

# **INFORMATION HANDOUT**

**For Contract No. 07-295504  
At 07-LA-101-1.8/8.4**

**Identified by  
Project ID 0713000014**

## **MATERIALS INFORMATION**

Fiber Optic System As-built Drawings

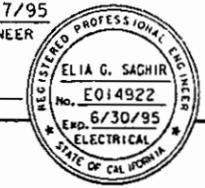






DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	68	154

2/17/95  
 REGISTERED ELECTRICAL ENGINEER



10-10-95  
 PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:  
 RAYTHEON INFRASTRUCTURE SERVICES, INC.  
 ABRATIOUE AND ASSOCIATES, INC.

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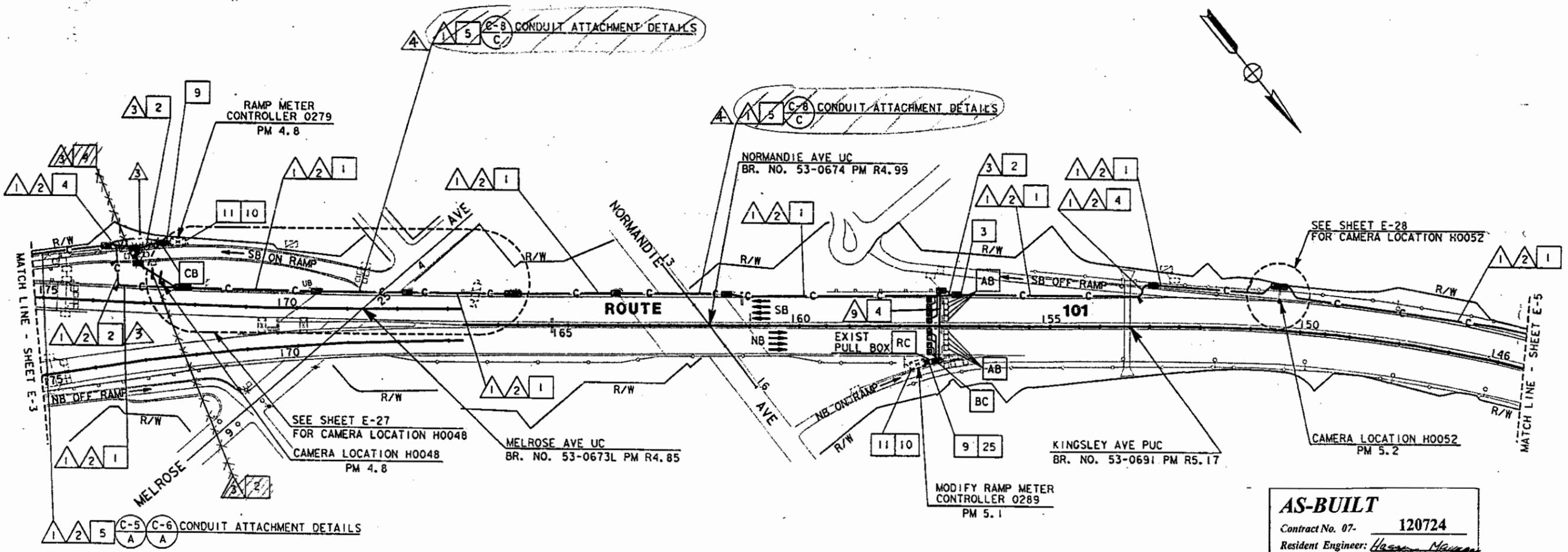
PROJECT NOTES: (THIS SHEET ONLY)

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

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)

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

\*\*EXISTING TO BE REUSED  
 CHANGED PER CCO #6



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

**LOOP DETECTOR,  
 CCTV AND COMMUNICATION SYSTEM  
 ROUTING**

SCALE: 1"=100'

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

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

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

CU 07387 EA 120721

REVISOR: ES 12/95  
 CHECKED BY: JZ 5/95  
 DATE REVISION: 12/95 5/95

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



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

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
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- 3 INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
- 4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
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- 11 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT. VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
- 25 ADD DETECTOR LOOP CABLE(S) TO EXISTING CONDUIT.
- 28 INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
- 32 INSTALL CONDUIT(S) IN TRENCH OVER UNDERGROUND STRUCTURE. MAINTAIN A MINIMUM OF 4 FEET FROM EDGE OF TRAVEL WAY. SEE SHEET E-52 FOR DETAILS.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)									
CONDUCTOR TYPE	FUNCTION								
50P22 CABLE	DATA/PHONE								
6P22 CABLE	DATA/PHONE								
48 SMFO CABLE	VIDEO/DATA								
12 SMFO CABLE	SH VIDEO								
DLC	RAMP/COUNT					2	6	8	9
	INNERDUCT	1/4"	1/4"						
CONDUIT	SIZE	4"	4"	2"	2"	2"	2"	2"	2"

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

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

10-10-95  
 PLANS APPROVAL DATE

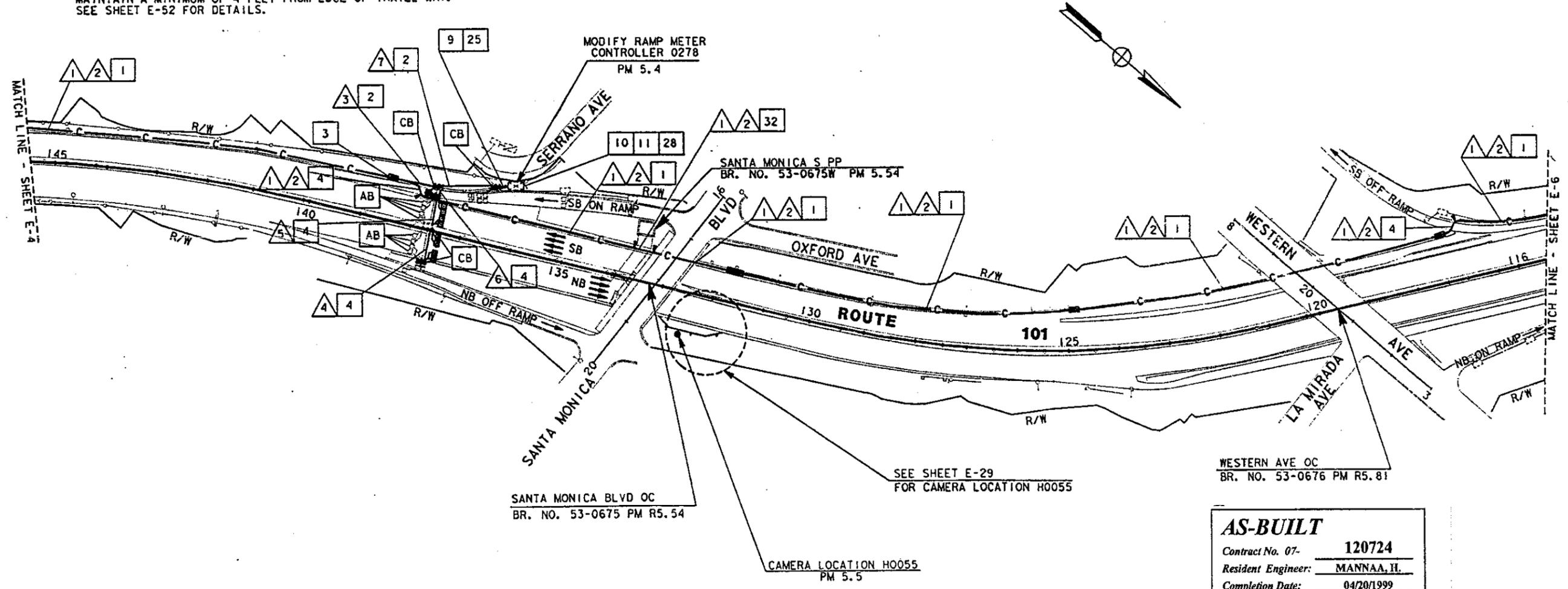
ELIA G. SAGHIR  
 No. E014922  
 Exp. 6/30/95  
 ELECTRICAL  
 STATE OF CALIFORNIA

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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REVISIONS: DATE 2/95 BY ES JZ DATE REVISIONS 5/95 BY JZ  
 PROJECT ENGINEER PAT SULLIVAN  
 DEPARTMENT OF TRANSPORTATION - STATE OF CALIFORNIA  
 Galtrans



**AS-BUILT**

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

**LOOP DETECTOR,  
CCTV AND COMMUNICATION SYSTEM  
ROUTING**

SCALE: 1"=100'

