

ISSUE	DATE / REMARKS
1	3-3-2015 Initial Submittal
2	5-7-2015 City Comments
3	6-26-2015 City & PWSO #2 Comments
4	11-9-2015 City Comments
5	12-10-2015 City Comments

PROJECT TITLE
The Villages at Shady Creek
 OFFALON, MISSOURI

THE **STERLING** CO.
 ENGINEERS & SURVEYORS
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 St. Louis, Missouri 63129
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Date: 12/10/2015
 RODNEY ARNOLD
 LICENSE # PE-2002016612
 Civil Engineer

Lombardo Homes of St. Louis, LLC
 2299 Technology Drive, Suite 150
 O'Fallon, Missouri 63368
 Ph. (636) 265-2710
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 www.lombardohomesstlouislouis.com

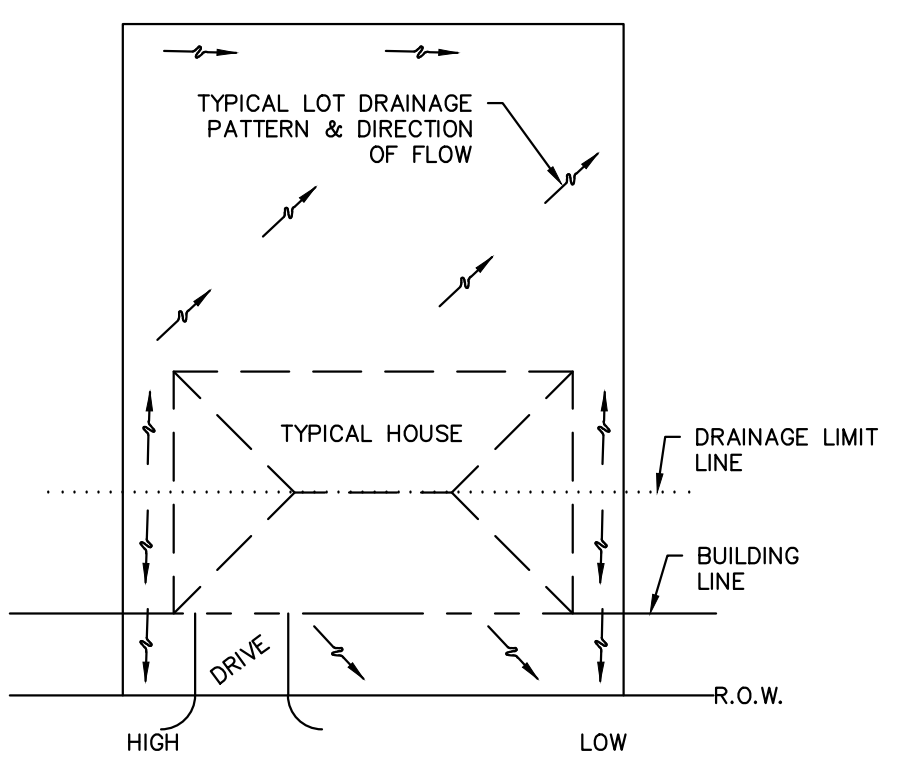
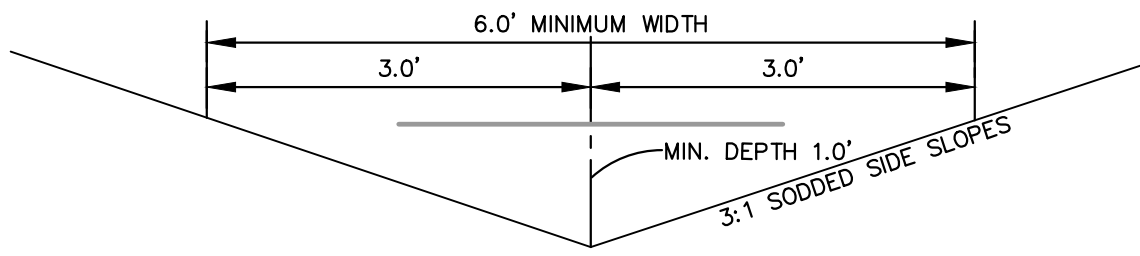
P+Z No. P&Z NO
 City No. 15-162-SP
 Date: 12/10/2015
 Job No. 14-03-087

