

DESIGN CRITERIA

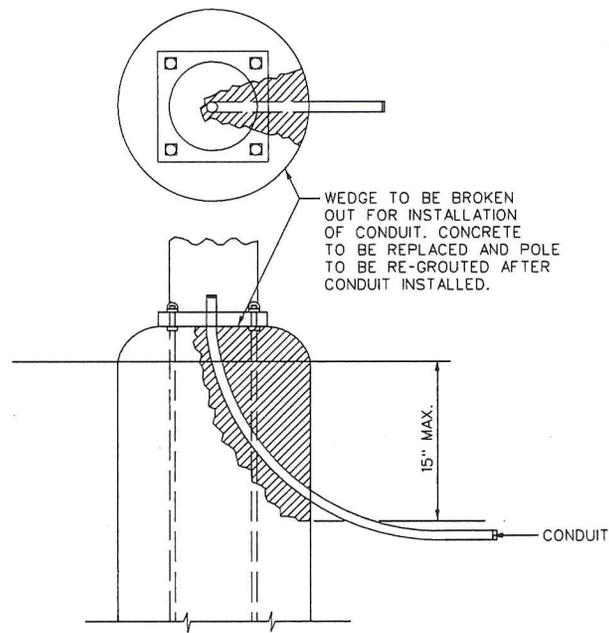
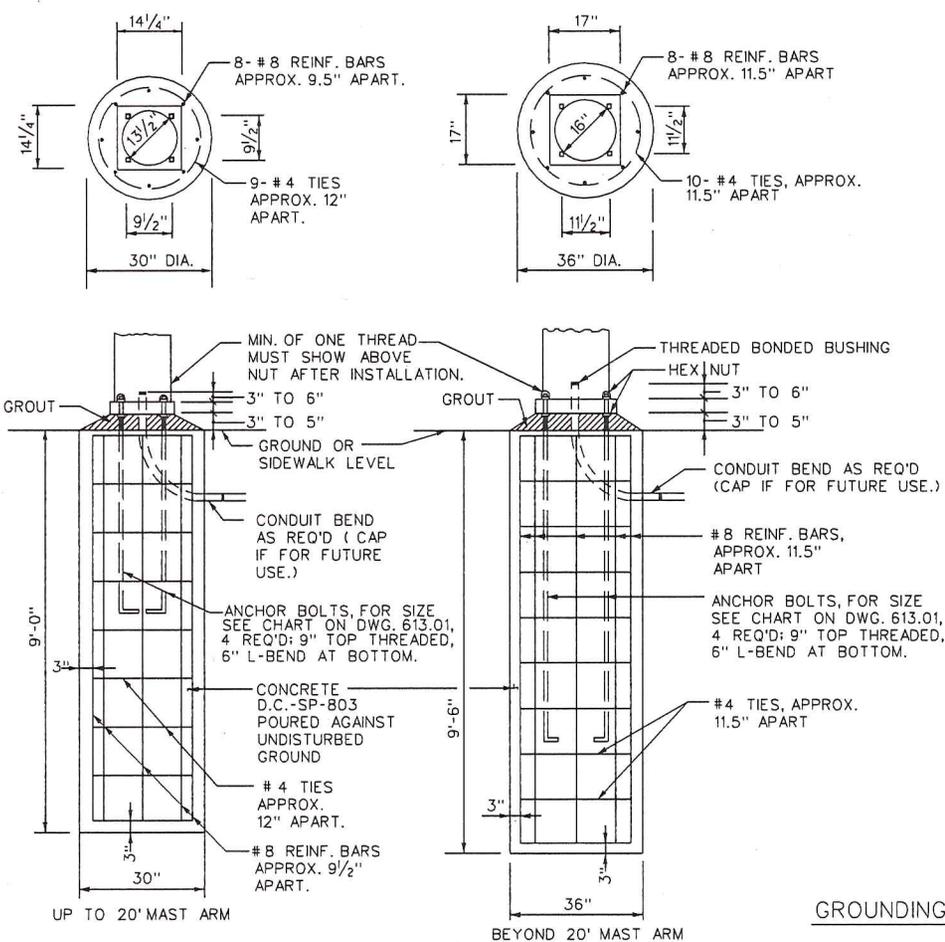
DESIGNED IN ACCORDANCE WITH THE CURRENT REVISION OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" FOR 80 M.P.H. WIND ZONE TO SUPPORT FIXED SIGNALS WITH BACK PLATES, ACTUAL AREAS AS SHOWN.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Rijaz</i>
REVISION	APPROVAL
	PROJECT MANAGER
	APPROVED: <i>Muhammed Khalid</i>
	CHIEF ENGINEER

**TRAFFIC SIGNAL POLE
MAST ARM**

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.01



METHOD OF CONDUIT ENTRANCE INTO EXISTING POLE FOUNDATION

GROUNDING NOTES FOR MAST ARM POLE FOUNDATIONS

1. THE GROUND ROD SHALL NOT BE INCLUDED WITHIN THE ACTUAL FOUNDATION GIVEN THE DIFFICULTY WHICH WOULD BE ENCOUNTERED IN EMBEDDING AN 8 FOOT LONG SECTION OF GROUND ROD IN THE SOIL.
2. THE GROUND ROD SHALL BE DRIVEN IN THE CLOSEST PULL BOX OR MANHOLE AS DIRECTED BY THE ENGINEER IN THE FIELD.
3. THE GROUND ROD SHALL BE 3/4" DIAMETER COPPER CLAD, 10'-0" IN LENGTH.
4. A 2" LONG SEGMENT OF THE GROUND ROD SHALL EXTEND ABOVE THE BOTTOM OF THE PULLBOX/ MANHOLE.
5. A SEGMENT OF NO. 6 SOLID GROUND CABLE SHALL BE AFFIXED TO THE 2" SEGMENT OF GROUND ROD EXTENDING ABOVE THE BOTTOM OF THE PULLBOX/MANHOLE AND BE INSTALLED THROUGH THE PVC CONDUIT TO THE MAST ARM POLE FOUNDATION AND INTO THE MAST ARM POLE, WHERE THE GROUND CABLE IS TO BE CONNECTED.

MAST ARM POLE FOUNDATION

NOTE:

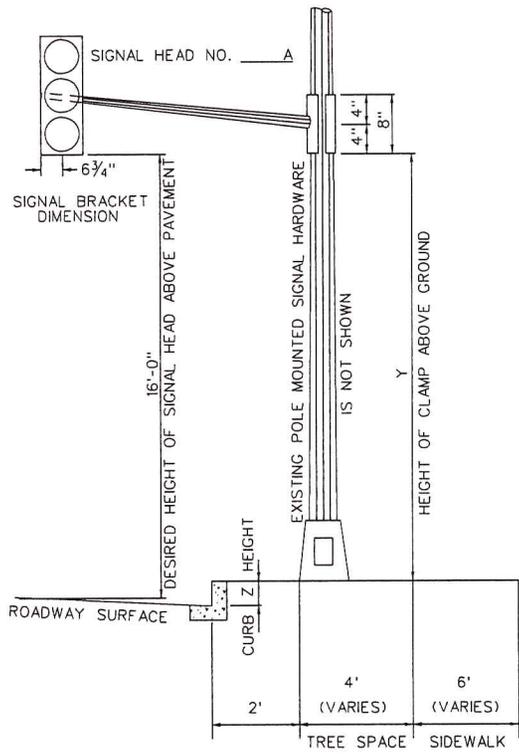
THE PCC CONCRETE FOR THE FOUNDATIONS SHALL BE RATED AT 3500 PSI AND CONFORM WITH THE PROVISIONS OF D.C. SPECIFICATION 803.01. FOUNDATION DESIGNS SPECIFIED BY POLE MANUFACTURERS SUPERSEDE THESE DESIGNS.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Raj</i>
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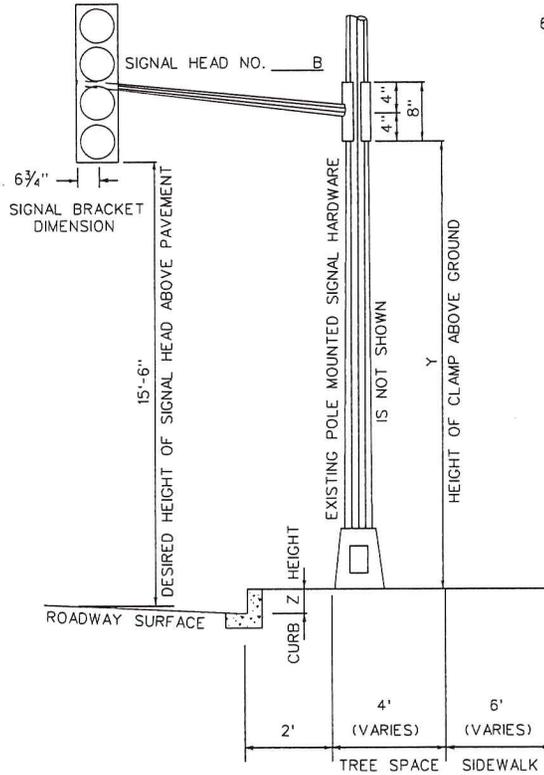
TRAFFIC SIGNAL POLE MAST ARM
POLE FOUNDATION AND
CABLE ENTRANCE

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

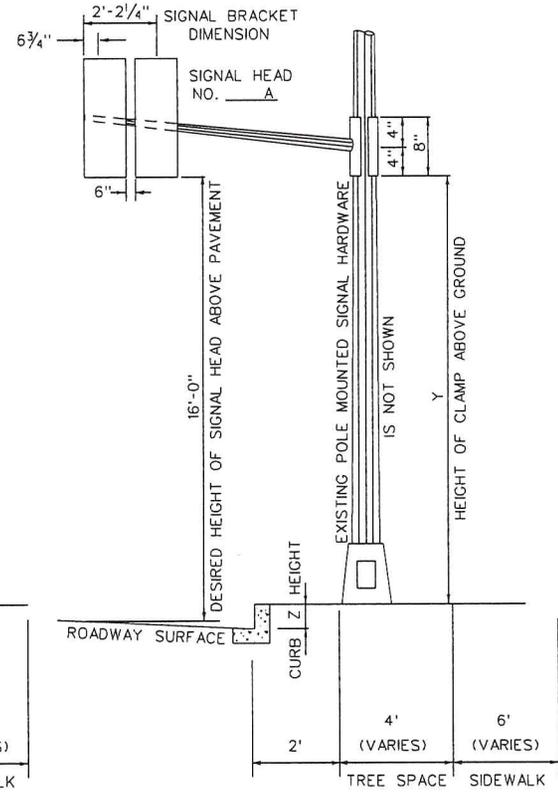
DWG. NO. 613.02



MAST ARM LENGTH L FEET



MAST ARM LENGTH L FEET



MAST ARM LENGTH L FEET

NOTES:

