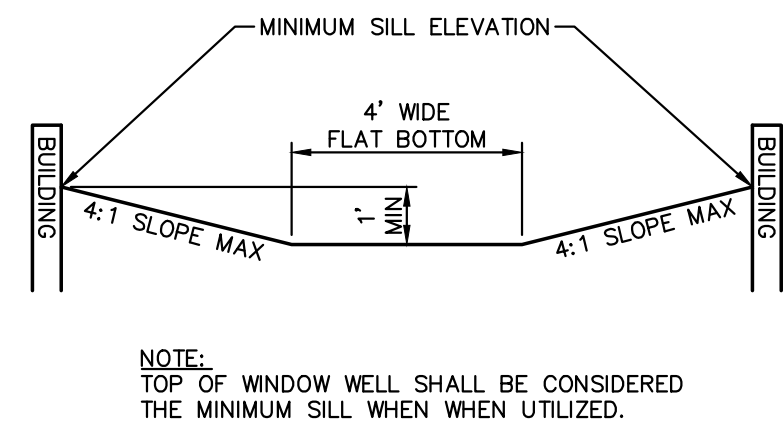
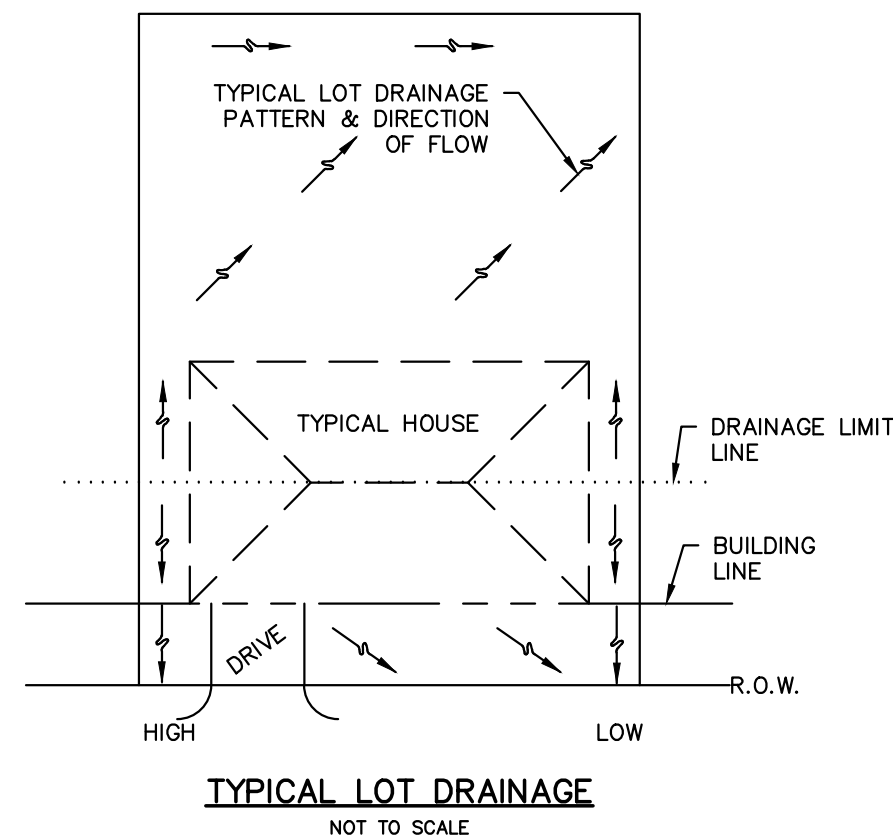
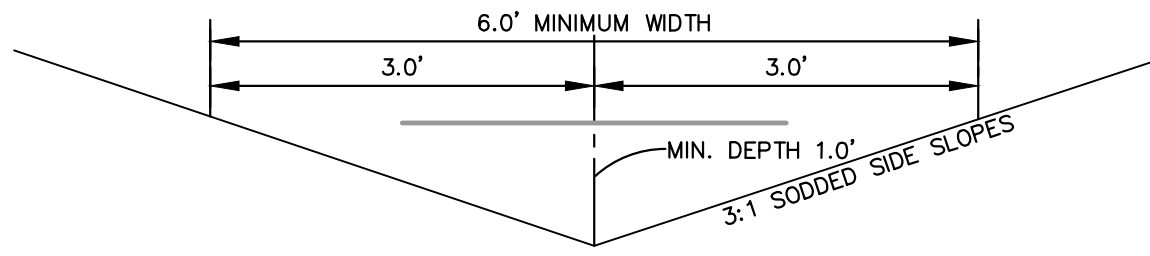