Page No.
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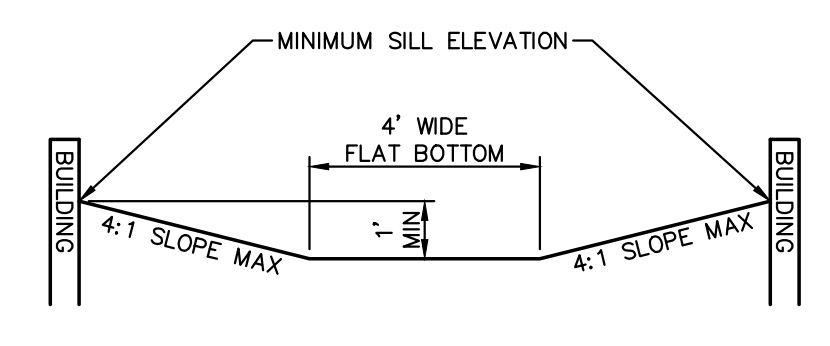
TYPICAL YARD SWALE

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

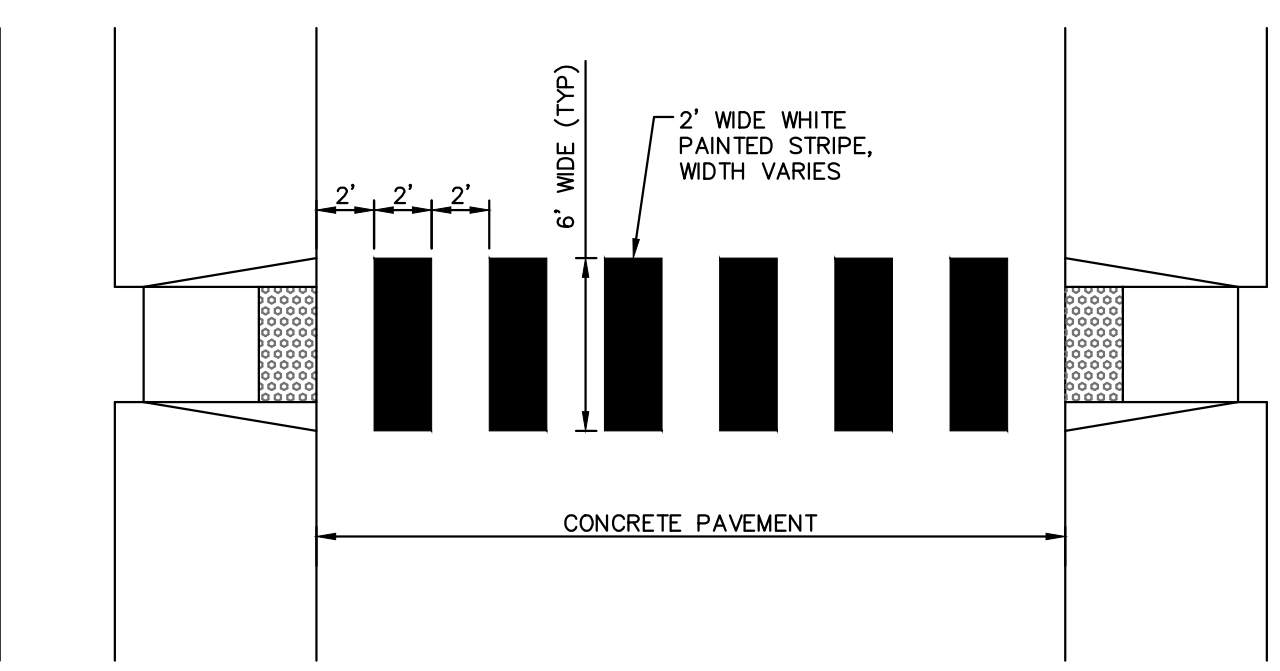
Longitudinal Slope (%)	Discharge (cfs)	Velocity (ft/sec)	Depth (ft)
0.5	3.00	1.73	0.76
1.0	3.00	2.23	0.67
2.0	3.00	2.87	0.59
3.0	1.99	3.00	0.47
4.0	1.30	3.00	0.38
5.0	0.92	3.00	0.32
6.0	0.70	3.00	0.28
7.0	0.52	3.00	0.24
8.0	0.43	3.00	0.22
9.0	0.36	3.00	0.20
10.0	0.32	3.00	0.19



