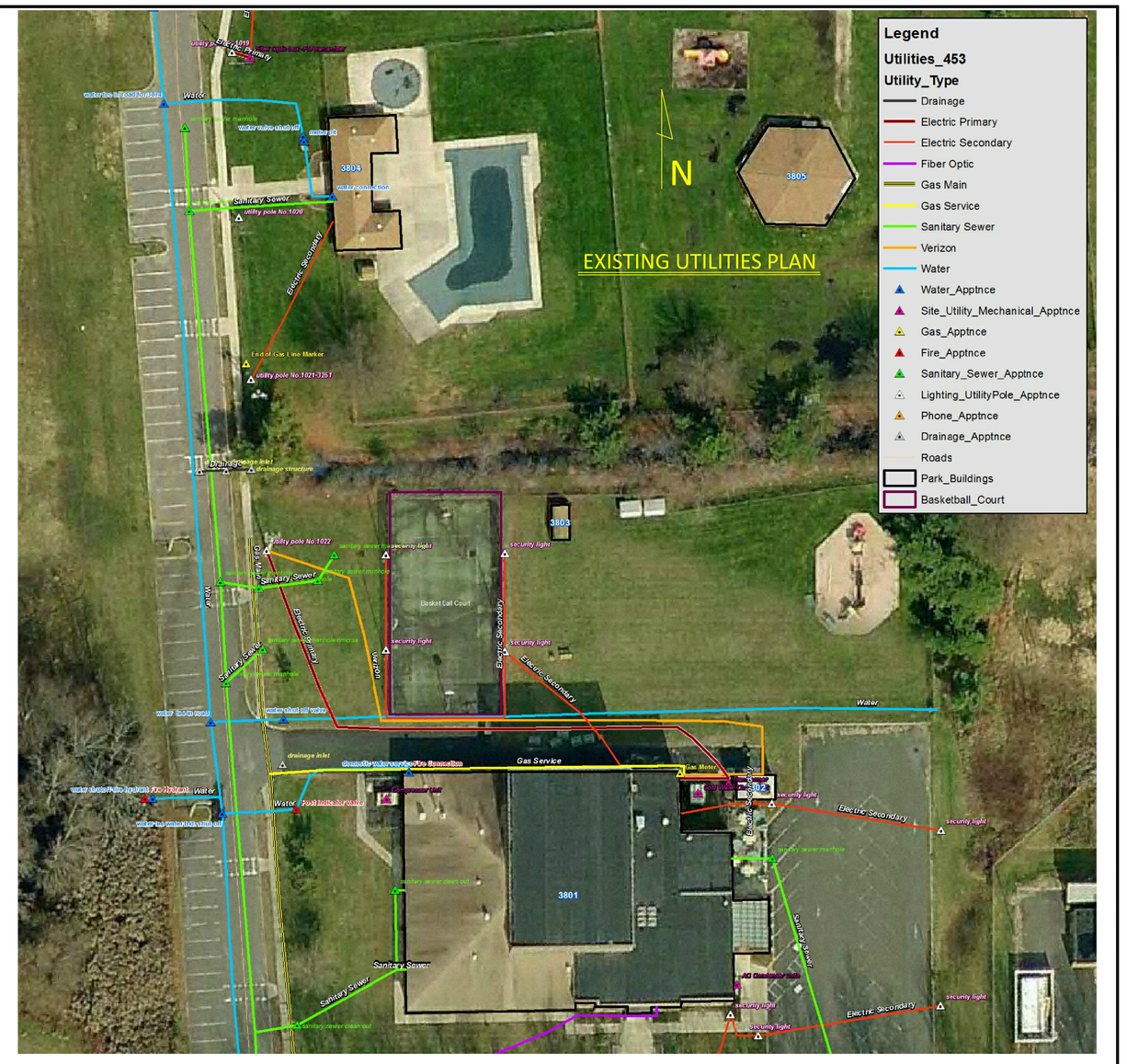

NOTES

1. Any underground utilities shown on the Drawings have been located primarily utilizing information from various sources and are to be considered approximate both in size and location. There are additional utilities to be encountered that are not shown on the drawings, and it shall be the Contractor's responsibility to locate all existing utilities and to protect same from damage or harm. All utilities or roadways interfered with or damaged shall be properly restored, at the expense of the Contractor and to the satisfaction of the Owner. **Contractor is required to call 1-800-272-1000 three days prior to start of construction to find locations of all utilities** and will supply the Park System Representative with the confirmation number of the "One - Call" system prior to the start of construction.

