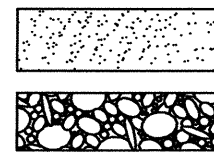


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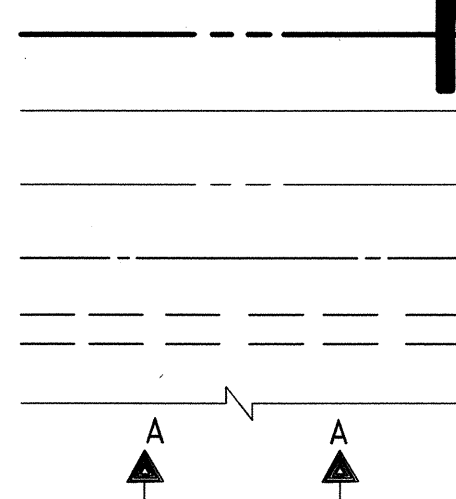
## MATERIALS

CONCRETE  
RIP-RAP



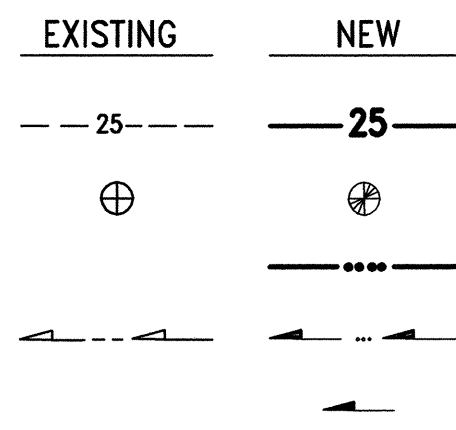
## LINES

SUBDIVISION BOUNDARY  
PROPERTY LINE (PLAN)  
PROPERTY LINE (SECTION)  
CENTERLINE  
EASEMENT LINE  
MATCH LINE  
SECTION CUT LINE



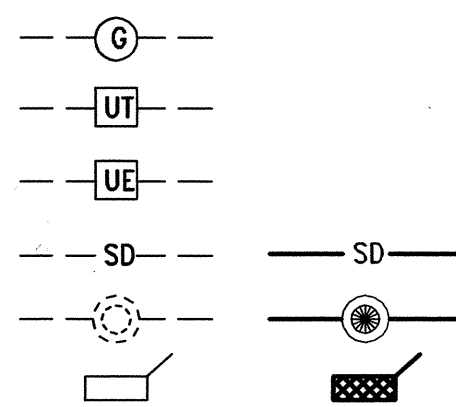
## EARTHWORK

CONTOUR LINE  
SPOT ELEVATION  
PROJECT / PHASE BOUNDARY  
FLOWLINE  
DIRECTION OF FLOW



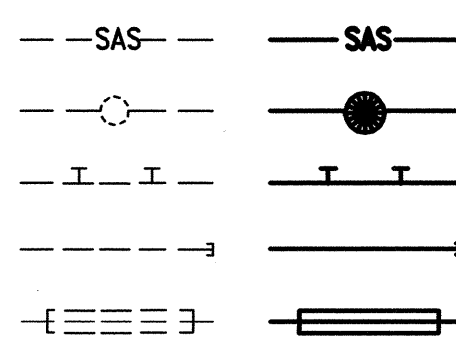
## MISCELLANEOUS UTILITIES

GAS LINE  
UNDERGROUND TELEPHONE  
UNDERGROUND ELECTRICAL  
STORM DRAIN  
STORM DRAIN MANHOLE  
STORM DRAIN INLET



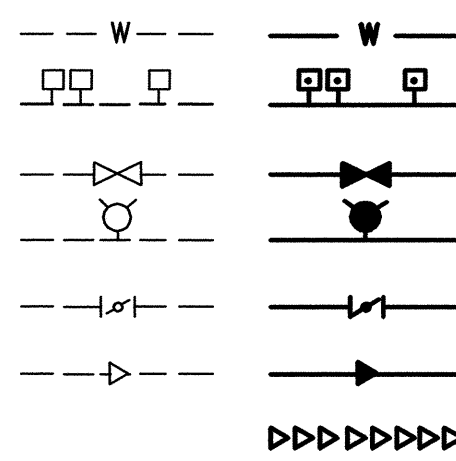
## SANITARY SEWER

SANITARY SEWER LINE  
SANITARY SEWER MANHOLE  
SAS SERVICE CONNECTIONS  
SAS CAP OR PLUG  
ENCASEMENT



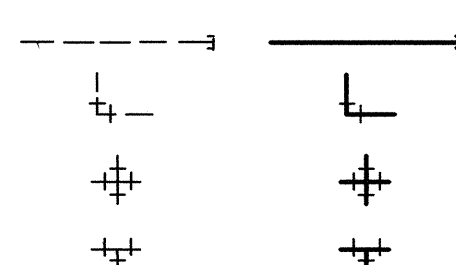
## WATER

WATER LINE  
WATER SERVICE CONNECTIONS  
GATE VALVE  
FIRE HYDRANT  
BUTTERFLY VALVE  
REDUCER  
WATER PRESSURE ZONE BOUNDARY



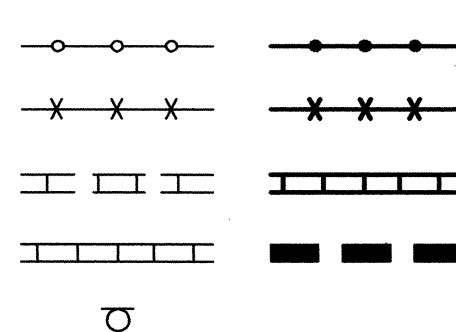
## WATER FITTINGS

CAPS AND PLUGS  
ELBOW  
CROSS  
TEE



## MISCELLANEOUS

CHAINLINK FENCE  
FIELD FENCE  
COMMON YARD WALL  
RETAINING WALL  
POWER OR TELEPHONE POLE



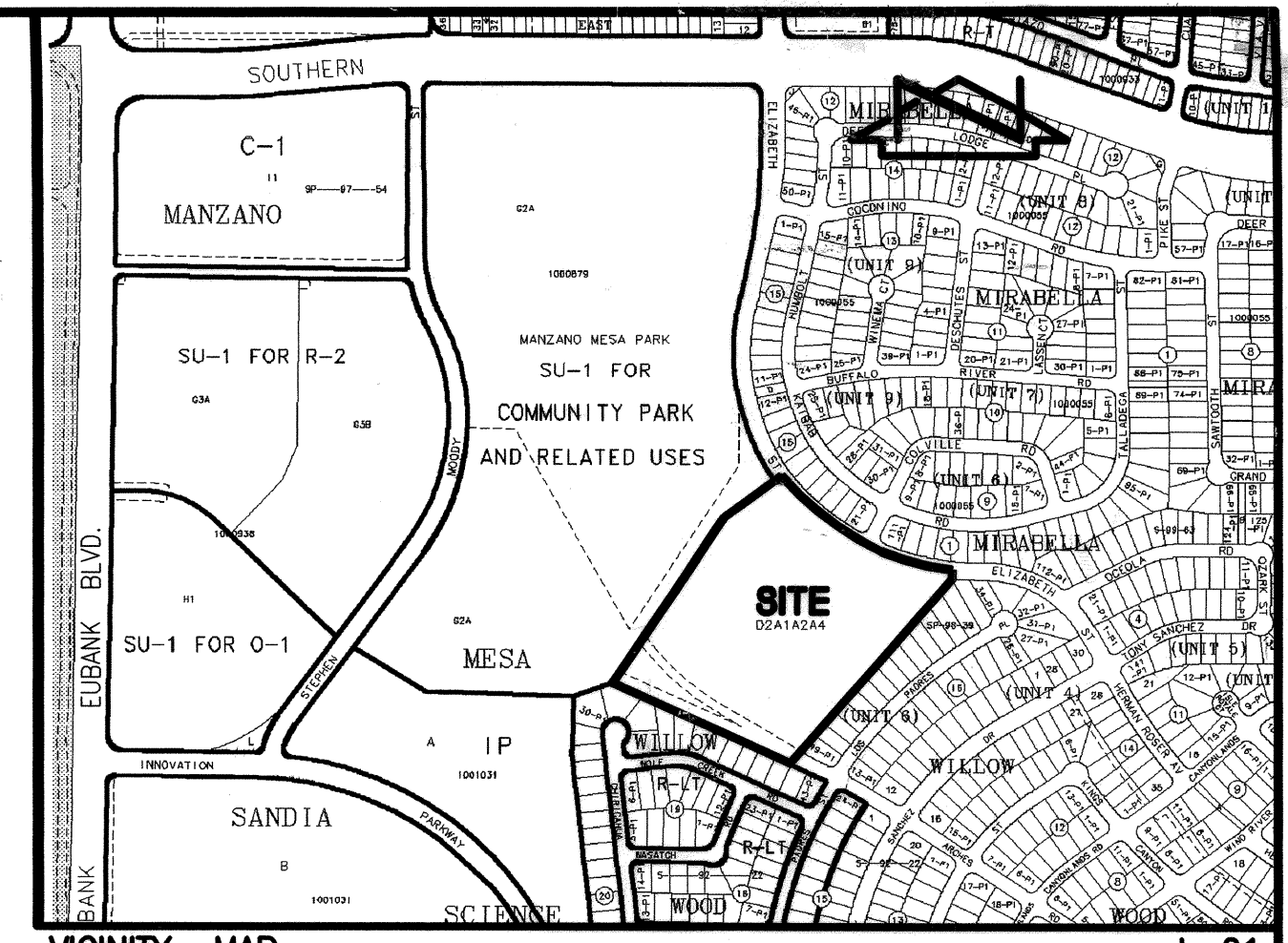
# CONSTRUCTION PLANS

for

# MANZANO MESA ELEMENTARY SCHOOL FLASHING SCHOOL BEACON

ALBUQUERQUE, NEW MEXICO

AUGUST, 2004



VICINITY MAP  
SCALE: 1" = 750'

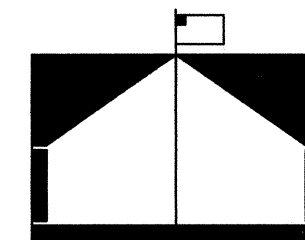
L-21



## CERTIFICATE OF SUBSTANTIAL COMPLIANCE

I, JEFFREY G. MORTENSEN, NMPE 8547, OF THE FIRM JEFF MORTENSEN & ASSOCIATES, INC., HEREBY CERTIFY THAT THE INFRASTRUCTURE CONSTRUCTED AS PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR PERSONNEL UNDER MY DIRECT SUPERVISION AND, TO THE BEST OF MY KNOWLEDGE AND BELIEF, HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND THE ORIGINAL DESIGN INTENT OF THE CITY ENGINEER APPROVED PLANS. THE RECORD INFORMATION EDITED ONTO THIS ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS RECORD INFORMATION IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE DESIGN INTENT OF THIS PROJECT. THOSE RELYING ON THIS DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR ACCEPTANCE OF THE PROJECT BY THE CITY ENGINEER.

