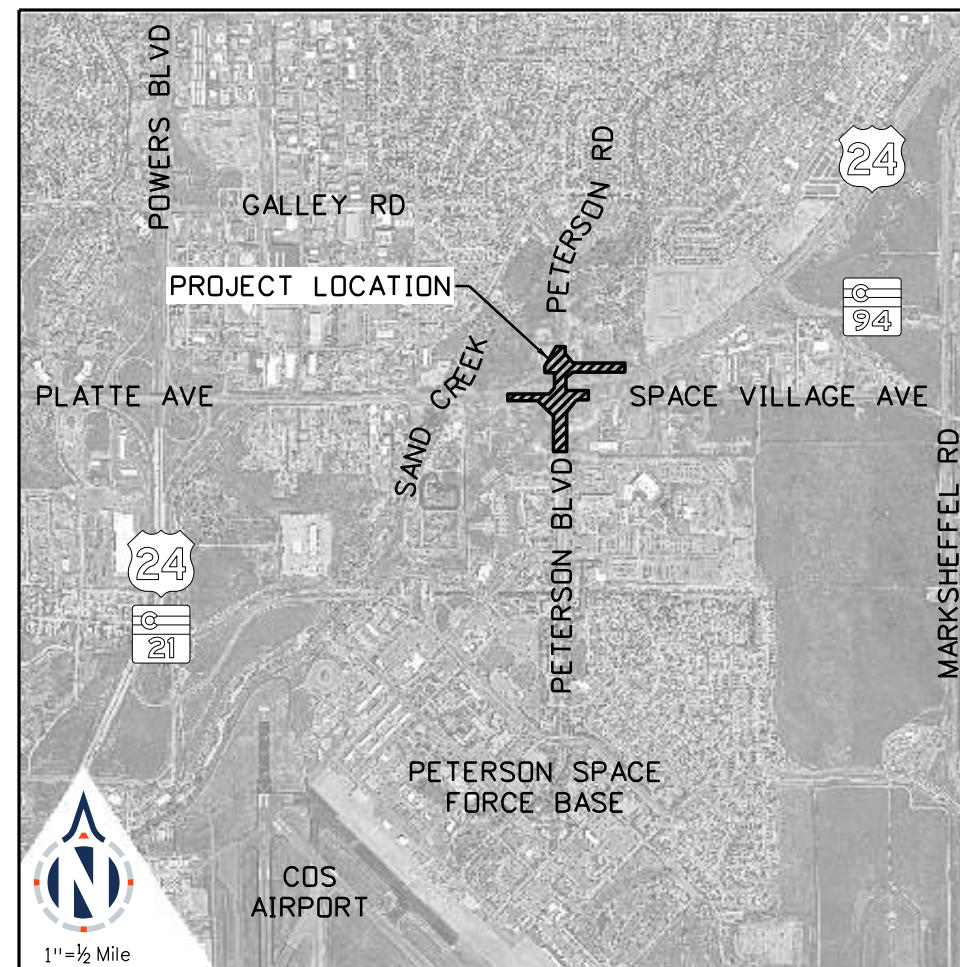




# CITY OF COLORADO SPRINGS PUBLIC WORKS DEPARTMENT

PRELIMINARY (30%) PLANS OF PROPOSED  
US HIGHWAY 24 & PETERSON BLVD/RD ROUNDABOUTS  
DECEMBER 20, 2023



25 N Spruce Street, Suite 310  
Colorado Springs, CO 80905  
Tel: 719-299-5077, basisp.com

SIGNATURE  
BLOCK

## INDEX OF SHEETS

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136 to 154	Roadway Swept Path Plan
	Survey Control
	City of COS Std Dwgs 6B, D24, TR1
	CDDOT Std Dwgs M-412-1, S-627-1



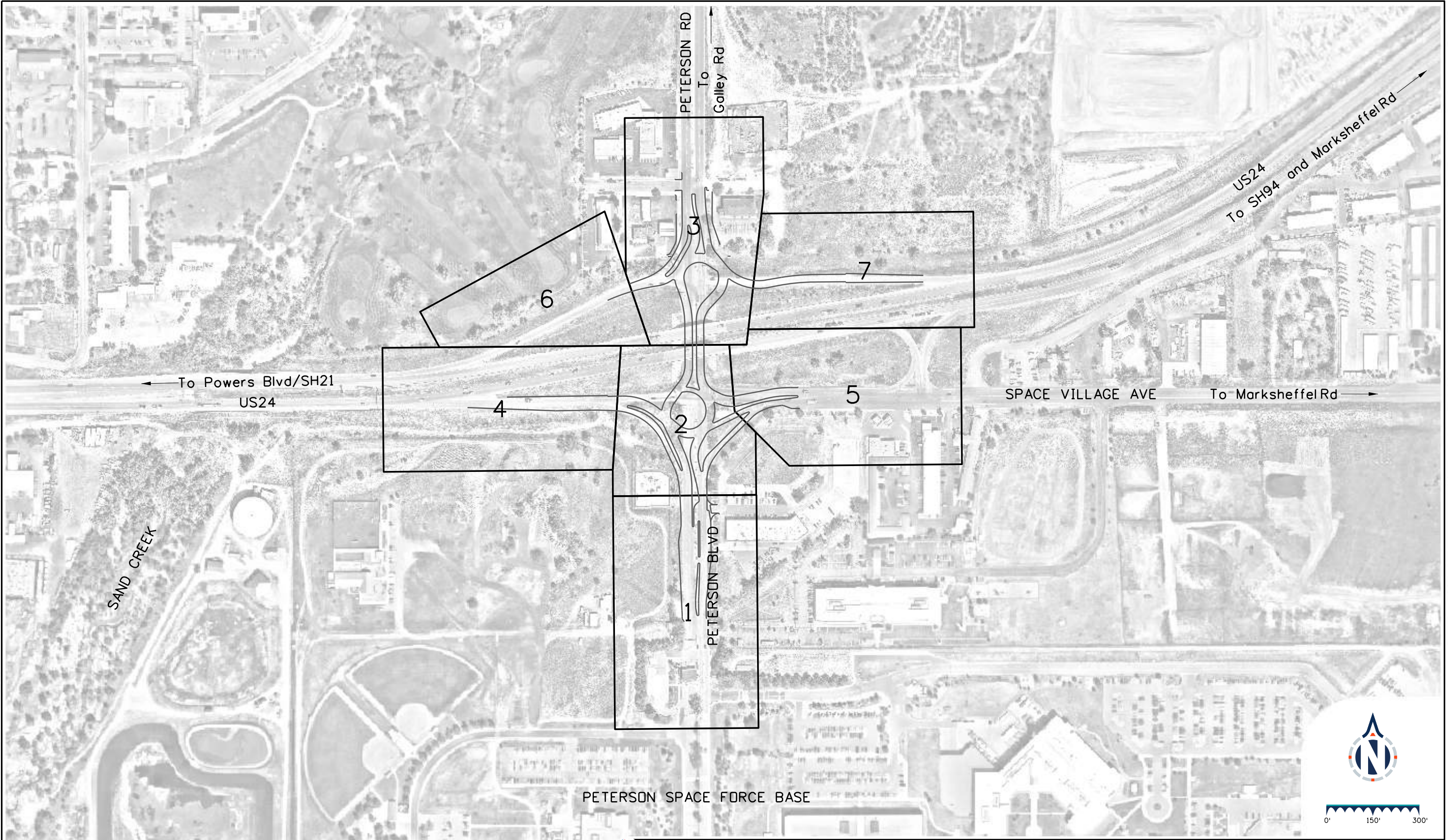
## DESIGN CRITERIA

CRITERIA	UNITS	Roundabout	
		South	North
Approximate Inscribed Diameter	LF	180	160
Desirable Fastest Path	R1 - Entry Path	MPH	25 to 30
	R2 - Circulating Path	MPH	15 to 25
	R3 - Exit Path	MPH	SSD for Xwalk
	R4 - Left Turn Path	MPH	10 to 20
	R5 - Right Turn Path	MPH	15 to 20
Design Vehicle, Side-by-Side, w/in Lanes		SU-30	
Design Vehicle, on Pavement		WB-67	

Key Roundabout Design Sources:  
- Geometric Design: Nat'l Cooperative Highway Research Program (NCHRP) Report 672, Roundabouts: An Informational Guide 2nd Ed.  
- Fastest Path Methodology: Wisconsin Department of Transportation, Facilities Development Manual, Chapter 11, Section 26, November 15, 2022

CRITERIA	UNITS	US24	Peterson		Space Village Ave
			Blvd	Rd	
Posted Speed (Existing)	MPH	55	30/15	30	45
Posted Speed (Proposed)	MPH	55	30/15	30	45
Design Speed	MPH	55	30	30	45
Traffic AADT (Existing)	VPD	41,800	15,200	9,100	4,700
Traffic AADT (Year 2026)	VPD	49,000	21,400	10,800	6,100
Traffic AADT (Year 2045)	VPD	74,100	26,200	17,700	12,800
Traffic % Trucks	%	N/A	3	3	3
Functional Classification (City)	N/A	N/A	Minor Arterial		

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Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
KEY MAP	Key Map 1 of 1 Sheet Number 2

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US Highway 24 & Peterson Blvd/Rd Roundabouts

GENERAL NOTES

Notes	1 of 1
Sheet Number	3

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US Highway 24 & Peterson Blvd/Rd Roundabouts

SUMMARY OF APPROXIMATE QUANTITIES

SDAQ	1 of 1
Sheet Number	4

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Reviewer: STV	Vert. Scale: N/A



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Date	Comments	Init

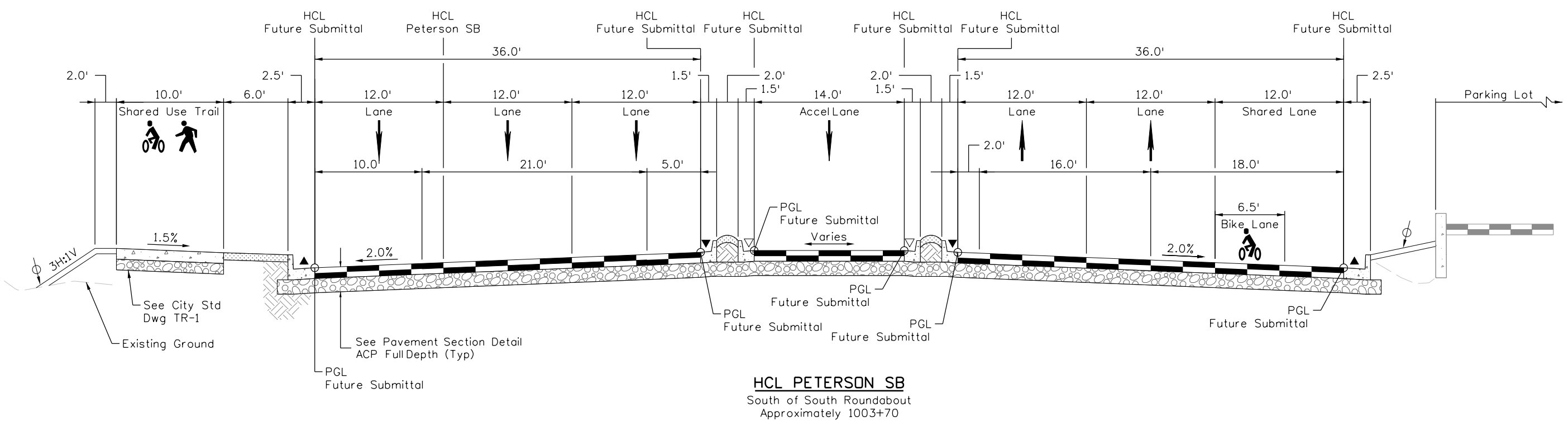
US Highway 24 & Peterson Blvd/Rd Roundabouts

TABULATION OF QUANTITIES

Tabs	1 of 1
Sheet Number	5

30% PRELIMINARY - NOT FOR CONSTRUCTION

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**NOTES**

1. This is a preliminary and incomplete set of plans. Not all typicals that are needed for final plans are shown.
2. HCLs and PGLs named "Future Submittal" are not described geometrically in this set of plans but will be included in a future submittal.

**LEGEND**

PCMP	Roundabout Apron	C&G Type 3 (Spill)	Roundabout C&G	Topsoil
Concrete	ACP (Proposed)	C&G Type 2 (Catch)	C&G Type 3 (Catch) See Detail, SHT 6/6	Safety Edge
ABC	ACP (Existing)	C&G Type 2 (Spill)	C&G (Special) See Detail, SHT 6/6	Curb Head See Detail, SHT 6/6

**Sheet Revisions**

Date	Comments	Init

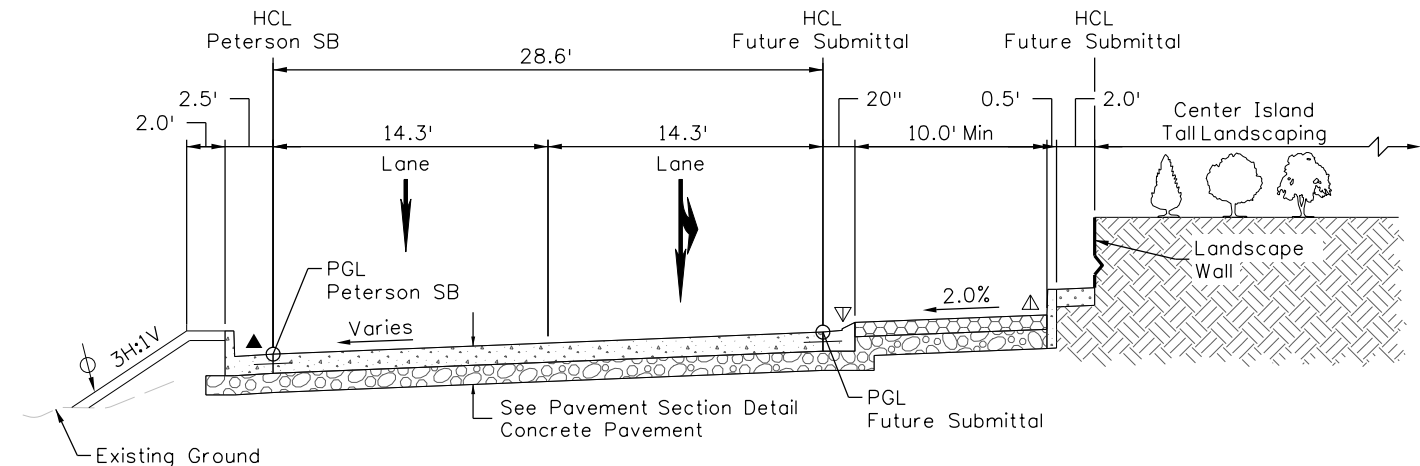
**US Highway 24 & Peterson Blvd/Rd Roundabouts**

<b>TYPICAL SECTION PETERSON BLVD</b>	Typical	1 of 6
	Sheet Number	6

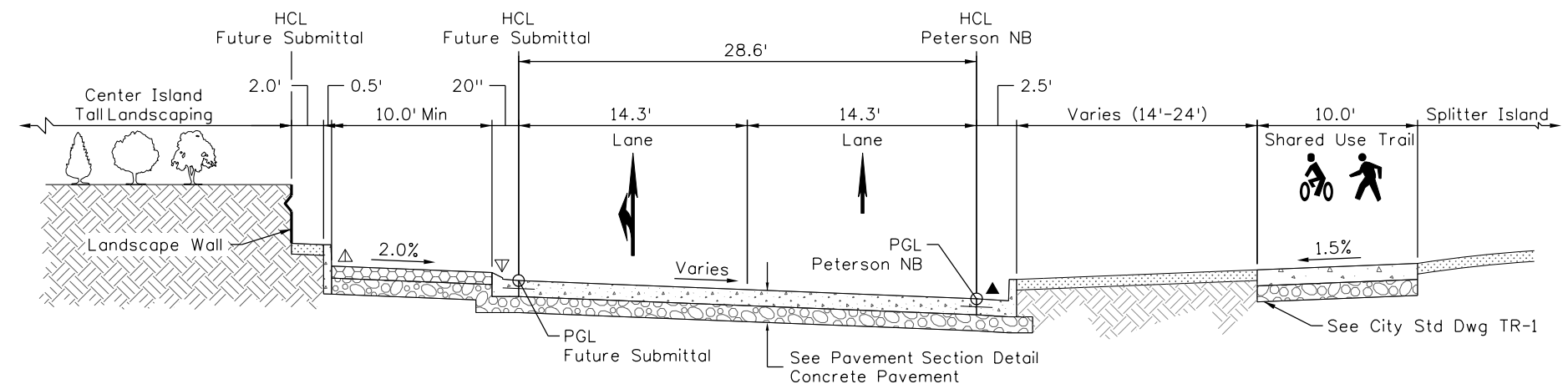
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Detailer: KAG    Print Date: 12/20/2023  
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Reviewer: STV    Vert. Scale: NTS





**HCL PETERSON SB**  
South Roundabout  
Approximately 1007+00 to 1008+40



**HCL PETERSON NB**  
South Roundabout  
Approximately 2002+10 to 2002+70

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3. Concrete joints are not shown. A vertical joint and tie bar between C&G and concrete pavement are shown for illustrative purposes only. See CDDOT M-412-1 for jointing requirements. C&G gutter thickness shall match the concrete pavement thickness.

**LEGEND**

PCMP	Roundabout Apron	C&G Type 3 (Spill)	Roundabout C&G	Topsoil
Concrete	ACP (Proposed)	C&G Type 2 (Catch)	C&G Type 3 (Catch) See Detail, SHT 6/6	Safety Edge
ABC	ACP (Existing)	C&G Type 2 (Spill)	C&G (Special) See Detail, SHT 6/6	Curb Head See Detail, SHT 6/6

**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**TYPICAL SECTION SOUTH ROUNDABOUT**

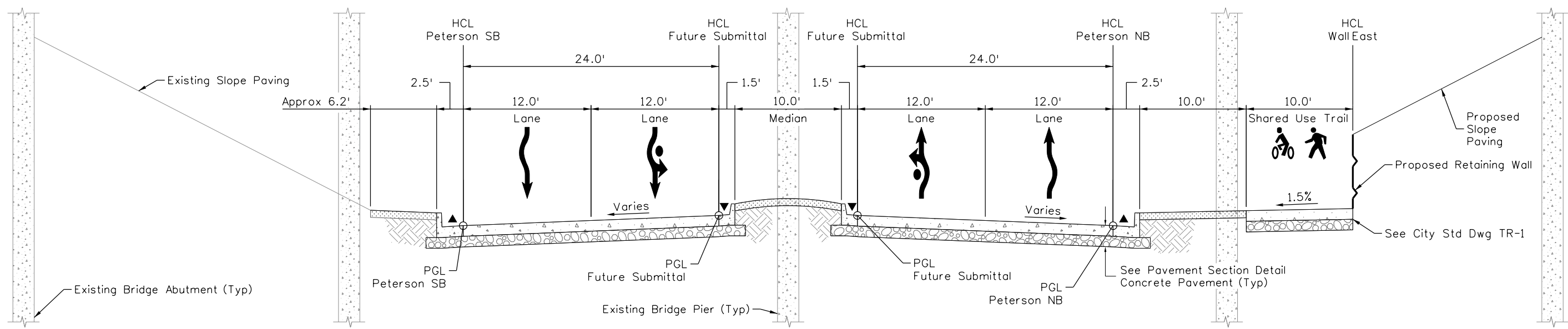
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Sheet Number	7

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Reviewer: STV	Vert. Scale: NTS





**HCL PETERSON SB**  
 Between Roundabouts and beneath US24  
 Approximately 1009+20 to 1010+60

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**LEGEND**

PCMP	Roundabout Apron	C&G Type 3 (Spill)	Roundabout C&G	Topsoil
Concrete	ACP (Proposed)	C&G Type 2 (Catch)	C&G Type 3 (Catch) See Detail, SHT 6/6	Safety Edge
ABC	ACP (Existing)	C&G Type 2 (Spill)	C&G (Special) See Detail, SHT 6/6	Curb Head See Detail, SHT 6/6

**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**TYPICAL SECTION BETWEEN ROUNDABOUTS**

Typical	3 of 6
Sheet Number	8

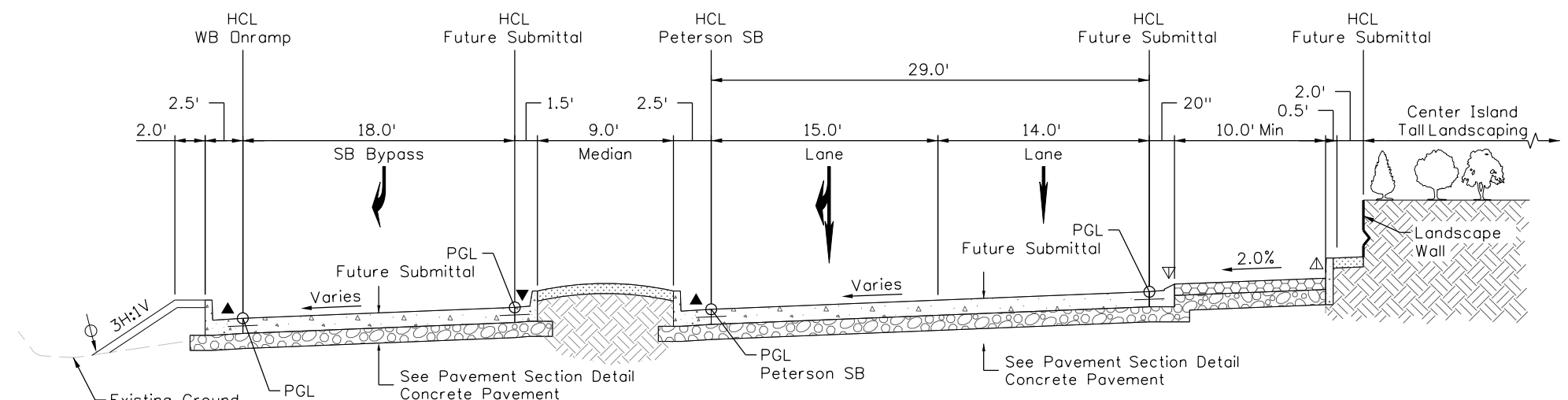
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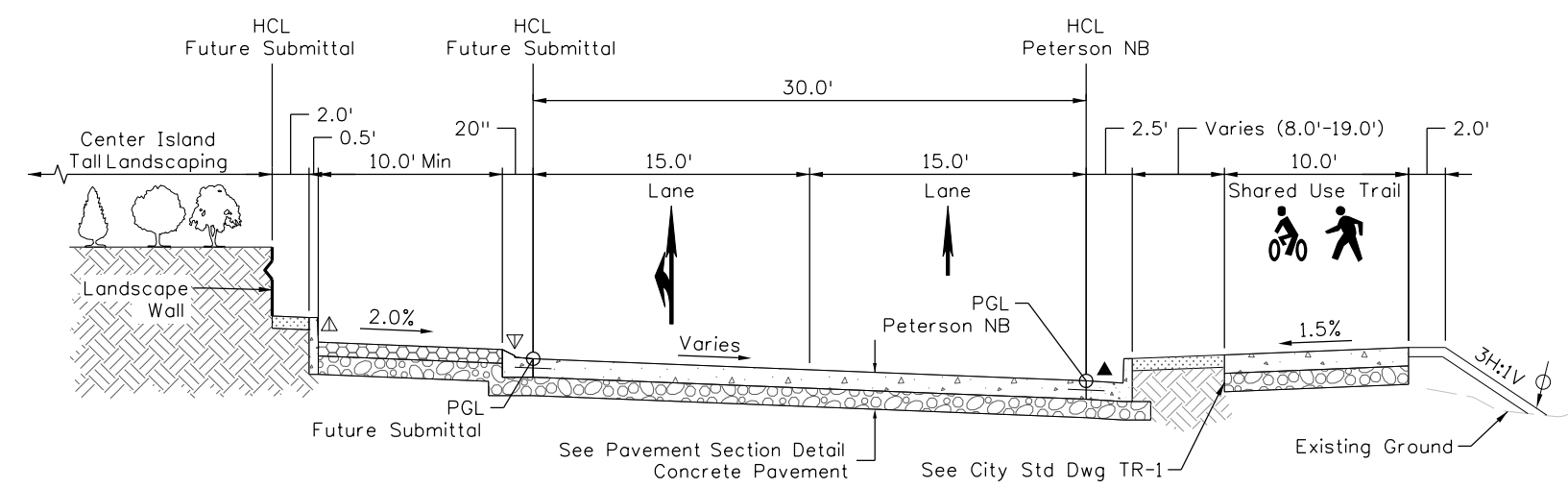
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Designer: STV	Horiz. Scale: NTS
Reviewer: STV	Vert. Scale: NTS







**HCL PETERSON SB**  
North Roundabout  
Approximately 1012+40



**HCL PETERSON NB**  
North Roundabout  
Approximately 2005+80 to 2007+00

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**LEGEND**

PCMP	Roundabout Apron	C&G Type 3 (Spill)	Roundabout C&G	Topsoil
Concrete	ACP (Proposed)	C&G Type 2 (Catch)	C&G Type 3 (Catch)	Safety Edge
ABC	ACP (Existing)	C&G Type 2 (Spill)	C&G (Special)	Curb Head
			See Detail, SHT 6/6	See Detail, SHT 6/6

**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**TYPICAL SECTION NORTH ROUNDABOUT**

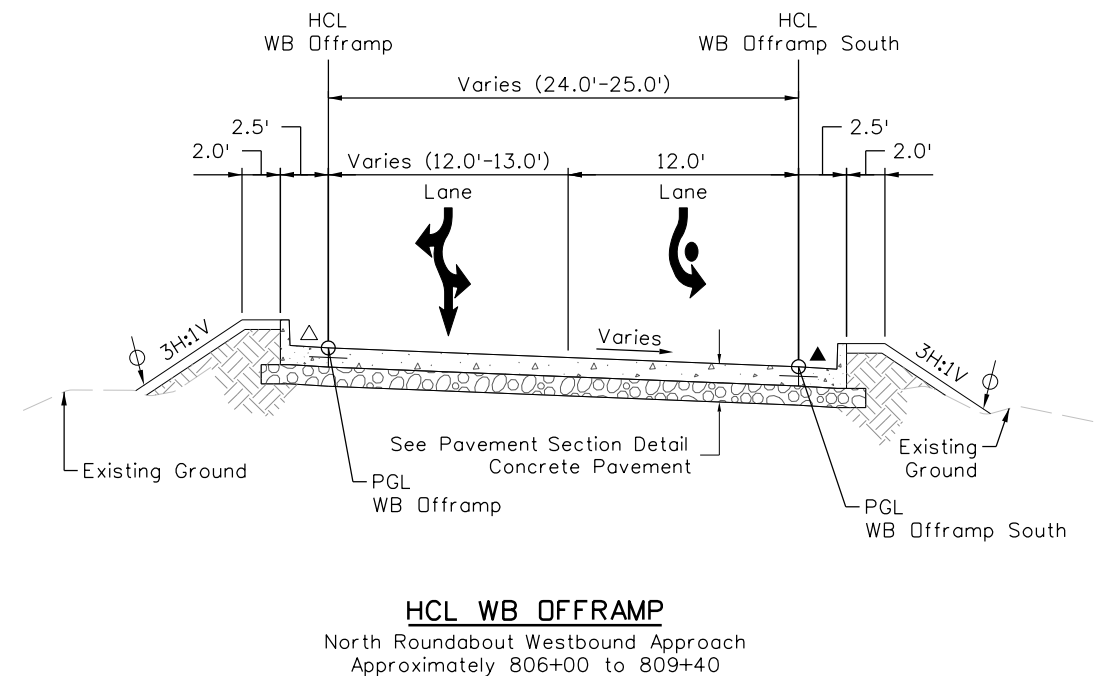
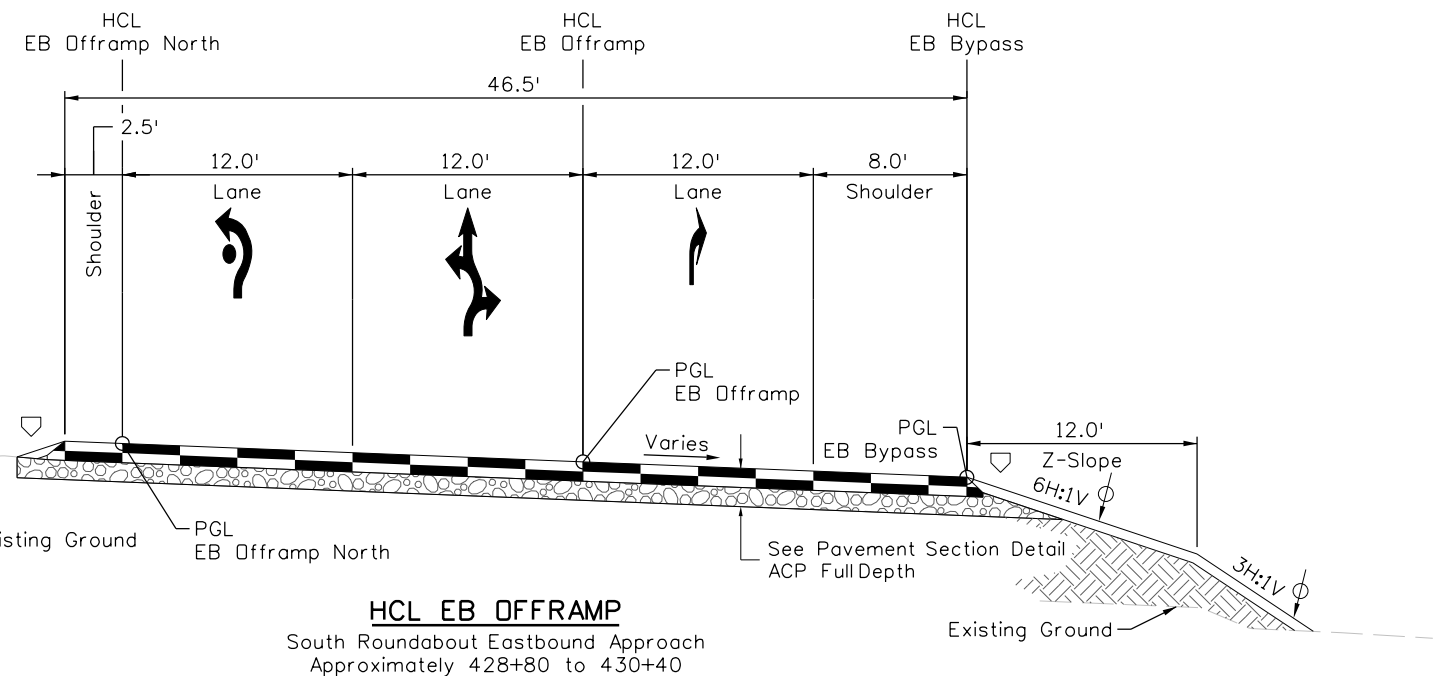
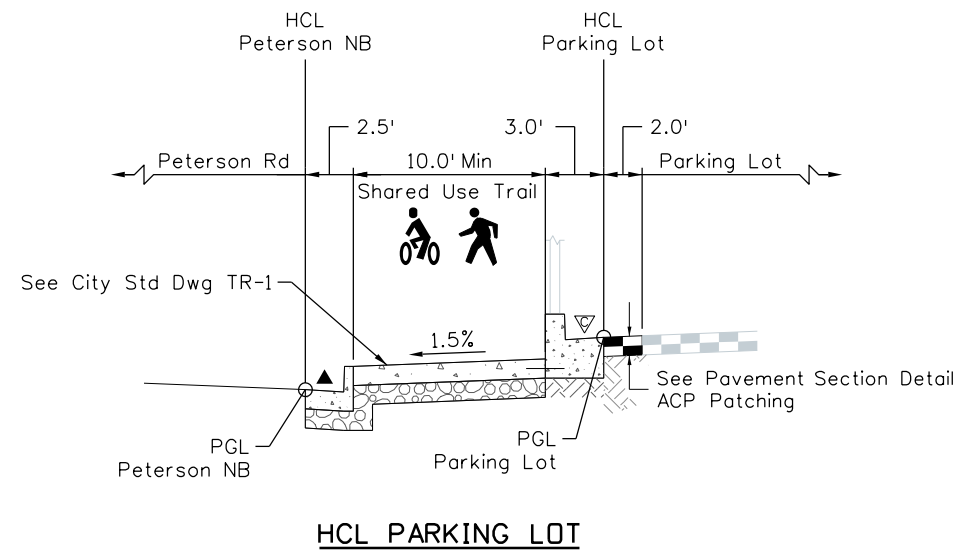
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Reviewer: STV	Vert. Scale: NTS





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**LEGEND**

PCMP	Roundabout Apron	C&G Type 3 (Spill)	Roundabout C&G	Topsoil
Concrete	ACP (Proposed)	C&G Type 2 (Catch)	C&G Type 3 (Catch) See Detail, SHT 6/6	Safety Edge
ABC	ACP (Existing)	C&G Type 2 (Spill)	C&G (Special) See Detail, SHT 6/6	Curb Head See Detail, SHT 6/6

**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**TYPICAL SECTION  
RAMPS AND MISCELLANEOUS**

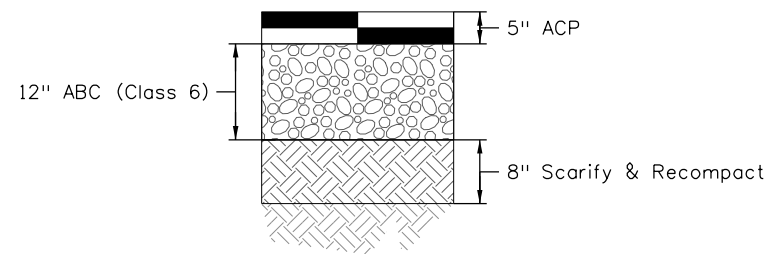
Typical	5 of 6
Sheet Number	10

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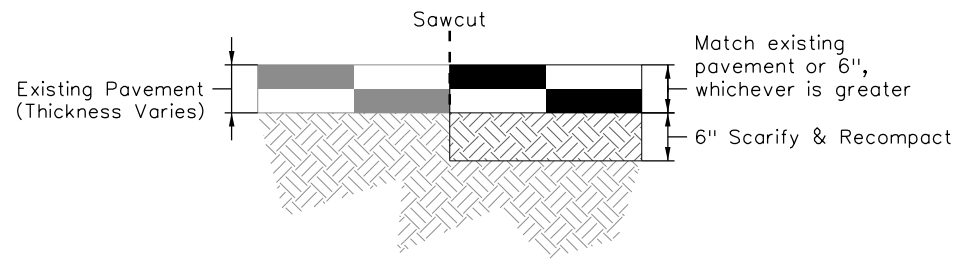
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Detailer: KAG    Print Date: 12/20/2023  
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 Reviewer: STV    Vert. Scale: NTS

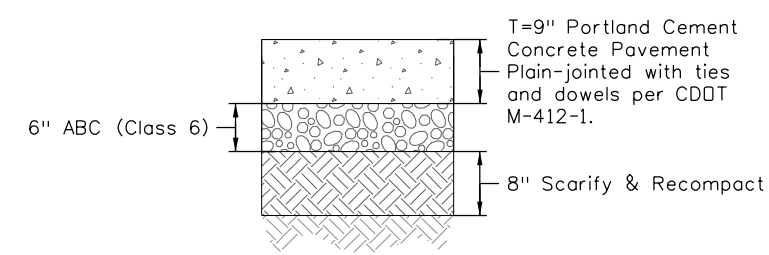




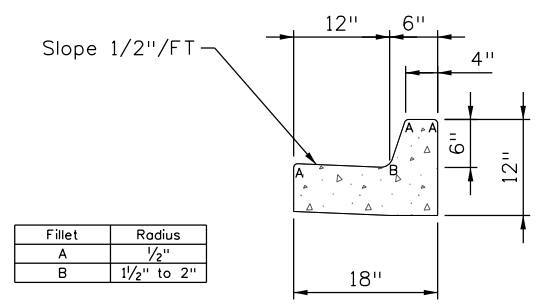
**PAVEMENT SECTION DETAIL**  
ACP Full Depth



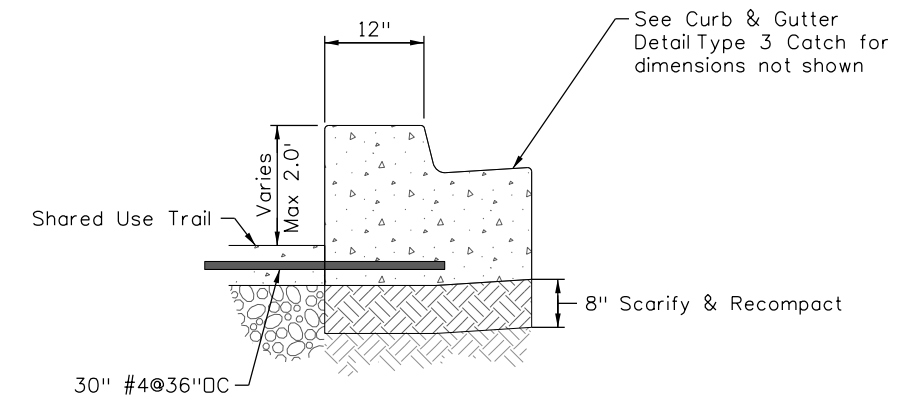
**PAVEMENT SECTION DETAIL**  
ACP Patching



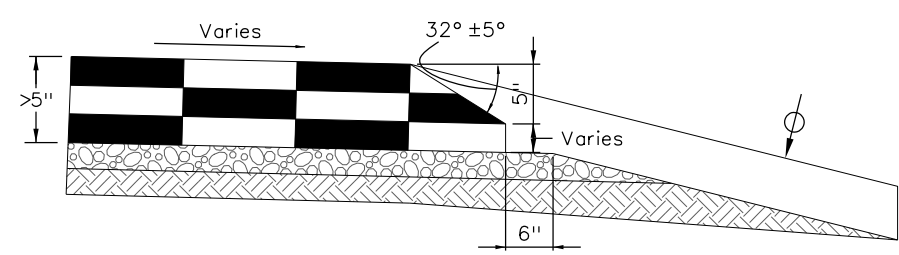
**PAVEMENT SECTION DETAIL**  
Concrete Pavement



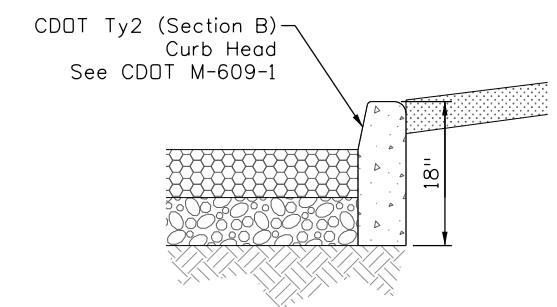
**CURB AND GUTTER DETAIL**  
Type 3 Catch



**CURB AND GUTTER (SPECIAL) DETAIL**



**PAVEMENT DETAIL**  
ACP Safety Edge



**CURB HEAD DETAIL**

**LEGEND**

- PCMP
- Roundabout Apron
- Concrete
- ACP (Proposed)
- ABC
- ACP (Existing)
- Topsoil

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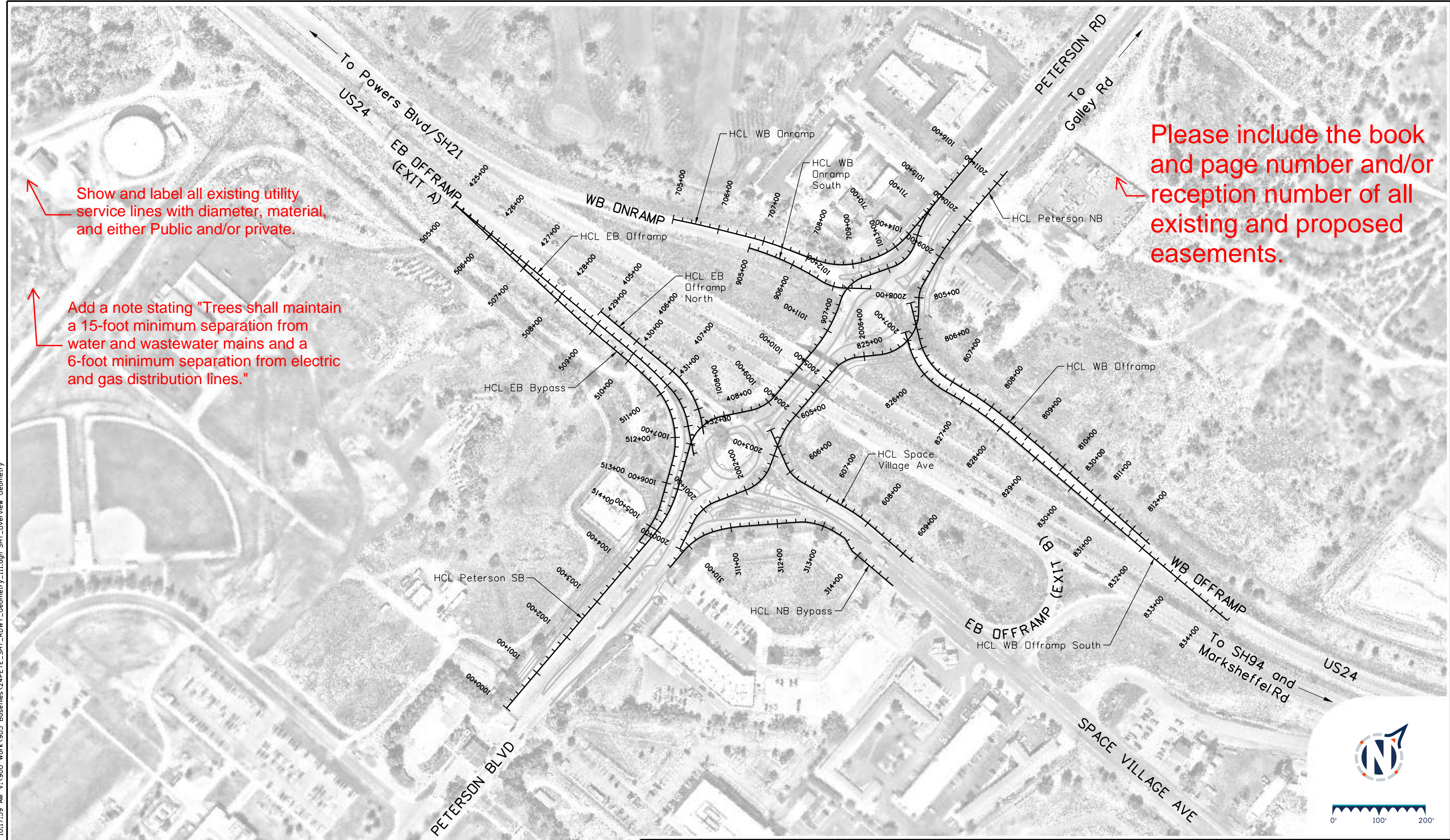
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
TYPICAL SECTION DETAIL	Typical 6 of 6
	Sheet Number 11



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	Date	Comments	Init												

KeithGiven 12/20/2023 10:18:13 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Geometry\_111.dgn SHT\_HCL\_1000+00

C01
PI= 1005+44.27
PI N=
PI E=
PC= 1004+85.00
PT= 1006+01.74
Dc= 24° 30'00" LT
Tc= 59.27'
Lc= 116.74'
Rc= 273.00'

C02
PI= 1007+50.36
PI N=
PI E=
PC= 1006+96.10
PT= 1007+93.76
Dc= 62° 08'27" RT
Tc= 54.26'
Lc= 97.66'
Rc= 90.05'

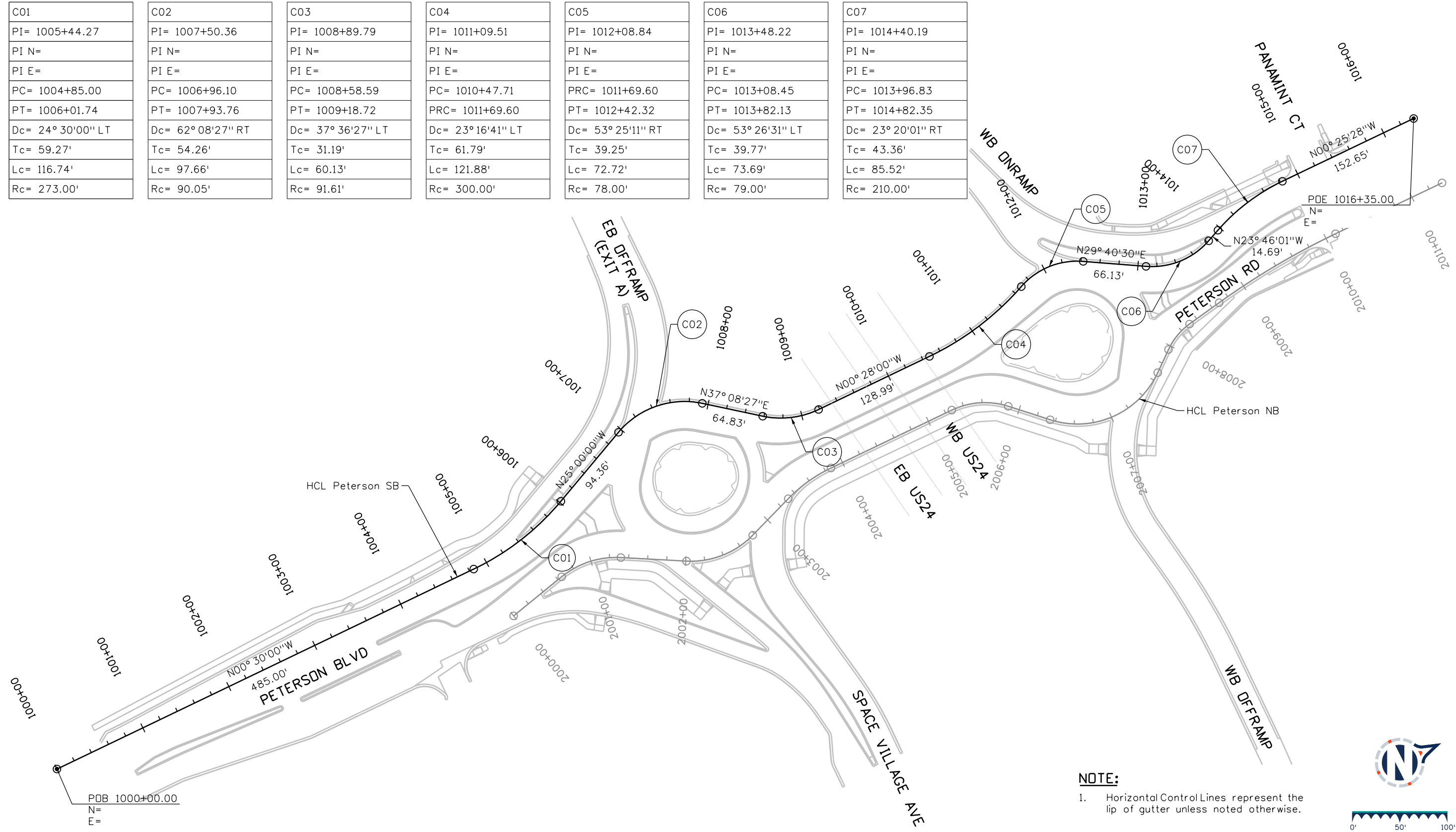
C03
PI= 1008+89.79
PI N=
PI E=
PC= 1008+58.59
PT= 1009+18.72
Dc= 37° 36'27" LT
Tc= 31.19'
Lc= 60.13'
Rc= 91.61'

C04
PI= 1011+09.51
PI N=
PI E=
PC= 1010+47.71
PT= 1011+69.60
Dc= 23° 16'41" LT
Tc= 61.79'
Lc= 121.88'
Rc= 300.00'

C05
PI= 1012+08.84
PI N=
PI E=
PRC= 1011+69.60
PT= 1012+42.32
Dc= 53° 25'11" RT
Tc= 39.25'
Lc= 72.72'
Rc= 78.00'

C06
PI= 1013+48.22
PI N=
PI E=
PC= 1013+08.45
PT= 1013+82.13
Dc= 53° 26'31" LT
Tc= 39.77'
Lc= 73.69'
Rc= 79.00'

C07
PI= 1014+40.19
PI N=
PI E=
PC= 1013+96.83
PT= 1014+82.35
Dc= 23° 20'01" RT
Tc= 43.36'
Lc= 85.52'
Rc= 210.00'



**NOTE:**  
 1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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		Sheet Revisions																				
		Date	Comments	Init																		
<b>30% PRELIMINARY - NOT FOR CONSTRUCTION</b>																						

C01
PI= 2001+00.00
PI N=
PI E=
PC= 2000+65.02
PT= 2001+31.79
Dc= 42°14'30" RT
Tc= 34.98'
Lc= 66.77'
Rc= 90.57'

C02
PI= 2002+41.75
PI N=
PI E=
PC= 2002+00.78
PT= 2002+77.69
Dc= 48°56'01" LT
Tc= 40.98'
Lc= 76.91'
Rc= 90.05'

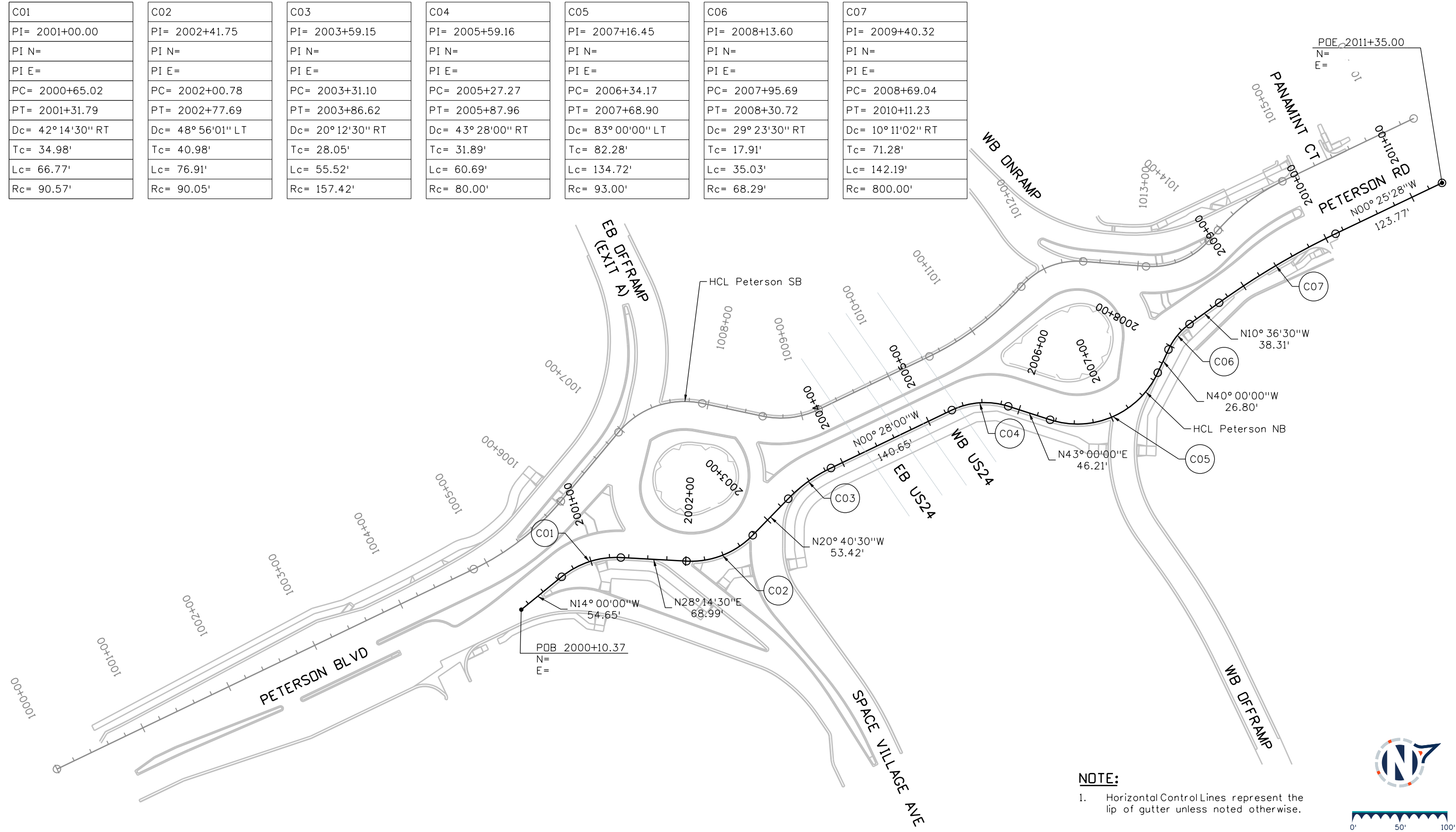
C03
PI= 2003+59.15
PI N=
PI E=
PC= 2003+31.10
PT= 2003+86.62
Dc= 20°12'30" RT
Tc= 28.05'
Lc= 55.52'
Rc= 157.42'

C04
PI= 2005+59.16
PI N=
PI E=
PC= 2005+27.27
PT= 2005+87.96
Dc= 43°28'00" RT
Tc= 31.89'
Lc= 60.69'
Rc= 80.00'

C05
PI= 2007+16.45
PI N=
PI E=
PC= 2006+34.17
PT= 2007+68.90
Dc= 83°00'00" LT
Tc= 82.28'
Lc= 134.72'
Rc= 93.00'

C06
PI= 2008+13.60
PI N=
PI E=
PC= 2007+95.69
PT= 2008+30.72
Dc= 29°23'30" RT
Tc= 17.91'
Lc= 35.03'
Rc= 68.29'

C07
PI= 2009+40.32
PI N=
PI E=
PC= 2008+69.04
PT= 2010+11.23
Dc= 10°11'02" RT
Tc= 71.28'
Lc= 142.19'
Rc= 800.00'



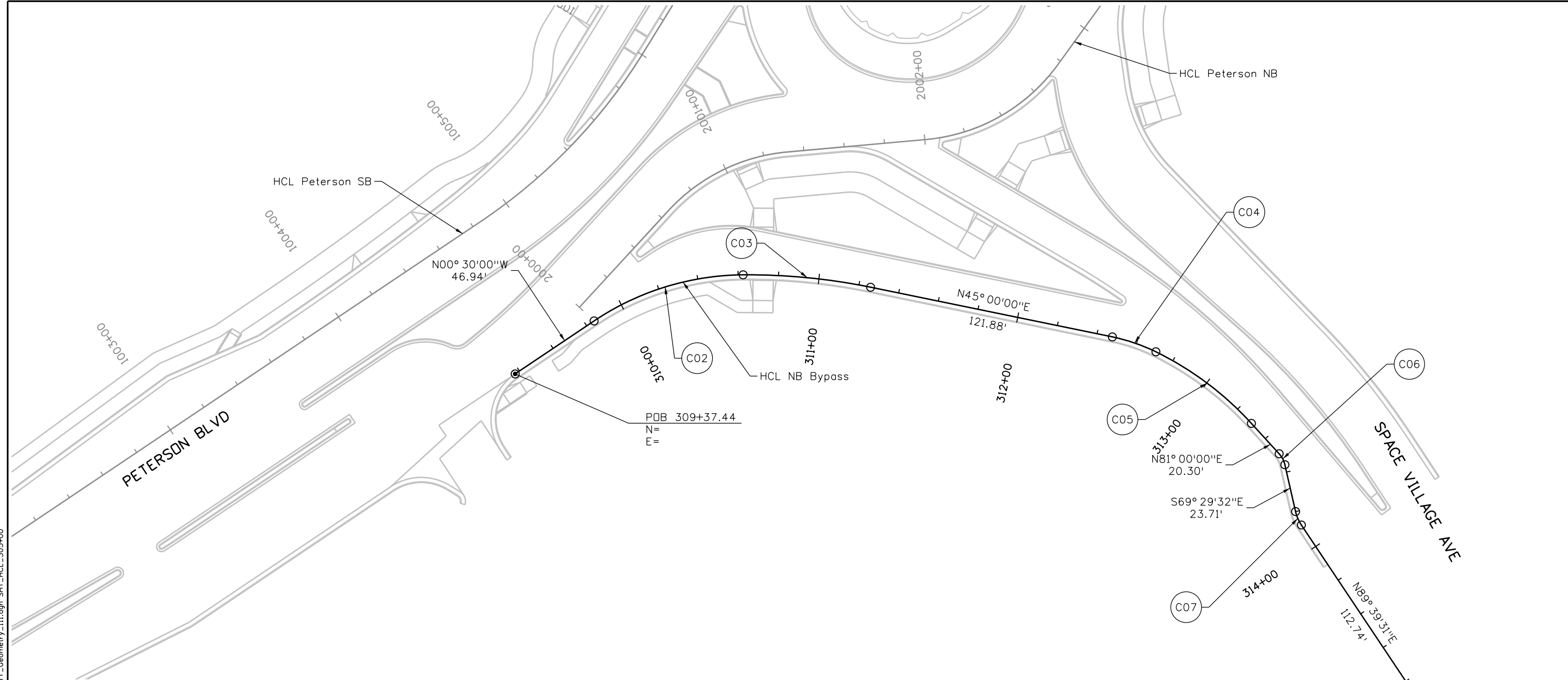
**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



Keith Given 12/20/2023 10:18:13 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Geometry\_111.dgn SHT\_HCL\_2000+00

	Basis Partners 25 N Spruce Street, Suite 310 Colorado Springs, CO 80905 Tel: 719-299-5077, basisp.com	Detailer: KAG	Print Date: 12/20/2023		<b>Sheet Revisions</b>			<b>US Highway 24 &amp; Peterson Blvd/Rd Roundabouts</b>			
		Designer: STV	Horiz. Scale: 1"=100'		<div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div>	Date	Comments	Init	<b>HORIZONTAL GEOMETRY</b> <b>HCL PETERSON NB</b>		Geometry 3 of 12
		Reviewer: STV	Vert. Scale: N/A		<div style="border: 1px solid black; width: 20px; height: 20px; margin: 2px;"></div>				Sheet Number 14		

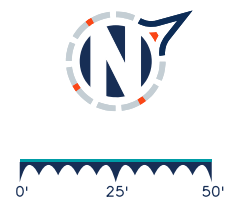
30% PRELIMINARY - NOT FOR CONSTRUCTION



<b>C02</b>	<b>C03</b>	<b>C04</b>	<b>C05</b>	<b>C06</b>	<b>C07</b>
PI= 310+24.58	PI= 310+94.29	PI= 312+59.17	PI= 313+00.50	PI= 313+53.25	PI= 313+83.66
PI N=	PI N=	PI N=	PI N=	PI N=	PI N=
PI E=	PI E=	PI E=	PI E=	PI E=	PI E=
PC= 309+84.38	PCC= 310+62.49	PC= 312+47.72	PCC= 312+70.50	PC= 313+50.09	PC= 313+79.98
PCC= 310+62.49	PT= 311+25.85	PCC= 312+70.50	PT= 313+29.79	PT= 313+56.27	PT= 313+87.26
Dc= 33° 23' 59" RT	Dc= 12° 06' 01" RT	Dc= 14° 29' 60" RT	Dc= 21° 30' 00" RT	Dc= 29° 30' 28" RT	Dc= 20° 50' 57" LT
Tc= 40.20'	Tc= 31.80'	Tc= 11.45'	Tc= 30.00'	Tc= 3.16'	Tc= 3.68'
Lc= 78.11'	Lc= 63.36'	Lc= 22.78'	Lc= 59.29'	Lc= 6.18'	Lc= 7.28'
Rc= 134.00'	Rc= 300.00'	Rc= 90.00'	Rc= 158.00'	Rc= 12.00'	Rc= 20.00'

PDE 315+00.00  
N=  
E=

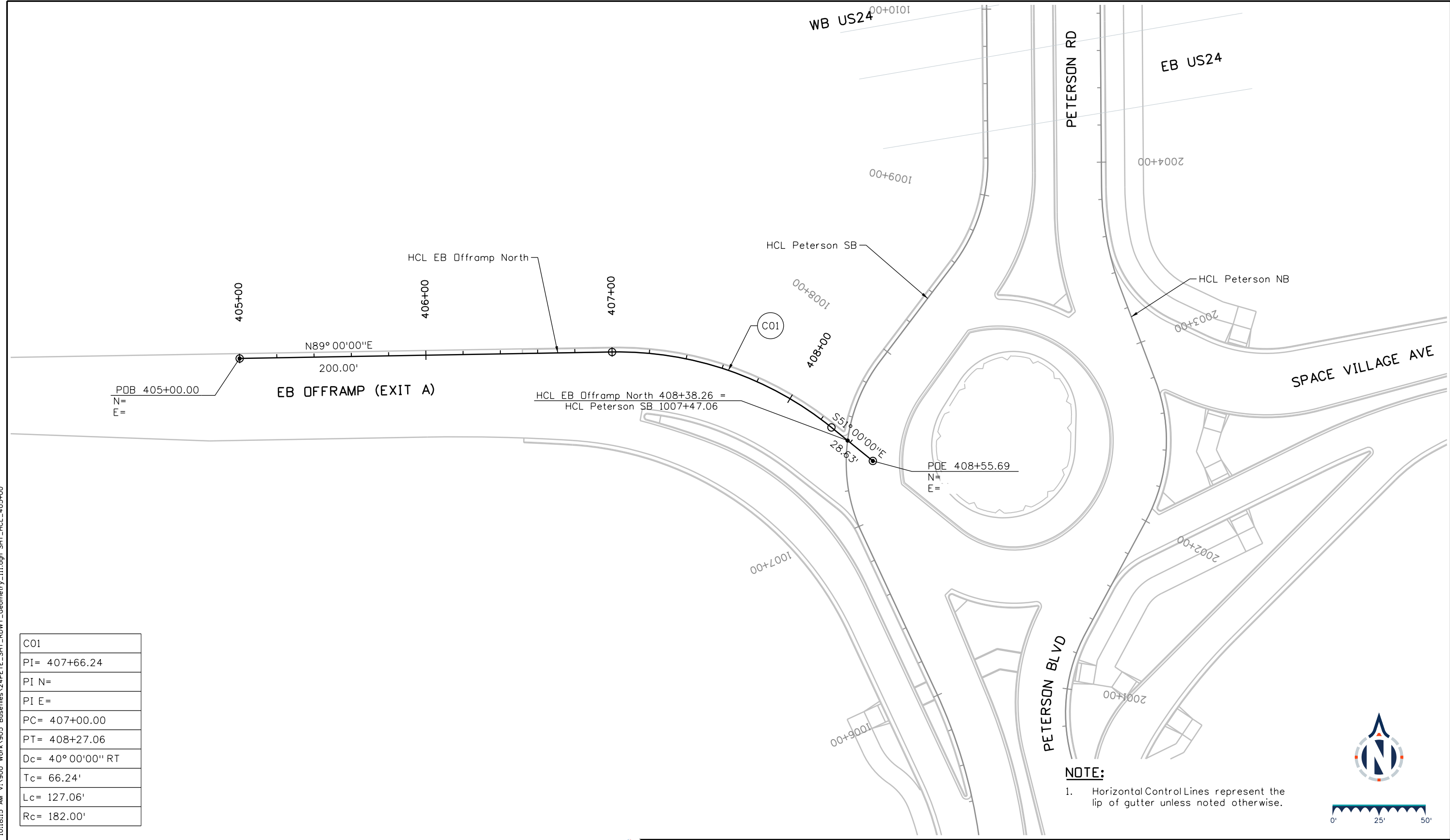
**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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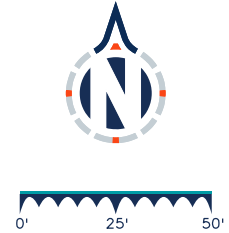
<p>Basis Partners 25 N Spruce Street, Suite 310 Colorado Springs, CO 80905 Tel: 719-299-5077, basisp.com</p>	Detailer: KAG Designer: STV Reviewer: STV	Print Date: 12/20/2023 Horiz. Scale: 1"=50' Vert. Scale: N/A		<table border="1"> <thead> <tr> <th colspan="3">Sheet Revisions</th> </tr> <tr> <th>Date</th> <th>Comments</th> <th>Init</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sheet Revisions			Date	Comments	Init										US Highway 24 & Peterson Blvd/Rd Roundabouts  HORIZONTAL GEOMETRY HCL NB BYPASS	Geometry 4 of 12  Sheet Number 15
	Sheet Revisions																				
	Date	Comments	Init																		

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C01
PI= 407+66.24
PI N=
PI E=
PC= 407+00.00
PT= 408+27.06
Dc= 40°00'00" RT
Tc= 66.24'
Lc= 127.06'
Rc= 182.00'

**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: N/A

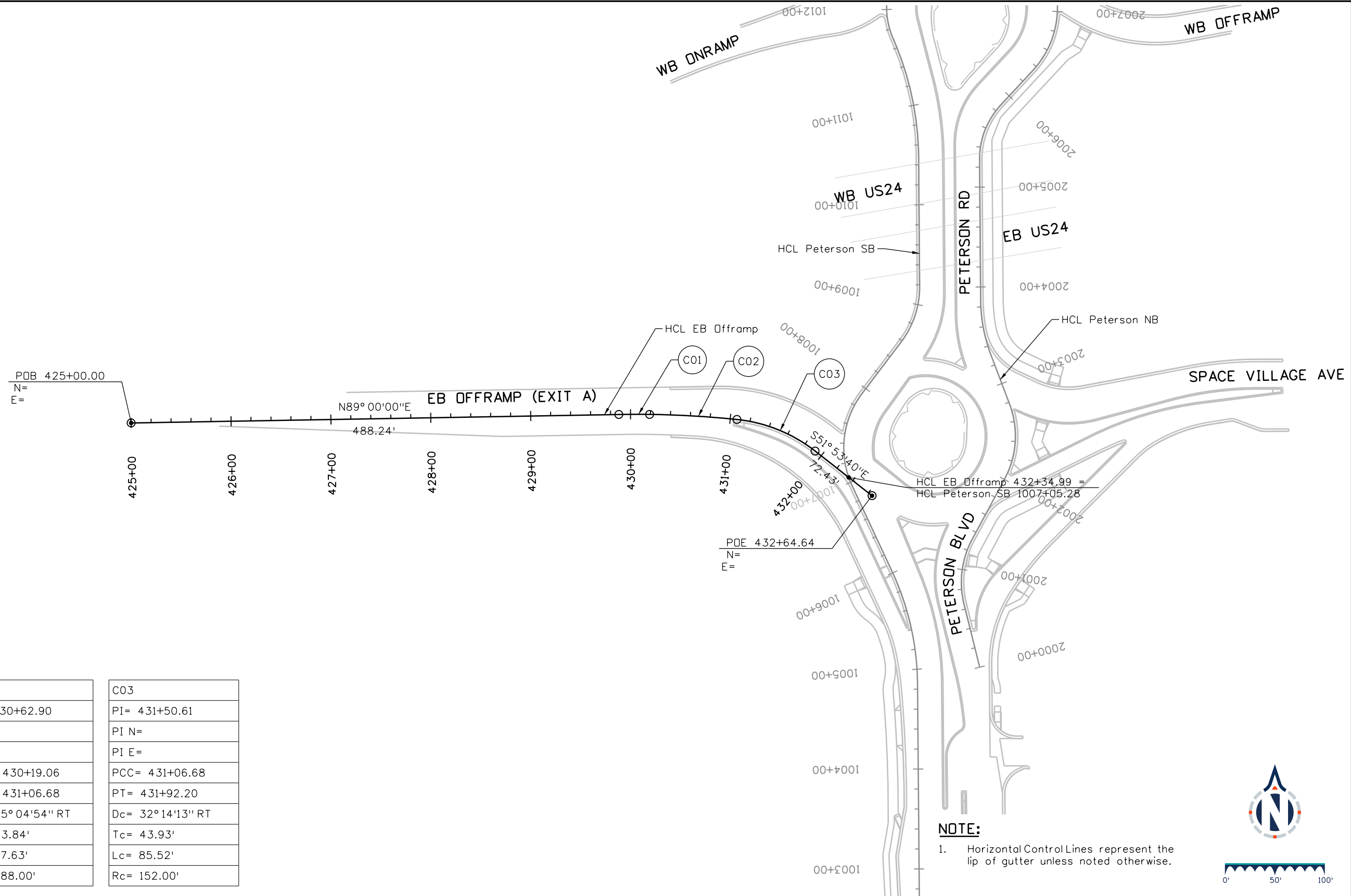


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
HORIZONTAL GEOMETRY HCL EB OFFRAMP NORTH	
Geometry	5 of 12
Sheet Number	16



Keith Given 12/20/2023 10:18:16 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Geometry\_111.dgn SHT\_HCL\_425+00



**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.

C01	C02	C03
PI= 430+03.65	PI= 430+62.90	PI= 431+50.61
PI N=	PI N=	PI N=
PI E=	PI E=	PI E=
PC= 429+88.24	PCC= 430+19.06	PCC= 431+06.68
PCC= 430+19.06	PCC= 431+06.68	PT= 431+92.20
Dc= 01° 47'13" RT	Dc= 05° 04'54" RT	Dc= 32° 14'13" RT
Tc= 15.41'	Tc= 43.84'	Tc= 43.93'
Lc= 30.82'	Lc= 87.63'	Lc= 85.52'
Rc= 988.00'	Rc= 988.00'	Rc= 152.00'

**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

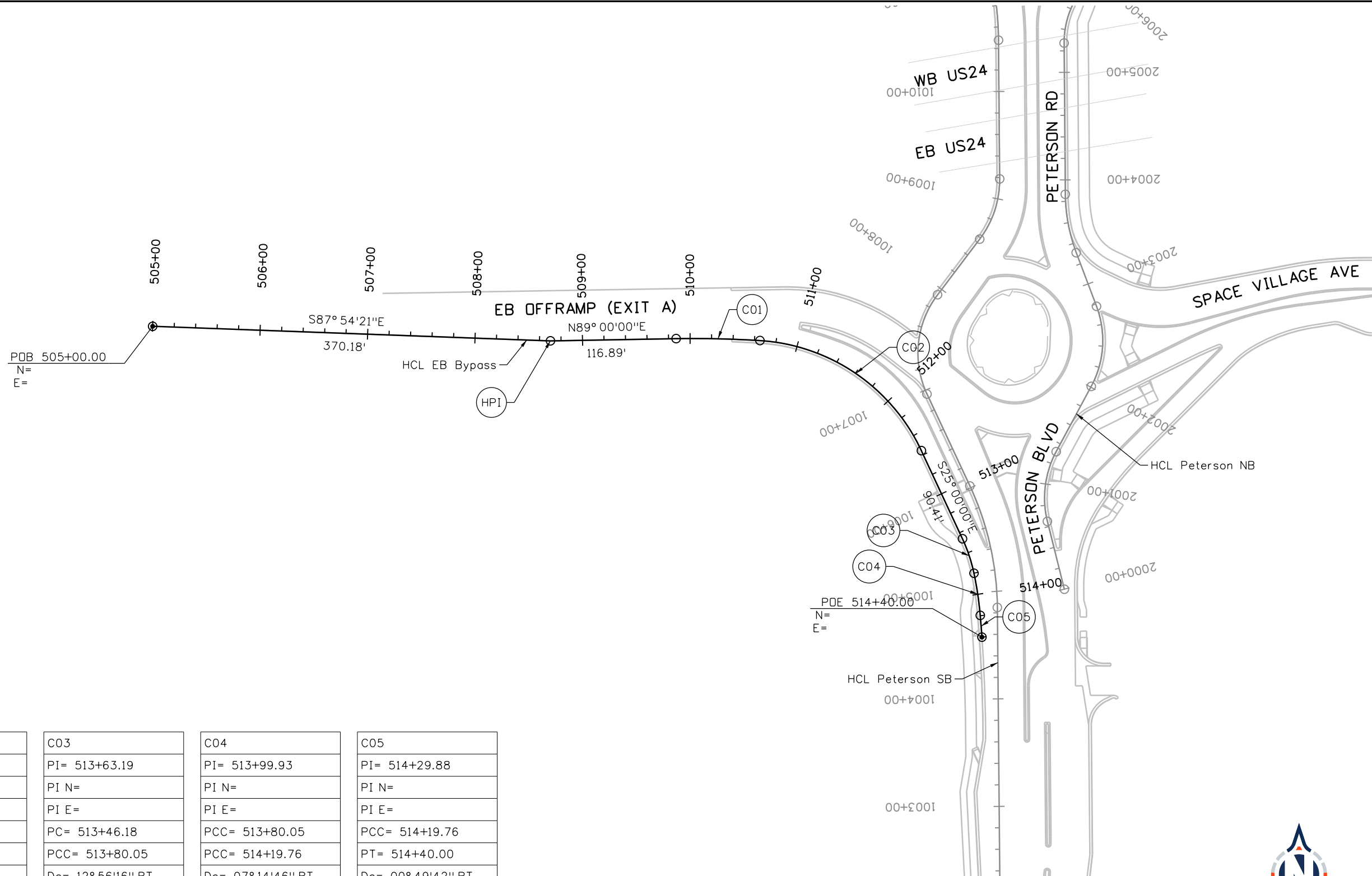
HORIZONTAL GEOMETRY  
HCL EB OFFRAMP

Geometry	6 of 12
Sheet Number	17

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Detailer: KAG    Print Date: 12/20/2023  
Designer: STV    Horiz. Scale: 1"=100'  
Reviewer: STV    Vert. Scale: N/A





C01	C02	C03	C04	C05
PI= 510+26.09	PI= 511+70.73	PI= 513+63.19	PI= 513+99.93	PI= 514+29.88
PI N=	PI N=	PI N=	PI N=	PI N=
PI E=	PI E=	PI E=	PI E=	PI E=
PC= 509+87.07	PCC= 510+65.08	PC= 513+46.18	PCC= 513+80.05	PCC= 514+19.76
PCC= 510+65.08	PT= 512+55.77	PCC= 513+80.05	PCC= 514+19.76	PT= 514+40.00
Dc= 04° 37'02" RT	Dc= 61° 22'58" RT	Dc= 12° 56'16" RT	Dc= 07° 14'46" RT	Dc= 00° 49'42" RT
Tc= 39.03'	Tc= 105.65'	Tc= 17.01'	Tc= 19.88'	Tc= 10.12'
Lc= 78.01'	Lc= 190.70'	Lc= 33.87'	Lc= 39.71'	Lc= 20.24'
Rc= 968.00'	Rc= 178.00'	Rc= 150.00'	Rc= 314.00'	Rc= 1,400.00'

PDE 514+40.00  
N=  
E=

**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

HORIZONTAL GEOMETRY  
HCL EB BYPASS

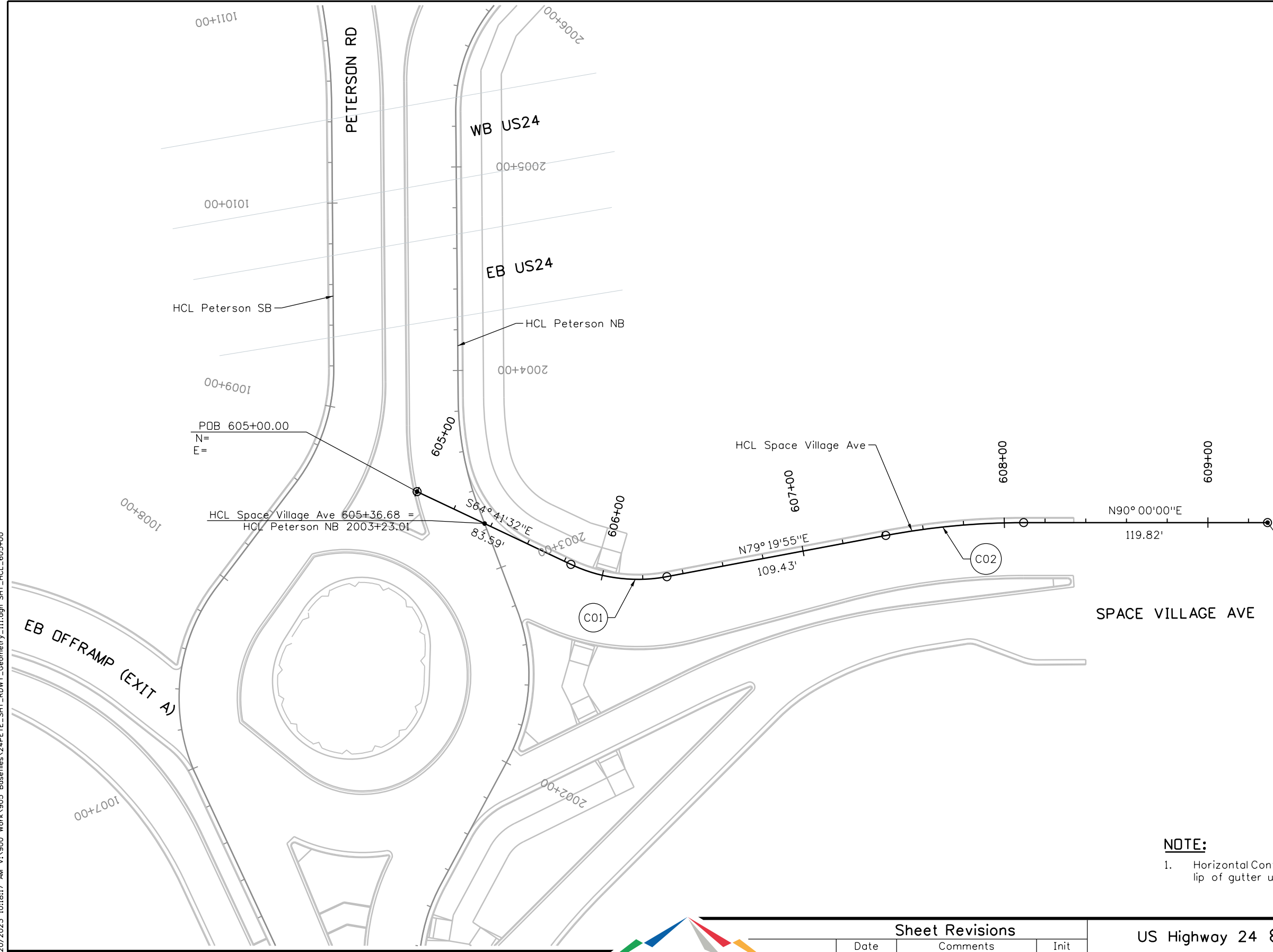
Geometry 7 of 12  
Sheet Number 18

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Detailer: KAG Print Date: 12/20/2023  
Designer: STV Horiz. Scale: 1"=100'  
Reviewer: STV Vert. Scale: N/A



C01	C02
PI= 606+08.59	PI= 607+75.54
PI N=	PI N=
PI E=	PI E=
PC= 605+83.59	PC= 607+41.36
PT= 606+31.94	PT= 608+09.51
Dc= 35° 58' 33" LT	Dc= 10° 40' 05" RT
Tc= 25.00'	Tc= 34.17'
Lc= 48.35'	Lc= 68.15'
Rc= 77.00'	Rc= 366.00'



**NOTE:**  
 1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.

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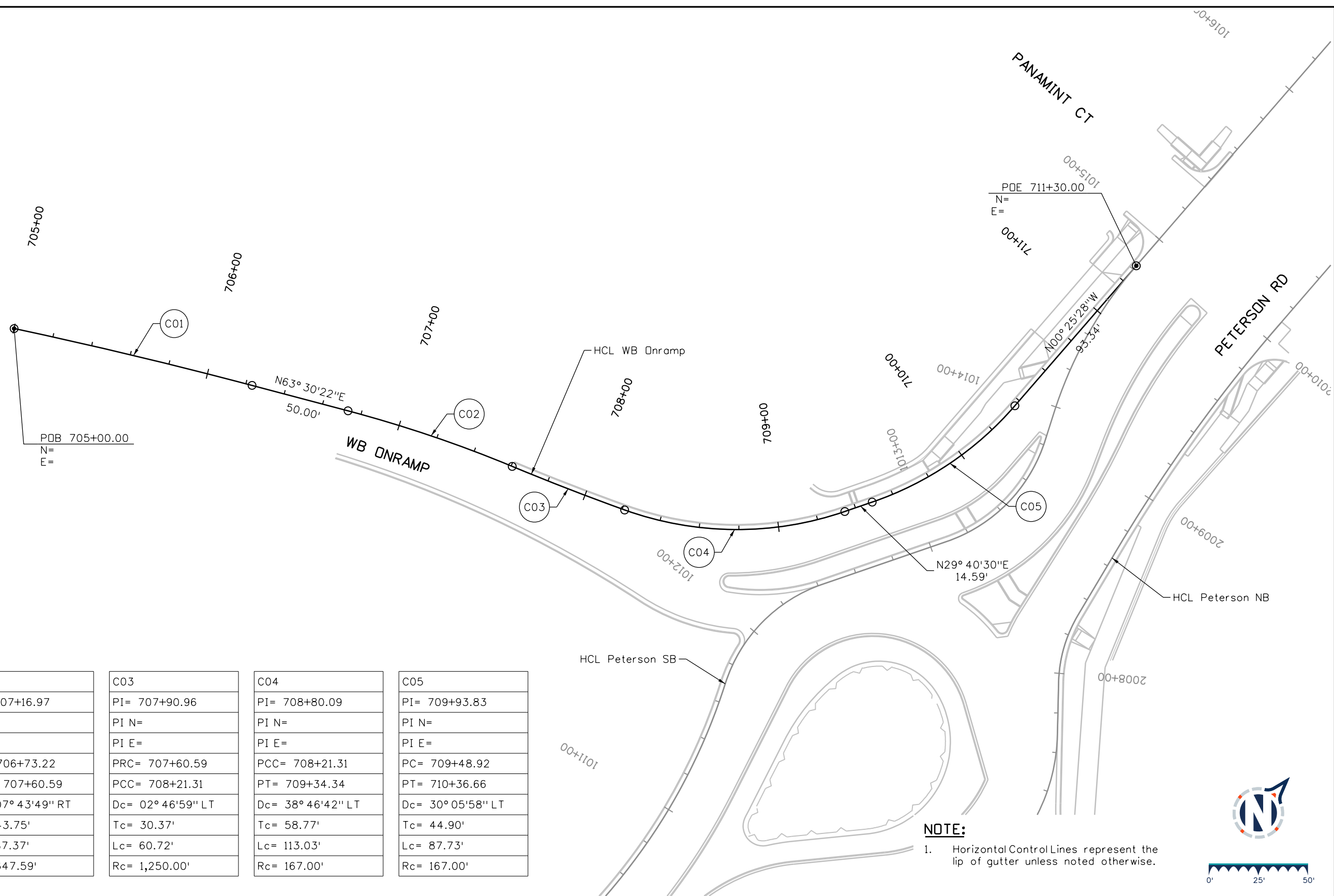
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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
HORIZONTAL GEOMETRY HCL SPACE VILLAGE AVE	Geometry 8 of 12
	Sheet Number 19



C01	C02	C03	C04	C05
PI= 705+61.62	PI= 707+16.97	PI= 707+90.96	PI= 708+80.09	PI= 709+93.83
PI N=	PI N=	PI N=	PI N=	PI N=
PI E=	PI E=	PI E=	PI E=	PI E=
PC= 705+00.00	PC= 706+73.22	PC= 707+60.59	PCC= 708+21.31	PC= 709+48.92
PT= 706+23.22	PRC= 707+60.59	PCC= 708+21.31	PT= 709+34.34	PT= 710+36.66
Dc= 02° 49'26" RT	Dc= 07° 43'49" RT	Dc= 02° 46'59" LT	Dc= 38° 46'42" LT	Dc= 30° 05'58" LT
Tc= 61.62'	Tc= 43.75'	Tc= 30.37'	Tc= 58.77'	Tc= 44.90'
Lc= 123.22'	Lc= 87.37'	Lc= 60.72'	Lc= 113.03'	Lc= 87.73'
Rc= 2,500.00'	Rc= 647.59'	Rc= 1,250.00'	Rc= 167.00'	Rc= 167.00'

**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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Detailer: KAG Print Date: 12/20/2023  
Designer: STV Horiz. Scale: 1"=50'  
Reviewer: STV Vert. Scale: N/A



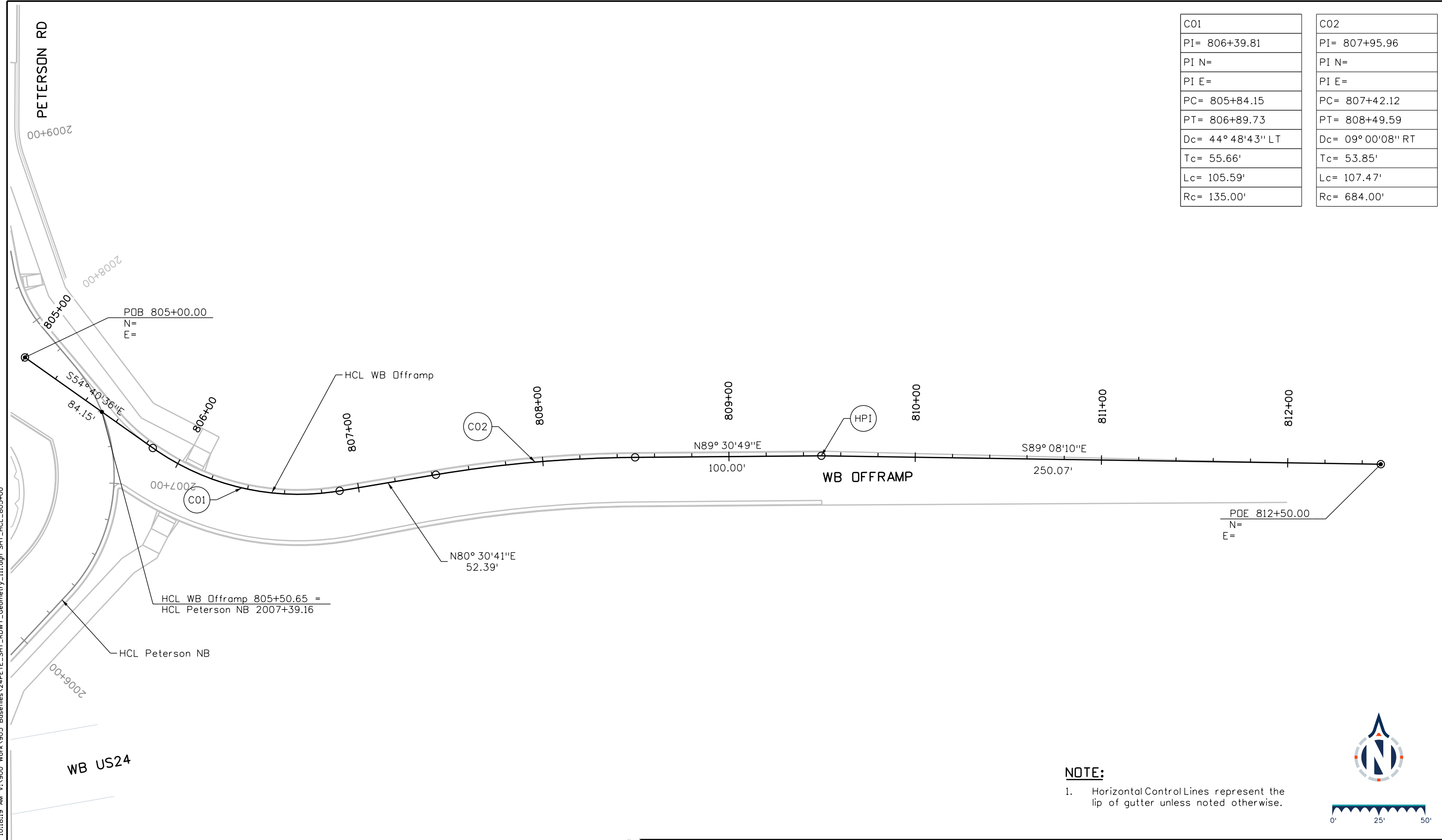
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

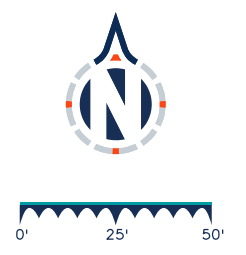
**HORIZONTAL GEOMETRY  
HCL WB ONRAMP**

Geometry	9 of 12
Sheet Number	20

C01	C02
PI= 806+39.81	PI= 807+95.96
PI N=	PI N=
PI E=	PI E=
PC= 805+84.15	PC= 807+42.12
PT= 806+89.73	PT= 808+49.59
Dc= 44° 48' 43" LT	Dc= 09° 00' 08" RT
Tc= 55.66'	Tc= 53.85'
Lc= 105.59'	Lc= 107.47'
Rc= 135.00'	Rc= 684.00'



**NOTE:**  
 1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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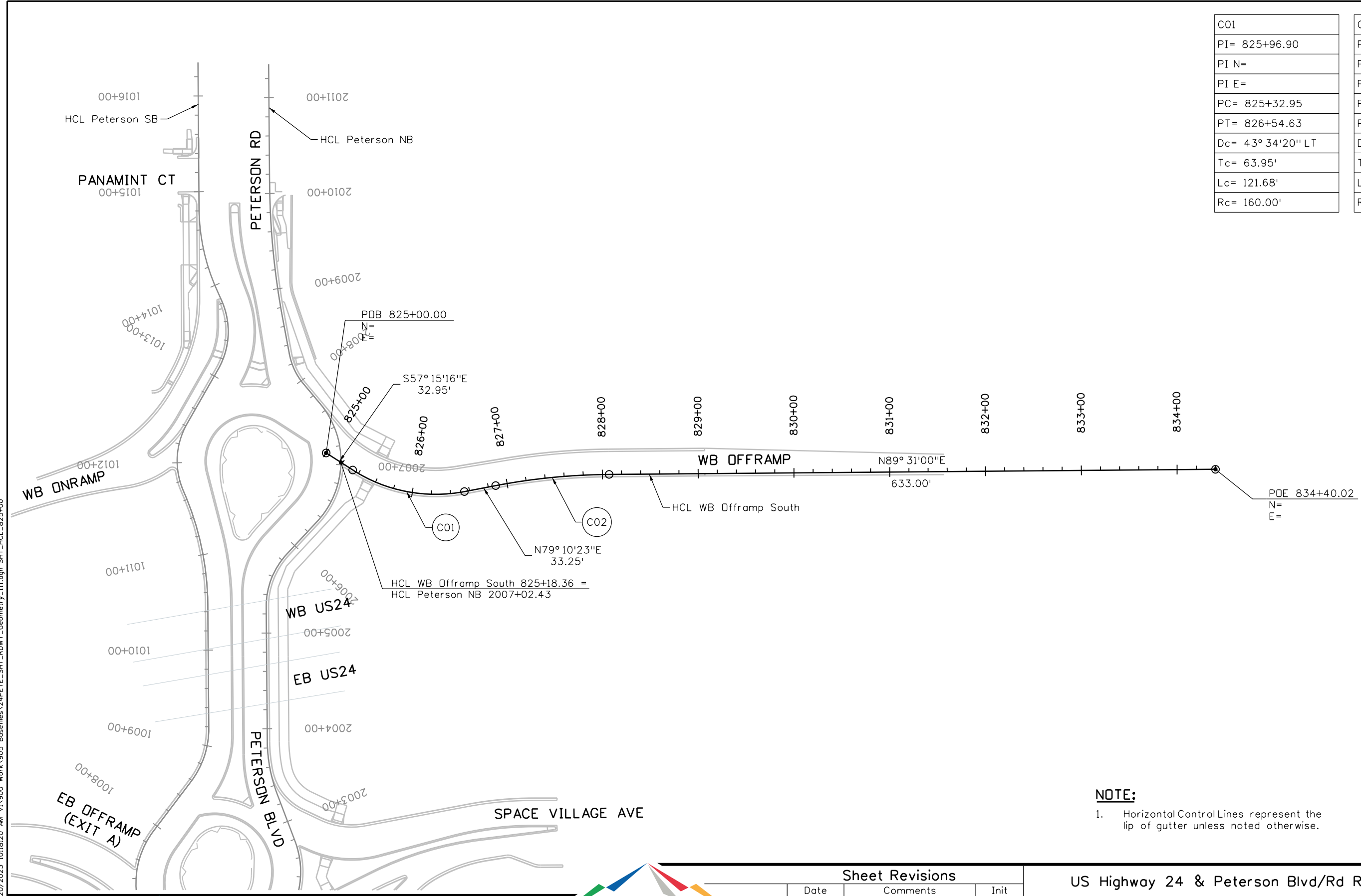
Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: N/A



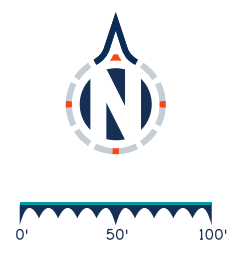
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
HORIZONTAL GEOMETRY HCL WB OFFRAMP	Geometry 10 of 12
	Sheet Number 21

C01	C02
PI= 825+96.90	PI= 827+47.61
PI N=	PI N=
PI E=	PI E=
PC= 825+32.95	PC= 826+87.88
PT= 826+54.63	PT= 828+07.03
Dc= 43° 34' 20" LT	Dc= 10° 20' 37" RT
Tc= 63.95'	Tc= 59.74'
Lc= 121.68'	Lc= 119.15'
Rc= 160.00'	Rc= 660.00'



**NOTE:**  
 1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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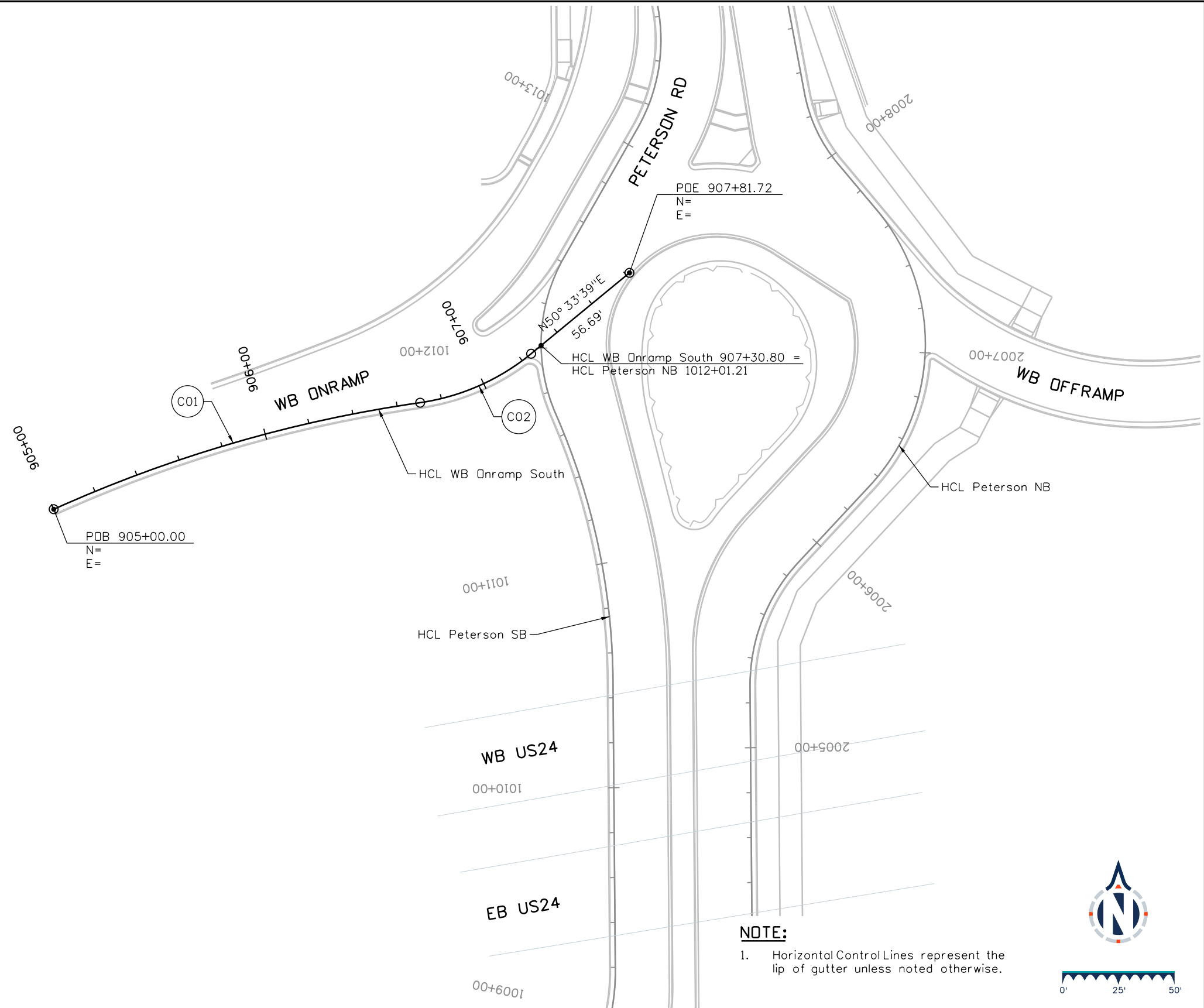
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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=100'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
HORIZONTAL GEOMETRY HCL WB OFFRAMP SOUTH	Geometry 11 of 12
Sheet Number	22



C01	C02
PI= 905+85.77	PI= 906+98.42
PI N=	PI N=
PI E=	PI E=
PC= 905+00.00	PRC= 906+70.41
PRC= 906+70.41	PT= 907+25.03
Dc= 16° 08'17" RT	Dc= 31° 17'41" LT
Tc= 85.77'	Tc= 28.01'
Lc= 170.41'	Lc= 54.62'
Rc= 605.00'	Rc= 100.00'

**NOTE:**  
1. Horizontal Control Lines represent the lip of gutter unless noted otherwise.



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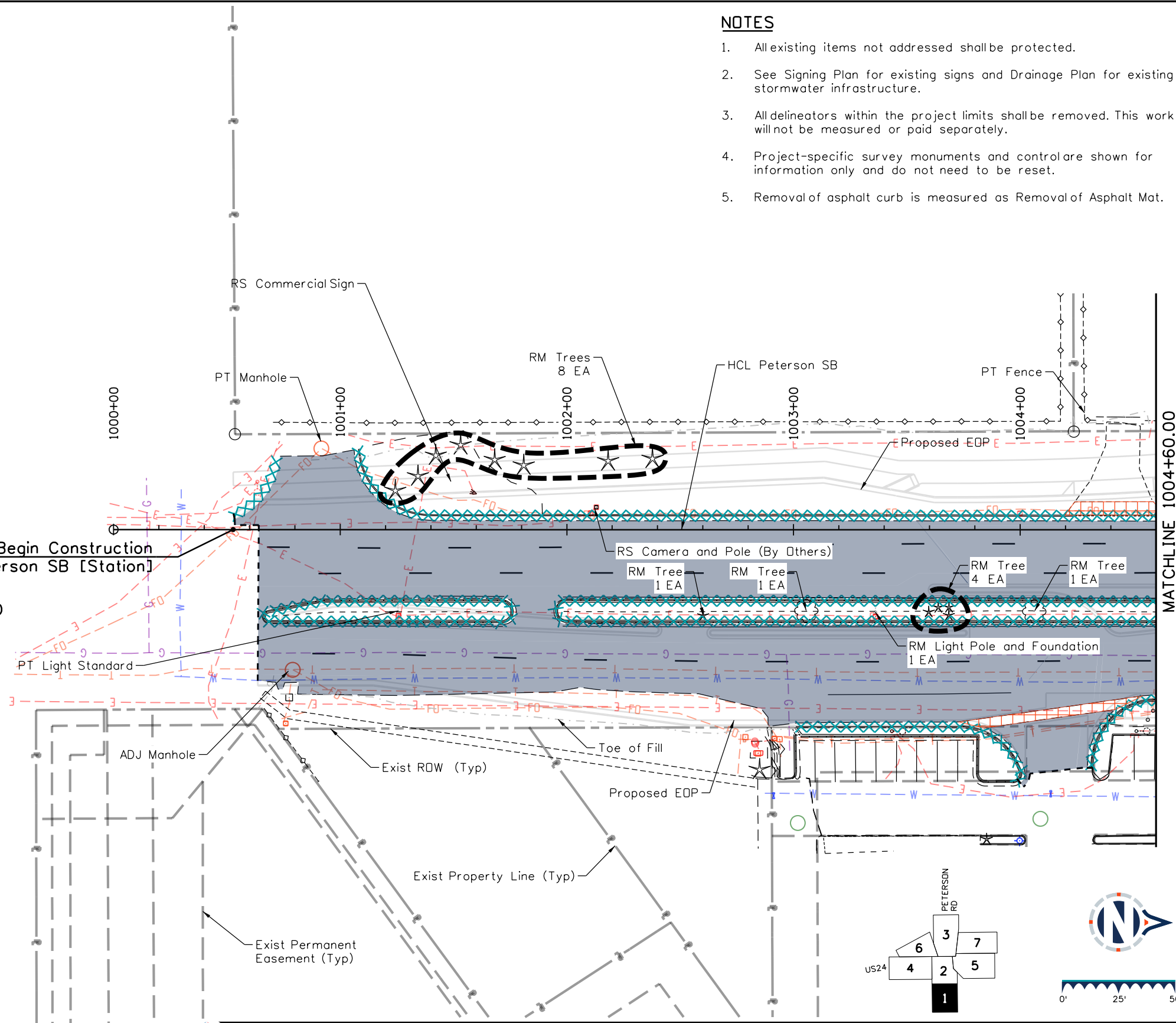
Basis Partners 25 N Spruce Street, Suite 310 Colorado Springs, CO 80905 Tel: 719-299-5077, basisp.com	Detailer: KAG Designer: STV Reviewer: STV	Print Date: 12/20/2023 Horiz. Scale: 1"=50' Vert. Scale: N/A		<b>Sheet Revisions</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Date</th> <th style="width: 60%;">Comments</th> <th style="width: 30%;">Init</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Comments	Init										<b>US Highway 24 &amp; Peterson Blvd/Rd Roundabouts</b>  HORIZONTAL GEOMETRY HCL WB ONRAMP SOUTH	Geometry 12 of 12  Sheet Number 23
	Date	Comments	Init															



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### NOTES

1. All existing items not addressed shall be protected.
2. See Signing Plan for existing signs and Drainage Plan for existing stormwater infrastructure.
3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.



