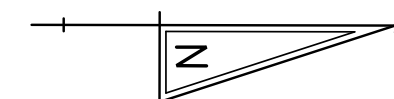


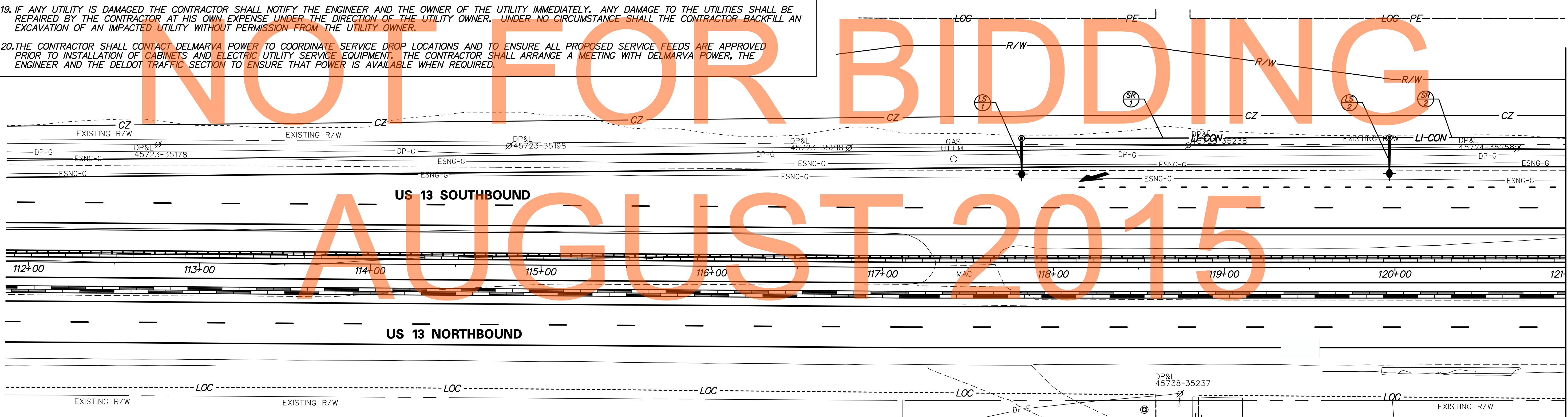
PROJECT LIGHTING NOTES:

1. CONDUIT RUNS ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL LOCATE THE SERVICE RUNS IN A MANNER THAT AVOIDS CONFLICTS WITH ALL EXISTING AND PROPOSED FEATURES AS FIELD CONDITIONS DICTATE AND AS APPROVED BY THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO WORK.
3. THE LIGHTING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL THE CONTRACTORS INVOLVED ON THIS PROJECT. THE LIGHTING CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE GENERAL SUPERINTENDENT ON THE LOCATIONS OF ALL CONDUIT, JUNCTION WELLS AND POLE BASES TO ELIMINATE CONSTRUCTION CONFLICTS.
4. EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT LOCATIONS OF EXISTING AND PROPOSED UTILITIES PRIOR TO COMMENCING WORK.
5. ALL JUNCTION WELL LIDS AND FRAMES SHALL BE BONDED TO THE GROUND WIRE PRESENT IN EACH JUNCTION WELL.
6. COLOR CODING SHALL BE PROVIDED THROUGHOUT THE ENTIRE NETWORK FOR SERVICE, FEEDER, BRANCH AND CONTROL CONDUCTORS. EACH PHASE SHALL BE AN INDEPENDENT COLOR. CONDUCTORS SHALL HAVE FACTORY IMPREGNATED COLOR THROUGHOUT THEIR ENTIRE LENGTH.
7. ALL FUSED CONNECTIONS SHALL BE MADE IN THE POLE BASE. SPLICES IN JUNCTION BOXES OR PULL BOXES SHALL NOT BE FUSED.
8. ALL CONDUITS SHALL BE BONDED IN A CONTINUOUS RUN FROM THE SOURCE BY A BARE COPPER GROUNDING CONDUCTOR WITH SIZE AS NOTED ON PLANS. 10 FEET OF ADDITIONAL SLACK FOR EACH GROUND WIRE IN EACH JUNCTION WELL SHALL BE PROVIDED AND NEATLY COILED.
9. ALL STATION, OFFSET AND DIMENSION INFORMATION SHOWN FOR PROPOSED LIGHTING STANDARDS IS TO THE CENTER OF THE PROPOSED POLE BASE.
10. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF LIGHTING CONDUITS WITH ITMS CONDUITS. ITMS AND LIGHTING CONDUITS MAY SHARE A COMMON TRENCH BUT SHALL NOT SHARE COMMON JUNCTION WELLS.
11. ALL PROPOSED ROADWAY LIGHTING CONDUITS (SERVICE RUNS) SHALL BE RIGID POLYVINYL CHLORIDE SCHEDULE 80 WHEN INSTALLED BY TRENCHING AND SDR-13.5 HDPE WHEN INSTALLED BY BORING, UNLESS OTHERWISE NOTED ON PLANS.
12. SPLICES FOR ALL ROADWAY LIGHTING ELECTRICAL CABLES SHALL BE COMPLETED USING APPROVED SPLICE KITS OR METHODS APPROVED BY THE ENGINEER AND SHALL BE INCIDENTAL TO THE SUPPLY AND INSTALLATION OF THE VARIOUS ROADWAY LIGHTING ELECTRICAL CABLES.
13. ALL PROPOSED LIGHTING STANDARDS SHALL BE INSTALLED WITH BREAKAWAY TRANSFORMER BASES WHETHER PROTECTED BY TRAFFIC BARRIER OR UNPROTECTED.
14. ALL LIGHTING STANDARDS SHALL BE INSTALLED ON 2.5' DIAMETER BY 11.5' TALL POLE BASES. SEE DWG. NO. LI-08 FOR LIGHTING STANDARD POLE BASE DETAILS.
15. (1) 3/4" DIAMETER BY 10' LONG GROUND ROD SHALL BE INSTALLED AT EACH LIGHTING STANDARD POLE BASE. (1) 3/4" DIAMETER BY 10' LONG GROUND ROD SHALL BE INSTALLED IN THE JUNCTION WELL CLOSEST TO THE LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE AND THE BARE COPPER GROUNDING CONDUCTORS FOR EACH RUN OF CIRCUITS SHALL BE CONNECTED TO THE GROUND ROD. (1) 3/4" DIAMETER BY 10' LONG GROUND ROD SHALL BE INSTALLED AT THE LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE WHICH SHALL BE BONDED TO THE GROUND ROD IN THE JUNCTION WELL CLOSEST TO THE LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE. (1) 3/4" DIAMETER BY 10' LONG GROUND ROD SHALL BE INSTALLED AT THE ELECTRIC SERVICE PEDESTAL. GROUND RODS SHALL BE SEPARATED BY A MINIMUM OF 6 FEET.
16. THE EXISTING ELECTRICAL CABLES IN ALL CONDUITS DESIGNATED TO BE ABANDONED SHALL BE REMOVED.
17. ALL EXISTING LIGHTING POLE BASES DESIGNATED TO BE REMOVED OR RELOCATED SHALL BE REMOVED A MINIMUM OF 12" BELOW GRADE AND BACKFILLED.
18. THE CONTRACTOR SHALL VERIFY THE OPERATING CIRCUIT AND PHASE OF ALL EXISTING ROADWAY LIGHTING EQUIPMENT WHERE THE ELECTRICAL SERVICE IS BEING INTERRUPTED. THE EXISTING ROADWAY LIGHTING EQUIPMENT SHALL BE RECONNECTED TO THE SAME CIRCUIT AND PHASE AS IS EXISTING UNLESS OTHERWISE NOTED ON PLANS.
19. IF ANY UTILITY IS DAMAGED THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE TO THE UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE UNDER THE DIRECTION OF THE UTILITY OWNER. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR BACKFILL AN EXCAVATION OF AN IMPACTED UTILITY WITHOUT PERMISSION FROM THE UTILITY OWNER.
20. THE CONTRACTOR SHALL CONTACT DELMARVA POWER TO COORDINATE SERVICE DROP LOCATIONS AND TO ENSURE ALL PROPOSED SERVICE FEEDS ARE APPROVED PRIOR TO INSTALLATION OF CABINETS AND ELECTRIC UTILITY SERVICE EQUIPMENT. THE CONTRACTOR SHALL ARRANGE A MEETING WITH DELMARVA POWER, THE ENGINEER AND THE DELDOT TRAFFIC SECTION TO ENSURE THAT POWER IS AVAILABLE WHEN REQUIRED.



LIGHTING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	PROPOSED LIGHTING STANDARD AND POLE BASE
	EXISTING LIGHTING STANDARD AND POLE BASE
	EXISTING OFFSET LIGHT POLE AND POLE BASE (SINGLE AND DUAL MOUNT)
	EXISTING HIGH MAST TOWER AND POLE BASE
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (EXISTING AND PROPOSED)
	PROPOSED LIGHTING JUNCTION WELL
	EXISTING LIGHTING JUNCTION WELL
	PROPOSED ELECTRICAL SERVICE ON PEDESTAL
	PROPOSED LIGHTING SERVICE RUN
	EXISTING LIGHTING SERVICE RUN
	LIGHTING STANDARD IDENTIFIER (EXISTING AND PROPOSED)
	SERVICE RUN IDENTIFIER (EXISTING AND PROPOSED)
	LIGHTING JUNCTION WELL IDENTIFIER (TYPE) (EXISTING AND PROPOSED)
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE IDENTIFIER (EXISTING AND PROPOSED)
	REMOVE BY CONTRACTOR / REMOVE BY OTHERS
	ABANDON BY CONTRACTOR



SERVICE RUN	# OF CONDUITS	SIZE	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION
1	1	3.0"	216	(2)*2, (1)*2 GROUND	TRENCH
2	1	3.0"	216*	(3)*2, (1)*2 GROUND	TRENCH

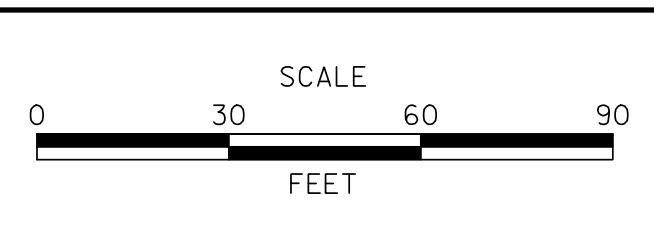
* DISTANCE CONTINUES ON ADJACENT PLAN SHEET.
NOTE: SERVICE RUN DISTANCE REFLECTS CONDUIT LENGTH ONLY.

NO.	CIRCUIT NO.	STATION	OFFSET	HEIGHT	ARM	LIGHT STANDARD
LS-1	4	117+81.3	75.7' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-2	2	119+96.8	76.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD

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ADDENDUMS / REVISIONS



US 13 & PORT PENN RD INTERSECTION

CONTRACT	T201011302	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	J.D.C.
		CHECKED BY:	J.M.M.

LIGHTING PLAN	
SHEET NO.	147
TOTAL SHTS.	179

MATCH LINE STA. 121+00 - SEE DWG. LI-02

LIGHTING SYMBOL LEGEND

- | SYMBOL | DESCRIPTION |
|--------|--|
| | PROPOSED LIGHTING STANDARD AND POLE BASE |
| | EXISTING LIGHTING STANDARD AND POLE BASE |
| | EXISTING OFFSET LIGHT POLE AND POLE BASE (SINGLE AND DUAL MOUNT) |
| | EXISTING HIGH MAST TOWER AND POLE BASE |
| | LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (EXISTING AND PROPOSED) |
| | PROPOSED LIGHTING JUNCTION WELL |
| | EXISTING LIGHTING JUNCTION WELL |
| | PROPOSED ELECTRICAL SERVICE ON PEDESTAL |
| | PROPOSED LIGHTING SERVICE RUN |
| | EXISTING LIGHTING SERVICE RUN |
| | LIGHTING STANDARD IDENTIFIER (EXISTING AND PROPOSED) |
| | SERVICE RUN IDENTIFIER (EXISTING AND PROPOSED) |
| | LIGHTING JUNCTION WELL IDENTIFIER (TYPE) (EXISTING AND PROPOSED) |
| | LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE IDENTIFIER (EXISTING AND PROPOSED) |
| | REMOVE BY CONTRACTOR / REMOVE BY OTHERS |
| | ABANDON BY CONTRACTOR |

