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216-1681041.83-2010

SCANNED BY  
PLANNING

# CONSTRUCTION PLANS FOR TRAFFIC SIGNAL PLANS SAN PEDRO DR & HOLLY AVE

CITY OF ALBUQUERQUE  
BERNALILLO COUNTY, NEW MEXICO

MARCH 2009

*FW*

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### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Ronald R. Bohannon, of the firm of Tierra West LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by Bill Brewster, of Souder Miller & Associates, NMPS number 10855.



### RECORD DRAWING

**TIERRA WEST, L.L.C.**  
5571 MI WAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

APPROVED AS RECORD DRAWINGS  
DESIGN REVIEW SECTION  
CITY ENGINEER  
*Anthony [Signature]*  
DATE: 01/20/10

DRB #1004974  
DRB #1006868

REV	SHEETS	CITY ENGINEER	DATE	USER DEPT.	DATE	R DEPT.	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS		ENGINEER	DATE	***** FOR CONSTRUCTION	
		DRC Chairman		<i>[Signature]</i>	5/21/09	APPROVED FOR CONSTRUCTION <i>[Signature]</i> 09/02/09 City Engineer Date	
		Transportation		<i>[Signature]</i>	5-3-09		
		Water/Wastewater		<i>[Signature]</i>	5-4-09		
		Hydrology		<i>[Signature]</i>	5-4-09		
		AMAFCA					
Mngmt.							
Constr. Coord.							
CITY PROJECT NO.		6864.83		SHEET		1 of 17	



## SIGNAL NOTES

- ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT NATIONAL ELECTRIC CODE, THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS FOR ELECTRICAL WIRING AND APPARATUS, AND THE CITY'S TRAFFIC ENGINEERING OPERATIONS THIRD DRAFT SPECIFICATIONS (JUNE 1994).
- LOCATIONS OF CONDUITS, FOUNDATIONS, CONTROL CABINETS, POLES, PULL BOXES, MANHOLES, AND SPLICE CABINETS SHOWN ON THE PLANS ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD TO MAXIMIZE CLEAR SPACE AVAILABLE FOR PEDESTRIANS AND WHEELCHAIRS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CONTRACTOR SHALL MEET WITH THE CITY'S TRAFFIC ENGINEERING OPERATIONS PERSONNEL IN THE FIELD AT ALL LOCATIONS TO SPOT EQUIPMENT BEFORE BEGINNING THE WORK. ALL SUCH EQUIPMENT SHALL BE INSTALLED WITHIN THE RIGHT- OF-WAY.
- THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.
- THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND ANY DRIVEWAYS FOR SIDE STREET CROSSINGS. BEFORE CONDUIT CAN BE BORED, DRILLED, OR PUSHED THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL LOCATE AND EXPOSE GAS LINES WHICH CROSS ANY PROPOSED BORES. THESE EXCAVATIONS SHALL REMAIN OPEN UNTIL AFTER THE BORE IS COMPLETE. CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ANY SIDEWALK OR PAVEMENT REQUIRED TO EXPOSE SUCH LINES. THE CONTRACTOR MAY CUT, TRENCH, AND REPLACE EXISTING PAVEMENT ONLY WHEN APPROVED BY THE PROJECT MANAGER, IN ACCORDANCE WITH COA STD DWG 2465.
- SPLICING OF COMMUNICATIONS CABLE WILL NOT BE PERMITTED IN PULL BOXES. SPLICING OF COMMUNICATIONS CABLE 8. (CONNECTIONS) WILL BE PERMITTED ONLY AT SPLICE CABINETS OR CONTROLLER CABINETS WITH SPLICE BARS. SPLICING OF TRAFFIC SIGNALS MCC WILL BE PERMITTED IN LARGE PULL BOXES INCLUDING LARGE MEDIAN PULL BOXES. SPLICING OF VIDEO DETECTION COAXIAL CABLE WILL NOT BE PERMITTED FROM THE MASTARM BASE TO THE CONTROLLER CABINET. SPLICING OF OPTICAL DETECTOR CABLE WILL NOT BE PERMITTED FROM THE DETECTOR TO THE CONTROLLER CABINET.
- ALL LOOP LEAD-IN CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH CABLE BY PHASE AND LOOP NUMBER. ALL VIDEO DETECTION COAXIAL AND POWER CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH CABLE BY CAMERA NUMBER AND LOCATION. ALL OPTICAL DETECTOR CABLE SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH BY DIRECTION AND LOCATION.
- ALL PULL BOXES SHALL BE REINFORCED POLYMER MORTAR HEAVY DUTY TYPE WITH REINFORCED POLYMER MORTAR FOUNDATIONS. HEAVY DUTY COVERS. CONCRETE COVERS, STEEL COVERS, AND CONCRETE PULL BOXES WILL NOT BE ACCEPTABLE.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS (857-8000) THREE WORKING DAYS IN ADVANCE OF ANY ANTICIPATED WORK ON SIGNALS, LIGHTING, AND POWER SERVICES. TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL ASSIST THE CONTRACTOR IN FIELD LOCATION OF EQUIPMENT, COLOR CODING OF WIRING, AND MUST BE PRESENT WHEN SIGNALS AND LIGHTING ARE SHUT-OFF OR TURNED ON. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS EACH TIME A TRAFFIC SIGNAL CONTROL DOOR IS OPENED.
- THE CONTRACTOR SHALL NOTIFY PUBLIC SERVICE COMPANY 30 DAYS IN ADVANCE OF ANTICIPATED POWER SERVICE CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC SERVICE COMPANY TO ESTABLISH ELECTRICAL SERVICE IN THE CITY'S NAME. THE CONTRACTOR SHALL PAY THE LOCAL POWER COMPANY ALL COSTS TO PROVIDE ELECTRICAL SERVICE. THIS WORK WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- THE CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNING AND DELIVER TO THE CITY TRAFFIC ENGINEERING YARDS WHEN TRAFFIC SIGNALS ARE PUT INTO OPERATION.
- LIVE UNUSED CONDUCTORS WILL NOT BE ALLOWED AT MASTARM POLES AND PEDESTAL POLES. ALL SUCH UNUSED CONDUCTORS SHALL BE DISCONNECTED AT THE LARGE PULL BOX ADJACENT TO THE POLE.
- IF TRENCH WIDTHS LESS THAN 12" ARE PROPOSED BY THE CONTRACTOR, APPROVED COMPACTION METHODS SHALL BE USED DURING BACKFILL TO PREVENT LATENT TRENCH FAILURES. THE CONTRACTOR SHALL USE GROUT OR LEAN FILL AS APPROVED BY THE PROJECT MANAGER IN LIEU OF EARTH BACKFILL.
- FOR CONDUITS CONTAINING ONLY LOW VOLTAGE COMMUNICATIONS CABLES, THE REQUIREMENTS FOR A SINGLE CONDUCTOR BARE COPPER #8 AWG MAY BE WAIVED WHERE PERMITTED BY THE NATIONAL ELECTRIC CODE.
- THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL PROVIDE TRAFFIC SIGNAL TIMING PLANS AND WILL PROGRAM TRAFFIC SIGNAL CONTROLLERS.
- EXISTING CONDUITS TO BE REMOVED OR ABANDONED SHALL HAVE ALL WIRING REMOVED.
- EXISTING CONDUITS SHALL BE REPAIRED, ADJUSTED, OR REPLACED AS DIRECTED BY THE PROJECT MANAGER WHERE ELECTRICAL PULLBOXES OR TRAFFIC MANHOLES ARE INSTALLED OR REPLACED.
- CONTRACTOR SHALL COIL EXCESS INTERCONNECT CABLE AT ALL NEW OR EXISTING TRAFFIC MANHOLES BETWEEN SPLICE CABINET OR CONTROL CABINETS WITH SPLICE BARS. IF MORE THAN ONE MANHOLE EXISTS BETWEEN SPLICE CABINETS OR CONTROL CABINETS WITH SPLICE BARS, THEN COILING IS ONLY REQUIRED AT ONE OF THE MANHOLES. THE FOLLOWING QUANTITIES OF COMMUNICATION CABLE SHALL BE COILED:  
12 PAIR - 50 FT.  
25 PAIR - 50 FT.  
50 PAIR - 25 FT.  
75 PAIR - 25 FT.
- THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO DIRECT TRAFFIC WHEN SIGNALS ARE TURNED OFF.
- ALL DATA SHOWN HEREIN CONCERNING EXISTING UTILITIES HAS BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND FROM FIELD OBSERVATIONS WHICH MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR WILL BE RESPONSIBLE FOR EXPLORATORY TRENCHING. IF NECESSARY, TO MORE SPECIFICALLY LOCATE UTILITY LINES. COST OF LOCATING UTILITY LINES INCLUDING EXPLORATORY TRENCHING WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- THE CONTRACTOR SHALL VIDEO TAPE THE EXISTING TRAFFIC SIGNAL EQUIPMENT IN VHS FORMAT AND REVIEW THE TAPE WITH CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL PRIOR TO BEGINNING ANY REMOVALS OF SIGNAL EQUIPMENT. THE TAPE SHALL BECOME THE PROPERTY OF THE CITY AND MAY BE USED TO RESOLVE ANY QUESTIONS RELATED TO THE ORIGINAL CONDITION AND QUALITY OF EXISTING EQUIPMENT. THE EXISTING TRAFFIC SIGNAL EQUIPMENT INCLUDING POLES, CONTROLLER CABINETS, CONFLICT MONITORS, AND DETECTORS SHALL BE DELIVERED TO THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING YARD ON PINO ROAD NE.
- CABINET AND CONTROLLER NEED TO BE I.D.C. 820A.
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION THROUGH UPDATE #7, INCLUDING AMENDMENT NO 1. AND WILL BE REFERRED TO HEREIN AS "STANDARD SPECIFICATIONS".
- ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART P.
- CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISBURBED WITHOUT PERMISSION. ONLY THE CITY SURVEYOR SHALL REPLACE SURVEY MONUMENTS WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED. CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO STANDARD SPECIFICATIONS SECTION 4.4.
- TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM DMD, CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) SEVEN (7) DAYS PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF STANDARD SPECIFICATIONS
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.
- PNM WILL PROVIDE AT NO COST TO THE CITY OR THE CONTRACTOR THE REQUIRED PERSONNEL FOR INSPECTION OR OBSERVATION DEEMED NECESSARY BY PNM WHILE THE CONTRACTOR IS EXPOSING PNM'S CABLES. HOWEVER, THE CONTRACTOR SHALL BE CHARGED THE TOTAL COST ASSOCIATED WITH REPAIRS TO ANY DAMAGED CABLES OR OR FOR ANY COST ASSOCIATED WITH SUPPORTING OR RELOCATING THE POLES AND CABLES DURING CONSTRUCTION.
- EXISTING UTILITY LINE LOCATION ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMATION PROVIDED BY THE UTILITY COMPANY, THE OWNER OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING UNTIL THE PROJECT IS ACCEPTED BY THE CITY OF ALBUQUERQUE.

## INCIDENTAL ITEMS \*

- REMOVAL OF EXISTING PULL BOXES, CONDUITS, OR OTHER SIGNAL EQUIPMENT FOR INSTALLATION OF NEW SIGNAL EQUIPMENT.
- CABLE TESTING AND DIAGRAMS.
- BORING, DRILLING, PUSHING, AND TRENCHING, INCLUDING REMOVAL AND REPLACEMENT OF PAVEMENT, SIDEWALKS, DRIVEPADS, VALLEY GUTTERS, WHEELCHAIR RAMPS, CURB & GUTTER, AND LANDSCAPING (INCLUDING SPRINKLERS), FOR INSTALLATION OF PULL BOXES, CONDUITS, AND SIGNAL FOUNDATIONS, EXCEPT AS NOTED ON THE PLANS.
- LOCATION OF UTILITY LINES INCLUDING EXPLORATORY TRENCHING AND EXPOSING OF GAS LINES WHEN BORING.
- DESIGN, MATERIALS, INSTALLATION AND REMOVAL OF SAFETY BARRIER FOR SHIELDING EQUIPMENT OR MATERIAL.
- APPRIISING PUBLIC THROUGH THE LOCAL NEWS MEDIA.
- HAULING OF MATERIAL TO BE DISPOSED TO CITY LANDFILL.
- REMOVAL, SALVAGE, AND TRANSPORTATION OF EXISTING SIGNAL EQUIPMENT TO THE CITY TRAFFIC ENGINEERING OPERATIONS YARD.
- LEAN FILL FOR CONDUIT TRENCHES.
- PULL BOX ADJUSTMENT TO GRADE.
- OFF-DUTY POLICE OFFICER FOR TRAFFIC CONTROL
- REMOVAL AND REPLACEMENT IN KIND OR BETTER OF LANDSCAPING INCLUDING SPRINKLERS, FOR INSTALLATION OF PULL BOXES, CONDUITS AND SIGNAL
- COST FOR PUBLIC SERVICE COMPANY TO PROVIDE ELECTRICAL SERVICE.

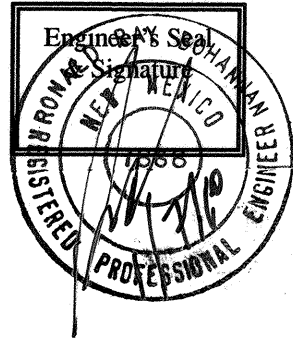
\* ITEMS LISTED ARE ONLY A GENERAL DESCRIPTION OF THE REQUIRED WORK AND MATERIALS, AND MAY NOT BE COMPLETE. THIS LIST DOES NOT INCLUDE ANY INCIDENTAL WORK OR MATERIALS REQUIRED BY THE SPECIAL PROVISIONS SERIALS (STANDARD DETAILS), SUPPLEMENTAL SPECIFICATIONS, OR THE STANDARD SPECIFICATIONS.

## TRAFFIC SIGNAL LEGEND

NEW	EXISTING	ITEM
■	■	PULL BOX
●	⤿	SERVICE POLE
M	M	METER PEDESTAL
C	C	CONTROLLER CABINET
---	---	CONDUIT RUN (SIGNALS)
---	---	CONDUIT RUN (INTERCONNECT)
=====	=====	LOOP DETECTOR
←●	←○	TRAFFIC SIGNAL PEDESTAL POLE
△1	△E1	CONDUIT RUN NUMBER (SIGNAL)
△S1	△S1	CONDUIT RUN NUMBER (POWER SERVICE)
△C1	△C1	CONDUIT RUN NUMBER (INTERCONNECT)
△F1	△F1	CONDUIT RUN NUMBER (WARNING BEACON)
⤿	⤿	TYPE II STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACK PLATE, AND OPTICAL DETECTOR
⤿	⤿	TRAFFIC SIGNAL, BACK PLATE, OPTICAL DETECTOR, LUMINAIRE, AND VIDEO CAMERA
⤿	⤿	TRAFFIC SIGNAL, BACK PLATE, OPTICAL DETECTOR, LUMINAIRE,
●	○	PEDESTRIAN PUSH BUTTON (MOUNTED TO SIDE OF POLE WHERE INDICATED)
■	○	PEDESTRIAN SIGNALS (MOUNTED TO SIDE OF POLE WHERE INDICATED)
SC	SC	SPLICE CABINET
●	○	TRAFFIC MANHOLE
■	□	VIDEO CAMERA

### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Ronald R. Bohannon, of the firm of Tierra West LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by Bill Brewster, of Souder Miller & Associates, NMPs number 10855.



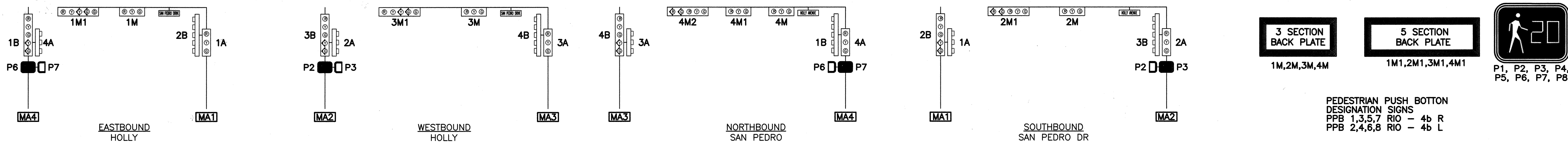
## DEFINITIONS

- "ENGINEER" - FOR THE PURPOSES OF THIS PROJECT, THE TERM "ENGINEER" IS SYNONYMOUS WITH THE TERM "PROJECT MANAGER".

## RECORD DRAWING

<b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
TRAFFIC SIGNALS SIGNALIZATION TRAFFIC SIGNAL NOTES AND LEGEND SAN PEDRO & HOLLY	
DESIGN REVIEW COMMITTEE APPROVE MAY 21 2009 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL SEP 02 2009 CITY ENGINEER
CITY PROJECT NO. 6864.83	ZONE MAP NO. C-18-Z
SHEET # 2	





### TRAFFIC SIGNAL CONFIGURATION BY APPROACH

NTS

NOTE  
LINES SHOWN OUTSIDE OF RIGHT-OF-WAY ARE  
SHOWN FOR CLARITY. ALL INSTALLATION TO BE DONE  
WITHIN THE RIGHT-OF-WAY.

### VIDEO CABLE

FROM	TO	CONDUIT TRACE	NO. PAIR x LENGTH	TOTAL LENGTH
MA1	CONTROLLER	16, 10A, 2A, 1A	1@105	105
MA2	CONTROLLER	12, 3A, 2A, 1A	1@135	135
MA3	CONTROLLER	13, 5A, 4A, 3A, 2A, 1A	1@235	235
MA4	CONTROLLER	15, 8A, 9A, 10A, 2A, 1A	1@192	192
		TOTAL		577

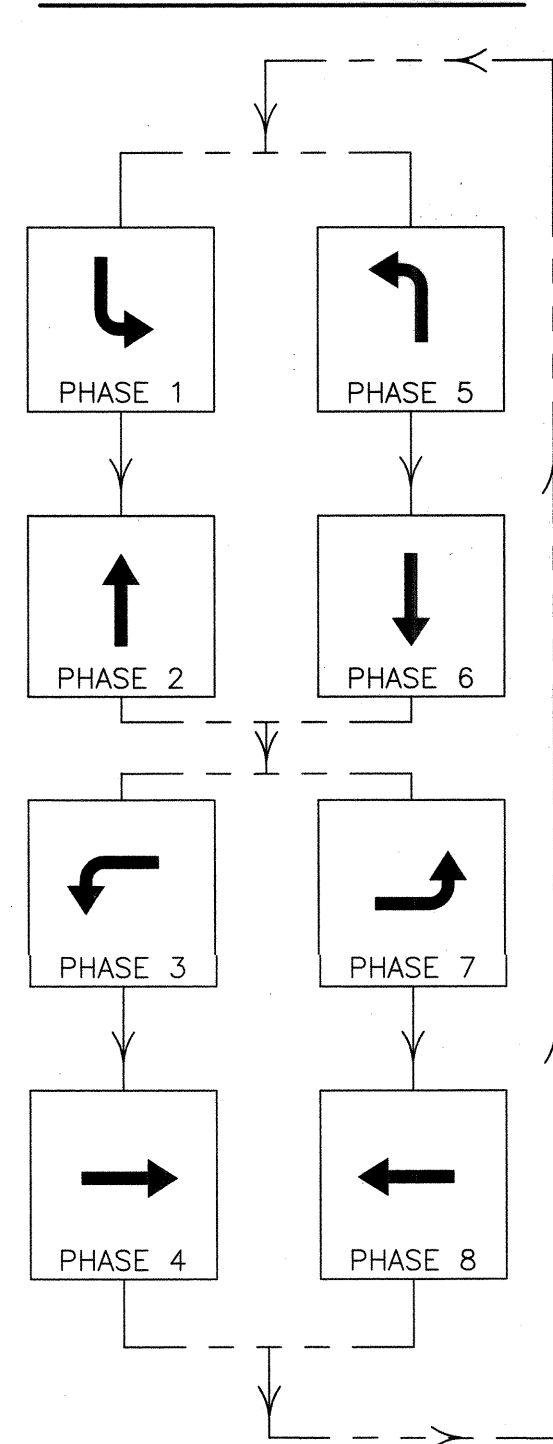
### OPTICOM SYSTEM CABLE

FROM	TO	CONDUIT TRACE	# PAIR x LENGTH	TOTAL LENGTH
MA1	CONTROLLER	16, 10A, 2A, 1A	1@105	105
MA2	CONTROLLER	12, 3A, 2A, 1A	1@135	135
MA3	CONTROLLER	13, 5A, 4A, 3A, 2A, 1A	1@235	235
MA4	CONTROLLER	15, 8A, 9A, 10A, 2A, 1A	1@192	192
		TOTAL		577

### SIGNAL POLES AND MASTARMS

ID#	TYPE	STATION	OFFSET	LUMINAIRE MOUNTING HEIGHT	LUMINAIRE ARM
MA1	MASTARM 25' TYPE III	10+57	31' RT	60'	15'
MA2	MASTARM 40' TYPE III	9+49	49 RT	60'	15'
MA3	MASTARM 25' TYPE III	9+49	32' LT	60'	15'
MA4	MASTARM 45' TYPE III	10+44	35' LT	60'	15'
CC1	CONTROLLER	10+46	74' RT	-	-

### SIGNAL PHASING



### ABBREVIATIONS

MA1 MASTARM NUMBER  
PP1 PEDESTAL POLE NUMBER  
PPB1 PEDESTRIAN PUSH BUTTON NUMBER  
CC1 CONTROL CABINET NUMBER  
PB1 PULL BOX NUMBER (SIGNALS)  
PBS1 PULL BOX NUMBER (POWER)  
PBC1 PULL BOX NUMBER (INTERCONNECT)  
DL1(1) DETECTOR LOOP PHASE # (LOOP #)  
3A SIGNAL HEAD NUMBER  
P1 PEDESTRIAN SIGNAL NUMBER  
BP BACK PLATE  
EC EXTENDED CALL LOOP DETECTOR  
SD SYSTEM LOOP DETECTOR  
MH1 TRAFFIC MANHOLE NUMBER  
M METER

### NOTES

1. NEW PULLBOXES ARE TO BE LARGE PULL BOXES.
2. ALL INDICATORS ARE TO BE LED.
3. MASTARM FOUNDATION CONCRETE SHALL BE TESTED FOR SLUMP AND COMPRESSIVE STRENGTH.

### FLASH CONDITION \*

YELLOW BALL 2A, 2B, 2M, 2M1  
RED BALL 1A, 1B, 1M  
YELLOW BALL 4A, 4B, 4M, 4M1  
RED BALL 3A, 3B, 3M, 3M1

### INITIALIZATION

ALL RED, THEN PHASE 2 AND 6 GREEN

### SYMBOL KEY

- MA1 SIGNAL & CABINET ID
- 3A NEW CONDUIT RUN ID
- 3B CONDUIT RUN ID (POWER SERVICE)
- 3C CONDUIT RUN ID (INTERCONNECT)

### RECORD DRAWING

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

### TRAFFIC SIGNALS SIGNALIZATION PLAN SAN PEDRO & HOLLY

DESIGN REVIEW COMMITTEE  
APPROVED  
MAY 21 2009  
DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL  
APPROVED  
SEP 2 2009  
CITY ENGINEER

MO./DAY/YR.	MO./DAY/YR.

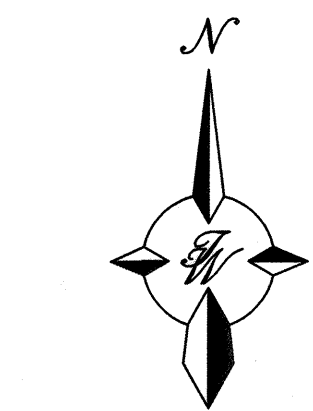
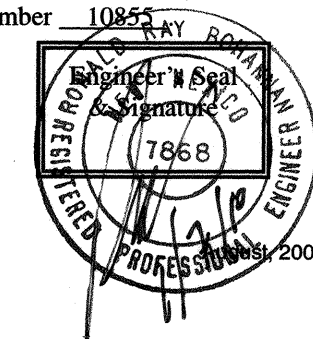
CITY PROJECT NO.  
6864.83

ZONE MAP NO.  
C-18-Z

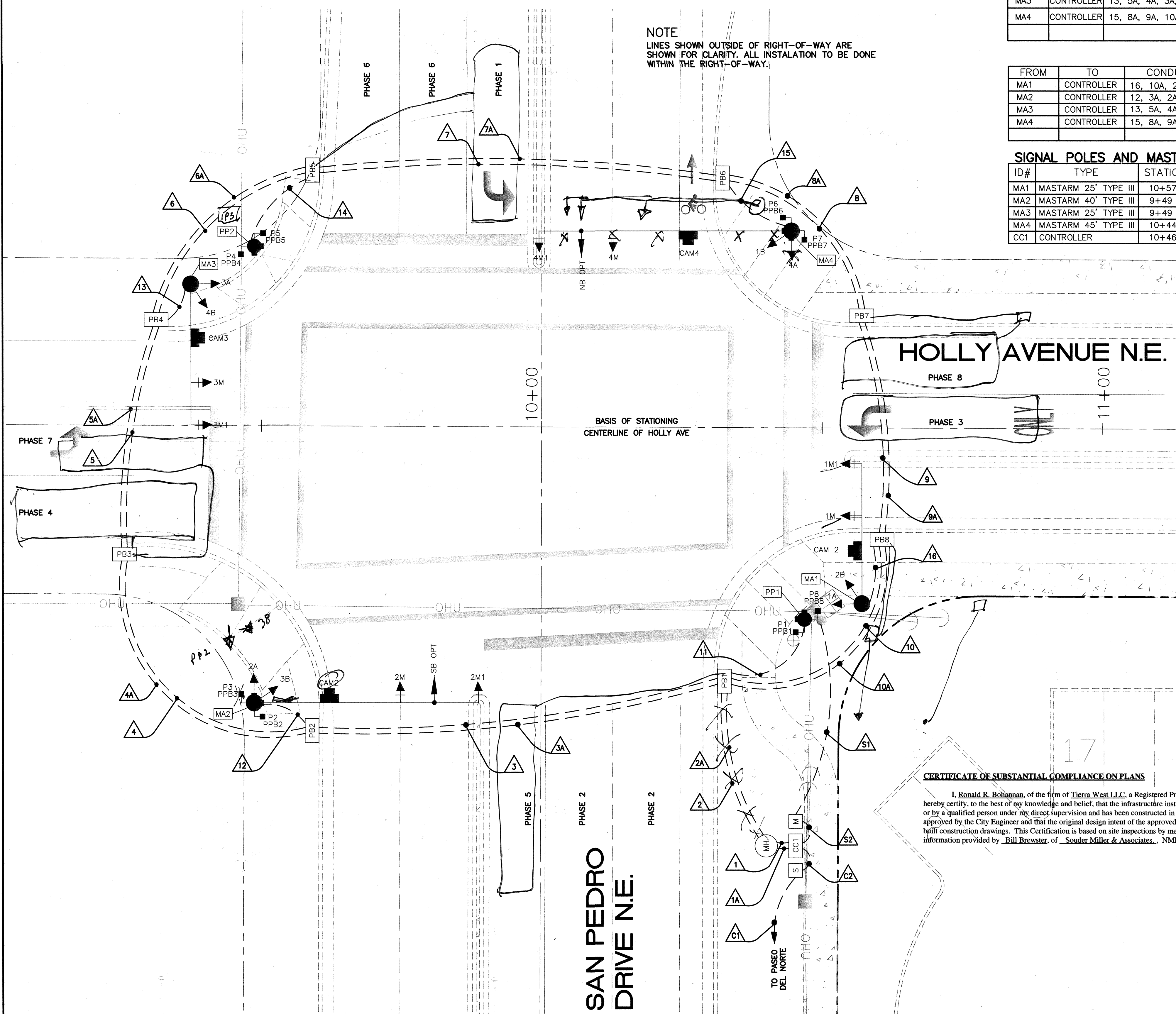
SHEET #  
3

### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

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GRAPHIC SCALE  
( IN FEET )  
1 inch = 10 ft.





## CONDUIT AND CONDUCTOR REQUIREMENTS

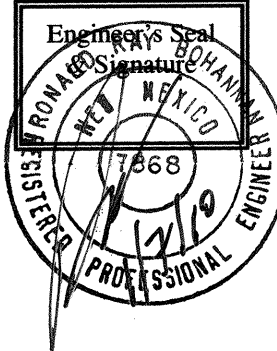
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## ABBREVIATIONS

CC 6	COMMUNICATION CABLE-6 PAIR
CC 12	COMMUNICATION CABLE-12 PAIR
DLIC	DETECTOR LOOP LEAD IN CABLE
MA	MASTARM
MCC	MULTI CONDUCTOR CABLE
PB	PULL BOX
PP	PEDESTAL POLE
PPB	PEDESTRIAN PUSH BUTTON
REC	RIGID ELECTRIC CONDUIT
SCC	SINGLE CONDUCTOR CABLE
CAM	VIDEO CAMERA

### **CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLAN**

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# RECORD DRAWING

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CONDUIT AND CONDUCTOR REQUIREMENTS

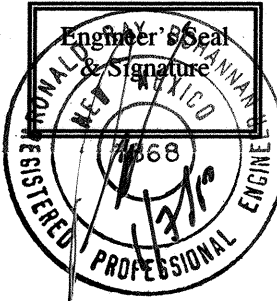
CONDUIT LENGTH, SIZE, AND TYPE					CONDUIT FILL BY CONTRACTOR LENGTH AND TYPE												
RUN ID ##	SIZE/LENGTH			TYPE	REMARKS	MCC 5	MCC 7	MCC 20	SCC #2	SCC #6	SCC #8	DLIC	CC #6	CC #12	OPTICOM	VIDEO	LUMINAIRE
	1"	2"	3"			(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)	(# @ FT)
SAN PEDRO DRIVE AND HOLLY AVENUE																	
MA1					BASE TO 1A	1 @ 15'											
MA1					BASE TO 2B		1 @ 15'										
MA1					BASE TO 1M	1 @ 35'											
MA1					BASE TO 1M1		1 @ 55'										
MA1					BASE TO VIDEO CAMERA											1 @ 60'	
PP1					BASE TO P1 & P8	2 @ 15'											
PP1					BASE TO PPB1 & PPB8	2 @ 9'											
MA2					BASE TO 2A	1 @ 15'											
MA2					BASE TO 3B		1 @ 15'										
MA2					BASE TO 2M	1 @ 45'											
MA2					BASE TO 2M1		1 @ 60'										
MA2					BASE TO P2 & P3	2 @ 15'											
MA2					BASE TO PPB2 & PPB3	2 @ 9'											
MA2					BASE TO OPTICOM										1 @ 45'		
MA2					BASE TO VIDEO CAMERA											1 @ 60'	
MA3					BASE TO 3A	1 @ 15'											
MA3					BASE TO 4B		1 @ 15'										
MA3					BASE TO 3M	1 @ 35'											
MA3					BASE TO 3M1		1 @ 45'										
MA3					BASE TO VIDEO CAMERA											1 @ 60'	
PP2					BASE TO P4 & P5	2 @ 15'											
PP2					BASE TO PPB4 & PPB5	2 @ 9'											
MA4					BASE TO 4A	1 @ 15'											
MA4					BASE TO 1B		1 @ 15'										
MA4					BASE TO 4M	1 @ 50'											
MA4					BASE TO 4M2		1 @ 65'										
MA4					BASE TO P6 & P7	2 @ 15'											
MA4					BASE TO PPB6 & PPB7	2 @ 9'											
MA4					BASE TO OPTICOM										1 @ 45'		
MA4					BASE TO VIDEO CAMERA											1 @ 60'	

ABBREVIATIONS

CC 6	COMMUNICATION CABLE-6 PAIR
CC 12	COMMUNICATION CABLE-12 PAIR
DLLIC	DETECTOR LOOP LEAD IN CABLE
MA	MASTARM
MCC	MULTI CONDUCTOR CABLE
PB	PULL BOX
PP	PEDESTAL POLE
PPB	PEDESTRIAN PUSH BUTTON
REC	RIGID ELECTRIC CONDUIT
SCC	SINGLE CONDUCTOR CABLE
CAM	VIDEO CAMERA

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Ronald R. Bohannan, of the firm of Tierra West LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by Bill Brewster, of Souder Miller & Associates, NMPS number 10855.



