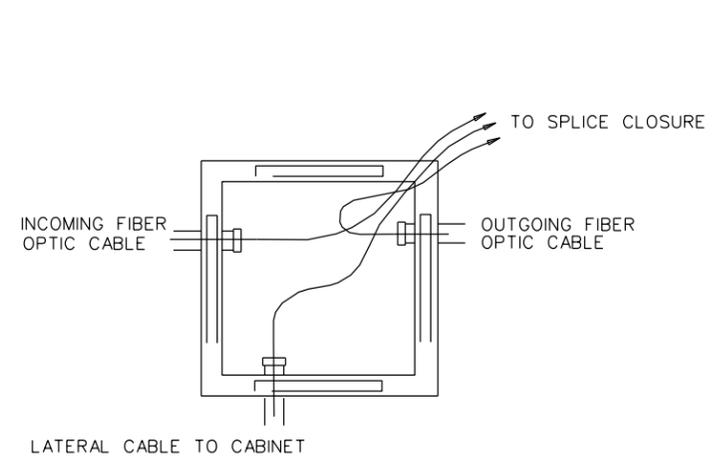


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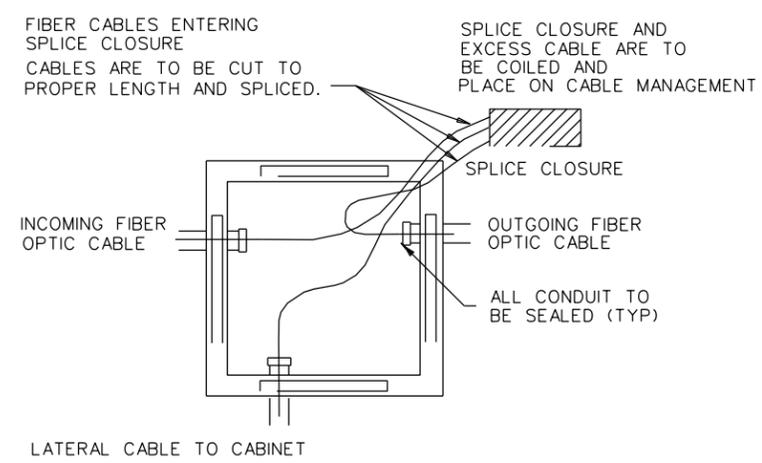
1. CONDUIT ENTERING MANHOLE SHALL NOT DEFLECT BY MORE THAN THE MANUFACTURER'S RECOMMENDATIONS FROM THE ALIGNMENT PRECEDING OR FOLLOWING MANHOLES.
2. SEE PROJECT SPECIFICATIONS FOR THE QUANTITY OF BOTH FIBER OPTIC BACKBONE CABLE AND FIBER OPTIC LATERAL CABLE TO BE COILED IN EACH MANHOLE.
3. ALL FIBER MUST BE LABELED PER PROJECT DETAIL SHEETS.
4. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL CABLE MANAGEMENT INCLUDING HOOKS, RACKS, FASTENERS, ANCHORS, AND STRAPS FOR USE INSIDE MANHOLES FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
5. FOR ALL EXISTING MANHOLES, FIBER MANAGEMENT HARDWARE SHALL BE PAID FOR WITH FIBER OPTIC CABLE, NO ADDITIONAL PAYMENT SHALL BE MADE.
6. ACCESS LADDER SHALL BE REMOVABLE AND ENGINEERED TO SUPPORT 300 POUNDS. BOLTS FOR LADDER SUPPORT SHALL BE EITHER EPOXIED INTO CONCRETE OR BY USE OF EXPANSION ANCHORS.

ITS MANHOLE - INTERIOR CABLE MANAGEMENT HARDWARE DETAIL (SIDE VIEW)

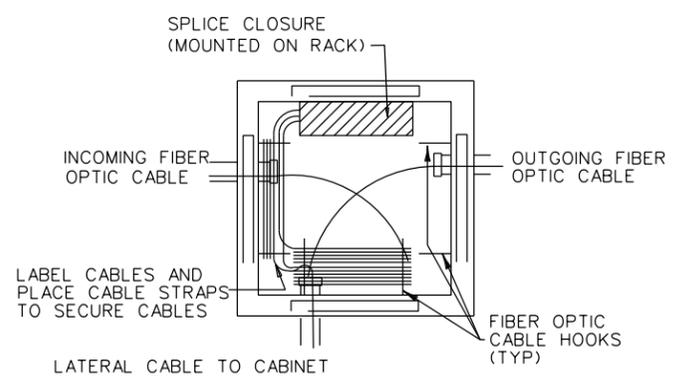
4' X 4' X 4'



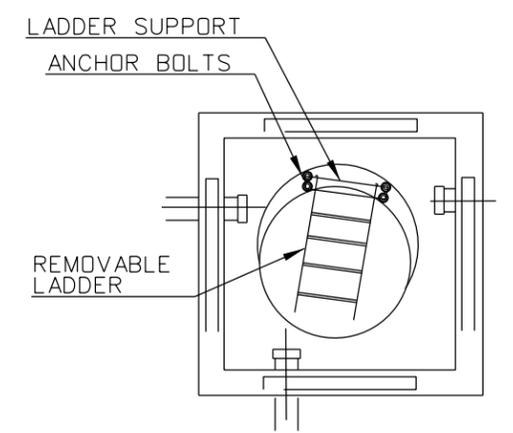
STEP 1
BRINGING FIBER CABLE INTO MANHOLE



STEP 2
SPLICE PROCEDURE



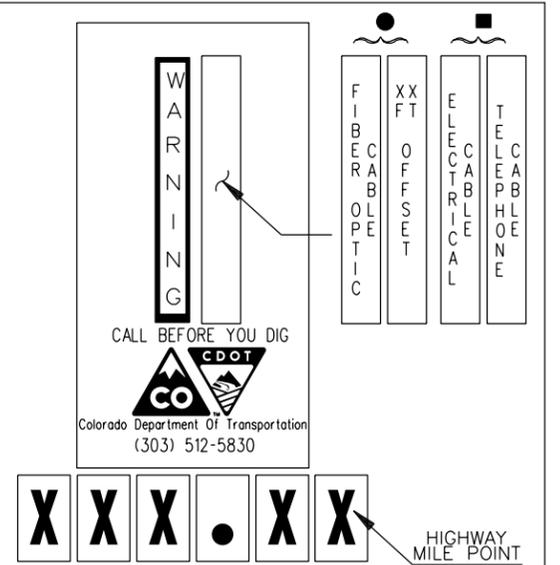
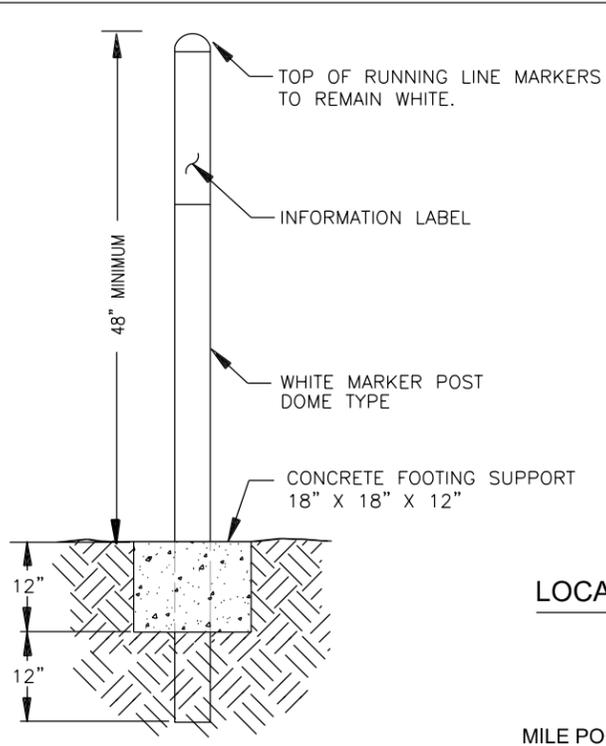
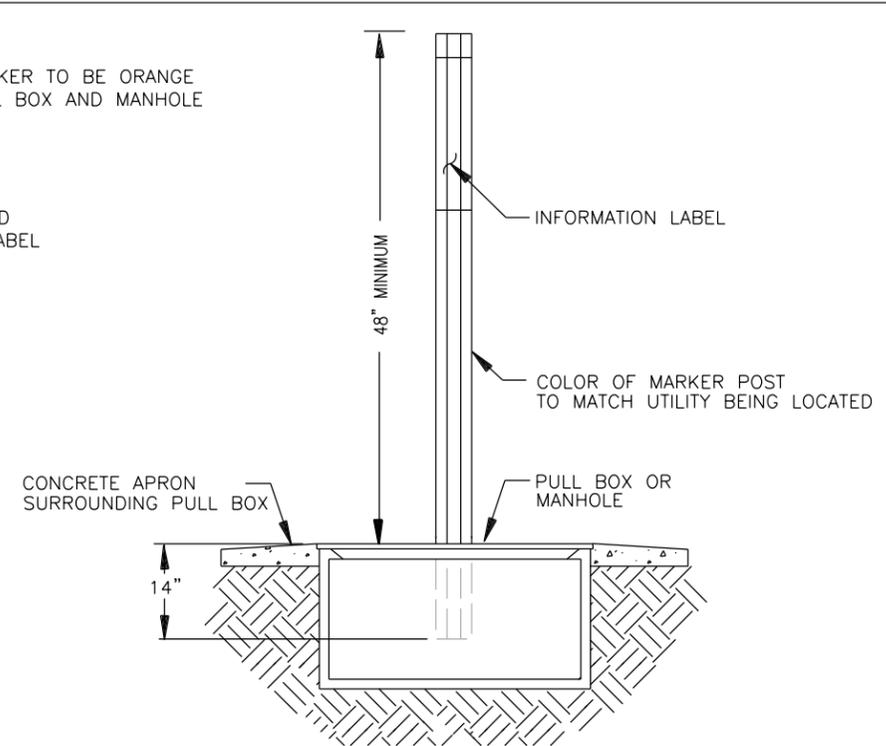
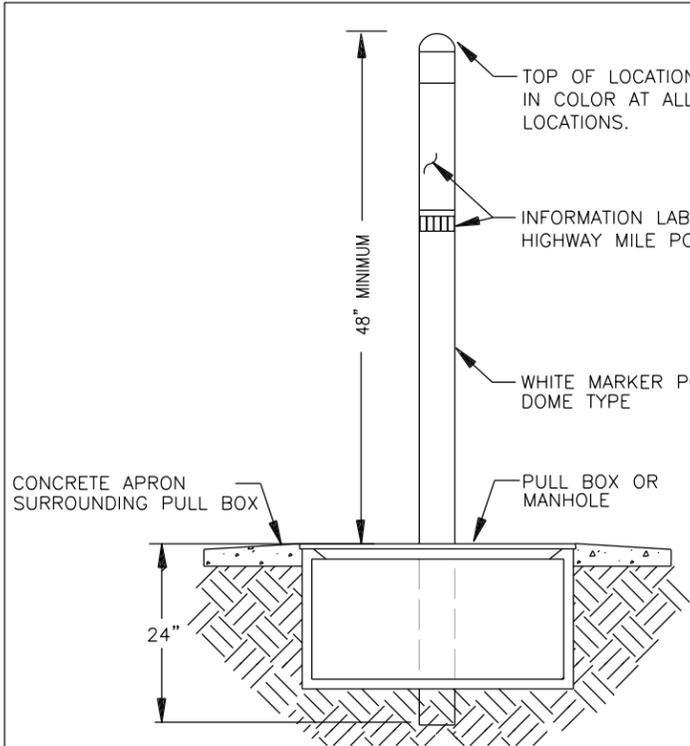
STEP 3
CLOSURE AND CABLE MANAGEMENT



ACCESS LADDER
Top View (Typical)

ITS MANHOLE - CABLE MANAGEMENT DETAIL (TOP VIEW)

Print Date: 9/21/2015	Sheet Revisions			As Constructed	MANHOLE (Traffic Management Systems)			Project No./Code
File Name: Revision of Section 604 - (TMS) Manhole	Detail.dgn	Date:	Comments	No Revisions:	Designer:	Structure Numbers	X-XX-XX	
Horiz. Scale: 1:100				Revised:	Detailer:		X-XX-XX	
Unit Information				Void:	Sheet Subset:	ITS	Subset Sheets: XXX of XXX	Sheet Number
	(R-X)							