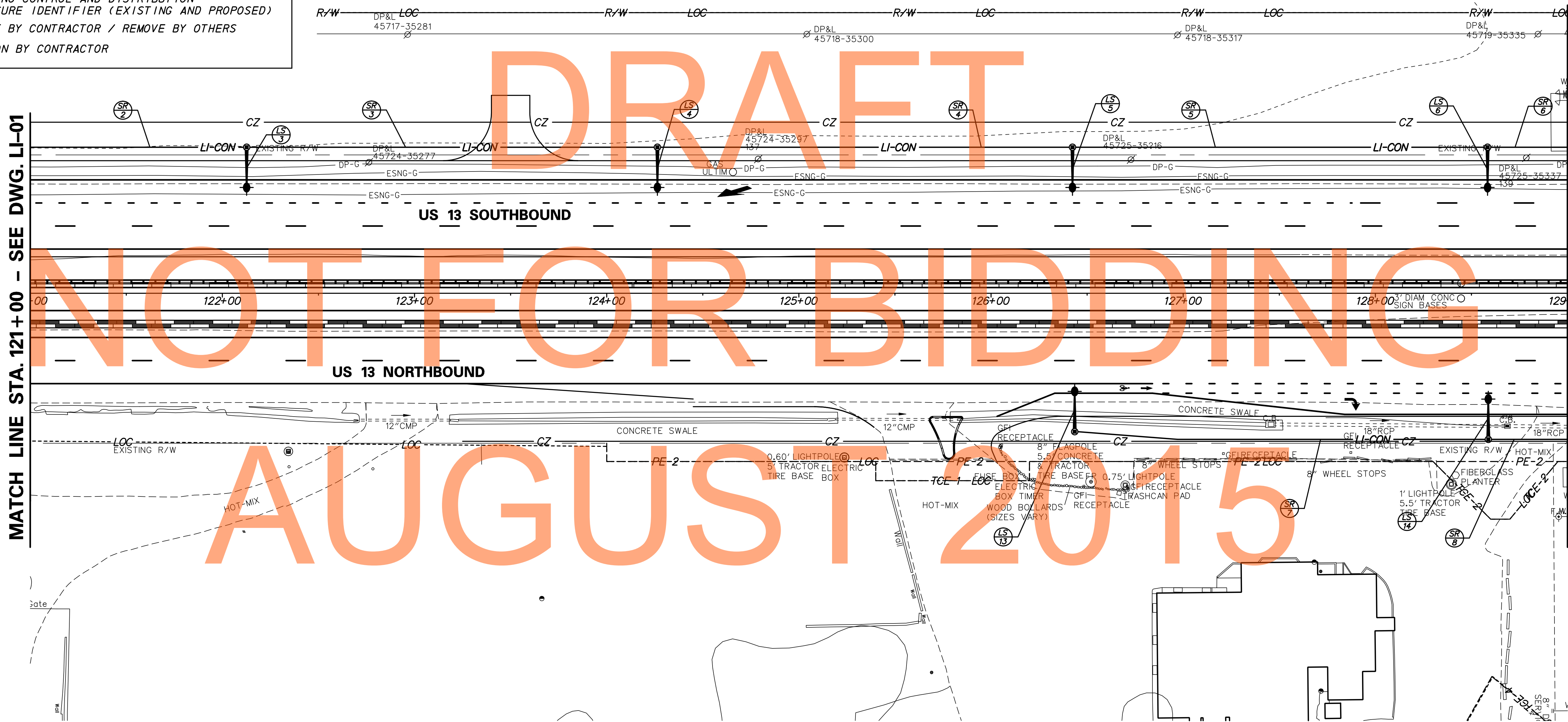
LIGHTING STANDARD SCHEDULE

NO.	CIRCUIT NO.	STATION	OFFSET	HEIGHT	ARM	LIGHT STANDARD
LS-3	4	122+12.6	76.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-4	2	124+26.4	76.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-5	4	126.42.4	76.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-6	2	128+58.4	76.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-13	3	126+43.5	72.0' RT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-14	1	128+58.8	76.0' RT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD

LIGHTING SERVICE SCHEDULE

SERVICE RUN	# OF CONDUITS	SIZE	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION
2	1	3.0"	216*	(3)#2, (1)#2 GROUND	TRENCH
3	1	3.0"	214	(3)#2, (1)#2 GROUND	TRENCH
4	1	3.0"	217	(3)#2, (1)#2 GROUND	TRENCH
5	1	3.0"	217	(3)#2, (1)#2 GROUND	TRENCH
6	1	3.0"	216*	(3)#2, (1)#2 GROUND	TRENCH
7	1	3.0"	216	(2)#6, (1)#6 GROUND	TRENCH
8	1	3.0"	216*	(3)#6, (1)#6 GROUND	TRENCH/BORE

* DISTANCE CONTINUES ON ADJACENT PLAN SHEET.
NOTE: SERVICE RUN DISTANCE REFLECTS CONDUIT LENGTH ONLY.



MATCH LINE STA. 121+00 - SEE DWG. LI-01

MATCH LINE STA. 129+00 - SEE DWG. LI-03

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ADDENDUMS / REVISIONS



US 13 & PORT PENN RD INTERSECTION

CONTRACT	BRIDGE NO.
T201011302	
COUNTY	DESIGNED BY: J.D.C.
NEW CASTLE	CHECKED BY: J.M.M.

LIGHTING PLAN

LI-02
SHEET NO.
148
TOTAL SHTS.
179

LIGHTING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	PROPOSED LIGHTING STANDARD AND POLE BASE
	EXISTING LIGHTING STANDARD AND POLE BASE
	EXISTING OFFSET LIGHT POLE AND POLE BASE (SINGLE AND DUAL MOUNT)
	EXISTING HIGH MAST TOWER AND POLE BASE
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (EXISTING AND PROPOSED)
	PROPOSED LIGHTING JUNCTION WELL
	EXISTING LIGHTING JUNCTION WELL
	PROPOSED ELECTRICAL SERVICE ON PEDESTAL
	PROPOSED LIGHTING SERVICE RUN
	EXISTING LIGHTING SERVICE RUN
	LIGHTING STANDARD IDENTIFIER (EXISTING AND PROPOSED)
	SERVICE RUN IDENTIFIER (EXISTING AND PROPOSED)
	LIGHTING JUNCTION WELL IDENTIFIER (TYPE) (EXISTING AND PROPOSED)
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE IDENTIFIER (EXISTING AND PROPOSED)
	REMOVE BY CONTRACTOR / REMOVE BY OTHERS
	ABANDON BY CONTRACTOR

LIGHTING STANDARD SCHEDULE

NO.	CIRCUIT NO.	STATION	OFFSET	HEIGHT	ARM	LIGHT STANDARD
LS-7	4	130+73.9	76.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-8	3	132+30.2	85.3' LT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-9	1	134+41.0	87.0' LT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-12	2	301+84.1	11.0' LT.	35'	8'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-15	3	130+77.3	73.0' RT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-16	1	132+43.2	67.0' RT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-17	3	4001+45.2	39.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD

PANELBOARD SE

LOAD SERVED	CIRCUIT BREAKER			CIRCUIT BREAKER	CIRCUIT BREAKER			LOAD SERVED	
	FRAME	TRIP	POLE		FRAME	TRIP	POLE		
6-250W HPS	100	20	1	1	2	100	20	1	4-250W HPS
6-250W HPS	100	20	1	3	4	100	20	1	4-250W HPS
SPARE	100	20	1	5	6	100	20	1	SPARE
SPARE	100	20	1	7	8	100	20	1	SPARE

NOTES:

- INSTALL CABINET BASE AS PER STD. NO. T-4 WITH (5) 3" CONDUIT SWEEPS. UNUSED CONDUIT SWEEPS SHALL BE CAPPED. INSTALL LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (SEE DETAILS ON DWG. NO. LI-07).
- INSTALL ELECTRICAL SERVICE ON PEDESTAL (100 AMP, 120/240 V, SINGLE-PHASE, 3 WIRE). SEE DETAIL ON DWG. NO. LI-07.
- UTILITY POLE LOCATION MAY BE ADJUSTED PENDING RELOCATION DESIGN BY DELMARVA POWER.
- SEE DWG. NO. LI-08 FOR LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE WIRING DIAGRAM.

- SPlice the proposed (4) *4 and (4) *2 electrical cables in service run no. 39 to the existing (4) *4 and (4) *2 electrical cables in the existing junction well. The electrical cables shall be spliced so that the existing roadway lighting to the south operates off the same circuit and phase as is existing. Repair existing junction well.
- LOCate and intercept the existing roadway lighting and dousing pump conduits with a proposed type 4 junction well. Cut and/or pull back the existing cables in the existing conduits to the proposed junction well, leaving sufficient length for splicing to the proposed electrical cables in service run nos. 38, 39 & 40 and maintaining electrical service to the north.
- SPlice the existing (4) *4 electrical cables from the intercepted conduit to the proposed (4) *4 electrical cables in service run nos. 38 and 39 and splice the existing (4) *2 electrical cables from the intercepted conduit to the proposed (4) *2 electrical cables in service run no. 39 ensuring that the existing roadway lighting to the south operates off the same circuit and phase as is existing. Splice the existing (3) *10 electrical cables from the existing conduit to the proposed (3) *10 electrical cables in service run no. 40.
- SPlice the proposed (4) *4 electrical cables in service run no. 38 to the existing (4) *4 electrical cables in the existing junction well. Repair existing junction well.
- CUT OR DISCONNECT BELOW GRADE THE EXISTING CONDUIT PROVIDING ELECTRICAL SERVICE TO THE DOUSING PUMPS CONTROL PANEL. ABANDON PORTION OF THE CONDUIT HEADING NORTH AND MAINTAIN PORTION OF CONDUIT LEADING TO THE CONTROL PANEL. COUPLE PROPOSED SERVICE RUN NO. 40 TO THE REMAINING CONDUIT AND FEED PROPOSED CABLES TO THE CONTROL PANEL. COORDINATE WITH THE ENGINEER TO MINIMIZE OUTAGES. CUTTING OF EXISTING CONDUIT WILL NOT BE MEASURED AND PAID FOR BUT WILL BE INCIDENTAL TO ITEM NO. 745544 - INSTALLATION OF CONDUIT IN UNPAVED TRENCH.
- SERVICE RUN NOS. 24 AND 28 SHALL BE RIGID GALVANIZED STEEL.

LIGHTING SERVICE SCHEDULE

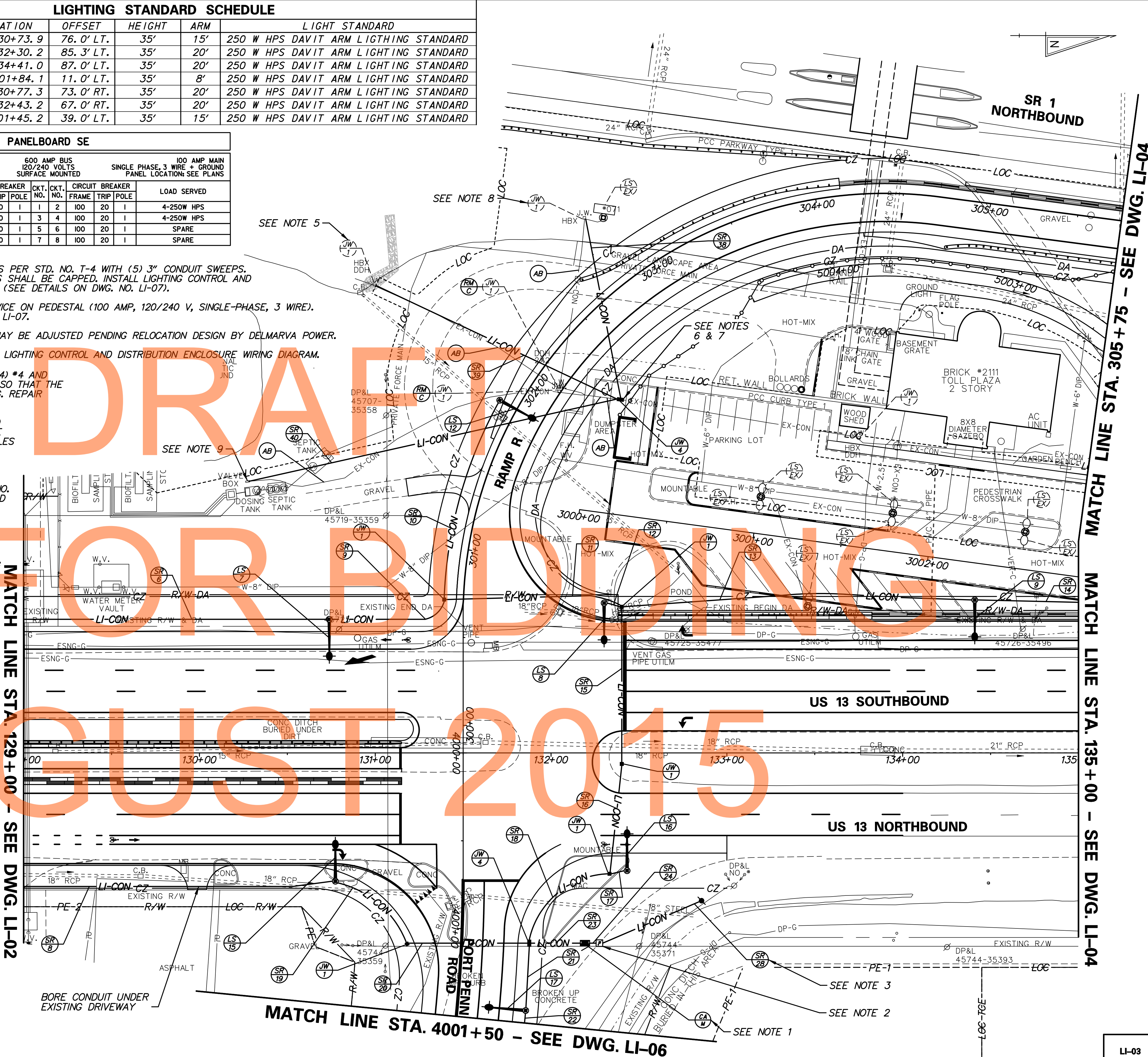
SERVICE RUN	# OF CONDUITS	SIZE	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION
6	1	3.0"	216*	(3)#2, (1)#2 GROUND	TRENCH
8	1	3.0"	216*	(3)#6, (1)#6 GROUND	TRENCH/BORE
9	1	3.0"	71	(3)#2, (1)#2 GROUND	TRENCH
10	1	3.0"	119	(2)#2, (1)#2 GROUND	TRENCH
11	1	3.0"	101	(3)#2, (1)#2 GROUND	BORE
12	1	3.0"	14	(2)#6, (1)#6 GROUND	TRENCH
13	1	3.0"	200	(3)#6, (1)#6 GROUND	BORE
14	1	3.0"	213*	(3)#6, (1)#6 GROUND	BORE
15	1	3.0"	89	(3)#2, (3)#6, (1)#2 GROUND	BORE
16	1	3.0"	63	(3)#2, (3)#6, (1)#2 GROUND	BORE
17	1	3.0"	8	(2)#6, (1)#6 GROUND	TRENCH
18	1	3.0"	66	(3)#2, (3)#6, (1)#2 GROUND	TRENCH
19	1	3.0"	58	(3)#6, (1)#6 GROUND	TRENCH
20	1	3.0"	70	(3)#6, (1)#6 GROUND	BORE
21	1	3.0"	39	(3)#6, (1)#6 GROUND	TRENCH
22	1	3.0"	212*	(3)#6, (1)#6 GROUND	TRENCH/BORE
23	1	3.0"	32	(3)#2, (3)#6, (1)#2 GROUND	TRENCH
24	1	3.0"	9	(3)#2, (1)#2 GROUND	TRENCH
28	1	3.0"	60	(3)#2, (1)#2 GROUND	TRENCH
38	1	3.0"	105	(4)#4, (1)#4 GROUND	TRENCH
39	2	3.0"	152	(4)#4, (1)#4 GROUND	TRENCH
40	1	1.0"	215	(3)#10, (1)#10 GROUND	TRENCH

* DISTANCE CONTINUES ON ADJACENT PLAN SHEET.
NOTE: SERVICE RUN DISTANCE REFLECTS CONDUIT LENGTH ONLY.