JEFFREY G. MORTENSEN, NMPE 8547  
DATE 08-02-2005



## RECORD DRAWING

## INDEX OF DRAWINGS

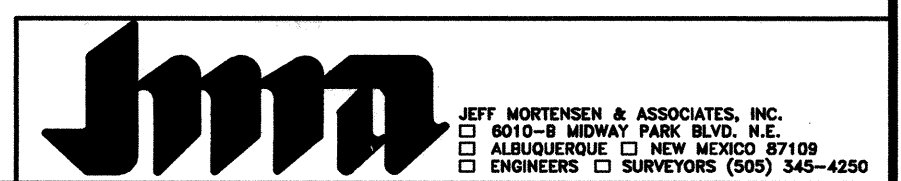
### SHEET

### DESCRIPTION

1	COVER SHEET, VICINITY MAP, GENERAL NOTES, LEGEND AND INDEX OF DRAWINGS
2	TRAFFIC NOTES, LEGEND, EQUIPMENT REQUIREMENTS AND INCIDENTAL ITEMS
3	SITE PLAN
4	ENLARGED SITE PLAN - EAST
5	ENLARGED SITE PLAN - WEST
6	CURB RAMP DETAILS
7	FLASHING BEACON DETAILS (MASTARM)
8	FLASHING BEACON DETAILS (PEDESTAL)
9	TRAFFIC SIGNAL MASTARM DETAILS, TYPE II STANDARD
10	FOUNDATION DETAILS, TYPE II AND TYPE III STANDARDS
11	TRAFFIC SIGNAL PULL BOX AND SCHOOL SIGN DETAILS
12	METER PEDESTAL DETAILS



2004.180.6



REV.	SHEETS	CITY ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE		APPROVED FOR CONSTRUCTION	
DRC Chairman		Transportation		Water/Wastewater		Hydrology		C.I.P.	
Const. Mngmt.		Const. Coord.							
City Project No.		714082		SHEET		OF		12	
09-08-2004									



SIGNAL, STRIPING, AND SIGNAGE NOTES

1. 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).
2. 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.
3. THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.
4. 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.
5. SPLICING OF COMMUNICATIONS CABLE WILL NOT BE PERMITTED IN PULL BOXES. SPLICING OF COMMUNICATIONS CABLE (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.
6. 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.
7. ALL PULL BOXES SHALL BE REINFORCED POLYMER MORTAR HEAVY DUTY TYPE WITH REINFORCED POLYMER MORTAR HEAVY DUTY COVERS. CONCRETE COVERS, STEEL COVERS, AND CONCRETE PULL BOXES WILL NOT BE ACCEPTABLE.
8. 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.
9. 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.
10. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNING AND DELIVER TO THE CITY TRAFFIC ENGINEERING YARDS WHEN TRAFFIC SIGNALS ARE PUT INTO OPERATION.
11. 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.
12. 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.
13. 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.
14. THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL PROVIDE TRAFFIC SIGNAL TIMING PLANS AND WILL PROGRAM TRAFFIC SIGNAL CONTROLLERS.
15. EXISTING CONDUITS TO BE REMOVED OR ABANDONED SHALL HAVE ALL WIRING REMOVED.
16. 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.
17. 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.
18. THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO DIRECT TRAFFIC WHEN SIGNALS ARE TURNED OFF.
19. 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.
20. 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.
21. STRIPING BY CONTRACTOR WILL BE REQUIRED PRIOR TO THE FINAL ACCEPTANCE.
22. STRIPING ERADICATION, IF REQUIRED, SHALL BE ACCOMPLISHED BY WATER BLASTING OR SURFACE PLANING OF THE ROADWAY TO A MAXIMUM DEPTH OF 0.25 INCHES AND FOR A WIDTH EQUAL TO TWO TIMES THE WIDTH OF THE STRIPE OR MARKING TO BE REMOVED.
23. CONTRACTOR SHALL CONTACT DAVE HARMON, CITY TRAFFIC ENGINEERING OPERATIONS, PRIOR TO STRIPING AND SIGN INSTALLATION (857-8691).
24. ALL SIGNAGE SHALL COMPLY WITH THE M.U.T.C.D. (LATEST EDITION).
25. MINIMUM CONDUIT AND BORE DEPTH IS 30" UNLESS AUTHORIZED BY THE ENGINEER.

INCIDENTAL ITEMS \*

1. REMOVAL OF EXISTING PULL BOXES, CONDUITS, OR OTHER SIGNAL EQUIPMENT FOR INSTALLATION OF NEW SIGNAL EQUIPMENT.
2. CABLE TESTING AND DIAGRAMS.
3. BORING, DRILLING, PUSHING, AND TRENCHING, INCLUDING REMOVAL AND REPLACEMENT OF PAVEMENT, SIDEWALKS, DRIVE PADS, 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.
4. LOCATION OF UTILITY LINES INCLUDING EXPLORATORY TRENCHING AND EXPOSING OF GAS LINES WHEN BORING.
5. DESIGN, MATERIALS, INSTALLATION AND REMOVAL OF SAFETY BARRIER FOR SHIELDING EQUIPMENT OR MATERIAL.
6. APPRISING PUBLIC THROUGH THE LOCAL NEWS MEDIA.
7. HAULING OF MATERIAL TO BE DISPOSED TO CITY LANDFILL.
8. REMOVAL, SALVAGE, AND TRANSPORTATION OF EXISTING SIGNAL EQUIPMENT TO THE TRAFFIC ENGINEERING OPERATIONS YARD.
9. LEAN FILL FOR CONDUIT TRENCHES.
10. PULL BOX ADJUSTMENT TO GRADE.
11. OFF-DUTY POLICE OFFICER FOR TRAFFIC CONTROL.
12. REMOVAL AND REPLACEMENT IN KIND OR BETTER OF LANDSCAPING INCLUDING SPRINKLERS, FOR INSTALLATION OF PULL BOXES, CONDUITS AND SIGNAL FOUNDATIONS.
13. 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.

14. NO. 8 AWG COPPER CONDUCTOR (BARE) INSTALLED IN CONNECTION WITH NON METALLIC CONDUIT (SEE SEC 424.3.2 OF STANDARD SPECIFICATIONS).

TRAFFIC SIGNAL EQUIPMENT REQUIREMENTS

1. THIS PROJECT IS AN EXTENSION OF AN EXISTING SIGNAL SYSTEM. THEREFORE THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:
- A. ALL CONTROLLERS SUPPLIED FOR THIS PROJECT SHALL BE MANUFACTURED BY ECONOLITE.
- B. ALL TRAFFIC PULL BOXES USED ON THIS PROJECT SHALL BE LARGE SIZE.
2. ALL SIGNAL ASSEMBLIES, PEDESTRIAN SIGNALS, CABINETS AND FITTINGS SHALL COMPLY WITH THE CITY OF ALBUQUERQUE TYPE AND COLOR REQUIREMENTS.
3. CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A MATERIAL SUBMITTAL FOR THE FLASHING BEACON CONTROLLER PRIOR TO THE SUBMISSION OF THE WORK ORDER PACKAGE TO THE CITY OF ALBUQUERQUE.

4. TIME CLOCK INSTALLED UNDER THIS CONTRACT, SHALL BE REMOVED BY CITY TRAFFIC ENGINEERING. FOR FUTURE REFERENCE, ELEMENTARY SCHOOL INSTALLATIONS SHALL DELETE THE STANDARD CLOCK AND INSTALL A MANUAL SWITCH ONLY FOR OPERATION BY THE CROSSING GUARDS.

TRAFFIC SIGNAL LEGEND

NEW	EXISTING	ITEM
		PULL BOX
		SERVICE POLE
		METER PEDESTAL
		CONTROLLER CABINET
		CONDUIT RUN (SIGNALS)
		CONDUIT RUN (INTERCONNECT)
		LOOP DETECTOR
		TRAFFIC SIGNAL PEDESTAL POLE
		CONDUIT RUN NUMBER (FLASHING BEACON)
		CONDUIT RUN NUMBER (POWER SERVICE)
		CONDUIT RUN NUMBER (INTERCONNECT)
		TYPE II STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACK PLATE, AND OPTICAL DETECTOR
		TRAFFIC SIGNAL, BACK PLATE, OPTICAL DETECTOR, LUMINAIRE, AND VIDEO CAMERA
		PEDESTRIAN PUSH BUTTON (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		PEDESTRIAN SIGNALS (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		SPLICE CABINET
		TRAFFIC MANHOLE
		VIDEO CAMERA

DEFINITIONS

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

File Path: E:\JMM\KRM\CON\86A  
File Name: 41806N.DWG  
Plot Date: 09-02-2004  
Plot Time: 09:18 am

RECORD DRAWING

JMA

2004.180.6

JEFF MORTENSEN & ASSOCIATES, INC.  
600-B HIGHWAY PARK BLVD. NE  
ALBUQUERQUE, NM 87109  
ENGINEERS & SURVEYORS (505) 345-4250  
FAX: (505) 345-4254 □ ESTABLISHED 1977

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE: MANZANO MESA ELEMENTARY SCHOOL  
FLASHING SCHOOL BEACON  
TRAFFIC NOTES, LEGEND, EQUIPMENT REQUIREMENTS AND INCIDENTAL ITEMS

Design Review Committee  
APPROVE  
OCT - 6 2004  
DESIGN REVIEW COMMITTEE

City Engineer Approval  
APPROVE  
DEC - 7 2004  
CITY ENGINEER

Last Design Update

City Project No.

714082

Zone Map No.

L-21

Sheet

2

of

12

AS BUILT INFORMATION

CONTRACTOR

WORKS

DATE

DATE

DATE

DATE

DATE

PROJECT BENCHMARK

ACS 3 1/4" ALUMINUM CAP STAMPED "ACS 6-121, 1986" SET FLUSH

IN TOP OF EAST MEDIAN CURB AT THE INTERSECTION OF ELIZABETH

STREET WITH CENTRAL AVENUE

ELEVATION = 5500.669 FEET (NGVD 1929)

DATE

BY

JMA

NO.

991833

ENGINEER'S SEAL

05-02-2005

09-08-2004

REMARKS

Revisions

DESIGN

DATE

06-2004

06-2004

08-2004

Designed By

J.G.M.

