

216-7101611-821-2012

SCANNED BY  
PLANNING

# CONSTRUCTION PLANS FOR LA ORILLA ROAD PAVING IMPROVEMENTS

CITY OF ALBUQUERQUE  
BERNALILLO COUNTY, NEW MEXICO  
JANUARY, 2011

*FW*

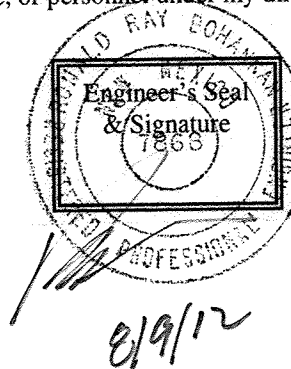
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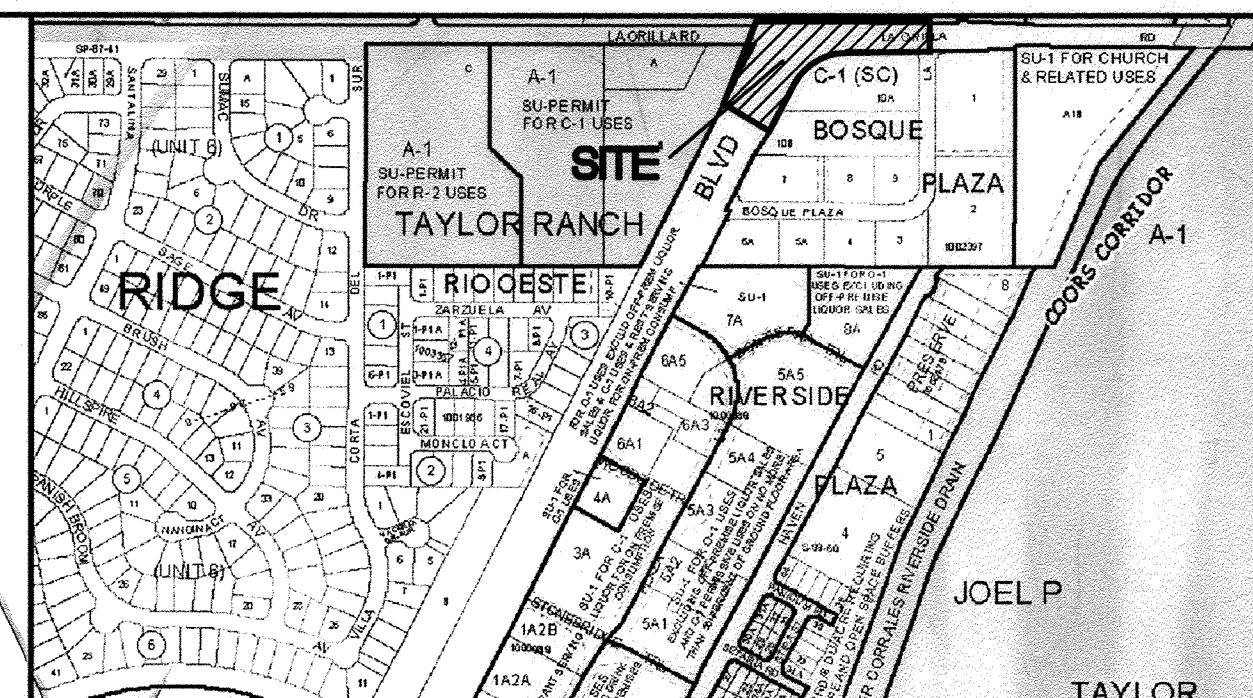
APPROVED AS RECORD DRAWINGS  
DESIGN REVIEW SECTION  
CITY CONSTRUCTION ENGINEER  
*Paul D. [Signature]*  
DATE: 11/5/2012

### 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 Russ Huggs, of Surv-Tek, NMPS number 9750



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

E-12Z

SCALE NONE

### NOTICE TO CONTRACTORS

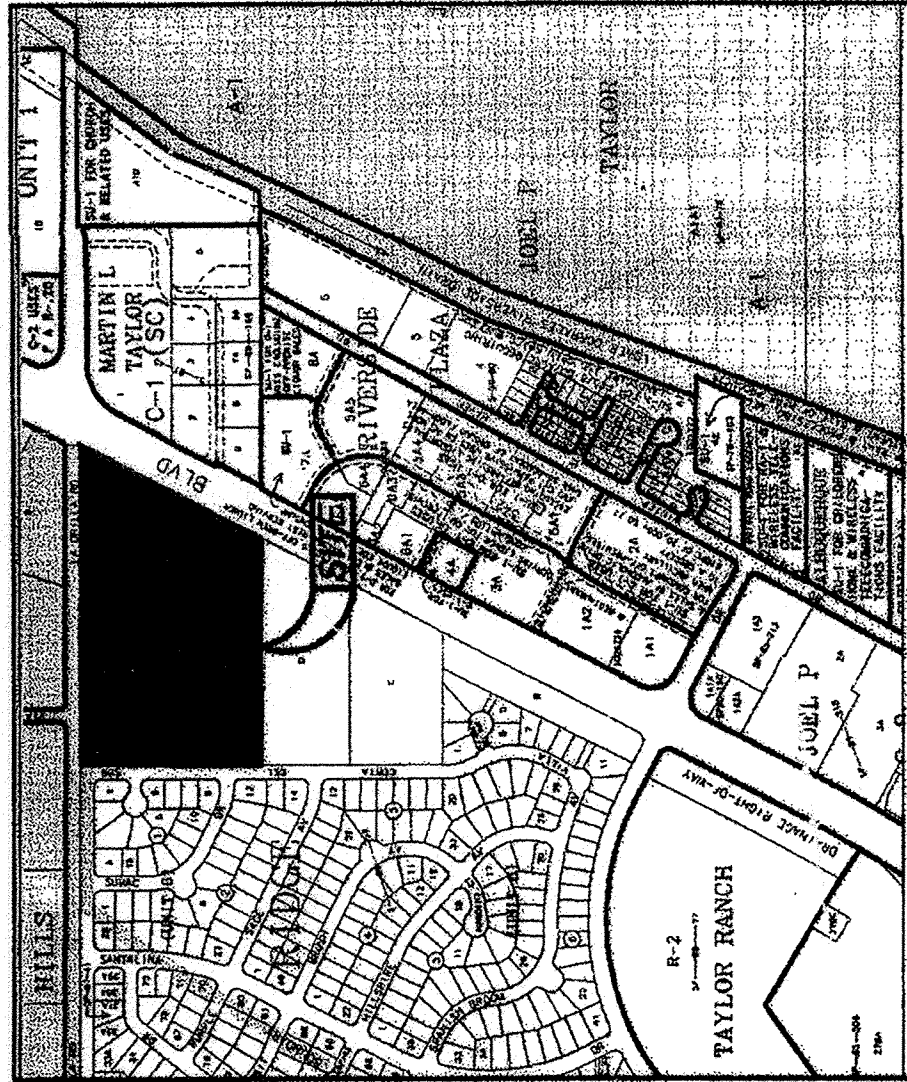
1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION (UPDATE #7), INCLUDING AMENDMENT #1.
2. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (280-1990) FOR LOCATION OF EXISTING UTILITIES.
3. ANY WORK AFFECTING AN ARTERIAL ROADWAY REQUIRES 24-HOUR CONSTRUCTION.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. SEVEN (7) WORKING DAYS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO NMDOT AND CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONST. COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO STANDARD SPECIFICATIONS.
6. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH HOT THERMOPLASTIC ONLY REFLECTORIZED PAVEMENT MARKINGS BY THE CONTRACTOR TO LOCATION AS EXISTING OR AS INDICATED BY THIS PLAN SET.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. 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 SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS. ANY PERMANENT SURVEY MONUMENT LOCATED WITHIN 50' OF THIS PROJECT THAT IS NOT SHOWN ON THE PLAN AND IS DESTROYED DURING CONSTRUCTION WILL BE REPLACED AT THE CONTRACTORS EXPENSE.
8. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
9. FOR STORM DRAIN CONSTRUCTION, RCP PIPE JOINTS SHALL NOT BE GROUTED PRIOR TO FINAL INSPECTION. FINAL INSPECTION WILL DETERMINE JOINTS TO BE GROUTED FOR FINAL ACCEPTANCE OF THE CONSTRUCTION.
10. THE ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY (857-8200) WILL BE NOTIFIED BY THE CONTRACTOR SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK WHICH MAY AFFECT THE EXISTING PUBLIC WATER FACILITIES. REFER TO SECTION 18 OF THE STANDARD SPECIFICATIONS. ONLY ABCWUA PERSONNEL ARE ALLOWED TO OPERATE PUBLIC VALVES.
11. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650 SUBPART P AND CMA STD DWG 2465.
12. ELECTRONIC MARKER SPHERES (EMS) WILL BE PLACED ACCORDING TO SECTION 170 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING UNTIL PROJECT HAS BEEN ACCEPTED BY COA.

THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

- ☒ ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- ☒ BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- ☒ TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE PROJECT ENGINEER.
- ☒ SIDEWALKS AND WHEELCHAIR RAMPS IF THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER NEW CURB RETURN IS CONSTRUCTED.
- ☒ IF CURB IS DEPRESSED FOR A DRIVEPAD, THE DRIVEPAD SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.
- ☒ ALL STORM DRAINAGE FACILITIES BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

REVISIONS		CITY ENGINEER		DATE		USER DEPT.		DATE		REVISIONS	
ENGINEERS STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE		APPROVAL		OR CONSTRUCTION	
		DRC Chairman		<i>[Signature]</i>		4/5/11		<i>[Signature]</i> 6-3-11 City Engineer Date		1 of 16	
		Transportation		<i>[Signature]</i>		3-30-11					
		Water/Wastewater		<i>[Signature]</i>		2-11-11					
		Hydrology		<i>[Signature]</i>		2-7-11					
		Traffic Engineer		<i>[Signature]</i>							
Const. Mngmt.											
Bern. Cont. Public Works											
CITY PROJECT NO.		706182		SHEET							





Location Map

Zone Atlas Map No. E-12-Z

Subdivision Data:

GROSS SUBDIVISION ACRES: 16.074 ACRES  
ZONE ATLAS MAP NO. E-12-Z  
NO. OF TRACTS CREATED: 2  
MILES OF FULL-NORTH STREETS CREATED: 0  
DATE OF SURVEY: JUNE 2005, VERIFIED FEBRUARY 2006.

Purpose of Plat

THE PURPOSE OF THIS PLAT IS TO REPEAT THE EXISTING THREE PARCELS INTO TWO NEW TRACTS, DEDICATE RIGHT OF WAY AND TO GRANT EASEMENTS.

Notes:

1. MISC. DATA: ZONING A-1 SU-PERMIT FOR R-2 USES A-1 SU PERMIT FOR C-1 USES.
2. BEARINGS SHOWN ARE GRID BEARINGS (NEW MEXICO STATE PLANE CENTRAL ZONE - NAD 1983).
3. ALL DISTANCES ARE GROUND DISTANCES-US SURVEY FOOT.
4. THIS PROPERTY LIES WITHIN SECTION 25, TOWNSHIP 11 NORTH, RANGE 2 EAST, N.M.P.M.
5. PLAT SHOWS ALL EASEMENTS OF RECORD.
6. SP NO. 2008180302.

Easements

THIS PLAT SHOWS EXISTING RECORDED AND APPARENT EASEMENTS AS NOTED.

1. PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT ARE GRANTED FOR THE COMMON AND JOINT USE OF:  
A. PUBLIC UTILITY SERVICES FOR INSTALLATION, MAINTENANCE, AND SERVICE OF OVERHEAD AND UNDERGROUND ELECTRIC TRANSMISSION LINES, WITH THE RIGHT AND PERMISSION TO RUN AND SINK POLES (ABOVEGROUND OR SUBSURFACE), HOT TUB, CONCRETE OR WOOD POOL DECKING, OR OTHER STRUCTURE SHALL BE ERECTED OR CONSTRUCTED ON SAID EASEMENTS, WORK SHALL BE WELL BE DRILLED OR OPERATED IN ACCORDANCE WITH THE CODE CAUSED BY CONSTRUCTION OF POOLS, DECKING OR ANY STRUCTURES ADJACENT TO WITHIN OR NEAR EASEMENTS SHOWN ON THIS PLAT.
2. GAS SERVICES FOR INSTALLATION, MAINTENANCE, AND SERVICE OF NATURAL GAS LINES VALVES AND OTHER EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE NATURAL GAS.
3. OIL/GAS SERVICES FOR THE INSTALLATION, MAINTENANCE AND SERVICE OF ALL BURIED AND AERIAL COMMUNICATION LINES AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE COMMUNICATION SERVICES, INCLUDING BUT NOT LIMITED TO ABOVE GROUND, UNDERGROUND, AND CLOSURES.
4. RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE CABLE TV SERVICE, AND OTHER INCLUDED IN THE RIGHT TO BUILD, REPAIR, CONSTRUCT, RECONSTRUCT, LOCATE, RELOCATE, CHANGE, REMOVE, MAINTAIN, OPERATE, AND USE SAID EASEMENTS FOR THE PURPOSES DESCRIBED ABOVE, TOGETHER WITH FREE ACCESS TO FROM, AND OVER SAID EASEMENTS, INCLUDING SUFFICIENT WORKING AREA, SPACE FOR ELECTRIC TRANSMISSION LINES, WITH THE RIGHT AND PERMISSION TO RUN AND SINK POLES (ABOVEGROUND OR SUBSURFACE), HOT TUB, CONCRETE OR WOOD POOL DECKING, OR OTHER STRUCTURE SHALL BE ERECTED OR CONSTRUCTED ON SAID EASEMENTS, WORK SHALL BE WELL BE DRILLED OR OPERATED IN ACCORDANCE WITH THE CODE CAUSED BY CONSTRUCTION OF POOLS, DECKING OR ANY STRUCTURES ADJACENT TO WITHIN OR NEAR EASEMENTS SHOWN ON THIS PLAT.
5. EASEMENTS FOR ELECTRIC TRANSMISSION, SWITCHGEARS, AS INSTALLED, SHALL EXTEND TEN FEET (10') IN FRONT OF TRANSMISSION/SWITCHGEAR DUCK AND FIVE FEET (5') ON EACH SIDE.
6. IN APPROVING THIS PLAT, PUBLIC UTILITY SERVICES AND GAS SERVICES (PUM) DID NOT CONDUCT A TITLE SEARCH, AND THEREFORE, PUM DOES NOT HAVE ANY RELEASE ANY EASEMENT OR EASEMENT RIGHTS TO WHICH IT MAY BE ENTITLED.

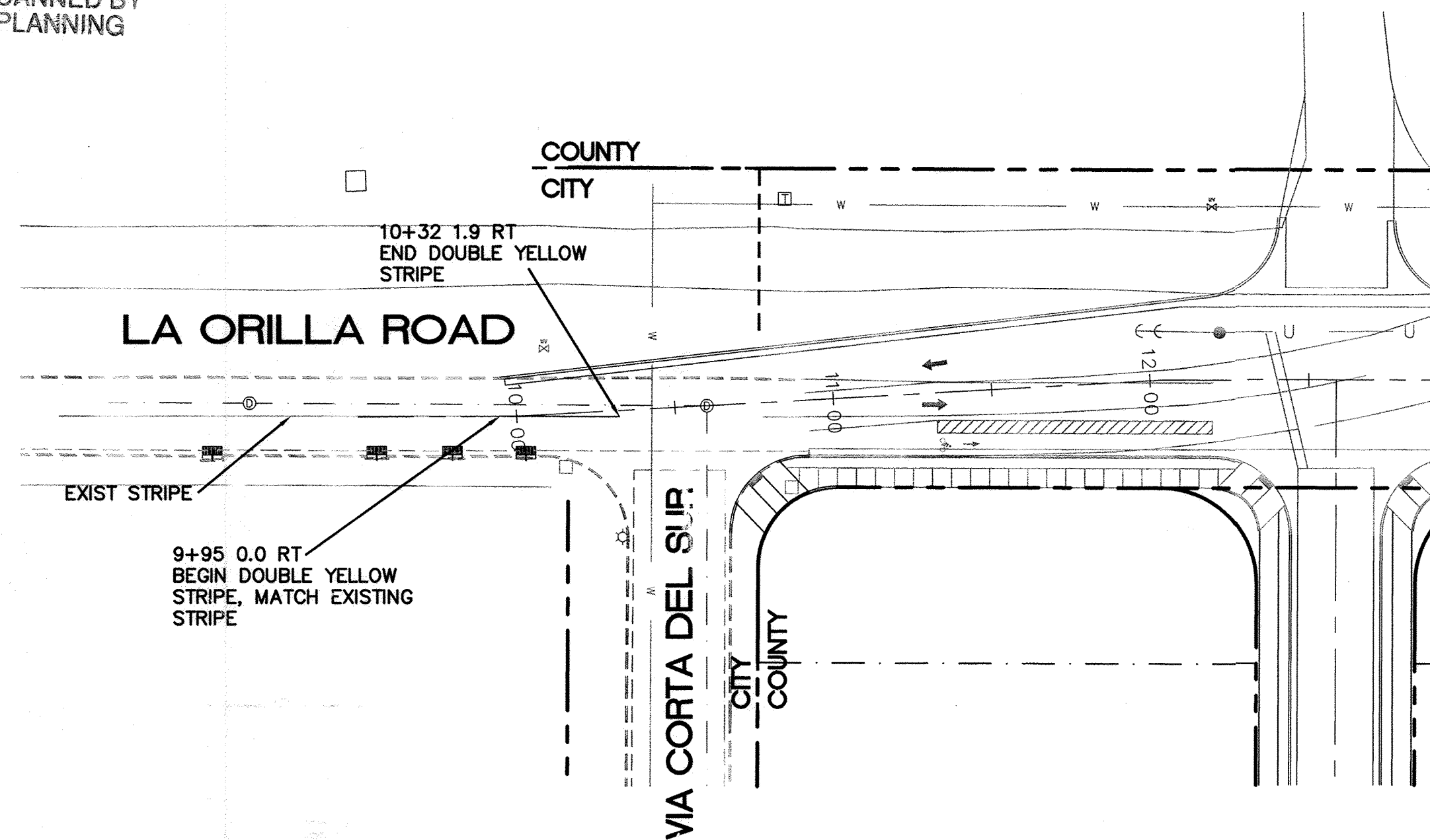
Curve Table

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT	CHORD LENGTH	CHORD BEARING
C1	25.01'	39.64'	89°58'08"	25.37'	35.92'	N 43°33'45" E
C2	25.00'	39.26'	89°57'40"	24.98'	35.34'	N 45°13'42" E
C3	25.07'	56.76'	08°47'57"	23.40'	56.45'	S 89°45'25" E
C4	565.66'	57.86'	05°31'28"	28.36'	57.84'	N 88°30'06" W
C5	55.05'	71.52'	11°05'15"	57.21'	59.71'	S 31°17'00" E



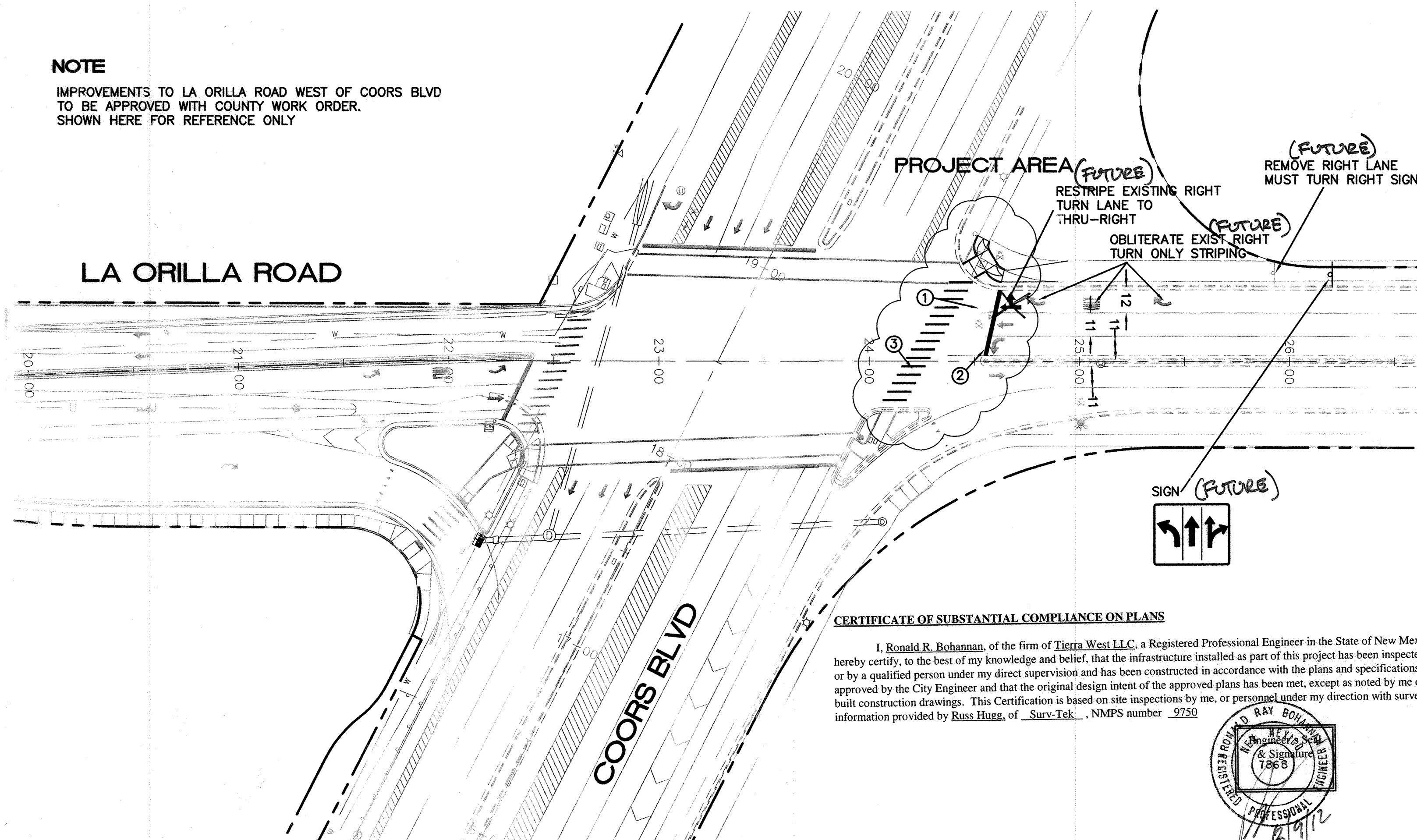






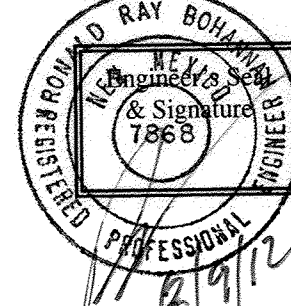
**NOTE**

IMPROVEMENTS TO LA ORILLA ROAD WEST OF COORS BLVD TO BE APPROVED WITH COUNTY WORK ORDER. SHOWN HERE FOR REFERENCE ONLY



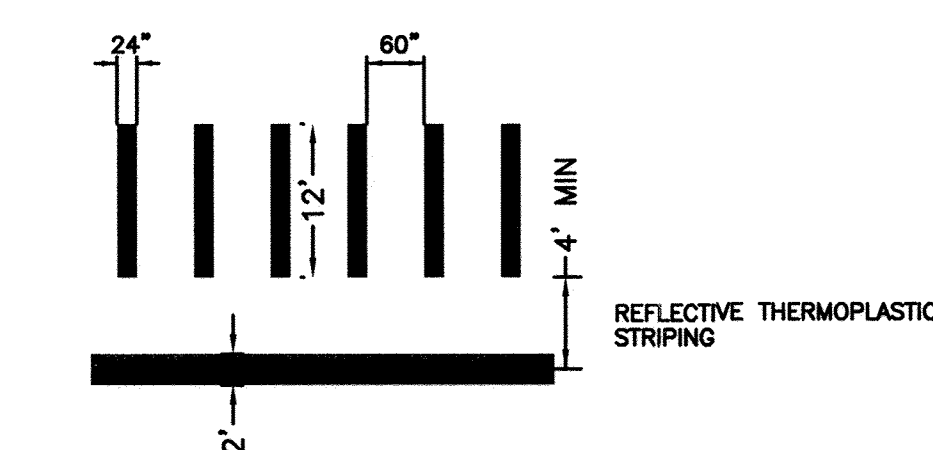
**CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS**

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 Russ Hugg, of Survey-Tek, NMPs number 9750



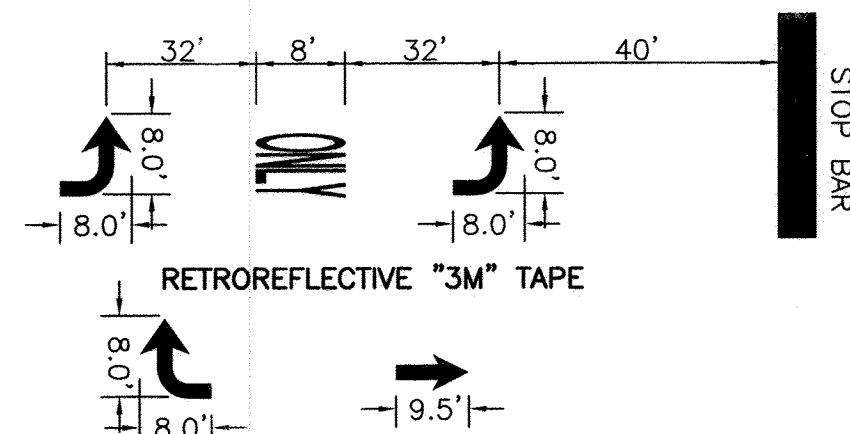
**GENERAL NOTES**

- ALL CONFLICTING STRIPING SHALL BE ERADICATED BY WATER BLASTING OR SURFACE PLANING OF THE ROADWAY TO A MAXIMUM DEPTH OF 0.25 INCHES AND A WIDTH TO EQUAL 2 TIMES THE WIDTH OF THE STRIPE OR MARKING TO BE REMOVED.
- ALL SIGNS SHALL BE MADE IN ACCORDANCE WITH THE M.U.T.C.D. (CURRENT EDITION) SPECIFICATIONS.
- ALL STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D. (CURRENT EDITION) SPECIFICATIONS.
- ALL STRIPING TO BE PERFORMED THERMOPLASTIC.
- ALL SIGNS SHALL BE COVERED WITH ANTI-GRAFFITI COATING.



**CROSSWALK DETAIL**

NTS



**ARROW DETAILS**

NTS

\* CONTRACTOR SHALL COORDINATE WITH TRAFFIC OPERATIONS PRIOR TO SIGNING AND STRIPING

1. ALL REGULATORY, WARNING, SPECIAL, AND GUIDE SIGNS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

BACKGROUND SIGN SHEETING	SIGN CODE	COLOR	LETTER SHEETING
STOP TYPE VIII OR IX	R1-1	(W/RED)	TYPE VIII OR IX
YIELD TYPE VIII OR IX	R1-2	(W/RED)	TYPE VIII OR IX
DO NOT ENTER TYPE VIII OR IX	R5-1	(W/RED)	TYPE VIII OR IX
WRONG WAY TYPE VIII OR IX	R5-1A	(W/RED)	TYPE VIII OR IX
SCHOOL BUS STOP TYPE VIII OR IX	S3-1	(BLK/FLOURESCENT YELLOW GREEN)	TYPE VIII OR IX
SCHOOL BUS X-ING TYPE VIII OR IX	S1-1	(BLK/FLOURESCENT YELLOW GREEN)	TYPE VIII OR IX
PEDESTRIAN X-ING TYPE VIII OR IX	W11-2	(BLK/FLOURESCENT YELLOW GREEN)	TYPE VIII OR IX
BIKE X-ING TYPE VIII OR IX	W11-1	(BLK/FLOURESCENT YELLOW GREEN)	TYPE VIII OR IX
ALL SCHOOL/PED/BIKE SUPPLEMENTAL PLAQUES TYPE VIII OR IX		(BLK/FLOURESCENT YELLOW GREEN)WHEREVER BLK/YELLOW IS SPECIFIED COLOR IN MUTCD	TYPE VIII OR IX
ALL OTHER WARNING SIGNS AND SUPPLEMENTAL TYPE VIII OR IX PLAQUES		(BLK/FLOURESCENT YELLOW GREEN)WHEREVER BLK/YELLOW IS SPECIFIED COLOR IN MUTCD	TYPE VIII OR IX
GUIDE & DESTINATION SIGNS INCLUDES EXTRUDED & NON-TYPE IV EXTRUDED (OVERHEAD & GROUND MOUNTED)	ALL	(W/GREEN) EXCEPT WHERE SPECIFIED OTHERWISE IN THE MUTCD	TYPE VIII OR IX
E-CODE SIGNS TYPE IV	E11-1, 1A 1B, 1C	(BLK/YELLOW)	TYPE VIII OR IX
RECREATIONAL & CULTURAL TYPE IV INTEREST	ALL	(W/BROWN)	TYPE VIII OR IX
GENERAL SERVICES TYPE IV	ALL	(W/BLUE)	TYPE VIII OR IX
SPECIFIC SERVICES TYPE IV	ALL	(W/BLUE)	TYPE VIII OR IX
ALL OTHER PERMANENT SIGNS TYPE IV		(BLK/WHITE) EXCEPT WHERE SPECIFIED OTHERWISE IN THE MUTCD	TYPE IV

2. ONLY 0.125 INCHES THICK ALUMINUM PANEL SIGNS ARE PERMITTED FOR WARNING AND REGULATORY SIGNS.

3. ANTI-GRAFFITI COATING SHALL BE APPLIED ON ALL REGULATORY, WARNING, GUIDE, AND OTHER SPECIAL SIGNS.

4. QUANTITIES MAY VARY AS FIELD CONDITIONS DICTATE. THE CONTRACTOR WILL BE PAID FOR ACTUAL QUANTITIES USED.

5. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH NM STANDARDS SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION (LATEST EDITION) AND ANY APPLICABLE SPECIAL PROVISION AND/ OR SUPPLEMENTAL SPECIFICATION. ALSO THE DEVICES SHALL COMPLY WITH THE CURRENT EDITION, WITH REVISION, OF THE MUTCD.

