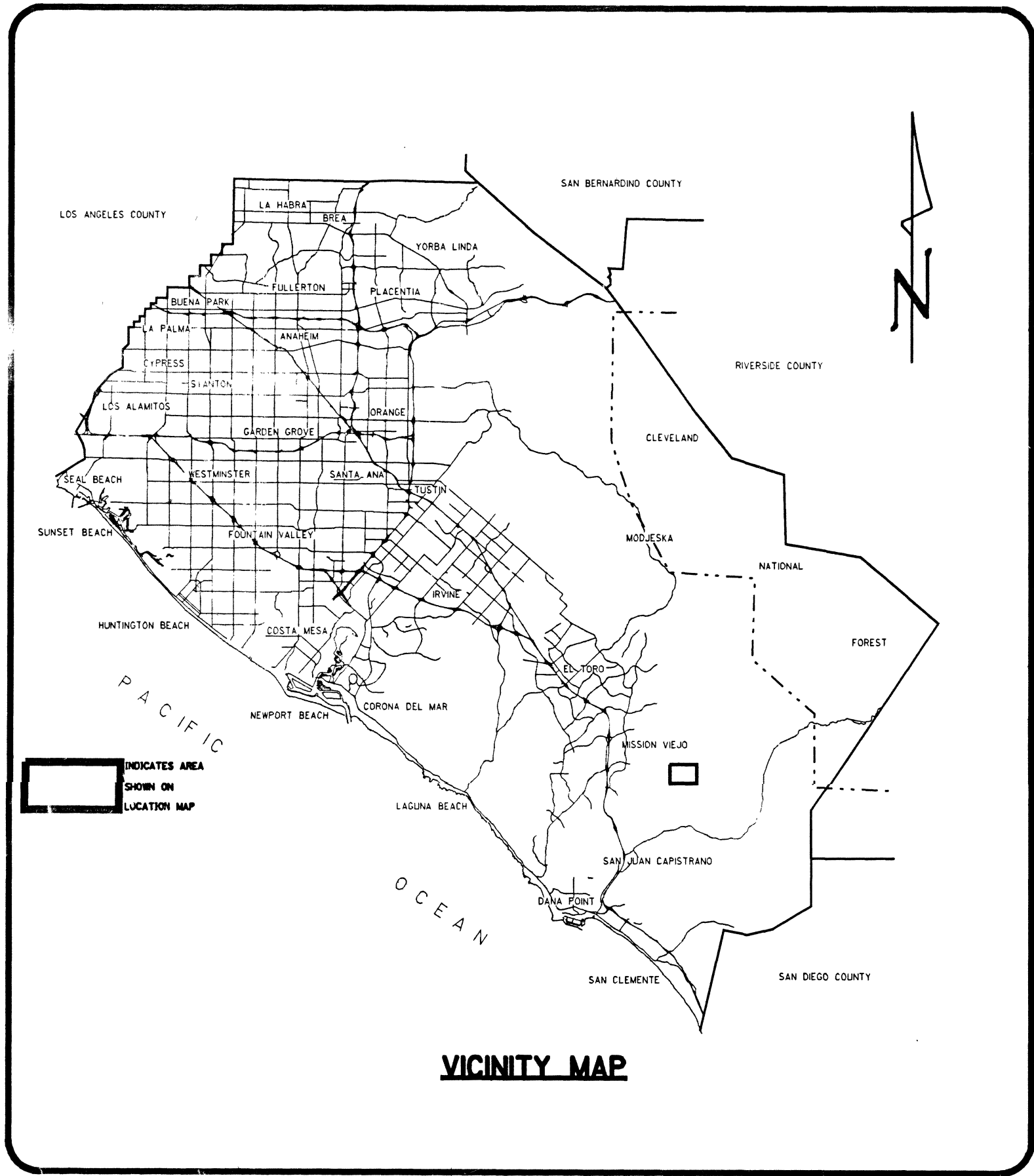
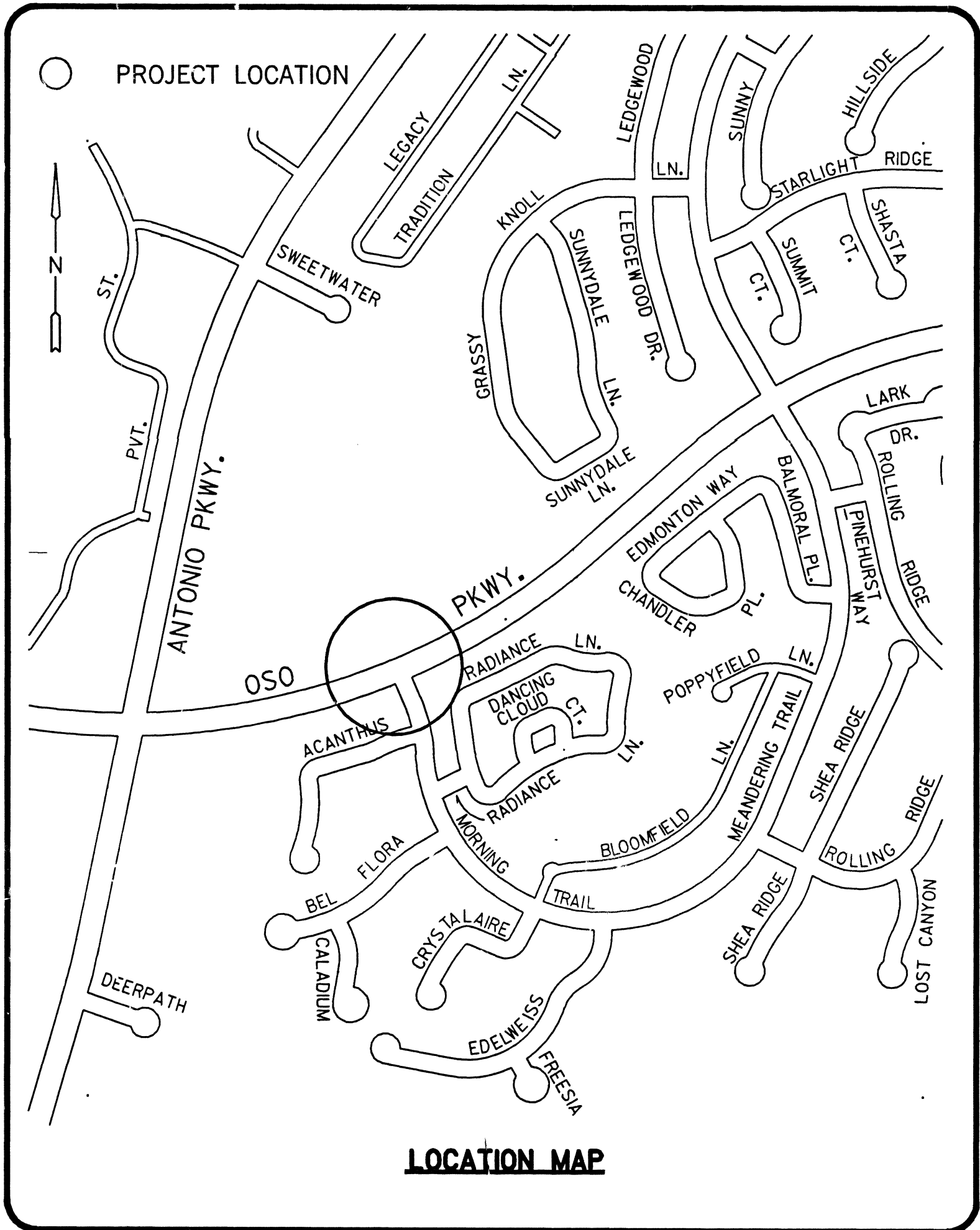




