

**GENERAL CONSTRUCTION NOTES:**

**PRE-CONSTRUCTION**

1. Contractor shall notify Public Works Director (940-648-3290) 7 days minimum before beginning work on this project.
2. Contractor shall attend a pre-construction meeting before beginning work on this project.
3. Developer shall list the type of Street Light pole or poles to be installed for the proposed project site.

**FOUNDATIONS**

1. Dimensions shown on plans for locations of street light foundations, conduit and other items may be varied to meet local conditions; subject to approval of Town Engineer.
2. Contractor shall contact the Town for inspections prior to pouring street light foundations and excavating for conduit runs.
3. No street light poles shall be placed on foundations prior to seven days following placement of concrete.
4. Contractor shall clean up and remove all loose material resulting from construction operations.
5. Street light pole foundations shall be Class C (3000 P.S.I.) concrete.
6. All foundations shall be 24 inches in diameter unless shown otherwise.
7. Foundation piers shall be drilled plum, the top of foundation poured level, the top 3 inches of the exposed pier (height) above finished grade shall have the sonotube removed.
8. Top of foundation shall be 3 inches above the finished grade unless shown different on plans.
9. Anchor bolts shall extend above the top of the foundation concrete as shown on Anchor Bolt Detail.
10. Anchor bolts, ground rod, all reinforcing and conduit shall be in place before pouring concrete in pier foundations.
11. Pier foundations shall have one continuous concrete pour.
12. Street light foundations shall have a chamfered edge (beveled) at the top; see foundation details on sheet L2.

**FOUNDATION PLACEMENT**

1. Foundations in medians shall be placed in the center of the median.
2. Foundations shall not be drilled within 3 feet of a water line or Fire Hydrant.
3. In residential areas foundations shall be placed in the street right of way (R.O.W.) in line with the property line between lots and at the break of the radius point of the street curb at street intersections.
4. Foundations shall not be placed in sidewalks (or location of future sidewalks) or sidewalk ramps.

**CONCRETE POURS**

Contractor shall notify the Public Works Director (940-648-3290) or his designated inspector in advance (between 8:00 AM & 5:00 PM) of all concrete pours. Inspector must be present when concrete is placed on the project site.

**EXISTING UTILITIES**

1. Approximate location of known underground utilities has been shown on the plan sheets for the project. The Engineer assumes no responsibility for the accuracy of the utility locations shown on the plans.
2. It is Contractor's responsibility to make arrangements with the owners of underground facilities prior to working in the area to confirm their exact location and to determine whether any additional facilities other than those shown on the plans may be present. The Contractor shall preserve and protect all underground facilities.
3. Contractor shall be responsible for the following at no additional cost to the Town:
  - 3.1 Preventing any property damage to property owner's poles, fences, shrubs, mailboxes, etc. Any damaged property will be restored as directed by Director of Public Works.
  - 3.2 Landscaping and Sprinkler System - the contractor shall adjust and repair any existing landscaping and the sprinkler systems as directed by the Director of Public Works to allow for the placement of all street light equipment. This shall be done in a manner equal to or better than the areas adjacent to the damaged areas.
  - 3.3 Providing access to all driveways during construction.
  - 3.4 Protecting all underground and overhead utilities and repair any damages.
4. No additional payment will be made for relocation of any foundations or conduit due to location of existing utilities.
5. Texas State Law, Article 1436C, makes unlawful the operation of equipment or machines within 10 feet of any overhead electrical line unless danger against contact with high voltage overhead lines has been effectively guarded against pursuant to the provisions of the article. When construction operations require working near an overhead electrical line, the Contractor shall contact the owner/operator of the overhead electrical line to make adequate arrangements and to take necessary safety precautions to ensure that all laws, electrical line owner/operator requirements and standard industry safety practices are met.
6. If any Town of Northlake water or sewer utility is in the vicinity of a proposed pole foundation (within 3.0 feet), then the Contractor will hand dig to uncover the line and verify that the proposed pole foundation location is satisfactory. The Contractor shall be liable for all damages done, and restoration to utilities as a result of his/her operations.