**E-5**

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



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

CU 07387 EA 120721

TIME PLOTTED => 17-OCT-1995 10:17

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

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

10-10-95  
 PLANS APPROVAL DATE

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

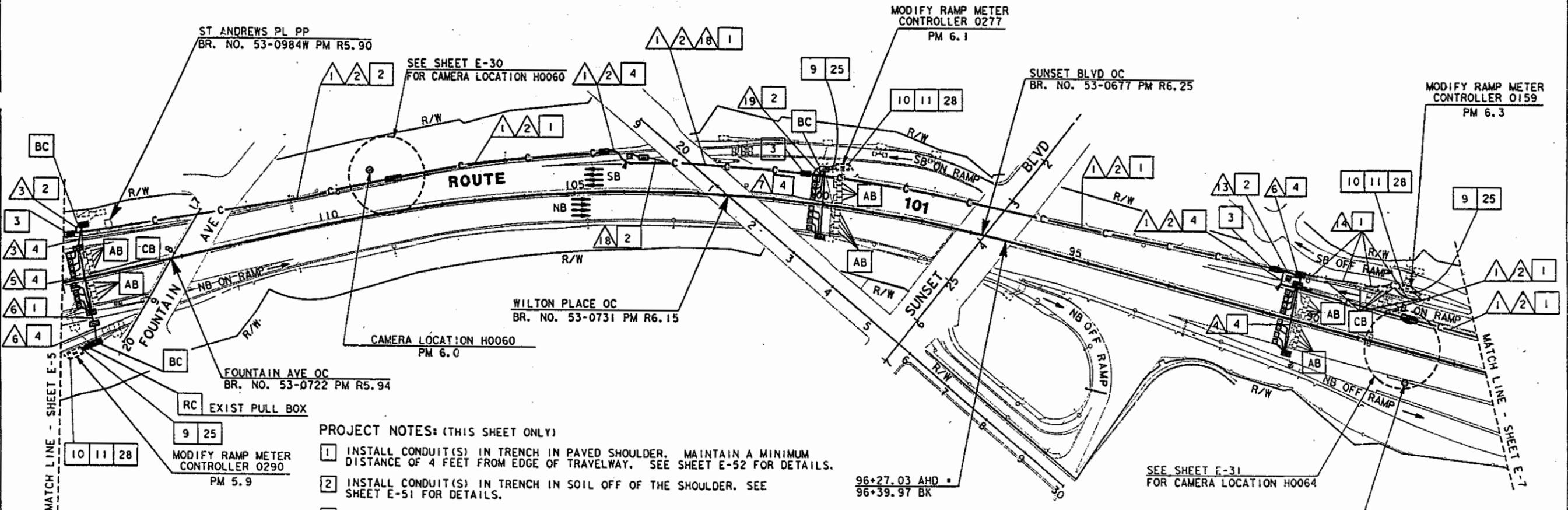
NATIONAL ENGINEERING TECHNOLOGY  
 14320 FIRESTONE BLVD., SUITE 100  
 LA MIRADA, CA 90638

IN ASSOCIATION WITH:  
 RAYTHEON INFRASTRUCTURE SERVICES, INC.  
 ABRATIOUE AND ASSOCIATES, INC.

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CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)											
CONDUCTOR TYPE	FUNCTION	1	2	3	4	5	6	7	8	9	10
50P22 CABLE	DATA/PHONE										
6P22 CABLE	DATA/PHONE										
48 SMFO CABLE	VIDEO/DATA										
12 SMFO CABLE	SH VIDEO										
DLC	RAMP/COUNT				4	4	8	4		9	1
	INNERDUCT	1 1/4"	1 1/4"								
CONDUIT	SIZE	4"	4"	2"	2"	2"	2"	2"	2"	2"	2"

REVISIONS:  
 DATE 2/7/95  
 DESIGNED BY ES  
 CHECKED BY JZ  
 PROJECT ENGINEER PAT SULLIVAN  
 DEPARTMENT OF TRANSPORTATION - STATE OF CALIFORNIA  
 00-00-00



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

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

**LOOP DETECTOR,  
 CCTV AND COMMUNICATION SYSTEM  
 ROUTING**  
 SCALE: 1"=100'

**E-6**

PROJECT NOTES: (THIS SHEET ONLY)

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)					
CONDUCTOR TYPE	FUNCTION				
50P22 CABLE	DATA/PHONE				
6P22 CABLE	DATA/PHONE				
48 SMFO CABLE	VIDEO/DATA				
12 SMFO CABLE	SH VIDEO				
DLC	RAMP/COUNT				
	INNERDUCT	1/4"	1/4"		
CONDUIT	SIZE	4"	4"	2"	2"

(E) - EXISTING CONDUIT OR CONDUCTOR

- 1 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
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- 5 INSTALL FIBERGLASS REINFORCED EPOXY (FRE) CONDUIT(S) ON STRUCTURE. SEE SHEETS C-4 TO C-11 FOR DETAILS.
- 9 ADD CABLE(S) AND CONNECT TO CONTROLLER.
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- 25 IDENTIFY AND **RC** EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	71	154

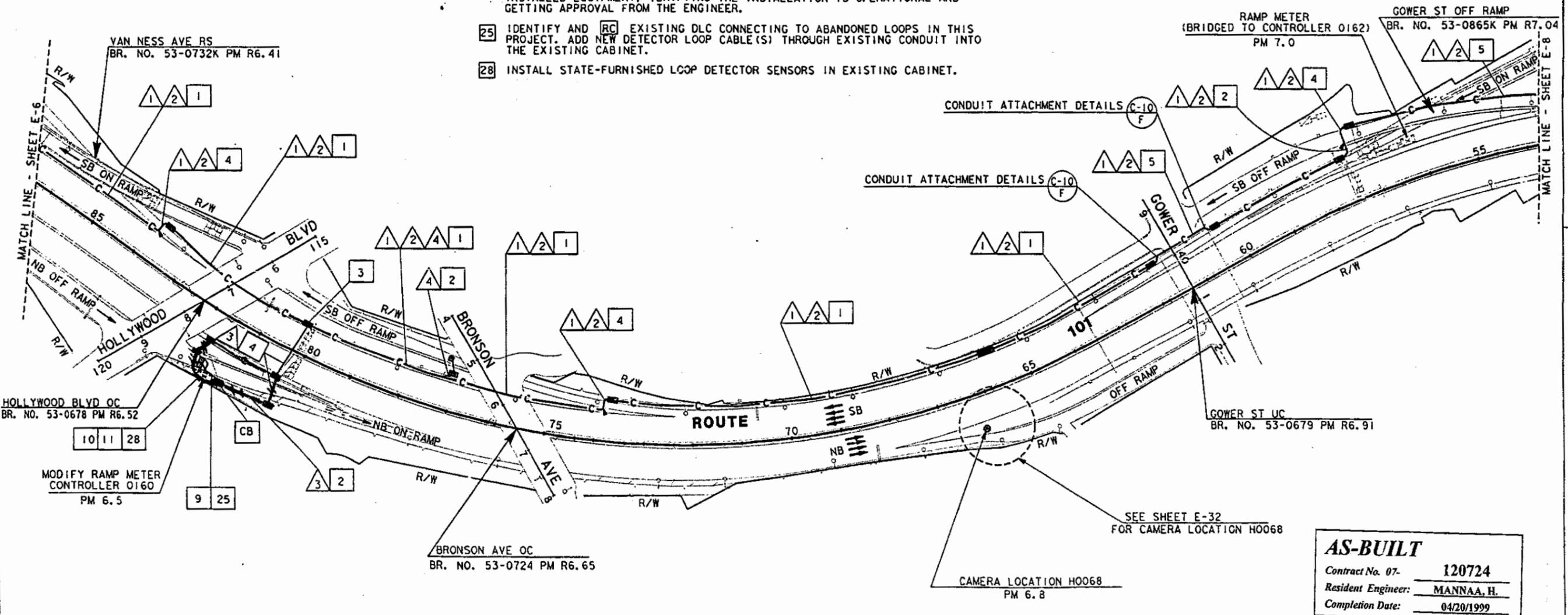
*Elia G. Saghia* 2/17/95  
 REGISTERED ELECTRICAL ENGINEER  
 No. E014922  
 Exp. 6/30/95  
 ELECTRICAL  
 STATE OF CALIFORNIA

10-10-95  
 PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:  
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**AS-BUILT**

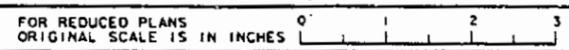
Contract No. 07- 120724  
 Resident Engineer: MANNA, H.  
 Completion Date: 04/20/1999

**LOOP DETECTOR,  
CCTV AND COMMUNICATION SYSTEM  
ROUTING**

SCALE: 1"=100'

**E-7**

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



USERNAME -> mikes1  
DGN FILE -> /usr/mikes1/P0/712072u07.dg

CU 07387 EA 120721

PROJECT ENGINEER: PAT SULLIVAN  
 DESIGNED BY: ES  
 CHECKED BY: JZ  
 DATE: 2/95  
 REVISIONS: 5/95  
 REVISIONS: 5/95

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 Caltrans

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

REVISOR: DATE: 2/95  
 REVISOR: DATE: 5/95  
 DESIGNED BY: ES  
 CHECKED BY: JZ  
 PROJECT ENGINEER: PAT SULLIVAN  
 DEPARTMENT OF TRANSPORTATION  
 STATE OF CALIFORNIA  
 Caltrans

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
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CIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	72	154

