

# 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

# **SEPTEMBER 2022**

**CITY PROJECT NUMBER: 22-32** 

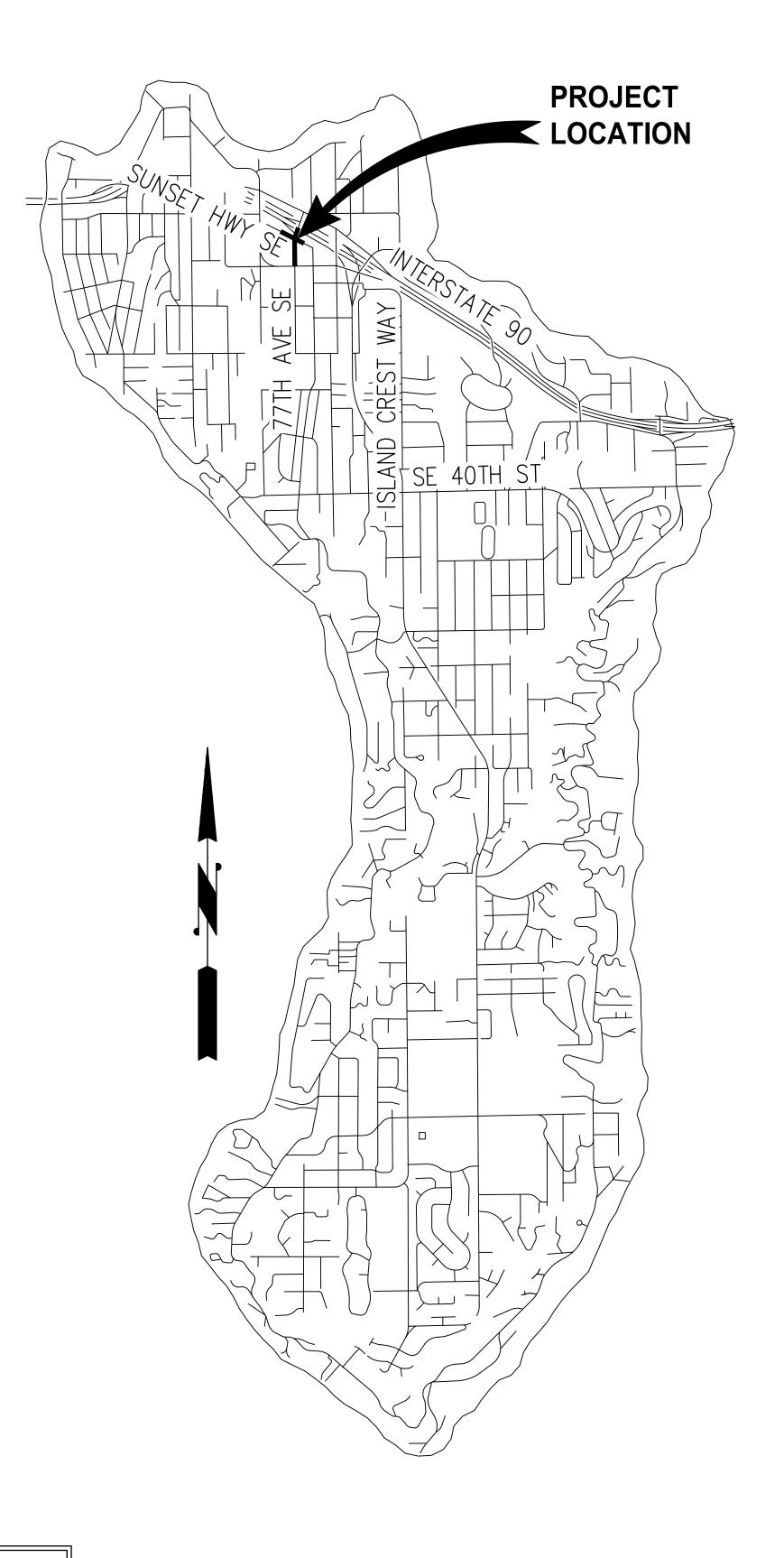
# **SCHEDULE OF DRAWINGS**

SHEET	DRAWINGS
1	COVER SHEET
2	LEGEND & ABBREVIATIONS
3	ALIGNMENT & SURVEY CONTROL PLAN
4	TYPICAL SECTIONS
5	SITE PREPARATION & TESC PLANS
6-10	ROADWAY & SIDEWALK PLAN & DETAILS
11-14	RAISED INTERSECTION PLANS & DETAILS
15-18	CURB RAMP DETAILS
19	BIKE RAMP DETAIL
20	DRIVEWAY DETAIL
21-22	STORMWATER PLAN & PROFILE & DETAILS
23-24	WATERMAIN PLAN & PROFILE & DETAILS
25-27	CHANNELIZATION PLAN & DETAILS
28-29	ILLUMINATION & RRFB PLAN & DETAILS
30-33	TRAFFIC CONTROL & DETOUR PLANS





BID DOCUMENTS



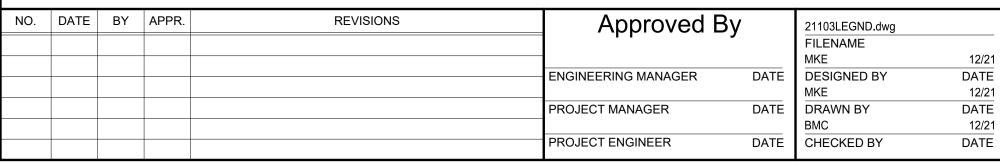
#### **LEGEND EXISTING** MONUMENT IN CASE PAINTED STRIPE △ MAG NAIL/SPIKE PAINTED SKIP STRIPE REBAR & CAP RAISED-BUTTON SOLID STR . . . . . . . . . . . . . . . . ⊗ SPOT SHOT (DESCRIBED) RAISED-BUTTON SKIP STRIF □ CATCH BASIN EDGE OF PAVEMENT CONTOUR STORM DRAIN MANHOLE YARD DRAIN CONCRETE SEWER MANHOLE GRAVEL SEWER CLEAN-OUT GRASS P POWER VAULT LID BRICK METAL GRATE STREET LIGHT (LUMINAIRE) ASPHALT/CONCRETE AC LOT LIGHT DRIVEWAY DWY YARD LIGHT BARK&SHRUB AREA FIBER OPTIC MANHOLE FINISHED FLOOR GAS VALVE ⋈ WATER VALVE ■ WATER METER W WATER MANHOLE WATER VAULT LID FIRE HYDRANT FIRE DEPARTMENT CONNECT MONITORING WELL GUARD POST SIGN SHRUB $\bigcirc_{xx^n}$ DECIDUOUS TREE, DIAMETER (# OF TRUNKS) CONIFEROUS TREE, DIAMETER (# OF TRUNKS) PAINTED POWER PAINTED TELEPHONE PAINTED WATER PAINTED GAS

	<u>P</u>
	·X
	./
RIPE	_
RIPE	
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	_

<u>PROPOSED</u>	
××××××××××××××××××××××××××××××××××××××	REMOVE CURB AND GUTTER
   -  -  -  -  -  -  -  -  -  -  -  -	REMOVE/ABANDON PIPE
	FULL DEPTH SAWCUT
	PROPERTY LINE
	RIGHT OF WAY
C —	CUT LINE
	FILL LINE
	STORM DRAIN PIPE
<b>#</b>	STORM DRAINAGE STRUCTURE ID NUMBER
	CATCH BASIN TYPE 1
	CATCH BASIN TYPE 2
•	AREA DRAIN
<b>&gt;</b>	DIRECTIONAL FLOW ARROW
	INLET PROTECTION
$\odot$	REMOVE DECIDUOUS TREE
	REMOVE ASPHALT/CONCRETE PAVEMENT
	REMOVE CEMENT CONCRETE SIDEWALK
, A	CEMENT CONCRETE LANDING
	HMA CL ½" PG 58H-22
To the state of th	SCORED CEMENT CONCRETE
	STAMPED CEMENT CONCRETE
50000000000000000000000000000000000000	DETECTABLE WARNING SURFACE
•	SIGN
	RRFR

#### ADDDEVIATIONS

<b>ABBRE</b>	EVIATIONS		
AC	ASPHALT/CONCRETE	MH	MANHOLE
ACP	ASPHALT CONCRETE PAVEMENT	MIC	MONUMENT IN CASE
ADA	AMERICANS WITH DISABILITIES ACT	MJ	MECHANICAL JOINT
AP	ANGLE POINT	MON	MONUMENT
APPROX	APPROXIMATE	MTS	MOUNTAINS TO SOUND
BLDG	BUILDING	N	NORTH OR NORTHING
CB	CATCH BASIN	NAVD	NORTH AMERICAN VERTICAL DATUM
CCP	CEMENT CONCRETE PAVEMENT	NB	NORTHBOUND
CDF	CONTROLLED DENSITY FILL	NO	NUMBER
CHLK	CHAINLINK	NTS	NOT TO SCALE
ę	CENTERLINE	OC	ON CENTER
CL	CLASS	OD	OUTSIDE DIAMETER
CO	CLEANOUT	PC	POINT OF CURVE
COMI	CITY OF MERCER ISLAND	PCC	POINT OF COMPOUND CURVATURE
COL	COLUMN	PCCP	PERVIOUS CEMENT CONCRETE PAVEMENT
CONC		Pl	POINT OF INTERSECTION
CSBC	CONCRETE  ODUCUED CUREACING DAGE COURSE	POB	POINT OF BEGINNING
CSTC	CRUSHED SURFACING BASE COURSE	POE	POINT OF ENDING
DI	CRUSHED SURFACING TOP COURSE		
	DUCTILE IRON	PRC	POINT OF REVERSE CURVATURE
DIA	DIAMETER	PT	POINT OF TANGENT
DW	DRIVEWAY	PVC	POLYVINYL CHLORIDE OR POINT OF
E	EAST OR EASTING	DVT	VERTICAL CURVATURE
EA	EACH	PVT	POINT OF VERTICAL TANGENT
ELEV	ELEVATION	PVI	POINT OF VERTICAL INTERSECTION
EOP	EDGE OF PAVEMENT	R	RADIUS
EW	EACH WAY	ROW	RIGHT OF WAY
EXIST	EXISTING	RRFB	RAPID RECTANGULAR FLASHING BEACON
FF 	FINISHED FLOOR	RT	RIGHT
FL	FLOW LINE	S	SLOPE OR SOUTH
FO	FIBER OPTIC	SB	SOUTHBOUND
FOC	FACE OF CURB	SD	STORM DRAIN
HMA	HOT MIX ASPHALT	SDMH	STORM DRAIN MANHOLE
HORIZ	HORIZONTAL	SE	SOUTHEAST
HP	HIGH POINT	SHT	SHEET
HWY	HWY	SQ	SQUARE
ID	INSIDE DIAMETER	SS	SANITARY SEWER
ΙE	INVERT ELEVATION	SSMH	SANITARY SEWER MANHOLE
IN	INCH/INCHES	ST	STREET
JB	JUNCTION BOX	STA	STATION
L	LENGTH	STD	STANDARD
LT	LEFT	STCR	STRUCTURE
LF	LINEAR FEET	SW	SOUTHWEST
LP	LOW POINT	TYP	TYPICAL
MAX	MAXIMUM	UG	UNDERGROUND
MIN	MINIMUM	VERT	VERTICAL
	timoin	WSDOT	WSDOT
		W	WEST
		YD	YARD DRAIN



HEDGE (HEIGHT NOTED)

11111111111





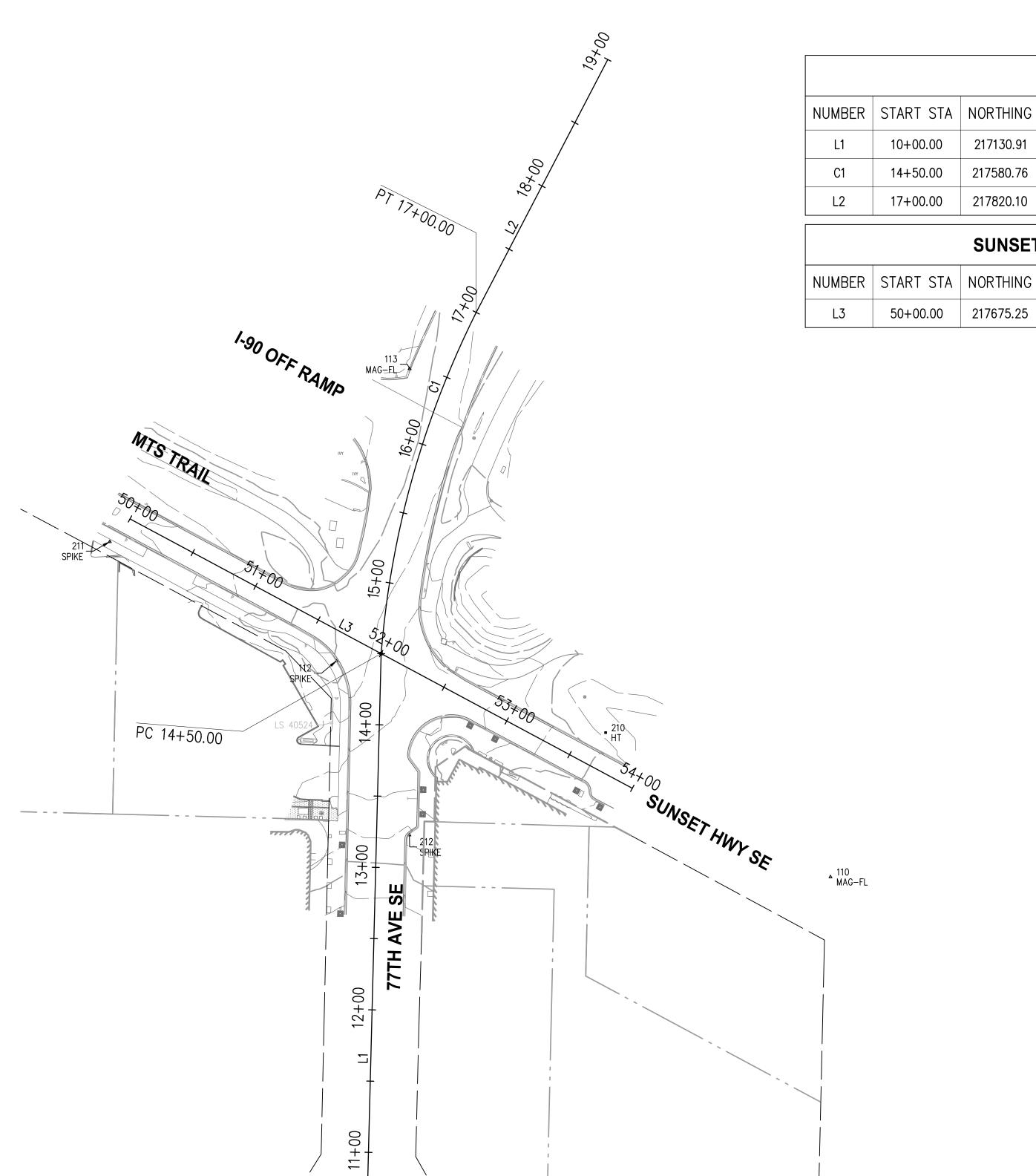




CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

**LEGEND & ABBREVIATIONS** 

KPG PROJECT No. 21103 SHT 2 OF 33



	77TH AVE SE												
NUMBER	START STA	NORTHING	EASTING	LENGTH	BRNG/DELTA	RADIUS	PI STA	TAN					
L1	10+00.00	217130.91	1294527.31	450.00'	N 1°27'24" E								
C1	14+50.00	217580.76	1294538.75	250.00'	22°02'12"	650.00'	15+76.56	126.56					
L2	17+00.00	217820.10	1294605.47	200.00'	N 27°29'20" E								

SUNSET HWY SE									
NUMBER	START STA	NORTHING	EASTING	LENGTH	BRNG/DELTA				
L3	50+00.00	217675.25	1294362.47	400.00'	S 61°48'30" E				

#### NOTES

- 1. THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS FOR CIVIL ENGINEERING DESIGN. THIS IS NOT A BOUNDARY SURVEY. SOURCES OF BOUNDARY INFORMATION AS SHOWN INCLUDE FIELD—TIED MONUMENTATION, PLATS, COUNTY RECORDS OF SURVEY, AND AUDITOR INDEXING INFORMATION.
- 2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITY SYSTEMS, AS SHOWN HEREON, ARE TAKEN FROM UTILITY LOCATE PAINT MARKS OR AS-BUILT PLANS AND ARE SHOWN IN AN APPROXIMATE WAY ONLY.

THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. ALL LOCATOR SERVICES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION OR SUBSURFACE EXPLORATION. CALL 1-800-424-5555.

- 3. FIELD SURVEY: KPG, NOVEMBER, 2021. LICENSEE MICHAEL R. BOWEN, P.L.S. NO. 29294/RONALD D. REICHEL, P.L.S. NO. 38015.
- 4. CONTOUR INTERVAL = 1 FOOT,  $\pm 0.5$  FOOT PER NATIONAL MAPPING STANDARDS. CONTOURS DERIVED FROM DIRECT FIELD OBSERVATIONS.
- 5. STORM AND SEWER CONNECTIONS HAVE BEEN DRAWN FROM CENTER OF LID TO CENTER OF LID.
- 6. THE LOCATIONS AND DIMENSIONS OF UNDERGROUND VAULTS HAVE NOT BEEN VERIFIED AND ARE APPROXIMATE.
- 7. DUCTS ARE NOTED AS INDICATED IN THE FIELD BY UTILITY LOCATORS.
  MULTIPLE LINES AND/OR UTILITIES MAY SHARE DUCT RUNS; THIS MAY
  NOT BE SHOWN IN THE DRAWING.

#### HORIZONTAL AND VERTICAL DATUM

HORIZONTAL DATUM:

NAD 83/11

VERTICAL DATUM

NAVD 88

HORIZONTAL AND VERTICAL DATUMS ESTABLISHED BY RTK GPS
OBSERVATION UTILIZING WSRN (WASHINGTON STATE REFERENCE NETWORK)

		CONTROL POINT LIST											
	PT #	DESCRIPTION	NORTHING	EASTING	ELEVATION								
*	1	SPIKE	215341.92	1294797.02	86.48'								
*	2	MAG-FL	215407.04	1294650.68	85.99'								
*	3	MAG-FL	217191.10	1295381.89	100.69'								
*	100	SPIKE	217106.00	1295716.28	104.41'								
*	101	SPIKE	216664.25	1295306.55	91.58'								
*	102	SPIKE	216332.24	1295298.79	96.03'								
*	103	MAG-FL	216006.40	1295292.60	110.80'								
	109	MAG-FL	217316.70	1295192.61	100.56								
	110	MAG-FL	217424.09	1294854.07	98.59'								
	112	SPIKE	217575.60	1294507.36	95.43'								
	113	MAG-FL	217780.61	1294558.73	96.75'								
	210	НТ	217525.33	1294696.31	96.81'								
	211	SPIKE	217659.25	1294348.24	93.57'								
	212	SPIKE	217453.54	1294558.59	91.28'								

\* POINT NOT SHOWN

NO.	DATE	BY	APPR.	REVISIONS	Approved By		21103CNTRL.dwg FILENAME		]
					ENGINEERING MANAGER	DATE	MKE DESIGNED BY MKE	12/21 DATE 12/21	$ \mathcal{F} $
						DATE	DRAWN BY BMC	DATE 12/21	
					PROJECT ENGINEER	DATE	CHECKED BY	DATE	ı