2. Mark the ends of conduits for ease of locating, install a minimum 1/8" polyethylene pulling rope in each conduit, and plug ends of all conduits
.

3. Unless noted, all conduit shall be PVC Schedule 40. All cable/wire shall be type THHN or THWN.

4. All conduit runs shall be separated by earth for a minimum horizontal distance of 12" from sewer, water and gas lines. Electric conduit should not be in the same trench with sewer, water or gas lines. There shall be a minimum vertical separation of 12" of earth where electric conduit cross sewer, water, gas and communication conduits.

5. Electric conduit runs will not be energized until the trench is completely backfilled. A minimum of two (2) weeks prior to the time trenching is needed to commence, the Contractor must coordinate scheduling with JCP&L .

6. All existing concrete and asphalt pavement shall be saw cut to the width of the installation trench. After installation and backfill, all paved areas will be restored to a condition at least equal to that which existed prior to the start of construction.

7. Excavation - The Contractor will excavate a trench with a minimum 12" width and required depths as specified. Services trenched in soft soil areas where bedding material is not required can be excavated to a minimum of 6" wide. At the meter base, where the conduit and 90º sweep elbow are installed, the service conduit trench shall be a minimum of 24" wide extending 8' from the meter base. Soil from the trench must be placed on the opposite side away from the road or driveway, to facilitate installation of conduit in the trench. The bottom of trench shall be clear of all stone and/or other debris prior to placing select bedding materials. *Depths specified are required to meet the national electric safety code rule 353.9 and table 353-1 and allow for maximum grading adjustment of 6".

8. Select Bedding/Sand - The Contractor will place a 4" minimum layer of select bedding in the bottom of all trenches to provide conduit protection and a base for electrical facility enclosures. Where a person is able to enter and work in an excavation, protection shall be provided from excavated or other material or equipment that could pose a hazard by falling or rolling into the excavation. The excavated or other material or equipment shall be placed at least 24" from the edge of the excavation or sufficient retaining devices may be used. A combination of both may be used if necessary.

9. Select Bedding/Sand Specification - Bedding material shall be fine manufactured granular stone sand, light gray or tan in color, and shall meet the following grading requirements:

   a. The portion of sand passing through the #40 sieve shall be non-plastic when tested in accordance with AASHOT t90.

   b. The percent of sand passing standard sieve sizes shall be as follows:

Sieve Size	#4	#8	#16	#30	#50	#100	#200
% Passing	100	98-100	95-100	80-100	70-95	60-60	20-40

   c. The sand must provide proper bedding for the conduit in the trench. Material that sets up is not acceptable. In addition flyash, culm foundry waste, etc. are not acceptable.

   d. For crossing under roadways, trenches are required to be backfilled with recycled concrete aggregate.

10. Backfilling - Immediately after conduits are installed, the conduits shall be covered with approved select bedding material to provide a minimum cover of 6" over top of the conduits. Conduits shall not remain uncovered overnight. The remaining backfill shall be select fill which is defined as soil free from rocks larger than 4" as well as all other debris and compacted in layers. For crossings under paved areas, the complete trench shall be backfilled with recycled concrete aggregate. The backfill shall be tamped in 6" layers to prevent settlement. The Contractor will provide warning tape 12" below finished grade and directly above the new conduit. The Contractor shall correct any settling or washing out of earth after the initial installation.

11. After backfill, all vegetated areas disturbed during construction shall be topsoiled and seeded to restore to pre-construction conditions.