RECORD DRAWING

<b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
<b>TRAFFIC SIGNALS</b> CABLES AND CONDUITS - B SAN PEDRO & HOLLY	
DESIGN REVIEW COMMITTEE <b>APPROVED</b> MAY 21 2009 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL <b>APPROVED</b> SEP 02 2009 CITY ENGINEER
CITY PROJECT NO. 6864.83	ZONE MAP NO. C-18-Z
SHEET # 5	

CONTRACTOR MODADE / WOODCOCK		WORK SOLDER MILLER DATE 2008		DATE	
DESIGNED BY: JN		DATE: 03-30-09		JOB NO: P2008-0011	
DRAWN BY: ET		DATE: 03-30-09		JOB NO: P2008-0011	
CHECKED BY: RRB		DATE: 03-30-09		JOB NO: P2008-0011	
REVISIONS		DESIGN		SIGNAL EXHIBIT.dwg	
NO. DATE		BY		DATE	
1		JN		03-30-09	
2		ET		03-30-09	
3		RRB		03-30-09	
4		JN		03-30-09	
5		ET		03-30-09	
6		RRB		03-30-09	
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53		ET		03-30-09	
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64		JN		03-30-09	
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70		JN		03-30-09	
71		ET		03-30-09	
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77		ET		03-30-09	
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85		JN		03-30-09	
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101		ET		03-30-09	
102		RRB		03-30-09	
103		JN		03-30-09	
104		ET		03-30-09	
105		RRB		03-30-09	
106		JN		03-30-09	
107		ET		03-30-09	
108		RRB		03-30-09	
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110		ET		03-30-09	
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112		JN		03-30-09	
113		ET		03-30-09	
114		RRB		03-30-09	
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118		JN		03-30-09	
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146		ET		03-30-09	
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171		RRB		03-30-09	
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175		JN		03-30-09	
176		ET		03-30-09	
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178		JN		03-30-09	
179		ET		03-30-09	
180		RRB		03-30-09	
181		JN</			

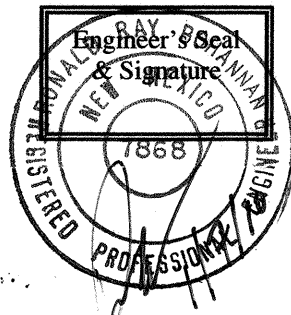


SIGNAL NOTES

- LOCATIONS OF CONDUITS, FOUNDATIONS, CONTROL CABINETS, POLES, PULL BOXES, MANHOLES, AND SPLICE CABINETS SHOWN ON THE PLANS ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD TO MAXIMIZE CLEAR SPACE AVAILABLE FOR PEDESTRIANS AND WHEELCHAIRS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CONTRACTOR SHALL MEET WITH THE PROJECT MANAGER IN THE FIELD AT ALL LOCATIONS TO SPOT EQUIPMENT BEFORE BEGINNING THE WORK. ALL SUCH EQUIPMENT SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY.
- THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.
- THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND DRIVEWAYS. BEFORE CONDUIT CAN BE BORED, DRILLED, OR PUSHED THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL LOCATE AND EXPOSE GAS LINES WHICH CROSS ANY PROPOSED BORES. THESE EXCAVATIONS SHALL REMAIN OPEN UNTIL AFTER THE BORE IS COMPLETE. CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ANY SIDEWALK OR PAVEMENT REQUIRED TO EXPOSE SUCH LINES. THE CONTRACTOR MAY CUT, TRENCH, AND REPLACE EXISTING PAVEMENT ONLY WHEN APPROVED BY THE PROJECT MANAGER.
- MASTARMS SHALL BE PLACED 90° TO THE CENTERLINE UNLESS OTHERWISE NOTED.
- MOUNT ALL CONTROLLERS SO DOORS FACE AWAY FROM TRAFFIC, UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY PROJECT MANAGER.
- SHOWN DISTANCES TO TRAFFIC SIGNAL POLES TO BE MEASURED FROM FACE OF CURB, UNLESS OTHERWISE NOTED.
- ALL WIRE ON THIS PROJECT SHALL BE COPPER
- ALL SPLICES FOR TRAFFIC SIGNAL MULTI-CONDUCTOR CABLE SHALL BE MADE ABOVE GROUND (IN CABINET OR STANDARD BASE). NO SPLICING OF MCC WILL BE PERMITTED IN PULL BOXES.
- SPLICING OF COMMUNICATIONS CABLE WILL NOT BE PERMITTED IN PULL BOXES. SPLICING OF COMMUNICATIONS CABLE (CONNECTIONS) WILL BE PERMITTED ONLY AT SPLICE CABINET OR CONTROL CABINETS WITH SPLICE BLOCKS. SPLICING OF VIDEO DETECTION COAXIAL CABLE WILL NOT BE PERMITTED BETWEEN THE MASTARM BASE AND THE CONTROLLER CABINET. SPLICING OF OPTICAL DETECTOR CABLE WILL NOT BE PERMITTED FROM THE OPTICAL DETECTOR TO THE CONTROLLER CABINET.
- SIGNAL HEADS SHALL BE COVERED WHEN NECESSARY WITH PACIFIC ENTERPRISES SIGNAL COVERS OR APPROVED EQUAL.
- NOT USED
- THE CONTRACTOR IS HEREBY ADVISED THAT THE INTERSECTION SIGNALS SHALL NOT BE TURNED ON UNTIL THE SIGNAL IS COMPLETELY INSTALLED. INCLUDING FULLY ACTUATED OPERATION (ALL LOOPS AND PUSHBUTTON WIRING SHALL BE OPERATIONAL).
- FLASHING OPERATION IS NOT CONSIDERED THE BEGINNING OF THE FIELD TESING PERIOD.
- ACCEPTABLE TYPE II AND TYPE III STANDARDS ARE VALMONT, UNION METAL, JEM, OR APPROVED EQUAL.
- ALL LOOP LEAD-IN CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH CABLE BY PHASE AND LOOP NUMBER. ALL VIDEO DETECTION COAXIAL AND POWER CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH CABLE BY CAMERA NUMBER AND LOCATION. ALL OPTICAL DETECTOR CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH BY DIRECTION AND LOCATION.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF ALBUQUERQUE SIGNAL SHOP TWO WORKING DAYS IN ADVANCE OF ANY ANTICIPATED WORK ON SIGNALS, LIGHTING, AND POWER SERVICES. TRAFFIC ENGINEERING PERSONNEL MUST BE PRESENT WHEN SIGNALS ARE SHUT-OFF OR TURNED ON. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF ALBUQUERQUE SIGNAL SHOP EACH TIME A TRAFFIC SIGNAL CONTROL DOOR IS OPENED.
- THE CONTRACTOR SHALL NOTIFY THE LOCAL POWER COMPANY 30 DAYS IN ADVANCE OF ANTICIPATED POWER SERVICE CONNECTIONS. THE CONTRACTOR SHALL COORIDINATE WITH THE LOCAL POWER COMPANY TO ESTABLISH ELECTRICAL SERVICE IN THE MAINTAINING AGENCY'S NAME. THE CONTRACTOR SHALL PAY THE LOCAL POWER COMPANY ALL COSTS TO PROVIDE ELECTRICAL SERVICE. THIS WORK WILL BE (CONSIDERED INCIDENTAL / ~~PAID SEPARATELY BY THE OWNER~~ <sup>2/24/09</sup> / ~~PAID BY THE CONTRACTOR~~ <sup>5/2/09</sup>) TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF THE POWER AND MAINTENANCE UNTIL SUCH TIME AS THE SIGNAL IS ACCEPTED FOR MAINTENANCE BY THE CITY OF ALBUQUERQUE.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CONFLICTING SIGNING WHEN TRAFFIC SIGNALS ARE PUT INTO OPERATION.
- FOR CONDUITS CONTAINING ONLY LOW VOLTAGE COMMUNICATIONS CABLES. THE REQUIREMENTS FOR SINGLE CONDUCTOR BARE COPPER #8 AWG MAY BE WAIVED WHERE PERMITTED BY THE NATIONAL ELECTRICAL CODE.
- EXISTING CONDUITS TO BE REMOVED OR ABANDONED SHALL HAVE ALL WIRING REMOVED.
- EXISTING CONDUITS SHALL BE REPAIRED, ADJUSTED, OR REPLACED AS DIRECTED BY THE PROJECT MANAGER WHERE ELECTRICAL PULL BOXES OR TRAFFIC MANHOLES ARE INSTALLED OR REPLACED.
- THE CONTRACTOR SHALL ARRANGE TO HAVE OFF-DUTY POLICE OFFICERS TO DIRECT TRAFFIC WHEN SIGNALS ARE TURNED OFF.
- ALL DATA SHOWN HEREIN CONCERNING EXISTING UTILITIES HAS BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND FROM FIELD OBSERVATIONS WHICH MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR WILL BE RESPONSIBLE FOR EXPLORATORY TRENCHING, IF NECESSARY, TO MORE SPECIFICALLY LOCATE UTILITY LINES. COST OF LOCATING UTILITY LINES INCLUDING EXPLORATORY TRENCHING WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- NOT USED
- THE CONTRACTOR SHALL VIDEO TAPE THE EXISTING TRAFFIC SIGNAL EQUIPMENT IN VHS FORMAT AND REVIEW THE TAPE WITH THE CITY OF ALBUQUERQUE SIGNAL SHOP PERSONNEL PRIOR TO BEGINNING ANY REMOVALS OF SIGNAL EQUIPMENT. THE TAPE SHALL BECOME THE PROPERTY OF THE CITY OF ALBUQUERQUE SIGNAL LABS) AND MAY BE USED TO RESOLVE ANY QUESTIONS RELATED TO THE ORIGINAL CONDITION AND QUALITY OF EXISTING EQUIPMENT. THE EXISTING TRAFFIC SIGNAL EQUIPMENT INCLUDING POLES, CONTROLLER, CABINETS, SIGNAL HEADS, PEDESTRIAN HEADS, PEDESTRIAN PUSH BUTTONS, FITTINGS, BACK PLATES, LOAD SWITCHES, CONFLICT MONITORS, AND DETECTORS SHALL BE DELIVERED TO THE CITY OF ALBUQUERQUE SIGNAL YARD

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Ronald R. Bohannon, of the firm of Tierra West LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by Bill Brewster, of Souder Miller & Associates, NMPS number 10855.



FUNCTION CHART – 115 VOLT CIRCUIT 1/						
CONDUCTOR			RING 1 – MULTI CONDUCTOR CABLE 20		RING 2 – MULTI CONDUCTOR CABLE 20 2/	
CONDUCTOR NUMBER	BASE COLOR	TRACER	FUNCTION	FIELD CONNECTION	FUNCTION	FIELD CONNECTION
1	BLACK	–	SPARE			
2	WHITE	–	SPARE			
3	RED	–	PHASE 1 RED		PHASE 5 RED	
4	GREEN	–	PHASE 1 GREEN	GREEN LT 2M1,2B	PHASE 5 GREEN	GREEN LT 4M1,4B
5	ORANGE	–	PHASE 1 YELLOW	YELLOW LT 2M1,2B	PHASE 5 YELLOW	YELLOW LT 4M1,4B
6	BLUE	–	SPARE		SPARE	
7	WHITE	BLACK	SPARE		SPARE	
8	RED	BLACK	PHASE 2 RED	RED BALL 4M,4M1,4M2,4A,4B	PHASE 6 RED	RED BALL 2M,2M1,2A,2B
9	GREEN	BLACK	PHASE 2 GREEN	GREEN BALL 4M,4M1,4A,4B	PHASE 6 GREEN	GREEN BALL 2M,2M1,2A,2B
10	ORANGE	BLACK	PHASE 2 YELLOW	YELLOW BALL 4M,4M1,4A,4B	PHASE 6 YELLOW	YELLOW BALL 2M,2M1,2A,2B
11	BLUE	BLACK	PHASE 2 WALK	PEDESTRIAN WALK P7,P8	PHASE 6 WALK	PEDESTRIAN WALK P3,P4
12	BLACK	WHITE	PHASE 2 DON'T WALK	PEDESTRIAN DON'T WALK P7,P8	PHASE 6 DON'T WALK	PEDESTRIAN DON'T WALK P3,P4
13	RED	WHITE	PHASE 3 RED		PHASE 7 RED	
14	GREEN	WHITE	PHASE 3 GREEN	GREEN LT ARROW 3M1,3A	PHASE 7 GREEN	GREEN LT ARROW 1M1,1B
15	BLUE	WHITE	PHASE 3 YELLOW	YELLOW LT ARROW 3M1,3A	PHASE 7 YELLOW	YELLOW LT ARROW 1M1,1B
16	BLACK	RED	PHASE 4 RED	RED BALL 1M,1M1,1A,1B	PHASE 8 RED	RED BALL 3M,3M1,3A,3B
17	WHITE	RED	PHASE 4 GREEN	GREEN BALL 1M,1M1,1A,1B	PHASE 8 GREEN	GREEN BALL 3M,3M1,3A,3B
18	ORANGE	RED	PHASE 4 YELLOW	YELLOW BALL 1M,1M1,1A,1B	PHASE 8 YELLOW	YELLOW BALL 3M,3M1,3A,3B
19	BLUE	RED	PHASE 4 WALK	PEDESTRIAN WALK P1,P2	PHASE 8 WALK	PEDESTRIAN WALK P5,P6
20	RED	GREEN	PHASE 4 DON'T WALK	PEDESTRIAN DON'T WALK P1,P2	PHASE 8 DON'T WALK	PEDESTRIAN DON'T WALK P5,P6

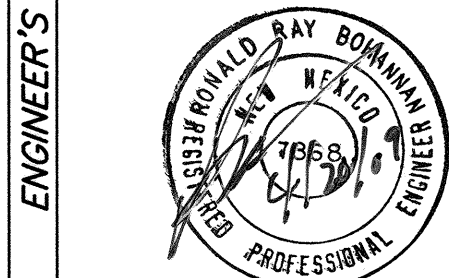
FUNCTION CHART – 24 VOLT CIRCUIT 3/			
MULTI CONDUCTOR CABLE 5			
CONDUCTOR NUMBER	BASE COLOR	FUNCTION	FIELD CONNECTION
1	BLACK	PHASE 2 PPB	PPB3 & PPB4
2	WHITE	COMMON	PPB1 THRU PPB8
3	RED	PHASE 4 PPB	PPB5 & PPB6
4	GREEN	PHASE 6 PPB	PPB7 & PPB8
5	ORANGE	PHASE 8 PPB	PPB1 & PPB2

NOTES:

- IDENTIFY CONDUCTORS LISTED AS "115 VOLTS"
- WRAP RING 2 CABLE AT EACH SPLICE POINT WITH COLORED ELECTRICAL TAPE. THE IDENTIFICATION MARKING SHALL BE PROVIDED ON EACH RING 2 CABLE AT EACH SPLICE BOX AND LOCATED 6" BACK FROM THE END.
- IDENTIFY CONDUCTORS LISTED AS "PPB – LOW VOLTAGE" AT EACH SPLICE POINT. FIVE (5) CONDUCTOR CABLE SHALL BE 24 VOLTS AND USED FOR PUSH BUTTONS ONLY.

RECORD DRAWING

 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
TRAFFIC SIGNALS FUNCTIONS AND DETECTORS SAN PEDRO & HOLLY	
DESIGN REVIEW COMMITTEE  MAY 21 2009 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL  SEP 03 2009 CITY ENGINEER
CITY PROJECT NO. 6664.83	ZONE MAP NO. C-18-Z
SHEET # 6	

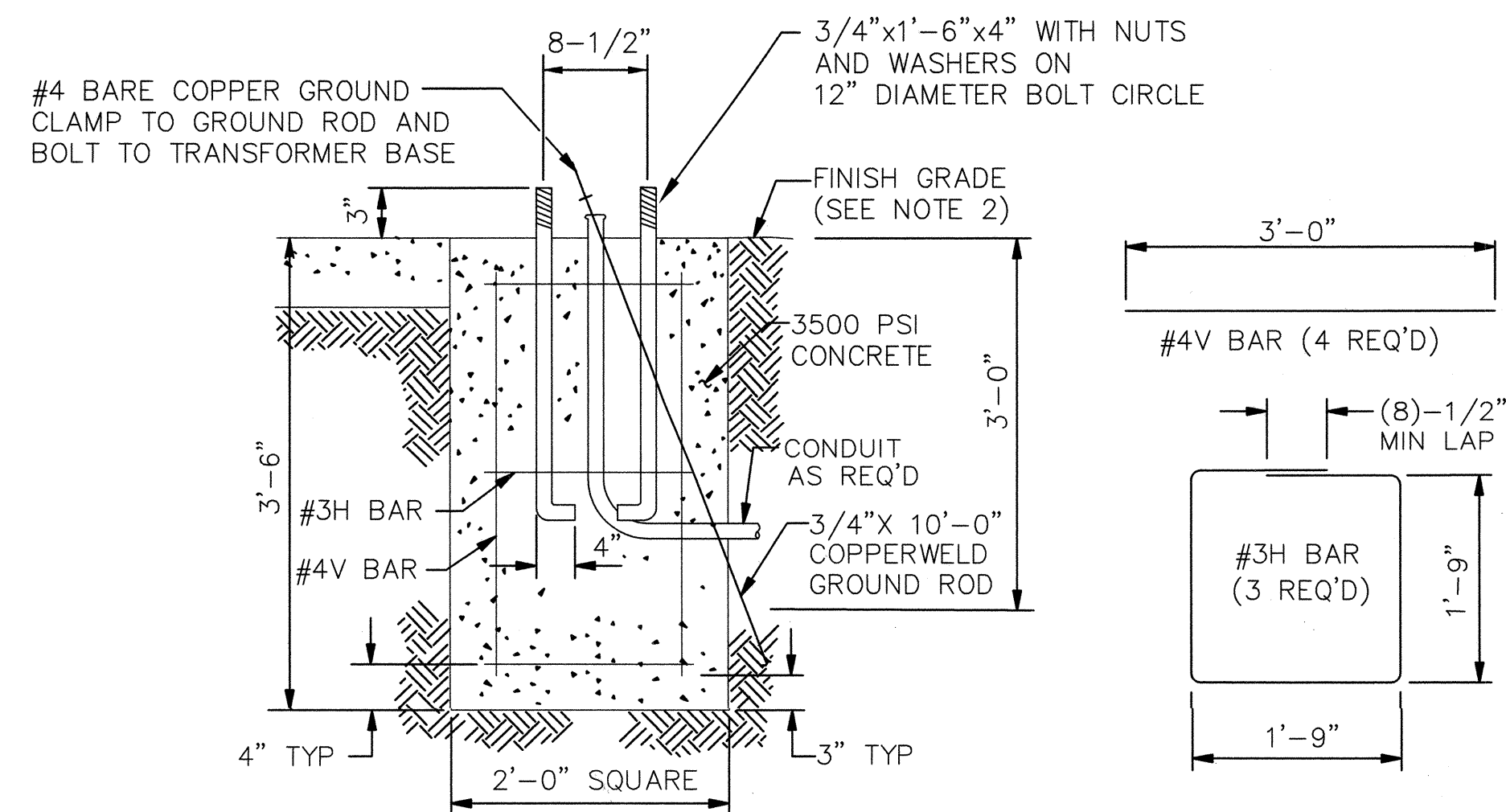




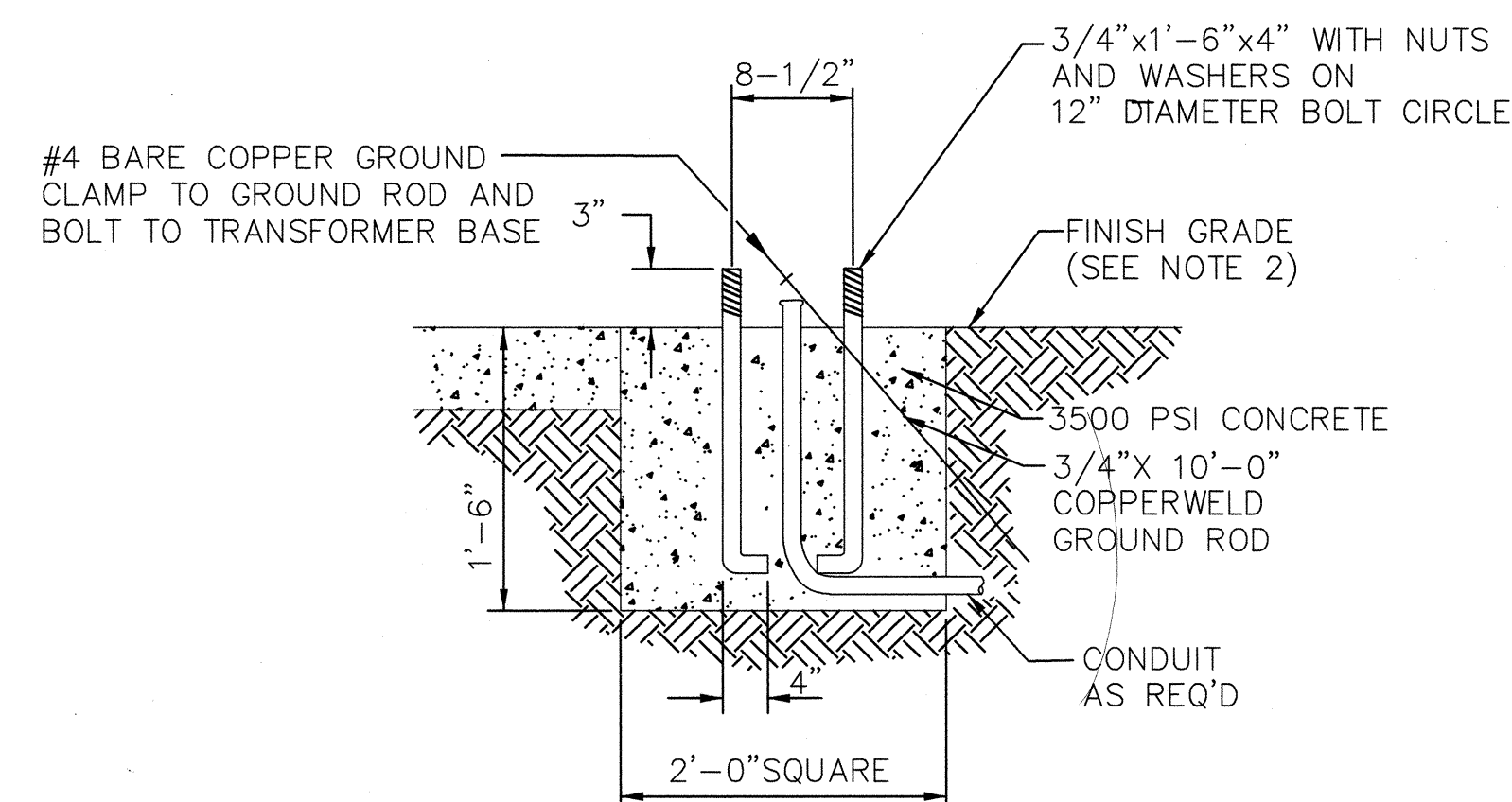
Plan view diagram showing dimensions and components:

- Overall width: 4'-0"
- Overall height: 4'-2"
- Internal width segments: 8" and 6"
- Internal height segment: 16"
- Components labeled:
  - 3500 PSI CONCRETE
  - BLOCK OUT FOR CONDUIT RUNS
  - GROUND ROD
  - POWER RUN
  - SIGNAL RUNS
  - INTERCONNECT RUN
  - CONTROL CABINET
- Orientation: R/W (Right of Way) and TRAFFIC direction indicated at the top.
- Reference points A and B are marked on the left side.

IN THE EVENT THE SUPPLIED CABINET WOULD OVERLAP THE SIDES OF ABOVE FOUNDATION, THE FOUNDATION SHALL BE INCREASED IN SIZE AS DIRECTED BY THE ENGINEER.

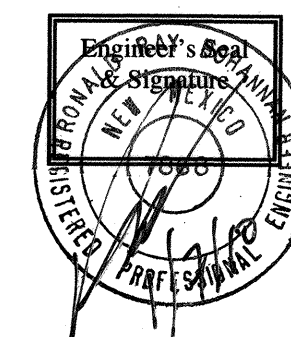


PEDESTAL FOUNDATION DETAIL



## SPLICE CABINET FOUNDATION DETAIL

I, **Ronald R. Bohannon**, of the firm of **Tierra West LLC**, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by **Bill Brewster**, of **Souder Miller & Associates**. NMPS number **10855**.





1. ALL FOUNDATIONS SHALL INCLUDE COPPERWELD GROUND RODS. ALL GROUND RODS SHALL BE 3/4"OX10' AND WILL BE CONSIDERED INCIDENTAL TO THE FOUNDATION BID ITEMS.
2. FINISHED GRADE FOR ALL FOUNDATIONS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER. FOUNDATIONS MAY BE SLOPED TO MATCH SIDEWALKS. SLOPES SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

FOUNDATION TYPE	3500 PSI CONCRETE CU YD	REINFORCING BARS POUNDS
PEDESTAL FOUNDATION	0.52	17
CONTROLLER FOUNDATION (TYPE M & P)	0.88	--
SPLICE CABINET FOUNDATION	0.13	--

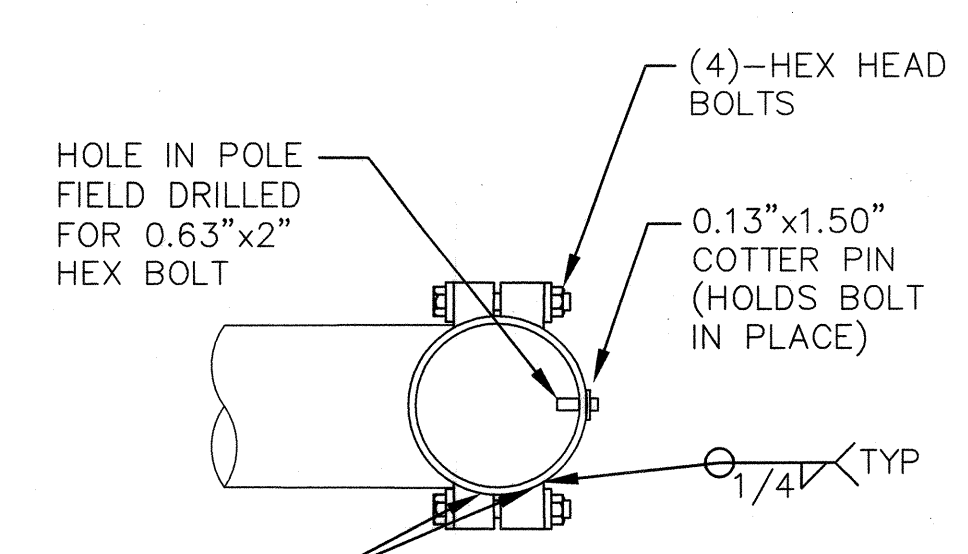
**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

**SAN PEDRO DR AND HOLLY AVE**  
CONTROLLER CABINET AND PEDESTAL FOUNDATION DETAILS

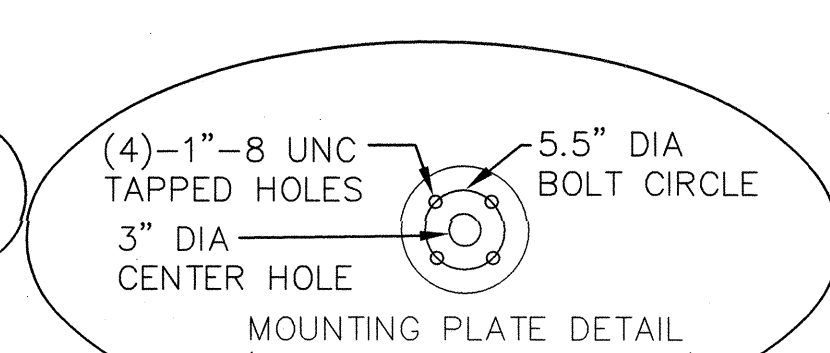
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CITY PROJECT NO. <b>6864.83</b>		ZONE MAP NO. <b>C-18-Z</b>		SHEET # <b>7</b>		

[illegible]



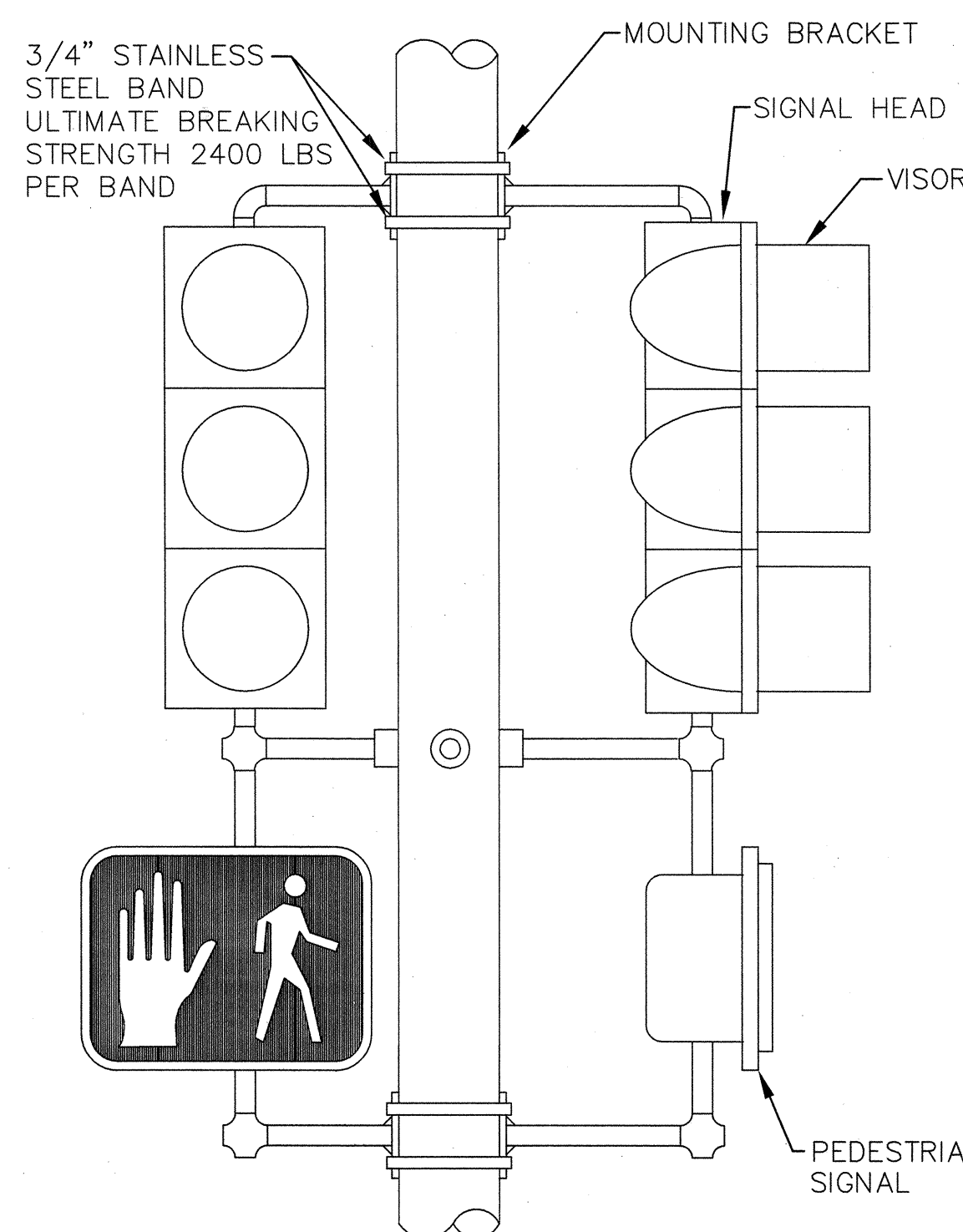


SECTION D-D



A technical diagram showing the mastarm and traffic signal assembly. It includes labels for the 'MASTARM', 'BACK PLATE AND TRAFFIC SIGNAL', and 'C TRAFFIC SIGNAL AND MASTARM'. A dashed line indicates a '5° ROTATION' of the assembly.