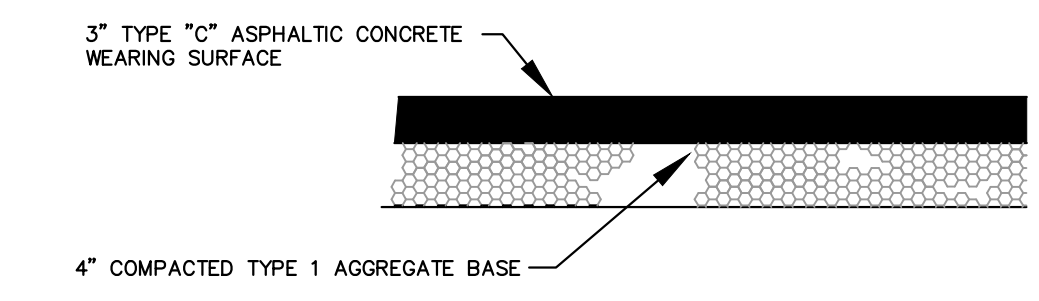
TYPICAL LOT DRAINAGE
 NOT TO SCALE



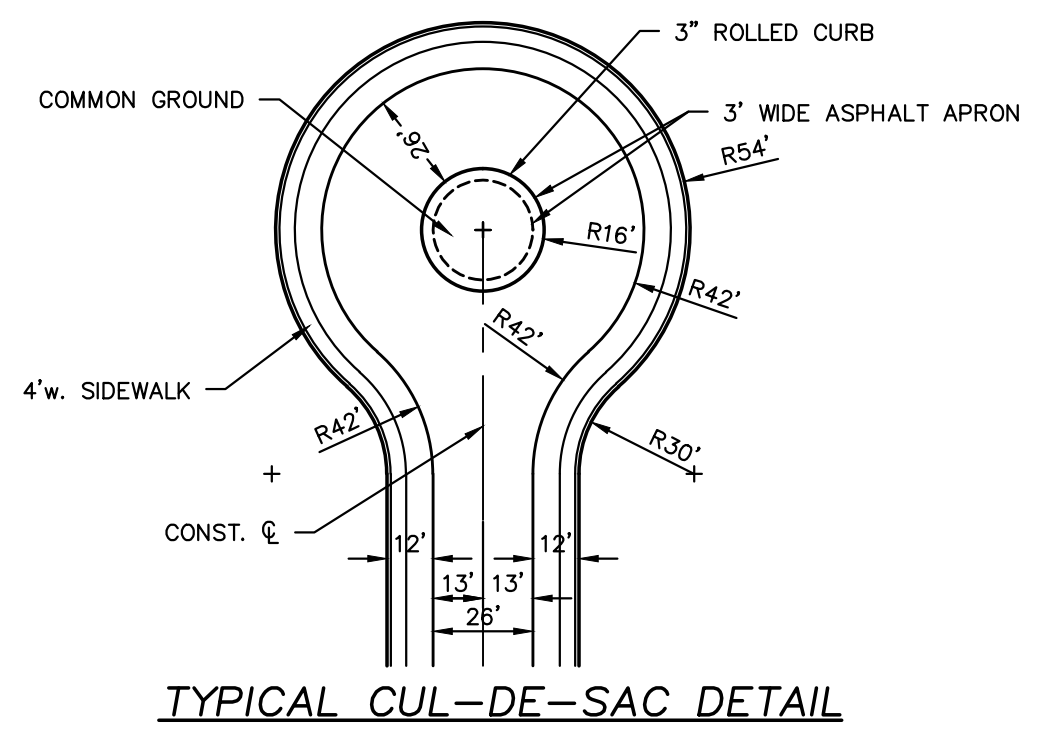
TYPICAL EMERGENCY RELIEF PATH SECTION
 NOT TO SCALE



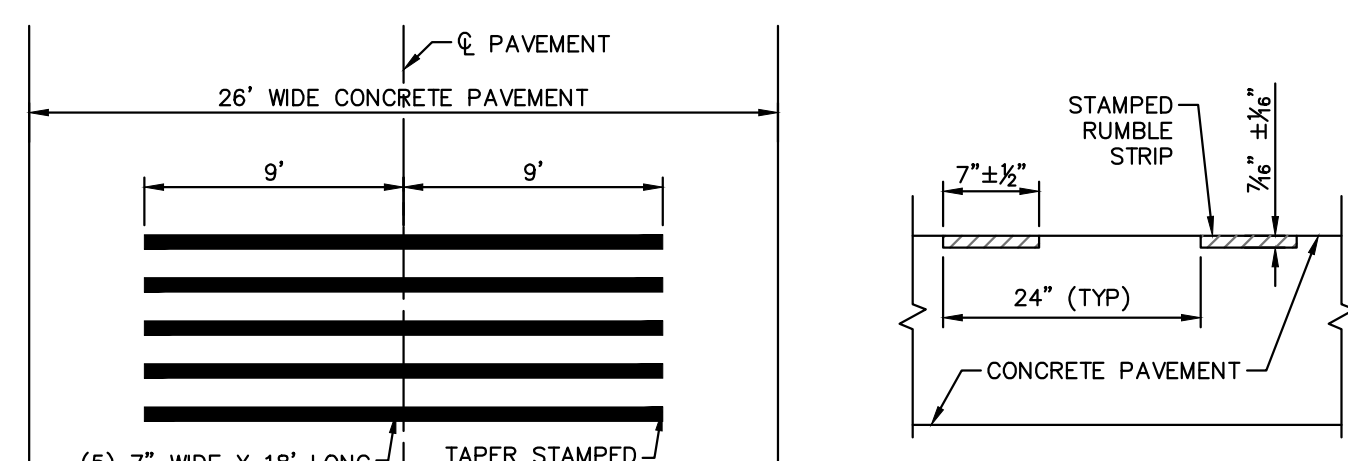
TYPICAL MID-BLOCK CROSSWALK DETAIL
 NOT TO SCALE