Drawn By

S.G.H.

Checked By

J.G.M.




FOR ENLARGED PLAN, SEE SHEETS 4 AND 5



SCALE: 1" = 50'

A horizontal graphic scale bar. Above the bar, the text "SCALE: 1" = 50'" is centered. The bar has tick marks at 0, 25, 50, and 100 feet. The segment from 0 to 25 feet is divided into five equal black and white alternating blocks. The segment from 25 to 50 feet is a solid black block. The segment from 50 to 100 feet is a solid white block.

### LEGEND

BR	BARRICADE SIGN
CLF	CHAIN LINK FENCE
CONC	CONCRETE
EA	EDGE OF ASPHALT
FL	FLOWLINE
MH	MANHOLE
PVC	POLYVINYL CHLORIDE
R.O.W.	RET-OF-WAY
RD	REINFORCED CONCRETE PIPE
SCP	STORM DRAIN
SI	STORM INLET
STD C&G	STANDARD CURB & GUTTER
SW	SIDEWALK
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
W	WATER
W/	WITH
WF	WIRE FENCE
WVB	WATER VALVE BOX
	SMALL GROUP OF TREES

RECORD DRAWING		ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	DATE	REMARKS	BY	DESIGN	FIELD NOTES		PROJECT BENCHMARK	CONTRACTOR	DATE
					NO.	DATE			
					991833	07-2002	ACS 3 1/4" ALUMINUM CAP STAMPED "ACS 6-121, 1986". SET FLUSH IN TOP OF EAST MEDIAN CURB AT THE INTERSECTION OF ELIZABETH STREET WITH CENTRAL AVENUE	CONTRACTOR BY	DATE
							ELEVATION = 5500.669 FEET (MND 1929)	INSPECTOR'S SIGNATURE BY	DATE
								FIELD VERIFICATION BY	DATE
								CONTRACTOR'S FIELD CHECKED BY	DATE
								MICRO-FILM INFORMATION	
								RECORDED BY	DATE

05-02-2005

05-02-2005

05-02-2005



2004.180.6

JEFF MORTENSEN & ASSOCIATES, INC.  
☐ 6010-B MIDWAY PARK BLVD. N.E.  
☐ ALBUQUERQUE ☐ NEW MEXICO 87109  
☐ ENGINEERS ☐ SURVEYORS (505) 345-4250  
☐ FAX: 505 345-4254 ☐ ESTABLISHED 1977

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE:	MANZANO MESA ELEMENTARY SCHOOL FLASHING SCHOOL BEACON SITE PLAN
--------	---

DESIGN REVIEW COMMITTEE

**APPROVE**

OCT - 6 2004

DESIGN  
REVIEW COMMITTEE

City Engineer Approval  
APPROVED  
DEC - 7 2004  
CITY ENGINEER

Last Design Update

Designed By
Drawn By
Checked By

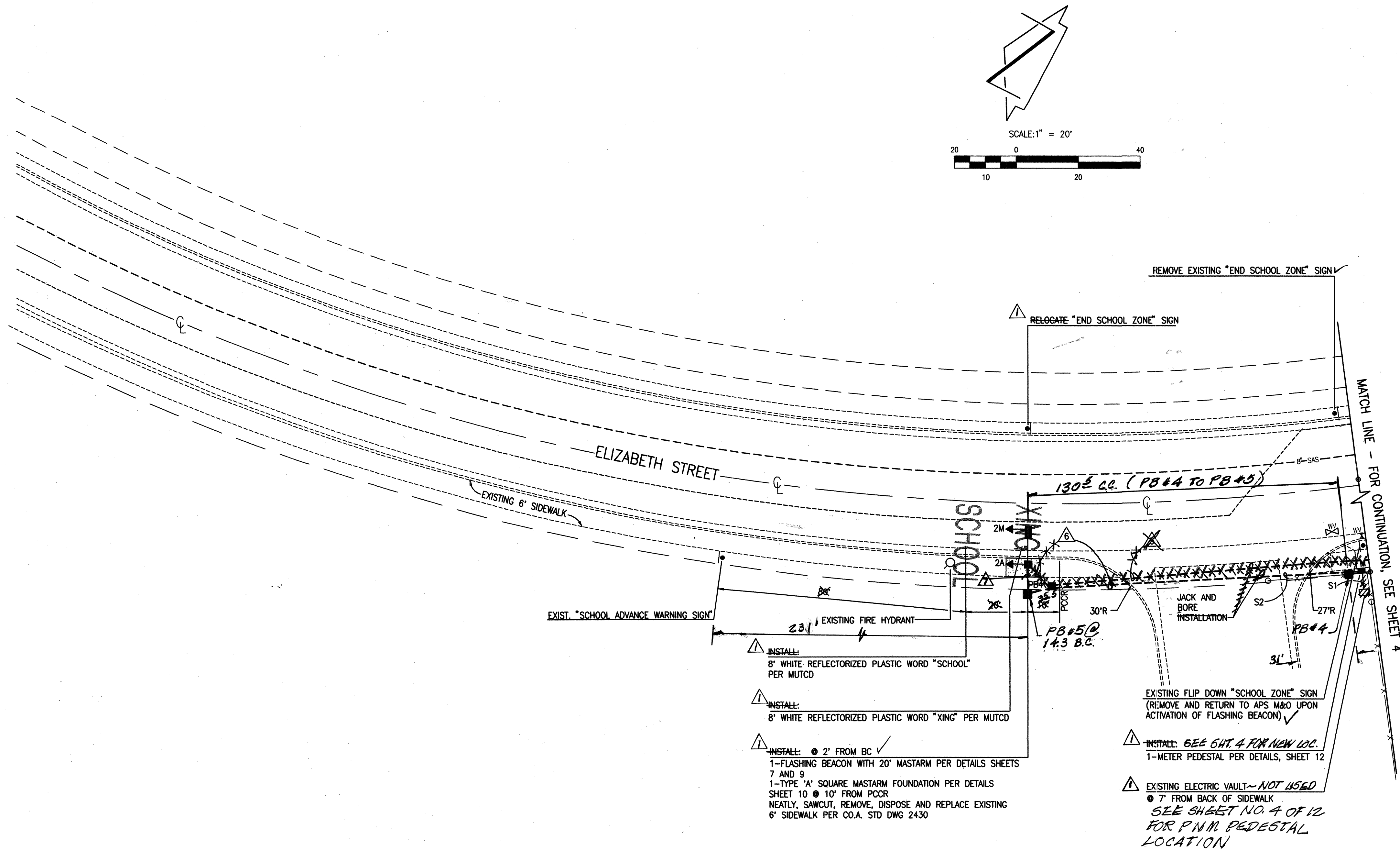
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# RECORD DRAWING









FUNCTION CHART - 115 VOLT CIRCUIT MULTI-CONDUCTOR CABLE 5			
CONDUCTOR NUMBER	BASE COLOR	FUNCTION	FIELD CONNECTION
1	BLACK	SPARE	
2	WHITE	NEUTRAL	
3	RED	CIRCUIT 1	1M 1A
4	ORANGE	CIRCUIT 2	2M 2A
5	GREEN	GROUND	

NOTE: IDENTIFY CONDUCTORS LISTED AS 115 VOLTS AT EACH SPLICE POINT

CONDUIT AND CONDUCTOR REQUIREMENTS					
CONDUIT LENGTH, SIZE AND TYPE			CONDUIT FILL BY LENGTH AND TYPE		
RUN ID	SIZE/ LENGTH	TYPE	REMARKS	MCC5	SCG
S1	5' <del>100</del>	REC	POWER TO M		1 @ 21
S2	400' 30	REC	M TO PWB 1		1 @ 105
	18' 12	REC	PB1 TO PB1	1 @ 20	
	45	REC	PB1 TO PB2	1 @ 50	
	220	REC	PB2 TO CC	1 @ 225	
	15	REC	CC TO PB3	1 @ 20	
	125' 100	REC	PB3 TO PB4	1 @ 190	
	20' 130	REC	PB4 TO PMP	1 @ 125	
	15		BASE TO 1M	1 @ 45	
			BASE TO 2M	1 @ 45	
TOTAL	507			610	117

△ PB 5 TO PP 2

### LEGEND

- |           |                                    |
|-----------|------------------------------------|
| CC        | CONTROLLER CABINET                 |
| PB        | PULL BOX                           |
| M         | ELECTRIC METER                     |
| PP        | PEDESTAL POLE                      |
| 1M        | HORIZONTAL TRAFFIC SIGNAL ASSEMBLY |
| 1A        | VERTICAL TRAFFIC SIGNAL ASSEMBLY   |
| MCC       | MULTI CONTROL CABLE                |
| SCC       | SINGLE CONDUCTOR CABLE             |
| REC       | RIGID ELECTRICAL CONDUIT           |
| — — — — — | TRENCHING INSTALLATION             |
| - - - - - | JACK AND BORE INSTALLATION         |

# RECORD DRAWING

SEE SHEET 1 FOR CERTIFICATION



2004.180.6

JEFF MORTENSEN & ASSOCIATES, INC.  
☐ 6010-B MIDWAY PARK BLVD. NE.  
☐ ALBUQUERQUE ☐ NEW MEXICO 87109  
☐ ENGINEERS ☐ SURVEYORS (505) 345-4250  
☐ FAX: 505 345-4254 ☐ ESTABLISHED 1977