1. MAST ARM LENGTHS ARE 6', 8', 10' AND 12'.
2. HEIGHT OF CLAMP ABOVE GROUND (Y) IS CALCULATED AS FOLLOWS:
 - A: FOR SIGNAL HEIGHT 16'-0" ABOVE ROAD $Y = 17'-3\frac{1}{2}" - (Z + 1.67L)"$
 - B: FOR SIGNAL HEIGHT 15'-6" ABOVE ROAD $Y = 17'-4" - (Z + 1.67L)"$
 - C: FOR SIGNAL HEIGHT 15'-0" ABOVE ROAD $Y = 17'-4\frac{1}{2}" - (Z + 1.67L)"$

WHERE Z = CURB HEIGHT MEASURED IN INCHES
L = MAST ARM LENGTH MEASURED IN FEET

3. APPROVED STAINLESS STEEL SIGNAL BRACKETS SHALL BE USED TO AFFIX VEHICLE SIGNAL HEAD TO MAST ARM.

ISSUED:	8/2015
REVISION	APPROVAL

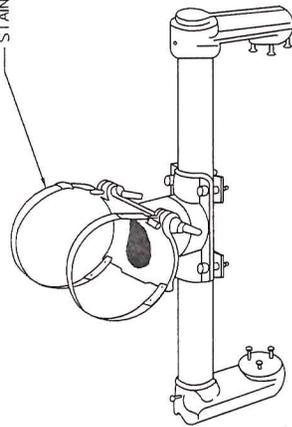
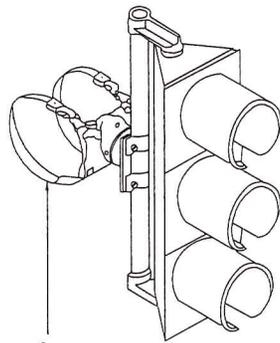
RECOMMENDED: *Adil Riaz*
PROJECT MANAGER

APPROVED: *Muhammed Kholid*
CHIEF ENGINEER

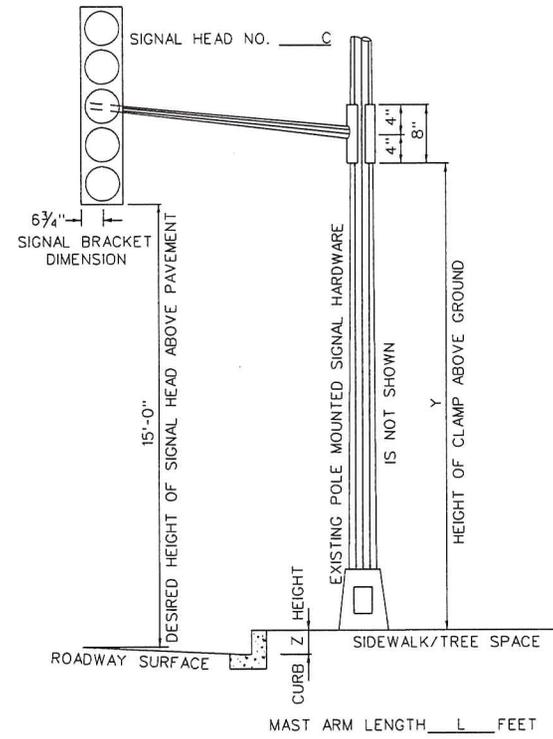
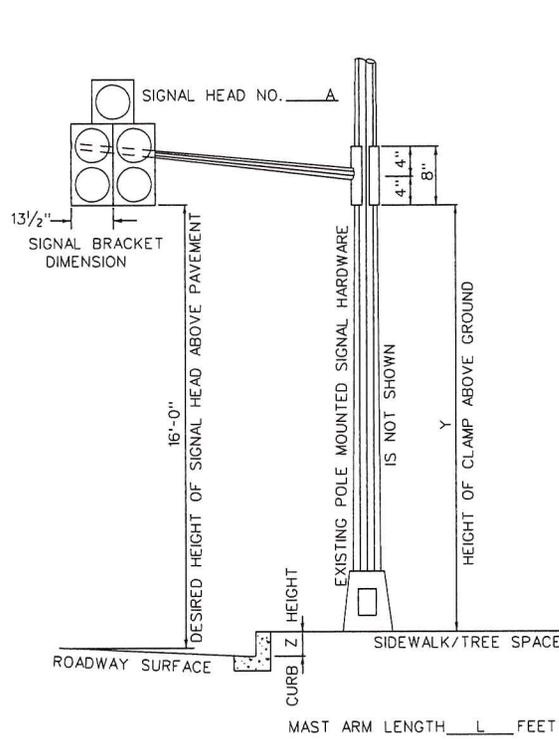
TRAFFIC SIGNAL POLE
SHORT MAST ARM
HARDWARE MOUNTING DETAILS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.03



RIGID MAST ARM MOUNTING DETAILS



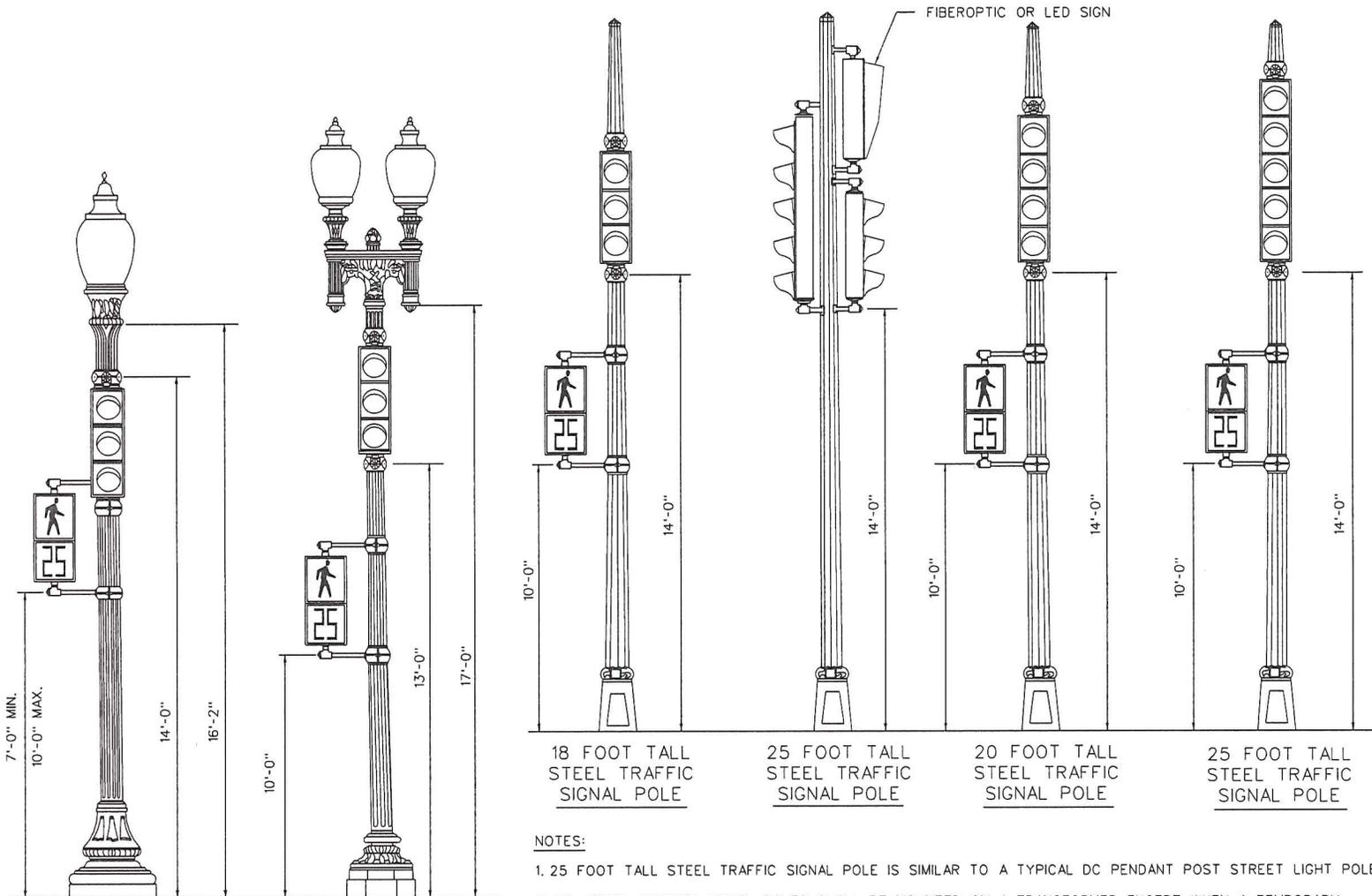
NOTE:
FOR MAST ARM NOTES, SEE DWG. 613.03.

ISSUED: 8/2015	RECOMMENDED: <i>Attila Rij</i>
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TRAFFIC SIGNAL POLE
SHORT MAST ARM
HARDWARE MOUNTING DETAILS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.04



NO. 18 DECORATIVE STREET LIGHT POLE

TWIN 20 DECORATIVE STREET LIGHT POLE

18 FOOT TALL STEEL TRAFFIC SIGNAL POLE

25 FOOT TALL STEEL TRAFFIC SIGNAL POLE

20 FOOT TALL STEEL TRAFFIC SIGNAL POLE

25 FOOT TALL STEEL TRAFFIC SIGNAL POLE

NOTES:

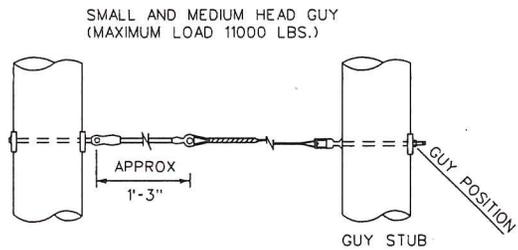
1. 25 FOOT TALL STEEL TRAFFIC SIGNAL POLE IS SIMILAR TO A TYPICAL DC PENDANT POST STREET LIGHT POLE.
2. ALL STEEL TRAFFIC SIGNAL POLES SHALL BE MOUNTED ON A TRANSFORMER EXCEPT WHEN A TEMPORARY PORTABLE CONCRETE BASE IS SPECIFIED IN THE PROJECT PLANS. SEE DWG. NO. 613.08 FOR TRANSFORMER BASE DETAILS. SEE DWG. NO. 613.24 FOR TEMPORARY CONCRETE BASE DETAILS.
3. DECORATIVE STREET LIGHT POLES MAY EXIST IN THE FIELD WITH OR WITHOUT LUMINAIRE.
4. NO. 16 DECORATIVE TRAFFIC SIGNAL POLE IS NOT SHOWN ON THIS DETAIL, MOUNTING TRAFFIC SIGNALS ON THIS POLE IS LIMITED TO SPECIAL APPLICATIONS.
5. UNLESS OTHERWISE SPECIFIED, STAINLESS STEEL STRAPPING SHALL BE USED TO AFFIX HARDWARE TO POLES.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Riaz</i>
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	APPROVED: <i>Muhammed Khelid</i>
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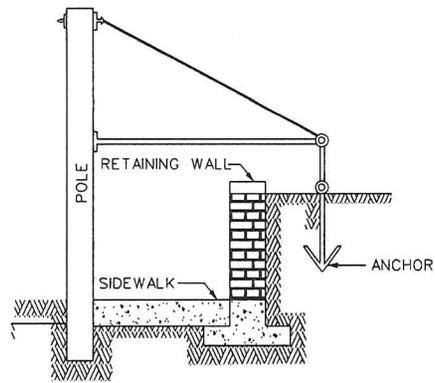
TRAFFIC SIGNAL HARDWARE ARRANGEMENT ON METAL POLES