MATCH LINE STA. 129+00 - SEE DWG. LI-02

MATCH LINE STA. 305+75 - SEE DWG. LI-04

MATCH LINE STA. 135+00 - SEE DWG. LI-04

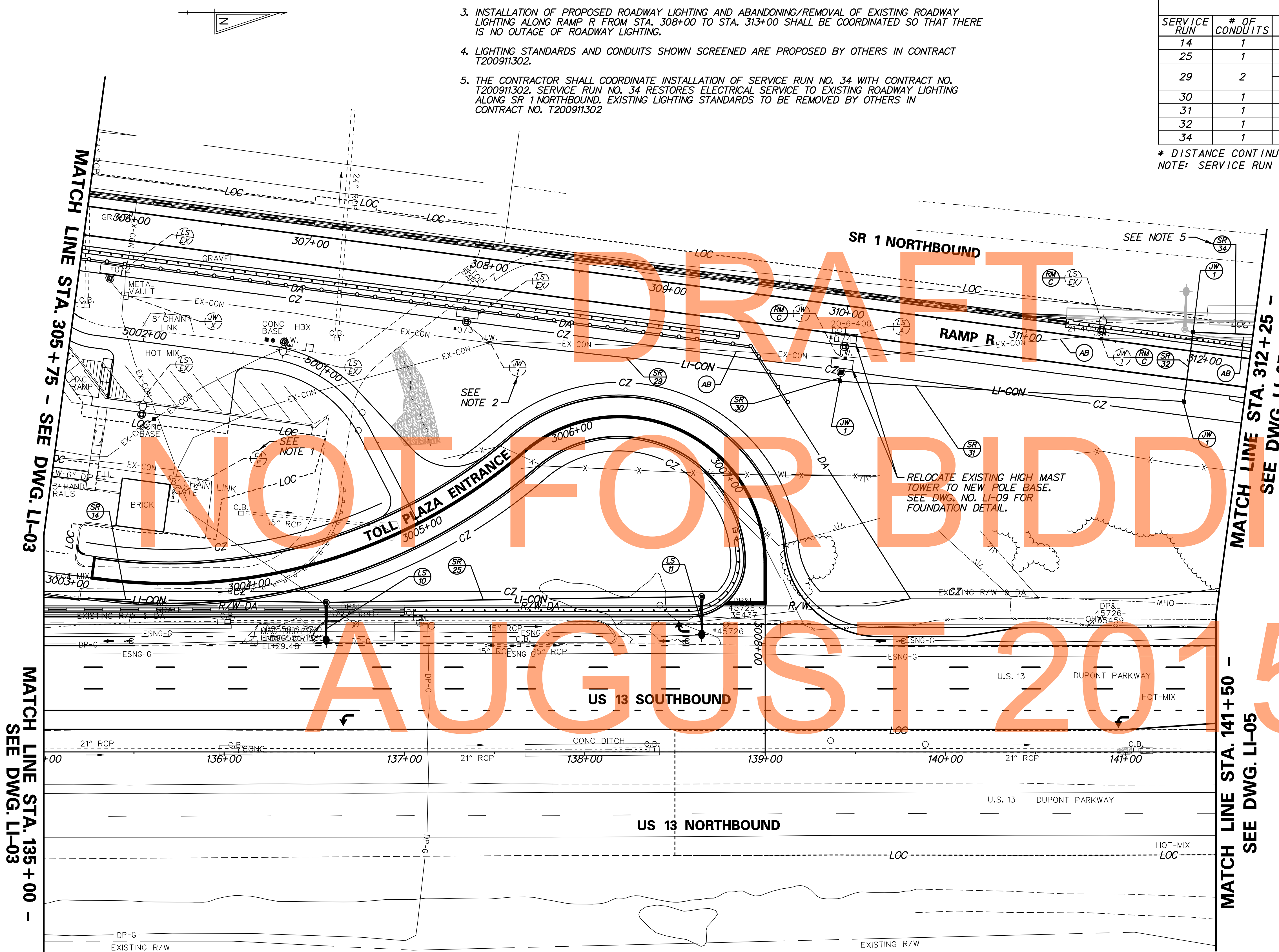


- NOTES:**
- EXISTING LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE FOR SR 1 TOLL PLAZA LIGHTING.
 - SPLICE THE PROPOSED (4)*8 AND (4)*4 ELECTRICAL CABLES IN SERVICE RUN NO. 29 TO THE EXISTING (4)*8 (EX. CIRCUITS C1, C2, C3) AND (4)*4 (EX. CIRCUITS B1, B2, B3) ELECTRICAL CABLES IN THE EXISTING JUNCTION WELL. SPLICE THE ELECTRICAL CABLES SO THAT THE EXISTING ROADWAY LIGHTING ALONG SR 1 NORTHBOUND OPERATES OFF THE SAME CIRCUIT AND PHASE AS IS EXISTING. REPAIR EXISTING JUNCTION WELL.
 - INSTALLATION OF PROPOSED ROADWAY LIGHTING AND ABANDONING/REMOVAL OF EXISTING ROADWAY LIGHTING ALONG RAMP R FROM STA. 308+00 TO STA. 313+00 SHALL BE COORDINATED SO THAT THERE IS NO OUTAGE OF ROADWAY LIGHTING.
 - LIGHTING STANDARDS AND CONDUITS SHOWN SCREENED ARE PROPOSED BY OTHERS IN CONTRACT T200911302.
 - THE CONTRACTOR SHALL COORDINATE INSTALLATION OF SERVICE RUN NO. 34 WITH CONTRACT NO. T200911302. SERVICE RUN NO. 34 RESTORES ELECTRICAL SERVICE TO EXISTING ROADWAY LIGHTING ALONG SR 1 NORTHBOUND. EXISTING LIGHTING STANDARDS TO BE REMOVED BY OTHERS IN CONTRACT NO. T200911302

LIGHTING STANDARD SCHEDULE						
NO.	CIRCUIT NO.	STATION	OFFSET	HEIGHT	ARM	LIGHT STANDARD
LS-10	3	136+56.7	83.0' LT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-11	1	138+64.9	86.2' LT.	35'	20'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-A	EX. C1, C2, C3	310+1.2	37.0' RT.	80'	0'	(6) 400 W HPS

LIGHTING SERVICE SCHEDULE						
SERVICE RUN	# OF CONDUITS	SIZE	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION	
14	1	3.0"	213*	(3)#6, (1)#6 GROUND	BORE	
25	1	3.0"	205	(2)#6, (1)#6 GROUND	TRENCH	
29	2	3.0"	194	(4)#8, (1)#8 GROUND	TRENCH	
		3.0"	194	(4)#4, (1)#4 GROUND	TRENCH	
30	1	3.0"	2	(4)#8, (1)#8 GROUND	TRENCH	
31	1	3.0"	190	(4)#4, (1)#4 GROUND	TRENCH	
32	1	3.0"	37	(4)#4, (1)#4 GROUND	TRENCH	
34	1	3.0"	89*	(4)#4, (1)#4 GROUND	TRENCH	

* DISTANCE CONTINUES ON ADJACENT PLAN SHEET.
NOTE: SERVICE RUN DISTANCE REFLECTS CONDUIT LENGTH ONLY.

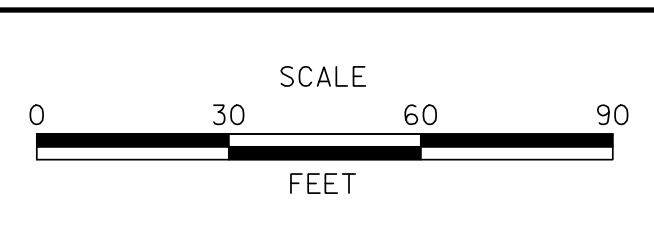


LIGHTING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED LIGHTING STANDARD AND POLE BASE
	EXISTING LIGHTING STANDARD AND POLE BASE
	EXISTING OFFSET LIGHT POLE AND POLE BASE (SINGLE AND DUAL MOUNT)
	EXISTING HIGH MAST TOWER AND POLE BASE
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (EXISTING AND PROPOSED)
	PROPOSED LIGHTING JUNCTION WELL
	EXISTING LIGHTING JUNCTION WELL
	PROPOSED ELECTRICAL SERVICE ON PEDESTAL
	PROPOSED LIGHTING SERVICE RUN
	EXISTING LIGHTING SERVICE RUN
	LIGHTING STANDARD IDENTIFIER (EXISTING AND PROPOSED)
	SERVICE RUN IDENTIFIER (EXISTING AND PROPOSED)
	LIGHTING JUNCTION WELL IDENTIFIER (TYPE) (EXISTING AND PROPOSED)
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE IDENTIFIER (EXISTING AND PROPOSED)
	REMOVE BY CONTRACTOR / REMOVE BY OTHERS
	ABANDON BY CONTRACTOR

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ADDENDUMS / REVISIONS



US 13 & PORT PENN RD INTERSECTION

CONTRACT T201011302	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: J.D.C.
	CHECKED BY: J.M.M.

LIGHTING PLAN

LI-04
SHEET NO. 150
TOTAL SHTS. 179

NOTES:

1. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF SERVICE RUN NO. 34 WITH CONTRACT NO. T200911302. SERVICE RUN NO. 34 RESTORES ELECTRICAL SERVICE TO EXISTING ROADWAY LIGHTING ALONG SR 1 NORTHBOUND. EXISTING LIGHTING STANDARDS TO BE REMOVED BY OTHERS IN CONTRACT NO. T200911302.
2. INSTALLATION OF PROPOSED ROADWAY LIGHTING AND ABANDONING/REMOVAL OF EXISTING ROADWAY LIGHTING ALONG RAMP R FROM STA. 308+00 TO STA. 313+00 SHALL BE COORDINATED SO THAT THERE IS NO OUTAGE IN ROADWAY LIGHTING.
3. SPLICE THE PROPOSED (4)*4 ELECTRICAL CABLES IN SERVICE RUN NO. 34 TO THE EXISTING (4)*4 ELECTRICAL CABLES IN THE EXISTING JUNCTION WELL. SPLICE THE ELECTRICAL CABLES SO THAT THE ROADWAY LIGHTING ALONG SR 1 NORTHBOUND OPERATES OFF THE SAME CIRCUIT AND PHASE AS IS EXISTING. REPAIR EXISTING JUNCTION WELL.
4. LIGHTING STANDARDS AND CONDUITS SHOWN SCREENED ARE PROPOSED BY OTHERS IN CONTRACT NO. T200911302.

