

## ADDENDUM NO. 1

**City of Mercer Island, Washington**  
**77<sup>th</sup> Ave SE & Sunset Hwy SE Intersection Improvements**  
**PROJECT NUMBER SP120**

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DATE OF ADDENDUM ISSUE: June 23, 2022  
DATE OF BID OPENING: June 30, 2022

### NOTE TO ALL PLANHOLDERS:

This Addendum No. 1, containing the following revisions, additions, deletions, and/or clarifications, is hereby made a part of the Plans and Contract Specifications (Contract Documents) for the above-named project. Bidders shall take this Addendum into consideration when preparing and submitting their bids.

Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 in the space provided on the Bid Summary or by signing in the space provided below and submitting the signed addendum with the bid package. Failure to provide this written acknowledgment may result in disqualification of the Bidder's submittal.

### CONTRACT SPECIFICATIONS

#### 1. Plan Sheets

DELETE Plan Sheets 4, 18, 23, 27, 29, & 30 and REPLACE with the attached Plan sheets 4, 18, 23, 27, 29, & 30. The attached sheet includes the following revision:

- Page 4: Lane Width Revision
- Page 18: Revision to the Bike Ramp Channelization and addition of detectable warning strip detail
- Page 23: Revision to the Channelization callout and lane widths
- Page 27: Revision to Phase Two and Three General Note 8.
- Page 29 & 30: Addition of note describing one-way flagging operation for Sunset Highway SE west leg.

#### 2. Special Provisions

- SUPPLEMENT Division 1-10.2 to read:

##### 1-10.2 Traffic Control Management

*(Special Provision)*

*Supplement*

Phase One: northbound 77th Ave SE traffic shall remain closed for duration of phase one construction at the intersection. Northbound access to chevron shall be provided at all times. Southbound traffic shall be maintained 24 hours per day. West segment of sunset highway traffic shall have flagger controlled access. Two way access shall be provided while contractor is on site. Right-in, right-out shall be provided while contractor is offsite. East segment sunset highway shall be closed at the intersection. Driveway/garage access shall be maintained to adjacent building.

Phases Two and Three: west segment of sunset highway one-way traffic shall only be allowed while contractor is on site and during crosswalk installation. Provide for two-way traffic during construction off hours. No temporary stoppage of southbound traffic will be allowed from 7:30am-9am and 300pm-6pm. Should any temporary stoppage of southbound traffic occur during the hours of 9am-3pm impact the 77th Ave SE off ramp, the contractor shall clear traffic immediately. Further traffic control restrictions may be required should 77th Ave SE off ramp operations be impacted.

- DELETE Appendix A and REPLACE with the attached Appendix A.
- DELETE Appendix B and REPLACE with the attached Appendix B.
- DELETE Appendix C

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**ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS REMAIN IN EFFECT.**

**Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 in the space provided on the Bid Summary Form or by signing in the space provided below and submitting the signed addendum with the bid package.** Failure to provide this written acknowledge may result in disqualification of the Bidder's submittal.

Sincerely,

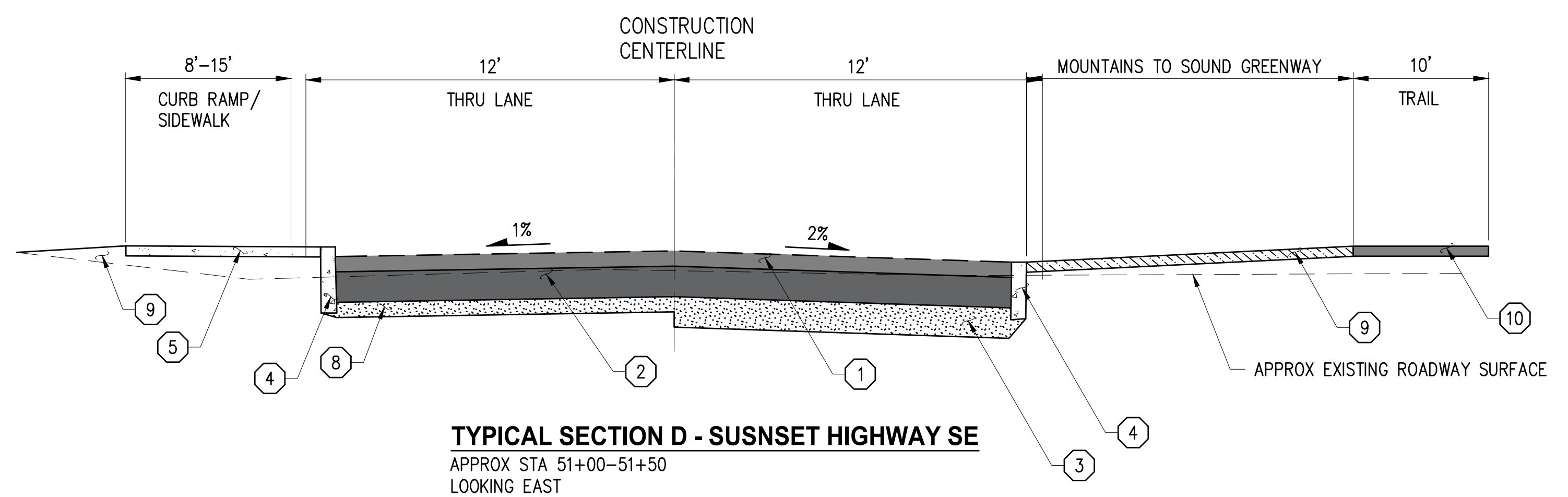
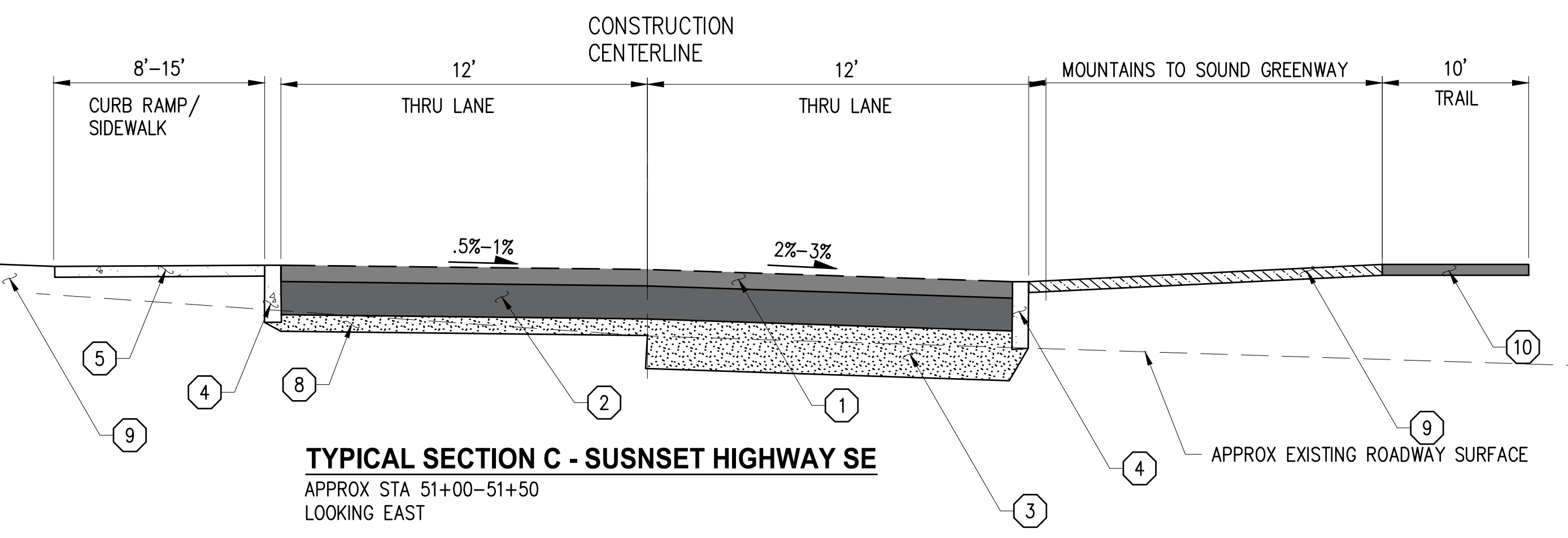
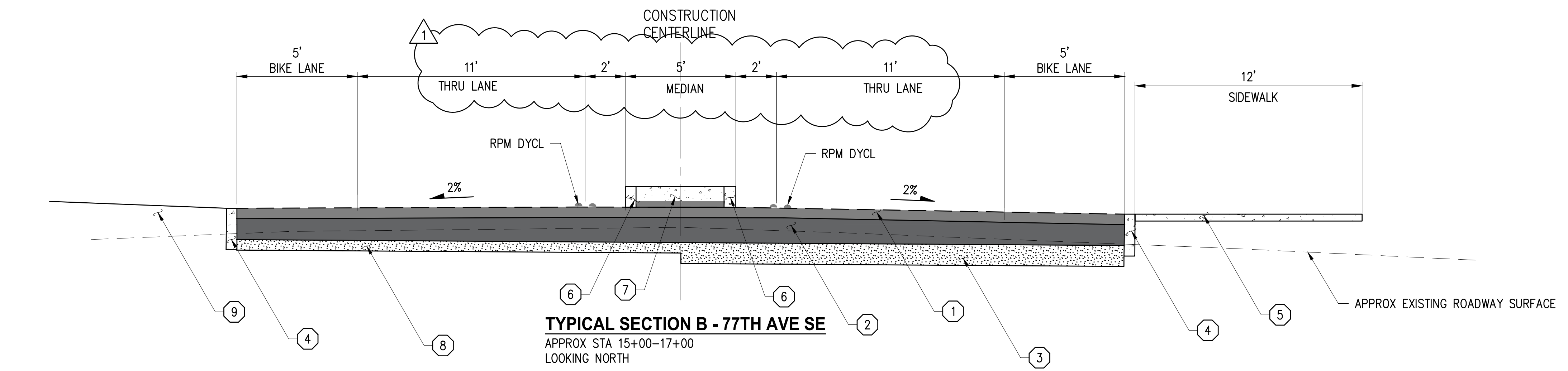
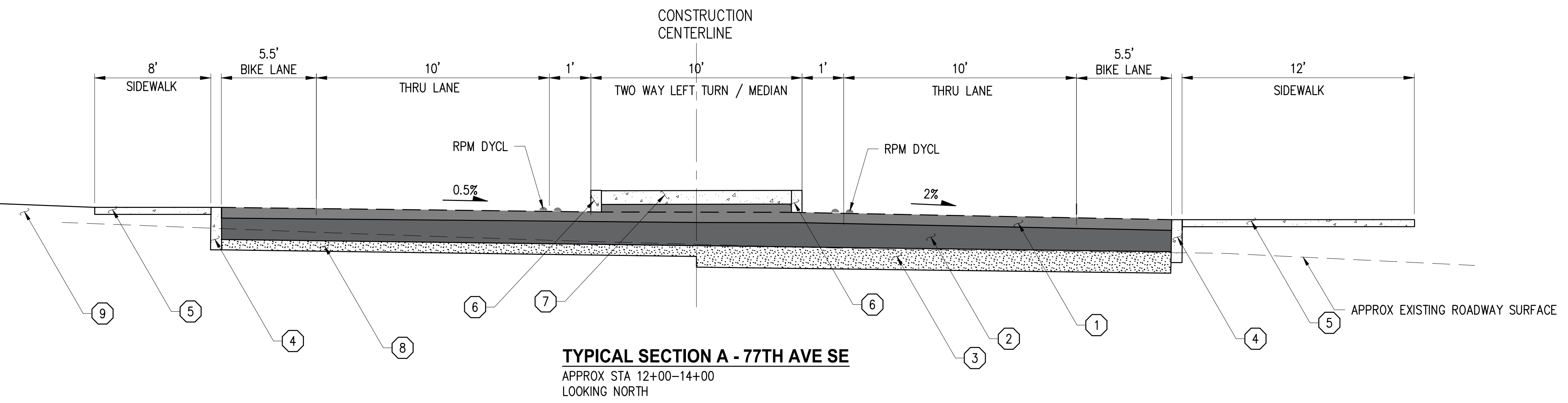
Lia Klein, PE  
City of Mercer Island  
Transportation Engineer

Receipt acknowledge, and conditions agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 2019

Bidder \_\_\_\_\_  
Signature

K:\PROJECTS\MERCER IS\21103-77th and Sunset Int Improvements\DESIGN\Drawings\Contract\21103RD-DET01.dwg 6/23/2022 9:02 AM

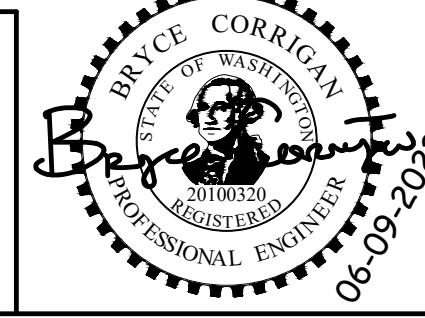
MATERIAL CODE	
#	DESCRIPTION
1	2" HMA CL 1/2" PG 58H-22 OVERLAY
2	6" HMA CL 1/2" PG 58H-22
3	2"-8" CRUSHED SURFACING BASE COURSE
4	CEMENT CONC. TRAFFIC CURB
5	CEMENT CONCRETE SIDEWALK. SEE SECTION, SHEET 8.
6	EXTRUDED CURB
7	RAISED MEDIAN. SEE DETAIL, SHEET 10
8	APPROX 2" CRUSHED SURFACING TOP COURSE
9	LANDSCAPING. MATCH EXISTING SURFACING.
10	HMA TRAIL OR WALKWAY. SEE SECTION, SHEET 8.



NO.	DATE	BY	APPR.	REVISIONS
1	6/23/22	BMC	BMC	LANE WIDTH REVISIONS

**Approved By**

ENGINEERING MANAGER	DATE
PROJECT MANAGER	DATE
PROJECT ENGINEER	DATE



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Seattle, WA 98121 206.286.1640  
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**BID DOCUMENT**

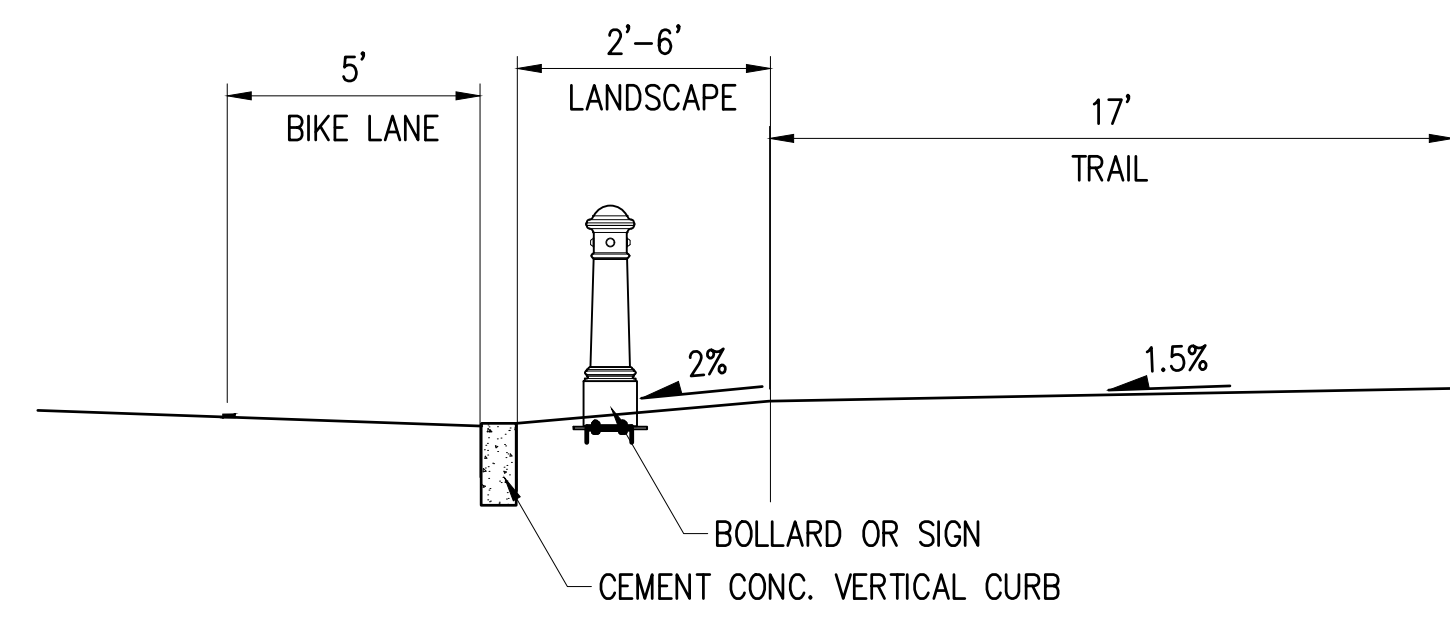
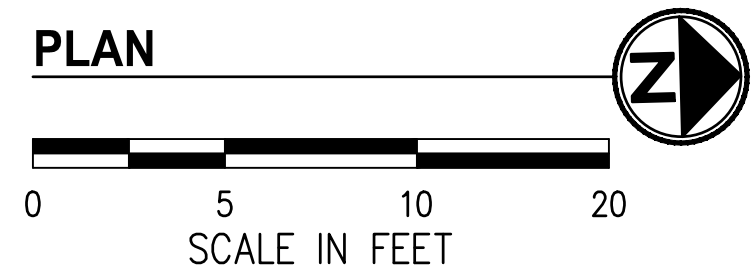
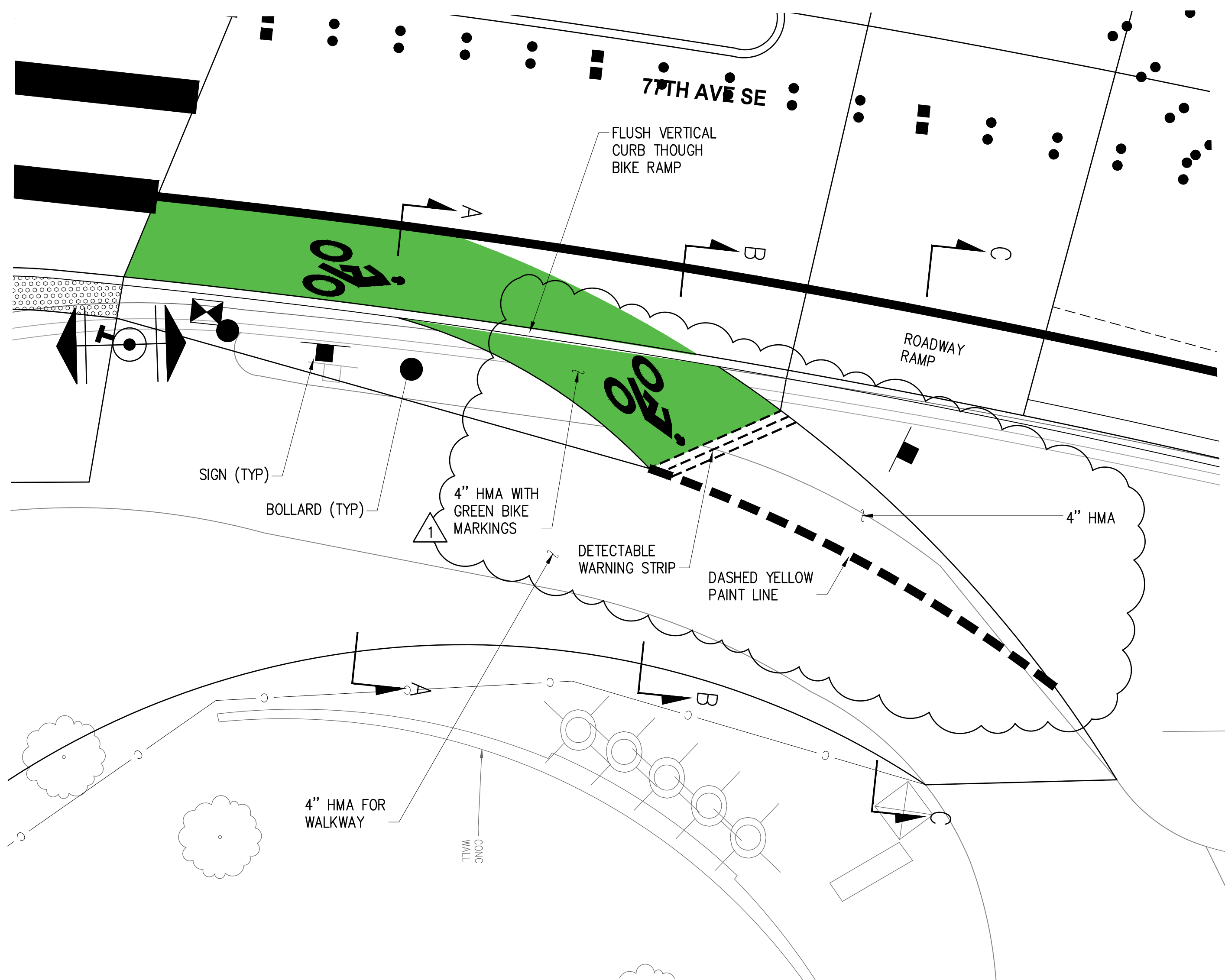


**CITY OF MERCER ISLAND**  
77TH AVE SE & SUNSET HWY SE  
INTERSECTION IMPROVEMENTS

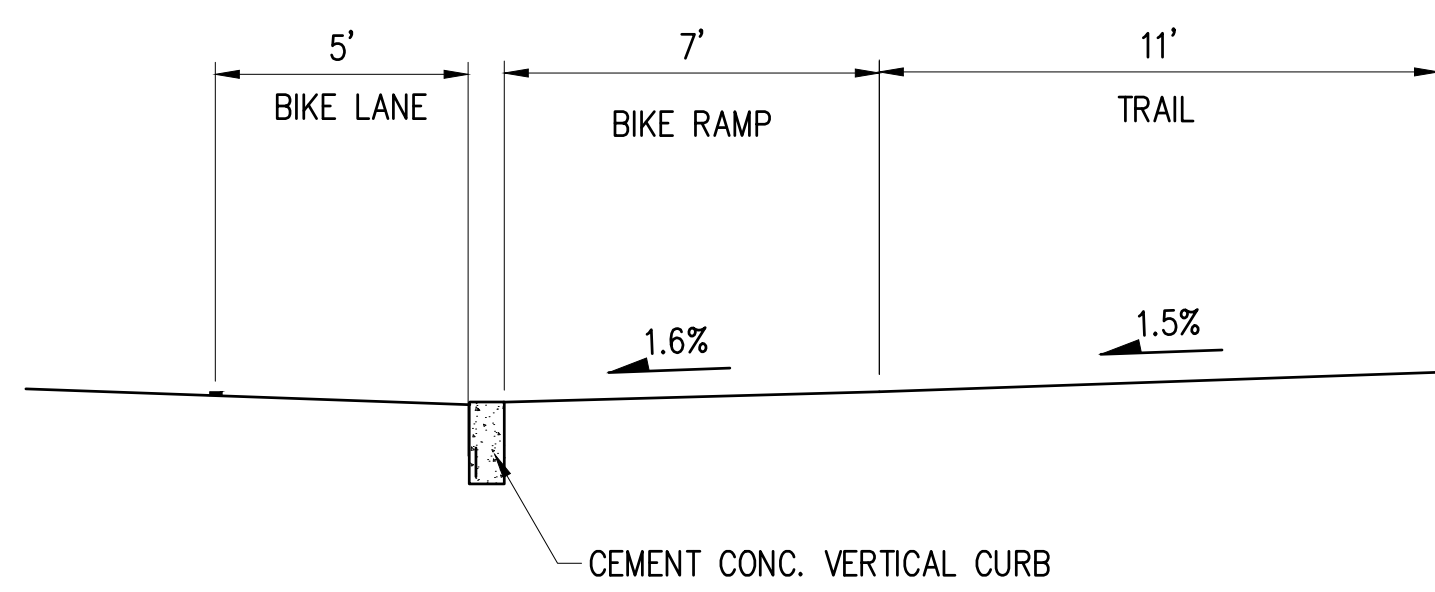
**TYPICAL SECTIONS**

KPG PROJECT No. 21103	SHT 4 OF 30
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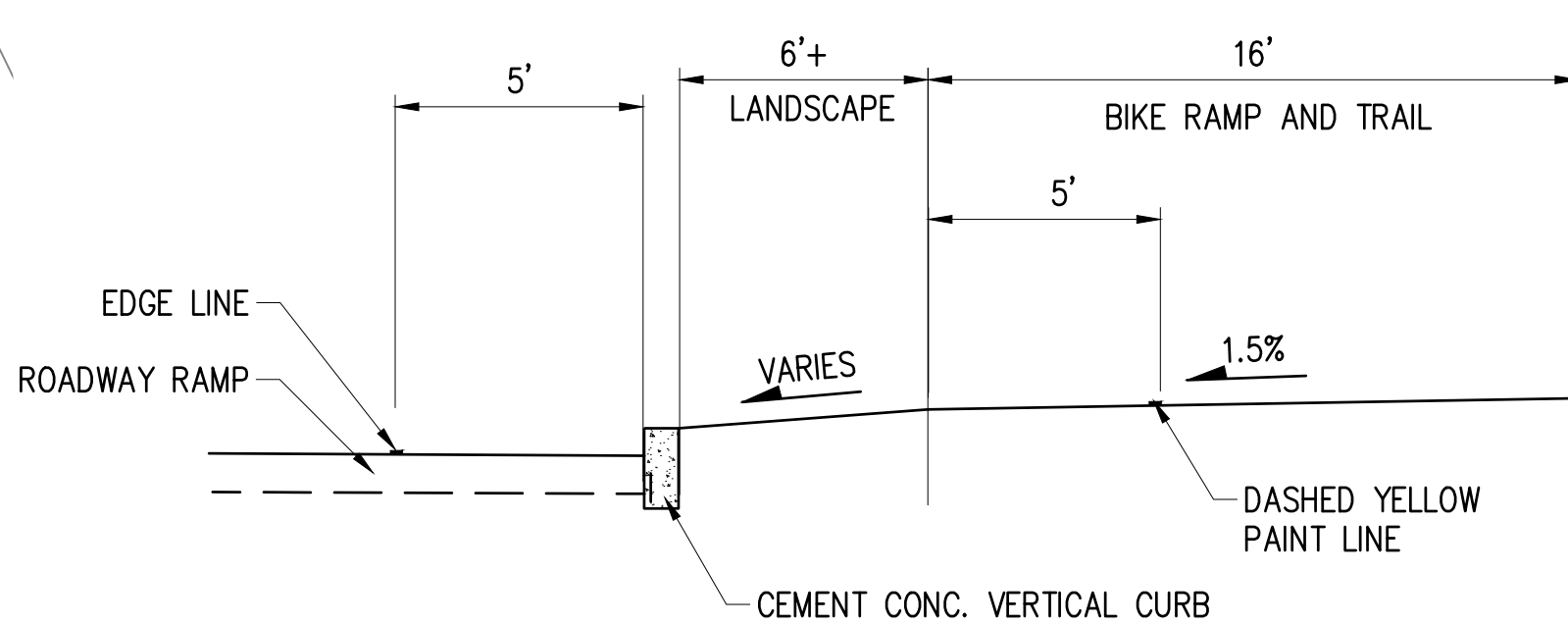
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SECTION A-A



SECTION B-B



SECTION C-C

**GENERAL NOTES**

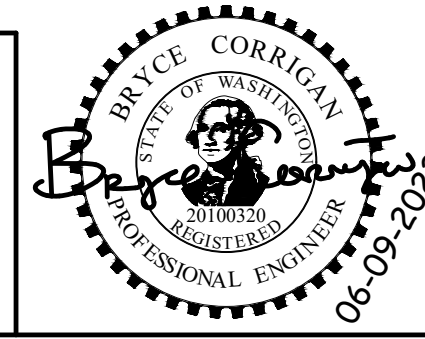
1. CURB RAMPS SHALL BE CONSTRUCTED TO MEET RUNNING AND CROSS SLOPES SHOWN.
2. CURB RAMPS AND LANDINGS SHALL BE PLANAR WITH NO GRADE BREAKS.
3. USE RADIUS DETECTABLE WARNING SURFACE (DWS) WHERE APPLICABLE. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER WSDOT STANDARD PLAN F-45.10-02.
4. CEMENT CONC. LANDINGS SHALL BE BRUSH FINISHED.

**LEGEND**

- PROPERTY LINE
- - - EXISTING RIGHT OF WAY
- [Pattern] CEMENT CONCRETE LANDING
- [Pattern] HMA CL 1/2" PG 58H-22
- [Pattern] SCORED CEMENT CONCRETE
- [Pattern] STAMPED CEMENT CONCRETE
- [Pattern] DETECTABLE WARNING SURFACE

NO.	DATE	BY	APPR.	REVISIONS
1	6/23/22	BMC	BMC	BIKE RAMP CHAN

<b>Approved By</b>		21103CURB-DET01.dwg
ENGINEERING MANAGER	DATE	BMC 5/22
PROJECT MANAGER	DATE	BMC 5/22
PROJECT ENGINEER	DATE	BMC 5/22
	CHECKED BY	DATE



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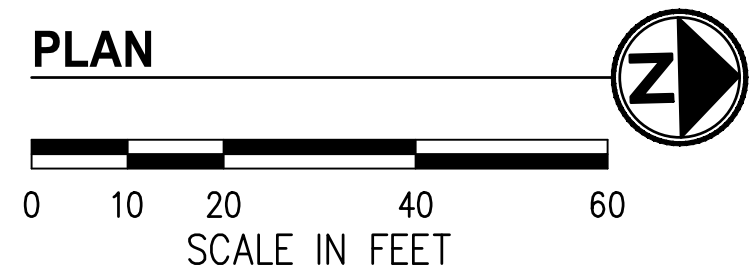
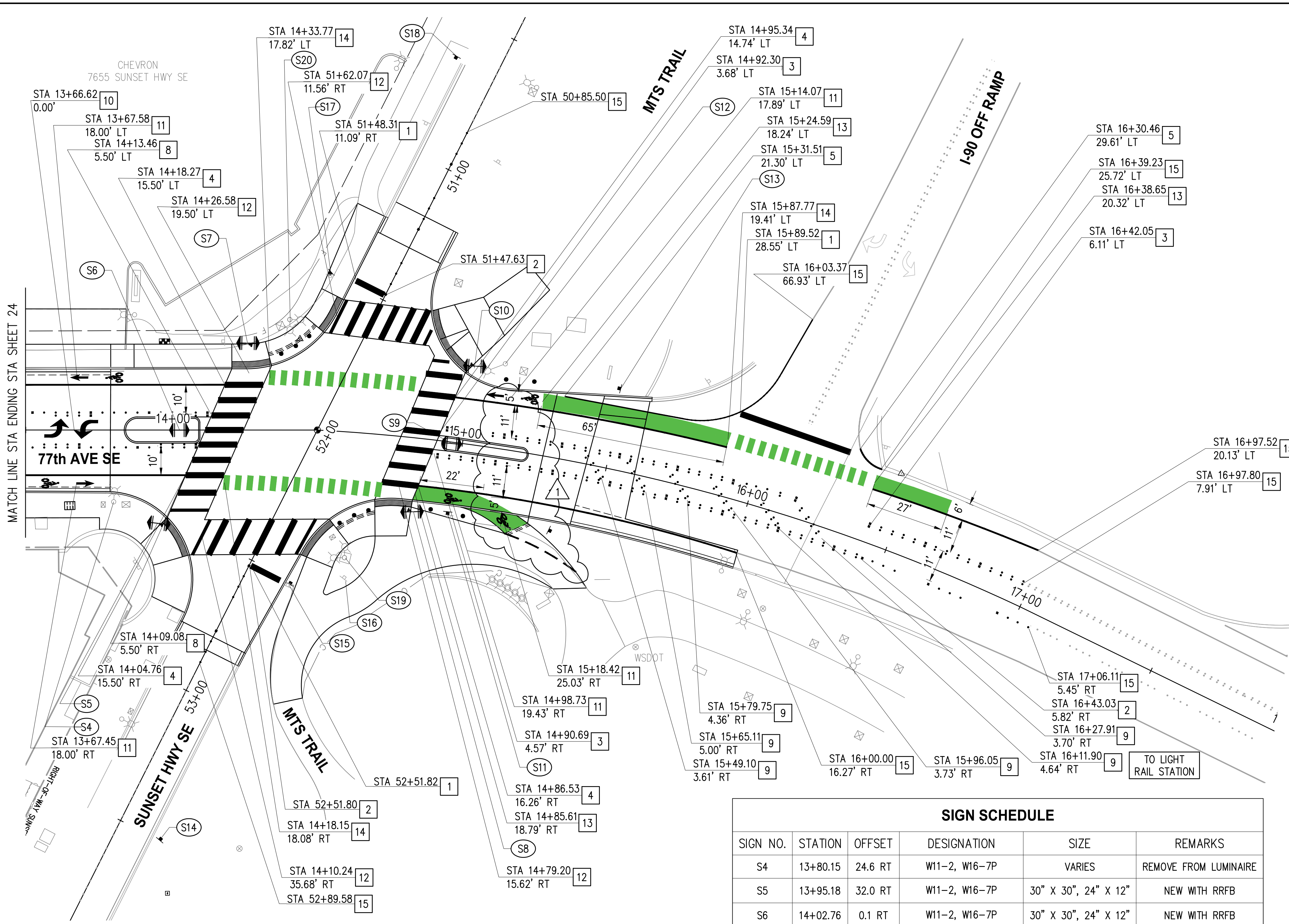
**BID DOCUMENT**



**CITY OF MERCER ISLAND**  
 77TH AVE SE & SUNSET HWY SE  
 INTERSECTION IMPROVEMENTS

<b>BIKE RAMP DETAIL</b>	
KPG PROJECT No. 21103	SHT 18 OF 30

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**GENERAL NOTES**

1. REMOVE ALL CONFLICTING EXISTING CHANNELIZATION. SEE SPECIFICATIONS FOR DETAILS.
2. ALL PAVEMENT MATERIAL SHALL CONFORM TO THE "STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION," LATEST EDITION, UNLESS OTHERWISE MODIFIED BY THE SPECIAL PROVISIONS.
3. PRESERVE AND PROTECT ALL SIGNS NOT IDENTIFIED FOR REMOVAL OR RELOCATION.
4. ALL SIGNS AND POSTS TO BE REMOVED SHALL BE SALVAGED TO CITY.
5. ALL NEW AND RELOCATED SIGNS TO HAVE NEW POSTS AND POST BASES. SEE DETAIL, SHEET 24.
6. CONTRACTOR SHALL FIELD LOCATE CHANNELIZATION FOR APPROVAL BY THE ENGINEER PRIOR TO FINAL PLACEMENT.
7. FOR RRFB ASSEMBLY DETAILS, SEE SHEET X & Y.

**CONSTRUCTION NOTES**

- 1 INSTALL 1' WIDE THERMOPLASTIC STOP BAR.
- 2 INSTALL LANE LINE PER WSDOT STD PLAN M-20.50.
- 3 INSTALL DOUBLE YELLOW CENTERLINE PER DETAIL, SHEET 24.
- 4 INSTALL PAINTED WIDE EDGE LINE PER WSDOT STD PLAN M-20.10.
- 5 INSTALL PAINTED EDGE LINE PER WSDOT M-20.10.
- 8 INSTALL TWO-WAY LEFT-TURN CENTERLINE PER WSDOT STD PLAN M-20.50.
- 9 INSTALL RPM HACHURES PER DETAIL, SHEET 24.
- 10 INSTALL THERMOPLASTIC TYPE 2SL TRAFFIC ARROW PER WSDOT STD PLAN M-24.40.
- 11 INSTALL BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9.50.
- 12 INSTALL THERMOPLASTIC CROSSWALK MARKINGS PER WSDOT STD PLAN M-15.10.
- 13 INSTALL THERMOPLASTIC GREEN BIKE MARKINGS PER DETAIL, SHEET 24.
- 14 INSTALL THERMOPLASTIC GREEN CROSSBIKE MARKINGS PER DETAIL, SHEET 24.
- 15 MATCH EXISTING CHANNELIZATION.