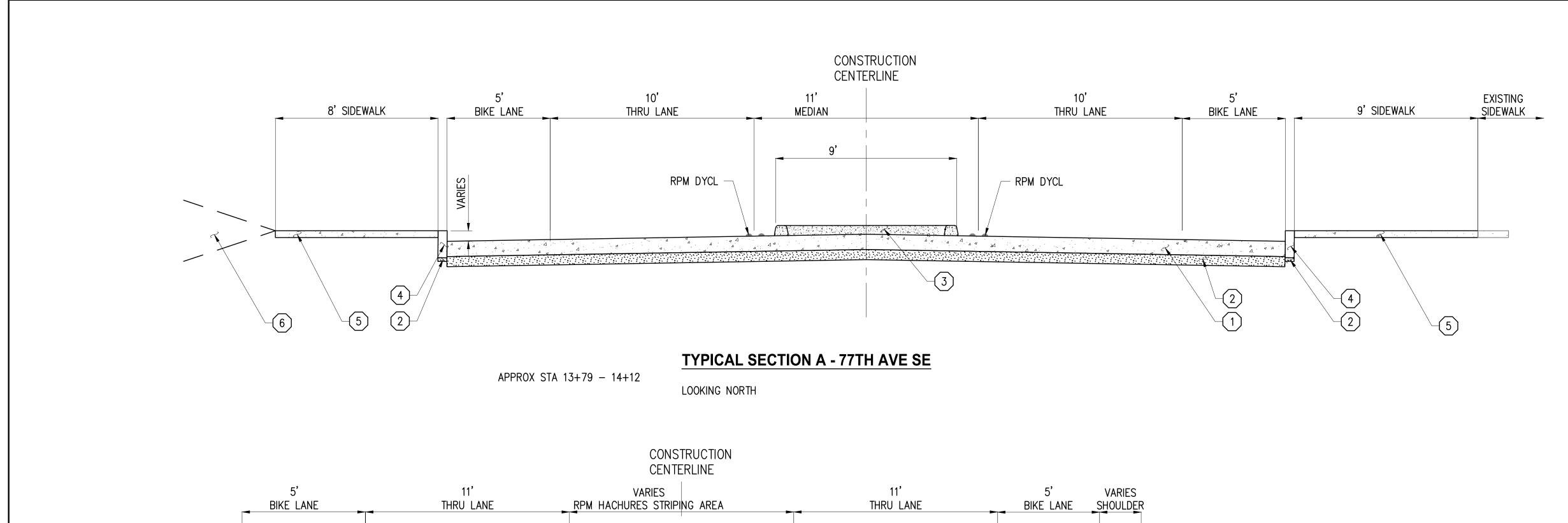


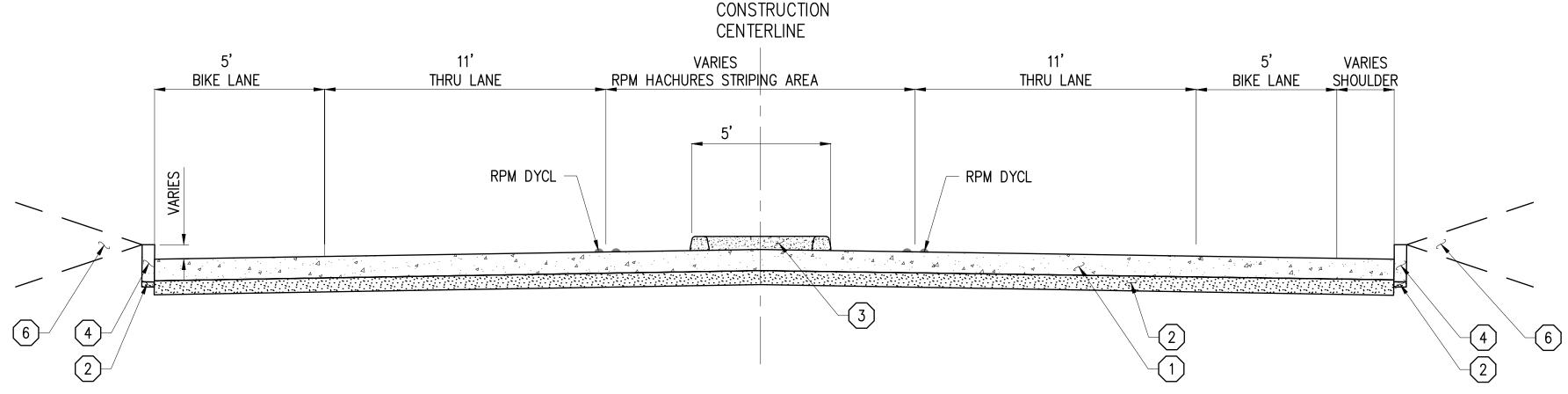
▲ 109 MAG-FL

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

ALIGNMENT & SURVEY CONTROL PLAN

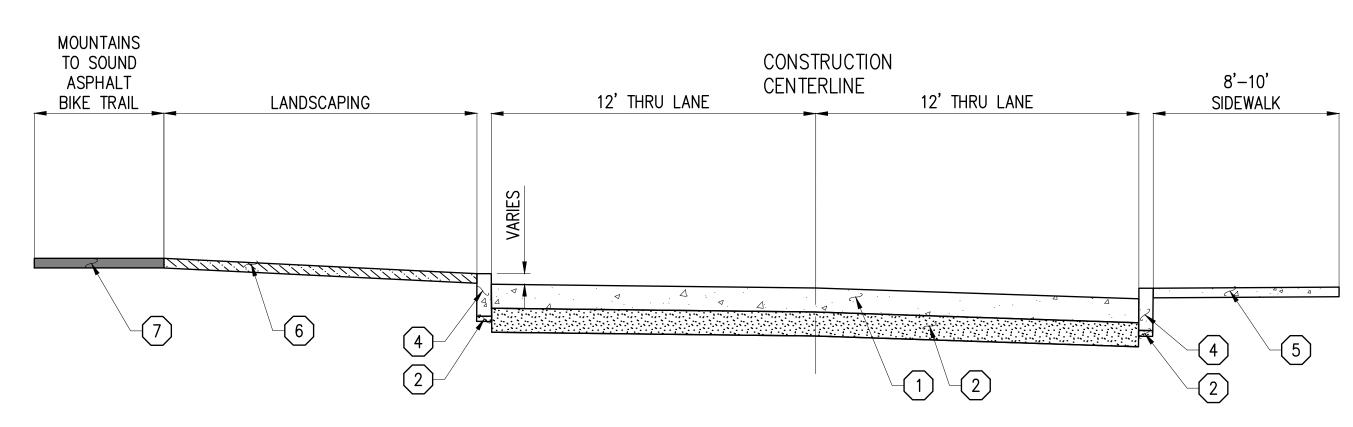
KPG PROJECT No. 21103 SHT 3 OF 33





TYPICAL SECTION B - 77TH AVE SE

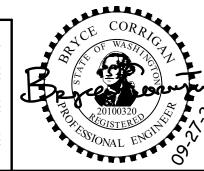
APPROX STA 15+43-17+00
LOOKING NORTH



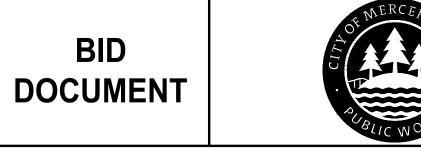
MATERIAL CODE								
#	DESCRIPTION							
1	CEMENT CONCRETE PAVEMENT. SEE SECTION, SHEET 8.							
2	2" -8" CRUSHED SURFACING BASE COURSE							
3	RAISED MEDIAN. SEE DETAIL, SHEET 10.							
4	CEMENT CONC. TRAFFIC CURB PER WSDOT STD PLAN F-10.12.							
5	CEMENT CONCRETE SIDEWALK. SEE SECTION, SHEET 8.							
6	CUT OR FILL. SLOPE 3:1 MAX.							
7	HMA WALKWAY. SEE SECTION, SHEET 8.							

<b>TYPICA</b>	L SECTION	<b>C</b> -	SU	<b>NSET</b>	<u>H</u>	<b>IGHWA</b>	Y SE
	51+30-51+50	AND	STA	52+48	TO	52+79	
LOOKING EAS	ST						

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							BMC	5/22
					ENGINEERING MANAGER	DATE	DESIGNED BY	DATE
							MKE	5/22
					PROJECT MANAGER	DATE	DRAWN BY	DATE
							BMC	5/22
					PROJECT ENGINEER	DATE	CHECKED BY	DATE



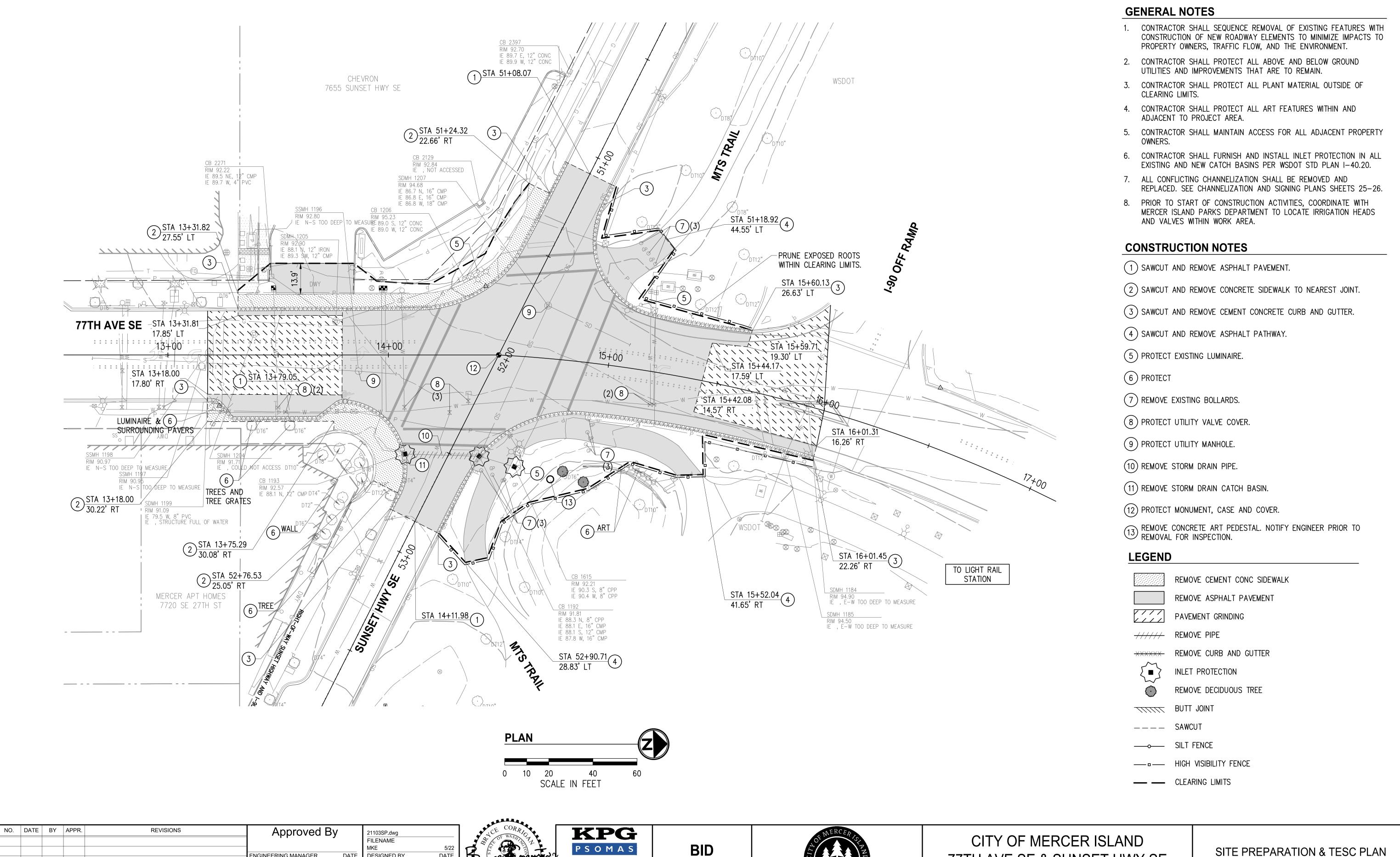




CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

TYPICAL SECTIONS

KPG PROJECT No. 21103 SHT 4 OF 33



DATE **DESIGNED BY** ENGINEERING MANAGER PROJECT MANAGER DATE DRAWN BY DATE 5/22 PROJECT ENGINEER DATE CHECKED BY



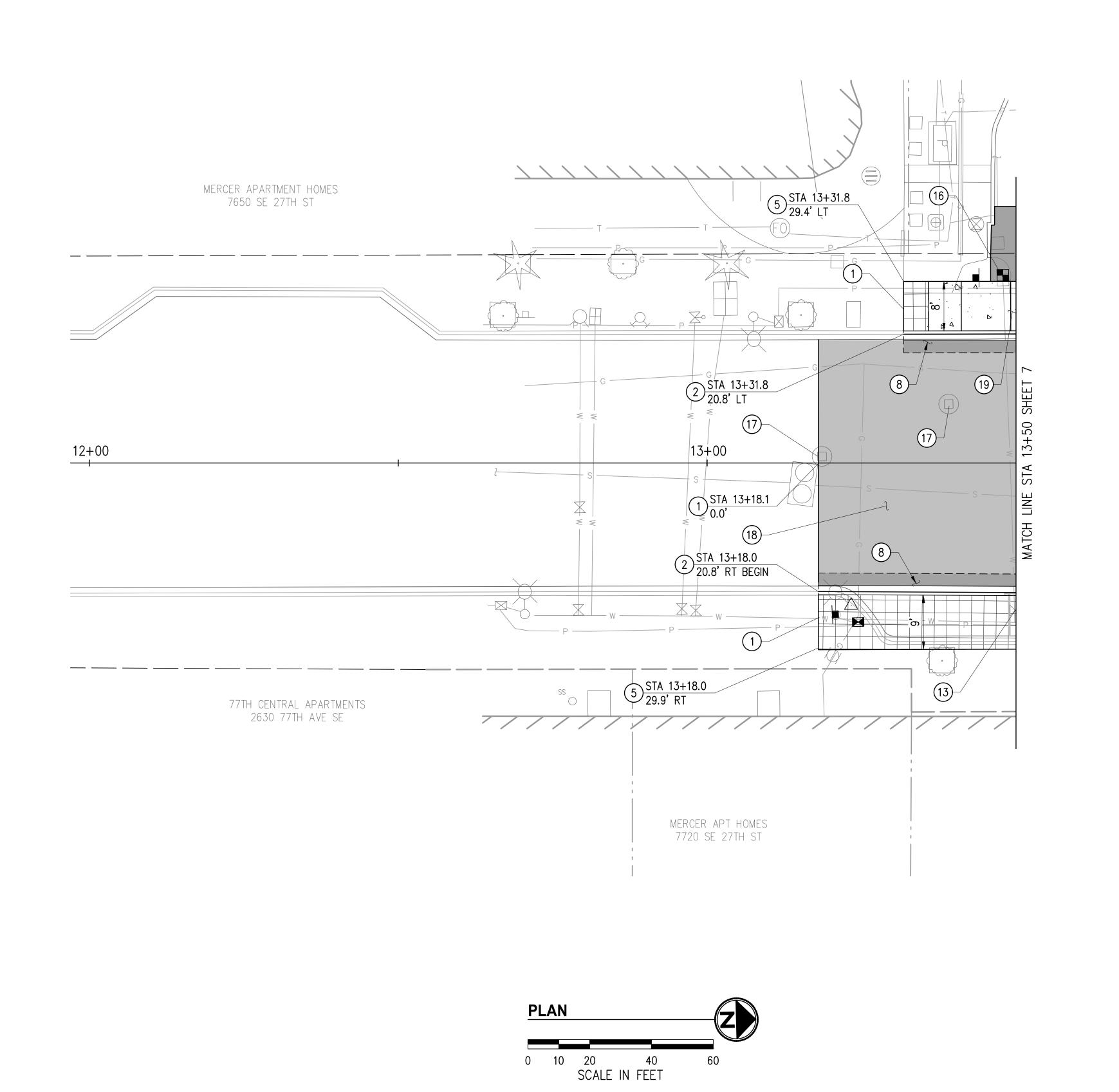
PSOMAS 3131 Elliott Avenue, Suite 400 Seattle, WA 98121 206.286.1640 Tacoma | Wenatchee | KPG.com

**BID DOCUMENT** 



77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

SHT \_\_5 \_\_OF \_\_33 KPG PROJECT No. 21103



- CONTRACTOR SHALL PROVIDE AND MAINTATIN TEMPORARY PEDESTRIAN ROUTE AROUND CONSTRUCTION ACTIVITY FOR THE DURATION OF THE
- 2. FOR CHANNELIZATION IMPROVEMENTS SEE CHANNELIZATION PLAN, SHEETS 25-26.

#### **CONSTRUCTION NOTES**

- 1) MATCH EXISTING.
- 2 CONSTRUCT CEMENT CONC. TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F-10.12.
- (5) CONSTRUCT SCORED CEMENT CONC. SIDEWALK PER SECTION, SHEET 8.
- 8 HMA CL 1/2" PG 58H-22 FOR NEW PAVEMENT PER SECTION, SHEET 8.
- (13) ADJUST UTILITY VALVE CASE AND COVER.
- REMOVE AND REPLACE WATER METER AND WATER METER BOX TO BACK OF WALK. CONTACT WATER DEPARTMENT AND NOTIFY CUSTOMER 24 HOURS PRIOR TO PERFORMING WORK.
- ADJUST DRAINAGE STRUCTURE. FURNISH AND INSTALL NEW FRAME AND GRATE OR COVER.
- GRIND 2" AND INSTALL HMA CL 1/2" PG 58H-22 FOR OVERLAY PER SECTION, SHEET 8.
- (19) CONSTRUCT CEMENT CONCRETE DRIVEWAY PER DETAIL, SHEET 20.

#### **LEGEND**

PROPERTY LINE RIGHT OF WAY LINE

---- SAWCUT

CUT LINE

CEM. CONC. SIDEWALK LANDING

CEM. CONC. PAVEMENT

HMA CL ½" PG 58H-22

SCORED CEM. CONC. SIDEWALK/CROSSWALK

DETECTABLE WARNING SURFACE

STAMPED CEMENT CONCRETE

Approved By NO. DATE BY APPR. REVISIONS ENGINEERING MANAGER DATE DESIGNED BY PROJECT MANAGER DATE DRAWN BY DATE 5/22

PROJECT ENGINEER

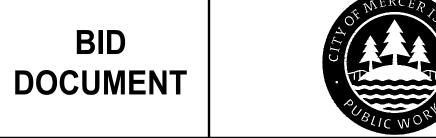
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DATE

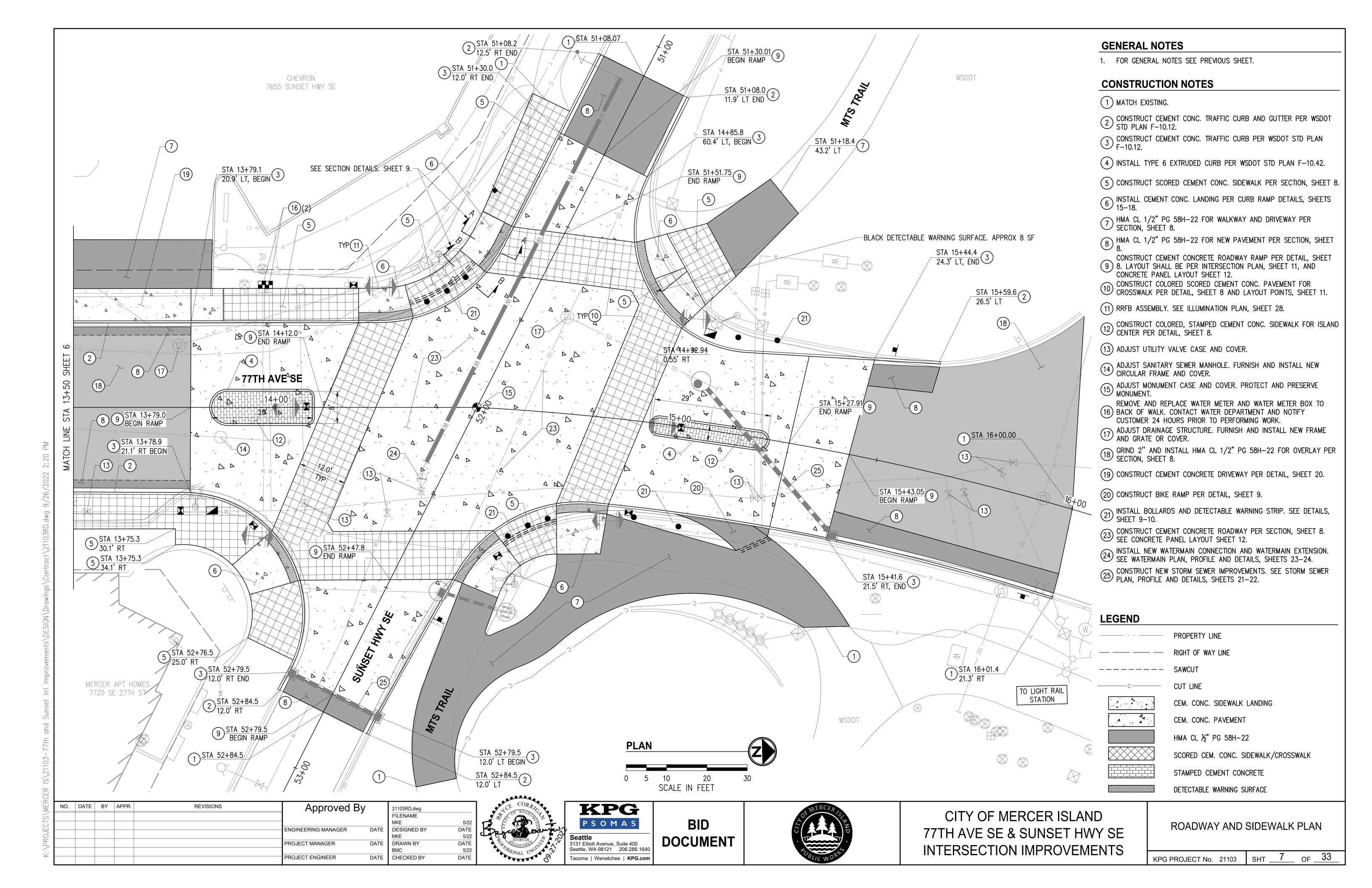




CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

ROADWAY AND SIDEWALK PLAN

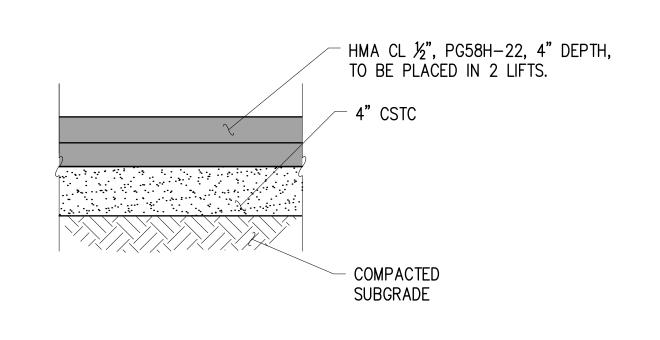
KPG PROJECT No. 21103 SHT 6 OF 33

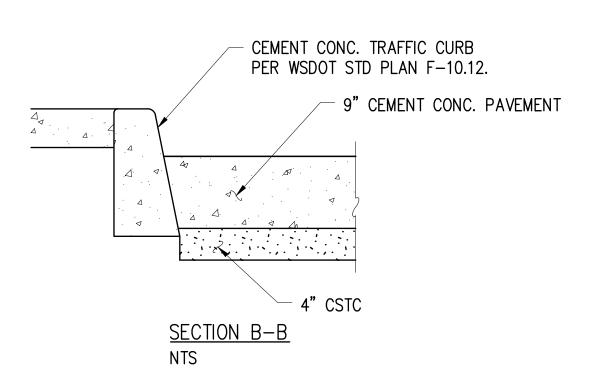


CEMENT CONCRETE
SIDEWALK, 4" DEPTH

4" CSTC

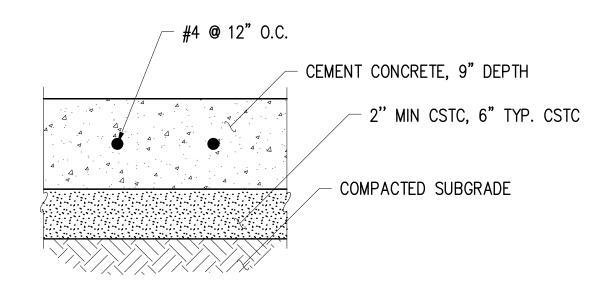
COMPACTED SUBGRADE





SCORED CEMENT CONC. SIDEWALK SECTION IN RAISED INTERSECTION

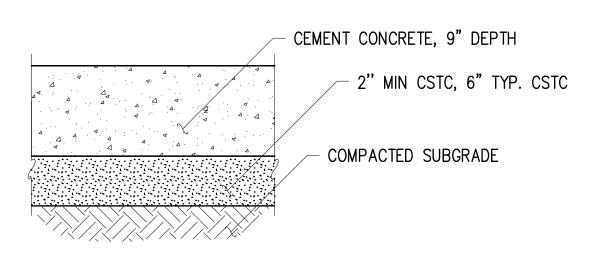
INCLUDES CEMENT CONC. SIDEWALK ADA LANDINGS AND SCORED CEMENT CONC. SIDEWALK BETWEEN ADA LANDINGS NTS NOTE: EXPANSION AND CONTRACTION JOINTS SHALL BE PLACED PER WSDOT STANDARD PLAN F-30.10.



#### CEMENT CONC. SIDEWALK SECTION

CEMENT CONC. SIDEWALK OUTSIDE OF RAISED INTERSECTION NTS
NOTE: EXPANSION AND CONTRACTION JOINTS SHALL BE
PLACED PER WSDOT STANDARD PLAN F-30.10.

