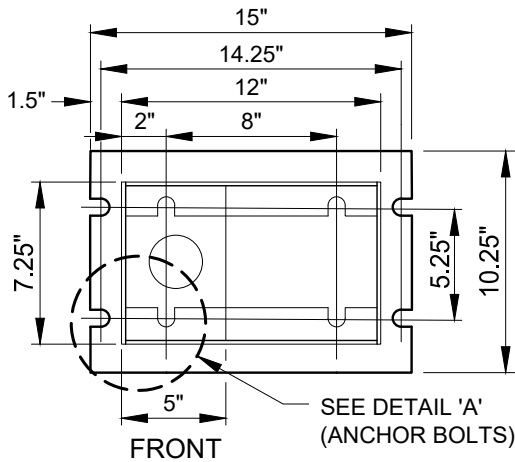
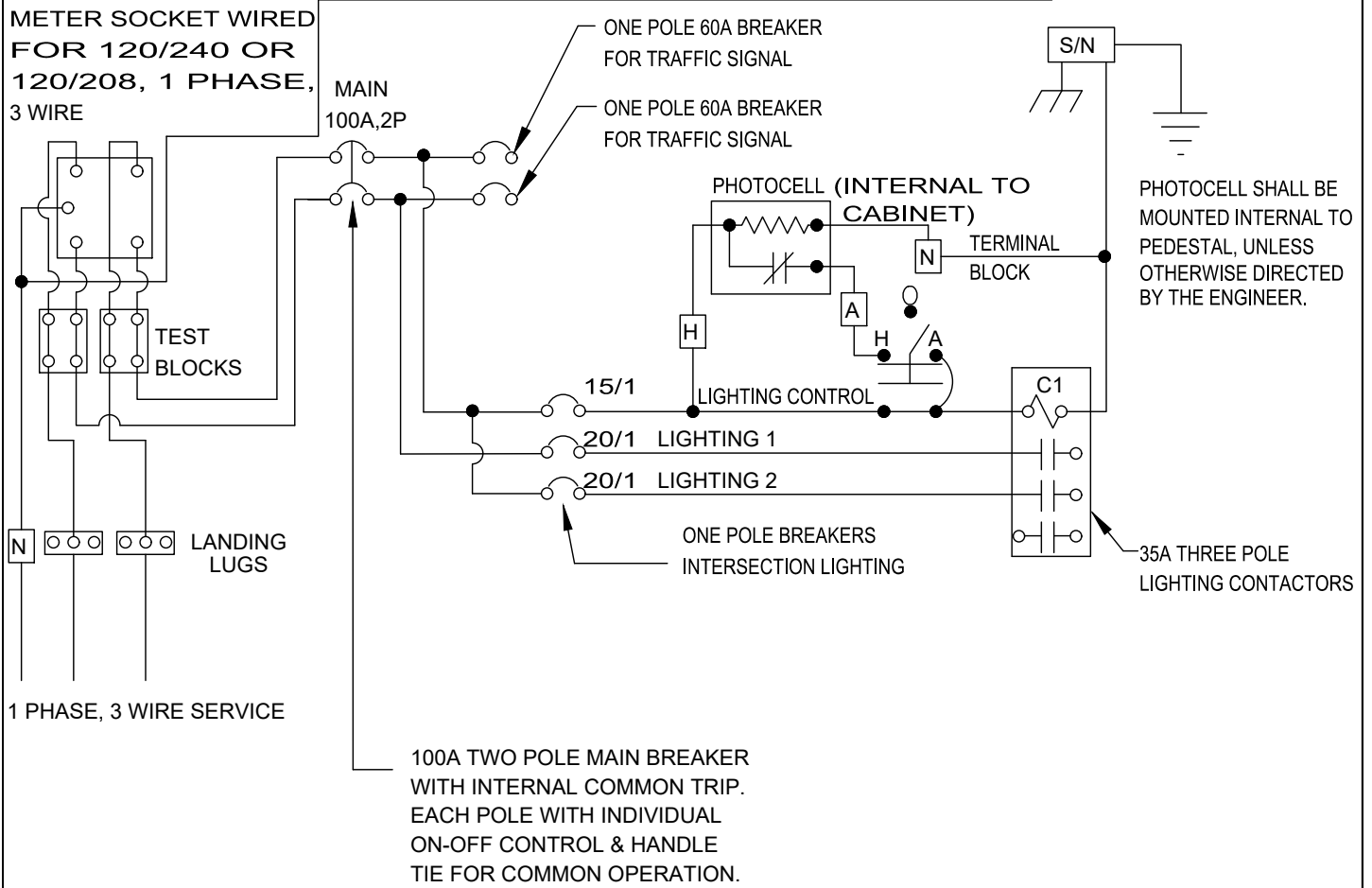
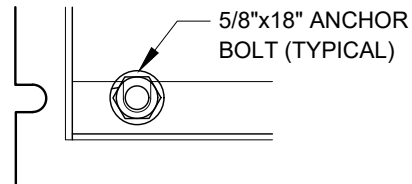


- EXTERIOR 14 GAUGE #304D STAINLESS STEEL, INTERIOR DEAD FRONT PANEL & BACK PAN SHALL BE 14 GAUGE STEEL PAINTED WHITE ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
- CONSTRUCTION IS NEMA 3R AND 12, RAIN TIGHT AND DUST TIGHT.
- ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
- NUTS, BOLTS & SCREWS ARE NOT USED ON THE OUTSIDE PEDESTAL.
- PHENOLIC NAMEPLATES TO IDENTIFY ALL OPERATOR CONTROLS.
- CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
- A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
- PEDESTAL WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
- PEDESTAL(S) WILL BE U.L. LISTED AS INDUSTRIAL CONTROL PANELS, U.L. 508 FILE NO. E62062
- WIRING BETWEEN CIRCUIT BREAKER AND CONTACTOR SHALL BE A #6 THWN OR THHN MINIMUM.
- SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
- SERVICE MUST CARRY A NEUTRAL TO STREETLIGHTS FOR 120 V OPERATION

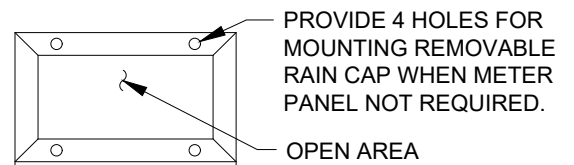
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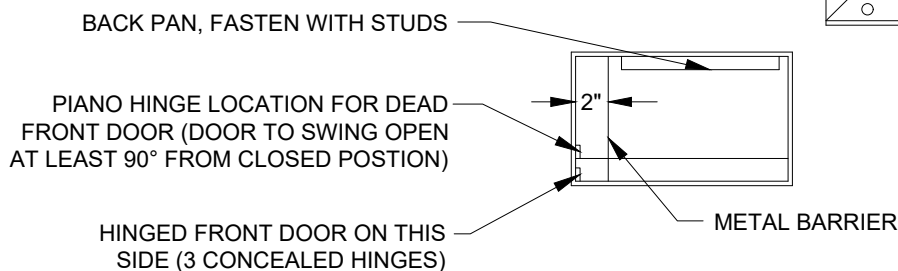
BASE PLATE DETAIL



DETAIL 'A'

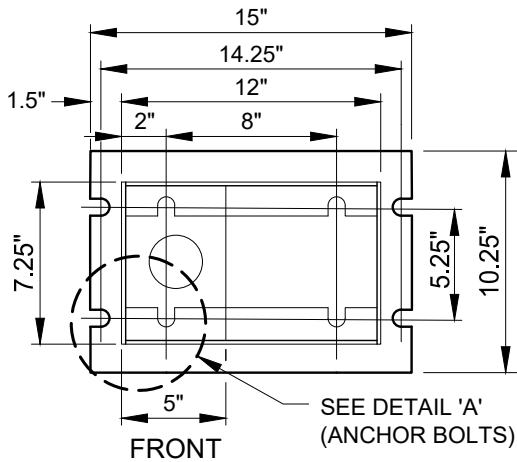
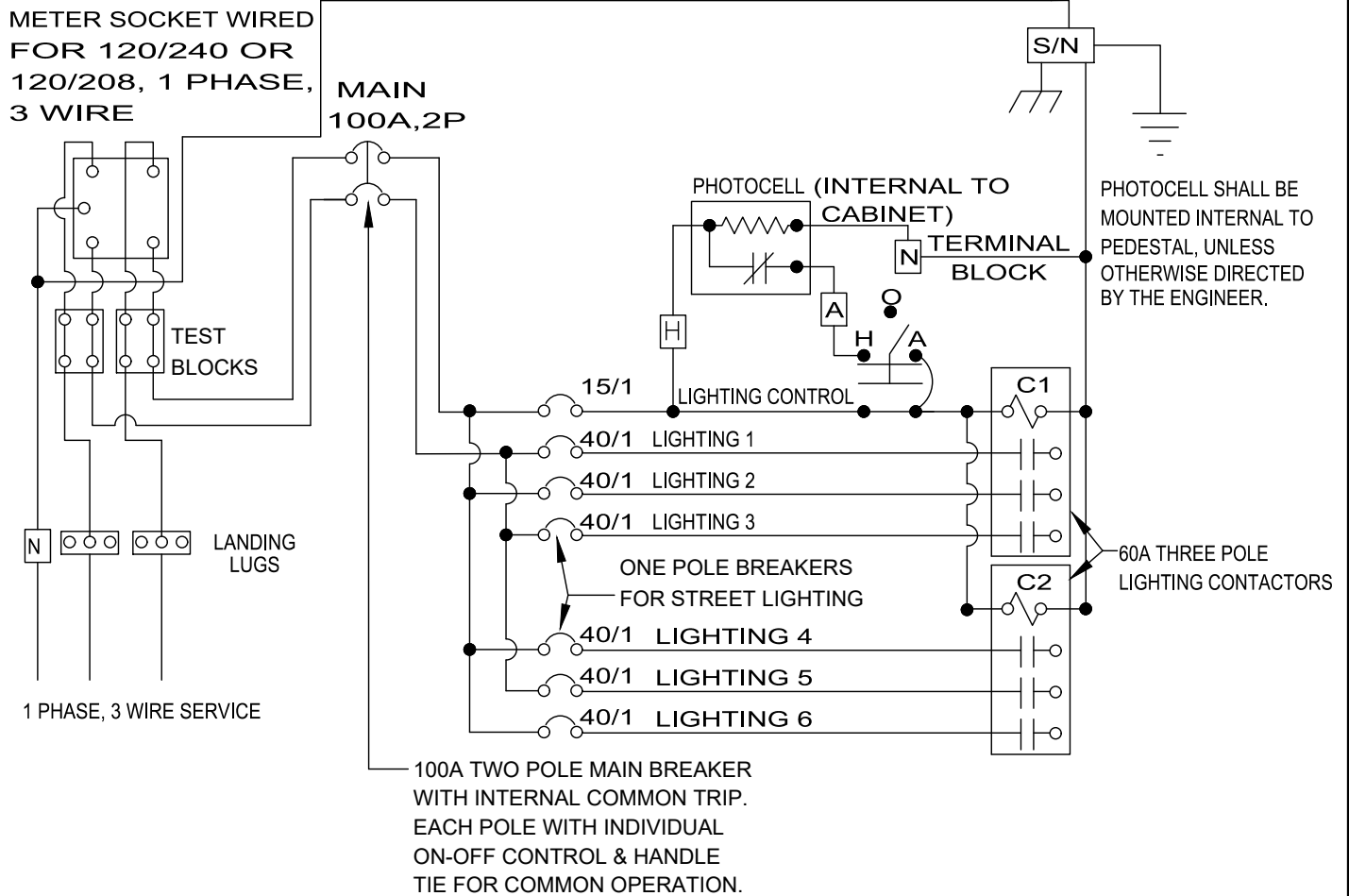


SECTION B-B

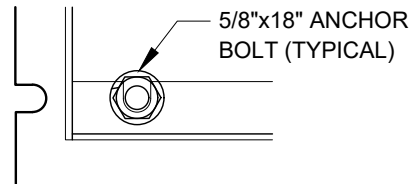


SECTION A-A

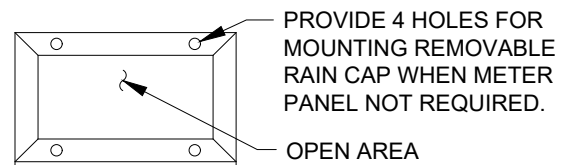
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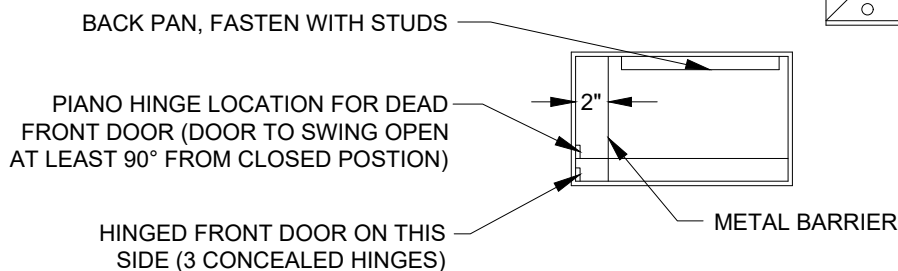
BASE PLATE DETAIL



DETAIL 'A'

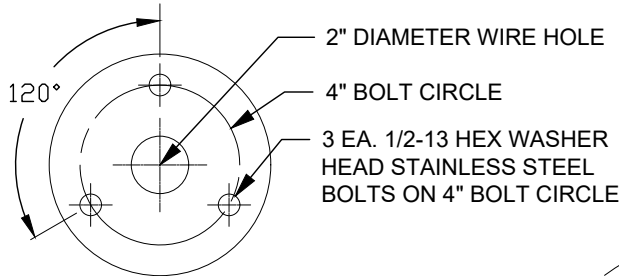
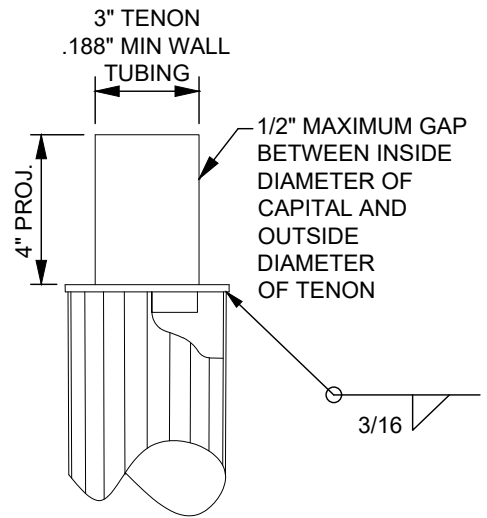
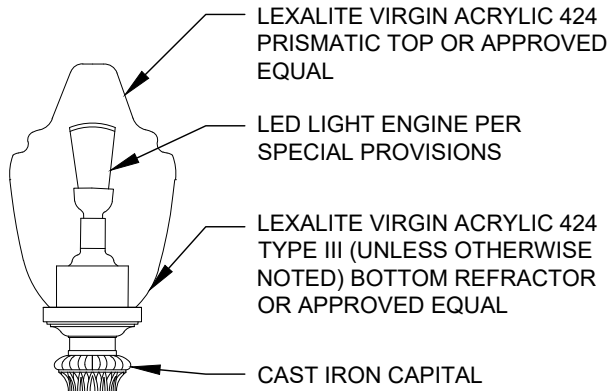


SECTION B-B

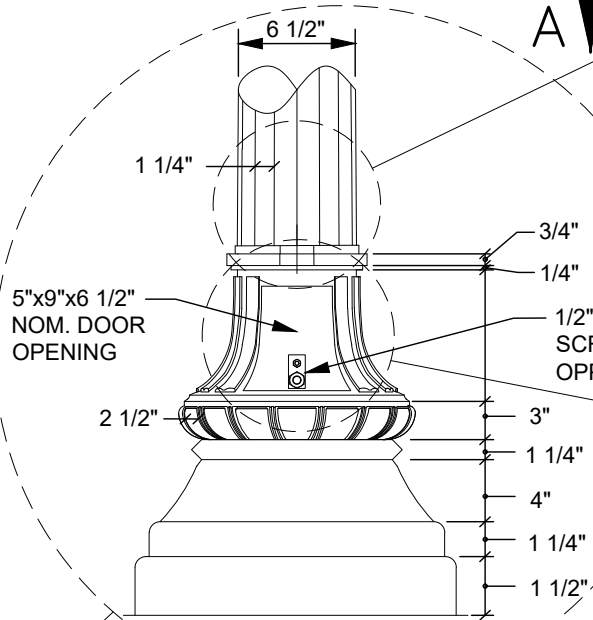
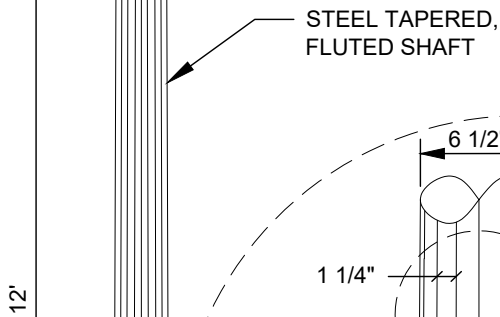
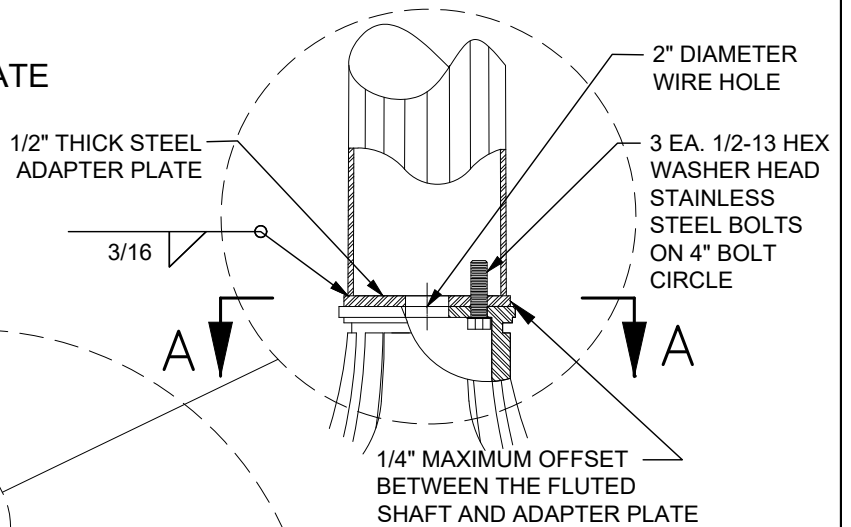


