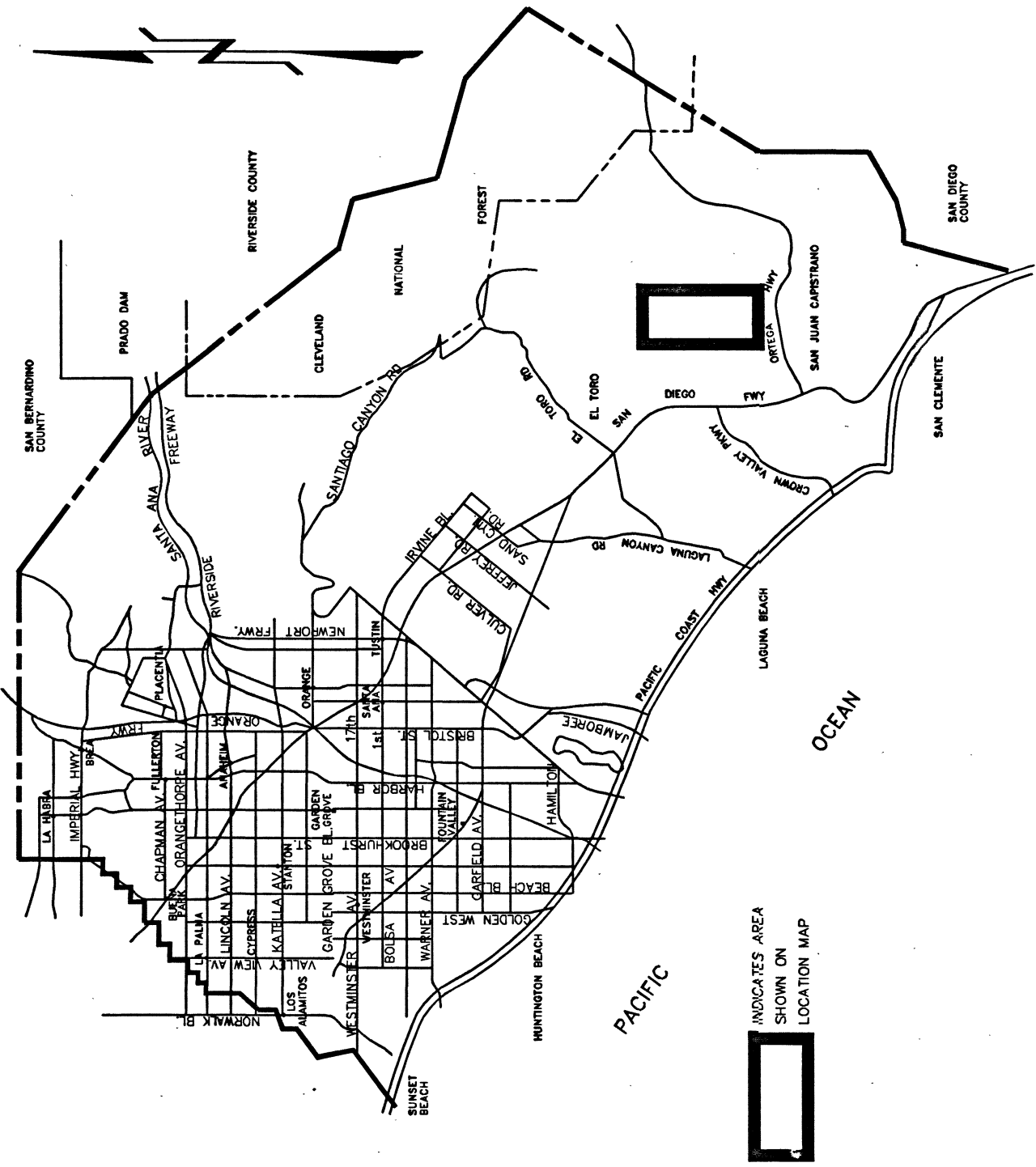


SANTA ANA, CALIFORNIA

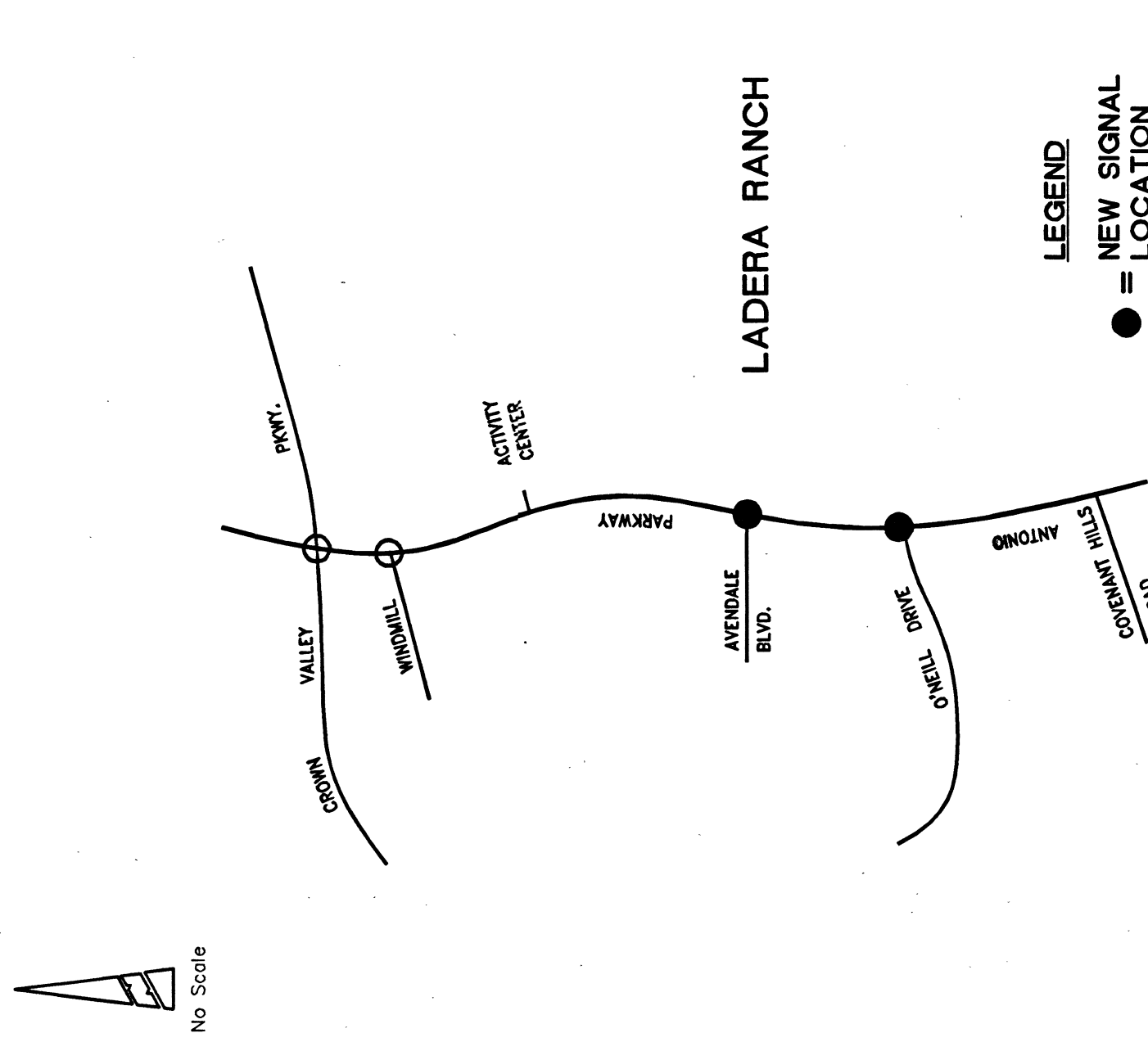
AT

ANTONIO PKWY. AND AVENDALE BLVD.
AND AT

ANTONIO PKWY. AND O'NEILL DRIVE



VICINITY MAP



LOCATION MAP

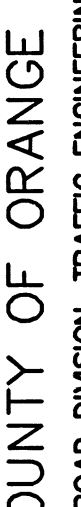
* NOTE
CONSTRUCTION OF THE TRAFFIC SIGNAL(S) WILL NOT BE PERMITTED UNTIL WARRANTED, WRITTEN APPROVAL SHALL BE PROVIDED TO COUNTY PROPERTY PERMIT SECTION FROM PFRD/TRAFFIC ENGINEERING PERMITTING THE CONSTRUCTION OF THE TRAFFIC SIGNAL(S).
THE PLAN IS SIGNED FOR BIDDING PURPOSES ONLY NOT FOR CONSTRUCTION.

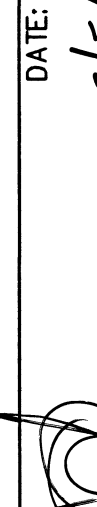
FUNDING BY: DEVELOPER

ENCROACHMENT PERMIT No.

COUNTY APPROVED PLANS DO NOT RELIEVE CONTRACTOR/DEVELOPER FROM RESPONSIBILITY TO OBTAIN COUNTY PROPERTY PERMIT WHICH SHALL BE AVAILABLE ON THE JOB AT ALL TIMES WORK IS BEING ACCOMPLISHED IN PUBLIC RIGHT OF WAY.

* SEE NOTE AT LEFT

COUNTY OF ORANGE PLANNING AND DEVELOPMENT SERVICES	
THIS PLAN IS SIGNED BY PLANNING AND DEVELOPMENT ENGINEERING AND TRAFFIC ENGINEERING ONLY. COUNTY STANDARDS AND REQUIREMENTS ONLY. PLANNING AND DEVELOPMENT SERVICES IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS AND ACCURACY.	
 _____ RCE	
DATE: 2/28/02	

COUNTY OF ORANGE PFRRD/ROAD DIVISION--TRAFFIC ENGINEERING	