PETERSON SPACE FORCE BASE

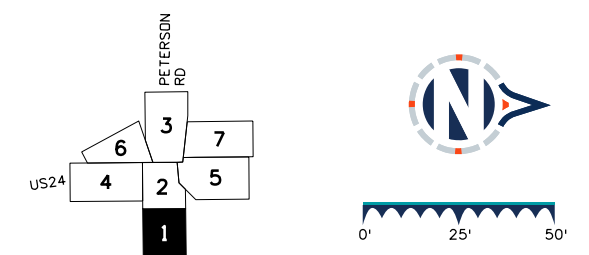
PETERSON BLVD

MATCHLINE 1004+60.00

### LEGEND

- Removal of Asphalt Mat
- Removal of Median Cover Material
- Removal of Concrete Flatwork
- Removal of Slope Paving
- Removal of Curb and Gutter
- Sawcut

- ADJ = Adjust
- RS = Reset
- RM = Removal of
- PT = Protect



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

REMOVAL PLAN  
PETERSON BLVD

Removals 1 of 7  
Sheet Number 24

C:\Users\kag\OneDrive\Documents\2023\12\20\2023 9:30:22 AM V:\900 Work\905 Basis\files\24PETE\_SHT\_RDWY\_RemovalPlan\_101.dgn SHT\_Removals\_1

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Designer: STV Horiz. Scale: 1"=50'  
Reviewer: STV Vert. Scale: N/A



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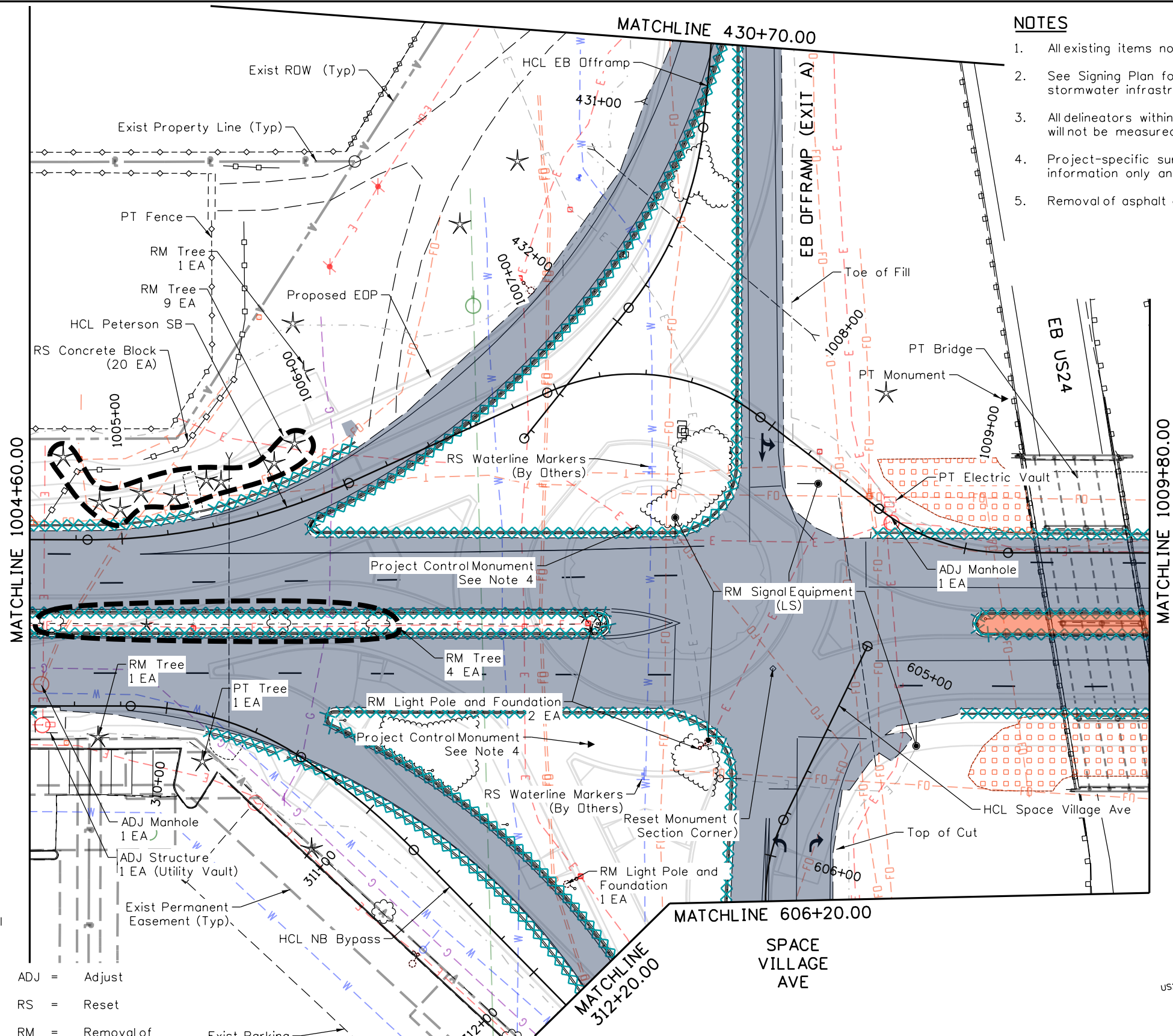




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### NOTES

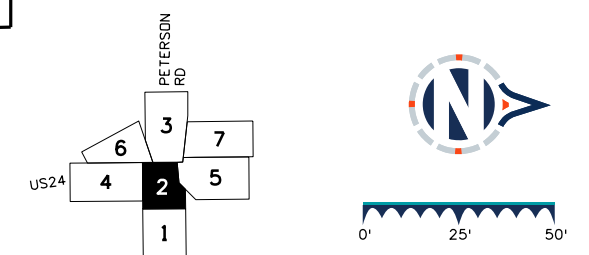
1. All existing items not addressed shall be protected.
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3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.



### LEGEND

- Removal of Asphalt Mat
- Removal of Median Cover Material
- Removal of Concrete Flatwork
- Removal of Slope Paving
- Removal of Curb and Gutter
- Sawcut

- ADJ = Adjust
- RS = Reset
- RM = Removal of
- PT = Protect



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

### REMOVAL PLAN SOUTH ROUNDABOUT

Removals 2 of 7  
Sheet Number 25

C:\Users\KeithGiven\12/20/2023 9:30:24 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_RemovalPlan\_101.dgn SHT\_Removals\_2

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Detailer: KAG Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=50'  
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30% PRELIMINARY - NOT FOR CONSTRUCTION

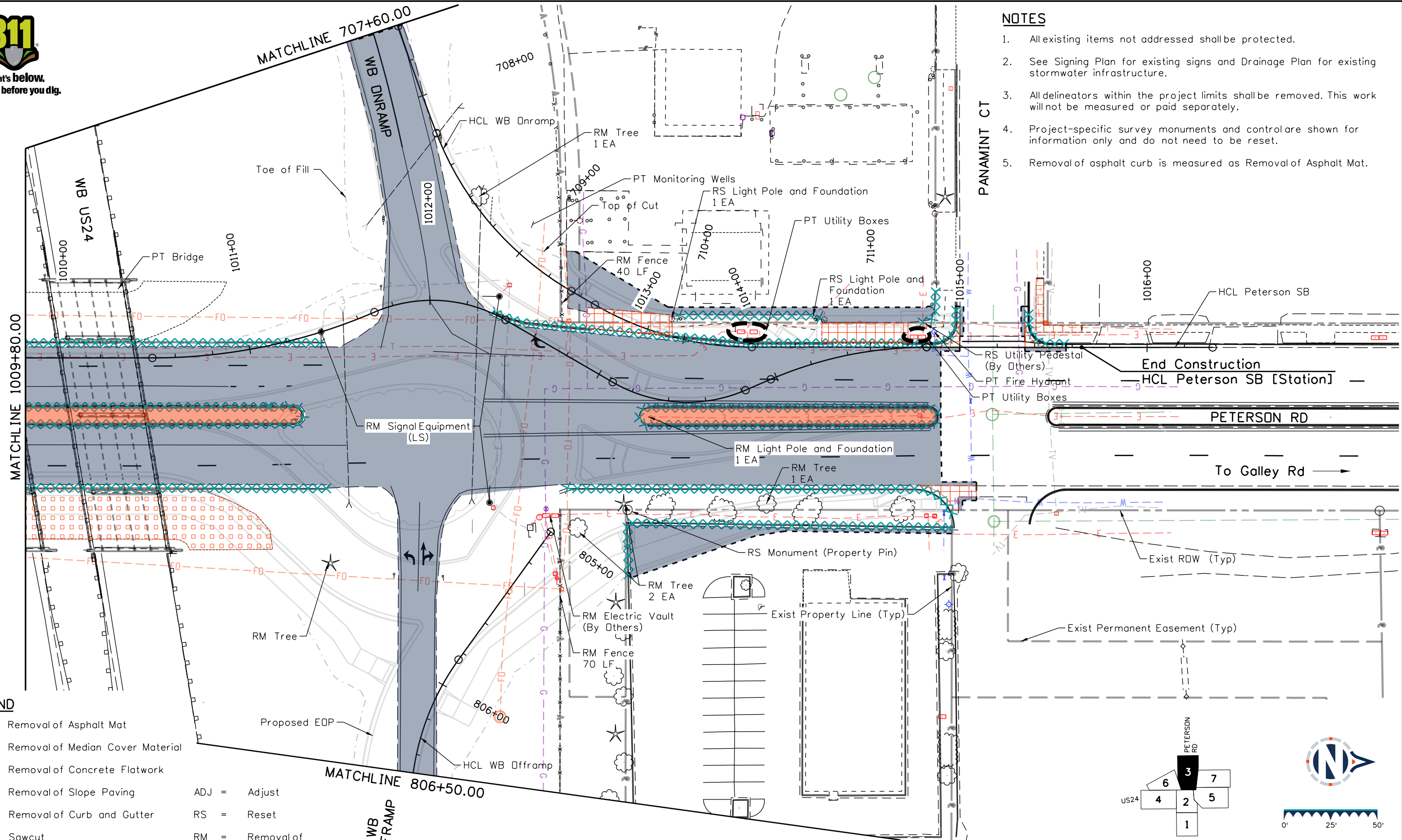


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### NOTES

1. All existing items not addressed shall be protected.
2. See Signing Plan for existing signs and Drainage Plan for existing stormwater infrastructure.
3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.

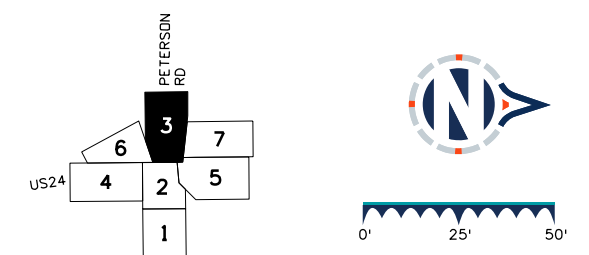
PANAMINT CT



### LEGEND

- Removal of Asphalt Mat
- Removal of Median Cover Material
- Removal of Concrete Flatwork
- Removal of Slope Paving
- Removal of Curb and Gutter
- Sawcut

- ADJ = Adjust
- RS = Reset
- RM = Removal of
- PT = Protect



### Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

REMOVAL PLAN  
NORTH ROUNDABOUT

Removals 3 of 7  
Sheet Number 26

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Detailer: KAG Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=50'  
 Reviewer: STV Vert. Scale: N/A



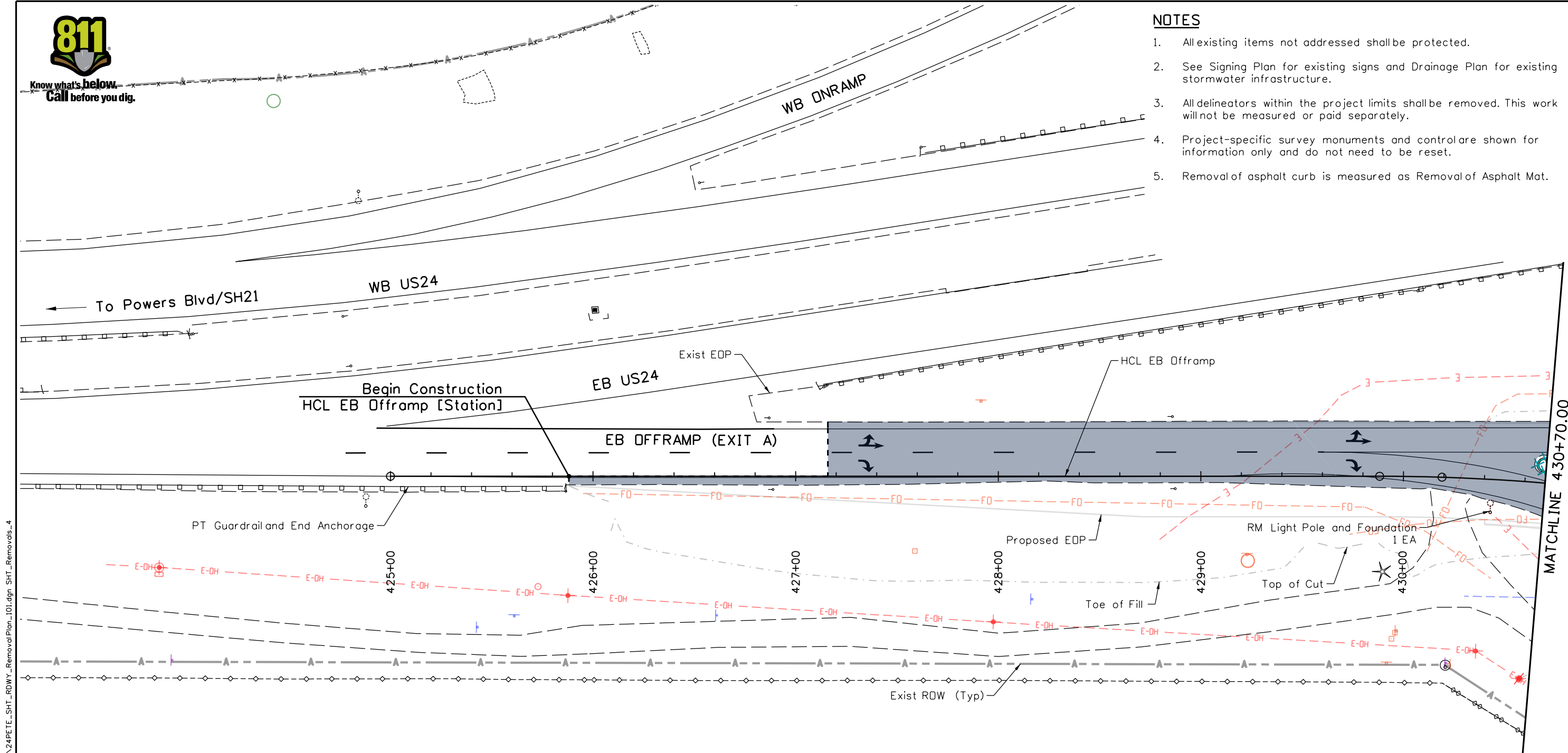
30% PRELIMINARY - NOT FOR CONSTRUCTION



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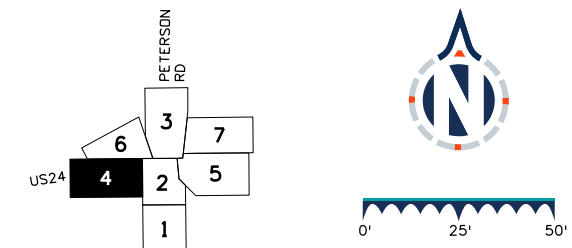
### NOTES

1. All existing items not addressed shall be protected.
2. See Signing Plan for existing signs and Drainage Plan for existing stormwater infrastructure.
3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.



### LEGEND

- Removal of Asphalt Mat
  - Removal of Median Cover Material
  - Removal of Concrete Flatwork
  - Removal of Slope Paving
  - Removal of Curb and Gutter
  - Sawcut
- ADJ = Adjust  
 RS = Reset  
 RM = Removal of  
 PT = Protect



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 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



### Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

REMOVAL PLAN  
EASTBOUND OFFRAMP (EXIT A)

Removals    4 of 7  
 Sheet Number    27

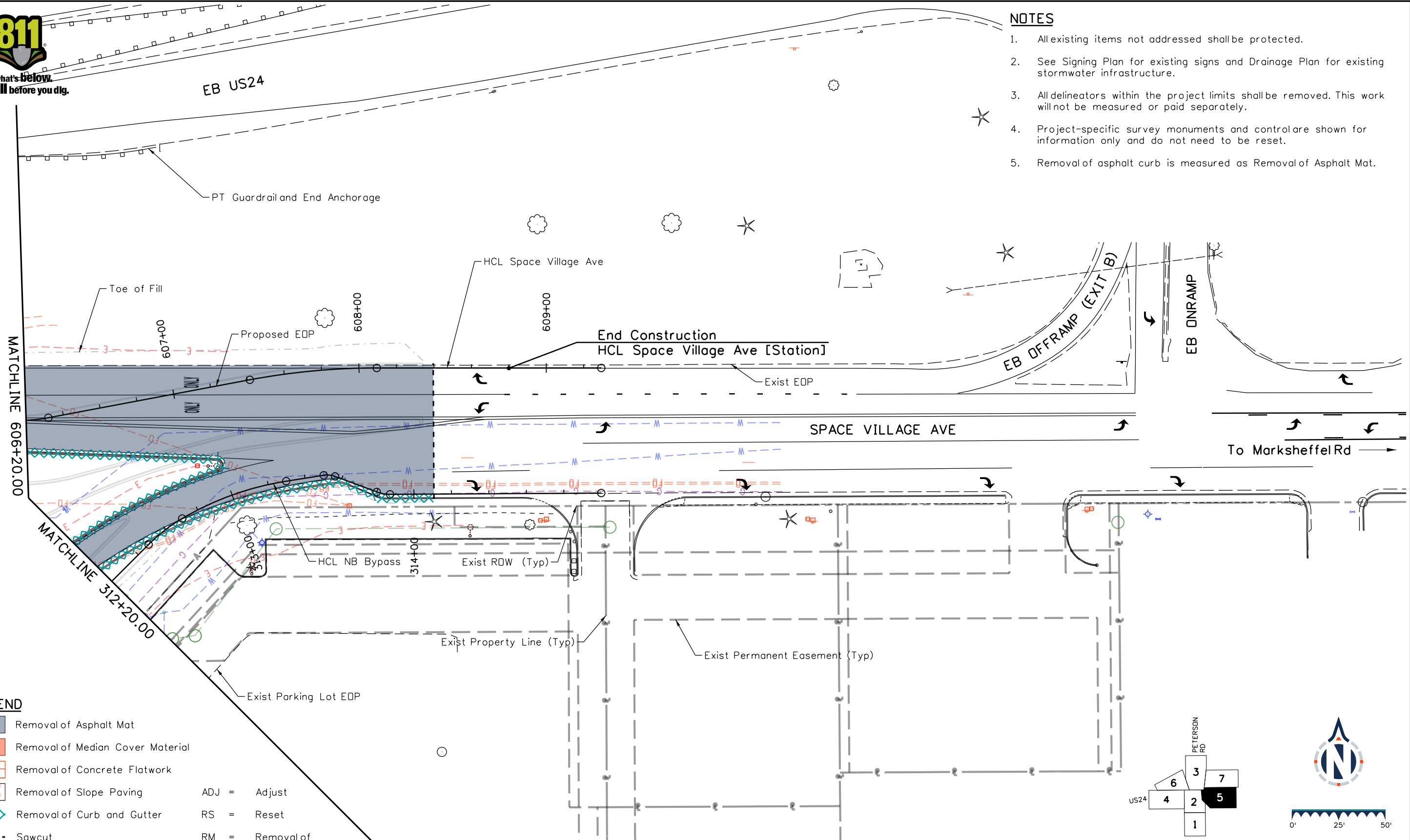
30% PRELIMINARY - NOT FOR CONSTRUCTION



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### NOTES

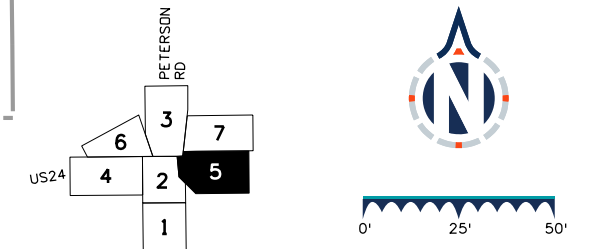
1. All existing items not addressed shall be protected.
2. See Signing Plan for existing signs and Drainage Plan for existing stormwater infrastructure.
3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.



### LEGEND

- Removal of Asphalt Mat
- Removal of Median Cover Material
- Removal of Concrete Flatwork
- Removal of Slope Paving
- Removal of Curb and Gutter
- Sawcut

- ADJ = Adjust
- RS = Reset
- RM = Removal of
- PT = Protect



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

### REMOVAL PLAN SPACE VILLAGE AVE

Removals 5 of 7  
Sheet Number 28

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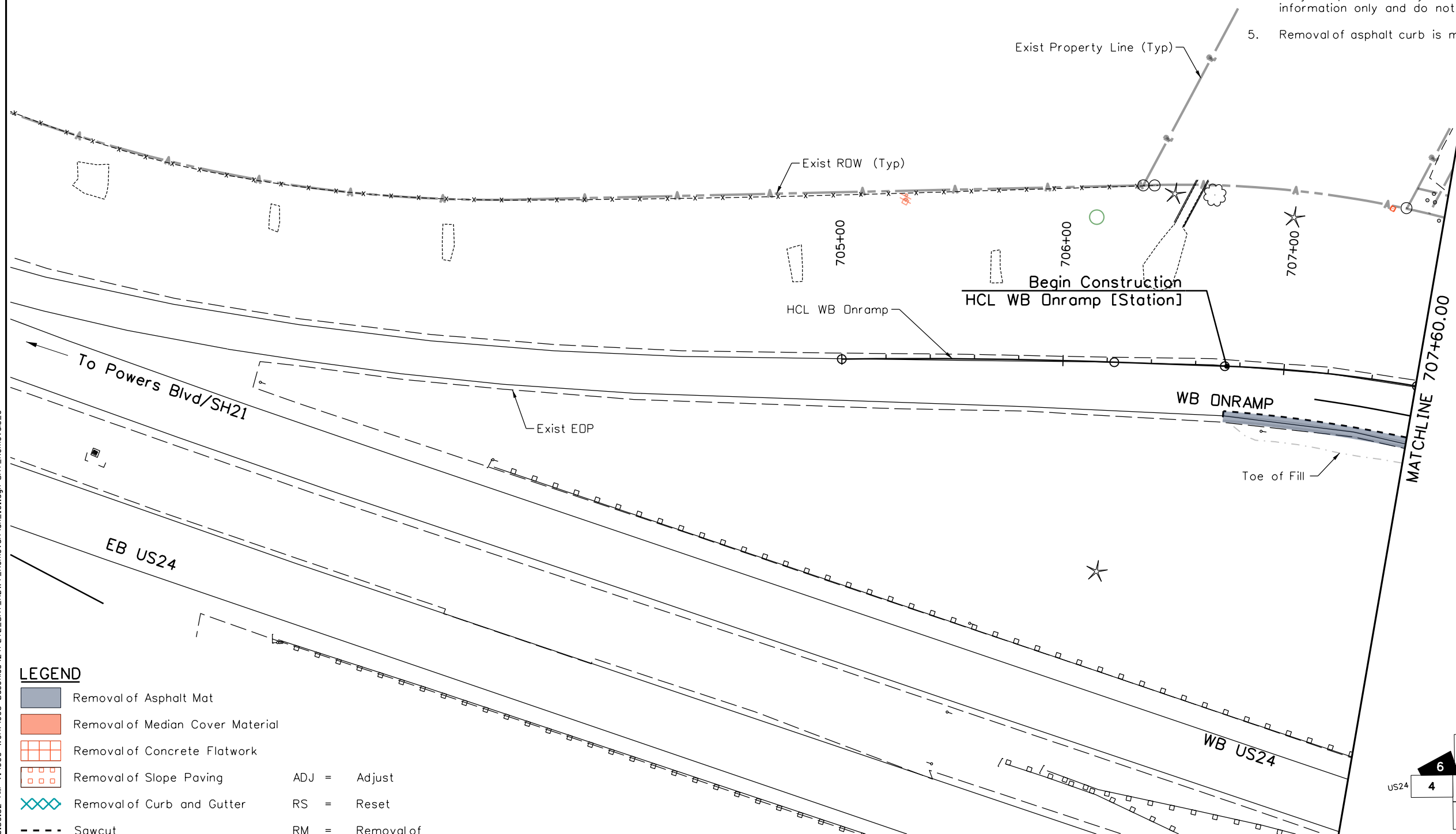
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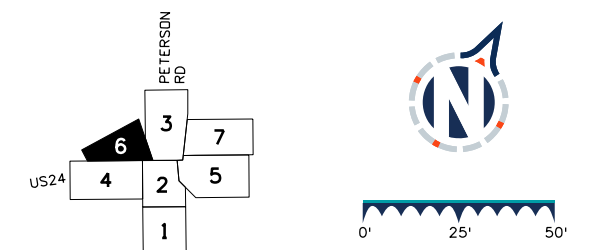
### NOTES

1. All existing items not addressed shall be protected.
2. See Signing Plan for existing signs and Drainage Plan for existing stormwater infrastructure.
3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.



### LEGEND

- Removal of Asphalt Mat
  - Removal of Median Cover Material
  - Removal of Concrete Flatwork
  - Removal of Slope Paving
  - Removal of Curb and Gutter
  - Sawcut
- ADJ = Adjust  
RS = Reset  
RM = Removal of  
PT = Protect



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 Reviewer: STV    Vert. Scale: N/A



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

REMOVAL PLAN  
 WESTBOUND ONRAMP

Removals    6 of 7  
 Sheet Number    29

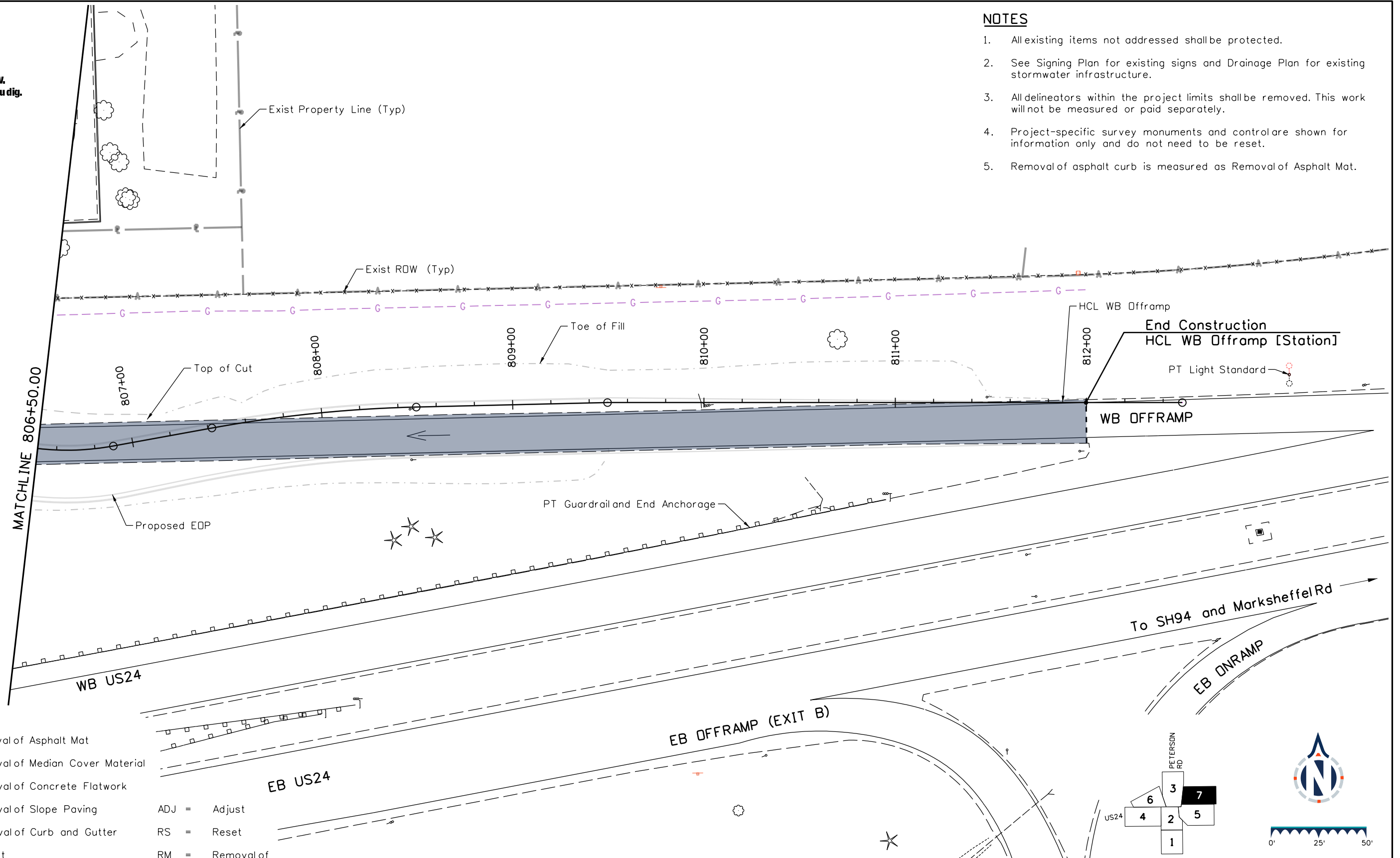
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### NOTES

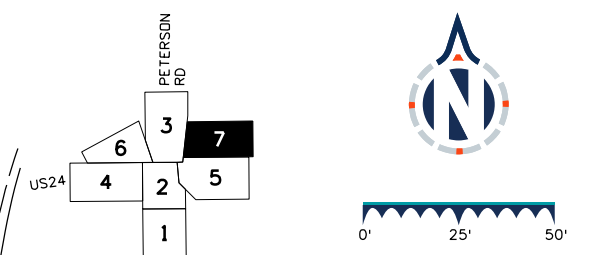
1. All existing items not addressed shall be protected.
2. See Signing Plan for existing signs and Drainage Plan for existing stormwater infrastructure.
3. All delineators within the project limits shall be removed. This work will not be measured or paid separately.
4. Project-specific survey monuments and control are shown for information only and do not need to be reset.
5. Removal of asphalt curb is measured as Removal of Asphalt Mat.



### LEGEND

- Removal of Asphalt Mat
- Removal of Median Cover Material
- Removal of Concrete Flatwork
- Removal of Slope Paving
- Removal of Curb and Gutter
- Sawcut

- ADJ = Adjust
- RS = Reset
- RM = Removal of
- PT = Protect



V:\9000 Work\9005 Basis\files\24PETE\_SHT\_RDWY\_RemovalPlan\_101.dgn\_SHT\_Removals\_7

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Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
REMOVAL PLAN WESTBOUND OFFRAMP	Removals 7 of 7
Sheet Number	30

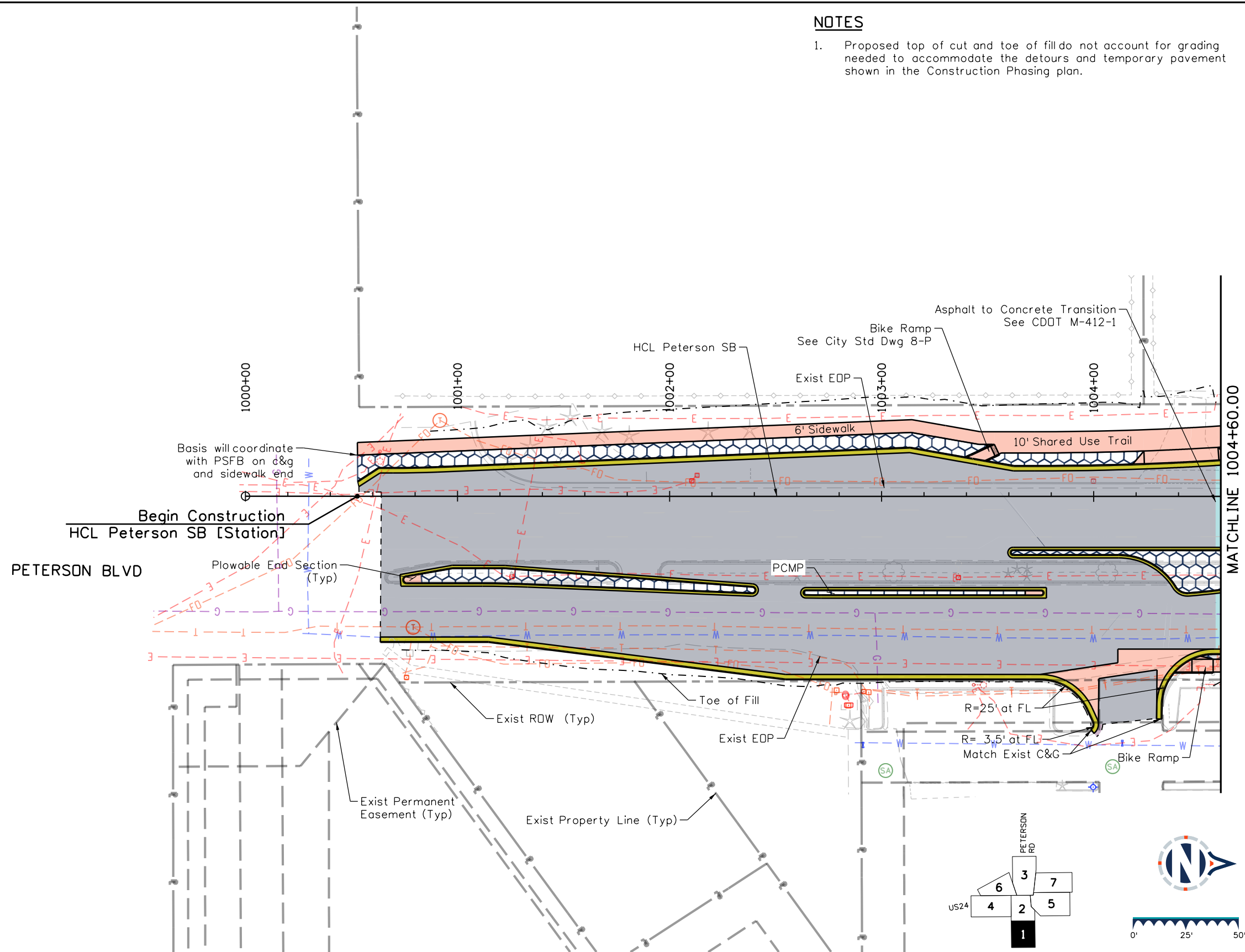
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### NOTES

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



### LEGEND

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP

### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PLAN  
PETERSON BLVD

Roadway 1 of 7  
Sheet Number 31

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 Designer: STV Horiz. Scale: 1"=50'  
 Reviewer: STV Vert. Scale: N/A



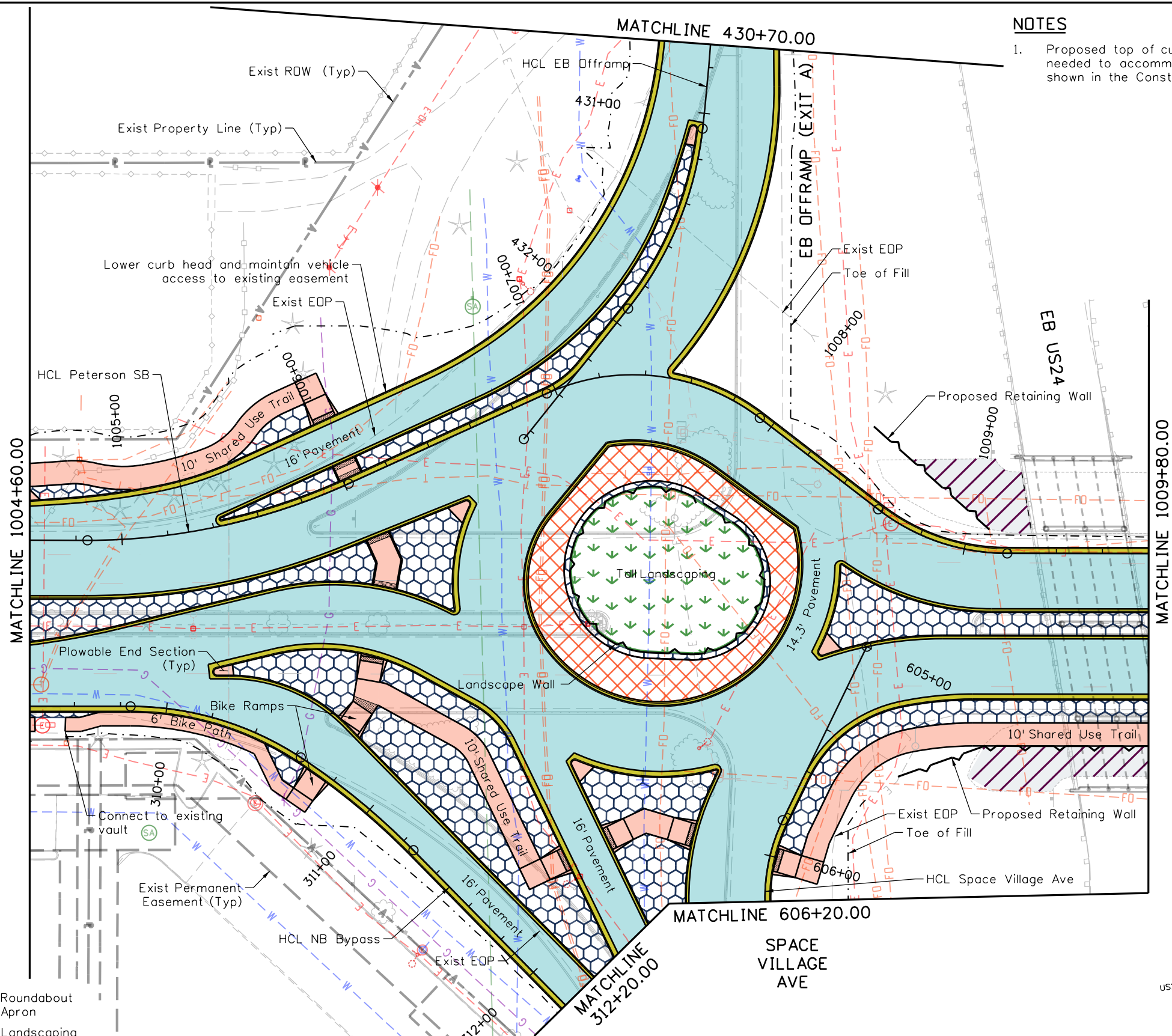
30% PRELIMINARY - NOT FOR CONSTRUCTION



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### NOTES

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



### LEGEND

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP

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 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



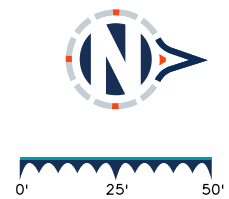
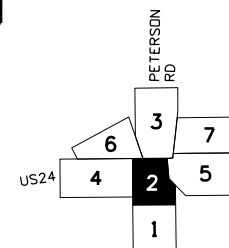
### Sheet Revisions

Date	Comments	Init
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### US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PLAN  
SOUTH ROUNDABOUT

Roadway 2 of 7  
 Sheet Number 32



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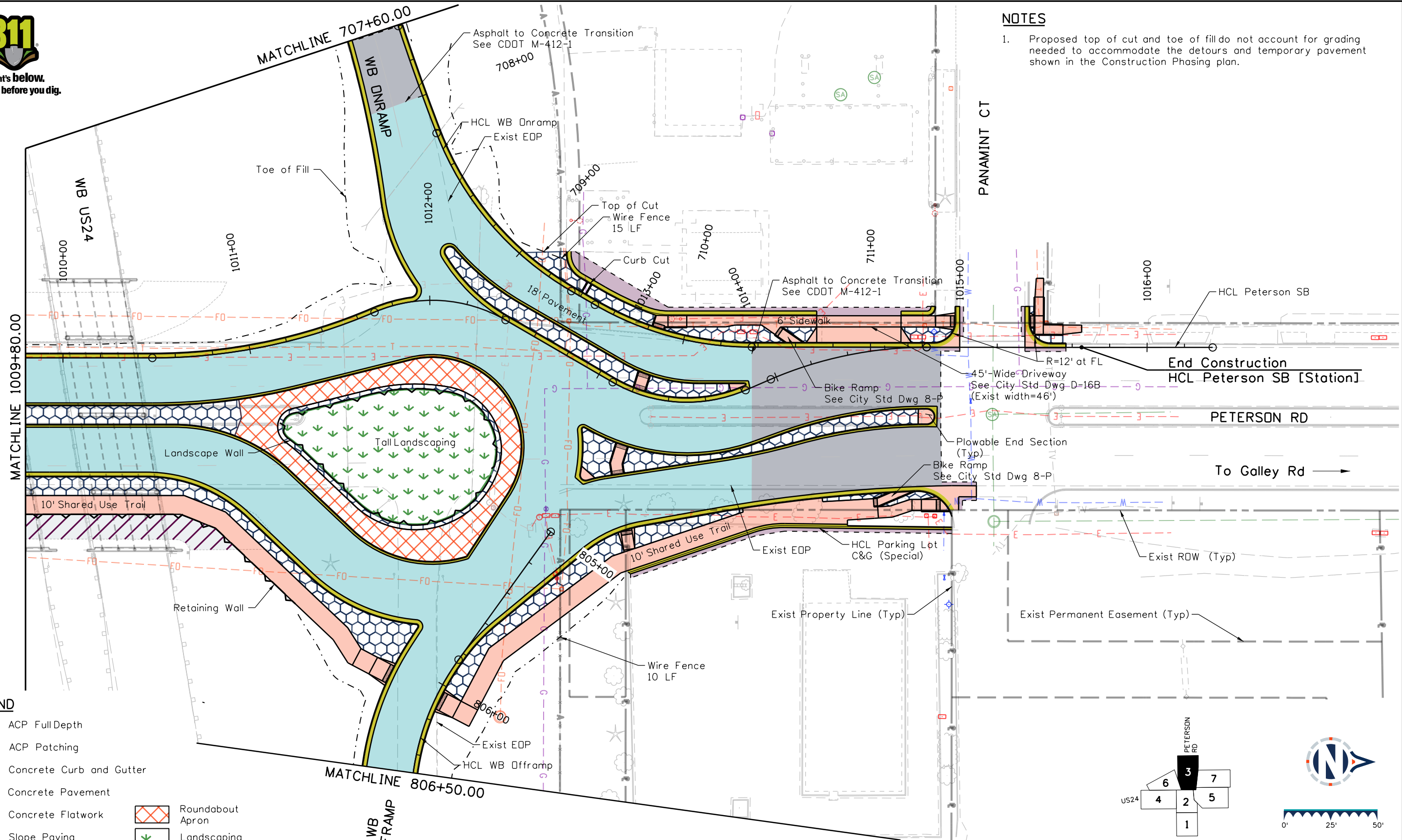




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### NOTES

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



### LEGEND

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP

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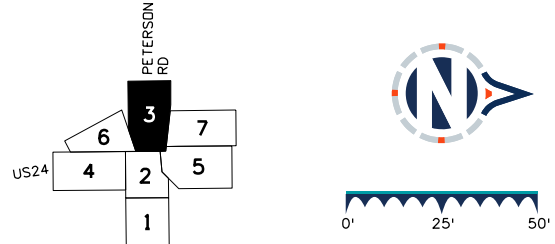


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

**ROADWAY PLAN NORTH ROUNDABOUT**

Roadway 3 of 7  
Sheet Number 33



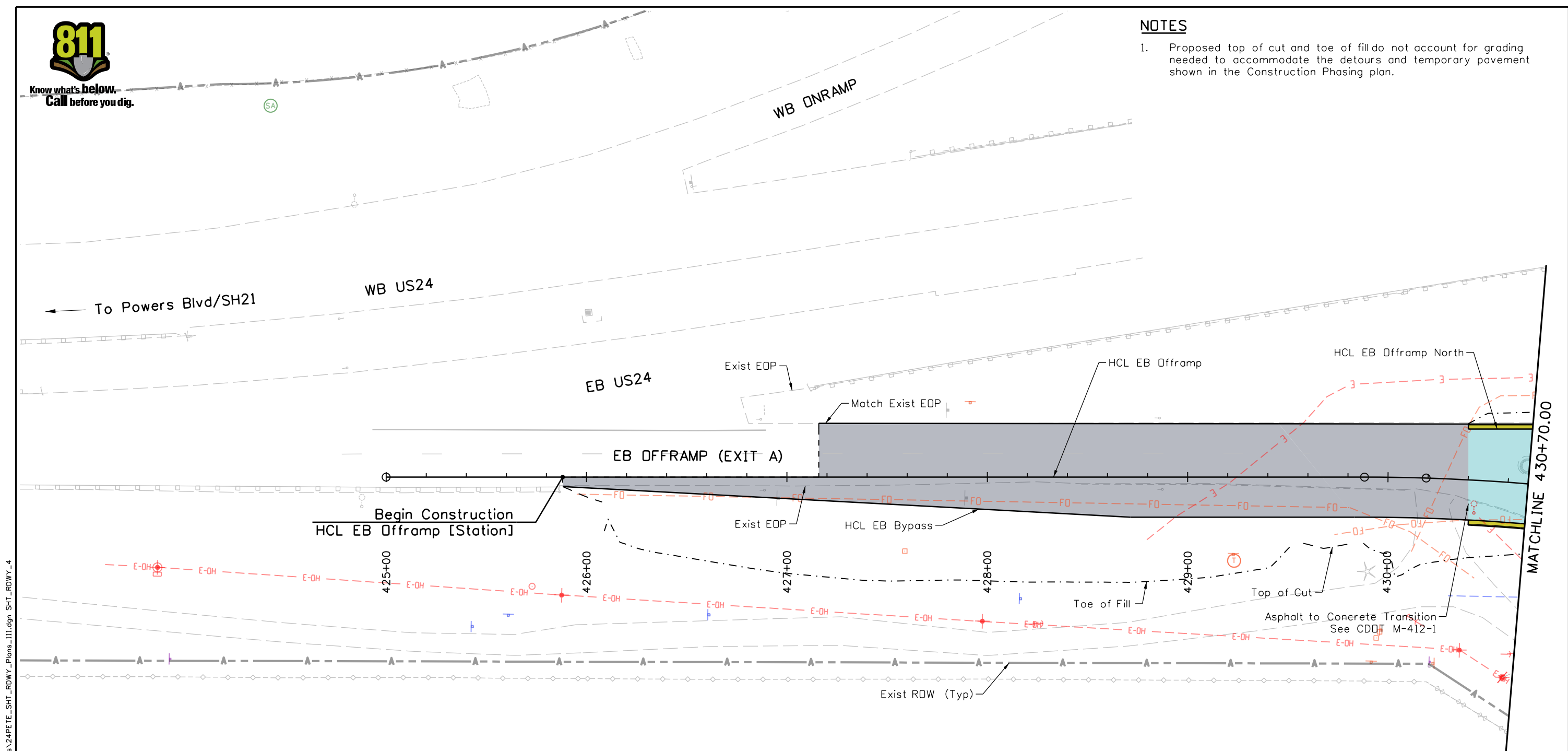
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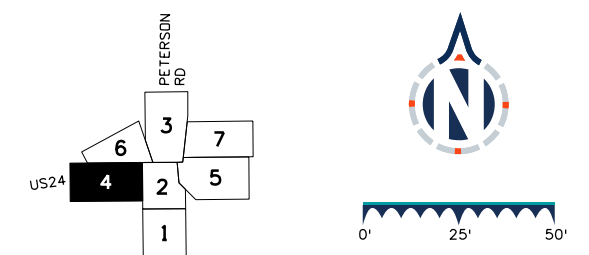
### NOTES

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



### LEGEND

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP



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 Reviewer: STV    Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PLAN EASTBOUND OFFRAMP (EXIT A)	Roadway 4 of 7 Sheet Number 34

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

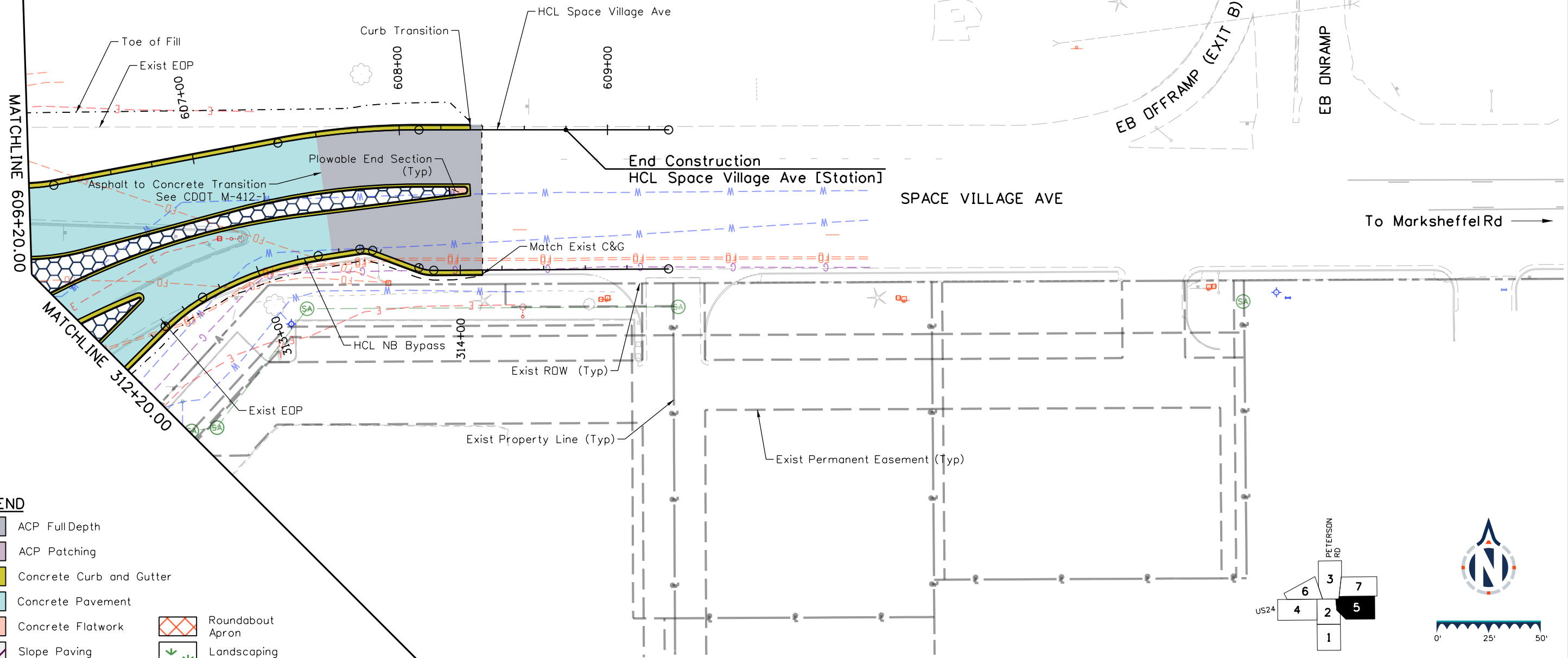


Know what's below.  
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EB US24

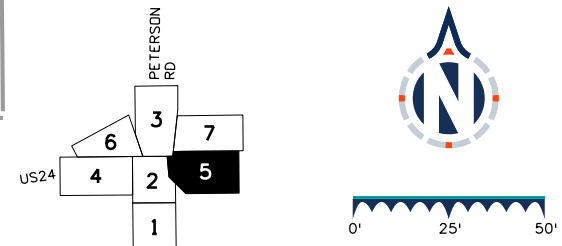
**NOTES**

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



**LEGEND**

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP



**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PLAN  
SPACE VILLAGE AVE

Roadway 5 of 7  
Sheet Number 35

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Detailer: KAG Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=50'  
 Reviewer: STV Vert. Scale: N/A



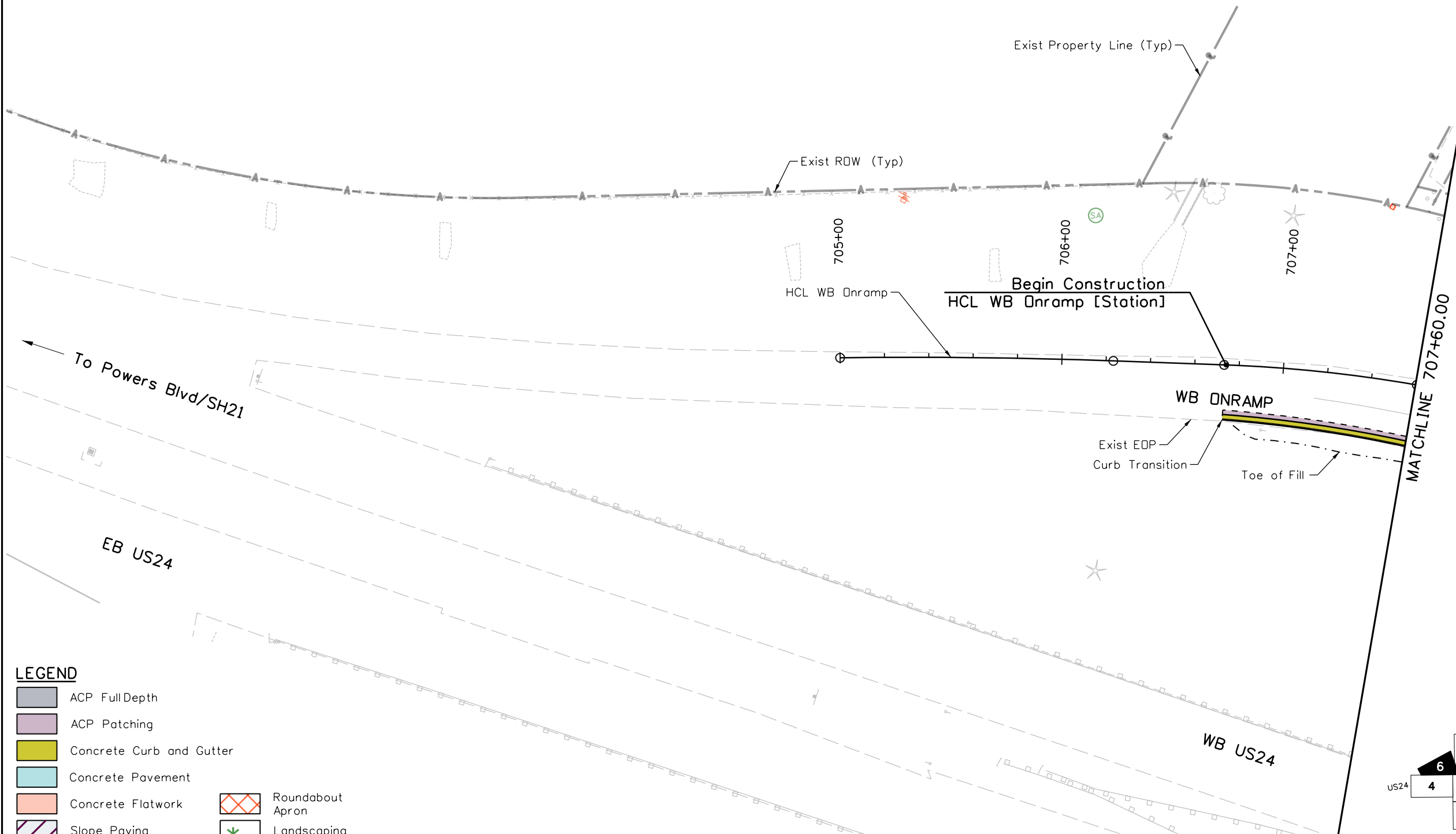
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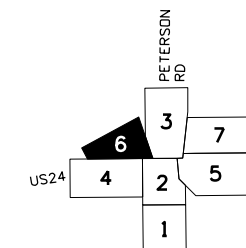
### NOTES

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



### LEGEND

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP



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Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

**ROADWAY PLAN  
WESTBOUND ONRAMP**

Roadway 6 of 7  
Sheet Number 36

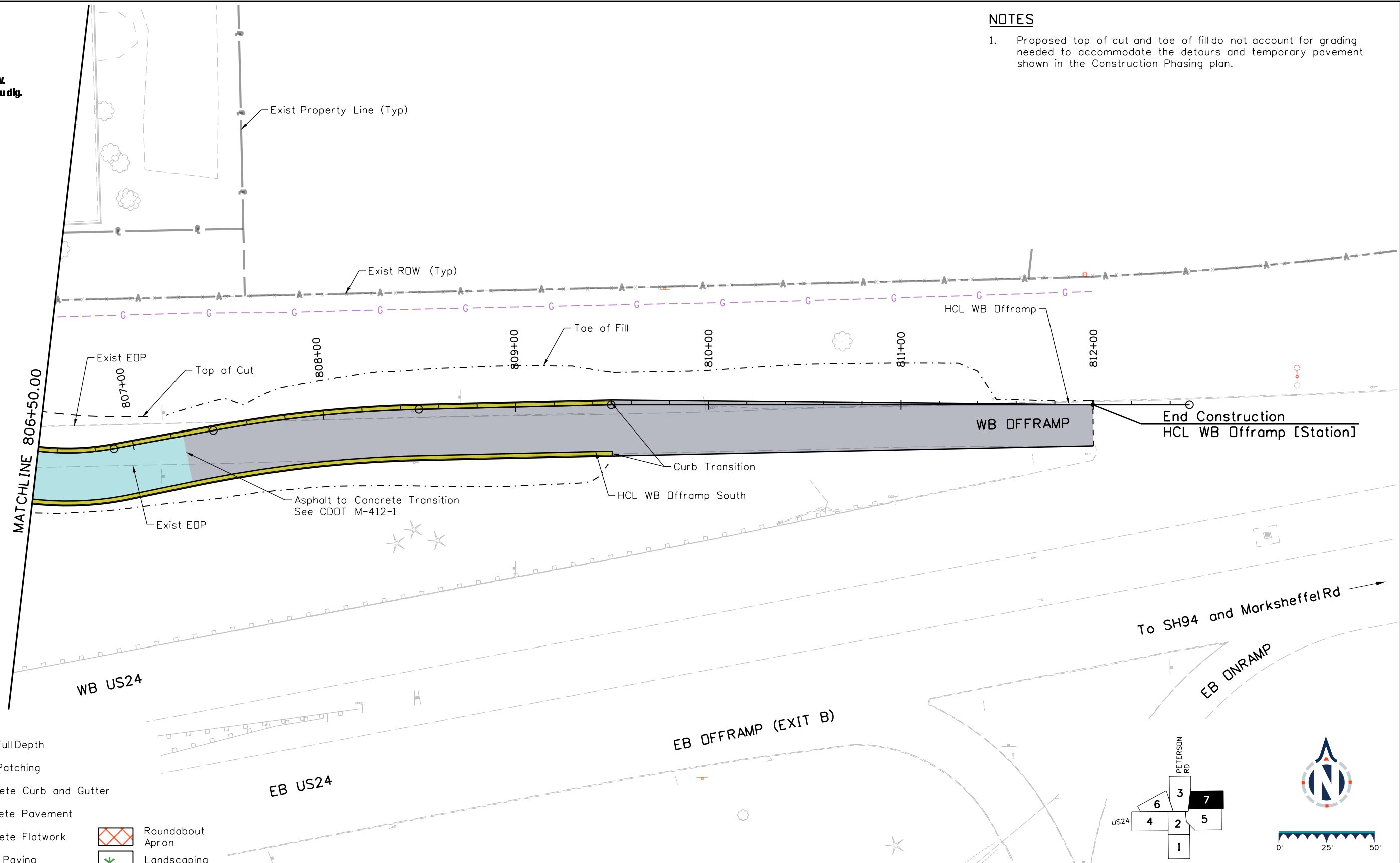
**30% PRELIMINARY - NOT FOR CONSTRUCTION**



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### NOTES

- Proposed top of cut and toe of fill do not account for grading needed to accommodate the detours and temporary pavement shown in the Construction Phasing plan.



### LEGEND

- ACP Full Depth
- ACP Patching
- Concrete Curb and Gutter
- Concrete Pavement
- Concrete Flatwork
- Slope Paving
- Sawcut
- Roundabout Apron
- Landscaping
- PCMP

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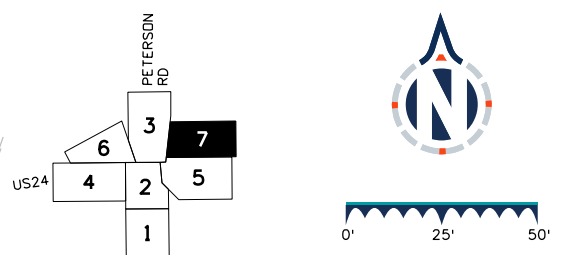
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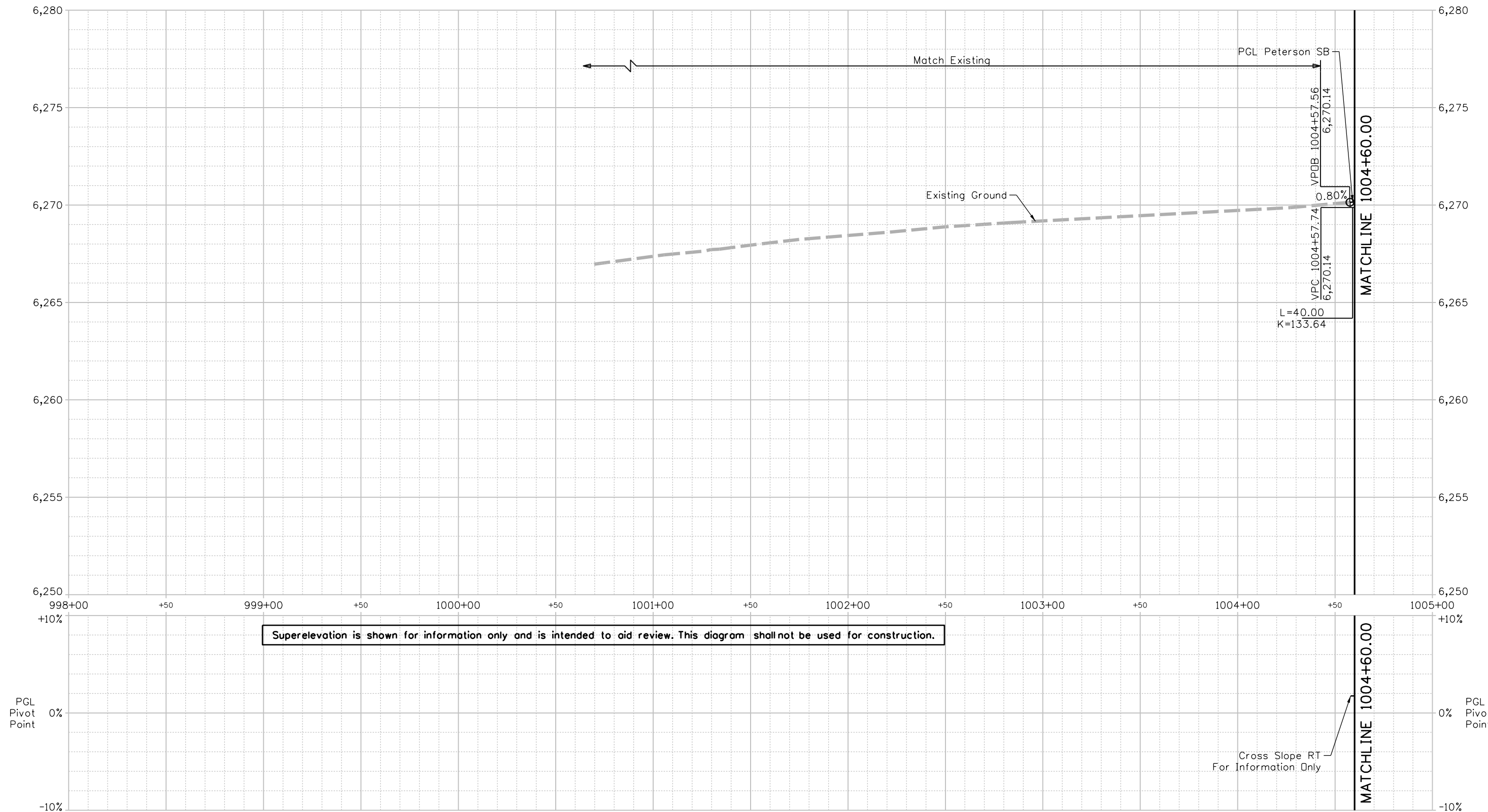
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PLAN WESTBOUND OFFRAMP	Roadway 7 of 7 Sheet Number 37



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# PGL PETERSON SB at HCL PETERSON SB



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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
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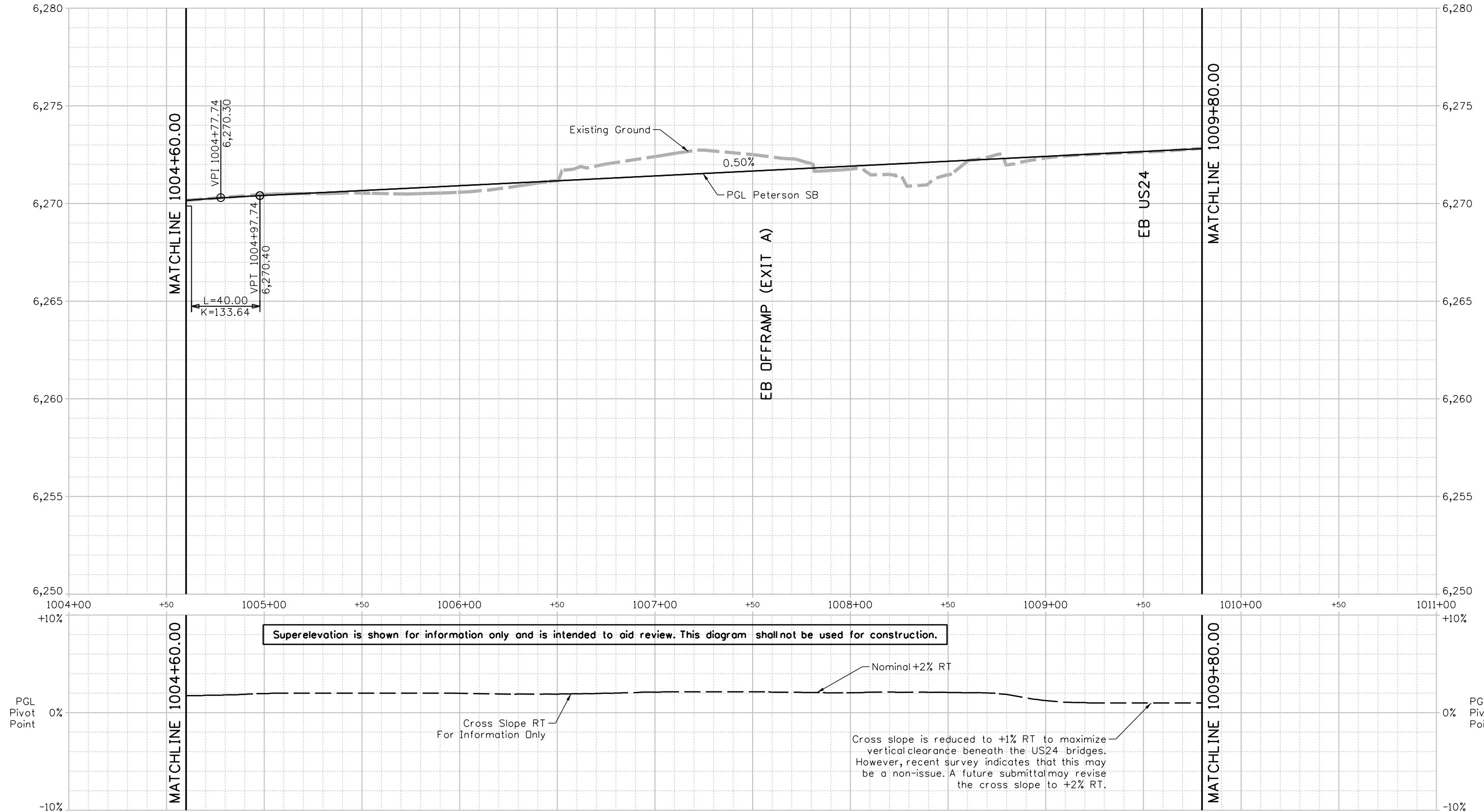


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL PETERSON SB	Profile 1 of 19
	Sheet Number 38

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# PGL PETERSON SB at HCL PETERSON SB



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Sheet Revisions		
Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

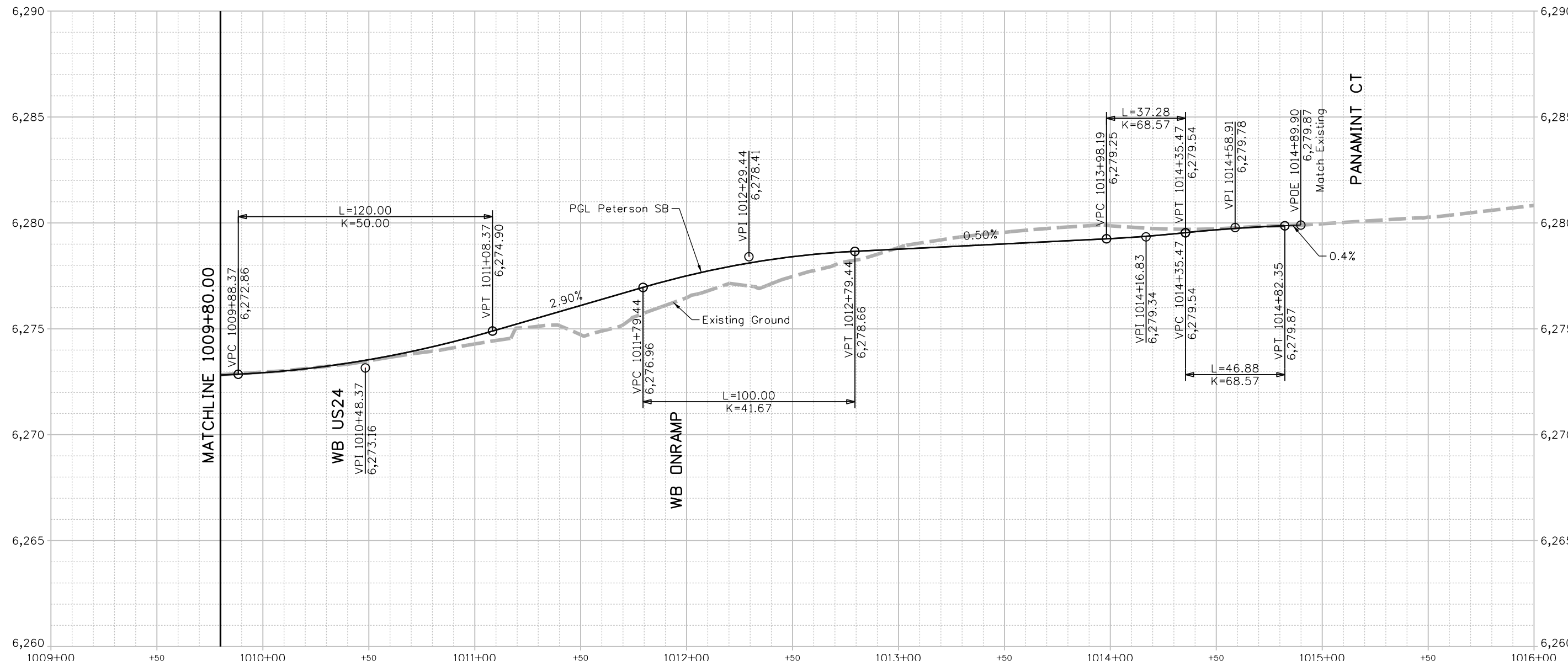
**ROADWAY PROFILE  
PGL PETERSON SB**

Profile	2 of 19
Sheet Number	39

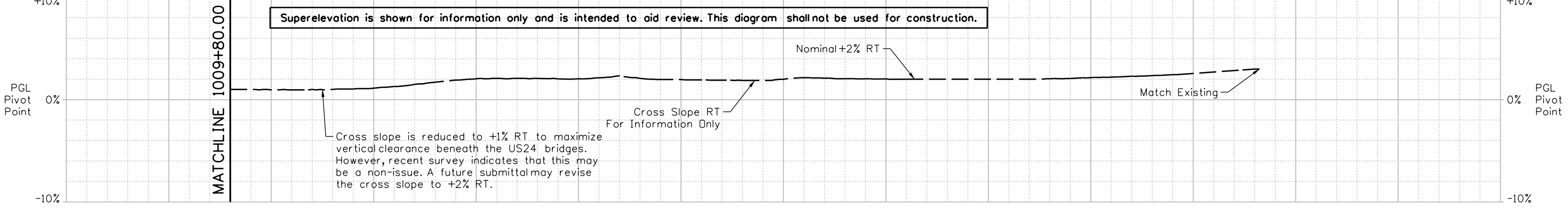
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# PGL PETERSON SB at HCL PETERSON SB



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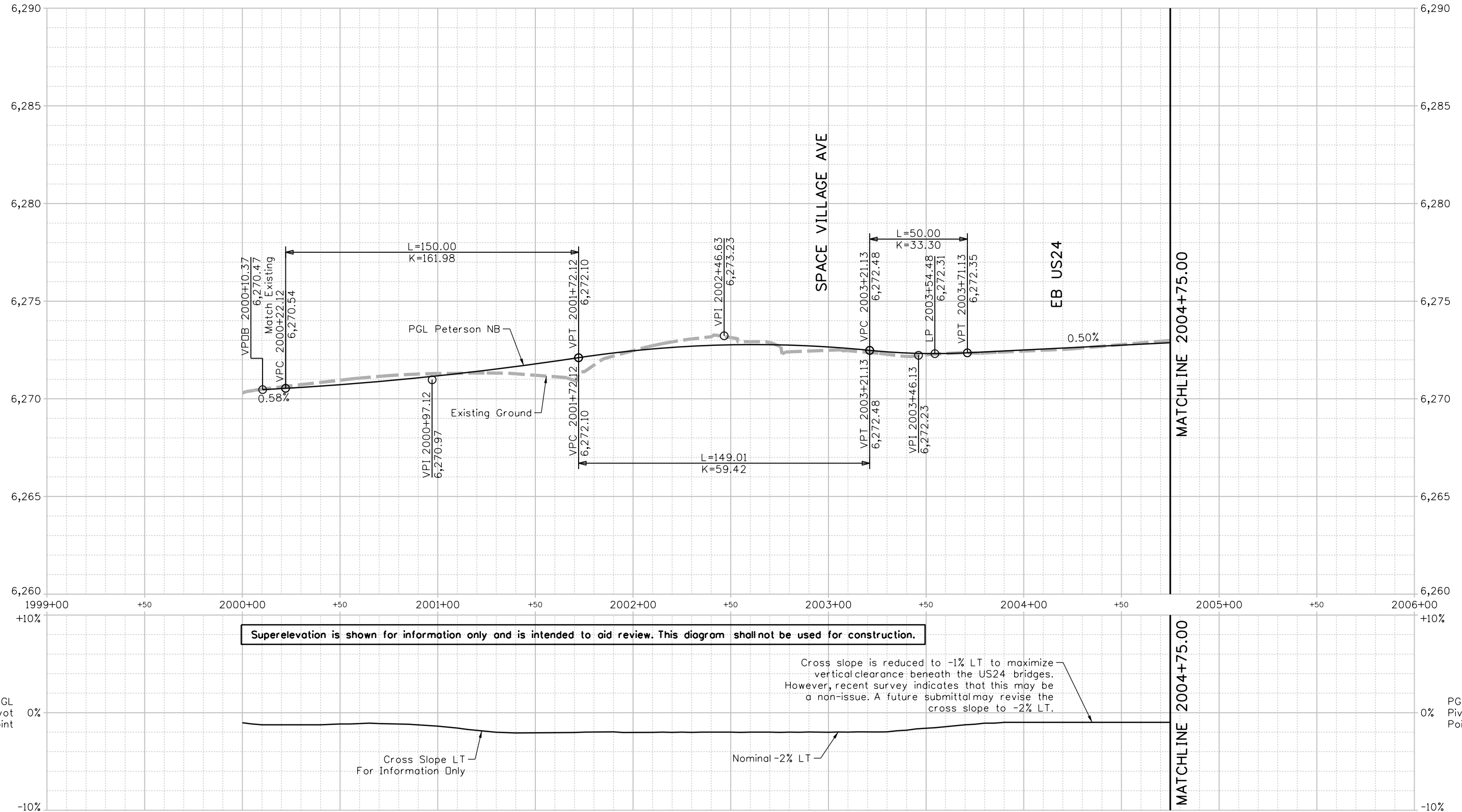
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL PETERSON SB	Profile 3 of 19
	Sheet Number 40

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# PGL PETERSON NB at HCL PETERSON NB



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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

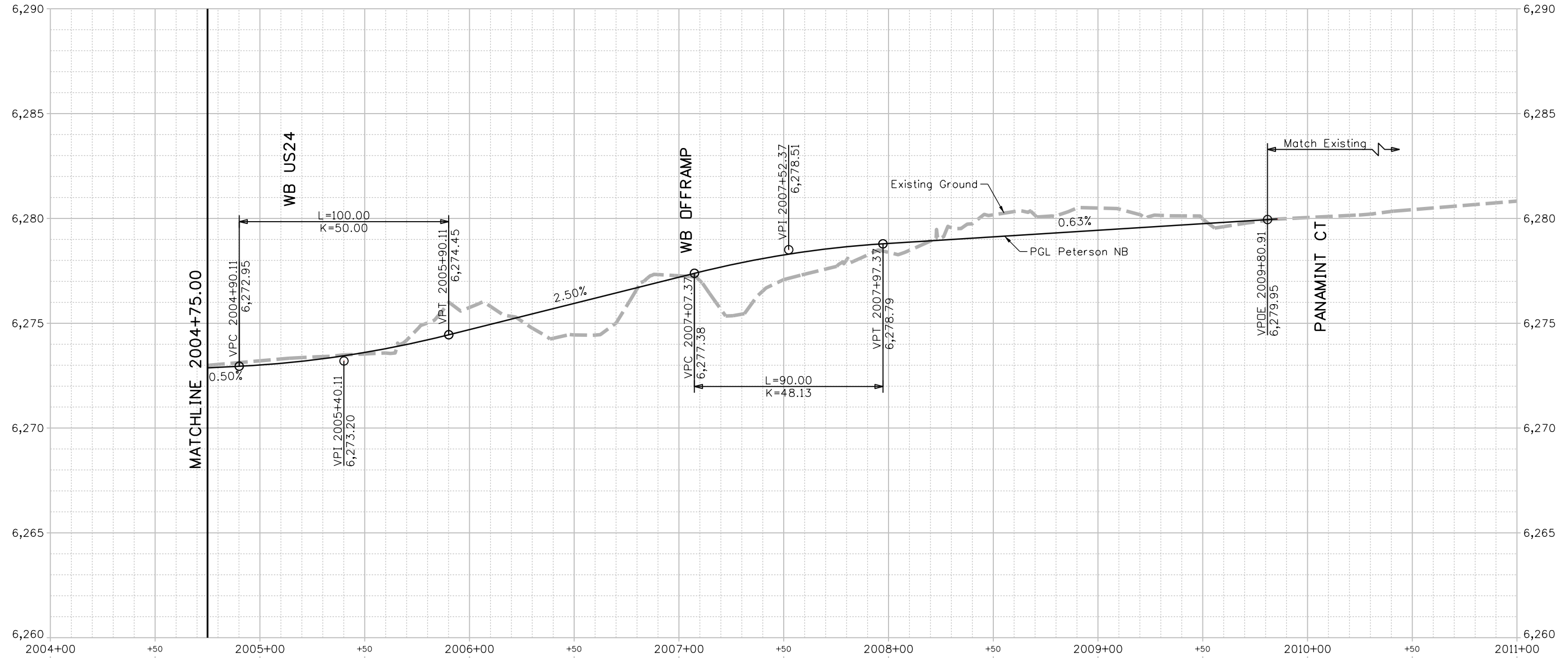


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL PETERSON NB	Profile 4 of 19
	Sheet Number 41

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL PETERSON NB at HCL PETERSON NB



Superelevation is shown for information only and is intended to aid review. This diagram shall not be used for construction.

Cross slope is reduced to -1% LT to maximize vertical clearance beneath the US24 bridges. However, recent survey indicates that this may be a non-issue. A future submittal may revise the cross slope to -2% LT.

Nominal -2% LT

Cross Slope LT For Information Only

Match Existing

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 Designer: STV    Horiz. Scale: 1"=50'  
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Sheet Revisions		
Date	Comments	Init

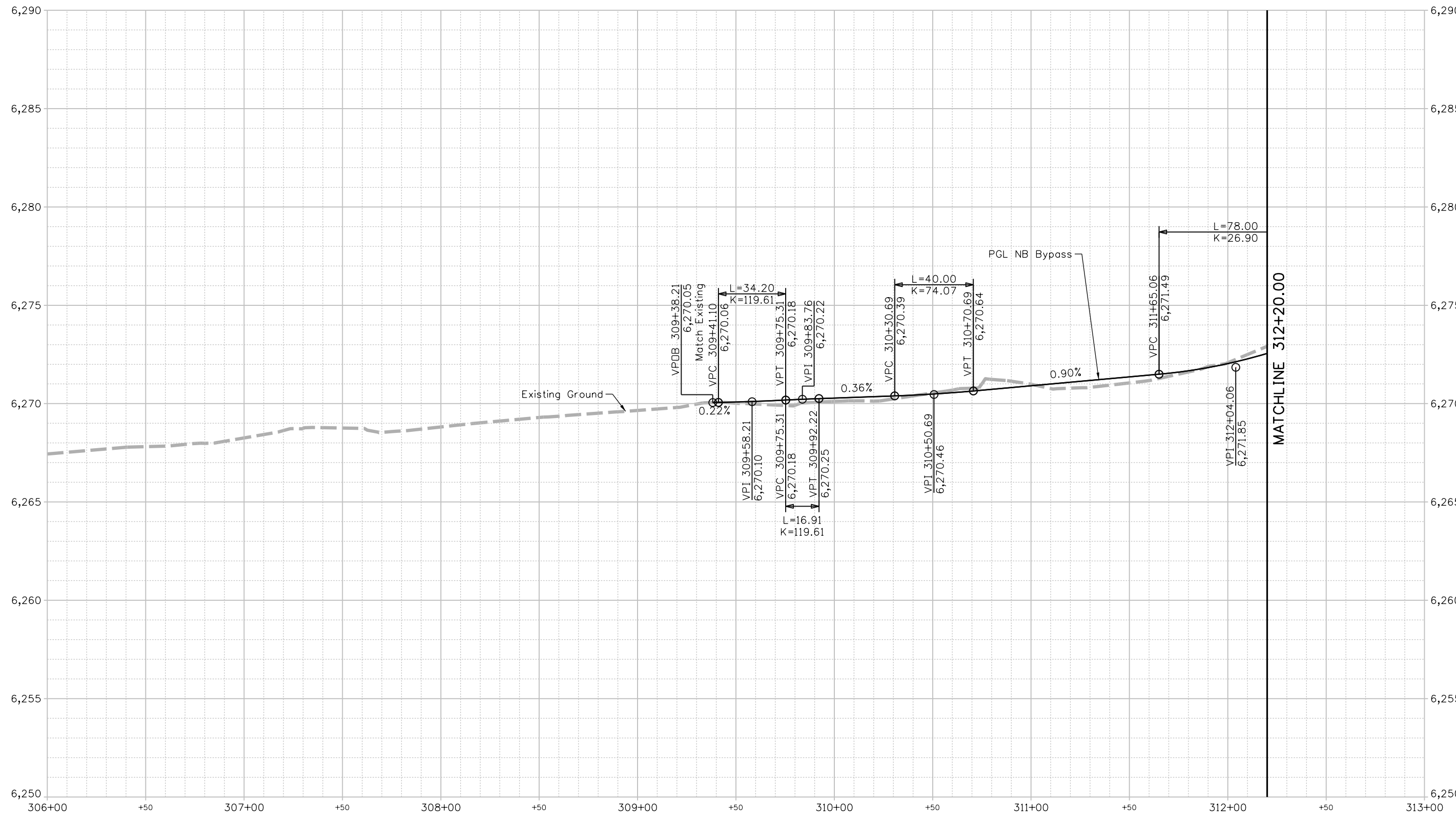
US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PROFILE  
 PGL PETERSON NB

Profile 5 of 19  
 Sheet Number 42

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL NB BYPASS at HCL NB BYPASS



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Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

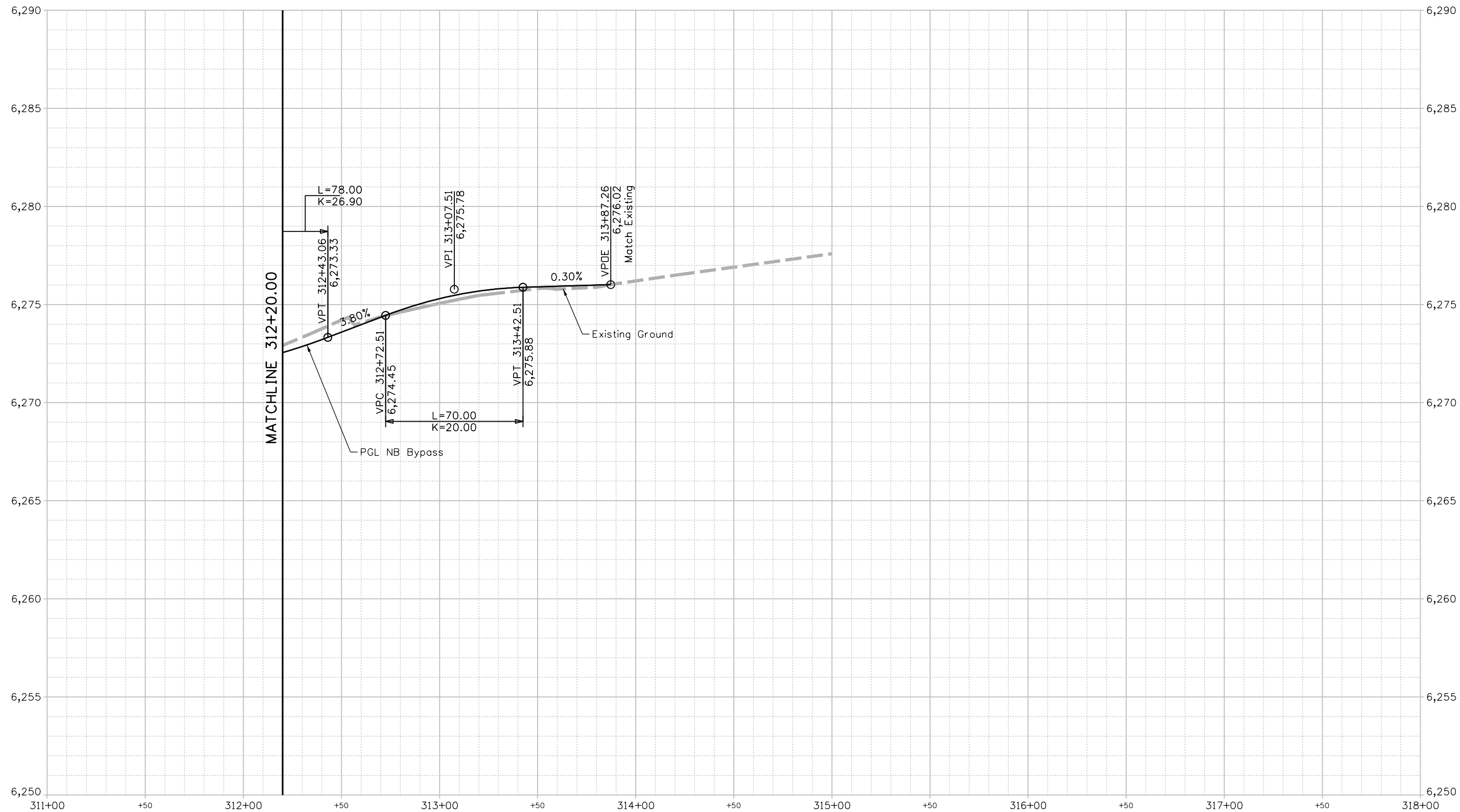


Sheet Revisions		
Date	Comments	Init
000		
000		

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL NB BYPASS	Profile 6 of 19
	Sheet Number 43

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL NB BYPASS at HCL NB BYPASS



Keith Given 12/20/2023 9:32:37 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\_111.dgn SHT\_305 SR NB Bypass\_2

**BASIS PARTNERS**  
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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: 1"=5'



Sheet Revisions		
Date	Comments	Init

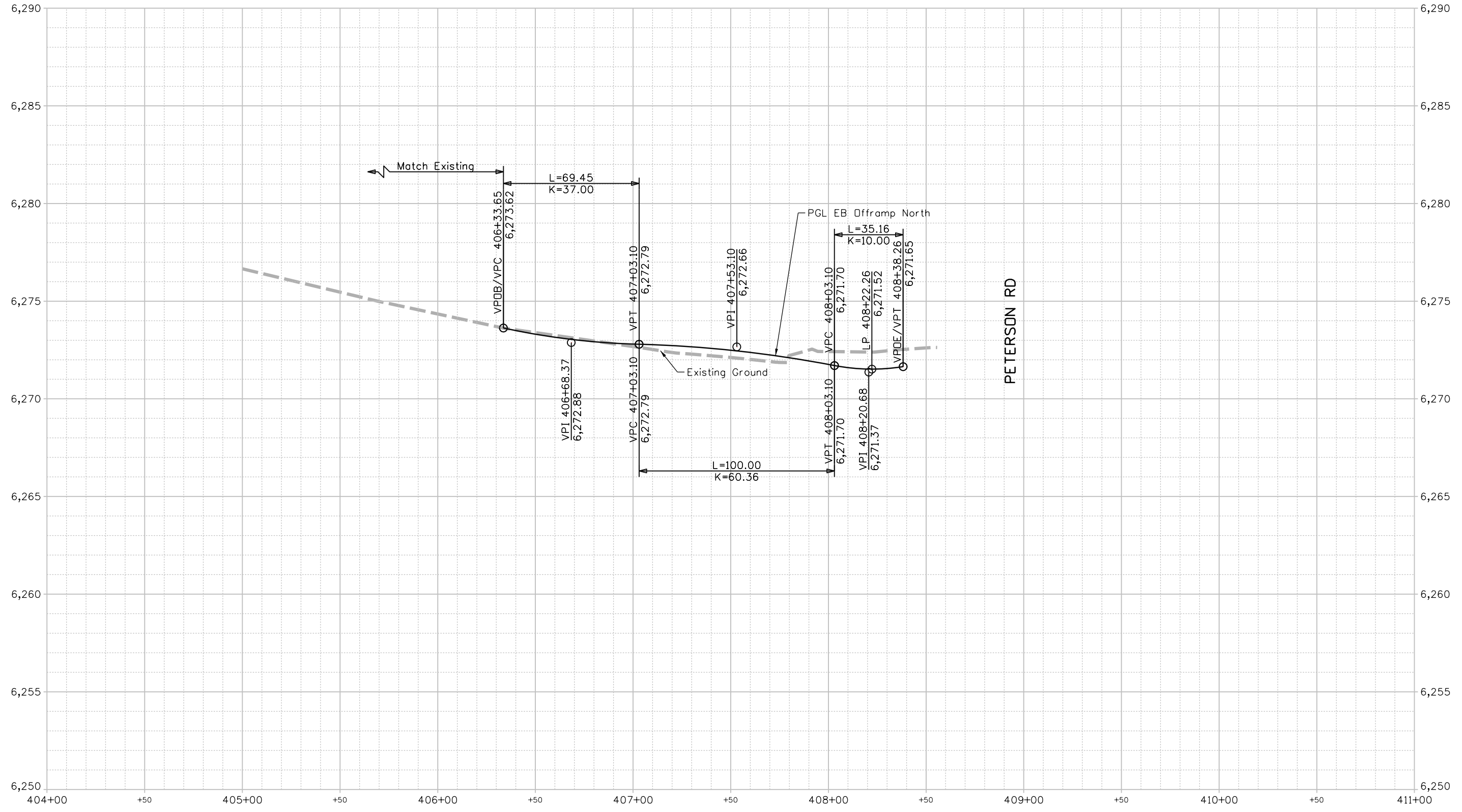
US Highway 24 & Peterson Blvd/Rd Roundabouts

**ROADWAY PROFILE  
PGL NB BYPASS**

Profile	7 of 19
Sheet Number	44

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL EB OFFRAMP NORTH at HCL EB OFFRAMP NORTH



KeithGiven 12/20/2023 9:32:38 AM V:\9000 Work\9005 Basefiles\24PETE\_SHT\_RDWY\_Profiles\_111.dgn SHT\_405 SR EB Approach\_1

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

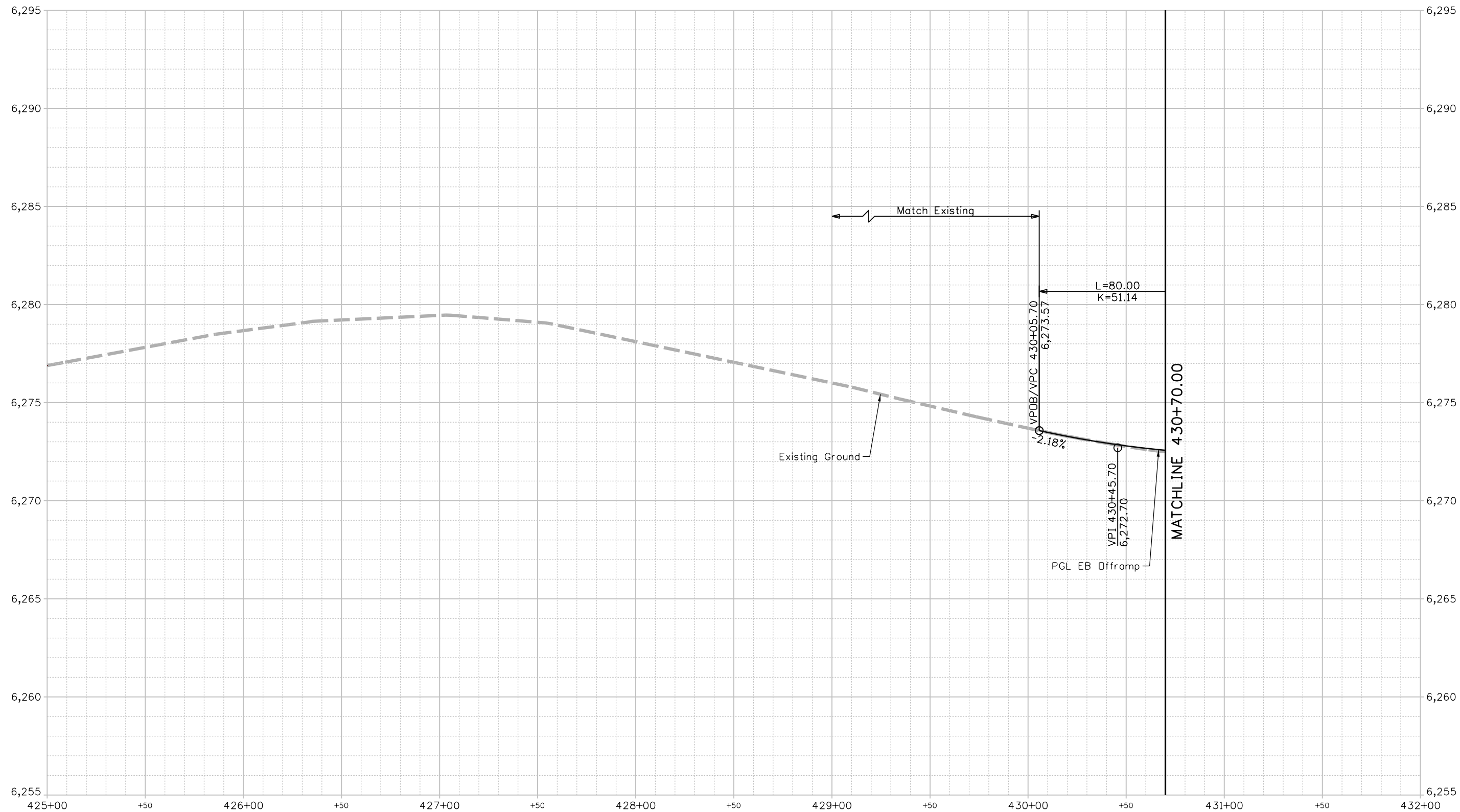


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL EB OFFRAMP NORTH	
Profile	8 of 19
Sheet Number	45

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL EB OFFRAMP at HCL EB OFFRAMP



Keith Given 12/20/2023 9:32:38 AM V:\9000 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\_111.dgn SHT\_425 SR EB Approach\_1

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

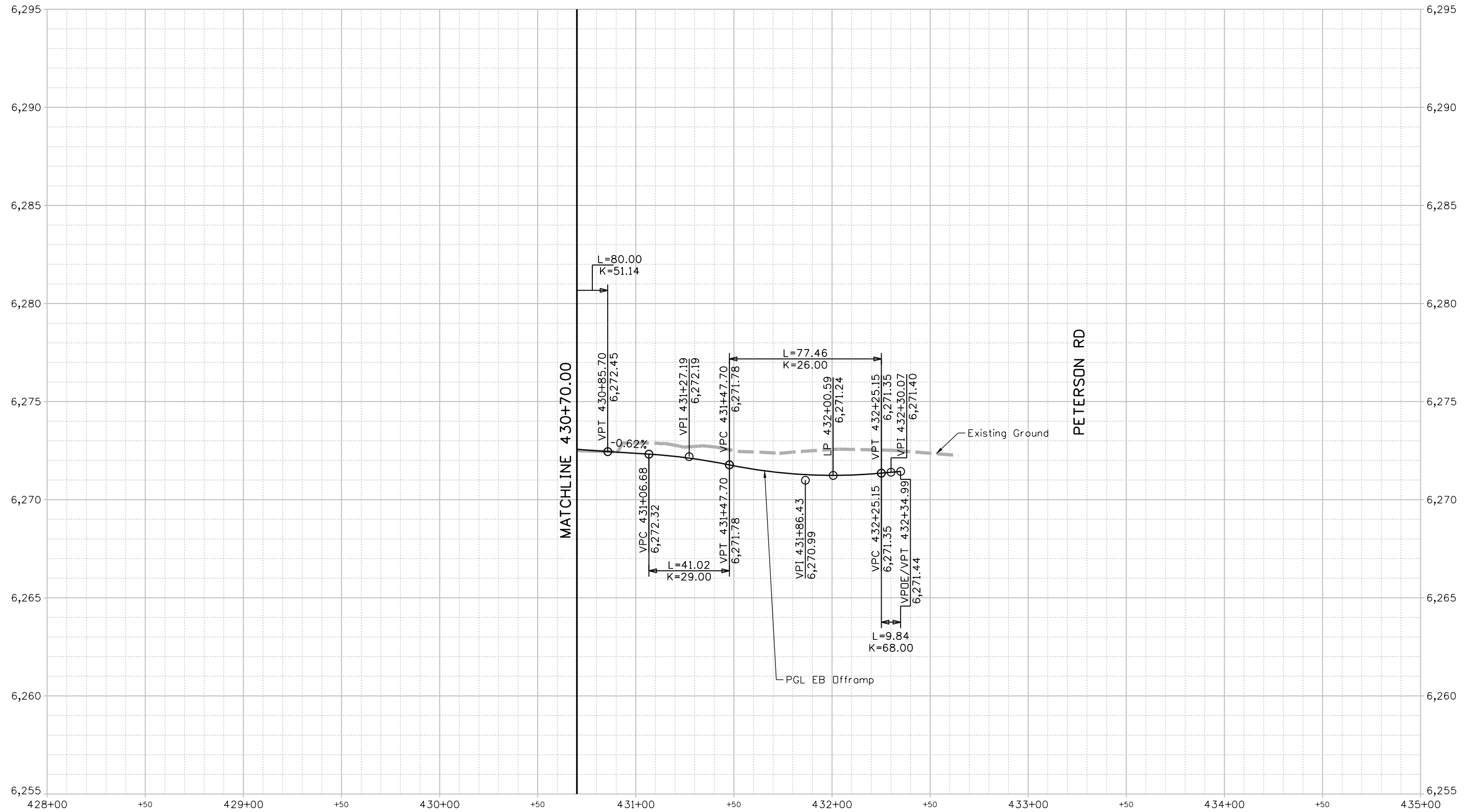


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL EB OFFRAMP	Profile 9 of 19
Sheet Number 46	