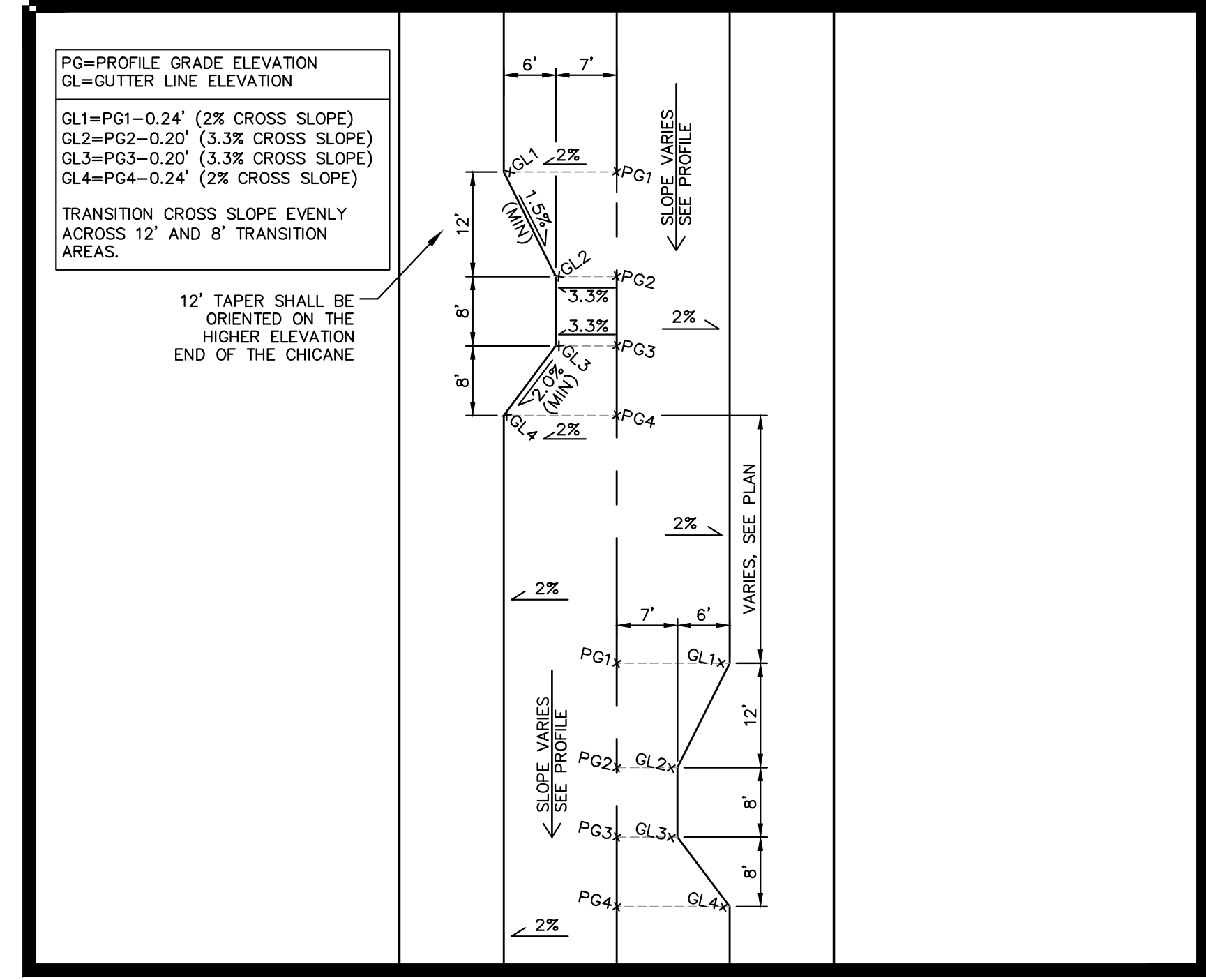
ASPHALT PAVEMENT DETAIL FOR WALKING TRAIL
 NOT TO SCALE