APPROVED BY:  _____ I.G. OCHOA, COUNTY TRAFFIC ENGINEER	
THIS PLAN IS SIGNED BY PFRRD/T.E. FOR CONCEPT AND ADHERENCE TO COUNTY TRAFFIC SIGNAL, SIGNING AND STRIPEING STANDARDS AND REQUIREMENTS ONLY. PFRRD/T.E. IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS OR ACCURACY.	
DATE: 2/15/02	

1282271

PREPARED UNDER THE SUPERVISION OF

William D. Willdan **Willdan**
DESIGN & CONSTRUCTION GROUP, INC. 2700
FOOTBUSH BRANCH, CALIFORNIA 92610
SERVING PUBLIC AGENCIES 949/470-8840 FAX 949/770-9041

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. 15629
Exp. 6/30/95

WILLDAN
Serving Public Agencies

W

SHEET	<u>INDEX OF SHEETS</u>	DESCRIPTION
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- | | |
|----|---|
| 1. | TITLE SHEET |
| 2. | TRAFFIC SIGNAL PLAN
ANTONIO AND AVENDALE BLVD. |
| 3. | TRAFFIC SIGNAL PLAN
ANTONIO AND O'NEILL BLVD. |
| 4. | DETAIL SHEET |

UTILITY	PHONE	CONTACT
1. S.D.G & E.	361-8037	GRACE TURNER
2. PACIFIC BELL	666-5443	LARRY TODD
3. M.N. WATER DIST.	459-6585	CINDY LANE
4. U.S.ALERT	1-800-422-4133	
5. SO. CAL. GAS CO.	634-3120	RON REEDS
6. DIMENSION CABLE	240-8828	MICKEY MILLER

DEVELOPER:
RANCHO MISSION VIEJO
28811 ORTEGA HIGHWAY
P.O. BOX 9
SAN JUAN CAPISTRANO, CA. 92693
(949) 888-9175

<u>BLOCK:</u>	5057
<u>MODULE:</u>	97 & 98

[illegible]