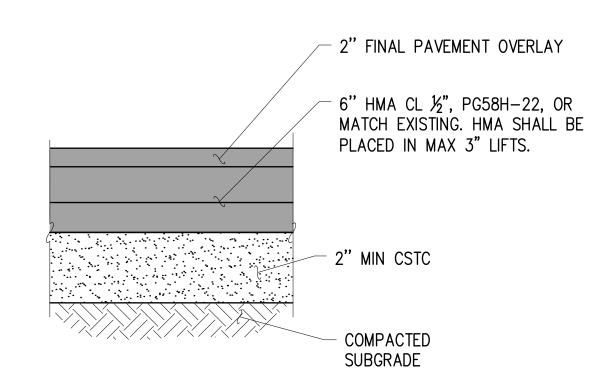
HMA CL 1/2" PG 58H-22 FOR WALKWAY AND DRIVEWAY SECTION



# 9" CEMENT CONC. PAVEMENT 2" HMA OVERLAY HMA PAVEMENT SECTION 4" CSTC SECTION A-A

#### **CEMENT CONC. PAVEMENT SECTION**

NTS



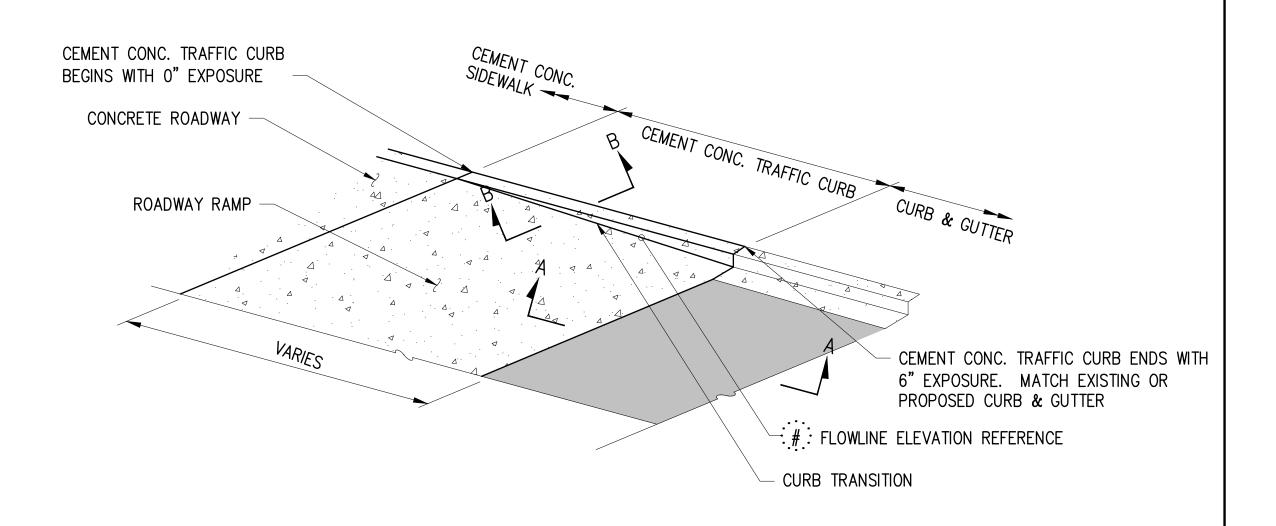
#### COLORED SCORED CEMENT CONC. CROSSWALK SECTION

NTS

#### NOTES:

- 1. FINISH SHALL BE A LIGHT BROOM
- FINISH.

  2. COLOR SHALL BE GREY #860
  "COBBLESTONE" BY DAVIS COLOR.



**CEMENT CONCRETE ROADWAY RAMP DETAIL** 

#### HMA CL 1/2" PG 58H-22 FOR NEW PAVEMENT SECTION

NTS

NO.	DATE	BY	APPR.	REVISIONS	Approved By	21103RD-DET01.dwg		
						FILENAME MKE	5/22	•
					ENGINEERING MANAGER DATE	DESIGNED BY D	DATE 5/22	ل
					PROJECT MANAGER DATE	DRAWN BY	DATE	
					PROJECT ENGINEER DATE	BMC CHECKED BY D	5/22 DATE	









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

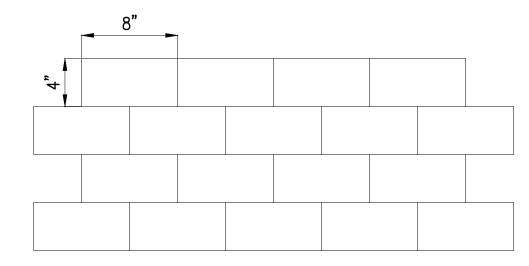
DETAILS	

KPG PROJECT No. 21103 SHT \_\_8 \_\_ OF \_\_33

#### NOTES:

- 1. ENGINEER TO APPROVE FINAL DECORATIVE SCORED CEMENT CONCRETE PAVEMENT LAYOUT PRIOR TO INSTALLATION.
- 2. SCORING PATTERN SHALL MATCH ADJACENT, EXISTING TOWN CENTER PATTERN SPACING.
- 3. DECORATIVE FINISH SHALL BE CONTINUOUS.

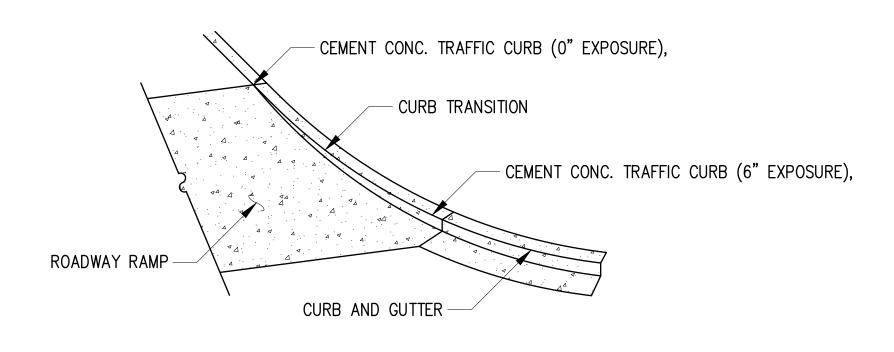
#### SCORED CEMENT CONCRETE SIDEWALK AND CROSSWALK FINISH DETAIL



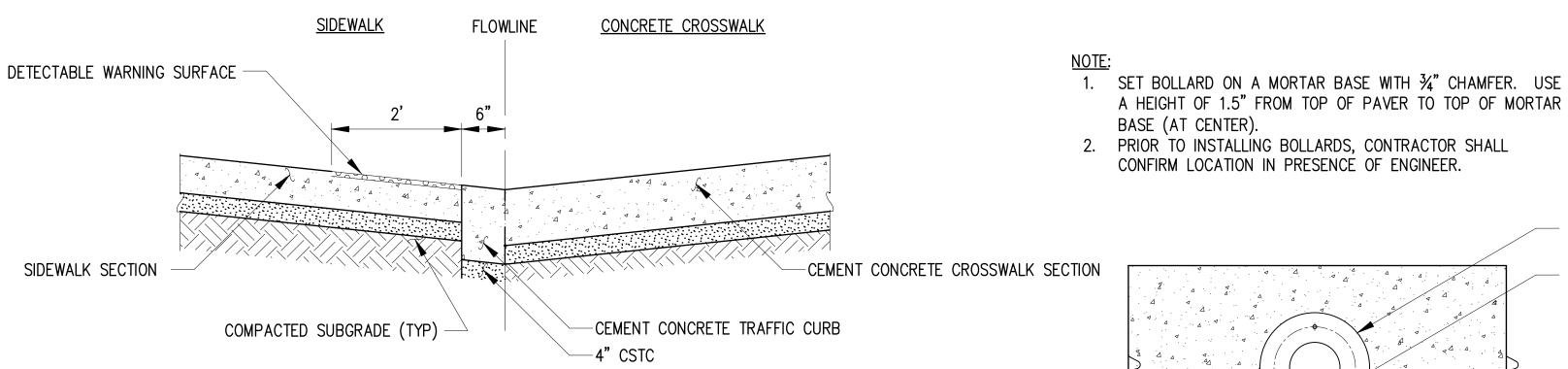
#### NOTES:

- ENGINEER TO APPROVE FINAL DECORATIVE STAMPED CEMENT CONCRETE PAVEMENT LAYOUT PRIOR TO INSTALLATION.
- 2. DECORATIVE FINISH SHALL BE CONTINUOUS.
- BRICK RED COLOR PER SPECIAL PROVISIONS SECTION 8-14.

#### **DECORATIVE STAMPED CONCRETE FINISH DETAIL** NTS



NOTE:
DEPTH OF VERTICAL CURB TO MATCH
ADJACENT ROADWAY SECTION.



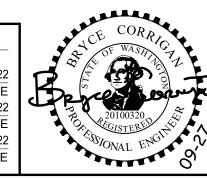
# **VERTICAL CURB SECTION A**

<u>SIDEWALK</u> CONCRETE PAVEMENT FLOWLINE BOLLARD BASE -DETECTABLE STRIP CEMENT CONC SIDEWALK SECTION CEMENT CONCRETE PAVEMENT SECTION COMPACTED SUBGRADE (TYP) -CEMENT CONCRETE TRAFFIC CURB -4" CSTC

## **VERTICAL CURB SECTION B**

# TRANSITIONAL VERTICAL CURB DETAIL

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					ENGINEERING MANAGER D.	ATE	DESIGNED BY	DA <sup>-</sup>
					PROJECT MANAGER D.	ATE	DRAWN BY BMC	DA <sup>-</sup>
					PROJECT ENGINEER D	ATE	CHECKED BY	DA









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

-BOLLARD

ZINC-COATED ACORN NUT:

PAINT TO MATCH BOLLARD

- ¾"X6" LENGTH THREADED

- ASPHALT ROADWAY

6" CONCRETE SIDEWALK

- CEMENT CONCRETE VERTICAL CURB

BOLLARD BASE PLATE

5¼" RADIUS LAYOUT FOR THREADED ROD

LAG BOLT HOLES

— 4" CSTC (TYP)

<u>SECTION</u>

<u>PLAN</u>

**BOLLARD IN CONCRETE DETAIL** 

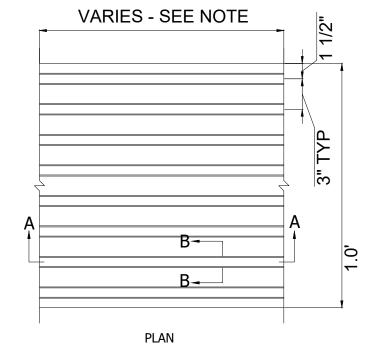
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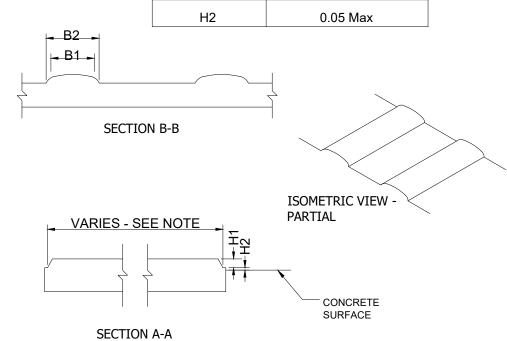
KPG PROJECT No. 21103 SHT 9 OF 33

#### NOTE

- Lengths are continuous based on project requirements
- Width is per project requirements.GuideStrip is a non-skid product.

Dimension	Range (in.)
B1	0.90 - 1.20
B2	B1 + 0.20
H1	0.18 - 0.20

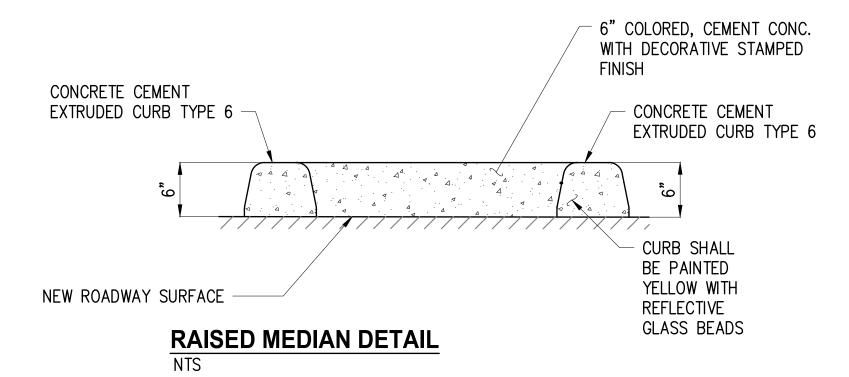


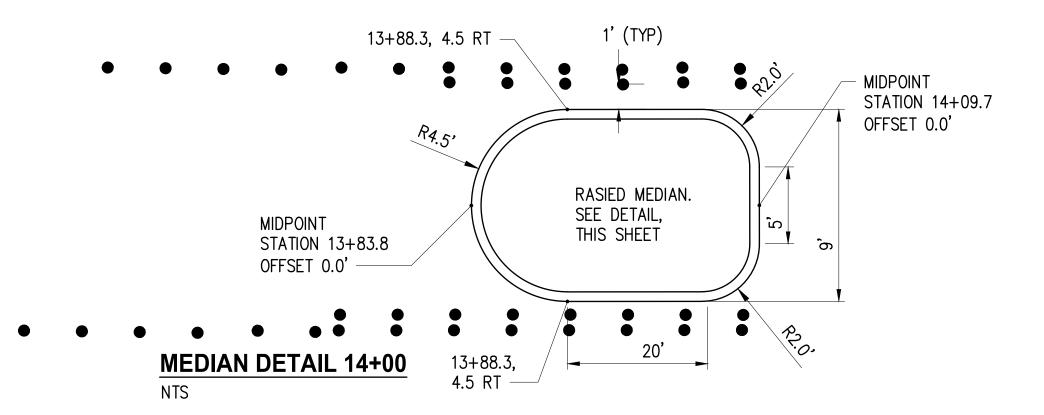


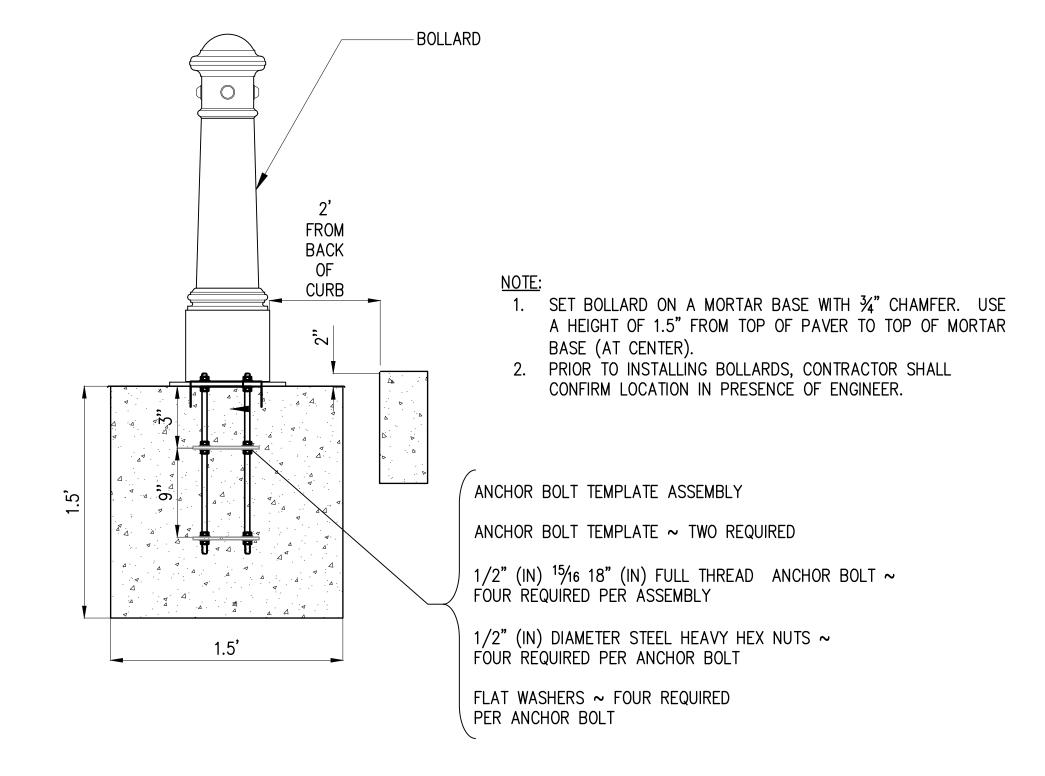
#### **DETECTABLE STRIP DETAIL**

INSTALL AS PER MANUFACTURERS RECOMMENDATIONS FOUND AT HTTPS: //VANGUARDONLINE.COM

MANUFACTURED BY APPROVED, TRAINED INSTALLERS
WIDTH OF DETECTABLE WARNING STRIP SHALL BE 1'.
NTS



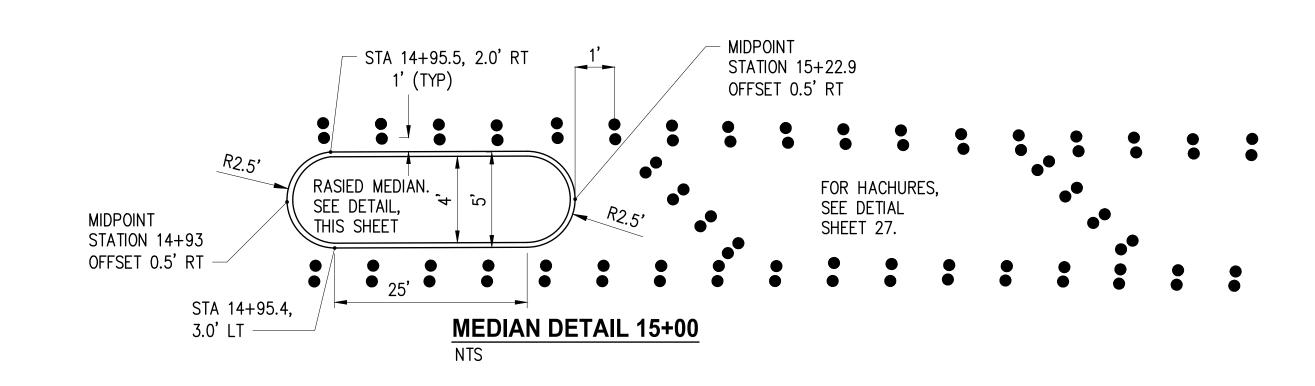




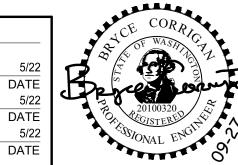
BOLLARD FOUNDATION DETAIL (FOR BOLLARDS PLACED IN PLANTER)

BOLLARD LOCATED OUTSIDE OF CONCRETE SIDEWALK

NTS



NO.	DATE	BY	APPR.	REVISIONS	Approved By	21103RD-DET01.dwg
					] ''	FILENAME
					1	BMC
					ENGINEERING MANAGER DATE	DESIGNED BY
					]	ВМС
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						BMC
					PROJECT ENGINEER DATE	CHECKED BY



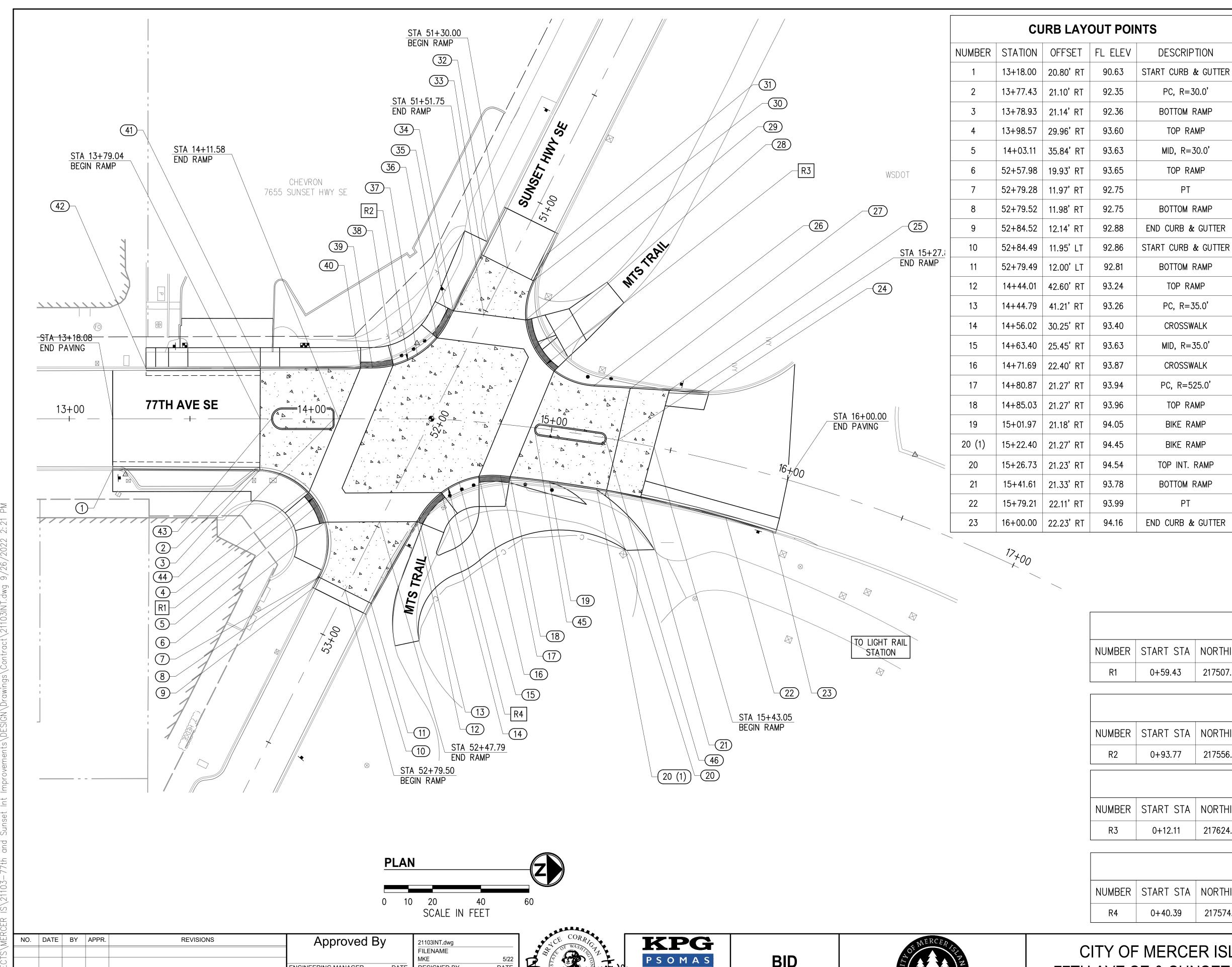




CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

DETAILS

KPG PROJECT No. 21103 SHT 10 OF 33



	CURB LAYOUT POINTS									
NUMBER	STATION	OFFSET	FL ELEV	DESCRIPTION						
24	15+59.61	26.56' LT	95.73	START CURB & GUTTER						
25	15+44.57	24.15' LT	95.05	BOTTOM RAMP						
26	51+57.66	53.88' LT	95.01	PC, R=30.0'						
27	15+29.04	21.66' LT	95.38	TOP RAMP						
28	14+89.10	32.55' LT	95.00	MID, R=30.0'						
29	14+84.48	43.93' LT	95.10	TOP RAMP						
30	51+30.00	12.01' LT	94.76	BOTTOM RAMP, PT						
31	14+89.48	71.67' LT	94.52	END CURB & GUTTER						
32	14+67.51	74.58' LT	94.77	START CURB & GUTTER						
33	14+65.43	69.14'LT	94.76	BOTTOM RAMP						
34	14+56.21	45.15' LT	95.60	TOP RAMP						
35	51+60.97	12.00' RT	95.65	PC, R=35.0'						
36	14+50.51	33.52' LT	95.75	CROSSWALK						
37	14+44.20	26.36' LT	95.28	MID, R-30.0'						
38	14+34.28	22.10' LT	94.85	CROSSWALK						
39	51+92.23	31.25' RT	94.71	PT						
40	14+20.68	21.00' LT	94.64	TOP RAMP						
41	13+79.15	20.93' LT	92.92	BOTTOM RAMP						
42	13+31.81	20.85' LT	91.26	END CURB & GUTTER						
43	13+83.76	0.00' RT	92.91	NOSE OF ISLAND						
44	14+09.71	0.00'	94.13	NOSE OF ISLAND						
45	14+92.93	0.75' RT	94.42	NOSE OF ISLAND						
46	15+22.89	0.98' RT	94.95	NOSE OF ISLAND						