LOCATION MARKER INFORMATION LABELING

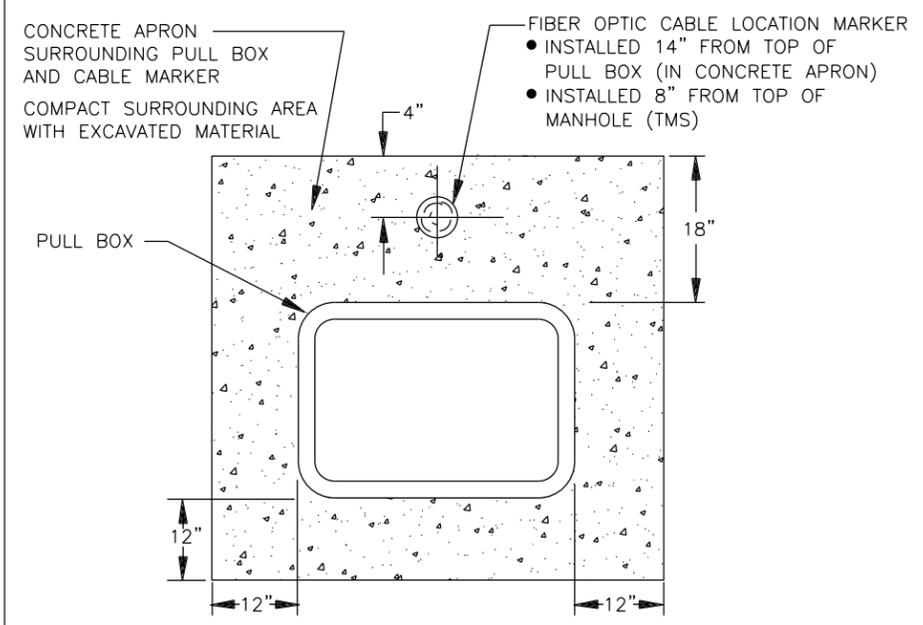
LABEL WITH CDOT CONTACT INFORMATION
 BLACK LETTERING ON ORANGE BACKGROUND

- FOR FIBER OPTIC DOME MARKERS
- FOR CDOT UTILITY FLAT MARKERS

MILE POINT REFERENCE LABEL (5 NUMBERS / 1 DECIMAL POINT)
 MILE POINT DESIGNATION TO BE TO 100TH OF A MILE
 BLACK NUMBERS WITH WHITE BACKGROUND

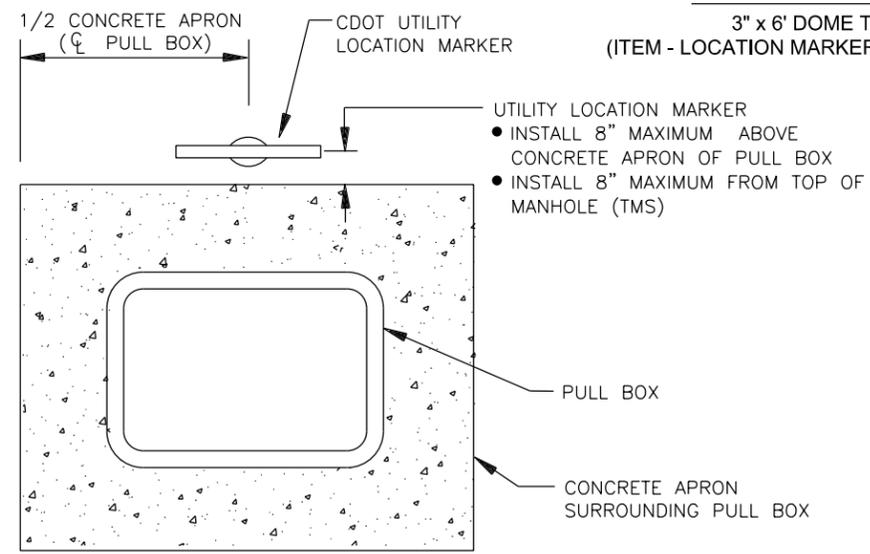
FIBER OPTIC RUNNING LINE LOCATION MARKER

3" x 6" DOME TYPE POST
 (ITEM - LOCATION MARKER (FIBER OPTIC)(DOME))



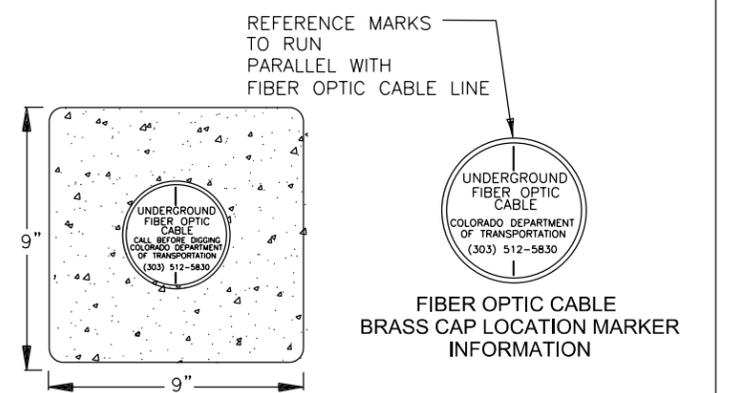
PULL BOX AND MANHOLE FIBER OPTIC LOCATION MARKER

3" x 6" DOME TYPE POST
 (ITEM - LOCATION MARKER (FIBER OPTIC)(DOME))

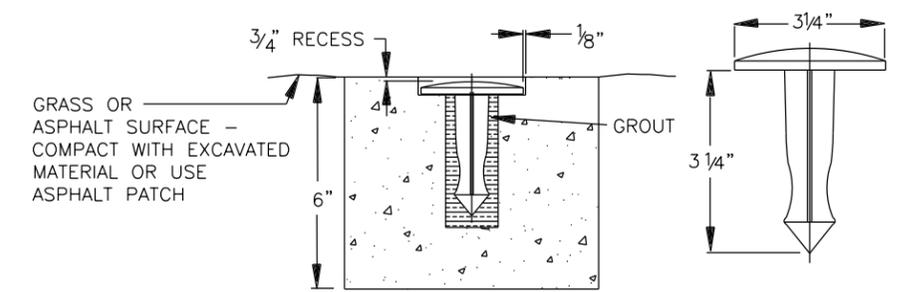


CDOT UTILITY LOCATION MARKER

3 1/2" X 62" FLAT TYPE POST
 ELECTRICAL POWER RUNNING LINES AND TELEPHONE RUNNING LINES
 ITEM - LOCATION MARKER (UTILITY)(FLAT SLAT)



FIBER OPTIC CABLE BRASS CAP LOCATION MARKER INFORMATION



LANDSCAPE LOCATION MARKER

BRASS CAP SURVEY MONUMENT USED AS FIBER OPTIC CABLE MARKER WITH CONCRETE FOOTING SUPPORT
 (ITEM - LOCATION MARKER (FIBER OPTIC)(BRASS CAP))

Creation Date: 10/01/2013	Initials: AS
Print Date: 9/21/2015	Initials: CSE
File Name: Revision of Section 612 - Location Marker - Detail1.dwg	
HQ ITS	SS
CAD Version: Microstation V8i	
Horiz. Scale:	Units: English

Sheet Revisions		
Date:	Comments	Init.

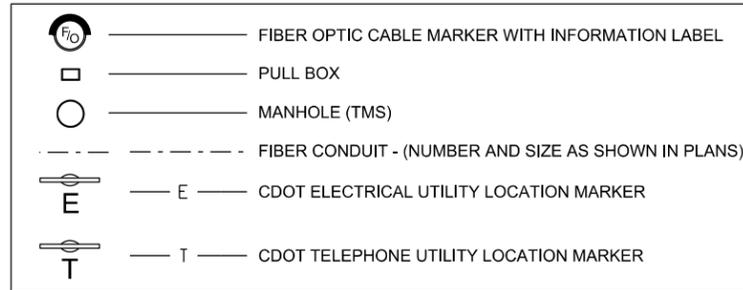
As Constructed
No Revisions:
Revised:
Void:

Fiber Optic and Utility Markers Project Standard			
Designer:	Structure Numbers	-	-
Detailer:			
Sheet Subset:	ITS	Subset Sheets:	2 of 2

Project No./Code
Sheet Number

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LEGEND



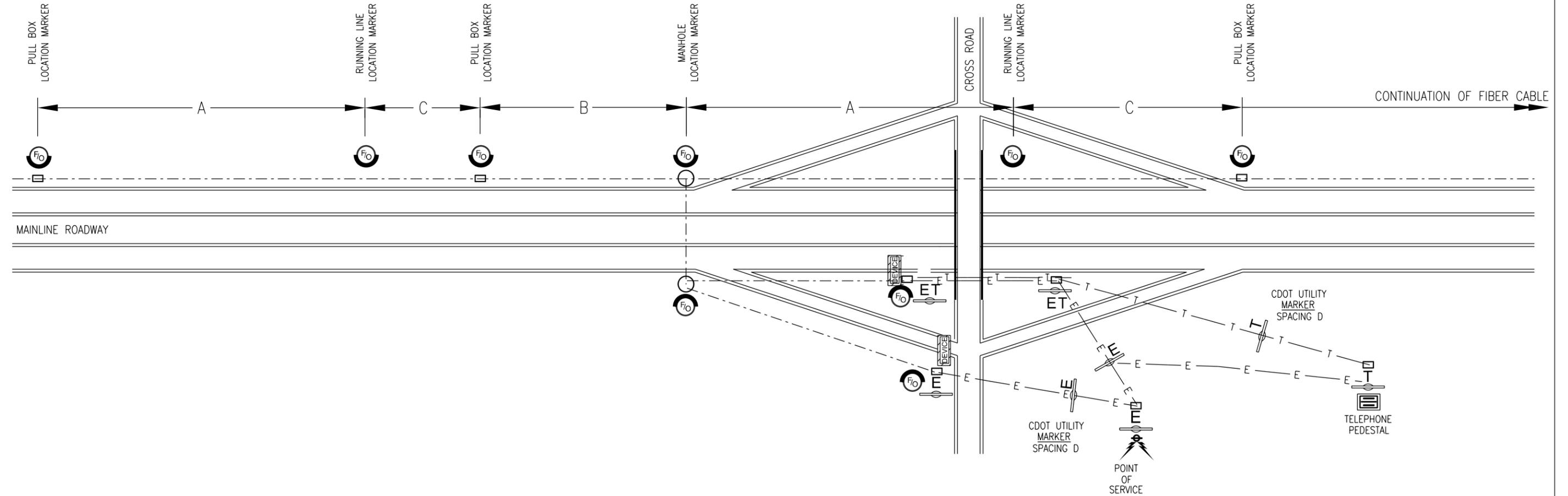
LOCATION MARKER SPACING

MEASUREMENT	DESCRIPTION	DISTANCE (FEET)
A	FIBER OPTIC RUNNING LINE MARKER SPACING	1000
B	HANDHOLE MARKER SPACING	< 1000
C	ADDITIONAL FIBER OPTIC RUNNING LINE MARKER SPACING	C=A-B (WHERE REQUIRED) < 1000
D	UTILITY MARKER SPACING	* ■

- * UTILITY LOCATION MARKERS FOR DEVICE POWER SOURCE ELECTRIC RUNS TO BE INSTALLED AT BEGINNING AND END OF UTILITY CONDUIT. IF RUNNING LINE IS LONGER THAN 500 FEET ONE ADDITIONAL MARKER SHALL BE INSTALLED AT THE MIDPOINT OF CONDUIT RUN.
- UTILITY LOCATION MARKERS FOR RUNNING LINE ELECTRICAL CONDUIT TO BE INSTALLED AT BEGINNING AND END OF UTILITY CONDUIT, AT ALL MANHOLES AND AT A MAXIMUM SPACING OF 1000' ALONG LINE BETWEEN MANHOLES.

FIBER OPTIC AND CDOT UTILITY LOCATION MARKER INSTALLATION NOTES:

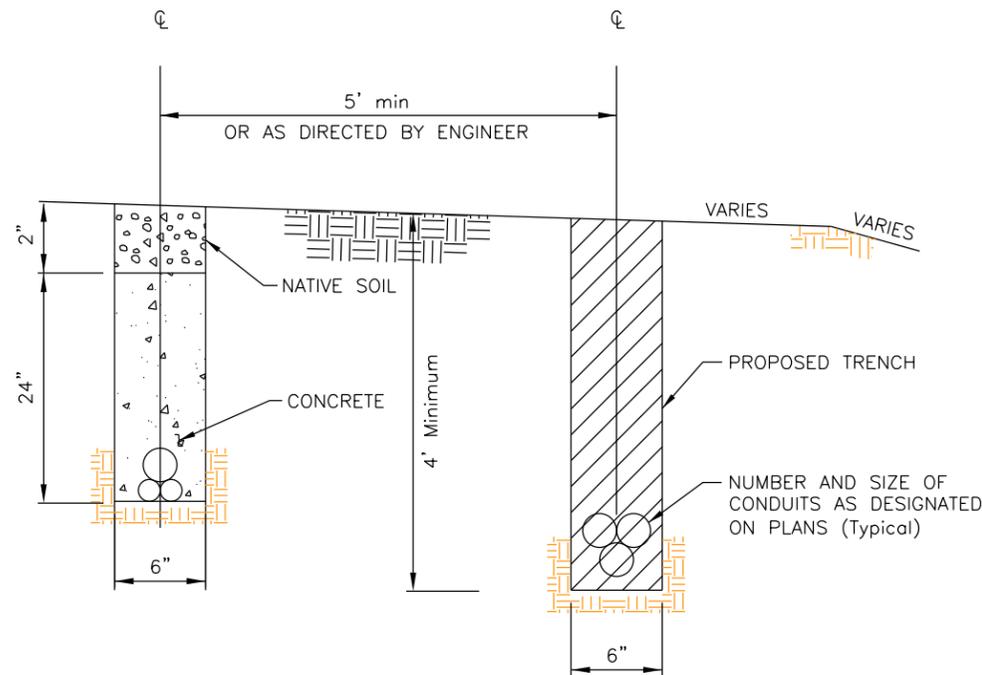
- AREA AROUND LOCATION MARKER INSTALLATION SHALL BE RETURNED TO EXISTING GRADE AND CONDITION. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT BE INCLUDED IN THE COST OF LOCATION MARKER ITEM.
- LOCATION MARKERS SHALL BE INSTALLED AT EACH PULL BOX AND MANHOLE ALONG BOTH THE BACKBONE AND LATERAL FIBER OPTIC CABLE RUNS THROUGHOUT THE PROJECT. ADDITIONAL MARKERS SHALL BE INSTALLED ALONG THE RUNNING LINE.
- UTILITY LOCATION MARKERS SHALL BE INSTALLED AT BOTH THE UTILITY POINT OF SERVICE PULL BOX AND THE EQUIPMENT PULL BOX OR MANHOLE AT PROJECT DEVICE. ADDITIONAL MARKERS, IF REQUIRED, SHALL BE INSTALLED AT MID LOCATIONS ALONG THE UTILITY LINE AS SHOWN ON THE PLANS.
- CONCRETE FOOTING SUPPORT FOR FIBER OPTIC CABLE LOCATION MARKERS AT PULL BOX LOCATIONS SHALL BE INCLUDED IN THE COST OF EACH PULL BOX SHOWN IN THE PROJECT.
- CONCRETE FOOTING SUPPORTS FOR FIBER OPTIC CABLE RUNNING LINE MARKERS ARE TO BE INCLUDED IN LOCATION MARKER ITEM.
- UTILITY LOCATION MAKERS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. CONCRETE SUPPORT FOUNDATIONS SHALL NOT BE REQUIRED FOR UTILITY LOCATION MARKERS.
- LANDSCAPE LOCATION MARKERS SHALL BE INSTALLED IN LANDSCAPE AREAS AND AREAS SUCH AS PARKING LOTS WHICH COULD HAVE VEHICULAR TRAFFIC.
- THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AN AS-BUILT DRAWING SHOWING THE INSTALLED LOCATIONS OF ALL MARKER TYPES.
- LOCATION MARKERS SHALL HAVE INFORMATION LABELS ATTACHED WITH ADHESIVE TO WITHSTAND HEAT AND COLD. INFORMATION ON LABELS SHALL INCLUDE CDOT CONTACT INFORMATION. NUMBERS INDICATING THE HIGHWAY MILE POINT OF THE PULL BOX OR MANHOLE, TO THE HUNDRETH OF A MILE, SHALL BE INSTALLED BENEATH THE INFORMATION LABELS AS SHOWN ON SHEET TWO OF THIS PROJECT DETAIL.
- WHERE REQUIRED ON NATIONAL FOREST SERVICE LAND, MARKERS SHALL BE BROWN (Fed #20059) IN COLOR. INFORMATION LABELS SHALL HAVE BLACK LETTERING ON THE BROWN BACKGROUND.