6. EACH SIGN FACE SHOWN ON PLANS SHALL MEET THE SPECIFICATIONS IN THE STANDARD HIGHWAY SIGNS MANUAL (CURRENT EDITION) FOR PROPER ARRANGEMENT, SPACING OF LETTERS, LETTER HEIGHT, SYMBOLS AND BORDERS FOR THE SPECIFIED SIZE AND MESSAGE AS SHOWN ON PLANS.

7. POST LENGTHS ARE BASED ON A MINIMUM OF 5 FT FOR RURAL ROADWAY SECTIONS TO A MINIMUM OF 7 FT FOR URBAN AND INTERSTATE ROADWAY SECTIONS. THE LENGTHS ARE MEASURED FROM THE BOTTOM OF THE SIGN TO NEAR EDGE OF THE DRIVING LANE.

8. THE LATERAL CLEARANCE OF SIGNS SHALL BE NO CLOSER THAN THE 6 FT FROM THE EDGE OF SHOULDER OR 12 FT FROM THE EDGE OF TRAVELED WAY FOR RURAL AREAS AND NO CLOSER THAN 2 FT FROM FACE OF CURB FOR URBAN AREAS.

9. ALL SIGNING HARDWARE, INCLUDING BRACKETS, (FOR MOUNTING ALL STREET NAME SIGNS, W1-8-18 BACK TO BACK MOUNTING, ETC.) ARE CONSIDERED INCIDENTAL TO SIGN INSTALLATION. THEREFORE, NO PAYMENT WILL BE MADE.

10. THREE 4 LB/FT SIGN POST INSTALLATION APPROVED ONLY IF THE SPAN BETWEEN THE OUTER POSTS EXCEEDS 84" (SIGN WIDTH OF 96" OR GREATER).

11. 3'-6" BASE POST ARE REQUIRED FOR ALL SMALL SIGN POST. SEE STANDARD SERIAL DRAWING 701-02-1/3 FOR DETAILS.

12. SIGN POST SHALL BE SQUARE TUBING AS APPROVED BY THE PROJECT MANAGER OR THE DISTRICT TRAFFIC ENGINEER.

13. CONTRACTOR SHALL FIELD VERIFY ALL SIGNING INFORMATION, TEXT, AND LOCATIONS PRIOR TO FABRICATION AND INSTALLATION. NEW SIGN LOCATIONS SHALL BE APPROVED BY THE PROJECT MANAGER OR THE DISTRICT TRAFFIC ENGINEER.

14. HOT THERMOPLASTIC PAVEMENT MARKINGS SHALL TO BE USED ON ALL STRIPING (LONG LINES, CROSSWALKS, LEGENDS, SYMBOLS, ETC.) THE THERMOPLASTIC PAINT SHALL BE APPLIED AT A THICKNESS OF 120 MIL.

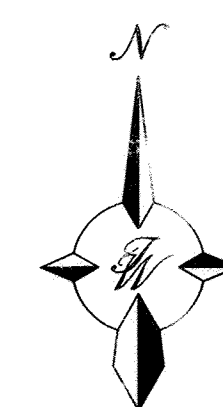
15. WATER BLASTING IS THE ONLY APPROVED METHOD OF EXISTING STRIPE REMOVAL WITHIN DISTRICT THREE. THE USE OF BLACK PAINT AS A METHOD OF REMOVING OR COVERING EXISTING STRIPING IS STRICTLY PROHIBITED.

**LEGEND**

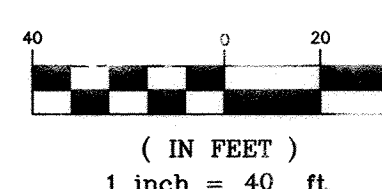
=====	EXISTING CURB & GUTTER
=====	PROPOSED CURB & GUTTER
-----	BOUNDARY LINE
-----	EXISTING BOUNDARY LINE
-----	EASEMENT
=====	PROPOSED SIDEWALK
-----	CENTERLINE
-----	RIGHT-OF-WAY
-----	4" DASHED WHITE LINE
-----	4" SOLID WHITE STRIPE
-----	4" DOTTED LINE

**KEYED NOTES**

- REMOVE EXISTING STOP BAR
- NEW STOP BAR PER DETAIL THIS SHEET
- RESTRIPE EXISTING CROSSWALK PER DETAIL THIS SHEET



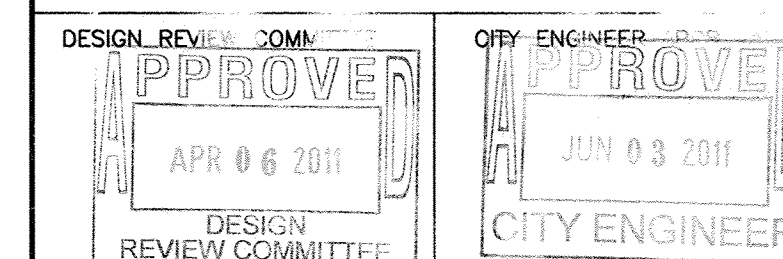
**GRAPHIC SCALE**



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

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

**LA ORILLA ROAD**  
STRIPING AND SIGNAGE PLAN



CITY PROJ. NO. 706-2

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REMARKS		REVISIONS		DESIGNED BY		CHECKED BY		DATE	
CONTRACTOR'S SIGNATURE	DATE	MUSC MONUMENT "STA 1M48-N6"	DATE	NO.	BY	SEAL	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
STANDARD N.M.S.H.C. BRASS TABLET	DATE	NEW MEXICO STATE PLANE COORDINATES	DATE														
INSPECTOR'S SIGNATURE	DATE	(CENTRAL ZONE N.A.D. 1927)	DATE														
FIELD VERIFICATION BY	DATE	X=372,524.25	DATE														
CONTRACTOR'S SIGNATURE	DATE	Y=1,914,838.11	DATE														
INSPECTOR'S SIGNATURE	DATE	ELEV=5016.922 (T.S.D. 1929)	DATE														
FIELD VERIFICATION BY	DATE	GROUND TO GRID=0.99967854	DATE														
CONTRACTOR'S SIGNATURE	DATE	DELTA ALPHA=-001444"	DATE														



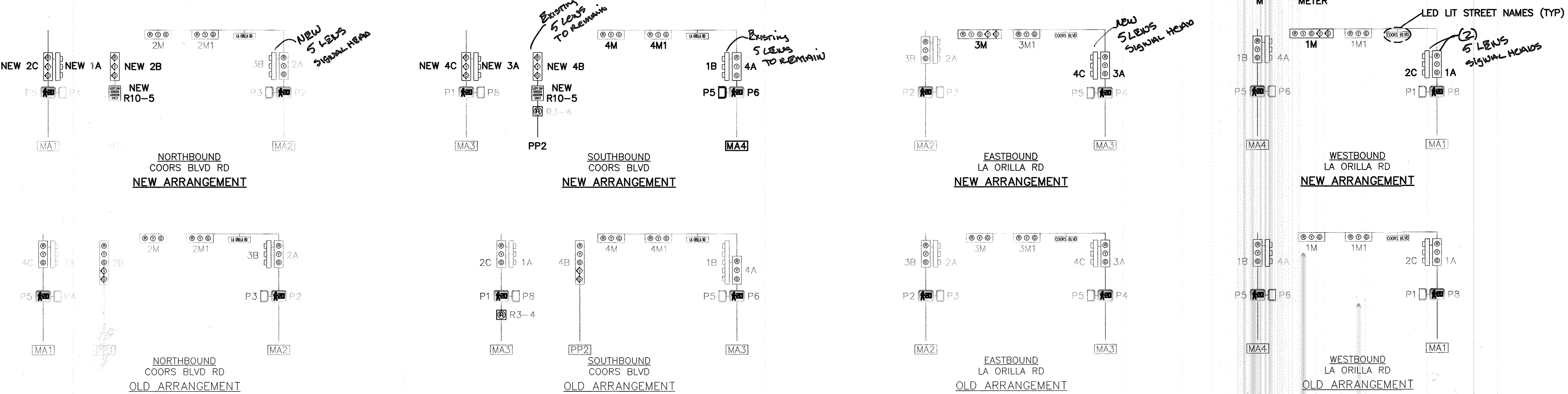
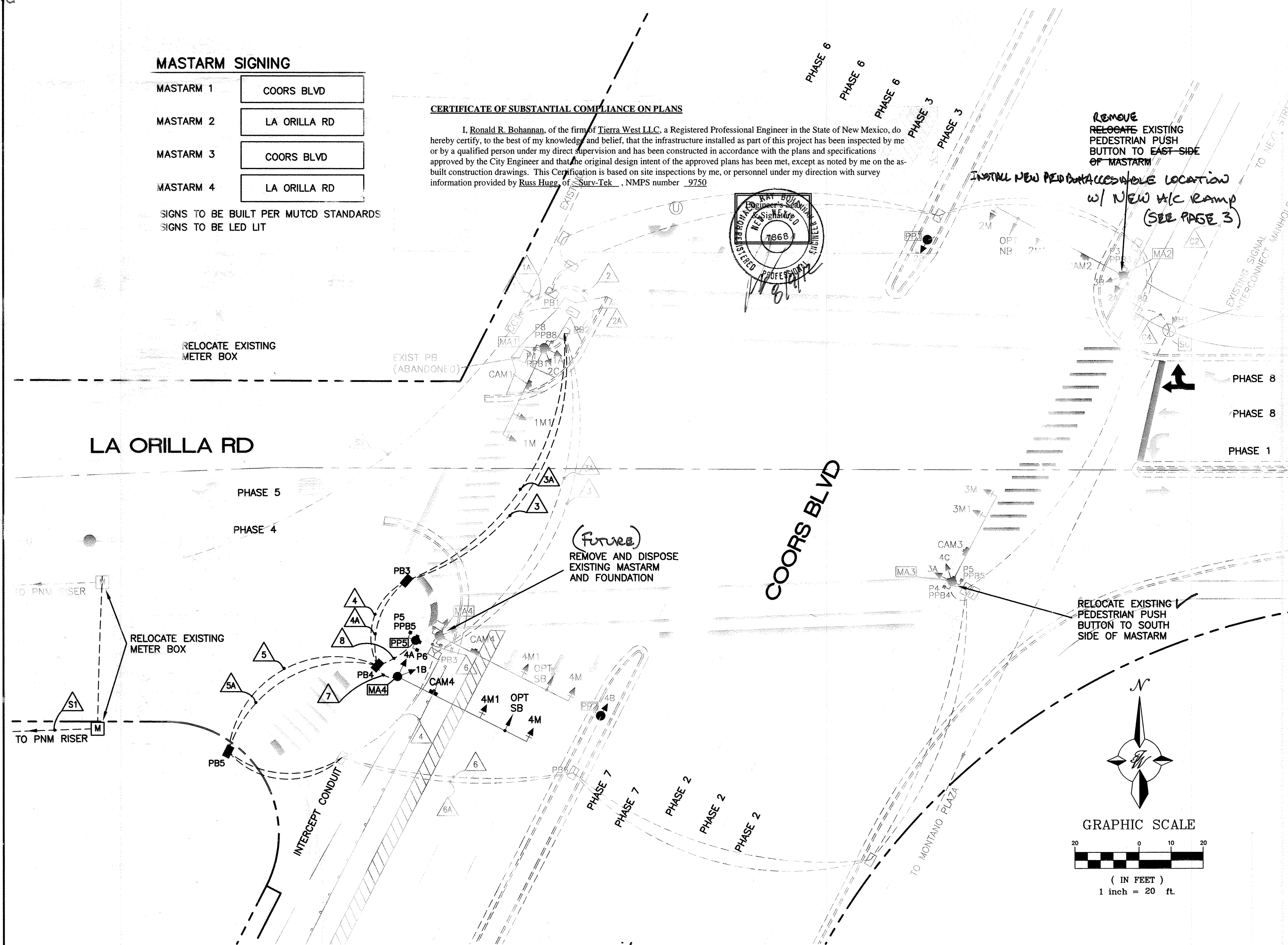
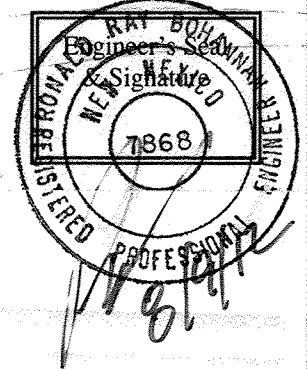
### MASTARM SIGNING

MASTARM 1	COORS BLVD
MASTARM 2	LA ORILLA RD
MASTARM 3	COORS BLVD
MASTARM 4	LA ORILLA RD

SIGNS TO BE BUILT PER MUTCD STANDARDS  
SIGNS TO BE LED LIT

### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, Ronald R. Bohannon, of the firm of Terra 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 Certificate is based on site inspections by me, or personnel under my direction with survey information provided by Russ Huns of Surv-Tek, NMPs number 9750.



TRAFFIC SIGNAL CONFIGURATION BY APPROACH  
NTS

### VIDEO CABLE

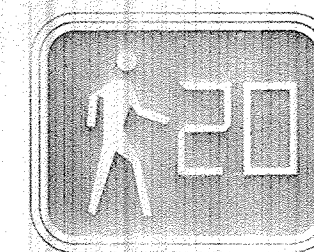
FROM	TO	CONDUIT TRACE	TOTAL LENGTH
MA4	CONTROLLER	7, 4A, 3A, 2A, 1A	154'
TOTAL			154'

### OPTICOM SYSTEM CABLE

FROM	TO	CONDUIT TRACE	# PAIR x LENGTH	TOTAL LENGTH
MA4	CONTROLLER		1 @ 154'	154'
TOTAL				154'

### SYMBOL KEY

- MA1 SIGNAL & CABINET ID
- NEW CONDUIT RUN ID
- CONDUIT RUN ID (POWER SERVICE)
- CONDUIT RUN ID (INTERCONNECT)



### NOTES

- PULLBOXES 1-9 ARE TO BE LARGE PULL BOXES.
- PULLBOXES 10-14 ARE TO BE SMALL PULL BOXES.
- ALL INDICATORS ARE TO BE LED
- OPTICOMS TO BE 3M 700 SERIES, 4 CHANNEL DISCRIMINATOR CARD.
- ALL PEDESTRIAN SIGNALS TO BE COUNTDOWN
- MASTARM FOUNDATION CONCRETE SHALL BE TESTED FOR SLUMP AND COMPRESSIVE STRENGTH
- DISRUPTION OF POWER MUST BE COORDINATED WITH TRAFFIC OPERATIONS AND PNM. DOWNTIME SHALL BE MINIMIZED

### ABBREVIATIONS

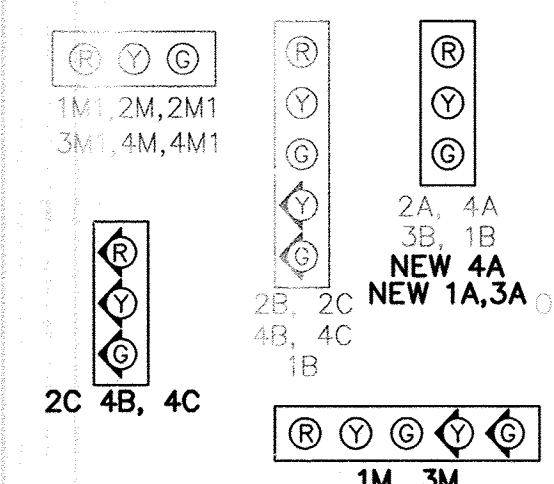
- MA1 MASTARM NUMBER
- PP1 PEDESTAL POLE NUMBER
- PPB1 PEDESTRIAN PUSH BUTTON NUMBER
- CC1 CONTROL CABINET NUMBER
- PB1 PULL BOX NUMBER (SIGNALS)
- PBS1 PULL BOX NUMBER (POWER)
- PBC1 PULL BOX NUMBER (INTERCONNECT)
- DL1(1) DETECTOR LOOP PHASE # (LOOP #)
- 3A SIGNAL HEAD NUMBER
- P1 PEDESTRIAN SIGNAL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

LED LIT STREET NAMES (TYP)

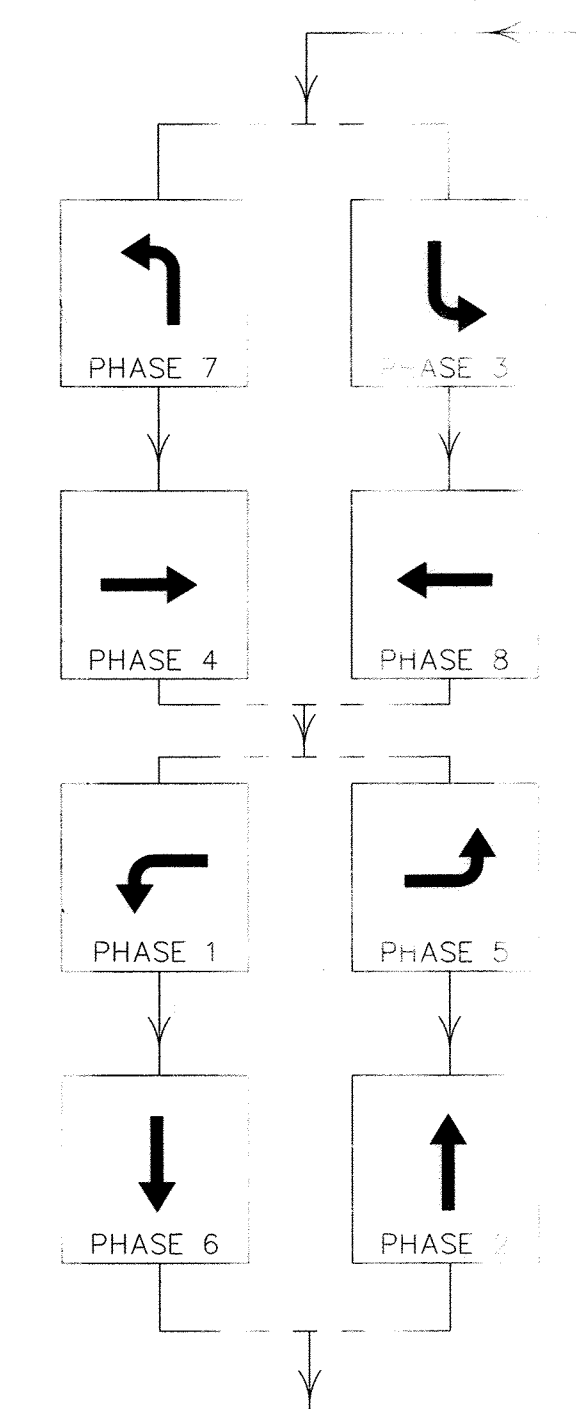
### SIGNAL POLES AND MASTARMS

ID#	TYPE	STATION	OFFSET	LUMINAIRE MOUNTING HEIGHT	LUMINAIRE ARM
MA1	MASTARM 35' TYPE III	18+58	69' LT	40'	20'
MA2	MASTARM 40' TYPE III	18+59	82' RT	40'	20'
MA3	MASTARM 30' TYPE III	18+50	77' RT	40'	20'
MA4	MASTARM 40' TYPE III	17+46	65' LT	40'	20'
CC1	CONTROLLER	18+60	81' LT	-	-
PP1	PED POLE	19+42	23' RT	-	-
PP2	PED POLE	17+64	3' LT	-	-
PP3	PED POLE	15+71	69' RT	-	-
PP5	PED POLE	17+59	65' LT	-	-
M	METER PEDESTAL	17+70	81' LT	-	-

### TYPICAL SIGNAL FACE LENS ARRANGEMENTS



### SIGNAL PHASING



### NOTE

IMPROVEMENTS SHOWN ON PLAN TO BE COORDINATED AND COMPLETED AT THE TIME COUNTY IMPROVEMENTS ARE CONSTRUCTED

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

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

### COORS BLVD AND LA ORILLA ROAD

#### SIGNALIZATION PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED APR 06 2011 DESIGN REVIEW COMMITTEE	APPROVED JUN 03 2011 CITY ENGINEER		
LAST DESIGN UPDATE			

CITY PROJECT NO. 706182	ZONE MAP NO. E-12-Z	SHEET # 5 of 16
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# CONDUIT AND CONDUCTOR REQUIREMENTS

## CONDUIT LENGTH, SIZE, AND TYPE

## CONDUIT FILL BY CONTRACTOR LENGTH AND TYPE

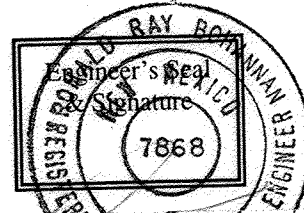
RUN ID	SIZE	LENGTH	TYPE	REMARKS	MCC 5 (# @ FT)	MCC 7 (# @ FT)	MCC 20 (# @ FT)	SCC #2 (# @ FT)	SCC #4 (# @ FT)	SCC #6 (# @ FT)	PS (# @ FT)	CC #6 (# @ FT)	CC #12 (# @ FT)	OPTICOM (# @ FT)	VIDEO (# @ FT)	LUMINAIRE SCC #10 (# @ FT)
S1	180		REC	METER TO RISER												
S2	90		REC	METER TO CC				3 @ 95'								
			REC	CC1 TO PB1	1 @ 20'		2 @ 20'			1 @ 20'						
			REC	CC1 TO PB1										4 @ 20'	4 @ 20'	
			REC	PB1 TO PB2	1 @ 18'		2 @ 18'			1 @ 18'						
			REC	PB1 TO PB2										2 @ 20'	2 @ 20'	
3	91		REC	PB2 TO PB3	2 @ 96'		2 @ 96'			2 @ 96'						
3A	91		REC	PB2 TO PB3										2 @ 96'	2 @ 96'	
4	72		REC	PB3 TO PB4	2 @ 33'		2 @ 33'			2 @ 33'						
4A	72		REC	PB3 TO PB4										2 @ 33'	2 @ 33'	
5	53		REC	PB4 TO PB5	2 @ 58'		2 @ 58'			2 @ 58'						
5A	53		REC	PB4 TO PB5										1 @ 58'	1 @ 58'	
6	107		REC	PB5 TO PB6	2 @ 112'		2 @ 112'			2 @ 112'						
6A	107		REC	PB5 TO PB6										1 @ 112'	1 @ 112'	
7			REC	PB4 TO MA4	2 @ 12'		2 @ 12'			2 @ 12'				1 @ 12'	1 @ 12'	
8	14		REC	PB4 TO PP5	2 @ 19'		2 @ 19'			2 @ 19'						
PP1				BASE TO 2B		1 @ 15'										
PP2				BASE TO 4B		1 @ 15'										
MA1				BASE TO 1A	1 @ 15'											
MA1				BASE TO 1M		1 @ 55'										
MA2				BASE TO PPB2	1 @ 9'											
MA3				BASE TO 3A	1 @ 15'											
MA3				BASE TO 3M		1 @ 50'										
MA3				BASE TO PPB5	1 @ 9'											
MA4				BASE TO 4A	1 @ 15'											
MA4				BASE TO 4M	1 @ 65'											
MA4				BASE TO 4M1	1 @ 50'											
MA4				BASE TO 1B	1 @ 15'											
MA4				BASE TO OPT									1 @ 55'			
MA4				BASE TO CAM4											1 @ 60'	
PP5				BASE TO P5,P6	2 @ 15'											
PP5				BASE TO PF 35,PPB6	2 @ 9'											
TOTALS	270'	605'	30'		939'	135'	736'			608'				615'	620'	

## 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
PPE	PEDESTRIAN PUSH BUTTON
REC	RIGID ELECTRIC CONDUIT
SCC	SINGLE CONDUCTOR CABLE
CAM	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 Russ Hugg, of Surv-Tek, NMPS number 9750.