SECTION A-A

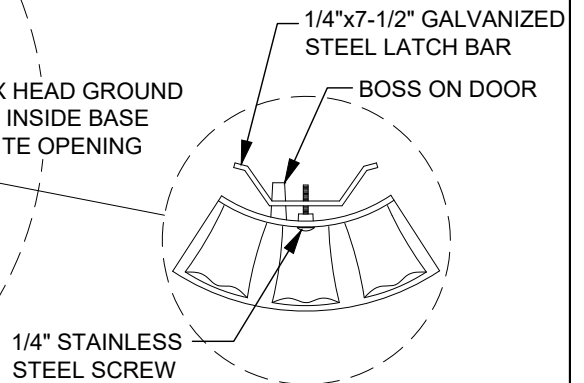
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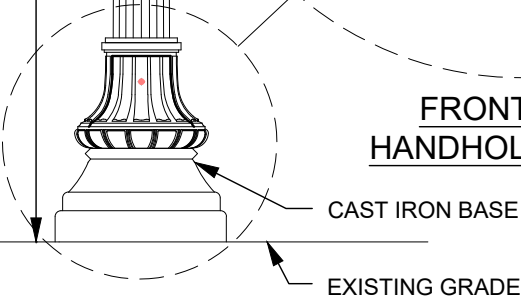
**STEEL ADAPTER PLATE
VIEW \"A-A\"**



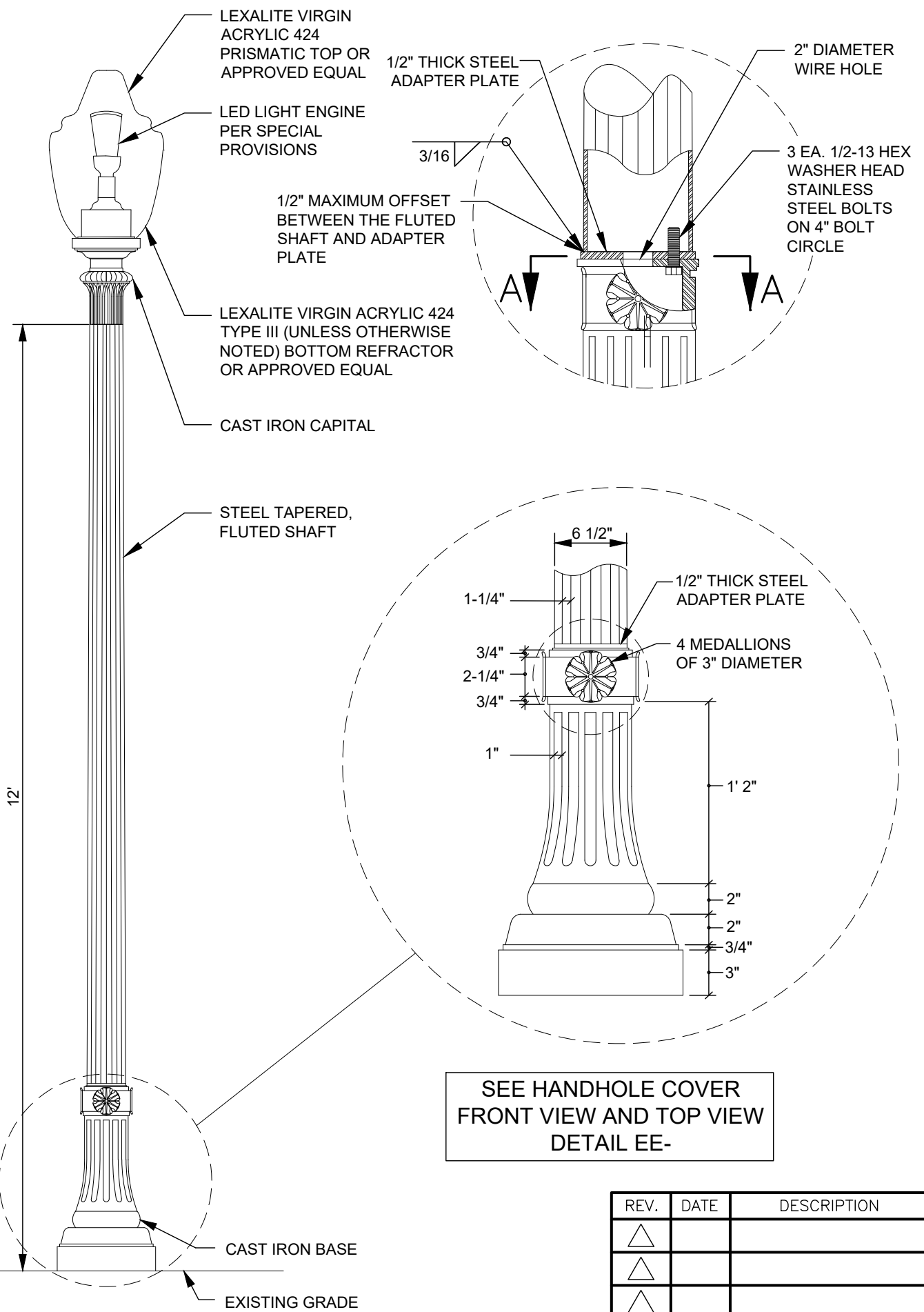
**FRONT VIEW
HANDHOLE COVER**



**TOP VIEW
HANDHOLE COVER
AND LATCH BAR**

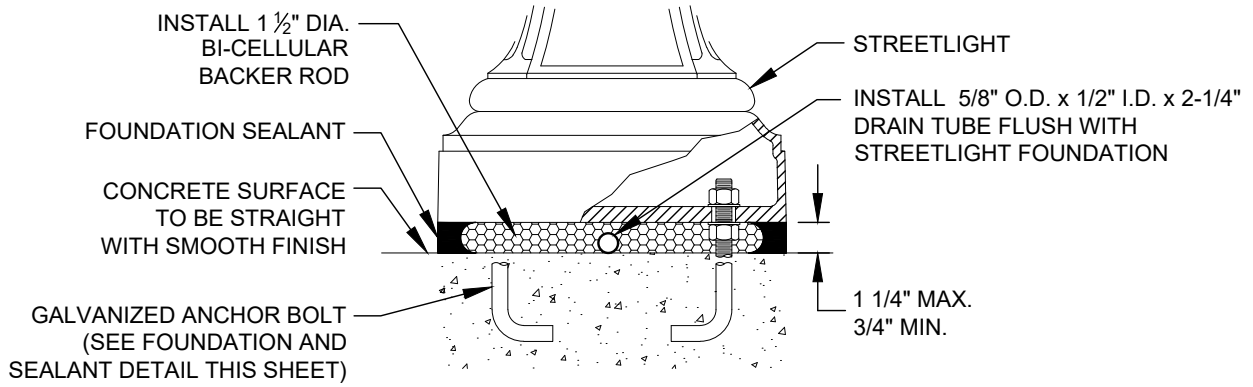


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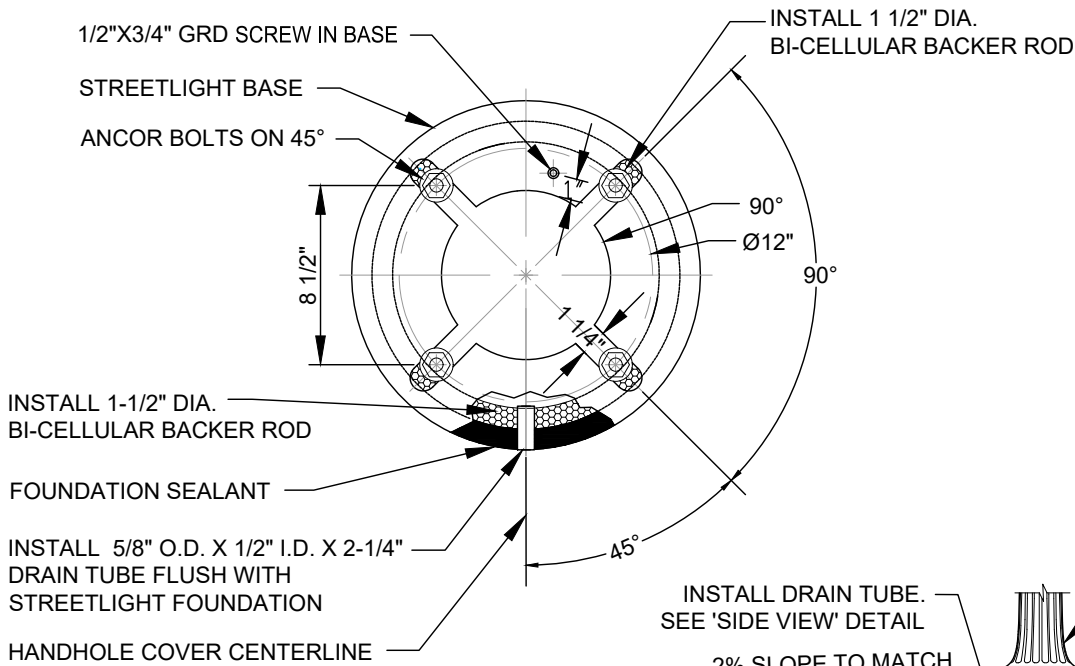


SEE HANDHOLE COVER
FRONT VIEW AND TOP VIEW
DETAIL EE-

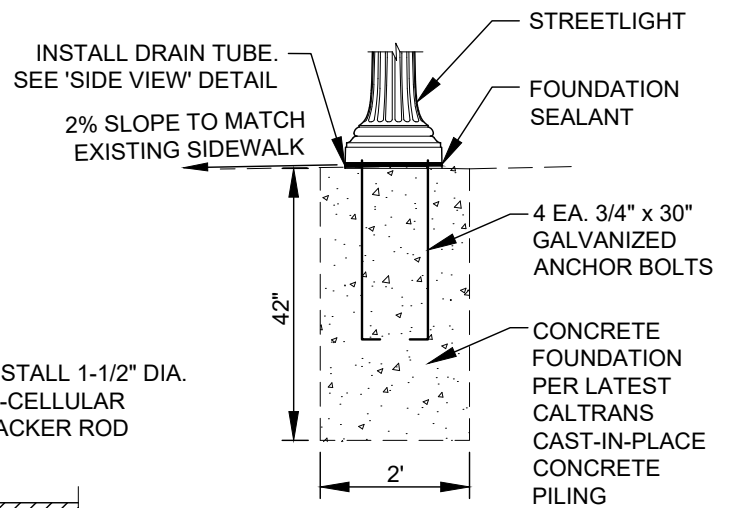
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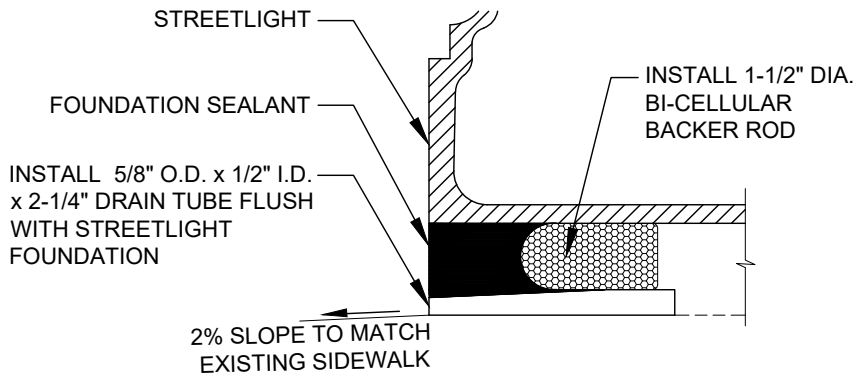
FRONT VIEW



TOP VIEW

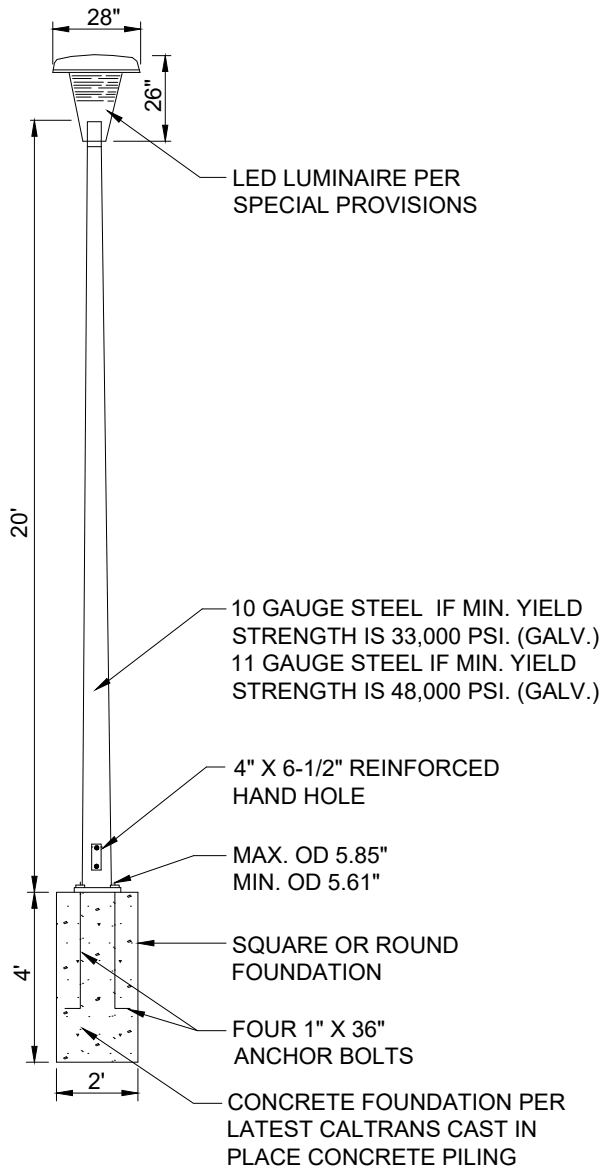


FOUNDATION AND SEALANT DETAIL



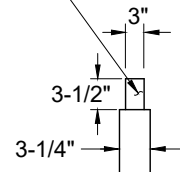
SIDE VIEW

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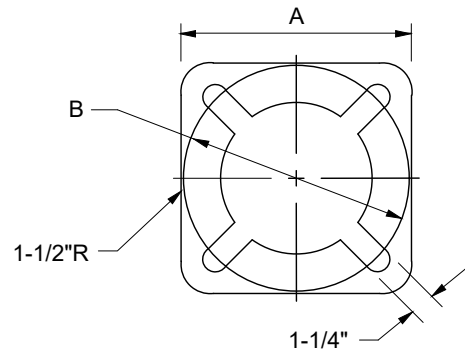


TYPE OF ELECTROLIER	BASE PLATE	
	A	B
POST TOP STEEL	10"	9-1/2"

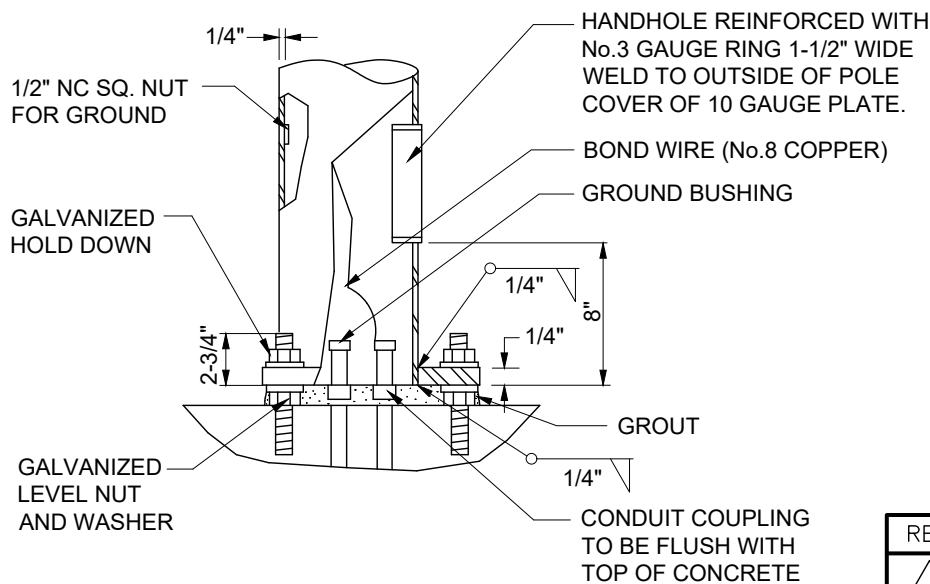
MOLDED TENON 3" x 3-1/2" (NO TAPER) WITH 16 GAUGE STEEL SLEEVE CAST ALUMINUM TENON OR APPROVED DESIGN IS ALSO AVAILABLE.



