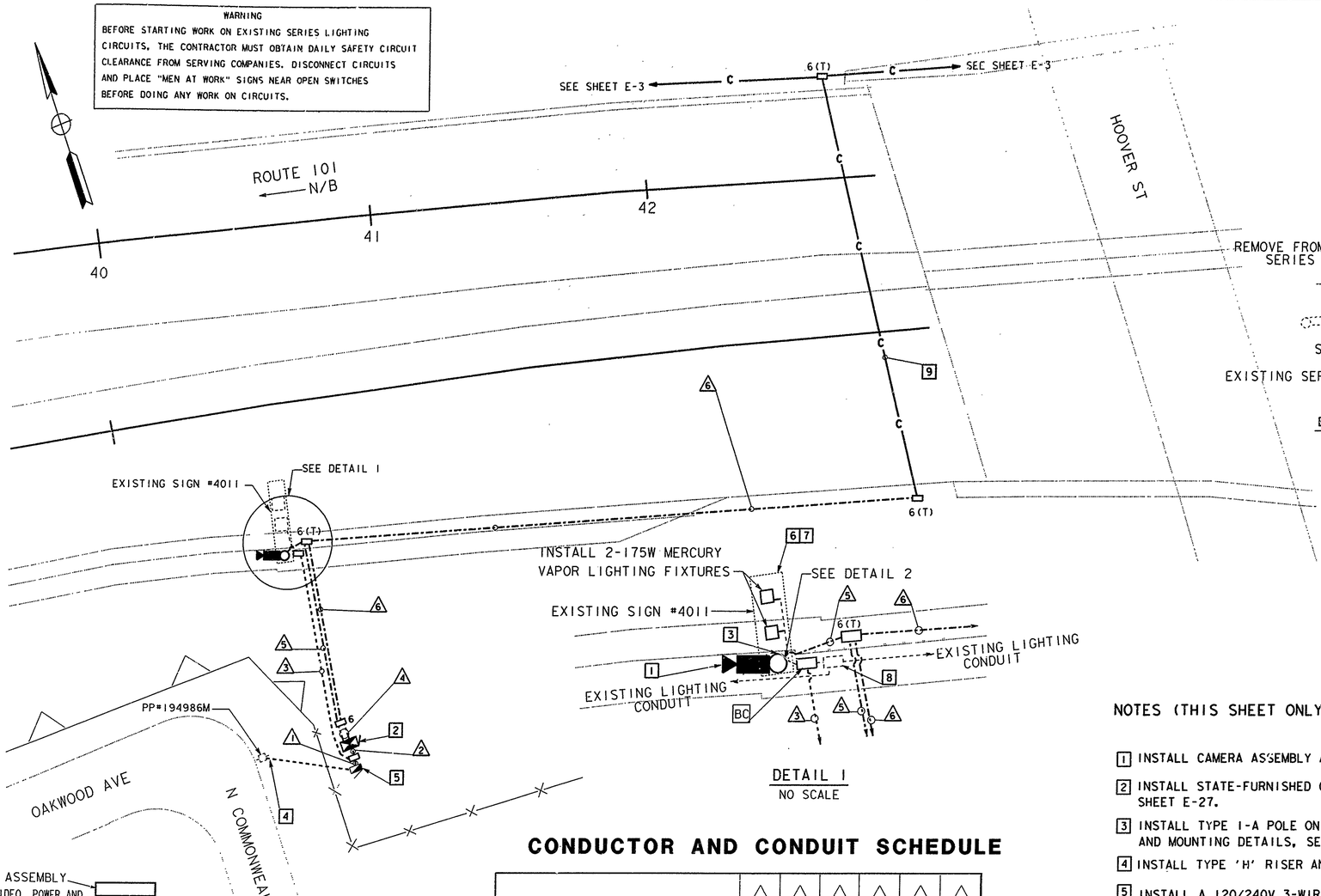
WARNING
BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES. DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.



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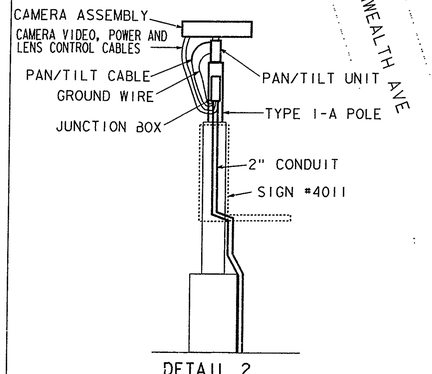
NO SCALE



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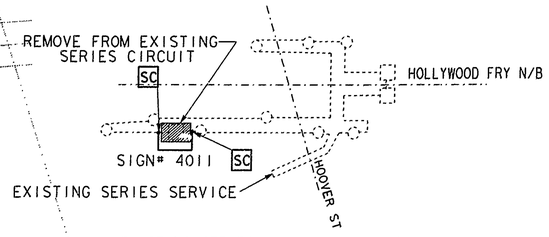
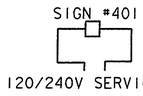
NO SCALE



EXISTING SERIES CURCUIT FOR SIGN #4011



LEGEND (THIS SHEET ONLY):
- EXISTING SIGN LUMINAIRE
- EXISTING LUMINAIRE
- PROPOSED SIGN LUMINAIRE

LIGHTING CONVERSION DIAGRAM
NO SCALE

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4	5	6
CAMERA VIDEO INTERFACE CABLE				1	1	
PAN/TILT CONTROL CABLE				1	1	
LENS CONTROL CABLE				1	1	
CAMERA POWER CABLE				1	1	
CAMERA GROUND CABLE				1	1	
2 SINGLEMODE FIBER OPTIC CABLE				1		1
6P22 COMMUNICATION DIST. CABLE				1		1
#6 POWER CABLE	2	2				
#10 POWER CABLE	2		2			
CONDUIT SIZE	2"	2"	1 1/2"	2-3"	2"	2"

NOTES (THIS SHEET ONLY):

1. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SET PAN STOPS FOR 350°.
2. INSTALL STATE-FURNISHED CCTV 334 CABINET. SEE CABINET DETAIL PLAN SHEET E-27.
3. INSTALL TYPE I-A POLE ON EXISTING SIGN STRUCTURE. FOR INSTALLATION AND MOUNTING DETAILS, SEE SHEET E-28, AND E-29.
4. INSTALL TYPE 'H' RISER AND 3" CONDUIT. CONDUCTORS BY OTHERS.
5. INSTALL A 120/240V, 3-WIRE, SINGLE PHASE 100AMP, TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH 100AMP MAIN BREAKER WITH, A METERED 120-1P-30 AMP CIRCUIT BREAKER FOR CCTV 334 CABINET, AND AN UNMETERED 120-1P-15AMP CIRCUIT BREAKER FOR SIGN ILLUMINATION.
6. RC EXISTING FLUORESCENT ILLUMINATION EQUIPMENT.
7. INSTALL TYPE SC3 SIGN CONTROL. RC EXISTING SIGN DISCONNECT.
8. RC EXISTING S/M TRANSFORMER.
9. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV CAMERA (LOCATION HO 041)

SCALE: 1" = 20'

E-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **IVHS DEVELOPMENT**
PROJECT ENGINEER: ALLEN CHEN

	CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
	PW	AC	5/94		5/94

LAST REVISION 00-00-00
TIME PLOTTED => 20-MAR-1995 06:31

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CU 07396

EA 1186C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	47	83

REGISTERED ELECTRICAL ENGINEER

3-13-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ALLEN CHEN — No. E-14106 — Exp. 06-30-97 — ELECTRICAL — STATE OF CALIFORNIA

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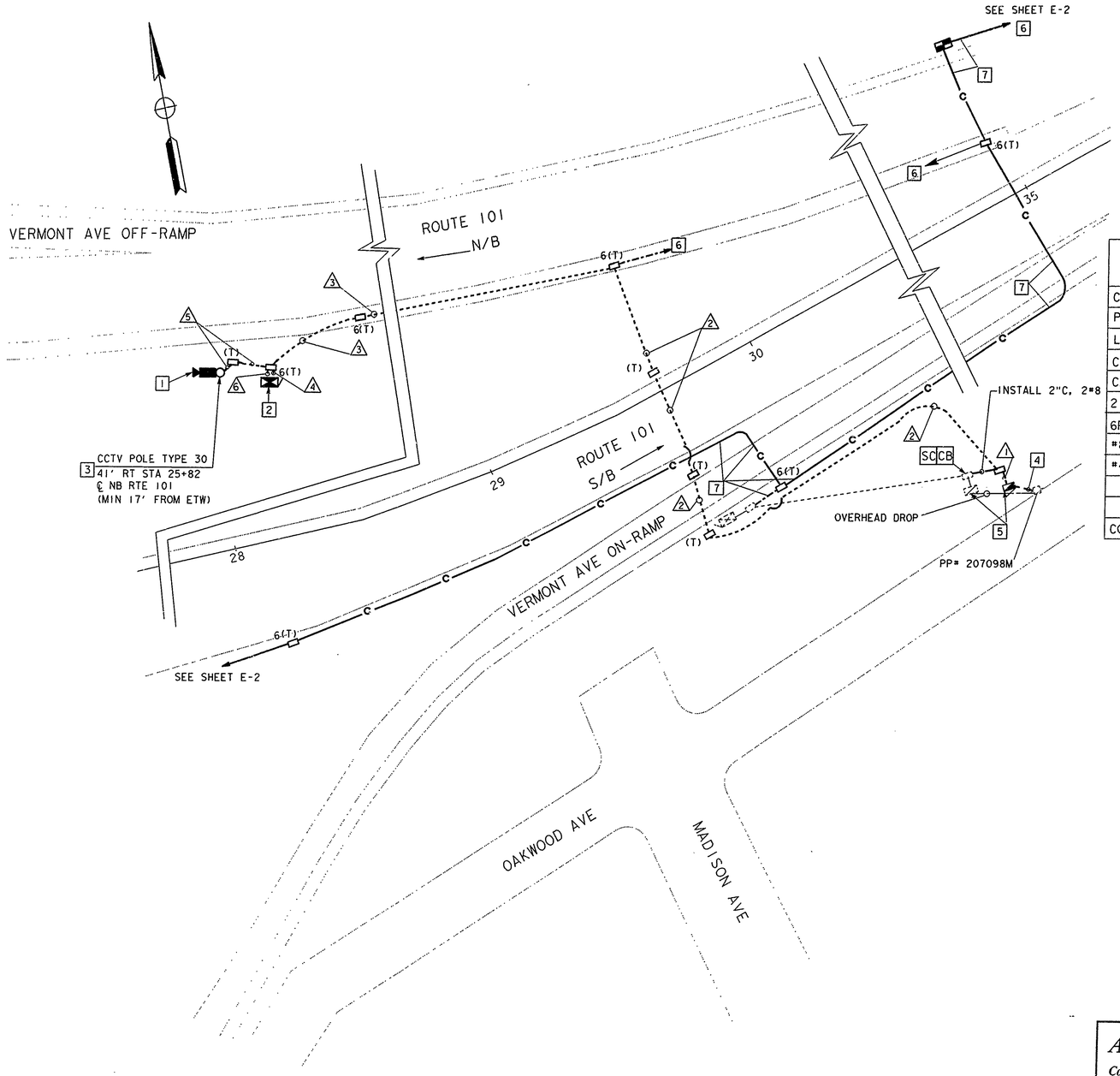

CONDUCTOR AND CONDUIT SCHEDULE

	1	2	3	4	5	6
CAMERA VIDEO INTERFACE CABLE				1	1	
PAN/TILT CONTROL CABLE				1	1	
LENS CONTROL CABLE				1	1	
CAMERA POWER CABLE				1	1	
CAMERA GROUND CABLE				1	1	
2 SINGLEMODE FIBER OPTIC CABLE			1	1		
6P22 COMMUNICATION DIST. CABLE			1	1		
#8 POWER CABLE	2					
#4 POWER CABLE	2	2	2			2
CONDUIT SIZE	2"	2"	2"	2-3"	2-2"	2"

NOTES (THIS SHEET ONLY):

1. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT. SET PAN STOPS FOR 350°.
2. INSTALL STATE-FURNISHED CCTV 334 CABINET. SEE CABINET DETAIL PLAN SHEET E-27.
3. INSTALL TYPE 30 CCTV POLE. FOR INSTALLATION AND MOUNTING DETAILS, SEE POLE MOUNT DETAIL PLAN SHEET E-28.
4. INSTALL TYPE 'H' RISER AND 3" CONDUIT. CONDUCTORS BY OTHERS.
5. RC EXISTING POLE MOUNTED TYPE E SERVICE. INSTALL A 120/240V, 3 WIRE SINGLE PHASE 100 AMP TYPE 111-BF SERVICE EQUIPMENT ENCLOSURE WITH 100 AMP MAIN BREAKER, A METERED 120-1P-30 AMP CIRCUIT BREAKER FOR CCTV 334 CABINET, A 120-1P-30 AMP CIRCUIT BREAKER FOR RAMP METERING.
6. SEE SHEET E-2 FOR CONTINUATION.
7. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

AS-BUILT
Contract No. 07- 1186C4
Resident Engineer: AMOS, H.
Completion Date: 08/21/1998

CCTV CAMERA (LOCATION HO 044)

SCALE: 1"=20'

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY

E-18

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3	USERNAME => trjimt DGN FILE => /usr/trjimt/P2/71186cu18.dg	CU 07396	EA 1186C1

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

PROJECT ENGINEER	CALCULATED/ DESIGNED BY	DATE	REVISED BY
ALLEN CHEN	PW	5/94	
	AC	5/94	DATE REVISED
	CHECKED BY		

LAST REVISION 00-00-00 TIME PLOTTED => 20-MAR-1995 08:23

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	I, I0	R34.6/35.2, R2.2/R5.7	I2	6I

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12891 — Exp. 12/31/96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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ABBREVIATIONS

I2SMFO	I2 SINGLEMODE FIBER OPTIC CABLE
27C18	27 CONDUCTOR, I8AWG CABLE
2MMFO	2 MULTIMODE FIBER OPTIC CABLE
2SMFO	2 SINGLEMODE FIBER OPTIC CABLE
48SMFO	48 SINGLEMODE FIBER OPTIC CABLE
50P22	TWISTED PAIR CABLE, 50 PAIR 22 AWG CONDUCTORS
6P22	TWISTED PAIR CABLE, 6 PAIR 22 AWG CONDUCTORS
I2MMFO	I2 MULTIMODE FIBER OPTIC CABLE
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
DLC	DETECTOR LOOP CABLE
FDU	FIBER DISTRIBUTION UNIT
FLEX	FLEXIBLE
F/O OR FO	FIBER OPTIC
FRE	FIBERGLASS CONDUIT
HAR	HIGHWAY ADVISORY RADIO
INTRFCE	INTERFACE
J-BOX	JUNCTION BOX
LDS	LOOP DETECTION STATION
MM	MULTIMODE
MOD	MODEM
MUX	MULTIPLEXER
MWR	MICROWAVE RECEIVER
M\W	MICROWAVE
NOM	NOMINAL
O.C.	ON CENTER
OHS	OVERHEAD SIGN
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
TDM	TIME DIVISON MULTIPLEXER
TELCO	TELEPHONE COMPANY
TOC	TRAFFIC OPERATIONS CENTER
TP	TWISTED PAIR
TX	TRANSMITTER
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPLEXER
VR	SINGLE VIDEO RECEIVER
VX	SINGLE VIDEO TRANSMITTER
#X	X AWG CONDUCTOR, i.e. #I0 MEANS I0 AWG CONDUCTOR
YP	Y PAIRS OF CONDUCTORS, i.e. 2P MEANS 2 PAIRS

AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

LEGEND

- POLE MOUNTED CCTV CAMERA
- CCTV CAMERA
- SPLICE VAULT
- FIBER OPTIC PATCH CORD
- NO. 6(T) PULL BOX (MODIFIED)
- NO. 5(T) PULL BOX
- DETECTOR LOOP TYPE E
- COMMUNICATIONS CONDUIT(S)
- SERVICE CONDUIT(S)
- CONDUIT LINE DELIMITER FOR CONSTRUCTION NOTES
- E-XX / B — DETAIL B ON SHEET E-XX.
- E-XX — DETAILS ON SHEET E-XX.
- TYPE 334-TV CABINET
- EXISTING TELEPHONE BRIDGE
- TELEPHONE BRIDGE
- FIBER OPTIC CABLE
- EXISTING HAR ANTENNA

CCTV AND COMMUNICATION SYSTEM
(LEGEND AND NOTES)

E-1

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — BJ
CHECKED BY — AP
DATE — 8/93
REVISED BY — DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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EA I20711

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	I, I0	R34.6/35.2, R2.2/R5.7	I3	6I

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12391 — Exp. 12/31/96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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GENERAL NOTES:

1. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON PLANS ARE LIMITED TO THOSE OBTAINED FROM OWNER'S RECORDS OR OWNER'S PLANS.
2. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL ACCURATELY DETERMINE THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
3. THE LOCATION OF ELECTRICAL HIGHWAY LIGHTING CONDUITS AND PULL BOXES ARE APPROXIMATE AND WERE OBTAINED FROM LIMITED LIGHTING RECORDS. CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO EXISTING LIGHTING CONDUITS.
4. THE LOCATIONS OF EXISTING DETECTOR LOOPS, EXISTING CONTROLLER CABINETS, EXISTING SERVICE ENCLOSURES, POWER POLES AND EXISTING DEMARCATION BOXES ARE APPROXIMATE.
5. THE CONTRACTOR SHALL FIELD VERIFY PROPOSED CCTV POLE LOCATIONS WITH THE ENGINEER PRIOR TO PLACEMENT OF FOUNDATIONS.
6. THE LOCATIONS OF PROPOSED CABINETS, DETECTOR LOOPS, PULL BOXES, SPLICE VAULTS AND DEMARCATION BOXES ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
7. TYPE 334-TV CABINET DOOR SWING SHOWN ON NEW CABINETS INDICATES FRONT DOOR.
8. EXISTING DETECTOR LOOPS AND CONDUITS ARE SHOWN IN THE VICINITY OF PROPOSED CONDUIT TRENCHES. CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO EXISTING CONDUIT. TRENCHING WITH HAND TOOLS MAY BE REQUIRED.
9. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELCO FACILITIES, THE CONTRACTOR SHALL PROVIDE A 72 HOUR ADVANCED WRITTEN NOTICE TO THE ENGINEER AND ALL CONCERNED AGENCIES.
11. 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.
12. CONDUITS AND CONDUCTORS IN CONDUIT AND CONDUCTOR SCHEDULE TABLES ARE EXISTING UNLESS MARKED (N) INDICATING NEW. UNLESS OTHERWISE NOTED, NEW CONDUITS SHALL HAVE ALL NEW CONDUCTORS.
13. PVC, WHERE CALLED OUT IN THESE PLANS, SHALL MEAN RIGID NON-METALLIC CONDUIT AS DEFINED IN THE STANDARD SPECIFICATIONS.
14. ALL NO.5, NO.6 PULL BOXES AND SPLICE VAULTS SHALL BE TRAFFIC TYPE.
15. 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.
17. 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

18. 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.
19. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
20. THE MINIMUM WIDTH OF ANY TRENCH SHALL PROVIDE A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE OUTSIDE WALL OF THE PLACED CONDUIT AND THE TRENCH WALL. DO NOT CONCRETE ENCASE BRANCH CONDUITS EXCEPT THE BRANCH CONDUITS TO VIDEO NODES AND DATA NODES. MINIMUM COVER SHALL NOT BE LESS THAN THAT SPECIFIED IN THE TRENCHING DETAILS.

PROJECT NOTES:

1. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM OF 4 FT DISTANCE FROM EDGE OF TRAVELWAY. SEE SHEET E-19 FOR DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN DIRT OFF OF THE SHOULDER. STAY WITHIN 3 FT OF SHOULDER EDGE. SEE SHEET E-18 FOR DETAILS.
3. INSTALL NO. 6(T) (MODIFIED) PULL BOX IN ASPHALT SHOULDER NO MORE THAN 1 FT FROM BARRIER WALL. SEE SHEETS E-22 AND E-23 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) BENEATH ROADWAY. SEE SHEET E-20 FOR DETAILS.
5. INSTALL FIBERGLASS CONDUIT(S) ON OVER/UNDER CROSSING STRUCTURE. SEE SHEETS E-34 TO E-41 AND E-44.
6. INSTALL NO. 6(T) (MODIFIED) PULL BOX IN CONCRETE MEDIAN. SEE SHEET E-22.
7. INSTALL NO. 6(T) (MODIFIED) PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE DETAIL B SHEET E-23.
8. ADD POWER CABLE(S) TO EXISTING CONDUIT.
9. ADD COMMUNICATION CABLE(S) TO EXISTING CONDUIT.
10. ADD DETECTOR-LOOP CABLE(S) TO EXISTING CONDUIT.
11. INSTALL COMMUNICATIONS BRIDGE AND 6-PAIR TERMINAL BLOCK IN EXISTING /NEW CONTROLLER CABINET. SEE SHEETS E-25 AND E-27 FOR DETAILS.
12. INSTALL STATE-FURNISHED TWO-CHANNEL LOOP DETECTOR(S) SENSOR UNIT IN EXISTING RMS CABINET.
13. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
14. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A SHEET E-26 AND DETAIL 3 SHEET E-27.
15. INSTALL TYPE 334-TV CABINET ON A NEW FOUNDATION. INSTALL VIDEO MULTIPLEXER AND VIDEO RECEIVERS. SEE DETAIL B SHEET E-26 AND DETAIL 5 SHEET E-28.
16. CONNECTORIZE ENDS OF (1) 12 MMFO AND (1) 12 SMFO CABLES AT THIS CABINET. AFTER CABLES ARE TESTED AND ACCEPTED, FUSION SPLICE TWELVE FIBERS OF 12 SMFO CABLES TO TWELVE FIBERS OF EXISTING 48 SMFO CABLE.
17. ADD ONE 30A, 120 V SINGLE POLE CIRCUIT BREAKER TO LEAST LOADED PHASE. NEW BREAKER TO MATCH EXISTING BREAKERS AND SHALL BE ADDED ONLY TO SPARE SPACES IN EXISTING RMS, CMS, OR IRRIGATION SERVICE CABINETS.
18. INSTALL 6-PAIR TERMINAL BLOCK, CCR AND SINGLE VIDEO TRANSMITTER IN RELOCATED TYPE 334-TV CABINET MOUNTED ON EXISTING FOUNDATION. USE EXISTING CIRCUIT TO PROVIDE POWER TO CABINET. SEE DETAIL D SHEET E-26.
19. COMMUNICATION FOR EXISTING CONTROLLER IS BRIDGED TO NEARBY CONTROLLER. SEE SHEET E-17.
20. INSTALL CCTV CAMERA POLE AND NEW FOUNDATION. SEE SHEETS E-33, E-37, L-1, L-2, L-3, L-4, AND L-5 FOR DETAILS AND EXACT LOCATIONS. INSTALL CCTV CAMERA ON POLE.
21. WING WALL/ABUTMENT SIDE. ATTACH CONDUIT TO FACE OF WING WALL (RAIL) AND/OR ABUTMENT SIDE WALL WITH TWO-HOLE PIPE STRAPS. LOCATE CONDUIT IN LINE WITH CONDUIT LOCATION ON STRUCTURE. SEE CONDUIT ATTACHMENT DETAILS SHEET E-35, DETAIL A.
22. BACK OF RAIL ENCLOSURE AND COVER, TYPE A. ATTACH ENCLOSURE TO OUTSIDE OF BRIDGE RAIL. PLACE CONDUIT WITHIN ENCLOSURE AND INSTALL COVER. SEE CONDUIT ATTACHMENT DETAILS SHEET E-36.
23. MAINTAIN EXISTING DIAL-UP TELEPHONE SERVICE CABLE BETWEEN EXISTING TELEPHONE SERVICE POINT AND EXISTING CONTROLLER CABINET.
24. INSTALL 6-PAIR TERMINAL BLOCK IN EXISTING HAR CABINET. SEE DETAIL 4 SHEET E-27.
25. INSTALL VSAT ON NEW FOUNDATION. SEE SHEET E-45 FOR DETAILS.
26. INSTALL RELOCATED TYPE 334 VSAT CABINET ON NEW FOUNDATION. SEE DETAIL E SHEET E-26.
27. INCLUDED IN BID ITEM "CLOSED CIRCUIT TELEVISION CAMERA"AT THE LOCATION SHOWN.
28. NOT INCLUDED IN LUMP SUM. PAID FOR AS SEPARATE QUANTITIES AS SHOWN IN THE ENGINEERS ESTIMATE.
29. INCLUDED IN BID ITEM "VSAT SYSTEM".
30. INCLUDED IN BID ITEM "WORK AT STEWART STREET".

AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

CCTV AND COMMUNICATION SYSTEM
(LEGEND AND NOTES)

NO SCALE

E-2

REVISED BY	DATE	CALCULATED/ DESIGNED BY	BJ	CHECKED BY	AP
DATE REVISED	8/93				

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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EA 12071

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CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
50P22 CABLE	DATA /PHONE	1									1										
6P22 CABLE	DATA /PHONE			1	1 (N)	1								1		1					
12 SMFO CABLE	VIDEO TRUNK	1									1										
12 MMFO CABLE	SH VIDEO	1									1										
2 MMFO B/O CABLE	SH VIDEO													1		1					
2 SMFO B/O CABLE	SH VIDEO																				
RG-6A/U COAX	BB VIDEO								1	1						1	1				
27C18 CABLE	CAMERA CONTROL								1	1						1	1				
#14	POWER																				
#12	POWER																				
#10	COMMON																				
#8	POWER						2	4				2	2					2			
#8	GROUND				1 (N)			1		1		1	1	1	1	1	1	1		2	1
#6	POWER				2 (N)								2	2	2						
#4	POWER																				
2P18	TELCO						1														
DLC	RAMP/COUNT			2N	4N	4N															
1"FLEX CONDUIT																					
RG-214	VSAT IFL CABLE																		1	1	1
50P22	VSAT COMM CABLE								1										1		
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	2"	3" (N)	3" (N)	2" (N)	3" (N)	2" (N)	3"* (N)	3" (N)	2" (N)	3" (N)	3" (N)	3" (N)	2" (N)	3" (N)	3" (N)	2" (N)	2" (N)

* FRE CONDUIT

DIST	COUNTY	ROUTE	POST M'LES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2, R2.2/R5.7	14	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

ASHOK KUMAR PURI, No. 12891, EXP. 12-31-96, ELECTRICAL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

2-21-95
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIOUE AND ASSOCIATES, INC.

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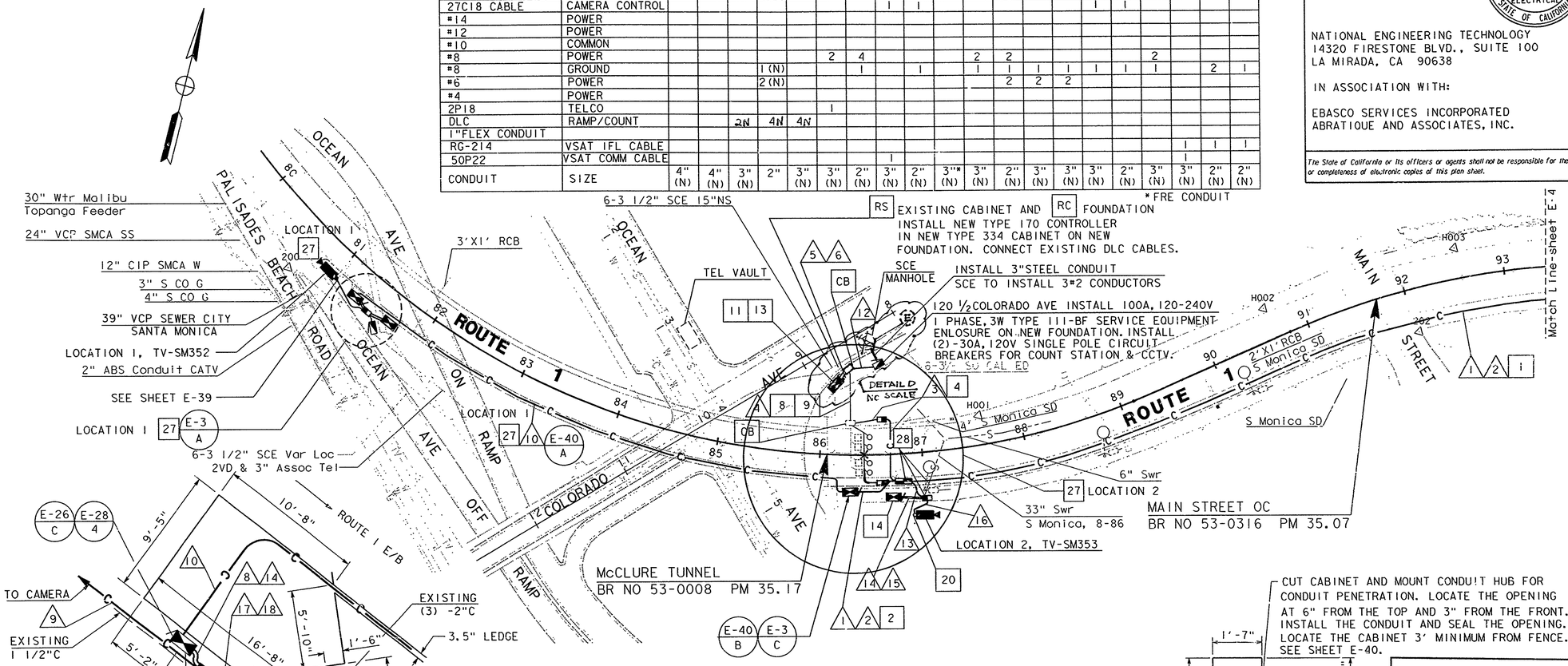

AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

See sheet 14A

CCTV CAMERA, VSAT SYSTEM, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 1 AND LOCATION 2)

SCALE: 1"=50'

E-3

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

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — ES
CHECKED BY — AP
DATE — REVISED BY — DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

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EA 120711

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2, R2.2/R5.7	14A	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12891 — Exp. 12-31-96 — ELECTRICAL — STATE OF CALIFORNIA

NATIONAL ENGINEERING TECHNOLOGY
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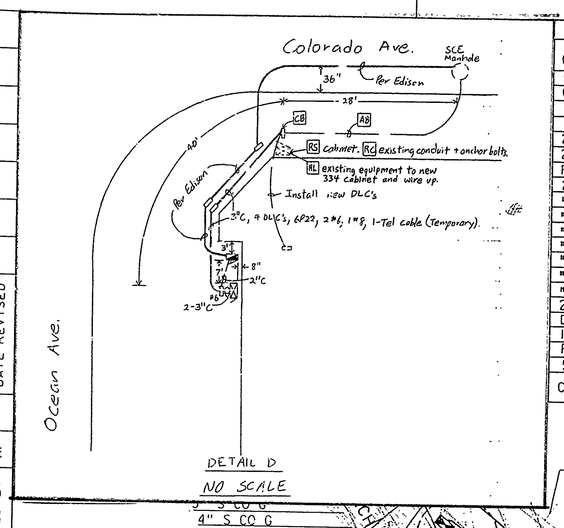
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
5OP22 CABLE	DATA /PHONE	1									1										
6P22 CABLE	DATA /PHONE			1	1 (N)	1								1		1					
12 SMFO CABLE	VIDEO TRUNK	1									1										
12 MMFO CABLE	SH VIDEO	1									1										
2 MMFO B/O CABLE	SH VIDEO																				
2 SMFO B/O CABLE	SH VIDEO													1		1					
RG-6A/U COAX	BB VIDEO																				
27C18 CABLE	CAMERA CONTROL								1	1							1	1			
#14	POWER								1	1							1	1			
#12	POWER																				
#10	COMMON																				
#8	POWER						2	4				2	2						2		
#8	GROUND				1 (N)			1		1		1	1	1	1	1	1	1		2	1
#6	POWER				2 (N)								2	2	2						
#4	POWER																				
2P18	TELCO						1														
DLC	RAMP/COUNT			.11	411	411															
1"FLEX CONDUIT																					
RG-214	VSAT IFL CABLE																				
5OP22	VSAT COMM CABLE																			1	1
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	2"	3" (N)	3" (N)	2" (N)	3" (N)	2" (N)	3"* (N)	3" (N)	2" (N)	3" (N)	3" (N)	3" (N)	2" (N)	3" (N)	3" (N)	2" (N)	2" (N)

*FRE CONDUIT



DETAIL D
NO SCALE

RS EXISTING CABINET AND RC FOUNDATION
INSTALL NEW TYPE 170 CONTROLLER IN NEW TYPE 334 CABINET ON NEW FOUNDATION. CONNECT EXISTING DLC CABLES.

INSTALL 3"STEEL CONDUIT
SCE TO INSTALL 3#2 CONDUCTORS

120 1/2 COLORADO AVE INSTALL 100A, 120-240V 1 PHASE, 3W TYPE 111-BF SERVICE EQUIPMENT ENLOSURE ON..NEW FOUNDATION. INSTALL (2)-30A, 120V SINGLE POLE CIRCUIT BREAKERS FOR COUNT STATION & CCTV.

6-3 1/2" SCE 15"NS
3'X1' RCB
TEL VAULT
SCE MANHOLE
6" Swr
33" Swr
S Monica, 8-86
LOCATION 2
LOCATION 2, TV-SM353
MAIN STREET OC
BR NO 53-0316 PM 35.07
McCLURE TUNNEL
BR NO 53-0008 PM 35.17
2'X1'RCB SD
S Monica SD
4" S Monica SD
Match Line-sheet E-4

39" VCP SEWER CITY
SANTA MONICA
LOCATION 1, TV-SM352
2" ABS Conduit CATV
SEE SHEET E-39
LOCATION 1
6-3 1/2" SCE Var Loc
2VD & 3" Assoc Tel

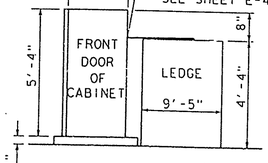
TO CAMERA
EXISTING 1 1/2"C
EXISTING (3) -2"C
3.5" LEDGE
EXIST 3"C
SCE MANHOLE
INSTALL 3"STEEL CONDUIT
SCE TO INSTALL 3#2 CONDUCTORS
OCEAN AVE OFF RAMP
ROUTE 1 E/B

1400 1/2PCH
INSTALL 100A, 120-240V, 1 PHASE, 3W TYPE 111-BF SERVICE EQUIPMENT ENCLOSURE ON NEW FOUNDATION. INSTALL (2)-30A, 120V SINGLE POLE CIRCUIT BREAKERS.

DETAIL A
NO SCALE

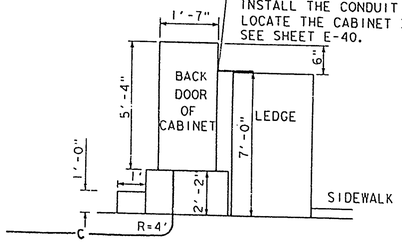
SEE SHEET E-14

CUT CABINET AND MOUNT CONDUIT HUB FOR CONDUIT PENETRATION. LOCATE THE OPENING AT 8" FROM THE TOP AND 3" FROM THE BACK. INSTALL THE CONDUIT AND SEAL THE OPENING. SEE SHEET E-40.



DETAIL B
NO SCALE

CUT CABINET AND MOUNT CONDUIT HUB FOR CONDUIT PENETRATION. LOCATE THE OPENING AT 6" FROM THE TOP AND 3" FROM THE FRONT. INSTALL THE CONDUIT AND SEAL THE OPENING. LOCATE THE CABINET 3' MINIMUM FROM FENCE. SEE SHEET E-40.



DETAIL C
NO SCALE

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

CCTV CAMERA, VSAT SYSTEM, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 1 AND LOCATION 2)

SCALE: 1"=50'

E-3

AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

DESIGN OVERSIGHT — GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans
712070U03.DGN EBASCO 7/16/93
CALCULATED/DESIGNED BY — ES
CHECKED BY — AP
DATE — REVISED BY — DATE REVISED

TIME PLOTTED => 02-MAR-1995 08:35

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/jimt/P2/712071u03.dgn
CU 07387
EA 120711

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1,10	R34.6/35.2, R2.2/R5.7	15	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ASHOK KUMAR PURI
No. 12891
Exp. 12/31/96
ELECTRICAL
STATE OF CALIFORNIA

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

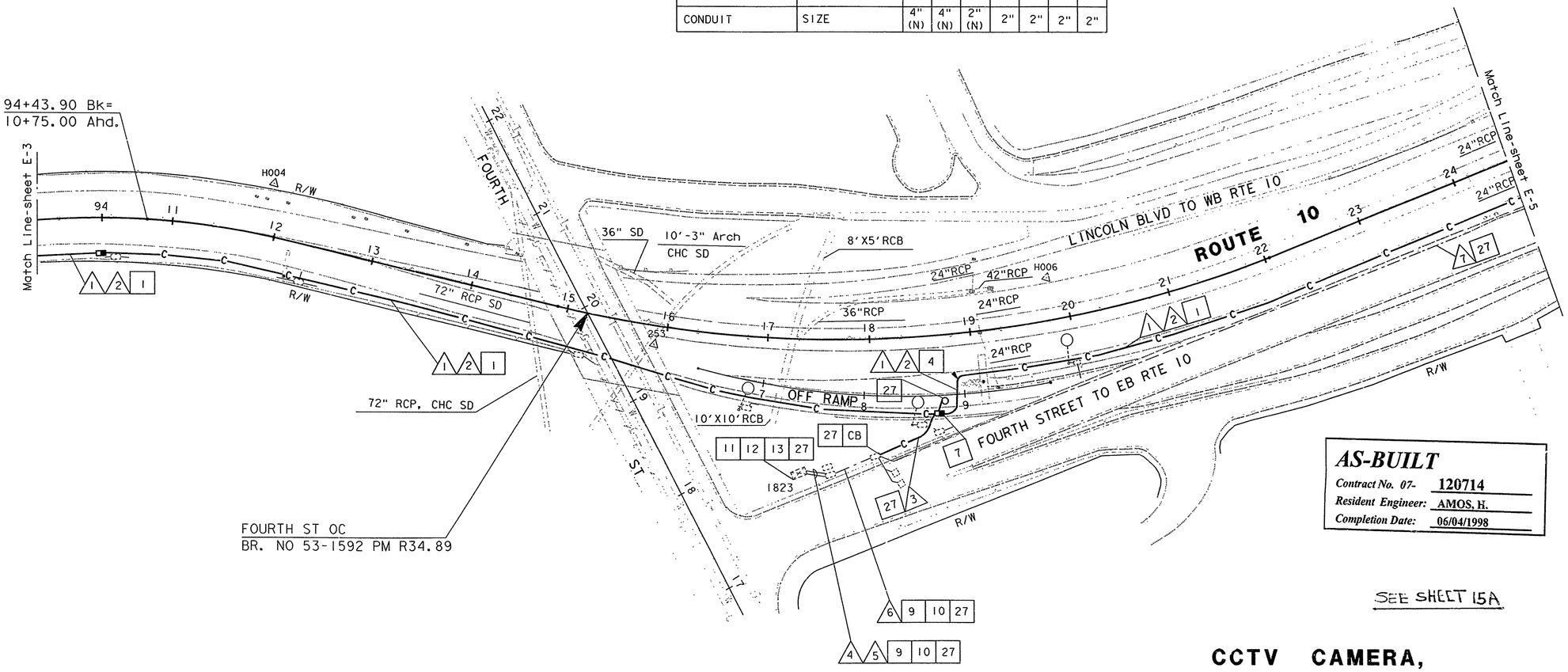
IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
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

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7
50P22 CABLE	DATA /PHONE	1						
6P22 CABLE	DATA /PHONE			1		1 (N)	1 (N)	
12 SMFO CABLE	VIDEO TRUNK	1						
12 MMFO CABLE	SH VIDEO	1						
2 MMFO B/O CABLE	SH VIDEO							
2 SMFO B/O CABLE	SH VIDEO							
RG-6A/U COAX	BB VIDEO							
27C18 CABLE	CAMERA CONTROL							
#14	POWER				7			
#12	POWER							
#10	COMMON				2			
#8	POWER				2			
#8	GROUND							
#6	POWER							
#4	POWER							
DLC	RAMP/COUNT			1		3 (N)	3 (N)	2 (N)
DLC	RAMP/COUNT					9	9	7
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2"	2"	2"	2"



AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

SEE SHEET 15A

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY (LOCATION 3)

SCALE: 1"=50'

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

E-4

CALCULATED/ DESIGNED BY	ES	DATE	REVISED BY
CHECKED BY	AP		DATE REVISED

DESIGN OVERSIGHT: GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

712070U04.DGN EBASCO 7/17/93

TIME PLOTTED => 02-MAR-1995 08:35

FORM DC-07-92-PF (REV. 3/88)

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

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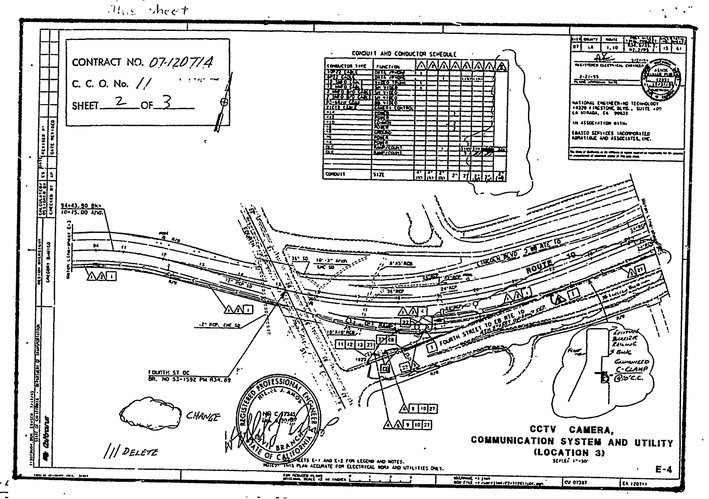
DGN FILE => /usr/jimt/P2/712071u04.dgn

CU 07387

EA 120711

< 24

Replace E-4 with this sheet



CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8
50P22 CABLE	DATA /PHONE	1							
6P22 CABLE	DATA /PHONE			1		1 (N)	1 (N)		
12 SMFO CABLE	VIDEO TRUNK	1							
12 MMFO CABLE	SH VIDEO	1							
2 MMFO B/O CABLE	SH VIDEO								
2 SMFO B/O CABLE	SH VIDEO								
RG-6A/U COAX	BB VIDEO								
27C18 CABLE	CAMERA CONTROL								
#14	POWER				7				
#12	POWER								
#10	COMMON				2				
#8	POWER				2				
#8	GROUND								
#6	POWER								
#4	POWER								
DLC	RAMP/COUNT			1		3 (N)	3 (N)	2 (N)	1 (N)
DLC	RAMP/COUNT					9	9	7	
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2"	2"	2"	2"	2"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1.10	R34.6/35.2, R2.2/R5.7	15	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

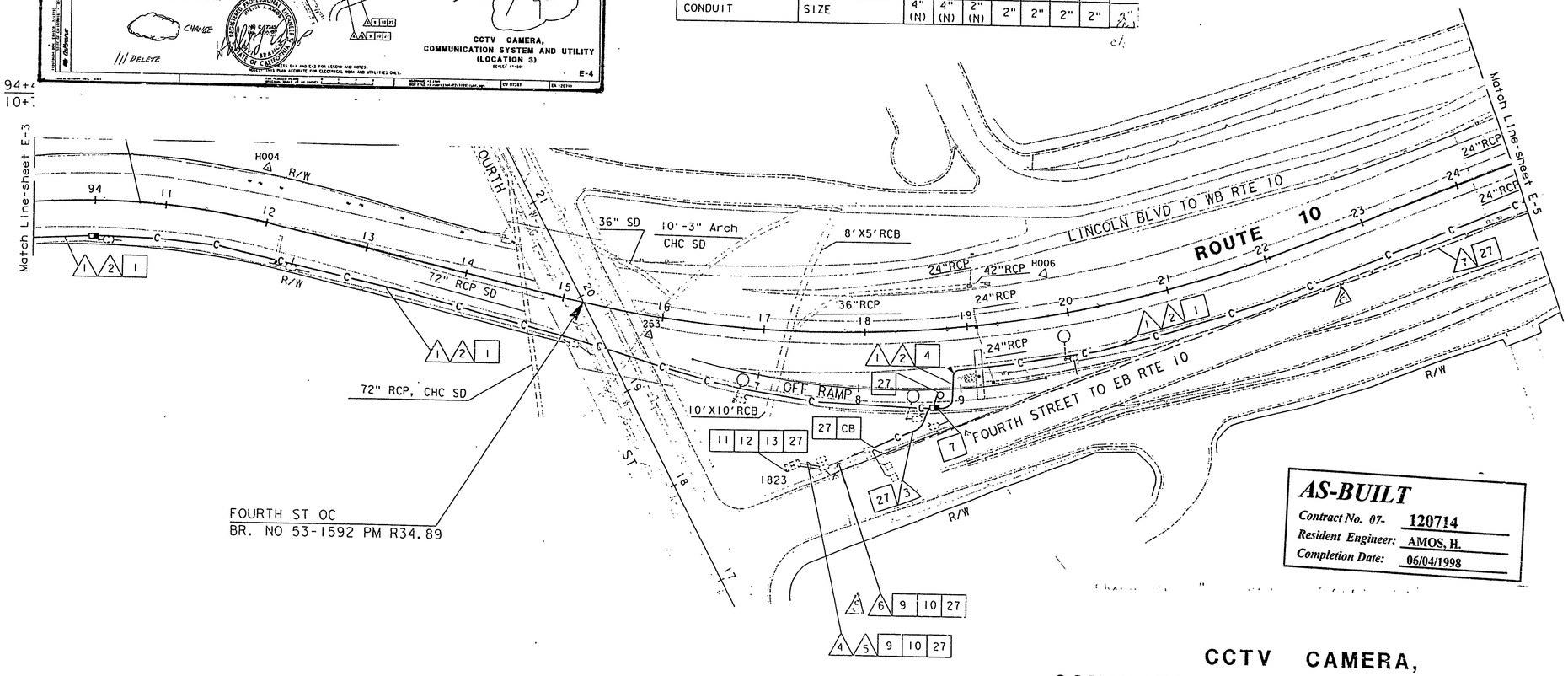
REGISTERED PROFESSIONAL ENGINEER ASHOK KUMAR PUR No. 12831 Exp. 12/31/96 ELECTRICAL STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
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- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY (LOCATION 3)

SCALE: 1"=50'

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

E-4

CALCULATED/ DESIGNED BY	ES	DATE	REVISED BY
CHECKED BY	AP		DATE REVISED

DESIGN OVERSIGHT: GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

712070U04.DGN EBASCO 7/17/93

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

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

USERNAME => jlml
DGN FILE => /usr/jlml/P2/712071u04.dgn

CU 07387

EA 120711

TIME PLOTTED => 02-MAR-1995 08:35

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2, R2.2/R5.7	16	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ASHOK KUMAR PURI No. 12891 Exp. 12/31/96 ELECTRICAL STATE OF CALIFORNIA

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

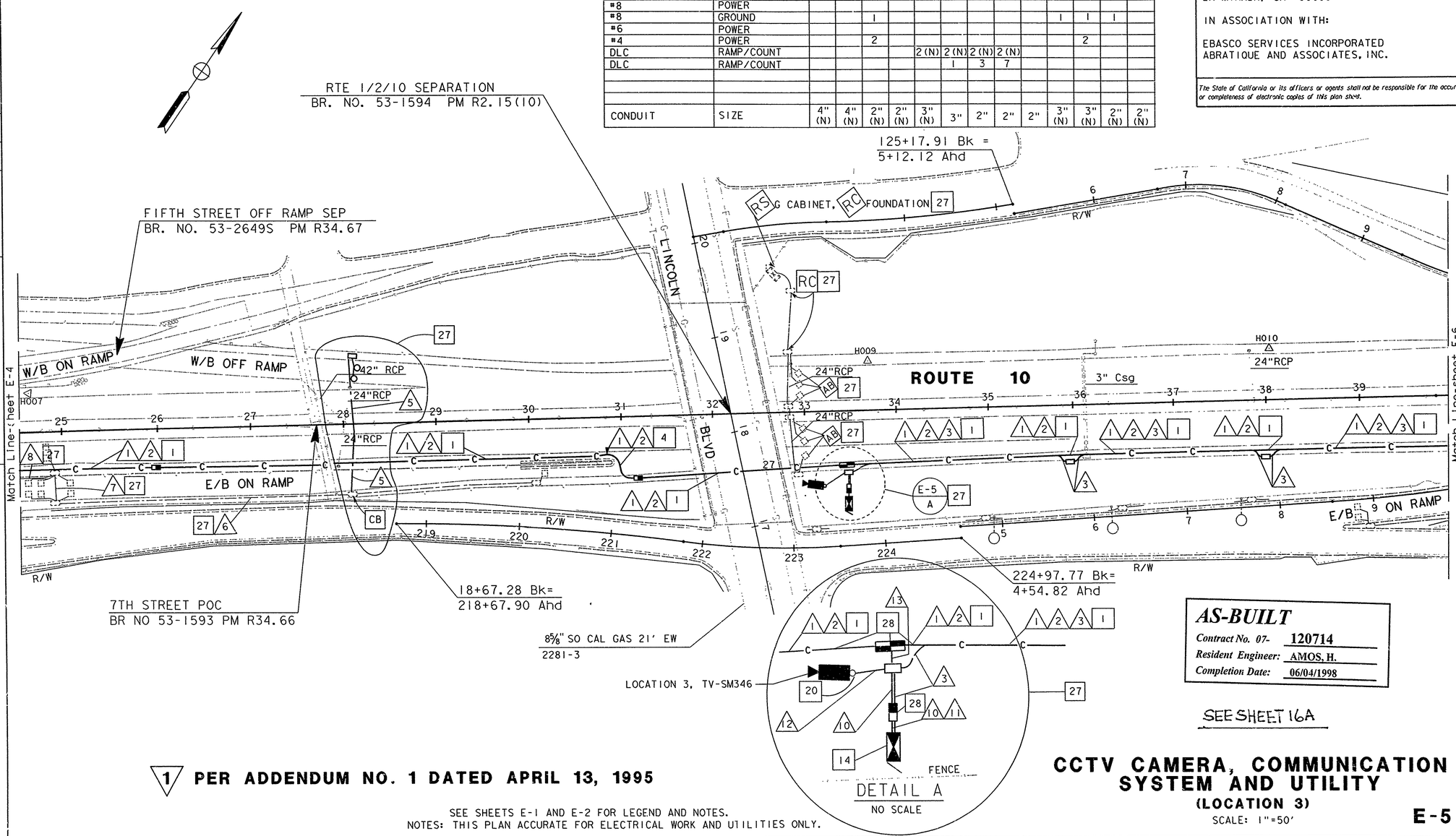
IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
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

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13
50P22 CABLE	DATA /PHONE	1												
6P22 CABLE	DATA /PHONE				1						1			1
12 SMFO CABLE	VIDEO TRUNK	1												
12 MMFO CABLE	SH VIDEO	1												
2 MMFO B/O CABLE	SH VIDEO										1			1
2 SMFO B/O CABLE	SH VIDEO													
RG-6A/U COAX	BB VIDEO										1		1	
27C18 CABLE	CAMERA CONTROL										1		1	
#14	POWER													
#12	POWER													
#10	POWER													
#8	POWER													
#8	GROUND			1							1	1	1	
#6	POWER													
#4	POWER			2								2		
DLC	RAMP/COUNT					2 (N)	2 (N)	2 (N)	2 (N)					
DLC	RAMP/COUNT						1	3	7					
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	3" (N)	3"	2"	2"	2"	3" (N)	3" (N)	2" (N)	2" (N)



AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

SEE SHEET 16A

1 PER ADDENDUM NO. 1 DATED APRIL 13, 1995

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

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 3)
SCALE: 1"=50'

E-5

CALCULATED/ DESIGNED BY	ES	DATE	REVISED BY
CHECKED BY	AP		DATE REVISED

DESIGN OVERSIGHT: GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

712070U05.DGN EBASCO 7/16/93

TIME PLOTTED => 13-APR-1995 15:58

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/P5/712071u05.dgn

CU 07387

EA 120711

< 24

DIST	COUNTY	ROUTE	TOTAL PROJECT	NO. SHEETS
07	LA	1-10	54.6/35.2	16A 61

REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

ASHOK KUMAR BHATIA No. 12801 Exp. 12/31/96 ELECTRICAL STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

ERASCO SERVICES INCORPORATED
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

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13
50P22 CABLE	DATA /PHONE	1												
6P22 CABLE	DATA /PHONE				1							1		1
12 SMFO CABLE	VIDEO TRUNK	1												
12 MMFO CABLE	SH VIDEO	1										1		1
2 MMFO B/O CABLE	SH VIDEO											1		1
2 SMFO B/O CABLE	SH VIDEO											1		1
RG-6A/U COAX	BB VIDEO											1		1
77C18 CABLE	CAMERA CONTROL											1		1
#14	POWER													
#12	POWER													
#10	POWER													
#8	POWER													
#8	GROUND			1										
#6	POWER													
#4	POWER			2								2		2
DLC	RAMP/COUNT					2(N)	2(N)	2(N)	2(N)					
DLC	RAMP/COUNT						1	3	7					
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	3" (N)	3" (N)	2"	2"	2"	3" (N)	3" (N)	2" (N)	2" (N)

RTE 1/2/10 SEPARATION
BR. NO. 53-1594 PM R0.15/10.01

FIFTH STREET OFF RAMP SEP
BR. NO. 53-2649S PM R34.67

125+17.91 Bk =
5+12.12 Ahd

RS CABINET, RC FOUNDATION 27

LINCOLN

W/B ON RAMP

W/B OFF RAMP

42" RCP

24"RCP

E/B ON RAMP

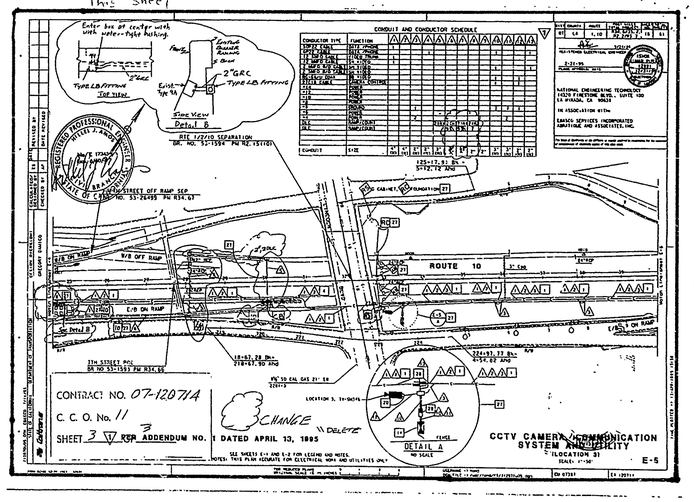
7TH STREET POC
BR NO 53-1593 PM R34.66

18+67.28 Bk=
218+67.90 Ahd

8⅝" SO CAL GAS 21" EW
2281-3

LOCATION 3, TV-SM346

Replace E-5 with This sheet



AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

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

DETAIL A
NO SCALE

CCTV CAMERA COMMUNICATION SYSTEM AND UTILITY
(LOCATION 3)
SCALE: 1"=50'

E-5

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

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DGN FILE => /user/jlmt/P2/7120714005.dgn

CU 07387 EA 120714

DATE PLOTTED => 02-MAR-1995 09:12

Match Line: Sheet E-6

ON RAMP

CAL. ENGR'S DES. BY ES DRAWN BY AP CHECKED BY DATE REVISED

USE OVERSIGHT

DEPARTMENT OF TRANSPORTATION

EBASCO OF CALIFORNIA

CADD

< 24

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2 R2.2/R5.7	17	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PUR — No. 12891 — Exp. 12/31/96 — ELECTRICAL — STATE OF CALIFORNIA

2-21-95
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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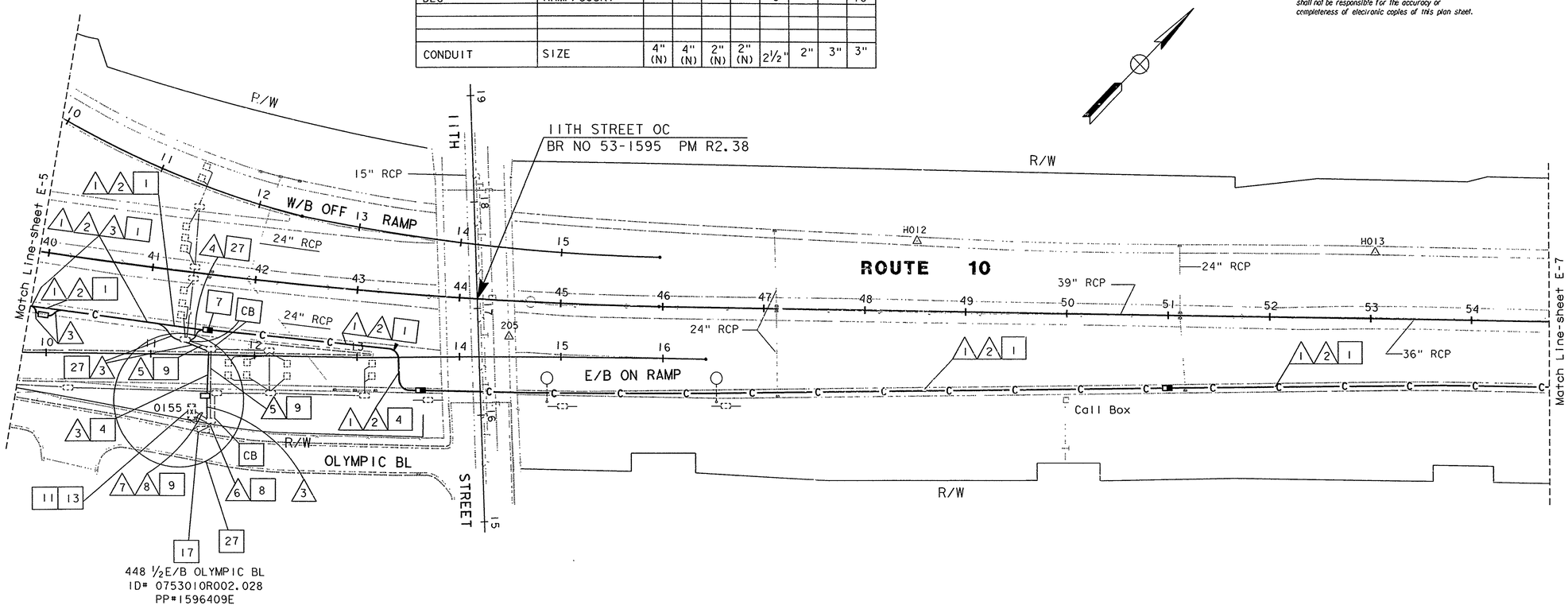
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8
50P22 CABLE	DATA /PHONE	1							
6P22 CABLE	DATA /PHONE				1	1 (N)		1 (N)	
12 SMFO CABLE	VIDEO TRUNK	1							
12 MMFO CABLE	SH VIDEO	1							
2 MMFO B/O CABLE	SH VIDEO								
2 SMFO B/O CABLE	SH VIDEO								
RG-6A/U COAX	BB VIDEO								
27C18 CABLE	CAMERA CONTROL								
#14	POWER								14
#12	POWER								
#10	COMMON								3
#10	POWER						2	2	
#8	GROUND			1			1 (N)		
#6	POWER						6		
#4	POWER			2			2 (N)		
2P18	TELCO								
DLC	RAMP/COUNT					8			16
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	2½"	2"	3"	3"



SEE SHEET 17A

AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY (LOCATION 3)

SCALE: 1"=50'

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

E-6

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — ES — DATE
CHECKED BY — AP — DATE REVISED
REVISED BY

712070U06.DGN EBASCO 7/16/93
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

TIME PLOTTED => 02-MAR-1995 08:20

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/lenard/P2/712071u06.dg
CU 07387
EA 120711

< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1,10	R34.6/35.2 R2.2/R5.7	17A	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

PROFESSIONAL ENGINEER — REGISTERED — ASHOK KUMAR PUR — No. 12891 — 12/31/96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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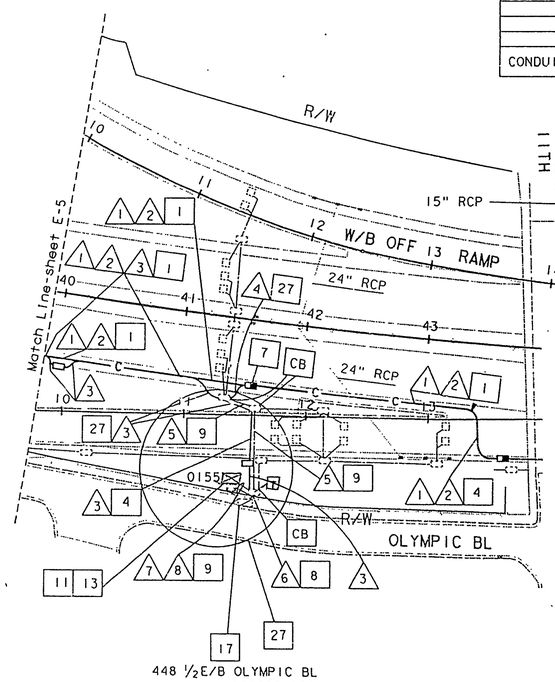
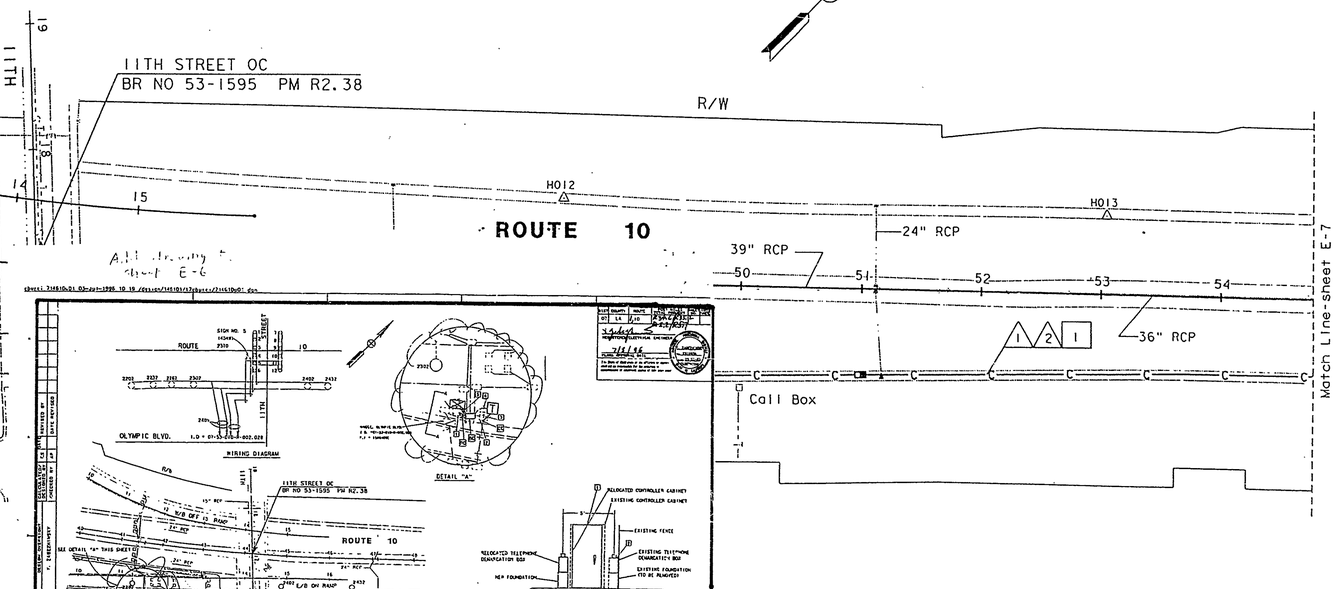
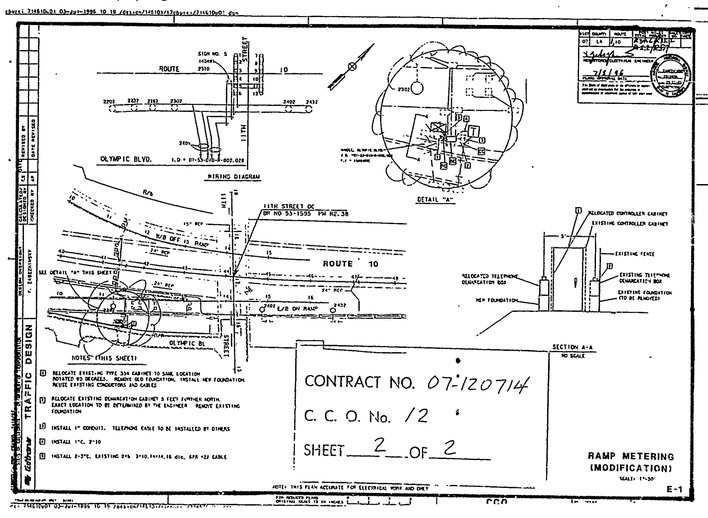
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8
50P22 CABLE	DATA /PHONE	1							
6P22 CABLE	DATA /PHONE				1	1 (N)		1 (N)	
12 SMFO CABLE	VIDEO TRUNK	1							
12 MMFO CABLE	SH VIDEO	1							
2 MMFO B/O CABLE	SH VIDEO								
2 SMFO B/O CABLE	SH VIDEO								
RG-6A/U COAX	BB VIDEO								
27C18 CABLE	CAMERA CONTROL								
#14	POWER								14
#12	POWER								
#10	COMMON								3
#10	POWER						2	2	
#8	GROUND			1			1 (N)		
#6	POWER						6		
#4	POWER			2			2 (N)		
2P18	TELCO								
DLC	RAMP/COUNT					8			16
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2" (N)	2½"	2"	3"	3"







AS-BUILT
Contract No. 07- **120714**
Resident Engineer: **AMOS, H.**
Completion Date: **06/04/1998**

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY (LOCATION 3)

SCALE: 1"=50'

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

E-6

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — ES
CHECKED BY — AP
DATE REVISED
REVISED BY
DATE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans
TRAFFIC DESIGN

712070U06.DGN EBASCO 7/16/93

TIME PLOTTED => 02-MAR-1995 08:20

FORM OC-OE-32-PF (REV. 3/88)

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

USERNAME => lenard
DGN FILE => /usr/lenard/P2/712071u06.dg

CU 07387

EA 120711

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10
50P22 CABLE	DATA /PHONE	1									
6P22 CABLE	DATA /PHONE			1	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)	
12 SMFO CABLE	VIDEO TRUNK	1									
12 MM-O CABLE	SH VIDEO	1									
2 MMFO B/O CABLE	SH VIDEO										
2 SMFO B/O CABLE	SH VIDEO										
RG-6A/U COAX	BB VIDEO										
27C18 CABLE	CAMERA CONTROL										
#14	POWER										
#12	POWER										
#10	POWER										2
#8	POWER										
#8	GROUND										
#6	POWER										
#4	POWER										
2P18	TELCO										1
DLC	RAMP/COUNT				1	3	5	7	6	2	
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	1½"	1½"	2"	2"	3"	3"	1"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2 R2.2/R5.7	18	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

ASHOK KUMAR PUR
No. 12891
Exp. 12/31/96
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
STATE OF CALIFORNIA

2-21-95
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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14TH STREET OC
BR NO. 53-1596 PM R2.61

17TH STREET OC
BR NO. 53-1597 PM R2.84

TELEPHONE SERVICE POINT
PP #769444E

ROUTE 10

Call Box

E/B OFF RAMP

Match Line-sheet E-6

Match Line-sheet E-8

AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)

SCALE: 1"=50'

E-7

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

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

CALCULATED/ DESIGNED BY	DATE	REVISED BY	DATE REVISED
ES			
CHECKED BY	AP		

DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

712070U07.DGN EBASCO 7/16/93

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

CU 07387 | EA 120711

< 24

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
50P22 CABLE	DATA /PHONE	1																	
6P22 CABLE	DATA /PHONE			2	1	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)			1 (N)	1			1		
12 SMFO CABLE	VIDEO TRUNK	1																	
12 MMFO CABLE	SH VIDEO	1																	
2 MMFO B/O CABLE	SH VIDEO			1													1		
2 SMFO B/O CABLE	SH VIDEO																		
RG-6A/U COAX	BB VIDEO															1	1		
27C18 CABLE	CAMERA CONTROL															1	1		
#14	POWER							6											
#12	POWER																		
#10	COMMON							1											
#8	POWER										2	2	2		2				
#8	GROUND				1	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)				1	1	1	
#6	POWER																		
#4	POWER								2	2	2	2							
#4	POWER				2	2 (N)	2 (N)	2 (N)	2 (N)	2 (N)	2 (N)	2 (N)						2	
2P18	TELCO								1						1				1
DLC	RAMP/COUNT					4	6	8						4	6				2
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	2" (N)	2"	3"	3"	3"	2"	2"	3"	2"	3" (N)	3" (N)	2" (N)	3" (N)	3" (N)	2"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1,10	R34.6/35.2 R2.2/R5.7	19	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12891 — Exp. 12-31-96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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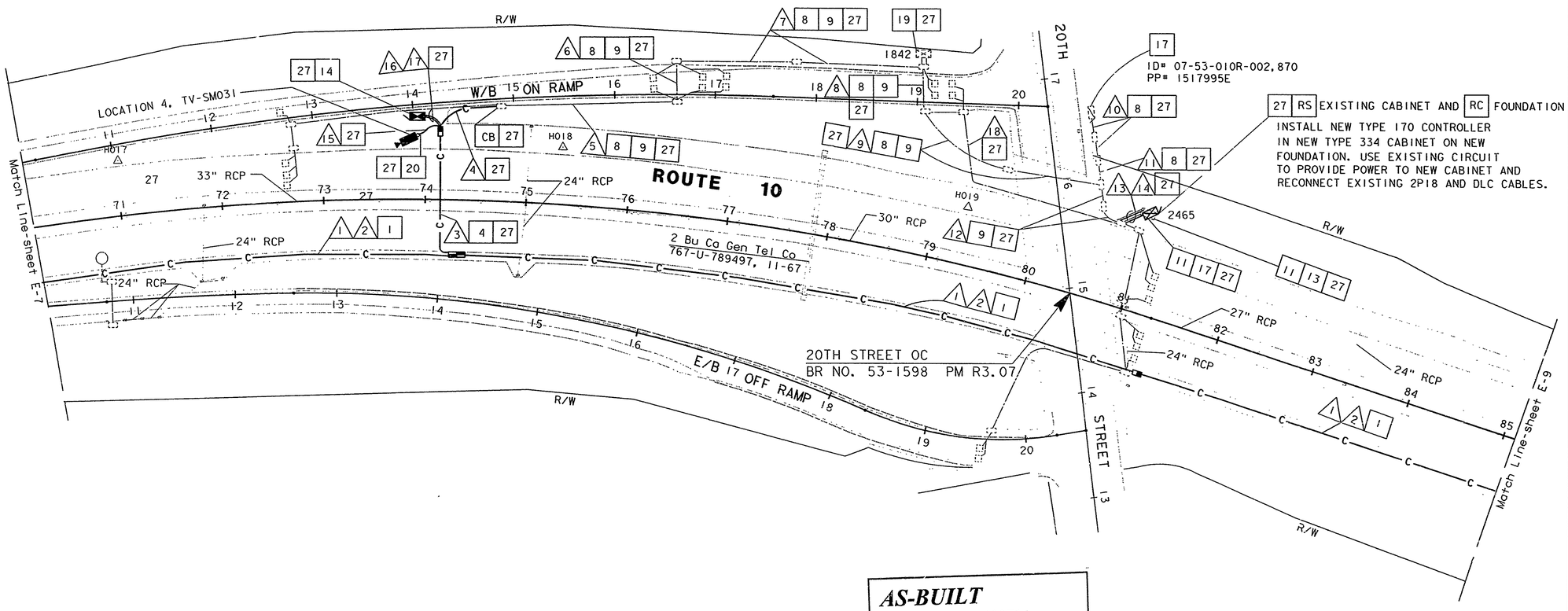


AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)

SCALE: 1"=50'

E-8

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

DESIGN OVERSIGHT	GREGORY DAMICO			
CALCULATED/ DESIGNED BY	CHECKED BY	REVISED BY	DATE	DATE REVISED
ES	AP			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
EBASCO 7/16/93
712070U08.DGN

TIME PLOTTED => 02-MAR-1995 08:45

FORM DC-0E-92-PF (REV. 3/89)

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

USERNAME => lenard
DGN FILE => /usr/lenard/P2'712071u08.dg

CU 07387

EA 120711

< 24

CONDUIT AND CONDUCTOR SCHEDULE

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 (N)	1 (N)	1 (N)	1	1 (N)				
12 SMFO CABLE	VIDEO TRUNK	1											
12 MMFO CABLE	SH VIDEO	1											
2 MMFO B/O CABLE	SH VIDEO												
2 SMFO B/O CABLE	SH VIDEO												
RG-6A/U COAX	BB VIDEO												
27C18 CABLE	CAMERA CONTROL												
40C18 CABLE	CMS CONTROL								1				
#14	POWER												
#12	POWER												
#10	POWER												
#8	POWER												
#8	GROUND										1 (N)	1	
#6	POWER									2	2		
#4	POWER										2 (N)	2	
#2	POWER										6		
DLC	RAMP/COUNT				4 (N)	4 (N)	2 (N)						4 (N)
DLC	RAMP/COUNT				3	1	1						3
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2"	2"	2"	2" (N)	3"	3"	3"	2" (N)	2"

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.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2 R2.2/R5.7	20	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

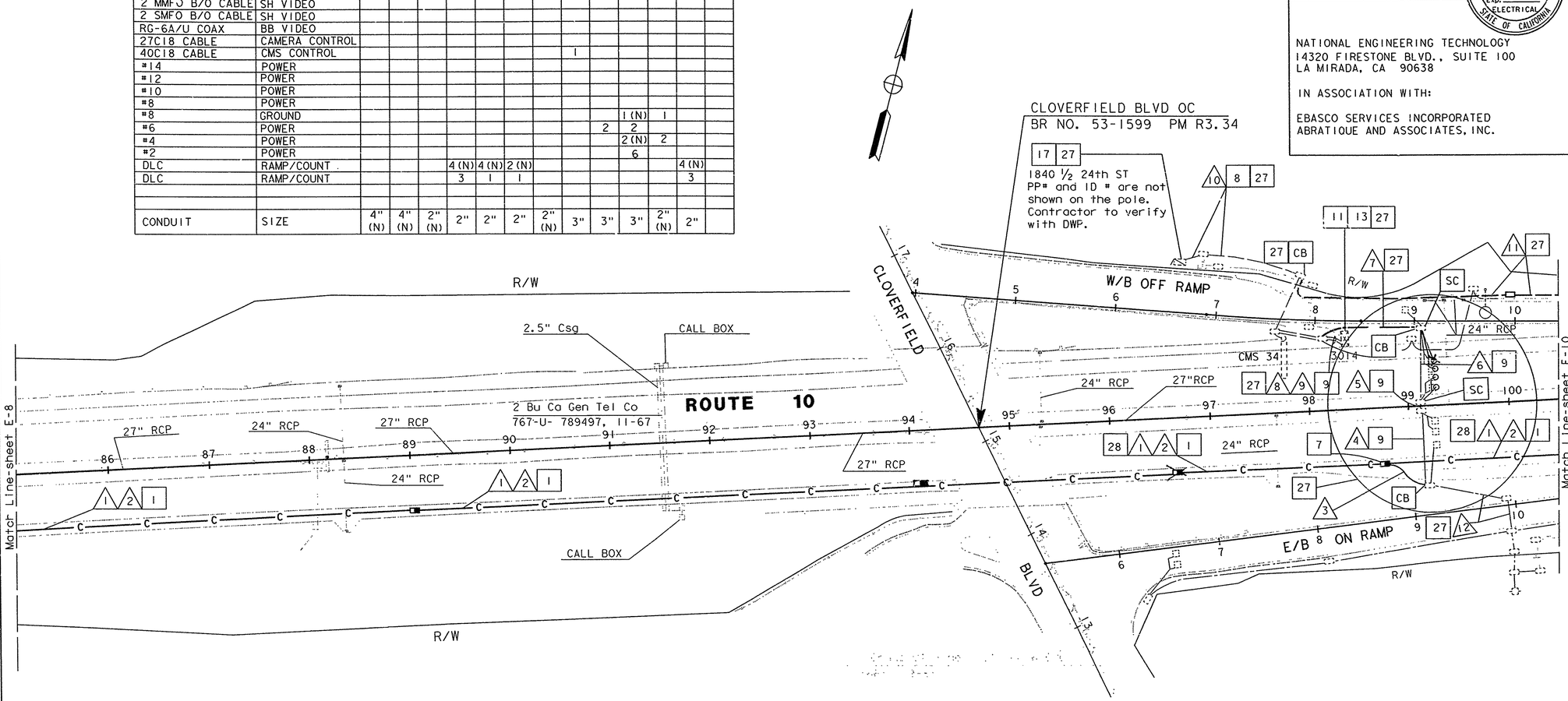
REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12891 — Exp. 12/31/96 — ELECTRICAL — STATE OF CALIFORNIA

2-21-95
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.



SEE SHEET 20A

AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY

(LOCATION 4)

SCALE: 1"=50'

E-9

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

DESIGN OVERSIGHT — GREGORY DAMICO
CALCULATED/DESIGNED BY — ES — DATE
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REVISED BY — DATE REVISED
Caltrans **TRAFFIC DESIGN**
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
71207OU09.DGN EBASCO 7/16/93

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

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CU 07387 | EA 120711

< 24

CONDUIT AND CONDUCTOR SCHEDULE

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 (N)	1 (N)	1 (N)	1	1 (N)				
12 SMFO CABLE	VIDEO TRUNK	1											
12 MMFO CABLE	SH VIDEO	1											
2 MMFO B/O CABLE	SH VIDEO												
2 SMFO B/O CABLE	SH VIDEO												
RG-6A/U COAX	BB VIDEO												
27C18 CABLE	CAMERA CONTROL												
40C18 CABLE	CMS CONTROL								1				
#14	POWER												
#12	POWER												
#10	POWER												
#8	POWER												
#8	GROUND										1 (N)	1	
#6	POWER									2	2		
#4	POWER										2 (N)	2	
#2	POWER										6		
DLC	RAMP/COUNT				4 (N)	4 (N)	2 (N)						4 (N)
DLC	RAMP/COUNT				3	1	1						3
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2"	2"	2"	2" (N)	3"	3"	3"	2" (N)	2"

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2 R2.2/R5.7	20A	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

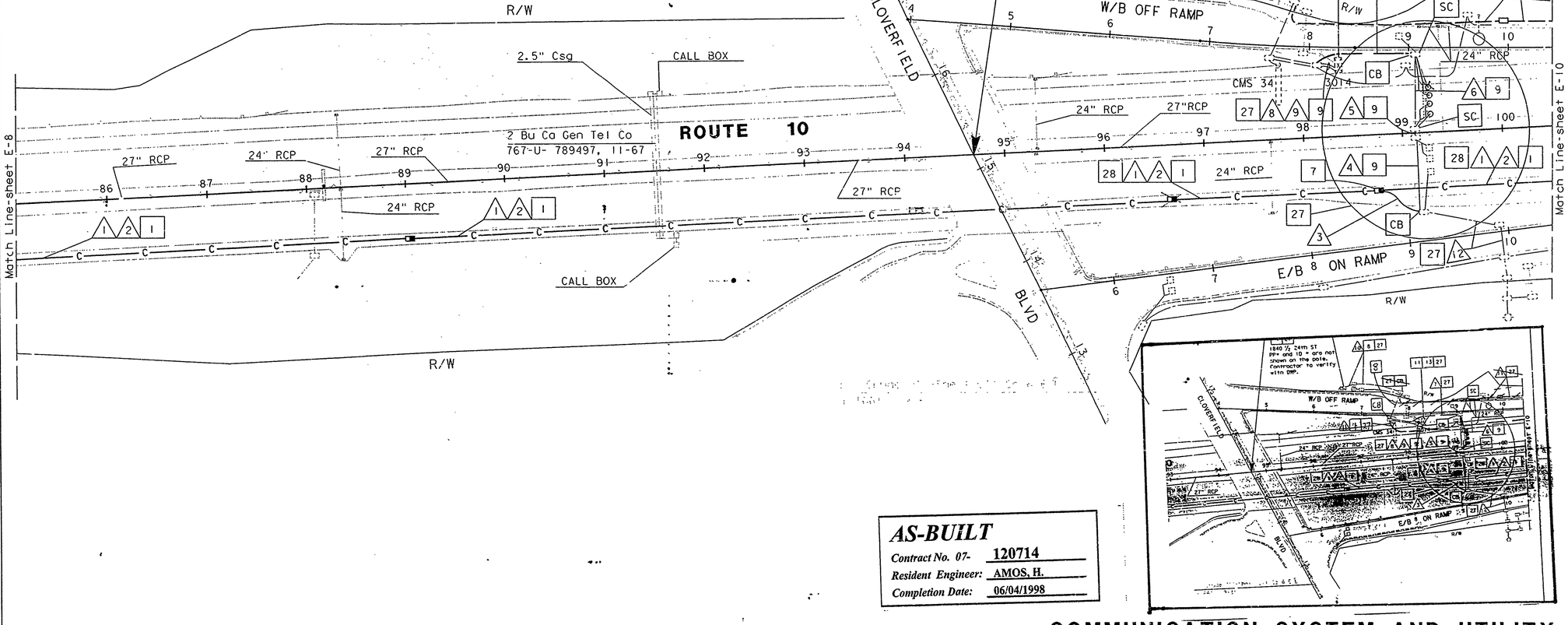
2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12891 — Exp. 12/31/96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.



AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)
SCALE: 1"=50'

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

E-9

DESIGN OVERSIGHT — GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — TRAFFIC DESIGN
712070U09.DGN EBASCO 7/16/93
CALCULATED/DESIGNED BY — ES
CHECKED BY — AP
DATE — REVISED BY — DATE REVISED

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CU 07387 | EA 120711

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

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< 24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2 R2.2/R5.7	21	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ASHOK KUMAR PURI No. 12891 Exp. 12/31/96 ELECTRICAL STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA /PHONE	1											1	1	
6P22 CABLE	DATA /PHONE			1	1 (N)		1			1		1	1		
12 SMFO CABLE	VIDEO TRUNK	1													
12 MMFO CABLE	SH VIDEO	1											1	1	
6 SMFO CABLE	VIDEO TRUNK											1	2	1	
2 MMFO B/O CABLE	SH VIDEO						1			1					
2 SMFO B/O CABLE	SH VIDEO														
RG-6A/U COAX	BB VIDEO							1		1					
27C18 CABLE	CAMERA CONTROL							1		1					
#14	POWER					6									
#12	POWER														
#10	COMMON				1	1									
#8	POWER				2										
#8	GROUND							1	1	1	1				
#6	POWER														
#4	POWER								2		2				
2P18	TELCO														
DLC	RAMP/COUNT				5	5									
DLC	RAMP CONDUIT				2 (N)	3 (N)									5 (N)
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2½"	2½"	3" (N)	2" (N)	2" (N)	3" (N)	3" (N)	1½" (N)	4" (N)	4" (N)	2"

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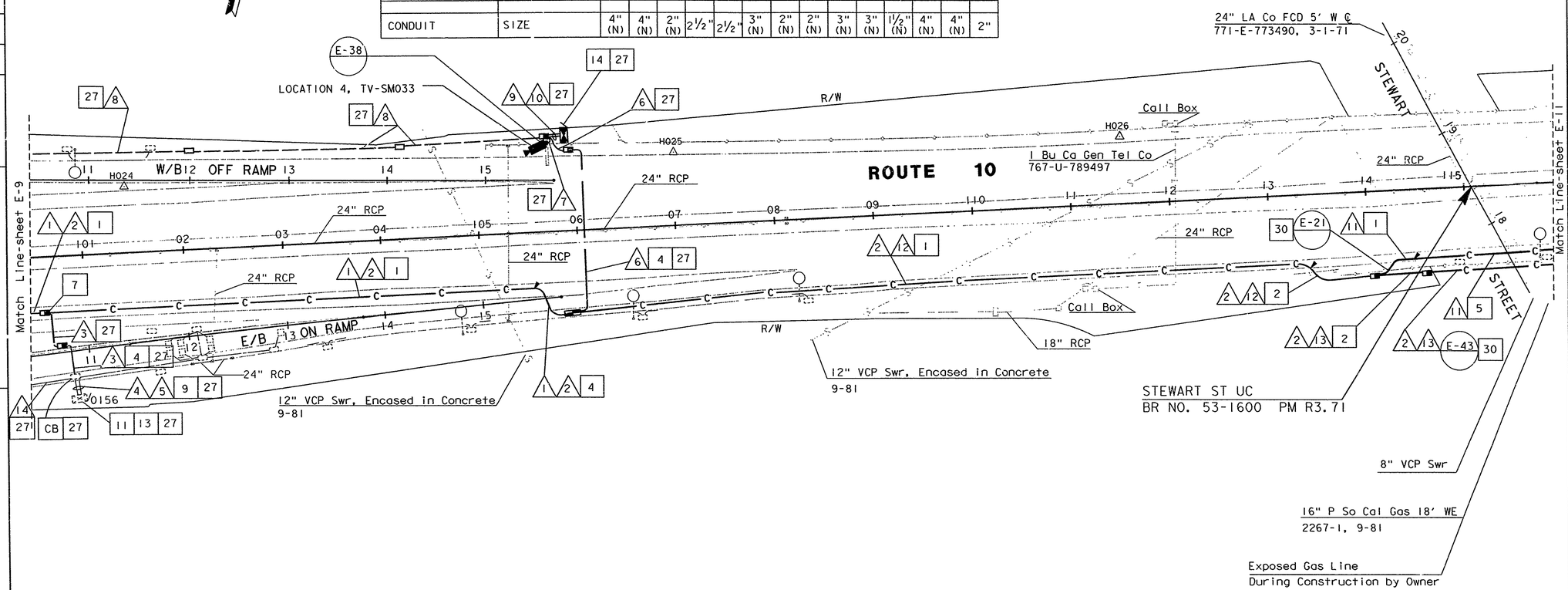

SEE SHEET 21A

AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CAMERA, WORK STEWART STREET, CCTV COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)

SCALE: 1"=50'

E-10

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

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CU 07387

EA 120711

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

DESIGN OVERSIGHT GREGORY DAMICO

CALCULATED/DESIGNED BY ES DATE
CHECKED BY AP
REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

712070U10.DGN EBASCO 7/16/93

TIME PLOTTED => 02-MAR-1995 08:45

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA /PHONE	1											1	1	
6F22 CABLE	DATA /PHONE			1	1 (N)		1			1		1			
12 SMFO CABLE	VIDEO TRUNK	1											1	1	
12 MMFO CABLE	SH VIDEO	1											1	1	
6 SMFO CABLE	VIDEO TRUNK												1	1	
2 MMFO B/O CABLE	SH VIDEO						1			1					
2 SMFO B/O CABLE	SH VIDEO														
RG-6A/U COAX	BB VIDEO							1		1					
27C18 CABLE	CAMERA CONTROL							1		1					
#14	POWER					6									
#12	POWER														
#10	COMMON				1	1									
#8	POWER				2										
#8	GROUND							1	1	1	1				
#6	POWER														
#4	POWER								2		2				
2P18	TELCO														
DLC	RAMP/COUNT				5	5									
DLC	RAMP CONDUIT				2 (N)	3 (N)									5 (N)
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2½"	2½"	3" (N)	2" (N)	2" (N)	3" (N)	3" (N)	1½" (N)	4" (N)	4" (N)	2"

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	I. 10	R34.6/35.2 R2.2/R5.7	21	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

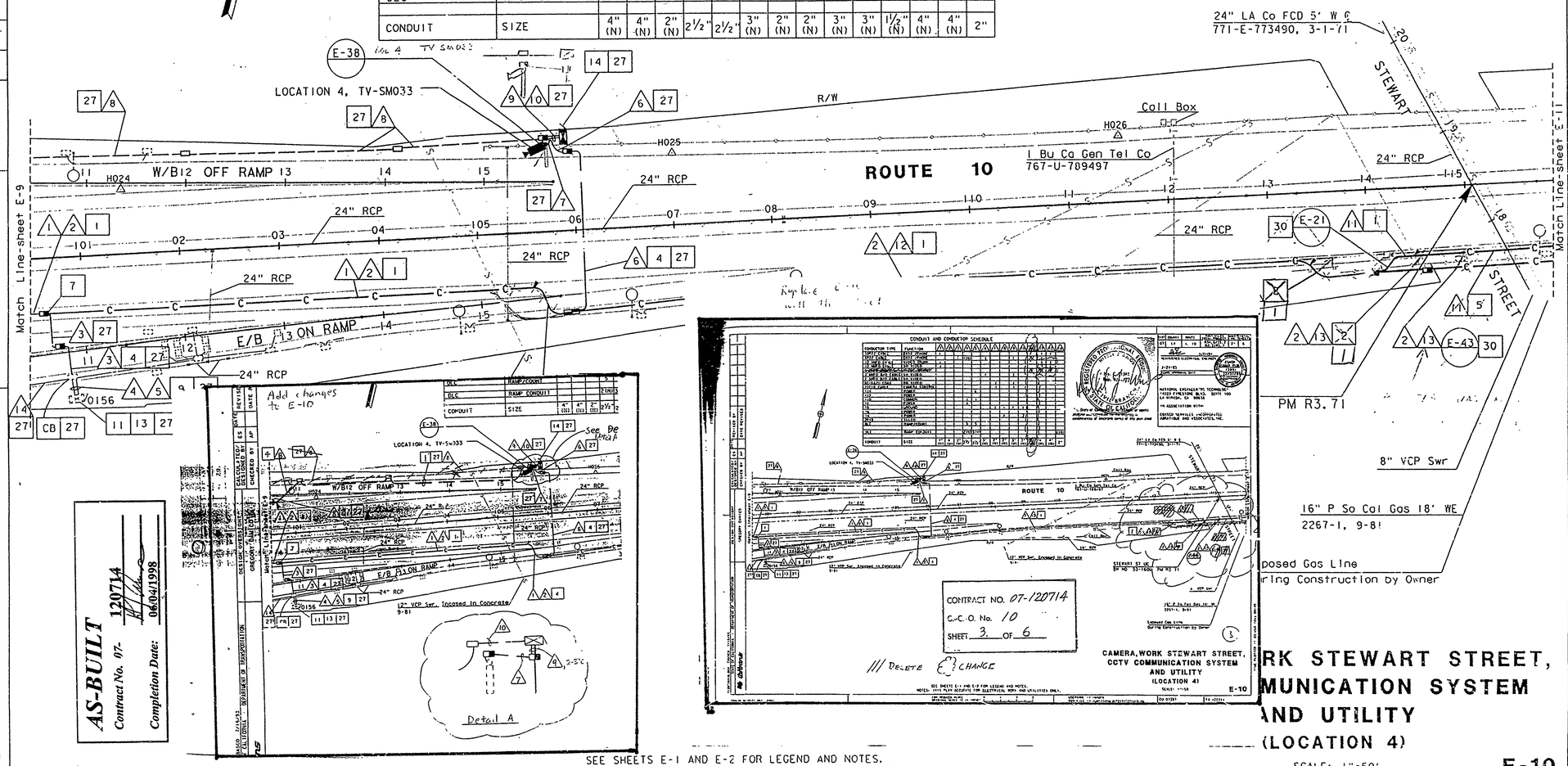
ASHOK KUMAR PURI
No. 12891
Exp. 12/31/96
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

2-21-95
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.



AS-BUILT
Contract No. 07-120714
Completion Date: 06/04/1998

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

WORK STEWART STREET, COMMUNICATION SYSTEM AND UTILITY (LOCATION 4)

SCALE: 1"=50'

E-10

DESIGN OVERSIGHT	DATE	REVISED BY	DATE REVISED
GREGORY DAMICO	ES		
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
712070U10.DGN EBASCO 7/16/93
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CU 07387

EA 120711

TIME PLOTTED => 02-MAR-1995 08:45

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	~~19~~	20	21
50P22 CABLE	DATA /PHONE	1																			1	1
6P22 CABLE	DATA /PHONE			2	1 (N)		1 (N)	1 (N)	1 (N)	1 (N)	1 (N)					1		1	1		1	
12 SMFO CABLE	VIDEO TRUNK	1																			1	1
12 MMFO CABLE	SH VIDEO	1		2														2			1	1
~~6 SMFO CABLE~~	~~VIDEO TRUNK~~																				~~2~~	~~1~~
2 MMFO B/O CABLE	SH VIDEO																					
2 SMFO B/O CABLE	SH VIDEO			1														1				
RG-6A/U COAX	BB VIDEO																					
27C18 CABLE	CAMERA CONTROL																					
40C18	CMS CONTROL				1																	
#14	POWER																					
#12	POWER																					
#10	POWER											2										
#8	GROUND												1 (N)		1 (N)							
#8	GROUND												1		1	1	1					
#6	POWER												1		1	2	2					
#6	POWER												2 (N)		2 (N)							
#4	POWER																					
2P18	TELCO											1										
DLC	RAMP/COUNT						2	4	6	8	4	4										
#2	POWER				2									6	6							
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	2"	2"	1½"	1½"	1½"	2"	3"	3"	3"	3"	3"	2" (N)	3" (N)	3" (N)	2" (N)	~~1½" (N)~~	4" (N)	4" (N)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2 R2.2/R5.7	22	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12891 — Exp. 12-31-96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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8" SP in 12" RCP
S Monica Wtr 6' W CL 9-81

Call Box

2 Bu Ca Gen Tel Co
767-U-789497, 11-67

R/W

DORCHESTER

TEL SERVICE POINT
PP #1518056E

18" CMP

2238

33" RCP

18" RCP

15" VCP Swr (conc encased)
9-81

24" RCP

6" Csg

ROUTE 10

Match Line-sheet E-10

Match Line-sheet E-12

Abn Swr

Abn 6" CI Wtr

Call Box

18" CMP

CMS #3

3001

CB

R/W

Abn 8" VCP Swr
9-81

YORKSHIRE

KANSAS AVE

AVE

ALLEY

2121 YORKSHIRE AVE
PP #428177E

DORCHESTER PUC
BR NO. 53-1601 PM R3.90

AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)

SCALE: 1"=50'

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

E-11

DESIGN OVERSIGHT
GREGORY DAMICO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
712070U11.DGN EBASCO 7/16/93

DATE	REVISED BY	DATE REVISED
ES		
AP		

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

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

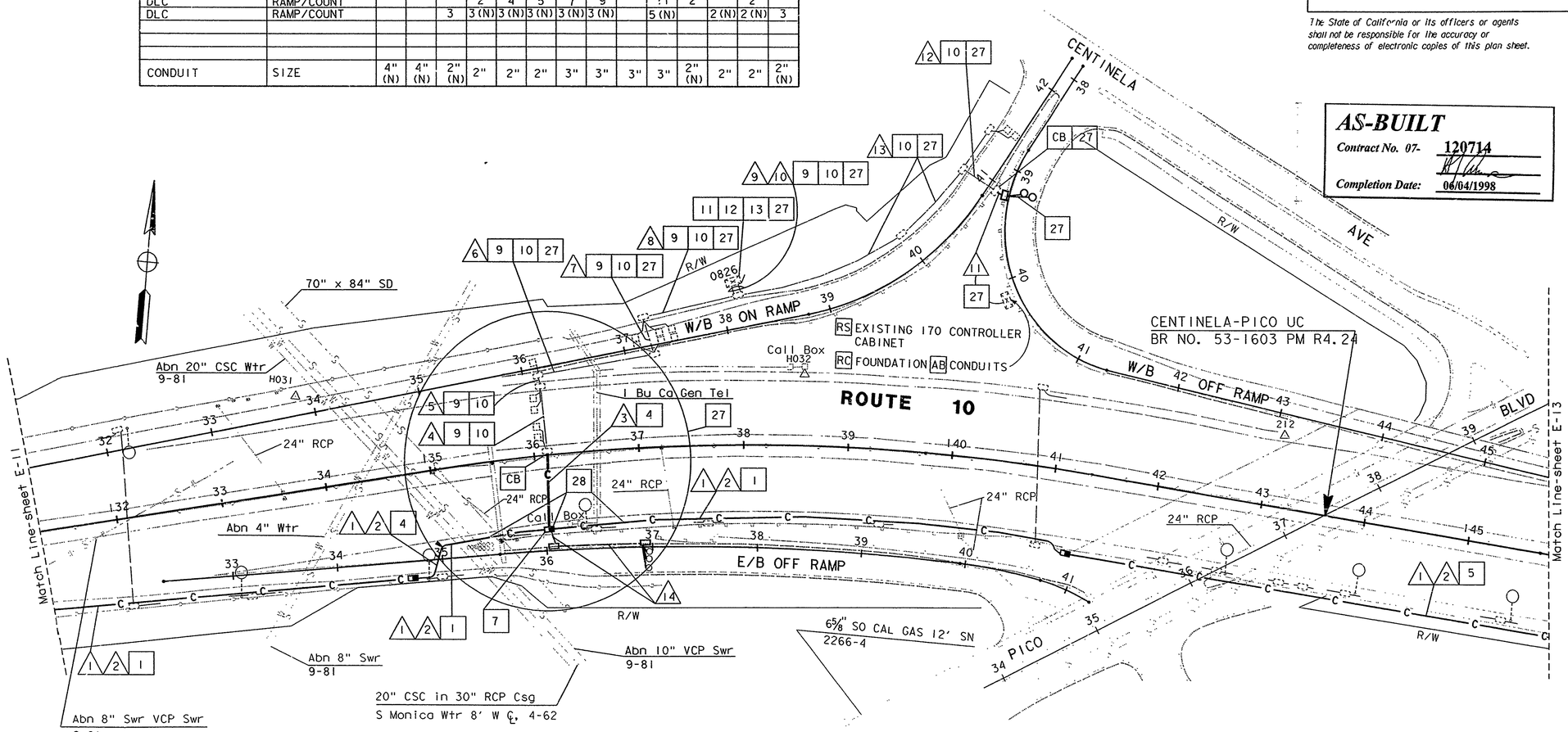
CU 07387 | EA 120711

< 24

< 24

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA /PHONE	1													
6P22 CABLE	DATA /PHONE			1	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)				
12 SMFO CABLE	VIDEO TRUNK	1			1										
12 MMFO CABLE	SH VIDEO	1			1										
2 MMFO B/O CABLE	SH VIDEO														
2 SMFO B/O CABLE	SH VIDEO														
RG-6A/U COAX	BB VIDEO														
27C18 CABLE	CAMERA CONTROL														
#14	POWER							6	9	11			2	2	
#12	POWER														
#10	COMMON							1	1	2				1	
#8	POWER									2					
#8	GROUND														
#6	POWER														
#4	POWER														
2P18	TELCO														
DLC	RAMP/COUNT				2	4	5	7	9		11	2		2	
DLC	RAMP/COUNT			3	3 (N)	3 (N)	3 (N)	3 (N)	3 (N)		5 (N)		2 (N)	2 (N)	3
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2"	2"	2"	3"	3"	3"	3"	2" (N)	2"	2"	2" (N)



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1,10	R34.6/35.2, R2.2/R5.7	23	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ASHOK KUMAR PURI — No. 12991 — Exp. 12-31-96 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)

SCALE: 1"=50'

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

E-12

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY: ES
CHECKED BY: AP

DESIGN OVERSIGHT: GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

7:\2070ul2.DGN EBASCO 7/16/93

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FORM DC-0E-92-PF (REV. 3/88)

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CU 07387

EA 120711

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1,10	R34.6/35.2, R2.2/R5.7	24	61

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5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ASHOK KUMAR PURI
No. 12891
Exp. 12-31-96
ELECTRICAL
STATE OF CALIFORNIA

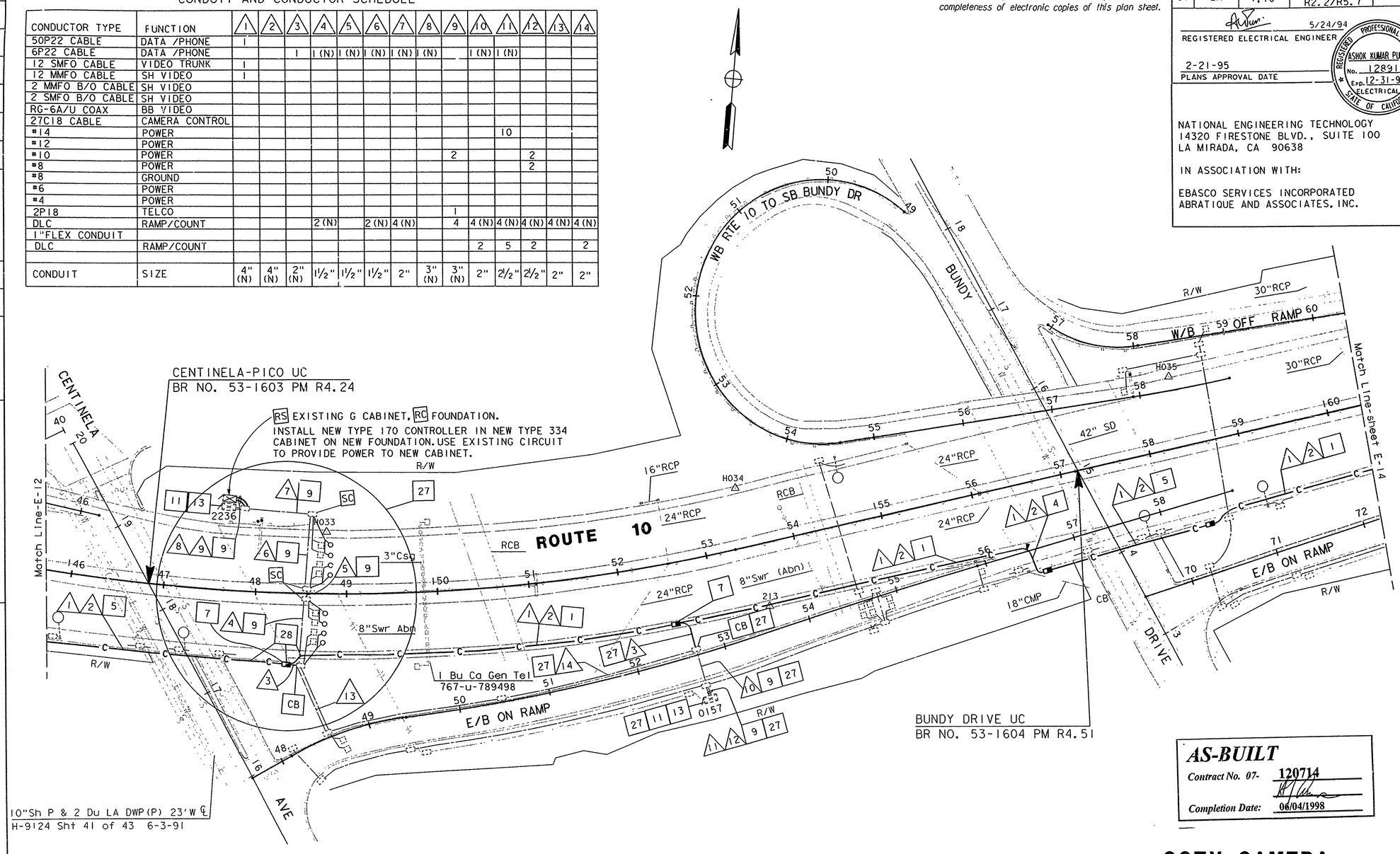
NATIONAL ENGINEERING TECHNOLOGY
14320 FIRESTONE BLVD., SUITE 100
LA MIRADA, CA 90638

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA /PHONE	1													
6P22 CABLE	DATA /PHONE			1	1 (N)	1 (N)	1 (N)	1 (N)	1 (N)		1 (N)	1 (N)			
12 SMFO CABLE	VIDEO TRUNK	1													
12 MMFO CABLE	SH VIDEO	1													
2 MMFO B/O CABLE	SH VIDEO														
2 SMFO B/O CABLE	SH VIDEO														
RG-6A/U COAX	BB VIDEO														
27C18 CABLE	CAMERA CONTROL														
#14	POWER											10			
#12	POWER														
#10	POWER									2			2		
#8	POWER												2		
#8	GROUND														
#6	POWER														
#4	POWER														
2P18	TELCO									1					
DLC	RAMP/COUNT				2 (N)		2 (N)	4 (N)		4	4 (N)	4 (N)	4 (N)	4 (N)	4 (N)
1"FLEX CONDUIT															
DLC	RAMP/COUNT										2	5	2		2
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	1½"	1½"	1½"	2"	3" (N)	3" (N)	2"	2½"	2½"	2"	2"



AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 4)

SCALE: 1"=50'

E-13

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN
DESIGN OVERSIGHT: GREGORY DAMICO
CALCULATED/DESIGNED BY: ES
CHECKED BY: AP
DATE
REVISED BY
DATE REVISED

712070U13.DGN EBASCO 7/16/93

TIME PLOTTED => 06-MAR-1995 13:50

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

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CU 07387

EA 120711

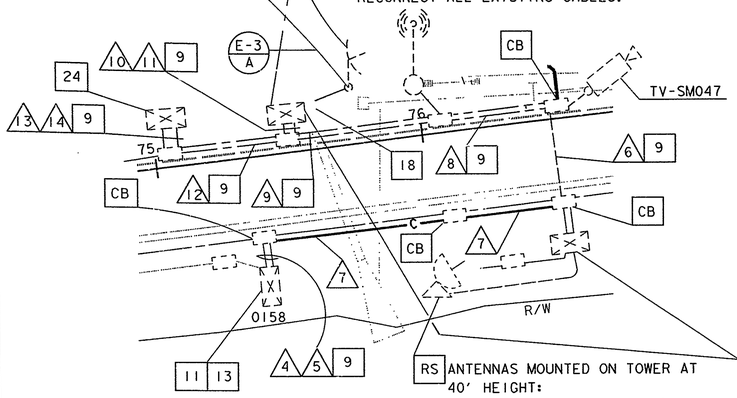
RS DISH
HAND OVER TO THE ENGINEER

RS VSAT POLE. GRIND POLE AND CONDUIT FLUSH WITH GROUND PLUS OPENINGS.

RL EXISTING TYPE 334 VSAT CABINET TO Mc CLURE TUNNEL, SEE (E-3 A)

RR CODEC & DIU UNITS AND JUNCTION BOX.
HAND OVER TO THE ENGINEER

RR CCR IN EXISTING VSAT CABINET AND INSTALL CCR IN THE RELOCATED CCTV CABINET.
RECONNECT ALL EXISTING CABLES.



RS ANTENNAS MOUNTED ON TOWER AT 40' HEIGHT:
1-23 GHZ ANTENNA, 2' DIAMETER
1-960 MHZ ANTENNA. 2' DIAMETER
TRANSPORTED AS DIRECTED BY THE ENGINEER.
PLUG ALL ABANDONED CONDUIT OPENINGS

RL EXISTING TYPE 334 CCTV CABINET TO EXISTING VSAT CABINET FOUNDATION (ACROSS BUNDY DR E/B ON RAMP) AFTER RELOCATING EXISTING VSAT CABINET TO MC CLURE TUNNEL.

RS 23 GHZ M/W TX, HAND OVER TO THE ENGINEER.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
50P22 CABLE	DATA /PHONE	1													
6P22 CABLE	DATA /PHONE			3	1 (N)		1 (N)	1	2 (N)	2 (N)	1 (N)		1 (N)	1 (N)	
12 SMFO CABLE	VIDEO TRUNK	1													
12 MMFO CABLE	SH VIDEO	1													
2 MMFO B/O CABLE	SH VIDEO			1					1 (N)	1 (N)	1 (N)				
2 SMFO B/O CABLE	SH VIDEO														
RG-6A/U COAX	BB VIDEO								1	1	1				
27C18 CABLE	CAMERA CONTROL								1	1	1				
#14	POWER				7	4									
#12	POWER														
#10	COMMON				1	2									
#10	POWER						3								
#8	GROUND						1		1	1	1	1			1
#6	POWER						2					2			2
#4	POWER														
2P18	TELCO														
DLC	RAMP/COUNT				5	9									
1"FLEX CONDUIT															
ANTENNA CABLE	RF FEEDLINE									1			1	1	
CONDUIT	SIZE	4" (N)	4" (N)	3" (N)	2½"	2½"	3"	2" (N)	3"	3"	3"	3"	3"	3"	3"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1, 10	R34.6/35.2, R2.2/R5.7	25	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

ASHOK KUMAR PURI
No. 12891
Exp 12-31-96
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

2-21-95
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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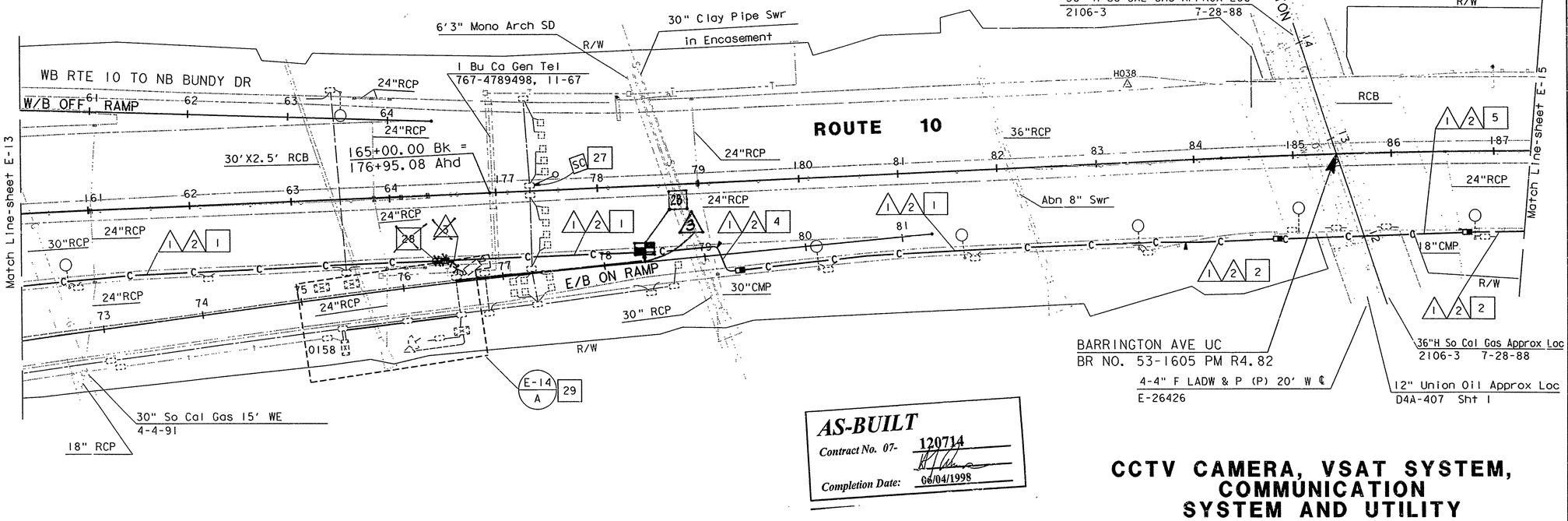
DETAIL A
NO SCALE



AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

CCTV CAMERA, VSAT SYSTEM, COMMUNICATION SYSTEM AND UTILITY (LOCATION 5)

SCALE: 1"=50'

E-14

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

DESIGN OVERSIGHT
GREGORY DAMICO

CALCULATED/ DESIGNED BY
CHECKED BY

DATE REVISED BY
ES AP

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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CU 07387

EA 120711

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	I, 10	R34.6/35.2 R2.2/R5.7	26	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ASHOK KUMAR PURI
No. 12891
Exp. 12-31-95
ELECTRICAL
STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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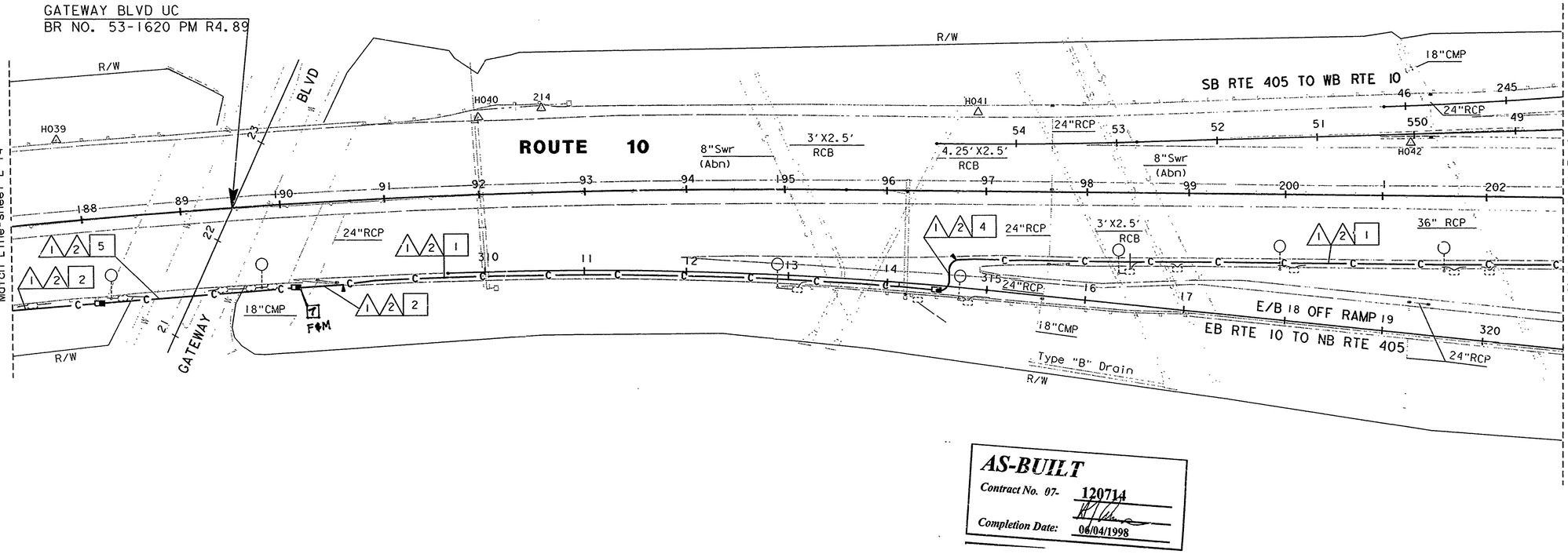
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2
50P22 CABLE	DATA /PHONE	1	
6P22 CABLE	DATA /PHONE		
12 SMFO CABLE	VIDEO TRUNK	1	
12 MMFO CABLE	SH VIDEO	1	
2 MMFO B/O CABLE	SH VIDEO		
2 SMFO B/O CABLE	SH VIDEO		
RG-6A/U COAX	BB VIDEO		
27C18 CABLE	CAMERA CONTROL		
#14	POWER		
#12	POWER		
#10	POWER		
#8	POWER		
#8	GROUND		
#6	POWER		
#4	POWER		
2P18	TELCO		
DLC	RAMP/COUNT		
1"FLEX CONDUIT			
CONDUIT	SIZE	4" (N)	4" (N)

GATEWAY BLVD UC
BR NO. 53-1620 PM R4.89



AS-BUILT
Contract No. 07- 120714
Completion Date: 06/04/1998

COMMUNICATION SYSTEM AND UTILITY

SCALE: 1"=50'

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

E-15

CALCULATED/ DESIGNED BY	ES	DATE	REVISED BY	DATE REVISED
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DESIGN OVERSIGHT
GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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CU 07387

EA 120711

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1,10	R34.6/35.2 R2.2/R5.7	27	61

5/24/94
REGISTERED ELECTRICAL ENGINEER

2-21-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ASHOK KUMAR PURI No. 12891 Exp. 12-31-96 ELECTRICAL STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

EBASCO SERVICES INCORPORATED
ABRATIQUE AND ASSOCIATES, INC.

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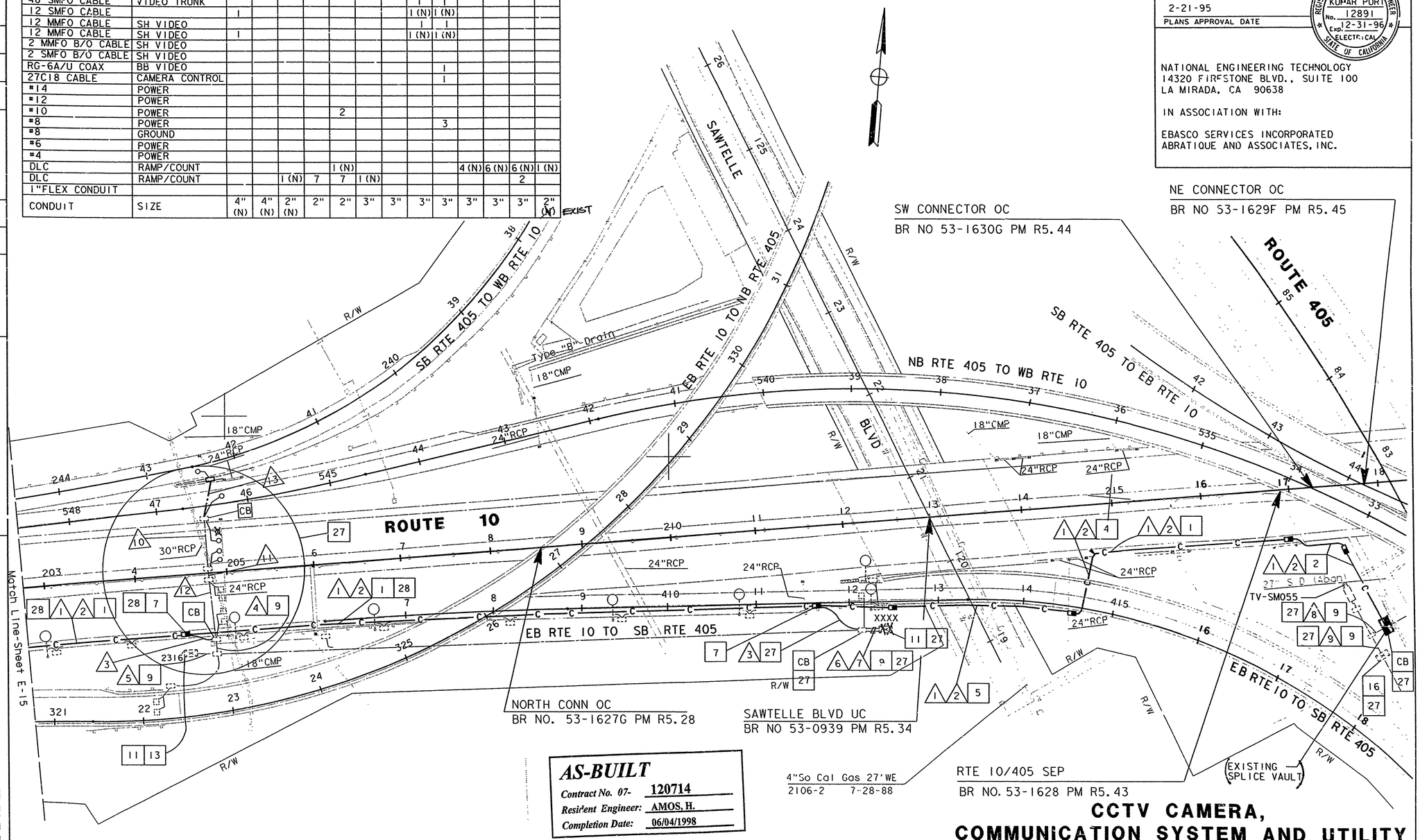
CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10	11	12	13
50P22 CABLE	DATA /PHONE	1							1	1				
50P22 CABLE	DATA /PHONE								1 (N)	1 (N)				
6P22 CABLE	DATA /PHONE				1 (N)	1 (N)	1 (N)							
48 SMFO CABLE	VIDEO TRUNK								1	1				
12 SMFO CABLE		1							1 (N)	1 (N)				
12 MMFO CABLE	SH VIDEO								1	1				
12 MMFO CABLE	SH VIDEO	1							1 (N)	1 (N)				
2 MMFO B/O CABLE	SH VIDEO													
2 SMFO B/O CABLE	SH VIDEO													
RG-6A/U COAX	BB VIDEO									1				
27C18 CABLE	CAMERA CONTROL									1				
#14	POWER													
#12	POWER													
#10	POWER					2								
#8	POWER									3				
#8	GROUND													
#6	POWER													
#4	POWER													
DLC	RAMP/COUNT					1 (N)					4 (N)	6 (N)	6 (N)	1 (N)
DLC	RAMP/COUNT			1 (N)	7	7	1 (N)						2	
1"FLEX CONDUIT														
CONDUIT	SIZE	4" (N)	4" (N)	2" (N)	2"	2"	3"	3"	3"	3"	3"	3"	3"	2" (N) EXIST



AS-BUILT
Contract No. 07- 120714
Resident Engineer: AMOS, H.
Completion Date: 06/04/1998

CCTV CAMERA, COMMUNICATION SYSTEM AND UTILITY
(LOCATION 5)

SCALE: 1"=50'

E-16

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

REVISED BY	DATE REVISED	DATE	CALCULATED/ DESIGNED BY	CHECKED BY
		ES	AP	

DESIGN OVERSIGHT: GREGORY DAMICO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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CU 07387

EA 120711

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E-20 TO E-22	CCTV AND COMMUNICATION SYSTEM DETAILS
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E-26	CMS CONTROLLER INTERFACE
E-27	CCTV AND COMMUNICATION SYSTEM (ELECTRICAL QUANTITIES)

LIST OF ABBREVIATIONS

8MMFO	FIBER OPTIC CABLE, 8 MULTIMODE FIBERS
2SMFO	FIBER OPTIC CABLE, 2 SINGLEMODE FIBERS
4SMFO	FIBER OPTIC CABLE, 4 SINGLEMODE FIBERS
6P22	TWISTED PAIR CABLE, 6 PAIR 22 AWG CONDUCTORS
12P22	TWISTED PAIR CABLE, 12 PAIR 22 AWG CONDUCTORS
16P22	TWISTED PAIR CABLE, 16 PAIR 22 AWG CONDUCTORS
18P22	TWISTED PAIR CABLE, 18 PAIR 22 AWG CONDUCTORS
9P18	TWISTED PAIR CABLE, 9 PAIR 18 AWG CONDUCTORS
12P18	TWISTED PAIR CABLE, 12 PAIR 18 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
FDF	FIBER DISTRIBUTION FRAME
FDU	FIBER DISTRIBUTION UNIT
FLEX	FLEXIBLE
F/O OR FO	FIBER OPTIC
FRE	FIBERGLASS REINFORCED EPOXY CONDUIT
IFU	INTERFACE UNIT
INTRFCE	INTERFACE
J-BOX	JUNCTION BOX
MM	MULTIMODE
MUX	MULTIPLEXER
MVDS	MICROWAVE VEHICLE DETECTION SENSOR
MWR	MICROWAVE RECEIVER
M\W	MICROWAVE
NOM	NOMINAL
OC	ON CENTER
OHS	OVERHEAD SIGN
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
TDM	TIME DIVISON MULTIPLEXER
TELCO	TELEPHONE COMPANY
TMC	TRAFFIC MANAGEMENT CENTER
TP	TWISTED PAIR
TX	TRANSMITTER
VDX	VIDEO DEMULTIPLEXER
VIPS	VIDEO IMAGE PROCESSING SYSTEM
VMX	VIDEO MULTIPLEXER
VR	VIDEO RECEIVER
VSAT	VERY SMALL APERTURE TERMINAL
VX	VIDEO TRANSMITTER
XCVR	TRANSCEIVER
#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
- MICROWAVE VEHICLE DETECTION SENSOR
- —C— COMMUNICATIONS CONDUIT(S)
- — E — — SERVICE CONDUIT(S)
- CONDUIT LINE DELIMITER FOR CONSTRUCTION NOTES (1 / 2)
- TYPE 334-TV CABINET
- EXISTING TELEPHONE BRIDGE
- TELEPHONE BRIDGE
- FIBER OPTIC CABLE
- MICROWAVE ANTENNA
- EXISTING MICROWAVE ANTENNA

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	26	54

Elia G. Saghi 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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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TABLE I CCTV WIRING		
CONDUCTOR TYPE	FUNCTION	QUANTITY
RG-6A/U	CAMERA VIDEO INTERFACE CABLE	1
9#18 CABLE	PAN/TILT CONTROL CABLE	1
12#18 CABLE	LENS CONTROL CABLE	1
1#8	CAMERA GROUND CABLE	1

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

CCTV AND COMMUNICATION SYSTEM (LEGEND AND NOTES)

E-1

REVISED BY	DATE REVISED
ES	3/95
JZ	3/95

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

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

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CU 07396

EA 120741

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	27	54

Elia G. Saghi 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ELIA G. SAGHI — 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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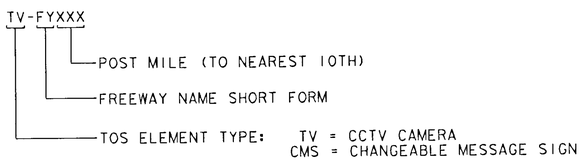
GENERAL NOTES:

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 CONTROLLER CABINETS, EXISTING SERVICE ENCLOSURES, POWER POLES AND EXISTING DEMARCATION BOXES ARE APPROXIMATE.
3. THE LOCATIONS OF PROPOSED CABINETS, DETECTOR LOOPS, PULL BOXES, SPLICE VAULTS AND DEMARCATION BOXES ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
4. EXISTING DETECTOR LOOPS AND CONDUITS ARE SHOWN IN THE VICINITY OF PROPOSED CONDUIT TRENCHES. CONTRACTOR SHALL AVOID DAMAGING EXISTING CONDUIT. TRENCHING WITH HAND TOOLS MAY BE REQUIRED.
5. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELECOMMUNICATION FACILITIES, THE CONTRACTOR SHALL PROVIDE 72 HOUR ADVANCED WRITTEN NOTICE TO THE ENGINEER AND ALL CONCERNED AGENCIES.
6. 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.
7. CONDUITS AND CONDUCTORS IN CONDUIT AND CONDUCTOR SCHEDULE TABLES ARE NEW UNLESS MARKED (E) INDICATING EXISTING.
8. PVC, WHERE CALLED OUT IN THESE PLANS, SHALL INDICATE RIGID NON-METALLIC CONDUIT AS DEFINED IN THE STANDARD SPECIFICATIONS.
9. ALL NO. 5, COMMUNICATION PULL BOXES AND SPLICE VAULTS SHALL BE TRAFFIC TYPE. SEE SHEETS E-15, E-16 AND E-17 FOR DETAILS.
10. LOCATIONS OF ROADWAY SHOULDER AND EDGE OF TRAVELWAY WERE OBTAINED FROM AS-BUILT PLANS 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.
11. ALL MODEL 170 CONTROLLERS, REMOTE TRAFFIC MICROWAVE SENSOR UNITS AND TYPE 334 CABINETS WILL BE STATE-FURNISHED.
12. IDENTIFICATION FORMAT OF TRAFFIC OPERATION SYSTEM (TOS) ELEMENTS:



13. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
14. WHEN CONDUIT IS INSTALLED NEAR AN EXISTING STRUCTURE, THE CONDUIT IS TO BE PLACED AT A MINIMUM DISTANCE OF 5' FROM THE STRUCTURE.