30% PRELIMINARY - NOT FOR CONSTRUCTION

# PGL EB OFFRAMP at HCL EB OFFRAMP



Keith Given 12/20/2023 9:32:39 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\_111.dgn SHT\_425 SR EB Approach\_2

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

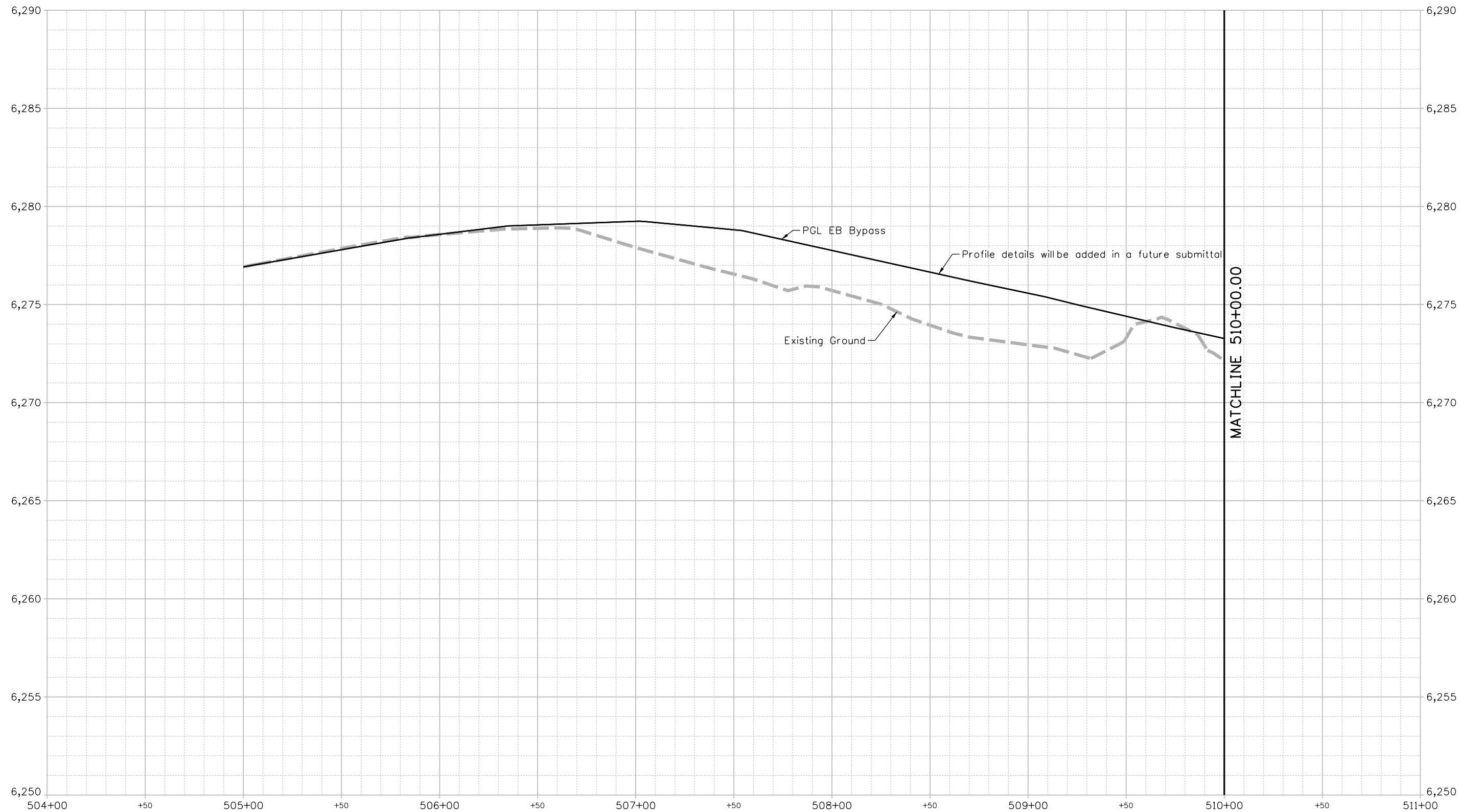


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL EB OFFRAMP	Profile 10 of 19
	Sheet Number 47

30% PRELIMINARY - NOT FOR CONSTRUCTION

# PGL EB BYPASS at HCL EB BYPASS



K:KeithGiven 12/20/2023 9:32:40 AM V:\9000 Work\9005 Basefiles\24PETE\_SHT\_RDWY\_Profiles\_111.dgn SHT\_505 SR EB Bypass\_1

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: 1"=5'



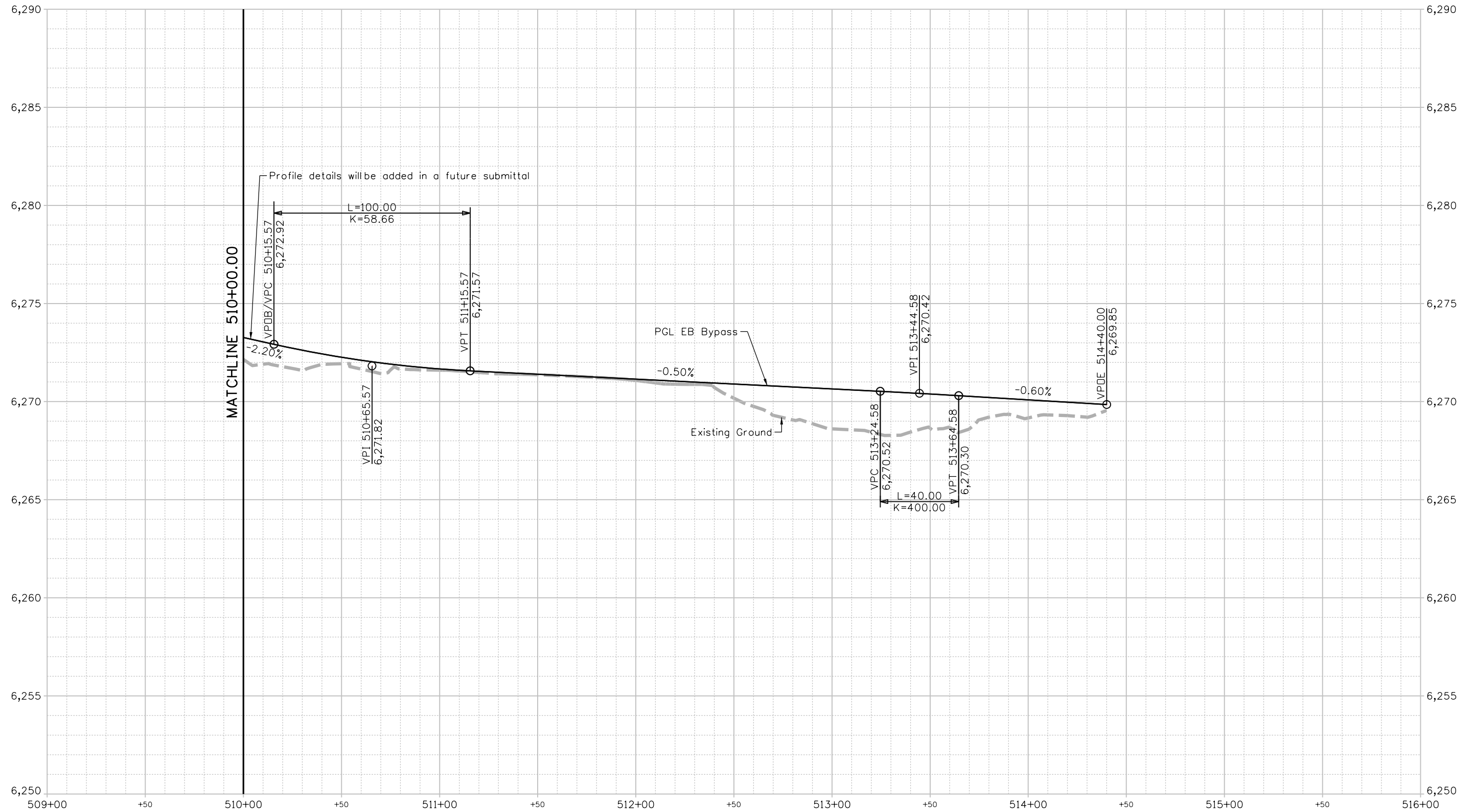
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL EB BYPASS	Profile 11 of 19
	Sheet Number 48

**30% PRELIMINARY - NOT FOR CONSTRUCTION**



# PGL EB BYPASS at HCL EB BYPASS



Keith Given 12/20/2023 9:32:40 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\111.dgn SHT\_505 SR EB Bypass\_2

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

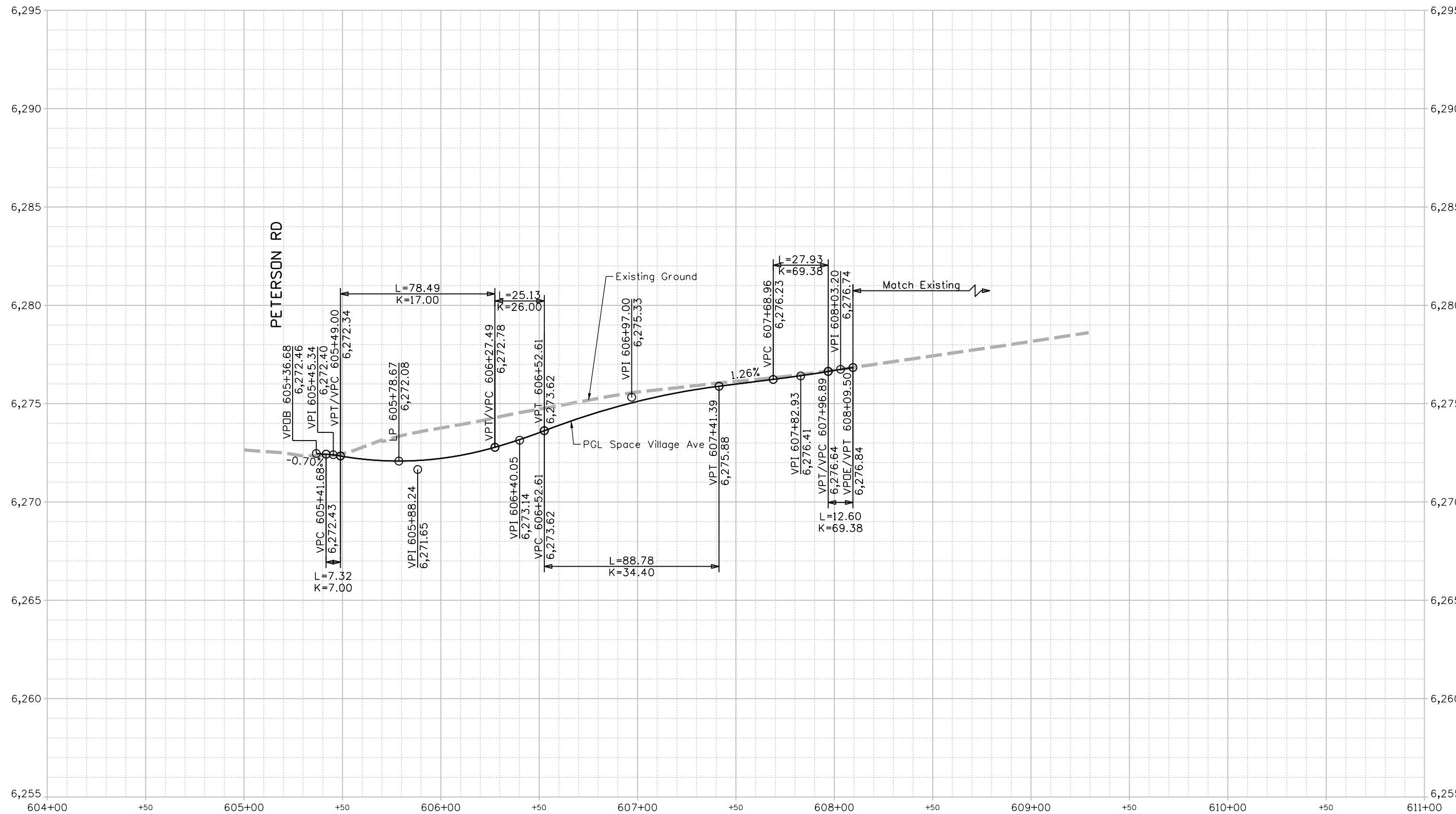


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL EB BYPASS	Profile 12 of 19
	Sheet Number 49

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL SPACE VILLAGE AVE at HCL SPACE VILLAGE AVE



Keith Given 12/20/2023 9:32:41 AM V:\900 Work 905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\111.dgn SHT\_605 SR Space Village Ave\_1

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Detailer: KAG Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=50'  
 Reviewer: STV Vert. Scale: 1"=5'



Sheet Revisions		
Date	Comments	Init

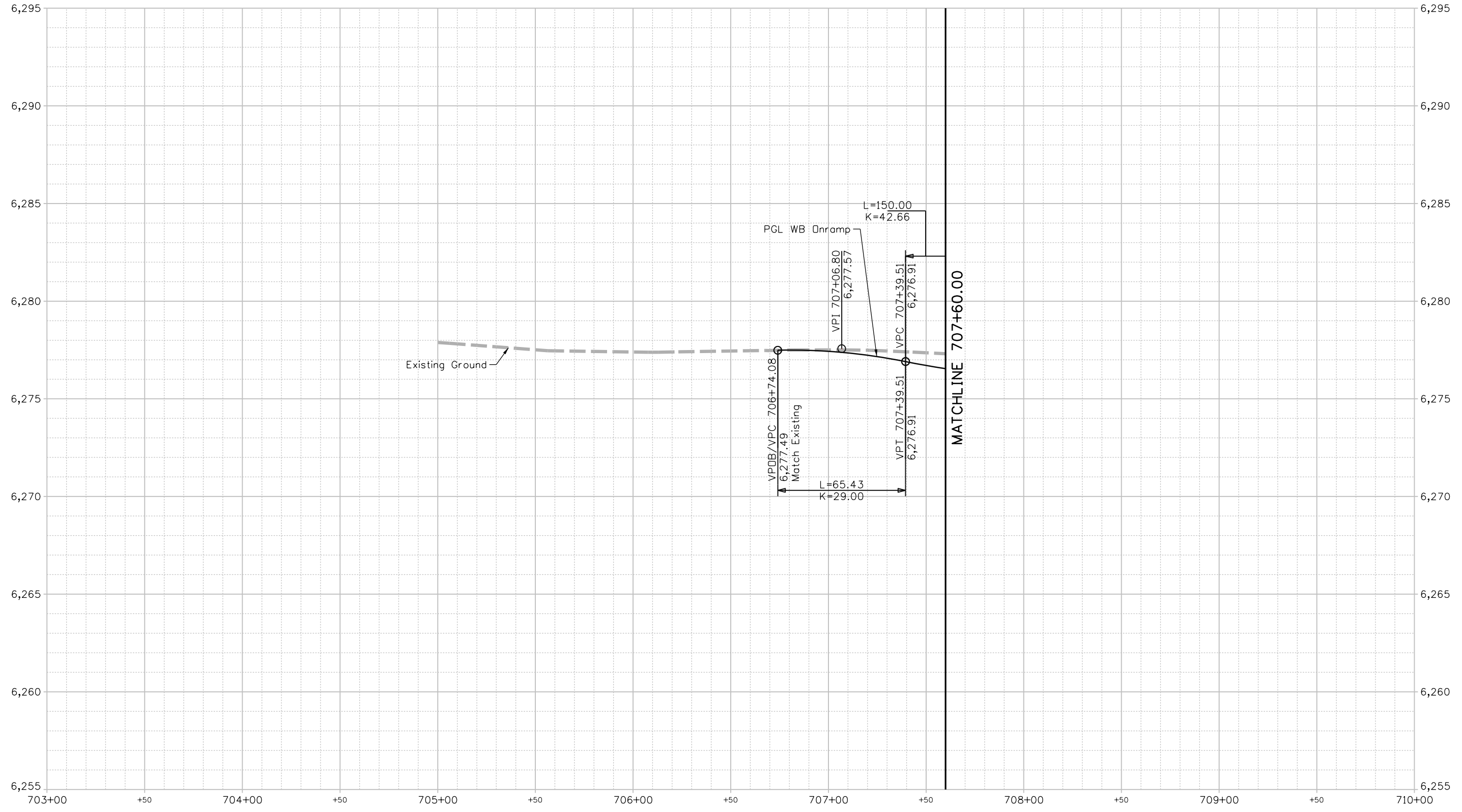
US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PROFILE  
 PGL SPACE VILLAGE AVE

Profile 13 of 19  
 Sheet Number 50

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL WB ONRAMP at HCL WB ONRAMP



Keith Given 12/20/2023 9:32:41 AM V:\900 Work 905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\111.dgn SHT\_705 NR SB Bypass\_1

**BASIS PARTNERS** Basis Partners  
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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

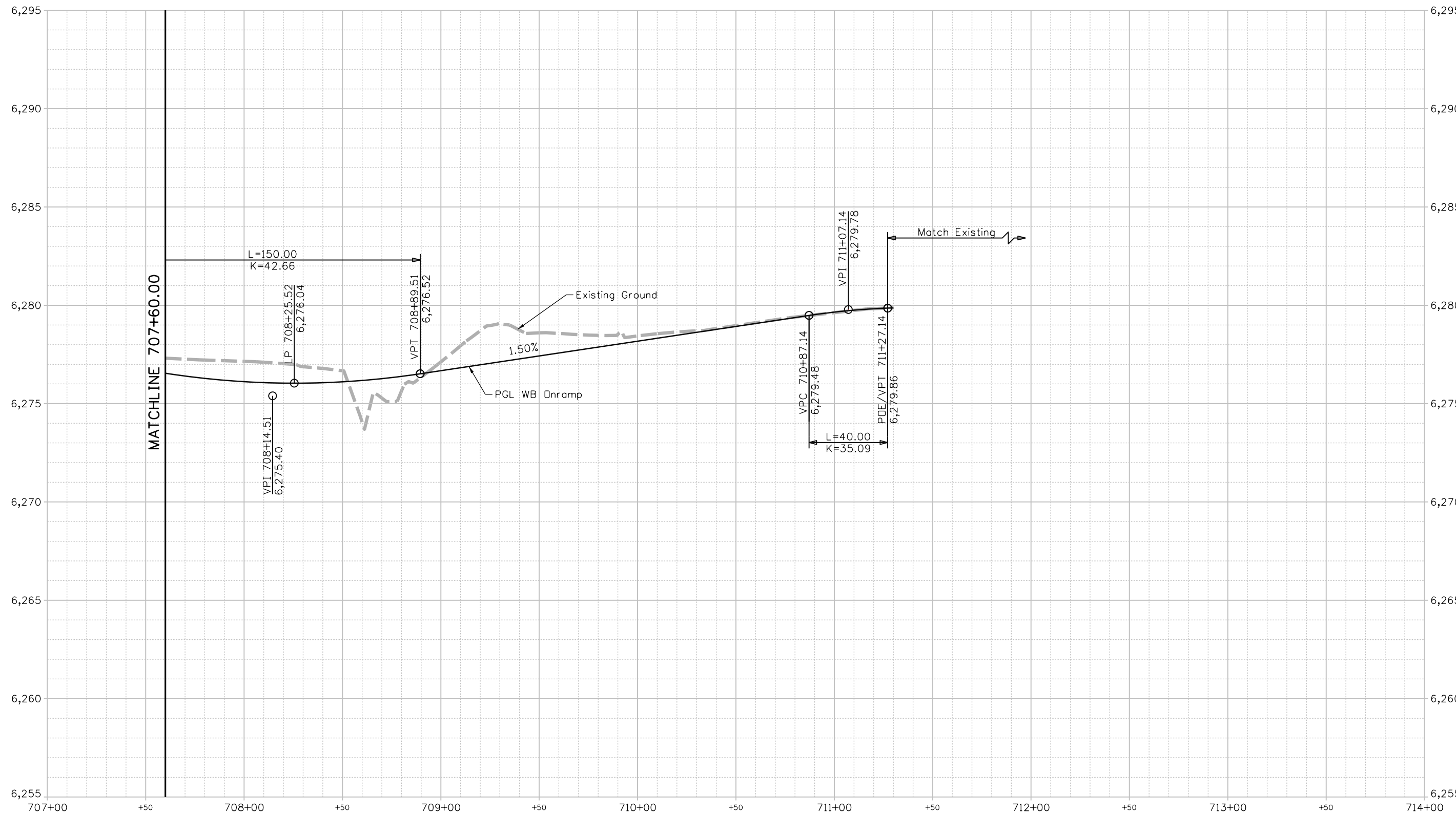


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL WB ONRAMP	Profile 14 of 19 Sheet Number 51

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL WB ONRAMP at HCL WB ONRAMP



Keith Given 12/20/2023 9:32:42 AM V:\9000 Work\9005 Basefiles\24PETE\_SHT\_RDWY\_Profiles\111.dgn SHT\_705 NR SB Bypass\_2

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: 1"=5'



Sheet Revisions		
Date	Comments	Init

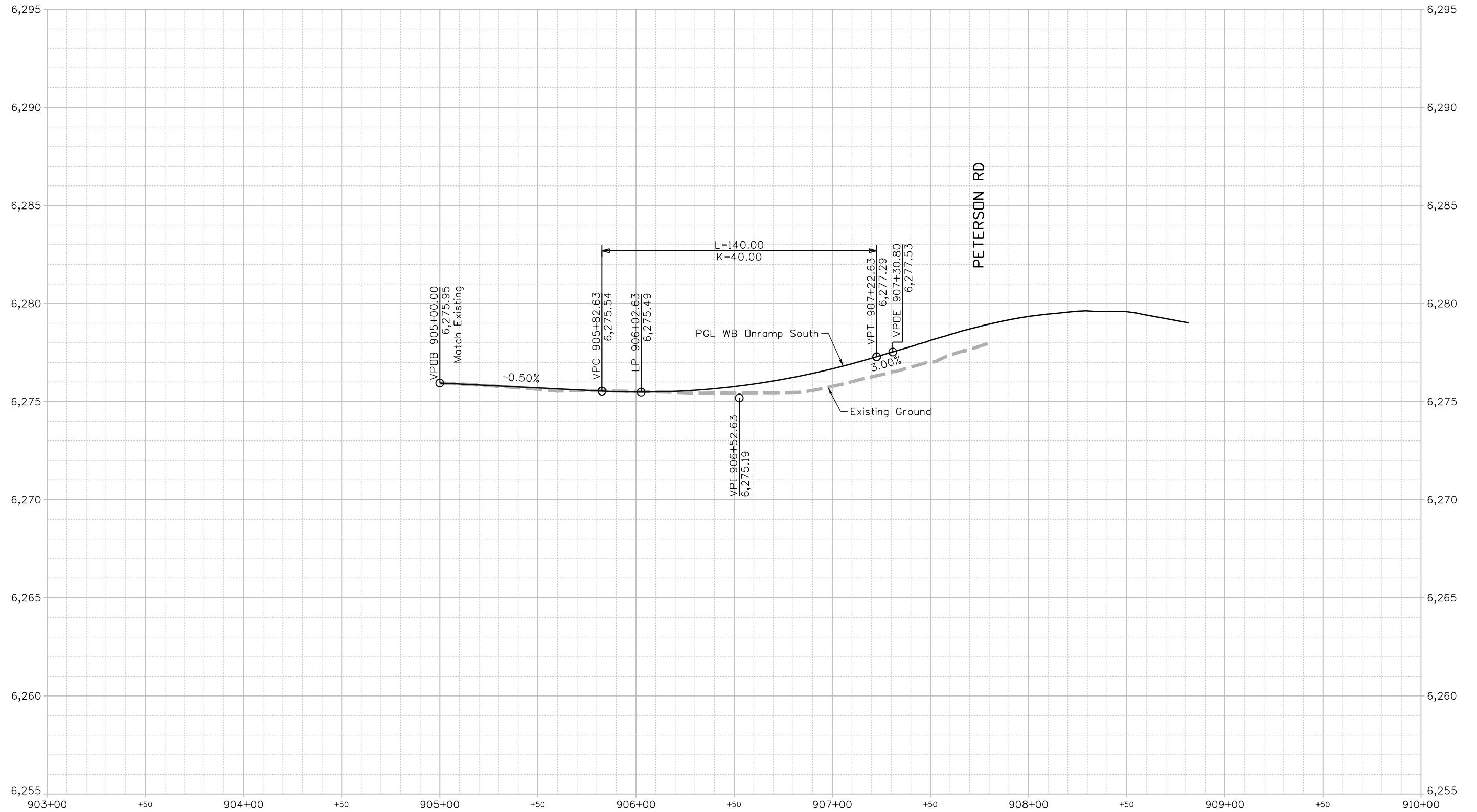
US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PROFILE  
PGL WB ONRAMP

Profile 15 of 19  
 Sheet Number 52

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL WB ONRAMP SOUTH at HCL WB ONRAMP SOUTH



Keith Given 12/20/2023 9:32:42 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\111.dgn SHT\_905 NR WB Onramp\_1

**BASIS PARTNERS** Basis Partners  
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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

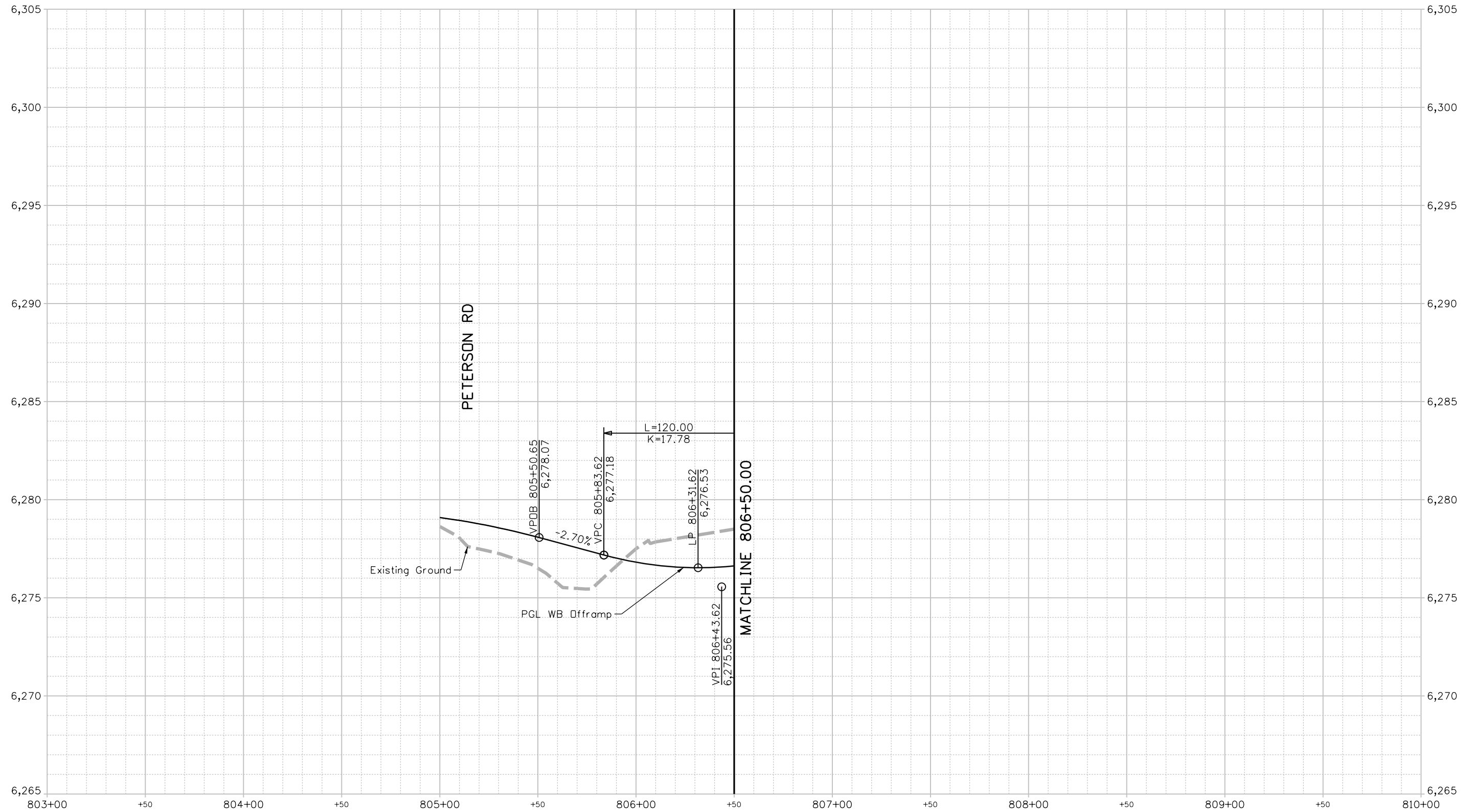


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL WB ONRAMP SOUTH	Profile 16 of 19
	Sheet Number 53

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

PGL WB OFFRAMP at HCL WB OFFRAMP



Keith Given 12/20/2023 9:32:43 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Profiles\111.dgn SHT\_805 NR WB Offramp\_1

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: STV	Vert. Scale: 1"=5'

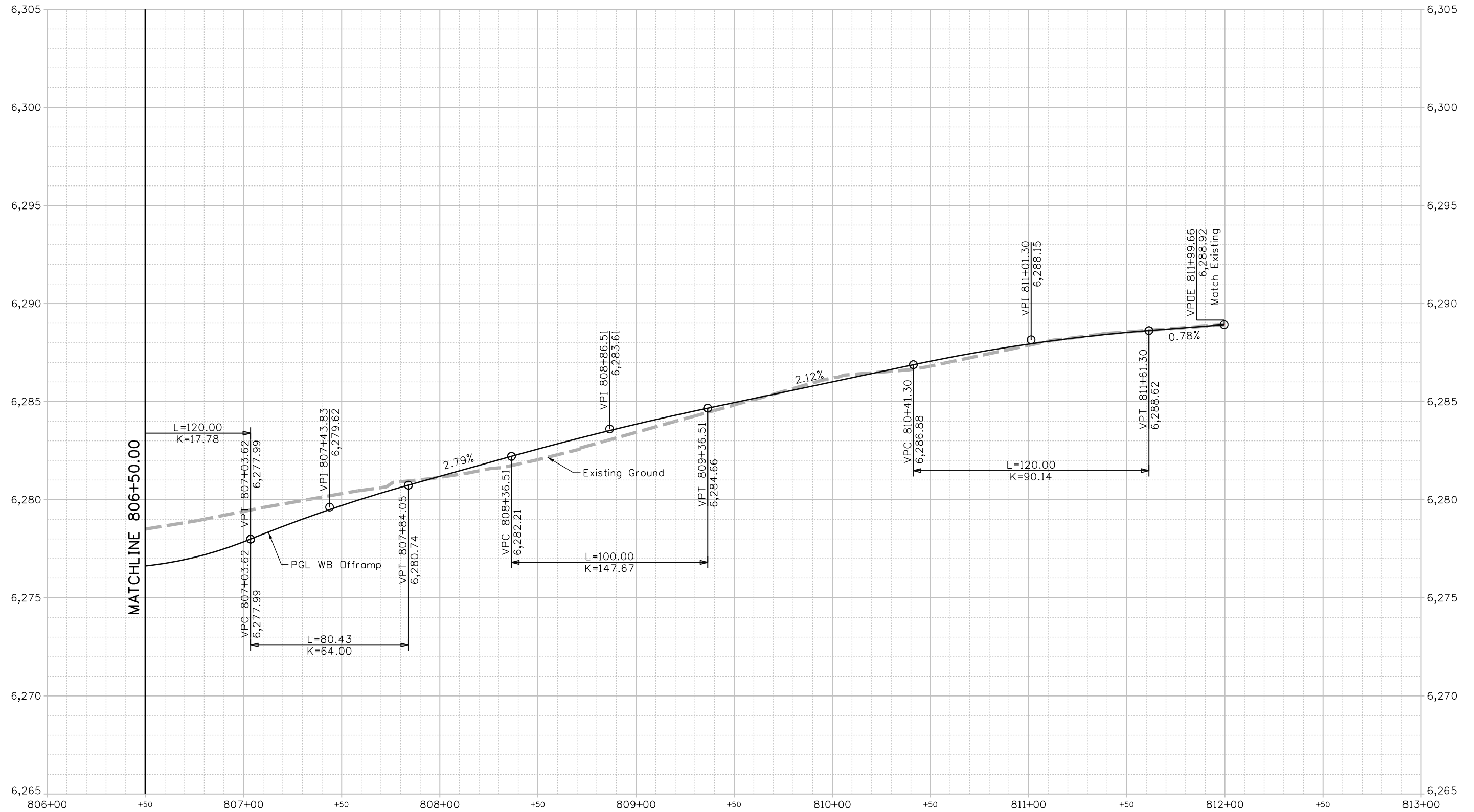


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY PROFILE PGL WB OFFRAMP	Profile 17 of 19
	Sheet Number 54

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL WB OFFRAMP at HCL WB OFFRAMP



Keith Given 12/20/2023 9:32:44 AM V:\900 Work\905 Boses\files\24PETE\_SHT\_RDWY\_Profiles\_111.dgn SHT\_805 NR WB Offramp-2

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: 1"=5'



Sheet Revisions		
Date	Comments	Init

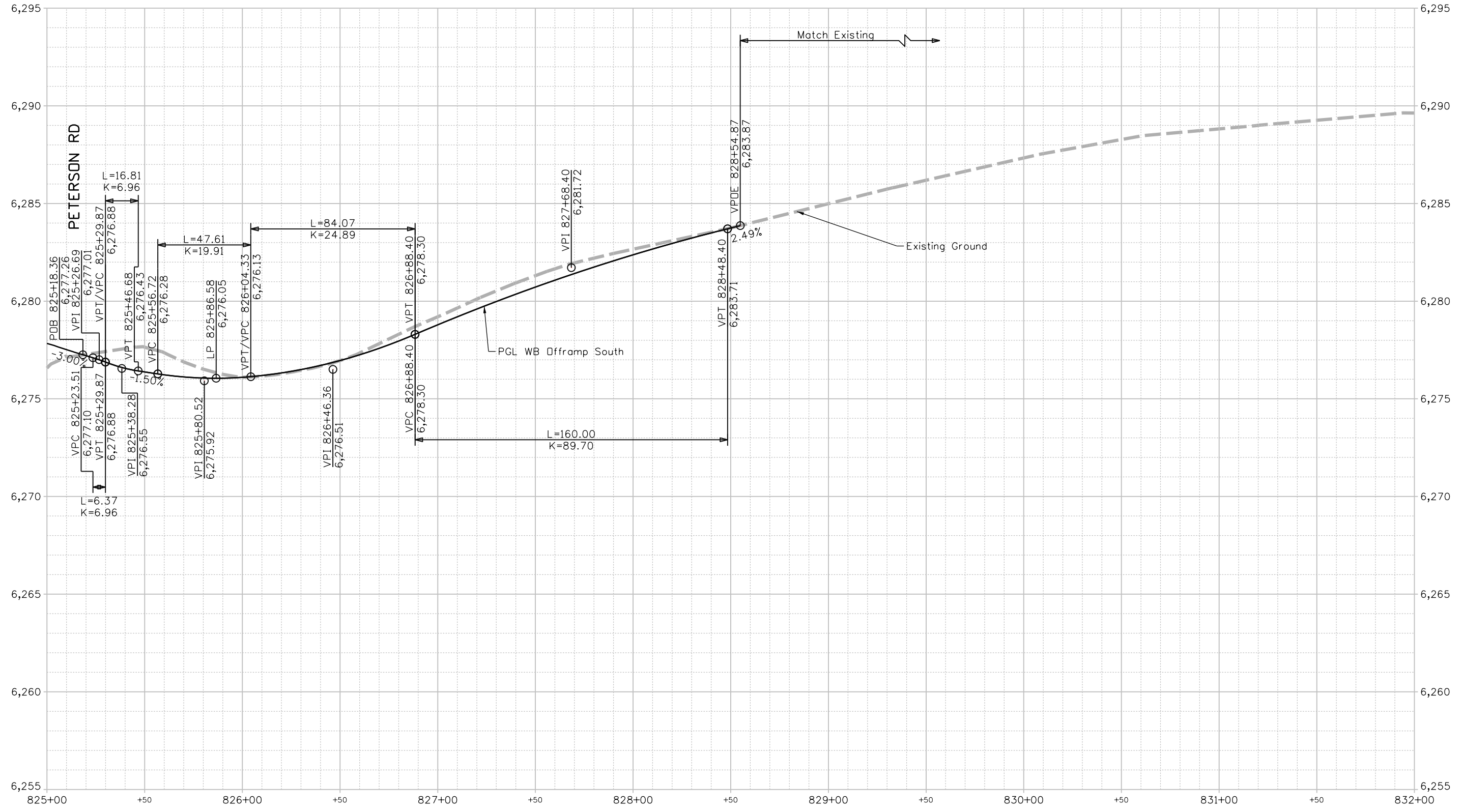
US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY PROFILE  
 PGL WB OFFRAMP

Profile 18 of 19  
 Sheet Number 55

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

# PGL WB OFFRAMP SOUTH at HCL WB OFFRAMP SOUTH



Keith Given 12/20/2023 9:32:44 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_ROWY\_Profiles\111.dgn SHT\_825 NR WB Offramp South\_1

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: 1"=5'



Sheet Revisions		
Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**ROADWAY PROFILE**  
PGL WB OFFRAMP SOUTH

Profile	19 of 19
Sheet Number	56

**30% PRELIMINARY - NOT FOR CONSTRUCTION**





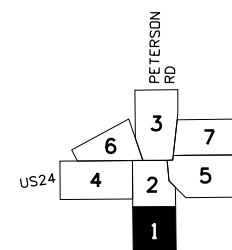
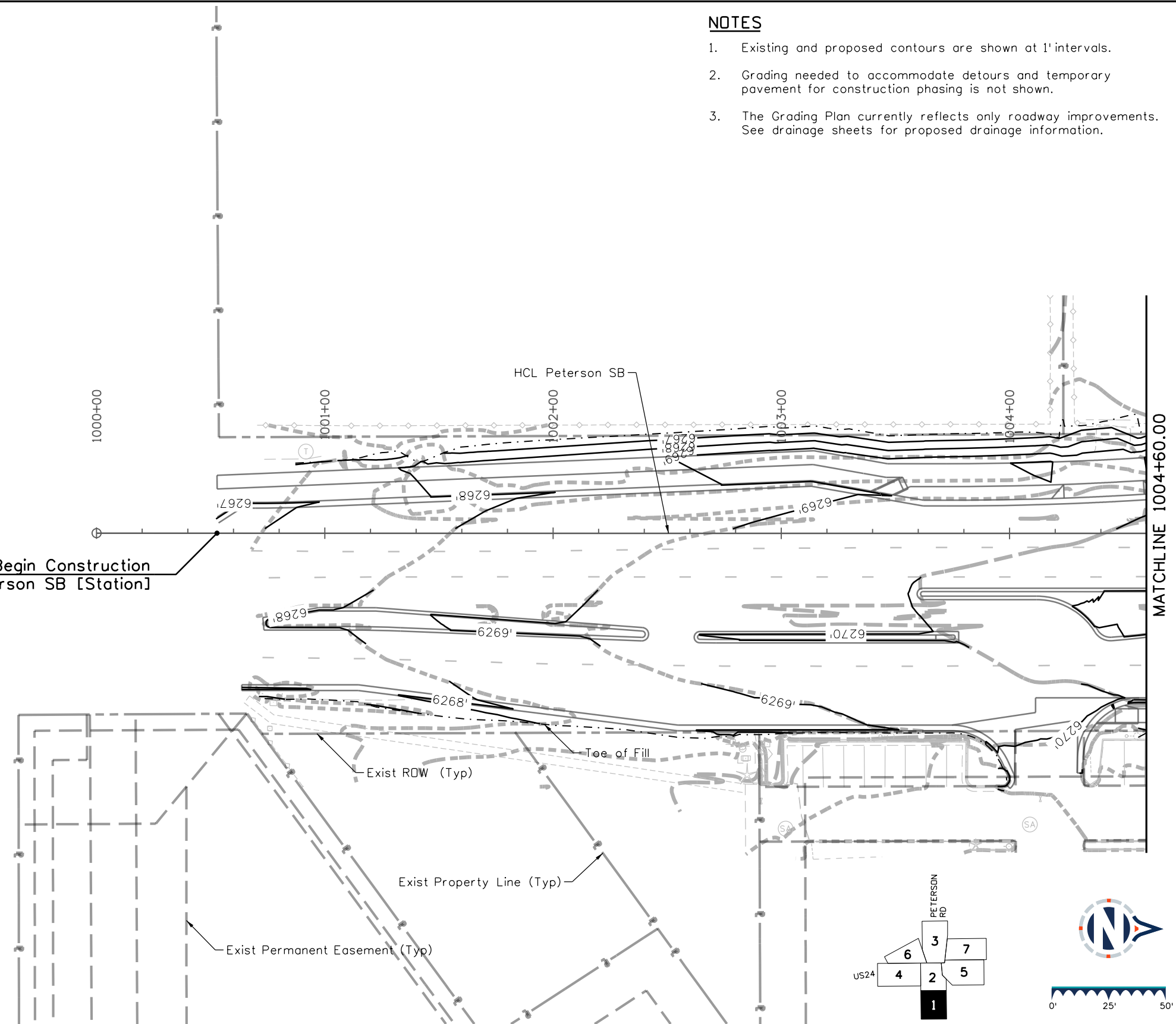
Know what's below.  
Call before you dig.

### NOTES

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.

PETERSON SPACE FORCE BASE

Begin Construction  
HCL Peterson SB [Station]  
PETERSON BLVD



#### Sheet Revisions

Date	Comments	Init

#### US Highway 24 & Peterson Blvd/Rd Roundabouts

GRADING PLAN  
PETERSON BLVD

Grading	1 of 7
Sheet Number	57

Keith Given 12/20/2023 9:33:33 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_GRADE\_Grading\_Plan.dgn SHT\_Grading\_1

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 Tel: 719-299-5077, basisp.com

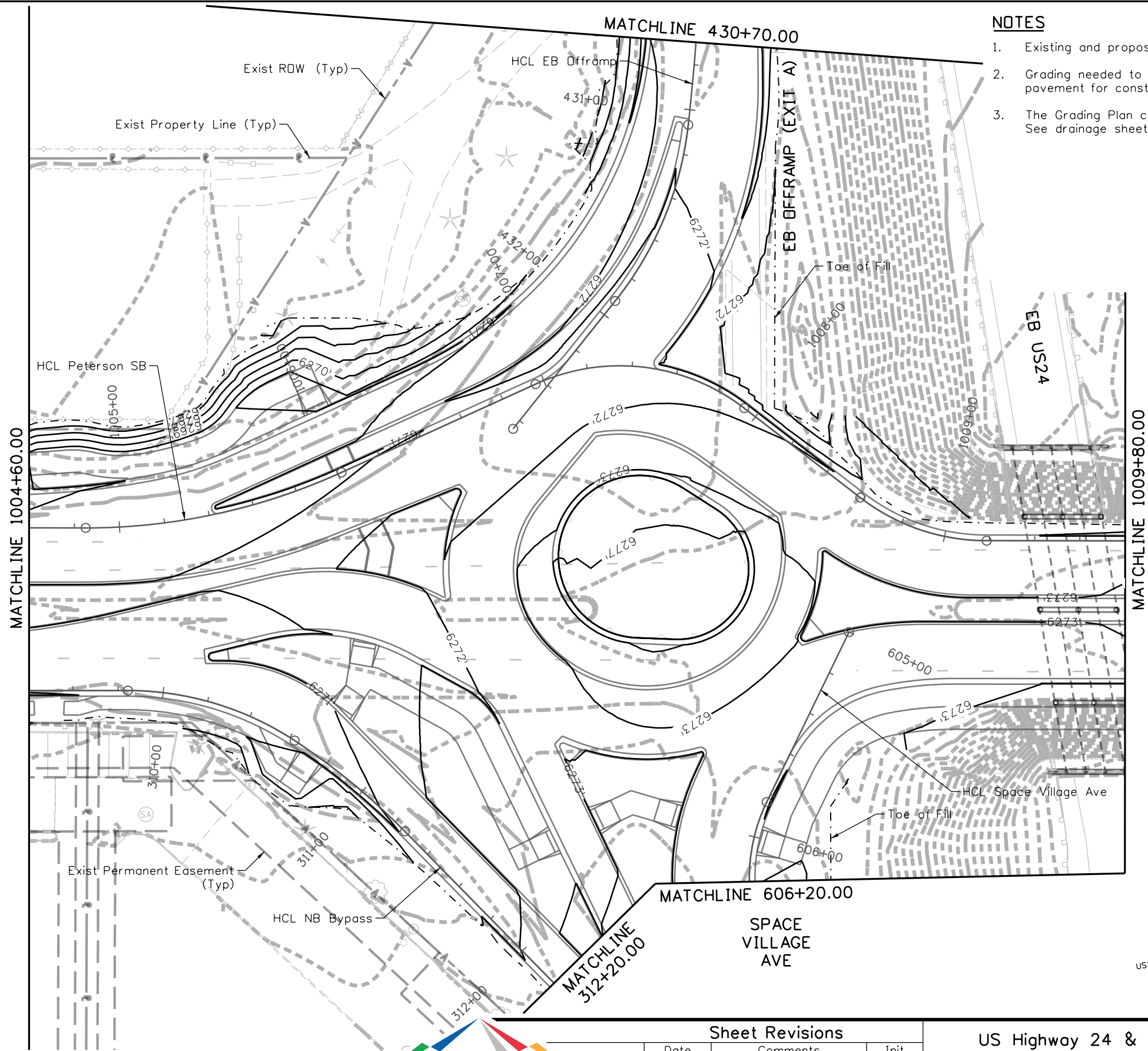
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 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



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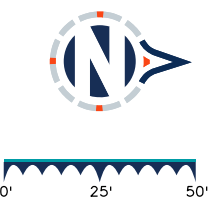
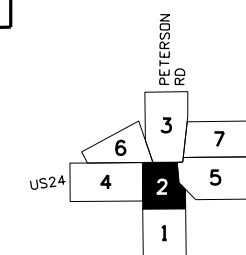
**NOTES**

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.

PETERSON BLVD

PETERSON RD

SPACE VILLAGE AVE



**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

GRADING PLAN  
SOUTH ROUNDABOUT

Grading	2 of 7
Sheet Number	58

Keith Given 12/20/2023 9:33:36 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_GRADE\_SHT.dgn SHT\_Grading\_2

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



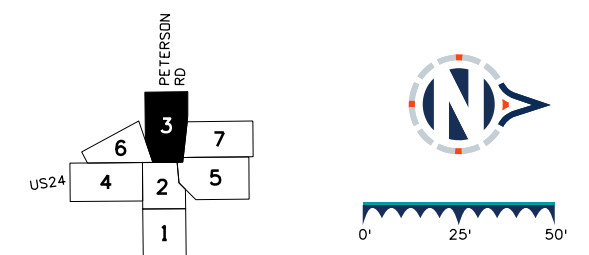
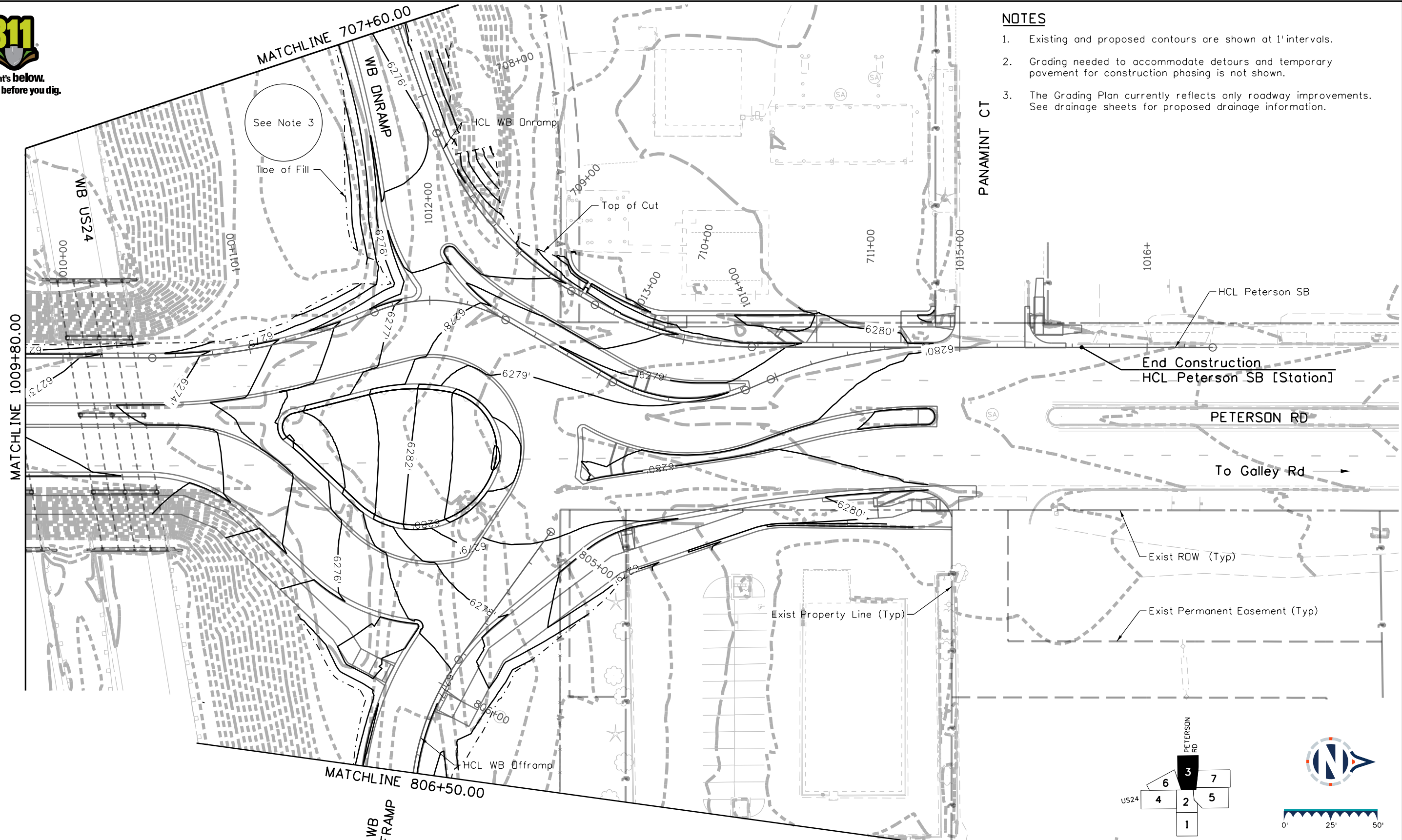
30% PRELIMINARY - NOT FOR CONSTRUCTION



Know what's below.  
Call before you dig.

### NOTES

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.



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Keith Given 12/20/2023 9:33:38 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_GRADE\_Grading Plan.dgn\_SHT\_Grading\_3

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts

**GRADING PLAN  
NORTH ROUNDABOUT**

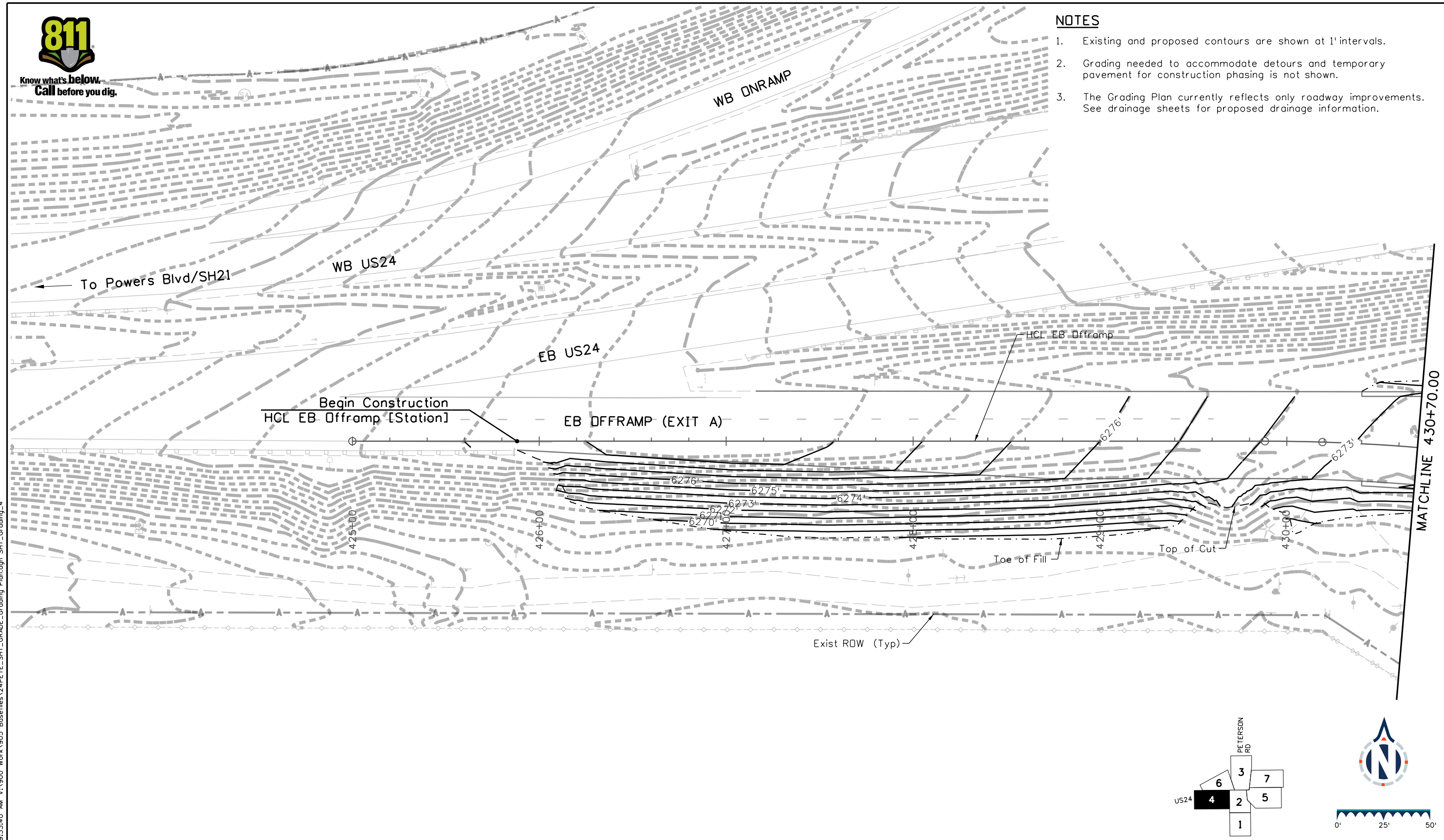
Grading    3 of 7  
 Sheet Number    59



Know what's below.  
Call before you dig.

### NOTES

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.



C:\Users\ktriv\OneDrive\Desktop\2023\12\20\2023 9:33:40 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_GRADE\_Grading Plan.dgn SHT\_Grading\_4

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



Sheet Revisions			
Date	Comments	Init	

US Highway 24 & Peterson Blvd/Rd Roundabouts	
GRADING PLAN EASTBOUND OFFRAMP (EXIT A)	Grading 4 of 7 Sheet Number 60

30% PRELIMINARY - NOT FOR CONSTRUCTION



Know what's below.  
Call before you dig.

EB US24

### NOTES

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.

MATCHLINE 606+20.00

MATCHLINE 312+20.00

Toe of Fill

HCL Space Village Ave

End Construction  
HCL Space Village Ave [Station]

SPACE VILLAGE AVE

EB OFFRAMP (EXIT B)

EB ONRAMP

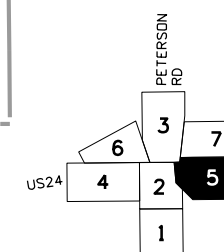
To Marksheffel Rd

Exist ROW (Typ)

HCL NB Bypass

Exist Property Line (Typ)

Exist Permanent Easement (Typ)



0' 25' 50'

### Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

GRADING PLAN  
SPACE VILLAGE AVE

Grading 5 of 7

Sheet Number 61

Keith Given 12/20/2023 9:33:41 AM V:\900 Work 905 Basefiles\24PETE\_SHT\_GRADE\_Grading\_Plan.dgn SHT\_Grading\_5

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Detailer: KAG Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=50'  
 Reviewer: STV Vert. Scale: N/A

COLORADO SPRINGS

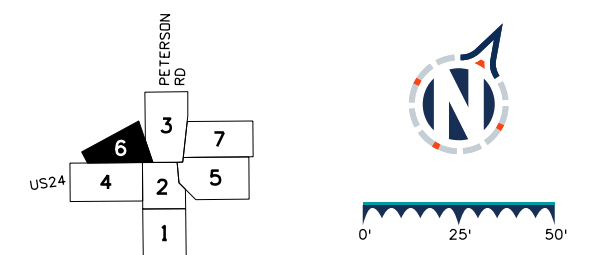
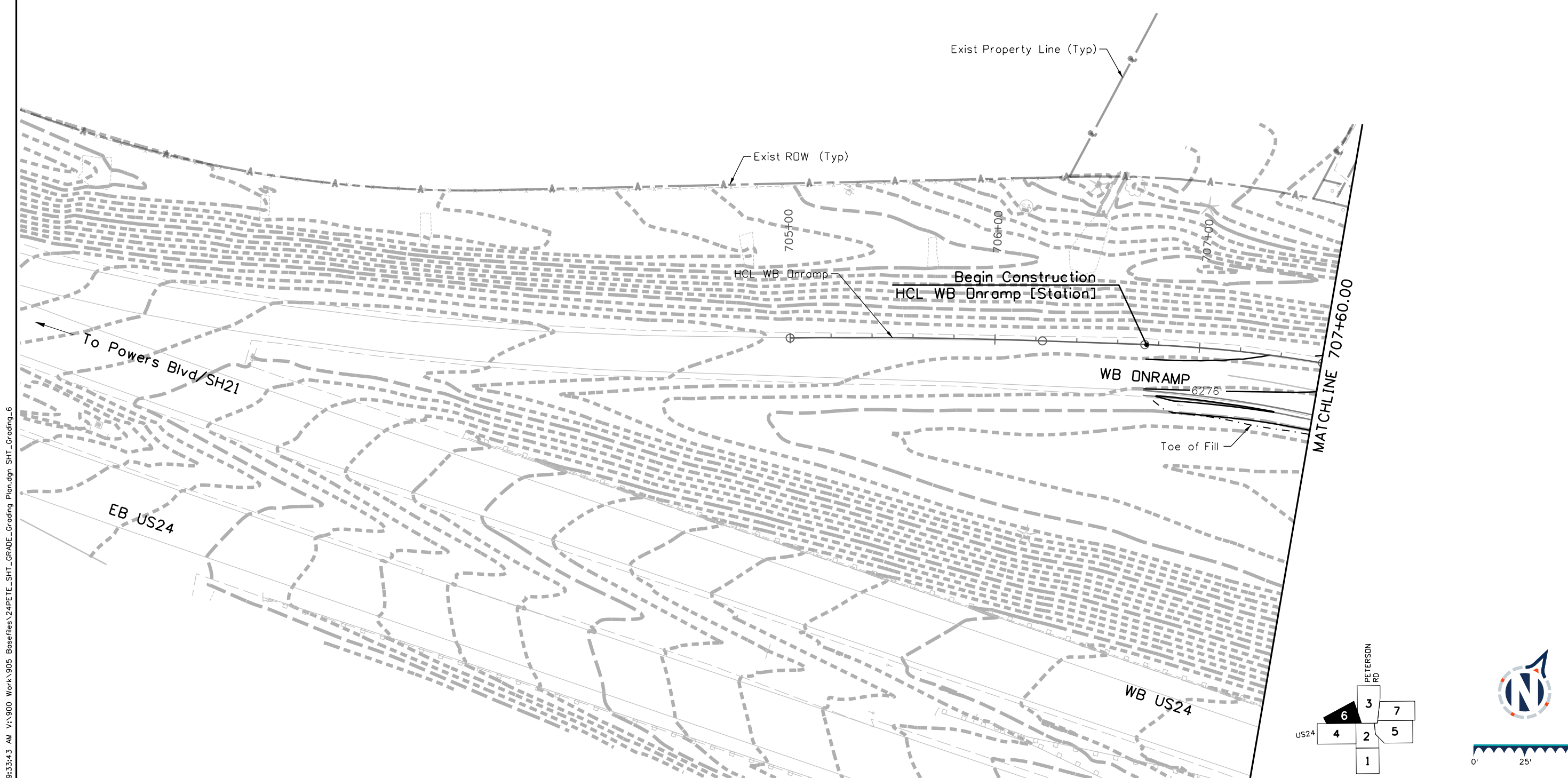
30% PRELIMINARY - NOT FOR CONSTRUCTION



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### NOTES

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.



C:\Users\Keith\OneDrive\Documents\12/20/2023 9:33:43 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_GRADE\_Grading Plan.dgn SHT\_Grading\_6

#### Sheet Revisions

Date	Comments	Init

#### US Highway 24 & Peterson Blvd/Rd Roundabouts

GRADING PLAN  
WESTBOUND ONRAMP

Grading	6 of 7
Sheet Number	62

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
 Reviewer: STV    Vert. Scale: N/A



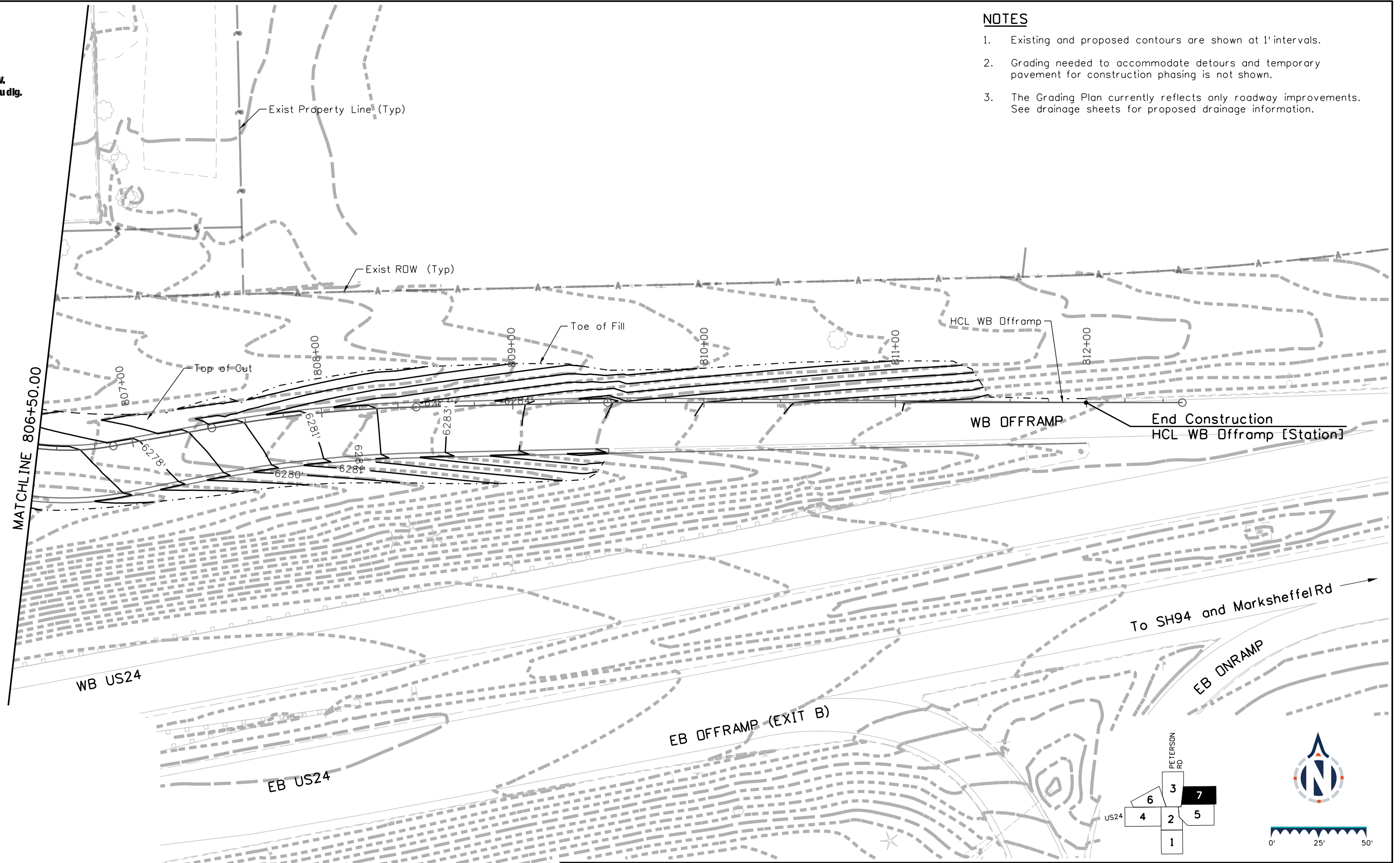
30% PRELIMINARY - NOT FOR CONSTRUCTION



Know what's below.  
Call before you dig.

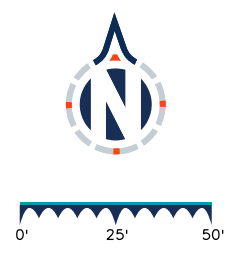
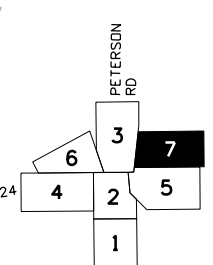
### NOTES

- Existing and proposed contours are shown at 1' intervals.
- Grading needed to accommodate detours and temporary pavement for construction phasing is not shown.
- The Grading Plan currently reflects only roadway improvements. See drainage sheets for proposed drainage information.



MATCHLINE 806+50.00

To SH94 and Marksheffel Rd



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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=50'  
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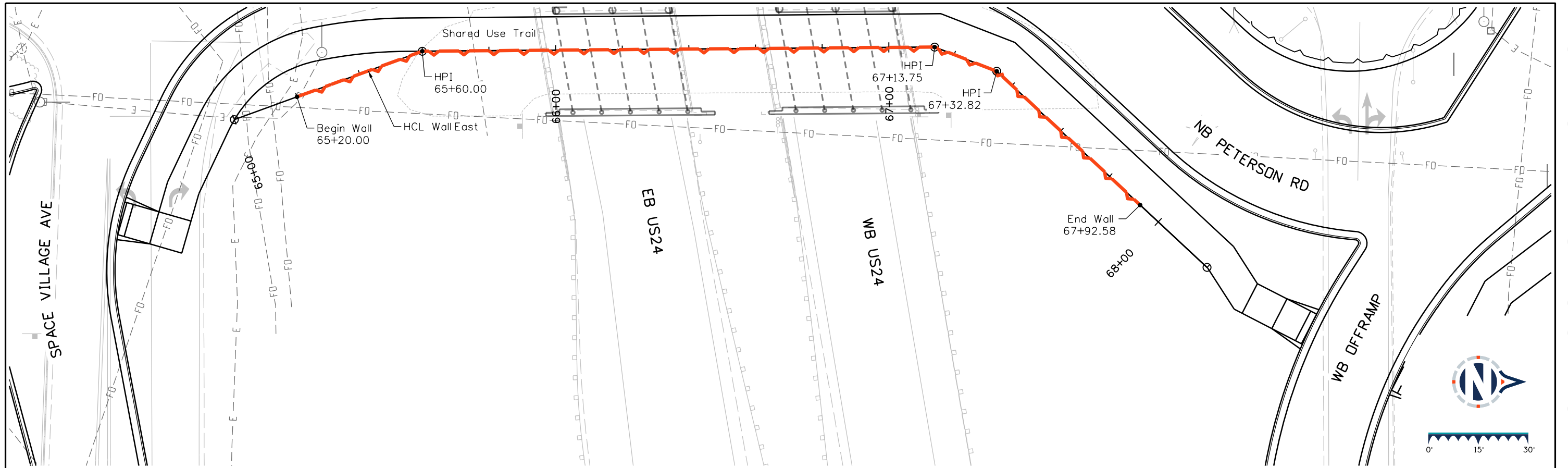
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

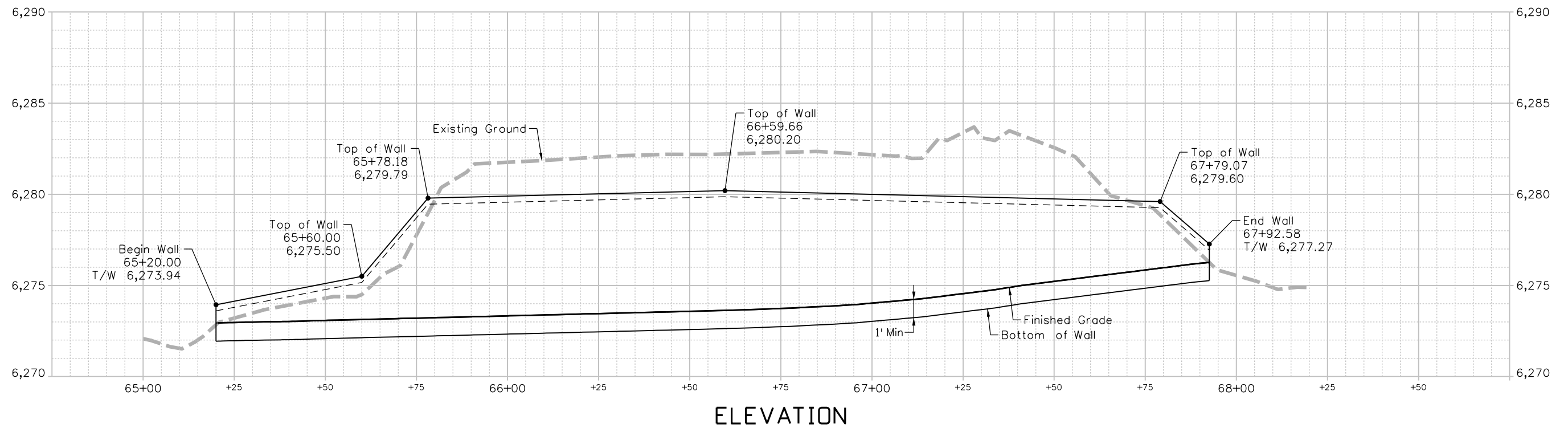
**GRADING PLAN  
WESTBOUND OFFRAMP**

Grading 7 of 7  
 Sheet Number 63

30% PRELIMINARY - NOT FOR CONSTRUCTION



PLAN



ELEVATION

K:\Keith\Given 12/20/2023 11:09:10 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_STR\_Wall Plan Profile\_101.dgn SHT\_Wall\_East

**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM    Print Date: 12/20/2023  
 Designer: JR    Horiz. Scale: 1"=30'  
 Reviewer: JR    Vert. Scale: 1"=15'



Sheet Revisions

Date	Comments	Init

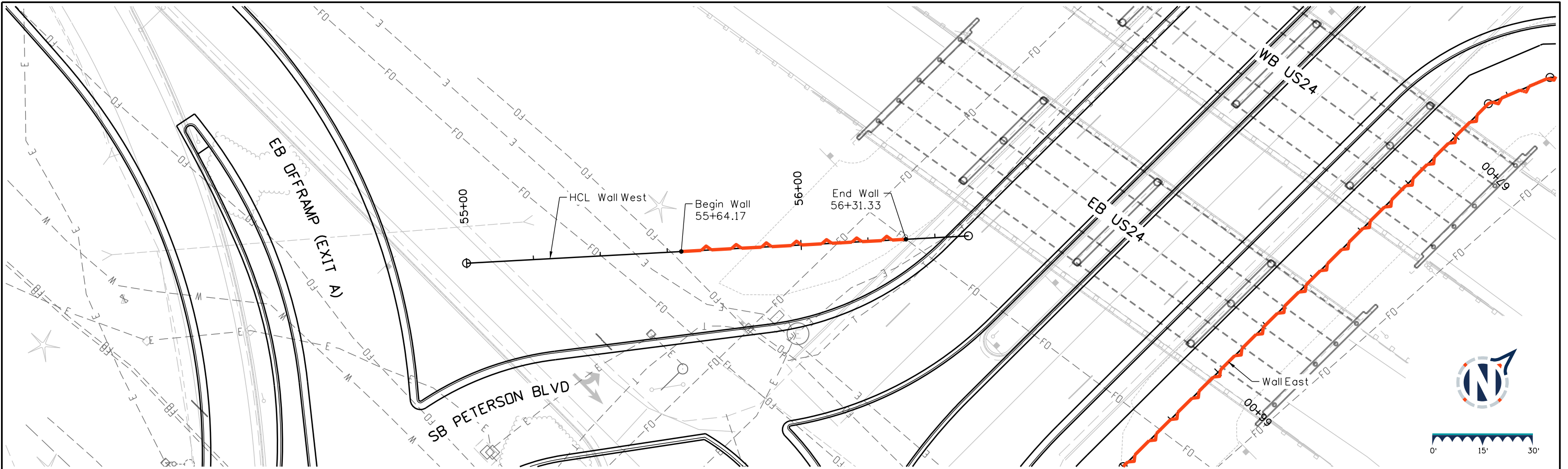
US Highway 24 & Peterson Blvd/Rd Roundabouts

WALL PLAN & PROFILE  
 WALL EAST

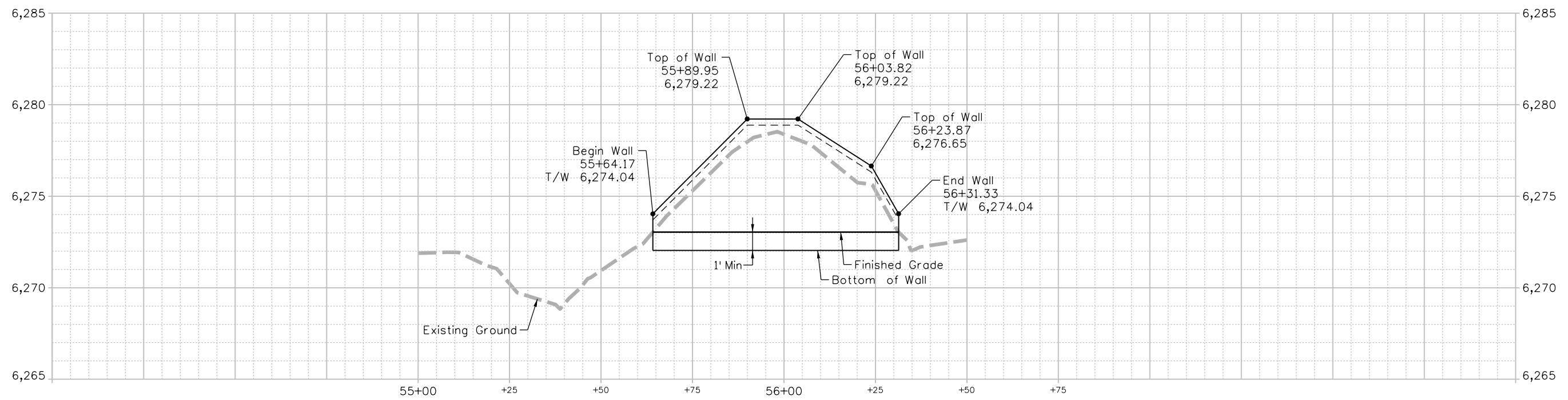
Wall            1 of 2  
 Sheet Number    64

**30% PRELIMINARY - NOT FOR CONSTRUCTION**





PLAN



ELEVATION

KeithGiven 12/20/2023 11:09:23 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_STR\_WallPlan\_Profile\_101.dgn SHT\_Wall\_West

**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM  
 Designer: JR  
 Reviewer: JR  
 Print Date: 12/20/2023  
 Horiz. Scale: 1"=30'  
 Vert. Scale: 1"=15'



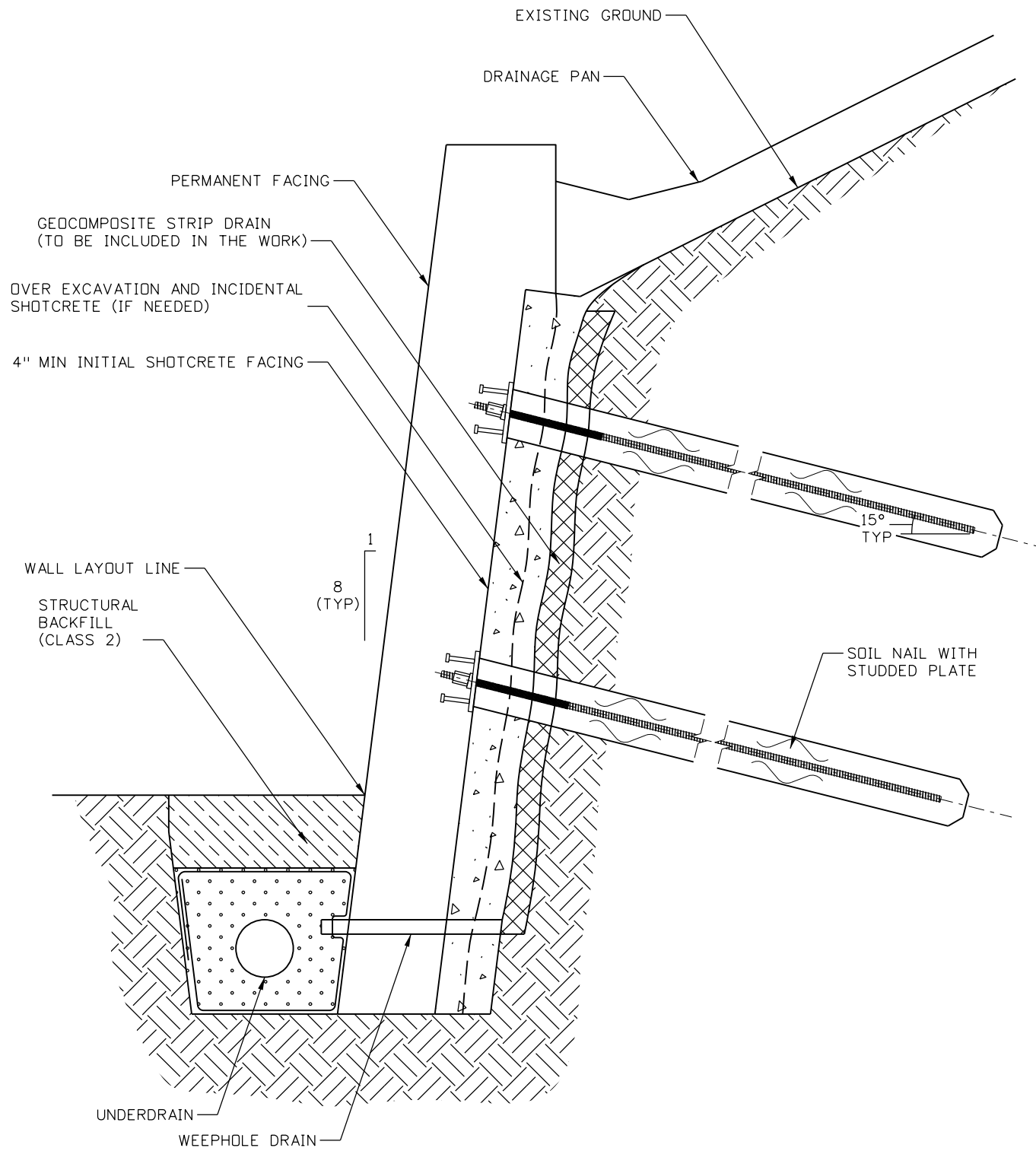
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts  
**WALL PLAN & PROFILE**  
**WALL WEST**

Wall	2 of 2
Sheet Number	65

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KeithGiven 12/20/2023 11:14:02 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_STR\_WallDetail\_101.dgn SHT-Wall\_Typ\_Sect



**SOIL NAIL WALL TYPICAL SECTION**

**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: JR	Print Date: 12/20/2023
Designer: JR	Horiz. Scale: NTS
Reviewer: JR	Vert. Scale: NTS



Sheet Revisions		
Date	Comments	Init

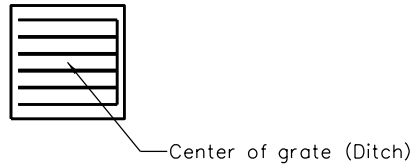
US Highway 24 & Peterson Blvd/Rd Roundabouts	
<b>WALL TYPICAL SECTION SOIL NAIL</b>	Wall Typ 1 of 1 Sheet Number 66

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

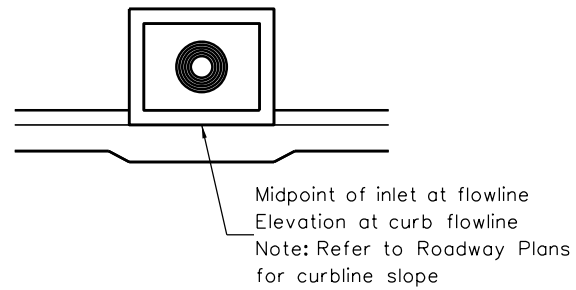
**GENERAL NOTES:**

1. Use CDOT M&S Standards & Details where appropriate.
2. Inlet reference points:

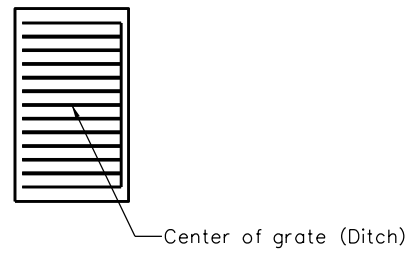
CDOT Type C Inlet



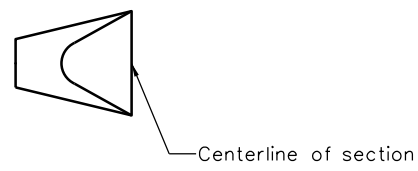
CDOT Type R Inlet



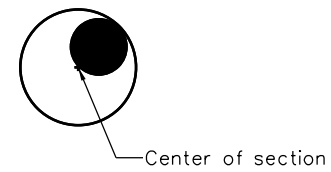
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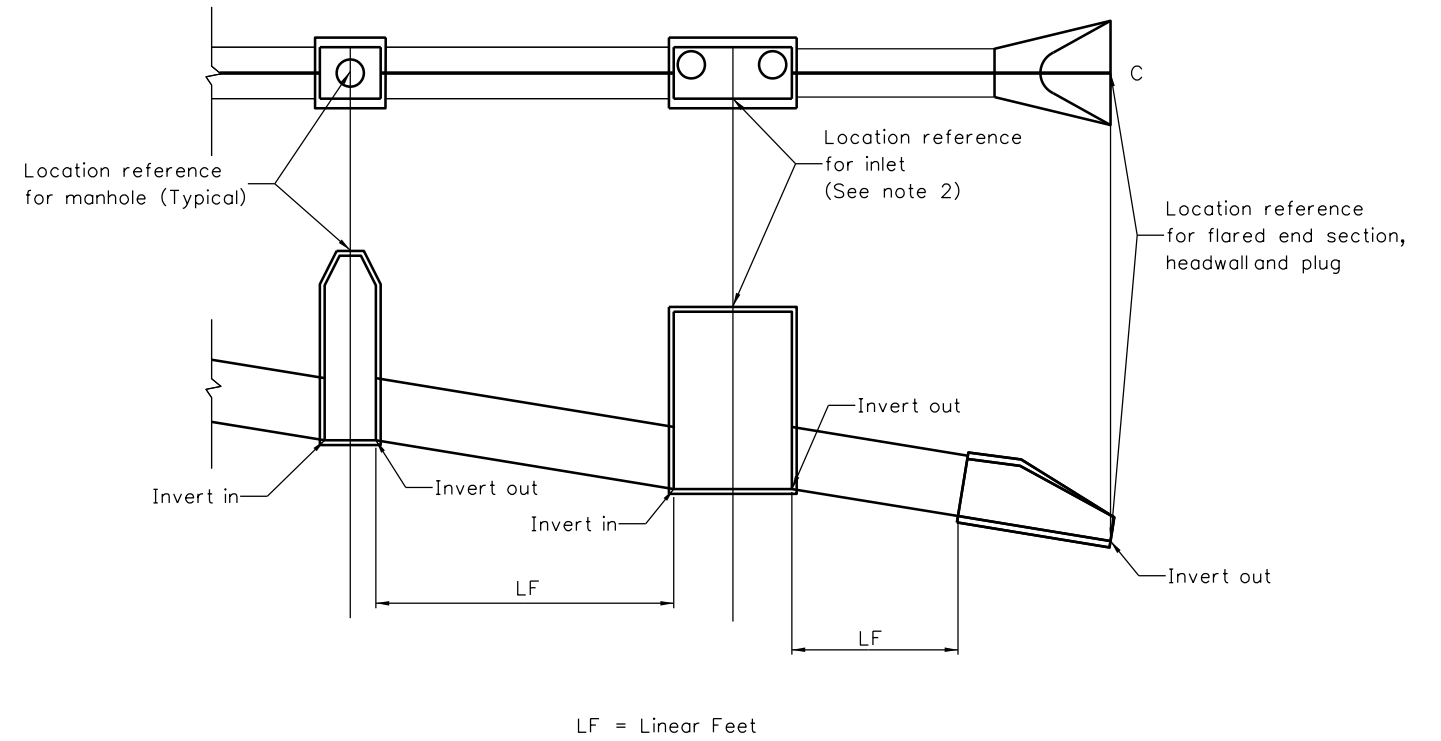
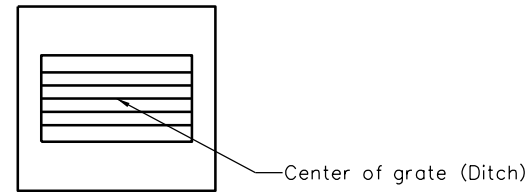
Flared end section (FES)



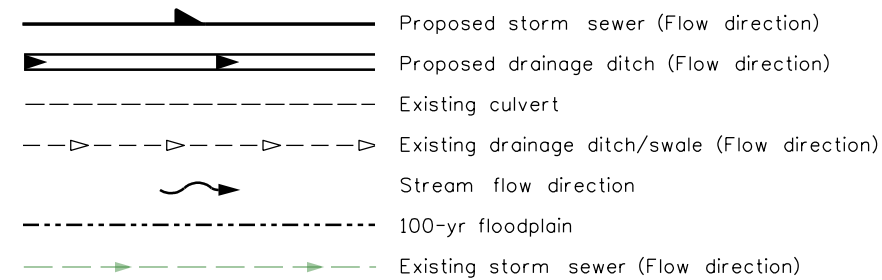
Manhole (MH)



CDOT Type 13 Inlet



3. Discrepancies found between the project plans and the field conditions shall be brought to the attention of the engineer.
4. Storm drains or culverts to be abandoned in place shall be filled with flow filler per CDOT specifications and plugged on both ends unless otherwise noted on plans.
5. All manholes to be minimum 4' diameter unless otherwise noted in the plans.
6. The contractor shall determine the type and location of the underground utilities as may be necessary to avoid damage thereto.
7. Adjust manhole ring and covers to meet the final grade of the final roadway per CDOT Standard M-604-20.
8. All pipes to be class 3 RCP unless otherwise noted in the plans.
9. All drainage improvements to be classified as public drainage facilities.
10. Tracer wire is required on all public stormwater piping systems. Details are linked here: [https://coloradosprings.gov/sites/default/files/tracer\\_wire-signed.pdf](https://coloradosprings.gov/sites/default/files/tracer_wire-signed.pdf)



**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE GENERAL NOTES

Subset 1 of 1  
Sheet Number 67



HDR  
1670 Broadway  
Denver, CO 80202  
Tel: 303-764-1520, hdrinc.com

Detailer: NES Print Date: 12/19/2023  
Designer: SDA Horiz. Scale: N/A  
Reviewer: EVS Vert. Scale: N/A



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**30% PRELIMINARY - NOT FOR CONSTRUCTION**

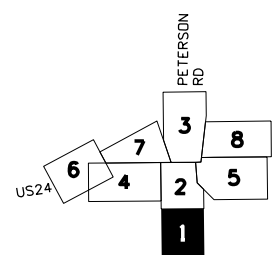
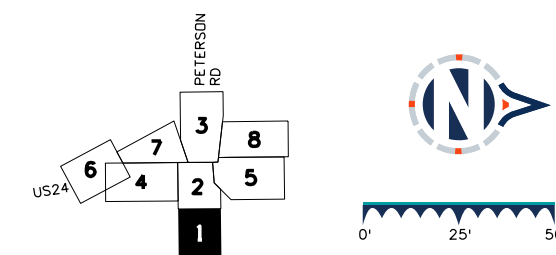
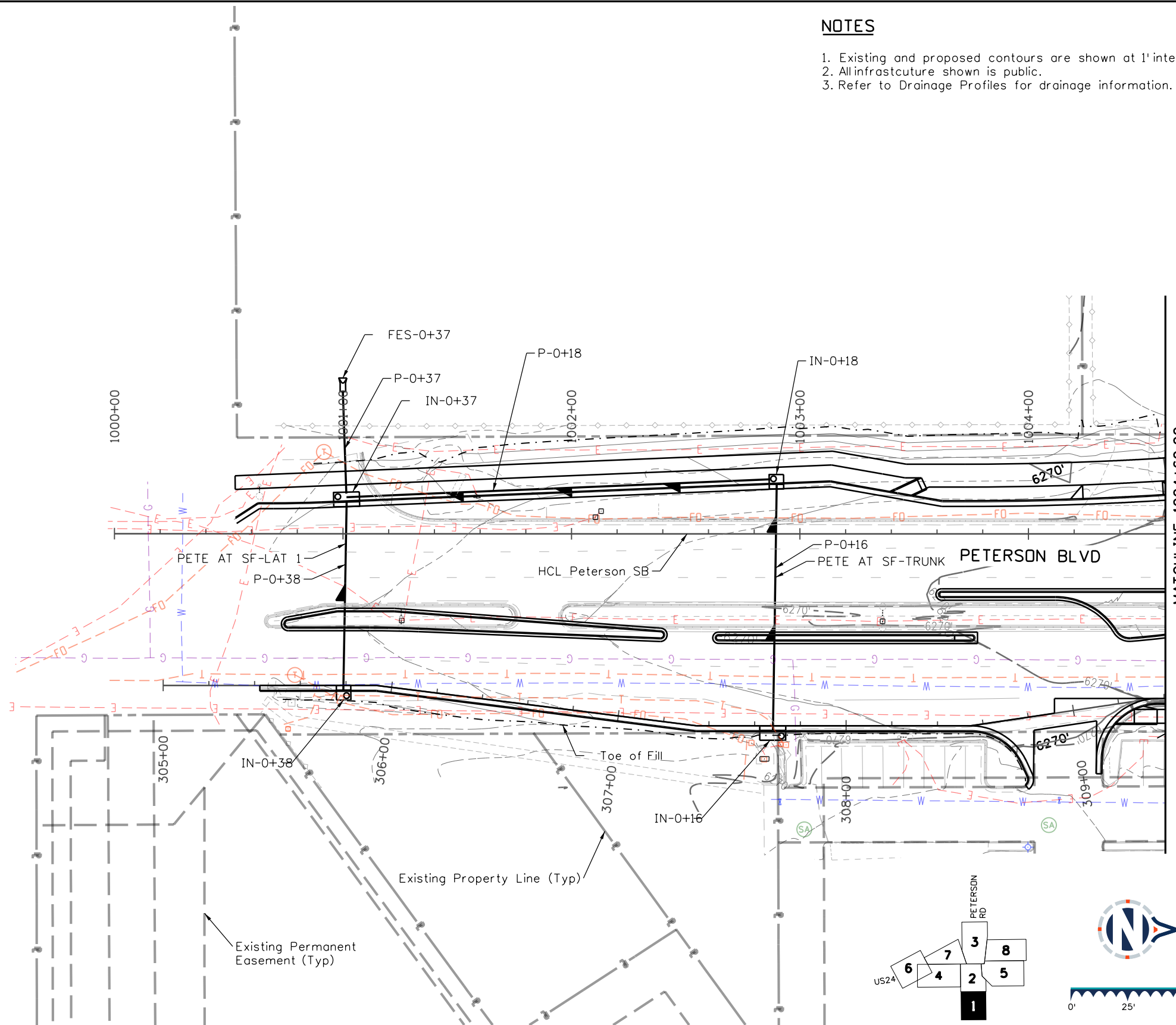


Know what's below.  
Call before you dig.

### NOTES

- Existing and proposed contours are shown at 1' intervals.
- All infrastructure shown is public.
- Refer to Drainage Profiles for drainage information.

PETERSON SPACE FORCE BASE



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PLAN  
PETERSON BLVD

Drainage Plan	1 of 8
Sheet Number	68

C:\BURLISON\12/19/2023 1:50:04 PM p:\w\h\druscen0\HDR\_US\_Central\_01\Documents\Basis\_Engineering\Basis\_CDS\_US\_24\_Peterson\_Rd\6.0\_CAD\_BIM\6.2\_WIP\Hydraulics\Sheets\24PETE\_SHT\_HYO\_Plan\_Sheet.dgn SHT\_Discipline\_1



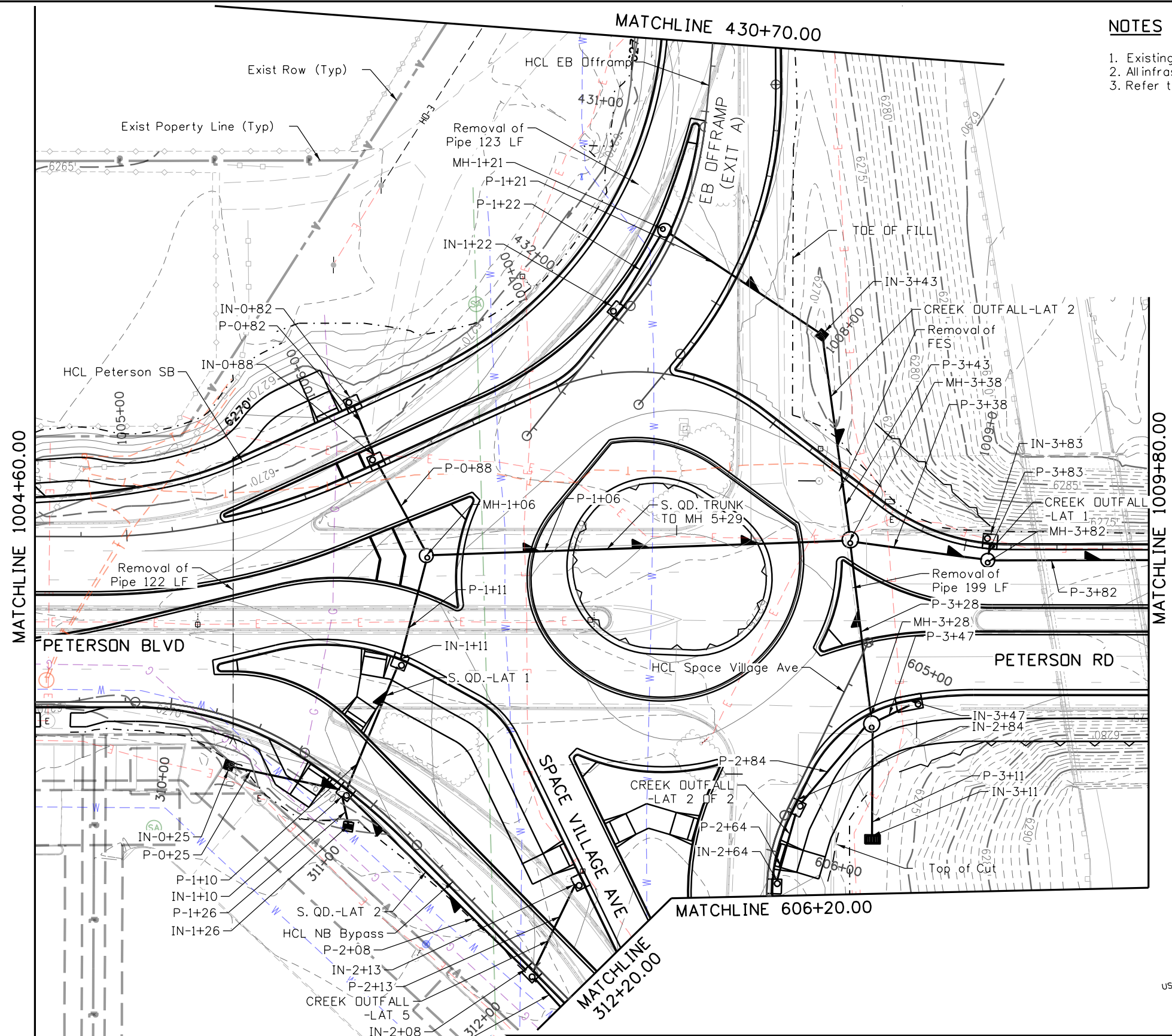
HDR  
1670 Broadway  
Denver, CO 80202  
Tel: 303-764-1520, hdrinc.com

Detailer: CMB    Print Date: 12/19/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
 Reviewer: EVS    Vert. Scale: N/A

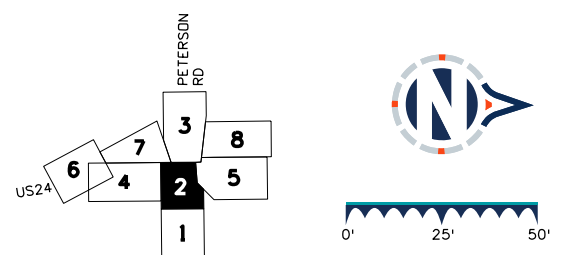


30% PRELIMINARY - NOT FOR CONSTRUCTION

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- NOTES**
- Existing and proposed contours are shown at 1' intervals.
  - All infrastructure shown is public.
  - Refer to Drainage Profiles for drainage information.