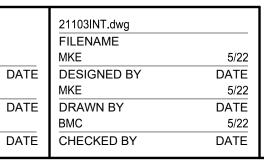
SE RADIUS								
NUMBER	START STA	NORTHING	EASTING	LENGTH	BRNG/DELTA	RADIUS	PI STA	TAN
R1	0+59.43	217507.68	1294557.99	61.90'	118°13'05"	30.00'	1+09.58	50.15

	SW RADIUS								
NUMBER	START STA	NORTHING	EASTING	LENGTH	BRNG/DELTA	RADIUS	PI STA	TAN	
R2	0+93.77	217556.89	1294517.13	38.65'	63°15'54"	35.00'	1+15.33	21.56	

NW RADIUS								
NUMBER	START STA	NORTHING	EASTING	LENGTH	BRNG/DELTA	RADIUS	PI STA	TAN
R3	0+12.11	217624.36	1294482.82	59.34'	113°19'51"	30.00'	0+57.73	45.61'

NE RADIUS								
NUMBER	START STA	NORTHING	EASTING	LENGTH	BRNG/DELTA	RADIUS	PI STA	TAN
R4	0+40.39	217574.51	1294579.81	40.36'	66°03'55"	35.00'	0+63.15	22.76'

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						ENGINEERING MANAGER DATE	<u>.</u>
						PROJECT MANAGER DATE	
						PRO IECT ENGINEER DATE	<u>.</u>







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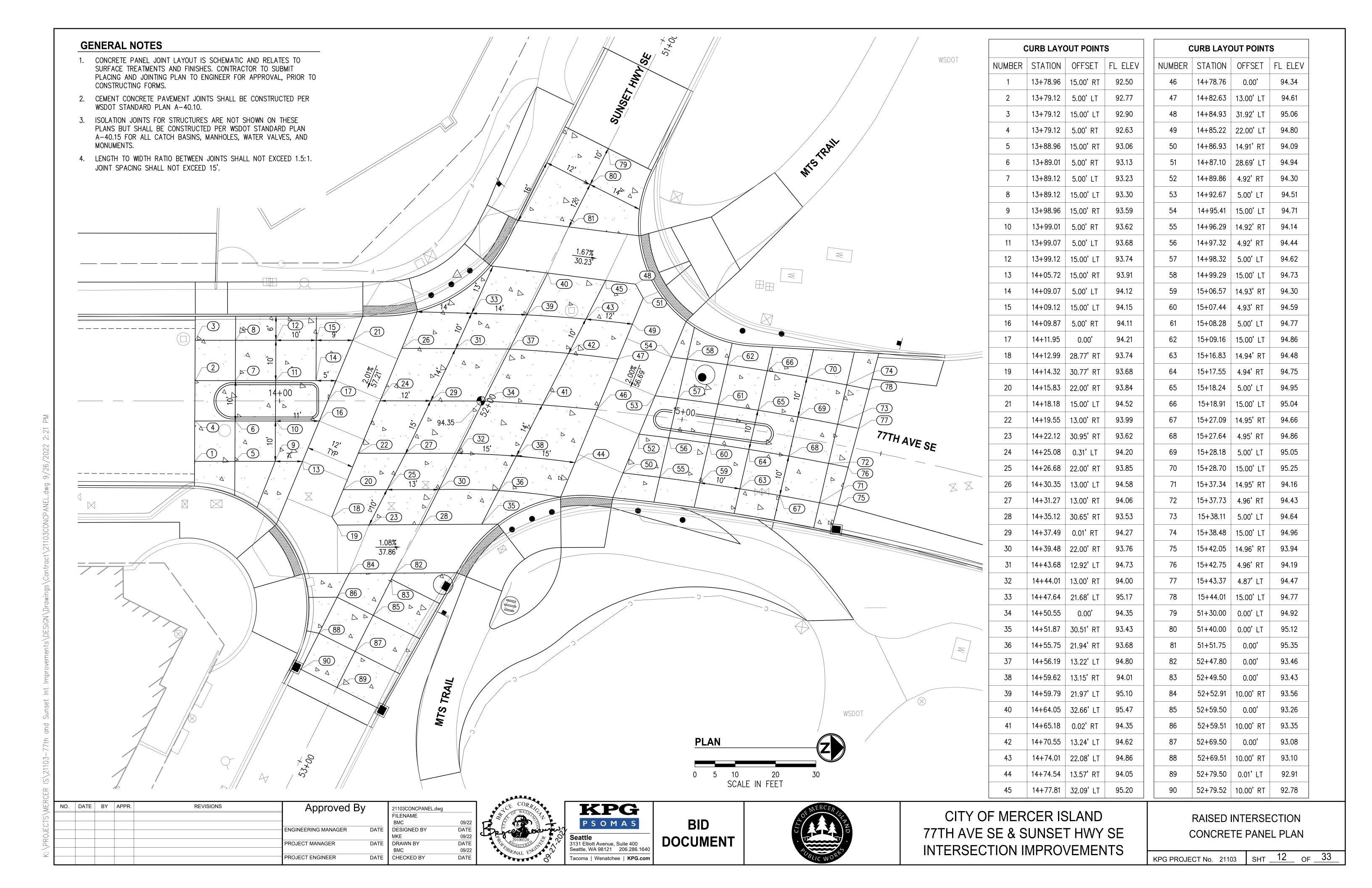


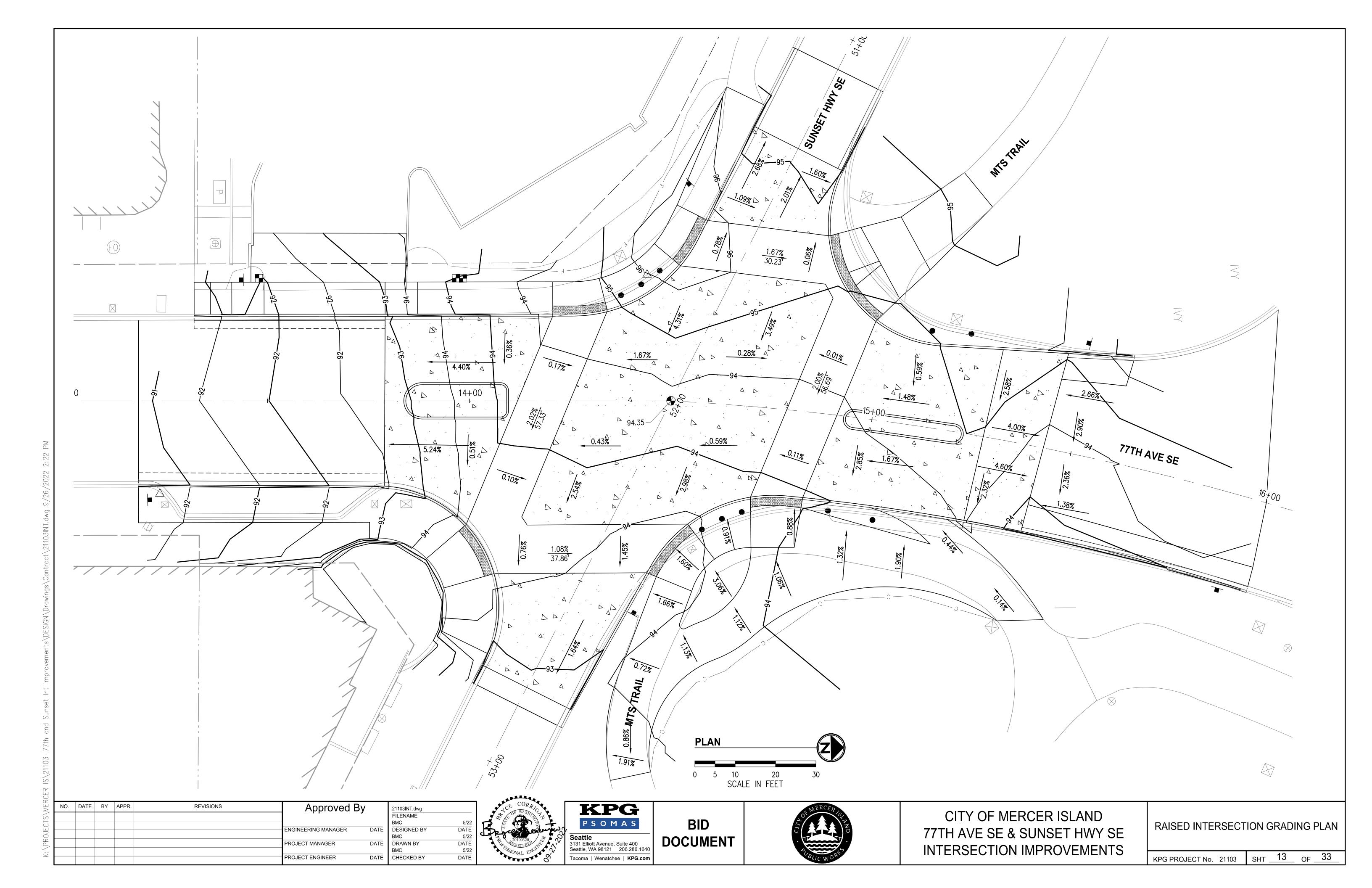
CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

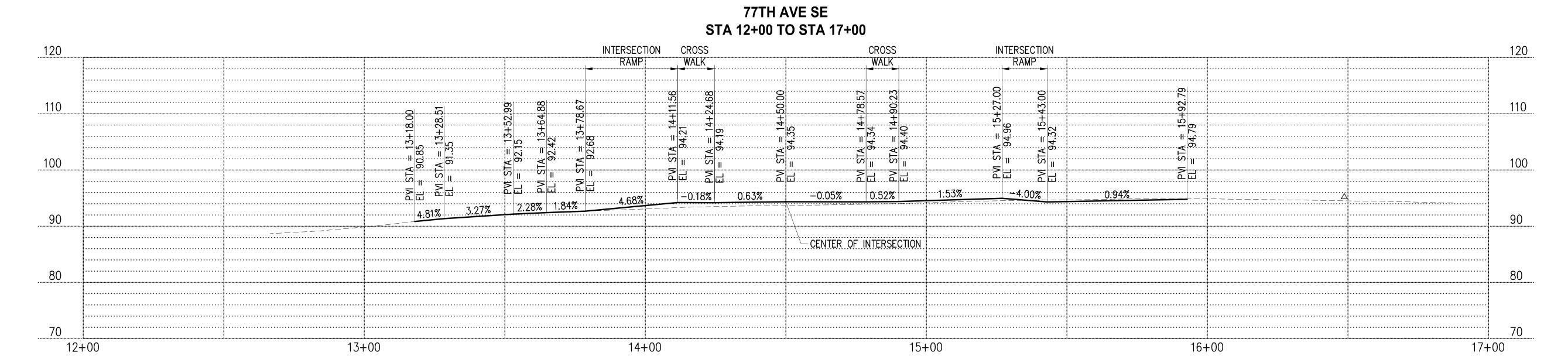
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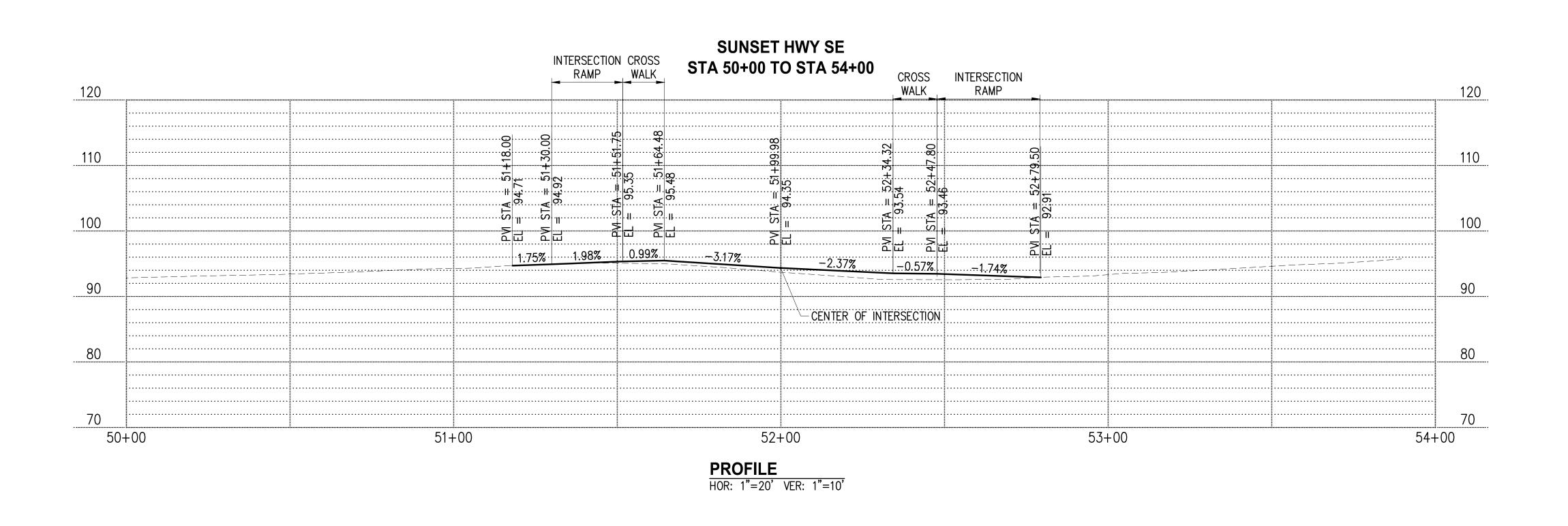
PG PROJECT No.	21103	SHT _	11	OF _	33	



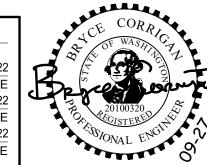




PROFILE
HOR: 1"=20' VER: 1"=10'



NO.	DATE	BY	APPR.	REVISIONS	Approved By		21103INT.dwg FILENAME	
					1		BMC	5/22
					ENGINEERING MANAGER	DATE	DESIGNED BY BMC	DATE 5/22
					PROJECT MANAGER	DATE	DRAWN BY BMC	DATE 5/22
					PROJECT ENGINEER	DATE	CHECKED BY	DATE





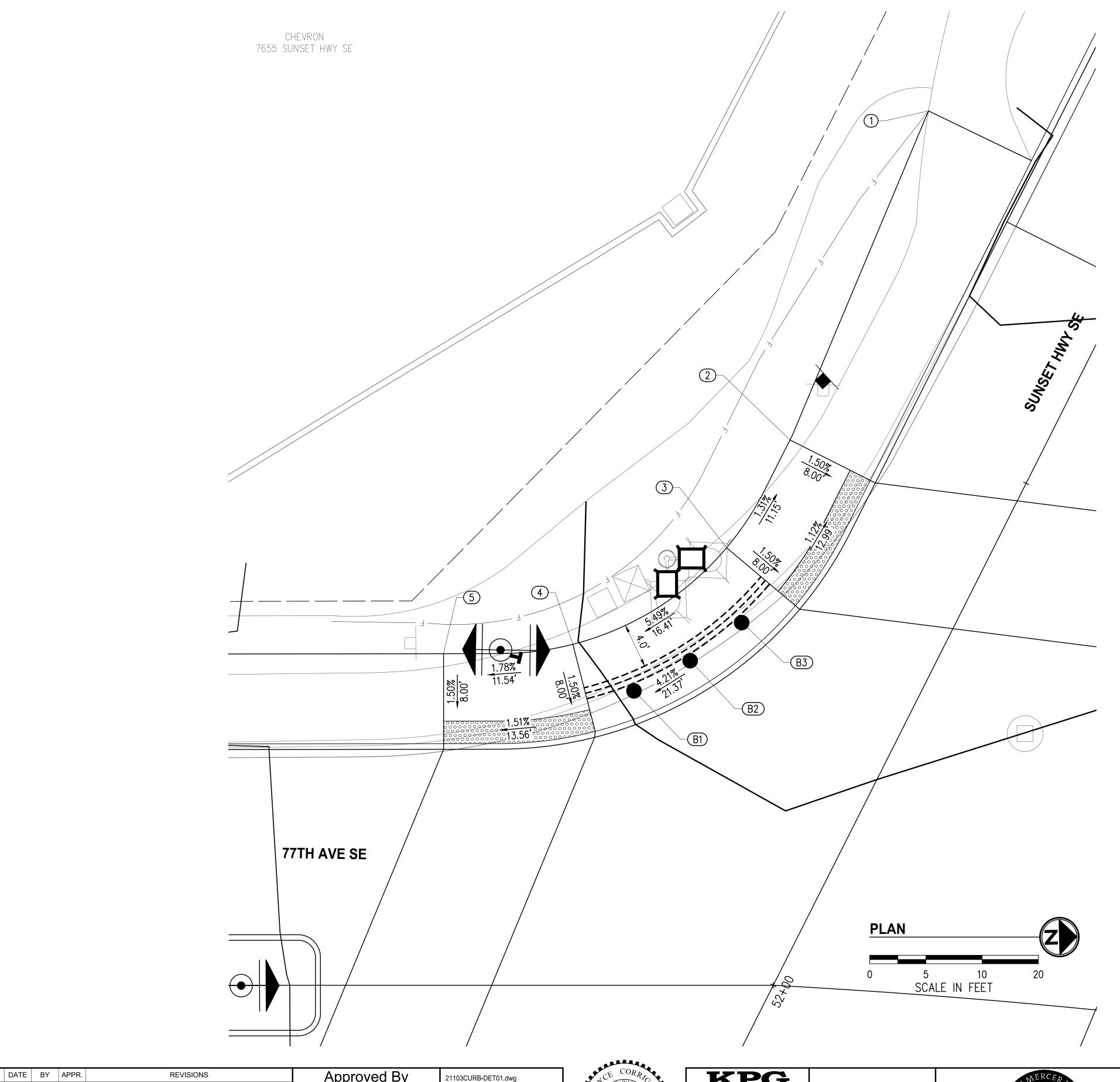




CITY OF MERCER ISLAND
77TH AVE SE & SUNSET HWY SE
INTERSECTION IMPROVEMENTS

RAISED INTERSECTION CENTERLINE PROFILES

KPG PROJECT No. 21103 SHT 14 OF 33



- 1. CURB RAMPS SHALL BE CONSTRUCTED TO MEET RUNNING AND CROSS SLOPES SHOWN.
- 2. CURB RAMPS AND LANDINGS SHALL BE PLANAR WITH NO GRADE
- 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

CEMENT CONCRETE LANDING

HMA CL ½" PG 58H-22

STAMPED CEMENT CONCRETE

SCORED CEMENT CONCRETE

DETECTABLE WARNING SURFACE

BOLLARD

DETECTABLE STRIP

SIDEWALK LAYOUT POINTS									
NUMBER	STATION	OFFSET	FL ELEV	DESCRIPTION					
1	14+58.54	78.48' LT	95.48	MATCH EXISTING					
2	14+50.00	48.54' LT	95.72	LANDING					
3	14+45.86	38.91' LT	95.87	LANDING					
4	14+32.17	30.31' LT	94.97	LANDING					
5	14+20.67	29.49' LT	94.76	LANDING					

BOLLARD TABLE								
	NUMBER	STATION	OFFSET	DESCRIPTION				
	B1	51+82.19	22.85' RT	BOLLARD				
	B2	51+77.54	19.60' RT	BOLLARD				
	В3	51+72.46	17.03' RT	BOLLARD				