TENON DETAIL

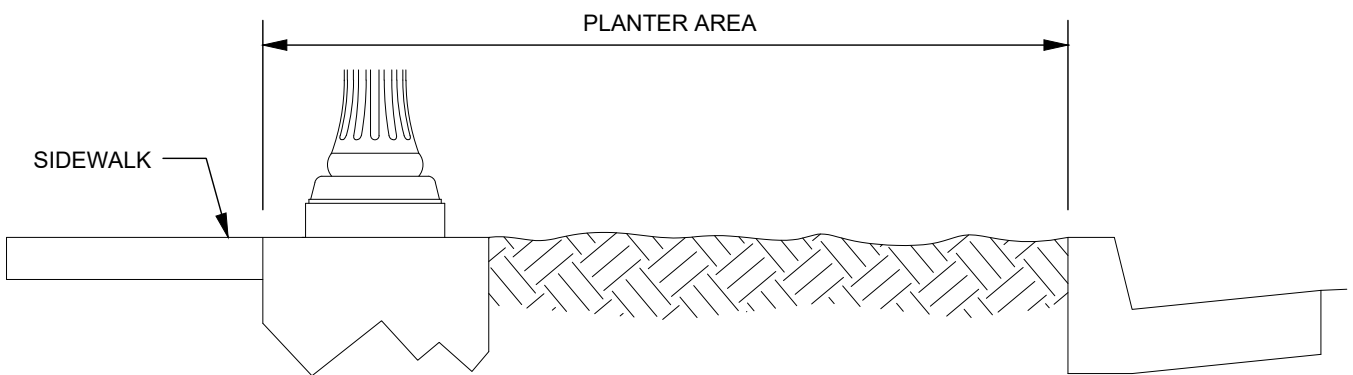
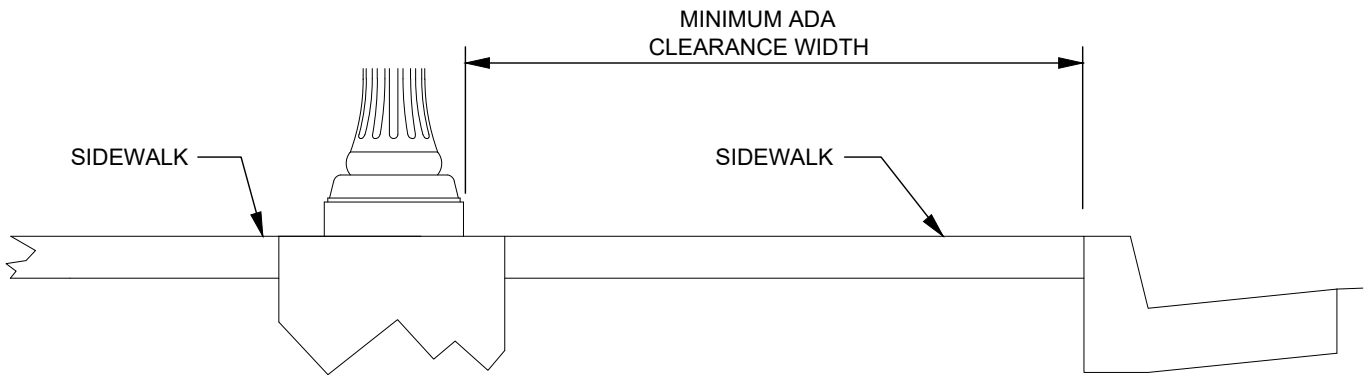
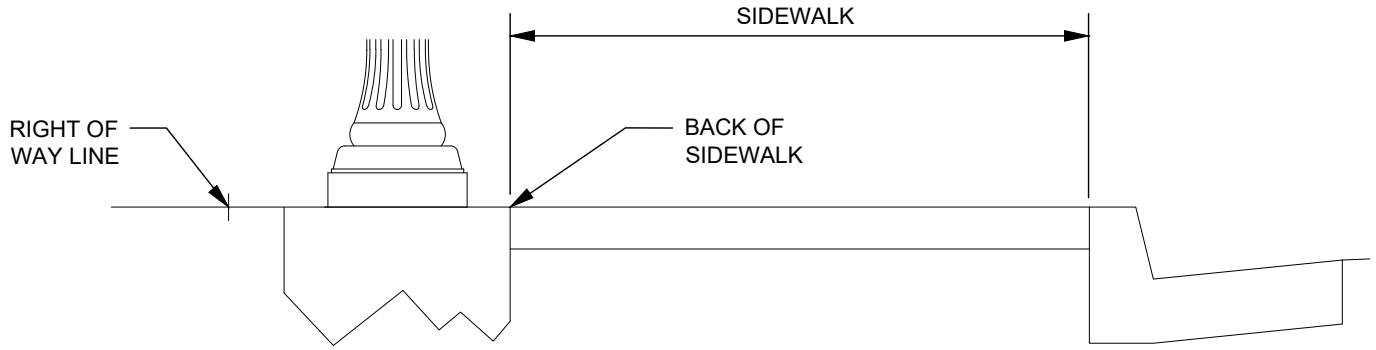
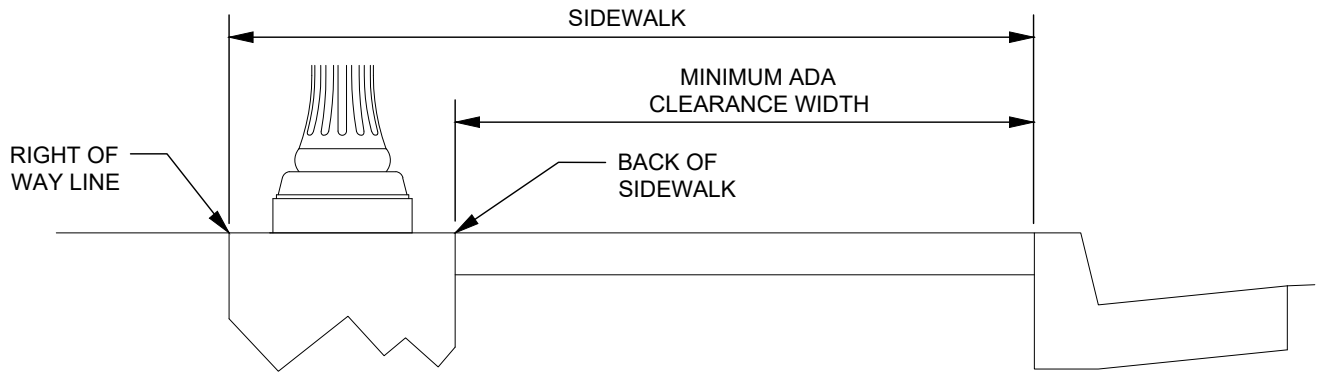


BASE PLATE



BASE DETAIL

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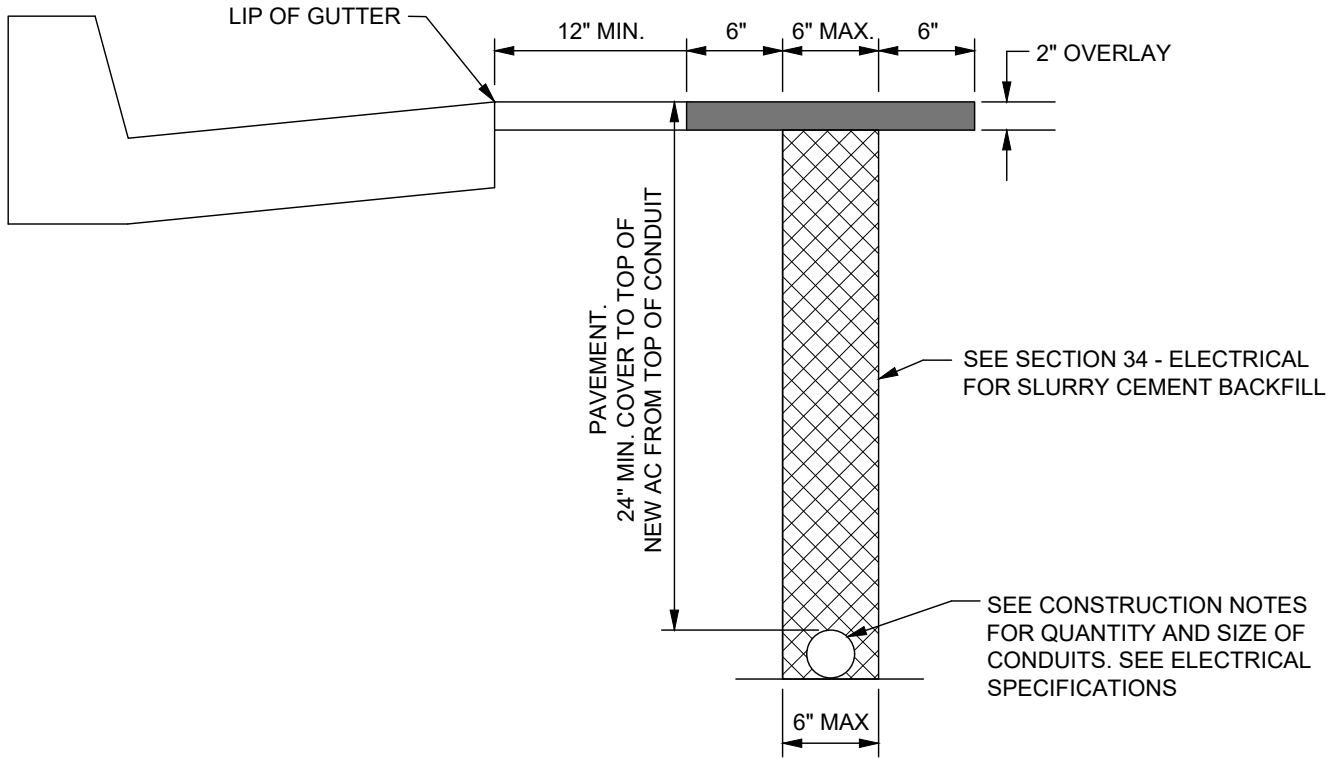


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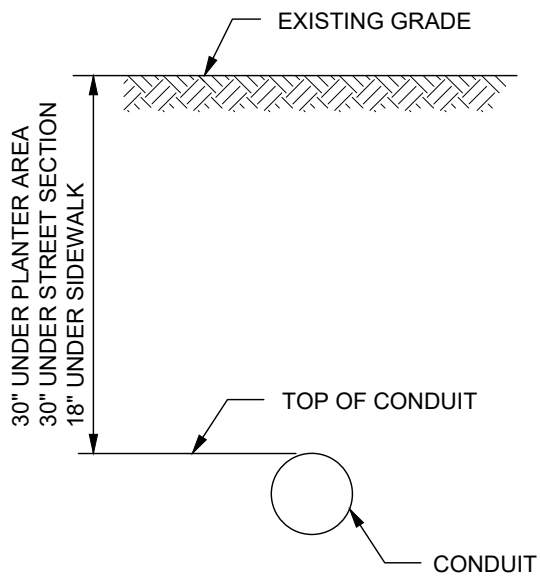
CITY OF SACRAMENTO
DEPARTMENT OF PUBLIC WORKS

**ORNAMENTAL STREETLIGHT
LOCATIONS**

APPROVED BY: *Nadel Kamal*
DATE: APRIL 2020 DWG. NO. E - 80

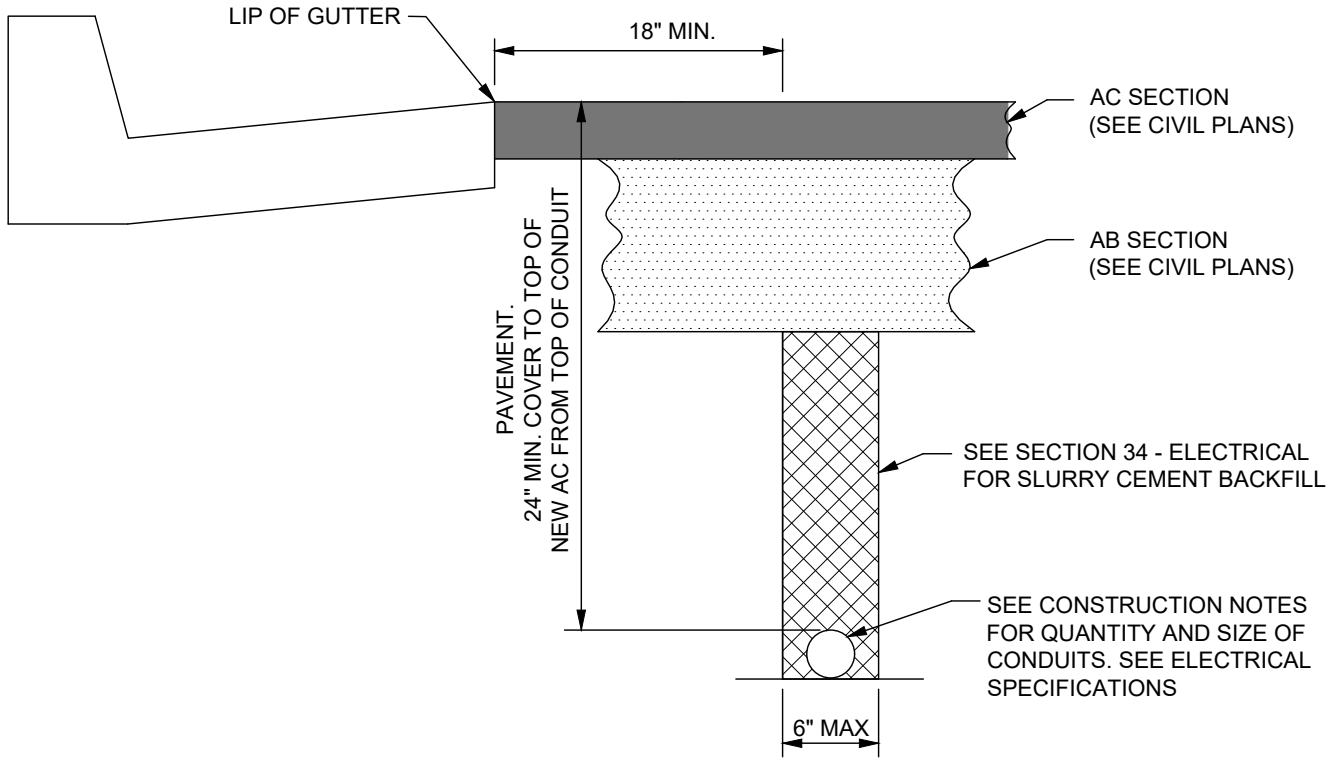


EXISTING ROADWAY
CONSTRUCTION

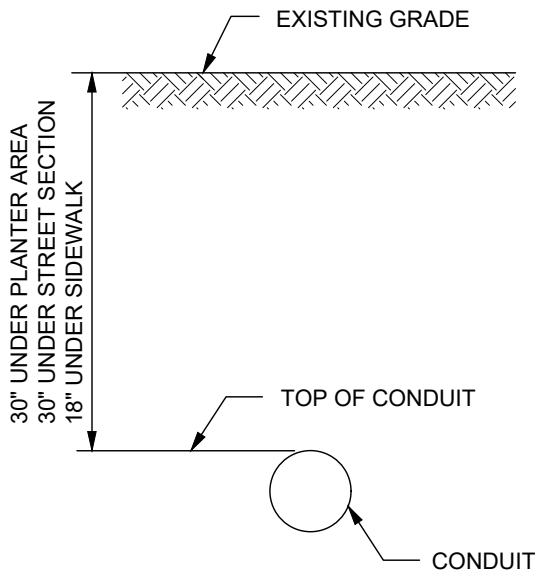


DIRECTIONAL DRILL

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**NEW ROADWAY
CONSTRUCTION AND
EXISTING ROADWAY
RECONSTRUCTION**



DIRECTIONAL DRILL

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LEGEND:

EXISTING

PROPOSED



INFRARED EMERGENCY VEHICLE DETECTOR (EV)



GPS EMERGENCY VEHICLE DETECTOR (EV)



TRAFFIC SIGNAL FACE WITH BACK PLATE



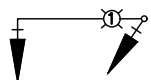
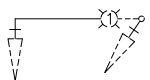
TRAFFIC SIGNAL FACE WITH 12" ARROW SECTIONS



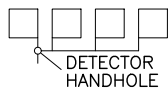
TYPE 1 STANDARD AND ATTACHED TRAFFIC SIGNAL FACES



STANDARD WITH SIGNAL MAST ARM ONLY AND ATTACHED TRAFFIC SIGNAL FACES



STANDARD WITH SIGNAL AND LUMINAIRE MAST ARMS AND ATTACHED TRAFFIC SIGNAL FACES AND LUMINAIRE



INDUCTIVE LOOP DETECTOR, WITH DETECTOR HANDHOLE AND LOCATION OF SAWCUTS



VIDEO DETECTION ZONE



ELECTROLIER, TYPE 15TS STANDARD WITH MAST ARM, SIGNAL FACES AND LUMINAIRE WITH CIRCUIT No. INDICATED.