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE:	MANZANO MESA ELEMENTARY SCHOOL FLASHING SCHOOL BEACON ENLARGED SITE PLAN-WEST
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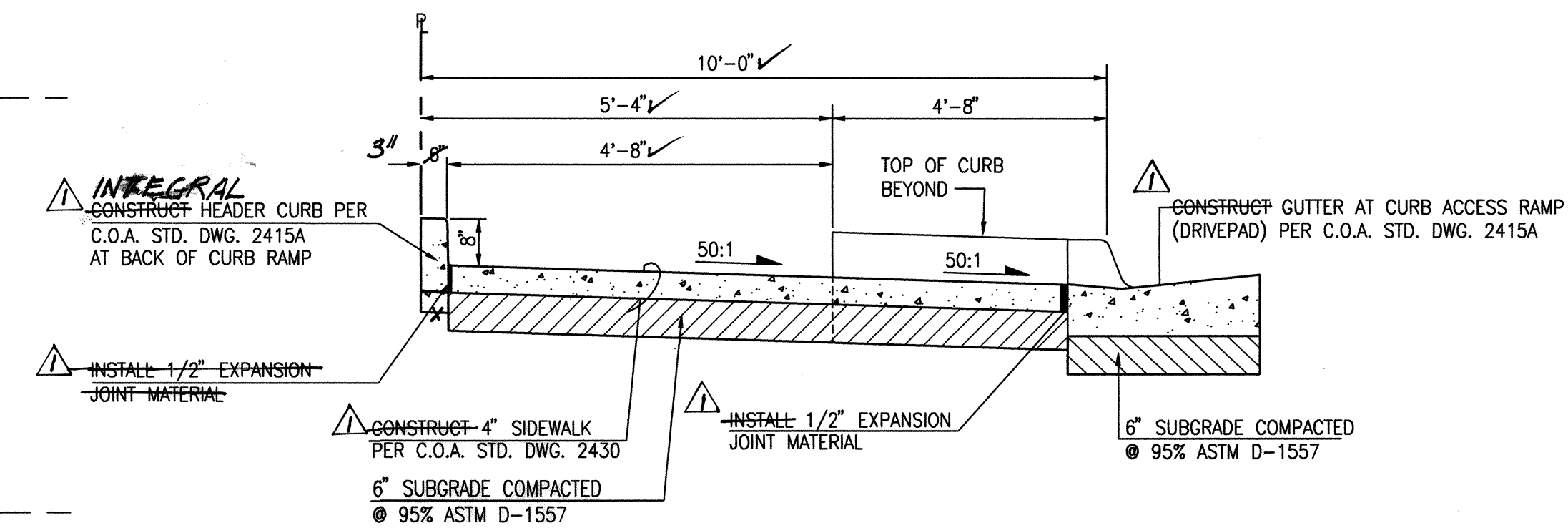
Design Review Committee  
**APPROVE**  
OCT - 6 2004  
DESIGN  
REVIEW COMMITTEE

City Engineer Approval  
APPROVED  
DEC - 7 2004  
CITY ENGINEER

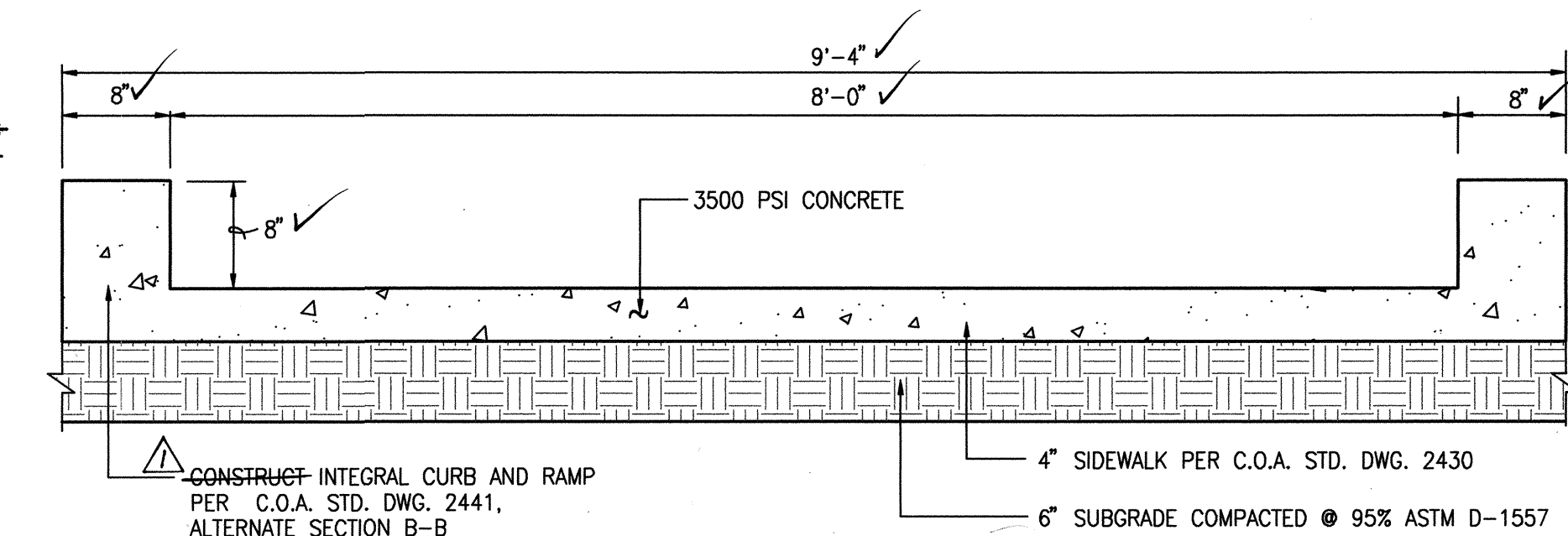
City Project No.	714082	Zone Map No.	L-21	Sheet	5	of	12
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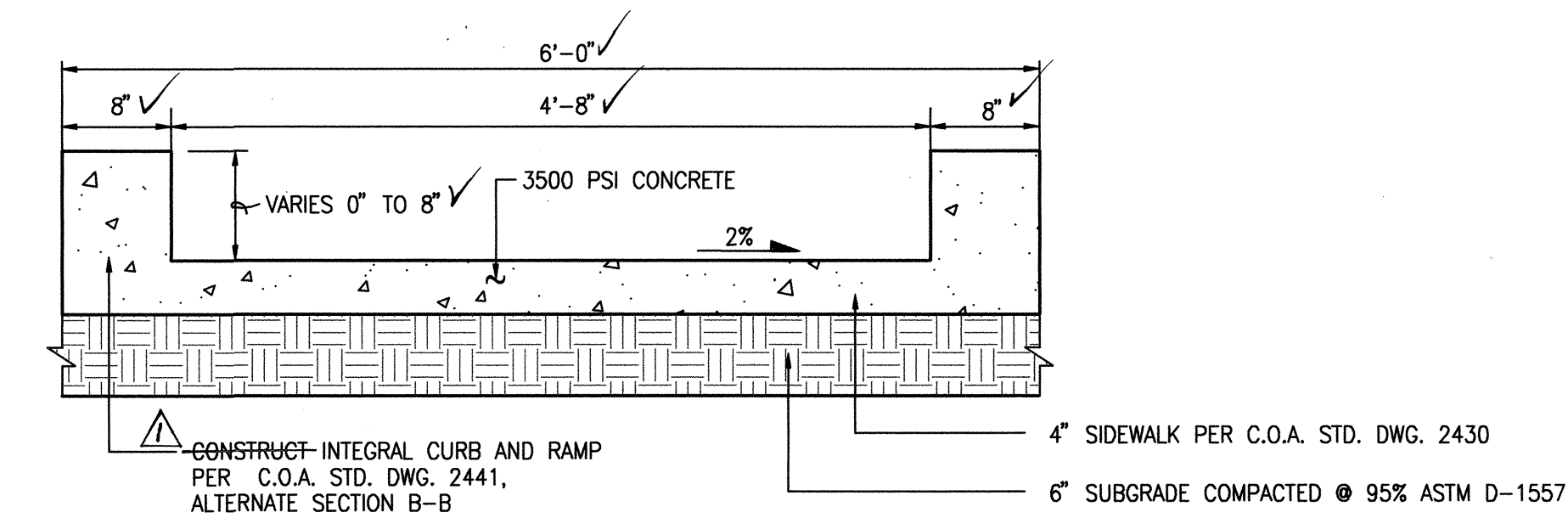




SECTION A-A  
SCALE: 1" = 2'-0"



SECTION C-C  
SCALE: 1" = 1'



SECTION B-B  
SCALE: 1" = 1'

CURB RAMP DETAIL AND MODIFICATION OF CROSSWALK  
SCALE: 1" = 2'-0"

EXISTING MARKINGS

NEW 1' DIAGONAL REFLECTORIZED  
PAVEMENT MARKING ADDED TO  
EXISTING 4" MARKING

x x x x x x

REMOVE AND DISPOSE EXISTING  
REFLECTORIZED PAVEMENT MARKING

# RECORD DRAWING

SEE SHEET 1 FOR CERTIFICATION

[illegible]

NT GROUP	
SCHOOL ON	
Mo./Day/Yr.	Mo./Day/Yr.
Sheet	Of
6	12

**JMA**  
2004.180.6

JEFF MORTENSEN & ASSOCIATES, INC.  
6010-B MIDWAY PARK BLVD. N.E.  
☐ ALBUQUERQUE ☐ NEW MEXICO 87109  
☐ ENGINEERS ☐ SURVEYORS (505) 245-4250  
☐ FAX: 505 345-4254 ☐ ESTABLISHED 1977

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

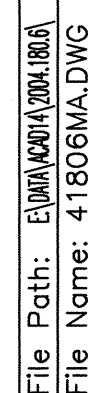
TITLE:	MANZANO MESA ELEMENTARY SCHOOL FLASHING SCHOOL BEACON SECTIONS AND DETAILS
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<p>Design Review Committee</p> <p><b>APPROVE</b></p> <p>OCT - 6 2004</p> <p>DESIGN REVIEW COMMITTEE</p>	<p>City Engineer Approval</p> <p><b>APPROVE</b></p> <p>DEC - 7 2004</p> <p>CITY ENGINEER</p>
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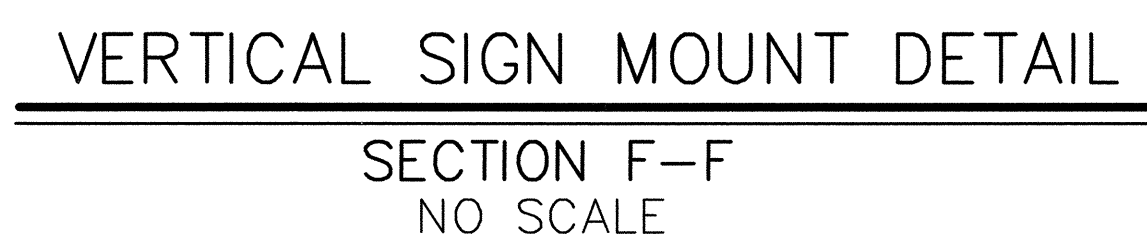
City Project No.	714082	Zone Map No.	L-21	Sheet	6	Of	12
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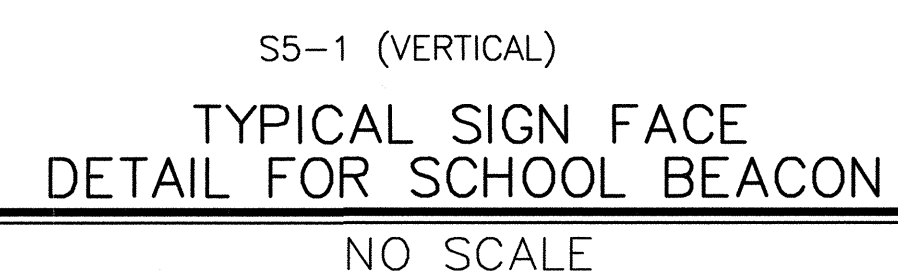