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

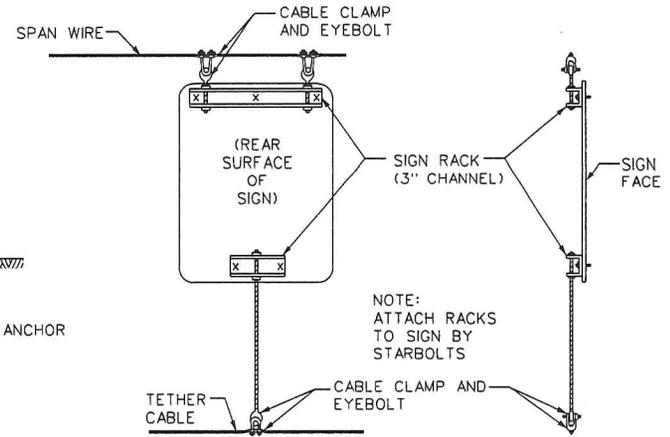
DWG. NO. 613.05



1. INSULATED GUYS CONNECTED TO A LINE CONDUCTOR POLE REQUIRE AN INSULATOR AT THAT POLE.
2. SIDEWALK GUYS SHALL EITHER BE INSULATED OR GROUNDED.



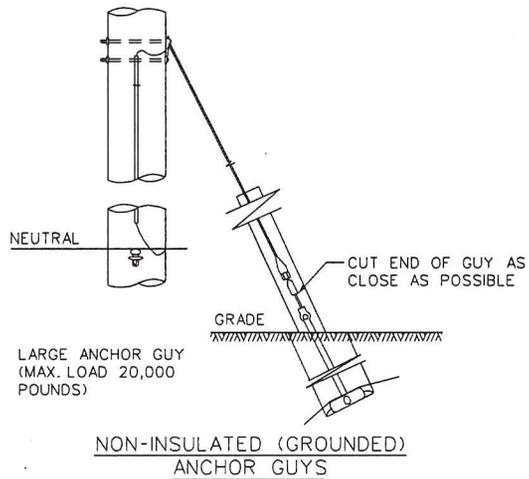
SIDEWALK GUY



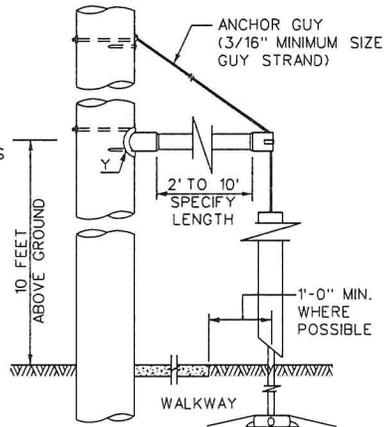
REAR VIEW

SIDE VIEW

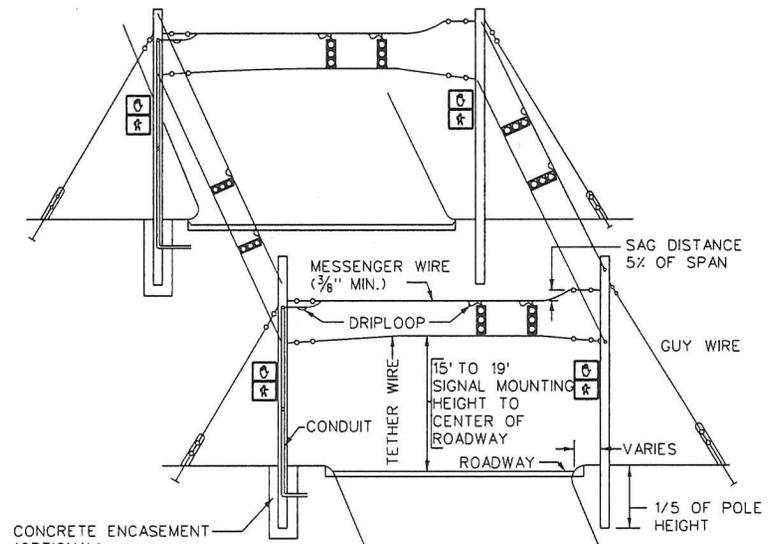
SPAN-WIRE MOUNTED SIGN



NON-INSULATED (GROUNDED) ANCHOR GUYS



SIDEWALK ANCHOR GUY BRACE



TYPICAL OVERHEAD SIGNAL INSTALLATION

ISSUED: 8/2015

RECOMMENDED:

REVISION APPROVAL

REVISION APPROVAL

REVISION APPROVAL

REVISION APPROVAL

REVISION APPROVAL

APPROVED:

PROJECT MANAGER

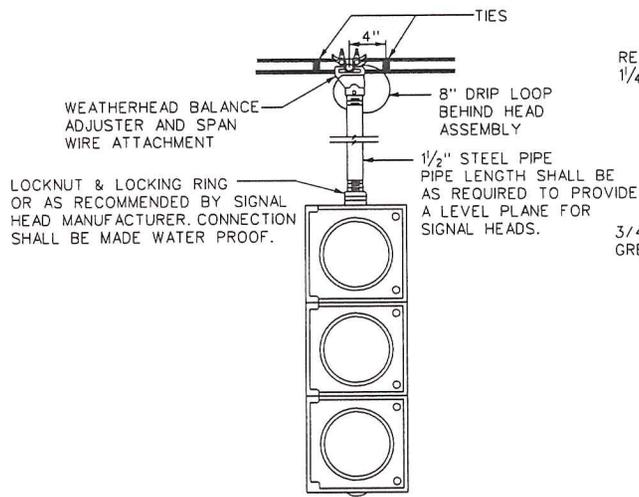
CHIEF ENGINEER

TRAFFIC SIGNAL SPAN WIRE WOOD POLE INSTALLATION

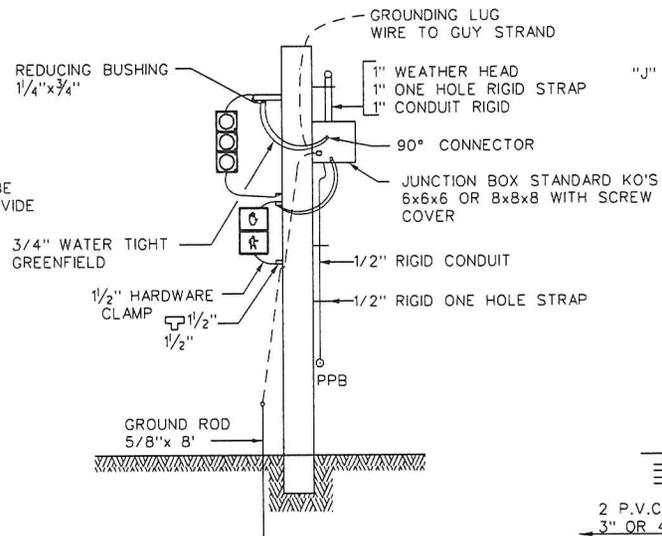
d.

DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

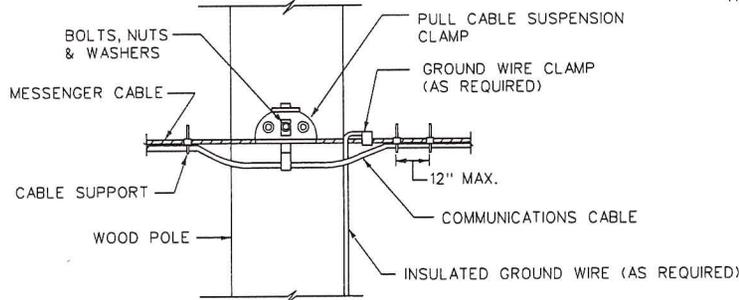
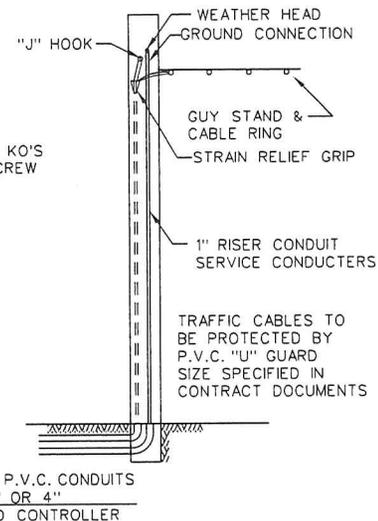
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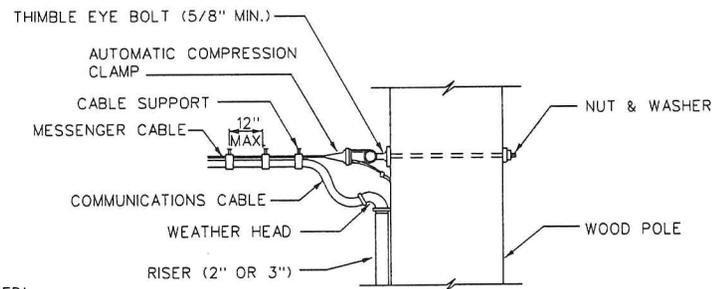
SIGNAL HEAD MOUNTING DETAILS FOR SPAN WIRE