PEDESTRIAN SIGNAL HEAD



CONTROLLER CABINET



SERVICE PEDESTAL



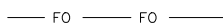
CONCRETE PULL BOX No. 5 MINIMUM



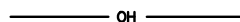
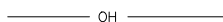
FIRE ALARM BOX



TRAFFIC SIGNAL CONDUIT



FIBER OPTIC CONDUCTOR



OVERHEAD CONDUCTOR



PEDESTRIAN PUSH BUTTON POST



S.M.U.D. SERVICE BOX



POWER POLE

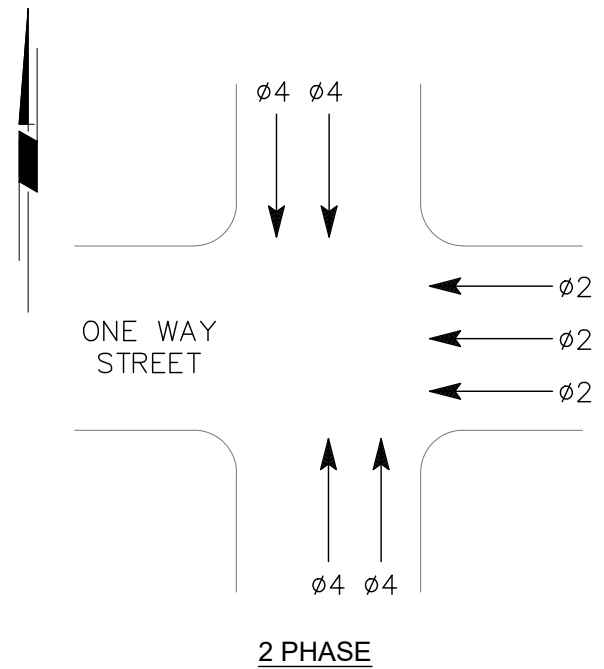
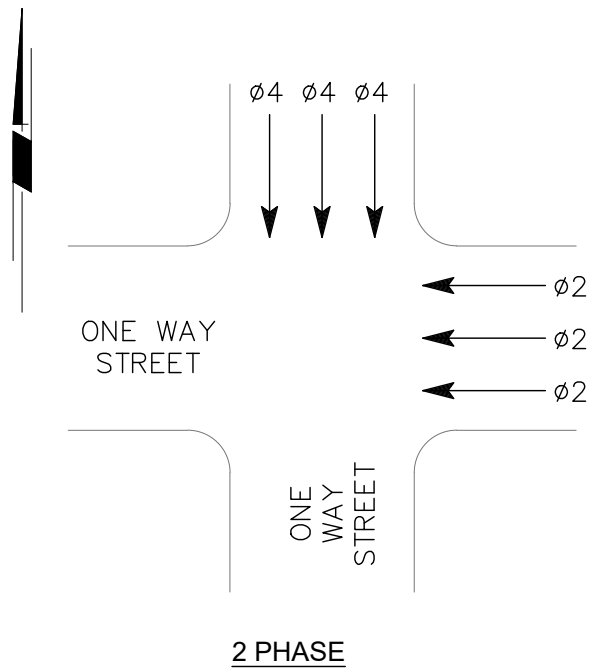
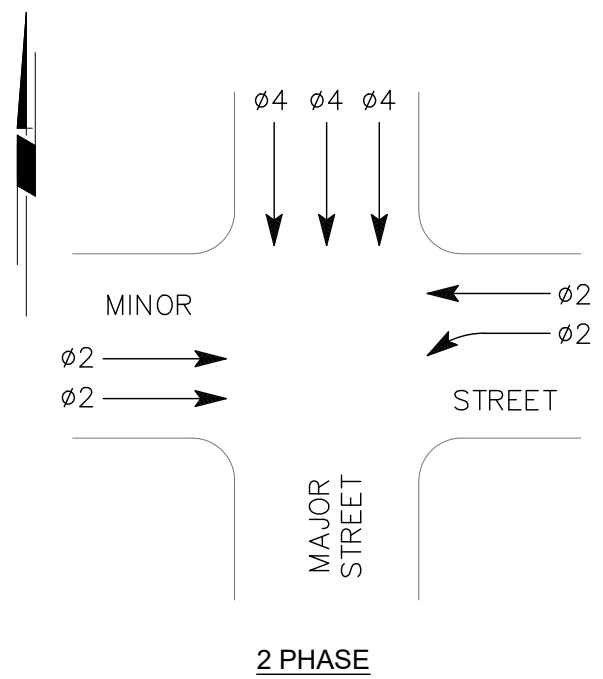
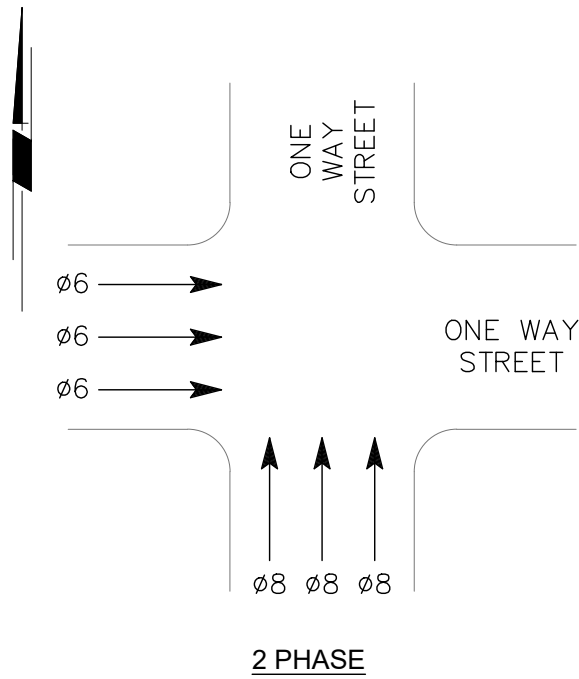


VIDEO DETECTION CAMERA

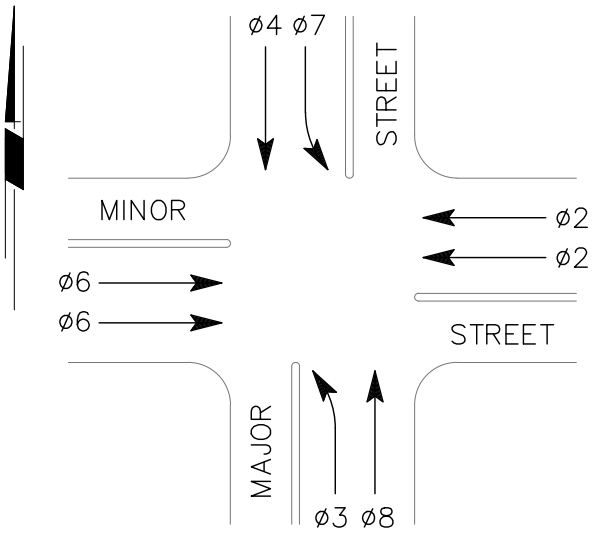


CCTV

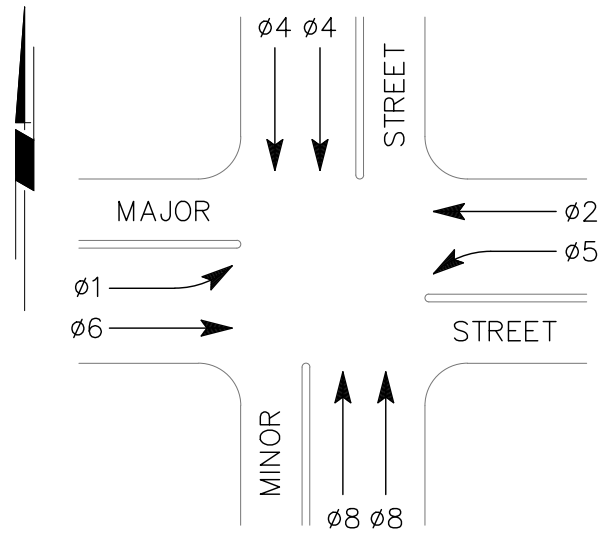
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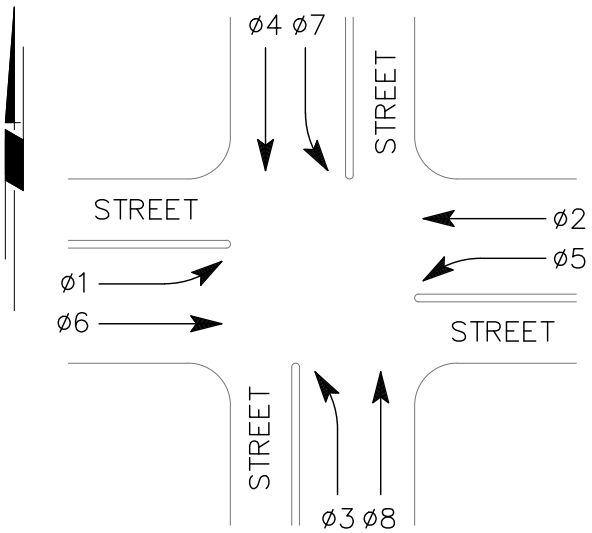
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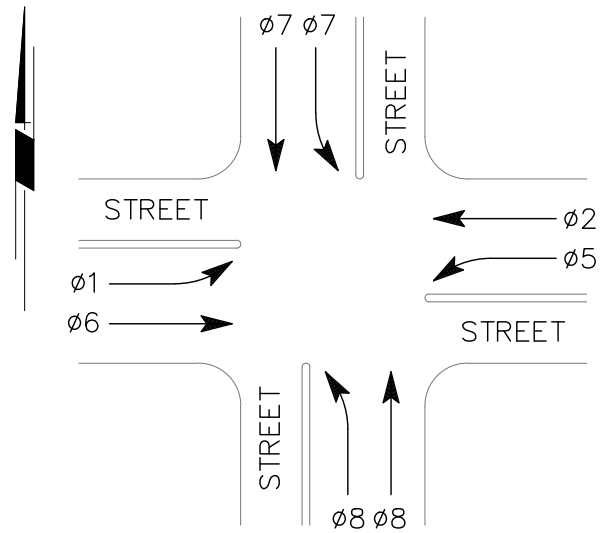
6 PHASE



6 PHASE

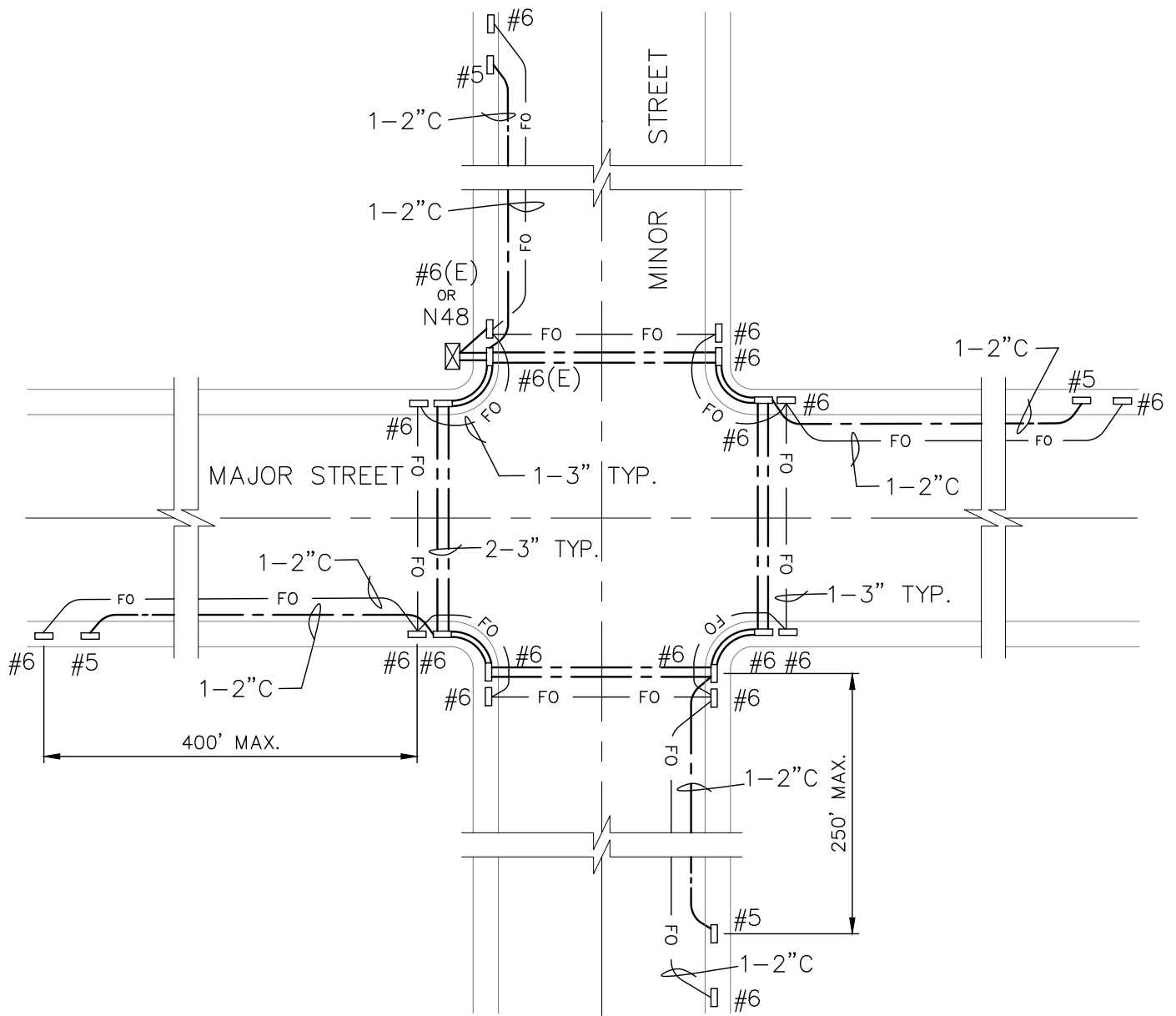


8 PHASE



SPLIT PHASE

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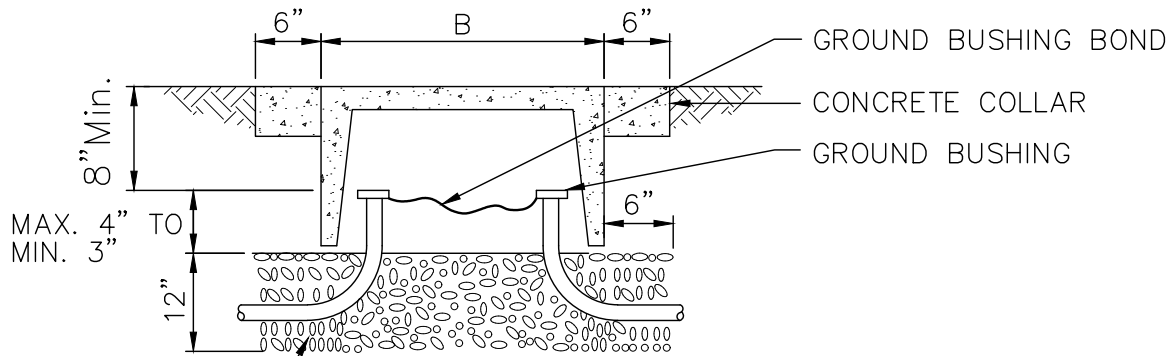
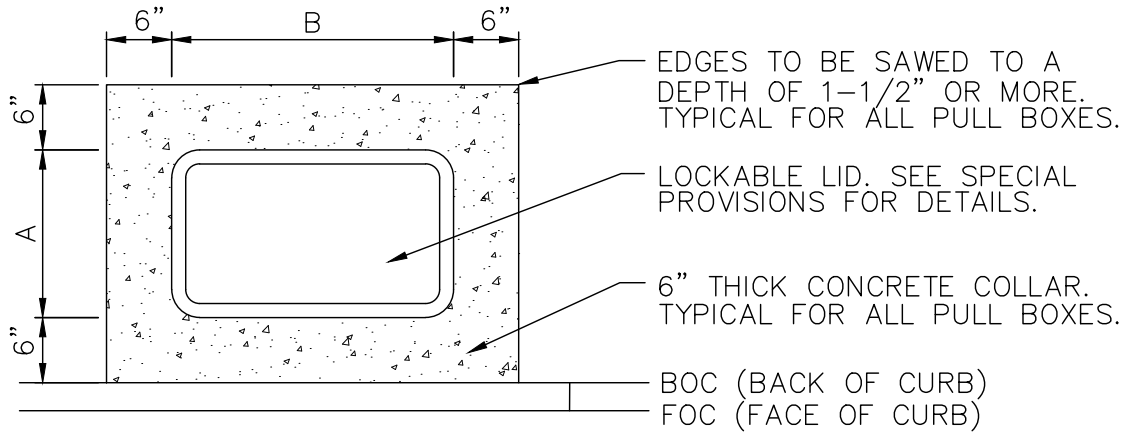


GENERIC INTERSECTION

GENERAL NOTES:

1. SEE FIBER OPTIC CONDUIT LAYOUT STANDARD PLAN E-250 FOR DISTRIBUTION AND BACKBONE CONDUIT ROUTING.
2. THIS LAYOUT IS TO BE USED AS A GUIDE. ACTUAL CONDUIT ROUTING WILL BE DEPENDANT ON CONTROLLER LOCATION, AND EXISTING FIELD CONDITIONS.
3. MAXIMUM DISTANCE BETWEEN TRAFFIC SIGNAL PULL BOXES SHALL NOT EXCEED 250'
4. MAXIMUM DISTANCE BETWEEN FIBER OPTIC PULL BOXES SHALL NOT EXCEED 400'
5. CONDUITS CONTAINING FIBER OPTIC ONLY SHALL HAVE #10 GROUND
6. USE 1-2\"C FOR FIBER OPTIC INTERCONNECT (UNLESS NOTED OTHERWISE ON PLANS)
7. USE 3\"C FOR ALL STREET CROSSINGS (UNLESS NOTED OTHERWISE ON PLANS)

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INSTALL PULL BOX ON TOP OF CRUSHED ROCK FOUNDATION. ADJUST PULL BOX TO GRADE. THE CRUSHED ROCK FOUNDATION SHALL HAVE A MINIMUM OF 12" IN DEPTH AND CONTINUE TO EXTEND A MINIMUM OF 6" BEYOND THE OUTSIDE EDGE OF THE PULL BOX. COMPACT CRUSHED ROCK WHILE MAINTAINING INTEGRITY OF CONDUIT. CONDUIT AND PULL BOX SHALL NOT BE DAMAGED NOR CRACKED.