LEGEND:BLACK(NON-REFLECTIVE)  
TOP PANEL:FLORESCENT YELLOW GREEN / VISUAL IMPACT (VIP)  
BOTTOM PANEL:WHITE  
OUTSIDE BORDER:WHITE / VIP  
INSIDE BORDER:BLACK



1. EACH SCHOOL BEACON (PEDESTAL) WILL BE MEASURED AND PAID FOR UNDER THE FOLLOWING ITEMS:
  - A. ITEM 0422.004 – TRAFFIC SIGNAL PEDESTAL POLE 15' (1 EACH BEACON)
  - B. ITEM 0423.001 – TRAFFIC SIGNAL FOUNDATION FOR PEDESTAL POLE (1 EACH BEACON)
  - C. ITEM 0427.001 – 1 SECTION TRAFFIC SIGNAL ASSEMBLY (2 EACH BEACON)
  - D. ITEM 0450.001 – ALUMINUM PANEL SIGNS (1 EACH BEACON)

 RECORD DRAWING

[illegible]

JEFF MORTENSEN & ASSOCIATES, INC.  
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CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE:	MANZANO MESA ELEMENTARY SCHOOL FLASHING SCHOOL BEACON SCHOOL BEACON DETAILS (PEDESTAL)
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DESIGN REVIEW COMMITTEE

**APPROVE**

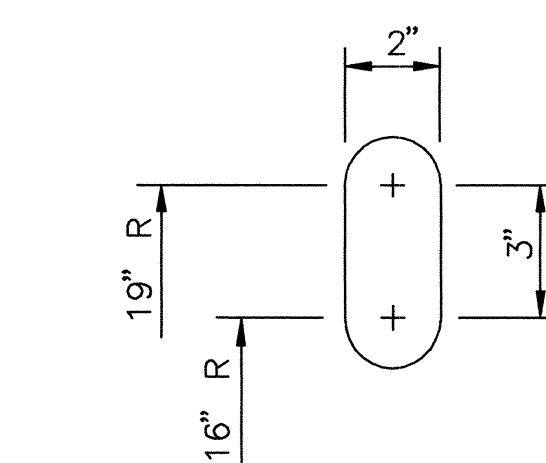
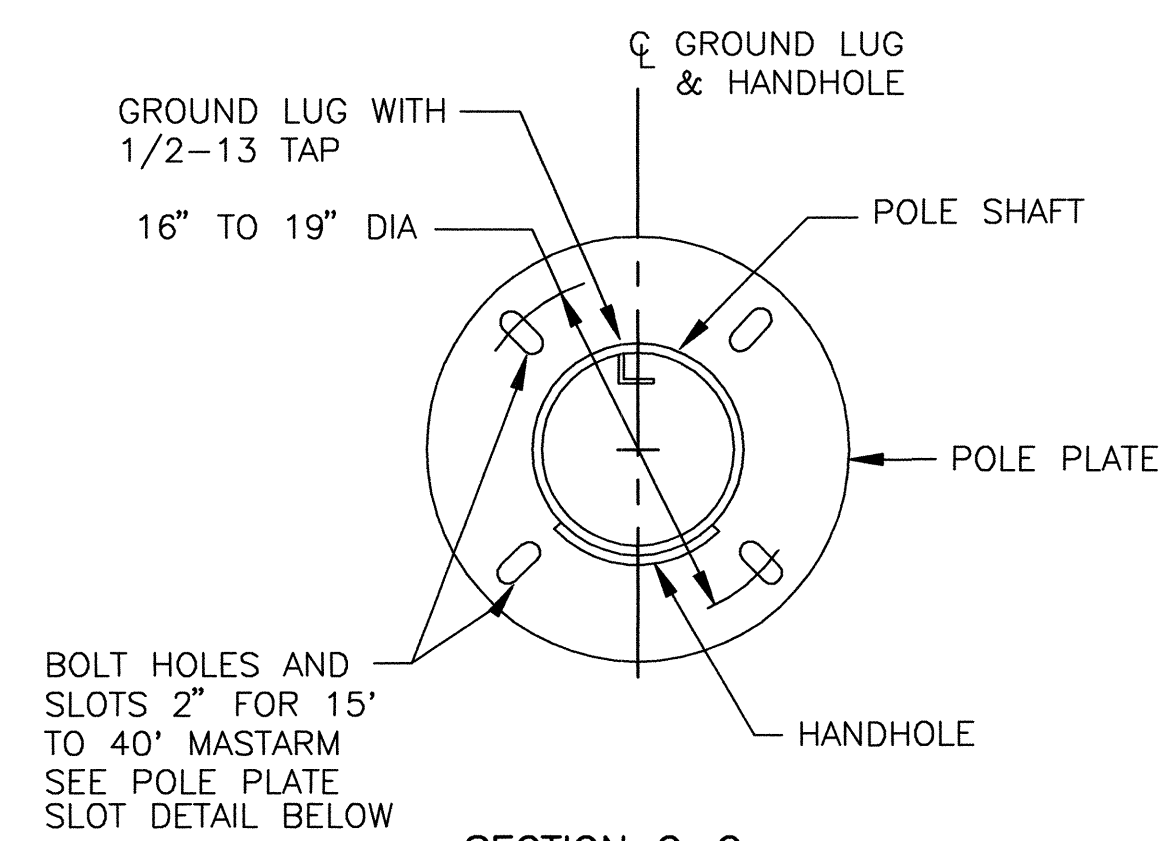
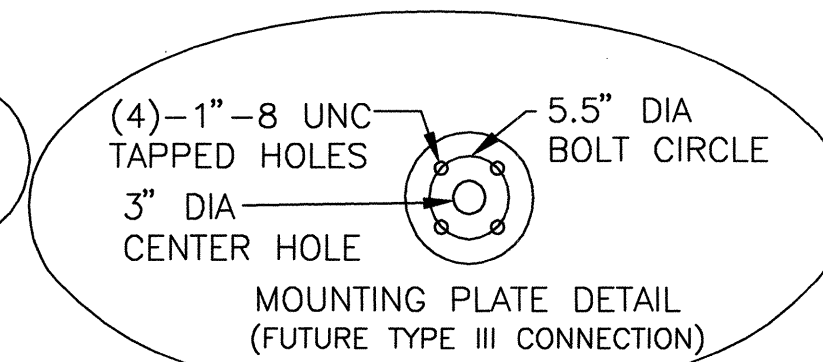
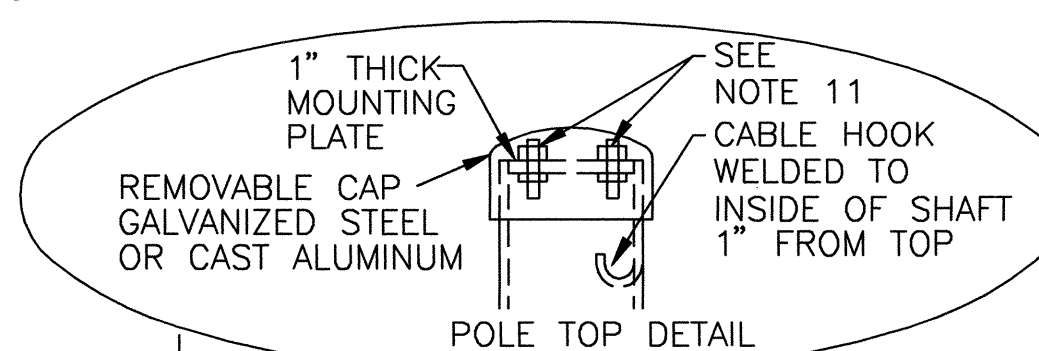
OCT - 6 2004

DESIGN  
REVIEW COMMITTEE

City Engineer Approval  
APPROVE  
DEC - 7 2004  
CITY ENGINEER

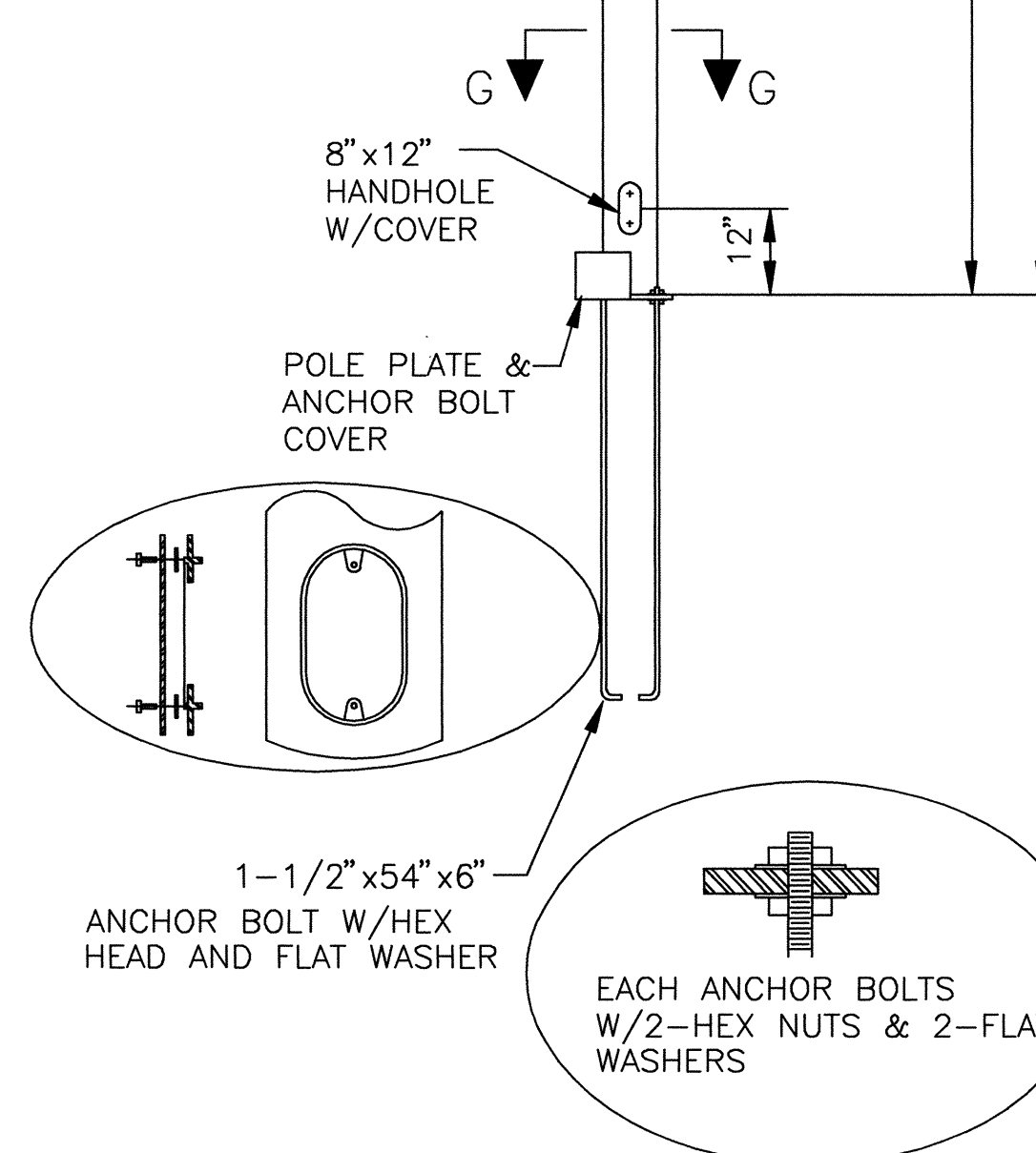
City Project No.	714082	Zone Map No.	-21	Sheet	8	of	12
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POLE PLATE SLOT DETAIL