REV	DATE	BY

MONMOUTH COUNTY PARK SYSTEM
BOARD OF PARK AND RECREATION COMMISSIONERS
805 NEWMAN SPRINGS ROAD
LINCROFT, NEW JERSEY 07738-1965
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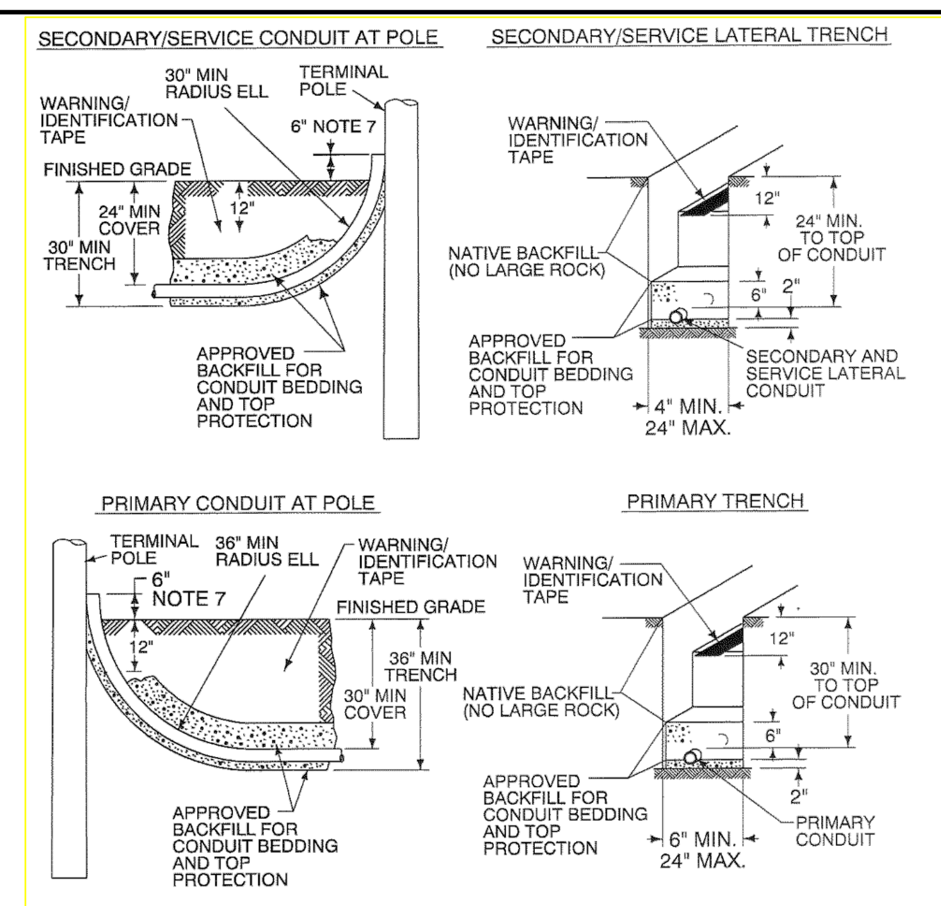
James Mowczan N.J. Professional Engineer License No. 32486

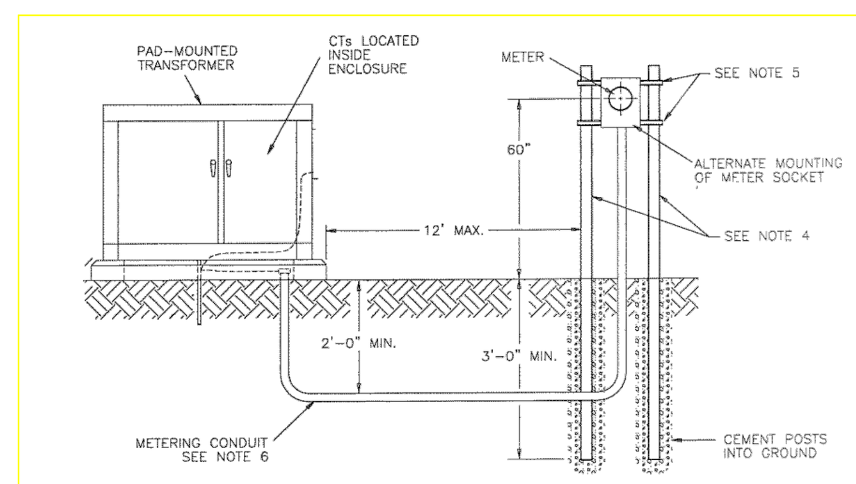
NEW ELECTRICAL SERVICE
Buildings Nos. 3801 & 3804
Fort Monmouth Recreation Area

DATE	SCALE	PROJECT #	DRAWN	CHECKED
04-11-14	1" = 40'		JM	JS

SHEET NO. 1 OF 2



TYPICAL TRENCHING DETAILS FOR PRIMARY & SECONDARY CONDUIT



ALL DIMENSIONS NOT DEFINED ARE VARIABLE TO ACCOMMODATE METERING APPARATUS.