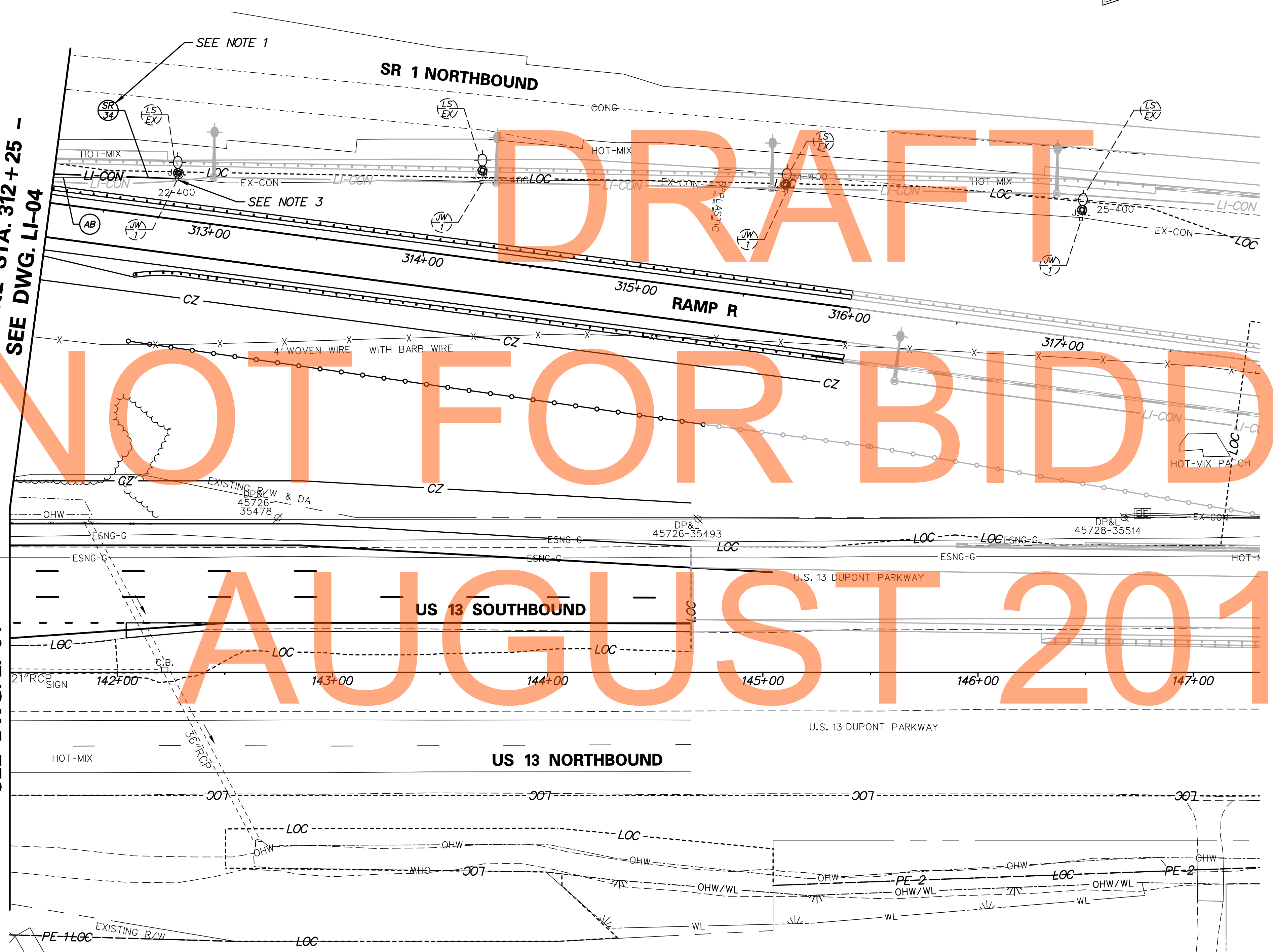
LIGHTING SERVICE SCHEDULE					
SERVICE RUN	# OF CONDUITS	SIZE	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION
34	1	3.0"	89*	(4)*4, (1)*4 GROUND	TRENCH

* DISTANCE CONTINUES ON ADJACENT PLAN SHEET.
NOTE: SERVICE RUN DISTANCE REFLECTS CONDUIT LENGTH ONLY.

LIGHTING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	- PROPOSED LIGHTING STANDARD AND POLE BASE
	- EXISTING LIGHTING STANDARD AND POLE BASE
	- EXISTING OFFSET LIGHT POLE AND POLE BASE (SINGLE AND DUAL MOUNT)
	- EXISTING HIGH MAST TOWER AND POLE BASE
	- LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (EXISTING AND PROPOSED)
	- PROPOSED LIGHTING JUNCTION WELL
	- EXISTING LIGHTING JUNCTION WELL
	- PROPOSED ELECTRICAL SERVICE ON PEDESTAL
	- LI-CON - PROPOSED LIGHTING SERVICE RUN
	- EX-CON - EXISTING LIGHTING SERVICE RUN
	- LIGHTING STANDARD IDENTIFIER (EXISTING AND PROPOSED)
	- SERVICE RUN IDENTIFIER (EXISTING AND PROPOSED)
	- LIGHTING JUNCTION WELL IDENTIFIER (TYPE) (EXISTING AND PROPOSED)
	- LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE IDENTIFIER (EXISTING AND PROPOSED)
	- REMOVE BY CONTRACTOR / REMOVE BY OTHERS
	- ABANDON BY CONTRACTOR

MATCH LINE STA. 312+25 - SEE DWG. LI-04

MATCH LINE STA. 141+50 - SEE DWG. LI-04



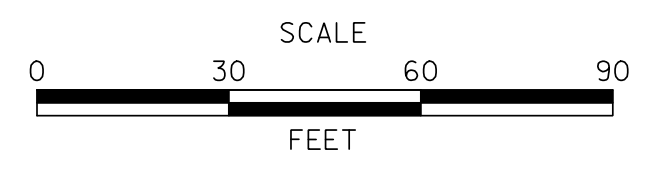
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NOT FOR BIDDING

AUGUST 2015



ADDENDUMS / REVISIONS	



US 13 & PORT PENN RD INTERSECTION

CONTRACT	T201011302	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	J.D.C.
		CHECKED BY:	J.M.M.

LIGHTING PLAN

LI-05
SHEET NO.
151
TOTAL SHTS.
179

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LIGHTING STANDARD SCHEDULE						
NO.	CIRCUIT NO.	STATION	OFFSET	HEIGHT	ARM	LIGHT STANDARD
LS-18	1	4003+47.9	39.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-19	3	4005+57.7	39.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD
LS-20	1	4007+66.1	39.0' LT.	35'	15'	250 W HPS DAVIT ARM LIGHTING STANDARD

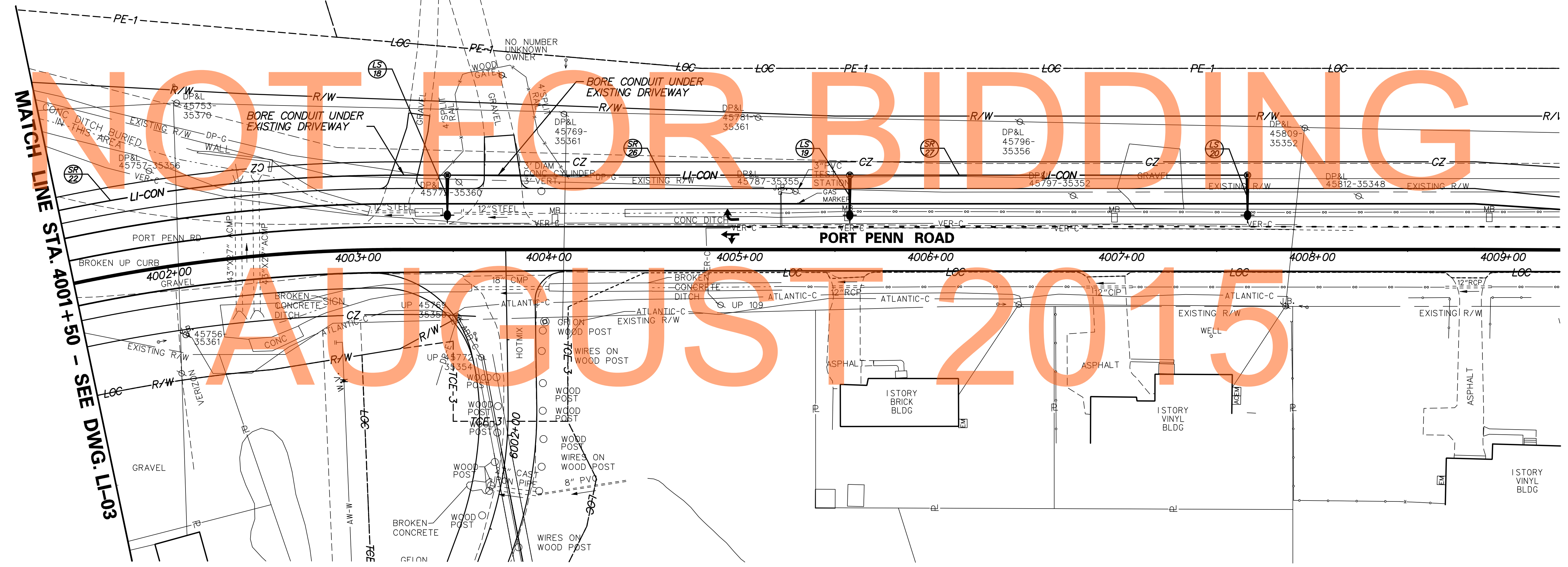
LIGHTING SERVICE SCHEDULE					
SERVICE RUN	# OF CONDUITS	SIZE	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION
22	1	3.0"	212*	(3)#6, (1)#6 GROUND	TRENCH/BORE
26	1	3.0"	211	(3)#6, (1)#6 GROUND	TRENCH/BORE
27	1	3.0"	209	(2)#6, (1)#6 GROUND	TRENCH

* DISTANCE CONTINUES ON ADJACENT PLAN SHEET.
 NOTE: SERVICE RUN DISTANCE REFLECTS CONDUIT LENGTH ONLY.

LIGHTING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED LIGHTING STANDARD AND POLE BASE
	EXISTING LIGHTING STANDARD AND POLE BASE
	EXISTING OFFSET LIGHT POLE AND POLE BASE (SINGLE AND DUAL MOUNT)
	EXISTING HIGH MAST TOWER AND POLE BASE
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE (EXISTING AND PROPOSED)
	PROPOSED LIGHTING JUNCTION WELL
	EXISTING LIGHTING JUNCTION WELL
	PROPOSED ELECTRICAL SERVICE ON PEDESTAL
	PROPOSED LIGHTING SERVICE RUN
	EXISTING LIGHTING SERVICE RUN
	LIGHTING STANDARD IDENTIFIER (EXISTING AND PROPOSED)
	LIGHTING RUN IDENTIFIER (EXISTING AND PROPOSED)
	LIGHTING JUNCTION WELL IDENTIFIER (TYPE) (EXISTING AND PROPOSED)
	LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE IDENTIFIER (EXISTING AND PROPOSED)
	REMOVE BY CONTRACTOR / REMOVE BY OTHERS
	ABANDON BY CONTRACTOR



DRAFT



NOT FOR BIDDING

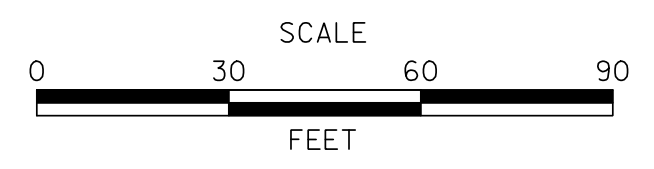
AUGUST 2015

MATCH LINE STA. 4001+50 - SEE DWG. LI-03

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ADDENDUMS / REVISIONS

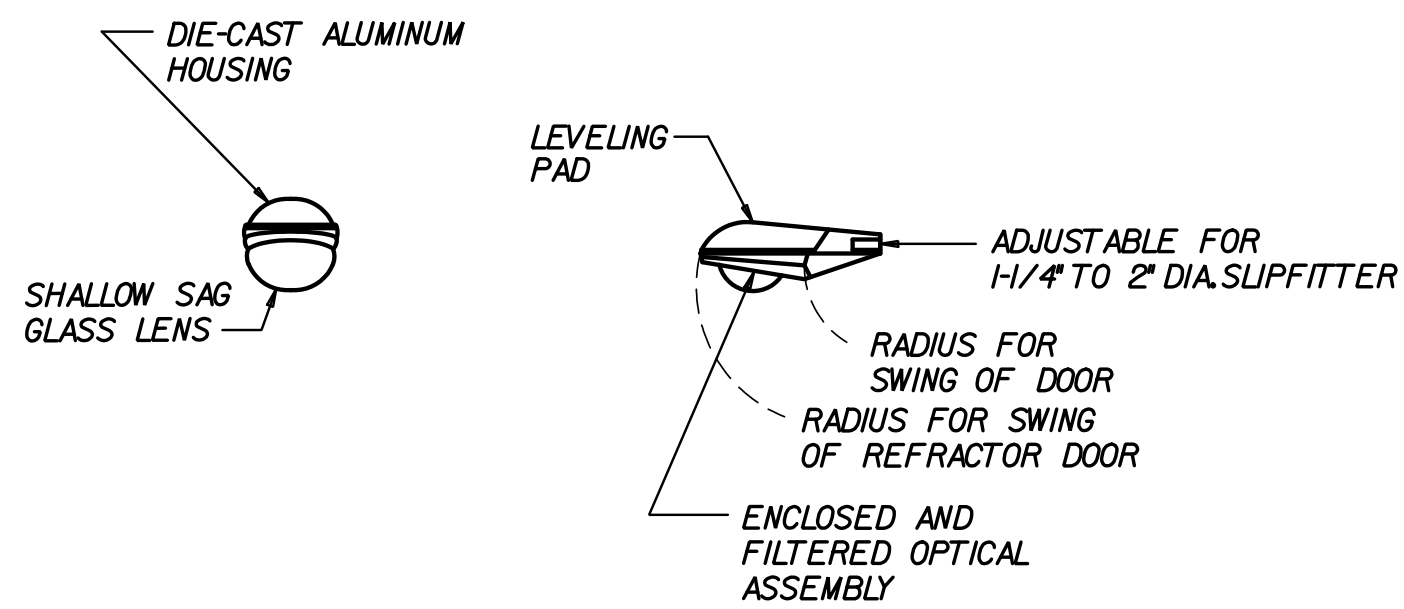


US 13 & PORT PENN RD INTERSECTION

CONTRACT	T201011302	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	J.D.C.
		CHECKED BY:	J.M.M.