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



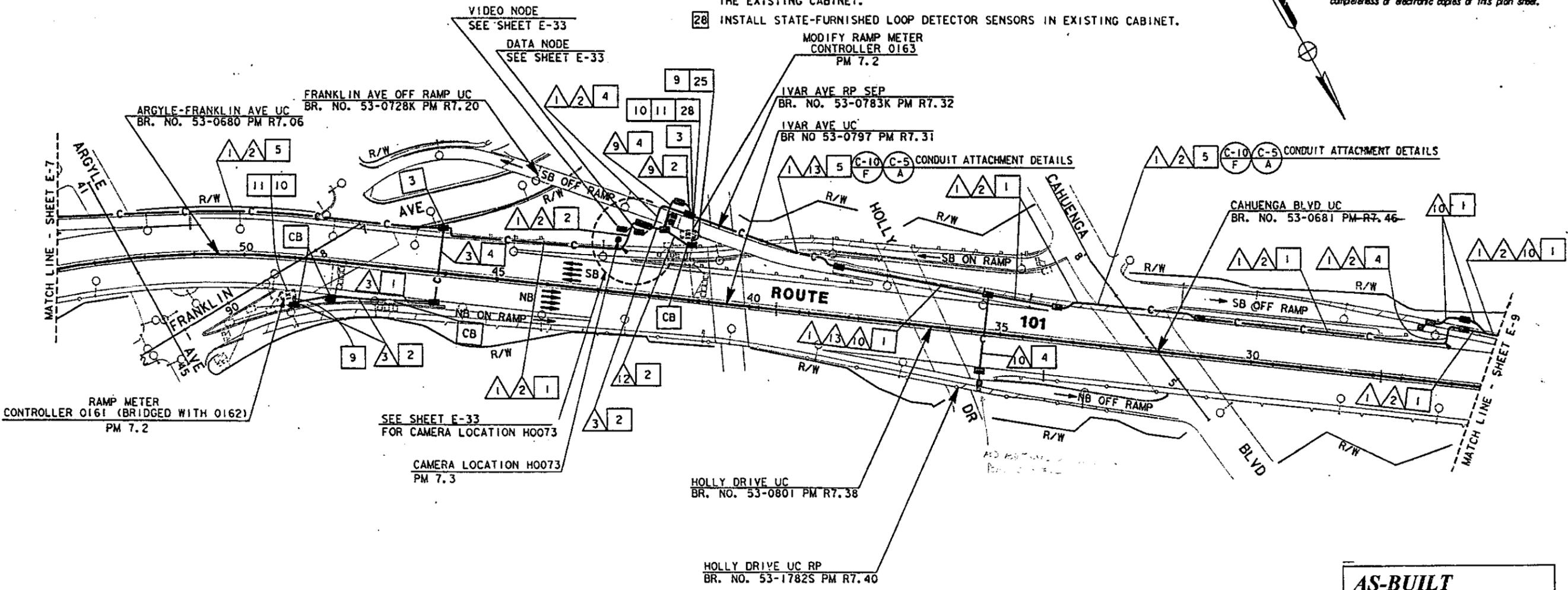
10-10-95  
 PLANS APPROVAL DATE

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

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CONDUCTOR TYPE	FUNCTION	1	2	3	8	9	10	12	13
50P22 CABLE	DATA /PHONE	1							
6P22 CABLE	DATA /PHONE			1				1	
48 SMFO CABLE	VIDEO/DATA	1							
12 SMFO CABLE	SH VIDEO		1		2				
DLC	RAMP/COUNT				1	1	1	3	
	INNERDUCT	1/4" 1/4"				1/4"		1/4" 1/4" 1/4"	
CONDUIT	SIZE	4"	4"	2"	2"	3"	2"	2"	4"



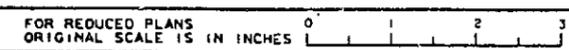
**AS-BUILT**  
 Contract No. 07- 120724  
 Resident Engineer: MANNAA, H.  
 Completion Date: 04/20/1999

**LOOP-DETECTOR,  
 CCTV AND COMMUNICATION SYSTEM  
 ROUTING**

SCALE: 1"=100'

**E-8**

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



USERNAME => mikes!  
 DGN FILE => /usr/mikes1/P0/712072u08.dg

CU 07387 EA 120721

TIME PLOTTED -> 17-OCT-1995 08:29

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



10-10-95  
PLANS APPROVAL DATE

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

IN ASSOCIATION WITH:  
RAYTHEON INFRASTRUCTURE SERVICES, INC.  
ABRATIOUE AND ASSOCIATES, INC.

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PROJECT NOTES: (THIS SHEET ONLY)

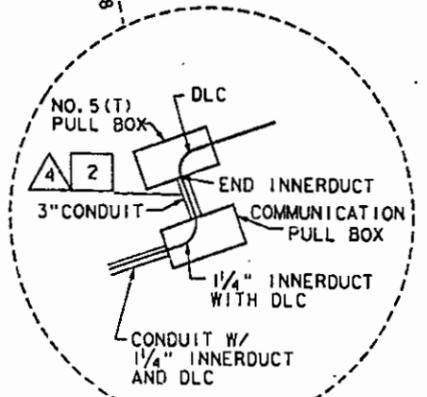
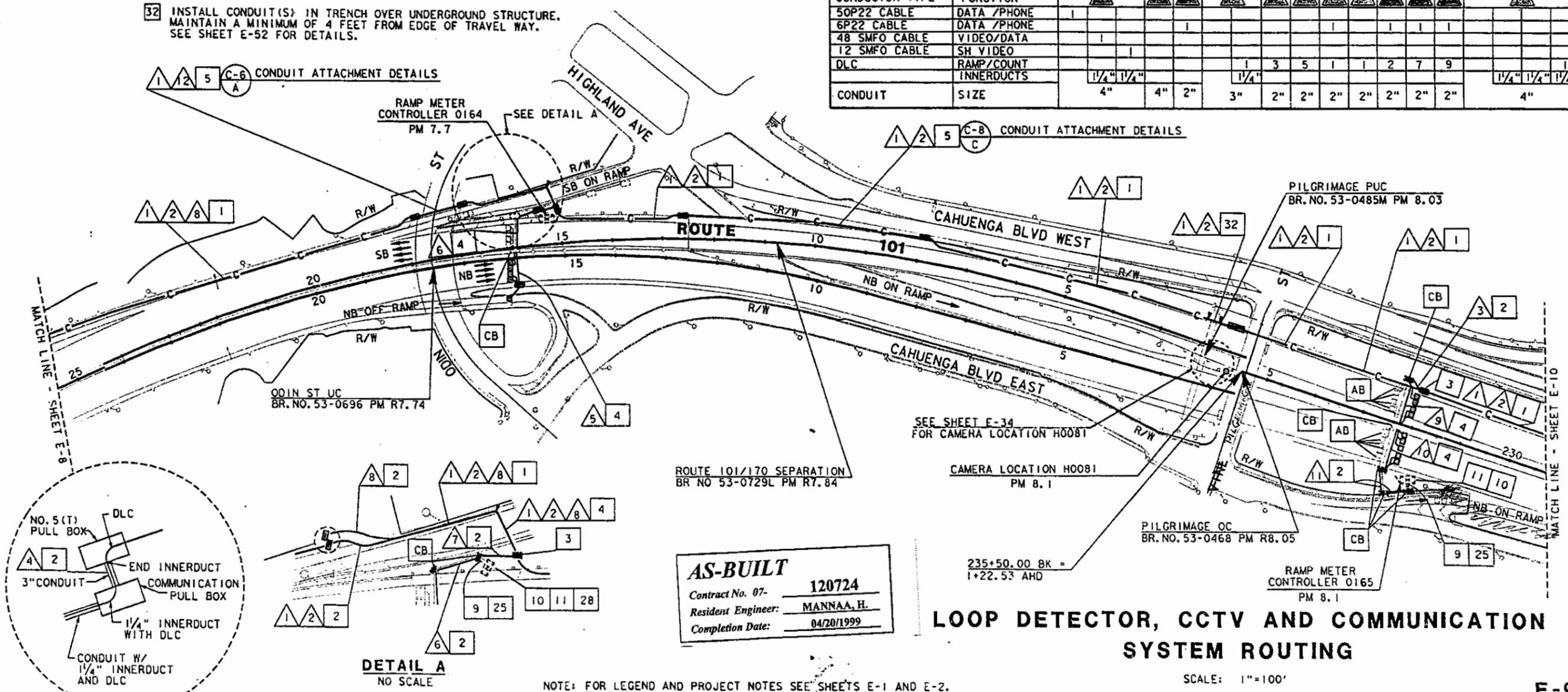
- 1 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
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- 28 INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
- 32 INSTALL CONDUIT(S) IN TRENCH OVER UNDERGROUND STRUCTURE. MAINTAIN A MINIMUM OF 4 FEET FROM EDGE OF TRAVEL WAY. SEE SHEET E-52 FOR DETAILS.



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

1 2 5 C-6 A CONDUIT ATTACHMENT DETAILS

1 2 5 C-8 C CONDUIT ATTACHMENT DETAILS



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

**LOOP DETECTOR, CCTV AND COMMUNICATION SYSTEM ROUTING**

SCALE: 1"=100'

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

REVISOR: ES 5/95  
DATE: 2/95  
DESIGNED BY: JZ  
CHECKED BY: JZ

PROJECT ENGINEER: PAT SULLIVAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
Caltrans

TIME PLOTTED: 17-OCT-1995 09:07  
LAST REVISION: 00-00-00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 PROJECT ENGINEER: PAT SULLIVAN  
 CHECKED BY: JZ  
 DATE REVISIONS: 2/95, 5/95

PROJECT NOTES: (THIS SHEET ONLY)

- 1 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
- 2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
- 4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
- 16 INSTALL TYPE 334 CABINET ON NEW FOUNDATION. INSTALL STATE-FURNISHED MODEL 170 CONTROLLER AND LOOP DETECTOR SENSORS. INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK. SEE SHEET E-59 AND SHEET E-60.