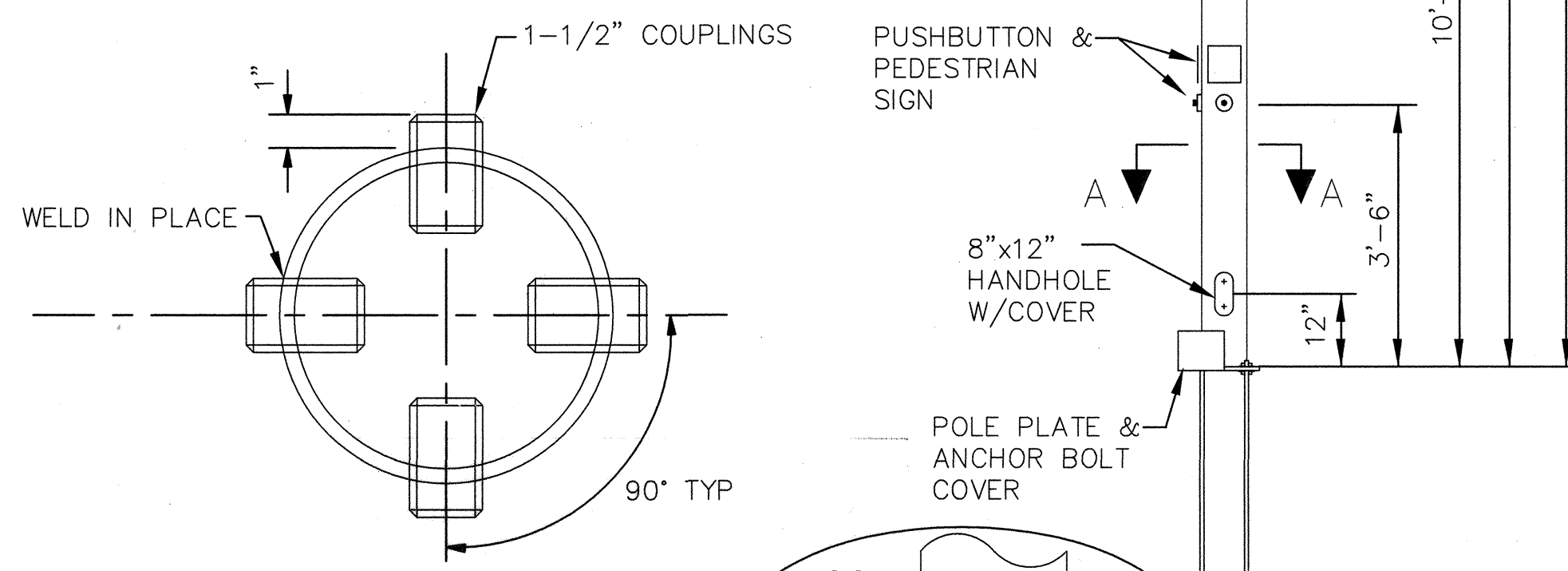
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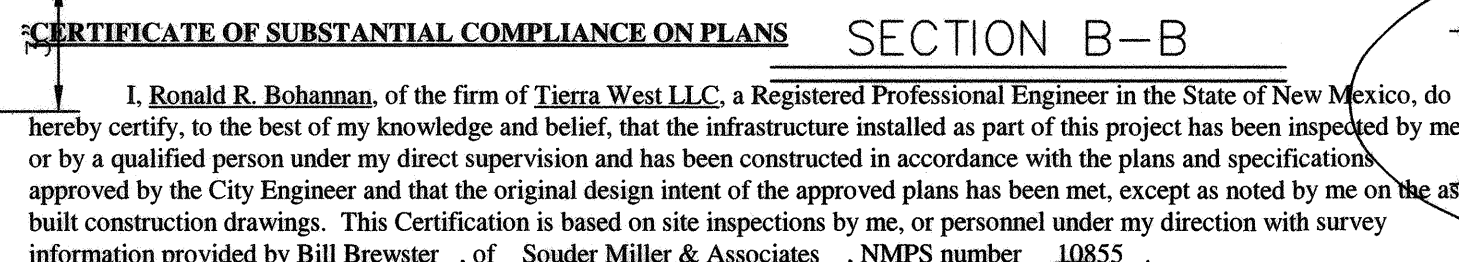
SECTION G-G

SECTION  
DETAIL

NOTE:  
ONE SIZE ARM CLAMP FOR  
15' TO 25' MASTARMS AND  
ONE SIZE FOR 30' TO 40'  
MASTARMS WILL BE ALLOWED

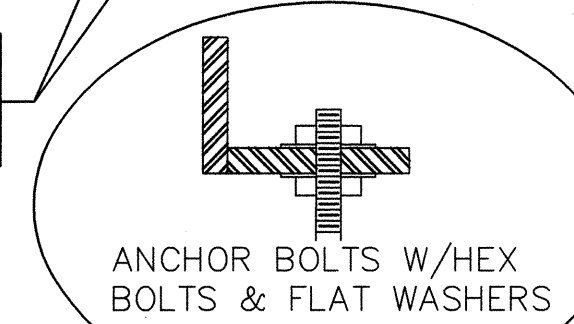


SECTION B-B



ANCHOR BOLTS \_\_\_\_\_

15', 20', 25'	ARM: 1-1/2"x54"x6"
30', 35', 40'	ARM: 1-1/2"x54"x6"





1. DESIGN IN ACCORDANCE WITH 1985 AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS FOR AN 80 MPH WIND ZONE.
2. POLES AND MASTARMS SHAFTS SHALL CONFORM TO ASTM A-595 GRADE A (MIN YIELD 55 KSI)
3. BASE PLATE AND SIGNAL ARM CLAMP SHALL BE ASTM A-36 (MIN YIELD 36 KSI).
4. ANCHOR BOLTS SHALL BE ASTM A-36 MOD 55 (MIN YIELD 55 KSI)
5. SIGNAL ARM CONNECTING BOLTS SHALL BE ASTM A-325.
6. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS AWS D1.1, LATEST EDITION. ALL WELDS SHALL BE FREE FROM CRACKS, EXCESSIVE UNDERCUT, AND POROSITY. ANY WELD DEFECTS SHALL BE REPAIRED BY REMOVING THE DEFECTIVE MATERIAL AND REPLACING IT WITH SOUND WELD MATERIAL.
7. ALL HOLES SHALL BE DRILLED AND DEBURRED.
8. ALL POLES, MASTARMS, AND BOLTS SHALL BE GALVANIZED TO ASTM A-123 & A-153.
9. MASTARM SHALL BE MARKED TO DESCRIBE WHICH IS TOP AND WHICH IS BOTTOM. POLE PLATE COVER SHALL BE MARKED IN MATED PAIRS. POLE SHAFTS SHALL BE MARKED "ALB" "15-25" OR "30-40", AND DATE OF FABRICATION (MONTH/YEAR).
10. DETAILS SHOWN ARE FOR STEEL POLES. ALUMINUM POLES MAY BE USED ONLY WHEN PRE-APPROVED BY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS DIVISION.
11. BOLTS FOR TYPE III EXTENSIONS SHALL BE FURNISHED BY THE MANUFACTURER FOR ALL POLES INCLUDING TYPE II STANDARDS WITH NO EXTENSIONS.

☐ GALVANIZED  
☐ POWDER COATED  
 COLOR

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87105  
(505) 858-3100

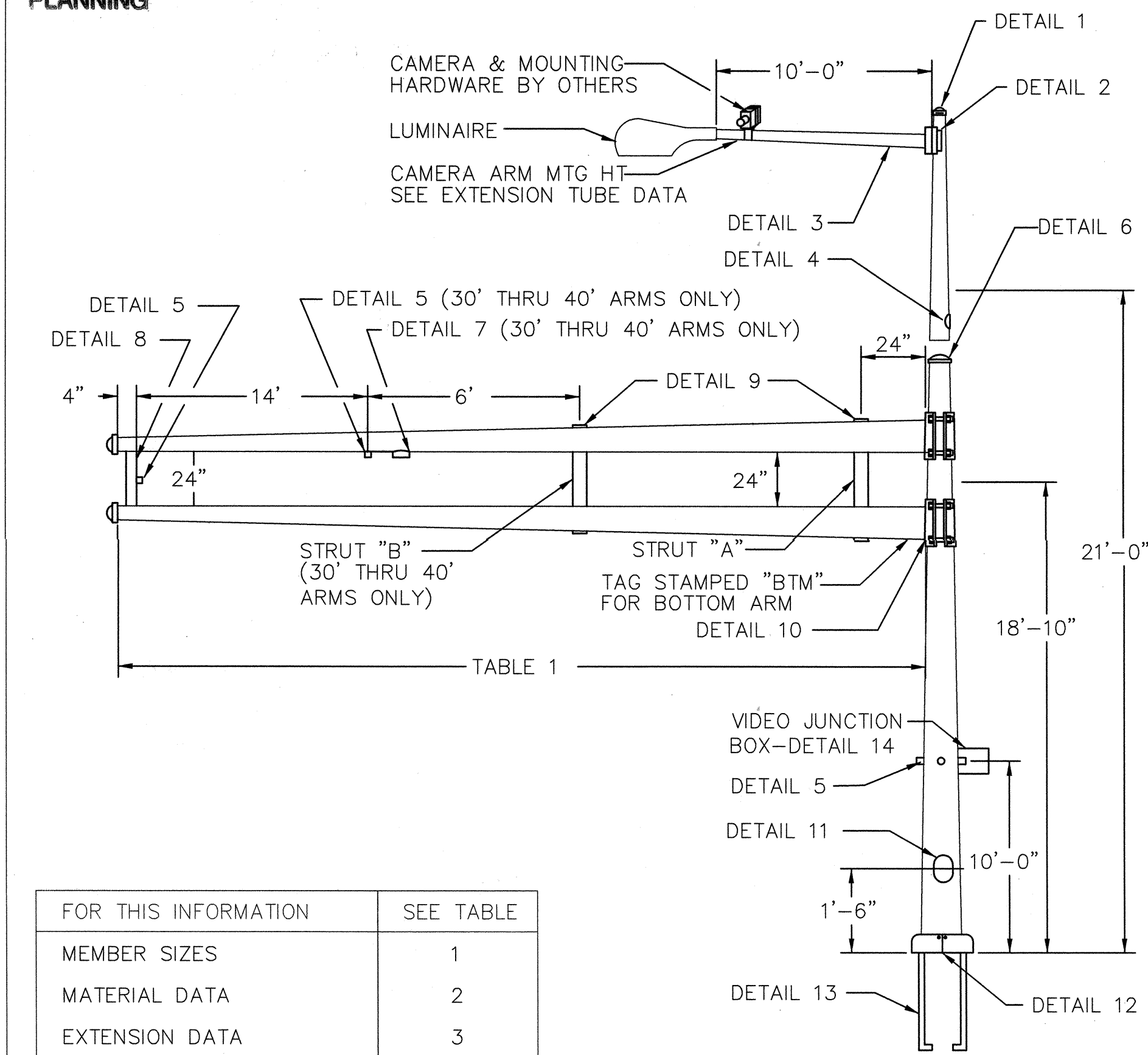
CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

MASTARM DETAILS, TYPE III STANDARD - A

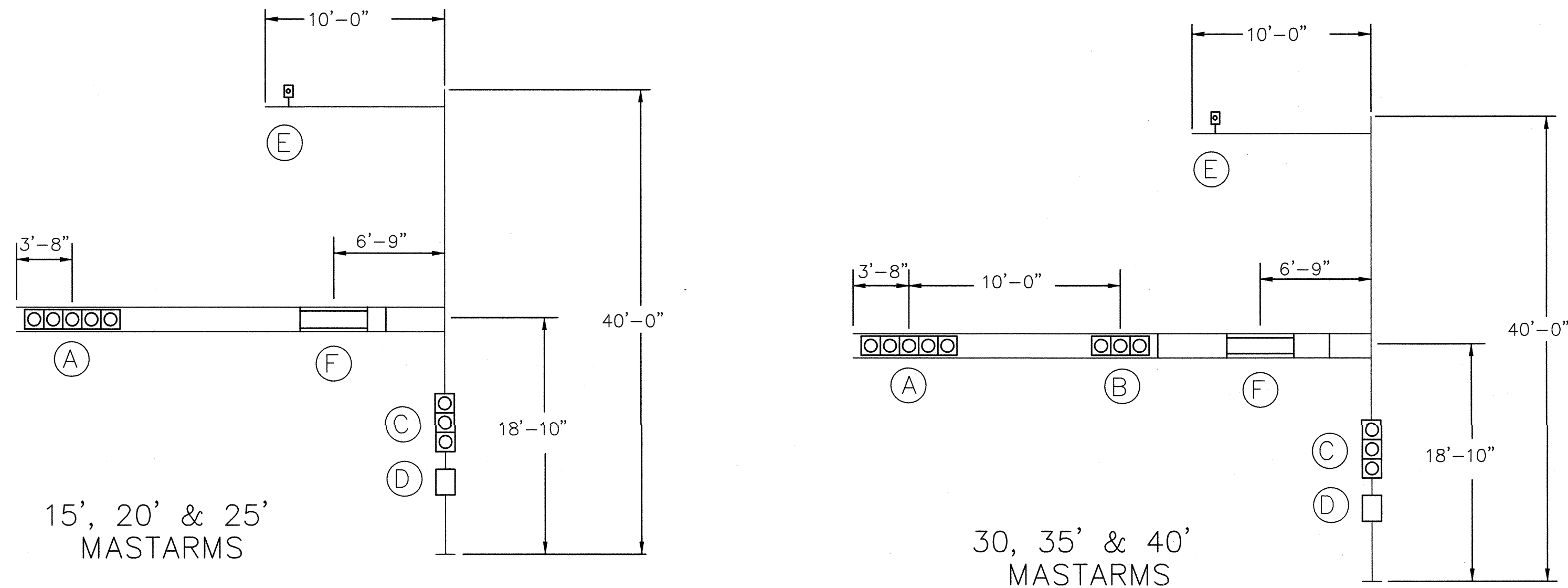
DESIGN REVIEW COMMITTEE 		CITY ENGINEER APPROVAL 		LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
CITY PROJECT NO. 6864.83			ZONE MAP NO. C-18-7	SHEET # 8		



SCANNED BY  
PLANNING



ALBUQUERQUE, NM POLE SERIES



DEVICE	DESCRIPTION	PROJ AREA (FT <sup>2</sup> )	WEIGHT (LBS)
(A)	12"-5 SEC. SIGNAL WITH BACK PLATE	13.33	75
(B)	12"-3 SEC. SIGNAL WITH BACK PLATE	8.67	50
(C)	DUAL 12"-3 SEC. SIGNAL WITHOUT BACK PLATES	8.20	100
(D)	DUAL PEDESTRIAN SIGNAL & VIDEO JUNCTION BOX	3.00	60
(E)	VIDEO CAMERA	1.00 EPA	35
(F)	FREE SWINGING STREET NAME -96" X 16"	3.00 EPA	35

DESIGN CRITERIA:

1985 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

WIND VELOCITY:

80 MPH ISOTACH

LOADING INFORMATION

TABLE 1: POLE AND MASTARM SCHEDULE

DESIGNATION (SEE EXAMPLE ABOVE)				POLE DATA				BASE PLATE DATA				ANCHOR BOLT DATA				MASTARM DATA				ARM ATTACHMENT DATA				
POLE SERIES	POLE TYPE	SIGNAL ARM SPAN (FT)	CAMERA MOUNTING HEIGHT 0=NO CAMERA	BASE DIA	TOP DIA	LENGTH	GA	CIRCLE "C"	THK "G"	BC RANGE		BOLT CIRCLE	DIAMETER "K"	LENGTH "J"	HOOK "H"	FIXED END DIA	FREE END DIA	GA	LENGTH (FT)	"A"	"B"	"C"	"D"	"E"
ALB	2	15	0, 30, 35, 40	10.00"	7.06"	21'-0"	7	23.00"	1.50"	16.00"	19.00"	16.00"	1.50"	54"	6"	5.80"	3.70"	11	15	7.25"	9.44"	10.81"	10.38"	1.00"-8UNC X 8.00"
ALB	2	20	0, 30, 35, 40	10.00"	7.06"	21'-0"	7	23.00"	1.50"	16.00"	19.00"	16.00"	1.50"	54"	6"	6.50"	3.70"	11	20	7.25"	9.44"	10.81"	10.38"	1.00"-8UNC X 8.00"
ALB	2	25	0, 30, 35, 40	10.00"	7.06"	21'-0"	7	23.00"	1.50"	16.00"	19.00"	16.00"	1.50"	54"	6"	7.00"	3.50"	11	25	7.25"	9.44"	10.81"	10.38"	1.00"-8UNC X 8.00"
ALB	2	30	0, 30, 35, 40	12.00"	9.06"	21'-0"	5	23.00"	1.50"	16.00"	19.00"	16.00"	1.50"	54"	6"	7.72"	3.52"	7	30	9.25"	11.44"	13.81"	12.38"	1.00"-8UNC X 9.00"
ALB	2	35	0, 30, 35, 40	12.00"	9.06"	21'-0"	5	23.00"	1.50"	16.00"	19.00"	16.00"	1.50"	54"	6"	8.30"	3.40"	7	35	9.25"	11.44"	13.81"	12.38"	1.00"-8UNC X 9.00"
ALB	2	40	0, 30, 35, 40	12.00"	9.06"	21'-0"	5	23.00"	1.50"	16.00"	19.00"	16.00"	1.50"	54"	6"	9.00"	3.40"	7	40	9.25"	11.44"	13.81"	12.38"	1.00"-8UNC X 9.00"

TABLE 2: MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)	COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE TUBE	A595 GR A	55	SIGNAL ARM CLAMP	A36	36
BASE PLATE	A36	36	SIGNAL ARM CONN BOLTS	A325 *	
MAST ARM TUBE	A595 GR A	55	CAMERA ARM PLATES	A36	36
CAMERA ARM TUBE	A595 GR A	55	GALVANIZING	A123 & A153	
POLE EXTENSION	A595 GR A	55			
ANCHOR BOLTS AASHTO M314 GR. 55					
* LUBRICATE IN FIELD IF NECESSARY IN LIEU OF THE REQUIREMENT IN A325					

TABLE 3: EXTENSION TUBE DATA

MASTARM LENGTH (FT)	CAMERA MTG HT (FT)	EXTENSION TUBE			
		BASE DIA	TOP DIA	LENGTH (FT)	GAUGE
15-20	30	7.00	5.74	9.0	11
	35	7.00	5.04	14.0	11
	40	7.00	4.34	19.0	11
30-40	30	9.00	7.74	9.0	11
	35	9.00	7.04	14.0	11
	40	9.00	6.34	19.0	11

FINISH:

☐ GALVANIZED

☐ POWDER COATED

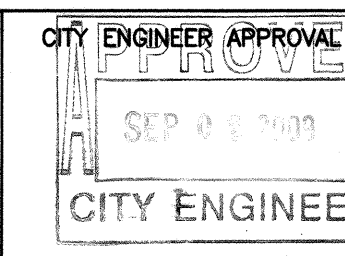
COLOR \_\_\_\_\_

RECORD DRAWING

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

**SAN PEDRO DR AND HOLLY AVE**  
MASTARM DETAILS - TYPE III STANDARD - B



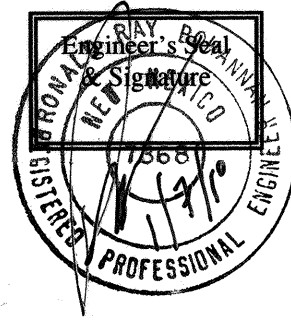
CITY PROJECT NO.  
6864.83

ZONE MAP NO.  
C-18-Z

SHEET #  
9

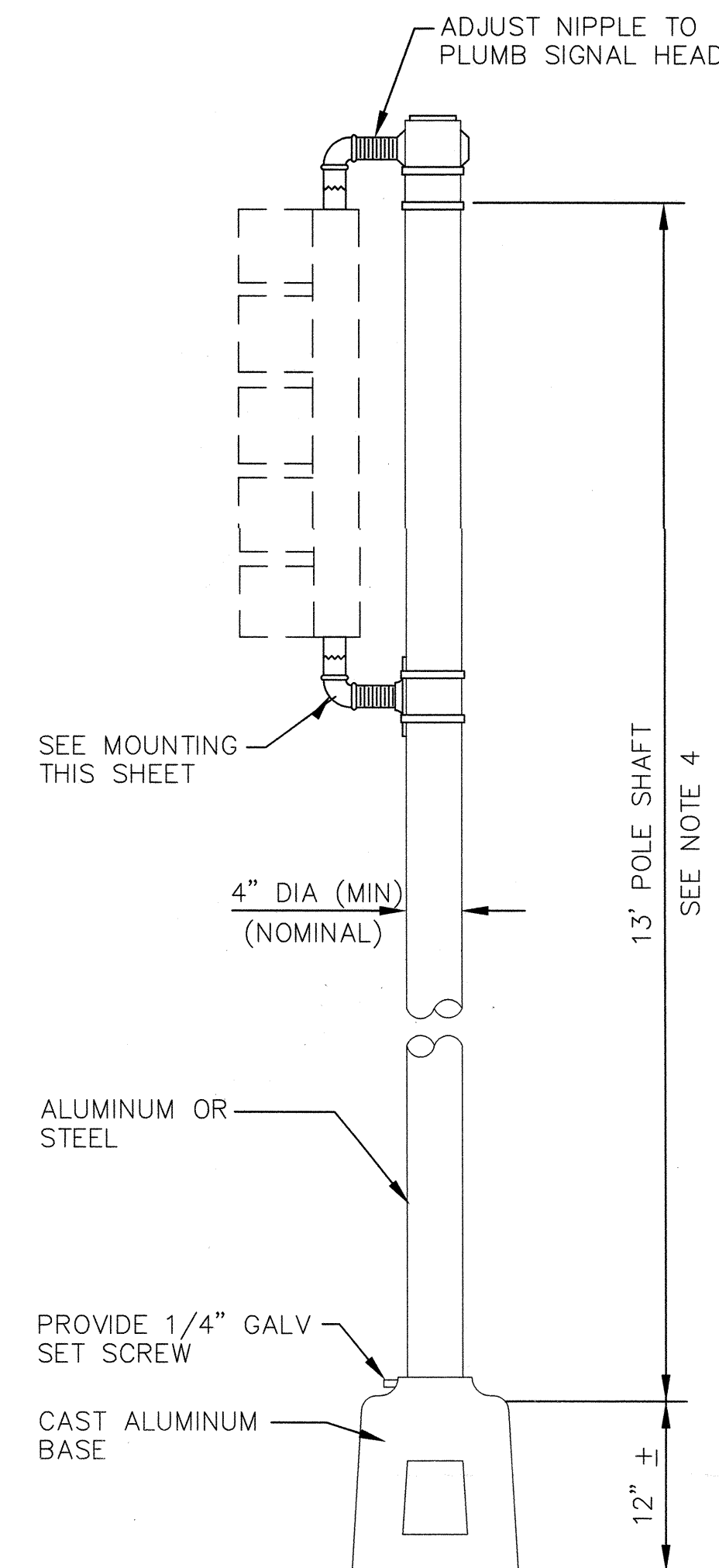
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, **Ronald R. Bohannon**, of the firm of **Tierra West LLC**, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by **Bill Brewster**, of **Souder Miller & Associates**, NMPS number **10855**.



\*\* POLE SHAFTS SHALL BE MARKED "ALB" "15-25" OR "30-40", AND DATE OF FABRICATION (MONTH/YEAR).





## PEDESTAL POLE DETAILS

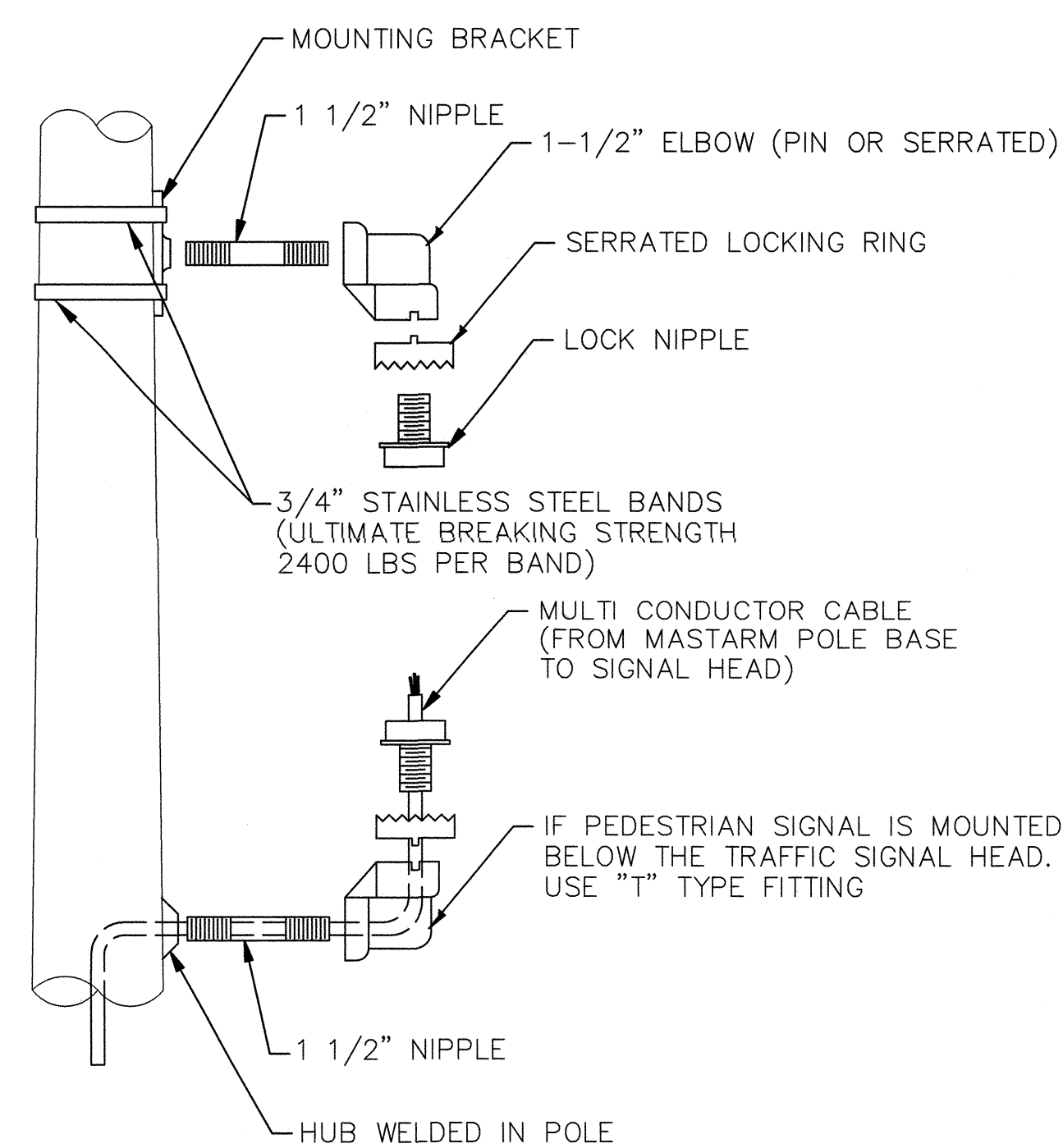
NOTES:

STREET NAME SIGNS REQUIRED AS SHOWN ON PLANS.

STREET NAME SIGN SHALL BE 16" WIDE WITH 8" SERIES "C" LETTERS. SIGN SHALL BE NO MORE THAN 12 SQUARE FEET TOTAL AREA AND SHALL HAVE HIGH INTENSITY REFLECTIVE LEGEND, 1" BORDER AND BACKGROUND COLORS: WHITE ON GREEN, SIGN PANELS SHALL BE SINGLE SHEET 6061-T6 ALUMINUM .120 MINIMUM THICKNESS.

PEDESTRIAN ACTUATED CROSSING SHALL BE A MAXIMUM OF 42" (1065 mm) ABOVE THE FINISHED PUBLIC SIDEWALK. A STABLE, FIRM AND SLIP-RESISTANT AREA 30"x48" (915 mm x 1220 mm) - SHALL BE PROVIDED TO ALLOW FOR A FORWARD OR A PARALLEL APPROACH TO THE CONTROLS. WHERE A PARALLEL IS PROVIDED, CONTROLS SHALL BE WITHIN 10" (255 mm) HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.

FOR INSTALLATIONS WITH ONLY PEDESTRIAN SIGNALS, CUT SHAFT TO 9'. USE 15' SHAFT FOR PEDESTAL POLES REQUIRING BOTH 5-SECTION SIGNAL ASSEMBLIES AND PEDESTRIAN SIGNALS.