**SIGN SCHEDULE**

SIGN NO.	STATION	OFFSET	DESIGNATION	SIZE	REMARKS
S4	13+80.15	24.6 RT	W11-2, W16-7P	VARIES	REMOVE FROM LUMINAIRE
S5	13+95.18	32.0 RT	W11-2, W16-7P	30" X 30", 24" X 12"	NEW WITH RRFB
S6	14+02.76	0.1 RT	W11-2, W16-7P	30" X 30", 24" X 12"	NEW WITH RRFB
S7	14+26.02	29.9 LT	W11-2, W16-7P	30" X 30", 24" X 12"	NEW WITH RRFB
S8	14+85.84	25.3 RT	W11-2, W16-7P	30" X 30", 24" X 12"	NEW WITH RRFB
S9	14+95.86	0.3 RT	W11-2, W16-7P	30" X 30", 24" X 12"	NEW WITH RRFB
S10	15+00.65	26.2 LT	W11-2, W-16-7P	30" X 30", 24" X 12"	NEW WITH RRFB
S11	14+97.99	24.3 RT	D3-1, "77TH AVE SE"	VARIES X 8"	REMOVE AND REPLACE
S12	15+10.53	29.1 LT	W11-2, W16-7P	VARIES	REMOVE FROM LUMINAIRE
S13	15+49.30	27.7 LT	W11 CUSTOM, "RAISED INTERSECTION AHEAD"	36" X 36"	NEW

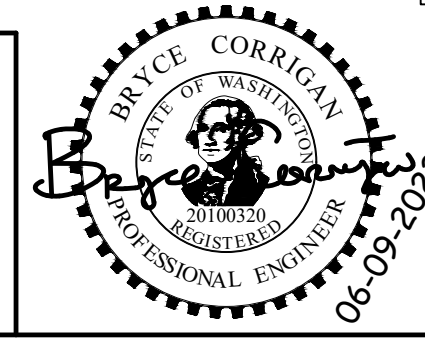
**SIGN SCHEDULE**

SIGN NO.	STATION	OFFSET	DESIGNATION	SIZE	REMARKS
S14	53+50.00	15.0 LT	W11 CUSTOM, "RAISED INTERSECTION AHEAD"	36" X 36"	NEW
S15	52+52.00	15.5 LT	R1-1, D3-1	36" X 36", VARIES X 8"	REMOVE AND REPLACE
S16	52+42.00	32.0 LT	CUSTOM, TO METRO PARK AND RIDE	12" X 18"	PROTECT
S17	51+50.00	20.0 RT	R1-1, D3-1	36" X 36", VARIES X 8"	REMOVE AND REPLACE
S18	50+64.00	15.0 RT	W11 CUSTOM, "RAISED INTERSECTION AHEAD"	36" X 36"	NEW
S19	52+34.90	28.3 LT	FLAG CROSSING INSTRUCTIONS	N/A	REMOVE
S20	51+71.00	25.0 RT	FLAG CROSSING INSTRUCTIONS	N/A	REMOVE

NO.	DATE	BY	APPR.	REVISIONS
1	6/23/22	BMC	BMC	CHANNELIZATION

**Approved By**

ENGINEERING MANAGER	DATE	21103CHAN.dwg
PROJECT MANAGER	DATE	FILENAME
PROJECT ENGINEER	DATE	BMC 5/22
		DESIGNED BY MKE 5/22
		DRAWN BY BMC 5/22
		CHECKED BY DATE



**BID DOCUMENT**

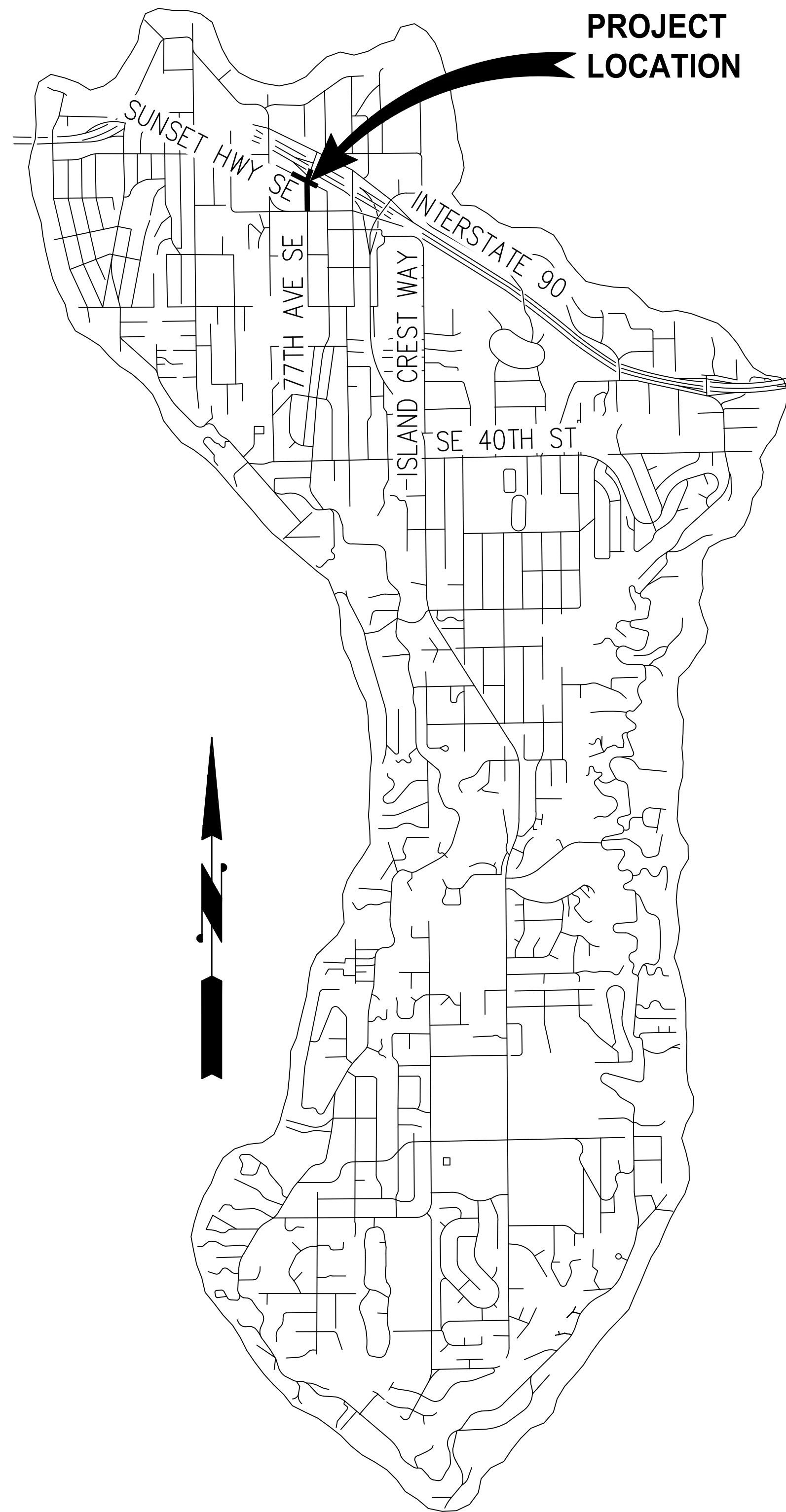


**CITY OF MERCER ISLAND**  
**77TH AVE SE & SUNSET HWY SE**  
**INTERSECTION IMPROVEMENTS**

**CHANNELIZATION & SIGNING PLAN**

KPG PROJECT No. 21103 SHT 23 OF 30

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**VICINITY MAP**  
NTS

**PROJECT LOCATION**

**CHANNELIZATION DEVICE SPACING**

POSTED SPEED LIMIT (MPH)	IN TAPER (FEET)	IN TANGENT (FEET)
25 / 30	10 TO 20	40

**SIGN SPACING = X (1)**

ROAD TYPE	SPEED LIMIT	SIGN SPACING
URBAN STREETS	25 MPH OR LESS	100' ± (1)
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±

(1) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS

**MIN TAPER LENGTH = L (feet)**

LANE WIDTH (FEET)	POSTED SPEED (MPH)		
	25	30	35
10	105	150	205
11	115	165	225
12	125	180	245

**BUFFER DATA**

LONGITUDINAL BUFFER SPACE = B						
POSTED SPEED (MPH)	25	30	35	40	45	50
LENGTH (B)	155'	200'	250'	305'	360'	425'
PROTECTION VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.					NO SPECIFIED DISTANCE REQUIRED	

**DESIGN DATA**

FUNCTIONAL CLASS:	77TH AVE SE URBAN ARTERIAL
HIGHWAY DESIGN CLASS:	N/A
NHS STATUS:	NON-NHS
DESIGN MATRIX:	4
I-90 ACCESS CONTROL:	LIMITED ACCESS FULLY CONTROLLED
77TH AVE SE ACCESS:	CATEGORY 2
DESIGN VEHICLE:	SU-30
POSTED/ DESIGN SPEED:	25 MPH/25 MPH
TERRAIN:	ROLLING
TRUCK %:	9
MILE POST RANGE	6.8-6.9
I-90	090 P1 0656 & 090 LX 00685

**GENERAL NOTES**

1. MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.
2. ALL TRAFFIC CONTROL TO COMPLY WITH MUTCD REQUIREMENTS.
3. MINIMUM TEMPORARY LANE WIDTHS SHALL BE 10'.
4. ALL CONSTRUCTION SIGNS ARE CLASS C UNLESS DESIGNATED OTHERWISE.
5. THE CONTRACTOR IS REQUIRED TO PROVIDE PEDESTRIAN ACCESS PER SECTION 1-10 OF THE SPECIAL PROVISIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY'S PROJECT MANAGER IMMEDIATELY SHOULD TRAFFIC CONTROL CONFLICTS, COORDINATION, AND SAFETY CONCERNS ARISE WITH SOUND TRANSIT'S CONCURRENT PROJECT CONSTRUCTION AND TRAFFIC CONTROL NEEDS.
7. PHASE ONE: NORTHBOUND 77TH AVE SE TRAFFIC SHALL REMAIN CLOSED FOR DURATION OF PHASE ONE CONSTRUCTION AT THE INTERSECTION. NORTHBOUND ACCESS TO CHEVRON SHALL BE PROVIDED AT ALL TIMES. SOUTHBOUND TRAFFIC SHALL BE MAINTAINED 24 HOURS PER DAY. WEST SEGMENT OF SUNSET HIGHWAY TRAFFIC SHALL HAVE FLAGGER CONTROLLED ACCESS. TWO WAY ACCESS SHALL BE PROVIDED WHILE CONTRACTOR IS ON SITE. RIGHT-IN, RIGHT-OUT SHALL BE PROVIDED WHILE CONTRACTOR IS OFFSITE. EAST SEGMENT SUNSET HIGHWAY SHALL BE CLOSED AT THE INTERSECTION. DRIVEWAY/GARAGE ACCESS SHALL BE MAINTAINED TO ADJACENT BUILDING.
8. PHASES TWO AND THREE: WEST SEGMENT OF SUNSET HIGHWAY ONE-WAY TRAFFIC SHALL ONLY BE ALLOWED WHILE CONTRACTOR IS ON SITE AND DURING CROSSWALK INSTALLATION. PROVIDE FOR TWO-WAY TRAFFIC DURING CONSTRUCTION OFF HOURS. NO TEMPORARY STOPPAGE OF SOUTHBOUND TRAFFIC WILL BE ALLOWED FROM 7:30AM-9AM AND 300PM-6PM. SHOULD ANY TEMPORARY STOPPAGE OF SOUTHBOUND TRAFFIC OCCUR DURING THE HOURS OF 9AM-3PM IMPACT THE 77TH AVE SE OFF RAMP, THE CONTRACTOR SHALL CLEAR TRAFFIC IMMEDIATELY. FURTHER TRAFFIC CONTROL RESTRICTIONS MAY BE REQUIRED SHOULD 77TH AVE SE OFF RAMP OPERATIONS BE IMPACTED.
9. WORK HOURS SHALL BE 7AM - 6PM, ANY CONSECUTIVE 8 HOUR PERIOD. SEE SPECIAL PROVISIONS SECTION 1-08.
10. PROTECTION OF DROP-OFFS AND ABRUPT EDGES SHALL BE PER THE WSDOT STANDARD SPECIFICATIONS.

FOR USE AND ADOPTION BY THE CONTRACTOR PER SPECIAL PROVISION 1-10.  
TRAFFIC CONTROL AND PHASING PLAN PREPARED BY:  
BRYCE CORRIGAN, PE  
KPG PSOMAS  
BRYCE@KPG.COM, 206-267-1039  
MERCER ISLAND PROJECT MANAGER:  
LIA KLEIN, PE  
LIA.KLEIN@MERCERISLAND.GOV, 206-275-7655

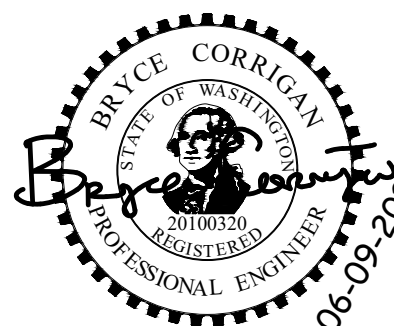
**WSDOT NORTHWEST REGION  
APPROVED TRAFFIC CONTROL PLAN**

TRAFFIC ENGINEER - AREA OPERATIONS \_\_\_\_\_  
SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
PRINT \_\_\_\_\_  
ENGINEERING MANAGER \_\_\_\_\_  
SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
PRINT \_\_\_\_\_

NO.	DATE	BY	APPR.	REVISIONS
1	6/23/22	BMC	BMC	WORK HOUR RESTRICTIONS

**Approved By**

ENGINEERING MANAGER	DATE	21103TC.dwg	
PROJECT MANAGER	DATE	BMC	5/22
PROJECT ENGINEER	DATE	BMC	5/22
		BMC	5/22
		BMC	5/22
		BMC	5/22



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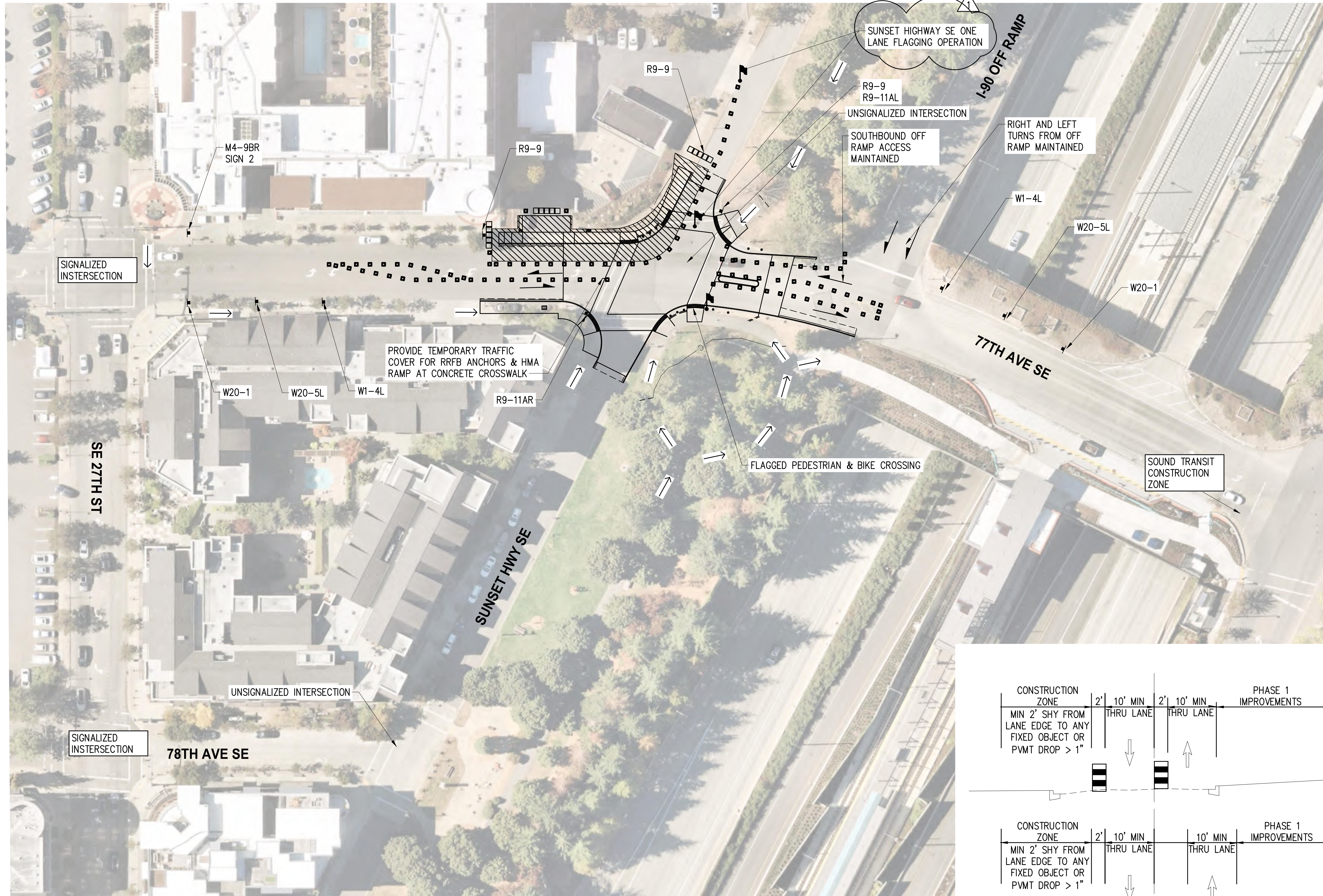
**BID DOCUMENT**



**CITY OF MERCER ISLAND  
77TH AVE SE & SUNSET HWY SE  
INTERSECTION IMPROVEMENTS**

**TRAFFIC CONTROL & DETOUR PLANS  
TRAFFIC CONTROL GENERAL NOTES**

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**TRAFFIC CONTROL LEGEND**

- SIGN
- WORK ZONE
- FLAGGER
- TYPE-2 BARRICADE
- VEHICLE PATH
- PEDESTRIAN/BICYCLE PATH
- CHANNELIZATION DEVICE
- PORTABLE CHANGEABLE MESSAGE SYSTEM

W20-1

W20-7A

W1-4L

M4-9BR

M4-9BL

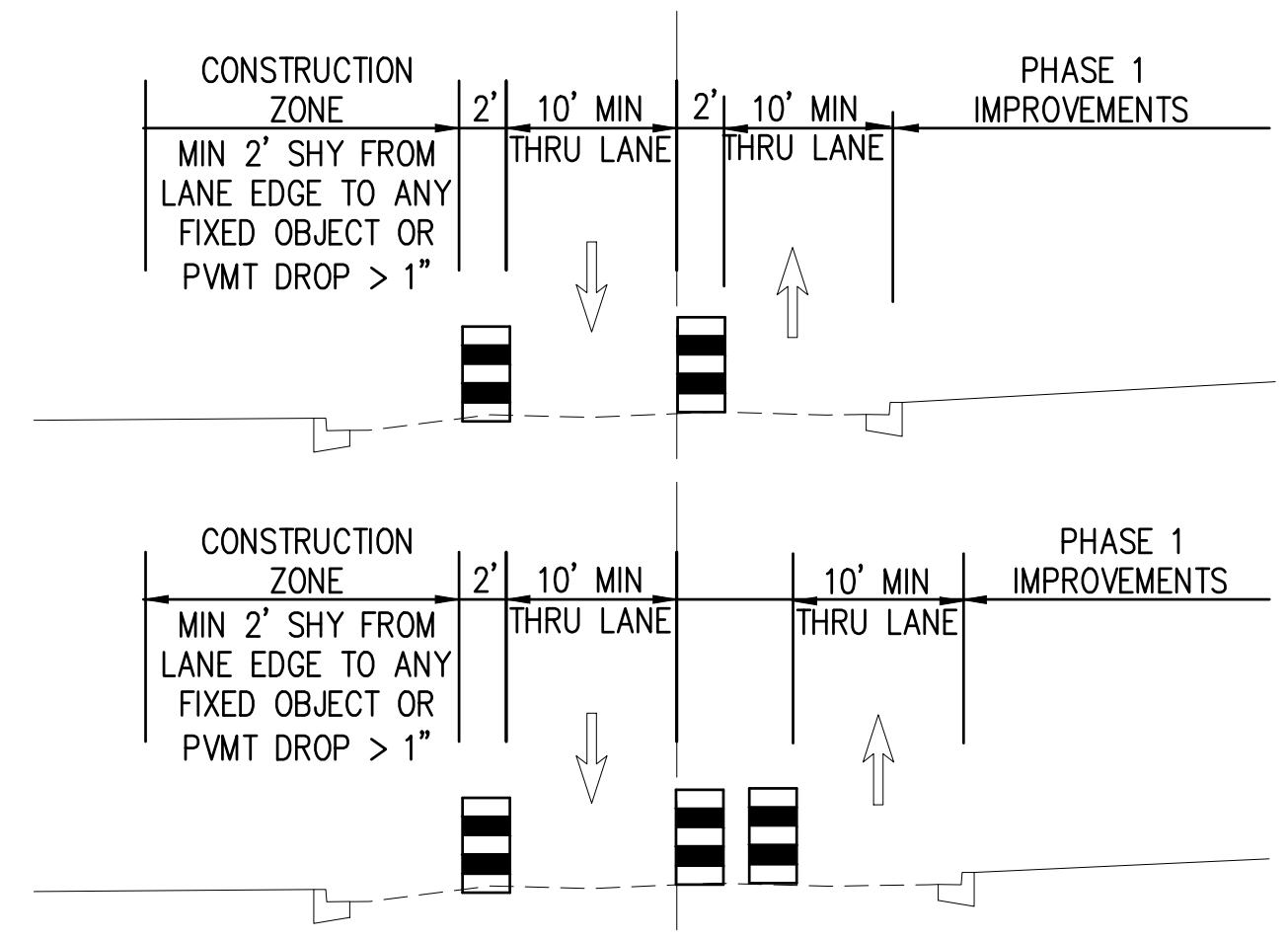
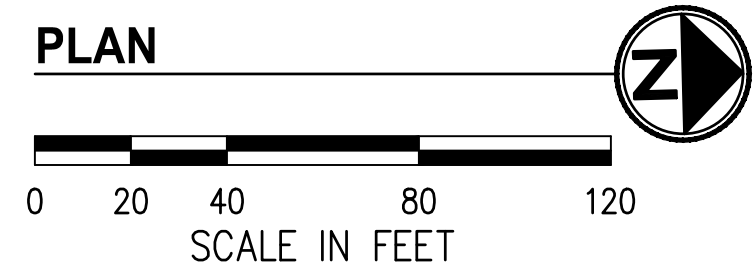
M4-9A(R)

R9-9

CUST1

R9-11AR/L



**TEMPORARY TRAFFIC CONTROL TYPICAL SECTION**  
NTS

**WSDOT NORTHWEST REGION  
APPROVED TRAFFIC CONTROL PLAN**

TRAFFIC ENGINEER - AREA OPERATIONS \_\_\_\_\_

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

PRINT \_\_\_\_\_

ENGINEERING MANAGER \_\_\_\_\_

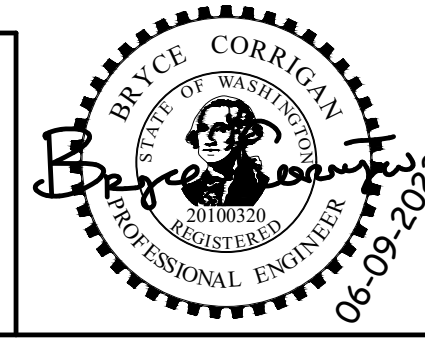
SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

PRINT \_\_\_\_\_

NO.	DATE	BY	APPR.	REVISIONS
1	6/23/22	BMC	BMC	FLAGGING CLARIFICATION

**Approved By**

ENGINEERING MANAGER	DATE
PROJECT MANAGER	DATE
PROJECT ENGINEER	DATE



**KPG PSOMAS**

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Seattle, WA 98121 206.286.1640  
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**BID DOCUMENT**



**CITY OF MERCER ISLAND  
77TH AVE SE & SUNSET HWY SE  
INTERSECTION IMPROVEMENTS**





# APPENDIX A

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## **PREVAILING WAGES**

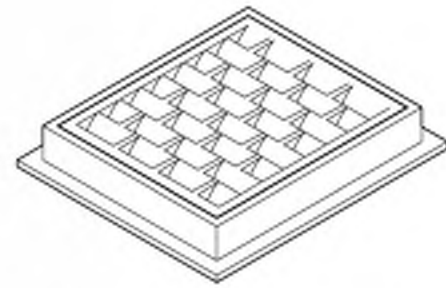
The State of Washington prevailing wage rates for King County apply to work performed under this contract. The applicable prevailing wage rates may be found at the following website address of the Department of Labor and Industries:

<https://secure.lni.wa.gov/wagelookup/>

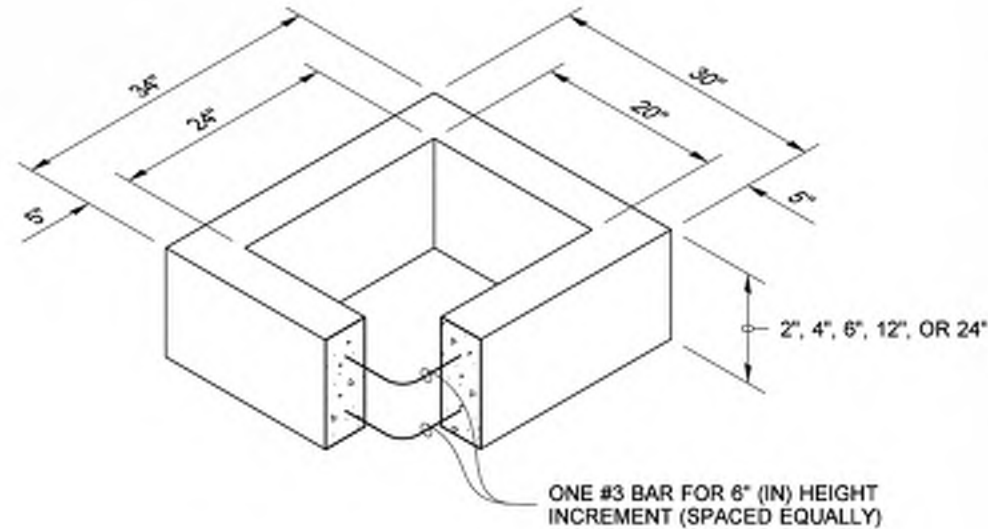
Based on the bid submittal date for this project, the applicable date for prevailing wages for this project is June 30, 2022. A copy of the applicable prevailing wage rates are also available for viewing at the City of Mercer Island, Maintenance Department located at 9601 SE 36th Street.

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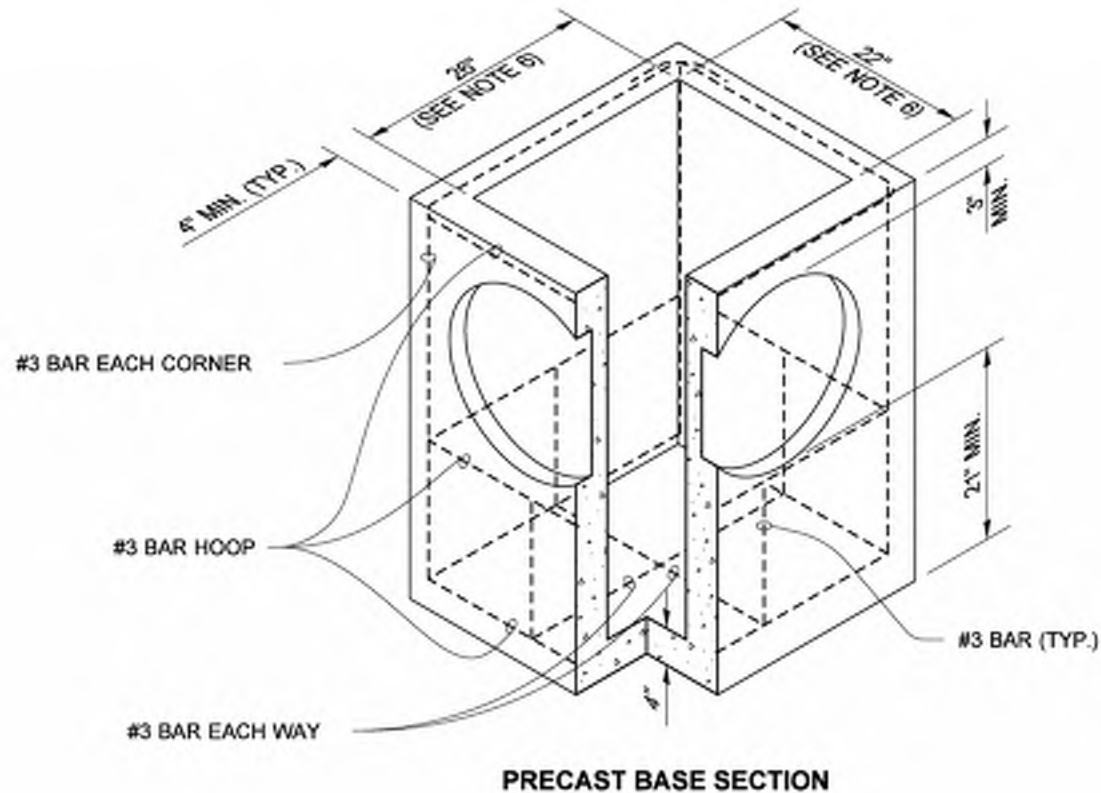
## APPENDIX B



**FRAME AND VANED GRATE**



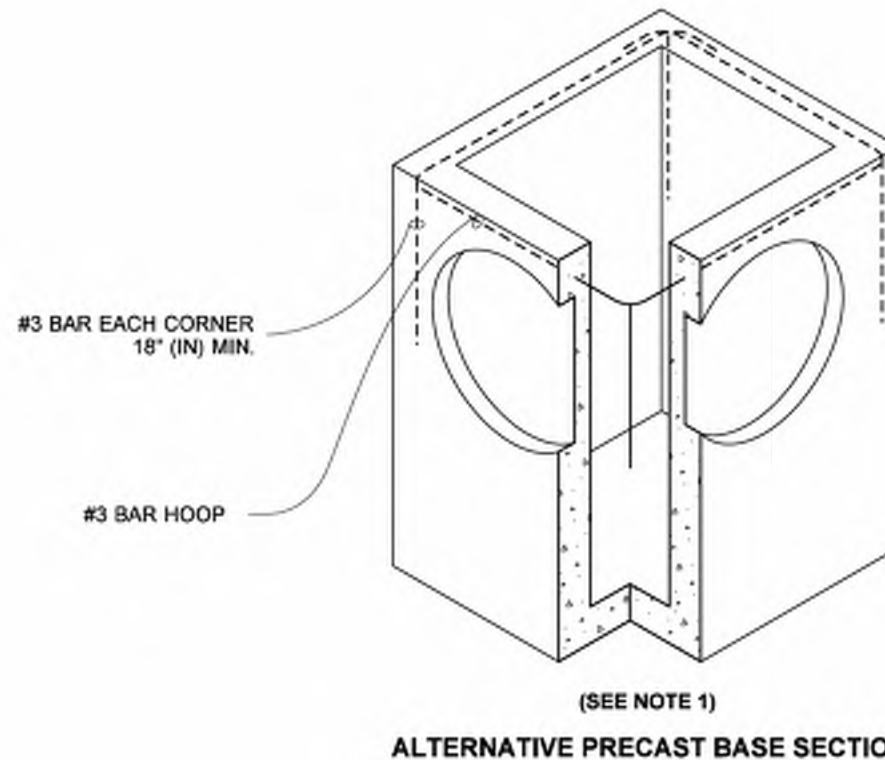
**RECTANGULAR ADJUSTMENT SECTION**



**PRECAST BASE SECTION**

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

\* CORRUGATED POLYETHYLENE STORM SEWER PIPE



**ALTERNATIVE PRECAST BASE SECTION**

**NOTES**

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section**.
7. All pickup holes shall be grouted full after the basin has been placed.



*Julie Heilman* Julie Heilman  
2020.09.01 07:52:50 -07'00'

**CATCH BASIN TYPE 1**

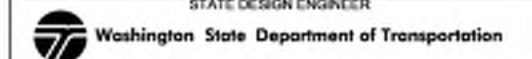
**STANDARD PLAN B-5.20-03**

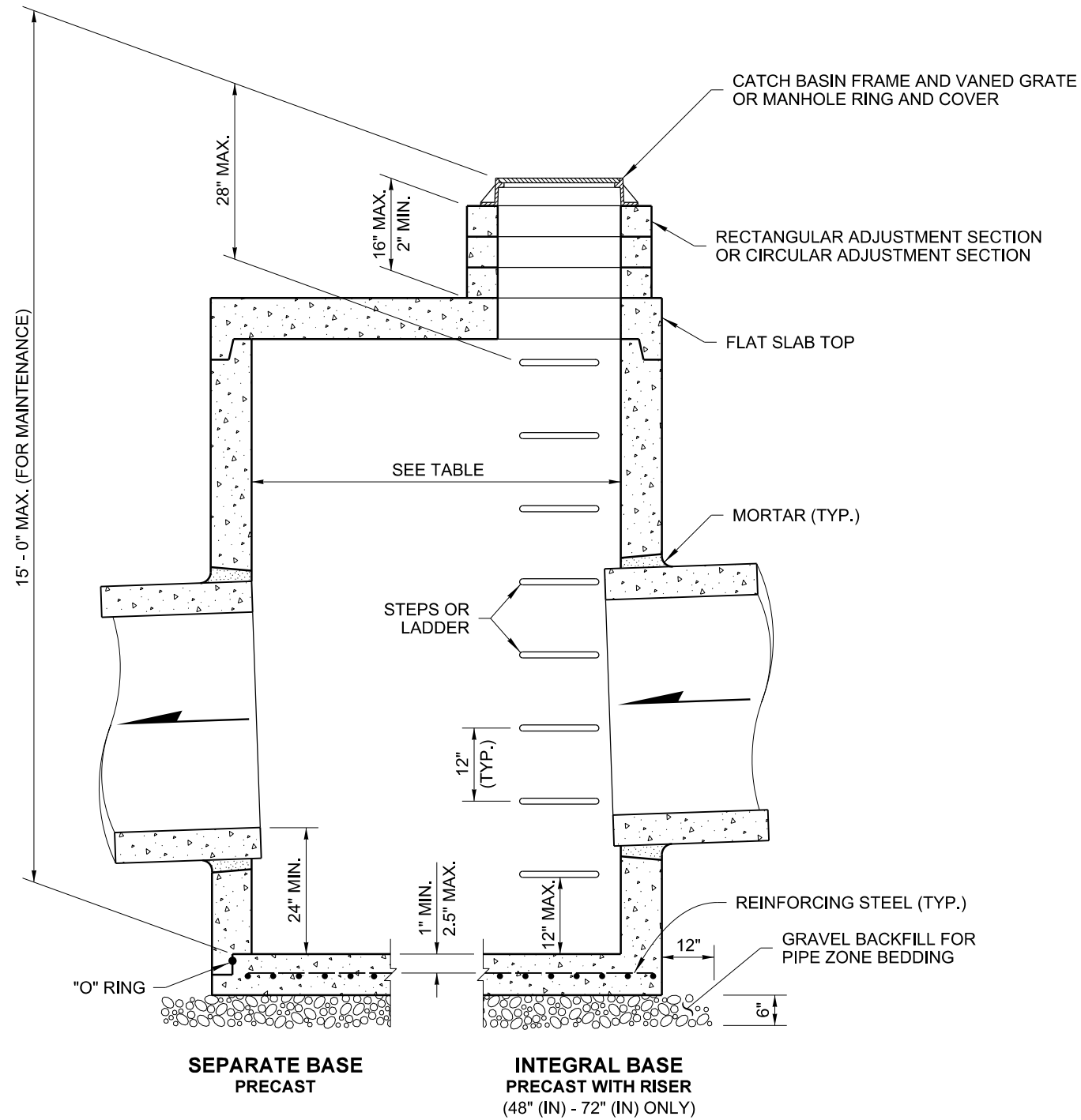
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Roark, Steve Digitally signed by Roark, Steve  
Date: 2020.09.09 09:45:23 -07'00'

STATE DESIGN ENGINEER





**NOTES**

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.

CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ① PP ④	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

- ① Corrugated Polyethylene Storm Sewer Pipe (See **Standard Specification Section 9-05.20**)
- ② (See **Standard Specification Section 9-05.12(1)**)
- ③ (See **Standard Specification Section 9-05.12(2)**)
- ④ Polypropylene Pipe (See **Standard Specification Section 9-05.24**)



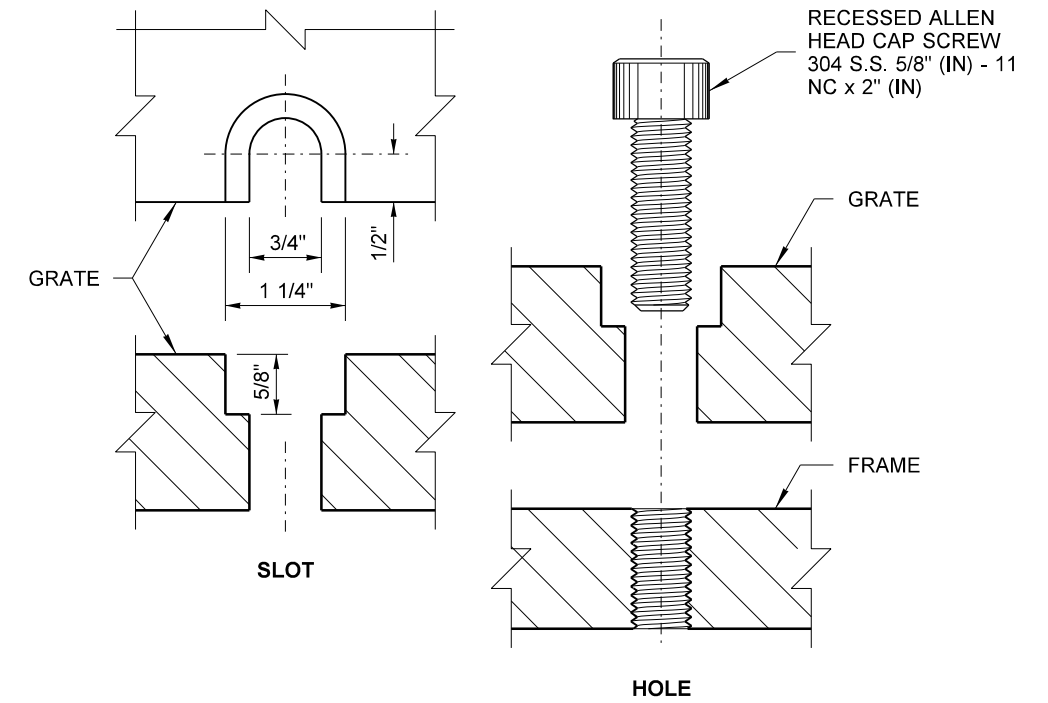
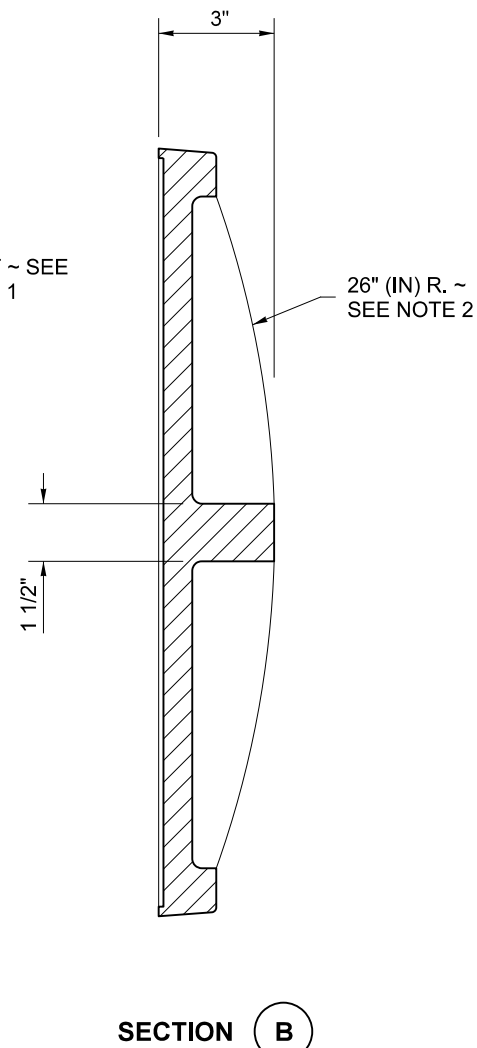
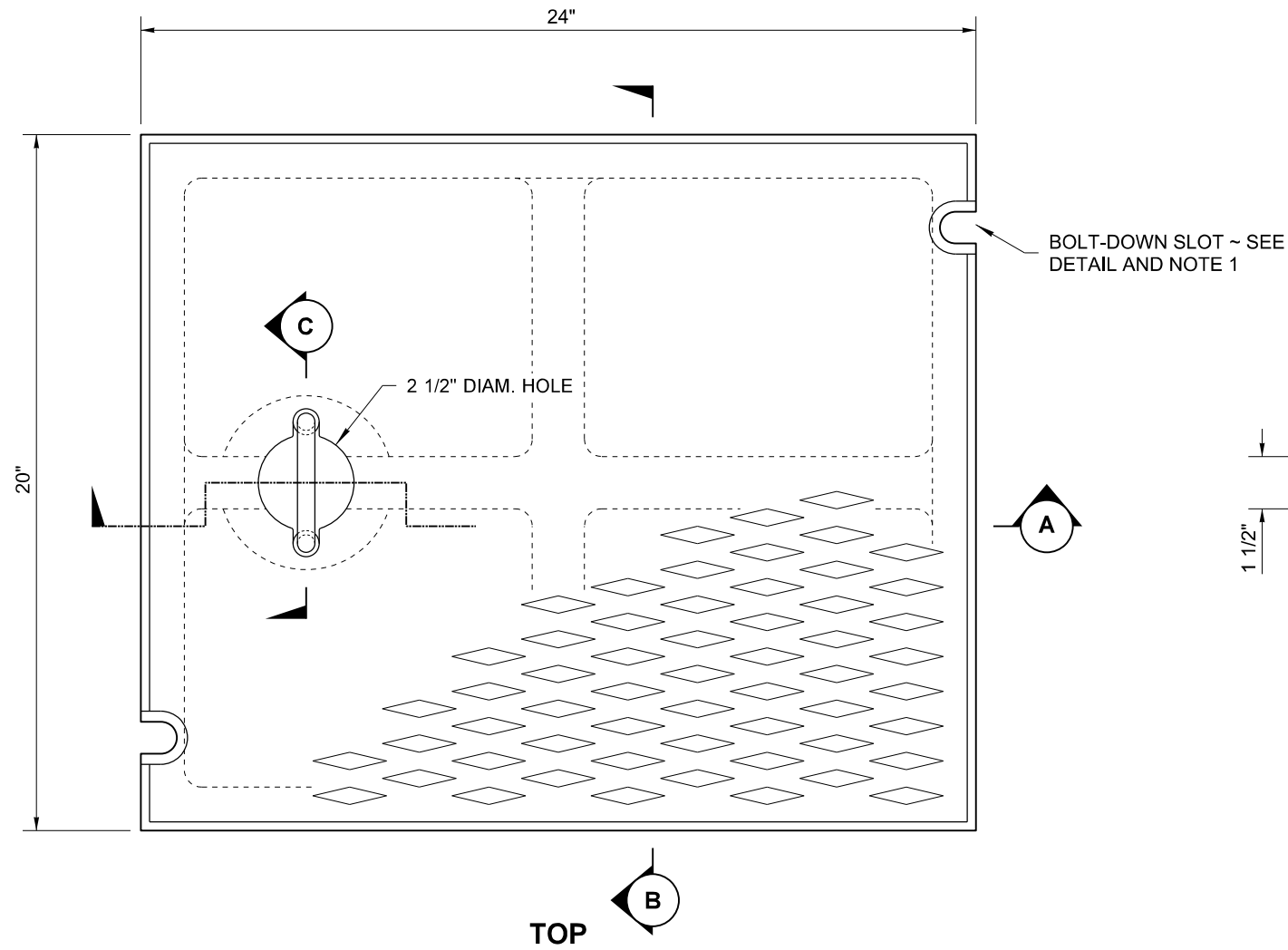
**CATCH BASIN TYPE 2**

**STANDARD PLAN B-10.20-02**

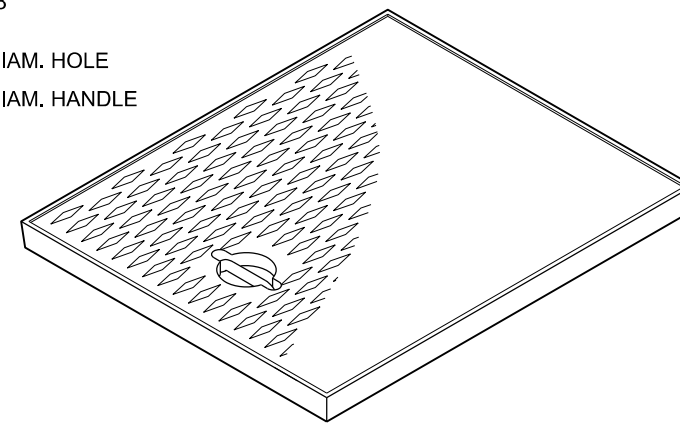
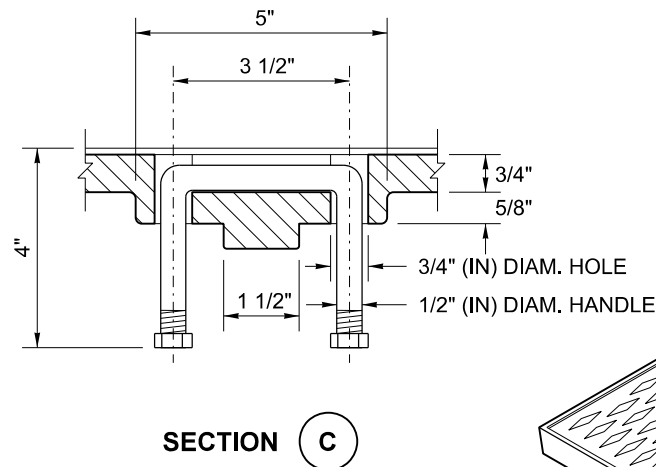
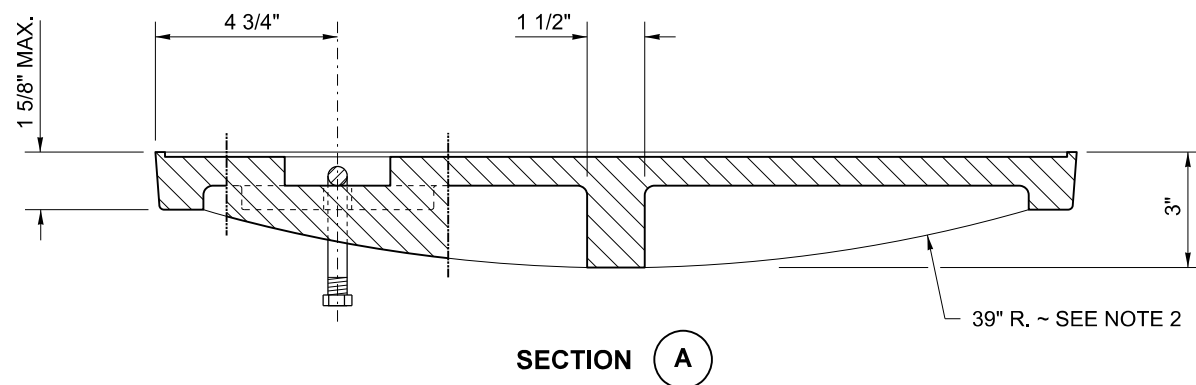
SHEET 1 OF 1 SHEET

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 Washington State Department of Transportation



**BOLT-DOWN DETAILS**  
SEE NOTE 1



**ISOMETRIC**

**NOTES**

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Alternative reinforcing designs are acceptable in lieu of the rib design.
3. Refer to **Standard Specification Section 9-05.15** and **9-05.15(2)** for additional requirements.
4. For frame details, see **Standard Plan B-30.10**.



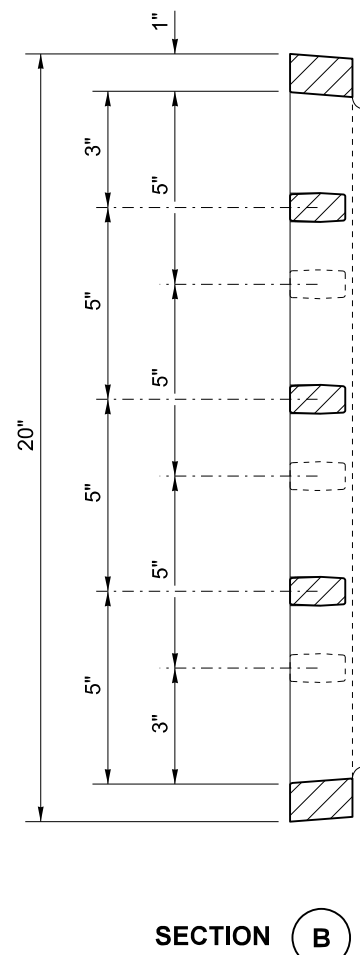
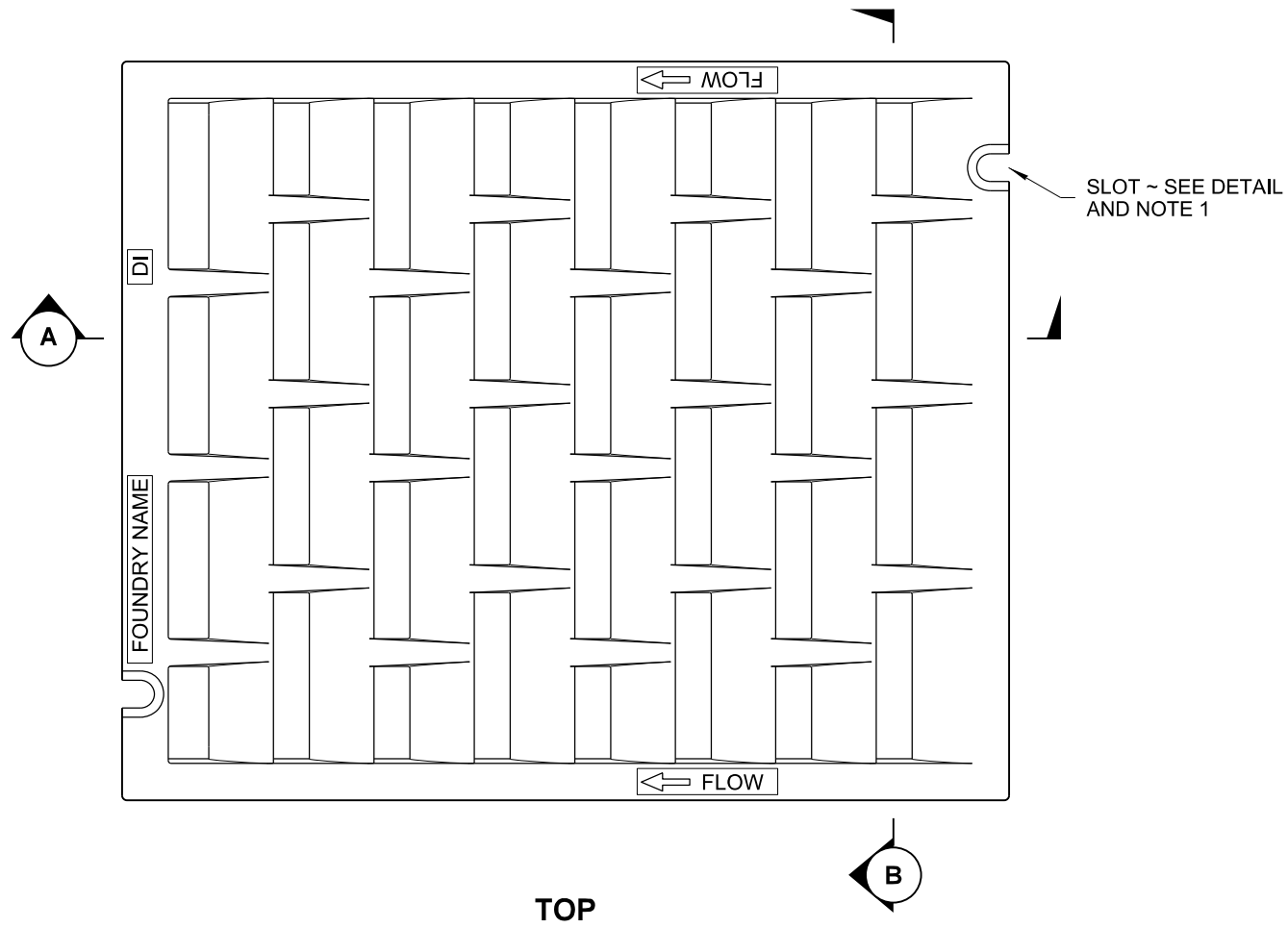
**RECTANGULAR SOLID  
METAL COVER**  
**STANDARD PLAN B-30.20-04**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

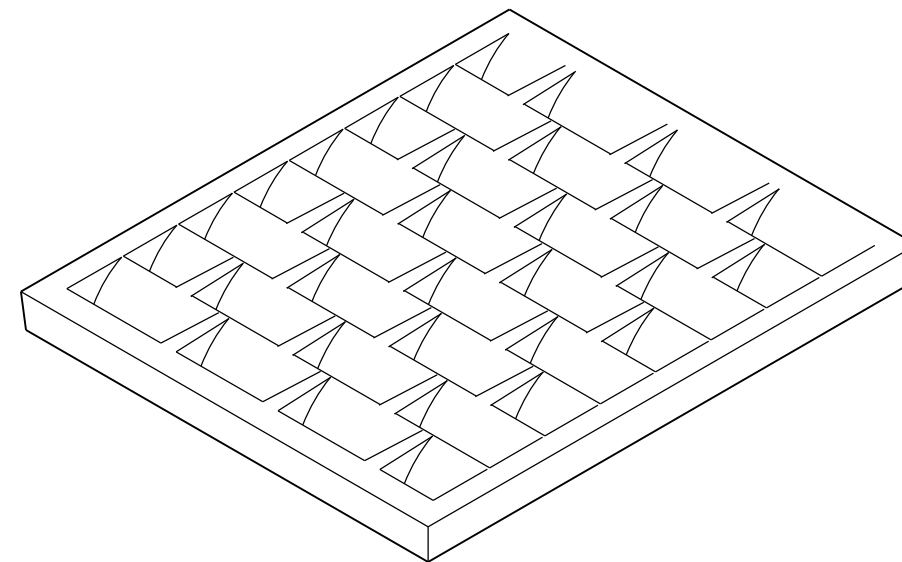
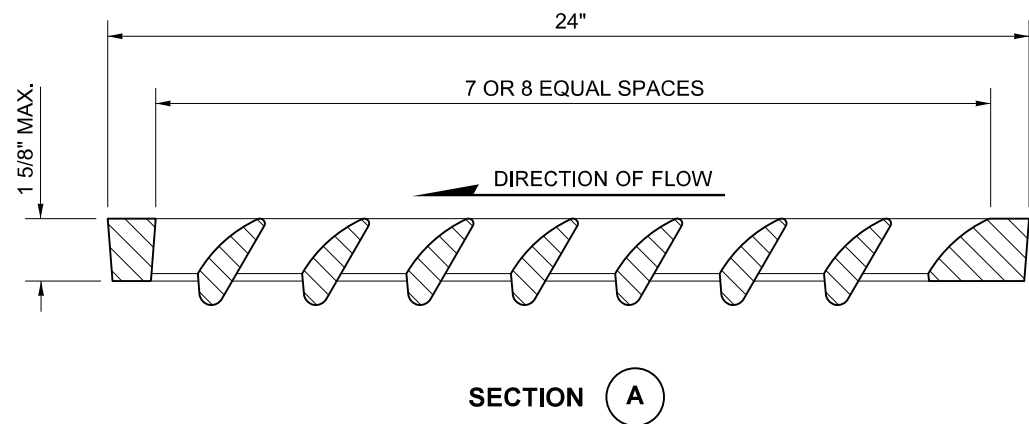
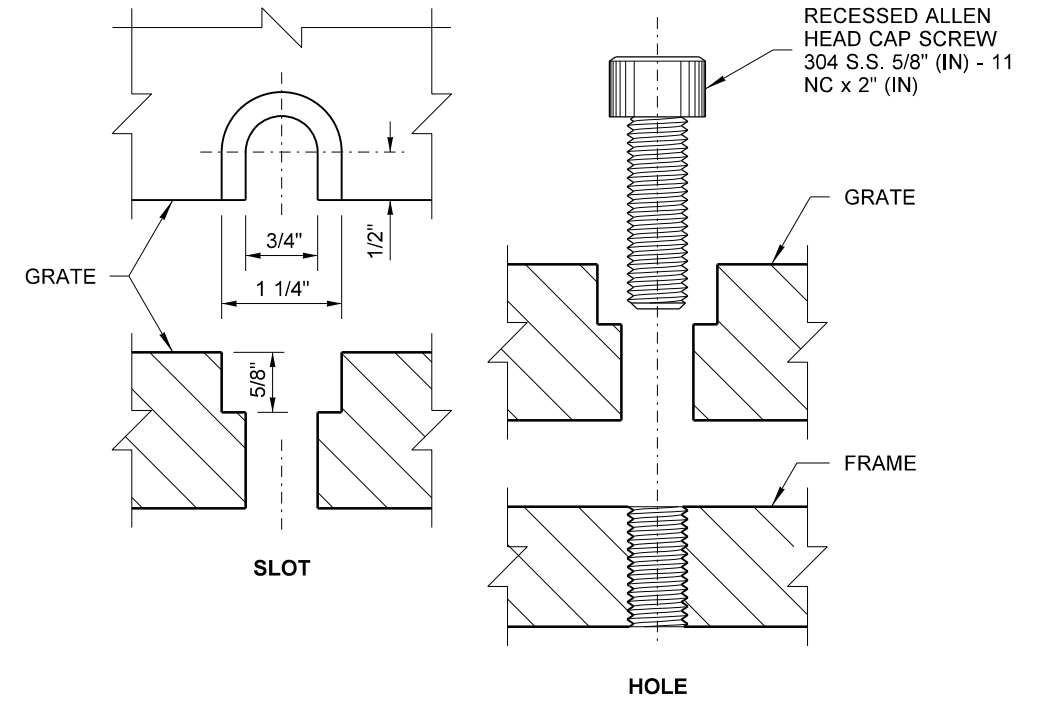


DRAWN BY: FERN LIDDELL



**NOTES**

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Refer to **Standard Specification Section 9-05.15** and **9-05.15(2)** for additional requirements.
3. For frame details, see **Standard Plan B-30.10**.

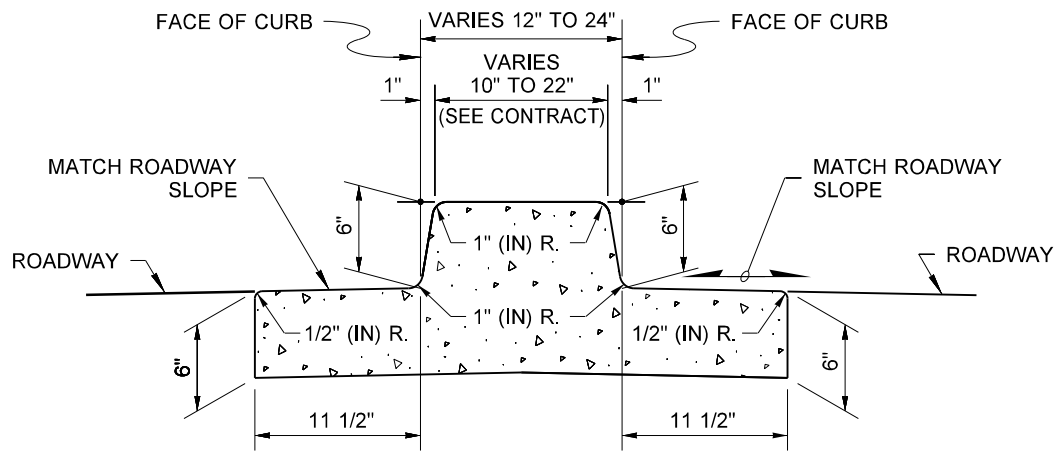


**RECTANGULAR  
VANED GRATE**  
**STANDARD PLAN B-30.30-03**

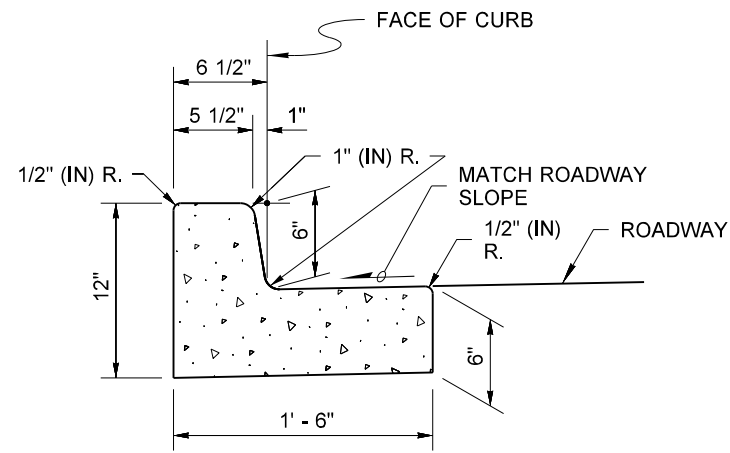
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

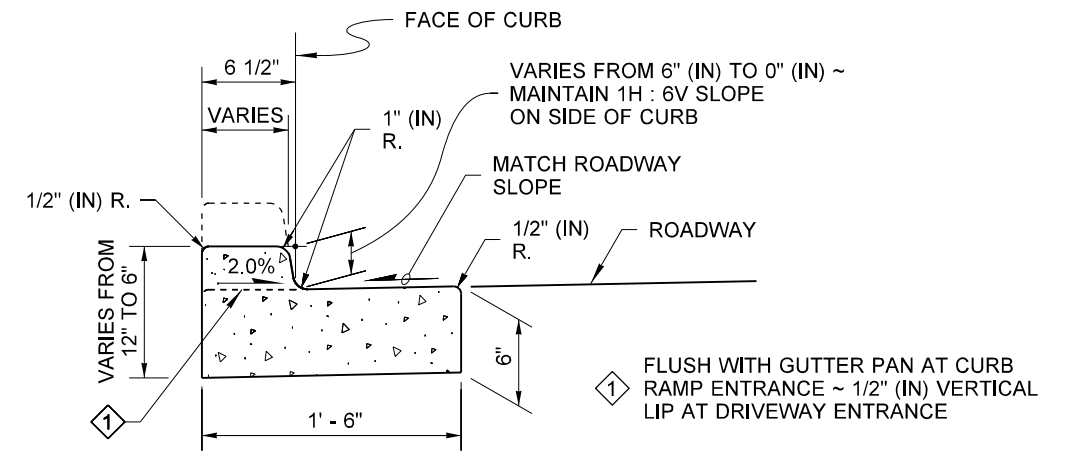
DRAWN BY: FERN LIDDELL



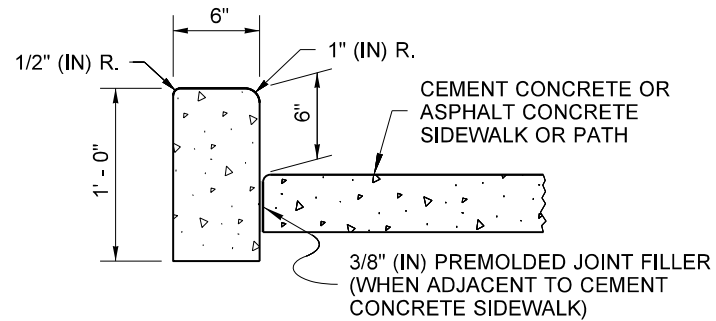
**DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER**



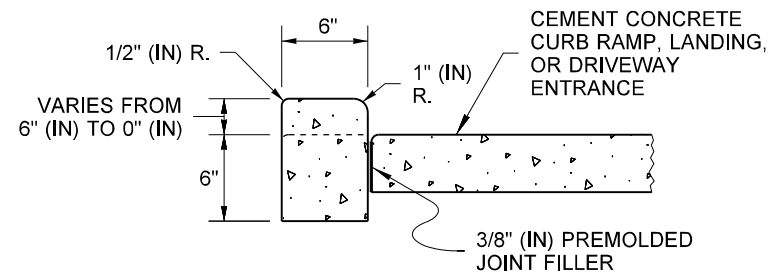
**CEMENT CONCRETE TRAFFIC CURB AND GUTTER**



**DEPRESSED CURB AND GUTTER SECTION AT CURB RAMPS AND DRIVEWAY ENTRANCES**



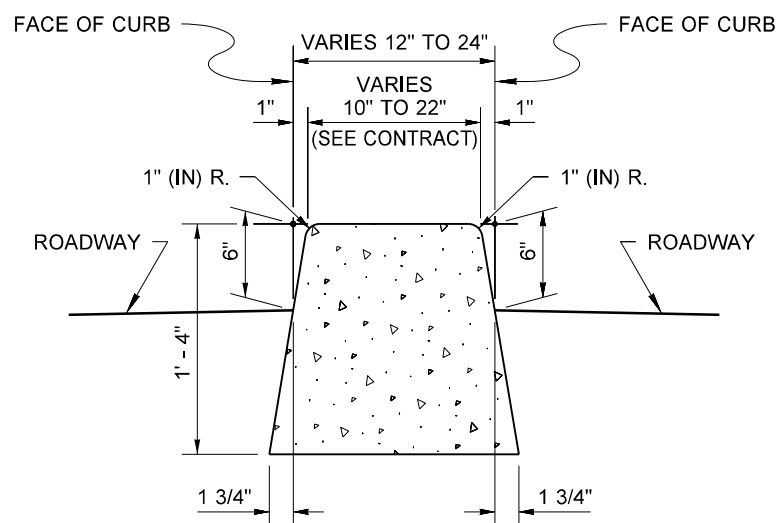
**CEMENT CONCRETE PEDESTRIAN CURB**



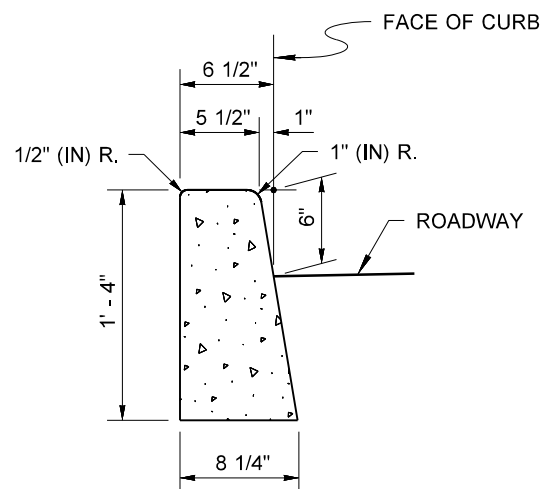
**CEMENT CONCRETE PEDESTRIAN CURB AT CURB RAMPS, LANDINGS, AND DRIVEWAY ENTRANCES**

**NOTE**

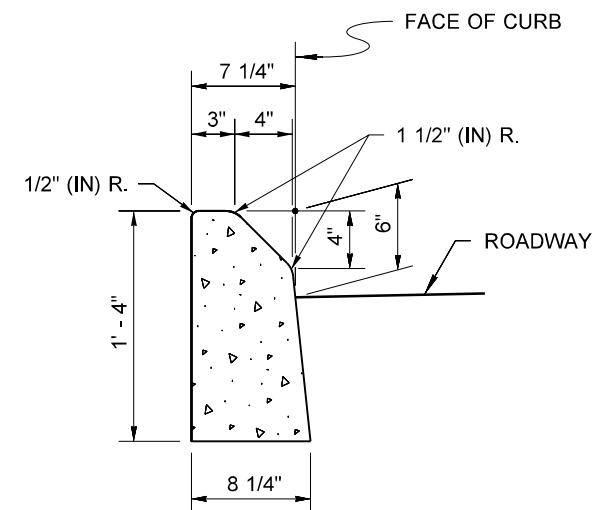
1. See **Standard Plan F-30.10** for Curb Expansion and Contraction Joint spacing. See **Standard Specification, Sections 8-04 and 9-04** for additional requirements.



**DUAL-FACED CEMENT CONCRETE TRAFFIC CURB**



**CEMENT CONCRETE TRAFFIC CURB**



**MOUNTABLE CEMENT CONCRETE TRAFFIC CURB**



Michael S  
Fleming  
**CEMENT CONCRETE CURBS**

Digitally signed by Michael S Fleming  
Date: 2020.09.24 07:39:38 -07'00'

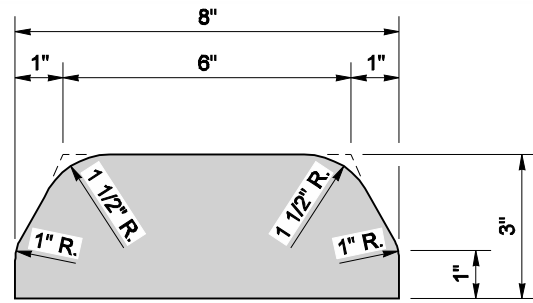
**STANDARD PLAN F-10.12-04**

SHEET 1 OF 1 SHEET

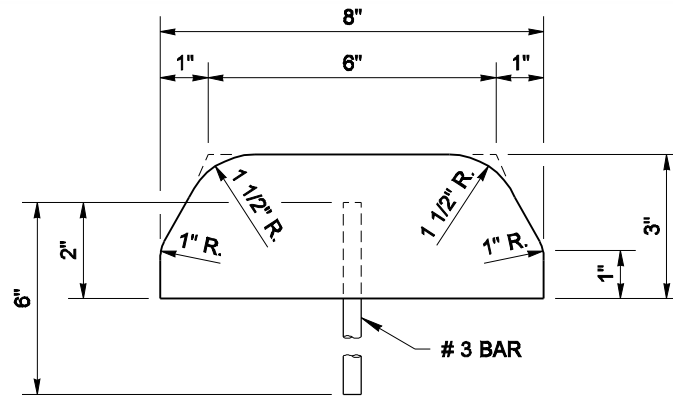
APPROVED FOR PUBLICATION  
Date: 2020.09.24  
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*[Signature]*  
STATE DESIGN ENGINEER  
Washington State Department of Transportation

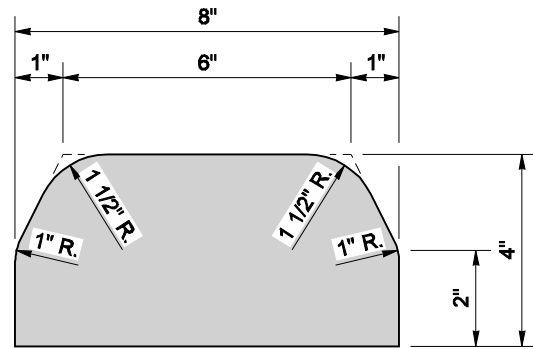
DRAWN BY: BILL BERENS



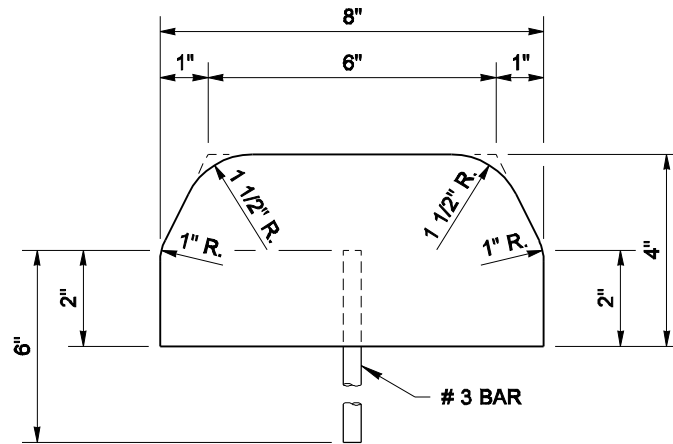
**TYPE 1**  
(HOT MIX ASPHALT)



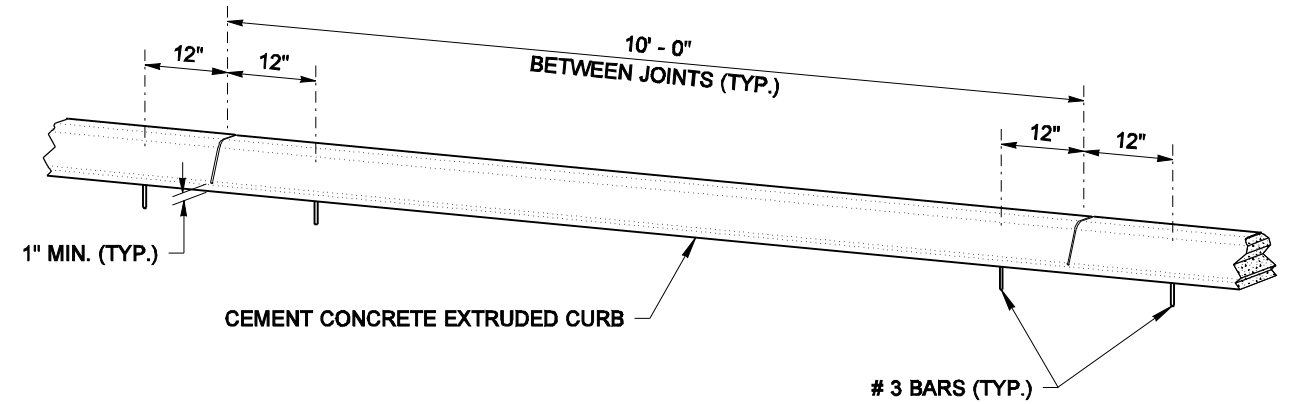
**TYPE 4**  
(CEMENT CONCRETE)



**TYPE 2**  
(HOT MIX ASPHALT)



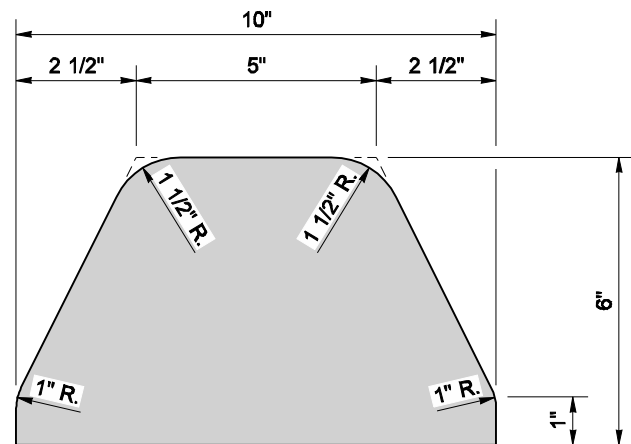
**TYPE 5**  
(CEMENT CONCRETE)



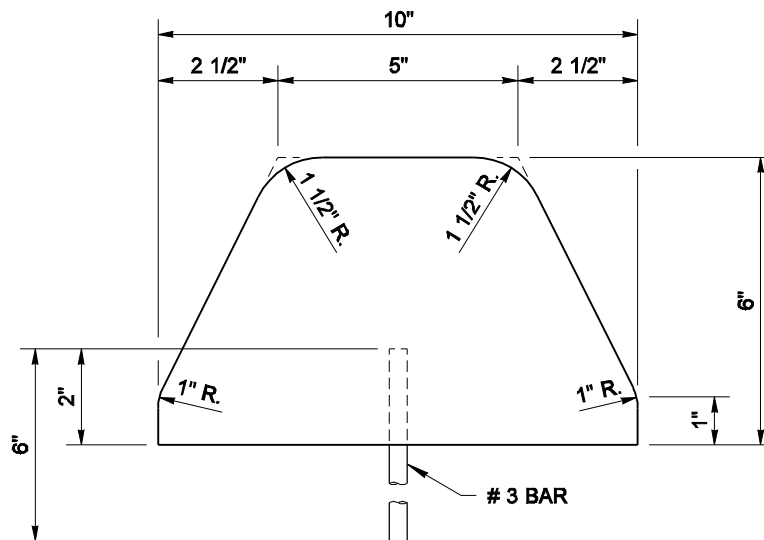
**SPACING OF ANCHOR BARS**  
(FOR TYPES 4, 5, AND 6)

**NOTE**

JOINTS MAY BE FORMED DURING INSTALLATION USING A RIGID DIVIDER OR SAWCUT AFTER CONCRETE CURES TO MINIMUM STRENGTH.