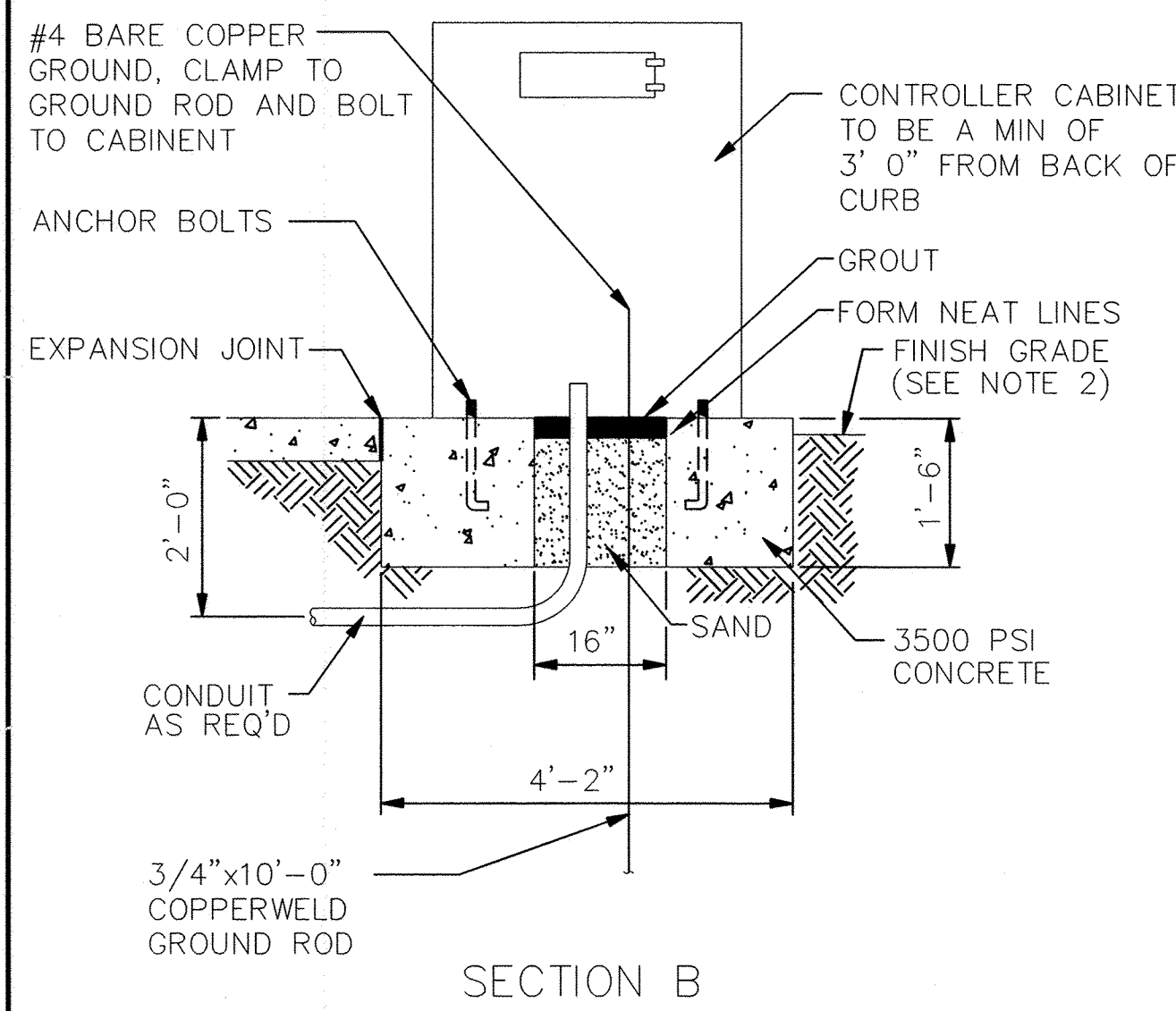
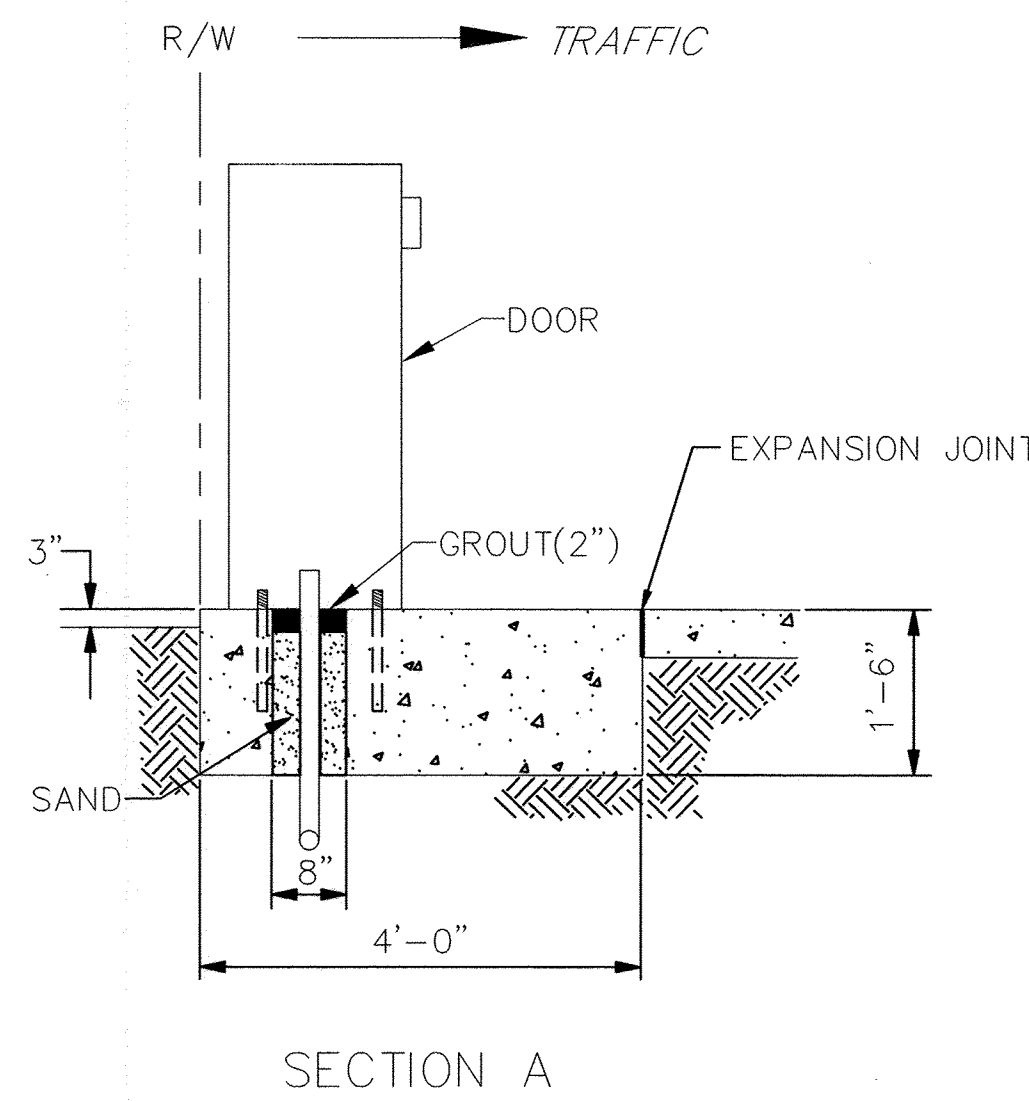
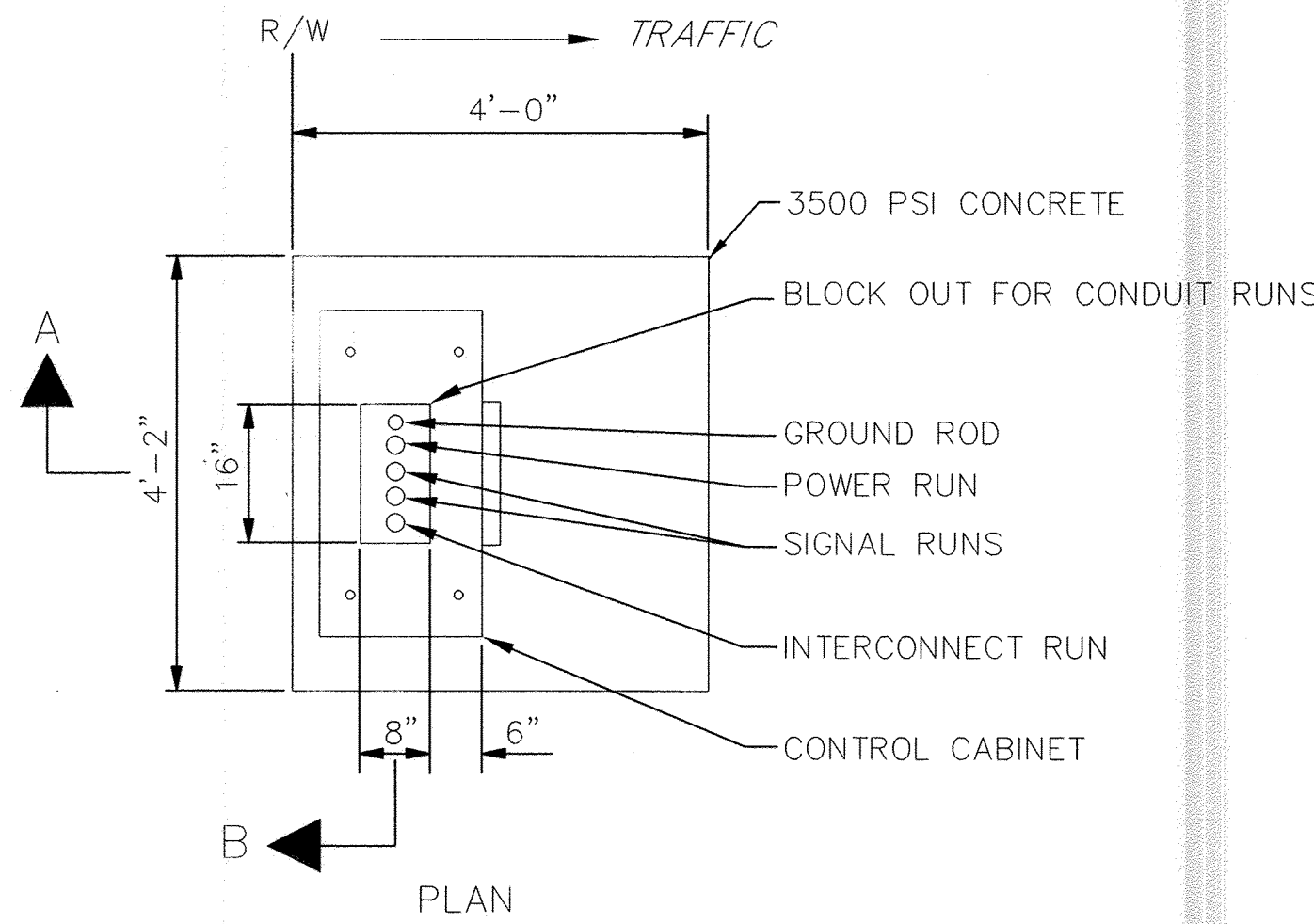
## SIGNAL NOTES

- 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 TESTING 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 COORDINATE 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 / PAID BY THE CONTRACTOR \$ ) 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.

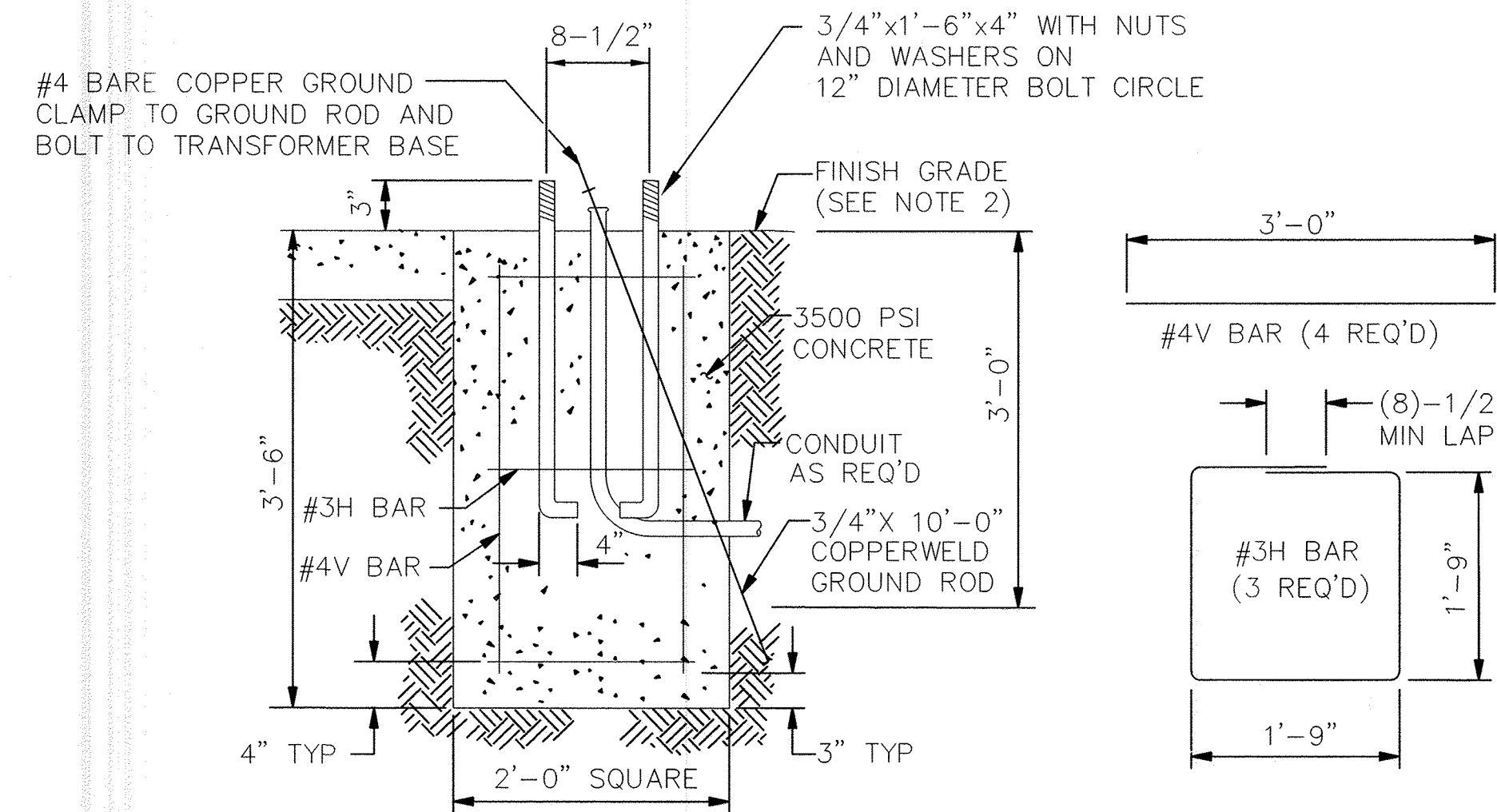
<b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
<b>COORS BLVD AND LA ORILLA ROAD</b> CABLES AND CONDUITS, SIGNAL NOTES	
DESIGN REVIEW COMMITTEE APPROVED APR 06 2011	CITY ENGINEER APPROVAL APPROVED JUN 03 2011
CITY PROJECT NO. 706182	ZONE MAP NO. E-12-Z
SHEET # 6 of 16	



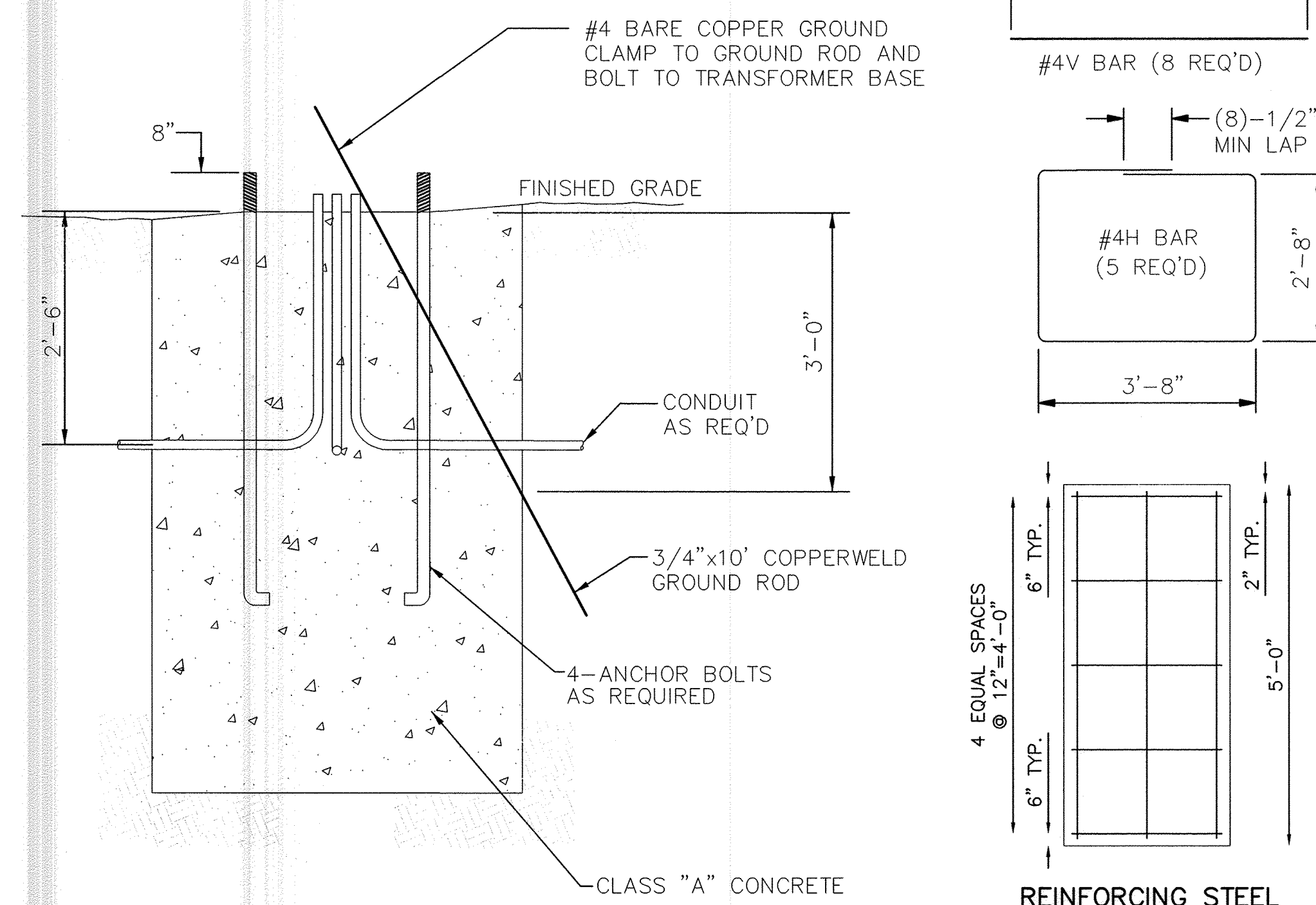
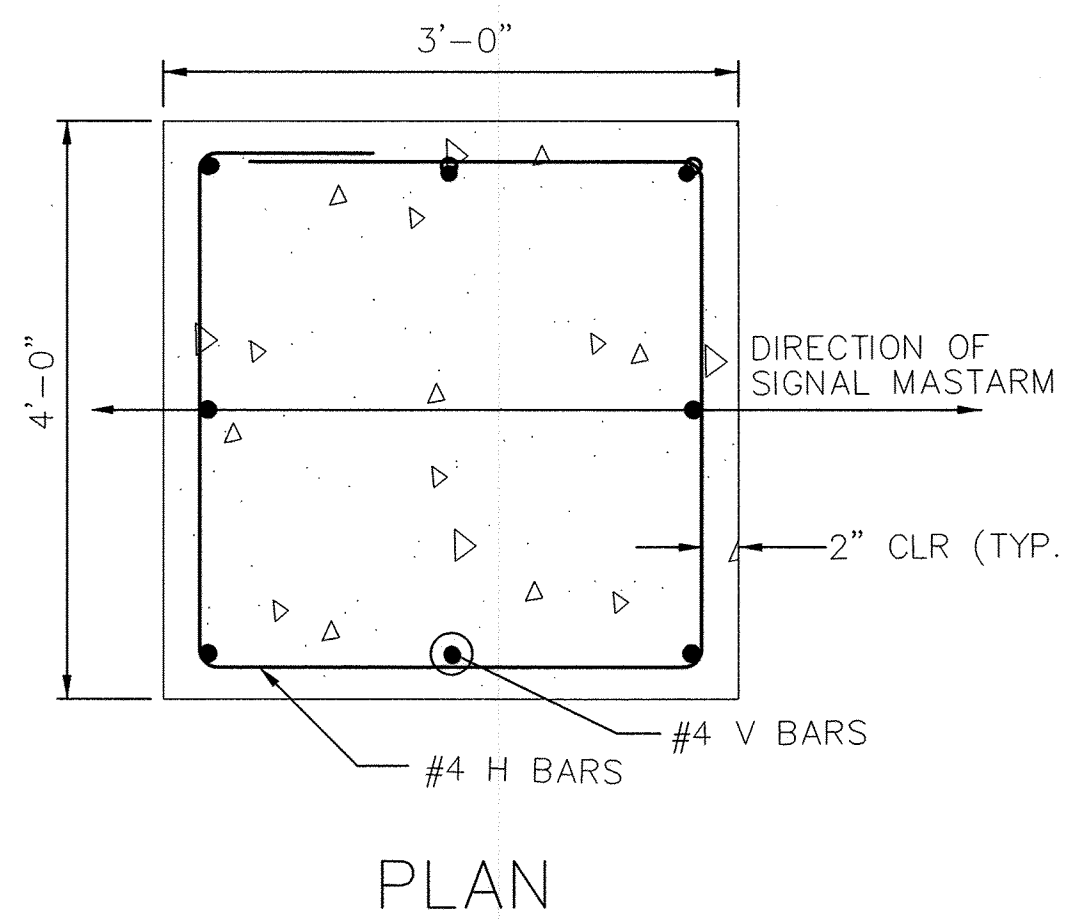


### CONTROLLER FOUNDATION DETAIL

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



### MASTARM FOUNDATION (15'-40' MASTARM)

NO SCALE

### TRAFFIC SIGNAL FOUNDATION NOTES

ALL FOUNDATIONS SHALL INCLUDE COPPERWELD GROUND RODS. ALL GROUND RODS SHALL BE 3/4"x10'-0" AND WILL BE CONSIDERED INCIDENTAL TO THE FOUNDATION BID ITEMS.

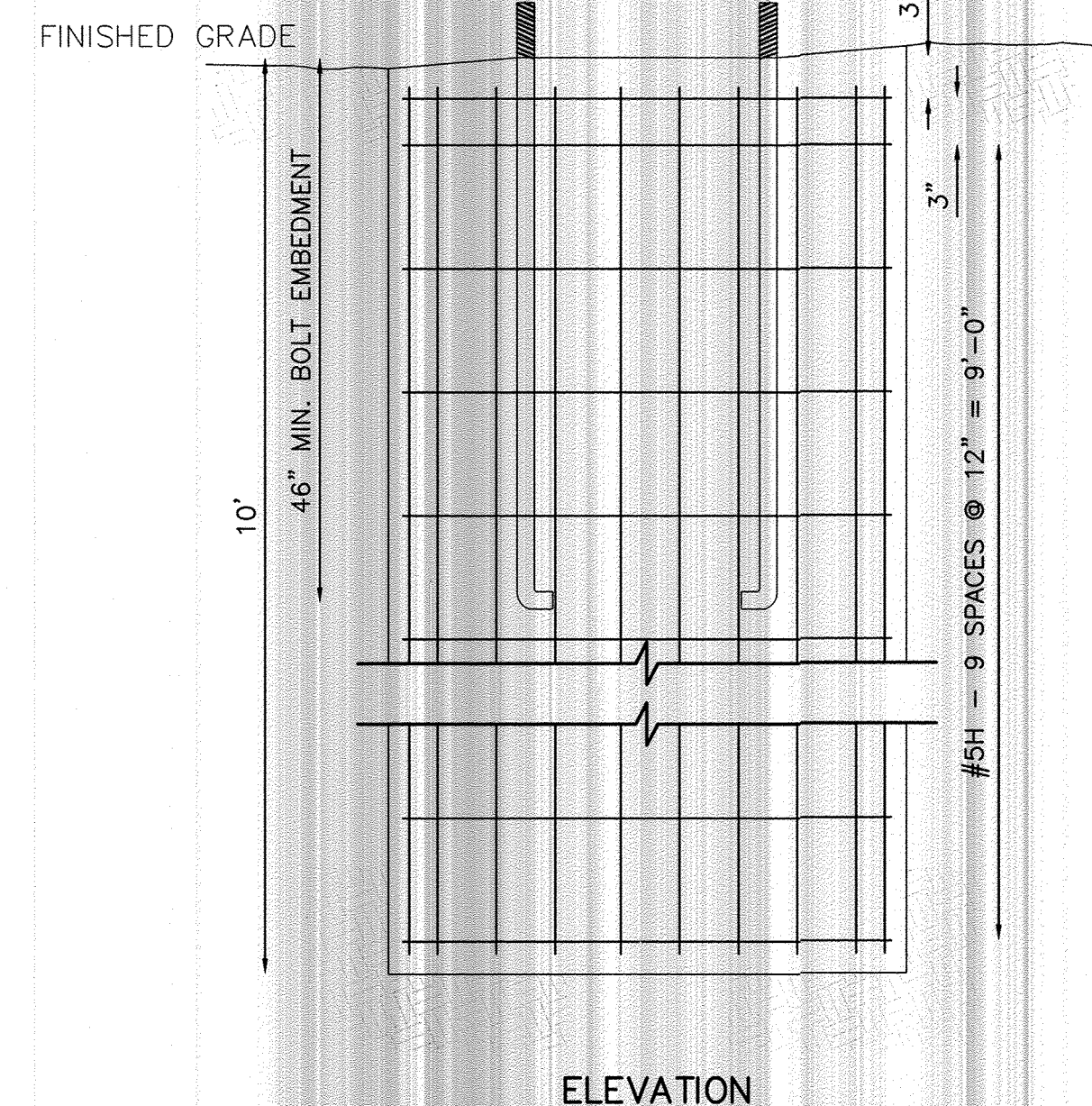
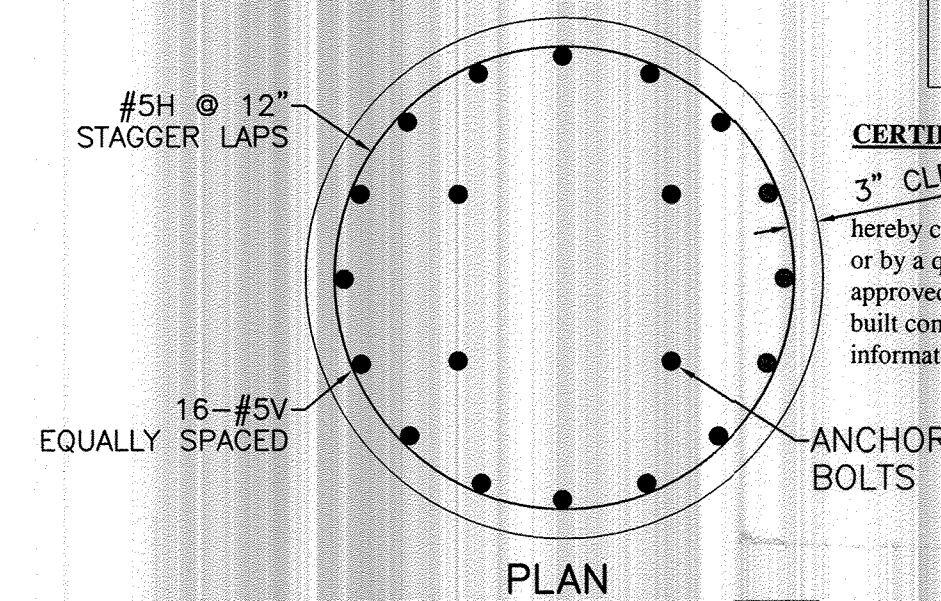
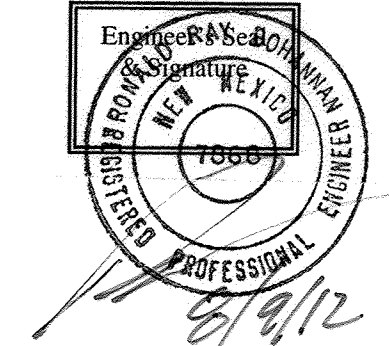
FINISHED GRADE FOR ALL FOUNDATIONS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER. FOUNDATIONS MAY BE SLOPED TO MATCH SIDEWALKS. SLOPES SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

### ESTIMATED QUANTITIES

FOUNDATION TYPE	CLASS "A" CONCRETE CU YD	REINFORCING BARS POUNDS
MASTARM - TYPE III (FOR 15 FOOT TO 40 FOOT MASTARM)	2.22	72
MASTARM - TYPE III (SPECIAL) (FOR 45 FOOT TO 50 FOOT MASTARM)	4.65	327
PEDESTAL FOUNDATION	0.52	17
CONTROLLER FOUNDATION (TYPE M & P)	0.88	--
SPLICE CABINET FOUNDATION	0.13	--

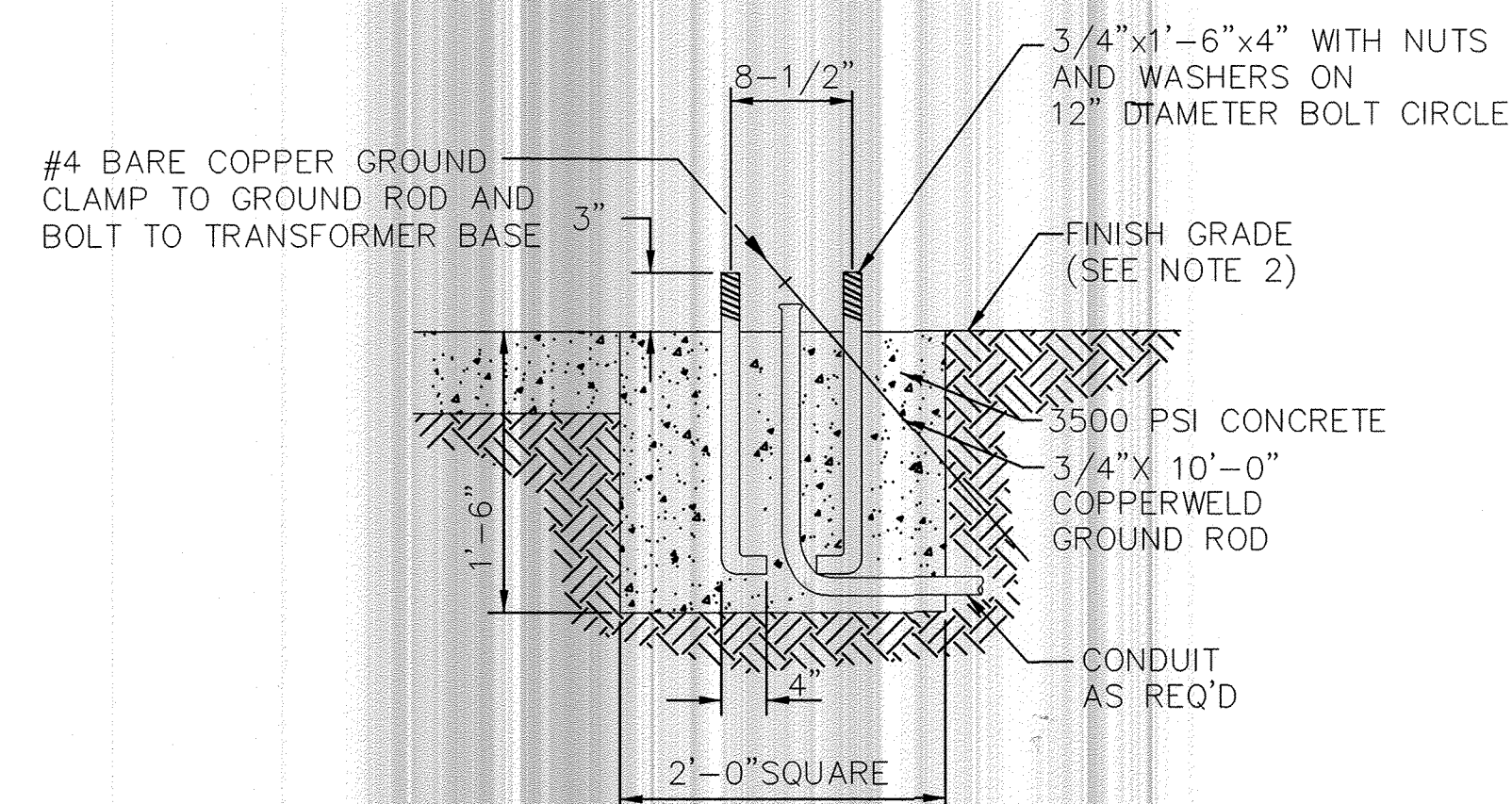
### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

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 Russ Hugg, of "Surv-Tek", NMPS number 9750.