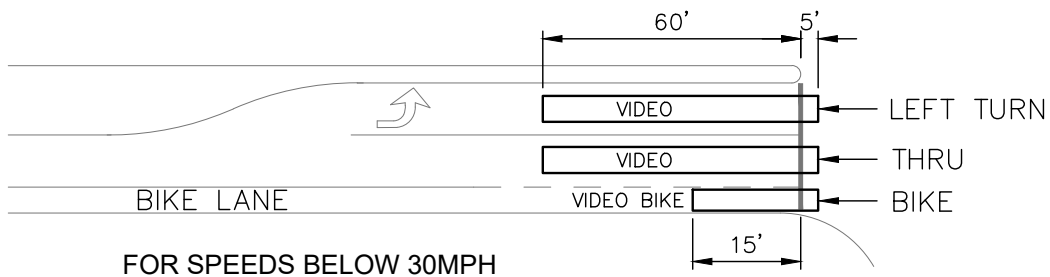
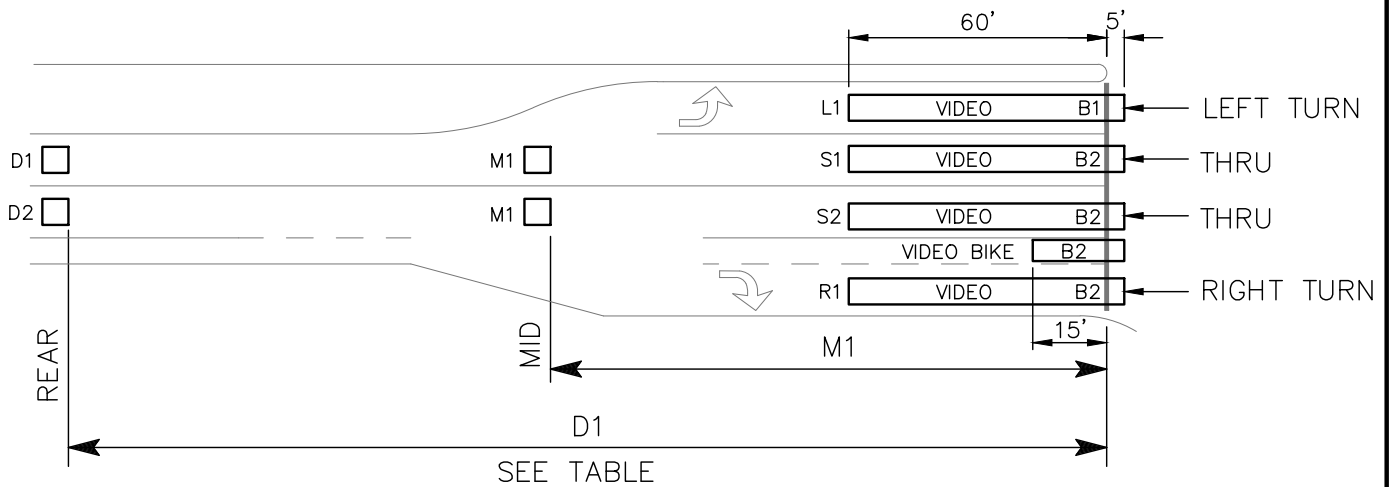
CONCRETE PULL BOX

PULL BOX, ADDITIONAL DESIGNATIONS OR DESCRIPTIONS:

PULL BOX DIMENSIONS		
PULL BOX	A	B
5	18"	27-1/2"
6	22"	35"

- (C) – COMMUNICATIONS PULL BOX
- (E) – PULL BOX WITH EXTENSION
- (T) – TRAFFIC RATED PULL BOX
- (TR) – TAMPER-RESISTANT PULL BOX

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LEFT TURN DETECTION = L1 – L4

REAR DETECTION = D1 – D4

MID DETECTION = M1

STOPBAR = S1 – S4

RIGHT TURN DETECTION = R1 – R2

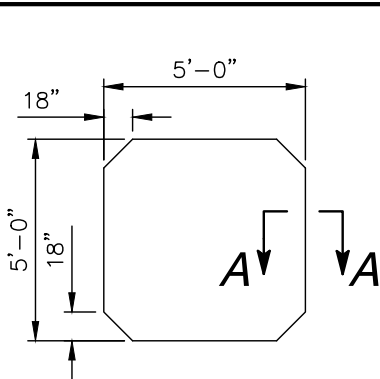
BICYCLE DETECTION = B1 – B4

LOOP DISTANCE		
DESIGN OR 85TH PERCENTILE SPEED	REAR D1	MID M1
BELOW 30 MPH	N/A	
30 MPH	175'	
35 MPH	200'	
40 MPH	250'	
45 MPH	300'	200'
50 MPH	350'	225'
55 MPH	405'	250'

GENERAL NOTES:

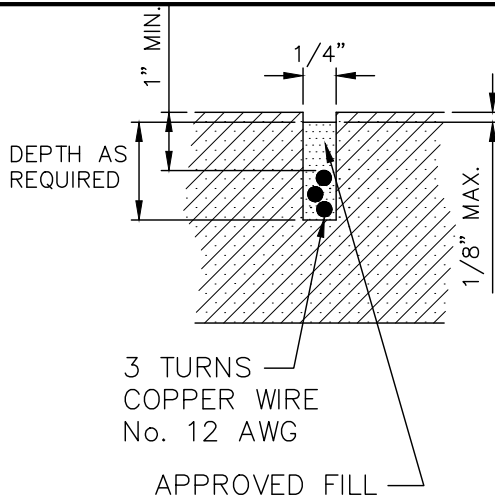
- SEE STANDARD PLAN E-170 FOR LOOP SIZES. LOOPS SHALL BE PLACED IN THE CENTER OF THE LANE.
- EACH REAR AND MID LOOP SHALL HAVE ONE DLC PER LANE.

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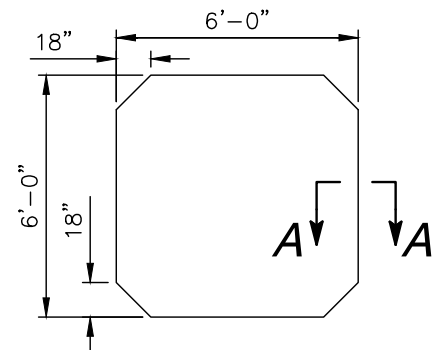


LOOPS SHALL BE 5' x 5' FOR LANE WIDTH LESS THAN OR EQUAL TO 11', UNLESS OTHERWISE SPECIFIED.

5' x 5' LOOP

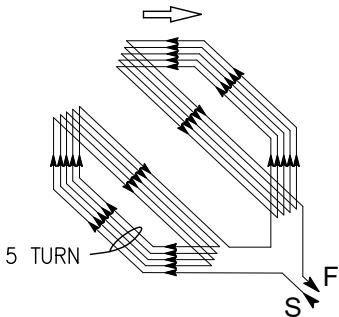


SECTION A-A

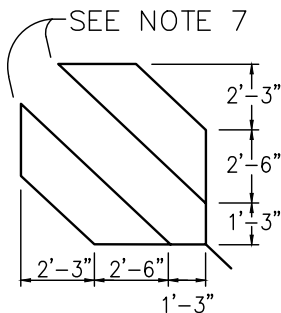


LOOPS SHALL BE 6' x 6' FOR LANE WIDTH GREATER THAN 11', UNLESS OTHERWISE SPECIFIED.

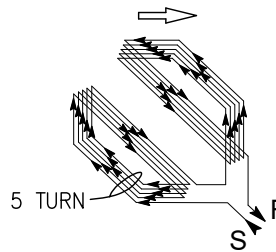
6' x 6' LOOP



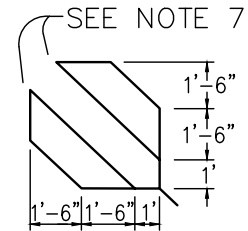
WINDING DETAIL



SAWCUT DETAIL



WINDING DETAIL



SAWCUT DETAIL

TYPE D LOOP DETECTOR CONFIGURATION

BIKE LOOP DETECTOR CONFIGURATION

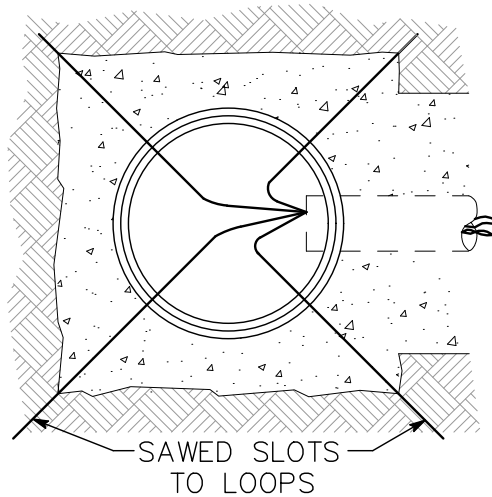
LOOP WINDING PATTERNS:

1. LOOP DETECTOR INSTALLATION SHALL CONFORM TO CALTRANS STANDARD PLAN ES-5A.
2. THE CONDUCTOR FOR EACH INDUCTIVE DETECTOR LOOP SHALL BE CONTINUOUS, UNSPLICED, TYPE RHW-USE NEOPRENE JACKETED OR TYPE USE CROSS-LINKED POLYETHYLENE INSULATED No. 12. STRANDED COPPER WIRE WITH A MINIMUM INSULATION THICKNESS OF 45 MILS.
3. THE LOOP DETECTOR LEAD IN CABLE FROM THE PULL BOX ADJACENT TO THE DETECTOR LOOPS TO THE CONTROLLER SHALL BE CONTINUOUS WITH NO SPLICES. DETECTOR CABLE SHALL BE SHIELDED, TWO TWISTED PAIR No. 18 CANOGA TYPE 30005 OR APPROVED EQUAL.
4. ALL DETECTOR LOOP SPLICES SHALL BE MADE IN THE ASSOCIATED PULL BOX AND ALL LEADS SHALL BE TAGGED.
5. INSULATION RESISTANCE TO GROUND SHALL BE GREATER THAN 200 MEGAOHMS.
6. HAND HOLES SHALL BE INSTALLED AT LOCATIONS AS DESIGNATED BY THE ENGINEER.
7. ROUND CORNERS OF ACUTE ANGLE SAW CUTS TO PREVENT DAMAGE TO CONDUCTORS.
8. USE TYPE D LOOPS FOR LIMIT LINE DETECTOR INSTALLATION IN LEFT TURN AND BICYCLE LANES.

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TYPE 'B' DETECTOR HANDHOLE INSTALLATION REQUIREMENTS:

1. OUTLINE OF TRENCH SHALL BE SAW CUT TO A MINIMUM DEPTH OF 3" EXCEPT WHERE AC OVERLAY IS TO BE PLACED.
2. THE PRECAST VALVE BOX WITH CAST IRON LID SHALL BE FABRICATED OF CALCIUM CARBONATE AND POLYESTER RESINS WITH FIBERGLASS REINFORCING AND DESIGNED FOR HEAVY TRAFFIC LOADS.
3. CAST IRON LID SHALL BE MARKED "DETECTOR" AND SHALL BE SECURED IN PLACE BY APPLYING WATERPROOF SILICONE SEALANT. VALVE BOX SHALL BE CENTERED ON LANE LINE, UNLESS OTHERWISE SHOWN ON THE PLANS.
4. THE EXCAVATION AROUND THE HANDHOLE SHALL BE BACKFILLED WITH P.C.C. EXCEPT THE TOP 2" IN AC SURFACED ROADWAYS SHALL BE BACKFILLED WITH AC.
5. THE HANDHOLE SHALL BE PROTECTED WITH COLD PATCH OR OTHER SUITABLE PROTECTION UNTIL PERMANENT AC BACKFILL IS PLACED.



2" MIN. A.C. AROUND HANDHOLE

9" DIA. ID x 12" HIGH VALVE BOX WITH CAST IRON LID

A.C. OVERLAY IF REQUIRED

SILICONE SEALANT

2" MIN.

TWIST LOOP CONDUCTOR PAIRS 2-FT. OF SLACK IN EACH CONDUCTOR

P.C.C.

SAWED SLOTS TO LOOPS
SECTION A-A

0.1' MIN. A.C. OVER CONDUIT TRENCH

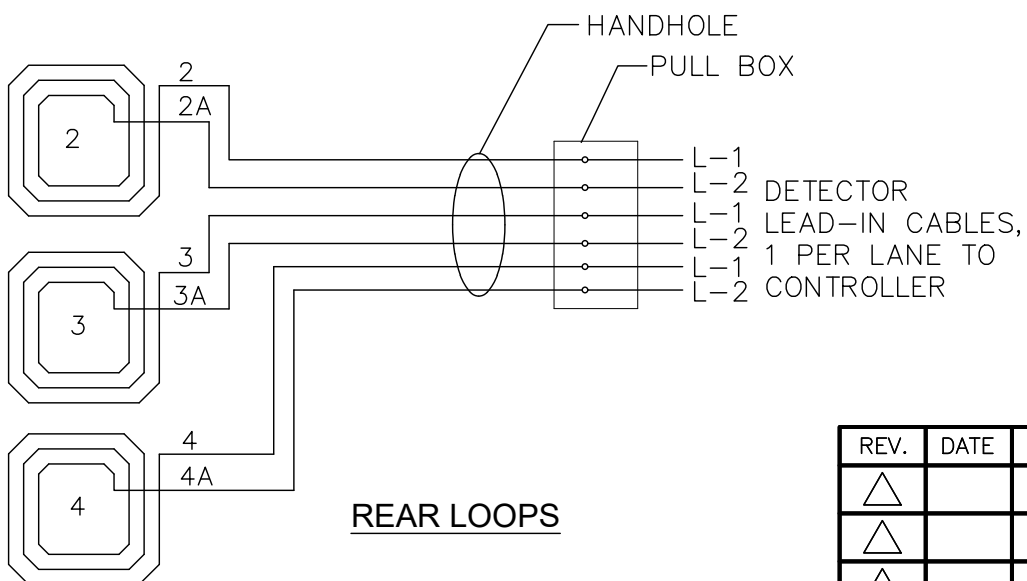
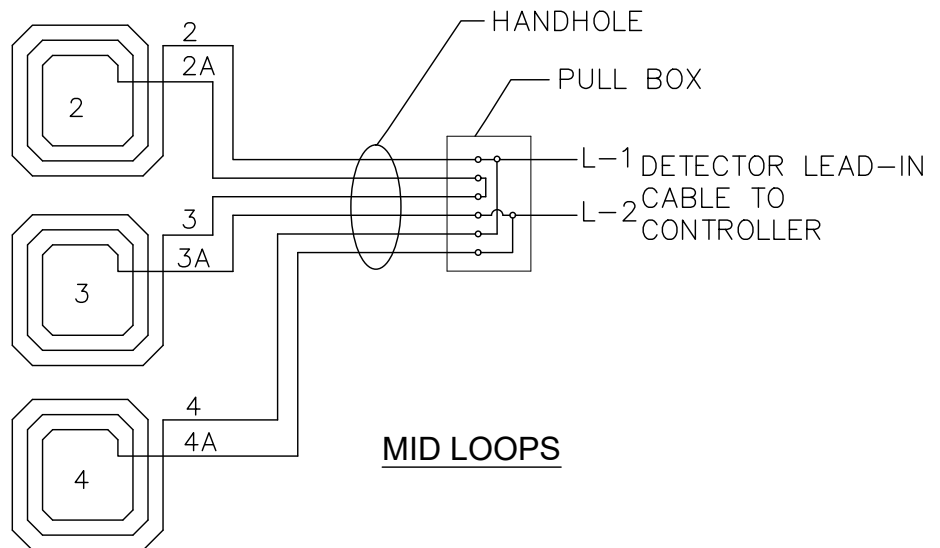
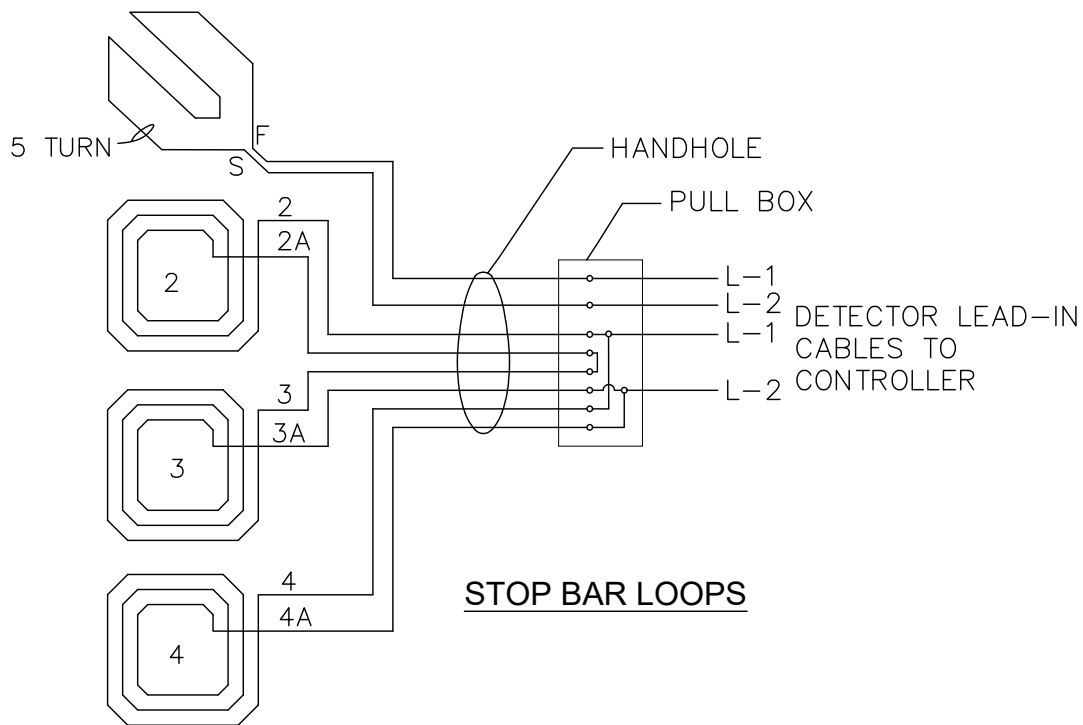
LOOP WIRES IN SAWED SLOT