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
DRAINAGE PLAN SOUTH ROUNDABOUT	Drainage Plan 2 of 8
	Sheet Number 69

HDR  
 1670 Broadway  
 Denver, CO 80202  
 Tel: 303-764-1520, hdrinc.com

Detailer: CMB    Print Date: 12/20/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
 Reviewer: EVS    Vert. Scale: N/A

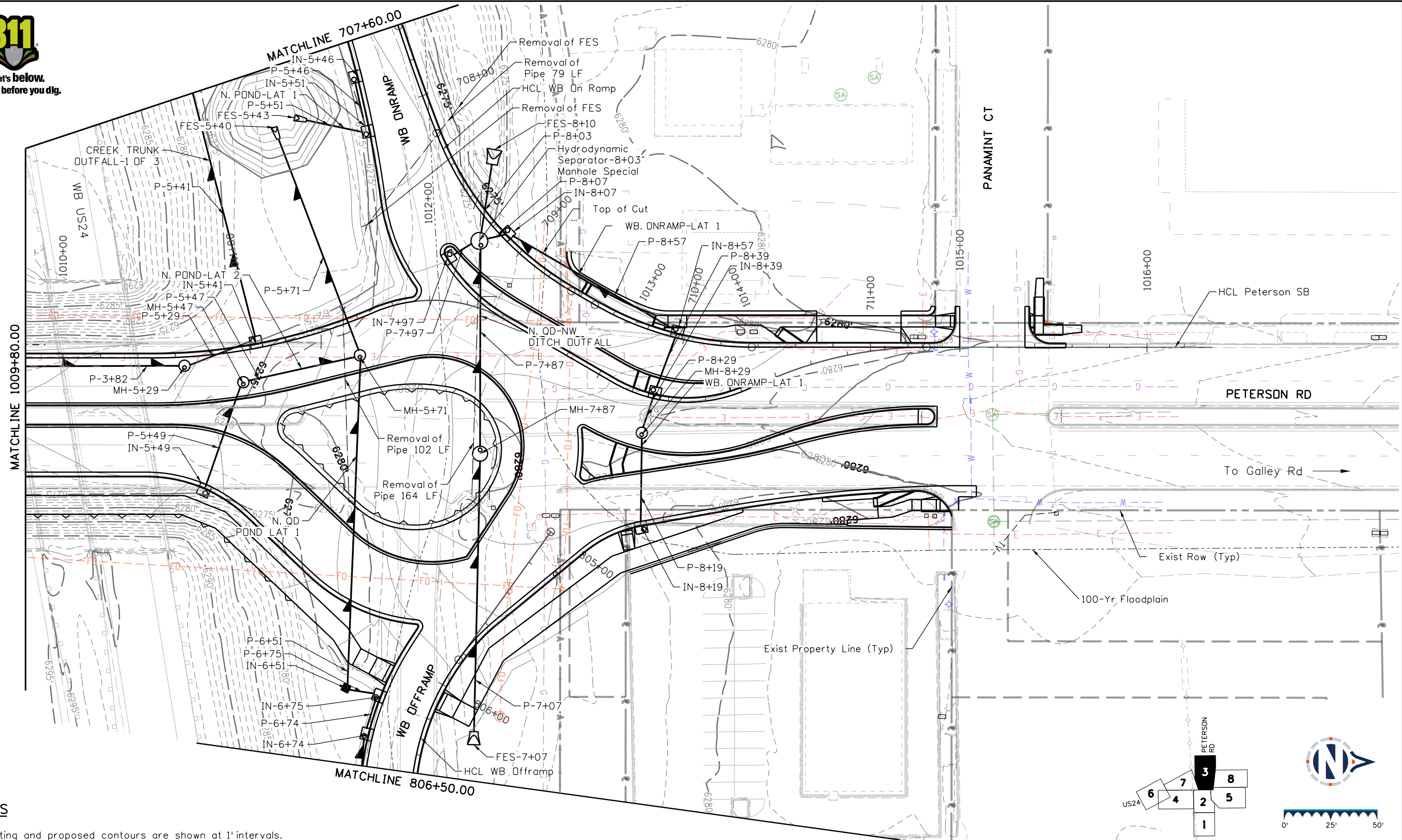


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### NOTES

- Existing and proposed contours are shown at 1' intervals.
- All infrastructure shown is public.
- Refer to Drainage Profiles for drainage information.



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Detailer: CMB Print Date: 12/20/2023  
Designer: SDA Horiz. Scale: 1"=50'  
Reviewer: EVS Vert. Scale: N/A



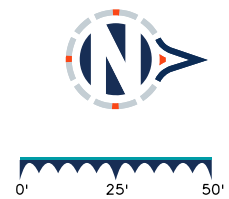
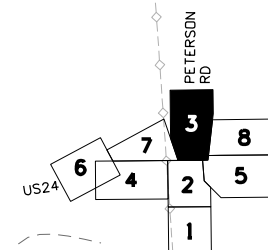
### Sheet Revisions

Date	Comments	Init
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### US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PLAN  
NORTH ROUNDABOUT

Drainage Plan 3 of 8  
Sheet Number 70

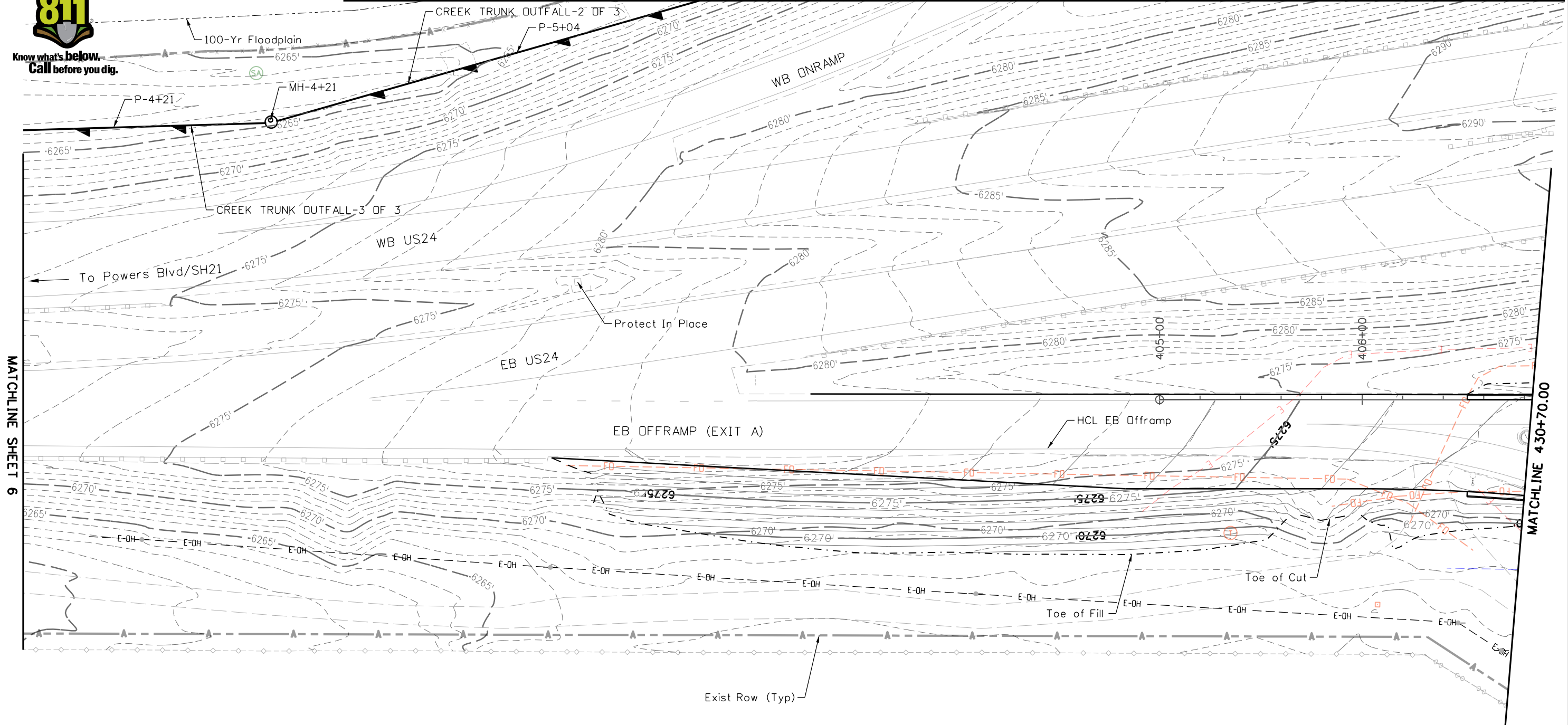


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Know what's below.  
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MATCHLINE SHEET 7

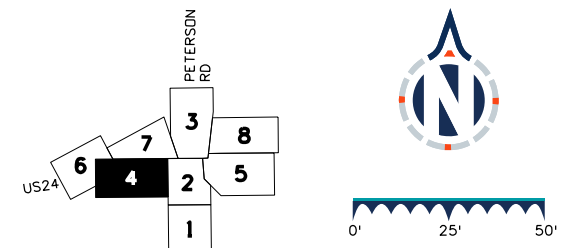


MATCHLINE SHEET 6

MATCHLINE 430+70.00

NOTES

- 1. Existing and proposed contours are shown at 1' intervals.
- 2. All infrastructure shown is public.
- 3. Refer to Drainage Profiles for drainage information.



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Denver, CO 80202  
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Detailer: CMB Print Date: 12/19/2023  
Designer: SDA Horiz. Scale: 1"=50'  
Reviewer: EVS Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PLAN  
EASTBOUND OFFRAMP (EXIT A)

Drainage Plan 4 of 8  
Sheet Number 71

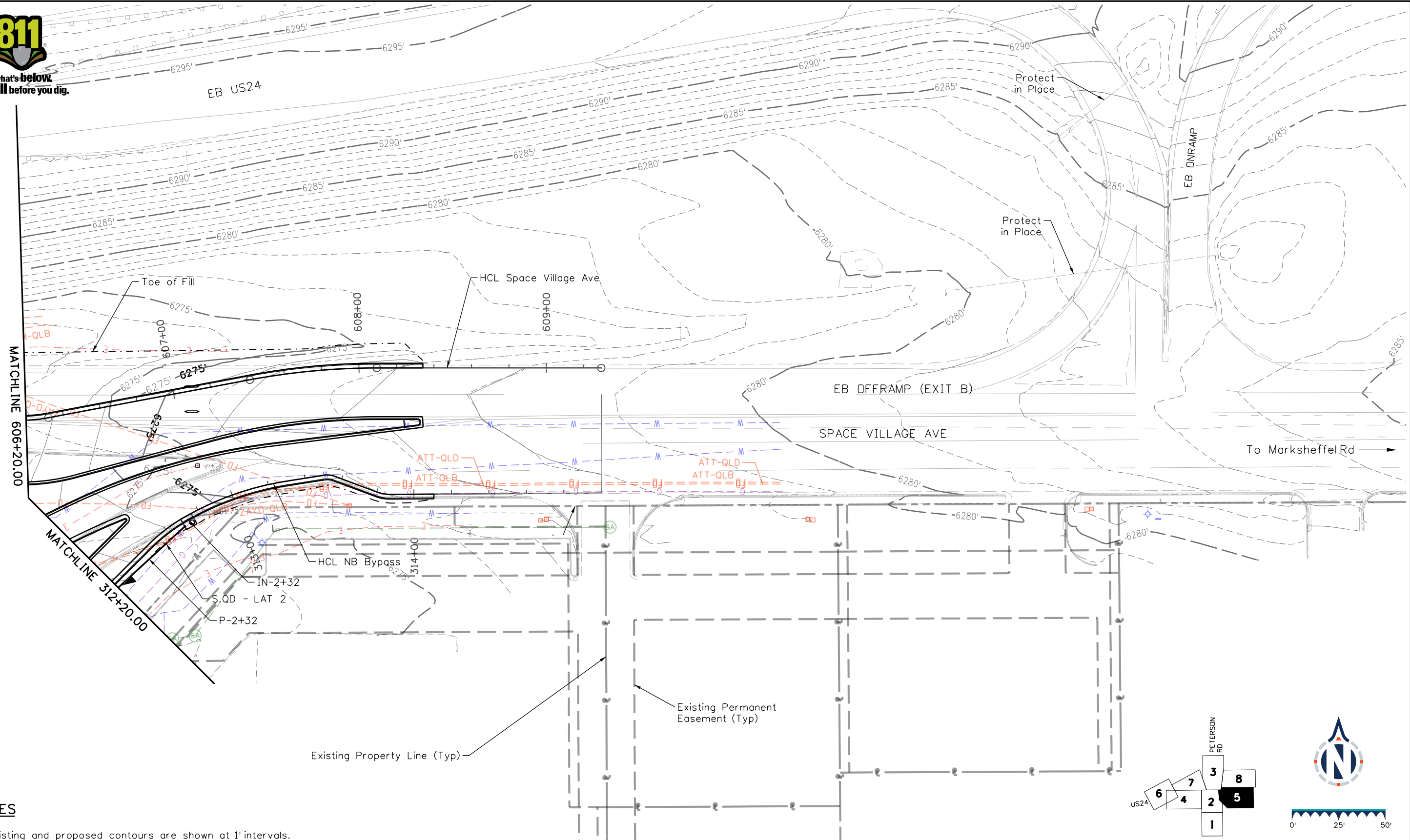
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30% PRELIMINARY - NOT FOR CONSTRUCTION



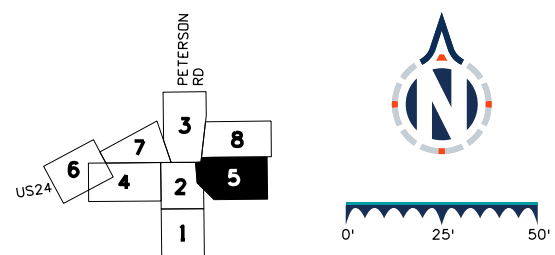
Know what's below.  
Call before you dig.

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**NOTES**

- Existing and proposed contours are shown at 1' intervals.
- All infrastructure shown is public.
- Refer to Drainage Profiles for drainage information.



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Detailer: CMB Print Date: 12/19/2023  
Designer: SDA Horiz. Scale: 1"=50'  
Reviewer: EVS Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

DRAINAGE PLAN  
SPACE VILLAGE AVE

Drainage Plan 5 of 8  
Sheet Number 72

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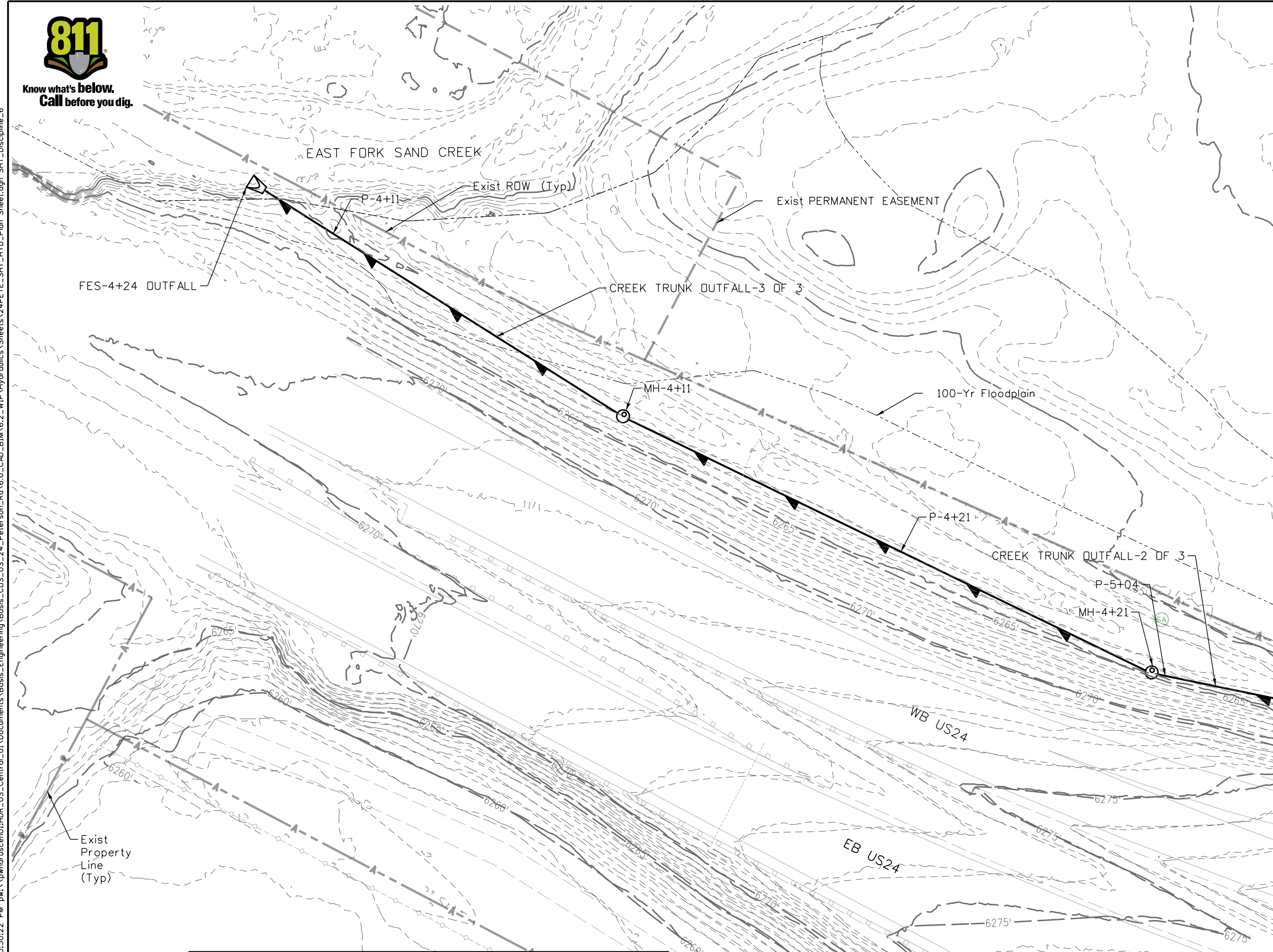


Know what's below.  
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### NOTES

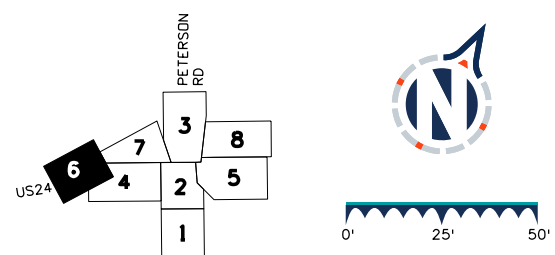
- Existing and proposed contours are shown at 1' intervals.
- All infrastructure shown is public.
- Refer to Drainage Profiles for drainage information.

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MATCHLINE SHEET 7

MATCHLINE SHEET 4



**HDR**  
 HDR  
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 Denver, CO 80202  
 Tel: 303-764-1520, hdrinc.com

Detailer: CMB    Print Date: 12/19/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
 Reviewer: EVS    Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PLAN  
US24

Drainage Plan 6 of 8  
 Sheet Number 73

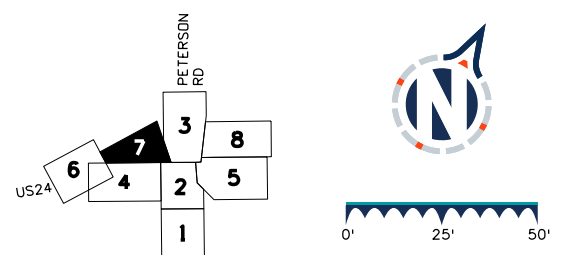
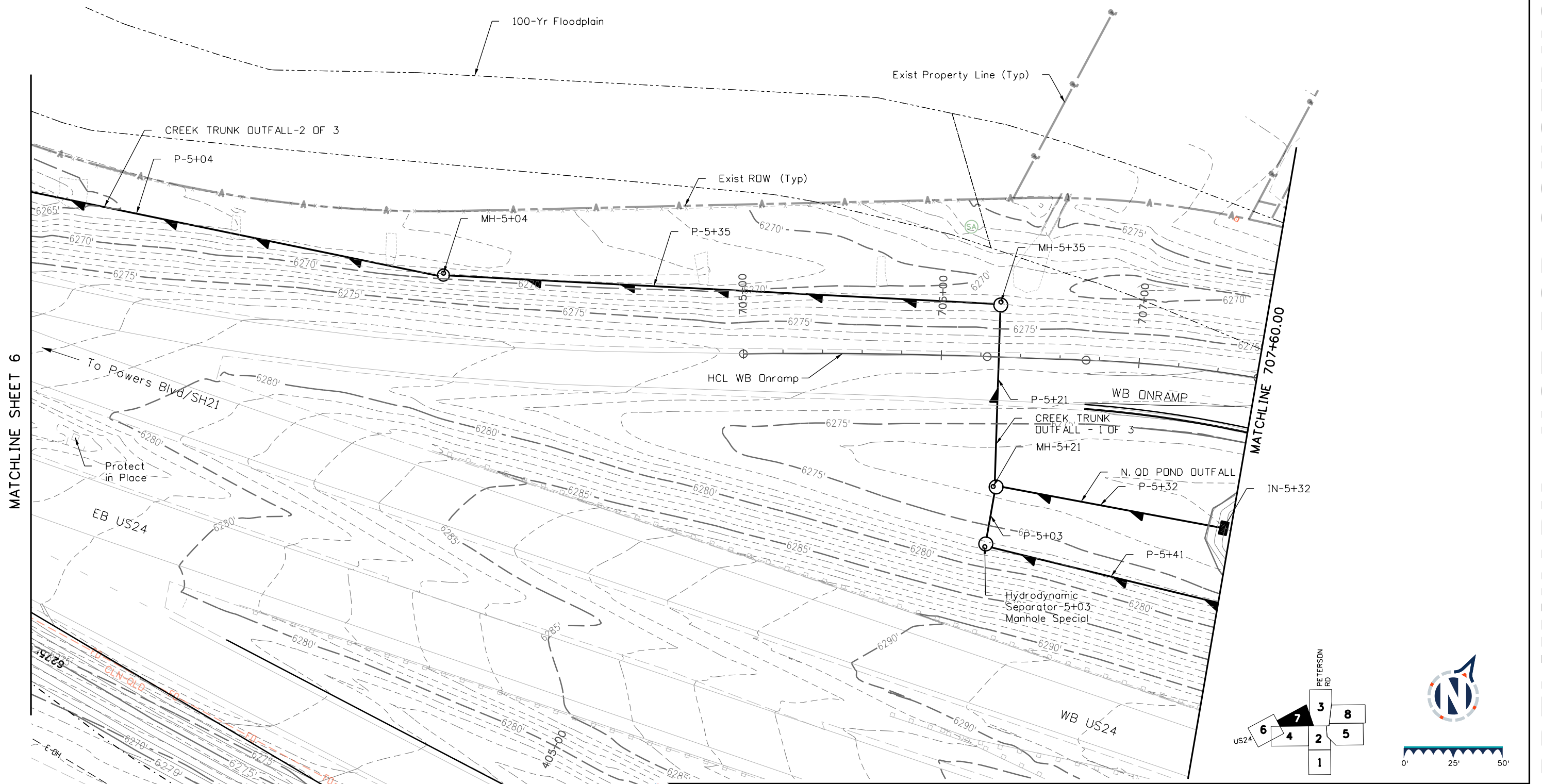
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### NOTES

- Existing and proposed contours are shown at 1' intervals.
- All infrastructure shown is public.
- Refer to Drainage Profiles for drainage information.



MATCHLINE SHEET 6

MATCHLINE 707+60.00

### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PLAN  
WESTBOUND ONRAMP

Drainage Plan	7 of 8
Sheet Number	74

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Detailer: CMB    Print Date: 12/19/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
 Reviewer: EVS    Vert. Scale: N/A

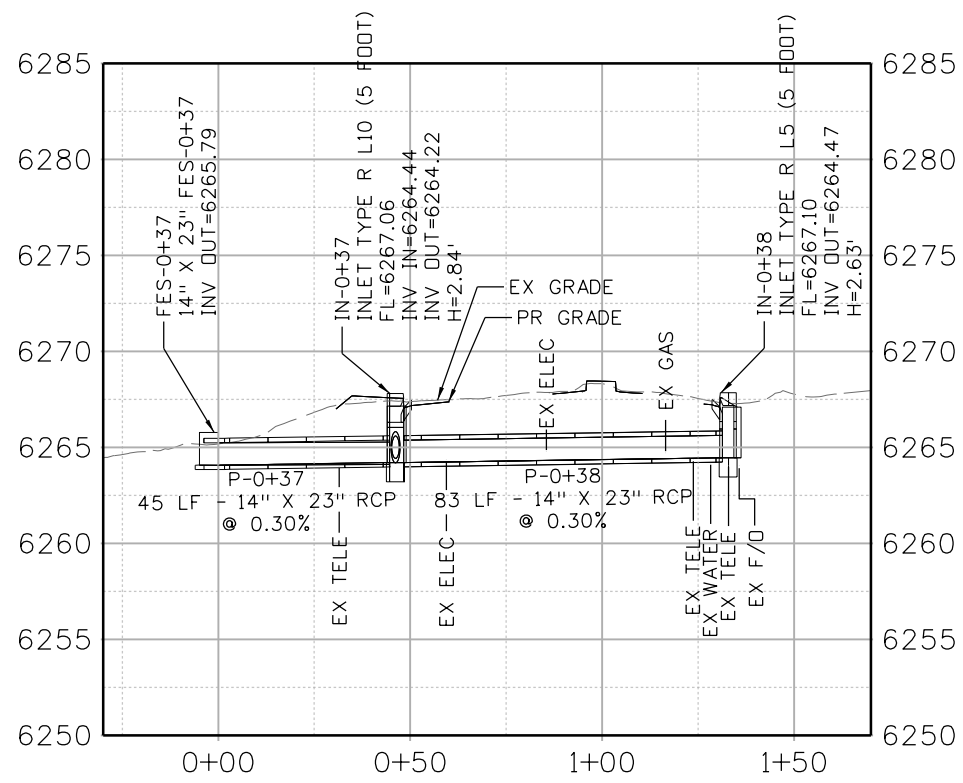


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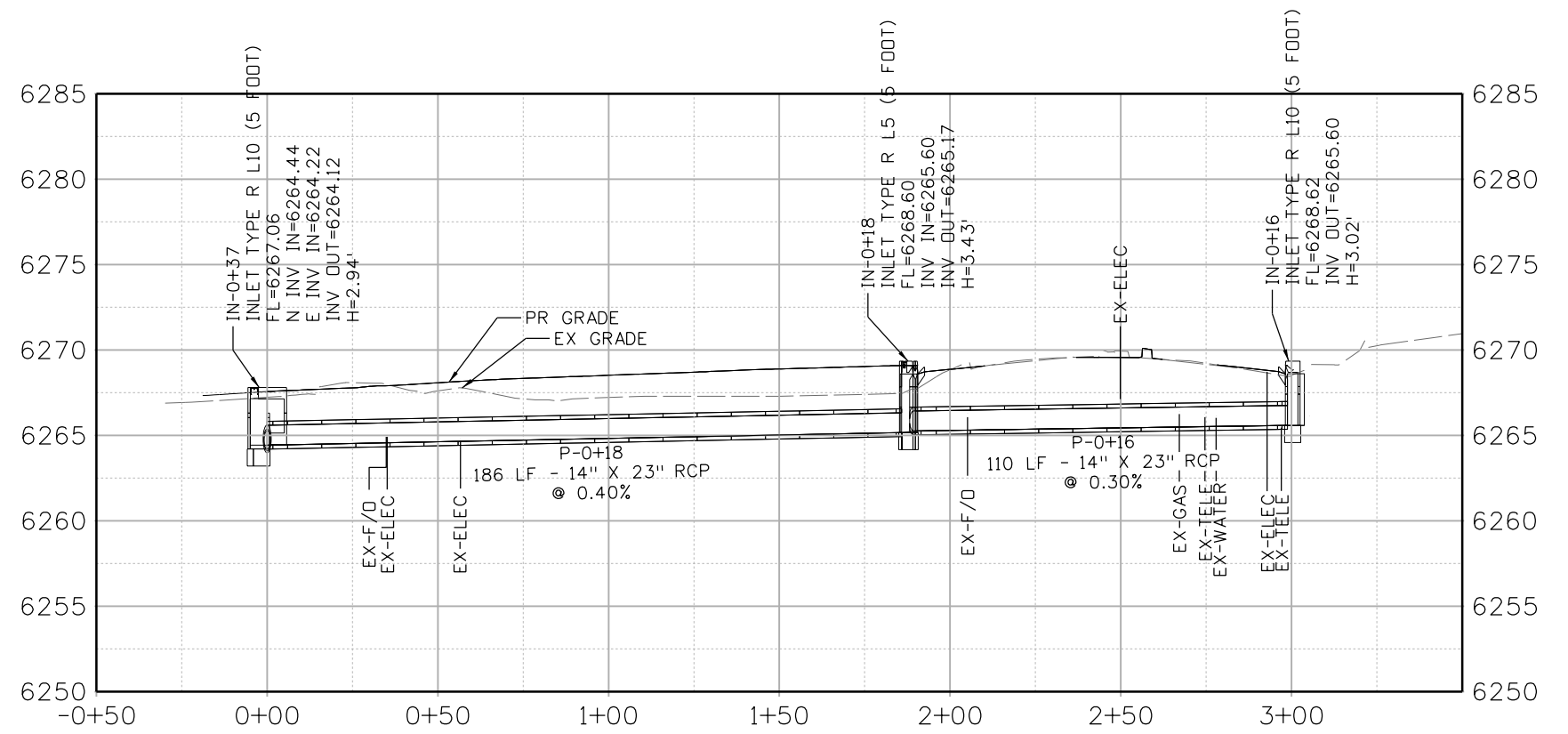
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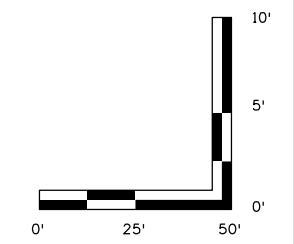
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PETERSON AT SF-LAT 1



PETERSON AT SF-TRUNK




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 Denver, CO 80202  
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Detailer: CMB    Print Date: 12/20/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
 Reviewer: EVS    Vert. Scale: 1"=10'



Sheet Revisions		
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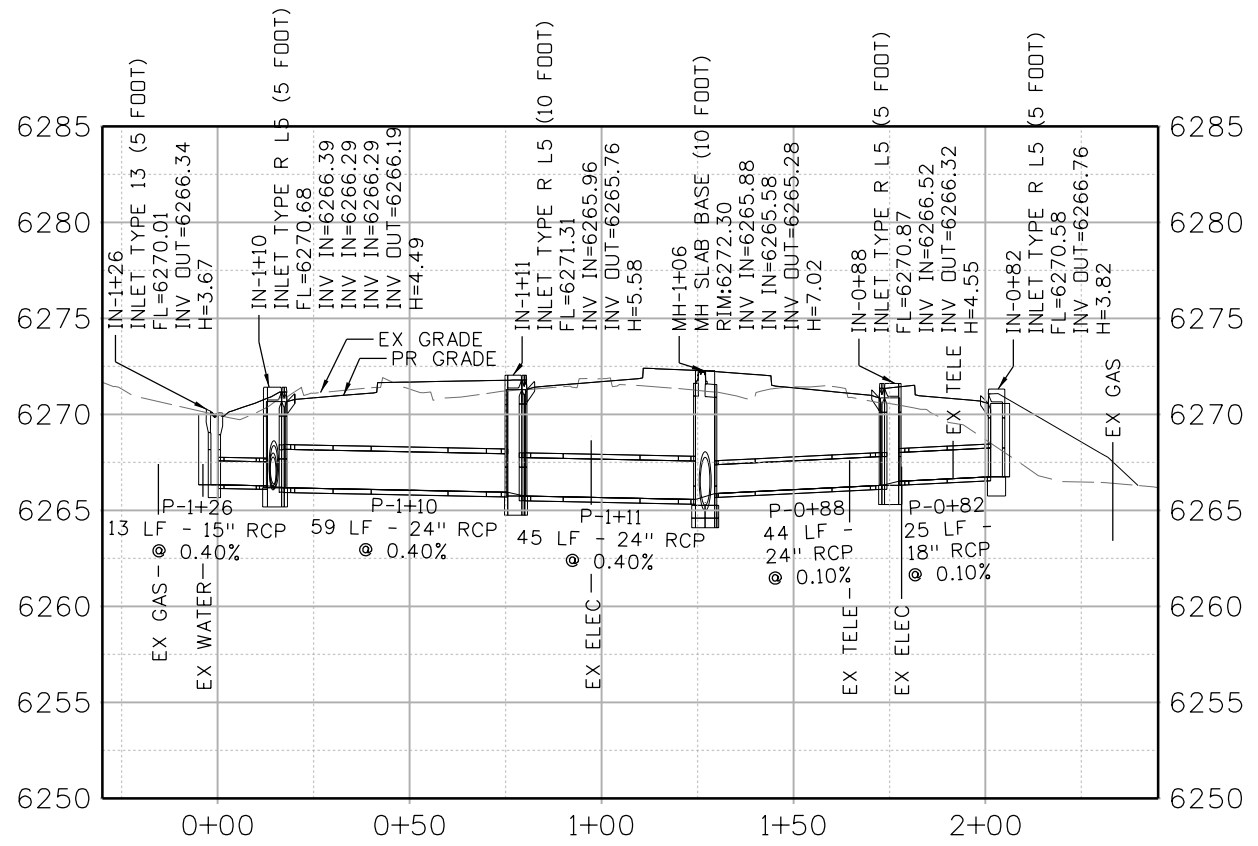
US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PROFILE

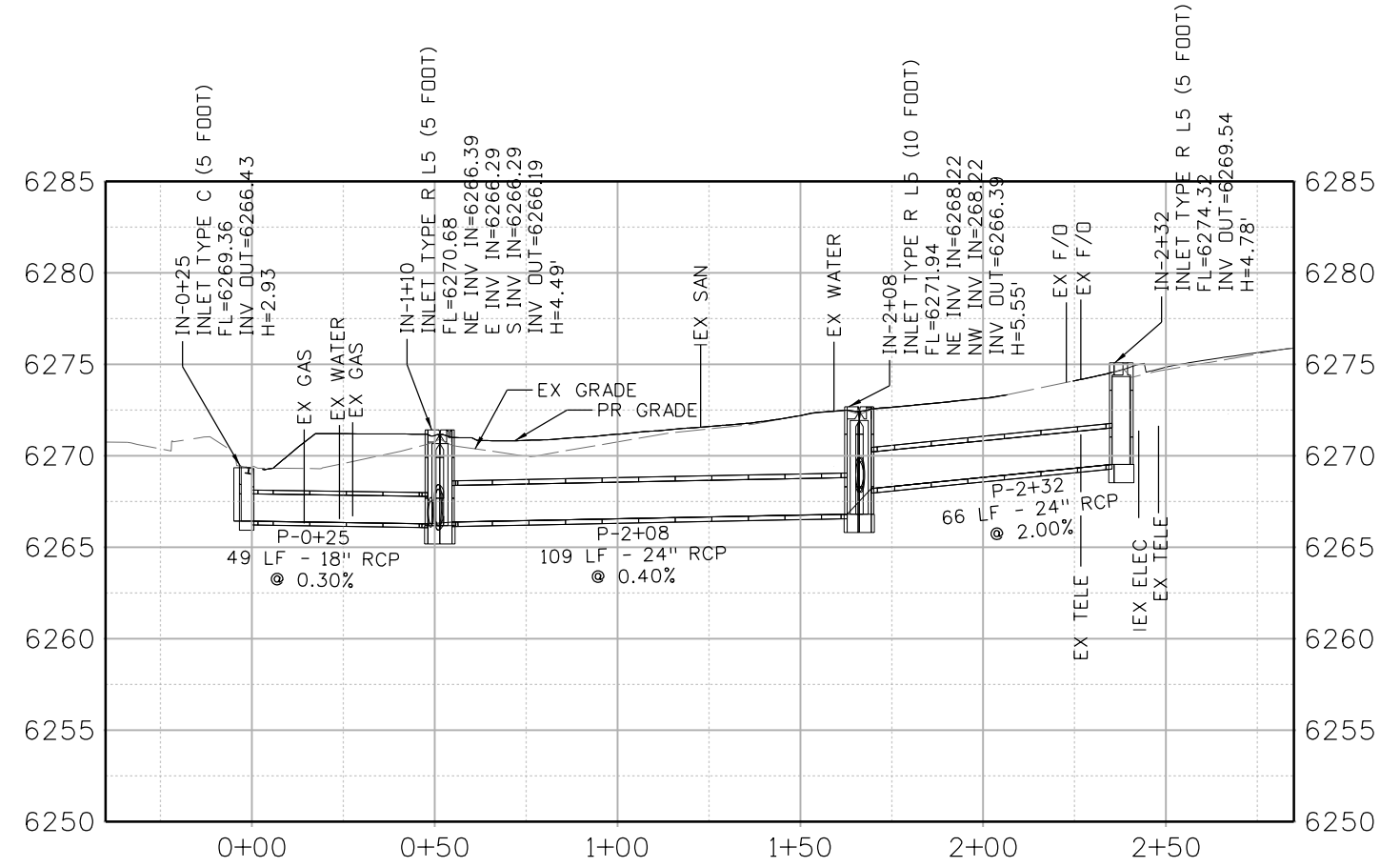
Drainage Prof	1 of 11
Sheet Number	76

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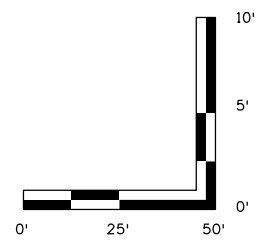
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S. QD-LAT 1



S. QD-LAT 2




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 Denver, CO 80202  
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Detailer: CMB    Print Date: 12/20/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
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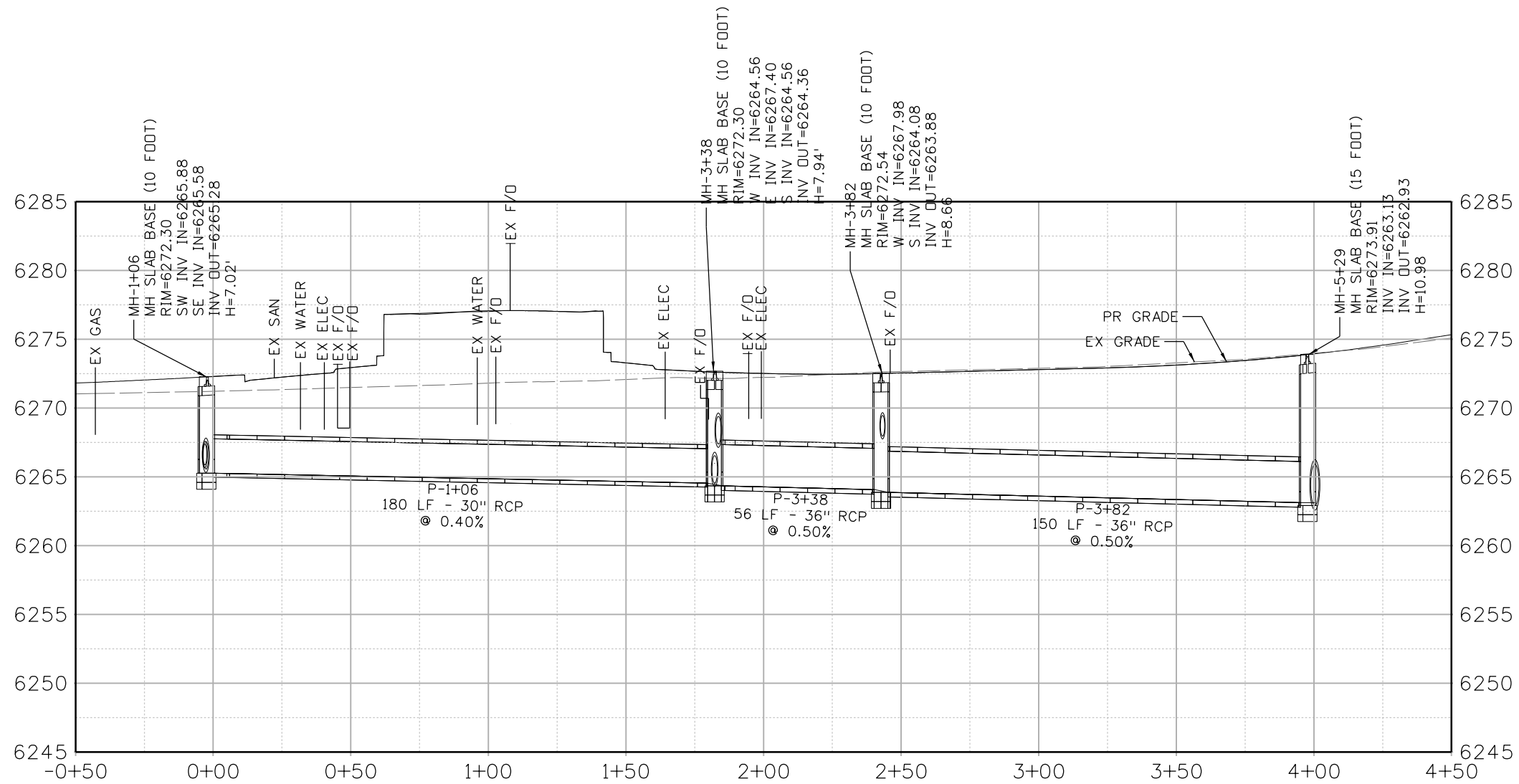


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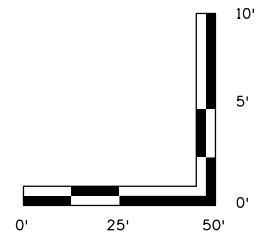
US Highway 24 & Peterson Blvd/Rd Roundabouts  
**DRAINAGE PROFILE**  
 Drainage Prof 2 of 11  
 Sheet Number **77**

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

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S. QD TRUNK TO MH-5+29



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 Denver, CO 80202  
 Tel: 303-764-1520, hdrinc.com

Detailer: CMB    Print Date: 12/20/2023  
 Designer: SDA    Horiz. Scale: 1"=50'  
 Reviewer: EVS    Vert. Scale: 1"=10'



Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

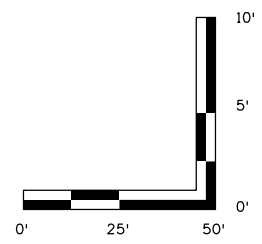
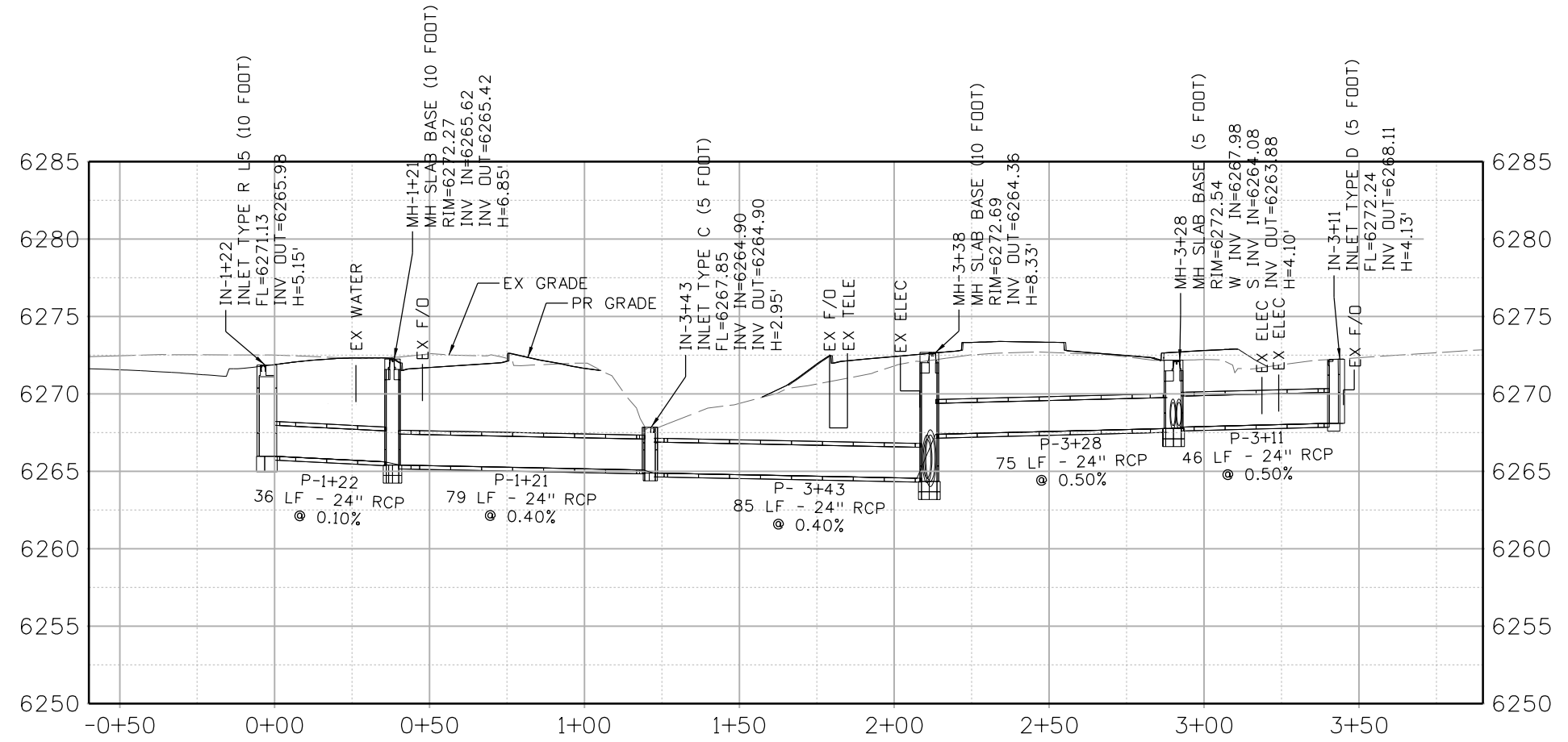
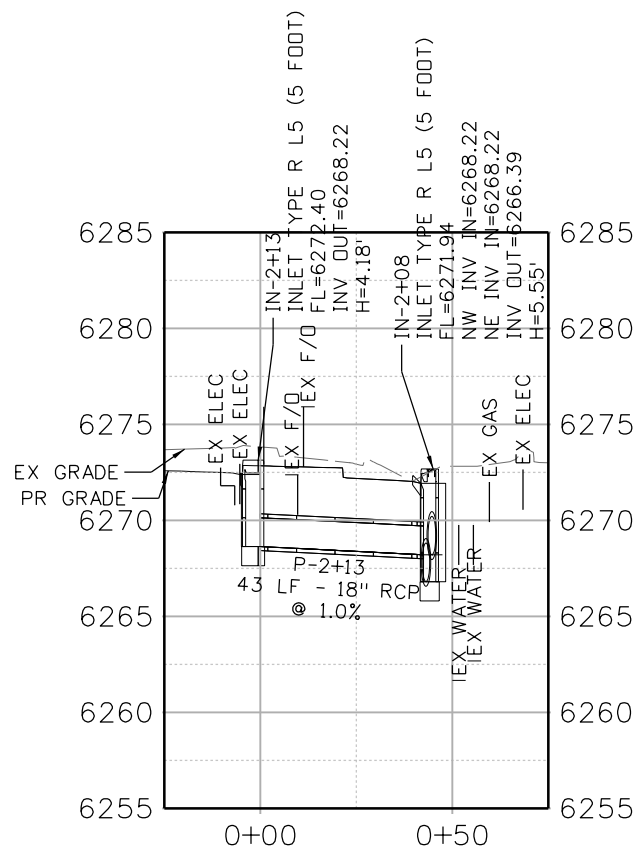
DRAINAGE PROFILE

Drainage Prof 3 of 11

Sheet Number 78

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HDR  
 1670 Broadway  
 Denver, CO 80202  
 Tel: 303-764-1520, hdrinc.com

Detailer: CMB	Print Date: 12/20/2023
Designer: SDA	Horiz. Scale: 1"=50'
Reviewer: EVS	Vert. Scale: 1"=10'

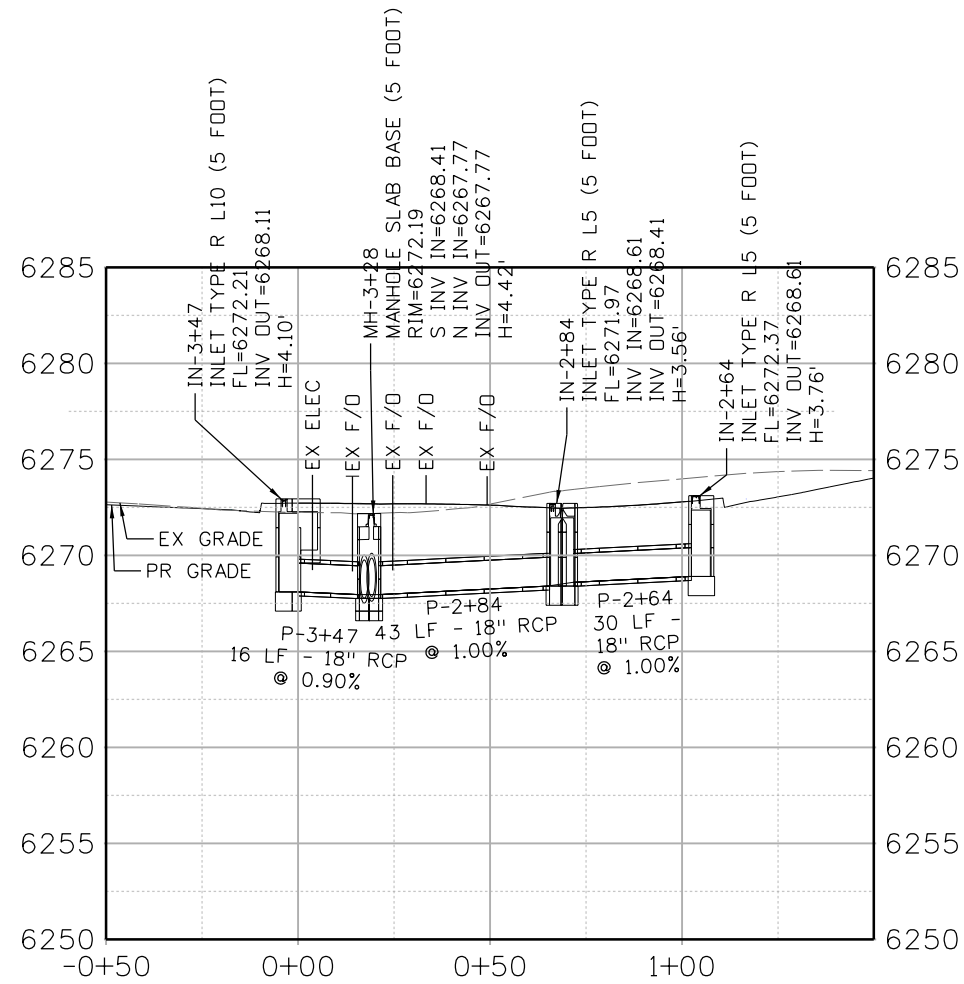


Sheet Revisions		
Date	Comments	Init

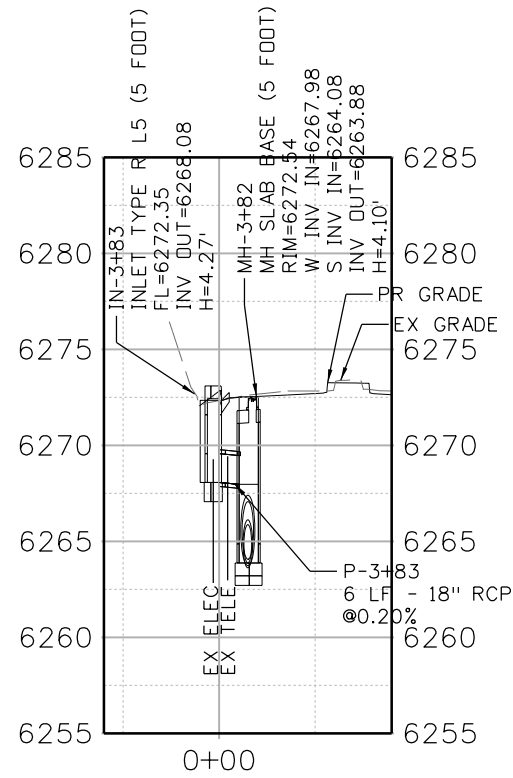
US Highway 24 & Peterson Blvd/Rd Roundabouts	
DRAINAGE PROFILE	
Drainage Prof 4 of 11	Sheet Number 79

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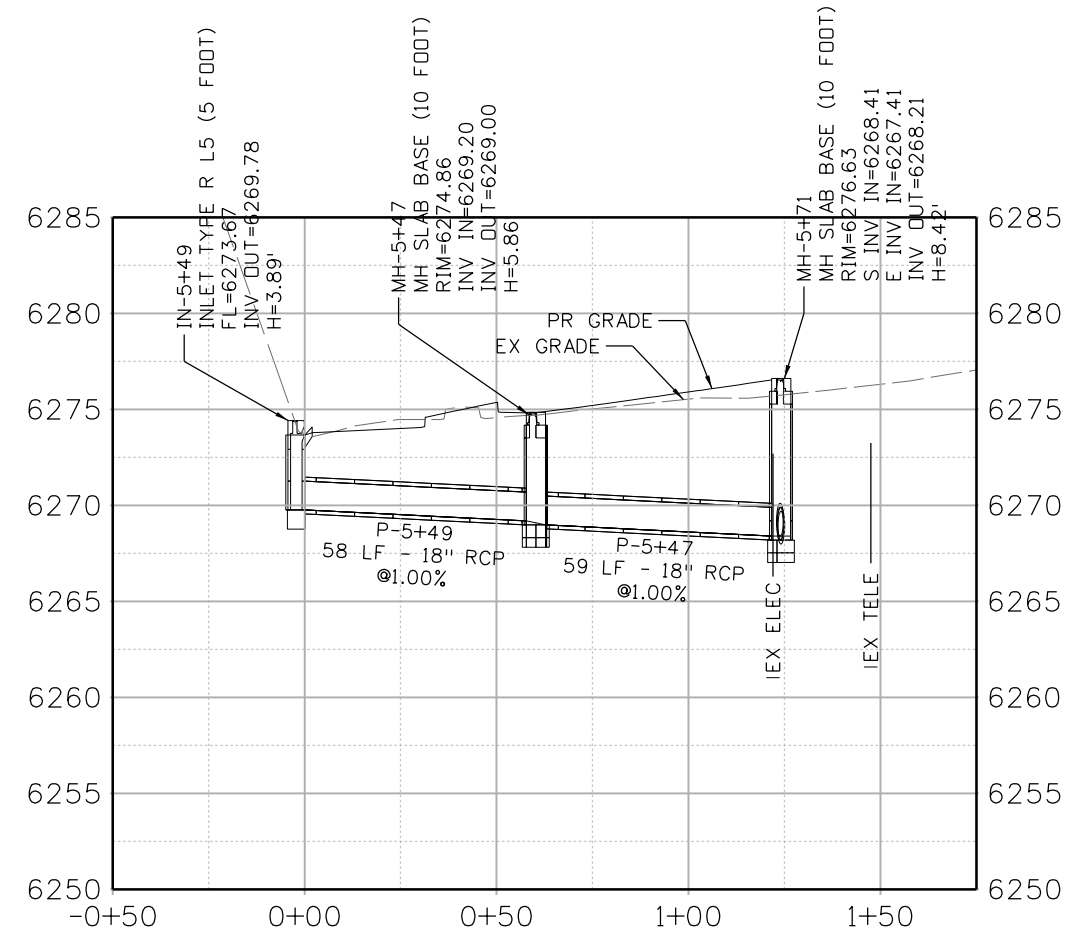
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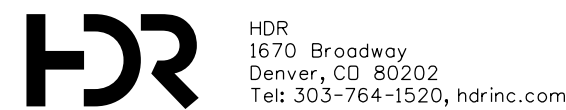
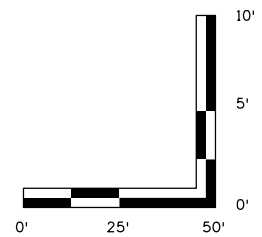
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CREEK OUTFALL-LAT 1



N. POND-LAT 2



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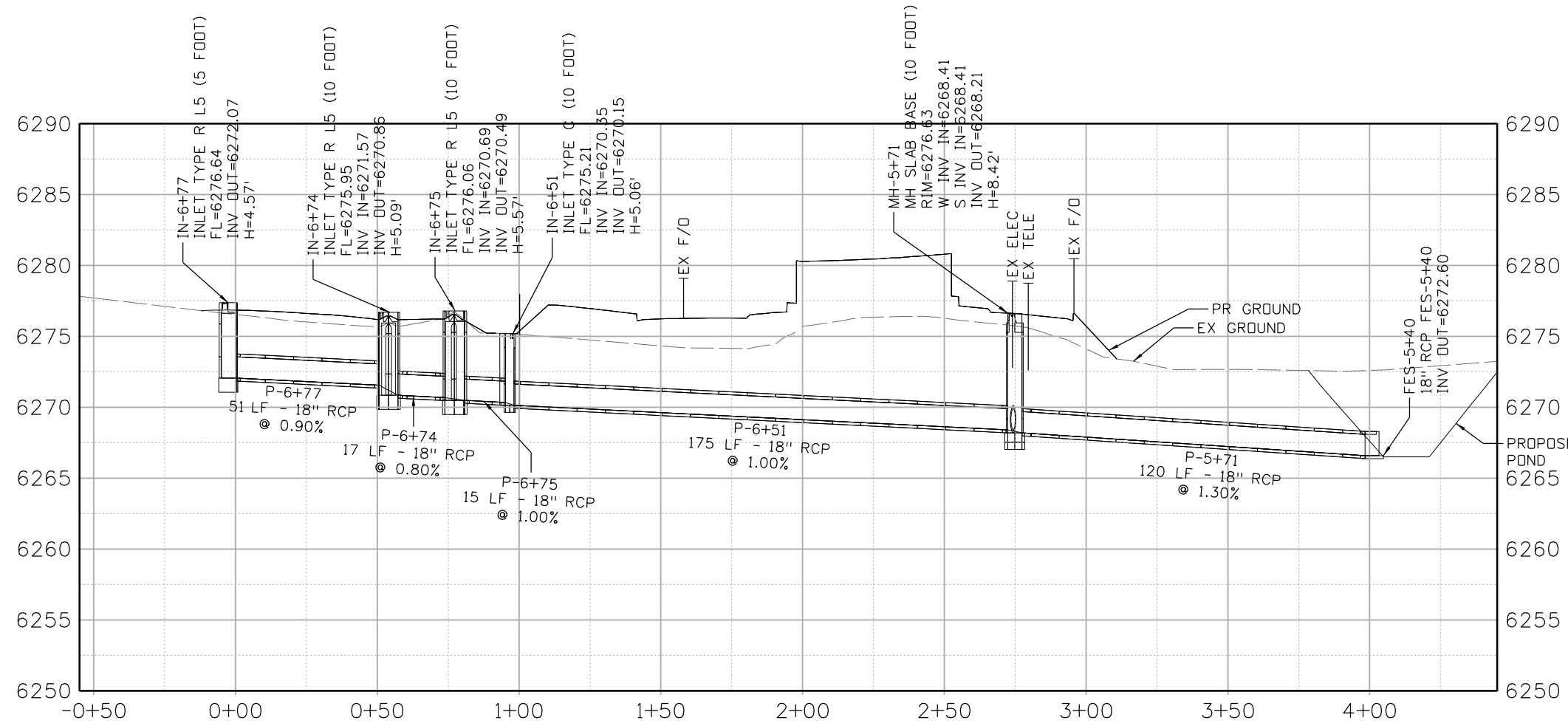
Drainage Prof 5 of 11

Sheet Number 80

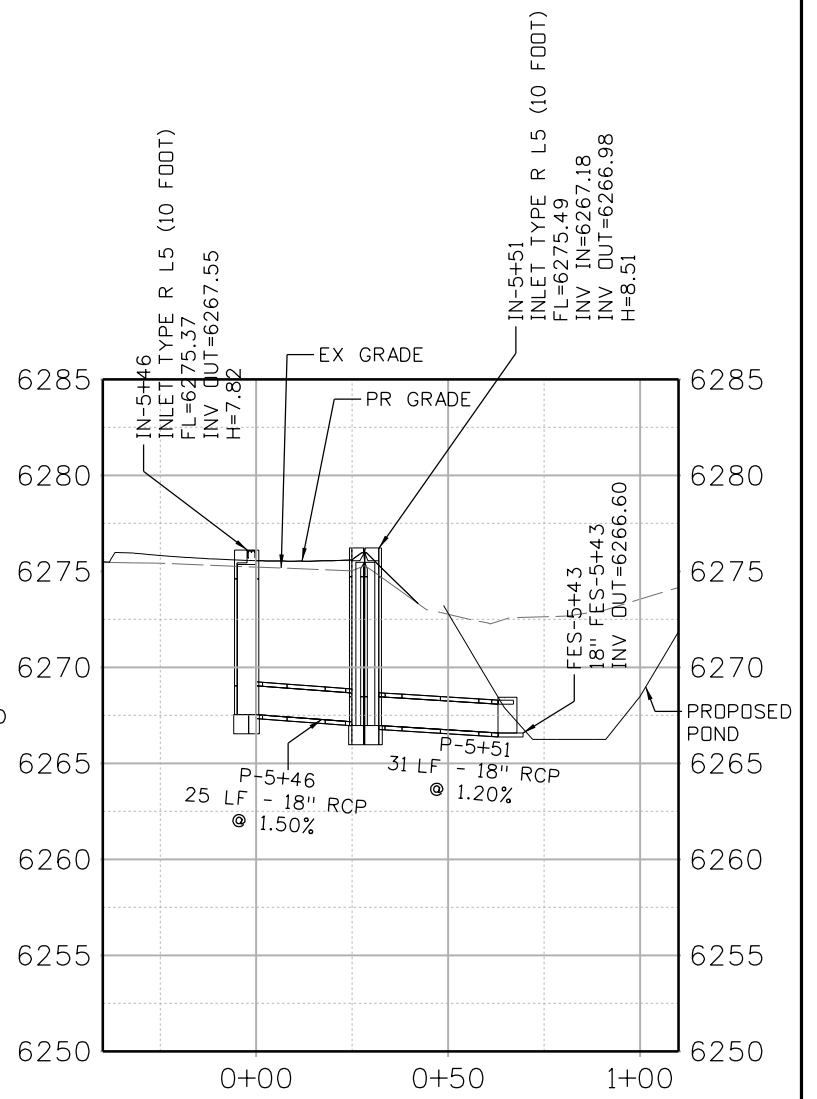
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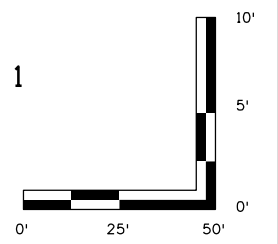
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N. QD-POND LAT 1



N. POND-LAT 1



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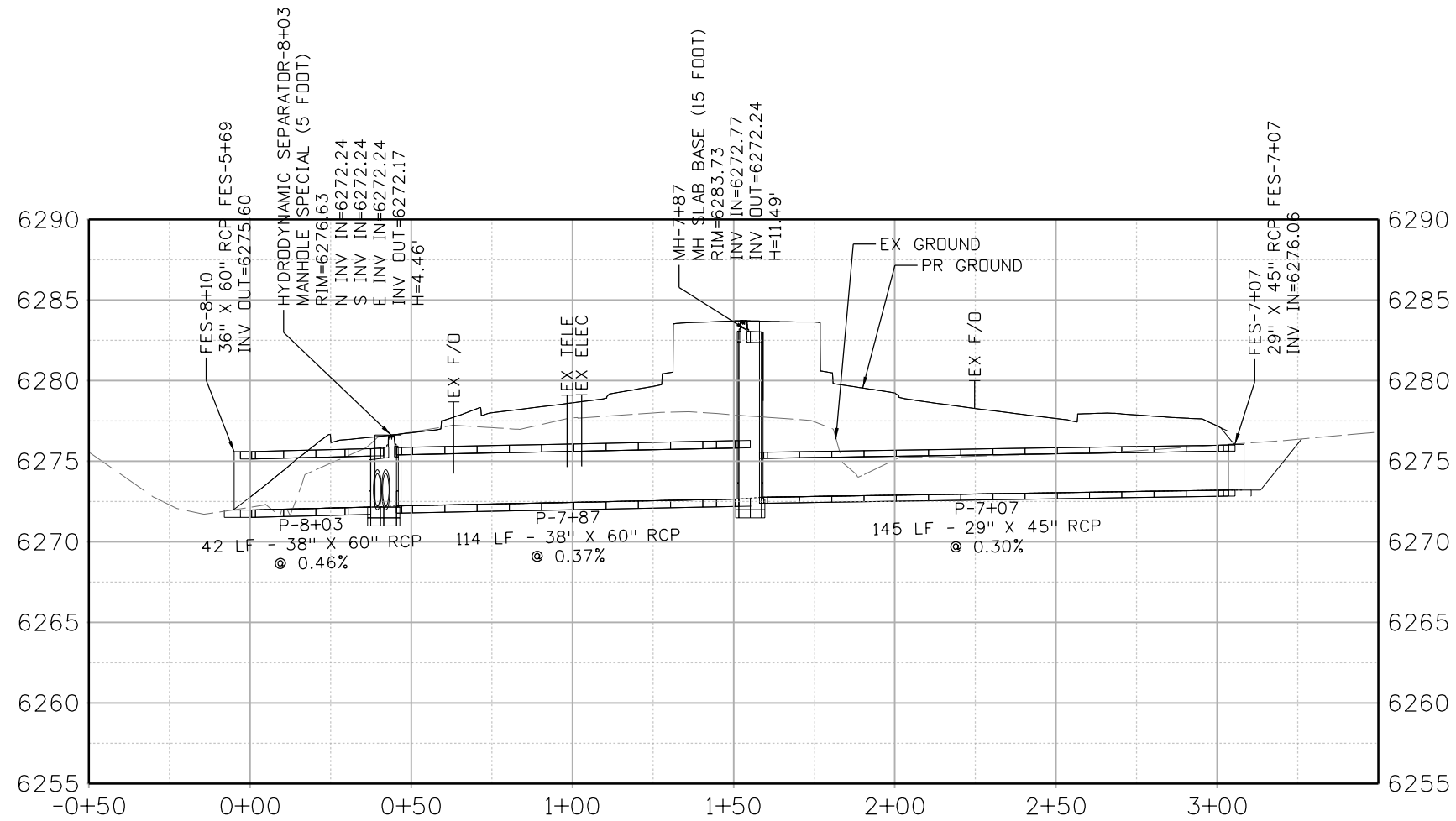
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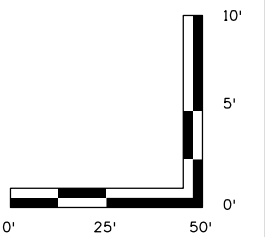
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N. QD-NW DITCH OUTFALL



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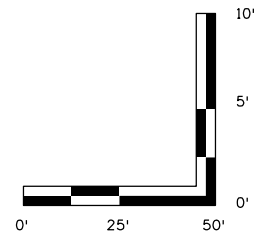
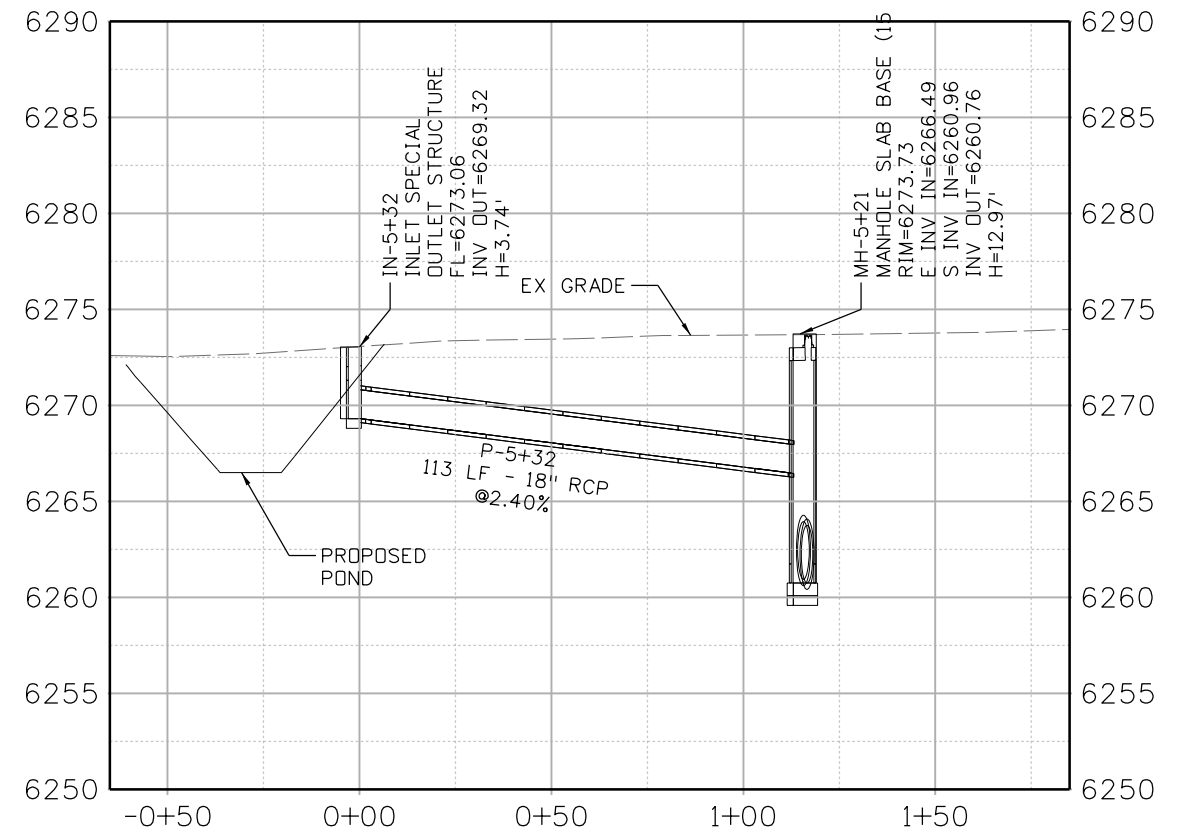
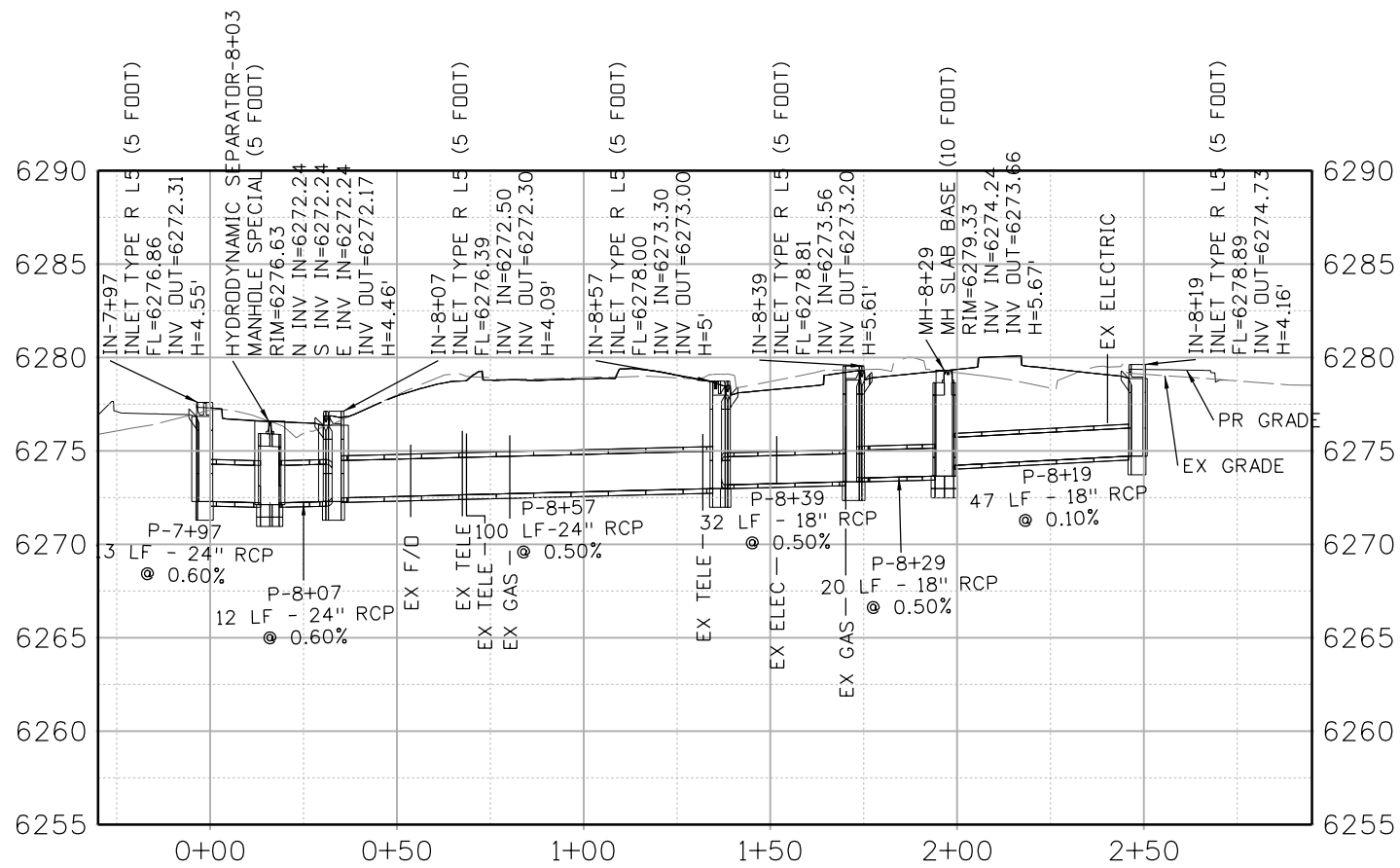
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Sheet Number 82

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WB. ONRAMP-LAT 1

N. QD POND OUTFALL



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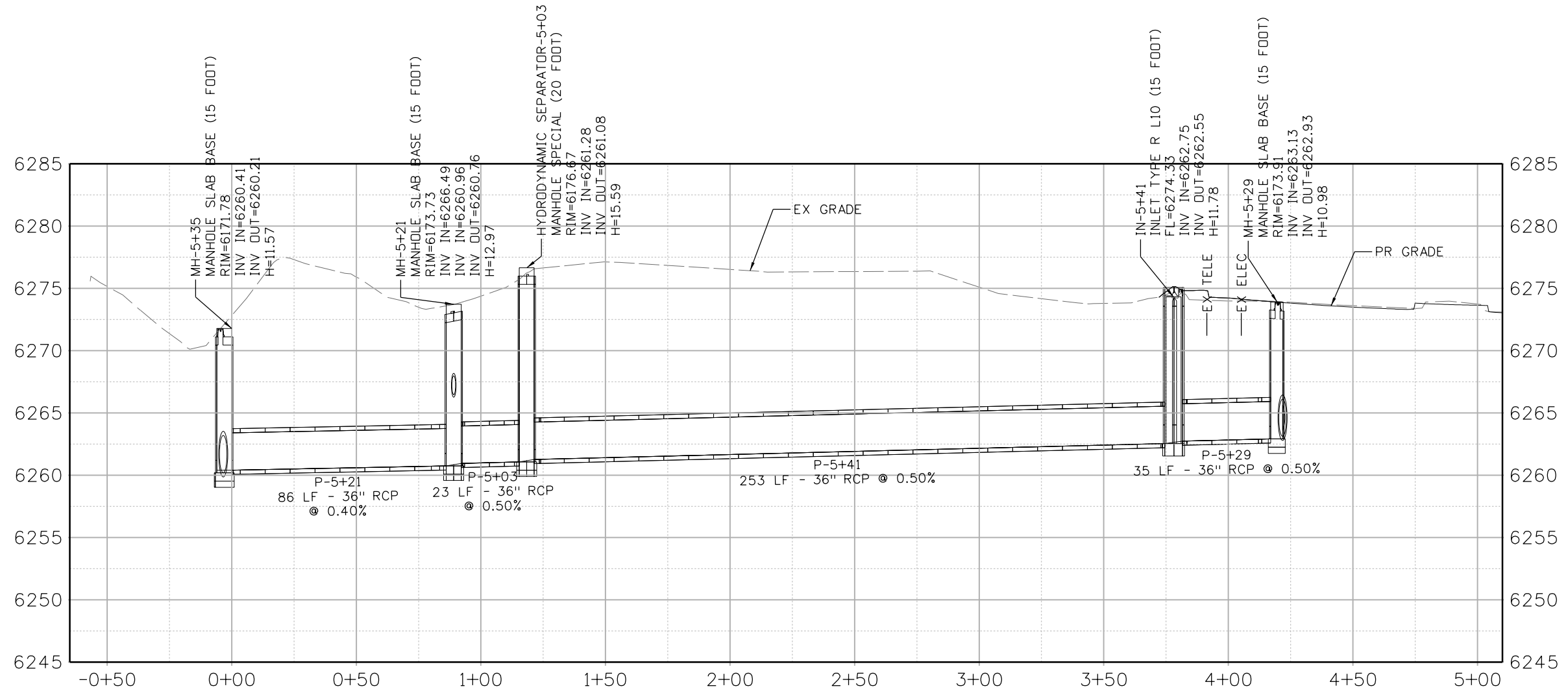
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Drainage Prof 8 of 11

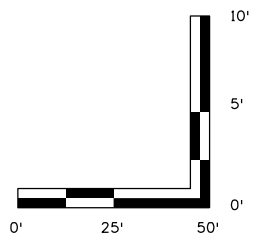
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CREEK TRUNK OUTFALL-1 OF 3



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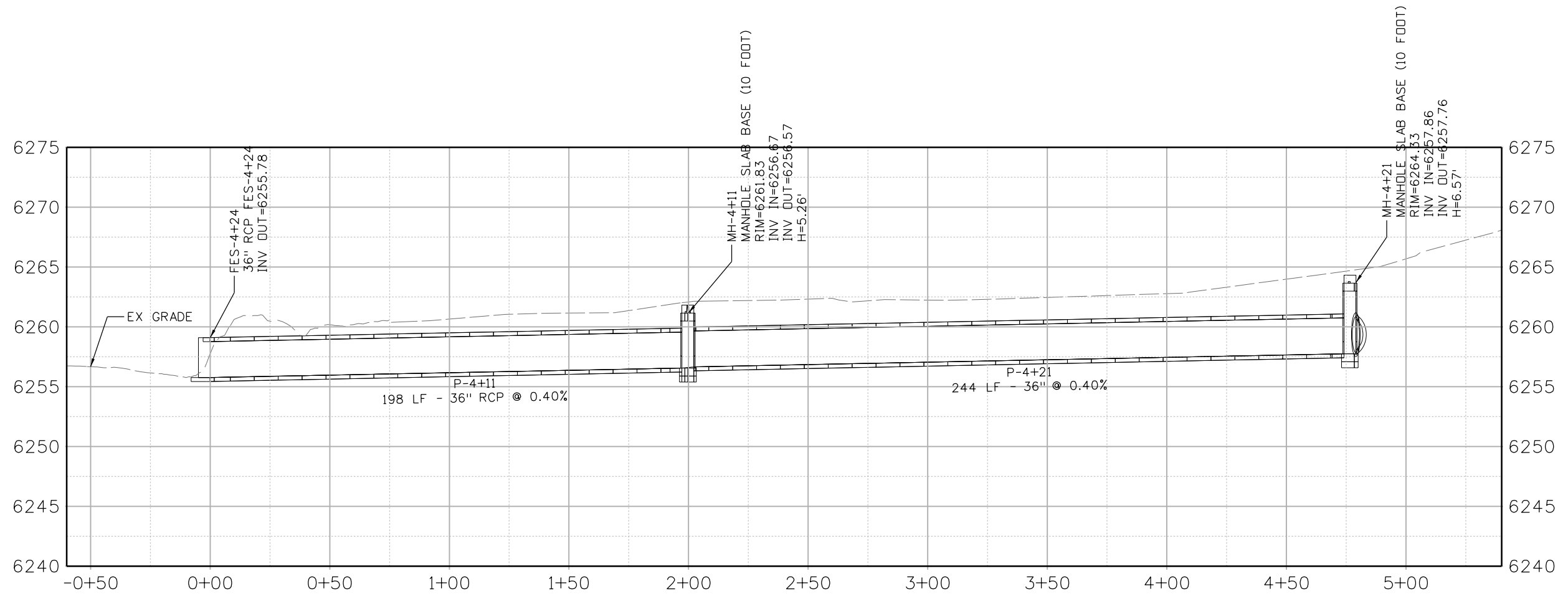
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Drainage Prof 9 of 11	Sheet Number 84

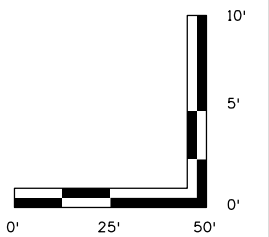
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CREEK TRUNK OUTFALL 3 OF 3



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US Highway 24 & Peterson Blvd/Rd Roundabouts

DRAINAGE PROFILE

Drainage Prof 11 of 11

Sheet Number 86

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GENERAL NOTES

- GENERAL NOTES
- SUBSURFACE UTILITY ENGINEERING IS A PROFESSIONAL PRACTICE DEFINED BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE.) T2UE CONDUCTS UTILITY INVESTIGATIONS IN ACCORDANCE WITH ASCE 38-22; STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA. IDENTIFYING AND DOCUMENTING UNDERGROUND UTILITIES IS A RESULT OF GATHERING EVIDENCE FROM VARIOUS SOURCES AND EXACT UTILITY LOCATIONS ARE NOT CONFIRMED UNLESS VISUALLY EXPOSED AND SURVEYED, AND THEN ONLY AT THOSE SPECIFIC EXPOSED LOCATIONS. ADDITIONALLY, T2UE CANNOT GUARANTEE THAT ALL UTILITIES HAVE BEEN DISCOVERED AND DEPICTED.
  - IN ACCORDANCE WITH COLORADO REVISED STATUTES TITLE 9 ARTICLE 1.5, T2UE SUBMITTED A SUBSURFACE UTILITY ENGINEERING NOTIFICATION TO THE COLORADO 811 ASSOCIATION ON SEPTEMBER 14, 2023.
  - T2UE INVESTIGATED ALL UTILITIES, INCLUDED WITHIN THE SCOPE OF WORK, INSIDE THE PROJECT LIMITS. THOSE UTILITIES ARE DEPICTED AS INDICATED IN THE LEGEND. OTHERS PROVIDED ALL OTHER INFORMATION, NOTABLY THE BACKGROUND INFORMATION, AND T2UE DISCLAIMS RESPONSIBILITY FOR ITS ACCURACY.
  - INVESTIGATIONS OF DEPICTED UTILITIES WERE COMPLETED ON OCTOBER 11, 2023. T2UE DISCLAIMS RESPONSIBILITY FOR NEW INSTALLATIONS OR ALTERATIONS TO EXISTING UTILITIES AFTER THIS DATE. CONSIDERATION SHOULD BE GIVEN TO UPDATING THIS INVESTIGATION PRIOR TO FINAL DESIGN AND/OR CONSTRUCTION.
  - UTILITY SIZE AND MATERIAL ARE SHOWN IF AVAILABLE FROM RECORD INFORMATION. ADDITIONALLY, FIELD OBSERVATIONS WERE CONDUCTED, WHERE POSSIBLE, TO CORROBORATE AND SUPPLEMENT RECORD INFORMATION BUT T2UE DOES NOT GUARANTEE ITS ACCURACY OR COMPLETENESS. PIPE DIAMETERS ARE NOMINAL AND NOT EXACT, UNLESS OTHERWISE NOTED.
  - PROFESSIONAL ASSISTANCE BY T2UE IS RECOMMENDED IN SELECTING LOCATIONS FOR QUALITY LEVEL A DATA FOR SPECIFIC DESIGN DECISIONS.
  - THIS INVESTIGATION DEPICTS UTILITIES FOR PLANNING AND DESIGN PURPOSES BUT NOT FOR CONSTRUCTION. FOR DAMAGE PREVENTION DURING CONSTRUCTION, COMPLY WITH APPLICABLE ONE-CALL LAWS (CALL 811).
  - THESE PLANS HAVE BEEN PREPARED FOR THE USE OF T2UE'S CLIENT FOR THIS PROJECT ONLY AND MAY NOT BE USED, REPRODUCED, OR RELIED UPON BY THIRD PARTIES EXCEPT WHEN AGREED UPON BY T2UE AND ITS CLIENT OR WHEN REQUIRED BY LAW.
  - UNDER THE PROJECT SCOPE, THE FOLLOWING UTILITIES WERE EXPRESSLY EXCLUDED FROM THIS INVESTIGATION: LANDSCAPE IRRIGATION SYSTEMS, TRAFFIC LOOP DETECTION DEVICE, SEWER LATERALS AND UNDERGROUND STORAGE TANKS / ASSOCIATED PIPING OR SEPTIC SYSTEMS.
  - UTILITIES ARE GENERALLY DEPICTED BY A SINGLE LINE. HOWEVER, LARGER UTILITIES (12" AND GREATER) MAY BE DEPICTED AT THEIR REPORTED WIDTH CENTERED OVER THE ACTUAL QUALITY LEVEL RESULTS. THEREFORE, ANY UTILITY EDGES SHOWN ARE FOR SCHEMATIC DEPICTION ONLY AND SHOULD NOT BE CONSIDERED RELIABLE FOR DESIGN. IF EXACT EDGES OF UTILITY ARE NEEDED, QLA DATA IS REQUIRED.
  - NON-CONDUCTIVE UTILITY PIPES, WHERE TRACER WIRE IS AVAILABLE, ARE DESIGNATED AND LABELED QLB. HOWEVER, DUE TO THE UNKNOWN WIRE INSTALLATION MEAN AND METHODS DURING CONSTRUCTION, THE ALIGNMENT LOCATION OF THE TRACER WIRE MAY BE DIFFERENT FROM THE ALIGNMENT LOCATION OF THE ACTUAL UTILITY PIPE.
  - OVERHEAD UTILITIES ARE NOT ASSIGNED A QUALITY LEVEL, UNLESS OTHERWISE NOTED.
  - AS DEFINED BY THE PROJECT SCOPE, T2UE ATTEMPTED TO FIND UNDOCUMENTED UTILITIES. UNDOCUMENTED UTILITIES ARE DEPICTED AND LABELED AS UNKNOWN UTILITIES ON THE PLAN SET, AS THEY HAVE NO CORRELATED RECORDS OR VISIBLE APPURTENANCES TO DETERMINE FUNCTION OR TYPE. HOWEVER, UNDOCUMENTED UTILITIES MAY BE PRESENT IN THE PROJECT AREA THAT WERE NOT DISCOVERABLE BY THE SCOPED EFFORT AND THEREFORE NOT DEPICTED.
  - QLB LINEWORK IS DEPICTED BASED ON DETECTION AND TRACING OF THE CENTERLINE OF THE ELECTROMAGNETIC FIELD SURROUNDING THE UTILITY. HORIZONTAL POSITIONING OF QLB UTILITY SEGMENTS ARE NOT REPRESENTATIVE OF THE CENTERLINE OF ANY DUCTS OR CONDUIT THAT THE DEPICTED UTILITY MAY BE INSIDE OF.

UTILITY SYMBOLS

	GAS VALVE
	GAS METER (LOW PRESSURE)
	GAS METER (HIGH PRESSURE)
	GAS WARNING SIGN
	ELECTRIC METER
	ELECTRIC JUNCTION BOX
	ELECTRIC MANHOLE
	ELECTRIC UTILITY POLE
	ELECTRIC TRANSFORMER ON POLE
	ELECTRIC TRANSFORMER
	ELECTRIC GUY WIRE
	ELECTRIC PULL BOX
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEAN OUT
	SANITARY SEWER VENT
	SANITARY SEWER WARNING SIGN
	TRAFFIC SIGNAL POLE
	TRAFFIC CONTROLLER CABINET
	TRAFFIC PULL BOX
	TRAFFIC PEDESTAL
	TRAFFIC LOOP ACCESS POINT
	TRAFFIC SIGN WITH A FLASHING BEACON
	STREET LIGHT
	STORM INLET (TYPES C, D, 13)
	VANE GRATE STORM INLET
	15' TYPE-R STORM INLET
	10' TYPE-R STORM INLET
	5' TYPE-R STORM INLET
	STORM MANHOLE
	STORM PIPE END SECTION
	FIBER OPTIC MANHOLE
	TELEPHONE/TV PEDESTAL
	TELEPHONE/TV MARKER
	TELEPHONE/TV PULL BOX
	WATER WARNING SIGN
	FIRE HYDRANT
	WATER VALVE
	WATER MANHOLE
	WATER VAULT
	WATER METER

UTILITY LINETYPES (EXISTING CONDITIONS)

	CULVERT STORM DRAINAGE
	CULVERT CONCRETE BOX/WINGWALL
	STORM DRAINAGE
	SANITARY SEWER
	CABLE TELEVISION
	CABLE TELEVISION OVERHEAD
	FIBER OPTIC UNDERGROUND
	FIBER OPTIC OVERHEAD
	WATER UNDERGROUND
	IRRIGATION UNDERGROUND
	ELECTRIC UNDERGROUND
	ELECTRIC OVERHEAD
	ELECTRIC TRANSFORMER EDGE
	ELECTRIC GUY WIRE
	STREET LIGHT
	STREET LIGHT OVERHEAD
	TRAFFIC LOOP
	TRAFFIC SIGNAL
	TRAFFIC SIGNAL OVERHEAD
	TELEPHONE
	TELEPHONE OVERHEAD
	FIBER OPTIC TELEPHONE
	FIBER OPTIC TELEPHONE OVERHEAD
	GAS LINE
	HIGH PRESSURE GAS LINE
	UNKNOWN UTILITY LINE
	DITCH

NOTE: FOR A COMPLETE LISTING OF SYMBOLOLOGY USED WITHIN THIS SET OF PLANS, PLEASE REFER TO THE M-100-1 STANDARD SYMBOLS OF THE COLORADO DEPARTMENT OF TRANSPORTATION M&S STANDARDS PUBLICATION. EXISTING BACKGROUND FEATURES ARE SHOWN AS SCREENED BACK TO GRAY SCALE. UTILITY INVESTIGATION FEATURES ARE SHOWN AS FULL WEIGHT AND COLOR WITHOUT SCREENING, UNLESS NOTED OTHERWISE.

ABBREVIATIONS

AATUR	ABANDONED ACCORDING TO UTILITY RECORD
ABND	ABANDONED
ACP	ASBESTOS CLAY/CONCRETE PIPE
BLDG	BUILDING
C/L	CENTER/CENTERLINE
CATV	CABLE TELEVISION
CB	CATCH BASIN/STORM INLET
CBC	CONCRETE BOX CULVERT
CI	CAST IRON PIPE
CSP	CORRUGATED STEEL PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CD	CLEAN-OUT
COND	CONDUIT
CU	COPPER PIPE
DI	DUCTILE IRON PIPE
ELEC	ELECTRIC
ELEV	ELEVATION
FO	FIBER OPTIC
GPR	GROUND PENETRATING RADAR
HP	HIGH PRESSURE
INV	INVERT
LP	LOW PRESSURE
MH	MANHOLE
M.P.	MILE POST MARKER
MT	EMPTY
MTC	EMPTY CONDUIT
OH	OVERHEAD
PB	PULL BOX
PE	POLYETHYLENE PIPE
PL	PLASTIC CONDUIT/PIPE
PVC	POLYVINYL CHLORIDE PIPE
PRI	PRIVATE
RCP	REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SVC	SERVICE
SP	STAND PIPE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STL	STEEL
TELE	TELEPHONE
UNK	UNKNOWN
VCP	VITRIFIED CLAY PIPE
VD	VERTICAL DROP
VMS	VARIABLE MESSAGE SIGN
W/	WITH
W/O	WITHOUT
WS	WRAPPED STEEL

SURVEY CONTROL  
Control information was provided by Farnsworth Group

UTILITY QUALITY LEVELS  
(OBTAINED FROM ASCE PUBLICATION CI/ASCE STANDARD 38-22)

I N C R E A S E D  Q U A L I T Y	<b>QUALITY LEVEL "D" (QLD)</b> A VALUE ASSIGNED TO A UTILITY SEGMENT OR UTILITY FEATURE NOT VISIBLE AT THE GROUND SURFACE WHOSE ESTIMATED POSITION IS JUDGED THROUGH UTILITY RECORDS, INFORMATION FROM OTHERS, OR FROM VISUAL CLUES SUCH AS PAVEMENT CUTS, OBVIOUS TRENCHES, OR EXISTENCE OF SERVICE.
	<b>QUALITY LEVEL "C" (QLC)</b> A VALUE ASSIGNED TO A UTILITY SEGMENT NOT VISIBLE AT THE GROUND SURFACE WHOSE ESTIMATED POSITION IS JUDGED THROUGH CORRELATING UTILITY RECORDS OR SIMILAR EVIDENCE OF UTILITY FEATURES, VISIBLE ABOVE GROUND AND/OR UNDERGROUND. THE UTILITY ANCHOR POINT ON THE UTILITY FEATURES SHALL BE TIED TO THE PROJECT SURVEY DATUM WITH AN ACCURACY OF 0.2 FT (60 MM) HORIZONTAL.
	<b>QUALITY LEVEL "B" (QLB)</b> A VALUE ASSIGNED TO A UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE WHOSE EXISTENCE AND HORIZONTAL POSITION IS BASED ON GEOPHYSICAL METHODS COMBINED WITH PROFESSIONAL JUDGMENT AND WHOSE LOCATION IS TIED TO THE PROJECT SURVEY DATUM.
	<b>QUALITY LEVEL "A" (QLA)</b> A VALUE ASSIGNED TO THAT PORTION (X-Y, AND Z-GEOMETRY) OF A UTILITY SEGMENT OR A SUBSURFACE UTILITY FEATURE THAT IS DIRECTLY EXPOSED AND MEASURED AND WHOSE LOCATION AND DIMENSIONS ARE TIED TO THE PROJECT SURVEY DATUM. THE UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE SHALL BE TIED TO THE PROJECT SURVEY DATUM WITH AN ACCURACY OF 0.1 FT (30 MM) VERTICAL AND TO 0.2 FT (60 MM) HORIZONTAL FOR THE MEASUREMENTS OF THE OUTSIDE LIMITS OF THE UTILITY FEATURE OR UTILITY SEGMENT THAT IS EXPOSED.

UTILITY DETECTION EQUIPMENT

RADIDDETECTION RD8100 PCL  
VIVAX-METROTECH VM-810 PCL  
IDS HI-MOD 200/600 MHZ GPR  
JAMESON DUCT HUNTER TRACEABLE RODDER  
SCHONSTEDT GA-52C MAGNETIC LOCATOR  
PIPEHORN 800H PCL  
VIVAX-METROTECH VLDC3 PRO PCL

NOTE: SCHONSTEDT MAGNETIC LOCATOR AND DETECTABLE RODDER ARE SUPPLEMENTAL UTILITY DETECTION EQUIPMENT AND USED ONLY WHEN NECESSARY.

SUBSURFACE UTILITY ENGINEERING SYMBOLS

	PROJECT LIMITS		FEED TERMINATION TO STRUCTURE
	LOSS OF GEOPHYSICAL SIGNAL		UTILITY STUB-OUT
	LIMITS OF ASCE 38-22 INVESTIGATION		DESIGNATED TO REFUSAL USING SONDE / RODDER
	CHANGE OF ASCE 38-22 QUALITY LEVEL		BREAKLINE TO INDICATE NEXT STRUCTURE OFF SHEET
	(UTILITY OWNER)-(SIZE AND/OR TYPE)		
	(UTILITY OWNER) **		

ENGINEER'S NOTE

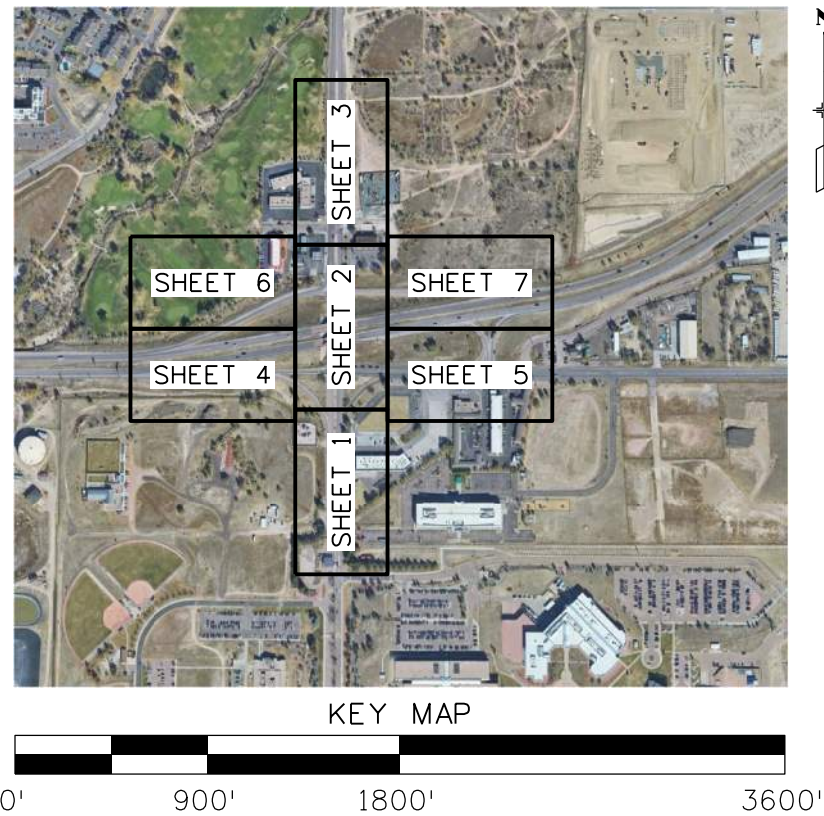
THE UTILITIES DEPICTED HAVE BEEN INVESTIGATED IN GENERAL ACCORDANCE WITH THE ASCE 38-22, "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES," STANDARD AND SHOWN AT THEIR ACHIEVED QUALITY LEVELS. ALL OTHER INFORMATION HAS BEEN PROVIDED BY OTHERS AND INCLUDED AS REFERENCE ONLY.



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 150 CAPITAL DR, STE 190 GOLDEN, COLORADO 80401 PHONE: (720) 257-5800 WWW.T2UE.COM	Detailer: BF Designer: KM Reviewer: CD	Print Date: 12/19/2023 Horiz. Scale: N/A Vert. Scale: N/A	COLORADO SPRINGS	Sheet Revisions <table border="1"> <thead> <tr><th>Date</th><th>Comments</th><th>Init</th></tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Comments	Init										US Highway 24 & Peterson Blvd/Rd Roundabouts	INVESTIGATION PLAN GENERAL NOTES	Exist Utilities OA of 7 Sheet Number 87
	Date	Comments	Init																

**KEY MAP & UTILITY RECORD NOTES**



**ENGINEERING NOTES**

A) T2 UE, INC. ATTEMPTED TO OBTAIN UTILITY RECORDS FROM ALL UTILITY OWNERS IDENTIFIED, VIA THE COLORADO 811 PROCESS, WITHIN THE PROJECT AREA. RECORD INFORMATION WAS RECEIVED FROM SOME UTILITY OWNERS (NOTED AS "MAPS PROVIDED", WHILE OTHERS PROVIDED A "CLEAR" RESPONSE; HOWEVER, NO UTILITY INFORMATION WAS RECEIVED IN THESE "ALL CLEAR" INSTANCES. "NO RESPONSE" AND "DID NOT LOCATE" INDICATE A UTILITY OWNER DID NOT RESPOND TO T2 UE, INC.'S REQUEST FOR UTILITY RECORDS. WITH THAT SAID, ADDITIONAL UTILITIES MAY EXIST, WHICH ARE NOT DEPICTED ON THESE PLANS, DUE TO LIMITED UTILITY RECORD INFORMATION.

B) CDOT FIBER OPTIC BACKBONE RESPONDED "ALL CLEAR" VIA THE 811 SYSTEM. HOWEVER, DURING THE INVESTIGATION, CDOT FIBER OPTIC BACKBONE FACILITIES WERE FOUND TO BE PRESENT WITHIN THE PROJECT LIMITS. ADDITIONAL UTILITIES MAY EXIST AND ARE NOT DEPICTED ON THE PLANS DUE TO LIMITED UTILITY RECORD INFORMATION.

C) CENTURY LINK, INC. CHANGED ITS NAME TO LUMEN TECHNOLOGIES, INC. EFFECTIVE 09/18/2020. CENTURY LINK ACQUIRED LEVEL3 COMMUNICATIONS, INC. AS OF 11/01/2017. FACILITIES LABELED AS LUMEN, CENUTRY LINK, OR LEVEL3 ON THIS PLANSET ARE DEPICTED BASED ON THE SIGNAGE, LABELS, OR MARKS OBSERVED BY T2 UE, INC. WHILE IN THE FIELD.

D) MAPS OF ZAYO FACILITIES WERE OBTAINED ON THEIR PUBLIC GIS OUTSIDE OF THE 811 REQUEST ON 09/14/2023.