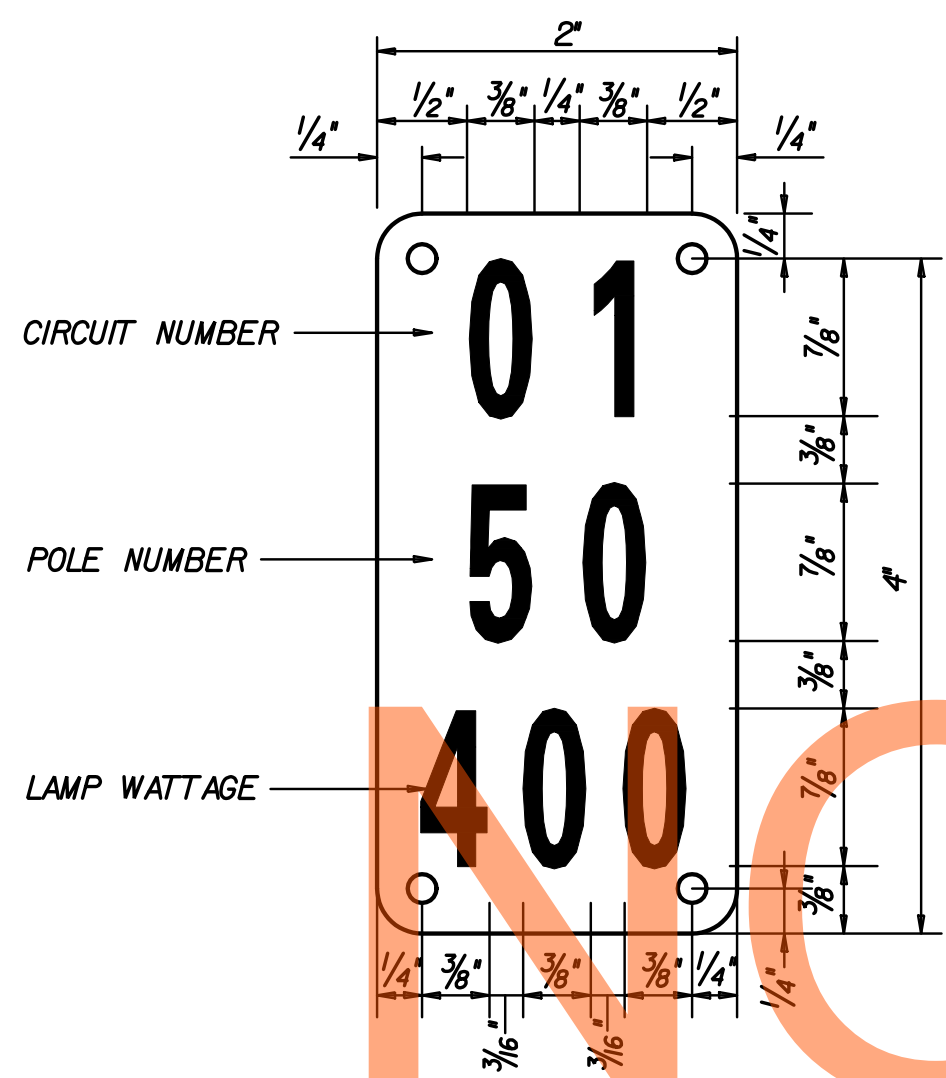
LIGHTING PLAN

LI-06
SHEET NO.
152
TOTAL SHTS.
179

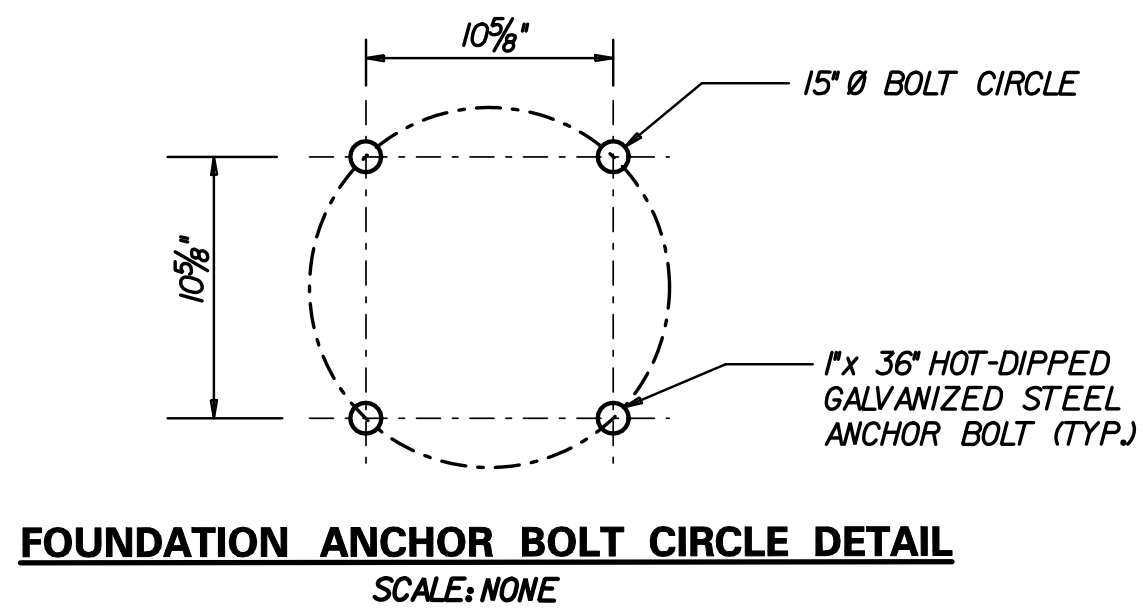


LUMINAIRE FIXTURE
SCALE: NONE

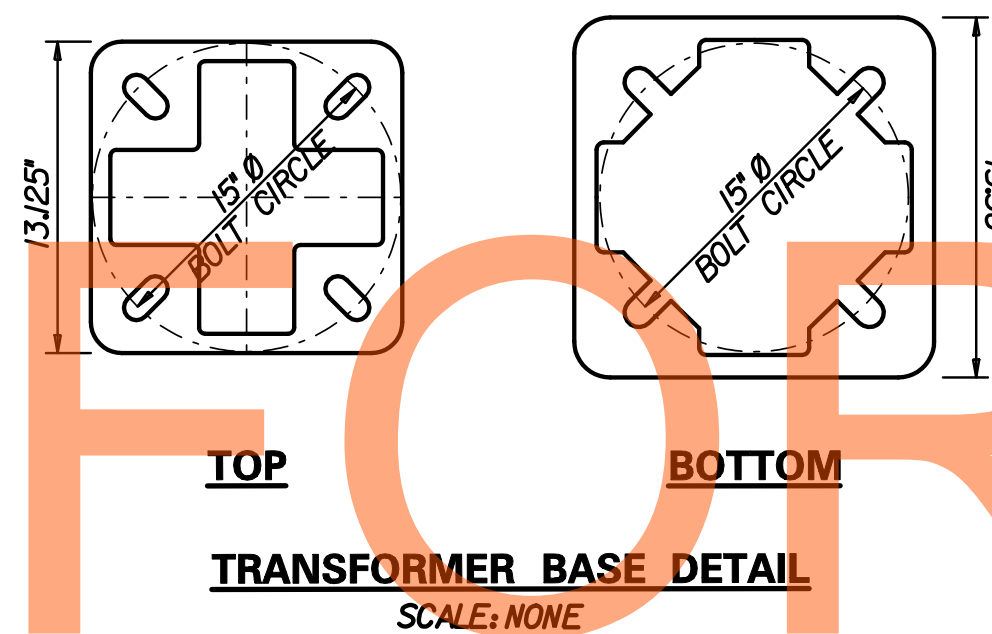
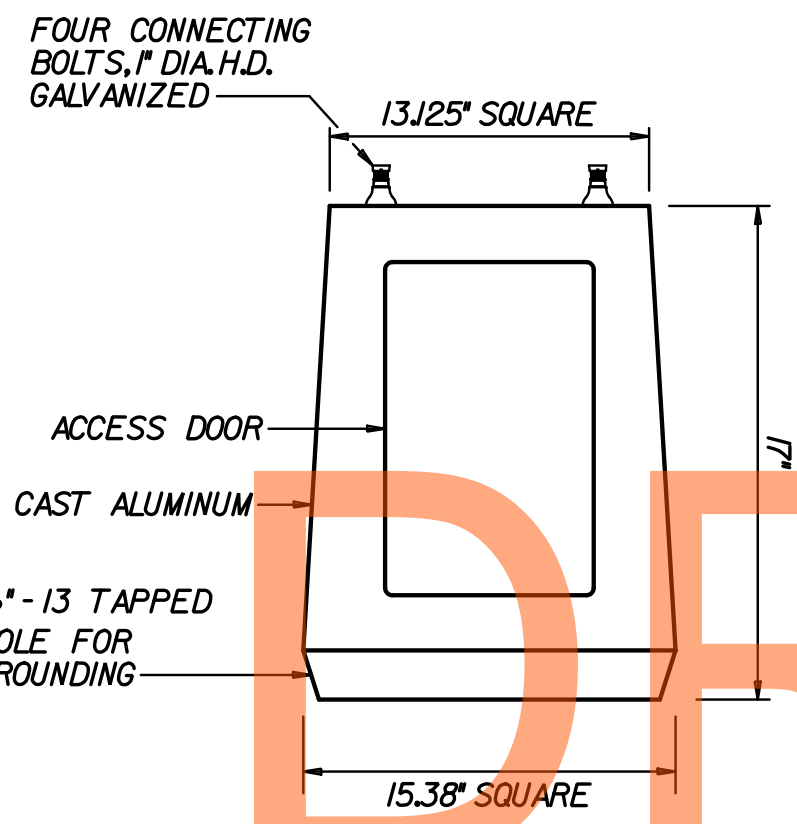
NOTES:
1. ALL PROPOSED LUMINAIRES SHALL BE 250 WATT HIGH PRESSURE SODIUM COBRAHEAD STYLE FIXTURES WITH A TYPE III HORIZONTAL LIGHT DISTRIBUTION, MEDIUM VERTICAL LIGHT DISTRIBUTION AND CUT-OFF OPTICS MOUNTED WITH A ZERO DEGREE TILT ANGLE. PHOTOCONTROL SHALL BE AT THE LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE.



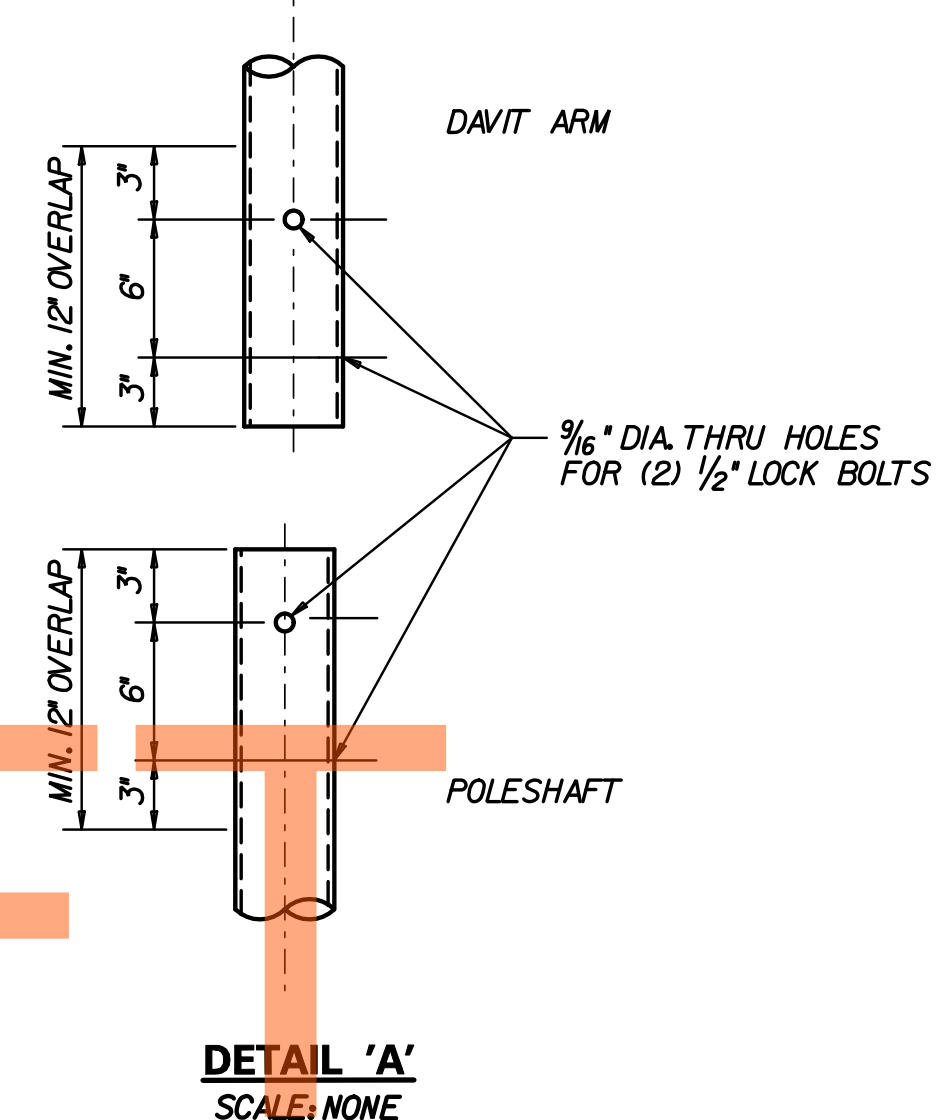
TYPICAL POLE IDENTIFICATION TAG
SCALE: NONE