45° ELBOW

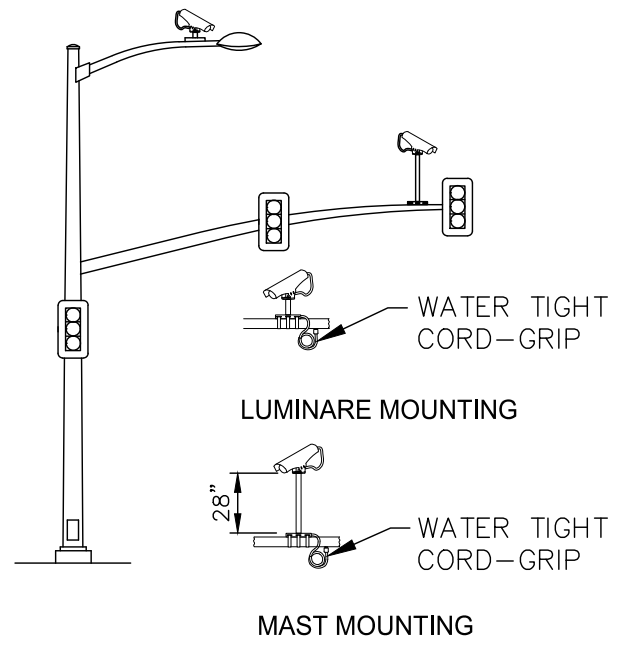
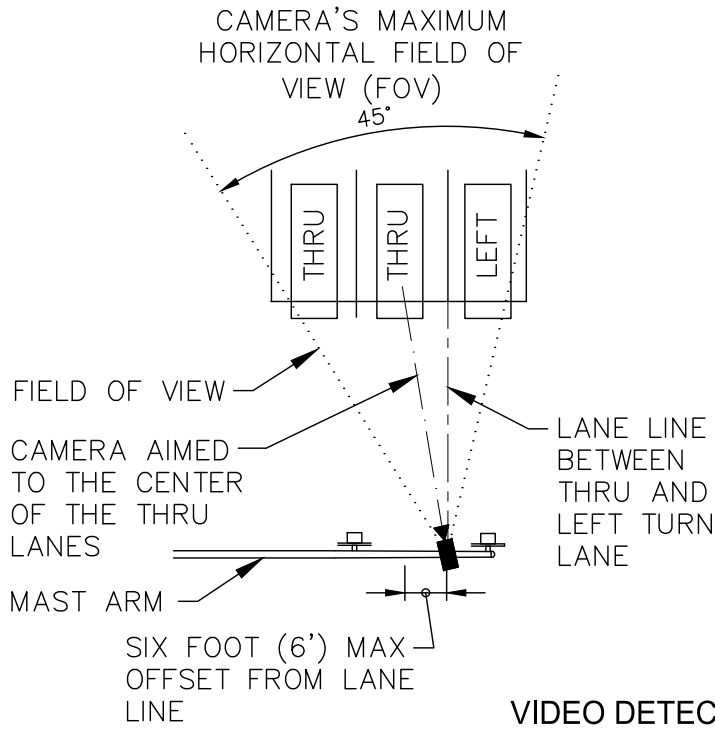
1-1/2" MIN. P.V.C. 9" MIN. DEPTH

TYPE 'B' DETECTOR HANDHOLE

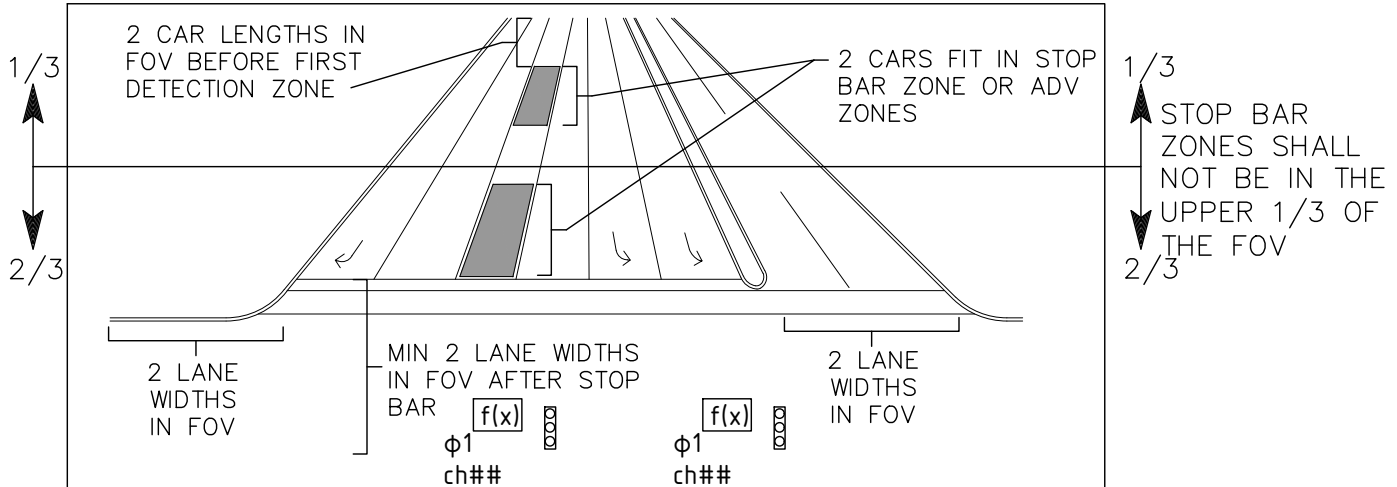
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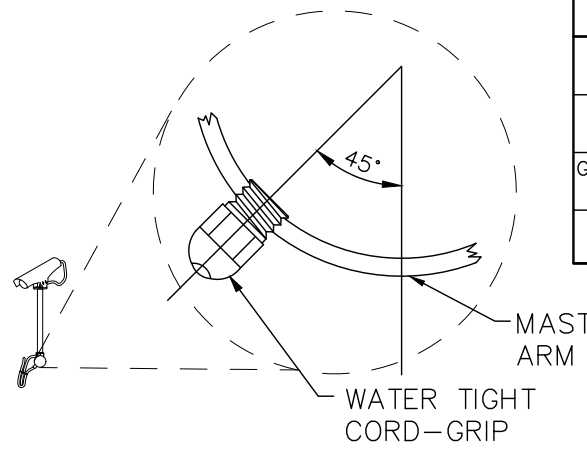
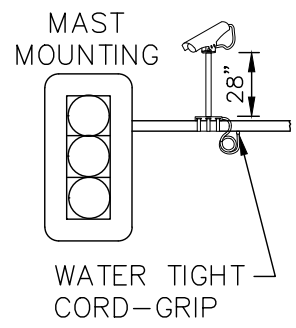


VIDEO DETECTION FIELD OF VIEW AND MOUNTING DETAIL



TYPICAL VIDEO DETECTION AIMING AND FIELD OF VIEW
TYPICAL 6 LANE CAMERA VIEW

SEE STANDARD PLAN E-210 FOR GENERAL AIMING AND PROGRAMMING NOTES.



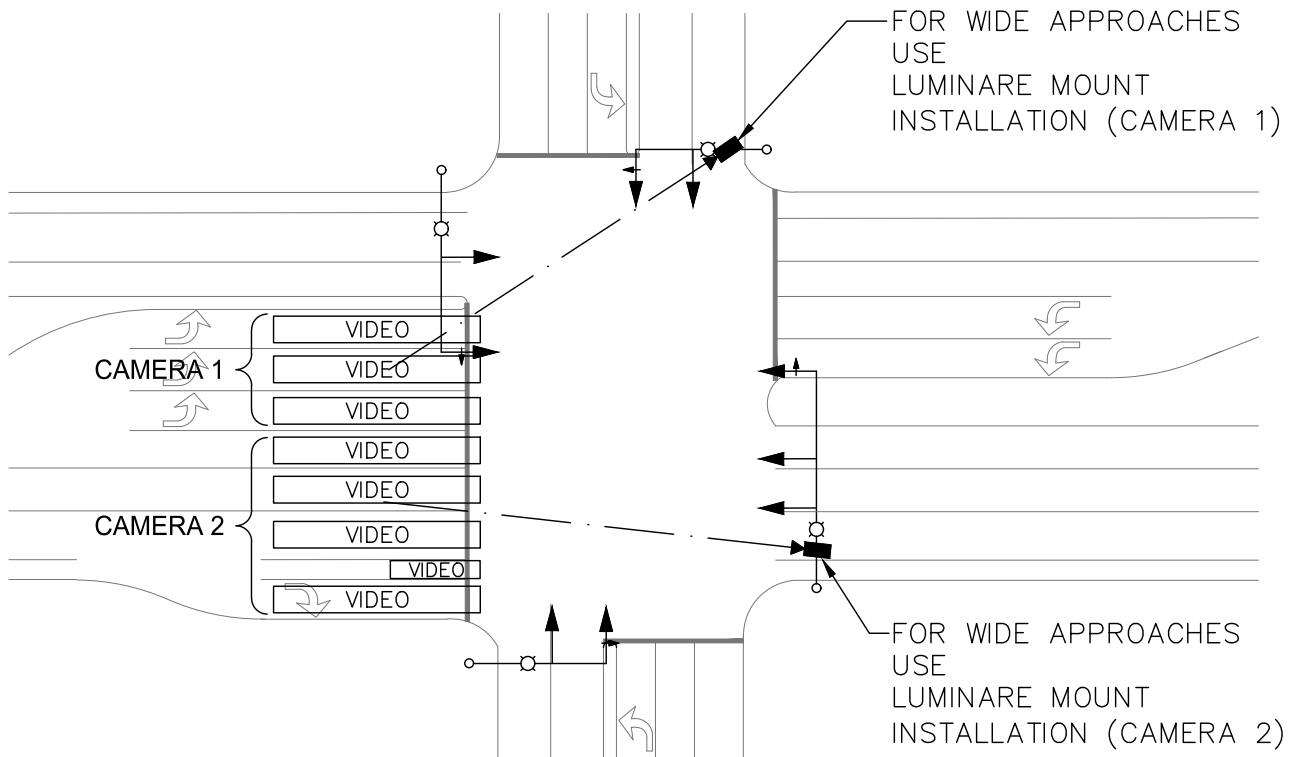
VIDEO DETECTION		
NUMBER OF APPROACH LANES	QTY OF CAMERAS	CAMERA MOUNTING
6 LANES + BIKE LANE OR LESS	1	MAST ARM
GREATER THAN 6 LANES + BIKE LANE	2	LUMINAIRE ARM
SPLIT PHASE	1	LUMINAIRE ARM

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GENERAL AIMING AND PROGRAMMING NOTES (ALL CAMERA INSTALLATIONS):

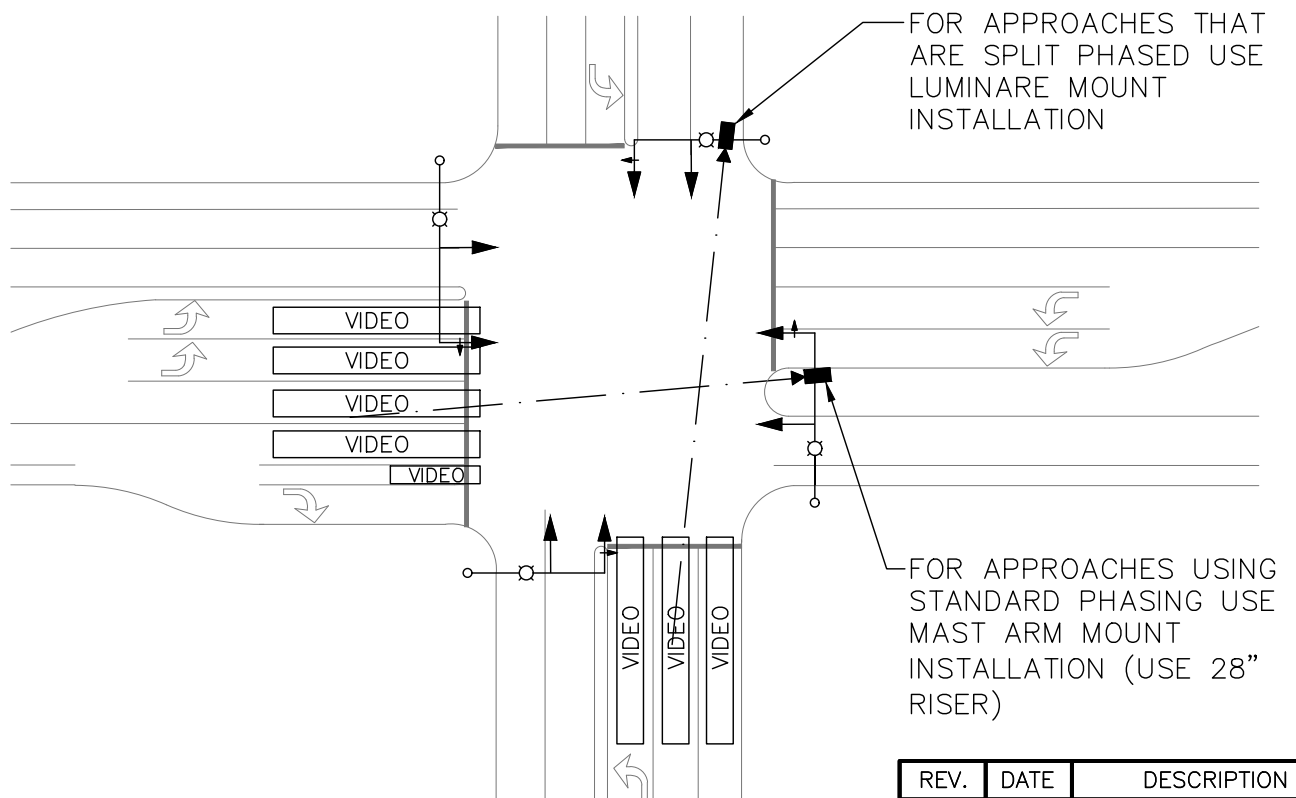
1. AIMING AND FIELD OF VIEW (FOV) DETAIL DEMONSTRATES FOV AND AIMING ONLY. DOES NOT DENOTE THE AMOUNT OF DETECTED LANES.
2. CAMERAS FIELD OF VIEW SHALL BE CHECKED TO VERIFY THAT THE CAMERA CAN DETECT ALL LANES. THE CAMERA SHALL HAVE A MAXIMUM HORIZONTAL FOV OF 45°. IF ALL LANES DO NOT FIT IN THE FOV THEN ADDITIONAL CAMERAS WILL BE REQUIRED.
3. VIDEO SHALL BE USED FOR STOP BAR DETECTION ONLY.
4. NO HORIZON SHALL BE ALLOWED IN VIDEO.
5. CAMERA SHALL BE AIMED SO THE STOP BAR ZONES ARE NOT IN THE UPPER 1/3 OF THE VIDEO FIELD OF VIEW.
6. TWO CAR LENGTHS SHALL BE VISIBLE IN THE FIELD OF VIEW BETWEEN THE FIRST DETECTION ZONE AND THE TOP OF THE VIDEO IMAGE.
7. THE CAMERA SHALL BE ROTATED SO THE THE STOP BAR IS HORIZONTAL IN THE VIDEO IMAGE.
8. DETECTION ZONE SHALL BE APPROXIMATELY 60' LONG.
9. MAXIMUM DETECTABLE WIDTH IS 6 LANES + BIKE LANE.
10. DETECTOR LABELS SHALL INCLUDE ASSIGNED PHASE # AND ASSIGNED CHANNEL #.
11. THE PHASE STATUS SHALL BE DISPLAYED