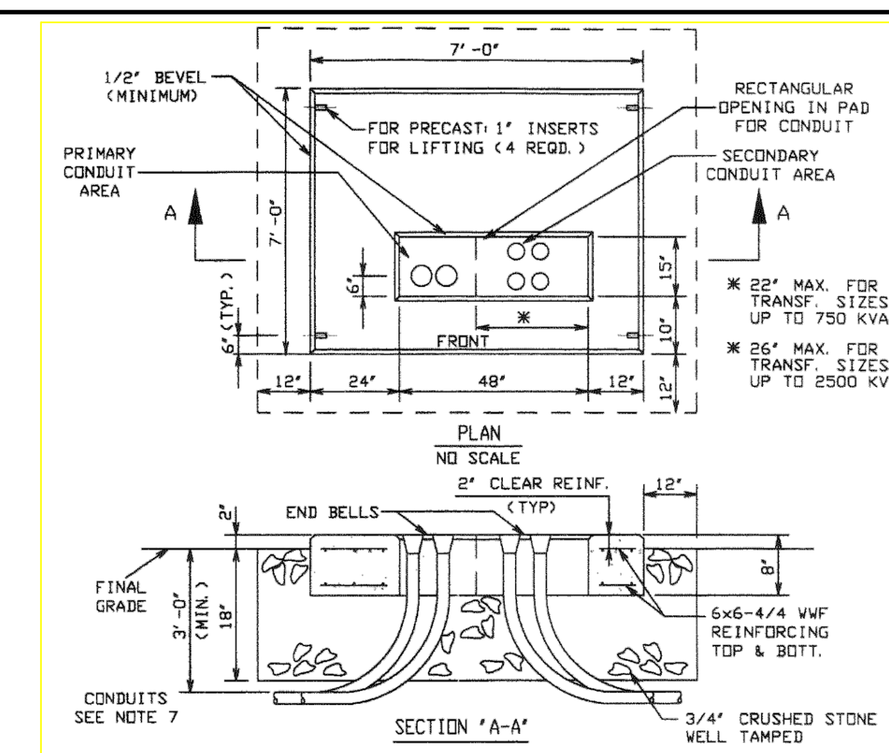
SUPPORT POST – USE ANY OF THE FOLLOWING:
2-3" MIN. STEEL PIPE CAPPED AND CEMENTED IN GROUND
2-4" MIN. PVC SCHEDULE 80 CEMENT FILLED AND CEMENTED IN GROUND
2-3" MIN. CHANNEL IRON CEMENTED IN GROUND

MOUNTING HARDWARE – TWO 12 GAUGE 1-5/8" X 1-5/8" CONTINUOUS SLOT HOT DIPPED GALVANIZED CHANNEL (e.g., UNISTRUT) COMPLETE WITH 1-1/4" X 5/16" DIA. 13 THD SPRING NUT (2 PER CHANNEL), 5/16" HEX NUT, AND LOCK WASHER SECURELY MOUNTED TO SUPPORT POSTS.

METERING CONDUIT – USE 1-1/2" MIN. GALVANIZED RIGID METALLIC CONDUIT WITH ALL THREADED JOINTS AND INSULATED BONDING BUSHINGS ON BOTH ENDS. CONDUIT SHALL BE GROUNDED AT THE TRANSFORMER.

WHEN MOUNTED ON TRANSFORMER CABINET, METER SOCKET SHALL BE LOCATED 6" FROM TOP OF CABINET AND 6" FROM THE FRONT EDGE.