VICINITY MAP



LOCATION MAP

ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT

SANTA ANA, CALIFORNIA
VICKY L. WILSON, DIRECTOR

PLANS FOR CONSTRUCTION OF
A TRAFFIC SIGNAL
AT

OSO PARKWAY

AT

MORNING TRAIL

FEBRUARY 2003

FUNDED BY: DEVELOPER DEPOSIT (D95-002)

INDEX OF SHEETS	
SHEET	DESCRIPTION
1	TITLE SHEET
2	OSO PARKWAY AT MORNING TRAIL SIGNAL PLAN
3	DETAIL SHEET

UTILITY OWNER	CONTACT	PHONE NO.
COX COMMUNICATION	ERIC WELCH	(949) 546-2754
PACIFIC BELL	JEFF MERICKEL	(714) 666-5710
THE GAS COMPANY	JOHN PAPACS	(714) 634 3185
SDG&E	PATTI GOOD	(714) 361-8047
SANTA MARGARITA WATER DIST.	DON PUCKETT	(949) 459-6502
USA		(800) 422-4133

PUBLIC FACILITIES & RESOURCES DEPARTMENT

DESIGNED BY:  I. G. CHHOA
COUNTY TRAFFIC ENGINEER
No. 1183
Exp. 12-31-03
DATE: 1/22/03

RECOMMENDED BY:  VINCENT H. ROSALES, MANAGER
ROAD DIVISION
No. 30829
Exp. 2-21-04
DATE: 1/29/03

APPROVED BY:  KENNETH R. SMITH
CHIEF ENGINEER
DATE: 2/4/03

PREPARED BY

PREPARED UNDER THE SUPERVISION OF:  LARRY F. ABAD
CIVIL ENGINEER
No. 59374
Exp. 12-31-03
DATE: 1/29/03

REVISIONS			
NO.	DESCRIPTION	SHT.	APPROVED DATE

[6] CONDUCTOR SCHEDULE		RUN						
AWG	CIRCUIT	1	2	3	4	5	6	7
3 #20	EVP	1	2	2	1	1	3	3
# 10	SIGNAL COMMON	1	1	1	1	1	2	2
	LUMINAIRE	2	2	2	2	2	4	4
	TOTAL	3	3	3	3	3	6	6
	Ø1	1	1	—	—	—	1	1
	Ø2	—	—	—	—	—	2	5
	Ø3	—	—	—	—	—	—	—
	Ø4	—	—	—	—	—	—	—
	Ø5	—	—	—	—	—	—	—
	Ø6	5	5	5	—	—	5	5
	Ø7	—	—	—	—	—	—	—
	Ø8	—	—	—	2	2	2	2
	TOTAL	6	6	5	2	2	10	13
CSC-3		1	1	1	2	3	5	5
CSC-12		1	2	2	2	2	5	5
INTERCONNECT CABLE (6 PR #22)		1	1	1	—	—	1	1
CONDUIT SIZE		(3")	(3")	(2-3")	(3")	(3")	2-3"	2-3"