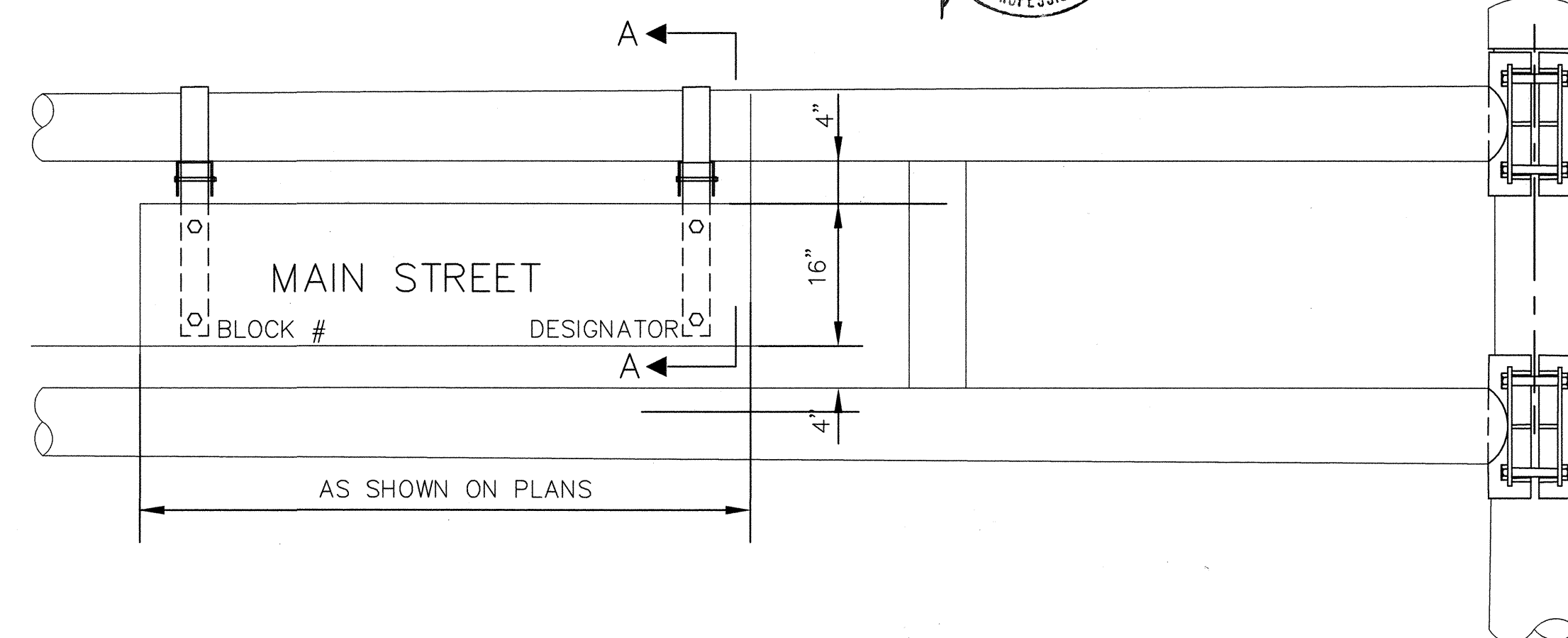


SIDE VIEW

### MOUNTING DETAIL

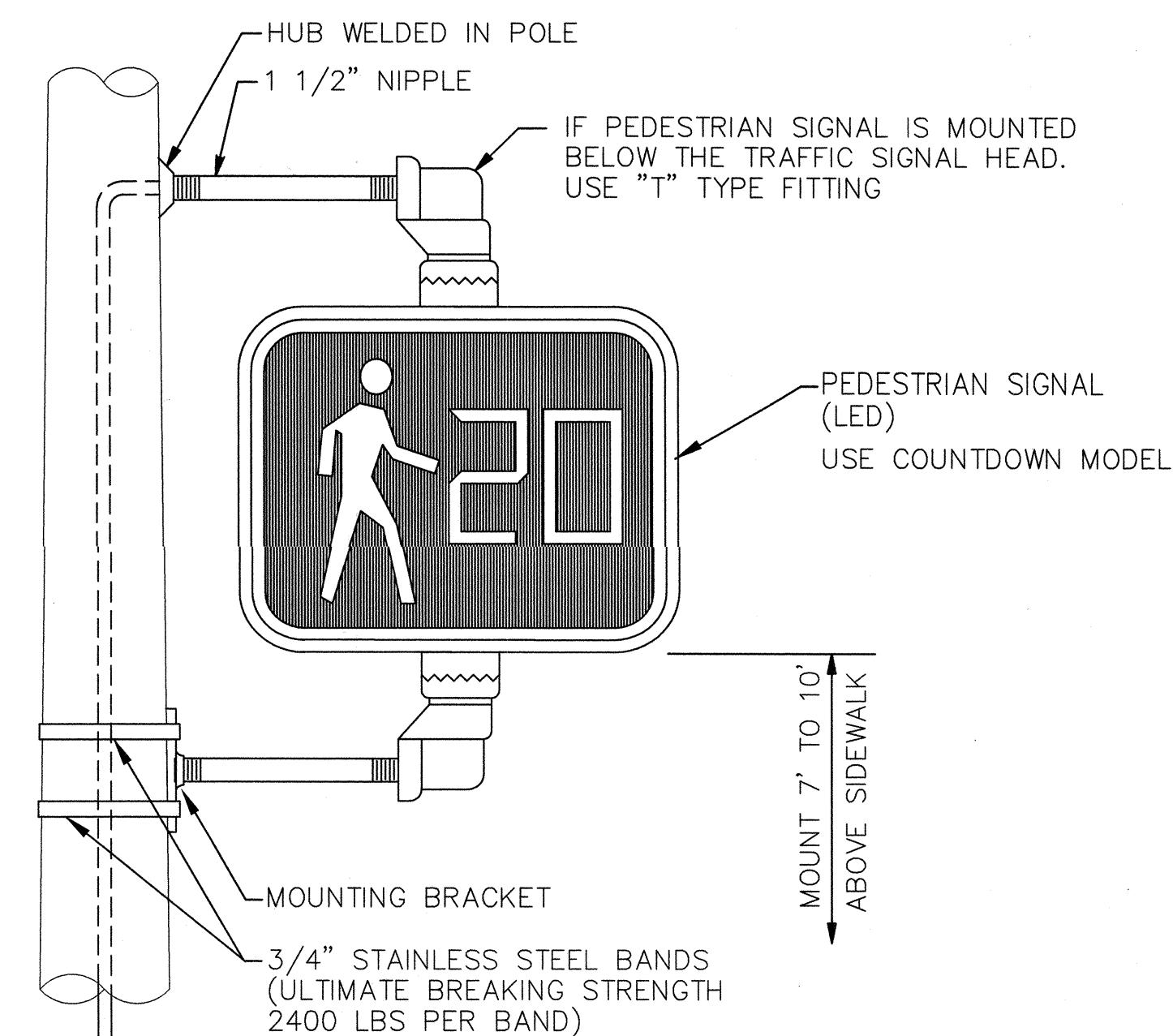
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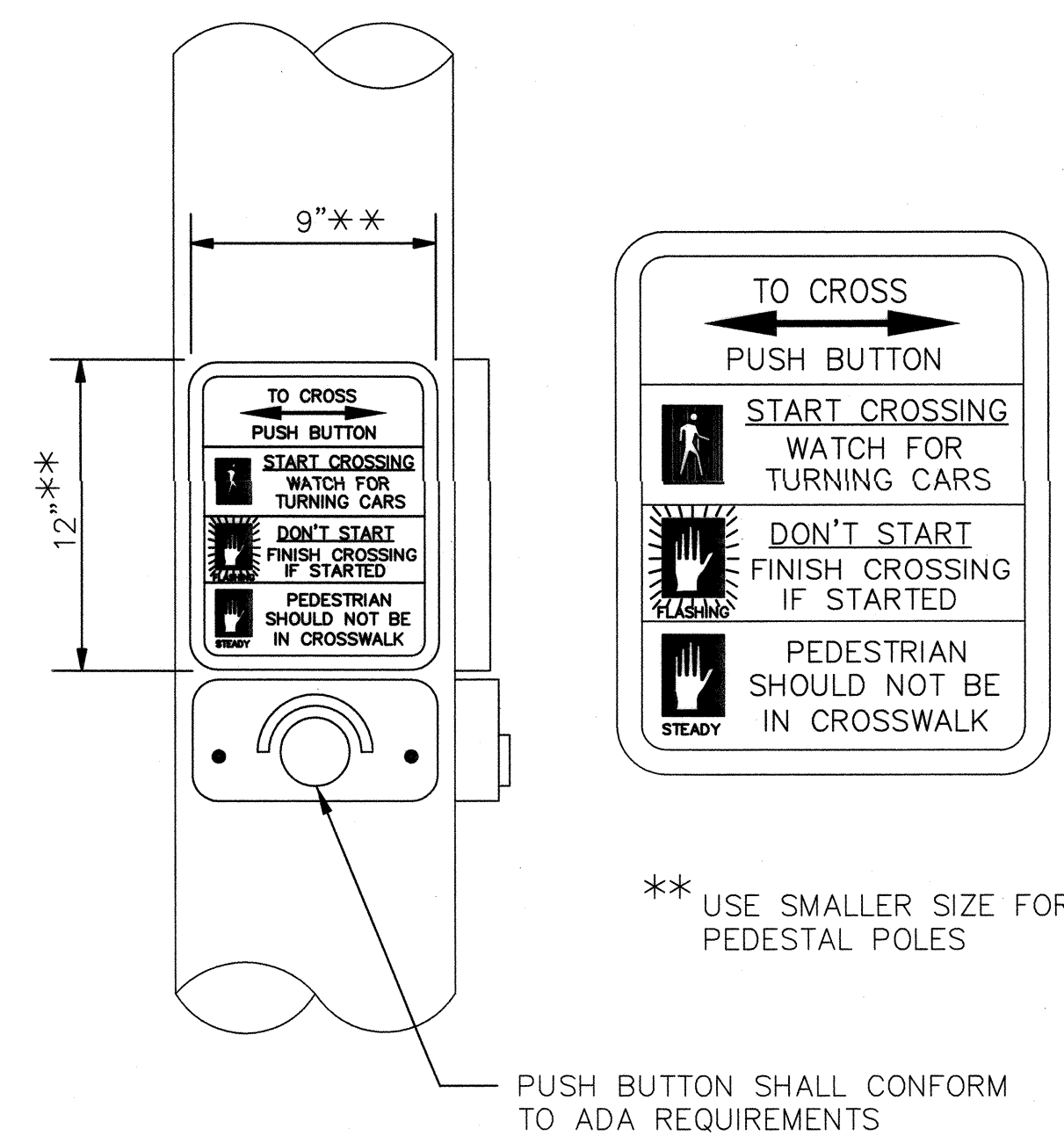


STREET NAME SIGN DETAILS

SUBJECT TO COA TRAFFIC ENGINEER APPROVAL  
PRIOR TO FABRICATION.



## PEDESTRIAN SIGNAL DETAILS



### PUSH BUTTON DETAIL

FINISH:

☐ GALVANIZED☐ POWDER COATED

COLOR

## RECORD DRAWING

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

SAN PEDRO DR AND HOLLY AVE

MISCELLANEOUS DETAILS A - TYPE III STANDARD

DESIGN REVIEW COMMITTEE  
APPROVED  
MAY 21 1983  
DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL  
SEP 02 2003  
CITY ENGINEER