Approved By NO. DATE BY APPR. ENGINEERING MANAGER PROJECT ENGINEER

DESIGNED BY DRAWN BY DATE CHECKED BY

**KPG** PSOMAS **Seattle**3131 Elliott Avenue, Suite 400
Seattle, WA 98121 206.286.1640 Tacoma | Wenatchee | **KPG.com** 

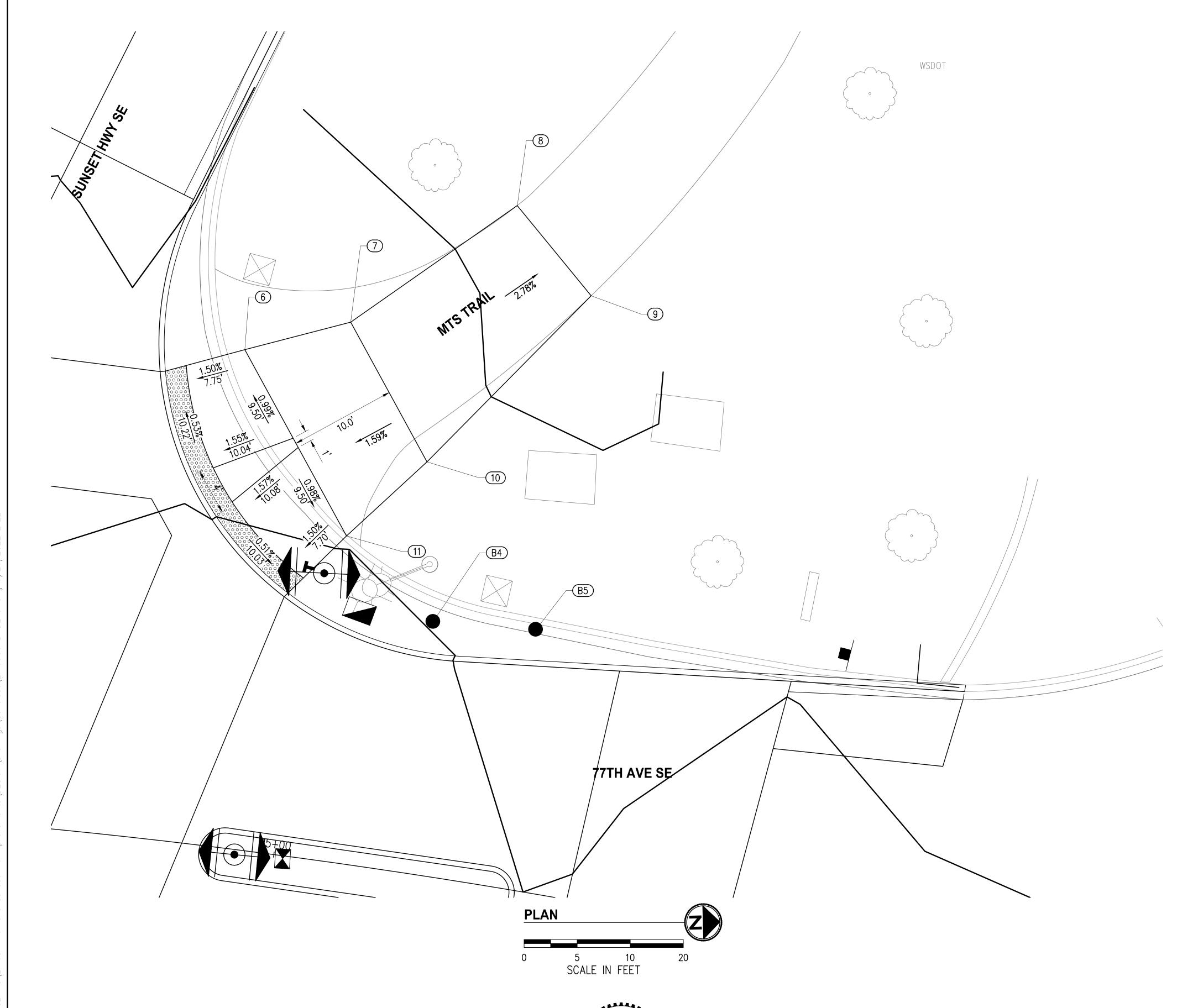
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CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

CURB RAMP DETAILS (SW)

KPG PROJECT No. 21103 SHT \_\_\_15 OF \_\_33



- 1. CURB RAMPS SHALL BE CONSTRUCTED TO MEET RUNNING AND CROSS SLOPES SHOWN.
- 2. CURB RAMPS AND LANDINGS SHALL BE PLANAR WITH NO GRADE
- 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**

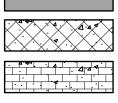
PROPERTY LINE

— — EXISTING RIGHT OF WAY

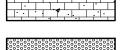
CEMENT CONCRETE LANDING



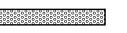
HMA CL ½" PG 58H-22



SCORED CEMENT CONCRETE



STAMPED CEMENT CONCRETE



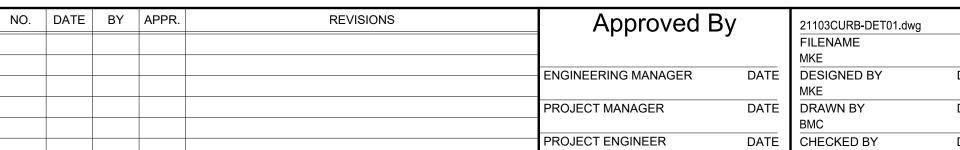
DETECTABLE WARNING SURFACE

BOLLARD

DETECTABLE STRIP 

SIDEWALK LAYOUT POINTS								
NUMBER	STATION	OFFSET	FL ELEV	DESCRIPTION				
6	14+91.67	46.87' LT	95.22	LANDING				
7	15+00.58	50.69' LT	95.37	AP				
8	15+13.43	63.80' LT	94.78	MATCH EXISTING				
9	15+20.94	56.48' LT	94.72	MATCH EXISTING				
10	15+08.94	38.64' LT	95.18	AP				
11	15+02.73	30.67' LT	95.03	LANDING				

BOLLARD TABLE									
NUMBER	STATION	OFFSET	DESCRIPTION						
B4	15+11.56	23.85' LT	BOLLARD						
B5	15+20.88	24.62' LT	BOLLARD						





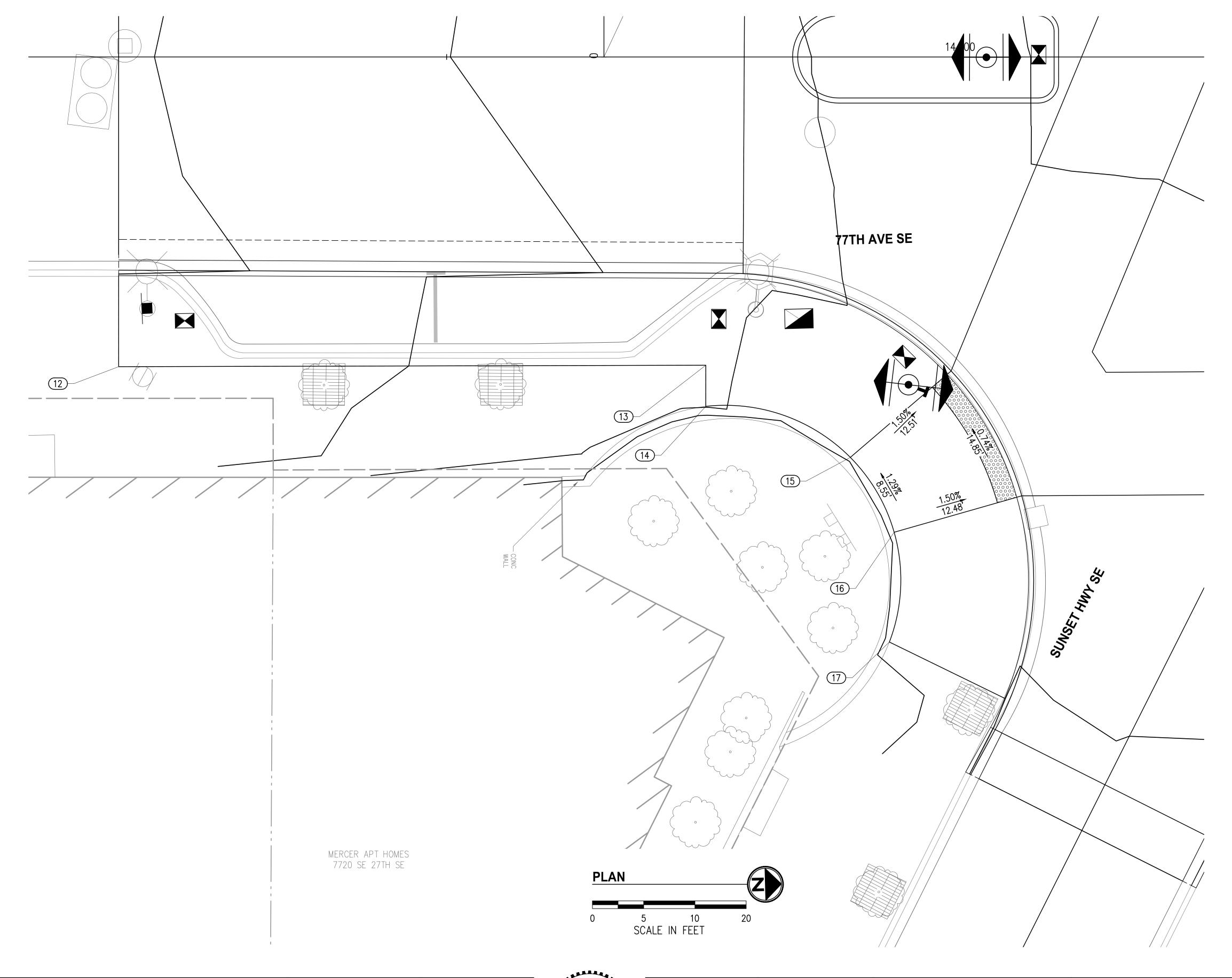




CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

CURB RAMP DETAILS (NW)

KPG PROJECT No. 21103 SHT 16 OF 33



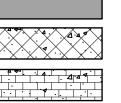
- 1. CURB RAMPS SHALL BE CONSTRUCTED TO MEET RUNNING AND CROSS SLOPES SHOWN.
- 2. CURB RAMPS AND LANDINGS SHALL BE PLANAR WITH NO GRADE
- 3. USE RADIUS DETECTABLE WARNING SURFACE (DWS) WHERE APPLICABLE. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER WSDOT STANDARD PLAN F-45.10-02.
- 4. CEMENT CONC.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

#### **LEGEND**

PROPERTY LINE

— — EXISTING RIGHT OF WAY

CEMENT CONCRETE LANDING



HMA CL ½" PG 58H-22

SCORED CEMENT CONCRETE



STAMPED CEMENT CONCRETE



DETECTABLE WARNING SURFACE

BOLLARD

DETECTABLE STRIP

SIDEWALK LAYOUT POINTS							
NUMBER	STATION	OFFSET	FL ELEV	DESCRIPTION			
12	13+18.00	30.22' RT	91.18	AP, MATCH EXISTING			
13	13+75.29	30.08' RT	92.84	AP, MATCH EXISTING			
14	13+75.29	34.09' RT	92.88	MATCH EXISTING			
15	13+89.39	39.07' RT	93.11	MATCH EXISTING			
16	13+93.67	46.37' RT	93.22	MATCH EXISTING			
17	13+93.20	57.08' RT	93.40	MATCH EXISTING			

Approved By NO. DATE BY APPR. REVISIONS 1103CURB-DET01.dwg ENGINEERING MANAGER DESIGNED BY PROJECT MANAGER DRAWN BY

PROJECT ENGINEER

DATE CHECKED BY



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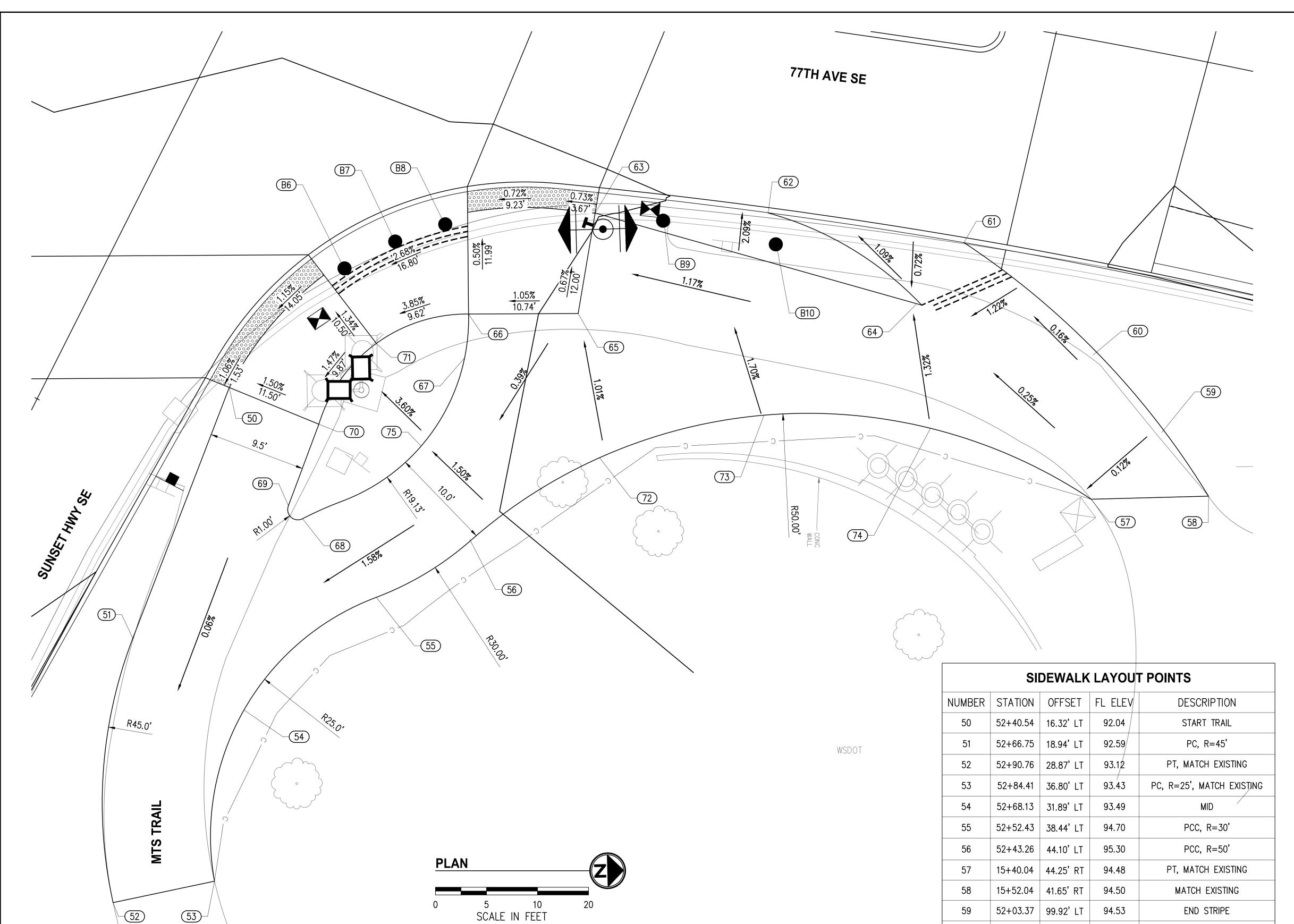




CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

CURB RAMP DETAILS (SE)

KPG PROJECT No. 21103 SHT \_\_\_\_\_ OF \_\_\_\_ 33



- 1. CURB RAMPS SHALL BE CONSTRUCTED TO MEET RUNNING AND CROSS SLOPES SHOWN.
- 2. CURB RAMPS AND LANDINGS SHALL BE PLANAR WITH NO GRADE
- 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

CEMENT CONCRETE LANDING

HMA CL ½" PG 58H-22

SCORED CEMENT CONCRETE STAMPED CEMENT CONCRETE

DETECTABLE WARNING SURFACE

BOLLARD

====

DETECTABLE STRIP

BOLLARD TABLE						
NUMBER	STATION	OFFSET	DESCRIPTION			
В6	14+59.82	31.35' RT	BOLLARD			
В7	14+64.81	28.36' RT	BOLLARD			
B8	14+69.77	26.28' RT	BOLLARD			
В9	14+91.83	23.76' RT	BOLLARD			
B10	15+03.52	24.66' RT	BOLLARD			

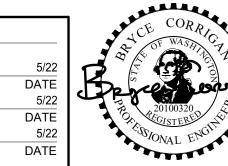
SIDEWALK LAYOUT POINTS								
NUMBER	STATION	OFFSET	FL ELEV	DESCRIPTION				
50	52+40.54	16.32' LT	92.04	START TRAIL				
51	52+66.75	18.94' LT	92.59	PC, R=45'				
52	52+90.76	28.87' LT	93.12	PT, MATCH EXISTING				
53	52+84.41	36.80' LT	93.43	PC, R=25', MATCH EXISTING				
54	52+68.13	31.89' LT	93.49	MID				
55	52+52.43	38.44' LT	94.70	PCC, R=30'				
56	52+43.26	44.10' LT	95.30	PCC, R=50'				
57	15+40.04	44.25' RT	94.48	PT, MATCH EXISTING				
58	15+52.04	41.65' RT	94.50	MATCH EXISTING				
59	52+03.37	99.92' LT	94.53	END STRIPE				
60	51+99.61	90.50' LT	94.41	EDGE ASPHALT				
61	51+95.46	74.23' LT	93.60	END BIKE RAMP OPENING				
62	52+01.50	55.79' LT	93.40	BEGINNING BIKE RAMP OPENING				

	SIDEWALK LAYOUT POINTS									
NUMBER	STATION	OFFSET	FL ELEV	DESCRIPTION						
63	52+09.14	40.65' LT	92.95	TRAIL START						
64	52+02.98	72.77' LT	94.12	AP, BIKE RAMP & TRAIL						
65	52+18.69	43.60' LT	93.00	EDGE CONCRETE						
66	52+23.56	34.03' LT	92.55	EDGE CONCRETE						
67	52+27.58	35.61' LT	92.82	PC						
68	52+48.80	28.52' LT	92.82	PCC						
69	52+48.29	26.71' LT	92.57	PT						
70	52+39.80	25.78' LT	92.38	EDGE CONCRETE						
71	52+30.22	27.30' LT	92.37	EDGE CONCRETE						
72	52+30.36	51.83' LT	95.53	EDGE ASPHALT						
73	52+19.38	64.35' LT	94.69	EDGE ASPHALT						
74	52+13.19	79.50' LT	94.59	EDGE ASPHALT						

NO.	DATE	BY	APPR.	REVISIONS	Approved By	21103CURB-DET0
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					PROJECT ENGINEER DATE	BMC CHECKED BY

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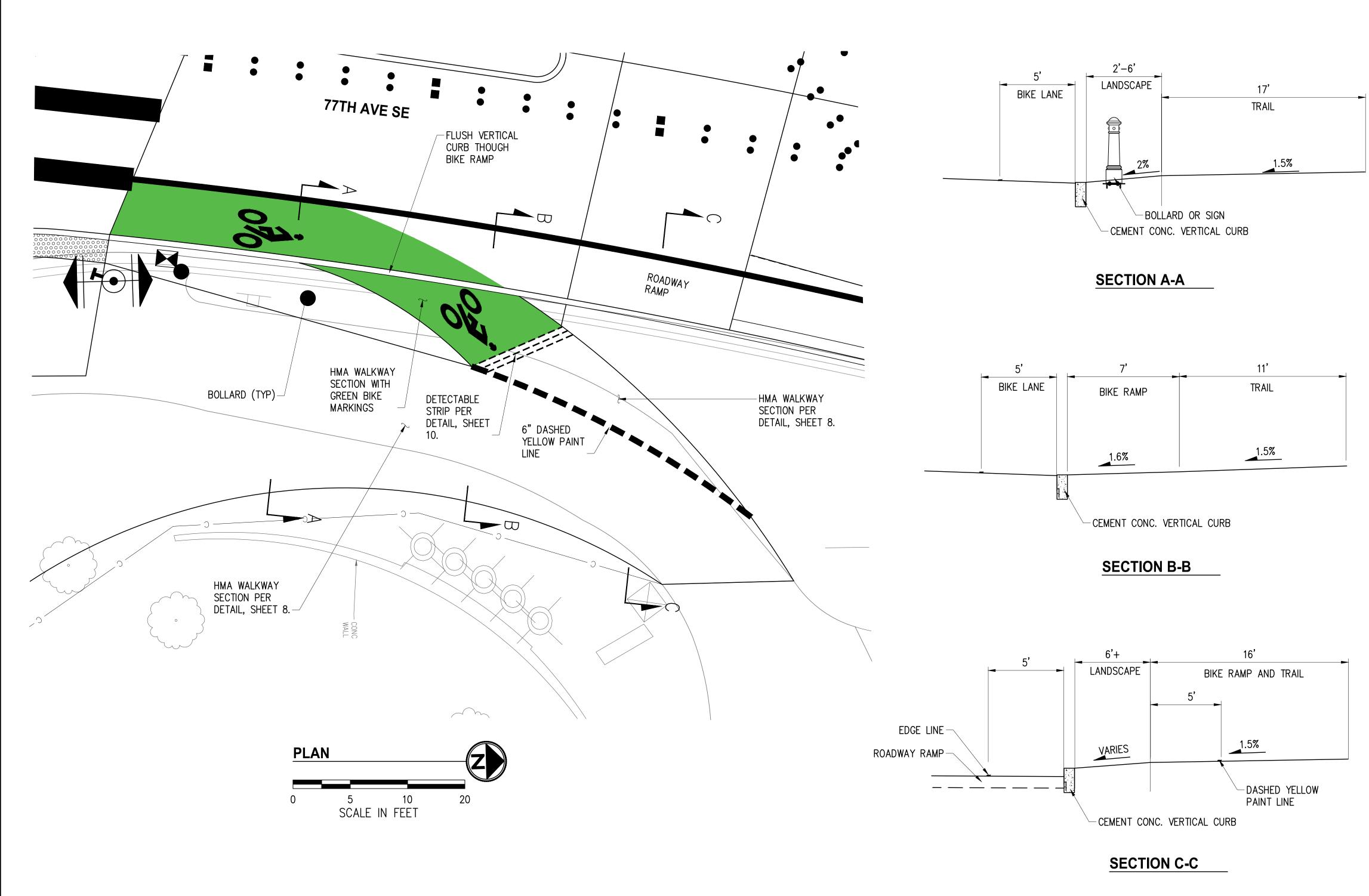
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CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

CURB RAMP DETAILS (NE)

KPG PROJECT No. 21103 SHT 18 OF 33



- 1. CURB RAMPS SHALL BE CONSTRUCTED TO MEET RUNNING AND CROSS SLOPES SHOWN.
- 2. CURB RAMPS AND LANDINGS SHALL BE PLANAR WITH NO GRADE
- 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.