TYPICAL WOOD POLE INSTALLATION



TYPICAL COMMUNICATIONS CABLE INSTALLATION ON WOOD POLE



ISSUED: 8/2015

RECOMMENDED: *Adil Raj*
PROJECT MANAGER

REVISION APPROVAL

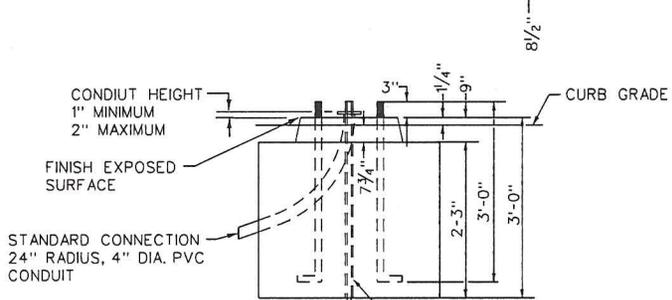
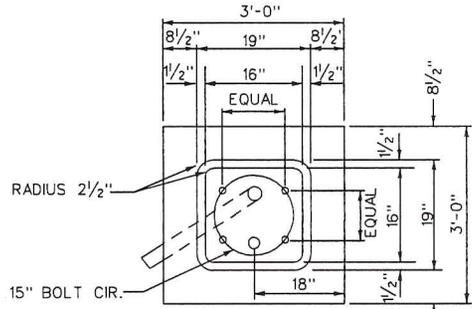
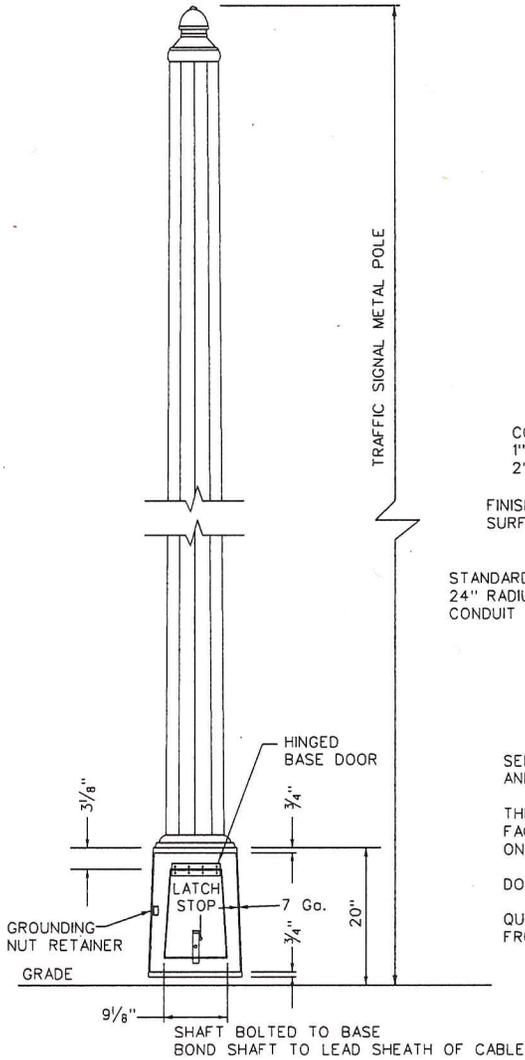
APPROVED: *Muhammed Kholid*
CHIEF ENGINEER

TRAFFIC SIGNAL SPAN WIRE
WOOD POLE INSTALLATION

d.

DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.07



INSTALL 3/4"x12' GROUND ROD (2" ABOVE FOUNDATION FINISH SURFACE)

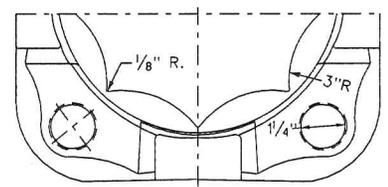
SEE CONST. DWG. TO CHECK BOLT CENTERS AND RELATED INFORMATION ON THIS DRAWING.

THE DISTANCE OF CENTER OF FOUNDATION TO FACE OF CURB TO BE 3'-6" EXCEPT AS NOTED ON CONST. DWG.

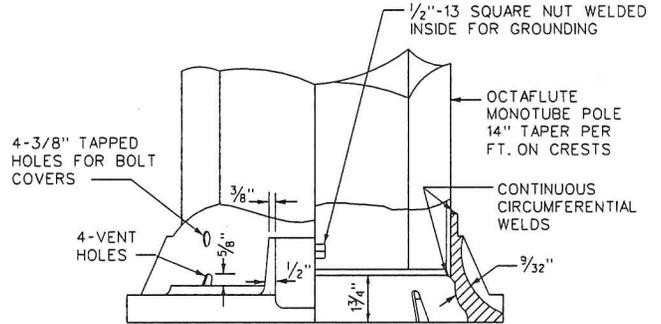
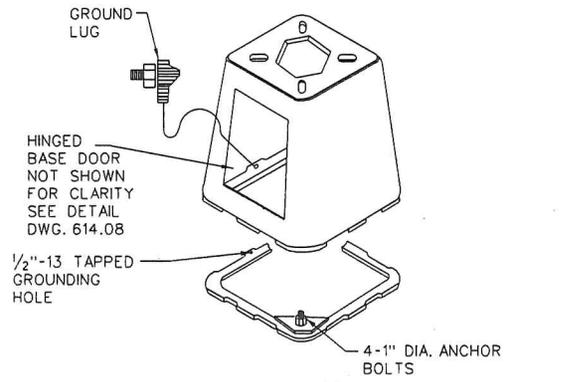
DOOR OF TRANSFORMER BASE TO BE 90° FROM CURB.

QUARTER BEND TO BE ON CURB OR SIDEWALK SIDE 4" FROM C OF FOUNDATION USE TEMPLATE NO. U.M.T. 1.

CONCRETE FOUNDATION



HALF PLAN



NOTE:
TRANSFORMER BASE DOOR MUST FACE SIDEWALK OR TREE SPACE

STEEL TRANSFORMER BASE

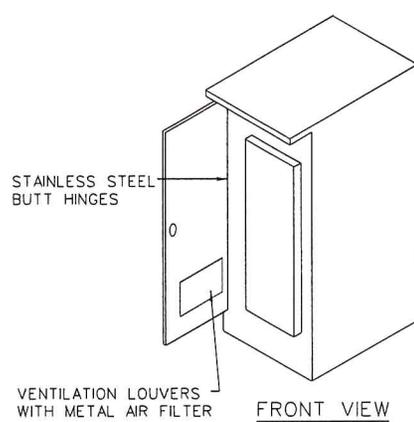
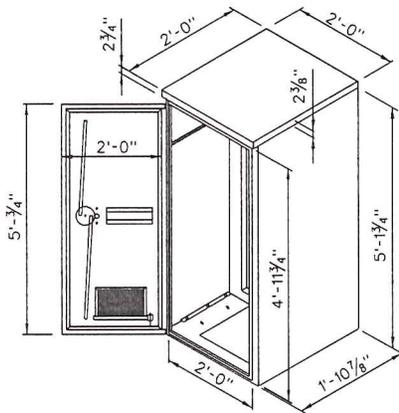
- NOTES:
1. CONTRACTOR SHALL INSTALL DUCT SEAL IN CONDUIT AFTER CABLE HAS BEEN PULLED.
 2. GROUND ROD IS POSITIONED IN 2" DIAMETER PVC CONDUIT EXTENDING THROUGH THE FOUNDATION.
 3. 3/4" DIAMETER COPPER CLAD GROUND ROD SHALL BE 12'-0" LONG TO ENSURE THAT AT LEAST 8 FEET OF THE ROD IS EMBEDDED IN SOIL. THE NO. 6 SOLID GROUND CABLE SHALL BE AFFIXED TO THAT PORTION OF THE GROUND ROD EXTENDING ABOVE THE FOUNDATION SURFACE.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Raza</i>
REVISION	APPROVAL
	PROJECT MANAGER
	APPROVED: <i>Muhammed Khelid</i>
	CHIEF ENGINEER

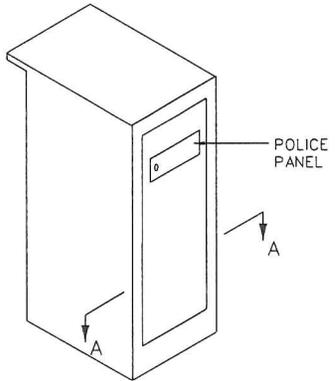
**TRAFFIC SIGNAL METAL POLE
FOUNDATION AND TRANSFORMER
BASE**

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

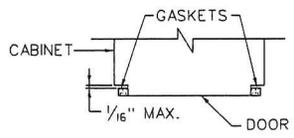
DWG. NO. 613.08



FRONT VIEW

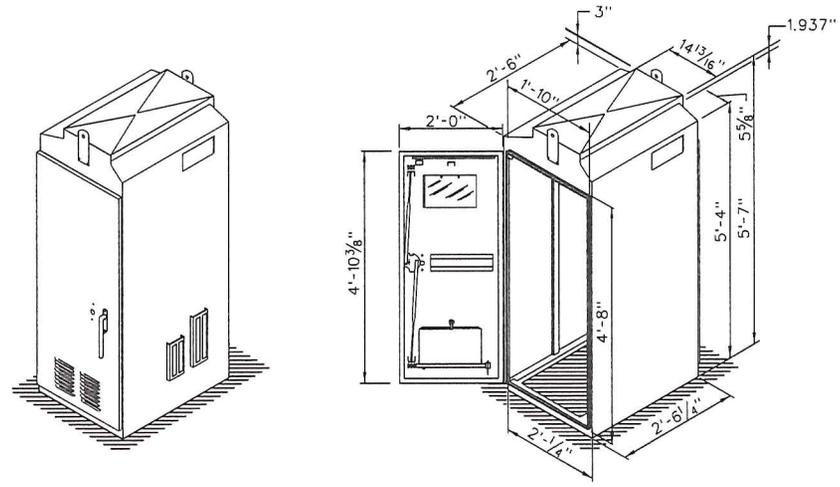


REAR VIEW



SECTION A-A

MODEL 336SS CONTROLLER CABINET



MODEL 332 CONTROLLER CABINET DETAILS

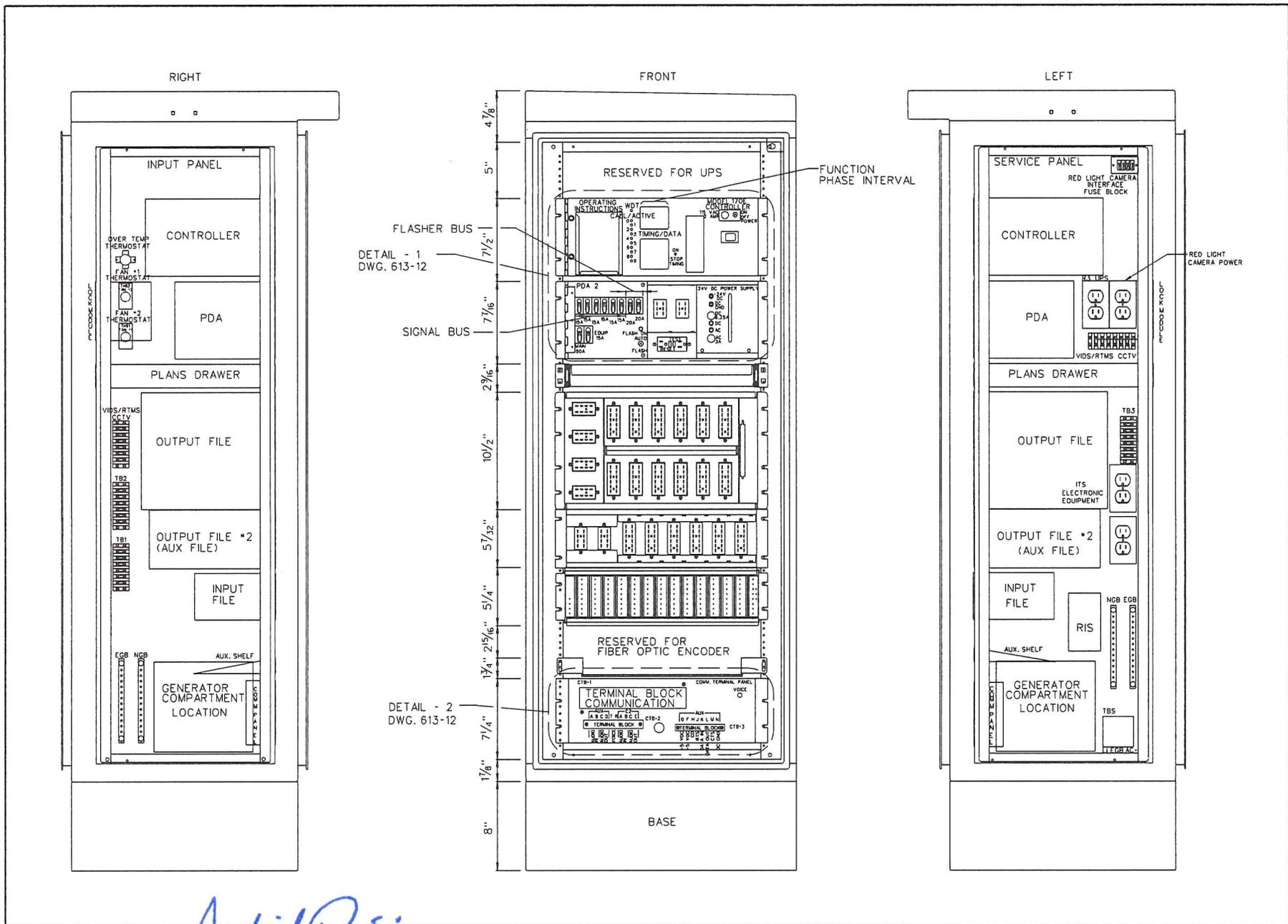
NOTE:
DO NOT PLACE CABINETS IN SIDEWALK.