W.O. NO. _____
 DWG. NO. _____

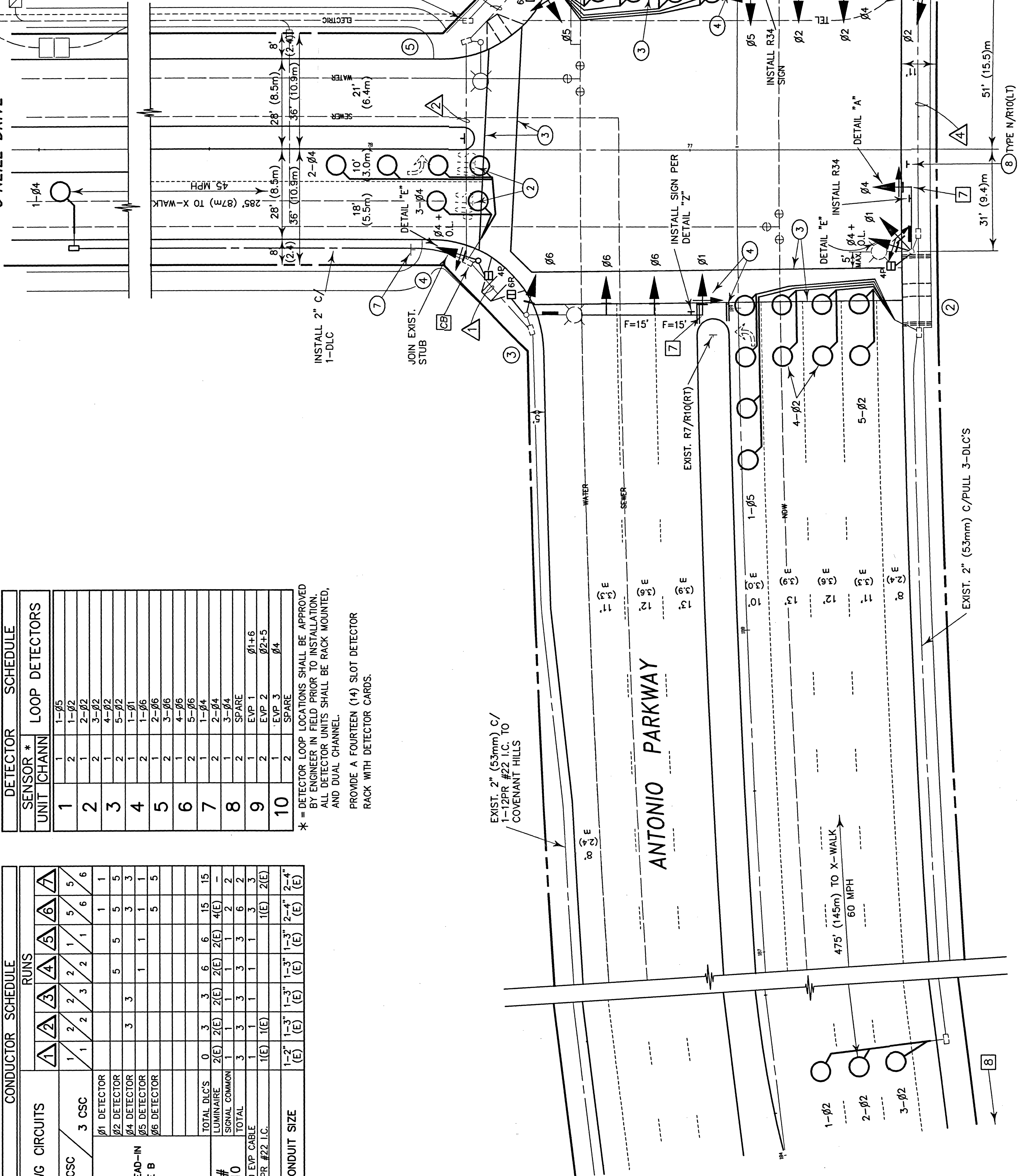
SHEET 1 OF 4

DR. 15 (16631)

CONDUCTOR SCHEDULE		RINGS	
AWG CIRCUITS		1	2
12 CSC	3 CSC	1	2
LOOP LEAD-IN TYPE B	Ø1 DETECTOR	1	2
	Ø2 DETECTOR	2	3
	Ø4 DETECTOR	3	4
	Ø5 DETECTOR	4	5
	Ø6 DETECTOR	5	6
#	TOTAL DLS'S	0	3
	LUMINAIRE	2(E)	2(E)
	SIGNAL COMMON	1	1
	3 #20 EXP CABLE	1	1
	1-12PR #22 I.C.	1(E)	1(E)
CONDUIT SIZE	1-2"	1-3"	1-3"
	(E)	(E)	(E)

DETECTOR SCHEDULE		LOOP DETECTORS	
SENSOR * UNIT	CHANN	1	2
1	1-Ø5	1	2
2	2-Ø2	2	3
3	3-Ø2	3	4
4	4-Ø2	4	5
5	5-Ø2	5	6
6	6-Ø2	6	7
7	7-Ø2	7	8
8	8-Ø2	8	9
9	9-Ø2	9	10
10	10-Ø2	10	11
* = DETECTOR LOOP LOCATIONS SHALL BE APPROVED BY ENGINEER IN FIELD PRIOR TO INSTALLATION. ALL DETECTOR UNITS SHALL BE RACK MOUNTED, AND DUAL CHANNEL.			

PROVIDE A FOURTEEN (14) SLOT DETECTOR RACK WITH DETECTOR CARDS.



POLE SCHEDULE		SIGNAL MOUNTING		PED PHASE		REMARKS	
NO.	TYPE	HEIGHT	SIG.M.A.	LUM.M.A.	HPSV	R.S.N.S. LEGEND	
1	29-5-129	30'	(E)	(E)	250 W	O'Neill	
2	17-1-129	30'	(E)	(E)	250 W	Antonio	
3	29-5-129	30'	(E)	(E)	250 W	O'Neill	
4	1-A	10'	(E)	(E)	250 W		
5	15	30'	(E)	(E)	250 W		
6	1-A	10'	(E)	(E)	250 W		