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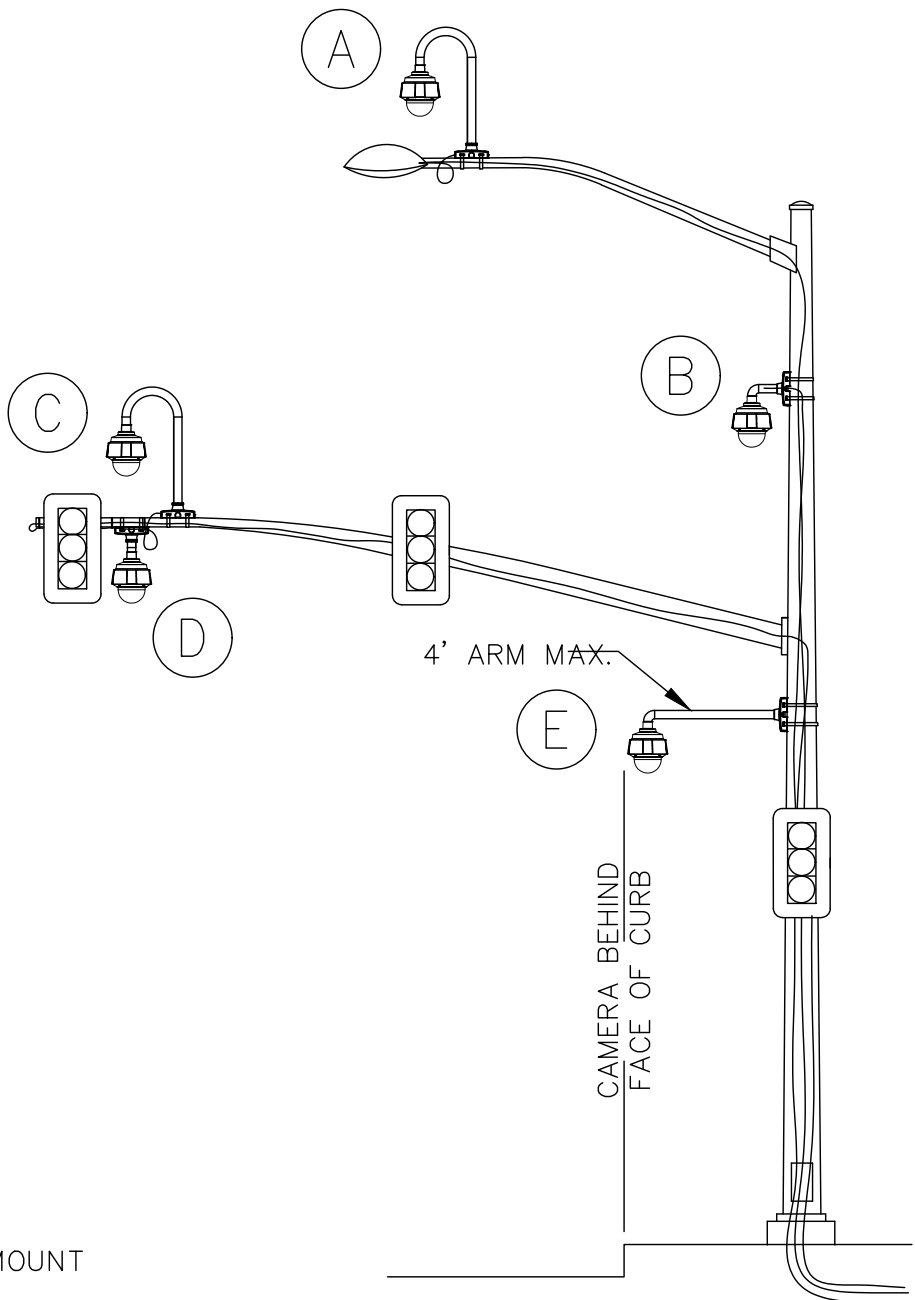
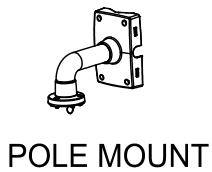
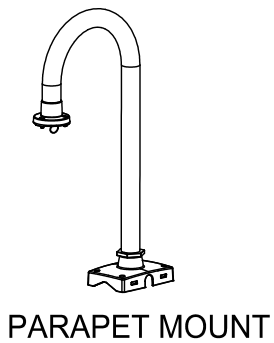
DUAL CAMERA DETECTION MOUNTING

FOR APPROACHES GREATER THAN 6 LANES + BIKE LANE



SINGLE CAMERA DETECTION MOUNTING
FOR APPROACHES 6 LANES + BIKE LANE OR LESS

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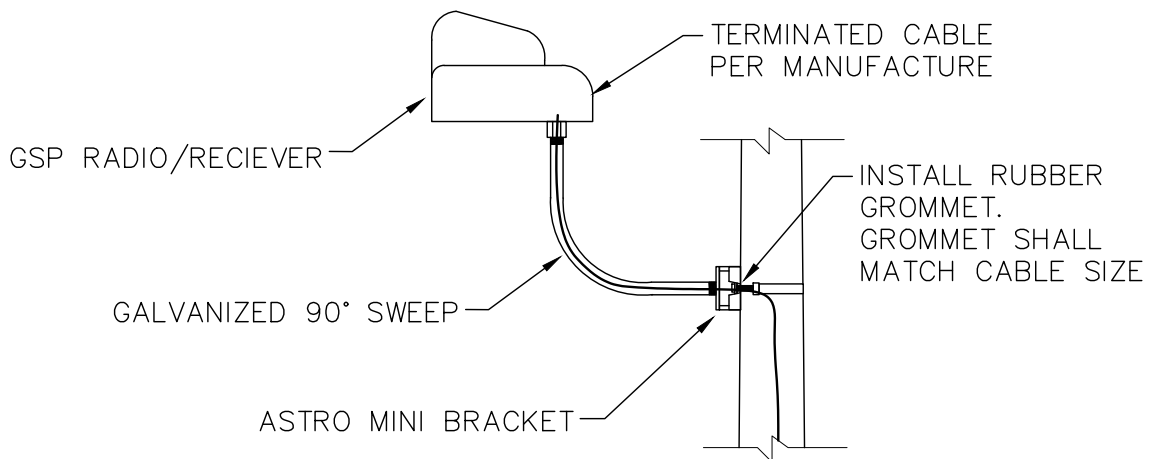
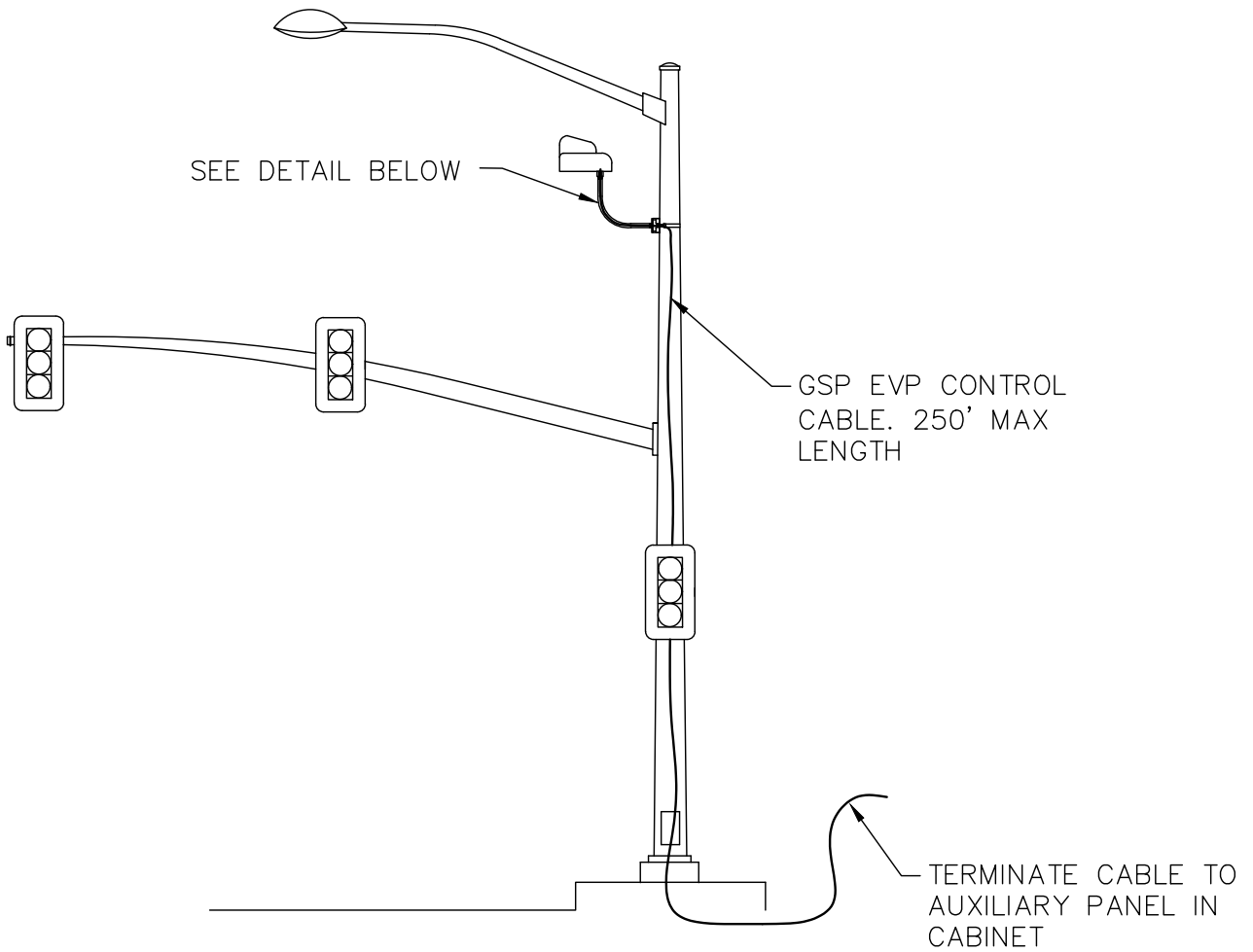
PTZ CAMERA MOUNTING LOCATIONS
N.T.S.

- (A) LUMINAIRE ARM MOUNT
- (B) POLE MOUNT HIGH
- (C) MAST ARM MOUNT HIGH
- (D) MAST ARM MOUNT LOW
- (E) POLE MOUNT LOW

GENERAL NOTE:

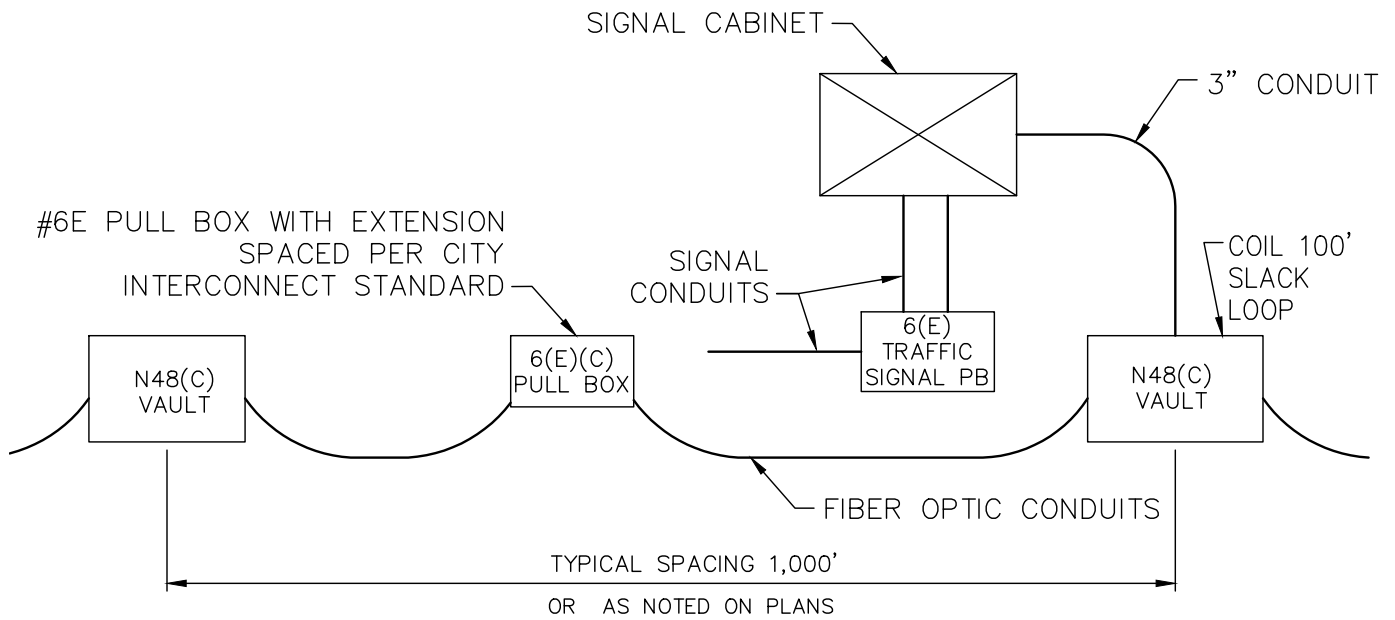
1. USE CAMERA MOUNTING LOCATION (A) UNLESS OTHERWISE NOTED ON PLANS.

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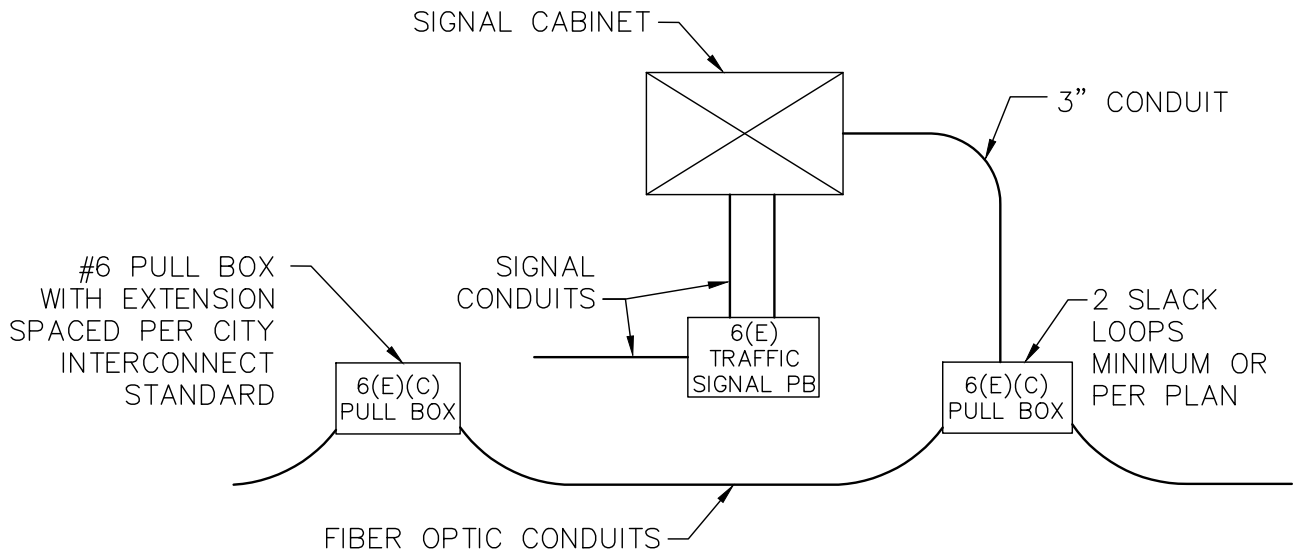


TS-1 CABINET CHANNELS	TS-2 CABINET CHANNELS	EVP	PHASE	DIRECTION
2	3	A	1, 6	EASTBOUND
3	4	B	2, 5	WESTBOUND
4	5	C	3, 8	NORTHBOUND
5	6	D	4, 7	SOUTHBOUND