PROPERTY LINE

#### **LEGEND**

— — EXISTING RIGHT OF WAY CEMENT CONCRETE LANDING HMA CL ½" PG 58H-22

DETECTABLE WARNING SURFACE

STAMPED CEMENT CONCRETE

SCORED CEMENT CONCRETE

BOLLARD

 $\equiv$   $\equiv$   $\equiv$ 

DETECTABLE STRIP

Approved By NO. DATE BY APPR. REVISIONS 1103CURB-DET01.dwg FILENAME DATE DESIGNED BY ENGINEERING MANAGER PROJECT MANAGER DATE DRAWN BY DATE 5/22 CHECKED BY PROJECT ENGINEER DATE





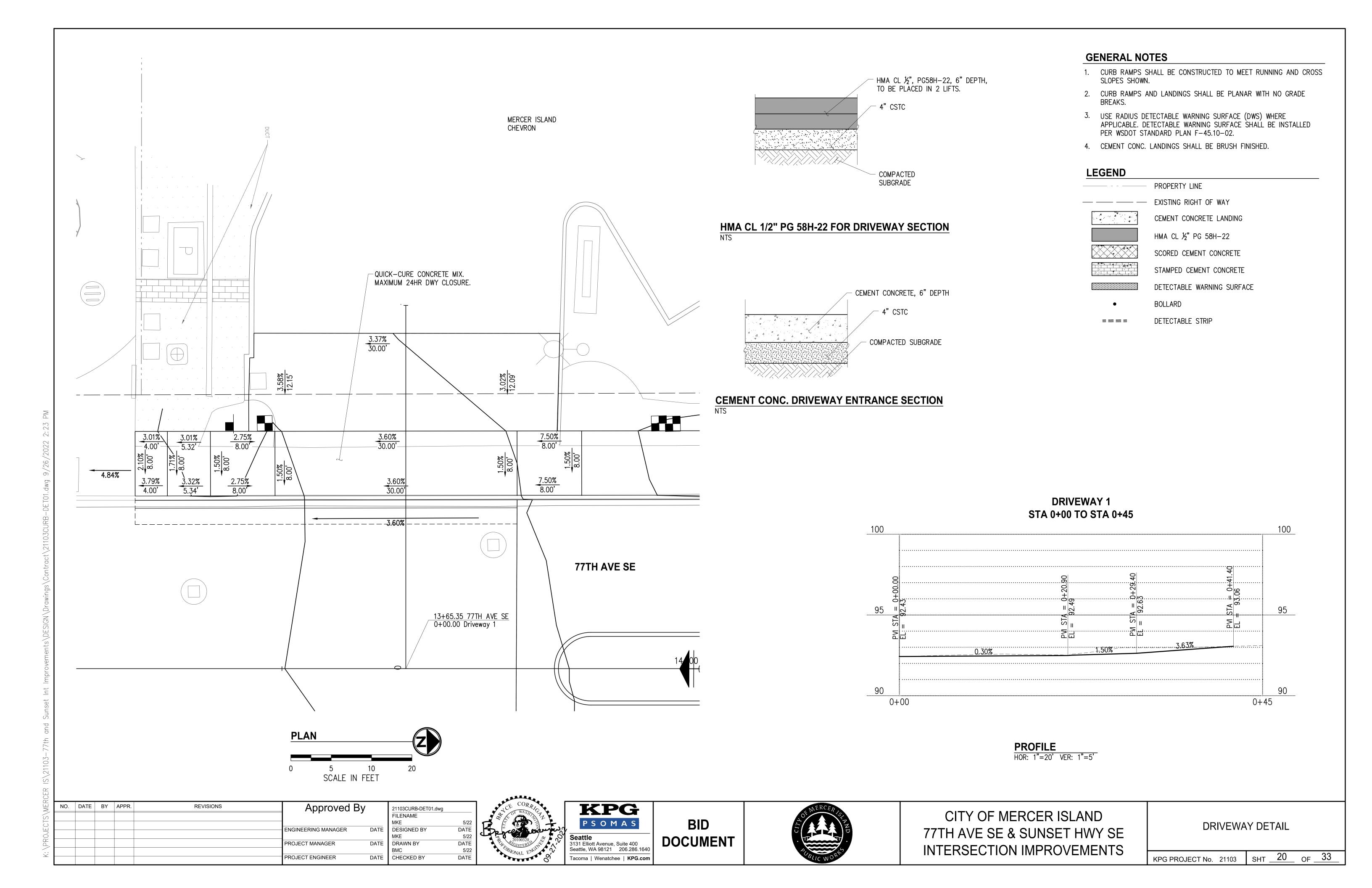
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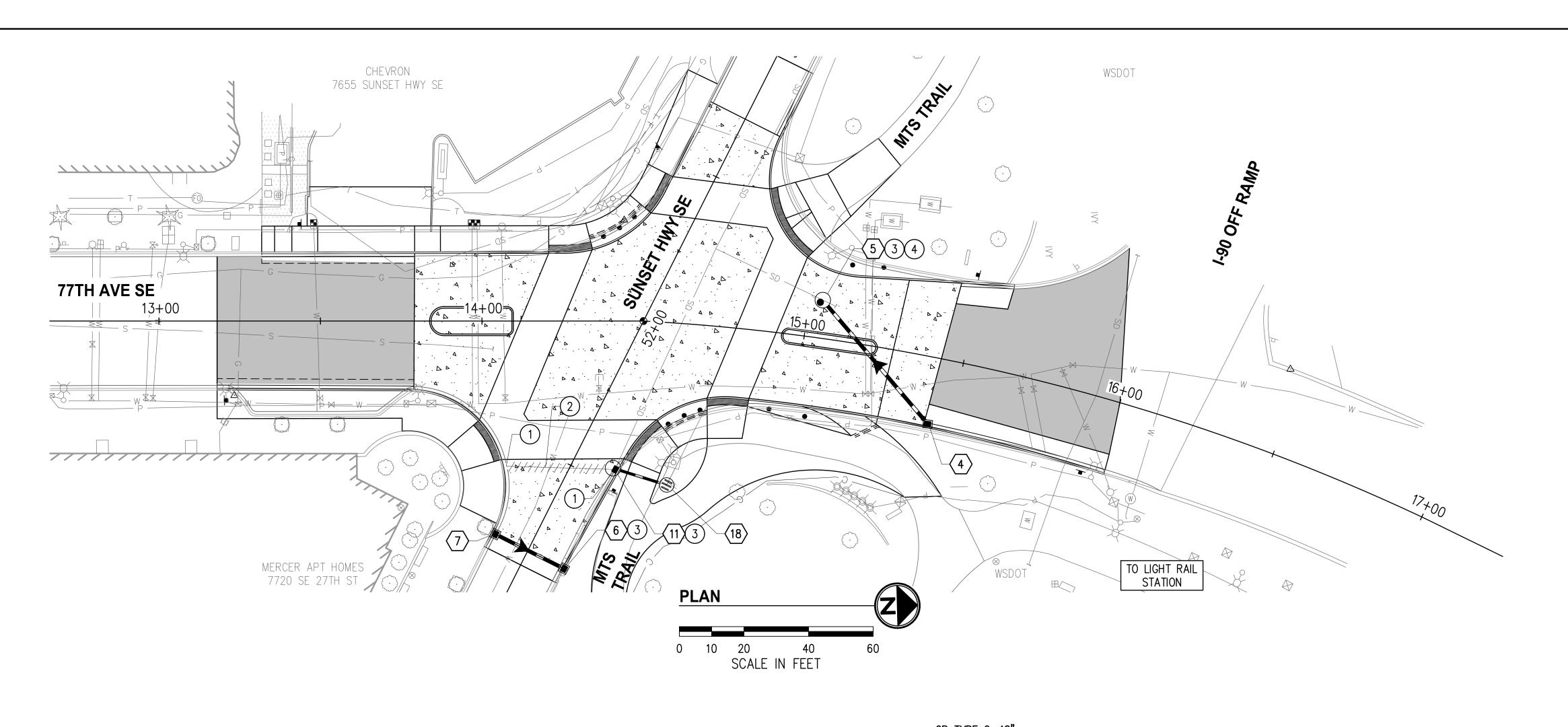


CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

**BIKE RAMP DETAIL** 

KPG PROJECT No. 21103 SHT 19 OF 33





- 1. INSTALL CB TYPE 1 PER WSDOT STD DETAIL B-5.20.02 AND CB TYPE 2 PER WSDOT STD DETAIL B-10.20-02.
- 2. PIPES LABELED "SD" SHALL BE POLYPROPYLENE STORM SEWER PIPE.
- 3. ALL STORM DRAINAGE PIPE SHALL HAVE WATERTIGHT JOINTS.
- 4. LOCATION AND SIZE OF EXISTING UTILITIES ARE APPROXIMATE.
- 5. STATION/OFFSET CALLOUTS PROVIDED ARE FOR THE CENTER OF THE DRAINAGE STRUCTURE.
- 6. CATCH BASINS SHALL BE VANED GRATE OR SOLID METAL COVER PER WSDOT STD DETAIL B-30.30-03 AND B-30.20-04.

#### STORM DRAINAGE NOTES

- 1) REMOVE EXISTING STORM DRAINAGE STRUCTURE.
- (2) REMOVE EXISTING STORM DRAINAGE PIPE.
- (3) CONNECT NEW STRUCTURE TO EXISTING STORM DRAINAGE PIPE.
- (4) INSTALL SOLID LID COVER

#### **LEGEND**

STORM DRAINAGE STRUCTURE ID NUMBER

STORM DRAIN PIPE

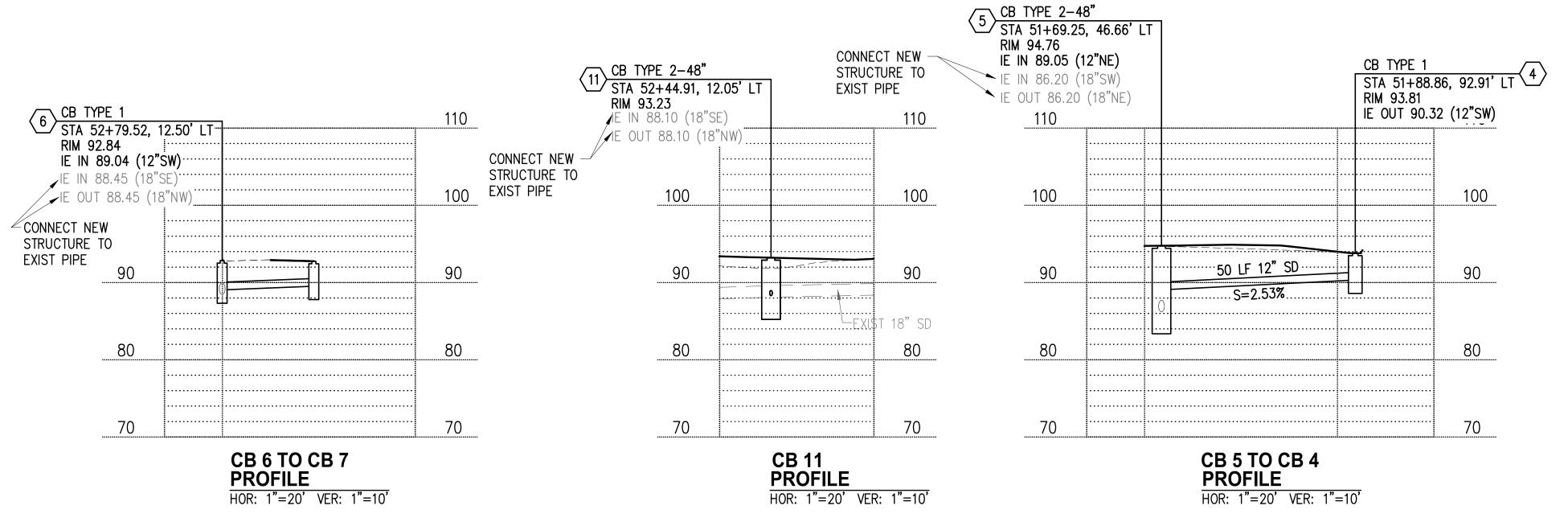
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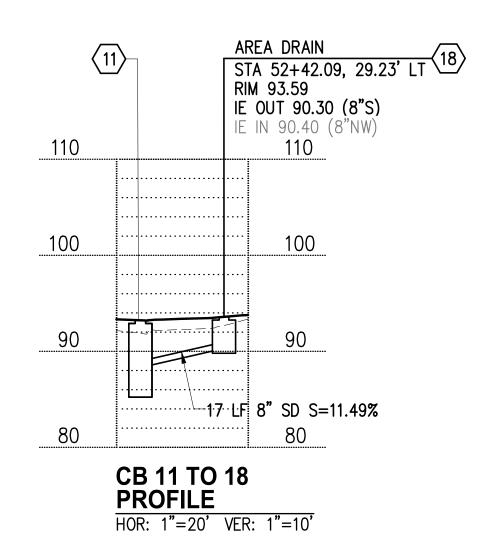
■ CATCH BASIN TYPE 1

AREA DRAIN

► DIRECTIONAL FLOW ARROW

\*/\*/\*/\*/\*/\*/ REMOVE EXISTING PIPE





NO.	DATE	BY	APPR.	REVISIONS	Approved By		21103STRM01.dwg	
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							BMC	5/22
					ENGINEERING MANAGER	DATE	DESIGNED BY	DATE
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					PROJECT MANAGER	DATE	DRAWN BY	DATE
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					PROJECT ENGINEER	DATE	CHECKED BY	DATE





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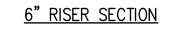
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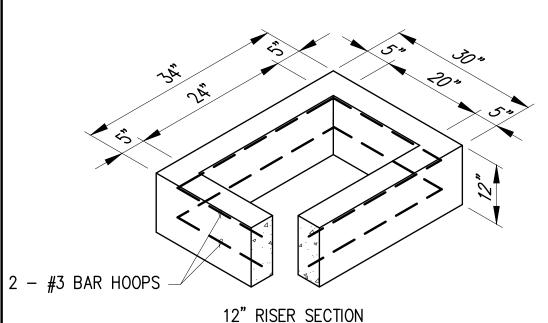


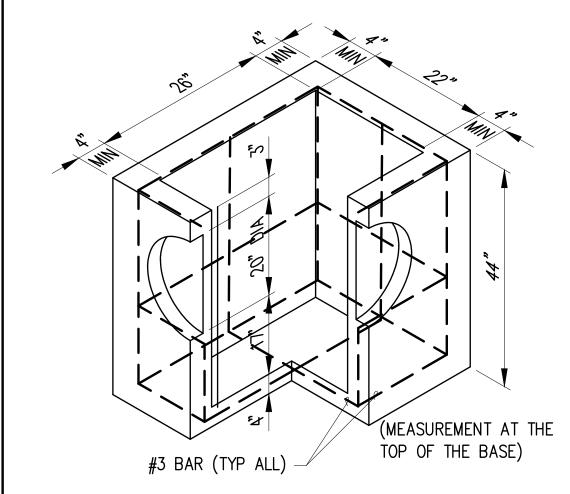
CITY OF MERCER ISLAND
77TH AVE SE & SUNSET HWY SE
INTERSECTION IMPROVEMENTS

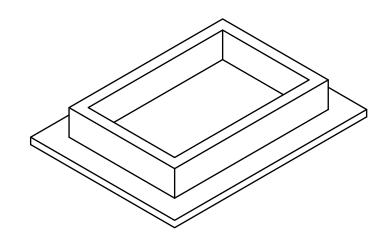
STORMWATER PLAN & PROFILE
77TH AVENUE SE

KPG PROJECT No. 21103 SHT 21 OF 33





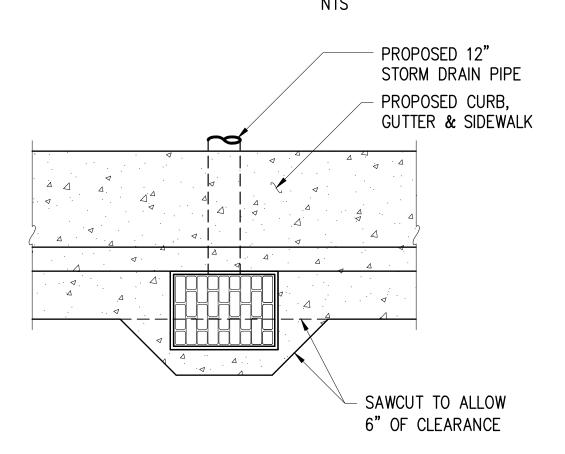




FRAME & GRATE

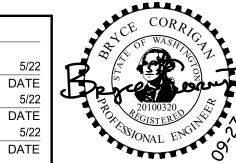
- CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M 199) AND C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
- AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
- 3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
- 4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
- 5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS.
- 6. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES WITH MAXIMUM DIA. OF 20". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPED.
- 7. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 4'-0".
- 8. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2' PER FT.
- 9. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
- 10. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
- 11. EDGE OF RISER OR BRICK SHALL NOT BE MORE THAN 2" FROM VERTICAL EDGE OF CATCH BASIN.

#### PRECAST BASE SECTION **CATCH BASIN TYPE 1**



#### **CATCH BASIN INSTALLATION**

NO. DATE BY APPR. REVISIONS Approved By 1103STRM-DET01.dwg FILENAME ENGINEERING MANAGER DATE **DESIGNED BY** PROJECT MANAGER DATE DRAWN BY DATE PROJECT ENGINEER CHECKED BY







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**DOCUMENT** 

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

#### **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"				

CATCH BASIN FRAME AND VANED GRATE OR MANHOLE RING AND COVER

RECTANGULAR ADJUSTMENT SECTION OR CIRCULAR ADJUSTMENT SECTION

GRAVEL BACKFILL FOR

PIPE ZONE BEDDING

- FLAT SLAB TOP

MORTAR (TYP.)

SEE TABLE

STEPS OR

SEPARATE BASE

**INTEGRAL BASE** 

(48" (IN) - 72" (IN) ONLY)

	PIPE ALLOWANCES								
CATCH	PIPE MATER	IAL WITH N	MAXIMUM IN	SIDE DIAM	ETER				
BASIN DIAMETER	CONCRETE	ALL METAL	CPSSP ① PP ④	SOLID WALL PVC <sup>2</sup>	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)