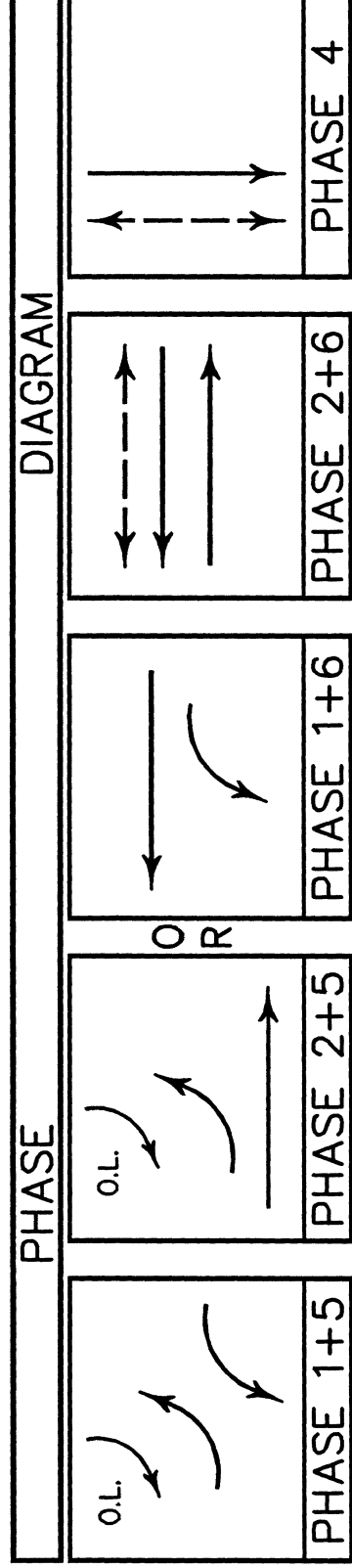
1. ALL EQUIPMENT IS NEW EXCEPT WHERE SHOWN (E) = EXISTING.
2. ALL SIGNAL HEADS SHALL HAVE 12 INDICATORS. ALL INDICATIONS SHALL BE L.E.D. TYPE.
3. R.S.N.S.=REFLECTORIZED STREET NAME SIGN - SEE SPECIAL PROVISIONS.
4. ALL POLES ARE PER CALTRANS PLANS DATED JULY, 1999.
5. ALL PED. INDICATIONS SHALL BE L.E.D. TYPE.

NOTES

1. REFER TO DETAIL SHEET FOR GENERAL NOTES.
2. FURNISH AND INSTALL A 16 PHASE ECONOLITE ASC/25-2100 TYPE 90 CONTROLLER AND UPS SYSTEM IN A FULLY WIRED NEMA TS2 TYPE 1 SIZE 6 ALUMINUM CABINET AND FOUNDATION. PLACE CONTROLLER ON TOP SHELF.
3. EXISTING TYPE III-BF SERVICE WITH 30A LIGHTING BREAKER. ADD 50A SIGNAL BREAKER AND TYPE V PHOTOELECTRIC CIRCUIT WITH DELAY TYPE PHOTOCELL. REPLACE EXISTING PHOTOCELLS ON LUMINAIRES WITH SHORTING CAPS. REPAINT CABINET & RE-STENCIL SERVICE ADDRESS ON CABINET. COLOR TO MATCH CONTROLLER CABINET.
4. FURNISH AND INSTALL AN EXTERIOR MOUNTED ALUMINUM CABINET FOR UPS BATTERIES.
5. STREET PAINTING INSTALLATION AND REMOVALS SHALL BE COMPLETED BY THE CONTRACTOR.
6. STRIPING SHOWN (---) IS EXISTING. PROPOSED STRIPING AND PAVEMENT MARKINGS ARE SHOWN WITH SOLID LINES.
7. INSTALL EXP CABLE FROM END OF MAST ARM TO CONTROLLER CABINET.
8. INSTALL W41 SIGN 500' TO CROSSWALK BETWEEN CURB AND R/W AND STENCIL ON PAVEMENT "SIGNAL AHEAD" IN EACH LANE.
9. EXACT LOCATION AND CONDITION OF EXISTING CONDUITS IS UNKNOWN. THE CONTRACTOR SHALL VERIFY EXISTING CONDUIT STATUS. DAMAGED OR MISSING CONDUITS SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. EXISTING DAMAGED PULLBOXES AND/OR LIDS SHALL ALSO BE REPLACED.

STRIPING AND SIGNING NOTES

1. ALL WORK AND MATERIAL SHALL CONFORM TO THE STATE STANDARD PLANS AND SPECIFICATIONS DATED JAN. 1999 AND THE CURRENT TRAFFIC MANUAL.
2. REMOVE CONFLICTING STRIPING BY SANDBLASTING.
3. PAINT 12" WHITE CROSSWALK OR LIMIT LINE PER PRFD STD. 1416.
4. PAINT 4" DOUBLE YELLOW / DET. 29
5. INSTALL "BIKE LANE" MARKING
6. INSTALL 2-R96 SIGNS 8' ABOVE SIDEWALK.
7. REMOVE R1 SIGN AT SIGNAL TURN ON.
8. INSTALL SIGN AND POST AS SHOWN.



0 1/2 1 2 3
3 inches on original drawing
SCALE: 1"=20'

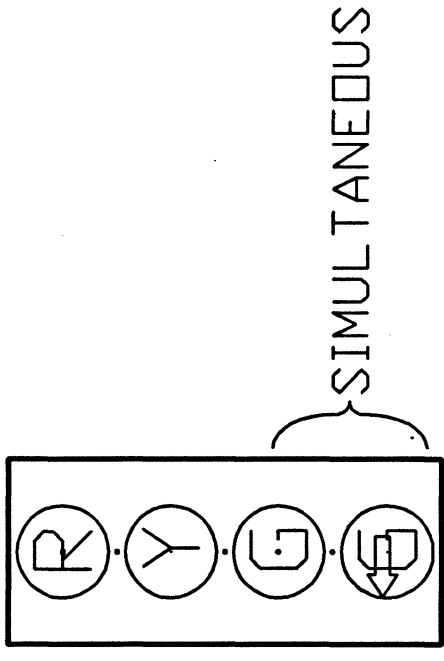
DESIGNED: MSELHATTAN	CHECKED: SOMMERS	SHEET 3 OF 4
DRAWN: MSELHATTAN	CHECKED: SOMMERS	
SCALE: 1"=20'	DATE: 1/24/02	DRAWING NO.
ORANGE COUNTY PUBLIC FACILITIES AND RESOURCES DEPARTMENT TRAFFIC SIGNAL INSTALLATION PLAN ANTONIO PKWY. AND O'NEILL DRIVE		
MARK DATE DESCRIPTION R E V I S I O N S		
PREPARED UNDER RESPONSIBLE CHARGE OF: [Signature] DATE: 1/24/02		

LABORARY/13822A0N	WILLDAN 27042 Towne Centre Drive, Suite 270 Foothill Ranch, California 92610 Serving Public Agencies 949/470-8840 fax 949/770-8041
County of Orange PRFD/ROAD DIVISION-TRAFFIC ENGINEERING	Approved By: [Signature] Date:
Underground Service Alert Call: TOLL FREE 1-800 422-4133 TWO WORKING DAYS BEFORE YOU DIG	I, G. OCHOA, County Traffic Engineer THIS PLAN IS SIGNED BY PRD/T.E. FOR CONCEPT AND ADHERENCE TO COUNTY TRAFFIC SIGNALS, SIGNING AND STRIPING STANDARDS AND REQUIREMENTS ONLY. PRD/T.E. IS NOT RESPONSIBLE FOR DESIGN ASSUMPTIONS OR ACCURACY.