PROJECT NOTES: (MASTER LIST)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
9. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-19 AND DETAIL 3, SHEET E-20.
10. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER.
11. INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-25 AND C-4 FOR DETAILS.
12. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
13. INSTALL TWO TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE SHEETS E-20 AND E-26 FOR DETAILS.
14. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
15. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-13 FOR DETAILS.
16. INSTALL CCTV CAMERA ON EXISTING LUMINAIRE. SEE SHEETS E-25 AND C-5 FOR DETAILS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS, SEE SHEET C-10 FOR DETAILS.
18. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE CABINET WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
19. INSTALL 3" RIGID STEEL CONDUIT. UTILITY COMPANY TO INSTALL CONDUCTORS.
20. ADD MVDS CABLE(S) IN EXISTING CONDUIT.
21. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS. SEE DETAIL 4, SHEET E-20.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
23. ADD MVDS CABLE(S) IN EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS
24. ADD CABLE TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
25. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.
27. INSTALL MVDS ON SIGN STRUCTURE. SEE SHEET C-3 FOR DETAILS.
28. INSTALL TYPE 334 TV-CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE VIDEO RECEIVERS AND TWO STATE-FURNISHED 23 GHZ MICROWAVE TRANSMITTERS. SEE SHEET E-22 FOR DETAILS.
29. INSTALL 31 GHZ MICROWAVE TRANSCEIVER AND D-4 CHANNEL BANK IN EXISTING CABINET. SEE SHEET E-22 FOR DETAILS.

DATE	REVISED BY	CALCULATED/ DESIGNED BY	CHECKED BY
3/95	ES	JZ	
3/95	DATE REVISED		

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

CCTV AND COMMUNICATION SYSTEM (NOTES)

NO SCALE

E-2

LAST REVISION 00-00-00
TIME PLOTTED => 29-SEP-1995 14:47

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

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

USERNAME => tome
DGN FILE => /usr/tome/P0/712074u02.dgn

CU 07396

EA 120741

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
20. ADD MVDS CABLE(S) IN EXISTING CONDUIT.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
24. ADD CABLE TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
25. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6
16P22 CABLE	DATA /PHONE	1					2
6P22 CABLE	DATA /PHONE		1	2	1		
4SMFO CABLE	VIDEO DATA	1					
2SMFO B/O CABLE	SH VIDEO						
MVDS CABLE					1	2	
	CONDUIT SIZE	2"	2"	2"	2"	2"	3"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	28	54

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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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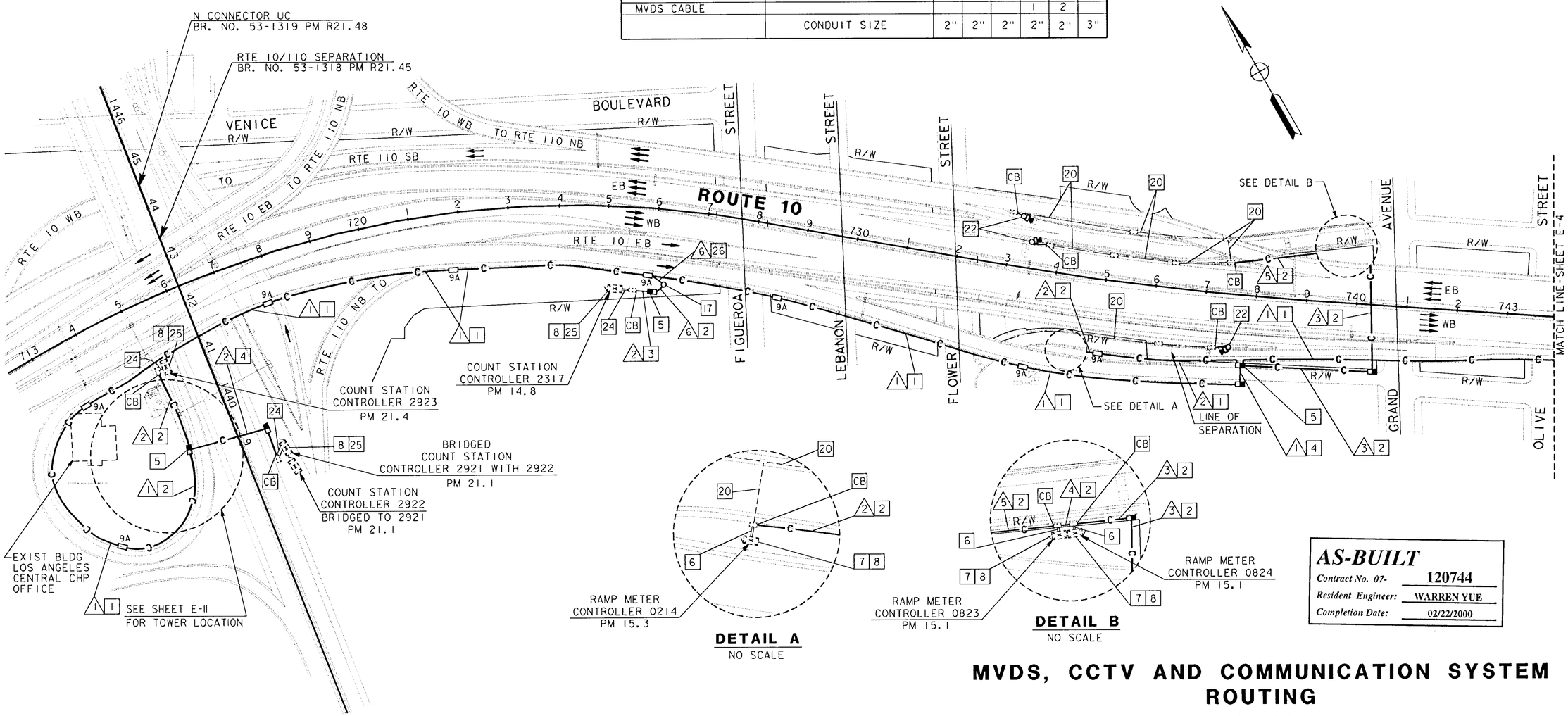

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

MVDS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

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

E-3

DATE	REVISED BY	DATE REVISED
3/95	JZ	3/95

CALCULATED/DESIGNED BY: ES
CHECKED BY:

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 29-SEP-1995 14:59

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

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DGN FILE => /usr/lenard/P18/712074u03.d

CU 07396

EA 120741

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.0	29	54

Elia G. Saghi 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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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CALCULATED/ DESIGNED BY		DATE	REVISED BY	DATE REVISED
CHECKED BY	ES	3/95	JZ	3/95

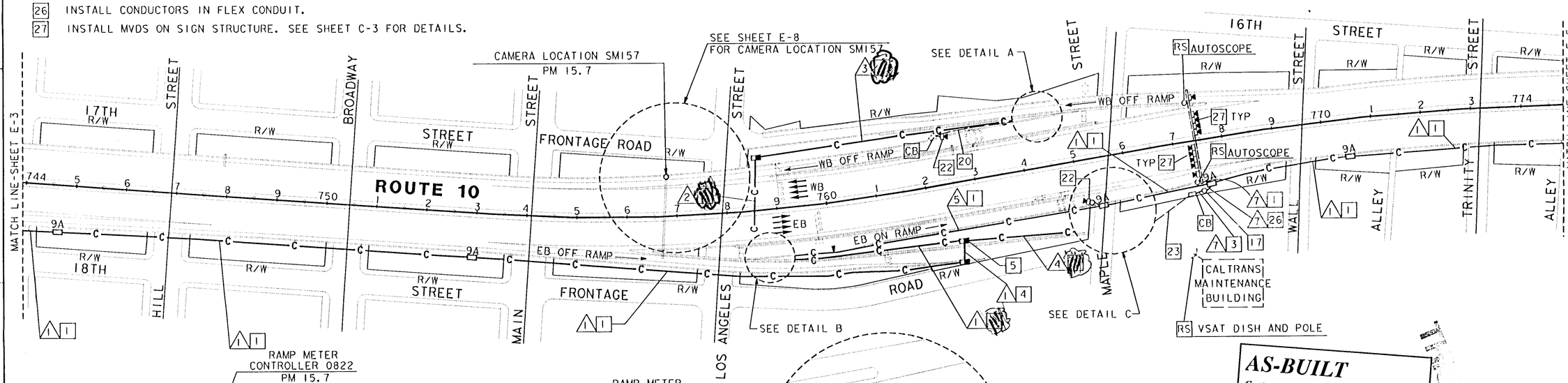
PROJECT NOTES: (THIS SHEET ONLY)

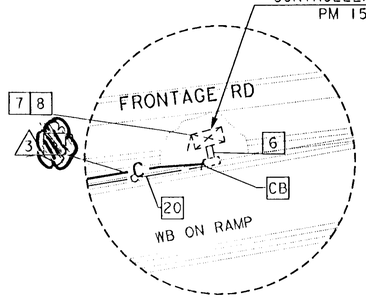
1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
13. INSTALL TWO TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE SHEETS E-20 AND E-26 FOR DETAILS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
20. ADD MVDS CABLE(S) IN EXISTING CONDUIT.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
23. ADD MVDS CABLE(S) IN EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS
24. ADD CABLE TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.
27. INSTALL MVDS ON SIGN STRUCTURE. SEE SHEET C-3 FOR DETAILS.

PER CCO #7

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8
[illegible]	DATA /PHONE	1				1	1		
6#22 CABLE	DATA /PHONE		2	1	1		1		
4SMFO CABLE	VIDEO /DATA	1				1	1		
2SMFO B/O CABLE	SH VIDEO		1						
MVDS CABLE						1		10	
12P22	DATA/PHONE				1				1
	CONDUIT SIZE	2"	2"	2"	2"	2"	2"	3"	2"





DETAIL A
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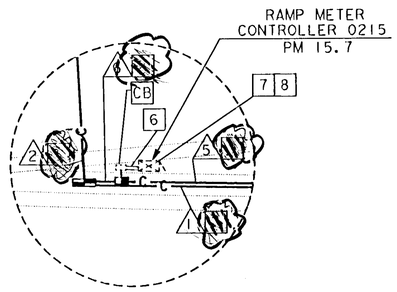
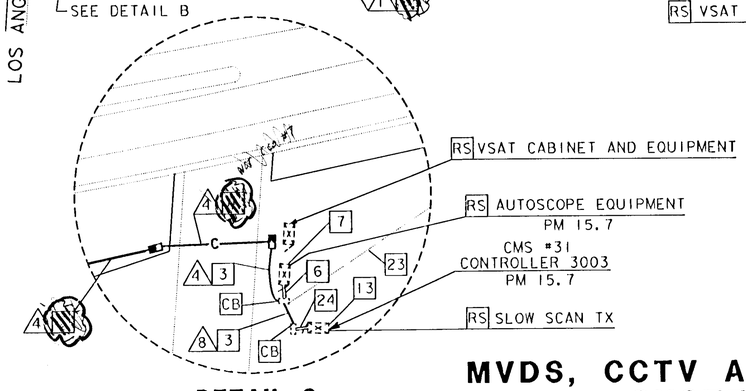


DETAIL B
NO SCALE



DETAIL C
NO SCALE

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

SEE SHEET 29A

MVDS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-4

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

XXXXXXXXXXXXXXXXXXXXXXXX
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
PAT SULLIVAN

LAST REVISION 00-00-00
TIME PLOTTED => 28-SEP-1995 15:26

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

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DGN FILE => /usr/JImt/P8/712074u04.dgn

CU 07396

EA 120741

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT. VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
13. INSTALL TWO TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE SHEETS E-20 AND E-26 FOR DETAILS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
20. ADD MVDS CABLE(S) IN EXISTING CONDUIT.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
23. ADD MVDS CABLE(S) IN EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS
24. ADD CABLE TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.
27. INSTALL MVDS ON SIGN STRUCTURE. SEE SHEET C-3 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAI

P&E CCO #7

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8
6A22 CABLE	DATA /PHONE	1				1	1		
6A22 CABLE	DATA /PHONE		2	1	1		1		
4SMFO CABLE	VIDEO /DATA	1				1	1		
2SMFO B/O CABLE	SH VIDEO		1						
MVDS CABLE						1		10	
12P22	DATA/PHONE				1				1
	CONDUIT SIZE	2"	2"	2"	2"	2"	2"	3"	2"

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.0	29A	54

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEERS — 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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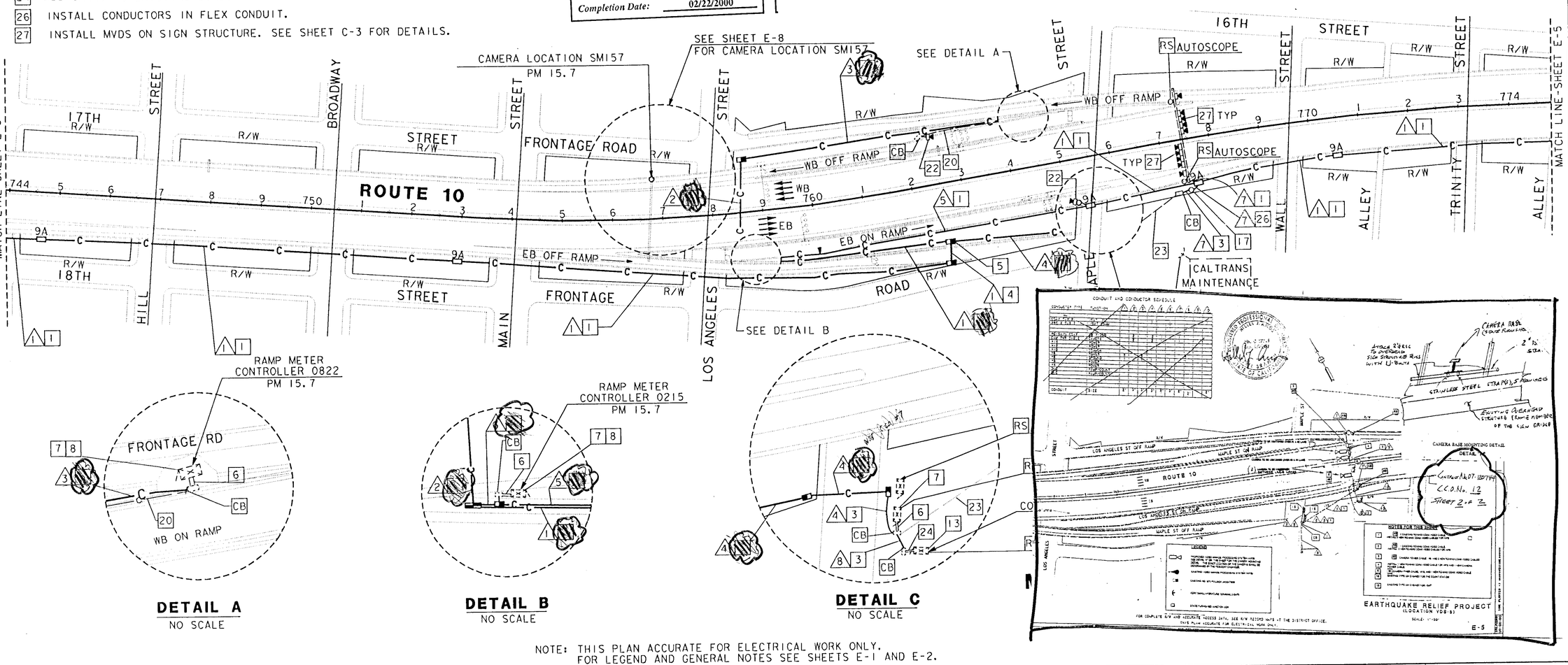

DETAIL A
NO SCALE

DETAIL B
NO SCALE

DETAIL C
NO SCALE

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

DATE	REVISED BY	DATE REVISED
3/95	ES	JZ 3/95

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 TIME PLOTTED => 28-SEP-1995 15:26

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DGN FILE => /usr/jlmt/P8/712074u04.dgn

CU 07396

EA 120741

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

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
10. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR RTMS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
15. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-13 FOR DETAILS.
21. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER, INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS. SEE DETAIL 4, SHEET E-20.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.
27. INSTALL MVDS ON SIGN STRUCTURE. SEE SHEET C-3 FOR DETAILS.
32. ADD POWER CONDUCTORS TO EXISTING CONDUIT.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	7	8	9
16P22 CABLE	DATA /PHONE	1			1		1				
6P22 CABLE	DATA /PHONE		1				1	1			1
4SMFO CABLE	VIDEO/DATA	1			1		1				
MVDS CABLE			1	1	1			10		10	
#8	POWER					2			2		
	CONDUIT SIZE	2"	2"	2"	2"	2"	2"	3"	3"	3"	2"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.0	30	54

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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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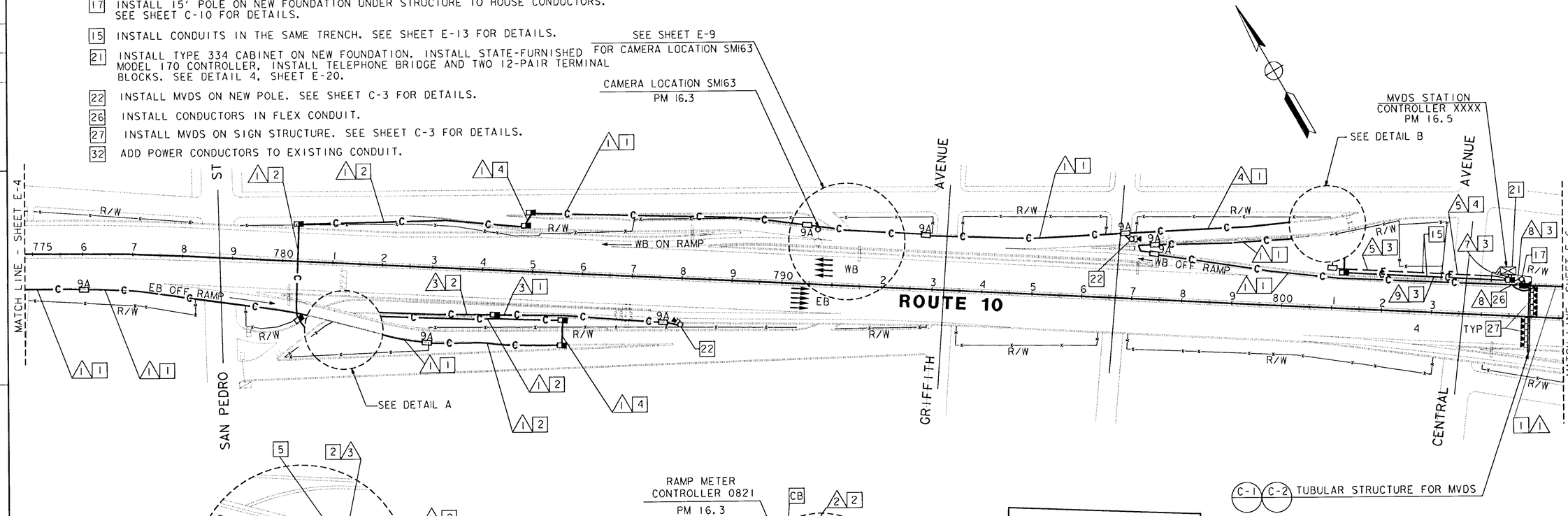

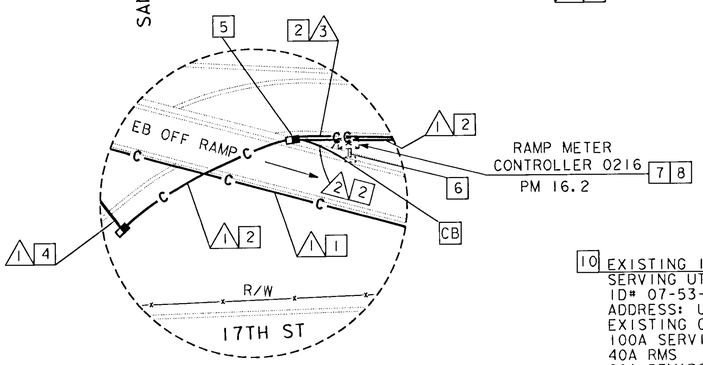

DETAIL A
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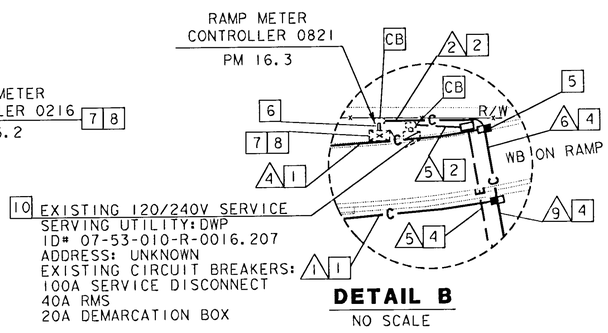

DETAIL B
NO SCALE

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

MVDS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-5

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

DATE	REVISED BY	DATE REVISED
3/95	ES	3/95
	JZ	

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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DGN FILE => /usr/annda/P2/712074u05.dgn

CU 07396

EA 120741

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	31	54

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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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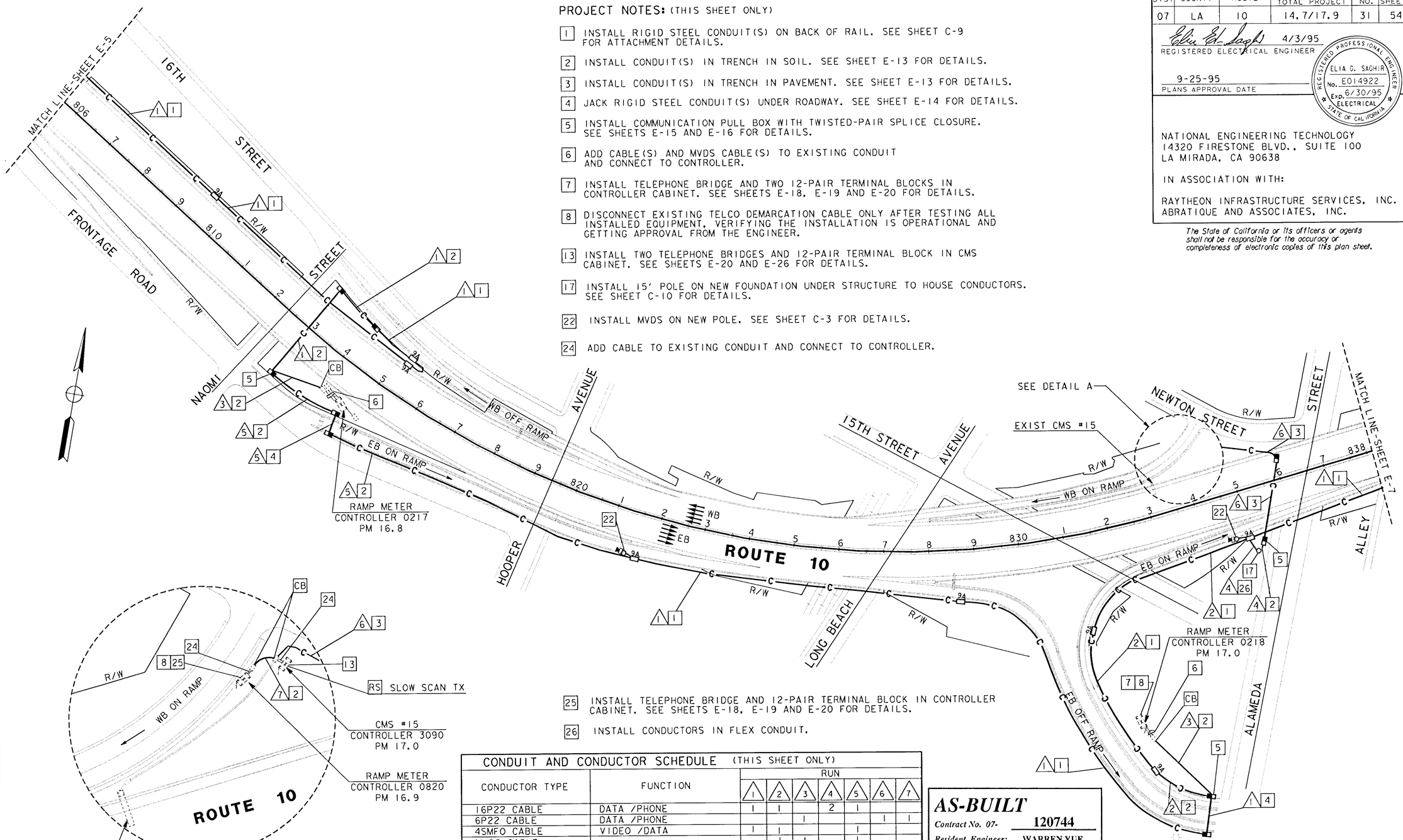
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
13. INSTALL TWO TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE SHEETS E-20 AND E-26 FOR DETAILS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
24. ADD CABLE TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
25. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7
16P22 CABLE	DATA /PHONE	1	1		2	1		
6P22 CABLE	DATA /PHONE			1			1	1
4SMFO CABLE	VIDEO /DATA	1	1			1		
MVDS CABLE			1	1		1		
12P22	DATA /PHONE						1	
	CONDUIT SIZE	2"	2"	2"	3"	2"	2"	2"

AS-BUILT
Contract No. 07- **120744**
Resident Engineer: **WARREN YUE**
Completion Date: **02/22/2000**

MVDS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-6

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

CALCULATED/ DESIGNED BY	DATE	REVISED BY
ES	3/95	
CHECKED BY	DATE	DATE REVISED
JZ	3/95	

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-00
TIME PLOTTED => 29-SEP-1995 15:02

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

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DGN FILE => /usr/trmariak/P2/712074u06.

CU 07396

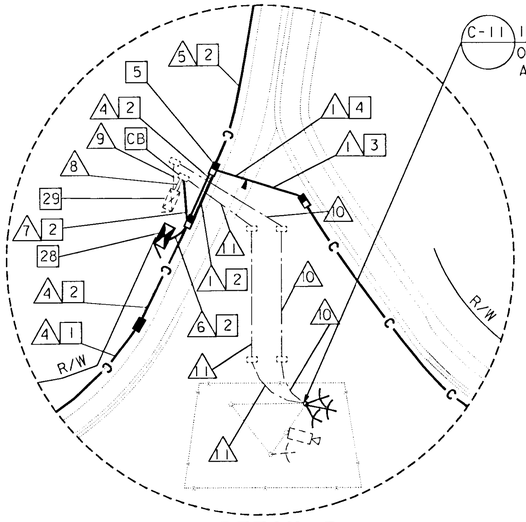
EA 120741

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

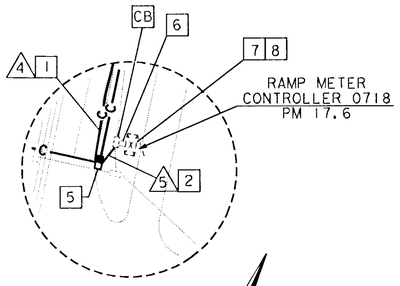
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
4. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-14 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
6. ADD CABLE(S) AND MVDS CABLE(S) TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
7. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
8. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
10. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR MVDS STATION.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
21. INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER. INSTALL TELEPHONE BRIDGE AND TWO 12-PAIR TERMINAL BLOCKS. SEE DETAIL 4, SHEET E-20.
22. INSTALL MVDS ON NEW POLE. SEE SHEET C-3 FOR DETAILS.
24. ADD CABLE TO EXISTING CONDUIT AND CONNECT TO CONTROLLER.
25. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-18, E-19 AND E-20 FOR DETAILS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.
27. INSTALL MVDS ON SIGN STRUCTURE. SEE SHEET C-3 FOR DETAILS.
28. INSTALL TYPE 334 TV-CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE VIDEO RECEIVERS AND TWO STATE-FURNISHED 23 GHZ MICROWAVE TRANSMITTERS. SEE SHEET E-22 FOR DETAILS.
29. INSTALL 31 GHZ MICROWAVE TRANSCEIVER AND D4 IN EXISTING CABINET. SEE SHEET E-22 FOR DETAILS.
32. ADD POWER CONDUCTORS TO EXISTING CONDUIT.

C-11 INSTALL TWO STATE-FURNISHED 23 GHZ TRANSMITTERS
ONE 31 GHZ TRANSCEIVER
AZIMUTH 62.8 DEG



DETAIL B
NO SCALE



DETAIL A
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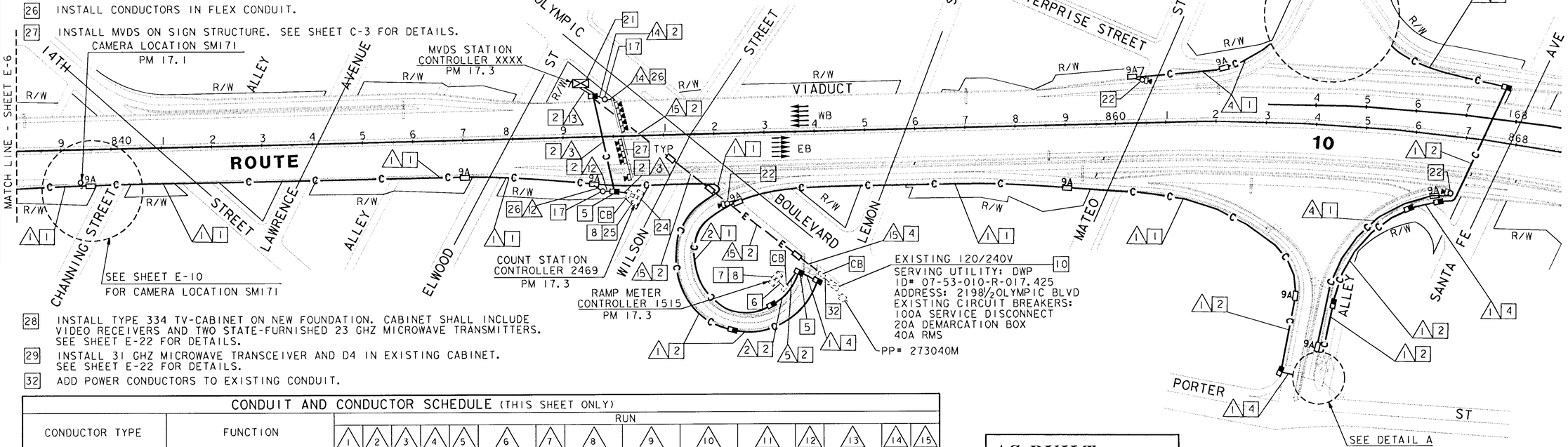


CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16P22 CABLE	DATA /PHONE	1	1					1	1				2			
6P22 CABLE	DATA /PHONE			1		1								1		
4SMFO CABLE	VIDEO /DATA	1	1				1									
MVDS CABLE			1		1	1								10	10	
#8	POWER						2		2		2 2				2	2
#18	POWER									2(E)	12 6(E) 12					
RG58A/U	COAXIAL								2			2				
2P24									1(E)			1(E)				
12P20	CAMERA CONTROL								1(E)			1(E)				
RG-6A/U COAX	COAXIAL						2	2	2(E)			2(E) 2				
	CONDUIT SIZE	2"	2"	2"	2"	2"	3"	3"	3"	2"(E) 3"(E)	3"(E)	2"(E)	3"	3"	3"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	32	54

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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.

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

MVDS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-7

DATE	REVISED BY	DATE REVISED
3/95	ES	3/95 JZ

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

XXXXXXXXXXXXXXXXXXXXXX
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 29-SEP-1995 10:39

FORM DC-0E-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => tome
DGN FILE => /usr/tome/P0/712074u07.dgn
CU 07396
EA 120741

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	33	54

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

9-25-95
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.

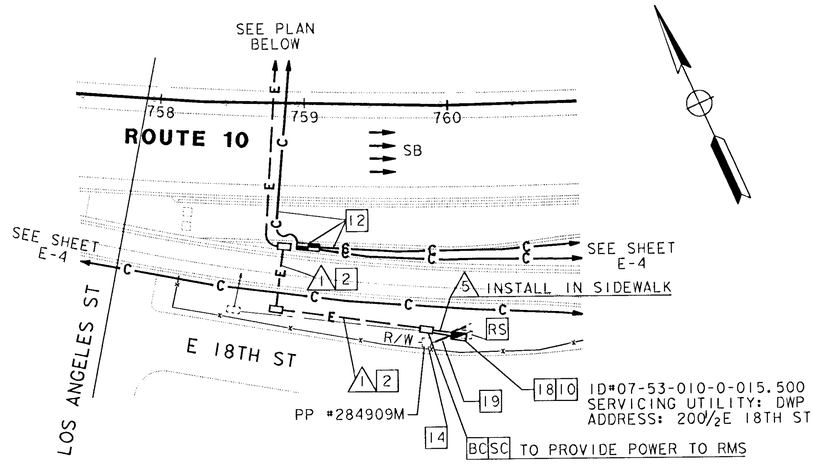
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

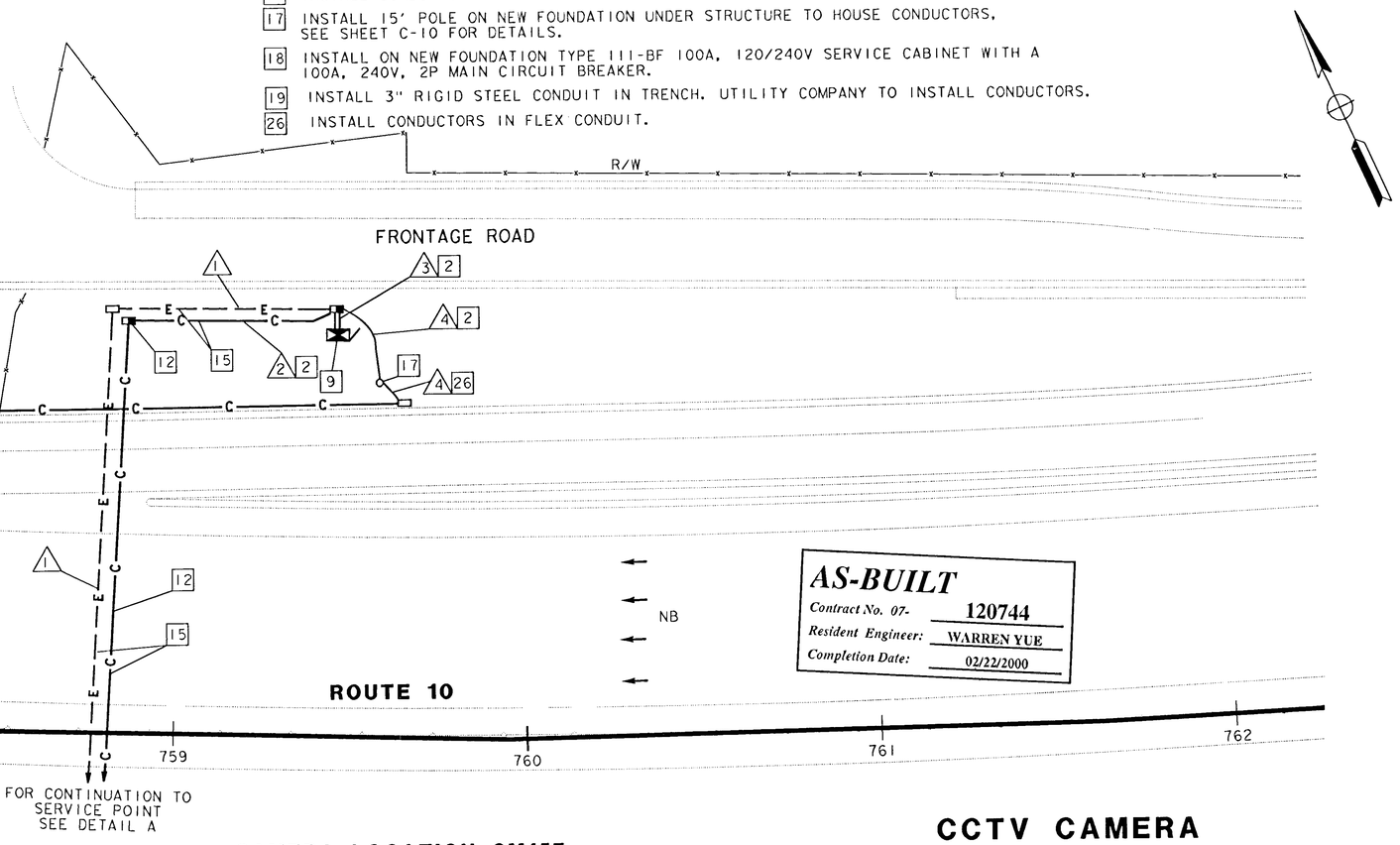
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 3	RUN 4	RUN 5
6P22 CABLE	DATA /PHONE		1	1			
2SMFO B/O CABLE	SH VIDEO		1	1			
#8	POWER	2			2		4
SEE TABLE 1, SHEET E-1	CCTV WIRING			1		1	
	CONDUIT SIZE	2"	2"	3"	3"	3"	2"

NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
2. INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
9. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-19 AND DETAIL 3, SHEET E-20.
10. INSTALL TWO 30A, 120V, SINGLE POLE CIRCUIT BREAKERS, ONE FOR EXISTING RMS & ONE FOR CCTV.
11. INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-25 AND C-4 FOR DETAILS.
12. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
14. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
15. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-13 FOR DETAILS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS, SEE SHEET C-10 FOR DETAILS.
18. INSTALL ON NEW FOUNDATION TYPE 111-BF 100A, 120/240V SERVICE CABINET WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
19. INSTALL 3" RIGID STEEL CONDUIT IN TRENCH. UTILITY COMPANY TO INSTALL CONDUCTORS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.



DETAIL A
SCALE: 1"=50'



CAMERA LOCATION SM157
SCALE: 1"=20'

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

CCTV CAMERA (LOCATION SM157)

SCALE: AS NOTED

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

E-8

DESIGN OVERSIGHT: PAT SULLIVAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

	DATE	REVISED BY	DATE REVISED
CALCULATED/ DESIGNED BY	ES	3/95	
CHECKED BY	JZ	3/95	

LAST REVISION 00-00-00
TIME PLOTTED => 28-SEP-1995 11:52

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DGN FILE => /usr/mikesl/P0/712074u08.dg

CU 07396

EA 120741

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	34	54

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

9-25-95
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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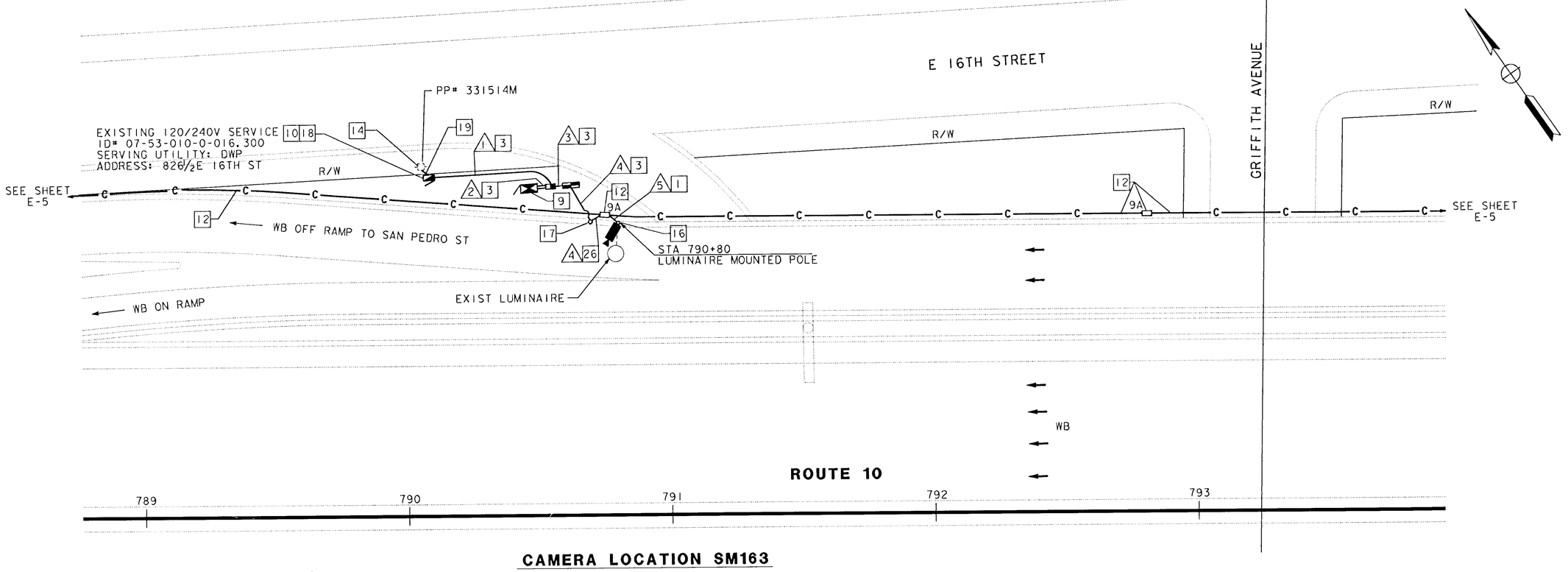
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 3	RUN 4	RUN 5
16P22 CABLE	DATA /PHONE					2	
6P22 CABLE	DATA /PHONE		1		1		
4SMFO CABLE	VIDEO/DATA					2	
2SMFO B/O CABLE	SH VIDEO		1		1		
SEE TABLE 1, SHEET E-1	CCTV WIRING		1		1	1	1
#8	POWER	2		2			
	CONDUIT SIZE	2"	3"	3"	3"	3"	2"

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
9. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-19 AND DETAIL 3, SHEET E-20.
10. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.
12. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
14. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
16. INSTALL CCTV CAMERA ON EXISTING LUMINAIRE. SEE SHEETS E-25 AND C-5 FOR DETAILS.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS, SEE SHEET C-10 FOR DETAILS.
18. INSTALL ON NEW FOUNDATION TYPE III-BF 100A, 120/240V SERVICE CABINET WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
19. INSTALL 3" RIGID STEEL CONDUIT IN TRENCH. UTILITY COMPANY TO INSTALL CONDUCTORS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.



CAMERA LOCATION SM163

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

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

CCTV CAMERA (LOCATION SM163)

SCALE: 1"=20'

E-9

DESIGN OVERSIGHT: PAT SULLIVAN
CALCULATED/DESIGNED BY: ES
CHECKED BY: JZ
DATE: 3/95
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
LAST REVISION 00-00-00
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FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
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CU 07396
EA 120741

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	35	54

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

9-25-95
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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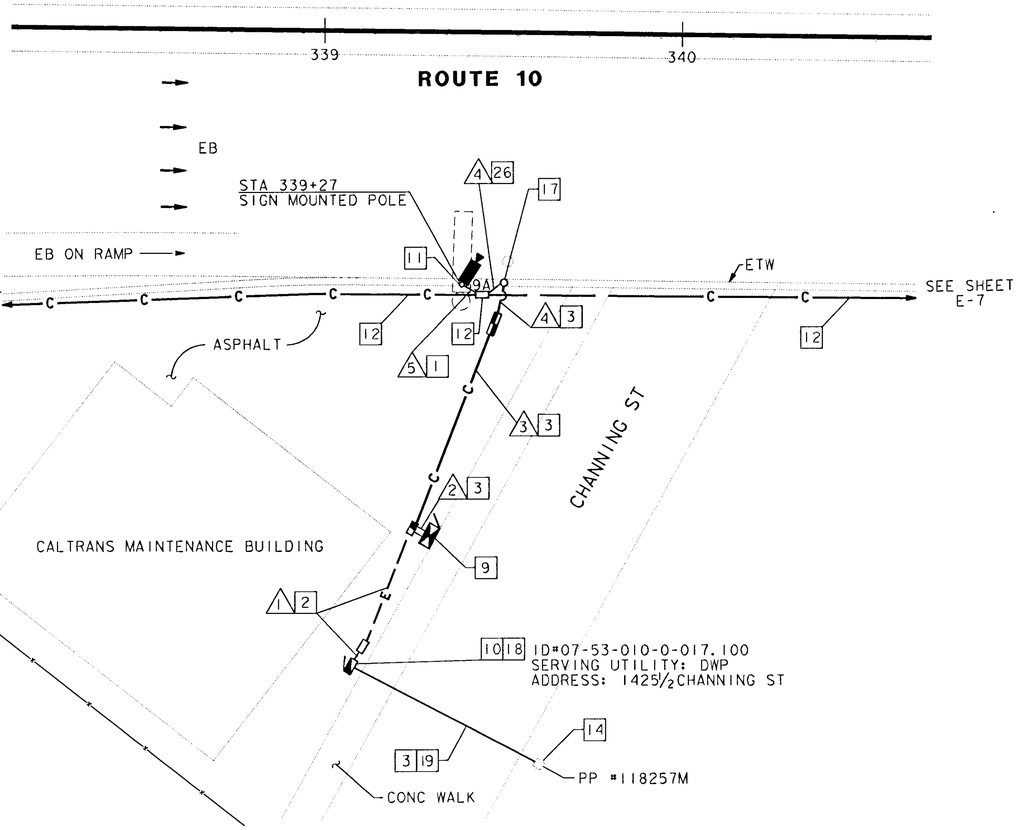
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2		RUN 3	RUN 4	RUN 5
16P22 CABLE	DATA /PHONE					2	
6P22 CABLE	DATA /PHONE		1		1		
4SMFO CABLE	VIDEO/DATA					2	
2SMFO B/O CABLE	SH VIDEO		1		1		
SEE TABLE 1, SHEET E-1	CCTV WIRING		1		1	1	1
#8	POWER	2		2			
	CONDUIT SIZE	2"	3"	3"	2"	3"	2"

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL RIGID STEEL CONDUIT(S) ON BACK OF RAIL. SEE SHEET C-9 FOR ATTACHMENT DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
5. INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-15 AND E-16 FOR DETAILS.
9. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER. SEE DETAIL A, SHEET E-19 AND DETAIL 3, SHEET E-20.
10. INSTALL ONE 30A, 120V, SINGLE POLE CIRCUIT BREAKER FOR CCTV.
11. INSTALL CCTV CAMERA ON EXISTING SIGN STRUCTURE. SEE SHEETS E-25 AND C-4 FOR DETAILS.
12. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
14. INSTALL 3" CONDUIT TYPE H SERVICE RISER ON POWER POLE.
17. INSTALL 15' POLE ON NEW FOUNDATION UNDER STRUCTURE TO HOUSE CONDUCTORS. SEE SHEET C-10 FOR DETAILS.
18. INSTALL ON NEW FOUNDATION, TYPE III-BF 100A, 120/240V SERVICE CABINET WITH A 100A, 240V, 2P MAIN CIRCUIT BREAKER.
19. INSTALL 3" RIGID STEEL CONDUIT IN TRENCH. UTILITY COMPANY TO INSTALL CONDUCTORS.
26. INSTALL CONDUCTORS IN FLEX CONDUIT.



CAMERA LOCATION SM171

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

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

CCTV CAMERA (LOCATION SM171)

SCALE: 1"=20'

E-10

REVISED BY	DATE REVISED
ES	3/95

CALCULATED/DESIGNED BY: JZ 3/95
CHECKED BY:

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-00 TIME PLOTTED => 29-SEP-1995 12:18

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/richard/PI/712074ul0.d

CU 07396

EA 120741

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

DELETED PER CCO #6

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8	9	10
50P22 CABLE	DATA /PHONE			1		1		1	1		
12P22 CABLE	DATA /PHONE			1		1		1	1		
18P22 CABLE	DATA /PHONE	1		1		1					
8MMFO CABLE	SH VIDEO		1 (E)	1	1			1			
12SMFO CABLE	SH VIDEO		1	1	1			1			
48SMFO CABLE	VIDEO /DATA		1 (E)								
72SMFO CABLE	VIDEO /DATA		1 (E)								
4SMFO CABLE	SH VIDEO	1		1	1						
#8	POWER				2		2			4	
SEE TABLE 1, SHEET E-1	CCTV WIRING					1					
18P22 (FUTURE)	DATA/PHONE					*					*
2 SMFO B/O CABLE	DATA				2	2					
	CONDUIT SIZE	2"	3"	3"	4"	3"	3"	3"	4"	3"	2"	4"

(E) - EXISTING CONDUIT OR CONDUCTOR
* - EMPTY CONDUIT

PER CCO #10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	36	54

Elia G. Saghir 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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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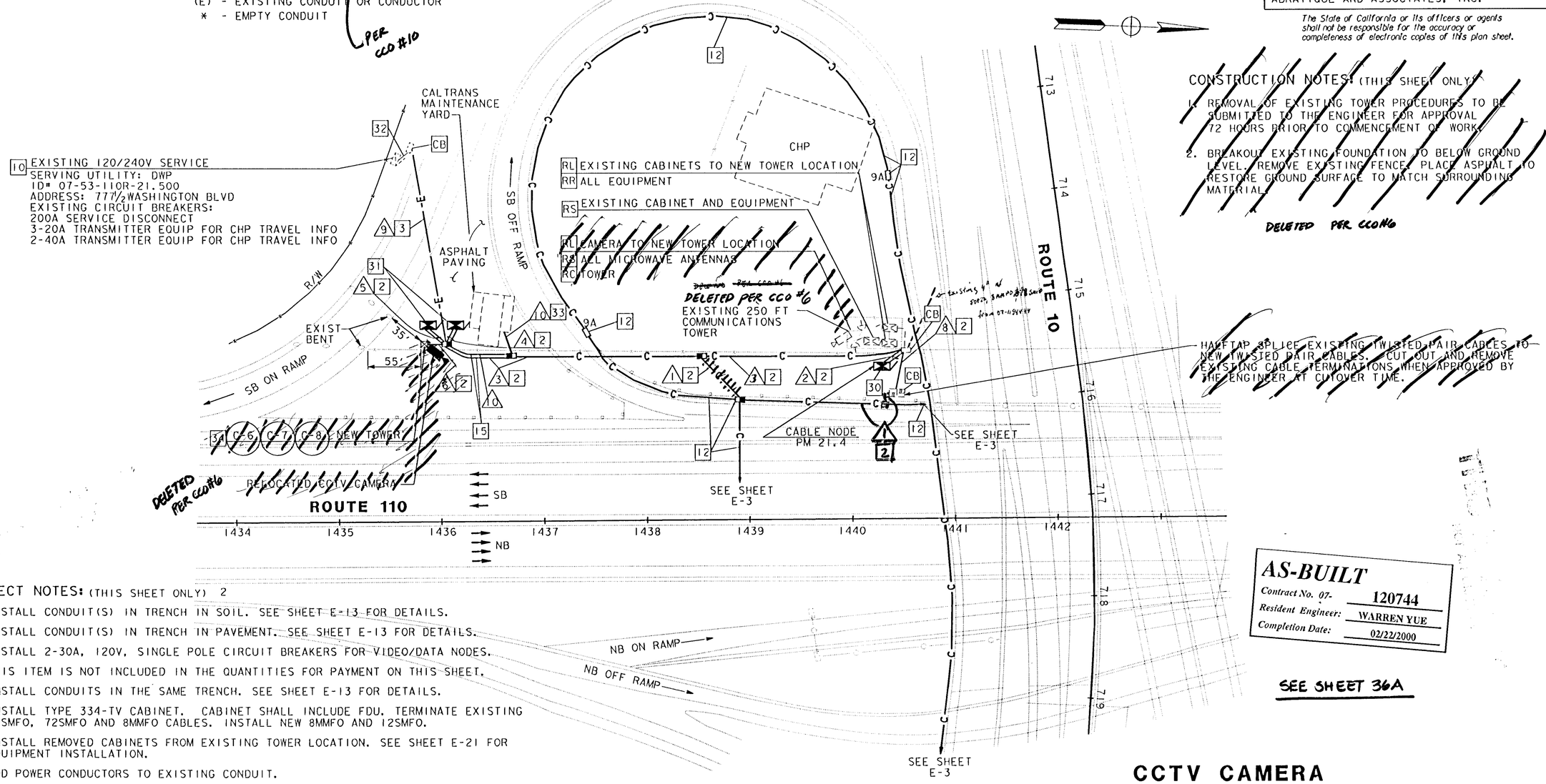
CONSTRUCTION NOTES: (THIS SHEET ONLY)

1. REMOVAL OF EXISTING TOWER PROCEDURES TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
2. BREAKOUT EXISTING FOUNDATION TO BELOW GROUND LEVEL. REMOVE EXISTING FENCE. PLACE ASPHALT TO RESTORE GROUND SURFACE TO MATCH SURROUNDING MATERIAL.

DELETED PER CCO #6



PROJECT NOTES: (THIS SHEET ONLY) 2

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.
3 INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.
10 INSTALL 2-30A, 120V, SINGLE POLE CIRCUIT BREAKERS FOR VIDEO/DATA NODES.
12 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
15 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-13 FOR DETAILS.
30 INSTALL TYPE 334-TV CABINET. CABINET SHALL INCLUDE FDU. TERMINATE EXISTING 48SMFO, 72SMFO AND 8MMFO CABLES. INSTALL NEW 8MMFO AND 12SMFO.
31 INSTALL REMOVED CABINETS FROM EXISTING TOWER LOCATION. SEE SHEET E-21 FOR EQUIPMENT INSTALLATION.
32 ADD POWER CONDUCTORS TO EXISTING CONDUIT.
33 INSTALL 4" PVC CONDUIT. CONDUIT TO ENTER BUILDING AT LOCATION DETERMINED BY THE ENGINEER.
34 NEW TOWER STRUCTURE (IS INCLUDED IN BID ITEM WORK.

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

AS-BUILT
Contract No. 07- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

SEE SHEET 36A

CCTV CAMERA (TOWER LOCATION SM148)

SCALE: 1"=50'

E-11

REVISED BY	DATE	CALCULATED/ DESIGNED BY	CHECKED BY
ES	3/95	JZ	3/95

DATE REVISED

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-00 TIME PLOTTED => 29-SEP-1995 14:48

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

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

USERNAME => richard
DGN FILE => /usr/richard/PI/712074ull.d

CU 07396

EA 120741

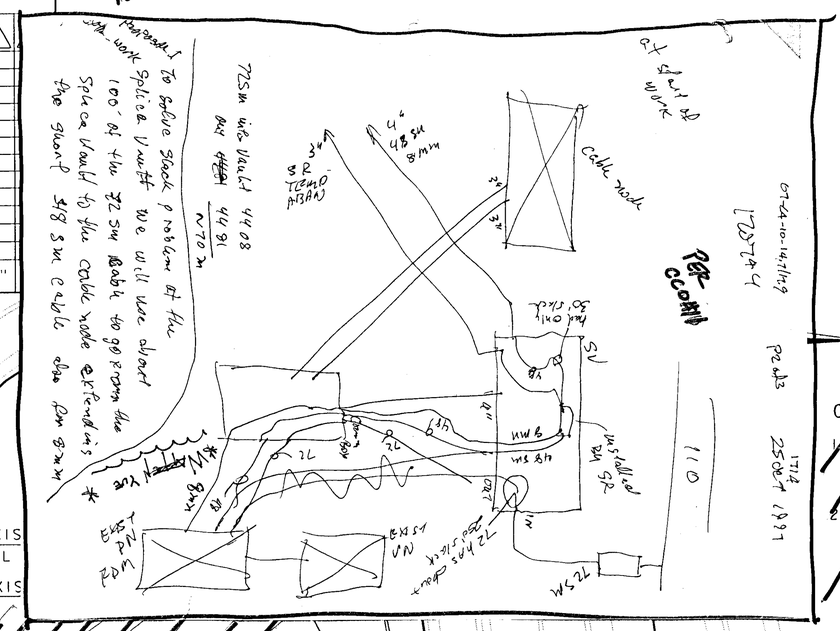
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

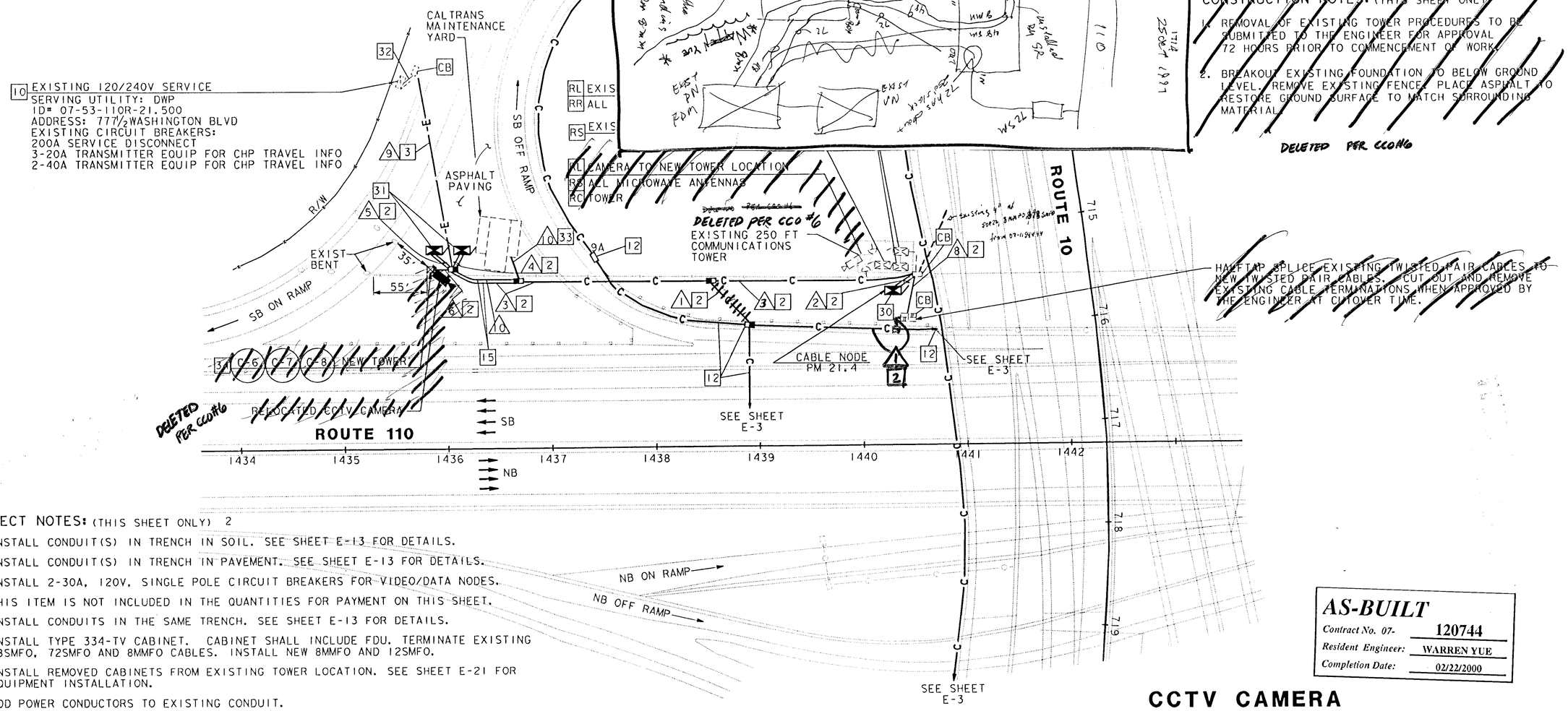
DELETED PER CCO #6

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	4	5	6	7	8	9
50P22 CABLE	DATA /PHONE			1		1		1	1	
12P22 CABLE	DATA /PHONE			1		1		1	1	
18P22 CABLE	DATA /PHONE	1		1		1				
8MMFO CABLE	SH VIDEO		1 (E)	1	1			1		
12SMFO CABLE	SH VIDEO			1	1			1		
48SMFO CABLE	VIDEO /DATA		1 (E)							
72SMFO CABLE	VIDEO /DATA		1 (E)							
4SMFO CABLE	SH VIDEO	1		1	1					
#8	POWER				2	2				4
SEE TABLE 1, SHEET E-1	CCTV WIRING			1		1	1			
18P22 (FUTURE)	DATA/PHONE					*				
2 SMFO B/O CABLE	DATA				2	2				
	CONDUIT SIZE	2"	3"	3"	3"	3"	3"	2"	4"	3"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR
* - EMPTY CONDUIT

PER CCO #10





PROJECT NOTES: (THIS SHEET ONLY) 2

2 INSTALL CONDUIT(S) IN TRENCH IN SOIL. SEE SHEET E-13 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVEMENT. SEE SHEET E-13 FOR DETAILS.

10 INSTALL 2-30A, 120V, SINGLE POLE CIRCUIT BREAKERS FOR VIDEO/DATA NODES.

12 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

15 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-13 FOR DETAILS.

30 INSTALL TYPE 334-TV CABINET. CABINET SHALL INCLUDE FDU. TERMINATE EXISTING 48SMFO, 72SMFO AND 8MMFO CABLES. INSTALL NEW 8MMFO AND 12SMFO.

31 INSTALL REMOVED CABINETS FROM EXISTING TOWER LOCATION. SEE SHEET E-21 FOR EQUIPMENT INSTALLATION.

32 ADD POWER CONDUCTORS TO EXISTING CONDUIT.

33 INSTALL 4" PVC CONDUIT. CONDUIT TO ENTER BUILDING AT LOCATION DETERMINED BY THE ENGINEER.

34 NEW TOWER STRUCTURE IS INCLUDED IN BID ITEM WORK.

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

CONSTRUCTION NOTES: (THIS SHEET ONLY)

1. REMOVAL OF EXISTING TOWER PROCEDURES TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
2. BREAKOUT EXISTING FOUNDATION TO BELOW GROUND LEVEL. REMOVE EXISTING FENCE. PLACE ASPHALT TO RESTORE GROUND SURFACE TO MATCH SURROUNDING MATERIAL.

DELETED PER CCO #6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	10	14.7/17.9	36	54

Elias El-Saghi 4/3/95
REGISTERED ELECTRICAL ENGINEER

9-25-95
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- 120744
Resident Engineer: WARREN YUE
Completion Date: 02/22/2000

CCTV CAMERA (TOWER LOCATION SM148)

SCALE: 1"=50'

E-11

DATE	REVISED BY	DATE REVISED
3/95	ES	3/95
	JZ	

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
TIME PLOTTED => 29-SEP-1995 14:48

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USERNAME => richard
DGN FILE => /usr/richard/PI/712074u11.d

CU 07396

EA 120741

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

USER ID: HHuynh@T7NT6044 FILE: f:\projects\120821_ug\gb\712082u16.dgn DATE: Fri Apr 13 2001 TIME: 13:38

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1	2	3	6	8	20	32	33	12	42	48	99
75P22 CABLE	COMMUNICATION DATA	1	1	1						1			
6P22 CABLE	CONTROLLER DATA	1	1	2	1	3	2	3	4	1	1		
72SMFO	DATA/VIDEO NODE TO HUB	1	1	1								2	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION	1	1	1							1		
2SMFO B/O CABLE	SHORT HAUL VIDEO						1						
2SMFO B/O CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION							1	1	1			
	INNERDUCT	1¼" 1¼"	1¼" 1¼"	1¼" 1¼"							1¼" 1¼"	1¼" 1¼"	
	CONDUIT SIZE	4"	4"	4"	2"	2"	4"	4"	4"	4"	4"	4"	4"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5, 110, 405	Var	73	164

Kenneth D. Camp 7/8/94
REGISTERED ELECTRICAL ENGINEER

12-16-96
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — KENNETH D CAMP — No. E012917 — Exp. 3/31/97 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

KDC ARCHITECTS • ENGINEERS
1055 WEST SEVENTH ST., SUITE 2890
LOS ANGELES, CA 90017

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DATE	REVISED BY
7/94	DATE REVISED

CALCULATED/DESIGNED BY: DP 7/94
CHECKED BY: RL 7/94

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

MATCH LINE - SHEET E-20

PROPOSED TRAFFIC MONITORING STATION CONTROLLER 2264, PM 12.6
SEE SHEET E-53

TRAFFIC MONITORING STATION CONTROLLER 2337 PM 8.2 (SR-110)

NB 110 CONNECTOR TO SB ROUTE 405

NB 110 CONNECTOR TO NB ROUTE 405

SB ROUTE 110

SB 405 CONNECTOR TO SB ROUTE 110

SB 405 CONNECTOR TO NB ROUTE 110

SB 110 CONNECTOR TO SB ROUTE 405

SB ROUTE 405

NB 110 CONNECTOR TO NB ROUTE 405

NB 405 CONNECTOR TO SB ROUTE 110

SB 110 CONNECTOR TO NB ROUTE 405

NB CONNECTOR TO 110 (CARS)

NB CONNECTOR TO 110 (TRUCKS)

CABLE NODE PM 8.5

FIGUEROA

ANELO AVE

R/W

5KV

TRAFFIC MONITORING STATION CONTROLLER 2477 PM 13.0

TRAFFIC MONITORING STATION CONTROLLER 2480 PM 13.2

CAMERA LOCATION SD132 PM 13.2

SEE SHEET E-36 FOR CAMERA LOCATION SD132

SEE SHEET E-41 FOR CAMERA LOCATION HA089

CAMERA LOCATION HA089 PM 8.9 (SR-110)

MATCH LINE - SHEET E-17

MATCH LINE - SHEET E-15

PROJECT NOTES (THIS SHEET ONLY)

17 INSTALL CONDUITS IN THE SAME TRENCH.

32 INSTALL TYPE 334 CABINET. SEE DETAIL 5, SHEET E-66.

33 RC EXISTING PULL BOX.

34 INSTALL 1½"C, 2 DLC

35 ADD ~~3~~ 4 DLC, REMOVE EXISTING DLC'S.

36 INSTALL TWO LOOP SENSOR/DC ISOLATION UNITS IN EXISTING CABINET AND CONNECT DLC CABLES.

37 INSTALL 1 DLC IN EXISTING CONDUIT.

38 INSTALL 2"C, 2 DLC.

39 INSTALL 3 DLC IN EXISTING CONDUIT. RC EXISTING DLC'S.

40 INSTALL 4 DLC IN EXISTING CONDUIT AND CONNECT DLC CABLES IN CABINET. RC EXISTING DLC'S.

41 INSTALL 1½"C, 8 DLC.

42 ADD ~~10~~ 4 DLC, REMOVE EXISTING DLC'S.

43 ADD 3 DLC, REMOVE EXISTING DLC'S.

44 ADD ~~6~~ 4 DLC, REMOVE EXISTING DLC'S.

45 PLACE NUMBER 5 TRAFFIC PULL BOX AS CLOSE TO MEDIAN BARRIER AS POSSIBLE.

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

AS-BUILT
Contract No. 07- 120824
Resident Engineer: NGUYEN, L.
Completion Date: 06/29/2000

CCTV AND COMMUNICATION SYSTEM ROUTING AND MODIFY RAMP METERING SYSTEM AND TRAFFIC MONITORING STATION (LOCATION 2337, 2477 AND 2480)

SCALE: 1" = 100'

E-16

LAST REVISION | DATE PLOTTED = 13-Apr-2001

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

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DGN FILE => 712082u1613133752

CU 07396

EA 120821

USER ID: HHuynh@T7NT6044 FILE: f:\projects\120821_ug\gb\712082u16.dgn DATE: Fri Apr 13 2001 TIME: 13:38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5, 110, 405	Var	77	164

Kenneth D. Camp 7/8/94
REGISTERED ELECTRICAL ENGINEER

12-16-96
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — KENNETH D CAMP — No. E012917 — Exp. 3/31/97 — ELECTRICAL — STATE OF CALIFORNIA

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

IN ASSOCIATION WITH:

KDC ARCHITECTS • ENGINEERS
1055 WEST SEVENTH ST., SUITE 2890
LOS ANGELES, CA 90017

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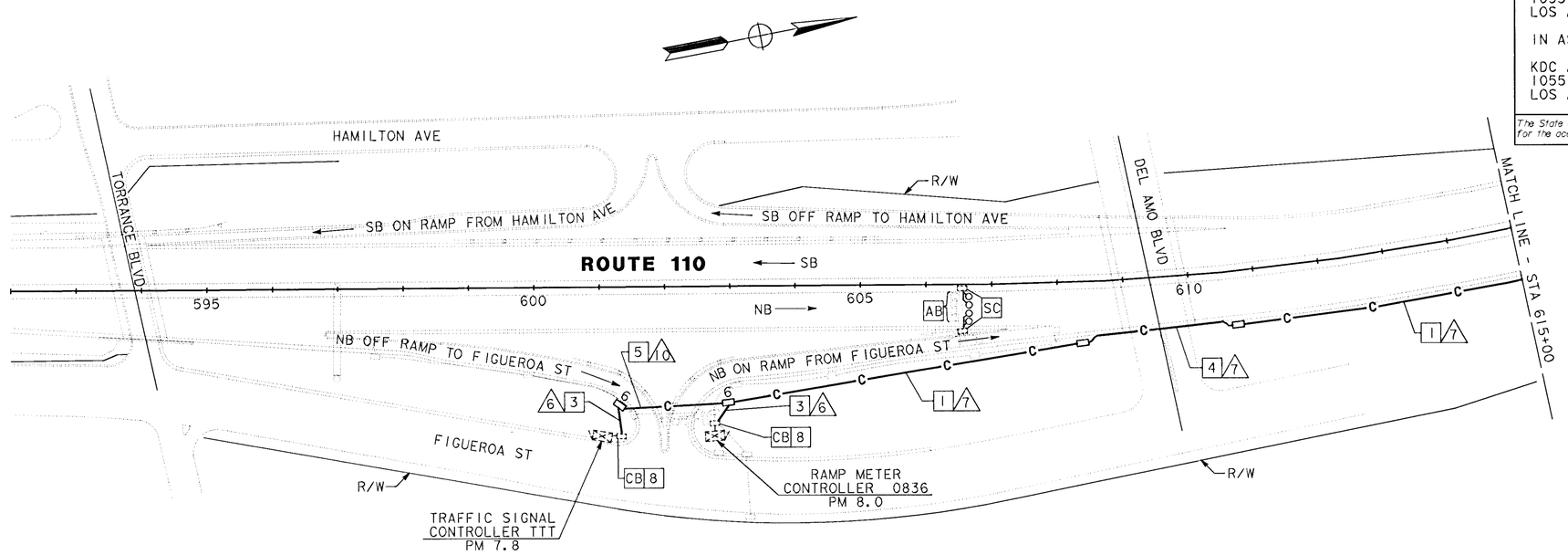
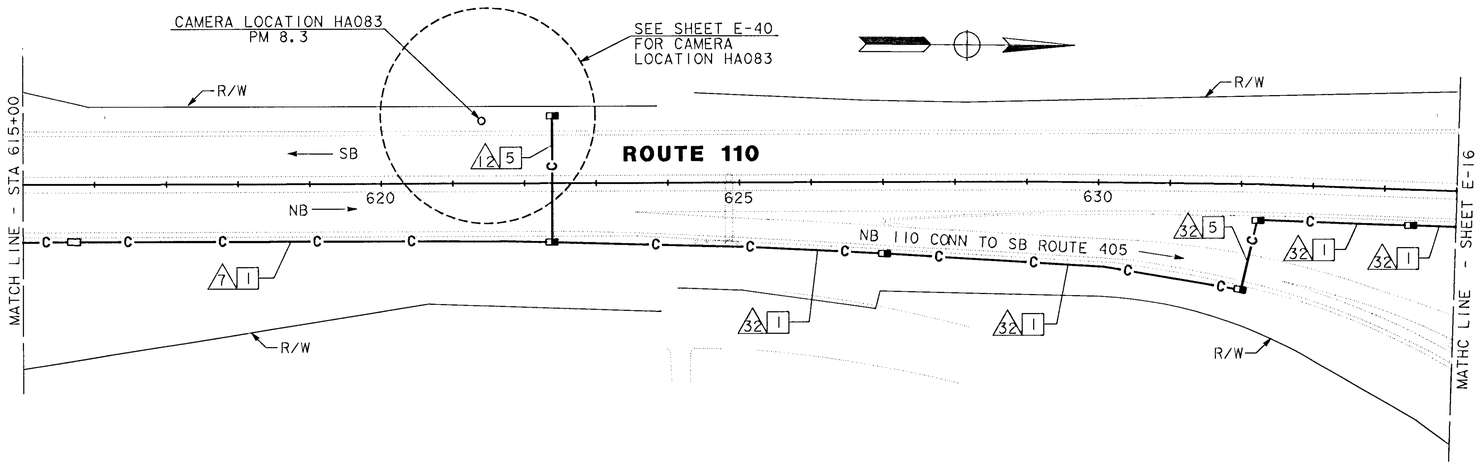
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 6	RUN 7	RUN 10	RUN 12	RUN 32
6P22 CABLE	CONTROLLER DATA	1	2	1	1	3
2SMFO B/O	CCTV CAMERA TO VIDEO DISTRIBUTION				1	1
	CONDUIT SIZE	2"	2"	4"	4"	4"





AS-BUILT
Contract No. 07- 120824
Resident Engineer: NGUYEN, L.
Completion Date: 06/29/2000

CCTV AND COMMUNICATION SYSTEM
ROUTING AND MODIFY RAMP METERING SYSTEM
(LOCATION 0836)

SCALE: 1" = 100'

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

E-20

DESIGN OVERSIGHT	CALCULATED/ DESIGNED BY	DRAWN BY	CHECKED BY	DATE	REVISED BY
PAT SULLIVAN	DP	RL		7/94	DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 09-15-95
DATE PLOTTED => 21-Dec-1996
TIME PLOTTED => 08:56

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 => [ESC-OE]712082u20.psf
CU 07396
EA 120821

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	40	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

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PROJECT NOTES: (SHEETS E-2 TO E-8)

1. TRENCH AND INSTALL CONDUIT IN SOIL.
2. TRENCH AND INSTALL CONDUIT IN CONCRETE.
3. TRENCH AND INSTALL CONDUIT IN ASPHALT.
4. ATTACH CONDUIT TO STRUCTURE. SEE SHEET C-8 TO C-11 FOR BRIDGE ATTACHMENT TYPE AND DETAILS.
5. JACK CONDUIT BENEATH ROADWAY.
6. COIL 25 FEET OF 6P22 CABLE IN PULL BOX FOR FUTURE TMS CONTROLLER.
7. COIL 50 FEET OF 24SMFO CABLE IN SPLICE VAULT.
8. CONNECT 6P22 TO CONTROLLER. USE CONDUIT FROM PB INTO CABINET. IF NEW TELEPHONE BRIDGE, CONNECT OTHER 6P22 TO BLOCK. SEE SHEET E-35.
9. TERMINATE 12SMFO CABLE AND COIL IN SPLICE VAULT.
10. TERMINATE 24SMFO CABLE AND COIL IN SPLICE VAULT.
12. COIL 25 FEET OF 6P22 CABLE IN PB FOR IRRIGATION CONTROLLER CONNECTION.
13. COIL 25 FEET OF 6P22 CABLE IN PB FOR TRAFFIC SIGNAL CONTROLLER.
14. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-34.
15. INSTALL CONDUIT 25' FROM EDGE OF TRAVELED WAY.

GENERAL NOTES:

1. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL FACILITIES, THE CONTRACTOR SHALL GIVE 72 HOURS ADVANCE NOTICE IN WRITING TO THE ENGINEER.
2. SERVICE EQUIPMENT ENCLOSURE SHALL BE LOCATED 10' MINIMUM FROM THE POWER POLE OR VAULT.
3. ELECTRICAL SERVICE INSTALLATION SHALL MEET THE REQUIREMENTS OF LOS ANGELES DEPARTMENT OF WATER AND POWER (DWP).
4. CONDUCTORS FROM POWER POLE (OR VAULT) TO SERVICE ENCLOSURE WILL BE INSTALLED BY UTILITY COMPANY.
5. TRENCH FOR CONDUIT INSTALLATION BETWEEN POWER POLE (OR VAULT) AND SERVICE ENCLOSURE SHALL BE LEFT OPEN FOR INSPECTION AND APPROVAL BY SCE OR DWP INSPECTOR BEFORE BACKFILL.
6. STENCIL CAMERA IDENTIFICATION NUMBER ON POLE IN 3" CHARACTERS 10 FEET ABOVE BASE. SEE SHEET K-1.
7. STATIONS GIVEN ARE APPROXIMATE, EXACT EQUIPMENT AND POLE LOCATIONS TO BE DETERMINED BY ENGINEER.
8. PULL AND COIL AN EXTRA 50 FEET OF SMFO, AND COPPER TWISTED PAIR CABLES IN EACH SPLICE VAULT UNLESS OTHERWISE NOTED.
9. ALL ELECTRICAL SERVICE FACILITIES SHOWN ON CITY RIGHT-OF-WAY OR COUNTY. RIGHT-OF-WAY WILL BECOME THE PROPERTY OF SERVING UTILITY COMPANY, UTILITY COMPANY AND CONSTRUCTED BY THE CONTRACTOR UNDER THE PERMIT FROM THE CITY OR COUNTY.

ABBREVIATIONS: (NOT LISTED IN CALTRANS STANDARD PLANS)

CCTV	- CLOSED CIRCUIT TELEVISION
COMM	- COMMUNICATION
DACCS	- DIGITAL ACCESS CROSS CONNECTION SYSTEM
DEMARC	- DEMARCATION
DEMUX	- DEMULTIPLEX
DWP	- LA DEPARTMENT OF WATER AND POWER
GTE	- GENERAL TELEPHONE AND ELECTRIC
JKFD	- JACKFIELD
MUX	- MULTIPLEX
OW	- ORDER WIRE (MULTIPLE VOICE CIRCUIT)
PAC BELL	- PACIFIC BELL TELEPHONE COMPANY
PT&T	- PACIFIC TELEPHONE AND TELEGRAPH
RX	- RECEIVER
SCE	- SOUTHERN CALIFORNIA EDISON
SCGS	- SOUTHERN CALIFORNIA GAS COMPANY
SCWC	- SOUTHERN CALIFORNIA WATER COMPANY
SMFO	- SINGLE MODE FIBER OPTIC
SPT CO	- SOUTHERN PACIFIC TRANSPORTATION COMPANY
TMS	- TRAFFIC MONITORING STATION
TX	- TRANSMITTER
VMX	- VIDEO MULTIPLEXER
VSAT	- VERY SMALL APERTURE TERMINAL

LEGEND: (SHEETS E-2 TO E-29)

	CCTV ASSEMBLY CAMERA AND POLE
o	CCTV CAMERA POLE LOCATION
	VSAT LOCATION
	SPLICE VAULT SEE SHEETS E-2 TO E-8
	334 CABINET (CCTV/VSAT/CMS)
—— E ——	PROPOSED POWER SERVICE CONDUIT
—— e ——	EXISTING POWER SERVICE CONDUIT
O	PROPOSED TYPE E DETECTOR LOOPS
PP#XXX	POWER POLE NUMBER
XXSMFO	SINGLE MODE FIBER OPTIC CABLE SEE SHEET E-55 FOR ASSIGNMENT
XXP22	XX PAIR COPPER TELEPHONE CABLE SEE SHEETS E-50 AND E-53 FOR ASSIGNMENT
HAXXX OR PAXXX	CCTV IDENTIFICATION NUMBER: (HA = HARBOR FREEWAY) (PA = PASADENA FREEWAY) (XXX = POST MILE DESIGNATOR TO ONE DECIMAL PLACE)
	COMMUNICATION PULL BOX (SEE SHEETS E-35 AND E-36 FOR DETAIL)
	CRASH CUSHION

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

LEGEND AND NOTES

E-1

DATE	REVISED BY
3/94	DATE REVISED

CALCULATED/DESIGNED BY: RL
CHECKED BY: CF

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 00-00-00
DATE PLOTTED => 10-Jun-1997
TIME PLOTTED => 12:54

[ESC-OE]712085u01.psf 10-Jun-1997 12:54 trienard

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 => [ESC-OE]712085u01.psf

CU 07396

EA 120851

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	41	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAT SULLIVAN
No. C30912
Exp. 3/31/00
CIVIL
STATE OF CALIFORNIA

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DATE	REVISED BY
3/94	DP
4/94	CF

CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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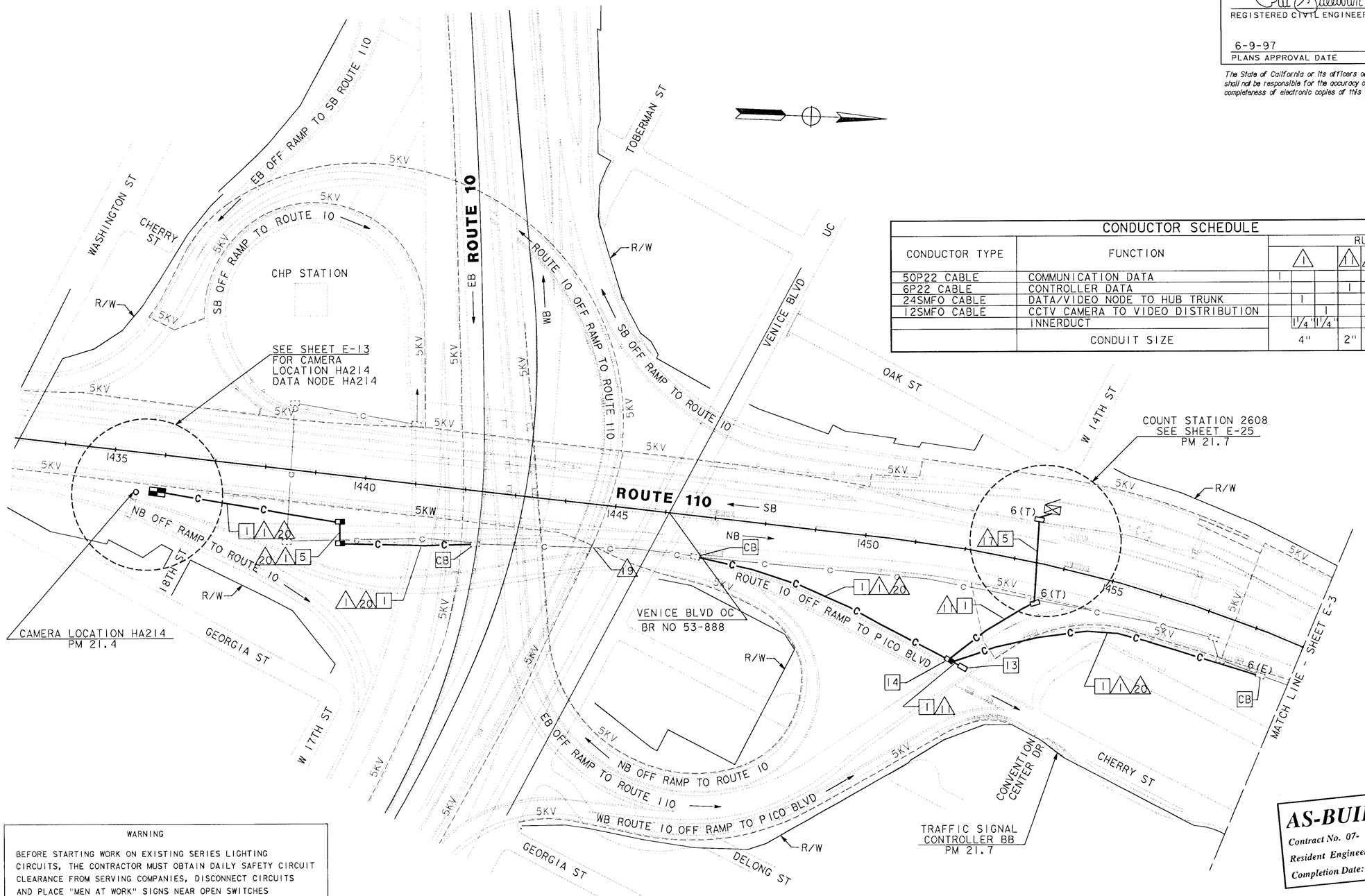
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1	11	17	20	19
50P22 CABLE	COMMUNICATION DATA	1				1
6P22 CABLE	CONTROLLER DATA			1	1	
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1				1
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION	1				1
	INNERDUCT	1 1/4"	1 1/4"			1 1/4"
	CONDUIT SIZE	4"	2"	4"	4"	EXIST 4"



WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

TMS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

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

E-2

LAST REVISION 00-00-00
DATE PLOTTED => 10-Jun-1997
TIME PLOTTED => 13:07

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 => (ESC-OEJT)2085u02.dsf

CU 07396

EA 120851

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	42	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — STATE OF CALIFORNIA

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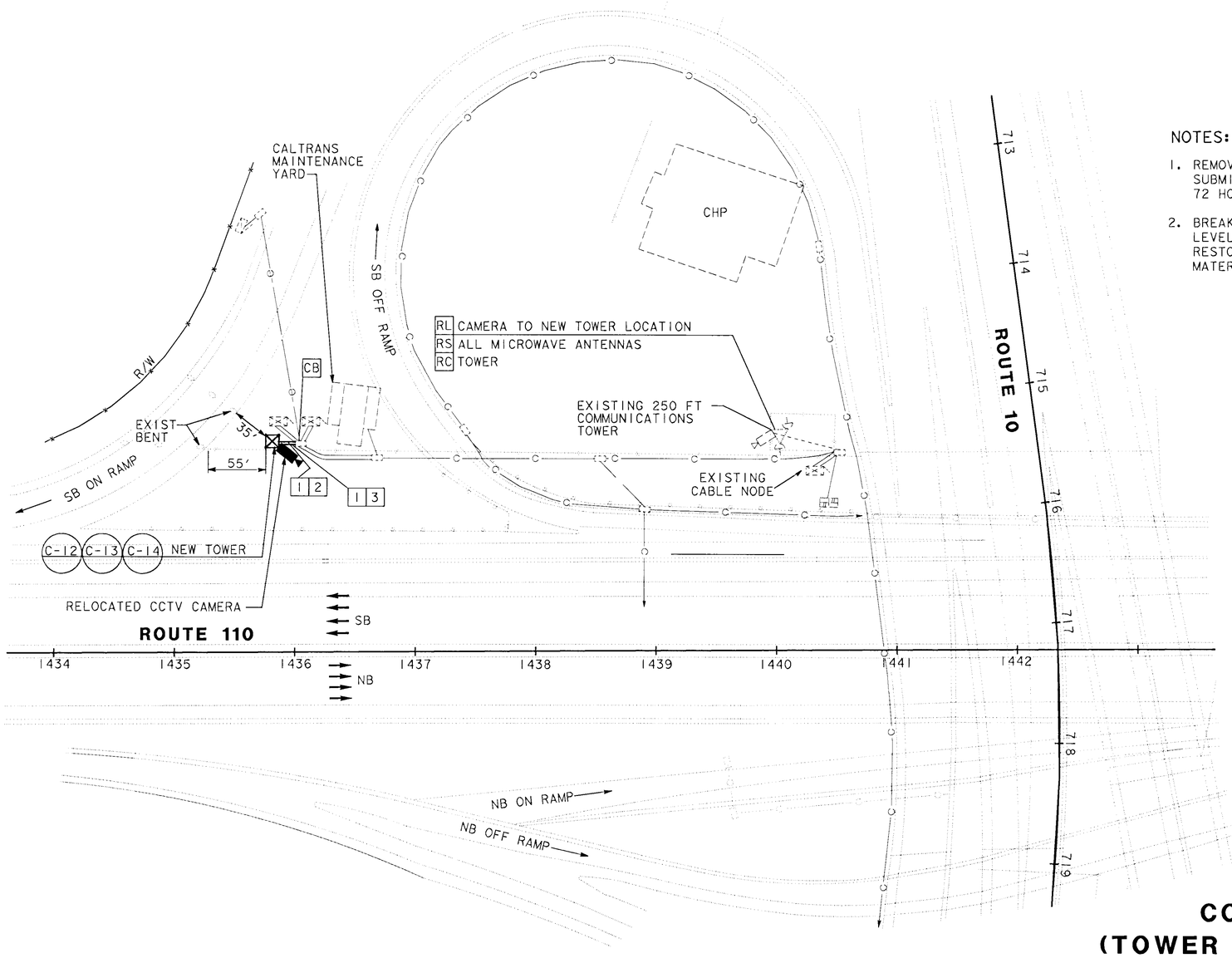
PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL.
2. INSTALL 2"C, RG-6A/U COAX.
3. INSTALL 2"C, CONTROL CABLE.



NOTES: (THIS SHEET ONLY)

1. REMOVAL OF EXISTING TOWER PROCEDURES TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
2. BREAKOUT EXISTING FOUNDATION TO BELOW GROUND LEVEL. REMOVE EXISTING FENCE. PLACE ASPHALT TO RESTORE GROUND SURFACE TO MATCH SURROUNDING MATERIAL.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA (TOWER LOCATION SM148)

SCALE: 1"=50'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND, SEE SHEETS E-1.

E-2A

DATE	REVISED BY
	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-00
TIME PLOTTED => 10-Jun-1997 13:06

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

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DGN FILE => [ESC-OE]712085u2a.psf

CU 07396

EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u03.dgn DATE: Wed Aug 8 2001 TIME: 10:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	43	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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

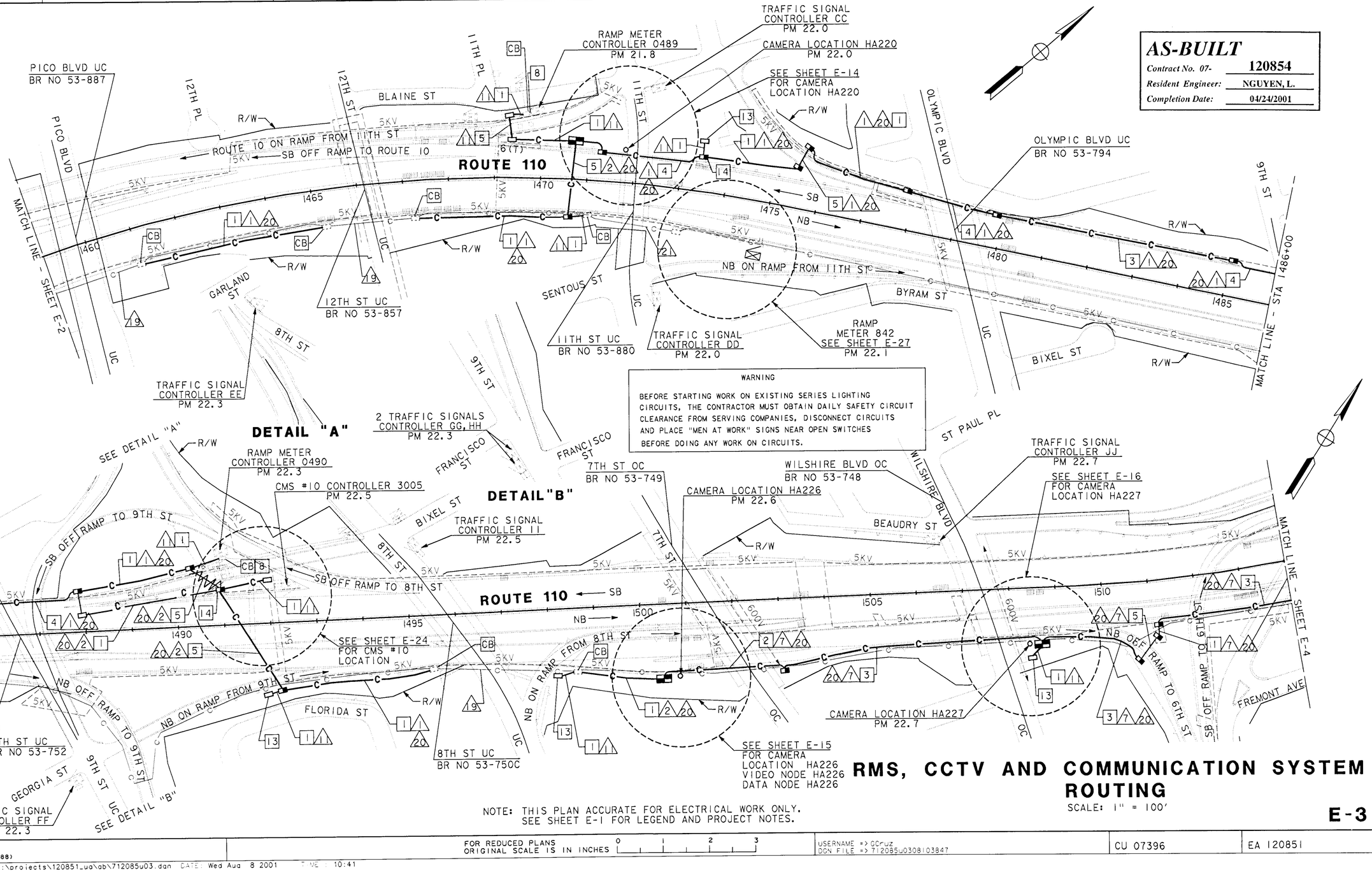
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 7	RUN 11	RUN 19	RUN 20	RUN 21
75P22 CABLE	COMMUNICATION DATA			1				
50P22 CABLE	COMMUNICATION DATA	1	1			1		
6P22 CABLE	CONTROLLER DATA		1		1			1
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1	1	1		1		
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION	1				1		
	INNERDUCT	1 1/4" 1 1/4"	1 1/4" 1 1/4"	1 1/4" 1 1/4"		1 1/4" 1 1/4"		
	CONDUIT SIZE	4"	4"	4"	2"	EXIST 4"	4"	EXIST 4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001



WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

RMS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

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

E-3

DATE	BY	REVISED
3/94	DP	CALCULATED/DESIGNED BY
4/94	CF	CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:40

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

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

USERNAME => GCruz
DGN FILE => 712085u0308103847

CU 07396 EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u03.dgn DATE: Wed Aug 8 2001 TIME: 10:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	44	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

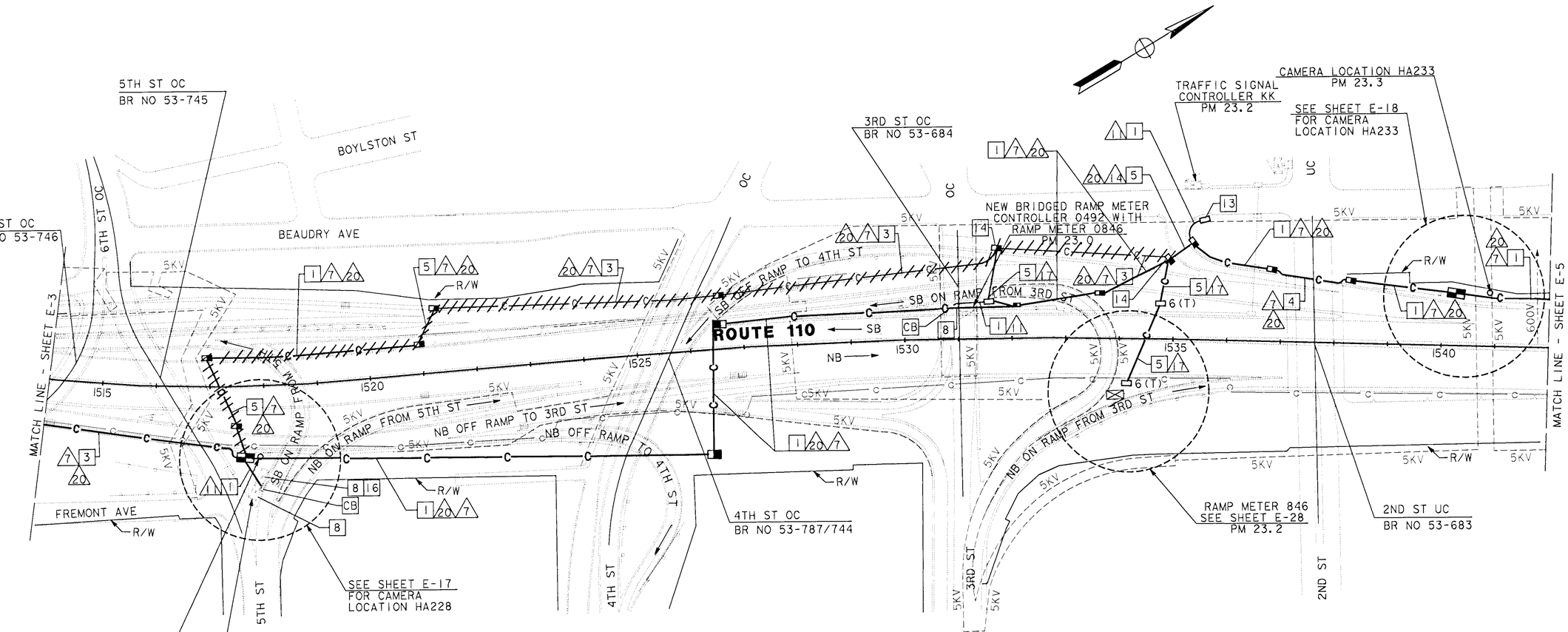
REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

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

CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 7	11	14	17	20
75P22 CABLE	COMMUNICATION DATA	1		1		
6P22 CABLE	CONTROLLER DATA		1	1		1
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1		1		
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION	1		1		
	INNERDUCT	1 1/4"		1 1/4"		
	CONDUIT SIZE	4"	2"	4"	4"	4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.



PROJECT NOTES: (THIS SHEET ONLY)

16 INSTALL NEW TELEPHONE BRIDGE IN CONTROLLER FOR BRIDGING OF COUNT STATIONS.

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

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

RMS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-4

DATE	REVISED BY
3/94	DP
4/94	CF

DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT: PAT SULLIVAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 8-Aug-2001
TIME PLOTTED => 10:39

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

USERNAME => GCruz
DGN FILE => 712085u0408103806

CU 07396

EA 120851

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

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u05.dgn DATE: Wed Aug 8 2001 TIME: 10:39

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 7	11	12	13	14	15	20
75P22 CABLE	COMMUNICATION DATA	1				1	1	
6P22 CABLE	CONTROLLER DATA		1	2	3	1	2	
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1				1		
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION	1				1	1	
	INNERDUCT	1 1/4" 1 1/4"				1 1/4" 1 1/4"	1 1/4" 1 1/4"	
	CONDUIT SIZE	4"	2"	2"	2"	4"	4"	4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	45	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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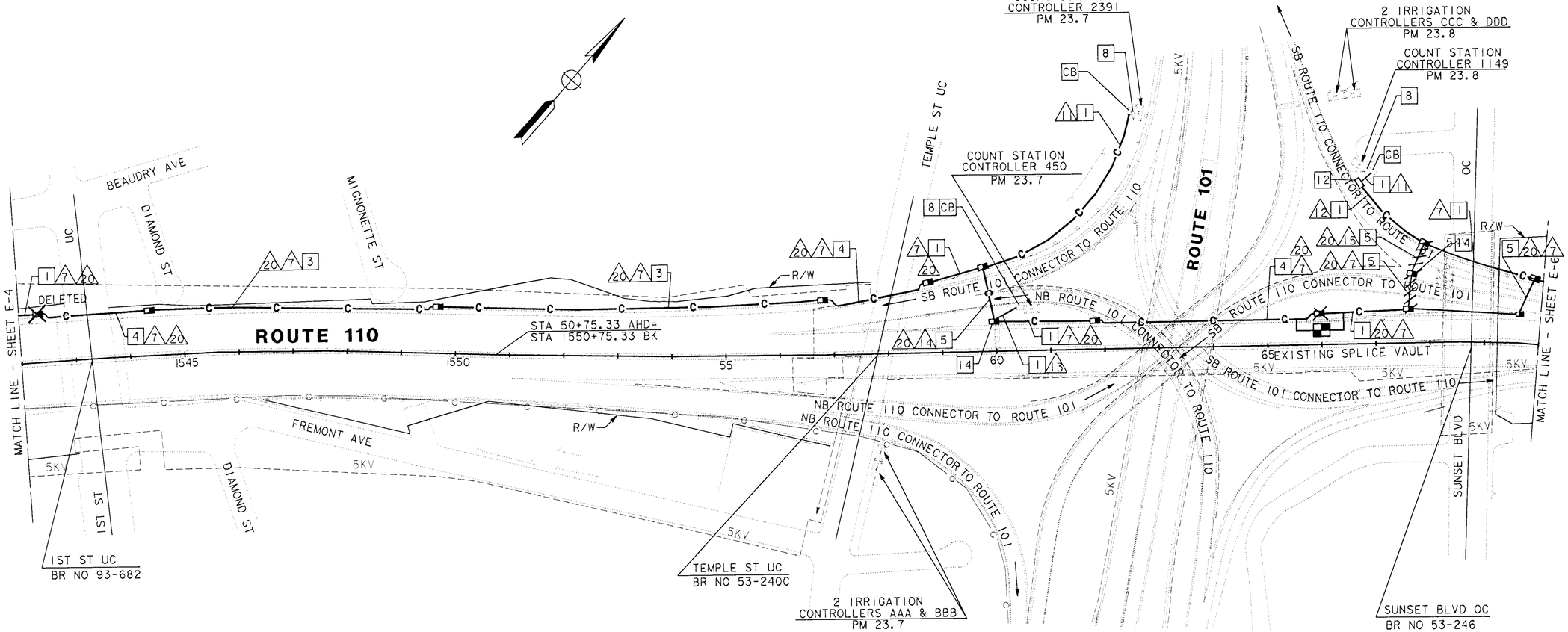


AS-BUILT

Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

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

E-5

CALCULATED/ DESIGNED BY	DP	3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 8-Aug-2001 | TIME PLOTTED => 10:39

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

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

USERNAME => GCruz | DGN FILE => 712085u0508103709

CU 07396 | EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u05.dgn DATE: Wed Aug 8 2001 TIME: 10:39

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	46	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

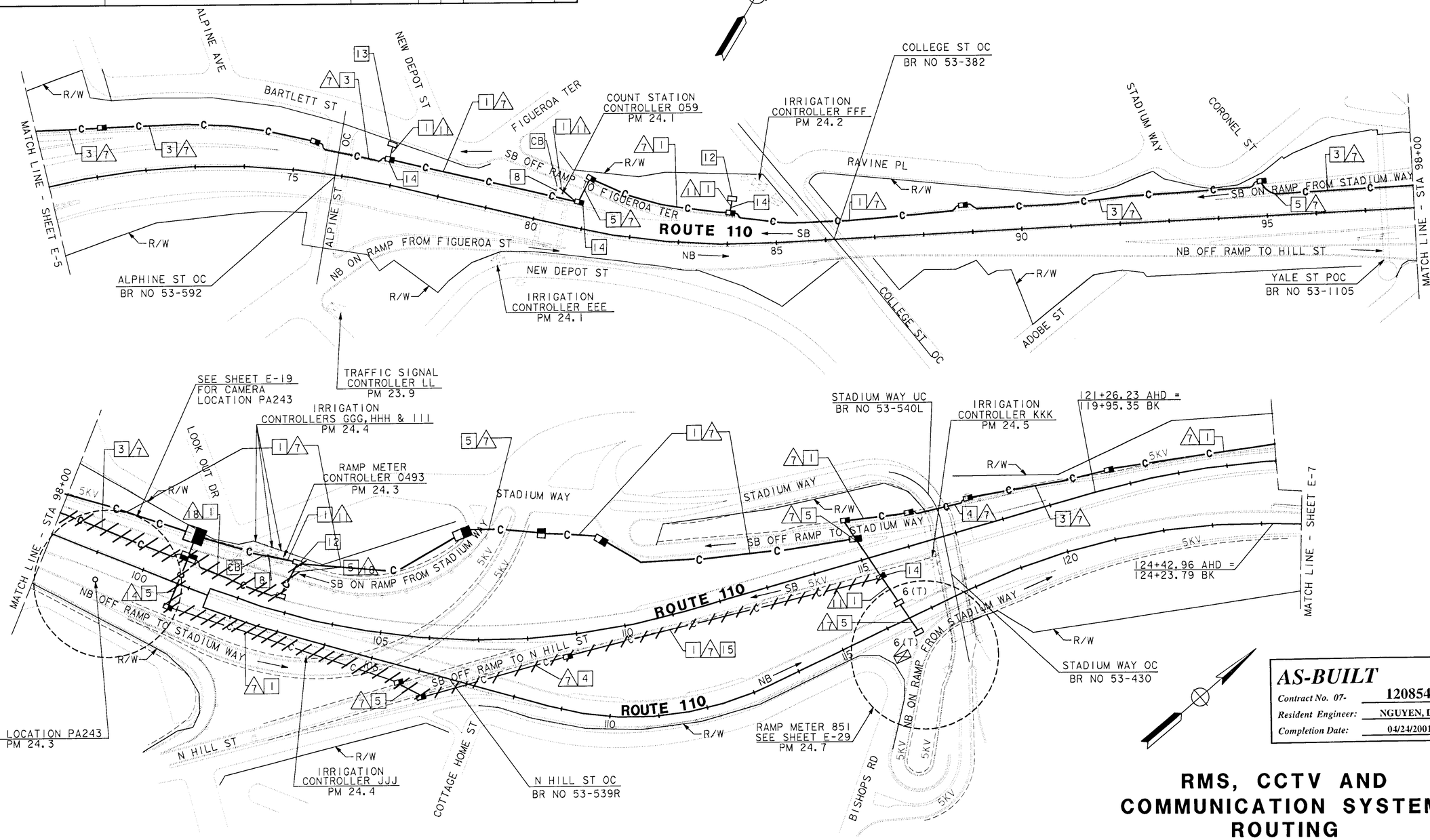
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 7	RUN 10	RUN 11	RUN 14	RUN 17	RUN 18
75P22 CABLE	COMMUNICATION DATA	1			1		
6P22 CABLE	CONTROLLER DATA		1	1	1	1	2
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1			1		
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION		1		1		
2SMFO B/O CABLE	SHORT HAUL VIDEO		1		1		
	INNERDUCT	1¼" 1¼"			1¼" 1¼"		
	CONDUIT SIZE	4"	4"	2"	4"	4"	4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.



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

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

RMS, CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1" = 100'

E-6

DESIGN OVERSIGHT	CALCULATED/DESIGNED BY	CHECKED BY	DP	DATE REVISED BY
PAT SULLIVAN	CF 4/94			DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 8-Aug 2001 TIME PLOTTED => 10:38

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

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

USERNAME => GCruz DGN FILE => 712085u0608103628

CU 07396 EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u07.dgn DATE: Wed Aug 8 2001 TIME: 10:38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	47	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

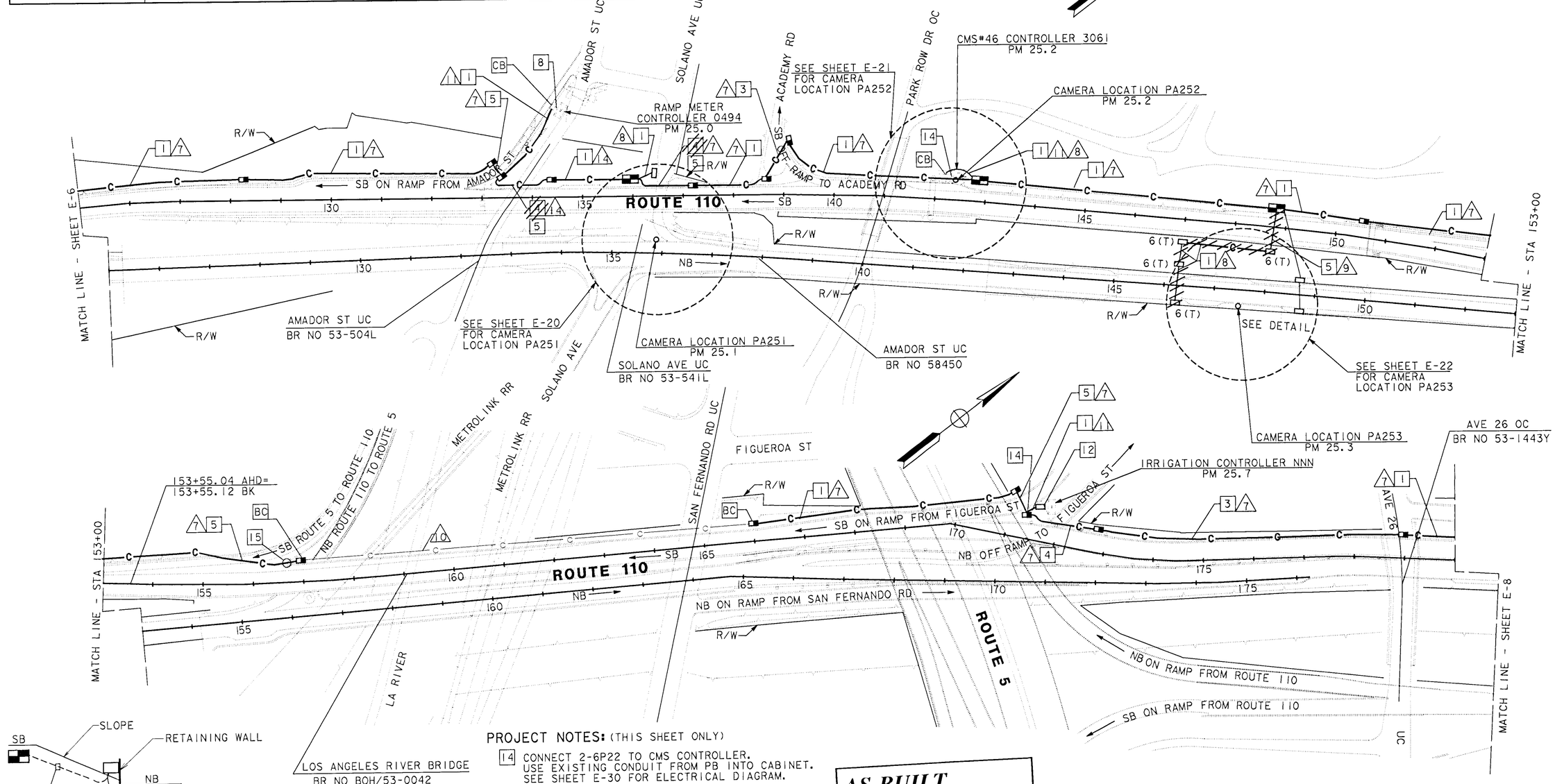
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

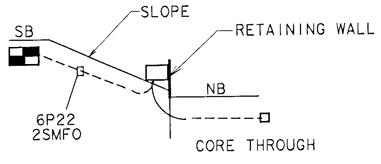
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 7	8	9	11	14	10
75P22 CABLE	COMMUNICATION DATA	1		1	1	1	1
6P22 CABLE	CONTROLLER DATA		1				
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1				1	1
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION		1				1
2SMFO B/O CABLE	SHORT HAUL VIDEO		1	1			
	INNERDUCT	1 1/4"				1 1/4"	1 1/4"
	CONDUIT SIZE	4"	2"	4"	2"	4"	EXIST 3"C

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.





PROJECT NOTES: (THIS SHEET ONLY)

14 CONNECT 2-6P22 TO CMS CONTROLLER. USE EXISTING CONDUIT FROM PB INTO CABINET. SEE SHEET E-30 FOR ELECTRICAL DIAGRAM.

5 RELOCATE AND ATTACHED EXISTING FIBER GLASS CONDUITS TO NEW CONCRETE BARRIER. SEE ATTACHED PLAN.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1" = 100'

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

E-7

DESIGNED BY	CALCULATED/	DP	DATE 3/94	REVISED BY
PAT SULLIVAN	CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00

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

CU 07396 EA 120851

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

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USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u07.dgn DATE: Wed Aug 8 2001 TIME: 10:38

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	48	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAT SULLIVAN
No. C30912
Exp. 3/31/00
CIVIL
STATE OF CALIFORNIA

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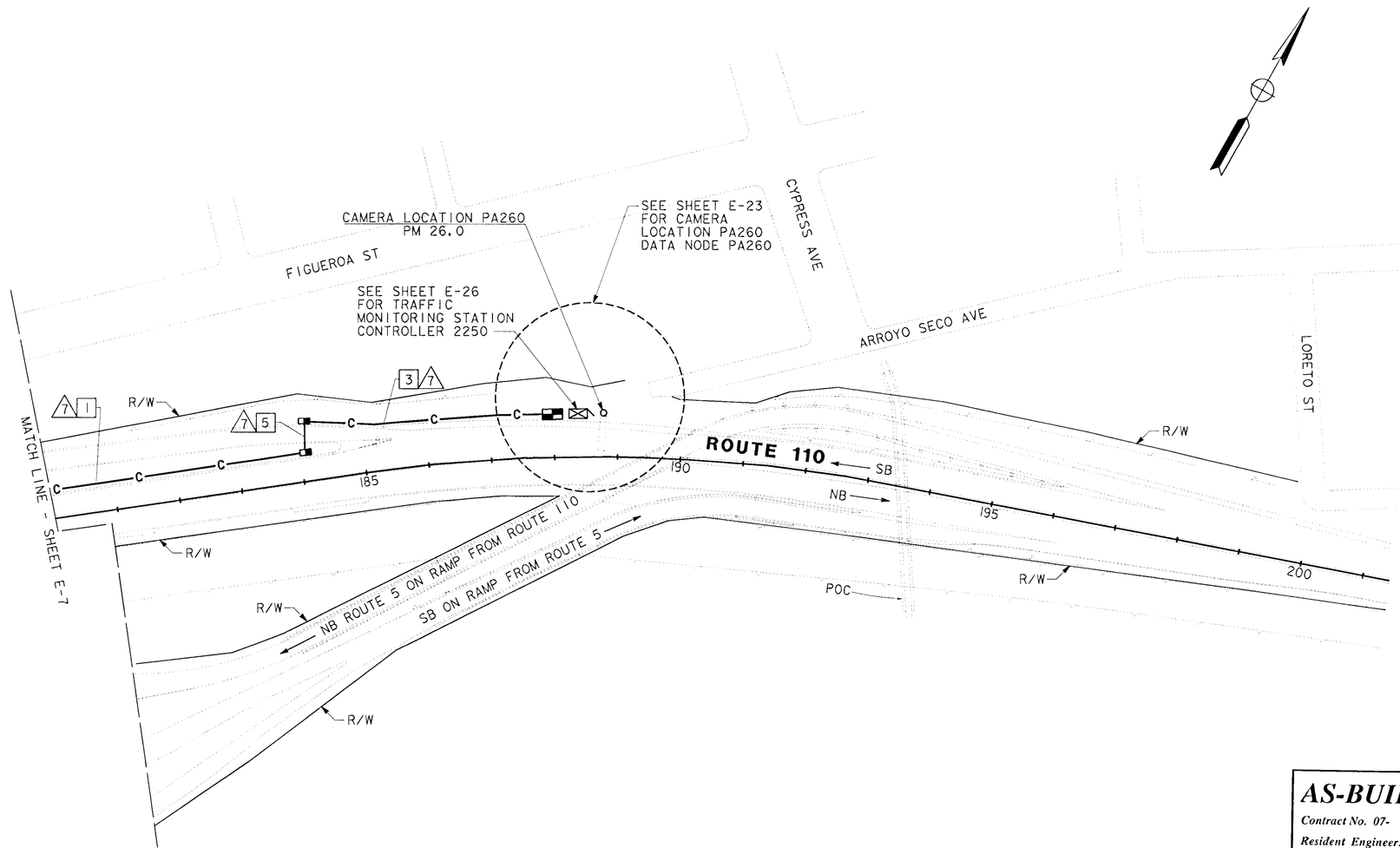
WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

CONDUCTOR SCHEDULE		
CONDUCTOR TYPE	FUNCTION	RUN (7)
75P22 CABLE	COMMUNICATION DATA	1
24SMFO CABLE	DATA/VIDEO NODE TO HUB TRUNK	1
12SMFO CABLE	CCTV CAMERA TO VIDEO DISTRIBUTION	1
	INNERDUCT	1 1/4" 1 1/4"
	CONDUIT SIZE	4"



AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1" = 100'

E-8

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

CALCULATED/DESIGNED BY
CHECKED BY
DP 3/94 REVISED BY
CF 4/94 DATE REVISED
DESIGN OVERSIGHT
PAT SULLIVAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 10-Jun-1997
TIME PLOTTED => 13:02

[ESC-OE]712085u08.psf 10-Jun-1997 13:02 trienard

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => trienard
DGN FILE => [ESC-OE]712085u08.psf
CU 07396
EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u09.dgn DATE: Wed Aug 8 2001 TIME: 10:37

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	49	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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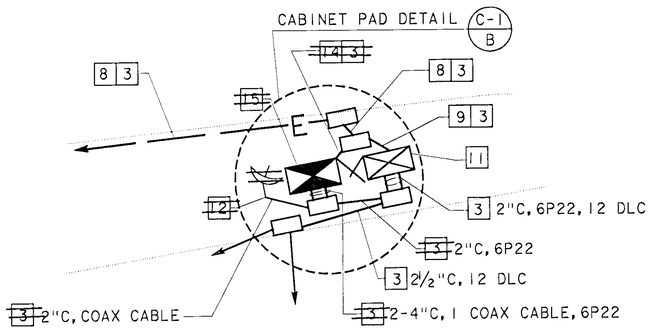
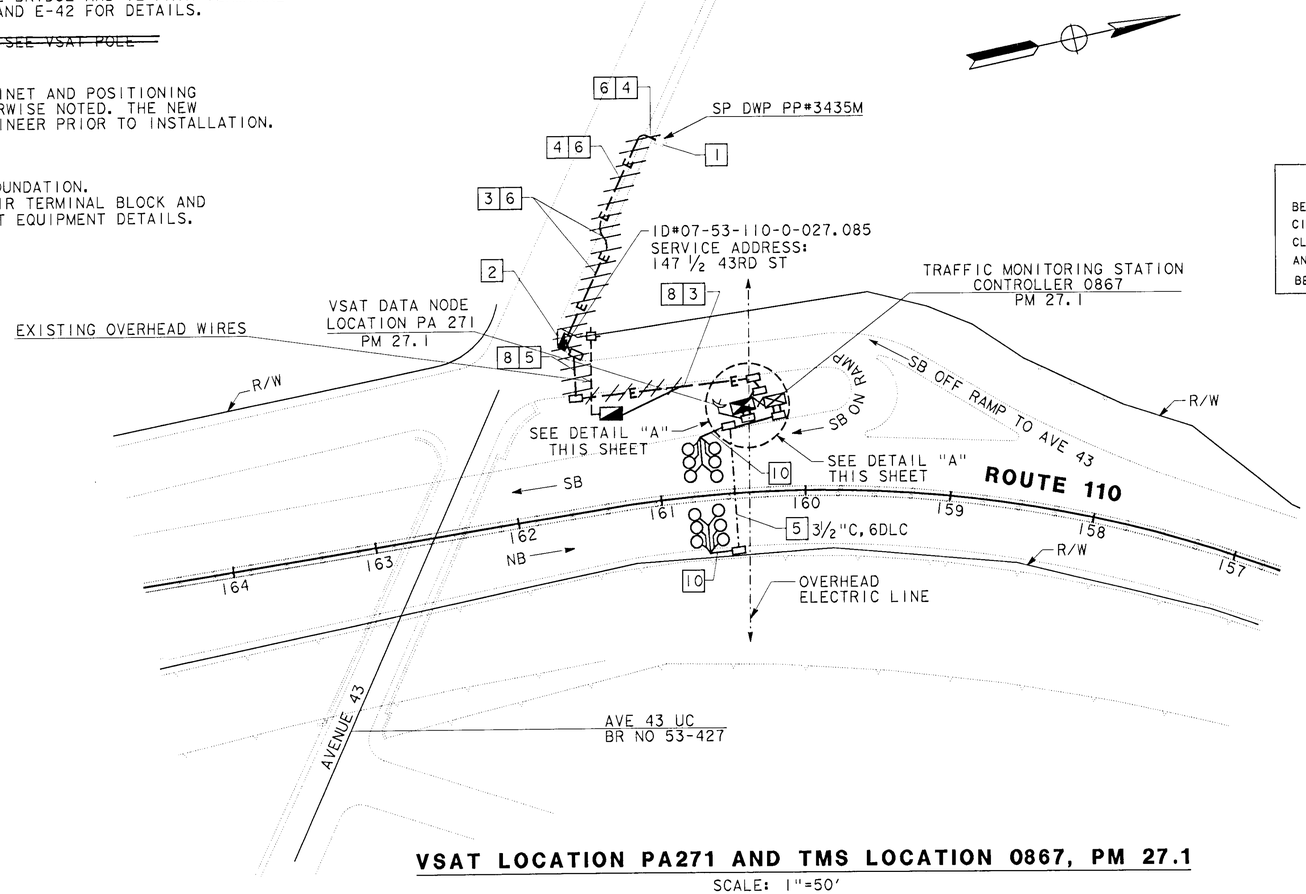
NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 20A, 120V, 1P CIRCUIT BREAKER FOR TMS, AND 30A, 240V, 2P CIRCUIT BREAKER FOR VSAT.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN ASPHALT.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 5#6 AND 2"C (EMPTY).
8. INSTALL 2"C, 5#6.
9. INSTALL 2"C, 2#6.
10. SEE SHEET E-31 FOR TMS LOOP CONFIGURATION ONLY.
11. INSTALL TYPE 334 CABINET ON A NEW FOUNDATION. CABINET TO (INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY) AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL IN CONTROLLER CABINET. SEE SHEETS E-31 AND E-42 FOR DETAILS.
12. ~~FOR INSTALLATION AND MOUNTING DETAILS, SEE VSAT POLE AND MOUNTING DETAILS, SHEET E-38.~~
13. LOCATION OF PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
14. ~~INSTALL 2"C, 3#8.~~
15. INSTALL TYPE 334 VSAT CABINET ON NEW FOUNDATION. ~~CABINET TO INCLUDE VSAT TERMINAL,~~ 25 PAIR TERMINAL BLOCK AND ~~A DATA MODEM.~~ SEE SHEET E-37 FOR CABINET EQUIPMENT DETAILS.