**TYPE 3**  
(HOT MIX ASPHALT)



**TYPE 6**  
(CEMENT CONCRETE)



EXPIRES AUGUST 26, 2007

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

**EXTRUDED CURB**

**STANDARD PLAN F-10.42-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

**Ken L. Smith**

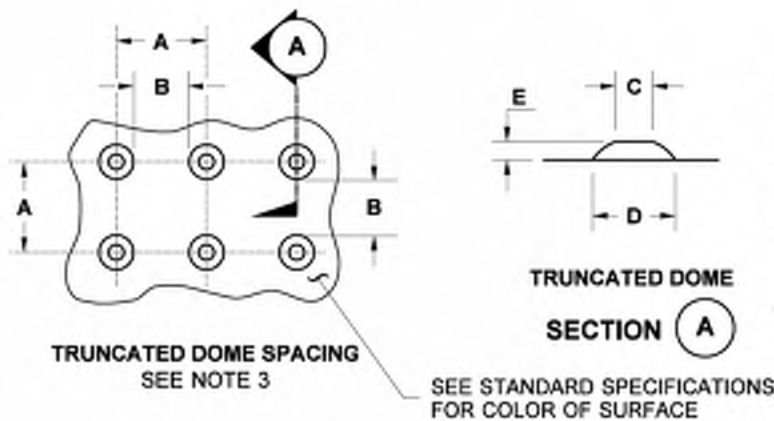
STATE DESIGN ENGINEER

**01-23-07**

DATE

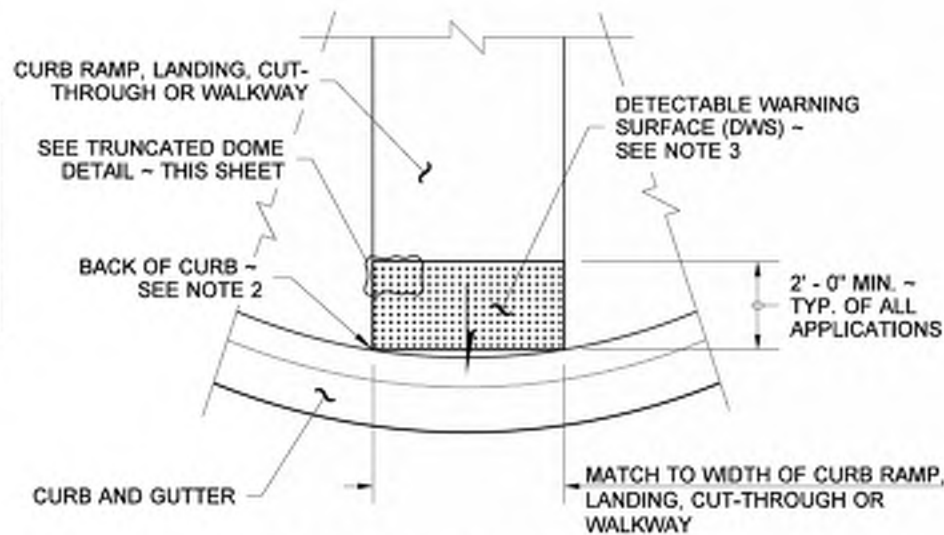


Washington State Department of Transportation



	MIN.	MAX.
A	1.80"	2.40"
B	0.65"	—
C	0.45"	0.90"
D	0.9"	1.40"
E	0.2"	0.2"

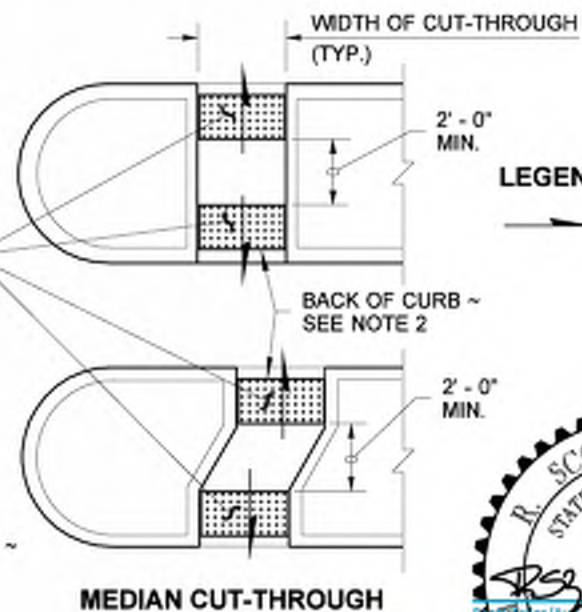
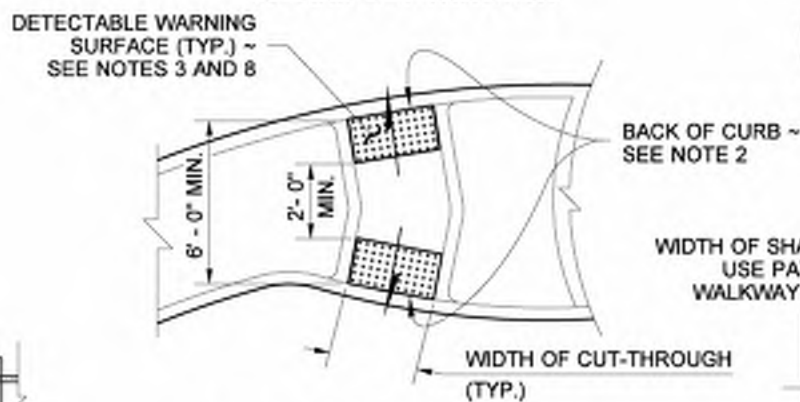
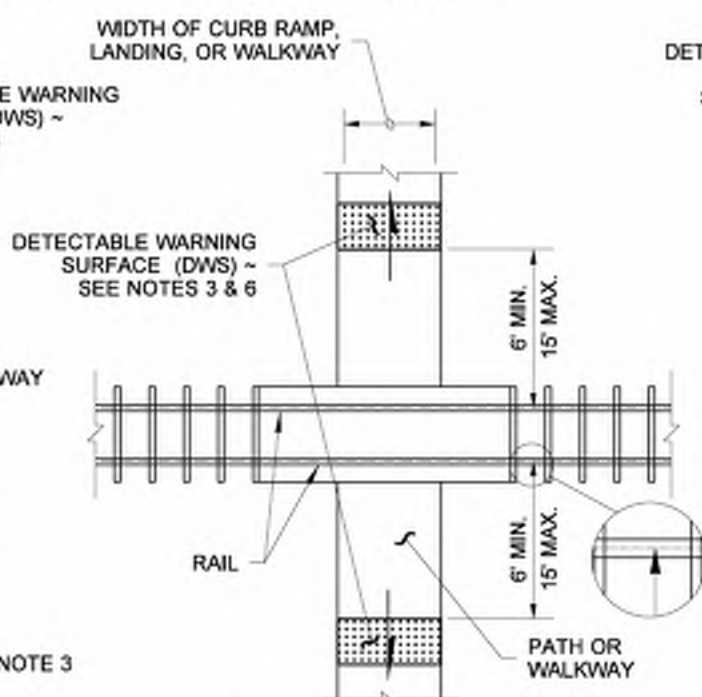
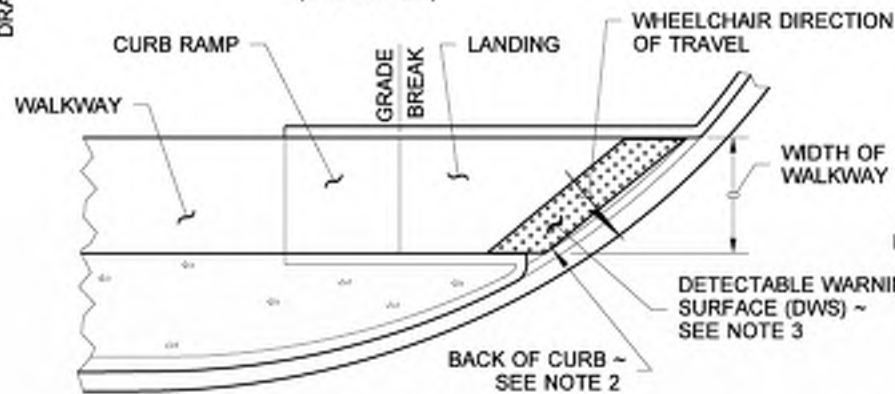
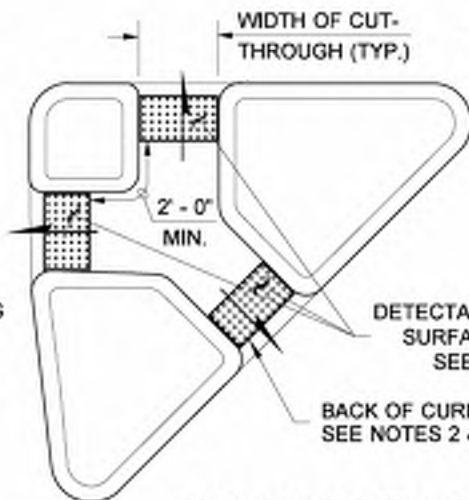
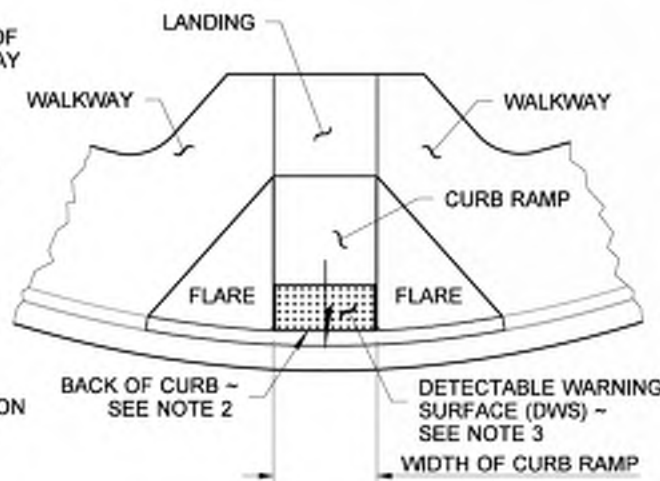
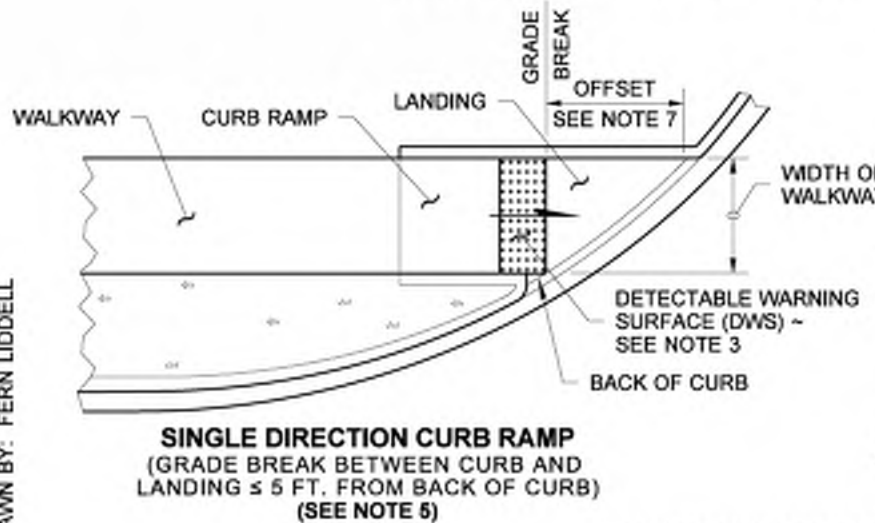
**TRUNCATED DOME DETAILS**



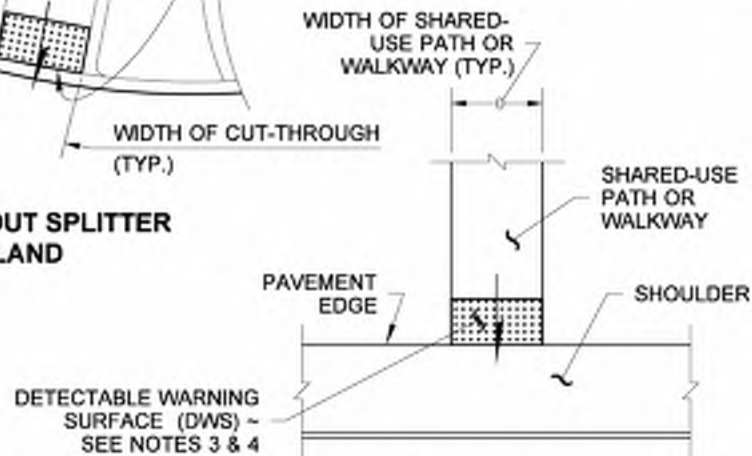
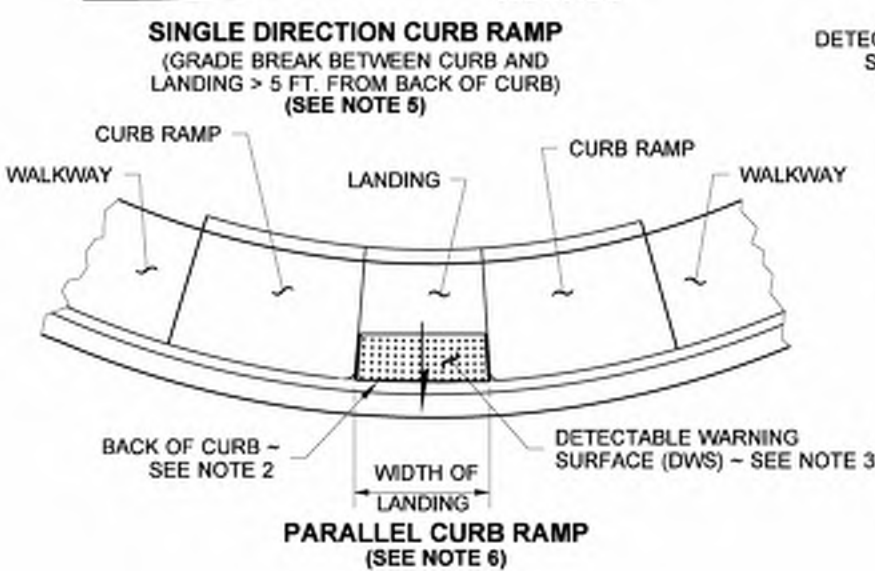
**NOTES**

1. Permanent Detectable Warning Surfaces (DWS) shall extend the full width of the curb ramp, landing, or other roadway entrance as applicable. Exception: If the Manufacturer of the DWS requires a concrete border around the DWS, a variance of up to 2" (in) on each side of the DWS is permitted.
2. Permanent Detectable Warning Surfaces (DWS) shall be placed on a minimum 4" (in) thick concrete pad. The DWS panel shall be placed adjacent to the back of the curb and with no more than a 2" (in) gap between the DWS and the back of the curb measured at the center of the DWS panel. Exception: If the Manufacturer of the selected DWS requires a concrete border around the DWS, a variance of up to 2" (in) from the back of the curb is permitted (measured at the leading corners of the DWS panel).
3. The rows of truncated domes shall be aligned to be parallel to the direction of travel, and perpendicular to the grade break at the back of curb.
4. If curb and gutter are not present, such as a shared-use path connection, the Detectable Warning Surface shall be placed at the pavement edge.
5. See **Standard Plans** for sidewalk and curb ramp details.
6. If a curb ramp is required, the location of the Detectable Warning Surface must be at the bottom of the ramp and within the required distance from the rail crossing.
7. When the grade break between the curb ramp and the landing is less than or equal to 5 ft. from the back of curb at all points, place the Detectable Warning Surface on the bottom of the curb ramp directly above the grade break.
8. Glued or stick down Detectable Warning Surfaces are allowed only for temporary work zone applications.

DRAWN BY: FERN LIDDELL



**LEGEND**  
→ DIRECTION OF TRAVEL



**PLACEMENT GUIDELINES**



Aug 30, 2021

**DETECTABLE WARNING SURFACE**

**STANDARD PLAN F-45.10-03**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

*[Signature]*

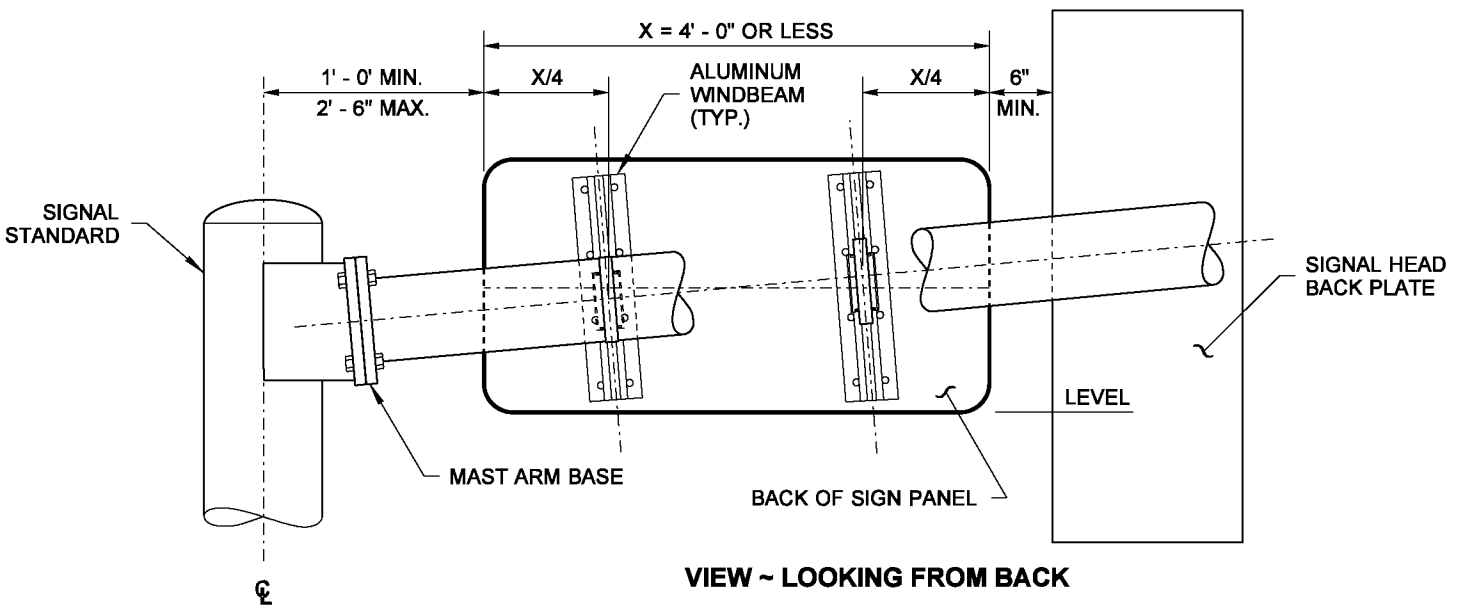
Aug 31, 2021

STATE DESIGN ENGINEER

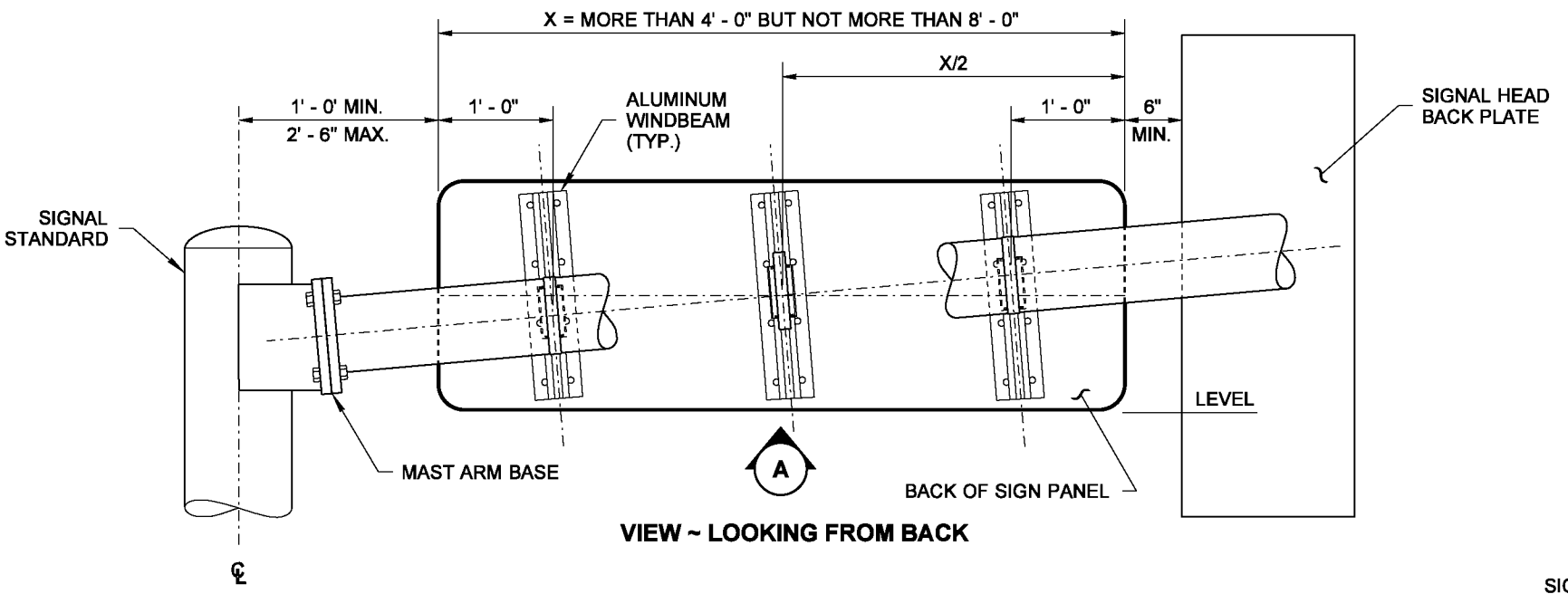


Washington State Department of Transportation

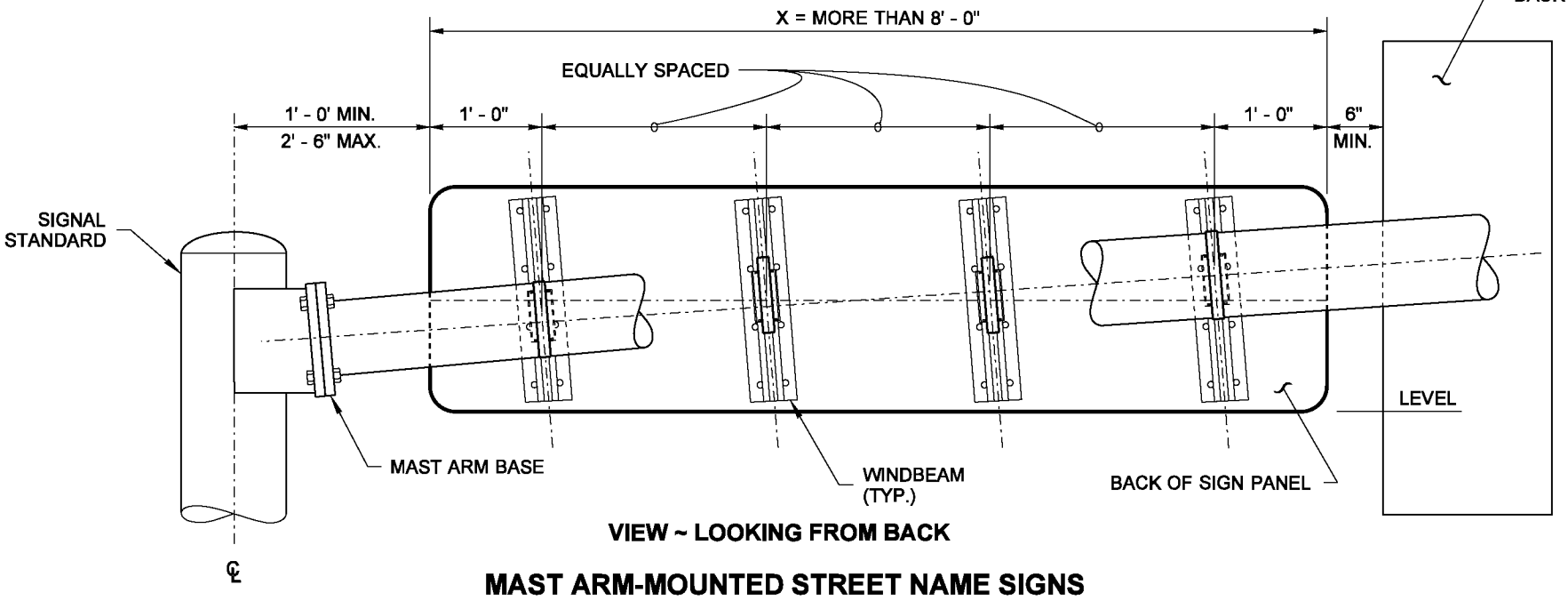
DRAWN BY: FERN LIDDELL



VIEW ~ LOOKING FROM BACK

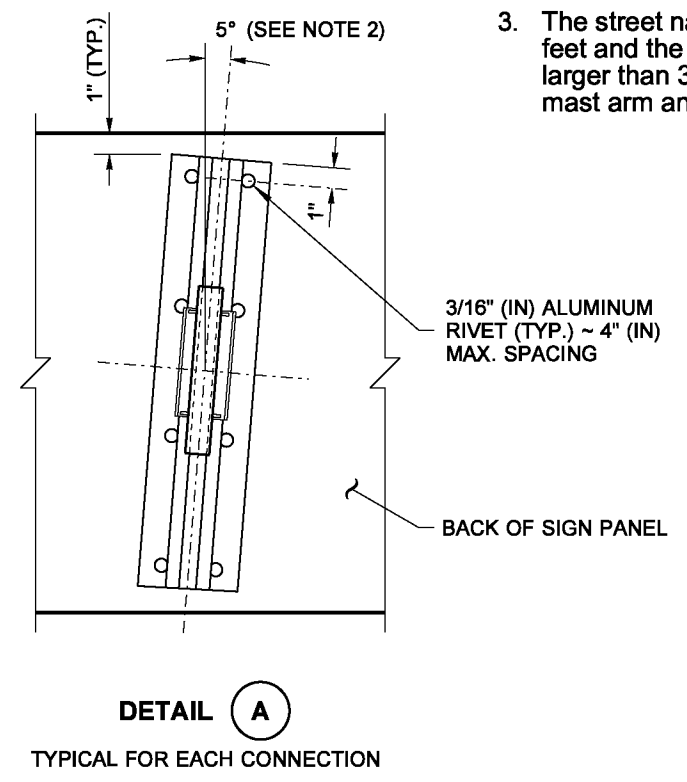


VIEW ~ LOOKING FROM BACK



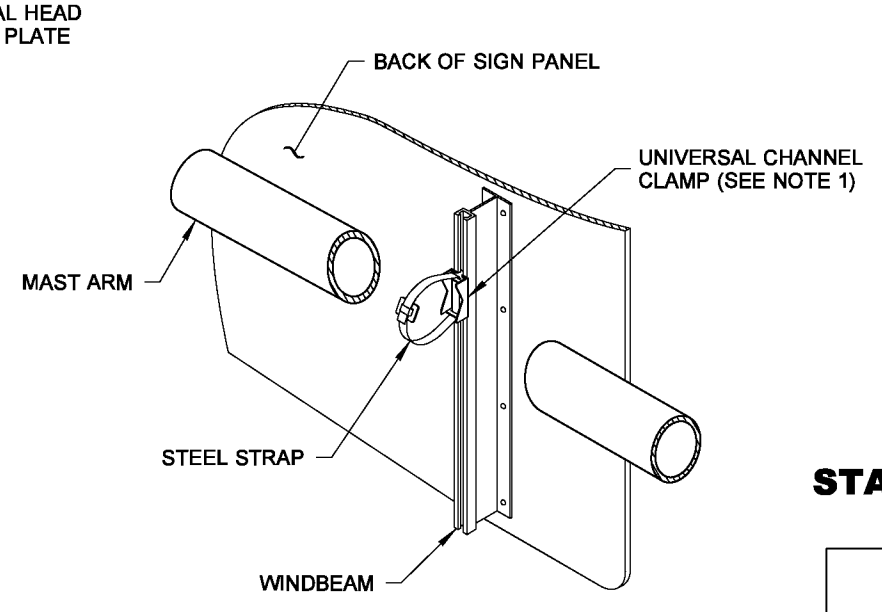
VIEW ~ LOOKING FROM BACK

**MAST ARM-MOUNTED STREET NAME SIGNS**



DETAIL A

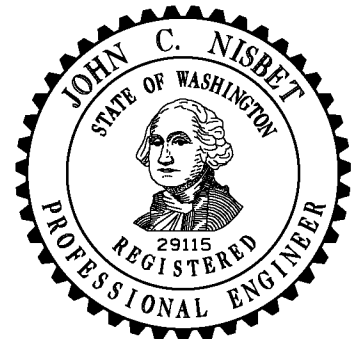
TYPICAL FOR EACH CONNECTION



TYPICAL MAST ARM INSTALLATION

**NOTES**

1. Mounting brackets with steel straps shall be a stainless steel band and buckle system product or an approved equal. Mounting brackets shall be universal channel clamps; steel straps shall be 3/4" (in) wide and 0.030" (in) thick.
2. All signs installed on mast arms or standards (poles) require windbeams. All signs shall be installed with horizontal edges level. A skewed windbeam is required only when the sign is mounted within 12" (in) of the mast arm base (see Detail "A").
3. The street name sign shall be a maximum of 36 square feet and the sign height is a maximum of 3' (ft); signs larger than 36 square feet require a special design mast arm and signal pole.



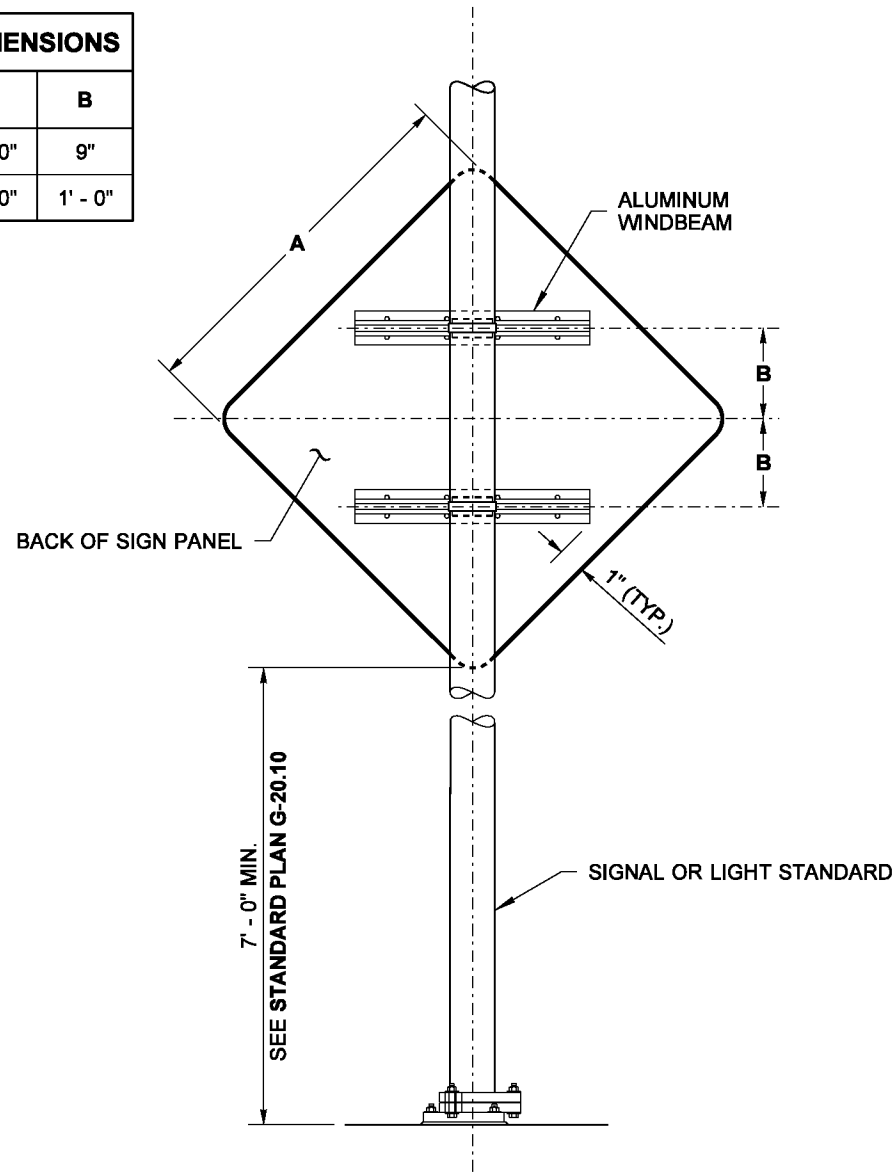
**SIGN INSTALLATION  
ON SIGNAL AND  
LIGHT STANDARDS  
STANDARD PLAN G-30.10-04**

SHEET 1 OF 2 SHEETS

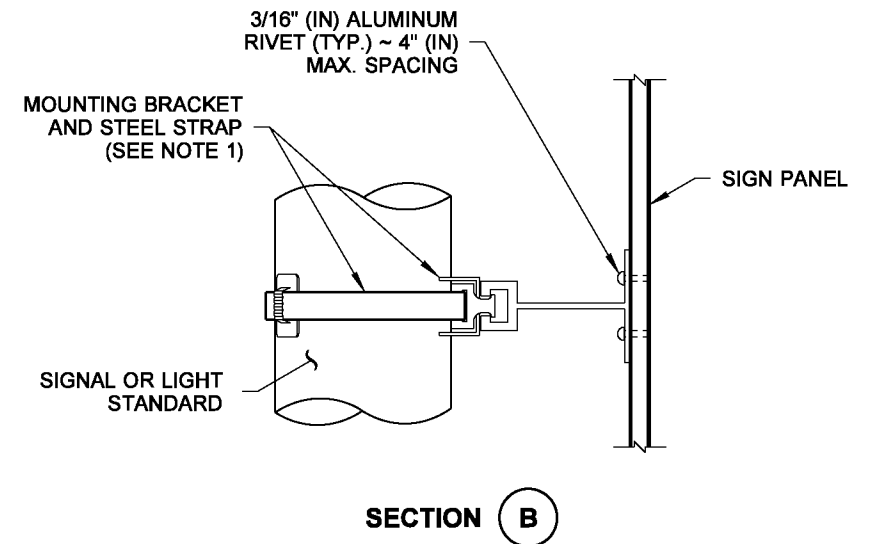
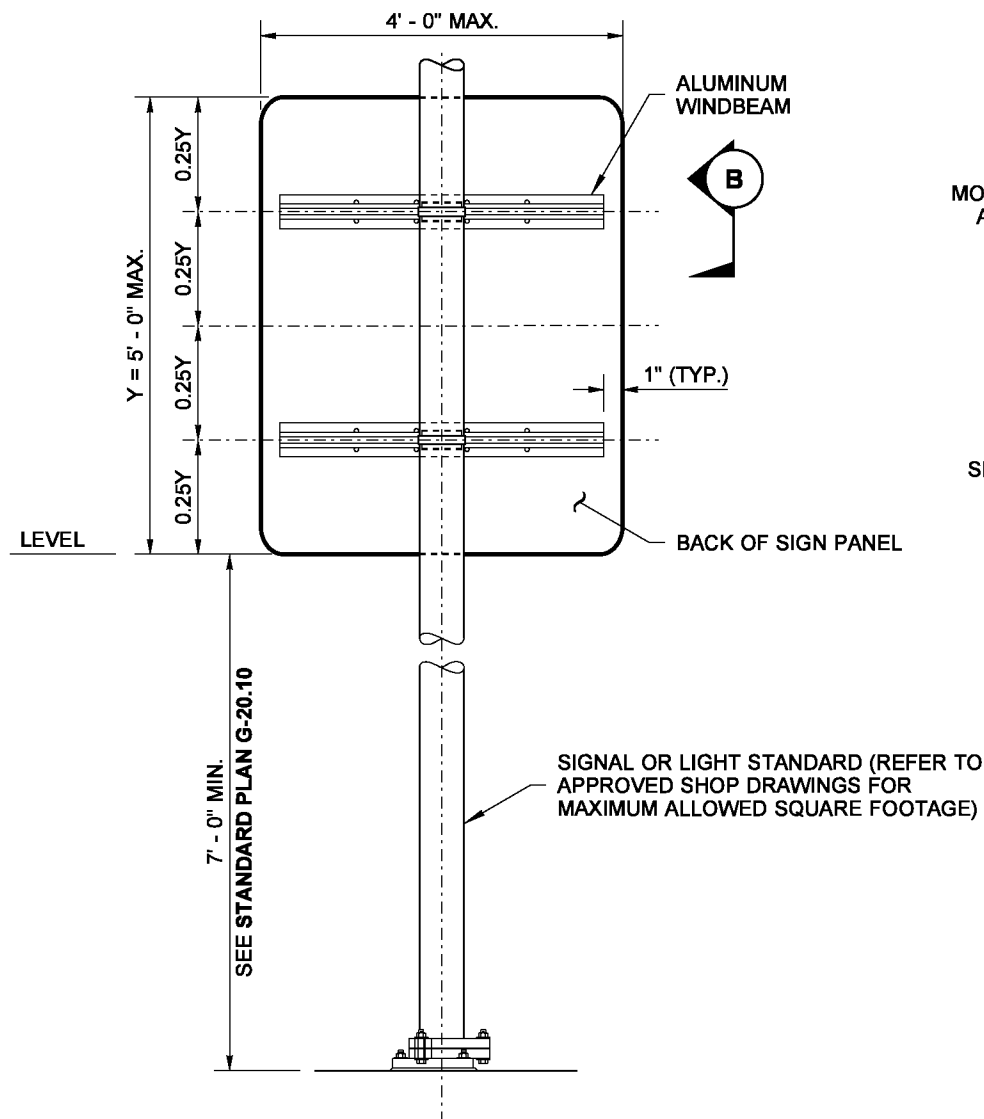
APPROVED FOR PUBLICATION

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Washington State Department of Transportation

DIMENSIONS	
A	B
3' - 0"	9"
4' - 0"	1' - 0"

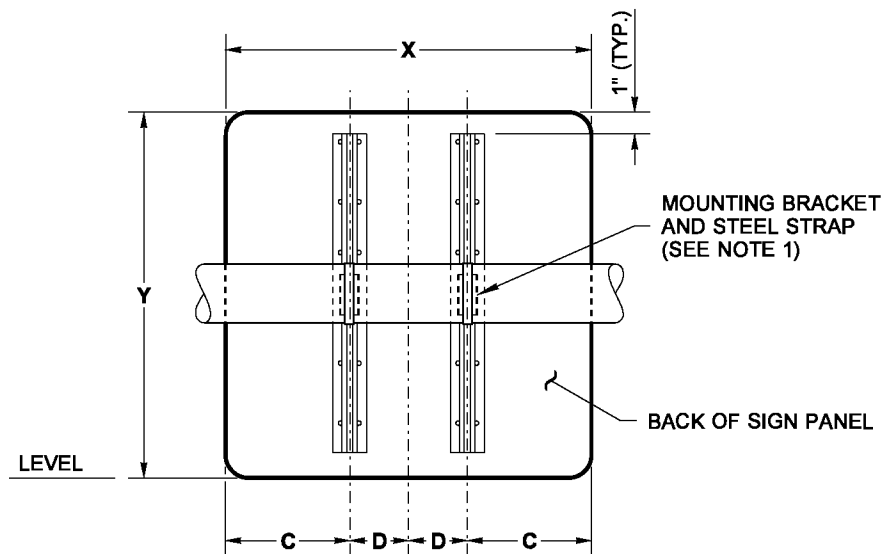


**SIGN INSTALLATION ON SIGNAL OR LIGHT STANDARD**

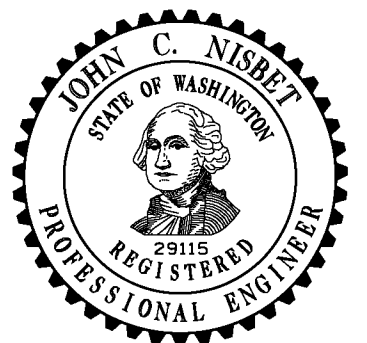


DIMENSIONS			
X	Y	C	D
3' - 0"	2' - 6"	1' - 0"	6"
3' - 0"	3' - 0"	1' - 0"	6"
3' - 0"	4' - 0"	1' - 3"	9"
4' - 0"	2' - 6"	1' - 3"	9"