DR. 15 (16631)

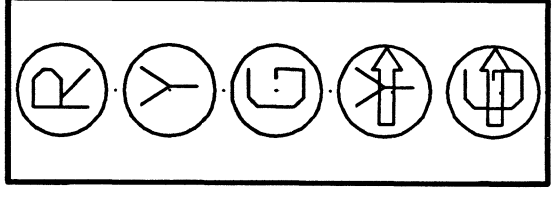
DETAIL A

4-SECTION SIGNAL HEAD 12" LENSES



DETAIL E

5-SECTION SIGNAL HEAD
12" LENSES



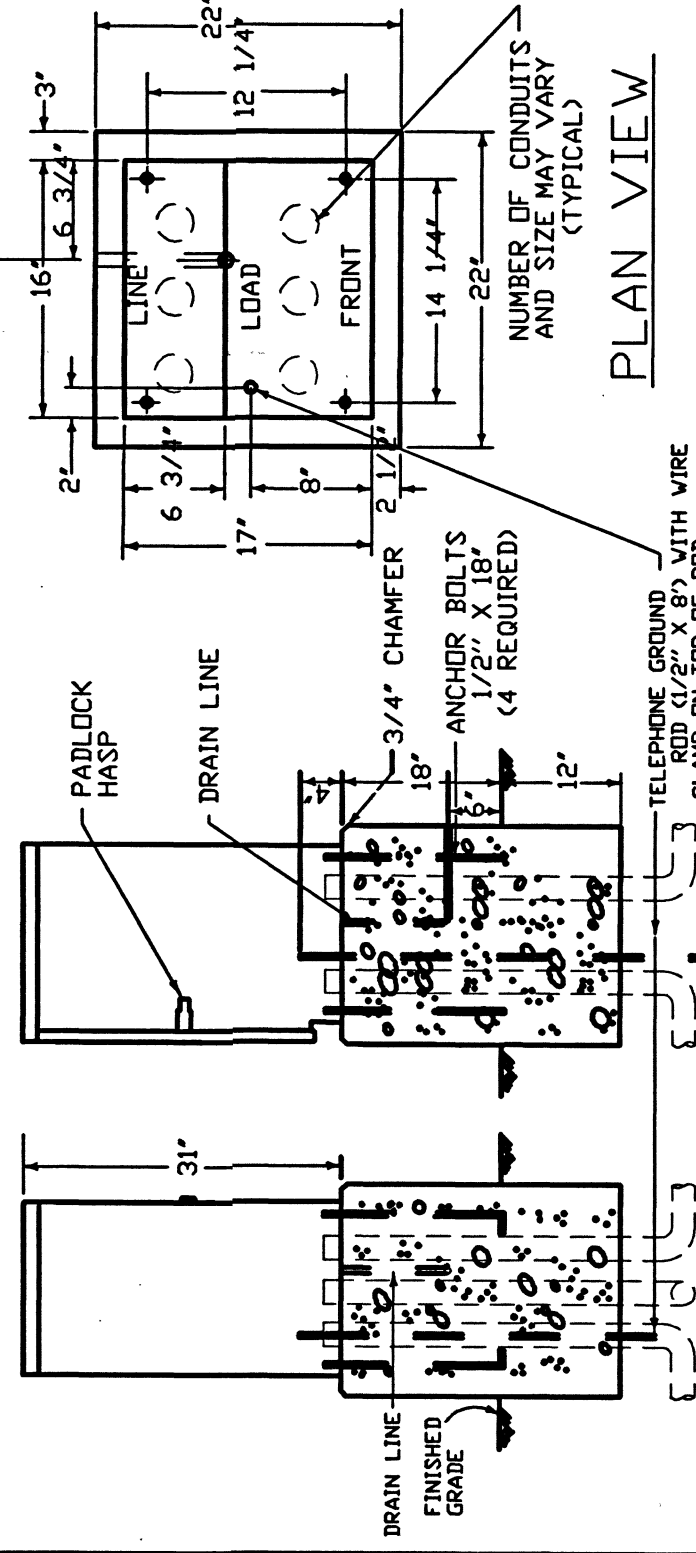
8 - BAND STRAP OR BOLT FRAME WORK AT TOP, TO SIGNAL POLE.
- NO CAST ALUMINUM TERMINAL BLOCKS ALLOWED.

8

- BAND STRAP OR BOLT FRAME WORK AT TOP,
- NO CAST ALUMINUM TERMINAL BLOCKS ALLOWED.