### MASTARM FOUNDATION (45'-50' MASTARM)

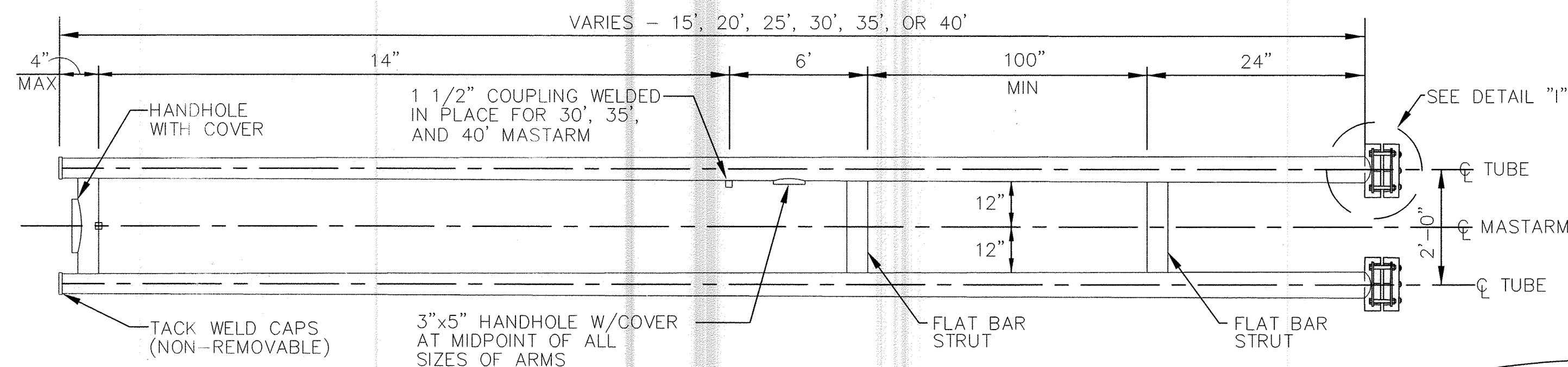
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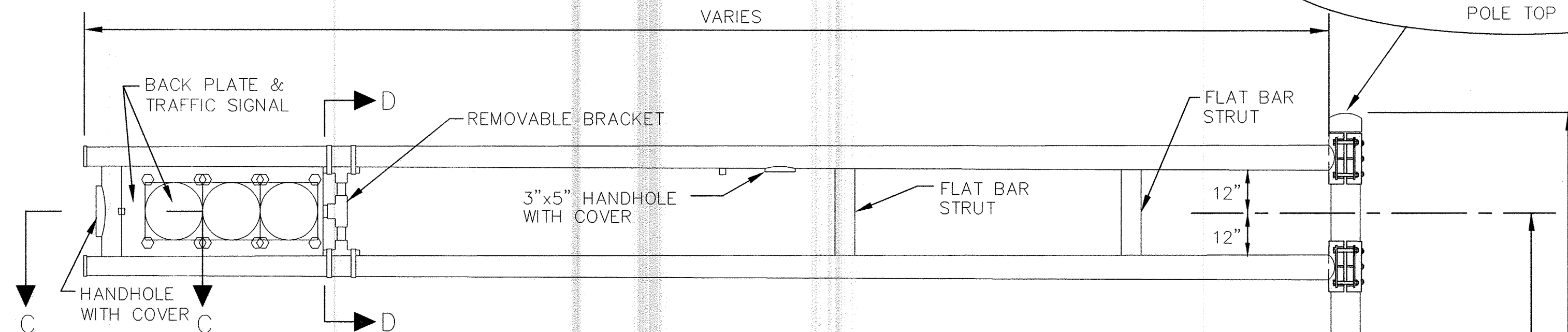
### SPLICE CABINET FOUNDATION DETAIL

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN		SHEET #	
CONTRACTOR	DATE	NO.	BY	NO.	BY	DATE	DATE	NO.	DATE	NO.	DATE	NO.	DATE
WORK	2011/12												
STAKED BY	2012												
ACCEPTANCE BY	2012												
FIELD	2012												
REVISION	2012												
DRAWING	2012												
CORRECTED BY	2012												
MICRO-FILM	2012												
INFORMATION	2012												
RECORDED BY	2012												
NO.													

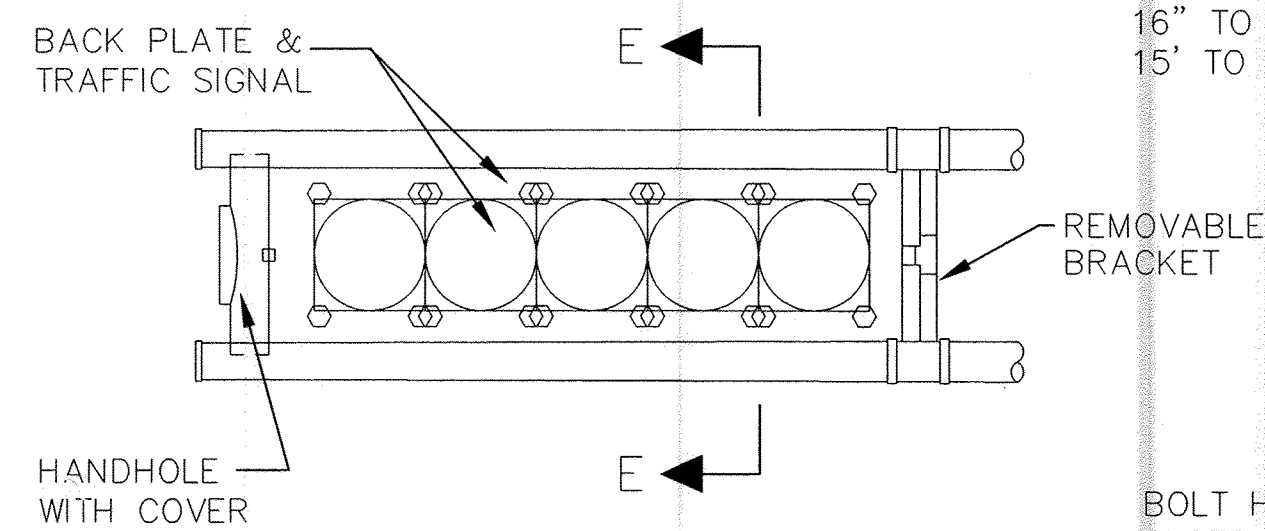




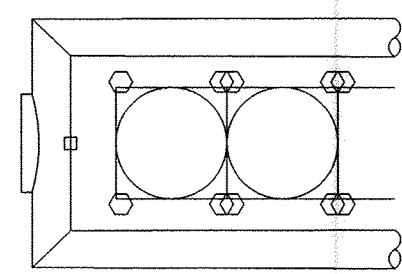
TYPICAL MASTARM DETAIL



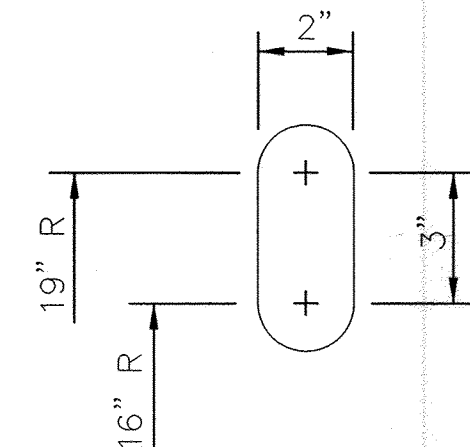
3-SECTION TRAFFIC SIGNAL



5-SECTION TRAFFIC SIGNAL

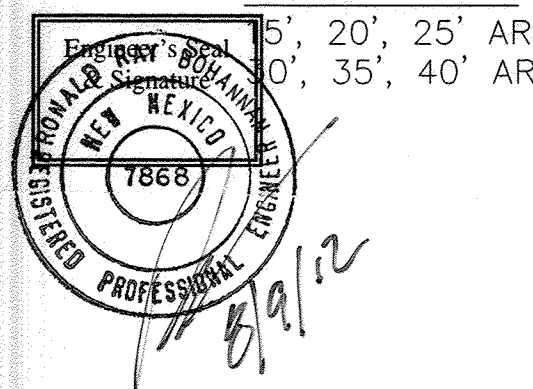


MITERED ARM END (OPTIONAL)

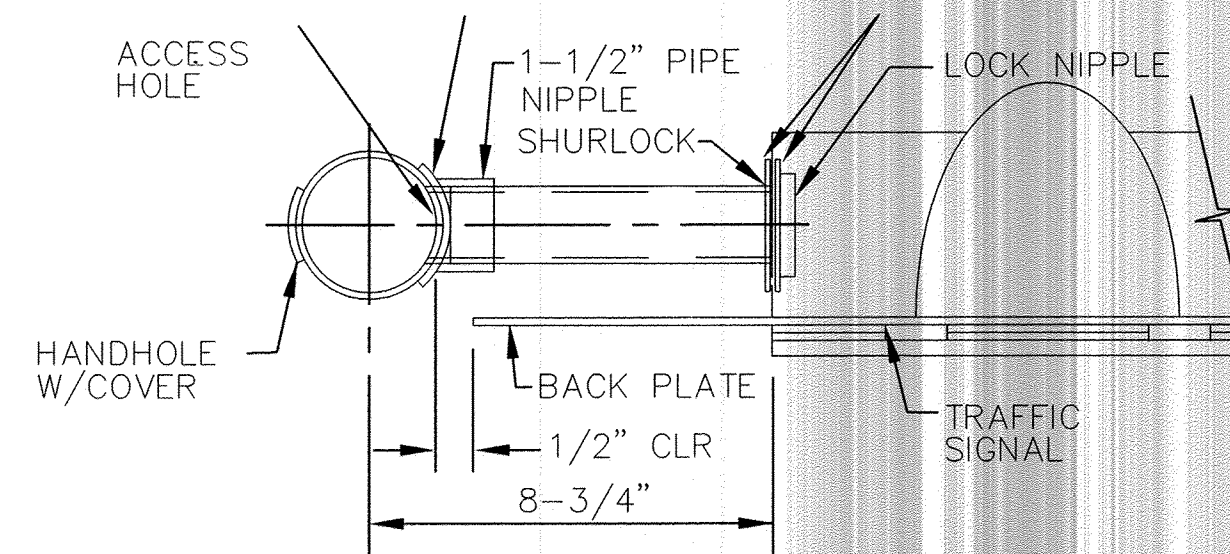
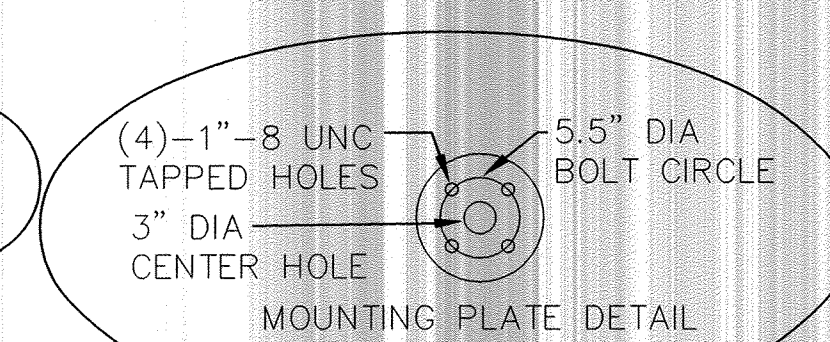
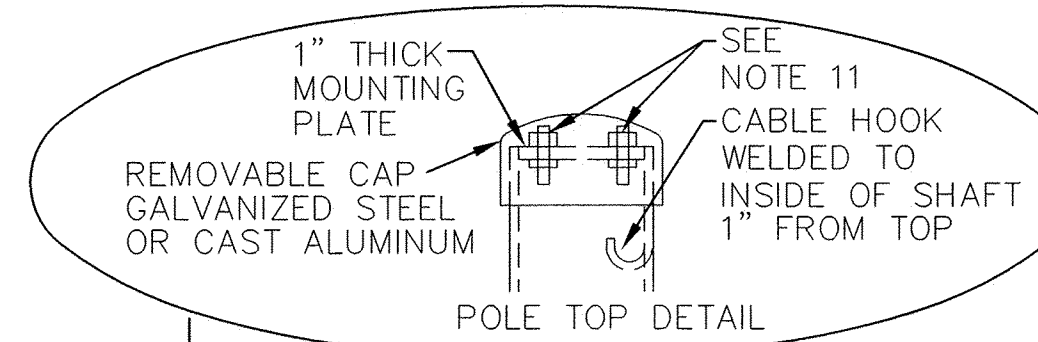
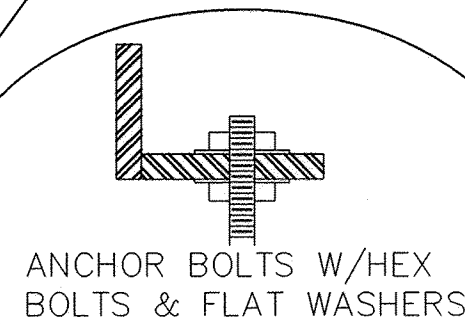


POLE PLATE SLOT DETAIL

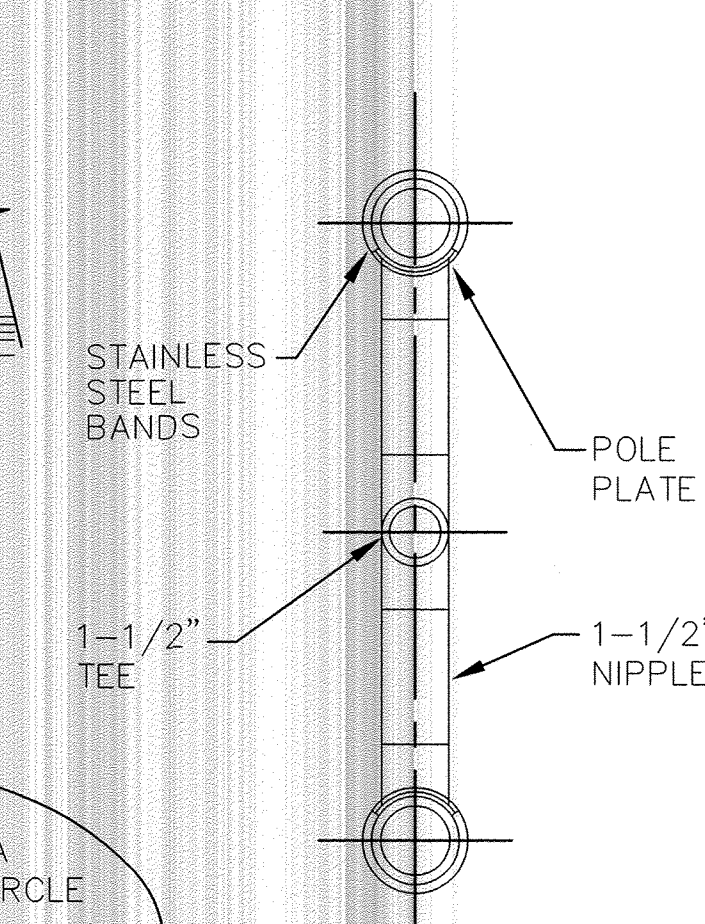
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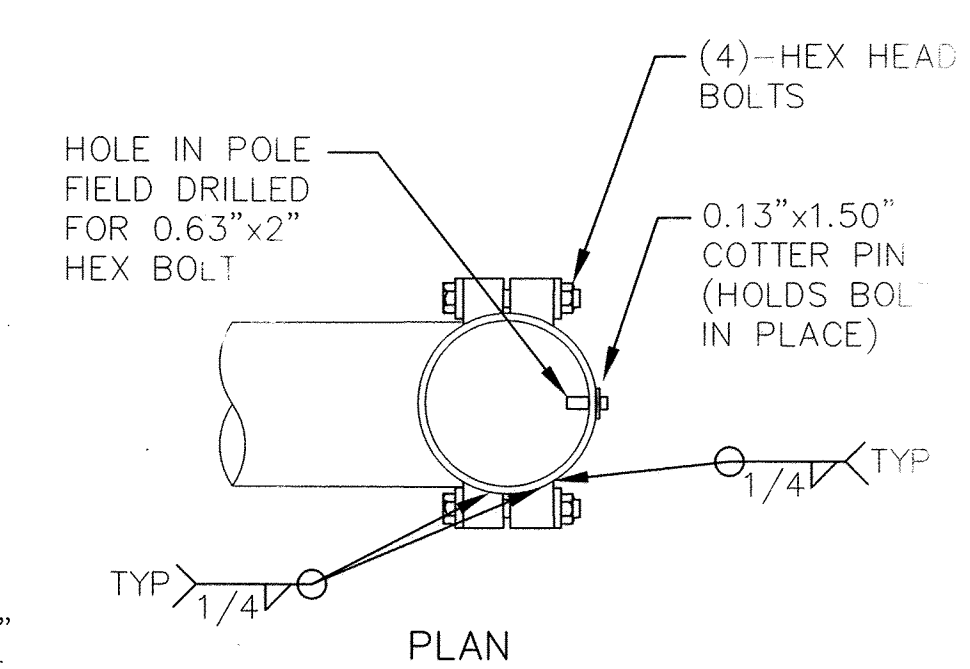
**ANCHOR BOLTS**  
5', 20', 25' ARM: 1-1/2"x54"x6"  
30', 35', 40' ARM: 1-1/2"x54"x6"



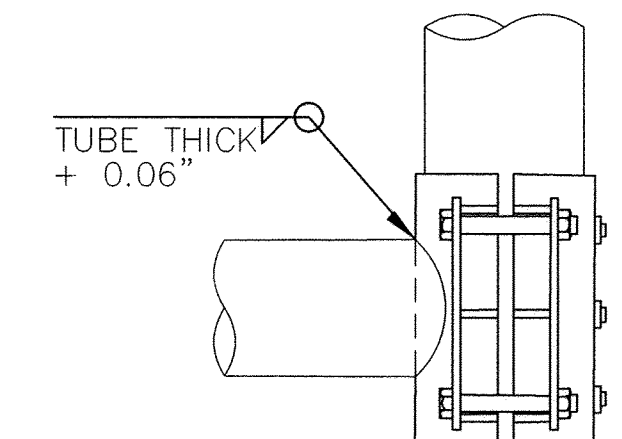
SECTION C-C



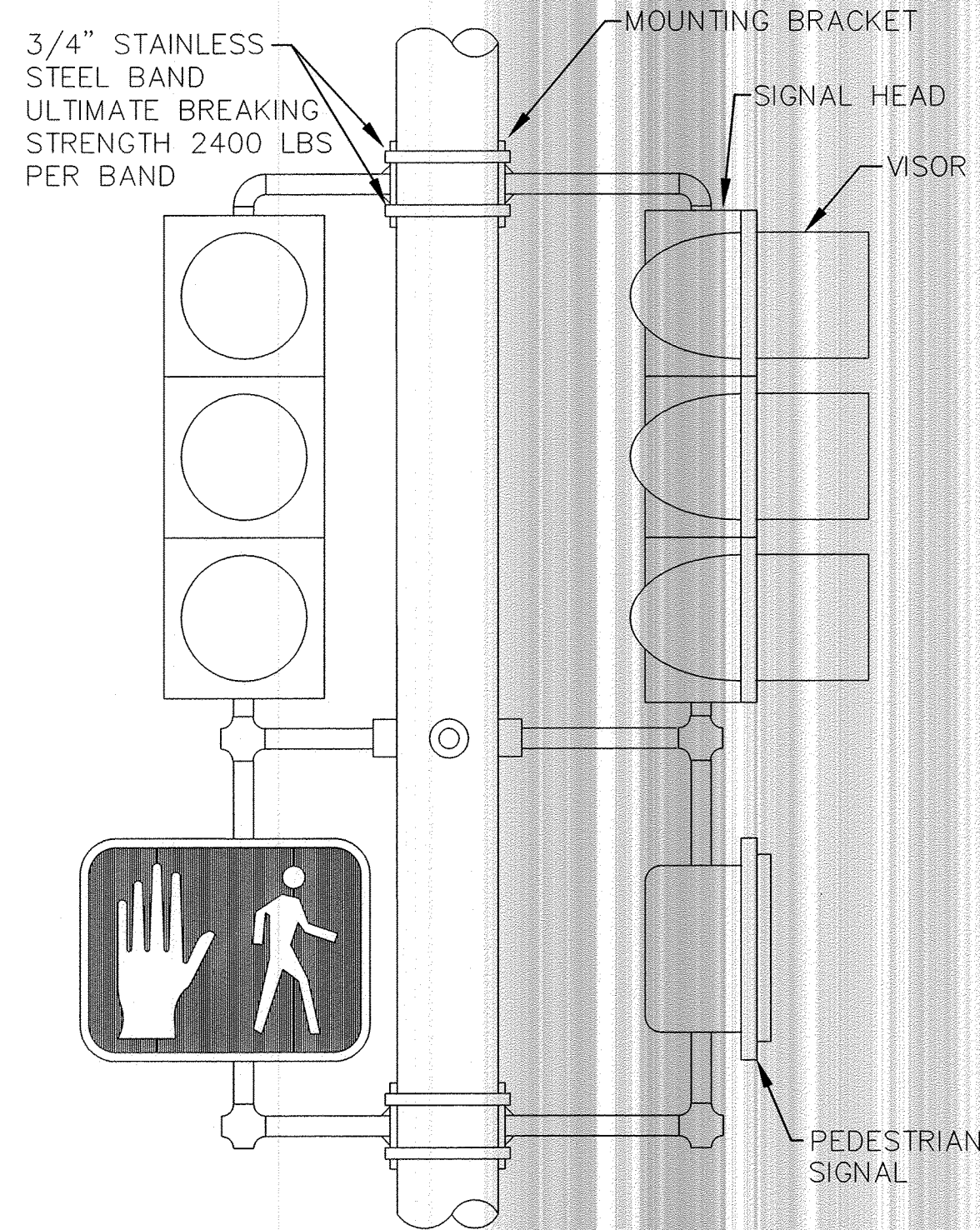
SECTION D-D



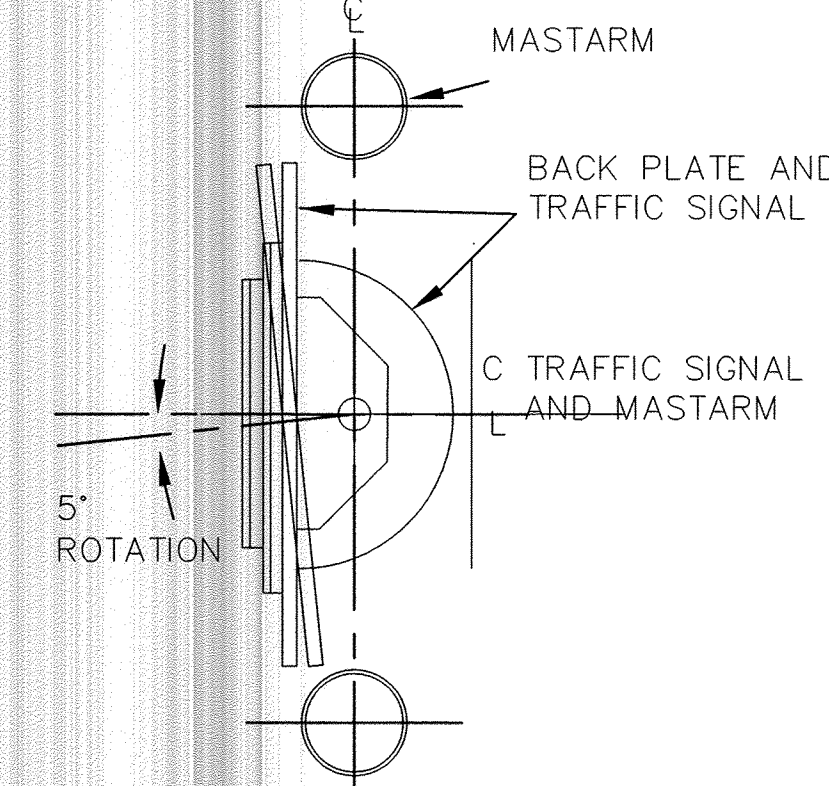
PLAN



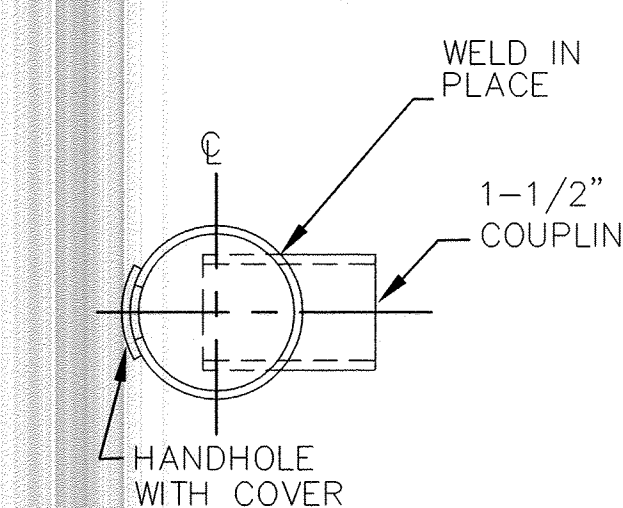
ELEVATION



SECTION F-F



SECTION E-E



SECTION G-G

SECTION

DETAIL I

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

FINISH:

☐ GALVANIZED  
☐ POWDER COATED  
COLOR \_\_\_\_\_

TRAFFIC SIGNAL MASTARM NOTES:

1. DESIGN IN ACCORDANCE WITH CURRENT 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.

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

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

**COORS BLVD AND LA ORILLA ROAD**  
MASTARM DETAILS, TYPE III STANDARD - A

DESIGN REVIEW COMMITTEE APPROVED APR 06 2011 DESIGN REVIEW COMMITTEE	CITY ENGINEER-APPROVAL APPROVED JUN 03 2011 CITY ENGINEER	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
CITY PROJECT NO. 706182			ZONE MAP NO. E-12-Z	SHEET # 8 of 16

AS BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEER'S SEAL			
CONTRACTOR	DATE	BY	NO.	CONTRACTOR	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
WORK	DATE	BY	NO.	WORK	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
INSPECTOR'S	DATE	BY	NO.	INSPECTOR'S	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
FIELD	DATE	BY	NO.	FIELD	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
VERIFICATION	DATE	BY	NO.	VERIFICATION	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
CORRECTED	DATE	BY	NO.	CORRECTED	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
MICRO-FILM	DATE	BY	NO.	MICRO-FILM	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
RECORDED	DATE	BY	NO.	RECORDED	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.
NO.	DATE	BY	NO.	NO.	DATE	BY	NO.	NO.	BY	DATE	NO.	SEAL	BY	DATE	NO.