**DRAINAGE**

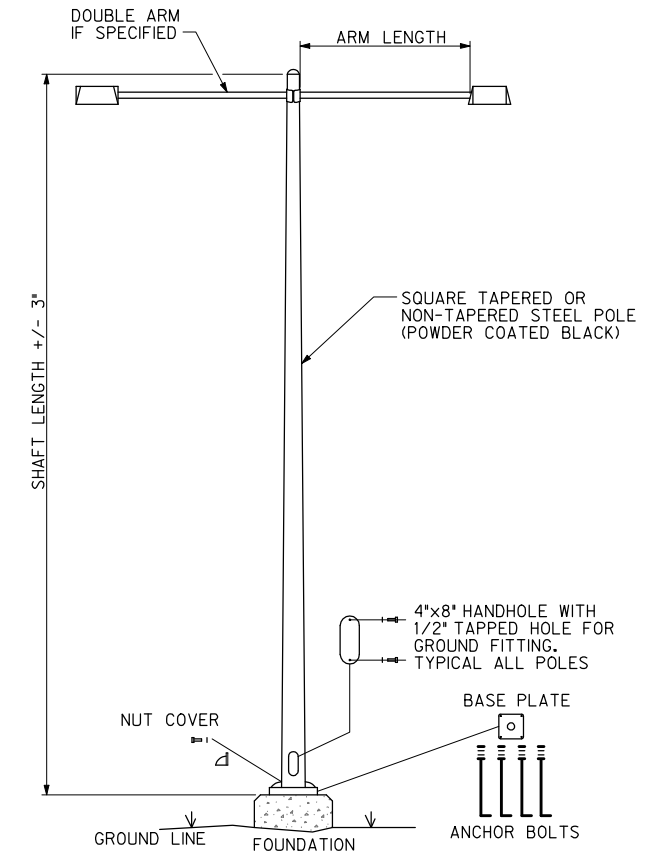
Any obstruction to existing drainage due to Contractor's operations shall be corrected by the contractor as required by the Public Works Director at the Contractor's expense.

**PERMITS**

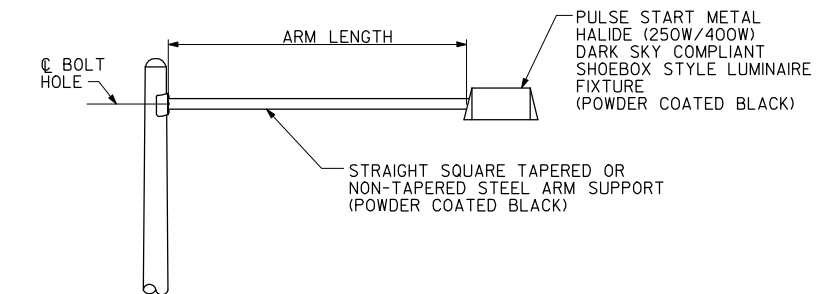
Contractor shall obtain and pay for all permits as required to work in Town right-of-way.

**ELECTRICAL**

1. All conduit under ground shall be 2 inch schedule 40 PVC and placed 24 inches to 36 inches deep.
2. Conduit above ground shall be 2 inch rigid galvanized metal.
3. Conduit shall be installed in a trench free of rocks that would damage the conduit and first 2 inches of backfill shall be free of rocks.
4. All conduit shall start or end in a ground box, foundation or at a transformer pad along with a 1/4 inch poly line (pull string) with a break strength of 500 pounds or more.
5. Each change of direction in the conduit run requires a ground box (pull box).
6. The unit of measure for conduit placement is the straight line distance between ground boxes, foundations or transformer pads.
7. Conduit shall be placed inside on easement or street right-of-way as shown on the plans. When placed in easements, the location of conduit shall be 30 inches off lot lines to avoid being damaged by fence post placement.
8. All electrical conduit, wiring, electrical connections, etc. shall be installed according to the National Electric Code.



**SINGLE PIECE STEEL POLE SHAFT**




**LUMINAIRE SUPPORT ARM**

STREET CLASSIFICATION	POLE TYPE	POLE MOUNTING HGT. FT	MINIMUM SHAFT SIZE AT BASE	ARM LENGTH (SINGLE OR DOUBLE)	GAUGE (MIN.)	DRILLED SHAFT FOUNDATION TYPE
LOCAL	A	25	7.5"	6'	#11	TYPE I
M2U OR COLLECTOR	B	30	8.0"	6'	#11	TYPE II
M4D & M4U	C	35	8.5"	8'	#11	TYPE III
P6D	D	40	9.5"	8'	#11	TYPE III