ISSUED:	8/2015	RECOMMENDED:	<i>Attila Pij</i>
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		APPROVED:	<i>Muhammed Khalid</i>
			CHIEF ENGINEER

TRAFFIC SIGNAL CONTROLLER
CABINET DETAILS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.10

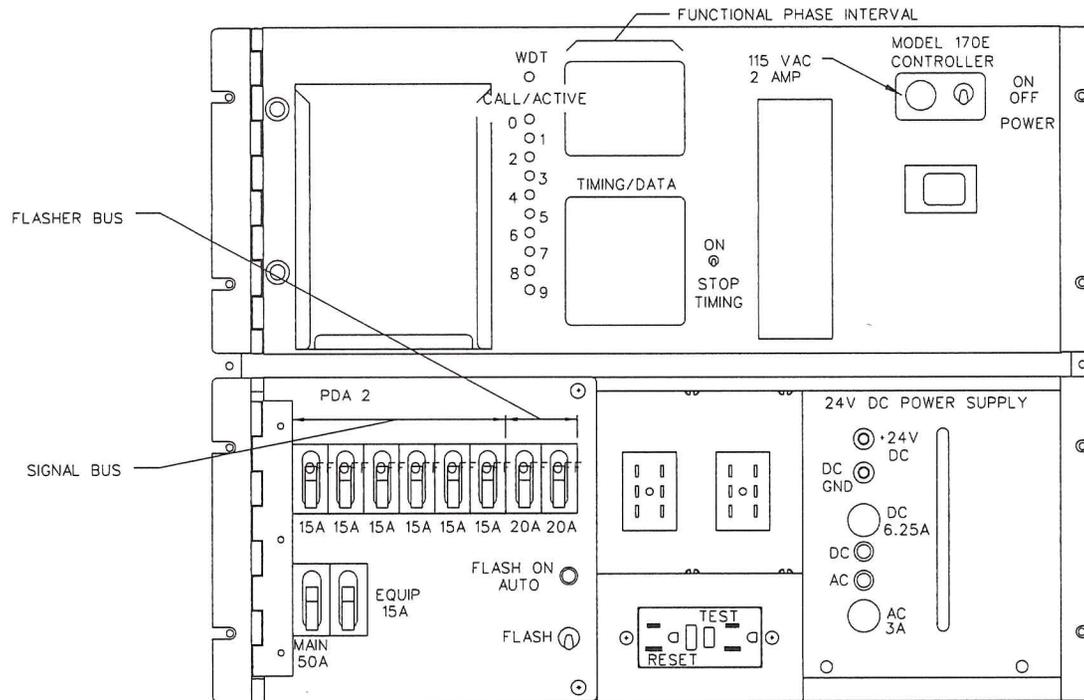


ISSUED:	8/2015	RECOMMENDED:	<i>Adil Riaz</i>
REVISION	APPROVAL	PROJECT MANAGER	
		APPROVED:	<i>Muhammed Khalid</i>
		CHIEF ENGINEER	

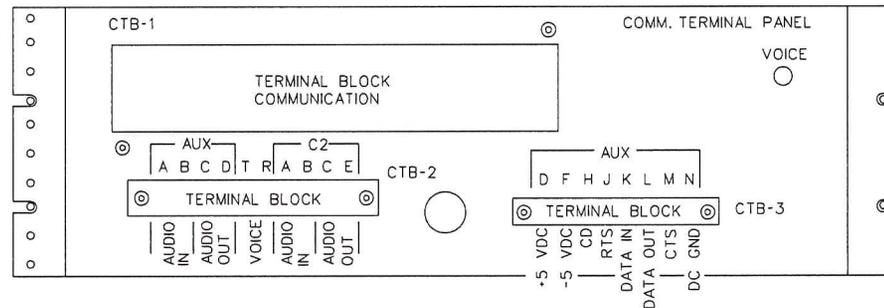
336SS TRAFFIC SIGNAL CABINET
FRONT, LEFT, AND RIGHT VIEWS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.11



DETAIL - 1
DWG. 613.11



DETAIL - 2
DWG. 613.11

ISSUED:	8/2015
REVISION	APPROVAL

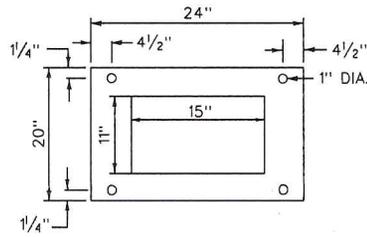
RECOMMENDED: *Asif Raza*
PROJECT MANAGER

APPROVED: *Muhammed Khalid*
CHIEF ENGINEER

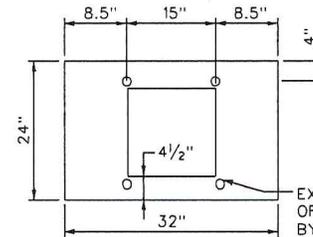
336SS TRAFFIC SIGNAL CABINET DETAILS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.12

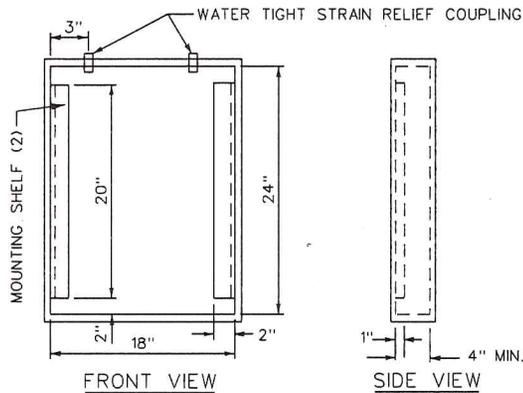


TOP VIEW

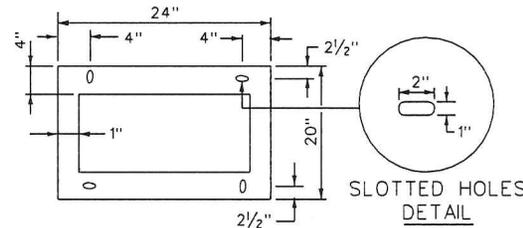


TOP VIEW

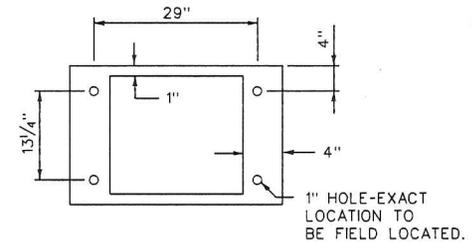
EXTRA SIZE AND LOCATION OF HOLES TO BE DETERMINED BY CONTRACTOR. MUST BE COMPATIBLE WITH SECTION D-D, DWG. NO. 613.11.



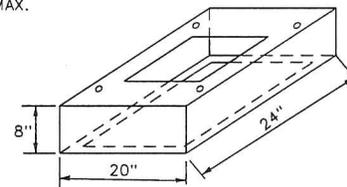
AERIAL TERMINATION CABINET



BOTTOM VIEW

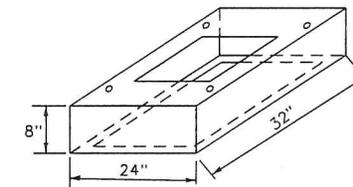


BOTTOM VIEW



ADAPTOR BASE NO. 1

USE WITH STANDARD 336SS FOUNDATIONS



ADAPTOR BASE NO. 2

USE WITH FOUNDATIONS FOR 332 AND 336SS CABINETS ON EXISTING TYPE N FOUNDATIONS

CONTROLLER AND TERMINATION CABINET ADAPTOR BASES

NOTES:

1. CABINET TYPE 3R ELECTRICAL ENCLOSURE.
2. THE SIZE OF THE WATER TIGHT STRAIN RELIEF COUPLINGS WILL BE SPECIFIED BY THE ENGINEER.
3. THE DOOR SHALL BE HINGED, AND LATCHED.
4. REAR OF THE CABINET SHALL HAVE TWO (2) WOOD POLE MOUNTING BRACKETS TO BE USED WITH METAL STRAPPING.
5. THE CABINET SHALL BE MADE OF ALUMINUM SHEET WITH A MIN. OF 0.125" THICKNESS.