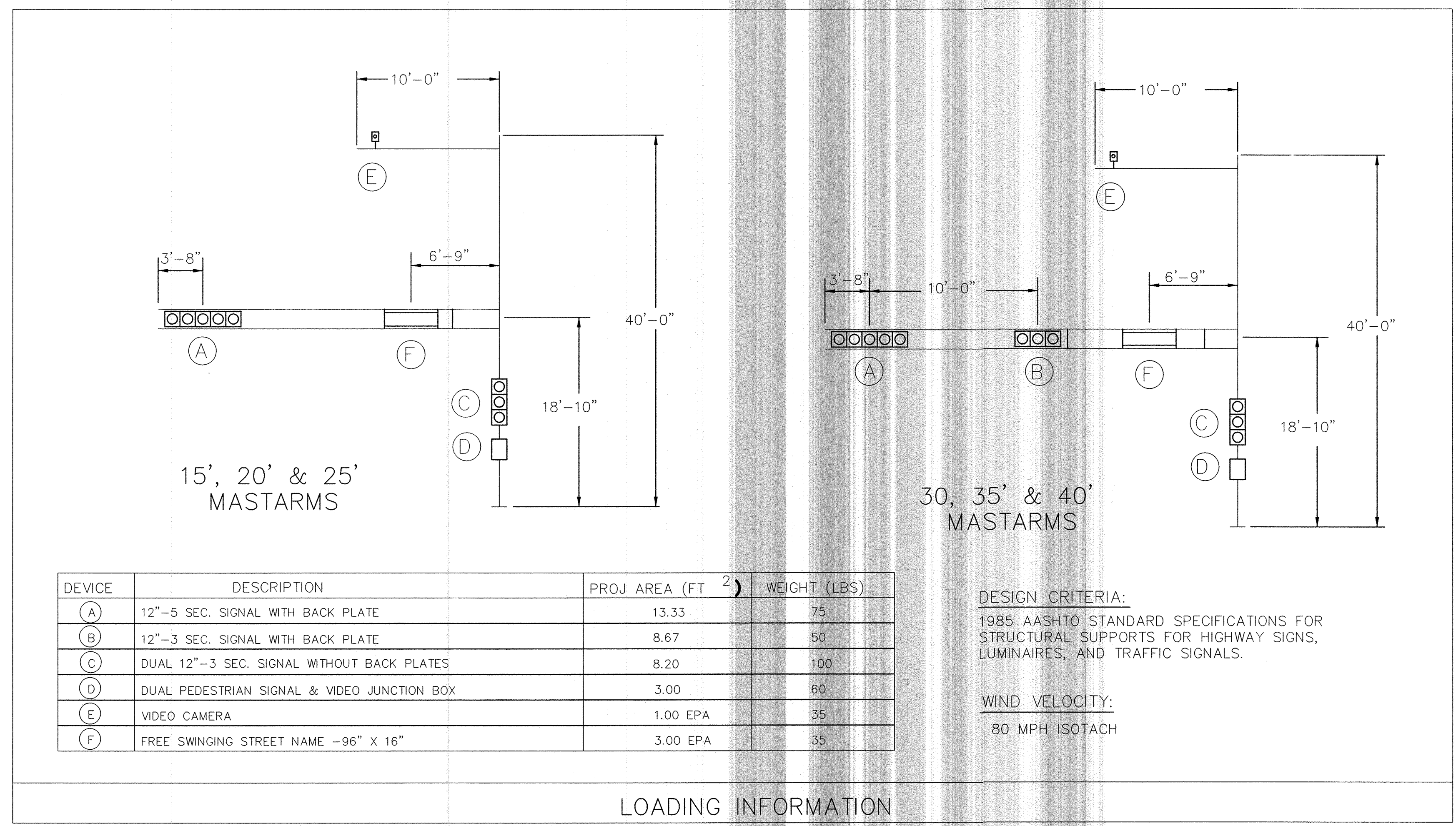
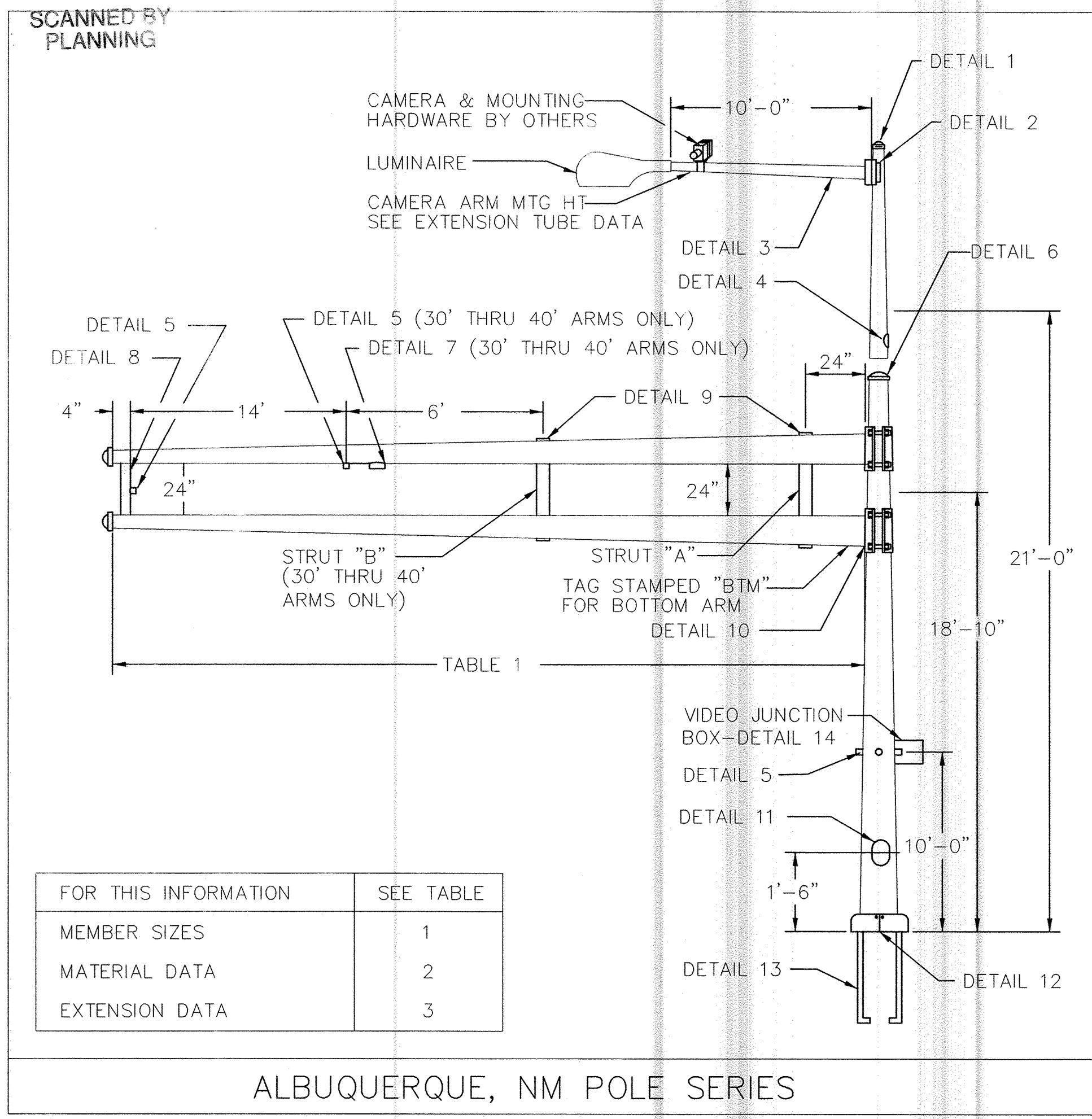


TABLE 1: POLE AND MASTARM SCHEDULE																								
DESIGNATION (SEE EXAMPLE ABOVE)				POLE DATA				BASE PLATE DATA				ANCHOR BOLT DATA				MASTARM DATA				ARM ATTACHMENT DATA				
POLE SERIES	POLE TYPE	SIGNAL ARM SPAN (FT)	CAMERA MOUNTING HEIGHT 0=NO CAMERA	BASE DIA	TOP DIA	LENGTH	GA	CIRCLE "C"	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"
										BC1	BC2													
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:

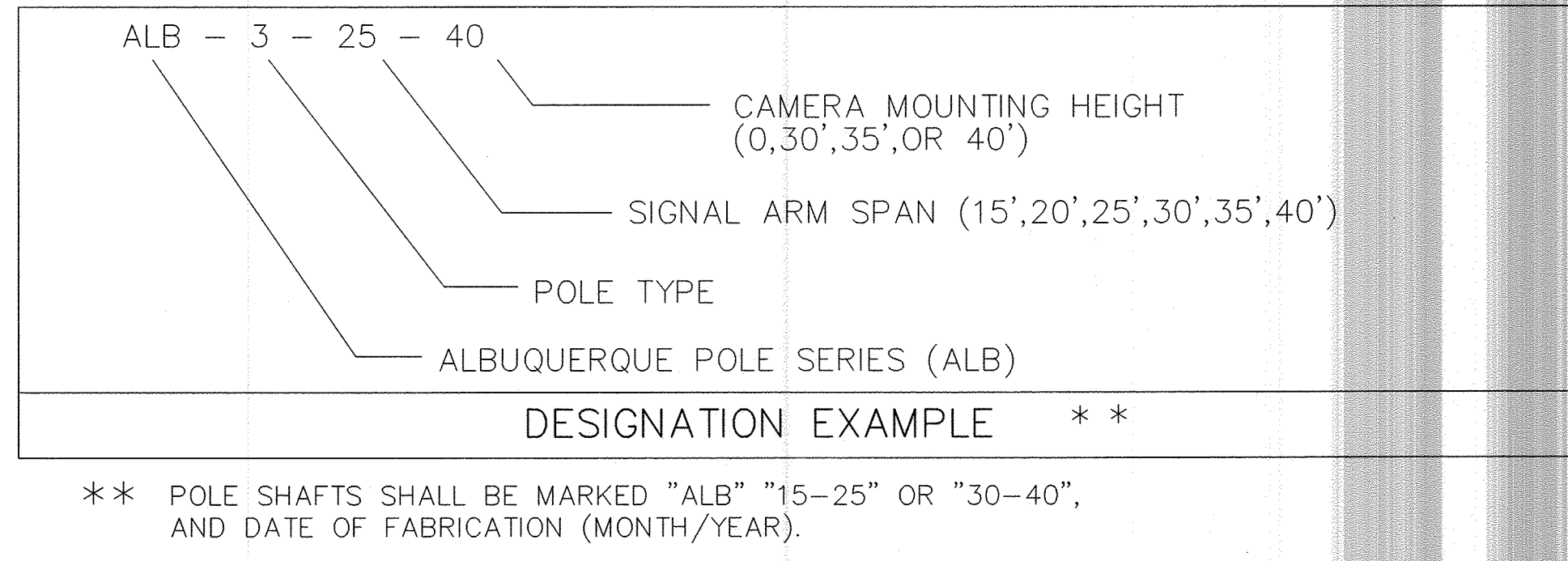
☐ GALVANIZED

☐ POWDER COATED

COLOR \_\_\_\_\_

**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 Russ Hugg, of Surv-Tek, NMPs number 9750



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

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

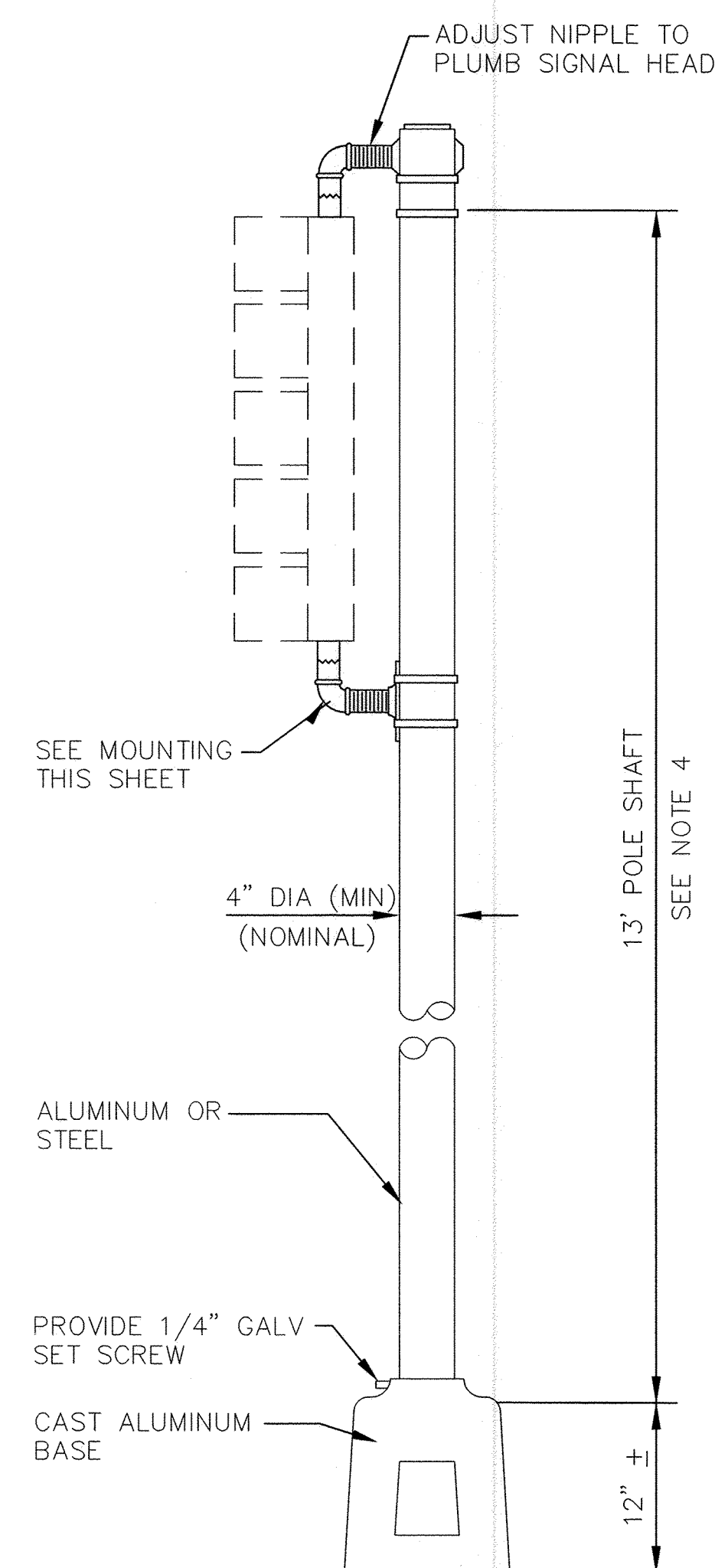
**COORS BLVD AND LA ORILLA ROAD**  
MASTARM DETAILS - TYPE III STANDARD - B

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
APPROVED APR 06 2011 DESIGN REVIEW COMMITTEE	APPROVED JUN 03 2011 CITY ENGINEER		

CITY PROJECT NO. 706182 ZONE MAP NO. E-12-Z SHEET # 9 of 16

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE			FIELD NOTES			
WORK STARTED BY	DATE			BY			
ACCEPTANCE BY	DATE			NO.			
FIELD INSPECTION BY	DATE						
DRAWING BY	DATE						
CORRECTED BY	DATE						
MICRO-FILM INFORMATION							
RECORDED BY	NO.						





## PEDESTAL POLE DETAILS

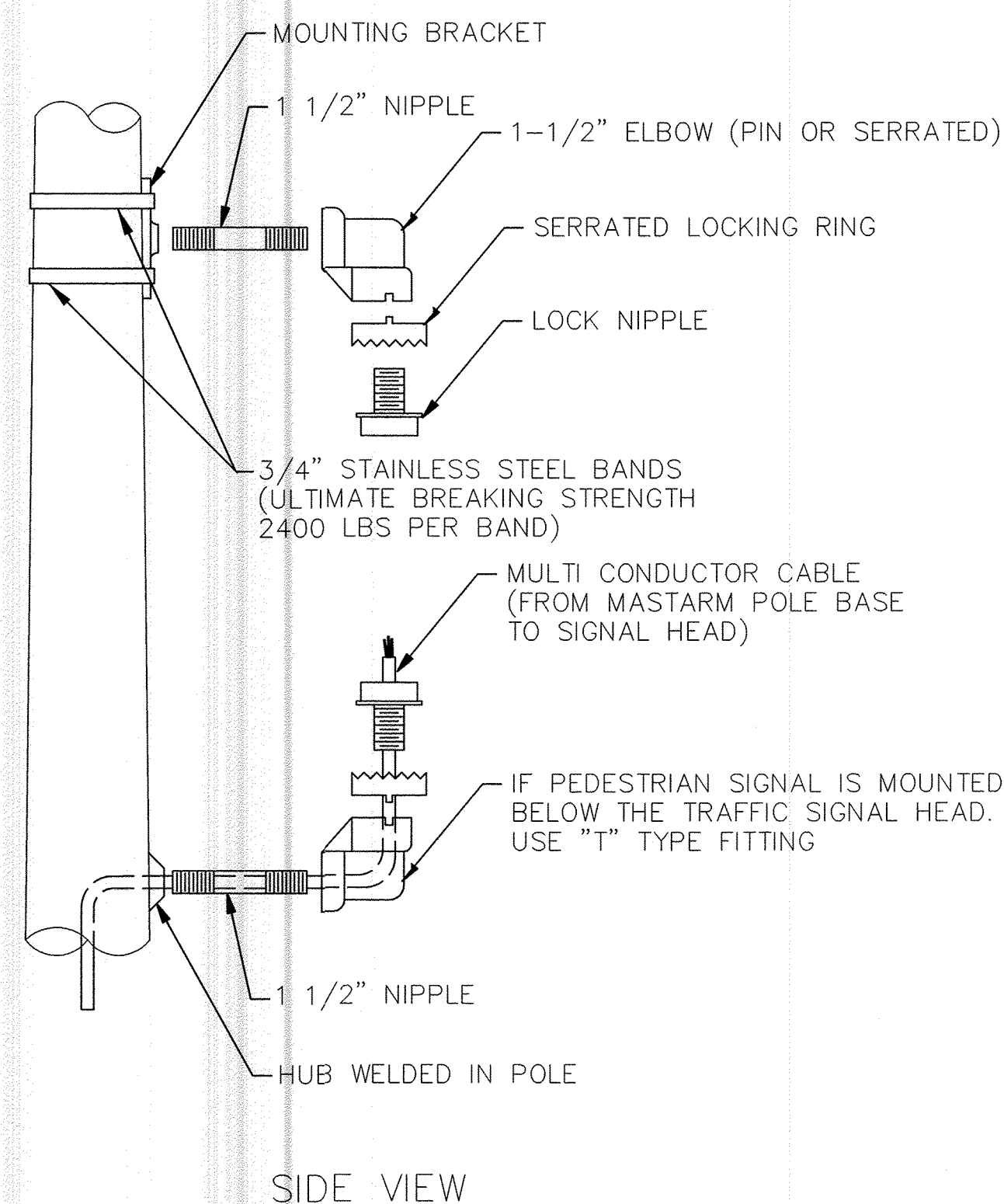
NOTES:

STREET NAME SIGNS REQUIRED AS SHOWN ON PLANS.

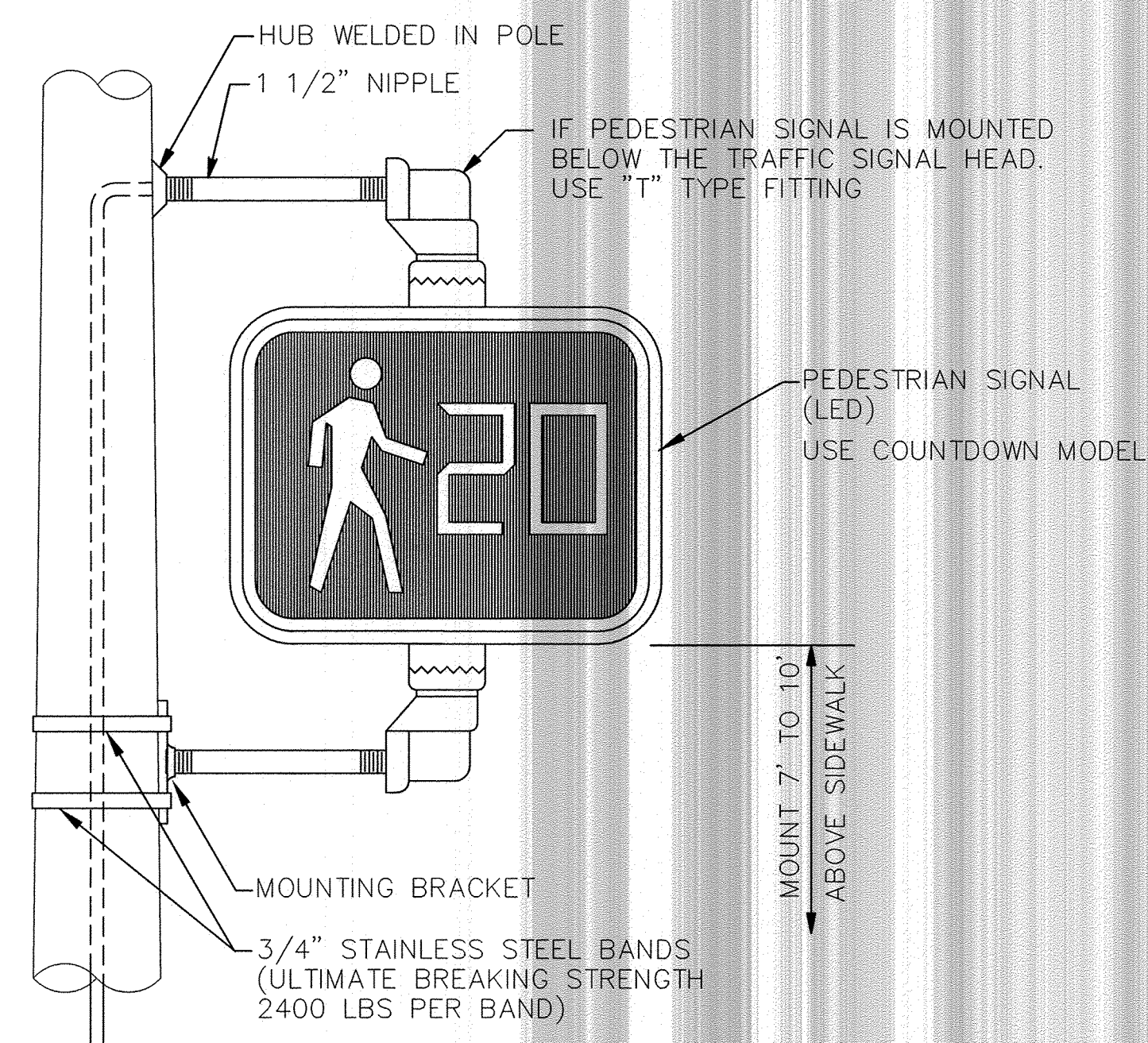
STREET NAME SIGN SHALL BE 16" WIDE WITH 8" SERIES "C" LETTERS. SIGN SHALL BE NO MORE THAN 12 SQUARE FEET TOTAL AREA AND SHALL HAVE HIGH INTENSITY REFLECTIVE LEGEND, 1" BORDER AND BACKGROUND COLORS: WHITE ON GREEN, SIGN PANELS SHALL BE SINGLE SHEET 6061-T6 ALUMINUM .120 MINIMUM THICKNESS.

PEDESTRIAN ATTUATED CROSSING SHALL BE A MAXIMUM OF 42" (1065 mm) ABOVE THE FINISHED PUBLIC SIDEWALK. A STABLE, FIRM AND SLIP-RESISTANT AREA 30" x 48" (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.

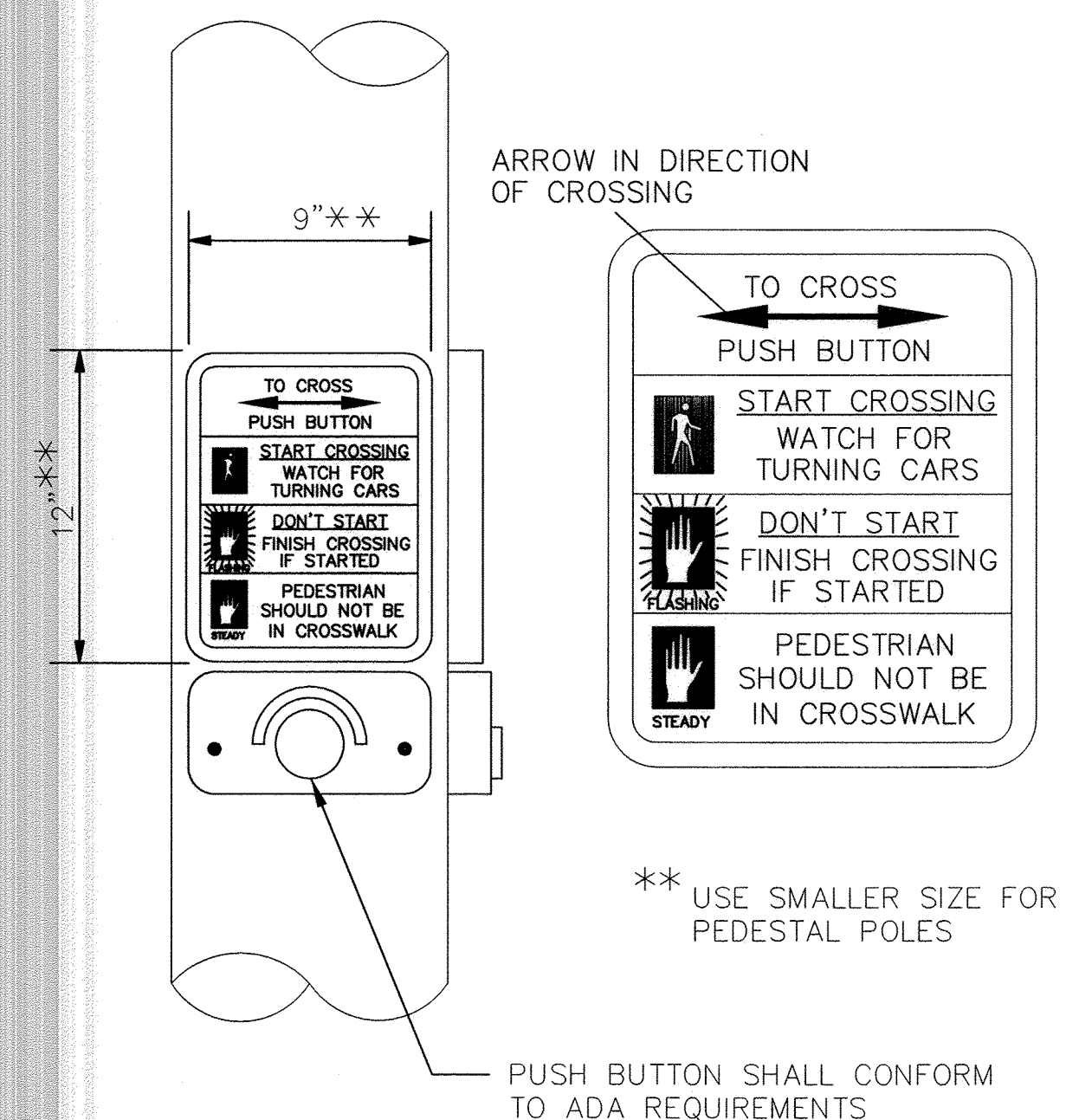
FOR INSTALLATIONS WITH ONLY PEDESTRIAN SIGNALS, CUT SHAFT TO 9'. USE 15' SHAFT FOR PEDESTAL POLES REQUIRING BOTH 5-SECTION SIGNAL ASSEMBLIES AND PEDESTRIAN SIGNALS.



### MOUNTING DETAIL



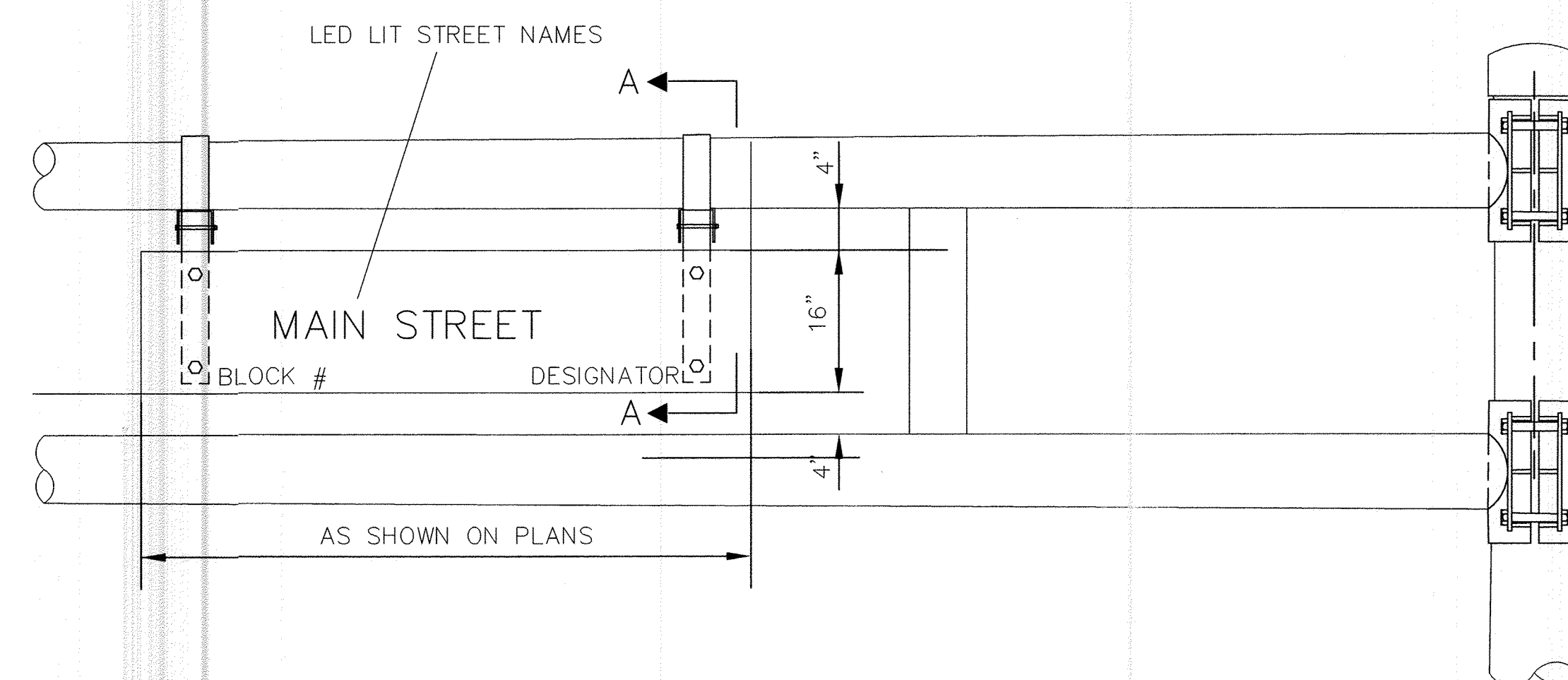
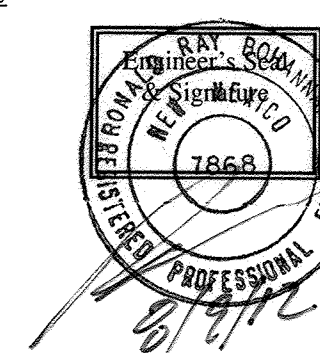
## PEDESTRIAN SIGNAL DETAILS



### PUSH BUTTON DETAIL

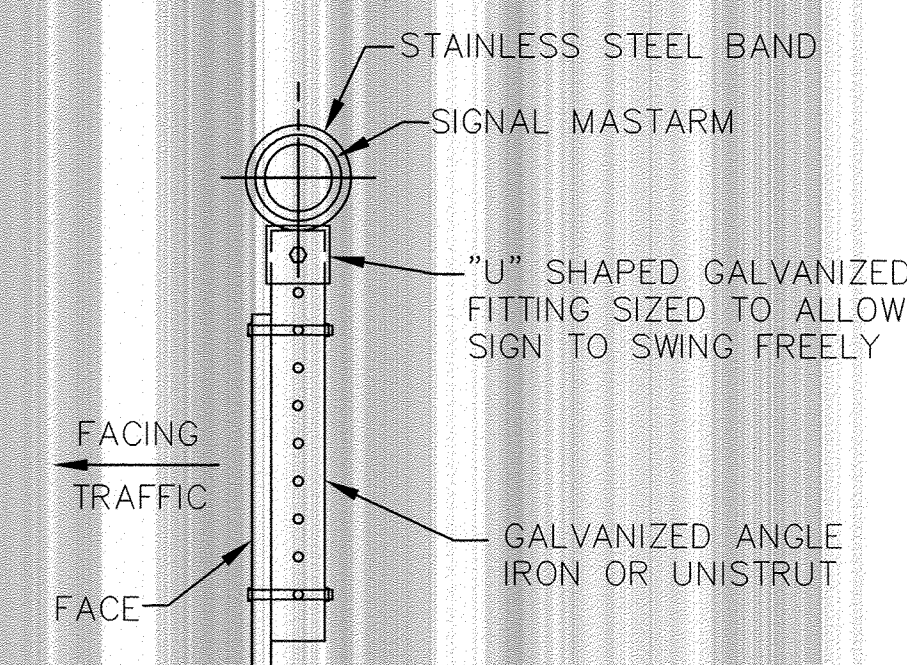
### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, **Ronald R. Bohannan**, of the firm of **Tierra Wess 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 followed, except as indicated 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 **Russ Huez**, of **Surv-Tek, NMPS number 9750**



## STREET NAME SIGN DETAILS

SUBJECT TO COA TRAFFIC ENGINEER APPROVAL  
PRIOR TO FABRICATION.