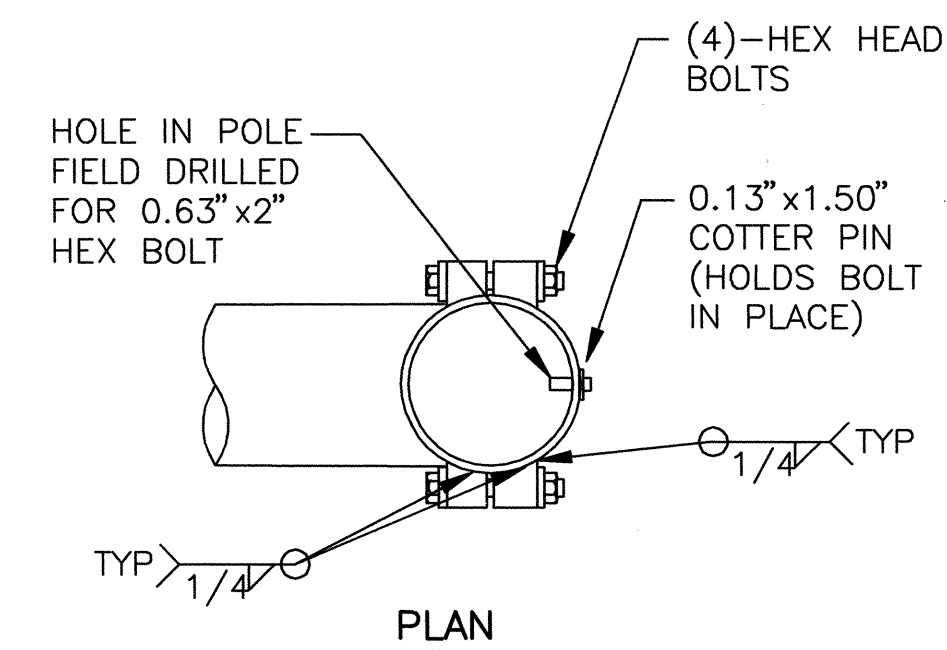
NO SCALE



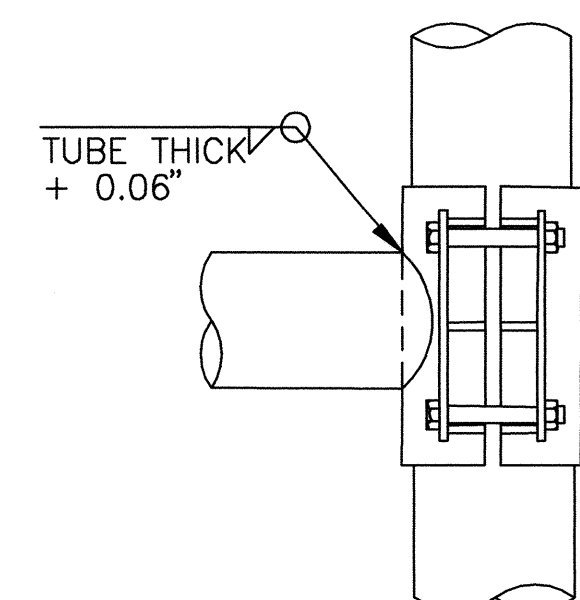
MASTARM AND POLE

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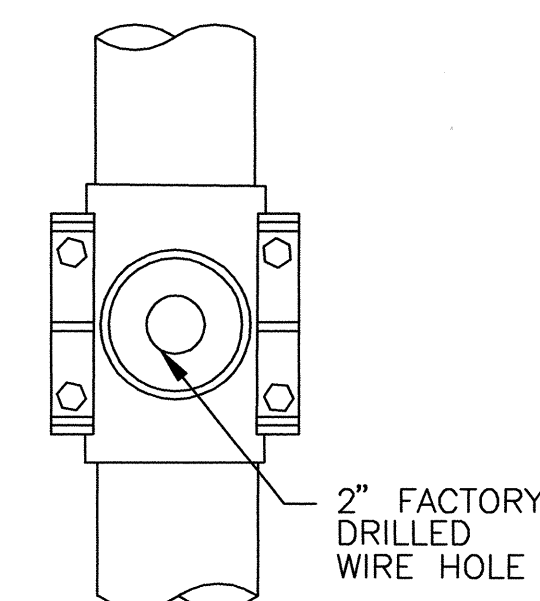
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## PLAN



ELEVATION



SECTION

DETAIL A

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

FINISH:

<input checked="" type="checkbox"/>	GALVANIZED
<input type="checkbox"/>	POWDER COATED
COLOR _____	

## TRAFFIC SIGNAL MASTARM NOTES:

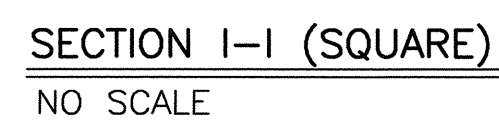
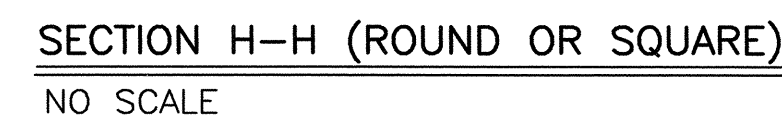
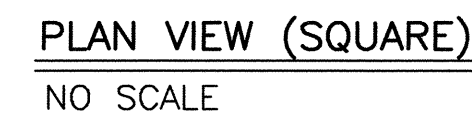
1. DESIGN IN ACCORDANCE WITH 1985 AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS FOR AN 80 MPH WIND ZONE.
2. POLES AND MASTARMS SHAFTS SHALL CONFORM TO ASTM A-595 GRADE A (MIN YIELD 55 KSI)
3. BASE PLATE AND SIGNAL ARM CLAMP SHALL BE ASTM A-36 (MIN YIELD 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.



# RECORD DRAWING

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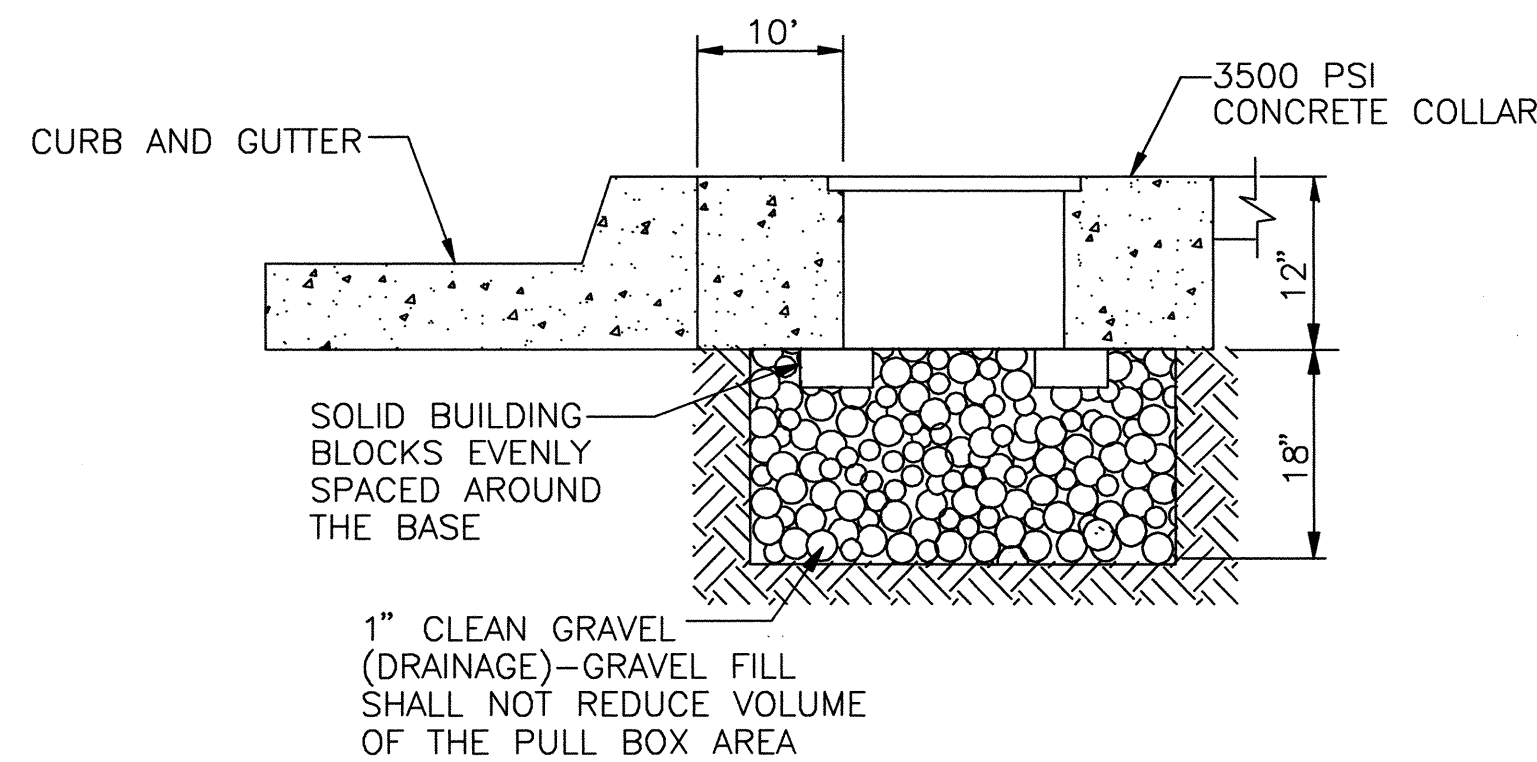