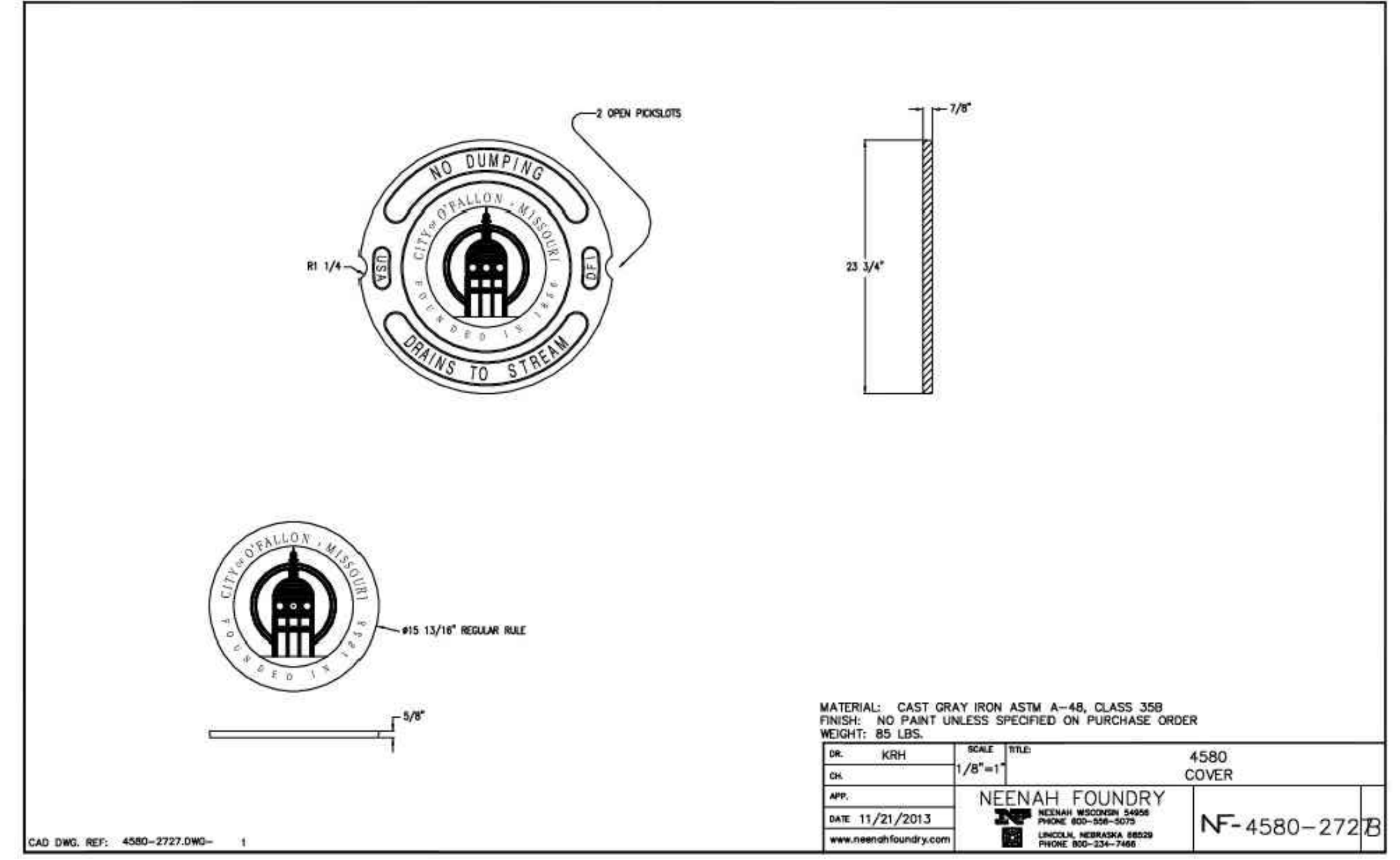
TYPICAL CUL-DE-SAC DETAIL
 NOT TO SCALE



PLAN SECTION TYPICAL RUMBLE STRIP DETAIL
 NOT TO SCALE

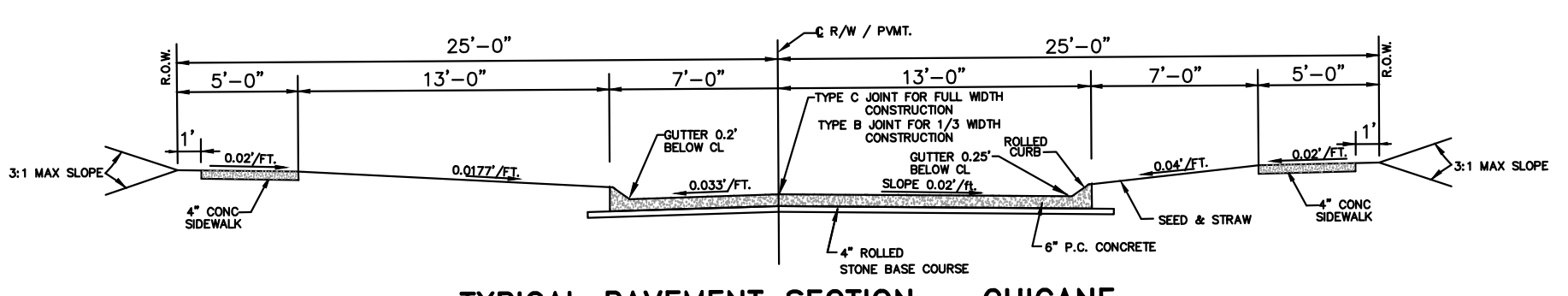


TYPICAL PLAN - TRAFFIC CALMING CHICANE