NOTES:

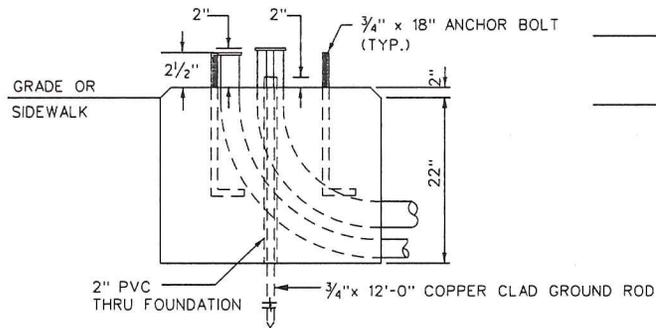
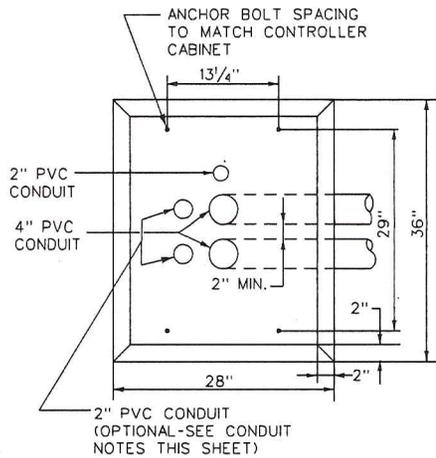
1. WHEN ADAPTOR BASE NO. 2 IS USED FOR A TYPE 332 CABINET, NEW HOLES MUST BE DRILLED IN THE TOP PLATE. THE HOLES SHALL BE 29" APART ON THE LONG SIDE AND 13 1/4" APART ON THE SHORT SIDE (29"x13 1/4").
2. TYPE N FOUNDATIONS WILL NOT BE CONSTRUCTED.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Raj</i>
REVISION	APPROVAL
	PROJECT MANAGER
	APPROVED: <i>Muhammed Khalid</i>
	CHIEF ENGINEER

TRAFFIC SIGNAL AERIAL TERMINATION CABINETS AND CONTROLLER CABINET ADAPTER BASES

d. DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.13



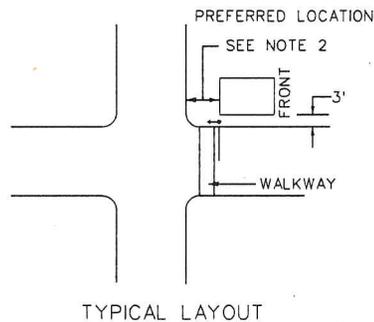
TYPE 332 FOUNDATION

CONDUIT NOTES:

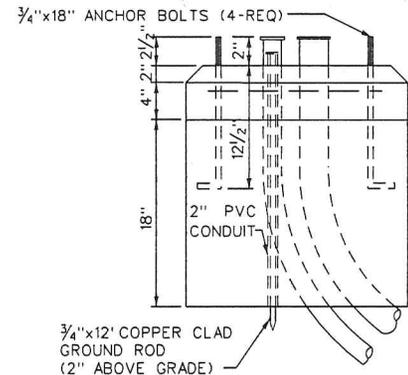
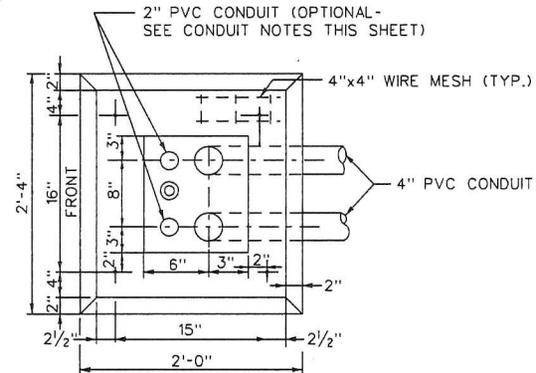
1. UNLESS OTHERWISE SPECIFIED, ONLY TWO 4" DIAMETER CONDUITS ARE TO BE BUILT INTO THE FOUNDATION.
2. SPECIFIC INTERSECTION PLANS WILL INDICATE WHETHER ONE OR TWO ADDITIONAL 2" DIAMETER CONDUITS ARE ALSO TO BE PROVIDED.
3. GROUND RODS ARE POSITIONED IN 2" DIAMETER PVC CONDUIT EXTENDING THROUGH THE FOUNDATION.
4. CONTRACTOR SHALL INSTALL DUCT SEAL IN CONDUITS AFTER CABLE HAS BEEN PULLED.
5. 3/4" DIAMETER COPPER CLAD GROUND ROD SHALL BE 12'-0" LONG TO ENSURE THAT AT LEAST 8 FEET OF THE ROD IS EMBEDDED IN SOIL. THE NO. 6 SOLID GROUND CABLE SHALL BE AFFIXED TO THAT PORTION OF THE GROUND ROD EXTENDING ABOVE THE FOUNDATION SURFACE.

FOUNDATION NOTES:

1. POSITION SHORT SIDE OF FOUNDATION PARALLEL TO CURB WITH THE REAR EDGE OF THE FOUNDATION A MINIMUM OF 3 FEET FROM THE FACE OF THE CURB UNLESS SPECIFIED OTHERWISE.
2. POSITION LONG SIDE OF FOUNDATION BEYOND THE MARKED WALKWAY, STOP LINE AND TRAFFIC SIGNAL POST.
3. IN UNUSUAL INSTANCES SUCH AS CIRCLES AND MULTI-LEG INTERSECTIONS, THE CURB SIDE AND THE FRONT DOOR LOCATION SHOULD BE SPECIFIED ON THE DRAWING.
4. CONSTRUCTION DRAWING TO SPECIFY THE DIRECTION OF THE BENDS. PROVIDE 36" MIN. COVER IN ALL INSTALLATIONS.
5. FRONT DOOR IS TO BE POSITIONED SO THAT A PERSON CAN VIEW THE INTERSECTION WHILE OBSERVING THE CONTROLLER DISPLAY.



TYPICAL LAYOUT



TYPE 336SS FOUNDATION

ISSUED:	8/2015
REVISION	APPROVAL

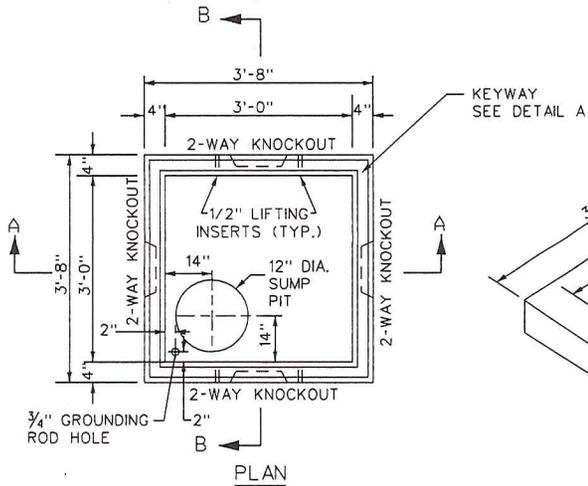
RECOMMENDED: *Adil Raza*
PROJECT MANAGER

APPROVED: *Muhammed Khalid*
CHIEF ENGINEER

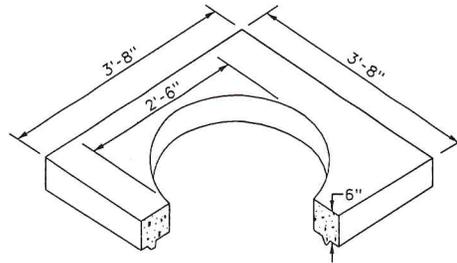
**TRAFFIC SIGNAL CONTROLLER
FOUNDATION LOCATION AND
DETAILS**

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

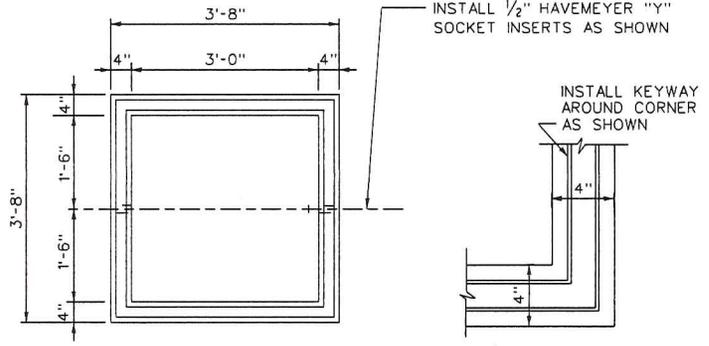
DWG. NO. 613.14



PLAN

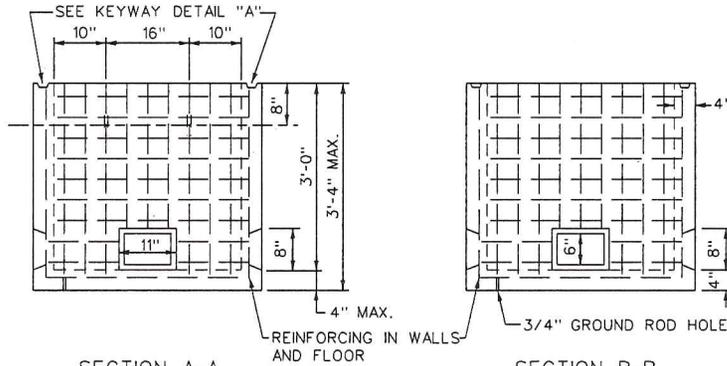


TOP



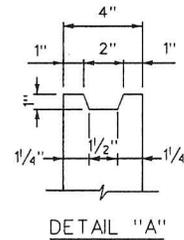
PLAN OF MANHOLE RING
(SEE DETAIL "C" FOR SECTIONS)

PLAN OF RING CORNER

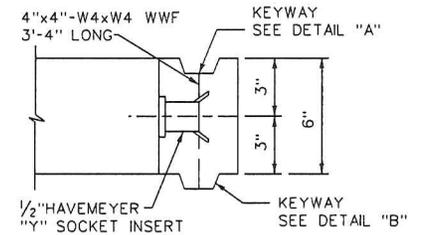


SECTION A-A

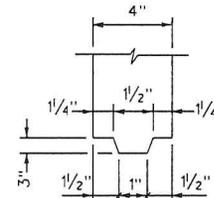
SECTION B-B



DETAIL "A"



DETAIL "C"



DETAIL "B"

NOTES:

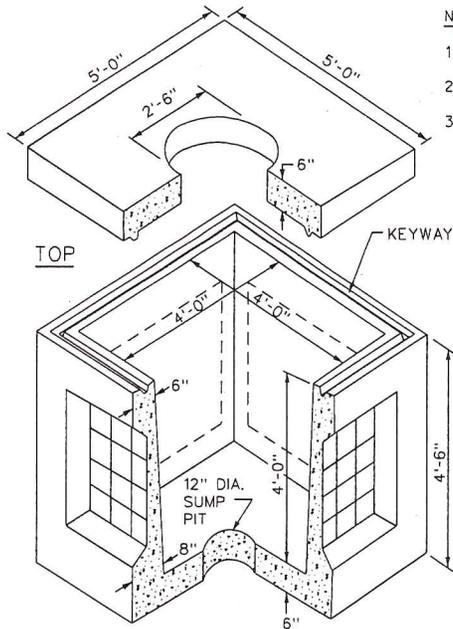
1. MANHOLE CONCRETE SHALL BE CLASS B, 4500 PSI.
2. MANHOLE SECTIONS SHALL BE PRECAST.
3. HANDHOLE WILL BE DESIGNED FOR MINIMUM H2O LOADING. SUPPLIER IS TO PROVIDE CERTIFIED DESIGN CALCULATIONS FOR RECORD OR FOR APPROVAL.
4. REINFORCING IN WALLS AND FLOOR TO BE 4"x4"-W4xW4 WWF.
5. REINFORCING IN TOP SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
6. MANHOLE RINGS ARE 6 IN. DEEP.
7. THIS DRAWING COULD ALSO BE USED FOR STREETLIGHT IN SECTION 614.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Raj</i>
REVISION	APPROVAL
	PROJECT MANAGER
	APPROVED: <i>Muhammed Khalid</i>
	CHIEF ENGINEER

TRAFFIC SIGNAL DISTRICT
3' x 3' x 3' ELECTRICAL MANHOLE

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.15



NOTES:

1. MANHOLE CONCRETE SHALL BE CLASS B, 4500 PSI.
2. MANHOLE SECTIONS SHALL BE PRECAST.
3. THIS DRAWING COULD ALSO BE USED FOR STREETLIGHT MANHOLE IN SECTION 614.