DETAIL "A" VSAT DELETED

NO SCALE



VSAT LOCATION PA271 AND TMS LOCATION 0867, PM 27.1

SCALE: 1"=50'

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

VSAT DATA NODE (LOCATION PA271) AND TRAFFIC MONITORING STATION (LOCATION 0867)

SCALE AS SHOWN

E-9

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

DATE	REVISED BY
7/94	DATE REVISED

CALCULATED/DESIGNED BY: MXZ
CHECKED BY: CF

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

$$$$$$$$$$DGNSPEC$$$$$$$$$$ $$$$$$$SYTIME$$$$$$$ $$$$$$USER$$$$$$

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

CU 07396 EA 120851

LAST REVISION 00-00-00

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

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u09.dgn DATE: Wed Aug 8 2001 TIME: 10:37

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u10.dgn DATE: Wed Aug 8 2001 TIME: 10:36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	50	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

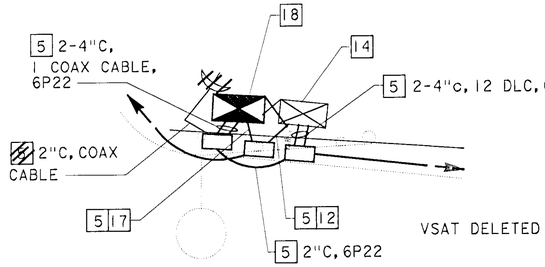
6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

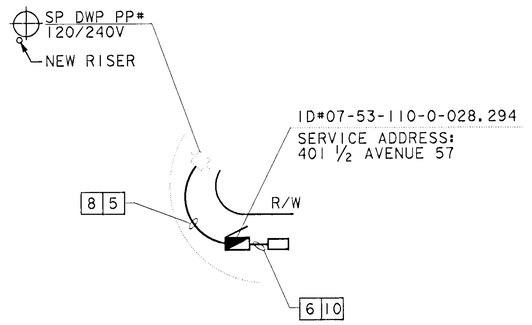
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES: (THIS SHEET ONLY)

1. REMOVE EXISTING POLE MOUNTED METERED SERVICE FOR IRRIGATION. THE CONTRACTOR SHALL CONTACT CALTRANS ENGINEER BEFORE REMOVING EXISTING POLE MOUNTED SERVICE AND CONTACT DWP 48 HOURS IN ADVANCE TO TURN OFF POWER FROM POWER POLE.
2. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS, (WIRES BY OTHERS).
3. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 20A, 120V, 1P CIRCUIT BREAKER FOR TRAFFIC MONITORING STATION, 30A, 240V, 2P CIRCUIT BREAKER FOR VSAT, AND (2) 20A, 120V, 1P CIRCUIT BREAKERS FOR EXISTING IRRIGATION CIRCUITS.
4. CONNECT EXISTING IRRIGATION CIRCUITS TO NEW SERVICE EQUIPMENT ENCLOSURE.
5. TRENCH FOR CONDUIT IN SOIL.
6. TRENCH FOR CONDUIT IN ASPHALT.
7. JACK FOR CONDUIT BENEATH ROADWAY.
8. INSTALL 3"C, (WIRES BY OTHERS).
9. INSTALL 2"C, 4#8 (FOR EXISTING IRRIGATION).
10. INSTALL 2"C, 2#8 (FOR TMS), 3#6 (FOR VSAT) AND 2"C, 4#8 (FOR IRRIGATION).
11. INSTALL 2"C, 2#8, 3#6.
12. INSTALL 2"C, 2#8.
13. SEE SHEET E-31 FOR TMS LOOP CONFIGURATION ONLY.
14. INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL IN CONTROLLER CABINET. SEE SHEETS E-31 AND E-42 FOR DETAILS.
15. ~~FOR INSTALLATION AND MOUNTING DETAILS, SEE VSAT POLE AND MOUNTING DETAILS, SHEET E-38.~~
16. LOCATIONS OF PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
17. INSTALL 2"C, 3#6.
18. INSTALL TYPE 334 VSAT CABINET ON NEW FOUNDATION. ~~CABINET TO INCLUDE VSAT TERMINAL,~~ 25 PAIR TERMINAL BLOCK ~~AND A DATA MODEM.~~ SEE SHEET E-37 FOR CABINET EQUIPMENT DETAILS.



DETAIL "A"
NO SCALE



DETAIL "B"
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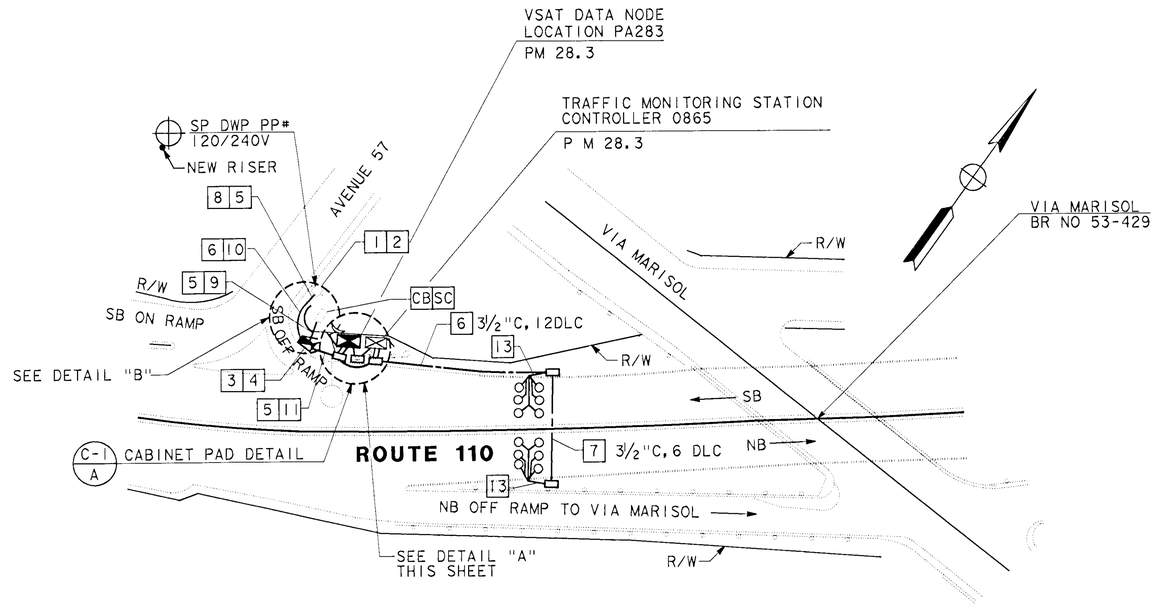

VSAT LOCATION PA283 AND TMS LOCATION 0865, PM 28.3
SCALE: 1"=50'

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

VSAT DATA NODE (LOCATION PA283) AND TRAFFIC MONITORING STATION (LOCATION 0865)

SCALE AS SHOWN

E-10

REVISED BY	DATE REVISED
MXZ	7/94
CF	7/94

CALCULATED/DESIGNED BY
CHECKED BY
DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 8-AUG-2001
TIME PLOTTED => 10:36

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

USERNAME => GCruz
DGN FILE => 712085u1008103438

CU 07396

EA 120851

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

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USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u10.dgn DATE: Wed Aug 8 2001 TIME: 10:36

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u11.dgn DATE: Wed Aug 8 2001 TIME: 10:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	51	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

PROFESSIONAL ENGINEER — REGISTERED — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

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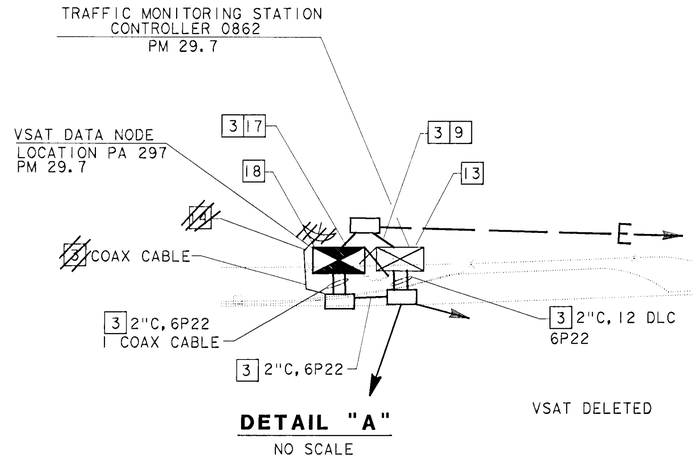
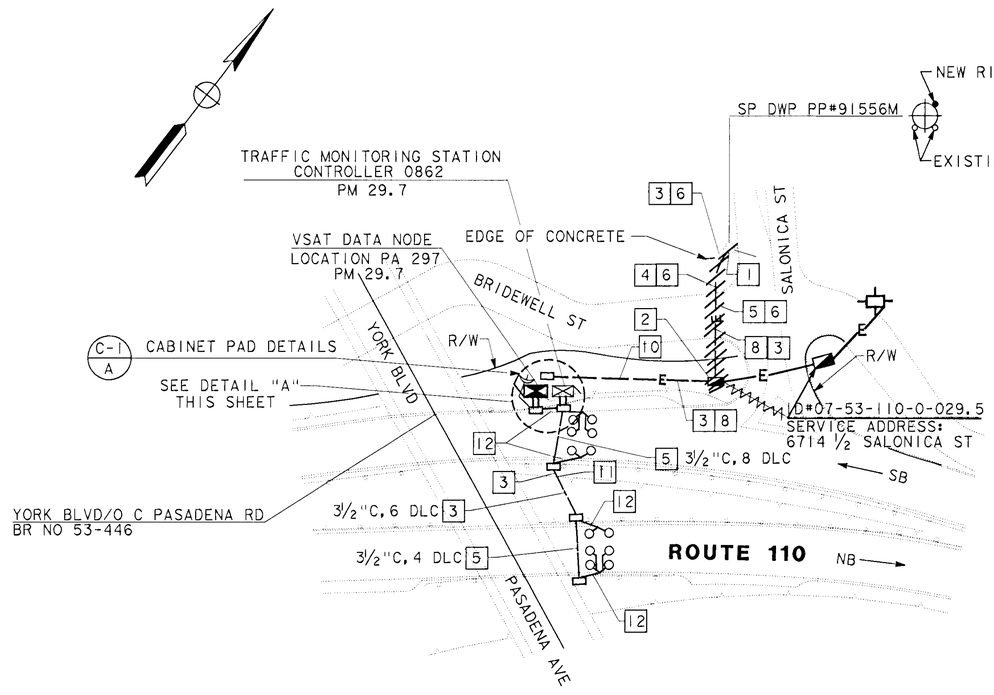


DETAIL "A"
NO SCALE

VSAT DELETED

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.



VSAT LOCATION PA297 AND TMS LOCATION 0862, PM 29.7

SCALE: 1"=50'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C, TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIRMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 20A, 120V, 1P CIRCUIT BREAKER FOR TMS, AND 30A, 240V, 2P CIRCUIT BREAKER FOR VSAT.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN CONCRETE.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 5#6 AND 2"C (EMPTY).
8. INSTALL 2"C, 5#6.
9. INSTALL 2"C, 2#6
10. TRENCH FOR CONDUIT BENEATH FENCE.
11. CORE FOR CONDUIT THROUGH CONCRETE WALL.
12. SEE SHEET E-31 FOR TMS LOOP CONFIGURATION ONLY.
13. INSTALL STATE-FURNISHED TYPE 334 CABINET ON A NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL IN CONTROL CABINET. SEE SHEET E-31 AND E-42 FOR DETAILS.
14. ~~FOR INSTALLATION AND MOUNTING DETAILS, SEE VSAT POLE AND MOUNTING DETAILS, SHEET E-38.~~
15. LOCATIONS OF PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
16. INSTALL 3"C, 5#6.
17. INSTALL 2"C, 3#6.
18. INSTALL TYPE 334 VSAT CABINET ON NEW FOUNDATION. ~~CABINET TO INCLUDE VSAT TERMINAL, 25 PAIR TERMINAL BLOCK AND A DATA MODEM.~~ SEE SHEET E-37 FOR CABINET EQUIPMENT DETAILS.

AS-BUILT

Contract No. 07-	120854
Resident Engineer:	NGUYEN, L.
Completion Date:	04/24/2001

VSAT DATA NODE (LOCATION PA297) AND TRAFFIC MONITORING STATION (LOCATION 0862)

SCALE AS SHOWN

E-11

DATE	REVISED BY	CALCULATED/ DESIGNED BY	DESIGN OVERSIGHT
7/94	DATE REVISED	CHECKED BY	PAT SULLIVAN
MXZ	CF		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:35

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

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

USERNAME => GCruz
DGN FILE => 712085u1108103357

CU 07396

EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u11.dgn DATE: Wed Aug 8 2001 TIME: 10:35

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u12.dgn DATE: Wed Aug 8 2001 TIME: 10:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	52	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

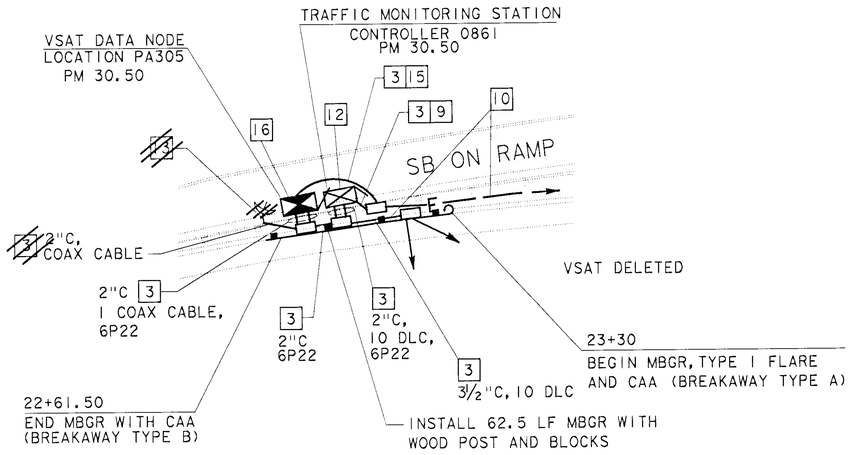
6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

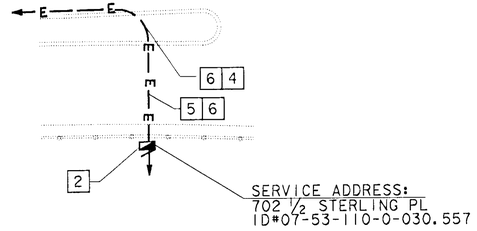
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

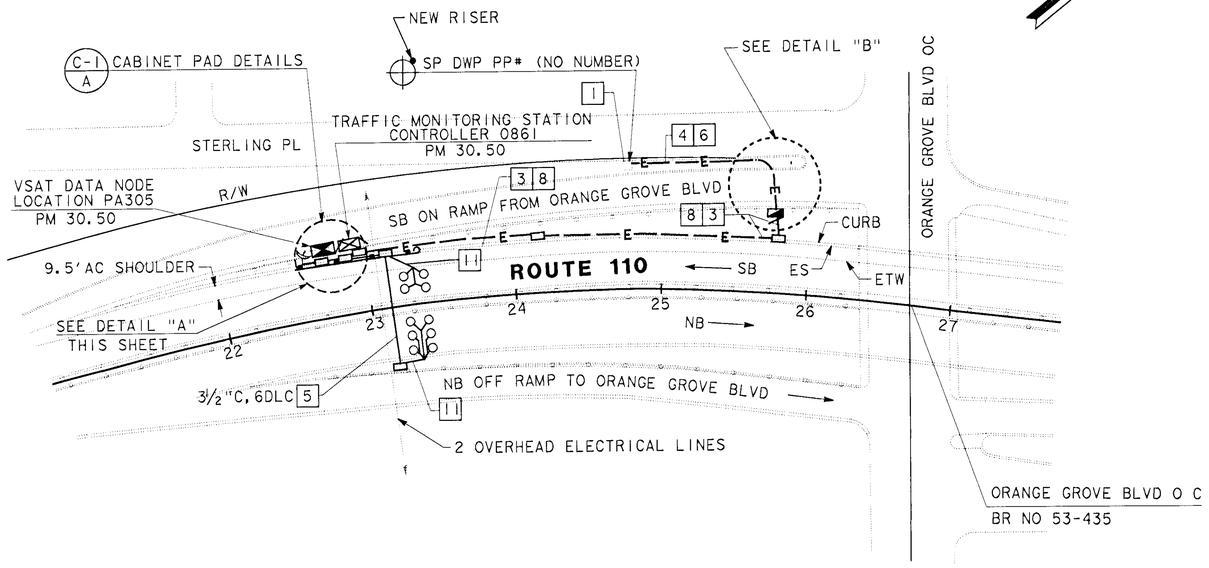


DETAIL "A"
NO SCALE



DETAIL "B"
NO SCALE

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001



VSAT LOCATION PA305 AND TMS LOCATION 0861, PM 30.5
SCALE: 1"=50'

NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C, TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS, (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 20A, 120V, 1P CIRCUIT BREAKER FOR TMS AND 30A, 240V, 2P CIRCUIT BREAKER FOR VSAT.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN ASPHALT.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 5#6 AND 2"C (EMPTY).
8. INSTALL 2"C, 5#6.
9. INSTALL 2"C, 2#6.
10. INSTALL CONDUITS IN THE SAME TRENCH.
11. SEE SHEET E-31 FOR TMS LOOP CONFIGURATION ONLY.
12. INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED I70 CONTROLLER ASSEMBLY AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL IN CONTROLLER CABINET. SEE SHEET E-31 AND E-42 FOR DETAILS.
13. ~~FOR INSTALLATION AND MOUNTING DETAILS, SEE VSAT POLE AND MOUNTING DETAILS, SHEET E-38.~~
14. LOCATIONS OF PULLBOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
15. INSTALL 2"C, 3#6.
16. INSTALL TYPE 334 VSAT CABINET ON NEW FOUNDATION. ~~CABINET TO INCLUDE VSAT TERMINAL~~, 25 PAIR TERMINAL BLOCK ~~AND A DATA MODEM.~~ SEE SHEET E-37 FOR CABINET EQUIPMENT DETAILS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

VSAT DATA NODE (LOCATION PA305) AND TRAFFIC MONITORING STATION (LOCATION 0861)

SCALE AS SHOWN

E-12

CALCULATED/DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
MXZ	CF	7/94		7/94

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:34

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

USERNAME => GCruz
DGN FILE => 712085u1208103331

CU 07396

EA 120851

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

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u12.dgn DATE: Wed Aug 8 2001 TIME: 10:35

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	53	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

PROFESSIONAL ENGINEER — REGISTERED — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

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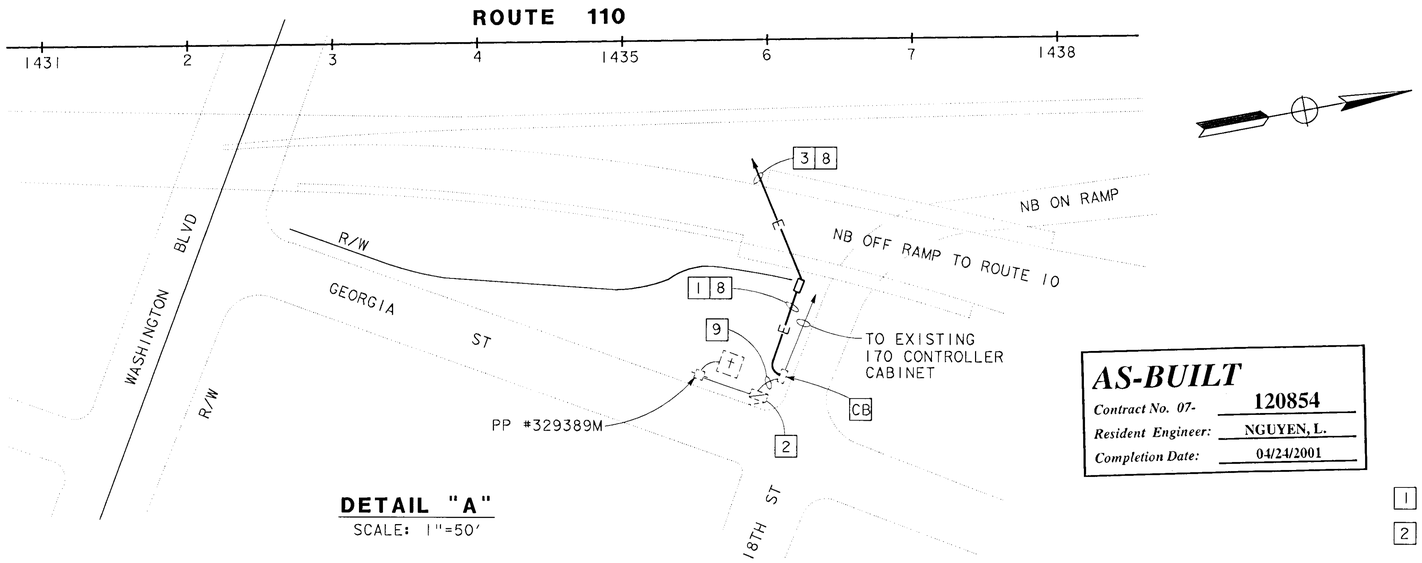
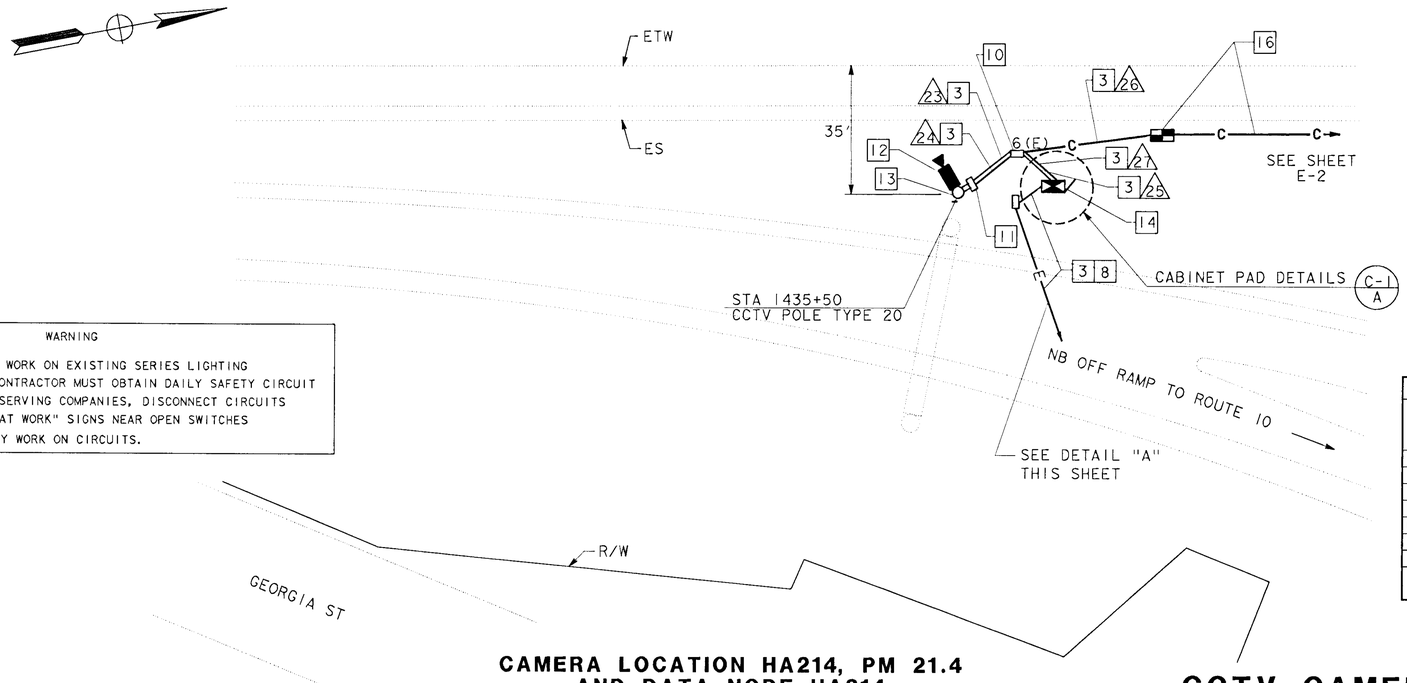


DETAIL "A"
SCALE: 1"=50'

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001



CAMERA LOCATION HA214, PM 21.4 AND DATA NODE HA214
SCALE: 1" = 20'

NOTES: (THIS SHEET ONLY)

1. TRENCH FOR CONDUIT IN ASPHALT.
2. EXISTING 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE. ADD 30A, 120V, 1P CIRCUIT BREAKER FOR CCTV CAMERA.
3. TRENCH FOR CONDUIT IN SOIL.
4. ATTACH GALVANIZED STEEL CONDUIT TO BRIDGE STRUCTURE.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 2#4 AND 2"C (EMPTY).
8. INSTALL 2"C, 2#4.
9. ADD 2#4 IN EXISTING CONDUIT.
10. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
11. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
12. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
13. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
14. INSTALL TYPE 334 CABINET. DATA NODE CABINET TO INCLUDE VIDEO TRANSMITTER, CAMERA CONTROL RECEIVER AND ONE D-4 CHANNEL BANK. SEE SHEET E-37, DETAIL A.
15. SEE SHEET L-1 FOR LAYOUT DETAILS.
16. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 23	RUN 24	RUN 25	RUN 26			RUN 27		
50P22 CABLE	COMMUNICATION DATA				1			1		
6P22 CABLE	CONTROLLER DATA				1			1		
2SMFO B/O CABLE	SHORT HAUL VIDEO						1			1
RG-6A/U COAX	BASE BAND VIDEO	1						1		
CONTROL CABLE	CAMERA CONTROL		1	1						
8SMFO B/O CABLE	NODE CONTROL						1			1
	INNERDUCT				1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	
	CONDUIT SIZE	2"	2"	4"	4"			4"		

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

CCTV CAMERA AND EQUIPMENT AT DATA NODE (LOCATION HA214)

SCALE AS SHOWN

E-13

CALCULATED/ DESIGNED BY	DP	DATE 3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 10-Jun-1997 TIME PLOTTED => 13:34

[ESC-OE]7|2085ul3.psf 10-Jun-1997 13:34 trmikesl

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

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

USERNAME => trmikesl
DGN FILE => [ESC-OE]7|2085ul3.psf

CU 07396

EA 120851

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	54	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

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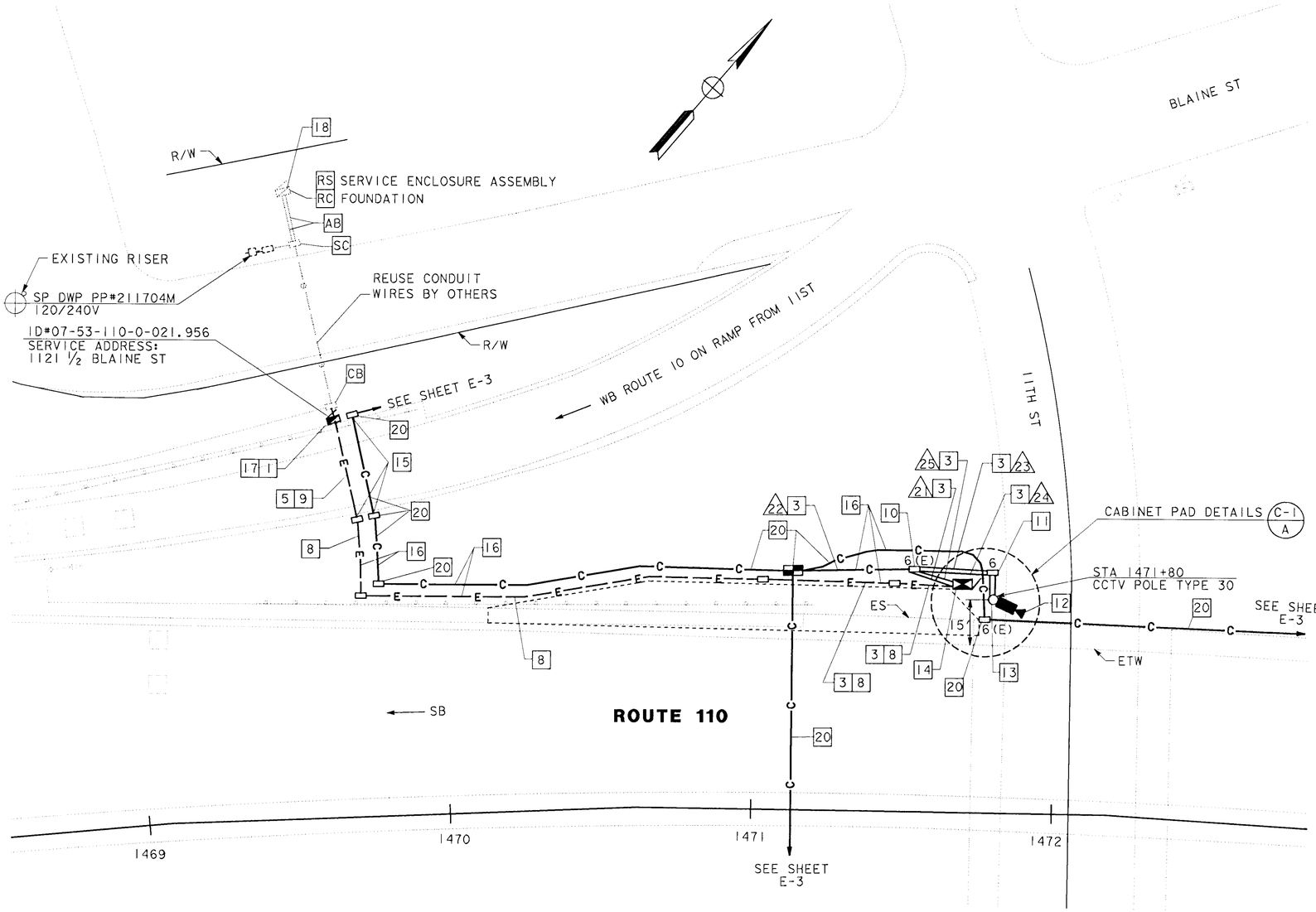

CAMERA LOCATION HA220, PM 22.0

NOTES: (THIS SHEET ONLY)

1. INSTALL 120/240V, 3 WIRE, METERED TYPE III BF SERVICE EQUIPMENT ENCLOSURE CIRCUITS, 100A, 240V, 2P MAIN CIRCUIT BREAKER, 30A, 120V, 1P CIRCUIT BREAKER FOR CCTV CAMERA. AND 20A, 120V, 1P CIRCUIT BREAKER FOR EXISTING RAMP METER.
2. ADD 2#8 IN EXISTING CONDUIT.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN ASPHALT.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 2#8 FOR CCTV CAMERA AND 2#8 FOR EXISTING RAMP METER AND 2"C (EMPTY).
8. INSTALL 2"C, 2#8.
9. INSTALL 3"C, 2#8.
10. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
11. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
12. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
13. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
14. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER. SEE SHEET E-37, DETAIL A.
15. USE THE SAME PIT FOR JACKING CONDUITS.
16. INSTALL CONDUITS IN THE SAME TRENCH.
17. CONNECT EXISTING RAMP METER TO NEW SERVICE EQUIPMENT ENCLOSURE.

    REMOVE EXISTING 120/240V UNMETERED SERVICE EQUIPMENT ENCLOSURE. CONTRACTOR SHALL CONTACT CALTRANS ENGINEER IN ADVANCE OF REMOVING EXISTING SERVICE EQUIPMENT ENCLOSURE, AND CONTACT DWP 48 HOURS IN ADVANCE TO TURN OFF POWER FROM POWER POLE.
19. SEE SHEET L-2 FOR LAYOUT DETAILS.
20. INCLUDED IN CCTV AND CUMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN /21	/22	/23	/24	/25
6P22 CABLE	CONTROLLER DATA	1	1			
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1			
RG-6A/U COAX	BASE BAND VIDEO	1		1		
CONTROL CABLE	CAMERA CONTROL				1	1
	CONDUIT SIZE	4"	2"	2"	2"	4"

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

CCTV CAMERA (LOCATION HA220)

SCALE: 1" = 20'

E-14

DATE	REVISED BY	CALCULATED/ DESIGNED BY	DP	CHECKED BY	CF
3/94	DATE REVISED		4/94		

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 10-Jun-1997 — TIME PLOTTED => 13:35

[ESC-OE]7|2085u14.psf 10-Jun-1997 13:35 trmikesl

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

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

USERNAME => trmikesl
DGN FILE => [ESC-OE]7|2085u14.psf

CU 07396 | EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u15.dgn DATE: Wed Aug 8 2001 TIME: 10:34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	55	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN — No. C30912 — Exp. 3/31/00 — CIVIL — STATE OF CALIFORNIA

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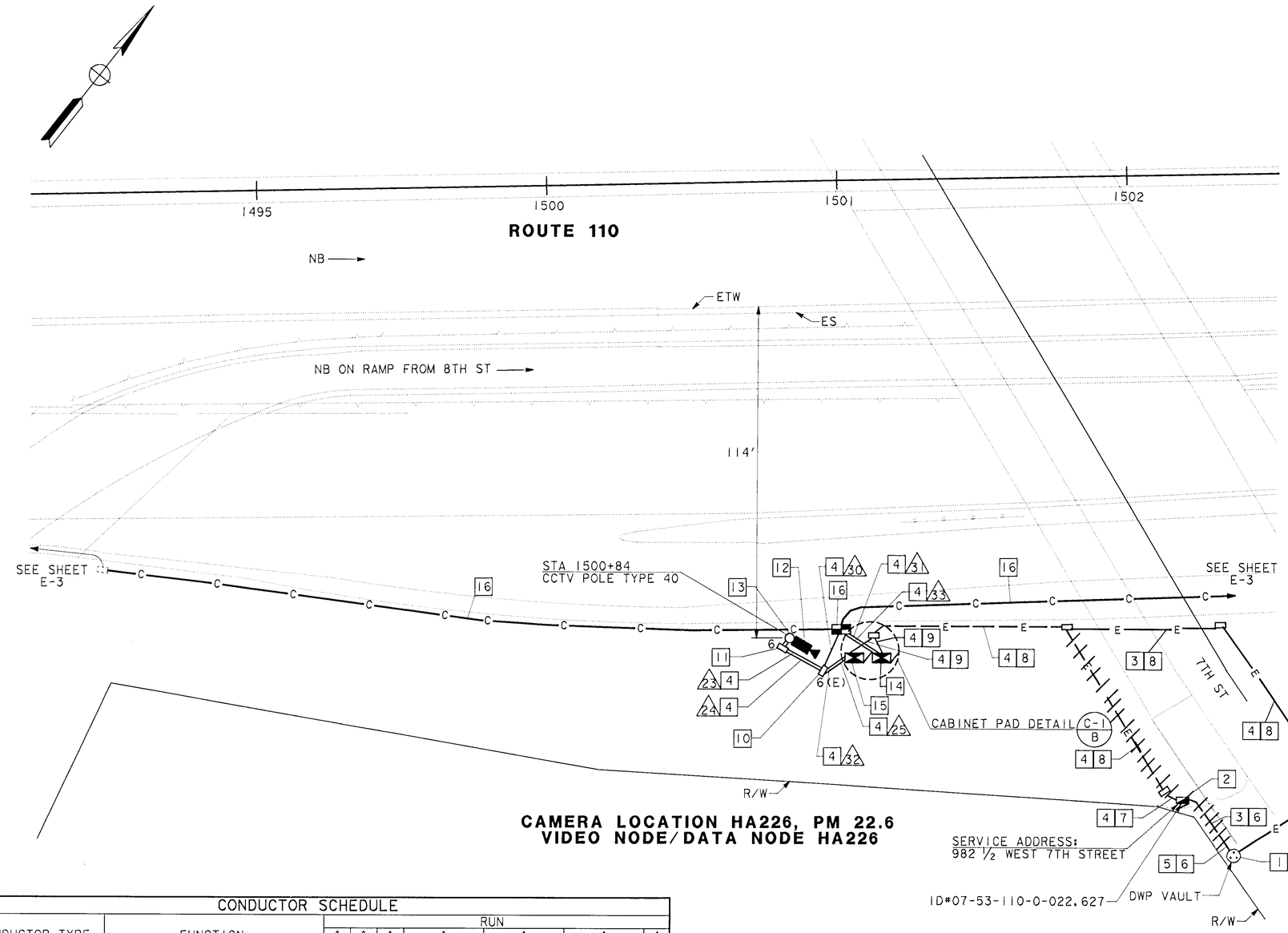

CAMERA LOCATION HA226, PM 22.6
VIDEO NODE/DATA NODE HA226

NOTES: (THIS SHEET ONLY)

1. CONTRACTOR SHALL CONTACT DWP INSPECTOR THREE (3) WORKING DAYS IN ADVANCE FOR ENTRY INTO DWP ELECTRICAL VAULT AND WITH LA CITY INSPECTOR FOR TRENCHING AND INSTALLATION OF CONDUIT.
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 30A, 120V, IP CIRCUIT BREAKER FOR VIDEO NODE, AND 30A, 120V, IP CIRCUIT BREAKER FOR DATA NODE.
3. JACK FOR CONDUIT BENEATH SIDEWALK.
4. TRENCH FOR CONDUIT IN SOIL.
5. TRENCH FOR CONDUIT IN CONCRETE.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 4#8 AND 2"C (EMPTY).
8. INSTALL 2"C, 4#8.
9. INSTALL 2"C, 2#8.
10. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
11. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
12. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
13. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
14. INSTALL TYPE 334 CABINET. DATA NODE CABINET TO INCLUDE TWO D4 CHANNEL BANKS. SEE SHEET E-37, DETAIL B.
15. INSTALL TYPE 334 CABINET. VIDEO NODE CABINET TO INCLUDE 16 CHANNEL VIDEO MULTIPLEXER AND 10 VIDEO RECEIVERS. SEE SHEET E-37, DETAIL B.
16. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN												
		23	24	25	30			31			32			33
75P22 CABLE	COMMUNICATION DATA							1						
50P22 CABLE	COMMUNICATION DATA							1						
6P22 CABLE	CONTROLLER DATA				1			1			1			
8SMFO B/O CABLE	NODE CONTROL					1			1			1		
12SMFO CABLE	CCTV TO VIDEO DISTRIBUTION						2						2	
RG-6A/U COAX	BASE BAND VIDEO	1									1			
CONTROL CABLE	CAMERA CONTROL		1	1										
	INNERDUCT				1 1/4"	1 1/4"		1 1/4"	1 1/4"		1 1/4"	1 1/4"		
	CONDUIT SIZE	2"	2"	4"	4"			4"			4"			4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA, EQUIPMENT AT DATA NODE AND EQUIPMENT AT VIDEO NODE (LOCATION HA226)

SCALE: 1" = 20'

E-15

CALCULATED/ DESIGNED BY	DP	DATE 3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00 — DATE PLOTTED => 8-Aug-2001 — TIME PLOTTED => 10:34

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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 => 712085u1508103249

CU 07396

EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u15.dgn DATE: Wed Aug 8 2001 TIME: 10:34

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	56	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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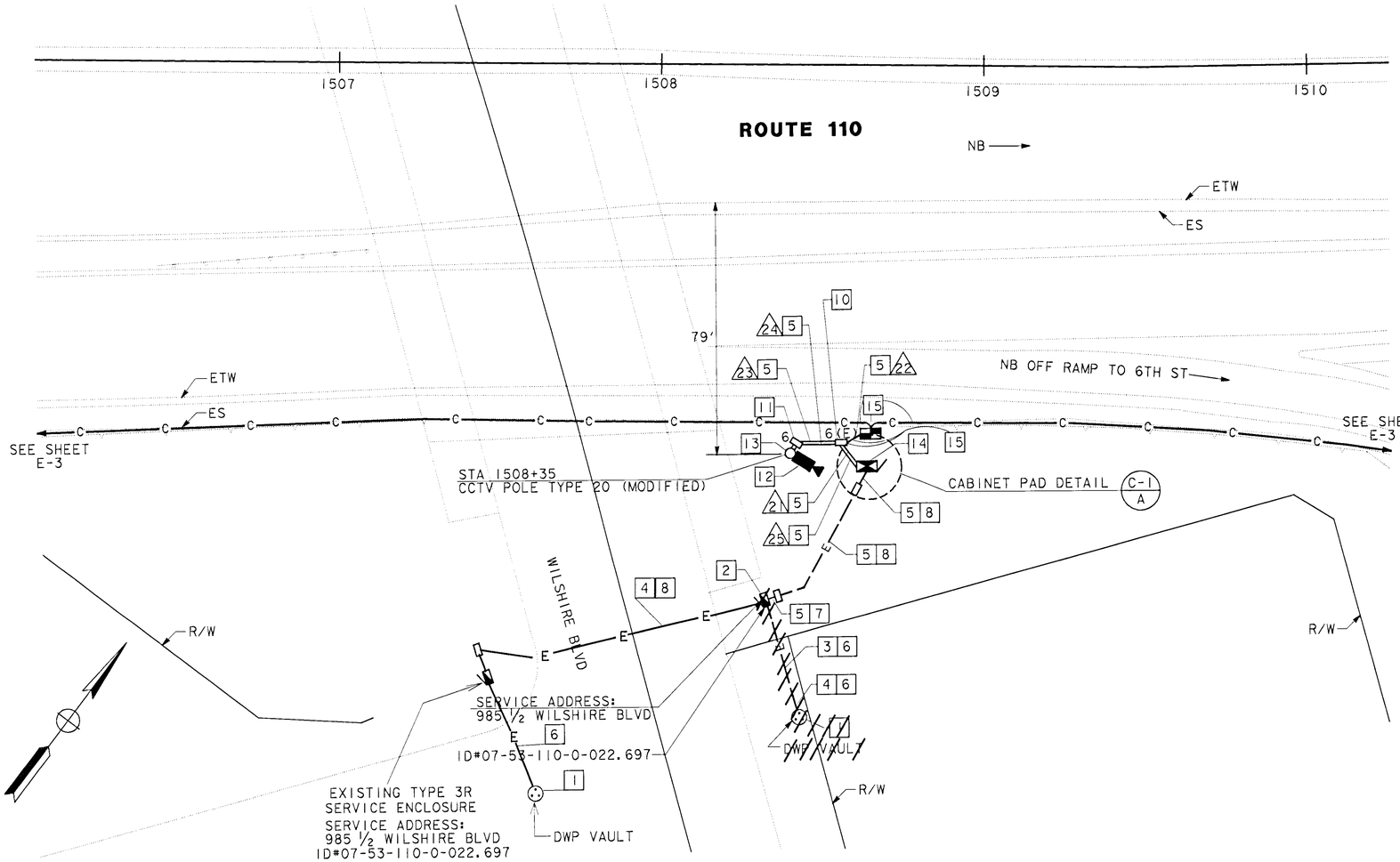

CAMERA LOCATION HA227, PM 22.7

CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 21	22	23	24	25
6P22 CABLE	CONTROLLER DATA	1	1			
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1			
RG-6A/COAX	BASE BAND VIDEO	1		1		
CONTROL CABLE	CAMERA CONTROL				1	1
	CONDUIT SIZE	4"	2"	2"	2"	4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

NOTES: (THIS SHEET ONLY)

1. CONTRACTOR SHALL CONTACT DWP INSPECTOR THREE (3) WORKING DAYS IN ADVANCE FOR ENTRY INTO DWP ELECTRICAL VAULT AND WITH LA CITY INSPECTOR FOR TRENCHING AND INSTALLATION OF CONDUIT.
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120V, IP CIRCUIT BREAKER FOR CCTV CAMERA.
3. JACK FOR CONDUIT BENEATH SIDEWALK.
4. TRENCH FOR CONDUIT IN CONCRETE.
5. TRENCH FOR CONDUIT IN SOIL.
6. EXISTING ~~INSTALL~~ 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 2#8 AND 2"C (EMPTY).
8. INSTALL 2"C, 2#8.
10. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
11. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
12. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
13. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
14. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER. SEE SHEET E-37, DETAIL A.
15. INCLUDED IN THE CCTV AND COMMUNICATIONS SYSTEM ROUTING LANS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA (LOCATION HA227)

SCALE: 1" = 20'

E-16

CALCULATED/ DESIGNED BY	CHECKED BY	DP	CF
DATE		3/94	4/94
REVISED BY			
DATE REVISED			

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:33

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

USERNAME => GCruz
DGN FILE => 712085u1608:03222

CU 07396

EA 120851

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

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u16.dgn DATE: Wed Aug 8 2001 TIME: 10:34

USERID GCruz@T7NT6023 FILE f:\projects\120851_ua\ab\712085u17.dgn DATE Wed Aug 8 2001 TIME 10:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	57	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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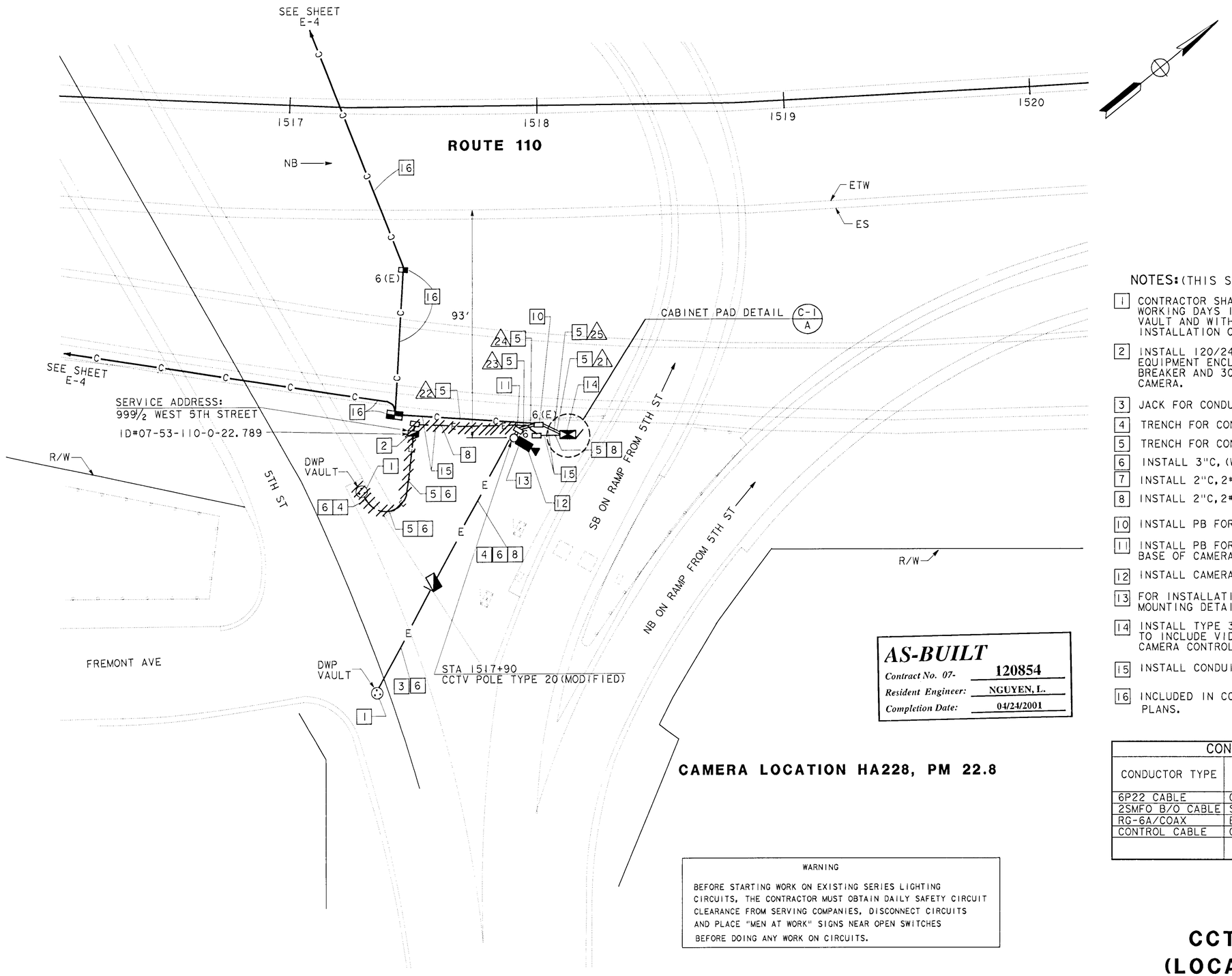

NOTES: (THIS SHEET ONLY)

1. CONTRACTOR SHALL CONTACT DWP INSPECTOR THREE (3) WORKING DAYS IN ADVANCE FOR ENTRY INTO DWP ELECTRICAL VAULT AND WITH LA CITY INSPECTOR FOR TRENCHING AND INSTALLATION OF CONDUIT.
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120V, 1P CIRCUIT BREAKER FOR CCTV CAMERA.
3. JACK FOR CONDUIT BENEATH SIDEWALK.
4. TRENCH FOR CONDUIT IN CONCRETE.
5. TRENCH FOR CONDUIT IN SOIL.
6. INSTALL 3"C, (WIRES BY OTHERS).
7. INSTALL 2"C, 2#8 AND 2"C (EMPTY).
8. INSTALL 2"C, 2#8.
10. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
11. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
12. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
13. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
14. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER. SEE SHEET E-37, DETAIL A.
15. INSTALL CONDUITS IN THE SAME TRENCH.
16. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CAMERA LOCATION HA228, PM 22.8

CONDUCTOR SCHEDULE							
CONDUCTOR TYPE	FUNCTION	RUN					
		21	22	23	24	25
6P22 CABLE	CONTROLLER DATA	1	1			
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1			
RG-6A/COAX	BASE BAND VIDEO	1		1		
CONTROL CABLE	CAMERA CONTROL				1	1
	CONDUIT SIZE	4"	2"	2"	2"	4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

CCTV CAMERA (LOCATION HA228)

SCALE: 1" = 20'

E-17

CALCULATED/ DESIGNED BY	DP	DATE 3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN OVERSIGHT
PAT SULLIVAN
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:32

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FORM DC-0E-92-PF (REV. 3/88)

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

USERNAME => GCruz
DGN FILE => 712085u1708103151

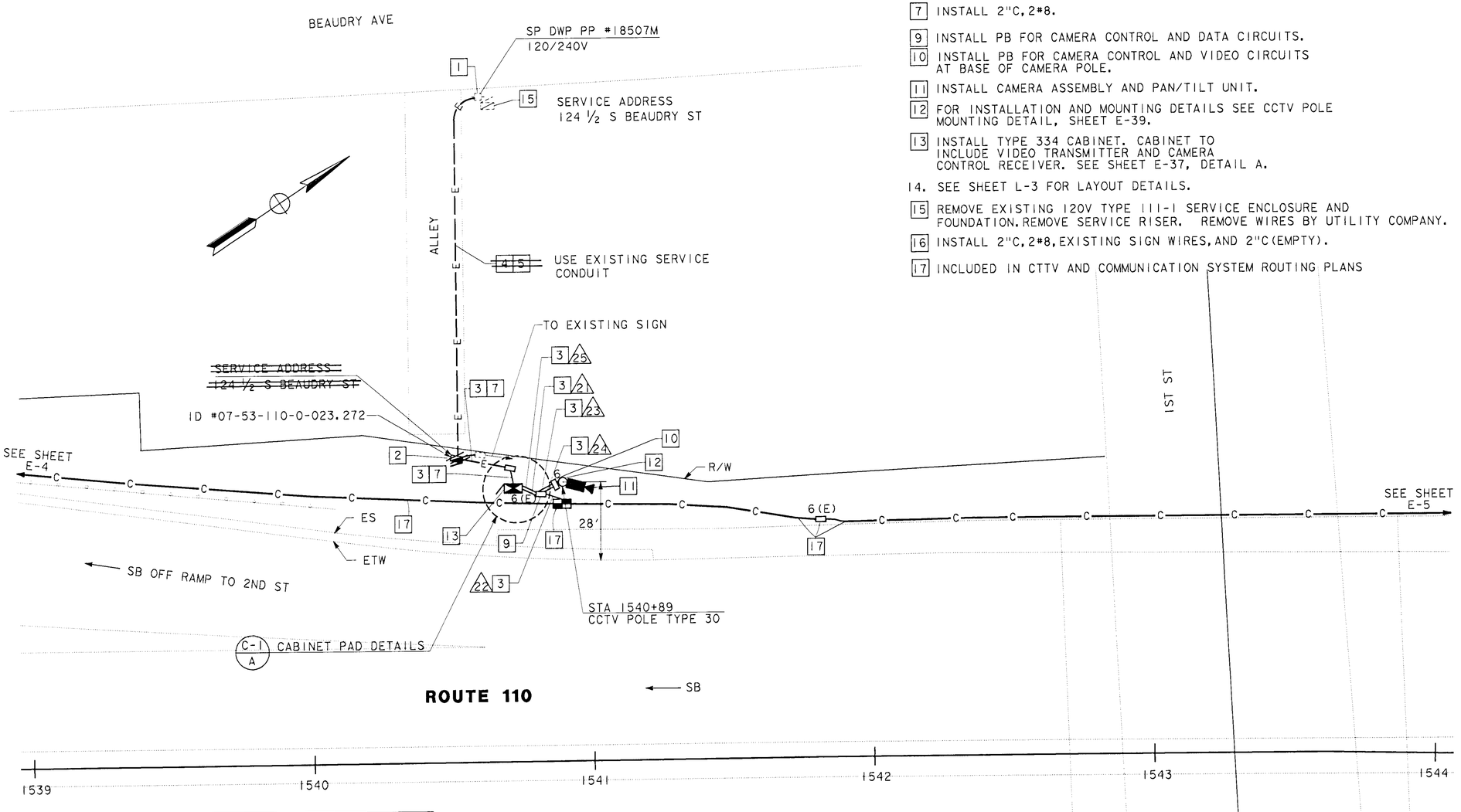
CU 07396

EA 120851

USER ID GCruz@T7NT6023 FILE f:\projects\120851_ua\ab\712085u17.dgn DATE Wed Aug 8 2001 TIME 10:33

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u18.dgn DATE: Wed Aug 8 2001 TIME: 10:32

CONDUCTOR SCHEDULE							
CONDUCTOR TYPE	FUNCTION	RUN					
		21	22	23	24	25	
6P22 CABLE	CONTROLLER DATA	1	1				
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1				
RG-6A/U COAX	BASE BAND VIDEO	1		1			
CONTROL CABLE	CAMERA CONTROL				1	1	
	CONDUIT SIZE	4"	2"	2"	2"	4"	



NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILTIY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 30A, 120V, 1P BRANCH CIRCUIT BREAKER FOR CCTV CAMERA, AND 20A, 120V, 1P BRANCH CIRCUIT BREAKER FOR EXISTING SIGN. CONNECT EXISTING SIGN WIRES.
3. TRENCH FOR CONDUIT IN SOIL.
4. ~~TRENCH FOR CONDUIT IN ASPHALT.~~
5. ~~INSTALL 3"C, (WIRES BY OTHERS).~~
6. INSTALL 2"C, 2#8 AND 2"C (EMPTY).
7. INSTALL 2"C, 2#8.
9. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
10. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
11. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
12. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
13. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER. SEE SHEET E-37, DETAIL A.
14. SEE SHEET L-3 FOR LAYOUT DETAILS.
15. REMOVE EXISTING 120V TYPE III-1 SERVICE ENCLOSURE AND FOUNDATION. REMOVE SERVICE RISER. REMOVE WIRES BY UTILITY COMPANY.
16. INSTALL 2"C, 2#8, EXISTING SIGN WIRES, AND 2"C (EMPTY).
17. INCLUDED IN CTTV AND COMMUNICATION SYSTEM ROUTING PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	58	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES. DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

CAMERA LOCATION HA233, PM 23.3

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

CCTV CAMERA (LOCATION HA233)

SCALE: 1" = 20'

E-18

CALCULATED/ DESIGNED BY	DP	DATE 3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00

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

CU 07396 | EA 120851

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

$$$$$$$$$$DGNSPEC$$$$$$$$$$ $$$$$$$SYTIME$$$$$$ $$$$$$USERN$$$$$$

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u18.dgn DATE: Wed Aug 8 2001 TIME: 10:32

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u19.dgn DATE: Wed Aug 8 2001 TIME: 10:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	59	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

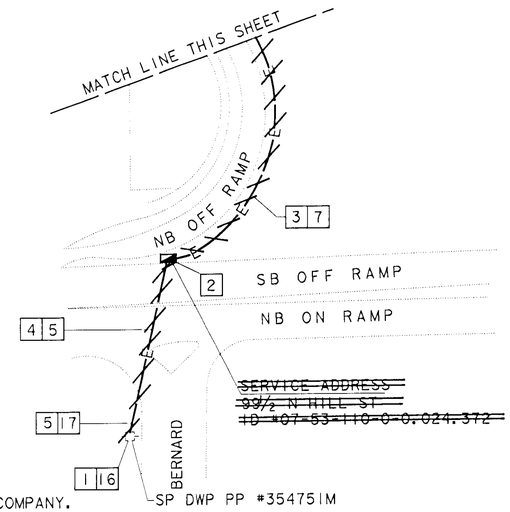
REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

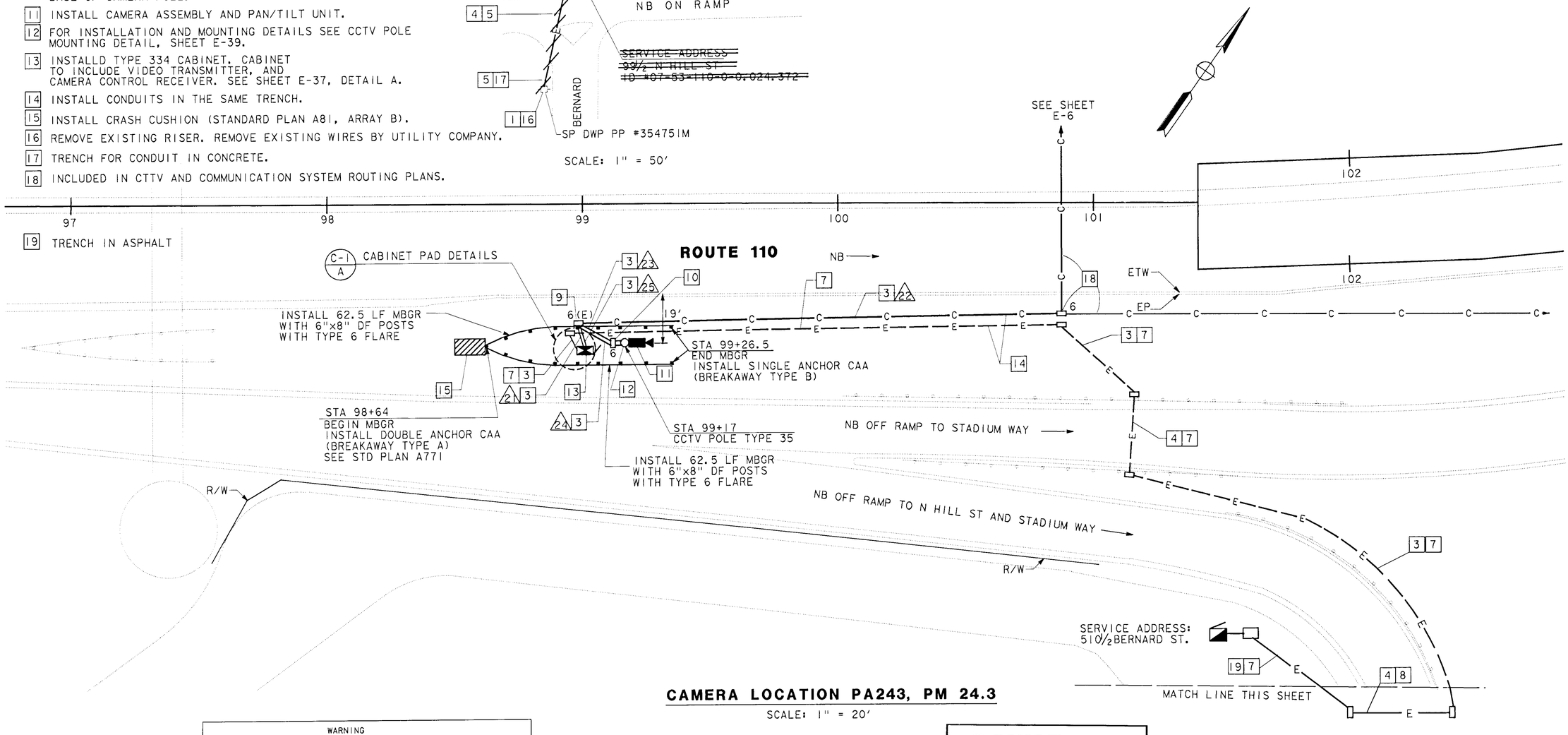
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120, 1P CIRCUIT BREAKER FOR CCTV CAMERA.
3. TRENCH FOR CONDUIT IN SOIL.
4. JACK FOR CONDUIT BENEATH ROADWAY.
5. INSTALL 3"C, (WIRES BY OTHERS).
6. INSTALL 2"C, 2#6 AND 2"C (EMPTY).
7. INSTALL 2"C, 2#6.
8. INSTALL 3"C, 2#6.
9. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
10. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
11. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
12. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
13. INSTALLD TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER, AND CAMERA CONTROL RECEIVER. SEE SHEET E-37, DETAIL A.
14. INSTALL CONDUITS IN THE SAME TRENCH.
15. INSTALL CRASH CUSHION (STANDARD PLAN A81, ARRAY B).
16. REMOVE EXISTING RISER. REMOVE EXISTING WIRES BY UTILITY COMPANY.
17. TRENCH FOR CONDUIT IN CONCRETE.
18. INCLUDED IN CTTV AND COMMUNICATION SYSTEM ROUTING PLANS.
19. TRENCH IN ASPHALT

CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5
6P22 CABLE	CONTROLLER DATA	1	1			
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1			
RG-6A/U COAX	BASE BAND VIDEO	1		1		
CONTROL CABLE	CAMERA CONTROL				1	1
	CONDUIT SIZE	4"	2"	2"	2"	4"





CAMERA LOCATION PA243, PM 24.3

SCALE: 1" = 20'

NOTE: SEE SHEET E-1 FOR LEGEND

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT

Contract No. 07-	120854
Resident Engineer:	NGUYEN, L.
Completion Date:	04/24/2001

CCTV CAMERA (LOCATION PA243)

SCALE AS SHOWN

E-19

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
DP	CF	3/94	4/94	

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00

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

CU 07396 | EA 120851

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

$$$$$$$$$$$$DGNSPEC$$$$$$$$$$ $$$$$$SYTIME$$$$$$ $$$$$$USER$$$$$$

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u19.dgn DATE: Wed Aug 8 2001 TIME: 10:32

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u20.dgn DATE: Wed Aug 8 2001 TIME: 10:30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	60	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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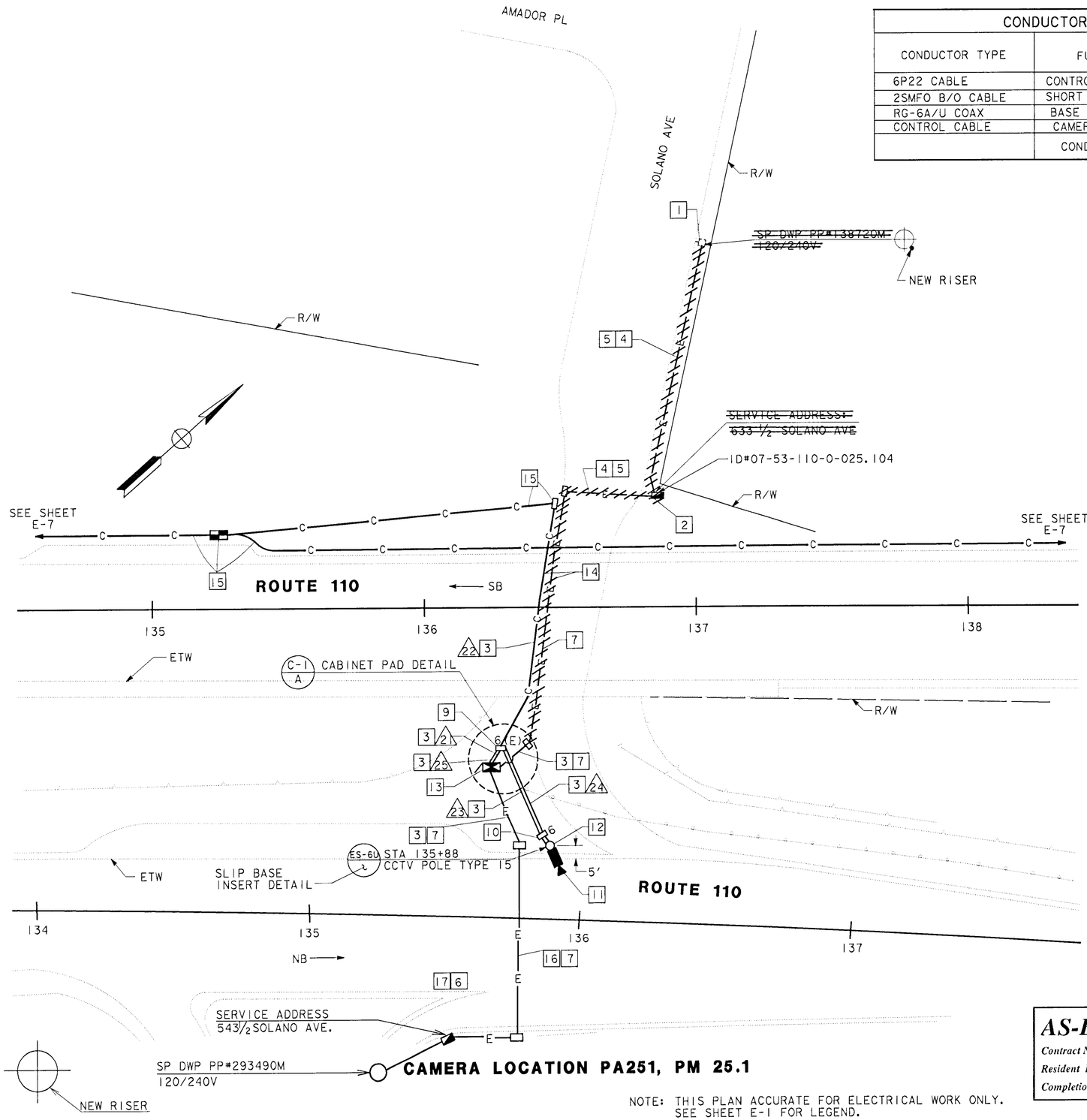
CONDUCTOR SCHEDULE							
CONDUCTOR TYPE	FUNCTION	RUN					
		2	22	23	24	25	
6P22 CABLE	CONTROLLER DATA	1	1				
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1				
RG-6A/U COAX	BASE BAND VIDEO	1		1			
CONTROL CABLE	CAMERA CONTROL				1	1	
	CONDUIT SIZE	4"	2"	2"	2"	4"	



CAMERA LOCATION PA251, PM 25.1

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120V, 1P CIRCUIT BREAKER FOR CCTV CAMERA.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN ASPHALT.
5. INSTALL 3"C, (WIRES BY OTHERS).
6. INSTALL 2"C, 2#8 AND 2"C (EMPTY).
7. INSTALL 2"C, 2#8.
9. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
10. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
11. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
12. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
13. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER, SEE SHEET E-37, DETAIL A.
14. INSTALL CONDUITS IN THE SAME TRENCH.
15. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.
16. JACK FOR CONDUIT BENEATH ROADWAY.
17. JACK FOR CONDUIT BENEATH CONCRETE.

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA (LOCATION PA251)

SCALE: 1" = 20'

E-20

DATE	REVISED BY	DATE REVISED
3/94	DP	4/94 CF

CALCULATED/DESIGNED BY:
CHECKED BY:

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

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

CU 07396 EA 120851

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	61	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAT SULLIVAN
No. C30912
Exp. 3/31/00
CIVIL
STATE OF CALIFORNIA

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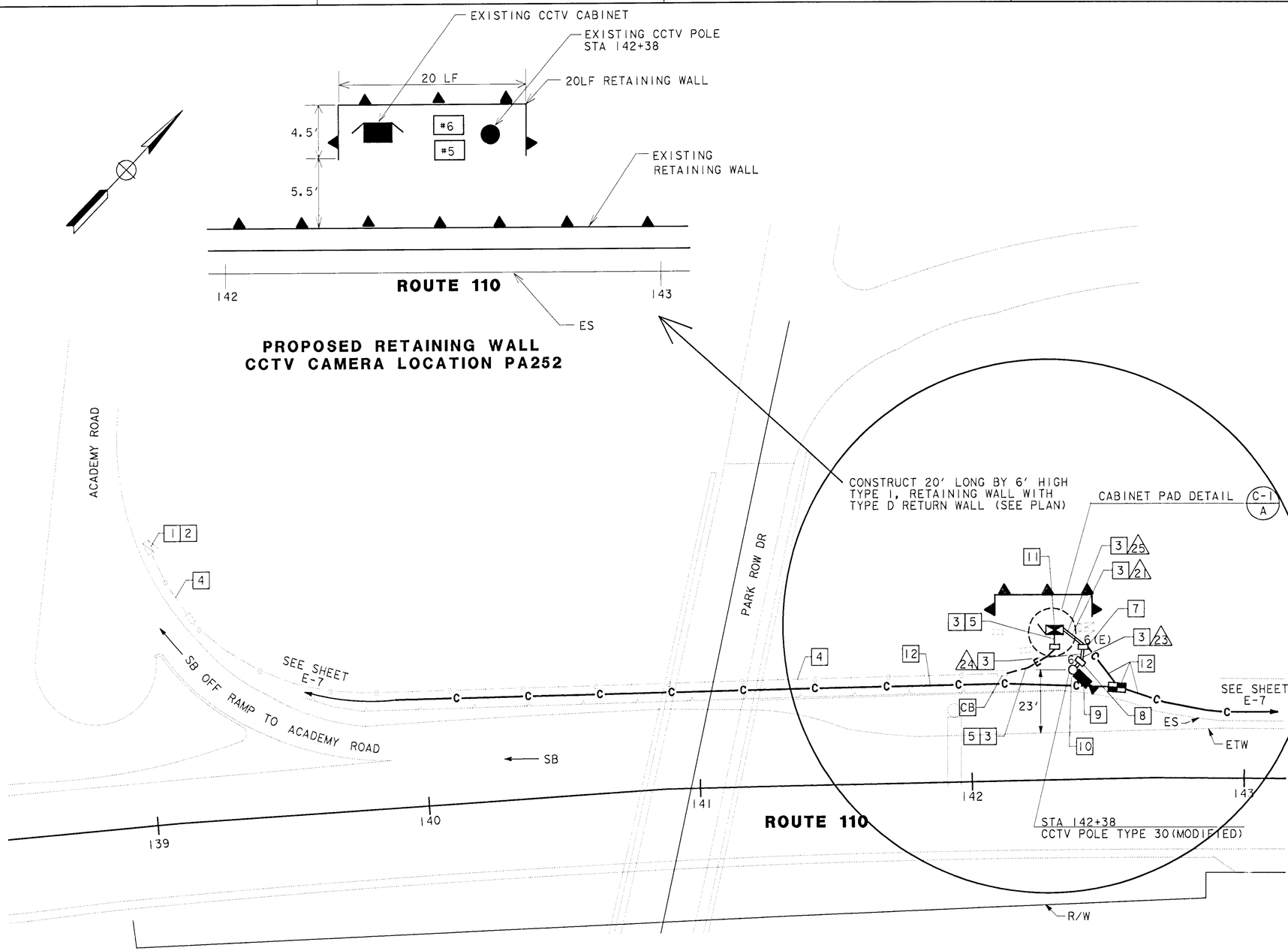

PROPOSED RETAINING WALL
CCTV CAMERA LOCATION PA252

CAMERA LOCATION PA252, PM 25.2

NOTES: (THIS SHEET ONLY)

1. EXISTING 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE: PP#429007H.
2. ADD METERED, 30A, 120V, IP CIRCUIT BREAKER FOR CCTV CAMERA IN EXISTING SERVICE EQUIPMENT ENCLOSURE.
3. TRENCH FOR CONDUIT IN SOIL.
4. ADD 2#8 IN EXISTING CONDUIT.
5. INSTALL 2"C, 2#8.
7. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
8. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
9. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
10. FOR INSTALLATION AND MOUNTING DETAILS, SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
11. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER. SEE SHEET E-37, DETAIL A.
12. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE						
CONDUCTOR TYPE	FUNCTION	RUN 21		23	24	25
6P22 CABLE	CONTROLLER DATA	1				
2SMFO B/O CABLE	SHORT HAUL VIDEO	1				
RG-6A/COAX	BASE BAND VIDEO	1		1		
CONTROL CABLE	CAMERA CONTROL				1	1
	CONDUIT SIZE	4"		2"	2"	4"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA (LOCATION PA252)

SCALE: 1" = 20'

E-21

CALCULATED/ DESIGNED BY	DP	DATE 3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

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

CU 07396 EA 120851

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	62	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAT SULLIVAN
No. C30912
Exp. 3/31/00
CIVIL
STATE OF CALIFORNIA

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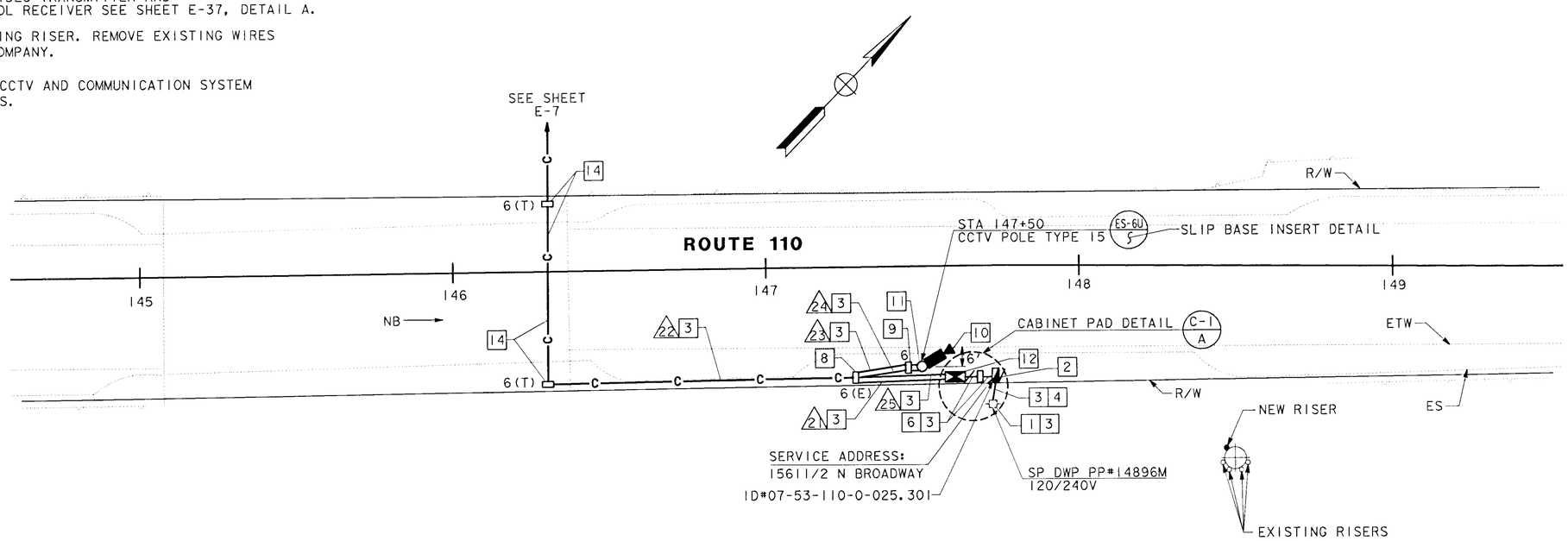
NOTES: (THIS SHEET ONLY)

1. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120V, 1P CIRCUIT BREAKER FOR CCTV CAMERA.
3. TRENCH FOR CONDUIT IN SOIL.
4. INSTALL 3"C, (WIRES BY OTHERS).
5. INSTALL 2"C, 2#8 AND 2"C (EMPTY).
6. INSTALL 2"C, 2#8.
8. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
9. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
10. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
11. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
12. INSTALL TYPE 334 CABINET. CABINET TO INCLUDE VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER SEE SHEET E-37, DETAIL A.
13. REMOVE EXISTING RISER. REMOVE EXISTING WIRES BY UTILITY COMPANY.
14. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 21	RUN 22	RUN 23	RUN 24	RUN 25
6P22 CABLE	CONTROLLER DATA	1	1			
2SMFO B/O CABLE	SHORT HAUL VIDEO	1	1			
RG-6A/U COAX	BASE BAND VIDEO	1		1		
CONTROL CABLE	CAMERA CONTROL				1	1
	CONDUIT SIZE	4"	2"	2"	2"	4"



CAMERA LOCATION PA253, PM 25.3

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA (LOCATION PA253)

SCALE: 1" = 20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

E-22

CALCULATED/DESIGNED BY	DP	DATE 3/94	REVISED BY
CHECKED BY	CF	4/94	DATE REVISED

DESIGN OVERSIGHT: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

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

CU 07396 | EA 120851

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

[ESC-OE]712085u22.psf 10-Jun-1997 16:10 trsteved

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u23.dgn DATE: Wed Aug 8 2001 TIME: 10:30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	63	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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

DATE	REVISED BY
3/94	DP
4/94	CF

DATE	REVISED BY
	CALCULATED/ DESIGNED BY
	CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

NOTES: (THIS SHEET ONLY)

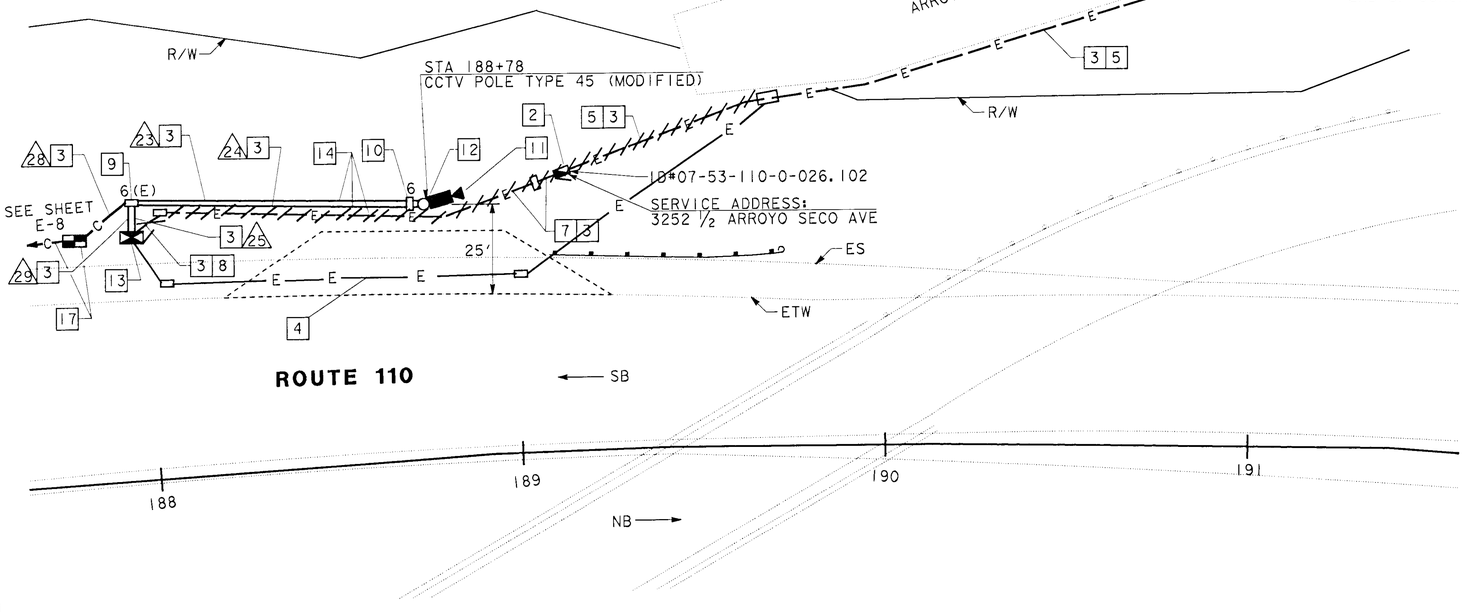
1. INSTALL 3"C TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 30A, 120V, 1P CIRCUIT BREAKER FOR CCTV CAMERA, 30A, 120V, 1P CIRCUIT BREAKER FOR DATA NODE AND 30A, 120V, 1P CIRCUIT BREAKER FOR TMS.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN CONCRETE.
5. INSTALL 3"C, (WIRES BY OTHERS).
6. INSTALL 2"C, 4#6 AND 2"C (EMPTY).
7. INSTALL 2"C, 4#6.
8. INSTALL 2"C, 2#6.
9. INSTALL PB FOR CAMERA CONTROL AND DATA CIRCUITS.
10. INSTALL PB FOR CAMERA CONTROL AND VIDEO CIRCUITS AT BASE OF CAMERA POLE.
11. INSTALL CAMERA ASSEMBLY AND PAN/TILT UNIT.
12. FOR INSTALLATION AND MOUNTING DETAILS SEE CCTV POLE MOUNTING DETAIL, SHEET E-39.
13. INSTALL TYPE 334 CABINET. DATA NODE CABINET TO INCLUDE VIDEO TRANSMITTER CAMERA CONTROL RECEIVER AND ONE D-4 CHANNEL BANK. SEE SHEET E-37, DETAIL A.
14. INSTALL CONDUITS IN THE SAME TRENCH.
15. SEE SHEET L-4 FOR LAYOUT DETAILS.
16. SEE SHEET E-31 FOR TMS DETAILS.
17. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE

CONDUCTOR TYPE	FUNCTION	RUN 23	RUN 24	RUN 25	RUN 28		RUN 29		
75P22 CABLE	COMMUNICATION DATA				1		1		
6P22 CABLE	CONTROLLER DATA				1		1		
2SMFO B/O CABLE	SHORT HAUL VIDEO					1			1
RG-6A/U COAX	BASE BAND VIDEO	1					1		
CONTROL CABLE	CAMERA CONTROL		1	1					
8SMFO B/O CABLE	NODE CONTROL					1		1	
	INNERDUCT				1 1/4"	1 1/4"	1 1/4"	1 1/4"	
	CONDUIT SIZE	2"	2"	4"	4"		4"		

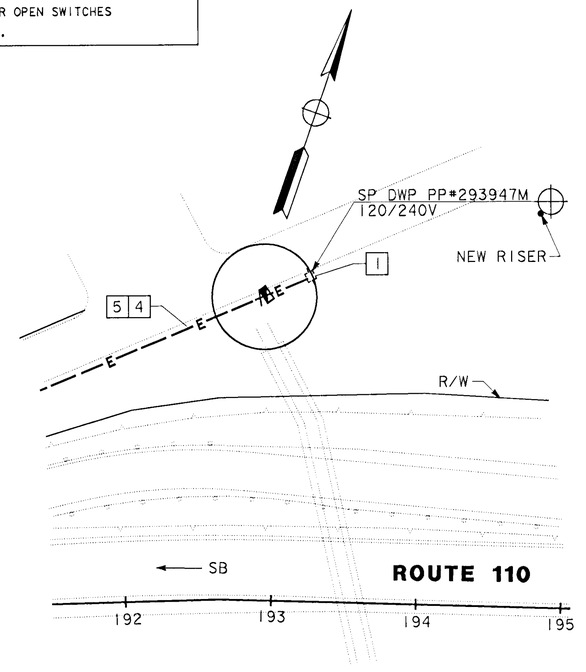
WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.



CAMERA LOCATION PA260, PM 26.0
DATA NODE PA260

SCALE: 1" = 20'



DETAIL "A"

SCALE: 1"=50'

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CCTV CAMERA AND EQUIPMENT AT DATA NODE (LOCATION PA260)

SCALE AS SHOWN

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

E-23

LAST REVISION 00-00-00

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

CU 07396 EA 120851

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

$$$$$$$$$$DONSPEC$$$$$$$$$$ $$$$$$$SYTIME$$$$$$$ $$$$$$$USERID$$$$$$$$$$

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u23.dgn DATE: Wed Aug 8 2001 TIME: 10:30

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u24.dgn DATE: Wed Aug 8 2001 TIME: 10:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	64	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

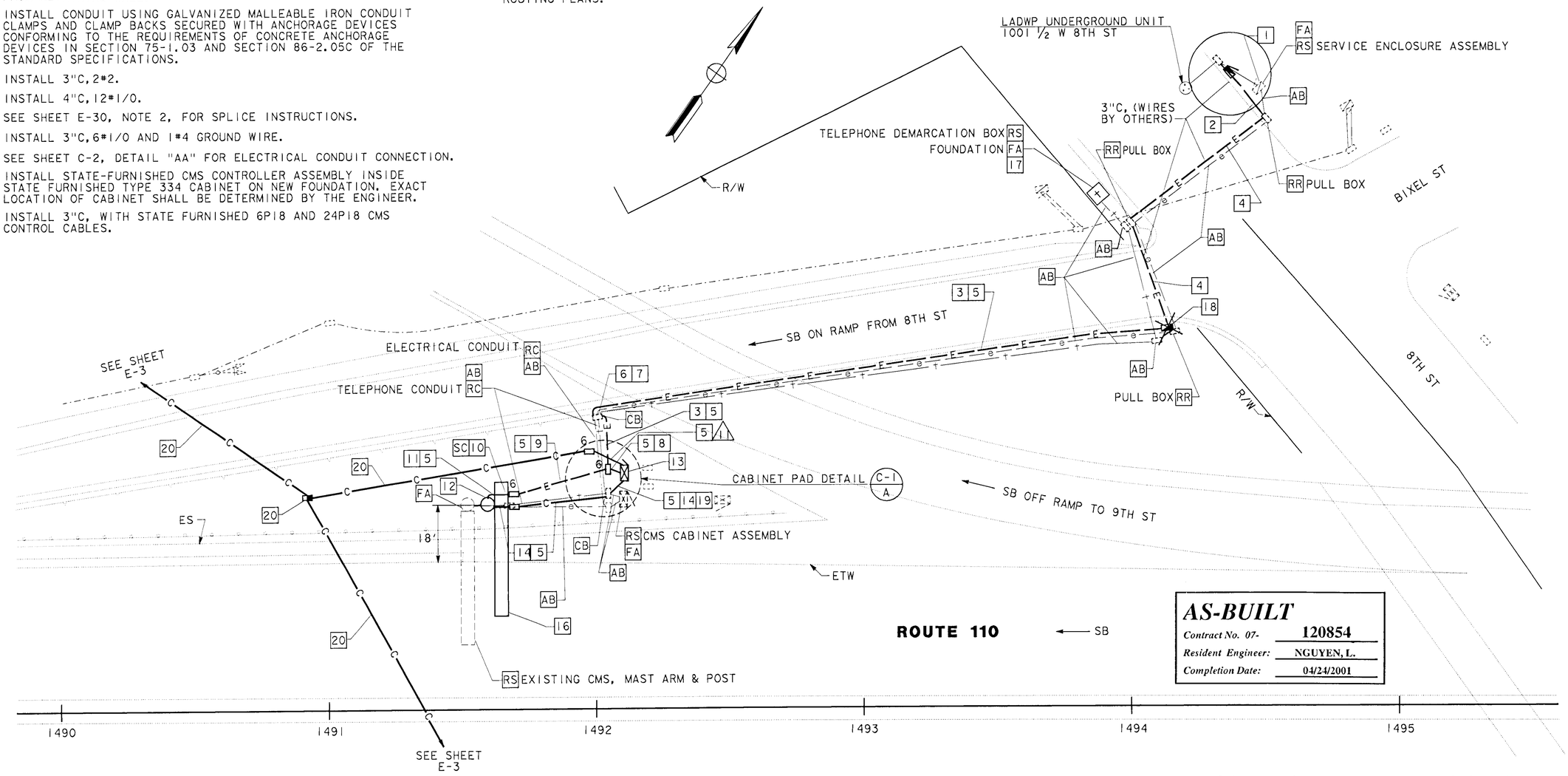
REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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

NOTES: (THIS SHEET ONLY)

1. REMOVE EXISTING 120/240V, 3 WIRE, METERED TYPE III BF SERVICE EQUIPMENT ENCLOSURE. THE CONTRACTOR SHALL CONTACT CALTRANS ENGINEER IN ADVANCE BEFORE REMOVING EXISTING SERVICE EQUIPMENT ENCLOSURE AND CONTACT DWP 48 HOURS IN ADVANCE TO TURN OFF POWER FROM POWER VAULT.
2. REMOVE AND REPLACE PCC SIDEWALK SECTIONS AS NECESSARY.
3. INSTALL 4"C, 12#1/0 AND 2#2.
4. JACK FOR CONDUIT BENEATH ROADWAY.
5. TRENCH FOR CONDUIT IN SOIL.
6. REMOVE EXISTING ELECTRICAL CONDUIT AND CONDUIT CLAMPS FROM RETAINING WALL.
7. INSTALL CONDUIT USING GALVANIZED MALLEABLE IRON CONDUIT CLAMPS AND CLAMP BACKS SECURED WITH ANCHORAGE DEVICES CONFORMING TO THE REQUIREMENTS OF CONCRETE ANCHORAGE DEVICES IN SECTION 75-1.03 AND SECTION 86-2.05C OF THE STANDARD SPECIFICATIONS.
8. INSTALL 3"C, 2#2.
9. INSTALL 4"C, 12#1/0.
10. SEE SHEET E-30, NOTE 2, FOR SPLICE INSTRUCTIONS.
11. INSTALL 3"C, 6#1/0 AND 1#4 GROUND WIRE.
12. SEE SHEET C-2, DETAIL "AA" FOR ELECTRICAL CONDUIT CONNECTION.
13. INSTALL STATE-FURNISHED CMS CONTROLLER ASSEMBLY INSIDE STATE FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. EXACT LOCATION OF CABINET SHALL BE DETERMINED BY THE ENGINEER.
14. INSTALL 3"C, WITH STATE FURNISHED 6P18 AND 24P18 CMS CONTROL CABLES.
16. INSTALL STATE-FURNISHED MODEL 500 CMS ON NEW MAST ARM. SEE SHEETS C-2 THROUGH C-7 FOR POLE AND CMS MOUNTING DETAILS. NEW CMS POLE AND MAST ARM SHALL BE MOUNTED ON NEW FOUNDATION.
17. CONTRACTOR SHALL COORDINATE DISCONNECTION OF TELEPHONE SERVICE WITH CALTRANS ENGINEER AND PROVIDER OF TELEPHONE SERVICE.
18. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 200A, 240V, 2P MAIN CIRCUIT BREAKER AND (4) 80A, 120V, 1P AND 30A, 120V, 1P CIRCUIT BREAKERS FOR CMS.
19. CONNECT 6P22 TO CMS CONTROLLER. USE CONDUIT FROM PB INTO CABINET.
20. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE		
CONDUCTOR TYPE	FUNCTION	RUN
6P22 CABLE	CONTROLLER DATA	1
	CONDUIT SIZE	2"



AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CHANGEABLE MESSAGE SIGN ELECTRICAL SYSTEM (CMS NO 10)

SCALE: 1" = 20'

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

E-24

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
		PRE 3/94	RJC 4/94	

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00

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

CU 07396	EA 120851

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

$$$$$$$$$$DONSPEC$$$$$$$$$$ $$$$$$SYTIME$$$$$$ $$$$$$USER$$$$$$

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u24.dgn DATE: Wed Aug 8 2001 TIME: 10:29

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u25.dgn DATE: Wed Aug 8 2001 TIME: 10:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	65	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAT SULLIVAN
No. C30912
Exp. 3/31/00
CIVIL
STATE OF CALIFORNIA

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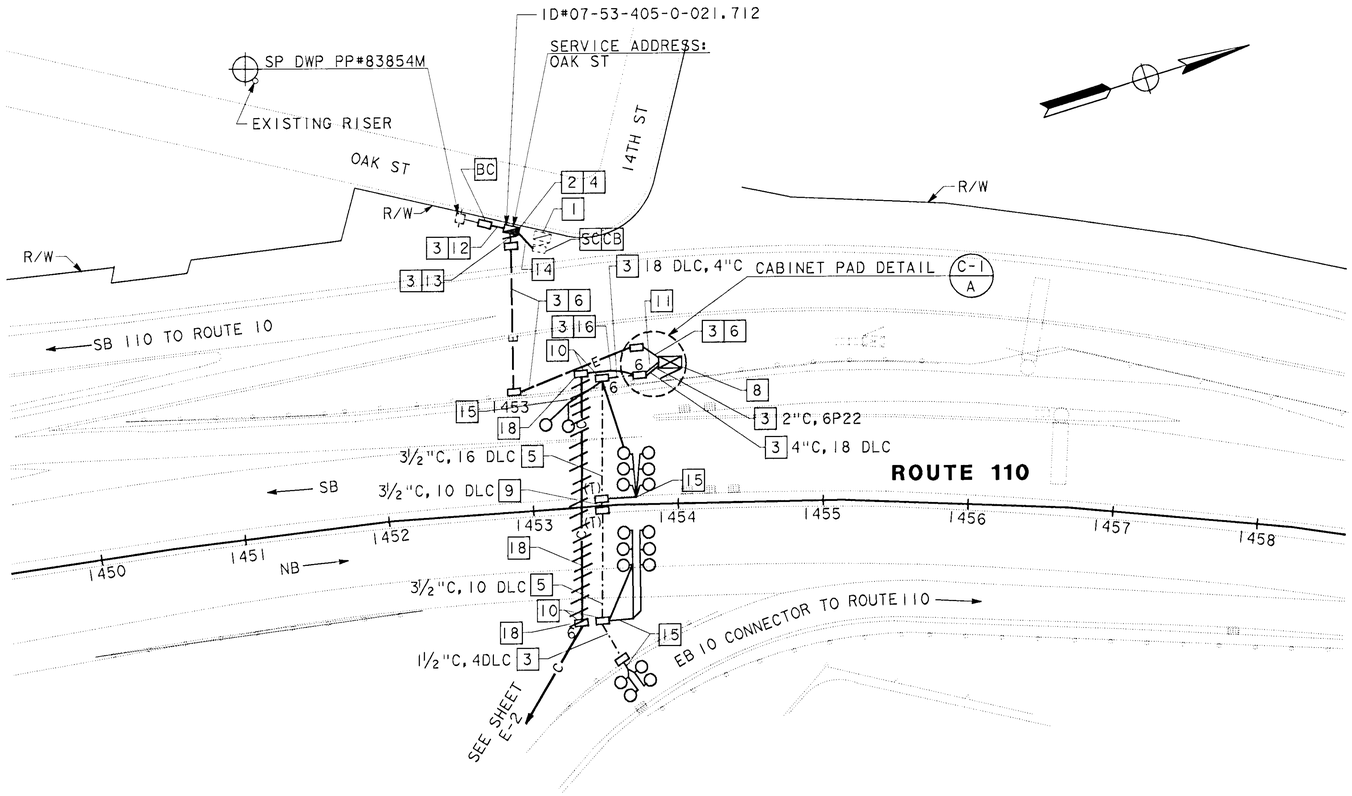


LOCATION 2608, PM 21.7

NOTES: (THIS SHEET ONLY)

1. REMOVE EXISTING 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE: PP#83854M. THE CONTRACTOR SHALL CONTACT CALTRANS ENGINEER IN ADVANCE BEFORE REMOVING EXISTING SERVICE EQUIPMENT ENCLOSURE AND CONTACT DWP 48 HOURS IN ADVANCE TO TURN OFF POWER FROM POWER POLE.
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER, 30A, 120V, 1P CIRCUIT BREAKER FOR TMS, (4) 20A, 120V, 1P AND 15A, 120V, 1P CIRCUIT BREAKERS FOR EXISTING CIRCUITS.
3. TRENCH FOR CONDUIT IN SOIL.
4. CONNECT EXISTING CIRCUITS TO NEW SERVICE EQUIPMENT ENCLOSURE.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. INSTALL 2"C, 2#6.
8. INSTALL STATE-FURNISHED TYPE 334 CABINET ON A NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY. SEE SHEET E-31, DETAIL D.
9. SEE SHEET E-31, DETAIL E FOR CONDUIT BENEATH MEDIAN BARRIER.
10. USE THE SAME PIT FOR JACKING CONDUITS
11. CONNECT 6P22 TO CONTROLLER. USE CONDUIT FROM PB INTO CABINET.
12. INSTALL 3"C, (WIRES BY OTHERS).
13. INSTALL 2"C, 2#6 AND 2"C (EMPTY).
14. INSTALL 2"C, 8#6 FOR EXISTING CIRCUITS.
15. SEE SHEET E-31 FOR TMS LOOP CONFIGURATION.
16. INSTALL 2"C, 1-6P22 FOR CONNECTION TO CONTROLLER.
17. LOCATIONS OF PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE EGINNING ANY CONSTRUCTION OPERATIONS THE NEW LOCATIONS SHALL BE VERIFIED BY THE RESIDENT ENGINEER.
18. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

TRAFFIC MONITORING STATION (LOCATION 2608)

SCALE: 1" = 50'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

E-25

DATE	REVISED BY
11/93	MXZ
7/94	CF

CALCULATED/DESIGNED BY
CHECKED BY

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

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

CU 07396 EA 120851

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

$$$$$$$$$$DGNSPEC$$$$$$$$$$ $$$$$$$$SYTIME$$$$$$$$ $$$$$$USER$$$$$$

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u25.dgn DATE: Wed Aug 8 2001 TIME: 10:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	66	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

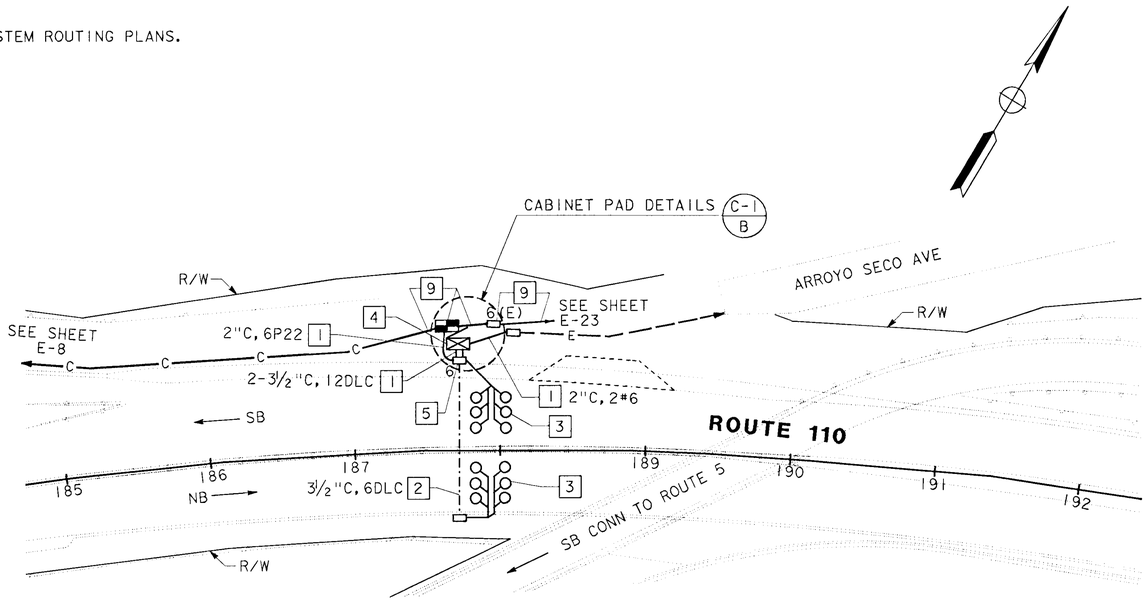
6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAT SULLIVAN
No. C30912
Exp. 3/31/00
CIVIL
STATE OF CALIFORNIA

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

NOTES: (THIS SHEET ONLY)

1. TRENCH FOR CONDUIT IN SOIL.
2. JACK FOR CONDUIT BENEATH ROADWAY.
3. SEE SHEET E-31 FOR TMS LOOP CONFIGURATION.
4. INSTALL STATE-FURNISHED TYPE 334 CABINET ON FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY.
5. CONNECT 6P22 TO CONTROLLER. USE CONDUIT FROM PB INTO CABINET
6. SEE SHEET E-23 FOR ELECTRICAL DETAILS ONLY.
7. LOCATION OF PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
8. SEE SHEET L-4 FOR LAYOUT DETAILS.
9. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.



LOCATION 2250, PM 26.0

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. SEE SHEET E-1 FOR LEGEND.

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

TRAFFIC MONITORING STATION (LOCATION 2250)

SCALE: 1" = 50'

E-26

CALCULATED/ DESIGNED BY	DATE	REVISED BY
CHECKED BY	7/94	DATE REVISED
MXZ	11/93	
CF		

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 10-Jun-1997
TIME PLOTTED => 13:47

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
USERNAME => trannda
DGN FILE => [ESC-OE]712085u26.psf
CU 07396
EA 120851

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u27.dgn DATE: Wed Aug 8 2001 TIME: 10:28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	67	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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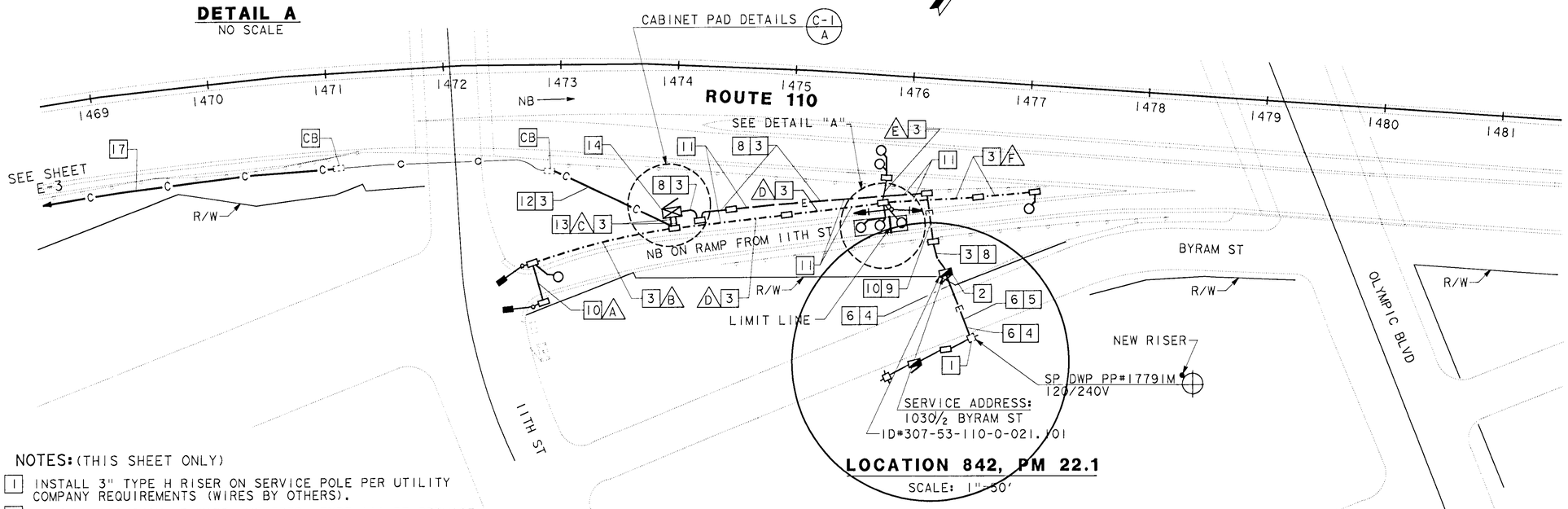
RAMP METER SIGNAL
SAWCUT PAVEMENT
2'
ETW
SAWCUT PAVEMENT
14'
5'
3'
ETW
AC SHOULDER
50'
15'
REMOVE 14' X 65' AC PAVEMENT AND BASE, AND REPLACE WITH PCC BASE AND SUB-BASE. SEE SHEET E-32 FOR NEW PAVEMENT CROSS SECTION DETAIL.
LIMIT LINE

DETAIL A
NO SCALE



LOCATION 842, PM 22.1
SCALE: 1"=50'

NOTES: (THIS SHEET ONLY)

1. INSTALL 3" TYPE H RISER ON SERVICE POLE PER UTILITY COMPANY REQUIREMENTS (WIRES BY OTHERS).
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120V, 1P CIRCUIT BREAKER FOR RAMP METER.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN CONCRETE.
5. TRENCH FOR CONDUIT IN ASPHALT.
6. INSTALL 3"C (WIRES BY OTHERS).
7. INSTALL 2"C, 2#8 AND 2"C (EMPTY).
8. INSTALL 2"C, 2#8.
9. INSTALL 3"C, 2#8.
10. JACK FOR CONDUIT BENEATH ROADWAY.
11. INSTALL CONDUITS IN THE SAME TRENCH.
12. INSTALL 2"C FROM EXISTING PULL BOX TO PULL BOX IN FRONT OF CONTROLLER CABINET. INSTALL 1-6P22 CABLE IN CONDUIT.
13. CONNECT 6P22 COMMUNICATION CABLE TO TERMINAL BLOCK INSIDE 334 CABINET.
14. INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY.
15. FOR RAMP METERING SYSTEM DETAILS AND NOTES SEE SHEET E-32.
16. LOCATIONS OF POLES, PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE BEGINNING ANY CONSTRUCTION OPERATIONS, THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER.
17. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
SEE SHEET E-1 FOR LEGEND.

RAMP METER CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	A	B	C	D	E	F
#14	RAMP SIGNAL			3	3		
	SPARES			3	3		
	TOTAL			6	6		
#10	SIGNAL COMMON			1	1		
	METER-ON SIGN	3	3	3			
	TOTAL	3	3	4	1		
DLC	QUEUE DETECTOR		1	1			
	DEMAND DETECTOR			1	1		
	PASSAGE DETECTOR			1	1		
	SURVEILLANCE DETECTOR			2	2	2	
	COUNT DETECTOR			1	1		1
	SPARE (HOV)						
	TOTAL		1	6	5	2	1
	CONDUIT SIZE (INCHES)	3"	2"	2-3"	3"	2"	2"

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

WARNING
BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

RAMP METERING SYSTEM (LOCATION 842)

SCALE AS SHOWN

E-27

DESIGNED BY	CALCULATED/ CHECKED BY	DATE	REVISED BY	DATE REVISED
PAT SULLIVAN	CF	PRE 3/94		
DESIGN OVERSIGHT	CHECKED BY	3/93		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00

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

CU 07396 EA 120851

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

$$$$$$$$$$DGNSPEC$$$$$$$$$$ $$$$$$SYTIME$$$$$$ $$$$$$USER$$$$$$

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u28.dgn DATE: Wed Aug 8 2001 TIME: 10:27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	68	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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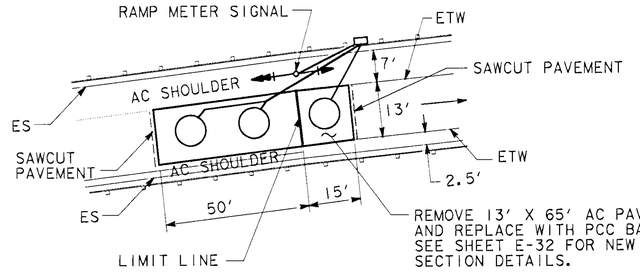
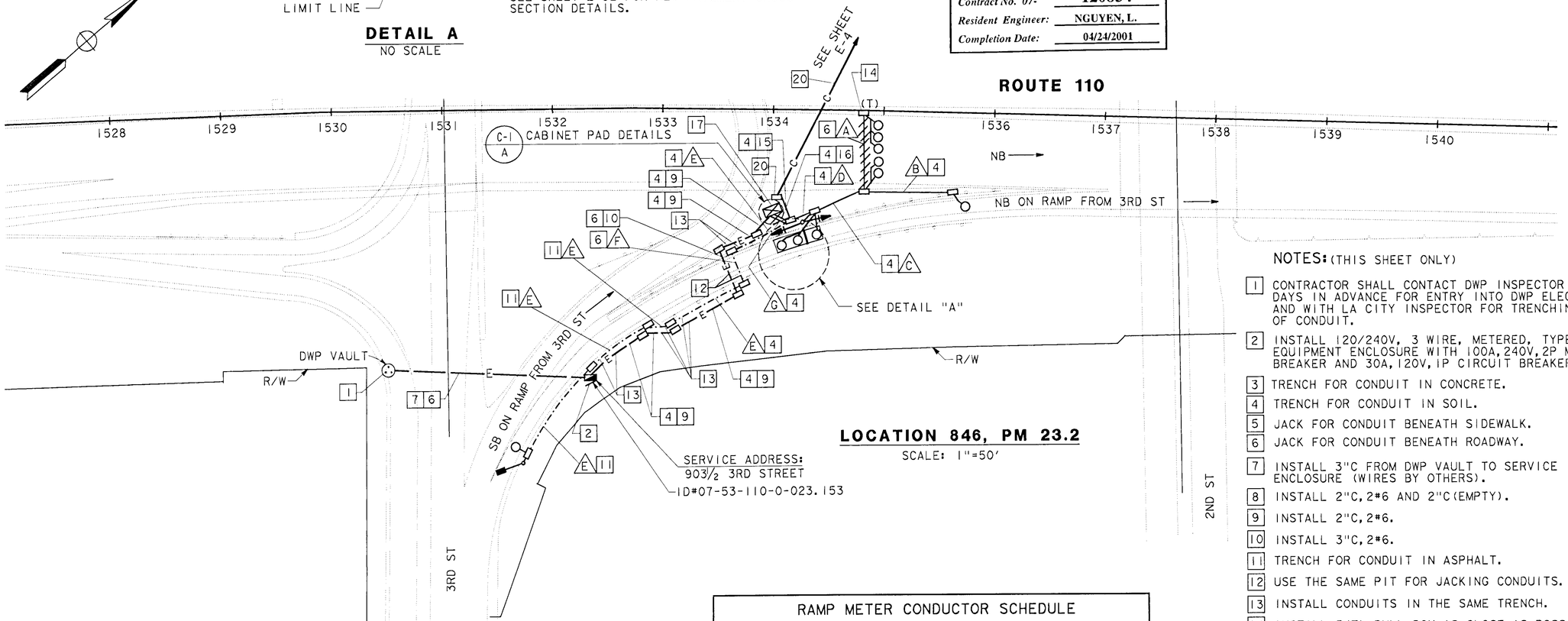
AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001



DETAIL A
NO SCALE

ROUTE 110



LOCATION 846, PM 23.2
SCALE: 1"=50'

RAMP METER CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	A	B	C	D	E	F	G
#14	RAMP SIGNAL				3			3
	SPARES				3			3
	TOTAL				6			6
#10	SIGNAL COMMON				1			1
	METER-ON SIGN					3	3	3
	TOTAL				1	3	3	4
DLC	QUEUE DETECTOR					1	1	1
	DEMAND DETECTOR				1			1
	PASSAGE DETECTOR				1			1
	SURVEILLANCE DETECTOR	3		5	5			5
	COUNT DETECTOR		1	1	1			1
	SPARE (HOV)							
	TOTAL	3	1	6	8	1	1	9
	CONDUIT SIZE (INCHES)	3"	2"	2"	3"	2"	3"	2-3"

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

NOTES: (THIS SHEET ONLY)

1. CONTRACTOR SHALL CONTACT DWP INSPECTOR THREE(3) WORKING DAYS IN ADVANCE FOR ENTRY INTO DWP ELECTRICAL VAULT AND WITH LA CITY INSPECTOR FOR TRENCHING AND INSTALLATION OF CONDUIT.
2. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 100A, 240V, 2P MAIN CIRCUIT BREAKER AND 30A, 120V, IP CIRCUIT BREAKER FOR RAMP METER.
3. TRENCH FOR CONDUIT IN CONCRETE.
4. TRENCH FOR CONDUIT IN SOIL.
5. JACK FOR CONDUIT BENEATH SIDEWALK.
6. JACK FOR CONDUIT BENEATH ROADWAY.
7. INSTALL 3"C FROM DWP VAULT TO SERVICE EQUIPMENT ENCLOSURE (WIRES BY OTHERS).
8. INSTALL 2"C, 2#6 AND 2"C(EMPTY).
9. INSTALL 2"C, 2#6.
10. INSTALL 3"C, 2#6.
11. TRENCH FOR CONDUIT IN ASPHALT.
12. USE THE SAME PIT FOR JACKING CONDUITS.
13. INSTALL CONDUITS IN THE SAME TRENCH.
14. INSTALL 5(T) PULL BOX AS CLOSE AS POSSIBLE TO MEDIAN BARRIER.
15. INSTALL 2"C FROM COMMUNICATION PULL BOX TO PULL BOX IN FRONT OF CONTROLLER CABINET. INSTALL 1-6P22 CABLE IN CONDUIT.
16. CONNECT 6P22 COMMUNICATION CABLE TO TERMINAL BLOCK INSIDE 334 CABINET.
17. INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY.
18. FOR RAMP METERING SYSTEM DETAILS AND NOTES SEE SHEET E-32.
19. LOCATIONS OF POLES, PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE BEGINNING ANY CONSTRUCTION OPERATIONS, THE NEW LOCATIONS SHALL BE VERIFIED BY THE ENGINEER.
20. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

RAMP METERING SYSTEM (LOCATION 846)

SCALE AS SHOWN

E-28

	DATE	REVISED BY
CALCULATED/DESIGNED BY	MXZ 3/94	CF 4/94
CHECKED BY		

DESIGN OVERSIGHT
PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:27

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

USERNAME => GCruz
DGN FILE => 712085u2808102637

CU 07396

EA 120851

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

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u28.dgn DATE: Wed Aug 8 2001 TIME: 10:27

USER ID: GCruz@T7NT6023 F. F. f:\projects\120851_ua\ab\712085u29.dgn DATE: Wed Aug 8 2001 TIME: 10:27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	69	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

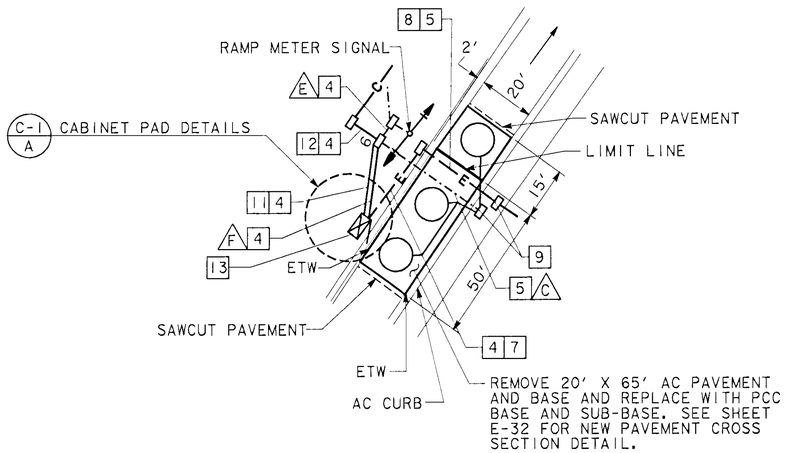
6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.



DETAIL A
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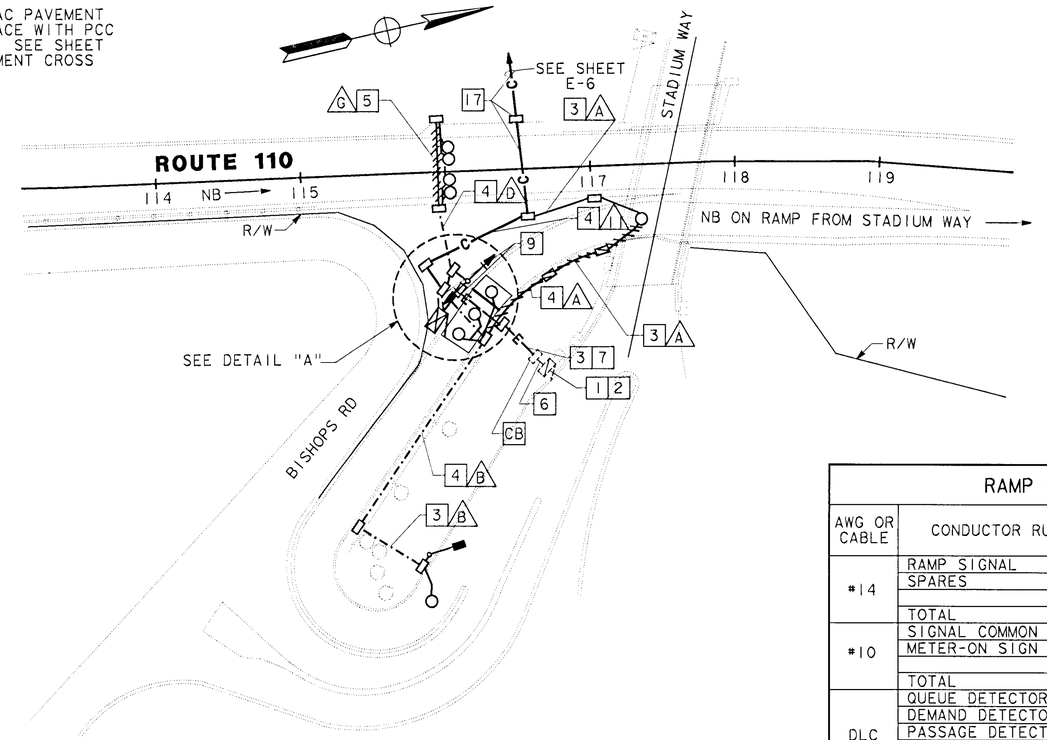

LOCATION 851, PM 24.7
SCALE: 1" = 50'

NOTES: (THIS SHEET ONLY)

1. EXISTING 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE. PP#138892M.
2. ADD METERED 30A, 120V, IP CIRCUIT BREAKER FOR RAMP METER SYSTEM IN EXISTING SERVICE EQUIPMENT ENCLOSURE.
3. TRENCH FOR CONDUIT IN SOIL.
4. TRENCH FOR CONDUIT IN ASPHALT.
5. JACK FOR CONDUIT BENEATH ROADWAY.
6. ADD 2#8 IN EXISTING CONDUIT.
7. INSTALL 2"C, 2#8.
8. INSTALL 3"C, 2#8.
9. USE THE SAME PIT FOR JACKING CONDUITS.
10. INSTALL CONDUITS IN THE SAME TRENCH.
11. CONNECT 6P22 COMMUNICATION CABLE TO TERMINAL BLOCK INSIDE 334 CABINET.
12. INSTALL 2"C FROM COMMUNICATION PULL BOX TO PULL BOX IN FRONT OF CONTROLLER CABINET. INSTALL 1-6P22 CABLE IN CONDUIT.
13. INSTALL STATE-FURNISHED TYPE 334 CABINET ON A NEW FOUNDATION. CABINET TO INCLUDE STATE-FURNISHED 170 CONTROLLER ASSEMBLY.
14. FOR RAMP METERING SYSTEM DETAILS AND NOTES SEE SHEET E-32.
15. LOCATIONS OF POLES, PULL BOXES, CONTROLLER CABINET AND POSITIONING OF DETECTORS ARE SCHEMATIC UNLESS OTHERWISE NOTED. BEFORE BEGINNING ANY CONSTRUCTION OPERATIONS, THE NEW LOCATIONS SHALL BE VERIFIED BY THE RESIDENT ENGINEER PRIOR TO INSTALLATION.
16. SEE SHEET PD-1 FOR PAVEMENT DELINEATION DETAILS.
17. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

RAMP METER CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	A	B	C	D	E	F	G
#14	RAMP SIGNAL					3	3	
	SPARES					3	3	
	TOTAL					6	6	
#10	SIGNAL COMMON					1	1	
	METER-ON SIGN		3	3			3	
	TOTAL		3	3		1	4	
DLC	QUEUE DETECTOR		1	1			1	
	DEMAND DETECTOR			1			1	
	PASSAGE DETECTOR			1			1	
	SURVEILLANCE DETECTOR				4	4	4	2
	COUNT DETECTOR	1		1			1	
	SPARE (HOV)							
	TOTAL	1	1	4	4	4	8	2
	CONDUIT SIZE (INCHES)	2"	2"	3"	2"	2"	2-3"	3"

AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

RAMP METERING SYSTEM (LOCATION 851)

SCALE AS SHOWN

E-29

DESIGN OVERSIGHT — PAT SULLIVAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

DATE	REVISED BY	CALCULATED/ DESIGNED BY
11/93	MXZ	CF
7/94	DATE REVISED	CHECKED BY

LAST REVISION 00-00-00 — DATE PLOTTED => 8-Aug-2001 TIME PLOTTED => 10:26

FORM DC-OE-92-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
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CU 07396
EA 120851

USERID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u29.dgn DATE: Wed Aug 8 2001 TIME: 10:27

PROJECT NOTE: (THIS SHEET ONLY)

1. TRENCH AND INSTALL CONDUIT(S) IN SOIL.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.
7. COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
34. COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR IRRIGATION CONTROLLER.
36. TRENCH AND INSTALL CONDUIT(S) IN ASPHALT.
6. TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				4	6
50P22 CABLE	DATA/VOICE	1					
24SMFO CABLE	VIDEO/DATA		1				
12SMFO CABLE	VIDEO DISTRIBUTION			1			
6P22 CABLE	DATA/VOICE					1	2
	INNERDUCT (SIZE 32)		1	1			
	CONDUIT SIZE	103			103	53	78

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	23	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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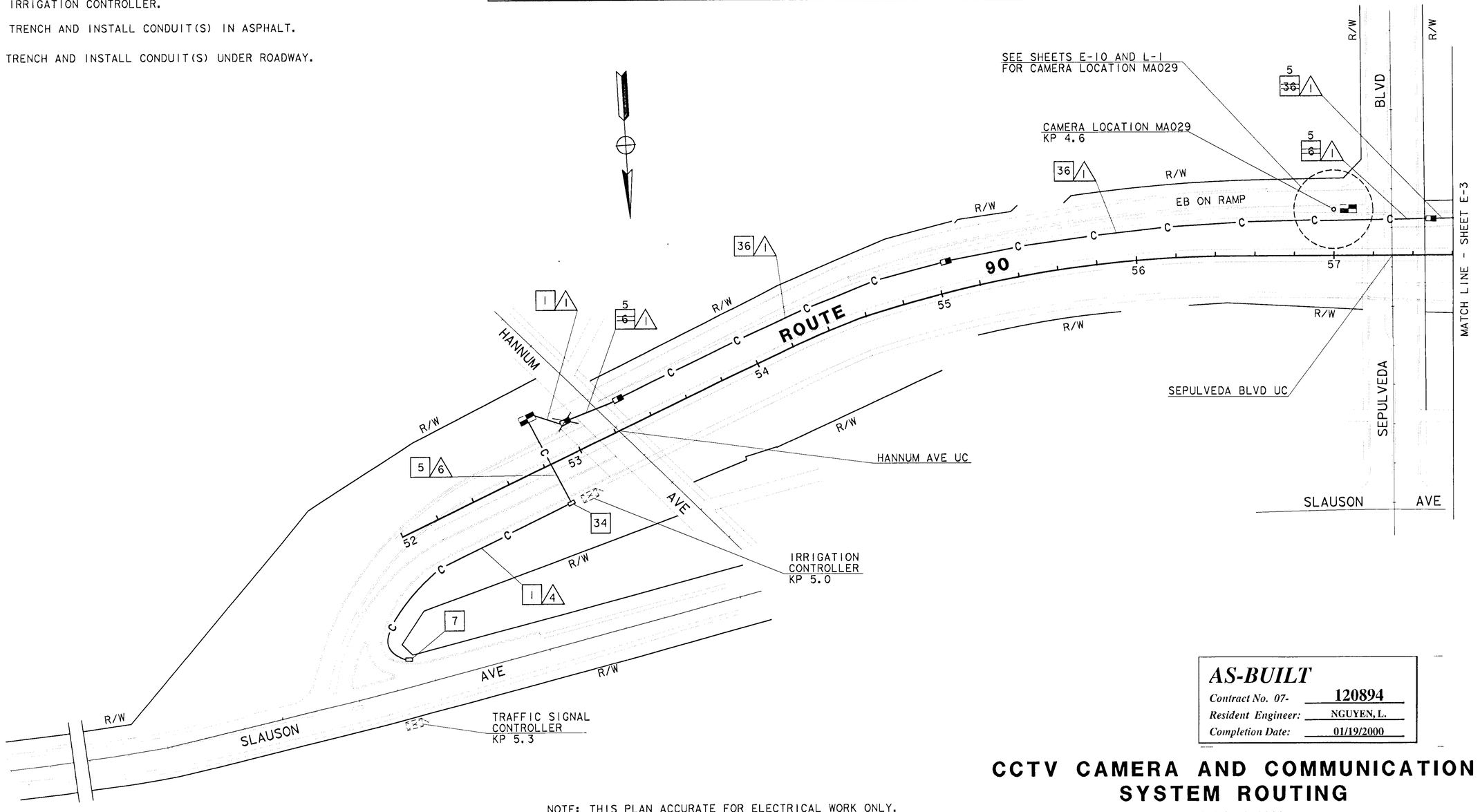

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CCTV CAMERA AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT
PROJECT ENGINEER: CONWAY CHU
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED
REVISED BY
DATE

LAST REVISION 00-00-00
DATE PLOTTED => 27-Apr-2000
TIME PLOTTED => 12:23

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
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DGN FILE => 712089u0227122306
CU 07396
EA 120891

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u03.dgn DATE: Thu Apr 27 2000 TIME: 12:23

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	24	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

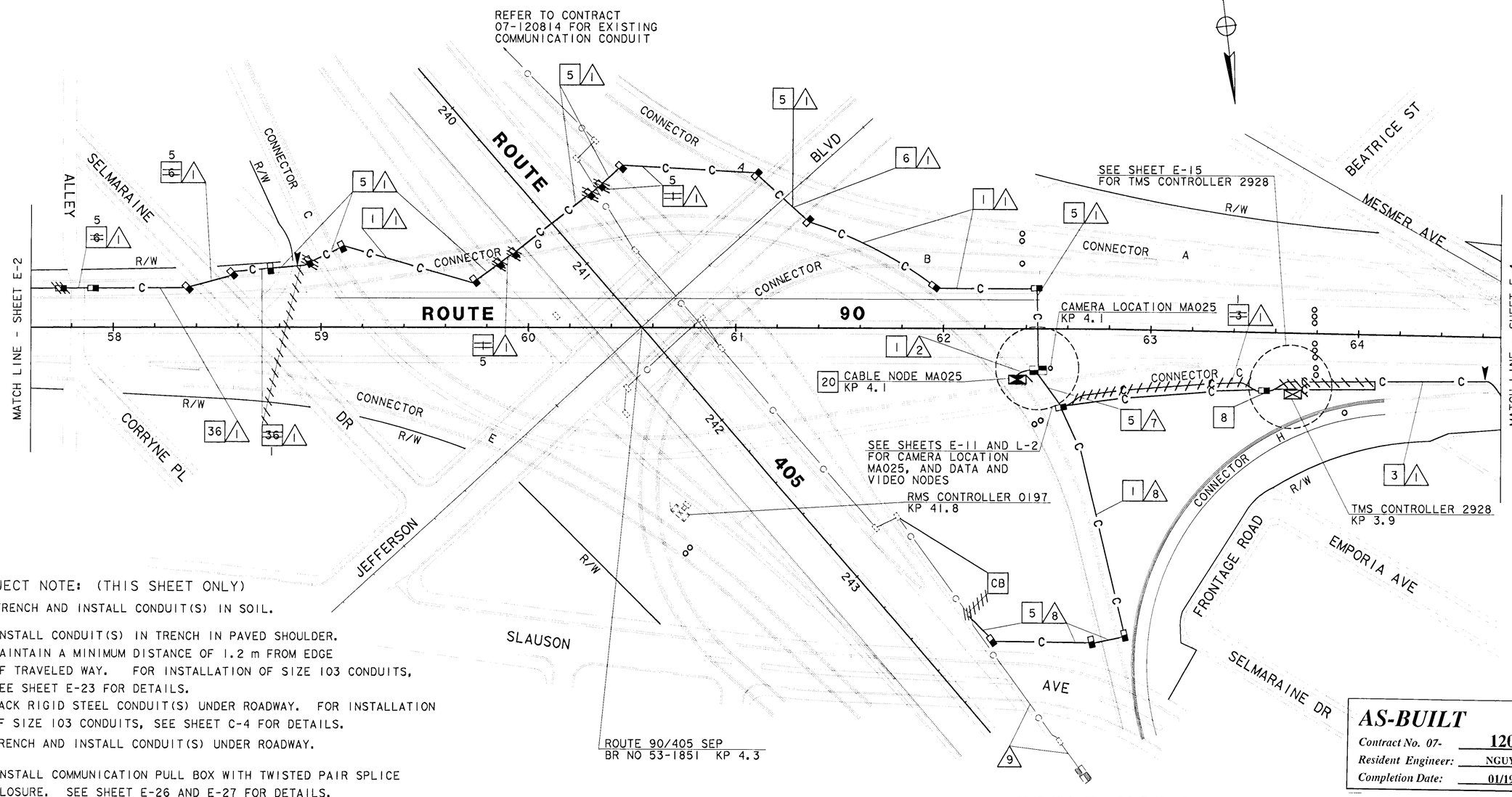
5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — Exp. 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)																	
CONDUCTOR TYPE	FUNCTION	RUN															
		1				2			7			8			9		
50P22 CABLE	DATA/VOICE	1				3			2			1			1		
24SMFO CABLE	VIDEO/DATA		1				2			1							
12SMFO CABLE	VIDEO DISTRIBUTION			1						1							
12SMFO CABLE	90/405 INTERCONNECT						1			1			1			1	
	INNERDUCT (SIZE 32)		1	1			2			3			1			1	
	CONDUIT SIZE		103		103		103		103		103		103			103(*)	

(*) EXISTING CONDUIT (EMPTY SPARE)



PROJECT NOTE: (THIS SHEET ONLY)

- 1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.
- 3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.
- 5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.
- 6 TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.
- 8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.
- 20 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT CABLE NODE. SEE SHEETS E-31 AND E-32 FOR DETAILS.
- 36 TRENCH AND INSTALL CONDUIT(S) IN ASPHALT.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND GENERAL NOTES SEE SHEET E-1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CABLE NODE, TMS, CCTV CAMERA AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

E-3

DATE	REVISED BY	DATE REVISED
CALCULATED/ DESIGNED BY		
CHECKED BY		
PROJECT ENGINEER	CONWAY CHU	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 TIME PLOTTED => 12:23

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

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DGN FILE => 712089u0327122236

CU 07396 EA 120891

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u03.dgn DATE: Thu Apr 27 2000 TIME: 12:23

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	90	1.4/5.2	25	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — STATE OF CALIFORNIA

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

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVEL WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.