## FAST DESIGN UPDATE

CITY PROJECT NO.  
*6864.83*

ZONE MAP NO.  
*C-18-Z*

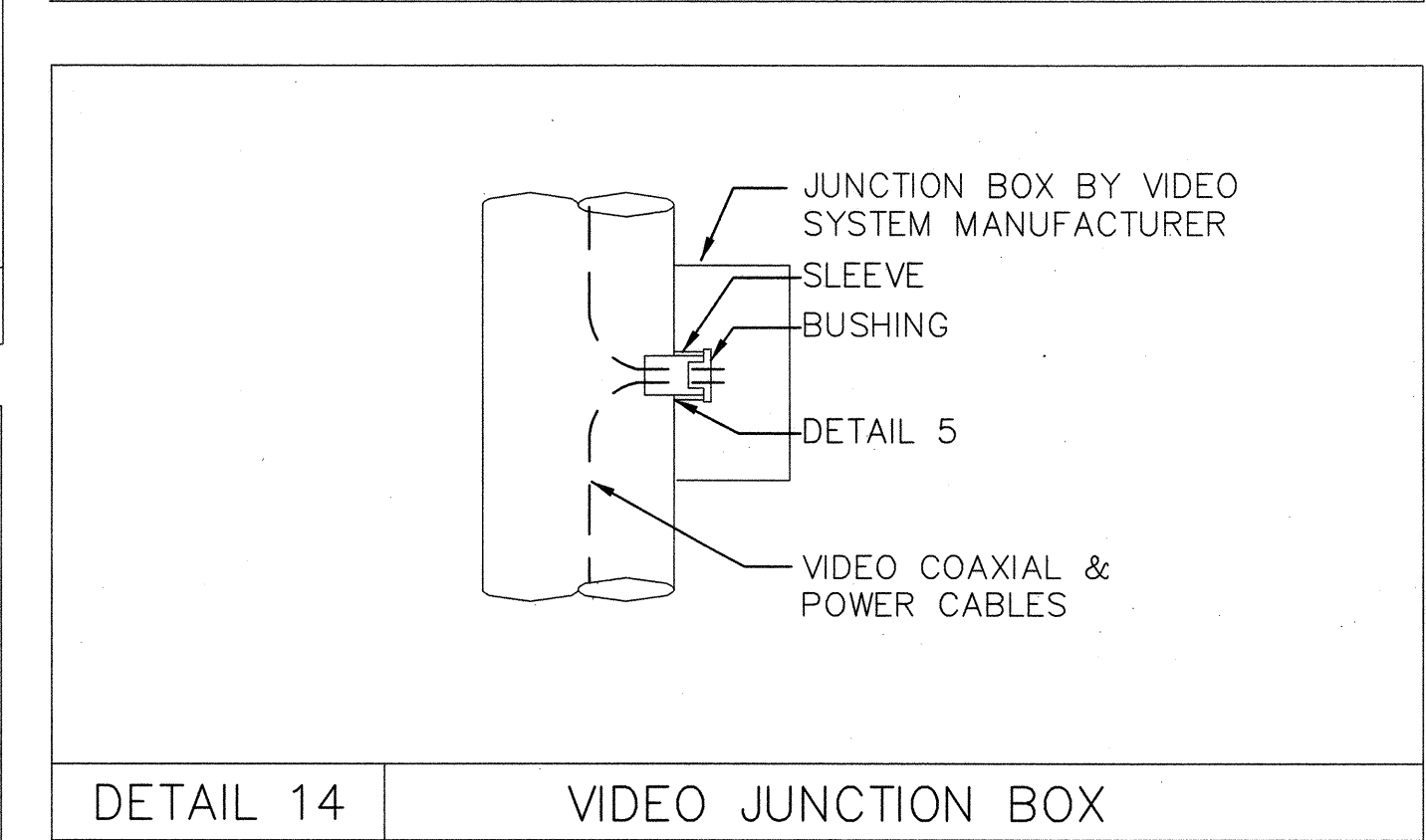
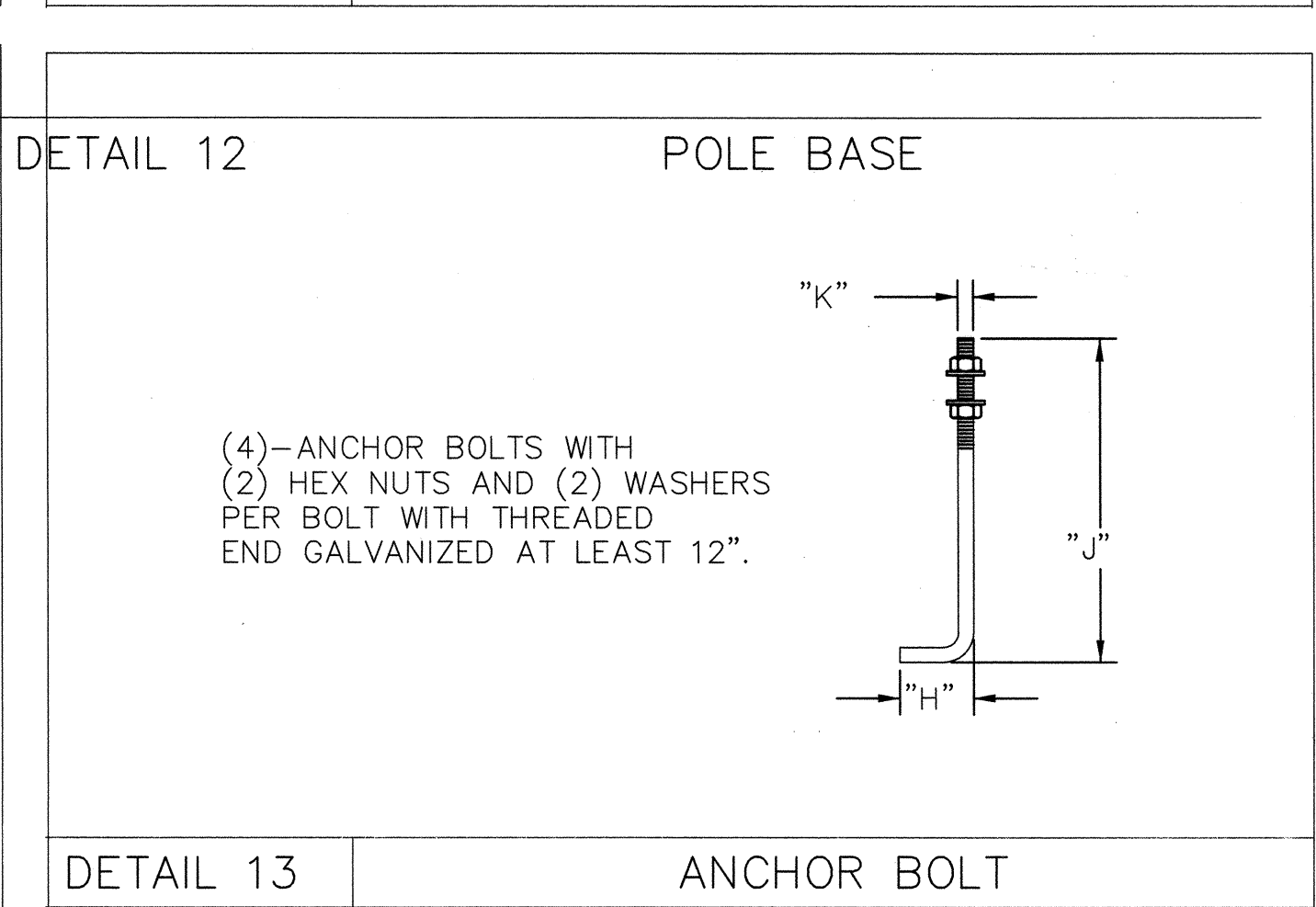
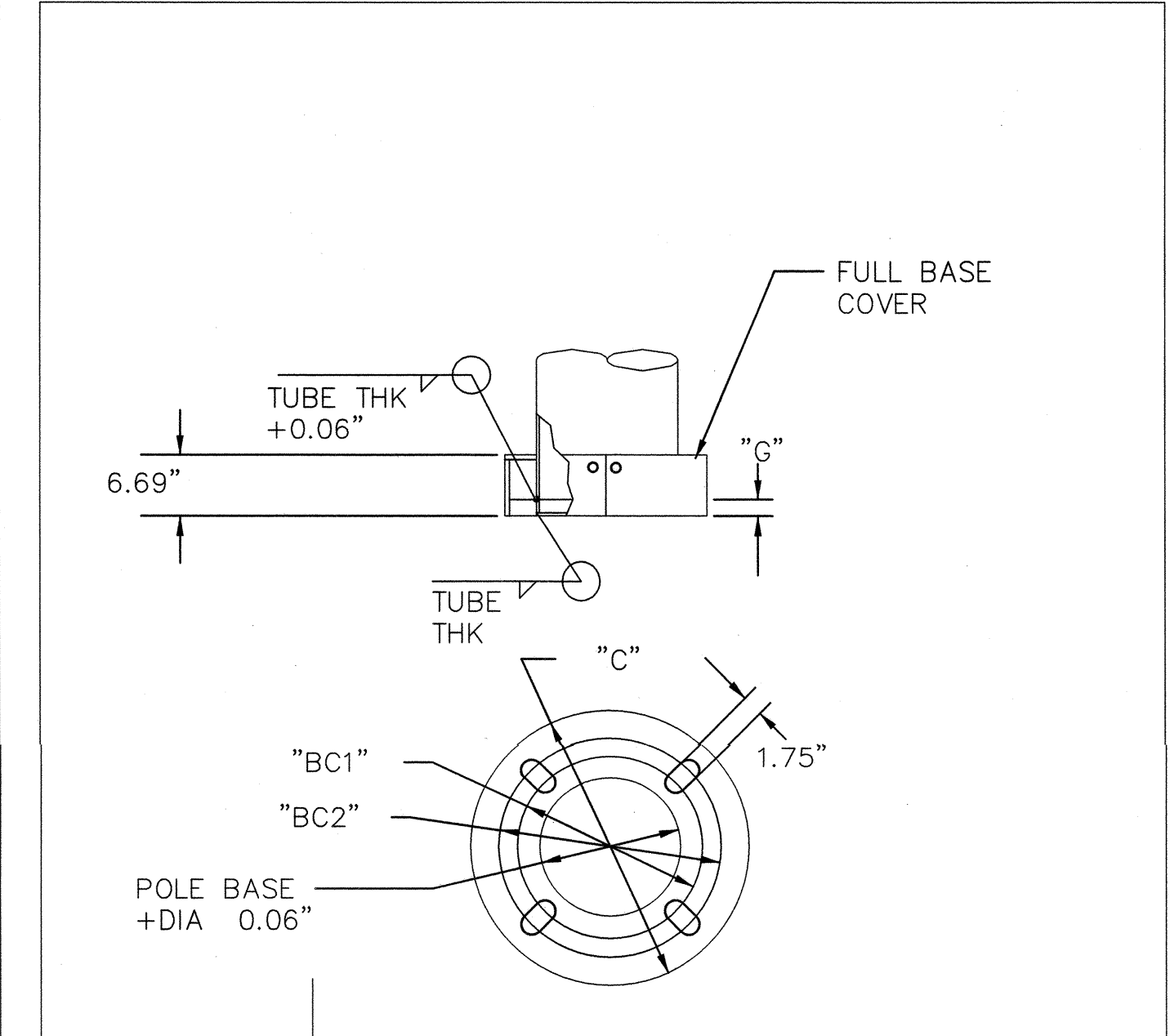
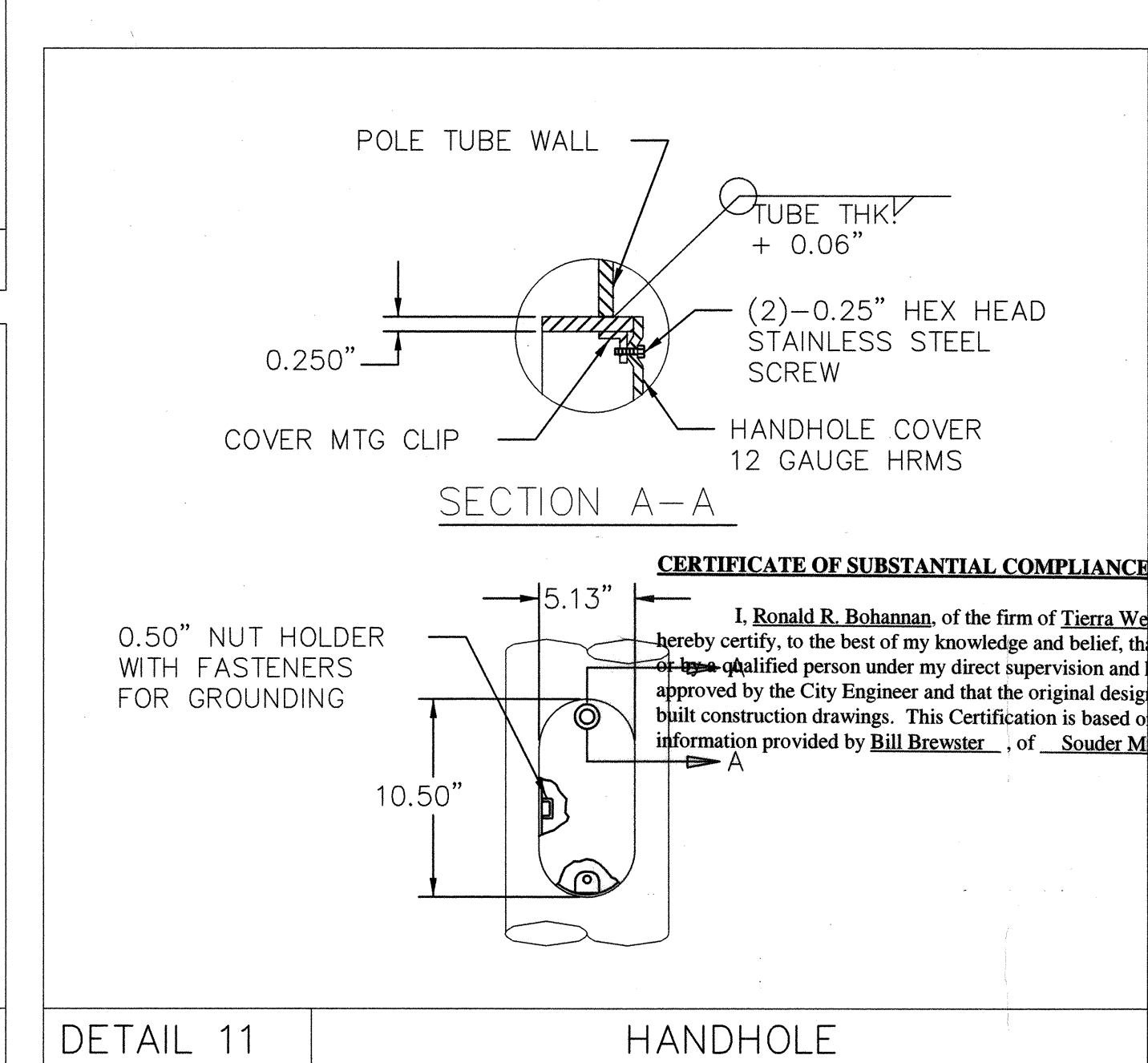
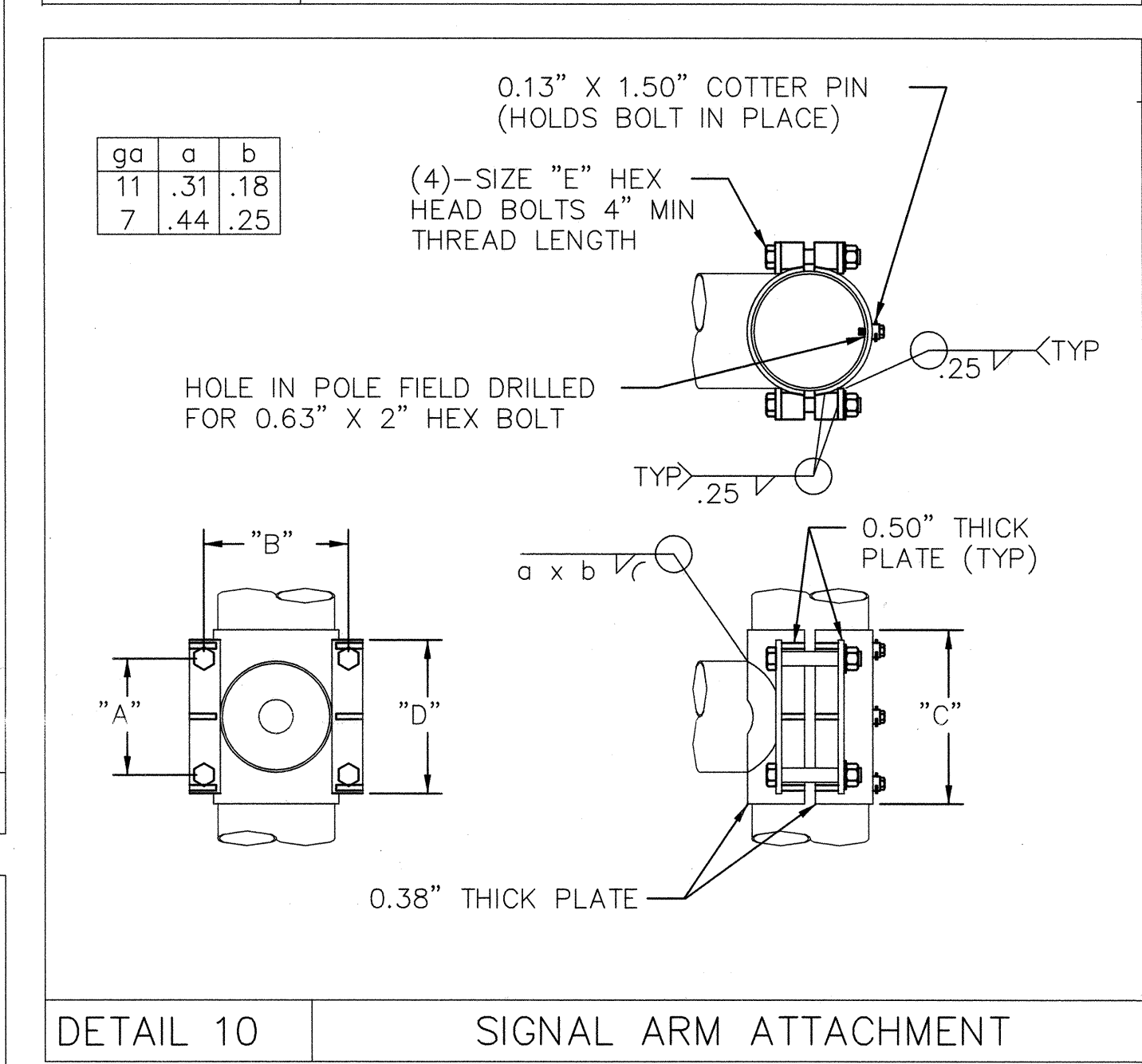
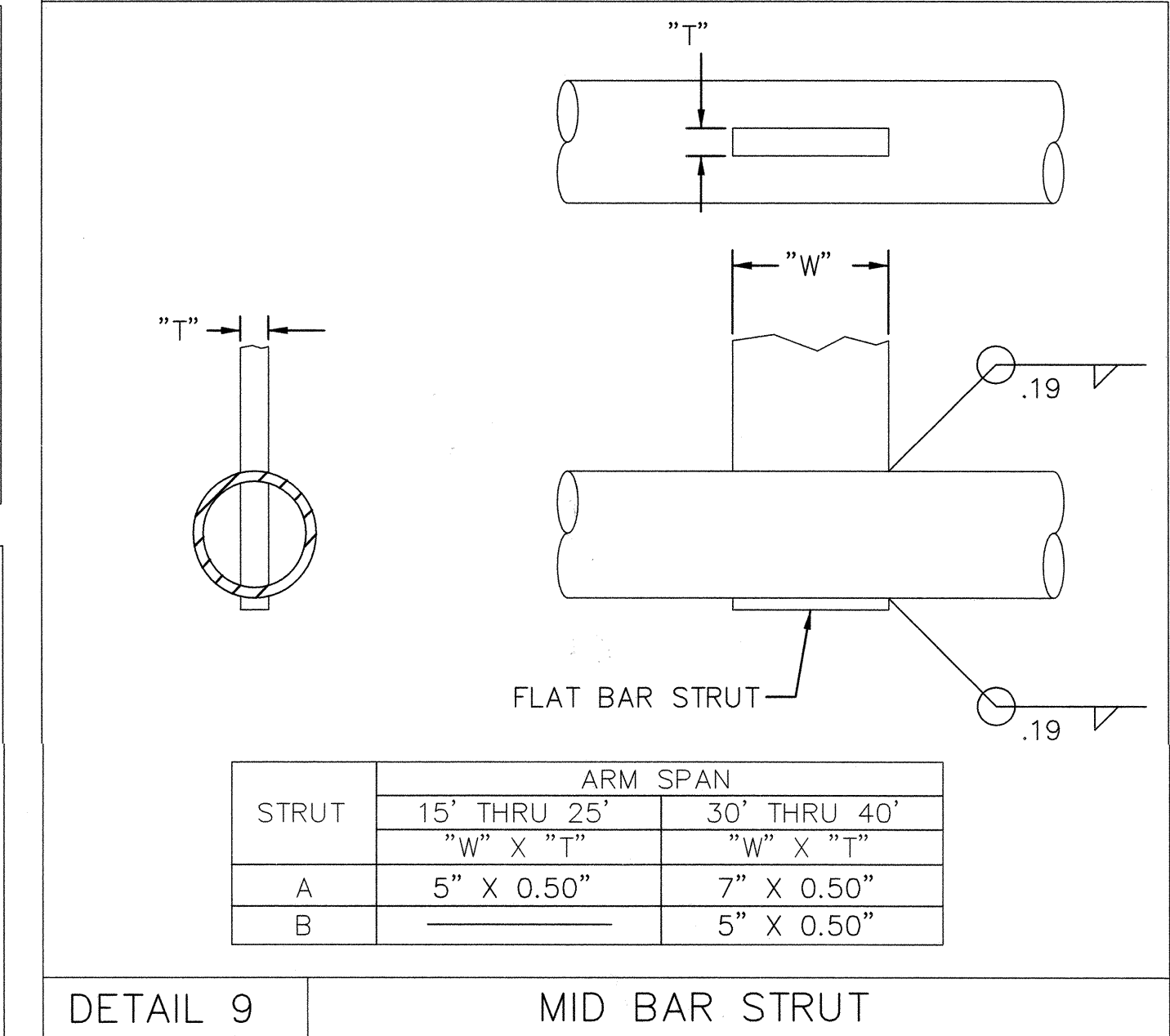
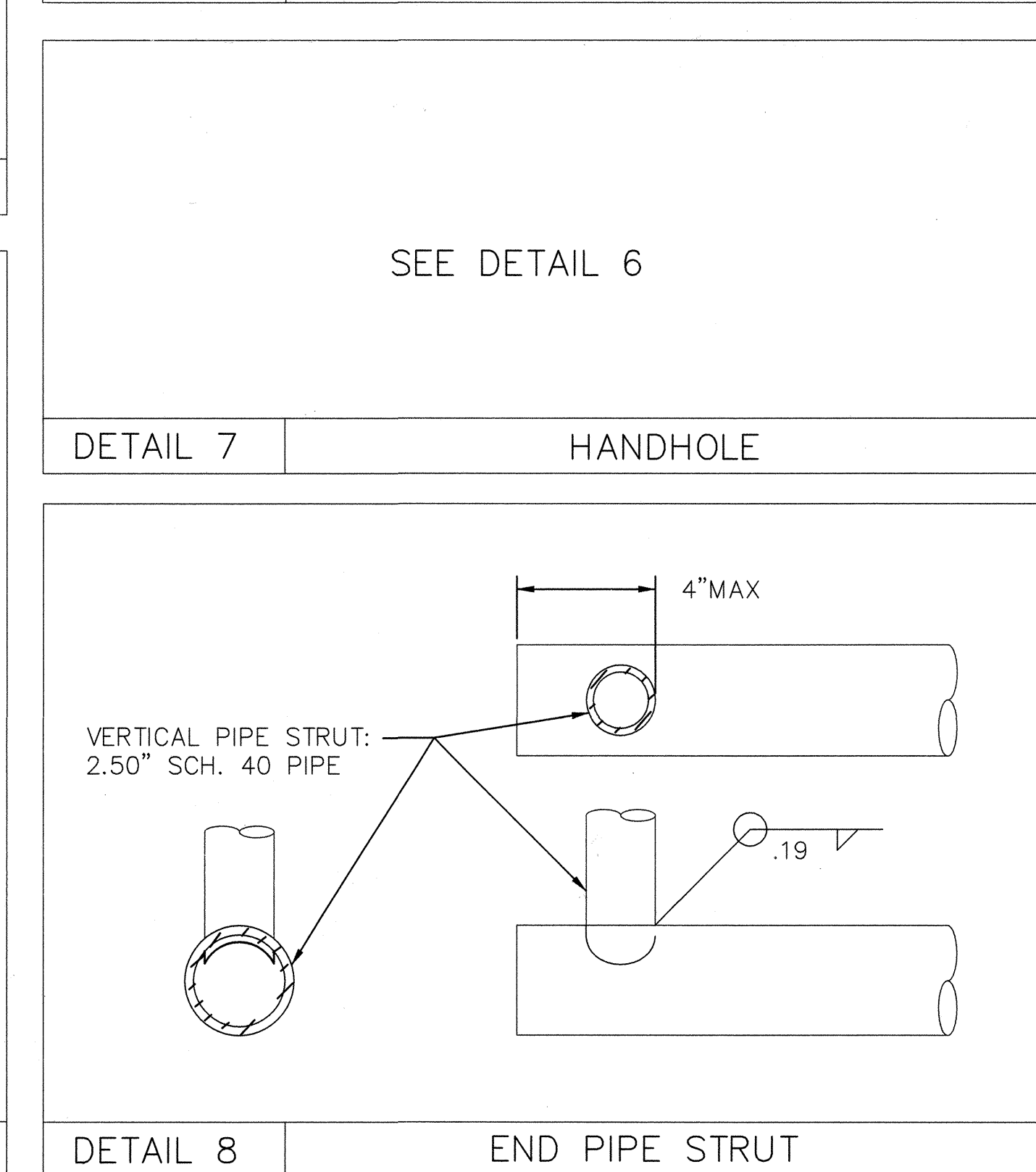
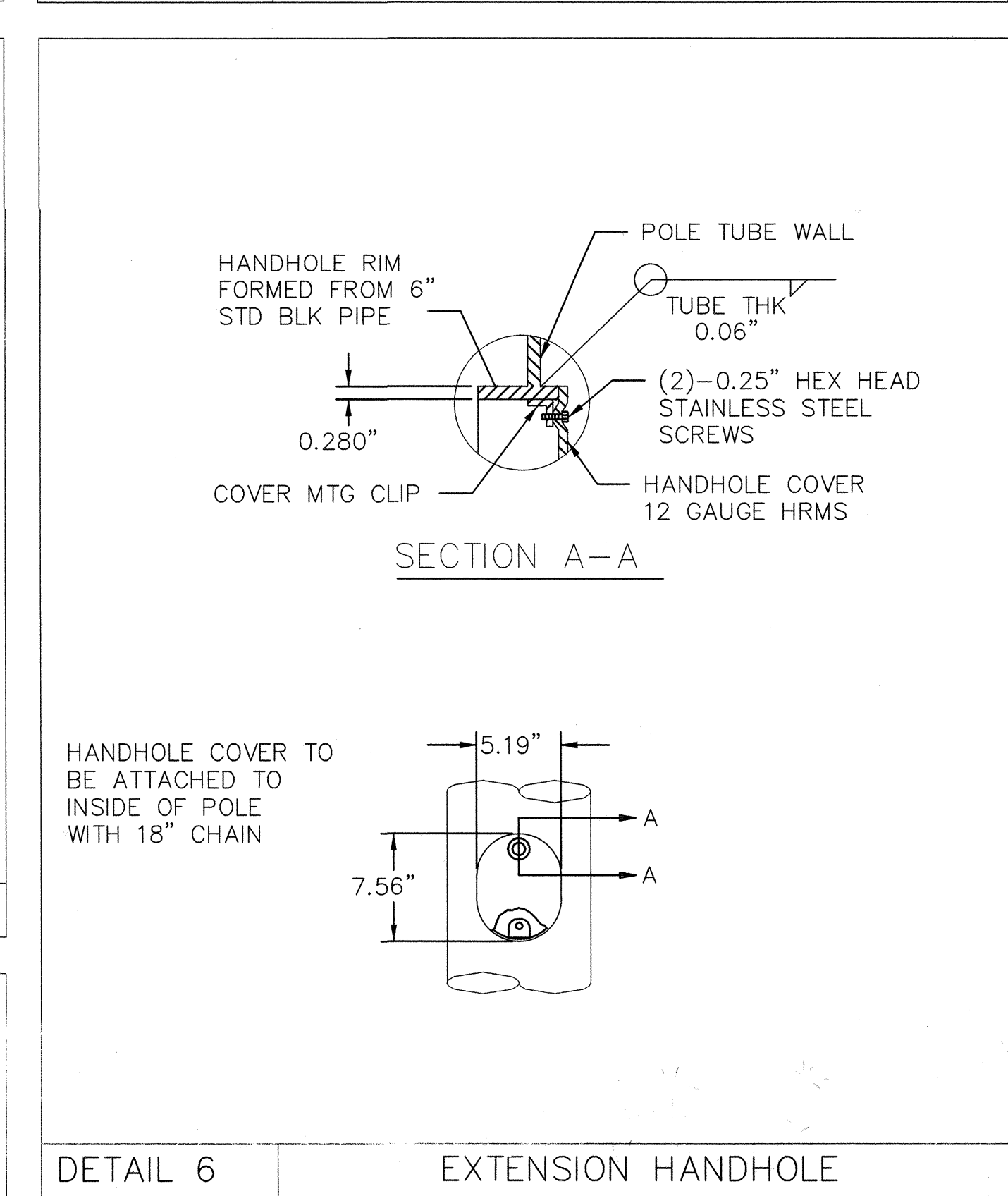
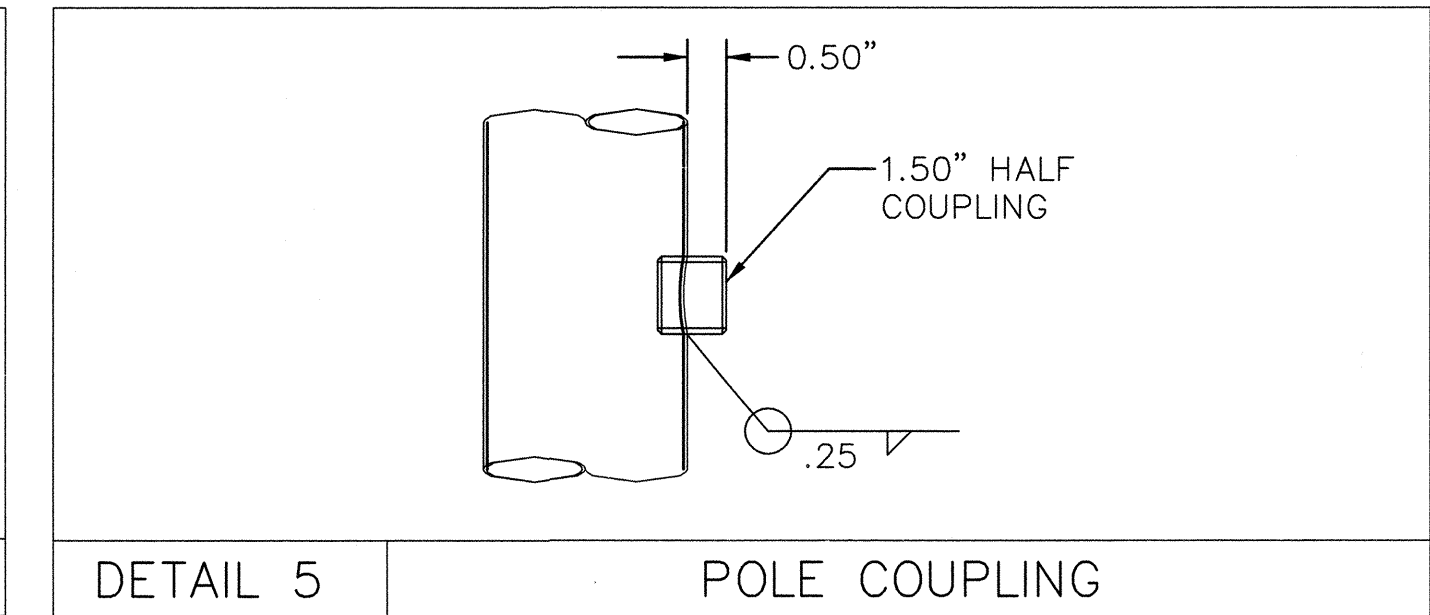
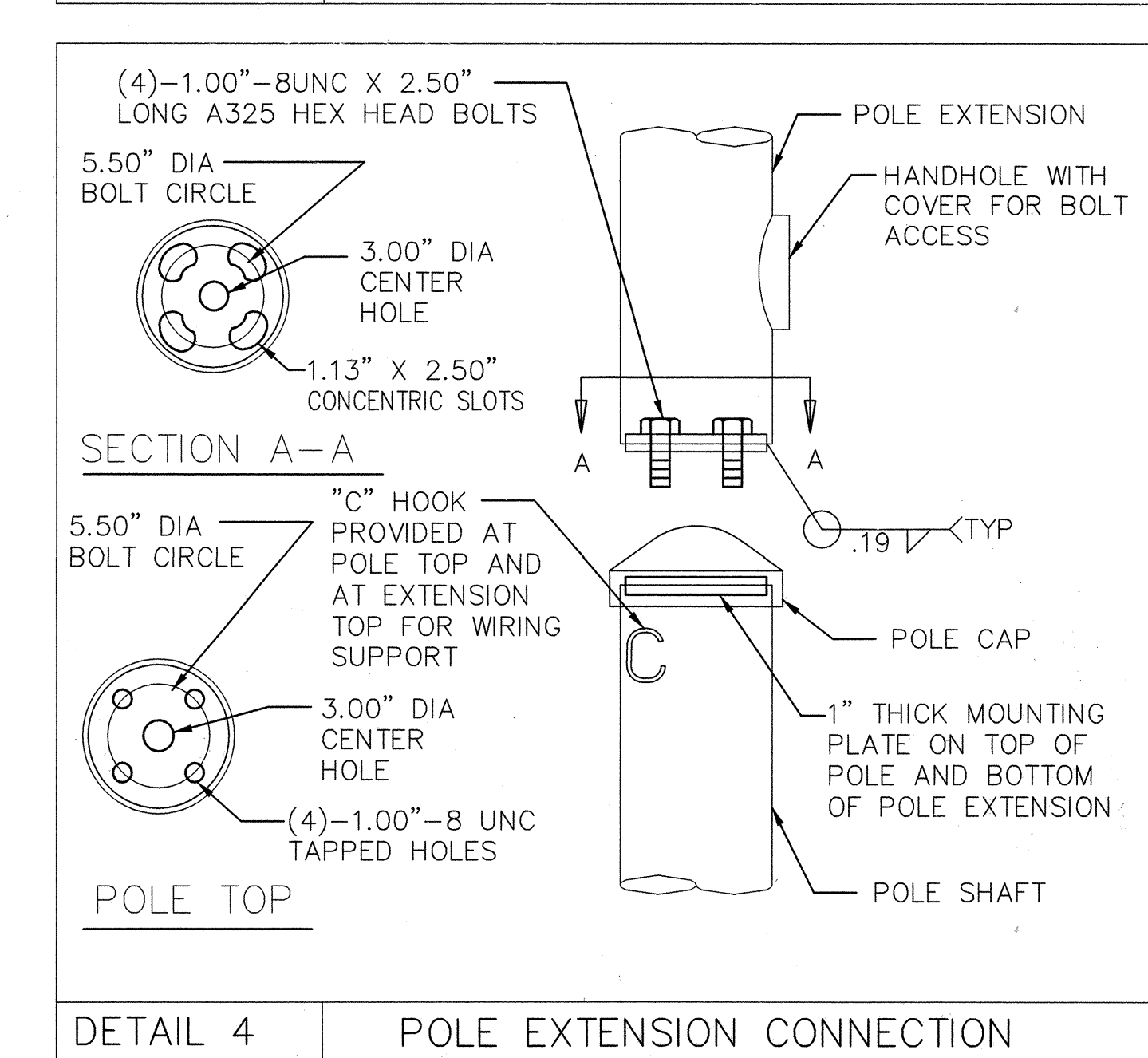
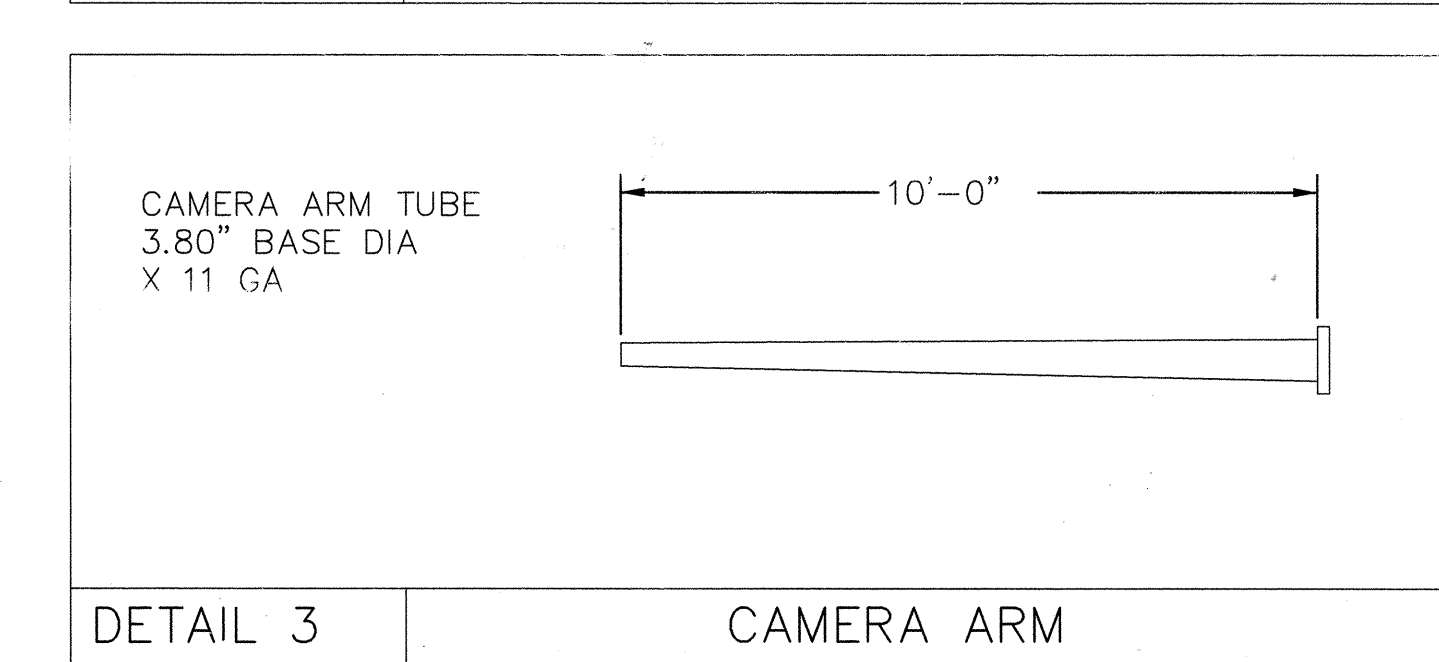
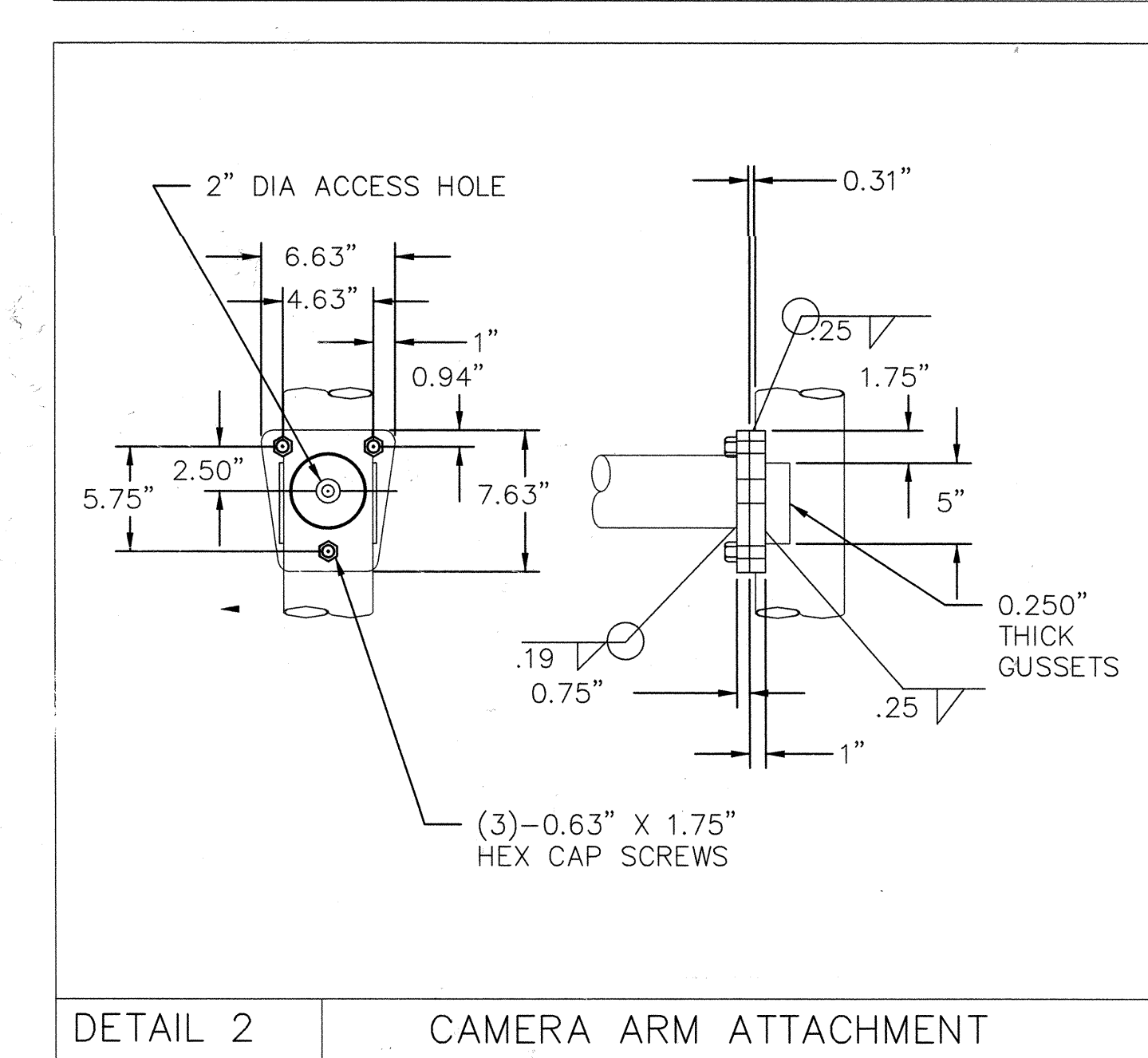
SHEET #
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10

[illegible]



<p>"C" HOOK FOR WIRING AND HANDLING—0.38" DIA. COMMERCIAL GRADE HOT ROLLED BAR</p>	
<p>DETAIL 1</p>	<p>POLE TOP</p>





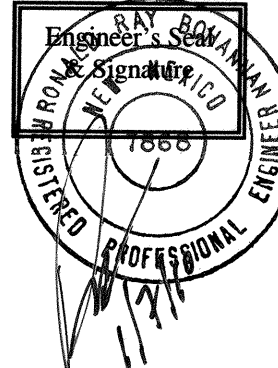
**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

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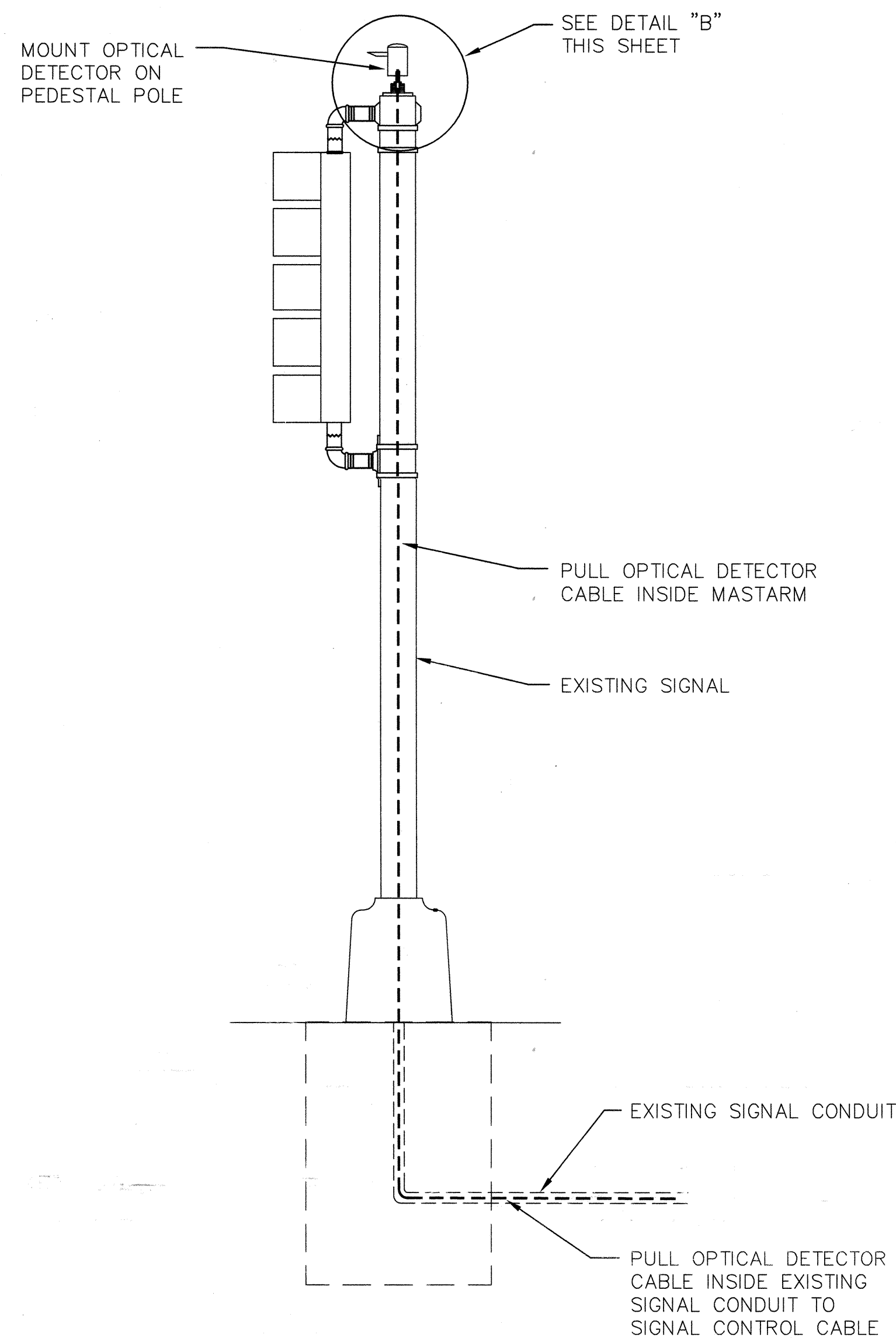
**SAN PEDRO DR AND HOLLY AVE**  
*MISCELLANEOUS DETAILS B - TYPE III STANDARD*

DESIGN REVIEW COMMITTEE		CITY ENGINEER APPROVAL		LAST DESIGN UPDATE	MO./DAY/YR.		MO./DAY/YR.	
								