TYPICAL YARD SWALE

Maximum Discharge (Q) = 3.00 cfs
 Maximum Velocity (V) = 3.00 ft/sec
 N = 0.030 (grass)
 Maximum side slopes = 3 (horizontal) : 1 (vertical)

Longitudinal Slope (%)	Discharge (cfs)	Velocity (ft/sec)	Depth (ft)
0.5	3.00	1.73	0.76
1.0	3.00	2.23	0.67
2.0	3.00	2.87	0.59
3.0	1.99	3.00	0.47
4.0	1.30	3.00	0.38
5.0	0.92	3.00	0.32
6.0	0.70	3.00	0.28
7.0	0.52	3.00	0.24
8.0	0.43	3.00	0.22
9.0	0.36	3.00	0.20
10.0	0.32	3.00	0.19



TYPICAL EMERGENCY RELIEF PATH SECTION
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ISSUE REMARKS/DATE

1	INITIAL SUBMITTAL 07-25-2017
2	CITY & CLIENT REV. 09-08-17
3	CITY REV. 10-16-17
4	CITY REV. 10-27-17

PROJECT TITLE

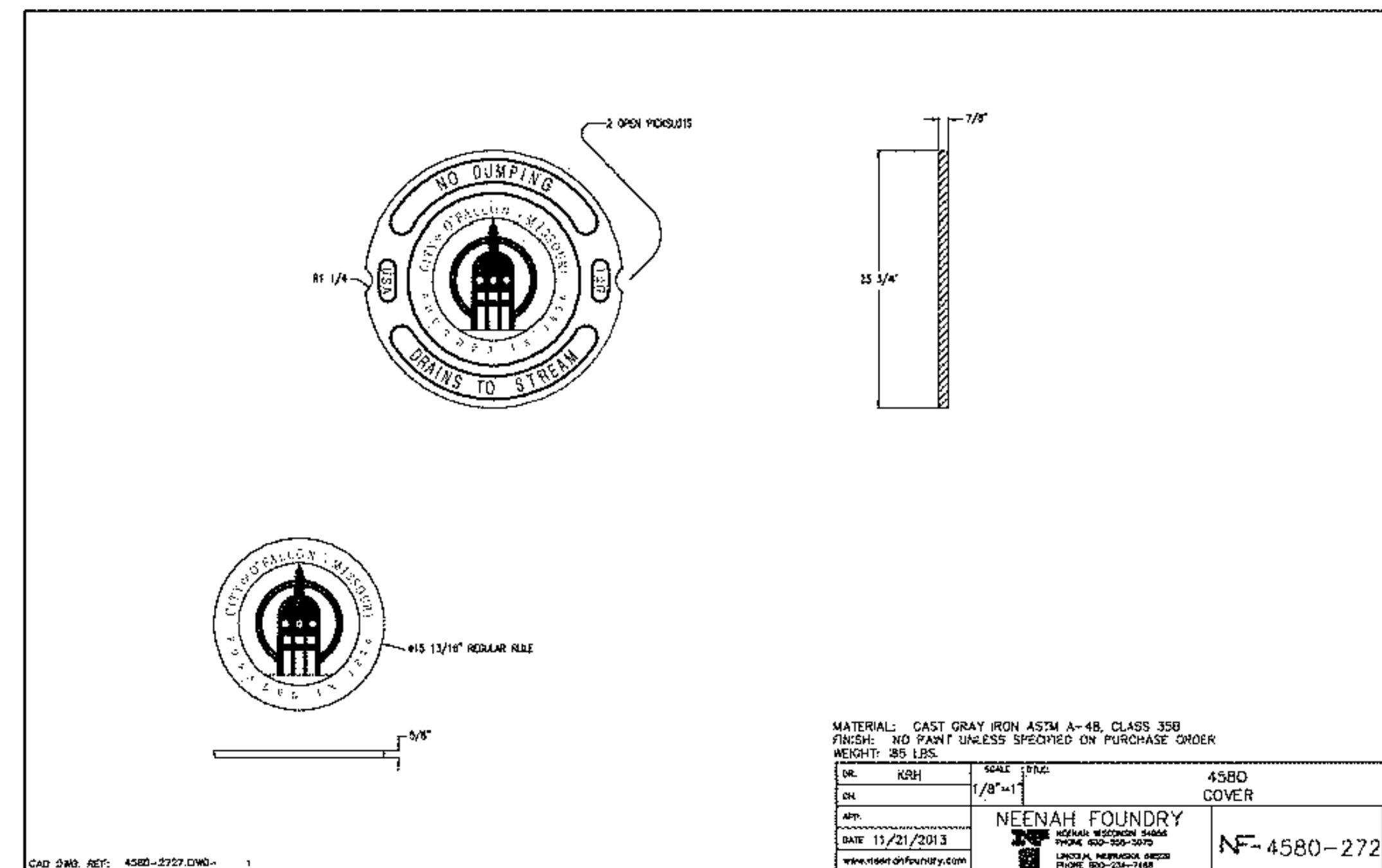
BROOKSIDE FOREST

OTFALLON, MISSOURI

THE STERLING CO.
ENGINEERS & SURVEYORS
5065 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-8944
www.sterling-eng-sur.com
Corporate Certificate of Authority #001348