4 INSTALL CONDUIT(S) ON STRUCTURE. SEE SHEET C-2 FOR DETAILS.

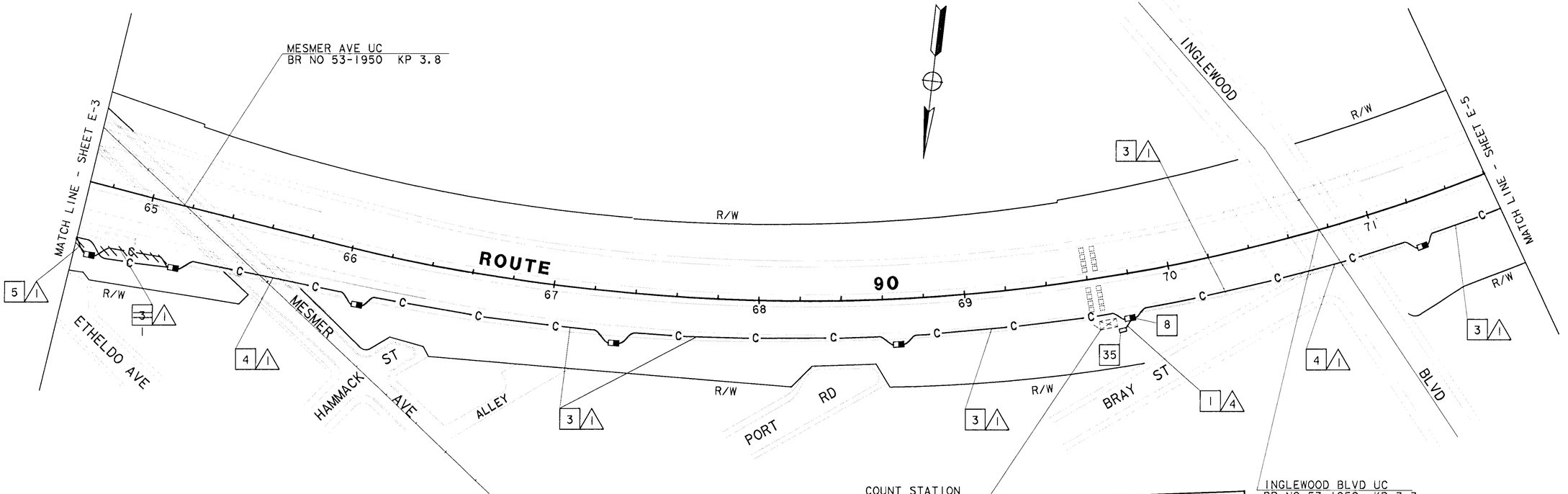
5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.

35 COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR COUNT STATION CONTROLLER.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1				RUN 4
50P22 CABLE	DATA/VOICE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/VOICE					1
	INNERDUCT (SIZE 32)		1	1		
	CONDUIT SIZE	103			103	53



AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER: CONWAY CHU

CALCULATED/DESIGNED BY | DATE | REVISED BY | DATE REVISED | CHECKED BY

LAST REVISION 00-00-00 | DATE PLOTTED => 27-Apr-2000 | TIME PLOTTED => 12:22

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

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DGN FILE => 712089u0427122155

CU 07396 | EA 120891

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	26	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU No. E15305 EXP. 3/31/01 ELECTRICAL — STATE OF CALIFORNIA

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Caltrans Metric

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.

4 INSTALL CONDUIT(S) ON STRUCTURE. SEE SHEET C-2 FOR DETAILS.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

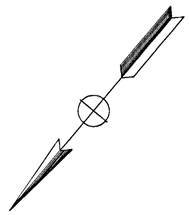
7 COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.

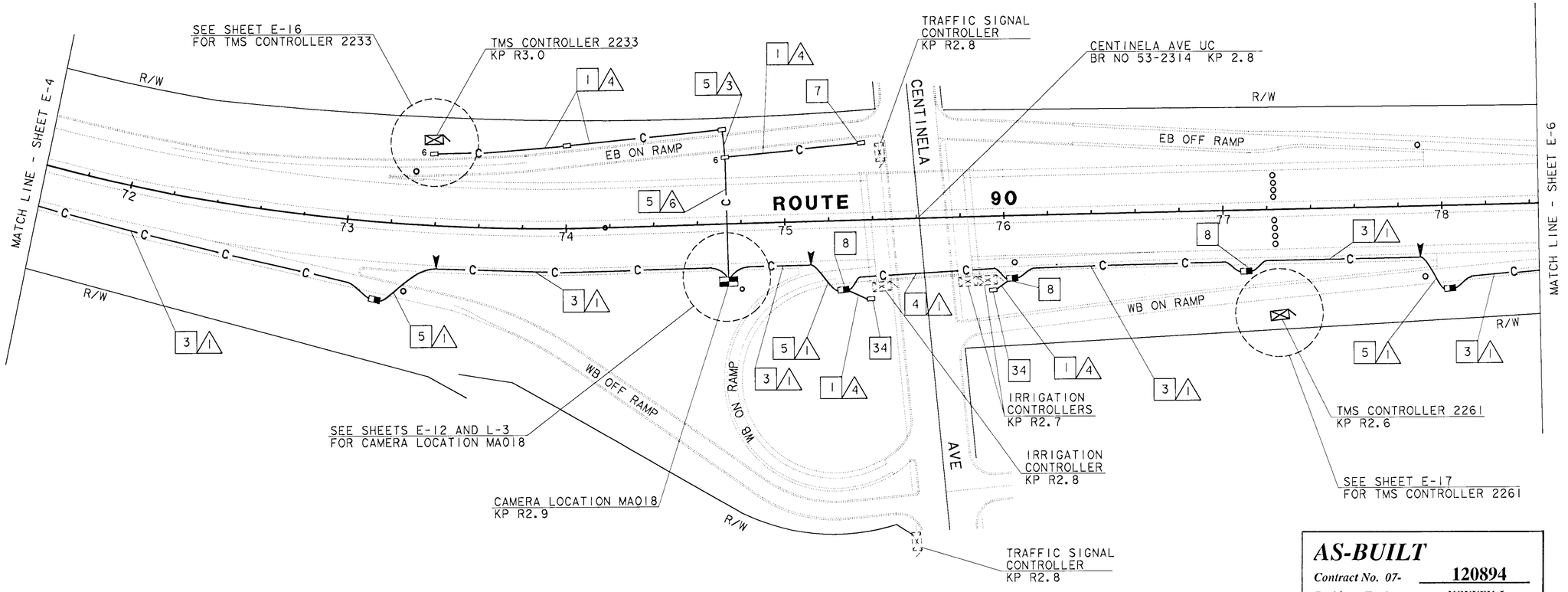
8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.

34 COIL 8 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR IRRIGATION CONTROLLER.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN						
		1				3	4	6
50P22 CABLE	DATA/VOICE	1						
24SMFO CABLE	VIDEO/DATA		1					
12SMFO CABLE	VIDEO DISTRIBUTION			1				
6P22 CABLE	DATA/VOICE					1	1	2
	INNERDUCT (SIZE 32)		1	1				
	CONDUIT SIZE	103			103	78	53	103





AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

TMS, CCTV CAMERA AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

E-5

DATE | REVISED BY | DATE REVISED
CALCULATED/ DESIGNED BY
CHECKED BY
PROJECT ENGINEER: CONWAY CHU
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00
TIME PLOTTED => $$$$$$$SYSTIME$$$$$$$

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => $$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$
CU 07396
EA 120891

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.

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

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	27	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — Exp. 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA

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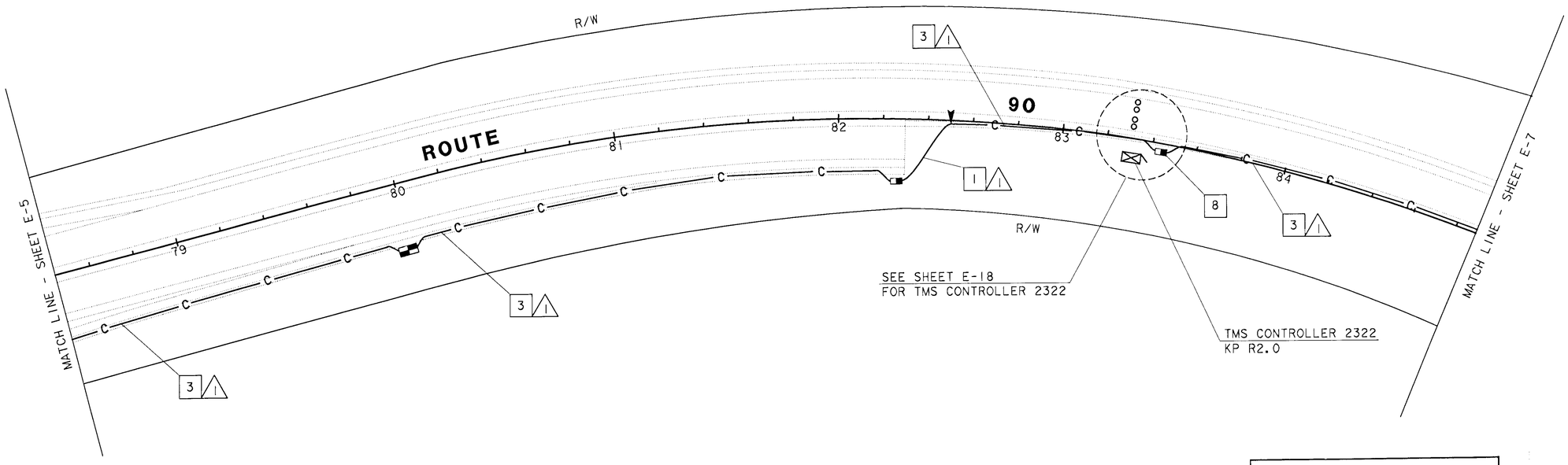

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

TMS AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

E-6

DATE	REVISED BY
	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER
CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00
TIME PLOTTED => $$$$$$$SYSTIME$$$$$$$

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

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DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 07396

EA 120891

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	90	1.4/5.2	28	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — Exp. 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA

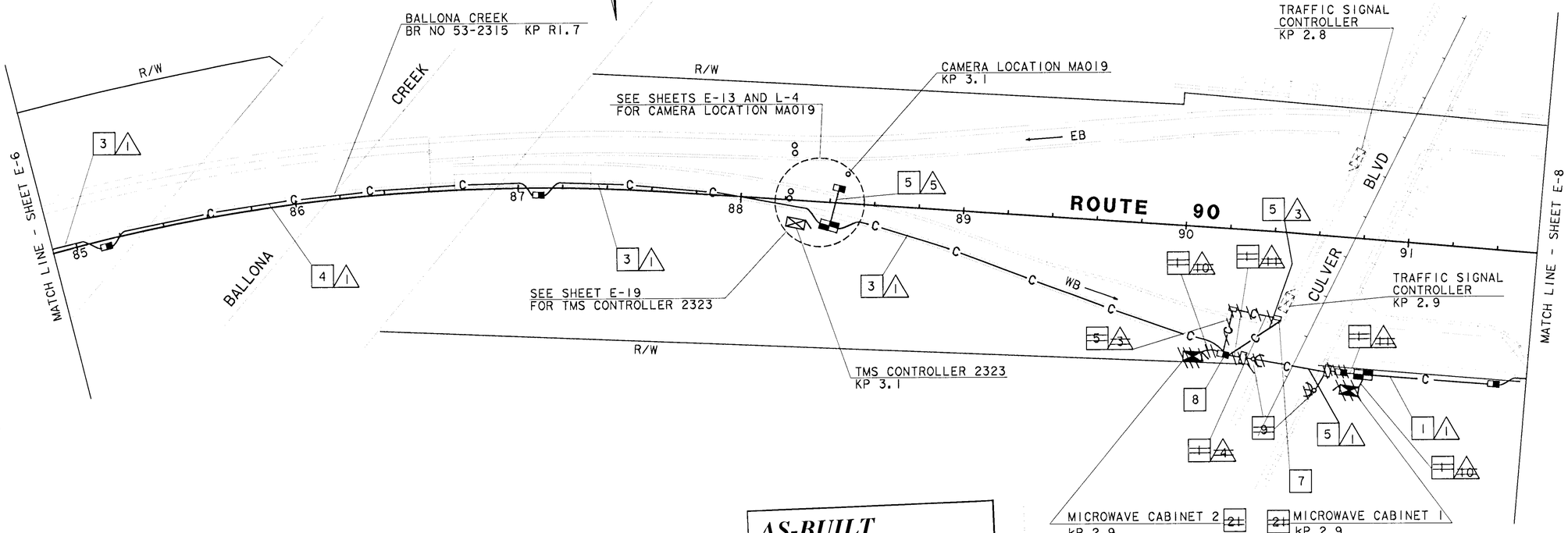
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PROJECT NOTE: (THIS SHEET ONLY)

1. TRENCH AND INSTALL CONDUIT(S) IN SOIL.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.
4. INSTALL CONDUIT(S) ON STRUCTURE. SEE SHEET C-2 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.
7. COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.
9. INSTALL ONE 31 GHZ AND ONE STATE-FURNISHED 23 GHZ MIROWAVE ANTENNAS ON NEW TYPE 15 LIGHTING STANDARD POLE (WITHOUT LUMINAIRE ARM).
21. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT PER SHEET E-28.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	1	1	3	4	5	10	10	10	11	11
50P22 CABLE	DATA/VOICE	1						1				
24SMFO CABLE	VIDEO/DATA		1						1			
12SMFO CABLE	VIDEO DISTRIBUTION			1						1		
6P22 CABLE	DATA/VOICE				1	1		1				
2SMFO B/O CABLE	SHORT HAUL VIDEO						1					
RG6AN COAX CABLE	MICROWAVE ANTENNA										1	1
RG58A/U COAX CABLE	MICROWAVE ANTENNA										2	2
#18	MICROWAVE ANTENNA										6	6
	INNERDUCT (SIZE 32)		1	1			1		1	1		
	CONDUIT SIZE	103		103	78	53	103	103			103	53



AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

TMS, CCTV CAMERA, MICROWAVE TRANSMISSION SYSTEM AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

E-7

DATE | REVISED BY | DATE REVISED
CALCULATED/DESIGNED BY
CHECKED BY
PROJECT ENGINEER
CONWAY CHU
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 TIME PLOTTED => $$$$$$$SYTIME$$$$$$

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

USERNAME => $$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 07396 EA 120891

USERID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u08.dgn DATE: Thu Apr 27 2000 TIME: 12:21

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.

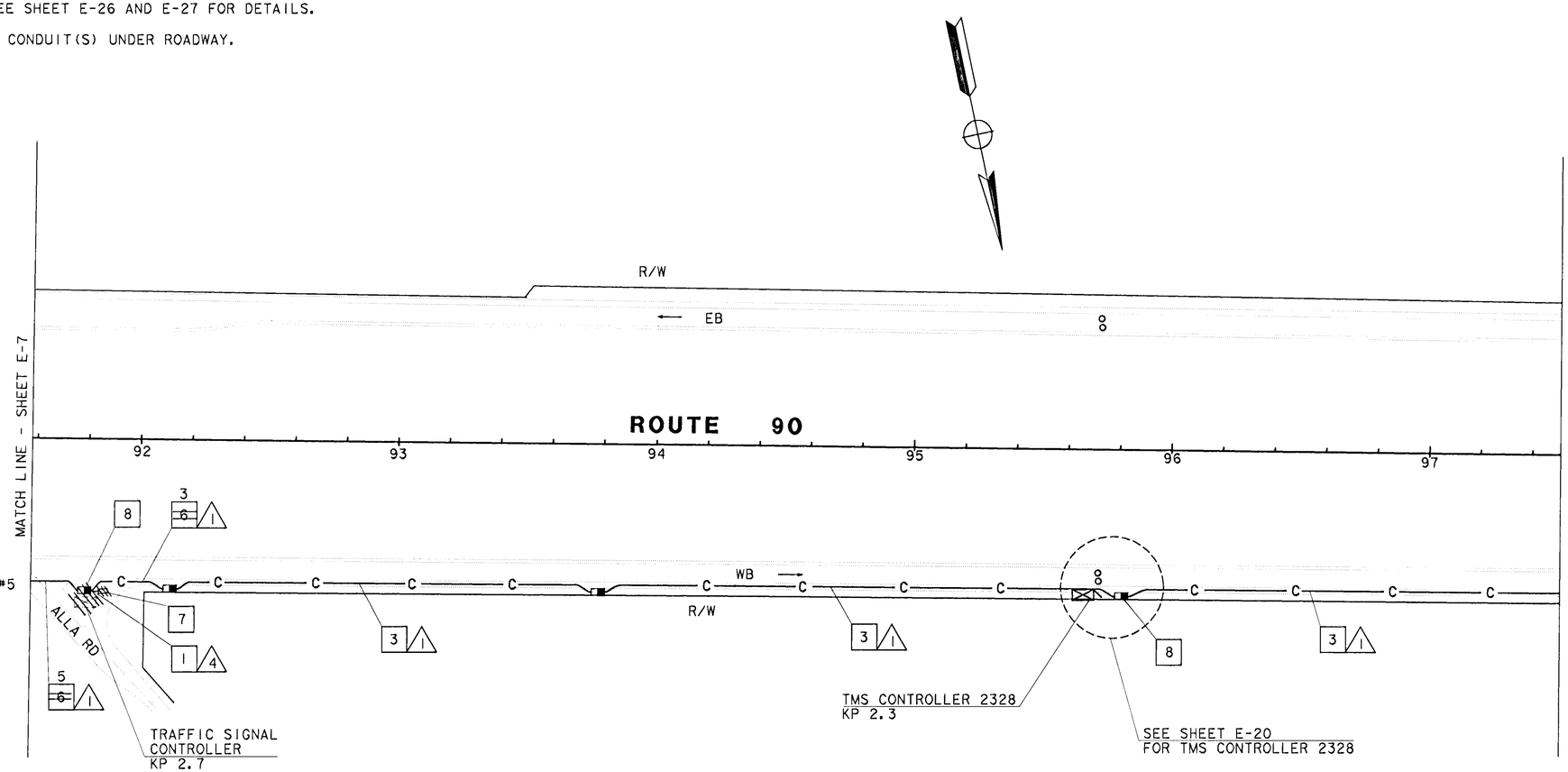
5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

7 COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.

6 TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUCTOR TYPE	FUNCTION	RUN				
		1				4
50P22 CABLE	DATA/VOICE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/VOICE					1
	INNERDUCT (SIZE 32)		1	1		
	CONDUIT SIZE	103			103	53



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	29	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

TMS AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

E-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER: CONWAY CHU
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 12:20

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

USERNAME => t7aferna
DGN FILE => 712089u08271220t7

CU 07396 EA 120891

USERID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u08.dgn DATE: Thu Apr 27 2000 TIME: 12:21

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u09.dgn DATE: Thu Apr 27 2000 TIME: 12:20

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	90	1.4/5.2	30	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

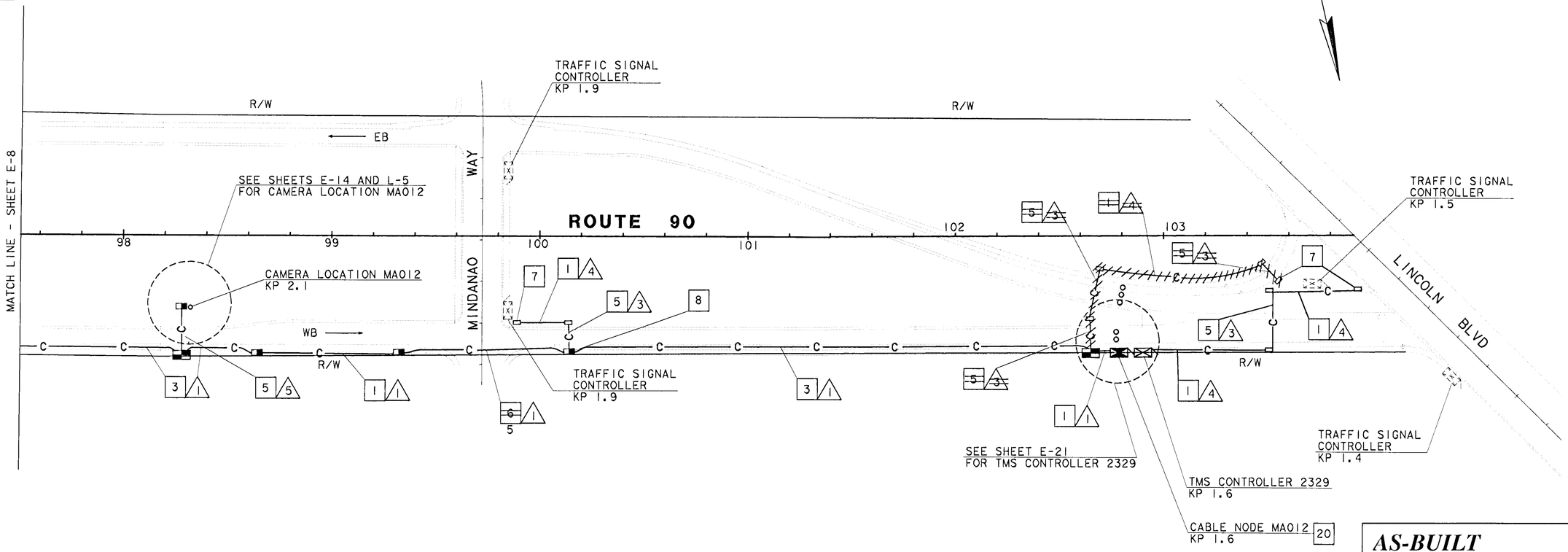
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PROJECT NOTE: (THIS SHEET ONLY)

1. TRENCH AND INSTALL CONDUIT(S) IN SOIL.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.
7. COIL 15 m OF 6P22 TWISTED PAIR CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEET E-26 AND E-27 FOR DETAILS.
20. INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT CABLE NODE. SEE SHEETS E-31 AND E-32 FOR DETAILS.
6. TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			2	3	4	5	
50P22 CABLE	DATA/VOICE	1							
24SMFO CABLE	VIDEO/DATA		1						
12SMFO CABLE	VIDEO DISTRIBUTION			1					
6P22 CABLE	DATA/VOICE					1	1		1
2SMFO B/O CABLE	SHORT HAUL VIDEO							1	
	INNERDUCT (SIZE 32)		1	1				1	
	CONDUIT SIZE	103			103	78	53	103	



NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CABLE NODE, TMS, CCTV CAMERA AND COMMUNICATION SYSTEM ROUTING

SCALE: 1=1000

E-9

DATE REVISED BY | DATE REVISED
CALCULATED/ DESIGNED BY
CHECKED BY
PROJECT ENGINEER: CONWAY CHU
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 12:19

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

USERNAME => t7aferna
DGN FILE => 712089u09271219.21

CU 07396 EA 120891

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u09.dgn DATE: Thu Apr 27 2000 TIME: 12:20

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u10.dgn DATE: Thu Apr 27 2000 TIME: 12:19

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

2 TRENCH AND INSTALL CONDUIT(S) IN CONCRETE.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

10 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-24 AND E-27 FOR DETAILS.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE REVISED STANDARD PLAN ES-34A AND SHEET E-29 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE SHEETS E-30 AND E-32 FOR DETAILS.

6 TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.

22 INSTALL ON NEW FOUNDATION TYPE III-BF 100 A, 120/240 V SERVICE WITH:
1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV

23 INSTALL 78 mm CONDUIT TYPE H SERVICE RISER ON POWER POLE. UTILITY COMPANY TO INSTALL CONDUCTORS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	90	1.4/5.2	31	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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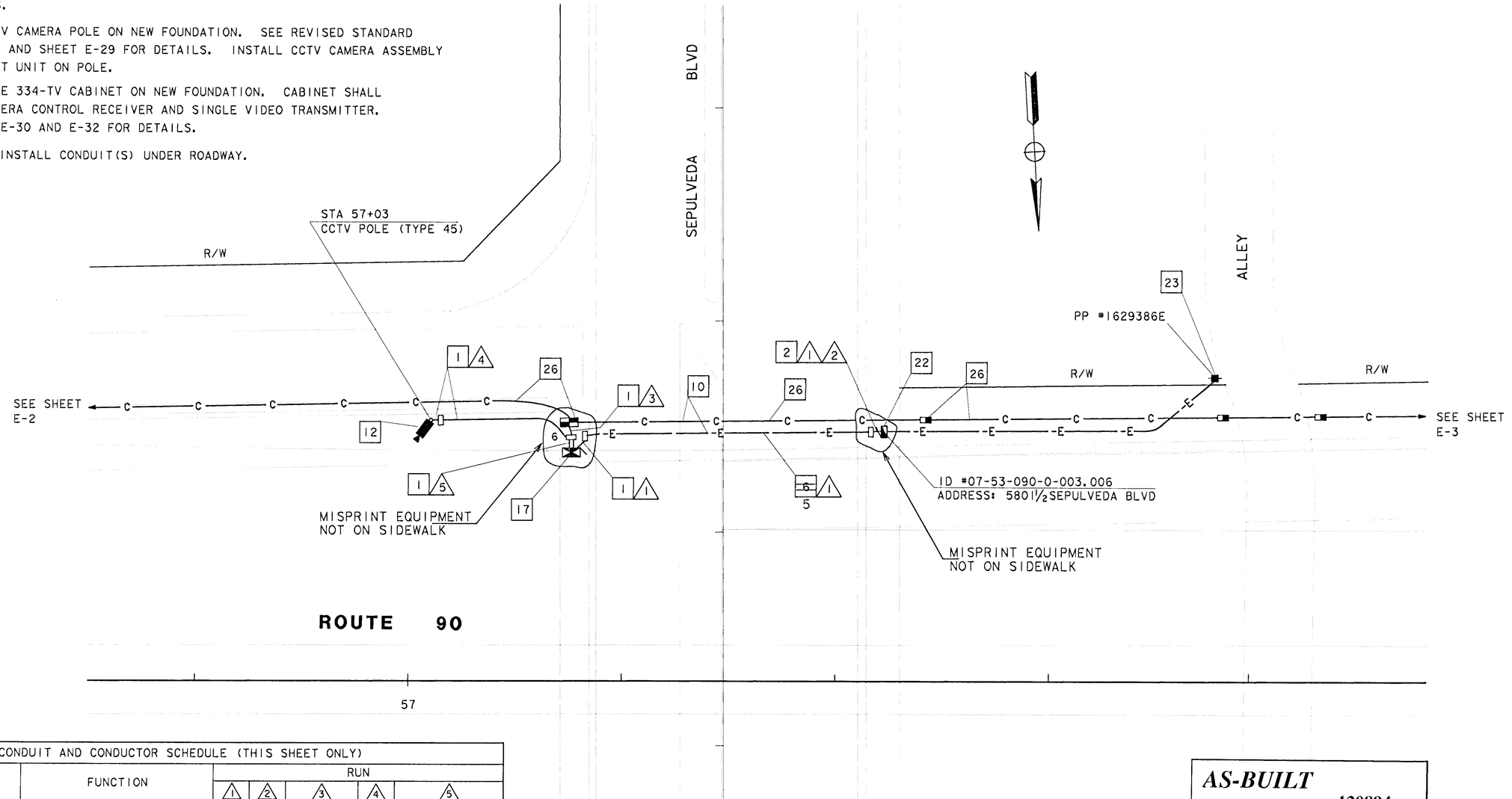


CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)										
CONDUCTOR TYPE	FUNCTION	RUN								
		1	2	3		4	5			
2SMFO B/O CABLE	SH VIDEO			1			1			
6P22 CABLE	DATA/VOICE				1			1		
TABLE 1, E-1	CCTV CONTROL CABLE					1				1
#8	POWER	2								
	INNERDUCT (SIZE 32)			1			1			
	CONDUIT SIZE	53	53	103		53	103			103

CAMERA LOCATION MA029

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CCTV CAMERA (LOCATION MA029)

SCALE: 1=200

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT
PROJECT ENGINEER: CONWAY CHU
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED
REVISED BY
DATE

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 TIME PLOTTED => 12:19

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

USERNAME => t7aferna
DGN FILE => 712089u1027121840

CU 07396 EA 120891

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u10.dgn DATE: Thu Apr 27 2000 TIME: 12:19

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	90	1.4/5.2	32	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — EXP. 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA

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

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

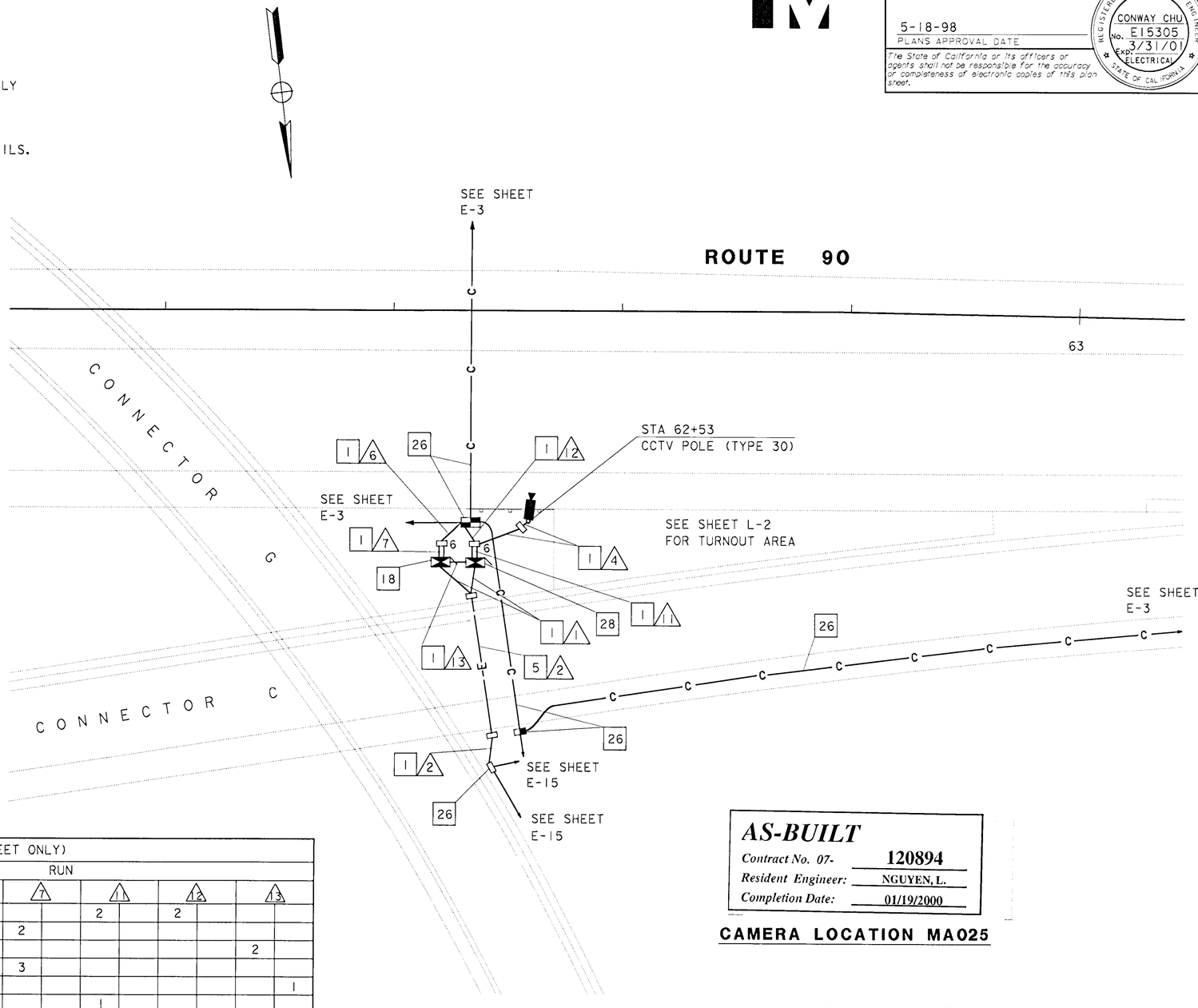
5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE REVISED STANDARD PLAN ES-34A AND SHEET E-29 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.

18 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE. SEE SHEETS E-31 AND E-32 FOR DETAILS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

28 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND MODEM, AND EQUIPMENT AT DATA NODE SEE SHEETS E-31 AND E-32 FOR DETAILS.



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)														
CONDUCTOR TYPE	FUNCTION	RUN												
		1	2	4	6		7		11		12		13	
50P22 CABLE	DATA/VOICE								2		2			
12SMFO CABLE	VIDEO DISTRIBUTION				2		2							
2SMFO PATCH CORD	DATA												2	
2SMFO B/O CABLE	SH VIDEO				3		3							
RG-6A/U COAX	BB VIDEO													1
TABLE 1, E-1	CCTV CONTROL CABLE			1					1					
#6	POWER	2	4											
	INNERDUCT (SIZE 32)				2		2		1				1	
	CONDUIT SIZE	53	78	53	103		103	103	103	103	103		78	

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CAMERA LOCATION MA025

DATA NODE, CCTV CAMERA AND VIDEO NODE
(LOCATION MA025)

SCALE: 1=200

E-11

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER: CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => trannda
DGN FILE => 712089u11_20124052

CU 07396

EA 120891

LAST REVISION 00-00-00 DATE PLOTTED => 20-May-1998 TIME PLOTTED => 12:44

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	90	1.4/5.2	33	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — EXP. 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA

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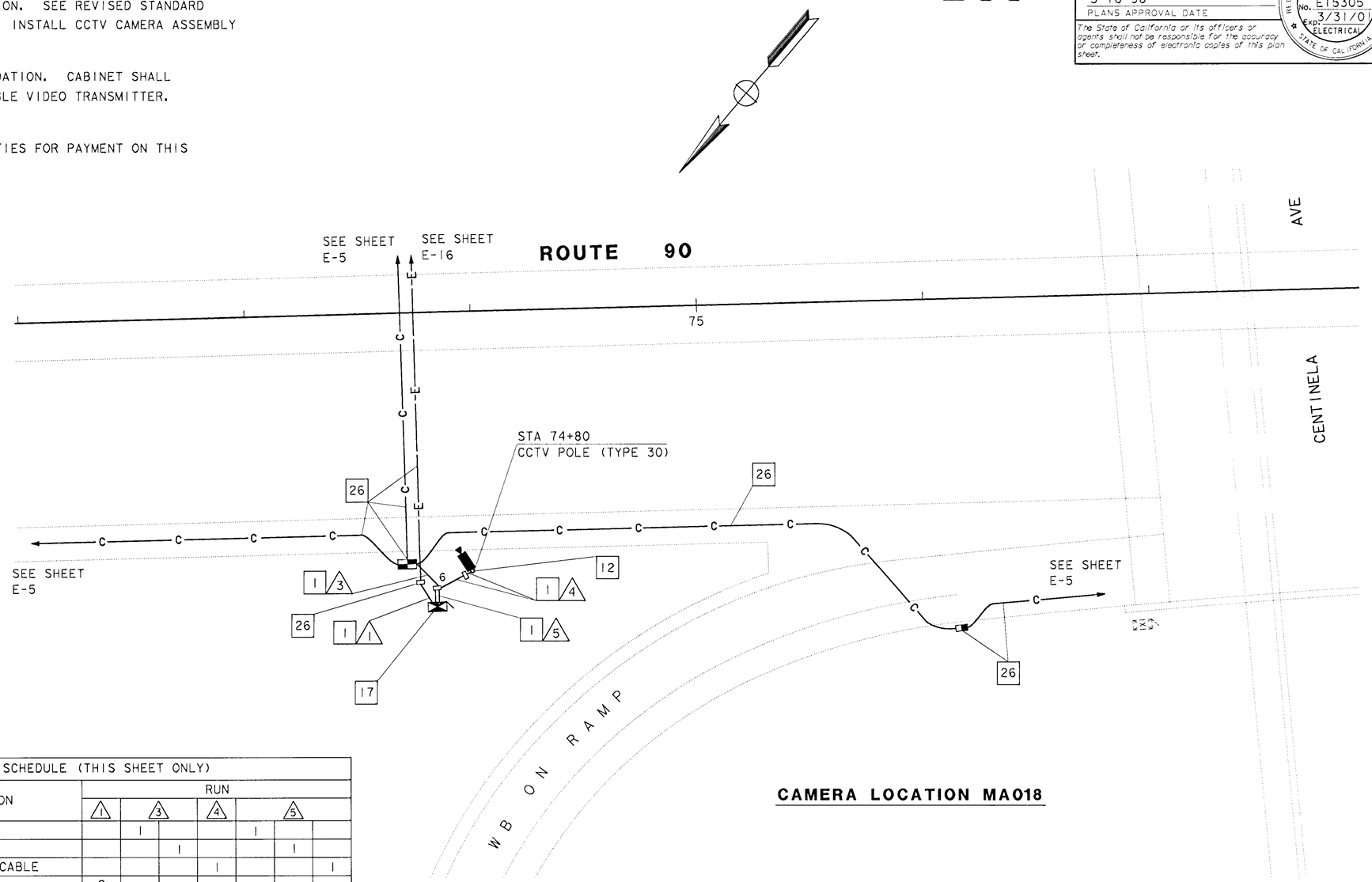
PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE REVISED STANDARD PLAN ES-34A AND SHEET E-29 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE SHEETS E-30 AND E-32 FOR DETAILS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.



CAMERA LOCATION MA018

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN						
		1	3		4	5		
2SMFO B/O CABLE	SH VIDEO		1			1		
6P22 CABLE	DATA/VOICE			1			1	
TABLE 1, E-1	CCTV CONTROL CABLE				1			1
#8	POWER	2						
	INNERDUCT (SIZE 32)		1			1		
	CONDUIT SIZE	53	103		53	103		103

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CCTV CAMERA
(LOCATION MA018)

SCALE: 1=200

E-12

DATE	REVISED BY	DATE REVISED
	CALCULATED/ DESIGNED BY	
	CHECKED BY	

PROJECT ENGINEER: CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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ITS DEVELOPMENT

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

USERNAME => trannda
DGN FILE => 7120891U12_20124046

CU 07396 | EA 120891

LAST REVISION 00-00-00
DATE PLOTTED => 20-May-1998
TIME PLOTTED => 12:43

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE REVISED STANDARD PLAN ES-34A AND SHEET E-29 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE SHEETS E-30 AND E-32 FOR DETAILS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	34	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — STATE OF CALIFORNIA

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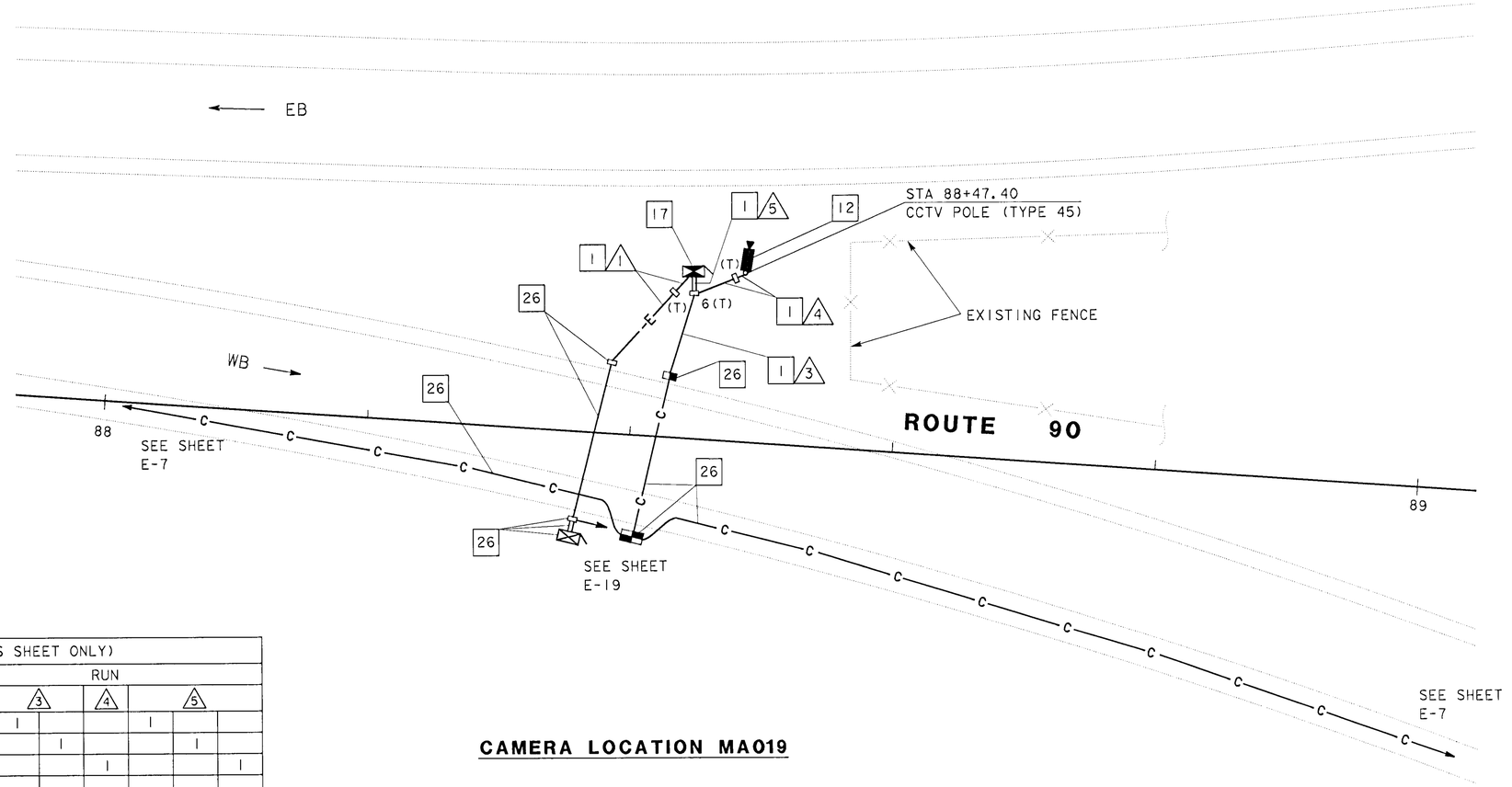


CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN						
		1	3		4	5		
2SMFO B/O CABLE	SH VIDEO		1			1		
6P22 CABLE	DATA/VOICE			1			1	
TABLE 1, E-1	CCTV CONTROL CABLE				1			1
#8	POWER	2						
	INNERDUCT (SIZE 32)		1			1		
	CONDUIT SIZE	53	103		53	103		103

CAMERA LOCATION MA019

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CCTV CAMERA (LOCATION MA019)

SCALE: 1=200

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

E-13

DATE	REVISED BY	CALCULATED/ DESIGNED BY	PROJECT ENGINEER
	DATE REVISED	CHECKED BY	CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

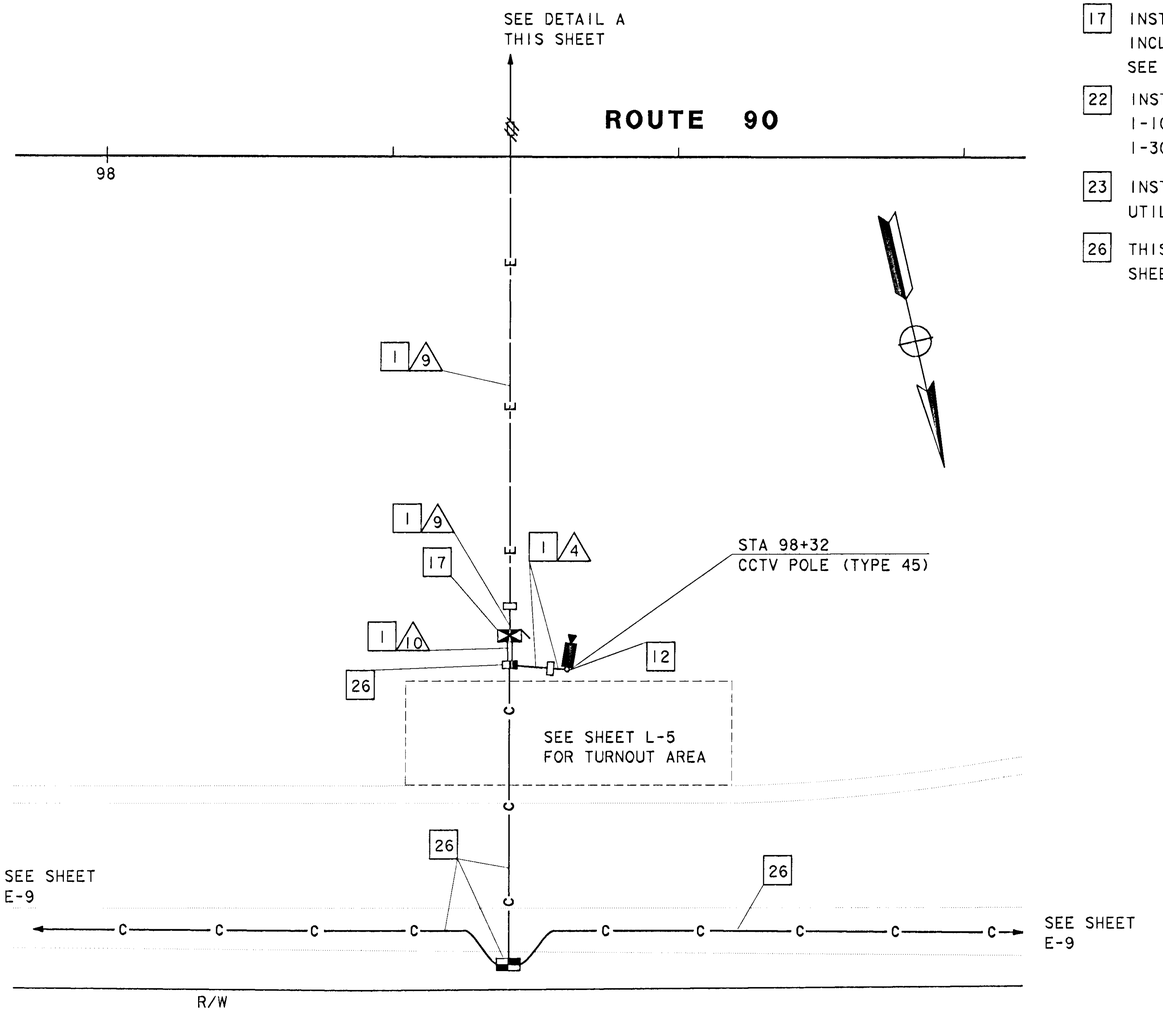
USERNAME => trannda
DGN FILE => 7120890103_20124040

CU 07396

EA 120891

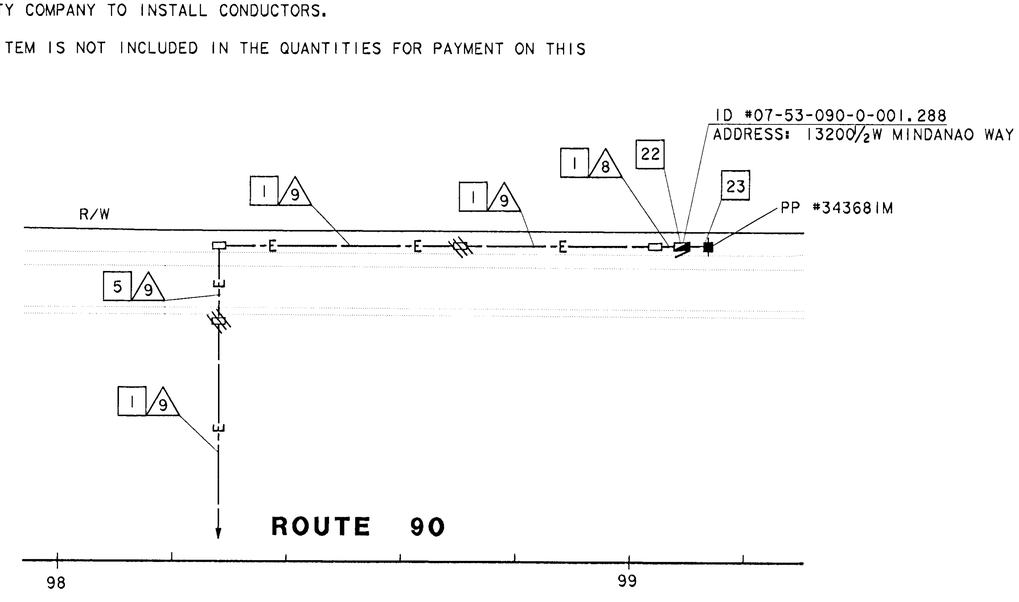
LAST REVISION 00-00-00
DATE PLOTTED => 20-May-1998
TIME PLOTTED => 12:42

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN						
		4	8		9	10		
2SMFO B/O CABLE	SH VIDEO					1		
6P22 CABLE	DATA/VOICE						1	
TABLE 1, E-1	CCTV CONTROL CABLE	1						1
#6	POWER		2		2			
	INNERDUCT (SIZE 32)					1		
	CONDUIT SIZE	53	53	53	53	103		103



CAMERA LOCATION MA012

SCALE: 1=200



DETAIL A

SCALE: 1=500

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE REVISED STANDARD PLAN ES-34A AND SHEET E-29 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE SHEETS E-30 AND E-32 FOR DETAILS.

22 INSTALL ON NEW FOUNDATION TYPE 111-BF 100 A, 120/240 V SERVICE WITH:
1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV

23 INSTALL 78C TYPE H SERVICE RISER ON POWER POLE. UTILITY COMPANY TO INSTALL CONDUCTORS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	90	1.4/5.2	35	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CONWAY CHU
No. E15305
Exp. 3/31/01
ELECTRICAL
STATE OF CALIFORNIA

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AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

CCTV CAMERA (LOCATION MA012)

SCALE AS SHOWN

E-14

DATE REVISED | DATE | REVISED BY
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PROJECT ENGINEER: CONWAY CHU
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Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 11:05

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

USERNAME => t7aferna
DGN FILE => 712089u1427110146

CU 07396 EA 120891

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

2 TRENCH AND INSTALL CONDUIT IN CONCRETE.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

10 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-24 AND E-27 FOR DETAILS.

21 INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE DETAIL A SHEET C-1 AND DETAILS SHEETS E-30 AND E-32.

22 INSTALL ON NEW FOUNDATION TYPE 111-BF 100 A, 120/240 V SERVICE WITH:
1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR TMS
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR DATA NODE
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR VIDEO NODE

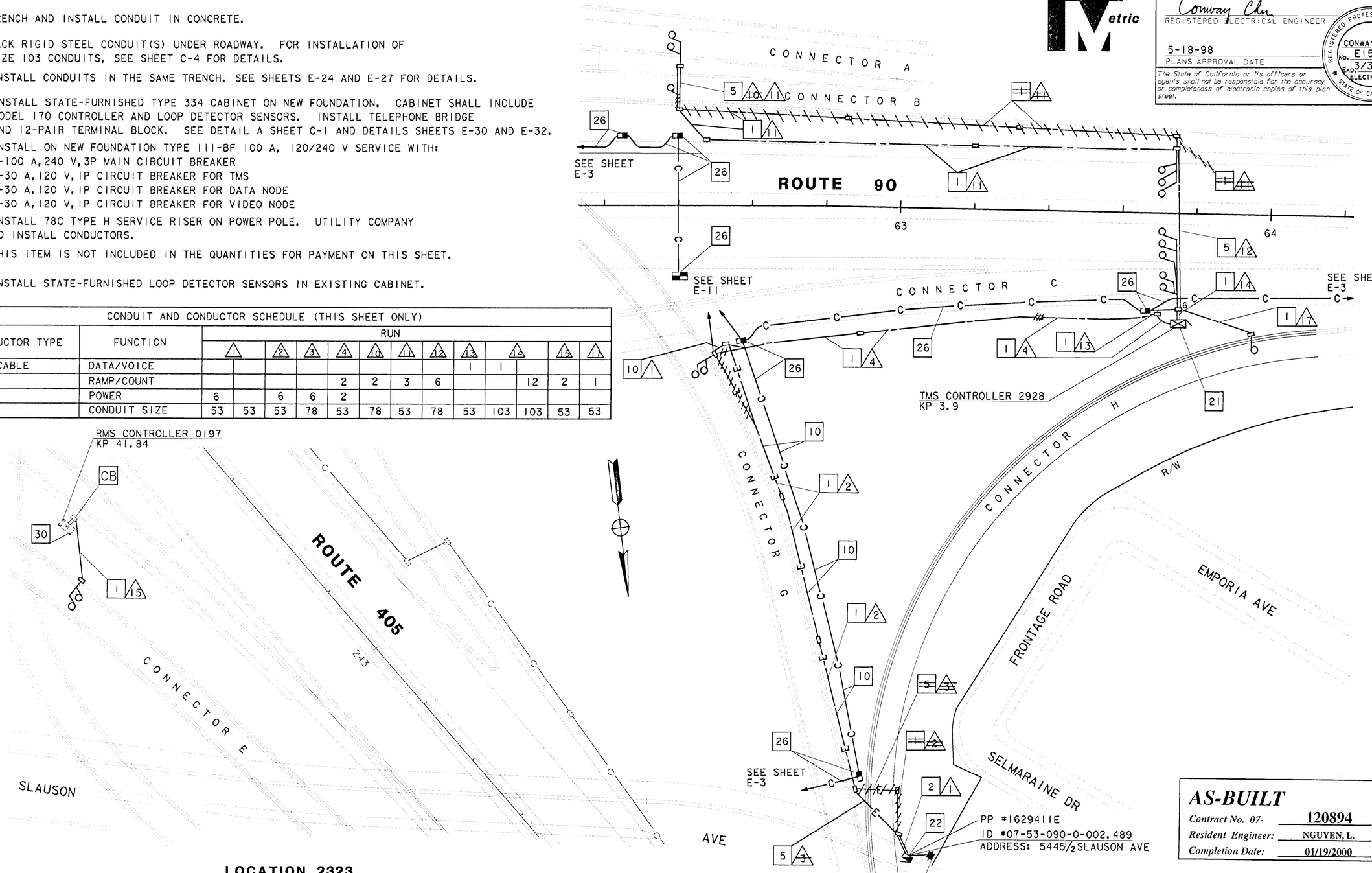
23 INSTALL 78C TYPE H SERVICE RISER ON POWER POLE. UTILITY COMPANY TO INSTALL CONDUCTORS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN												
		1		2	3	4	10	11	12	13	14		15	17
6P22 CABLE	DATA/VOICE					2				1	1			
DLC	RAMP/COUNT					2	2	3	6			12	2	1
#6	POWER	6		6	6	2								
	CONDUIT SIZE	53	53	53	78	53	78	53	78	53	103	103	53	53



LOCATION 2323

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	90	1.4/5.2	36	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU No. E15305 EXP. 3/31/01 ELECTRICAL — STATE OF CALIFORNIA

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

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

TRAFFIC MONITORING STATION (LOCATION 2928)

SCALE: 1=500

E-15

DATE REVISED BY | CALCULATED/DESIGNED BY | CHECKED BY

PROJECT ENGINEER: CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 | DATE PLOTTED => 27-Apr-2000 | TIME PLOTTED => 11:04

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

USERNAME => t7aferna
DGN FILE => 712089u1527110107

CU 07396 | EA 120891

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	37	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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

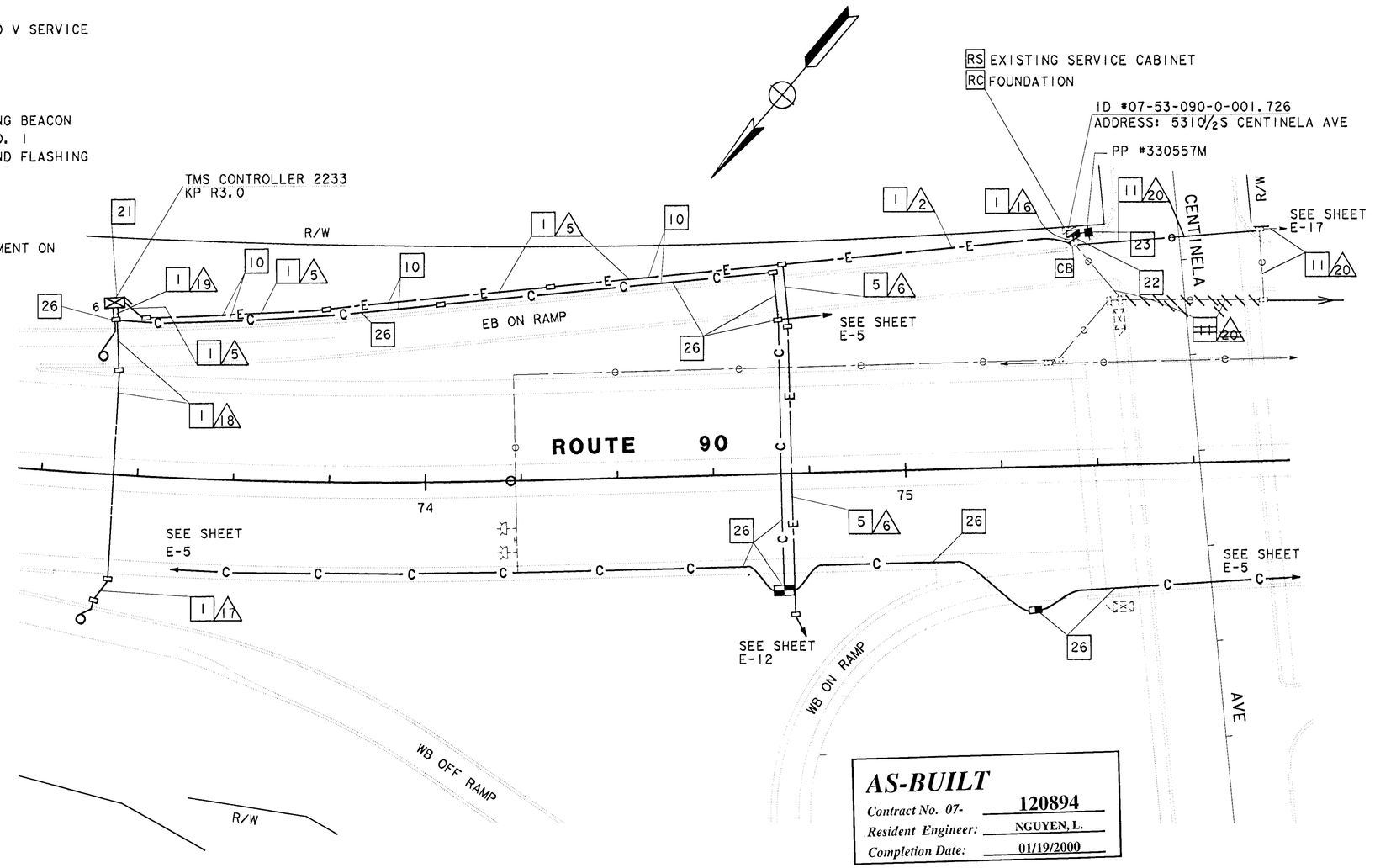
PROJECT NOTE: (THIS SHEET ONLY)

1. TRENCH AND INSTALL CONDUIT(S) IN SOIL.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.
10. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-24 AND E-27 FOR DETAILS.
11. ADD 2#6 POWER CONDUCTORS TO EXISTING CONDUIT (EXISTING CONDUIT HAS 2#6).
21. INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEETS E-30 AND E-32 FOR DETAILS.
22. INSTALL ON NEW FOUNDATION TYPE 111-BF 100 A, 120/240 V SERVICE WITH :
    1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER
    2-30 A, 120 V, 1P CIRCUIT BREAKER FOR TMS
    1-30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV
    1-20 A, 120 V, 1P CIRCUIT BREAKER FOR EXISTING FLASHING BEACON
    1-30 A, 120 V, 1P CIRCUIT BREAKER FOR EXISTING SIGN NO. 1
    1-30 A, 120 V, 1P CIRCUIT BREAKER FOR EXISTING SIGN AND FLASHING BEACON.
23. INSTALL 78C TYPE H SERVICE RISER ON POWER POLE. UTILITY COMPANY TO INSTALL CONDUCTORS.
26. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN (2)	(5)	(6)	(16)	(17)	(18)	(19)		(20)
6P22 CABLE	DATA/VOICE							1		
DLC	RAMP/COUNT					1	1		2	
#8	POWER	4	2	2	4					
#10	POWER				2(E)					
#6	POWER				4(E)					2
	CONDUIT SIZE	53	53	78	53	53	53	78	103	103 (*)

(*) : EXISTING



AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

LOCATION 2233

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

TRAFFIC MONITORING STATION (LOCATION 2233)

SCALE: 1=500

E-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER: CONWAY CHU

DATE	REVISED BY	DATE REVISED	CALCULATED/ DESIGNED BY	CHECKED BY

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 TIME PLOTTED => 11:03

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

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DGN FILE => 712089u1627110025

CU 07396 EA 120891

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u17.dgn DATE: Thu Apr 27 2000 TIME: 11:02

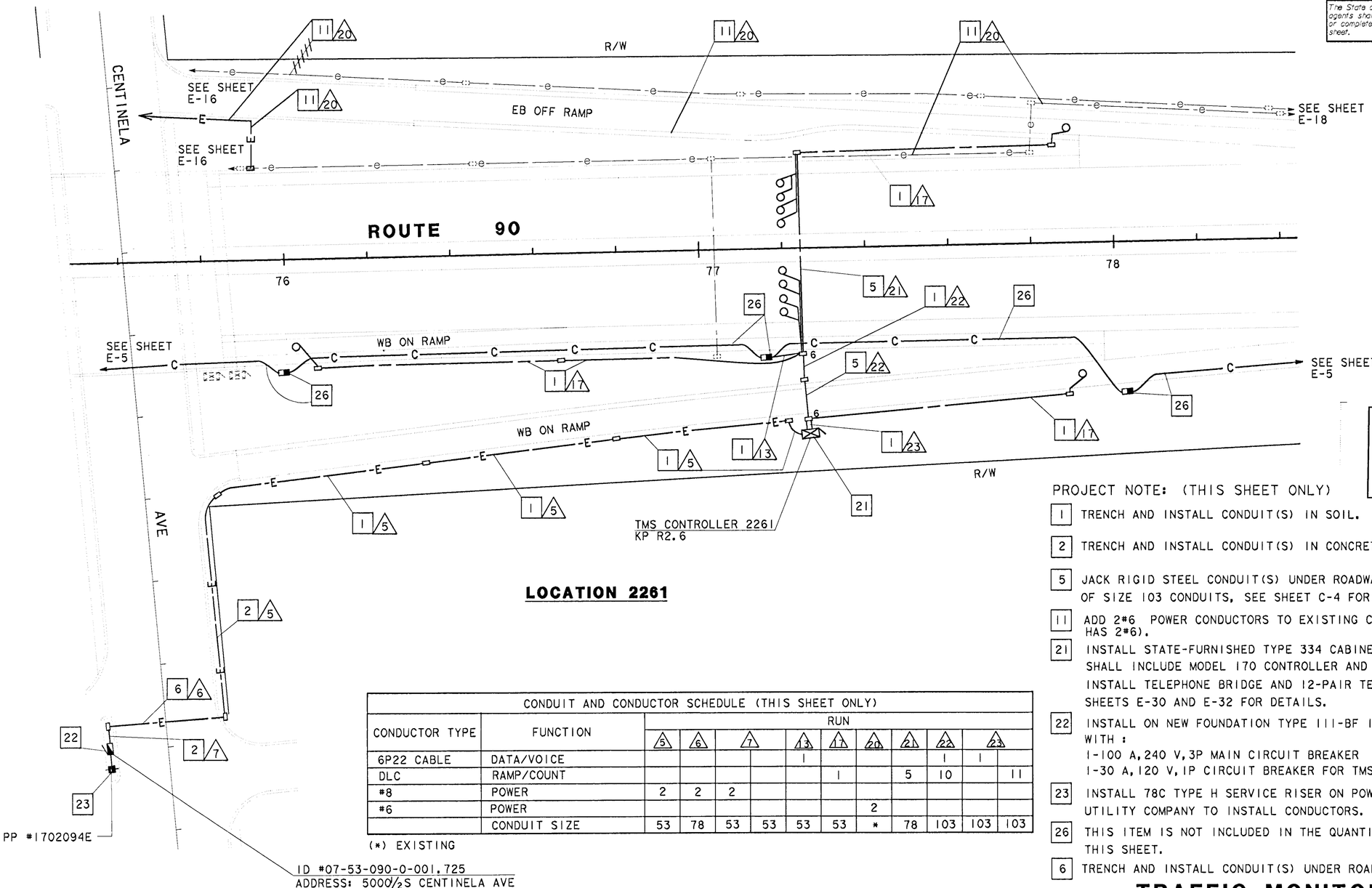
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	38	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — Exp 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA



LOCATION 2261

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)												
CONDUCTOR TYPE	FUNCTION	RUN										
		5	6	7		13	17	20	21	22	23	
6P22 CABLE	DATA/VOICE					1				1	1	
DLC	RAMP/COUNT						1		5	10		11
#8	POWER	2	2	2								
#6	POWER							2				
	CONDUIT SIZE	53	78	53	53	53	53	*	78	103	103	103

(*) EXISTING

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

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

PROJECT NOTE: (THIS SHEET ONLY)

1. TRENCH AND INSTALL CONDUIT(S) IN SOIL.
2. TRENCH AND INSTALL CONDUIT(S) IN CONCRETE.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.
11. ADD 2#6 POWER CONDUCTORS TO EXISTING CONDUIT (EXISTING CONDUIT HAS 2#6).
21. INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEETS E-30 AND E-32 FOR DETAILS.
22. INSTALL ON NEW FOUNDATION TYPE III-BF 100 A, 120/240 V SERVICE WITH :
    1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER
    1-30 A, 120 V, 1P CIRCUIT BREAKER FOR TMS
23. INSTALL 78C TYPE H SERVICE RISER ON POWER POLE. UTILITY COMPANY TO INSTALL CONDUCTORS.
26. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
6. TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.

TRAFFIC MONITORING STATION
(LOCATION 2261)

SCALE: 1=500

E-17

DATE REVISED BY | DATE REVISED
CALCULATED/DESIGNED BY | CHECKED BY
PROJECT ENGINEER: CONWAY CHU
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 | DATE PLOTTED => 27-Apr-2000 | TIME PLOTTED => 11:02

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

USERNAME => t7aferna
DGN FILE => 712089u1727105930

CU 07396 | EA 120891

USER ID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u17.dgn DATE: Thu Apr 27 2000 TIME: 11:02

PROJECT NOTE: (THIS SHEET ONLY)

[1] TRENCH AND INSTALL CONDUIT(S) IN SOIL.

[5] JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-1 FOR DETAILS.

[11] ADD 2#6 POWER CONDUCTORS TO EXISTING CONDUIT (EXISTING CONDUIT HAS 2#6).

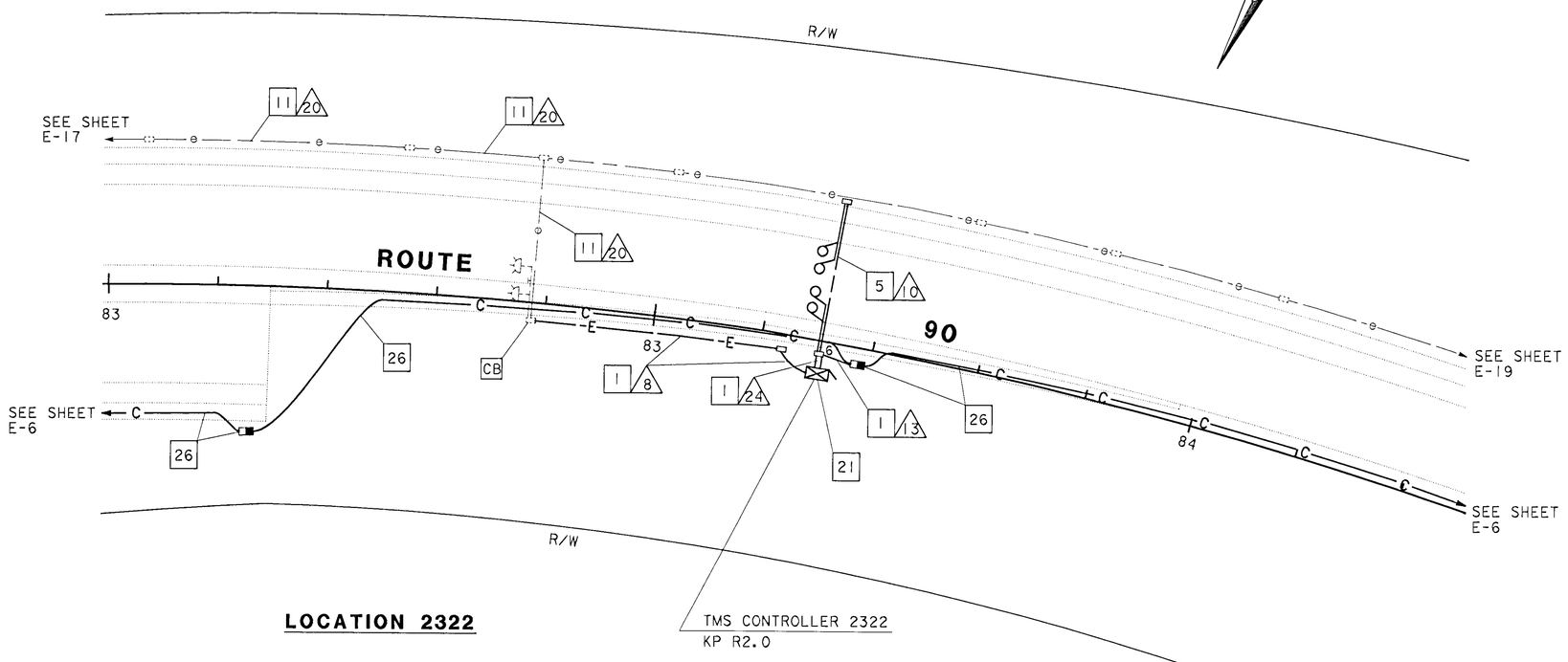
[21] INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEETS E-30 AND E-32 FOR DETAILS.

[26] THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN						
		8	10	13	20	24		42
6P22 CABLE	DATA/VOICE			1		1		
DLC	RAMP/COUNT		2				4	
#6	POWER	2			2			2
	CONDUIT SIZE	53	78	53	(E)	103	103	(E)

(E) : EXISTING



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	39	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E15305 — EXP. 3/31/01 — ELECTRICAL — STATE OF CALIFORNIA

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

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

TRAFFIC MONITORING STATION
(LOCATION 2322)

SCALE: 1=500

E-18

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

PROJECT ENGINEER
CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 22-May-1998 TIME PLOTTED => 10:08

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

USERNAME => trmarlak
DGN FILE => 712089u18_22100618

CU 07396

EA 120891

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

3 INSTALL CONDUITS TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 M FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET E-23 FOR DETAILS.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

10 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-24 AND E-27 FOR DETAILS.

21 INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINETS SHALL INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEETS E-30 AND E-32 FOR DETAILS.

22 INSTALL ON NEW FOUNDATION TYPE III-BF 100 A, 120/240 V SERVICE WITH:
1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER.
3-30 A, 120 V, 1P CIRCUIT BREAKERS FOR TMS CCTV AND MICROWAVE TRANSMISSION SYSTEM.

23 INSTALL 78C TYPE H SERVICE RISER ON POWER POLE.
UTILITY COMPANY TO INSTALL CONDUCTORS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

36 TRENCH AND INSTALL CONDUIT IN ASPHALT CONCRETE.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	40	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

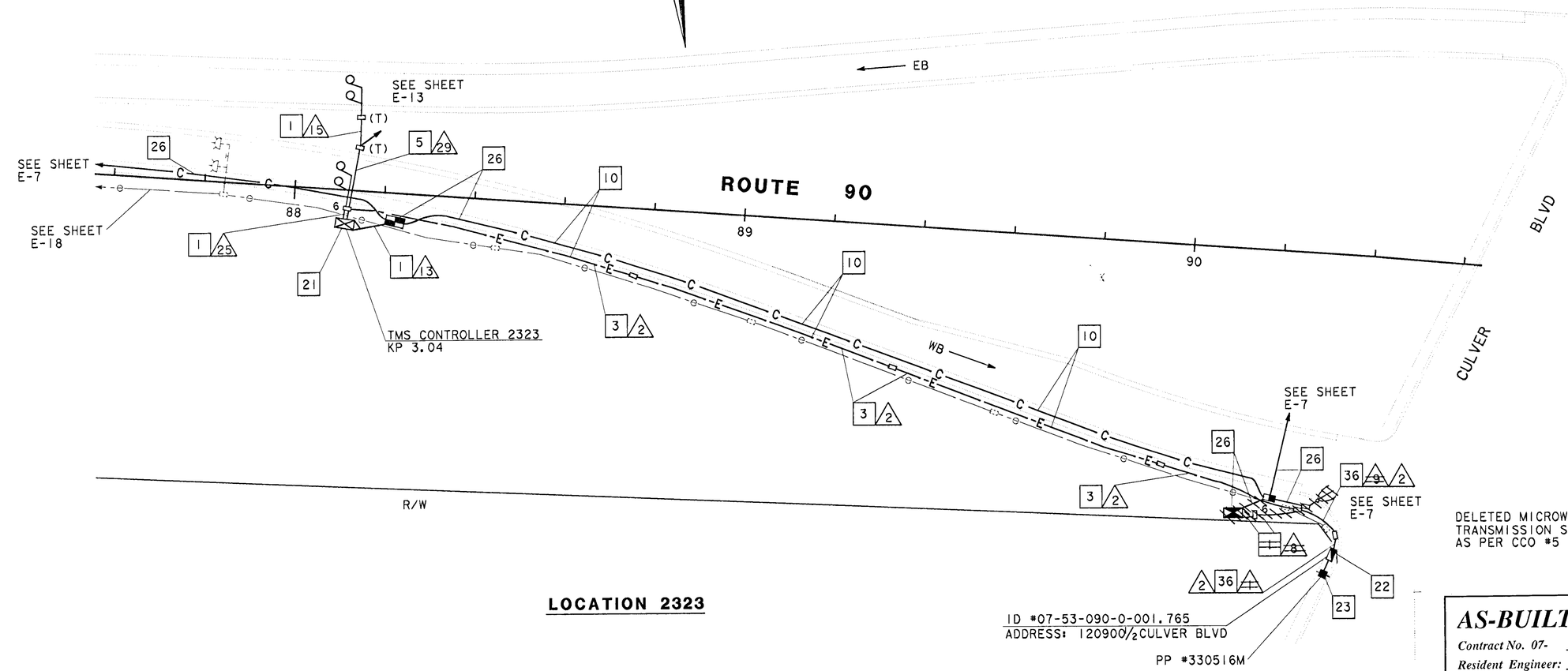
5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — STATE OF CALIFORNIA

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	1	2	13	15	25		29	8	9
6P22 CABLE	DATA/VOICE				1						
DLC	RAMP/COUNT					2		4	2		
#8	POWER	6		4				2	2	2	6
	CONDUIT SIZE	53	53	53	53	53	103	103	78	53	53



LOCATION 2323

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

TRAFFIC MONITORING STATION (LOCATION 2323)

SCALE: 1=500

E-19

DATE REVISED BY / DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER: CONWAY CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 TIME PLOTTED => $$$$$$$SYTIME$$$$$$$

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

USERNAME => $$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$$

CU 07396 EA 120891

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF SIZE 103 CONDUITS. SEE SHEET E-23 FOR DETAILS.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-4 FOR DETAILS.

6 TRENCH AND INSTALL CONDUIT(S) UNDER ROADWAY.

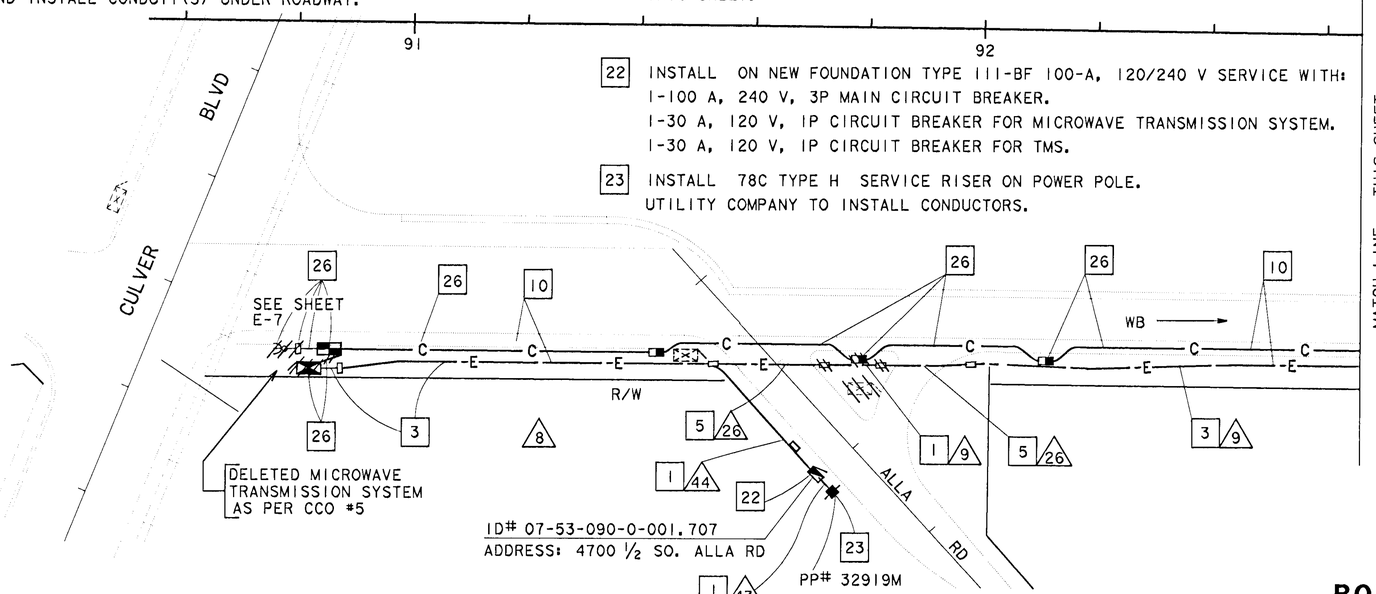
10 INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEETS E-24 AND E-27 FOR DETAILS.

21 INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEETS E-30 AND E-32 FOR DETAILS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

22 INSTALL ON NEW FOUNDATION TYPE III-BF 100-A, 120/240 V SERVICE WITH:
1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER.
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR MICROWAVE TRANSMISSION SYSTEM.
1-30 A, 120 V, 1P CIRCUIT BREAKER FOR TMS.

23 INSTALL 78C TYPE H SERVICE RISER ON POWER POLE.
UTILITY COMPANY TO INSTALL CONDUCTORS.



ROUTE 90

LOCATION 2328

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)											
CONDUCTOR TYPE	FUNCTION	RUN									
		8	13	15	24		26	9	43		44
6P22 CABLE	DATA/VOICE		1		1						
DLC	RAMP/COUNT			2		4					
#6	POWER						2	2	2		2
#8		2							2		2
	CONDUIT SIZE	53	53	53	103	103	78	53	53	53	53

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
07	LA	90	1.4/5.2	41	65

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

TRAFFIC MONITORING STATION

LOCATION (2328)

SCALE: 1=500

E-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT
PROJECT ENGINEER: CONWAY CHU
CALCULATED/DESIGNED BY | CHECKED BY
DATE | REVISED BY | DATE REVISED
LAST REVISION 00-00-00
DATE PLOTTED => 27-Apr-2000 10:59

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
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DGN FILE => 712089_2027105735
CU 07396 EA 120891

USERID: t7aferna@NODE FILE: /project/120891_ua/ab/t7aferna/712089u21.dgn DATE: Thu Apr 27 2000 TIME: 10:59

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	90	1.4/5.2	42	65

Caltrans Metric

Conway Chu
REGISTERED ELECTRICAL ENGINEER

5-18-98
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER CONWAY CHU No. E15305 Exp. 3/31/01 ELECTRICAL STATE OF CALIFORNIA

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

PROJECT NOTE: (THIS SHEET ONLY)

1 TRENCH AND INSTALL CONDUIT(S) IN SOIL.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF SIZE 103 CONDUITS, SEE SHEET C-1 FOR DETAILS.

21 INSTALL STATE-FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. INCLUDE MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEETS E-30 AND E-32 FOR DETAILS.

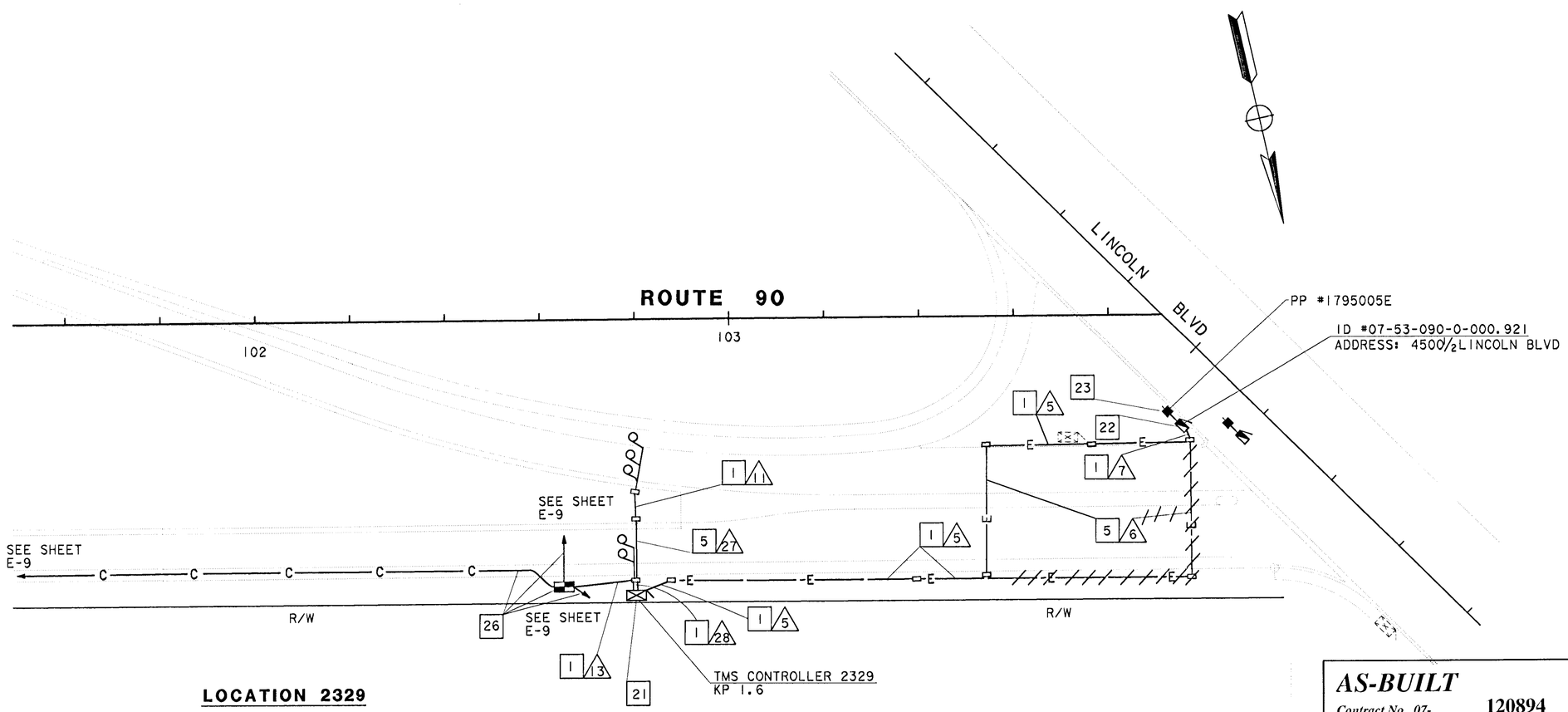
22 INSTALL ON NEW FOUNDATION TYPE III-BF 100 A, 120/240 V SERVICE WITH :
1-100 A, 240 V, 3P MAIN CIRCUIT BREAKER
2-30 A, 120 V, 1P CIRCUIT BREAKERS FOR TMS

23 INSTALL 78C TYPE H SERVICE RISER ON POWER POLE. UTILITY COMPANY TO INSTALL CONDUCTORS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 5	6	7		11	13	27	28	
6P22 CABLE	DATA/VOICE						1		1	
DLC	RAMP/COUNT					3		3		5
#8	POWER	2	2	2						
	CONDUIT SIZE	53	78	53	53	53	53	78	103	103



LOCATION 2329

AS-BUILT
Contract No. 07- 120894
Resident Engineer: NGUYEN, L.
Completion Date: 01/19/2000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

TRAFFIC MONITORING STATION
(LOCATION 2329)

SCALE: 1=500

E-21

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER CONWAY CHU
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

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

USERNAME => t7aferna
DGN FILE => 712089u21271056S1

CU 07396 EA 120891

LAST REVISION 00-00-00 DATE PLOTTED => 27-Apr-2000 10:58

GENERAL NOTES

1. THE LOCATION OF EXISTING CONTROLLER CABINETS ELECTRICAL HIGHWAY LIGHTING AND PULL BOXES ARE APPROXIMATE AND WERE OBTAINED FROM LIMITED LIGHTING RECORDS. CONTRACTOR SHALL AVOID DAMAGING EXISTING LIGHTING CONDUITS.

2. THE LOCATION 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. 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.

5. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELCO FACILITIES, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE 72 HOURS PRIOR TO COMMENCING WORK TO ALL CONCERNED AGENCIES AND THE ENGINEER.

6. UNLESS OTHERWISE NOTED ALL FIBER OPTIC 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.

7. ALL CONDUITS SHALL BE INSTALLED ON THE SHOULDER UNLESS OTHERWISE NOTED.

8. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

9. ALL CCTV EQUIPMENT AND POWER CABLE THAT IS TO BE REMOVED SHALL BE DELIVERED TO THE NEAREST CALTRANS ELECTRICAL MAINTENANCE YARD. LOCATION TO BE DETERMINED BY ENGINEER.

10 ALL NEW EQUIPMENT TO BE INSTALLED AT EXISTING CCTV LOCATIONS SHALL BE OF THE SAME MANUFACTURER AS THE EQUIPMENT FOR NEW LOCATIONS.

ABBREVIATIONS

2SMFO B/O	FIBER OPTIC BREAKOUT CABLE, 2 SINGLE MODE FIBERS
24SMFO	FIBER OPTIC CABLE, 24 SINGLE MODE FIBERS
36SMFO	FIBER OPTIC CABLE, 36 SINGLE MODE FIBERS
50P22	TWISTED PAIR CABLE 50 PAIR 22 AWG CONDUCTORS
6P22	TWISTED PAIR CABLE 6 PAIR 22 AWG CONDUCTORS
12P22	TWISTED PAIR CABLE 12 PAIR 22 AWG CONDUCTORS
Ø /	DIAMETER
BB	BASE BAND
BNSF	BURLINGTON NORTHERN SANTA FE CORPORATION
B/O	BREAKOUT CABLE
CCR	CAMERA CONTROL RECEIVER
CCT	CAMERA CONTROL TRANSMITTER
CCTV	CLOSED CIRCUIT TELEVISION
CHAN #	CHANNEL NUMBER
CMS	CHANGEABLE MESSAGE SIGN
D4	4TH VERSION OF THE D-SIGNAL FOR TDM
DACCS	DIGITAL CROSS CONNECT SYSTEM
DEMARC	DEMARCATION
DEMUX	DEMULTIPLEXER
DIST	DISTRIBUTION
DWP	DEPARTMENT OF WATER & POWER
FDF	FIBER DISTRIBUTION FRAME
FDU	FIBER DISTRIBUTION UNIT
FLEX	FLEXIBLE
F/O OR FO	FIBER OPTIC
FRE	FIBERGLASS REINFORCED EPOXY
HOV	HIGH OCCUPANCY VEHICLE
INTRFCE	INTERFACE
IRR	IRRIGATION
J-BOX	JUNCTION BOX
MTA	METROPOLITAN TRANSPORTATION AUTHORITY
MUX	MULTIPLEXER
NOM	NOMINAL
PDA	POWER DISTRIBUTION ASSEMBLY
PMP	PUMP STATION
PR	PAIR
PTZ	PAN, TILT AND ZOOM
PS	PUMP STATION
REQ'D	REQUIRED
RMS	RAMP METERING SYSTEM OR STATION
RX	RECEIVER
SCE	SOUTHERN CALIFORNIA EDISON
SCHED	SCHEDULE
SH	SHORT HAUL
SM	SINGLE MODE
SONET	SYNCHRONOUS OPTICAL NETWORK
SPT	SOUTHERN PACIFIC TRANSIT RAIL
STL	STEEL
TDM	TIME DIVISION MULTIPLEXER
TELCO	TELEPHONE COMPANY
TMC	TRANSPORTATION MANAGEMENT CENTER
TMS	TRAFFIC MONITORING STATION
TP	TWISTED PAIR
TS	TRAFFIC SIGNAL
TX	TRANSMITTER
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPLEXER
VR	SINGLE VIDEO RECEIVER
VSM	VIDEO SWITCH MATRIX
VX	SINGLE VIDEO TRANSMITTER
#X	X AWG CONDUCTOR, ie #10 MEANS 10 AWG CONDUCTOR
YP	Y PAIRS OF CONDUCTORS, ie 2P MEANS 2 PAIRS

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	31	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E015611 12-31-01 EXP. ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

10-25-99
PLANS APPROVAL DATE

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LEGEND

- CCTV CAMERA AND POLE
- EXISTING CCTV CAMERA
- SPLICE VAULT
- EXISTING SPLICE VAULT
- CCTV CAMERA POLE LOCATION
- FIBER OPTIC JUMPER
- COMMUNICATIONS PULLBOX
- EXISTING COMMUNICATIONS PULLBOX
- C — COMMUNICATIONS CONDUIT(S)
- e — EXISTING SERVICE CONDUIT(S)
- E — SERVICE CONDUIT(S)
- DELIMITER FOR PROJECT NOTES — EXAMPLE: 1/11 C 1/12
- NEW TYPE 334 TV CABINET
- EXISTING TELEPHONE BRIDGE
- TELEPHONE BRIDGE
- FIBER OPTIC CABLE
- COAXIAL CABLE
- CMS — EXISTING CHANGEABLE MESSAGE SIGN

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

CCTV AND COMMUNICATION SYSTEM
(LEGEND AND NOTES)

E-1

DATE REVISED BY | DATE REVISED
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CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	32	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 ELECTRICAL — STATE OF CALIFORNIA

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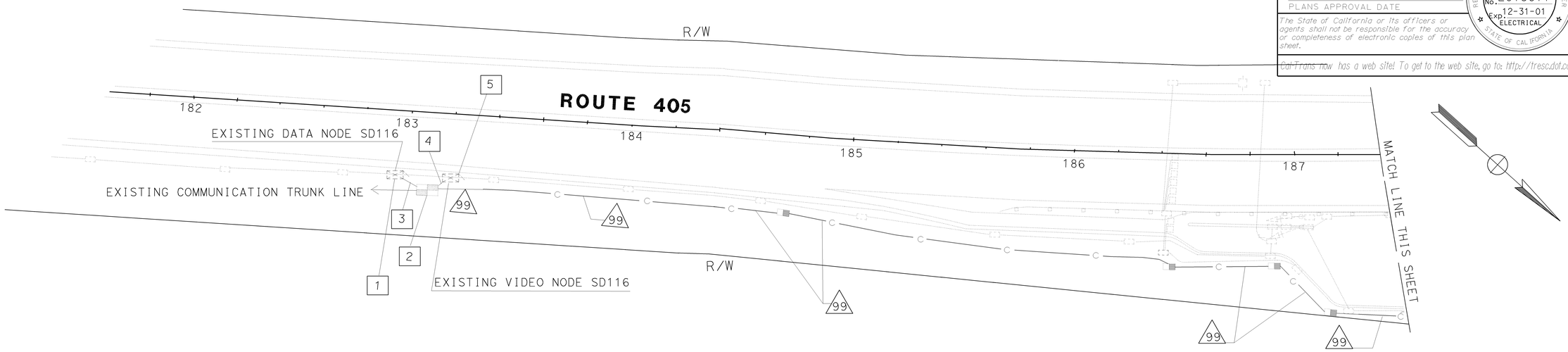
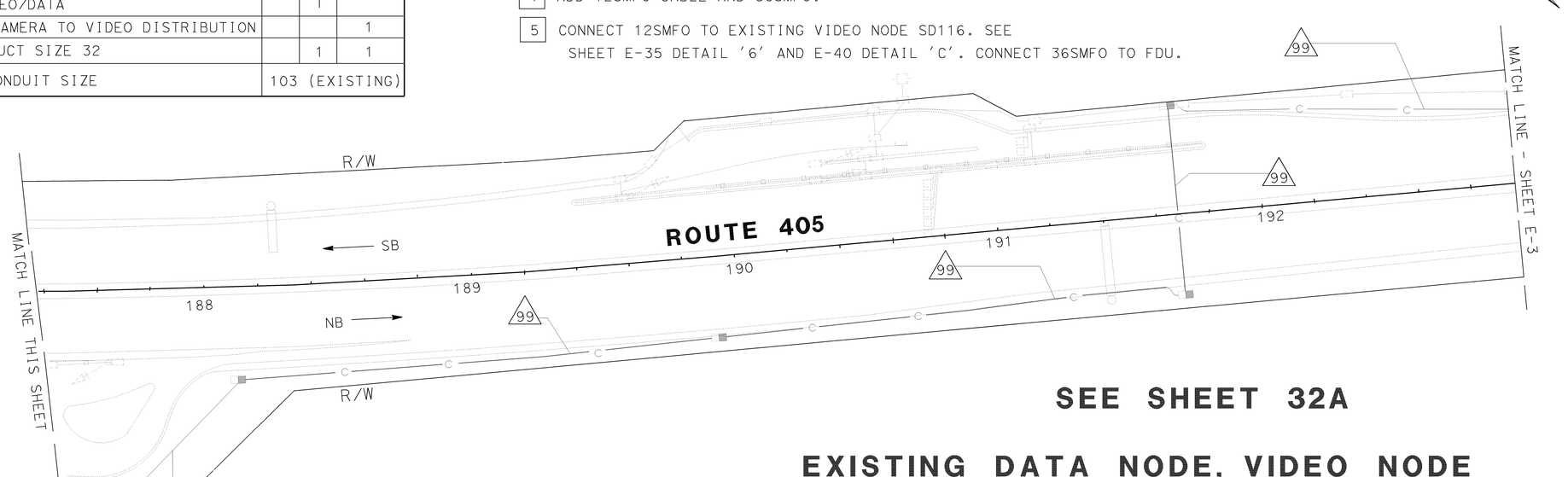


NOTES: (THIS SHEET ONLY)

1. INSTALL 50 PAIR TERMINAL BLOCK, CONNECT 50P22 IN EXISTING DATA NODE SD116 AS SHOWN IN SHEET E-35 DETAIL '6' AND SHEET E-40 DETAIL 'A'.
2. CONNECT 36SMFO AS SHOWN IN SHEET E-40 DETAIL 'F' AND 'I'. COIL 15 m 24SMFO FOR FUTURE ROUTE 110 HOOKUP.
3. ADD 50P22.
4. ADD 12SMFO CABLE AND 36SMFO.
5. CONNECT 12SMFO TO EXISTING VIDEO NODE SD116. SEE SHEET E-35 DETAIL '6' AND E-40 DETAIL 'C'. CONNECT 36SMFO TO FDU.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN △99		
50P22 CABLE	COMMUNICATION DATA	1		
36SMFO CABLE AND 24SMFO CABLE	VIDEO/DATA		1	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1
	INNERDUCT SIZE 32		1	1
	CONDUIT SIZE	103 (EXISTING)		



AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

SEE SHEET 32A

EXISTING DATA NODE, VIDEO NODE AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1:1000

E-2

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN
PROJECT ENGINEER
DAVID PADILLA

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	32a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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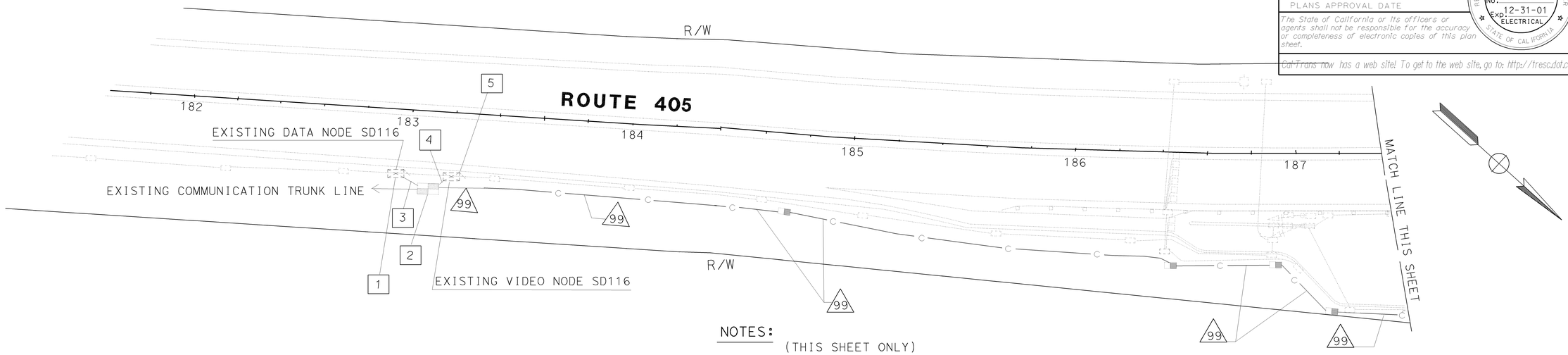
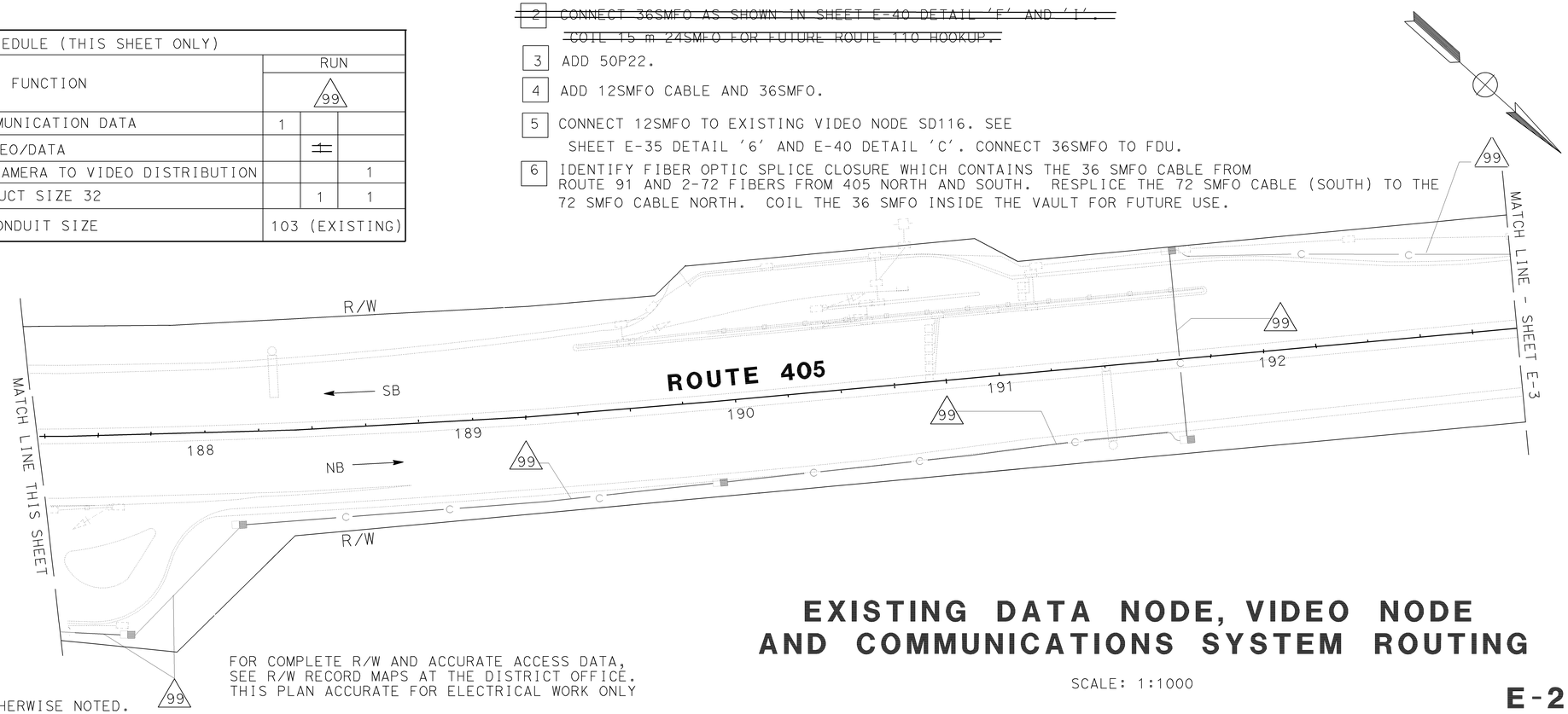


NOTES: (THIS SHEET ONLY)

1. INSTALL 50 PAIR TERMINAL BLOCK, CONNECT 50P22 IN EXISTING DATA NODE SD116 AS SHOWN IN SHEET E-35 DETAIL '6' AND SHEET E-40 DETAIL 'A'.
2. ~~CONNECT 36SMFO AS SHOWN IN SHEET E-40 DETAIL 'F' AND 'I'. COIL 15 m 24SMFO FOR FUTURE ROUTE 110 HOOKUP.~~
3. ADD 50P22.
4. ADD 12SMFO CABLE AND 36SMFO.
5. CONNECT 12SMFO TO EXISTING VIDEO NODE SD116. SEE SHEET E-35 DETAIL '6' AND E-40 DETAIL 'C'. CONNECT 36SMFO TO FDU.
6. IDENTIFY FIBER OPTIC SPLICE CLOSURE WHICH CONTAINS THE 36 SMFO CABLE FROM ROUTE 91 AND 2-72 FIBERS FROM 405 NORTH AND SOUTH. RESPLICE THE 72 SMFO CABLE (SOUTH) TO THE 72 SMFO CABLE NORTH. COIL THE 36 SMFO INSIDE THE VAULT FOR FUTURE USE.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN 99		
50P22 CABLE	COMMUNICATION DATA	1		
36SMFO CABLE AND 24SMFO CABLE	VIDEO/DATA		⫫	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1
	INNERDUCT SIZE 32		1	1
	CONDUIT SIZE	103 (EXISTING)		



AS-BUILT

Contract No. 07- 168104
Resident Engineer: M. FARDOUN
Completion Date: 03/05/02

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

EXISTING DATA NODE, VIDEO NODE AND COMMUNICATIONS SYSTEM ROUTING

SCALE: 1:1000

E-2

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	33	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

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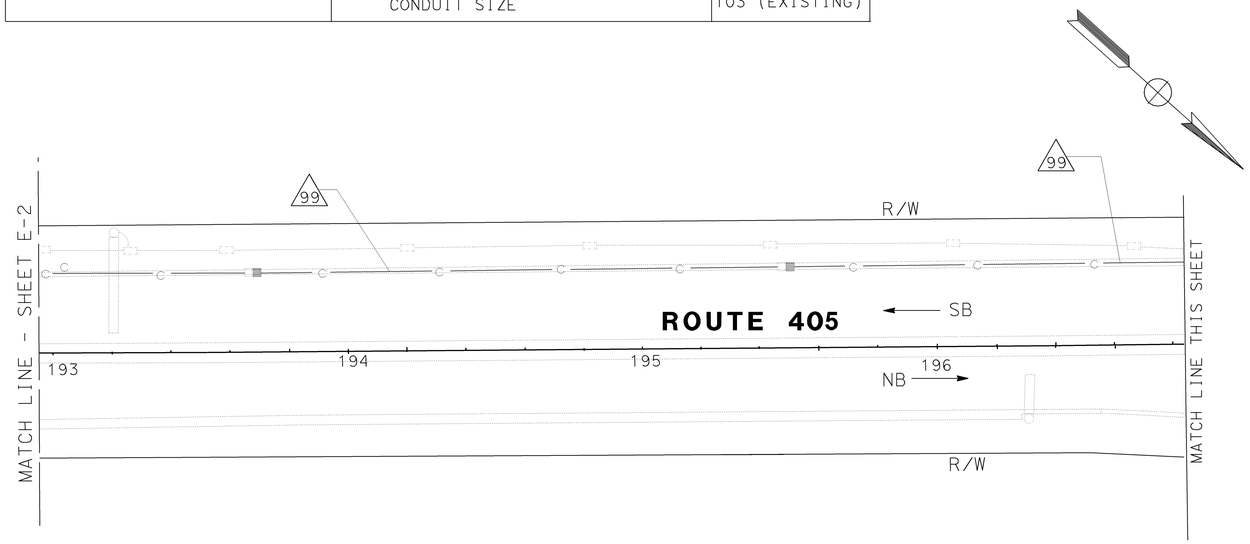
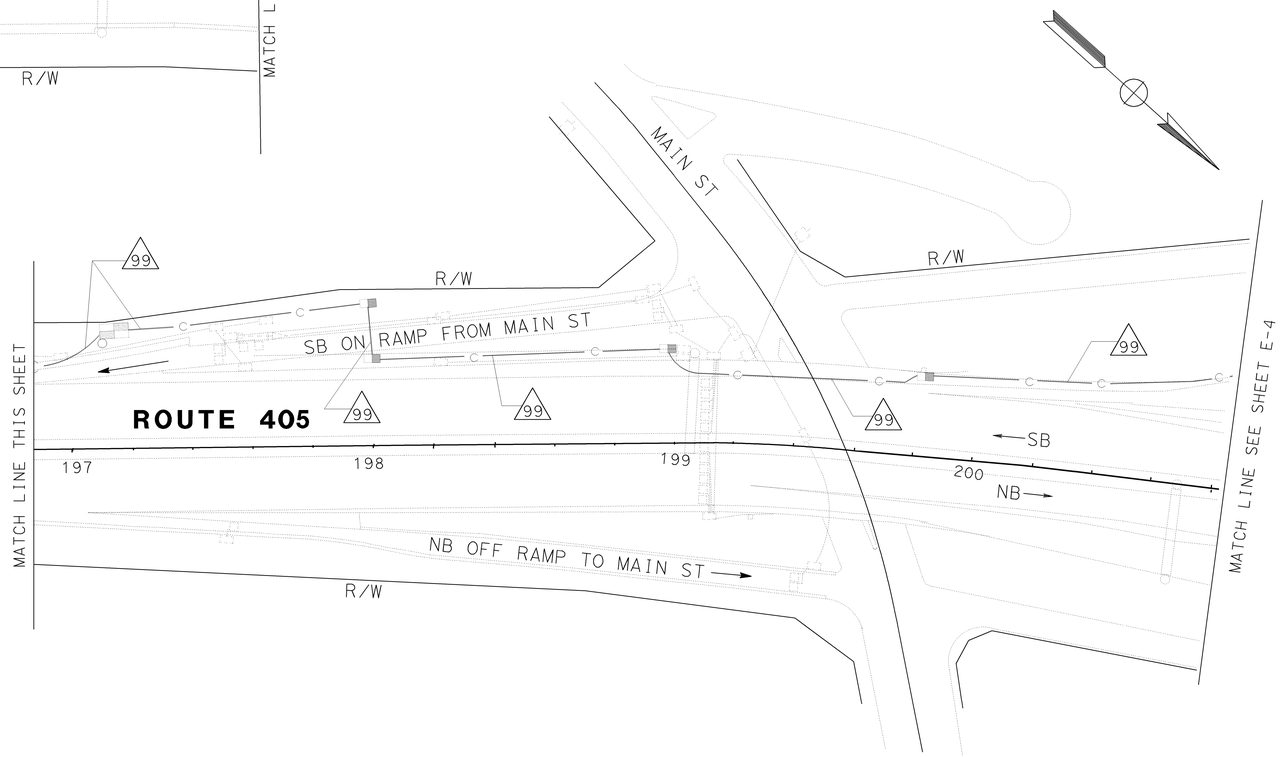
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN △99		
50P22 CABLE	COMMUNICATION DATA	1		
36SMFO CABLE AND 24SMFO CABLE	VIDEO/DATA		1	
12SMFO	CCTV CAMERA TO VIDEO DISTRIBUTION			1
	INNERDUCT SIZE 32		1	1
	CONDUIT SIZE	103 (EXISTING)		





COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

E-3

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	34	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

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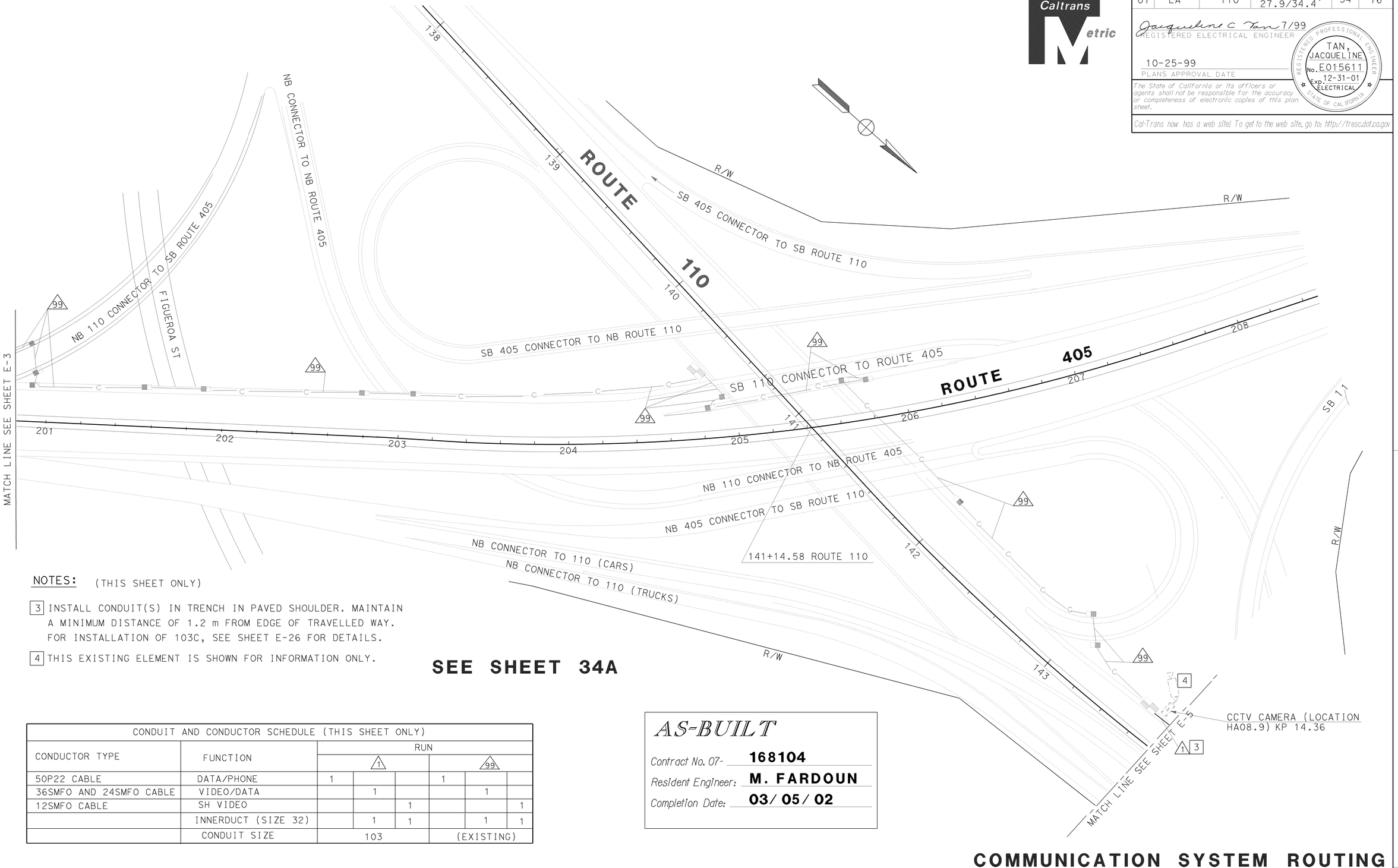

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

4 THIS EXISTING ELEMENT IS SHOWN FOR INFORMATION ONLY.

SEE SHEET 34A

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN					
		1			99		
50P22 CABLE	DATA/PHONE	1			1		
36SMFO AND 24SMFO CABLE	VIDEO/DATA		1			1	
12SMFO CABLE	SH VIDEO			1			1
	INNERDUCT (SIZE 32)		1	1		1	1
	CONDUIT SIZE	103			(EXISTING)		

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

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E-4

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EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	34a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

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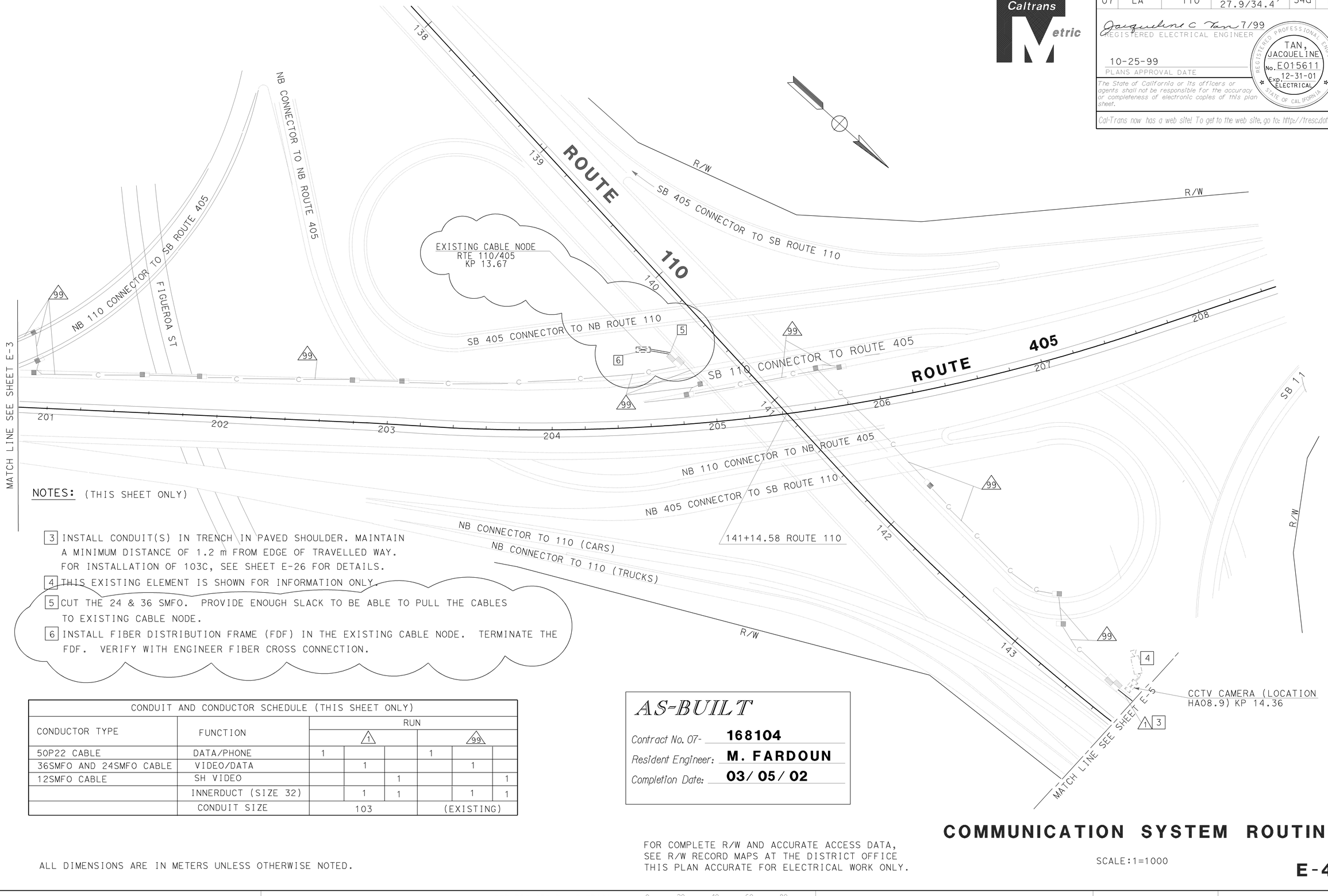
Caltrans Metric



NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

4 THIS EXISTING ELEMENT IS SHOWN FOR INFORMATION ONLY.

5 CUT THE 24 & 36 SMFO. PROVIDE ENOUGH SLACK TO BE ABLE TO PULL THE CABLES TO EXISTING CABLE NODE.

6 INSTALL FIBER DISTRIBUTION FRAME (FDF) IN THE EXISTING CABLE NODE. TERMINATE THE FDF. VERIFY WITH ENGINEER FIBER CROSS CONNECTION.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 99		
50P22 CABLE	DATA/PHONE	1			1		
36SMFO AND 24SMFO CABLE	VIDEO/DATA		1			1	
12SMFO CABLE	SH VIDEO			1			1
	INNERDUCT (SIZE 32)		1	1		1	1
	CONDUIT SIZE	103			(EXISTING)		

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE:1=1000

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER: DAVID PADILLA

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	35	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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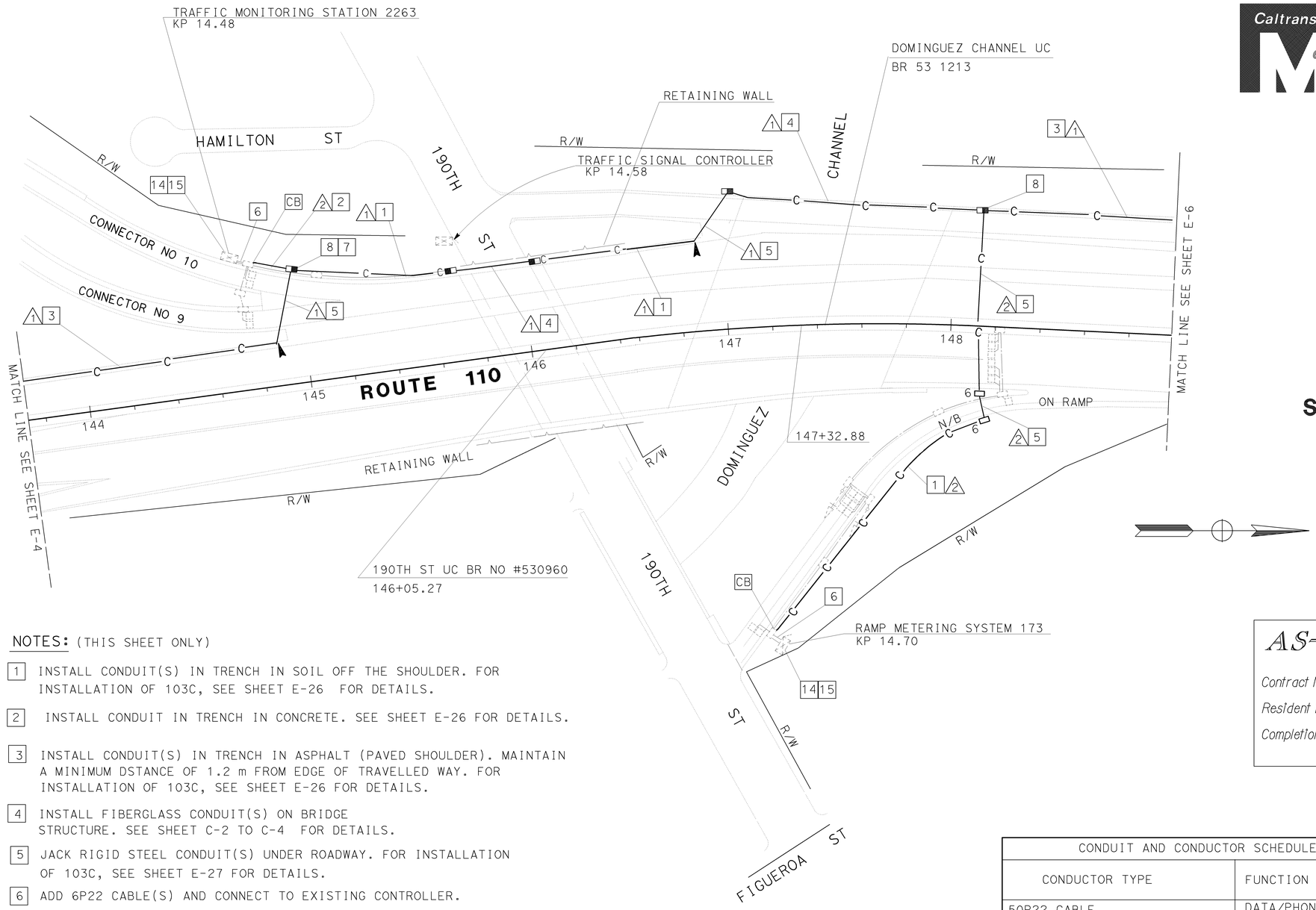

SEE SHEET 35A

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DSTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
4. INSTALL FIBERGLASS CONDUIT(S) ON BRIDGE STRUCTURE. SEE SHEET C-2 TO C-4 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER AND SPLICE USING A TWISTED PAIR SPLICE CLOUSURE.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUCTOR TYPE	FUNCTION	RUN			
		1			2
50P22 CABLE	DATA/PHONE	1			
36SMFO CABLE AND 24SMFO CABLE	VIDEO/DATA		1		
12SMFO CABLE	SH VIDEO			1	
6P22 CABLE	DATA/PHONE				1
	INNERDUCT (SIZE 32)		1	1	
	CONDUIT SIZE	103			53

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-5

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PROJECT ENGINEER: DAVID PADILLA

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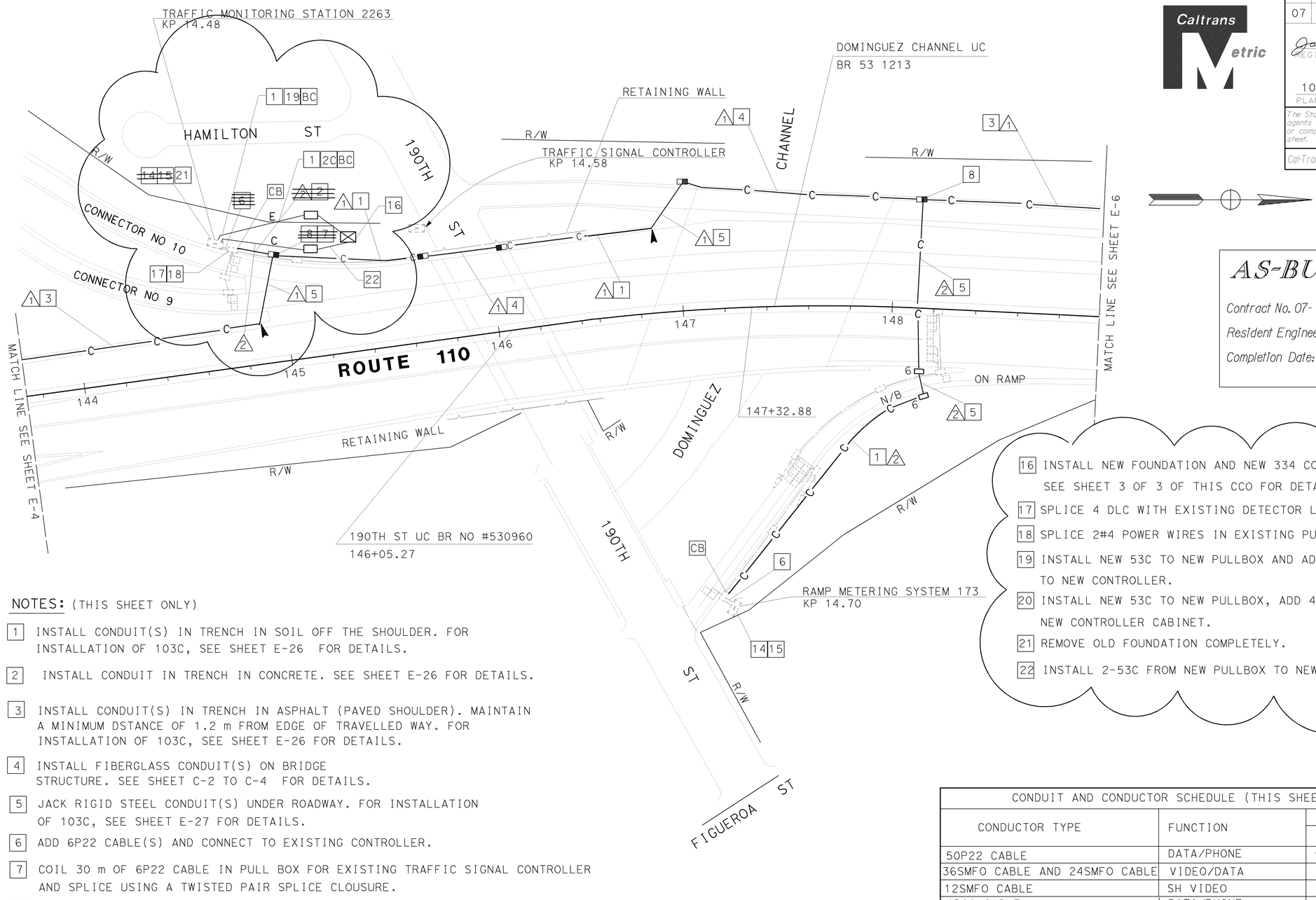

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DSTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
4. INSTALL FIBERGLASS CONDUIT(S) ON BRIDGE STRUCTURE. SEE SHEET C-2 TO C-4 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER AND SPLICE USING A TWISTED PAIR SPLICE CLOUSURE.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

16. INSTALL NEW FOUNDATION AND NEW 334 CONTROLLER CABINET BEHIND THE BARRIER. SEE SHEET 3 OF 3 OF THIS CCO FOR DETAILS.
17. SPLICE 4 DLC WITH EXISTING DETECTOR LOOP CABLES IN EXISTING PULLBOX.
18. SPLICE 2#4 POWER WIRES IN EXISTING PULLBOX.
19. INSTALL NEW 53C TO NEW PULLBOX AND ADD 2#4 POWER WIRES AND CONNECT TO NEW CONTROLLER.
20. INSTALL NEW 53C TO NEW PULLBOX, ADD 4 DLC, (1) 6P22 CABLE AND CONNECT TO NEW CONTROLLER CABINET.
21. REMOVE OLD FOUNDATION COMPLETELY.
22. INSTALL 2-53C FROM NEW PULLBOX TO NEW CONTROLLER CABINET.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUCTOR TYPE	FUNCTION	RUN			
		1			2
50P22 CABLE	DATA/PHONE	1			
36SMFO CABLE AND 24SMFO CABLE	VIDEO/DATA		1		
12SMFO CABLE	SH VIDEO			1	
6P22 CABLE	DATA/PHONE				1
	INNERDUCT (SIZE 32)		1	1	
	CONDUIT SIZE		103		53

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-5

AS-BUILT
Contract No. 07- 168104
Resident Engineer: M. FARDOUN
Completion Date: 03/05/02

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	35a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER
10-25-99
PLANS APPROVAL DATE
TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA
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PROJECT ENGINEER: DAVID PADILLA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 21-JUL-2009 | TIME PLOTTED => 15:12

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
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DGN FILE => 716810u05a.dgn
CU 07396
EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	36	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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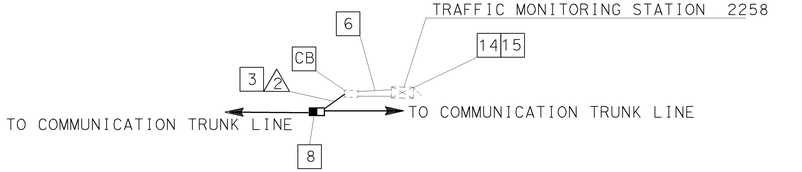
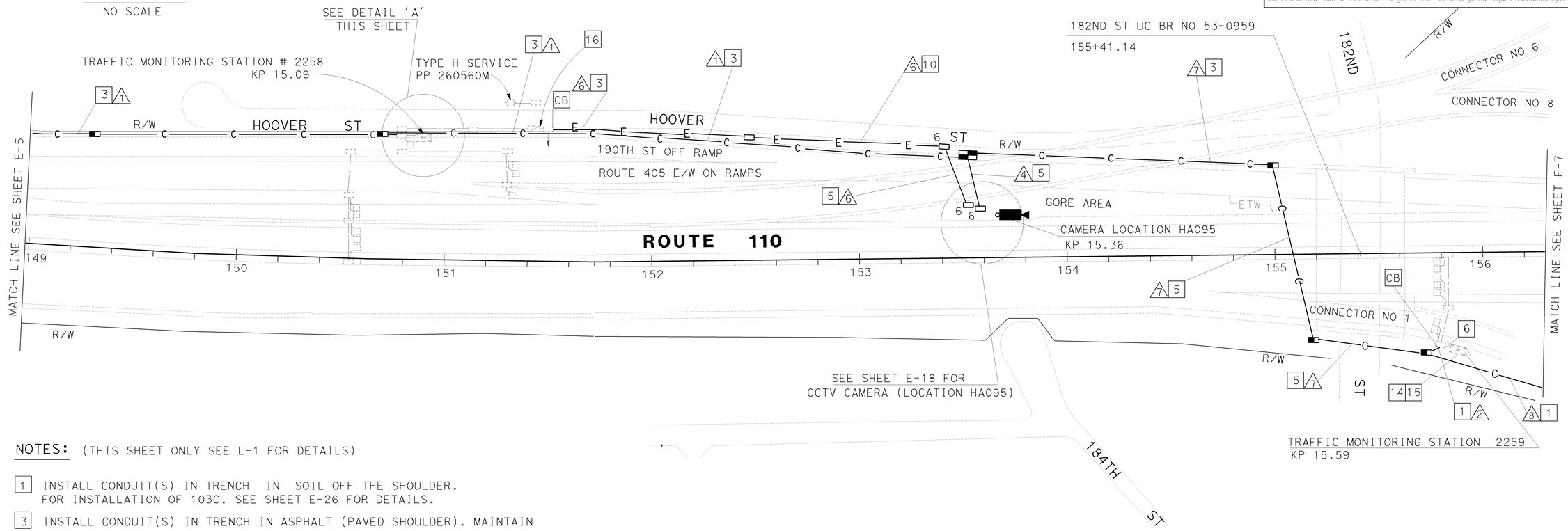


DETAIL 'A'
NO SCALE



NOTES: (THIS SHEET ONLY SEE L-1 FOR DETAILS)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
4. INSTALL FIBERGLASS (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEET C-2 TO C-5 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
8. INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
10. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-26 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL 20 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR CCTV CAMERA, IN EXISTING TYPE 111BF SERVICE CABINET.

ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE NOTED.

SEE SHEET 36A

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFICE.
NOTE: THI PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN							
		7	1		1		2	4		6	8
50P22 CABLE	DATA/PHONE		1								
24SMFO CABLE	VIDEO/DATA			1							
36SMFO CABLE	VIDEO/DATA	1		1							1
12SMFO CABLE	SH VIDEO				1						
6P22 CABLE	DATA/PHONE	1				1	1				
2SMFO B/O CABLE	SH VIDEO							1			
2 #4	POWER								1		
	INNERDUCT (SIZE 32)	1		1	1			1			1
	CONDUIT SIZE	103	103			53	53		53		103

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-6

LAST REVISION 00-00-00
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DGN FILE => 7168100606.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	36a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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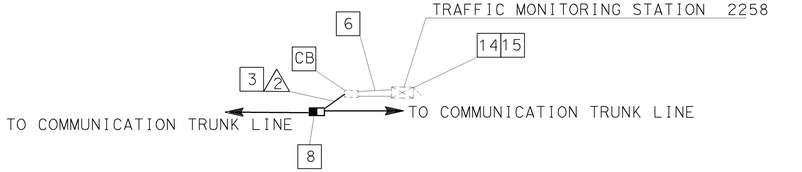
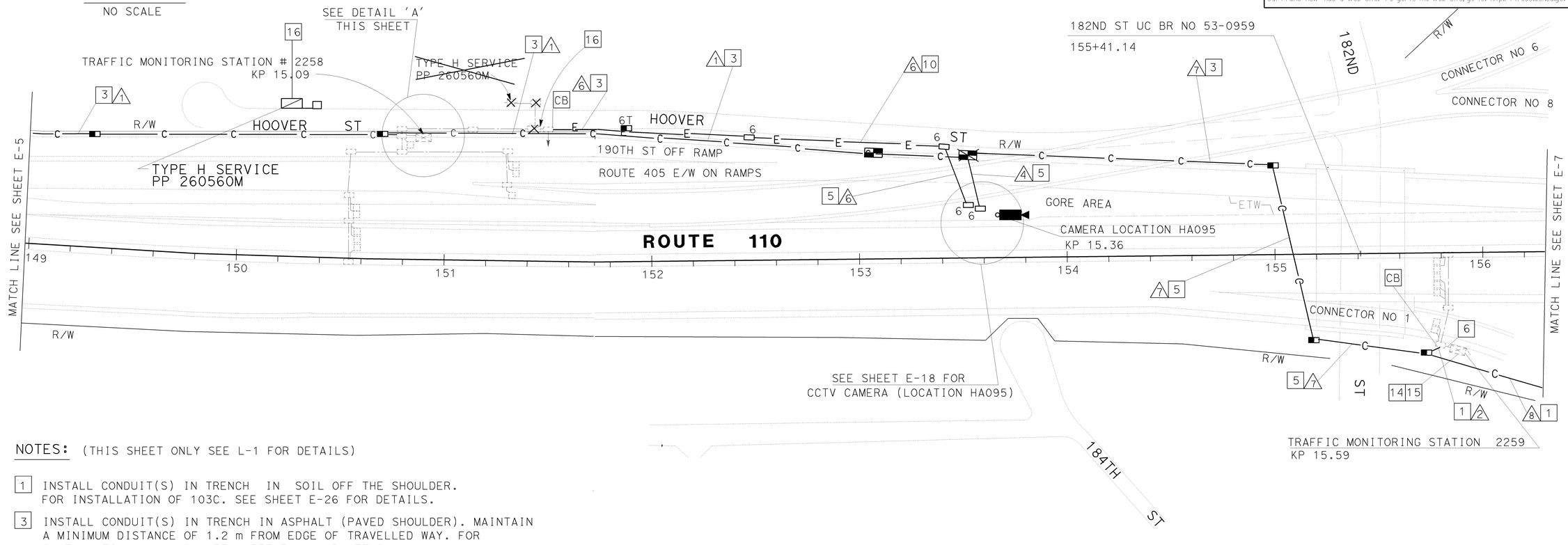


DETAIL 'A'
NO SCALE



NOTES: (THIS SHEET ONLY SEE L-1 FOR DETAILS)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
4. INSTALL FIBERGLASS (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEET C-2 TO C-5 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
8. INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
10. INSTALL CONDUITS IN THE SAME TRENCH. SEE SHEET E-26 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL 20 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR CCTV CAMERA, IN EXISTING TYPE 111BF SERVICE CABINET.

ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE NOTED.

AS-BUILT
Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFICE.
NOTE: THI PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION		RUN						
		7	1			2	4		6	8
50P22 CABLE	DATA/PHONE		1							
24SMFO CABLE	VIDEO/DATA			1						
36SMFO CABLE	VIDEO/DATA	1		1						1
12SMFO CABLE	SH VIDEO				1					
6P22 CABLE	DATA/PHONE	1				1	1			
2SMFO B/O CABLE	SH VIDEO							1		
2 #4	POWER								1	
	INNERDUCT (SIZE 32)	1		1	1			1		1
	CONDUIT SIZE	103	103			53	53		53	103

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-6

LAST REVISION 00-00-00 DATE PLOTTED =>21-JUL-2009 TIME PLOTTED =>15:12

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DGN FILE =>7168100u06a.dgn

CU 07396

EA 168101

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	37	76

Jacqueline C Tan 7/99
REGISTERED CIVIL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. ELECTRICAL — STATE OF CALIFORNIA

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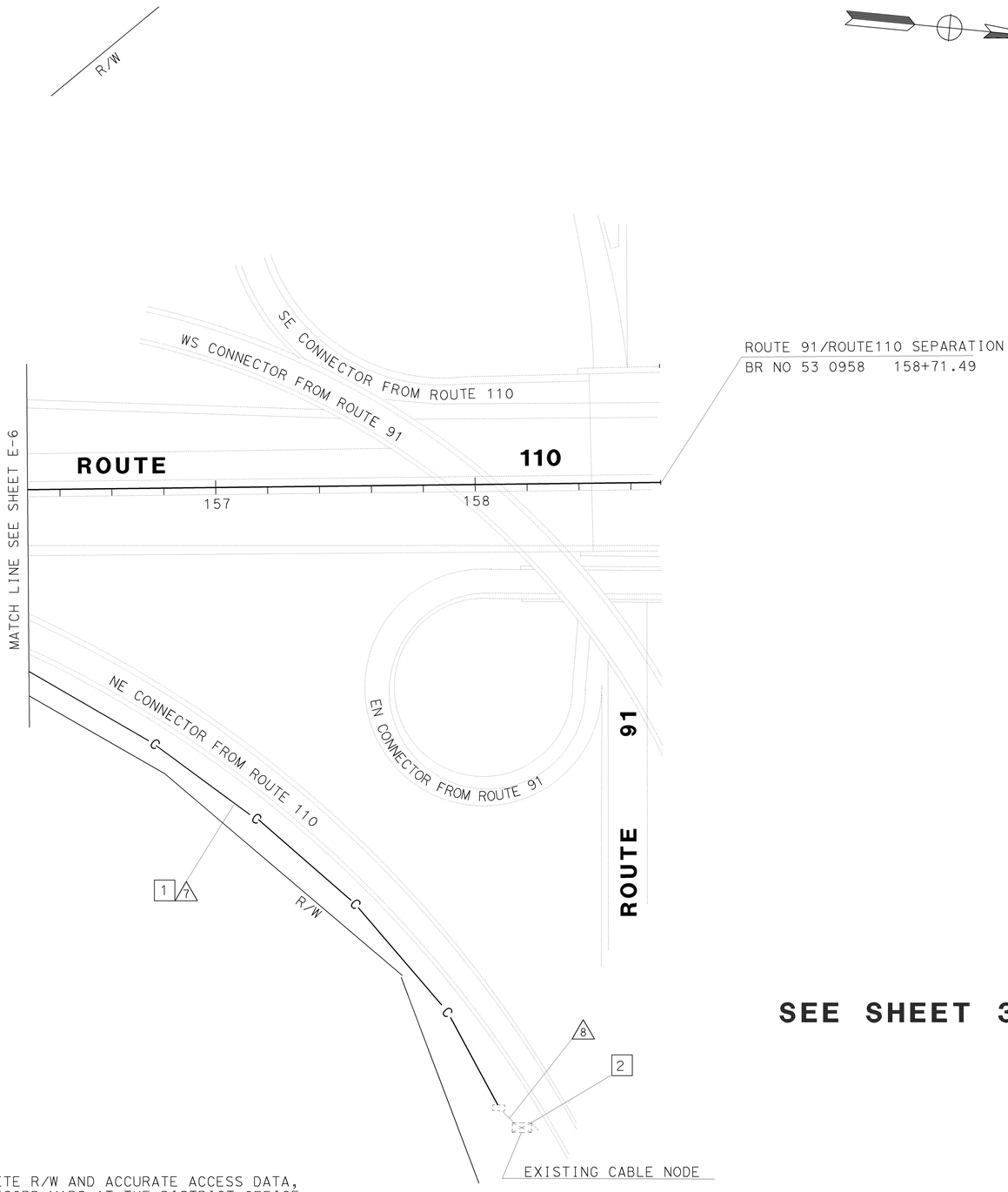

ROUTE 91/ROUTE110 SEPARATION
BR NO 53 0958 158+71.49

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)			
CONDUCTOR TYPE	FUNCTION	RUN	
		7	8
36SMFO CABLE	VIDEO/DATA	1	1
	INNERDUCT (SIZE 32)	1	1
	CONDUIT SIZE	103	EXIST

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C OR OTHER TYPES SEE SHEET E-26 FOR DETAILS.

2 CONNECT 36SMFO CABLE TO EXISTING CABLE NODE. SEE DETAIL 'E' SHEET E-40 FOR DETAILS.

SEE SHEET 37A

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-7

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PROJECT ENGINEER: DAVID PADILLA

CALCULATED/DESIGNED BY
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DATE REVISED

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EA 168101

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	37a	76

Jacqueline C Tan 7/99
REGISTERED CIVIL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. ELECTRICAL — STATE OF CALIFORNIA

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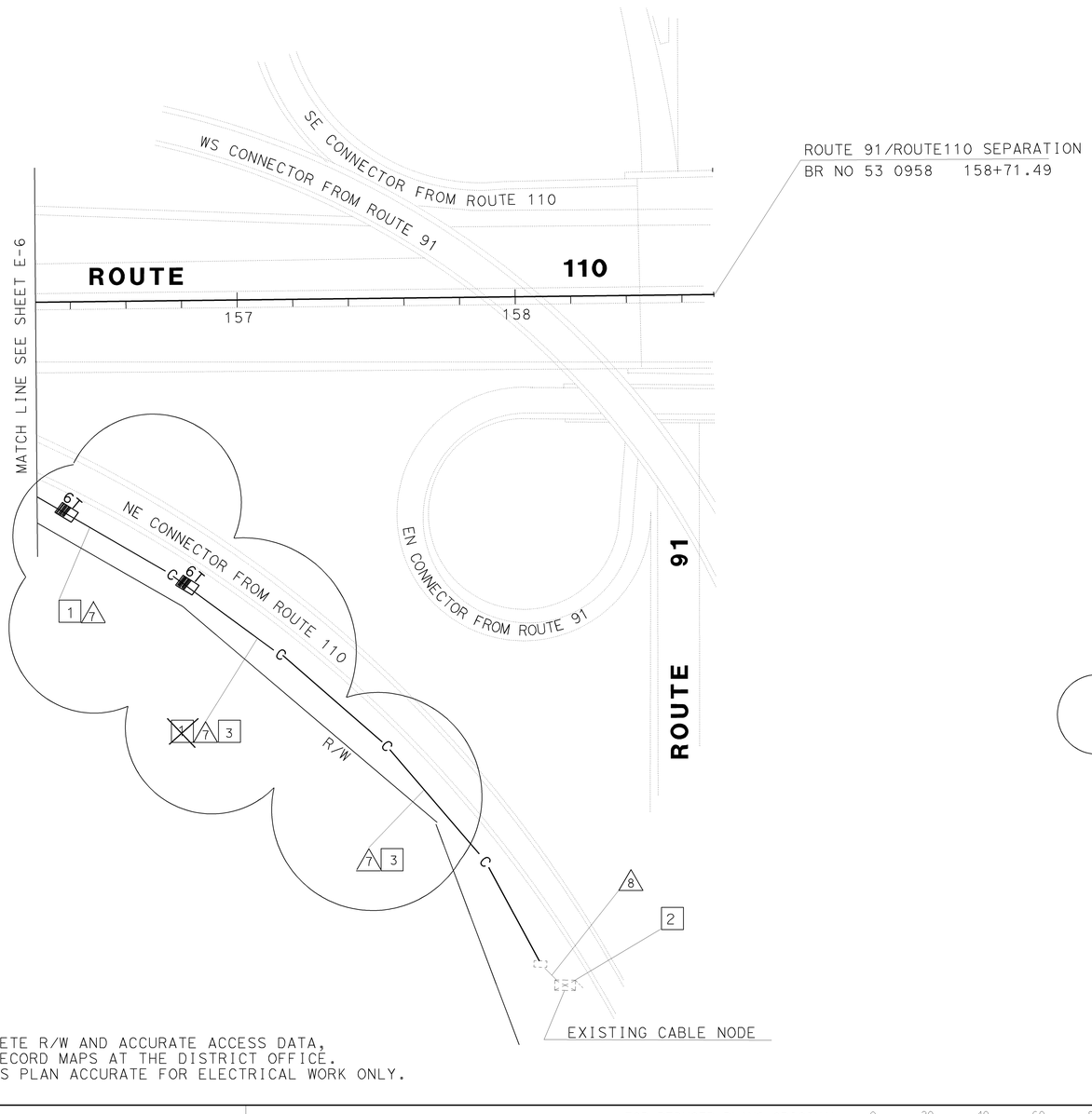
AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/ 05/ 02**

R/W



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)			
CONDUCTOR TYPE	FUNCTION	RUN	
		7	8
36SMFO CABLE	VIDEO/DATA	1	1
	INNERDUCT (SIZE 32)	1	1
	CONDUIT SIZE	103	EXIST

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C OR OTHER TYPES SEE SHEET E-26 FOR DETAILS.
2. CONNECT 36SMFO CABLE TO EXISTING CABLE NODE. SEE DETAIL 'E' SHEET E-40 FOR DETAILS.
3. INSTALL CONDUITS IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE 1.2M FROM EDGE OF TRAVELED WAY FOR INSTALLATION SEE DETAIL E-26.

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-7

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PROJECT ENGINEER: DAVID PADILLA

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	38	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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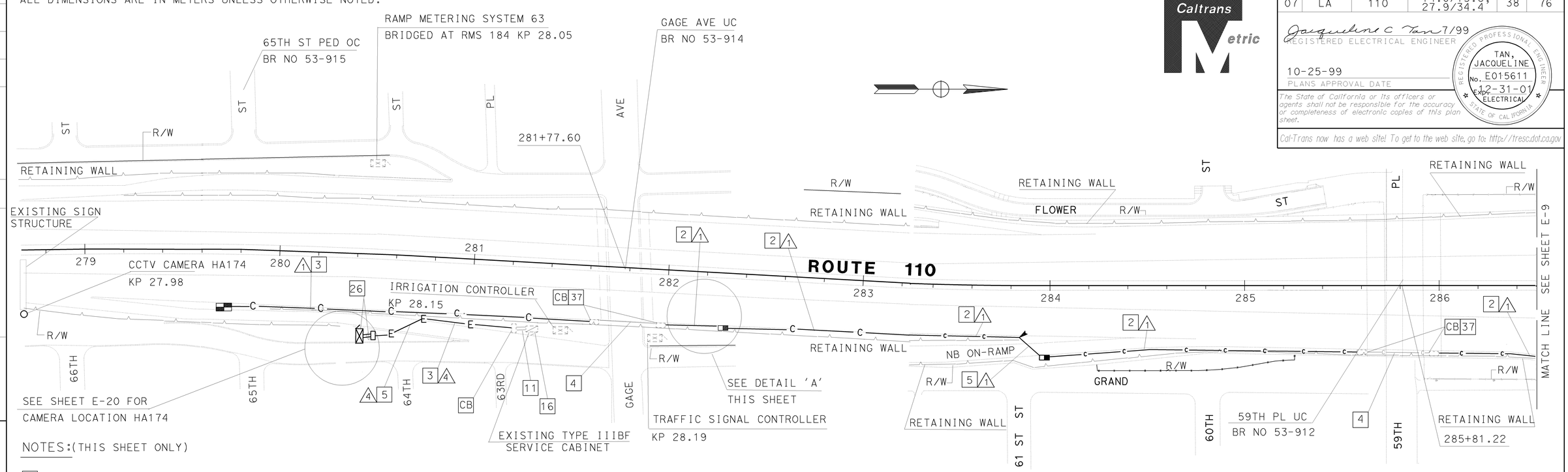
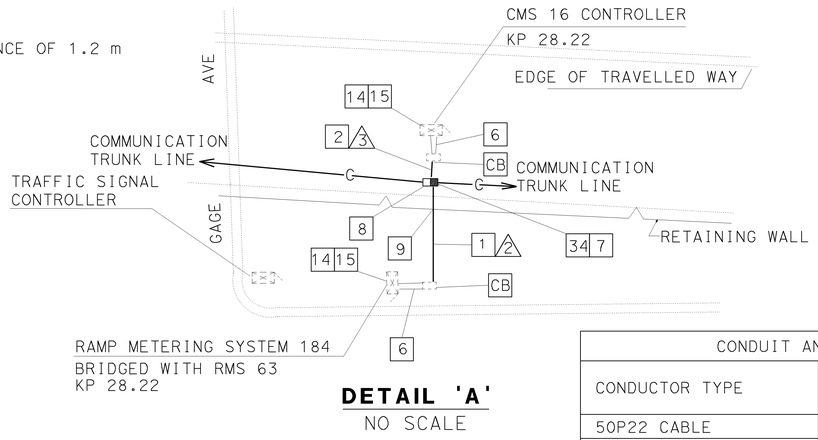


NOTES:(THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
4. ADD 50P22,24SMFO, AND 12SMFO CABLES IN EXISTING COMMUNICATION CONDUIT IN CONCRETE BARRIER WITHOUT INNERDUCT. INSTALL CABLES AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL 4, SHEET C-5.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
7. COIL 30 m OF 6P22 IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.
8. INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
9. CORE THROUGH WALL. SEE SHEET C-6 FOR DETAILS.
11. ADD 2 # 4 POWER CONDUCTORS TO EXISTING CONDUIT.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
16. INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR CCTV IN EXISTING SERVICE CABINET.
26. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.
34. COIL 30 M OF 6P22 FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.
37. INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE DETAIL '4' SHEET C-5.
38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.



DETAIL 'A'
NO SCALE

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2	RUN 3	RUN 4
50P22 CABLE	DATA/PHONE	1					
24SMFO CABLE	VIDEO/DATA		1				
12SMFO CABLE	SH VIDEO			1			
6P22 CABLE	DATA/PHONE				1	2	
2 # 4	POWER						1
	INNERDUCT (SIZE 32)		1	1			
	CONDUIT SIZE		103		53	53	53

SEE SHEET 38A

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-8

DATE | REVISED BY | DATE REVISED

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PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	38a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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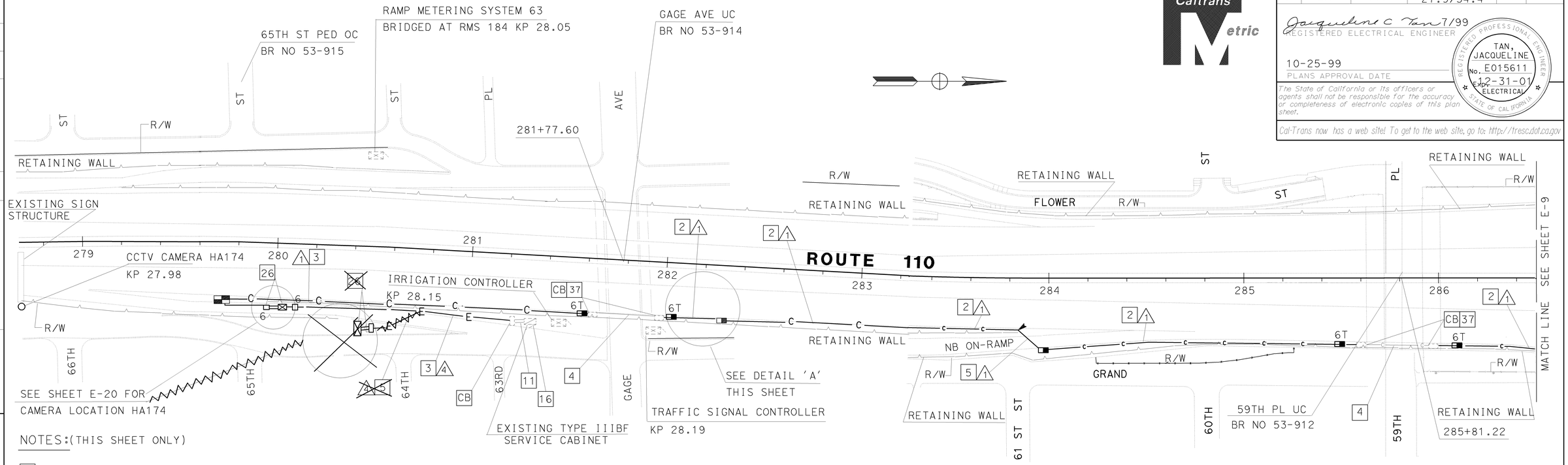


NOTES:(THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

4 ADD 50P22,24SMFO, AND 12SMFO CABLES IN EXISTING COMMUNICATION CONDUIT IN CONCRETE BARRIER WITHOUT INNERDUCT. INSTALL CABLES AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL 4, SHEET C-5.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

7 COIL 30 m OF 6P22 IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

9 CORE THROUGH WALL. SEE SHEET C-6 FOR DETAILS.

11 ADD 2 # 4 POWER CONDUCTORS TO EXISTING CONDUIT.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

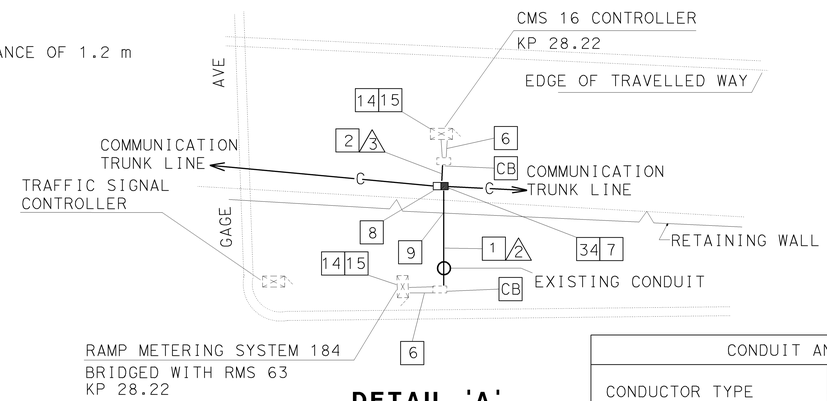
16 INSTALL 30 A, 120 V, SINGLE POLE CIRCUIT BREAKER FOR CCTV IN EXISTING SERVICE CABINET.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

34 COIL 30 M OF 6P22 FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

37 INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE DETAIL '4' SHEET C-5.

38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.



DETAIL 'A'
NO SCALE

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/ 05/ 02**

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			2	3	4
50P22 CABLE	DATA/PHONE	1					
24SMFO CABLE	VIDEO/DATA		1				
12SMFO CABLE	SH VIDEO			1			
6P22 CABLE	DATA/PHONE				1	2	
2 # 4	POWER						1
	INNERDUCT (SIZE 32)		1	1			
	CONDUIT SIZE		103		53	53	53

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-8

DATE REVISED BY

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

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

USERNAME => s129112
DGN FILE => 716810u08a.dgn

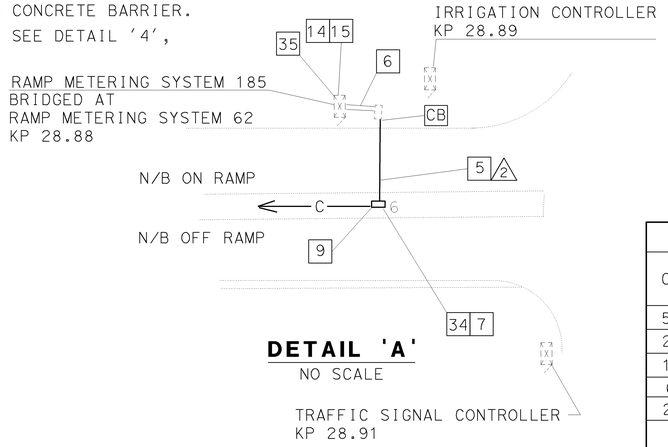
CU 07396

EA 168101

LAST REVISION 00-00-00
DATE PLOTTED => 21-JUL-2009
TIME PLOTTED => 15:12

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE (SHOULDER). SEE SHEET E-26 FOR DETAILS.
4. ADD 50P22, 24SMFO, AND 12SMFO WITHOUT THE INNERDUCT IN EXISTING CONDUIT IN CONCRETE BARRIER. INSTALL CABLE AFTER PROPER MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL '4', SHEET C-5.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. CONNECT 6P22 TO 50 PAIR TERMINAL BLOCK AT NEW DATA NODE.
9. CORE THROUGH WALL. SEE SHEET C-6 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
34. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. CONNECT 6P22 TO 50 PAIR TERMINAL BLOCK AT NEW DATA NODE.
35. RELOCATE BRIDGE AT RMS 62 TO RMS 185 AND REVERSE BRIDGING SCHEME. BRIDGE RMS 62 TO RMS 185.
36. COIL 30 m OF 6P22 FOR CABLE FOR FUTURE USE. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.
37. INSTALL 103C IN EXISTING PULL BOX IN CONCRETE BARRIER. SEE DETAIL '4' SHEET C-5.
38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.



DETAIL 'A'
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	3	4	
50P22 CABLE	DATA/PHONE	1						
24SMFO CABLE	VIDEO/DATA		1					
12SMFO CABLE	SH VIDEO			1				
6P22 CABLE	DATA/PHONE				1	3	1	
2SMFO CABLE	SH VIDEO							1
	INNERDUCT (SIZE 32)		1	1				
	CONDUIT SIZE	103			53	53	53	

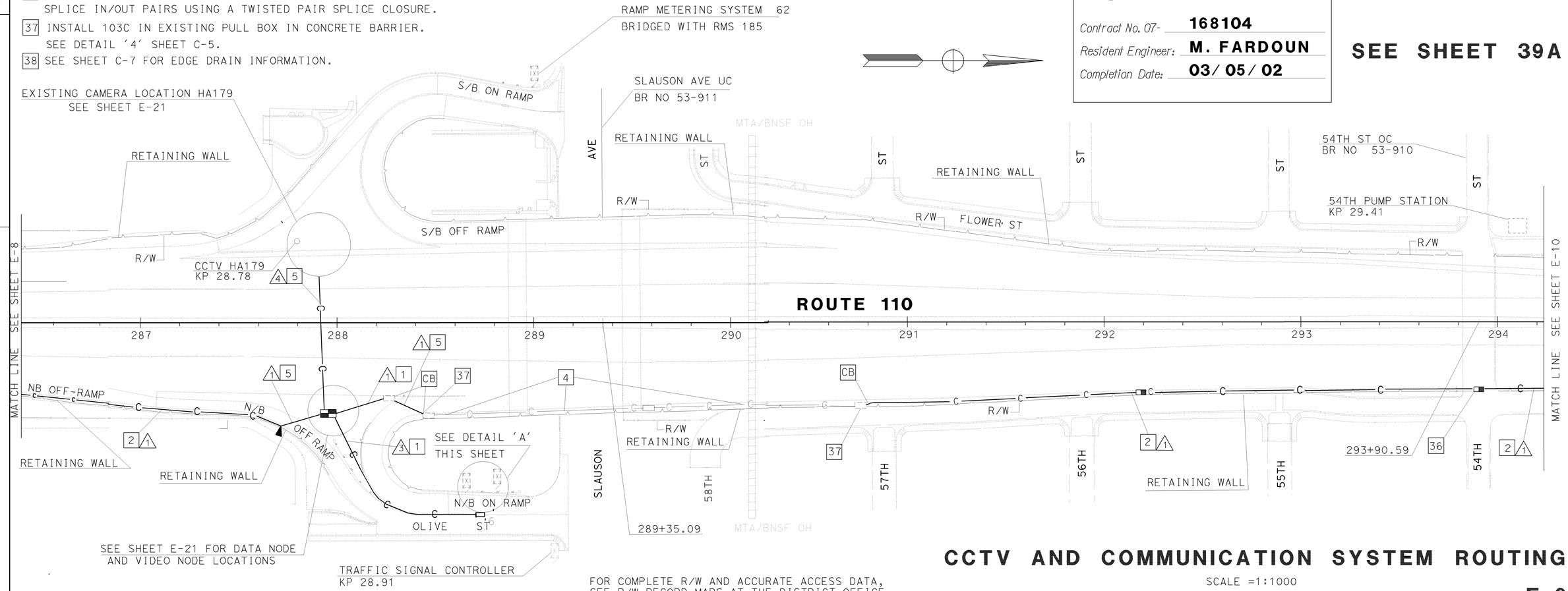
AS-BUILT

Contract No. 07- 168104

Resident Engineer: M. FARDOUN

Completion Date: 03/05/02

SEE SHEET 39A



CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-9

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	39	76

Caltrans Metric

Jacqueline C Tan
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

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

USERNAME => s129112
DGN FILE => 716810u09.dgn

CU 07396

EA 168101

LAST REVISION 00-00-00
DATE PLOTTED => 21-JUL-2009
TIME PLOTTED => 15:12

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	39a	76

Caltrans Metric

Jacqueline C Tan
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE (SHOULDER). SEE SHEET E-26 FOR DETAILS.
4. ADD 50P22, 24SMFO, AND 12SMFO WITHOUT THE INNERDUCT IN EXISTING CONDUIT IN CONCRETE BARRIER. INSTALL CABLE AFTER PROPER MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL '4', SHEET C-5.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. CONNECT 6P22 TO 50 PAIR TERMINAL BLOCK AT NEW DATA NODE.
9. CORE THROUGH WALL. SEE SHEET C-6 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
34. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. CONNECT 6P22 TO 50 PAIR TERMINAL BLOCK AT NEW DATA NODE.
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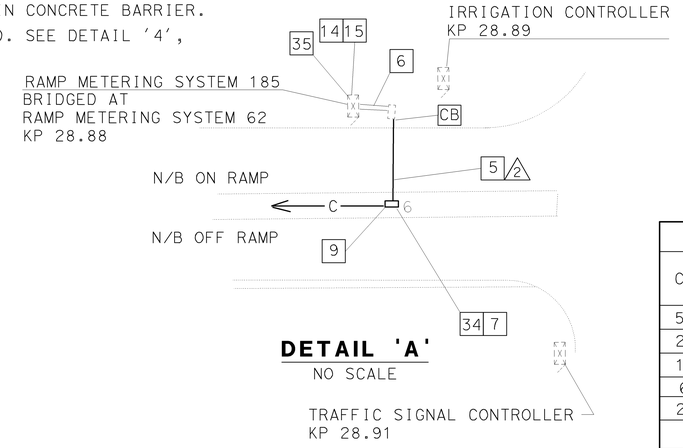
37. INSTALL 103C IN EXISTING PULL BOX IN CONCRETE BARRIER. SEE DETAIL '4' SHEET C-5.
38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

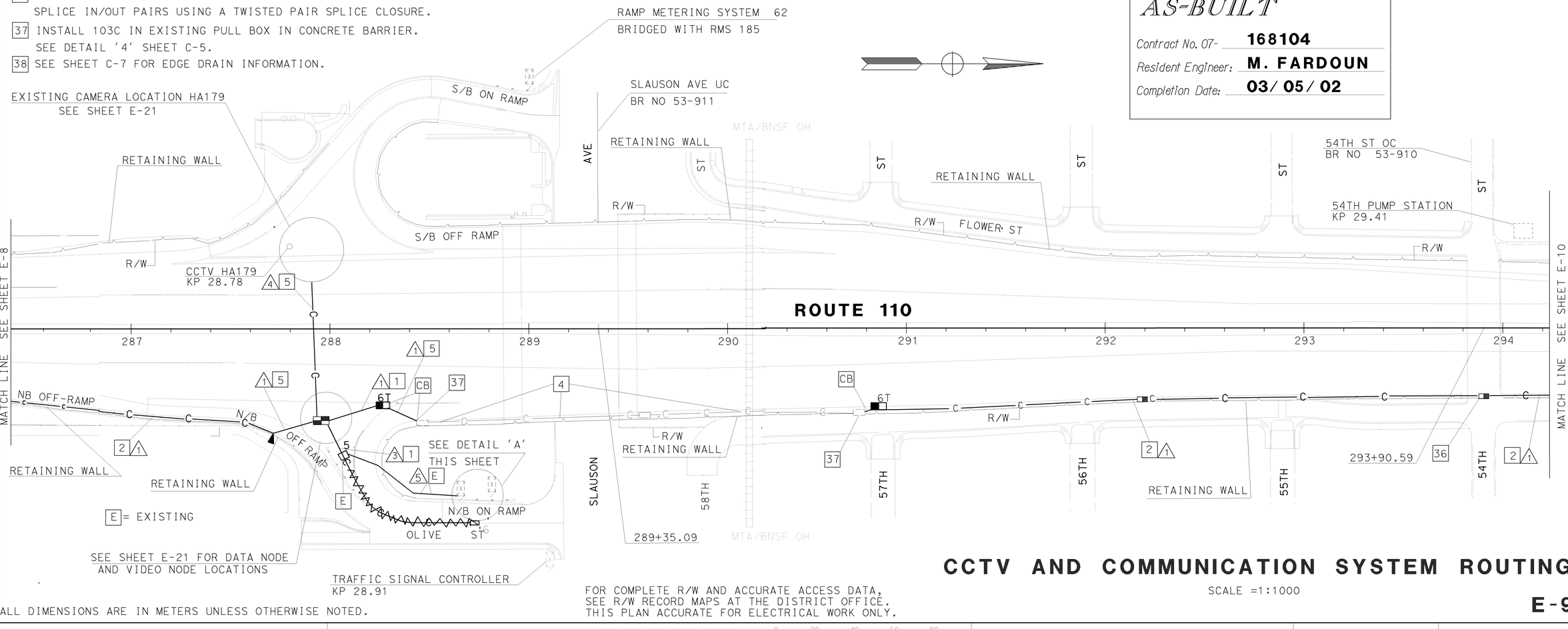


DETAIL 'A'
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	3	4	
50P22 CABLE	DATA/PHONE	1						
24SMFO CABLE	VIDEO/DATA		1					
12SMFO CABLE	SH VIDEO			1				
6P22 CABLE	DATA/PHONE				1	3	1	
2SMFO CABLE	SH VIDEO							1
	INNERDUCT (SIZE 32)		1	1				
	CONDUIT SIZE	103			53	53	53	

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-9

DATE | REVISED BY | DATE REVISED

CALCULATED/ DESIGNED BY | CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

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USERNAME => s129112
DGN FILE => 716810u09a.dgn

CU 07396

EA 168101

LAST REVISION 00-00-00
DATE PLOTTED => 21-JUL-2009
TIME PLOTTED => 15:12

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	40	76

Jacqueline C. Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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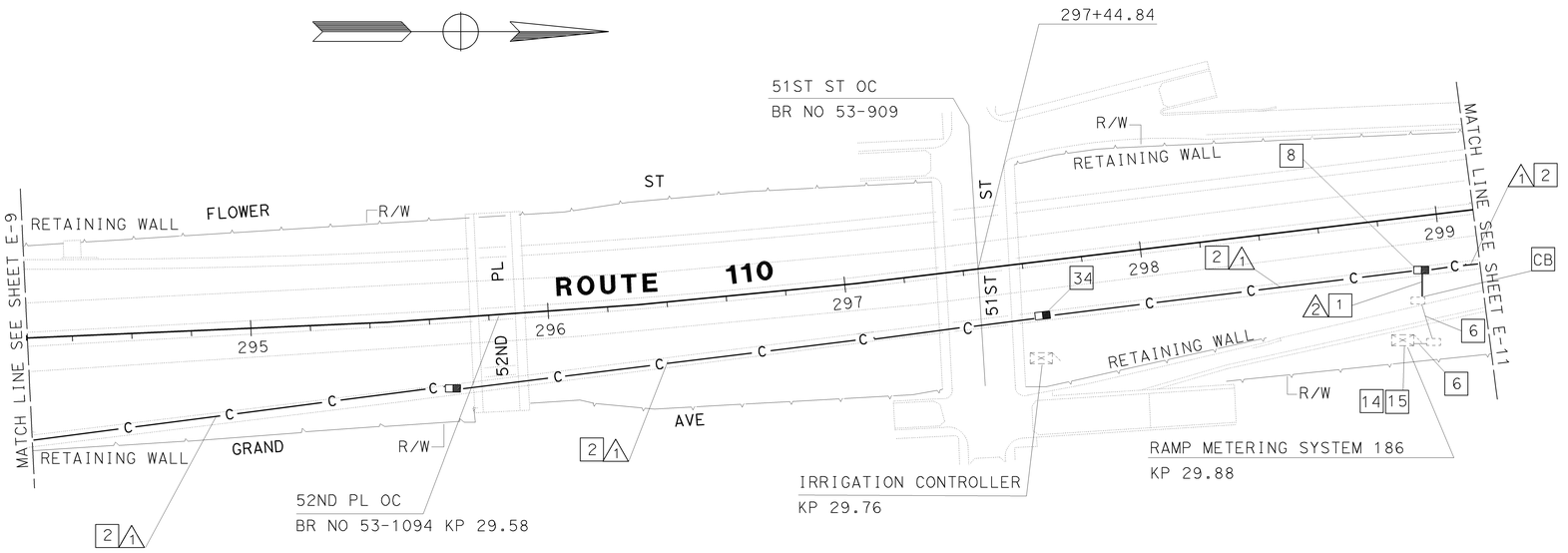

AS-BUILT

Contract No. 07- 168104

Resident Engineer: M. FARDOUN

Completion Date: 03/05/02

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUCTOR TYPE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	SH VIDEO			1		
6P22 CABLE	DATA/PHONE					1
	INNERDUCT (SIZE 32)		1	1		
	CONDUIT SIZE	103				53

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING RMS 186 CONTROLLER.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-31 AND DETAIL 1, SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

PROJECT ENGINEER: DAVID PADILLA

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

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

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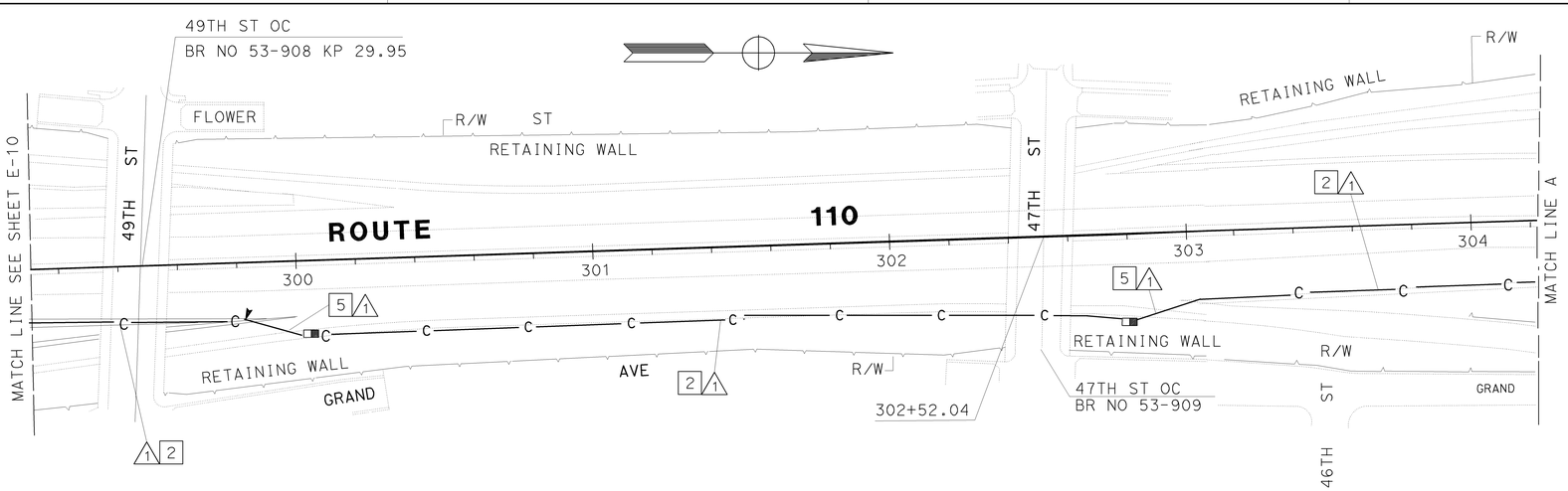
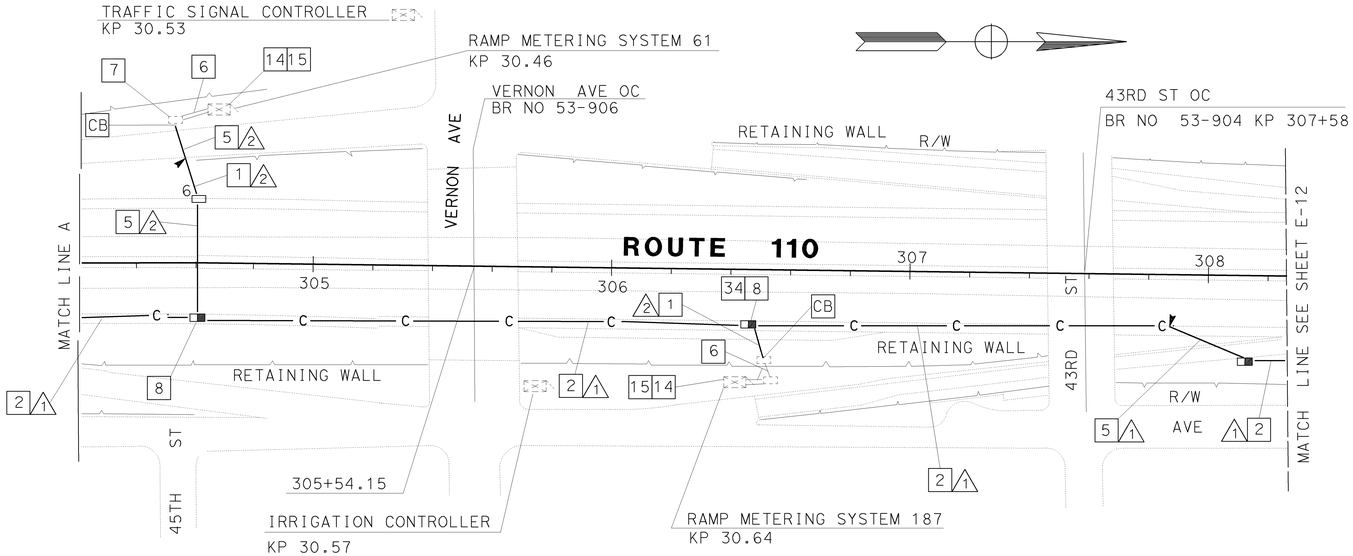
CU 07396

EA 168101

LAST REVISION 00-00-00 DATE PLOTTED => 02-JUL-2009 TIME PLOTTED => 14:42





CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2
50P22 CABLE	DATA/PHONE	1			
24SMFO CABLE	VIDEO/DATA		1		
12SMFO CABLE	SH VIDEO			1	
6P22 CABLE	DATA/PHONE				2
	INNERDUCT (SIZE 32)		1	1	
	CONDUIT SIZE	103			53

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	41	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — EXP. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

SEE SHEET 41A

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.
8. INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
34. COIL 30 m OF 6P22 FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.
38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN
PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 21-JUL-2009
TIME PLOTTED => 15:21

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

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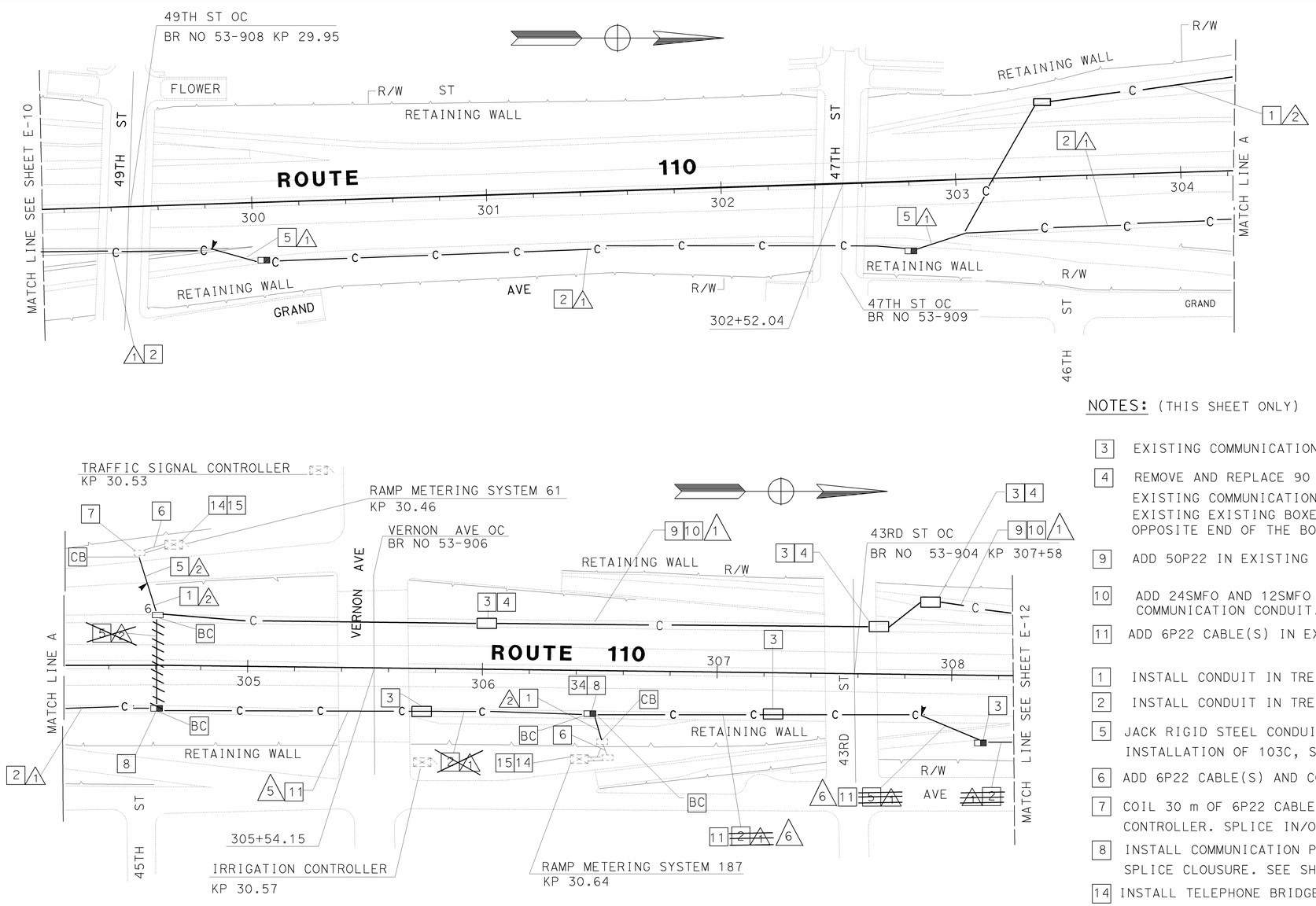
DGN FILE => 716810u11.dgn

CU 07396

EA 168101



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)												
CONDUCTOR TYPE	FUNCTION	RUN										
		1			4			2	3	5	6	
50P22 CABLE	DATA/PHONE	1			1							
24SMFO CABLE	VIDEO/DATA		1			1						
12SMFO CABLE	SH VIDEO			1			1					
6P22 CABLE	DATA/PHONE				~~2~~	1		1	2	4	1	
	INNERDUCT (SIZE 32)		1	~~1~~		1						
	CONDUIT SIZE	(2)	~~103~~	53E	103			53	53	53E	53E	

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

NOTES: (THIS SHEET ONLY)

3 EXISTING COMMUNICATIONS PULL BOX IN CONCRETE SHOULDER.

4 REMOVE AND REPLACE 90 DEGREES BENDS FROM EXISTING 53C CONDUITS ENTERING EXISTING COMMUNICATION PULL BOXES WITH THE CONDUITS ENTERING THE ENDS OF THESE EXISTING EXISTING BOXES, VERTICALLY AND HORIZONTALLY ALIGNED WITH CONDUITS AT THE OPPOSITE END OF THE BOX.

9 ADD 50P22 IN EXISTING 53C COMMUNICATION CONDUIT.

10 ADD 24SMFO AND 12SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 53 C COMMUNICATION CONDUIT.

11 ADD 6P22 CABLE(S) IN EXISTING 53C IN CONCRETE SHOULDER.

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

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38 SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-11

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	41a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — EXP. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

DATE REVISED BY

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans **TRAFFIC DESIGN**

LAST REVISION 00-00-00 DATE PLOTTED =>21-JUL-2009 TIME PLOTTED =>15:21

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DGN FILE =>716810u11a.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	42	76

Caltrans Metric

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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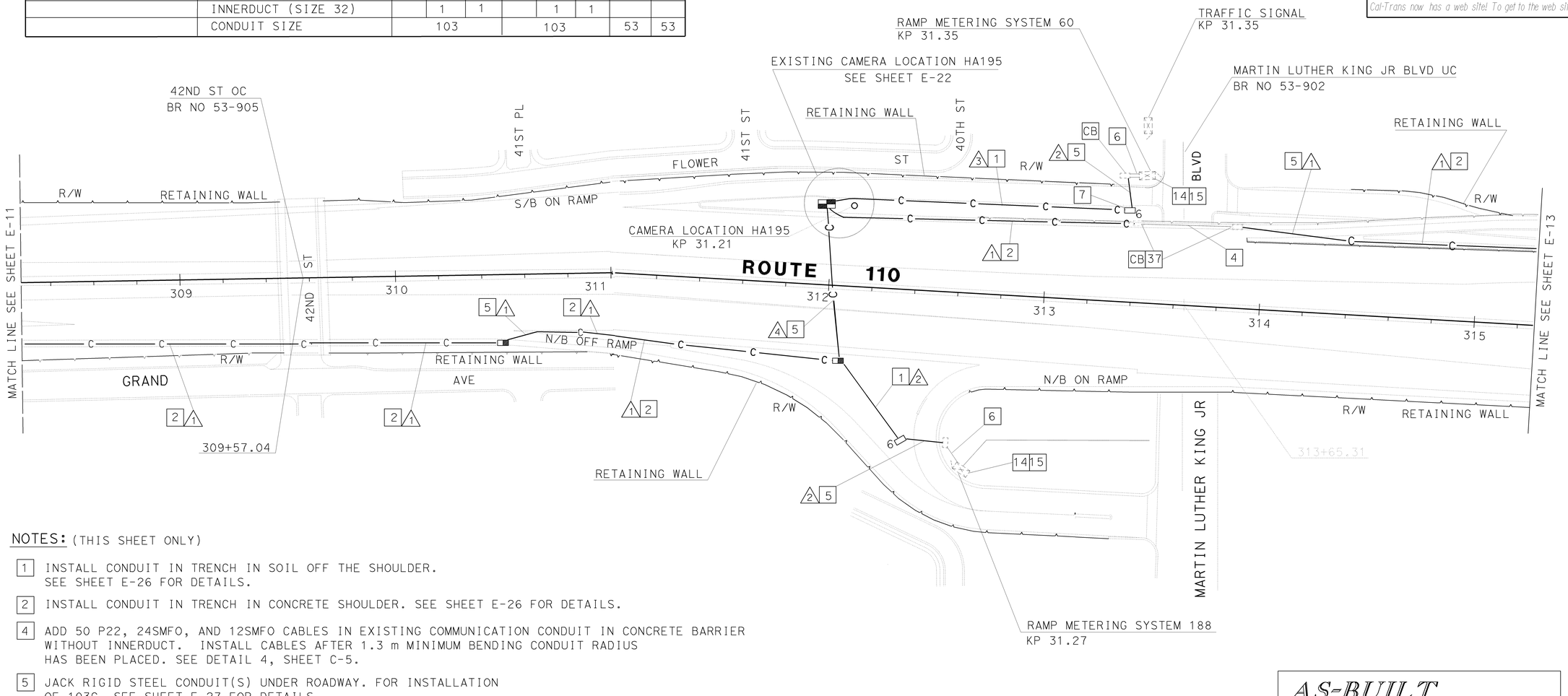
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)									
CONDUCTOR TYPE	FUNCTION	RUN							
		1			4			2	3
50P22 CABLE	DATA/PHONE	1			1				
24SMFO CABLE	VIDEO/DATA		1			1			
12SMFO CABLE	SH VIDEO			1			1		
6P22 CABLE	DATA/PHONE					1		1	2
	INNERDUCT (SIZE 32)		1	1		1	1		
	CONDUIT SIZE	103			103			53	53



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.
4. ADD 50 P22, 24SMFO, AND 12SMFO CABLES IN EXISTING COMMUNICATION CONDUIT IN CONCRETE BARRIER WITHOUT INNERDUCT. INSTALL CABLES AFTER 1.3 m MINIMUM BENDING CONDUIT RADIUS HAS BEEN PLACED. SEE DETAIL 4, SHEET C-5.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING RMS 60 CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS AT SPLICE VAULT.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
37. INSTALL 103C IN EXISTING COMMUNICATION PULLBOX IN CONCRETE BARRIER. SEE SHEET C-5 DETAIL '4'.
38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

SEE SHEET 42A

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

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

USERNAME => s129112
DGN FILE => 716810u12.dgn

CU 07396

EA 168101

LAST REVISION 00-00-00
DATE PLOTTED => 21-JUL-2009
TIME PLOTTED => 15:21

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	42a	76

Caltrans Metric

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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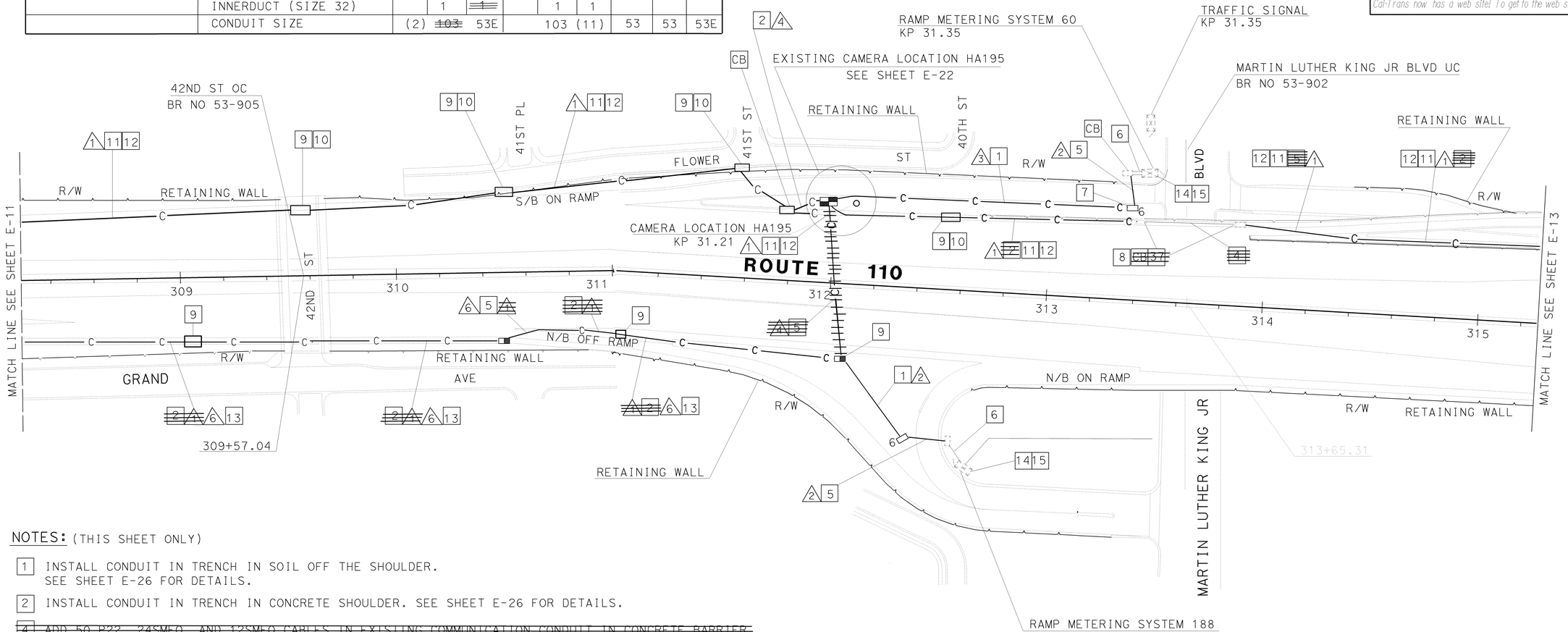
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)										
CONDUCTOR TYPE	FUNCTION	RUN								
		1			4			2	3	6
50P22 CABLE	DATA/PHONE	1			1					
24SMFO CABLE	VIDEO/DATA		1			1				
12SMFO CABLE	SH VIDEO			1			1			
6P22 CABLE	DATA/PHONE					1		1	2	1
	INNERDUCT (SIZE 32)		1	~~1~~		1	1			
	CONDUIT SIZE	(2) ~~103~~ 53E			103 (11)			53	53	53E



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.
4. ~~ADD 50 P22, 24SMFO, AND 12SMFO CABLES IN EXISTING COMMUNICATION CONDUIT IN CONCRETE BARRIER WITHOUT INNERDUCT. INSTALL CABLES AFTER 1.3 m MINIMUM BENDING CONDUIT RADIUS HAS BEEN PLACED, SEE DETAIL 4, SHEET C-5.~~
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING RMS 60 CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS AT SPLICE VAULT.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
37. ~~INSTALL 103C IN EXISTING COMMUNICATION PULLBOX IN CONCRETE BARRIER. SEE SHEET C-5 DETAIL "4".~~
38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

8. EXISTING COMMUNICATION PULL BOX IN CONCRETE BARRIER.
9. EXISTING COMMUNICATION PULL BOX IN CONCRETE SHOULDER.
10. REMOVE AND REPLACE 90 DEGREES BENDS FROM EXISTING 53C CONDUITS ENTERING EXISTING COMMUNICATION PULL BOXES WITH THE CONDUITS ENTERING THE ENDS OF THESE EXISTING BOXES, VERTICALLY AND HORIZONTALLY ALIGNED WITH CONDUITS AT THE OPPOSITE END OF THE BOX.
11. ADD 50P22 IN EXISTING 53C COMMUNICATION CONDUIT.
12. ADD 24SMFO AND 12SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 53C COMMUNICATION CONDUIT.
13. ADD 6P22 CABLE(S) IN EXISTING 53C IN CONCRETE SHOULDER.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-12

DATE REVISED BY

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00 DATE PLOTTED =>21-JUL-2009 TIME PLOTTED =>15:21

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

USERNAME =>s129112
DGN FILE =>716810u12a.dgn

CU 07396

EA 168101

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

4 INSTALL 50P22, 24SMFO AND 12SMFO CABLES IN EXISTING 73C WITHOUT INNERDUCT IN CONCRETE BARRIER. INSTAL CABLES AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL 4, SHEET C-5.

5 JACK RIGID STEEL CONDUIT(S) ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

36 INSTALL 2-6P22 CABLES IN EXISTING 53C.

37 INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE DETAIL '4', SHEET C-5.

38 SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2	RUN 3	RUN 4	
50P22 CABLE	DATA/PHONE	1						
24SMFO CABLE	VIDEO/DATA		1					
12SMFO CABLE	SH VIDEO			1				
6P22 CABLE	DATA/PHONE				1	2	1	
2SMFO B/O CABLE	SH VIDEO							1
	INNERDUCT (SIZE 32)		1	1				1
	CONDUIT SIZE		103		53	53	53	

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	43	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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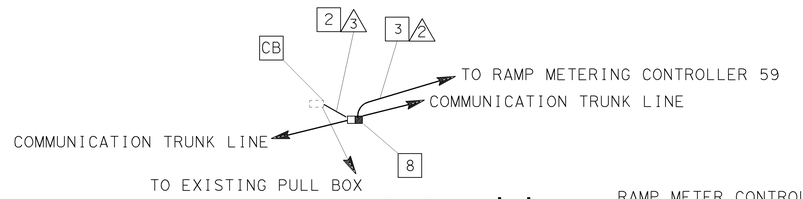

DETAIL 'A'
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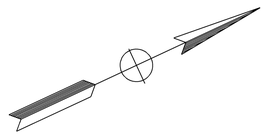

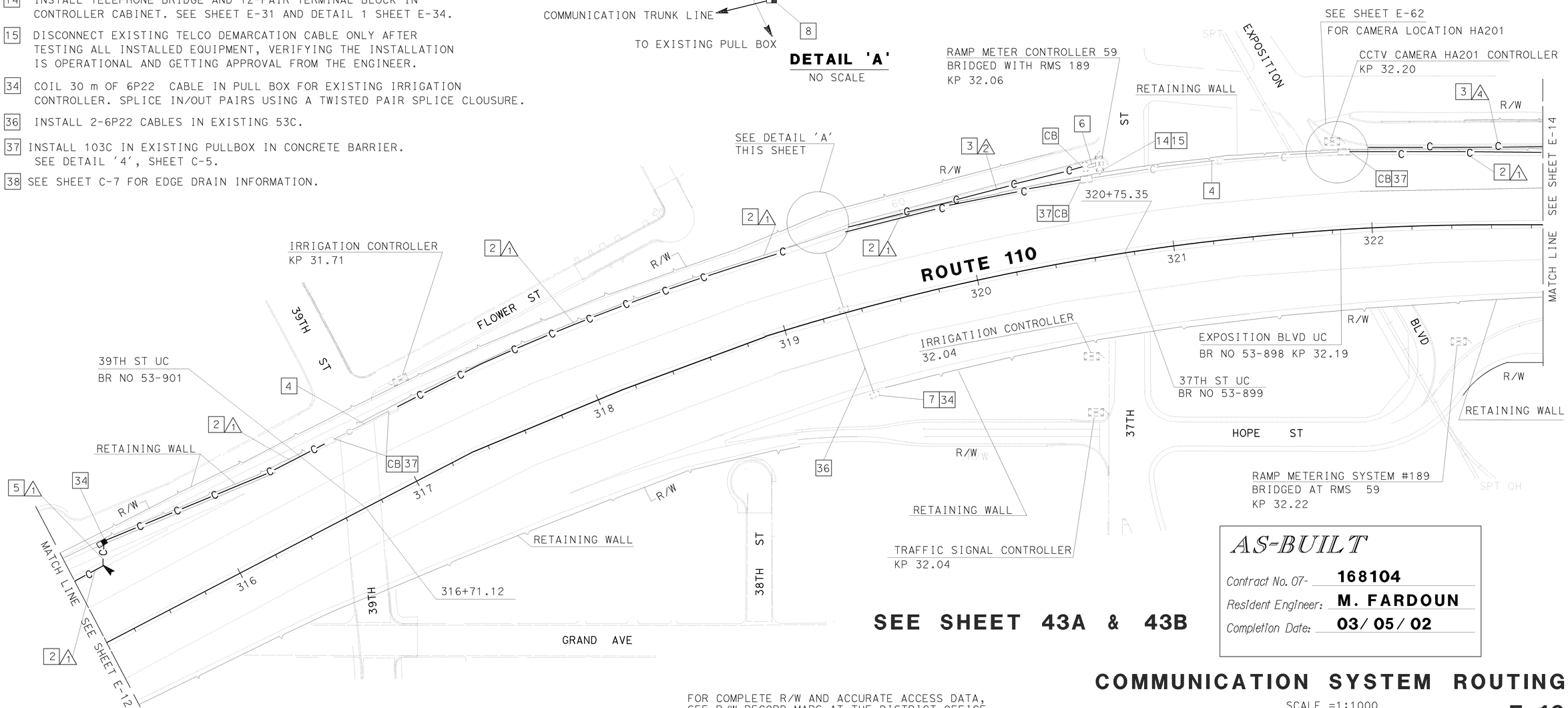

SEE SHEET 43A & 43B

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

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

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COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-13

DATE REVISED BY

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00
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USERNAME => s129112
DGN FILE => 716810u13.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	43a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

~~4 INSTALL 50P22, 24SMFO AND 12SMFO CABLES IN EXISTING 73C WITHOUT INNERDUCT IN CONCRETE BARRIER. INSTAL CABLES AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL 4, SHEET C-5.~~

~~5 JACK RIGID STEEL CONDUIT(S) ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.~~

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

36 INSTALL 2-6P22 CABLES IN EXISTING 53C.

37 INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE DETAIL '4', SHEET C-5.

38 SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

9 ADD 50P22, 24SMFO, AND 12 SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 78C COMMUNICATION CONDUIT.

10 ADD 50P22 IN EXISTING 53C COMMUNICATION CONDUIT.

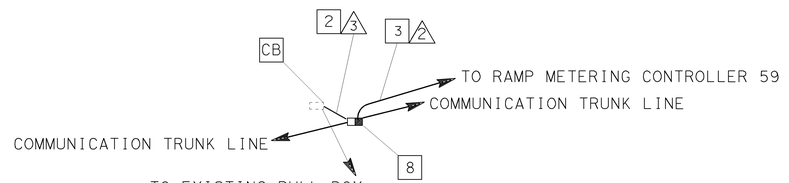
11 ADD 24SMFO AND 12 SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 53C COMMUNICATION CONDUIT.

12 EXISTING COMMUNICATION PULL BOX IN CONCRETE BARRIER.

13 INSTALL NEW 53C BETWEEN EXISTING PULL BOX ON CONCRETE BARRIER AND NEW COMMUNICATION PULL BOX BY SAWCUT AND JACKHAMMER CONCRETE BARRIER AND SHOULDER. FORM AND CAST THE CONCRETE BARRIER TO ORIGINAL CONDITION.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2	RUN 3	RUN 4	
50P22 CABLE	DATA/PHONE	1						
24SMFO CABLE	VIDEO/DATA		1					
12SMFO CABLE	SH VIDEO			1				
6P22 CABLE	DATA/PHONE				1	2	1	
2SMFO B/O CABLE	SH VIDEO							1
	INNERDUCT (SIZE 32)		1	1				1
	CONDUIT SIZE		103		53	53	53	



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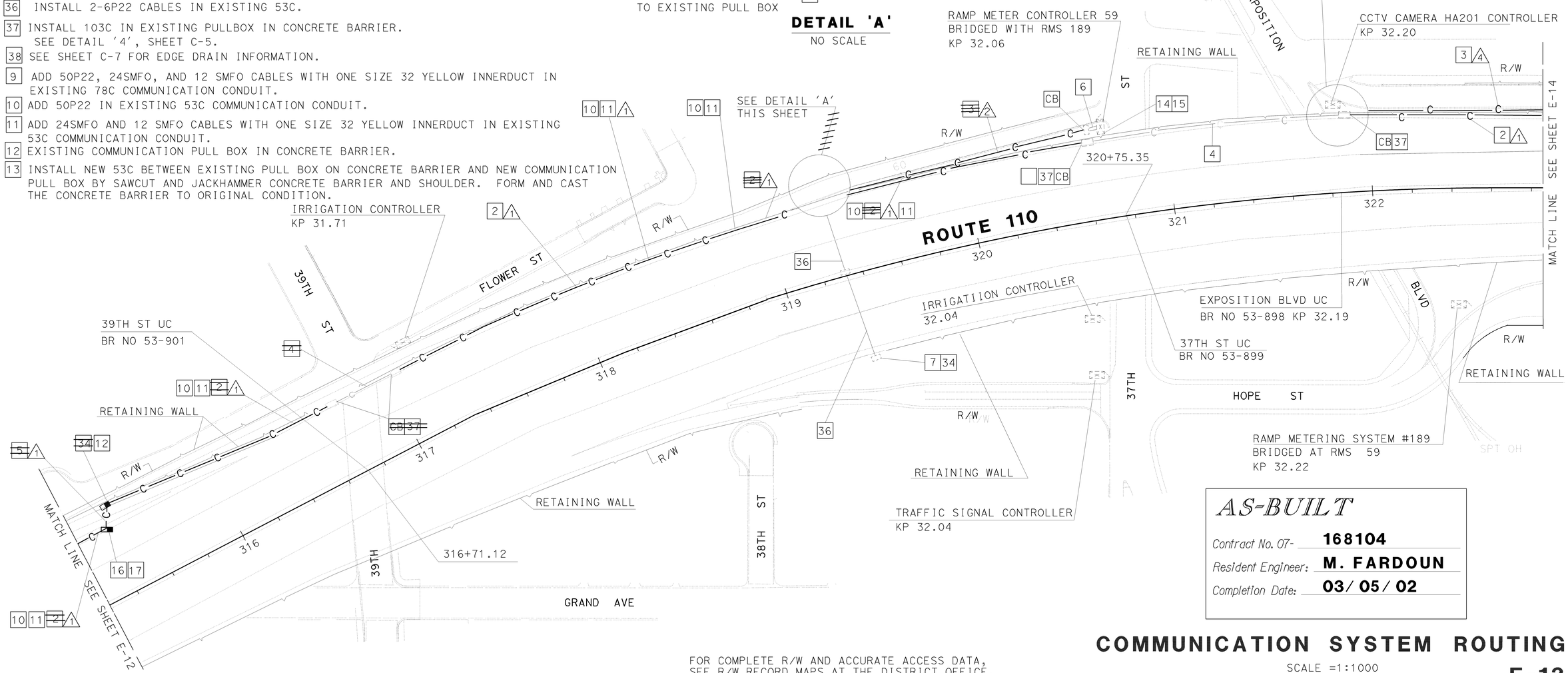

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-13

DATE | REVISED BY | DATE REVISED

CALCULATED/ DESIGNED BY | CHECKED BY

PROJECT ENGINEER — DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00
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FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s129112
DGN FILE => 716810u13a.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	43b	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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Caltrans Metric

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

~~4 INSTALL 50P22, 24SMFO AND 12SMFO CABLES IN EXISTING 73C WITHOUT INNERDUCT IN CONCRETE BARRIER. INSTAL CABLES AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL 4, SHEET C-5.~~

~~5 JACK RIGID STEEL CONDUIT(S) ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.~~

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1 SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

36 INSTALL 2-6P22 CABLES IN EXISTING 53C.

37 INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE DETAIL '4', SHEET C-5.

38 SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

9 ADD 50P22, 24SMFO, AND 12 SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 78C COMMUNICATION CONDUIT.

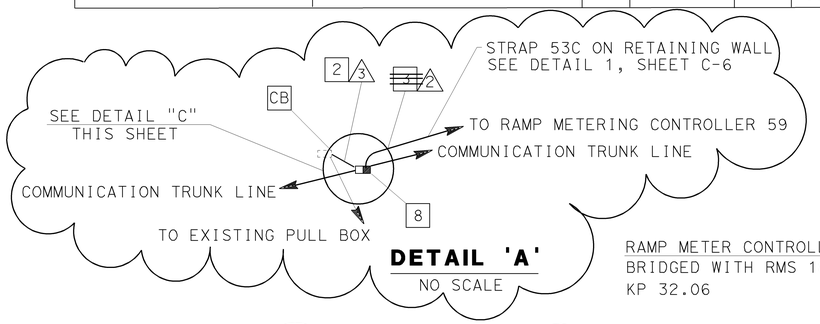
10 ADD 50P22 IN EXISTING 53C COMMUNICATION CONDUIT.

11 ADD 24SMFO AND 12 SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 53C COMMUNICATION CONDUIT.

12 EXISTING COMMUNICATION PULL BOX IN CONCRETE BARRIER.

13 INSTALL NEW 53C BETWEEN EXISTING PULL BOX ON CONCRETE BARRIER AND NEW COMMUNICATION PULL BOX BY SAWCUT AND JACKHAMMER CONCRETE BARRIER AND SHOULDER. FORM AND CAST THE CONCRETE BARRIER TO ORIGINAL CONDITION.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)											
CONDUCTOR TYPE	FUNCTION	RUN									
		1			2	3	4			5	6
50P22 CABLE	DATA/PHONE	1								1	1
24SMFO CABLE	VIDEO/DATA		1								1
12SMFO CABLE	SH VIDEO			1							1
6P22 CABLE	DATA/PHONE				1	2	1				
2SMFO B/O CABLE	SH VIDEO							1			
	INNERDUCT (SIZE 32)		1	~~1~~				1			1
	CONDUIT SIZE	53E	~~103~~	53E	53	53	53			53	78E



DETAIL 'A'
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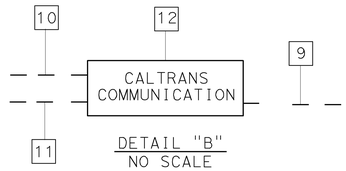


DETAIL "B"
NO SCALE

RAMP METER CONTROLLER 59
BRIDGED WITH RMS 189
KP 32.06

SEE SHEET E-62
FOR CAMERA LOCATION HA201

CCTV CAMERA HA201 CONTROLLER
KP 32.20

INSTALL 4 IN EXISTING 53C.

SEE SHEET E-14

MATCH LINE

RETAINING WALL

EXPOSITION BLVD UC
BR NO 53-898 KP 32.19

37TH ST UC
BR NO 53-899

RAMP METERING SYSTEM #189
BRIDGED AT RMS 59
KP 32.22

IRRIGATION CONTROLLER
KP 31.71

IRRIGATIION CONTROLLER
32.04

TRAFFIC SIGNAL CONTROLLER
KP 32.04

SEE DETAIL 'A' THIS SHEET

SEE DETAIL "B" THIS SHEET

320+75.35

316+71.12

ROUTE 110

FLOWER ST

39TH ST

37TH ST

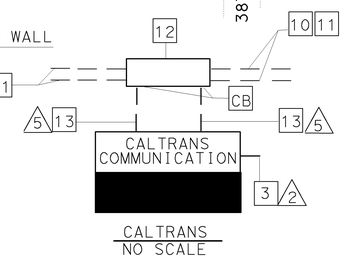
38TH ST

HOPE ST

EXPOSITION BLVD

GRAND AVE

SEE SHEET E-12



CALTRANS
NO SCALE

16 REMOVE AND REPLACE TYPE 6 PULL BOX IN SOIL AREA WITH COMMUNICATION PULL BOX. SEE SHEETS E-28 AND E-29 FOR DETAILS.

17 REMOVE AND REPLACE 90 DEGREES BENDS FROM EXISTING 53C CONDUITS ENTERING EXISTING COMMUNICATION PULL BOXES WITH THE CONDUITS ENTERING THE ENDS OF THESE EXISTING BOXES, VERTICALLY AND HORIZONTALLY ALIGNED WITH THE CONDUITS AT THE OPPOSITE END OF THE BOX.

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**
39TH ST UC
BR NO 53-901

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

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COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-13

DATE	REVISED BY	DATE REVISED

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PROJECT ENGINEER — DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
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Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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AS-BUILT

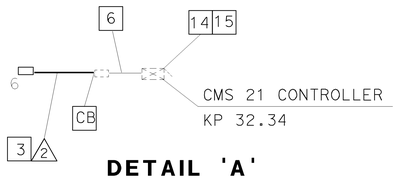
Contract No. 07- 168104

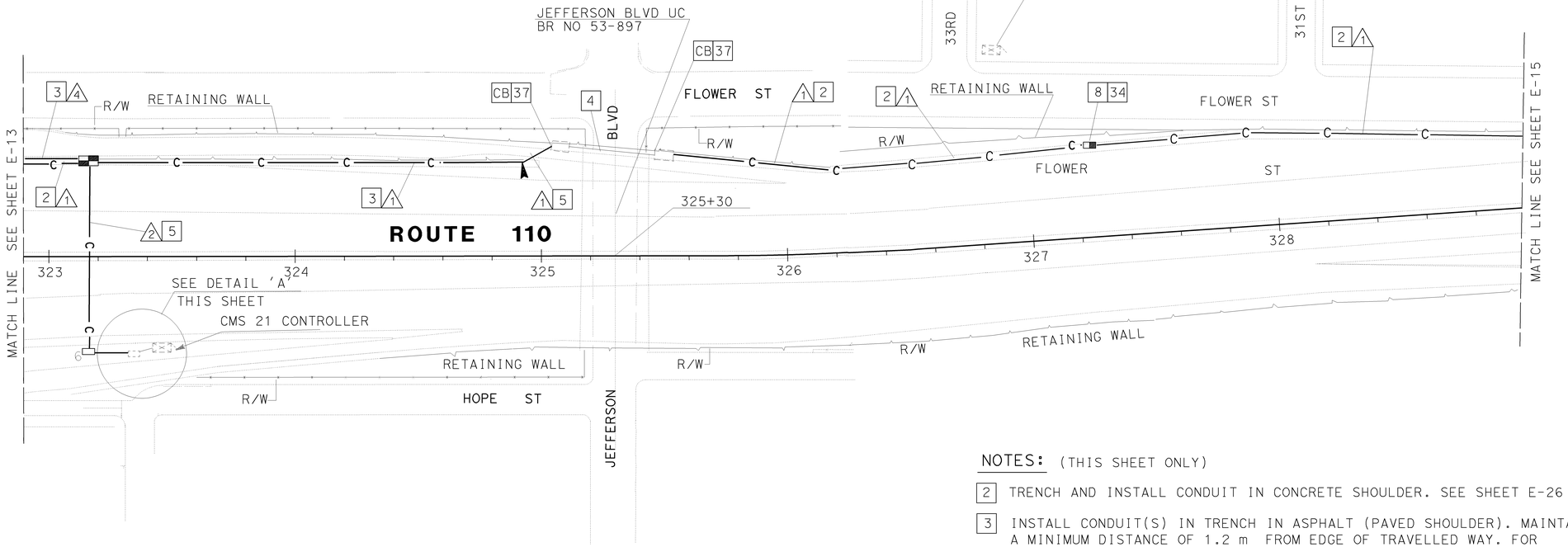
Resident Engineer: M. FARDOUN

Completion Date: 03/05/02

Caltrans Metric

DETAIL 'A'
NO SCALE





CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN					
		1			2	4	
50P22 CABLE	DATA/PHONE	1					
24SMFO CABLE	VIDEO/DATA		1				
12SMFO CABLE	SH VIDEO			1			
6P22 CABLE	DATA/PHONE				2	1	
2SMFO B/O CABLE	SH VIDEO						1
	INNERDUCT (SIZE 32)		1	1			1
	CONDUIT SIZE	103			53	53	

SEE SHEET 44A

NOTES: (THIS SHEET ONLY)

2 TRENCH AND INSTALL CONDUIT IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

4 ADD 50 P22, 24SMFO, AND 12SMFO CABLES WITHOUT INNERDUCT IN EXISTING COMMUNICATION CONDUIT IN CONCRETE BARRIER. INSTALL CABLE AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL '4' SHEET C-5.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

6 ADD 2-6P22 CABLE(S) AND CONNECT TO EXISTING CMS 21 CONTROLLER.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1, SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOUSURE.

37 INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE SHEET C-5 DETAIL '4'.

38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

E-14

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

LAST REVISION 00-00-00 DATE PLOTTED => 21-JUL-2009 TIME PLOTTED => 15:21

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

USERNAME => s129112
DGN FILE => 716810u14.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	44a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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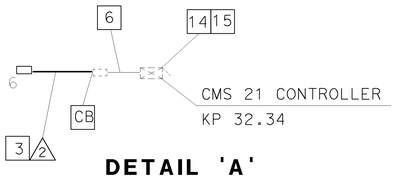
CHECKED BY

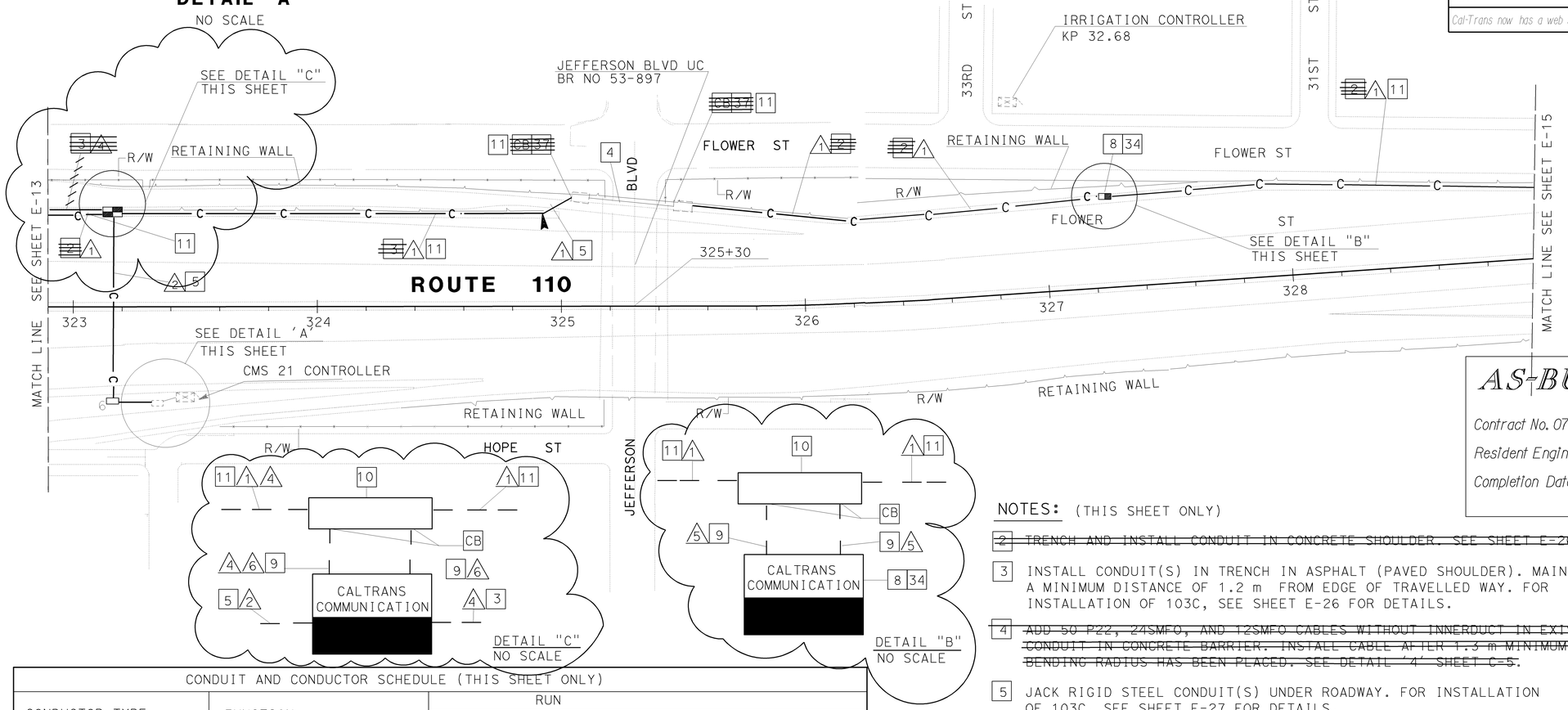
PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN

Caltrans



DETAIL 'A'
NO SCALE



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)									
CONDUCTOR TYPE	FUNCTION	RUN							
		1			2	4		5	6
50P22 CABLE	DATA/PHONE	1						1	1
24SMFO CABLE	VIDEO/DATA		1						
12SMFO CABLE	SH VIDEO			1					1
6P22 CABLE	DATA/PHONE				2	1			
2SMFO B/O CABLE	SH VIDEO						1		
	INNERDUCT (SIZE 32)		1	~~1~~			1		
	CONDUIT SIZE		~~103~~	78E	53	53		53	53

9 INSTALL NEW 53C BETWEEN EXISTING PULL BOX ON CONCRETE BARRIER AND NEW COMMUNICATION PULL BOX BY SAW CUT AND JACKHAMMER CONCRETE BARRIER AND SHOULDER. FORM AND CAST THE CONCRETE BARRIER TO ORIGINAL CONDITION.

10 EXISTING COMMUNICATION PULL BOX IN CONCRETE BARRIER.

11 ADD 50P22, 24SMFO, AND 12 SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 78C CONDUIT.

NOTES: (THIS SHEET ONLY)

~~2 TRENCH AND INSTALL CONDUIT IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.~~

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

~~4 ADD 50 P22, 24SMFO, AND 12SMFO CABLES WITHOUT INNERDUCT IN EXISTING COMMUNICATION CONDUIT IN CONCRETE BARRIER. INSTALL CABLE AFTER 1.3 m MINIMUM CONDUIT BENDING RADIUS HAS BEEN PLACED. SEE DETAIL '4' SHEET C-5.~~

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

6 ADD 2-6P22 CABLE(S) AND CONNECT TO EXISTING CMS 21 CONTROLLER.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-31 AND DETAIL 1, SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOUSURE.

37 INSTALL 103C IN EXISTING PULLBOX IN CONCRETE BARRIER. SEE SHEET C-5 DETAIL '4'.

38. SEE SHEET C-7 FOR EDGE DRAIN INFORMATION.

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-14

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

LAST REVISION 00-00-00 DATE PLOTTED => 22-JUL-2009 TIME PLOTTED => 13:40

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

USERNAME => s129112
DGN FILE => 716810u14a.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	45	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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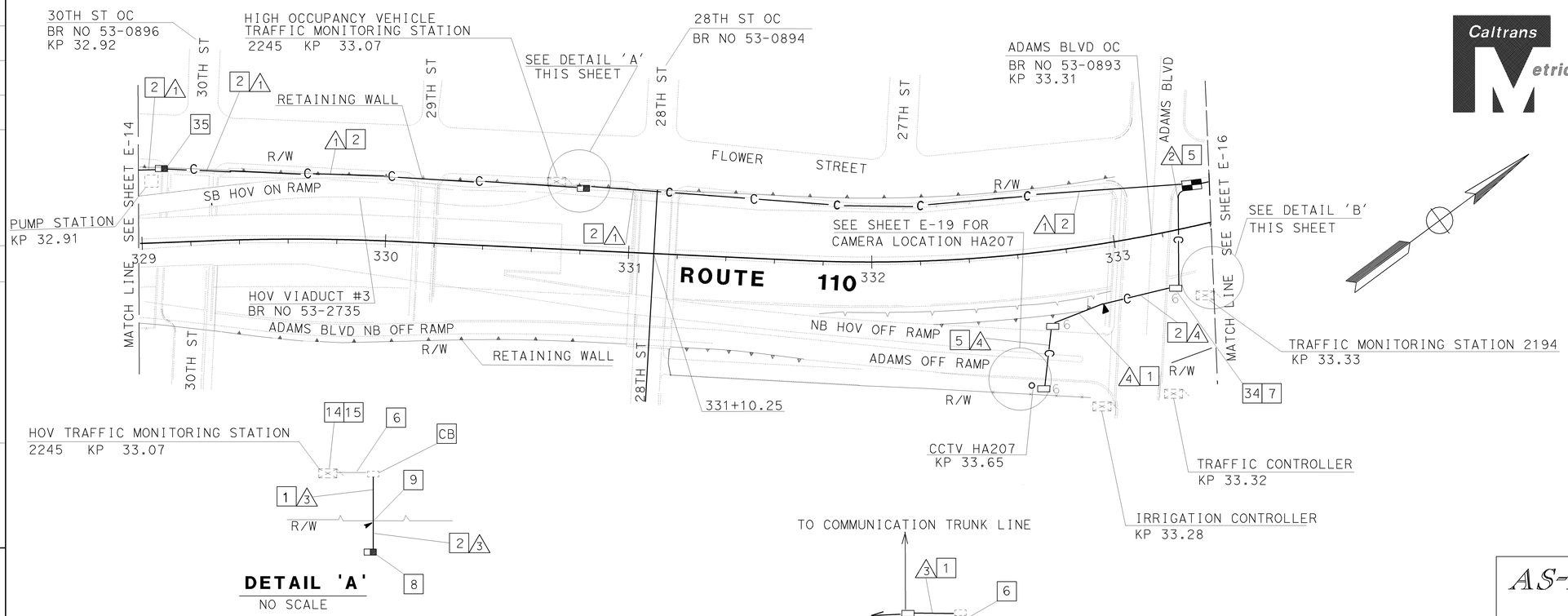
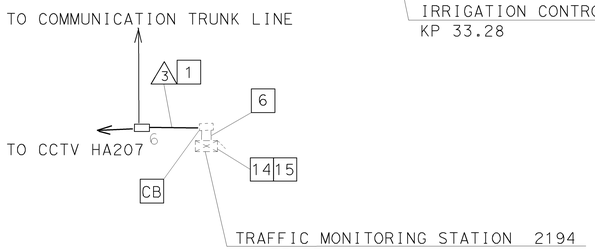


DETAIL 'A'
NO SCALE



DETAIL 'B'
NO SCALE

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING TMS 2194 CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE AT SPLICE VAULT.
8. INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
9. CORE THROUGH WALL. SEE SHEET C-6 FOR TYPICAL DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-31 AND DETAIL 1, SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
34. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE AT SPLICE VAULT.
35. COIL 20 m 6P22 CABLE FOR FUTURE USE. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2		RUN 3	RUN 4	
50P22 CABLE	DATA/PHONE	1							
24SMFO CABLE	VIDEO/DATA		1						
12SMFO CABLE	SH VIDEO			1					
6P22 CABLE	DATA/PHONE				4		1	1	
2SMFO B/O CABLE	SH VIDEO					1			1
INNERDUCT (SIZE 32)			1	1		1			1
CONDUIT SIZE		103			103		53	53	

SEE SHEET 45A

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

PROJECT ENGINEER
DAVID PADILLA

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

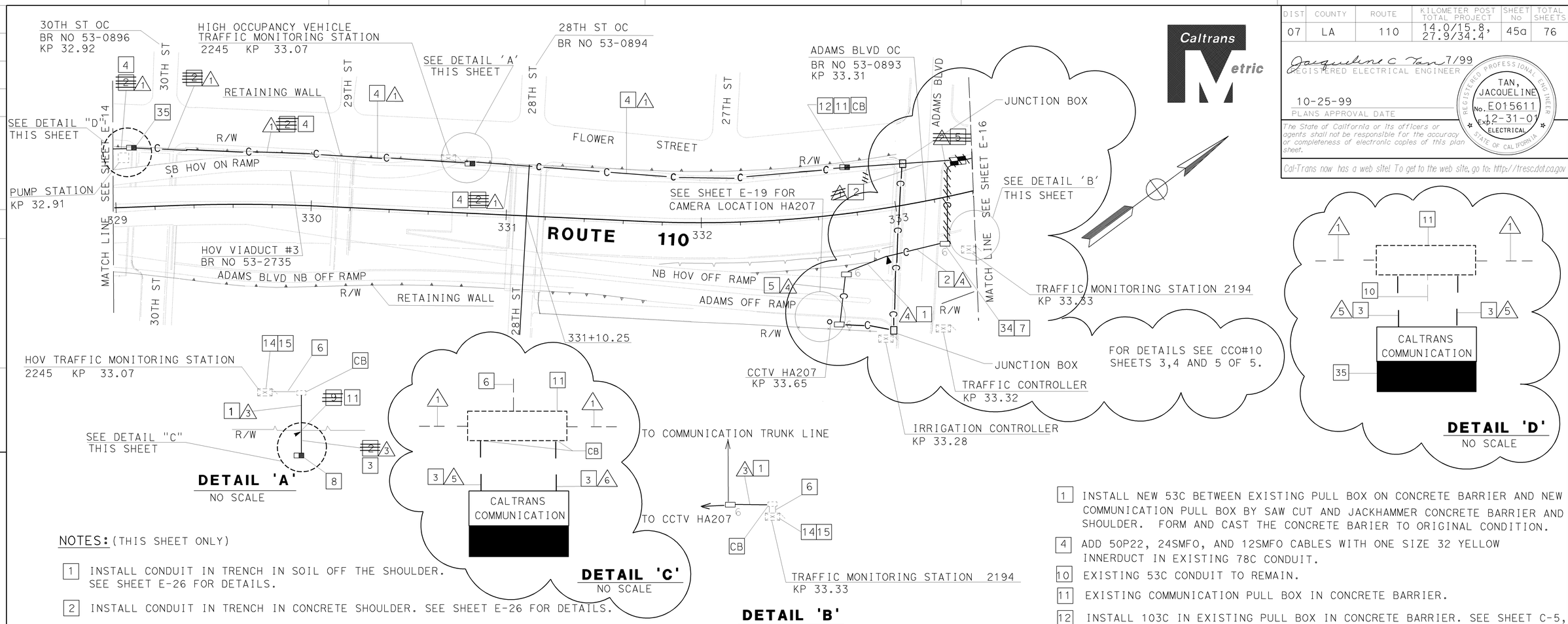
FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s129112
DGN FILE => 716810u15.dgn

CU 07396

EA 168101

LAST REVISION 00-00-00 DATE PLOTTED => 21-JUL-2009 TIME PLOTTED => 15:21



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	45a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

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PROJECT ENGINEER — DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — TRAFFIC DESIGN

DATE | REVISED BY | DATE REVISED

CALCULATED/ DESIGNED BY | CHECKED BY

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-26 FOR DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING TMS 2194 CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE AT SPLICE VAULT.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

9 CORE THROUGH WALL. SEE SHEET C-6 FOR TYPICAL DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-31 AND DETAIL 1, SHEET E-34.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE AT SPLICE VAULT.

35 COIL 20 m 6P22 CABLE FOR FUTURE USE. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/ 05/ 02**

1 INSTALL NEW 53C BETWEEN EXISTING PULL BOX ON CONCRETE BARRIER AND NEW COMMUNICATION PULL BOX BY SAW CUT AND JACKHAMMER CONCRETE BARRIER AND SHOULDER. FORM AND CAST THE CONCRETE BARIER TO ORIGINAL CONDITION.

4 ADD 50P22, 24SMFO, AND 12SMFO CABLES WITH ONE SIZE 32 YELLOW INNERDUCT IN EXISTING 78C CONDUIT.

10 EXISTING 53C CONDUIT TO REMAIN.

11 EXISTING COMMUNICATION PULL BOX IN CONCRETE BARRIER.

12 INSTALL 103C IN EXISTING PULL BOX IN CONCRETE BARRIER. SEE SHEET C-5, DETAIL "4".

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2		RUN 3	RUN 4		RUN 5	RUN 6
50P22 CABLE	DATA/PHONE	1								1	1
24SMFO CABLE	VIDEO/DATA		1								
12SMFO CABLE	SH VIDEO			1							
6P22 CABLE	DATA/PHONE				4		1	1			1
2SMFO B/O CABLE	SH VIDEO					1			1		
	INNERDUCT (SIZE 32)		1	//		1			1		
	CONDUIT SIZE		~~103~~	78E		~~103~~	53E	53	53	53	53

E=EXISTING

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-15

LAST REVISION 00-00-00 | DATE PLOTTED => 21-JUL-2009 | TIME PLOTTED => 15:21

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USERNAME => s129112
DGN FILE => 716810u15a.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	46	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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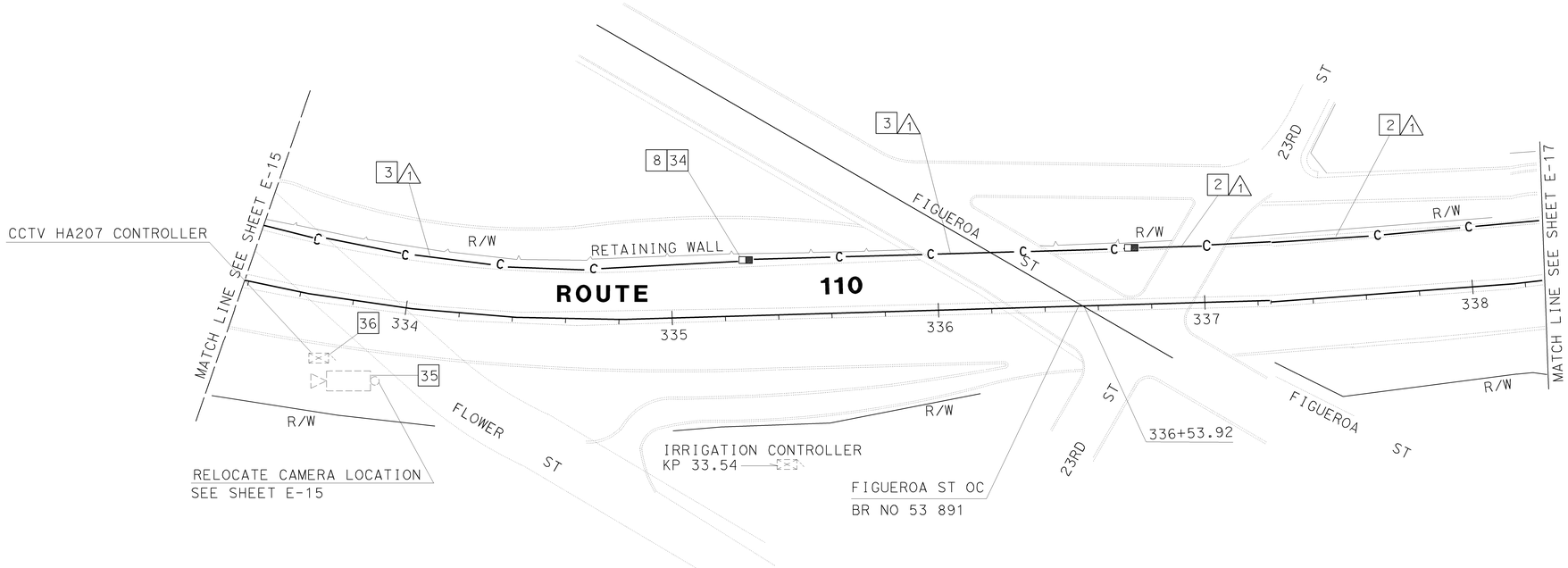

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

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

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

8 INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOUSURE.

35 RS EXISTING CAMERA POLE.

36 RELOCATE CCTV HA207 CONTROLLER TO NEW LOCATION. SEE SHEET E-15.
RC EXISTING CONTROLLER FOUNDATION.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

PROJECT ENGINEER
DAVID PADILLA

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY
CHECKED BY

LAST REVISION 00-00-00
DATE PLOTTED =>02-JUL-2009
TIME PLOTTED =>14:43

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DGN FILE =>716810u16.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	47	76

Caltrans Metric

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

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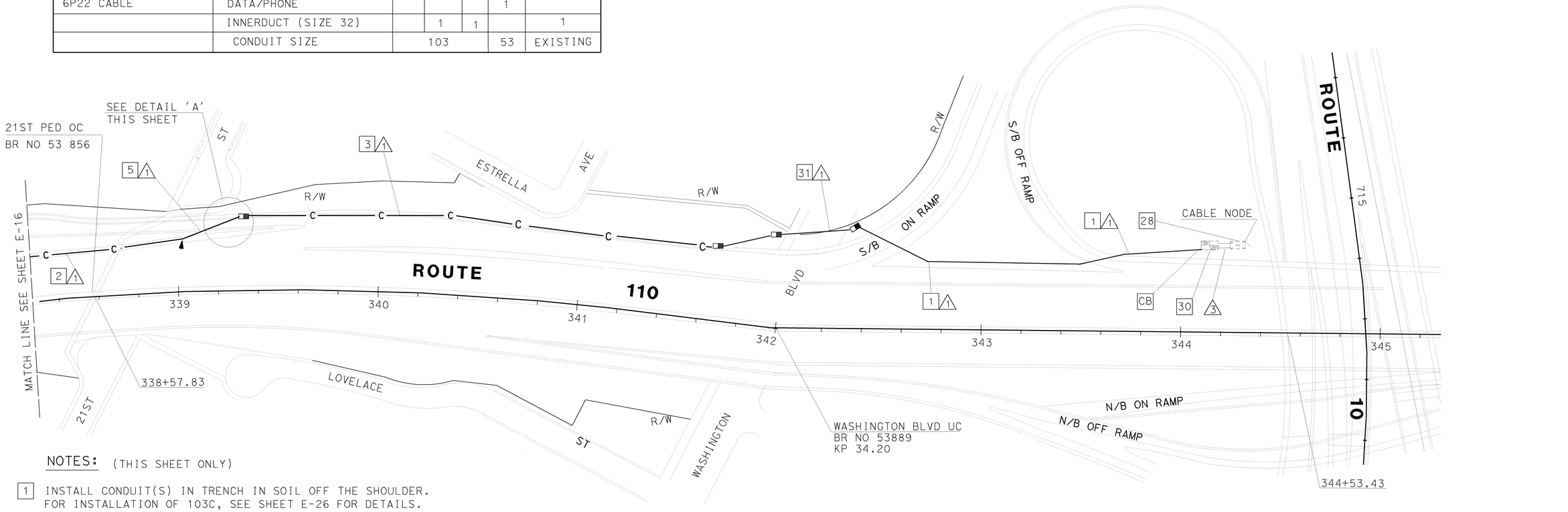
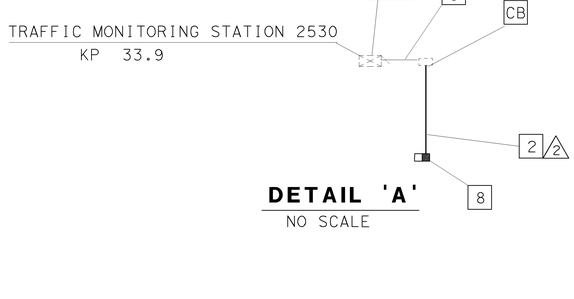
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUCTOR TYPE	FUNCTION	RUN				
		1			2	3
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			1
12SMFO CABLE	SH VIDEO			1		
6P22 CABLE	DATA/PHONE				1	
	INNERDUCT (SIZE 32)		1	1		1
	CONDUIT SIZE	103			53	EXISTING





NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING TMS 2530 CONTROLLER.
8. INSTALL COMMUNICATION PULLBOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-28 AND E-29 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-31 AND DETAIL 1 SHEET E-34.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
28. EXISTING CABLE NODE FACILITY. TERMINATE CABLES AS SHOWN SHEETS E-40 DETAIL 'G' AND 'H'.
30. COIL 20 m OF 50P22 AND 12SMFO CABLES.
31. INSTALL CONDUIT IN TRENCH IN CONCRETE AT WASHINGTON BLVD. SEE SHEET E-26 FOR DETAILS.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

COMMUNICATION SYSTEM ROUTING

SCALE =1:1000

E-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

PROJECT ENGINEER
DAVID PADILLA

CALCULATED/ DESIGNED BY
CHECKED BY

DATE REVISED BY

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

USERNAME => s129112
DGN FILE => 716810u17.dgn

CU 07396

EA 168101

LAST REVISION 00-00-00
DATE PLOTTED => 02-JUL-2009
TIME PLOTTED => 14:43

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	48	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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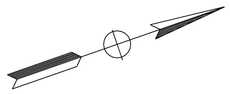
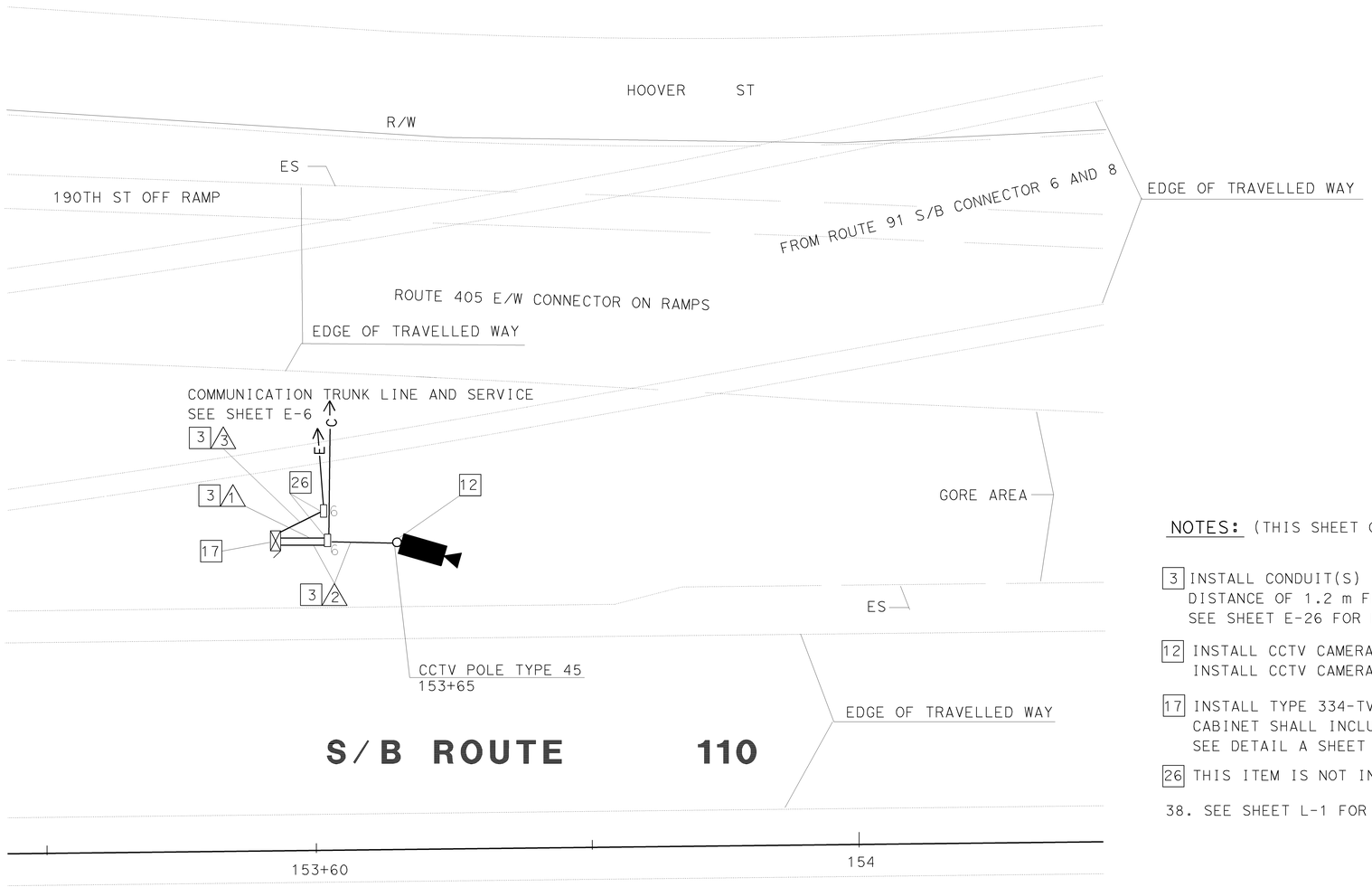
AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**





CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN		
		1	2	3
RG-6A/U	VIDEO INTERFACE CABLE		1	
9 #18 AND 12#18 CABLE	CAMERA CONTROL		1	
2 # 4	POWER			1
2SMFO CABLE	SH VIDEO	1		
6P22 CABLE	DATA/PHONE	1		
	CONDUIT SIZE	78	78	53

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 53C, SEE SHEET E-26 FOR DETAILS.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATIONS. SEE ES-34A AND ES34B.. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE. SEE SHEET E-37 FOR DETAILS.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE DETAIL A SHEET E-33 AND DETAIL 3 SHEET E-34.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

38. SEE SHEET L-1 FOR TURNOUT LAYOUT AND SHEET U-3 FOR UTILITY PLAN.

SEE SHEET 48A

CCTV CAMERA (LOCATION HA095)

SCALE =1:200

E-18

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

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

USERNAME => s129112
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CU 07396

EA 168101

LAST REVISION 00-00-00 DATE PLOTTED => 22-JUL-2009 TIME PLOTTED => 07:38

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PROJECT ENGINEER DAVID PADILLA
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DATE REVISED BY
DATE

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	48a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

10-25-99
PLANS APPROVAL DATE

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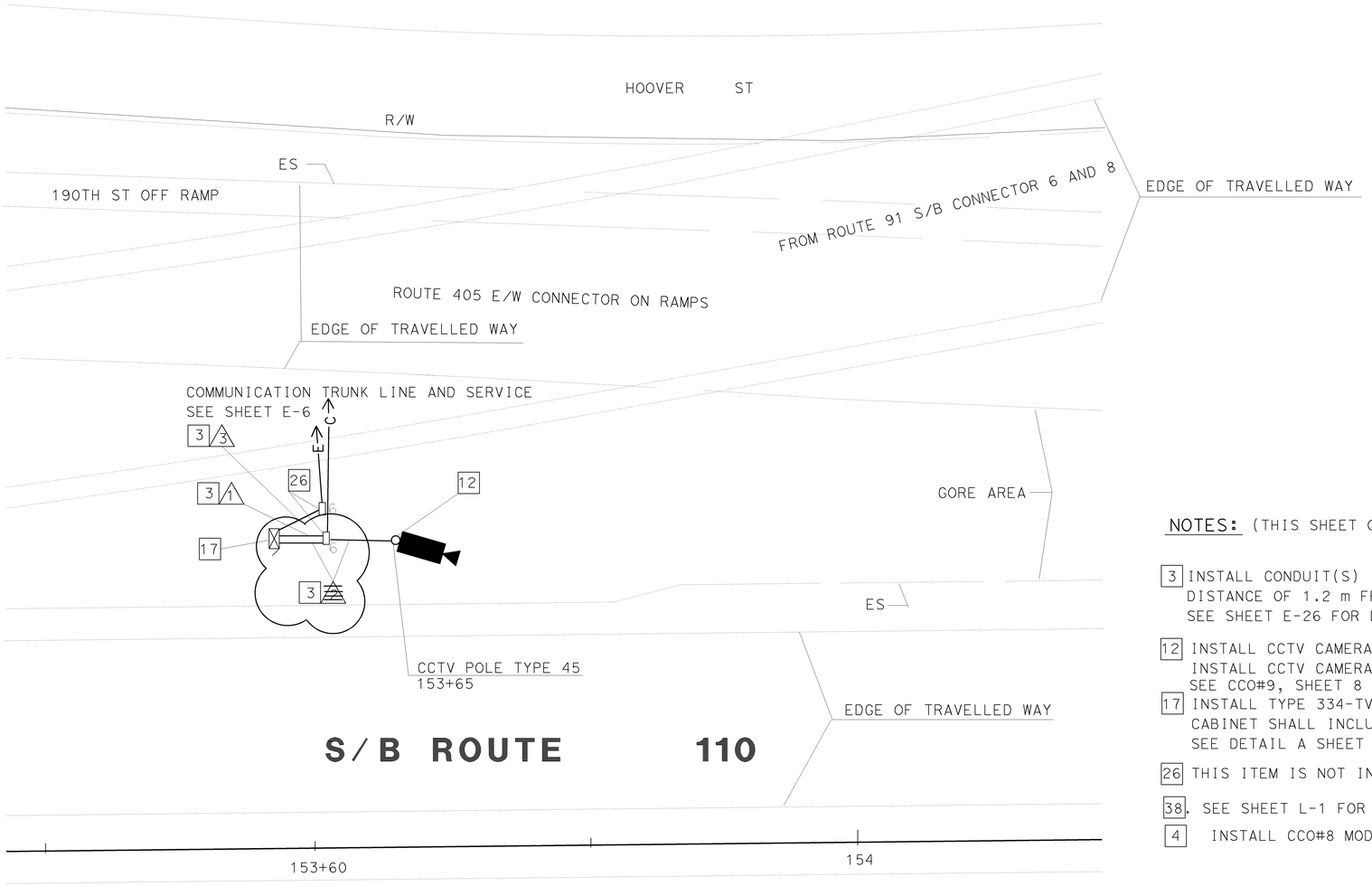
Caltrans Metric

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3
~~RG-6A/U~~	~~VIDEO INTERFACE CABLE~~		1	
~~9 #18 AND 12#18 CABLE~~	~~CAMERA CONTROL~~		1	
2 # 4	POWER			1
2SMFO CABLE	SH VIDEO	1		
6P22 CABLE	DATA/PHONE	1		
	CONDUIT SIZE	78	78	53

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT (PAVED SHOULDER). MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 53C, SEE SHEET E-26 FOR DETAILS.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATIONS. SEE ES-34A AND ES34B..
INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE. ~~SEE SHEET E-37 FOR DETAILS.~~
SEE CCO#9, SHEET 8 OF 9 FOR DETAILS.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. SEE SHEET C-1 FOR DETAILS.
CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER.
SEE DETAIL A SHEET E-33 AND DETAIL ~~3 SHEET E-34~~. SEE CCO#9, SHEET 7 OF 9 FOR DETAILS "C".