 N.T.S.



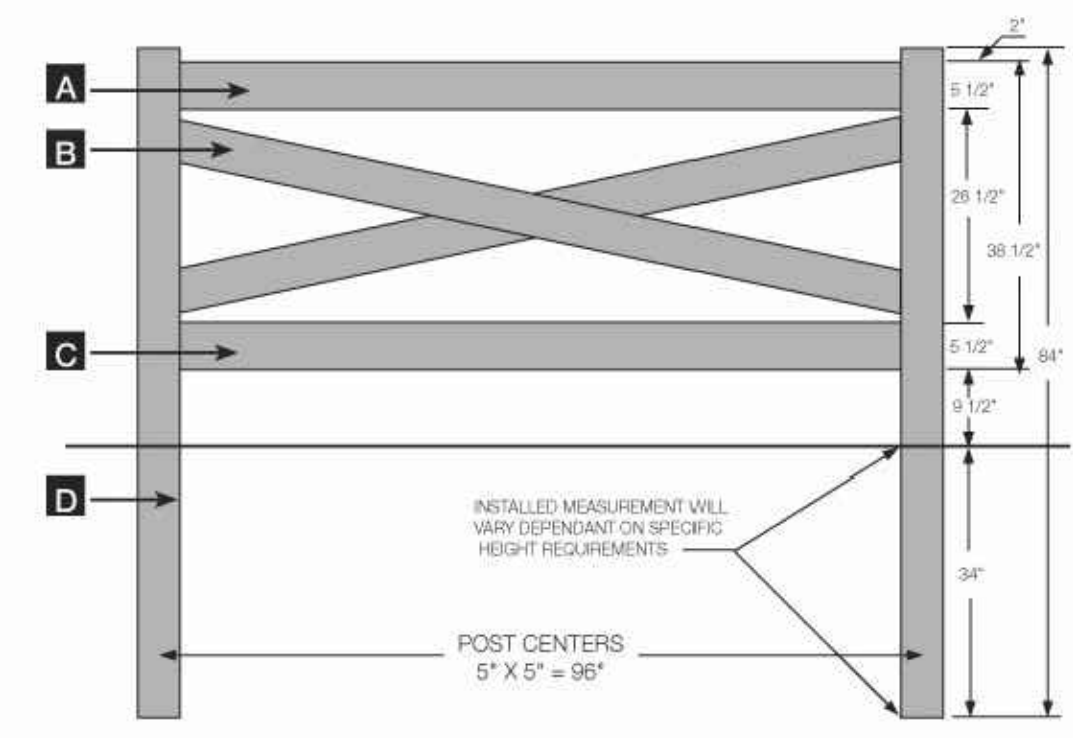
STORM SEWER LID DETAIL
 NOT TO SCALE

DR. KRH	SCALE: 1/8"=1'	TITLE: 4580 COVER
APP.:	NEENAH FOUNDRY	NF-4580-272B
DATE: 11/21/2013	NEENAH FOUNDRY	
CAD DWG. REF: 4580-2727.DWG-1		