REINFORCING SCHEDULE  
(GRADE 60 BARS)TRAFFIC SIGNAL FOUNDATION NOTES

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

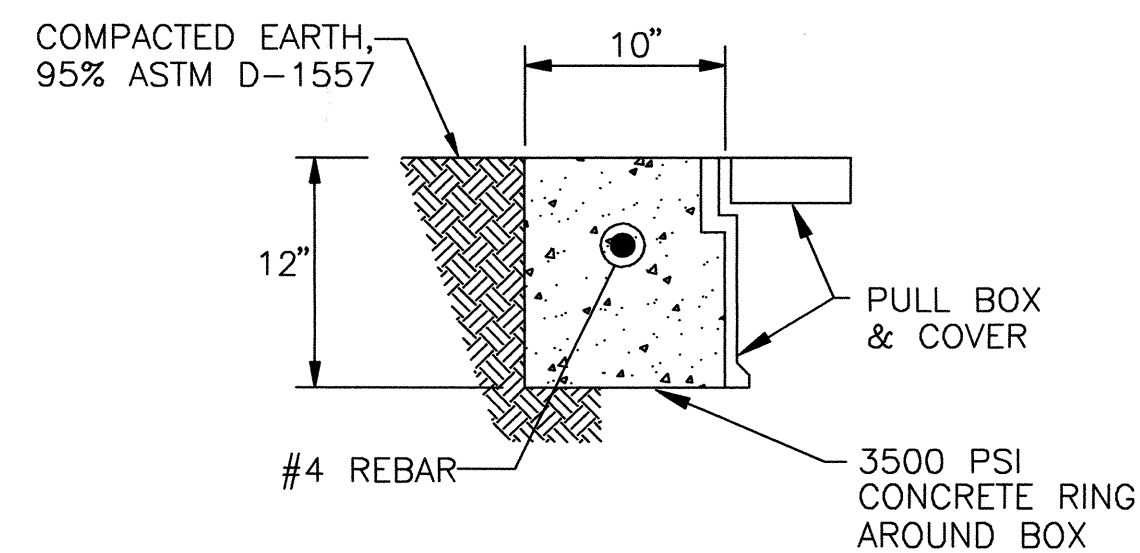
# RECORD DRAWING



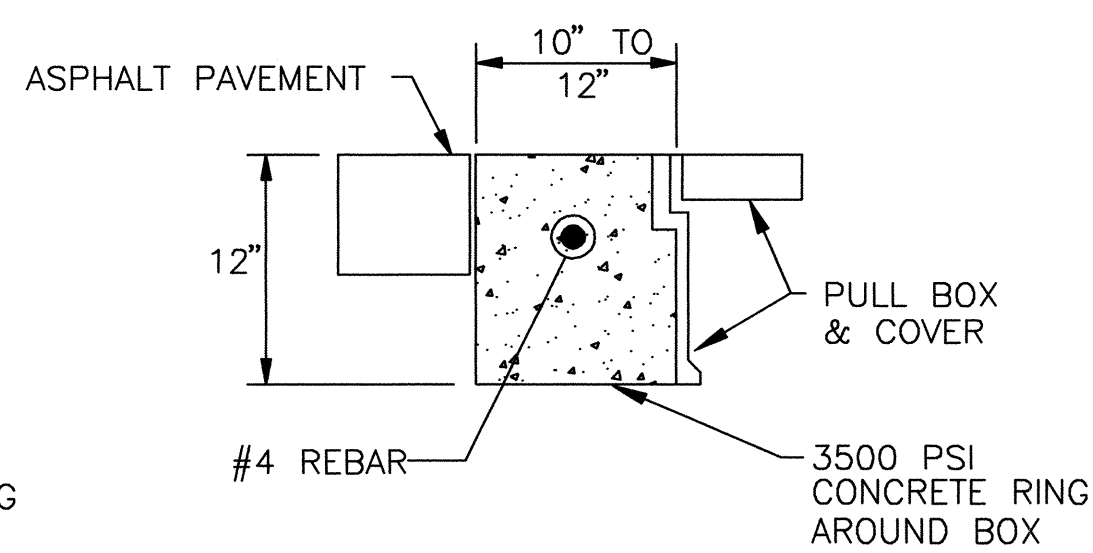


TYPICAL PULL BOX INSTALLATION

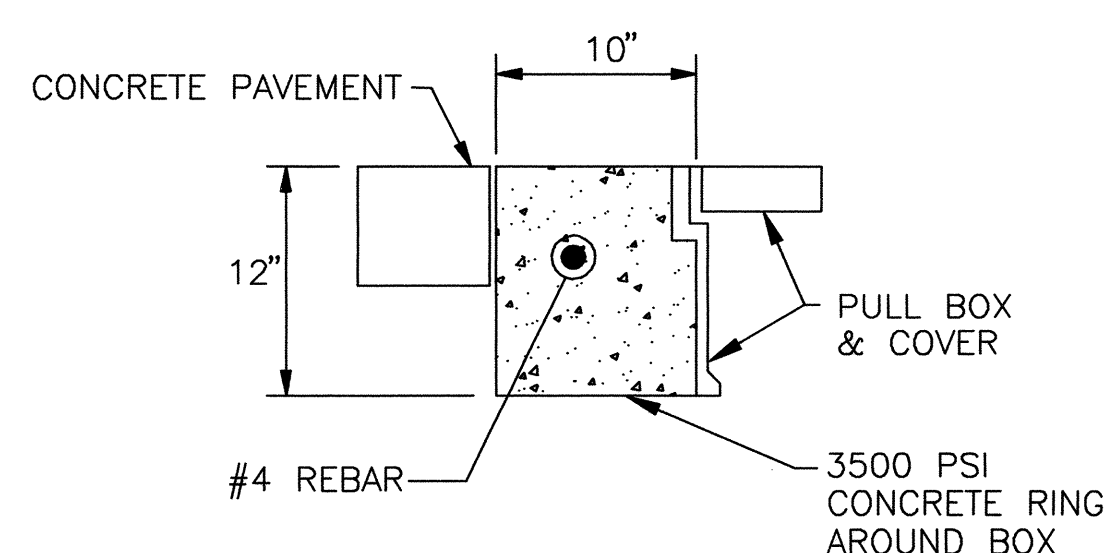
NOTE: SEE "CONCRETE COLLAR DETAIL" AT RIGHT