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

38. SEE SHEET L-1 FOR TURNOUT LAYOUT AND SHEET U-3 FOR UTILITY PLAN.

4 INSTALL CCO#8 MODEL ER8490K CABLE. SEE CCO#9, SHEET 8 OF 8, FOR DETAILS.

CCTV CAMERA
(LOCATION HA095)

SCALE =1:200

E-18

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

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

USERNAME => s129112
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CU 07396

EA 168101

DATE REVISED BY | DATE REVISED
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PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00
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TIME PLOTTED => 07:38

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	49	76

Caltrans Metric

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-01
ELECTRICAL
STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

6 ADD 6P22 AND 2SMFO CABLES AND CONNECT TO EXISTING CCTV HA201 CONTROLLER.

15 RELOCATE EXISTING CCTV HA207 CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET C-1. RS PRESEARCH VIDEO TRANSMITTER,US ROBOTIC 28.8K MODEM, AND CAMERA CONTROL EQUIPMENT.INSTALL EQUIPMENT AS SHOWN ON DETAIL 'A' SHEET E-33 AND DETAIL 3, SHEET E-34.

16 RS PRESEARCH VIDEO TRANSMITTER,US ROBOTIC 28.8K MODEM, AND CAMERA CONTROL EQUIPMENT.INSTALL EQUIPMENT AS SHOWN ON DETAIL 'A' SHEET E-33 AND DETAIL 3, SHEET E-34.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

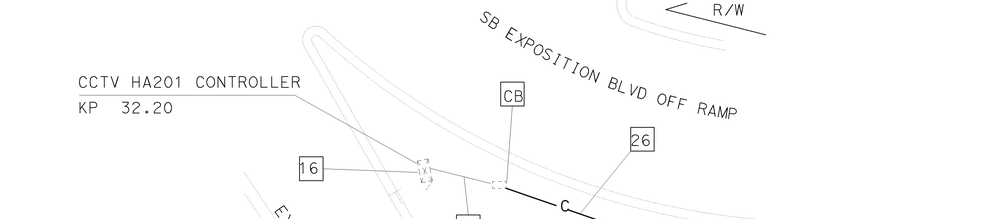
27 INSTALL CCTV CAMERA EQUIPMENT ON NEW CCTV POLE TYPE 45 AT NEW LOCATION. SEE ES-34A AND ES-34B.

28 RS EXISTING TELEPHONE DEMARCATION POWER CABLES. INSTALL 2 #4 POWER CABLES AND CONNECT TO EXISTING CIRCUIT BREAKER FOR CCTV CAMERA.

29 CONNECT 2#4 POWER CABLES TO EXISTING CCTV HA207 CONTROLLER.

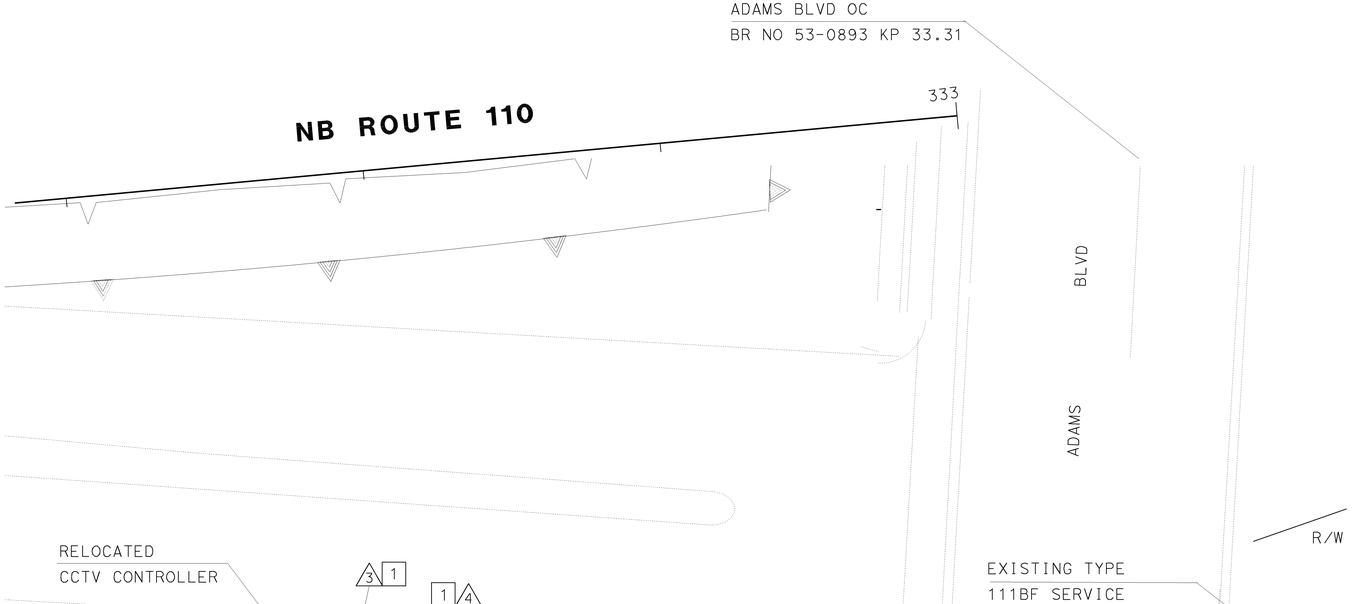
38. SEE SHEET L-2 FOR CCTV HA207 TURNOUT LAYOUT AND SHEET U-10, U-12 FOR UTILITY MAP.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN		
		2	3	4
RG-6A/U	VIDEO INTERFACE CABLE		1	
9 #18 CABLE	PAN/TILT CONTROL CABLE		1	
12#18 CABLE	LENS CONTROL CABLE		1	
6P22 CABLE	DATA/PHONE			
2SMFO CABLE	SH VIDEO			1
2 # 4	POWER	1		1
	CONDUIT SIZE	78	78	78



SB ROUTE 110

CAMERA LOCATION HA201
KP 32.20



CAMERA LOCATION HA207
KP 32.65

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

SEE SHEET 49A

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

CCTV CAMERA (LOCATIONS HA201 AND HA207)

SCALE =1:200

E-19

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

DATE | REVISED BY | DATE REVISED

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PROJECT ENGINEER: DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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USERNAME => s129112
DGN FILE => 716810u19.dgn

CU 07396 | EA 168101

LAST REVISION 00-00-00 | DATE PLOTTED => 22-JUL-2009 | TIME PLOTTED => 07:38

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	49a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-26 FOR DETAILS.

6 ADD 6P22 AND 2SMFO CABLES AND CONNECT TO EXISTING CCTV HA201 CONTROLLER.

15 RELOCATE EXISTING CCTV HA207 CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET C-1. RS PRESEARCH VIDEO TRANSMITTER,US ROBOTIC 28.8K MODEM, AND CAMERA CONTROL EQUIPMENT.INSTALL EQUIPMENT AS SHOWN ON DETAIL 'A' SHEET E-33 AND DETAIL 3, SHEET E-34.

16 RS PRESEARCH VIDEO TRANSMITTER,US ROBOTIC 28.8K MODEM, AND CAMERA CONTROL EQUIPMENT.INSTALL EQUIPMENT AS SHOWN ON DETAIL 'A' SHEET E-33 AND ~~DETAIL 3, SHEET E-34.~~ CCO #9, SHEET 7 OF 9, DETAIL "C".

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27 INSTALL CCTV CAMERA EQUIPMENT ON NEW CCTV POLE TYPE 45 AT NEW LOCATION. SEE ES-34A AND ES-34B.

28 RS EXISTING TELEPHONE DEMARCATION POWER CABLES. INSTALL 2 #4 POWER CABLES AND CONNECT TO EXISTING CIRCUIT BREAKER FOR CCTV CAMERA.

29 CONNECT 2#4 POWER CABLES TO EXISTING CCTV HA207 CONTROLLER.

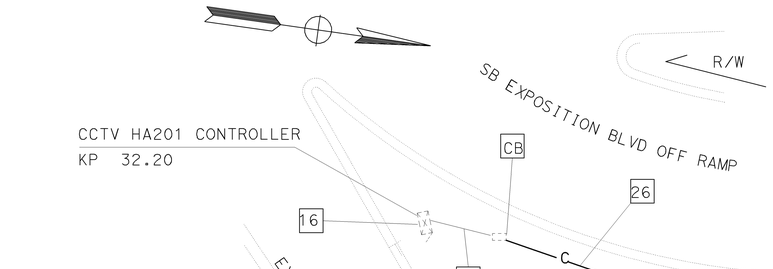
38 SEE SHEET L-2 FOR CCTV HA207 TURNOUT LAYOUT AND SHEET U-10, U-12 FOR UTILITY MAP.

12 INSTALL CCTV CAMERA ASSEMBLY AND FAN/TILT UNIT ON POLE, SEE CCO#9, SHEET 8 OF 9.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

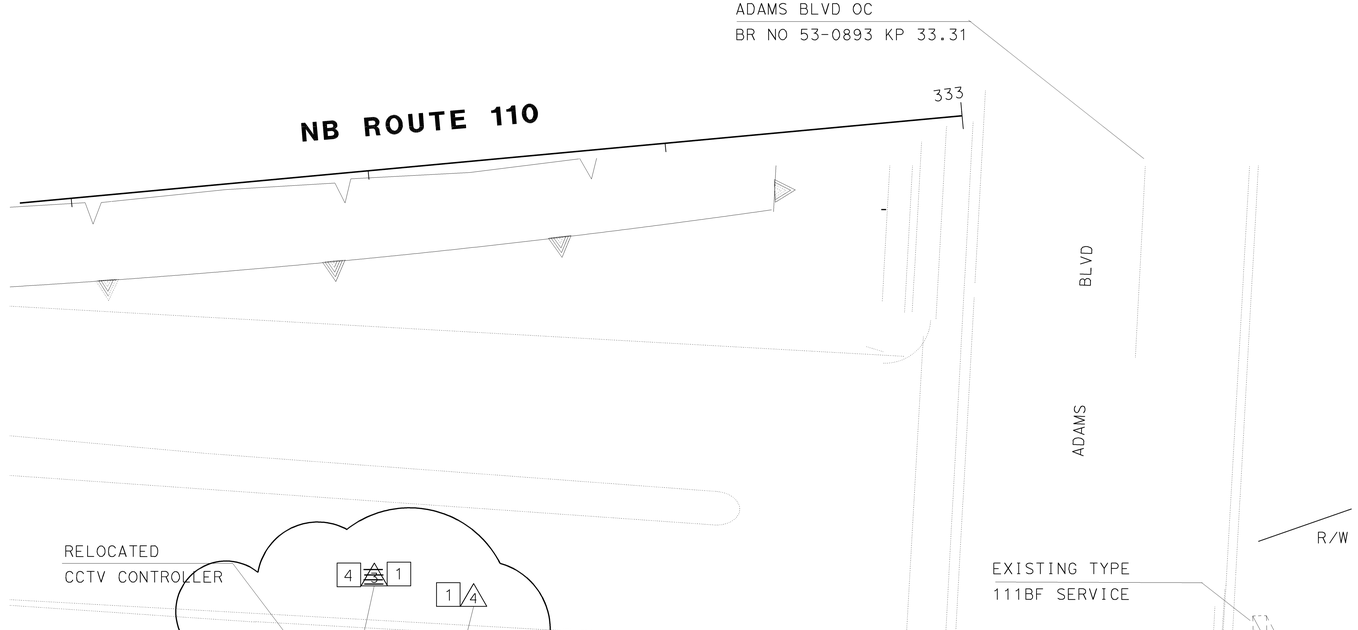
CONDUCTOR TYPE	FUNCTION	RUN 2	RUN 3	RUN 4
~~RG-6A/U~~	~~VIDEO INTERFACE CABLE~~		~~1~~	
~~9 #18 CABLE~~	~~PAN/TILT CONTROL CABLE~~		~~1~~	
~~12#18 CABLE~~	~~LENS CONTROL CABLE~~		~~1~~	
6P22 CABLE	DATA/PHONE			
2SMFO CABLE	SH VIDEO			1
2 # 4	POWER	1		1
	CONDUIT SIZE	78	78	78

4 INSTALL COHU MODEL ER 3490K CABLE SEE CCO 39, SHEET 8 OF 9.



SB ROUTE 110

CAMERA LOCATION HA201
KP 32.20



CAMERA LOCATION HA207
KP 32.65

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

CCTV CAMERA (LOCATIONS HA201 AND HA207)

SCALE =1:200

E-19

DATE	REVISED BY	DATE REVISED
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	PROJECT ENGINEER	DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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USERNAME => s129112
DGN FILE => 716810u19a.dgn

CU 07396 EA 168101

LAST REVISION 00-00-00 DATE PLOTTED => 22-JUL-2009 TIME PLOTTED => 07:39

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	50	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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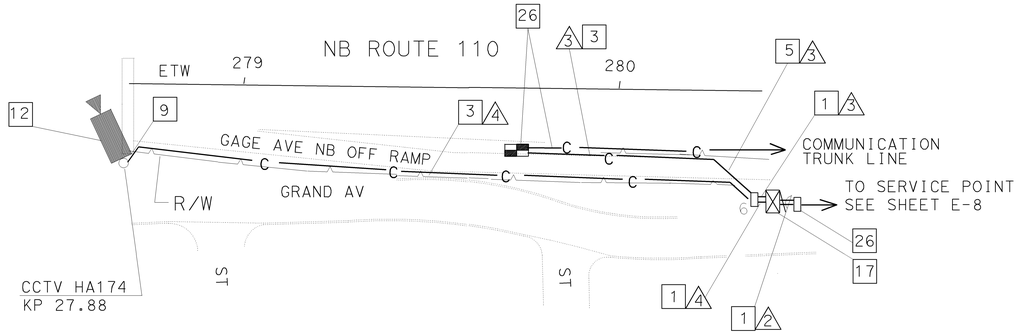


CCTV CAMERA LOCATION HA174
SCALE =1:500

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

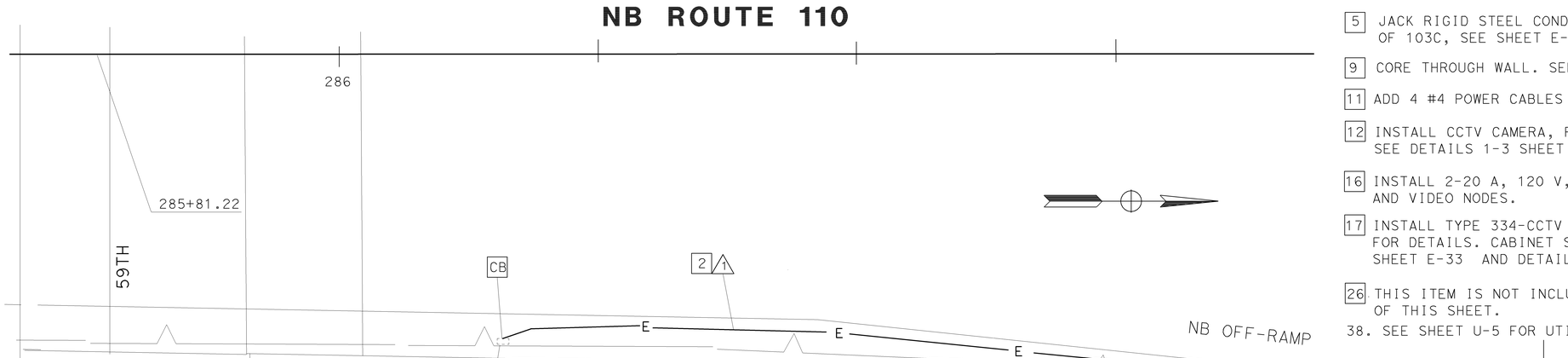
Completion Date: **03/05/02**

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 4
2 # 4 CABLE	POWER	2	1		
6P22 CABLE	DATA/PHONE			1	
2SMFO B/O CABLE	SH VIDEO			1	
RG-6A/U COAX	BB VIDEO				1
12P18 AND 9P18 CABLE	CAMERA CONTROL				1
	CONDUIT SIZE	78	78	78	78

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUITS IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUITS SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 53C, SEE SHEET E-26 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.
9. CORE THROUGH WALL. SEE SHEET C-6 FOR TYPICAL DETAILS.
11. ADD 4 #4 POWER CABLES TO EXISTING CONDUIT FOR DATA AND VIDEO NODES.
12. INSTALL CCTV CAMERA, PAN AND TILT UNIT ON EXISTING SIGN STRUCTURE. SEE DETAILS 1-3 SHEET C-5.
16. INSTALL 2-20 A, 120 V, SINGLE POLE CIRCUIT BREAKERS FOR DATA AND VIDEO NODES.
17. INSTALL TYPE 334-CCTV CABINET ON NEW FOUNDATION SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE CCTV EQUIPMENT AS SHOWN ON DETAIL A SHEET E-33 AND DETAIL 3 SHEET E-34.
26. THIS ITEM IS NOT INCLUDED WITH THE QUANTITIES FOR PAYMENT OF THIS SHEET.
38. SEE SHEET U-5 FOR UTILITY PLAN.

NB ROUTE 110



SERVICE FOR DATA NODE AND VIDEO NODE
SCALE =1:200

SEE SHEET 50A

CCTV CAMERA (LOCATION HA174)

SCALE =AS SHOWN

E-20

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

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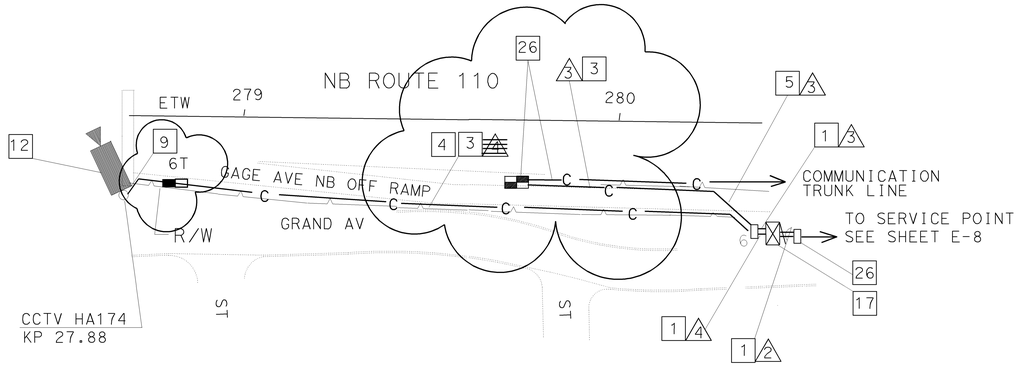
DGN FILE => 716810u20.dgn

CU 07396 EA 168101

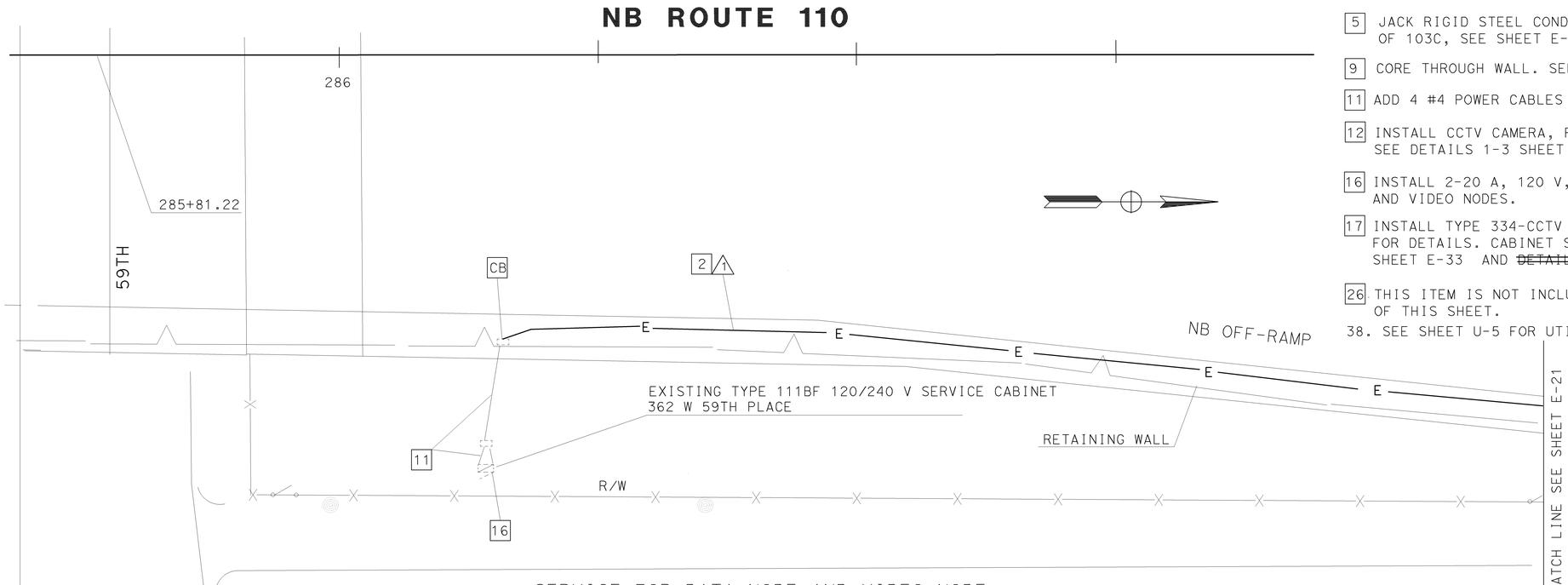
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN
PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-JUL-2009
TIME PLOTTED => 07:39



CCTV CAMERA LOCATION HA174

SCALE =1:500



SERVICE FOR DATA NODE AND VIDEO NODE

SCALE =1:200

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUCTOR TYPE	FUNCTION	RUN			
		1	2	3	4
2 # 4 CABLE	POWER	2	1		
6P22 CABLE	DATA/PHONE			1	
2SMFO B/O CABLE	SH VIDEO			1	
~~RG-6A/U COAX~~	~~BB VIDEO~~				1
~~12P18 AND 9P18 CABLE~~	~~CAMERA CONTROL~~				1
	CONDUIT SIZE	78	78	78	78

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUITS IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUITS SEE SHEET E-26 FOR DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELLED WAY. FOR INSTALLATION OF 53C, SEE SHEET E-26 FOR DETAILS.

4 INSTALL COHU MODEL ER3490K CABLE, SEE CCO #9, SHEET 8 OF 9.

5 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-27 FOR DETAILS.

9 CORE THROUGH WALL. SEE SHEET C-6 FOR TYPICAL DETAILS.

11 ADD 4 #4 POWER CABLES TO EXISTING CONDUIT FOR DATA AND VIDEO NODES.

12 INSTALL CCTV CAMERA, PAN AND TILT UNIT ON EXISTING SIGN STRUCTURE. SEE DETAILS 1-3 SHEET C-5.

16 INSTALL 2-20 A, 120 V, SINGLE POLE CIRCUIT BREAKERS FOR DATA AND VIDEO NODES.

17 INSTALL TYPE 334-CCTV CABINET ON NEW FOUNDATION SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE CCTV EQUIPMENT AS SHOWN ON DETAIL A SHEET E-33 AND ~~DETAIL 3 SHEET E-34.~~ CCO#9, SHEET 7 OF 9, DETAIL "C".

26 THIS ITEM IS NOT INCLUDED WITH THE QUANTITIES FOR PAYMENT OF THIS SHEET.

38. SEE SHEET U-5 FOR UTILITY PLAN.

AS-BUILT

Contract No. 07- 168104

Resident Engineer: M. FARDOUN

Completion Date: 03/05/02

CCTV CAMERA (LOCATION HA174)

SCALE =AS SHOWN

E-20

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	50a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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DATE REVISED BY

CALCULATED/ DESIGNED BY

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PROJECT ENGINEER DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

TRAFFIC DESIGN

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USERNAME => s129112
DGN FILE => 716810u20a.dgn

CU 07396

EA 168101

LAST REVISION 00-00-00

DATE PLOTTED => 22-JUL-2009
TIME PLOTTED => 07:39

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	51	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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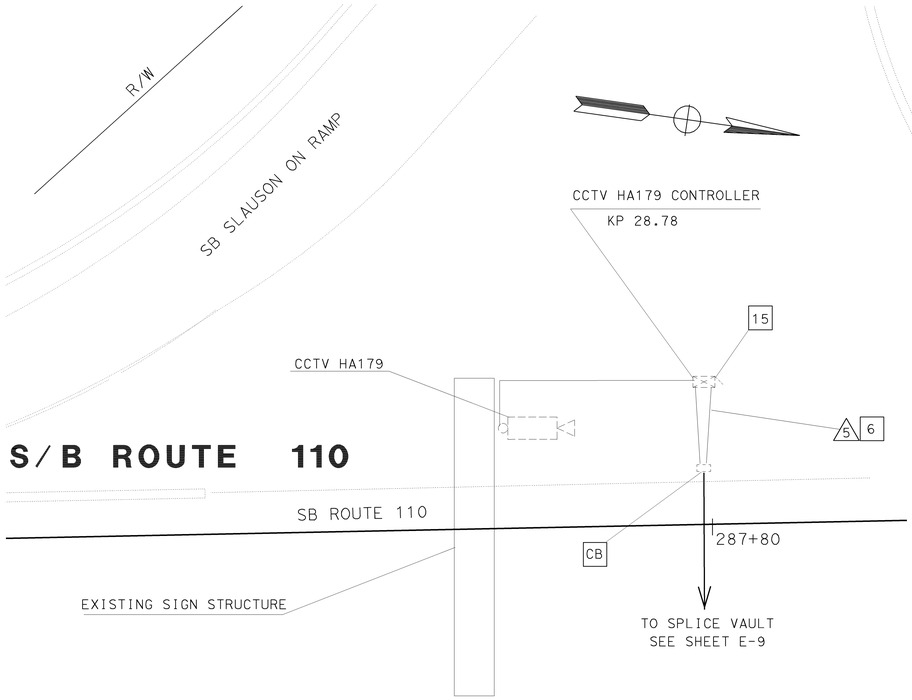
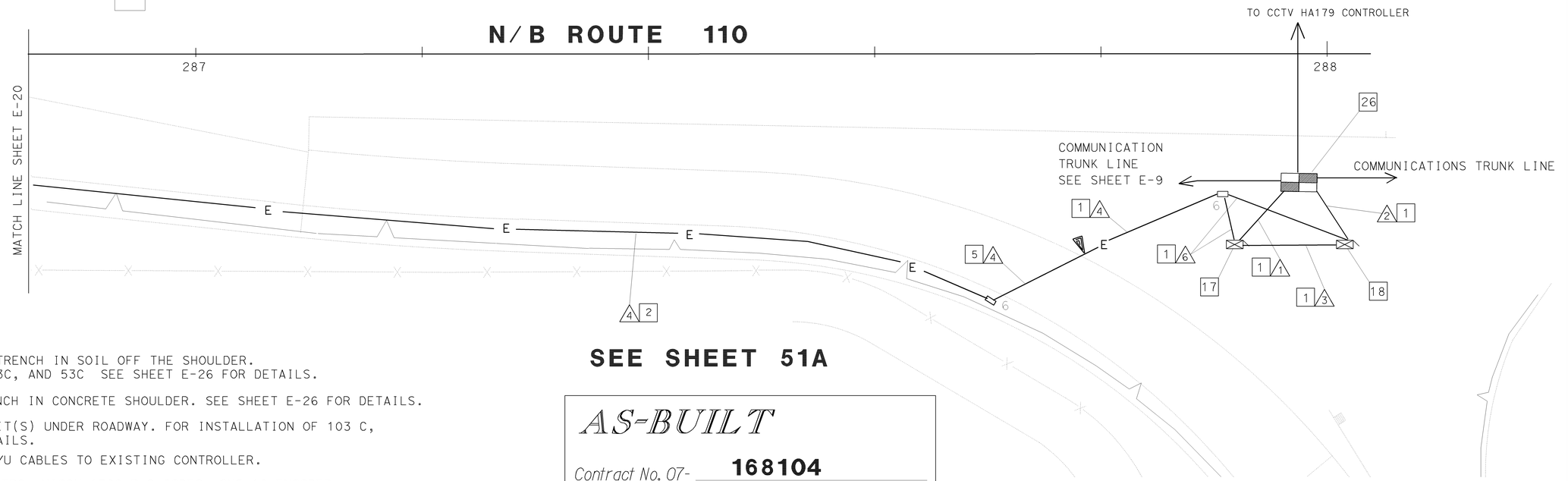


CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUCTOR TYPE	FUNCTION	RUN					
		1	2	3	4	5	6
50P22 CABLE	DATA/PHONE	2					
6P22 CABLE	DATA/PHONE	1				1	
12SMFO CABLE	SH VIDEO		2				
2SMFO CABLE B/O	SH VIDEO		4			1	1
2 # 4 CABLES	POWER				2		
FO JUMPERS	DATA			2			
	CONDUIT SIZE	103	103	53	78	EXISTING	78



SEE SHEET 51A

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, AND 53C SEE SHEET E-26 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-26 FOR DETAILS.
5. JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103 C, SEE SHEET E-27 FOR DETAILS.
6. CONNECT 6P22 AND RG-6A/U CABLES TO EXISTING CONTROLLER.
15. RS EXISTING CAMERA CONTROL VICON 1300 R-2,CODEC- GVS-10 ENCODER DSU-VERLINK. INSTALL CCTV EQUIPMENT AS SHOWN SHEET E-33 DETAIL 'A' AND SHEET E-34 DETAIL 3.
17. INSTALL NEW 334 CABINET IN NEW FOUNDATION SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE DATA NODE EQUIPMENT. SEE DETAIL 'B' SHEET E-33 AND DETAIL '5' SHEET E-35.
18. INSTALL TYPE 334 CABINET ON NEW FOUNDATION SEE SHEET C-1. CABINET SHALL INCLUDE EQUIPMENT AT VIDEO NODE. SEE DETAIL 'B' SHEET E-33 AND DETAIL '5' SHEET E-35.
26. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

38. SEE SHEET U-6 FOR UTILITY PLAN.

NOTE: SEE DETAIL 'B' AND 'D' SHEET E-40 FOR DATA/VIDEO NODE WIRING TABLE.

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

AS-BUILT

Contract No. 07- **168104**

Resident Engineer: **M. FARDOUN**

Completion Date: **03/05/02**

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

SCALE =1:200

E-21

DATE REVISED BY

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CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DGN FILE => 716810u21.dgn

CU 07396

EA 168101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	52	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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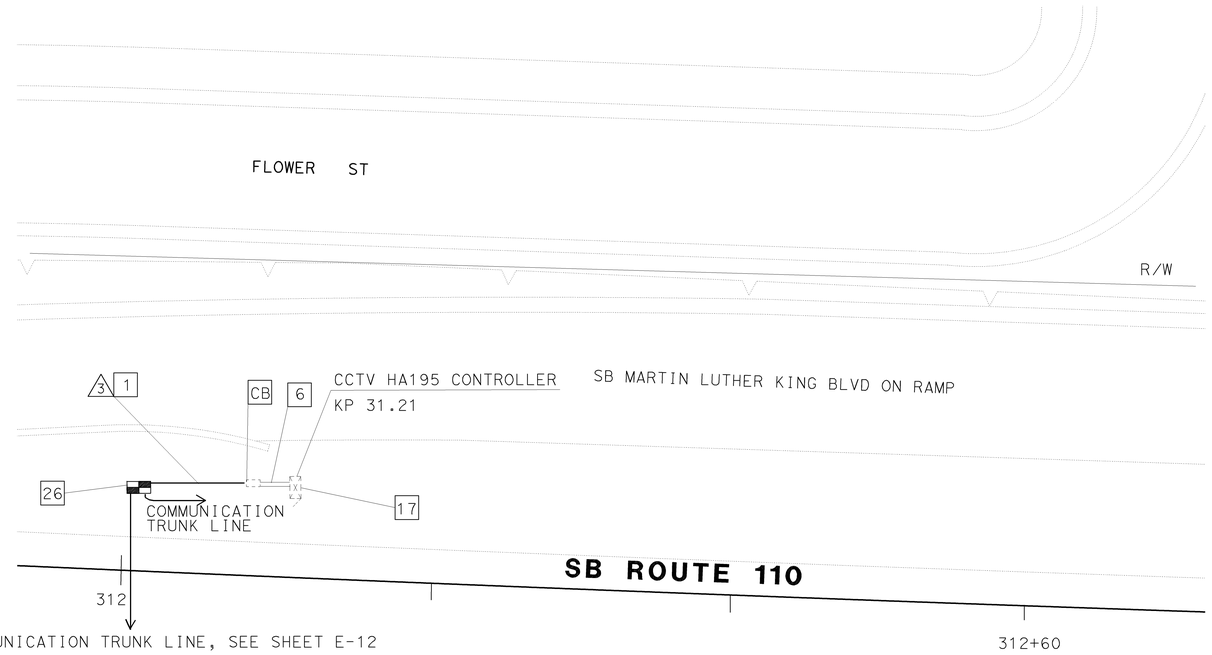

AS-BUILT

Contract No. 07- 168104

Resident Engineer: M. FARDOUN

Completion Date: 03/05/02

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)			
CONDUCTOR TYPE	FUNCTION	RUN 3	
2SMFO CABLE	SH VIDEO		1
6P22 CABLE	DATA/PHONE	1	
	CONDUIT SIZE	53	

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 53C. SEE SHEET E-26 FOR DETAILS.

6. ADD 6P22 AND 2SMFO CABLE(S) AND CONNECT TO EXISTING CONTROLLER.

17. RS VICON 1300K-2,CODEC,GVS-10 ENCODER AND DSU-VERILINK. INSTALL NEW EQUIPMENT AS SHOWN DETAIL 'A' SHEET E-33 AND DETAIL '3' SHEET E-34.

26. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT OF THIS SHEET.

38. SEE SHEET U-9 FOR UTILITY PLAN.

SEE SHEET 52A

CCTV CAMERA
(LOCATION HA195)

SCALE =1:200

E-22

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

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DGN FILE => 716810u22.dgn

CU 07396

EA 168101

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PROJECT ENGINEER
DAVID PADILLA

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LAST REVISION 00-00-00
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TIME PLOTTED => 07:39

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110	14.0/15.8, 27.9/34.4	52a	76

Jacqueline C Tan 7/99
REGISTERED ELECTRICAL ENGINEER

10-25-99
PLANS APPROVAL DATE

TAN, JACQUELINE No. E015611 Exp. 12-31-01 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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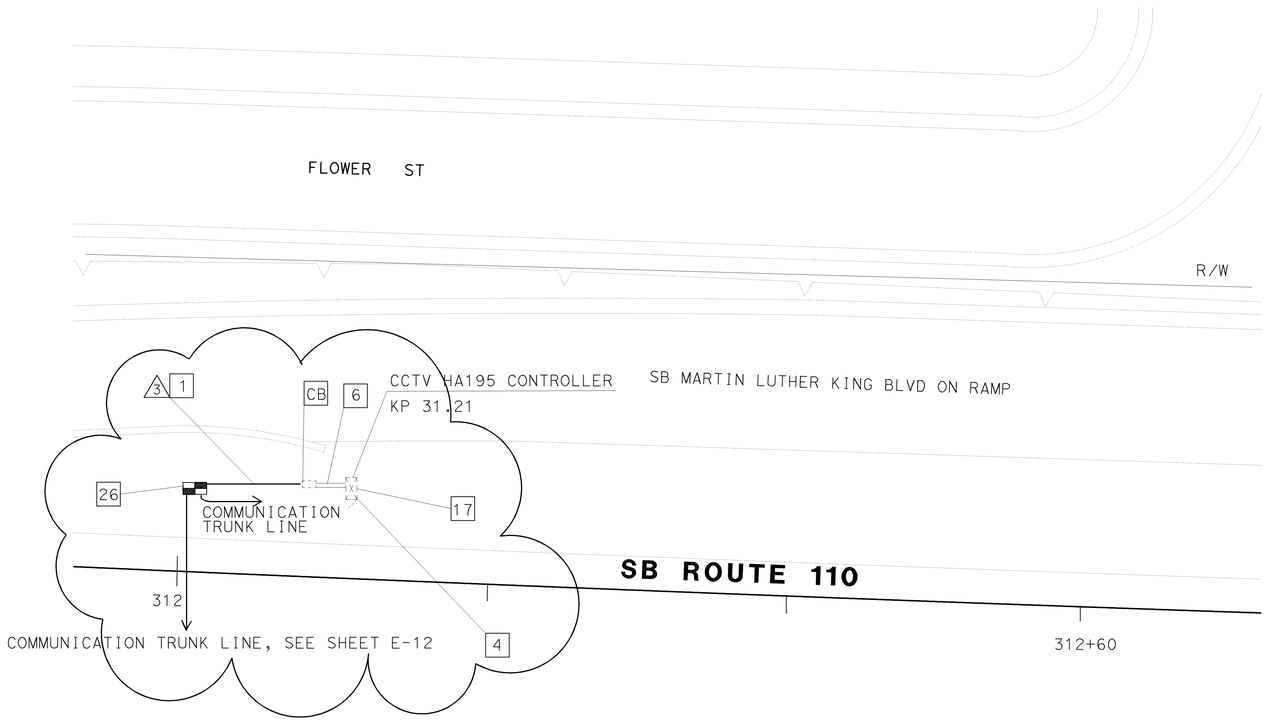

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)			
CONDUCTOR TYPE	FUNCTION	RUN 3	
2SMFO CABLE	SH VIDEO		1
6P22 CABLE	DATA/PHONE	1	
	CONDUIT SIZE	53	

NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 53C. SEE SHEET E-26 FOR DETAILS.
6. ADD 6P22 AND 2SMFO CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
17. RS VICON 1300K-2,CODEC,GVS-10 ENCODER AND DSU-VERILINK. INSTALL NEW EQUIPMENT AS SHOWN DETAIL 'A' SHEET E-33 AND ~~DETAIL '3' SHEET E-34.~~ SEE CCO #9, SHEET 7 OF 9, DETAIL "C".
26. THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT OF THIS SHEET.
38. SEE SHEET U-9 FOR UTILITY PLAN.
4. INSTALL COHU MODEL ER 3490K CABLE TO CCTV, SEE CCO#9, SHEET 8 OF 9.

AS-BUILT

Contract No. 07- **168104**
Resident Engineer: **M. FARDOUN**
Completion Date: **03/05/02**

CCTV CAMERA (LOCATION HA195)

SCALE =1:200

E-22

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	50	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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ABBREVIATIONS

6SMFO	FIBER OPTIC BREAKOUT CABLE, 6 SINGLE MODE FIBERS
24SMFO	FIBER OPTIC CABLE, 24 SINGLE MODE FIBERS
12SMFO	FIBER OPTIC CABLE, 12 SINGLE MODE FIBERS
50P22	TWISTED PAIR CABLE 50 PAIR 22 AWG CONDUCTORS
6P22	TWISTED PAIR CABLE 6 PAIR 22 AWG CONDUCTORS
2P22	TWISTED PAIR CABLE 2 PAIR 22 AWG CONDUCTORS
ASYNC	ASYNCHRONOUS
B/O	BREAKOUT
CCR	CAMERA CONTROL RECEIVER
CCT	CAMERA CONTROL TRANSMITTER
COAX	COAXIAL
CTS	CLEAR TO SEND
CCTV	CLOSED CIRCUIT TELEVISION
CHAN	CHANNEL NUMBER
D4	4TH VERSION OF THE D-SIGNAL FOR TDM
DACCS	DIGITAL CROSS CONNECT SYSTEM
DEMARC	DEMARCATION
DSX-1	DIGITAL SIGNAL CROSS CONNECT OPERATING AT DS-1 DATA RATE
DEMUX	DEMULTIPLEXER
DS-1	DIGITAL TRANSMISSION TRANSMISSION RATE1.5 MEGABITS PER SECOND
FDF	FIBER DISTRIBUTION FRAME
FDU	FIBER DISTRIBUTION UNIT
FODM	FIBER OPTIC DATA MODEM
F/O OR FO	FIBER OPTIC
HOV	HIGH OCCUPANCY VEHICLE
INTRFCE	INTERFACE
IRR	IRRIGATION
MUX	MULTIPLEXER
NOM	NOMINAL
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
PTZ	PAN, TILT AND ZOOM
PS	PUMP STATION
RMS	RAMP METERING SYSTEM OR STATION
RTS	REQUEST TO SEND
RX	RECEIVER
SM	SINGLEMODE
SMFO	SINGLEMODE FIBER OPTIC CABLE
SONET	SYNCHRONOUS OPTICAL NETWORK
TDM	TIME DIVISION MULTIPLEXER
TELCO	TELEPHONE COMPANY
TMC	TRANSPORTATION MANAGEMENT CENTER
TMS	TRAFFIC MONITORING STATION
TS	TRAFFIC SIGNAL
TPC	TWISTED PAIR CABLE
TX	TRANSMITTER
UP	UNION PACIFIC
VDX	VIDEO DEMULTIPLEXER
VMX	VIDEO MULTIPLEXER
VR	VIDEO (RECEIVE)
VX	VIDEO (TRANSMIT)
#X	X AWG CONDUCTOR, ie #10 MEANS 10 AWG CONDUCTOR
XMTR	TRANSMITTER

AS-BUILT

Contract No. 07- **168114**

Resident Engineer: **PAUL WANG**

Completion Date: **8/11/05**

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY PROPOSED CCTV POLE LOCATIONS WITH THE ENGINEER PRIOR TO PLACEMENT OF FOUNDATIONS.
2. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL OR TELCO FACILITIES, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE 72 HOURS PRIOR TO COMMENCING WORK TO ALL CONCERNED AGENCIES AND THE ENGINEER.
3. UNLESS OTHERWISE NOTED ALL FIBER OPTIC 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.
4. ALL CONDUITS SHALL BE INSTALLED ON THE SHOULDER UNLESS OTHERWISE NOTED.
5. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
6. ALL NEW EQUIPMENT TO BE INSTALLED AT EXISTING AND NEW CCTV CAMERA LOCATIONS SHALL BE OF THE SAME MANUFACTURER AS THE EQUIPMENT.

LEGEND

- SPLICE VAULT
- EXISTING SPLICE VAULT
- FIBER OPTIC JUMPER
- COMMUNICATIONS PULLBOX WITH EXTENSION
- EXISTING COMMUNICATIONS PULLBOX
- EXISTING SERVICE VAULT
- e — EXISTING SERVICE CONDUIT(S)
- E — SERVICE CONDUIT(S)
- DELIMITER FOR PROJECT NOTES — EXAMPLE: 1 11 C 1 12
- NEW TYPE 334 TV CABINET
- EXISTING TELEPHONE BRIDGE
- TELEPHONE BRIDGE
- FIBER OPTIC CABLE
- COAXIAL CABLE
- EXISTING CONDUIT RUNS FOR RMS, TMS, CMS AND CCTV
- NEW CONDUIT RUNS FOR RMS, TMS, CMS AND CCTV
- PUMP HOUSE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

CCTV AND COMMUNICATION SYSTEM
(LEGEND AND NOTES)

E-1

DATE REVISED | REVISED BY | DATE
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PROJECT ENGINEER: DAVID PADILLA
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CU 07396

EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	51	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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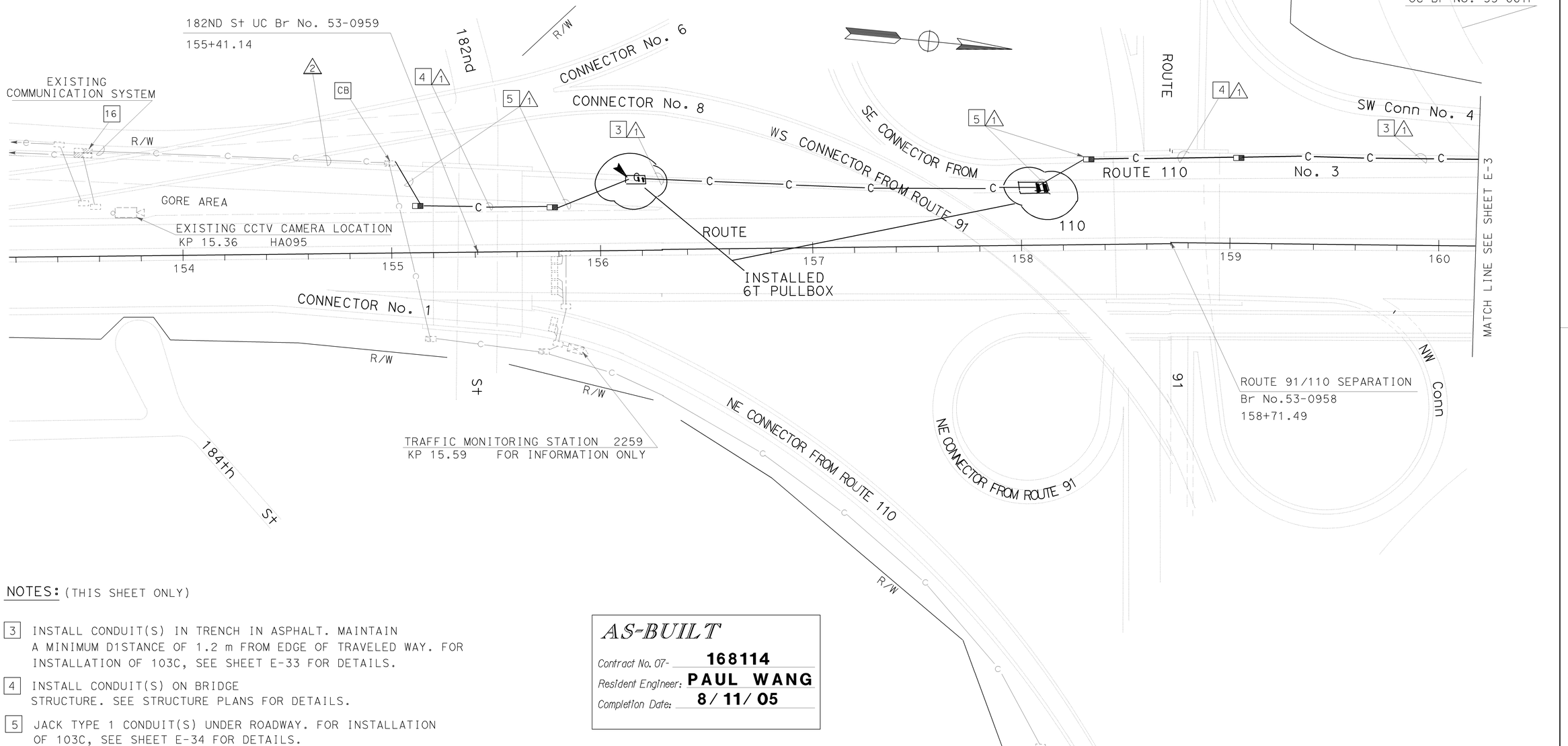
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1				RUN 2		
50P22 CABLE	DATA/PHONE	1				1		
24SMFO CABLE	VIDEO/DATA		1				1	
12SMFO CABLE	VIDEO DISTRIBUTION			1				1
SIZE 32 INNERDUCT			1	1				
CONDUIT SIZE		103			103	Exist 103		



NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

16 INSTALL 2 FO SPLICE CLOSURES AND 1 TPC SPLICE CLOSURE IN EXISTING SPLICE VAULT. SPLICE NEW 50P22 CABLE, 24SMFO AND 12SMFO CABLES WITH EXISTING MATCHING CABLES IN EXISTING SPLICE VAULT.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

AS-BUILT

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

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

COMMUNICATIONS SYSTEM ROUTING

SCALE 1:1000

E-2

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

PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
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CU 07388

EA 168111

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
				1		2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

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

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	52	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
EXP. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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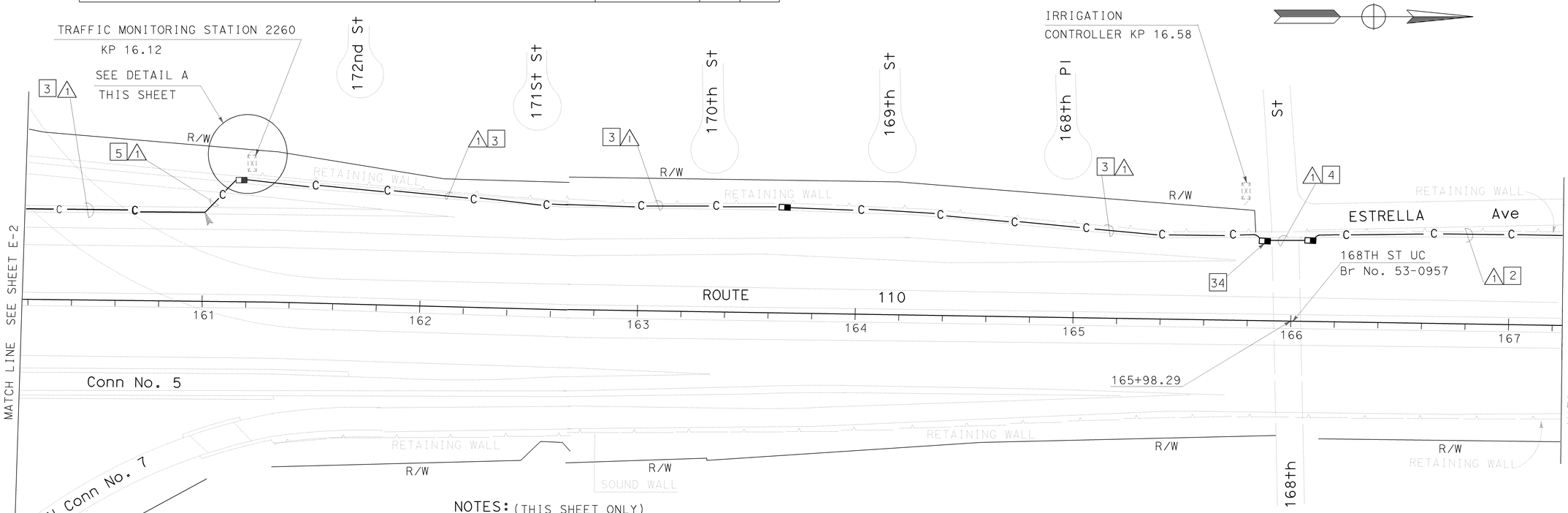

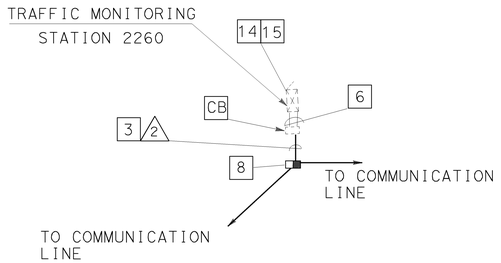

DETAIL A
NO SCALE

NOTES: (THIS SHEET ONLY)

2 TRENCH AND INSTALL CONDUIT IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUITS UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE AND CONNECT TO EXISTING CONTROLLER CABINET.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT, AND VERIFYING THE INSTALLATION IS OPERATIONAL.

34 COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

FOR COMPLETE R/W AND ACCURATE ACCESS DATA,
SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-3

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DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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EA 168111

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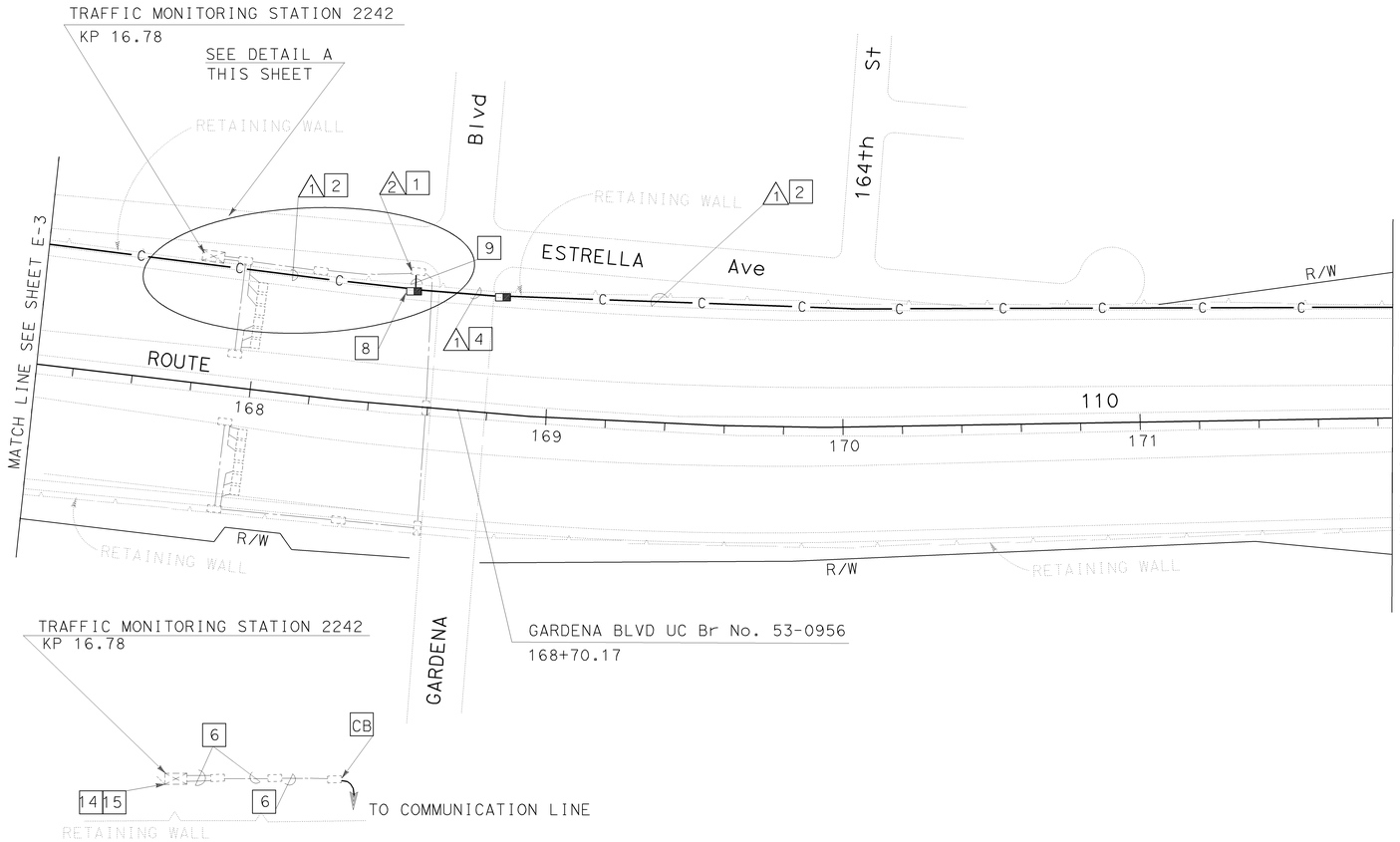

DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-33 FOR INSTALLATION DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR INSTALLATION DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

9 CORE THROUGH WALL. SEE SHEET C-8 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-4

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	53	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

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AS-BUILT

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

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	54	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E15611 — Exp. 12-31-04 — ELECTRICAL — STATE OF CALIFORNIA

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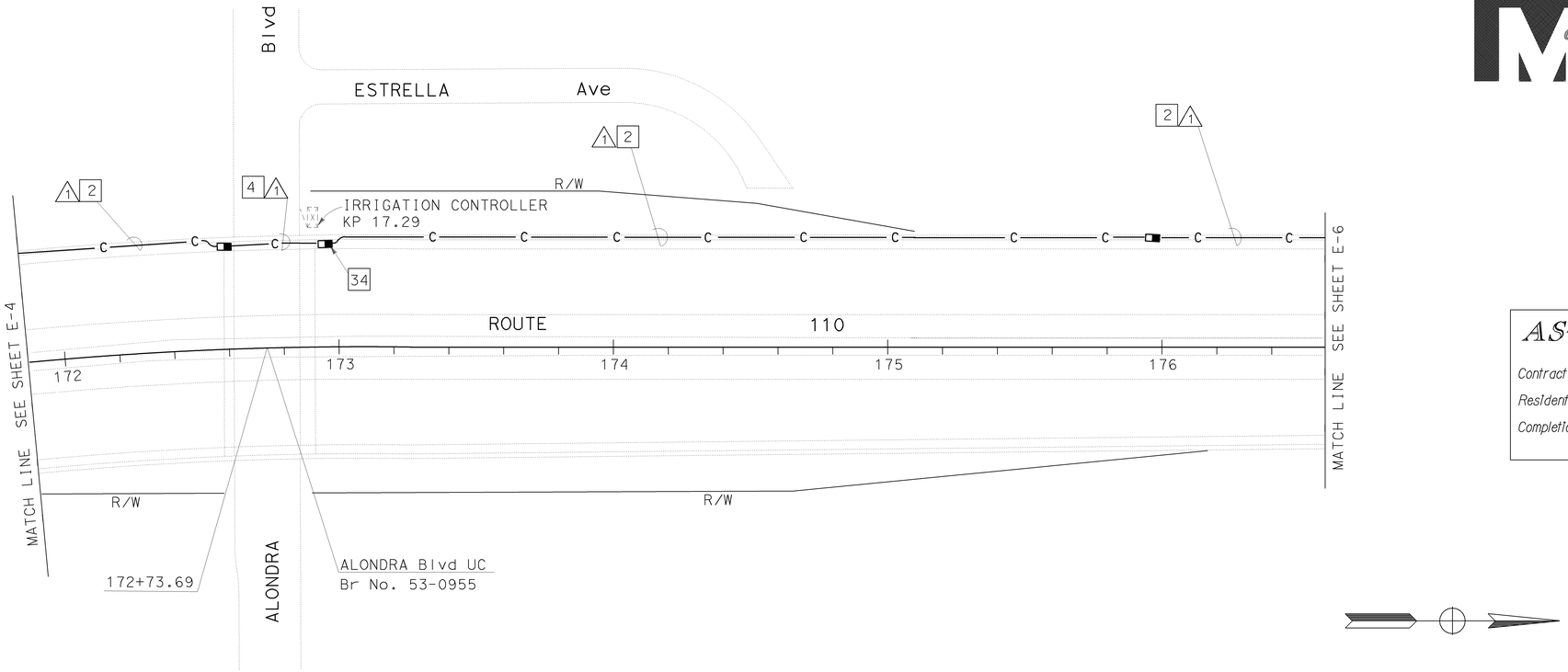

AS-BUILT

Contract No. 07- **168114**

Resident Engineer: **PAUL WANG**

Completion Date: **8/11/05**

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE.
SEE STRUCTURE PLANS FOR DETAILS.

34 COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER.
SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER: DAVID PADILLA

CALCULATED/ DESIGNED BY | CHECKED BY

DATE REVISED BY | DATE REVISED

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

USERNAME => s124928
DGN FILE => 716811u05.dgn

CU 07388

EA 168111

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

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	55	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E15611 — Exp. 12-31-04 — ELECTRICAL — STATE OF CALIFORNIA

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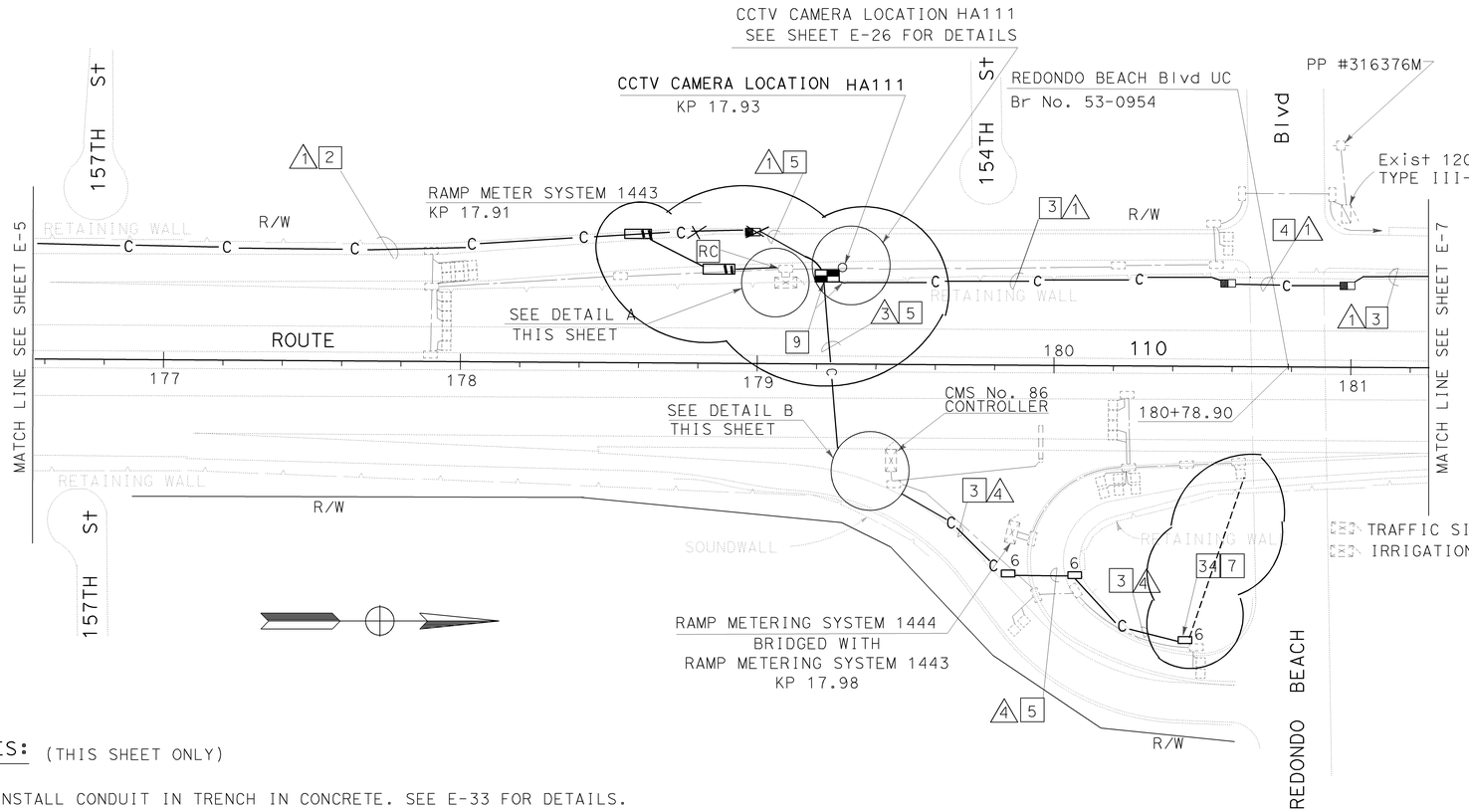
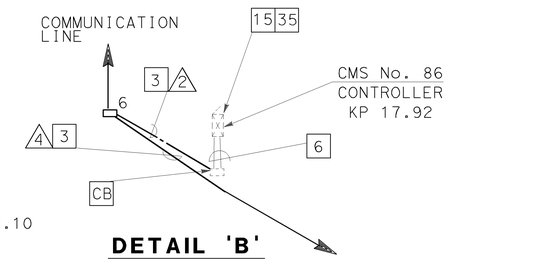
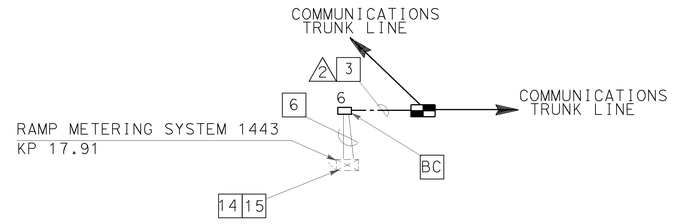




DETAIL 'B'
NO SCALE



DETAIL A
NO SCALE

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUITS ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE CABLE IN SPLICE VAULT AT 179+23.

9 CORE THROUGH WALL. SEE SHEET C-8 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE CABLE IN SPLICE VAULT AT 179+23.

35 INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-39 FOR DETAILS.

ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE NOTED.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN						
		1				2	3	4
50P22 CABLE	DATA/PHONE	1						
24SMFO CABLE	VIDEO/DATA		1					
12SMFO CABLE	VIDEO DISTRIBUTION			1				
6P22 CABLE	DATA/PHONE					1	3	2
SIZE 32 INNERDUCT			1	1				
CONDUIT SIZE		103			103	53	103	53

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

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-6

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

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

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

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DGN FILE => 716811u06.dgn

CU 07388

EA 168111

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

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	56	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 EXP. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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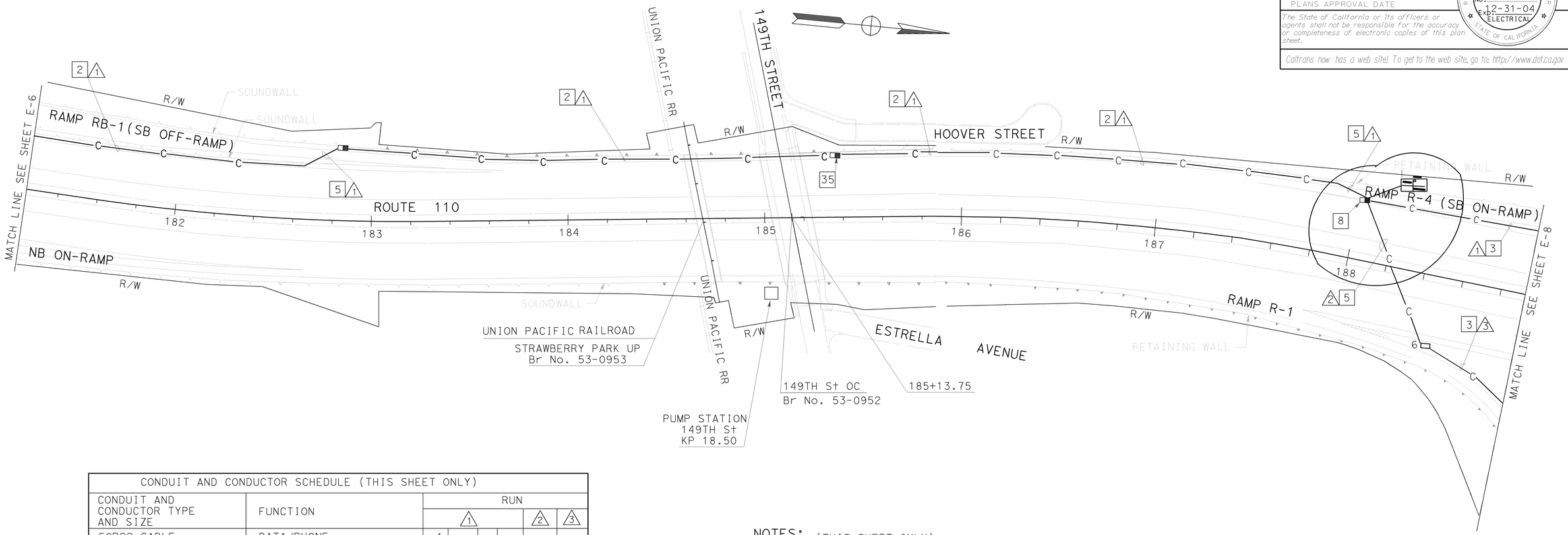

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)							
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN					
		1				2	3
50P22 CABLE	DATA/PHONE	1					
24SMFO CABLE	VIDEO/DATA		1				
12SMFO CABLE	VIDEO DISTRIBUTION			1			
6P22 CABLE	DATA/PHONE					2	2
INNERDUCT (SIZE 32)			1	1			
CONDUIT SIZE		103			103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

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

35 COIL 30 m OF 6P22 CABLE FOR FUTURE PUMP HOUSE CONNECTION. SPLICE IN/OUT PAIRS TOGETHER USING A NEW TWISTED PAIR SPLICE CLOSURE.

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

FOR COMPLETE R/W AND ACCURATE ACCESS DATA,
SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER
DAVID PADILLA

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY
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EA 168111

LAST REVISION 00-00-00
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TIME PLOTTED => 13:49

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	57	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 EXP. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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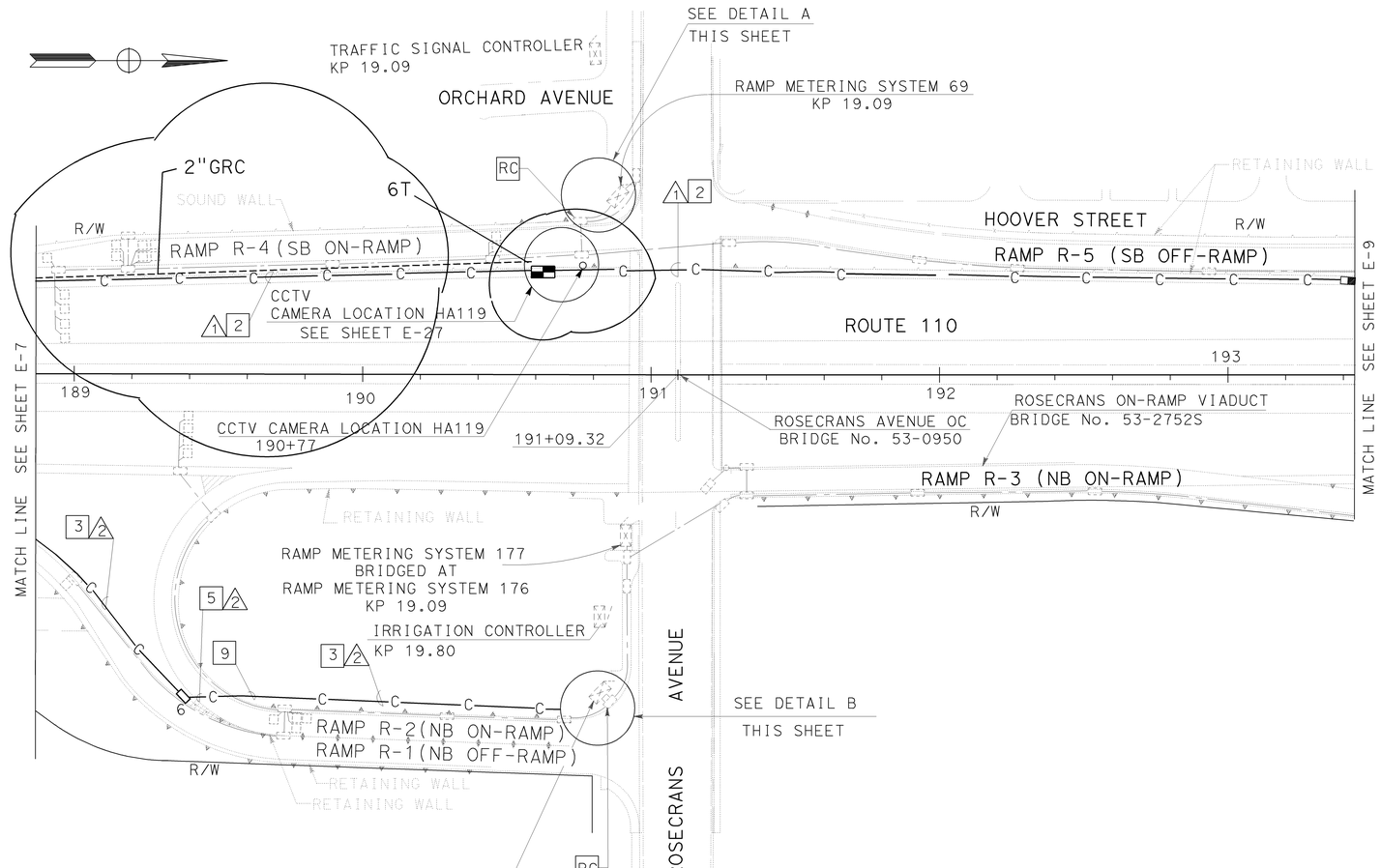
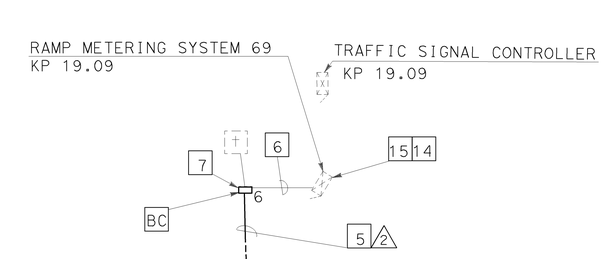
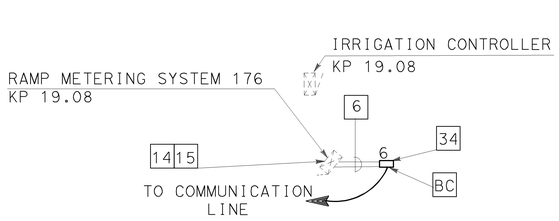
AS-BUILT

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





DETAIL A
NO SCALE



DETAIL B
NO SCALE

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR EXISTING TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS IN SPLICE VAULT.

9 CORE THROUGH WALL. SEE SHEET C-8 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

34 COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-8

DATE	REVISED BY	DATE REVISED
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PROJECT ENGINEER	DAVID PADILLA	
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CU 07388

EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	58	165

Caltrans Metric

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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AS-BUILT

Contract No. 07- **168114**

Resident Engineer: **PAUL WANG**

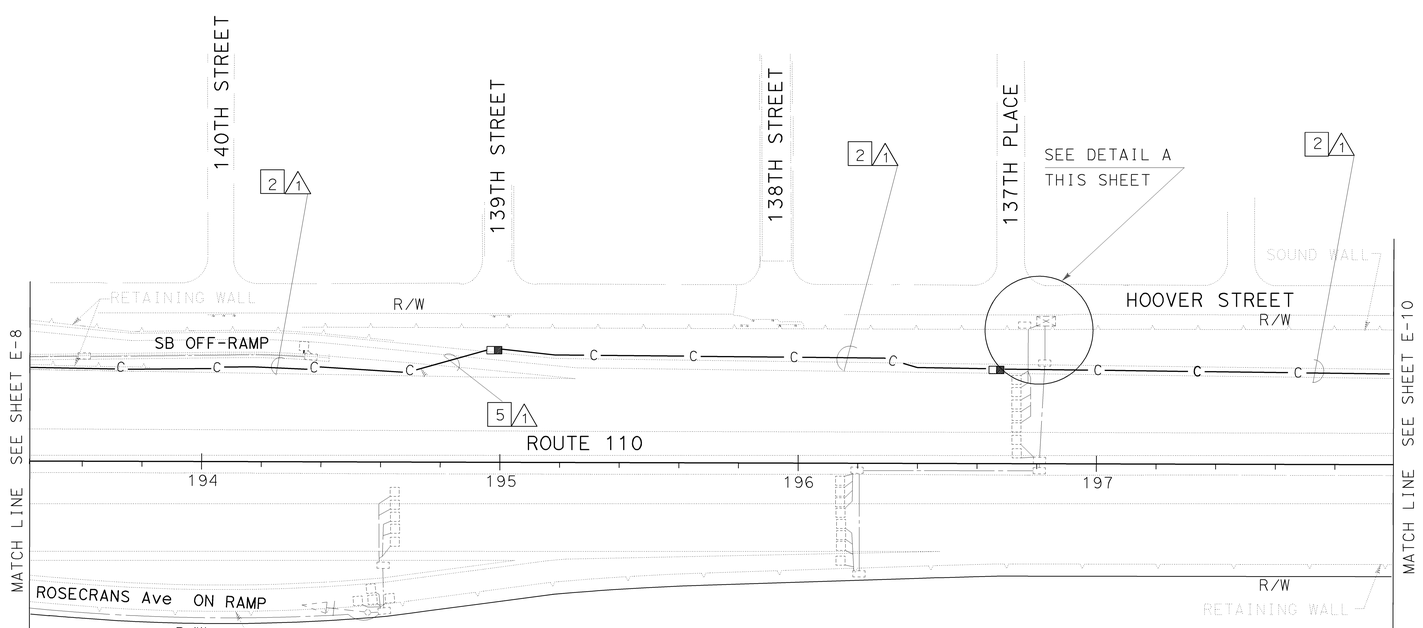
Completion Date: **8/11/05**

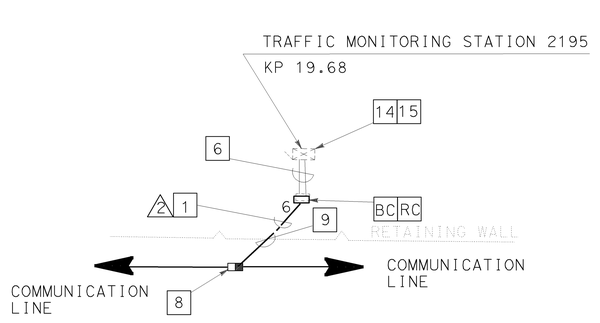
NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-33 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.
5. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.
9. CORE THROUGH WALL. SEE SHEET C-8 FOR DETAILS.
14. INSTALL TWO TELEPHONE BRIDGES AND TWO-12-PAIR TERMINAL BLOCKS IN EXISTING CONTROLLER CABINET. USE ONE BRIDGE FOR CMS INTERMEDIATE BRIDGING AND ONE FOR TMS. SEE SHEET E-38 AND E-39 FOR DETAILS.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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





DETAIL A
NO SCALE

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

E-9

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

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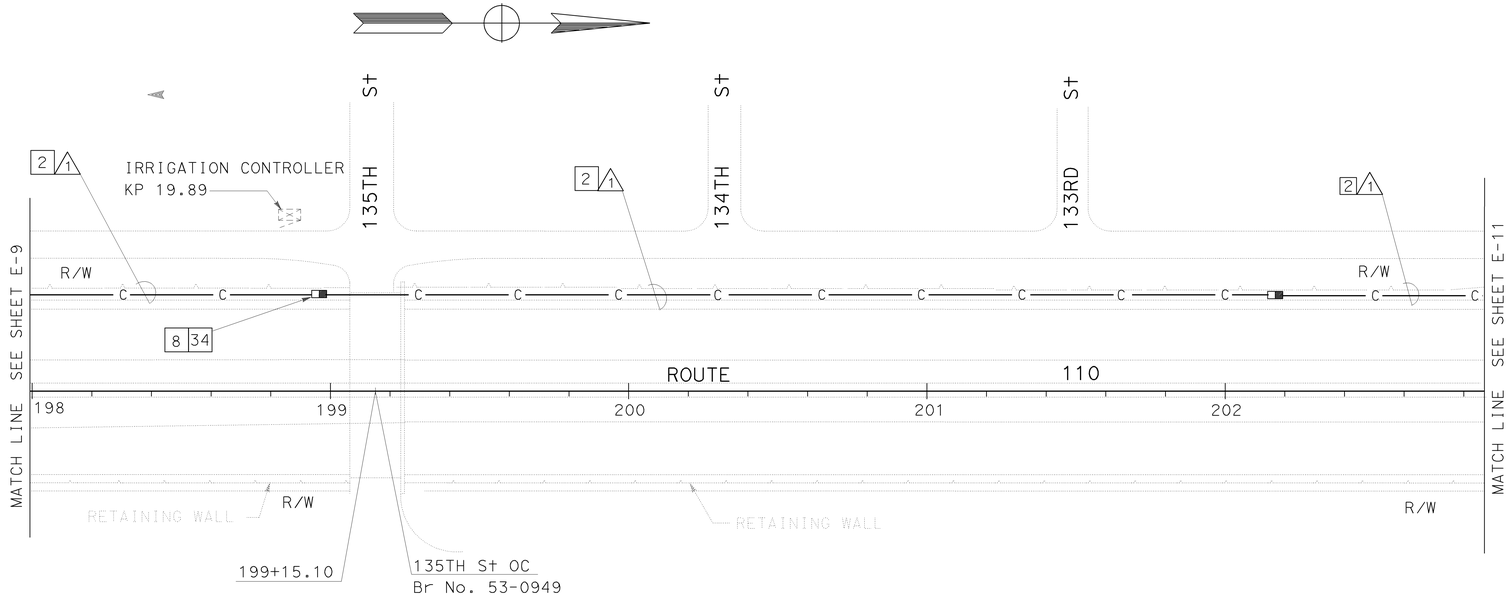
CU 07388

EA 168111



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

NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE SHOULDER. SEE SHEET E-33 FOR DETAILS.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

34 COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-10

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	59	165

Jacqueline C. Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No E15611 Exp. 12-31-04 ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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

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

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

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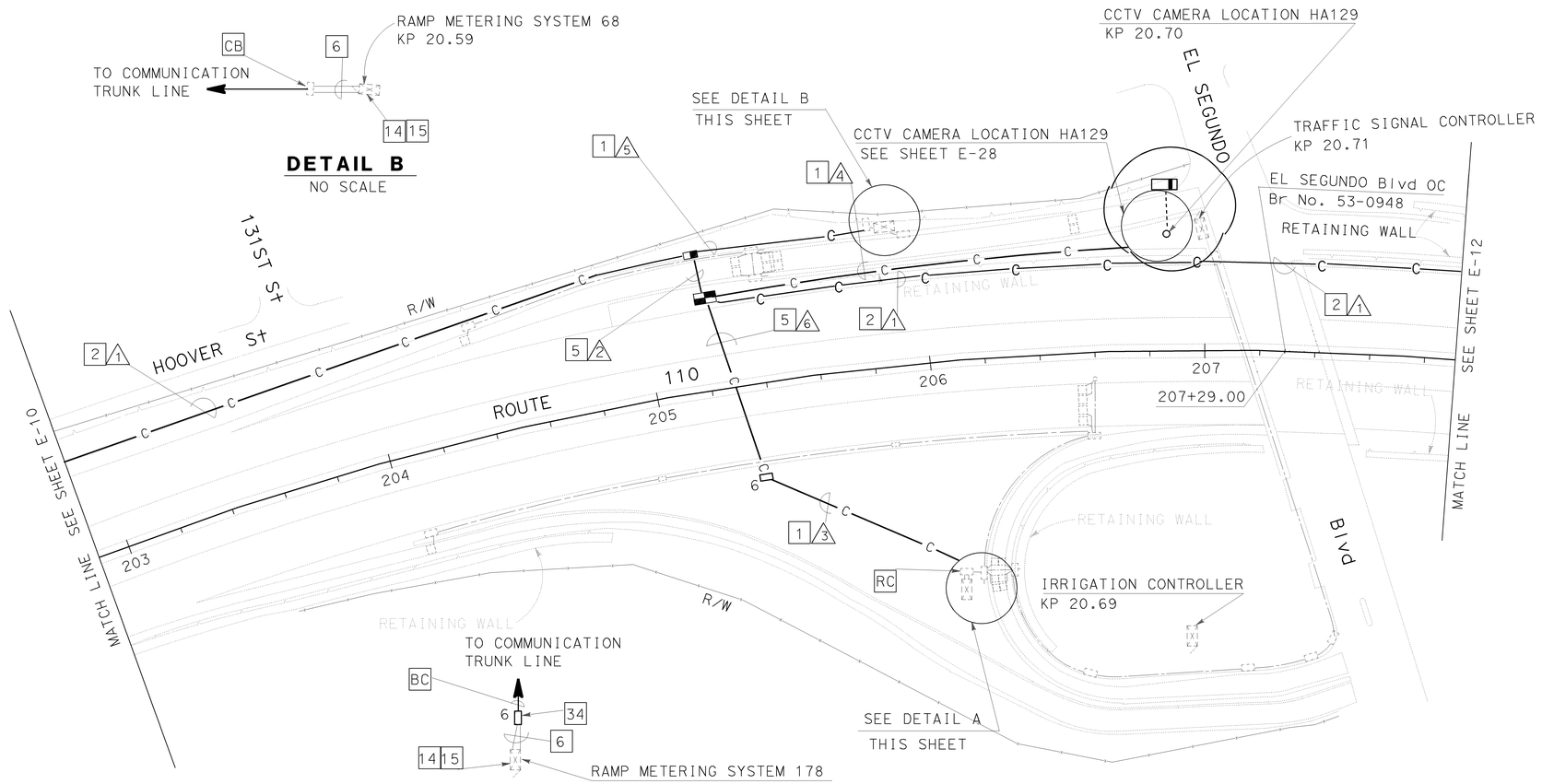
CU 07388
EA 168111



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)													
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN											
		1				2				3	4	5	6
50P22 CABLE	DATA/PHONE	1				1							
24SMFO CABLE	VIDEO/DATA		1				1						
12SMFO CABLE	VIDEO DISTRIBUTION			1				1					
6P22 CABLE	DATA/PHONE					1				2	2	1	2
6SMFO CABLE	VIDEO DISTRIBUTION										1		
SIZE 32 INNERDUCT			1	1			1	1					
CONDUIT SIZE		103			103	103			103	53	53	53	103

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-33 FOR DETAILS.

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER CABINET.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS AT SPLICE VAULT.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-11

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	60	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
12-31-04
Exp. ELECTRICAL
STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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

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

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CU 07388
EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	61	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E015611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

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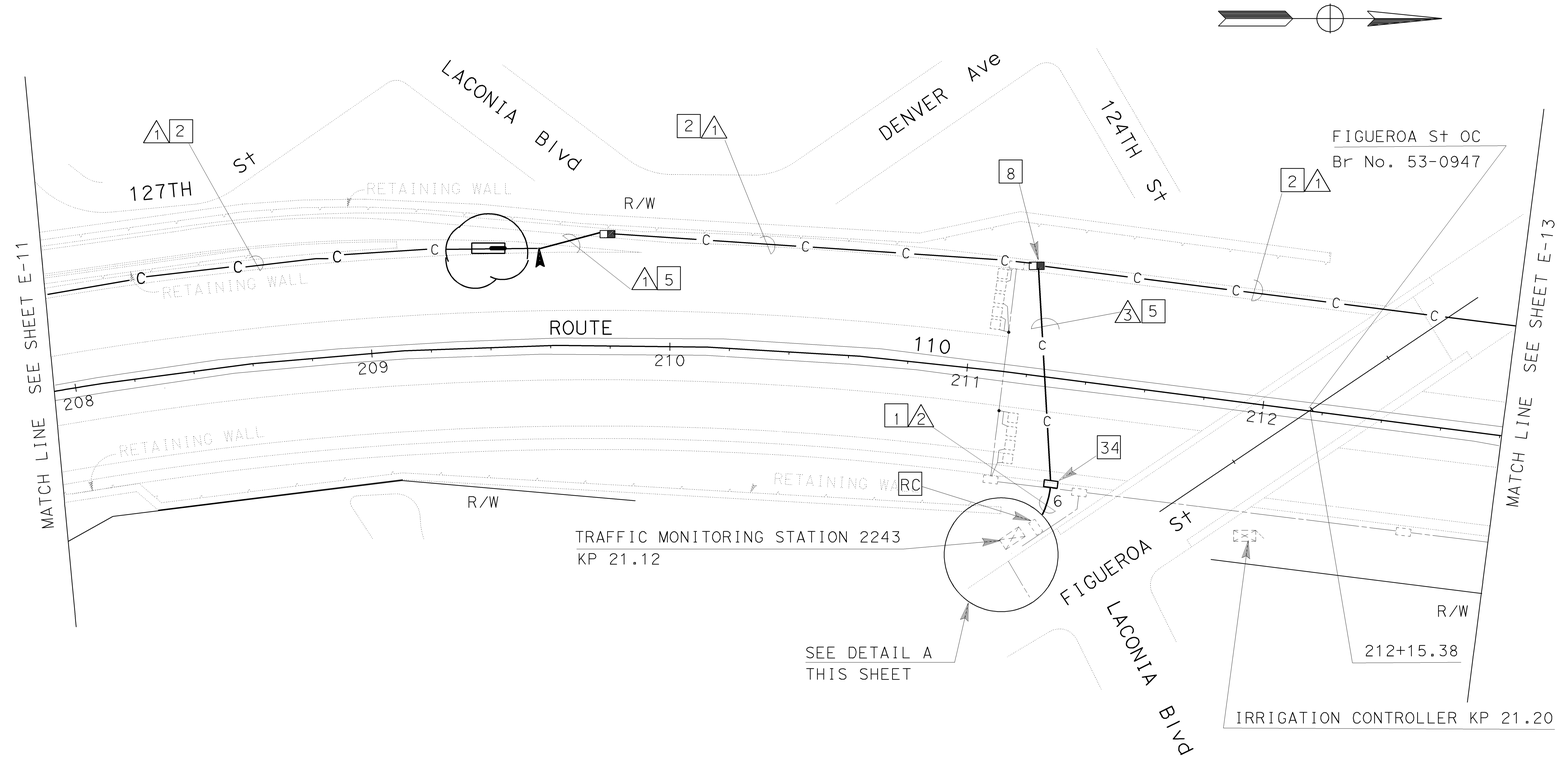
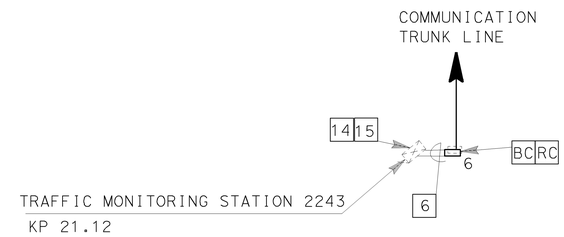
Caltrans Metric





DETAIL A
NO SCALE

NOTES: (THIS SHEET ONLY)

1. TRENCH AND INSTALL CONDUIT IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.
2. TRENCH AND INSTALL CONDUIT IN CONCRETE. SEE SHEET E-33 FOR DETAILS.
5. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET.SEE SHEET E-38 FOR DETAILS.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.
34. COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS TOGETHER USING A TWISTED PAIR SPLICE CLOSURE.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
CHECKED BY
DATE
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FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

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DGN FILE => 716811u12.dgn

CU 07388

EA 168111

LAST REVISION 00-00-00
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TIME PLOTTED => 13:49

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	62	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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NOTES: (THIS SHEET ONLY)

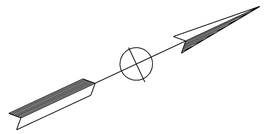
1. INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.
2. INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.
5. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET.SEE SHEET E-38 FOR DETAILS.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

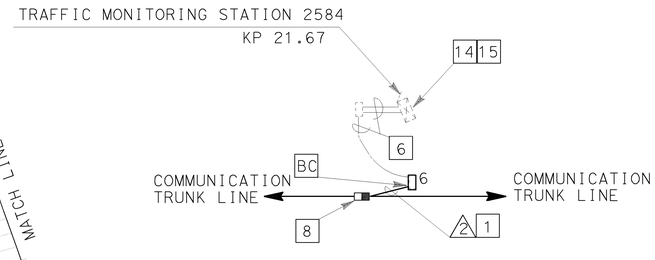
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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

AS-BUILT

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





DETAIL A
NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-13

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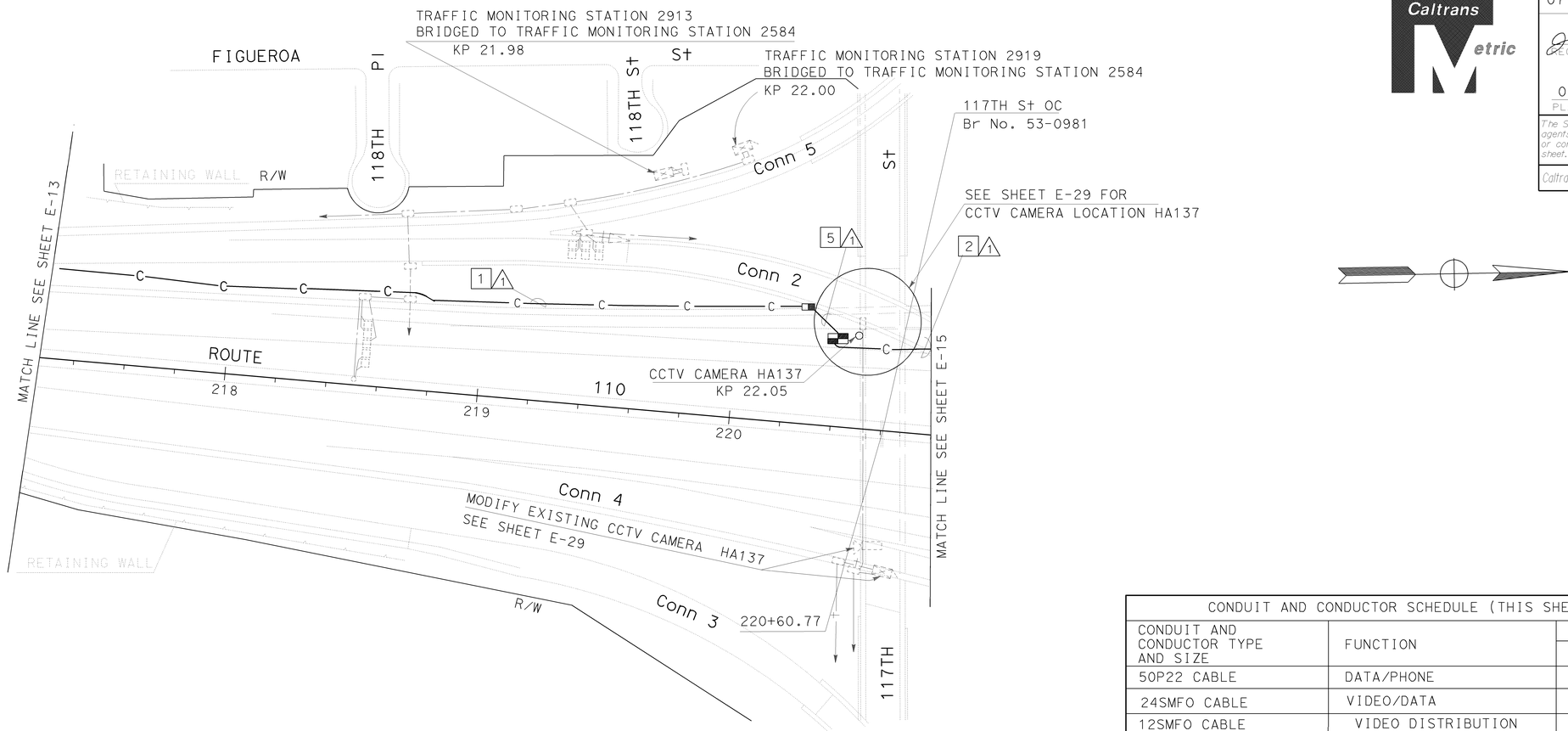

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1			
50P22 CABLE	DATA/PHONE	1			
24SMFO CABLE	VIDEO/DATA		1		
12SMFO CABLE	VIDEO DISTRIBUTION			1	
SIZE 32 INNERDUCT			1	1	
CONDUIT SIZE		103			103

NOTES: (THIS SHEET ONLY)

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

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-14

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

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
EXP. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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EA 168111

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

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

Caltrans Metric

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF CONDUIT, SEE SHEET E-34 FOR DETAILS.

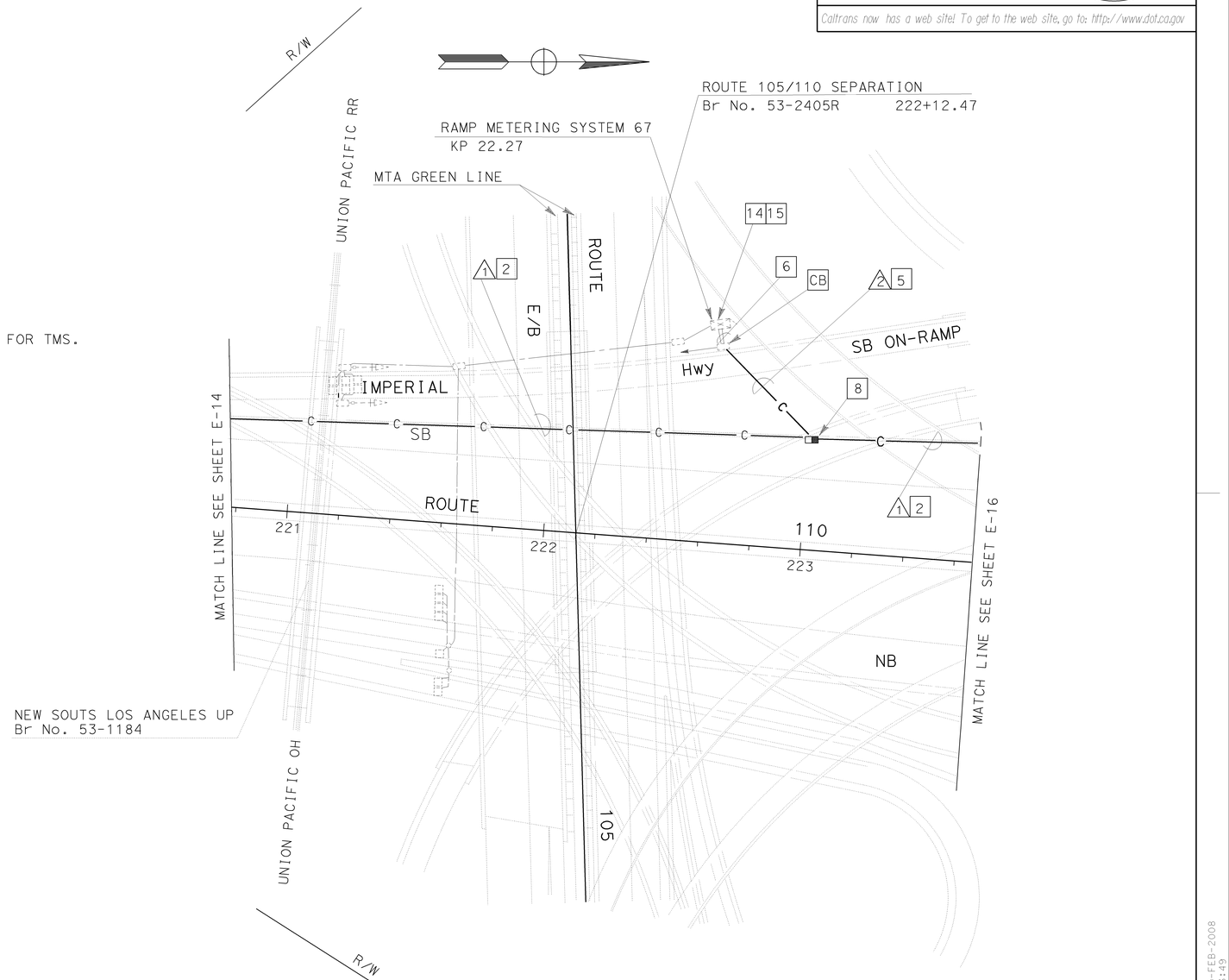
6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

14 INSTALL 2 TELEPHONE BRIDGES AND TWO 12-PAIR TERMINAL BLOCKS IN CONTROLLER CABINET. USE ONE BRIDGE FOR CMS INTERMEDIATE BRIDGING AND ONE FOR TMS. SEE SHEET E-38 AND E-39 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					2
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53



COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-15

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	65	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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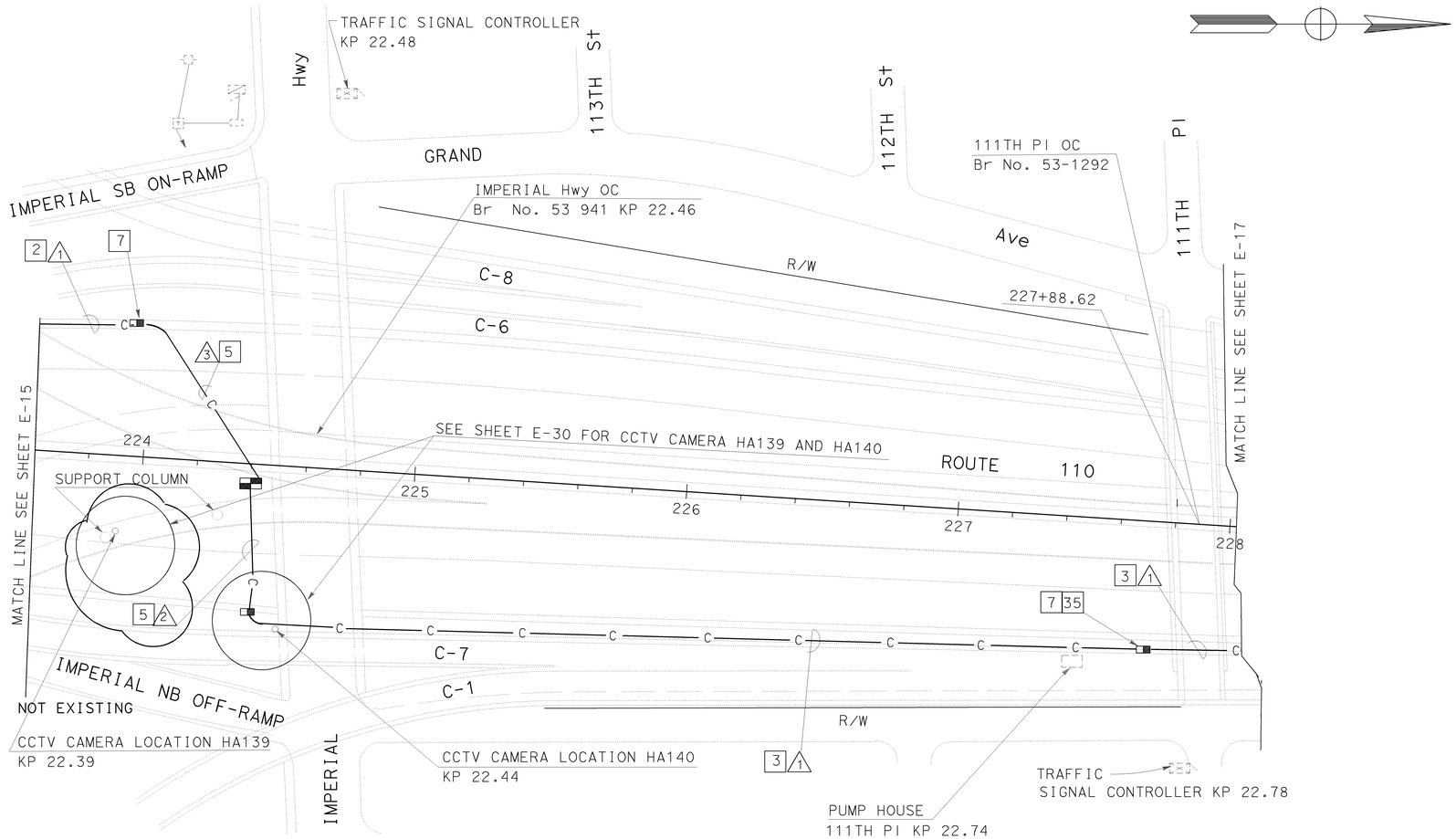
AS-BUILT
Contract No. 07- **168114**
Resident Engineer: **PAUL WANG**
Completion Date: **8/11/05**



NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

35 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR FUTURE PUMP HOUSE CONNECTION. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-16

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ITS DEVELOPMENT

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CALCULATED/ DESIGNED BY
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DGN FILE => 716811u16.dgn

CU 07388

EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	66	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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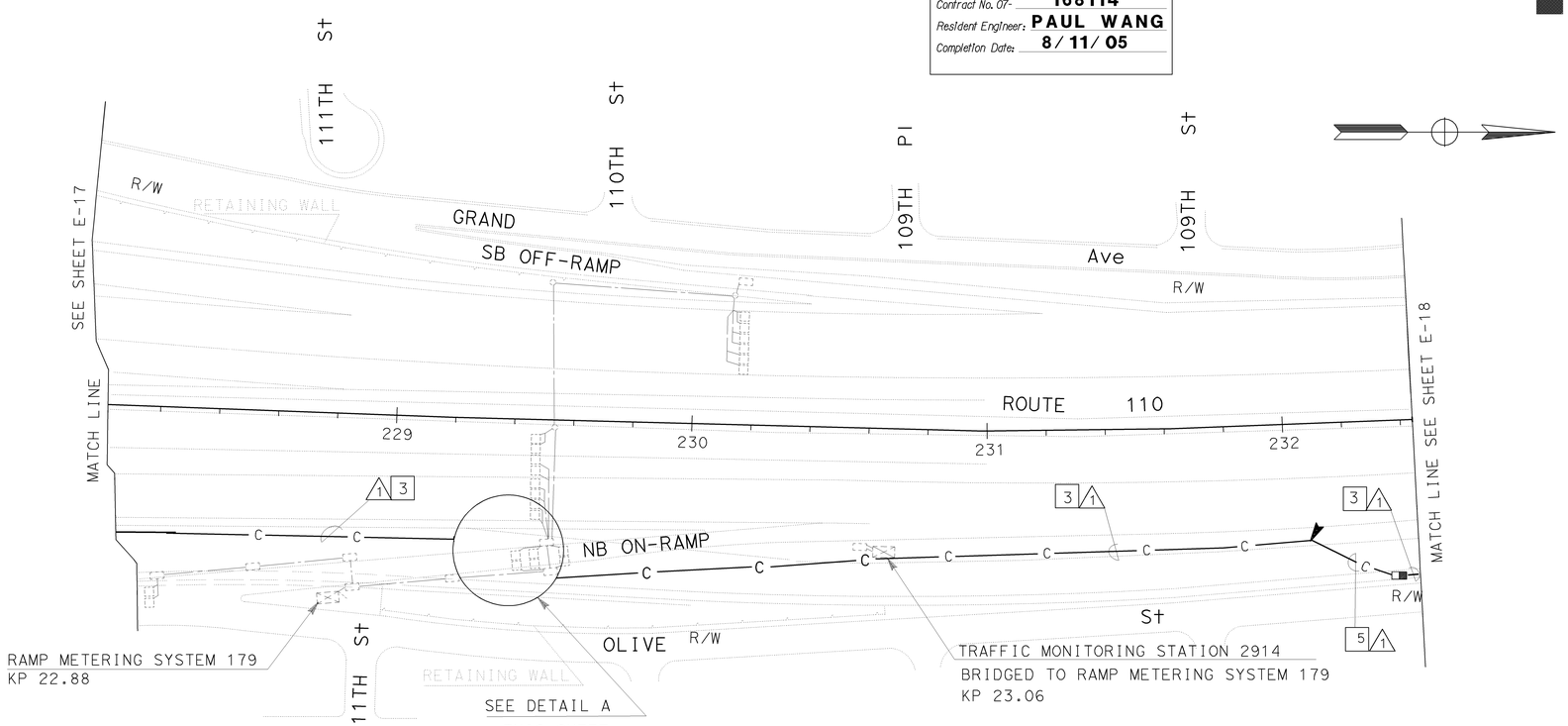
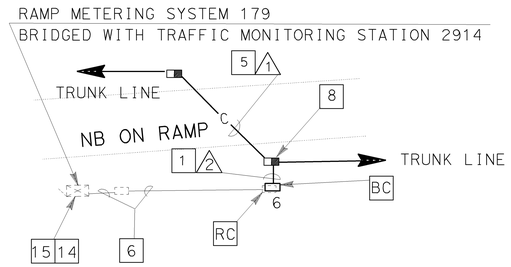
AS-BUILT
Contract No. 07- 168114
Resident Engineer: PAUL WANG
Completion Date: 8/11/05





DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		⚠1				⚠2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-17

DATE	REVISED BY	DATE REVISED

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PROJECT ENGINEER
DAVID PADILLA

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CU 07388

EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	67	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
EXP. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

03-17-03
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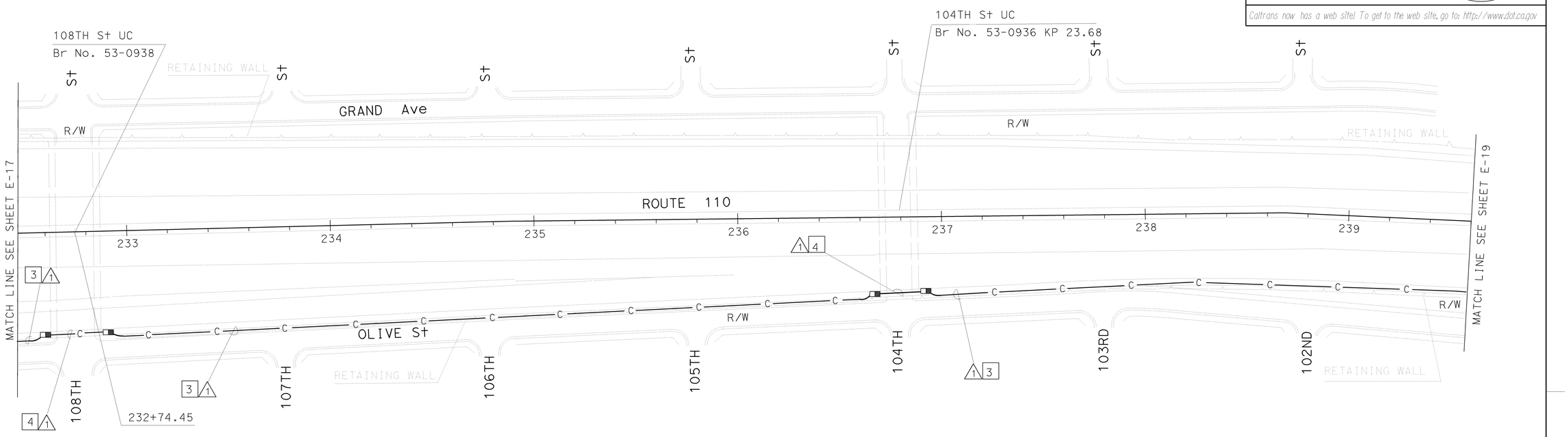

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN /1			
50P22 CABLE	DATA/PHONE	1			
24SMFO CABLE	VIDEO/DATA		1		
12SMFO CABLE	VIDEO DISTRIBUTION			1	
SIZE 32 INNERDUCT			1	1	
CONDUIT SIZE		103			103

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVEL WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-18

DATE | REVISED BY | DATE REVISED

CALCULATED/ DESIGNED BY | CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

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 => 716811u18.dgn

CU 07388

EA 168111

LAST REVISION 00-00-00
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TIME PLOTTED => 13:50

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	68	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

03-17-03
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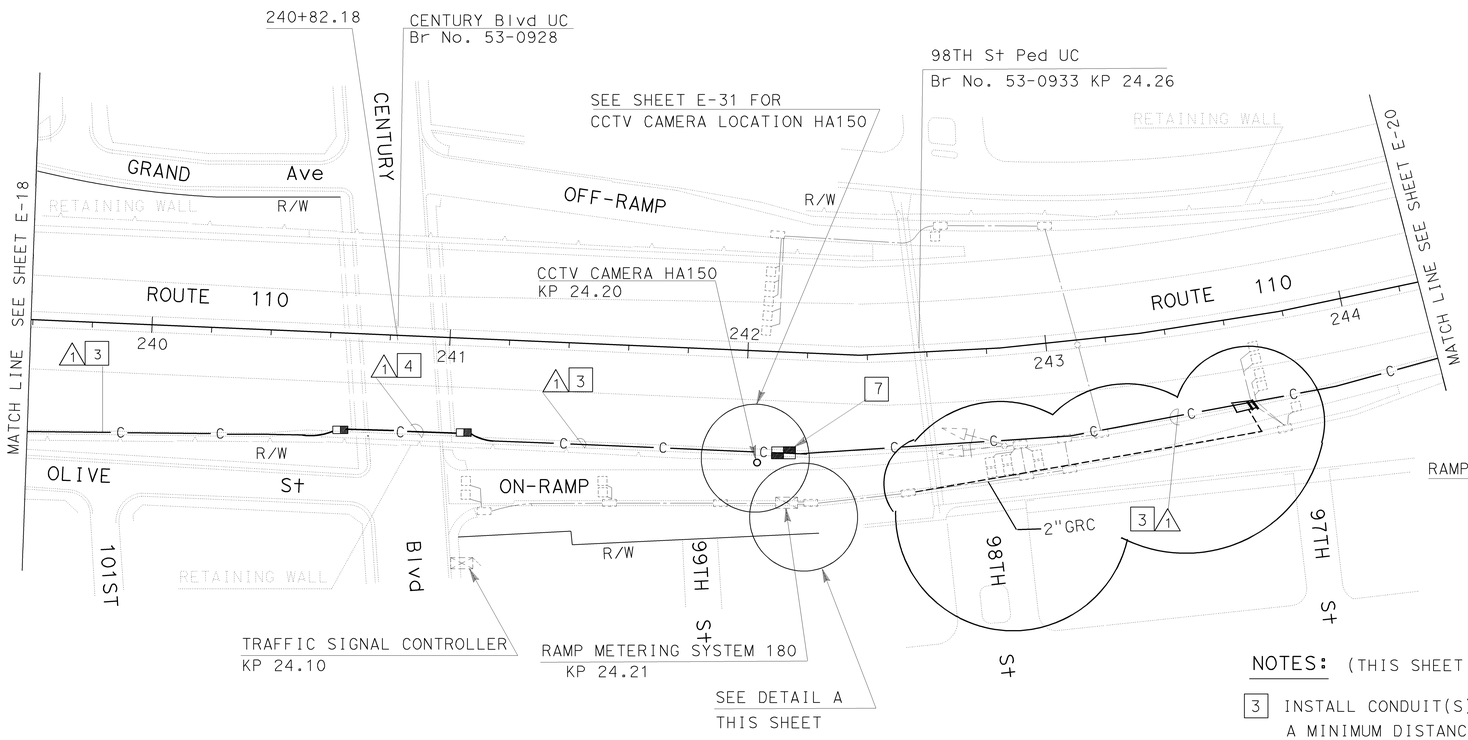

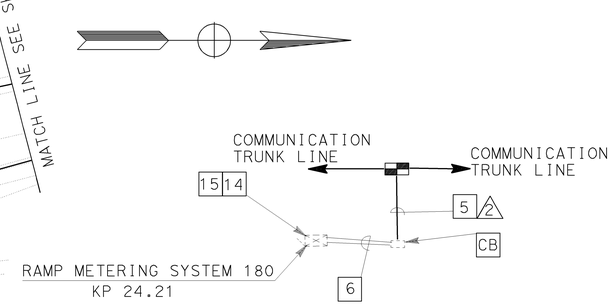

DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

7 COIL 30 m OF 6P22 CABLE IN SPLICE VAULT FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

16. USE HAND TOOLS IN ALL EXCAVATIONS TO INSTALL ELECTRICAL CONDUITS WITHIN 1.2 m OF THE HIGH RISK UNDERGROUND UTILITY. EXCEPT THAT POWER EQUIPMENT MAY BE USED TO CUT AND REMOVE ASPHALT OR PORTLAND CEMENT CONCRETE PAVEMENT. LOCATION OF HIGH RISK UNDERGROUND UTILITY IS AT 101ST STREET, SEE SHEET U-19 FOR DETAILS.

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-19

DATE | REVISED BY | DATE REVISED
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PROJECT ENGINEER | DAVID PADILLA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | Caltrans | ITS DEVELOPMENT

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USERNAME => s124928
DGN FILE => 716811u19.dgn

CU 07388 | EA 168111

LAST REVISION 00-00-00
DATE PLOTTED => 19-FEB-2008
TIME PLOTTED => 13:50

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	69	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

03-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E15611 — Exp. 12-31-04 — ELECTRICAL — STATE OF CALIFORNIA

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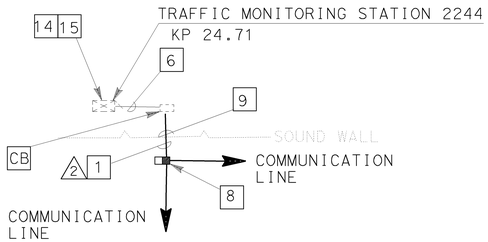
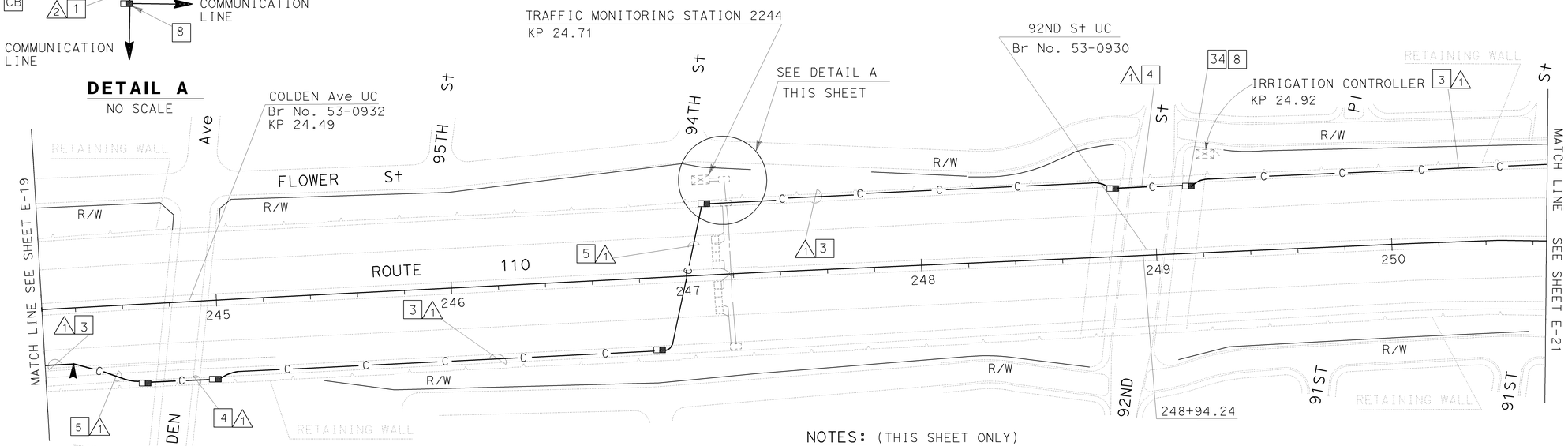


DETAIL A
NO SCALE



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE ON STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO CONTROLLER.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOUSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

9 CORE THROUGH WALL. SEE SHEET C-8 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOUSURE.

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

FOR COMPLETE R/W AND ACCURATE ACCESS DATA,
SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER: DAVID PADILLA
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION 00-00-00 DATE PLOTTED => 19-FEB-2008 TIME PLOTTED => 13:50

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USERNAME => s124928
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CU 07388

EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	70	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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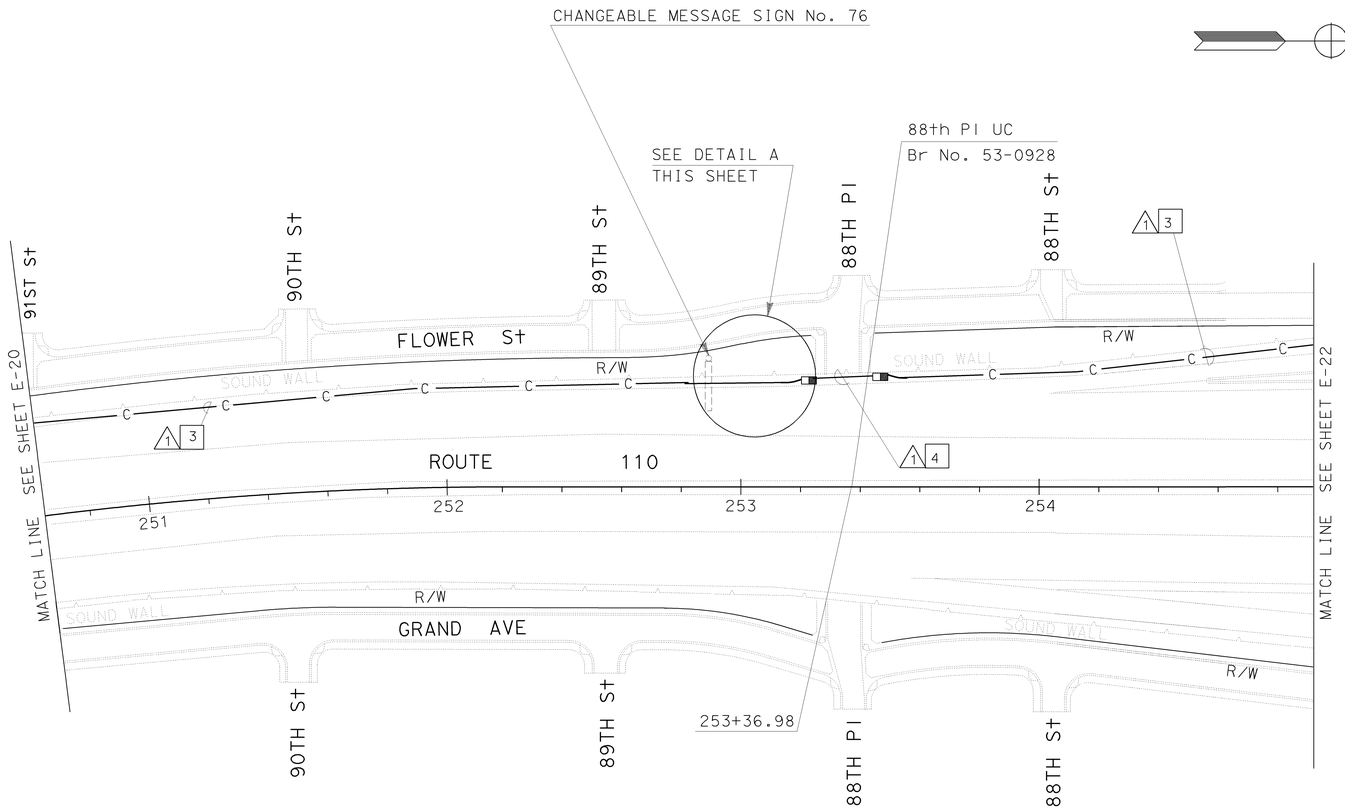

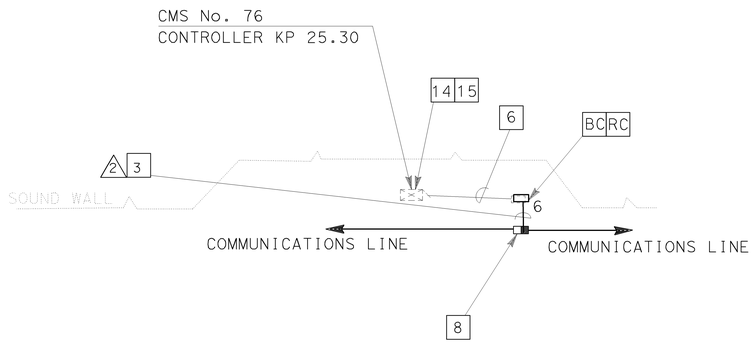

DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1				RUN 2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER CABINET.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-35 AND E-36 FOR DETAILS.