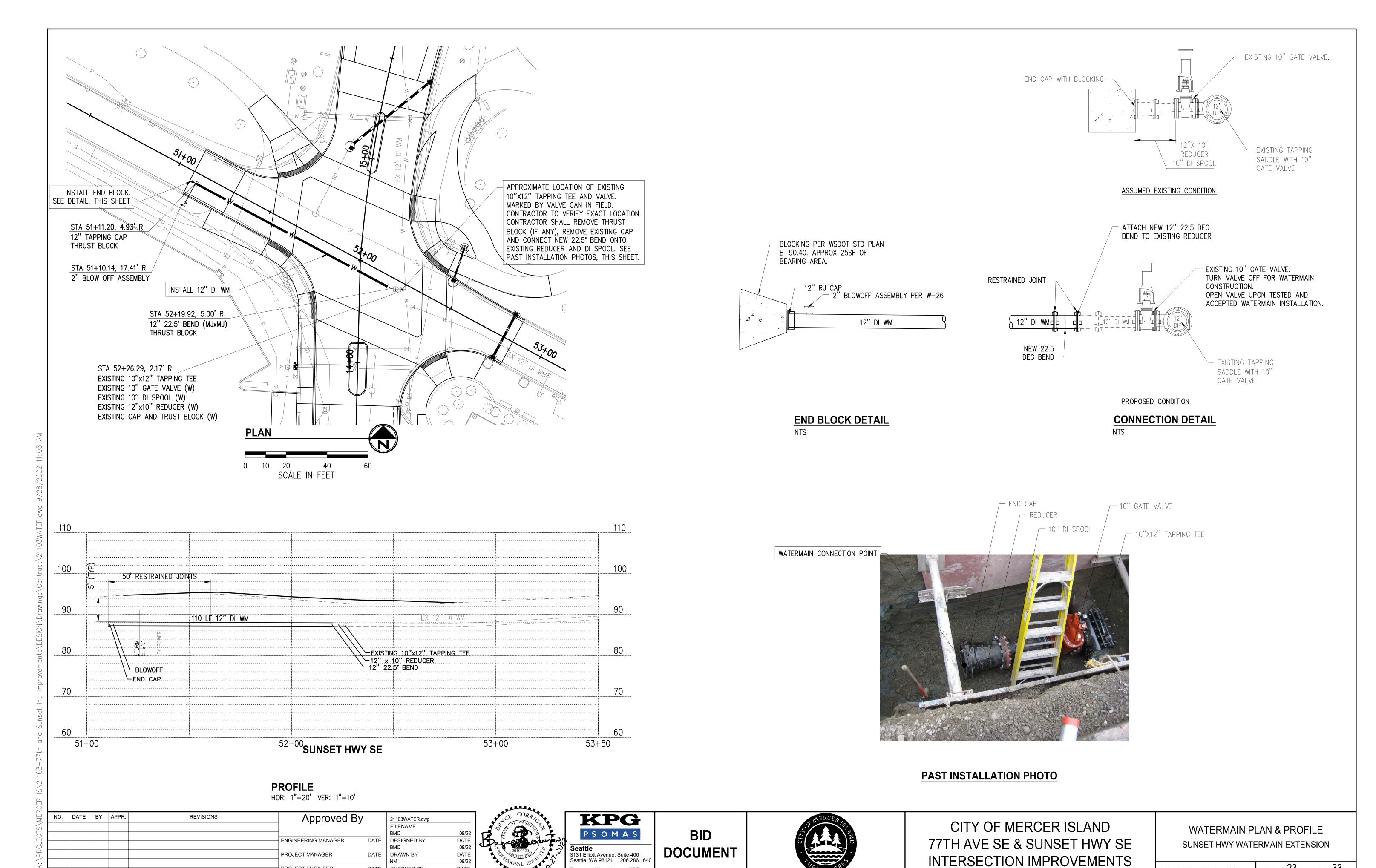
STANDARD PLAN B-10.20-02

APPROVED FOR PUBLICATION

SHEET 1 OF 1 SHEET

STORMWATER DETAILS

KPG PROJECT No. 21103 SHT 22 OF 33



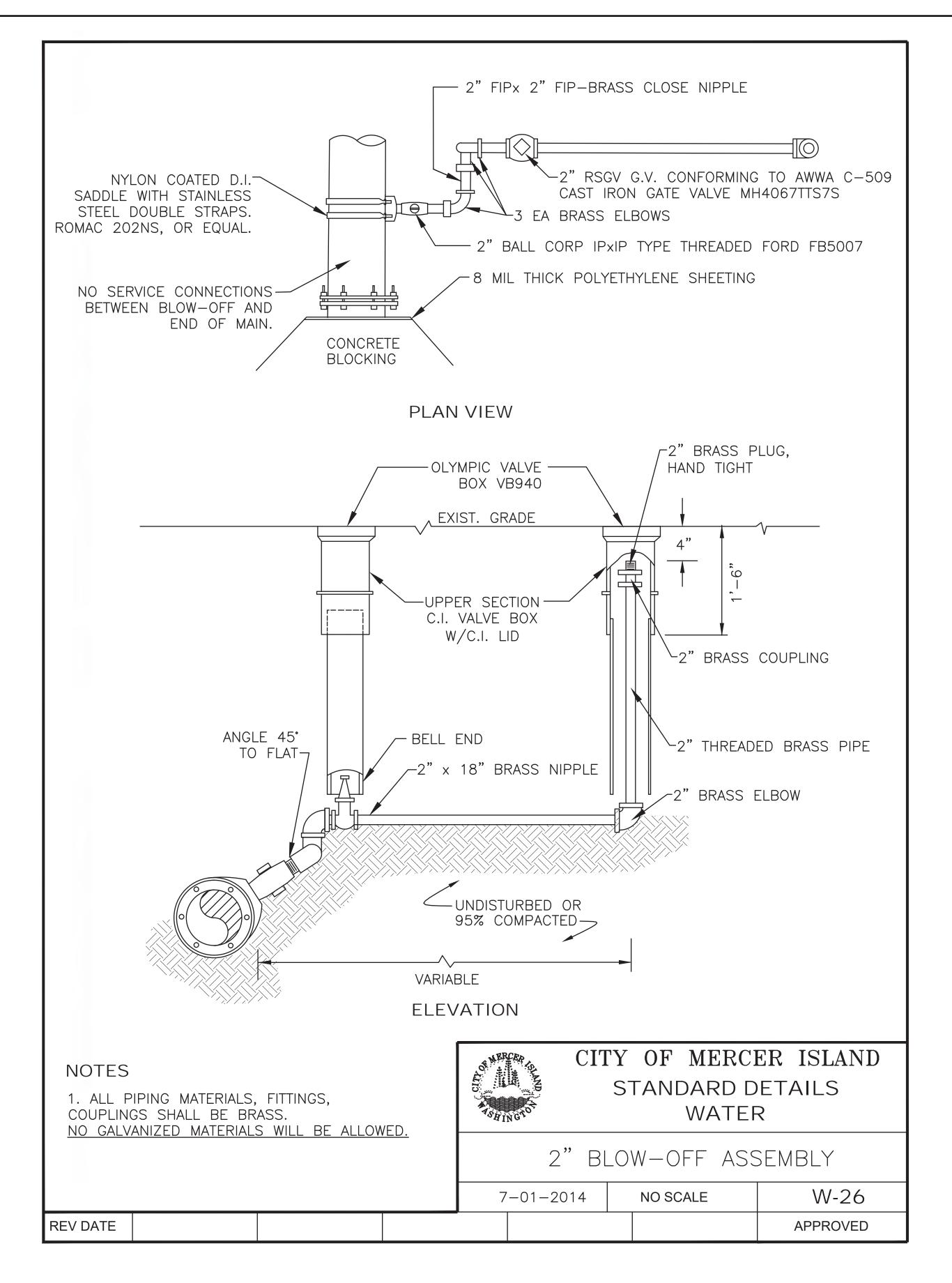
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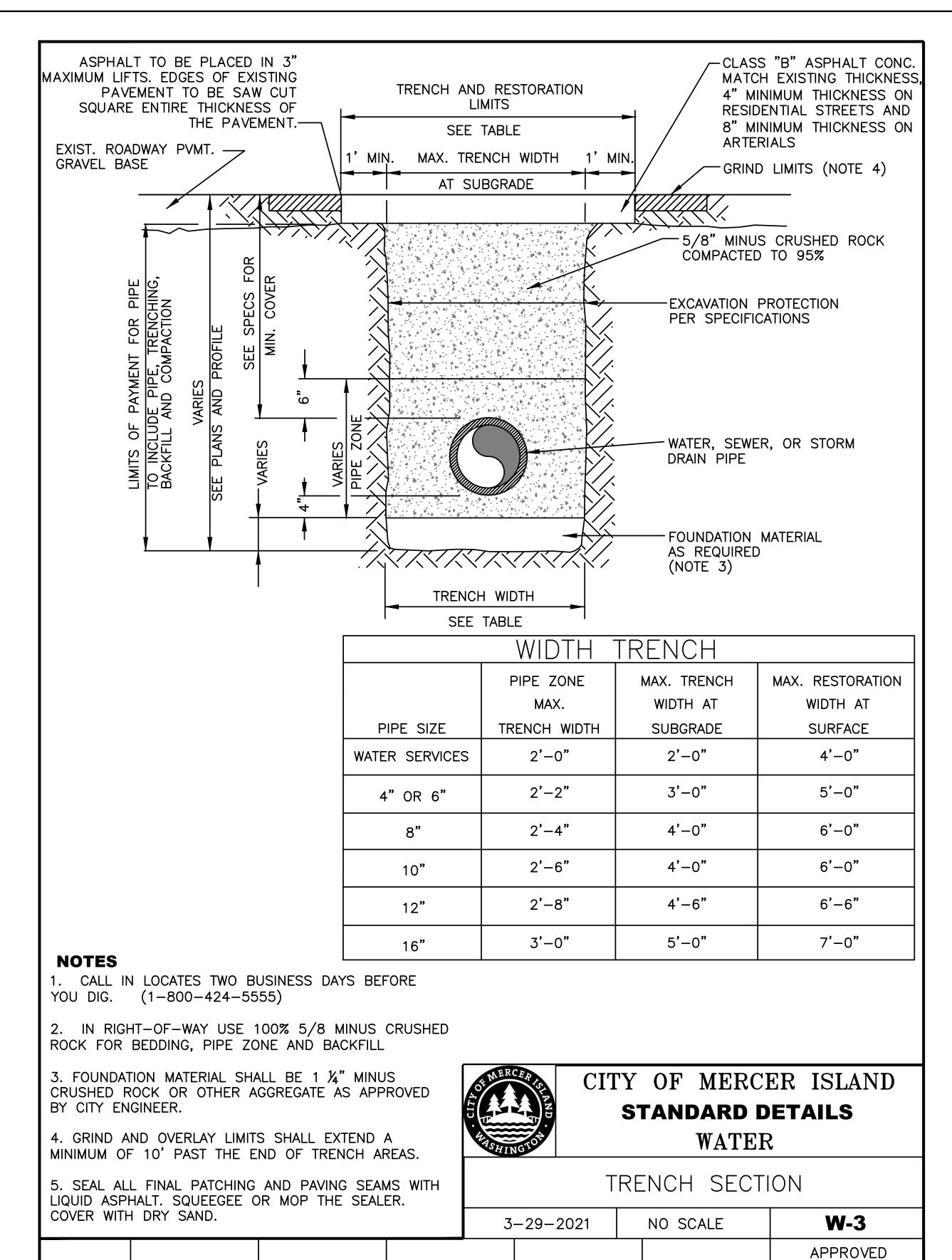
PROJECT ENGINEER

DATE

CHECKED BY

KPG PROJECT No. 21103 SHT 23 OF 33





NO. DATE BY APPR. REVISIONS

Approved By

FILENAME
BMC 09/22

ENGINEERING MANAGER DATE
PROJECT MANAGER DATE
DATE
NM 09/22

PROJECT ENGINEER DATE
NM 09/22

PROJECT ENGINEER DATE
NM 09/22

CHECKED BY DATE
NM 09/22

CHECKED BY DATE



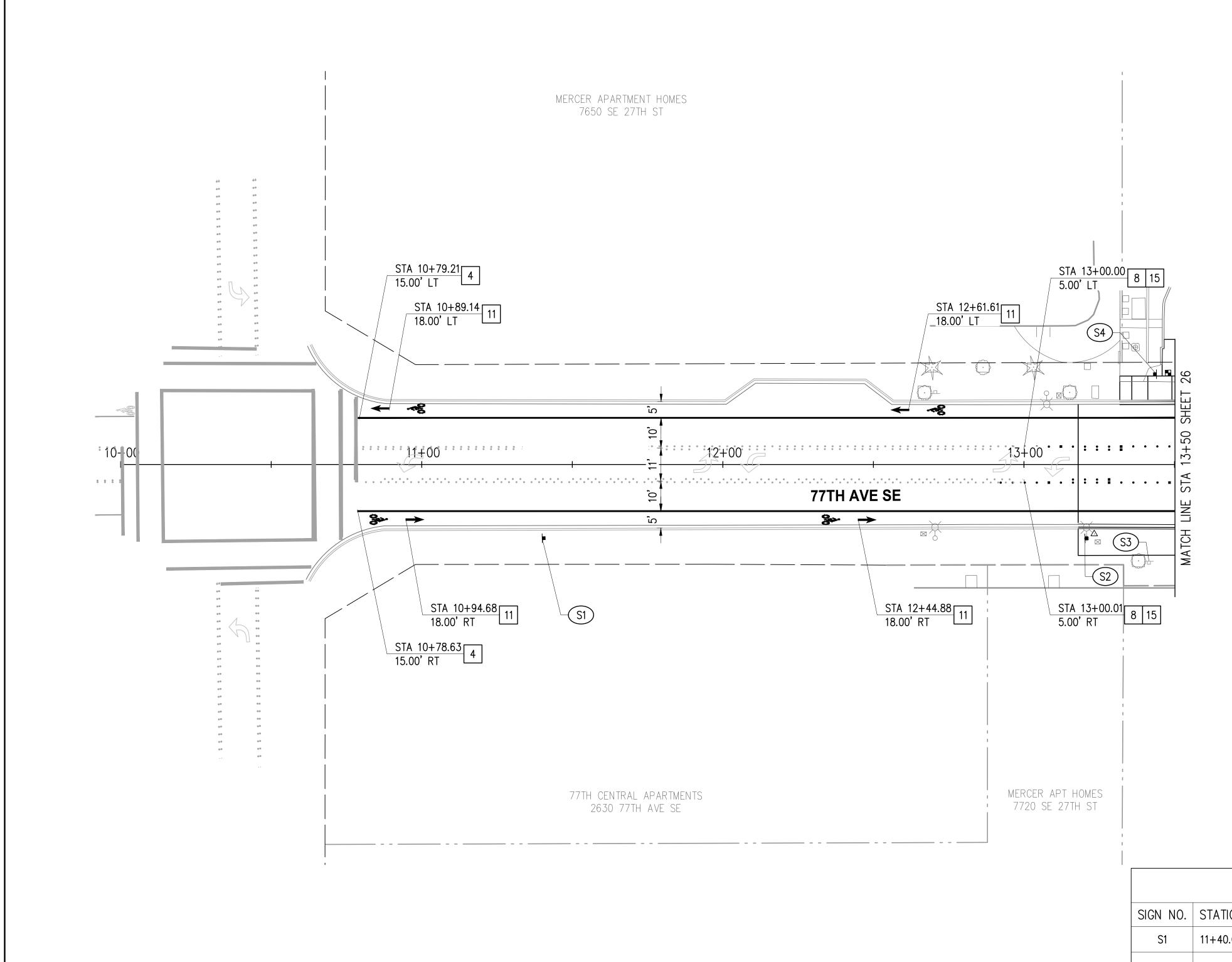




CITY OF MERCER ISLAND
77TH AVE SE & SUNSET HWY SE
INTERSECTION IMPROVEMENTS

WATER DETAILS

KPG PROJECT No. 21103 SHT 24 OF 33



- 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 27.
- 6. CONTRACTOR SHALL FIELD LOCATE CHANNELIZATION FOR APPROVAL BY THE ENGINEER PRIOR TO FINAL PLACEMENT.
- 7. FOR RRFB ASSEMBLY DETAILS, SEE SHEET 28 & 29.

#### **CONSTRUCTION NOTES**

- 4 INSTALL PAINTED WIDE EDGE LINE PER WSDOT STD PLAN M-20.10.
- 8 INSTALL TWO-WAY LEFT-TURN CENTERLINE PER WSDOT STD PLAN M-20.50.
- 11 INSTALL BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9.50.
- 15 MATCH EXISTING CHANNELIZATION.

SIGN SCHEDULE									
SIGN NO. STATION OFFSET DESIGNATION SIZE REMARKS									
S1	11+40.00	24.5 RT	R3-17, "BIKE LANE"	24" X 18"	NEW, MOUNT ON EXISTING LUMINAIRE. REMOVE EXISTING BANNER, SALVAGE TO CITY.				
S2	13+20.26	24.5 RT	W11 CUSTOM, "RAISED INTERSECTION AHEAD"	36" X 36"	REMOVE EXISTING "BIKE ROUTE" SIGN, INSTALL ON EXISTING LUMINAIRE				
S3	13+41.51	32.2 RT	"2 HR PARKING"	12" X 18"	REMOVE				
S4 13+44.00 30.0 LT R3-17, "BIKE LANE" 24" X 18" NEW					NEW				

NO.	DATE	BY	APPR.	REVISIONS	Approved By		21103CHAN.dwg FILENAME	
							MKE	5/22
					ENGINEERING MANAGER	DATE	DESIGNED BY MKE	DATE 5/22
					PROJECT MANAGER	DATE	DRAWN BY BMC	DATE 5/22
					PROJECT ENGINEER	DATE	CHECKED BY	DATE



**PLAN** 

0 10 20 40 SCALE IN FEET

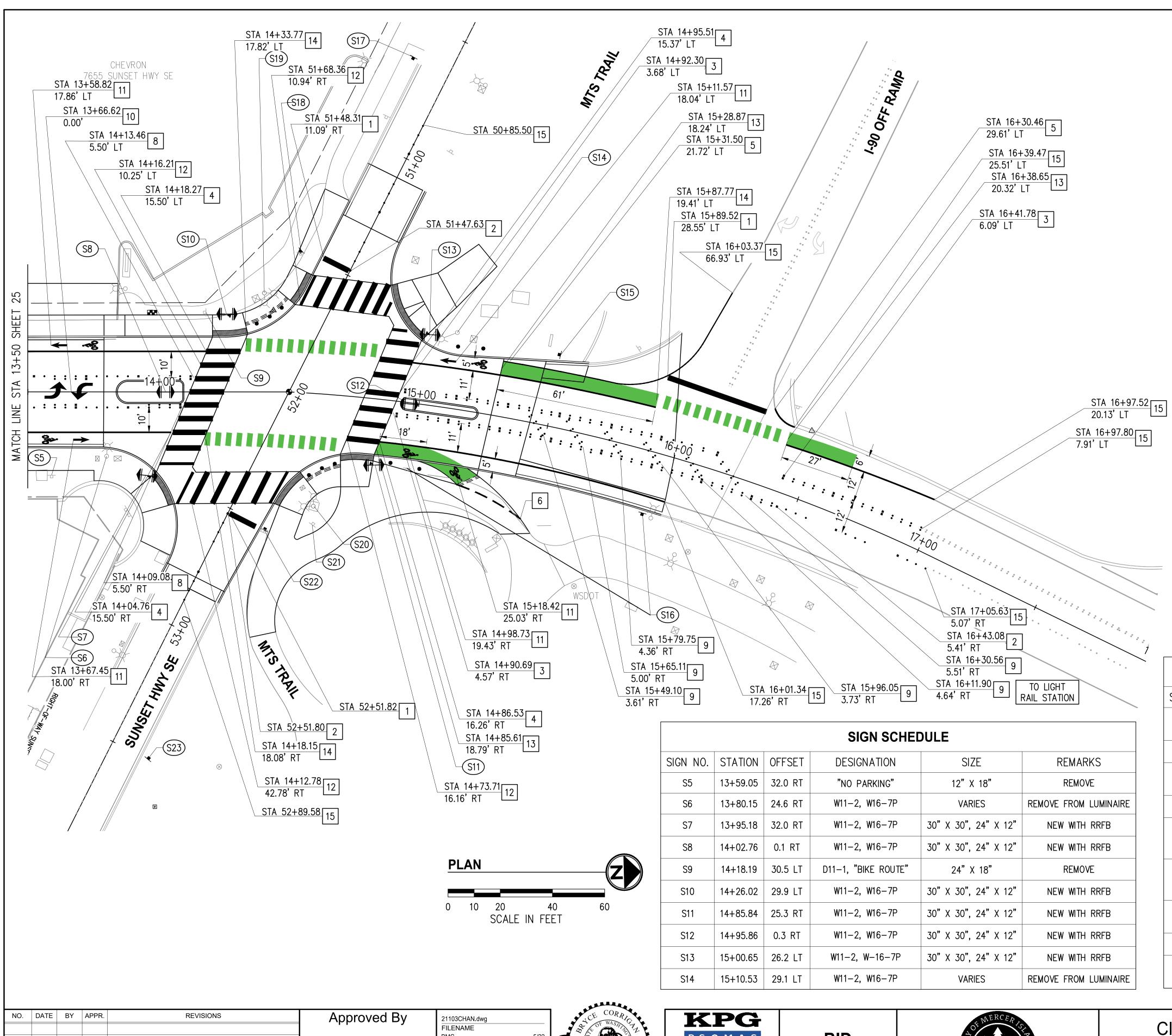




CITY OF MERCER ISLAND
77TH AVE SE & SUNSET HWY SE
INTERSECTION IMPROVEMENTS

CHANNELIZATION & SIGNING PLAN

KPG PROJECT No. 21103 SHT 25 OF 33



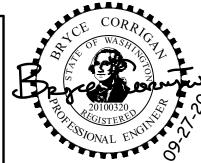
- 1. REMOVE ALL CONFLICTING EXISTING CHANNELIZATION. SEE SPECIFICATIONS FOR DETAILS.
- 2. ALL PAVEMENT MATERIAL SHALL CONFORM TO THE "STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION," LATEST EDITION, UNLESS OTHERWISE MODIFIED BY THE SPECIAL PROVISIONS.
- 3. PRESERVE 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 27.
- CONTRACTOR SHALL FIELD LOCATE CHANNELIZATION FOR APPROVAL BY THE ENGINEER PRIOR TO FINAL PLACEMENT.
- 7. FOR RRFB ASSEMBLY DETAILS, SEE SHEET 28 & 29.

#### **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 27.
- 4 INSTALL PAINTED WIDE EDGE LINE PER WSDOT STD PLAN M-20.10.
- 5 INSTALL PAINTED EDGE LINE PER WSDOT M-20.10.
- 6 INSTALL 6" DASHED YELLOW PAINT LINE.
- 8 INSTALL TWO-WAY LEFT-TURN CENTERLINE PER WSDOT STD PLAN M-20.50.
- 9 INSTALL RPM HACHURES PER DETAIL, SHEET 27.
- 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 27.
- INSTALL THERMOPLASTIC GREEN CROSSBIKE MARKINGS PER DETAIL, SHEET 27.
- 15 MATCH EXISTING CHANNELIZATION.

	SIGN SCHEDULE									
SIGN NO. STATION OFFSET DESIGNATION SIZE R										
S15	15+49.30	27.7 LT	W11 CUSTOM, "RAISED INTERSECTION AHEAD"	36" X 36"	NEW					
S16	15+94.07	23.7 RT	D3-1, "77TH AVE SE"	VARIES X 8"	REMOVE AND REPLACE					
S17	50+64.00	15.0 RT	W11 CUSTOM, "RAISED INTERSECTION AHEAD"	36" X 36" NEW						
S18	51+50.00	20.0 RT	R1-1, D3-1	36" X 36", VARIES X 8"	REMOVE AND REPLACE					
S19	51+70.39	25.5 RT	FLAG CROSSING INSTRUCTIONS, NO PARKING	VARIES	REMOVE					
S20	52+34.90	28.3 LT	FLAG CROSSING INSTRUCTIONS, NO PARKING	VARIES	REMOVE					
S21	52+41.53	30.9 LT	CUSTOM, "TO METRO PARK AND RIDE"	12" X 18"	REMOVE					
S22	52+51.58	15.4 LT	R1-1, D3-1	36" X 36", VARIES X 8"	REMOVE AND REPLACE					
S23	53+50.00	3+50.00 15.0 LT W11 CUSTOM, "RAISED NEW NEW NEW		NEW						

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							BMC	5/22
					ENGINEERING MANAGER	DATE	DESIGNED BY	DATE
							MKE	5/22
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					PROJECT ENGINEER	DATE	CHECKED BY	DATE





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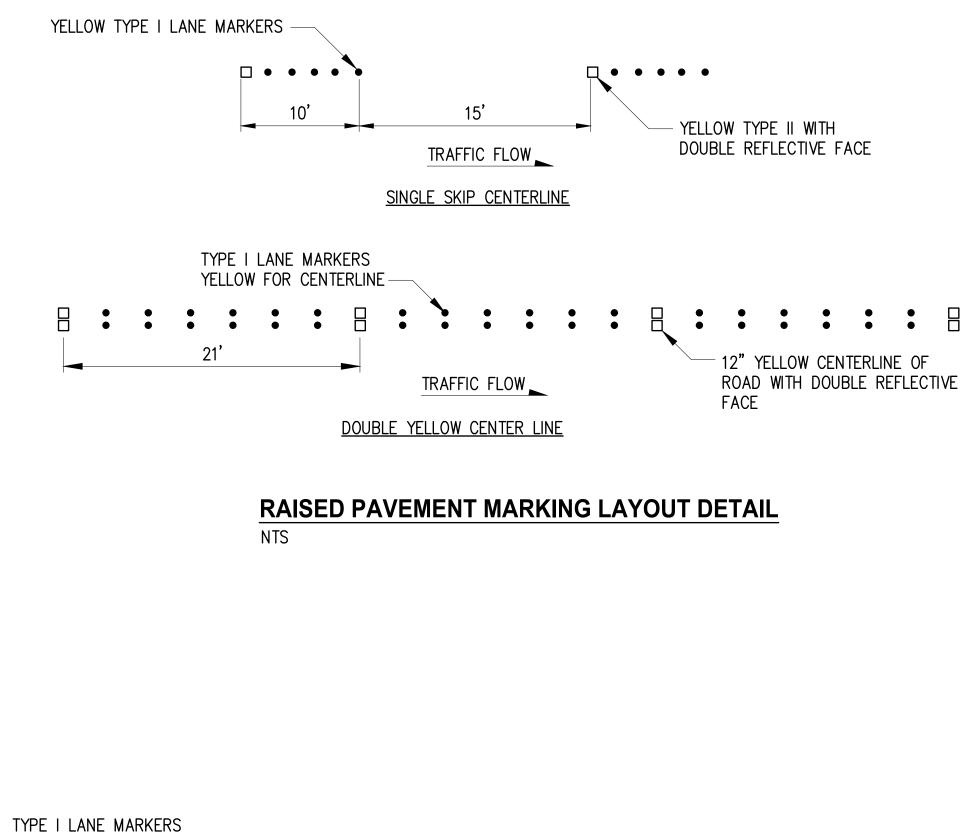
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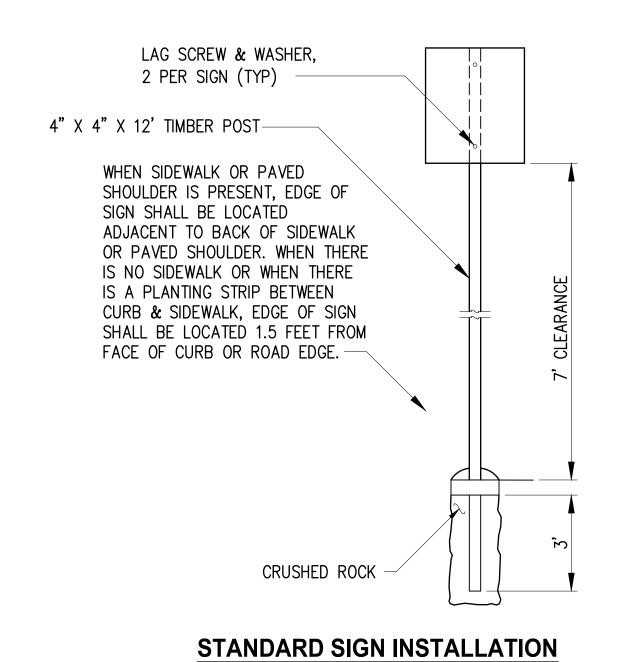