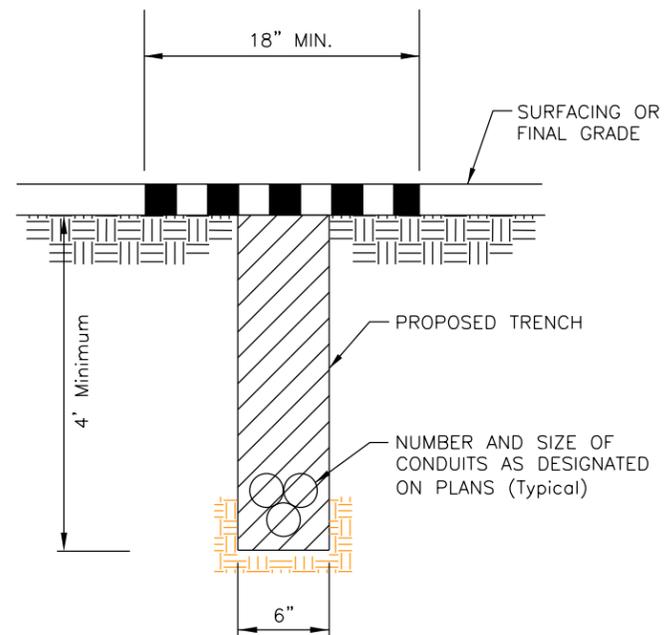
Creation Date: 10/01/2013	Initials: AS	Sheet Revisions			As Constructed	Fiber Optic and Utility Markers		Project No./Code
Print Date: 9/21/2015	Initials: CSE	Date:	Comments	Init.		No Revisions:	Project Standard	
File Name: Revision of Section 612 - Location Marker - Detail 2.dgn	SS				Revised:	Designer:	Structure Numbers	
HQ ITS					Void:	Detailer:		
CAD Version: Microstation V8i						Sheet Subset: ITS	Subset Sheets: 1 of 2	Sheet Number
Horiz. Scale:	Units: English							

Whenever trenching occurs, the trench shall be filled in by the end of the day or else a BMP, such as an erosion log, shall be placed on the downstream side of the spoils to prevent the transport of the sediment during a rain event.

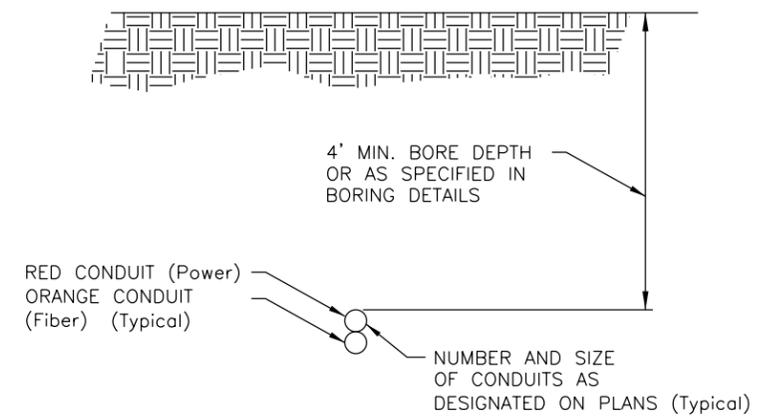
NO OPEN TRENCHES SHALL BE ALLOWED UNLESS APPROVED BY THE PROJECT ENGINEER



TRENCHING IN FILL

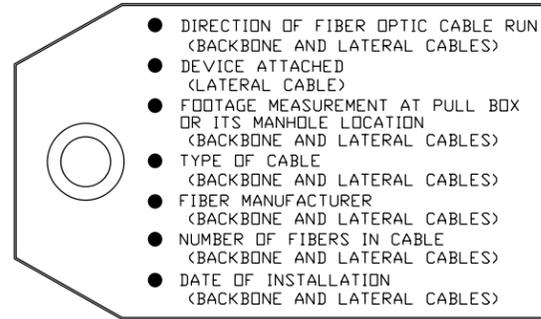


DIRECTIONAL BORE



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Print Date: 9/21/2015	Sheet Revisions			As Constructed	CONDUIT Project Standard			Project No./Code
File Name: Revision of Section 613 - Electrical Conduit - Detail.dgn	Date:	Comments	Init.	No Revisions:	Designer:	Structure Numbers	X-XX-XX	
Horiz. Scale: No Scale	Vert. Scale: No Scale			Revised:	Detailer:		X-XX-XX	
Unit Information	JKS			Void:	Sheet Subset: ITS	Subset Sheets:	1 of 2	Sheet Number



- DIRECTION OF FIBER OPTIC CABLE RUN (BACKBONE AND LATERAL CABLES)
- DEVICE ATTACHED (LATERAL CABLE)
- FOOTAGE MEASUREMENT AT PULL BOX OR ITS MANHOLE LOCATION (BACKBONE AND LATERAL CABLES)
- TYPE OF CABLE (BACKBONE AND LATERAL CABLES)
- FIBER MANUFACTURER (BACKBONE AND LATERAL CABLES)
- NUMBER OF FIBERS IN CABLE (BACKBONE AND LATERAL CABLES)
- DATE OF INSTALLATION (BACKBONE AND LATERAL CABLES)

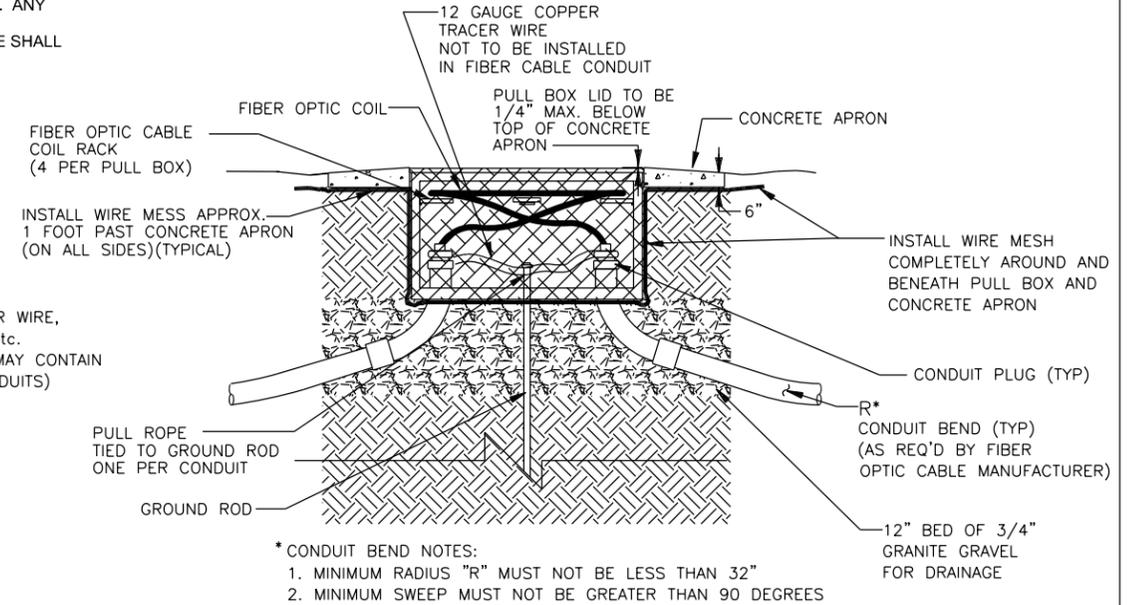
FIBER CABLE LABEL

TO BE ATTACHED TO EACH FIBER OPTIC CABLE LOCATED IN ALL PULL BOX AND ITS MANHOLES

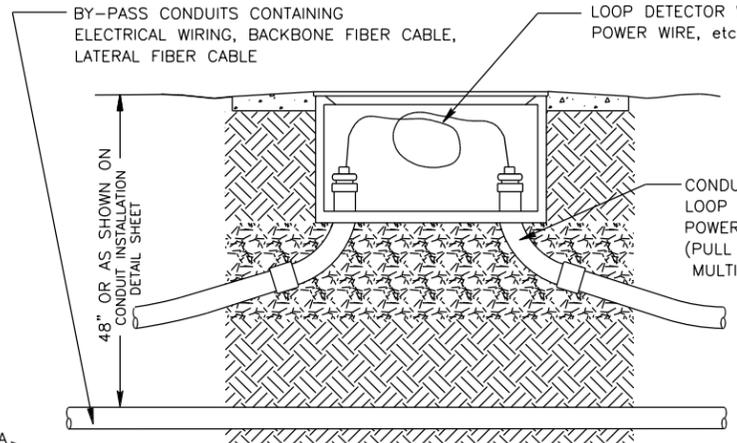
ITS PULL BOX TYPE	MINIMUM DIMENSIONS (Inches)			Knockout Mouse Hole Type
	A	B	C	
PULL BOX - (13" x 24" x 18")	13	24	18	2
PULL BOX - (24" x 36" x 24")	24	36	24	4
PULL BOX - (36" x 48" x 24")	36	40	24	4
PULL BOX - (SURFACE MOUNTED)	24	24	8	NA

PULL BOX NOTES:

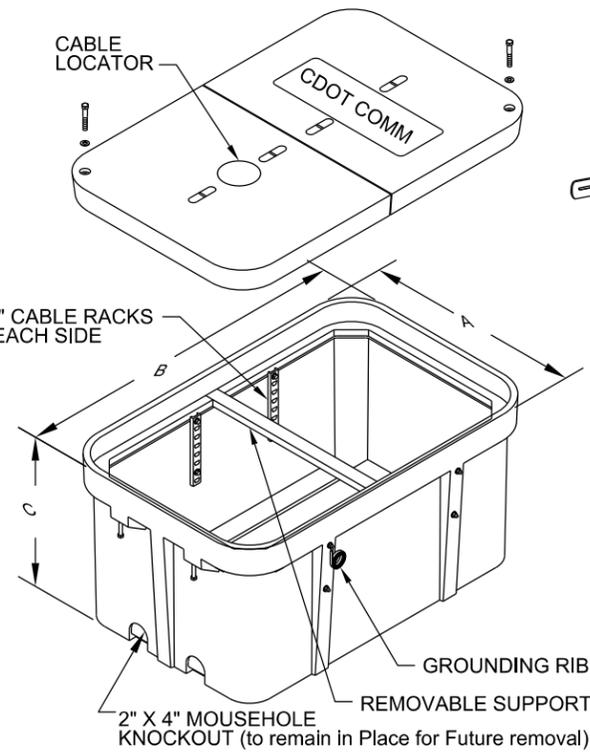
1. CONDUITS DEPICTED ON THIS SHEET ARE REPRESENTATIVE ONLY. EXACT NUMBER OF CONDUITS INSTALLED AND CONDUIT SIZE SHALL BE AS TABULATED AND SHOWN ON THE PLANS.
2. DESIGNATION FOR THE INSTALLTION OF ELECTRICAL WIRING AND FIBER OPTIC CABLE IN THE BACKBONE CONDUIT SYSTEM IS DESCRIBED IN THE PROJECT SPECIFICATIONS.
3. CONDUIT CENTERLINE SHALL BE ALIGNED WITHIN THE PULL BOX TO FACILITATE FIBER OPTIC CABLE PULLING.
4. CONDUIT PLUGS SHALL BE INSTALLED IN ALL CONDUITS, BOTH WITH AND WITHOUT WIRE OR CABLE AND SHALL BE INCLUDED IN THE COST OF ELECTRICAL CONDUIT ITEM.
5. WEATHERPROOF TAGS SHALL BE INSTALLED ON ALL FIBER CABLES AND SHALL BE INCLUDED IN THE COST OF ELECTRICAL CONDUIT ITEM.
6. TRACER WIRE AND PULL ROPE SHALL BE INCLUDED IN THE COST OF ELECTRICAL CONDUIT ITEM.
 - MAIN BACKBONE AND LATERAL FIBER CABLE CONDUIT -
 - IF INSTALLATION INCLUDES MULTIPLE RUNS OF CONDUIT, PULL ROPE SHALL BE INSTALLED IN EACH INDIVIDUAL CONDUIT. TRACER WIRE SHALL BE INSTALLED IN ONLY ONE CONDUIT. ANY CONDUIT CONTAINING FIBER OPTIC CABLE SHALL NOT HAVE TRACER WIRE INSTALLED.
 - IF INSTALLATION INCLUDES ONLY ONE RUN OF CONDUIT, PULL ROPE AND TRACER WIRE SHALL BE INSTALLED IN SAME CONDUIT AS FIBER CABLE.
7. SEE 612 - MARKER SPECIFICATION FOR TRACER BALL REQUIRMENTS
8. ALL PULL BOX TYPES SHALL BE PAID FOR UNDER THE CORRESPONDING PULL BOX ITEM, AND SHALL BE SIZED AS TABULATED AND SHOWN IN THE PLANS.
9. PULL BOXES SHALL HAVE A CONCRETE APRON SLOPED AWAY FROM PULL BOX OPENING. THE COST OF THE CONCRETE APRON SHALL BE PAID FOR AS PART OF PULL BOX ITEM.
10. SEE PROJECT SPECIFICATIONS FOR THE QUANTITY OF BOTH FIBER OPTIC BACKBONE AND LATERAL CABLE TO BE COILED IN EACH PUL BOX.
11. FIBER OPTIC CABLE COILS WITHIN PULL BOXES SHALL BE TIED TO EACH CABLE RACK. PLASTIC WIRE TIES SHALL NOT BE ALLOWED. CAUTION SHALL BE TAKEN TO COIL THE FIBER CABLE PER MANUFACTURER'S RECOMMENDATIONS.
12. ALL WORK TO INSTALL PULL BOX SHALL INCLUDE BUT NOT BE LIMITED TO SAW CUTTING OF PAVEMENT, REMOVAL OF PAVEMENT, CONCRETE, EARTHWORK, ALL LANDSCAPE RESTORATION AND SHALL BE PAID FOR AS PART OF PULL BOX. ALL MATERIAL SHALL BE CONTAINED AND NOT ALLOWED TO RUN OFF SITE.
13. PULL BOX TYPES AS DEPICTED ON THIS PROJECT DETAIL SHEET SHALL NOT BE INSTALLED IN THE ASPHALT OR CONCRETE SHOULDER OF THE ROADWAY.



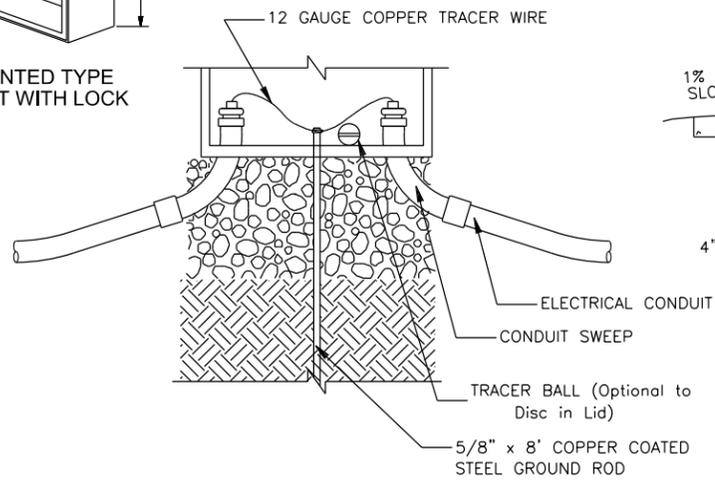
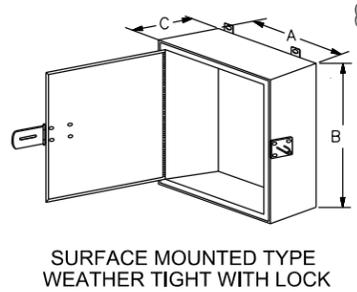
- * CONDUIT BEND NOTES:
1. MINIMUM RADIUS "R" MUST NOT BE LESS THAN 32"
 2. MINIMUM SWEEP MUST NOT BE GREATER THAN 90 DEGREES



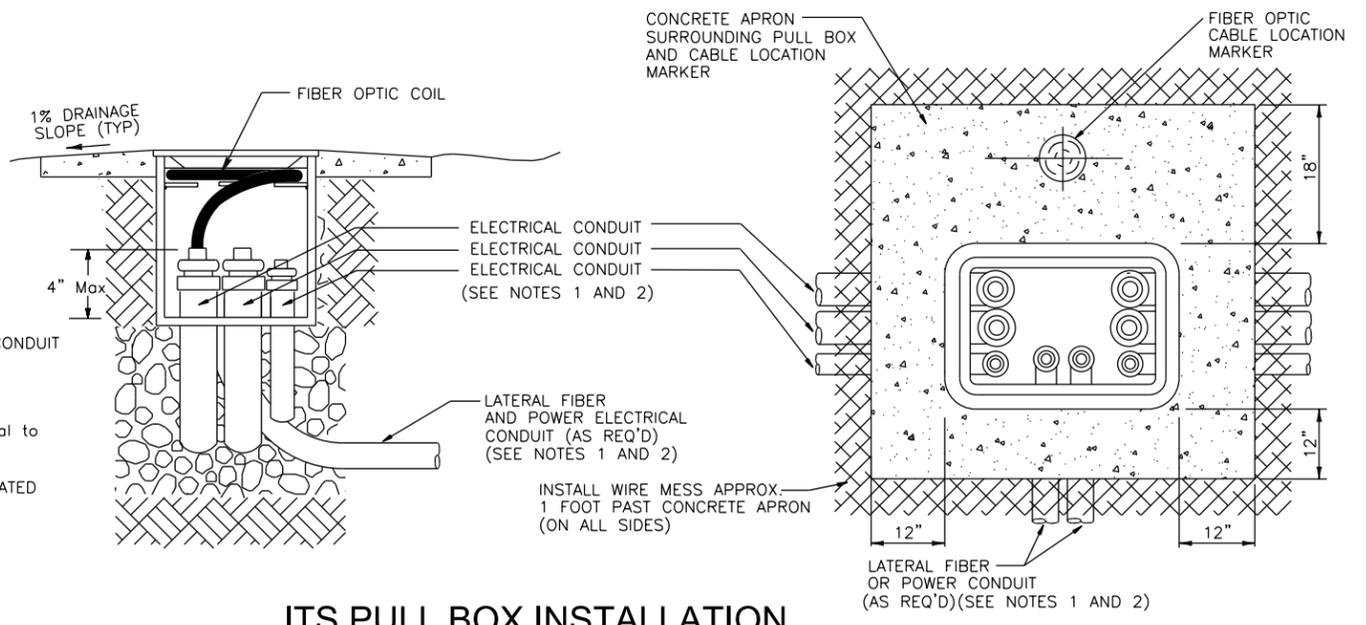
CONDUIT BYPASS DETAIL



2' X 3' BOX (or LARGER)



GROUNDING DETAIL

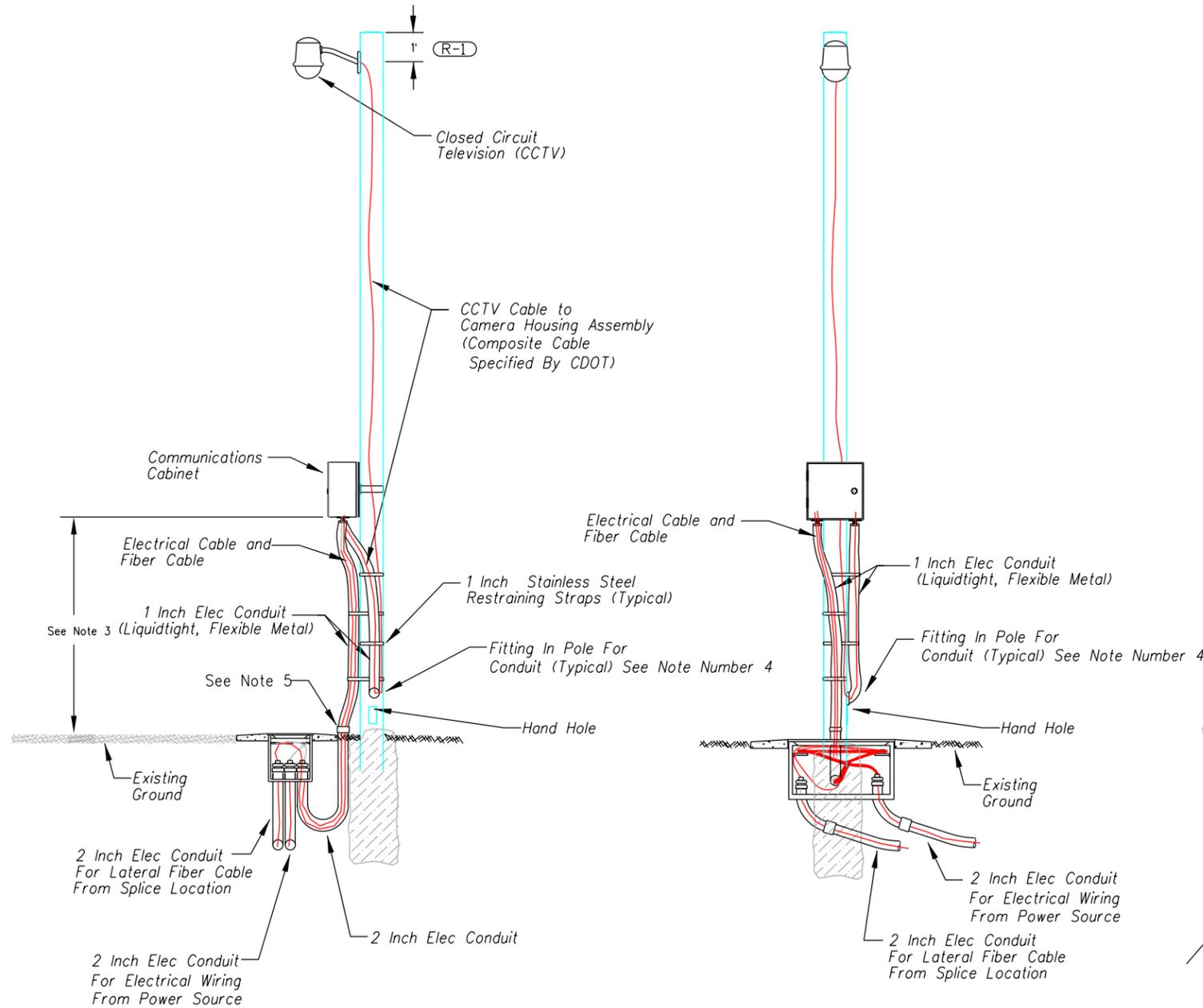


ITS PULL BOX INSTALLATION

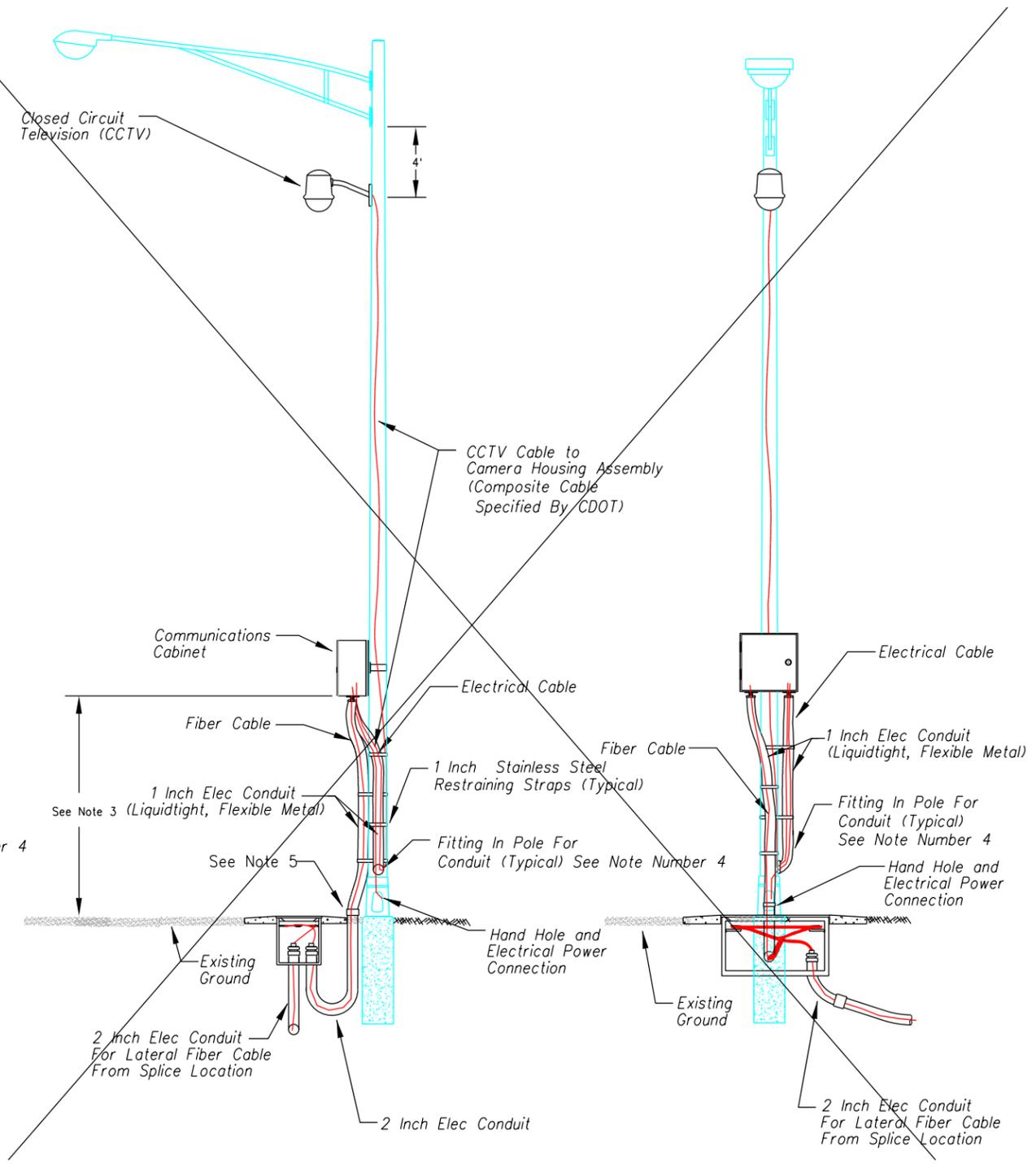
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File Name: Revision of Section 613 * PullBoxes - Detail.dgn	Date:	Comments	Init.	No Revisions:				
Horiz. Scale: No Scale Vert. Scale: No Scale	(R-X)			Revised:	Designer:	Structure Numbers	X-XX-XX	
Unit Information JKS				Void:	Detailer:		X-XX-XX	
					Sheet Subset:	ITS	Subset Sheets:	Sheet Number