E) COLORADO SPRINGS UTILITIES RESPONDED TO T2 UES, INC.'S 811 ENGINEERING TICKET WITH "022 - NO LOCATE NECESSARY". T2 UES, INC. OBTAINED MAPS OF COLORADO SPRINGS UTILITIES FACILITIES ON 09/14/2023 OUTSIDE OF THE 811 REQUEST PROCESS FROM COLORADO SPRINGS UTILITIES PUBLIC GIS.

**811 RECORDS RESEARCH RESPONSES**

OWNER	UTILITY	ABBREVIATION	CONTACT	PHONE/EMAIL	OFFICIAL 811 RESPONSE	NOTE
A T T TRANSMISSION	FIBER	ATT	DAVID CLARK	(760)717-4755 / DC5801@ATT.COM	NO RESPONSE	SEE ENGINEERING NOTE A
CDOT - REGION 2	ELECTRIC & FIBER	CDOT2	USIC - COMCAST	(800)778-9140	MAPS PROVIDED	-
CDOT FIBER OPTIC BACKBONE	FIBER	CDOTITS	USIC - CDOT FIBER BACKBONE	(800)778-9140 / (720)202-6441	CLEAR	SEE ENGINEERING NOTE B
CENTURY LINK	FIBER & TELECOM	CLN	USIC - CENTURY LINK	(800)778-9140 / NATIONALRELO@CENTURYLINK.COM	MAPS PROVIDED	SEE ENGINEERING NOTE C
CHEROKEE METRO DISTRICT	WATER & SEWER	CHKWS	CHEROKEE METRO DISTRICT	(719)597-5080 / HTTPS://CHEROKEEMETRO.ORG/PUBLIC-RECORDS/	MAPS PROVIDED	-
CITY OF COLORADO SPRINGS PUBLIC WORKS	FIBER, ELECTRIC, WATER, STORM SEWER, SEWER	CSPPW	CITY OF COLO SPRINGS PUBLIC WORKS	(719)385-6275 / HTTPS://GIS.COLORADOSPRINGS.GOV/HTML5VIEWER/?VIEWER=SPRINGSVIEW	MAPS PROVIDED	-
COLORADO SPRINGS UTILITIES	WATER, GAS, ELECTRIC, SANITARY SEWER	COSU	ANDREW VIGIL	(719)385-2209 / ANDREW.VIGIL@COLORADOSPRINGS.GOV HTTPS://GIS.COLORADOSPRINGS.GOV/HTML5VIEWER/?VIEWER=SPRINGSVIEW	DID NOT LOCATE	SEE ENGINEERING NOTE E
COMCAST	CATV & FIBER	CMCST	USIC - COMCAST	(800)778-9140	CLEAR	-
EL PASO COUNTY DEPT. OF PUBLIC WORKS	STORM SEWER, ELECTRIC, DITCH WATER	ELPA	EL PASO CO. DEPT. OF PUBLIC WORKS	(719)352-9601	CLEAR	-
LEVEL 3	FIBER	LVL3	LEVEL 3 ( NOW CENTURYLINK )	(877)366-8344 / NATIONALRELO@CENTURYLINK.COM	MAPS PROVIDED	-
MCI	FIBER	MCI	MCI RECORDS	(800)289-3427 / INVESTIGATIONS@VERIZON.COM	NO RESPONSE	SEE ENGINEERING NOTE A
SECOM	FIBER	SECOM	USIC - SECOM	(800)778-9140	CLEAR	-
ZAYO	ELECTRIC & FIBER	ZAYO	ZAYO - SELF-SERVE PORTAL	(800)961-6500 / HTTPS://TRANZACT.ZAYO.COM	CLEAR	SEE ENGINEERING NOTE D

**ENGINEER'S NOTE**

UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVEL" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEER'S DOCUMENT ASCE 38-22, "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES." RELIANCE UPON THIS DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DOES NOT RELIEVE THE EXCAVATOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK BETWEEN THE PROJECT OWNER AND THEIR ENGINEER REGARDING THE SCOPE AND LIMITS OF THE UTILITY INVESTIGATION LEADING TO THAT DEPICTIONS.



**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts



150 CAPITAL DR, STE 190  
GOLDEN, COLORADO 80401  
PHONE: (720) 257-5800

Detailer: BF    Print Date: 12/19/2023  
Designer: KM    Horiz. Scale: 1"=900'  
Reviewer: CD    Vert. Scale: N/A



INVESTIGATION PLAN  
GENERAL NOTES

Exist Utilities    0B    of    7  
Sheet Number    88

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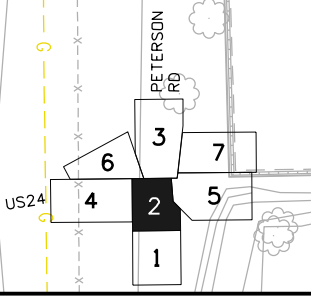
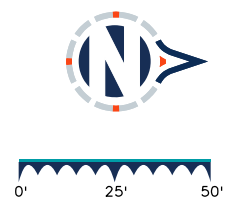
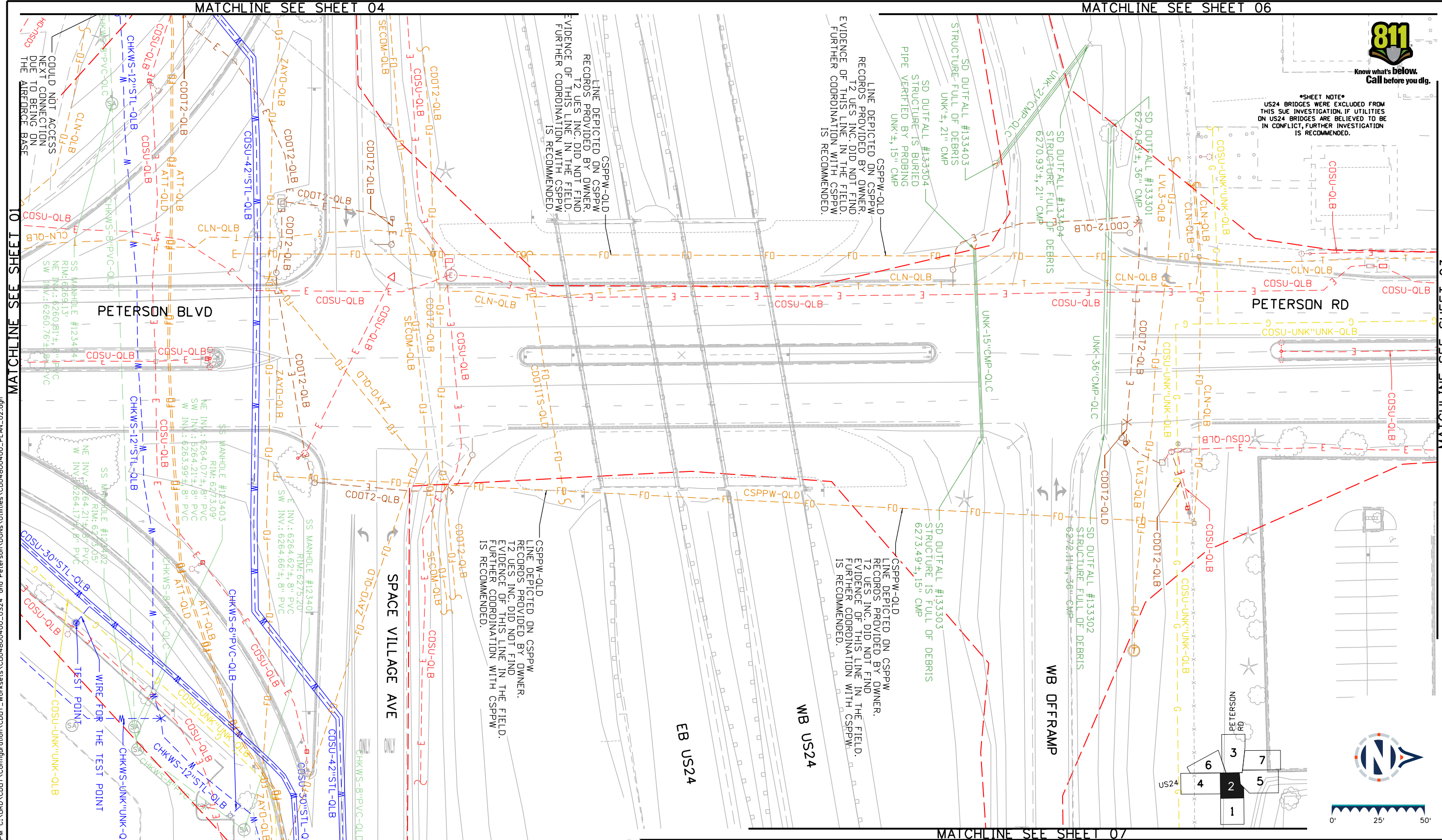
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\*SHEET NOTE\*  
 US24 BRIDGES WERE EXCLUDED FROM THIS SUE INVESTIGATION. IF UTILITIES ON US24 BRIDGES ARE BELIEVED TO BE IN CONFLICT, FURTHER INVESTIGATION IS RECOMMENDED.



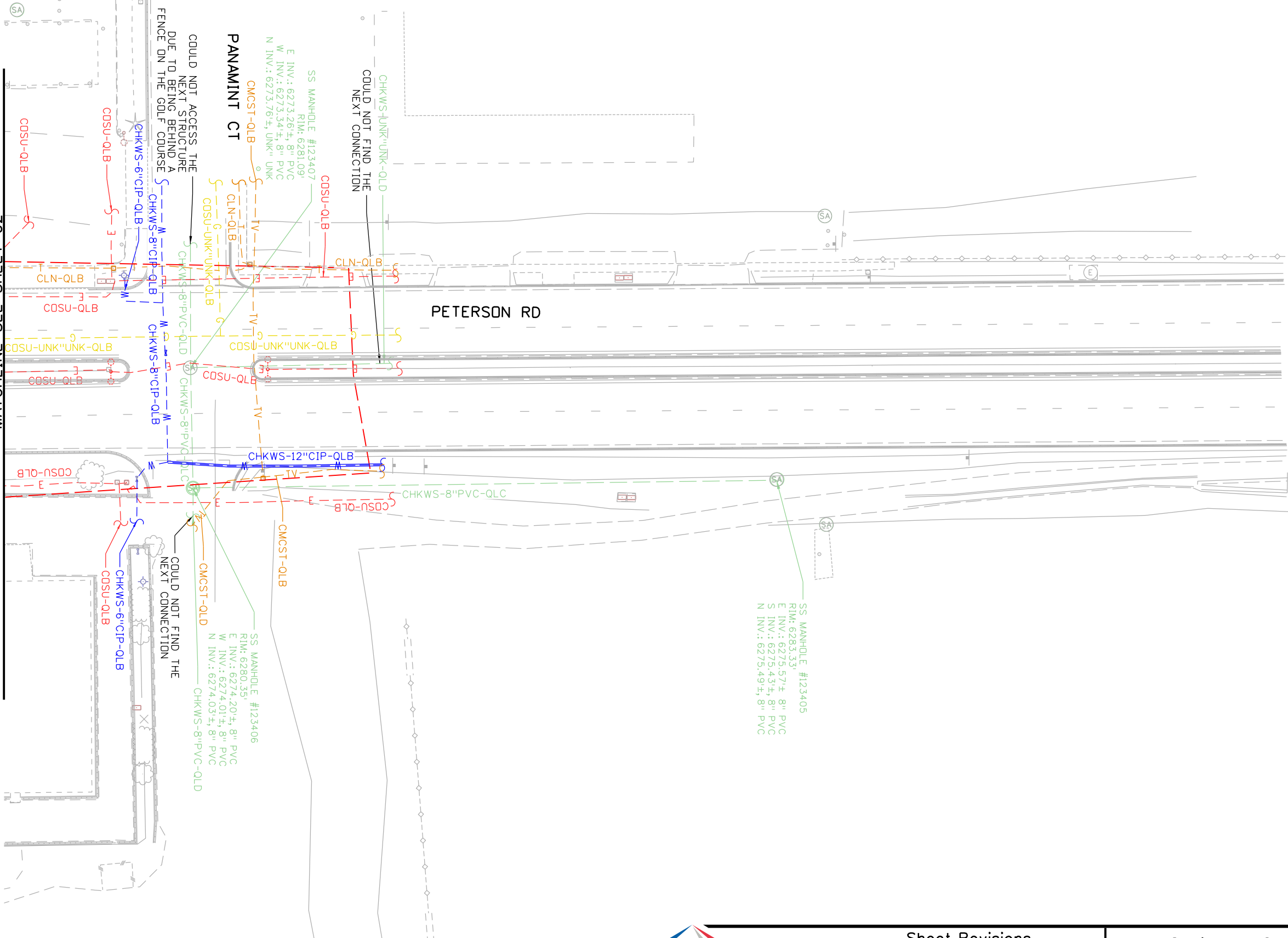
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	150 CAPITAL DR, STE 190 GOLDEN, COLORADO 80401 PHONE: (720) 257-5800	Detailer: BF Designer: KM Reviewer: CD	Print Date: 12/19/2023 Horiz. Scale: 1"=50' Vert. Scale: N/A		000	Date Comments Init	Sheet Revisions	US Highway 24 & Peterson Blvd/Rd Roundabouts  UTILITY INVESTIGATION PLAN PETERSON RD	Exist Utilities 2 of 7  Sheet Number 90
	MATCHLINE SEE SHEET 05      MATCHLINE SEE SHEET 06      MATCHLINE SEE SHEET 07      MATCHLINE SEE SHEET 04								



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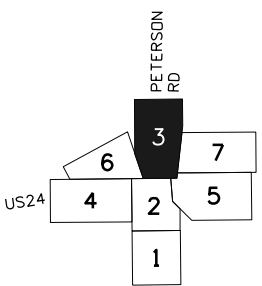
MATCHLINE SEE SHEET 06



MATCHLINE SEE SHEET 02

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MATCHLINE SEE SHEET 07



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Detailer: BF    Print Date: 12/19/2023  
 Designer: KM    Horiz. Scale: 1"=50'  
 Reviewer: CD    Vert. Scale: N/A



Sheet Revisions			
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
UTILITY INVESTIGATION PLAN PETERSON RD	Exist Utilities 3 of 7
Sheet Number	91

MATCHLINE SEE SHEET 06



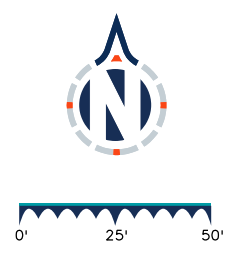
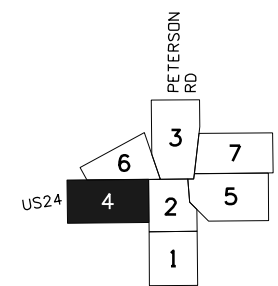
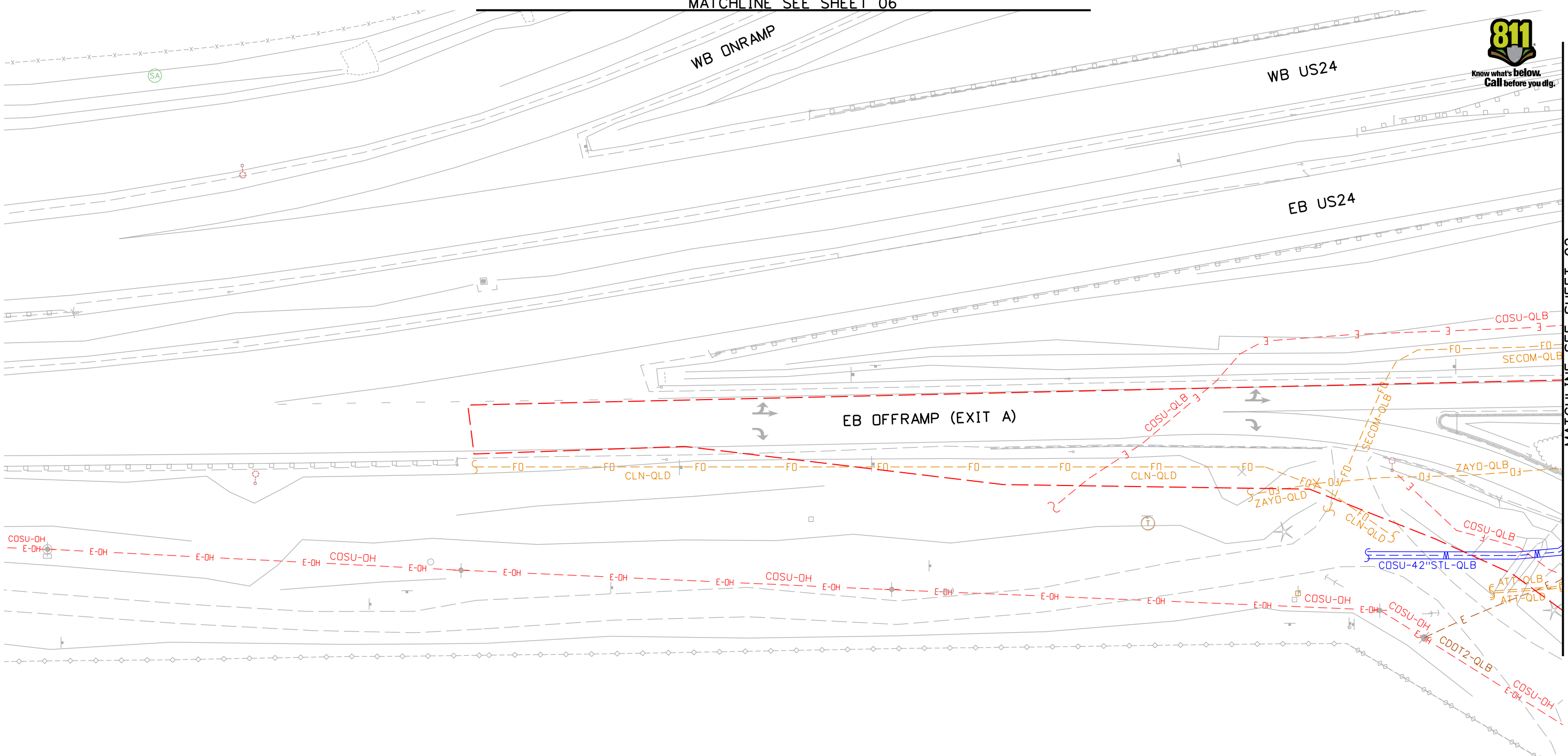
WB ONRAMP

WB US24

EB US24

EB OFFRAMP (EXIT A)

MATCHLINE SEE SHEET 02



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Reviewer: CD	Vert. Scale: N/A



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US Highway 24 & Peterson Blvd/Rd Roundabouts	
UTILITY INVESTIGATION PLAN EASTBOUND OFF RAMP	
Exist Utilities	4 of 7
Sheet Number	92

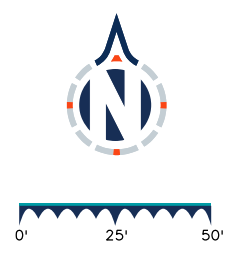
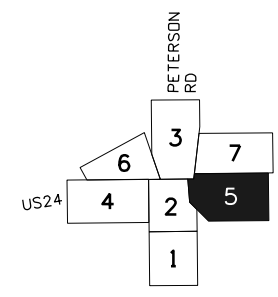
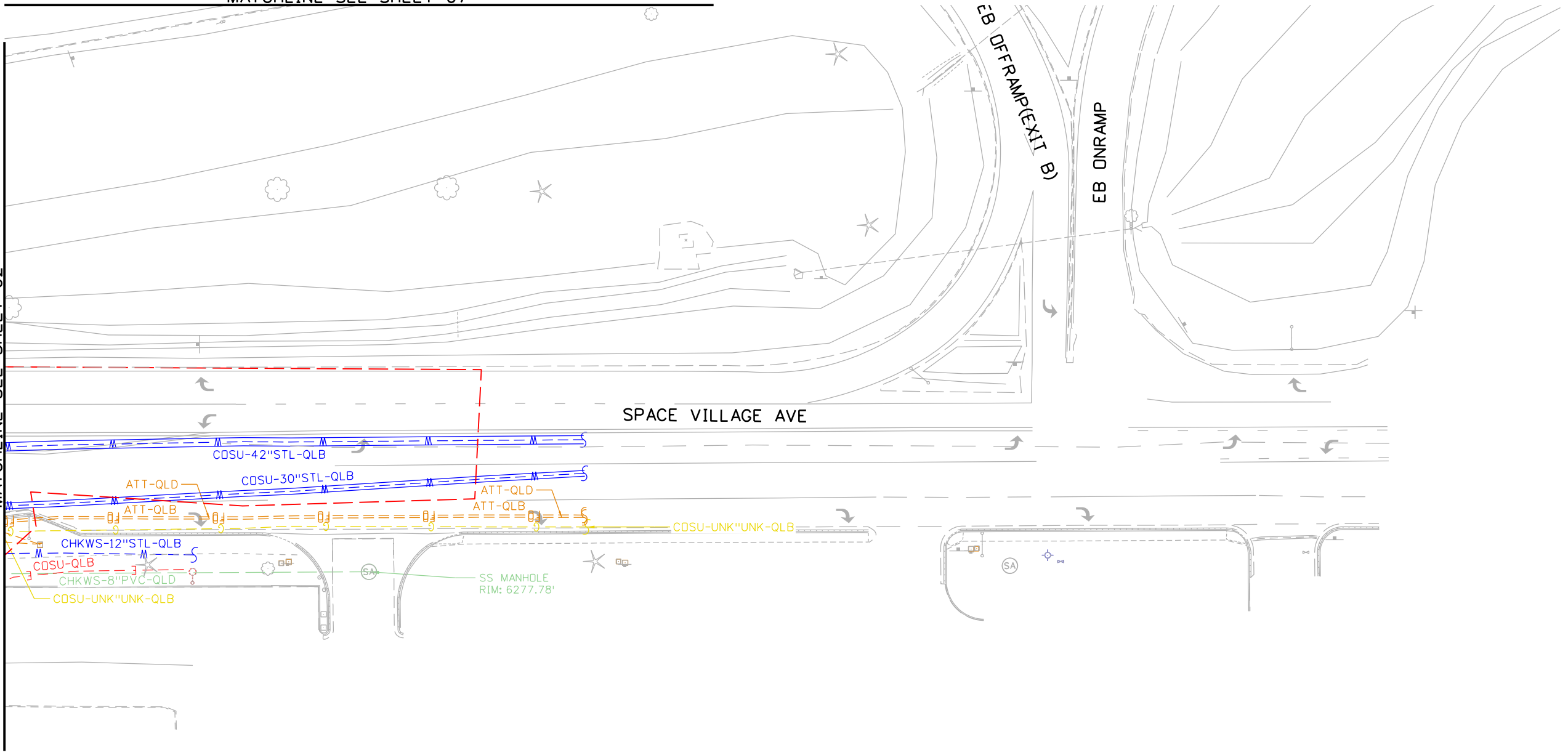
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MATCHLINE SEE SHEET 02

MATCHLINE SEE SHEET 07



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Designer: KM	Horiz. Scale: 1"=50'
Reviewer: CD	Vert. Scale: N/A



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US Highway 24 & Peterson Blvd/Rd Roundabouts	
UTILITY INVESTIGATION PLAN SPACE VILLAGE AVE	Exist Utilities 5 of 7
Sheet Number	93

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Please add the following information to the utility plan:

General Notes for Preliminary Utility Plans

Property Owner(s) acknowledge and agree to the following upon approval of Preliminary Utility Plan:

1. Colorado Springs Utilities (Springs Utilities) shall make the final determination of the location of all water, wastewater, electric and gas facilities, which may not be the same location as shown on this Preliminary Utility Plan.
2. Property Owner(s) ("Owner") acknowledges that the connection and/or extension of utility services to the property identified in this Preliminary Utility Plan ("Property") shall be in accord with all applicable codes and regulations, Springs Utilities Line Extension & Service Standards ("Standards"), Tariffs, Colorado Springs City Code, resolutions, and policies, and Pikes Peak Regional Building Department codes, in effect at the time of utility service connection and/or extension.
3. Owner acknowledges responsibility for the costs of extensions or utility system improvements that Springs Utilities determines necessary to provide utility services to the Property or to ensure timely development of integrated utility systems serving the Property and areas outside the Property (including the costs to design and install water systems, wastewater collection systems, and any gas or electric lines to and within the Property). Owner may be eligible for a cost Recovery Agreement as provided in Utilities' Rules and Regulations.
4. Springs Utilities utility services are available on a "first-come, first-served" basis, and therefore no specific allocations or amounts of utility services, facilities, capacities or supplies are reserved for the Owner, and Springs Utilities makes no commitment as to the availability of any utility service until such time as an application for permanent service is approved by Springs Utilities.
5. The relocation or alteration of any existing utility facilities within the Property will be at the Owner's sole cost and expense. If Springs Utilities determines that Owner's relocation or alteration requires new or updated easements, Owner shall convey those easements prior to relocating or altering the existing utility facilities.
6. Owner shall dedicate by plat and/or convey by recorded document, all property and easements that Springs Utilities determines are required for all utility system facilities necessary to serve the Property or to ensure development of an integrated utility system. All easements granted by separate instrument shall utilize Springs Utilities' then-current Permanent Easement Agreement form.
7. The water system facilities must meet Springs Utilities criteria for water quality, reliability and pressure, including looping requirements (see Springs Utilities Line Extension and Service Standards).
8. Owner recognizes that the extension of water system facilities may affect the quality of water in the Springs Utilities water system. When water quality is affected, Owner acknowledges responsibility for any costs that Springs Utilities determines necessary in order to maintain water quality in its system as a result of Owner's water system extensions. Owner may be required to submit a Water Quality Plan for the project.
9. Owner must contact Springs Utilities Field Engineering to determine the location of all natural gas and electric meters and transformers and to secure approval of gas-service-line pressures in excess of Springs Utilities standard gas system pressure. (Contact Field Engineering North 668-4985 or South 668-5564).
10. It shall not be permissible for any person to modify the grade of the earth within any Springs Utilities easement or rights of way without the written approval of Springs Utilities. Improvements, structures and trees shall not be located within utility easement, shall not violate National Electric Safety Code (NESC) provisions and clearances, and shall not impair access or the ability to maintain utility facilities.
11. Springs Utilities approval of this Preliminary Utility Plan shall not be construed as a limitation upon the authority of Springs Utilities to apply its Standards; and if there are any conflicts between any approved drawings and any provision of Standards or the City Code, then the Standards or City Code shall apply. Springs Utilities' approval of this Preliminary Utility Plan shall not be construed as a limitation upon the authority of the City of Colorado Springs or Springs Utilities to adopt different ordinances, rules, regulations, resolutions, policies or codes which change any of the provisions of the Standards so long as these apply to the City generally and are in accord with the then-current tariffs, rates and policies of Springs Utilities.

Please add the following information to the utility plan:

Information Items:

1. Please contact Utilities Development Services (UDS) at 719.668.8111 for an estimate of development charges, fees, Recovery Agreement Charges or other utility related costs that may apply to this development.  
In instances where metered water and/or wastewater connections existed on the property, please contact UDS to discuss distribution of Water and/or Wastewater Development Charges to eligible lots.
2. When new water meters are proposed to serve the project or additional demand added to existing water meters, a Commercial Water Meter Sizing Form will be required to be submitted to CSU prior to Service Contract issuance and plan set approval.
3. CSU requires an Application for Gas and Electric Line Extension to be submitted along with a Load Data form or an Application for Gas Service Line Approval and/or Application for Elevated Pressure Approval prior to electric and natural gas system design for service to the project. Refer to the CSU Line Extension and Service Standards or contact Field Engineering at 719-668-4985.
4. CSU may require an extension contract and payment of contributions-in-aid of construction (or a Revenue Guarantee Contract) for the extension of electric facilities needed to serve the development. With regard to natural gas extensions, CSU may require an extension contract and advance payment for the estimated costs to construct the necessary gas extensions.
5. Improvements, structures and trees must not be located directly over or within 6 feet of any underground gas or electric distribution facilities and shall not violate any provision of the National Electric Safety Code (NESC) or any applicable natural gas regulations or CSU' policies.
6. Improvements, structures and trees shall not be located under any overhead utility facility, shall not violate NESC clearances, and shall not impair access or the ability to maintain utility facilities.
7. Landscaping shall be designed to provide the required clearances for utility facilities, to allow continuous access for utility equipment, and to minimize conflicts with such facilities.
8. CSU requires wastewater and water construction drawings when new wastewater and water facilities are proposed. Plans can be submitted electronically to UDS via [www.csu.org](http://www.csu.org).

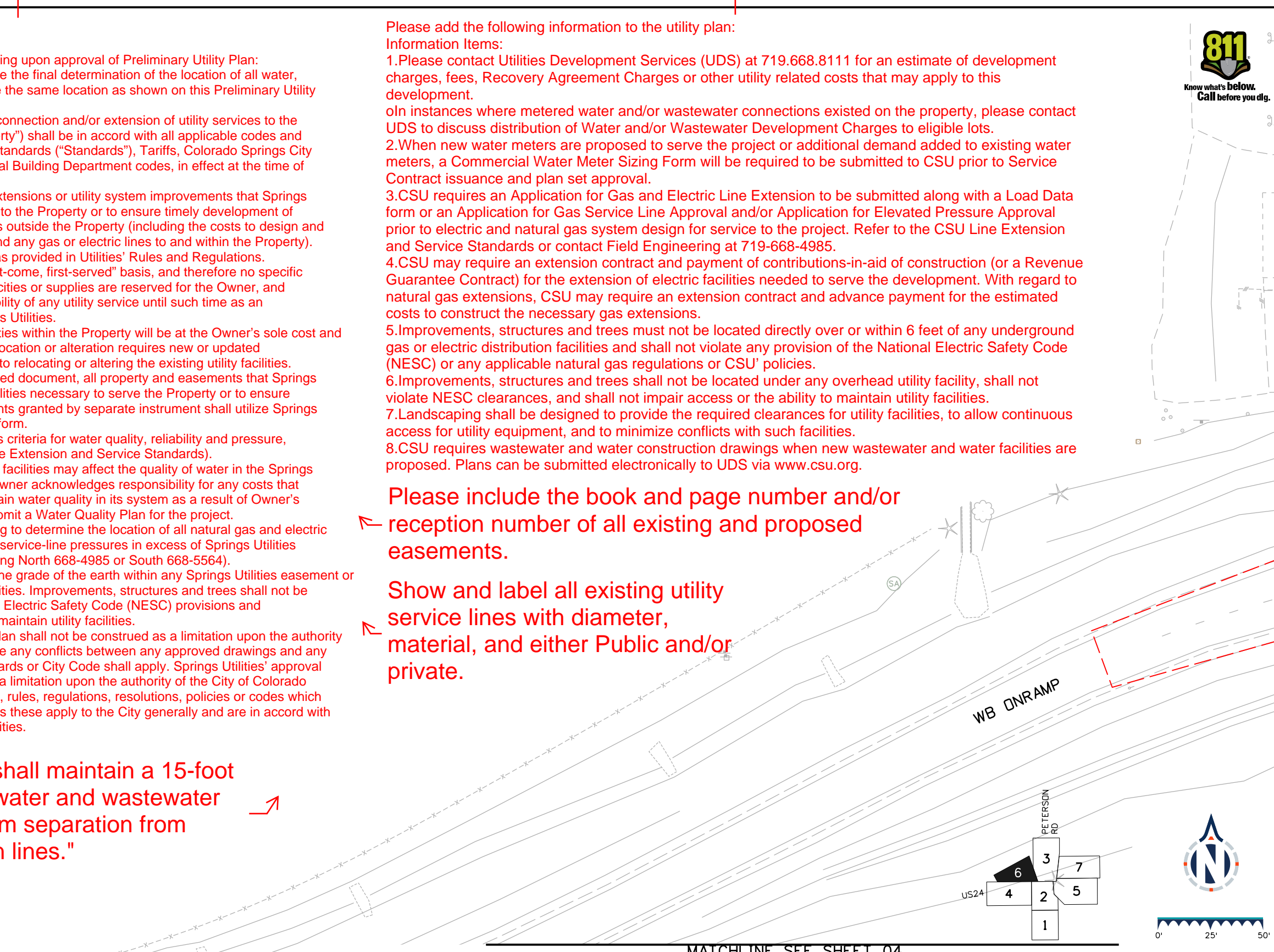
Please include the book and page number and/or reception number of all existing and proposed easements.

Show and label all existing utility service lines with diameter, material, and either Public and/or private.

Add a note stating "Trees shall maintain a 15-foot minimum separation from water and wastewater mains and a 6-foot minimum separation from electric and gas distribution lines."



MATCHLINE SEE SHEET 02 MATCHLINE SEE SHEET 03



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**T2 utility engineers**  
 150 CAPITAL DR, STE 190  
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Detailer: BF	Print Date: 12/19/2023
Designer: KM	Horiz. Scale: 1"=50'
Reviewer: CD	Vert. Scale: N/A



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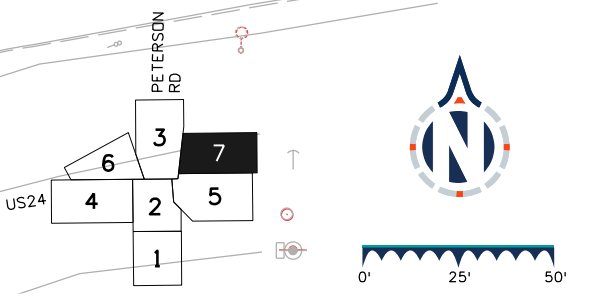
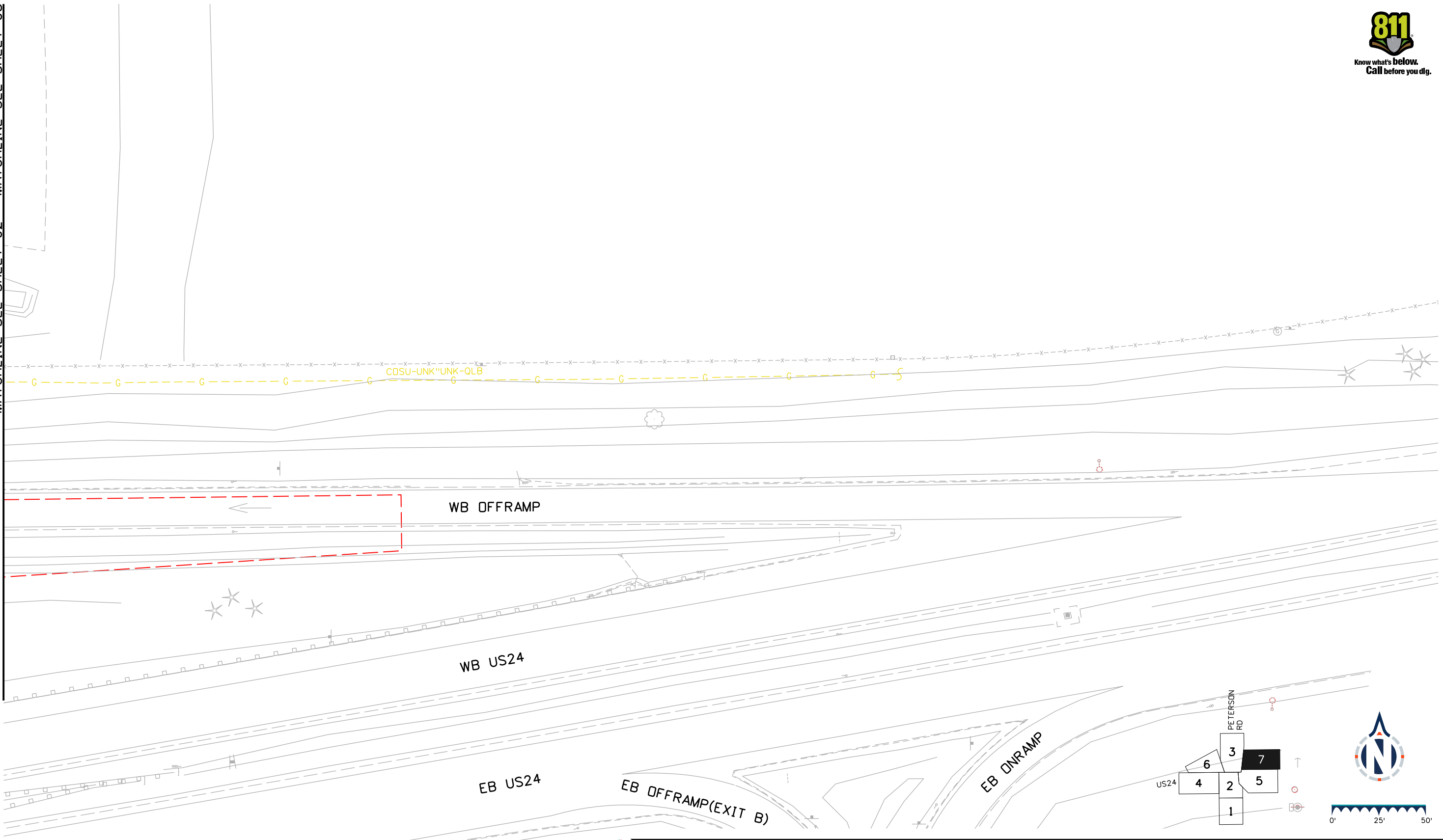
US Highway 24 & Peterson Blvd/Rd Roundabouts	
UTILITY INVESTIGATION PLAN WESTBOUND ON RAMP	Exist Utilities 6 of 7
	Sheet Number 94

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MATCHLINE SEE SHEET 02 MATCHLINE SEE SHEET 03

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MATCHLINE SEE SHEET 05

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 GOLDEN, COLORADO 80401  
 PHONE: (720) 257-5800

Detailer: BF	Print Date: 12/19/2023
Designer: KM	Horiz. Scale: 1"=50'
Reviewer: CD	Vert. Scale: N/A



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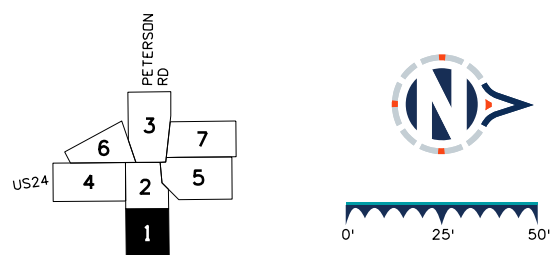
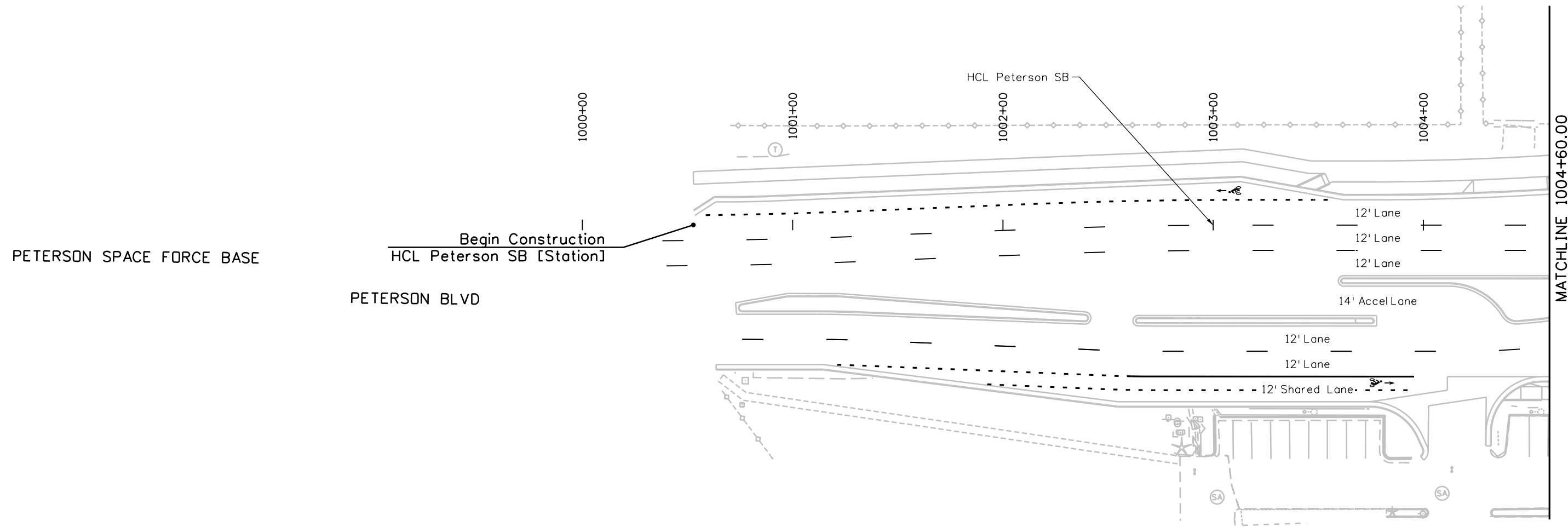
US Highway 24 & Peterson Blvd/Rd Roundabouts

**UTILITY INVESTIGATION PLAN  
WESTBOUND OFF RAMP**

Exist Utilities	7 of 7
Sheet Number	95

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**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

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Designer: STV	Horiz. Scale: 1"=50'
Reviewer: GB	Vert. Scale: N/A



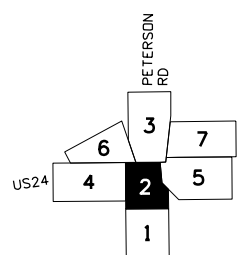
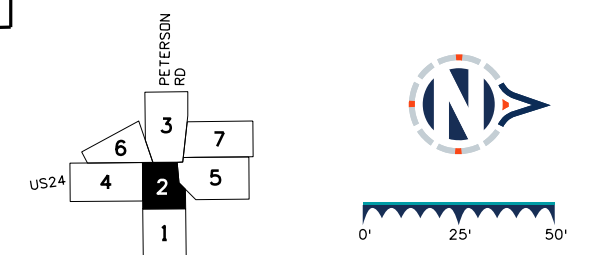
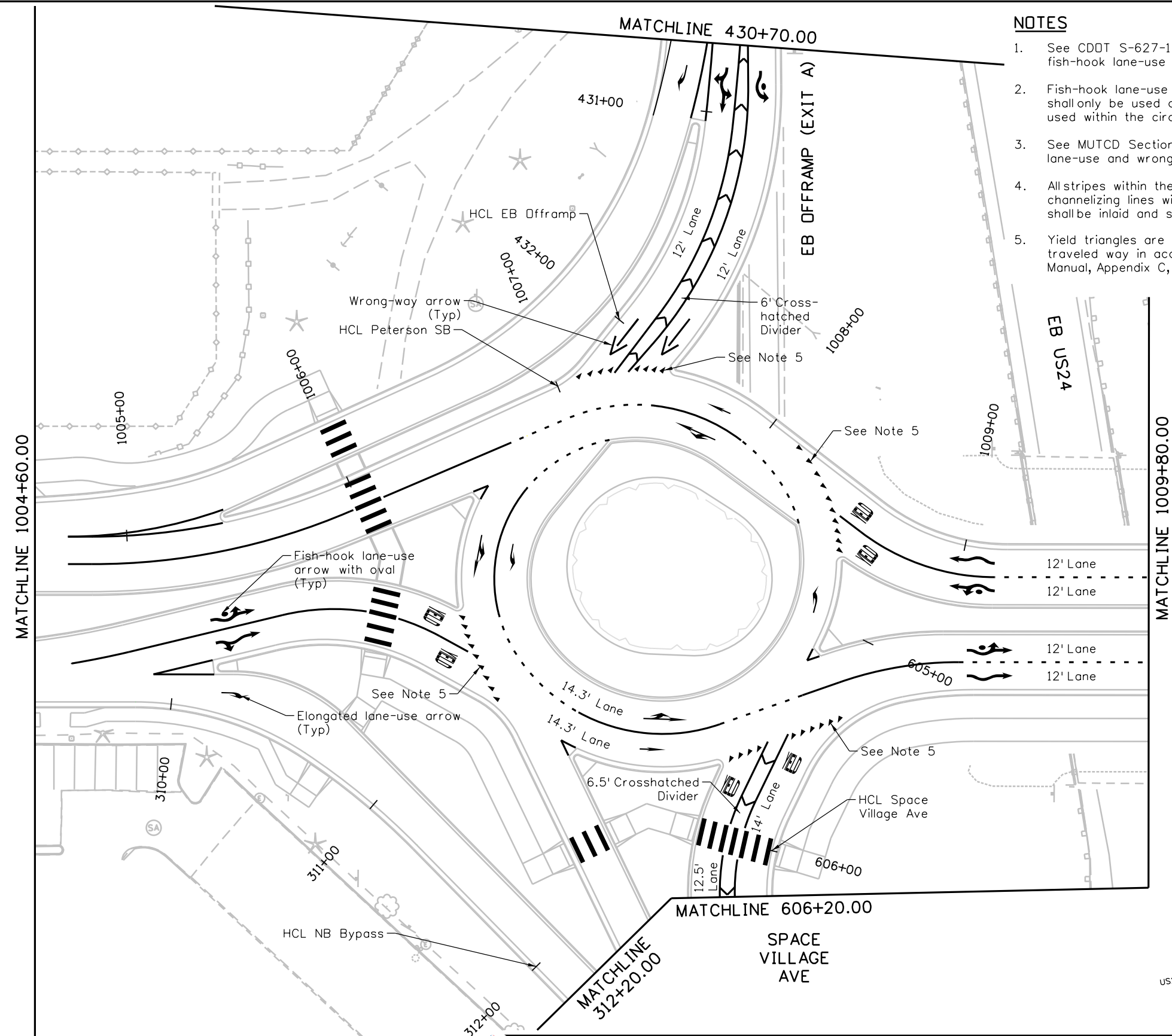
Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
STRIPING PLAN PETERSON BLVD	Striping 1 of 7
Sheet Number	96



**NOTES**

1. See CDDT S-627-1 for detailed illustrations and dimensions of fish-hook lane-use arrow and oval pavement markings.
2. Fish-hook lane-use arrow pavement markings and left turn ovals shall only be used on roundabout approaches and shall not be used within the circulatory roadway of a roundabout.
3. See MUTCD Section 3B.20 for more information on elongated lane-use and wrong-way arrow pavement markings.
4. All stripes within the circulatory roadway shall be inlaid. All solid channelizing lines within the circulatory roadway and approaches shall be inlaid and supplemented with rumble strips.
5. Yield triangles are shown along the edge of the circulatory traveled way in accordance with the City of COS Traffic Criteria Manual, Appendix C, Section 3.



**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**STRIPING PLAN  
SOUTH ROUNDABOUT**

Striping	2 of 7
Sheet Number	97

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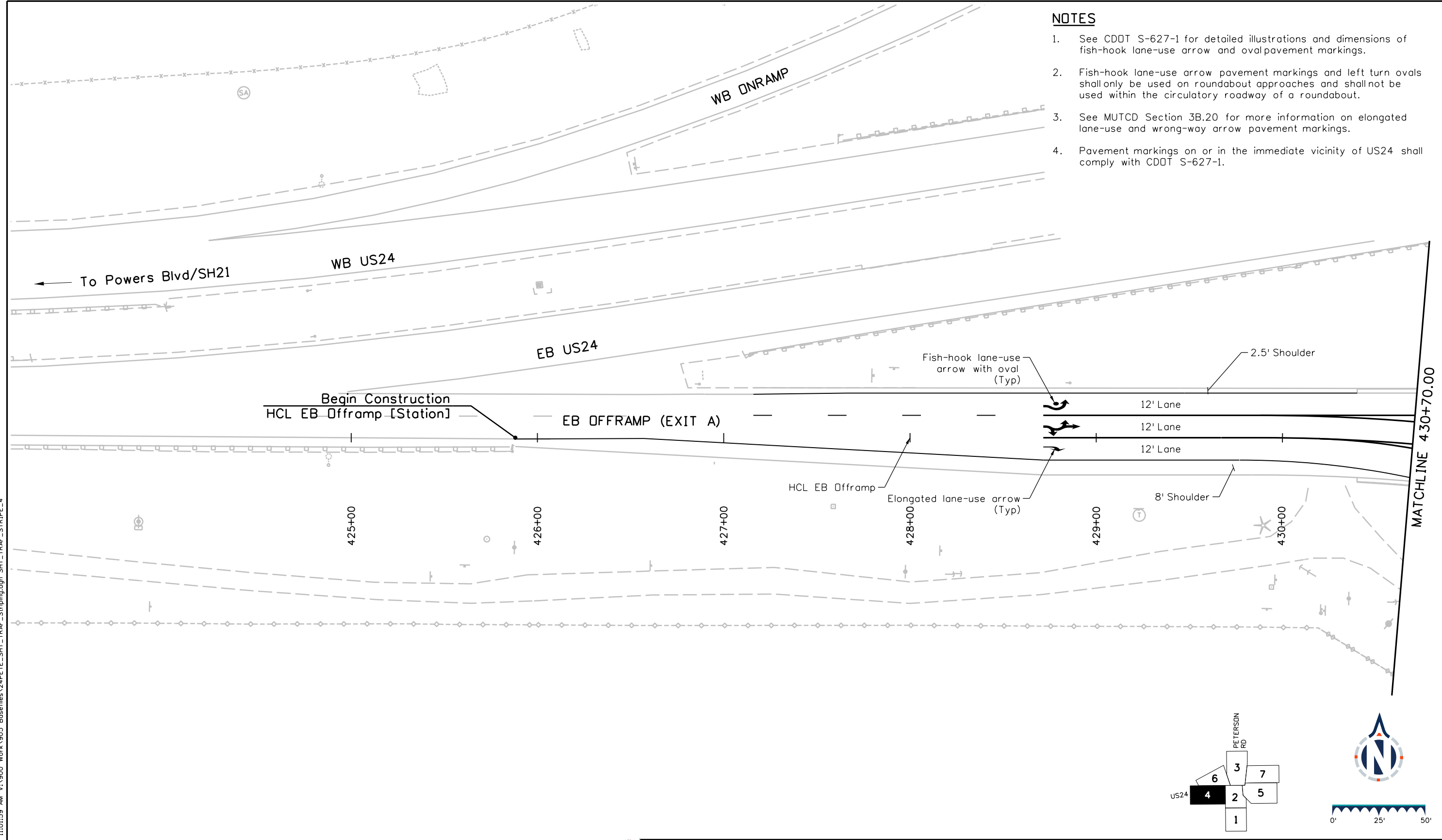
**BASIS PARTNERS** Basis Partners  
 25 N Spruce Street, Suite 310  
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 Tel: 719-299-5077, basisp.com

Detailer: STV	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
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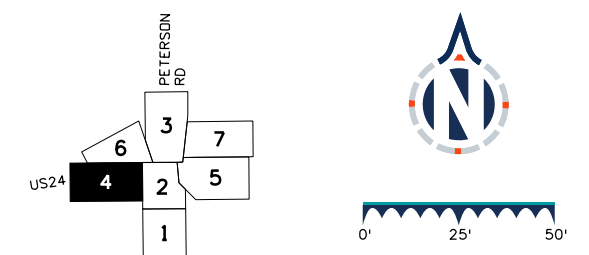


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**NOTES**

1. See CDDT S-627-1 for detailed illustrations and dimensions of fish-hook lane-use arrow and oval pavement markings.
2. Fish-hook lane-use arrow pavement markings and left turn ovals shall only be used on roundabout approaches and shall not be used within the circulatory roadway of a roundabout.
3. See MUTCD Section 3B.20 for more information on elongated lane-use and wrong-way arrow pavement markings.
4. Pavement markings on or in the immediate vicinity of US24 shall comply with CDDT S-627-1.



**BASIS PARTNERS**  
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Designer: STV	Horiz. Scale: 1"=50'
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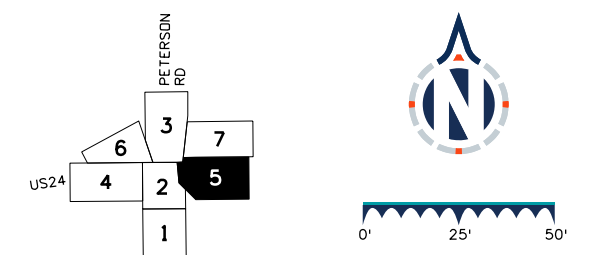
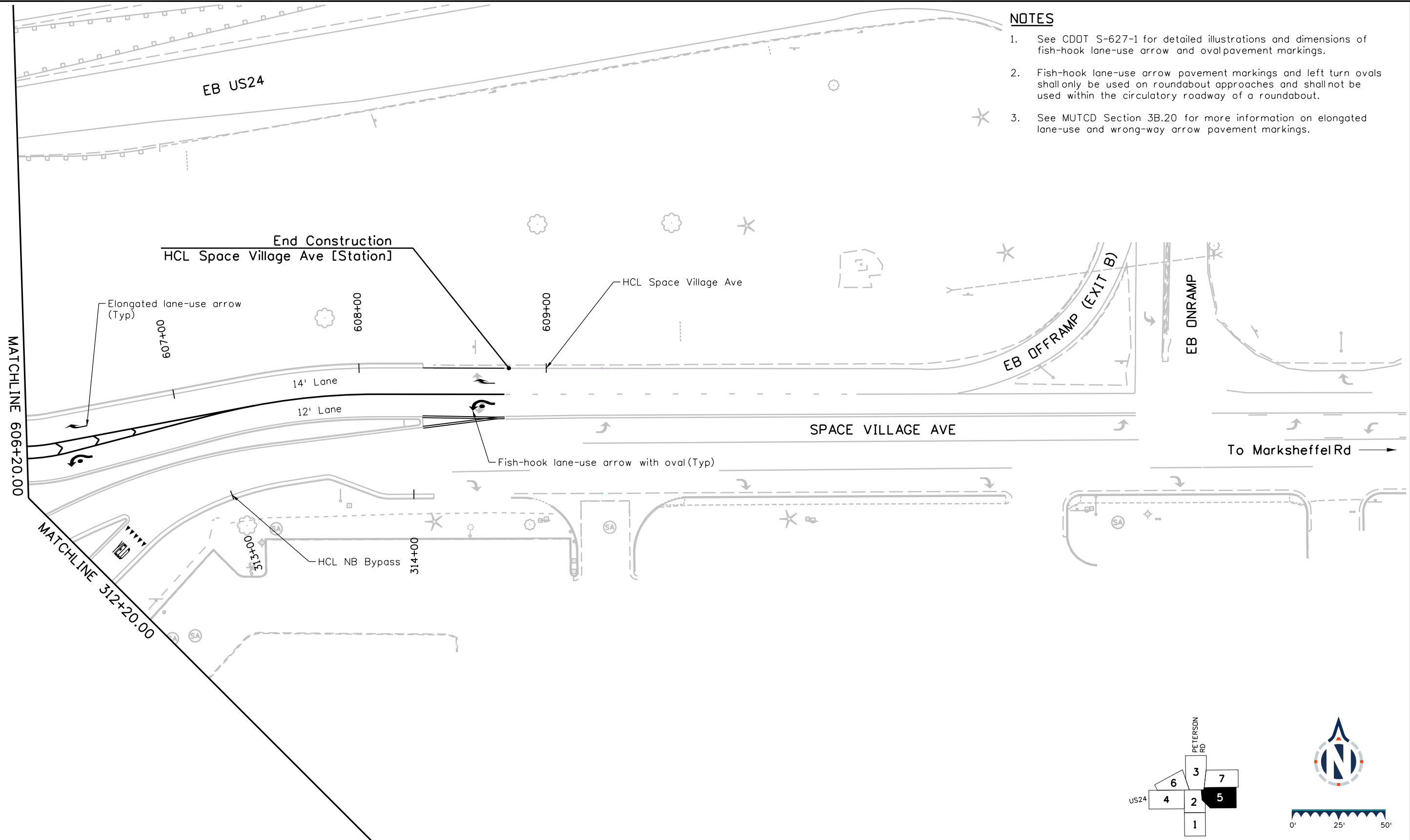


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Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
STRIPING PLAN EASTBOUND OFFRAMP (EXIT A)	Striping 4 of 7
Sheet Number 99	

**NOTES**

1. See CDDT S-627-1 for detailed illustrations and dimensions of fish-hook lane-use arrow and oval pavement markings.
2. Fish-hook lane-use arrow pavement markings and left turn ovals shall only be used on roundabout approaches and shall not be used within the circulatory roadway of a roundabout.
3. See MUTCD Section 3B.20 for more information on elongated lane-use and wrong-way arrow pavement markings.



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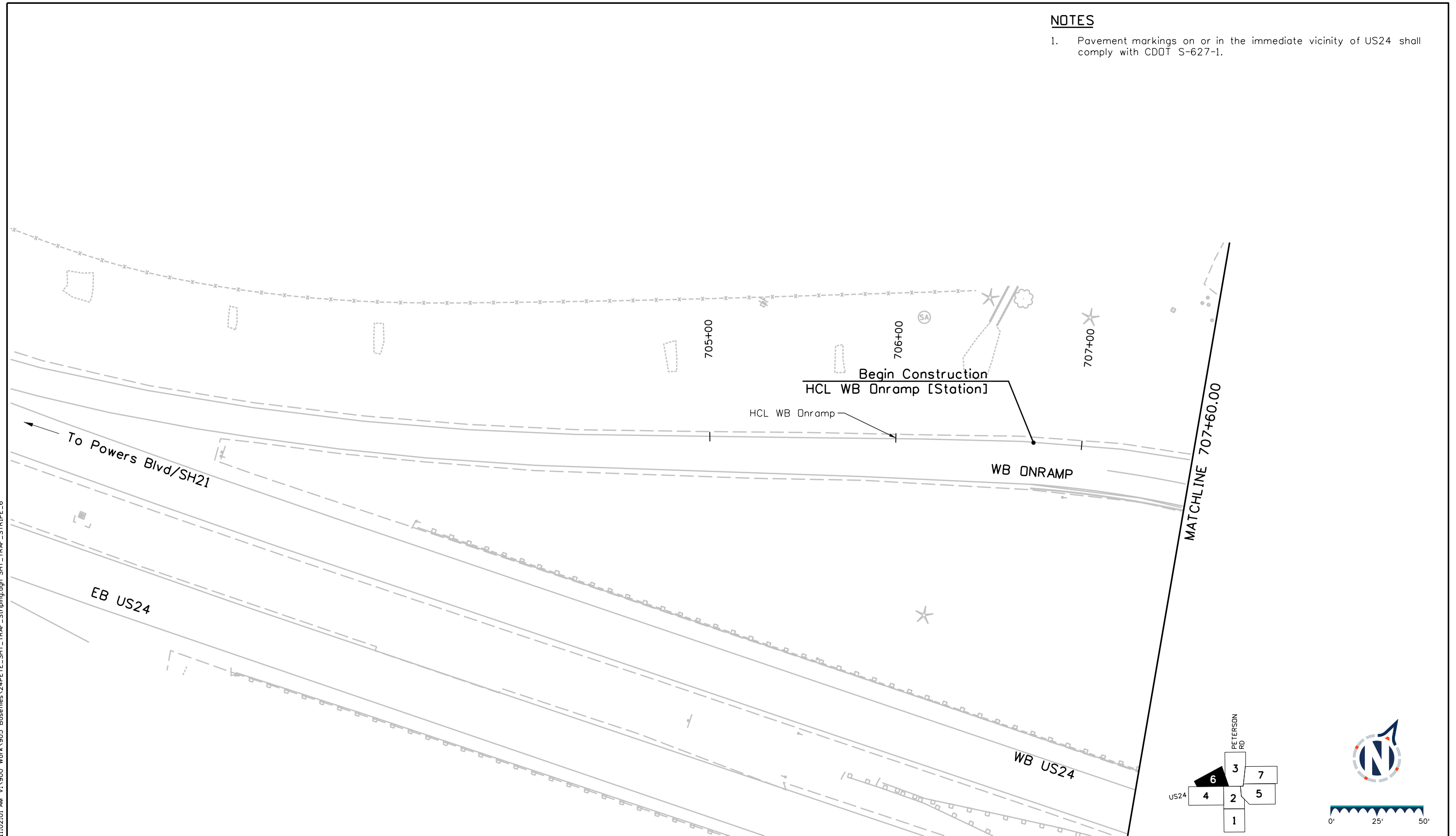


Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
STRIPING PLAN SPACE VILLAGE AVE	Striping 5 of 7
Sheet Number 100	

**NOTES**

1. Pavement markings on or in the immediate vicinity of US24 shall comply with CDOT S-627-1.



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 Tel: 719-299-5077, basisp.com

Detailer: STV	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=50'
Reviewer: GB	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

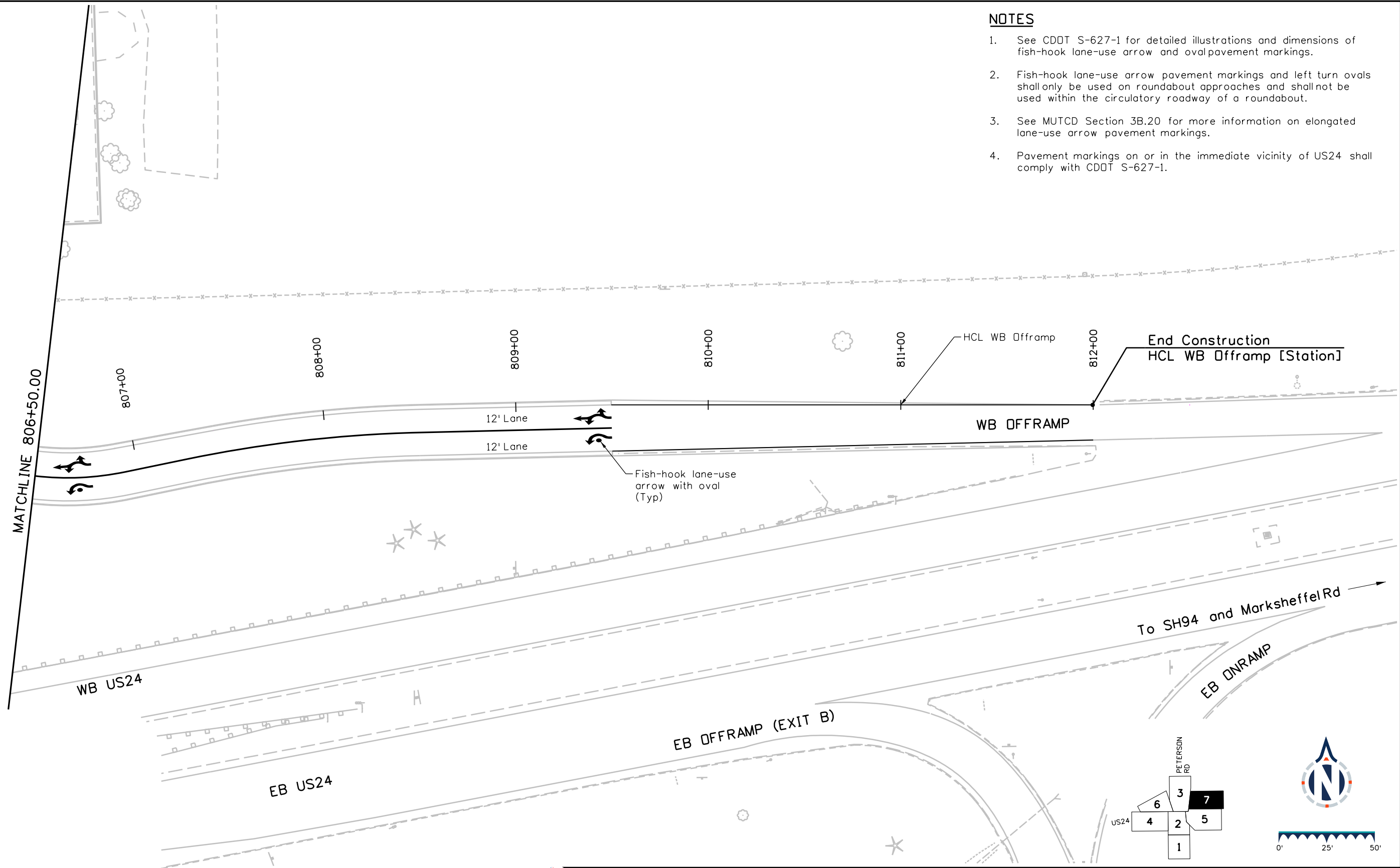
**STRIPING PLAN  
WESTBOUND ONRAMP**

Striping	6 of 7
Sheet Number	101

**30% PRELIMINARY - NOT FOR CONSTRUCTION**

**NOTES**

1. See CDOT S-627-1 for detailed illustrations and dimensions of fish-hook lane-use arrow and oval pavement markings.
2. Fish-hook lane-use arrow pavement markings and left turn ovals shall only be used on roundabout approaches and shall not be used within the circulatory roadway of a roundabout.
3. See MUTCD Section 3B.20 for more information on elongated lane-use arrow pavement markings.
4. Pavement markings on or in the immediate vicinity of US24 shall comply with CDOT S-627-1.



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 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

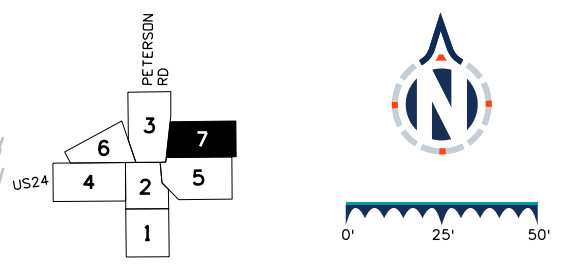
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Sheet Revisions		
Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

<b>STRIPING PLAN WESTBOUND OFFRAMP</b>	Striping 7 of 7
	Sheet Number 102

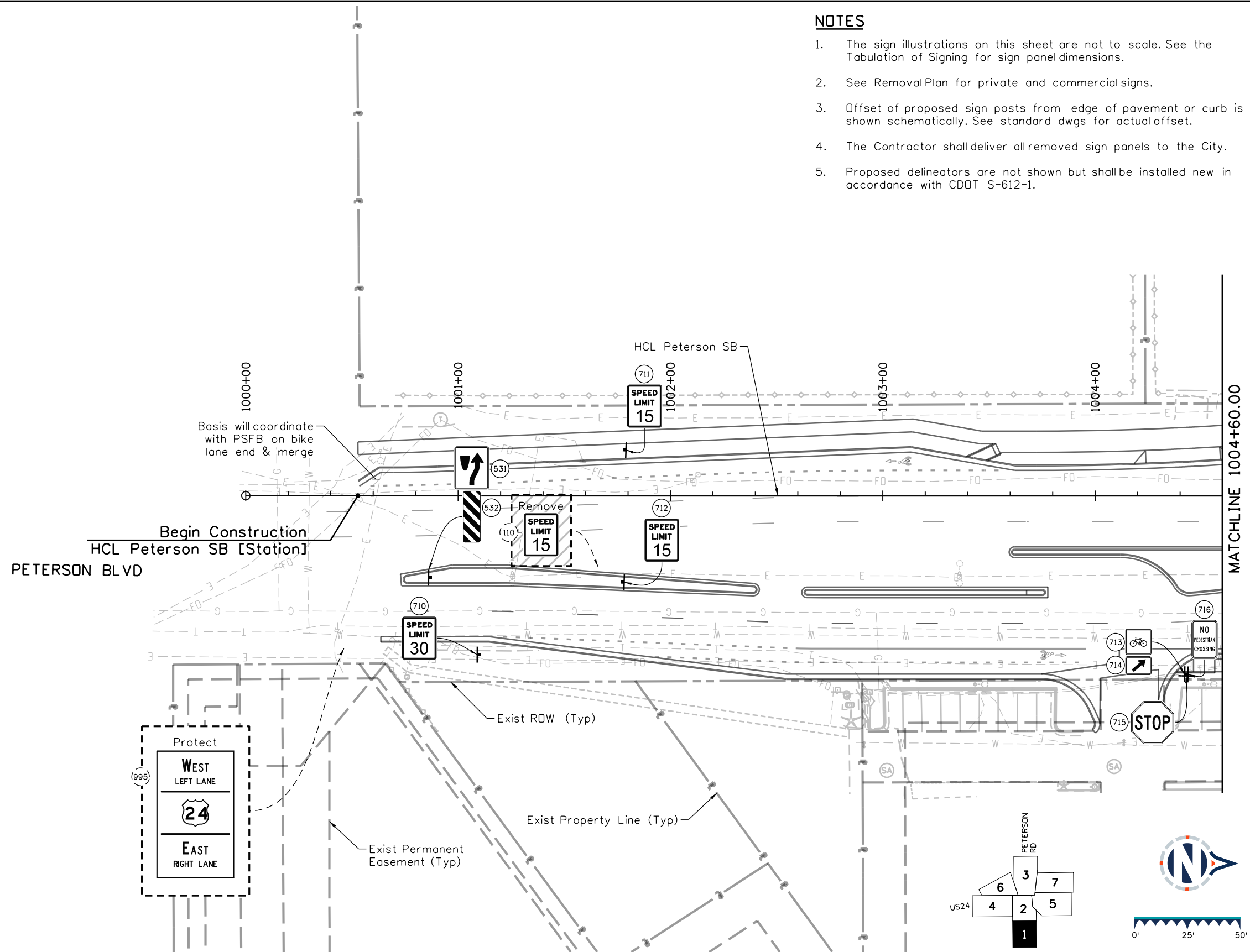




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### NOTES

1. The sign illustrations on this sheet are not to scale. See the Tabulation of Signing for sign panel dimensions.
2. See Removal Plan for private and commercial signs.
3. Offset of proposed sign posts from edge of pavement or curb is shown schematically. See standard dwgs for actual offset.
4. The Contractor shall deliver all removed sign panels to the City.
5. Proposed delineators are not shown but shall be installed new in accordance with CDOT S-612-1.



### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly

### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

SIGNING PLAN  
PETERSON BLVD

Signing	1 of 7
Sheet Number	103

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 Designer: STV    Horiz. Scale: 1"=50'  
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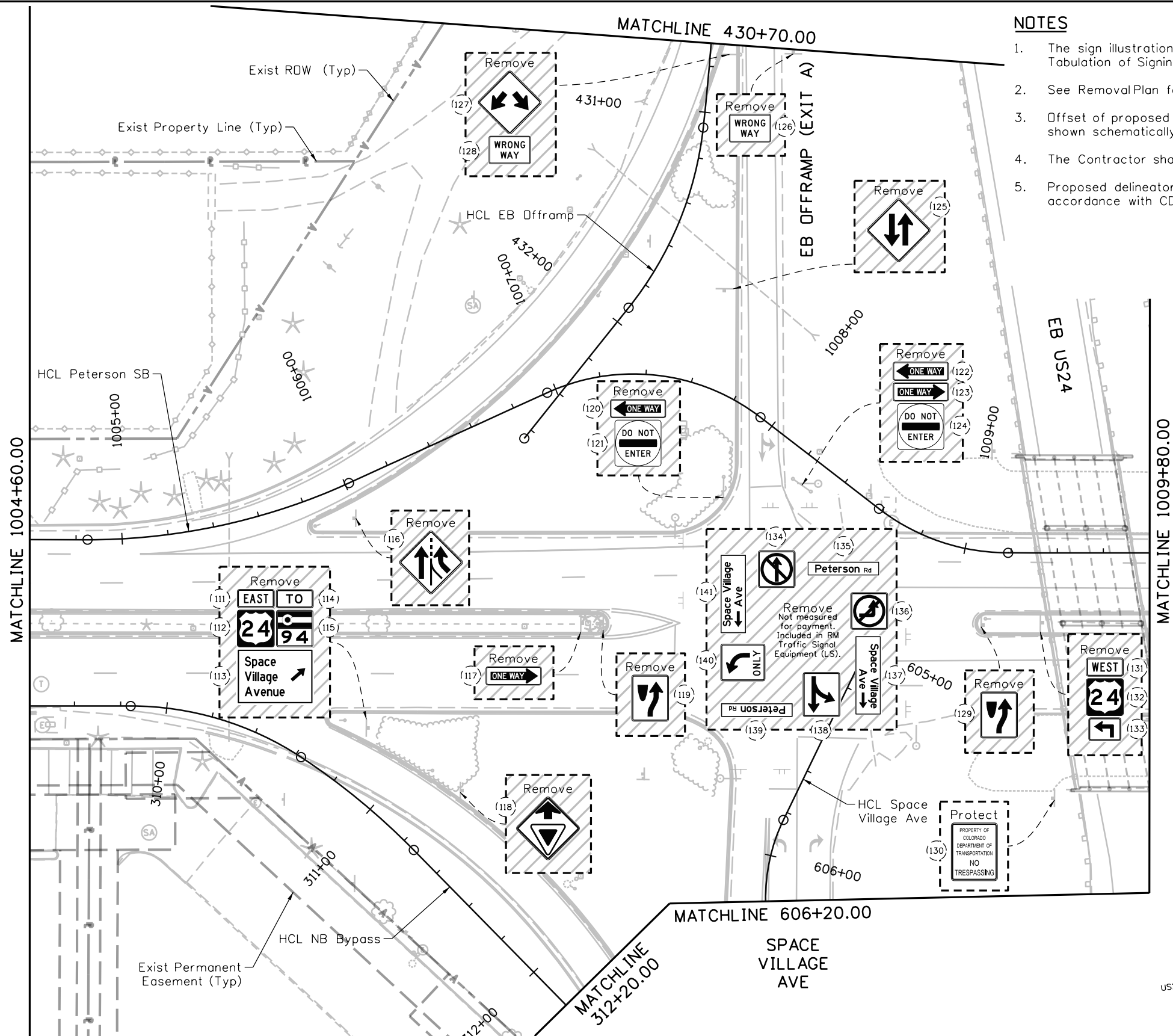
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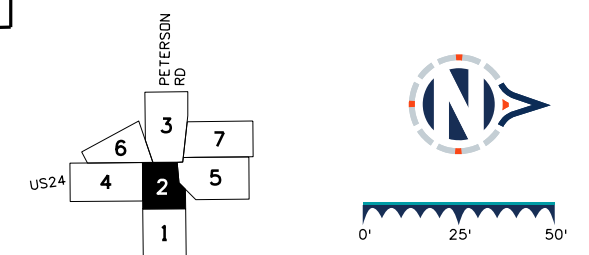
### NOTES

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2. See RemovalPlan for private and commercial signs.
3. Offset of proposed sign posts from edge of pavement or curb is shown schematically. See standard dwgs for actual offset.
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### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



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Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts

**SIGNING PLAN  
EXISTING SIGNS  
SOUTH ROUNDABOUT**

Signing	2A of 7
Sheet Number	104

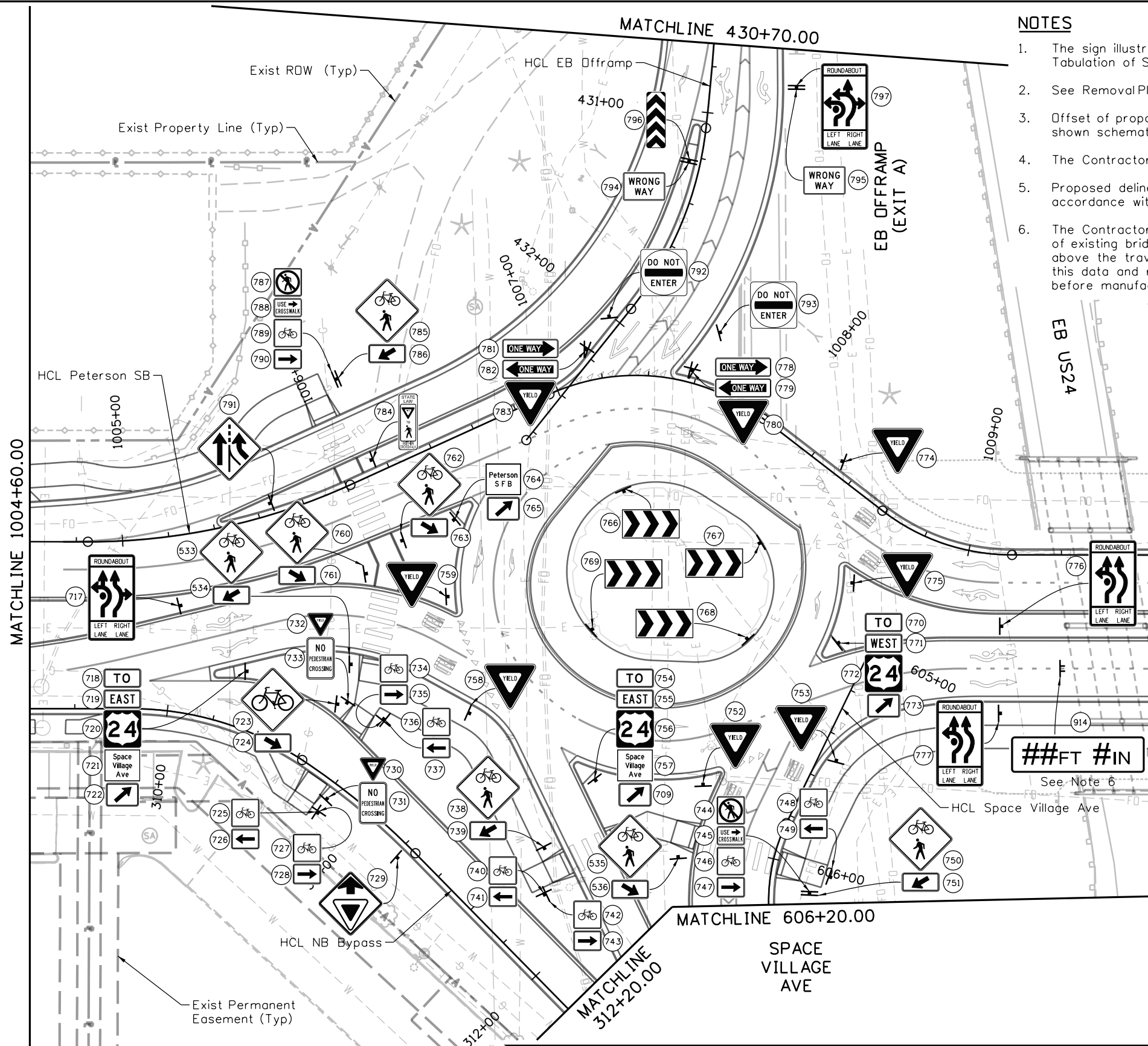
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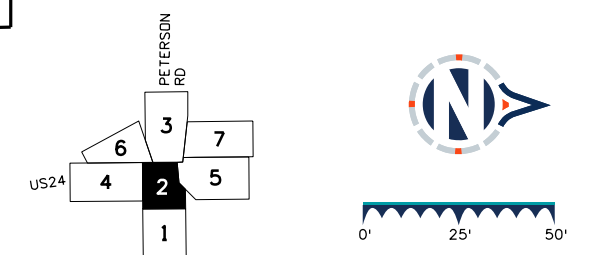


**NOTES**

1. The sign illustrations on this sheet are not to scale. See the Tabulation of Signing for sign panel dimensions.
2. See Removal Plan for private and commercial signs.
3. Offset of proposed sign posts from edge of pavement or curb is shown schematically. See standard dwgs for actual offset.
4. The Contractor shall deliver all removed sign panels to the City.
5. Proposed delineators are not shown but shall be installed new in accordance with CDOT S-612-1.
6. The Contractor shall survey the top of finished pavement and bottom of existing bridge to determine the actual minimum vertical clearance above the traveled way and gutter pans. The Contractor shall submit this data and recommended clearance for approval of the Engineer before manufacturing or installing the sign panel. Paint over the existing painted clearance to the satisfaction of the Engineer.
7. Yield sign panels on the right side of a roundabout approach shall be perpendicular to the curb. Yield sign panels on the left side of a roundabout approach shall be perpendicular to approaching traffic at least 100' away.

**LEGEND**

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**SIGNING PLAN  
PROPOSED SIGNS  
SOUTH ROUNDABOUT**

Signing 2B of 7  
Sheet Number 105

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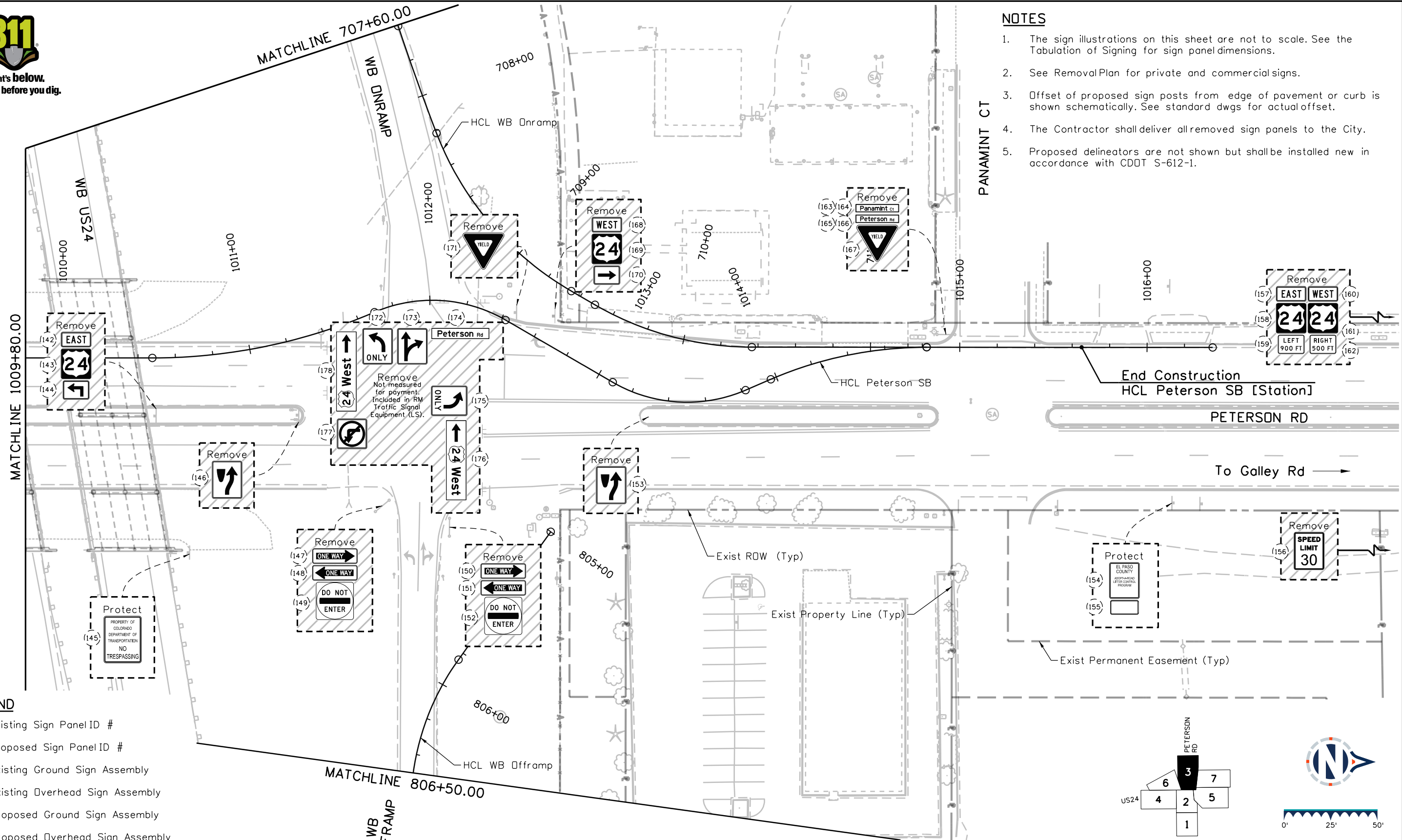


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### NOTES

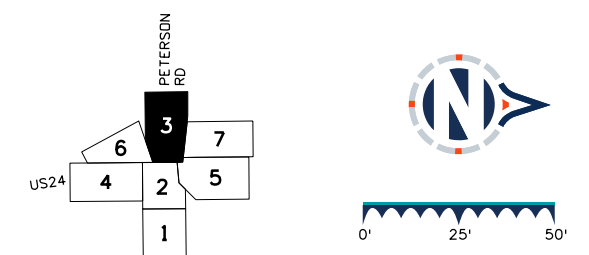
1. The sign illustrations on this sheet are not to scale. See the Tabulation of Signing for sign panel dimensions.
2. See RemovalPlan for private and commercial signs.
3. Offset of proposed sign posts from edge of pavement or curb is shown schematically. See standard dwgs for actual offset.
4. The Contractor shall deliver all removed sign panels to the City.
5. Proposed delineators are not shown but shall be installed new in accordance with CDOT S-612-1.

PANAMINT CT



### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



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Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

**SIGNING PLAN  
EXISTING SIGNS  
NORTH ROUNDABOUT**

Signing    3A of 7  
 Sheet Number    106



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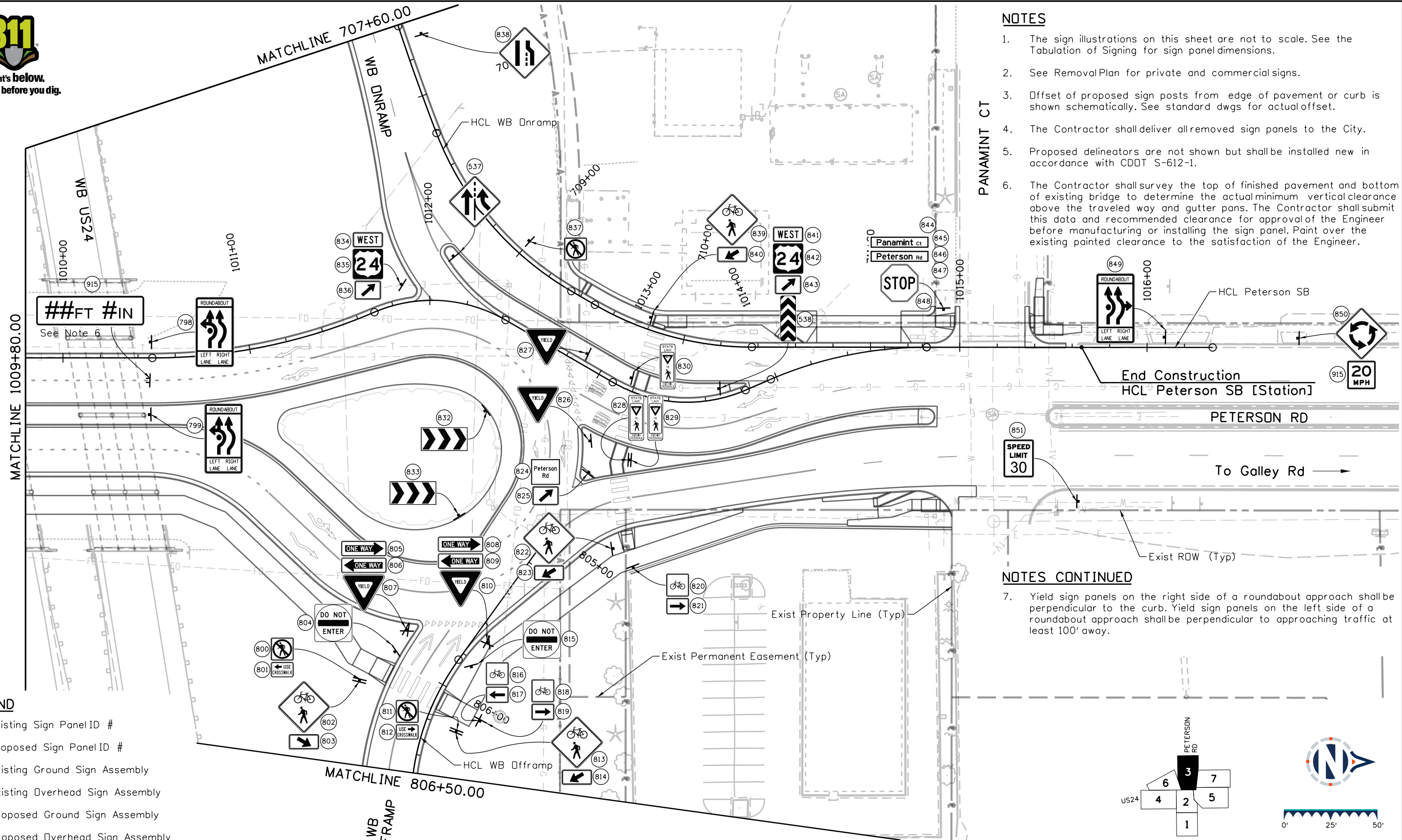
### NOTES

1. The sign illustrations on this sheet are not to scale. See the Tabulation of Signing for sign panel dimensions.
2. See Removal Plan for private and commercial signs.
3. Offset of proposed sign posts from edge of pavement or curb is shown schematically. See standard dwgs for actual offset.
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PANAMINT CT

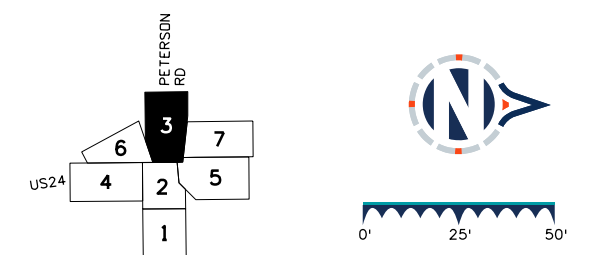
### NOTES CONTINUED

7. Yield sign panels on the right side of a roundabout approach shall be perpendicular to the curb. Yield sign panels on the left side of a roundabout approach shall be perpendicular to approaching traffic at least 100' away.



### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

### SIGNING PLAN PROPOSED SIGNS NORTH ROUNDABOUT

Signing 3B of 7  
Sheet Number 107

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Designer: STV Horiz. Scale: 1"=50'  
Reviewer: GB Vert. Scale: N/A



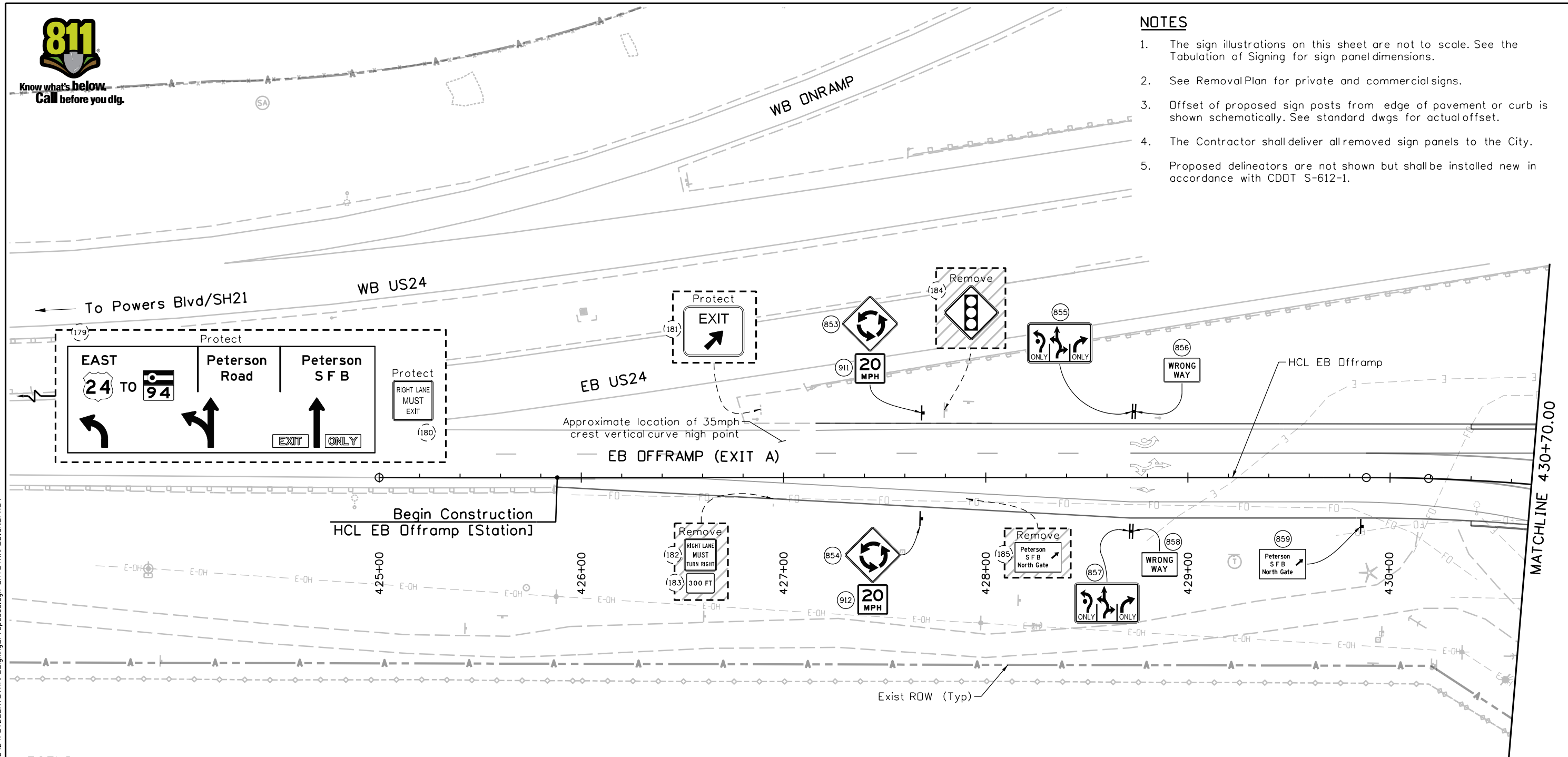
30% PRELIMINARY - NOT FOR CONSTRUCTION



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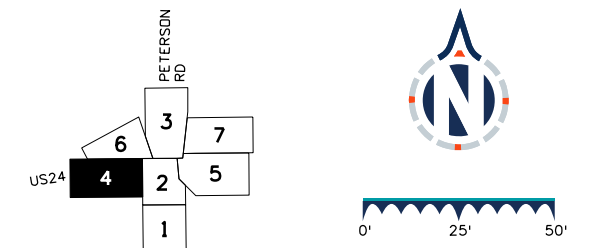
### NOTES

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2. See RemovalPlan for private and commercial signs.
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### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



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### Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

SIGNING PLAN  
EASTBOUND OFFRAMP (EXIT A)

Signing 4 of 7  
 Sheet Number 108

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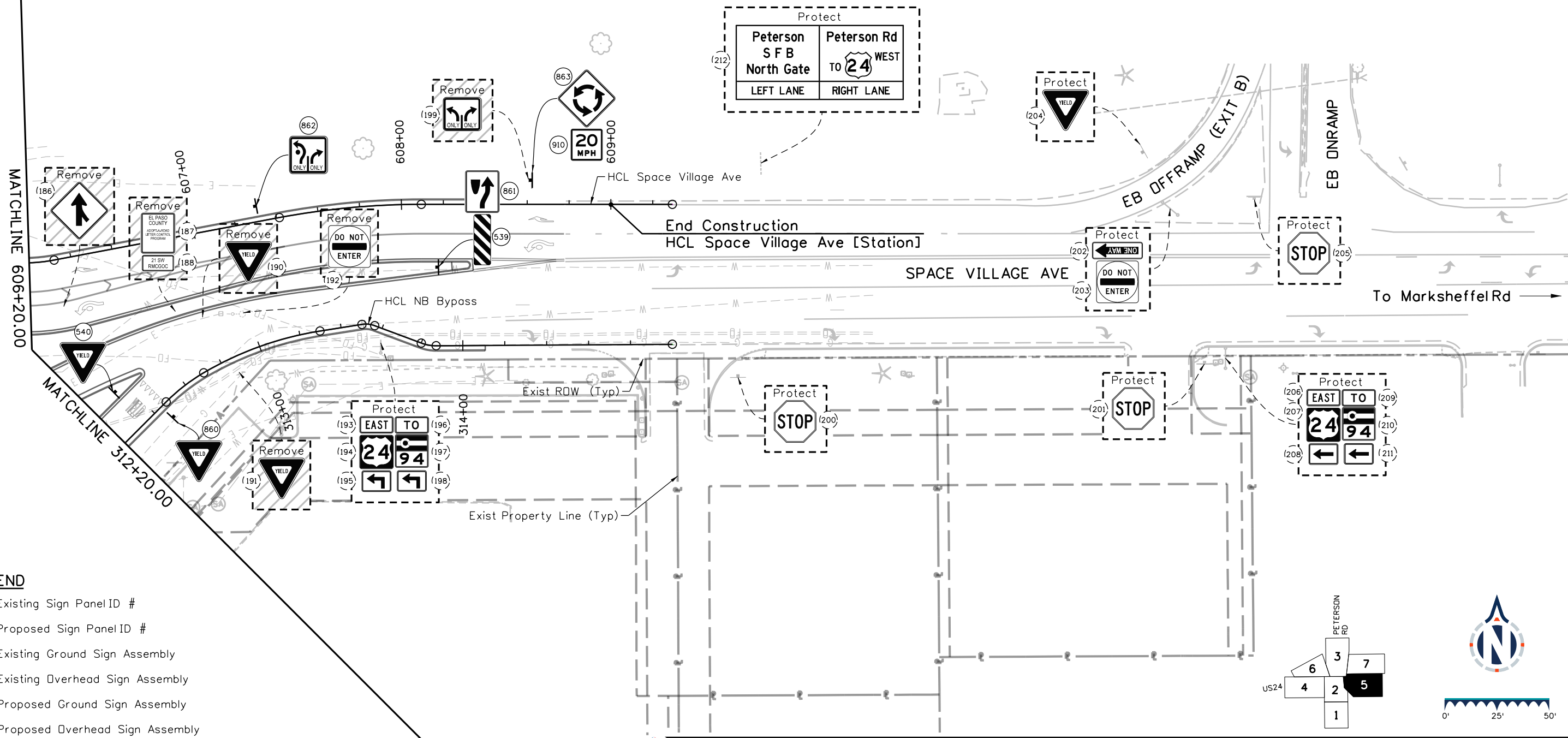


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EB US24

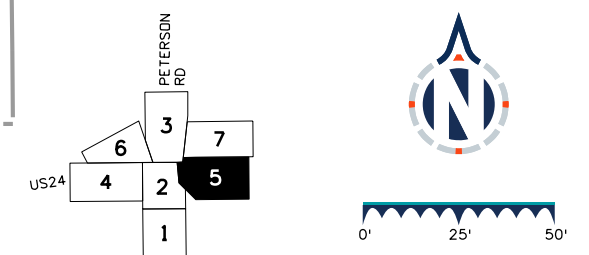
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### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

### SIGNING PLAN SPACE VILLAGE AVE

Signing 5 of 7  
Sheet Number 109

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Designer: STV Horiz. Scale: 1"=50'  
Reviewer: GB Vert. Scale: N/A



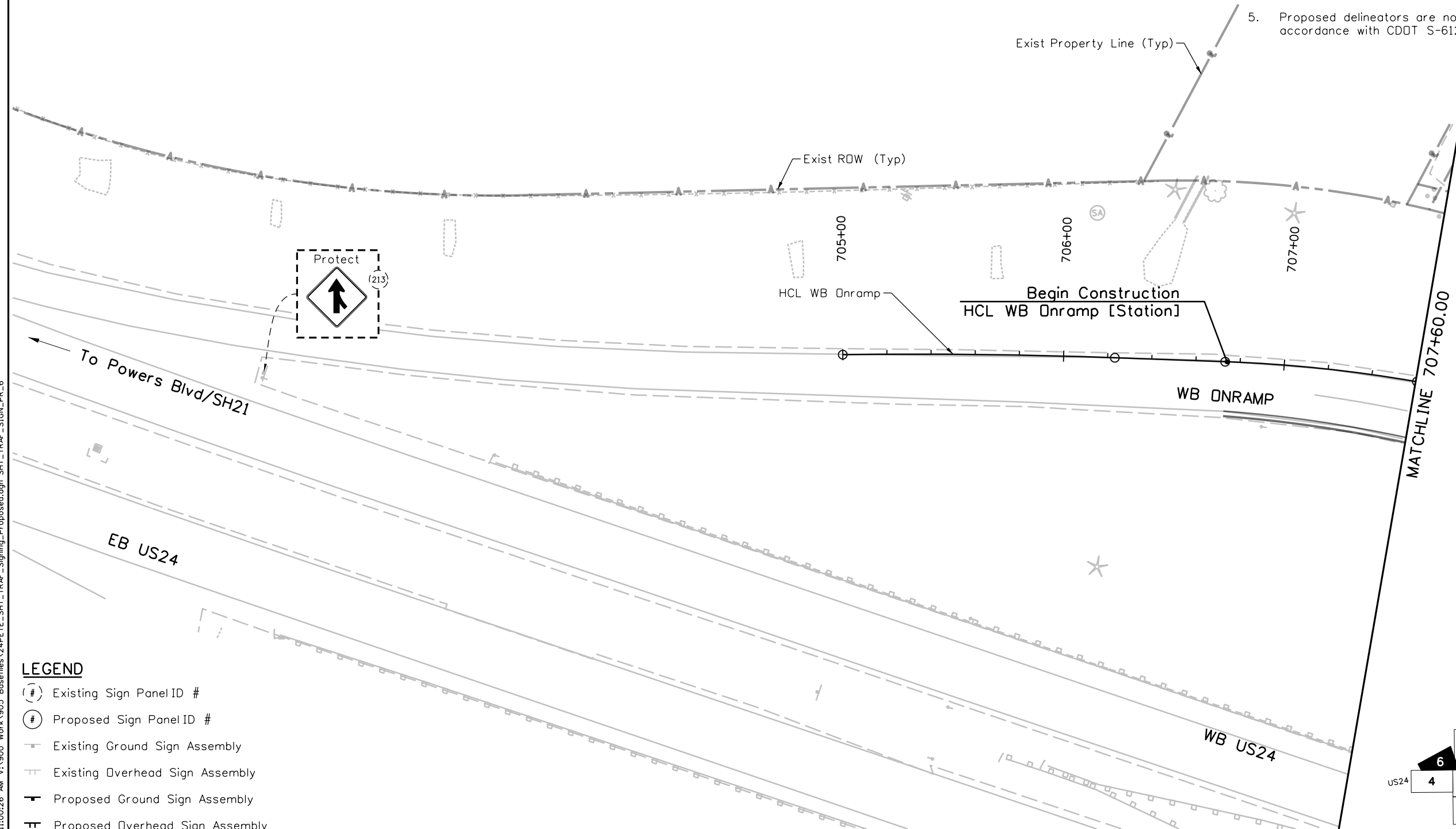
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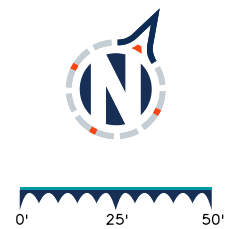
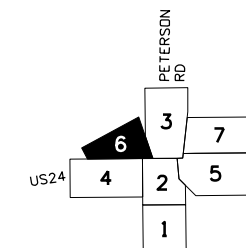
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### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



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### Sheet Revisions

Date	Comments	Init

### US Highway 24 & Peterson Blvd/Rd Roundabouts

SIGNING PLAN  
 WESTBOUND ONRAMP

Signing    6 of 7  
 Sheet Number    110

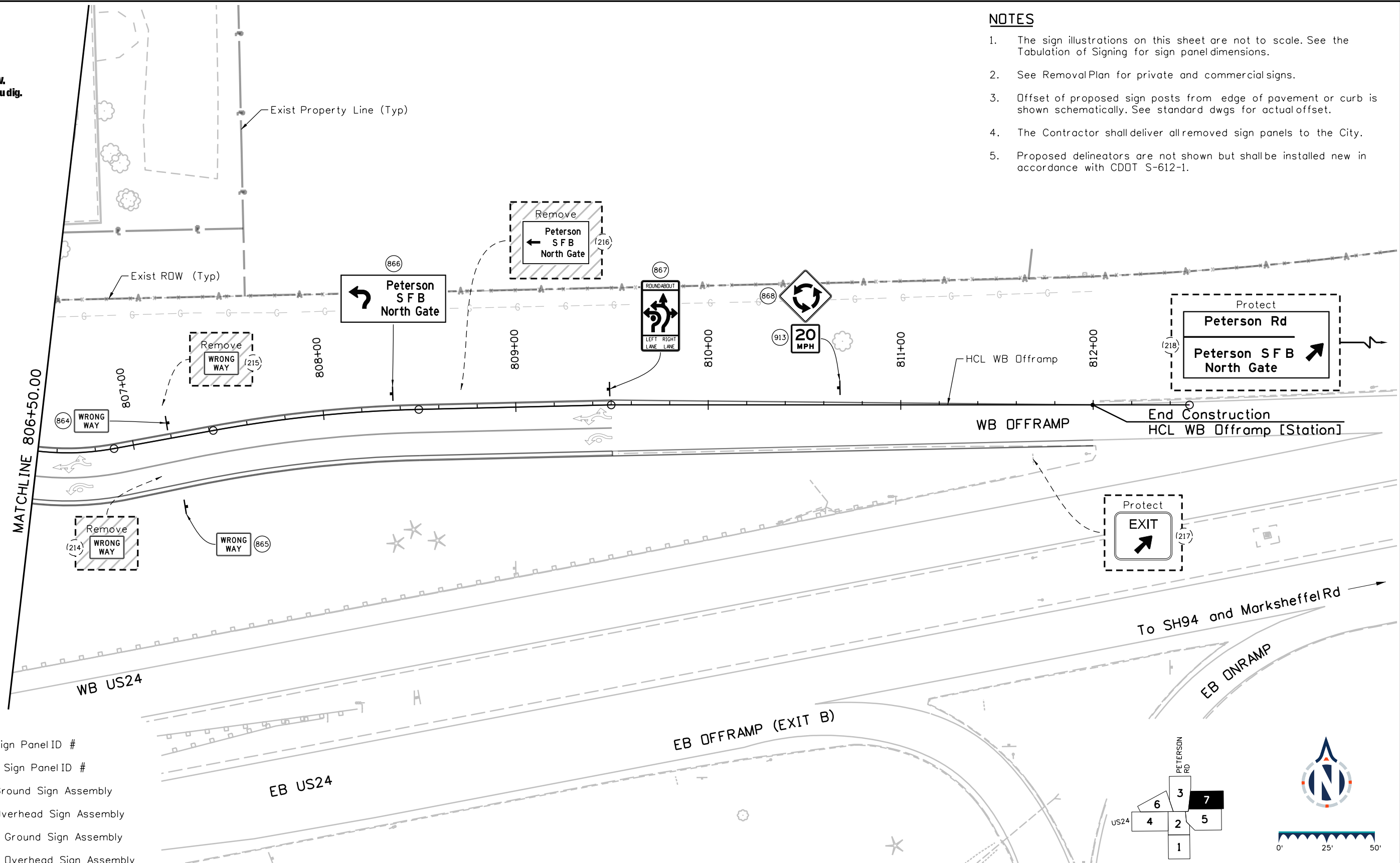
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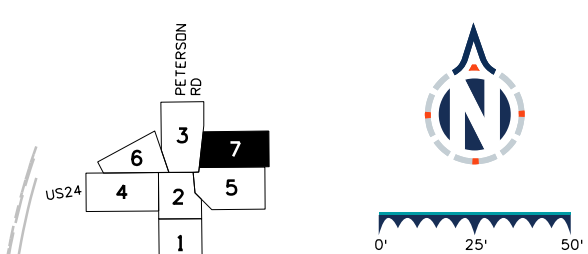
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### LEGEND

- (#) Existing Sign Panel ID #
- (#) Proposed Sign Panel ID #
- Existing Ground Sign Assembly
- Existing Overhead Sign Assembly
- Proposed Ground Sign Assembly
- Proposed Overhead Sign Assembly



### Sheet Revisions

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

SIGNING PLAN  
WESTBOUND OFFRAMP

Signing 7 of 7  
Sheet Number 111

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Designer: STV Horiz. Scale: 1"=50'  
Reviewer: GB Vert. Scale: N/A

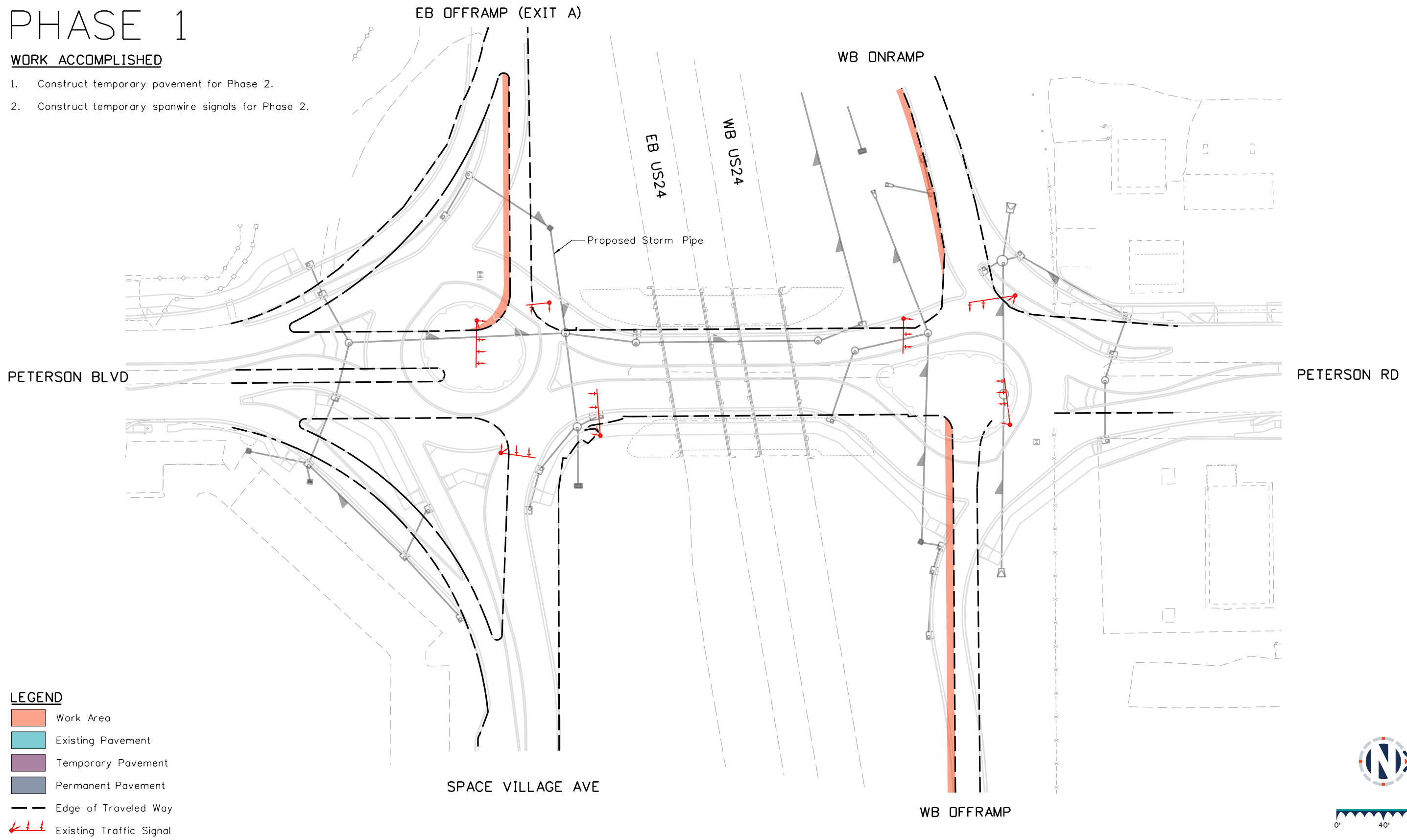


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# PHASE 1

## WORK ACCOMPLISHED

1. Construct temporary pavement for Phase 2.
2. Construct temporary spanwire signals for Phase 2.



### LEGEND

- Work Area
- Existing Pavement
- Temporary Pavement
- Permanent Pavement
- Edge of Traveled Way
- Existing Traffic Signal
- Temporary Traffic Signal

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Detailer: KAG Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=80'  
 Reviewer: STV Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
CONSTRUCTION PHASING PLAN PHASE 1	Phasing 1 of 6
	Sheet Number 112

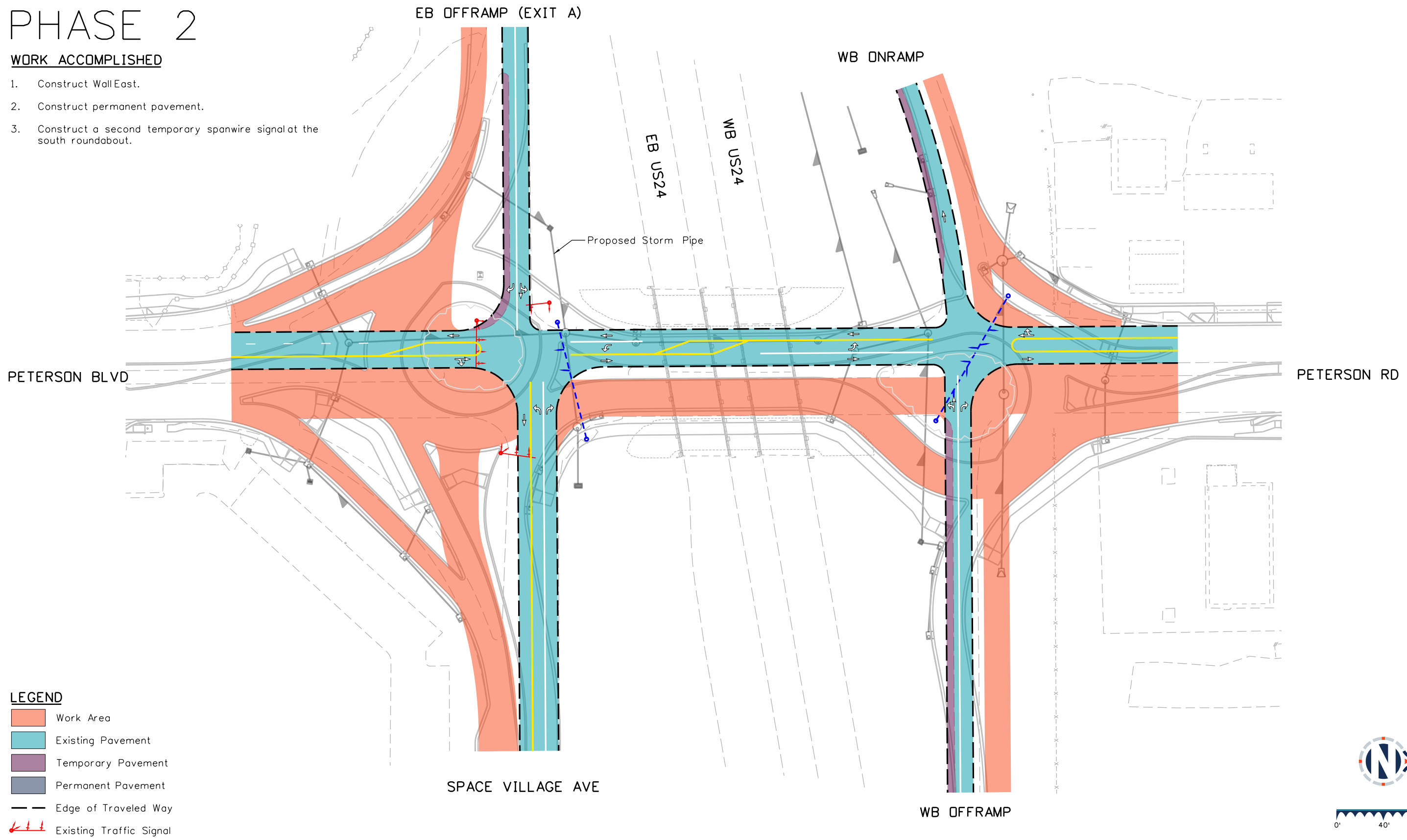
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# PHASE 2

## WORK ACCOMPLISHED

1. Construct Wall East.
2. Construct permanent pavement.
3. Construct a second temporary spanwire signal at the south roundabout.



### LEGEND

- Work Area
- Existing Pavement
- Temporary Pavement
- Permanent Pavement
- Edge of Traveled Way
- Existing Traffic Signal
- Temporary Traffic Signal

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Designer: STV	Horiz. Scale: 1"=80'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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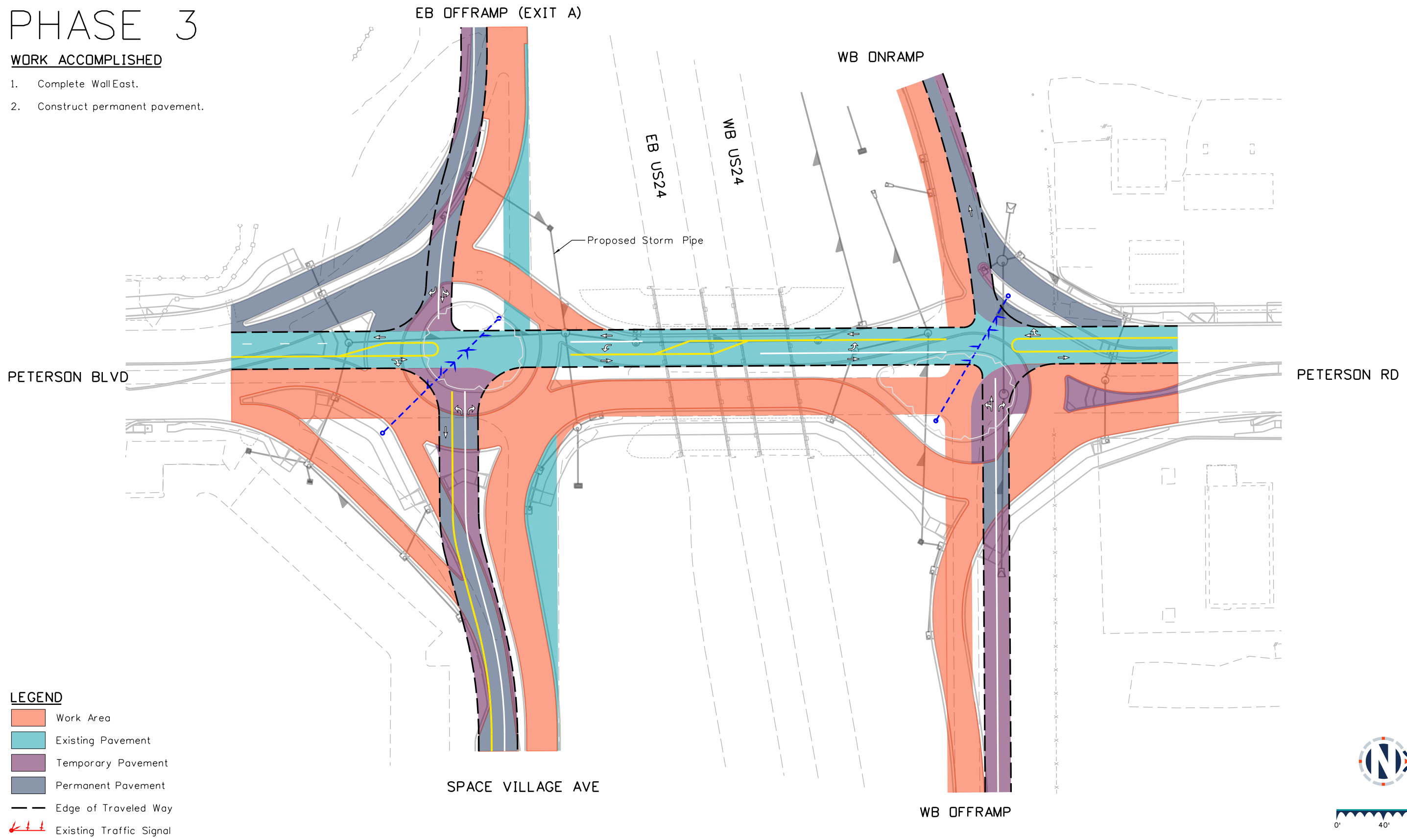
US Highway 24 & Peterson Blvd/Rd Roundabouts	
CONSTRUCTION PHASING PLAN PHASE 2	Phasing 2 of 6
	Sheet Number 113

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# PHASE 3

## WORK ACCOMPLISHED

1. Complete Wall East.
2. Construct permanent pavement.



### LEGEND

- Work Area
- Existing Pavement
- Temporary Pavement
- Permanent Pavement
- Edge of Traveled Way
- Existing Traffic Signal
- Temporary Traffic Signal

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=80'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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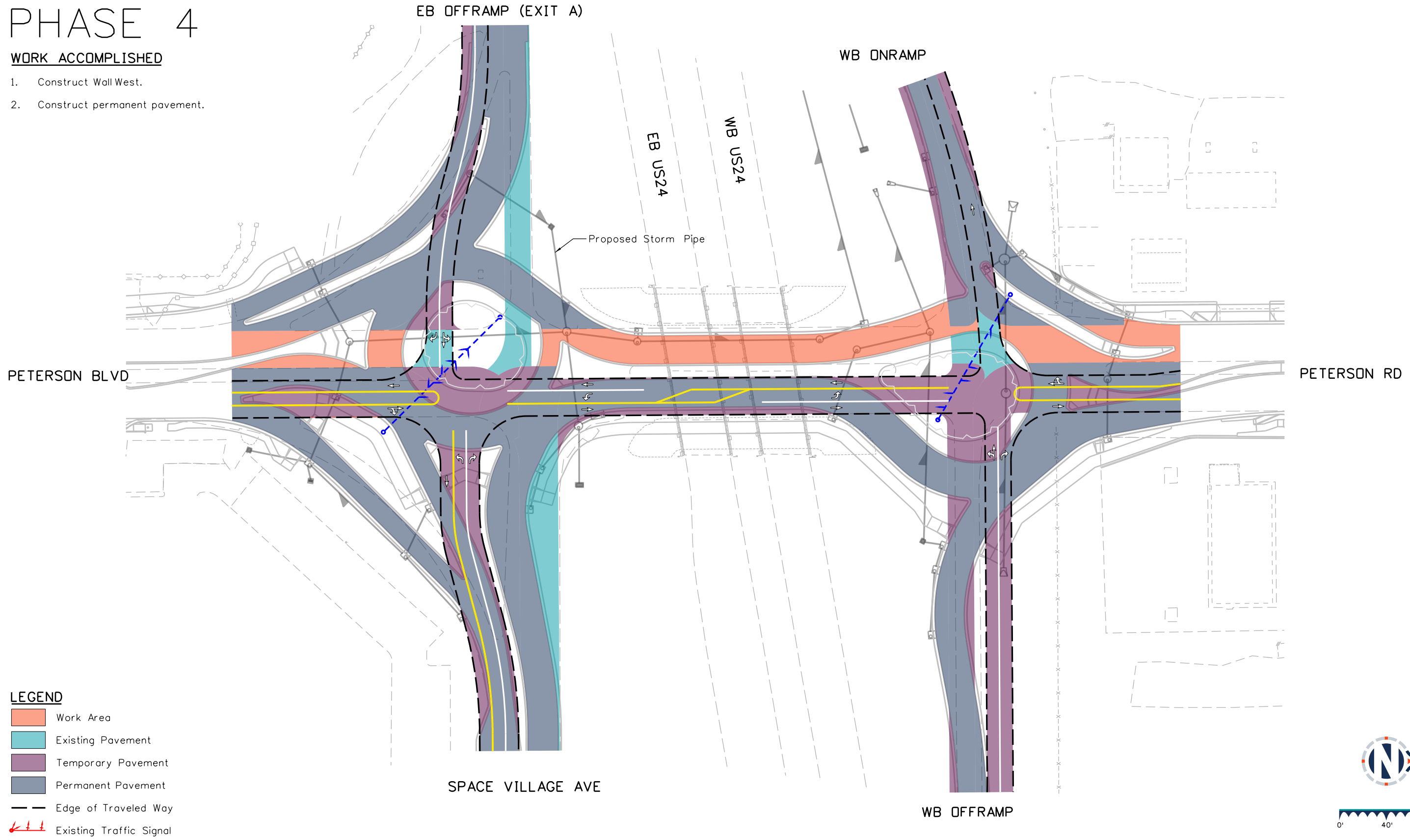
US Highway 24 & Peterson Blvd/Rd Roundabouts	
CONSTRUCTION PHASING PLAN PHASE 3	Phasing 3 of 6
	Sheet Number 114

30% PRELIMINARY - NOT FOR CONSTRUCTION

# PHASE 4

## WORK ACCOMPLISHED

1. Construct Wall West.
2. Construct permanent pavement.



### LEGEND

- Work Area
- Existing Pavement
- Temporary Pavement
- Permanent Pavement
- Edge of Traveled Way
- Existing Traffic Signal
- Temporary Traffic Signal

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Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=80'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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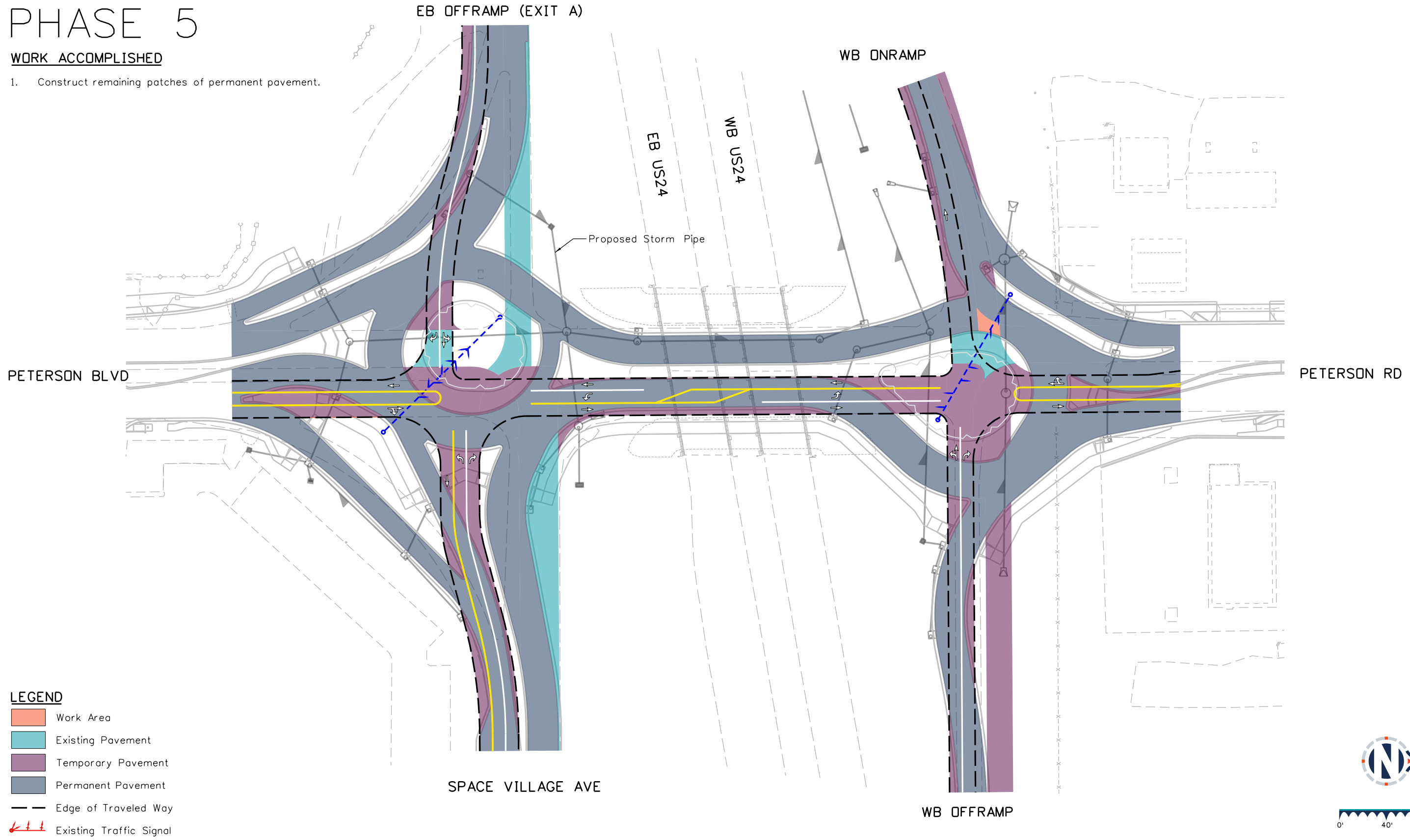
US Highway 24 & Peterson Blvd/Rd Roundabouts	
CONSTRUCTION PHASING PLAN PHASE 4	Phasing 4 of 6
Sheet Number 115	

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# PHASE 5

## WORK ACCOMPLISHED

1. Construct remaining patches of permanent pavement.



### LEGEND

- Work Area
- Existing Pavement
- Temporary Pavement
- Permanent Pavement
- Edge of Traveled Way
- Existing Traffic Signal
- Temporary Traffic Signal

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=80'  
 Reviewer: STV    Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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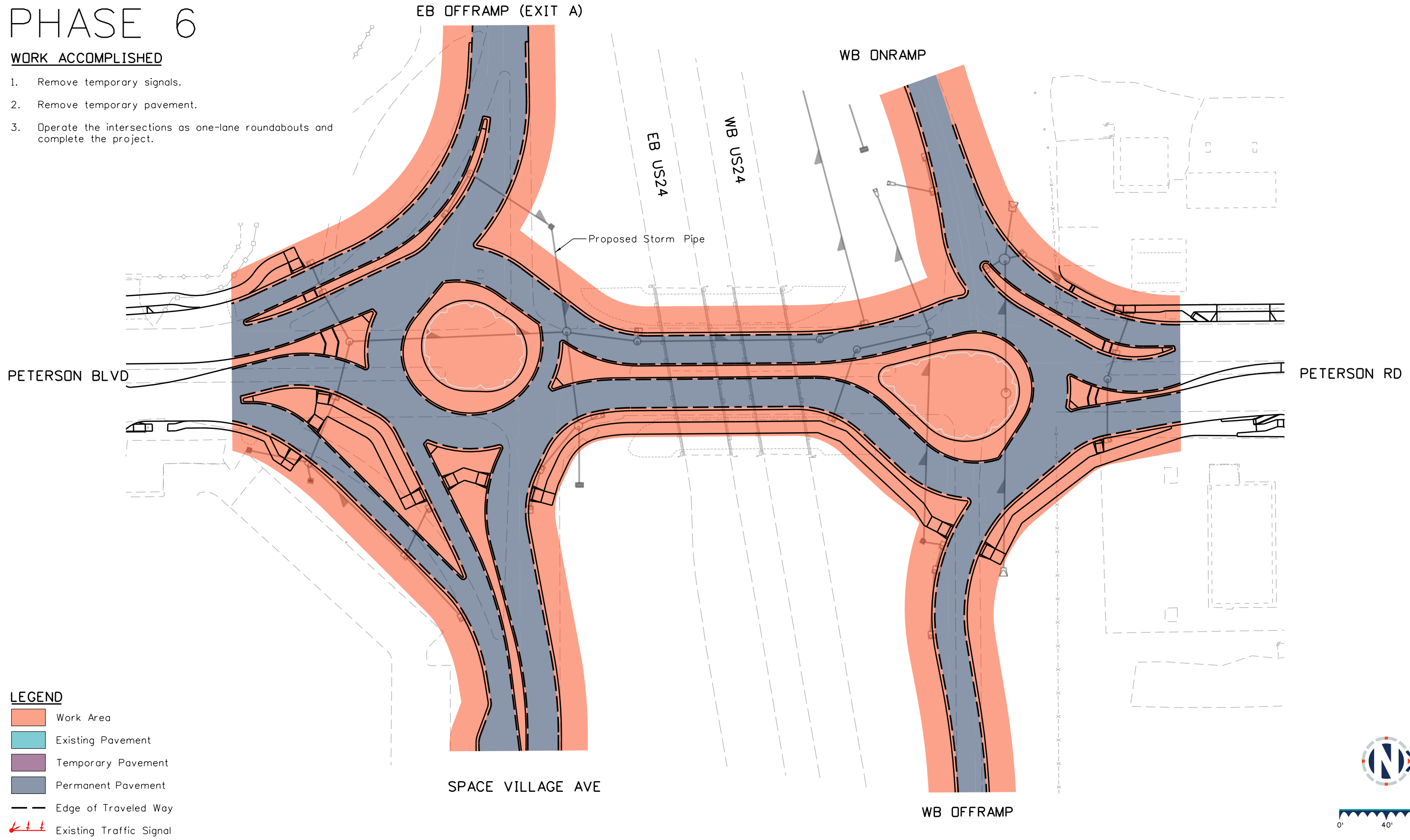
US Highway 24 & Peterson Blvd/Rd Roundabouts	
CONSTRUCTION PHASING PLAN PHASE 5	Phasing    5 of 6
	Sheet Number    116

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# PHASE 6

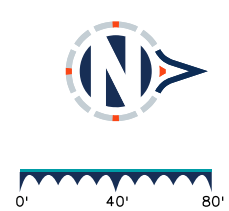
## WORK ACCOMPLISHED

1. Remove temporary signals.
2. Remove temporary pavement.
3. Operate the intersections as one-lane roundabouts and complete the project.



### LEGEND

- Work Area
- Existing Pavement
- Temporary Pavement
- Permanent Pavement
- Edge of Traveled Way
- Existing Traffic Signal
- Temporary Traffic Signal



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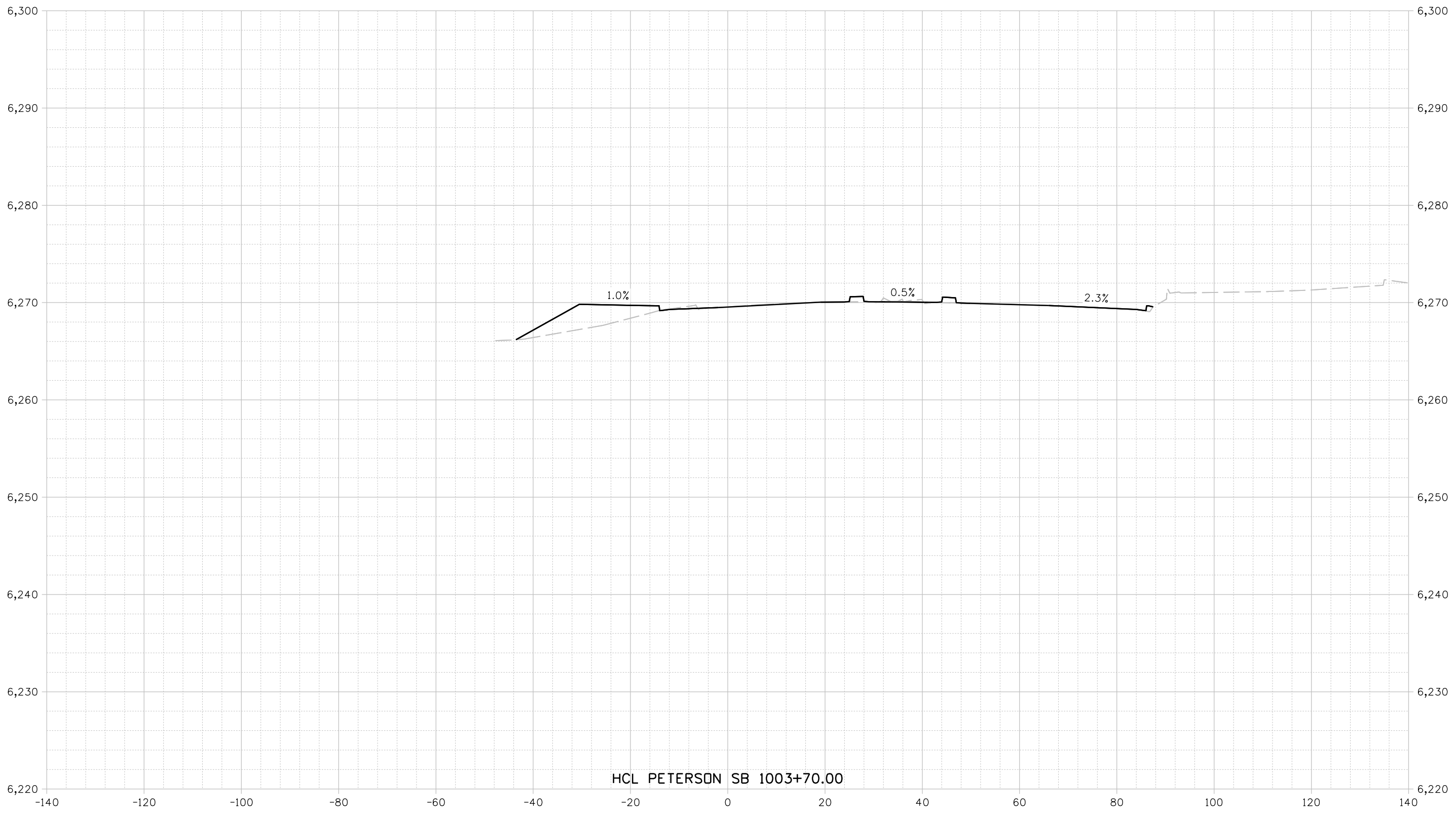
Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=80'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
CONSTRUCTION PHASING PLAN PHASE 6	Phasing 6 of 6
	Sheet Number 117

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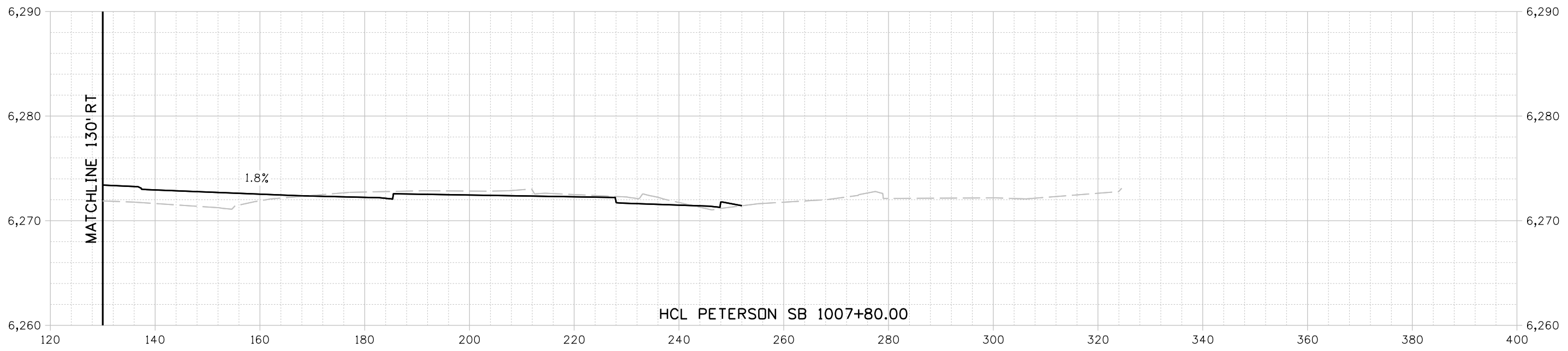
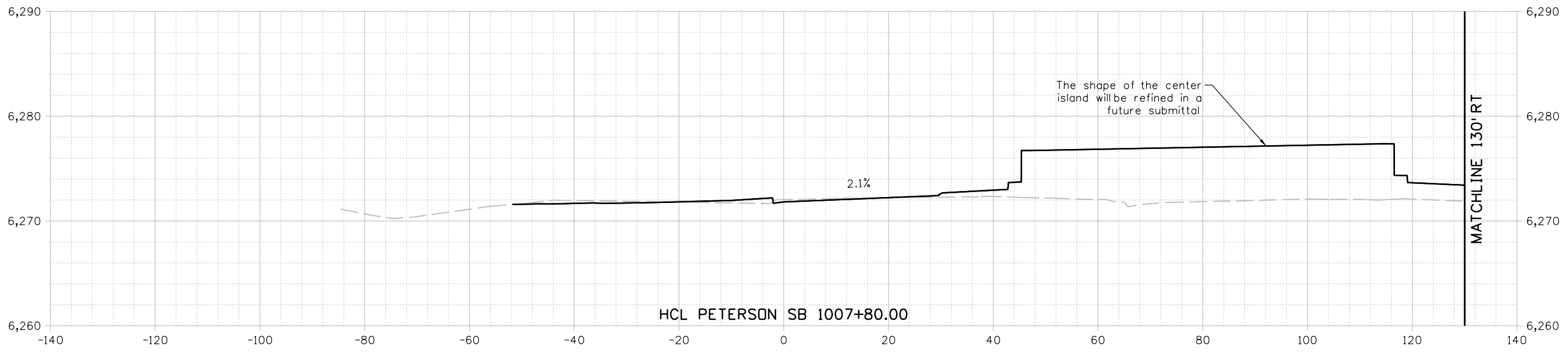
**BASIS PARTNERS** Basis Partners  
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Detailer: KAG	Print Date: 12/20/2023
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Reviewer: STV	Vert. Scale: 1"=10'



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US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL PETERSON SB 1003+70.00	
XSection	1 of 9
Sheet Number	118



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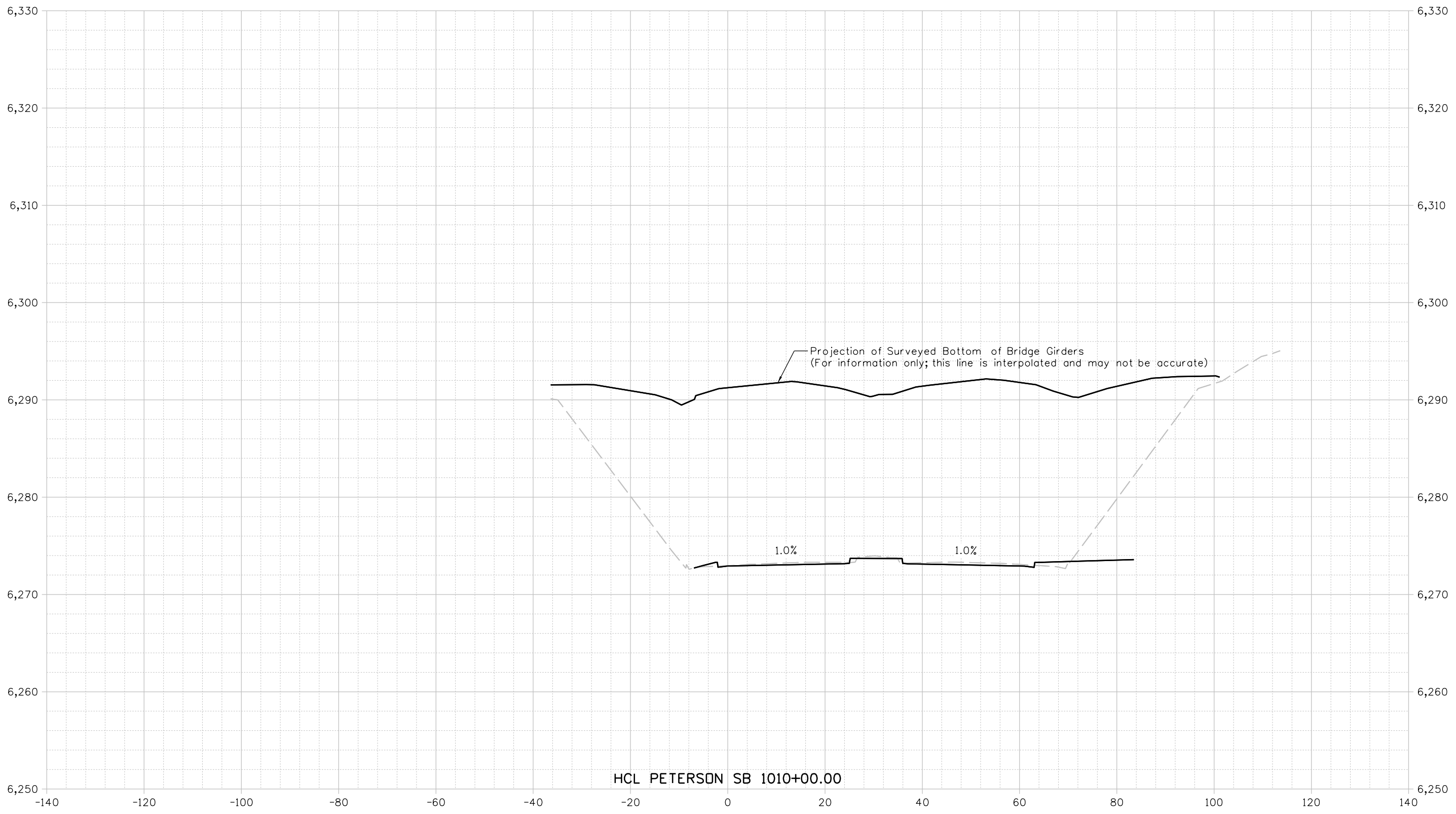
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Detailer: KAG    Print Date: 12/20/2023  
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Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL PETERSON SB 1007+80.00	
XSection	2 of 9
Sheet Number	119



HCL PETERSON SB 1010+00.00

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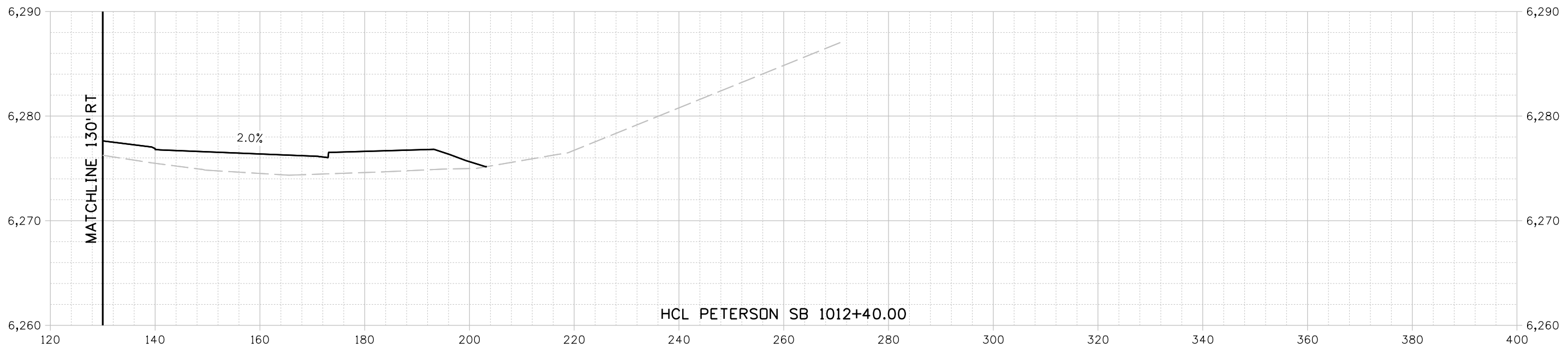
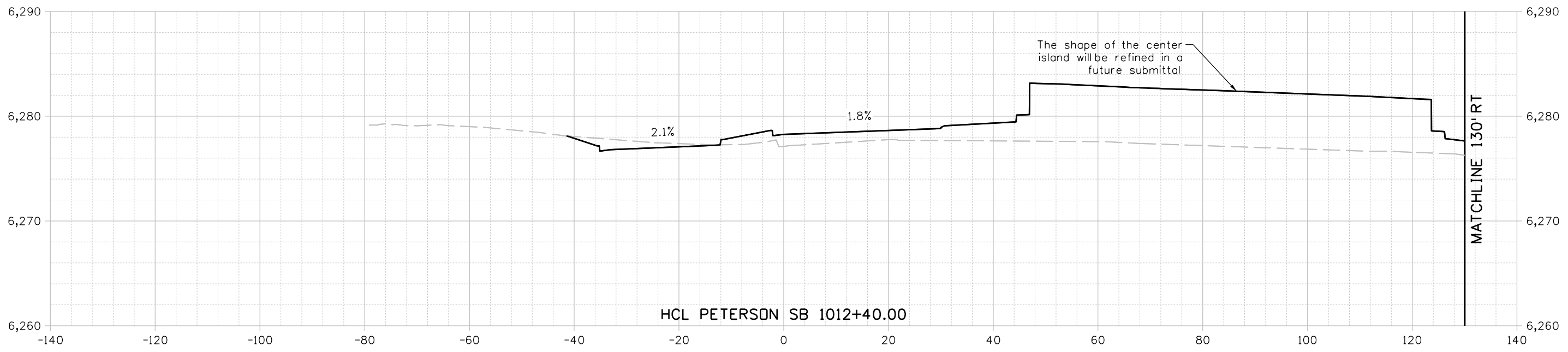
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Designer: STV	Horiz. Scale: 1"=20'
Reviewer: STV	Vert. Scale: 1"=10'



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US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL PETERSON SB 1010+00.00	
XSection	3 of 9
Sheet Number	120





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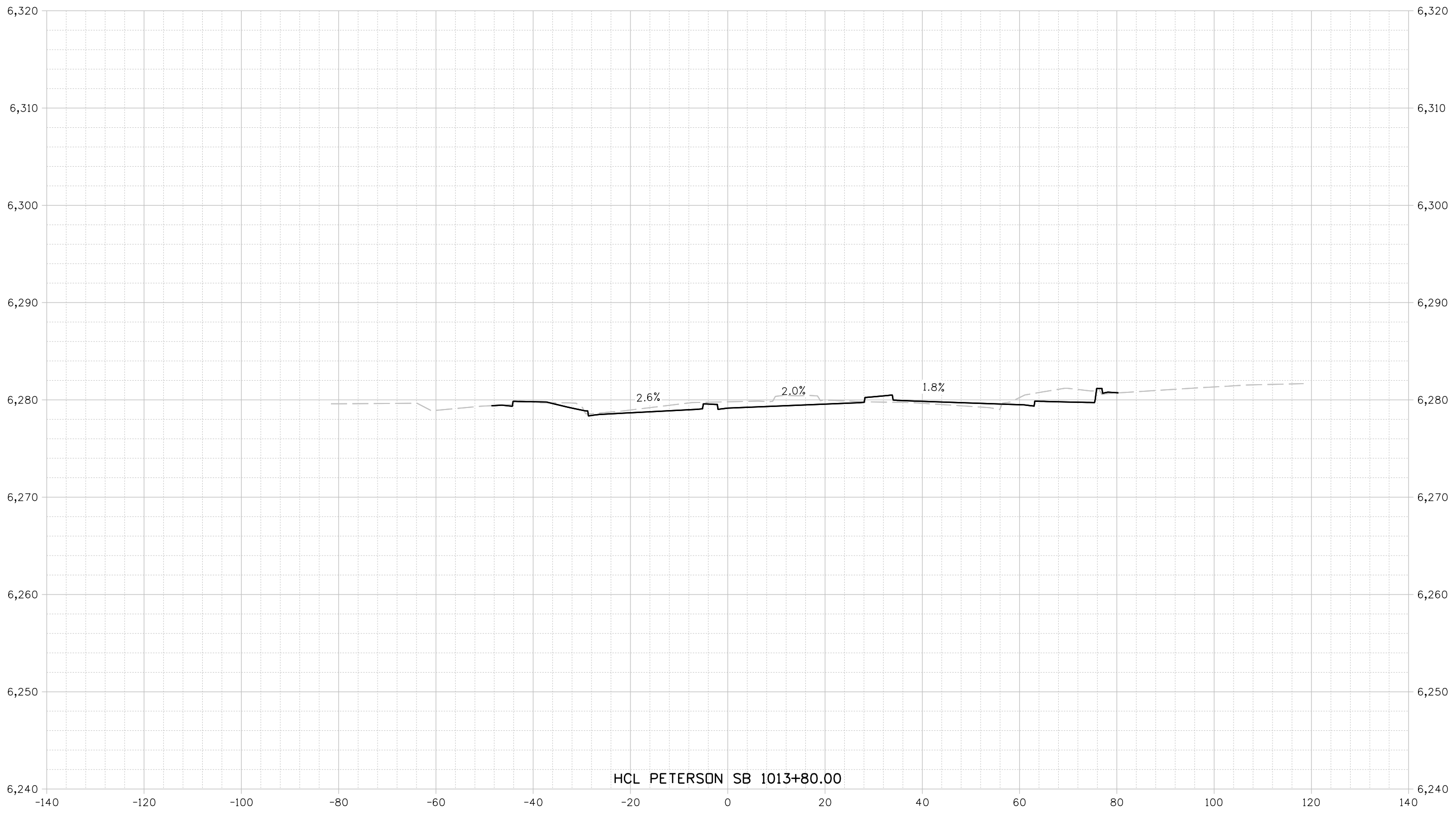
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Designer: STV	Horiz. Scale: 1"=20'
Reviewer: STV	Vert. Scale: 1"=10'



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Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL PETERSON SB 1012+40.00	
XSection	4 of 9
Sheet Number	121

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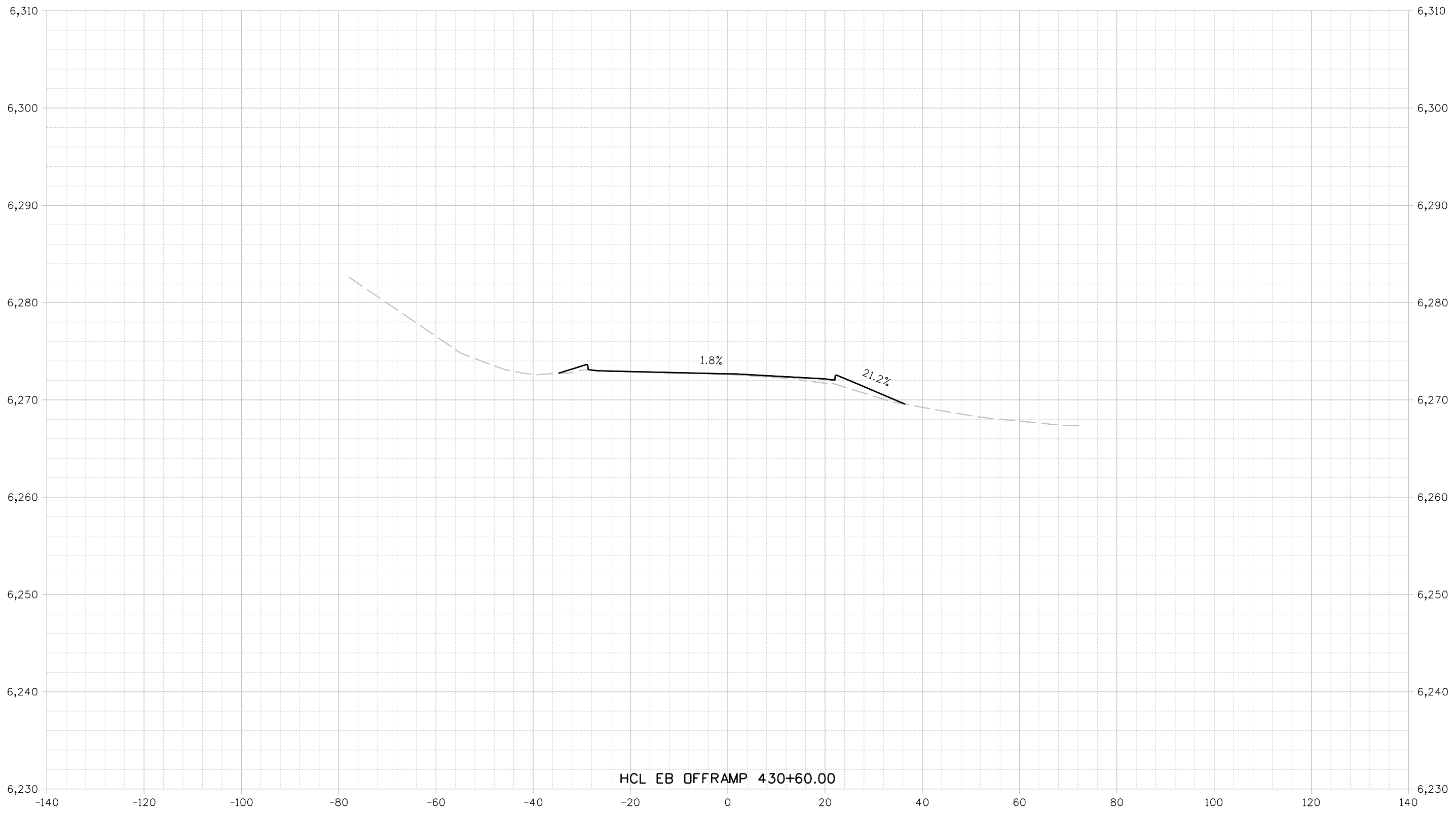
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Designer: STV	Horiz. Scale: 1"=20'
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL PETERSON SB 1013+80.00	
XSection	5 of 9
Sheet Number	122

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HCL EB OFFRAMP 430+60.00

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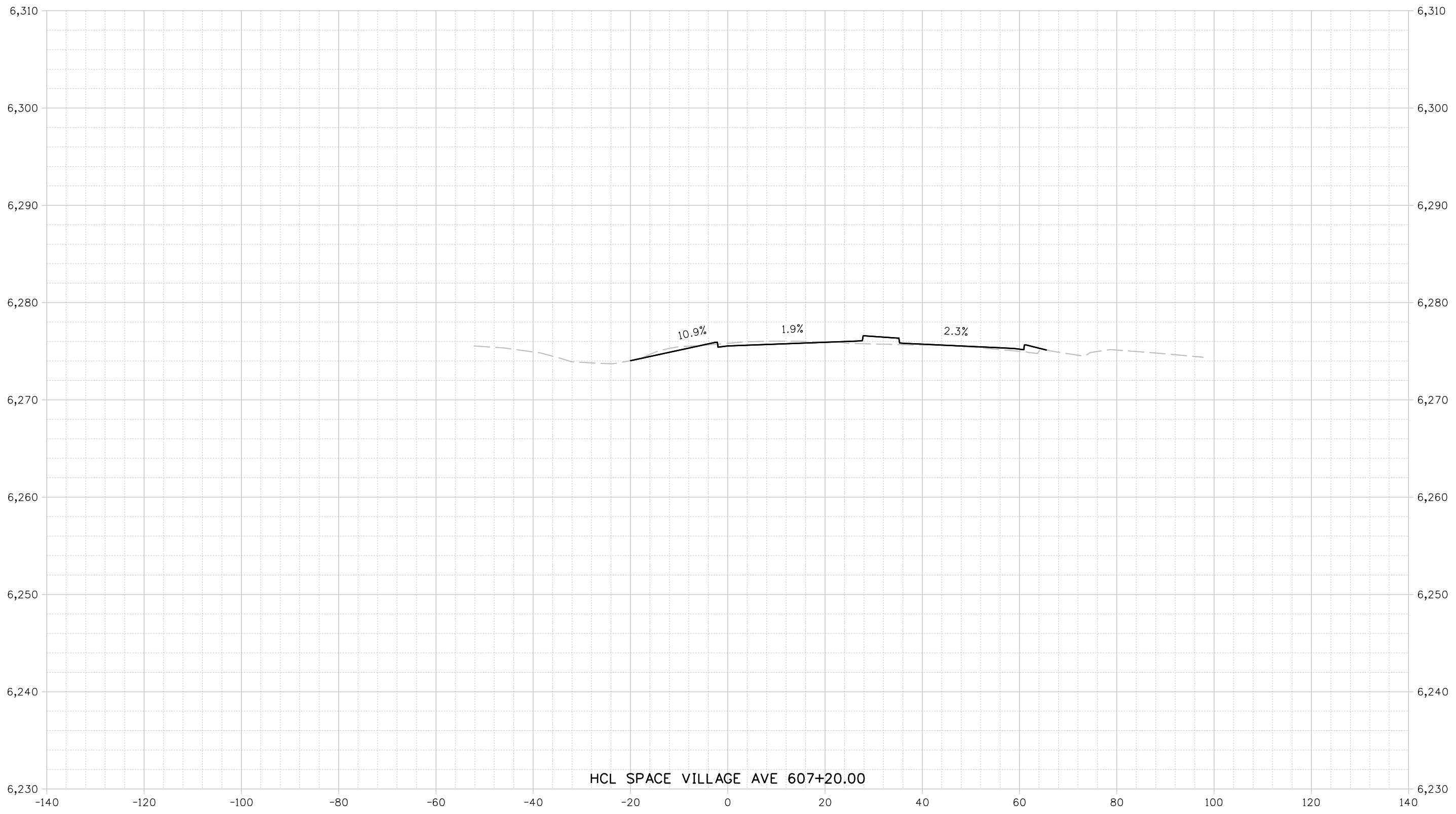
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Designer: STV	Horiz. Scale: 1"=20'
Reviewer: STV	Vert. Scale: 1"=10'



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL EB OFFRAMP 430+60.00	XSection 6 of 9 Sheet Number 123

30% PRELIMINARY - NOT FOR CONSTRUCTION



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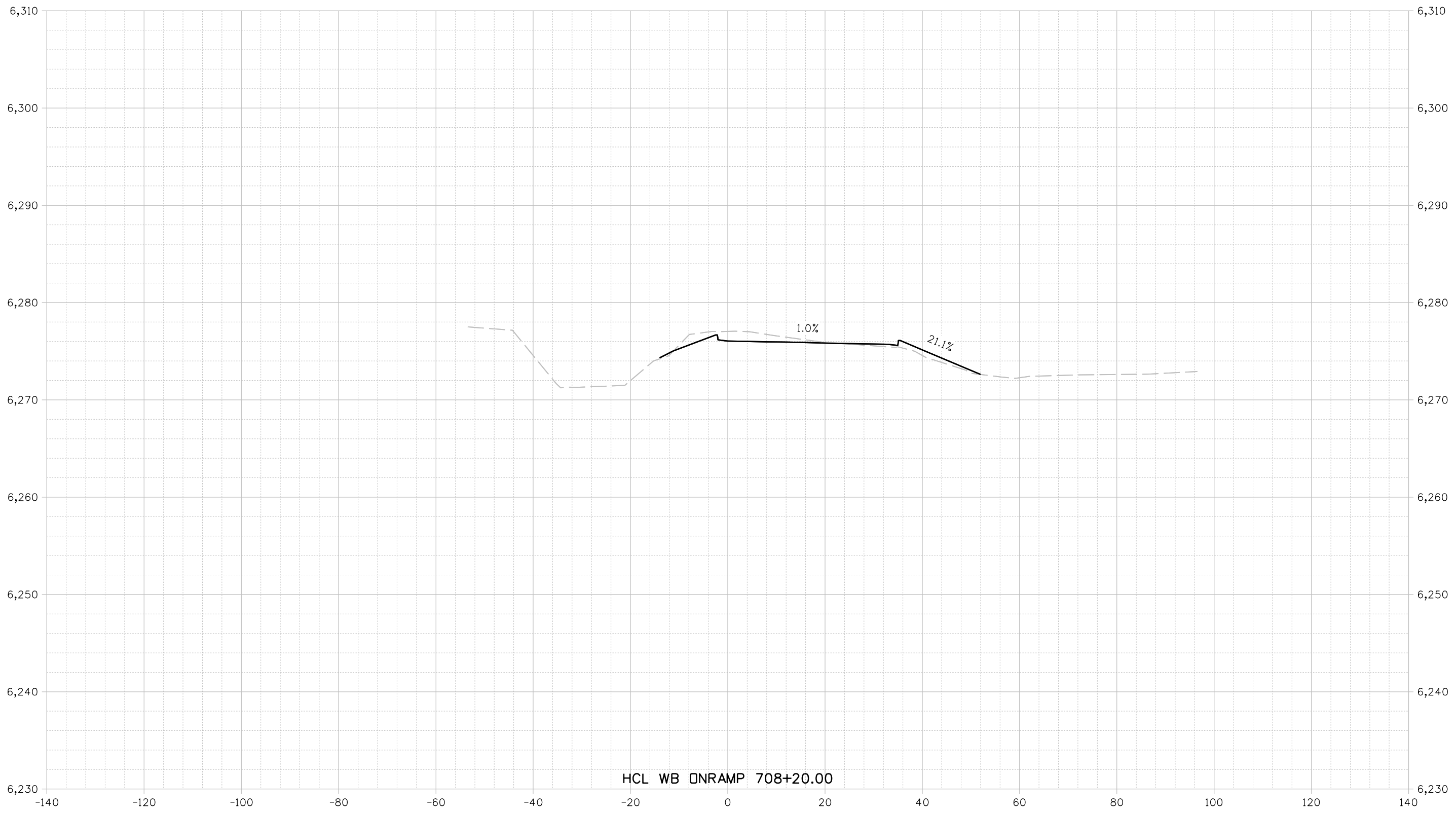
Detailer: KAG	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=20'
Reviewer: STV	Vert. Scale: 1"=10'



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL SPACE VILLAGE AVE 607+20.00	XSection 7 of 9 Sheet Number 124

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HCL WB ONRAMP 708+20.00

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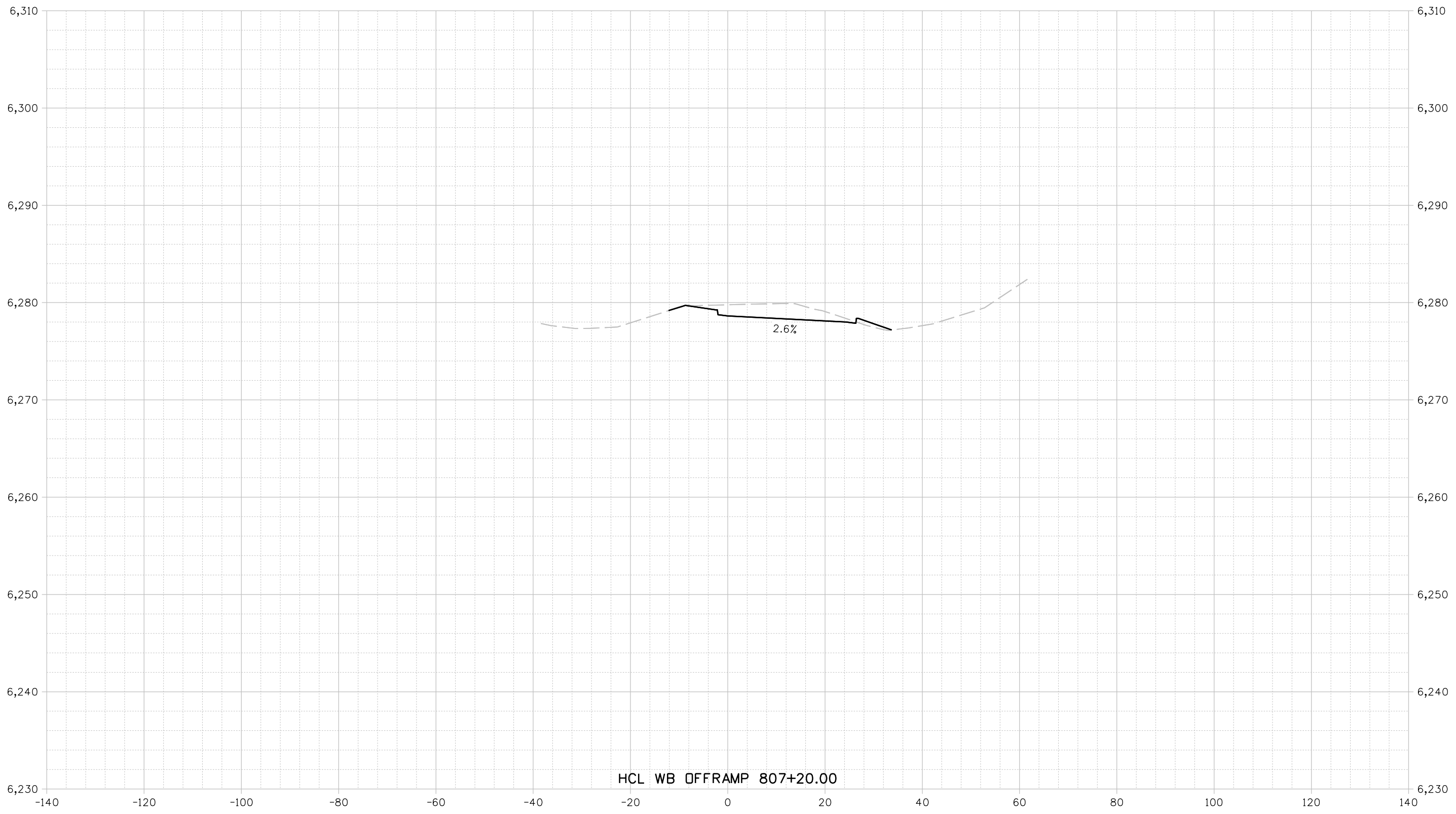
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Designer: STV	Horiz. Scale: 1"=20'
Reviewer: STV	Vert. Scale: 1"=10'



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
CROSS SECTION HCL WB ONRAMP 708+20.00	XSection 8 of 9 Sheet Number 125

30% PRELIMINARY - NOT FOR CONSTRUCTION



HCL WB OFFRAMP 807+20.00

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Detailer: KAG    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=20'  
 Reviewer: STV    Vert. Scale: 1"=10'



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US Highway 24 & Peterson Blvd/Rd Roundabouts

**CROSS SECTION  
 HCL WB OFFRAMP  
 807+20.00**

XSection 9 of 9  
 Sheet Number 126

**SOUTH ROUNDABOUT  
NORTHBOUND FASTEST PATHS**

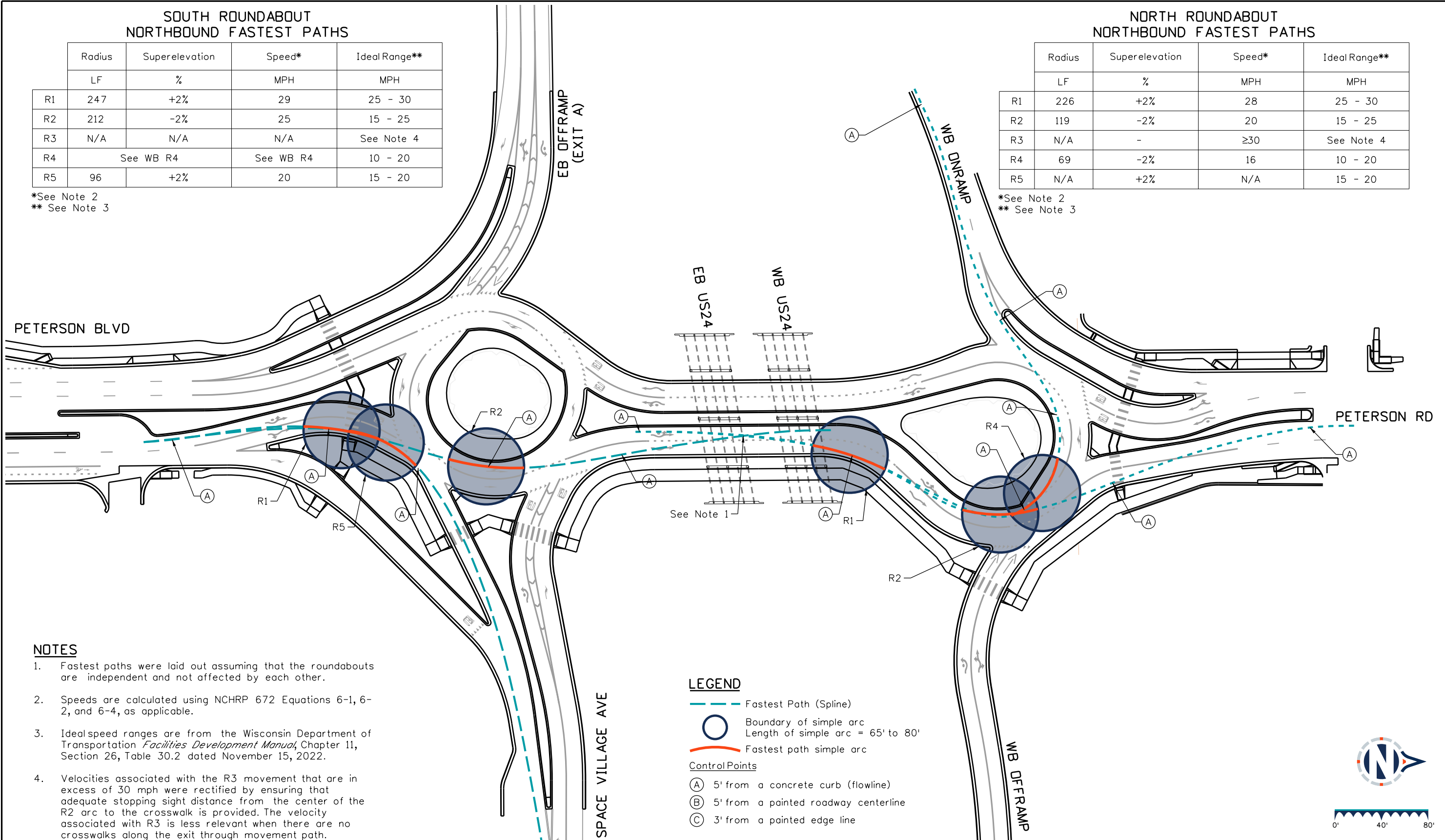
	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	247	+2%	29	25 - 30
R2	212	-2%	25	15 - 25
R3	N/A	N/A	N/A	See Note 4
R4	See WB R4		See WB R4	10 - 20
R5	96	+2%	20	15 - 20

\*See Note 2  
\*\* See Note 3

**NORTH ROUNDABOUT  
NORTHBOUND FASTEST PATHS**

	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	226	+2%	28	25 - 30
R2	119	-2%	20	15 - 25
R3	N/A	-	≥30	See Note 4
R4	69	-2%	16	10 - 20
R5	N/A	+2%	N/A	15 - 20

\*See Note 2  
\*\* See Note 3

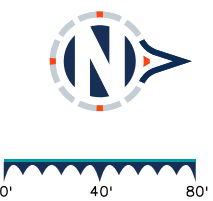


**NOTES**

1. Fastest paths were laid out assuming that the roundabouts are independent and not affected by each other.
2. Speeds are calculated using NCHRP 672 Equations 6-1, 6-2, and 6-4, as applicable.
3. Idealspeed ranges are from the Wisconsin Department of Transportation *Facilities Development Manual*, Chapter 11, Section 26, Table 30.2 dated November 15, 2022.
4. Velocities associated with the R3 movement that are in excess of 30 mph were rectified by ensuring that adequate stopping sight distance from the center of the R2 arc to the crosswalk is provided. The velocity associated with R3 is less relevant when there are no crosswalks along the exit through movement path.

**LEGEND**

- Fastest Path (Spline)
- Boundary of simple arc  
Length of simple arc = 65' to 80'
- Fastest path simple arc
- Control Points**
- (A) 5' from a concrete curb (flowline)
- (B) 5' from a painted roadway centerline
- (C) 3' from a painted edge line



**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY FASTEST PATH PLAN  
NORTHBOUND APPROACHES

Fastest Path 1 of 4  
Sheet Number 127

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Designer: STV Horiz. Scale: 1"=80'  
Reviewer: STV Vert. Scale: N/A



**30% PRELIMINARY - NOT FOR CONSTRUCTION**

**SOUTH ROUNDABOUT  
WESTBOUND FASTEST PATHS**

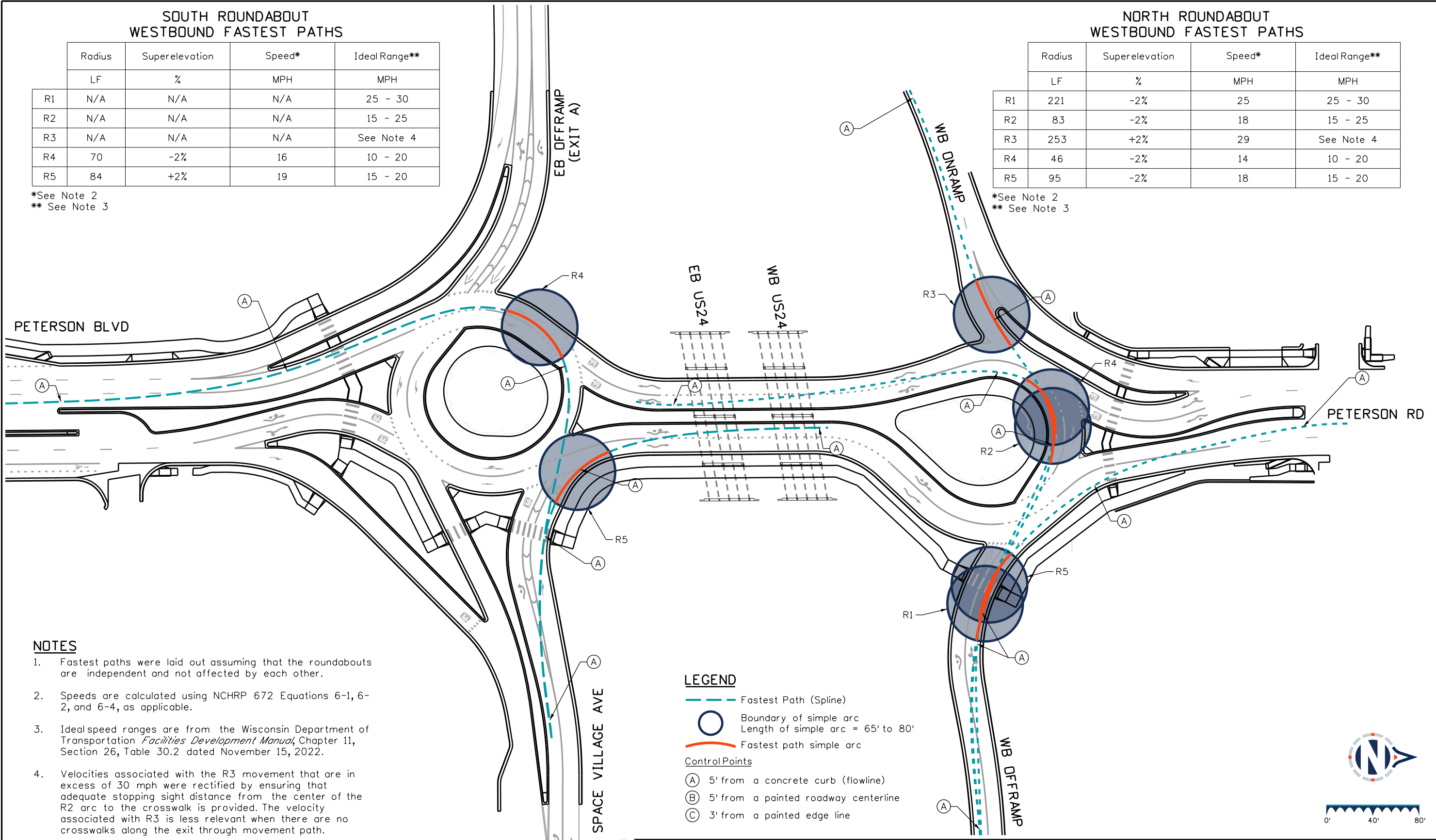
	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	N/A	N/A	N/A	25 - 30
R2	N/A	N/A	N/A	15 - 25
R3	N/A	N/A	N/A	See Note 4
R4	70	-2%	16	10 - 20
R5	84	+2%	19	15 - 20

\*See Note 2  
\*\* See Note 3

**NORTH ROUNDABOUT  
WESTBOUND FASTEST PATHS**

	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	221	-2%	25	25 - 30
R2	83	-2%	18	15 - 25
R3	253	+2%	29	See Note 4
R4	46	-2%	14	10 - 20
R5	95	-2%	18	15 - 20

\*See Note 2  
\*\* See Note 3

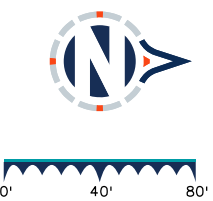


**NOTES**

1. Fastest paths were laid out assuming that the roundabouts are independent and not affected by each other.
2. Speeds are calculated using NCHRP 672 Equations 6-1, 6-2, and 6-4, as applicable.
3. Idealspeed ranges are from the Wisconsin Department of Transportation *Facilities Development Manual*, Chapter 11, Section 26, Table 30.2 dated November 15, 2022.
4. Velocities associated with the R3 movement that are in excess of 30 mph were rectified by ensuring that adequate stopping sight distance from the center of the R2 arc to the crosswalk is provided. The velocity associated with R3 is less relevant when there are no crosswalks along the exit through movement path.

**LEGEND**

- Fastest Path (Spline)
- Boundary of simple arc  
Length of simple arc = 65' to 80'
- Fastest path simple arc
- Control Points**
- (A) 5' from a concrete curb (flowline)
- (B) 5' from a painted roadway centerline
- (C) 3' from a painted edge line



**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY FASTEST PATH PLAN  
WESTBOUND APPROACHES

Fastest Path 2 of 4  
Sheet Number 128

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**SOUTH ROUNDABOUT  
SOUTHBOUND FASTEST PATHS**

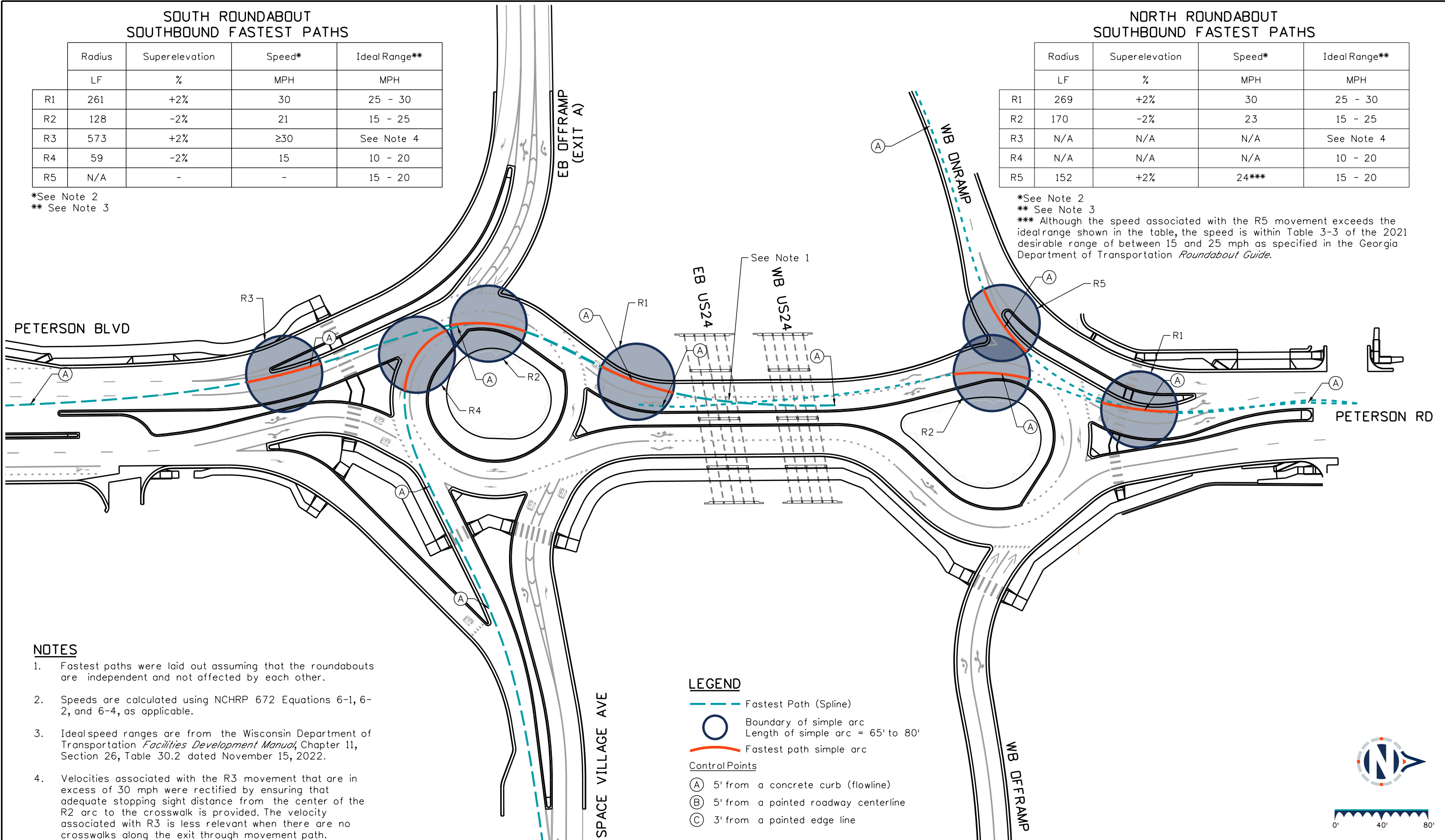
	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	261	+2%	30	25 - 30
R2	128	-2%	21	15 - 25
R3	573	+2%	≥30	See Note 4
R4	59	-2%	15	10 - 20
R5	N/A	-	-	15 - 20

\*See Note 2  
\*\* See Note 3

**NORTH ROUNDABOUT  
SOUTHBOUND FASTEST PATHS**

	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	269	+2%	30	25 - 30
R2	170	-2%	23	15 - 25
R3	N/A	N/A	N/A	See Note 4
R4	N/A	N/A	N/A	10 - 20
R5	152	+2%	24***	15 - 20

\*See Note 2  
\*\* See Note 3  
\*\*\* Although the speed associated with the R5 movement exceeds the ideal range shown in the table, the speed is within Table 3-3 of the 2021 desirable range of between 15 and 25 mph as specified in the Georgia Department of Transportation *Roundabout Guide*.



**NOTES**

1. Fastest paths were laid out assuming that the roundabouts are independent and not affected by each other.
2. Speeds are calculated using NCHRP 672 Equations 6-1, 6-2, and 6-4, as applicable.
3. Ideal speed ranges are from the Wisconsin Department of Transportation *Facilities Development Manual*, Chapter 11, Section 26, Table 30.2 dated November 15, 2022.
4. Velocities associated with the R3 movement that are in excess of 30 mph were rectified by ensuring that adequate stopping sight distance from the center of the R2 arc to the crosswalk is provided. The velocity associated with R3 is less relevant when there are no crosswalks along the exit through movement path.

**LEGEND**

- - - Fastest Path (Spline)
  - Boundary of simple arc  
Length of simple arc = 65' to 80'
  - Fastest path simple arc
- Control Points**
- (A) 5' from a concrete curb (flowline)
  - (B) 5' from a painted roadway centerline
  - (C) 3' from a painted edge line

**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY FASTEST PATH PLAN  
SOUTHBOUND APPROACHES

Fastest Path 3 of 4  
Sheet Number 129

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**SOUTH ROUNDABOUT  
EASTBOUND FASTEST PATHS**

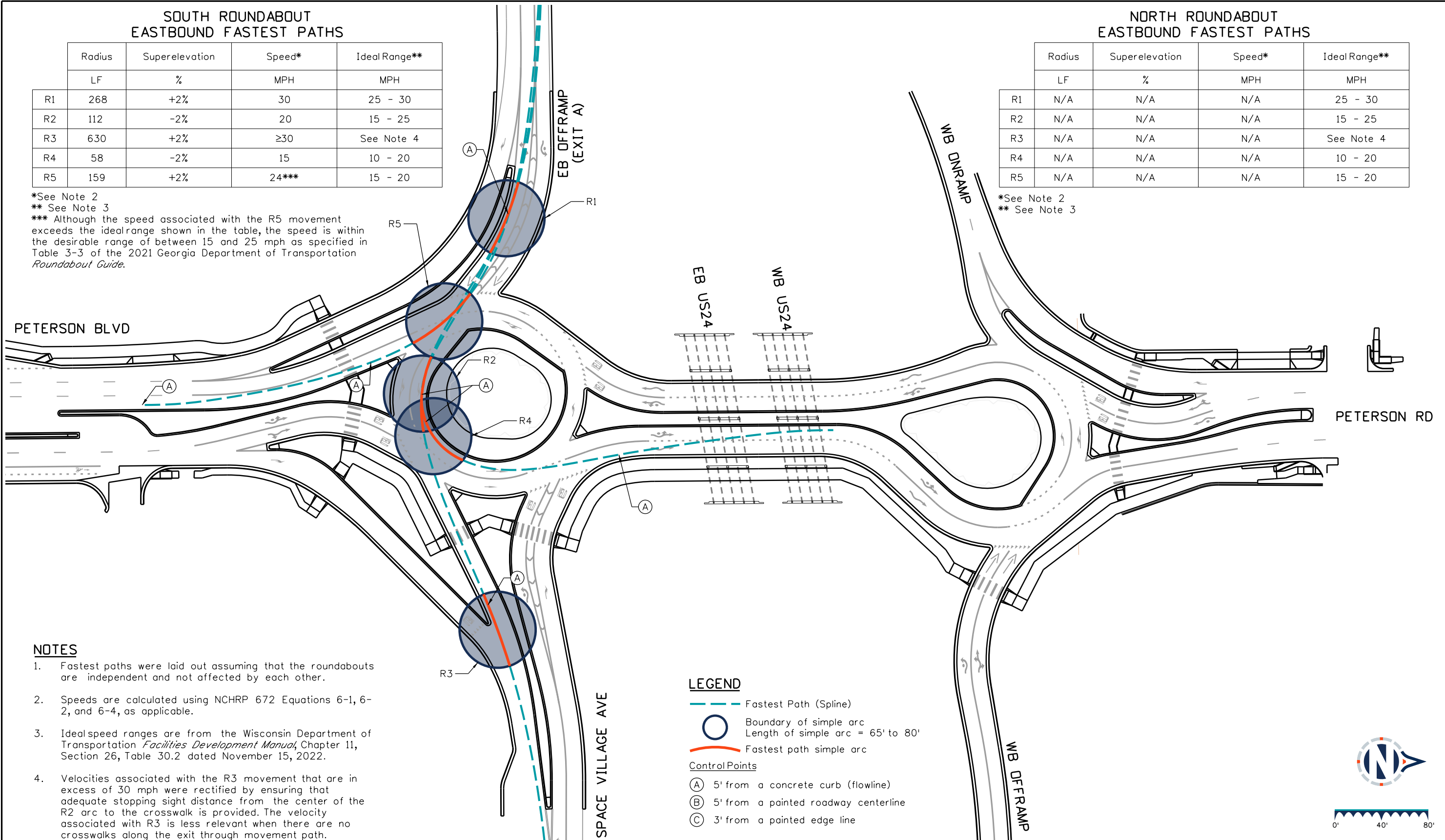
	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	268	+2%	30	25 - 30
R2	112	-2%	20	15 - 25
R3	630	+2%	≥30	See Note 4
R4	58	-2%	15	10 - 20
R5	159	+2%	24***	15 - 20

\*See Note 2  
 \*\* See Note 3  
 \*\*\* Although the speed associated with the R5 movement exceeds the ideal range shown in the table, the speed is within the desirable range of between 15 and 25 mph as specified in Table 3-3 of the 2021 Georgia Department of Transportation Roundabout Guide.

**NORTH ROUNDABOUT  
EASTBOUND FASTEST PATHS**

	Radius	Superelevation	Speed*	Ideal Range**
	LF	%	MPH	MPH
R1	N/A	N/A	N/A	25 - 30
R2	N/A	N/A	N/A	15 - 25
R3	N/A	N/A </td <td>N/A</td> <td>See Note 4</td>	N/A	See Note 4
R4	N/A	N/A	N/A	10 - 20
R5	N/A	N/A	N/A	15 - 20

\*See Note 2  
 \*\* See Note 3

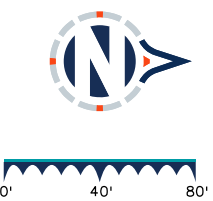


**NOTES**

1. Fastest paths were laid out assuming that the roundabouts are independent and not affected by each other.
2. Speeds are calculated using NCHRP 672 Equations 6-1, 6-2, and 6-4, as applicable.
3. Ideal speed ranges are from the Wisconsin Department of Transportation *Facilities Development Manual*, Chapter 11, Section 26, Table 30.2 dated November 15, 2022.
4. Velocities associated with the R3 movement that are in excess of 30 mph were rectified by ensuring that adequate stopping sight distance from the center of the R2 arc to the crosswalk is provided. The velocity associated with R3 is less relevant when there are no crosswalks along the exit through movement path.

**LEGEND**

- - - Fastest Path (Spline)
  - Boundary of simple arc  
Length of simple arc = 65' to 80'
  - Fastest path simple arc
- Control Points**
- (A) 5' from a concrete curb (flowline)
  - (B) 5' from a painted roadway centerline
  - (C) 3' from a painted edge line



**Sheet Revisions**

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US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY FASTEST PATH PLAN  
EASTBOUND APPROACHES

Fastest Path 4 of 4  
 Sheet Number 130

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**SOUTH ROUNDABOUT  
NORTHBOUND INTERSECTION SIGHT DISTANCE**

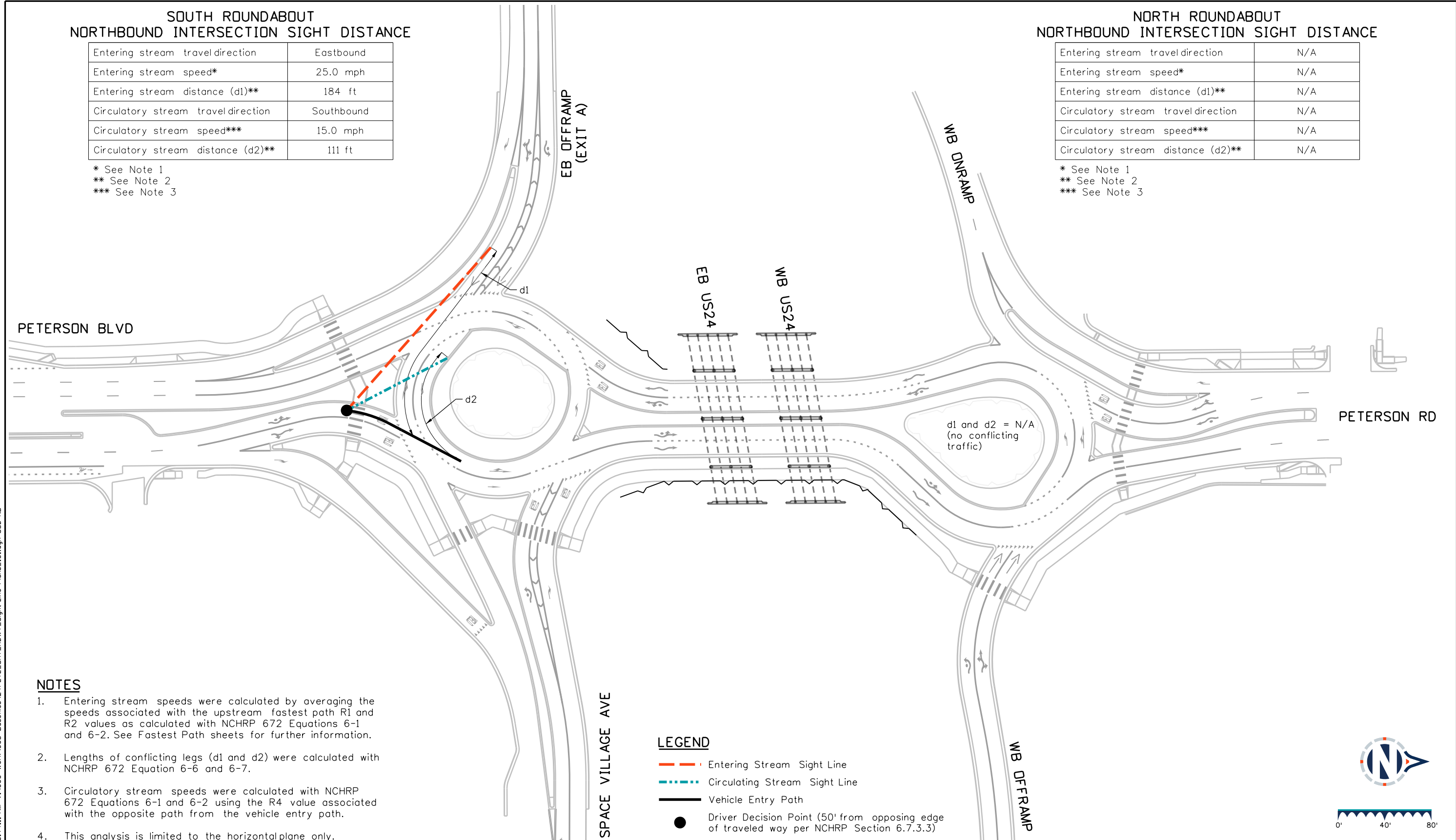
Entering stream travel direction	Eastbound
Entering stream speed*	25.0 mph
Entering stream distance (d1)**	184 ft
Circulatory stream travel direction	Southbound
Circulatory stream speed***	15.0 mph
Circulatory stream distance (d2)**	111 ft

\* See Note 1  
\*\* See Note 2  
\*\*\* See Note 3

**NORTH ROUNDABOUT  
NORTHBOUND INTERSECTION SIGHT DISTANCE**

Entering stream travel direction	N/A
Entering stream speed*	N/A
Entering stream distance (d1)**	N/A
Circulatory stream travel direction	N/A
Circulatory stream speed***	N/A
Circulatory stream distance (d2)**	N/A

\* See Note 1  
\*\* See Note 2  
\*\*\* See Note 3



**NOTES**

1. Entering stream speeds were calculated by averaging the speeds associated with the upstream fastest path R1 and R2 values as calculated with NCHRP 672 Equations 6-1 and 6-2. See Fastest Path sheets for further information.
2. Lengths of conflicting legs (d1 and d2) were calculated with NCHRP 672 Equation 6-6 and 6-7.
3. Circulatory stream speeds were calculated with NCHRP 672 Equations 6-1 and 6-2 using the R4 value associated with the opposite path from the vehicle entry path.
4. This analysis is limited to the horizontal plane only.

**LEGEND**

- Entering Stream Sight Line
- Circulating Stream Sight Line
- Vehicle Entry Path
- Driver Decision Point (50' from opposing edge of traveled way per NCHRP Section 6.7.3.3)

**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**ROADWAY SIGHT DISTANCE PLAN  
INTERSECTION SIGHT DISTANCE  
NORTHBOUND APPROACHES**

Sight Distance 1 of 5  
Sheet Number 131

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Designer: STV Horiz. Scale: 1"=80'  
Reviewer: STV Vert. Scale: N/A



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**SOUTH ROUNDABOUT  
WESTBOUND INTERSECTION SIGHT DISTANCE**

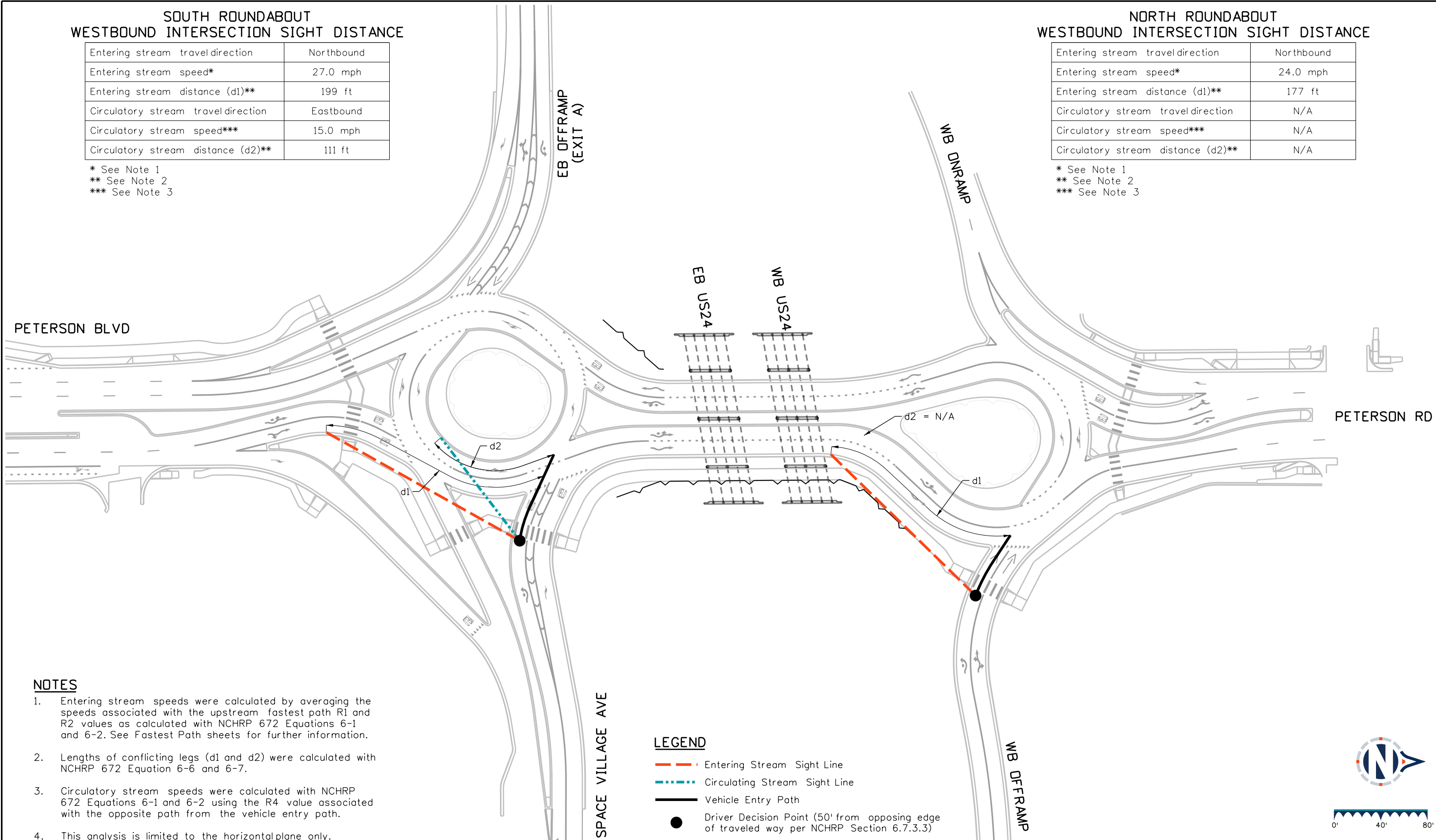
Entering stream travel direction	Northbound
Entering stream speed*	27.0 mph
Entering stream distance (d1)**	199 ft
Circulatory stream travel direction	Eastbound
Circulatory stream speed***	15.0 mph
Circulatory stream distance (d2)**	111 ft

\* See Note 1  
 \*\* See Note 2  
 \*\*\* See Note 3

**NORTH ROUNDABOUT  
WESTBOUND INTERSECTION SIGHT DISTANCE**

Entering stream travel direction	Northbound
Entering stream speed*	24.0 mph
Entering stream distance (d1)**	177 ft
Circulatory stream travel direction	N/A
Circulatory stream speed***	N/A
Circulatory stream distance (d2)**	N/A

\* See Note 1  
 \*\* See Note 2  
 \*\*\* See Note 3

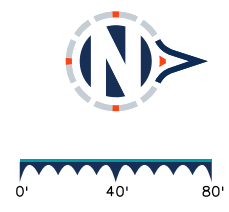


**NOTES**

1. Entering stream speeds were calculated by averaging the speeds associated with the upstream fastest path R1 and R2 values as calculated with NCHRP 672 Equations 6-1 and 6-2. See Fastest Path sheets for further information.
2. Lengths of conflicting legs (d1 and d2) were calculated with NCHRP 672 Equation 6-6 and 6-7.
3. Circulatory stream speeds were calculated with NCHRP 672 Equations 6-1 and 6-2 using the R4 value associated with the opposite path from the vehicle entry path.
4. This analysis is limited to the horizontal plane only.