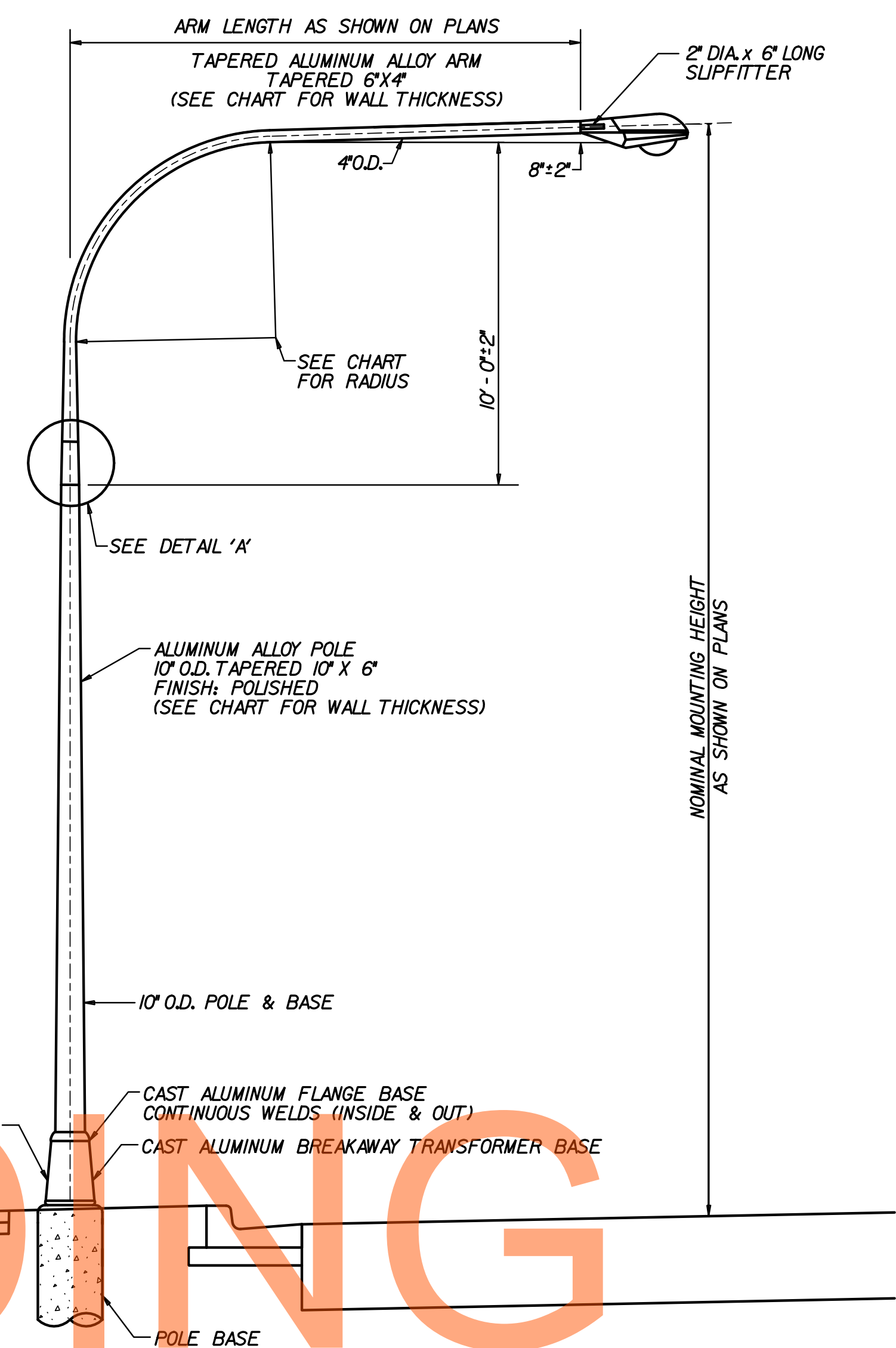
FOUNDATION ANCHOR BOLT CIRCLE DETAIL
SCALE: NONE



TRANSFORMER BASE DETAIL
SCALE: NONE

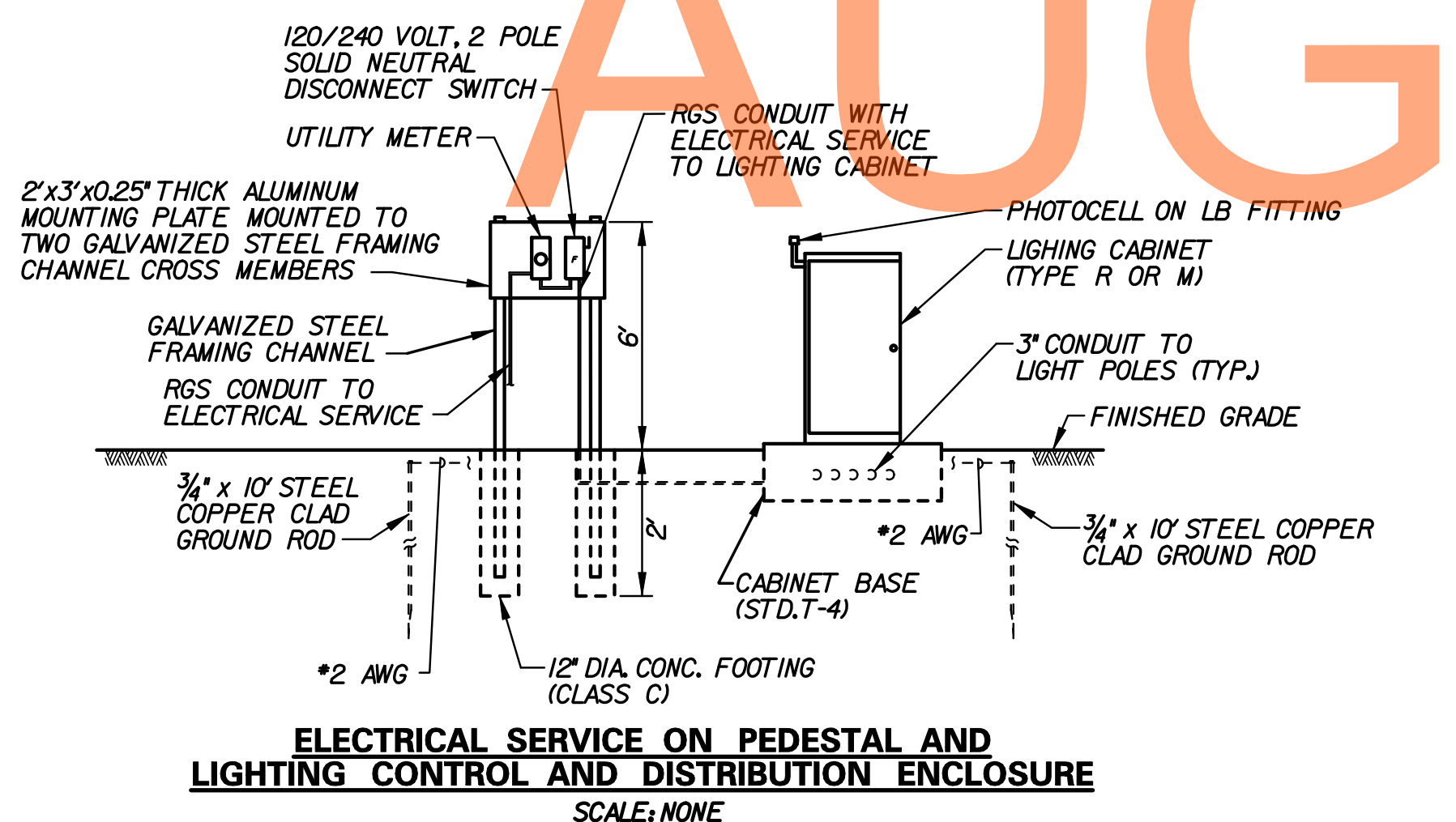


DETAIL 'A'
SCALE: NONE

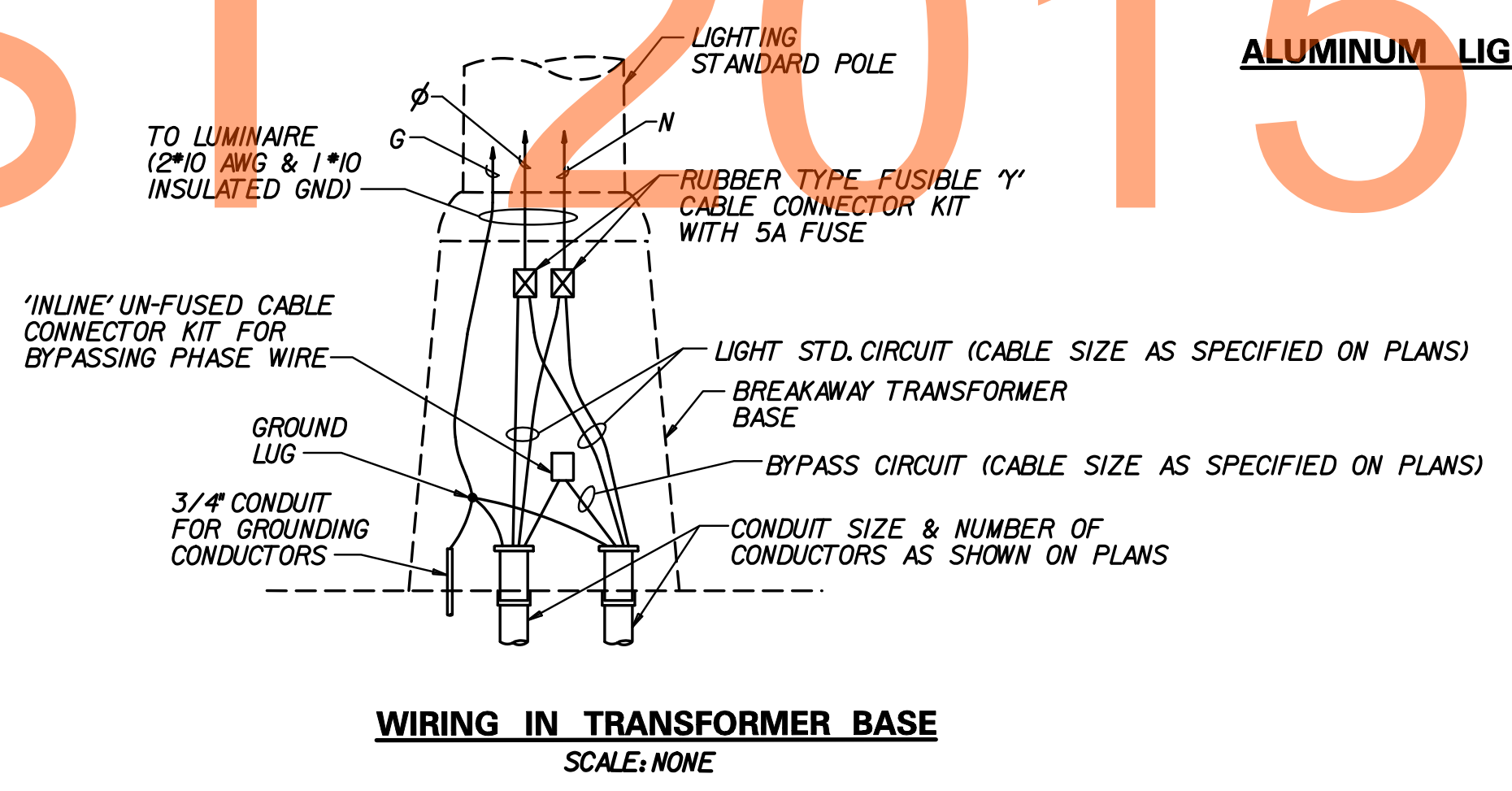


MOUNTING HEIGHT	ARM LENGTH	BEND RADIUS	WALL THICKNESS
35'	8'	5'-6"	0.156"
35'	12'	5'-6"	0.156"
35'	15'	5'-6"	0.156"
35'	20'	7'-0"	0.188"

ALUMINUM LIGHTING STANDARD WITH SINGLE DAVIT ARM
SCALE: NONE



ELECTRICAL SERVICE ON PEDESTAL AND LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE
SCALE: NONE



WIRING IN TRANSFORMER BASE
SCALE: NONE

ADDENDUMS / REVISIONS

NOT TO SCALE

US 13 & PORT PENN RD INTERSECTION

CONTRACT T201011302	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: J.D.C.
	CHECKED BY: J.M.M.