PAD MOUNTED TRANSFORMER METERING



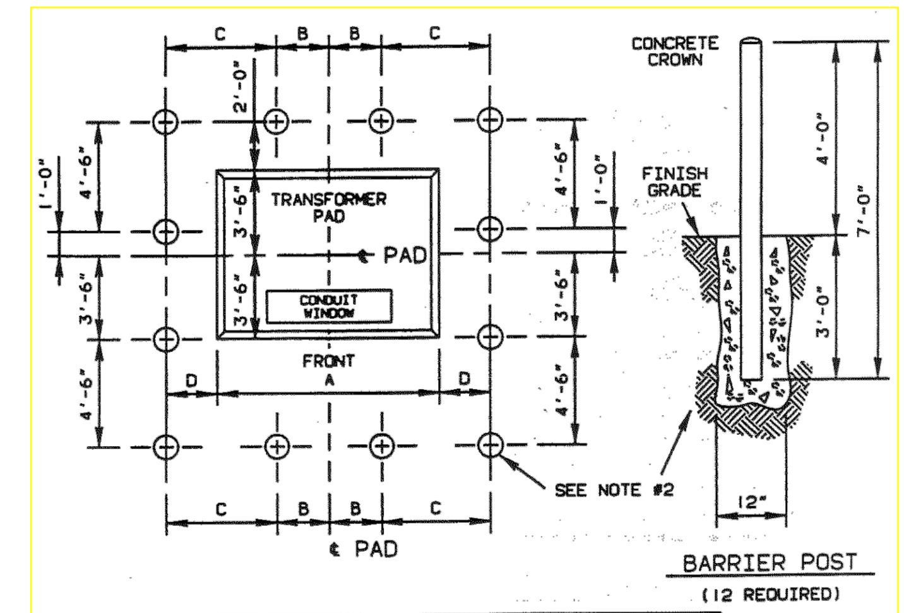
1. THE CONCRETE USED SHALL MEET A 5000 PSI STRENGTH REQUIREMENT AFTER 28 DAYS. THE TOP OF THE CONCRETE SURFACE SHALL BE FLAT AND OUTSIDE EDGES SHALL BE CHAMFERED AT A 45 DEG. ANGLE WITH A MINIMUM ½" BEVEL/ALL BURRS AND SHARP POINT PROJECTIONS ARE TO BE REMOVED PRIOR TO SHIPMENT.

2. THE TRANSFORMER PAD SHALL BE INSTALLED ON A 12" BED OF ¾" CRUSHED STONE OVER UNDISTURBED AND/OR A BED OF WELL TAMPED EARTH. THE CRUSHED STONE SHALL EXTEND 12' BEYOND THE PAD ON ALL SIDES.

3. THE TOP OF THE PAD SHALL BE LEVEL AND EXTEND 2" ABOVE FINAL GRADE

4. ALL PRIMARY AND SECONDARY CONDUIT BENDS SHALL BE INSTALLED AND TERMINATED FLUSH WITH THE TOP OF THE CONCRETE AND INCLUDE END BELLS. THE CENTER LINE OF THE PRIMARY CONDUITS SHALL BE 6" FROM THE FRONT OF THE CONDUIT OPENING.

CONCRETE FOUNDATION FOR PAD MOUNTED TRANSFORMER



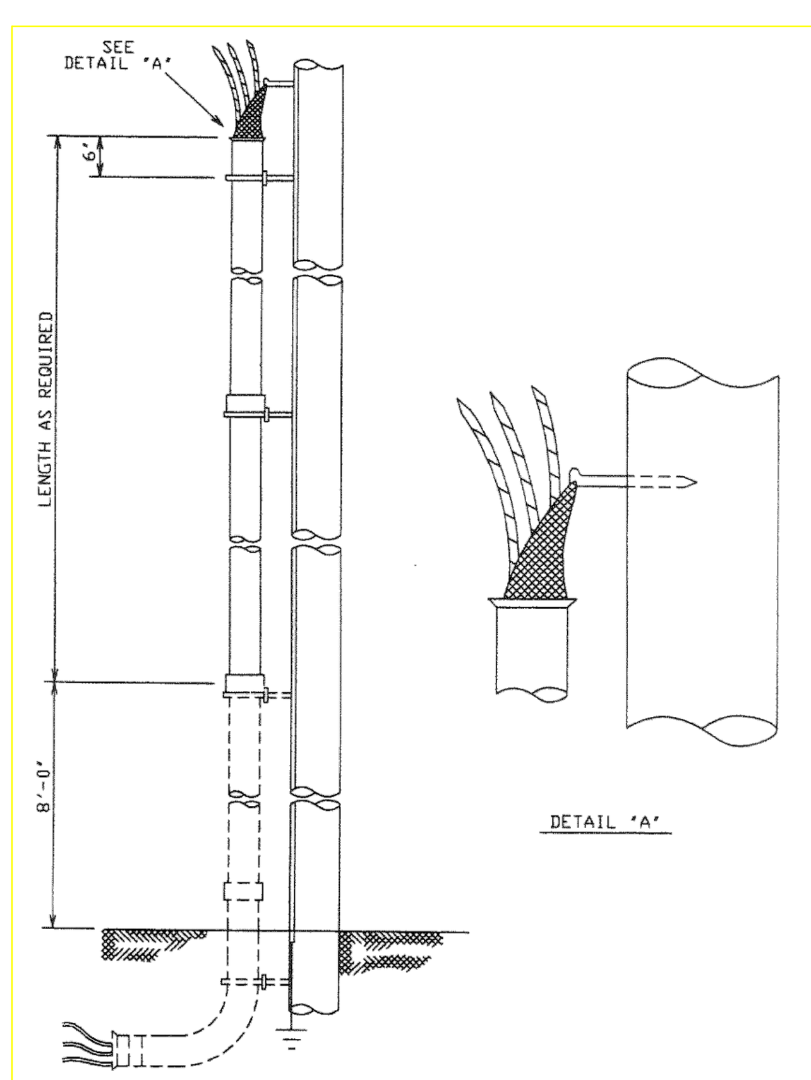
TRANSFORMER KVA	DIMENSIONS			
	A	B	C	D
75-750	SEE	2'-0"	4'-0"	2'-0"