CONDUIT AND CONDUCTOR SCHEDULE (THIS SHEET ONLY)		1	2	3	4	5	6
CONDUCTOR TYPE	FUNCTION						
50P22 CABLE	DATA /PHONE	1					
6P22 CABLE	DATA /PHONE					1	1
48 SMFO CABLE	VIDEO/DATA	1					
12 SMFO CABLE	SH VIDEO		1				
*6	POWER				2		2
DLC	RAMP/COUNT				7		12
	INNERDUCT	1 1/4"	1 1/4"				
CONDUIT	SIZE	4"	4"	2"	2"	3"	3"

(E) - EXISTING CONDUIT OR CONDUCTOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	74	154

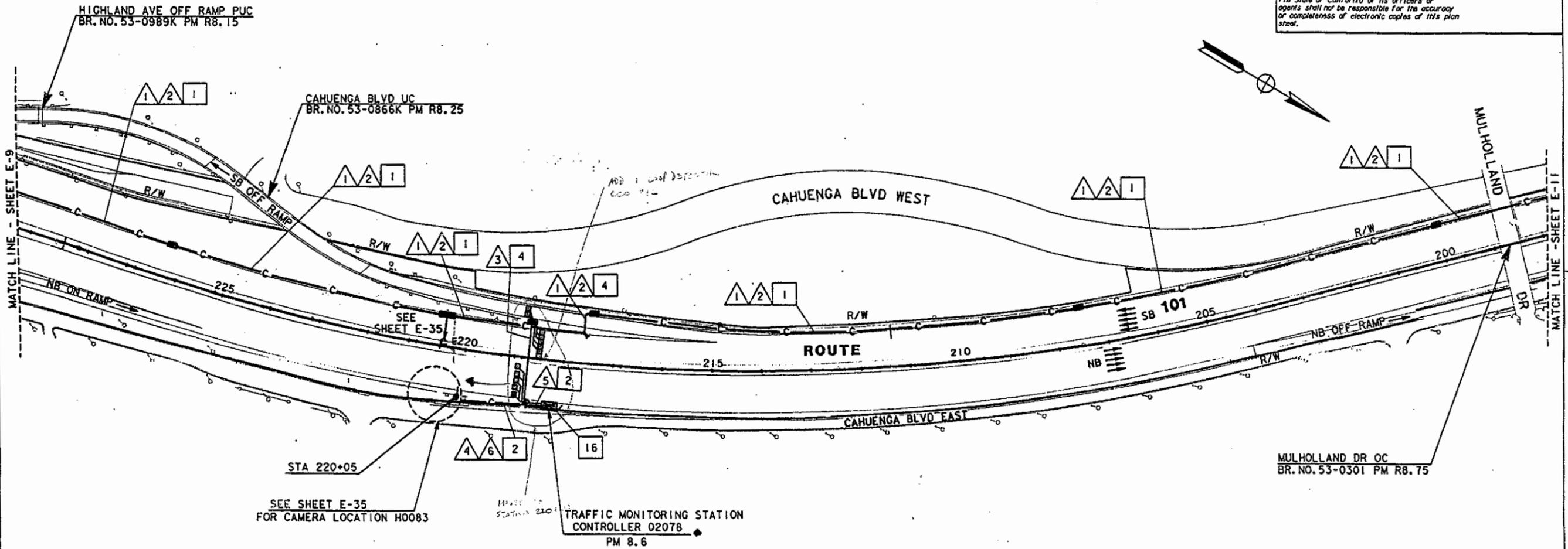
ELIA G. SAGHIR 2/17/95  
 REGISTERED ELECTRICAL ENGINEER  
 10-10-95  
 PLANS APPROVAL DATE



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 LA MIRADA, CA 90638

IN ASSOCIATION WITH:  
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 ABRATIOUE AND ASSOCIATES, INC.

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

**TRAFFIC MONITORING STATION,  
 CCTV AND COMMUNICATION  
 SYSTEM ROUTING**

SCALE: 1"=100'

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

**E-10**

TIME PLOTTED => 19-OCT-1995 15:33



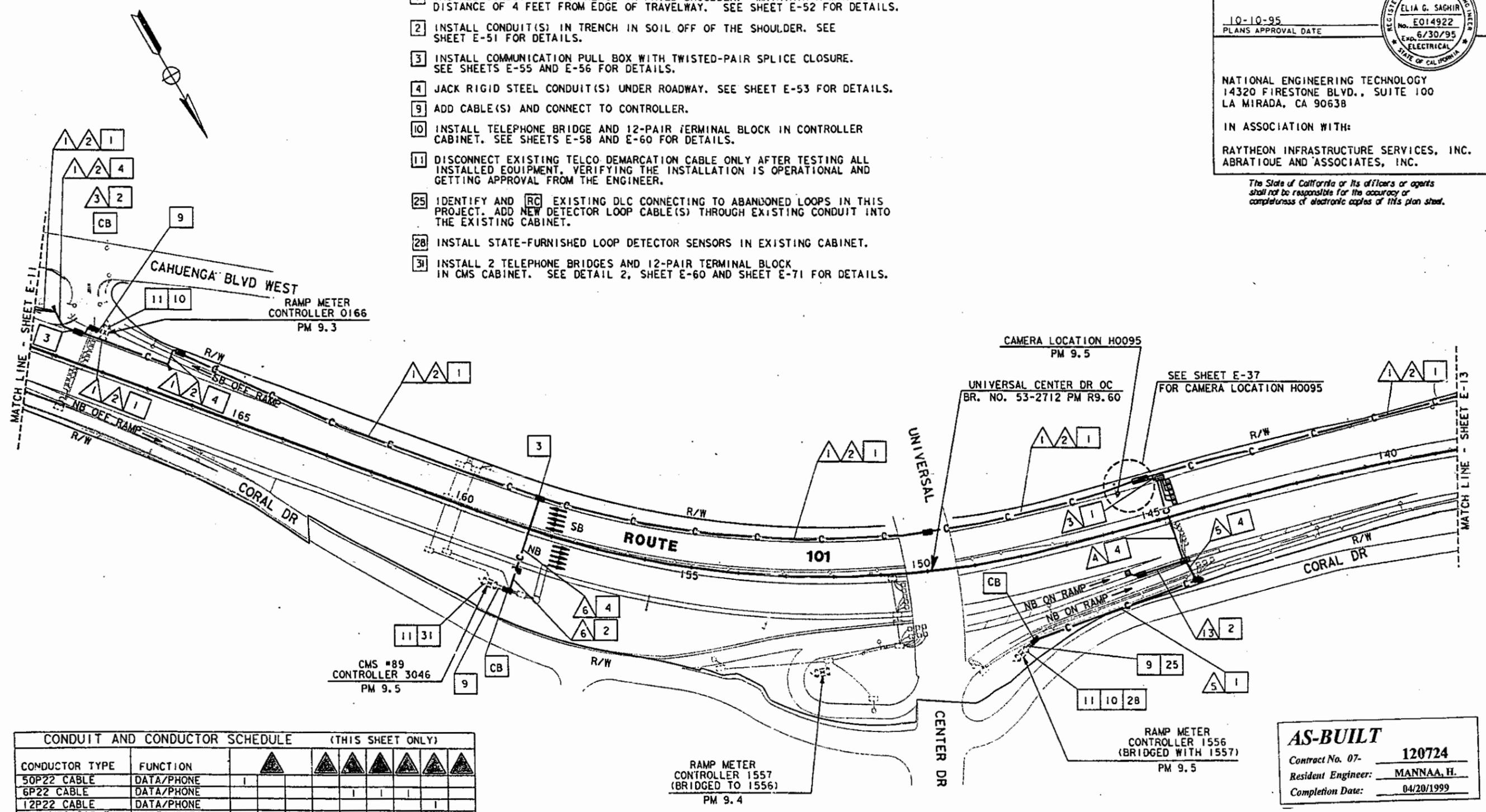
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	R4.4/R17.1	76	154

*Elia G. Saghir* 2/17/95  
 REGISTERED ELECTRICAL ENGINEER  
 10-10-95  
 PLANS APPROVAL DATE  


NATIONAL ENGINEERING TECHNOLOGY  
 14320 FIRESTONE BLVD., SUITE 100  
 LA MIRADA, CA 90638  
 IN ASSOCIATION WITH:  
 RAYTHEON INFRASTRUCTURE SERVICES, INC.  
 ABRATIOUQUE AND ASSOCIATES, INC.

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

- PROJECT NOTES: (THIS SHEET ONLY)
- 1 INSTALL CONDUIT(S) IN TRENCH IN PAVED SHOULDER. MAINTAIN A MINIMUM DISTANCE OF 4 FEET FROM EDGE OF TRAVELWAY. SEE SHEET E-52 FOR DETAILS.
  - 2 INSTALL CONDUIT(S) IN TRENCH IN SOIL OFF OF THE SHOULDER. SEE SHEET E-51 FOR DETAILS.
  - 3 INSTALL COMMUNICATION PULL BOX WITH TWISTED-PAIR SPLICE CLOSURE. SEE SHEETS E-55 AND E-56 FOR DETAILS.
  - 4 JACK RIGID STEEL CONDUIT(S) UNDER ROADWAY. SEE SHEET E-53 FOR DETAILS.
  - 9 ADD CABLE(S) AND CONNECT TO CONTROLLER.
  - 10 INSTALL TELEPHONE BRIDGE AND 12-PAIR TERMINAL BLOCK IN CONTROLLER CABINET. SEE SHEETS E-58 AND E-60 FOR DETAILS.
  - 11 DISCONNECT EXISTING TELCO DEMARCATION CABLE ONLY AFTER TESTING ALL INSTALLED EQUIPMENT. VERIFYING THE INSTALLATION IS OPERATIONAL AND GETTING APPROVAL FROM THE ENGINEER.
  - 25 IDENTIFY AND [RC] EXISTING DLC CONNECTING TO ABANDONED LOOPS IN THIS PROJECT. ADD NEW DETECTOR LOOP CABLE(S) THROUGH EXISTING CONDUIT INTO THE EXISTING CABINET.
  - 28 INSTALL STATE-FURNISHED LOOP DETECTOR SENSORS IN EXISTING CABINET.
  - 31 INSTALL 2 TELEPHONE BRIDGES AND 12-PAIR TERMINAL BLOCK IN CMS CABINET. SEE DETAIL 2, SHEET E-60 AND SHEET E-71 FOR DETAILS.