CITY PROJECT NO. <b>6864.83</b>		ZONE MAP NO. <b>C-18-Z</b>			SHEET #		<b>11</b>	

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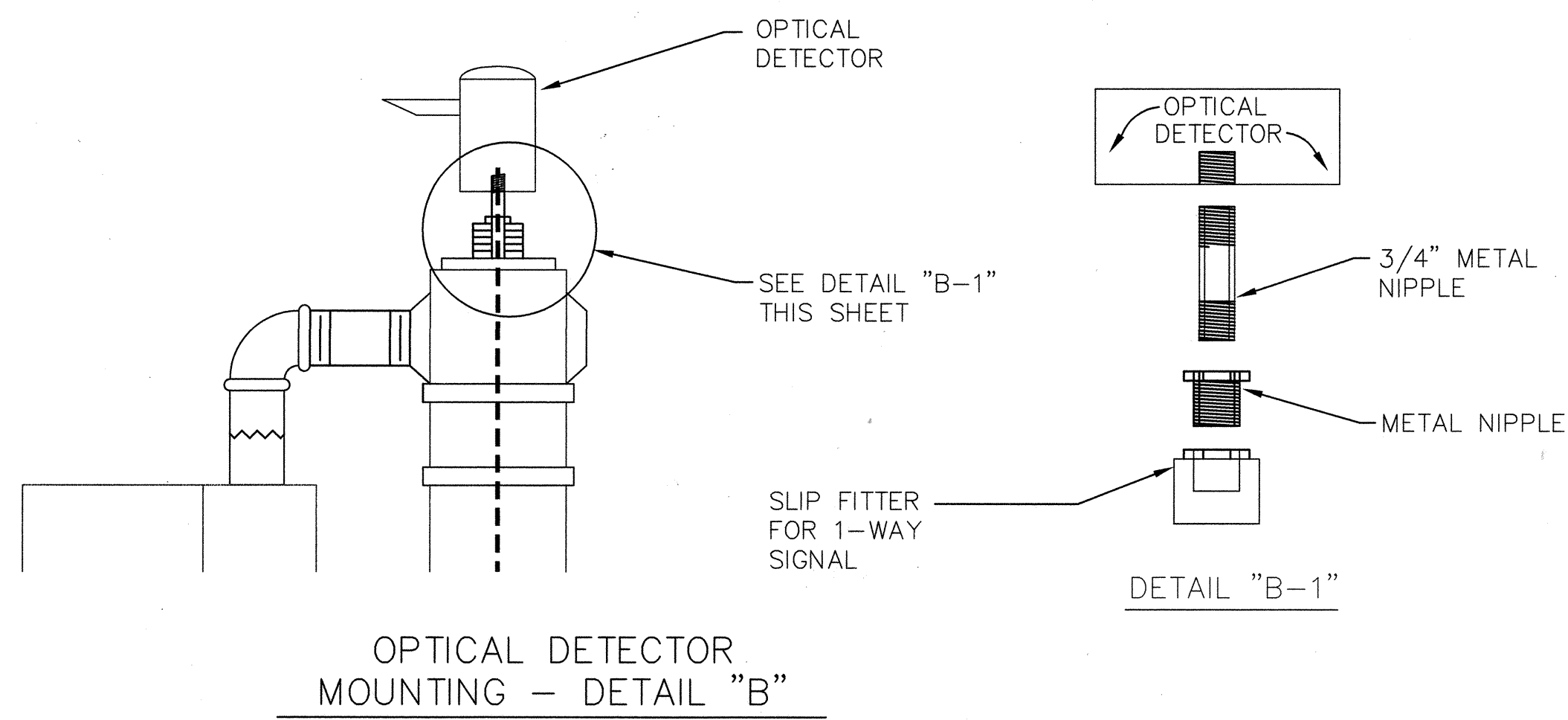


SCANNED BY  
PLANNING

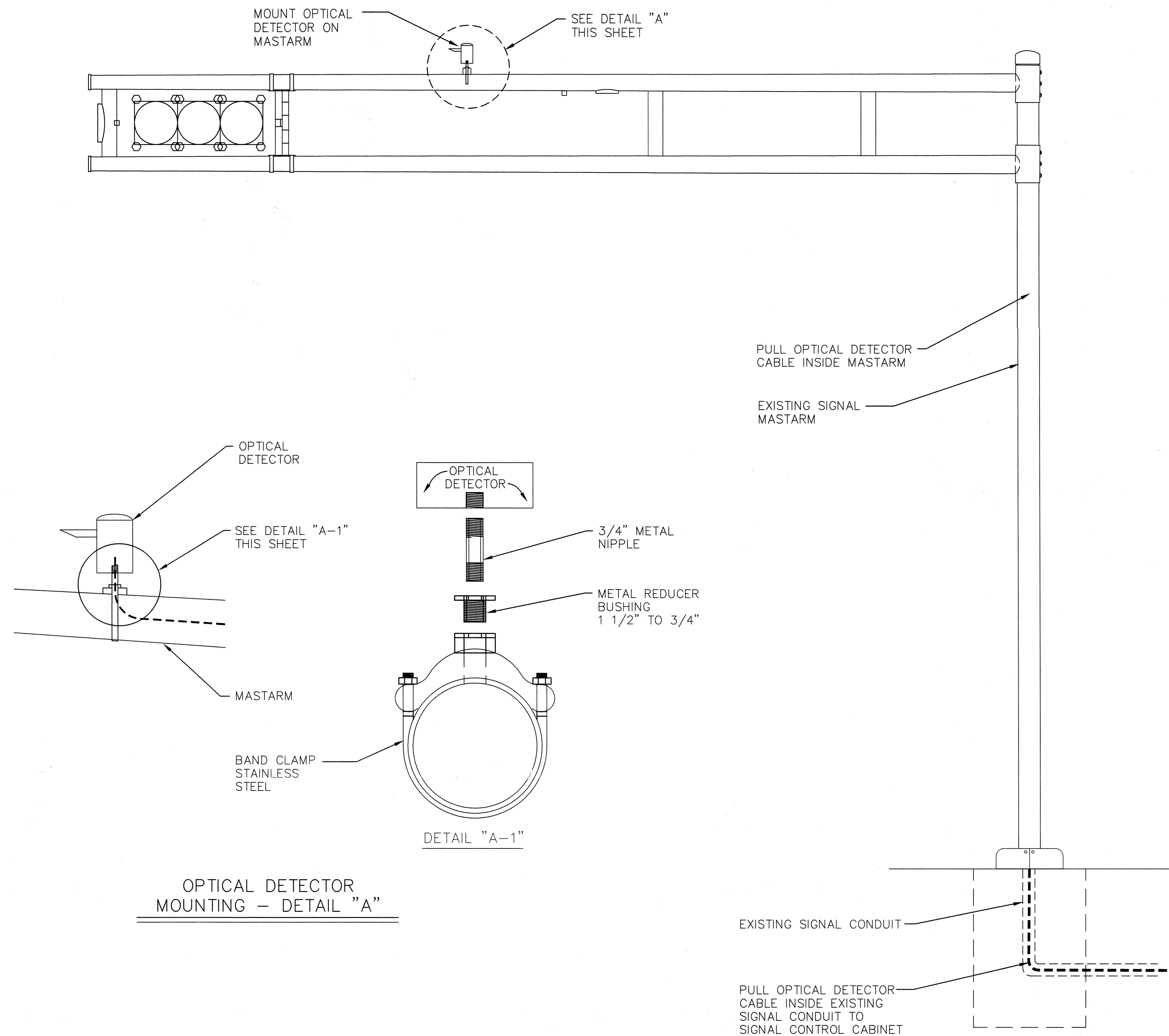


### TYPICAL OPTICAL DETECTOR INSTALLATION – PEDESTAL POLE

NOTE: OPTICAL DETECTOR SHALL ONLY BE MOUNTED  
ON PEDESTAL POLES WHEN THERE IS NO MASTARM.



OPTICAL DETECTOR  
MOUNTING - DETAIL "B"



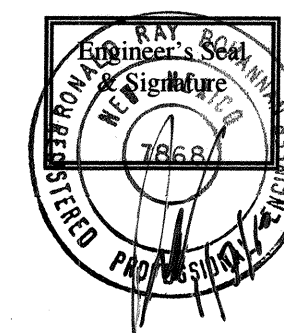
OPTICAL DETECTOR  
MOUNTING - DETAIL "A"

NOTES:

1. ALL OPTICAL DETECTOR MOUNTING HARDWARE SHALL CONFORM TO OPTICAL DETECTOR MANUFACTURER'S REQUIREMENTS.

### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, **Ronald R. Bohannon**, of the firm of **Tierra West LLC**, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by **Bill Brewster**, of **Souder Miller & Associates**, NMP# number **10855**.



TYPICAL OPTICAL DETECTOR INSTALLATION – MASTARM



## RECORD DRAWING

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

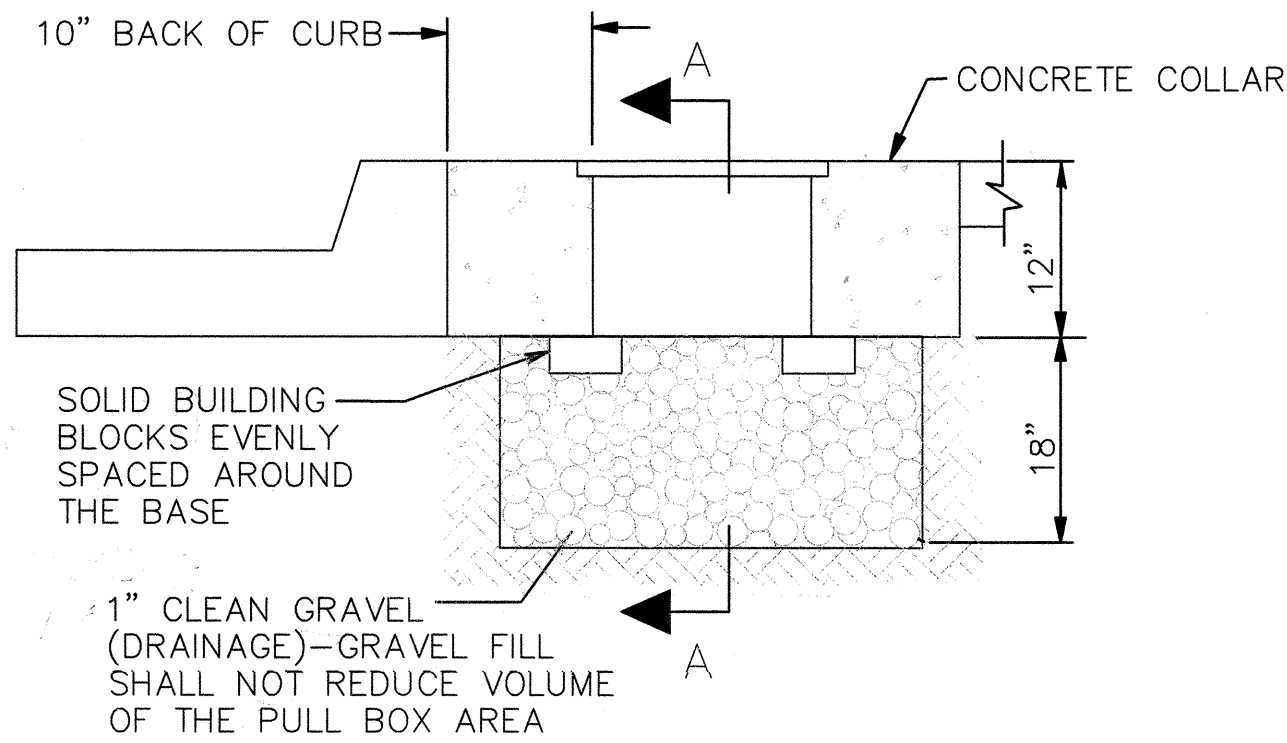
**SAN PEDRO DR AND HOLLY AVE**

### OPTICAL DETECTOR INSTALLATION DETAILS

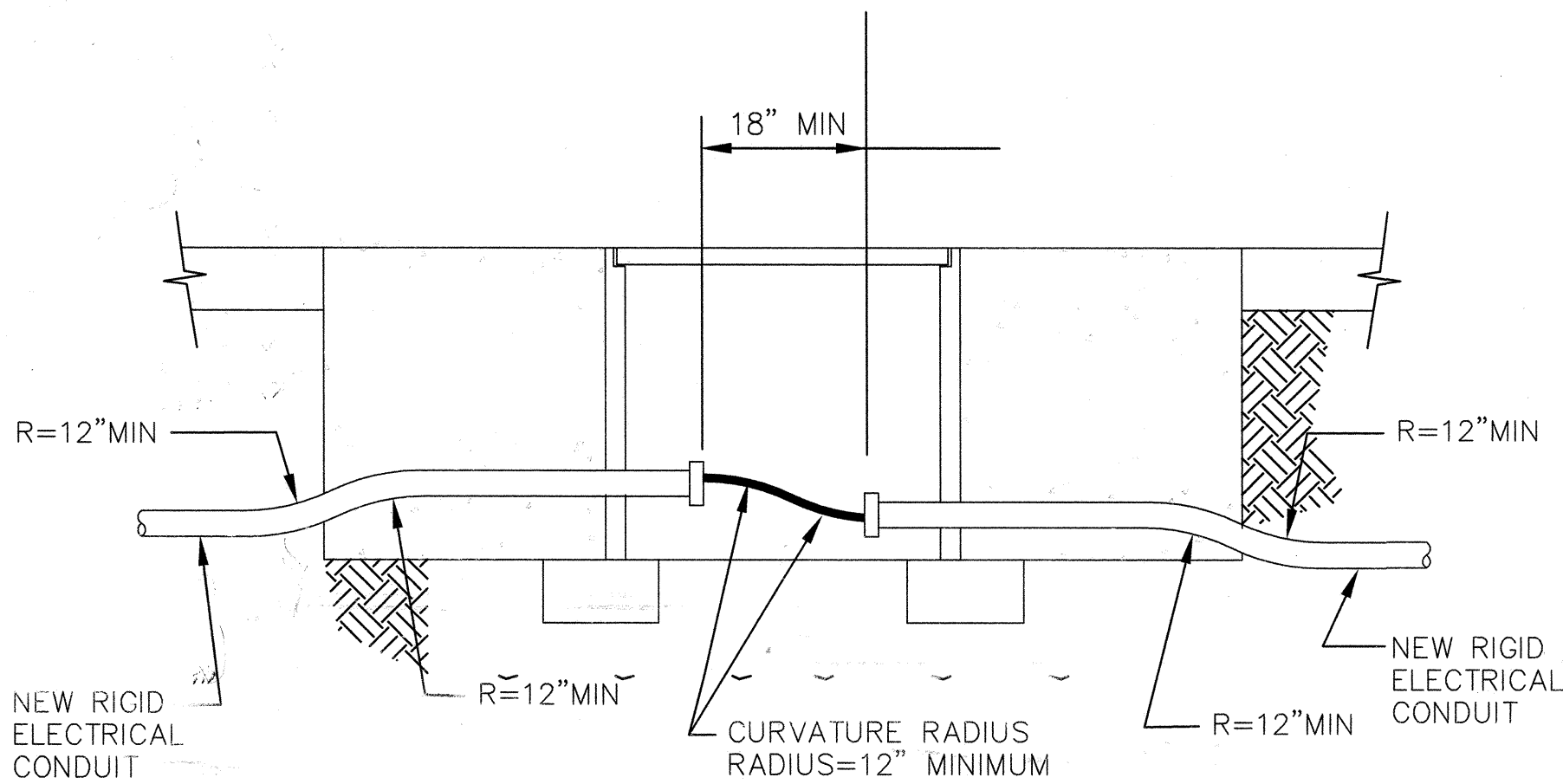
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CITY PROJECT NO. 6864.83			ZONE MAP NO. C-18-Z		SHEET # 12	

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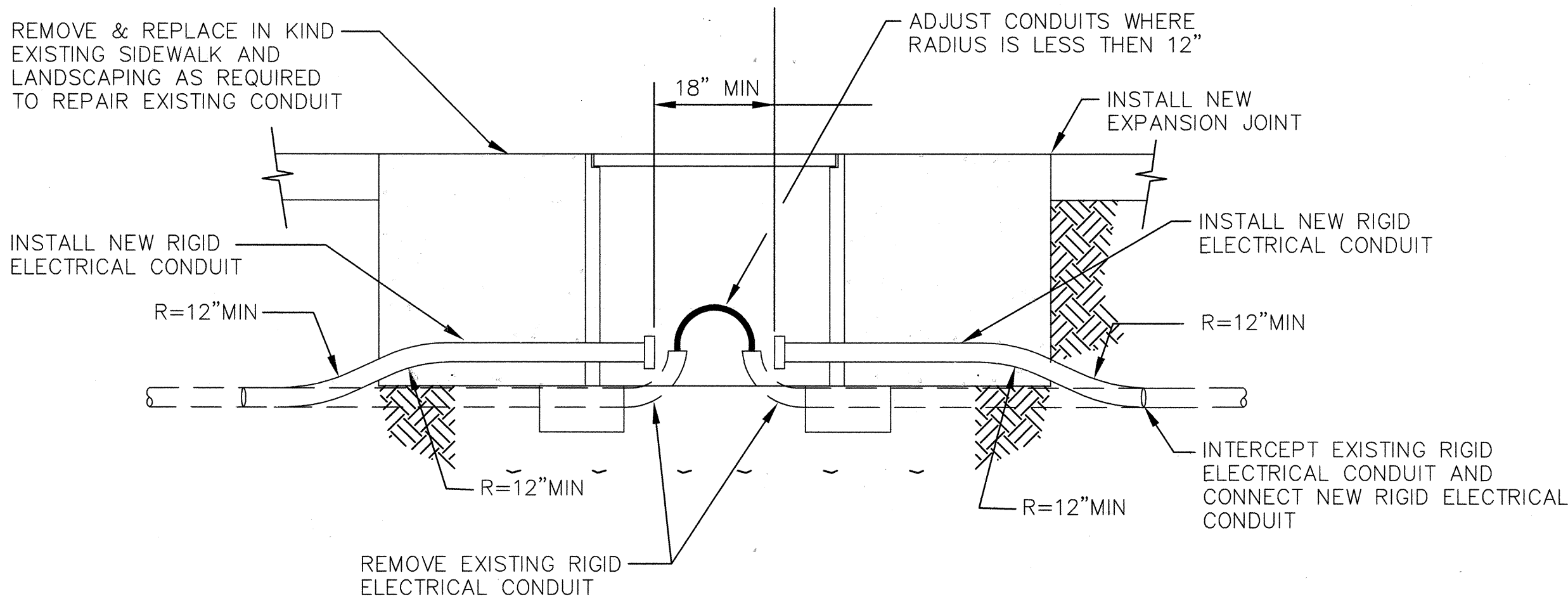




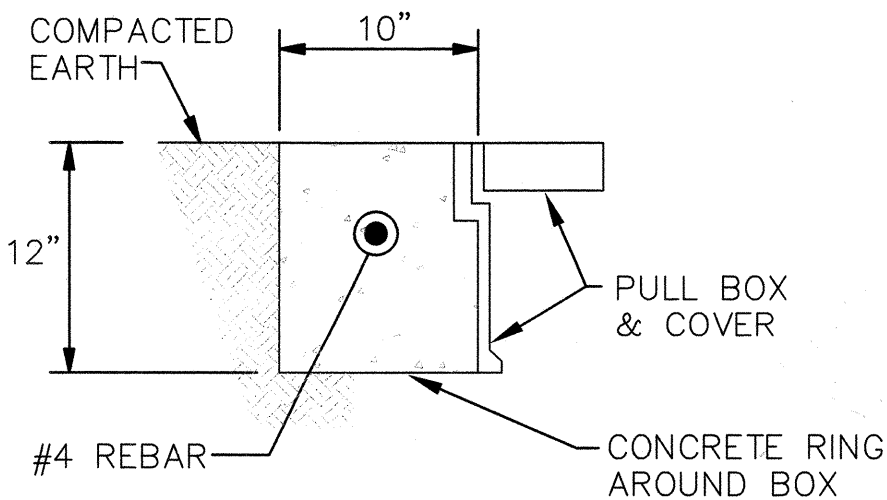
TYPICAL PULL BOX INSTALLATION  
NOTE: SEE "CONCRETE COLLAR DETAIL"



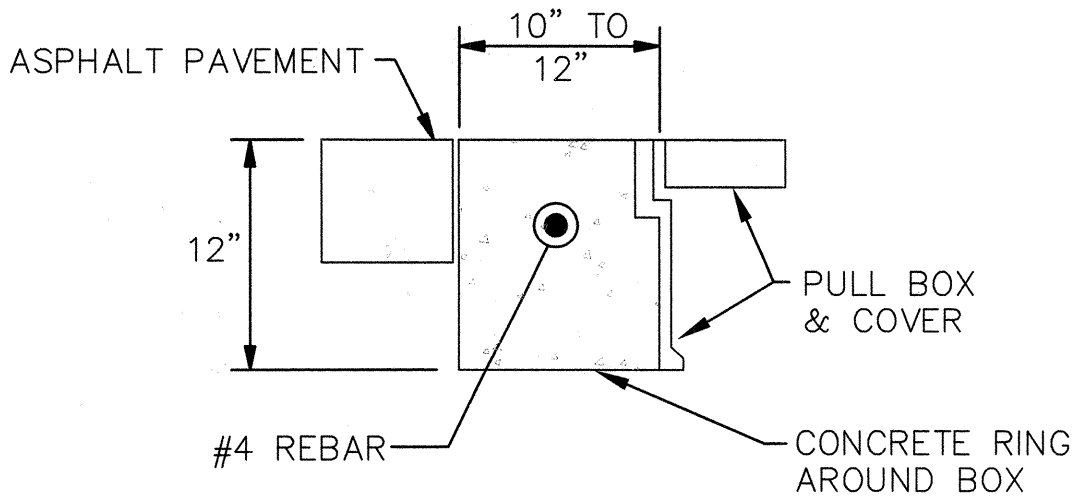
TRAFFIC SIGNAL PULL BOX (TYPICAL)  
NEW CONDUIT INSTALLATION



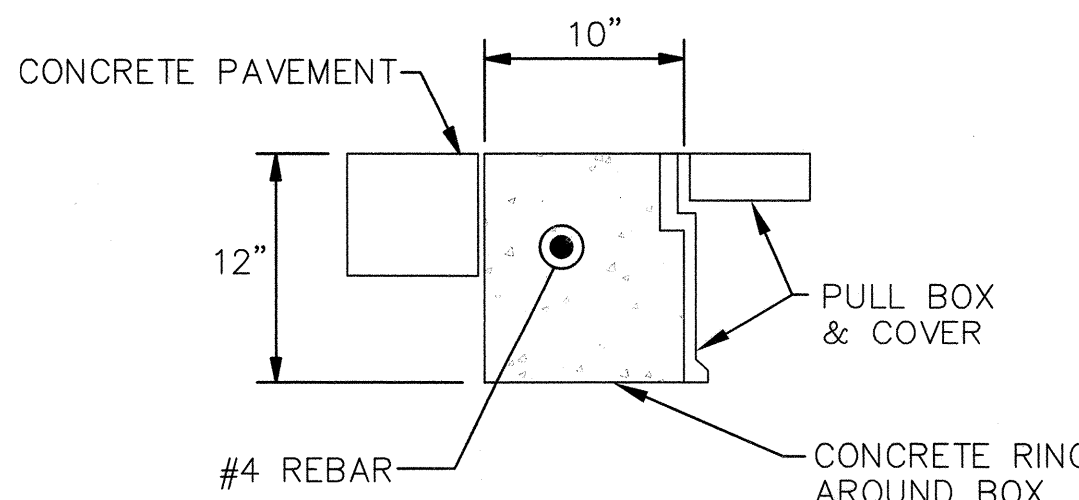
TRAFFIC SIGNAL PULL BOX (TYPICAL)  
RETROFIT INSTALLATION



IN COMPACTED EARTH



IN ASPHALT PAVEMENTS



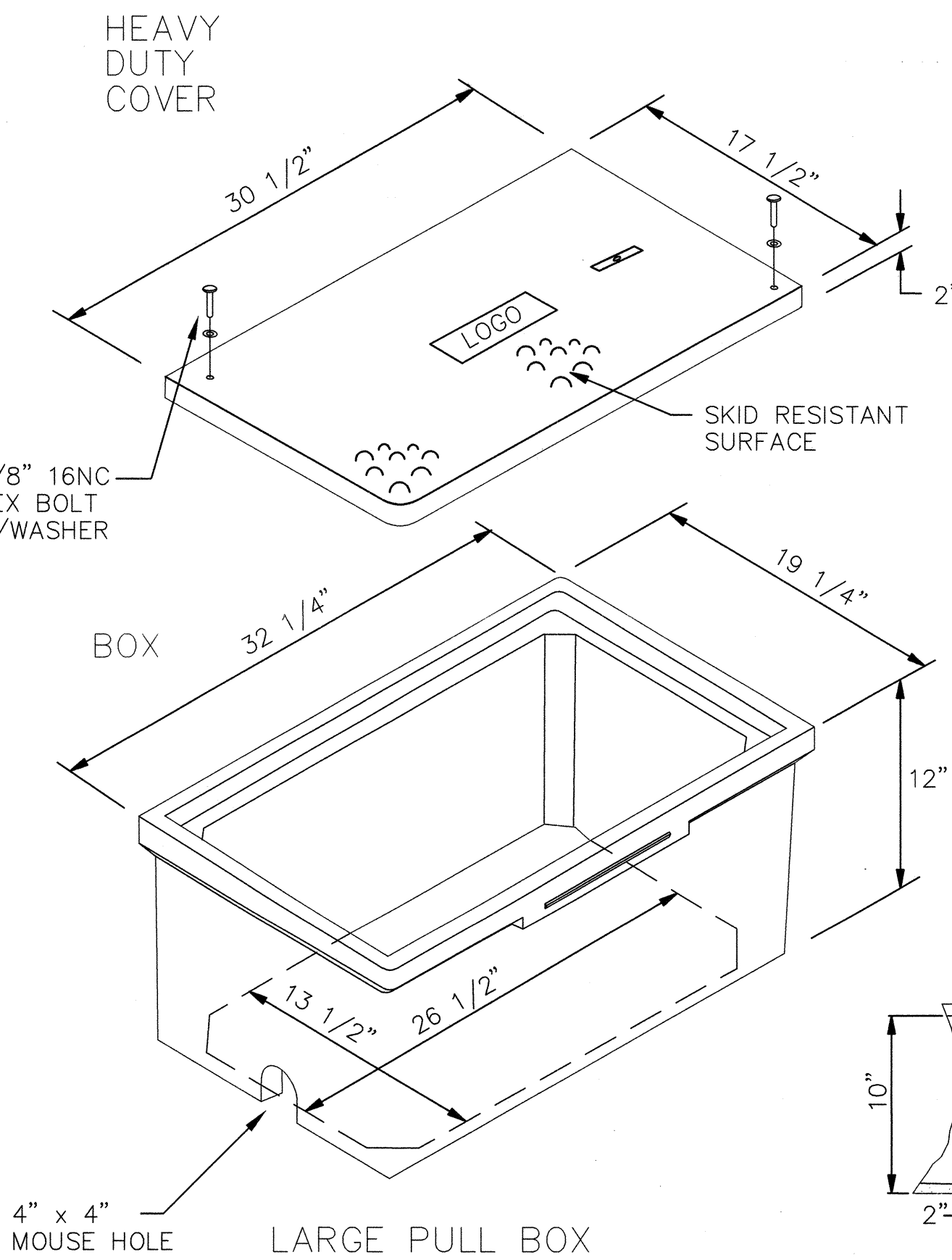
IN CONCRETE PAVEMENTS

CONCRETE COLLAR DETAILS

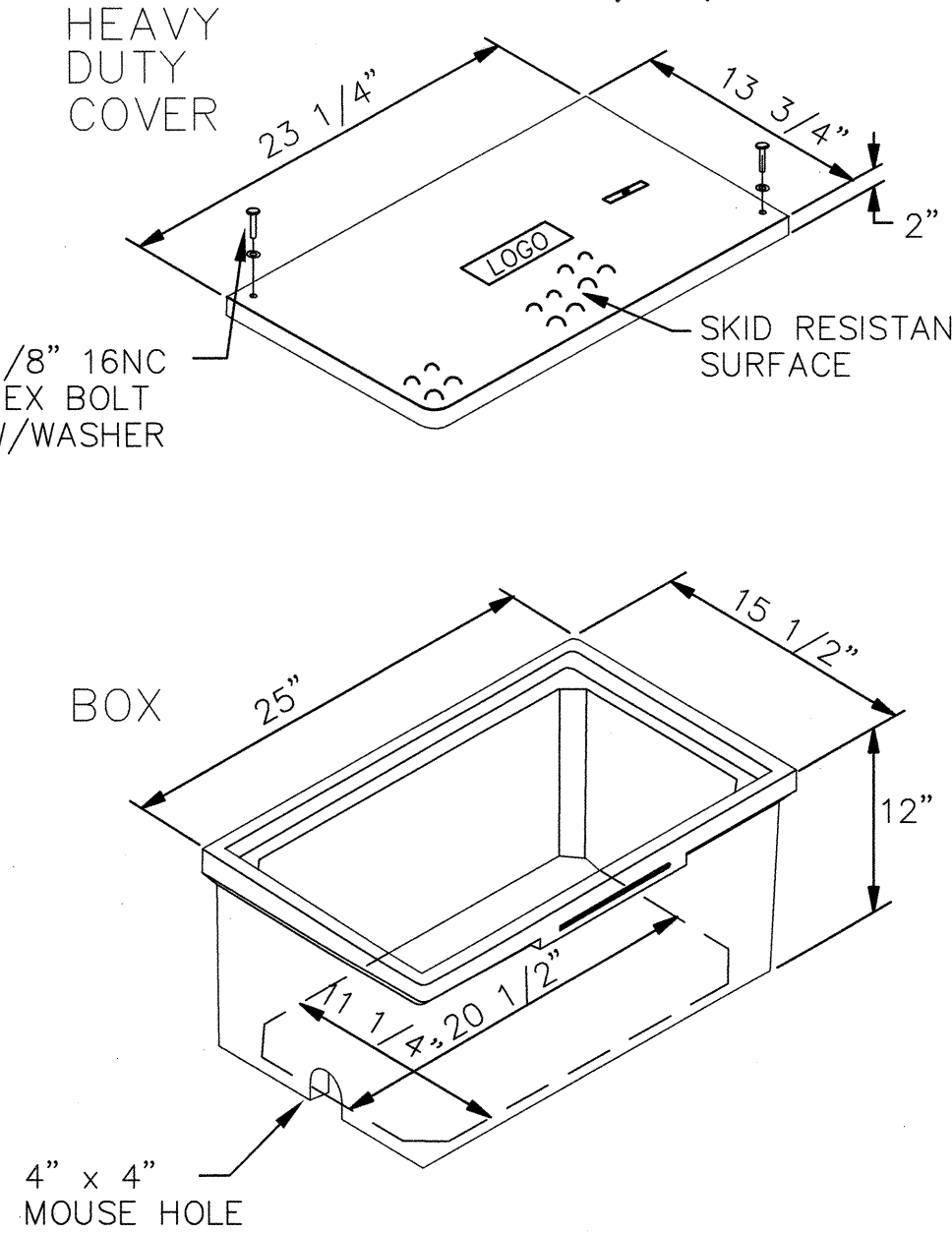
NOTE: THE CONCRETE COLLAR FOR THE PULL BOXES WILL BE CONSIDERED INCIDENTAL TO THE PULL BOX BID ITEMS

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Ronald R. Bohannon, of the firm of Tierra West LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by Bill Brewster, of Souder Miller & Associates, NMPS number 10855.