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**TYPICAL CONDUIT DETAIL FOR
BACKBONE FIBER OVER 48 STRANDS**

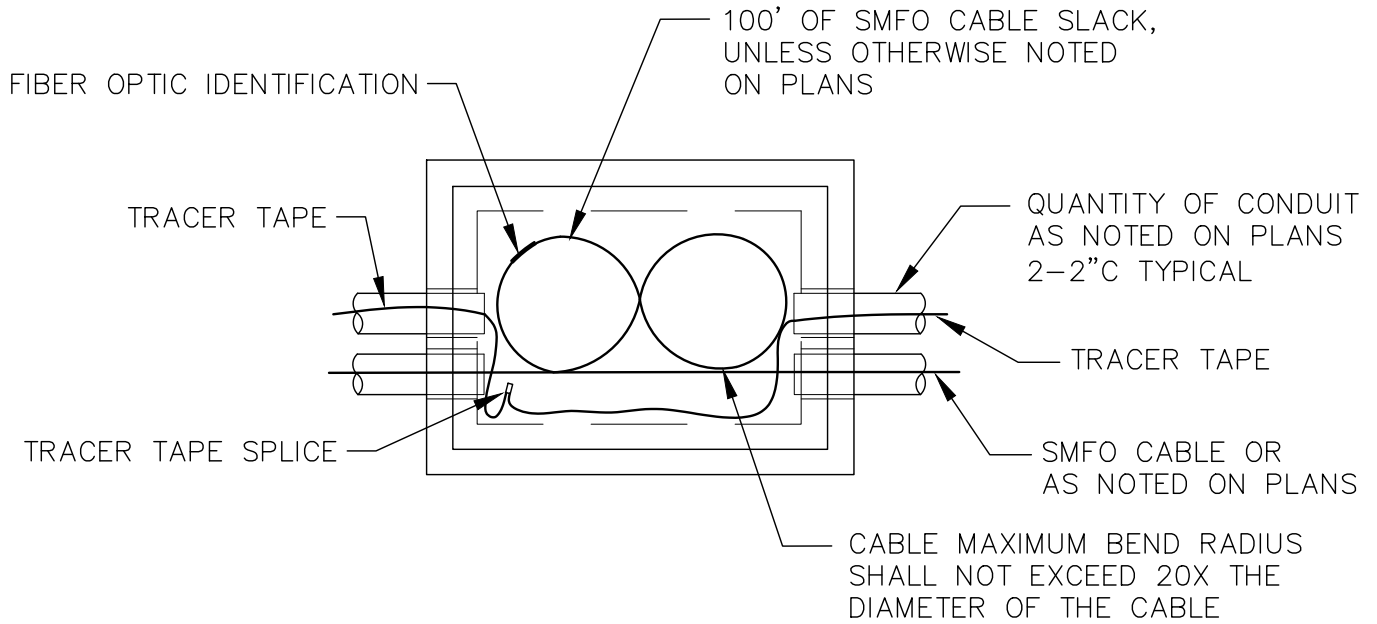


**TYPICAL CONDUIT DETAIL FOR
DISTRIBUTION FIBER CABLE UP TO 48 STRANDS**

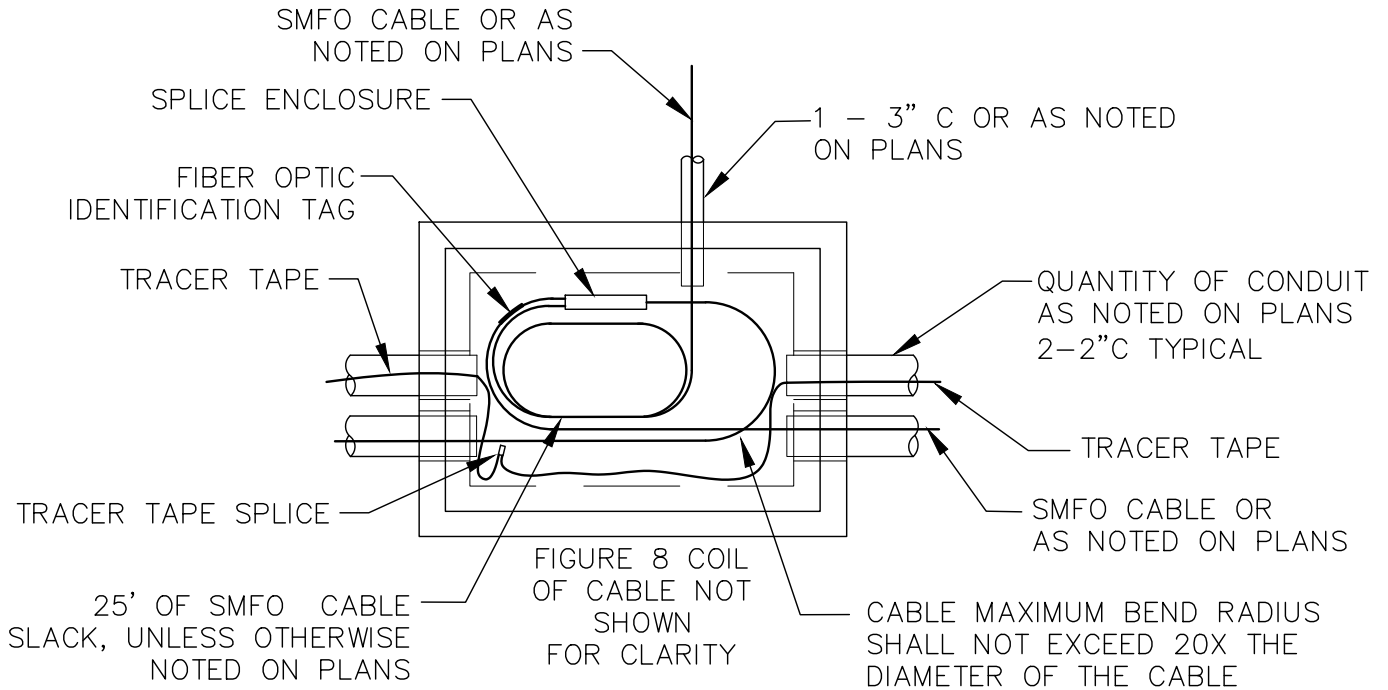
TRACER TAPE:

1. TRACE WIRE SHALL BE INSTALLED IN RACEWAY WITH FIBER OPTIC CABLE OR IN ONE CONDUIT OF MULTIPLE CONDUIT BANK.
2. TRACE WIRE IN TAPE SHALL BE SPLICED AT EVERY BREAK.

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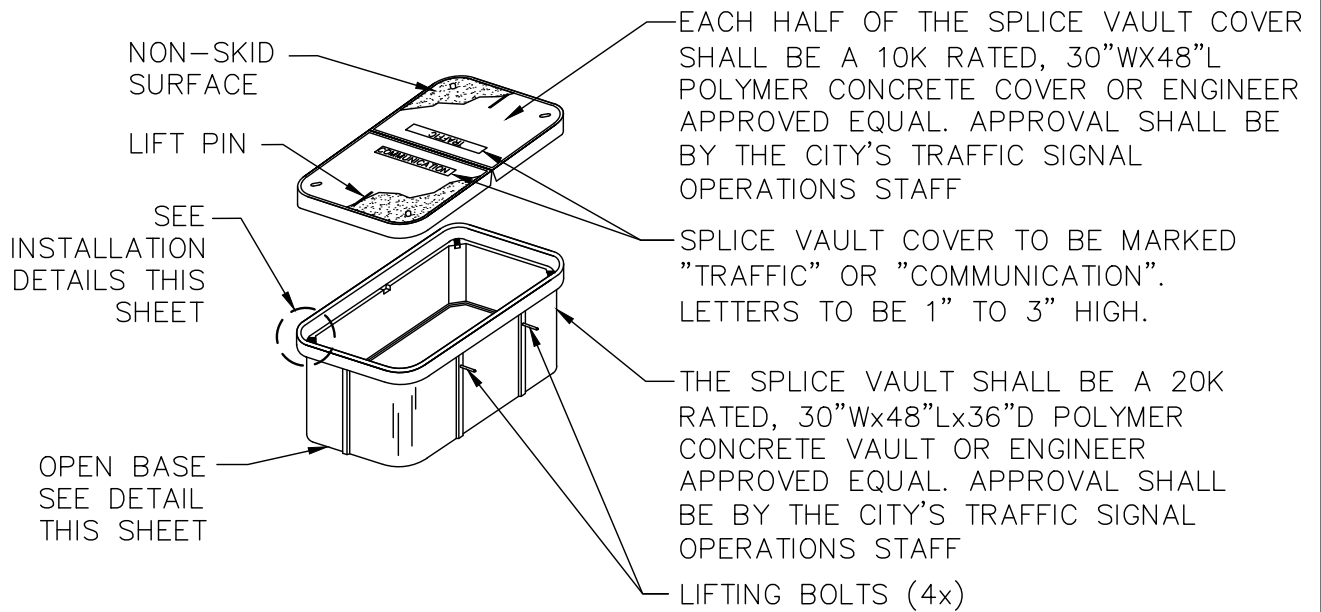


N48 VAULT WITH NO SPLICE
NO SCALE



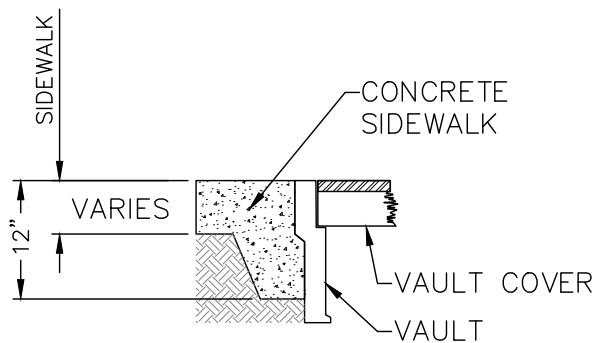
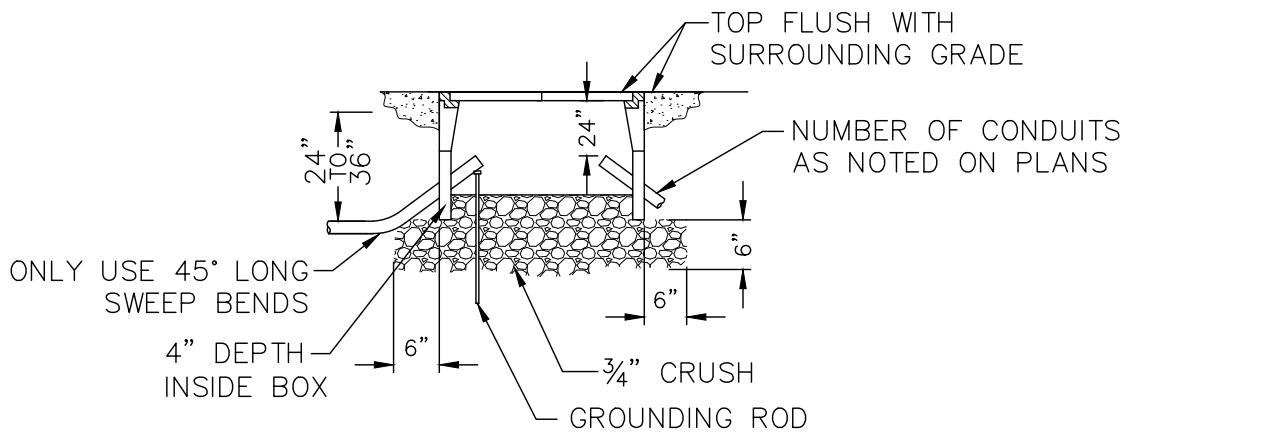
N48 VAULT WITH SPLICE
NO SCALE

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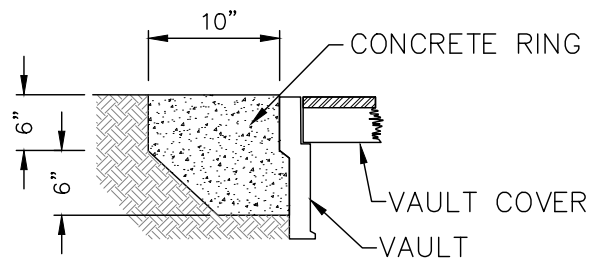


N48 SPLICE VAULT - 3-DIMENSIONAL VIEW

NO SCALE



IN CONCRETE SIDEWALK



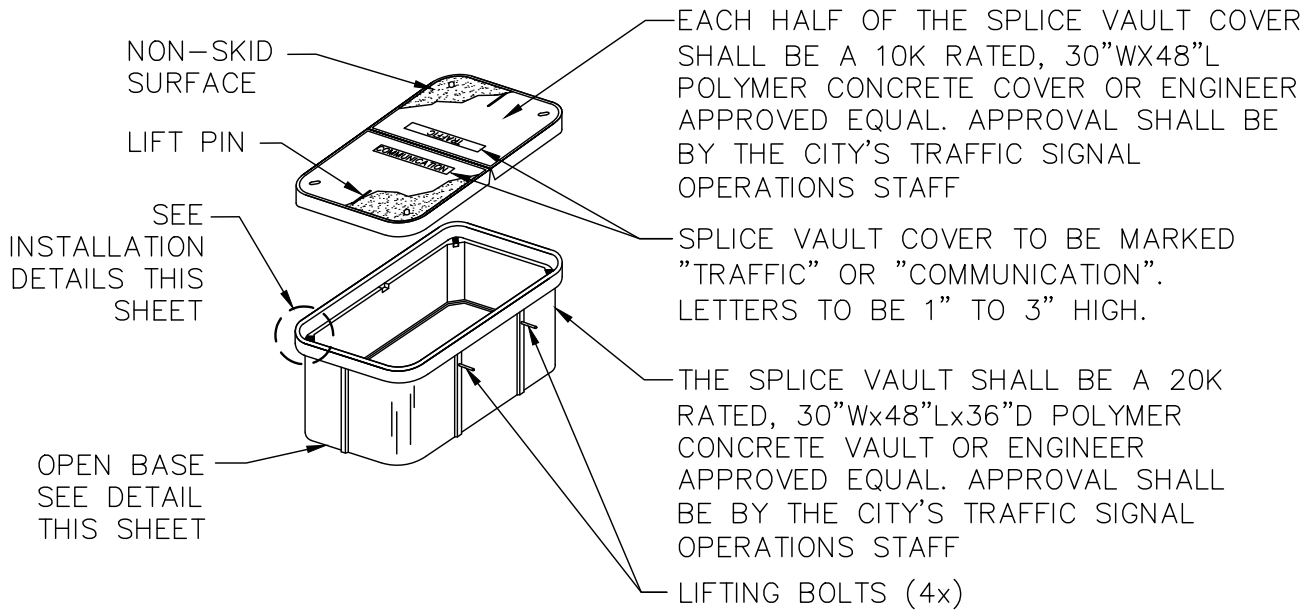
IN COMPACTED EARTH

N48 SPLICE VAULT INSTALLATION

NO SCALE

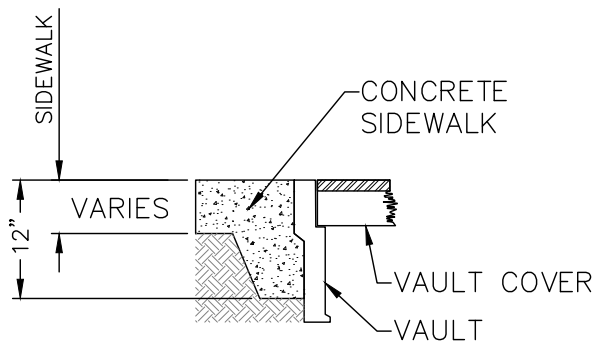
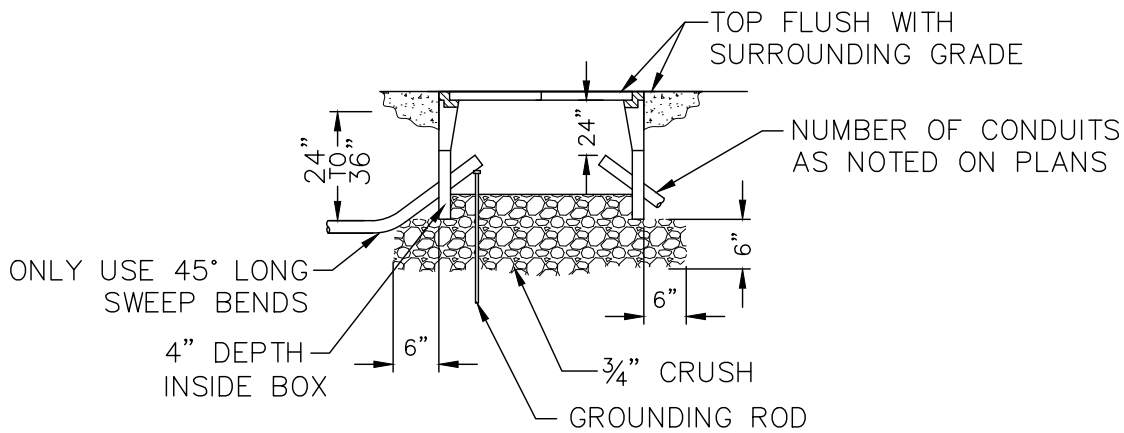
SEE E-290 FOR ADDITIONAL NOTES.

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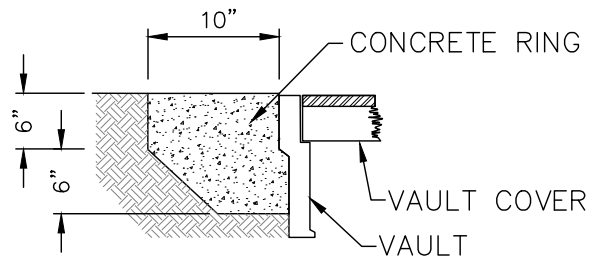


N48 SPLICE VAULT - 3-DIMENSIONAL VIEW

NO SCALE



IN CONCRETE SIDEWALK



IN COMPACTED EARTH

N48 SPLICE VAULT INSTALLATION

NO SCALE

SEE E-290 FOR ADDITIONAL NOTES.

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N48 SPLICE VAULT GENERAL NOTES:

1. UPON ACCEPTANCE OF THE WORK, ALL CONDUITS SHALL BE SEALED WITH COMPATIBLE SEALANT MATERIAL.
2. ALL GROUND CONNECTIONS SHALL BE COATED WITH OXIDATION PROHIBITING COMPOUND.
3. ALL CONDUITS SHALL BE CAULKED OR GROUTED AFTER CONDUIT ARE INSTALLED.
4. VAULT SHALL BE INSTALLED ON A MINIMUM OF SIX (6) INCH OF ¾" CRUSHED ROCK. SEE DETAIL THIS SHEET. CONDUITS SHALL EXTEND ABOVE THE ROCK AND HAVE MINIMUM OF TWENTY FOUR (24") INCHES OF CLEARANCE BELOW THE COVER.
5. VAULTS SHALL NOT BE WITHIN THE BOUNDARIES OF NEW OR EXISTING WHEELCHAIR RAMPS.
6. WHEN SPLICE VAULT IS INSTALLED IN SIDEWALK AREA AS NOTE ON PLANS, THE DEPTH OF THE SPLICE VAULT SHALL BE ADJUSTED SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE SIDEWALK
7. ALL COVERS AND VAULTS SHALL BE INTERCHANGEABLE WITH CALIFORNIA STANDARD MALE AND FEMALE GAGES. WHEN INTERCHANGED WITH A STANDARD MALE OR FEMALE GAGE, THE TOP SURFACES SHALL BE FLUSH WITHIN ⅛" OF AN INCH. TOP OUTSIDE EDGE OF ALL CONCRETE COVERS AND SPLICE VAULTS SHALL HAVE A ¼" MINIMUM RADIUS.

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