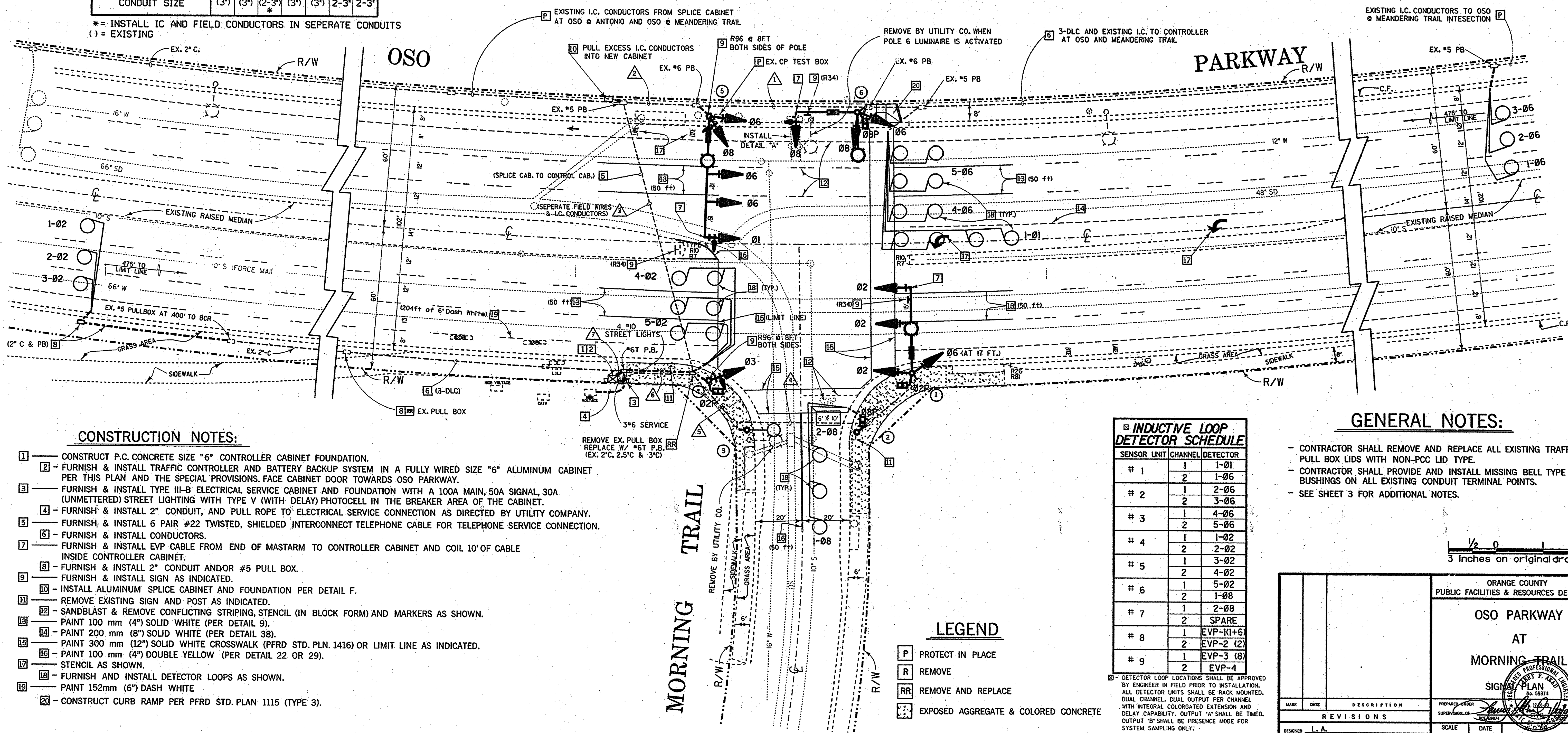
* = INSTALL IC AND FIELD CONDUCTORS IN SEPARATE CONDUITS
(-) = EXISTING

POLE SCHEDULE													
POLE DATA			SIGNAL		H.P.S.V. LUMINAIRE		SIGNAL MOUNTING		PED. PUSH BUTTON		FOUNDATION		REFLECTORIZE STREET NAME SIGN (DOUBLE FACE)
NO.	TYPE	HEIGHT	M.A.	M.A.	WATTS	VEH.	M.A.	PED.	PHASE	POLE QUAD	TYPE	SIZE	
①	24-4-129	9.1m(30ft)	10.7m (35')	4.6m (15')	250	SV-1-T SV-1-T▲	2MAS	SP-1-CS	Ø8	W	C	94mmx2.7m (3.0' x 9.0')	Morning Trail
②	IA	3.05m(10ft)	—	—	—	—	—	SP-1-CS	Ø2	N	S	610mmx95mm (2.0' x 3.0')	—
③	TYPE 15	9.1m(30ft)	—	3.7m (12')	150	—	—	—	Ø2	N	C	760mmx4.5m (2.5' x 5.0')	—
④	IA	3.05m(10ft)	—	—	—	TV-1-T	—	SP-1-CS	—	—	S	610mmx95mm (2.0' x 3.0')	—
⑤	29-5-129	9.1m(30ft)	15.2m (50')	4.6m (15')	250	SV-2-TD	3MAS	—	—	—	C	94mmx2.7m (3.0' x 9.0')	Morning Trail
⑥	17-3-129	9.1m(30ft)	6m (20')	4.6m (15')	250	SV-2-T	MAS	SP-1-CS	Ø8	E	C	94mmx2.7m (3.0' x 9.0')	Oso Pkwy

EXACT POLE LOCATIONS DETERMINED BY ENGINEER IN THE FIELD.
POTHOLE POLE FOUNDATION LOCATIONS PRIOR TO ORDERING POLES.
* = Turn Luminaire Mast Arm 90° Into Roadway.
▲ = Mount at 17 Ft.

C = C.I.D.H. Ø = 2.44m(8ft)
S = SQUARE. Sign Panel
CS = CLAM SHELL

PHASE	DIAGRAM			
VEHICULAR & PEDESTRIAN MOVEMENTS				
NEMA PHASE	Ø1	Ø2	Ø6	Ø8
COORDINATION FUNCTION	*	*	*	*
* DETERMINED BY MASTER COMPUTER DURING COORDINATED OPERATION.				
SEQUENCE WITH CALLS ON ALL PHASES.				



CONSTRUCTION NOTES:

- CONSTRUCT P.C. CONCRETE SIZE "6" CONTROLLER CABINET FOUNDATION.
- FURNISH & INSTALL TRAFFIC CONTROLLER AND BATTERY BACKUP SYSTEM IN A FULLY WIRED SIZE "6" ALUMINUM CABINET PER THIS PLAN AND THE SPECIAL PROVISIONS. FACE CABINET DOOR TOWARDS OSO PARKWAY.
- FURNISH & INSTALL TYPE III-B ELECTRICAL SERVICE CABINET AND FOUNDATION WITH A 100A MAIN, 50A SIGNAL, 30A (UNMETTERED) STREET LIGHTING WITH TYPE V (WITH DELAY) PHOTOCCELL IN THE BREAKER AREA OF THE CABINET.
- FURNISH & INSTALL 2" CONDUIT, AND PULL ROPE TO ELECTRICAL SERVICE CONNECTION AS DIRECTED BY UTILITY COMPANY.
- FURNISH & INSTALL 6 PAIR #22 TWISTED, SHIELDED INTERCONNECT TELEPHONE CABLE FOR TELEPHONE SERVICE CONNECTION.
- FURNISH & INSTALL CONDUCTORS.
- FURNISH & INSTALL EVP CABLE FROM END OF MASTARM TO CONTROLLER CABINET AND COIL 10' OF CABLE INSIDE CONTROLLER CABINET.
- FURNISH & INSTALL 2" CONDUIT AND/OR #5 PULL BOX.
- FURNISH & INSTALL SIGN AS INDICATED.
- INSTALL ALUMINUM SPLICE CABINET AND FOUNDATION PER DETAIL F.
- REMOVE EXISTING SIGN AND POST AS INDICATED.
- SANDBLAST & REMOVE CONFLICTING STRIPING, STENCIL (IN BLOCK FORM) AND MARKERS AS SHOWN.
- PAINT 100 mm (4") SOLID WHITE (PER DETAIL 9).
- PAINT 200 mm (8") SOLID WHITE (PER DETAIL 38).
- PAINT 300 mm (12") SOLID WHITE CROSSWALK (PFRD STD. PLN. 1416) OR LIMIT LINE AS INDICATED.
- PAINT 100 mm (4") DOUBLE YELLOW (PER DETAIL 22 OR 29).
- STENCIL AS SHOWN.
- FURNISH AND INSTALL DETECTOR LOOPS AS SHOWN.
- PAINT 152mm (6") DASH WHITE
- CONSTRUCT CURB RAMP PER PFRD STD. PLAN 1115 (TYPE 3).

INDUCTIVE LOOP DETECTOR SCHEDULE

SENSOR UNIT	CHANNEL	DETECTOR
# 1	1	1-Ø1
	2	1-Ø6
# 2	1	2-Ø6
	2	3-Ø6
# 3	1	4-Ø6
	2	5-Ø6
# 4	1	1-Ø2
	2	2-Ø2
# 5	1	3-Ø2
	2	4-Ø2
# 6	1	5-Ø2
	2	1-Ø8
# 7	1	2-Ø8
	2	SPARE
# 8	1	EVP-1(1+6)
	2	EVP-2 (2)
# 9	1	EVP-3 (8)
	2	EVP-4

DETECTOR LOOP LOCATIONS SHALL BE APPROVED BY ENGINEER IN FIELD PRIOR TO INSTALLATION. ALL DETECTOR UNITS SHALL BE RACK MOUNTED. DUAL CHANNEL, DUAL OUTPUT PER CHANNEL WITH INTEGRAL COLORATED EXTENSION AND DELAY CAPABILITY. OUTPUT "A" SHALL BE TIMED. OUTPUT "B" SHALL BE PRESENCE MODE FOR SYSTEM SAMPLING ONLY.

LEGEND

- PROTECT IN PLACE
- REMOVE
- REMOVE AND REPLACE
- EXPOSED AGGREGATE & COLORED CONCRETE

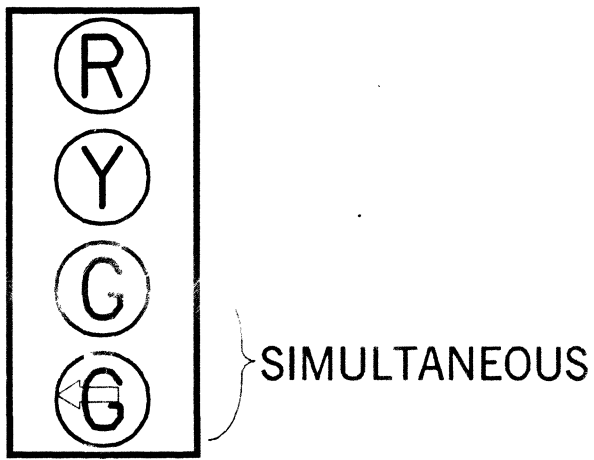
GENERAL NOTES:

- CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING TRAFFIC PULL BOX LIDS WITH NON-PCC LID TYPE.
- CONTRACTOR SHALL PROVIDE AND INSTALL MISSING BELL TYPE BUSHINGS ON ALL EXISTING CONDUIT TERMINAL POINTS.
- SEE SHEET 3 FOR ADDITIONAL NOTES.

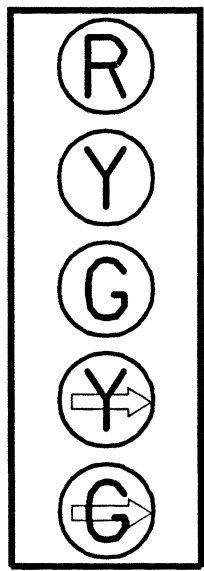
1/2" = 0' 1" = 2'
3 inches on original drawing

ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT		OSO PARKWAY AT MORNING TRAIL	
DESIGNED: L. A.		CHECKED: L. A.	
DATE: JAN. 03		DATE: JAN. 03	
SCALE: AS SHOWN		SCALE: AS SHOWN	
PROJECT NO: ERI0162		SHEET 2 OF 3	