14 INSTALL TWO TELEPHONE BRIDGES AND ONE 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-39 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-21

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

PROJECT ENGINEER: DAVID PADILLA

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DATE | REVISED BY | DATE REVISED

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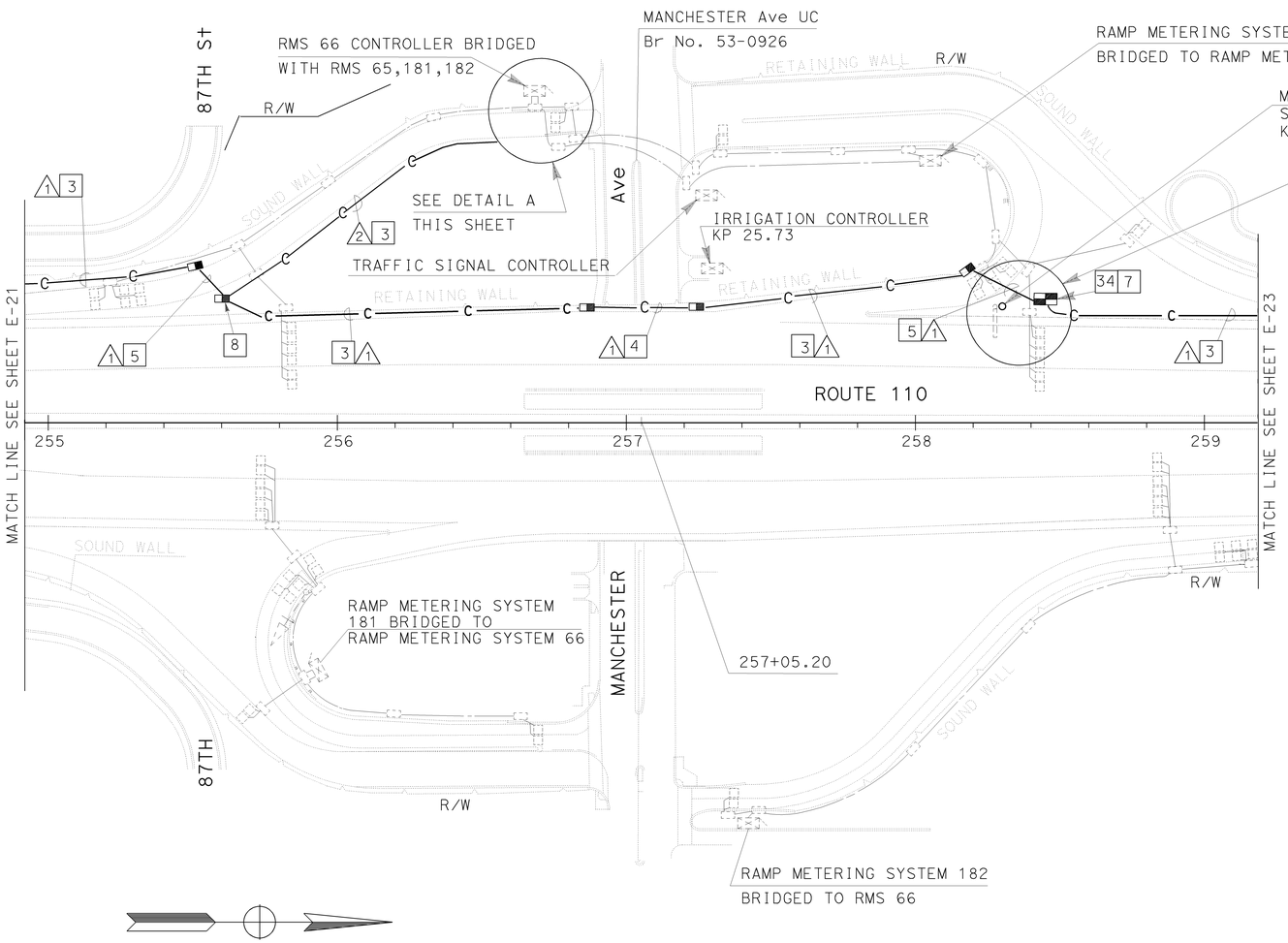
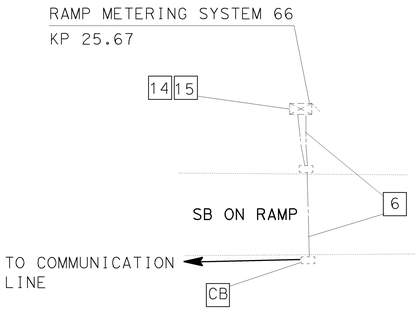
CU 07388 | EA 168111





DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE			103		103	53

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVEL WAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER CABINET.

7 COIL 30 m OF 6P22 CABLE FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE, SEE SHEETS E-35 AND E-36 FOR DETAILS.

14 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

34 COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-22

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	71	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
EXP. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

03-17-03
PLANS APPROVAL DATE

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PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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EA 168111

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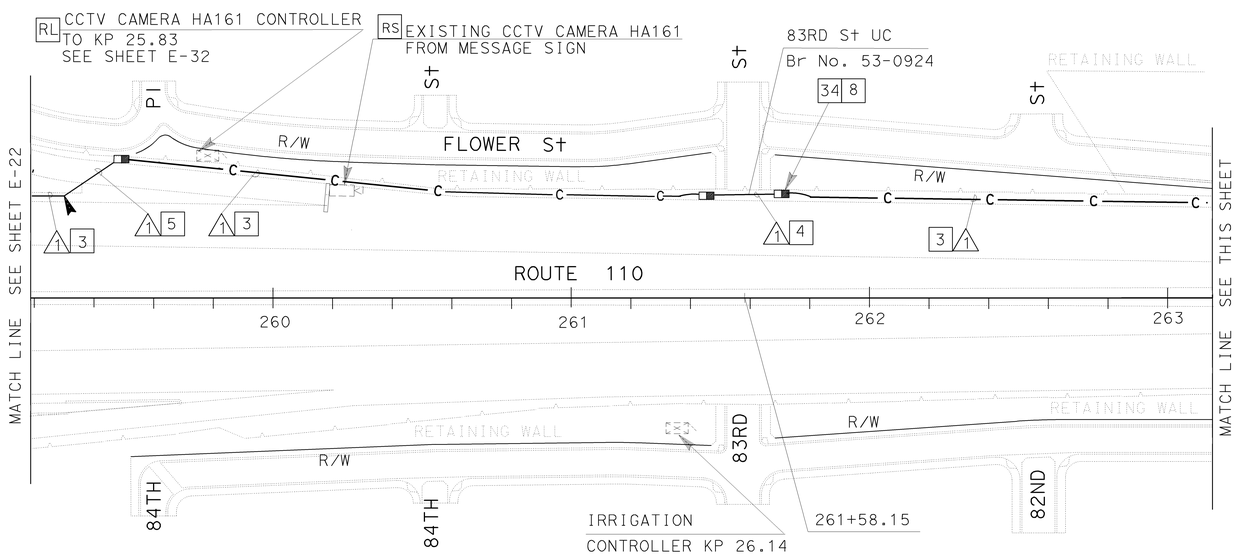

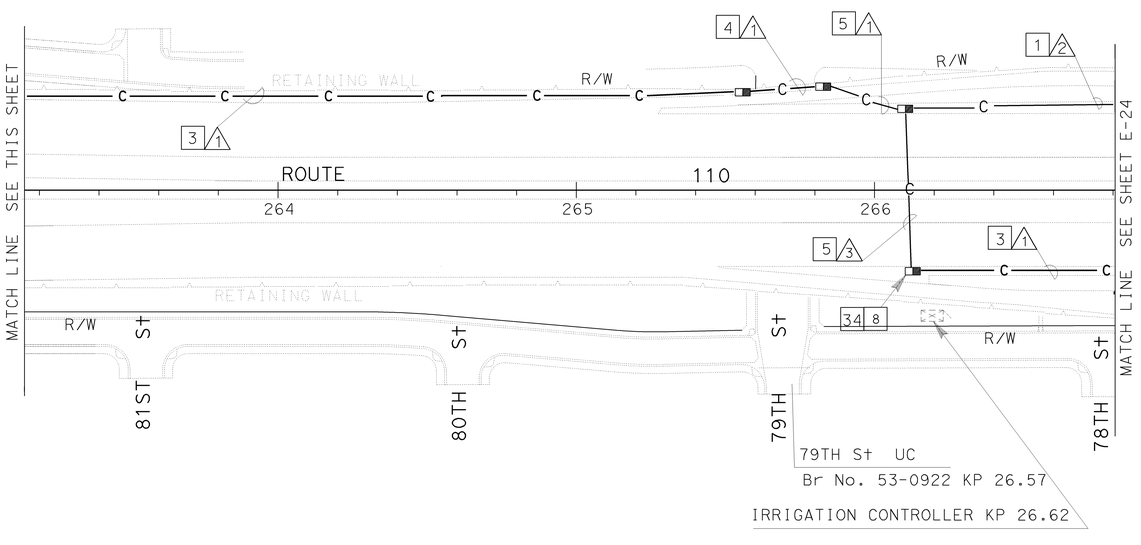

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR COMPLETE R/W AND ACCURATE ACCESS DATA,
SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	72	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

03-17-03
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NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

8 INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-34 AND E-35 FOR DETAILS.

34 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A TWISTED PAIR SPLICE CLOSURE.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DAVID PADILLA

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-23

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CU 07388

EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101 105,110,405	15.3/28.0	73	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E15611 — Exp. 12-31-04 — ELECTRICAL — STATE OF CALIFORNIA

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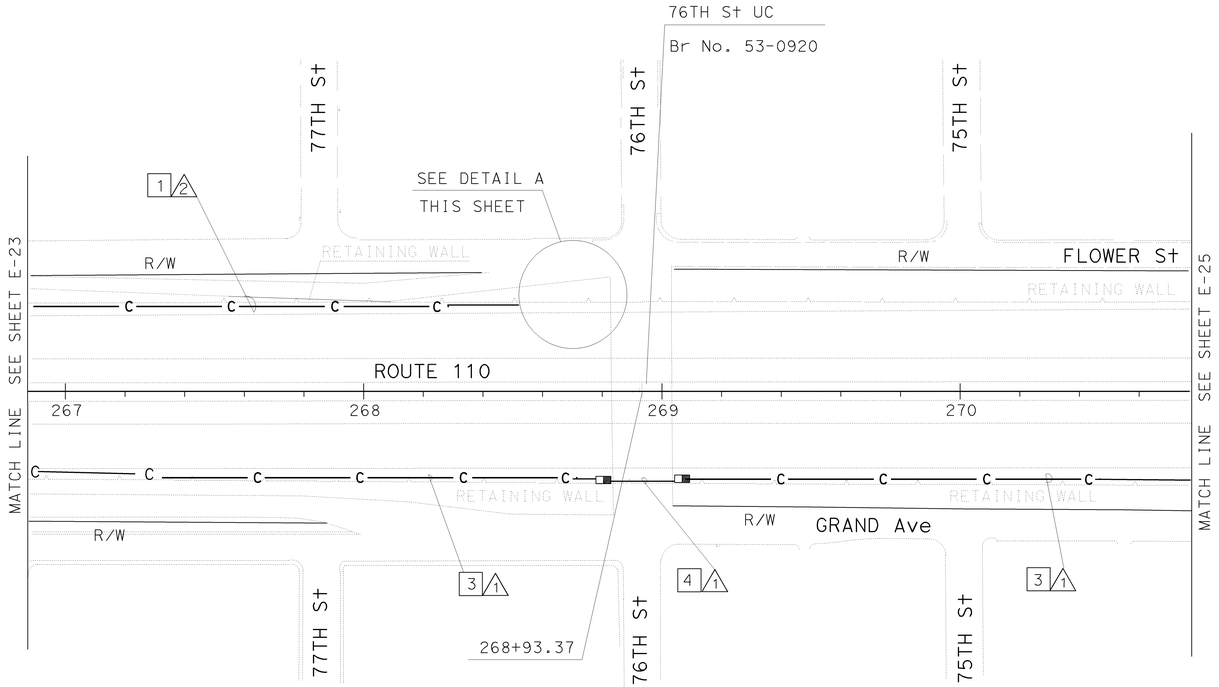
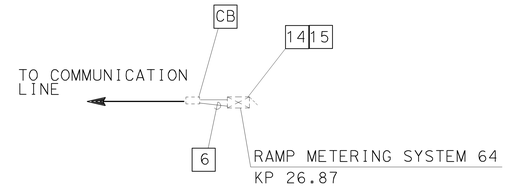
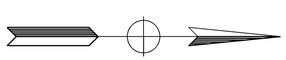
AS-BUILT
Contract No. 07- **168114**
Resident Engineer: **PAUL WANG**
Completion Date: **8/11/05**





DETAIL A
NO SCALE



CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE		103			103	53

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

4 INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.

6 ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER CABINET.

14 INSTALL TELEPHONE BRIDGE AND 12 PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.

15 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-24

DATE	REVISED BY	DATE REVISED

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PROJECT ENGINEER
DAVID PADILLA

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

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DGN FILE => 716811u24.dgn

CU 07388

EA 168111

LAST REVISION 00-00-00 DATE PLOTTED => 19-FEB-2008 TIME PLOTTED => 13:50

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	74	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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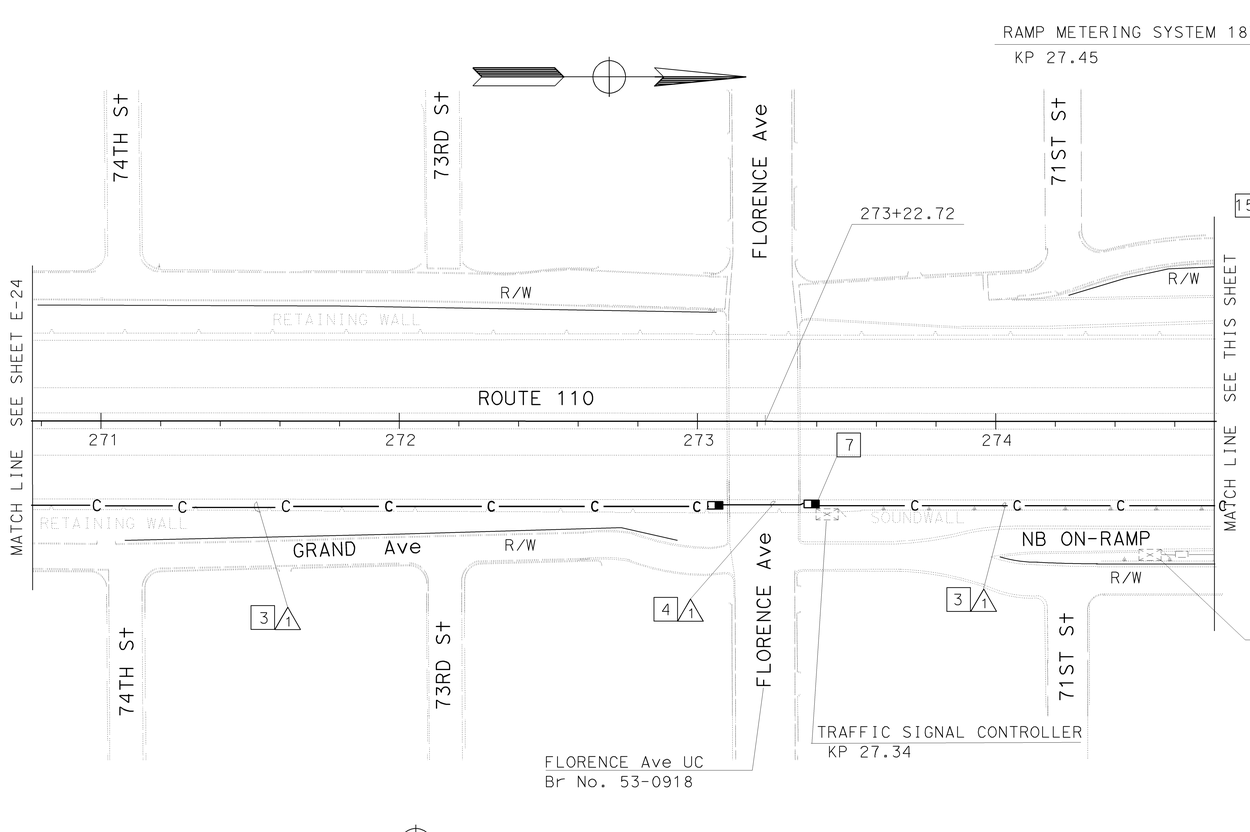
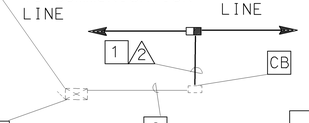
Caltrans Metric

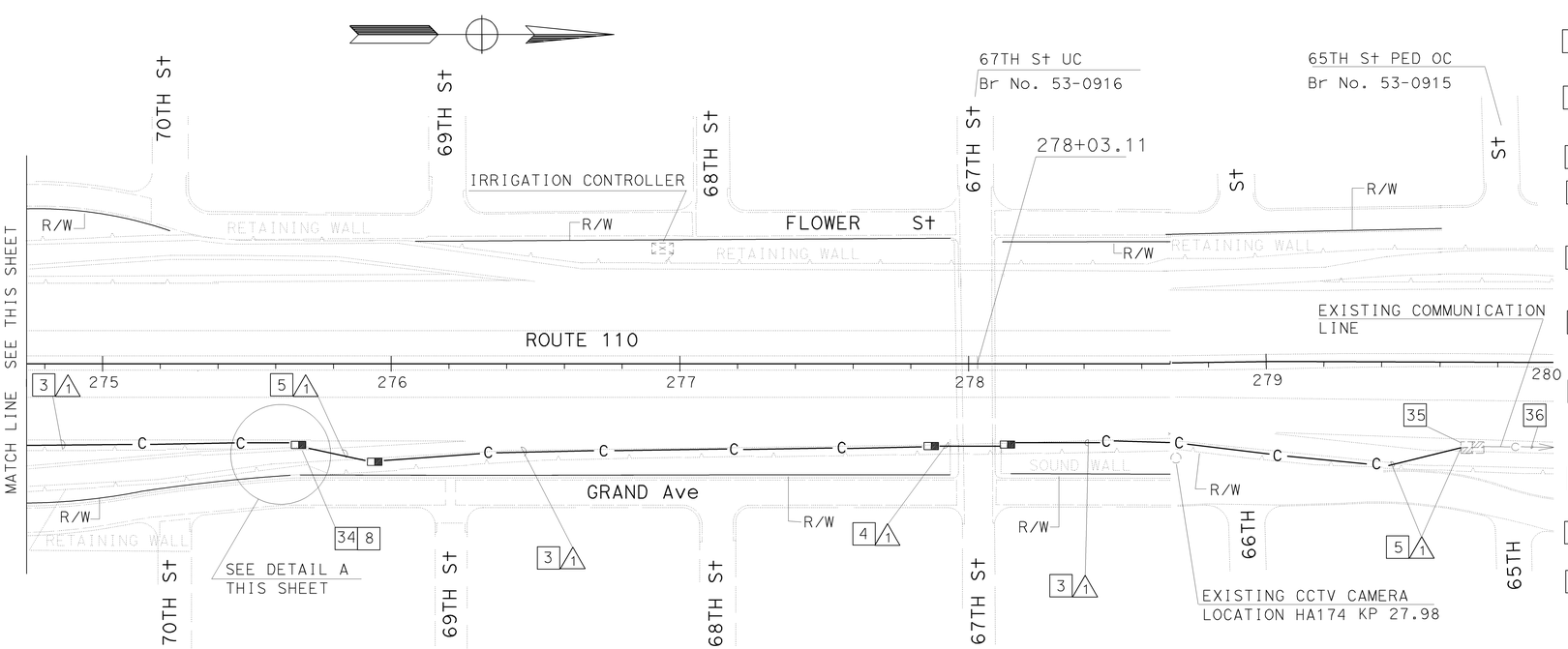
AS-BUILT
Contract No. 07- **168114**
Resident Engineer: **PAUL WANG**
Completion Date: **8/11/05**





DETAIL A
NO SCALE

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)						
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN				
		1				2
50P22 CABLE	DATA/PHONE	1				
24SMFO CABLE	VIDEO/DATA		1			
12SMFO CABLE	VIDEO DISTRIBUTION			1		
6P22 CABLE	DATA/PHONE					1
SIZE 32 INNERDUCT			1	1		
CONDUIT SIZE			103		103	53



NOTES: (THIS SHEET ONLY)

1. INSTALL CONDUIT IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.
3. INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.
4. INSTALL CONDUIT(S) ON BRIDGE STRUCTURE. SEE STRUCTURE PLANS FOR DETAILS.
5. JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.
6. ADD 6P22 CABLE(S) AND CONNECT TO EXISTING CONTROLLER.
7. COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.
8. INSTALL COMMUNICATION PULL BOX WITH TWISTED PAIR SPLICE CLOSURE. SEE SHEETS E-34 AND E-35 FOR DETAILS.
14. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN EXISTING CONTROLLER CABINET. SEE SHEET E-38 FOR DETAILS.
15. DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT AND VERIFYING THE INSTALLATION IS OPERATIONAL.
34. COIL 30 m OF 6P22 CABLE FOR IRRIGATION CONTROLLER. SPLICE IN/OUT PAIRS USING A NEW TWISTED PAIR SPLICE CLOSURE.
35. SPLICE NEW 50P22, 24SMFO, AND 12SMFO CABLES WITH EXISTING 50P22, 24SMFO, AND 12SMFO CABLES IN EXISTING SPLICE VAULT.
36. EXISTING COMMUNICATION TRUNK LINE. SEE SHEETS E-42, E-43, AND E-46 FOR CABLE ASSIGNMENTS IN EXISTING DATA/VIDEO NODES.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

COMMUNICATION SYSTEM ROUTING

SCALE 1:1000

E-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER
DAVID PADILLA
CALCULATED/ DESIGNED BY
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DATE REVISED

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

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CU 07388

EA 168111

LAST REVISION 00-00-00 DATE PLOTTED => 19-FEB-2008 TIME PLOTTED => 13:50

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	75	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
TAN, JACQUELINE
No. E15611
Exp. 12-31-04
ELECTRICAL
STATE OF CALIFORNIA

3-17-03
PLANS APPROVAL DATE

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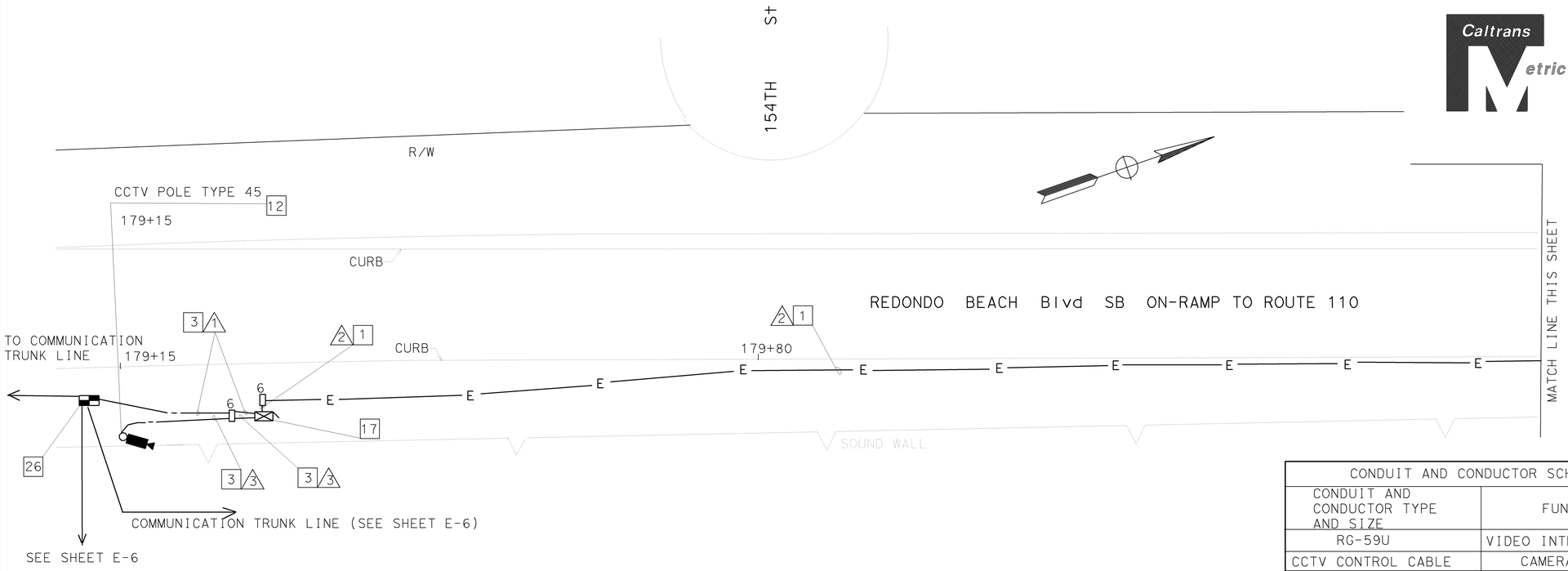

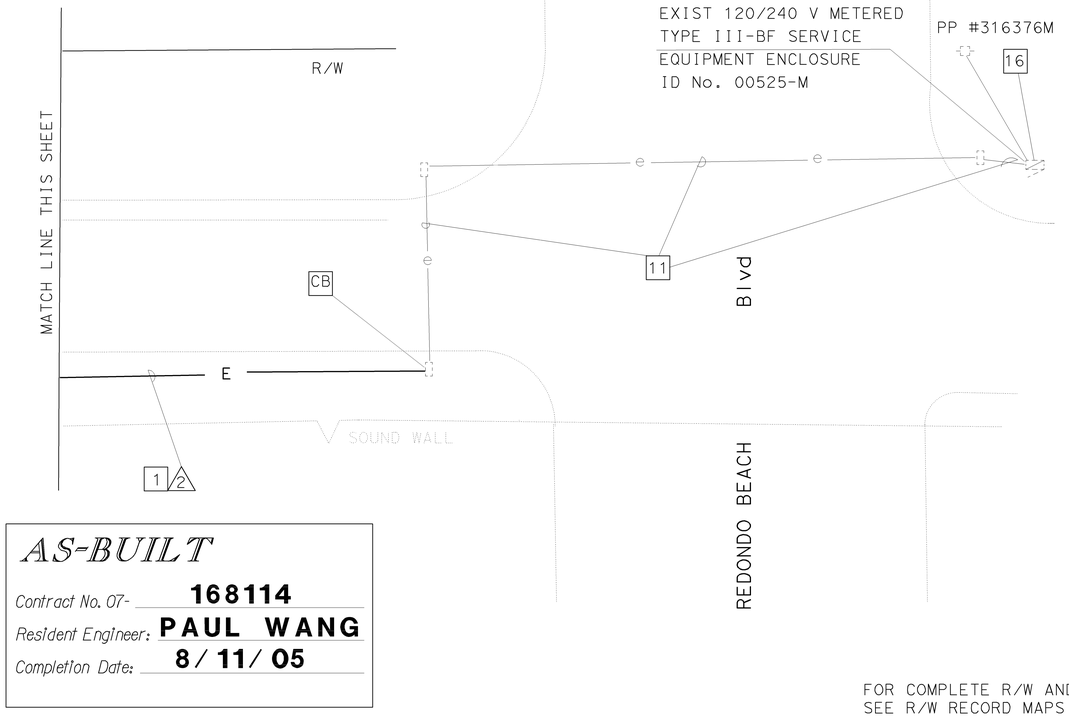

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1	RUN 2	RUN 3
RG-59U	VIDEO INTERFACE CABLE			1
CCTV CONTROL CABLE	CAMERA CONTROL			1
2#6	POWER		1	
6SMFO CABLE	VIDEO DISTRIBUTION	1		
6SMFO CABLE	DATA/PHONE	1		
CONDUIT SIZE		78	78	53

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. SEE SHEET E-33 FOR DETAILS.

11 ADD 2#6 POWER CONDUCTORS TO EXISTING CONDUIT AND CONNECT TO NEW CCTV CAMERA CIRCUIT BREAKER.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE ES-16A AND ES-16B. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE. SEE SHEET E-44 FOR DETAILS.

16 INSTALL 1P, 30 A, 120 V, CIRCUIT BREAKER FOR CCTV CAMERA IN EXISTING TYPE III-BF 120 V SERVICE EQUIPMENT ENCLOSURE.

17 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER AND FODM. SEE DETAIL A SHEET E-40 AND DETAIL C SHEET E-41.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27. SEE SHEET E-44 FOR CCTV CONTROL CABLE DETAILS.

28. SEE SHEET C-1 FOR CCTV CAMERA HA111 CONSTRUCTION DETAILS AND SHEET U-6 FOR UTILITY PLAN.

AS-BUILT

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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CCTV CAMERA (LOCATION HA111)

SCALE 1:200

E-26

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Caltrans **ITS DEVELOPMENT**
PROJECT ENGINEER
DAVID PADILLA

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DGN FILE => 716811u26.dgn

CU 07388 | EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	76	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 EXP: 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

3-17-03
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AS-BUILT
Contract No. 07- **168114**
Resident Engineer: **PAUL WANG**
Completion Date: **8/11/05**

NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF CONDUIT(S), SEE SHEET E-34 FOR DETAILS.

9 CORE THRU WALL. SEE SHEET C-8 FOR DETAILS.

11 ADD 2#8 POWER CONDUCTORS TO EXISTING CONDUIT AND CONNECT TO NEW CCTV CAMERA CIRCUIT BREAKER IN EXISTING TYPE III-CF SERVICE EQUIPMENT ENCLOSURE.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE ES-16A AND ES-16B FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON CCTV CAMERA POLE. SEE SHEET E-44 FOR DETAILS.

16 INSTALL NEW 1P, 30 A, 120 V, CIRCUIT BREAKER FOR CCTV CAMERA, REMOVE EXISTING 30 A BREAKER FROM EXISTING SERVICE EQUIPMENT ENCLOSURE.

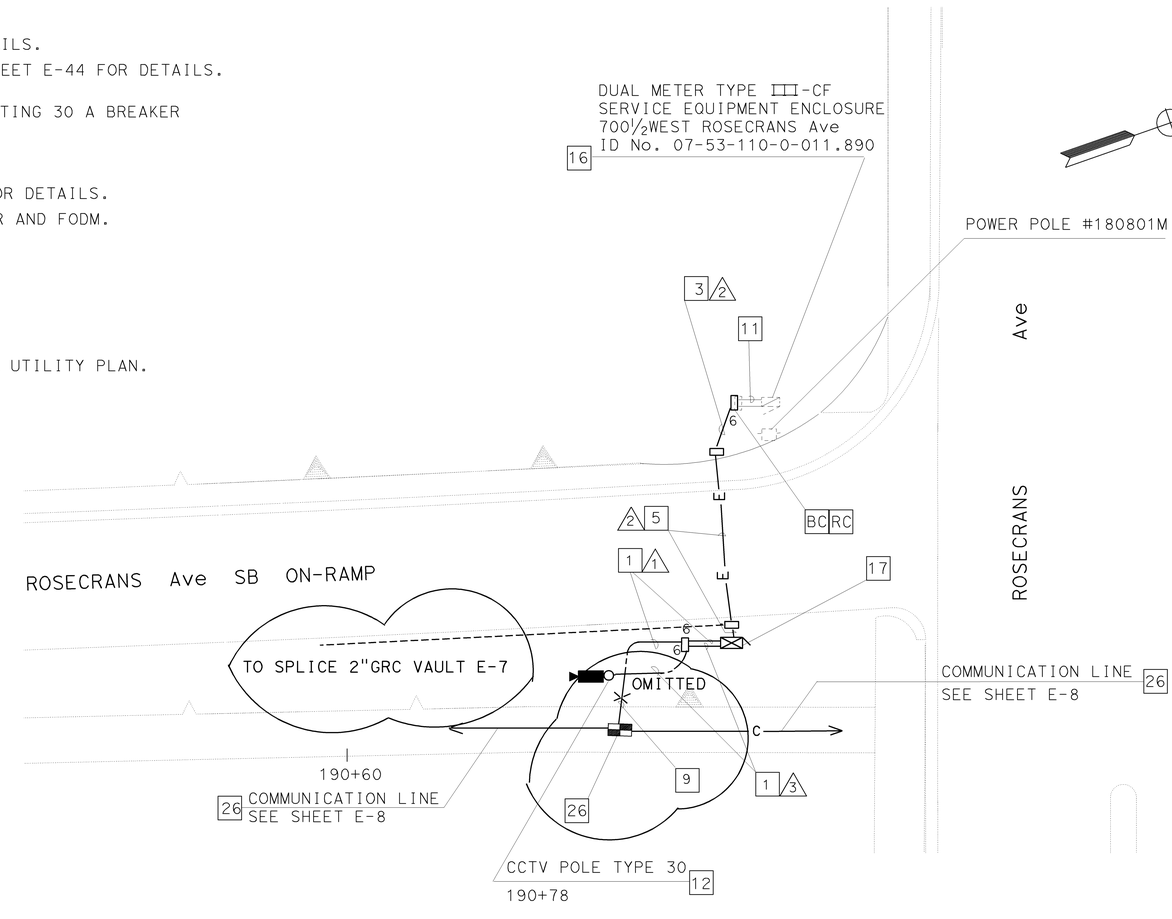
17 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER AND FODM. SEE DETAIL A SHEET E-40 AND DETAIL C SHEET E-41.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27. SEE SHEET E-44 FOR CCTV CAMERA CONTROL CABLE DETAILS.

28. SEE SHEET C-2 FOR CCTV CAMERA HA119 CONSTRUCTION DETAIL AND SHEET U-8 FOR UTILITY PLAN.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1	RUN 2	RUN 3
RG-59U	VIDEO INTERFACE CABLE			1
CCTV CONTROL CABLE	CAMERA CONTROL			1
2#8	POWER		1	
6SMFO CABLE	VIDEO DISTRIBUTION	1		
6SMFO CABLE	DATA/PHONE	1		
CONDUIT SIZE		78	53	53



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

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

CCTV CAMERA
(LOCATION HA119)

SCALE 1:200

E-27

DATE	REVISED BY	DATE REVISED

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CHECKED BY

PROJECT ENGINEER
DAVID PADILLA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	77	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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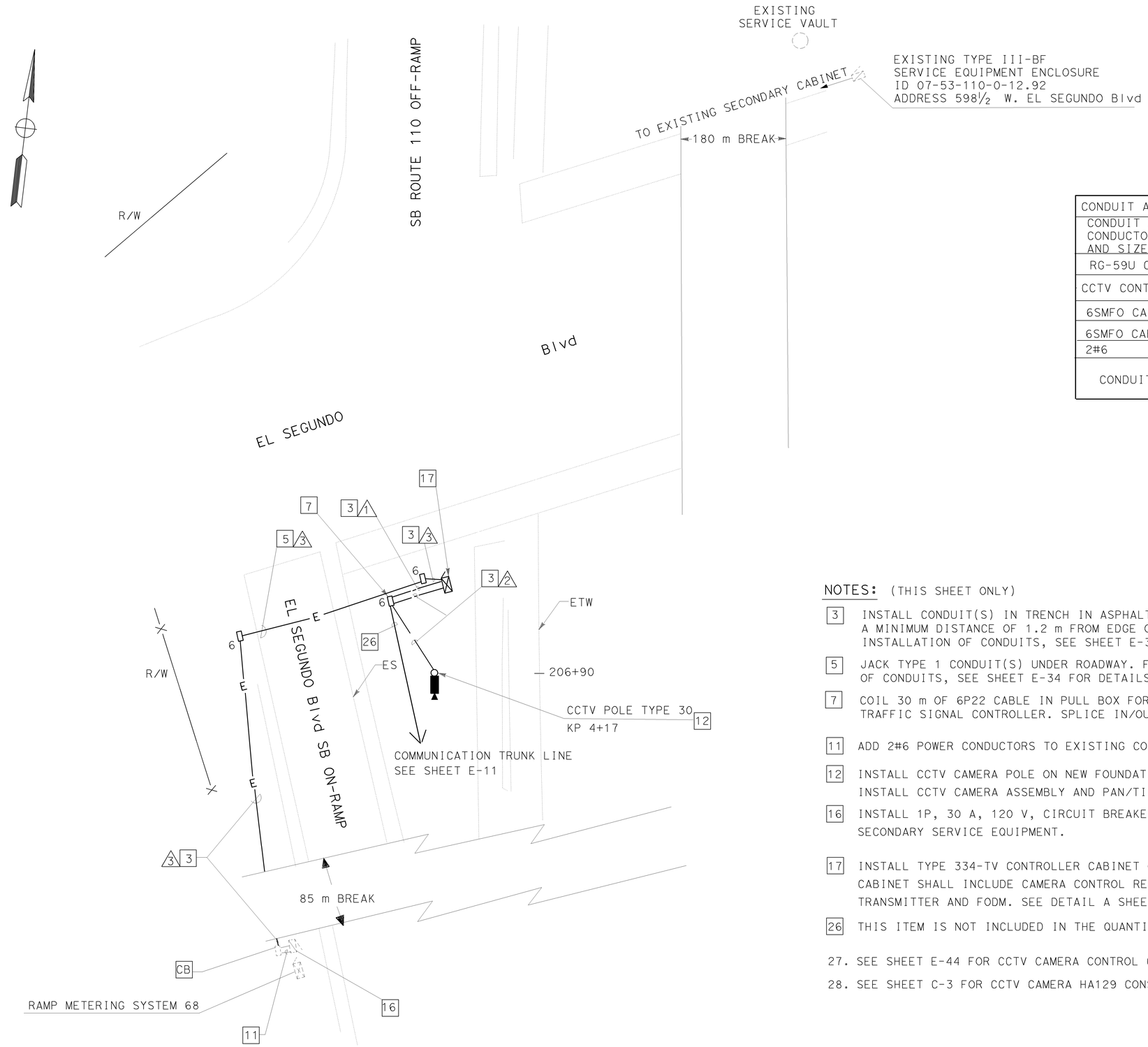

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1	RUN 2	RUN 3
RG-59U COAX CABLE	VIDEO INTERFACE CABLE		1	
CCTV CONTROL CABLE	CAMERA CONTROL		1	
6SMFO CABLE	VOICE/DATA	1		
6SMFO CABLE	VIDEO DISTRIBUTION	1		
2#6	POWER			1
CONDUIT SIZE		53	53	78

AS-BUILT

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

NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUITS, SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF CONDUITS, SEE SHEET E-34 FOR DETAILS.

7 COIL 30 m OF 6P22 CABLE IN PULL BOX FOR TRAFFIC SIGNAL CONTROLLER. SPLICE IN/OUT PAIRS AT SPLICE VAULT. SEE SHEET E-11.

11 ADD 2#6 POWER CONDUCTORS TO EXISTING CONDUIT AND CONNECT TO NEW CCTV CAMERA CIRCUIT BREAKER.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE ES-16A AND ES-16B FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON CCTV CAMERA POLE. SEE SHEET E-44 FOR DETAILS.

16 INSTALL 1P, 30 A, 120 V, CIRCUIT BREAKER FOR CCTV CAMERA IN EXISTING UNMETERED SECONDARY SERVICE EQUIPMENT.

17 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET C-1 FOR DETAILS. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER AND FODM. SEE DETAIL A SHEET E-40 AND DETAIL C SHEET E-41.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27. SEE SHEET E-44 FOR CCTV CAMERA CONTROL CABLE DETAILS.

28. SEE SHEET C-3 FOR CCTV CAMERA HA129 CONSTRUCTION DETAILS AND U-11 FOR UTILITY PLAN.

CCTV CAMERA (LOCATION HA129)

SCALE 1:200

E-28

DATE	REVISED BY	DATE REVISED

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PROJECT ENGINEER
DAVID PADILLA

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EA 168111

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07	LA	10,91,101, 105,110,405	15.3/28.0	78	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E15611 — Exp. 12-31-04 — ELECTRICAL — STATE OF CALIFORNIA

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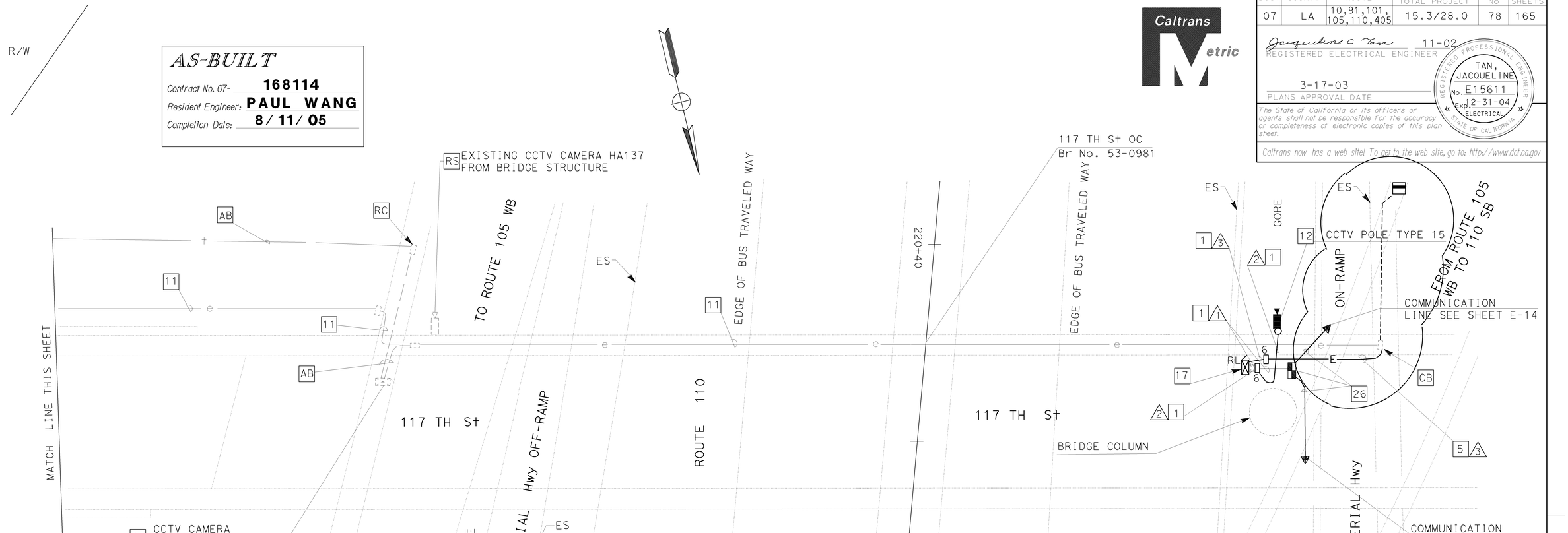
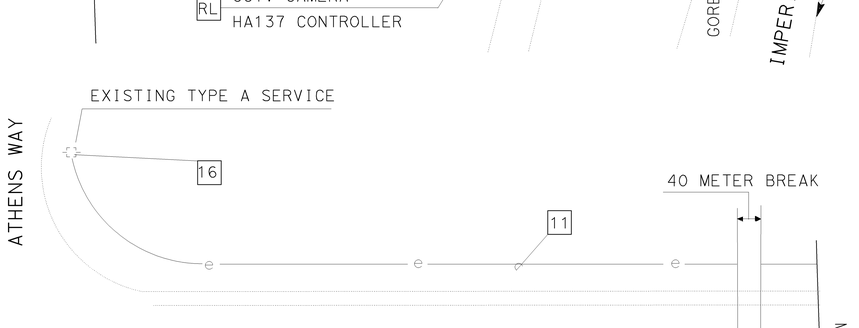
AS-BUILT

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





NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF CONDUITS, SEE SHEET E-34 FOR DETAILS.

11 RS POWER CABLES SERVICING EXISTING CCTV CAMERA HA137. INSTALL 2#6 POWER CONDUCTORS IN EXISTING CONDUIT AND CONNECT TO EXISTING CCTV CIRCUIT BREAKER.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE ES-16A AND ES-16B FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON CCTV CAMERA POLE. SEE SHEETS E-44 FOR DETAILS.

16 REUSE CCTV CIRCUIT BREAKER FOR RELOCATED CCTV CAMERA HA137.

17 INSTALL RELOCATED TYPE 334-TV CABINET (EXISTING CCTV CAMERA HA137 CONTROLLER) ON NEW FOUNDATION. SEE SHEET C-1 FOR DETAILS. RS VICON 1300K-2 CAMERA CONTROL RECEIVER. INSTALL NEW CAMERA CONTROL RECEIVER, SINGLE VIDEO TRANSMITTER AND FODM. SEE DETAIL A SHEET E-40 AND DETAIL 3 SHEET E-41.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27. SEE SHEET E-44 FOR CCTV CONTROL CABLE DETAILS.

28. SEE SHEET U-14 FOR UTILITY PLAN AND C-4 FOR CONSTRUCTION DETAIL.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1	RUN 2	RUN 3
RG-59U COAX CABLE	VIDEO INTERFACE CABLE		1	
CCTV CONTROL CABLE	CAMERA CONTROL		1	
6SMFO CABLE	VOICE/DATA	1		
6SMFO CABLE	VIDEO DISTRIBUTION	1		
2#6	POWER			1
CONDUIT SIZE		53	53	78

FOR COMPLETE R/W AND ACCURATE ACCESS DATA,
SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
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ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

MODIFY CCTV CAMERA (LOCATION HA137)

SCALE 1:200

E-29

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PROJECT ENGINEER
DAVID PADILLA

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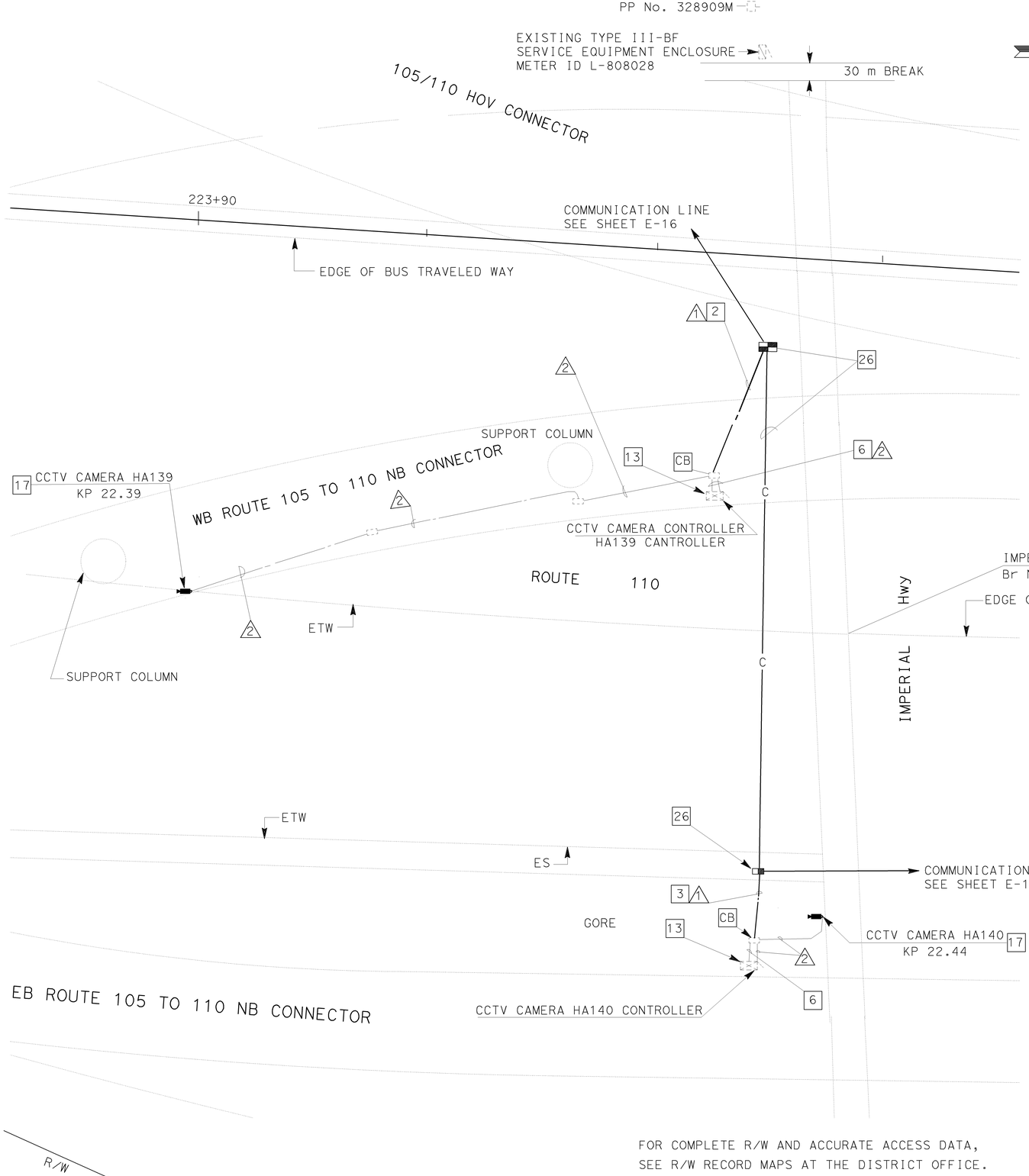
EA 168111

PP No. 328909M



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SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	79	165

Caltrans Metric

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E15611 — Exp. 12-31-04 — ELECTRICAL — STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

2 INSTALL CONDUIT IN TRENCH IN CONCRETE. SEE SHEET E-33 FOR DETAILS.

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF CONDUITS, SEE SHEET E-33 FOR DETAILS.

6 ADD TWO 6SMFO CABLES AND CONNECT TO EXISTING CCTV CAMERA CONTROLLER CABINET.

13 RS EXISTING VIDEO TRANSMITTER AND CAMERA CONTROL RECEIVER FROM EXISTING TYPE 334-TV CABINET. INSTALL NEW CAMERA CONTROL RECEIVER AND VIDEO TRANSMITTER AND FODM. SEE DETAIL A SHEET E-40 AND SHEET E-41 DETAIL C.

17 RS EXISTING PAN/TILT UNIT AND CCTV CAMERA ASSEMBLY. INSTALL NEW CCTV CAMERA AND PAN/TILT UNIT. SEE SHEET E-44 FOR DETAILS.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27. SEE SHEET E-44 FOR CCTV CONTROL CABLE DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)			
CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1	RUN 2
6SMFO CABLE	VIDEO DISTRIBUTION	1	
6SMFO CABLE	DATA/PHONE	1	
RG-59U COAX CABLE	VIDEO INTERFACE CABLE		1
CCTV CONTROL CABLE	CAMERA CONTROL		1
CONDUIT SIZE		53	EXISTING 53

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

MODIFY CCTV CAMERA (LOCATIONS HA139 AND HA140)

SCALE 1:200

E-30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER: DAVID PADILLA

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	80	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

3-17-03
PLANS APPROVAL DATE

TAN, JACQUELINE No. E15611 Exp. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

3 INSTALL CONDUIT(S) IN TRENCH IN ASPHALT. MAINTAIN A MINIMUM DISTANCE OF 1.2 m FROM EDGE OF TRAVELED WAY. FOR INSTALLATION OF 103C, SEE SHEET E-33 FOR DETAILS.

5 JACK TYPE 1 CONDUIT(S) UNDER ROADWAY. FOR INSTALLATION OF 103C, SEE SHEET E-34 FOR DETAILS.

11 ADD 2#8 POWER CONDUCTORS TO EXISTING CONDUIT AND CONNECT TO NEW CCTV CAMERA CIRCUIT BREAKER.

12 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE ES-16A AND ES-16B FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE. SEE SHEET E-44 FOR DETAILS.

16 INSTALL 1P, 30 A, 120 V, CIRCUIT BREAKER FOR CCTV CAMERA.

17 INSTALL TYPE 334-TV CONTROLLER CABINET ON NEW FOUNDATION. NEW CONTROLLER CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER AND FODM. SEE DETAIL A SHEET E-40 AND DETAIL C SHEET E-41.

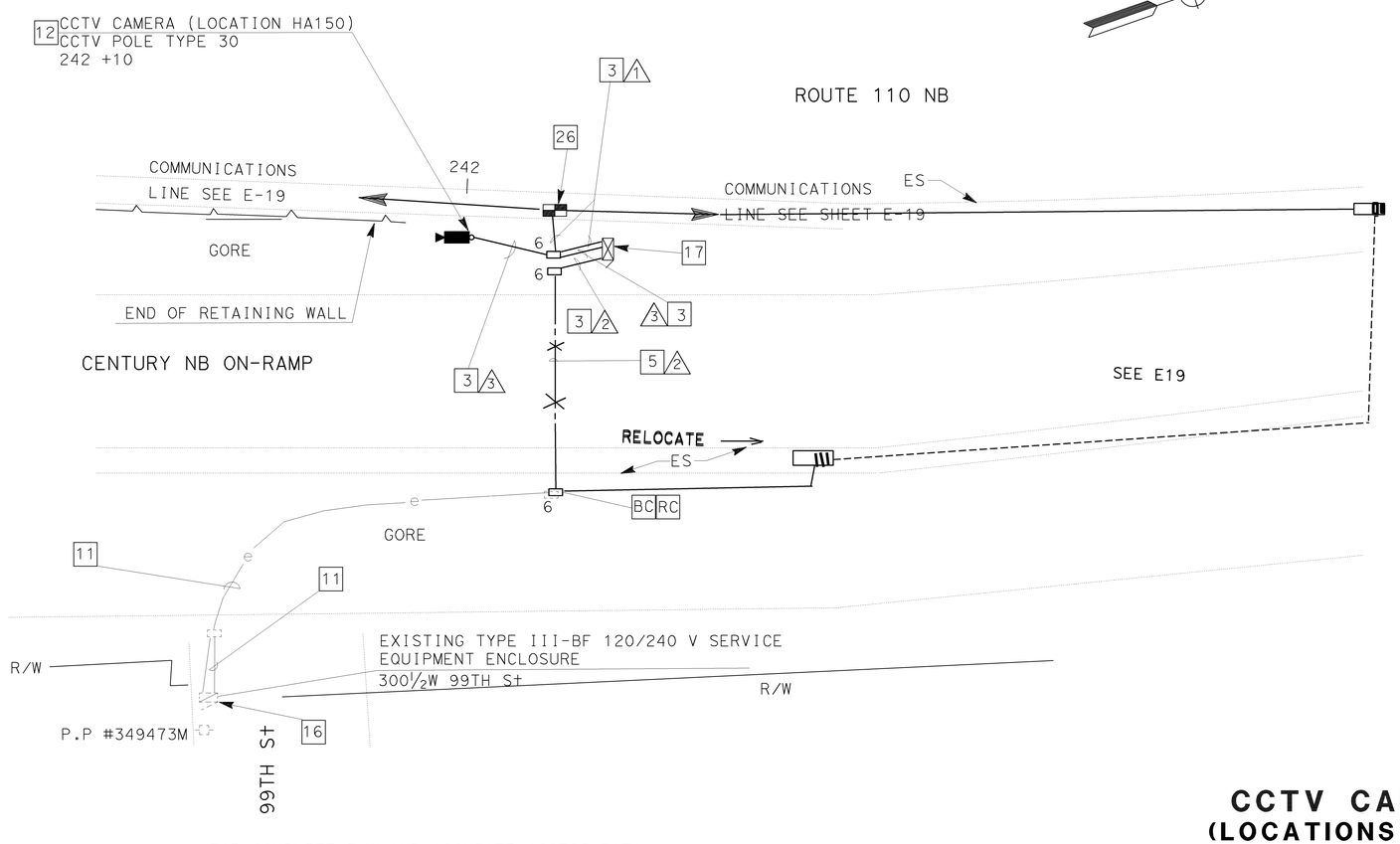
26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

27. SEE SHEET E-44 FOR CCTV CONTROL CABLE FOR DETAILS.

28 SEE SHEET C-5 FOR CCTV CAMERA HA150 CONSTRUCTION DETAIL AND U-16 FOR UTILITY PLAN.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3
RG-59U COAX CABLE	VIDEO INTERFACE CABLE			1
CCTV CONTROL CABLE	CAMERA CONTROL			1
2#8	POWER		1	
6SMFO CABLE	VIDEO DISTRIBUTION	1		
6SMFO CABLE	DATA/PHONE	1		
CONDUIT SIZE		78	53	53

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



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CCTV CAMERA (LOCATIONS HA150)

SCALE 1:200

E-31

DATE | REVISED BY | DATE REVISED

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PROJECT ENGINEER | DAVID PADILLA

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EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	10,91,101, 105,110,405	15.3/28.0	81	165

Jacqueline C Tan 11-02
REGISTERED ELECTRICAL ENGINEER

TAN, JACQUELINE No. E15611 EXP. 12-31-04 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

1 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF THE SHOULDER.
FOR INSTALLATION OF CONDUITS, SEE SHEET E-33 FOR DETAILS.

6 ADD 2-6SMFO, COAX AND CCTV CONTROL CABLES AND CONNECT TO CONTROLLER.

11 RS EXISTING 2#6 POWER CONDUCTORS FOR CCTV CAMERA. INSTALL 2#6 POWER CONDUCTORS.

12 INSTALL NEW CCTV CAMERA AND NEW PAN/TILT ON SIGN No. 22.
SEE SHEET C-7 FOR MOUNTING DETAILS ON SIGN STRUCTURE.

16 REUSE EXISTING 20 A,120 V CIRCUIT BREAKER FOR CCTV CABINET.

17 INSTALL RELOCATED 334-TV CABINET FOR CCTV CAMERA HA161 ON EXISTING FOUNDATION. RS EXISTING CAMERA CONTROL RECEIVER, VIDEO TRANSMITTER. INSTALL NEW CAMERA CONTROL RECEIVER, VIDEO TRANSMITTER AND FODM. SEE SHEET E-40 DETAIL A, DETAIL C SHEET E-41 AND E-44.

26 THIS ITEM IS NOT INCLUDED IN THE QUANTITIES FOR PAYMENT ON THIS SHEET.

36 EXISTING 334-TV CABINET FOR CCTV CAMERA HA161 TO BE RELOCATED. SEE NOTE 17.

37. SEE SHEET E-44 FOR CCTV CONTROL CABLE DETAILS.

38. SEE SHEET U-22 FOR UTILITY PLAN AND SHEET E-23 FOR LOCATION OF CCTV TO BE RELOCATED.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE AND SIZE	FUNCTION	RUN 1	RUN 2
6SMFO CABLE	DATA/PHONE	1	
6SMFO CABLE	VIDEO DISTRIBUTION	1	
CCTV CONTROL CABLE	CAMERA CONTROL		1
RG-59U COAX CABLE	VIDEO INTERFACE CABLE		1
CONDUIT SIZE		53	53

AS-BUILT
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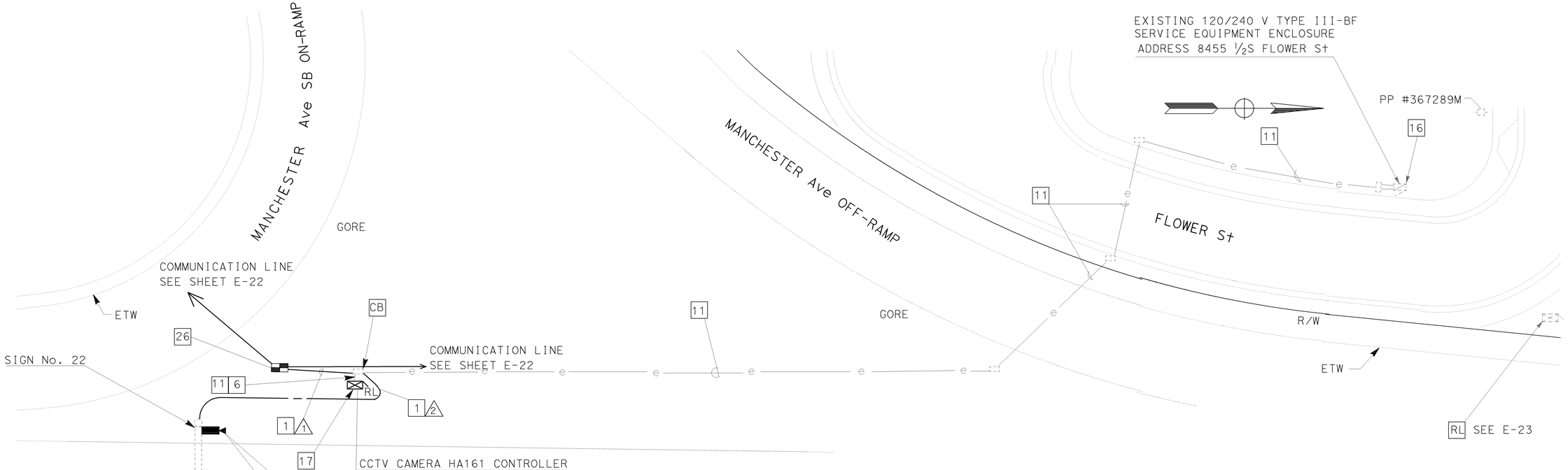
Resident Engineer: PAUL WANG
Completion Date: 8/11/05



FOR COMPLETE R/W AND ACCURATE ACCESS DATA,
SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.
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ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

MODIFY CCTV CAMERA (LOCATION HA161)

SCALE 1:200

E-32

DATE | REVISED BY | DATE REVISED

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PROJECT ENGINEER: DAVID PADILLA

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

USERNAME => s124928
DGN FILE => 716811u32.dgn

CU 07388 | EA 168111

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	20	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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LEGEND: (E-2 TO E-41)

MODEL 334-TV CABINET, VIDEO NODE AND DATA NODE

SPLICE VAULT

COMMUNICATION PULL BOX

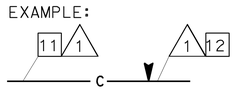
EXISTING COMMUNICATION PULL BOX

EXISTING SPLICE VAULT

OR — EXISTING COMMUNICATION TOWER

DELIMITER FOR PROJECT NOTES

EXAMPLE:



GENERAL NOTES: (E-2 TO E-41)

1. THE LOCATION OF EXISTING CONTROLLER CABINETS, EXISTING SERVICE EQUIPMENT ENCLOSURES, AND POWER POLES ARE APPROXIMATE. THE LOCATION OF PROPOSED PULL BOXES AND SPLICE VAULTS ARE APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
2. BEFORE REMOVING OR MODIFYING ANY EXISTING ELECTRICAL FACILITIES, THE CONTRACTOR SHALL PROVIDE 72 HOUR ADVANCE WRITTEN NOTICE TO THE ENGINEER AND ALL AGENCIES CONCERNED.
3. UNLESS OTHERWISE NOTED, ALL COMMUNICATION CONDUIT BENDS SHALL BE 1.3 m RADIUS FACTORY BENDS.
4. COMMUNICATION CONDUIT SHALL BE CENTERED IN THE PAVED SHOULDER OR AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
5. ALL CONDUITS INSTALLED ACROSS FREEWAYS AND RAMPS SHALL BE BY DIRECTIONAL JACKING METHOD, UNLESS OTHER WISE DIRECTED BY THE ENGINEER. ALL CONDUITS INSTALLED ALONG FREEWAYS AND RAMPS ON AC, Conc Pvmt AND SOIL SHALL BE BY OPEN TRENCH METHOD UNLESS OTHER WISE DIRECTED BY THE ENGINEER. FOR BACKFILL DETAILS, SEE E-43. NO HAND JACKING IS ALLOWED.
6. ALL CCTV EQUIPMENT AND POWER CABLE THAT IS TO BE SALVAGED SHALL BE DELIVERED TO A CALTRANS ELECTRICAL MAINTENANCE YARD AND THE LOCATION WILL BE DETERMINED BY THE ENGINEER.
7. NEW CONTROLLER CABINETS SHALL BE INSTALLED OUTSIDE THE CLEAR RECOVERY ZONE, MINIMUM 9 m, OR BEHIND EXISTING GUARD RAILING.

ABBREVIATIONS: (E-2 TO E-41)

IC	INTERCONNECT
1P	1-POLE
2SMFO B/O	FIBER OPTIC BREAKOUT CABLE, 2 SINGLEMODE FIBERS
72SMFO	FIBER OPTIC CABLE, 72 SINGLEMODE FIBERS
60SMFO	FIBER OPTIC CABLE, 60 SINGLEMODE FIBERS
48SMFO	FIBER OPTIC CABLE, 48 SINGLEMODE FIBERS
12SMFO	FIBER OPTIC CABLE, 12 SINGLEMODE FIBERS
50P22	TWISTED PAIR CABLE, 50 PAIR 22AWG CONDUCTORS
6P22	TWISTED PAIR BREAKOUT CABLE, 6 PAIR 22AWG CONDUCTORS
B/O	BREAKOUT
CCR	CAMERA CONTROL RECEIVER
SCE	SOUTHERN CALIFORNIA EDISON
RMS	RAMP METERING SYSTEM
12MMFO	FIBER OPTIC CABLE, 12 MULTIMODE FIBER OPTIC
8MMFO	FIBER OPTIC CABLE, 8 MULTIMODE FIBER OPTIC
FOAM	FIBER OPTIC AUDIO MODEM
TMC	TRANSPORTATION MANAGEMENT CENTER
FDU	FIBER DISTRIBUTION UNIT
D4	CHANNEL BANK
DS1	OPTICAL MODEM
V_R	VIDEO RECEIVER
Vx	VIDEO TRANSMITTER
VMX	VIDEO MULTIPLEXER
TB	TERMINAL BLOCK
ELA	EAST LOS ANGELES
FOCM	FIBER OPTIC CONTROL MODEM
CCM	CAMERA CONTROL MODEM

TABLE 1 - CCTV WIRING

CONDUCTOR TYPE	FUNCTION	QUANTITY
RG-6A/U COAX CABLE	CAMERA VIDEO INTERFACE CABLE	1
RS232 (5#22) CABLE	CAMERA CONTROL CABLE	1
3#18	POWER CABLE	1

COMMUNICATION SYSTEM ROUTING
(MODIFY)
(LEGEND AND NOTES)

NO SCALE

E-1

DATE	REVISED BY
12/04	SL

DATE REVISED	CALCULATED/ DESIGNED BY
12/04	JT

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PROJECT ENGINEER
SUNG LEE

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USERNAME => trstrk
DGN FILE => 718210ua001.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 11:02

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN			
		13	13	14	14
50P22 CABLE	DATA		1(E)		
12MMFO CABLE	SHORT HAUL VIDEO			1(E)	
12SMFO CABLE	DATA				1(E)
INNERDUCT (SIZE 25)				1(E)	1(E)
CONDUIT SIZE		103(E)	103(E)		

(E):EXISTING

PROJECT NOTE: (THIS SHEET ONLY)

13 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE.
COIL 40 m OF 12SMFO CABLE IN Exist CONTROLLER CABINET.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	21	91

Leesunghuan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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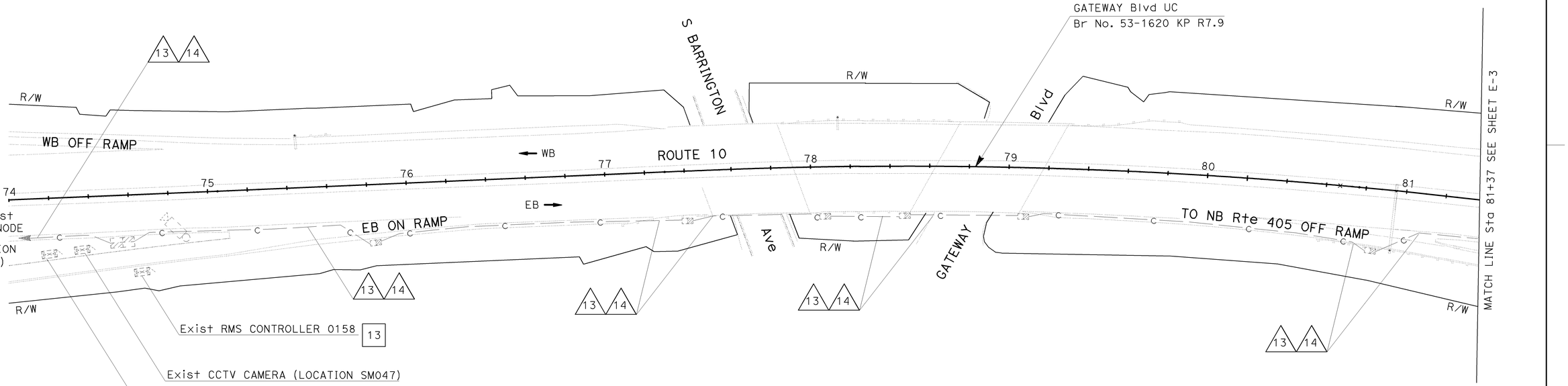

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COMMUNICATION SYSTEM ROUTING
(MODIFY)

SCALE 1:1000

E-2

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
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DATE	REVISED BY
12/04	DATE REVISED

CALCULATED/DESIGNED BY: SL
CHECKED BY: JT

PROJECT ENGINEER: SUNG LEE

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DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 11:08

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
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50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)					
72SMFO CABLE	VIDEO/DATA		1					
72SMFO CABLE	TRUNK			1				
12MMFO CABLE	SHORT HAUL VIDEO						1(E)	
12SMFO CABLE	DATA							1(E)
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			103(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTE: (THIS SHEET ONLY)

13 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE.
COIL 40 m OF 12SMFO CABLE IN Exist CONTROLLER CABINET.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	22	91

Leesungkwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
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STATE OF CALIFORNIA

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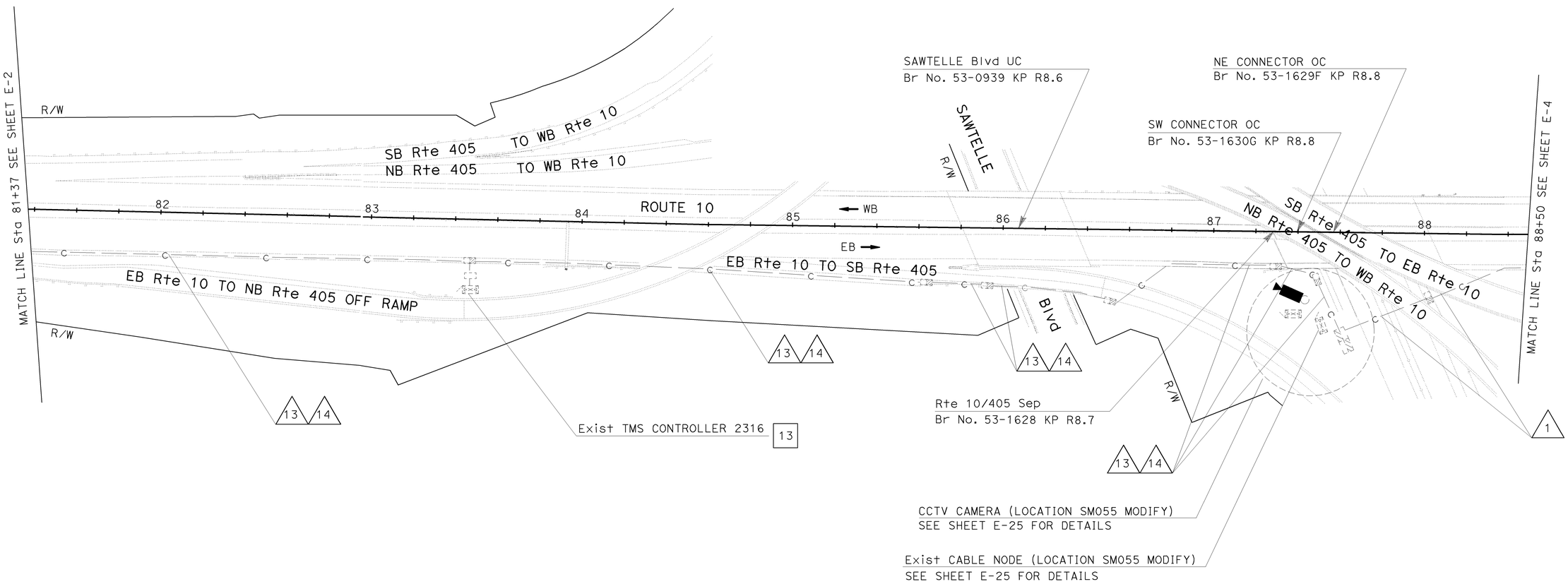

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
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E-3

DATE	REVISED BY	CALCULATED/ DESIGNED BY
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DATE REVISED		CHECKED BY
12/04		JT

PROJECT ENGINEER
SUNG LEE

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	23	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
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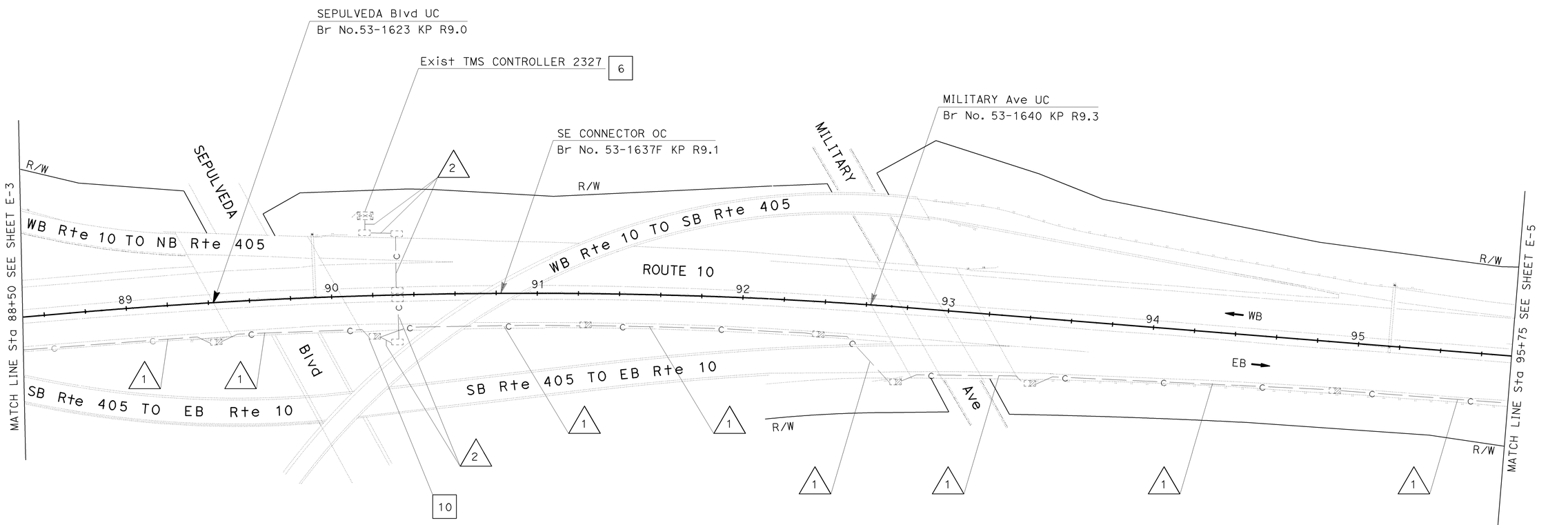
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN			
		1			2
50P22 CABLE	DATA	1(E)			
48SMFO CABLE	VIDEO		1(R)		
72SMFO CABLE	VIDEO/DATA		1		
72SMFO CABLE	TRUNK			1	
8MMFO CABLE	SHORT HAUL VIDEO			1(R)	
12SMFO CABLE	DATA				1
12P22 CABLE	DATA				1(R)
INNERDUCT (SIZE 25)			1(E)	1(E)	
CONDUIT SIZE		103(E)			78(E)

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.



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COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

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E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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PROJECT ENGINEER SUNG LEE
CALCULATED/DESIGNED BY SL
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12/04 DATE REVISED

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DGN FILE => 718210ua004.dgn

CU 07388

EA 182101

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TIME PLOTTED => 11:06

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	24	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 Exp. 12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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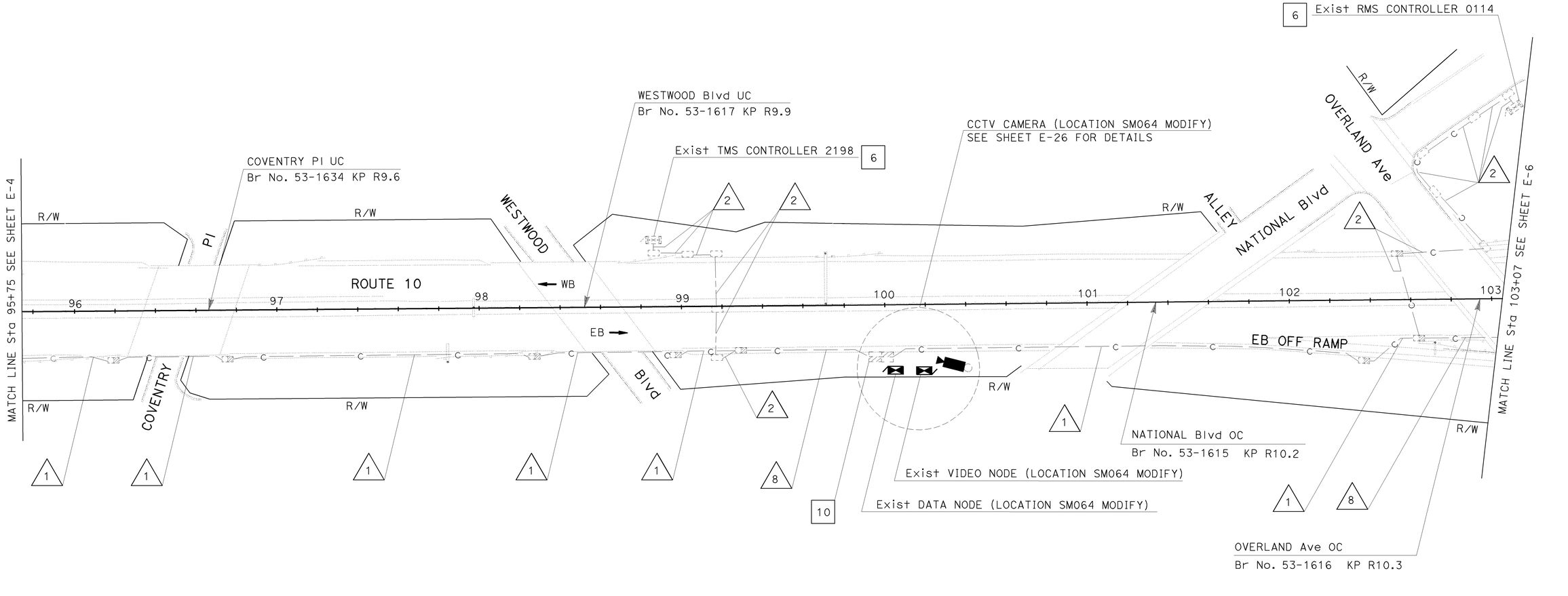

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COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

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E-5

DATE	REVISED BY	CALCULATED/ DESIGNED BY
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	SL	JT

PROJECT ENGINEER — SUNG LEE

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	25	91

Leesunghuan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE — No. E16249 — Exp. 12/31/06 — ELECTRICAL — STATE OF CALIFORNIA

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CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

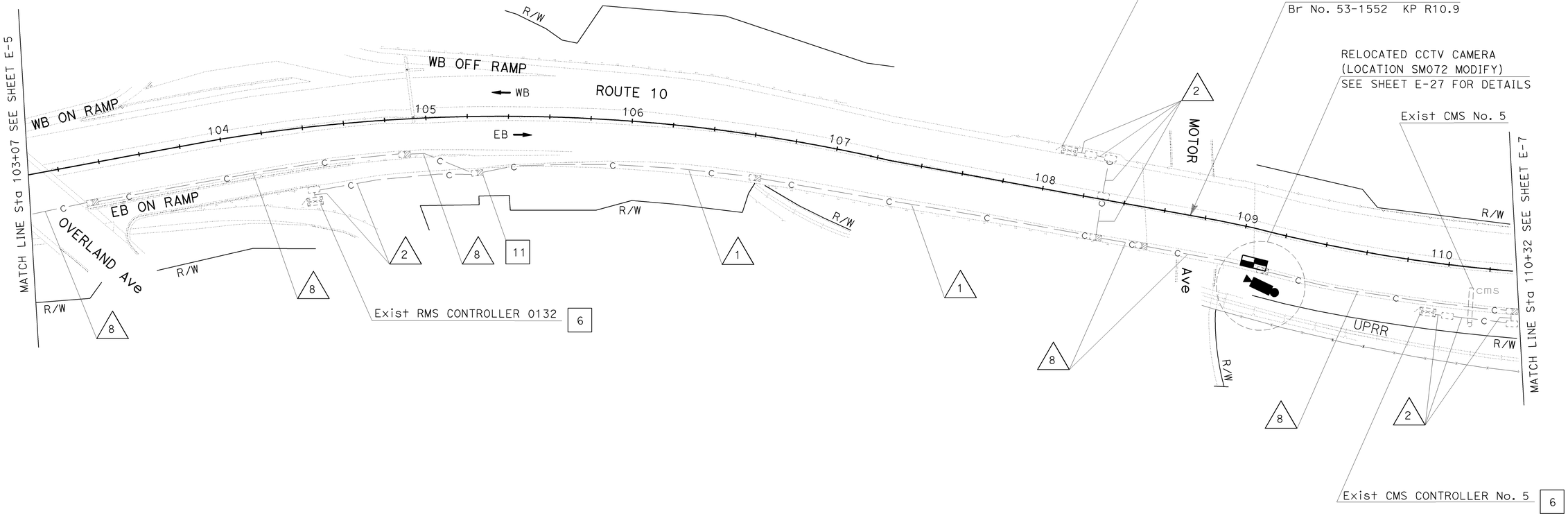
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2	RUN 8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

11 SPLICE 2-12SMFO WITH 72SMFO.



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COMMUNICATION SYSTEM ROUTING

(MODIFY)

SCALE 1:1000

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E-6

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DGN FILE => 718210ua006.dgn

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	26	91

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REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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PROJECT ENGINEER
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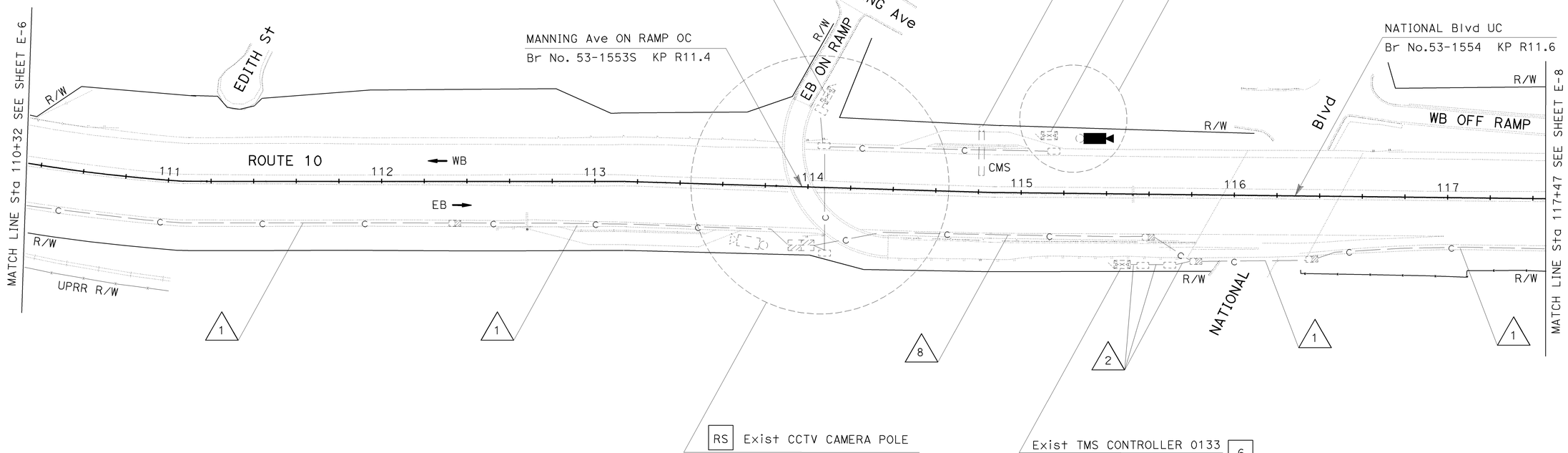
CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN 1			RUN 2	RUN 8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE			103(E)		78(E)		103(E)	

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.



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COMMUNICATION SYSTEM ROUTING
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E-7

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DGN FILE => 718210ua007.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 01-MAY-2006
TIME PLOTTED => 11:27

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
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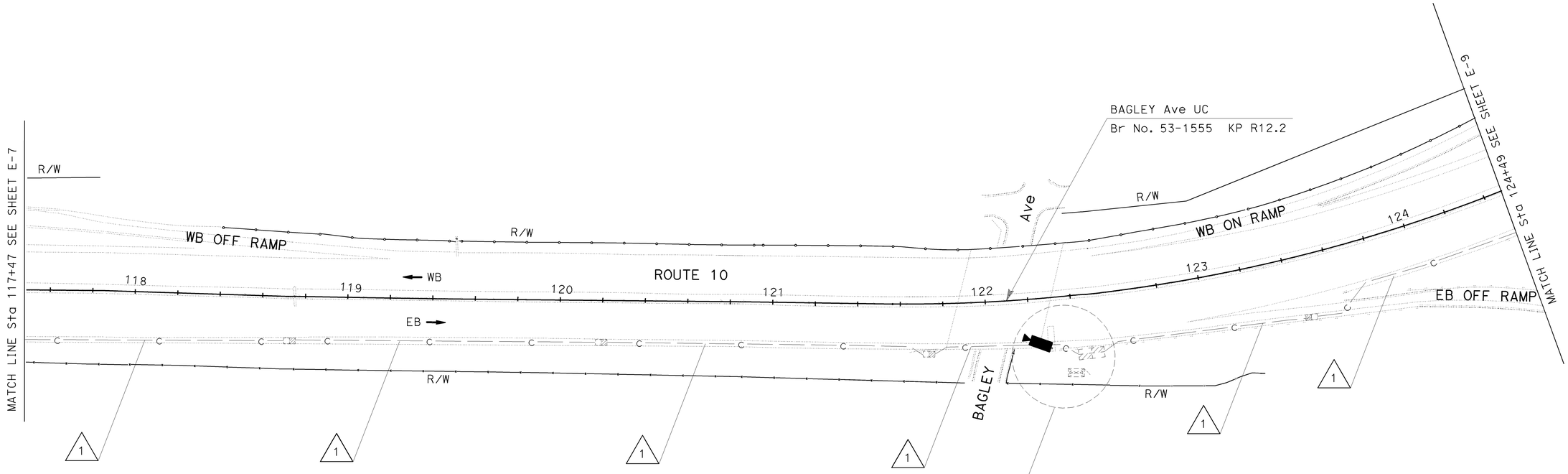
72SMFO CABLE	VIDEO/DATA		1	
72SMFO CABLE	TRUNK			1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)
INNERDUCT (SIZE 25)			1(E)	1(E)
CONDUIT SIZE		103(E)		

(R): RC (E):EXISTING



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COMMUNICATION SYSTEM ROUTING
(MODIFY)

SCALE 1:1000

E-8

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	27	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
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12/04	JT

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SUNG LEE

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USERNAME => trmariak
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EA 182101

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DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 10:44

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	28	91

Leesungkwan
REGISTERED ELECTRICAL ENGINEER

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STATE OF CALIFORNIA

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN							
		1			2	3	8		
50P22 CABLE	DATA	1(E)					1(E)		
48SMFO CABLE	VIDEO		1(R)					1(R)	
72SMFO CABLE	VIDEO/DATA		1					1	
72SMFO CABLE	TRUNK			1					1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)					1(R)
12SMFO CABLE	DATA				1	2		1	
12P22 CABLE	DATA				1(R)	1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)				1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	78(E)	103(E)		

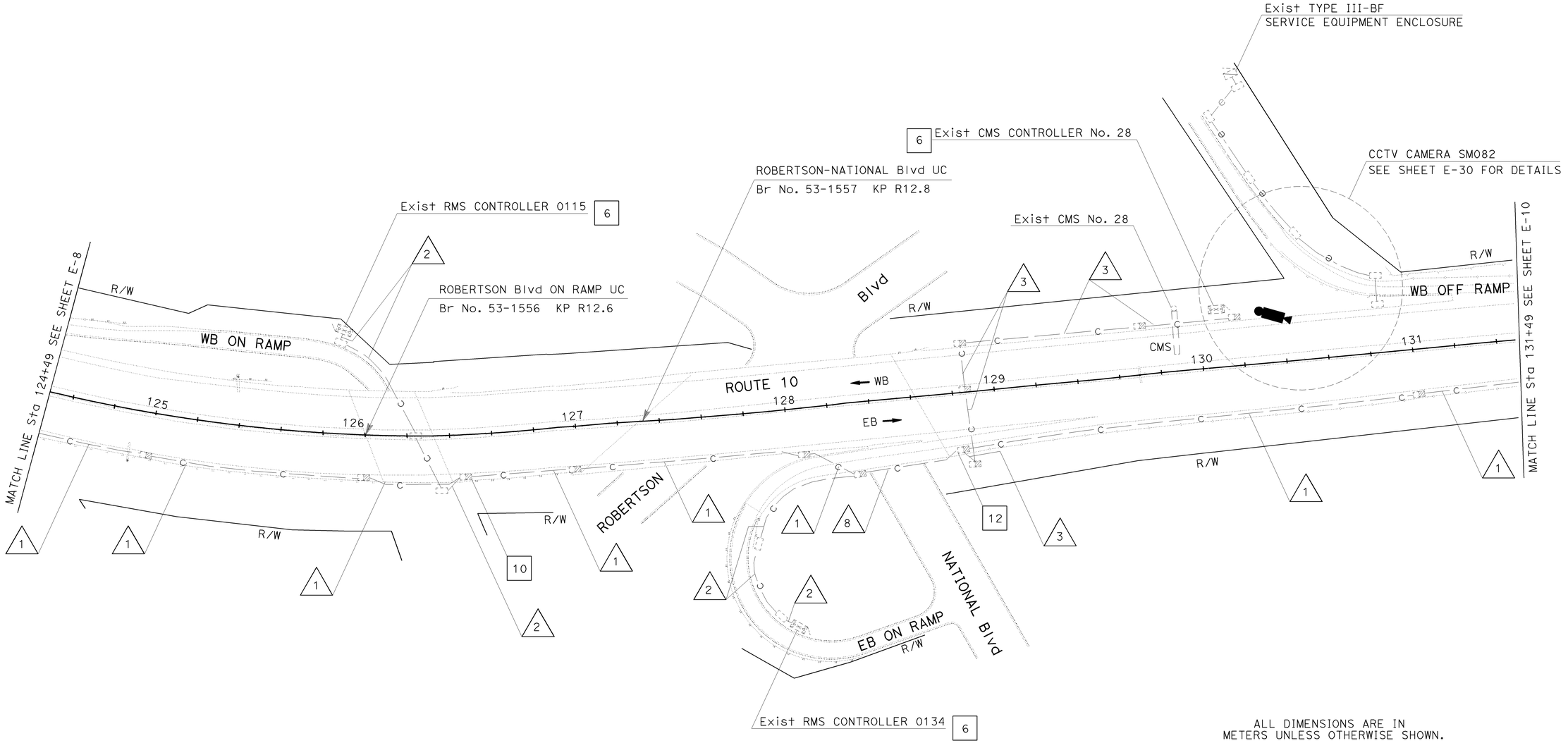
(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

12 SPLICE 3-12SMFO WITH 72SMFO.



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

E-9

DATE	REVISED BY	CALCULATED/ DESIGNED BY
12/04	SL	JT

DATE	REVISED BY	CHECKED BY
12/04		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER
SUNG LEE

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

USERNAME => trmariak
DGN FILE => 718210ua009.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 10:45

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN			
			1		2
50P22 CABLE	DATA	1(E)			
48SMFO CABLE	VIDEO		1(R)		
72SMFO CABLE	VIDEO/DATA		1		
72SMFO CABLE	TRUNK			1	
8MMFO CABLE	SHORT HAUL VIDEO			1(R)	
12SMFO CABLE	DATA				1
12P22 CABLE	DATA				1(R)
INNERDUCT (SIZE 25)			1(E)	1(E)	
CONDUIT SIZE		103(E)			78(E)

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE.
TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	29	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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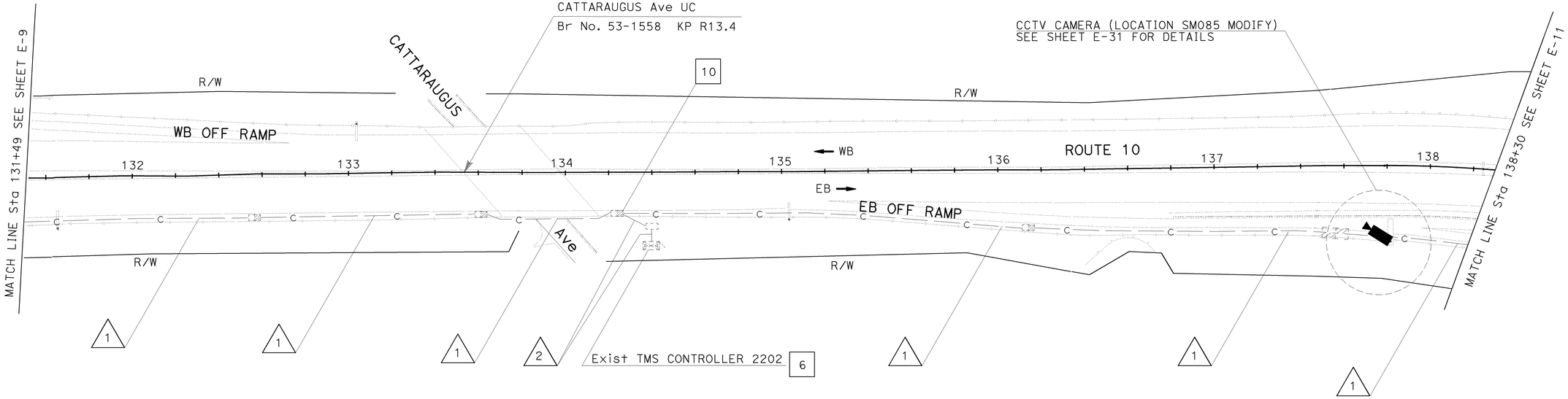

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING
(MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-10

DATE	REVISED BY	CALCULATED/ DESIGNED BY
12/04	SL	JT

DATE REVISED	CHECKED BY
12/04	

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trkathy
DGN FILE => 718210ua010.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:35

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	30	91

Leesungkwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

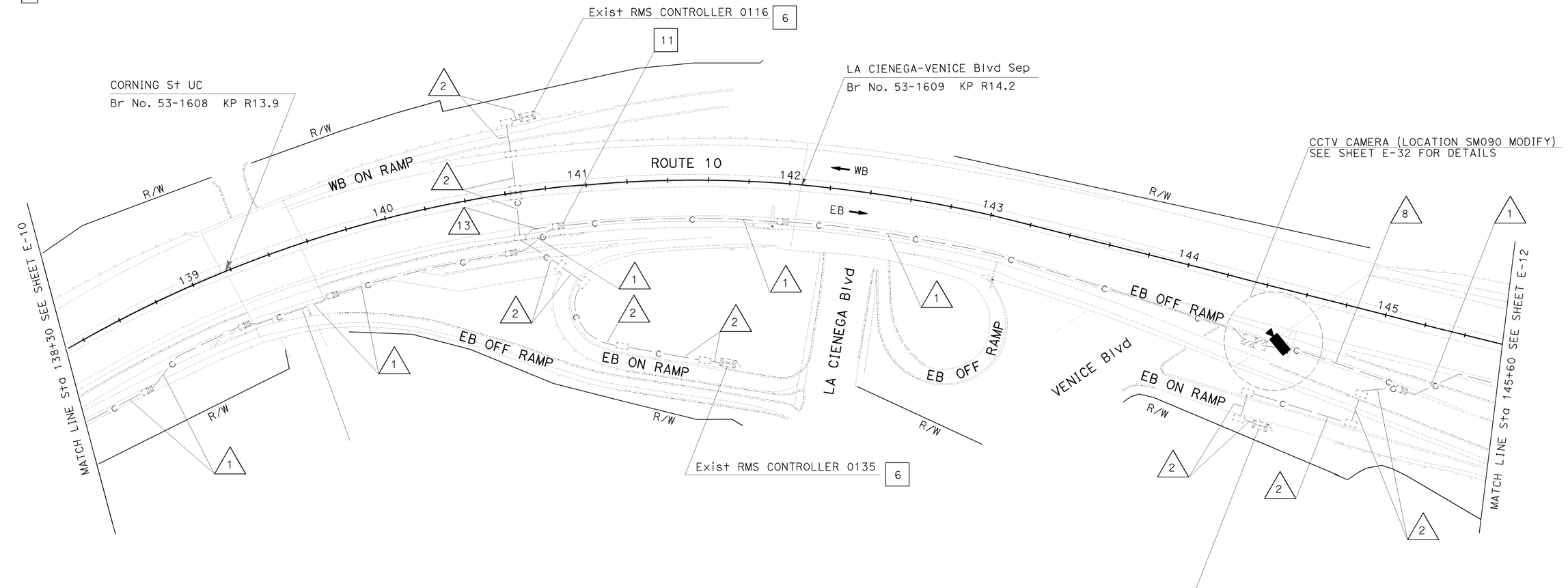
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN							
		1			2	8			13
50P22 CABLE	DATA	1(E)				1(E)			
48SMFO CABLE	VIDEO		1(R)				1(R)		
72SMFO CABLE	VIDEO/DATA		1				1		
72SMFO CABLE	TRUNK			1				1	2
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)	
12SMFO CABLE	DATA				1		1		
12P22 CABLE	DATA				1(R)				R
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)	
CONDUIT SIZE		103(E)			78(E)	103(E)			78(E)

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

11 SPLICE 2-12SMFO WITH 72SMFO.



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING
(MODIFY)

SCALE 1:1000

E-11

DATE	REVISED BY
12/04	DATE REVISED

CALCULATED/DESIGNED BY: SL
CHECKED BY: JT
PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => trkathy
DGN FILE => 718210ua011.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 12:35

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	31	91

REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 Exp.12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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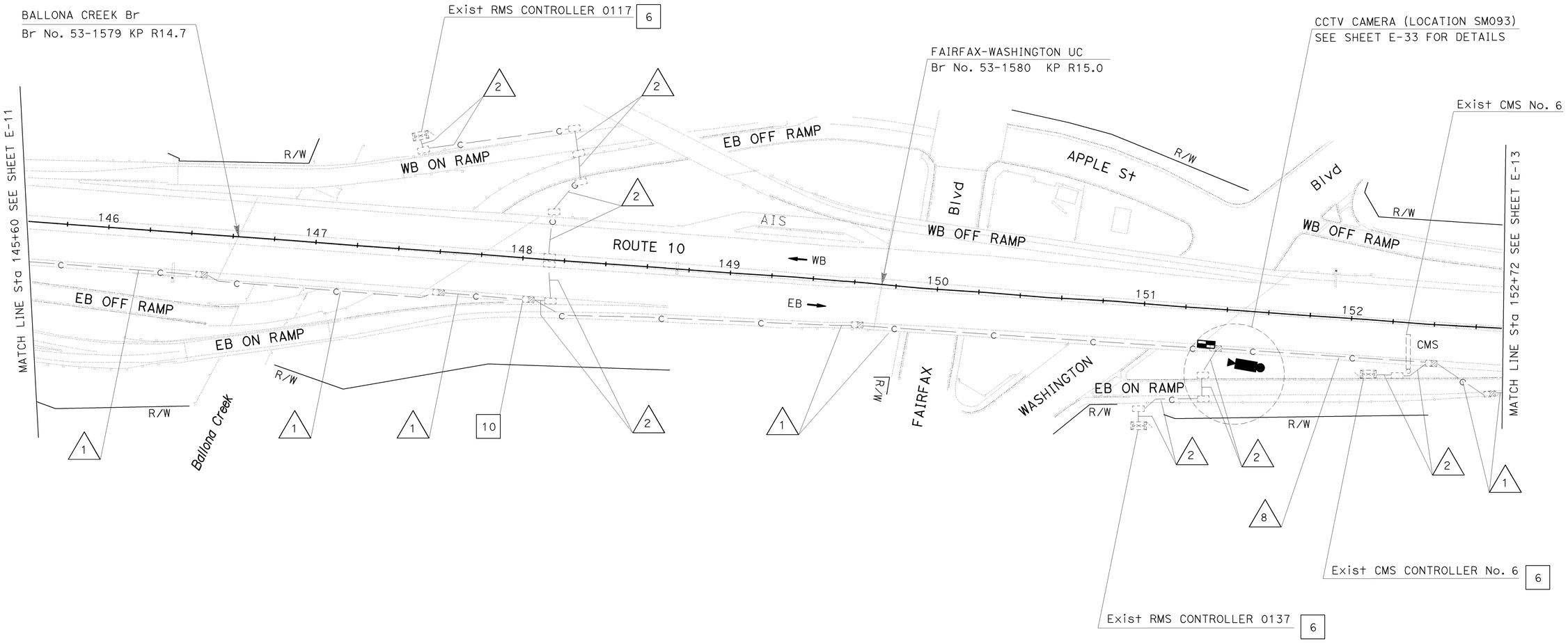
To get to the web site, go to: http://www.dot.ca.gov



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

E-12

FOR RIGHT OF WAY AND ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE. THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER SUNG LEE
CALCULATED/DESIGNED BY SL
CHECKED BY JT
DATE REVISED 12/04
REVISED BY

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

USERNAME => trkathy
DGN FILE => 718210ua012.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 01-MAY-2006
TIME PLOTTED => 12:17

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN			
		1			2
50P22 CABLE	DATA	1(E)			
48SMFO CABLE	VIDEO		1(R)		
72SMFO CABLE	VIDEO/DATA		1		
72SMFO CABLE	TRUNK			1	
8MMFO CABLE	SHORT HAUL VIDEO			1(R)	
12SMFO CABLE	DATA				1
12P22 CABLE	DATA				1(R)
INNERDUCT (SIZE 25)			1(E)	1(E)	
CONDUIT SIZE		103(E)			78(E)

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	32	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp.12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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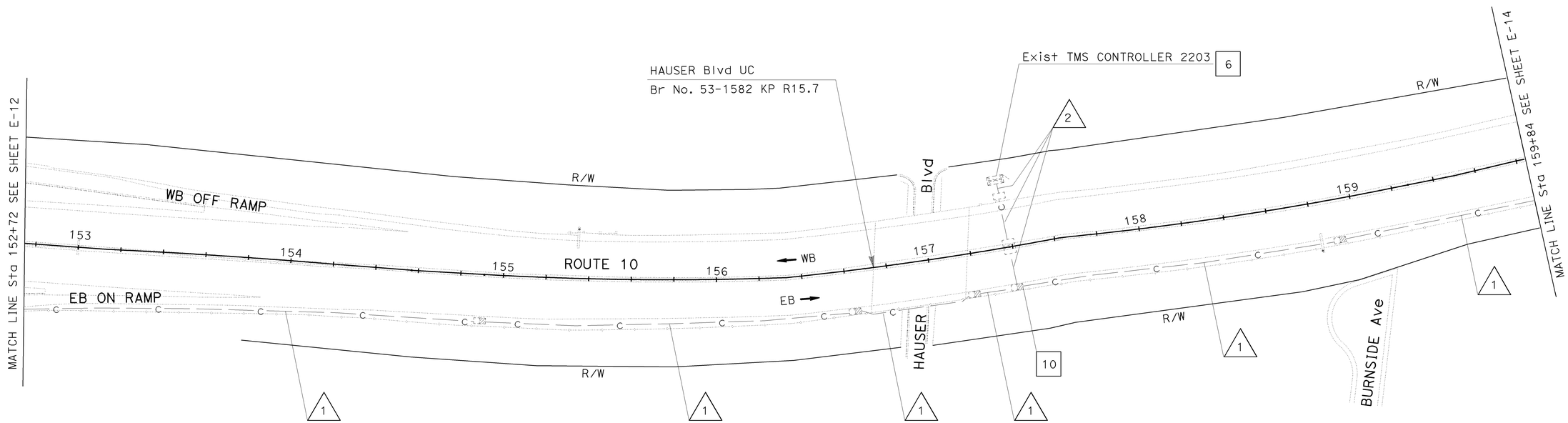
To get to the web site, go to: http://www.dot.ca.gov



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
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FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

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COMMUNICATION SYSTEM ROUTING
(MODIFY)

SCALE 1:1000

E-13

DATE	REVISED BY	DATE REVISED
12/04	SL	12/04

CALCULATED/DESIGNED BY: JT
CHECKED BY:

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trkathy
DGN FILE => 718210ua013.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:04

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE.
TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	33	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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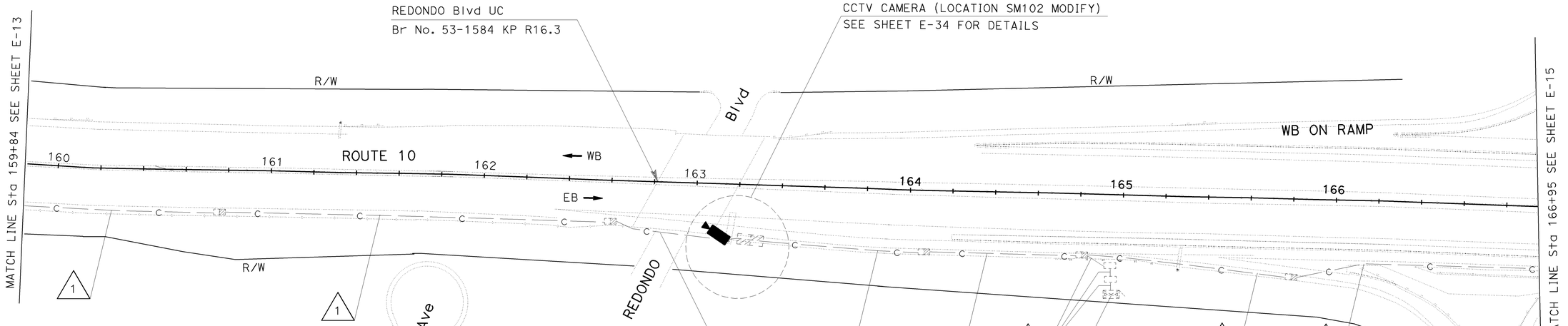
To get to the web site, go to: http://www.dot.ca.gov



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING

(MODIFY)

SCALE 1:1000

E-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER: SUNG LEE

DATE	REVISED BY	CALCULATED/ DESIGNED BY
12/04	DATE REVISED	CHECKED BY
	12/04	JT
		SL

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

USERNAME => trkathy
DGN FILE => 718210ua014.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:35

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)									
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN							
		1			2	3	8		
50P22 CABLE	DATA	1(E)					1(E)		
48SMFO CABLE	VIDEO		1(R)					1(R)	
72SMFO CABLE	VIDEO/DATA		1					1	
72SMFO CABLE	TRUNK			1					1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)					1(R)
12SMFO CABLE	DATA				1	2		1	
12P22 CABLE	DATA				1(R)	1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)				1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	78(E)	103(E)		

(R): [RC] (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

[6] INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

[10] SPLICE 12SMFO WITH 72SMFO.

[11] SPLICE 2-12SMFO WITH 72SMFO.