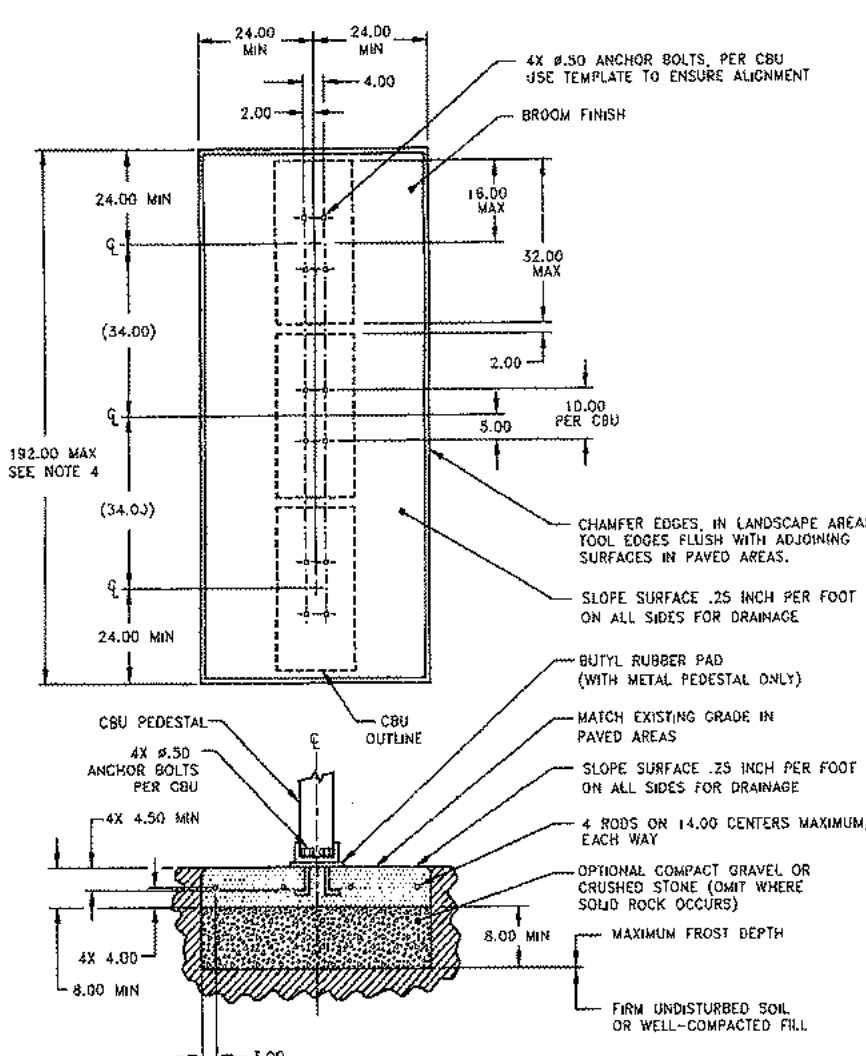


Date: 11-7-17
 Jason D Howell
 License No. PE 2007002801
 Civil Engineer



STORM SEWER LID DETAIL
NOT TO SCALE

USPS APPROVED SPECIFICATIONS - CONCRETE PAD (MULTIPLE UNIT)



- NOTES:
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN - 6% MAX AIR ENTRAINMENT AND BE PLACED WITH A 3.50\"/>

CLUSTER BOX UNIT (CBU) -ANCHORING METHODS-

CBU's must be level and mounted firmly on concrete, using one of the following methods.

- The J-bolt method is the preferred method of installation of CBU's on concrete pads; however, the J-bolt pattern must be accurate with the CBU pedestal plate. When using J-bolts, in order to prevent any damage or accidents that could result from the exposed bolts, consideration should be given as to the time lapse between pouring the concrete and the actual installation. Expansion anchors must be installed in accordance with the manufacturer's instructions.
- The use of anchor bolts for the installation of CBU's on concrete pads is also acceptable as long as the methods described below are followed.
 - Hilti Kwik bolt II, 1/2" diameter X 5-1/2" overall length
 Catalog Number: 000-453-896, KB II 12-512
 Stainless Steel Catalog Number: 000-454-744
 Minimum embedment in concrete must be no less than 3-1/2"
 - ITW Ramset Redhead Trubolt, galvanized, 1/2" diameter X 7" overall length
 - Rawl Stud, 1/2" diameter X 5 1/2" overall length, galvanized.
 Catalog Number: 7324
 Minimum embedment in concrete must be no less than 4"