DETAIL A
4-SECTION SIGNAL HEAD
12" LENSES

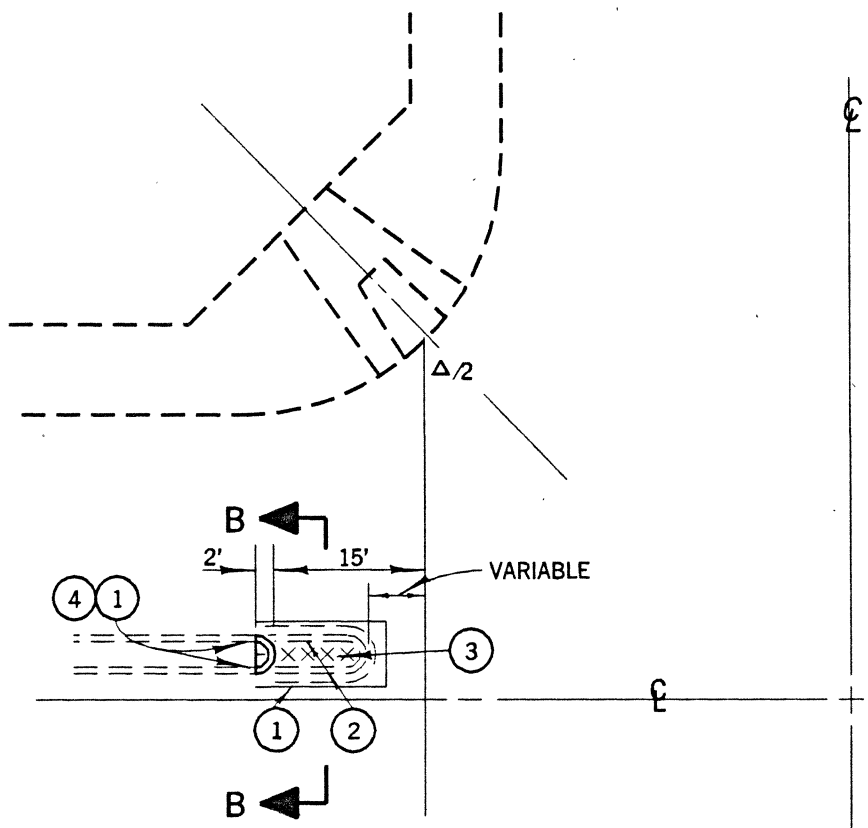


DETAIL E
5-SECTION SIGNAL HEAD
12" LENSES

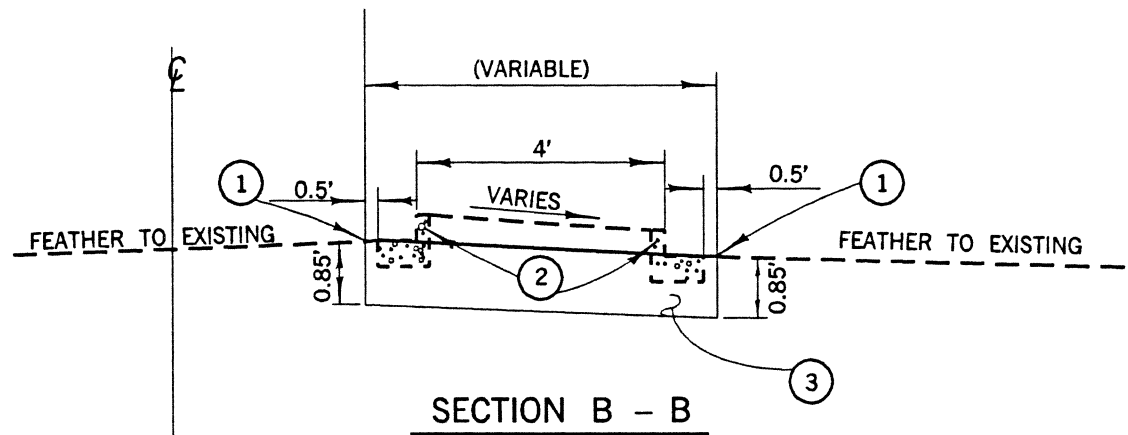


- △ - BAND STRAP OR BOLT FRAME WORK AT TOP, TO SIGNAL POLE, AS DIRECTED BY ENGINEER.
- NO CAST ALUMINUM TERMINAL BLOCKS ALLOWED.