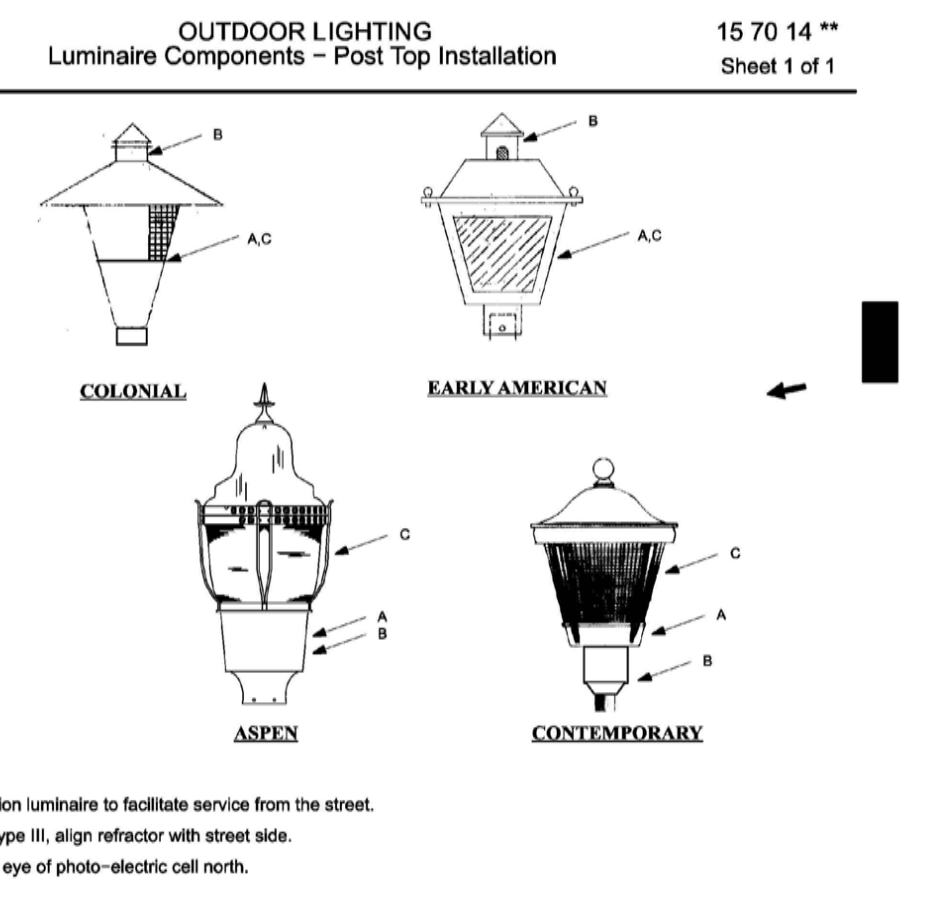


TYPICAL PAVEMENT SECTION - CHICANE
 RIGHT-OF-WAY TO BE PUBLIC

Crossback 4ft High X 8ft Wide

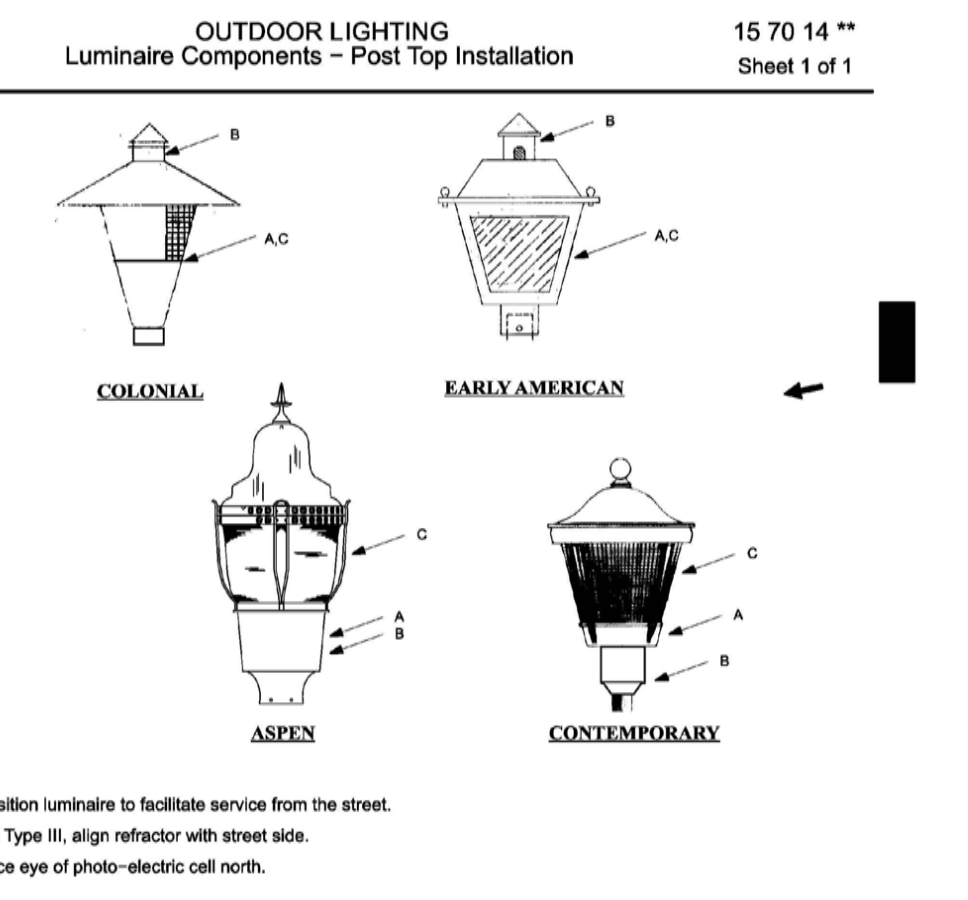


TYPICAL CROSSBACK FENCE DETAIL
 NOT TO SCALE



Dist. / Stk. 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									
B 38 01 525	Colonial, 100w, HPS, Type V	MO		1								
C 38 01 517	Early American, 100w, HPS, Type III	ALL		1								
D 38 01 518	Early American, 100w, HPS, Type V	MO			1							
E 38 01 942	Early American, 175w, MH, Type III	IL							1			
F 38 01 513	Contemporary, 100w, HPS, Type III	MO				1						
G 38 01 514	Contemporary, 100w, HPS, Type V	MO					1					
H 38 01 584	Aspen, 100w, HPS, Type III	MO							1			
I 38 01 585	Aspen, 100w, HPS, Type V	MO								1		
J 38 51 366	Switch, Photo electric Cell	MO	1	1	1	1	1	1	1	1	1	1
K 26 55 260	Lamp, 100w, HPS	MO	1	1	1	1	1	1	1	1	1	1
L 26 56 260	Lamp, 175w, MH	MO										1

TYPICAL STREET LIGHTING
 NOT TO SCALE



Dist. / Stk. 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									
B 38 01 525	Colonial, 100w, HPS, Type V	MO		1								
C 38 01 517	Early American, 100w, HPS, Type III	ALL		1								
D 38 01 518	Early American, 100w, HPS, Type V	MO			1							
E 38 01 942	Early American, 175w, MH, Type III	IL							1			
F 38 01 513	Contemporary, 100w, HPS, Type III	MO				1						
G 38 01 514	Contemporary, 100w, HPS, Type V	MO					1					
H 38 01 584	Aspen, 100w, HPS, Type III	MO							1			
I 38 01 585	Aspen, 100w, HPS, Type V	MO								1		
J 38 51 366	Switch, Photo electric Cell	MO	1	1	1	1	1	1	1	1	1	1
K 26 55 260	Lamp, 100w, HPS	MO	1	1	1	1	1	1	1	1	1	1
L 26 56 260	Lamp, 175w, MH	MO										1

616.8-3 (TA-3) Shoulder Work on Two-Lane Highways with Edgelines - MT

SPEED	SIGN SPACING (ft)		TAPER LENGTH (ft)		OPTIONAL BUFFER LENGTH (ft)	CHANNELIZER SPACING (ft)	
	Undivided (S)	Divided (S)	Shoulder (T1)	Lane (T2)		Tapers	Buffer/ Work Areas
0-35	200	-	70	-	250	35	50
40-45	350	-	150	-	300	40	100
50-55	500	-	185	-	495	50	100
60-70	1000	-	235	-	730	60	100