DIMENSIONS:
 INSIDE - 4'-0" x 4'-0" x 4'-0"
 OUTSIDE - 5'-0" x 5'-0" x 4'-6"

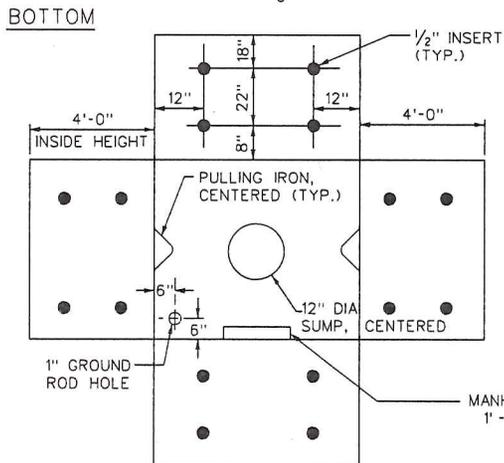
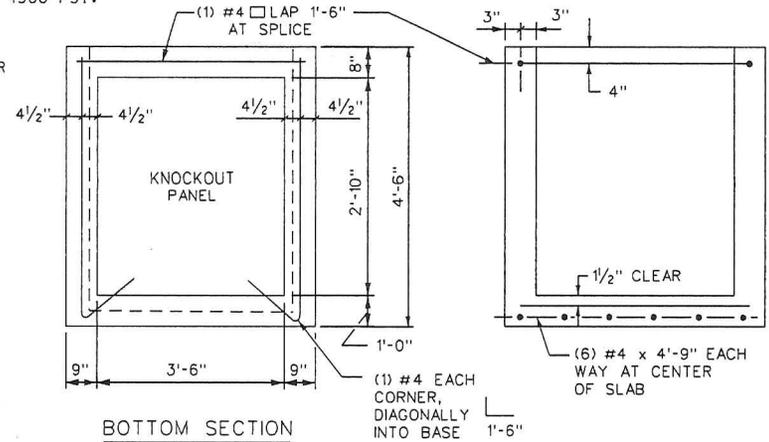
KNOCKOUTS:
 ALL WALLS - 3'-6" x 2'-10",
 1 PER WALL

KNOCKOUT PANEL:
 21" x 2" SOLID CONCRETE WITH
 6x6 - 6/6 WWF AT CENTER,
 LAP 6" INTO SLABS

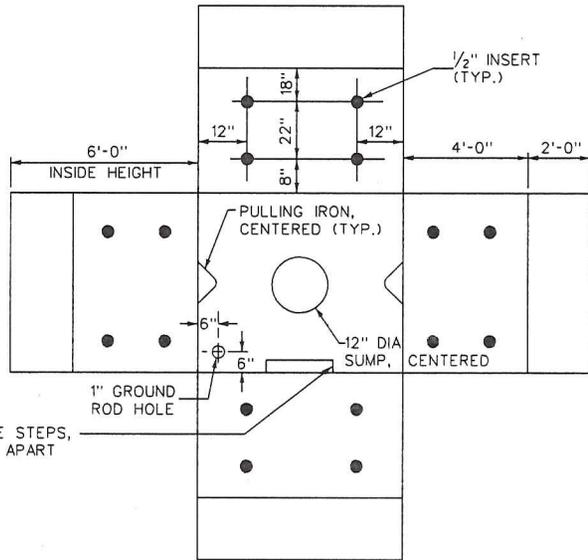
FRAME & COVER: SEE DWG. NO. 613.17

GROUNDING: SEE DWG. NO. 613.19

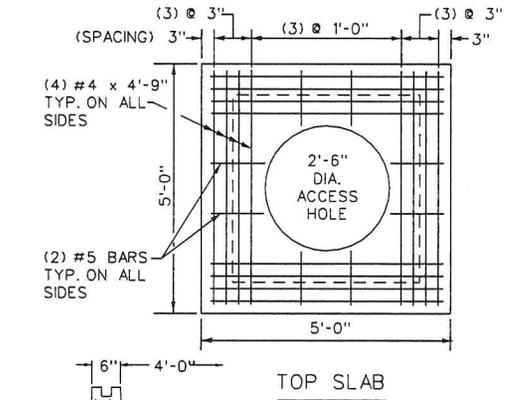
KEYWAY, PULLING IRON AND BOLTING
 INSERT DETAILS: SEE DWG. NO. 613.18



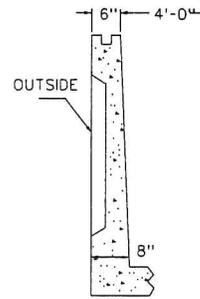
INSERT PLACEMENT SCHEDULE



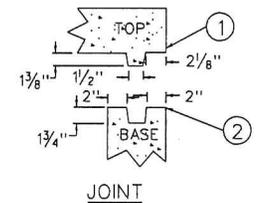
INSERT PLACEMENT SCHEDULE ALTERNATE
 (BOTTOM SECTION ALTERNATE FOR 4' x 4' x 6' ELECTRICAL MANHOLE)



TOP SLAB



SECTION VIEW



JOINT

ISSUED:	8/2015
REVISION	APPROVAL

RECOMMENDED: *Adil Riaz*
 PROJECT MANAGER

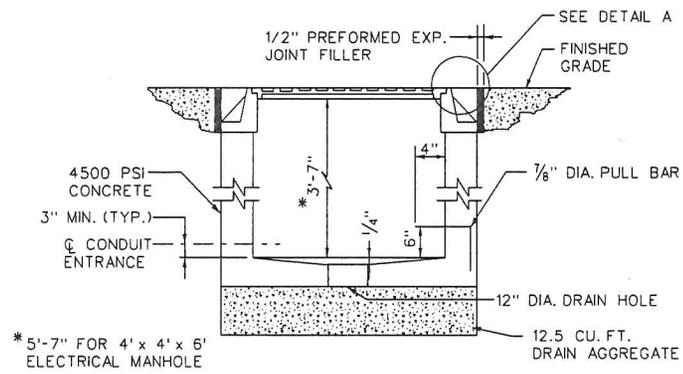
APPROVED: *Muhammed Khalid*
 CHIEF ENGINEER

TRAFFIC SIGNAL DISTRICT
4' x 4' x 4' ELECTRICAL MANHOLE

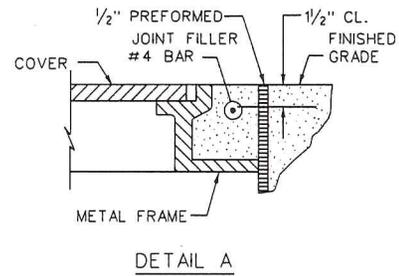
d.

DISTRICT OF COLUMBIA
 DEPARTMENT OF TRANSPORTATION

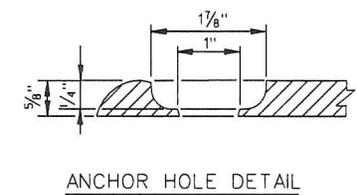
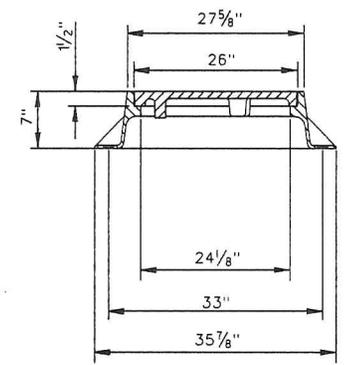
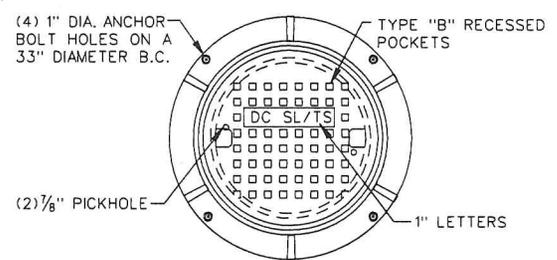
DWG. NO. 613.16



4' x 4' x 4' ELECTRICAL MANHOLE SECTION



DETAIL A



ANCHOR HOLE DETAIL

MANHOLE FRAME AND COVER

MANHOLE FRAME AND COVER NOTES:

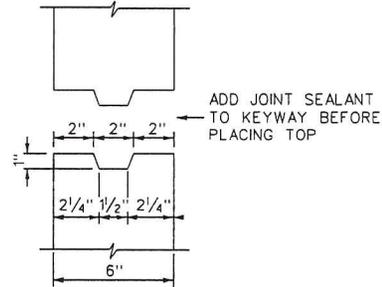
1. WHERE MANHOLE IS IN SIDEWALK, THE DEPTH OF THE FRAME SHALL BE 5 IN., AND THE COVER SHALL CONFORM TO THE SIDEWALK SLOPE. IT SHALL BE LEVEL AT ALL OTHER LOCATIONS.
2. CASTINGS ARE HEAVY DUTY AND MEET AASHTO M20 LOADING REQUIREMENTS.
3. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B, AASHTO M306.
4. FINISH: NOT PAINTED
5. THE MANUFACTURER'S NAME OR LOGO SHALL NOT BE CAST INTO THE RING OR COVER.
6. THIS DRAWING COULD ALSO BE USED FOR STREETLIGHT IN SECTION 614.

ISSUED: 8/2015	RECOMMENDED:
REVISION	APPROVAL
	<i>Adil Raza</i> PROJECT MANAGER
	APPROVED: <i>Muhammed Khalid</i> CHIEF ENGINEER

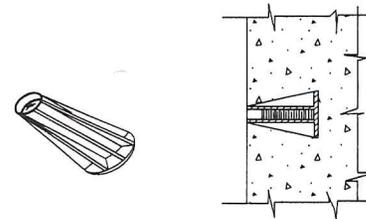
TRAFFIC SIGNAL DISTRICT
ELECTRICAL MANHOLE DETAILS - 1

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.17



ELECTRICAL MANHOLE - KEYWAY DETAIL
(FOR MANHOLES LARGER THAN 3' x 3' x 3')

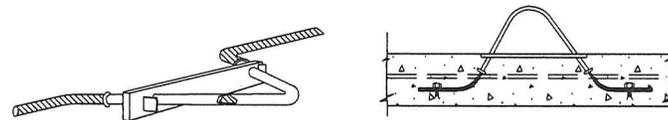


- 1/2" I.D. x 2 3/4" DEEP FLARED TO 1/4" AT BASE
- THERMOPLASTIC MATERIAL NON-CORROSIVE, CHEMICAL RESISTANT, NON-CONDUCTIVE
- ULTIMATE STRENGTH BY TEST TO BE AT LEAST 12,600 LBS.