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**STREET LUMINAIRE**

**POLE DETAILS & GENERAL NOTES**



**THE TOWN OF NORTHLAKE**  
**TEXAS**

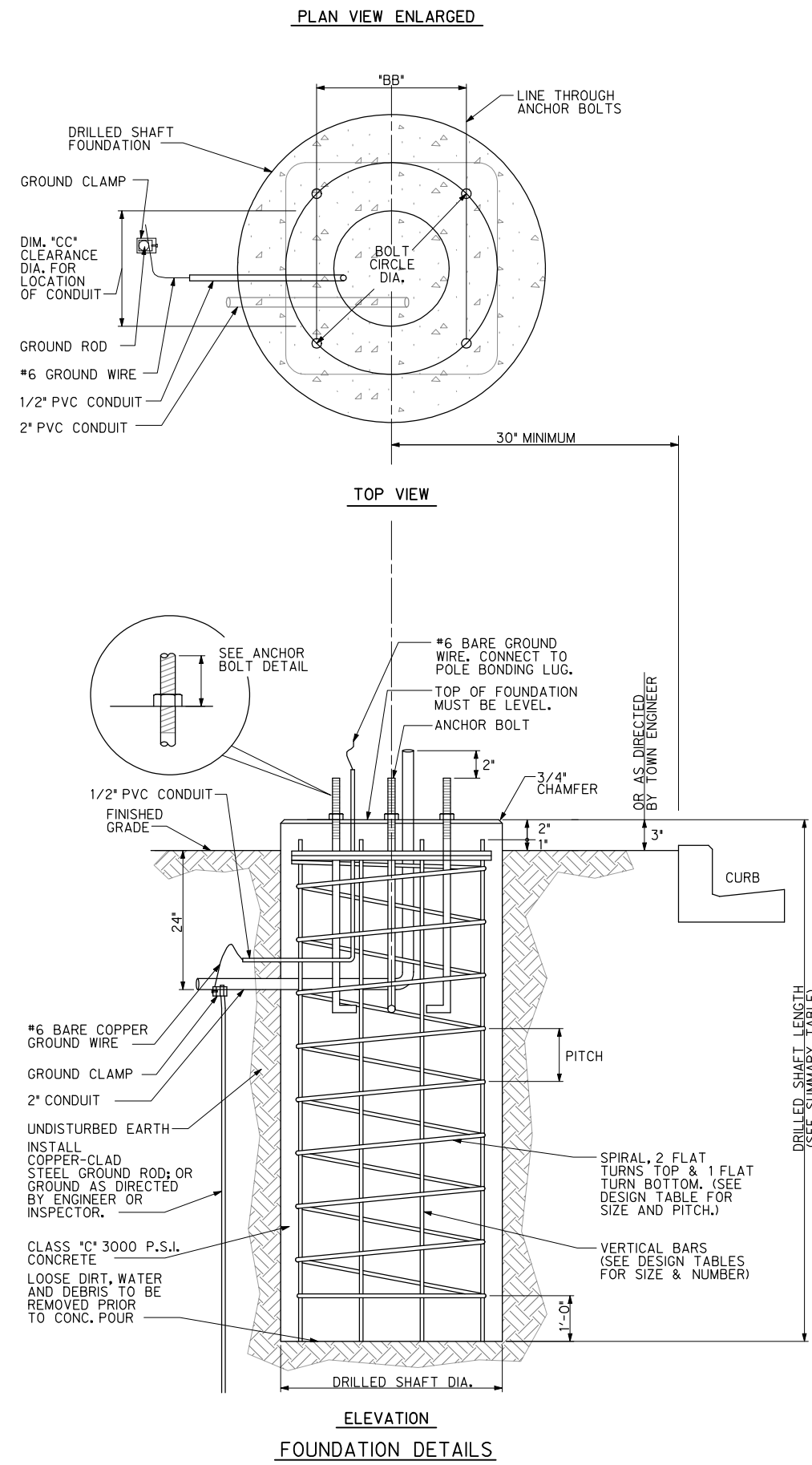
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CITY	HALFF	CITY	APRIL 2010	N.T.S.		

**CERTIFICATION:**

THIS TOWN OF NORTHLAKE STANDARD DETAIL SHEET IS AUTHORIZED FOR USE IN THIS PROJECT BY THE ENGINEER WHOSE SEAL APPEARS ON THIS SHEET. THIS ENGINEER IS ALSO CERTIFYING THAT THE CONTENT OF THE DETAILS AND NOTES ON THIS SHEET HAVE NOT BEEN ALTERED FROM THAT RECEIVED FROM THE TOWN OF NORTHLAKE.

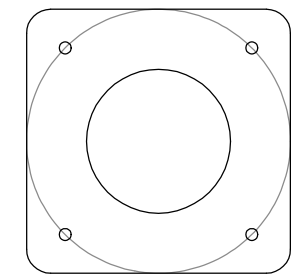
**NOTES:**

- IF ROCK IS ENCOUNTERED, THE DRILL SHAFT SHALL EXTEND A MINIMUM OF TWO DIAMETERS INTO SOLID ROCK AND HAVE A MINIMUM OF 6 FEET SHAFT DEPTH FOR FND. TYPE III.
- ANCHOR BOLTS SHALL BE GALVANIZED THE FULL LENGTH.
- SUPPLY 2 NUTS, 2 WASHERS & 1 LOCK WASHER WITH EACH ANCHOR BOLT.