## SECTION "A-A"

FINISH:

☐ GALVANIZED☐ POWDER COATED

COLOR

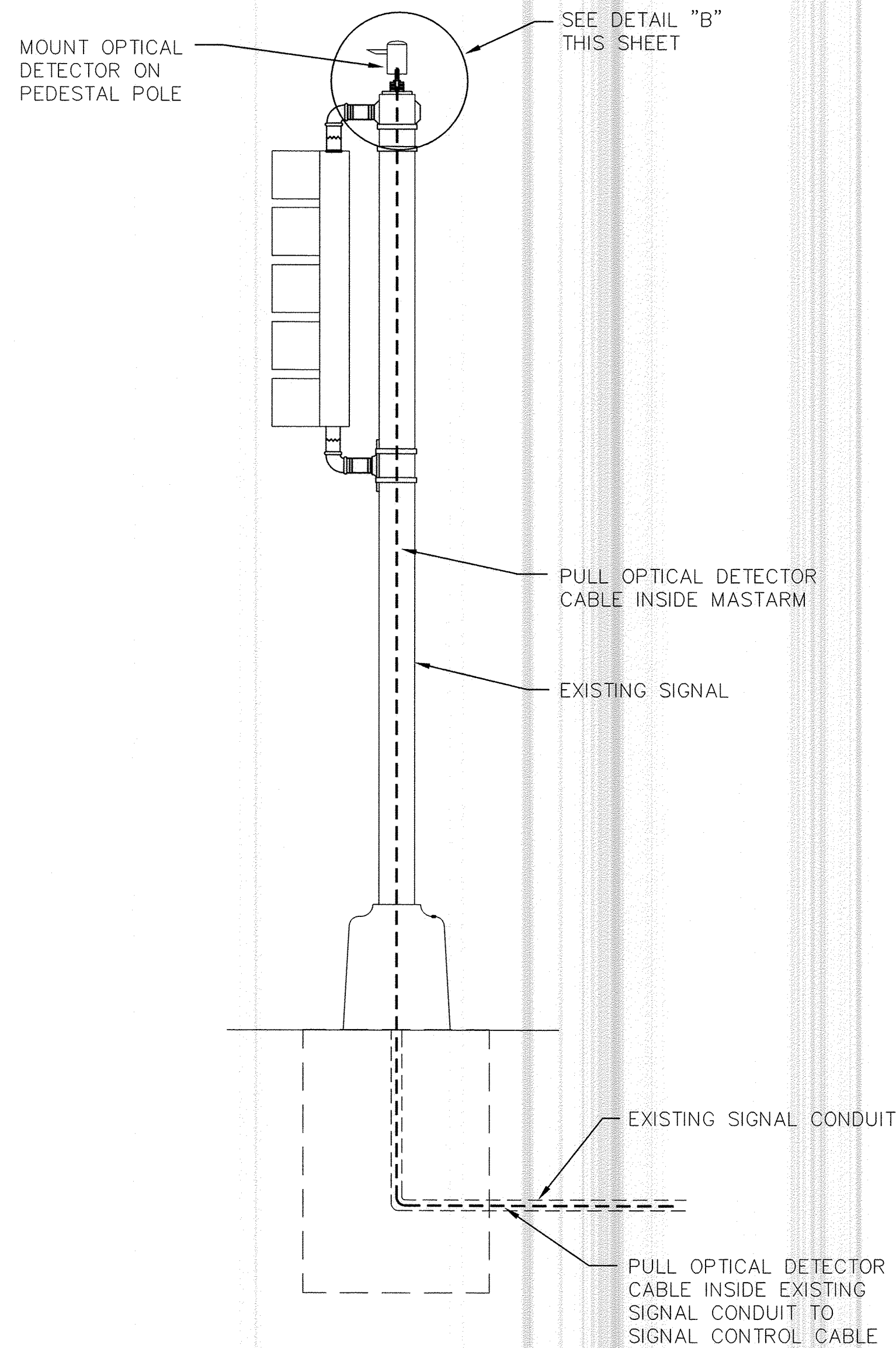
									DRAWN BY: P	DRAWN NAME	DESIGNED BY:	DATE
							N.O.					
<b>TERRA WEST, LLC</b>												
5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100												
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP												
<b>COORS BLVD AND LA ORILLA ROAD</b>												
<i>MISCELLANEOUS DETAILS A - TYPE III STANDARD</i>												
DESIGN REVIEW COMMITTEE   APR 06 2011 DESIGN REVIEW COMMITTEE				CITY ENGINEER APPROVAL   JUN 03 2011 CITY ENGINEER				LAST DESIGN UPDATE	MO./DAY/YR.  		MO./DAY/YR.  	
CITY PROJECT NO.				ZONE MAP NO.				SHEET #				
706182				E-12-Z						10 of 16		





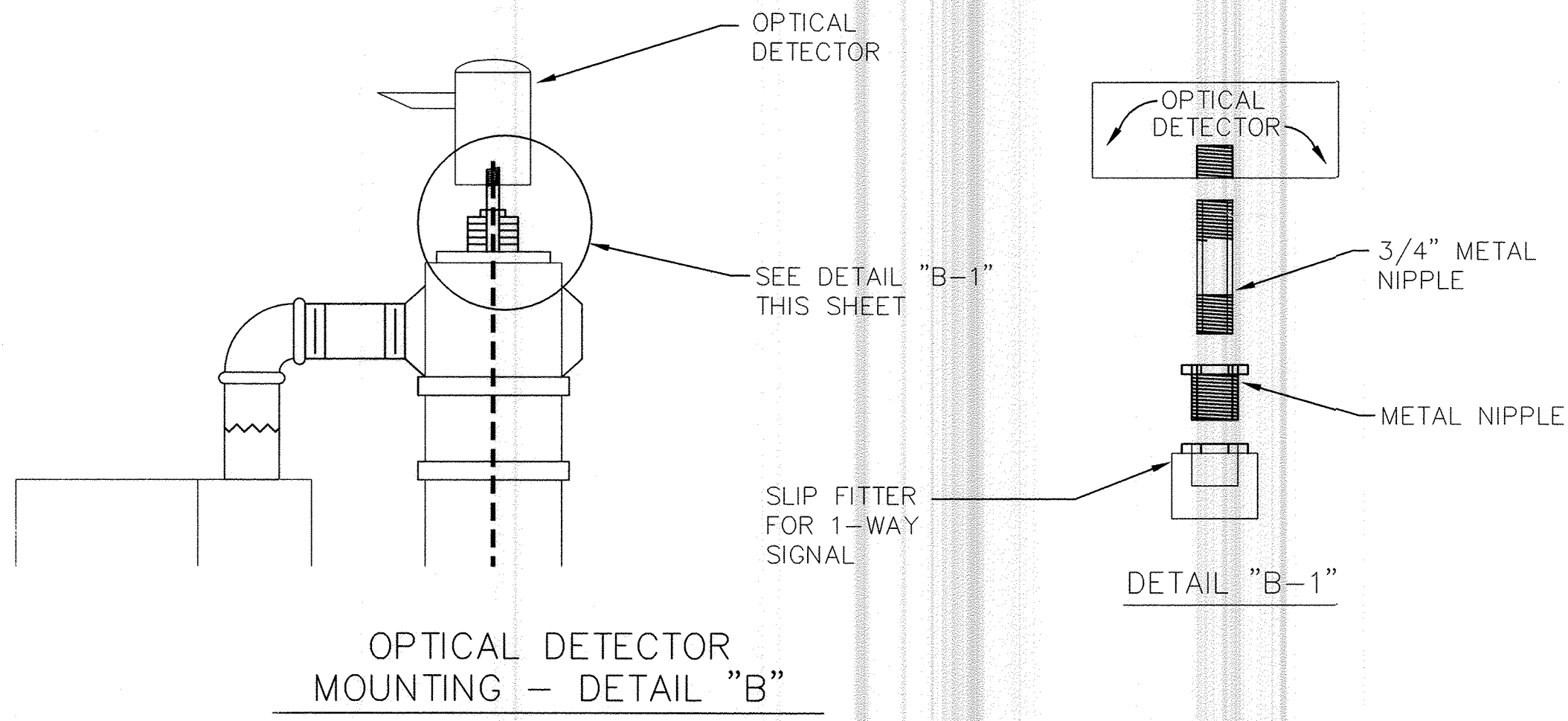


SCANNED BY  
PLANNING

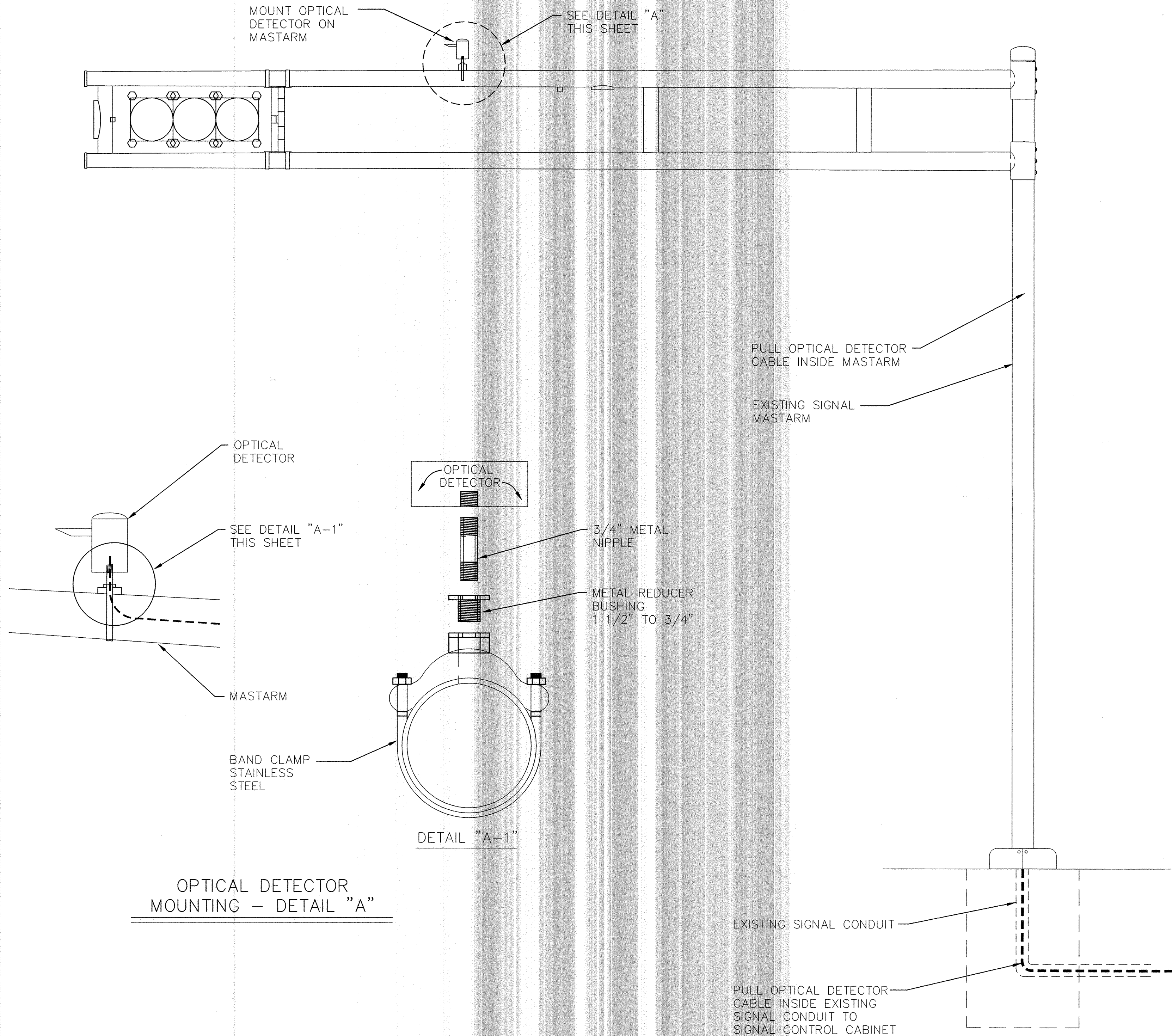


TYPICAL OPTICAL DETECTOR INSTALLATION - PEDESTAL POLE

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



OPTICAL DETECTOR MOUNTING - DETAIL "B"



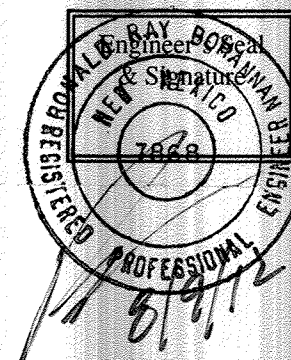
OPTICAL DETECTOR MOUNTING - DETAIL "A"

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 Russ Hugg, of Sury-Tek, NMPS number 9750.



TYPICAL OPTICAL DETECTOR INSTALLATION - MASTARM

<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>COORS BLVD AND LA ORILLA ROAD</b> OPTICAL DETECTOR INSTALLATION DETAILS	
DESIGN REVIEW COMMITTEE APPROVE APR 06 2011 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL APPROVE JUN 03 2011 CITY ENGINEER
CITY PROJECT NO. 706182	ZONE MAP NO. E-12-Z
SHEET # 12 of 16	

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE			NO.	BY		
WORK BY	DATE						
INSPECTOR'S REVIEW	DATE						
ACCEPTANCE BY	DATE						
VERIFICATION BY	DATE						
DRAWINGS CORRECTED BY	DATE						
MICRO-FILM INFORMATION	DATE						
RECORDED BY	DATE						
NO.							

REMARKS	BY
DESIGN	
DESIGNED BY: sl	DATE: Oct, 2010
DRAWN BY: pm	DATE: Oct, 2010
DRAWN NAME: 25031-Signal.dwg	JOB NO.: 29002
CHECKED BY: RRB	DATE: Oct, 2010



10" BACK OF CURB

CONCRETE COLLAR

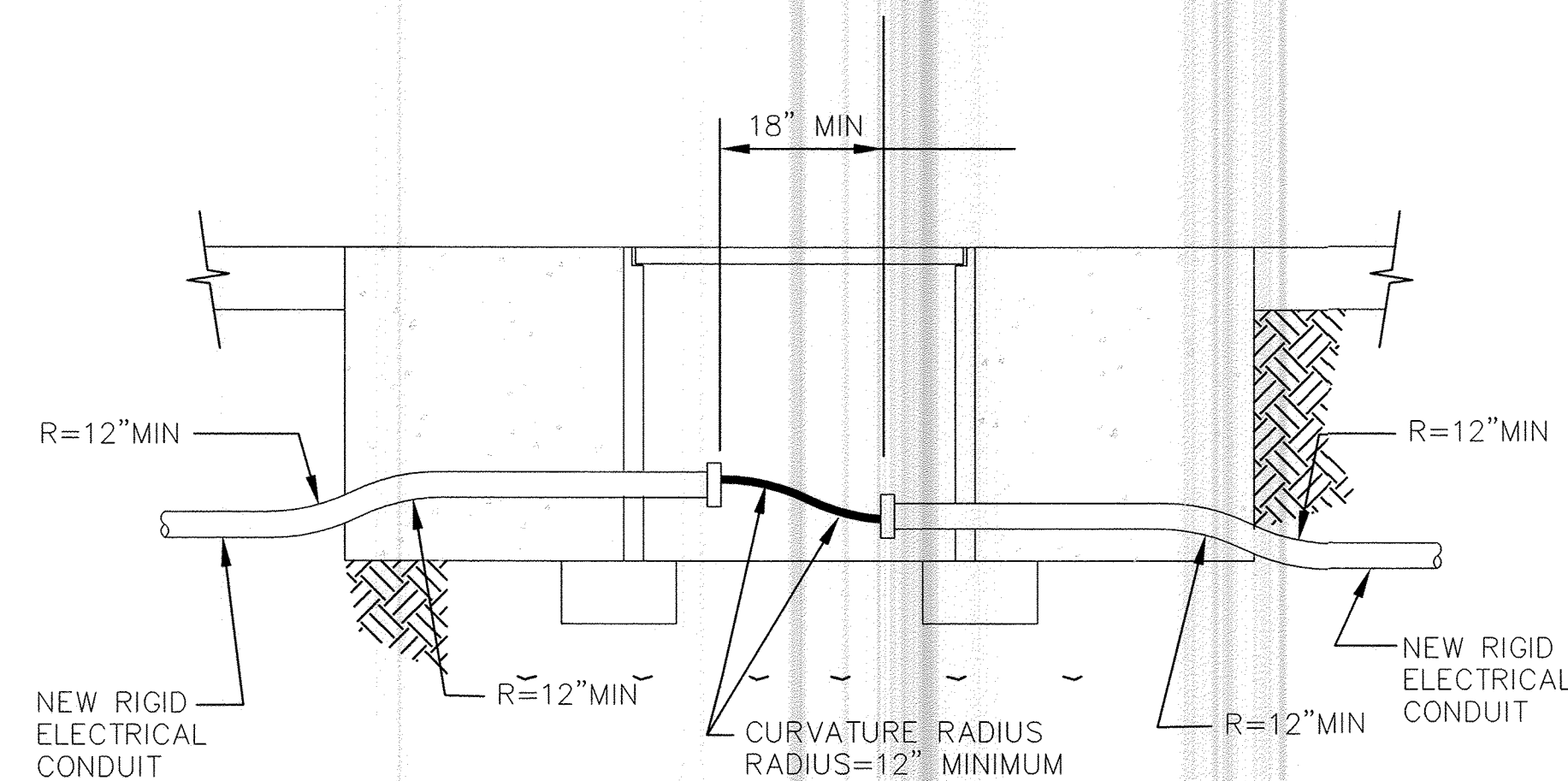
12"

18"

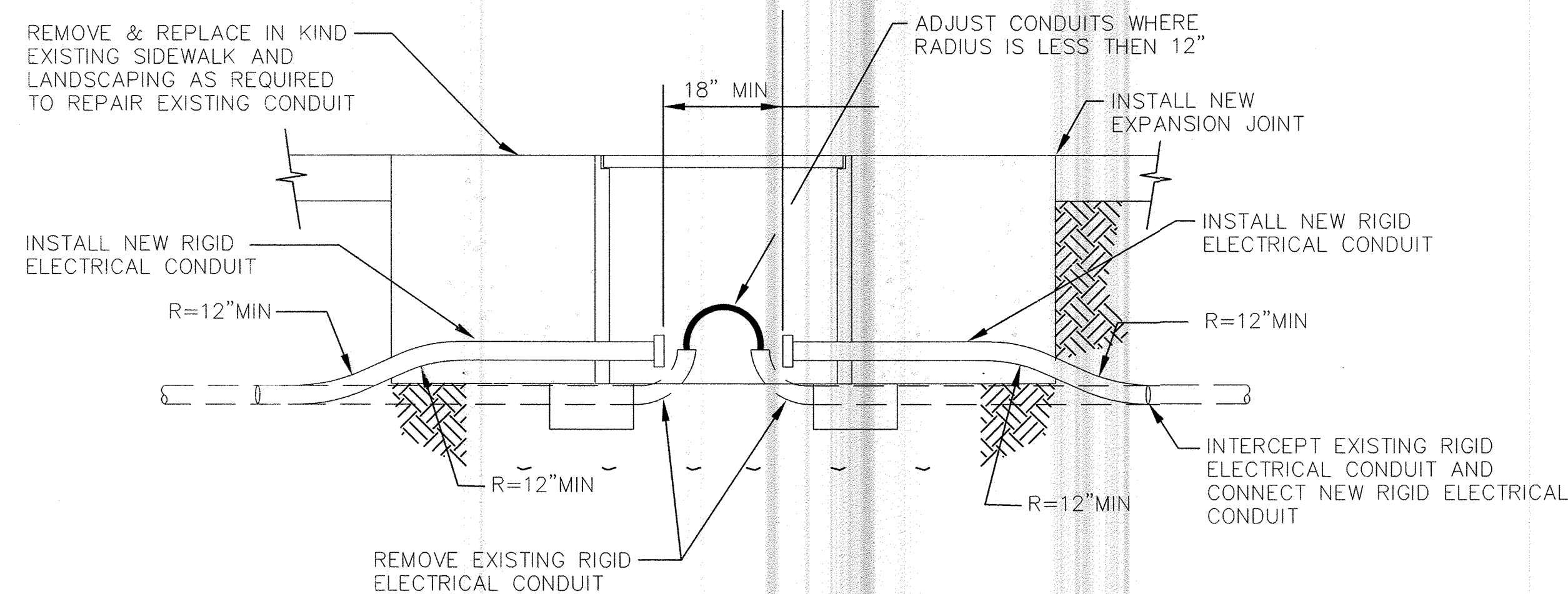
SOLID BUILDING BLOCKS EVENLY SPACED AROUND THE BASE

1" CLEAN GRAVEL (DRAINAGE) - GRAVEL FILL SHALL NOT REDUCE VOLUME OF THE PULL BOX AREA

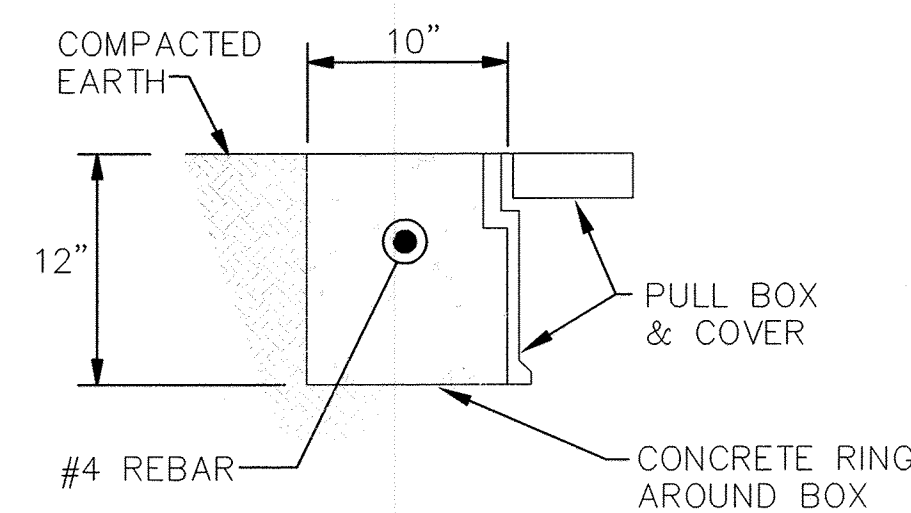
NOTE: SEE "CONCRETE COLLAR DETAIL"



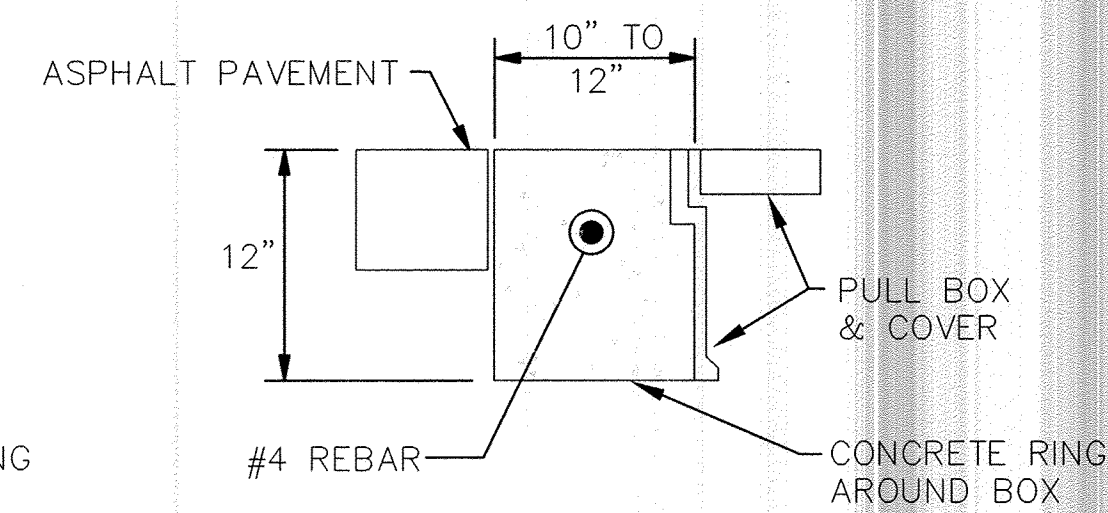
## NEW CONDUIT INSTALLATION



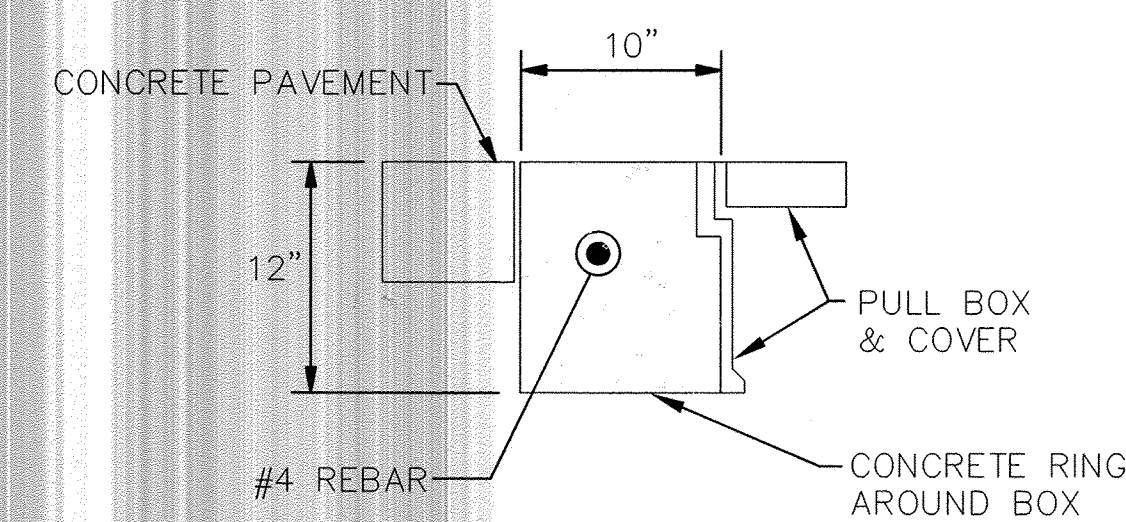
## RETROFIT INSTALLATION



IN COMPACTED EARTH



IN ASPHALT PAVEMENTS

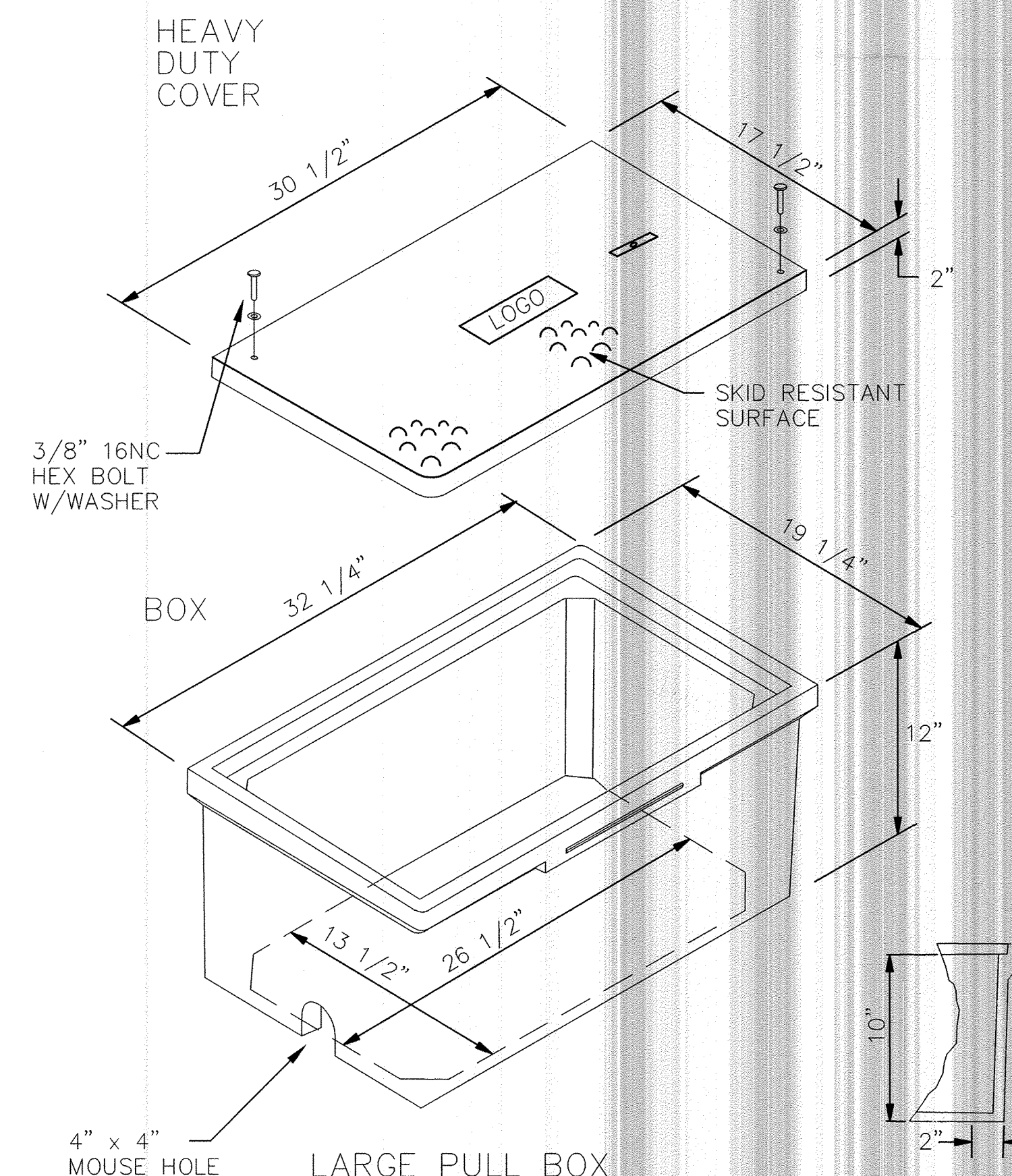
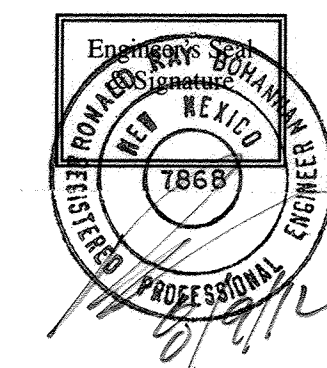