1 Shoulder taper length based on 10 ft. (standard shoulder width) offset. 2 Lane taper length based on 12 ft. (standard lane width) offset.

ROADWAY TYPE	SIGN HEIGHT	MAXIMUM WORK ZONE LENGTH (L)
URBAN	7' Portable	1 MI.
RURAL UNDIVIDED	5' Portable	3 MI.

In addition to shoulder work, this typical application is applicable to work beyond shoulder where vehicles and equipment are parked on the shoulder.

A protective vehicle shall be used while work is in progress. The protective vehicle should be equipped with a TMA and positioned at least 150 ft. in advance of the work space.

If encroachment onto driving surface occurs and there is not 10 ft. of driving surface available for the lane of traffic, that traffic lane shall be closed. Refer to appropriate lane closure typical applications.

If an arrow panel is used for an operation on the shoulder, the caution mode shall be displayed.

For short duration or mobile operations, signs, channelization devices, and protective vehicles may be reduced or eliminated if a work vehicle with activated rotating lights or strobe lights is used. However, if limited sight distance exists, a protective vehicle should be used. This protective vehicle should be equipped with a TMA and truck mounted flashing arrow panel and positioned at least 150 ft. in advance of the work space or work vehicle, as applicable. If a protective vehicle is used, a vehicle mounted sign shall be mounted at a recommended height of 4 ft. above the road surface.

For work beyond shoulder, where vehicles and equipment are parked on the shoulder, the protective vehicle may be eliminated if a work vehicle with activated rotating lights or strobe lights is used.

Vehicle hazard warning signals shall not be used instead of the vehicle's rotating lights or strobe lights.

Additional warning signs shall be erected at each intersection with another state highway within the work zone. Upon the discretion of the supervisor, additional warning signs may be erected at other intersections within the work zone.

Other appropriate signs may be used in lieu of SHOULDER WORK AHEAD sign.

TA-3 11/13