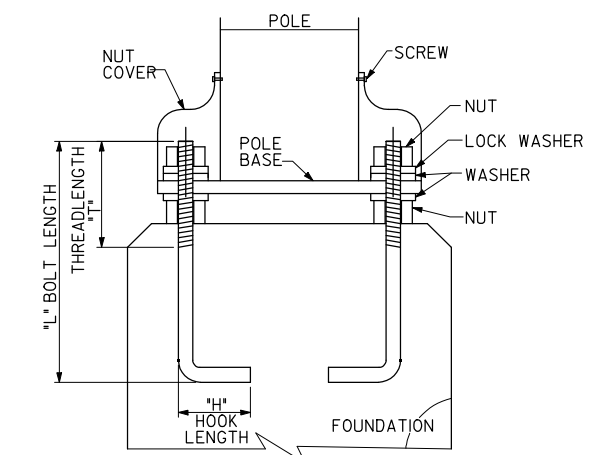


FND. TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		DRILLED SHAFT LENGTH (FEET)	GROUND ROD SIZE	ANCHOR BOLT DESIGN					DIM. 'CC' DIA. FOR LOCATION OF CONDUIT	FOR POLE TYPE (ALSO DOUBLE ARM)
		VERT BARS	SPIRAL & PITCH			ANCHOR BOLT DIA	ANCHOR BOLT TOTAL LENGTH	BOLT CIR DIA	ANCHOR TYPE NO.	DISTANCE ACROSS BOLTS DIM. 'BB'		
I	24"	4-#5	18" x #3 @ 6"	6	5/8" x 8'	1"	40"	10 1/2"	47	7 7/16"	6 1/2"	A
II	24"	4-#5	18" x #3 @ 6"	8	5/8" x 8'	1"	40"	11"	47	7 3/4"	7"	B
III	30"	6-#5	24" x #3 @ 6"	10	5/8" x 8'	1 1/4"	54"	13"	51	9 3/16"	8 1/2"	C & D

BASE PLATE TO BE SLOTTED AND SIZED TO ACCEPT REQUIRED ANCHOR BOLTS.



**POLE BASE PLATE**



TYPE NO.	BOLT DIA. (IN.)	LENGTH 'L' (IN.)	HOOK 'H' (IN.)	THREAD 'T' (IN.)	HEIGHT ABOVE FOUNDATION
47	1	36	4	6	4 1/2"
51	1 1/4"	48	6	9	5 1/4"

**ANCHOR BOLT DETAIL**

NOTE: ANCHOR BOLTS SHALL BE GALVANIZED THE FULL LENGTH.

**ANCHOR BOLT INSTALLATION PROCEDURE:**

ANCHOR BOLT THREADS SHALL BE TAPED PRIOR TO POURING CONCRETE. THREADS OF ANCHOR BOLTS SHALL BE COATED WITH PIPE JOINT COMPOUND PRIOR TO INSTALLATION OF UPPER NUTS WHEN ERECTING POLE. AFTER POLE IS PLUMBED AND IN PERMANENT ALIGNMENT, THE EXPOSED THREADS OF PAINTED BOLTS SHALL BE CLEANED AND AN ADDITIONAL COATING OF ZINC-RICH PAINT APPLIED TO SEAL THE BOLT THREAD-NUT JOINT.