DETAIL F

INTERCONNECT SPLICE CABINET

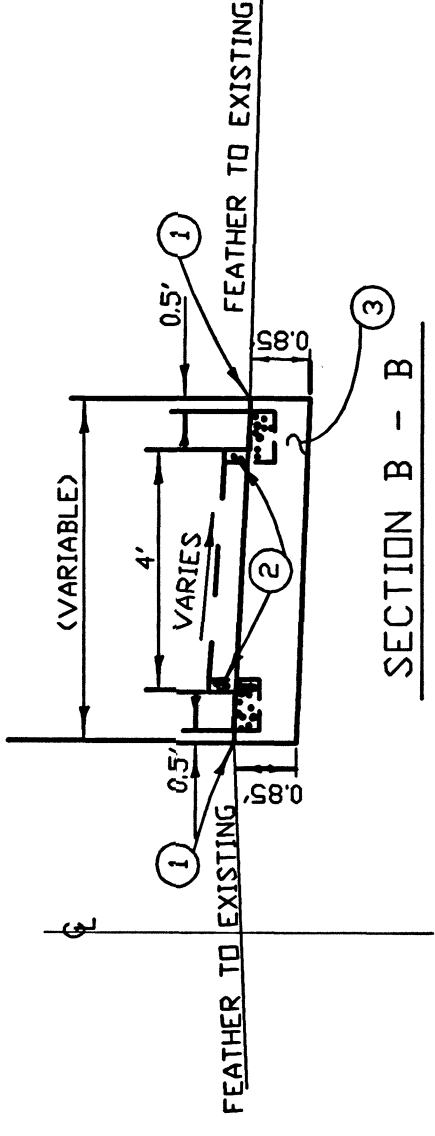
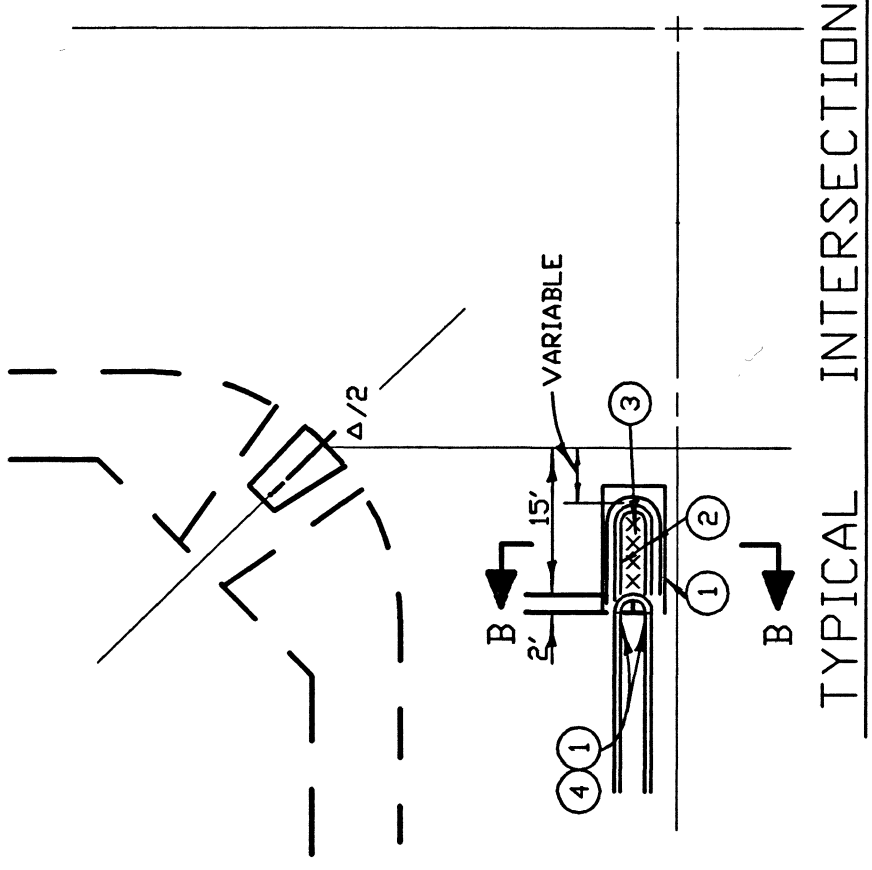


NOTES - DETAIL F

1. FOUNDATION TO BE 22" X 22". ANCHOR BOLT PLACEMENT PER CABINET MFG. TEMPLATE.
2. ENCLOSURE SHALL BE ALUMINUM AND FINISHED WITH A DETACHABLE MOUNTING BASE.
3. ALL FACTORY INSTALLED COMPONENTS SHALL BE UL LISTED OR PER PUBLISHED N.E.C. STANDARDS.
4. 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. MI-25 AND R-44 WALL. STANOFF FASTENED IN THE CENTER OF THE PANEL.
5. 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.
6. PROVIDE 1 1/2" CONDUIT FOR FUTURE 115 VAC SERVICE.
7. PROVIDE GROUND BUS INSIDE SPACE CABINET.