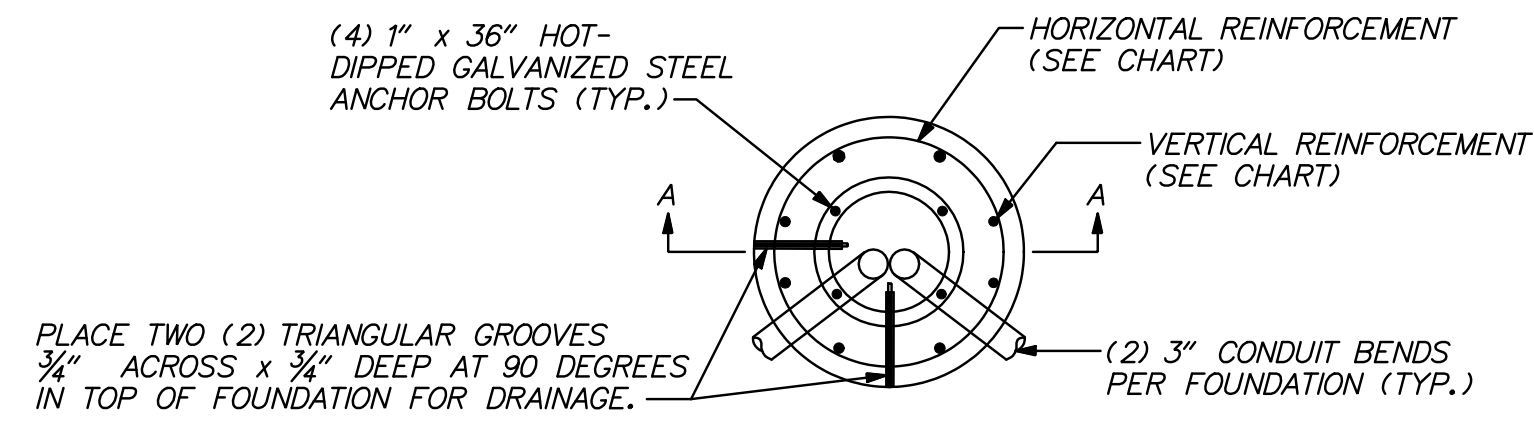
LIGHTING DETAILS

LI-07
SHEET NO. 153
TOTAL SHTS. 179

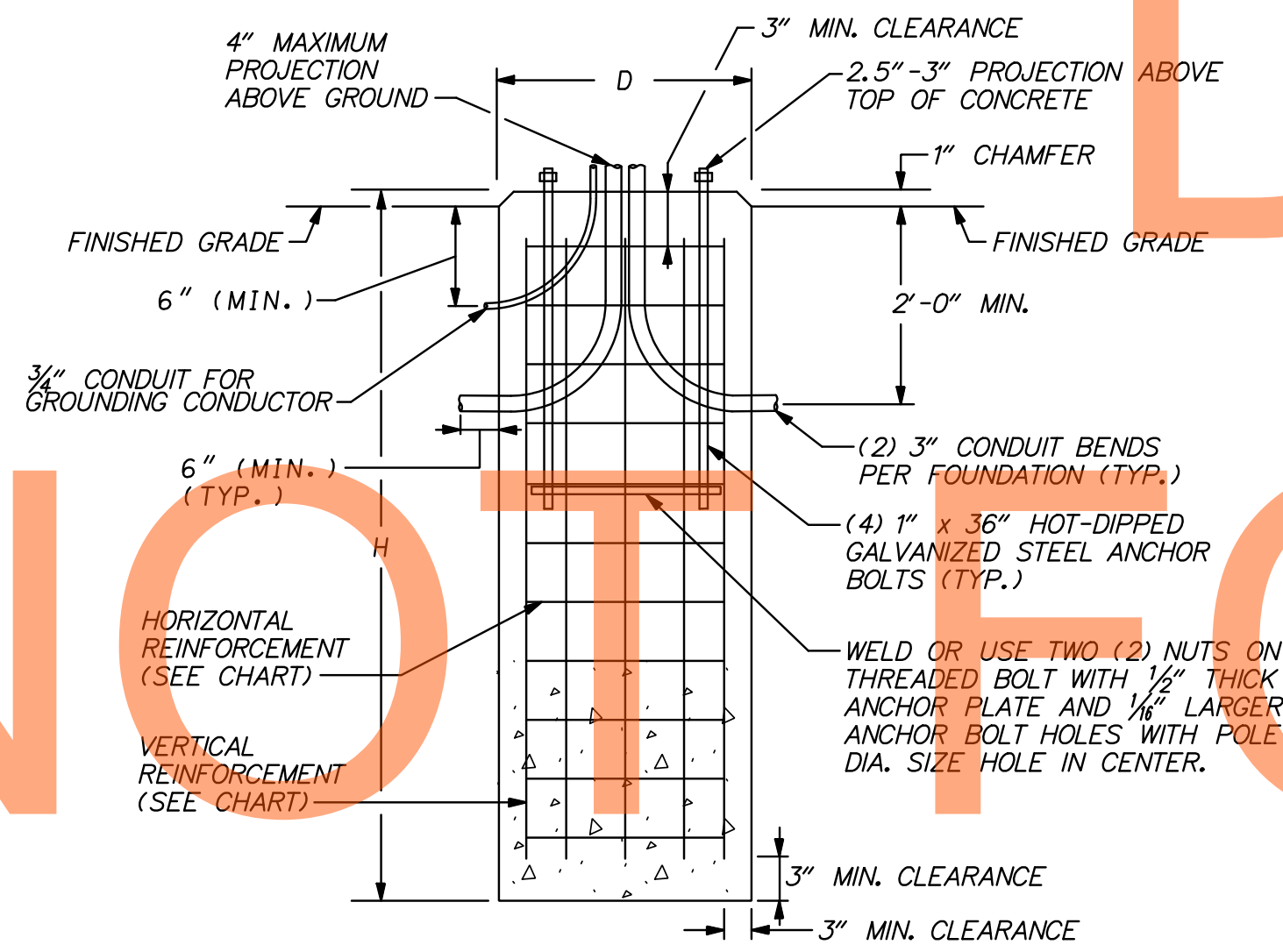
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LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE WIRING DIAGRAM

LIGHTING STANDARD POLE BASE DETAIL



PLAN VIEW

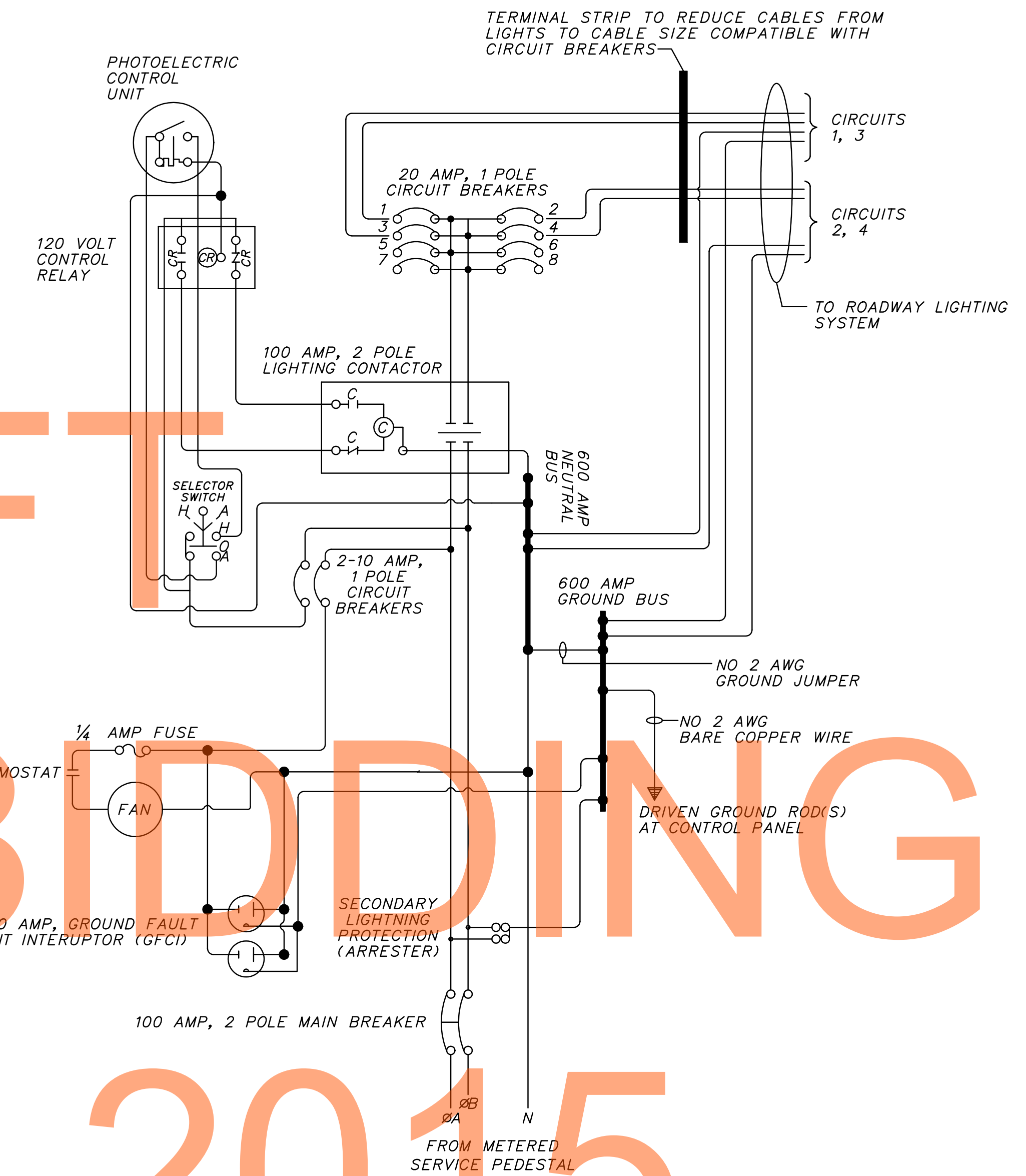


SECTION A-A

NOMINAL MOUNTING HEIGHT	DIAMETER (D)	HEIGHT (H)	VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT	CONCRETE REQUIRED (C.Y.)
30', 35' OR 40'	2.5'	11.5'	8 NO. 7	NO. 3 TIES AT 1'-0" CENTER TO CENTER	2.1

NOTES:

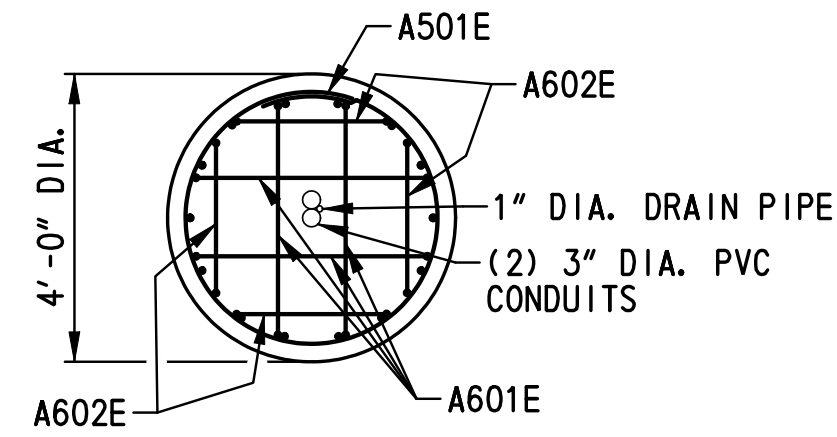
- ANCHOR BOLTS SHALL BE PLUMB. A 1/4" THICK STEEL TEMPLATE SHALL BE USED FOR INSTALLATION OF ANCHOR BOLTS.
- FOUNDATION SHALL NOT BE INSTALLED IN DRAINAGE DITCH.



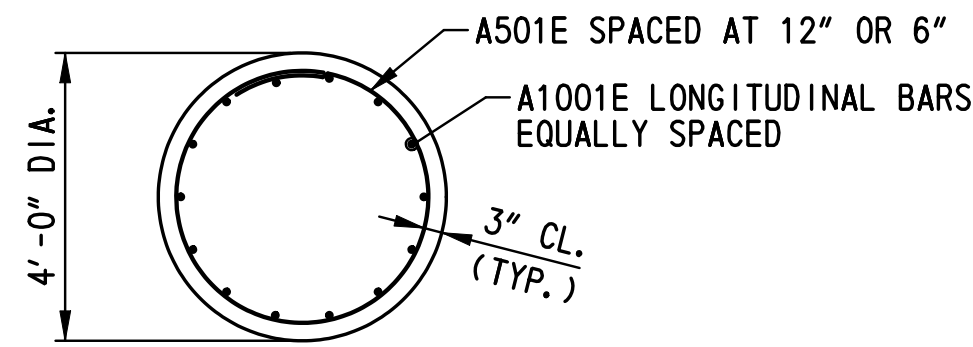
NOTES:

- ALL WIRING FROM SERVICE FEEDS SHALL BE INSTALLED IN FLEXIBLE CONDUIT WITHIN THE LIGHTING CONTROL AND DISTRIBUTION ENCLOSURE.
- NO CONDUCTORS MAY ENTER OR EXIT THROUGH THE REAR OF ANY PANEL.
- THE LIGHTING CONTACTOR SHALL BE IN A PROPERLY SIZED ENCLOSURE.
- A CONTINUOUS GROUNDING CONDUCTOR SHALL BE INSTALLED FROM THE METER SOCKET THROUGH ALL PANELS, THEN TO THE GROUNDING ELECTRODE.
- ALL CONDUCTORS NOT IN CONDUIT SHALL BE BUNDLED OR WRAPPED AND SECURED IN CABINET AWAY FROM SHARP EDGES.
- ALL CABLES SHALL MEET AMPACITY REQUIREMENTS OF THE NATIONAL ELECTRIC CODE. THE MINIMUM CABLE SIZE SHALL BE NO. 12 AWG