**LEGEND**

- Entering Stream Sight Line
- Circulating Stream Sight Line
- Vehicle Entry Path
- Driver Decision Point (50' from opposing edge of traveled way per NCHRP Section 6.7.3.3)



**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**ROADWAY SIGHT DISTANCE PLAN  
INTERSECTION SIGHT DISTANCE  
WESTBOUND APPROACHES**

Sight Distance 2 of 5  
 Sheet Number 132

Keith Given 12/20/2023 9:44:12 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Sight\_Line\_Plan\_101.dgn SSD-WB

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 Designer: STV Horiz. Scale: 1"=80'  
 Reviewer: STV Vert. Scale: N/A



**SOUTH ROUNDABOUT  
SOUTHBOUND INTERSECTION SIGHT DISTANCE**

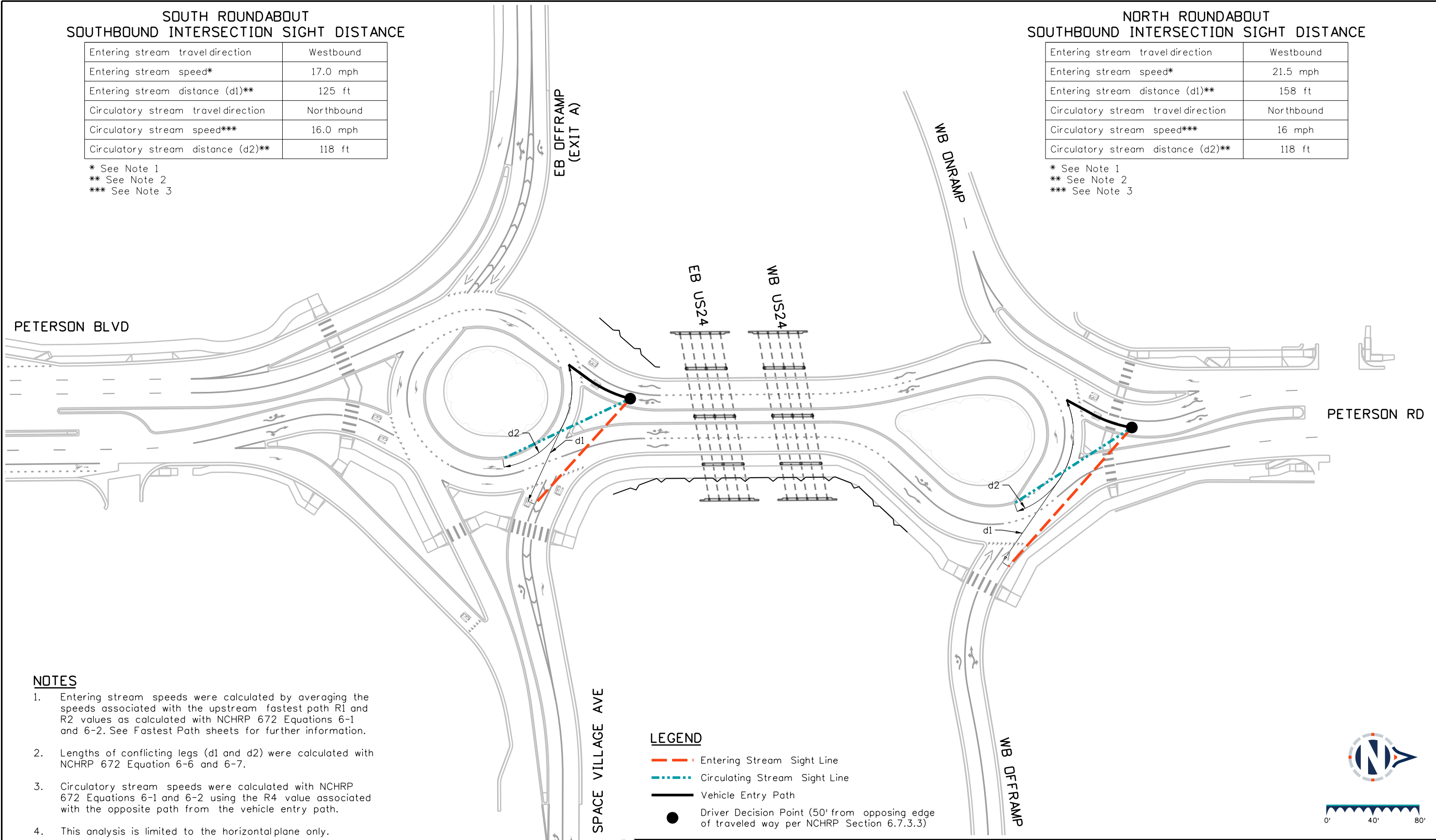
Entering stream travel direction	Westbound
Entering stream speed*	17.0 mph
Entering stream distance (d1)**	125 ft
Circulatory stream travel direction	Northbound
Circulatory stream speed***	16.0 mph
Circulatory stream distance (d2)**	118 ft

\* See Note 1  
 \*\* See Note 2  
 \*\*\* See Note 3

**NORTH ROUNDABOUT  
SOUTHBOUND INTERSECTION SIGHT DISTANCE**

Entering stream travel direction	Westbound
Entering stream speed*	21.5 mph
Entering stream distance (d1)**	158 ft
Circulatory stream travel direction	Northbound
Circulatory stream speed***	16 mph
Circulatory stream distance (d2)**	118 ft

\* See Note 1  
 \*\* See Note 2  
 \*\*\* See Note 3

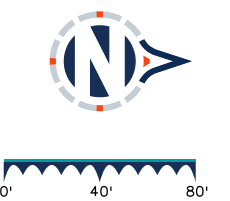


**NOTES**

1. Entering stream speeds were calculated by averaging the speeds associated with the upstream fastest path R1 and R2 values as calculated with NCHRP 672 Equations 6-1 and 6-2. See Fastest Path sheets for further information.
2. Lengths of conflicting legs (d1 and d2) were calculated with NCHRP 672 Equation 6-6 and 6-7.
3. Circulatory stream speeds were calculated with NCHRP 672 Equations 6-1 and 6-2 using the R4 value associated with the opposite path from the vehicle entry path.
4. This analysis is limited to the horizontal plane only.

**LEGEND**

- Entering Stream Sight Line
- Circulating Stream Sight Line
- Vehicle Entry Path
- Driver Decision Point (50' from opposing edge of traveled way per NCHRP Section 6.7.3.3)



**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**ROADWAY SIGHT DISTANCE PLAN  
INTERSECTION SIGHT DISTANCE  
SOUTHBOUND APPROACHES**

Sight Distance 3 of 5  
 Sheet Number 133

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 Designer: STV Horiz. Scale: 1"=80'  
 Reviewer: STV Vert. Scale: N/A



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**30% PRELIMINARY - NOT FOR CONSTRUCTION**

**SOUTH ROUNDABOUT  
EASTBOUND INTERSECTION SIGHT DISTANCE**

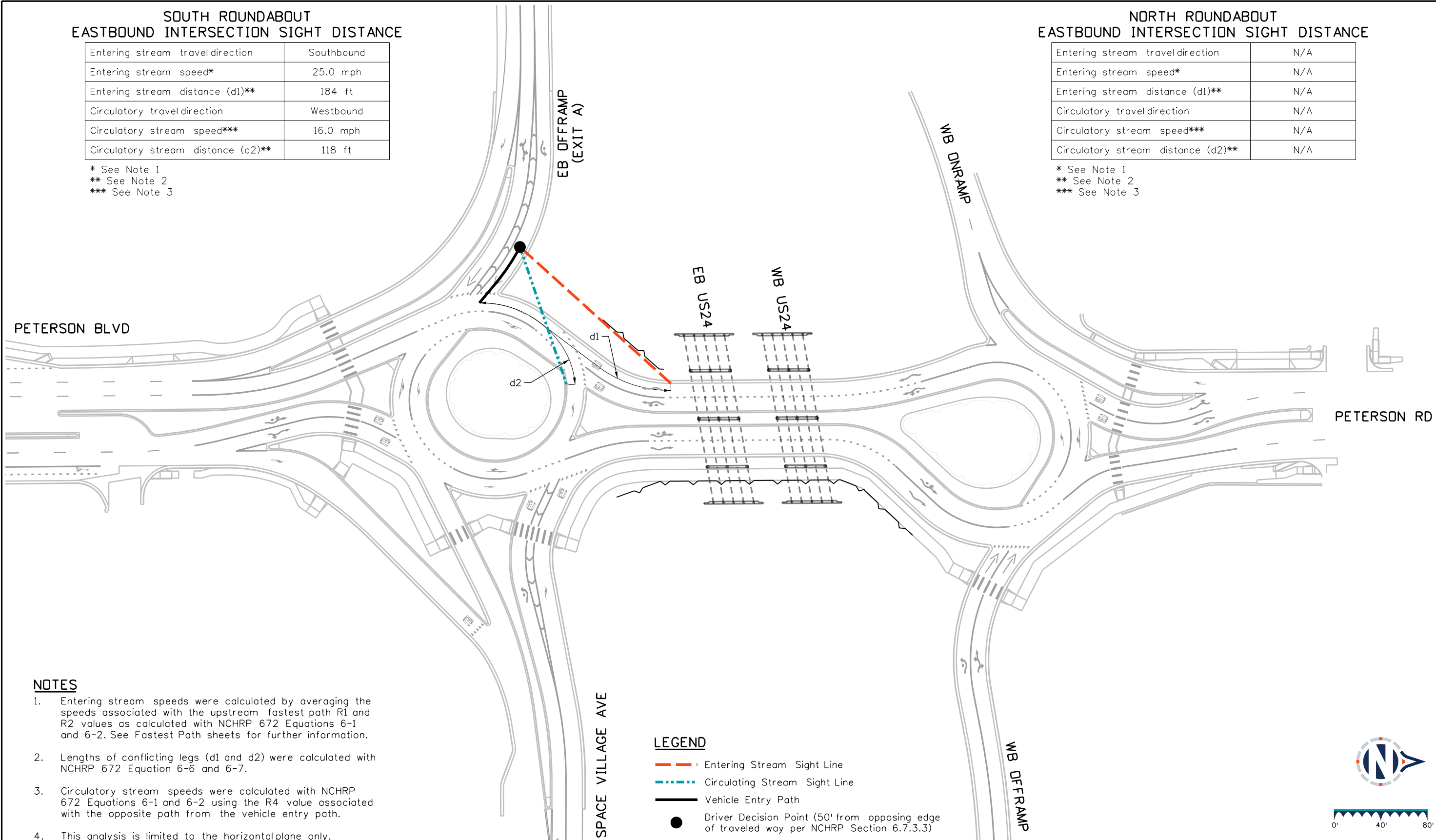
Entering stream travel direction	Southbound
Entering stream speed*	25.0 mph
Entering stream distance (d1)**	184 ft
Circulatory travel direction	Westbound
Circulatory stream speed***	16.0 mph
Circulatory stream distance (d2)**	118 ft

\* See Note 1  
 \*\* See Note 2  
 \*\*\* See Note 3

**NORTH ROUNDABOUT  
EASTBOUND INTERSECTION SIGHT DISTANCE**

Entering stream travel direction	N/A
Entering stream speed*	N/A
Entering stream distance (d1)**	N/A
Circulatory travel direction	N/A
Circulatory stream speed***	N/A
Circulatory stream distance (d2)**	N/A

\* See Note 1  
 \*\* See Note 2  
 \*\*\* See Note 3

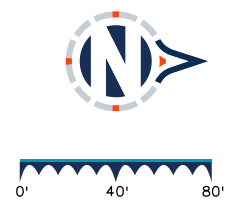


**NOTES**

1. Entering stream speeds were calculated by averaging the speeds associated with the upstream fastest path R1 and R2 values as calculated with NCHRP 672 Equations 6-1 and 6-2. See Fastest Path sheets for further information.
2. Lengths of conflicting legs (d1 and d2) were calculated with NCHRP 672 Equation 6-6 and 6-7.
3. Circulatory stream speeds were calculated with NCHRP 672 Equations 6-1 and 6-2 using the R4 value associated with the opposite path from the vehicle entry path.
4. This analysis is limited to the horizontal plane only.

**LEGEND**

- Entering Stream Sight Line
- Circulating Stream Sight Line
- Vehicle Entry Path
- Driver Decision Point (50' from opposing edge of traveled way per NCHRP Section 6.7.3.3)



**Sheet Revisions**

Date	Comments	Init

**US Highway 24 & Peterson Blvd/Rd Roundabouts**

**ROADWAY SIGHT DISTANCE PLAN  
INTERSECTION SIGHT DISTANCE  
EASTBOUND APPROACHES**

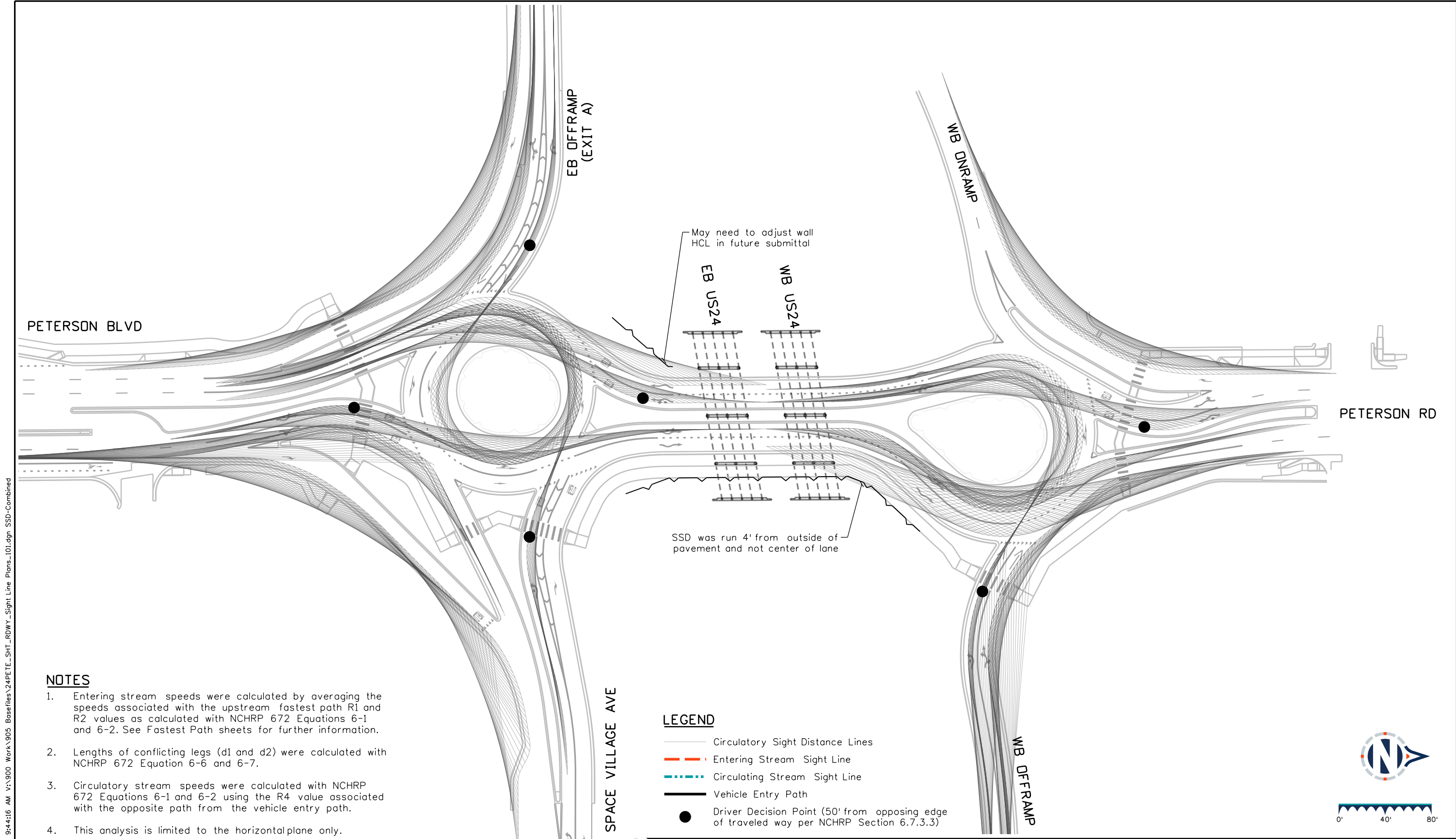
Sight Distance	4 of 5
Sheet Number	134

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Designer: STV	Horiz. Scale: 1"=80'
Reviewer: STV	Vert. Scale: N/A





**NOTES**

1. Entering stream speeds were calculated by averaging the speeds associated with the upstream fastest path R1 and R2 values as calculated with NCHRP 672 Equations 6-1 and 6-2. See Fastest Path sheets for further information.
2. Lengths of conflicting legs (d1 and d2) were calculated with NCHRP 672 Equation 6-6 and 6-7.
3. Circulatory stream speeds were calculated with NCHRP 672 Equations 6-1 and 6-2 using the R4 value associated with the opposite path from the vehicle entry path.
4. This analysis is limited to the horizontal plane only.

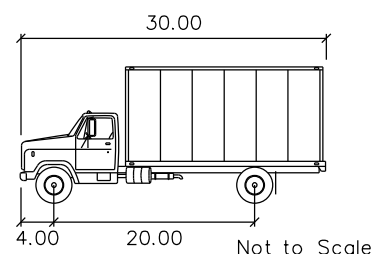
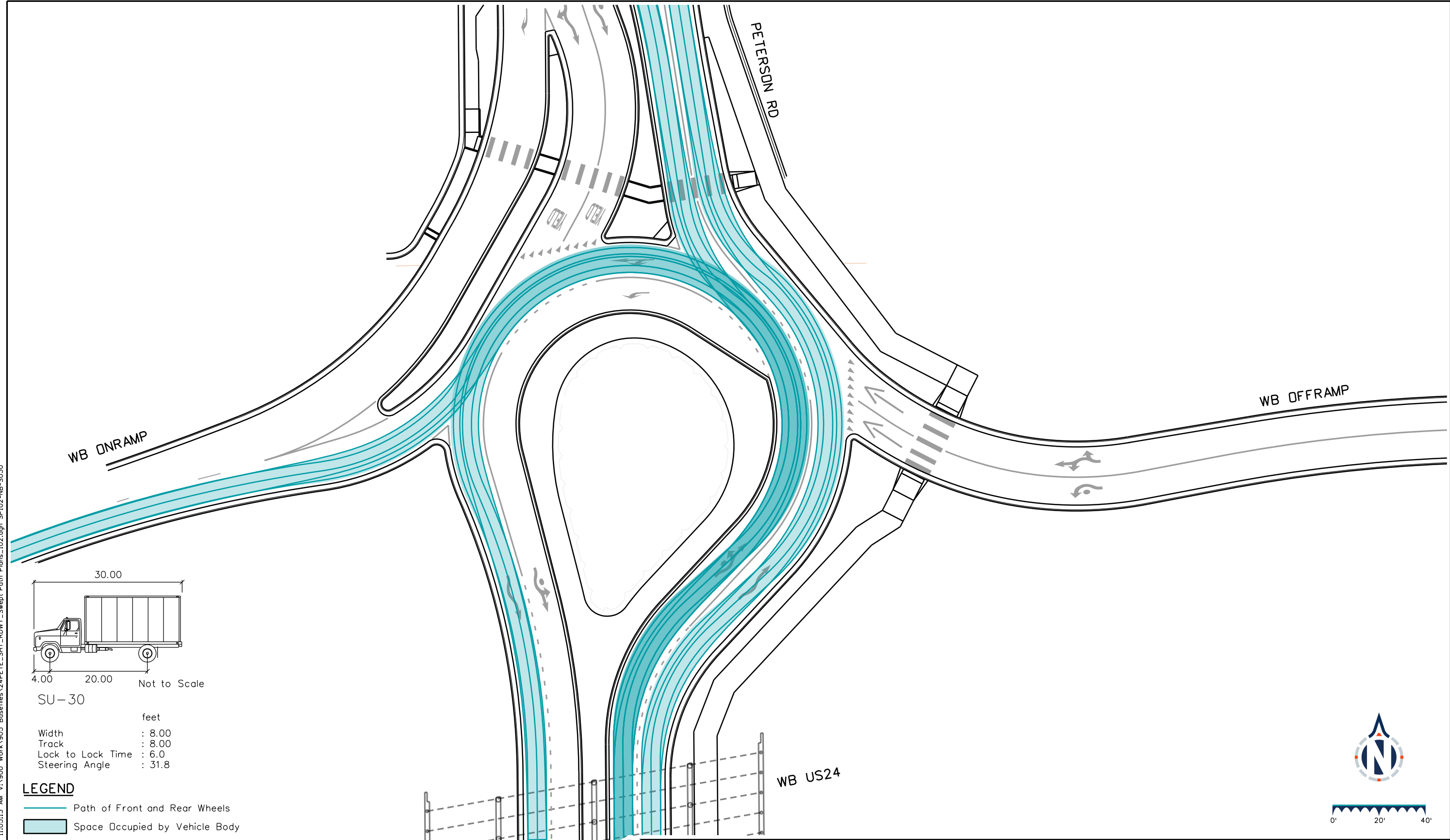
**LEGEND**

- Circulatory Sight Distance Lines
- Entering Stream Sight Line
- Circulating Stream Sight Line
- Vehicle Entry Path
- Driver Decision Point (50' from opposing edge of traveled way per NCHRP Section 6.7.3.3)

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<p>Basis Partners 25 N Spruce Street, Suite 310 Colorado Springs, CO 80905 Tel: 719-299-5077, basisp.com</p>	Detailer: LAM	Print Date: 12/20/2023		Sheet Revisions			US Highway 24 & Peterson Blvd/Rd Roundabouts	
	Designer: STV	Horiz. Scale: 1"=80'			Date	Comments	Init	ROADWAY SIGHT DISTANCE PLAN COMBINED SIGHT DISTANCE ALL APPROACHES
Reviewer: STV	Vert. Scale: N/A						Sight Distance 5 of 5	
							Sheet Number	135

KeithGiven 12/20/2023 11:05:13 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\_102.dgn SPI02-NB-SU30



SU-30

feet

Width : 8.00

Track : 8.00

Lock to Lock Time : 6.0

Steering Angle : 31.8

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body

WB US24

Sheet Revisions

Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY SWEEP PATH PLAN  
NORTH ROUNDABOUT  
NORTHBOUND SU-30

Swept Path 1 of 19

Sheet Number 136

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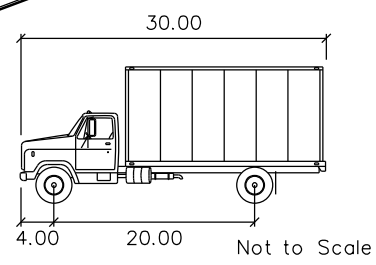
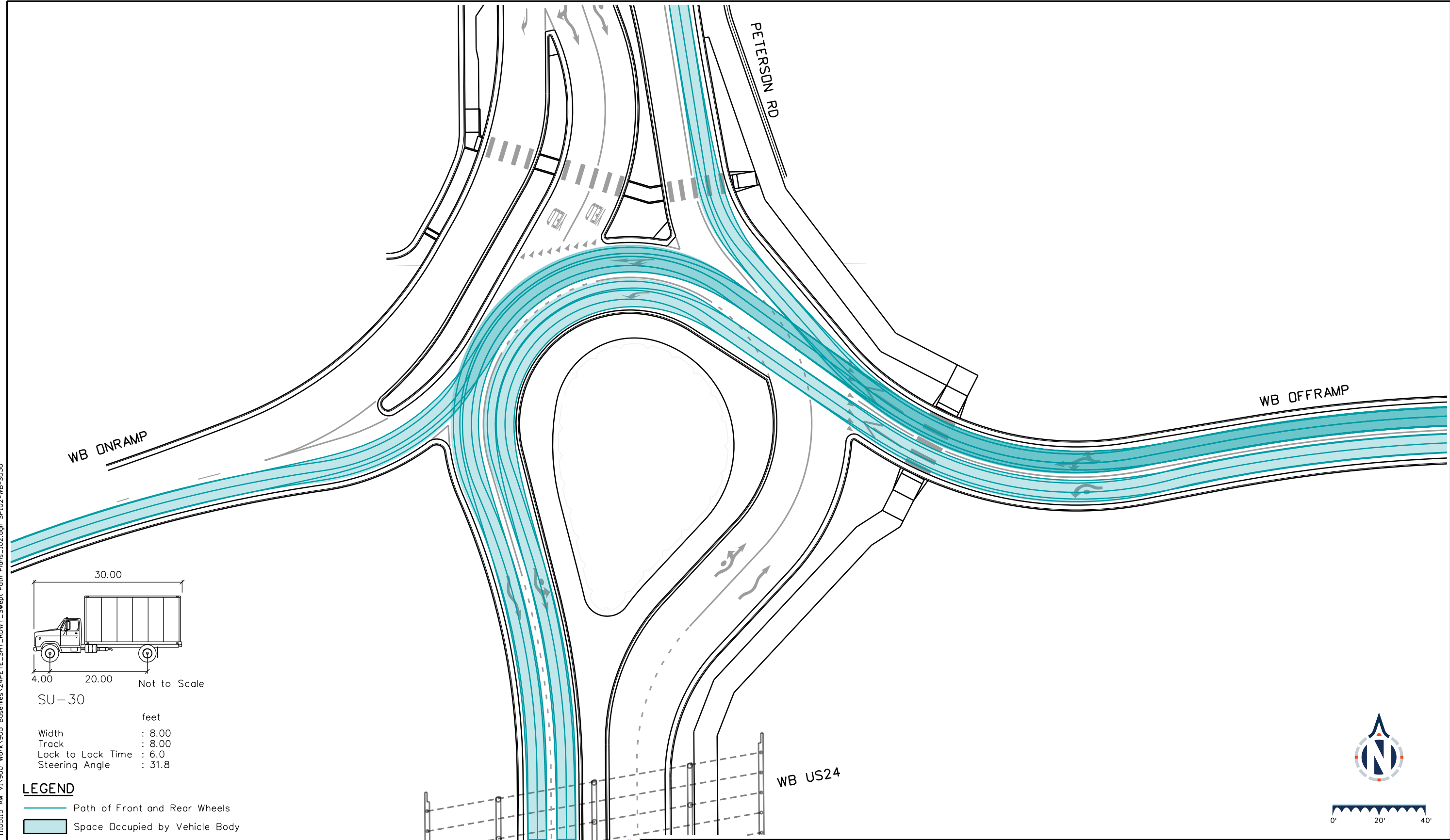
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SU-30

feet

Width : 8.00

Track : 8.00

Lock to Lock Time : 6.0

Steering Angle : 31.8

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body

WB US24



**Sheet Revisions**

Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY SWEPT PATH PLAN  
NORTH ROUNDABOUT  
WESTBOUND SU-30

Swept Path 2 of 19

Sheet Number 137

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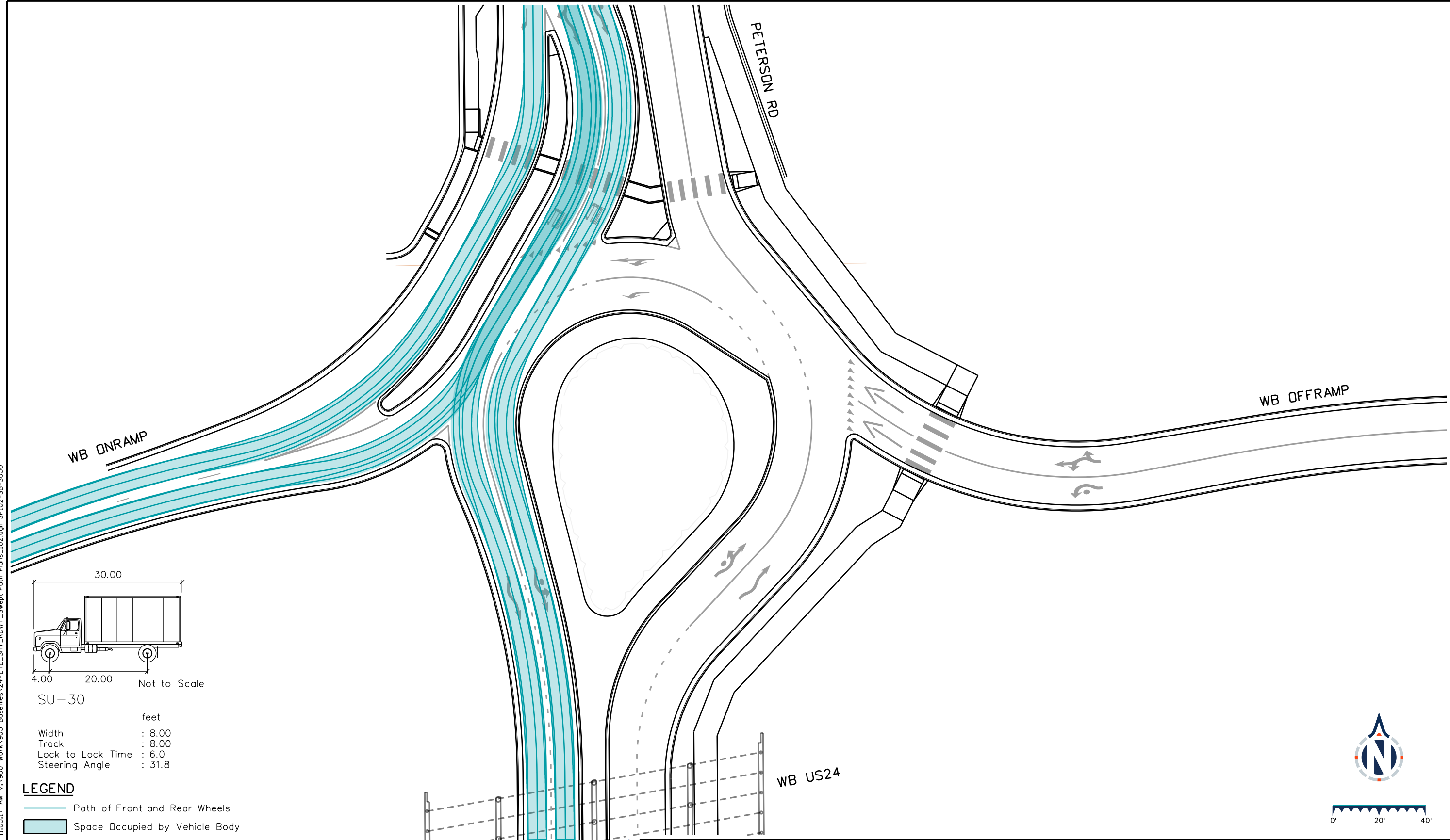
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Reviewer: STV Vert. Scale: N/A



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**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body

SU-30  
 Width : 8.00 feet  
 Track : 8.00  
 Lock to Lock Time : 6.0  
 Steering Angle : 31.8

**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY SWEEP PATH PLAN  
 NORTH ROUNDABOUT  
 SOUTHBOUND SU-30

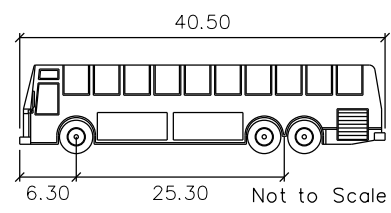
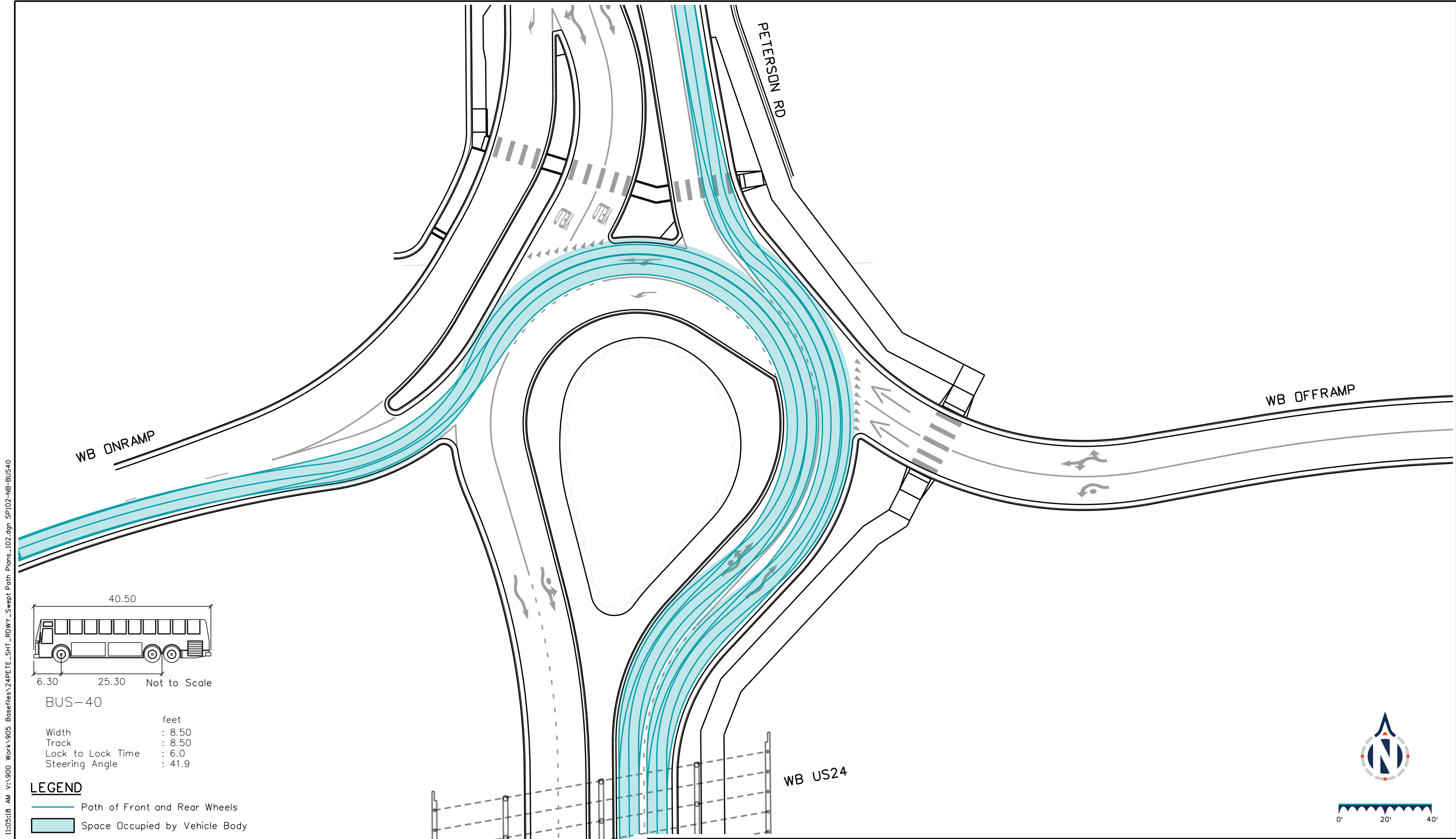
Swept Path 3 of 19  
 Sheet Number 138

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 Designer: STV Horiz. Scale: 1"=40'  
 Reviewer: STV Vert. Scale: N/A



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**BUS-40**

feet

Width : 8.50

Track : 8.50

Lock to Lock Time : 6.0

Steering Angle : 41.9

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body

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Detailer: LAM Print Date: 12/20/2023

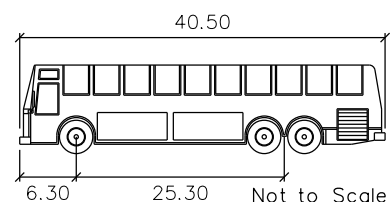
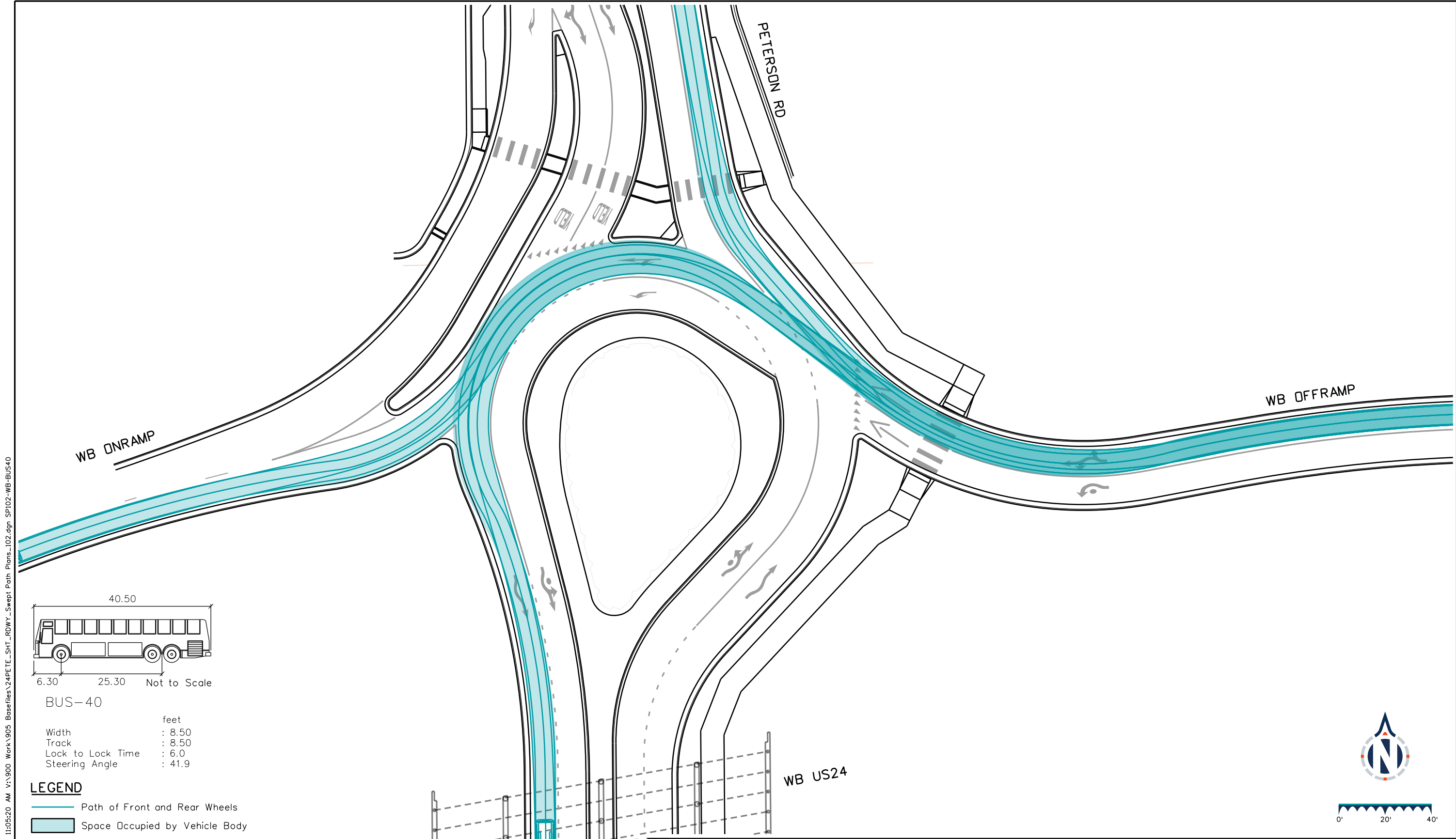
Designer: STV Horiz. Scale: 1"=40'

Reviewer: STV Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN NORTH ROUNDABOUT NORTHBOUND BUS-40	Swept Path 4 of 19
	Sheet Number 139



**BUS-40**

Width : 8.50 feet  
 Track : 8.50 feet  
 Lock to Lock Time : 6.0  
 Steering Angle : 41.9

**LEGEND**

— Path of Front and Rear Wheels  
 [Shaded Area] Space Occupied by Vehicle Body

KeithGiven 12/20/2023 11:05:20 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\_102.dgn SP102-WB-BUS40

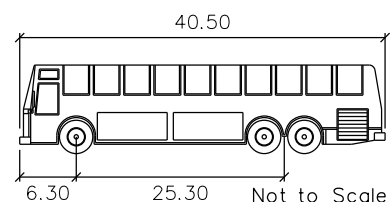
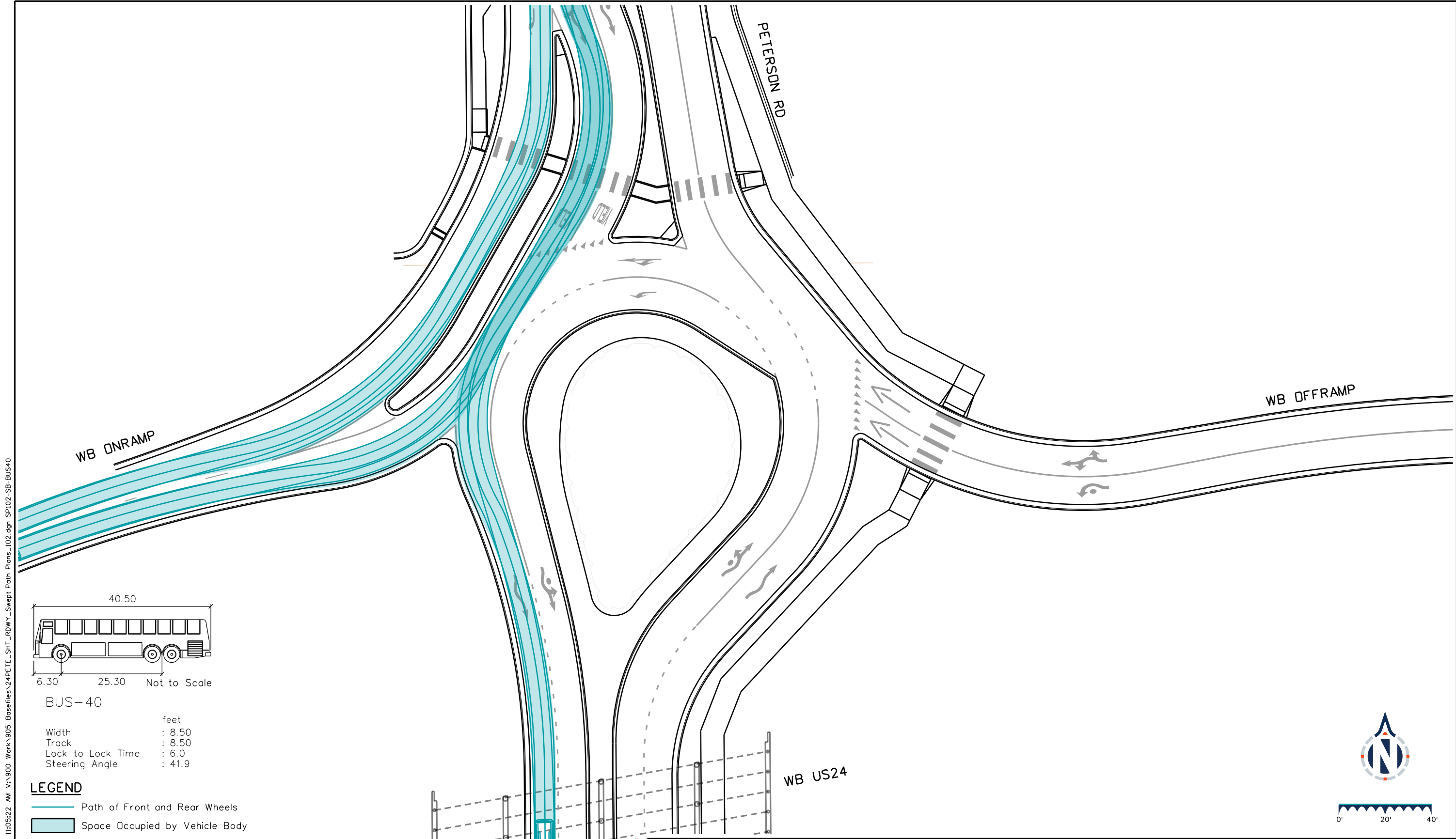
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Detailer: LAM Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=40'  
 Reviewer: STV Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN NORTH ROUNDABOUT WESTBOUND BUS-40	Swept Path 5 of 19
	Sheet Number 140



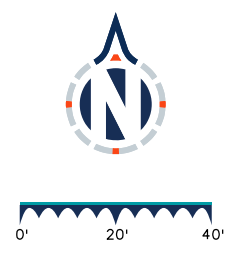
**BUS-40**

Width : 8.50 feet  
 Track : 8.50 feet  
 Lock to Lock Time : 6.0  
 Steering Angle : 41.9

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body



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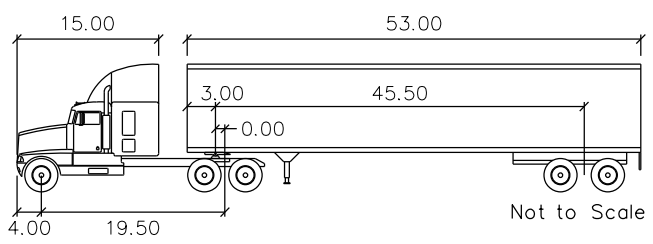
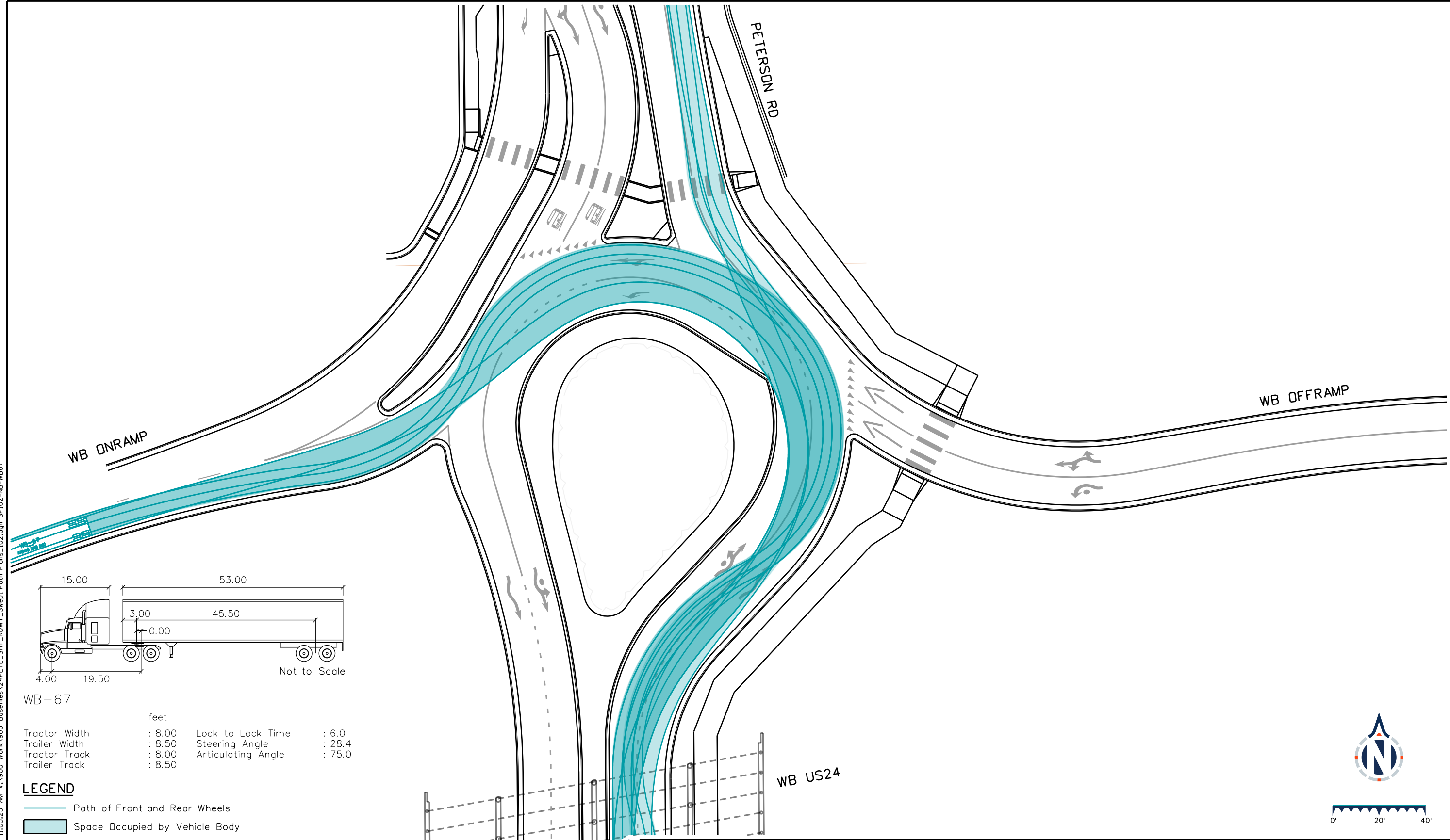
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 Designer: STV Horiz. Scale: 1"=40'  
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Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN NORTH ROUNDABOUT SOUTHBOUND BUS-40	Swept Path 6 of 19 Sheet Number 141

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Not to Scale

WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body

WB US24

**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY SWEEP PATH PLAN  
NORTH ROUNDABOUT  
NORTHBOUND WB-67

Swept Path	7 of 19
Sheet Number	142

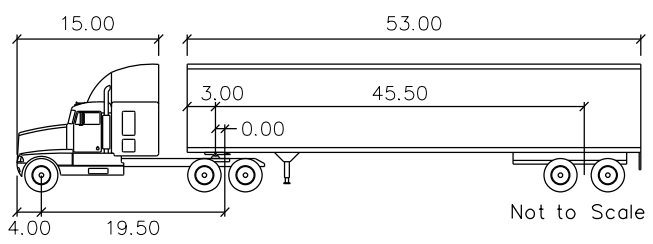
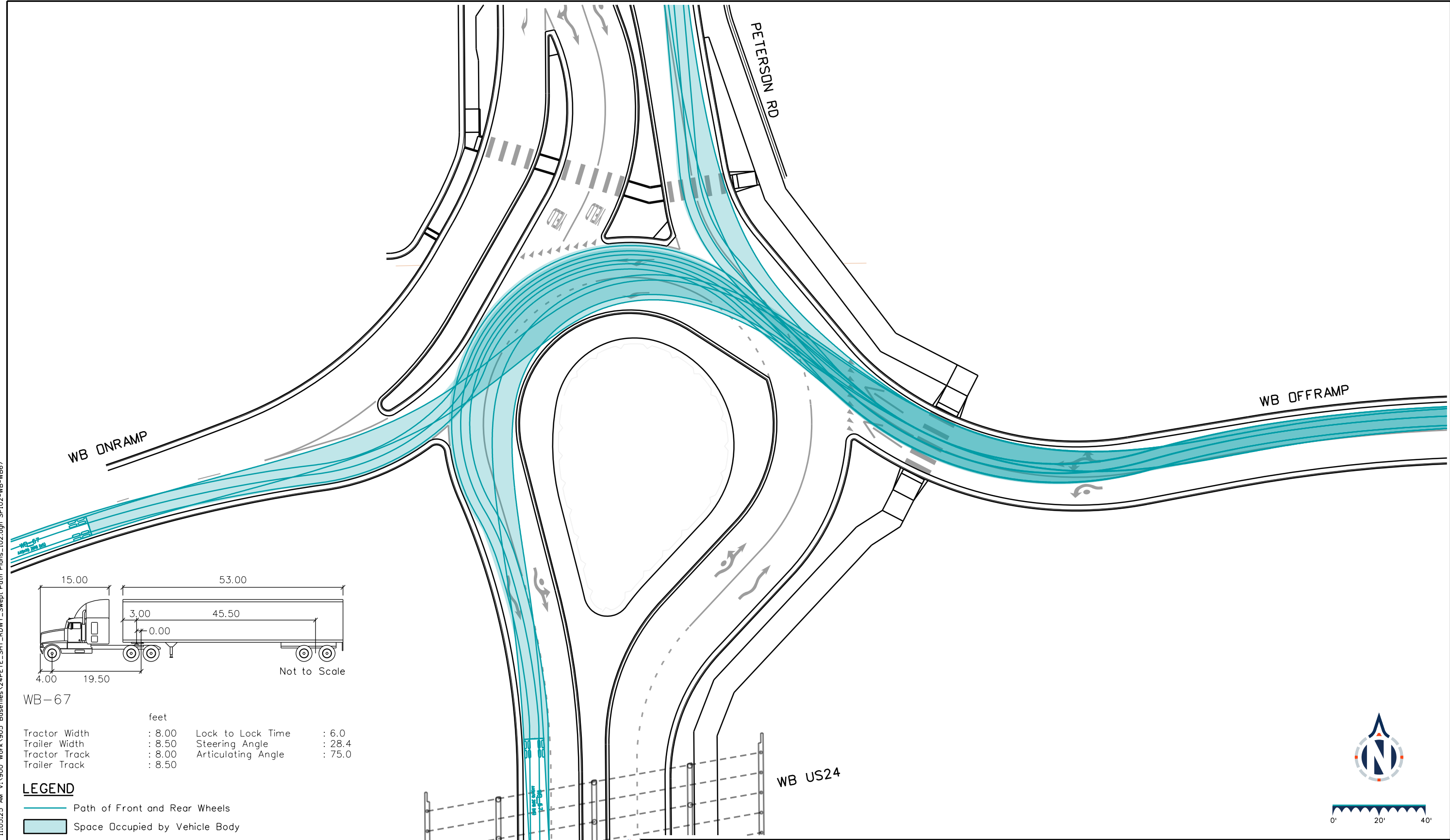
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Detailer: LAM	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



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WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body

**Sheet Revisions**

Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts

ROADWAY SWEEP PATH PLAN  
NORTH ROUNDABOUT  
WESTBOUND WB-67

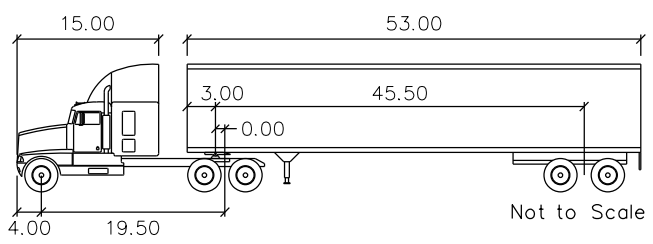
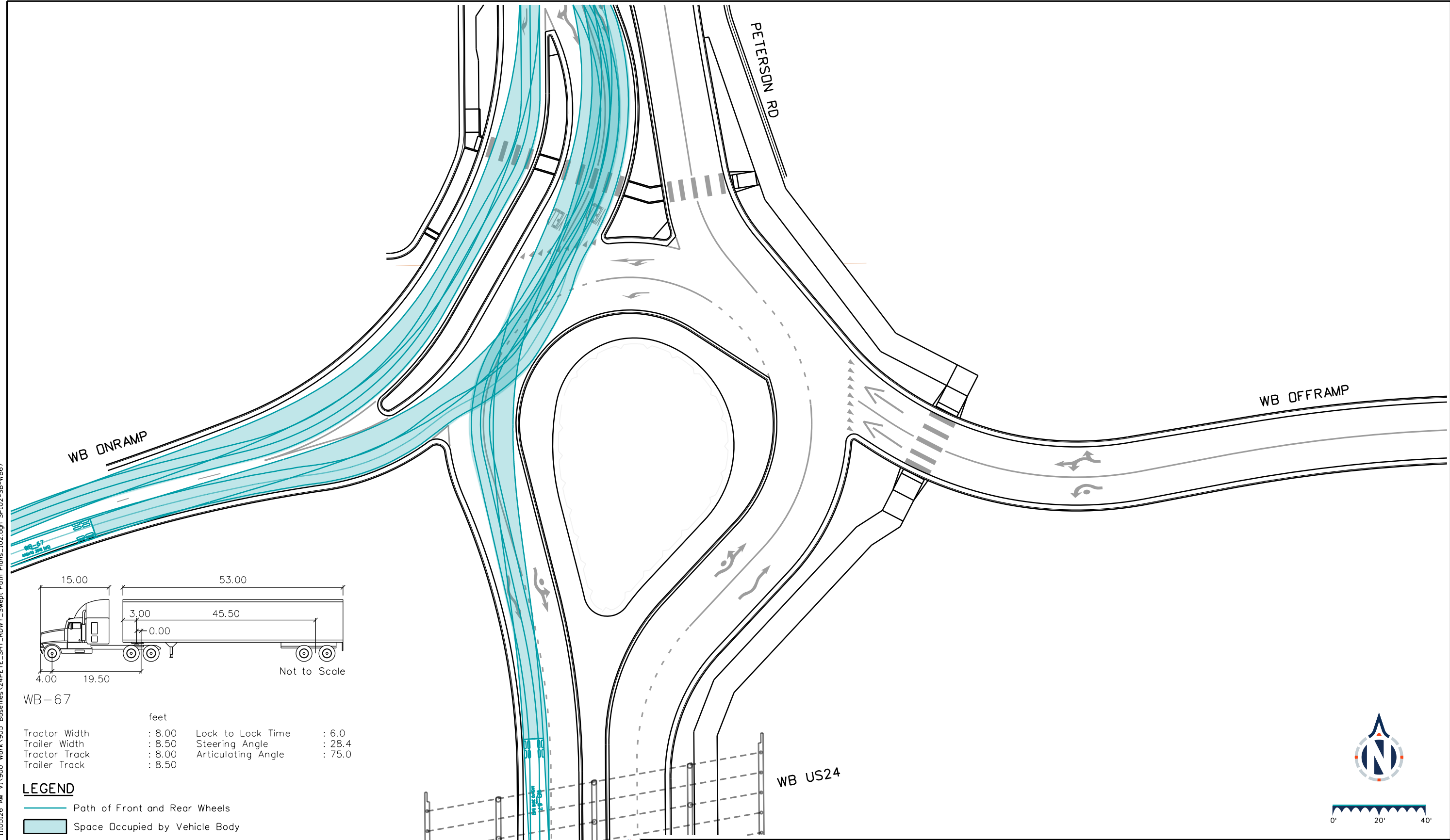
Swept Path	8 of 19
Sheet Number	143

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Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



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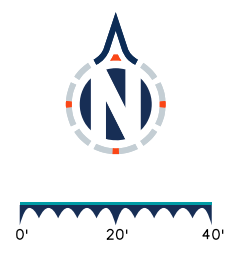


WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

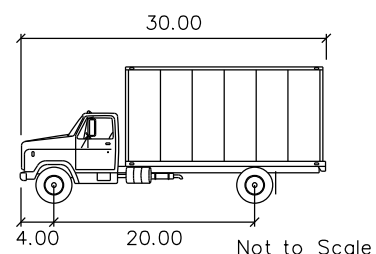
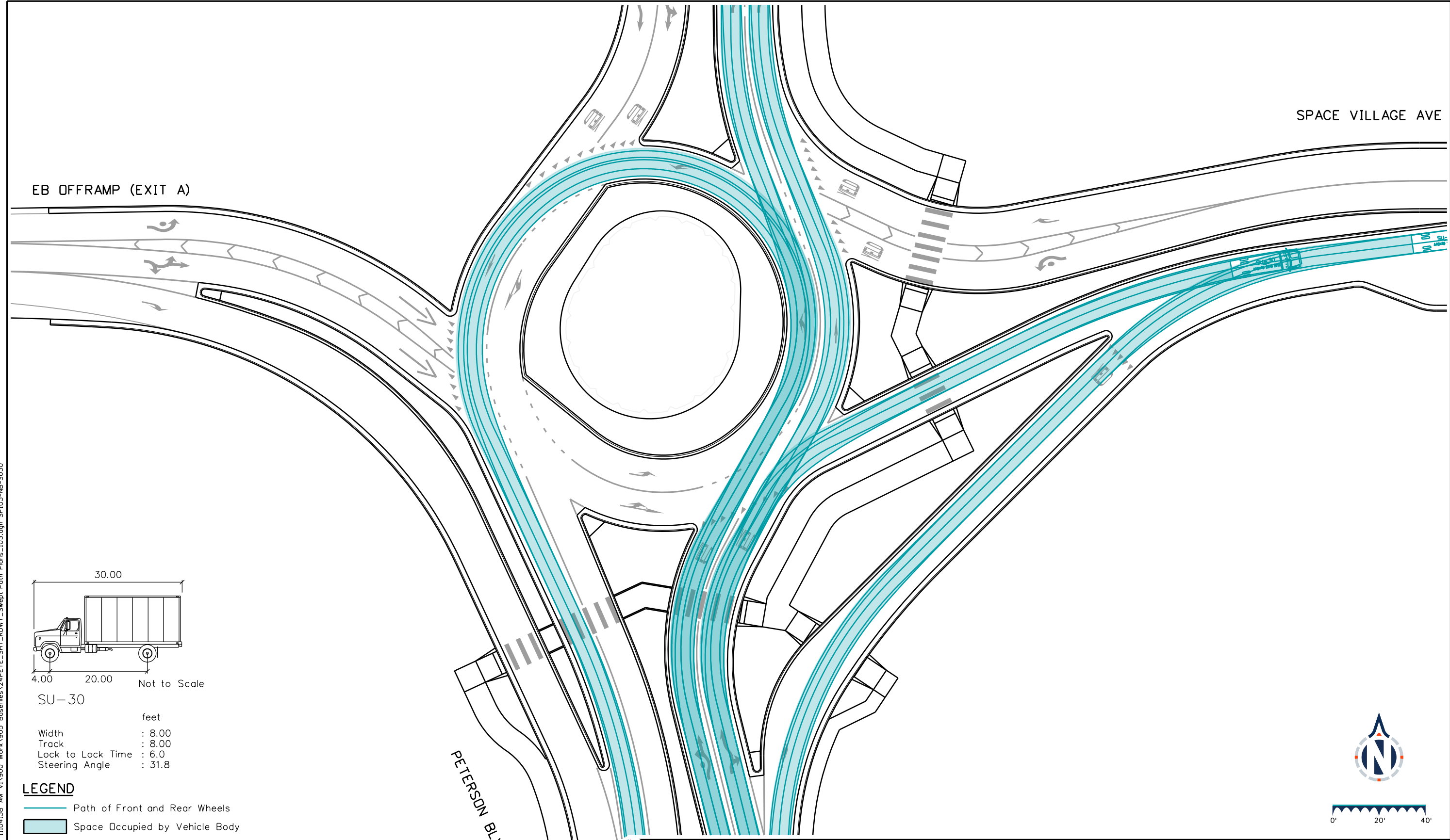
**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body



	Basis Partners 25 N Spruce Street, Suite 310 Colorado Springs, CO 80905 Tel: 719-299-5077, basisp.com	Detailer: LAM Designer: STV Reviewer: STV	Print Date: 12/20/2023 Horiz. Scale: 1"=40' Vert. Scale: N/A		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Sheet Revisions</th> </tr> <tr> <th style="width: 20%;">Date</th> <th style="width: 50%;">Comments</th> <th style="width: 30%;">Init</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sheet Revisions			Date	Comments	Init										US Highway 24 & Peterson Blvd/Rd Roundabouts  ROADWAY SWEEP PATH PLAN NORTH ROUNDABOUT SOUTHBOUND WB-67	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Swept Path</td> <td style="width: 50%;">9 of 19</td> </tr> <tr> <td>Sheet Number</td> <td>144</td> </tr> </table>	Swept Path	9 of 19	Sheet Number	144
	Sheet Revisions																									
	Date	Comments	Init																							
Swept Path	9 of 19																									
Sheet Number	144																									





Not to Scale

SU-30

feet

Width : 8.00

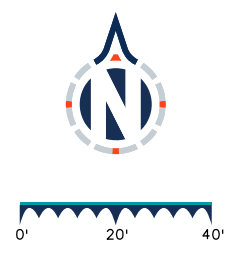
Track : 8.00

Lock to Lock Time : 6.0

Steering Angle : 31.8

**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body



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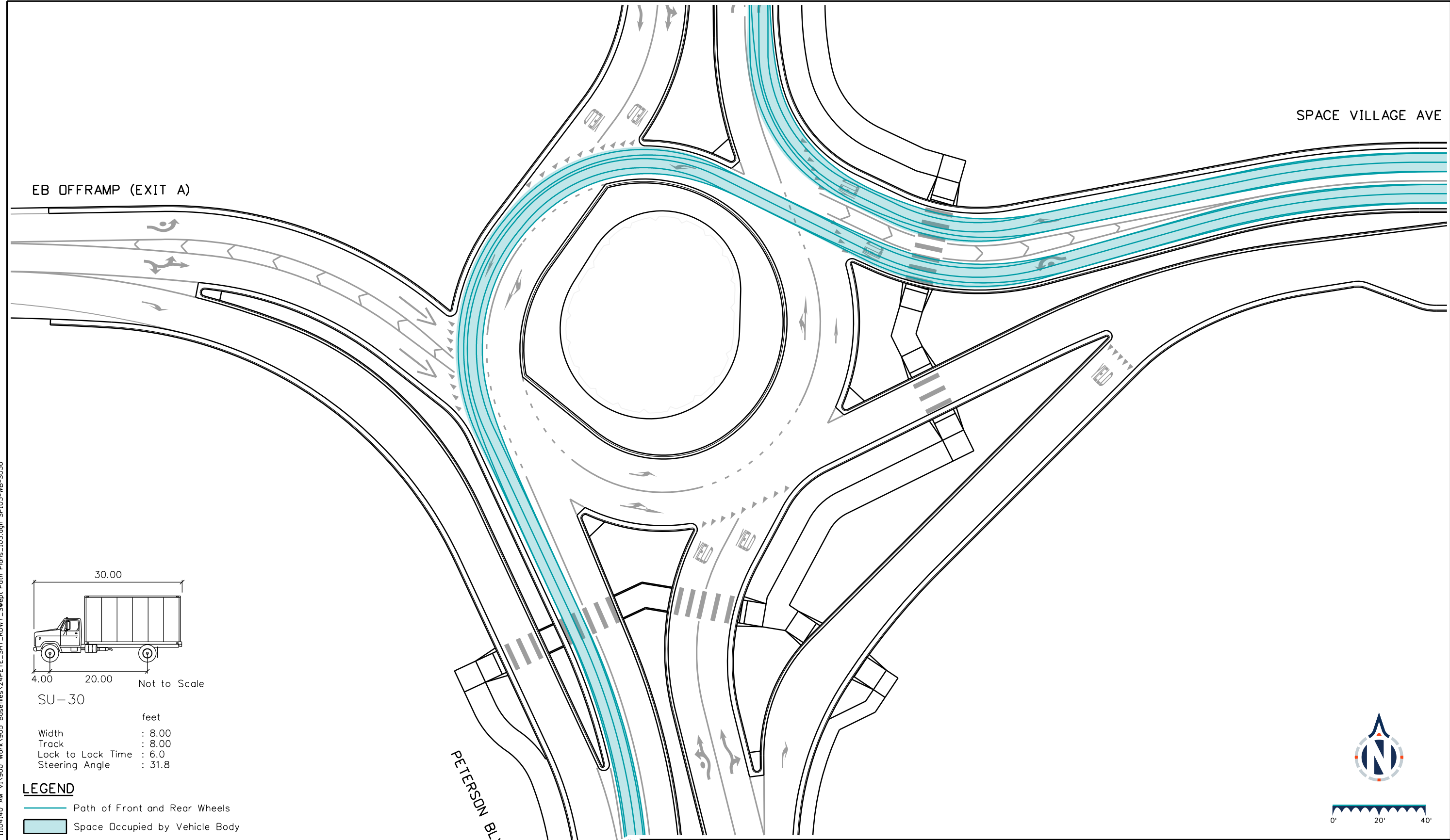
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Designer: STV	Horiz. Scale: 1"=40'
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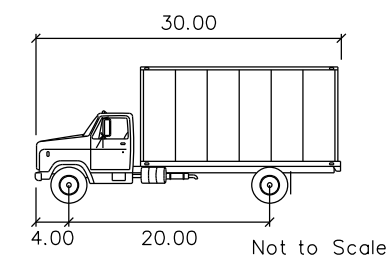


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US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT NORTHBOUND SU-30	Swept Path 10 of 19
	Sheet Number 145

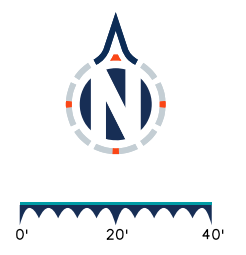


KeithGiven 12/20/2023 11:04:40 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\103.dgn SP103-WB-SU30



feet  
 Width : 8.00  
 Track : 8.00  
 Lock to Lock Time : 6.0  
 Steering Angle : 31.8

**LEGEND**  
 — Path of Front and Rear Wheels  
 ■ Space Occupied by Vehicle Body



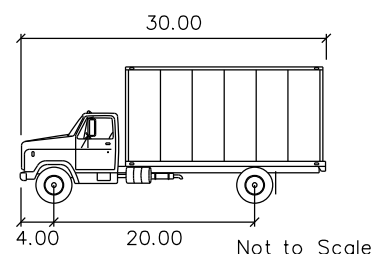
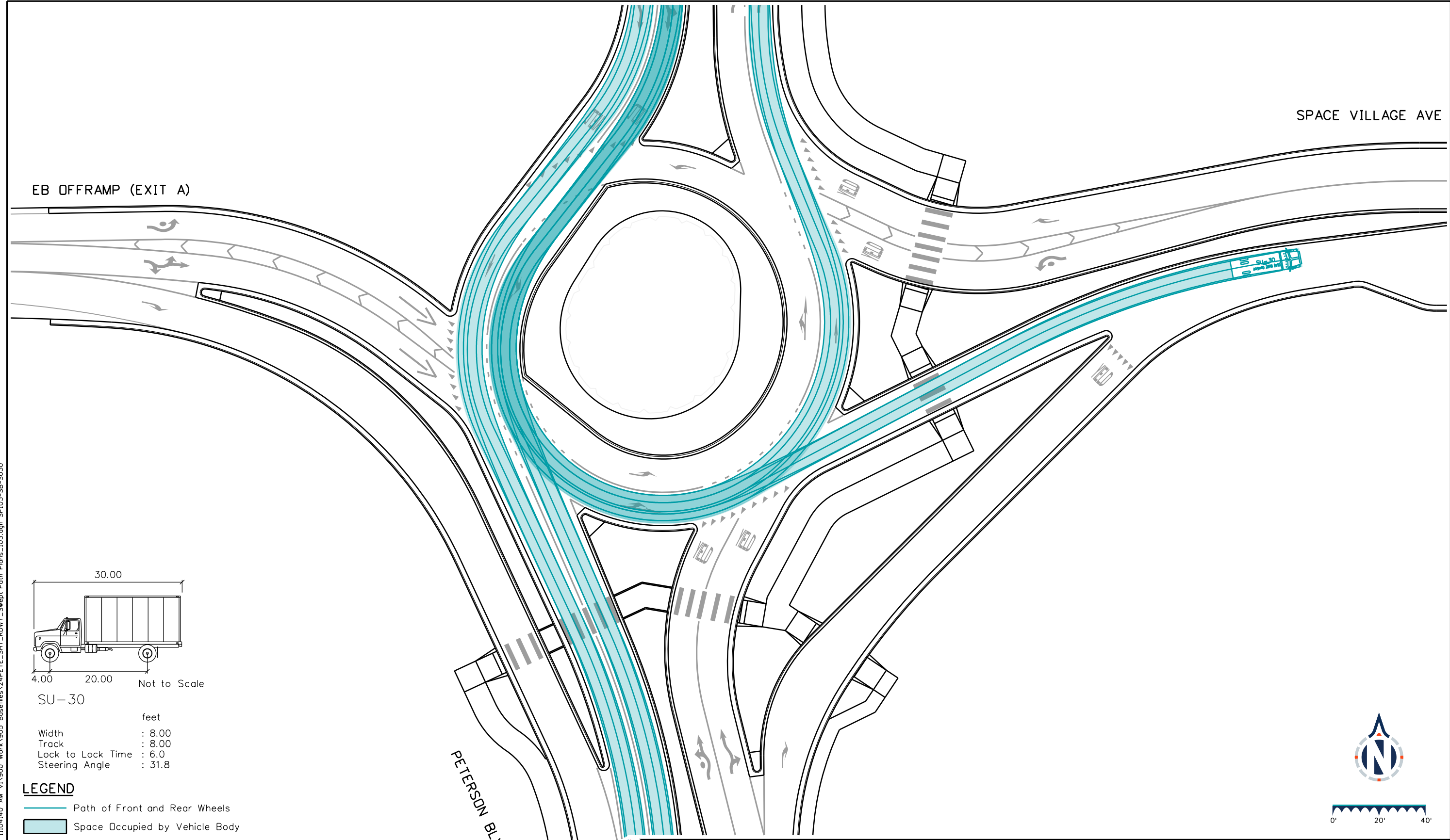
**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM    Print Date: 12/20/2023  
 Designer: STV    Horiz. Scale: 1"=40'  
 Reviewer: STV    Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT WESTBOUND SU-30	Swept Path 11 of 19 Sheet Number 146



SU-30

feet

Width : 8.00  
 Track : 8.00  
 Lock to Lock Time : 6.0  
 Steering Angle : 31.8

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body

KeithGiven 12/20/2023 11:04:40 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\10.3.dgn SP103-SB-SU30

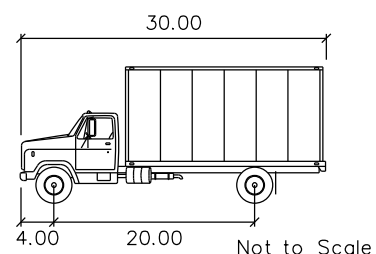
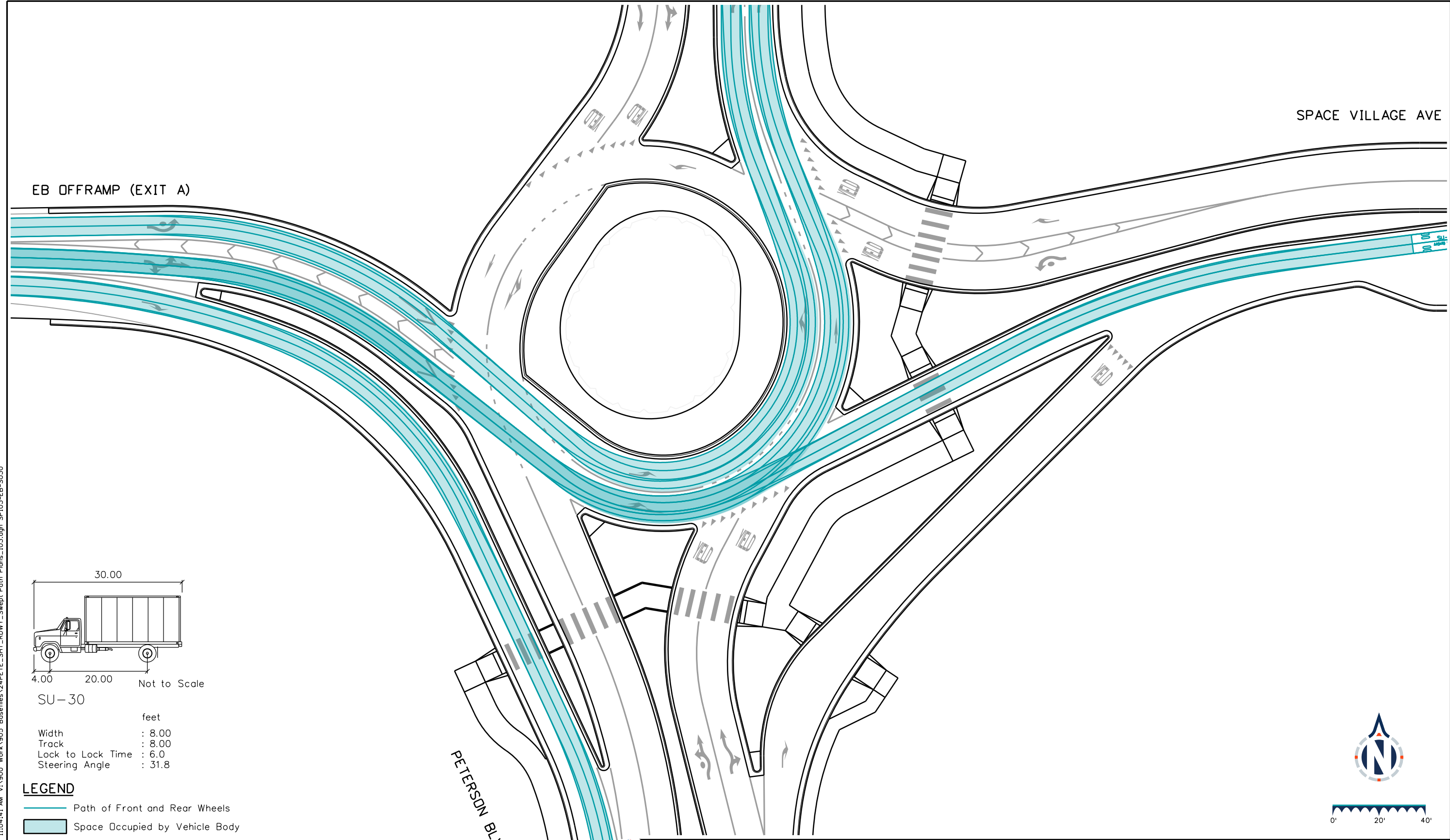
**BASIS PARTNERS** Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=40'  
 Reviewer: STV Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT SOUTHBOUND SU-30	Swept Path 12 of 19 Sheet Number 147



SU-30

feet

Width : 8.00  
 Track : 8.00  
 Lock to Lock Time : 6.0  
 Steering Angle : 31.8

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body

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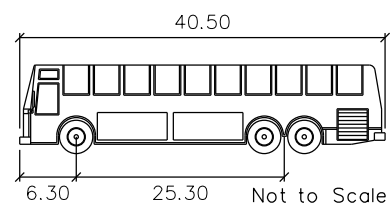
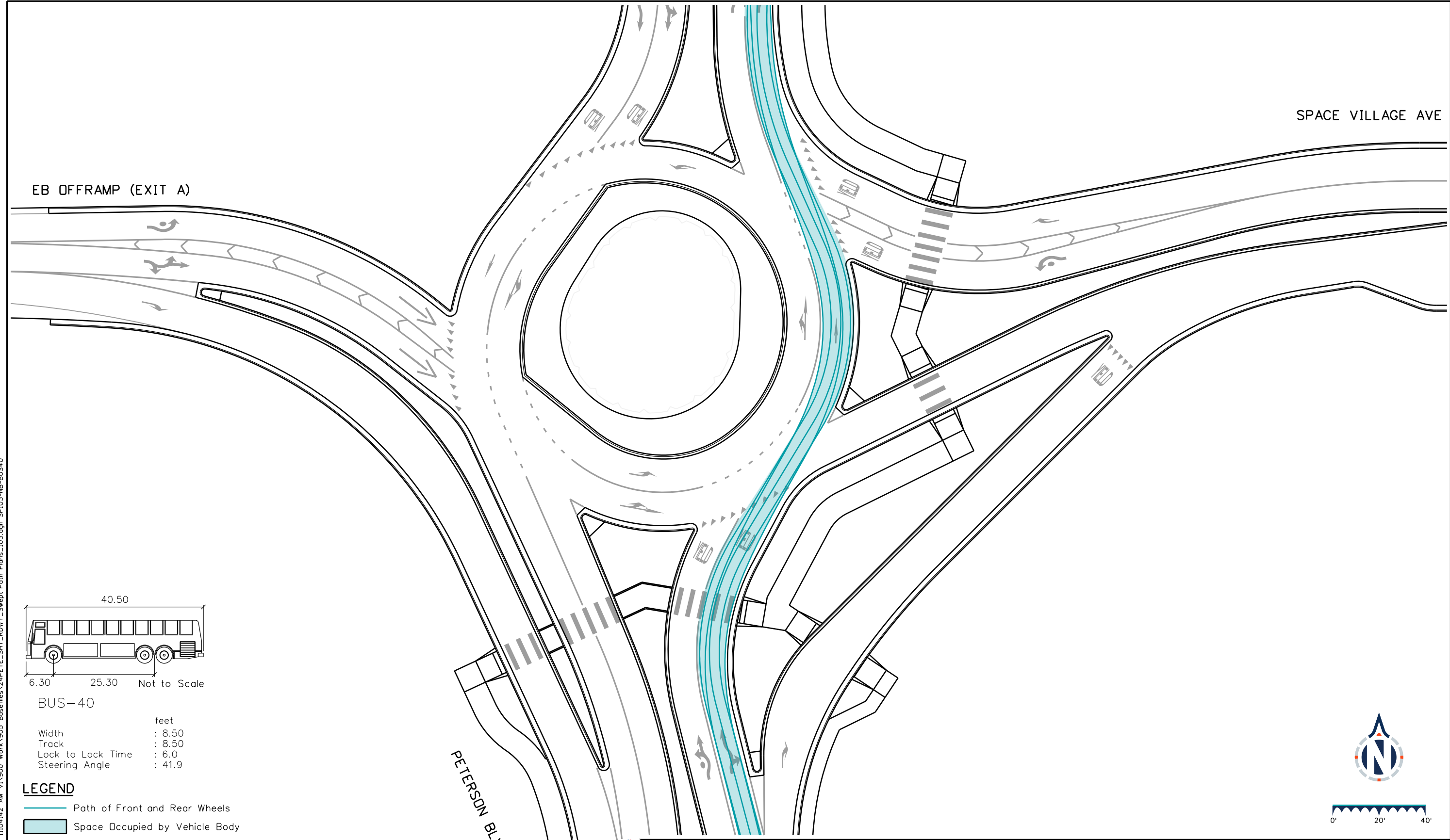
**BASIS PARTNERS** Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=40'  
 Reviewer: STV Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT EASTBOUND SU-30	Swept Path 13 of 19 Sheet Number 148



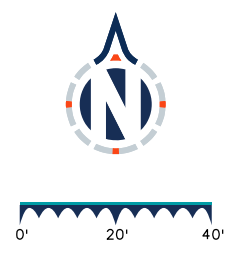
**BUS-40**

Width : 8.50 feet  
 Track : 8.50 feet  
 Lock to Lock Time : 6.0  
 Steering Angle : 41.9

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body



KeithGiven 12/20/2023 11:04:42 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\10.3.dgn SP103-NB-BUS40

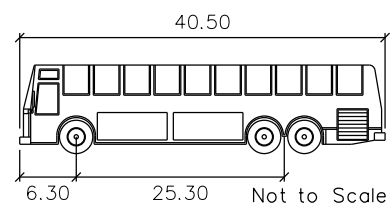
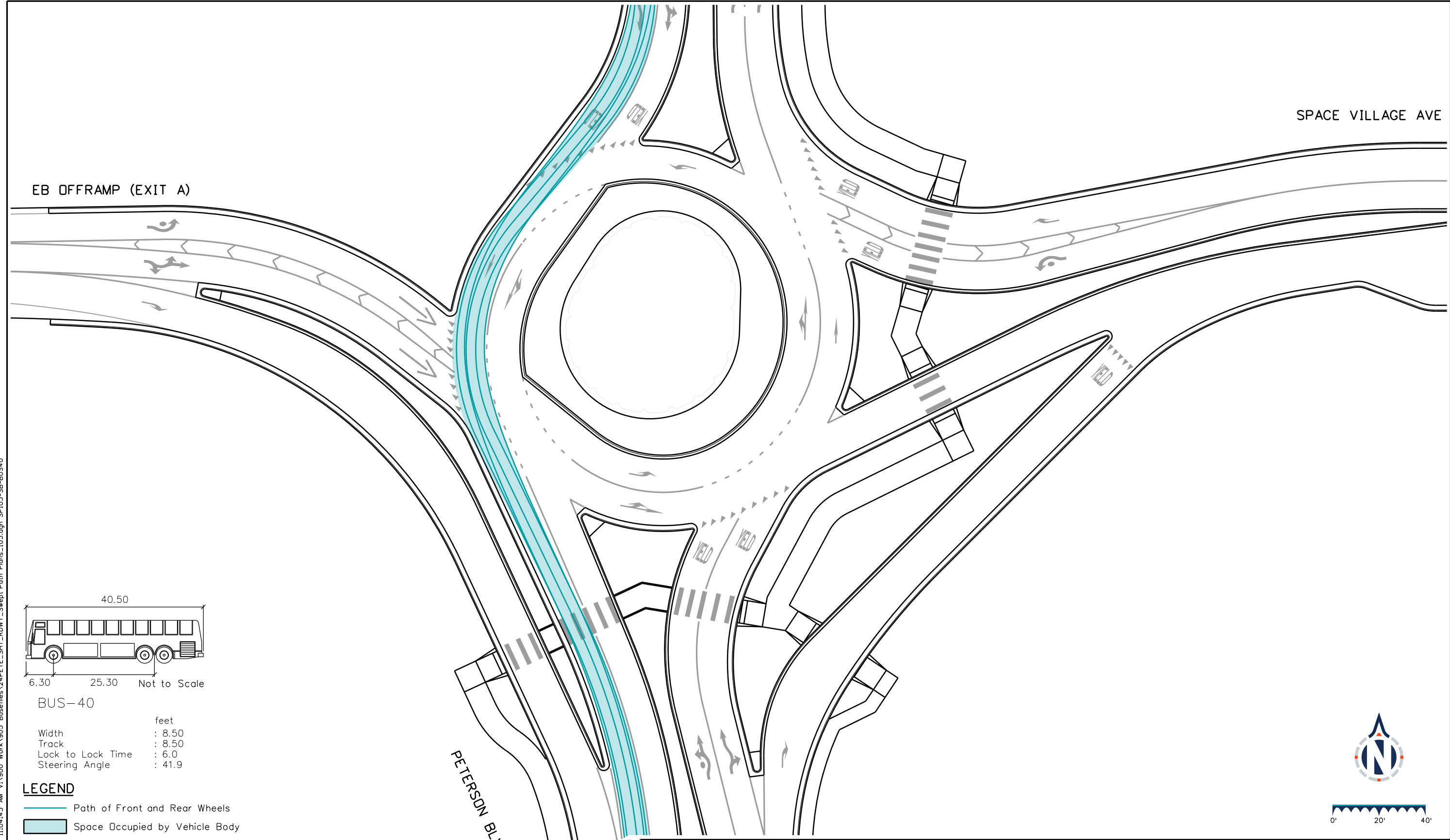
**BASIS PARTNERS** Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM Print Date: 12/20/2023  
 Designer: STV Horiz. Scale: 1"=40'  
 Reviewer: STV Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT NORTHBOUND BUS-40	Swept Path 14 of 19 Sheet Number 149



**BUS-40**

Width : 8.50 feet  
 Track : 8.50 feet  
 Lock to Lock Time : 6.0  
 Steering Angle : 41.9

**LEGEND**

— Path of Front and Rear Wheels

Space Occupied by Vehicle Body

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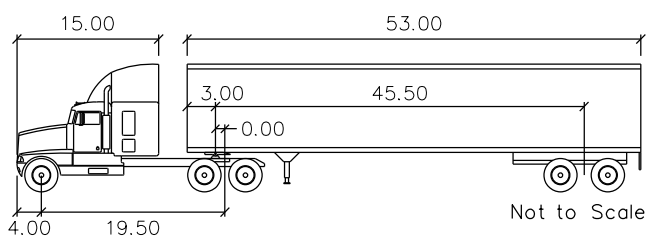
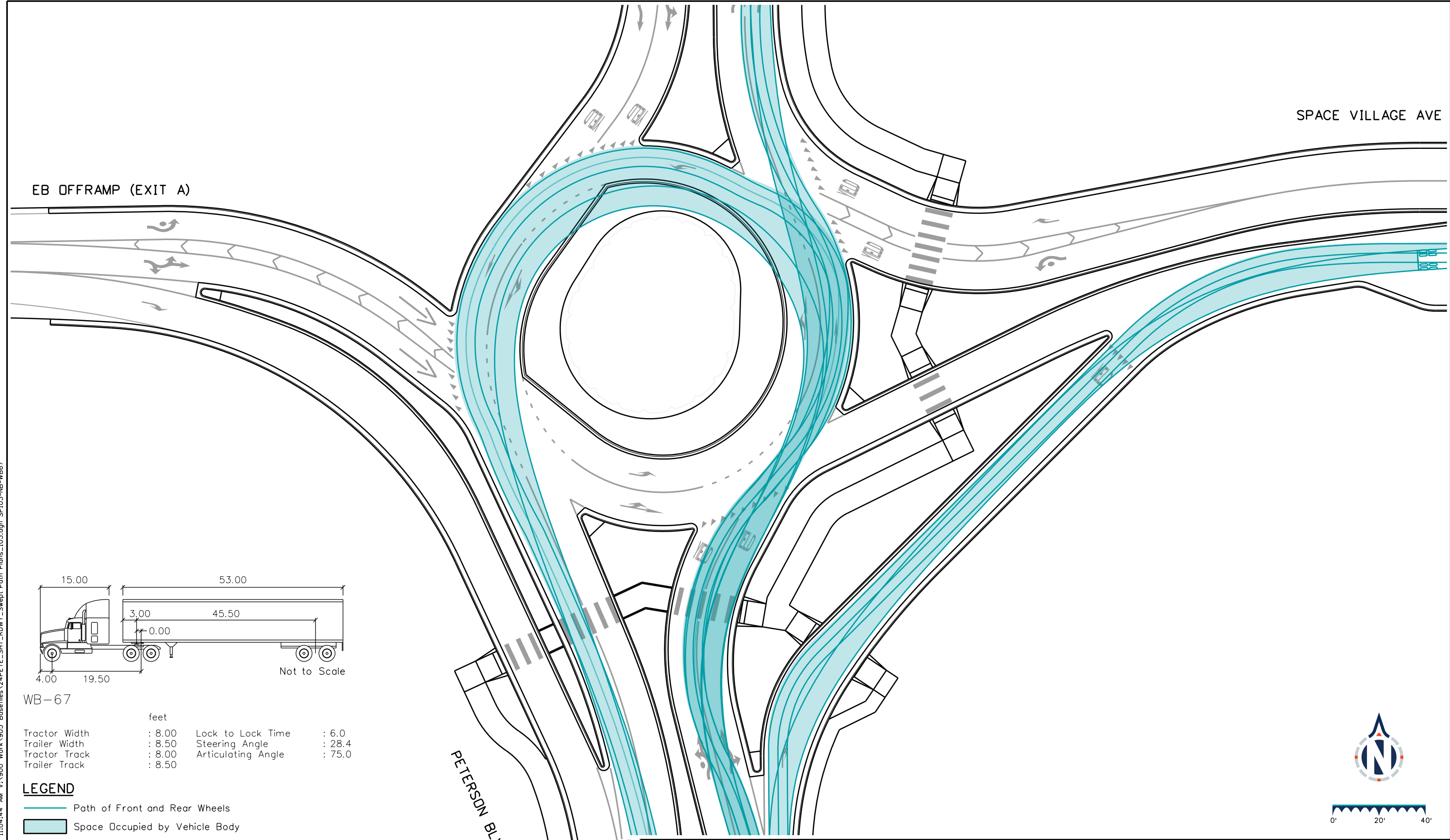
**BASIS PARTNERS** Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT SOUTHBOUND BUS-40	Swept Path 15 of 19 Sheet Number 150



WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body

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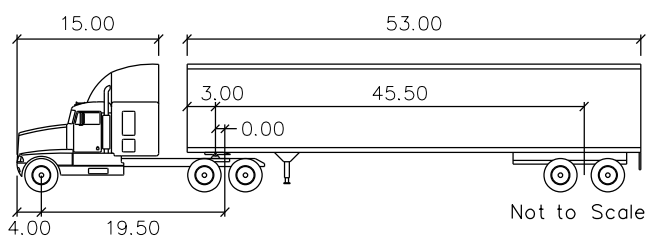
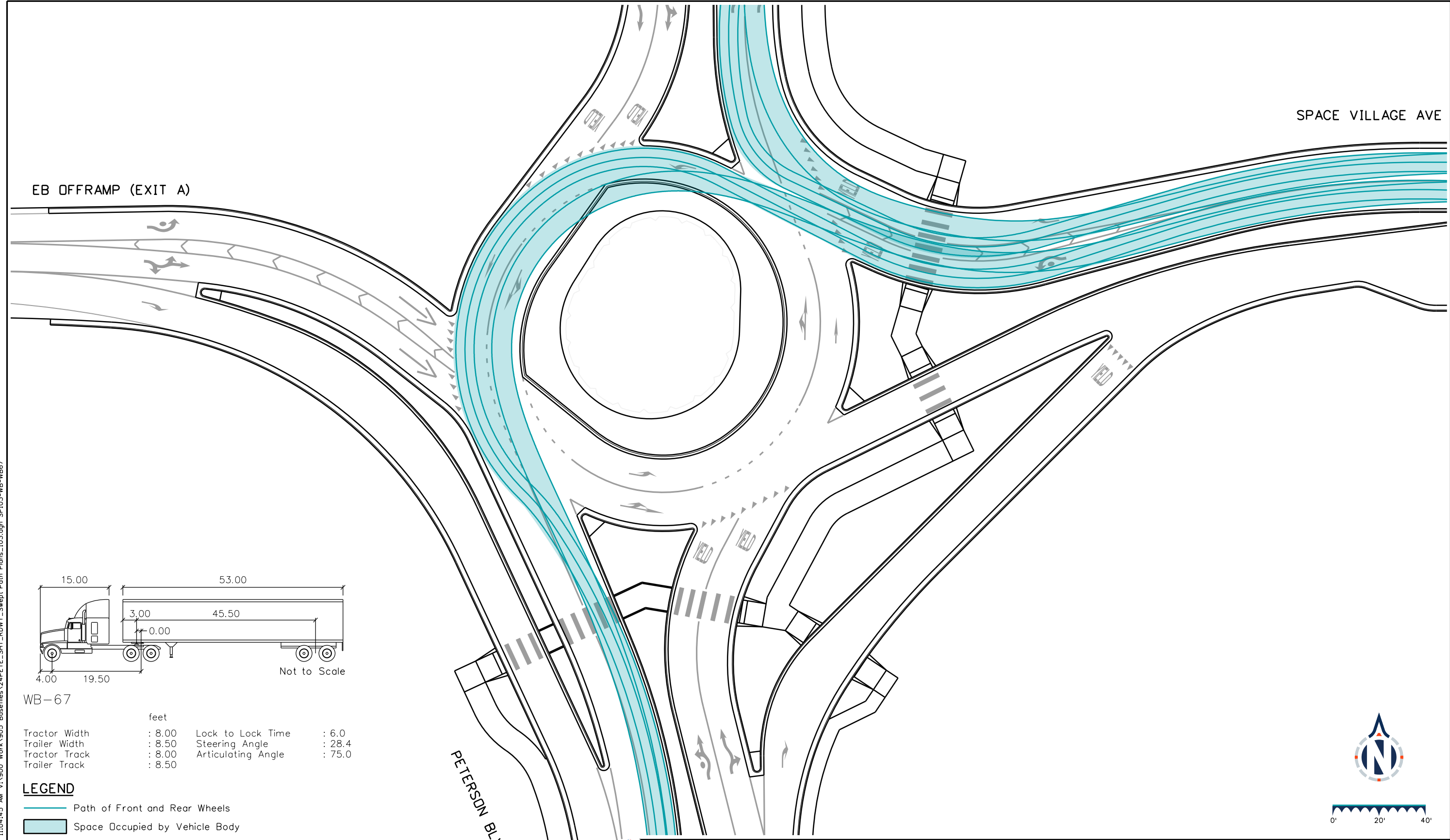
**BASIS PARTNERS** Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT NORTHBOUND WB-67	Swept Path 16 of 19 Sheet Number 151



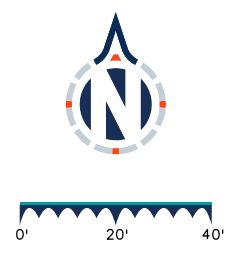
Not to Scale

WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body



KeithGiven 12/20/2023 11:04:45 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\10.3.dgn SP103-WB-WB67

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 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

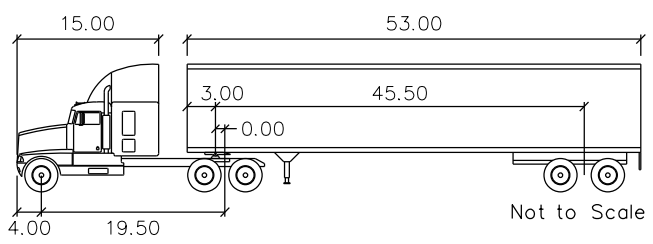
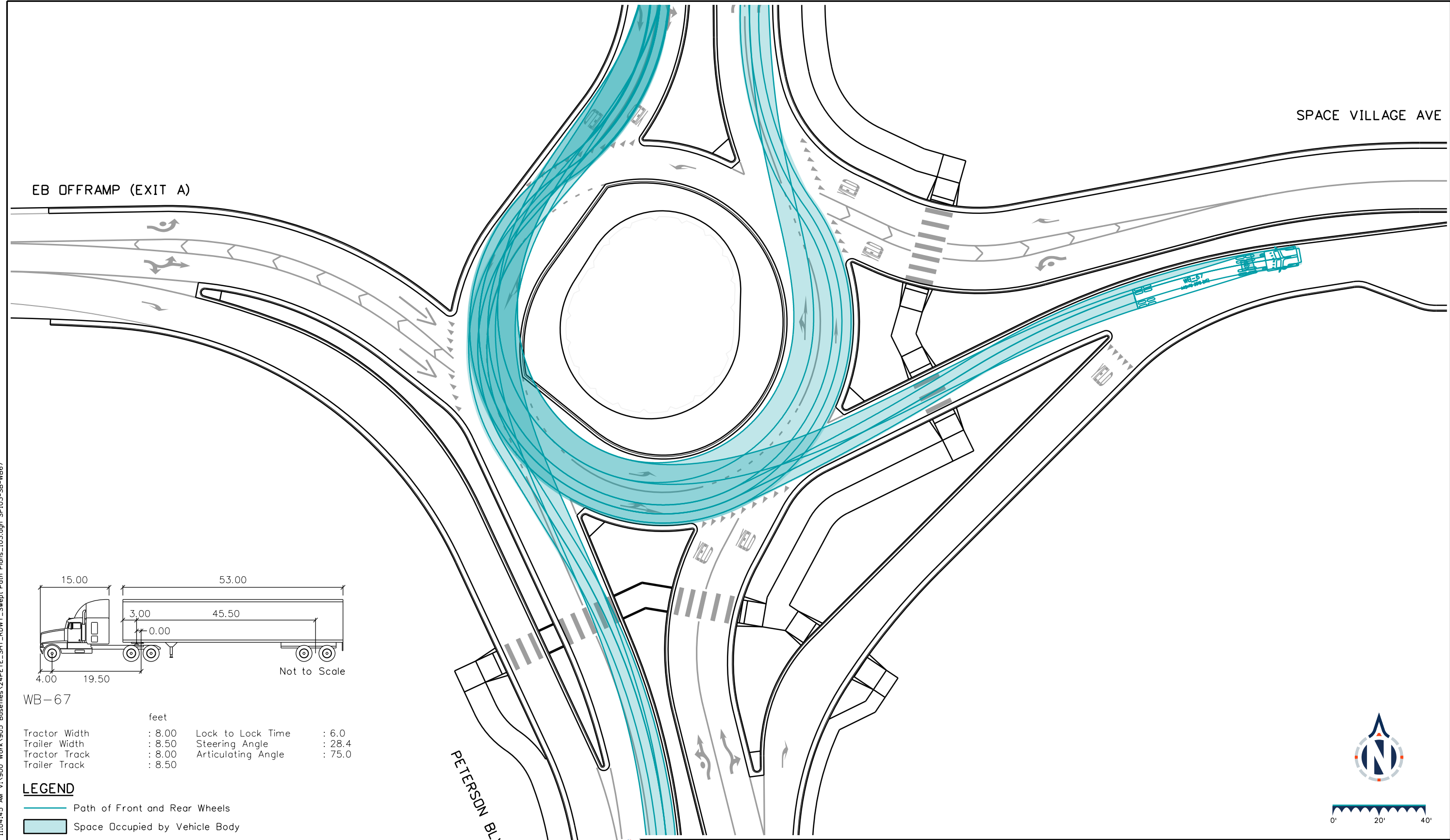
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Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT WESTBOUND WB-67	
Swept Path	17 of 19
Sheet Number	152

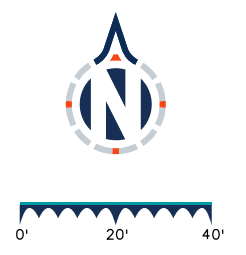




WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

- LEGEND**
- Path of Front and Rear Wheels
  - Space Occupied by Vehicle Body



KeithGiven 12/20/2023 11:04:45 AM V:\900 Work\905 Basis\files\24PETE\_SHT\_RDWY\_Swept Path Plans\_10.3.dgn SP103-SB-WB67

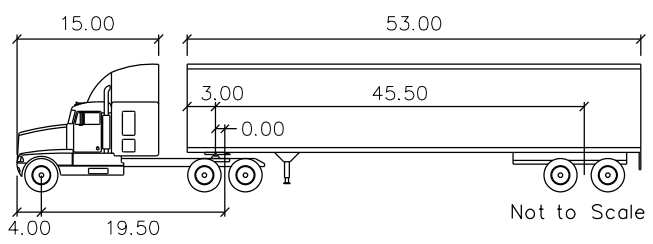
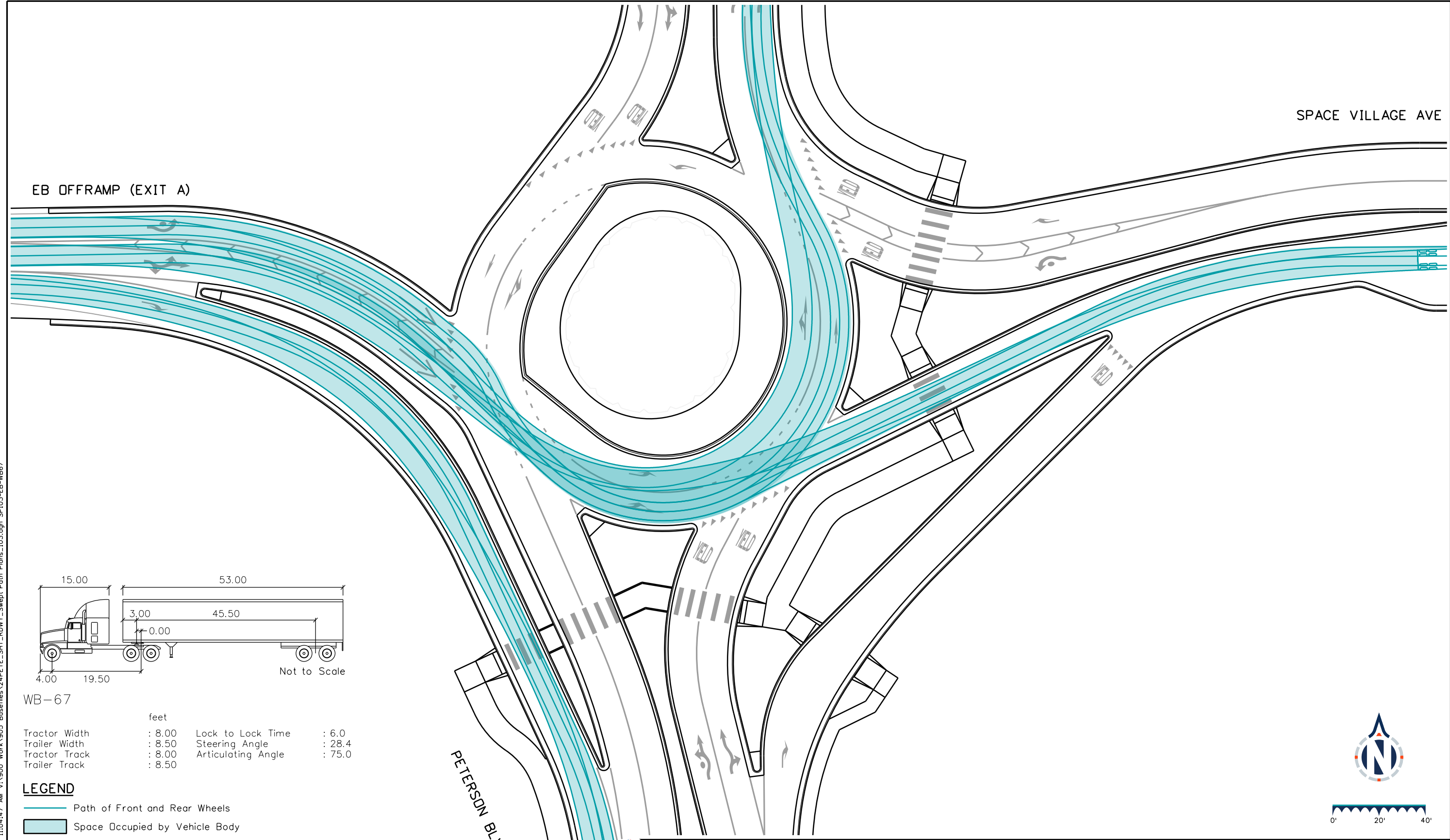
**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init
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US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT SOUTHBOUND WB-67	Swept Path 18 of 19 Sheet Number 153

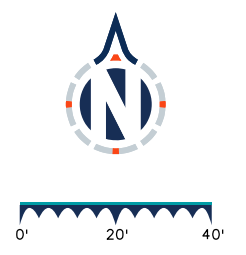


WB-67

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

**LEGEND**

- Path of Front and Rear Wheels
- Space Occupied by Vehicle Body



KeithGiven 12/20/2023 11:04:47 AM V:\900 Work\905 Basefiles\24PETE\_SHT\_RDWY\_Swept Path Plans\10.3.dgn SP10.3-EB-WB67

**BASIS PARTNERS**  
 Basis Partners  
 25 N Spruce Street, Suite 310  
 Colorado Springs, CO 80905  
 Tel: 719-299-5077, basisp.com

Detailer: LAM	Print Date: 12/20/2023
Designer: STV	Horiz. Scale: 1"=40'
Reviewer: STV	Vert. Scale: N/A



Sheet Revisions		
Date	Comments	Init

US Highway 24 & Peterson Blvd/Rd Roundabouts	
ROADWAY SWEEP PATH PLAN SOUTH ROUNDABOUT EASTBOUND WB-67	Swept Path 19 of 19 Sheet Number 154

# PROJECT CONTROL DIAGRAM

State Highway 24 MP 311 to 312  
Section 7, 8, 17, 18  
Township 14 South, Range 65 West  
of the 6th Principal Meridian  
County of El Paso

**GEODETC COORDINATE TABLE**

Point No.	Geodetic Coordinates NAD-83(2011) (CHARN)		Elev Height (NAVD88)(ft)	Ortho Height (ft)	Mapping Angle	Grid Scale Factor	NAD 83(2011) Central Zone (0502)		Description
	Latitude(N)	Longitude(W)					SP Northing(ft)	SP Easting(ft)	
701	N38°50'21.24162"	W104°42'21.69464"	6,211.416	6,269.420	0°30'02.7"	0.999649348	1,367,332.49	3,226,147.45	NAIL & WASHER
702	N38°50'29.85607"	W104°42'05.80770"	6,225.830	6,283.890	0°30'12.7"	0.999648471	1,368,214.95	3,227,396.72	FGI RED PLASTIC CAP ON NO 5 REBAR
703	N38°50'19.54118"	W104°42'04.62643"	6,214.442	6,272.530	0°30'13.5"	0.999649241	1,367,172.31	3,227,499.35	FGI RED PLASTIC CAP ON NO 5 REBAR
1125	N38°50'21.20887"	W104°43'12.93707"	6,176.105	6,233.861	0°29'30.4"	0.999651036	1,367,294.06	3,222,093.31	3" AL CAP "WC" (NOT SHOWN)
3036	N38°50'21.31046"	W104°42'06.51695"	6,233.954	6,292.030	0°30'12.3"	0.999648269	1,367,349.98	3,227,348.21	CDOT TYPE 2 CONTROL MON
9416	N38°50'21.00541"	W104°41'54.28542"	6,226.507	6,284.640	0°30'20.0"	0.999648632	1,367,327.64	3,228,316.20	CDOT TYPE 2 CONTROL MON
CS202	N38°49'41.67678"	W104°43'16.00378"	6,119.098	6,176.921	0°29'28.5"	0.999654649	1,363,292.87	3,221,884.96	DEEP ROD (NOT SHOWN)

Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of N79°14'00"W from CP 703 to CP 9416.