## IN CONCRETE PAVEMENTS

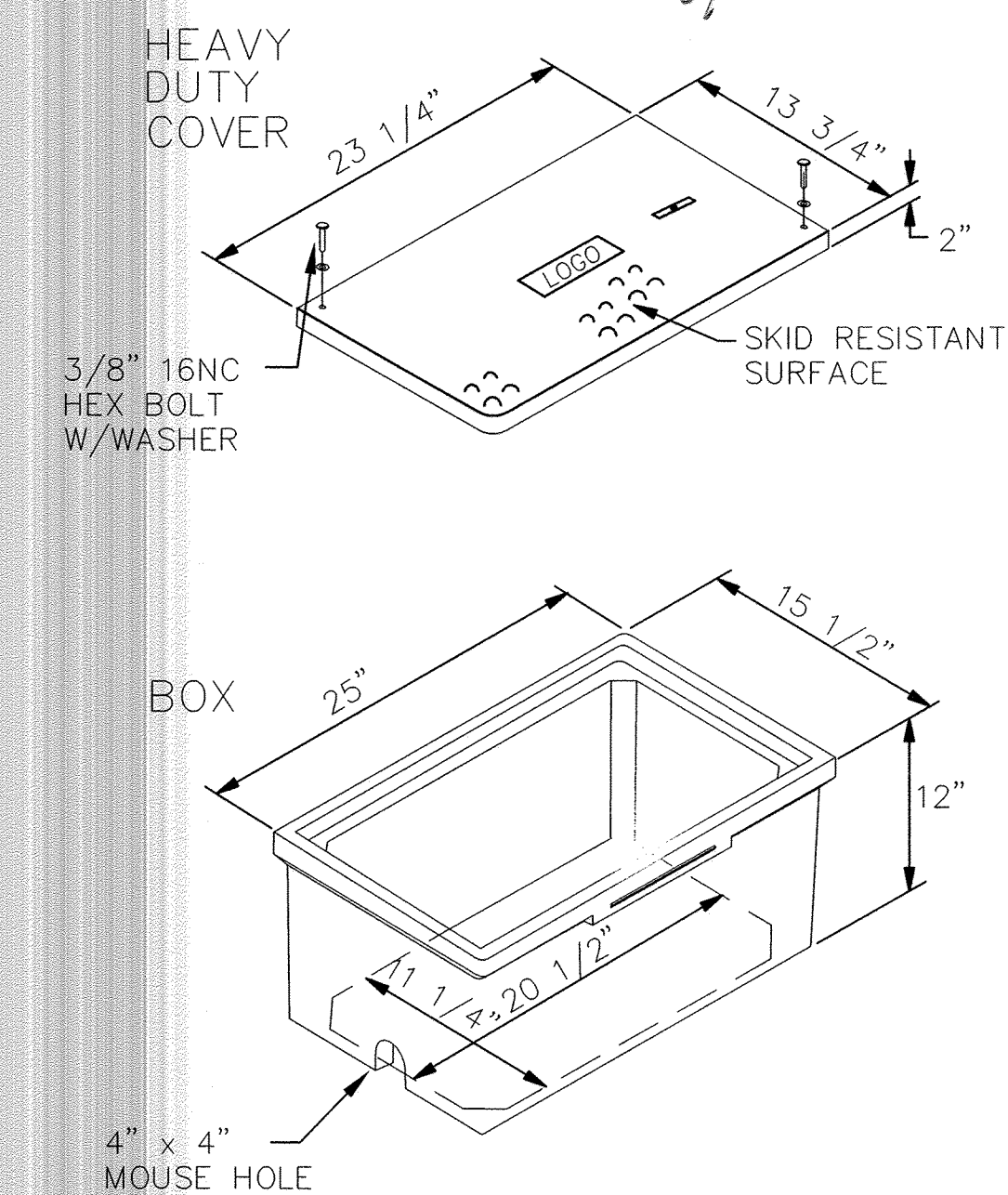
NOTE: THE CONCRETE COLLAR FOR THE PULL BOXES WILL BE CONSIDERED INCIDENTAL TO THE PULL BOX BID ITEMS.

### CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

I, **Ronald R. Bohannan**, of the firm of **Tierra Wess 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 **Russ Hugg**, of **Serv-Tek**, NMPMS number **9750**



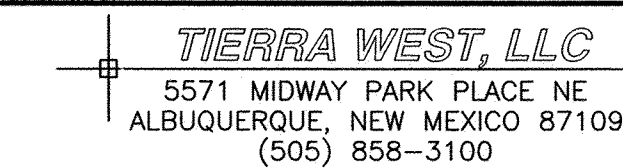
## PULL BOX DETAILS



## STANDARD PULL BOX

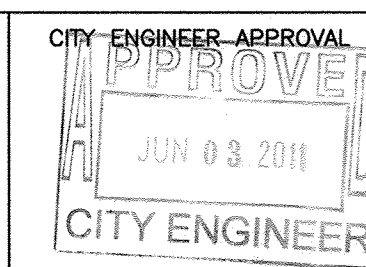
NOTES FOR HEAVY DUTY REINFORCED POLYMER MORTAR PULL BOX AND COVERS

1. 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.
2. ALL PULL BOX COVERS SHALL BE HEAVY DUTY REINFORCED POLYMER MORTAR, HAVING A SERVICE LOAD OF 22,568 LBS OVER 10" SQUARE (225 PSI).
3. PULL BOX TYPE AND LOGO SHALL BE APPROVED BY THE PROJECT MANAGER.
4. 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.
5. 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".



CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

### PULL BOX DETAILS



## LAST DESIGN UPDATE

CITY PROJECT NO. 706182

ZONE MAP NO.  
E-12-Z

SHEET #
---------

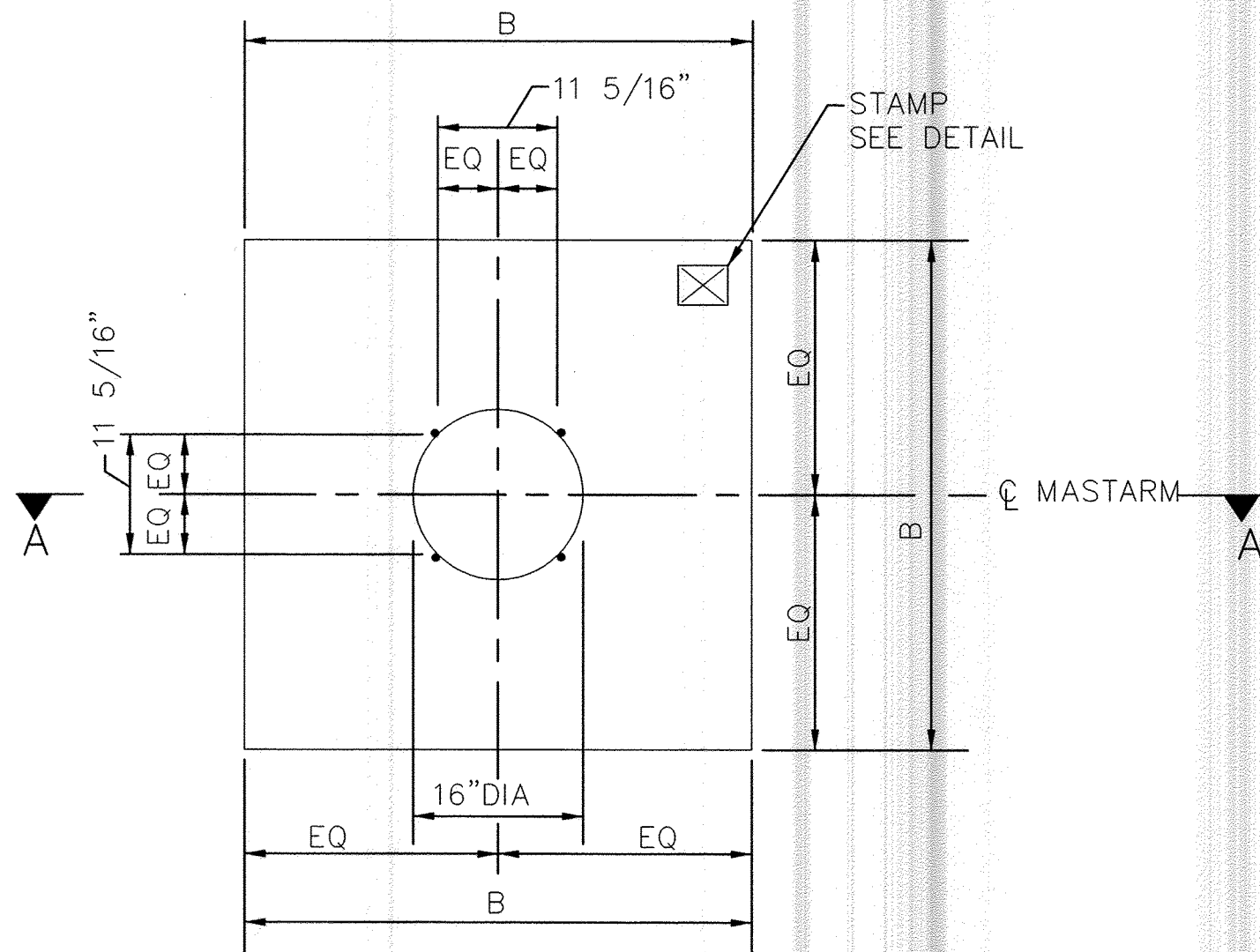
13 of 16

SURVEY INFORMATION		BENCH MARKS	AS BUILT INFORMATION	
FIELD NOTES			CONTRACTOR <u>Spivey Properties</u>	
NO.	BY	DATE	WORK STARTED BY <u>Spivey, Tom</u>	DATE <u>2011/12</u>
			ACCEPTANCE BY <u>COA</u>	DATE <u>2012</u>
			FIELD ECTION BY <u>TW56</u>	DATE <u>2012</u>
			DRAWINGS CORRECTED BY <u>TW56</u>	DATE <u>2012</u>
			MICRO-FILM INFORMATION	
			RECORDED BY	DATE
			NO.	

[illegible]

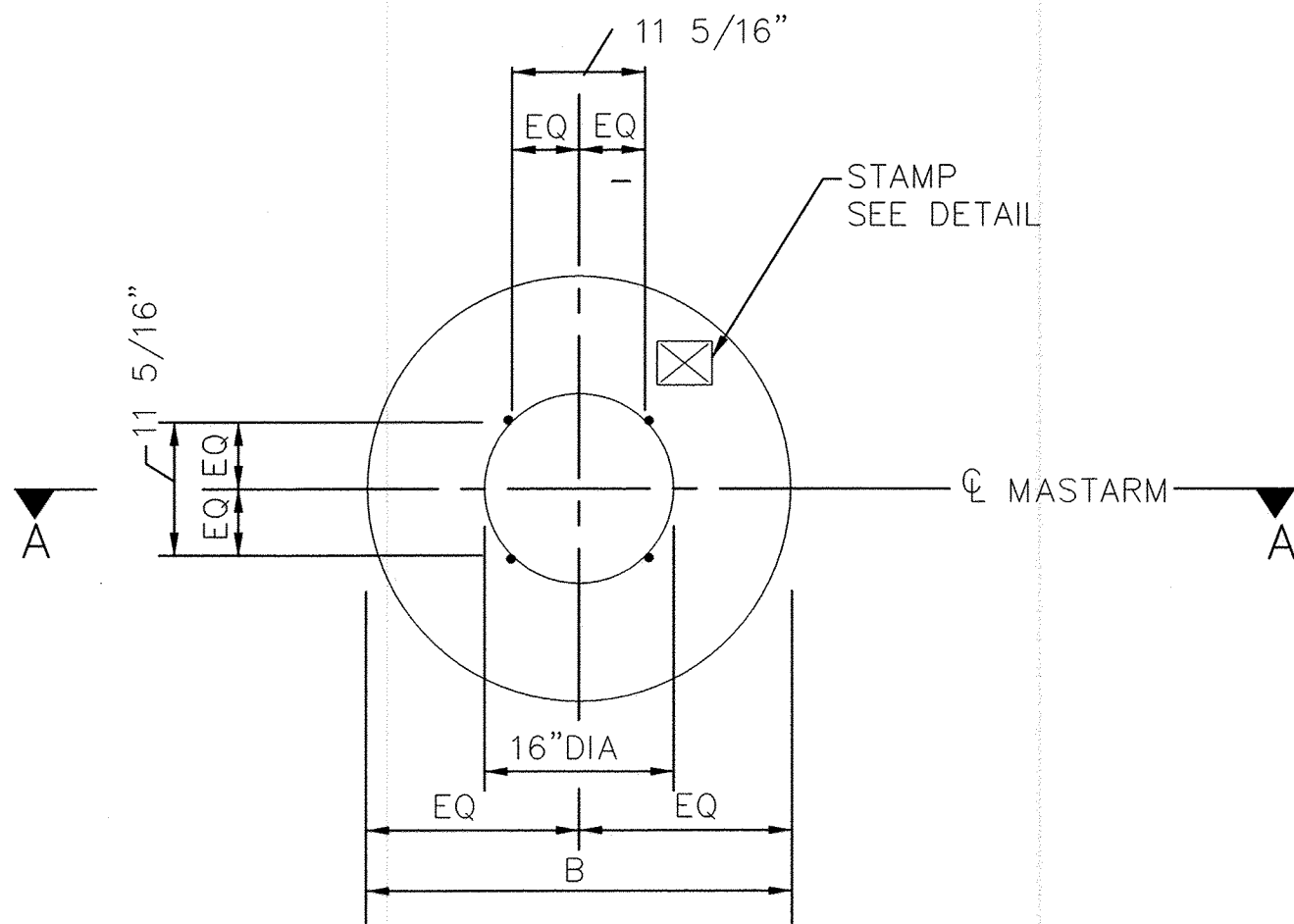


SCANNED BY  
PLANNING



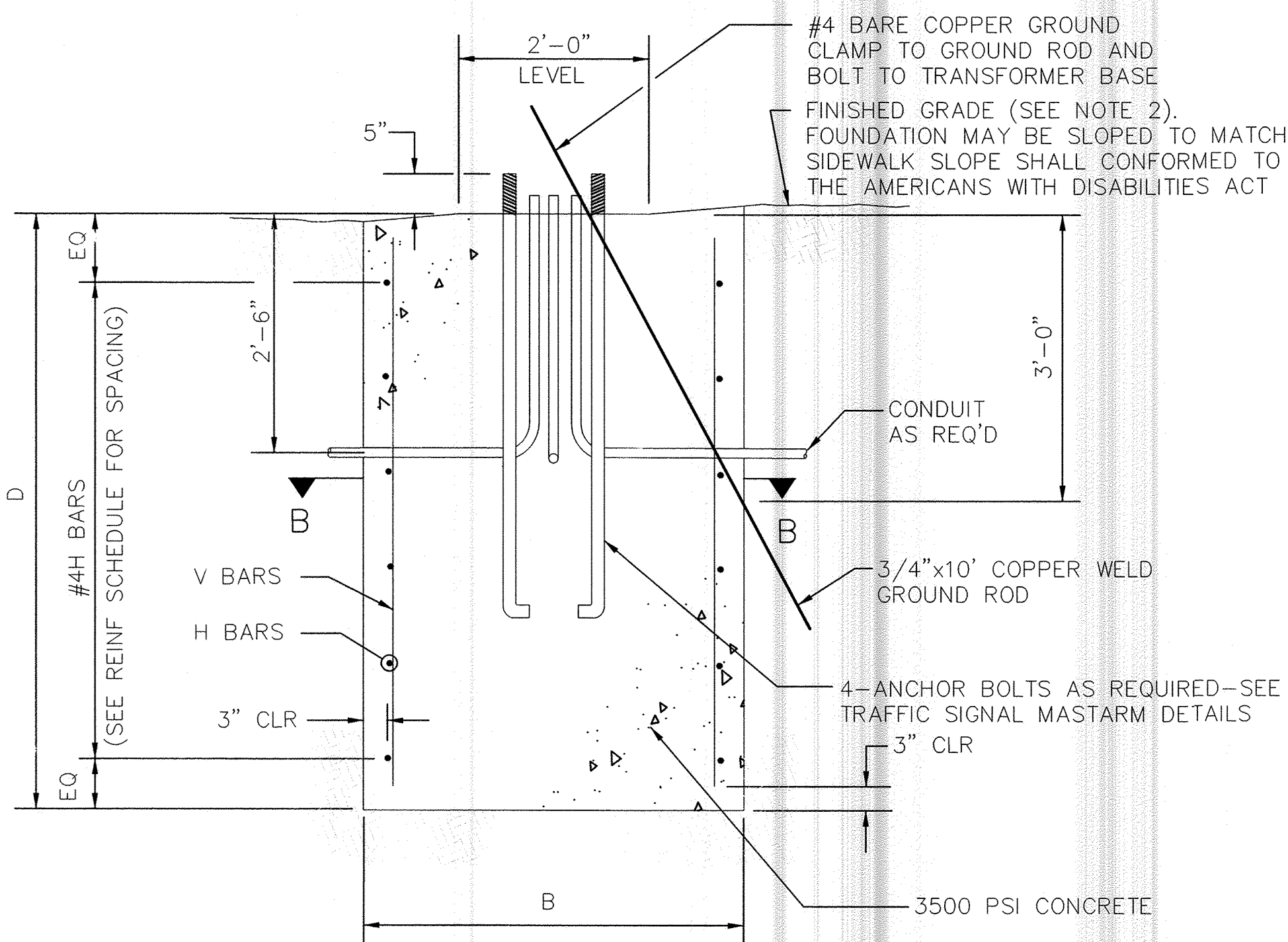
PLAN VIEW (SQUARE)

NO SCALE



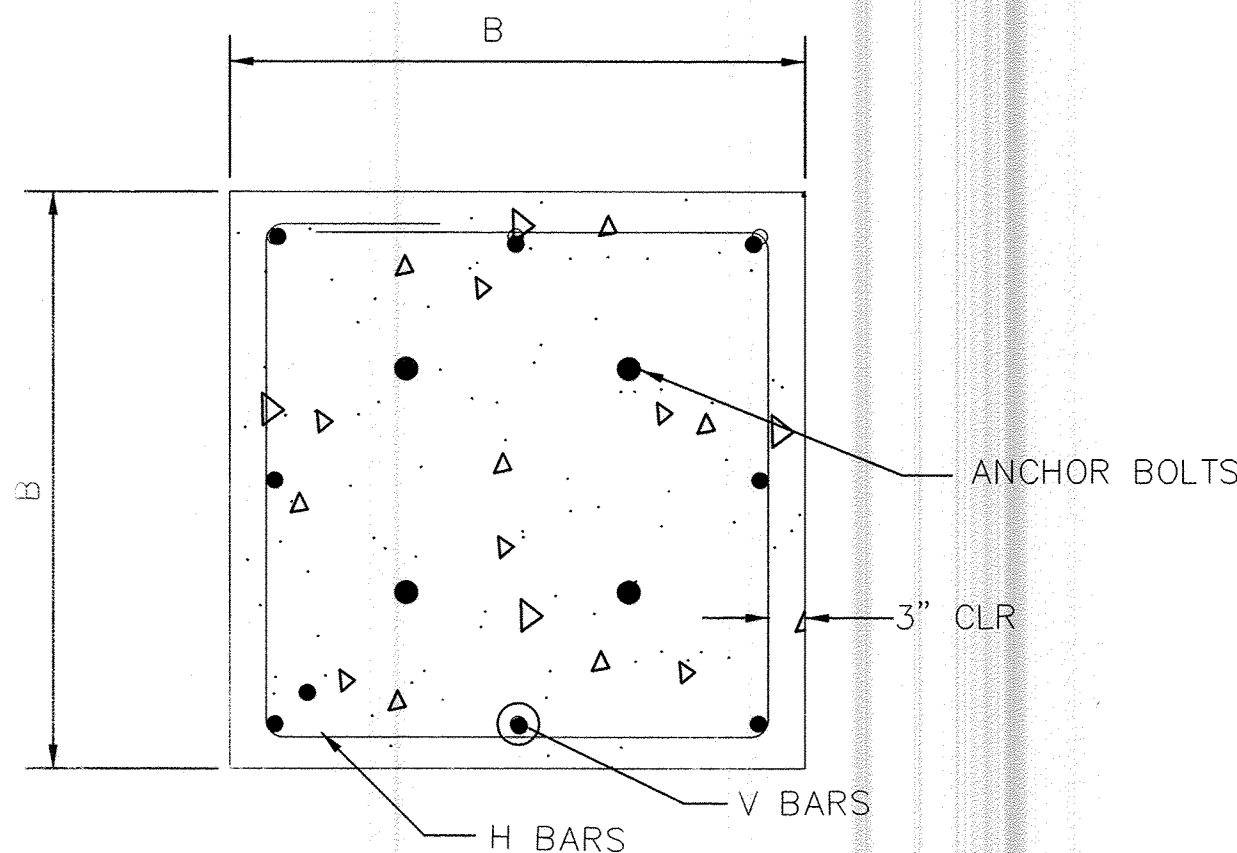
PLAN VIEW (ROUND)

NO SCALE



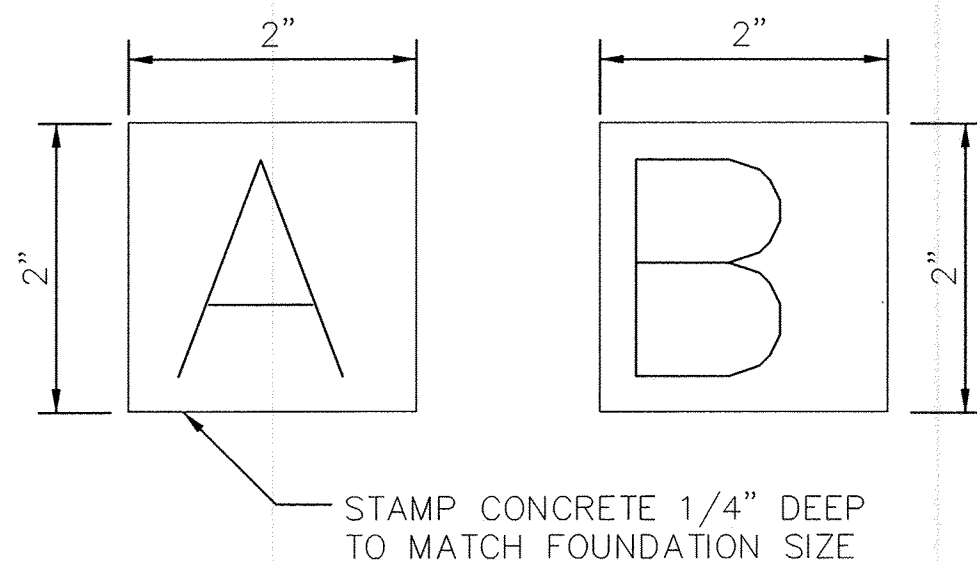
SECTION A-A (ROUND OR SQUARE)

NO SCALE



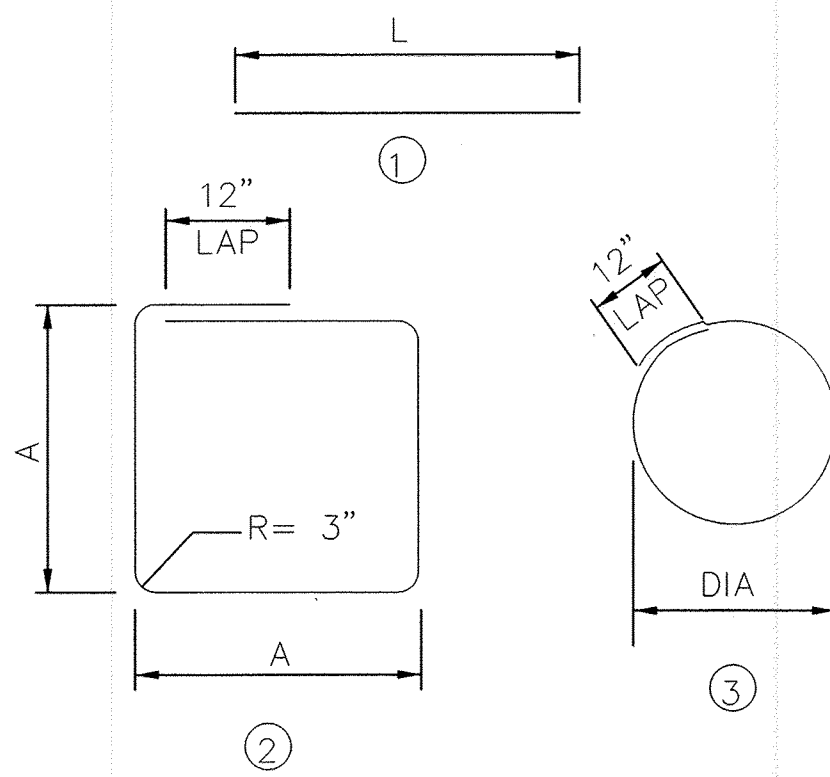
SECTION B-B (SQUARE)

NO SCALE

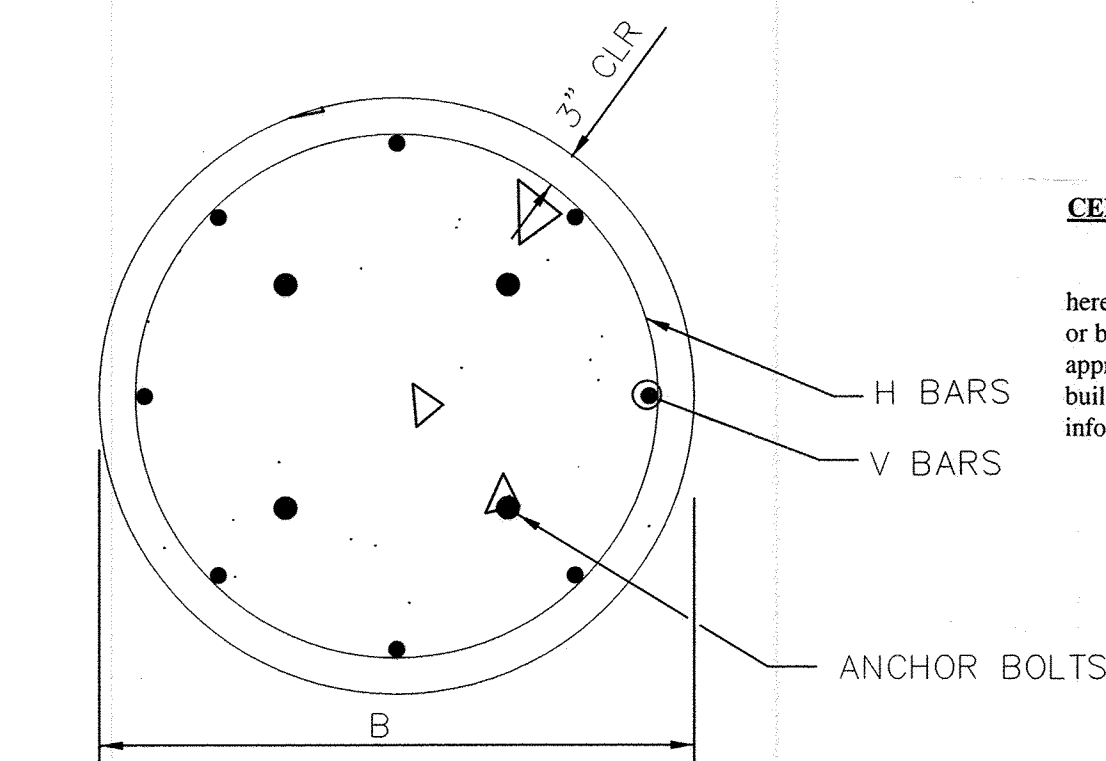


STAMP DETAIL

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)

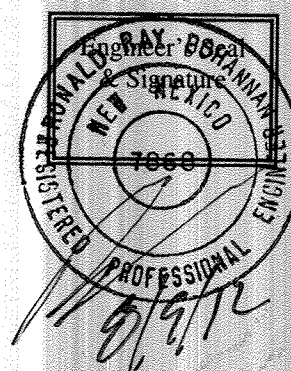
MARK	QUANT	TYPE	SIZE	LENGTH	COMMENTS
#5V1	8	1	5	5'-9"	A = 42", TIES AT 14" OC A = 36", TIES AT 12" OC DIA = 30", TIES AT 12" OC DIA = 24", TIES AT 12" OC
#4V2	8	1	4	4'-6"	
#7V3	6	1	7	11'-3"	
#6V4	6	1	6	8'-0"	
#3H1	6	2	3	15'-4"	
#3H2	5	2	3	13'-4"	
#3H3	12	3	3	9'-3"	
#3H4	9	3	3	7'-8"	

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).