CLUSTER BOX UNIT (CBU) -CONCRETE PAD REQUIREMENTS-

- ALL FREE STANDING PADS MUST BE 8" THICK -

1 UNIT	SINGLE PAD	4' X 4'
2 UNITS	DOUBLE PAD	4' X 7'
3 UNITS	TRIPLE PAD	4' X 10'
4 UNITS	QUAD PAD	4' X 13'

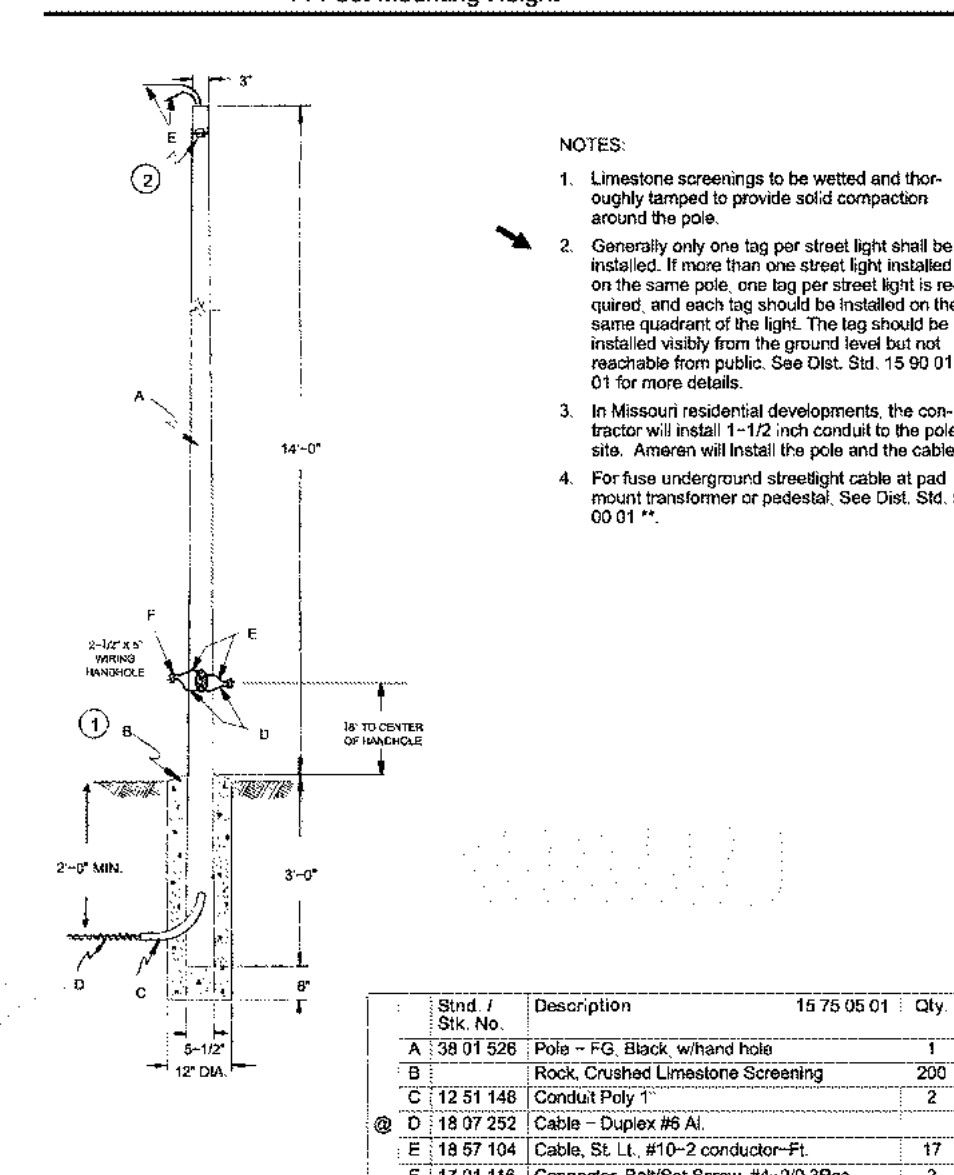
*** WHEN PLACING A PARCEL LOCKER AT ANY CBU LOCATION, INCREASE THE PAD SIZE BY AN ADDITIONAL 4' X 4' ***

POSTAL SERVICE DETAILS FOR MULTI-UNIT CBU PLACEMENT

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OUTDOOR LIGHTING
Post Top Installation Fiberglass Pole
14 Foot Mounting Height