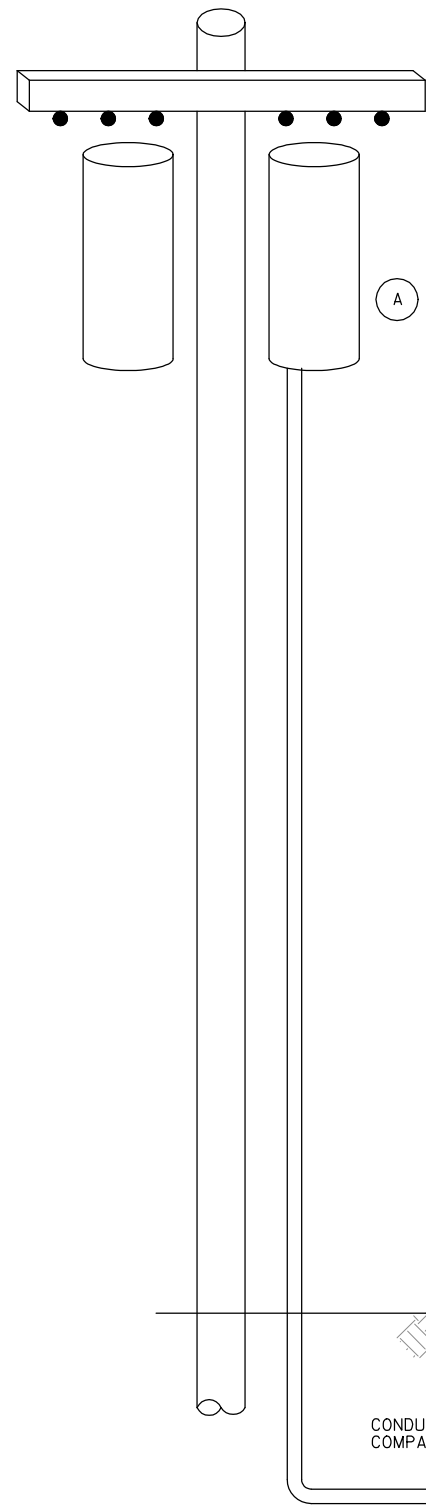
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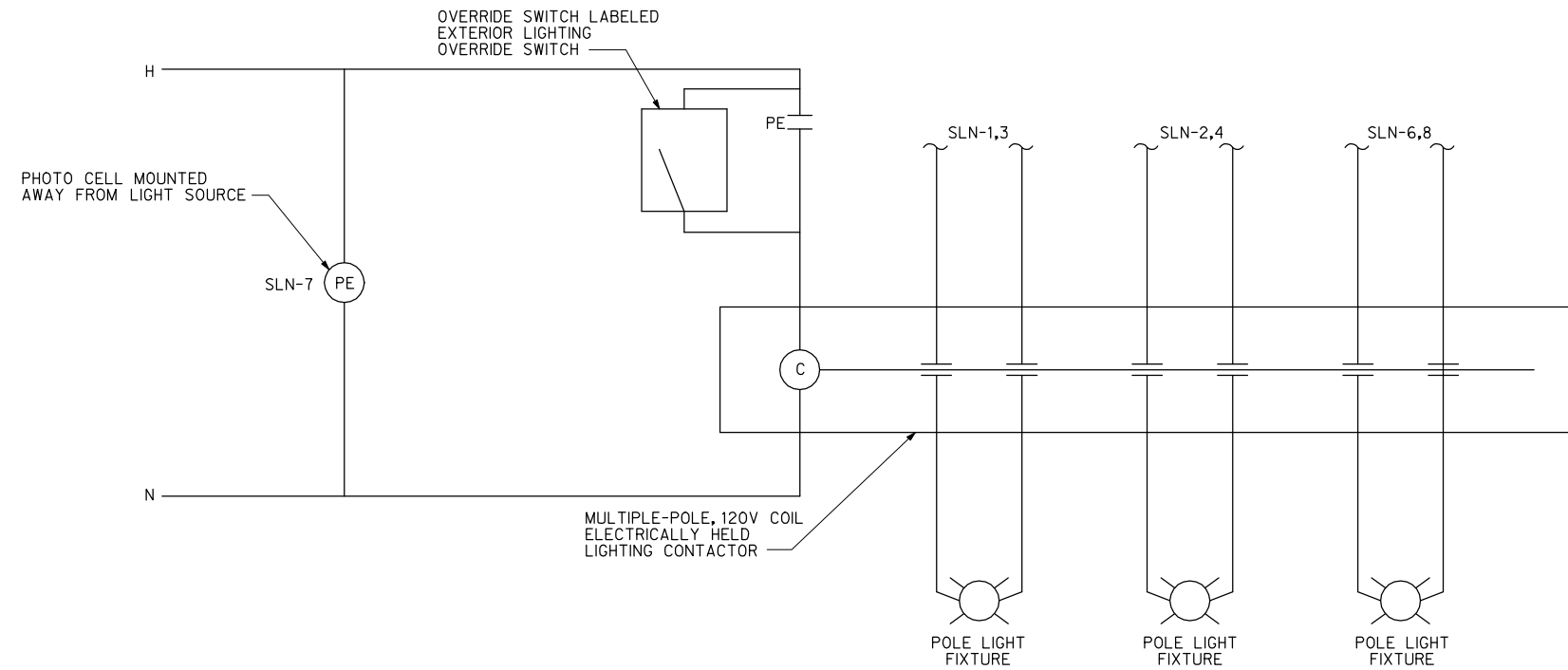
**STREET LUMINAIRE  
POLE FOUNDATION DETAILS**