NOTES:

1. WHERE TRANSFORMER INSTALLATION IS EXPOSED TO VEHICULAR TRAFFIC AND/OR SNOW PLOWING EQUIPMENT, BARRIER POSTS SHALL BE INSTALLED.

2. THE BARRIER POSTS SHALL BE 7'-0" IN LENGTH, 4" MINIMUM DIAMETER GALVANIZED STEEL (OR PAINTED STEEL) PIPE FILLED WITH CONCRETE, SET AT A DEPTH OF 3'-0" BELOW FINAL GRADE AND ENCASED IN A 12" DIA. CONCRETE BASE.

VEHICULAR BARRIERS FOR PAD MOUNTED TRANSFORMER



1. THE CONDUIT BEND SHOULD HAVE A 48" RADIUS MINIMUM.

2. THE U-BOLTS ON THE RISER STANDOFF BRACKETS SUPPORTING THE PVC CONDUIT ARE NOT TO BE TIGHTENED SNUGLY, BUT ARE TO ALLOW FOR MOVEMENT OF THE PVC CONDUIT DURING EXPANSION AND CONTRACTION. USE LOCKNUTS ON THE U-BOLTS.

3. THE FIRST RISER STANDOFF BRACKET SHALL BE INSTALLED 1' BELOW GRADE. THE SECOND SHALL BE INSTALLED LOCATED DIRECTLY BENEATH THE COUPLING AT THE TOP OF THE FIRST RISER SECTION.

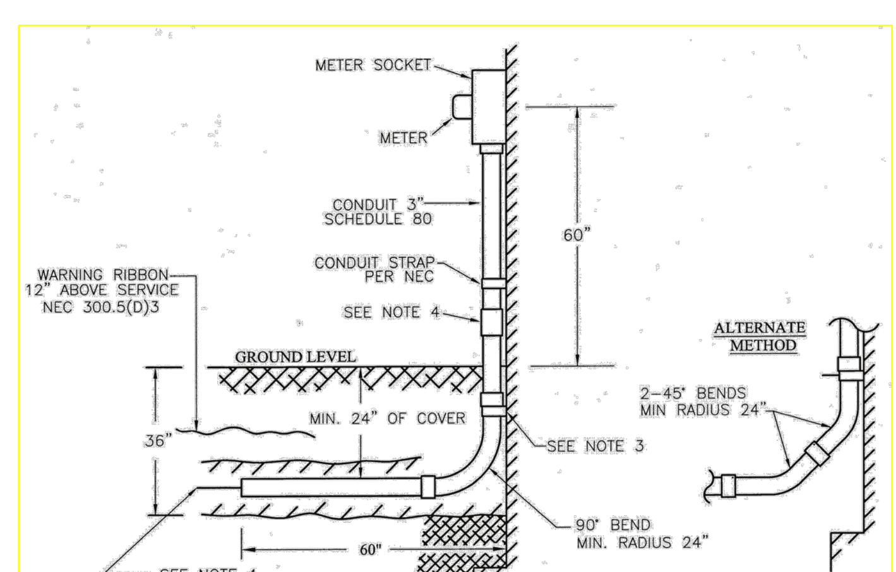
4. THE RISER SHALL BE LOCATED ON THE POLE QUARTER AWAY FROM APPROACHING TRAFFIC.