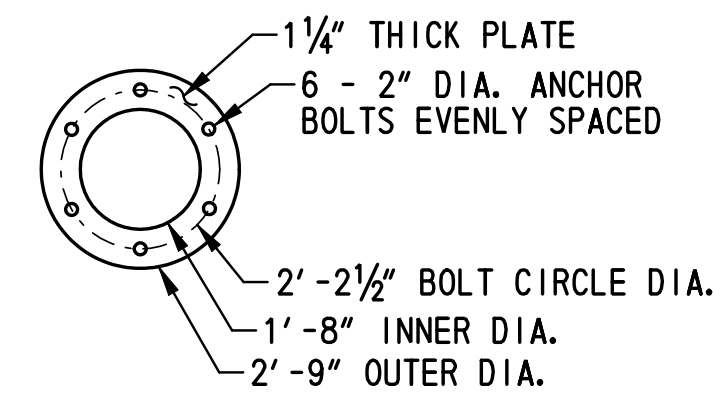
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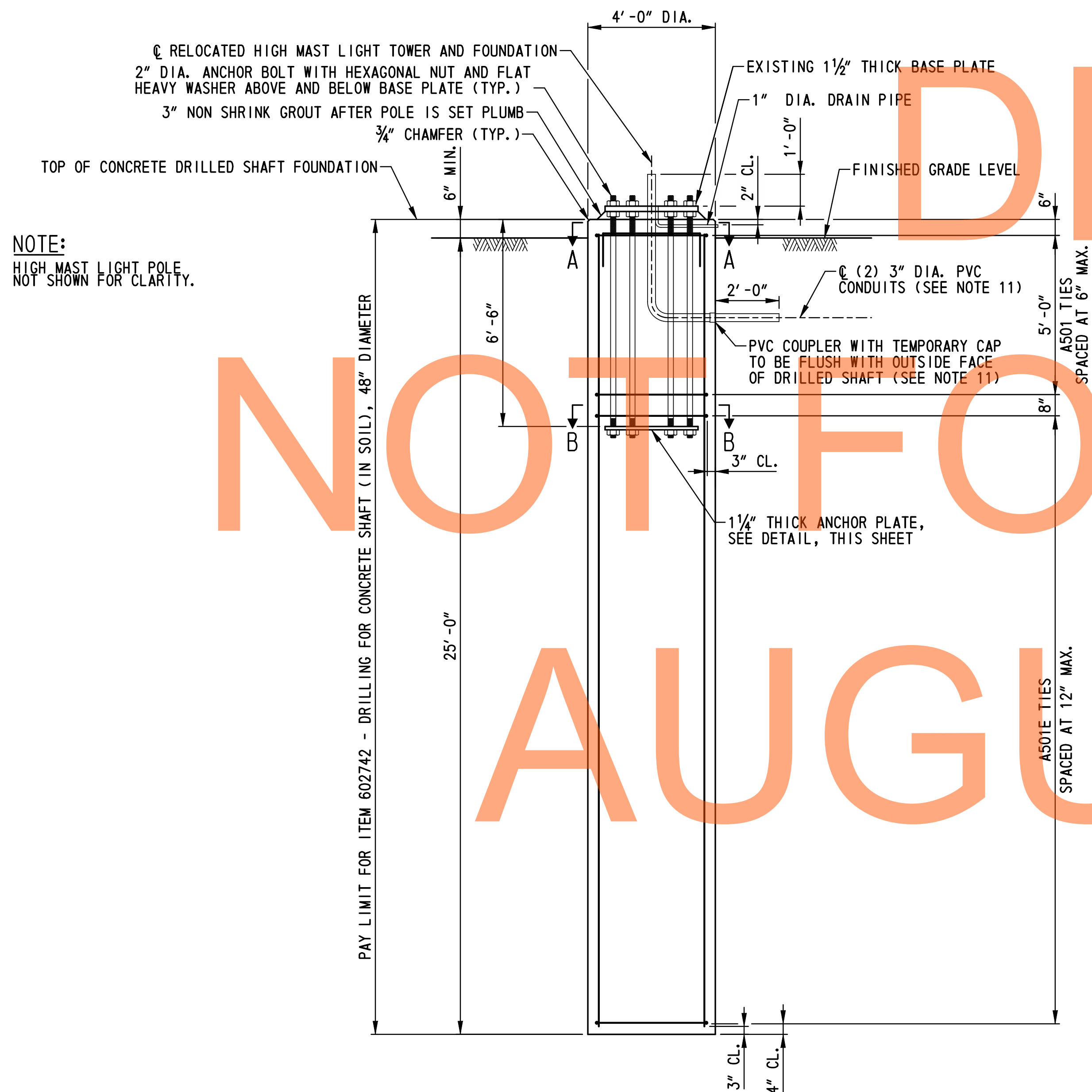
SECTION A-A
SCALE: 3/8" = 1'-0"



SECTION B-B
SCALE: 3/8" = 1'-0"

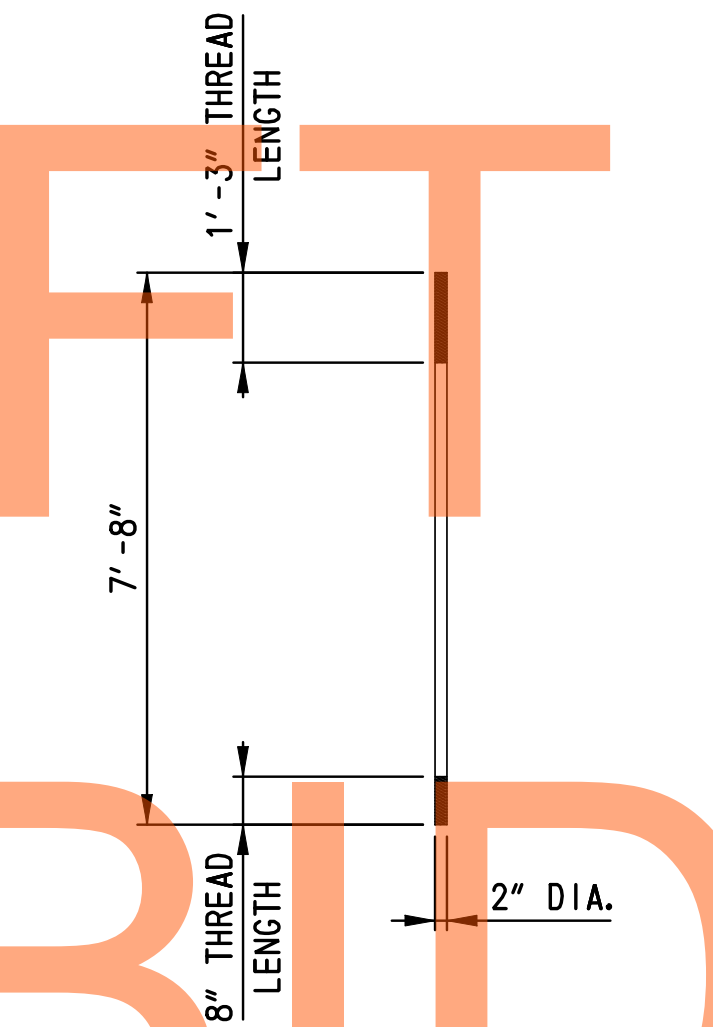


ANCHOR PLATE DETAIL
SCALE: 3/8" = 1'-0"



CAISSON FOUNDATION DETAIL
SCALE: 3/8" = 1'-0"

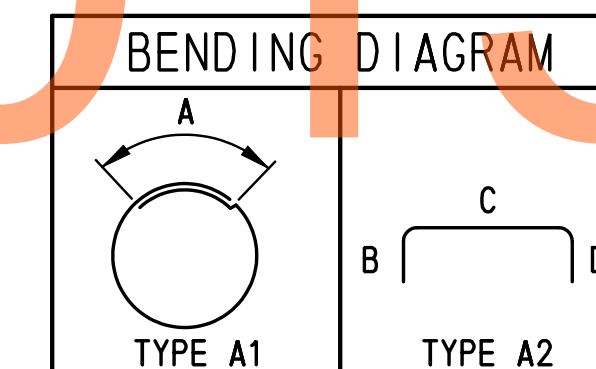
NOTE:
HIGH MAST LIGHT POLE,
NOT SHOWN FOR CLARITY.



ANCHOR BOLT DETAIL
SCALE: 3/8" = 1'-0"

GENERAL NOTES:

- BEFORE CONSTRUCTING THE DRILLED SHAFT THE CONTRACTOR SHALL ACCURATELY LOCATE EXISTING UNDERGROUND UTILITIES IN THE VICINITY OF NEW CONSTRUCTION TO DETERMINE IF THERE IS A CONFLICT. IF A CONFLICT EXISTS, ADJUST THE LOCATION OF THE DRILLED SHAFT TO AVOID CONFLICT AND COMMENCE WITH CONSTRUCTION ONCE APPROVED BY ENGINEER.
- ALL REINFORCEMENT SHALL BE GRADE 60 MINIMUM AND EPOXY COATED IN ACCORDANCE WITH AASHTO M 284 (ASTM A 775). ALL BAR DIMENSIONS ARE MEASURED OUT TO OUT AND MINIMUM COVER SHALL BE 3" UNLESS OTHERWISE NOTED.
- CONCRETE IN DRILLED SHAFT FOUNDATION SHALL BE 4500 P.S. I.
- ALL NEW STEEL PLATES SHALL CONFORM TO A709, GRADE 36.
- ANCHOR BOLTS SHALL CONFORM TO F 1554 GRADE 105 UNC THREAD. HEX NUTS SHALL BE USED AND CONFORM TO A 194 GRADE 2H OR A 563 GR. DH. HEAVY WASHERS SHALL BE USED AND CONFORM TO F 436. ANCHOR BOLTS SHALL BE THREADED FOR 15" AT THE TOP END AND 8" AT THE BOTTOM END. NUTS, WASHERS, AND THE ANCHOR BOLTS SHALL BE GALVANIZED PER A 153. THE ANCHOR BOLTS SHALL STICK THROUGH THE TOP BASE PLATE NUTS FOR A LENGTH OF 1 1/2".
- STEEL TEMPLATES SHALL BE USED TO SET ANCHOR BOLTS PLUMB WHEN POURING THE CONCRETE FOUNDATION. STEEL TEMPLATES SHALL CONTAIN HOLES FOR THE ANCHOR BOLTS 1/16" LARGER THAN THE ANCHOR BOLT DIAMETER.
- ANCHOR BOLTS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL. AFTER INSTALLATION, FIRM CONTACT SHALL EXIST BETWEEN THE ANCHOR BOLT NUTS, WASHER, AND BASE PLATE. IF ANY ANCHOR BOLT IS IN A MISALIGNED POSITION, A BEVELED WASHER IS REQUIRED IF MISALIGNMENT OF THE ANCHOR ROD IS GREATER THAN 1:40.
- THE INSTALLATION AND TIGHTENING OF THE ANCHOR BOLTS SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE SEQUENCE OUTLINED IN APPENDIX A, PART 1 AND 2, SECTION 5.2 OF THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 469 - FATIGUE RESISTANCE DESIGN OF CANTILEVER SIGNAL, SIGN AND LIGHT SUPPORTS. SEE SPECIAL PROVISIONS.
- GROUT FOR GROUT LEVELING PAD AND FOR ANCHOR BOLT HOLES SHALL BE A NON SHRINK GROUT IN CONFORMANCE WITH ASTM C 1107, WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 P.S. I. IN SEVEN DAYS WHEN TESTED AS SPECIFIED IN AASHTO T 160 EXCEPT THAT THE CUBE MOLDS SHALL REMAIN INTACT WITH A TOP FIRMLY ATTACHED THROUGHOUT THE CURING PERIOD. THE NON SHRINK GROUT SHALL HAVE A MINIMUM EXPANSION OF 0.0 PERCENT AFTER SEVEN DAYS WHEN TESTED AS SPECIFIED IN AASHTO T 160. PRIOR TO PLACEMENT OF THE GROUT LEVELING PAD, AN EPOXY BONDING AGENT SUITABLE FOR USE ON STEEL AND CONCRETE SURFACES SHALL BE APPLIED. THE BONDING MATERIAL SHALL CONSIST OF A THERMOSETTING EPOXY RESIN AND HARDENER IN CONFORMANCE WITH ASTM C 881. GROUT SHALL BE PLACED WITHIN SEVEN (7) DAYS OF RELOCATING THE HIGH MAST LIGHT POLE ONTO THE NEW FOUNDATION
- THE ORIENTATION OF THE PVC EXTENSION OUT OF THE DRILLED SHAFT FOUNDATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- UPON COMPLETION OF INSTALLING THE DRILLED SHAFT FOUNDATION, THE CONTRACTOR SHALL LOCATE THE CONDUIT CAST INTO THE DRILLED SHAFT AND INSTALL THE PVC EXTENSION WITH CAP.
- ANCHOR BOLTS NOT SHOWN IN SECTIONS A-A AND B-B FOR CLARITY.
- PAYMENT FOR THE CAISSON FOUNDATION WILL BE MADE UNDER ITEM 602742 - DRILLING FOR CONCRETE SHAFT (IN SOIL), 48" DIAMETER.
- PAYMENT FOR REMOVING, TRANSPORTING AND ERECTING THE LIGHT POLE WILL BE MADE UNDER ITEM 746898 - REMOVE AND RESET EXISTING HIGH MAST LIGHT POLE.
- TEMPORARY STEEL CASING SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.



BAR MARK	SIZE	NO. REQ'D.	LENGTH	TYPE	DIMENSION			
					A	B	C	D
A501E	5	31	12'-3"	A1	1'-3"			
A601E	6	4	5'-2 1/2"	A2		1'-0"	3'-2 1/2"	1'-0"
A602E	6	4	4'-1"	A2		1'-0"	2'-1"	1'-0"
A1001E	10	14	24'-9"	STR.				

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