LARGE PULL BOX



STANDARD PULL BOX

PULL BOX DETAILS

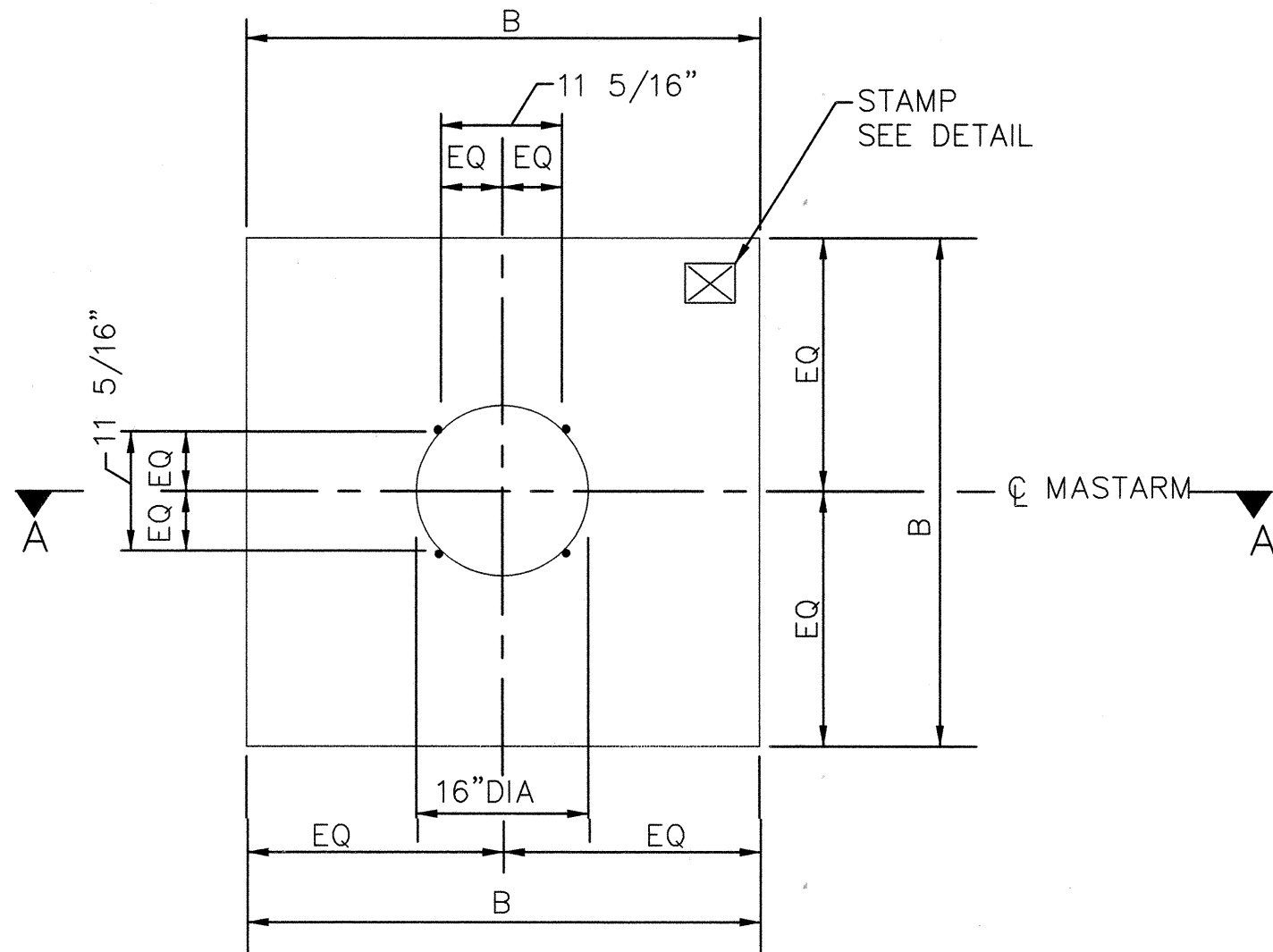
NOTES FOR HEAVY DUTY REINFORCED POLYMER MORTAR PULL BOX AND COVERS

- MATERIAL TO BE AN AGGREGATE CONSISTING OF SAND AND GRAVEL BOUND TOGETHER WITH A POLYMER AND REINFORCED WITH CONTINUOUS WOVEN GLASS STRANDS. THE MATERIAL MUST HAVE THE FOLLOWING MECHANICAL PROPERTIES: COMPRESSIVE STRENGTH - 11,000 PSI, TENSILE STRENGTH - 1,700 PSI, FLEXURAL STRENGTH - 7,500 PSI.
- ALL PULL BOX COVERS SHALL BE HEAVY DUTY REINFORCED POLYMER MORTAR, HAVING A SERVICE LOAD OF 22,568 LBS OVER 10" SQUARE (225 PSI).
- PULL BOX TYPE AND LOGO SHALL BE APPROVED BY THE PROJECT MANAGER.
- THE DIMENSIONS OF THE PULL BOXES SHOWN ARE NOMINAL DIMENSIONS AND MAY VARY AS TO THE MANUFACTURER'S RECOMMENDATIONS. ALL DIMENSIONS SHALL BE VERIFIED BY THE PROJECT MANAGER.
- ELECTRICAL PULL BOX (STANDARD) SHALL BE A HEAVY DUTY REINFORCED POLYMER MORTAR PULL BOX AND COVER MEASURING 13 3/4" x 23 1/4" x 2".

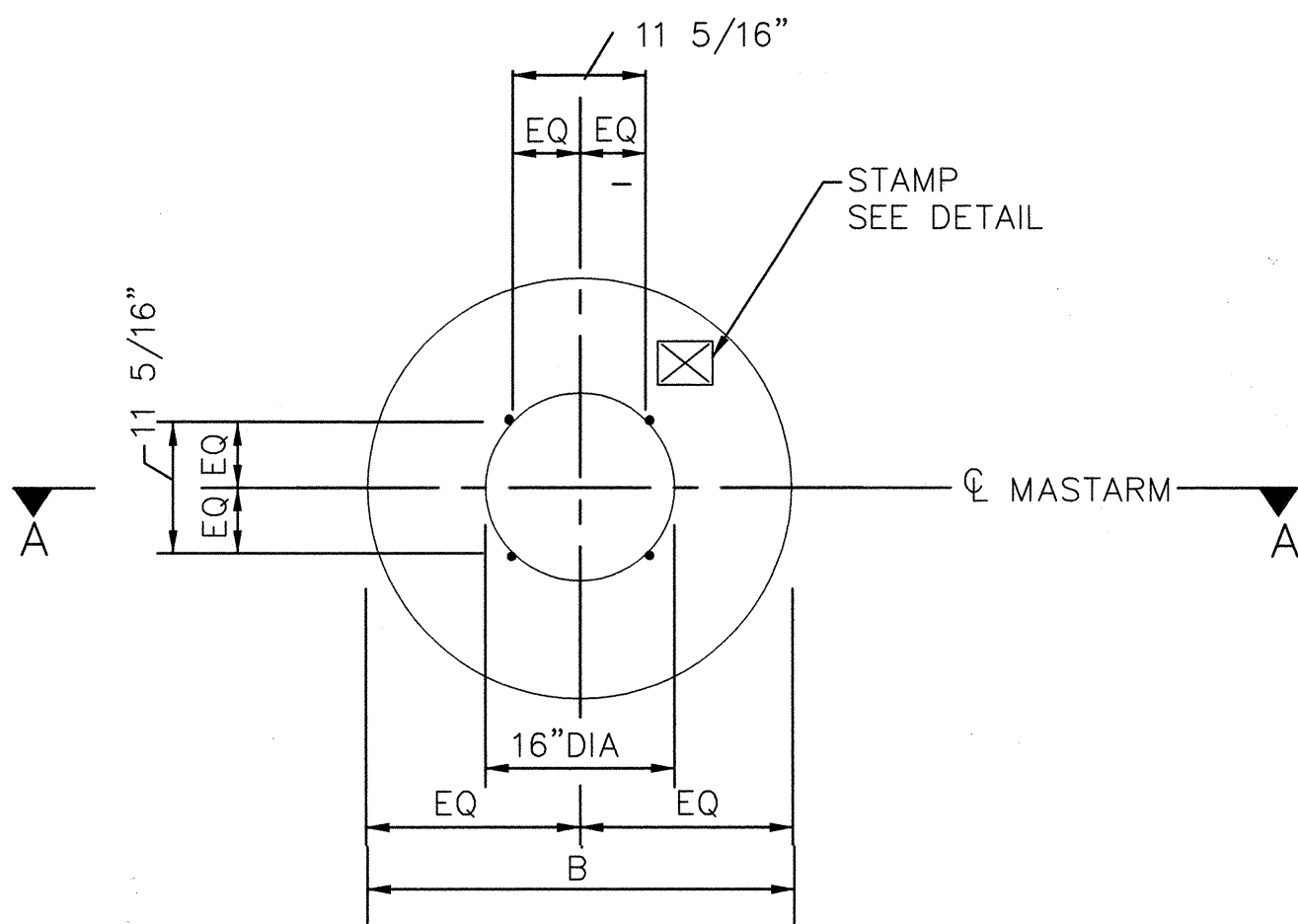
RECORD DRAWING

<b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
<b>SAN PEDRO DR AND HOLLY AVE</b> PULL BOX DETAILS	
DESIGN REVIEW COMMITTEE APPROVE MAY 21 2009 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL SEP 2 2009 CITY ENGINEER
CITY PROJECT NO. 6864.83	ZONE MAP NO. C-18-Z
SHEET # 13	

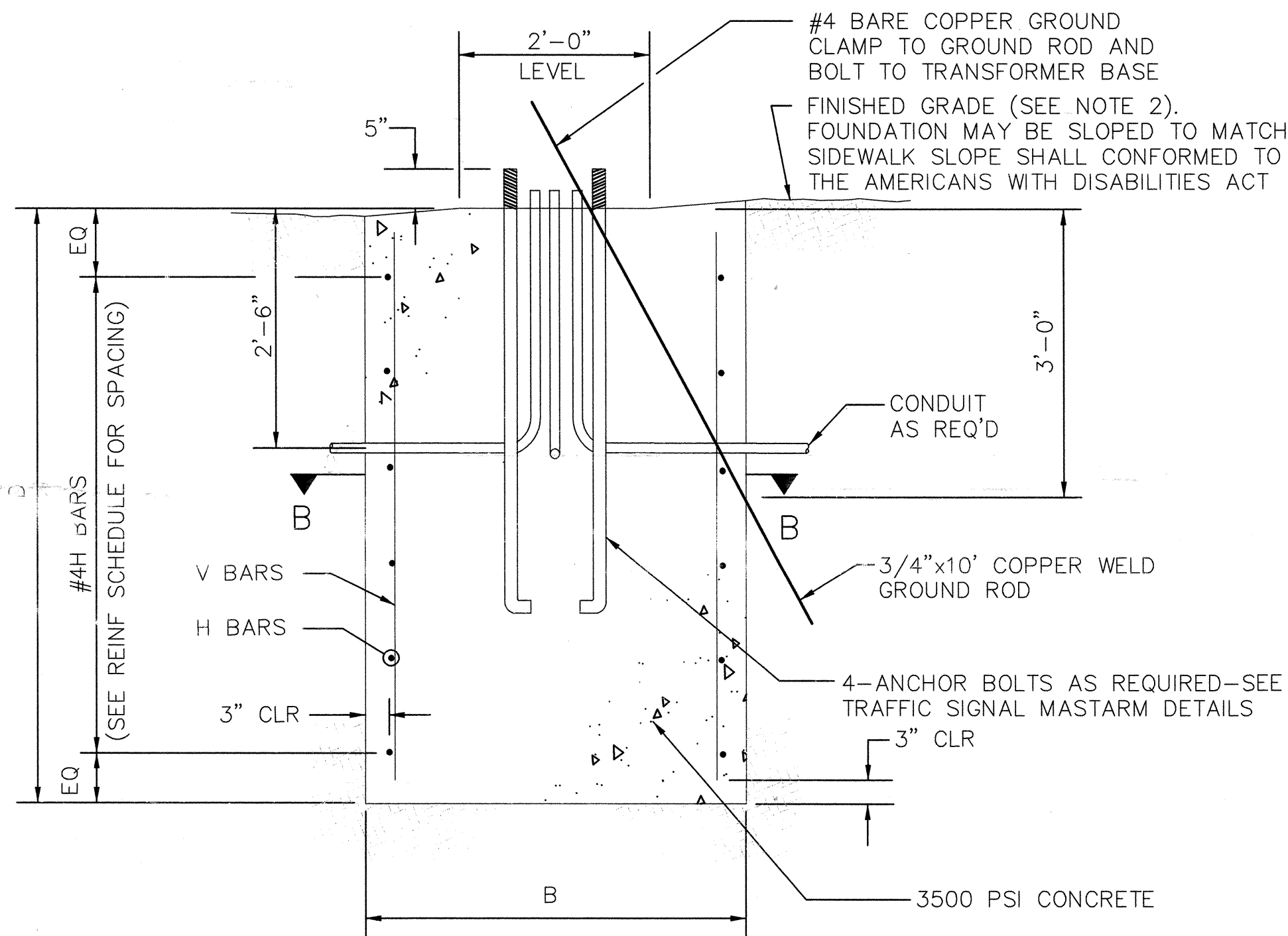




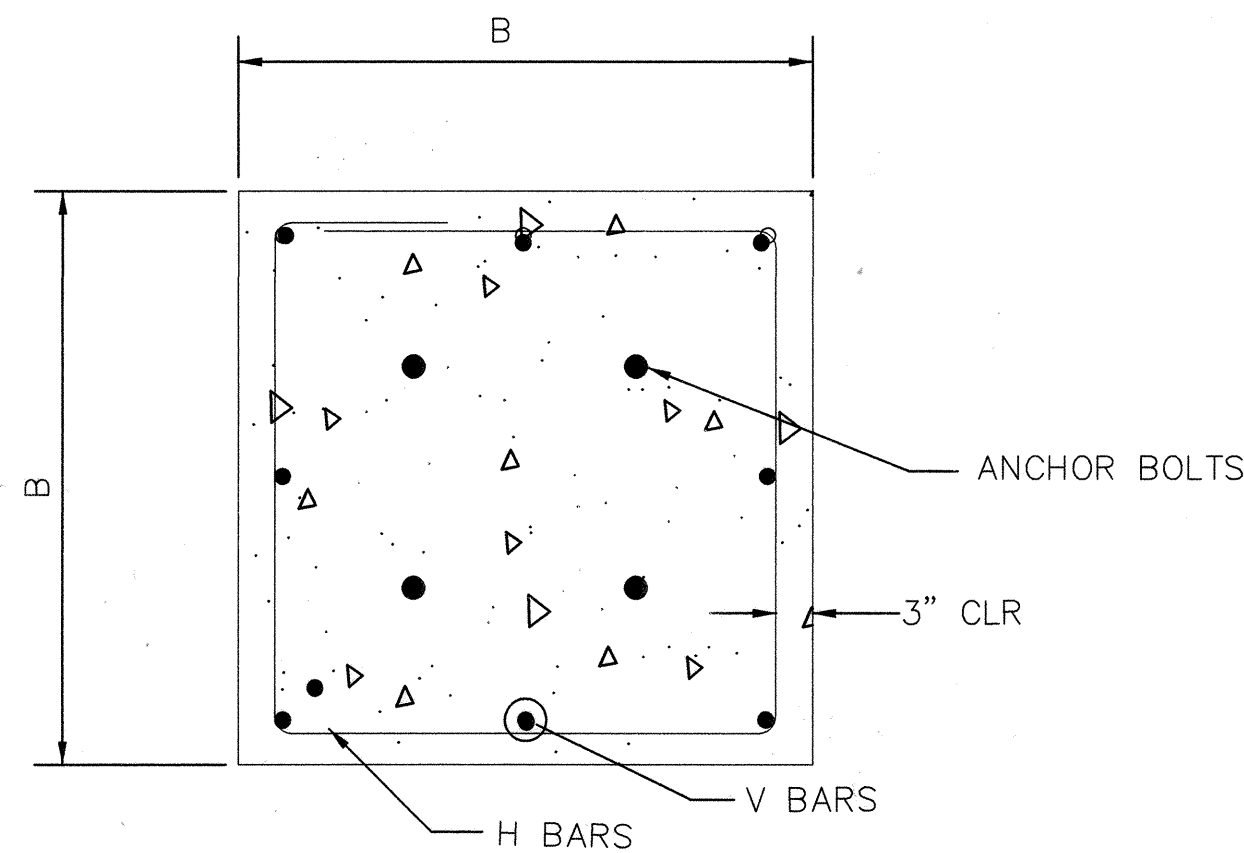
PLAN VIEW (SQUARE)  
NO SCALE



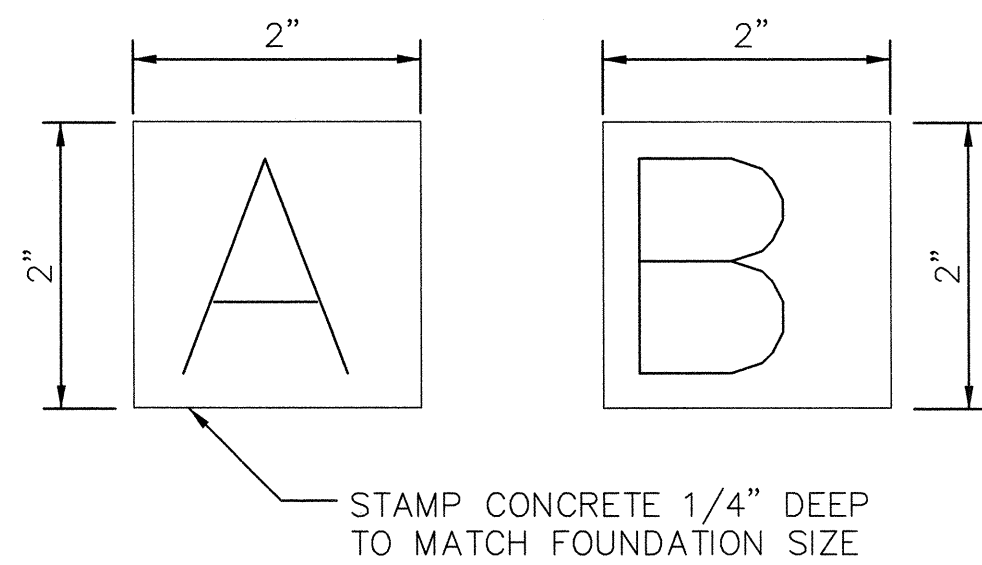
PLAN VIEW (ROUND)  
NO SCALE



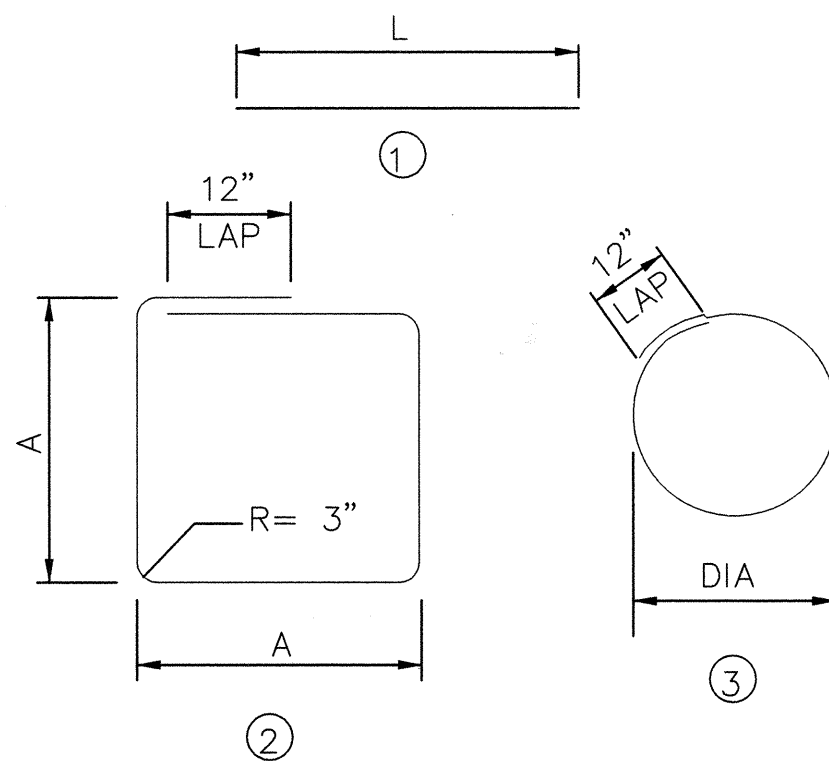
SECTION A-A (ROUND OR SQUARE)  
NO SCALE



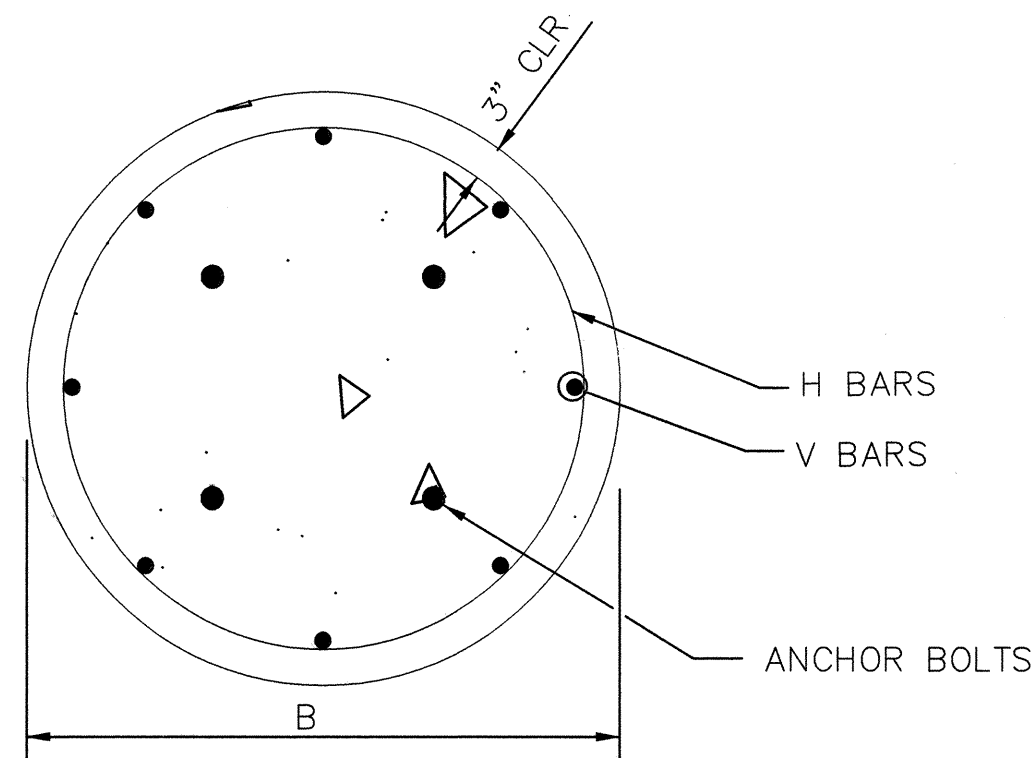
SECTION B-B (SQUARE)  
NO SCALE



STAMP DETAIL  
NO SCALE



BAR BENDING DIAGRAM



SECTION B-B (ROUND)  
NO SCALE

## FOUNDATION DIMENSIONS AND QUANTITIES

FOUNDATION TYPE	SIGNAL ARM SPAN(FT)	DIMENSION		REINFORCING		REBAR POUNDS	3500 PSI CONCRETE CUBIC YARDS	NOTES
		B (WIDTH)	D (DEPTH)	V BARS MARK	H BARS MARK			
TYPE A (SQUARE)	15	3'-6"	5'-0"	#4V2	#3H2	49.1	2.27	
	20	"	"	"	"	"	"	
	25	"	"	"	"	"	"	
TYPE B (SQUARE)	30	4'-0"	6'-3"	#5V1	#3H1	82.6	3.70	
	35	"	"	"	"	"	"	
	40	"	"	"	"	"	"	
TYPE A (ROUND)	15	2'-6"	8'-6"	#6V4	#3H4	98.1	1.55	ROUND SHAPE TO BE USED ONLY WHERE SPECIFICALLY NOTED ON PLANS OR WHEN APPROVED BY THE PROJECT MANAGER.
	20	"	"	"	"	"	"	
	25	"	"	"	"	"	"	
TYPE B (ROUND)	30	3'-0"	11'-9"	#7V3	#3H3	179.7	3.08	
	35	"	"	"	"	"	"	
	40	"	"	"	"	"	"	

## REINFORCING SCHEDULE (GRADE 60 BARS)

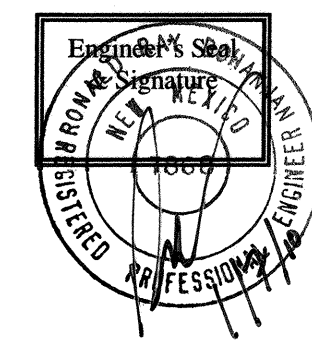
MARK	QUANT	TYPE	SIZE	LENGTH	COMMENTS
#5V1	8	1	5	5'-9"	A = 42", TIES AT 14" OC A = 36", TIES AT 12" OC DIA = 30", TIES AT 12" OC DIA = 24", TIES AT 12" OC
#4V2	8	1	4	4'-6"	
#7V3	6	1	7	11'-3"	
#6V4	6	1	6	8'-0"	
#3H1	6	2	3	15'-4"	
#3H2	5	2	3	13'-4"	
#3H3	12	3	3	9'-3"	
#3H4	9	3	3	7'-8"	

## TRAFFIC SIGNAL MASTARM FOUNDATION NOTES

- REFER TO THE PLANS FOR LOCATIONS OF TRAFFIC SIGNAL MASTARM FOUNDATIONS.
- FINISHED GRADE FOR THE FOUNDATIONS SHALL BE ESTABLISHED IN THE FIELD BY THE PROJECT MANAGER.
- THE FOUNDATIONS SHOWN HERE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT REVISION.
- CONCRETE SHALL BE 3500 PSI FOR EXTERIOR STRUCTURES. REFER TO TABLE 101.C OF THE SPECIFICATIONS.
- REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60.
- THE TOP 6 INCHES OF THE FOUNDATION PEDESTAL SHALL BE FORMED TO THE DIMENSIONS SHOWN ON THIS SHEET TO FORM NEAT LINES. CONCRETE BELOW 6 LINES MAY BE CAST AGAINST THE EARTH.
- THE CONCRETE SHALL GAIN 80% OF THE DESIGN STRENGTH PRIOR TO INSTALLING THE TRAFFIC SIGNAL MASTARM.
- ALL FOUNDATIONS SHALL INCLUDE COPPER WELD GROUND RODS. ALL GROUND RODS SHALL BE 3/4" DIA X 10'-0" AND WILL BE CONSIDERED INCIDENTAL TO THE FOUNDATIONS BID ITEMS.
- ALL FOUNDATIONS SHALL BE STAMPED EITHER "A" OR "B" TO SHOW TYPE CONSTRUCTED (SEE STAMP DETAIL).

### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

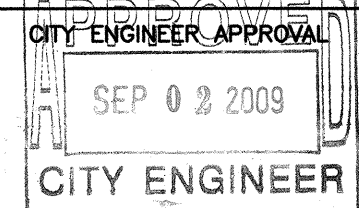
I, Ronald R. Bohannon, of the firm of Tierra West LLC, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by Bill Brewster, of Souder Miller & Associates, NMPS number 10855.



## RECORD DRAWING

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

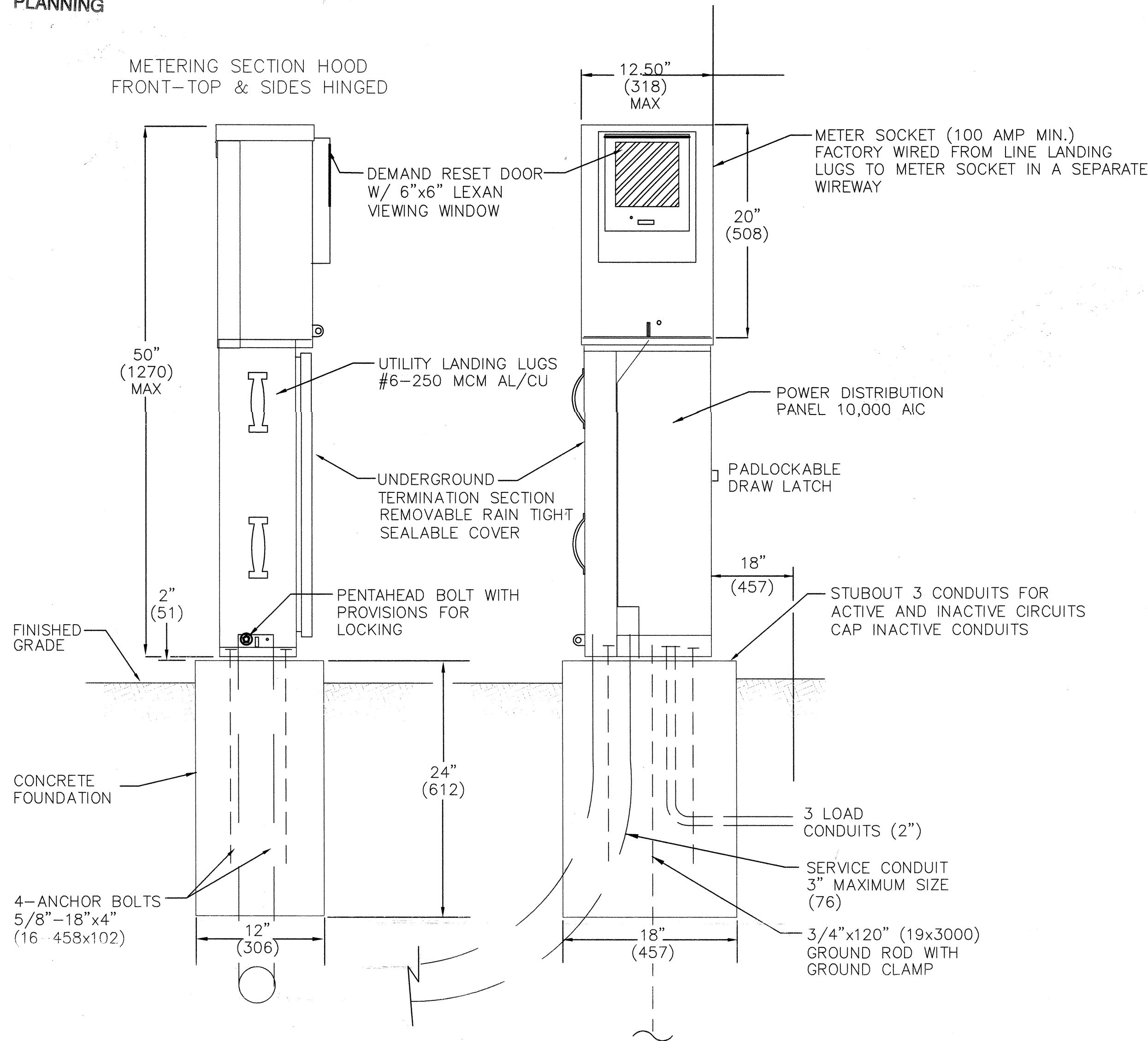
CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP  
**SAN PEDRO DR AND HOLLY AVE**  
FOUNDATION DETAILS, TYPE II AND TYPE III STANDARD



DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
APPROVED MAY 21 2009 DESIGN REVIEW COMMITTEE	APPROVED SEP 02 2009 CITY ENGINEER			

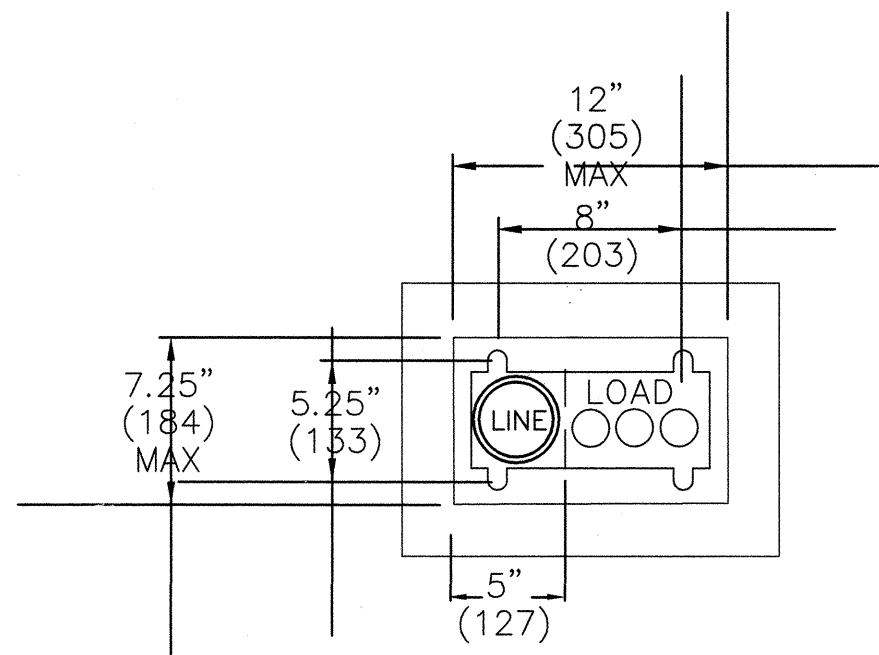
CITY PROJECT NO. **6864.83** ZONE MAP NO. **C-18-Z** SHEET # **14**