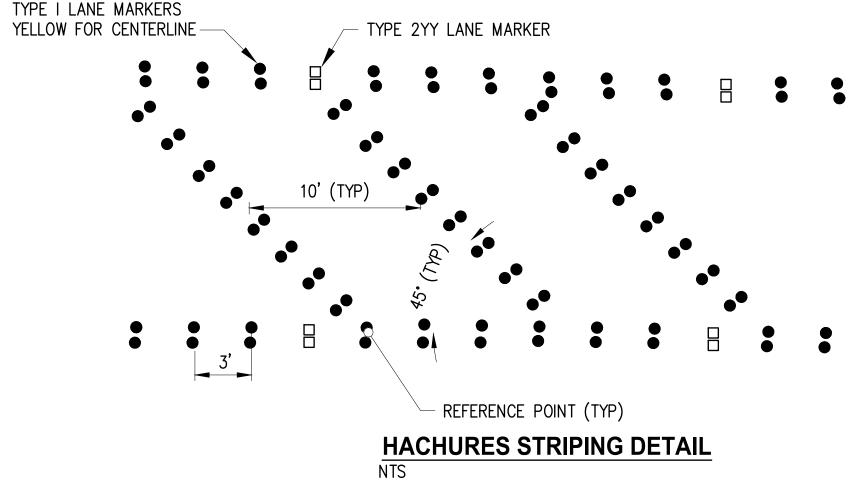
CITY OF MERCER ISLAND
77TH AVE SE & SUNSET HWY SE
INTERSECTION IMPROVEMENTS

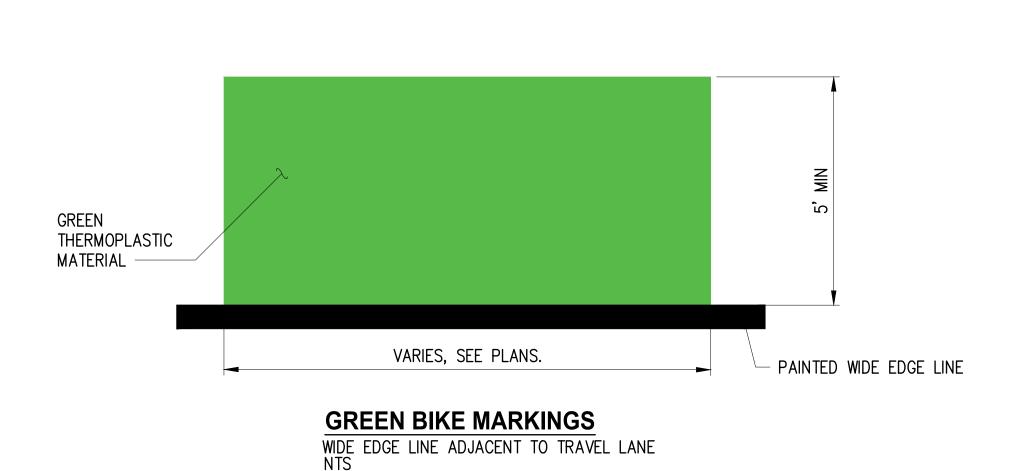
CHANNELIZATION & SIGNING PLAN

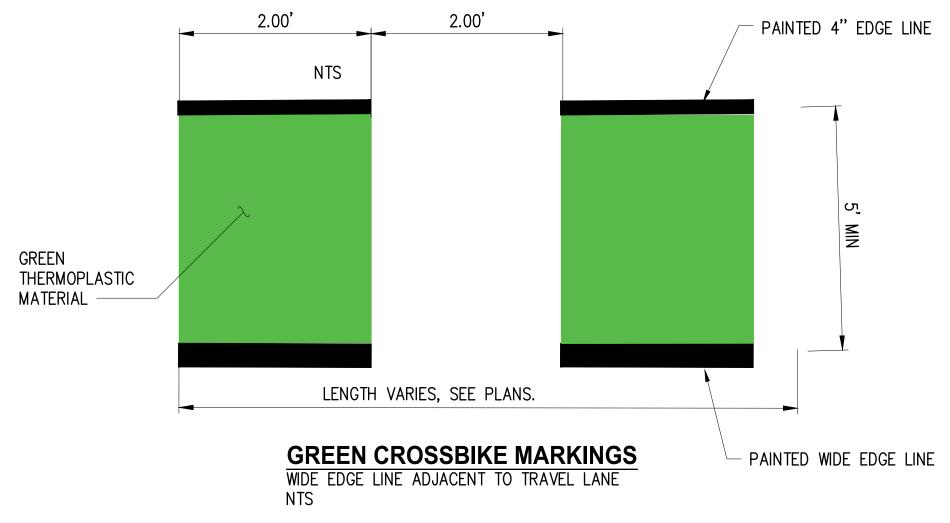
KPG PROJECT No. 21103 SHT 26 OF 33











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					ENGINEERING MANAGER	DATE	DESIGNED BY	DATE
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					PROJECT ENGINEER	DATE	CHECKED BY	DATE



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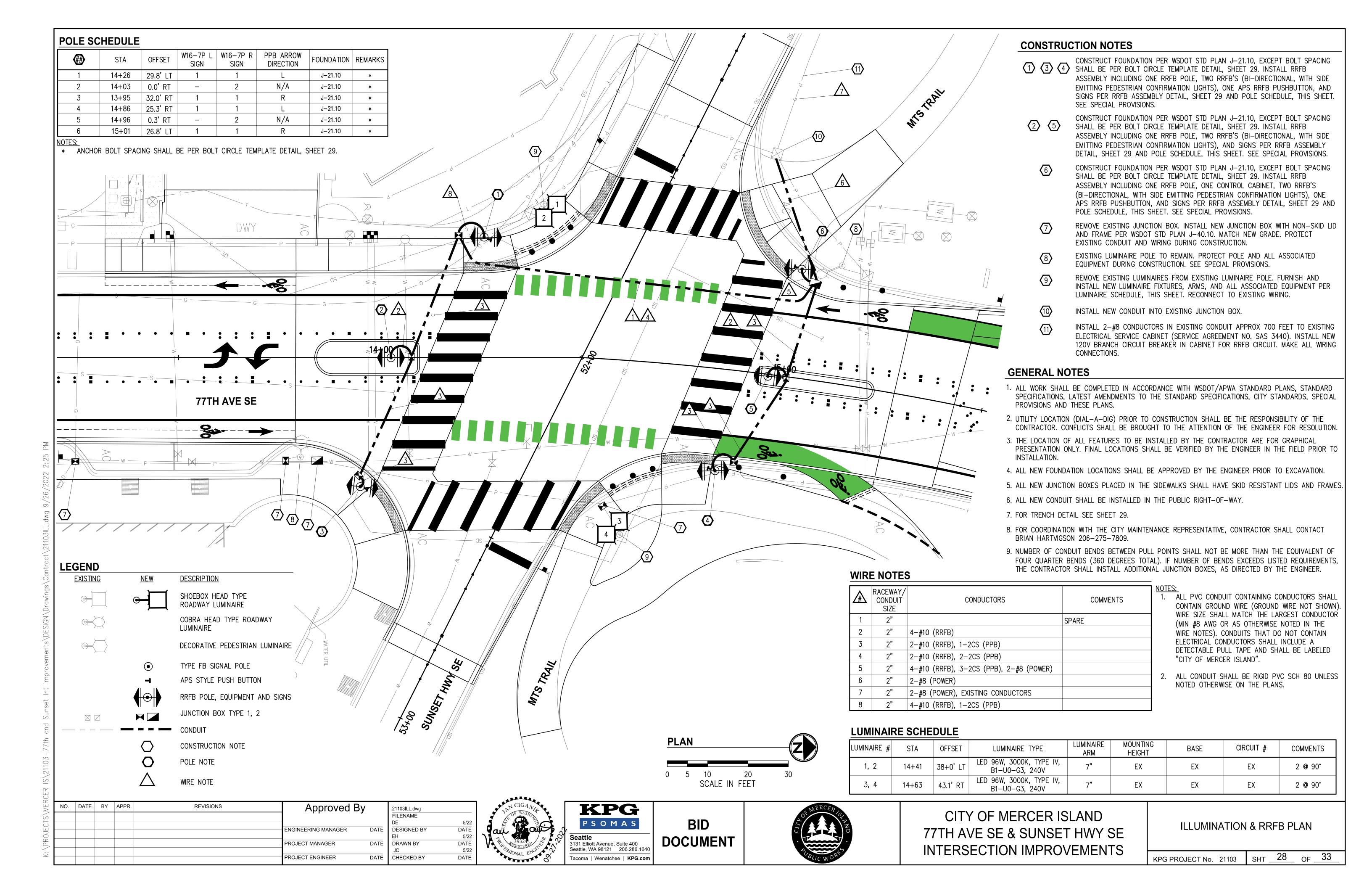
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Seattle, WA 98121 206.286.1640

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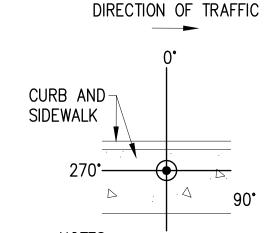
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CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS CHANNELIZATION PLAN
DETAILS

KPG PROJECT No. 21103 SHT \_\_27 OF \_\_33

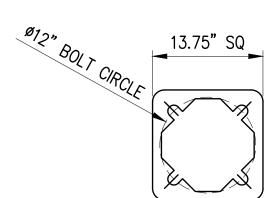


- 1. FOR PEDESTRIAN PUSHBUTTON SIGN ASSEMBLY USE 9"(IN) X 12"(IN) R10-25 SIGN IN ACCORDANCE WITH 2009 MUTCD. SIGN MAY INCLUDE INTEGRATED WARNING LIGHTS.
- 2. SEE STANDARD PLAN J-21.10 FOR SIGNAL STANDARD FOUNDATION DETAILS EXCEPT FOR BOLT CIRCLE, SEE DETAIL, THIS SHEET.
- 3. SEE STANDARD PLAN J-21.17, DETAIL C FOR WIRING DETAILS NOT SHOWN.
- 4. SEE STANDARD PLAN G-30.10 FOR MOUNTING BRACKETS, STEEL STRAPS AND SIGN INSTALLATION DETAILS.
- 5. TERMINATE RRFB CONNECTIONS PER MANUFACTURER'S RECOMMENDATION.
- 6. CONTROL CABINET ENCLOSURE SHALL BE SIZED BY THE RRFB MANUFACTURER AND SHALL FIT ALLOWABLE SPACE ON THE POLE. THE CONTROL CABINET SHALL BE MANUFACTURED PER TERMINAL CABINET REQUIREMENTS OF STANDARD SPECIFICATION SECTION 9-29.25.
- 7. RRFB DISPLAYS SHALL BE LED TYPE MEETING THE INTENSITY REQUIREMENTS OF SAE J595 FOR CLASS 1 YELLOW, BUT SHALL NOT EXCEED 1000 CANDELAS DURING DAYLIGHT AND 500 CANDELAS AFTER DARK.



1. HANDHOLE ACCESS DOOR SHALL BE MOUNTED AT 90° 2. PPB ORIENTATION SHALL BE PER ENGINEER'S

DIRECTIVES IN THE FIELD

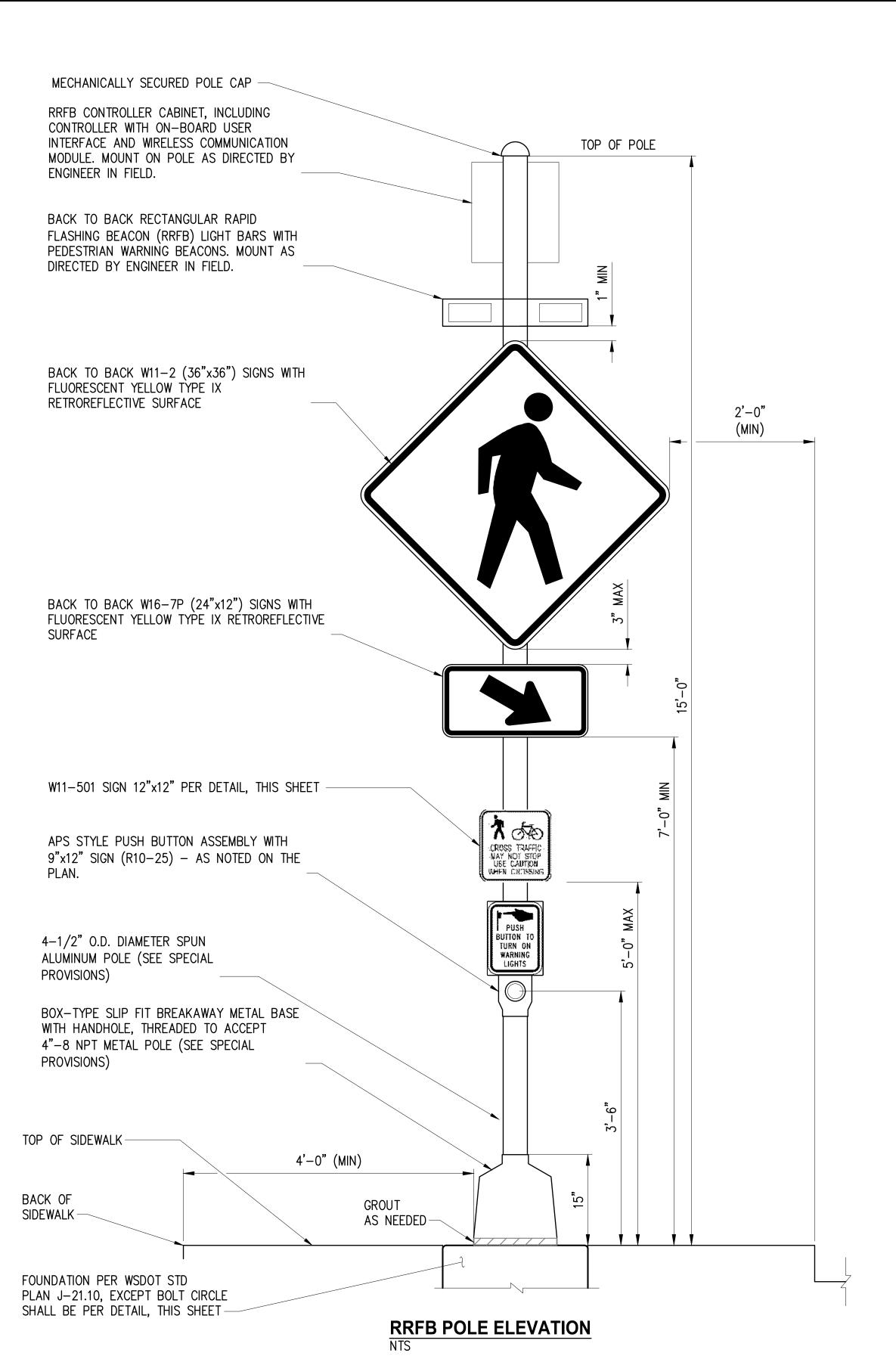


RRFB POLE BOLT CIRCLE

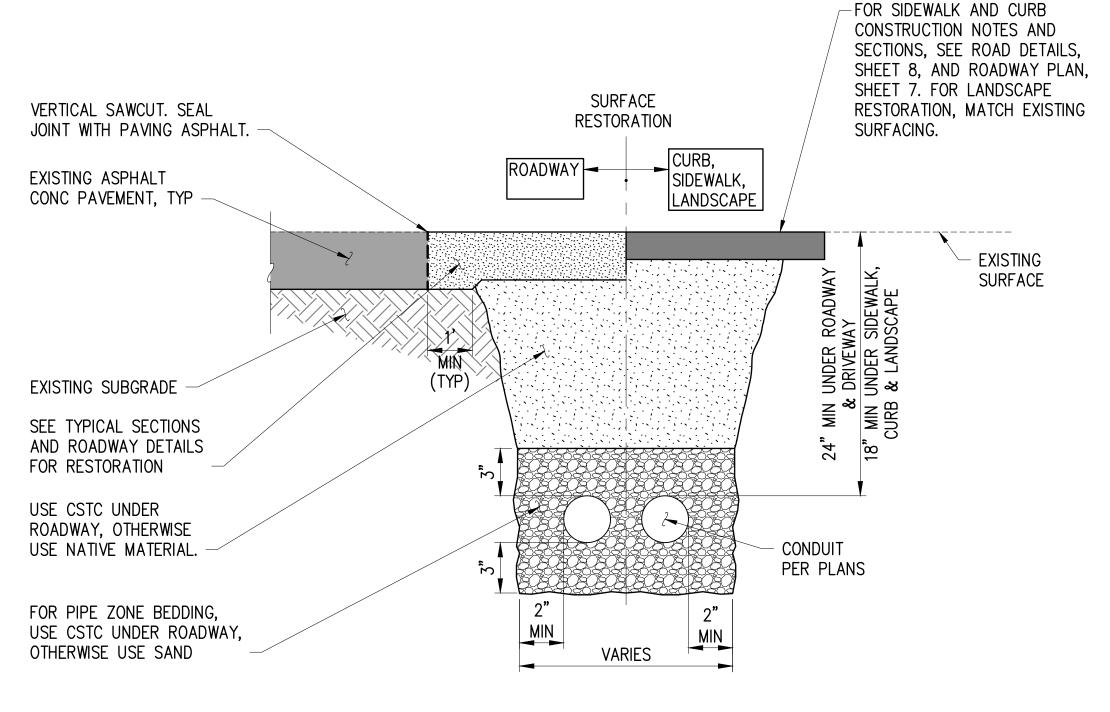


- 1. PEDESTRIAN SYMBOL HEIGHT SHALL BE 4"
- 2. BICYCLE SYMBOL HEIGHT SHALL
- 3. LETTERS SHALL 1" C
- LEGEND SHALL BE BLACK
- 5. BACKGROUND SHALL BE YELLOW

**W11-501 PEDESTRIAN WARNING SIGN DETAILS** 



RRFB POLE AND ATTACHMENTS SHALL BE FURNISHED BY THE CITY AND INSTALLED BY THE CONTRACTOR. CONTRACTOR SHALL INSTALL FOUNDATION, GROUT, AND FIELD WIRING. SEE SPECIAL PROVISIONS.



TYPICAL CONDUIT TRENCH DETAIL

				NTS				
2110	By	Approved By	REVISIONS	APPR.	APP	BY	DATE	NO.
FILE	•	] ''						
DE		1						
DES	DATE	ENGINEERING MANAGER						
EH								
DRA	DATE	PROJECT MANAGER						
JC		1						
CHE	DATE	PROJECT ENGINEER						
1								

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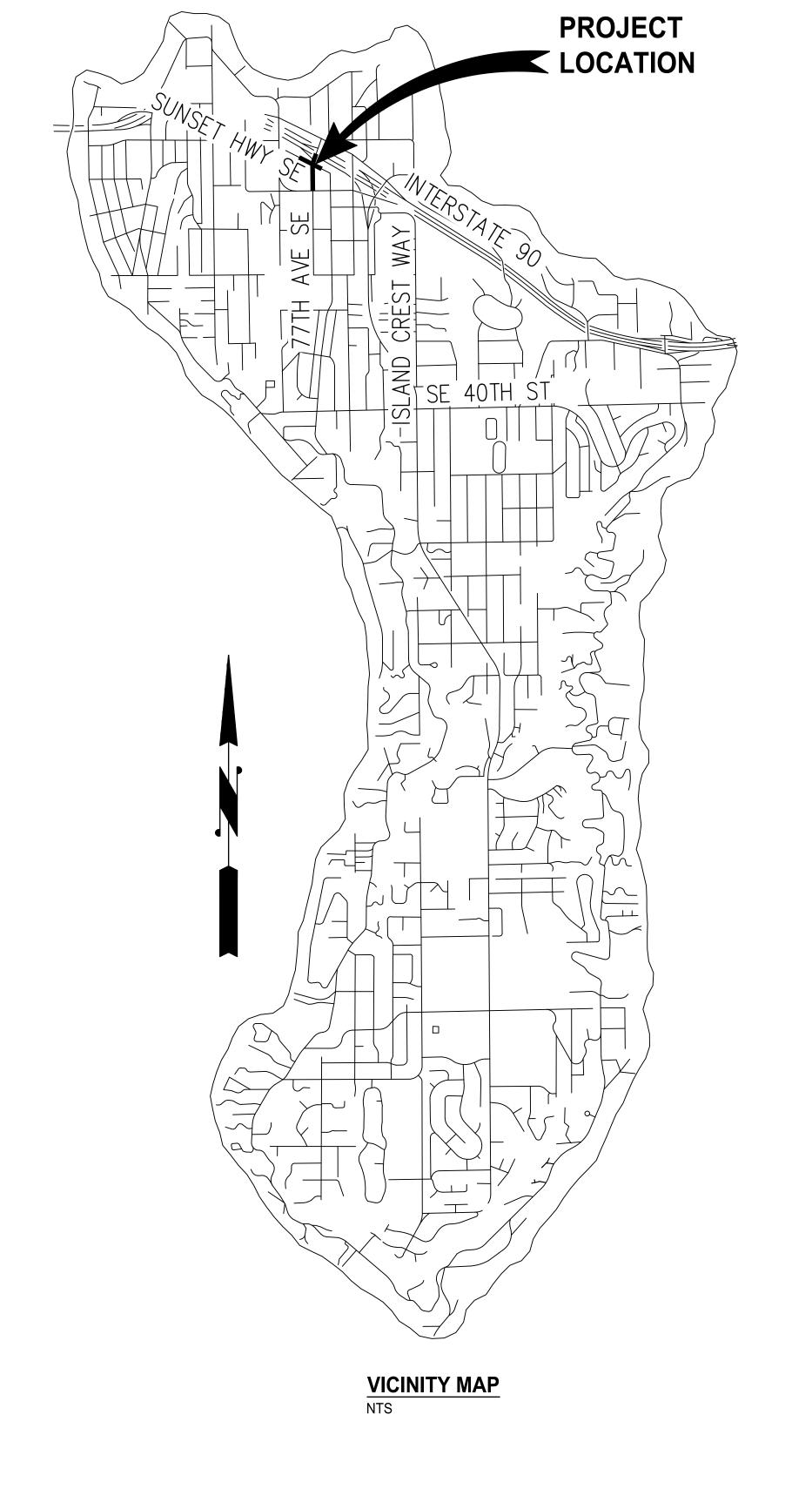
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CITY OF MERCER ISLAND 77TH AVE SE & SUNSET HWY SE INTERSECTION IMPROVEMENTS

**ILLUMINATION & RRFB PLAN** ILLUMINATION & RRFB DETAILS

KPG PROJECT No. 21103 SHT 29 OF 33



CHANNELIZ	ATION DEVIC	E SPACING
POSTED SPEED LIMIT (MPH)	IN TAPER (FEET)	IN TANGENT (FEET)
25 / 30	10 TO 20	40

SIGN SI	PACING = 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 LE	NGTH	I = L (f	eet)		
LANE WIDTH	POSTED SPEED (MPH)				
(FEET)	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 LOCATED TO SHIELD THE			E STRATE	GICALLY		ECIFIED REQUIRED		

DESIGN DATA	
	77TH AVE SE
FUNCTIONAL CLASS:	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 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

Approved By FILENAME
BMC 5/22
DESIGNED BY DATE
BMC 5/22
DRAWN BY DATE









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

TRAFFIC CONTROL & DETOUR PLANS
TRAFFIC CONTROL GENERAL NOTES

KPG PROJECT No. 21103 SHT 30 OF 33