15 75 05 01
Sheet 1 of 1



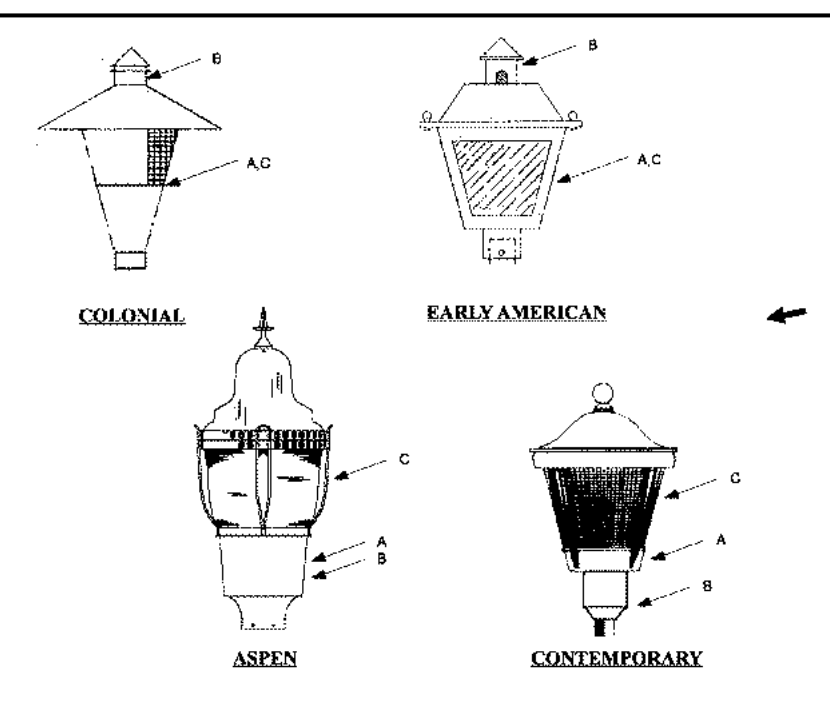
- NOTES:
- Limestone screenings to be wetted and thoroughly tamped to provide solid compaction around the pole.
 - Generally only one top per street light shall be installed. If more than one street light is installed on the same pole, one top per street light is required, and each top should be installed on the same quadrant of the light. The top should be installed evenly from the ground level but not reachable from public. See Dist. Std. 15 90 01 01 for more details.
 - In Missouri residential developments the contractor will install 1-1/2 inch conduit to the pole sets. Ameren will install the pole and the cable.
 - For face underground streetlight cable at pad mount transformer or pedestal. See Dist. Std. 52 00 01 **.

Stand / Sht. No.	Description	15 75 05 01	City
A 58 91 526	Pole - FG Black w/hand hole	1	
B	Rock Crushed Limestone Screening	200	
C 12 51 148	Conduit Poly	2	
D 18 37 252	Cable - Duplex #6 AL		
F 18 67 104	Cable, SL, LL, #10-2 conductor-Ft.	17	
F 17 01 116	Connector, Bolt/Str Screw #4-20 3Pcs	2	

DISTRIBUTION CONSTRUCTION STANDARDS Ameren ENG:WYY REV: NO: 8 REV: DATE: 01/21/10 Page 15 - 31

OUTDOOR LIGHTING
Luminaire Components - Post Top Installation

15 70 14 **
Sheet 1 of 1



- Position luminaire to facilitate service from the street.
- On Type III, align reflector with street side.
- Face eye of photo-electric cell north.

Stand / Sht. No.	Description	15 70 14 **	01	02	03	04	05	06	07	08	09	10
A 38 01 524	Colonial, 100w, HPS, Type III	MO	1									
38 01 525	Colonial, 100w, HPS, Type V	MO		1								
38 01 517	Early American, 100w, HPS, Type III	ALL			1							
38 01 518	Early American, 100w, HPS, Type V	MO				1						
38 01 542	Early American, 175w, MH, Type III	IL										
38 01 513	Contemporary, 100w, HPS, Type III	ALL					1					
38 01 514	Contemporary, 100w, HPS, Type V	MO						1				
38 01 584	Aspen, 100w, HPS, Type II	MO							1			
38 01 585	Aspen, 100w, HPS, Type V	MO								1		
D 38 51 266	Switch, Photo electric Cell	MO	1	1	1	1	1	1	1	1	1	1
E 26 55 260	Lamp, 100w, HPS	MO	1	1	1	1	1	1	1	1	1	1
F 26 58 260	Lamp, 175w, MH	MO										1

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TYPICAL STREET LIGHTING

NOT TO SCALE

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 Fax 636-537-2546
 www.mcbridehomes.com

MISCELLANEOUS DETAILS

P+Z No. 02-17.01
 City No.
 Date: Nov. 7, 2017
 Job No. 16-09-274

Page No.

12.1

IMP

Drawing name: V:\1609274 Brookside Forest\Drawings\Improvements\9274IMP.dwg, Plotted on: Nov 07, 2017, 12:28pm, Plotted by: jhowell