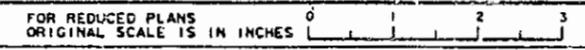
CONDUCTOR TYPE	FUNCTION							
50P22 CABLE	DATA/PHONE		▲	▲	▲	▲	▲	▲
6P22 CABLE	DATA/PHONE							
12P22 CABLE	DATA/PHONE							
48 SMFO CABLE	VIDEO/DATA							
12 SMFO CABLE	SH VIDEO							
DLC	RAMP/COUNT					5	6	11
	INNERDUCT	1/4"	1/4"					
CONDUIT	SIZE	4"	4"	2"	2"	2"	2"	2"

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

**LOOP DETECTOR, CCTV  
 AND COMMUNICATION SYSTEM  
 ROUTING**

SCALE: 1"=100'

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



USERNAME -> rrichard  
 DGN FILE -> /usr/richard/P11/712072u12.

CU 07387 EA 120721

REVISIONS  
 DATE 2/95  
 DESIGNED BY ES  
 CHECKED BY JZ

PROJECT ENGINEER  
 PAT SULLIVAN

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION  
 Caltrans

TIME PLOTTED -> 17-OCT-1995 10:52  
 00-00-00



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

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 IDENTIFICATION NUMBER ON POLE IN 3" CHARACTERS 10 FEET ABOVE BASE. SEE SHEET K1.

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
- DUPLEX RECEPTACLE
- CIRCUIT BREAKER
- SURGE PROTECTOR
- THERMOSTATIC CONTROL
- RELAY CONTACT NC
- FAN
- INDICATOR LAMP
- RELAY COIL - HIGH TEMPERATURE
- 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

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	MULTIMODE
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

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

PROJECT ENGINEER  
ALLEN CHEN

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

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

LEGEND AND NOTES

E-1

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

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

CU07396

EA1186C1

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

NOTES (THIS SHEET ONLY):

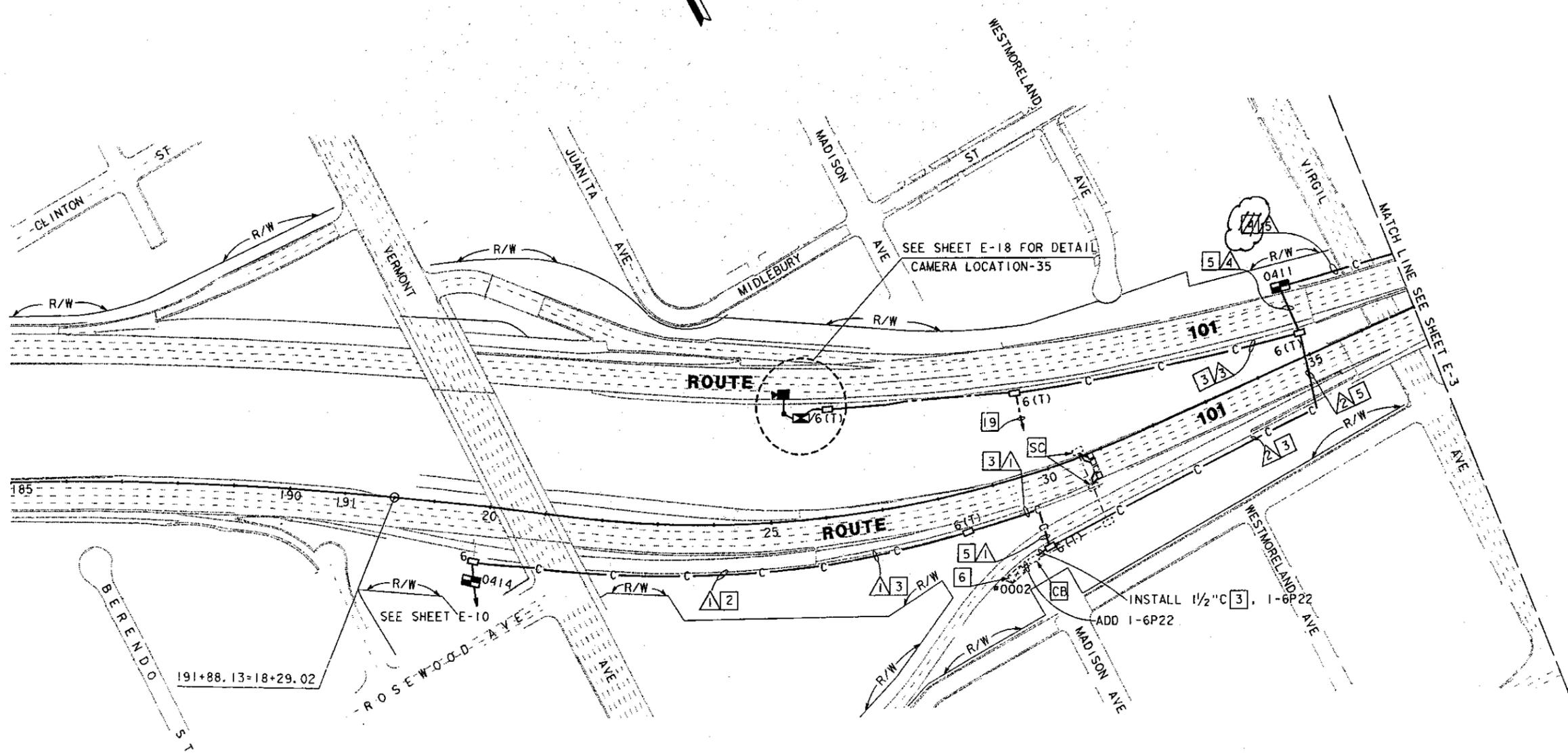
1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-2.
19. FOR DETAIL AND CONTINUATION, SEE SHEET E-18.

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

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

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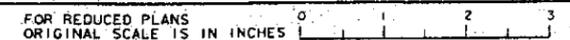


CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN				
	▲	▲	▲	▲	▲
50P22 CABLE					
6P22 CABLE				2	
2SMFO					
60SMFO					
12SMFO					
DLC					
INNERDUCT					
CONDUIT SIZE	4"	4"	2"	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  
 CALCULATED/DESIGNED BY: AL  
 CHECKED BY: AC  
 DATE REVISED BY: DATE REVISED  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** IVHS DEVELOPMENT

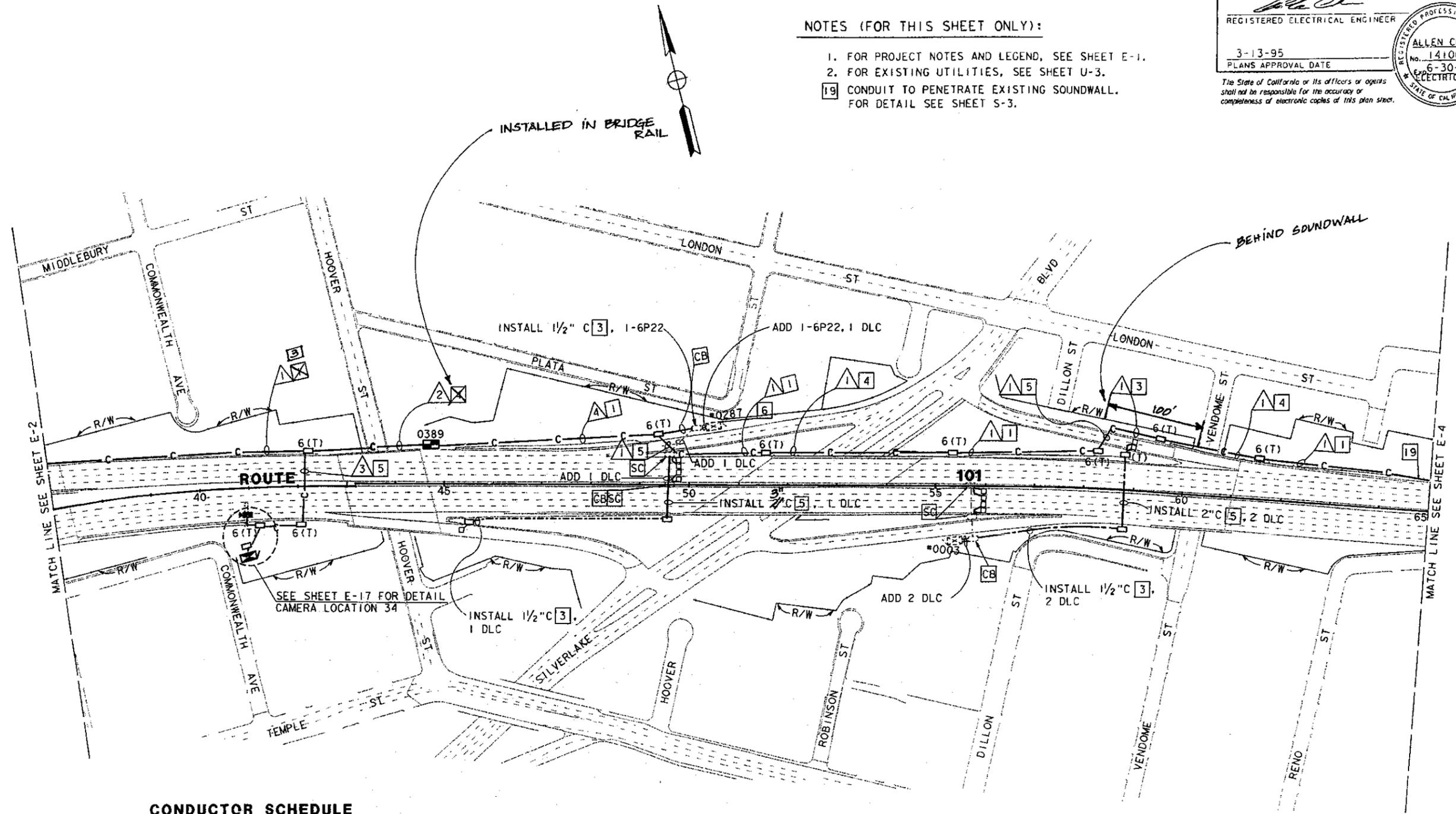
TIME PLOTTED => 18-MAR-1995 14:34  
 08-31-94