DETAIL B

INTERSECTIONS RAISED MEDIAN

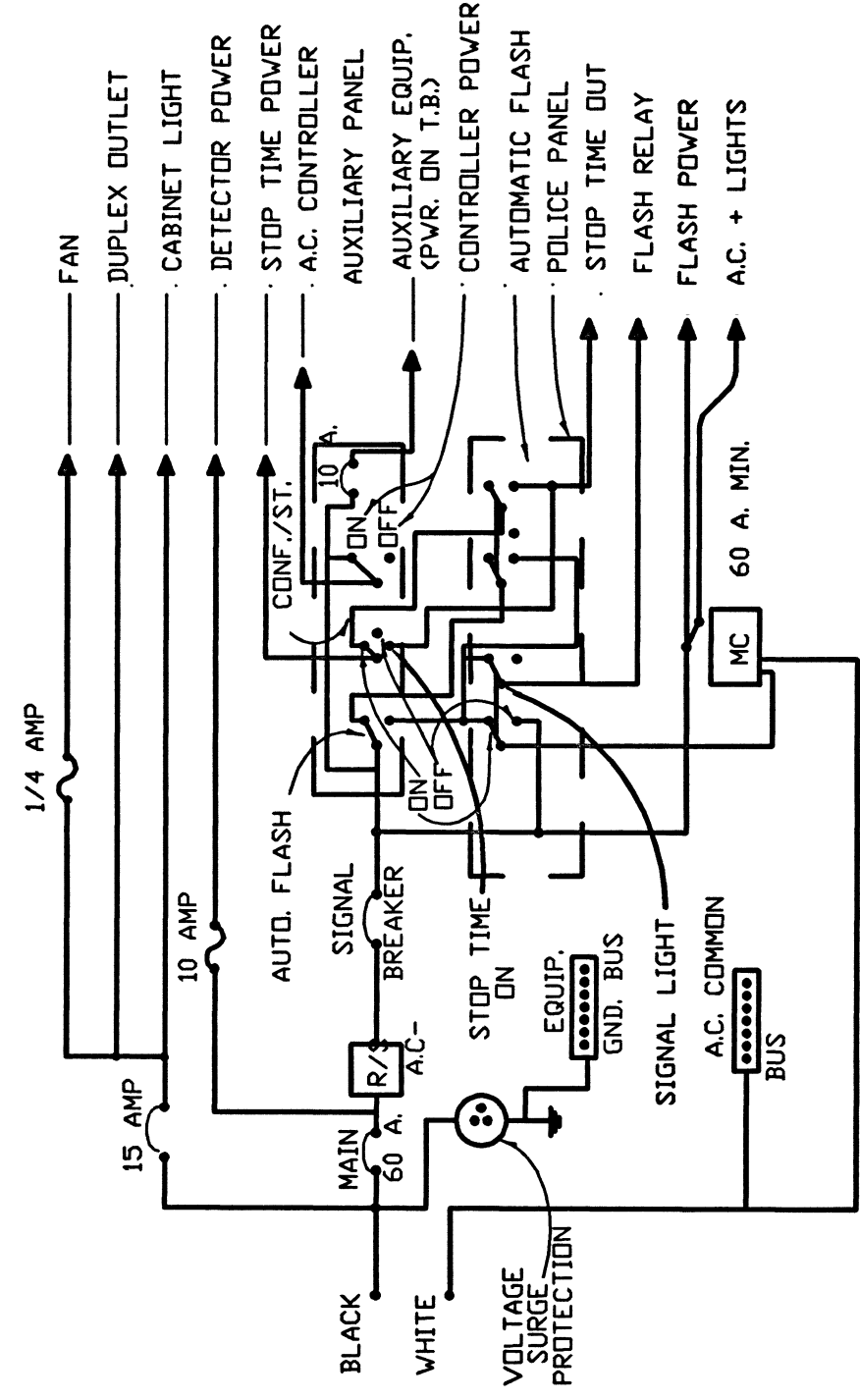


DETAILS B

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

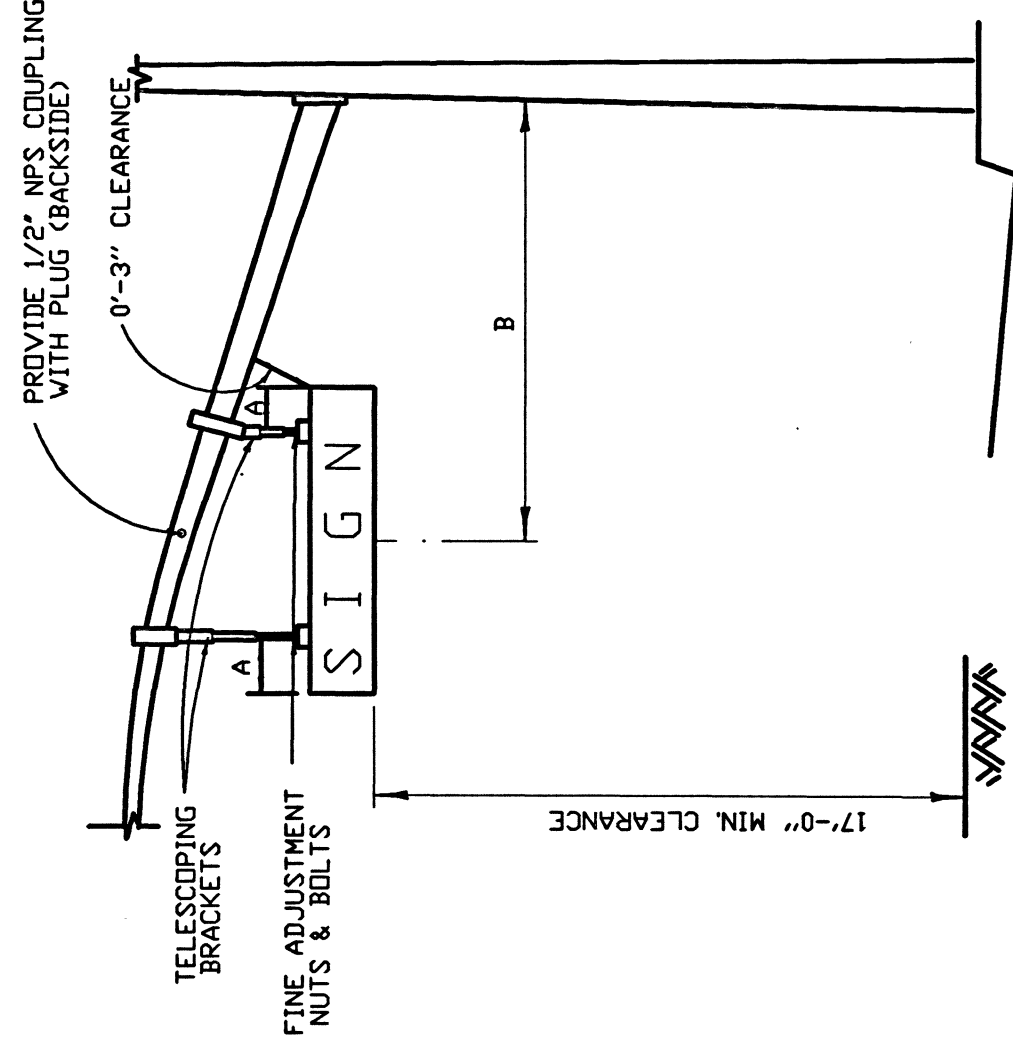
DETAIL G

CONTROLLER CABINET WIRING



DETAIL C

REFLECTORIZED STREET NAME SIGN COMPONENTS

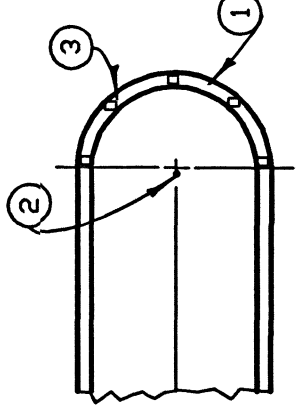


NOTES - DETAIL C

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

DETAIL H

RAISED MEDIAN MARKING

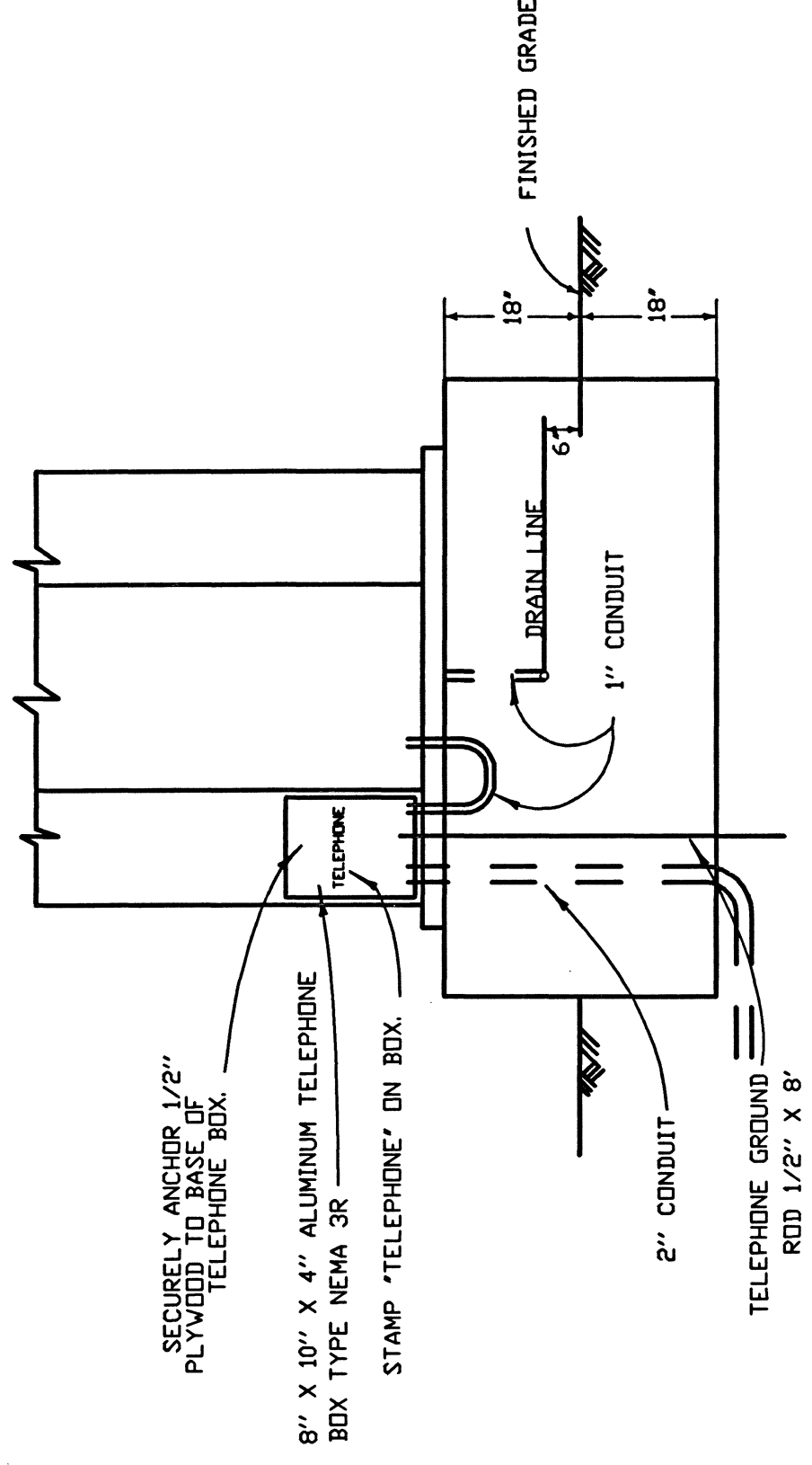


NOTES - DETAIL H

- ① PAINT MEDIAN NOSE WITH HIGH V REFLECTIVE PREMIXED WHITE TRAFFIC PAINT WITH GLASS BEADS.
- ② INSTALL FLEXIBLE VERTICAL TYPE K MARKER, R7, R10 OR TYPE N-1 ON TELEPOST AS INDICATED ON PLAN.
- ③ INSTALL YELLOW REFLECTIVE PAVEMENT MARKERS ON SURFACE OF MEDIAN CURB AND SURFACE OF SHOULDER (MINIMUM 5 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PERPENDICULAR TO G. OF ROADWAY.

DETAIL D

TELEPHONE SERVICE BOX



GENERAL NOTES

1. ALL NEW MATERIALS AND NEW EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED JULY 1989 AND STANDARD SPECIFICATIONS DATED JULY 1989 AND THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE OF THE CONTRACTOR, HOWEVER, IT IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
3. 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ORANGE COUNTY PUBLIC FACILITIES & RESOURCES DEPARTMENT FOR INSPECTION AT 567-1780.
4. THE ENGINEER SHALL APPROVE POLE AND LOOP DETECTION PLACEMENT IN THE FIELD PRIOR TO INSTALLATION.
5. ALL CONDUITS SHALL BE 2" UNLESS OTHERWISE NOTED.
6. ALL PULL BOXES SHALL BE #5 UNLESS OTHERWISE NOTED.