DETAIL B
INTERSECTIONS RAISED MEDIAN



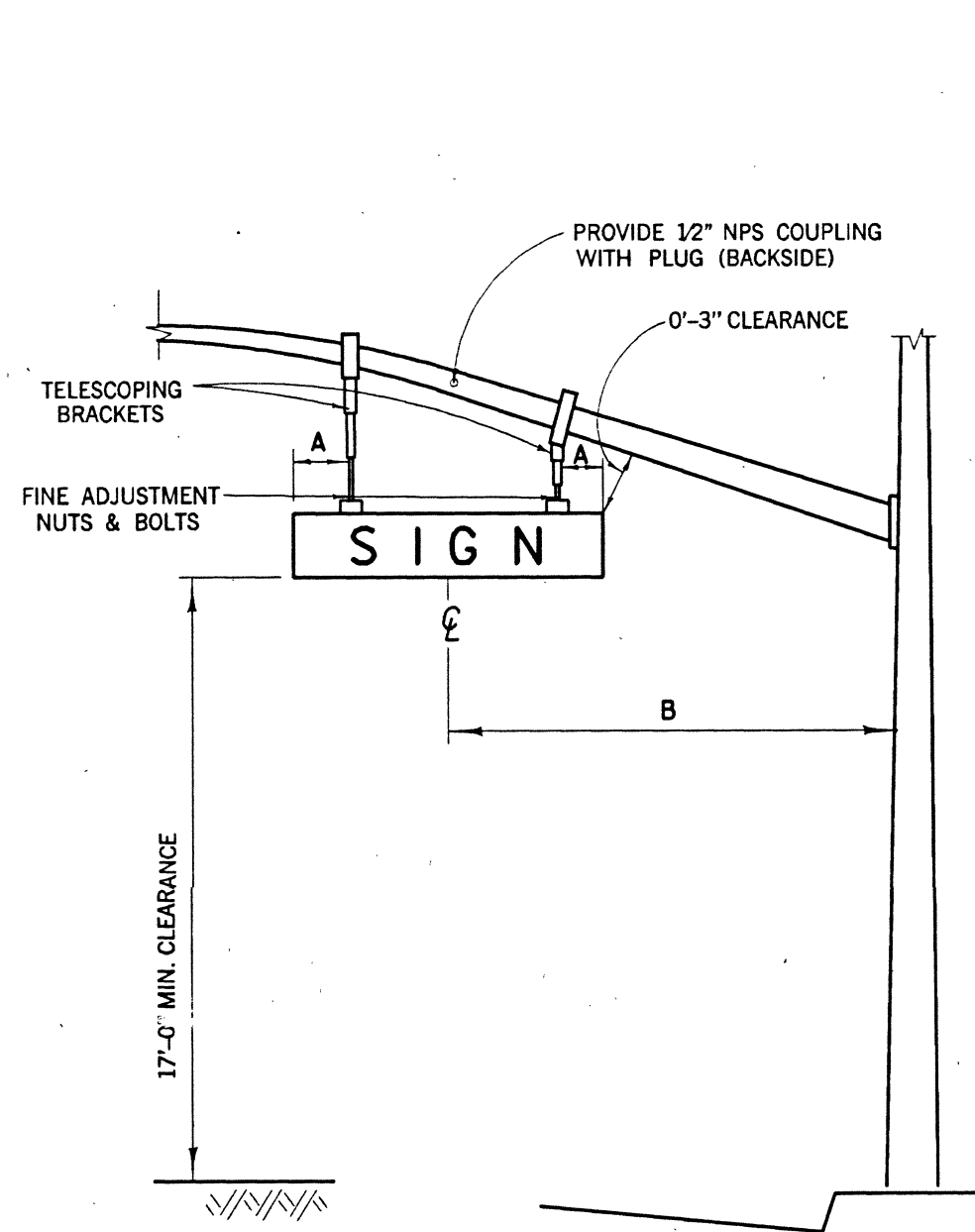
TYPICAL INTERSECTION



NOTES - DETAILS B

- SAWCUT AND JOIN EXISTING
- REMOVE CONCRETE
- CONSTRUCT 0.85' AC OVER NATIVE SOIL
- CONSTRUCT TYPE A1-8 CONCRETE CURB PER APWA STD. PLAN 120-0.

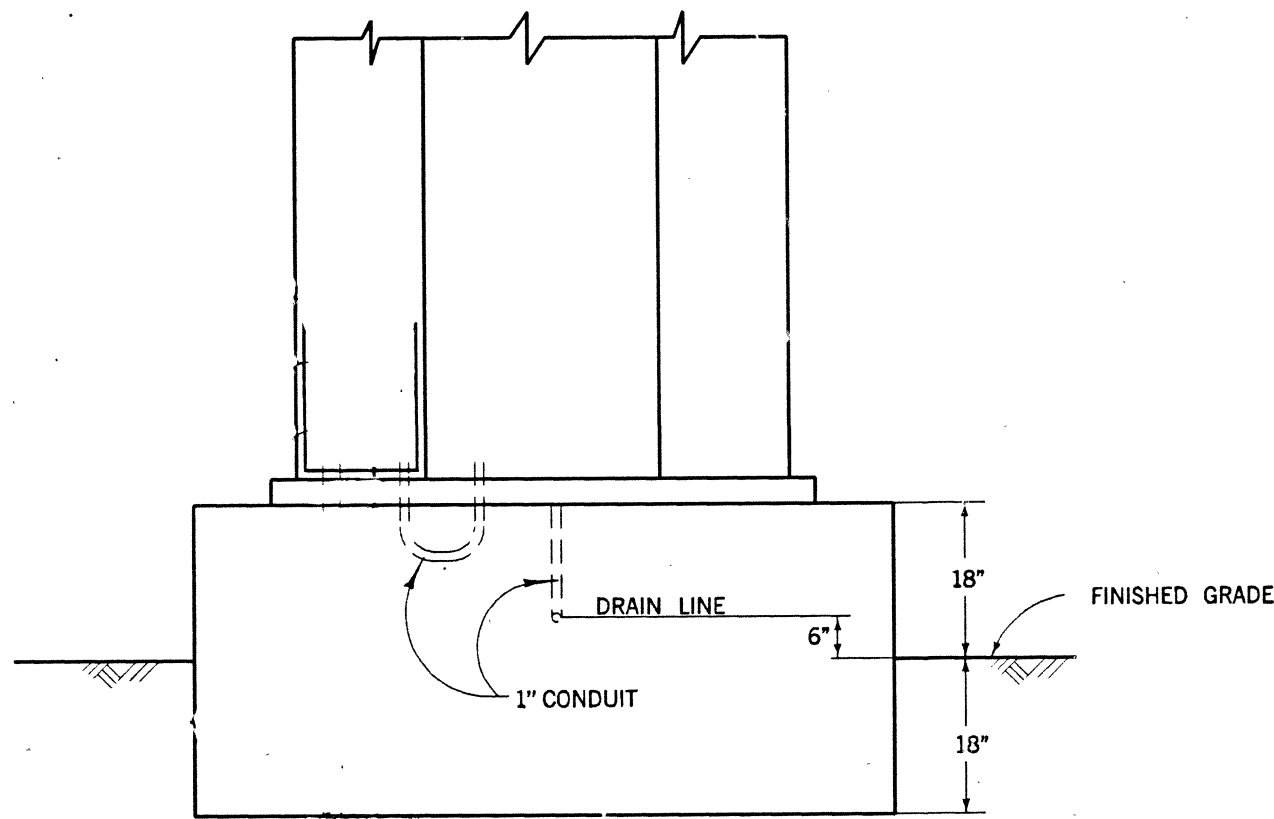
DETAIL C
REFLECTORIZED STREET NAME SIGN COMPONENTS