5. THE TOP MOST RISER STANDOFF BRACKET SHALL BE 6" FROM THE END OF THE CONDUIT.

6. THE RISER BRACKETS WILL PROVIDE A 3 ½" MINIMUM CLEARANCE BETWEEN THE POLE AND THE CONDUIT.

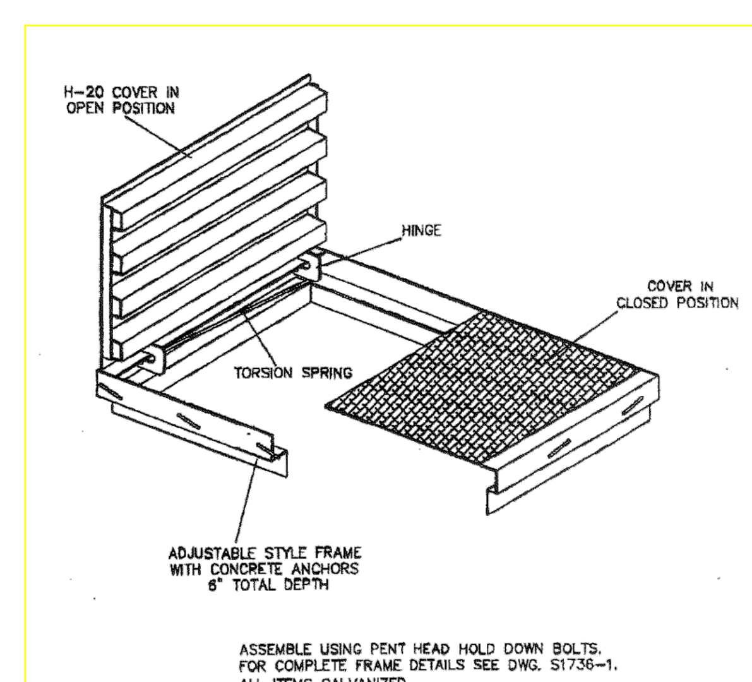
7. THE FIRST 8' SECTION OF RISER CONDUIT AND THE CONDUIT BEND SHALL BE GALVANIZED RIGID STEEL CONDUIT.