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  
 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):

- FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
- FOR EXISTING UTILITIES, SEE SHEET U-3.
- CONDUIT TO PENETRATE EXISTING SOUNDWALL. FOR DETAIL SEE SHEET S-3.



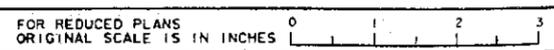
CONDUCTOR SCHEDULE

CONDUCTOR TYPE	CONDUCTOR RUN			
	△	△	△	△
50P22 CABLE				
6P22 CABLE				
2SMFO				
60SMFO				
12SMFO				
#4 POWER CABLE				
DLC				
INNERDUCT				
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



USERNAME => COOK  
 DGN FILE => ZH3\1330004\71186CU03.DGN

CU 07396

EA 1186C1

E-3

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

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

NOTES (FOR THIS SHEET ONLY):

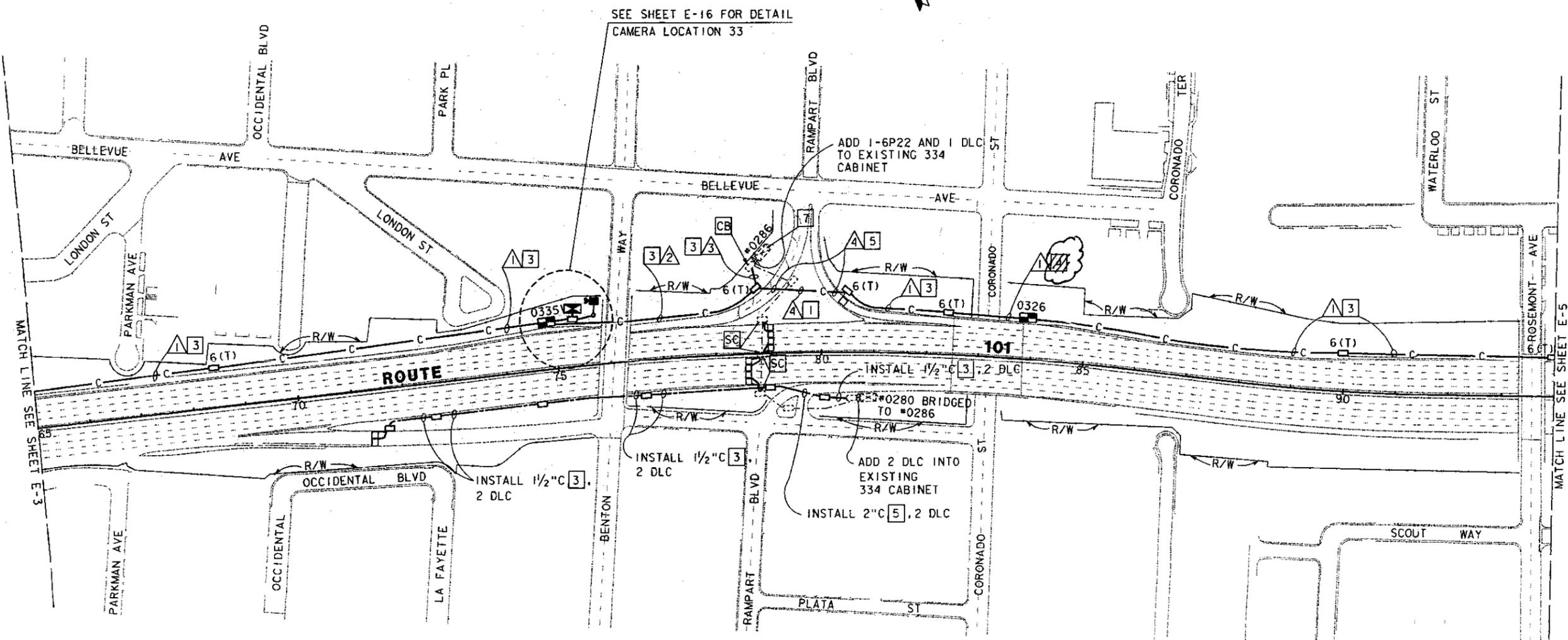
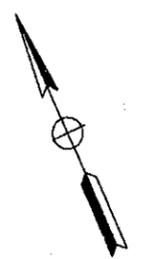
- FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
- FOR EXISTING UTILITIES, SEE SHEET U-4.

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

REGISTERED ELECTRICAL ENGINEER  
 3-13-95  
 PLANS APPROVAL DATE

ALLEN CHEN  
 No. 14106  
 Exp. 6/30/97  
 ELECTRICAL

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CONDUCTOR SCHEDULE

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

\* EXISTING TO BE REUSED

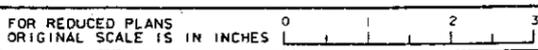
**AS-BUILT**  
 Contract No. 07- 1186C4  
 Resident Engineer: AMOS, H.  
 Completion Date: 08/21/1998

CCTV AND COMMUNICATION SYSTEM ROUTING

SCALE: 1"=100'

E-4

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY



USERNAME => mikes1  
 DGN FILE => /usr/mikes1/P4/71186cu04.dg

CU 07396

EA 1186C1

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

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

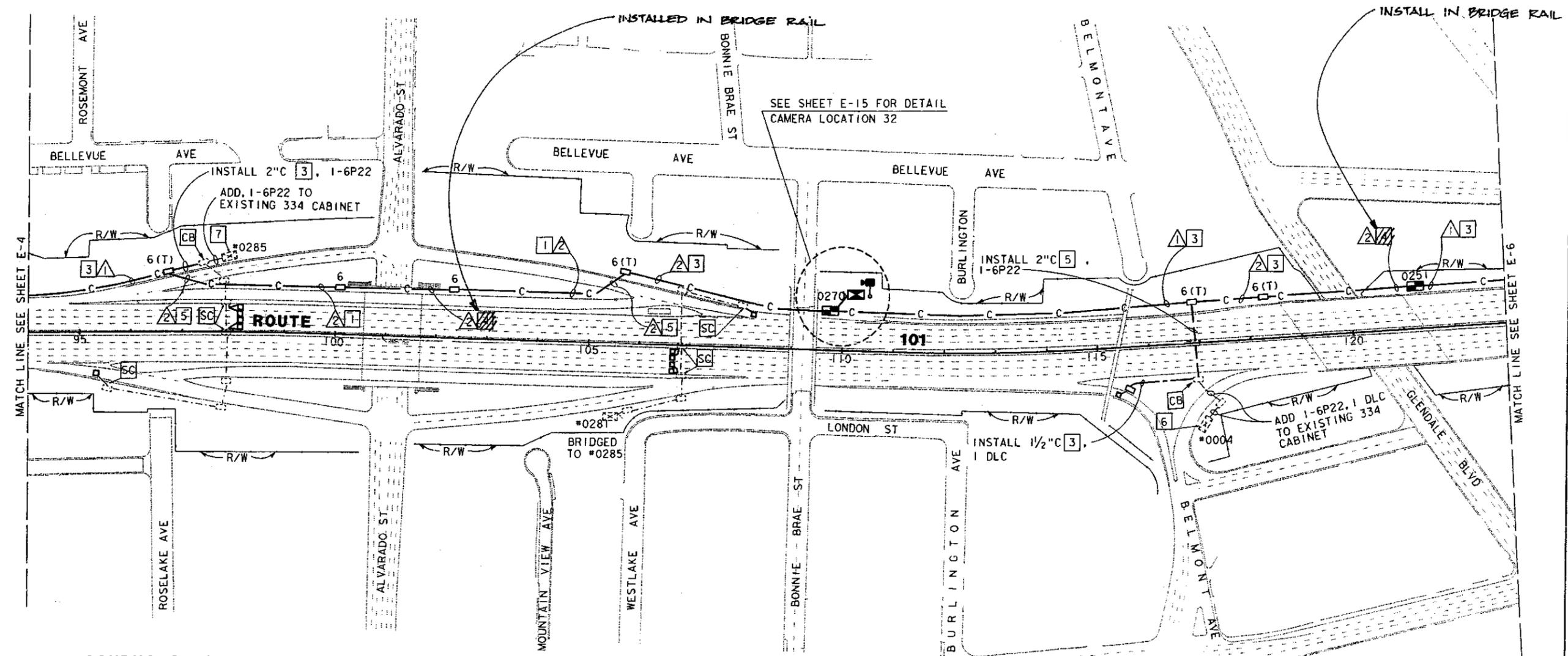
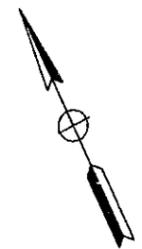
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.1/4.5	34	83

REGISTERED ELECTRICAL ENGINEER  
**ALLEN CHEN**  
 No. 4106  
 Exp. 6-30-97  
 ELECTRICAL  
 STATE OF CALIFORNIA

3-13-95  
 PLANS APPROVAL DATE

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- NOTES (FOR THIS SHEET ONLY):
- FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
  - FOR EXISTING UTILITIES, SEE SHEET U-5.