NOTES:

1. For pull box installation, see Project Special Details ITS PULL BOX sheet included in this plan set.
2. Attachment of communications cabinets to poles and conduit installations are typical for all pole types.
3. Attachment of communications cabinets to be 7 feet above ground where no guardrail exists. At locations with guardrail, cabinets shall be mounted at 5 feet above ground.
4. Install watertight connection for closed circuit television cabling flexible metal conduit. Contractor shall submit material type and Method Statement to Project Engineer for approval.
5. Install reducer between varying sized conduits.



INSTALLATIONS ON FIBERGLASS POLE

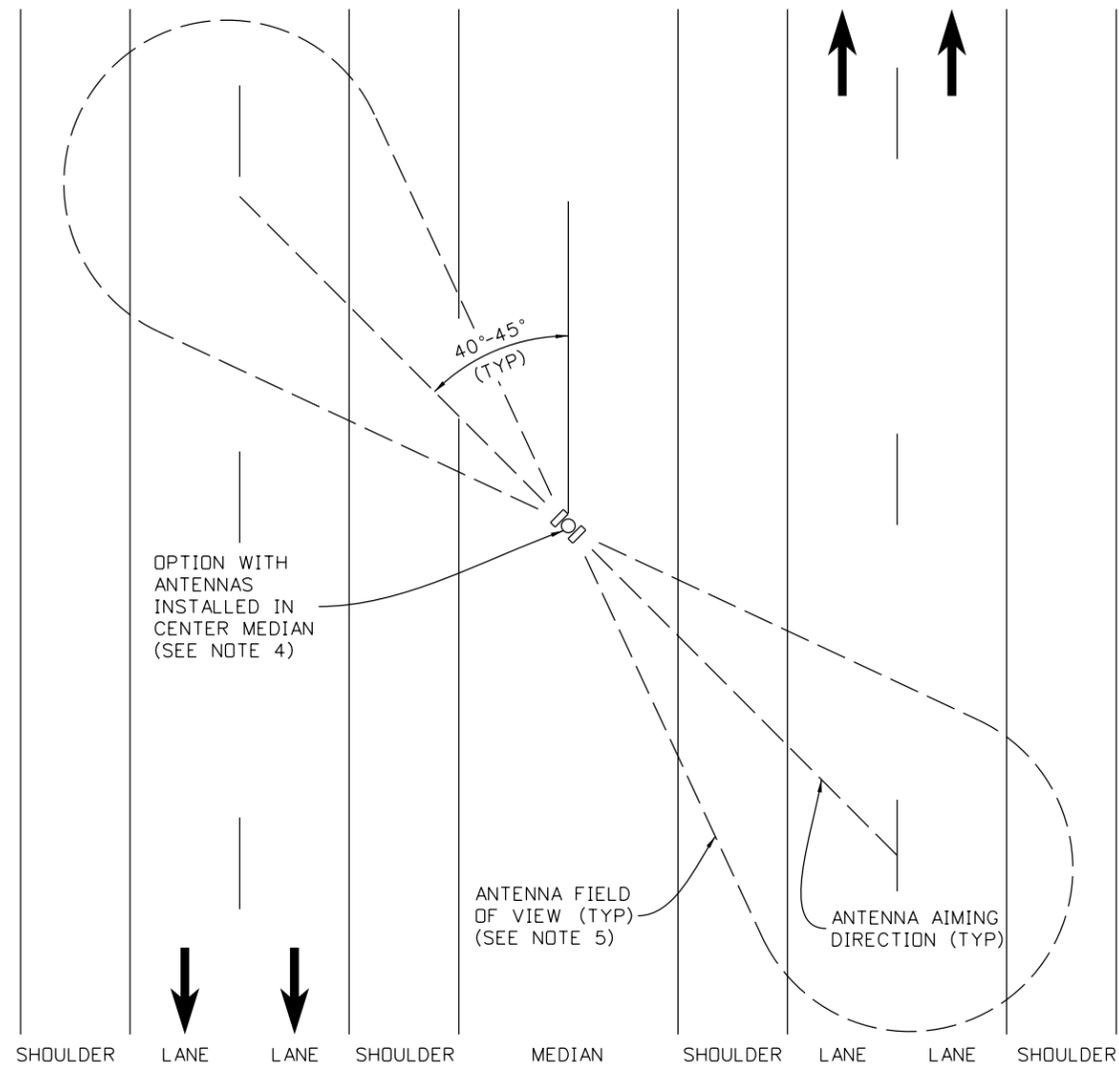


INSTALLATIONS ON LIGHT STANDARD

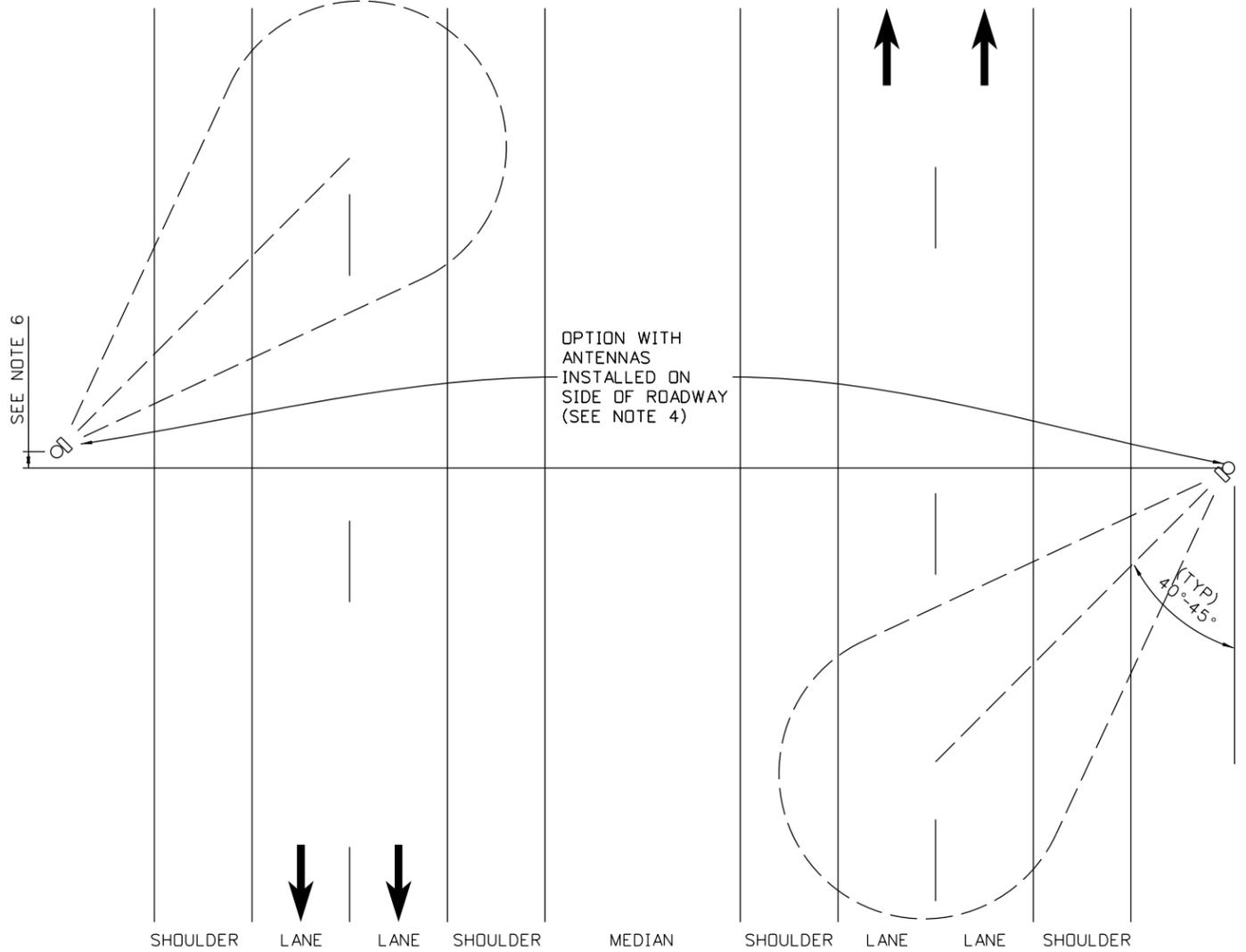
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Print Date: 9/21/2015	Sheet Revisions			As Constructed	FIBERGLASS AND LIGHT STANDARD			Project No./Code
File Name: Revision of Section 614 - CCTV fiber Glass Pole - Detail.dgn	Date:	Comments	Init.	No Revisions:	INSTALLATION DETAILS			
Horiz. Scale: No Scale Vert. Scale: No Scale	(R-1) 05-23-13	Revised Dimension	SAB	Revised:	Designer:	Structure Numbers	X-XX-XX	
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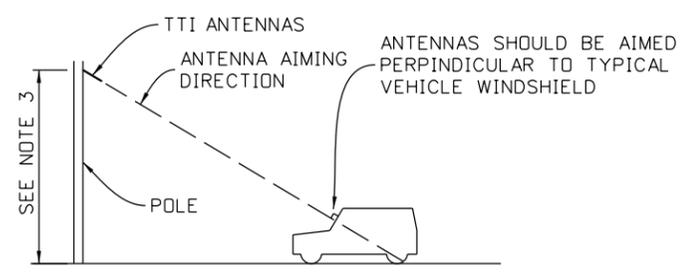
TTI ANTENNA AIMING-TYPICAL PLAN VIEW
CENTER MEDIAN INSTALLATION



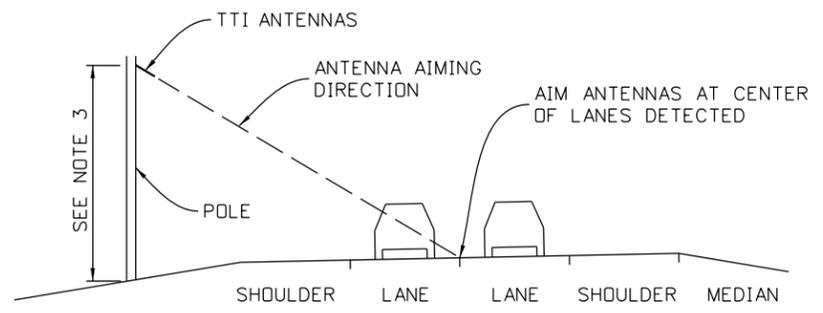
TTI ANTENNA AIMING-TYPICAL PLAN VIEW
ROADSIDE INSTALLATION

NOTES:

1. TWO LANE, TWO DIRECTION DETECTION SHOWN. ADJUST AS NEEDED FOR SITE SPECIFIC NUMBER OF LANES AND DIRECTIONS DETECTED.
2. SEE MANUFACTURER INSTALLATION INSTRUCTIONS FOR EQUIPMENT CONFIGURATION AND ADDITIONAL ANTENNA MOUNTING REQUIREMENTS.
3. ANTENNA MOUNTING HEIGHT VARIES BY LOCATION. ADJUST ANTENNA MOUNTING HEIGHT TO ADDRESS AIMING CRITERIA IN PLAN, SECTION, AND PROFILE VIEWS.
4. ANTENNAS SHALL BE HORIZONTALLY POLARIZED AND THERE SHALL BE A 2-FOOT MINIMUM SEPARATION BETWEEN ANY TWO ANTENNAS.
5. MAXIMUM ANTENNA FIELD OF VIEW IS 70 FEET.
6. OFFSET ANTENNA INSTALLATIONS IN ORDER TO MINIMIZE INTERFERENCE BETWEEN ANTENNA READERS.