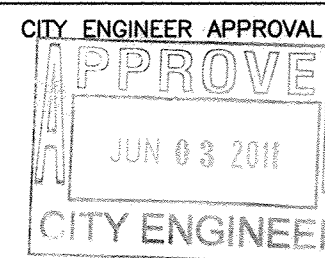
CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

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 **Russ Hugg**, of **Surv-Tek**, NMPS number **9750**.



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

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP  
**COORS BLVD AND LA ORILLA ROAD**  
FOUNDATION DETAILS, TYPE II AND TYPE III STANDARD



CITY PROJECT NO.  
706182

ZONE MAP NO  
E-12-Z

SHEET #

14 of 16



DESIGNED BY: sl  
DRAWN BY: pm  
CHECKED BY: RRB  
DATE: Oct. 2010  
DATE: Oct. 2010  
JOB NO.: 25002  
DATE: Oct. 2010



**GENERAL TRAFFIC CONTROL NOTES:**

1. The Contractor/TCP firm **MUST** adhere to the dates and times listed on the TCP permit. Failure to do so will result in the permit being **revoked**.
  2. The NMDOT reserves the right to make any changes and/or modifications to the approved Traffic Control Permit.
  3. The Contractor/TCP firm shall adhere to all the requirements listed in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
  4. In the areas of pavement operations or other activities within the traveled way and adjacent to the existing traveled lane, the contractor shall assure that no pavement drop-offs are left exposed during non-working hours. The contractor shall initiate corrective means as per "the New Mexico Department Of Transportation Pavement Drop-off Guideline" to achieve a minimum 6:1 slope between traveled lanes and a minimum 3:1 slope adjacent to the existing traveled lane with two 11 foot driving lanes as shown in the detail below.
- 
5. The Contractor/TCP firm will be required to cover up all conflicting signs within or in advance of the work zone.
  6. In covering up any conflicting signs, the contractor is to use an approved method of covering existing signing so as not to damage/distort sign sheeting or markings. The Contractor/TCP firm shall not place a patch on the sign and tape the patch directly to the face of the sign. Failure to adhere to this requirement will result in the Contractor/TCP firm being required to replace the sign.
  7. The Contractor/TCP firm shall not place a lane drop taper along a horizontal curve. The lane drop taper shall be placed in advance of the horizontal curve so that it is visible to all oncoming traffic.
  8. On crest vertical curves, the Contractor/TCP firm shall place lane drops in advance or at the beginning of the curve to enhance visibility of the lane drop to oncoming traffic.
  9. The Contractor/TCP firm **SHALL** contact Mr. Phil Gallegos, D3 Public Information Officer (PIO), at least 48 hours before any work listed in the TCP is performed, to confirm the actual start dates of the construction. Mr. Gallegos can then publish the upcoming work in the District Three Traffic Report. Mr. Gallegos can be reached at 841-2700.
  10. All traffic devices shall be kept clean throughout the duration of the project. Any sign that is tagged by Graffiti shall be cleaned within 24 hours or removed and replaced.
  11. "BUMP," "LOOSE GRAVEL," "LANE DROP-OFF SIGN" sign placement the contractor shall place W8-1-48 signs ("BUMP" - B/FO), W8-7-48 signs ("LOOSE GRAVEL" - B/FO) and/or W8-9a-48 signs ("SHOULDER DROP-OFFS" - B/FO) in advance of bridge approaches or other locations during cold milling and overlay operations as needed or as directed by the project manager. See standard drawing 702-01-1/3 for sign details
  12. The following reflectivity material shall be used on all signing placed on NMDOT roadways

SIGN	SIGN CODE	COLOR	LETTER SHEETING	BACKGROUND SHEETING
APPROACH SIGNS	W20-1,2,3,4,5, 7	(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
CHEVRONS	W1-8	(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
CURVES	W1-2	(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
REVERSE CURVE	W1-4	(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
MERGE	W4-1	(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
NO PASSING ZONE	W14-3	(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
FLAGGER PADDLE		(BLK/FLOURESCENT Orange side one with Red on side 2)	-----	Type VII, VIII or IX
ALL DRUMS		(BLK/FLOURESCENT Orange)	-----	Type VII, VIII or IX
All Other Const. Signs		Black on Orange		Type III

13. If any of the signs and/or traffic control devices, on the attached TCP, are being used overnight the following minimum reflectivity standards shall be required:

New MUTCD Table 2A-3. Minimum Maintained Retroreflectivity Levels <sup>1</sup>					
SHEETING TYPE (ASTM D4956-04)					
SIGN COLOR	Beaded Sheeting			Prismatic Sheeting III, IV, VI, VII, VIII, IX, X	ADDITIONAL CRITERIA
	I	II	III		
White on Green	W* ≥ G* 7	W* <sub>1</sub> G* <sub>1</sub> ≥ 15	W ≥ G* 25	W ≥ 25G* G* 25	Overhead
	W* <sub>2</sub> G* <sub>2</sub> 7		W ≥ 12G* G* 15		Ground-mounted
Black on Yellow or Black on Orange	Y* <sub>1</sub> O* <sub>1</sub>		Y ≥ 5G* O ≥ 50		☐
	Y* <sub>2</sub> O* <sub>2</sub>		Y ≥ 75, O ≥ 75		☐
White on Red		W ≥ 35, R ≥ 7			☐
Black on White		W ≥ 50			—

① The minimum maintained retroreflectivity levels shown in this table are in units of cd/m<sup>2</sup> measured at an observation angle of 0.2° and an entrance angle of 4.0°.

② For text and fine symbol signs measuring at least 1200 mm (48 in) and for all sizes of bold symbol signs

③ For text and fine symbol signs measuring less than 1200 mm (48 in)

④ Minimum Sign Contrast Ratio ≥ 3:1 (white retroreflectivity ÷ red retroreflectivity)

\* This sheeting type should not be used for this color for this application.

### BOLD SYMBOL SIGNS

• W1-1, 2 – Turn and Curve	• W3-1 – Stop Ahead	• W11-3 – Deer Crossing
• W1-3, 4 – Reverse Turn and Curve	• W3-2 – Yield Ahead	• W11-4 – Cattle Crossing
• W1-5 – Warning Road	• W3-3 – Signal Ahead	• W11-5 – Farm Equipment
• W1-6, 7 – Large Arrow	• W4-1 – Merge	• W11-6 – Snowmobile Crossing
• W1-8 – Chevron	• W4-2 – Lane Ends	• W11-7 – Bicyclist Crossing
• W1-10 – Intersection in Curve	• W4-3 – Added Lane	• W11-8 – Fire Station
• W1-15 – 250 Degree Loop	• W4-6 – Entering Roadway Added Lane	• W11-10 – Track Crossing
• W2-1 – Cross Road	• W6-1, 2 – Divided Highway Begins and Ends	• W12-1 – Double Arrow
• W2-2, 3 – Side Road	• W6-3 – Two Way Traffic	• W16-5p, 6p, 7p – Pointing Arrow Plaque
• W2-4, 5 – T and Y Intersection	• W10-1, 2 – 3, 4, 1-1, 1-2	• W20-2 – Hiker
• W2-6 – Circular Intersection	• W10-4 – Railroad Advance Warning	• W21-1a – Worker
	• W11-2 – Pedestrian Crossing	

### FINE SYMBOL SIGNS – Symbol Signs Not Listed As Bold Symbol Signs

### SPECIAL CASES

• W3-1 – Stop Ahead: Red retroreflectivity ≥ 7
• W3-2 – Yield Ahead: Red retroreflectivity ≥ 7; White retroreflectivity ≥ 35
• W3-3 – Signal Ahead: Red retroreflectivity ≥ 7; Green retroreflectivity ≥ 7
• W3-5 – Speed Reduction: White retroreflectivity ≥ 50
For non-diamond shaped signs (e.g. W14-1 (No Passing Zone), W14-4 (Cross Traffic Does Not Stop), or W13-1, -2, -3, -5 (Speed Advisory Plaque)), use largest sign dimension to determine proper minimum retroreflectivity level.

14. Placement of the sequential arrow shall be at or near the beginning of the lane closure taper. In areas of insufficient pavement width, the sequential arrow may be placed within the taper, but not to exceed  $\frac{1}{2}$  the taper length. In all cases, the sequential arrow shall be placed behind the channelization devices.
15. All signing on the interstate and on high speed 4 lane divided facilities shall be double indicated.
16. All signs that are part of work zone that is in place for more than 3 days shall be placed on posts.
17. Covering existing white and yellow stripes with black paint as a method of stripe removal is strictly prohibited.
18. All warning and regulatory signs shall meet the following size requirements:

a. Interstate:	Warning sign 48"x48"	Regulatory 48"x60"
b. Non-Interstate:	Warning sign 36"x36"	Regulatory 36"x42"
19. All CWB ends, within the clear zone, have to be protected with an approved crash cushion attenuator (approved based on the design speed of the road).
20. When flaring the leading end of a Temporary Concrete Wall Barrier (TCWB) within a construction work zone, the flare rate shall be done in accordance with the rates shown in the table below:

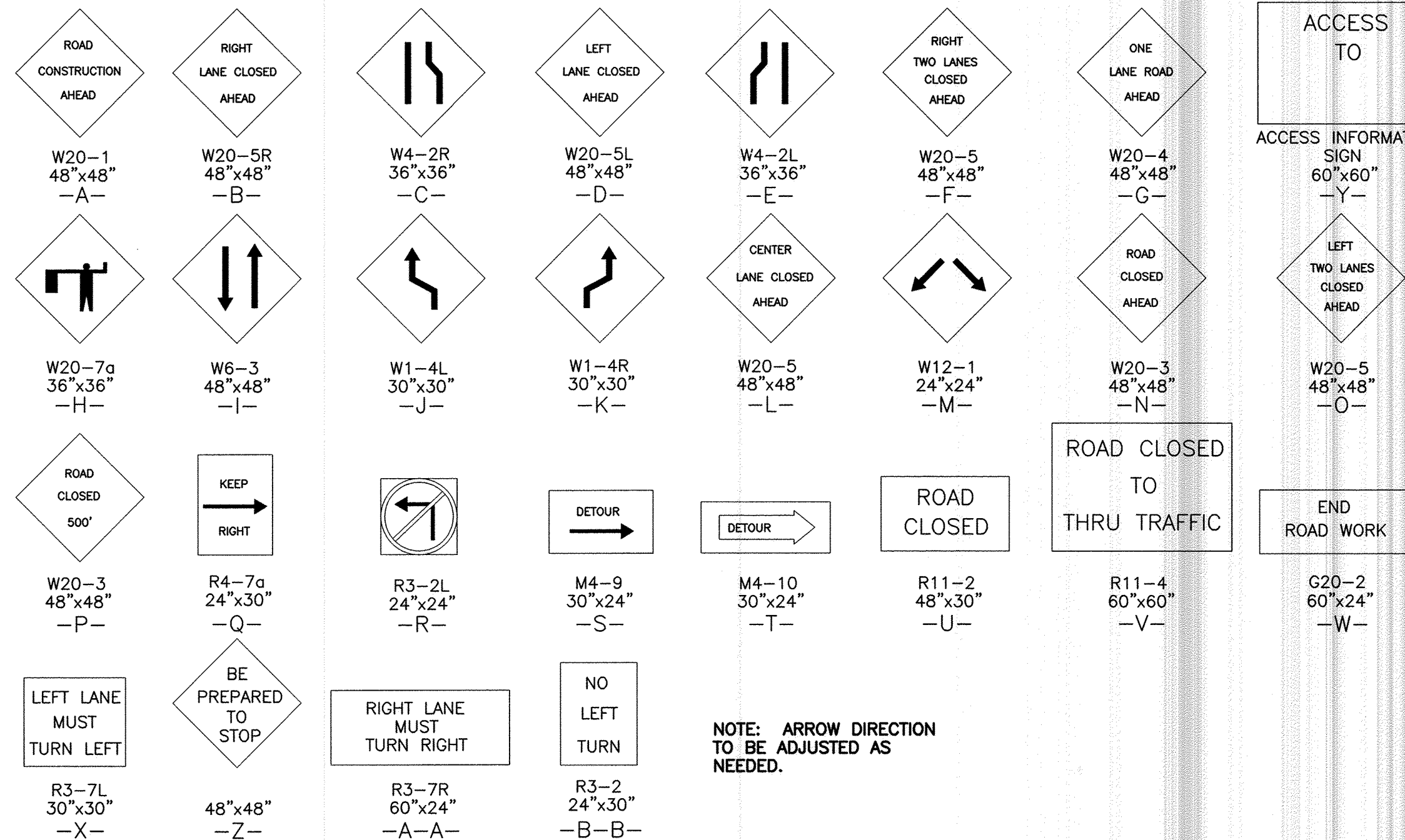
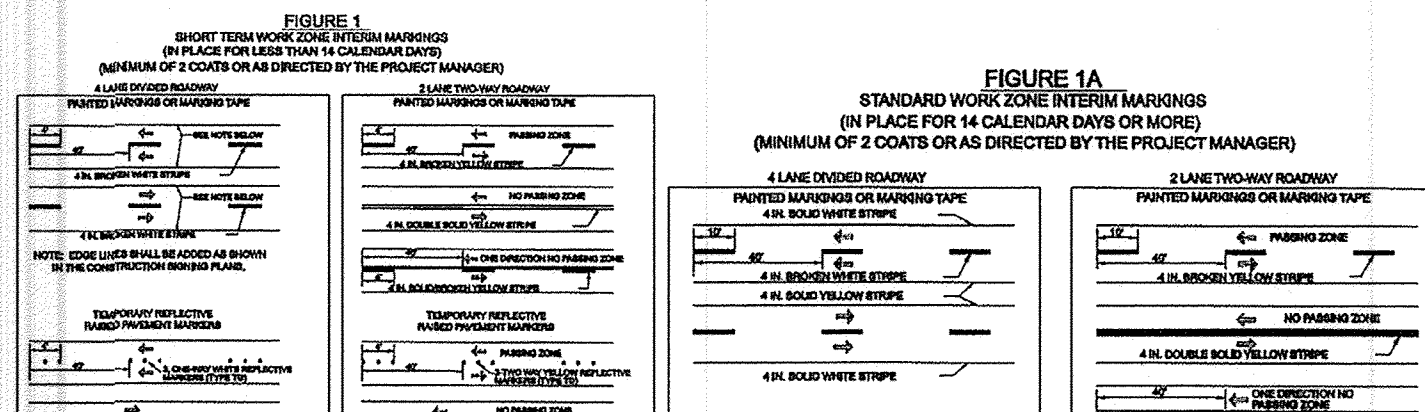
Roadway Speed Limit	Minimum Taper/Flare Rate	Desirable Taper/Flare Rate
Less than 45 MPH	8:1	18:1
Between 45 MPH and 55 MPH	10:1	24:1
Greater than 55 MPH	15:1	30:1

21. When CWB is placed in a construction work zone, a 5' buffer area is strongly recommended between the Temporary Concrete Wall Barrier and the work zone to accommodate barrier deflection. When a 5' buffer area is not attainable, consideration shall be given to anchoring the TCWB to the pavement surface. (See attachment "B" - note 8 in standard drawing 606-20-1/4 dated 1/1/2005).
22. The crash cushion attenuators shall be designed as per the District Traffic Engineer's recommendations. The District may elect to either utilize the posted speed or the 85% speed in the layout of the crash cushion attenuators within the work zone.
23. All construction signing shall have a Type III or higher reflective background.
24. All devices that are placed within the NMDOT R/W shall adhere to section 702 - Traffic Control Devices For Construction - in the latest edition of the NMDOT Specification book
25. All stationary objects within clear zone shall be properly shielded and outlined with drums mounted with Type "A" warning lights. Use of vertically mounted retro-reflective material in lieu of a Type A warning light is strictly prohibited.
26. Use of Type I or II barricades for approach tapers on rural Interstate or secondary roadways are prohibited.
27. Any equipment, materials, or vehicles stored within ROW shall be outside of clear zone (based on existing posted speed).
28. Any equipment, material or vehicle stored within clear zone shall be properly shielded.
29. Materials, work activities, equipment, and vehicles shall not be stored within the established buffer space.
30. All construction equipment, vehicles and materials shall remain behind traffic control devices.
31. All traffic control device types, quantities and spacing shall not deviate from the approved Traffic Control Plan. Any changes to the traffic control plan must be approved by the District Traffic Engineer or his/her designee
32. The following Traffic lengths, buffer zone, and spacing of devices requirements shall be adhered to:

Posted Speed (MPH)	Merging (L) & Shifting Taper (1/2L) Length (Ft.) <sup>1</sup>						Shoulder Taper (Ft.) <sup>2</sup>				Transition Area / Casing Zone <sup>3</sup>		Buffer Space / or Distance <sup>4</sup> to Fugger Station		Maximum Spacing of Devices (Ft.) <sup>5</sup>		
	Formula		12' Lane		13' Lane		4' 6"		8' 10'		1/2L (Ft.)		On a Taper		On a Tangent		
	Formula	12' Lane	8' Lane	12' Lane	8' Lane	13' Lane	12' Lane	8' Lane	13' Lane	12' Lane	8' Lane	13' Lane	12' Lane	8' Lane	13' Lane	12' Lane	8' Lane
20		75	40	80	40	85	45	9	18	18	22		115	20	40		
25	L=WS*60	115	60	120	60	135	70	14	21	28	35	250	155	25	70		
30		160	85	160	85	180	95	16	24	32	40	300	180	30	100		
35		225	115	225	115	245	125	27	41	54	68	450	250	35	150		
40		300	150	300	150	330	165	36	54	72	90	600	300	40	200		
45	L=WS*60	485	250	540	270	585	295	60	60	120	150	1030	360	45	110		
50		720	375	720	375	780	390	72	90	135	165	1330	450	50	150		
55		905	395	905	395	960	410	73	110	147	183	1320	465	55	110		
60		1090	420	1090	420	1140	435	74	110	147	183	1320	465	60	110		
65	L=WS*60	1275	445	1275	445	1330	460	75	110	147	183	1320	465	65	110		
70		1460	470	1460	470	1515	485	76	110	147	183	1320	465	70	110		
75		1645	495	1645	495	1700	510	77	110	147	183	1320	465	75	110		
80		1830	520	1830	520	1885	535	78	110	147	183	1320	465	80	110		

- <sup>2</sup> See Section 6C.08 on page 6C-5 and Figure 6C-2 on page 6C-6 of the 2003 MUTCD

33. The contractor or the traffic Control Subcontractor Shall provide a Traffic Control Supervisor on site during working hours for immediate response to traffic control issues/concerns.
34. Work Zone Interim Markings:
- a. The contractor shall place reflectorized painted markings on each markings on each intermediate lift of surfacing or milled surface at the end of day's surfacing or milling operation. these markings shall be placed in accordance with the details shown in figure 1 or figure 1a on this sheet. in the event the painted markings cannot be placed as described above, the contractor shall, with the approval of the project manager, place marking tape or temporary reflective raised pavement markers in accordance with the details shown in figure 1 or figure 1a on this sheet or as directed by the project manager. Payment for marking tape will be paid for under the unit price of reflectorized painted markings, unless otherwise specified.
  - b. The contractor shall place removable marking tape or temporary reflective raised pavement markers after placement of the final lift of surfacing if permanent markings are not placed during the same working day. These markings shall be placed in accordance with the details shown in figure 1 or 1a on this sheet or as directed by the project manager.
  - c. On roadways with severe curvature, broken-line interim markings with half-cycle lengths and a minimum of 2 foot stripes or a group of two temporary reflective pavement markings spaced 2 feet apart may be used where passing is allowed. Interim edge lines or channelization lines for delineation may be used as needed or as directed by the project manager. Passing/no passing zone signing to supplement interim markings for delineation may be used as needed or as directed by the project manager. All interim markings shall be in accordance with the current edition of the MUTCD.



NOTE: ARROW DIRECTION  
TO BE ADJUSTED AS  
NEEDED.

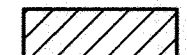
## TAPER REQUIREMENTS

SPEED LIMIT (MPH)	TAPER LENGTH (FEET)			MAXIMUM DISTANCE BETWEEN DEVICES (FEET)	MINIMUM NUMBER OF DEVICES REQUIRED
	10' LANE	11' LANE	12' LANE		
25	104	115	125	25	6
30	150	165	185	30	7
35	204	225	245	35	8
40	267	293	320	40	9
45	450	495	540	45	13
50	500	550	600	50	13
55	550	605	660	55	13

### RECOMMENDED SIGN SPACING (D) FOR ADVANCE WARNING SIGN SERIES

SPEED MILES PER HOUR	MINIMUM BETWEEN SIGNS	DISTANCE IN FEET FROM LAST SIGN TO TAPER
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
35-40	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

## LEGEND



WORK AREA



TRAFFIC SIGN &amp; QUANTITY (SEE THIS SHEET FOR DESIGNATION)



BARRICADE - TYPE I, TYPE II, OR BARREL



BARRICADE - TYPE II



### VERTICAL PANEL

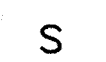


**WARNING SIGN**

**DISTANCE BETWEEN SIGNS—A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET**



### FLAGMAN POSITION




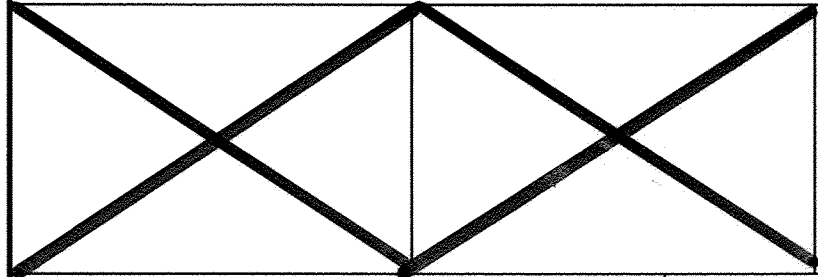
SPACING BETWEEN BARRICADES—A DISTANCE MEASURED IN FEET  
EQUAL TO THE SPEED LIMIT OF THE STREET

TAPER LENGTH - ON CHART

TANGENT LENGTH - IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET

## NOTES

1. ALL ADVANCE WARNING SIGNS ARE TO BE DOUBLE INDICATED WHENEVER MEDIANS ARE PRESENT.
2. TRANSFORMATION FROM EXISTING SIGNALS TO SPAN WIRE IS TO OCCUR AT OFF PEAK HOURS.
3. THIS IS A STANDARD TRAFFIC CONTROL PLAN AND SOME TRAFFIC CONTROL SITUATIONS MAY BE SHOWN THAT ARE NOT REQUIRED ON THIS PARTICULAR PROJECT.

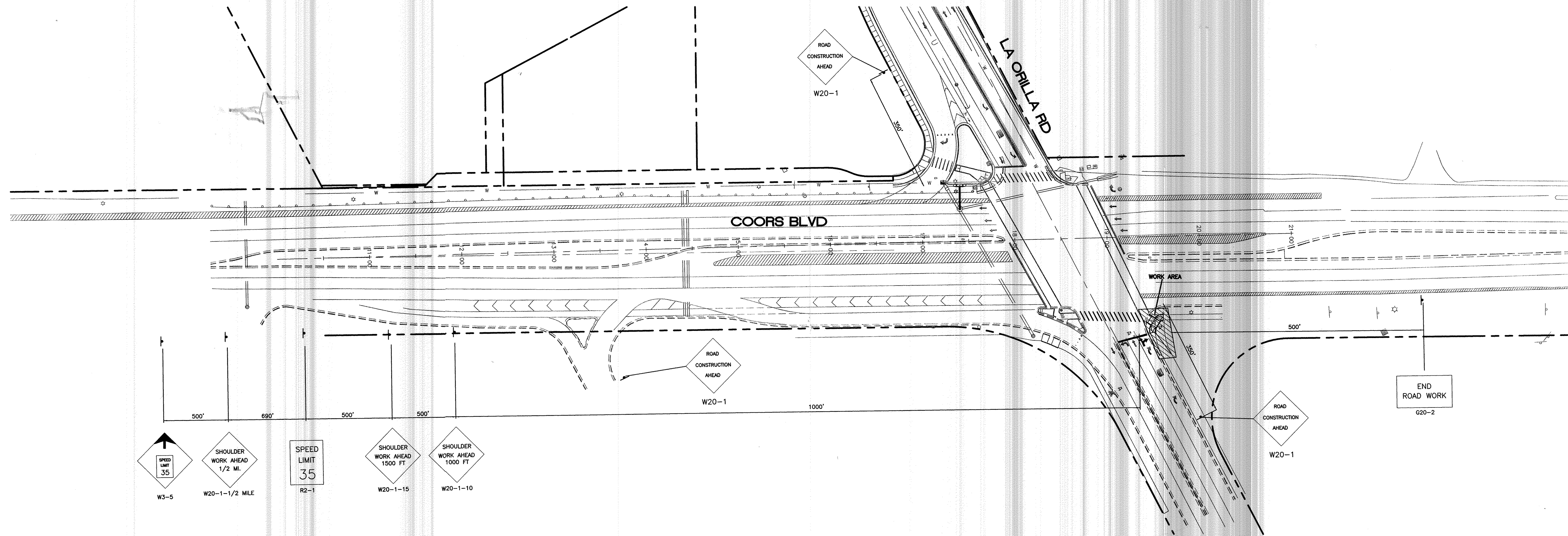
	<b>TIERRA WEST, LLC</b> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NEW MEXICO 87109 (505) 858-3100	NO.	DATE	DESIGNED BY	DRAWN BY	DRAWN NAME	CHECKED BY
COUNTY OF BERNALILLO DEPARTMENT OF PUBLIC WORKS ENGINEERING GROUP							
<b>COORS BLVD</b> <i>NMDOT TRAFFIC CONTROL STANDARDS</i>							
		LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.			
CITY PROJECT NO.	ZONE MAP NO. E-12-Z	SHEET #	15 of 16				

FOR INFORMATION ONLY






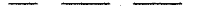










SCANNED BY  
PLANNING

## WORK AND NON WORK HOURS



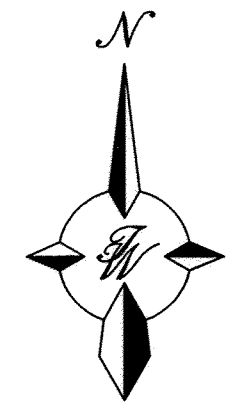
### LEGEND

- |   |                                       |
|---|---------------------------------------|
|  | EXISTING CURB & GUTTER                |
|  | PROPOSED CURB & GUTTER                |
|  | BOUNDARY LINE                         |
|  | EXISTING BOUNDARY LINE                |
|  | EASEMENT                              |
|  | CENTERLINE                            |
|  | RIGHT-OF-WAY                          |
|  | 4" DASHED WHITE LINE                  |
|  | 4" SOLID WHITE STRIPE                 |
|  | 4" DOTTED LINE                        |
|  | WORK AREA                             |
|  | BARRICADE— TYPE I, TYPE II, OR BARREL |
|  | BARRICADE— TYPE III                   |
|  | WARNING SIGN                          |


**NOTES:**

1. ONLY ONE SETUP FOR LANE CLOSURES WILL BE ALLOWED AT ONE TIME.
2. RIGHT LANE CLOSURES AND WORK SHALL TAKE PLACE FIRST.
3. LEFT LANE CLOSURES AND WORK SHALL TAKE PLACE SECOND.
4. WORK HOURS SHALL BE 9:00 AM TO 3:00 PM OR 6:00 PM TO 5:00 AM ONLY.
5. THE POSTED SPEED LIMIT FOR COORS BOULEVARD IS 45 MPH.

FOR INFORMATION ONLY



GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.

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

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING GROUP

# COORS BLVD

## DOT TRAFFIC CONTROL PLAN

CITY PROJECT NO. 706182

ZONE MAP NO.  
E-12-Z

SHEET # 16 of 16

[illegible]