**NOTE:**  
Any Lane Use Sign greater than 7.5 sq ft. requires a Special Design Mast Arm and Signal Pole.



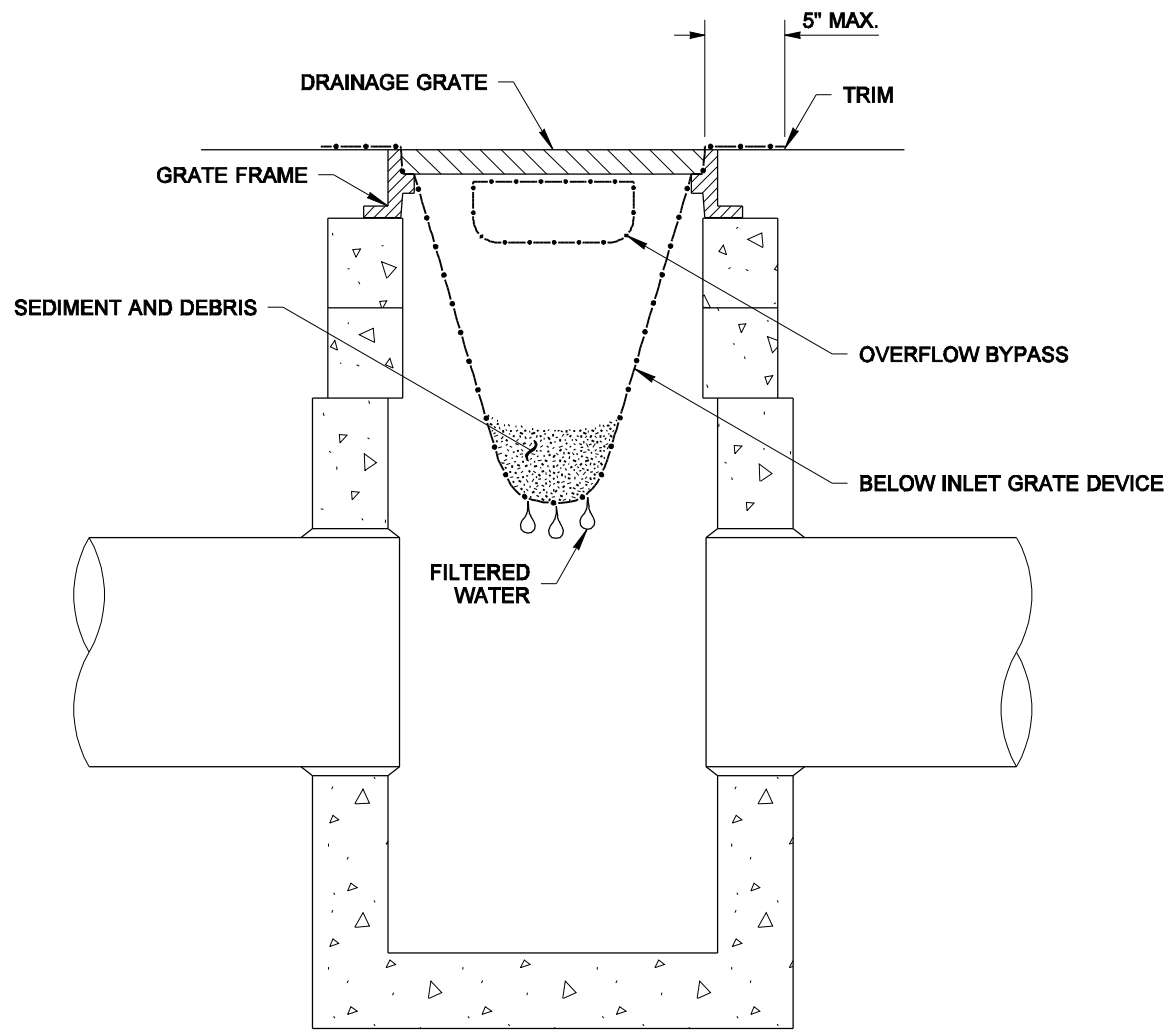
**MAST ARM-MOUNTED LANE USE SIGNS**



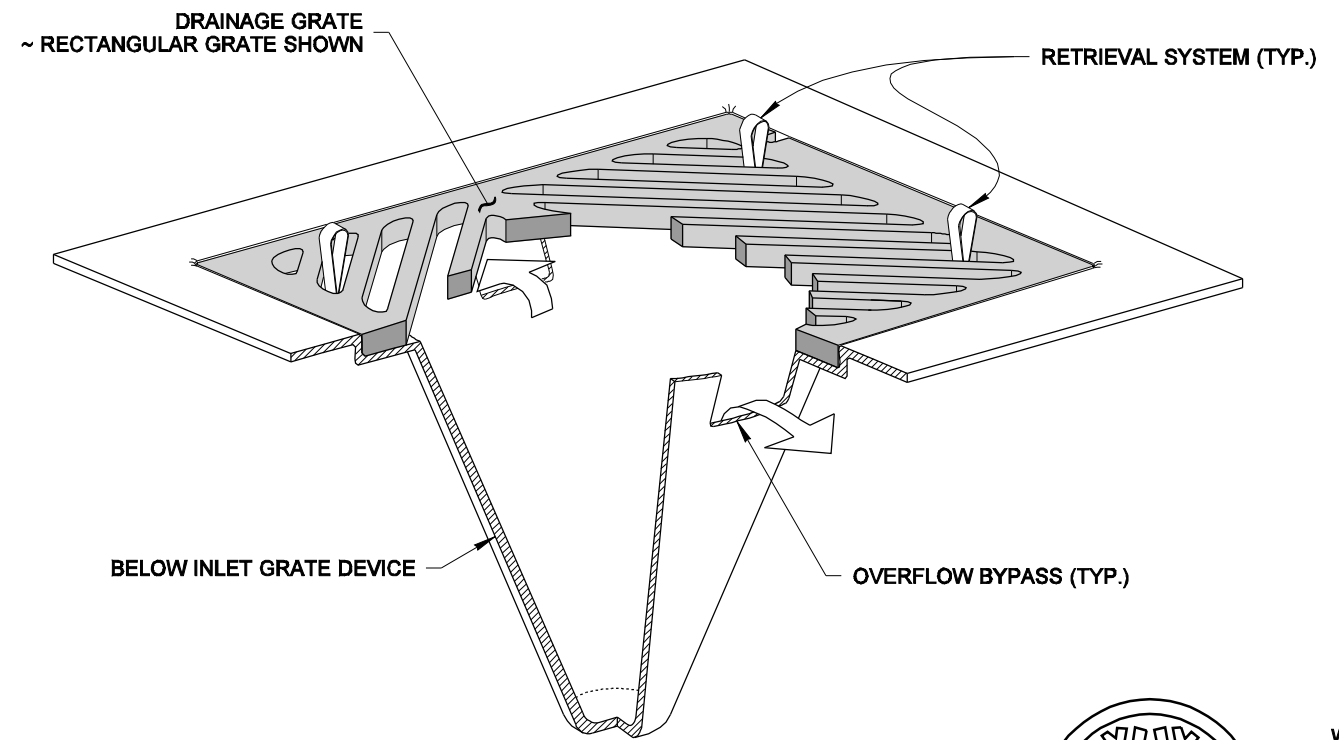
**SIGN INSTALLATION  
ON SIGNAL AND  
LIGHT STANDARDS  
STANDARD PLAN G-30.10-04**

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION



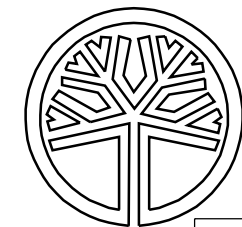
**SECTION VIEW**  
NOT TO SCALE



**ISOMETRIC VIEW**

**NOTES**

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).



STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT

MARK W. MAURER  
CERTIFICATE NO. 000598

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

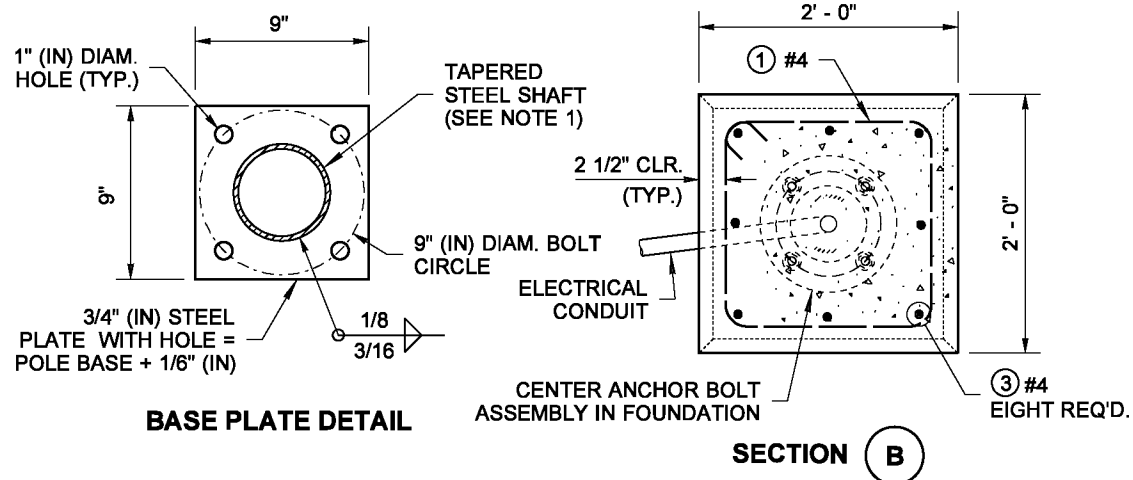
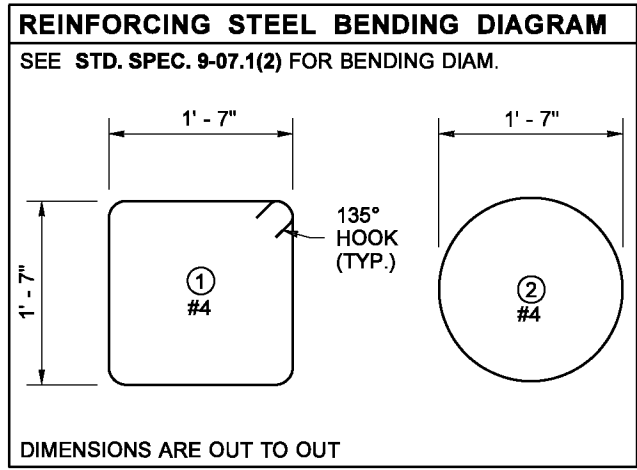
**STORM DRAIN  
INLET PROTECTION  
STANDARD PLAN I-40.20-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

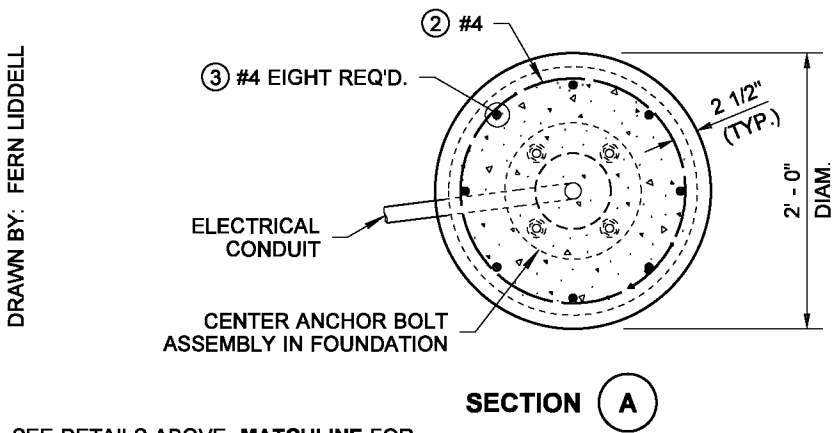
**Pasco Bakotich III**      **09-20-07**  
STATE DESIGN ENGINEER      DATE



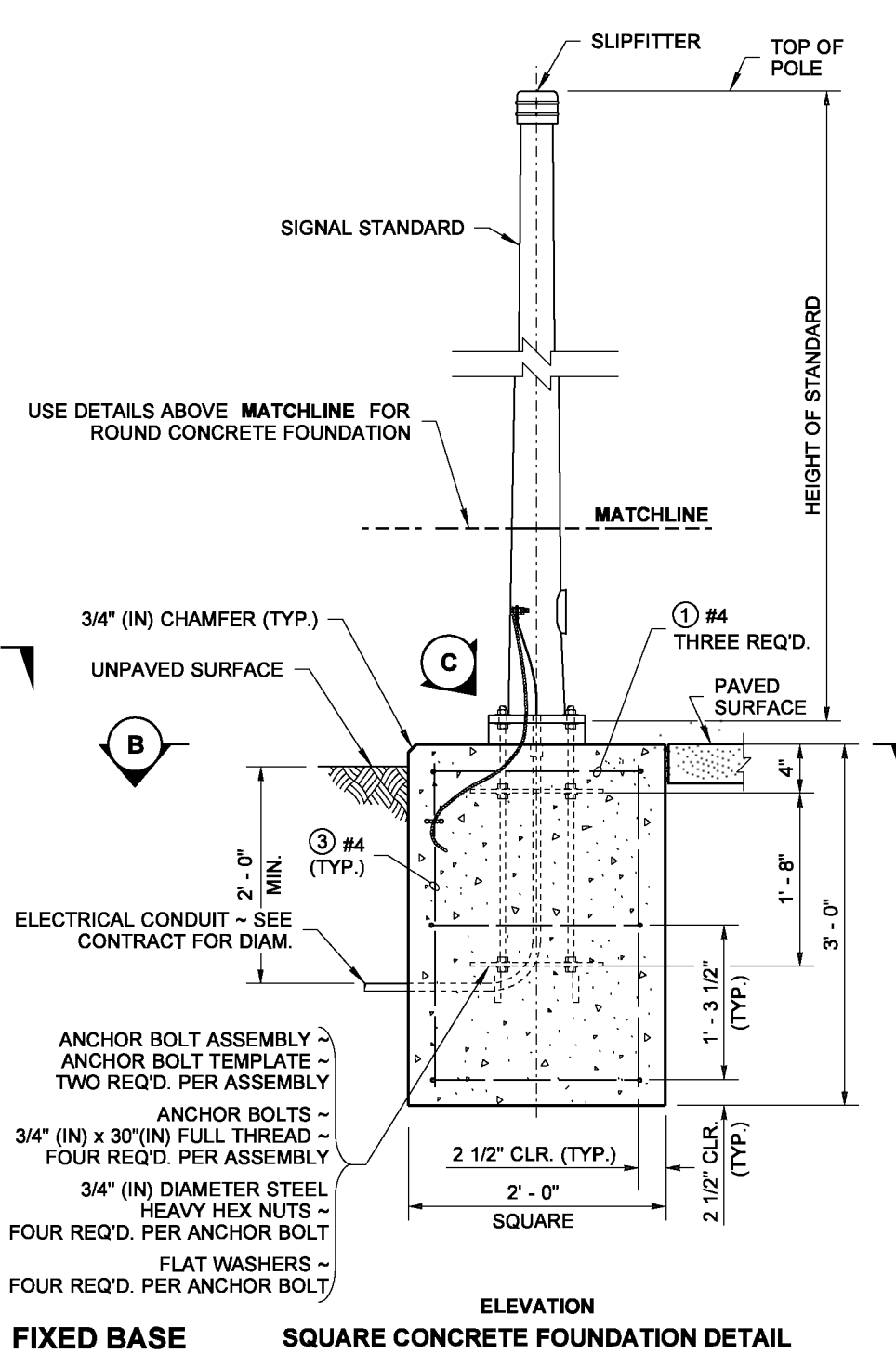
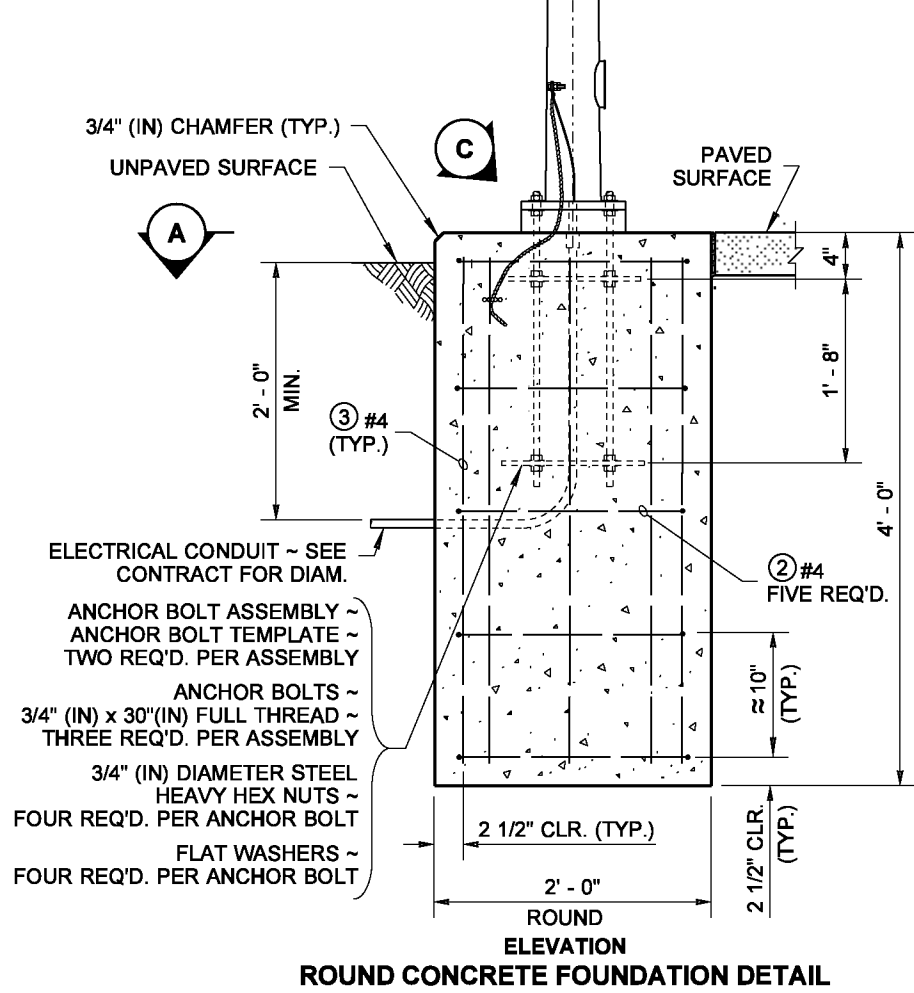


- ### NOTES
- Clamping bolts shall be tightened to 50 ft-lbs max. torque. After state inspection, burr threads to prevent nut rotation. DO NOT OVERTIGHTEN.
  - The final height of the Anchor Bolts shall be below the top of the slip plate assembly to ensure proper function of the slip base.
  - Supplemental grounding conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar with a connector suitable for use embedded in concrete: Provide 3'-0" min. slack. Attach to pole grounding stud with a full circle crimp-on connector (crimped with a manufacturer recommended crimper).
  - Junction box serving the Standard shall preferably be located 5'-0" (10'-0" Max.) from the Standard.
  - Provide cable tie at wiring entering the junction box (for slip base installations only) ~ See **Detail A, Standard Plan J-28.70**.
  - Keeper Plate shall not extend beyond the edges of the pole base plate.

DRAWN BY: FERN LIDDELL

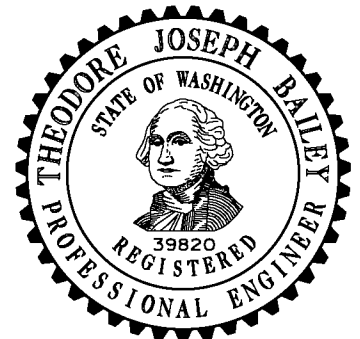
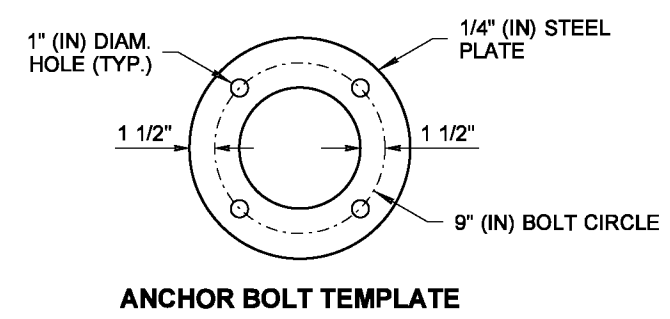
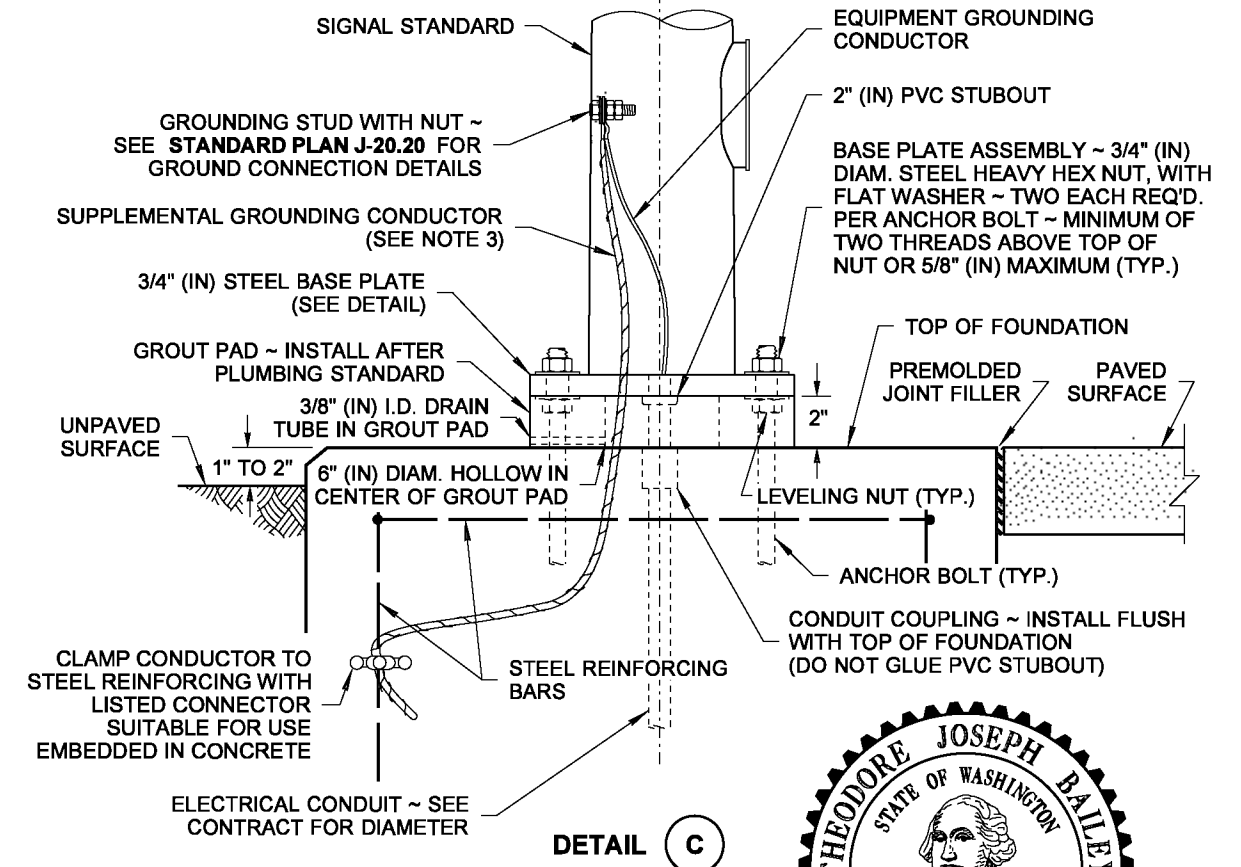
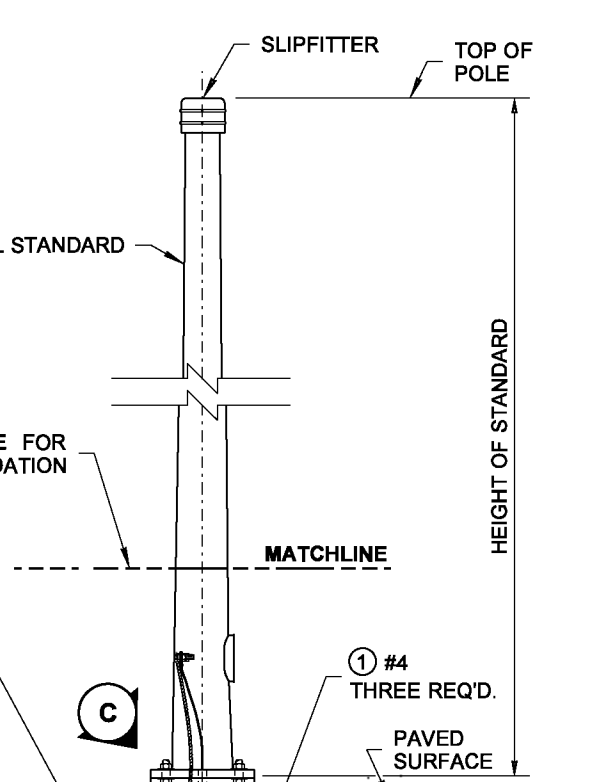


SEE DETAILS ABOVE MATCHLINE FOR SQUARE CONCRETE FOUNDATION



USE DETAILS ABOVE MATCHLINE FOR ROUND CONCRETE FOUNDATION

USE DETAILS ABOVE MATCHLINE FOR SQUARE CONCRETE FOUNDATION



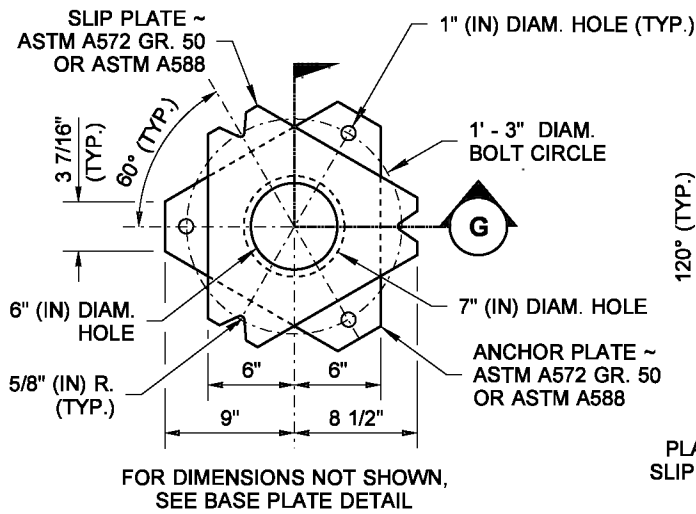
## TYPE PS, TYPE 1, RM & FB SIGNAL STANDARD FOUNDATION DETAILS