IN COMPACTED EARTH



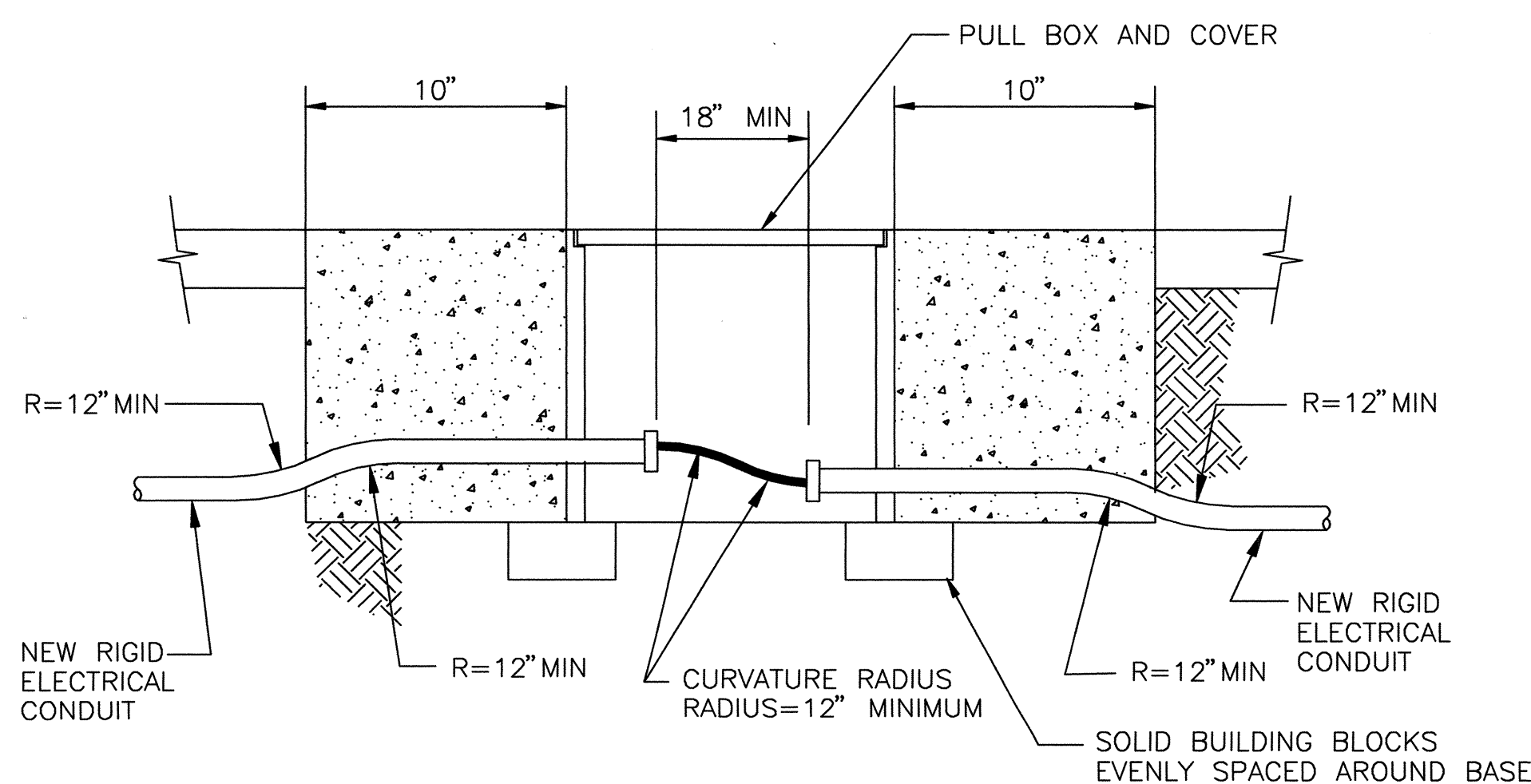
IN ASPHALT PAVEMENTS



IN CONCRETE PAVEMENTS

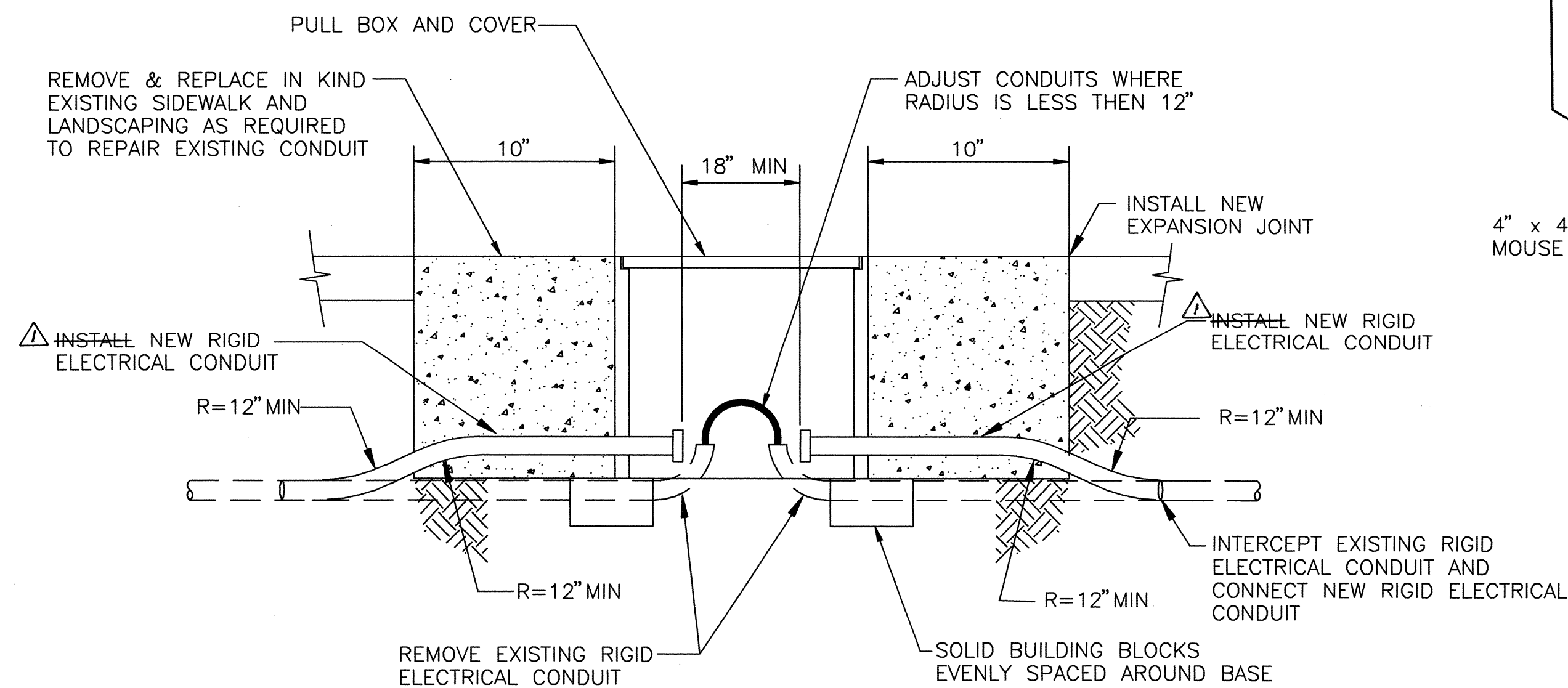
CONCRETE COLLAR DETAILS

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



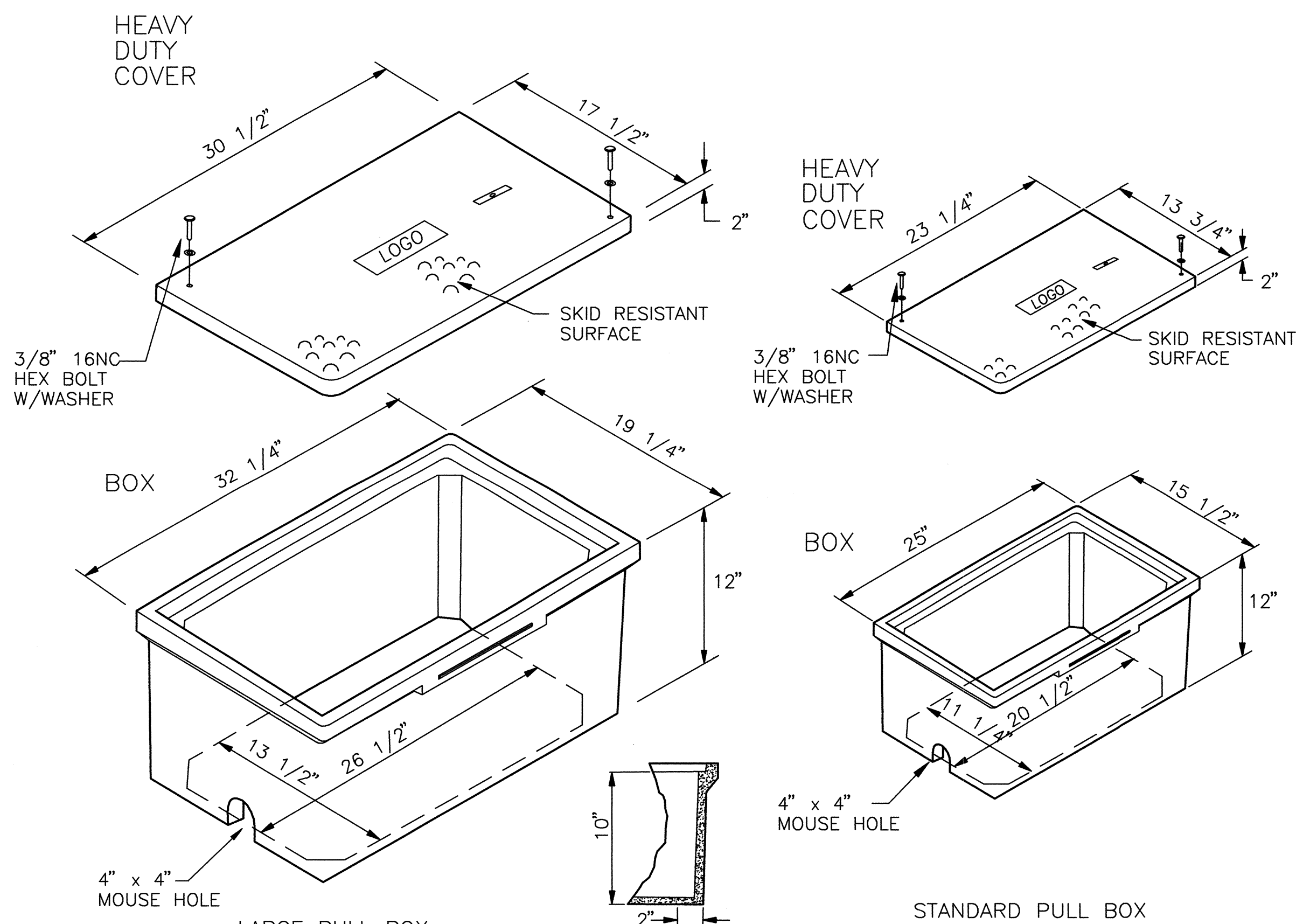
TRAFFIC SIGNAL PULL BOX (TYPICAL)

NEW CONDUIT INSTALLATION



TRAFFIC SIGNAL PULL BOX (TYPICAL)

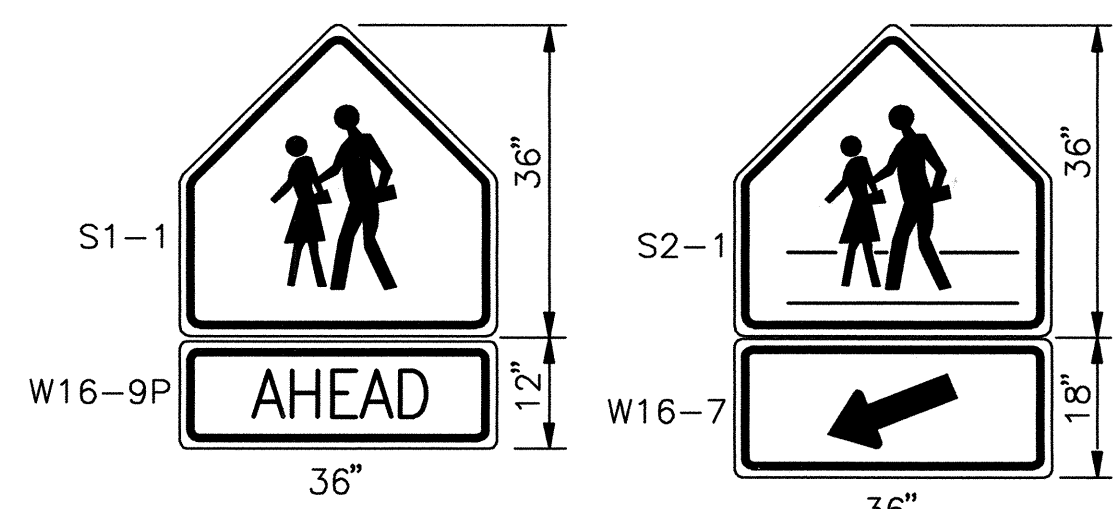
RETROFIT INSTALLATION



PULL BOX DETAILS

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 HEAVY - WEAVE FIBERGLASS. 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".



COLORS

LEGEND: BLACK (NON-REFLECTIVE)

TOP PANEL: FLORESCENT YELLOW GREEN / VISUAL IMPACT (VIP)

BOTTOM PANEL: FLORESCENT YELLOW GREEN / VIP

OUTSIDE BORDER: SAME AS PANEL BACKGROUND

INSIDE BORDER: BLACK

SCHOOL SIGN DETAILS

**Jim**

2004.180.6

JEFF MORTENSEN & ASSOCIATES, INC.  
600-9 MIDWAY PARK BLVD. NE  
ALBUQUERQUE, NM 87109  
ENGINEERS & SURVEYORS (505) 345-4250  
FAX: (505) 345-4254 (ESTABLISHED 1977)

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE: MANZANO MESA ELEMENTARY SCHOOL  
FLASHING SCHOOL BEACON  
TRAFFIC SIGNAL PULL BOX AND SCHOOL SIGN DETAILS

DESIGN REVIEW COMMITTEE  
OCT - 6 2004  
DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL  
DEC - 7 2004  
CITY ENGINEER

City Project No. 714082 Zone Map No. L-21 Sheet 11 of 12

RECORD DRAWING