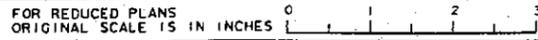


**CONDUCTOR SCHEDULE**

CONDUCTOR TYPE	CONDUCTOR RUN	
	△	▲
50P22 CABLE		
6P22 CABLE		
2SMFO		
60SMFO		
12SMFO		
DLC		
INNERDUCT		
CONDUIT SIZE	4"	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: ALLEN CHEN  
 CHECKED BY: AC  
 DATE REVISED BY: 5/94  
 DATE REVISED: 6/94

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

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

REGISTERED ELECTRICAL ENGINEER

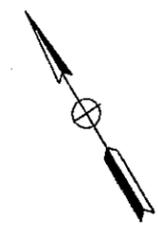
3-13-95  
PLANS APPROVAL DATE

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

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**CONDUCTOR SCHEDULE**

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

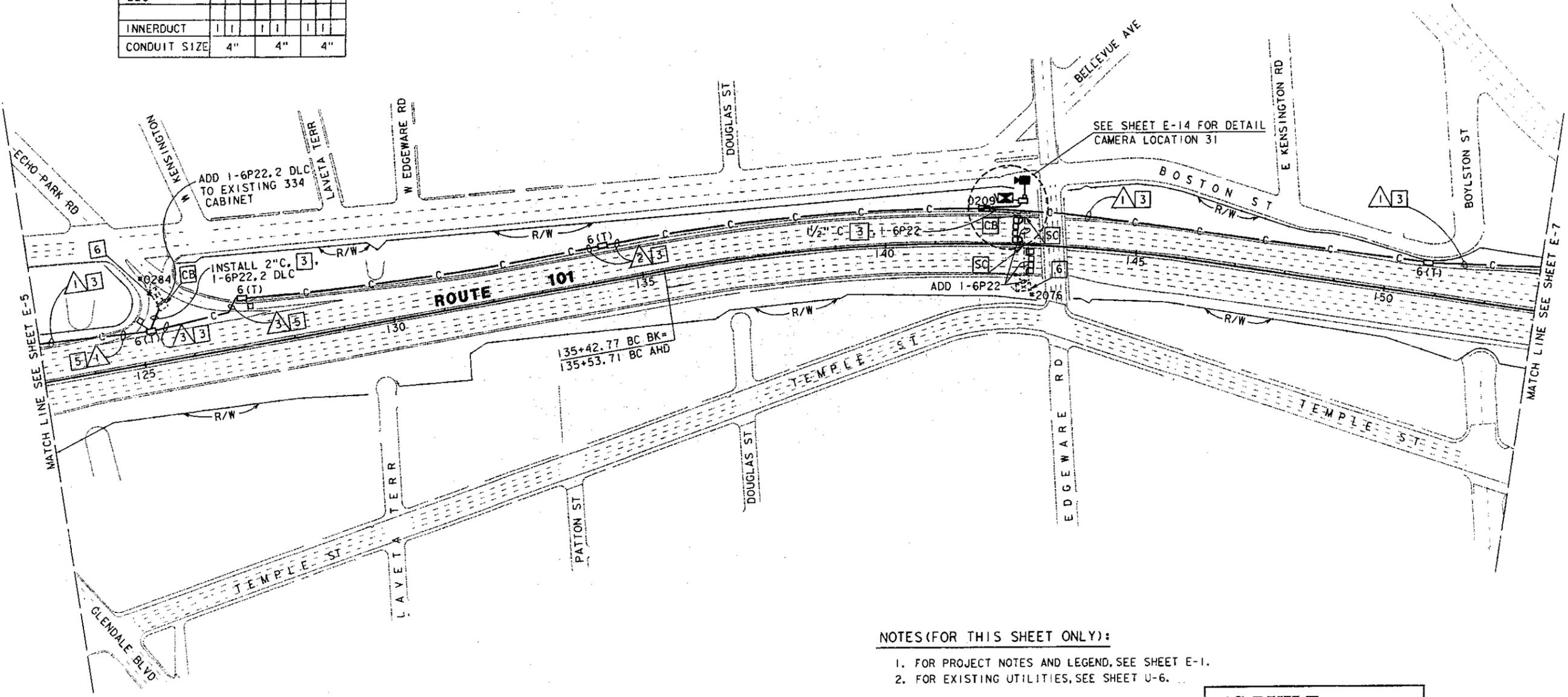


DATE REVISED BY  
5/94 AL  
6/94 AC

DATE REVISED  
5/94 AL  
6/94 AC

PROJECT ENGINEER  
ALLEN CHEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
IVHS DEVELOPMENT



- NOTES (FOR THIS SHEET ONLY):
- FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
  - FOR EXISTING UTILITIES, SEE SHEET U-6.

**AS-BUILT**

Contract No. 07- 1186C4

Resident Engineer: AMOS, H.

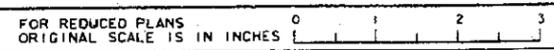
Completion Date: 08/21/1998

**CCTV AND COMMUNICATIONS SYSTEM ROUTING**

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.

SCALE: 1"=100'

E-6



USERNAME => mikes1  
DGN FILE => /usr/mikes1/P4/7:186cu06.dg

CU 07396

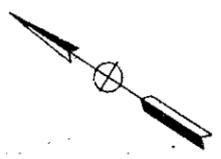
EA 1186C1

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

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

**NOTE (FOR THIS SHEET ONLY):**

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



SEE SHEET E-13 FOR DETAIL  
 CAMERA LOCATION 30  
 DATA AND VIDEO NODES

**CONDUCTOR SCHEDULE**

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

\*\* EXISTING TO BE REUSED

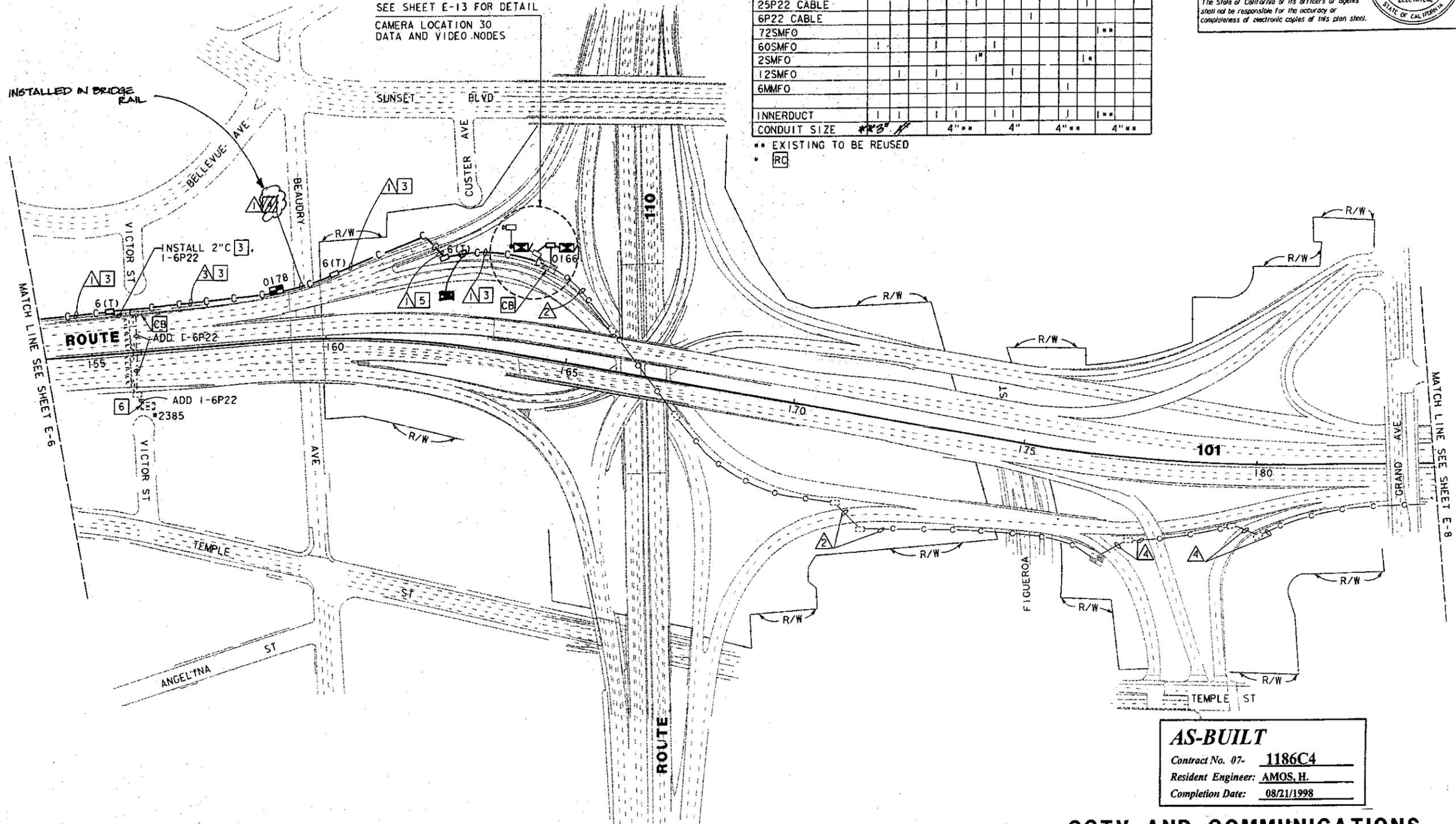
\* RC

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

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.