7. 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.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE AND ELECTRICAL SERVICE LINES AND INTERCONNECT HOOK-UPS BETWEEN THE LOCAL CONTROLLER AND THE SYSTEM MASTER.
9. PEDESTRIAN INDICATIONS SHALL BE INTERNATIONAL SYMBOL LEDD TYPE.
10. PEDESTRIAN PUSH BUTTONS SHALL BE TYPE B WITH INTERNATIONAL SYMBOL PLATE.
11. ALL VEHICLE INDICATIONS SHALL BE 12" DIAMETER RED, YELLOW, AND GREEN LED DISPLAYS WITH BACKPLATES.
12. CONTRACTOR SHALL AVOID CONFLICTING UTILITIES AS DIRECTED BY ENGINEER.
13. CONTRACTOR SHALL NOTHOD DAMAGING EXISTING UTILITIES. (SEE SPECIAL PROVISIONS).
14. DETECTOR LOOPS SHALL BE CIRCULAR 6" DIAMETER WITH 9" SPACING IN THE DIRECTION OF TRAVEL UNLESS OTHERWISE NOTED.
15. ALL DETECTOR CABLE HOMERUNS SHALL BE IN THE CROSSWALK AREA.
16. ALL DETECTOR LOOPS SHALL HAVE FOUR (4) TURNS.
17. ALL QUADRIPOLE DETECTOR LOOPS SHALL BE TWO (2-4-2) TURNS.
18. TRAFFIC CONTROLLER CABINET FOUNDATION SHALL BE 18" ABOVE AND BELOW FINISHED GRADE (SEE DETAIL D).
19. INSTALL " CABINET DOOR OPEN CIRCUIT IN CONTROLLER CABINET PER MANUFACTURE'S SPECIFICATIONS.
20. CONCRETE REPLACEMENT TO MATCH EXISTING.
21. MAINTAIN .36 INCHES OF CLEARANCE BETWEEN CABINETS.

		ORANGE COUNTY		PUBLIC FACILITIES & RESOURCES DEPARTMENT	
		SIGNAL DETAIL SHEET		SHEET	
				4	
				OF 4	
MARK	DATE	DESCRIPTION	PREPARED UNDER		DATE
			SUPERVISION OF		
			SCALE	DATE	
			NOT TO SCALE	V. D. NO.	
			REVISIONS		
			DESIGNED _____	CHECKED _____	
			DRAWN _____	CHECKED _____	

DR. 15 (16631)