**THE TOWN OF NORTHLAKE  
TEXAS**

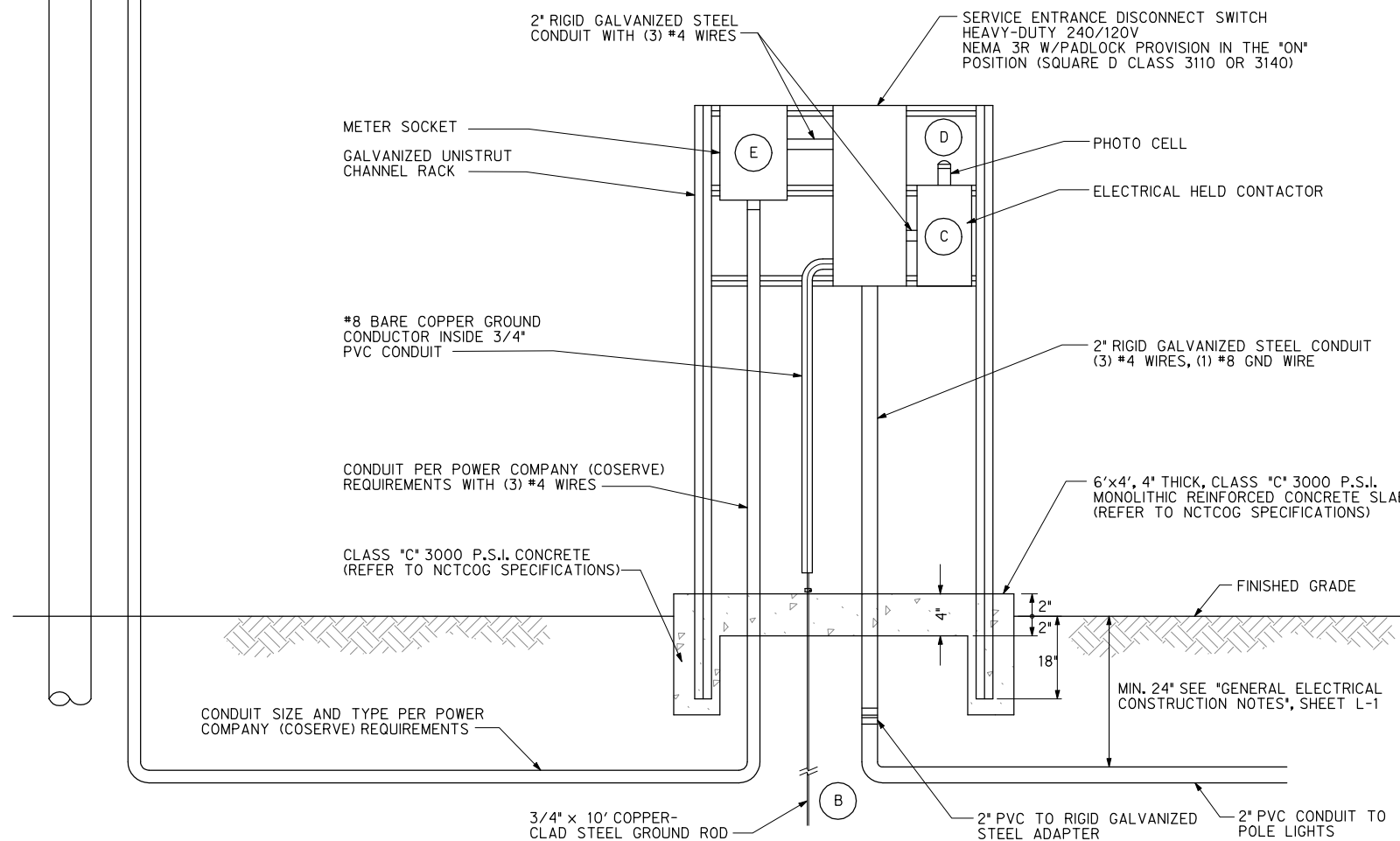
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NOTE:  
CONTRACTOR SHALL COORDINATE POWER  
DROP WITH LOCAL ELECTRIC COMPANY (COSERVE)



OUTDOOR LIGHTING CONTROL SCHEMATIC




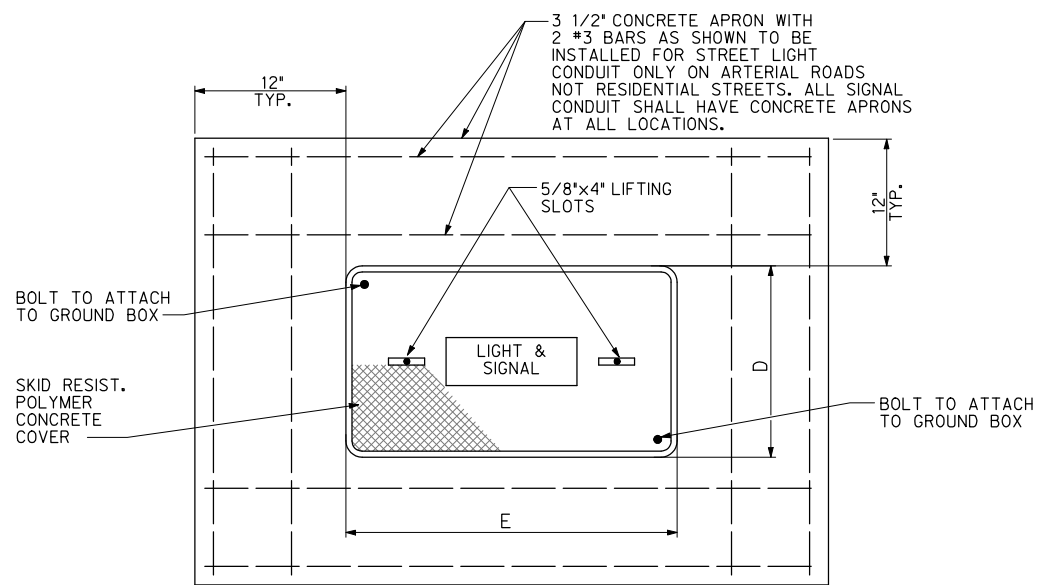
SERVICE RACK DETAIL

- (A) POWER COMPANY (COSERVE) POLE MOUNTED TRANSFORMER PER POWER COMPANY (COSERVE) REQUIREMENTS.
- (B) PROVIDE #8 THHN BARE COPPER WIRE INSIDE 3/4" PVC CONDUIT GROUNDED FROM SERVICE PANEL TO GROUND ROD WITH CADWELL CONNECTION INSERTED THRU THE CONCRETE SLAB.
- (C) 20 AMP ELECTRICAL HELD CONTACTOR WITH 2-WIRE 120 VOLT CONTROL VOLTAGE. PROVIDE MULTIPLE-POLE CONTACTOR CONTROLLING EXTERIOR LIGHTING CIRCUITS.
- (D) PHOTO CELL MOUNTED AWAY FROM LIGHT SOURCE.
- (E) METER SOCKET (VERIFY WITH COSERVE).