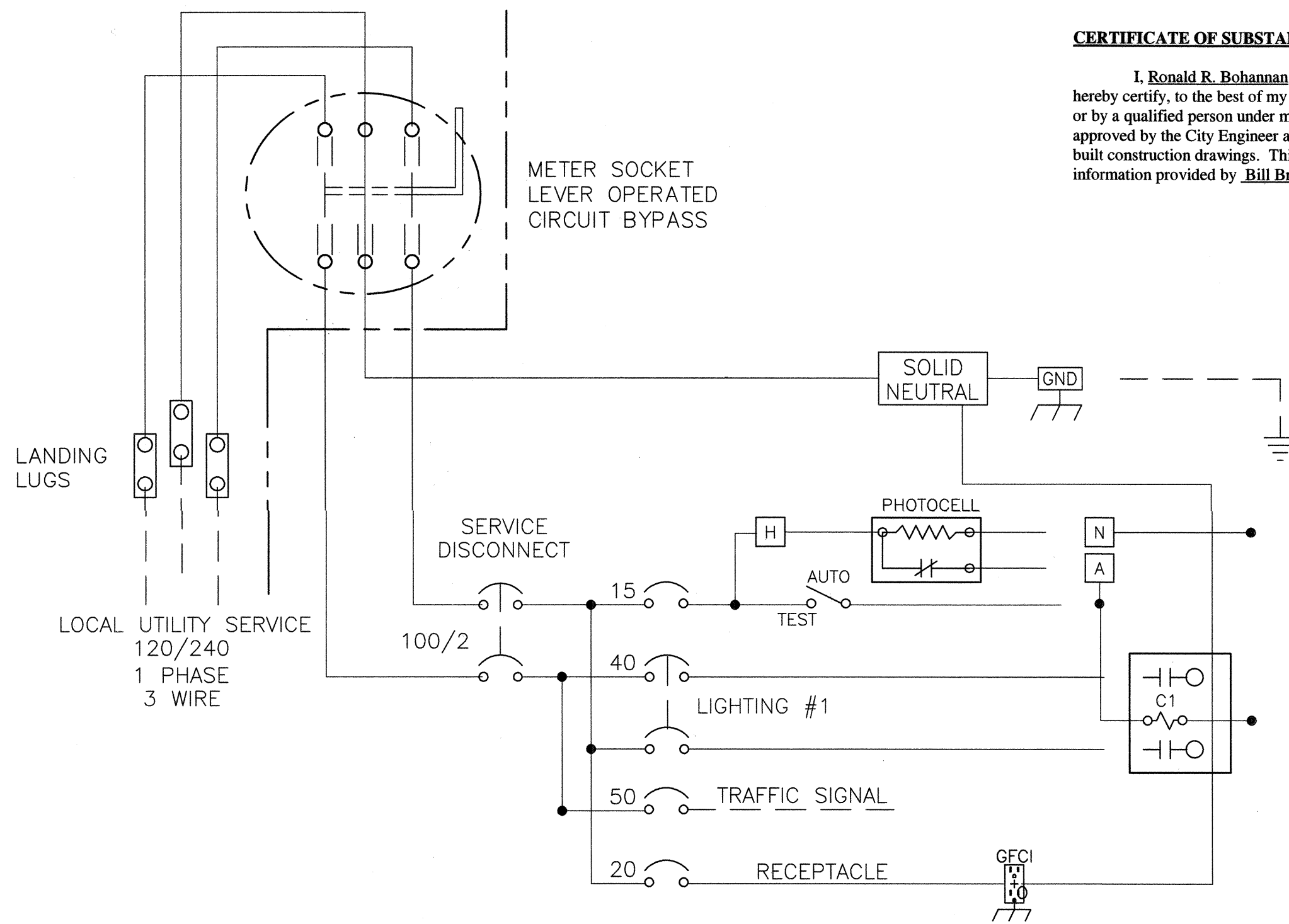


LEFT SIDE

FRONT VIEW



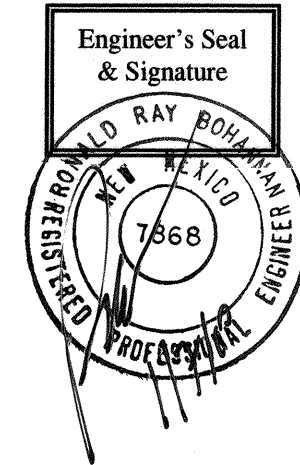
BASE PLAN



SERVICE EQUIPMENT  
WIRING DIAGRAM "B"

CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

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CONSTRUCTION MATERIALS AND FINISH

☐ 12 GA HD GALVANIZED SHEET STEEL  
☐ POWDER COATED

☐ 14 GA #304D STAINLESS STEEL SHEET  
☐ POWDER COATED COLOR:  
☐ NATURAL

☐ 0.125" ALUMINUM SHEET  
☐ POWDER COATED COLOR:  
☐ ANODIZED

POWDER COAT COLORS

☐ WHITE ☐ RANCH GREEN  
☐ MINT GREEN ☐ OTHER \_\_\_\_\_  
☐ CAMEL

PHOTO ELECTRIC CELL

☐ ON LIGHT POLE  
☐ IN SERVICE CABINET

METER PEDESTAL CONSTRUCTION NOTES

- METER PEDESTAL SHALL BE UL LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
- METER PEDESTAL SHALL MEET THE ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) GUIDELINES.
- CONSTRUCTION SHALL BE NEMA 3R AND 12, RAIN TIGHT AND DUST TIGHT. ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
- ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
- NUTS, BOLTS, AND SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF METER PEDESTAL.
- PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
- CIRCUIT BREAKERS SHALL BE CABLE IN-CABLE OUT WITH LINE ON TOP & LOAD ON THE BOTTOM. HANDLE POSITION UP="ON", MIDDLE="TRIPPED", DOWN="OFF".
- A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
- METER PEDESTAL SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
- ALL POWDER COATED METER PEDESTAL SHALL HAVE A CORROSION RESISTANT COATING WHICH INCLUDES A FIVE STEP DIP TANK METAL PREPARATION PROCESS:  
A. ALKALINE CLEANER 160° F.  
B. CLEAR WATER RINSE.  
C. IRON PHOSPHATE APPLICATION 150°.  
D. CLEAR WATER RINSE.  
E. INHIBITIVE RINSE TO SEAL PHOSPHATED SURFACES 120°.  
FINISHED WITH AN ELECTROSTATICALLY APPLIED DRY POLYESTER POWDER COATING THEN BAKED @ 380° TO CURE.
- CONCRETE FOUNDATIONS INCLUDING EXCAVATION AND BACKFILL, CONCRETE, AND ANCHOR BOLTS, COMPLETE-IN PLACE, WILL BE CONSIDERED INCIDENTAL TO THE METER PEDESTAL.

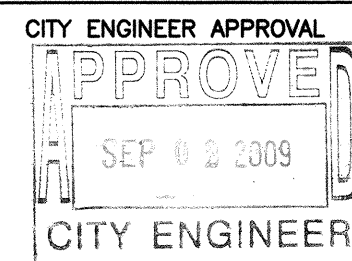
RECORD DRAWING

**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

SAN PEDRO DR AND HOLLY AVE

METER PEDESTAL DETAIL COMBINATION, SIGNALS AND LIGHTING



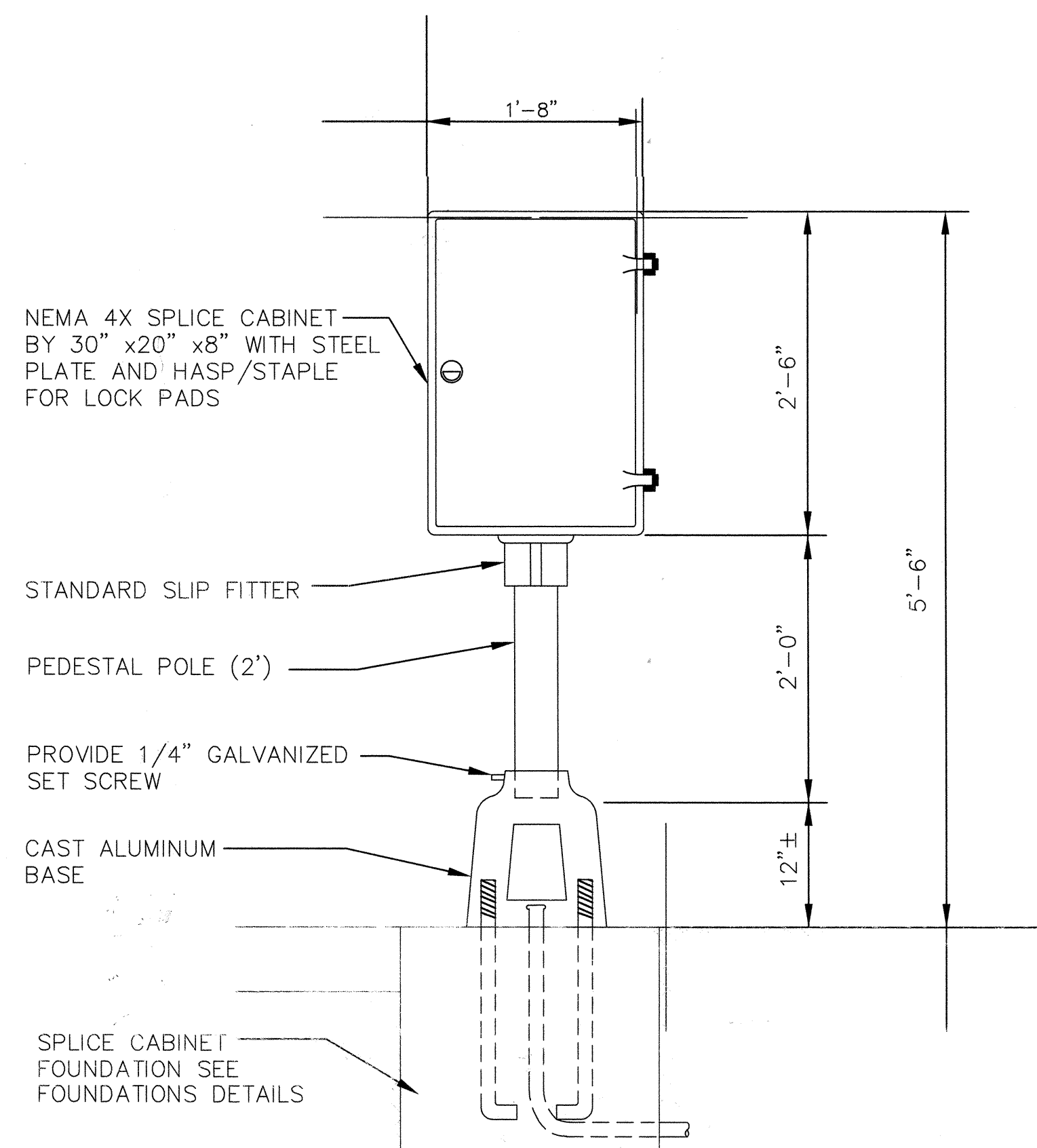
NO./DAY/YR.	NO./DAY/YR.

CITY PROJECT NO.  
**6864.83**

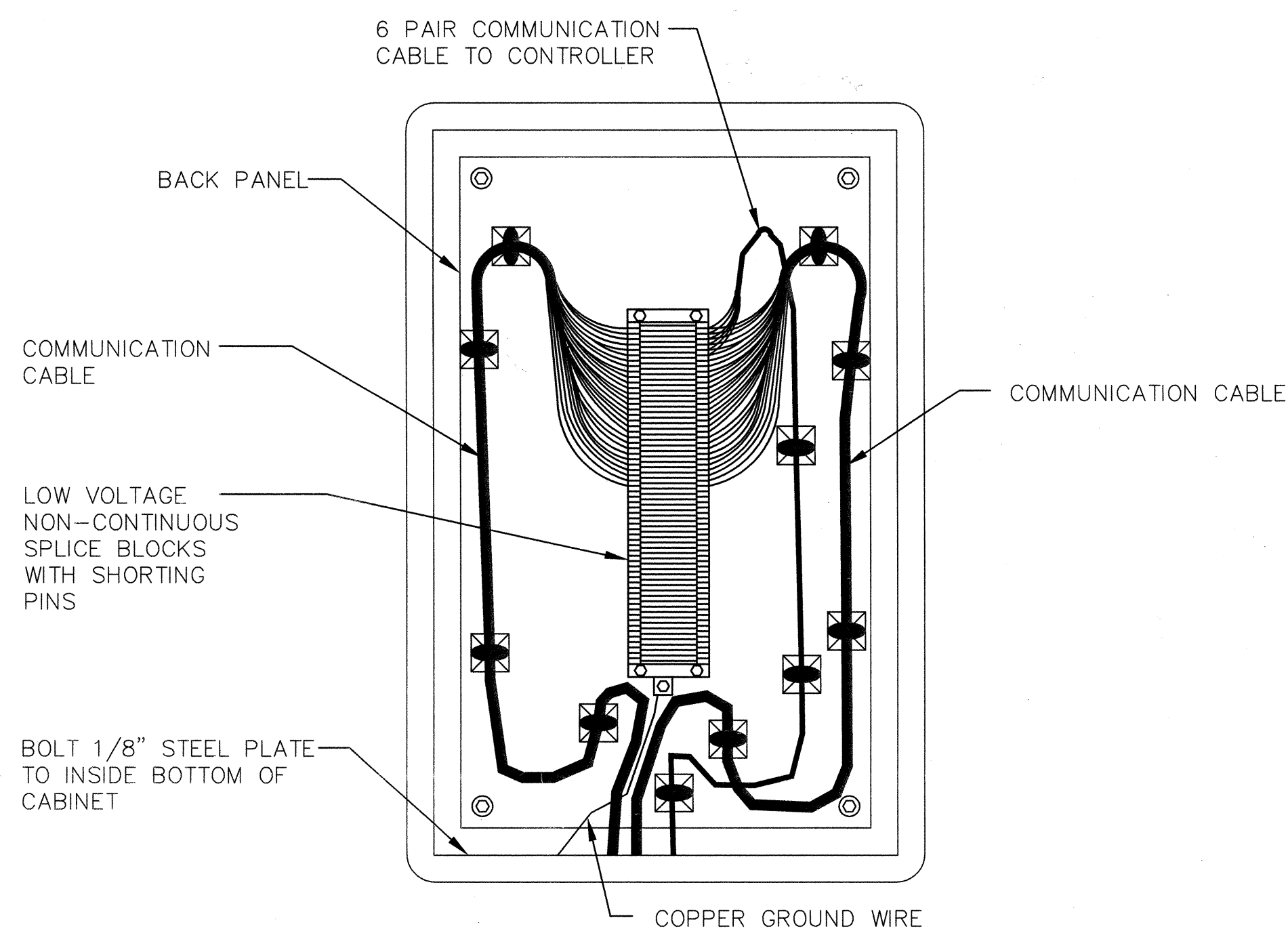
ZONE MAP NO.  
**C-18-Z**

SHEET #  
**15**

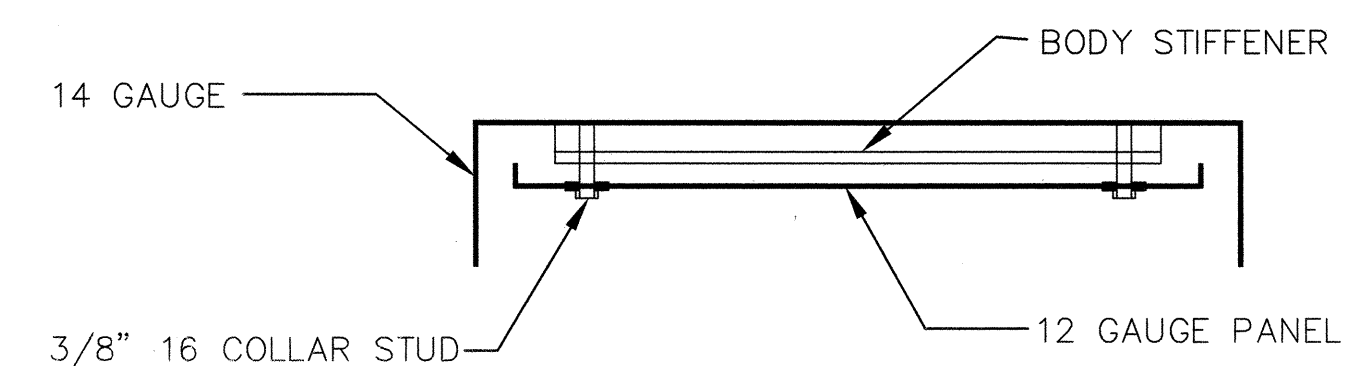




### TRAFFIC SIGNAL SPLICE CABINET DETAIL



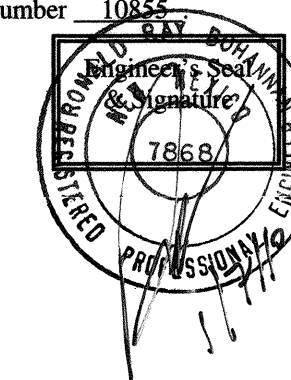
## TRAFFIC SIGNAL SPLICE CABINET WIRING DETAIL



### SPLICE CABINET PANEL DETAIL

**CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS**

I, **Ronald R. Bohannon**, of the firm of **Tierra West LLC**, a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as part of this project has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications approved by the City Engineer and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me, or personnel under my direction with survey information provided by **Bill Brewster**, of **Souder Miller & Associates**, NMPS number **10855**.


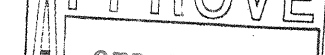


## RECORD DRAWING

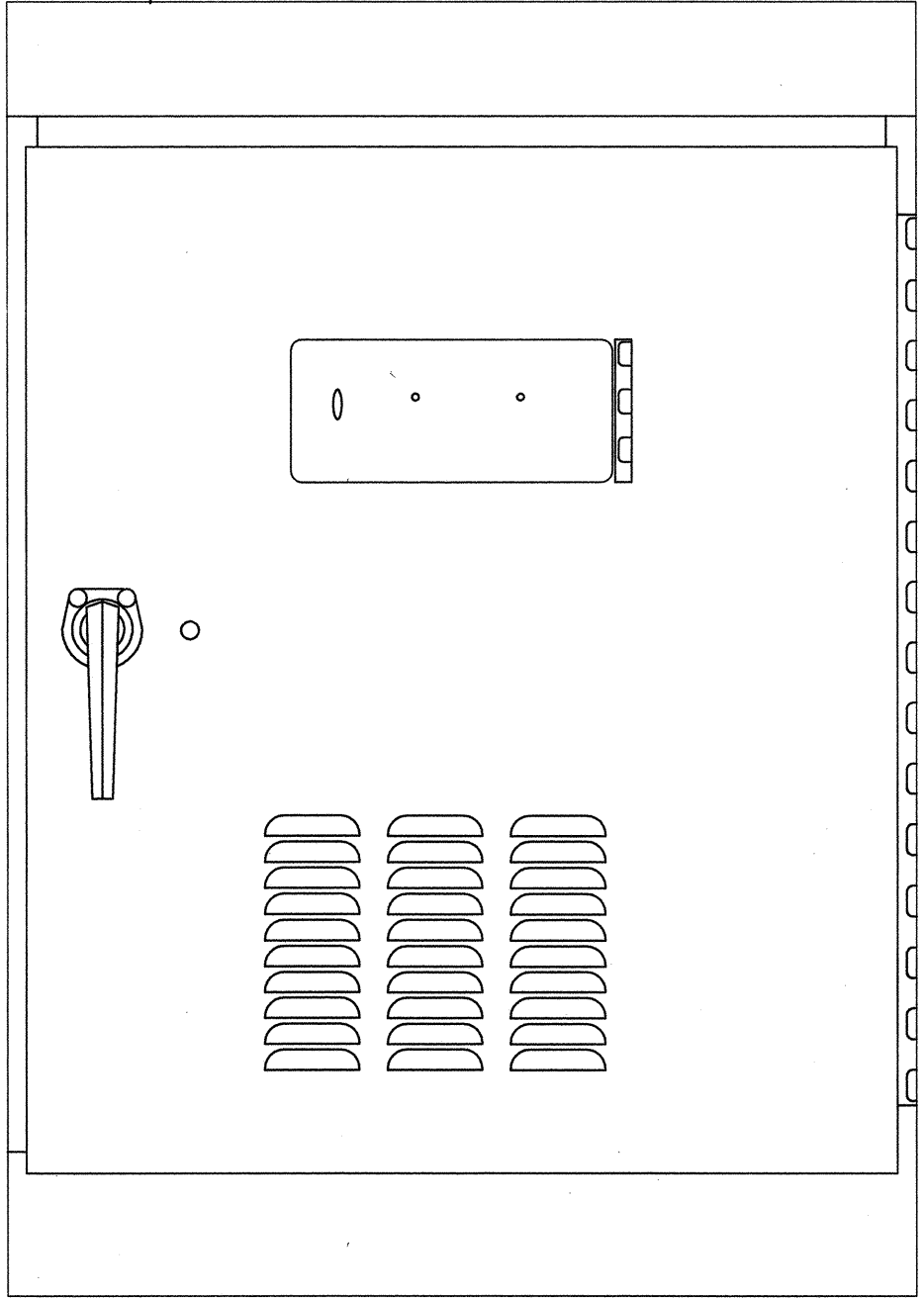
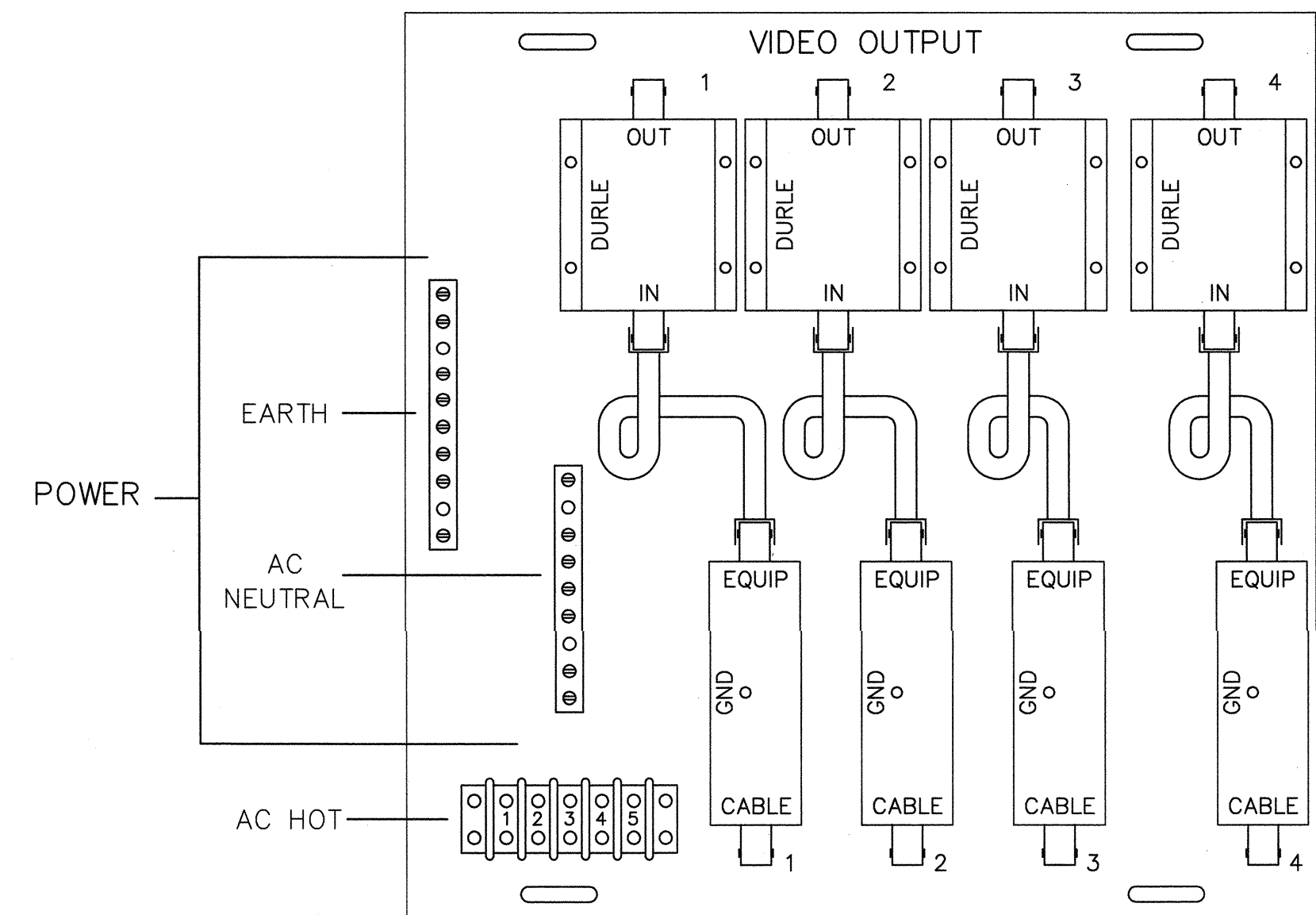
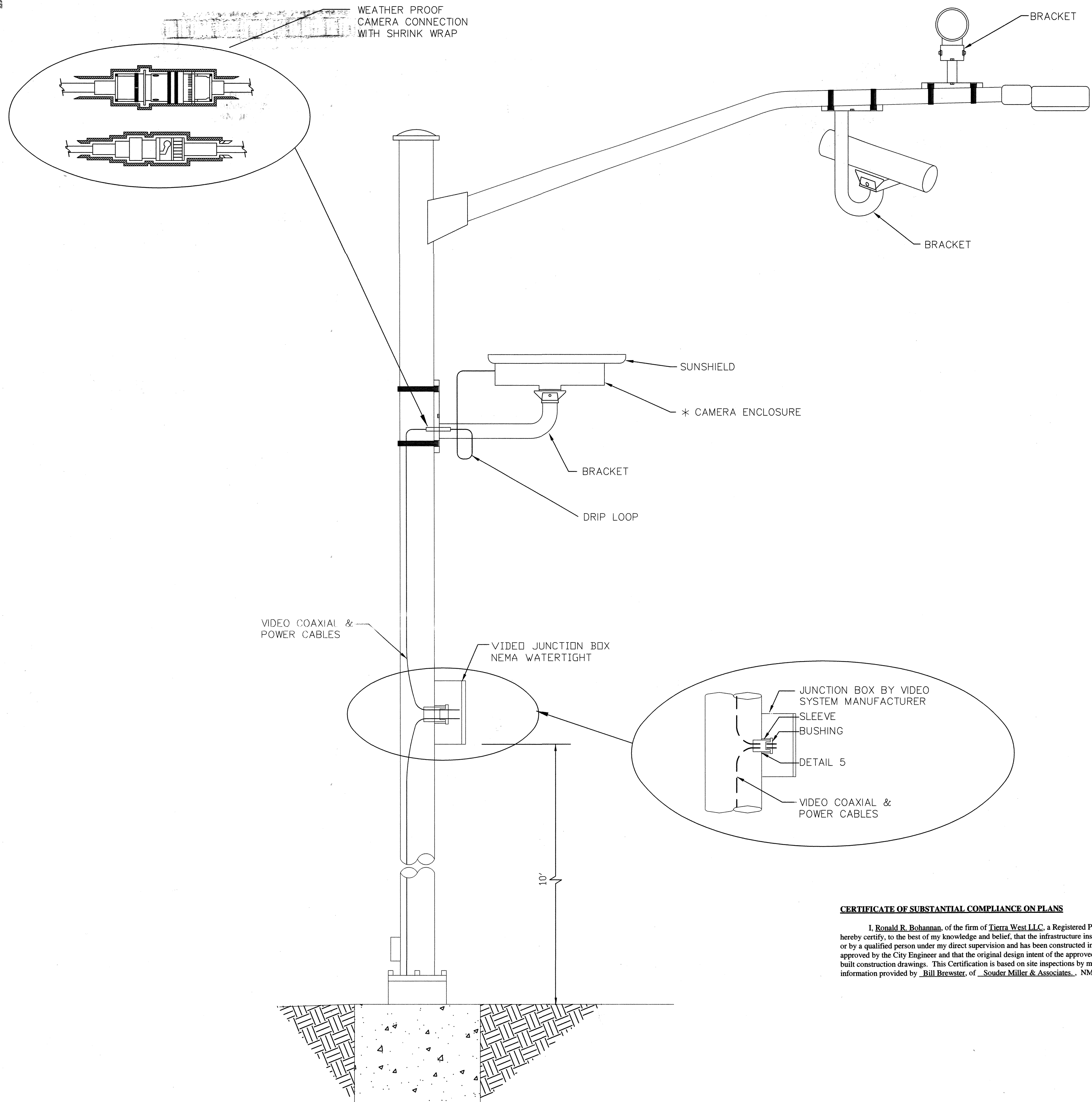
**TIERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NEW MEXICO 87109  
(505) 858-3100

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

**SAN PEDRO DR AND HOLLY AVE**  
*SPLICE CABINET PEDESTAL MOUNT DETAILS*

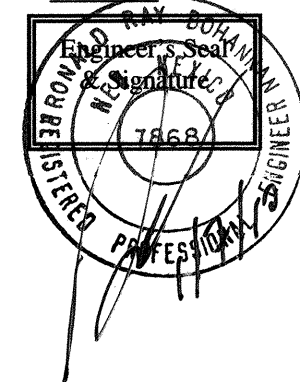
DESIGN REVIEW COMMITTEE 		CITY ENGINEER APPROVAL 		LAST DESIGN UPDATE	MO./DAY/YR.		MO./DAY/YR.	
CITY PROJECT NO. 6864.83				ZONE MAP NO. C-18-Z		SHEET # 16		





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\* CAMERA SHALL BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION, TO ALIGN HORIZON AT HORIZONTAL PLANE.

**RECORD DRAWING**

<b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
<b>SAN PEDRO DR AND HOLLY AVE</b> MACHINE VISION VEHICLE DETECTOR SYSTEMS	
DESIGN REVIEW COMMITTEE <b>APPROVED</b> MAY 21 2009 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL <b>APPROVED</b> SEP 02 2009 CITY ENGINEER
CITY PROJECT NO. 6864.83	ZONE MAP NO. C-18-Z
SHEET # 17	

AS BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEER'S SEAL			
CONTRACTOR	MODIFIED	NO. 00000000	2009	STAKED BY	SOUDER MILLER DATE	2009		FIELD BY	DATE						
INSPECTOR'S	DATE			DATE				NO.							
VERIFICATION BY	DATE			DATE											
CORRECTED BY	DATE														
MICRO-FILM INFORMATION				REVISIONS				DESIGN				REVISIONS			
RECORDED BY				DATE: Feb, 2009				DATE: Feb, 2009				DATE: Feb, 2009			
NO.				JOB NO.: P2008-0011				JOB NO.: P2008-0011				JOB NO.: P2008-0011			
				CHECKED BY: RRB				CHECKED BY: RRB				CHECKED BY: RRB			