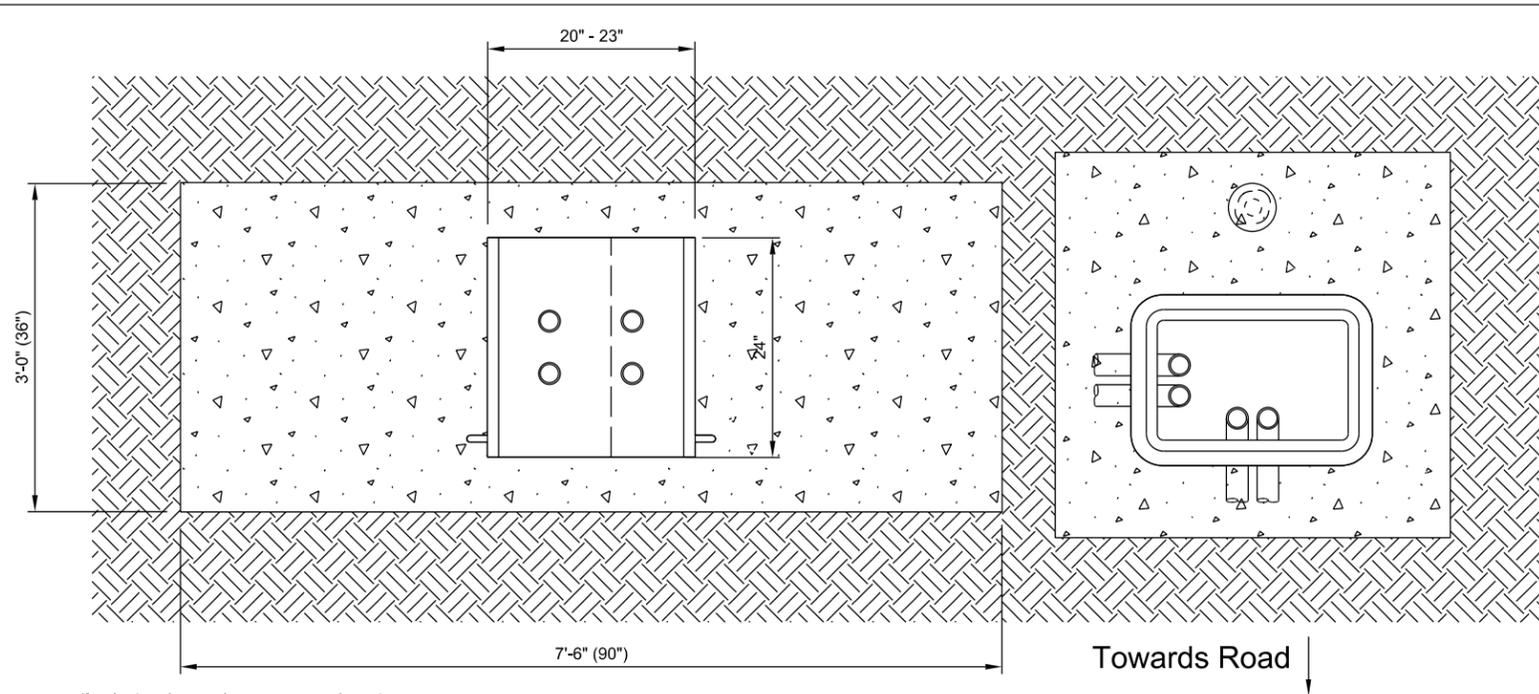


TTI ANTENNA AIMING-TYPICAL PROFILE VIEW



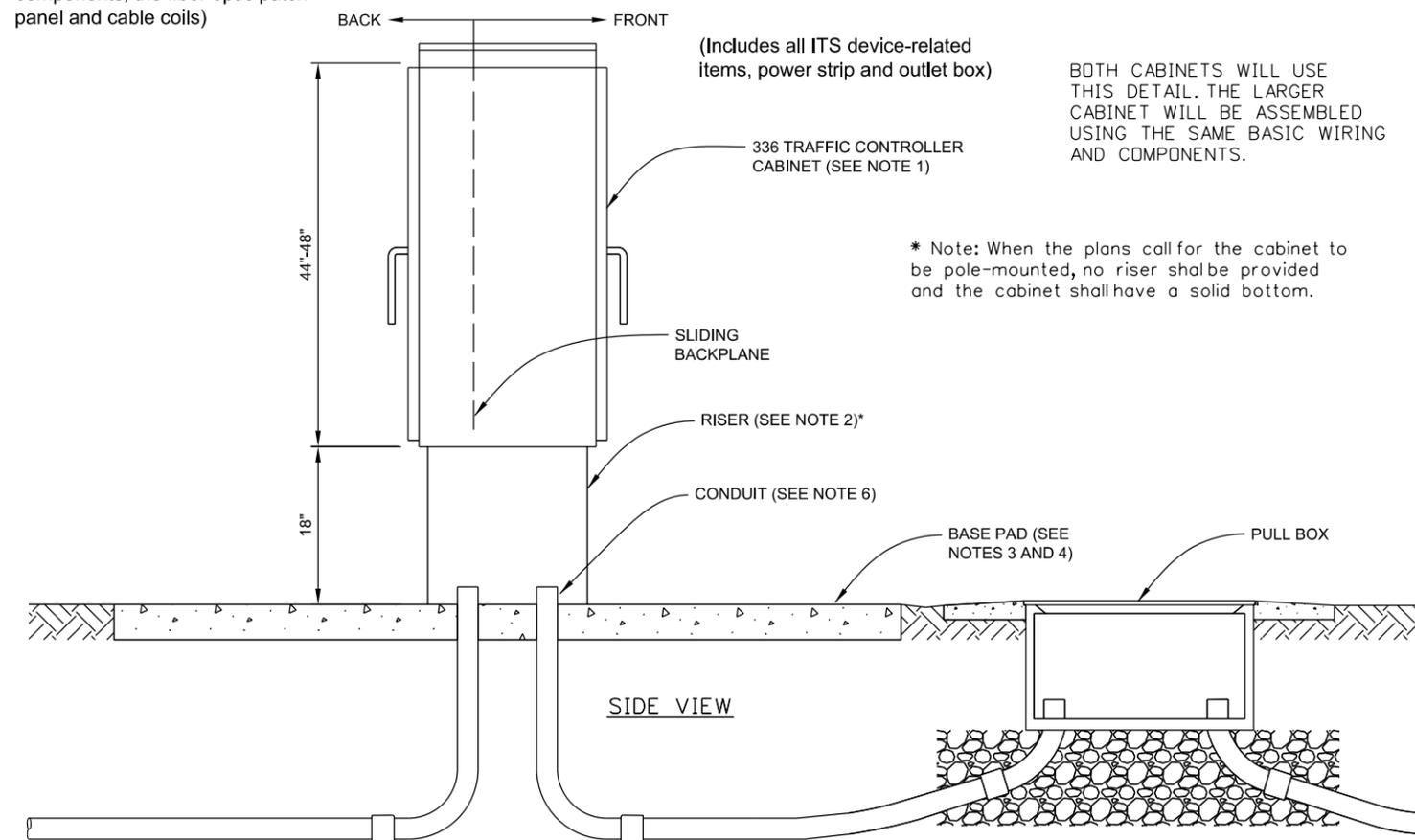
TTI ANTENNA AIMING-TYPICAL SECTION VIEW

Print Date: 9/21/2015		Sheet Revisions			
File Name: Revision of Section 614 - TTI Detail.dgn		Date:	Comments	Init.	As Constructed
Horiz. Scale: 1:1 Vert. Scale: As Noted	(R-X)				
Unit Information Unit Leader Initials	○				Project No./Code
	○				REVISIONS:
	○				DESIGNER:
					DETAILER:
					SHEET SUBSET: ITS
					STRUCTURE NUMBERS: X-XX-XX
					SUBSET SHEETS: 1 of 1
					SHEET NUMBER



(Includes incoming power-related components, the fiber optic patch panel and cable coils)

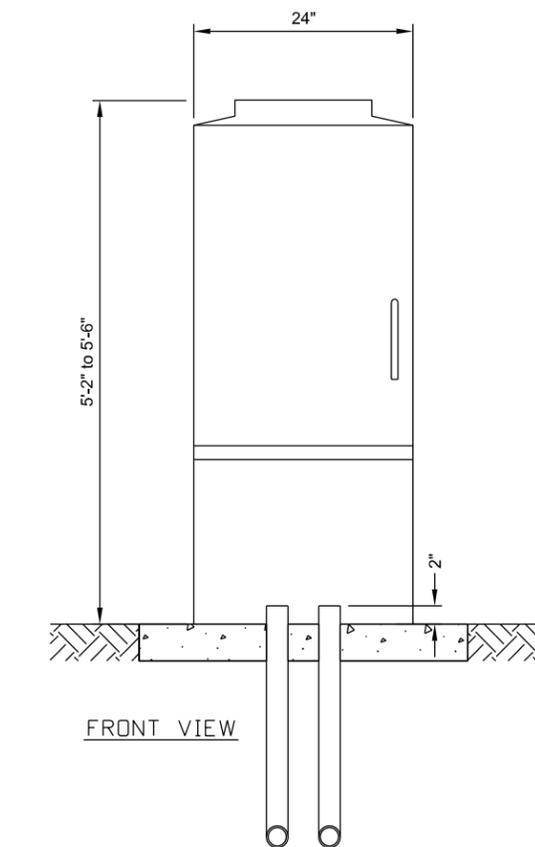
TOP VIEW



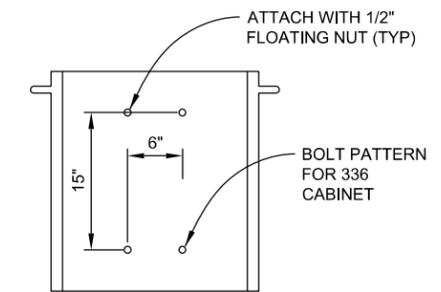
(Includes all ITS device-related items, power strip and outlet box)

BOTH CABINETS WILL USE THIS DETAIL. THE LARGER CABINET WILL BE ASSEMBLED USING THE SAME BASIC WIRING AND COMPONENTS.

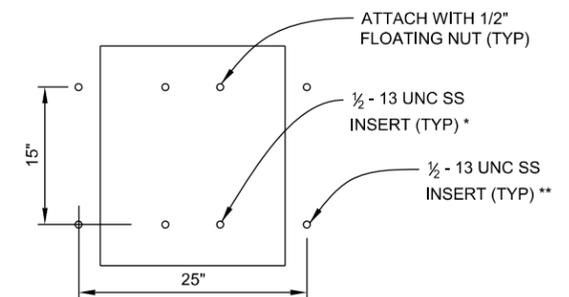
* Note: When the plans call for the cabinet to be pole-mounted, no riser shall be provided and the cabinet shall have a solid bottom.



FRONT VIEW



CABINET TO RISER BOLT PATTERN



BASE PAD TO RISER BOLT PATTERN

* Location of inserts to match the bolt pattern of the bottom of the riser.
 ** For potential future installation of a 332 cabinet (without riser). During installation, Contractor shall install threaded bolts that will protect the inserts from the weather.

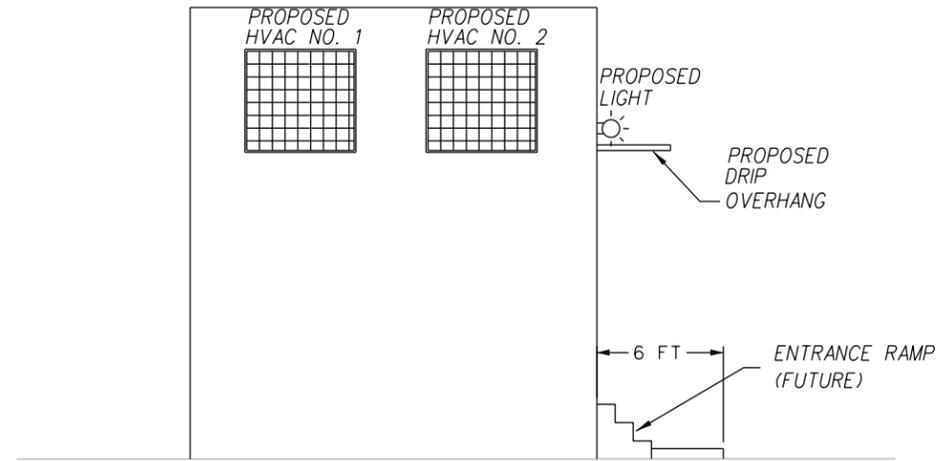
NOTES:

1. THE COMMUNICATIONS CABINET (TYPE 2) SHALL BE A 336 TRAFFIC CONTROLLER CABINET THAT IS CONSTRUCTED FROM ALUMINUM AND HAS NOMINAL DIMENSIONS OF 48" HIGH X 24" WIDE X 22" DEEP.
2. THE RISER SHALL BE CONSTRUCTED FROM ALUMINUM AND HAVE NOMINAL DIMENSIONS OF 18" HIGH X 24" WIDE X 24" DEEP. IT SHALL INCLUDE A CONNECTION MECHANISM THAT WILL ALLOW THE COMMUNICATIONS CABINET (TYPE 2) TO BE SOLIDLY ATTACHED TO IT. USE A TYPE (SIZE AND SHAPE) OF RISER COMPATIBLE WITH THE TYPE OF CONTROLLER CABINETS BEING SUPPLIED TO THE PROJECT.
3. THE BASE PAD SHALL BE NOMINALLY 4 INCHES THICK AND SHALL BE MADE OF EITHER CAST-IN-PLACE CONCRETE, PRECAST CONCRETE OR POLYMER CONCRETE. IT SHALL INCLUDE EMBEDDED INSERTS THAT WILL ALLOW THE RISER TO BE SOLIDLY ATTACHED TO IT.
4. THE BASE PAD DIMENSIONS SHOWN MAY VARY PER MANUFACTURER'S SPECIFICATIONS, BUT SHALL EXTEND AT LEAST AT LEAST 2'-6" BEYOND THE CABINET BASE ON EACH CABINET DOOR SIDE AND AT LEAST 6" BEYOND THE CABINET BASE ON THE OTHER TWO SIDES.
5. BOLT THE RISER TO THE BASE PAD AND BOLT THE CABINET TO THE RISER. THE JOINTS BETWEEN THE CABINET AND RISER, AND BETWEEN THE RISER AND THE BASE PAD SHALL BE SEALED WITH A QUALITY, CLEAR 100% SILICONE CAULK.
6. A TOTAL OF (4) - 2" CONDUITS SHALL BE INSTALLED WITH EVERY CABINET. THE OPENINGS IN THE BASE PAD THROUGH WHICH THESE CONDUITS PROTRUDE SHALL HAVE A DIAMETER THAT IS NO MORE THAN 1/8" GREATER THAN THAT OF THE CONDUIT. THESE CONDUITS SHALL EXTEND INTO A NEARBY PULL BOX OR DEVICE POLE.
7. ALL WORK INVOLVING THE FURNISHING AND INSTALLATION OF THE BASE PAD, RISER AND CONTROLLER CABINET WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE COMMUNICATIONS CABINET (TYPE 2) PAY ITEM. THIS ITEM SHALL ALSO INCLUDE ALL IN-CABINET COMPONENTS THAT ARE NOT SPECIFICALLY PART OF A SEPARATE PAY ITEM.