PRIMARY RISER POLE DETAIL

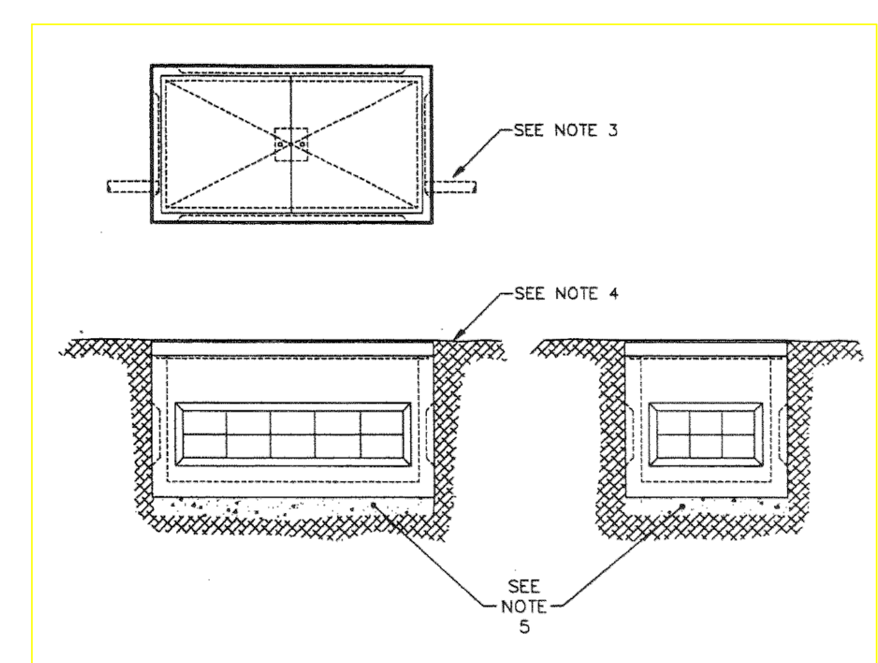


NOTES:
1. METER SOCKET MAY BE CONNECTED TO AN EXTERNAL GROUND ROD IF REQUIRED BY LOCAL INSPECTION AUTHORITY.
2. CUSTOMER TO SUPPLY AND INSTALL SERVICE LATERAL METER RISER CONDUIT AS SHOWN ABOVE. (BOND ALL JOINTS)
3. CONDUIT STRAP-LOCATE HEAVY GUAGE 2 HOLE GALVANIZED STRAP JUST BELOW BEND COUPLING. ANCHOR SECURELY INTO MASONRY USING 3/8" MIN. DIAMETER FASTENERS.
4. CUSTOMER SHALL PROVIDE GROUND MOVEMENT PROTECTION PER NEC 300.5(J) TO PREVENT DAMAGE DUE TO SETTLEMENT OR FROST HEAVES. THE COMPANY RECOMMENDS THE USE OF A SLIP JOINT CONDUIT PRODUCT SUCH AS RIZZCON SAFETY SLIP. SUFFICIENT CABLE SLACK OR A SLACK BOX SHALL BE PROVIDED TO ALLOW FOR CABLE MOVEMENT.

SECONDARY SERVICE METERING



HINGED PULLBOX COVER



SIZE	APPROVED SUPPLIER	PHONE NUMBER	APPROVED CATALOG NUMBER
4' x 6'	ROTONDO PRECAST	(215) 257-8081	GPU-006

1. THE PRECAST PULLBOX SHALL BE SUPPLIED WITH CONDUIT KNOCKOUT PANELS ON EACH OF THE FOUR SIDES

2. T HE PRECAST CONCRETE PULLBOXES ARE TO BE DESIGNED TO WITHSTAND VEHICULAR TRAFFIC IN AREAS SUCH AS PARKING LOTS , DRIVEWAYS AND ALLEYS.

3. ALL CONDUITS SHALL ENTER THE PULLBOX AT THE CORNERS TO ALLOW FOR CABLE LOOPS.

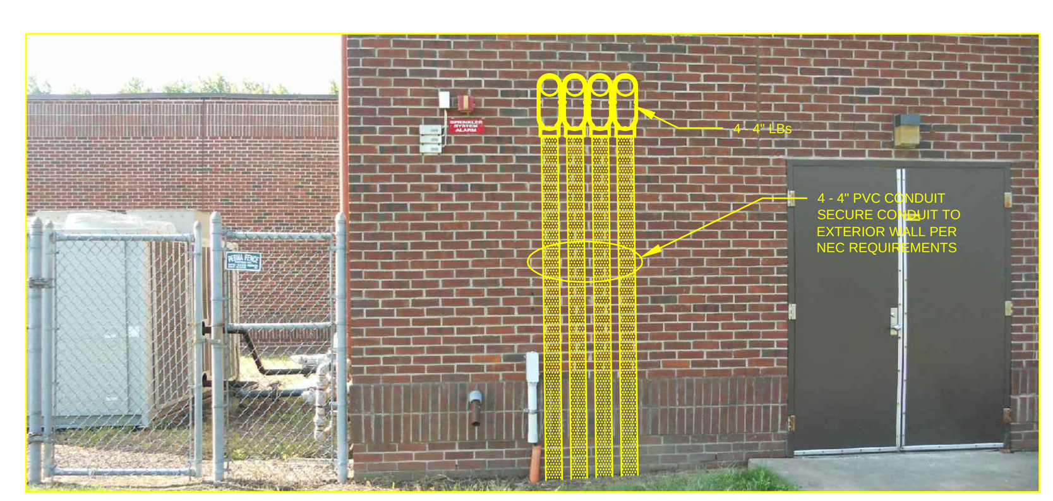
4. THE COVER OF THE PUL;L BOX SHALL BE SET FLUSH WITH FINISHED GRADE.

5. THE PULLBOX SHALL BE INSTALLED ON A 4" MINIMUM BED OF CRUSHED STONE.

6. CONDUITS REQUIRED BELL ENDS AND SHALL BE TERMINATED WITH THE INSIDE SURFACE OF THE PRECAST PULLBOX.

CONCRETE PULLBOX W/HINGED COVER

CONNECTION TO EXISTING DISTRIBUTION PANEL
INTERIOR



CONNECTION TO EXISTING DISTRIBUTION PANEL
EXTERIOR

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Building Nos. 3801 & 3804
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DATE 09-23-14 | SCALE N.T.S. | PROJECT # | DRAWN JM | CHECKED JS

SHEET NO. 2 OF 2