BOLTING INSERT
(FOR ATTACHING CABLE RACKS, ETC. TO SIDEWALLS)

NOTE:

1. THIS DRAWING COULD ALSO BE USED FOR STREETLIGHT IN SECTION 614.



PULLING IRON - TYPE C

- SEVEN (7) STRAND, 1/2" DIA. CARBON STEEL ROPE, STRESS RELIEVED WITH YIELD STRENGTH OF 270 KIPS.
- 8" HIGH x 22" WIDE AT BASE, FASTENED TO REBAR
- EXPOSED PORTION TOTALLY ENCAPSULATED IN DURABLE, NON-HYDROSCOPIC PLASTIC MATERIAL.

ISSUED:	8/2015
REVISION	APPROVAL

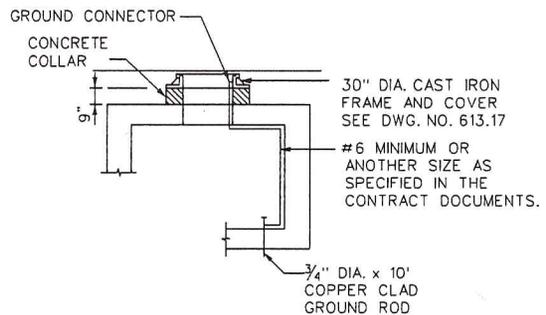
RECOMMENDED:
Attilio Pignatelli
PROJECT MANAGER

APPROVED:
Muhammed Khalid
CHIEF ENGINEER

TRAFFIC SIGNAL DISTRICT
ELECTRICAL MANHOLE DETAILS - 2

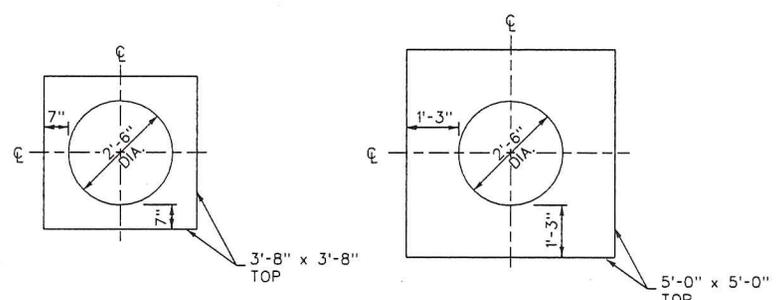
d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.18



NOTE:
1. THIS DRAWING COULD ALSO BE USED FOR STREETLIGHT IN SECTION 614.

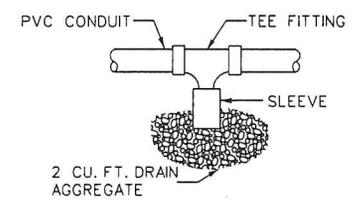
GROUNDING DETAIL



3' x 3' x 3' ELECTRICAL MANHOLE

4' x 4' x 4' (OR 4' x 4' x 6') ELECTRICAL MANHOLE

ACCESS HOLE LAYOUT



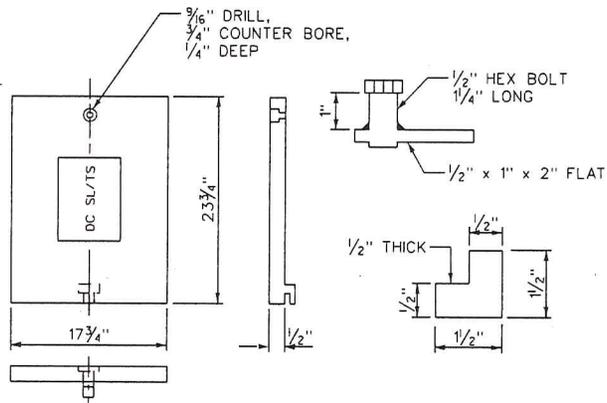
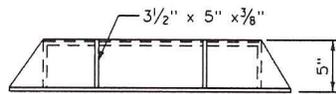
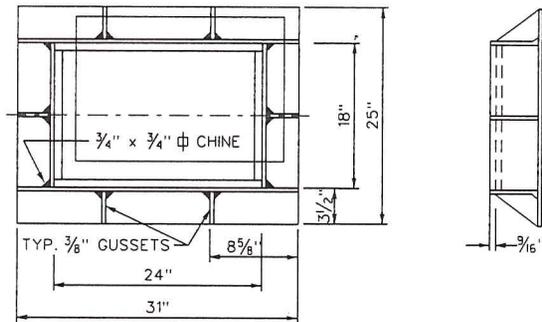
CONDUIT DRAIN DETAIL

ISSUED: 8/2015	RECOMMENDED: <i>Adil Raza</i>
REVISION	APPROVAL
	PROJECT MANAGER
	APPROVED: <i>Muhammed Khalid</i>
	CHIEF ENGINEER

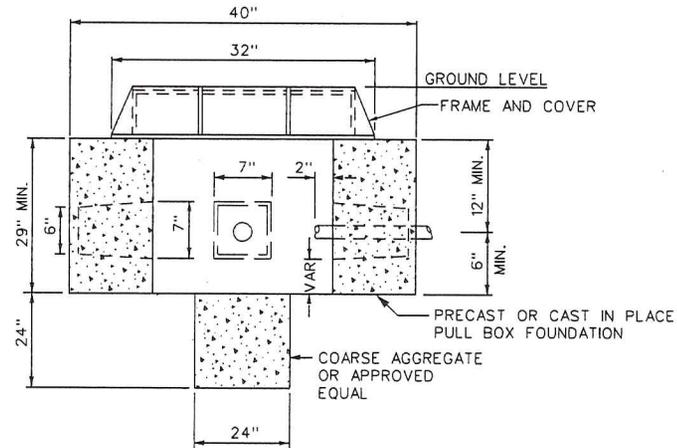
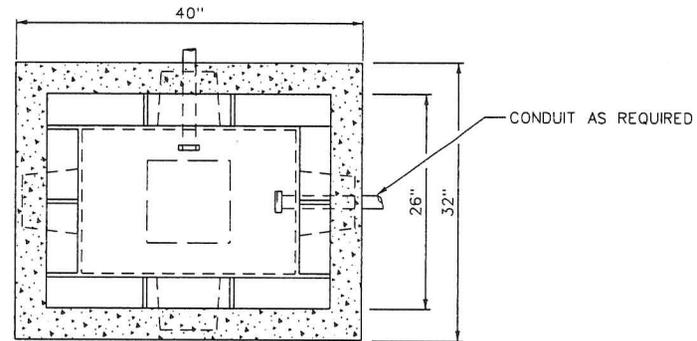
ELECTRICAL MANHOLE DETAILS - 3

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.19



FRAME AND COVER



PULL BOX INSTALLATION

NOTES:

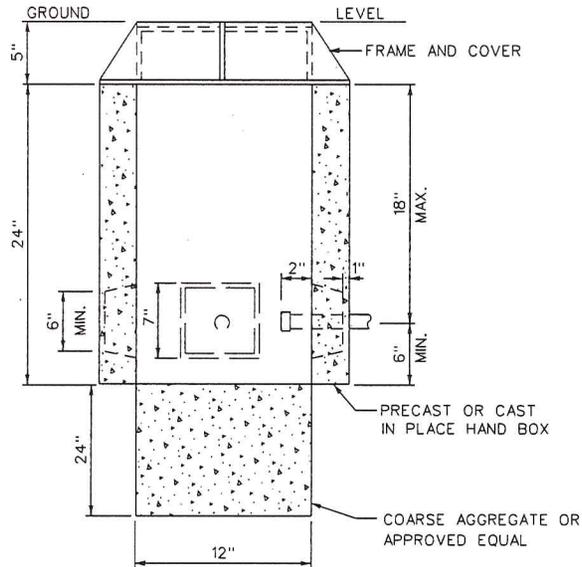
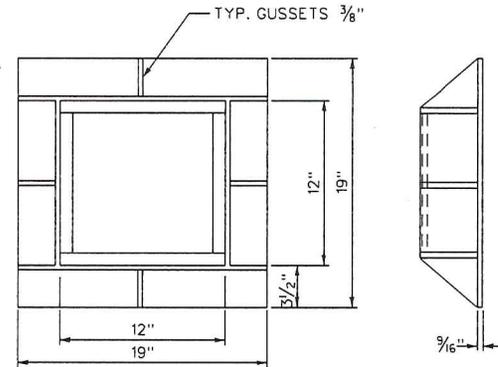
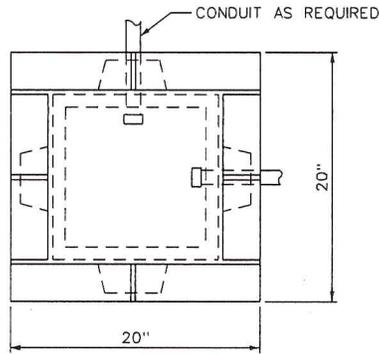
1. PULL BOX AND HANDBOX CONCRETE TO SATISFY D.C. SPECIFICATION 803.01 (3500 PSI).
2. SEE DWG. NO. 613.14 : GROUND ROD MAY BE REQUIRED IF MAST ARM POLE FOUNDATION IS CONNECTED TO THE PULL BOX.

ISSUED: 8/2015	RECOMMENDED: <i>Adil Riaz</i>
REVISION	APPROVAL
	PROJECT MANAGER
	APPROVED: <i>Muhammed Khelid</i>
	CHIEF ENGINEER

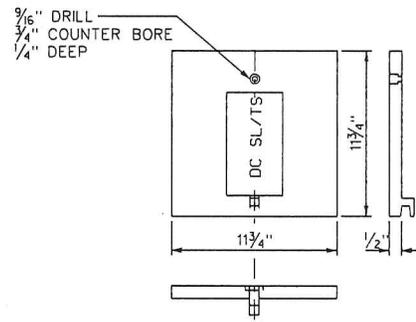
TRAFFIC SIGNAL DISTRICT
PULL BOX DETAILS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

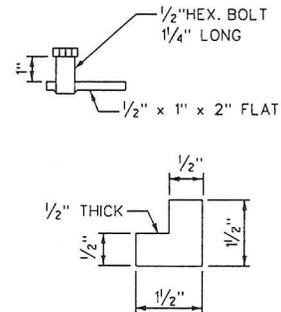
DWG. NO. 613.20



HAND BOX INSTALLATION



HAND BOX FRAME AND COVER



NOTE:
1. FOR PULL BOX AND HANDBOX CONCRETE,
SEE DWG. NO. 613.20.

ISSUED:	8/2015	RECOMMENDED:	<i>Adil Raza</i>
REVISION	APPROVAL		PROJECT MANAGER
		APPROVED:	<i>Muhammed Khalid</i>
			CHIEF ENGINEER

TRAFFIC SIGNAL DISTRICT
HAND BOX DETAILS

d. DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

DWG. NO. 613.21