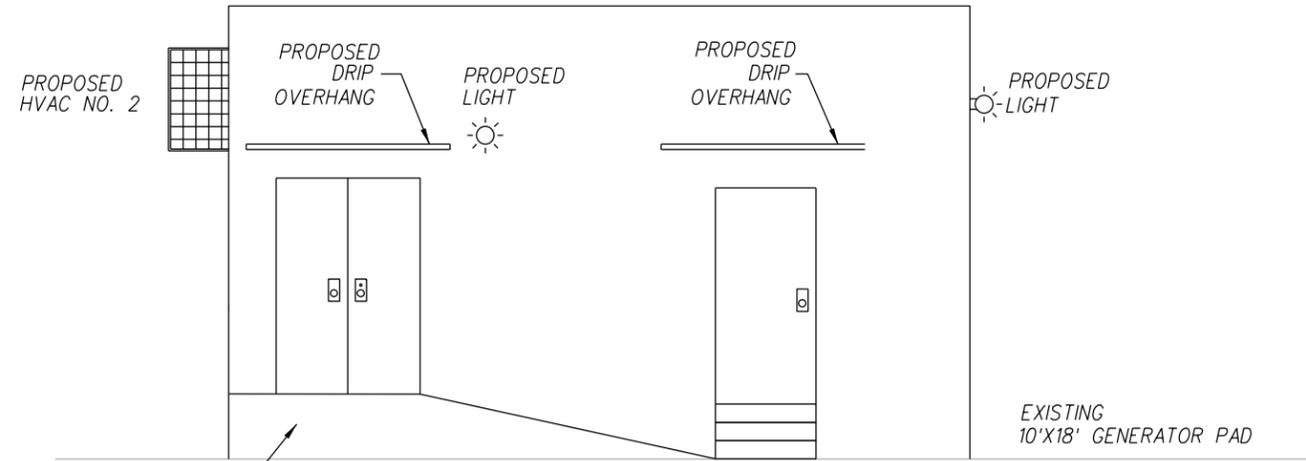
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Print Date: 9/21/2015	Sheet Revisions			As Constructed	COMMUNICATIONS CABINET (TYPE 2)		Project No./Code
File Name: Revision of Section 614 - Type II Cabinet Details.dgn	Date:	Comments	Init.	No Revisions:	CABINET AND FOUNDATION DETAIL		
Horiz. Scale: 1" = 20"	Vert. Scale: 1" = 20"			Revised:	Structure	X-XX-XX	
Unit Information	JKS			Void:	Detailer:	X-XX-XX	
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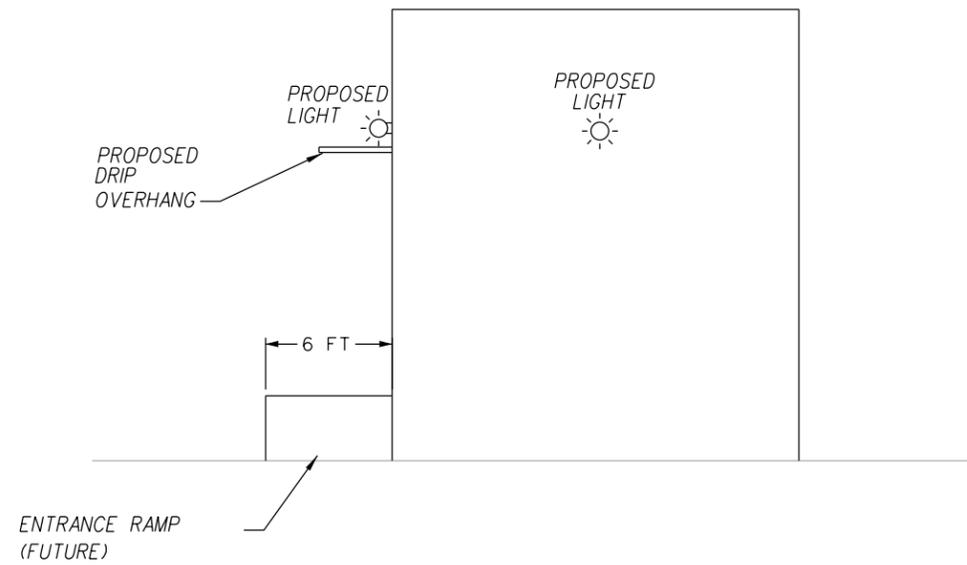
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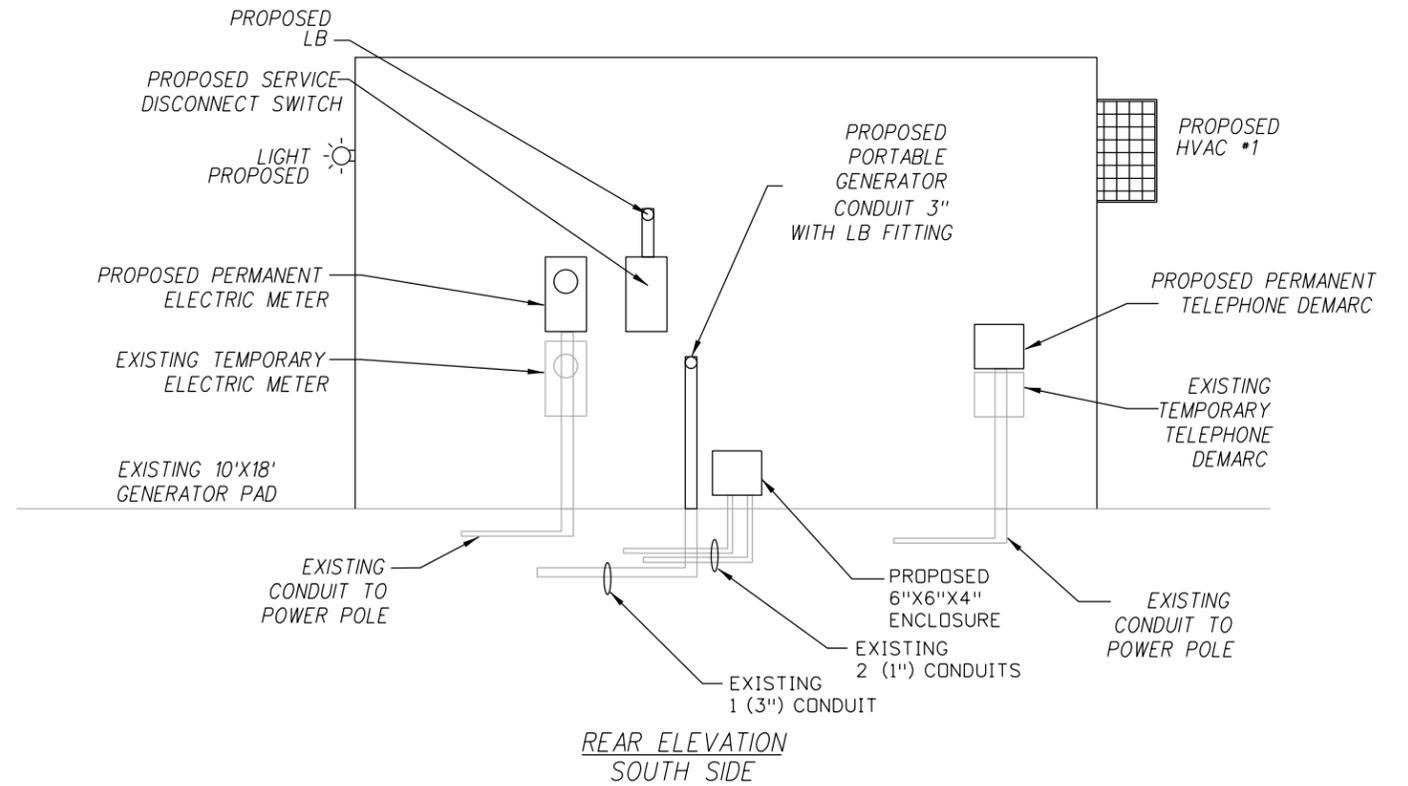
LEFT SIDE ELEVATION
EAST SIDE



FRONT ELEVATION
NORTH SIDE

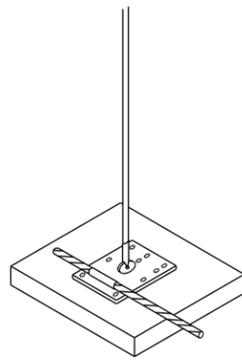


RIGHT SIDE ELEVATION
WEST SIDE

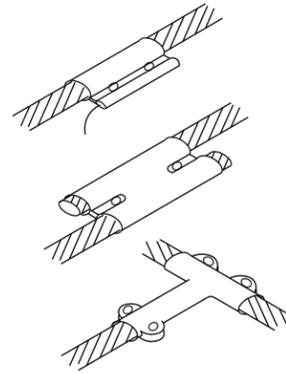


REAR ELEVATION
SOUTH SIDE

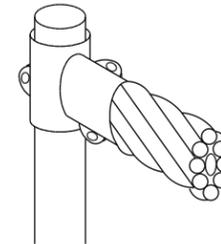
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File Name: 17970_04_Elevations.dgn	Date:	Comments	Init.	No Revisions:			
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Unit Information Unit Leader Initials				Void:	Detailer:		
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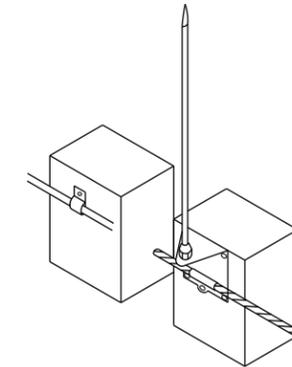
TYPICAL ADHESIVE BASED AIR TERMINAL
(NOT TO SCALE)



TYPICAL CABLE SPLICERS
(NOT TO SCALE)

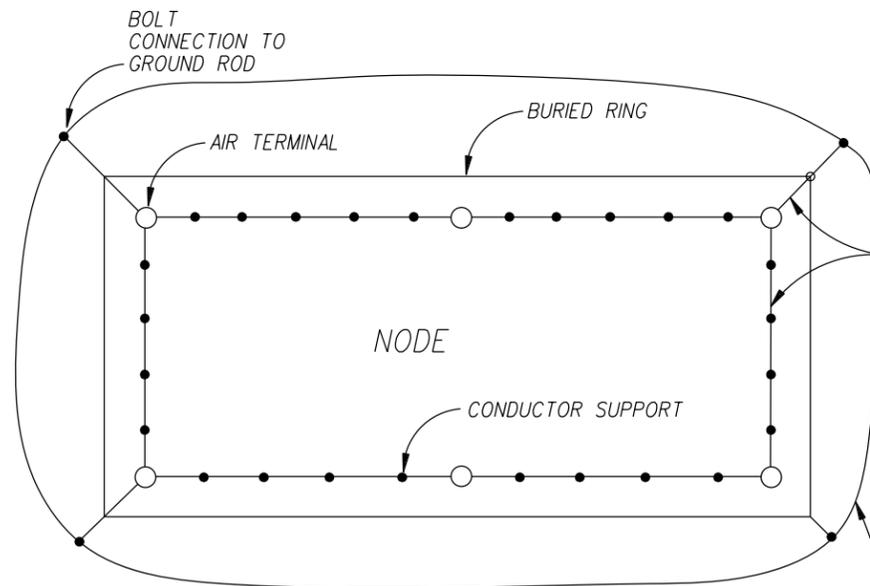


GROUND ROD BOLT CONNECTION
(NOT TO SCALE)



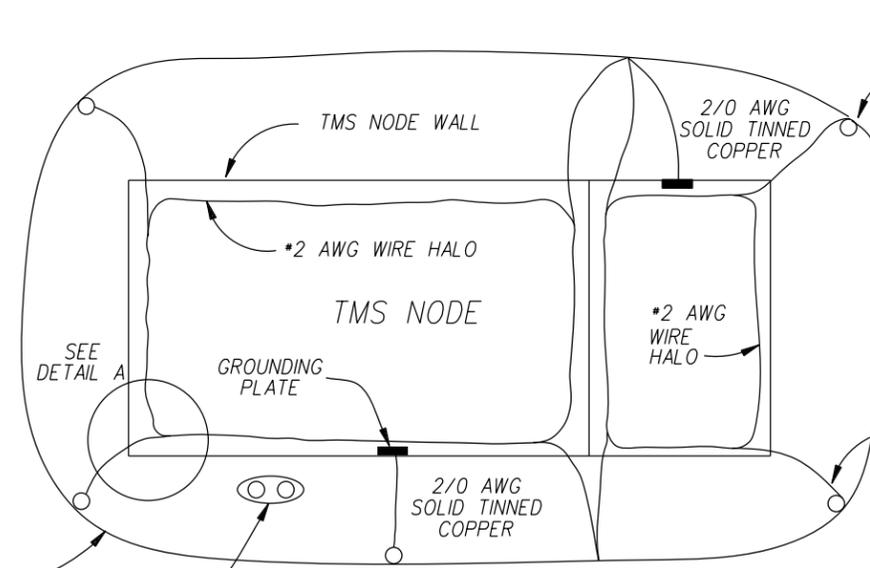
TYPICAL OFFSET BASED AIR TERMINAL
(NOT TO SCALE)

NOTE:
EXTERIOR GROUNDING RING WILL BE INSTALL
BY CDDT PRIOR TO BUILDING DELIVERY.
ALL OTHER GROUNDING REQUIREMENTS
ARE RESPONSIBILITY OF BUILDING MANUFACTURE.