[13] ADD 12SMFO IN EXISTING CONDUIT.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	34	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 Exp.12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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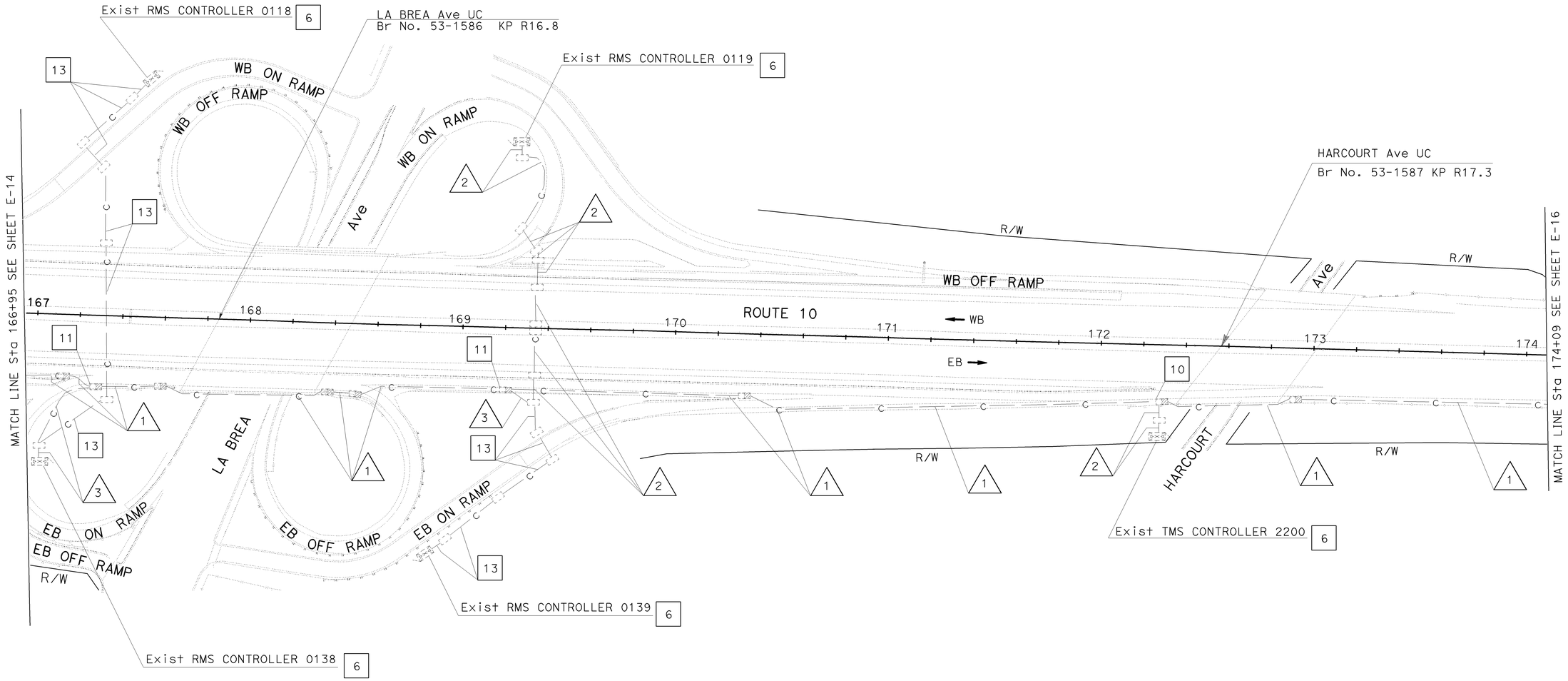

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

PROJECT ENGINEER	CALCULATED/ DESIGNED BY	DATE	REVISED BY
SUNG LEE	JT	12/04	12/04 DATE REVISED
	CHECKED BY		SL

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

USERNAME => trkathy
DGN FILE => 718210ua015.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 12:35

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)									
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN							
		1			2	8			9
50P22 CABLE	DATA	1(E)				1(E)			
48SMFO CABLE	VIDEO		1(R)				1(R)		
72SMFO CABLE	VIDEO/DATA		1				1		
72SMFO CABLE	TRUNK			1				1	
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)	
12SMFO CABLE	DATA				1		1		3
12P22 CABLE	DATA				1(R)				1(R)
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)	
CONDUIT SIZE		103(E)			78(E)	103(E)			78(E)

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

14 SPLICE 4-12SMFO WITH 72SMFO.

16 SPLICE 72SMFO WITH 72SMFO.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	35	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 Exp.12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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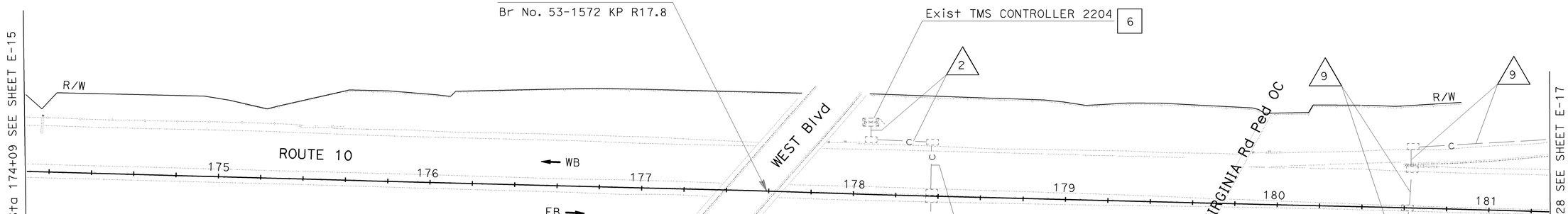
To get to the web site, go to: http://www.dot.ca.gov



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING

(MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER: SUNG LEE

DATE	REVISED BY	CALCULATED/ DESIGNED BY	SL
12/04	DATE REVISED	CHECKED BY	JT

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

USERNAME => trkathy
DGN FILE => 718210ua016.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:37

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)											
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN									
		1			2	3	8			9	
50P22 CABLE	DATA	1(E)					1(E)				
48SMFO CABLE	VIDEO		1(R)					1(R)			
72SMFO CABLE	VIDEO/DATA		1					1			
72SMFO CABLE	TRUNK			1					1		
8MMFO CABLE	SHORT HAUL VIDEO			1(R)					1(R)		
12SMFO CABLE	DATA				1	2		1		3	
12P22 CABLE	DATA				1(R)	1(R)				1(R)	
INNERDUCT (SIZE 25)			1(E)	1(E)				1(E)	1(E)		
CONDUIT SIZE		103(E)			78(E)	78(E)	103(E)			78(E)	

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

13 ADD 12SMFO IN EXISTING CONDUIT.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	36	91

Leesunghuan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SUNG LEE No. E16249 Exp 12/31/06 ELECTRICAL STATE OF CALIFORNIA

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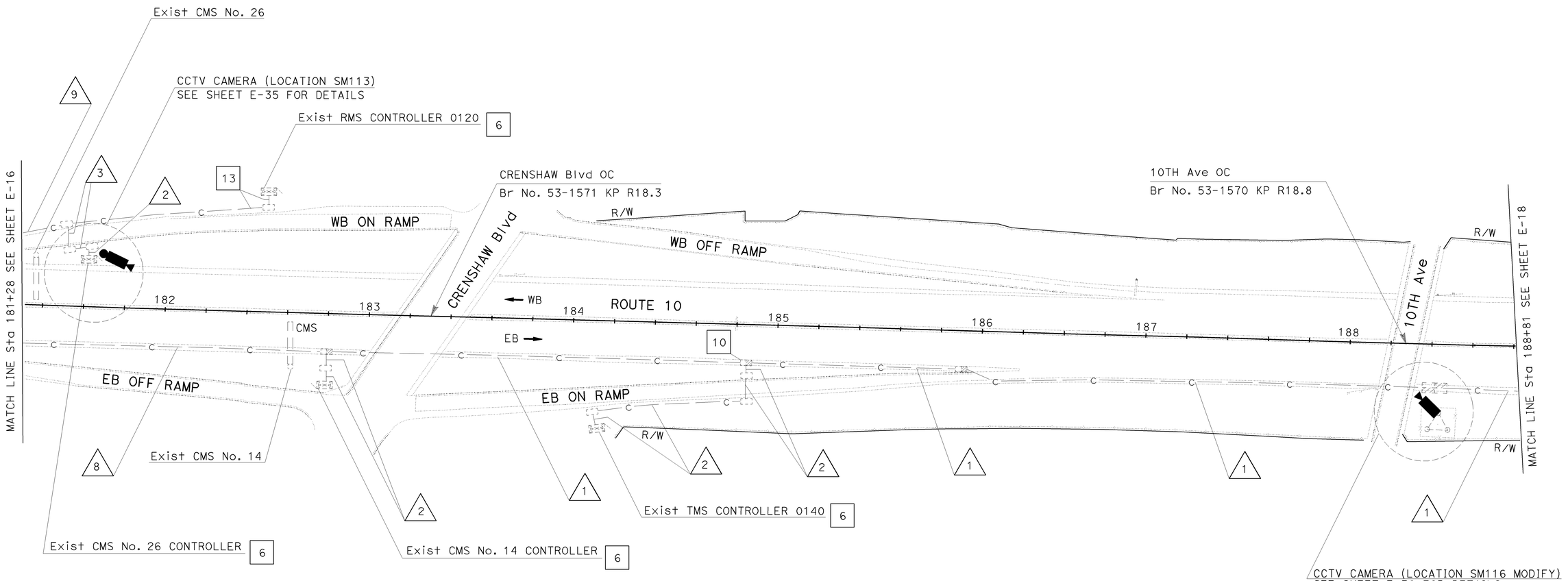
To get to the web site, go to: http://www.dot.ca.gov



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-17

DATE	REVISED BY	CALCULATED/ DESIGNED BY	CHECKED BY
12/04	SL	JT	
DATE	REVISED		
12/04			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER
SUNG LEE

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

USERNAME => trienard
DGN FILE => 718210ua017.dgn

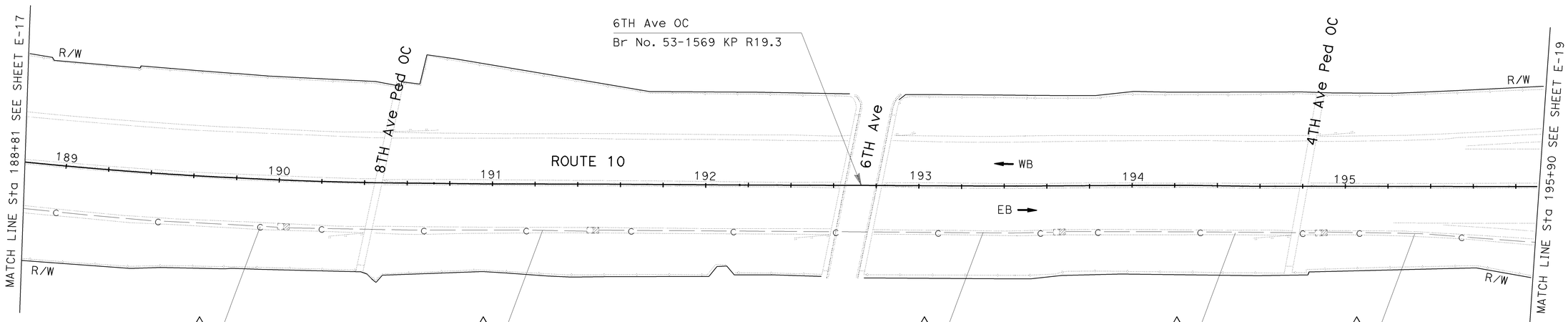
CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:32

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN ⚠1		
50P22 CABLE	DATA	1(E)		
48SMFO CABLE	VIDEO		1(R)	
72SMFO CABLE	VIDEO/DATA		1	
72SMFO CABLE	TRUNK			1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)
12SMFO CABLE	DATA			
12P22 CABLE	DATA			
INNERDUCT (SIZE 25)			1(E)	1(E)
CONDUIT SIZE		103(E)		

(R): RC (E):EXISTING



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING
(MODIFY)

SCALE 1:1000

E-18

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	37	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
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

DATE	REVISED BY
12/04	DATE REVISED
	SL
	12/04
	JT
	CALCULATED/ DESIGNED BY
	CHECKED BY

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trkathy
DGN FILE => 718210ua018.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:09

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	38	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 Exp. 12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN										
		1			2	8			10			11
50P22 CABLE	DATA	1(E)				1(E)			1(E)			
48SMFO CABLE	VIDEO		1(R)				1(R)			1(R)		
72SMFO CABLE	VIDEO/DATA		1				1			1		
72SMFO CABLE	TRUNK			1				1			1	
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)			1(R)	
12SMFO CABLE	DATA				1		1			2		1
12P22 CABLE	DATA				1(R)							
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)		1(E)	1(E)	
CONDUIT SIZE		103(E)			78(E)	103(E)			103(E)			78

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

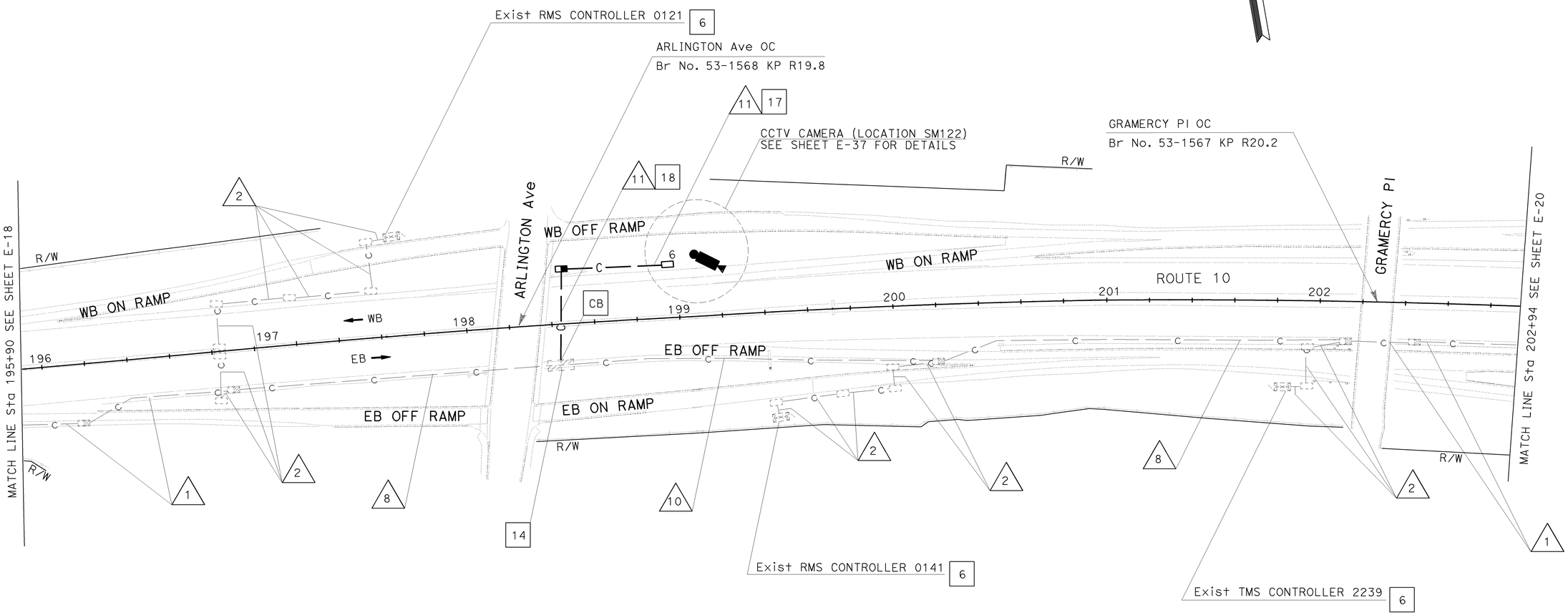
6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

14 SPLICE 4-12SMFO WITH 72SMFO.

17 TRENCH AND INSTALL CONDUIT IN SOIL. SEE SHEET E-43 FOR DETAILS.

18 JACK TYPE 1 CONDUIT BENEATH ROADWAY. SEE SHEET E-42 FOR DETAILS.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-19

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT
PROJECT ENGINEER: SUNG LEE

	CALCULATED/ DESIGNED BY	CHECKED BY
DATE 12/04	SL	JT
REVISED BY	DATE REVISED	

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

USERNAME => triim
DGN FILE => 718210ua019.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:35

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	39	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN									
		1			2	8			10		
50P22 CABLE	DATA	1(E)				1(E)			1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)			1(R)	
72SMFO CABLE	VIDEO/DATA		1				1			1	
72SMFO CABLE	TRUNK			1				1			1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)			1(R)
12SMFO CABLE	DATA				1		1			2	
12P22 CABLE	DATA				1(R)						
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)		1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)			103(E)		

(R): RC (E):EXISTING

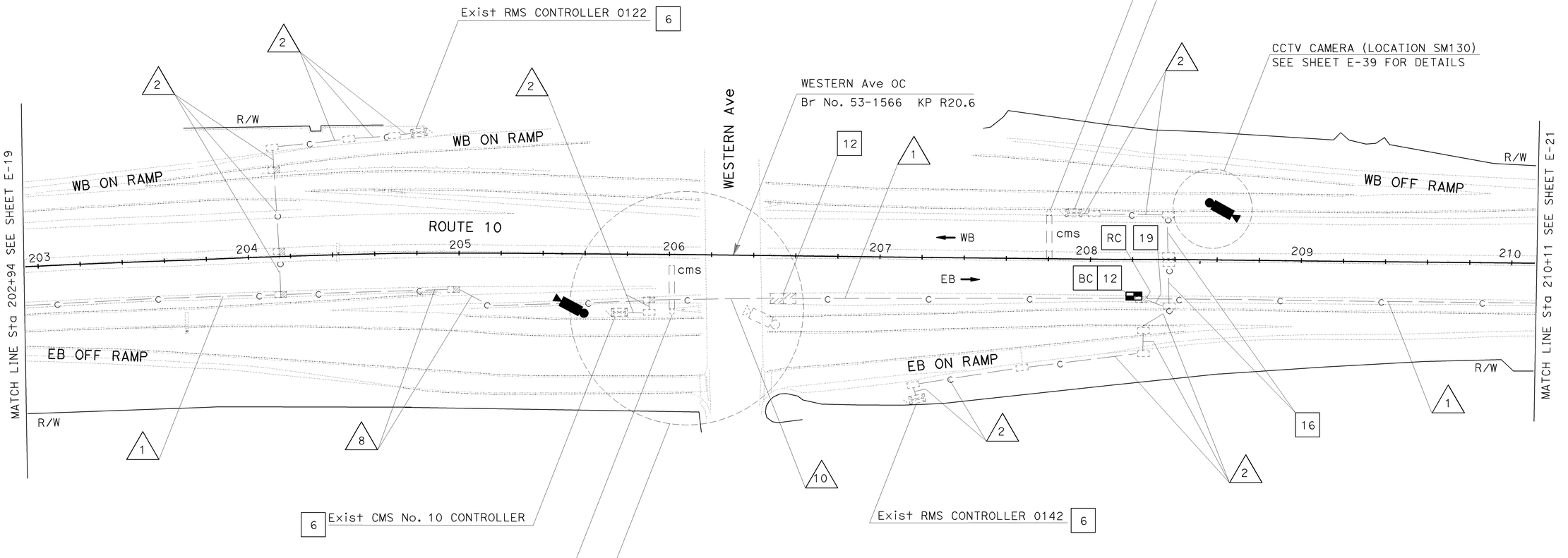
PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

12 SPLICE 3-12SMFO WITH 72SMFO.

16 ADD 2-12SMFO IN EXISTING CONDUIT.

19 ADD 3-12SMFO IN EXISTING CONDUIT.



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

E-20

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

DATE	REVISED BY
12/04	DATE REVISED
	SL
	JT
	CALCULATED/ DESIGNED BY
	CHECKED BY

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trlim
DGN FILE => 718210ua020.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:35

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

11 SPLICE 2-12SMFO WITH 72SMFO.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	40	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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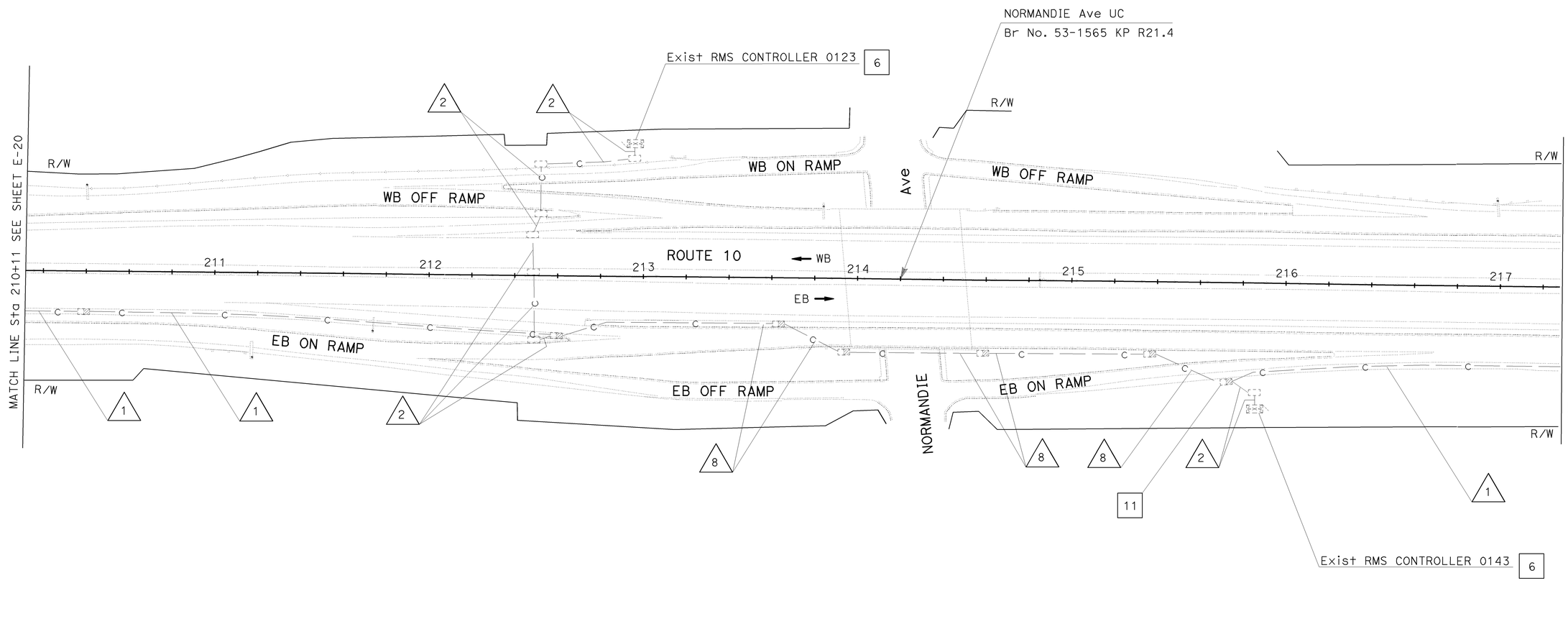

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-21

DATE	REVISED BY	DATE REVISED
12/04	SL	12/04

CALCULATED/DESIGNED BY: JT
CHECKED BY:

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:52

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

USERNAME => trlim
DGN FILE => 718210ua021.dgn

CU 07388

EA 182101

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE.
TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

10 SPLICE 12SMFO WITH 72SMFO.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	41	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SUNG LEE No. E16249 Exp. 12/31/06 ELECTRICAL STATE OF CALIFORNIA

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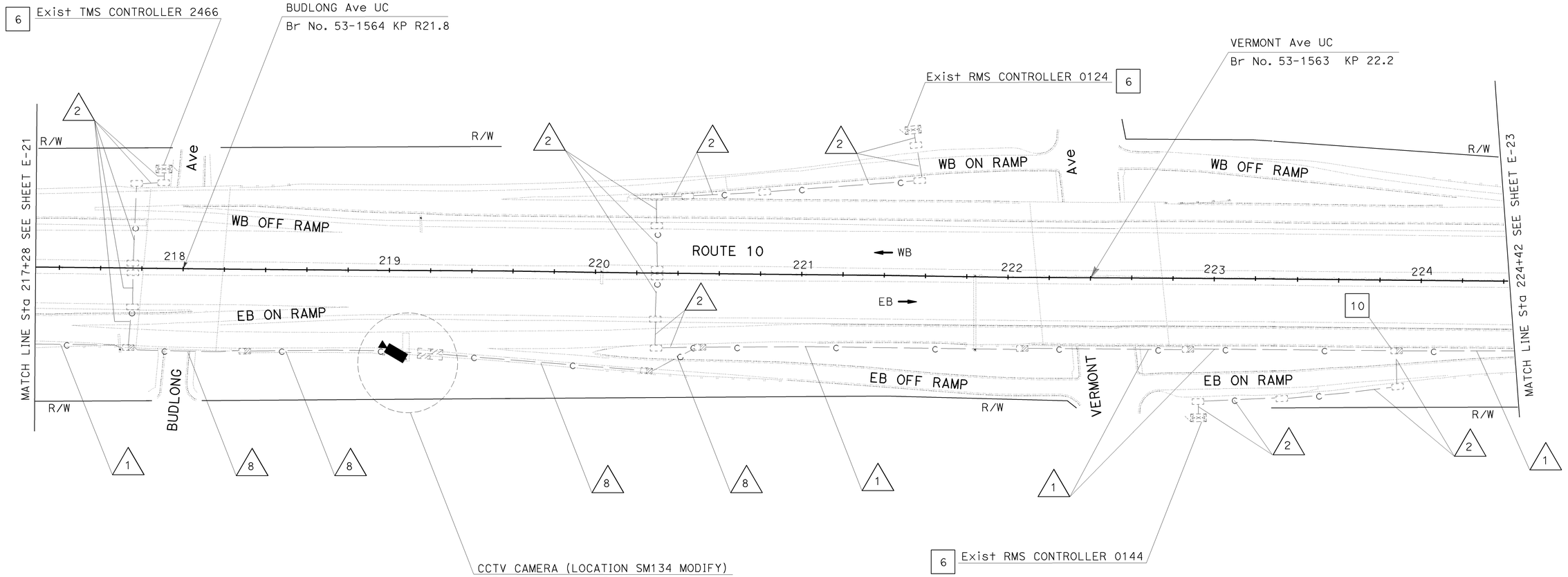

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-22

DATE	REVISED BY	DATE REVISED
12/04	SL	12/04

CALCULATED/DESIGNED BY: JT
CHECKED BY:

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => trjim
DGN FILE => 718210ua022.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:35

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)								
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN						
		1			2	8		
50P22 CABLE	DATA	1(E)				1(E)		
48SMFO CABLE	VIDEO		1(R)				1(R)	
72SMFO CABLE	VIDEO/DATA		1				1	
72SMFO CABLE	TRUNK			1				1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)				1(R)
12SMFO CABLE	DATA				1		1	
12P22 CABLE	DATA				1(R)			
INNERDUCT (SIZE 25)			1(E)	1(E)			1(E)	1(E)
CONDUIT SIZE		103(E)			78(E)	103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

11 SPLICE 2-12SMFO WITH 72SMFO.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	42	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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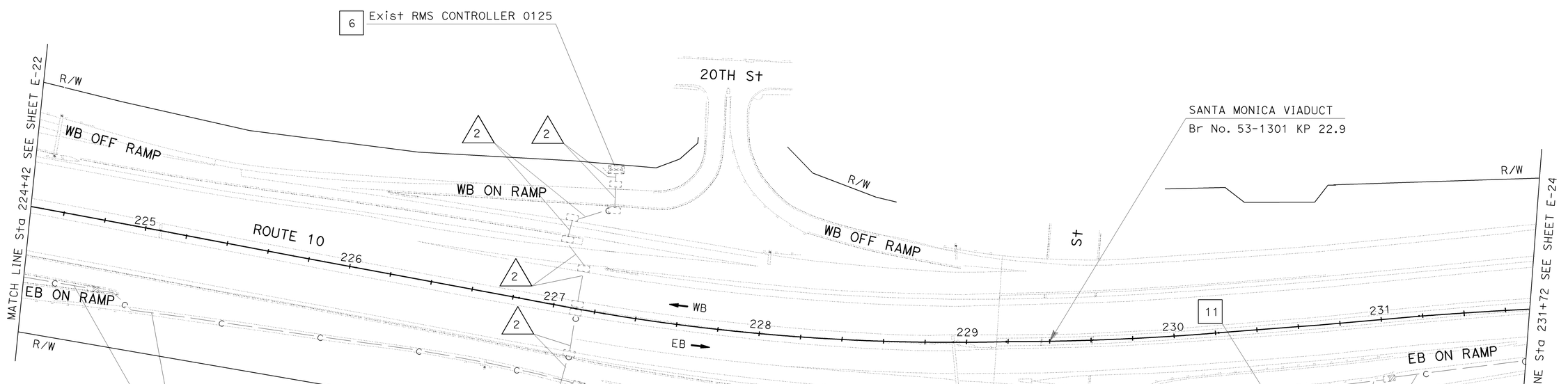

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

COMMUNICATION SYSTEM ROUTING

(MODIFY)

SCALE 1:1000

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-23

DATE	REVISED BY	CALCULATED/ DESIGNED BY
12/04	SL	

DATE	DATE REVISED	CHECKED BY
12/04		JT

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trlim
DGN FILE => 718210ug023.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:35

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)				
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN △1		
50P22 CABLE	DATA	1(E)		
48SMFO CABLE	VIDEO		1(R)	
72SMFO CABLE	VIDEO/DATA		1	
72SMFO CABLE	TRUNK			1
8MMFO CABLE	SHORT HAUL VIDEO			1(R)
12SMFO CABLE	DATA			
12P22 CABLE	DATA			
INNERDUCT (SIZE 25)			1(E)	1(E)
CONDUIT SIZE		103(E)		

(R): RC (E):EXISTING

PROJECT NOTES: (THIS SHEET ONLY)

6 INSTALL 12-FIBER FDU, FOAM AND INTERFACE CABLE. TERMINATE 12SMFO CABLE IN Exist CONTROLLER CABINET.

13 ADD 12SMFO IN EXISTING CONDUIT.

14 SHOWN FOR REFERENCE ONLY.

15 ADD 72SMFO IN EXISTING CONDUIT.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	43	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 Exp. 12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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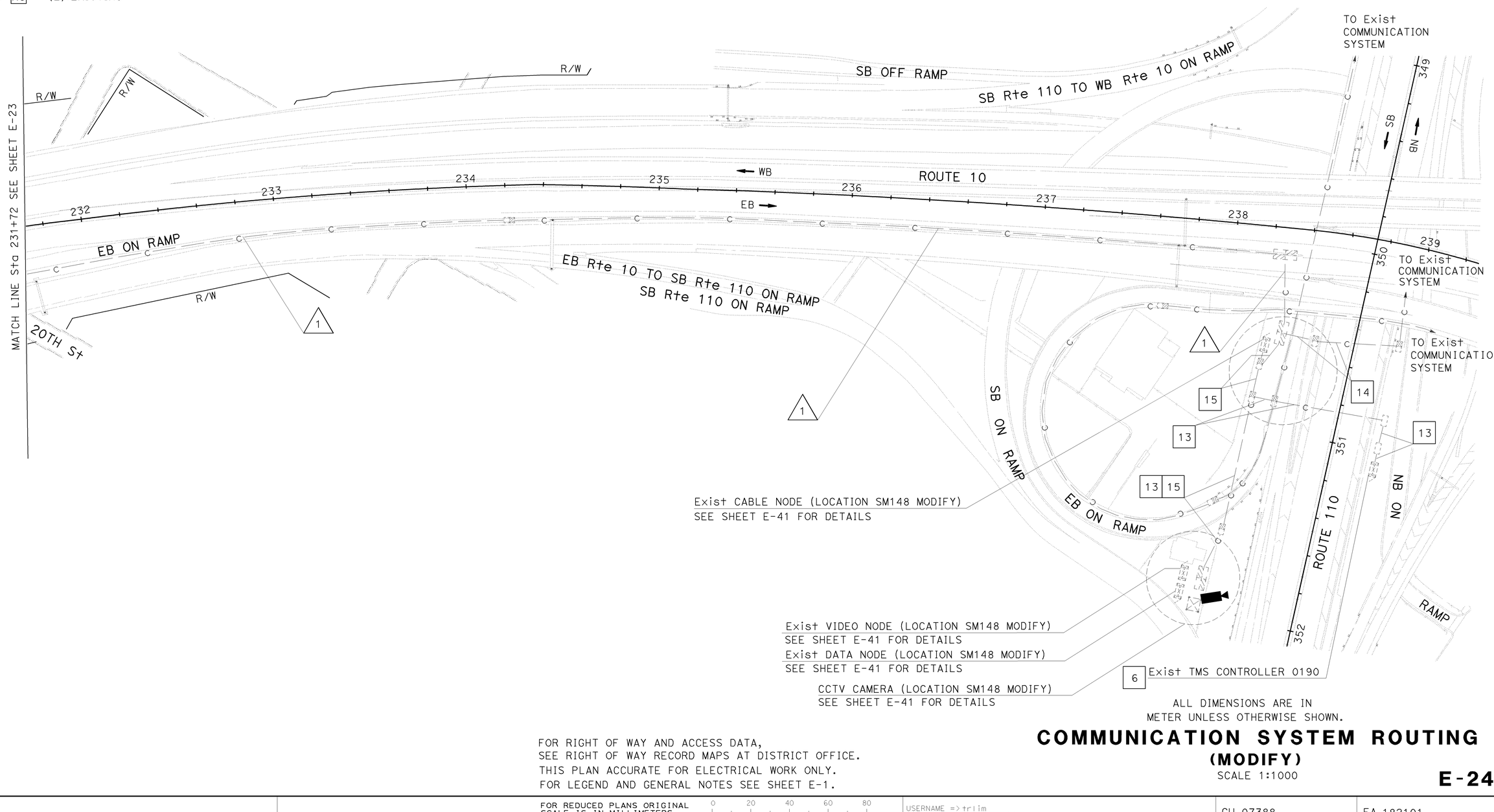
To get to the Caltrans web site, go to: http://www.dot.ca.gov



ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE SHOWN.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

COMMUNICATION SYSTEM ROUTING (MODIFY)

SCALE 1:1000

E-24

DATE	REVISED BY	CALCULATED/ DESIGNED BY
12/04	SL	
DATE REVISED		CHECKED BY
12/04		JT

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trlim
DGN FILE => 718210ua024.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:35

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	44	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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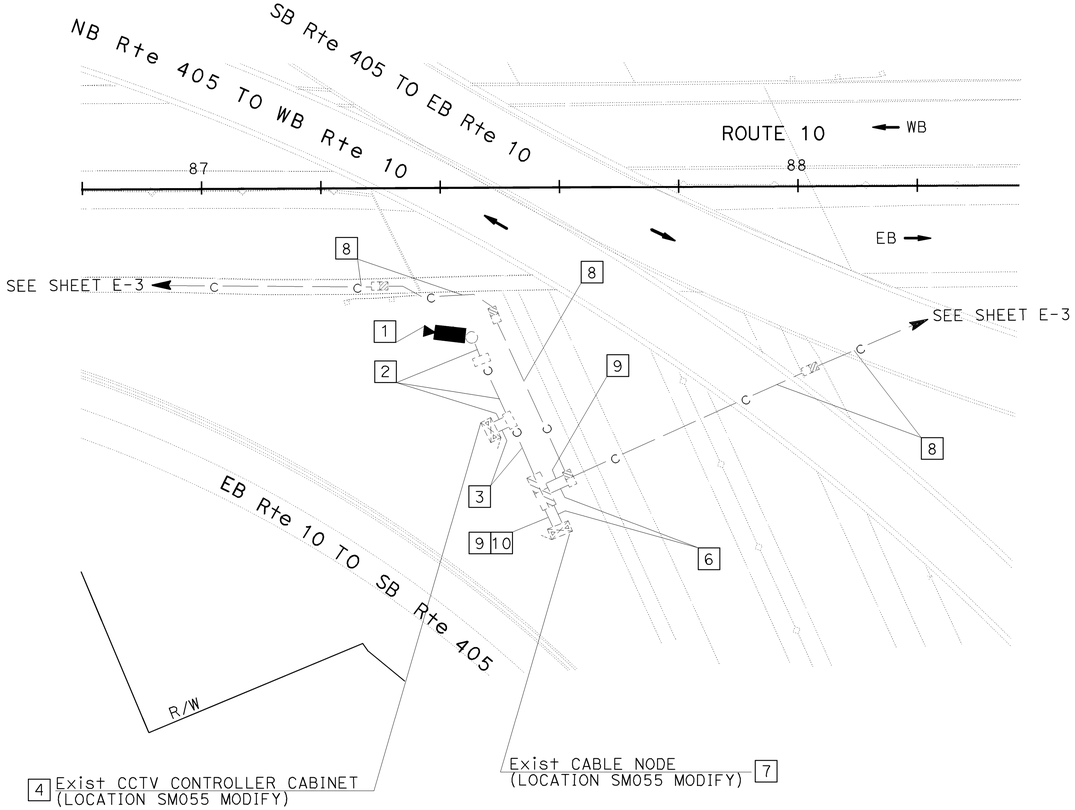
To get to the Caltrans web site, go to: http://www.dot.ca.gov



PROJECT NOTES: (THIS SHEET ONLY)

1. RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON EXISTING CCTV CAMERA POLE. SEE SHEET E-48 FOR DETAILS.
2. RC EXISTING CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.
3. RC 2MMFO. INSTALL 12SMFO.
4. RS EXISTING CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
6. INSTALL 72SMFO.
7. INSTALL 4 OF 144-FIBER FDU IN EXISTING CONTROLLER CABINET. TERMINATE 2-72SMFO AND OTHER EXISTING CABLES.
8. SHOWN FOR REFERENCE ONLY.
9. INSTALL 72SMFO.
10. INSTALL 12SMFO.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM055 MODIFY)
CABLE NODE
(LOCATION SM055 MODIFY)

SCALE 1:500

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

PROJECT ENGINEER: SUNG LEE
CALCULATED/DESIGNED BY: SL
CHECKED BY: JT
DATE: 12/04
REVISED BY: 12/04
DATE REVISED:

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:35

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trlim
DGN FILE => 718210ua025.dgn
CU 07388
EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	45	91

Leesung Kwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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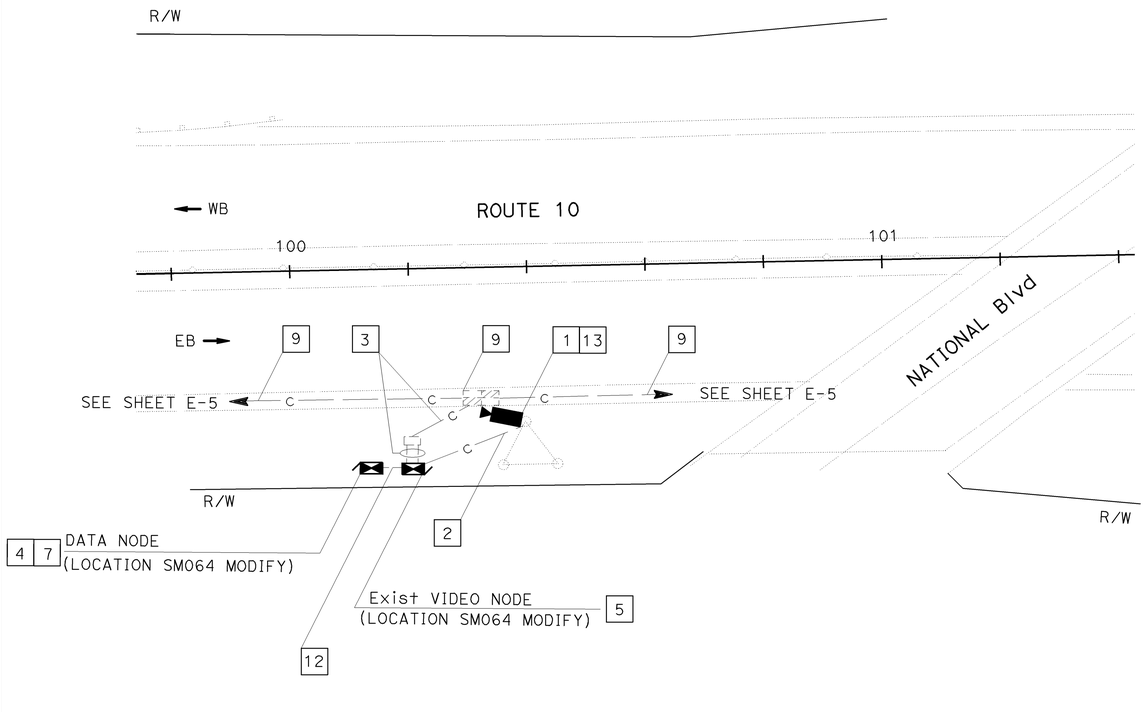
To get to the Caltrans web site, go to: http://www.dot.ca.gov



PROJECT NOTES: (THIS SHEET ONLY)

1 RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT.

2 RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.

3 RC 8MMFO. INSTALL 2-12SMFO AND 2-72SMFO.

4 RS CCR, MODEM AND VIDEO TRANSMITTER.

5 RS VIDEO MULTIPLEXER, VIDEO RECEIVERS AND CONTROLLER CABINET. FURNISH AND INSTALL NEW VIDEO MULTIPLEXER, VIDEO RECEIVERS, FOAM, RS232 MODEM AND 2 OF 144-FIBER FDU IN NEW CONTROLLER CABINET ON EXISTING FOUNDATION. SEE SHEET E-52 FOR DETAILS.

7 RS D4 CHANNEL BANK, DS-1 OPTICAL MODEM AND CONTROLLER CABINET. FURNISH AND INSTALL NEW D4 CHANNEL BANK, DS-1 OPTICAL MODEM, FOAM, FOCM, CCM AND 2 OF 144-FIBER FDU IN NEW CONTROLLER CABINET ON EXISTING FOUDATION. SEE SHEET E-53 FOR DETAILS.

9 SHOWN FOR REFERENCE ONLY.

12 INSTALL 72SMFO.

13 INSTALL NEW CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON NEW MOUNTING ON EXISTING TOWER OR AS DIRECTED BY THE ENGINEER.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

VIDEO NODE
(LOCATION SM064 MODIFY)
DATA NODE
(LOCATION SM064 MODIFY)
CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM064 MODIFY)

SCALE 1:500

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

E-26

DATE	REVISED BY
12/04	DATE REVISED

CALCULATED/DESIGNED BY: SL
CHECKED BY: JT
PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => trlim
DGN FILE => 718210ua026.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:52

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	46	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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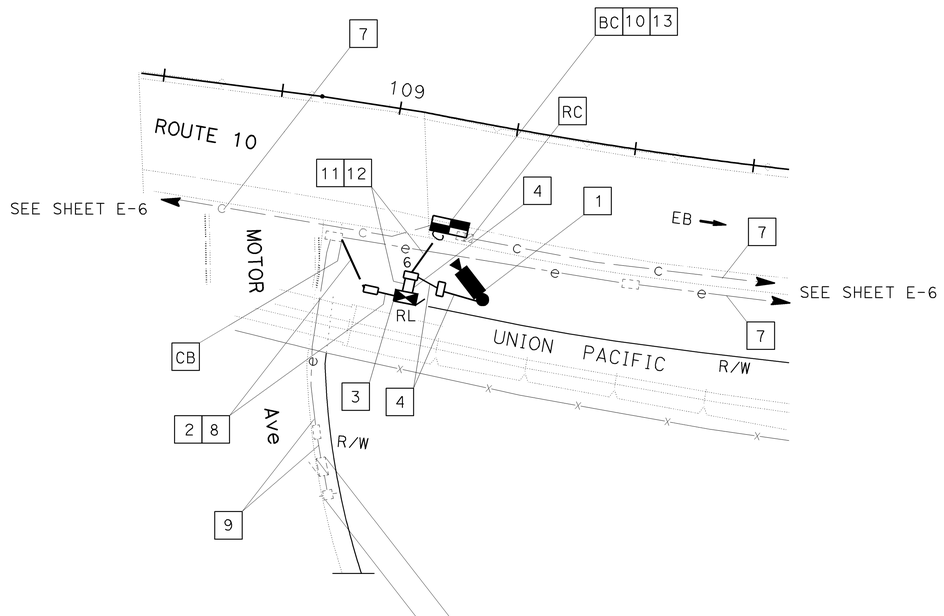

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON NEW CCTV CAMERA POLE TYPE 45 ON NEW FOUNDATION.
2. INSTALL 2#8 POWER WIRES AND 1#8 BONDING WIRE. CONNECT TO RELOCATED CCTV CONTROLLER CABINET.
3. INSTALL RELOCATED MODEL 334-TV CONTROLLER CABINET FROM STA 114+00 ON NEW FOUNDATION.
   RS EXISTING CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
4. TRENCH AND INSTALL 53C IN SOIL. SEE SHEET E-43 FOR DETAILS. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.
6. INSTALL 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV MODEL 334 CONTROLLER CABINET IN EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. CONNECT 2#8 POWER CABLES.
7. SHOWN FOR REFERENCE ONLY.
8. TRENCH AND INSTALL 53C IN SOIL. SEE SHEET E-43 FOR DETAILS.
9. ADD 2#8 POWER WIRES AND 1#8 GROUNDING WIRE IN EXISTING CONDUIT.
10. RC EXISTING COMMUNICATION PULL BOX. INSTALL SPLICE VAULT WITH SPLICE ENCLOSURE.
11. TRENCH AND INSTALL 78C IN SOIL. SEE SHEET E-43 FOR DETAILS.
12. INSTALL 12SMFO.
13. SPLICE 3-12SMFO WITH 72SMFO.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM072 MODIFY)

SCALE 1:500

E-27

DATE	REVISED BY
12/04	DATE REVISED

CALCULATED/DESIGNED BY: SL
CHECKED BY: JT

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => trmitzi
DGN FILE => 718210ua027.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 13:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	47	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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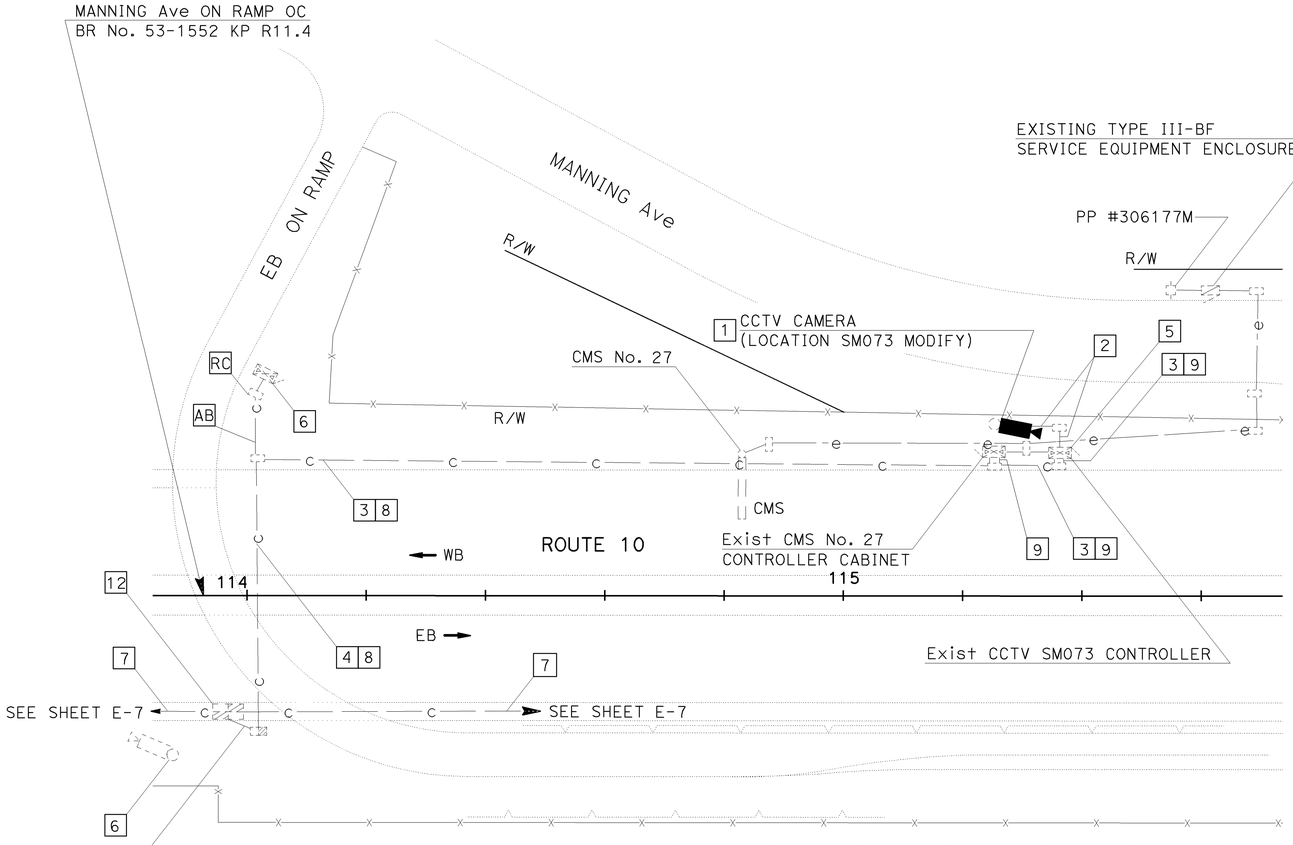
DATE	REVISED BY
12/04	DATE REVISED

CALCULATED/ DESIGNED BY: SL
CHECKED BY: JT

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT



PROJECT NOTES: (THIS SHEET ONLY)

1 RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON EXISTING CCTV CAMERA POLE. SEE SHEET E-48 FOR DETAILS.

2 RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.

3 RC 2MMFO AND 6P22.

4 RC 2-2MMFO AND 2-6P22.

5 RS CCR, MODEM, VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.

6 RS EXISTING CCTV CAMERA ASSEMBLY AND CCTV CAMERA POLE.
RL EQUIPMENT AND CONTROLLER CABINET TO NEW LOCATION AT STA 109+00, SHEET E-27 FOR DETAILS.

7 SHOWN FOR REFERENCE ONLY.

8 INSTALL 2-12SMFO.

9 INSTALL 12SMFO.

12 SPLICE 3-12SMFO WITH 72SMFO.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM073 MODIFY)

SCALE 1:500

E-28

LAST REVISION 00-00-00 DATE PLOTTED => 01-MAY-2006 TIME PLOTTED => 12:17

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

USERNAME => trkathy
DGN FILE => 718210ua028.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	48	91

Caltrans Metric

Leesungkwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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PROJECT NOTES: (THIS SHEET ONLY)

1 RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT.
INSTALL NEW CCTV CAMERA WITH PAN/TILT UNIT ON EXISTING SIGN STRUCTURE.

2 RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE SHEET TABLE 1 ON SHEET E-1.
SEE SHEET E-48 FOR DETAILS.

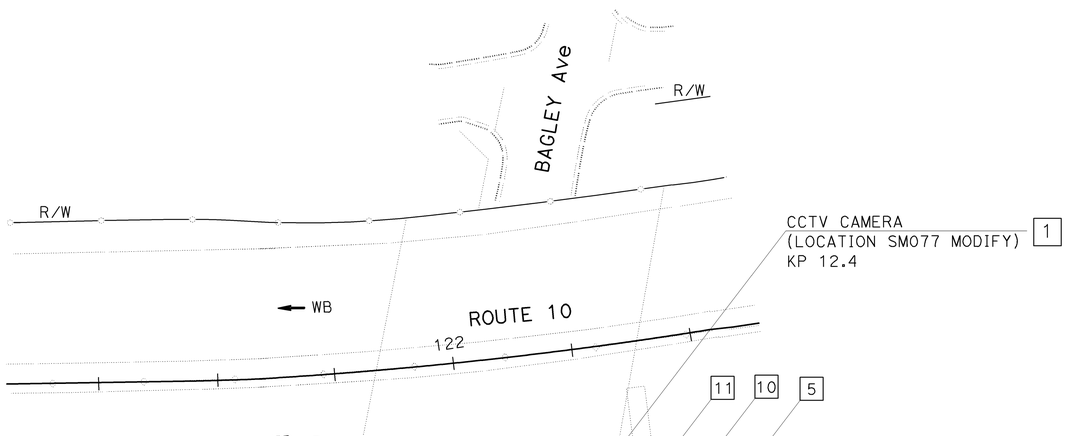
3 RC 2MMFO AND 6P22. INSTALL 12SMFO.

4 RS CCR, MODEM, VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.

5 SHOWN FOR REFERENCE ONLY.

10 SPLICE 12SMFO WITH 72SMFO.

11 MOUNT CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON POLE EXTENSION TYPE CCTV 5 ON EXISTING OVERHEAD SIGN. SEE REVISED STANDARD PLANS ES-16B FOR DETAILS.



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM077 MODIFY)

SCALE 1:500

E-29

DATE	REVISED BY	CALCULATED/ DESIGNED BY
12/04	SL	
12/04	JT	CHECKED BY

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

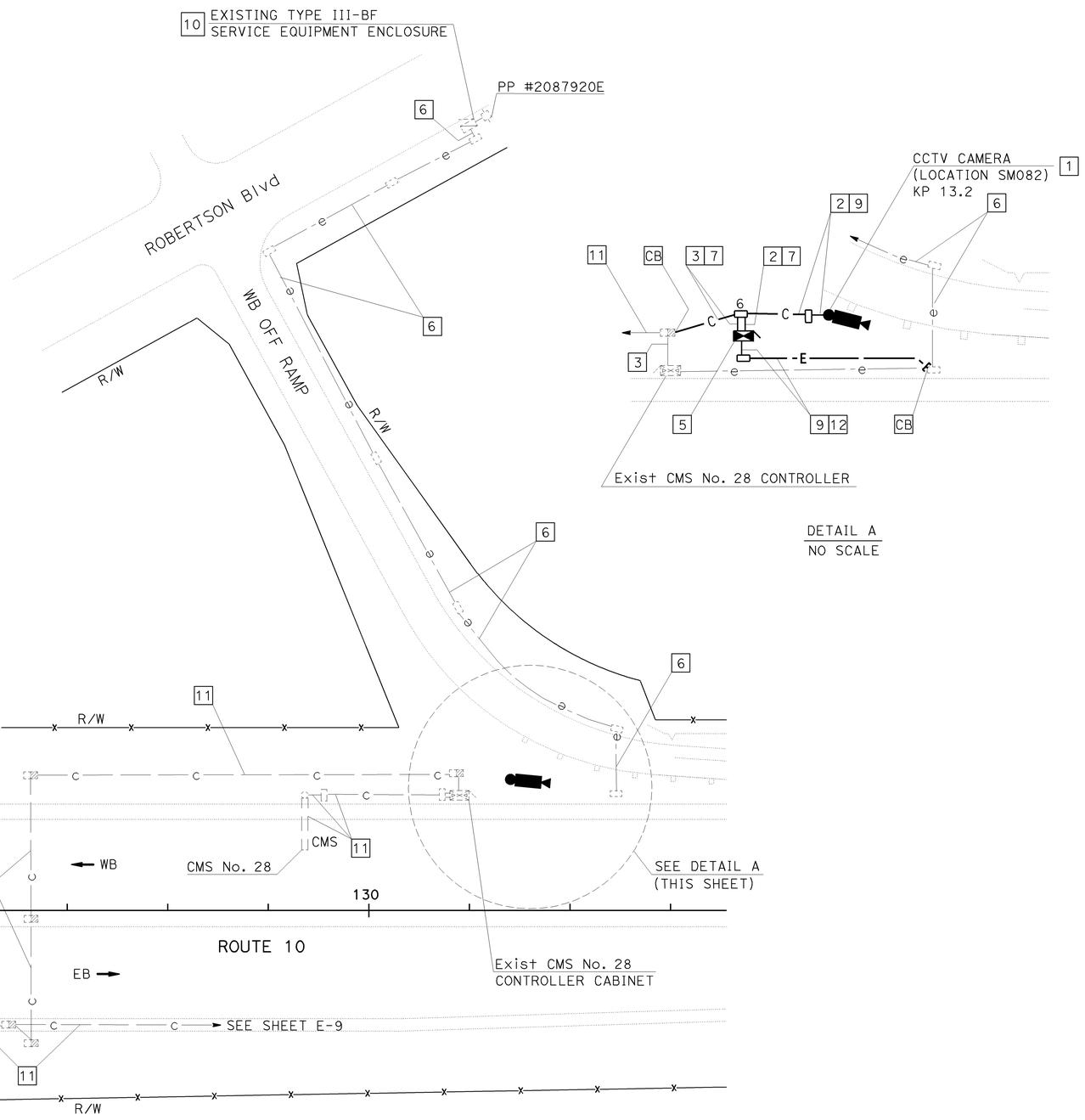
LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:41

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

USERNAME => trmitzi
DGN FILE => 718210ug029.dgn

CU 07388

EA 182101



DETAIL A
NO SCALE

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON NEW CCTV CAMERA POLE TYPE CCTV 45 ON NEW FOUNDATION.
2. INSTALL CCTV WIRING. SEE TABLE 1 ON SHEET E-1. FOR WIRING DETAILS, SEE SHEET E-48 FOR DETAILS.
3. INSTALL 12SMFO.
5. INSTALL MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET E-47 AND E-51 FOR DETAILS.
6. ADD 2#6 POWER WIRES AND 1#8 BONDING WIRE IN EXISTING CONDUIT.
7. TRENCH AND INSTALL 103C IN SOIL. SEE SHEET E-43 FOR DETAILS.
9. TRENCH AND INSTALL 53C IN SOIL. SEE SHEET E-43 FOR DETAILS.
10. INSTALL 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV MODEL 334 CONTROLLER CABINET IN EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. INSTALL 2#6 POWER CABLES.
11. SHOWN FOR REFERENCE ONLY.
12. INSTALL 2#6 POWER WIRES AND 1#8 BONDING WIRE.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM082)

SCALE 1:500

E-30

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	49	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SUNG LEE No. E16249 EXP. 12/31/06 ELECTRICAL — STATE OF CALIFORNIA

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DATE	REVISED BY
12/04	DATE REVISED

CALCULATED/DESIGNED BY: SL
CHECKED BY: JT

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trkathy
DGN FILE => 718210ua030.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 01-MAY-2006
TIME PLOTTED => 12:17

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10, 101	Var	50	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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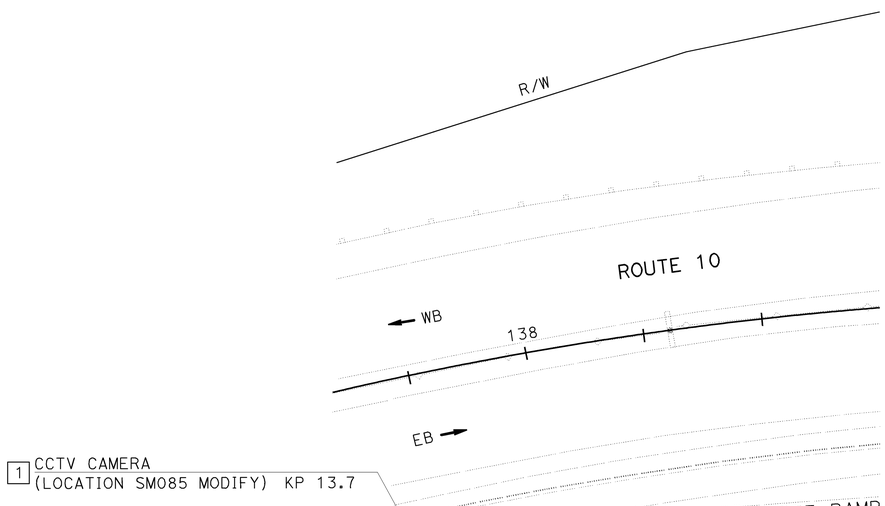

PROJECT NOTES: (THIS SHEET ONLY)

1. RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. INSTALL NEW CCTV CAMERA WITH PAN/TILT UNIT ON EXISTING SIGN STRUCTURE.
2. RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.
3. RC 2MMFO AND 6P22. INSTALL 12SMFO.
4. RS CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
5. SHOWN FOR REFERENCE ONLY.
6. SPLICE 12SMFO WITH 72SMFO.
7. MOUNT CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON POLE EXTENSION TYPE CCTV 5 ON EXISTING OVERHEAD SIGN. SEE REVISED STANDARD PLANS ES-16B FOR DETAILS.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM085 MODIFY)

SCALE 1:500

E-31

CALCULATED/ DESIGNED BY	DATE	REVISED BY
SL	12/04	
CHECKED BY		DATE REVISED
JT	12/04	

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trmitzi
DGN FILE => 718210ua031.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	51	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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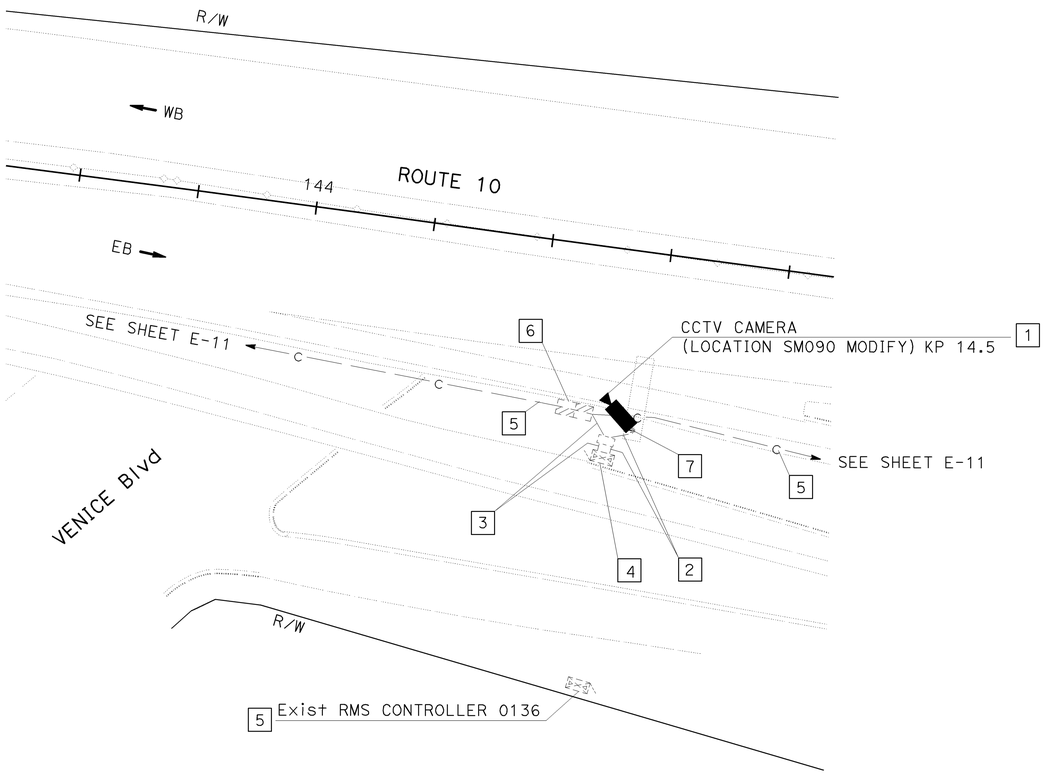

PROJECT NOTES: (THIS SHEET ONLY)

1 RS CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. INSTALL NEW CCTV CAMERA WITH PAN/TILT UNIT ON EXISTING SIGN STRUCTURE.

2 RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.

3 RC 2MMFO AND 6P22. INSTALL 12SMFO.

4 RS CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.

5 SHOWN FOR REFERENCE ONLY.

6 SPLICE 2-12SMFO WITH 72SMFO.

7 MOUNT CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON POLE EXTENSION TYPE CCTV 5 ON EXISTING OVERHEAD SIGN. SEE REVISED STANDARD PLANS ES-16B FOR DETAILS.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM090 MODIFY)

SCALE 1:500

E-32

	DATE	REVISED BY
	12/04	DATE REVISED
CALCULATED/ DESIGNED BY	SL	
CHECKED BY	JT	12/04

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:32

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

USERNAME => trannda
DGN FILE => 718210ua032.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	52	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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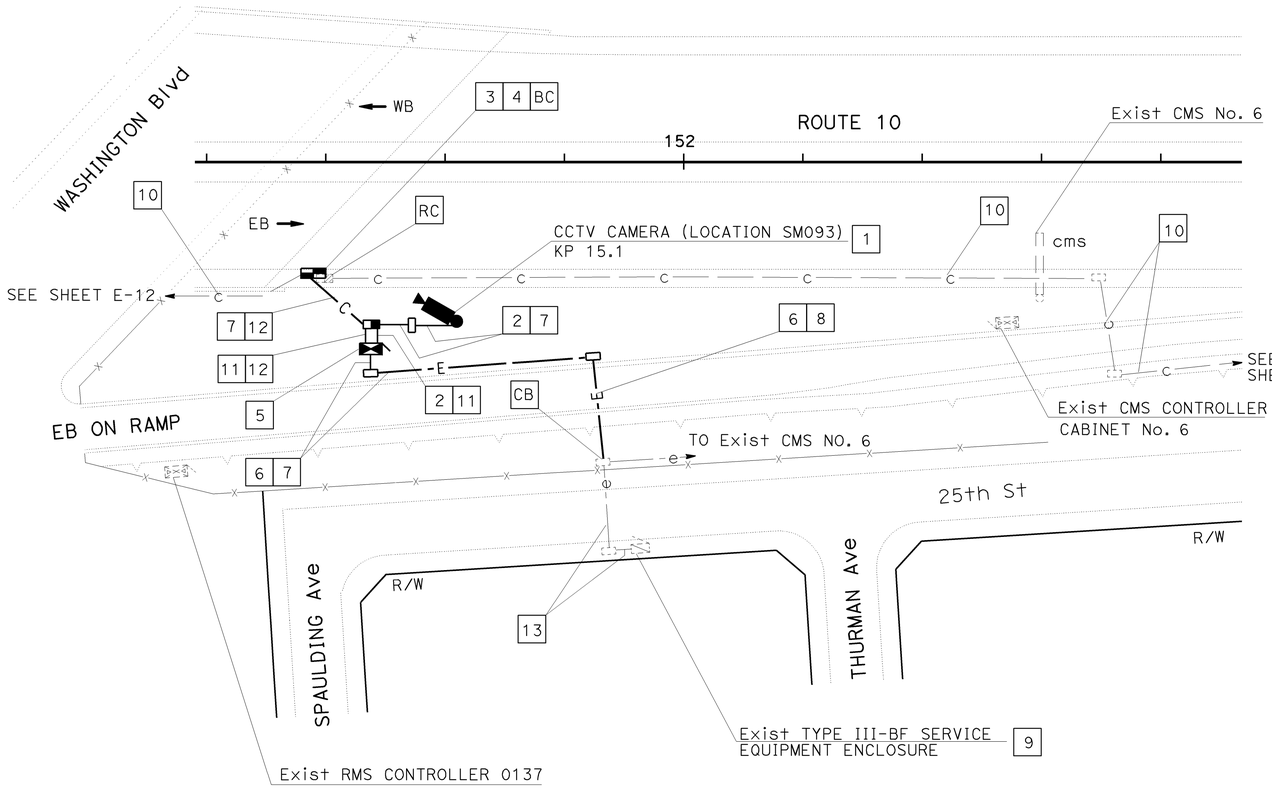

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON NEW CCTV CAMERA POLE TYPE CCTV 45 ON NEW FOUNDATION.
2. INSTALL CCTV WIRING. SEE TABLE 1 ON SHEET E-1. FOR WIRING DETAILS, SEE SHEET E-48 FOR DETAILS.
3. RC EXISTING COMMUNICATION PULL BOX. INSTALL NEW SPLICE VAULT.
4. SPLICE 3-12SMFO CABLE WITH 72SMFO.
5. INSTALL MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION WITH NEW CCTV EQUIPMENT. SEE SHEET E-47 AND E-51 FOR DETAILS.
6. INSTALL 2#6 POWER CABLES AND 1#8 BONDING WIRE.
7. TRENCH AND INSTALL 53C IN SOIL. SEE E-43 FOR DETAILS.
8. JACK 78C UNDER ROADWAY. SEE SHEET E-42 FOR DETAILS.
9. INSTALL 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV CONTROLLER CABINET IN EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. INSTALL AND CONNECT 2#6 POWER CABLES.
10. SHOWN FOR REFERENCE ONLY.
11. TRENCH AND INSTALL 103C IN SOIL. SEE SHEET E-43 FOR DETAILS.
12. INSTALL 12SMFO.
13. ADD 2#6 POWER CABLES AND 1#8 BONDING WIRE.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM093)

SCALE 1:500

E-33

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
SL	JT	12/04		12/04

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:32

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

USERNAME => trannda
DGN FILE => 718210ua033.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	53	91

Caltrans Metric

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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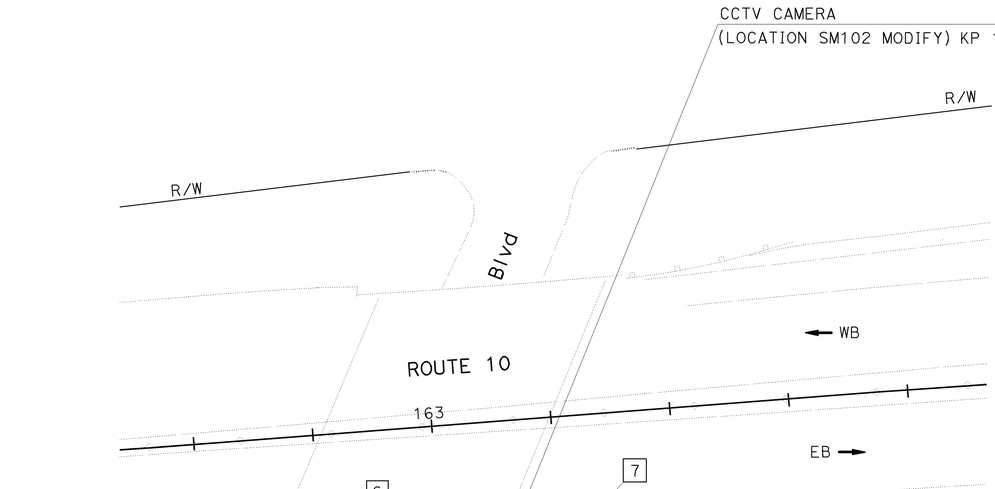

PROJECT NOTES: (THIS SHEET ONLY)

1. RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON EXISTING SIGN STRUCTURE.
2. RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.
3. RC 2MMFO AND 6P22. INSTALL 12SMFO.
4. RS CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
5. SHOWN FOR REFERENCE ONLY.
6. SPLICE 2-12SMFO WITH 72SMFO.
7. MOUNT CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON POLE EXTENSION TYPE CCTV 5 ON EXISTING OVERHEAD SIGN. SEE REVISED STANDARD PLANS ES-16B FOR DETAILS.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM102 MODIFY)

SCALE 1:500

E-34

DATE	REVISED BY	CALCULATED/ DESIGNED BY	CHECKED BY
12/04	DATE REVISED	SL	JT
	12/04		

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

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

USERNAME => trannda
DGN FILE => 718210ua034.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:32

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	54	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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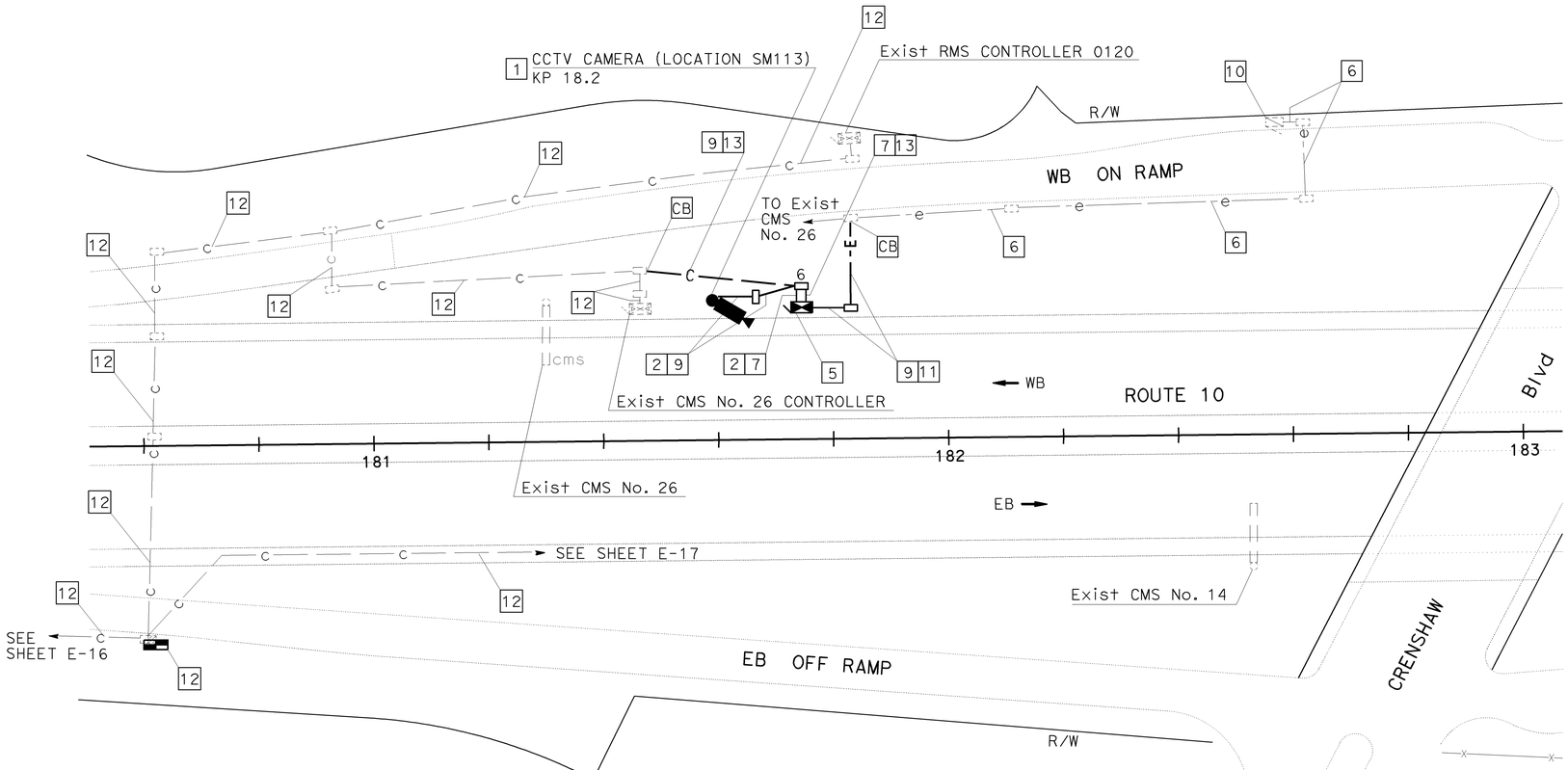

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON NEW CCTV CAMERA POLE TYPE CCTV 45 ON NEW FOUNDATION.
2. INSTALL CCTV WIRING. SEE TABLE 1 ON SHEET E-1. FOR WIRING, SEE SHEET E-48 FOR DETAILS.
5. INSTALL CCTV EQUIPMENT IN MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET E-47 AND E-51 FOR DETAILS.
6. ADD 2#6 POWER WIRES AND 1#8 BONDING WIRE IN EXISTING CONDUIT.
7. TRENCH AND INSTALL 103C IN SOIL. SEE SHEET E-43 FOR DETAILS.
9. TRENCH AND INSTALL 53C IN SOIL. SEE SHEET E-43 FOR DETAILS.
10. INSTALL 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV MODEL 334 CABINET IN EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. INSTALL AND TERMINATE 2#6 POWER CABLES.
11. INSTALL 2#6 POWER WIRES AND 1#8 BONDING WIRE.
12. SHOWN FOR REFERENCE ONLY.
13. INSTALL 12SMFO.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM113)

SCALE 1:500

E-35

DATE	REVISED BY
12/04	SL
12/04	JT

CALCULATED/DESIGNED BY
CHECKED BY
PROJECT ENGINEER: SUNG LEE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

LAST REVISION 00-00-00
DATE PLOTTED => 01-MAY-2006
TIME PLOTTED => 11:32

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

USERNAME => trstrk
DGN FILE => 718210ua035.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	55	91

Leesunghuan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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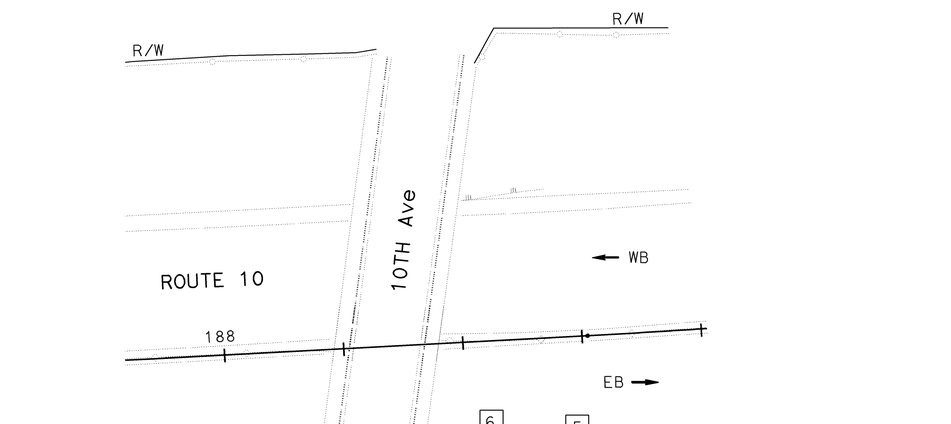

PROJECT NOTES: (THIS SHEET ONLY)

1. RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT.
2. RC CCTV WIRING. INSTALL NEW CCTV WIRING. SEE TABLE 1 ON SHEET E-1. SEE SHEET E-48 FOR DETAILS.
3. RC 2MMFO AND 6P22. INSTALL 12SMFO.
4. RS CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
5. SHOWN FOR REFERENCE ONLY.
6. SPLICE 12SMFO WITH 72SMFO.
7. INSTALL NEW CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON NEW MOUNTING ON EXISTING TOWER OR AS DIRECTED BY THE ENGINEER.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM116 MODIFY)

SCALE 1:500

E-36

	DATE	REVISED BY
	12/04	DATE REVISED
CALCULATED/DESIGNED BY		SL
CHECKED BY		JT

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trstrk
DGN FILE => 718210ua036.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 11:45

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	56	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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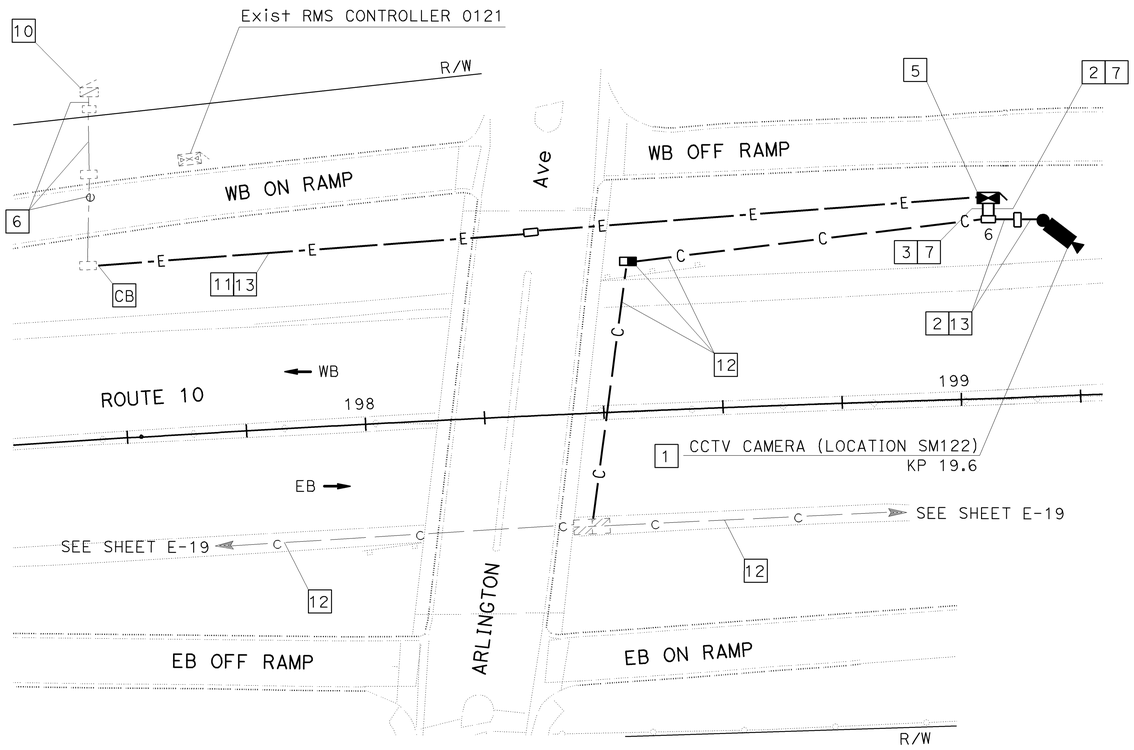

PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON NEW CCTV CAMERA POLE TYPE CCTV 45 ON NEW FOUNDATION.
2. INSTALL CCTV WIRING. SEE TABLE 1 ON SHEET E-1. FOR WIRING, SEE SHEET E-48 FOR DETAILS.
3. INSTALL 12SMFO.
5. INSTALL CCTV EQUIPMENT IN MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET E-47 AND E-51 FOR DETAILS.
6. ADD 2#6 POWER WIRES AND 1#8 BONDING WIRE IN EXISTING CONDUIT.
7. TRENCH AND INSTALL 103C IN SOIL. SEE SHEET E-43 FOR DETAILS.
10. INSTALL 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV MODEL 334 CONTROLLER CABINET IN EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. CONNECT 2#6 POWER CABLES.
11. INSTALL 2#6 POWER WIRES AND 1#8 BONDING WIRE.
12. SHOWN FOR REFERENCE ONLY.
13. TRENCH AND INSTALL 53C IN SOIL. SEE SHEET E-43 FOR DETAILS.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM122)

SCALE 1:500

E-37

	DATE	REVISED BY
	12/04	DATE REVISED
CALCULATED/ DESIGNED BY	SL	
CHECKED BY	JT	12/04

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 11:45

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USERNAME => trstrk
DGN FILE => 718210ua037.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	57	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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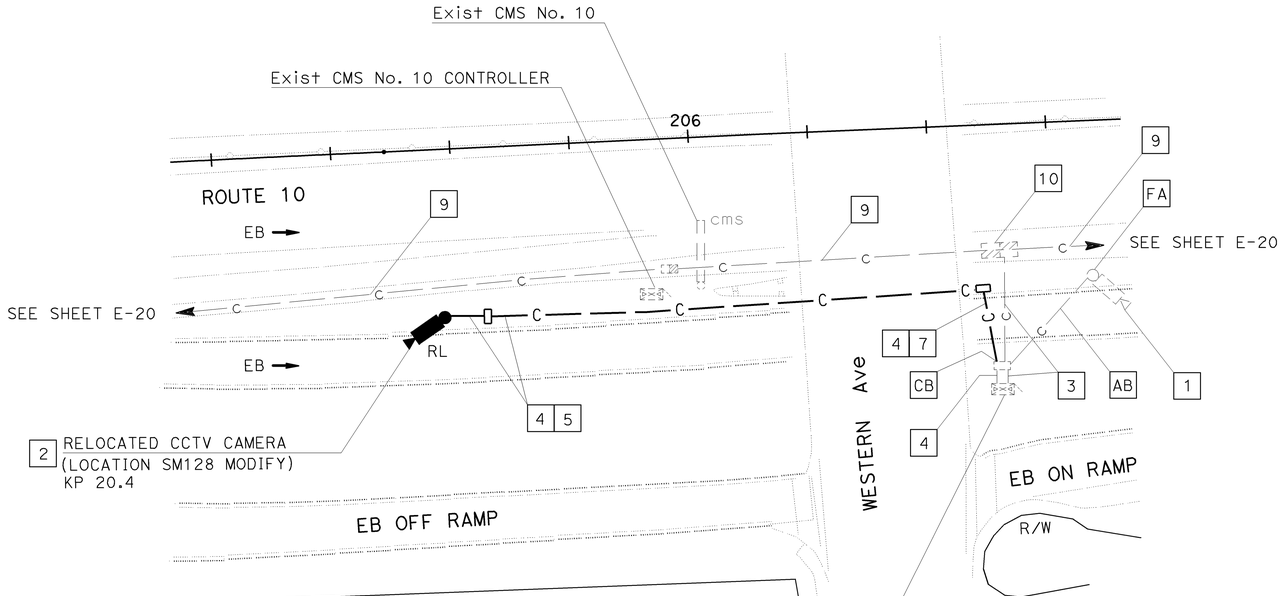

PROJECT NOTES: (THIS SHEET ONLY)

1. RS CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. RL CCTV CAMERA POLE TO STA 205+60.
2. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON RELOCATED CCTV CAMERA POLE ON NEW FOUNDATION.
3. RC 2MMFO AND 6P22. INSTALL 12SMFO.
4. INSTALL CCTV WIRING. SEE TABLE 1 ON SHEET E-1. FOR WIRING, SEE SHEET E-48 FOR DETAILS.
5. TRENCH AND INSTALL 53C IN PAVED AREA. SEE SHEET E-43 FOR DETAILS.
6. RS CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
7. JACK 78C UNDER ROADWAY. SEE SHEET E-42 FOR DETAILS.
9. SHOWN FOR REFERENCE ONLY.
10. SPLICE 3-12SMFO WITH 72SMFO.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA
(LOCATION SM128 MODIFY)

SCALE 1:500

E-38

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
SL	JT	12/04		12/04

PROJECT ENGINEER: SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 | DATE PLOTTED => 28-APR-2006 | TIME PLOTTED => 11:45

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USERNAME => trstrk
DGN FILE => 718210ua038.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	58	91

Caltrans Metric

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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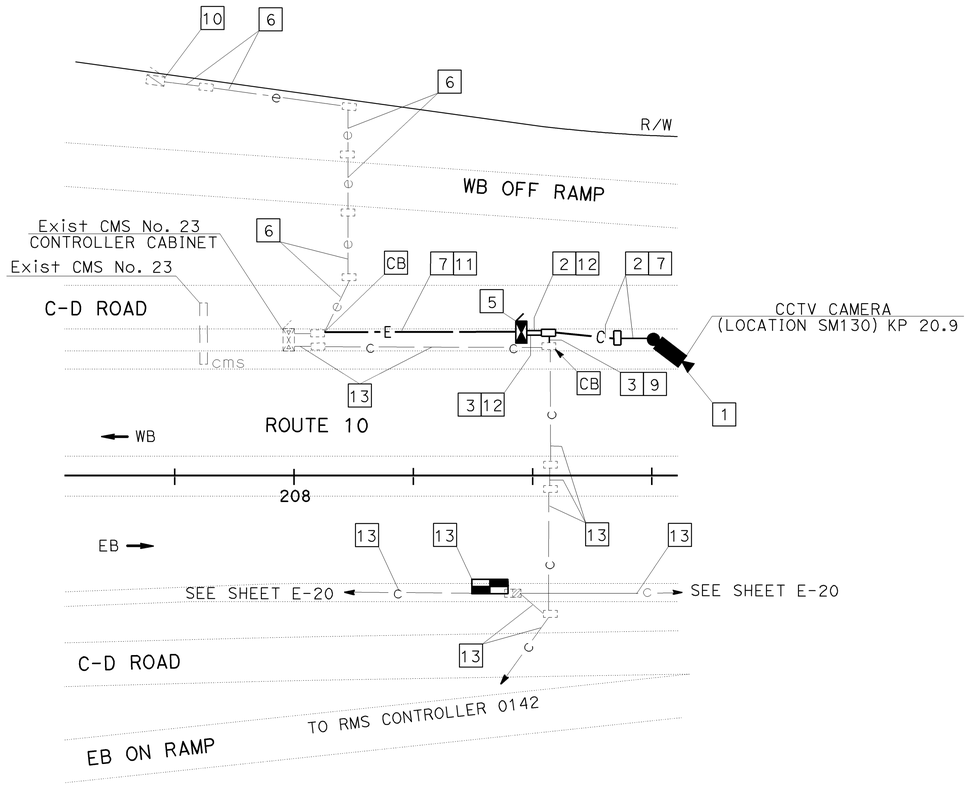
DATE	REVISED BY
12/04	DATE REVISED
	12/04
SL	CALCULATED/ DESIGNED BY
JT	CHECKED BY
SUNG LEE	PROJECT ENGINEER

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



PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON NEW CCTV CAMERA POLE TYPE CCTV 25 ON NEW FOUNDATION.
2. INSTALL CCTV WIRING. SEE TABLE 1 ON SHEET E-1. FOR WIRING DETAILS, SEE SHEET E-48 FOR DETAILS.
3. INSTALL 12SMFO.
5. INSTALL CCTV EQUIPMENT IN MODEL 334-TV CONTROLLER CABINET ON NEW FOUNDATION. SEE SHEET E-47 AND E-51 FOR DETAILS.
6. ADD 2#6 POWER WIRES AND 1#8 BONDING WIRE IN EXISTING CONDUIT.
7. TRENCH AND INSTALL 53C IN ASPHALT. SEE SHEET E-43 FOR DETAILS.
9. TRENCH AND INSTALL 78C IN ASPHALT. SEE SHEET E-43 FOR DETAILS.
10. INSTALL 30 A, 120 V, 1P CIRCUIT BREAKER FOR CCTV MODEL 334 CABINET IN EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE. TERMINATE 2#6 POWER CABLES.
11. INSTALL 2#6 POWER WIRE AND 1#8 BONDING WIRE.
12. TRENCH AND INSTALL 103C IN ASPHALT. SEE SHEET E-43 FOR DETAILS.
13. SHOWN FOR REFERENCE ONLY.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM130)

SCALE 1:500

E-39

LAST REVISION 00-00-00 | DATE PLOTTED => 28-APR-2006 | TIME PLOTTED => 11:54

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

USERNAME => trstrk
DGN FILE => 718210ua039.dgn

CU 07388

EA 182101

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	59	91

Leesunghwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
Exp. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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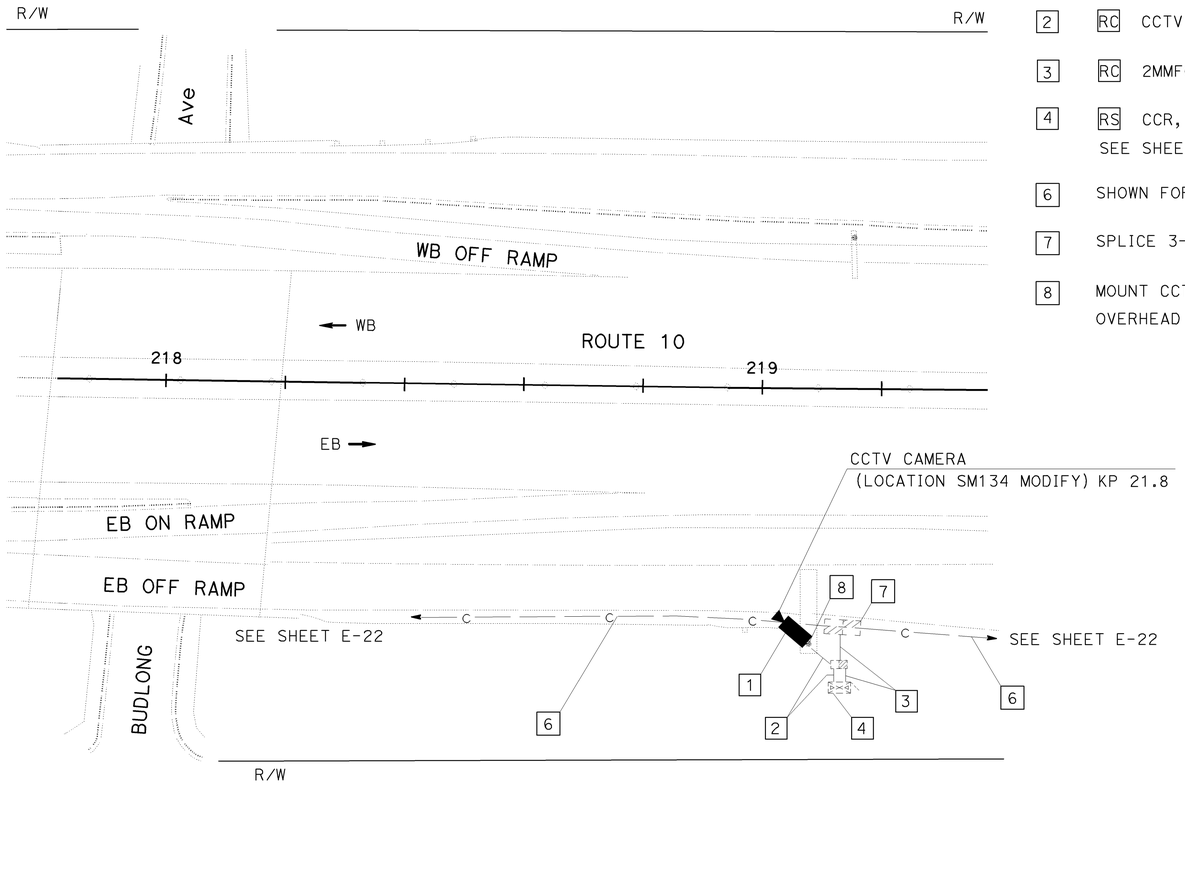


PROJECT NOTES: (THIS SHEET ONLY)

1. RS EXISTING CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT. INSTALL NEW CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT ON EXISTING SIGN STRUCTURE.
2. RC CCTV WIRING. SEE TABLE 1 ON SHEET E-1. INSTALL NEW CCTV WIRING. SEE SHEET E-48 FOR DETAILS.
3. RC 2MMFO. INSTALL 12SMFO.
4. RS CCR, MODEM AND VIDEO TRANSMITTER. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
6. SHOWN FOR REFERENCE ONLY.
7. SPLICE 3-12SMFO WITH 72SMFO.
8. MOUNT CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON POLE EXTENSION TYPE CCTV 5 ON EXISTING OVERHEAD SIGN. SEE REVISED STANDARD PLANS ES-16B FOR DETAILS.

FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.

CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM134 MODIFY)

SCALE 1:500

E-40

	DATE	REVISED BY
	12/04	DATE REVISED
CALCULATED/DESIGNED BY	SL	
CHECKED BY	JT	12/04

PROJECT ENGINEER
SUNG LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

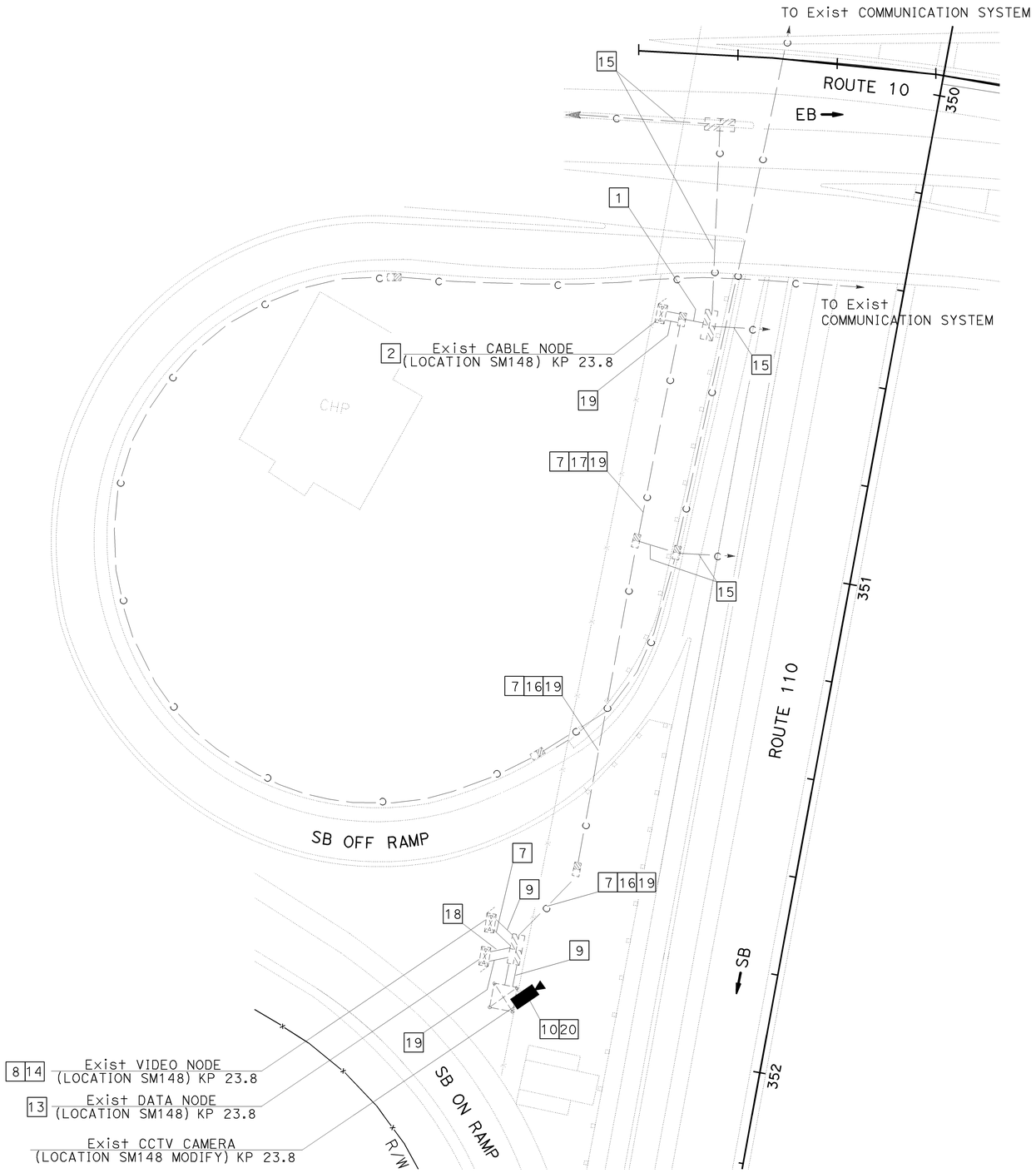
LAST REVISION 00-00-00
DATE PLOTTED => 28-APR-2006
TIME PLOTTED => 12:28

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

USERNAME => trstrk
DGN FILE => 718210ua040.dgn

CU 07388

EA 182101



FOR RIGHT OF WAY AND ACCESS DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,101	Var	60	91

Leesungkwan
REGISTERED ELECTRICAL ENGINEER

4-24-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SUNG LEE
No. E16249
EXP. 12/31/06
ELECTRICAL
STATE OF CALIFORNIA

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PROJECT NOTES: (THIS SHEET ONLY)

1. INSTALL 2-72SMFO.
2. INSTALL 4 OF 144-FDU. TERMINATE 72SMFO, 12SMFO AND OTHER EXISTING CABLES.
7. RC 8MMFO. REMAINING CABLES TO REMAIN.
8. RS CCTV CAMERA ASSEMBLY, CCR, VIDEO TRANSMITTER AND MODEM. INSTALL NEW CCTV EQUIPMENT. SEE SHEET E-51 FOR DETAILS.
9. RC CCTV WIRING. SEE TABLE 1 ON SHEET E-1. INSTALL NEW CCTV WIRING. SEE SHEET E-48 FOR DETAILS.
10. RS CCTV CAMERA ASSEMBLY WITH PAN/TILT UNIT.
13. RS D4 CHANNEL BANK, DS-1 OPTICAL MODEM. FURNISH AND INSTALL NEW D4 CHANNEL BANK, DS-1 OPTICAL MODEM, FOAM, FOCM, CCM AND 2 OF 144-FIBER FDU IN EXISTING CONTROLLER CABINET. SEE SHEET E-53 FOR DETAILS. TERMINATE 2-72SMFO AND 2-12SMFO.
14. RS VIDEO MULTIPLEXER AND VIDEO RECEIVERS. FURNISH AND INSTALL NEW VIDEO MULTIPLEXER, VIDEO RECEIVERS, FOAM, RS232 MODEM AND 2 OF 144-FIBER FDU IN EXISTING CONTROLLER CABINET. SEE SHEET E-52 FOR DETAILS. TERMINATE 72SMFO.
15. SHOWN FOR REFERENCE ONLY.
16. INSTALL 2-12SMFO.
17. INSTALL 12SMFO.
18. INSTALL 2-12SMFO AND 72SMFO.
19. INSTALL 72SMFO.
20. INSTALL NEW CCTV CAMERA ASSEMBLY/SUPPORT AND PAN/TILT UNIT ON NEW MOUNTING ON EXISTING TOWER OR AS DIRECTED BY THE ENGINEER.

ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE NOTED

CABLE NODE (LOCATION SM148 MODIFY)
VIDEO NODE (LOCATION SM148 MODIFY)
DATA NODE (LOCATION SM148 MODIFY)
CLOSED CIRCUIT TELEVISION CAMERA (LOCATION SM148 MODIFY)

SCALE 1:500

E-41

DATE	REVISED BY	CALCULATED/ DESIGNED BY	PROJECT ENGINEER
12/04	SL	CHECKED BY	SUNG LEE
12/04	JT		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

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

USERNAME => trienard
DGN FILE => 718210ua041.dgn

CU 07388

EA 182101

LAST REVISION 00-00-00 DATE PLOTTED => 28-APR-2006 TIME PLOTTED => 13:09

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,60,90,101, 105,134,170,405,605	Var	1100A	1697

Jacqueline C Tan 5-15-03
REGISTERED ELECTRICAL ENGINEER

2-2-04
PLANS APPROVAL DATE

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

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2 Caltrans Metric

AS-BUILT
Contract No. 07- **1178U4**
Resident Engineer: **J. VENTOCILLA**
Completion Date: **06/10/2010**

GENERAL NOTE: (THIS SHEET ONLY)

1. CMS No. SD 245, CCTV CAMERA AND CMS No. MA019 SHALL BE INSTALLED AND TESTED FOR THE OPERATION PRIOR TO SOUNDWALL AND WIDENING CONSTRUCTION OF THE PROJECT. REFER TO SHEETS E-98, E-100 AND E-101.

NOTES: (THIS SHEET ONLY)

[8] 78C, 4#2, 2#6

[9] 78C, 6P22, 4P18

[10] 41C, 6P22

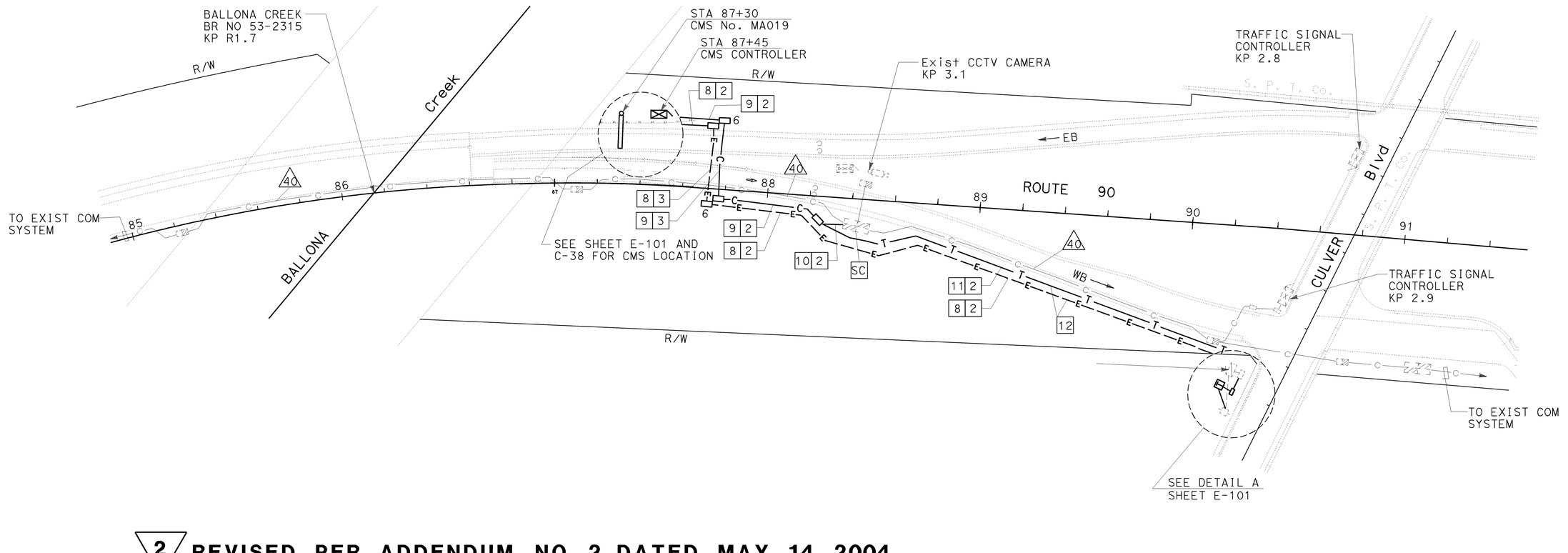
[11] 41C, 4P18

[12] INSTALL CONDUITS IN THE SAME TRENCH

[13] INSTALL 3"C TYPE H ON SERVICE POLE PER TELEPHONE COMPANY REQUIREMENTS (WIRES BY OTHERS)

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUIT AND CONDUCTOR TYPE	FUNCTION	RUN △40			
50P22 CABLE	VOICE/DATA	1(E)			
24SMFO CABLE	VOICE/DATA		1(E)		
12SMFO CABLE	VIDEO DISTRIBUTION			1(E)	
INNERDUCT(SIZE 32)			1(E)	1(E)	
CONDUIT SIZE		103(E)			103(E)

(E) EXISTING CONDUIT OR CONDUCTORS



2 **REVISED PER ADDENDUM NO. 2 DATED MAY 14, 2004**

CMS No. MA019

SCALE 1:1000

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-47.

E-99A

DATE	REVISED BY	DATE REVISED
	HIEU LUU	JACQUELINE TAN

CALCULATED/DESIGNED BY: HIEU LUU
CHECKED BY: JACQUELINE TAN
PROJECT ENGINEER: HIEU LUU

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

LAST REVISION 00-00-00
DATE PLOTTED => 22-MAR-2011
TIME PLOTTED => 12:50

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 10 20 30 40

USERNAME => s110796
DGN FILE => 71178uu146a.dgn

CU 07223

EA 1178U1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	5,10,60,90,101, 105,134,170,405,605	Var	1101A	1697

Jacqueline C Tan 5-15-03
REGISTERED ELECTRICAL ENGINEER

2-2-04
PLANS APPROVAL DATE

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

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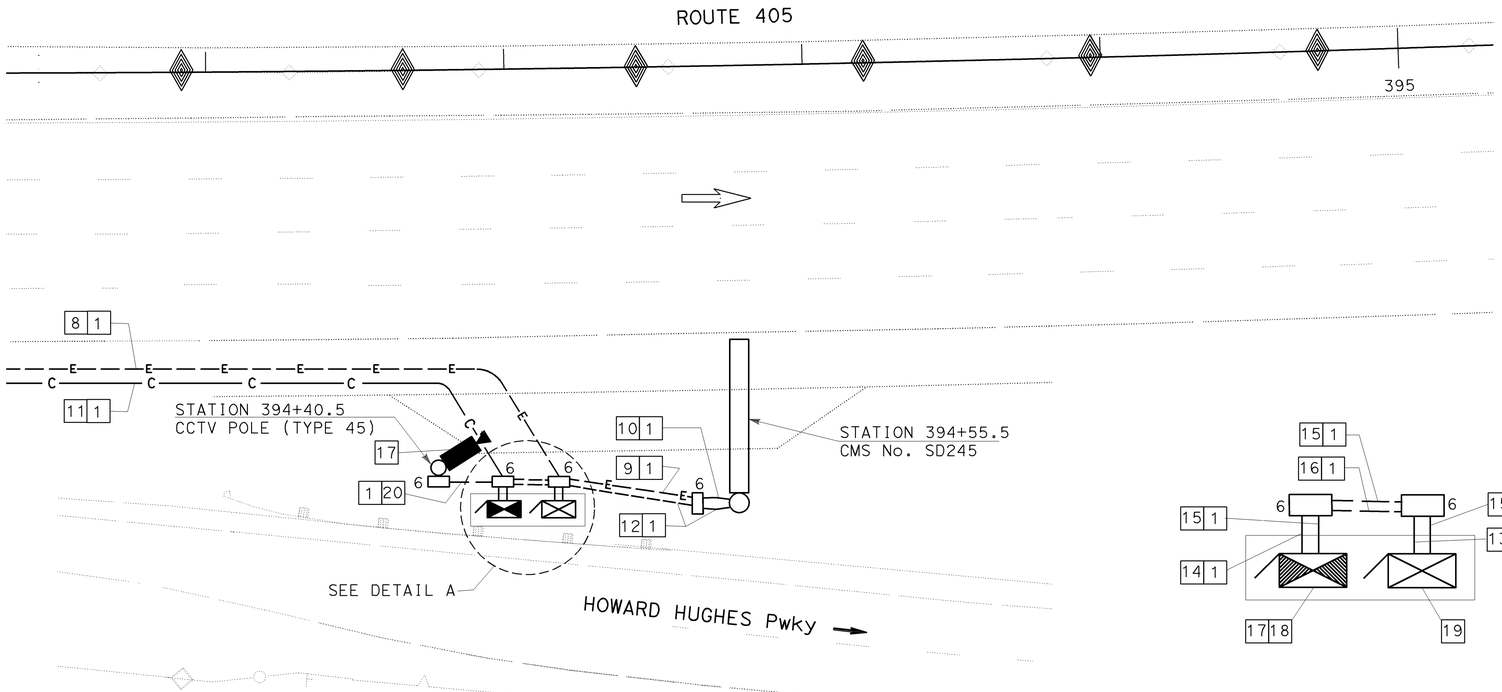
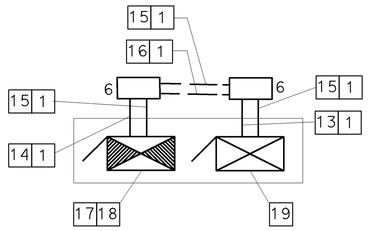
2

AS-BUILT
Contract No. 07- **1178U4**
Resident Engineer: **J. VENTOCILLA**
Completion Date: **06/10/2010**



CCTV CAMERA & CMS No. SD245
(LOCATION SD245)
NO SCALE



DETAIL A
NO SCALE

NOTES: (THIS SHEET ONLY)

8 78C, 4#2, 4#4

9 78C, 4#2

10 78C, 4#2, 1#4 GND

11 78C, (2)6P22, 4P18, 2SMFO, INNERDUCT (SIZE 32)

12 78C, 6P18, 24P18

13 103C, 6P22, 4P18, CMS CONTROL CABLE (6P18, 24P18)

14 103C, 6P22, 2SMFO, INNERDUCT (SIZE 32), CCTV WIRING (SEE TABLE 1, E-1)

15 103C, 2#4

16 103C, 6P22, 4P18

17 INSTALL CCTV CAMERA POLE ON NEW FOUNDATION. SEE SHEET E-90, C-38, AND C-39 FOR DETAILS. INSTALL CCTV CAMERA ASSEMBLY AND PAN/TILT UNIT ON POLE.

18 INSTALL TYPE 334-TV CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE CAMERA CONTROL RECEIVER AND SINGLE VIDEO TRANSMITTER. SEE SHEETS E-91 FOR DETAILS.

19 INSTALL TYPE 334-CMS CABINET ON NEW FOUNDATION. CABINET SHALL INCLUDE MODEL 170 CONTROLLER ASSEMBLY. SEE SHEETS E-89 AND E-91 FOR DETAILS.

20 78C, CCTV WIRING (SEE TABLE 1, E-47)

2 **REVISED PER ADDENDUM NO. 2 DATED MAY 14, 2004**

CMS No. SD245
CCTV CAMERA SD245
SCALE 1:200

E-100A

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY: HIEU LUU
CHECKED BY: JACQUELINE TAN

PROJECT ENGINEER: HIEU LUU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ITS DEVELOPMENT

LAST REVISION 00-00-00 DATE PLOTTED => 22-MAR-2011 TIME PLOTTED => 12:50

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 10 20 30 40

USERNAME => s110796
DGN FILE => 71178uu147a.dgn

CU 07223

EA 1178U1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	24.6/25.7	161	356

REGISTERED ELECTRICAL ENGINEER

7-27-98
PLANS APPROVAL DATE

ARIAN ABRISHAMI No. 14694 Exp. 6/30/99 ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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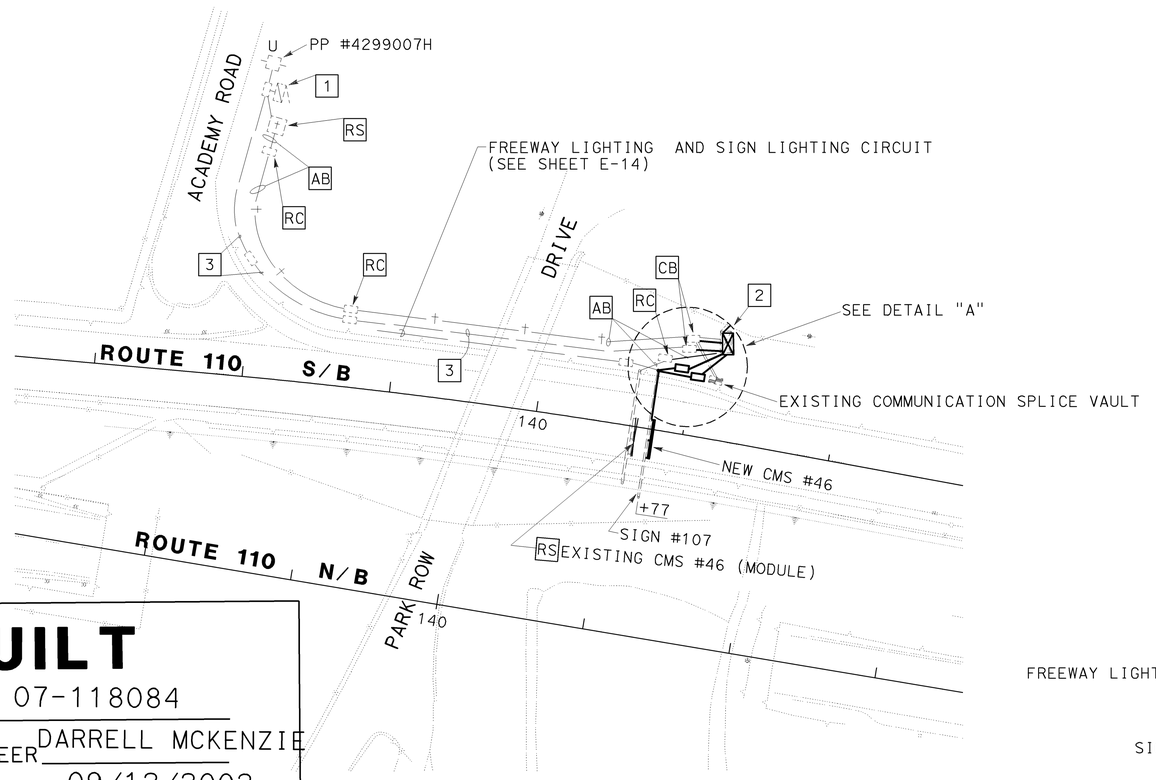
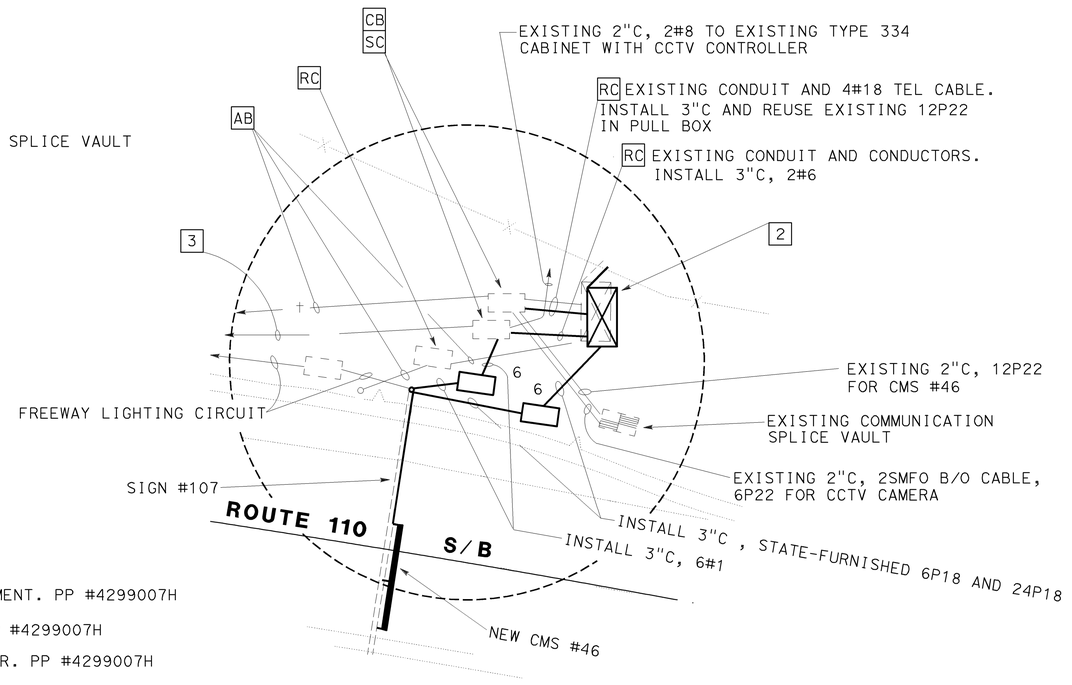
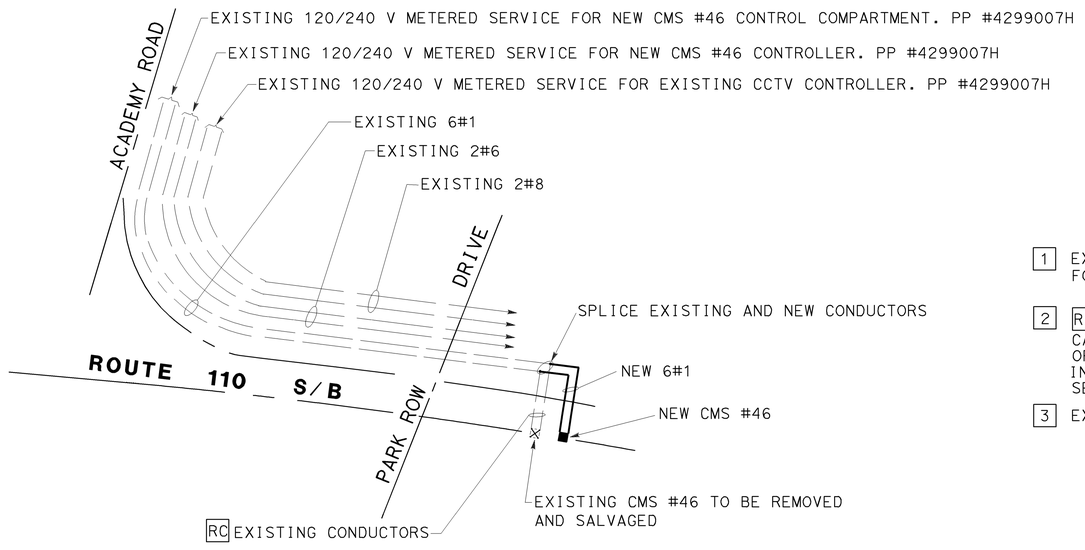




DETAIL "A"
NO SCALE

AS BUILT

CONTRACT No. 07-118084
RESIDENT ENGINEER DARRELL MCKENZIE
DATE ACCEPTED 09/12/2002



CMS #46 WIRING DIAGRAM
NO SCALE

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

PROJECT NOTES (FOR SHEET E-26)

1. EXISTING 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE FOR CHANGEABLE MESSAGE SIGN #46 AND CCTV CAMERA SYSTEM.
2. RS EXISTING CMS CONTROLLER CABINET AND INSTALL STATE-FURNISHED MODEL 334 CABINET ON NEW FOUNDATION FOR CMS #46. FOR CMS WIRING DETAILS, SEE SHEET E-27 OF ELECTRICAL PLANS.
   INSTALL 5-WAY 4 WIRE TELEPHONE BRIDGE AND 12-PAIR PROTECTED BLOCKS(FOR DETAILS, SEE SHEET E-28 OF ELECTRICAL PLANS).
3. EXISTING 3"C, 6#1, 2#6 AND 2#8.

CHANGEABLE MESSAGE SIGN PLAN
(MODIFY)

SCALE: 1"=50'

E-26

CALCULATED/ DESIGNED BY	CHECKED BY
PL	AA
DATE 3/98	3/98
REVISED BY	DATE REVISED

PROJECT ENGINEER
ARIAN ABRISHAMI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

LAST REVISION 00-00-00
DATE PLOTTED => 17-DEC-2010
TIME PLOTTED => 10:42

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

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DGN FILE => 711808u26.dgn

CU 07381

EA 118081

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u24.dgn DATE: Wed Aug 8 2001 TIME: 10:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	110	21.4/30.5	64	109

Pat Sullivan
REGISTERED CIVIL ENGINEER

6-9-97
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAT SULLIVAN No. C30912 Exp. 3/31/00 CIVIL — STATE OF CALIFORNIA

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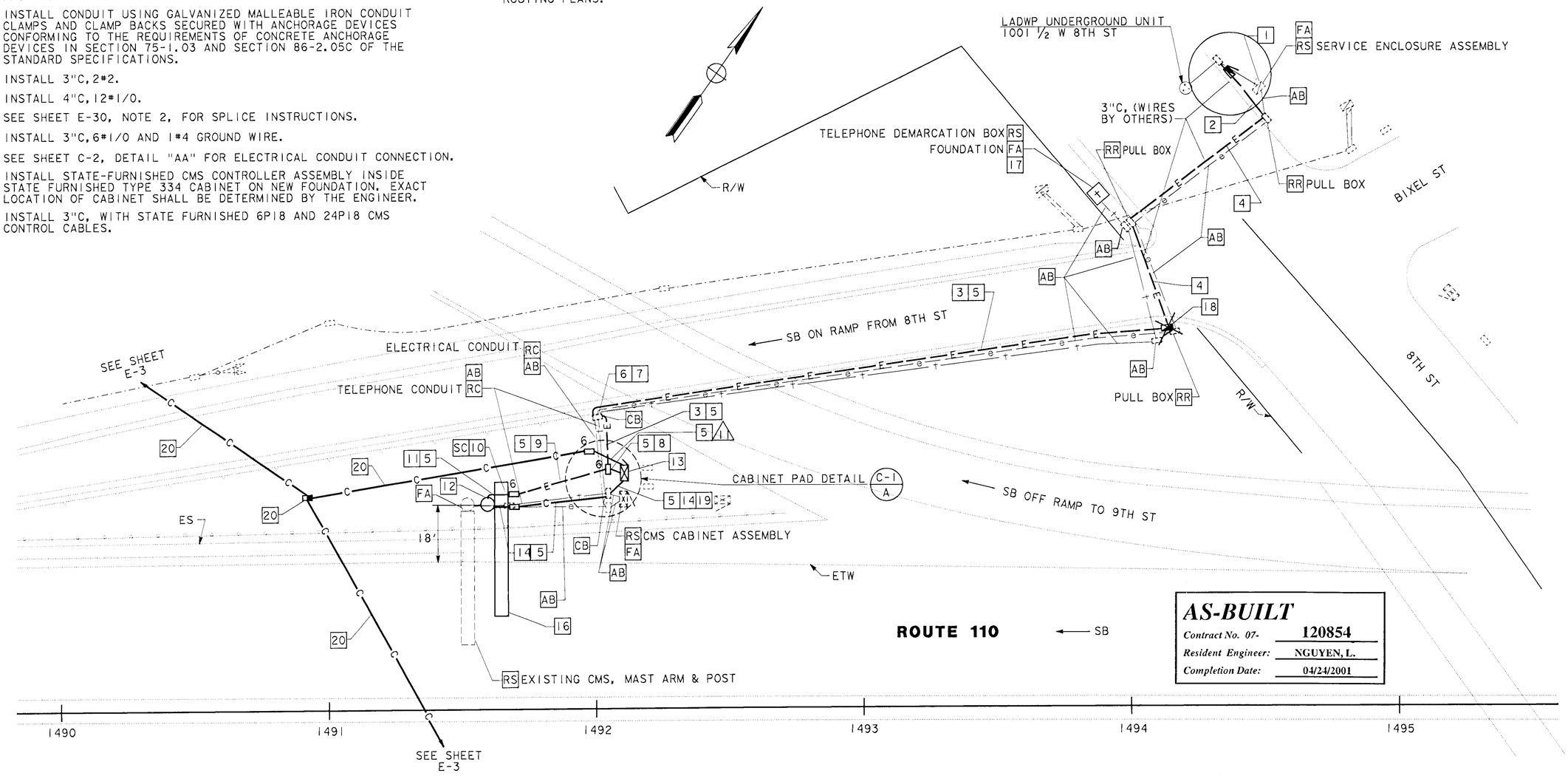
NOTES: (THIS SHEET ONLY)

1. REMOVE EXISTING 120/240V, 3 WIRE, METERED TYPE III BF SERVICE EQUIPMENT ENCLOSURE. THE CONTRACTOR SHALL CONTACT CALTRANS ENGINEER IN ADVANCE BEFORE REMOVING EXISTING SERVICE EQUIPMENT ENCLOSURE AND CONTACT DWP 48 HOURS IN ADVANCE TO TURN OFF POWER FROM POWER VAULT.
2. REMOVE AND REPLACE PCC SIDEWALK SECTIONS AS NECESSARY.
3. INSTALL 4"C, 12#1/0 AND 2#2.
4. JACK FOR CONDUIT BENEATH ROADWAY.
5. TRENCH FOR CONDUIT IN SOIL.
6. REMOVE EXISTING ELECTRICAL CONDUIT AND CONDUIT CLAMPS FROM RETAINING WALL.
7. INSTALL CONDUIT USING GALVANIZED MALLEABLE IRON CONDUIT CLAMPS AND CLAMP BACKS SECURED WITH ANCHORAGE DEVICES CONFORMING TO THE REQUIREMENTS OF CONCRETE ANCHORAGE DEVICES IN SECTION 75-1.03 AND SECTION 86-2.05C OF THE STANDARD SPECIFICATIONS.
8. INSTALL 3"C, 2#2.
9. INSTALL 4"C, 12#1/0.
10. SEE SHEET E-30, NOTE 2, FOR SPLICE INSTRUCTIONS.
11. INSTALL 3"C, 6#1/0 AND 1#4 GROUND WIRE.
12. SEE SHEET C-2, DETAIL "AA" FOR ELECTRICAL CONDUIT CONNECTION.
13. INSTALL STATE-FURNISHED CMS CONTROLLER ASSEMBLY INSIDE STATE FURNISHED TYPE 334 CABINET ON NEW FOUNDATION. EXACT LOCATION OF CABINET SHALL BE DETERMINED BY THE ENGINEER.
14. INSTALL 3"C, WITH STATE FURNISHED 6P18 AND 24P18 CMS CONTROL CABLES.
16. INSTALL STATE-FURNISHED MODEL 500 CMS ON NEW MAST ARM. SEE SHEETS C-2 THROUGH C-7 FOR POLE AND CMS MOUNTING DETAILS. NEW CMS POLE AND MAST ARM SHALL BE MOUNTED ON NEW FOUNDATION.
17. CONTRACTOR SHALL COORDINATE DISCONNECTION OF TELEPHONE SERVICE WITH CALTRANS ENGINEER AND PROVIDER OF TELEPHONE SERVICE.
18. INSTALL 120/240V, 3 WIRE, METERED, TYPE III BF SERVICE EQUIPMENT ENCLOSURE WITH 200A, 240V, 2P MAIN CIRCUIT BREAKER AND (4) 80A, 120V, 1P AND 30A, 120V, 1P CIRCUIT BREAKERS FOR CMS.
19. CONNECT 6P22 TO CMS CONTROLLER. USE CONDUIT FROM PB INTO CABINET.
20. INCLUDED IN CCTV AND COMMUNICATION SYSTEM ROUTING PLANS.

CONDUCTOR SCHEDULE		
CONDUCTOR TYPE	FUNCTION	RUN
6P22 CABLE	CONTROLLER DATA	1
	CONDUIT SIZE	2"



AS-BUILT
Contract No. 07- 120854
Resident Engineer: NGUYEN, L.
Completion Date: 04/24/2001

CHANGEABLE MESSAGE SIGN ELECTRICAL SYSTEM (CMS NO 10)

SCALE: 1" = 20'

WARNING

BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR MUST OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES BEFORE DOING ANY WORK ON CIRCUITS.

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
SEE SHEET E-1 FOR LEGEND.

E-24

CALCULATED/ DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE REVISED
		PRE 3/94	RJC 4/94	

DESIGN OVERSIGHT — PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

LAST REVISION 00-00-00

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

CU 07396	EA 120851

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

$$$$$$$$$$DONSPEC$$$$$$$$$$ $$$$$$SYTIME$$$$$$ $$$$$$USER$$$$$$

USER ID: GCruz@T7NT6023 FILE: f:\projects\120851_ua\ab\712085u24.dgn DATE: Wed Aug 8 2001 TIME: 10:29

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

PROJECT NOTES: (THIS SHEET ONLY)

2 2-48SMFO AND 72SMFO IN 103C WITH 4 SIZE 25 INNERDUCTS. 103C, MT.

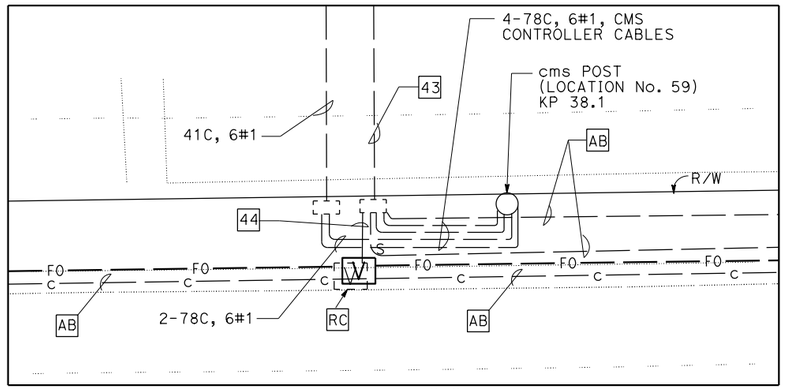
6 53C, 12SMFO.

30 INSTALL FOTM, FDU AND INTERFACE CABLES IN EXISTING CABINET. CONNECT 12SMFO.

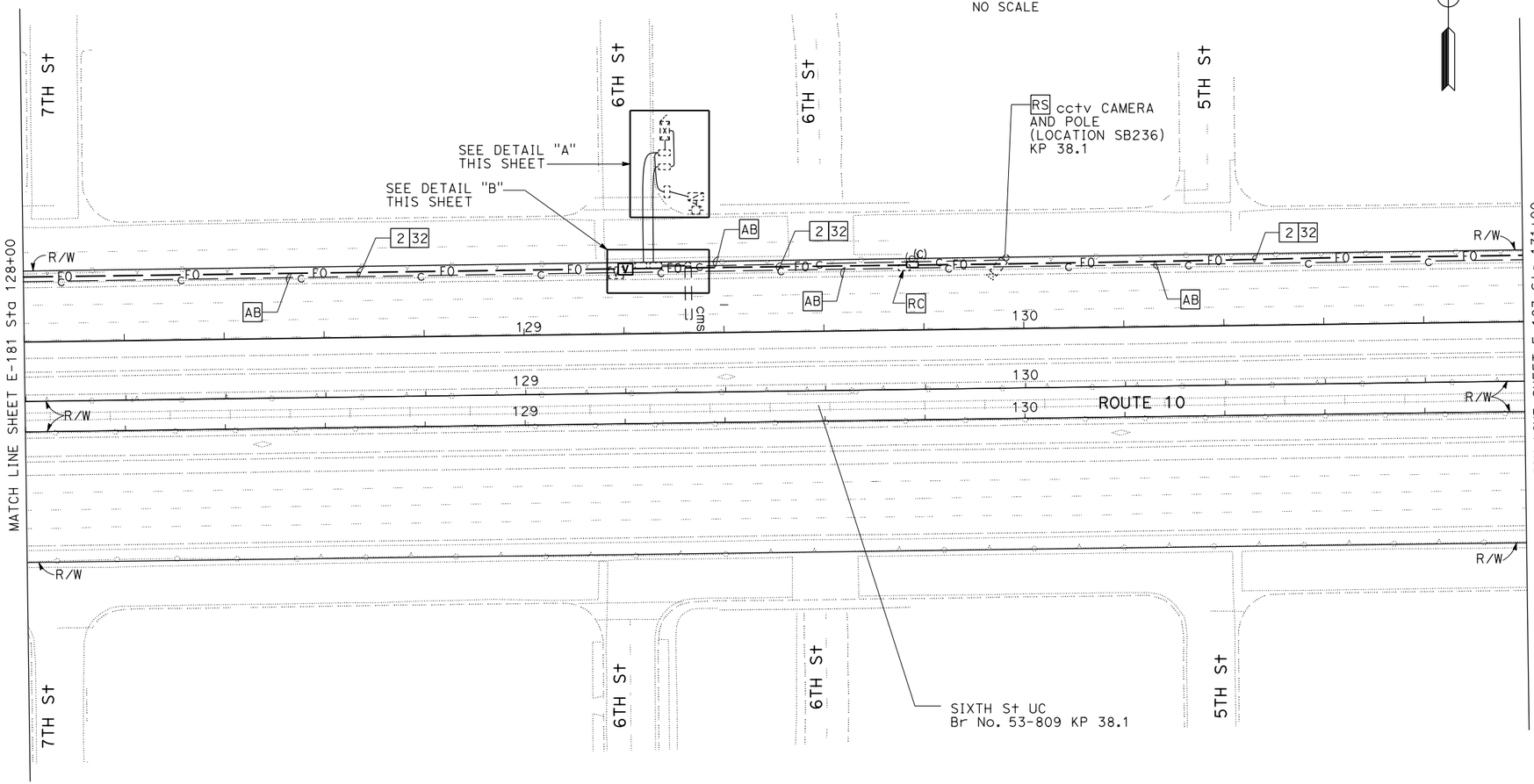
32 TRENCH AND INSTALL CONDUIT(S) IN PAVED SHOULDER.

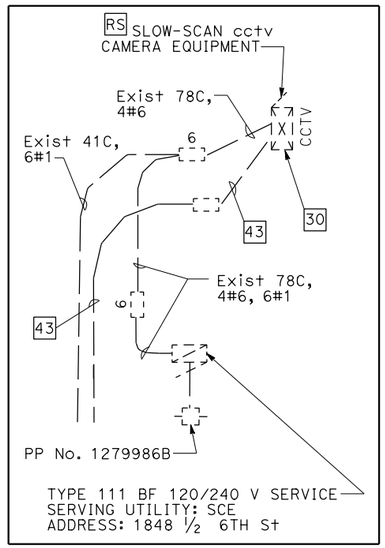
43 78C, RC 12P22, 2SMFO AND cctv WIRING. ADD 12SMFO. REUSE CMS CONTROLLER CABLES.

44 EXISTING 78C, RC 12P22 AND 2SMFO. ADD 12SMFO.



DETAIL "B"
NO SCALE





DETAIL "A"
NO SCALE

AS-BUILT

Contract No. 07- 07-166814
Resident Engineer: MICHAEL CHOU
Completion Date: 03/01/2013

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

MODIFY COMMUNICATION SYSTEM

SCALE 1:500

FOR SCHEMATIC SEE SHEET E-245.
FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE SHEET E-153.
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-182

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	29.5/50.4	1146	1317

Conway Chu 1/17/08
REGISTERED ELECTRICAL ENGINEER

5-5-08
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CONWAY CHU — No. E 15305 — EXP. 03-31-09 ELECTRICAL — STATE OF CALIFORNIA

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Caltrans Metric

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: CONWAY CHU
CHECKED BY: JACQUELINE C. TAN
FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS

LAST REVISION DATE PLOTTED => 02-APR-2014
00-00-00 TIME PLOTTED => 15:28

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => s135033
DGN FILE => 716681ua182.dgn
CU 07388
EA 166811

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	110,405, 605,710	Var	45	72

Jacqueline C Tan
REGISTERED ELECTRICAL ENGINEER

4-23-01
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — TAN, JACQUELINE — No. E015611 — Exp. 12-31-01 — ELECTRICAL — STATE OF CALIFORNIA

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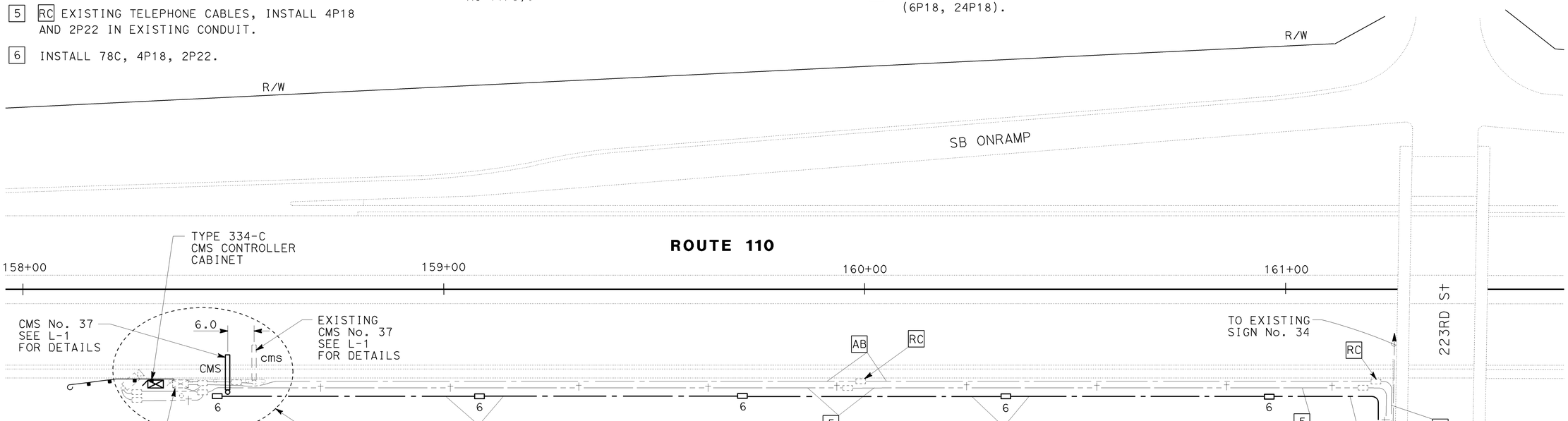
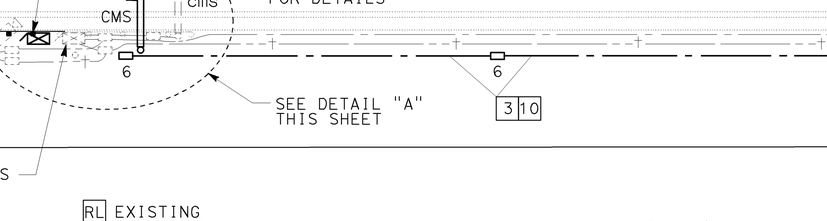
Caltrans now has a web site! To get to the web site, go to: http://www.dot.ca.gov

Caltrans Metric

NOTES (THIS SHEET)

1. RC EXISTING CIRCUIT BREAKERS FOR EXISTING CMS PANEL, CMS CONTROLLER CABINET AND SLOW SCAN CCTV CAMERA.
2. EXISTING 120/240 V, 100 A TYPE III-BF SERVICE EQUIPMENT ENCLOSURE, ADD:
   (4) 1P-40 A CB FOR CMS PANEL
   (1) 1P-30 A CB FOR CMS CONTROLLER CABINET
3. INSTALL 103C, 12#1/0, 2#6.
4. REUSE EXISTING TELEPHONE DEMARCATION BOX AND TELEPHONE CIRCUIT FOR CMS AND SLOW SCAN CCTV CAMERA. CONNECT 4P18 AND 2P22 IN EXISTING TERMINAL BLOCK.
5. RC EXISTING TELEPHONE CABLES, INSTALL 4P18 AND 2P22 IN EXISTING CONDUIT.
6. INSTALL 78C, 4P18, 2P22.
7. INSTALL 78C, 3#12.
8. INSTALL 78C, 2#6, 3#12.
9. TRENCH AND INSTALL CONDUIT IN SIDEWALK.
10. TRENCH AND INSTALL CONDUIT IN SOIL.
11. INSTALL STATE-FURNISHED TYPE 334-C CMS CONTROLLER CABINET AND EQUIPMENT PER SHEET E-9 ON NEW TYPE 334 FOUNDATION.
12. INSTALL 78C, CAMERA CONTROL CABLE (1-COAX TYPE RG-11/U) AND STATE-FURNISHED CMS CONTROL CABLES (6P18, 24P18).
13. INSTALL 78C, CAMERA CONTROL CABLE (1-COAX TYPE RG-11/U).
14. RL EXISTING SLOW SCAN TELEPHONE LINE VIDEO TRANSMITTER IN EXISTING CMS CONTROLLER CABNET. RC EXISTING CMS CONTROLLER CABINET AND CMS EQUIPMENT.
15. REINSTALL EXISTING SLOW SCAN PHONE LINE VIDEO TRANSMITTER IN STATE-FURNISHED TYPE 334-C CMS CONTROLLER CABINET.
16. INSTALL 78C, 12#1/0. FOR WIRING DETAILS SEE SHEET E-10.
17. INSTALL 78C, STATE-FURNISHED CMS CONTROL CABLES (6P18, 24P18).





DETAIL A
NO SCALE

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT THE DISTRICT OFFICE.

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
FOR LEGEND AND GENERAL NOTES SEE SHEET E-1.
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

AS-BUILT
Contract No. 07- 195324
Resident Engineer: LUKE NGUYEN
Completion Date: 07/26/02

CHANGEABLE MESSAGE SIGN ELECTRICAL SYSTEM
(MODIFY)
(CMS No. 37)

SCALE 1:500

E-2

DATE	REVISED BY	DATE REVISED
CALCULATED/ DESIGNED BY	CANDACE FUNG	DAVID PADILLA
CHECKED BY		

PROJECT ENGINEER: CANDACE FUNG

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ITS DEVELOPMENT

LAST REVISION 00-00-00 | DATE PLOTTED => 28-MAY-2009 | TIME PLOTTED => 13:24

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

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DGN FILE => 719532u02.dgn

CU 07388

EA 195321