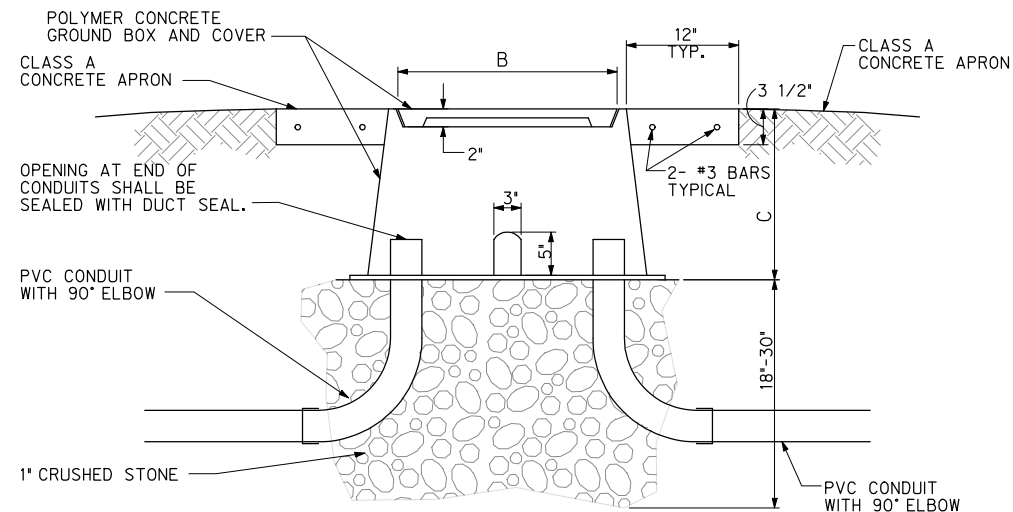
L-3

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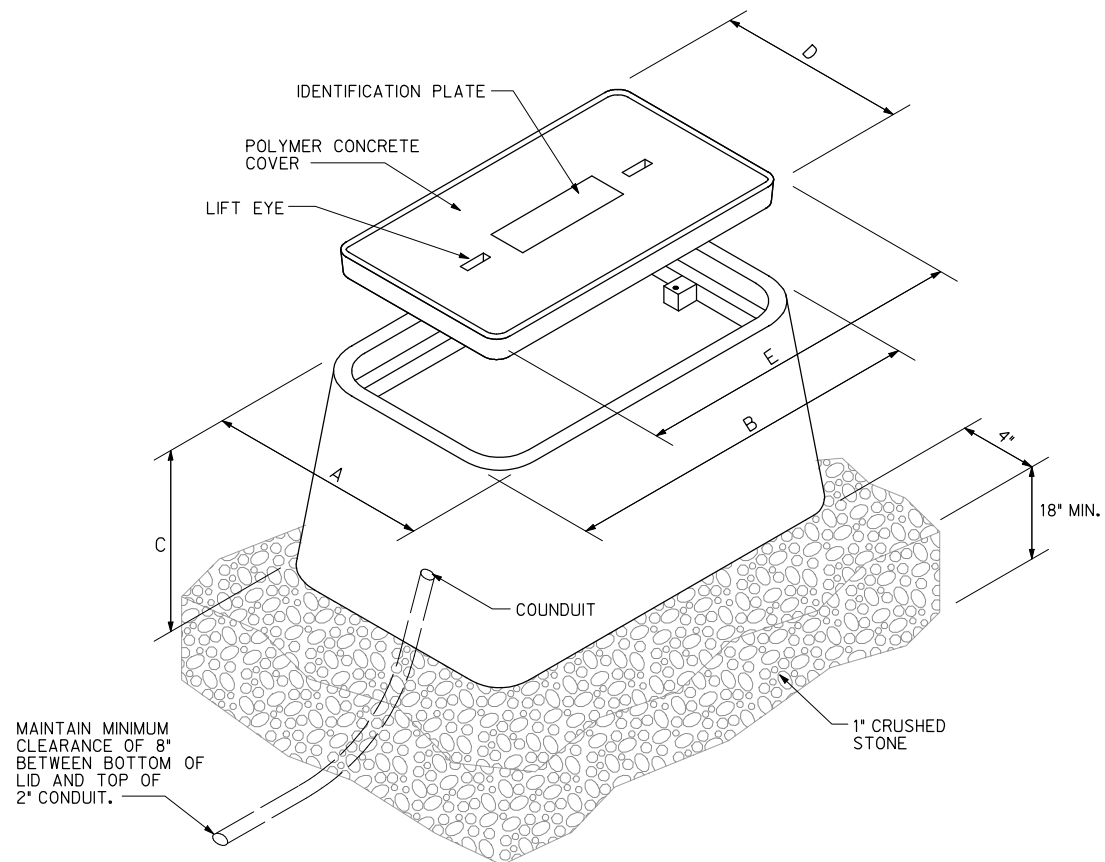
STREET LUMINAIRE						
ELECTRICAL CONNECTION DETAILS						
 <b>THE TOWN OF NORTHLAKE TEXAS</b>						
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COVER