### STANDARD PLAN J-21.10-04

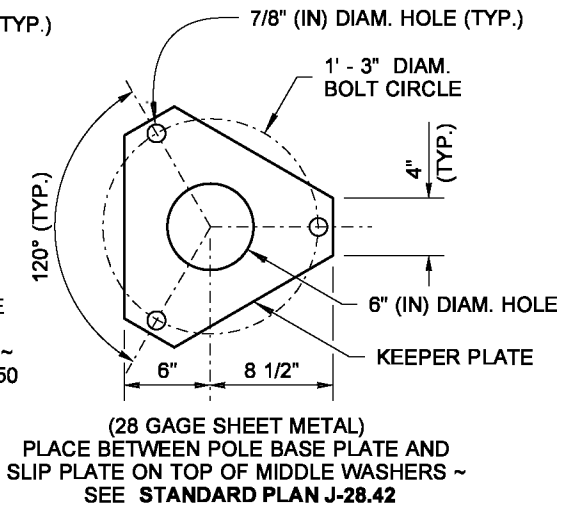




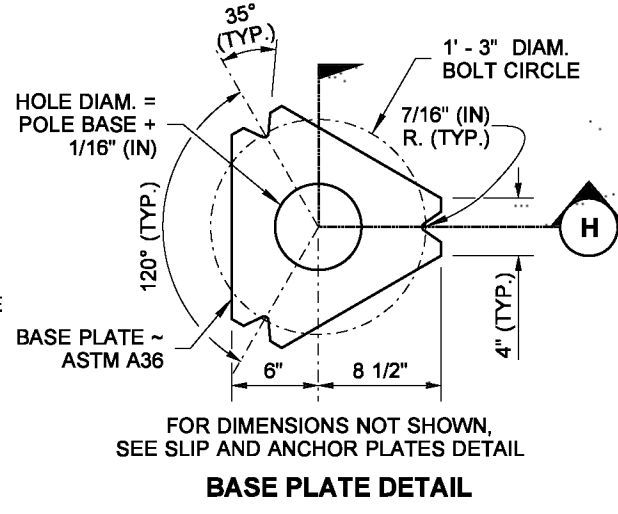




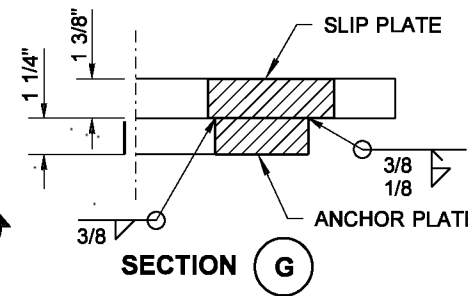
**SLIP AND ANCHOR PLATES DETAIL**



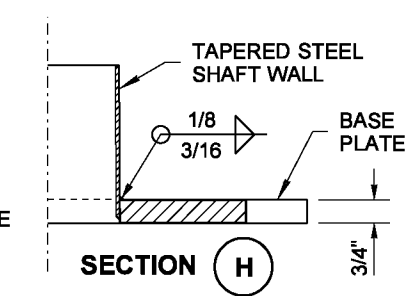
**KEEPER PLATE DETAIL**



**BASE PLATE DETAIL**

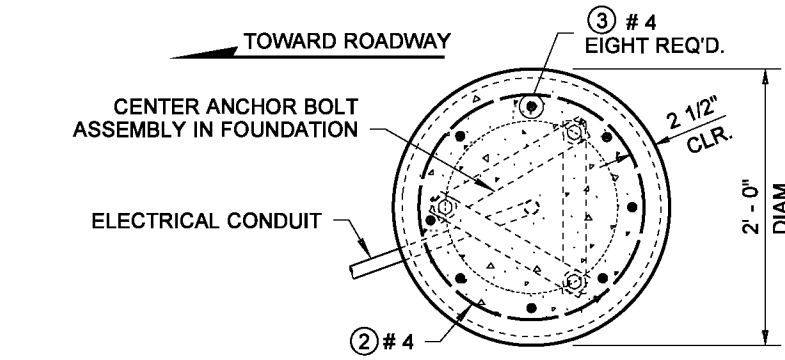


**SECTION G**

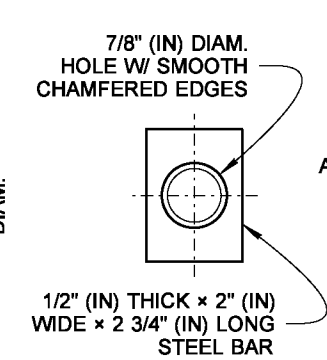


**SECTION H**

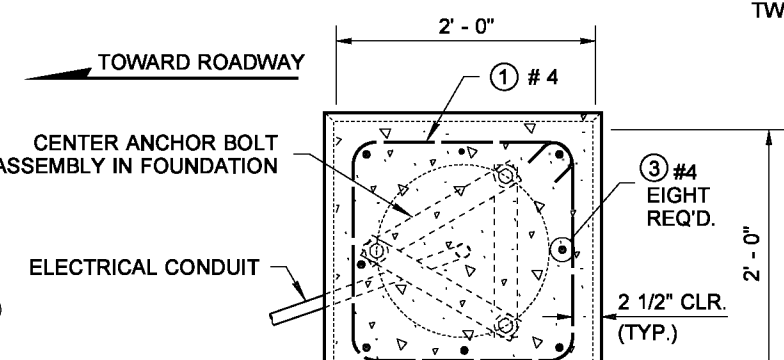
DRAWN BY: FERN LIDDELL



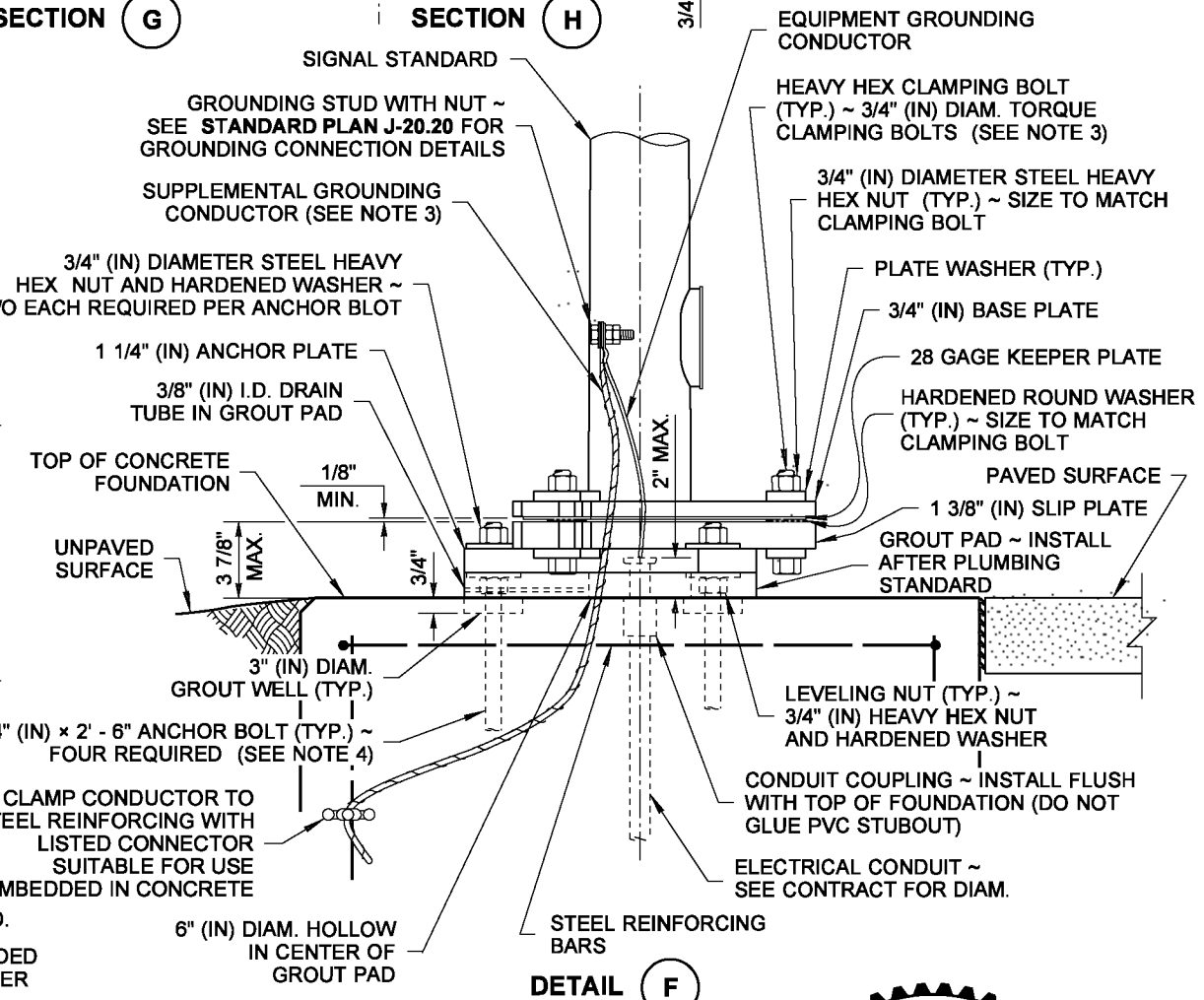
**SECTION D**



**PLATE WASHER DETAIL**

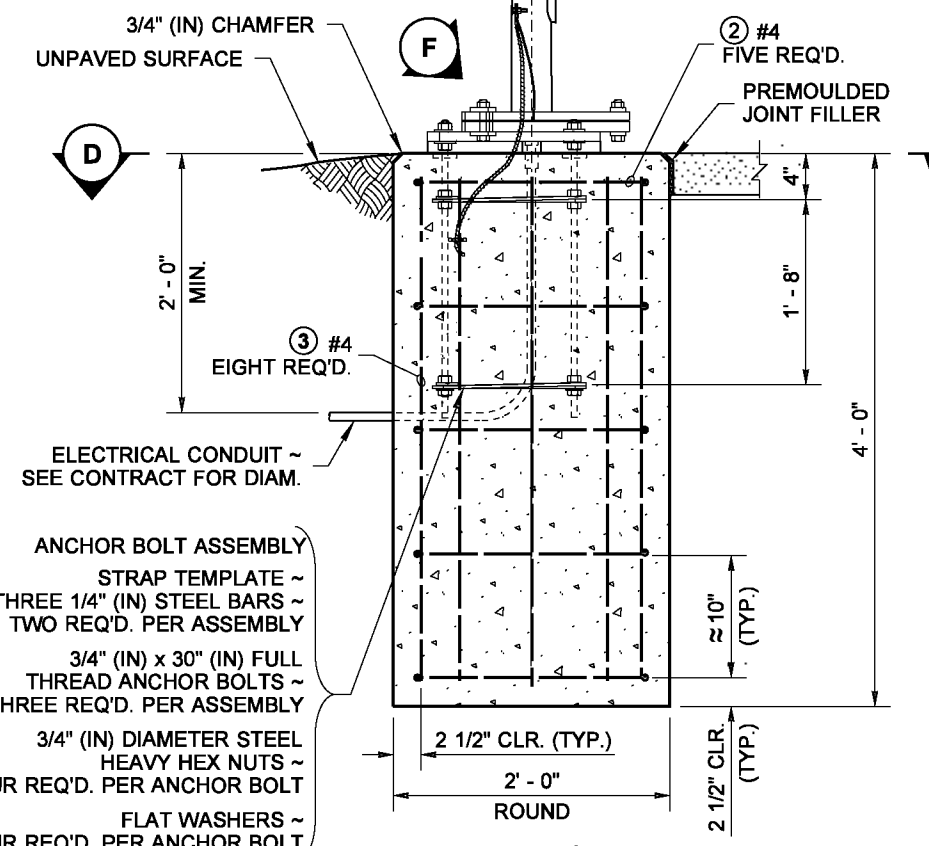


**SECTION E**

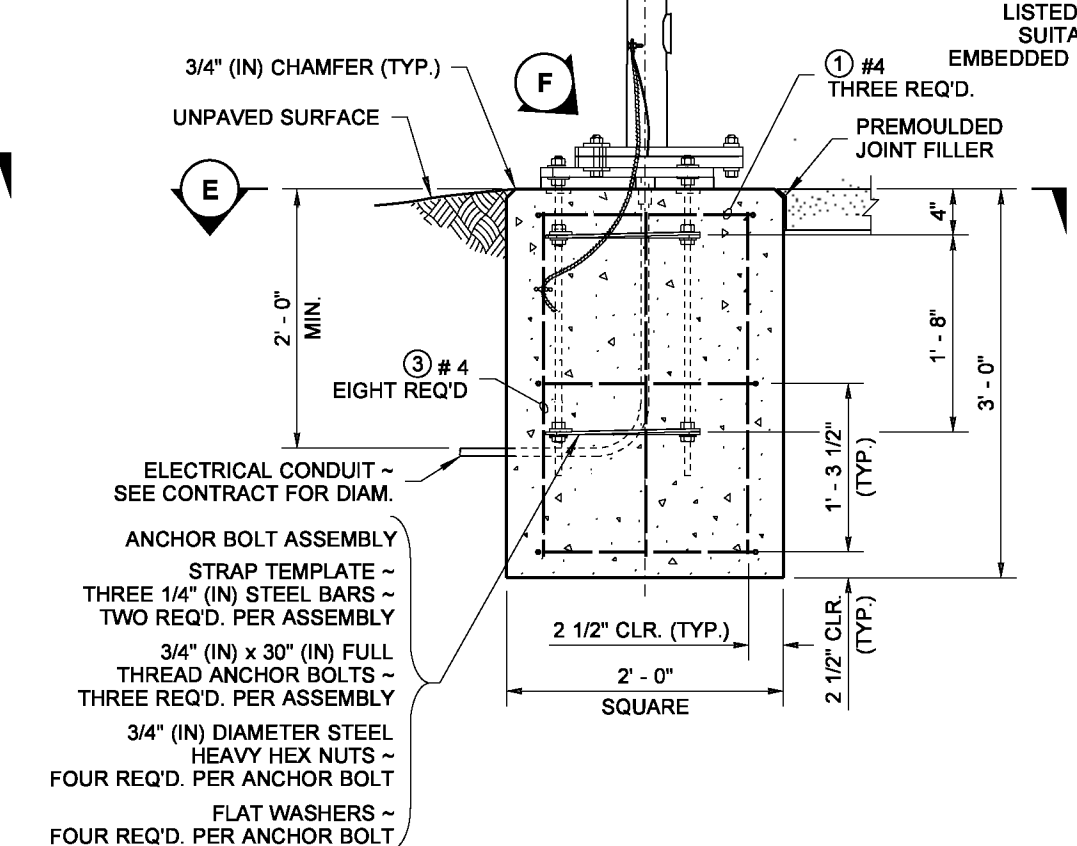


**DETAIL F**

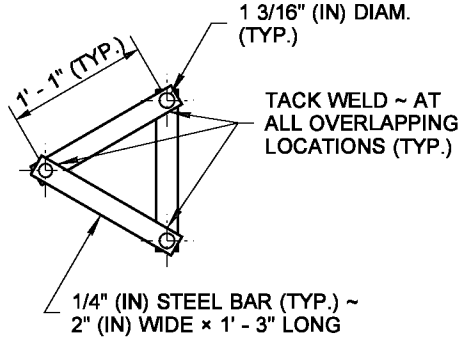
SQUARE FOUNDATION SHOWN



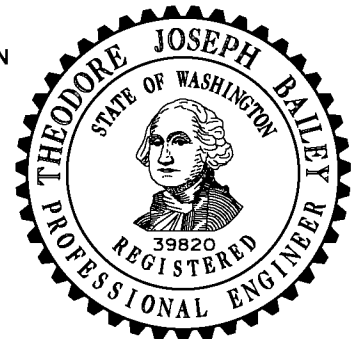
**ROUND CONCRETE FOUNDATION DETAIL**



**SQUARE CONCRETE FOUNDATION DETAIL**

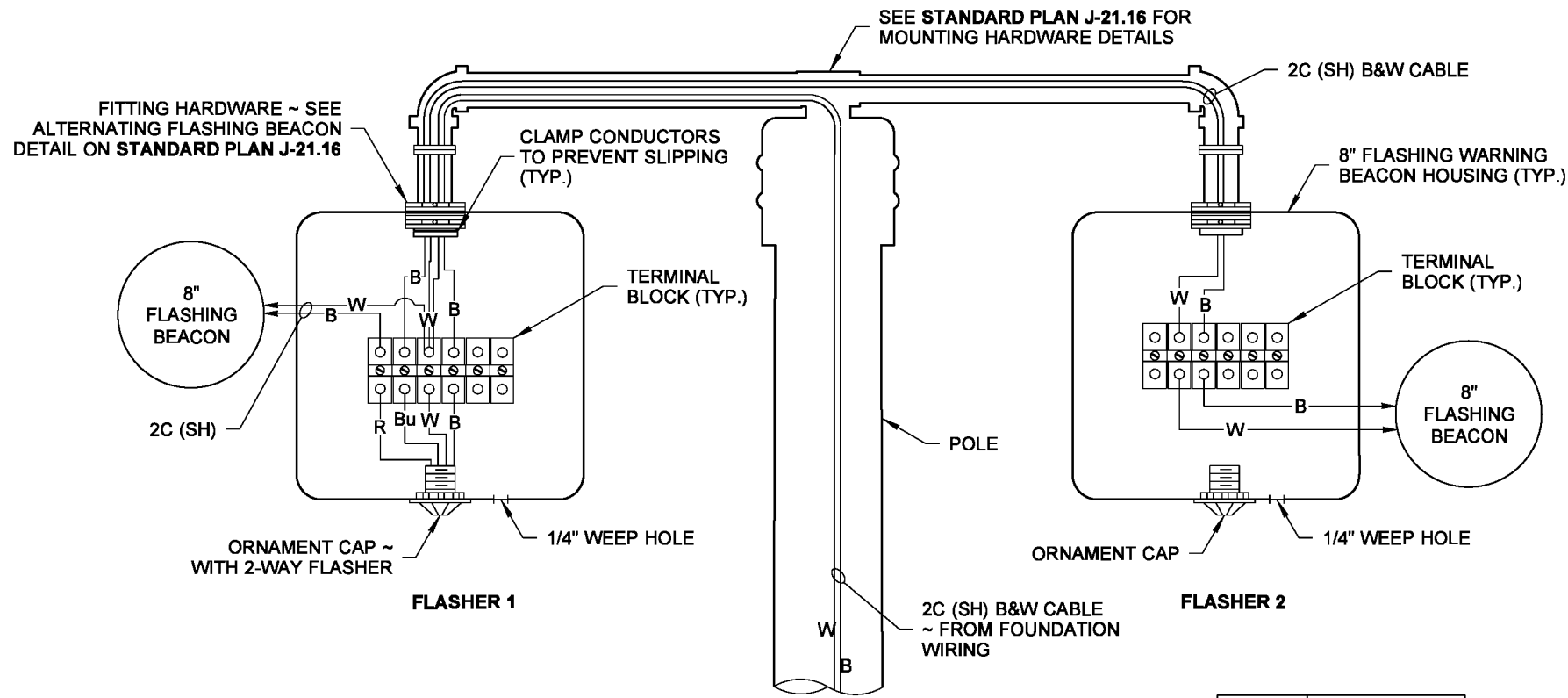


**STRAP TEMPLATE DETAIL**



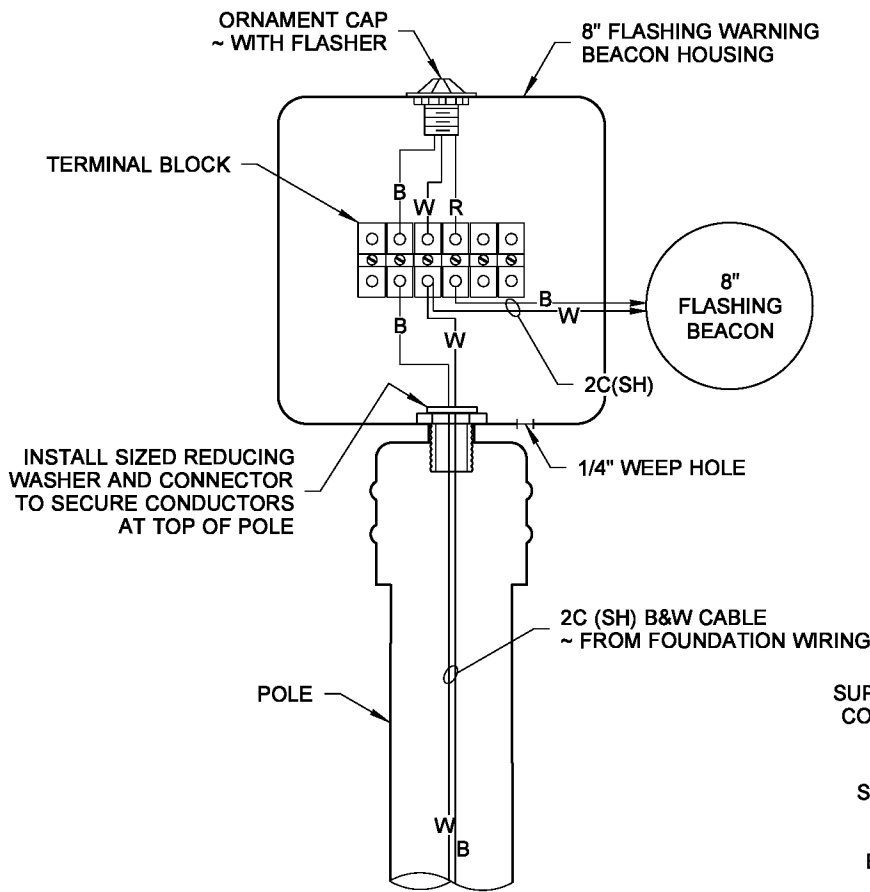
**TYPE PS, TYPE 1, RM & FB SIGNAL STANDARD FOUNDATION DETAILS**  
**STANDARD PLAN J-21.10-04**

DRAWN BY: FERN LIDDELL

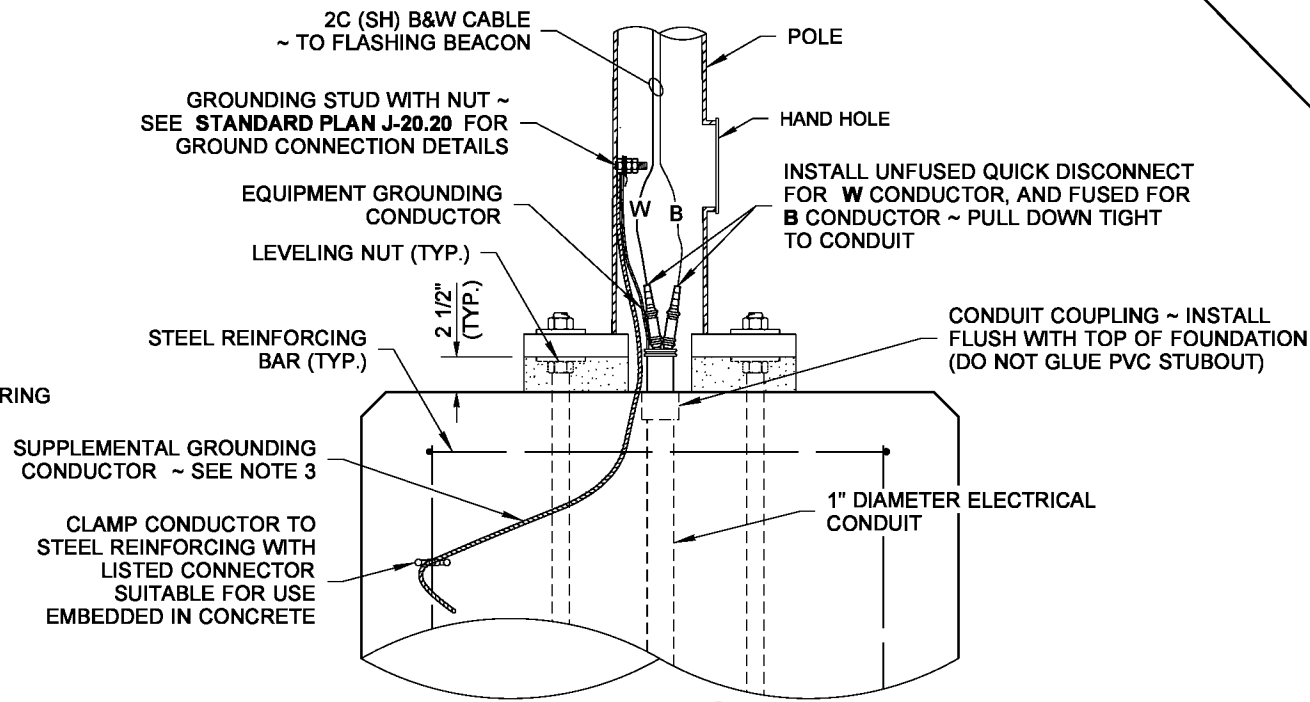


**DETAIL A**  
FLASHING BEACON WIRING  
ALTERNATING FLASH WIRING SHOWN

COLOR CODE	USE
B	POWER
W	NEUTRAL
R	FLASHER 1
Bu	FLASHER 2



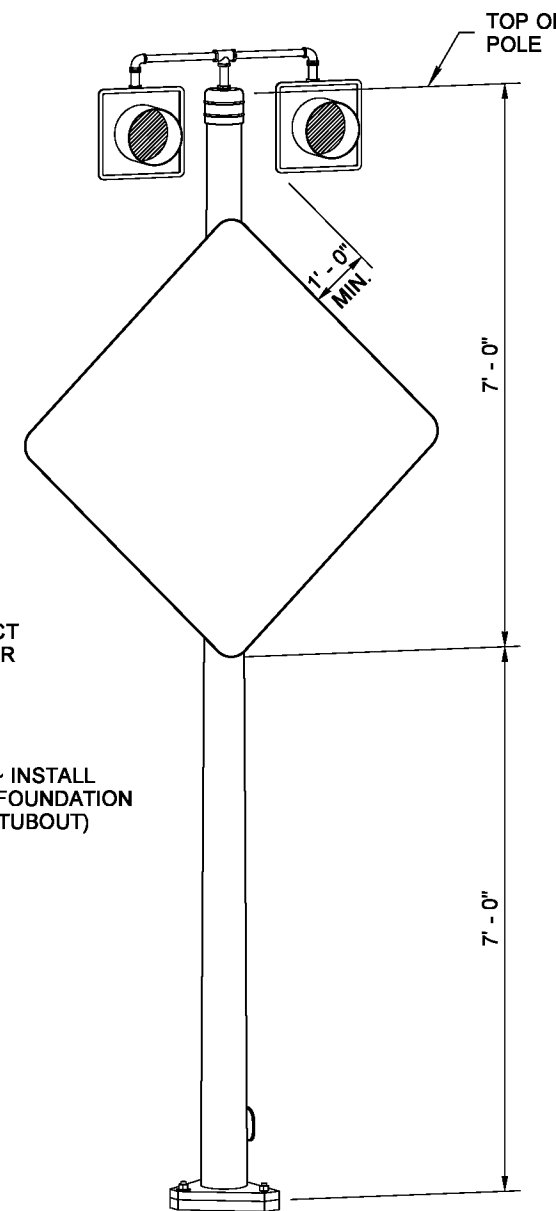
**DETAIL B**  
FLASHING BEACON WIRING  
SINGLE FLASH WIRING SHOWN



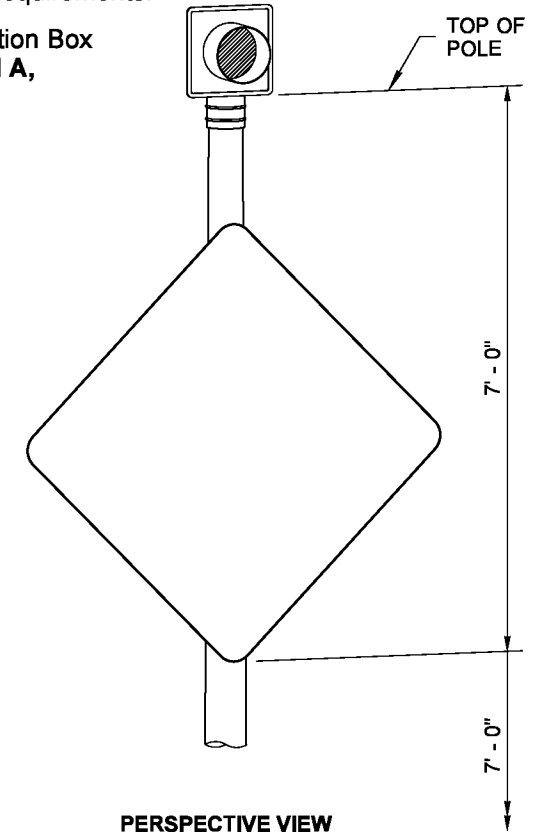
**DETAIL C**  
FOUNDATION WIRING  
FIXED BASE SHOWN

**NOTES**

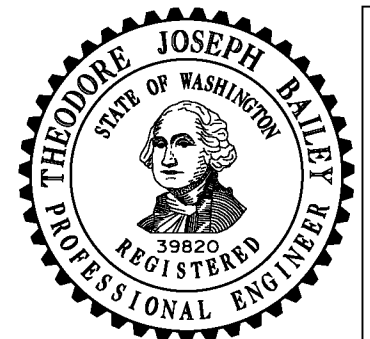
1. See **Standard Specification 9-29.3** for Cable Conductor requirements.
2. See **Standard Plan J-21.16** for Flashing Beacon Type 1 Signal Standard details.
3. Supplemental Grounding Conductor shall be non-insulated #4 AWG stranded copper, provide 3' - 0" min. slack. Clamp to vertical steel reinforcing bar with listed connector suitable for use embedded in concrete.
4. See **Standard Plan J-21.10** for foundation requirements.
5. Provide Cable Tie at wiring entering the Junction Box (for Slip Base installations only) ~ See **Detail A, Standard Plan J-28.70**.



**PERSPECTIVE VIEW**  
FLASHING BEACON TYPE 1  
ALTERNATING FLASH BEACON SHOWN



**PERSPECTIVE VIEW**  
FLASHING BEACON TYPE 1  
SINGLE FLASH BEACON SHOWN



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**FLASHING BEACON  
TYPE 1 SIGNAL STANDARD  
ELECTRICAL DETAILS**

**STANDARD PLAN J-21.17-01**

SHEET 1 OF 1 SHEET

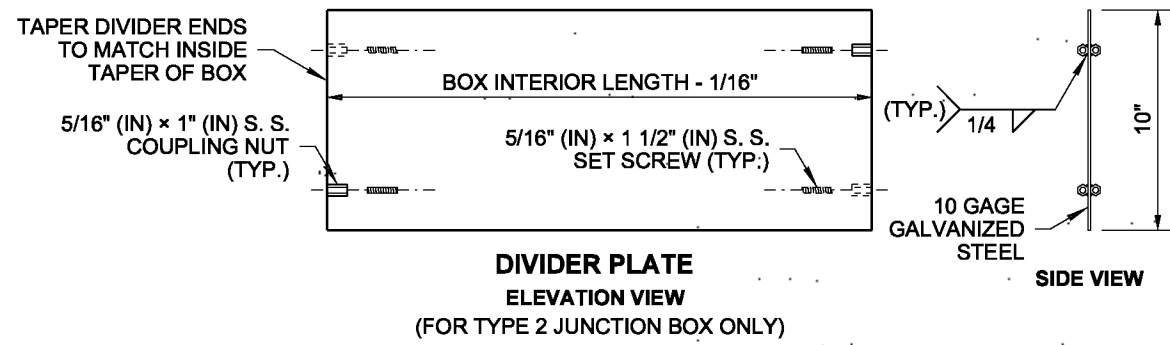
APPROVED FOR PUBLICATION

**Pasco Bakotich III** 6/10/13

STATE DESIGN ENGINEER DATE



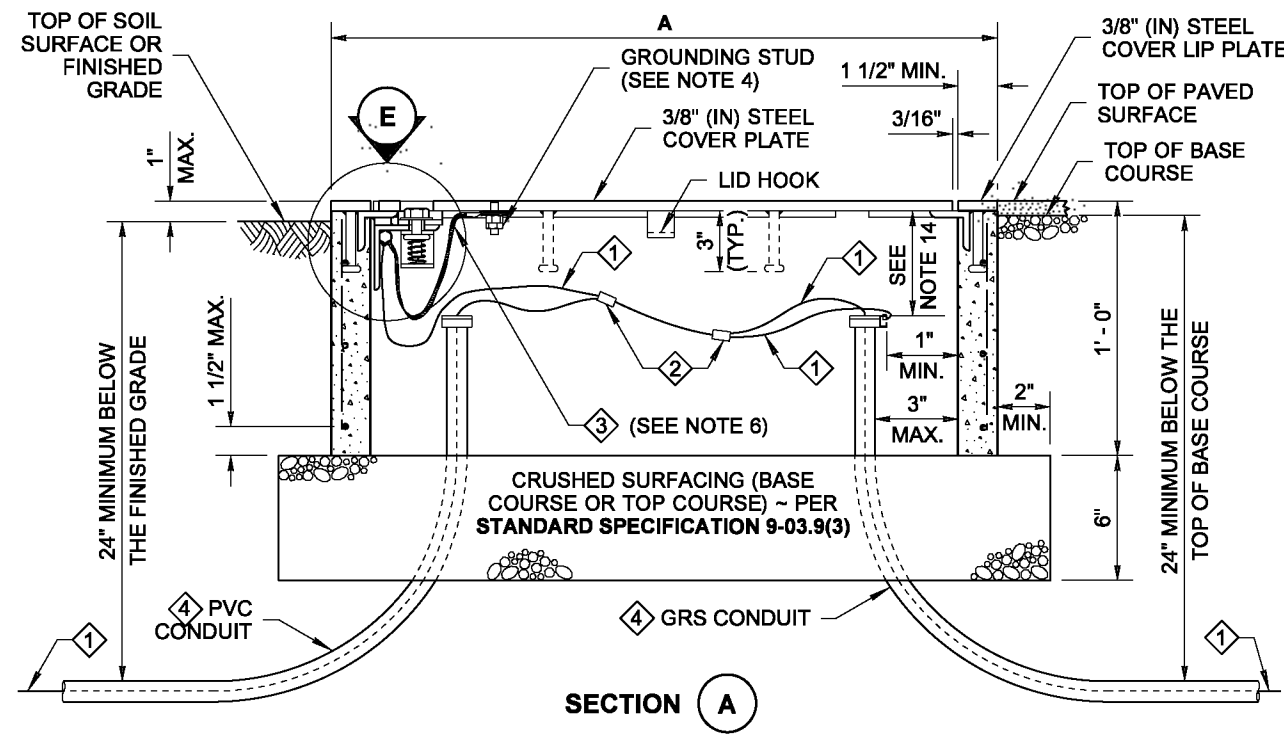
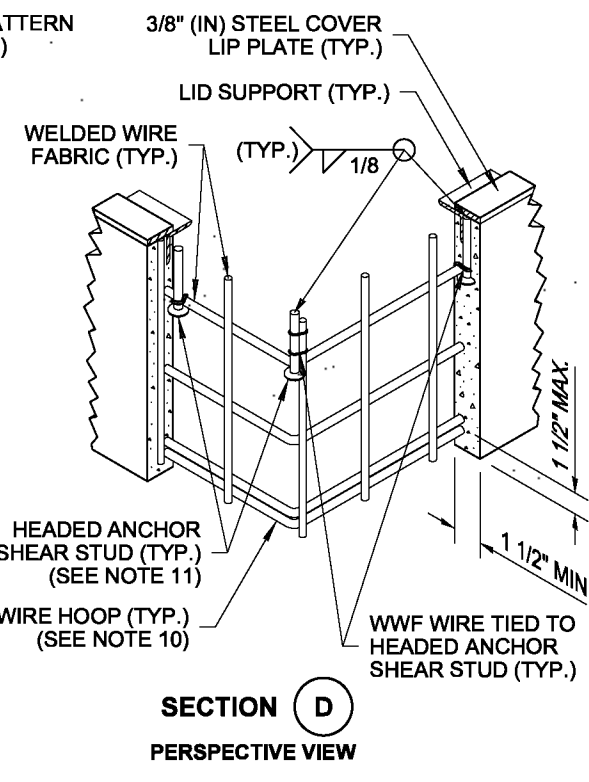
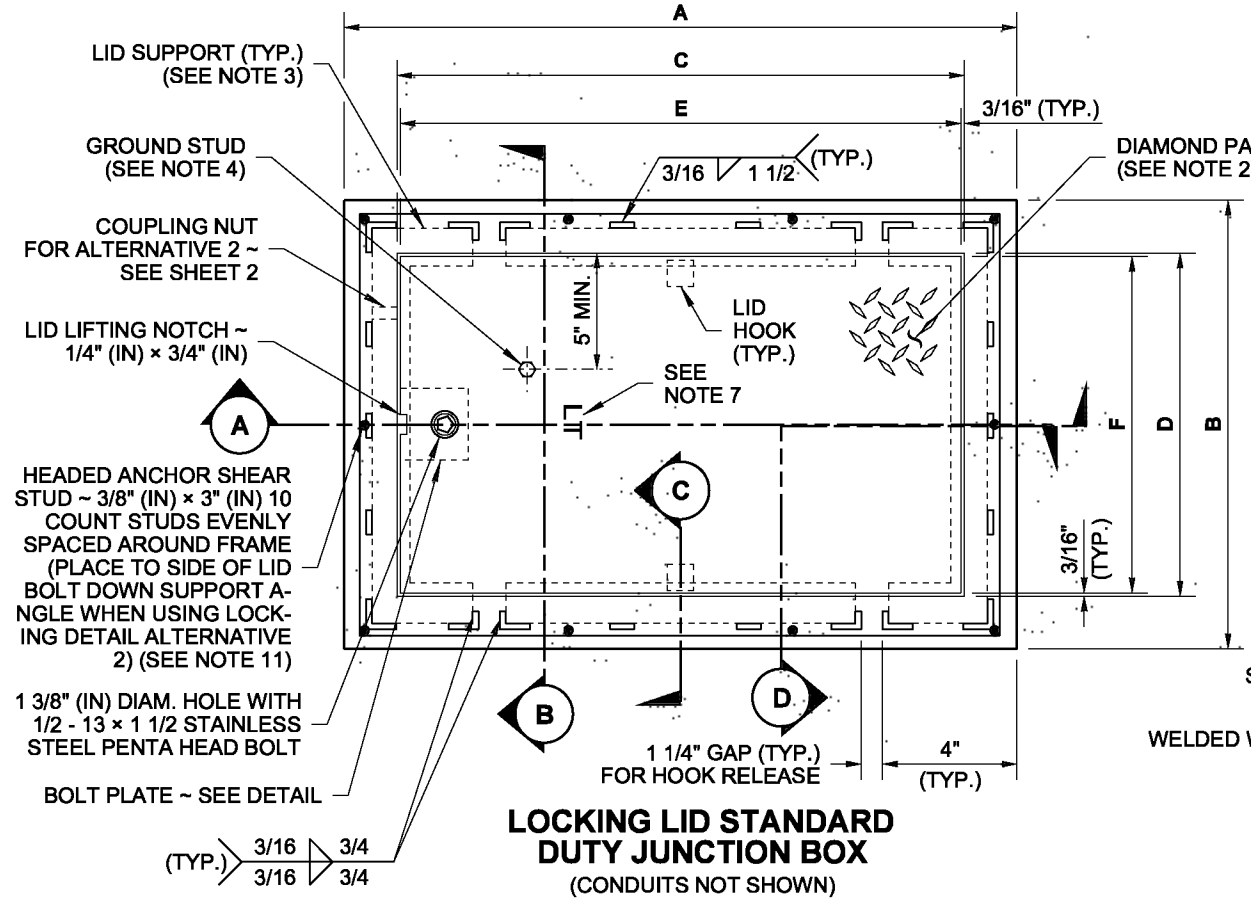
DRAWN BY: LISA CYFORD



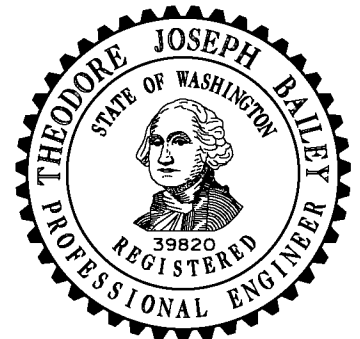
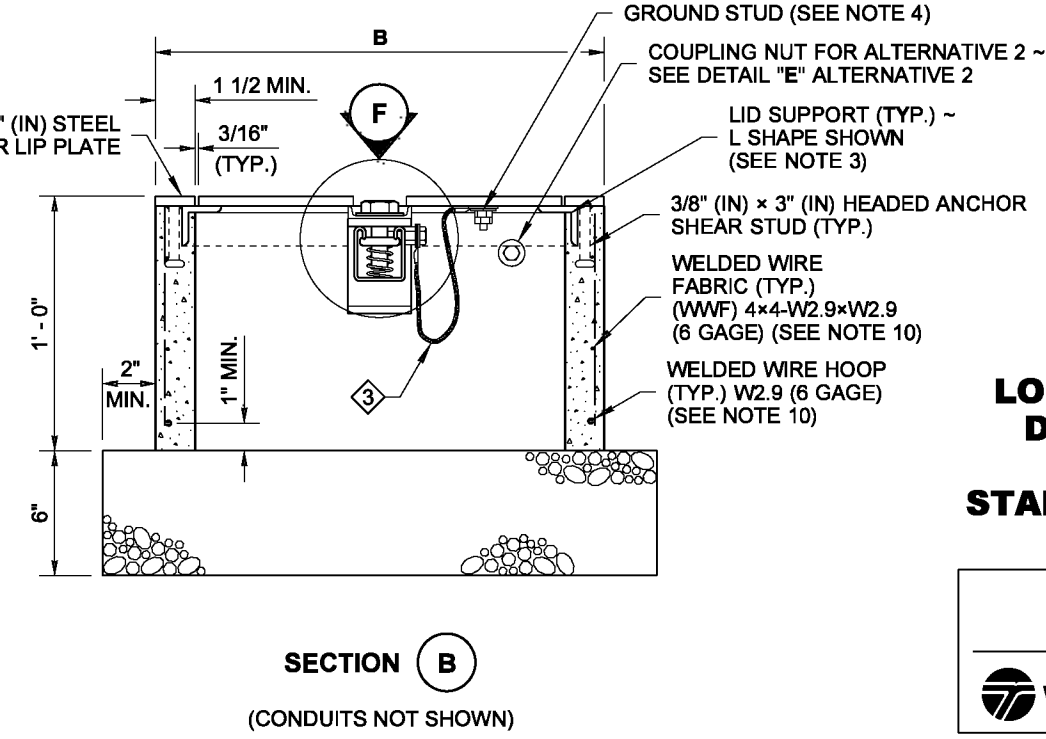
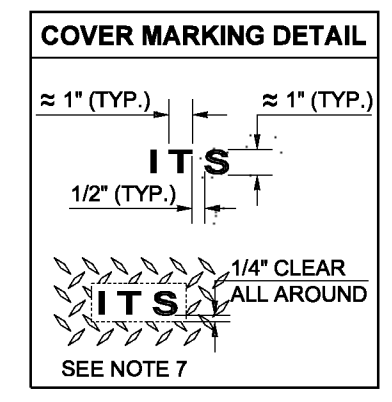
JUNCTION BOX DIMENSION TABLE			
MARK	ITEM	BOX TYPE	
		TYPE 1	TYPE 2
A	OUTSIDE LENGTH OF JUNCTION BOX	22"	33"
B	OUTSIDE WIDTH OF JUNCTION BOX	17"	22 1/2"
C	INSIDE LENGTH OF JUNCTION BOX	18" ~ 19"	28" ~ 29"
D	INSIDE WIDTH OF JUNCTION BOX	13" ~ 14"	17" ~ 18"
E	LID LENGTH	17 5/8"	28 5/8"
F	LID WIDTH	12 5/8"	18 1/8"
CAPACITY ~ CONDUIT DIAMETER		6"	12"

**NOTES**

- All box dimensions are approximate. Exact configurations vary among manufacturers.
- Minimum lid thickness shown. Junction Boxes installed in sidewalks, walkways, and shared-use paths shall have a slip-resistant coating on the lid and lip cover plate, and shall be installed with the surface flush with and matched to the grade of the sidewalk, walkway, or shared-use path. The non-slip lid shall be identified with permanent markings on the underside, indicating the type of surface treatment (see Contract Documents for details) and the year of manufacture. The permanent marking shall be 1/8" (in) line thickness formed with a mild steel weld bead and shall be placed prior to hot-dip galvanizing.
- Lid support members shall be 3/16" (in) minimum thick steel C, L, or T shape, welded to the frame.
- A 1/4-20 NC x 3/4" (in) stainless steel ground stud shall be welded to the bottom of the lid; include (2) stainless steel nuts and (2) stainless steel flat washers.
- Bolts and nuts shall be liberally coated with anti-seize compound.
- Equipment Bonding Jumper shall be # 8 AWG min. x 4' (ft) of tinned braided copper.
- The System Identification letters shall be 1/8" (in) line thickness formed with a mild steel weld bead. See Cover Marking detail. Grind off diamond pattern before forming letters. For System Identification details, see **Standard Specification 9-29.2(4)**.
- When required in the Contract, provide a 10" (in) x 27 1/2" (in), 10 gage divider plate, complete, with fasteners, in each Type 2 Junction Box where specified.
- When required in Contract, provide a 12" (in) deep extension for each Type 2 Junction Box where specified.
- See the **Standard Specifications** for alternative reinforcement and class of concrete.
- Headed Anchor Shear Studs must be welded to the Steel Cover Lip Plate and wire tied in two places to the vertical Welded Wire Fabric when in contact with each other. Wire tie all other Headed Anchor Shear Studs to the horizontal Welded Wire Fabric.
- Lid Bolt Down Attachment Tab provides a method of retrofitting by using a mechanical process in lieu of welding. Attachment Tab shown depicts a typical component arrangement; actual configurations of assembly will vary among manufacturers. See approved manufacturers' shop drawings for specifics.
- Unless otherwise noted in the plans or approved by the Engineer, Junction Boxes, Cable Vaults, and Pull Boxes shall not be placed within the sidewalks, walkways, shared use paths, traveled ways or paved shoulders. All Junction Boxes, Cable Vaults, and Pull Boxes placed within the traveled way or paved shoulders shall be Heavy-Duty.
- Distance between the top of the conduit and the bottom of the Junction Box lid shall be 6" (in) min. to 8" (in) max. for final grade of new construction only. See **Standard Specification 8-20.3(5)**. Where adjustments are to be made to existing Junction Boxes, or for interim construction stages during the contract, the limits shall be from 6" (in) min. to 10" (in) max. See **Standard Specification 8-20.3(6)**.