NOTES - DETAIL C

- A 1'-6" (18"x72" SIGN), 2'-0" (18"x96" SIGN)
B 10'-6" CENTERLINE OF SIGN TO FACE OF POLE

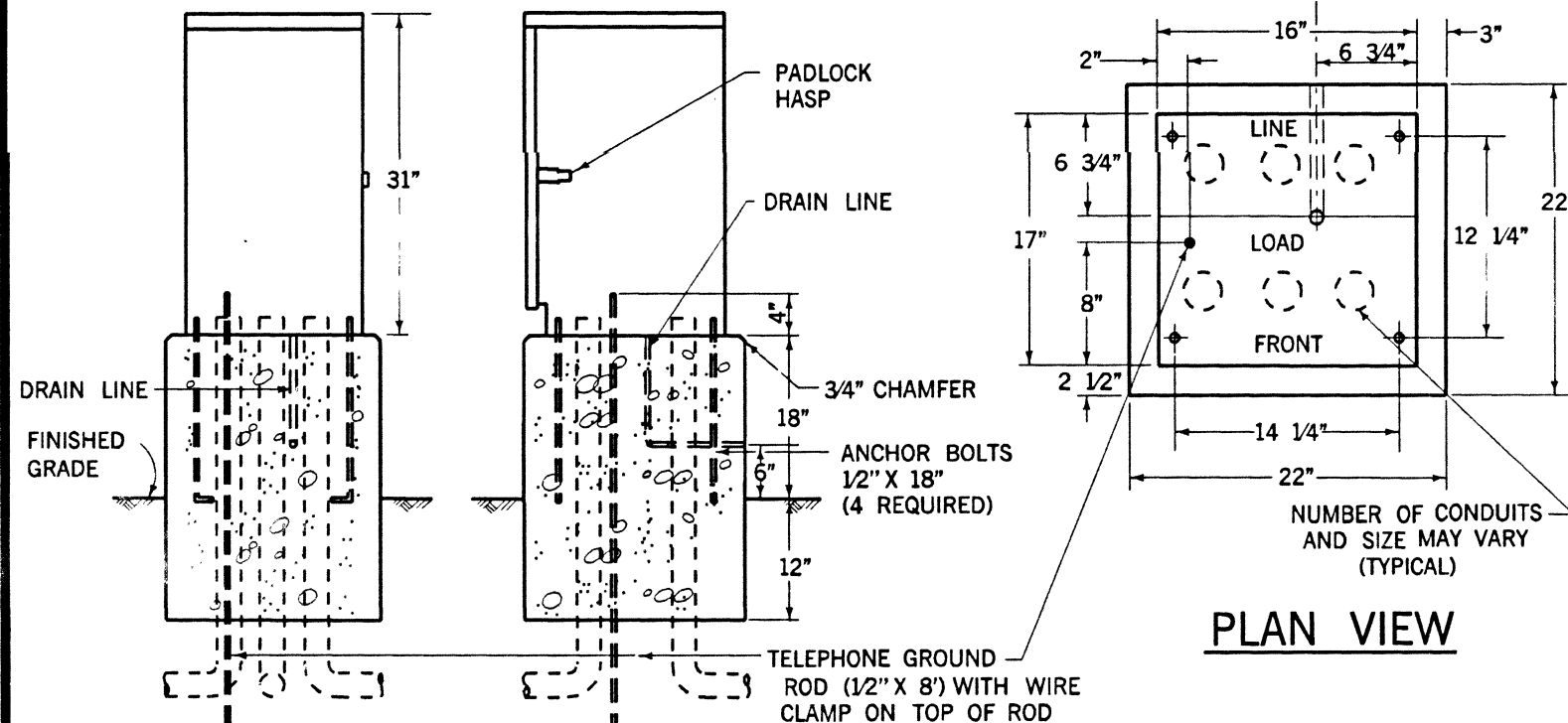
DETAIL D
TELEPHONE SERVICE BOX



GENERAL NOTES :

- ALL WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1999 AND JULY 1999 AND THE SPECIAL PROVISIONS FOR THIS PROJECT.
- UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER, IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
- 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT FOR INSPECTION AT 567-7800.
- THE ENGINEER SHALL APPROVE POLE AND LOOP DETECTION PLACEMENT IN THE FIELD PRIOR TO INSTALLATION.
- ALL CONDUITS SHALL BE 2" UNLESS OTHERWISE NOTED.
- ALL PULL BOXES SHALL BE #5 UNLESS OTHERWISE NOTED.
- ALL SALVAGED EQUIPMENT SHALL BE DELIVERED UNDAMAGED, BY CONTRACTOR, TO THE ORANGE COUNTY YARD AT 1152 EAST FRUIT ST., SANTA ANA, CA. CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE COUNTY PRIOR TO THE DELIVERY DATE.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE AND ELECTRICAL SERVICE LINES AND INTERCONNECT HOOK-UPS BETWEEN THE LOCAL CONTROLLER AND THE SYSTEM MASTER.
- PEDESTRIAN INDICATIONS SHALL BE INTERNATIONAL SYMBOL.
- PEDESTRIAN PUSH BUTTONS SHALL BE TYPE B WITH INTERNATIONAL SYMBOL PLATE.
- ALL VEHICLE INDICATIONS SHALL BE 12" DIAMETER WITH BACKPLATES, GLASS REFLECTORS, AND GLASS LENSES, UNLESS SHOWN OTHERWISE.
- CONTRACTOR SHALL POTHOLE CONFLICTING UTILITIES AS DIRECTED BY ENGINEER.
- CONTRACTOR SHALL AVOID DAMAGING EXISTING UTILITIES. (SEE SPECIAL PROVISIONS).
- DETECTOR LOOPS SHALL BE CIRCULAR 6' DIAMETER WITH 9' SPACING IN THE DIRECTION OF TRAVEL UNLESS OTHERWISE NOTED.
- ALL DETECTOR CABLE HOMERUNS SHALL BE IN THE CROSSWALK AREA.
- ALL DETECTOR LOOPS SHALL HAVE FOUR (4) TURNS.
- ALL QUADRUPOLE DETECTOR LOOPS SHALL BE TWO (2-4-2) TURNS.
- TRAFFIC CONTROLLER CABINET FOUNDATION SHALL BE 18" ABOVE AND BELOW FINISHED GRADE (SEE DETAIL D).
- INSTALL " CABINET DOOR OPEN" CIRCUIT IN CONTROLLER CABINET PER MANUFACTURE'S SPECIFICATIONS.
- CONCRETE REPLACEMENT TO MATCH EXISTING.