DIMENSIONS OF BOX AND ACCOMPANYING FIELD INSTALLATION

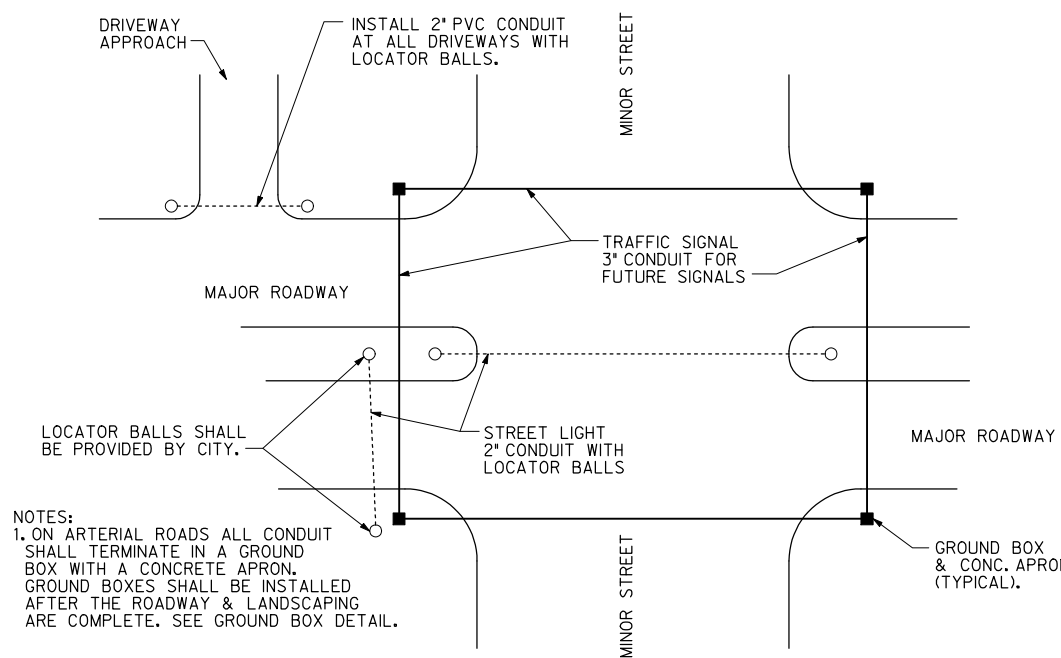


GROUND BOX DETAIL (PULL BOX)

**GROUND BOX NOTES**

GROUND BOXES AND COVERS SHALL BE MANUFACTURED FROM REINFORCED POLYMER CONCRETE (RPM) COMPOSED OF BOROSILICATE GLASS FIBER, A CATALYZED POLYESTER RESIN AND AN AGGREGATE. SIDE WALLS MAY BE FIBER REINFORCED POLYMER. BOTTOM EDGE OF BOX OR EXTENSION SHALL BE FOOTED WITH A MINIMUM 1 1/4" FLANGE. COVER LIFT EYE -----MOLDED WITH COVER COVER LETTERING-----1" INCISED LETTERS "LIGHT & SIGNAL" GROUND BOX AND COVER MUST BE ABLE TO WITHSTAND A MINIMUM 12,000 LB PER WHEEL LOAD. LOAD REQUIREMENTS SHALL BE TESTED BY AN INDEPENDENT LABORATORY AND A CERTIFICATION OF SUCH TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE GROUND BOXES FOR THE PROJECT SHALL MEET THE REQUIREMENTS SHOWN ABOVE. THE CONTRACTOR SHALL BE PERMITTED TO FURNISH LIKE MATERIALS OF ANY MANUFACTURER PROVIDED THEY ARE OF EQUAL QUALITY AND COMPLY WITH THE SPECIFICATIONS.

PULLBOX	NOMINAL BOX DIMENSIONS			NOMINAL COVER DIMENSIONS	
	A	B	C	D	E
SMALL	16 1/4"	23 1/4"	12"	11 3/8"	18 1/8"
LARGE	20 3/4"	32 1/2"	12"	19 1/2"	31 1/2"



NOTES:  
1. ON ARTERIAL ROADS ALL CONDUIT SHALL TERMINATE IN A GROUND BOX WITH A CONCRETE APRON. GROUND BOXES SHALL BE INSTALLED AFTER THE ROADWAY & LANDSCAPING ARE COMPLETE. SEE GROUND BOX DETAIL.

**LEGEND**

■	GROUND BOX WITH CONCRETE APRON
○	LOCATOR BALL
-----	STREET LIGHT 2" SCHEDULE 40 PVC CONDUIT
—————	TRAFFIC SIGNAL 3" SCHEDULE 40 PVC CONDUIT

TYPICAL CONDUIT PLACEMENT AT NEW ROAD CONSTRUCTION

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**STREET LUMINAIRE CONDUIT & GROUND BOX DETAILS**



THE TOWN OF NORTHLAKE TEXAS

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