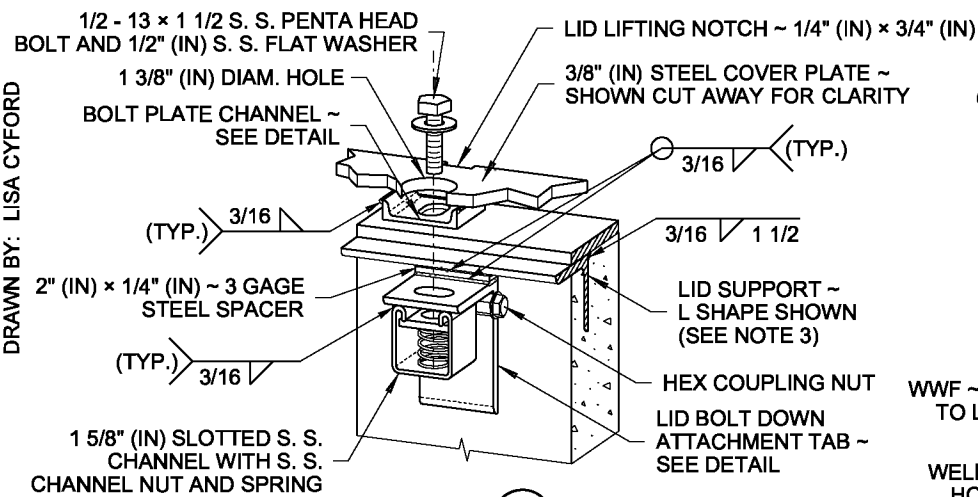


- ① Equipment Grounding Conductor
- ② Copper Solderless Crimp Connector
- ③ Equipment Bonding Jumper (See Note 6)
- ④ See Contract for conduit size and number



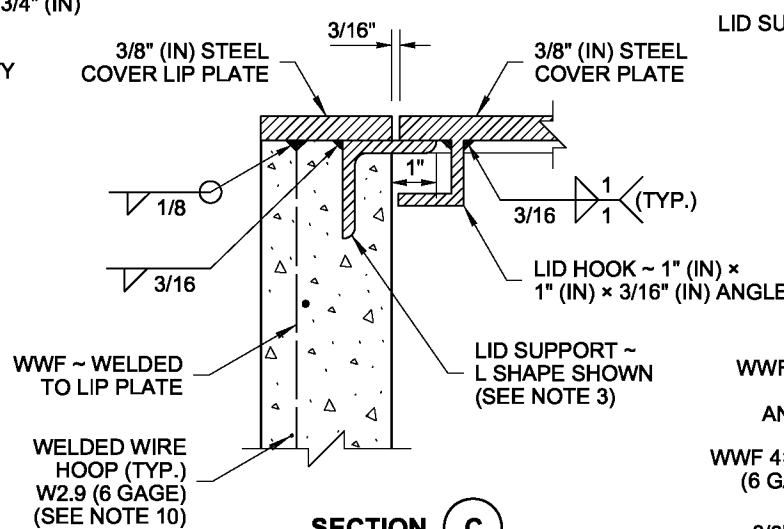
**LOCKING LID STANDARD  
DUTY JUNCTION BOX  
TYPES 1 & 2  
STANDARD PLAN J-40.10-04**

DRAWN BY: LISA CYFORD

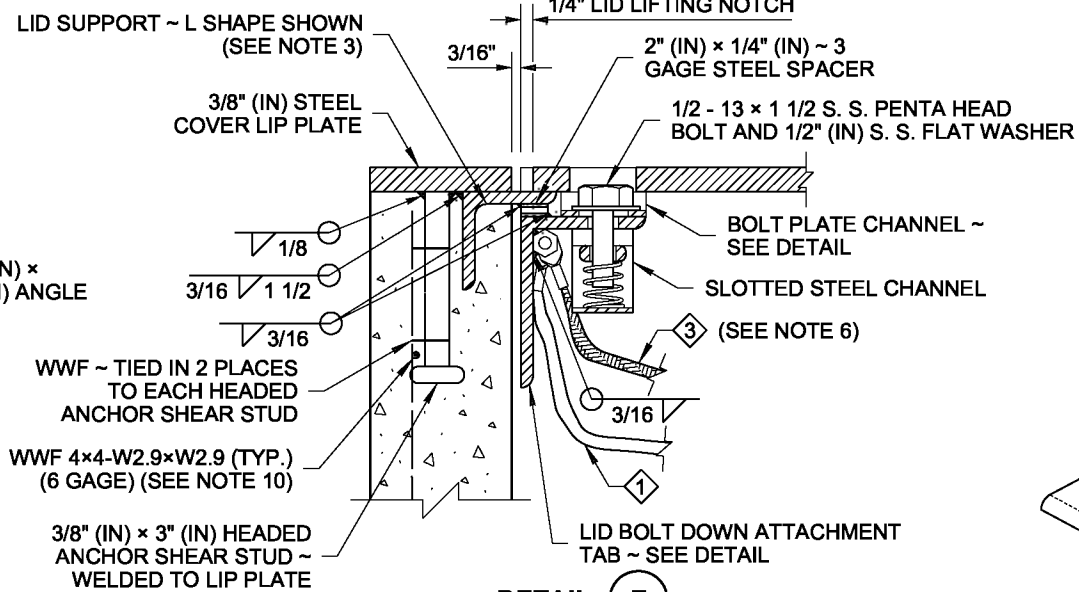


DETAIL F

ALTERNATIVE 1 SHOWN PERSPECTIVE VIEW

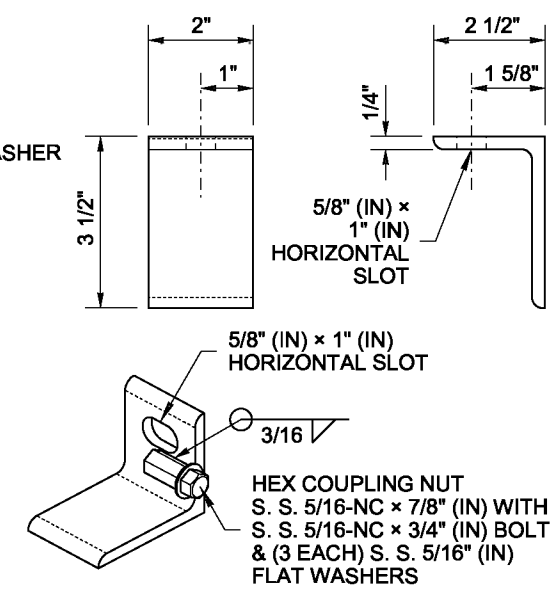


SECTION C

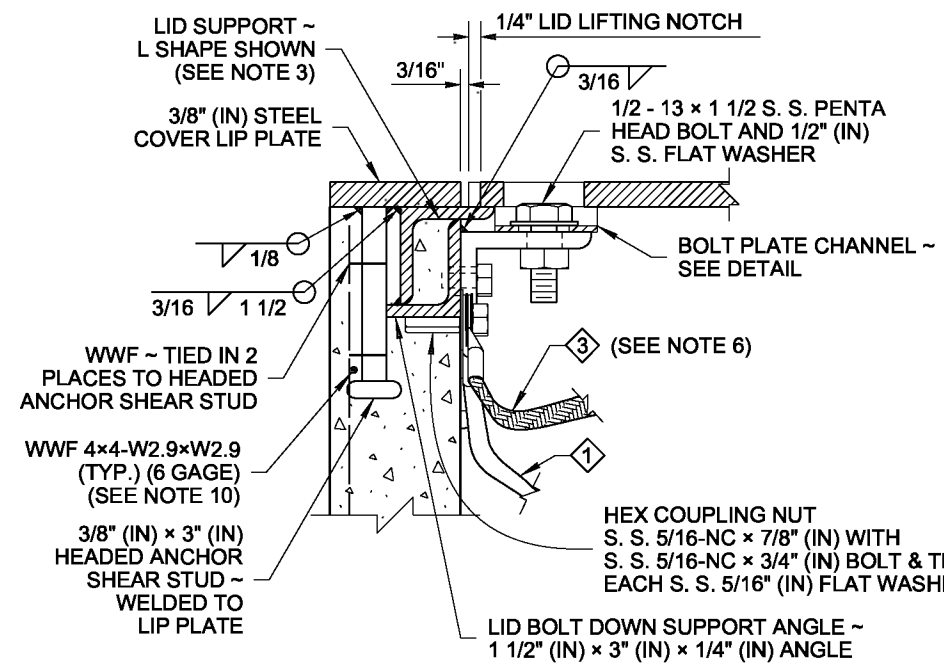


DETAIL E

ALTERNATIVE 1 SHOWN

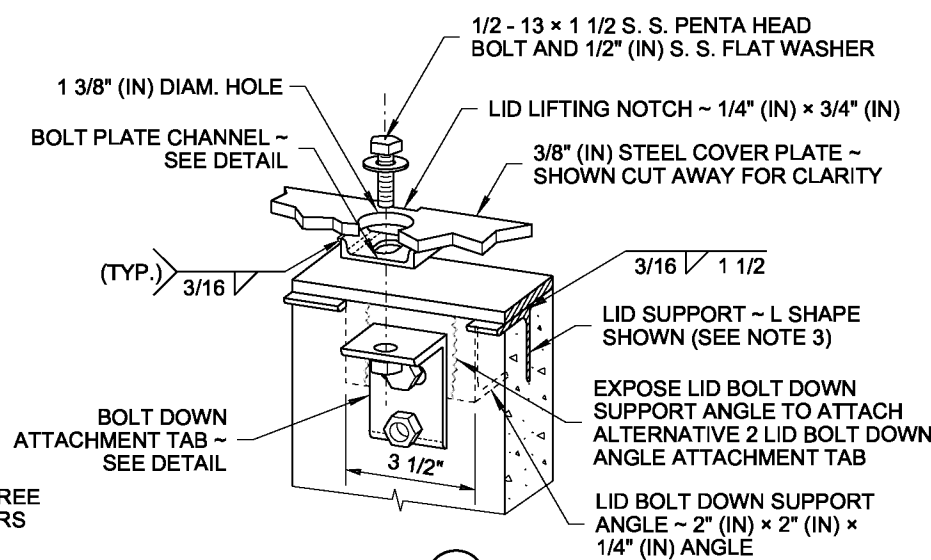


ALTERNATIVE 1 LID BOLT DOWN ATTACHMENT TAB (SEE NOTE 12)



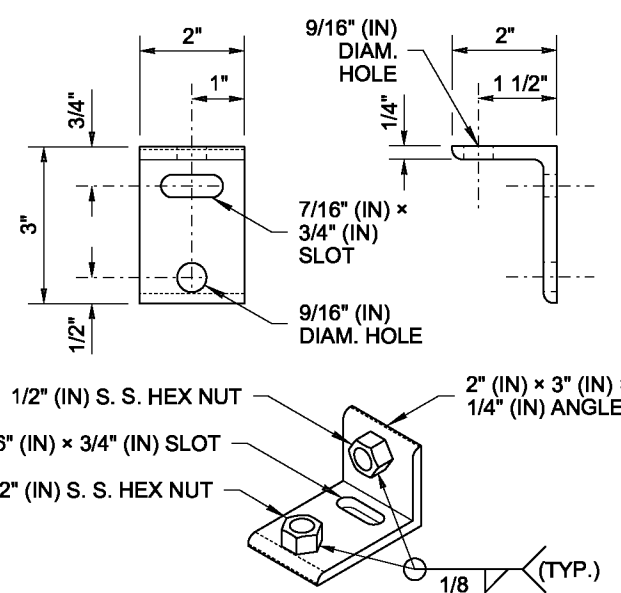
DETAIL E

ALTERNATIVE 2 SHOWN

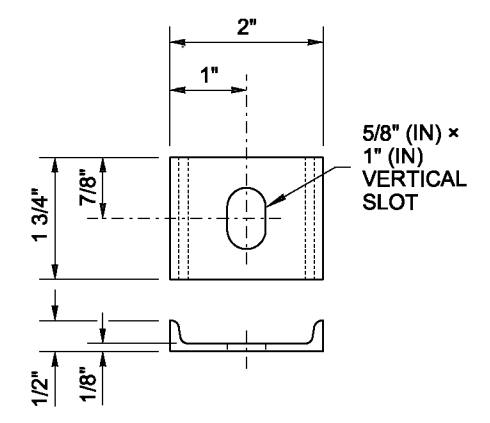


DETAIL F

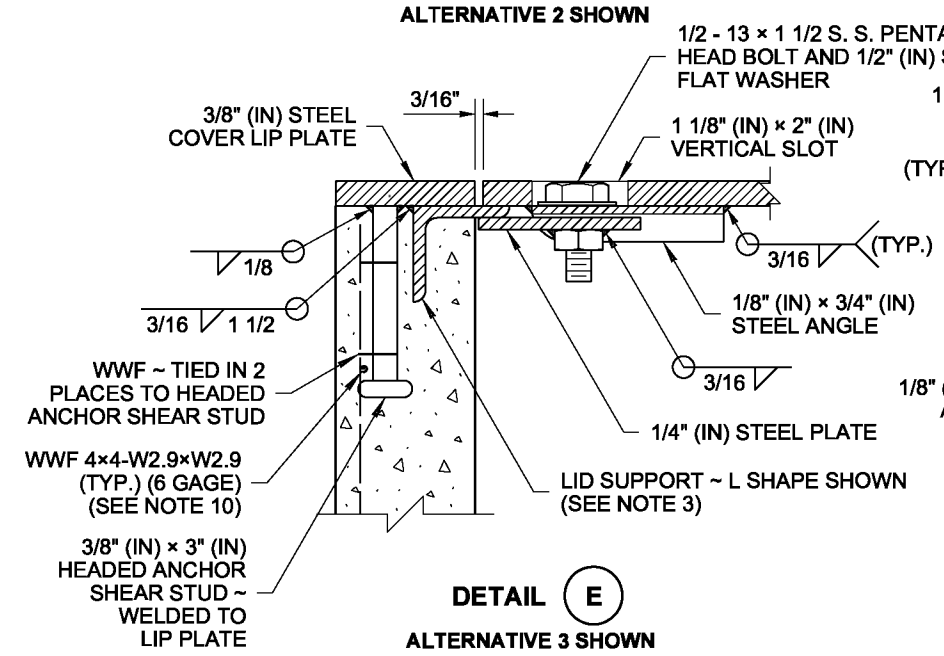
ALTERNATIVE 2 SHOWN PERSPECTIVE VIEW



ALTERNATIVE 2 LID BOLT DOWN ATTACHMENT TAB (SEE NOTE 12)

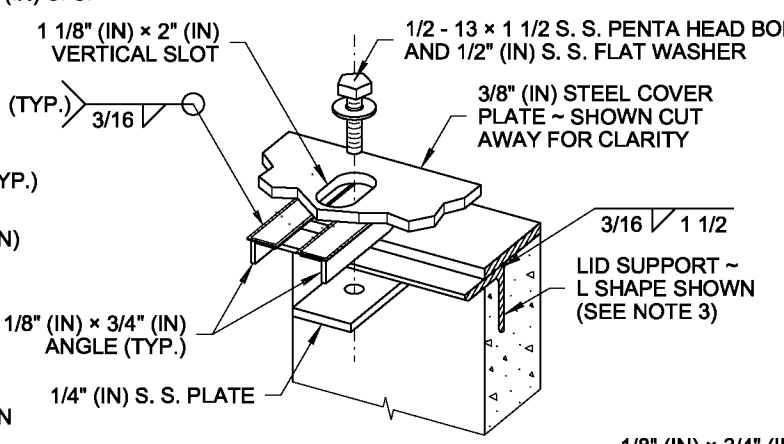


BOLT PLATE CHANNEL



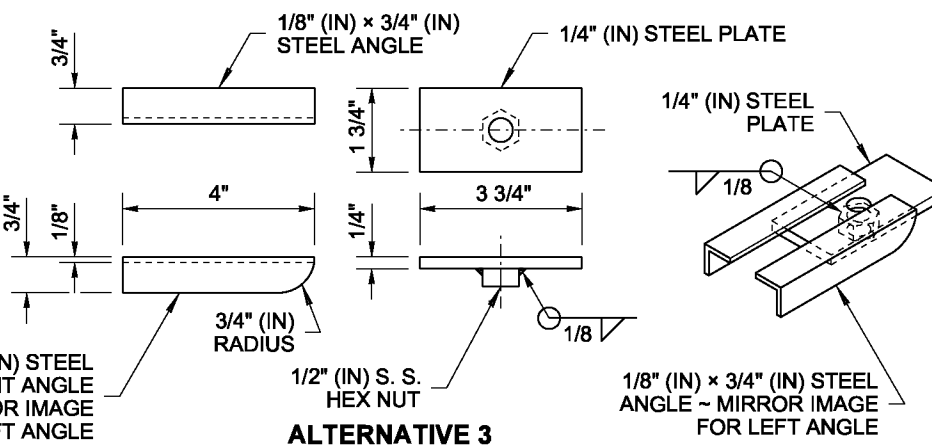
DETAIL E

ALTERNATIVE 3 SHOWN

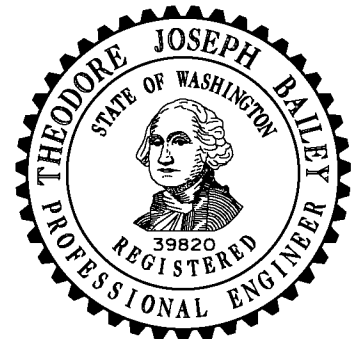


DETAIL F

ALTERNATIVE 3 SHOWN PERSPECTIVE VIEW



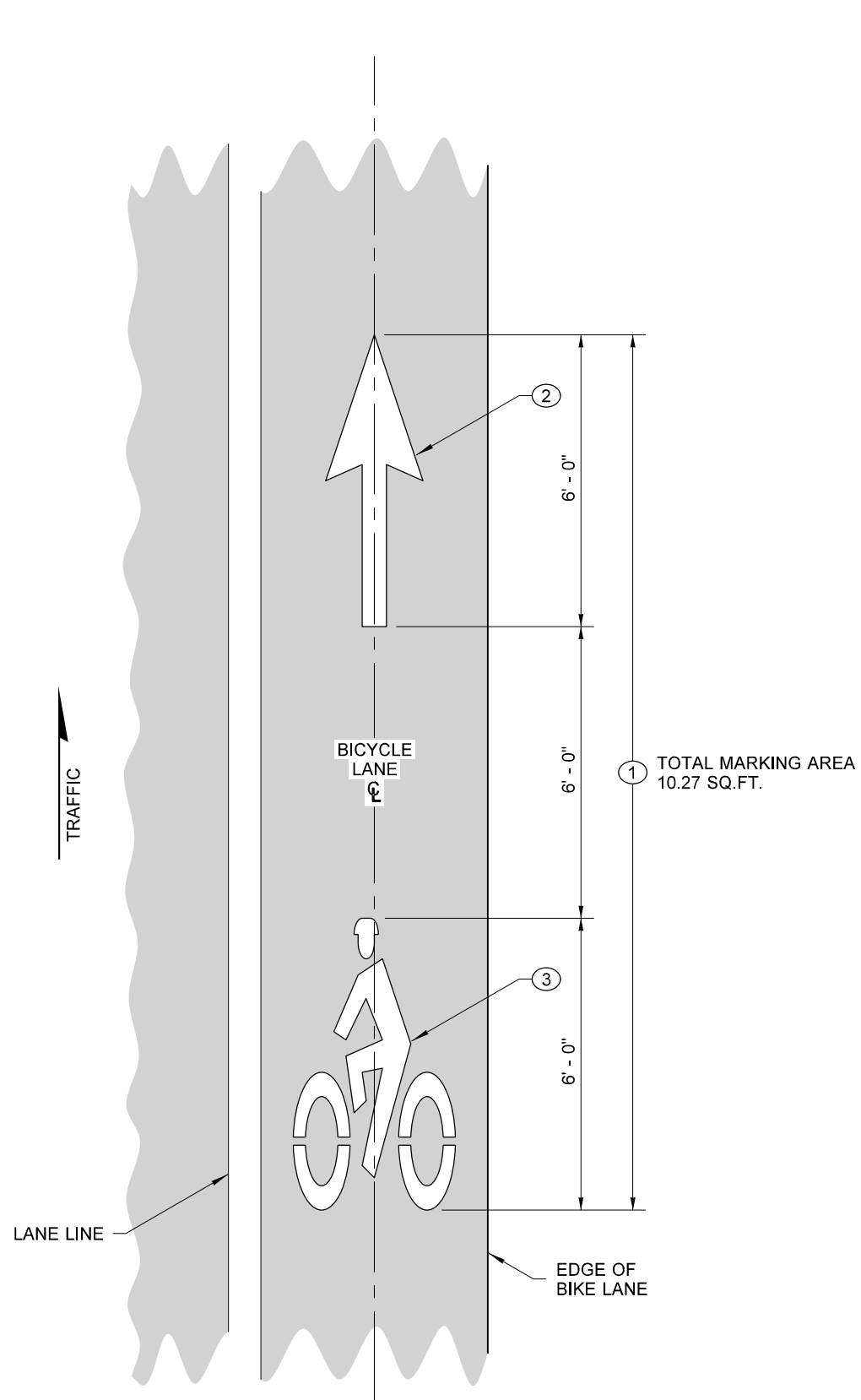
ALTERNATIVE 3 LID BOLT DOWN ATTACHMENT TAB (SEE NOTE 12)



**LOCKING LID STANDARD DUTY JUNCTION BOX TYPES 1 & 2 STANDARD PLAN J-40.10-04**

SHEET 2 OF 2 SHEETS

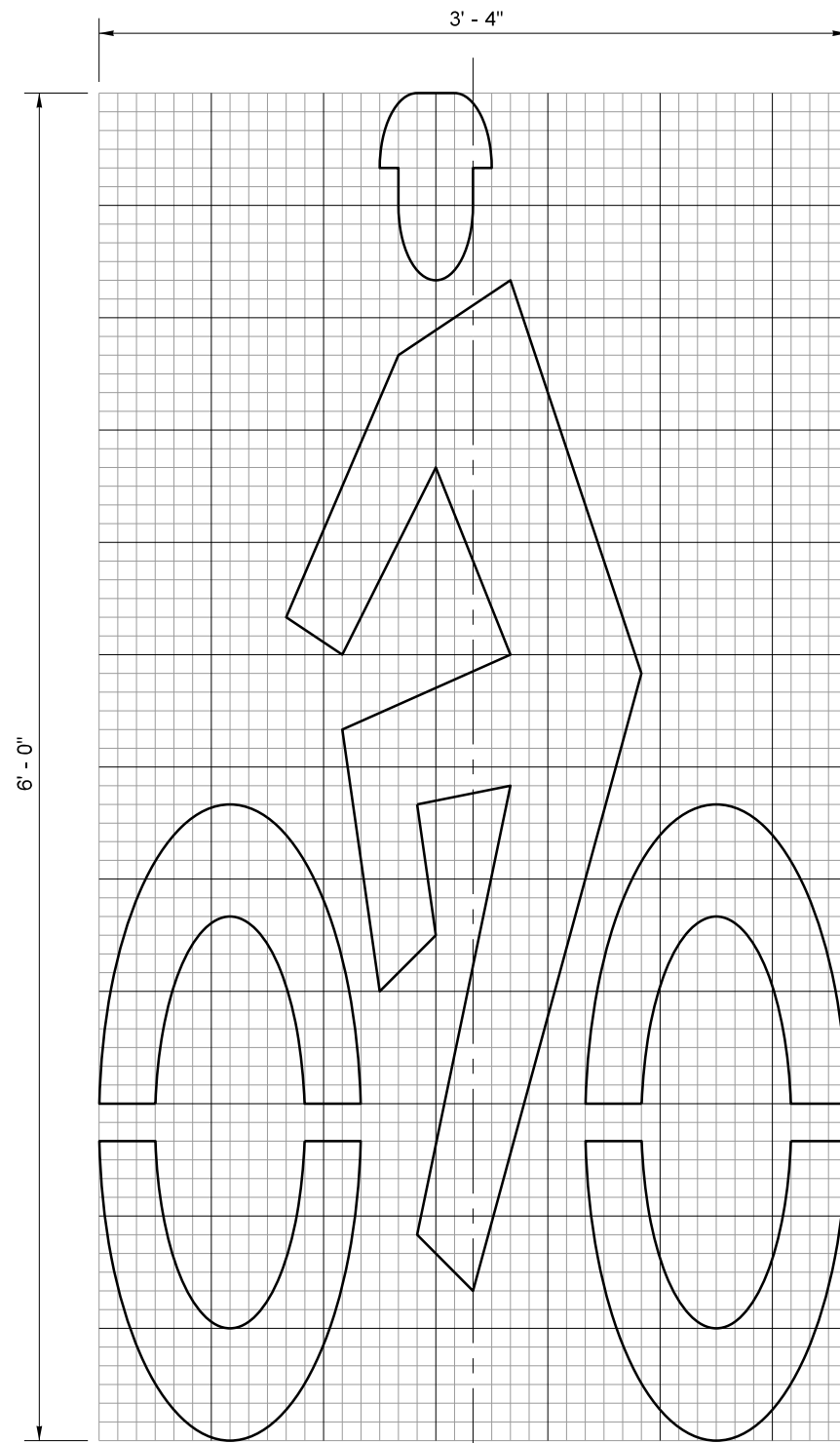
APPROVED FOR PUBLICATION



**BICYCLE LANE SYMBOL LAYOUT**

**KEY NOTES**

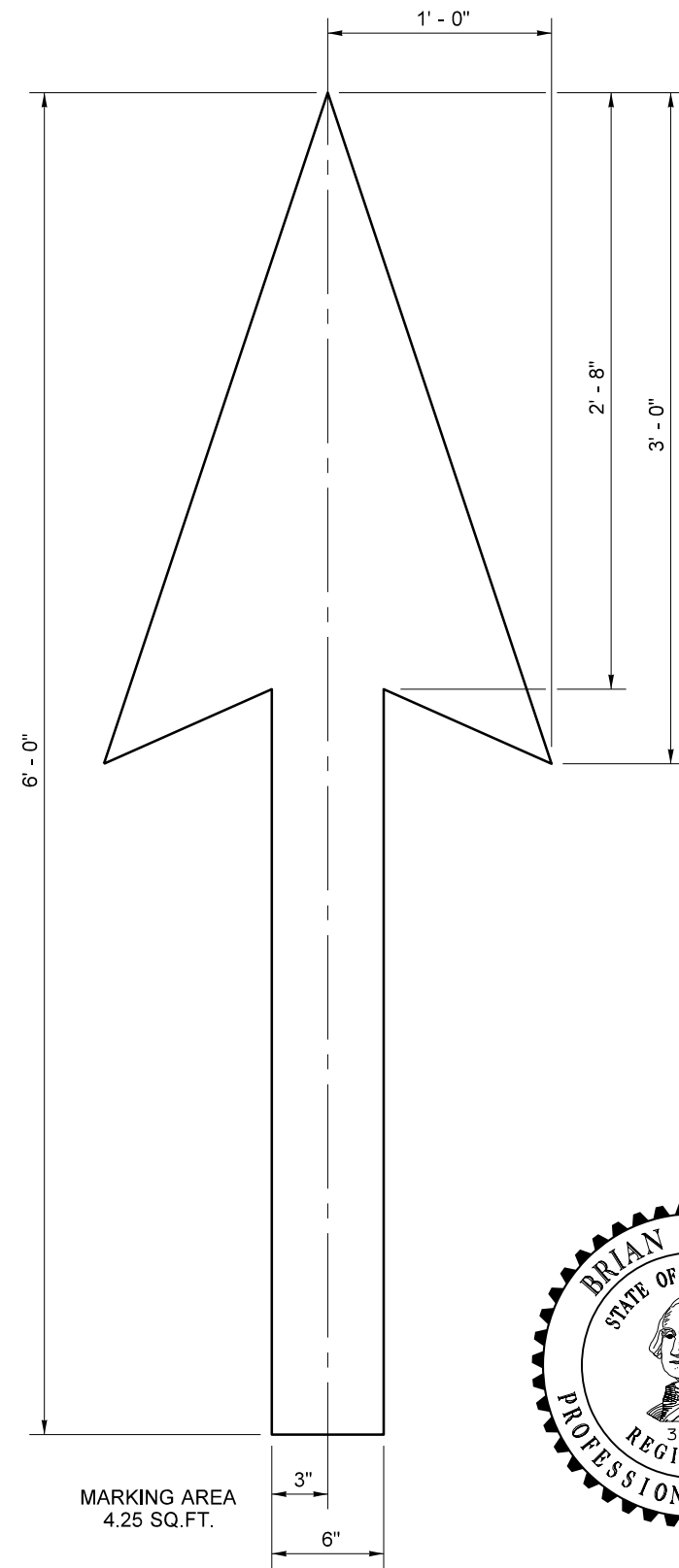
- ① Bid Item "Bicycle Lane Symbol" includes Bike Lane Arrow and Bike Rider Symbol.
- ② 2' (ft) x 6' (ft) White Bike Lane Arrow.
- ③ Bike Rider Symbol.



GRID IS 1" (IN) SQUARE  
**BIKE RIDER SYMBOL  
DETAIL**

**GENERAL NOTE**

See Contract for location and material requirements.



**BIKE LANE ARROW  
DETAIL**

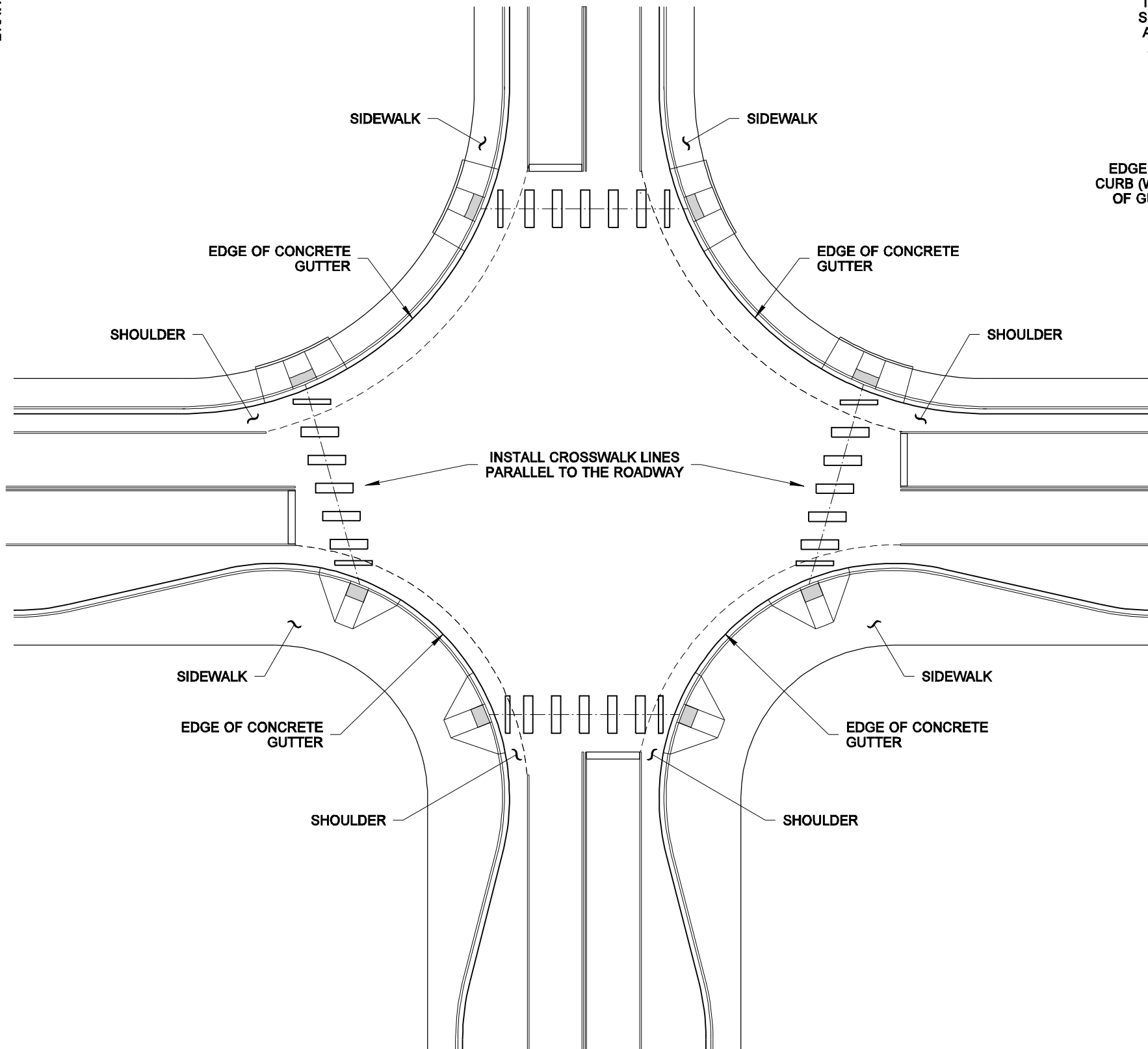


**BICYCLE LANE SYMBOL LAYOUT**

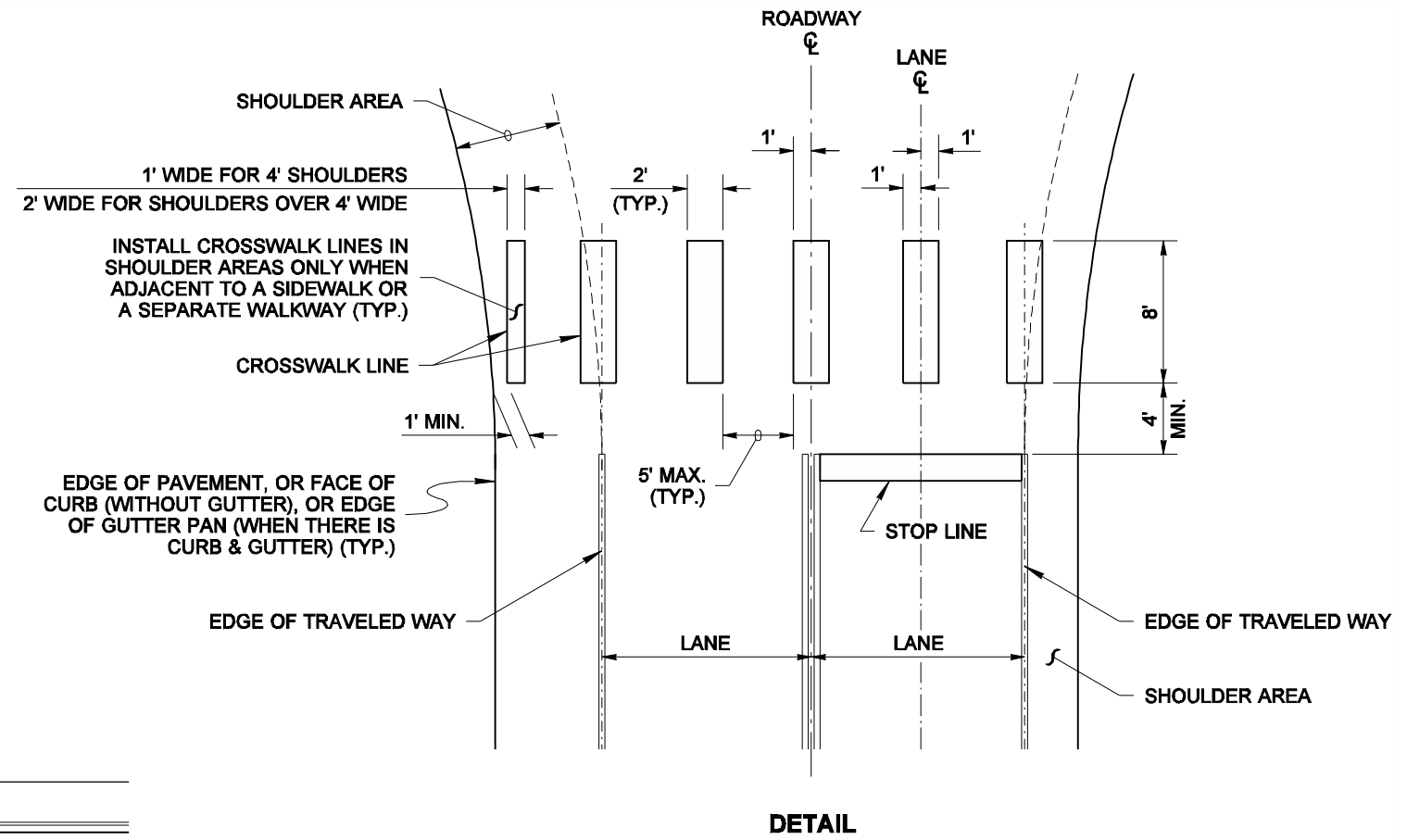
**STANDARD PLAN M-9.50-02**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

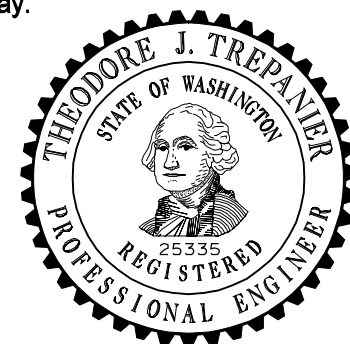


TYPICAL APPLICATIONS



NOTES

1. See the Contract Plans for locations of crosswalk centerlines.
2. To the maximum extent possible, curb ramp centerline should be perpendicular to the crosswalk centerline.
3. To the maximum extent possible, crosswalks should be perpendicular to the centerline of the traveled way.