PLAN VIEW

INDUSTRY STANDARD CABLE
32 STRANDS OF NO. 16 AWG
COPPER WIRE



TMS GROUNDING LAYOUT

5/8" X 10'
COPPER CLAD
GROUND ROD

2/0 AWG
SOLID TINNED
COPPER

#2 AWG WIRE HALO

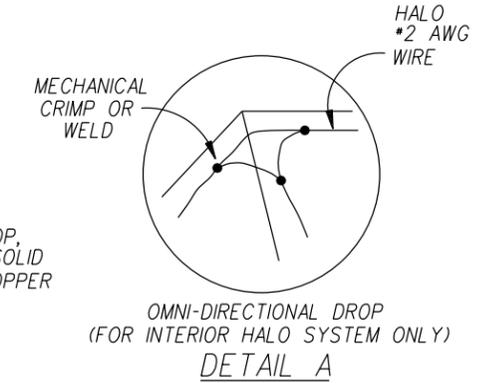
TMS NODE

GROUNDING
PLATE

2/0 AWG
SOLID TINNED
COPPER

BURIED GROUND RING
2/0 AWG SOLID TINNED
COPPER

ELECTRICAL SERVICE
GROUNDING RODS



OMNI-DIRECTIONAL DROP
(FOR INTERIOR HALO SYSTEM ONLY)
DETAIL A

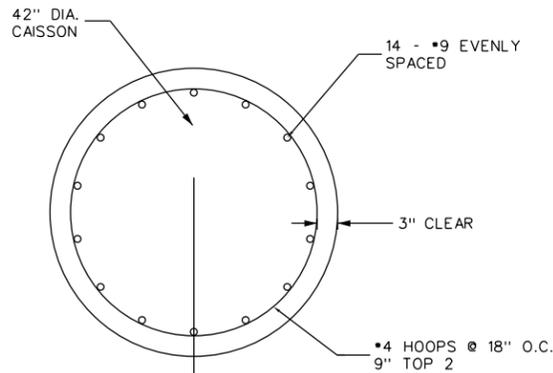
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Unit Information Unit Leader Initials	

Sheet Revisions		
Date:	Comments	Init.

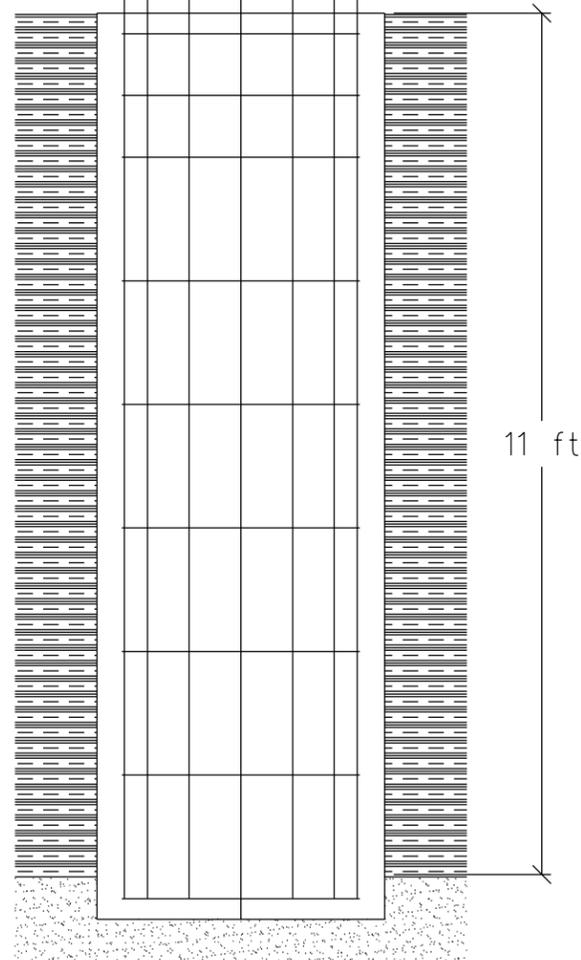
As Constructed
No Revisions:
Revised:
Void:

NODE GROUNDING RINGS			
Designer:	Structure Numbers	.	.
Detailer:	Sheet Subset:	Subset Sheets:	3 of 5

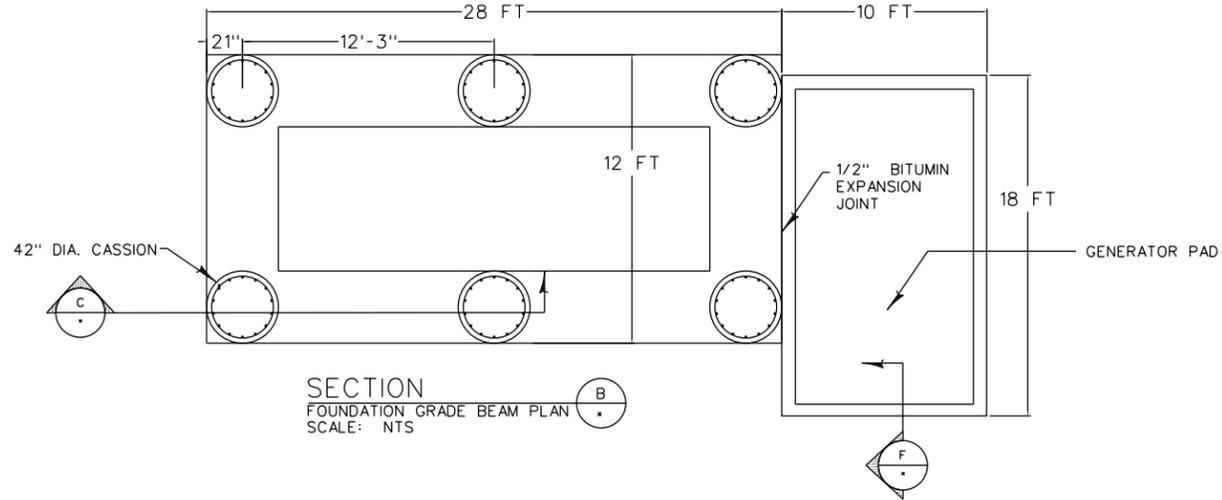
Project No./Code
Sheet Number 3



PLAN VIEW
ELEVATION

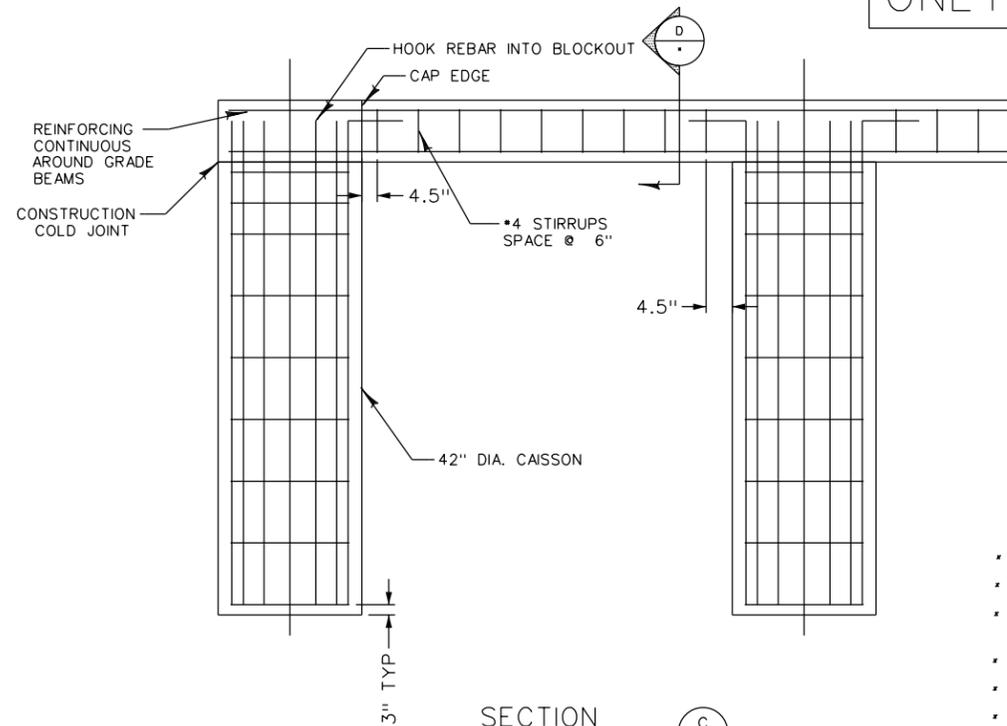


SECTION A
42" DIA. CAISSON
SCALE: NTS

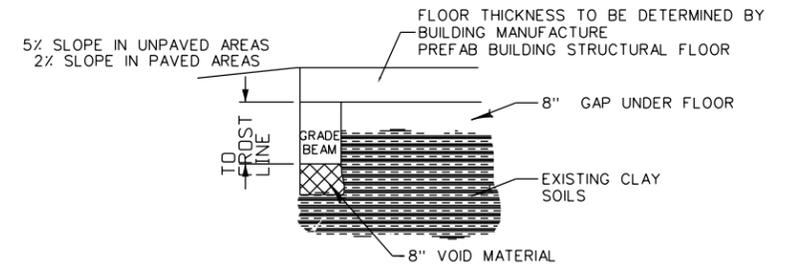


SECTION B
FOUNDATION GRADE BEAM PLAN
SCALE: NTS

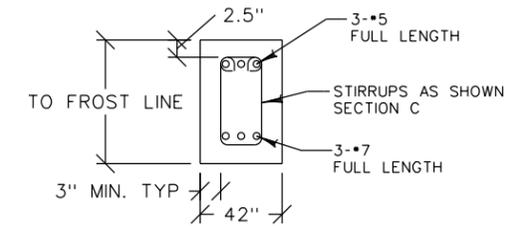
THIS FOUNDATION
PLAN IS FOR
INFORMATION
ONLY



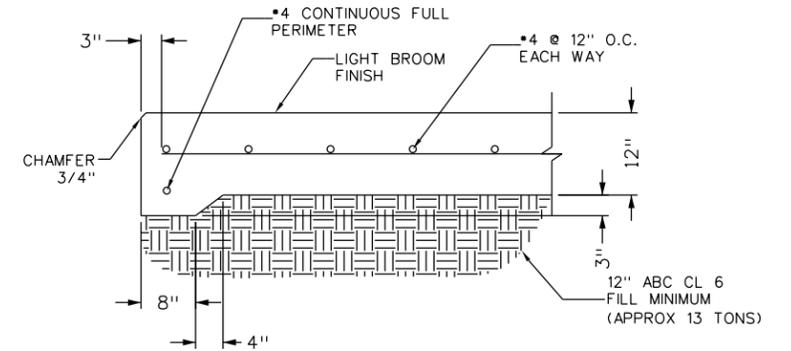
SECTION C
GRADE BEAM REBAR
SCALE: NTS



SECTION E
FLOOR SECTION
SCALE: NTS



SECTION D
GRADE BEAM SECTION
SCALE: NTS



SECTION F
GENERATOR FOUNDATION DETAIL
SCALE: NTS

NOTES:

- Form void to be installed under grade beams
- Building Manufacture shall perform a geotechnical study of the site.
- The foundation design shall be provided by the building manufacture. All details here are for informational purposes only and illustrate similar designs used previously.
- Concrete for Generator slab shall be class B.
- Concrete for Grade Beams shall be class D.
- Concrete for Caissons shall be class BZ.

Print Date: 9/21/2015
File Name: 17970_06_Foundation.dgn
Horiz. Scale: 1:1
Unit Information

Sheet Revisions			
Date:	Comments	Init.	

As Constructed	NODE FOUNDATION			Project No./Code
No Revisions:				
Revised:	Designer:	Structure Numbers	.	
Void:	Detailer:	Sheet Subset:	.	
		Subset Sheets:	4 of 5	Sheet Number 4