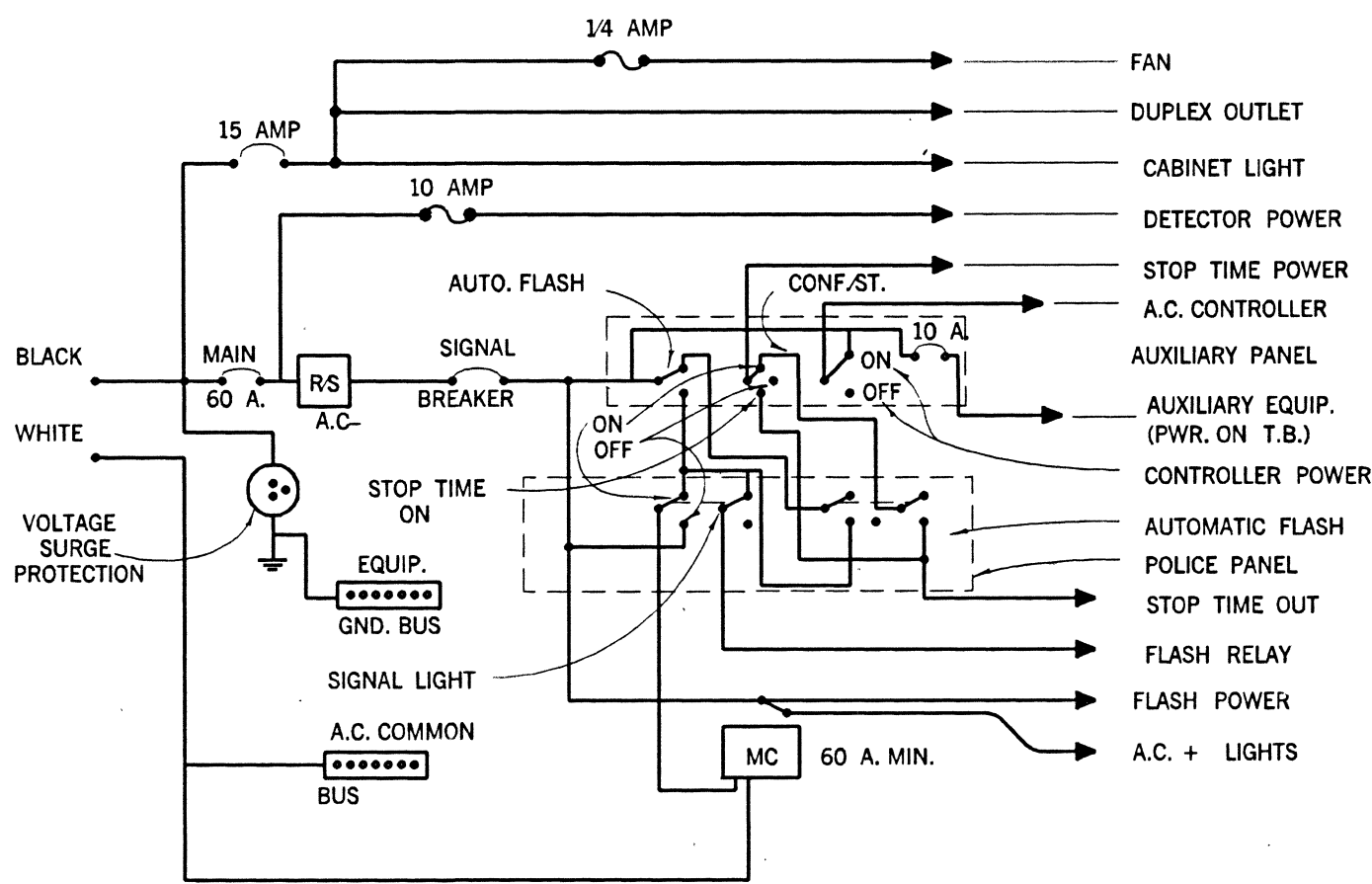
DETAIL F
INTERCONNECT SPICE CABINET



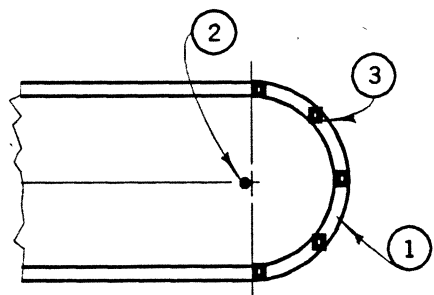
NOTES - DETAIL F

- FOUNDATION TO BE 22" X 22", ANCHOR BOLT PLACEMENT PER CABINET MFG. TEMPLATE.
- ENCLOSURE SHALL BE ALUMINUM AND FURNISHED WITH A DETACHABLE MOUNTING BASE.
- ALL FACTORY INSTALLED COMPONENTS SHALL BE U.L. LISTED OR PER PUBLISHED N.E.C. STANDARDS.
- A 3/4" CONSTRUCTION GRADE PLYWOOD PANEL SHALL BE FASTENED TO THE REAR WALL. PANEL SHALL BE 12" X 24" AND SHALL HAVE A No. M1-25 AND R-841 STANDOFF FASTENED IN THE CENTER OF THE PANEL.
- ENCLOSURE FINISH SHALL CONFORM TO A.S.T.M. B-117. PAINT TO BE APPLIED TO EXTERNAL AND INTERNAL CABINET SURFACE SHALL BE WHITE ANTI-GRAFFITI CARDINAL'S 6409 G SERIES OR APPROVED EQUAL ANTI GRAFFITI PAINT SHALL BE APPLIED TO CABINET AT THE TIME OF MANUFACTURE.
- PROVIDE 1 1/2" CONDUIT FOR FUTURE 115 VAC SERVICE.
- PROVIDE GROUND BUS INSIDE SPICE CABINET.

DETAIL G
CONTROLLER CABINET WIRING



DETAIL H
RAISED MEDIAN MARKING



NOTES - DETAIL H

- PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE PREMIXED WHITE TRAFFIC PAINT WITH GLASS BEADS.
- INSTALL FLEXIBLE VERTICAL TYPE K MARKER, R7, R10 OR TYPE N-1 ON TELESAR POST AS INDICATED ON PLAN.
- INSTALL YELLOW REFLECTIVE PAVEMENT MARKERS ON TOP SURFACE OF MEDIAN CURB NOSE AT 2' C.C. SPACING (MINIMUM 5 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PERPENDICULAR TO C OF ROADWAY.

ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT			
SIGNAL DETAIL SHEET			
MARK	DATE	DESCRIPTION	PREPARED UNDER SUPERVISION OF
REVISIONS			
DESIGNED	SCALE	DATE	W. O. NO.
DRAWN	NOT TO SCALE	JAN, 03	ER10162
SHEET 3 OF 3			