EXPIRES AUGUST 9, 2007

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CROSSWALK LAYOUT

STANDARD PLAN M-15.10-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Ken L. Smith

STATE DESIGN ENGINEER

02-06-07

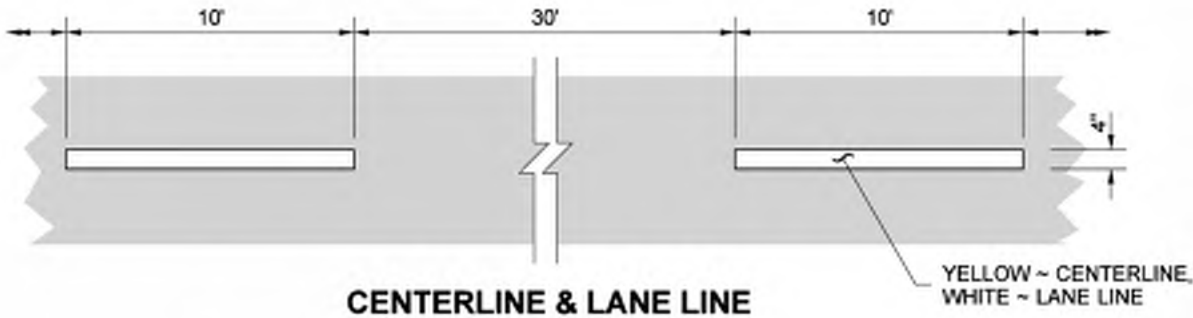
DATE



Washington State Department of Transportation

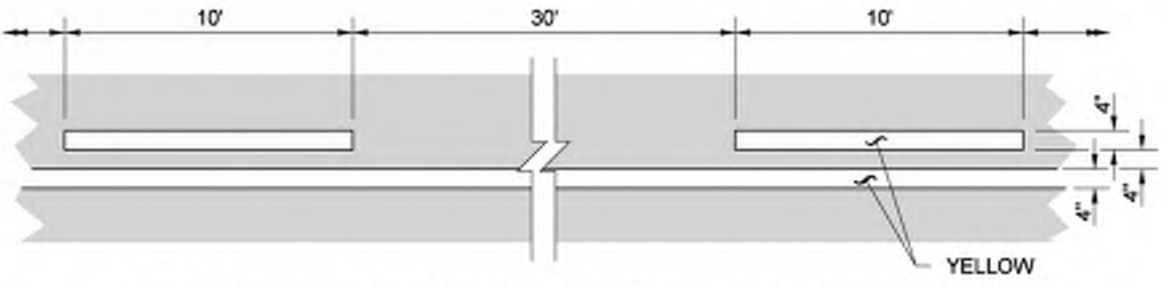


DRAWN BY: FERN LIDDELL



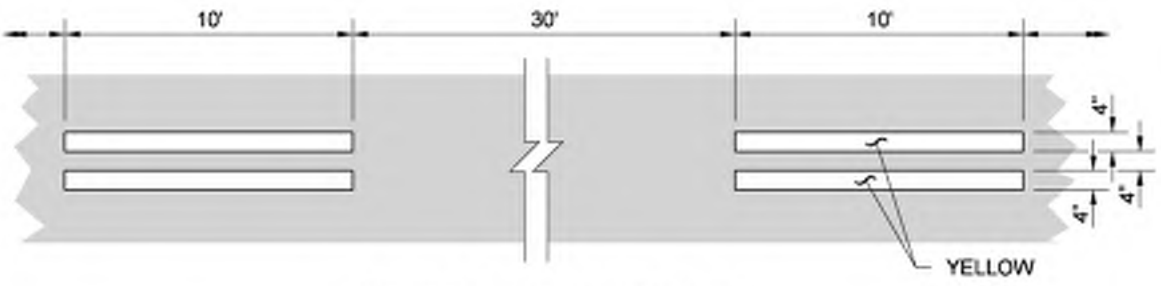
**CENTERLINE & LANE LINE**

YELLOW ~ CENTERLINE,  
WHITE ~ LANE LINE



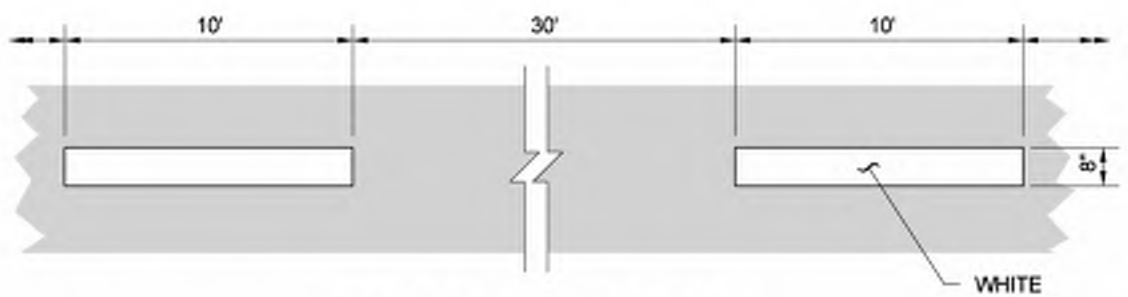
**NO-PASS LINE & TWO-WAY LEFT-TURN CENTERLINE**

YELLOW



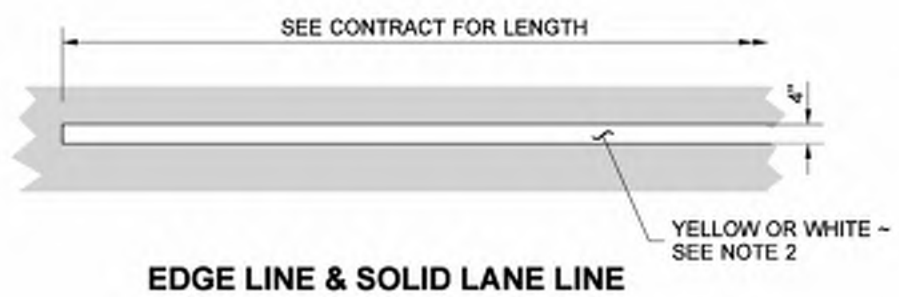
**REVERSIBLE LANE LINE**

YELLOW



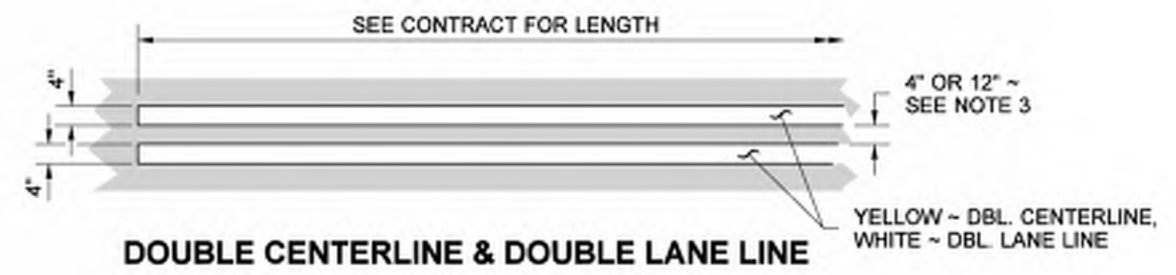
**WIDE BROKEN LANE LINE**

WHITE



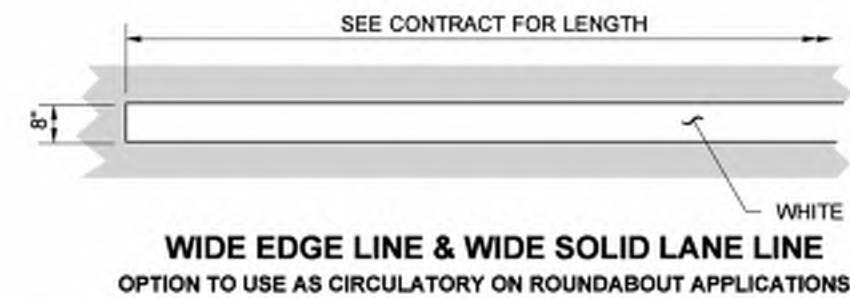
**EDGE LINE & SOLID LANE LINE**

YELLOW OR WHITE ~  
SEE NOTE 2



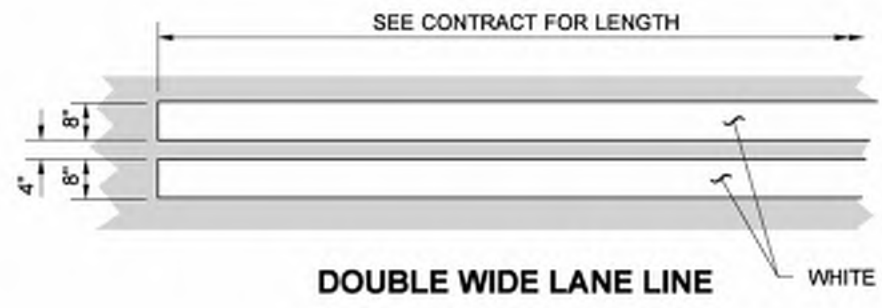
**DOUBLE CENTERLINE & DOUBLE LANE LINE**

4" OR 12" ~  
SEE NOTE 3  
YELLOW ~ DBL. CENTERLINE,  
WHITE ~ DBL. LANE LINE



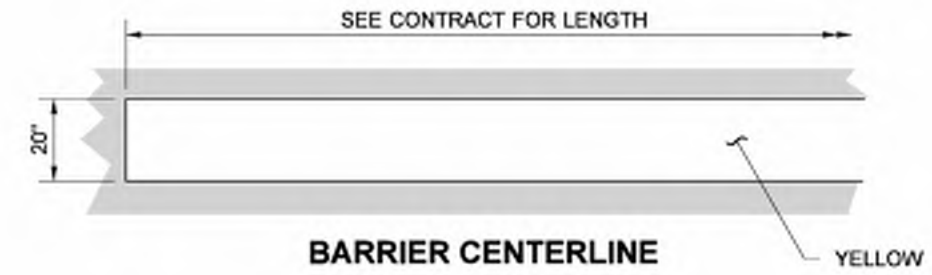
**WIDE EDGE LINE & WIDE SOLID LANE LINE**  
OPTION TO USE AS CIRCULATORY ON ROUNDABOUT APPLICATIONS

WHITE



**DOUBLE WIDE LANE LINE**

WHITE



**BARRIER CENTERLINE**

YELLOW

**NOTES**

1. Dotted Extension Line shall be the same color as the line it is extending.
2. Edge Line shall be white on the right edge of traveled way, and yellow on the left edge of traveled way (on one-way roadways). Solid Lane Line shall be white.
3. The distance between the lines of the Double Centerline shall be 12" everywhere, except 4" for left-turn channelization and narrow roadways with lane widths of 10 feet or less. Local Agencies (on non-state routes) may specify a 4" distance for all locations.  
The distance between the lines of the Double Lane Line shall be 4".

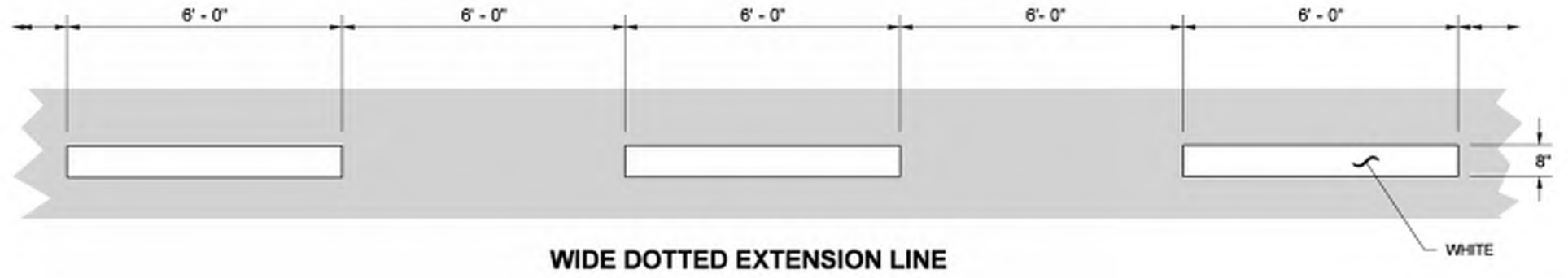
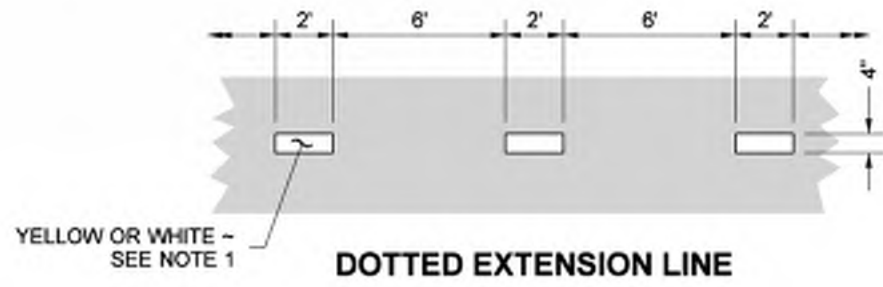
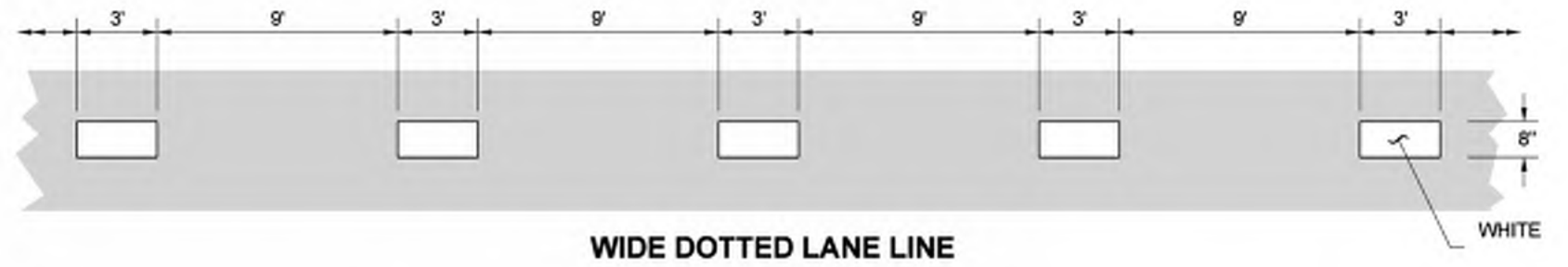
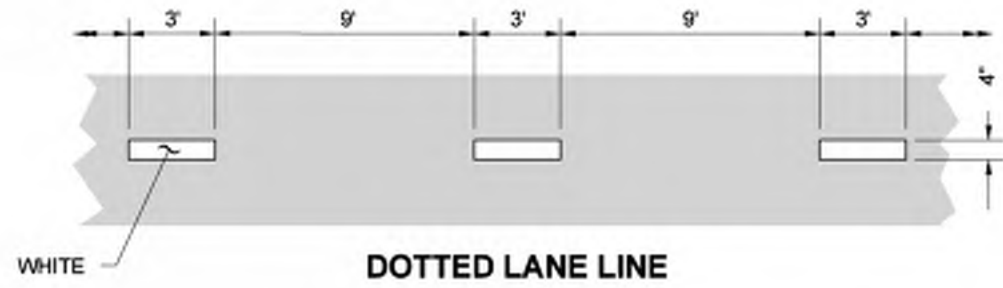


*Brian J. Walsh* Walsh, Brian  
Sep 23 2020 3:46 PM

**LONGITUDINAL MARKING PATTERNS**  
**STANDARD PLAN M-20.10-03**

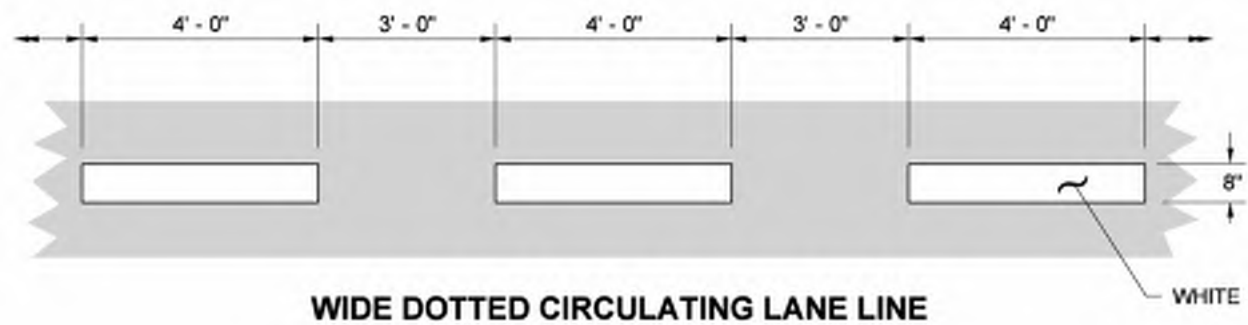
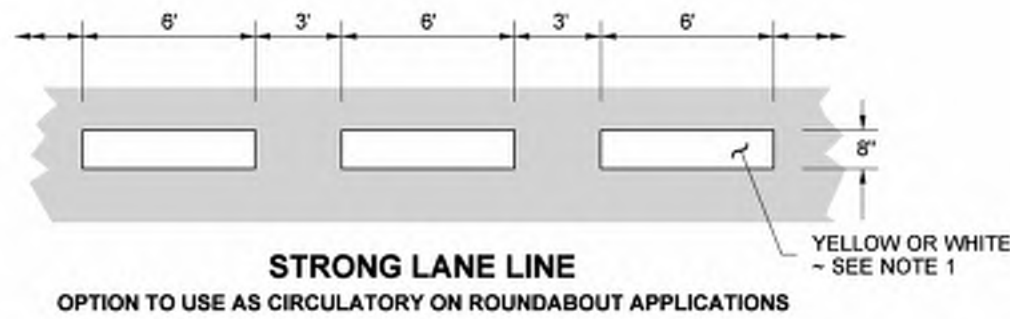
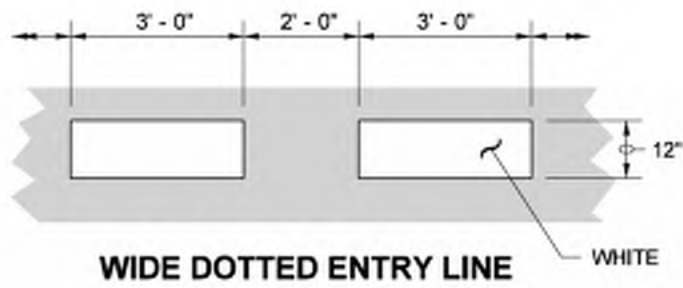
SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION  
Date: 2020.09.25 14:58:51  
-07'00"  
STATE DESIGN ENGINEER  
Washington State Department of Transportation



DRAWN BY: FERN LIDDELL

**Roundabout Specific Lines**



*Brian J. Walsh*  
Walsh, Brian  
Sep 23 2020 3:50 PM

**LONGITUDINAL MARKING PATTERNS**  
**STANDARD PLAN M-20.10-03**

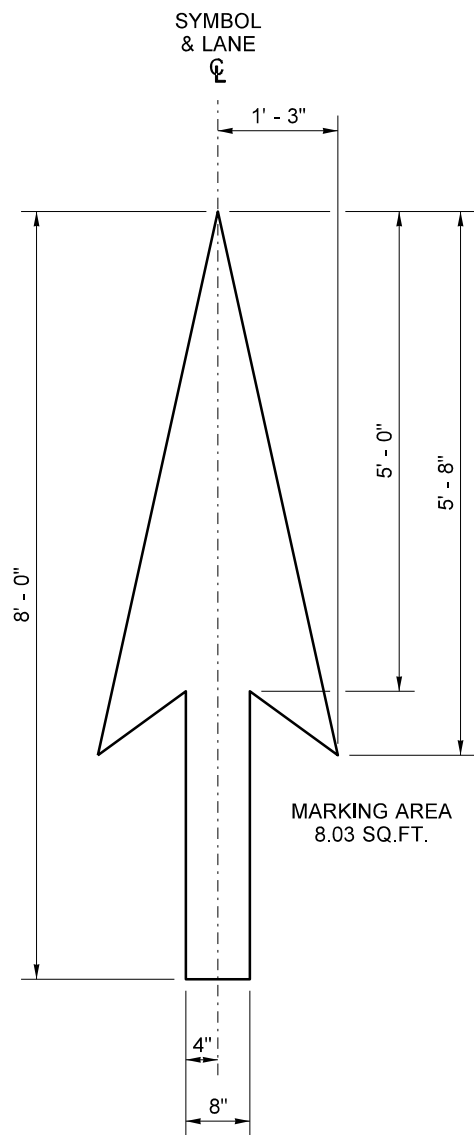
SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION  
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*[Signature]*  
STATE DESIGN ENGINEER

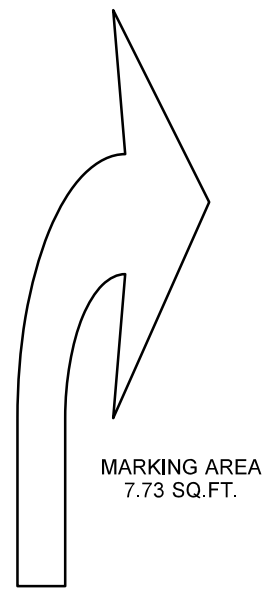
Washington State Department of Transportation





**TYPE 1S  
TRAFFIC ARROW**

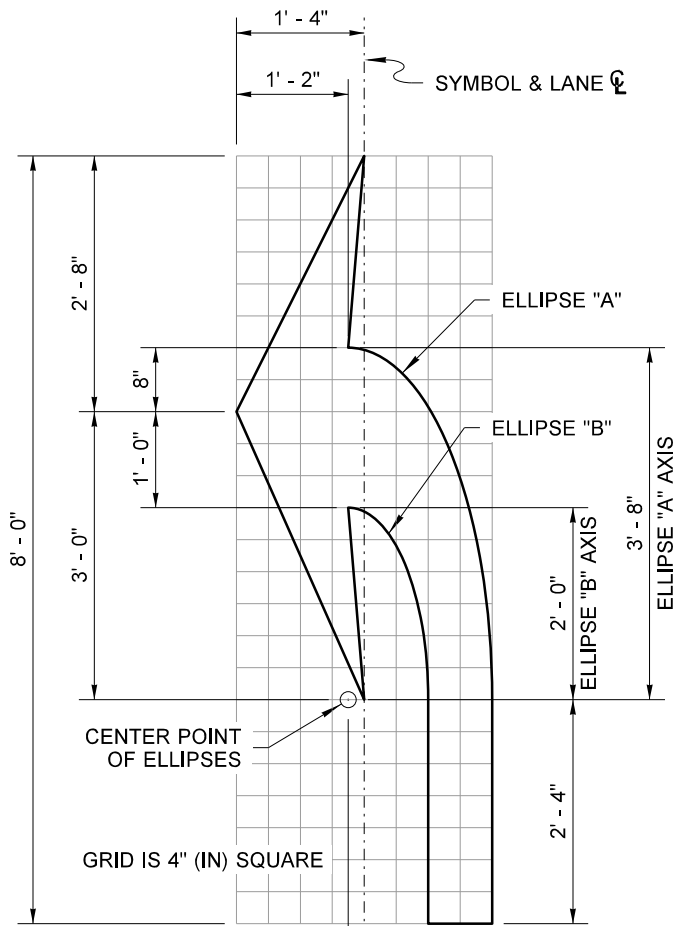
MARKING AREA  
8.03 SQ.FT.



MARKING AREA  
7.73 SQ.FT.

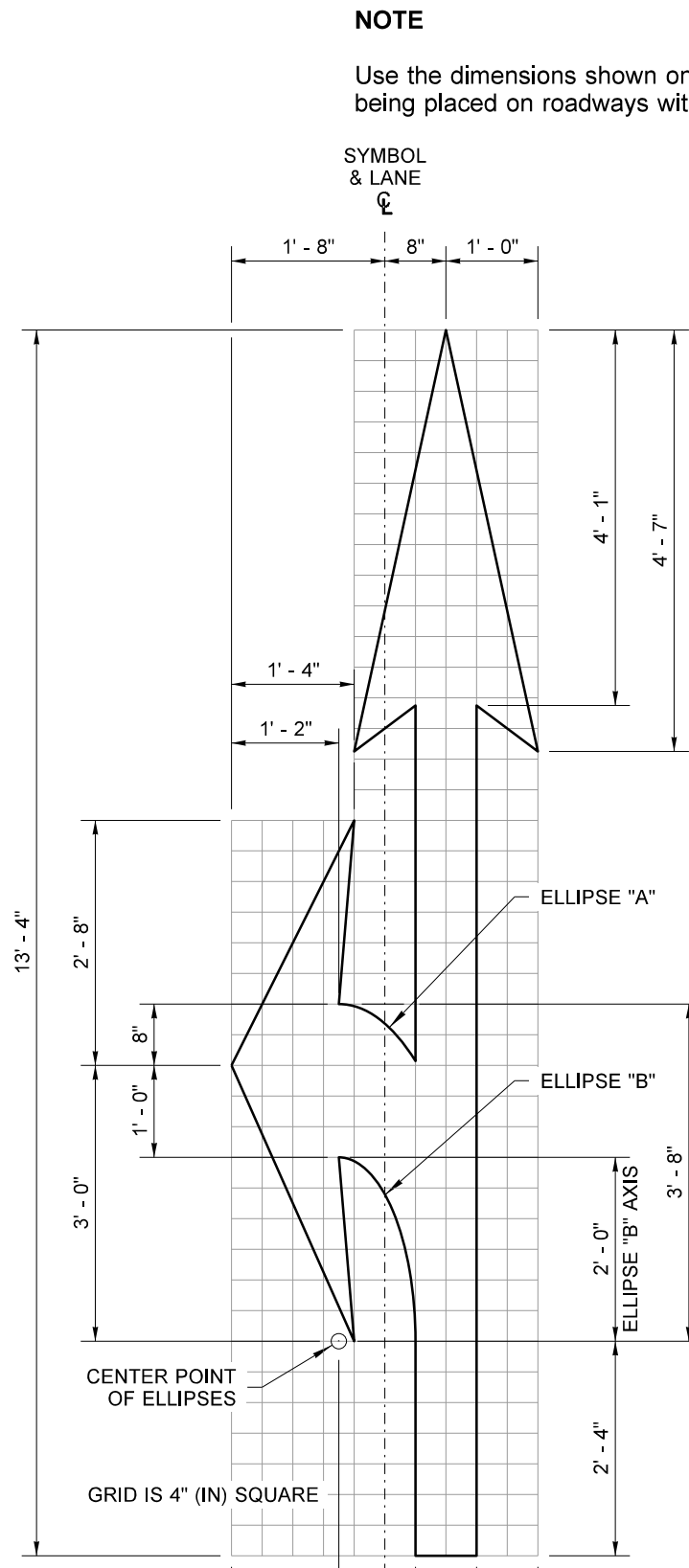
**TYPE 2SR (RIGHT)  
TRAFFIC ARROW**

MIRROR IMAGE OF  
TYPE 2SL TRAFFIC ARROW  
(SHOWN AT REDUCED SCALE)



MARKING AREA  
7.73 SQ.FT.

**TYPE 2SL (LEFT) TRAFFIC ARROW**

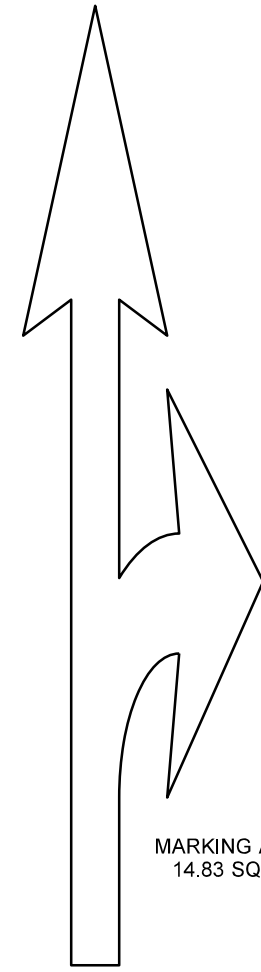


MARKING AREA  
14.83 SQ.FT.

**TYPE 3SL (LEFT) TRAFFIC ARROW**

**NOTE**

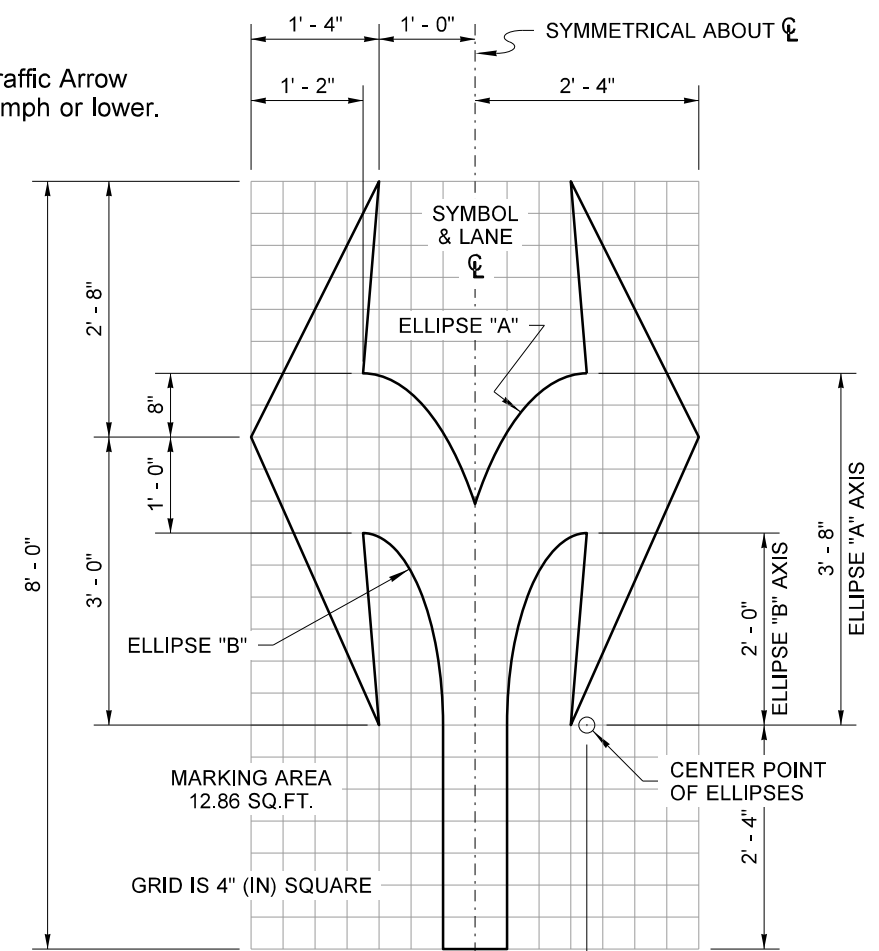
Use the dimensions shown on this plan for each type of Traffic Arrow being placed on roadways with a posted speed limit of 40 mph or lower.



MARKING AREA  
14.83 SQ.FT.

**TYPE 3SR (RIGHT)  
TRAFFIC ARROW**

MIRROR IMAGE OF  
TYPE 3SL TRAFFIC ARROW  
(SHOWN AT REDUCED SCALE)



MARKING AREA  
12.86 SQ.FT.

**TYPE 4S  
TRAFFIC ARROW**

DRAWN BY: COLBY FLETCHER

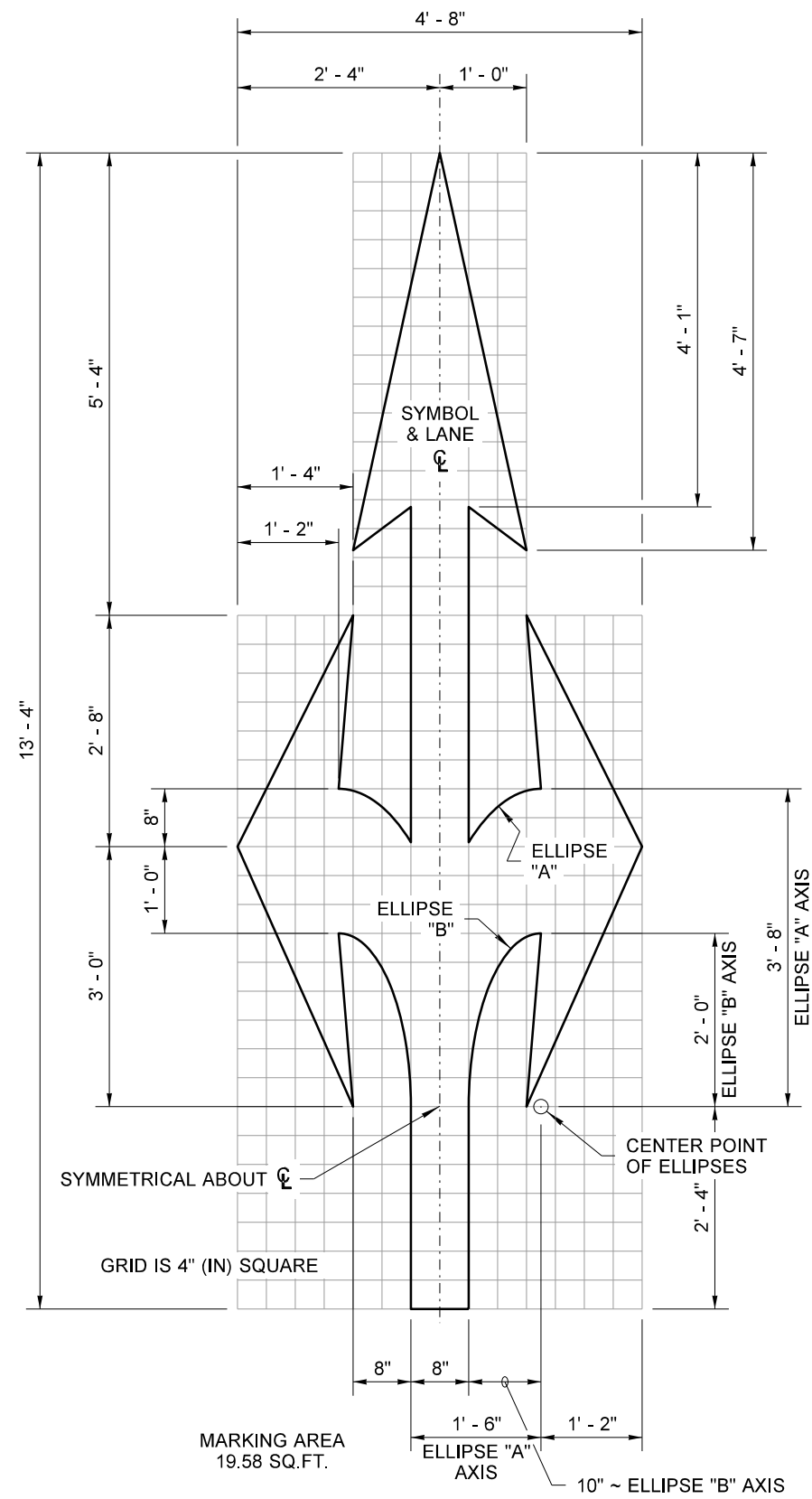


**SYMBOL MARKINGS ~  
TRAFFIC ARROWS FOR  
LOW-SPEED ROADWAYS  
STANDARD PLAN M-24.40-02**

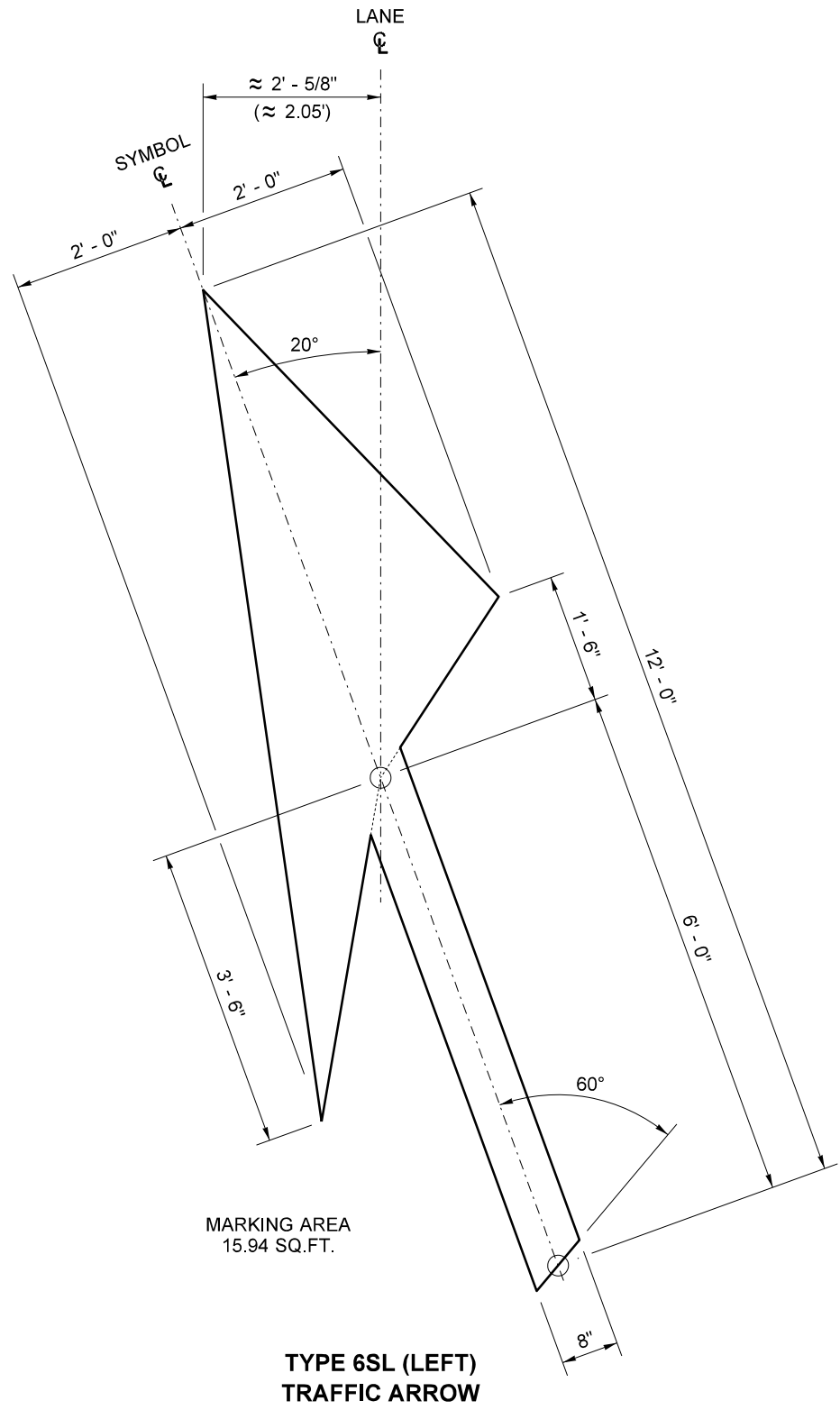
SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

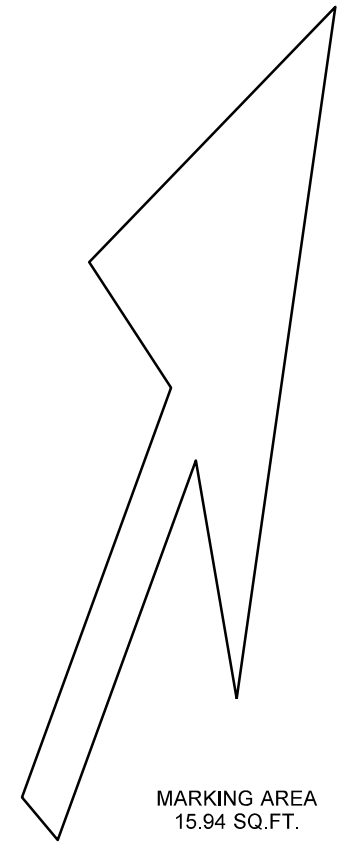
STATE DESIGN ENGINEER  
Washington State Department of Transportation



**TYPE 7S TRAFFIC ARROW**



**TYPE 6SL (LEFT) TRAFFIC ARROW**



**TYPE 6SR (RIGHT) TRAFFIC ARROW**

MIRROR IMAGE OF TYPE 6SL  
(MIRRORED ABOUT LANE CENTERLINE)  
(SHOWN AT REDUCED SCALE)



**SYMBOL MARKINGS ~ TRAFFIC ARROWS FOR LOW-SPEED ROADWAYS**  
**STANDARD PLAN M-24.40-02**

SHEET 2 OF 2 SHEETS

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