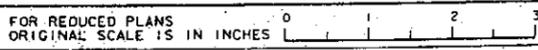
**AS-BUILT**  
 Contract No. 07- 1186C4  
 Resident Engineer: AMOS, H.  
 Completion Date: 08/21/1998

**CCTV AND COMMUNICATIONS ROUTING**

SCALE: 1"=100'

**E-7**

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL ONLY.



LAST REVISION 08-31-94  
 TIME PLOTTED => 18-MAR-1995 12:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	101	0.145	37	83

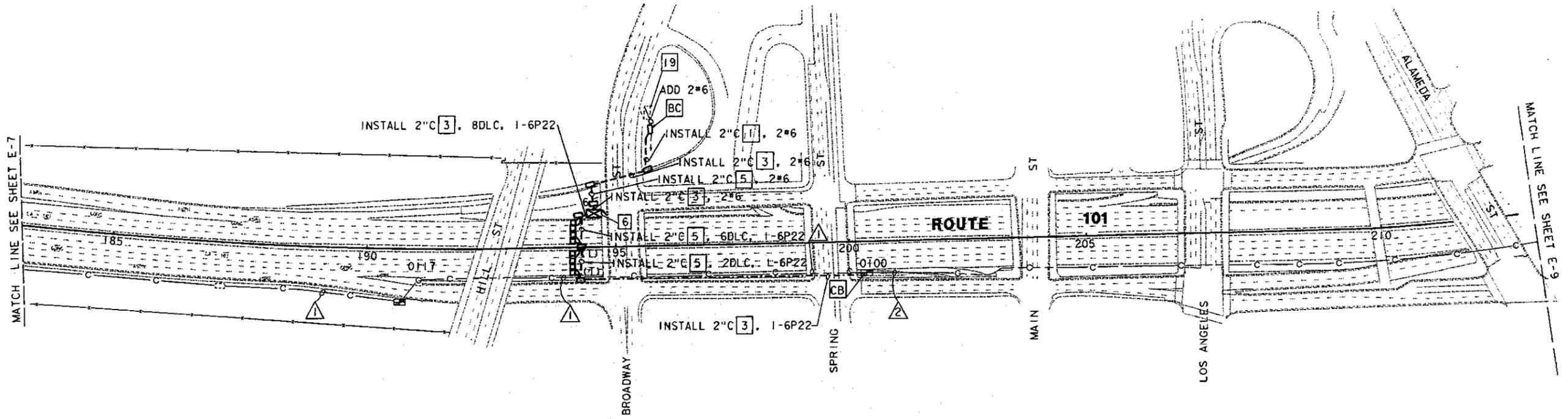
REGISTERED ELECTRICAL ENGINEER

3-13-95  
PLANS APPROVAL DATE

ALLEN CHEN  
No. 14106  
Exp. 6-30-99  
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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**St. Gobans** IVHS DEVELOPMENT  
 PROJECT ENGINEER: ALLEN CHEN  
 REVISIONS: AL 5/94, AC 6/94  
 CALCULATED/DESIGNED BY: AL  
 CHECKED BY: AC  
 DATE REVISION: 5/94, 6/94



- NOTES (FOR THIS SHEET ONLY):
- FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
  - FOR EXISTING UTILITIES, SEE SHEET U-8.
- [19] ADD A 120V-1P-30 AMP CIRCUIT BREAKER TO EXISTING IRRIGATION SERVICE (#433640) FOR COUNT STATION.

**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**

**CONDUCTOR SCHEDULE**

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

\*\* - EXISTING TO BE REUSED.  
 \* - RC

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

USERNAME => trjimt  
 DGN FILE => /usr/trjimt/P2/71186cu08.dg

CU 07396

EA 1186C1

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** IVHS DEVELOPMENT  
 PROJECT ENGINEER ALLEN CHEN  
 DATE REVISIONS BY DATE REVISIONS BY DATE REVISIONS BY  
 8/94 AL 8/94 AC 8/94 AC

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

CONDUCTOR TYPE	CONDUCTOR RUN			
	▲	▲	▲	▲
25P22 CABLE			I**	
6P22 CABLE				
725MFO	I**			I**
6MMFO		I**		
INNERDUCT	I**	I**	I**	I**
CONDUIT SIZE	4***		4***	

**NOTES ( FOR THIS SHEET ONLY ):**

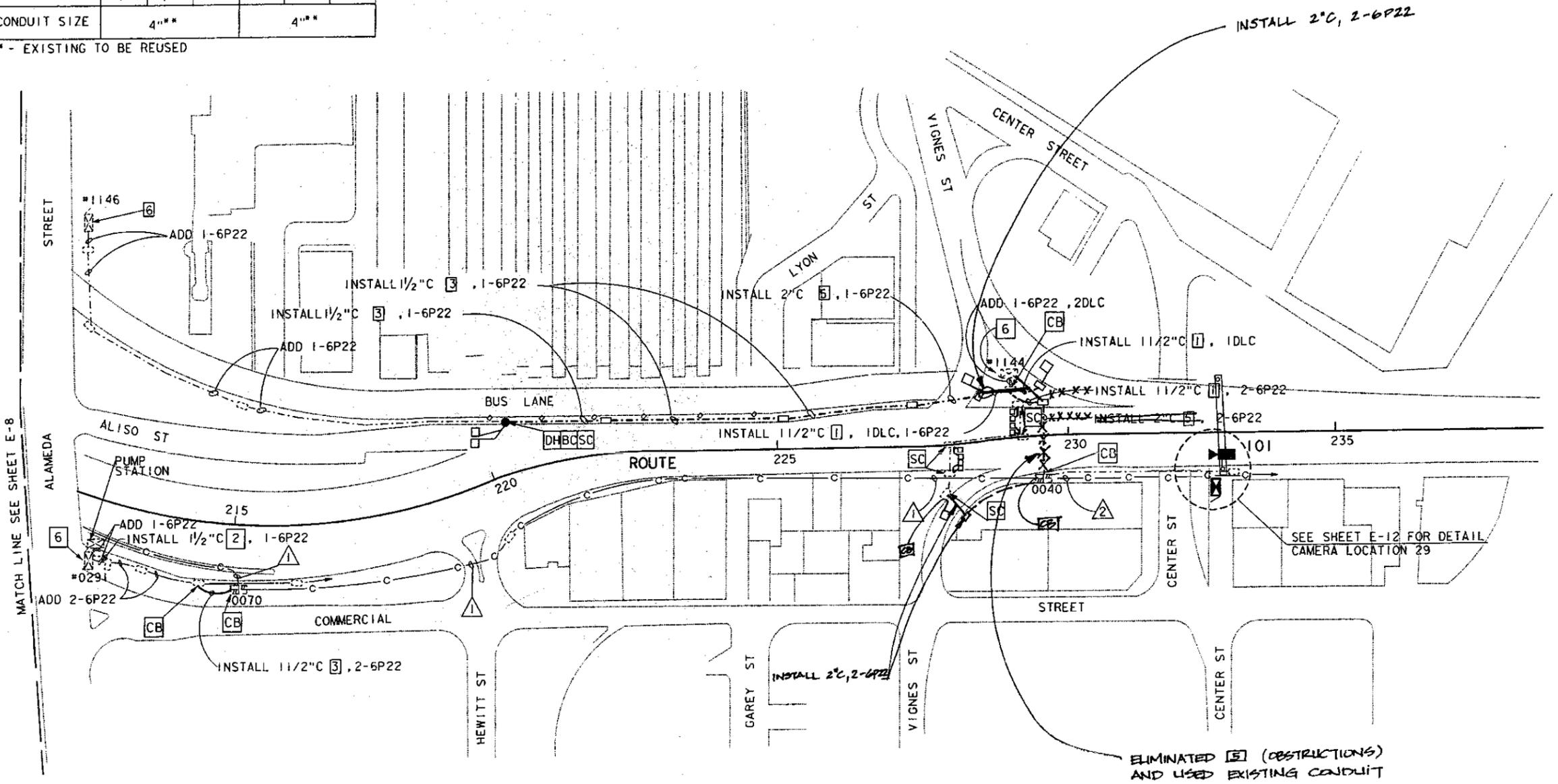
1. FOR PROJECT NOTES AND LEGEND, SEE SHEET E-1.
2. FOR EXISTING UTILITIES, SEE SHEET U-8.

REGISTERED ELECTRICAL ENGINEER  
 3-13-95  
 PLANS APPROVAL DATE

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.

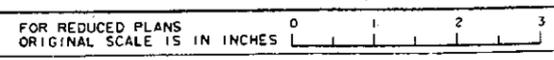
\*\* - EXISTING TO BE REUSED



**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



USERNAME => mar1a  
 DGN FILE => /usr/mar1a/P5/71186cu09.dgn

CU 07396 EA 1186C1

TIME PLOTTED => 18-MAR-1995 14:25