The survey data was obtained from a Global Positioning System (GPS) survey in August of 2022 and is based on the CDRS High Accuracy network. The levelloop was the performed for added checks.

Basis of Elevations: Project elevations are based on Bench Mark: R76 (1935), PID: JK0214, 3 IN BRASS DISK SET IN CONCRETE POST, with a NAVD 88 elevation of 6289.86ft. R 76 is a SECOND order class 0 benchmark.  
COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone NAD '83/(2011) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.000350173. The resulting project coordinates are NDT truncated in the Northing and in the Easting after converting from state plane coordinates to project coordinates.

Project Coordinates Northing US Survey Feet = (State Plane Coordinate Northing \* 1.000350173) \* (3937/1200).

Project Coordinates Easting US Survey Feet = (State Plane Coordinate Easting \* 1.000350173) \* (3937/1200).

**PROJECT COORDINATE TABLE**

Point No.	Project Coordinates		Elev(ft) (NAVD88)	Description
	Northing(ft)	Easting(ft)		
701	1,367,811.29	3,227,277.16	6,269.42	NAIL & WASHER
702	1,368,694.06	3,228,526.87	6,283.89	FGI RED PLASTIC CAP ON NO 5 REBAR
703	1,367,651.06	3,228,629.54	6,272.53	FGI RED PLASTIC CAP ON NO 5 REBAR
1125	1,367,772.85	3,223,221.60	6,233.86	3" AL CAP "WC" (NOT SHOWN)
3036	1,367,828.79	3,228,478.34	6,292.03	CDOT TYPE 2 CONTROL MON
9416	1,367,806.44	3,229,446.67	6,284.64	CDOT TYPE 2 CONTROL MON
CS202	1,363,770.26	3,223,013.18	6,176.92	DEEP ROD (NOT SHOWN)

NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.



**SURVEYOR STATEMENT (PROJECT CONTROL DIAGRAM)**

I, Lorelei A. Ward, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation this Project Control Diagram was prepared and the field survey it represents was performed under my responsible charge and, based upon my knowledge, information and belief is in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 34982



**Computer File Information**

Print Date: 12/2/2022  
File Name: 22382SURV\_PCD-lw.dgn  
Horiz. Scale: 1:400  
Unit Information

**STATEMENT:**

THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

**Farnsworth GROUP**  
ENGINEERS ARCHITECTS SURVEYORS SCIENTISTS  
5775 Mark Babling Boulevard, Suite 190  
COLORADO SPRINGS, CO 80919  
(719) 590-9194 / (719) 590-9111 Fax  
www.f-w.com

**Index of Revisions**

No.	Description	Date



30 S Nevada  
Colorado Springs, CO 80903  
Phone: 719-385-5918

Structure:  
Sheet Subset:  
Subset Sheets:

Designer: \_\_\_\_\_ Date: \_\_\_\_\_  
Cadd: FGI Date: 11/30/22  
Checker: LAW Date: \_\_\_\_\_

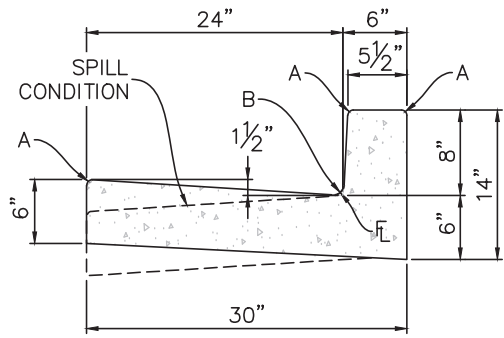
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STREET: US HWY 24 AT PETERSON RD.

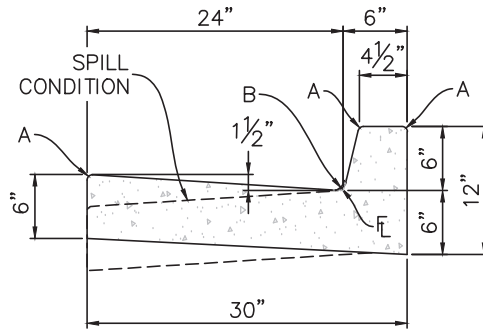
PROJECT CONTROL DIAGRAM

DRAINAGE BASIN: N/A N/A

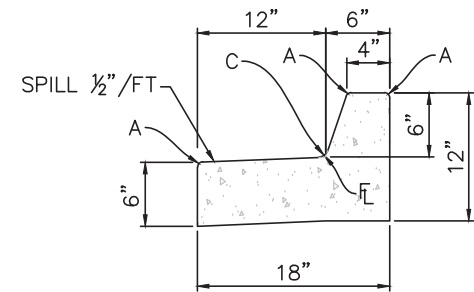
JOB NO. \_\_\_\_\_ SHEET 1 OF 1



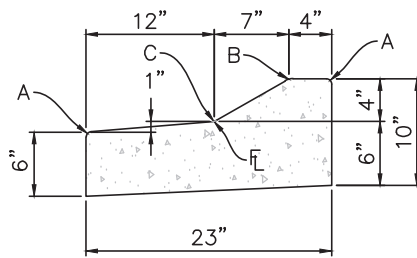
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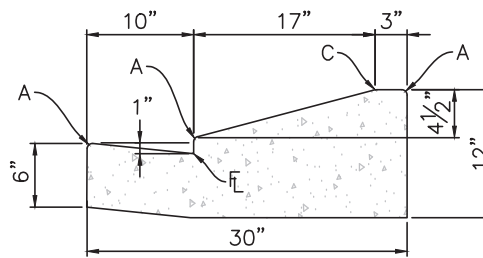
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**6" VERTICAL**



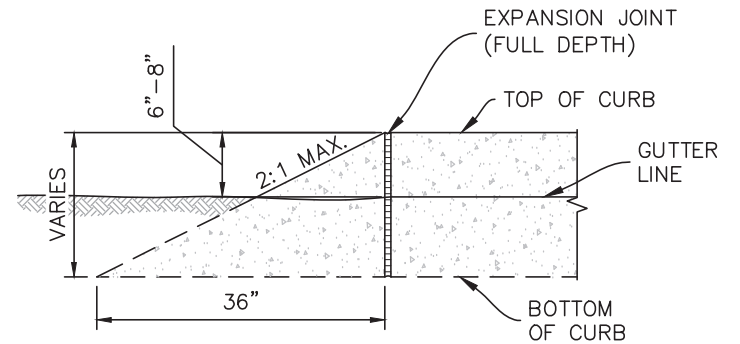
**TYPE 3**  
**STANDARD MEDIAN**



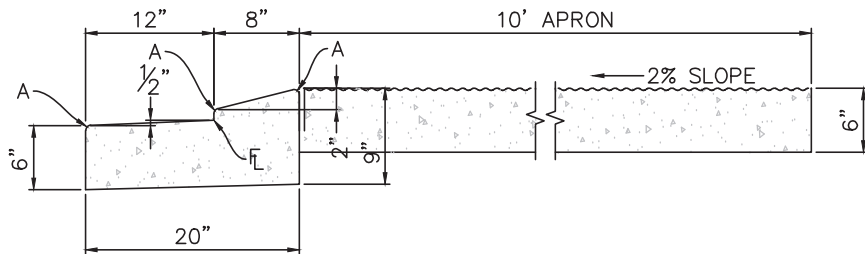
**TYPE 4**  
**MOUNTABLE**



**TYPE 5**  
**RESIDENTIAL CURB & GUTTER ONLY**



**CURB ENDING**



**ROUNDBOUNT APRON**

**NOTE:**  
TYPE 1 AND 2 SPILL GUTTER MUST BE APPROVED BY CITY ENGINEERING.  
TYPE 5 IS CARRY CURB ONLY.

RADII LEGEND	
A	1/4" - 1/2"
B	1 1/2"
C	1 1/2" - 2"



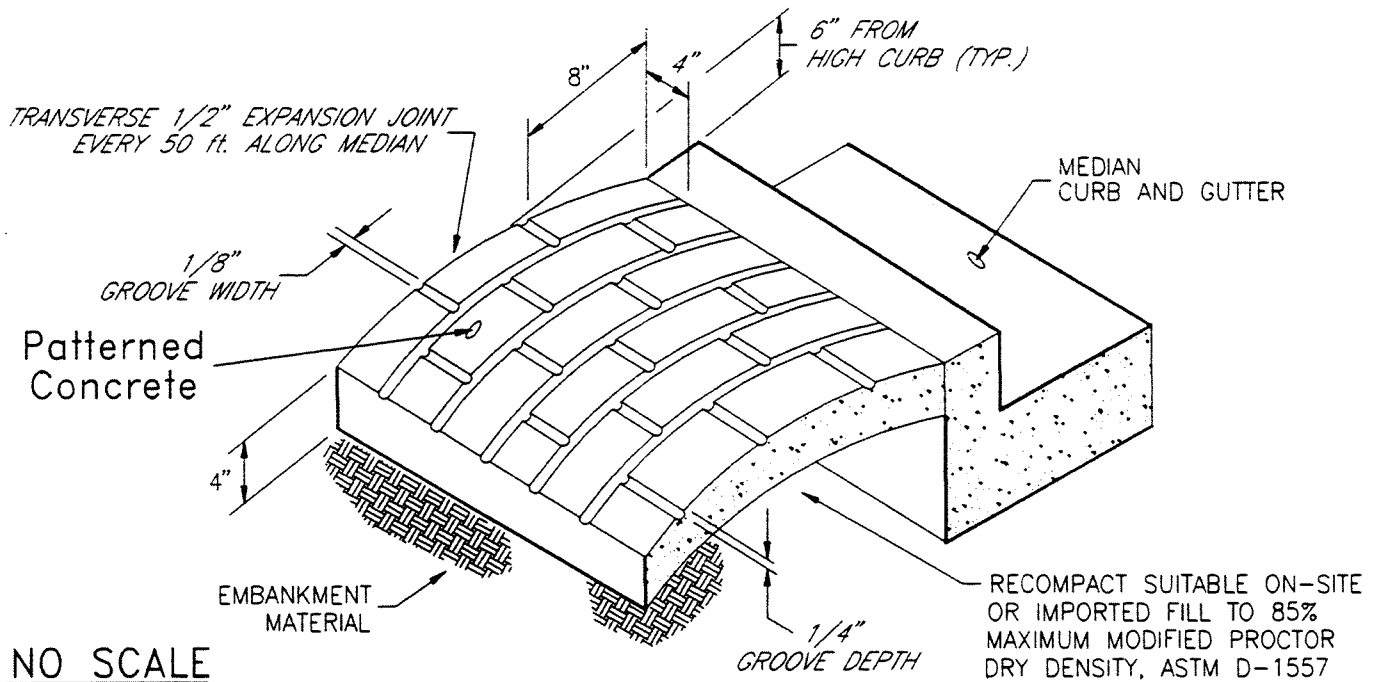
**CURB & GUTTER**  
**DETAILS**

APPROVED: *Gayle Sturdivant*  
CITY ENGINEER

ISSUED:  
2/26/20

REVISED:

DRAWING NO.  
6B



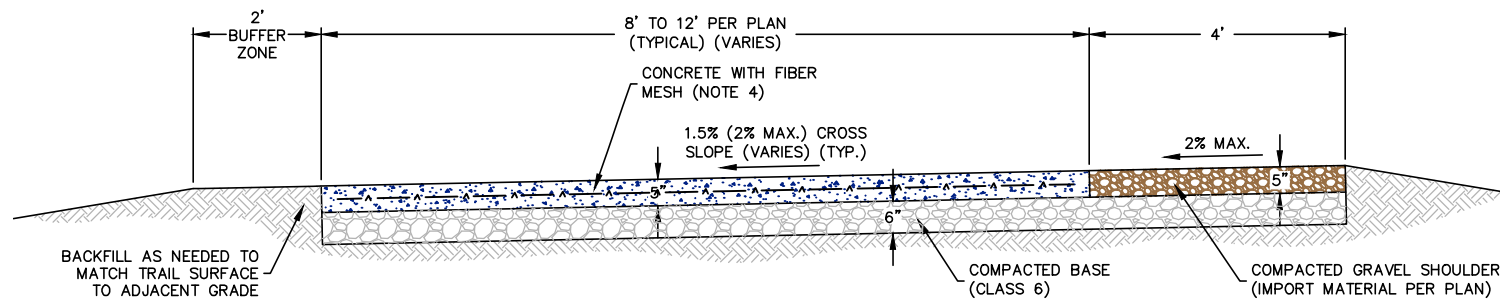
#### NOTES

- The median paving shall be constructed with 4 inch thick, integrally colored concrete, embossed with a running bond 4" x 8" brick pattern as shown.
- Install 1/2" x 4" expansion material at median noses, fixed objects, and at transverse joints at 50 ft. intervals (maximum) along the median.
- The color additive shall be an approved commercially pure or synthetic mineral pigment, factory formulated and packaged in cubic yard dosage increments. The mixture shall be "Chromix" as manufactured by L.M. Scofield Company, "Davis Colors" as manufactured by Davis Color Company, or approved equal.
- Patterned concrete to be colored L.M. Scofield Company "Santa Barbara Brown, C-35", Davis Color Company, Pigment No. 678, 5 lbs/sack, or an approved equal.
- The matching curing compound shall be a blend of waxes and pigments in a solvent emulsion base and conform to the requirements of ASTM C-309. The curing compound shall be "Lithochrome Colorwax" as manufactured by L.M. Scofield Company, "Davis Color-Seal", as manufactured by Davis Color Company, or approved equal.
- The concrete mix design shall conform to the requirements of the color admixture manufacturer and the following:
  - 28 -day compressive strength = 3000 psi (min.)
  - Water/Cement Ratio = 0.45 (max.)
  - Cement Content = 6-1/2 sacks/C.Y. (min.) (Type II cement)
  - Maximum Aggregate Size = 3/8"
  - Entrained Air Content = 6% - 10%
  - Slump = 4 inches (max.) - 1 inch (min.)
- For weed control prior to median paving, apply a pre-emergent herbicide to median subgrade area per manufacturer's specifications for paving under the Barrier 50 Label (pbi Gordon). Trifluralin is labeled for use under asphalt under the Treflan 4EC label (Eianco).

CITY OF COLORADO SPRINGS

Patterned Concrete  
Median Paving

approved by: *Ray R. Hynes* City Engineer  
 Drawn By: J2 Date: 04/93 STD. D-24



## CONCRETE TRAIL

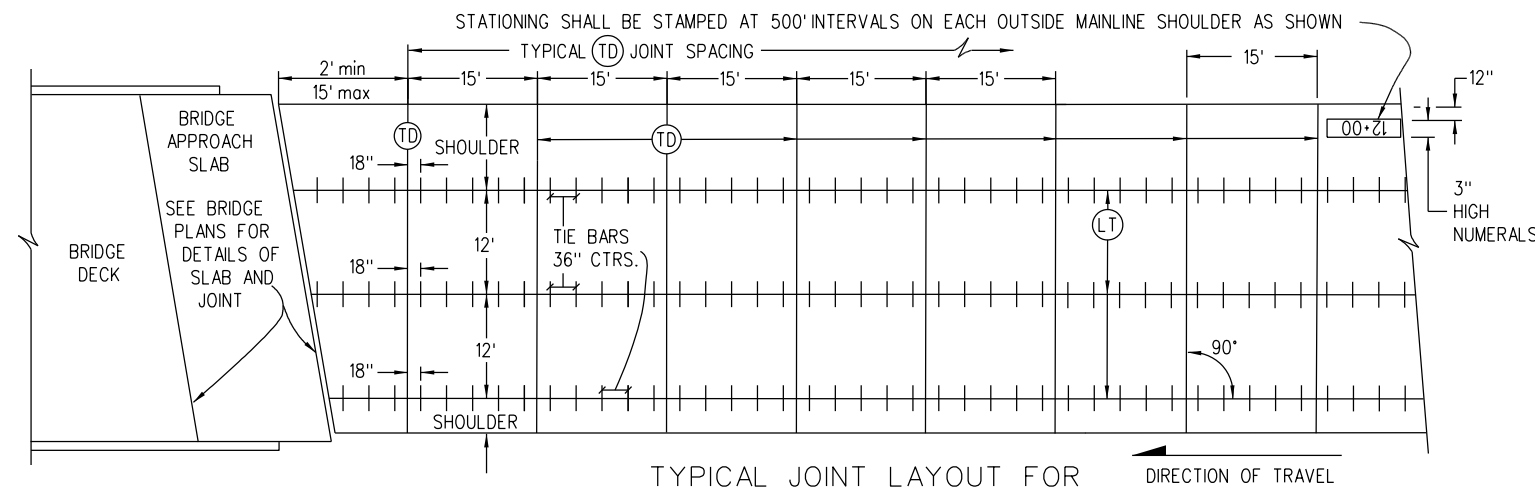
**NOTES:**

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT CITY OF COLORADO SPRINGS (THE CITY) STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS. FOR CITY RIGHT-OF-WAY/TRAFFIC AND STORMWATER PERMITS. THE CONTRACTOR SHALL USE THE CITY'S ON-LINE PERMITTING SYSTEM.
3. TRAIL ADJACENT TO ROADWAY SHALL HAVE A MINIMUM 10-FOOT WIDTH.
4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND BE A CITY APPROVED MIX DESIGN.
5. WHEN CONCRETE FOR TRAIL IS MAINTAINED BY CITY PARKS, THE ADDITION OF 1.5-LBS OF POLYOLEFIN MACRO-FIBER PER CUBIC YARD SHALL BE ADDED TO THE APPROVED CONCRETE MIX DESIGN. MIXING SHALL BE AS RECOMMENDED BY THE MANUFACTURER SUCH THAT THE FIBERS DO NOT BALL UP AND ARE EVENLY DISTRIBUTED IN THE MIX. POLYOLEFIN FIBERS SHALL MEET THE REQUIREMENTS OF ASTM C-1116 AND ASTM D-7508.
6. SAWCUT 1-INCH DEEP CONTROL JOINTS EVERY 10-FEET.
7. EXPANSION JOINTS EVERY 100-FEET, 1/4 DEPTH OF TRAIL. ALL EXPANSION JOINTS SHALL BE SEALED.
8. A MEDIUM BROOM FINISH, WITH SWEEPS PERPENDICULAR TO THE DIRECTION OF TRAVEL, SHALL BE APPLIED TO ALL CONCRETE SURFACES.
9. THE CONTRACTOR SHALL STAMP THEIR COMPANY NAME AND CONSTRUCTION DATE A MINIMUM OF EVERY 100-FEET IN THE LOWER RIGHT CORNER OF STONE.
10. WHITE CURE SHALL BE PLACED WITH 100% COVERAGE, AND MEET THE SPECIFICATIONS OF CITY STANDARD SPECIFICATIONS (SECTION 500).

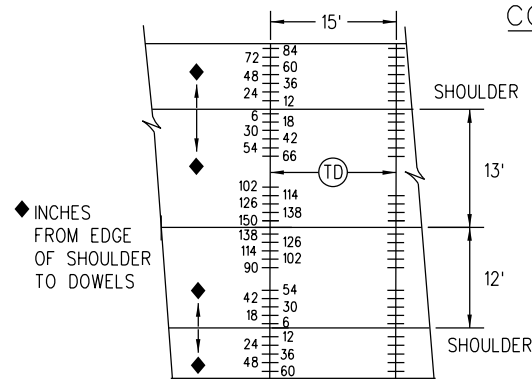


## CONCRETE MULTI-USE TRAIL

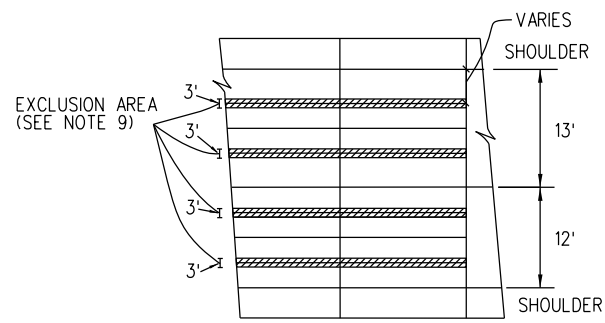
ISSUED: 12/12/22	REVISED:	DRAWING NO. TR-1
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TYPICAL JOINT LAYOUT FOR CONCRETE ROADWAY WITH CONCRETE SHOULDERS



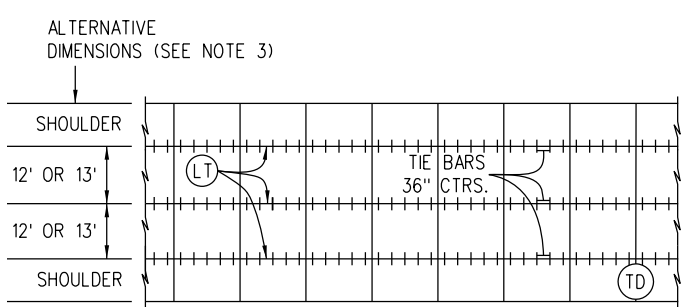
TD JOINT WITH 13 FT. AND 12 FT. WIDE SLABS



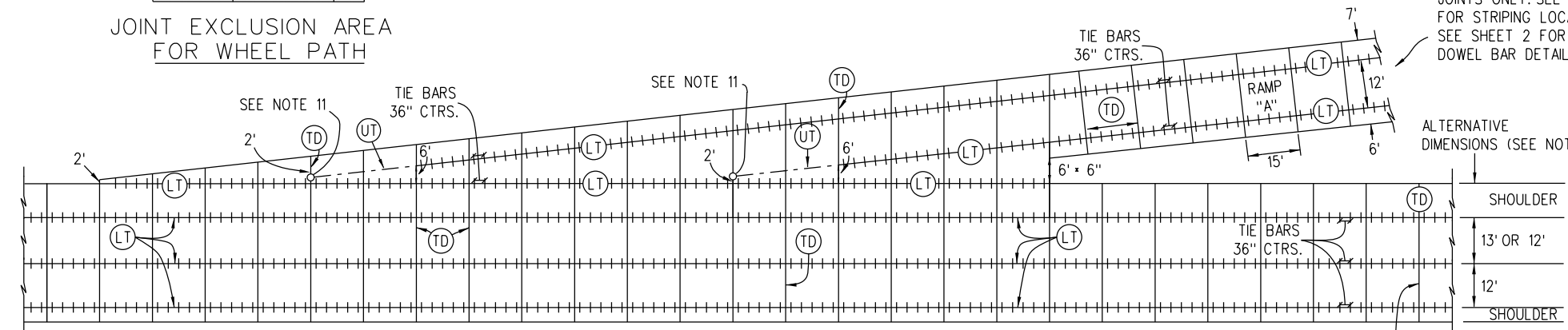
JOINT EXCLUSION AREA FOR WHEEL PATH

GENERAL NOTES

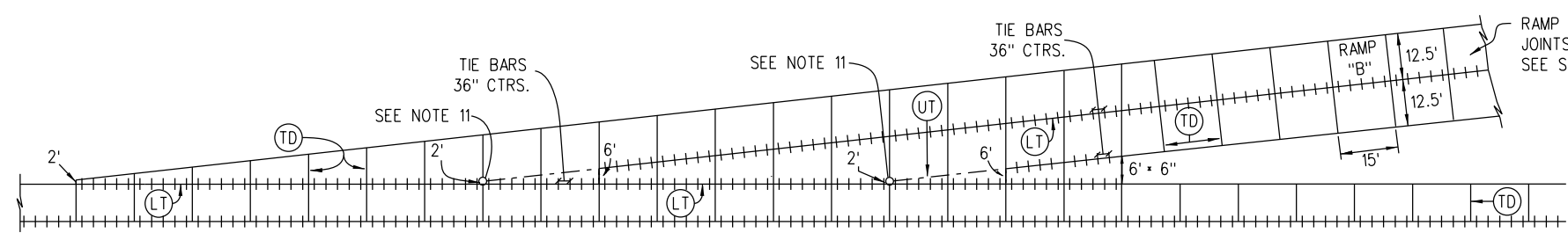
1. THIS STANDARD PLAN DOES NOT APPLY TO THIN CONCRETE OVERLAYS (WHITETOPPING).
2. LONGITUDINAL JOINT SHALL BE PLACED ADJACENT TO LANE MARKINGS WHEN POSSIBLE AND HAVE A MAXIMUM SPACING OF 13 FT.
3. THIS JOINT LAYOUT SHALL BE USED AS A STANDARD OF THE JOINT LAYOUT FOR THE PROJECT. IF THE CONTRACTOR PROPOSES VARIATIONS FROM THIS STANDARD OR THE PROJECT HAS UNUSUAL OR IRREGULAR CONDITIONS NOT COVERED HEREIN, THE CONTRACTOR SHALL PREPARE A PAVEMENT JOINT LAYOUT FOR APPROVAL BY THE ENGINEER. SLABS 13 FEET IN WIDTH SHALL BE CONSTRUCTED ONLY WHERE DESIGNATED ON THE PLANS.
4. ON MULTILANE DIVIDED HIGHWAYS, THE MULTILANE DIRECTIONAL PAVEMENT AND BOTH SHOULDERS SHALL BE PLACED WITH (LT) LONGITUDINAL CONTRACTION JOINTS.
5. ON MULTILANE DIVIDED HIGHWAYS SEPARATED BY A CONCRETE BARRIER, A (UT) JOINT SHALL BE CONSTRUCTED AT ONE OF THE BARRIER FACES.
6. (UT) JOINTS SHALL BE CONSTRUCTED BETWEEN THE TWO OPPOSING DIRECTIONS OF TRAVEL ON A MULTILANE UNDIVIDED HIGHWAY WHEN ALL OF THE FOLLOWING APPLY:
  - A. PAVEMENT IS CONTINUOUS ACROSS BOTH DIRECTIONS OF TRAVEL.
  - B. THERE IS NO MEDIAN BARRIER.
  - C. THE WIDTH OF THE PAVEMENT IN ONE DIRECTION IS GREATER THAN 80 FEET.
7. ON VARIABLE WIDTH SLABS, THE 2 FEET OR 4 FEET END OF SLAB WIDTH DIMENSION MAY VARY ±6 INCHES.
8. ON GORE PANEL WIDTHS LESS THAN 6 FEET TIE BARS SHALL BE ELIMINATED ON THE SIDE ADJACENT TO THE RAMP.
9. NO JOINTS SHALL BE PLACED WITHIN 1.5 FEET OF EITHER SIDE OF THE CENTER OF THE WHEEL PATH. WHEELPATH IS DEFINED PER SUBSECTION 101.02.
10. THE TICK MARKS FOR TIE BAR LINE TYPE ARE FOR ILLUSTRATIVE PURPOSES ONLY AND DO NOT REPRESENT ACTUAL TIE BAR LOCATIONS. SEE M-412-1 SHEET 5 OF 9 FOR TIE BAR PLACEMENT LOCATIONS.
11. IF A JOINT IS NOT CONTINUOUS INTO AN ADJACENT SLAB, A JOINT TERMINATION CORE (SEE SHEET 5) SHALL BE CONSTRUCTED USING 4 INCH PVC PIPE FILLED WITH AN APPROVED NON-SHRINK GROUT OR BOND BREAKER FILLED WITH AN APPROVED NON-SHRINK GROUT.



RURAL TWO-LANE



MULTI-LANE WITH SPEED CHANGE LANE AND CONCRETE SHOULDERS

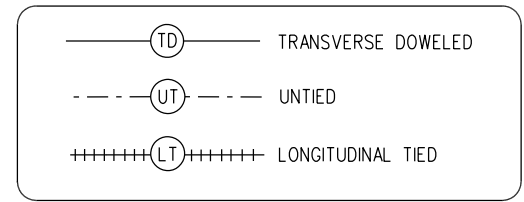


OPTIONAL LONGITUDINAL JOINT IN CENTER FOR SINGLE LANE SPEED CHANGE LANE

RAMP AND SPEED CHANGE LANE DIMENSIONING FOR JOINTS ONLY. SEE PLANS FOR STRIPING LOCATIONS. SEE SHEET 2 FOR RAMP DOWEL BAR DETAILS.

JOINT LEGEND

(SEE SHEET 5 FOR JOINT DETAILS)



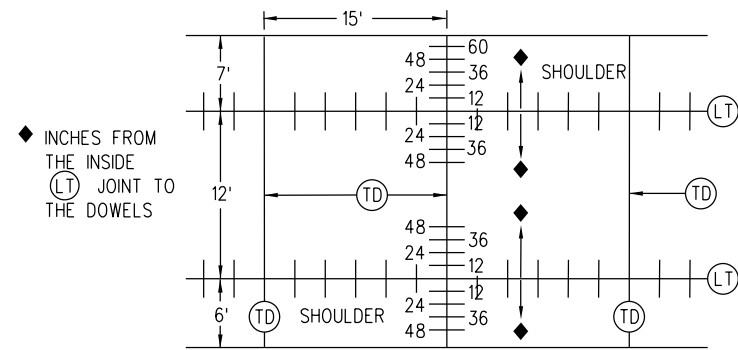
Computer File Information	
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Designer Initials:	JBK
Last Modification Date:	01/31/22
Detailer Initials:	LTA/HMG
CAD Ver.:	MicroStation V8 Scale: Not to Scale Units: English

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Date:	Comments
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(R-X)	
(R-X)	
(R-X)	

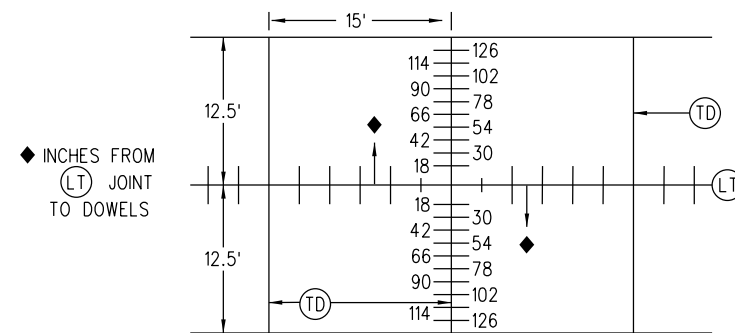
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**CONCRETE PAVEMENT JOINTS**  
 Issued by the Project Development Branch: July 31, 2019

**STANDARD PLAN NO. M-412-1**  
**Standard Sheet No. 1 of 9**  
 Project Sheet Number:

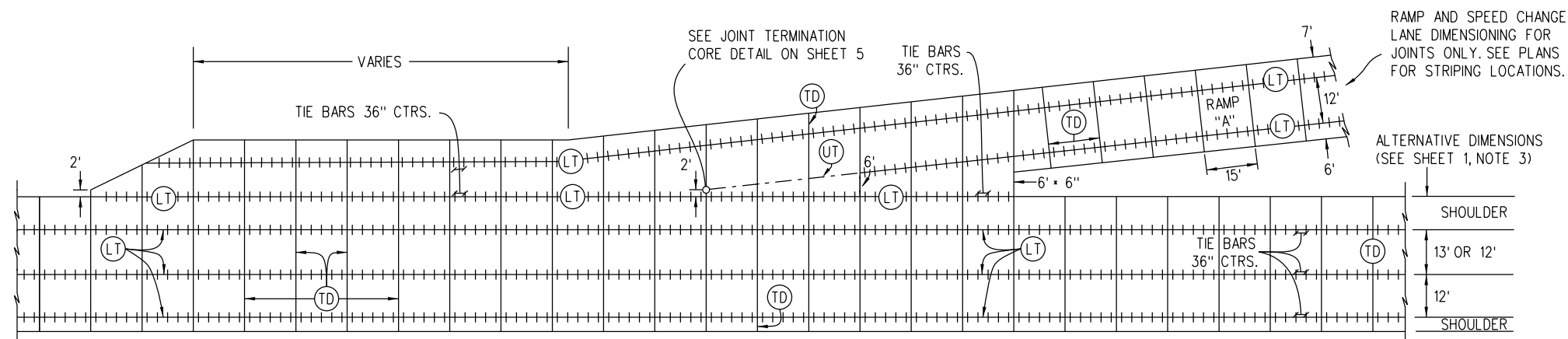
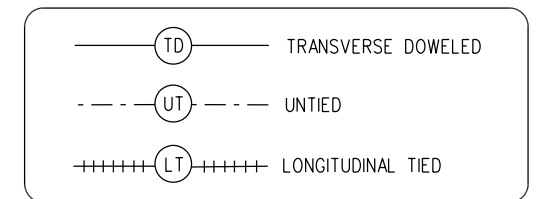


RAMP "A" DOWEL BAR DETAIL FOR (TD) JOINT WITH A 12 FT. LANE

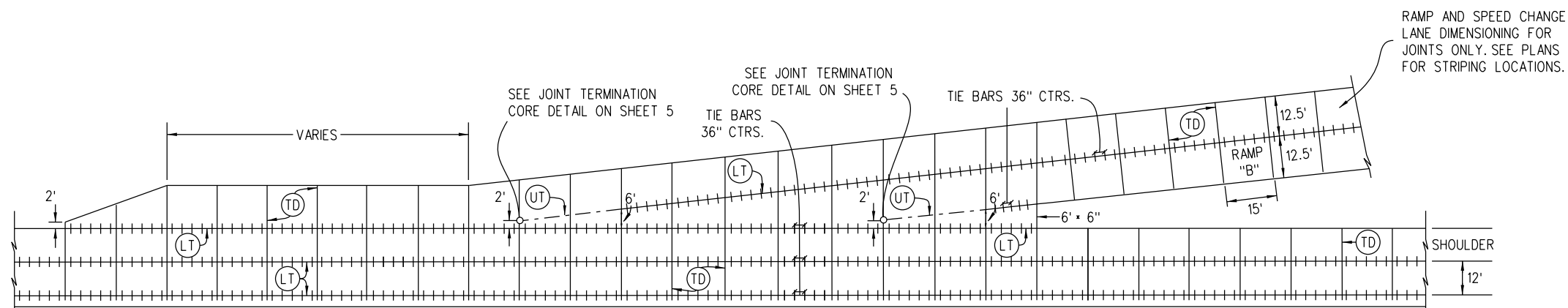


RAMP "B" DOWEL BAR DETAIL FOR (TD) JOINT WITH CENTER LONGITUDINAL SPLIT LANE

**JOINT LEGEND**  
(SEE SHEET 5 FOR JOINT DETAILS)



MULTI-LANE WITH ACCELERATION AND DECELERATION LANES AND CONCRETE SHOULDERS



OPTIONAL LONGITUDINAL JOINT IN CENTER FOR SINGLE LANE ACCELERATION AND DECELERATION LANE

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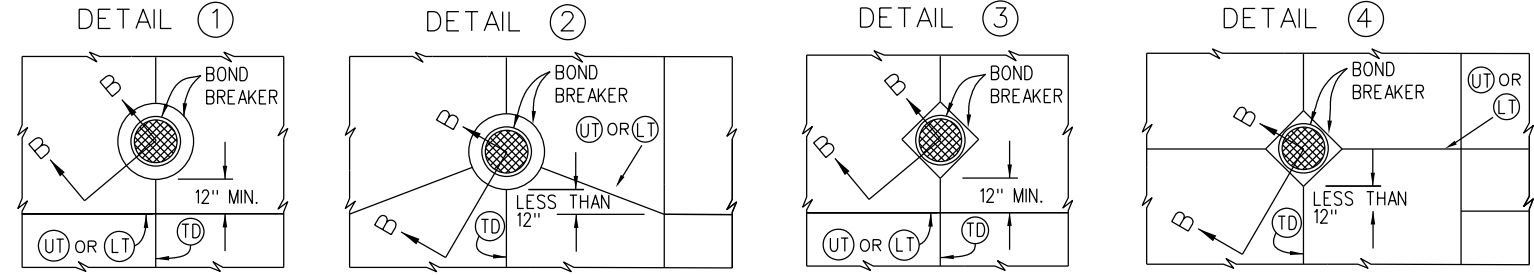
**CONCRETE PAVEMENT JOINTS**  
 Issued by the Project Development Branch: July 31, 2019

**STANDARD PLAN NO. M-412-1**  
**Standard Sheet No. 2 of 9**  
 Project Sheet Number:

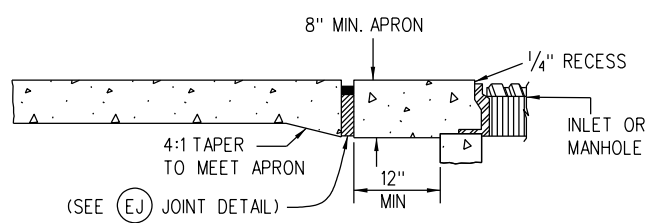


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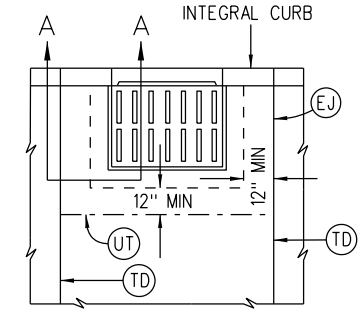
- LONGITUDINAL JOINTS SHALL BE PLACED ADJACENT TO LANE MARKINGS WHEN POSSIBLE AND HAVE A MAXIMUM SPACING OF 13 FEET (15 FEET IS PERMITTED WITH MONOLITHIC CURB AND GUTTER).
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE CENTERLINE OF PAVEMENT AND EXTEND THROUGH THE CURB OR CURB AND GUTTER.
- PLACE 1/2 INCH MINIMUM EXPANSION JOINT FILLER IN FULL DEPTH CURB JOINT AT INTERSECTION RETURN RADIUS POINTS.
- THE CONTRACTOR SHALL, UNLESS OTHERWISE SHOWN ON THE PLANS, SELECT AND USE A BOND BREAKER AT INLETS, MANHOLES AND SIMILAR SIZE STRUCTURES. SMALLER STRUCTURES SUCH AS VALVE AND MONUMENT BOXES SHALL NOT REQUIRE A BOND BREAKER.
- WHERE A LONGITUDINAL JOINT PASSES LESS THAN 1 FOOT FROM A CAST-IN-PAVEMENT MANHOLE OR SIMILAR SIZE STRUCTURE, INSTALL JOINT AS SHOWN IN DETAILS 1 THROUGH 4.
- TRANSVERSE JOINTS SHALL EITHER INTERSECT THE CENTER OF CIRCULAR MANHOLES AND INLETS OR BE AT LEAST 4 FEET AWAY FROM THE EDGE OF CIRCULAR MANHOLES. SEE CURB INLET BOXOUT DETAIL.
- WHEN THE SHORT RUN OF THE TRANSVERSE JOINT IS LESS THAN THREE FEET WIDE, ELIMINATE DOWELS.
- THE TICK MARKS FOR TIE BAR LINE TYPE ARE FOR ILLUSTRATIVE PURPOSES ONLY AND DO NOT REPRESENT ACTUAL TIE BAR LOCATIONS. SEE M-412-1 SHEET 5 OF 9 FOR TIE BAR PLACEMENT LOCATIONS.
- IF A JOINT IS NOT CONTINUOUS INTO AN ADJACENT SLAB, A JOINT TERMINATION CORE (SEE SHEET 5) SHALL BE CONSTRUCTED USING 4" PVC PIPE FILLED WITH AN APPROVED NON-SHRINK GROUT OR BOND BREAKER FILLED WITH AN APPROVED NON-SHRINK GROUT.



INLET OR MANHOLE CAST IN PAVEMENT

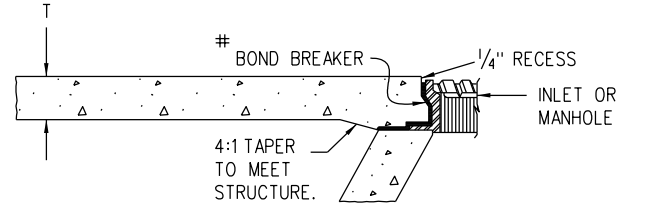


SECTION A-A



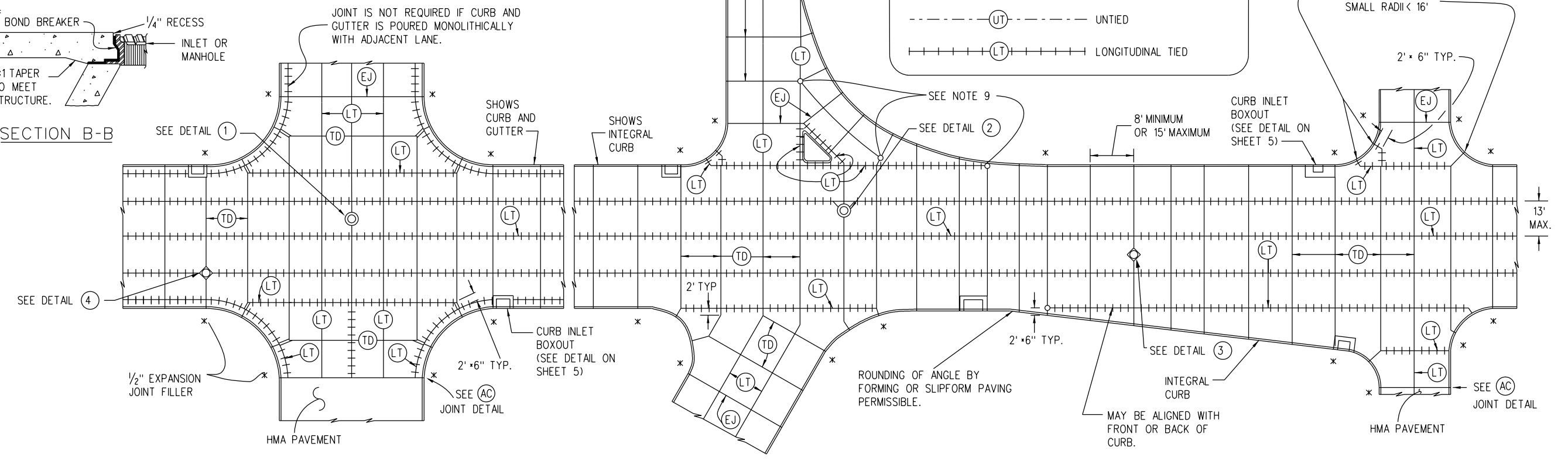
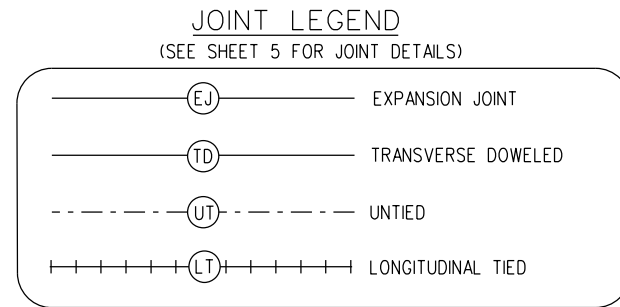
CURB INLET BOXOUT

INSTALL TRANSVERSE JOINT AT BOTH BOXOUT CORNERS IF BOXOUT IS 8 FT. OR LONGER.



SECTION B-B

# BOND BREAKER SHALL BE COMPOSED OF PLASTIC SHEET, BUILDING PAPER OR OTHER APPROVED MATERIAL THAT PREVENTS BONDING.



TYPICAL CURBED PAVEMENT JOINT LAYOUT

Computer File Information	
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**CONCRETE PAVEMENT JOINTS**  
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**STANDARD PLAN NO. M-412-1**  
**Standard Sheet No. 3 of 9**  
 Project Sheet Number:



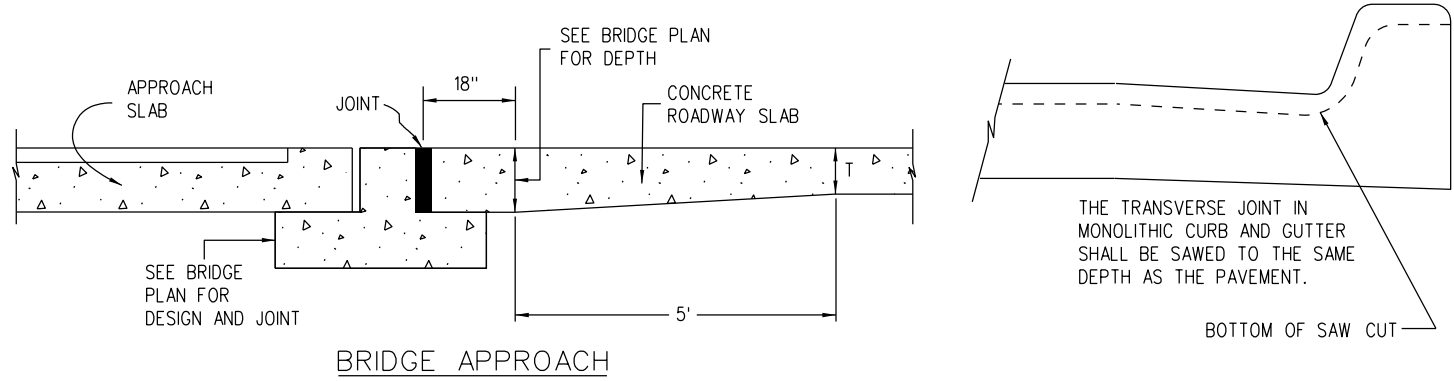
**NOTE**

1. PAVEMENT THICKNESS (T), SHALL BE AS SHOWN ON THE PLANS.

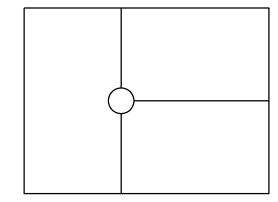
**REINFORCING SIZE TABLE**

TIE BAR SIZE IS NO. 5 WHEN PAVEMENT IS PLACED ON UNBOUND BASES.  
 TIE BAR IS NO. 6 WHEN PAVEMENT IS PLACED ON LIME TREATED SOIL, ASPHALT OR CEMENT TREATED, MILLED ASPHALT, OR RECYCLED ASPHALT BASES.

PAVEMENT THICKNESS (T)	DOWEL BAR DIAMETER
7 IN. • T < 8 IN.	1 IN.
8 IN. • T • 10 IN.	1.25 IN.
10 IN. < T • 15 IN.	1.50 IN.

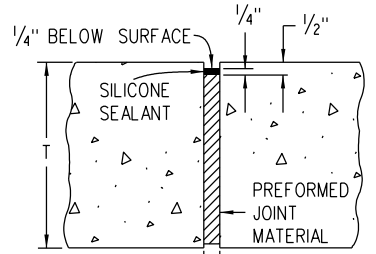


**BRIDGE APPROACH**

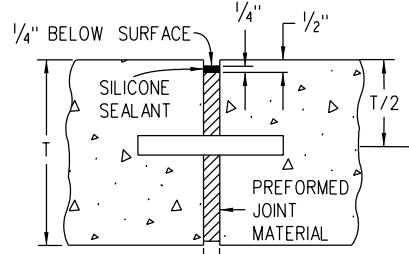


**(JTC) JOINT TERMINATION CORE**

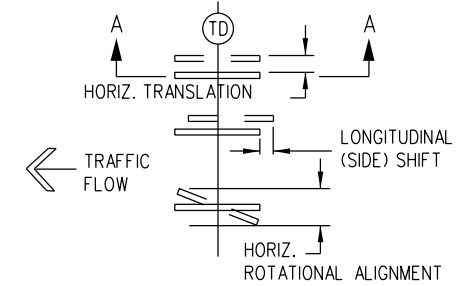
4" PVC PIPE FILLED WITH APPROVED NON-SHRINK GROUT OR BOND BREAKER FILLED WITH APPROVED NON-SHRINK GROUT



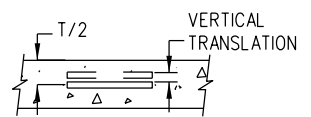
**(EJ) EXPANSION JOINT**



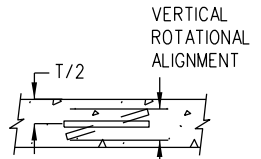
**(DE) DOWELED EXPANSION JOINT**



**PLAN VIEW**  
SHOWING HORIZ. TRANSLATION, LONGITUDINAL (SIDE) SHIFT AND HORIZ. ROTATIONAL ALIGNMENT



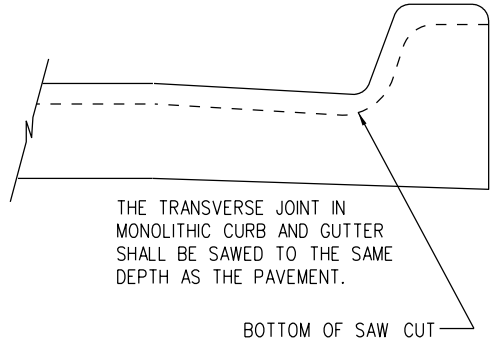
**SECTION A-A**  
SHOWING VERTICAL TRANSLATION TOLERANCE



**SECTION A-A**  
SHOWING VERTICAL ROTATIONAL ALIGNMENT

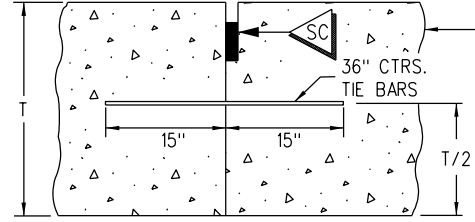
T IS PAVEMENT THICKNESS FROM PLANS

**DETAILS ILLUSTRATING DOWEL PLACEMENT TOLERANCES**  
SEE SUBSECTION 412.13(b)2 FOR ALLOWED TOLERANCE VALUES.

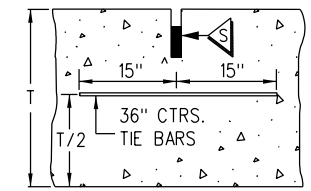


THE TRANSVERSE JOINT IN MONOLITHIC CURB AND GUTTER SHALL BE SAWED TO THE SAME DEPTH AS THE PAVEMENT.

**BOTTOM OF SAW CUT**

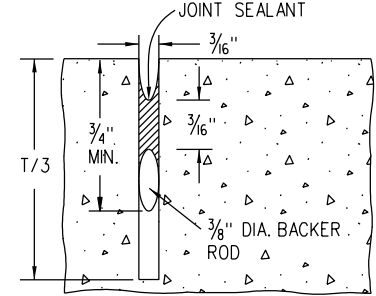


**(LT) LONGITUDINAL TIED JOINT**

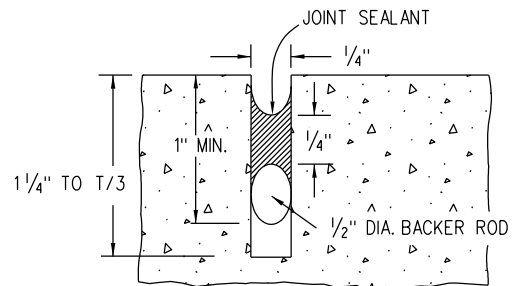


**(LT) SAWED LONGITUDINAL JOINT**  
(LONGITUDINAL WEAKENED PLANE JOINT)

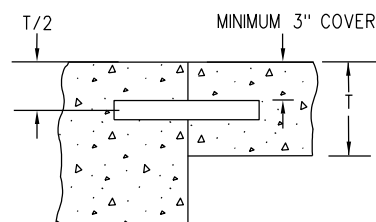
A KEYWAY IS ALLOWED TO FACILITATE USE OF BENT TIE BARS OR APPROVED TWO PIECE CONNECTORS



**SAWED JOINT**  
\*\*\* USE T/4 WHEN T < 8 IN.

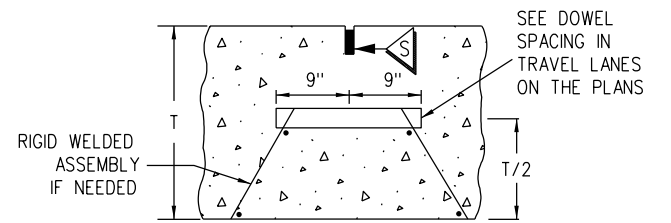


**SEAL AT CONSTRUCTION JOINT**



**DOWEL AND TIE BAR PLACEMENT FOR VARYING PAVEMENT THICKNESSES**

DOWEL BAR SIZING SHALL BE DETERMINED BY THE THICKEST SLAB DEPTH.

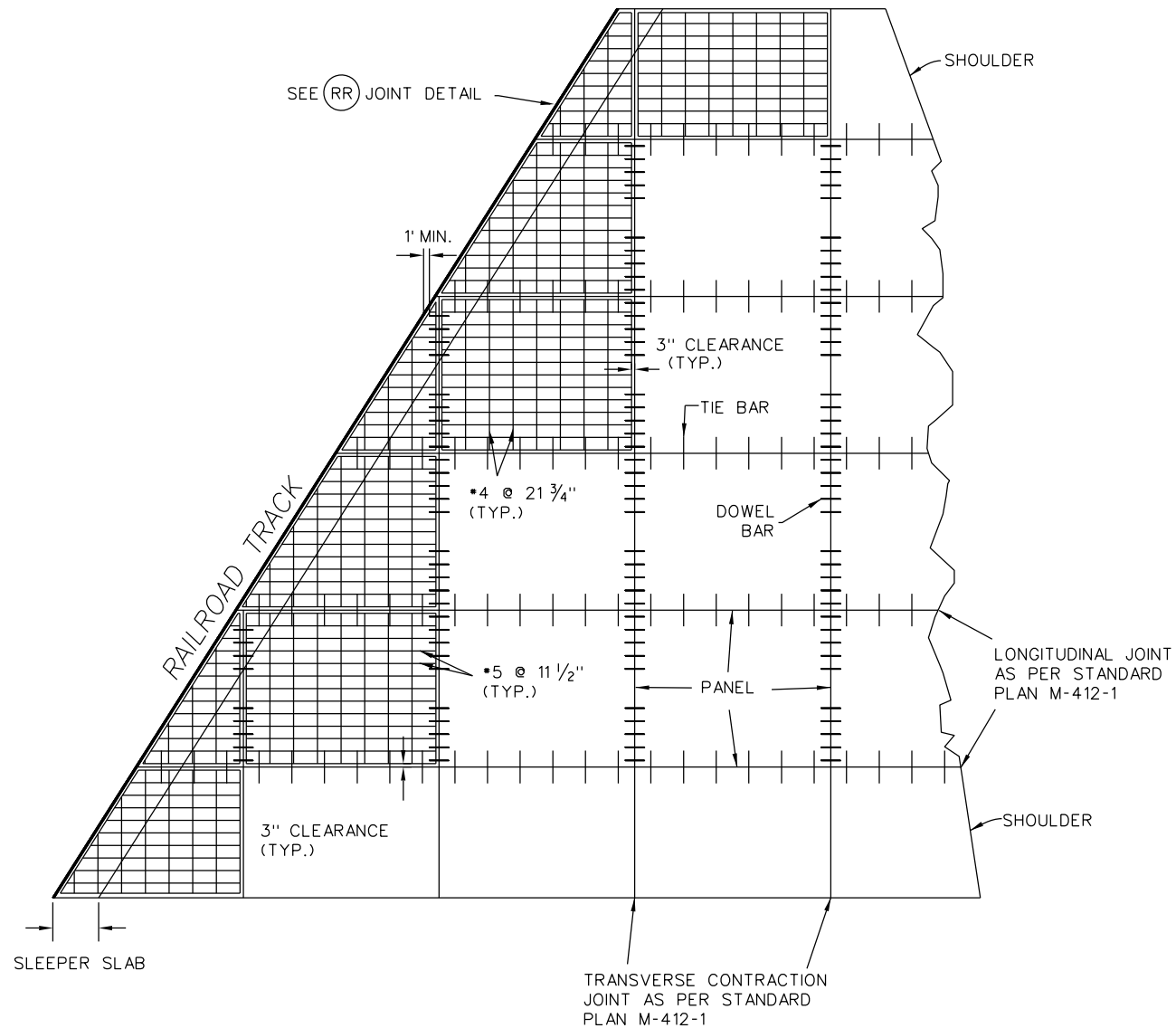


**(TD) DOWELED TRANSVERSE CONSTRUCTION OR CONTRACTION JOINT**  
(TRANSVERSE WEAKENED PLANE JOINT)

SEE DOWEL SPACING IN TRAVEL LANES ON THE PLANS

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Creation Date: 07/31/19		Date:	Comments				
Designer Initials: JBK	(R-X)	01/31/22	Revised all sheets.		<b>Standard Sheet No. 5 of 9</b>	Project Sheet Number:	
Last Modification Date: 01/31/22	(R-X)						
Detailer Initials: LTA/HMG	(R-X)						
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)						
				Construction Engineering Services JBK	Issued by the Project Development Branch: July 31, 2019		





SKewed RAILROAD  
PLAN VIEW

NOTE ON SKEWED RAILROAD DETAILS:

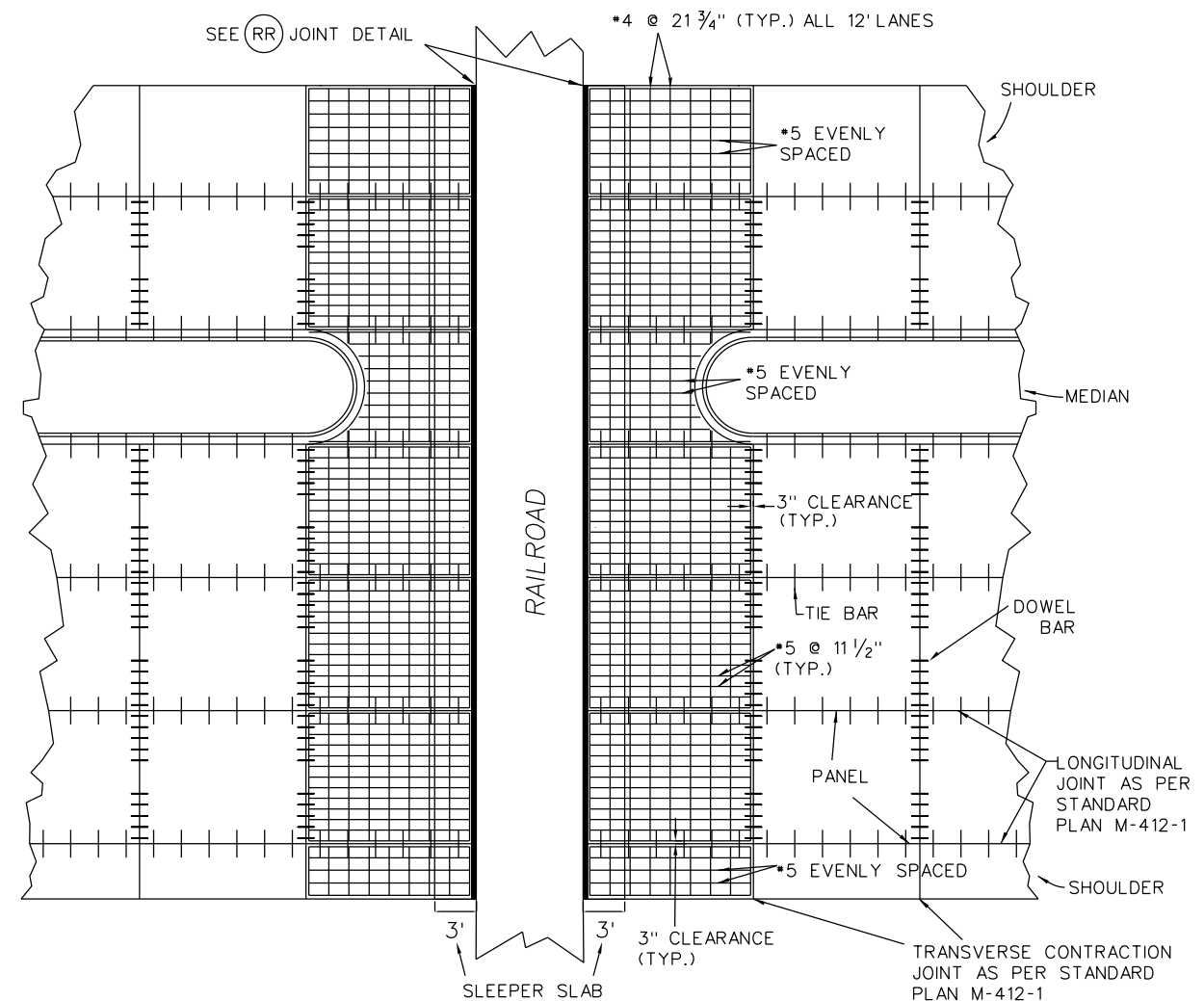
1. IF THE FIRST PANEL ADJACENT TO THE RAIL ROAD CROSSING IS LESS THAN ONE HALF THE AREA OF A NORMAL FULL PANEL, THEN THE FIRST PARTIAL PANEL AND THE NEXT FULL PANEL SHALL BE LONGITUDINALLY AND TRANSVERSLY REINFORCED AS SHOWN IN THE DETAILS. IF THE AREA OF THE FIRST PANEL ADJACENT TO THE RAIL ROAD CROSSING IS GREATER THAN ONE HALF THE AREA OF A NORMAL FULL PANEL, THEN JUST THE FIRST PARTIAL PANEL SHALL BE REINFORCED.

NOTES ON ALL RAILROAD DETAILS:

1. CONCRETE CLASS P OR CLASS D SHALL BE USED FOR THE SLEEPER SLAB.
2. GRADE 60 EPOXY COATED REINFORCING STEEL IS REQUIRED, OTHER THAN TIE AND DOWEL BARS.
3. ALL COST ASSOCIATED WITH THE REQUIREMENTS OF THESE DETAILS SHALL BE INCLUDED IN THE COST OF ITEM 412 - CONCRETE PAVEMENT ( \_ INCH).
4. THE CONTRACTOR SHALL PROVIDE, FOR APPROVAL, TO THE ENGINEER A DETAILED PLAN SHOWING THE JOINT CONFIGURATION A MINIMUM OF TWO WEEKS PRIOR TO THE START OF REINFORCING STEEL FABRICATION.
5. THESE DETAILS SHALL APPLY TO BOTH SIDES OF THE RAIL ROAD CROSSING, IF CONCRETE PAVEMENT IS REQUIRED.

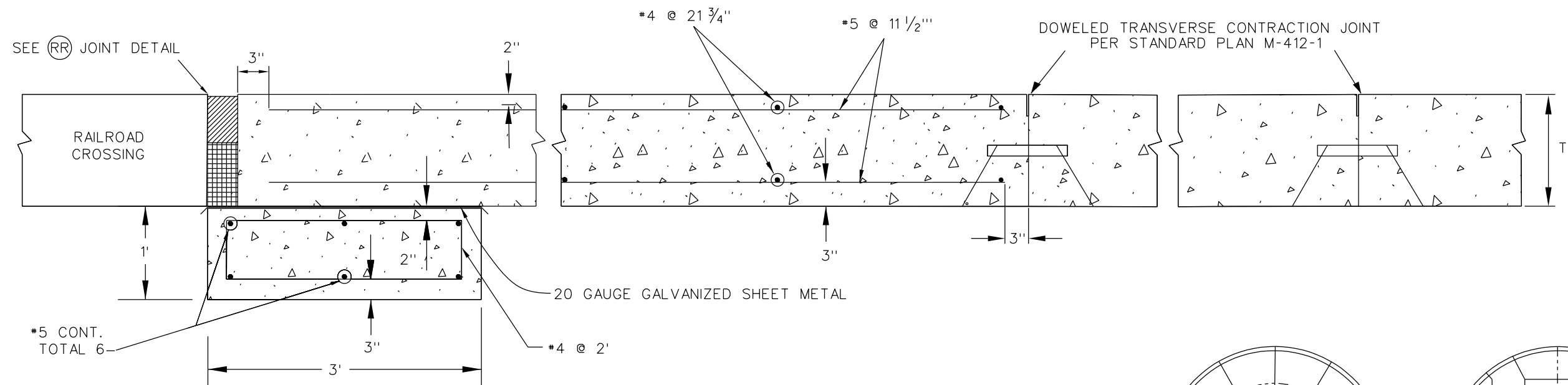
NOTE ON PERPENDICULAR RAILROAD DETAILS:

1. THE LENGTH OF THE FIRST PANEL ADJACENT TO THE RAIL ROAD SHALL BE BETWEEN 12 AND 15 FEET.

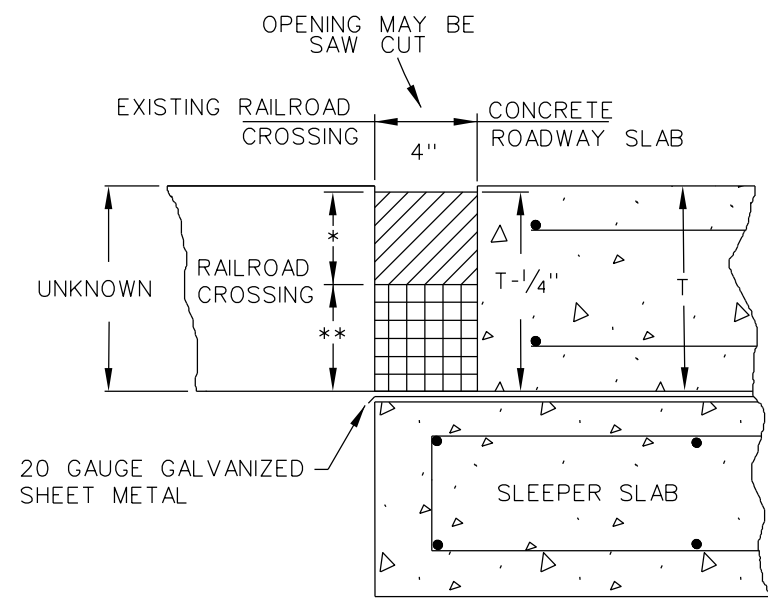


PERPENDICULAR RAILROAD PLAN VIEW

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Designer Initials: JBK	(R-X)					Standard Sheet No. 7 of 9
Last Modification Date: 01/31/22	(R-X)					Project Sheet Number:
Detailer Initials: LTA/HMG	(R-X)					
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)					



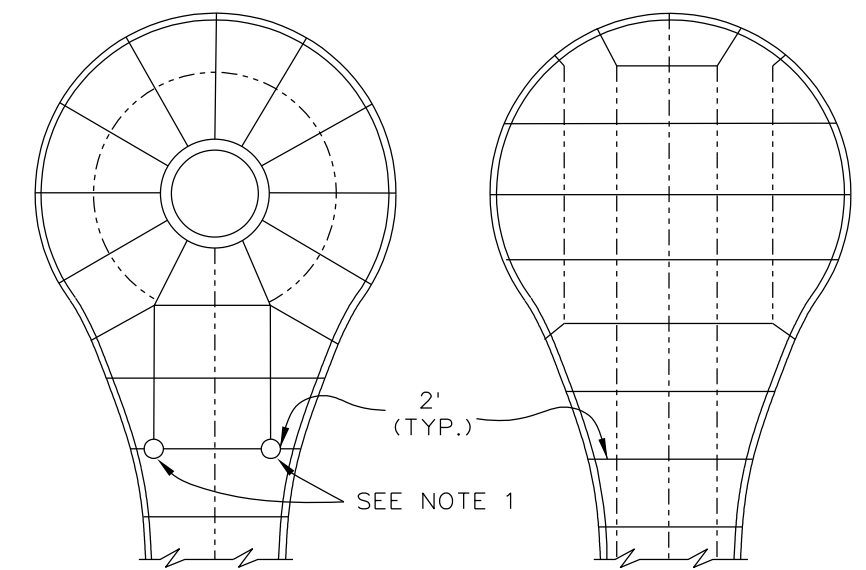
RAILROAD PROFILE VIEW



(RR)  
RAILROAD JOINT DETAILS

NOTES ON RAILROAD JOINTS:

- \* FOR SKEWED RAILROADS: 2" WIDE X 3" DEEP CHEMICALLY RESISTANT NEOPRENE JOINT SEAL.  
FOR PERPENDICULAR RAILROADS: PREFORMED COMPRESSION SEALS MEETING THE REQUIREMENTS OF SECTION 412 FOR THE OPENING SHOWN.
- \*\* PREFORMED EXPANSION JOINT FILLER AS APPROVED BY THE ENGINEER.



CUL-DE-SAC

NOTE ON CUL-DE-SACS:

- IF A JOINT IS NOT CONTINUOUS INTO AN ADJACENT SLAB, A JOINT TERMINATION CORE (SEE SHEET 5) SHALL BE CONSTRUCTED USING 4" PVC PIPE FILLED WITH AN APPROVED NON-SHRINK GROUT OR BOND BREAKER FILLED WITH AN APPROVED NON-SHRINK GROUT.

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(R-X)	
(R-X)	

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 Construction Engineering Services JBK

**CONCRETE PAVEMENT JOINTS**  
 Issued by the Project Development Branch: July 31, 2019

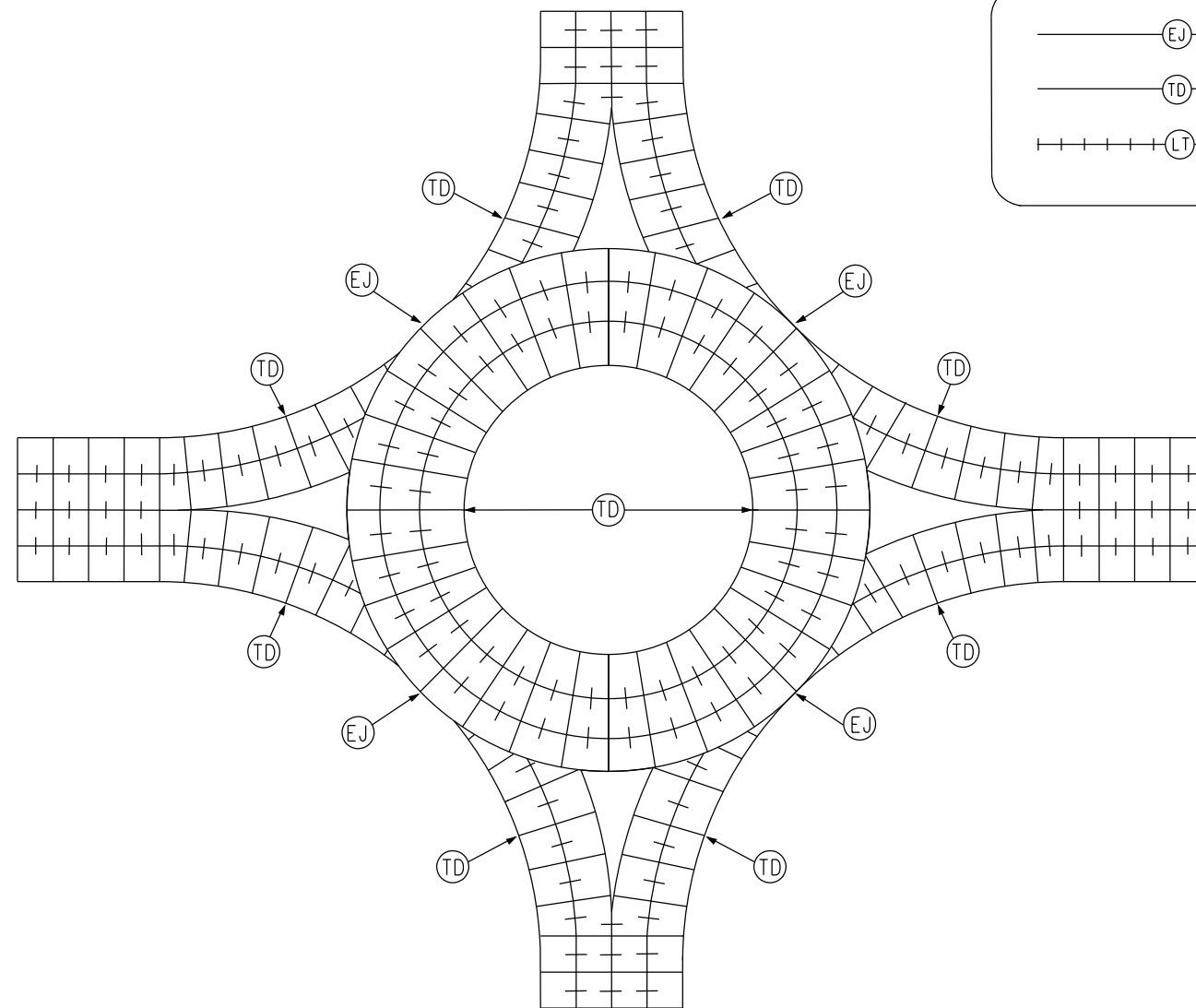
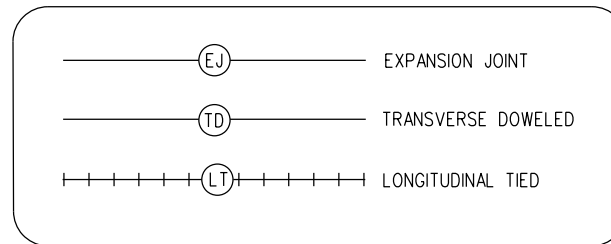
**STANDARD PLAN NO. M-412-1**  
**Standard Sheet No. 8 of 9**  
 Project Sheet Number:

**NOTES**

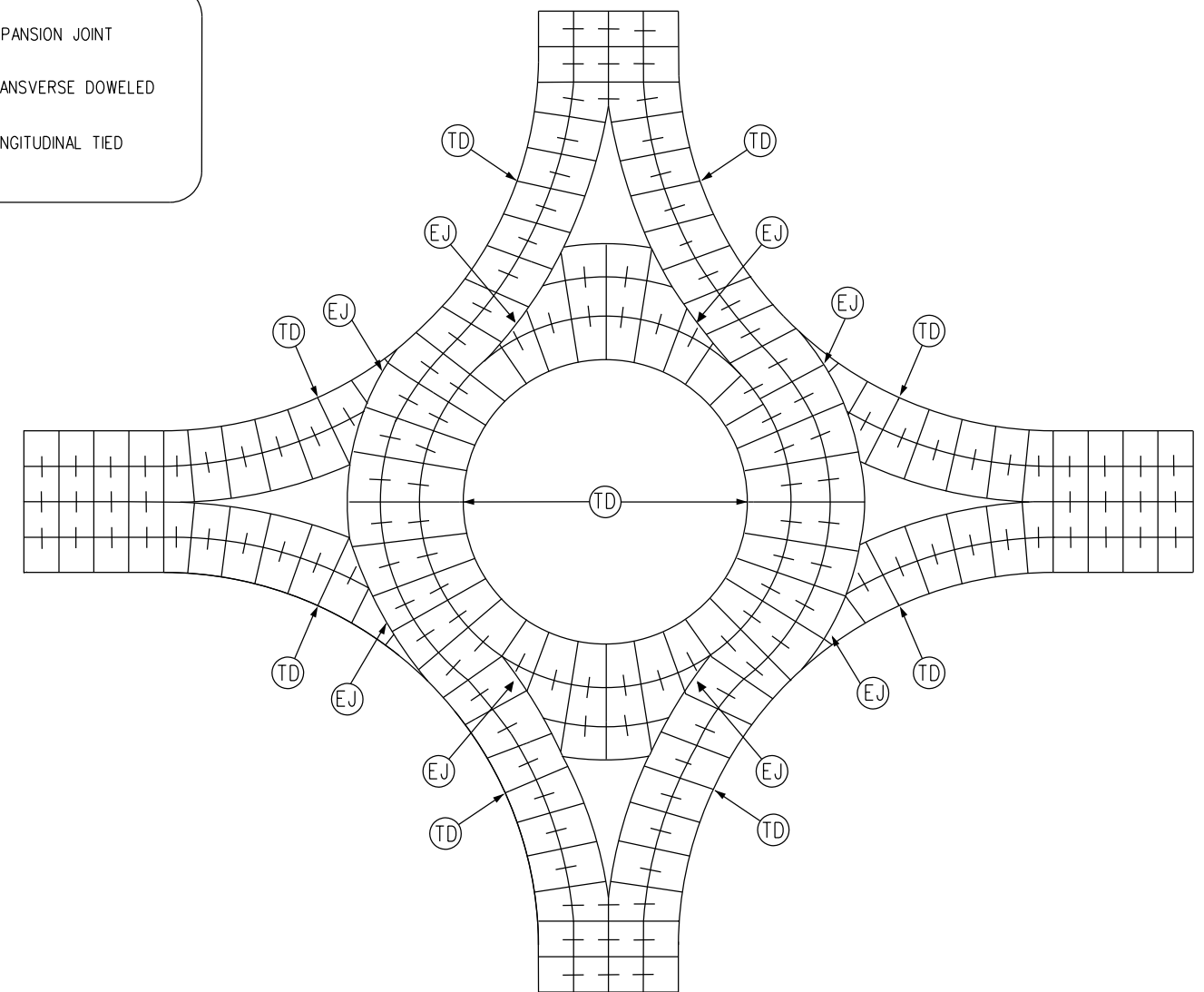
1. ALL RADIAL AND TRANSVERSE JOINTS SHALL BE (TD) JOINTS.
2. (EJ) JOINTS SHALL BE CONSTRUCTED WITH PREFORMED EXPANSION JOINT FILLER AS APPROVED BY THE ENGINEER.
3. THE TICK MARKS FOR TIE BAR LINE TYPE ARE FOR ILLUSTRATIVE PURPOSES ONLY AND DO NOT REPRESENT ACTUAL TIE BAR LOCATIONS. SEE M-412-1 SHEET 5 OF 9 FOR TIE BAR PLACEMENT LOCATIONS.
4. EXPANSION JOINTS SHALL BE INSTALLED BETWEEN CONCRETE CURB AND ANY FIXED STRUCTURE OR BRIDGE. EXPANSION JOINT MATERIAL SHALL EXTEND THE FULL DEPTH OF THE CONTACT SURFACE.
5. JOINT CONFIGURATIONS SHOWN ARE FOR SIMPLE ROUNDABOUTS AND DO NOT REPRESENT ALL ROUNDABOUT DESIGNS. THE CONTRACTOR SHALL SUBMIT A JOINT LAYOUT FOR APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION. THE PAVEMENT JOINT LAYOUT SHALL CONSIDER, AT A MINIMUM, CONSTRUCTION STAGING AND LANE DELINEATION.

**JOINT LEGEND**

(SEE SHEET 5 FOR JOINT DETAILS)



ISOLATED CIRCLE ROUNDABOUT



PAVE-THROUGH ROUNDABOUT

<b>Computer File Information</b> Creation Date: 07/31/19 Designer Initials: JBK Last Modification Date: 01/31/22 Detailer Initials: LTA/HMG CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English		<b>Sheet Revisions</b> <table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>01/31/22</td> <td>Revised all sheets.</td> </tr> </tbody> </table>		Date:	Comments	01/31/22	Revised all sheets.	Colorado Department of Transportation 2829 West Howard Place CDOT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868 		<p style="text-align: center;"><b>CONCRETE PAVEMENT JOINTS</b></p> <p>Issued by the Project Development Branch: July 31, 2019</p>		<b>STANDARD PLAN NO.</b> <b>M-412-1</b>	
Date:	Comments												
01/31/22	Revised all sheets.												
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**GENERAL NOTES**

**1. MINIMUM LONGITUDINAL PAVEMENT MARKING WIDTH**

Facility Type	Speed	Edge Lines	Lane Lines	Center Lines <sup>1</sup>	Dotted Lane Lines	Lane Drop/Aux Lines
2-Lane Facilities	All	6"	n/a	4"	n/a	n/a
3-Lane Facilities	All	6"	6"	4"	6"	8"
Multi-Lane Facilities $\geq 50$ MPH		6"	6"	4"	6"	8"
Multi-Lane Facilities $\leq 45$ MPH		4"	4"	4"	4"	8"

<sup>1</sup>Applies to facility types with double yellow lines, painted median, or undivided highway.

**2. TEMPORARY PAVEMENT MARKING**  
4 INCHES WIDE MARKING CAN BE USED INSTEAD OF 6 INCHES WIDE MARKING FOR TEMPORARY MARKING UNLESS OTHERWISE DIRECTED BY THE REGION TRAFFIC ENGINEER.

**3. CENTER LINES**  
a. BROKEN YELLOW, 4 INCHES WIDE-10 FEET SEGMENTS WITH 30 FEET GAPS.  
b. SOLID YELLOW, 4 INCHES WIDE. THESE LINES SEPARATE ADJACENT-OPPOSITE DIRECTION TRAFFIC LANES. DOUBLE LINES SHALL BE SPACED 4 INCHES APART.

**4. LANE LINES**  
a. BROKEN WHITE, 4 OR 6 INCHES WIDE-10 FEET SEGMENTS WITH 30 FEET GAPS. THESE LINES SEPARATE ADJACENT-SAME DIRECTION TRAFFIC LANES.  
b. SOLID WHITE, 4 OR 6 INCHES WIDE. THESE LINES SEPARATE ADJACENT-SAME DIRECTION TRAFFIC LANES. A SOLID LINE MAY BE USED TO DISCOURAGE LANE CHANGING, WHILE TWO PARALLEL SOLID WHITE LINES ARE REQUIRED TO PROHIBIT LANE CHANGING.

**5. EDGE LINES**  
a. SOLID WHITE OR YELLOW EDGE LINES SHALL BE 4 OR 6 INCHES WIDE. YELLOW EDGE LINES SHALL BE USED ONLY FOR LEFT EDGE, IN THE DIRECTION OF TRAVEL OF DIVIDED STREETS AND HIGHWAYS (SEPARATED BY OTHER THAN A PAINTED MEDIAN) AND ONE-WAY ROADWAYS (INCLUDING RAMPS).  
b. EDGE LINES ARE NOT CONTINUED THROUGH INTERSECTIONS AND ARE NOT BROKEN FOR DRIVEWAYS. CARE MUST BE TAKEN TO AVOID EDGE LINE APPEARING AS LANE LINE ALONG ROADWAYS WITH WIDE SHOULDERS AND/OR CLOSELY SPACED DRIVEWAYS.

**6. DOTTED EXTENSION LINES**  
BROKEN WHITE, WIDTH MATCHING THE LINE BEING EXTENDED-2 FEET SEGMENTS WITH 4 FEET GAPS. THESE LINES ARE USED TO DELINEATE THE EXTENSION OF A LINE THROUGH AN INTERSECTION OR INTERCHANGE AREA.

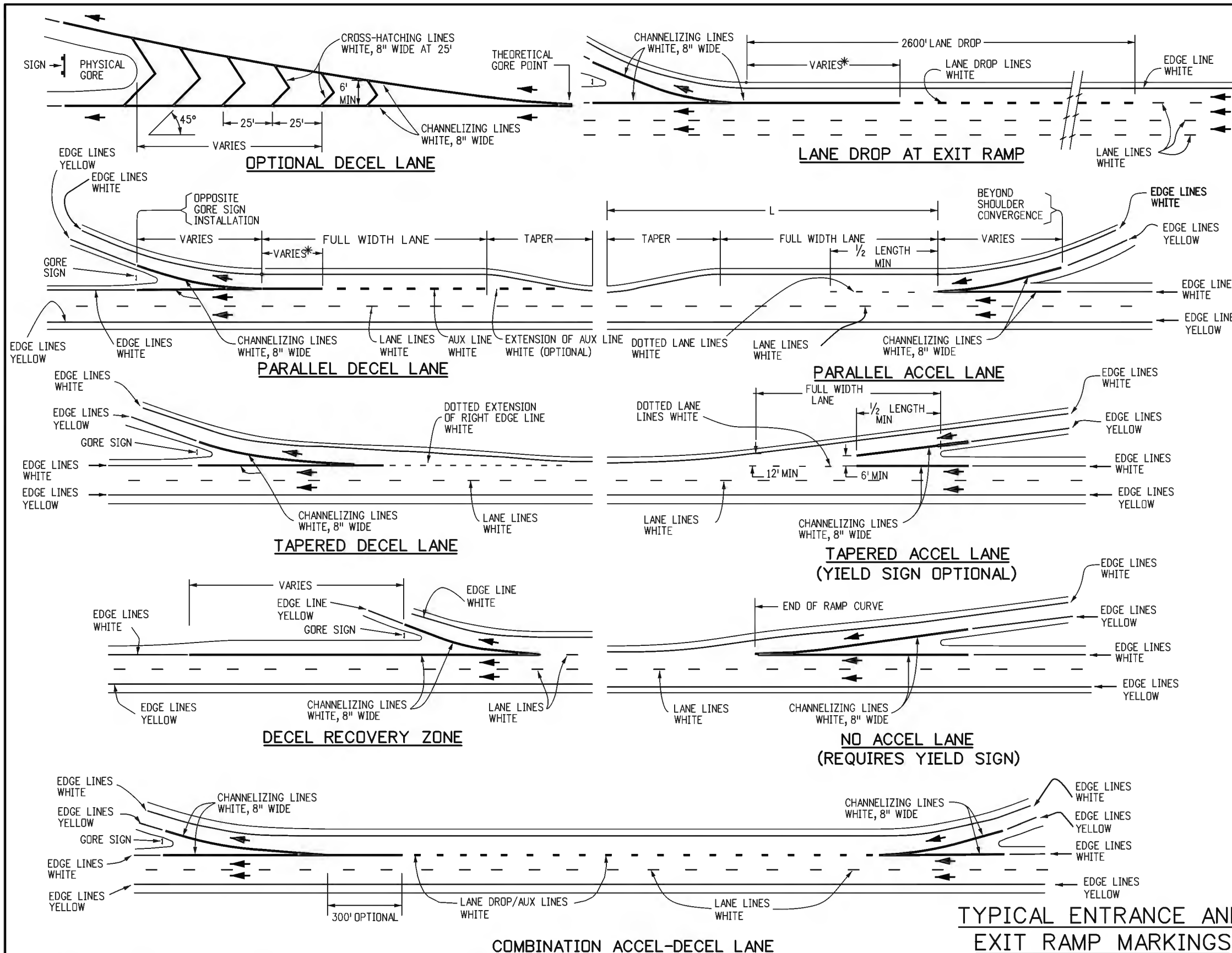
**7. LANE DROP / AUX LINES**  
BROKEN WHITE, 8 INCHES WIDE-3 FEET SEGMENTS WITH 12 FEET GAPS. THESE LINES SHOULD BEGIN 2600 FEET IN ADVANCE OF THE THEORETICAL GOREPOINT TO DISTINGUISH THE LANE DROP FROM A CONTINUOUS LANE.

**8. DOTTED LANE LINES**  
BROKEN WHITE, 4 OR 6 INCHES WIDE-3 FEET SEGMENTS WITH 12 FEET GAPS. LINE WIDTH SHALL MATCH THE ADJACENT LANE LINE. THE WIDTH SHOULD MATCH THAT OF THE LINE IT IS EXTENDING.

**9. CHANNELIZING LINES**  
SOLID WHITE, 8 INCHES WIDE. THESE LINES ARE USED WITH ACCELERATION-DECELERATION LANES, PAVEMENT WIDTH TRANSITIONS, AND LEFT-RIGHT TURN SLOTS OR ISLANDS.

\* THE CHANNELIZING LINE MAY BE EXTENDED 300 FEET (TYPICAL) UPSTREAM FROM THE THEORETICAL GORE. FINAL LENGTH DEPENDS ON SITE CONDITIONS.

(CONTINUED ON SHEET NO. 2)



**TYPICAL ENTRANCE AND EXIT RAMP MARKINGS**

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(R-3) 07/22/22	PARALLEL DECEL LANE AND NOTES UPDATE
(R-2) 02/16/21	LINE TYPE UPDATE FOR PARALLEL DECEL LANE ADDED NOTE TEMPORARY PAVEMENT MARKING
(R-1) 04/17/20	LINE WIDTH UPDATE

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**PAVEMENT MARKINGS**

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**STANDARD PLAN NO.**  
S-627-1

Standard Sheet No. 1 of 11

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**GENERAL NOTES**

(CONTINUED FROM SHEET NO. 1)

10. CROSS-HATCHING LINES
  - a. SOLID WHITE OR YELLOW, 8 INCHES WIDE-45 DEGREE DIAGONAL, SPACED AT 25 FEET INTERVALS. THESE LINES ARE OPTIONAL AND MAY BE PLACED AT LOCATIONS INDICATED ON THE PLANS OR DETERMINED BY THE ENGINEER. YELLOW SHALL BE USED FOR PAINTED MEDIANS OR PAVEMENT WIDTH TRANSITIONS ONLY.
  - b. OPTIONAL DIAGONAL SHOULDER MARKINGS SHALL BE SOLID WHITE, 8 INCHES WIDE, SPACED AT INTERVALS OF 20 FEET MINIMUM TO 100 FEET MAXIMUM.
11. PARKING LINES
 

SOLID WHITE, 3 INCHES WIDE-DIAGONAL OR PARALLEL AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
12. STOP LINES
 

SOLID WHITE, 24 INCHES WIDE-EXTEND PARALLEL TO INTERSECTED ROADWAY ACROSS ALL APPROACH LANES OR AS INDICATED AT LOCATIONS ON THE PLANS. LOCATE AT THE DESIRED STOPPING POINT, NOT MORE THAN 30 FEET, NOR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTED TRAFFIC LANE.
13. YIELD LINES
  - a. SOLID WHITE, THE INDIVIDUAL TRIANGLES COMPRISING YIELD LINES SHALL HAVE A BASE OF 12 TO 24 INCHES WIDE AND A HEIGHT EQUAL TO 1.5 TIMES THE BASE AND SHALL BE PARALLEL TO THE INTERSECTED ROADWAY ACROSS ALL APPROACH LANES OR AS INDICATED AT LOCATIONS ON THE PLANS.
  - b. THE SPACE BETWEEN EACH TRIANGLE SHALL BE 3 TO 12 INCHES.
14. CROSSWALK LINES
  - a. SOLID WHITE, 12 INCHES WIDE FOR TRANSVERSE LINE TYPE EXTEND ACROSS ENTIRE WIDTH OF PAVEMENT. IF NO ADVANCE STOP LINE IS PROVIDED, INCREASE THE WIDTH OF THE CROSSWALK LINES TO 24 INCHES. THE DISTANCE BETWEEN THE LINES IS USUALLY DETERMINED BY THE WIDTH OF THE SIDEWALKS CONNECTED IN ANY CASE THIS SHALL NOT BE LESS THAN 6 FEET.
  - b. COMPLICATED AND/OR CHANNELIZED INTERSECTIONS AND MID-BLOCK CROSSWALKS SHALL BE SOLID WHITE, 12 INCHES TO 24 INCHES WIDE AND 8 TO 10 FEET LONG FOR LONGITUDINAL LINE TYPE AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
15. WORD, ARROW AND SYMBOL MARKINGS
 

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH "THE STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION.
16. MERGING TAPER LENGTH
 

L = MINIMUM LENGTH OF TAPER.  
 S = DESIGN SPEED FOR NEW CONSTRUCTION OR NUMERICAL VALUE OF THE POSTED SPEED LIMIT OF THE 85TH PERCENTILE SPEED OF EXISTING TRAFFIC.  
 W = WIDTH TRANSITIONED.

FORMULA: FOR SPEED 45 MPH OR MORE,  $L = S \times W$   
 FOR SPEED 40 MPH OR LESS,  $L = \frac{WS^2}{60}$
17. TRANSITION LINES
 

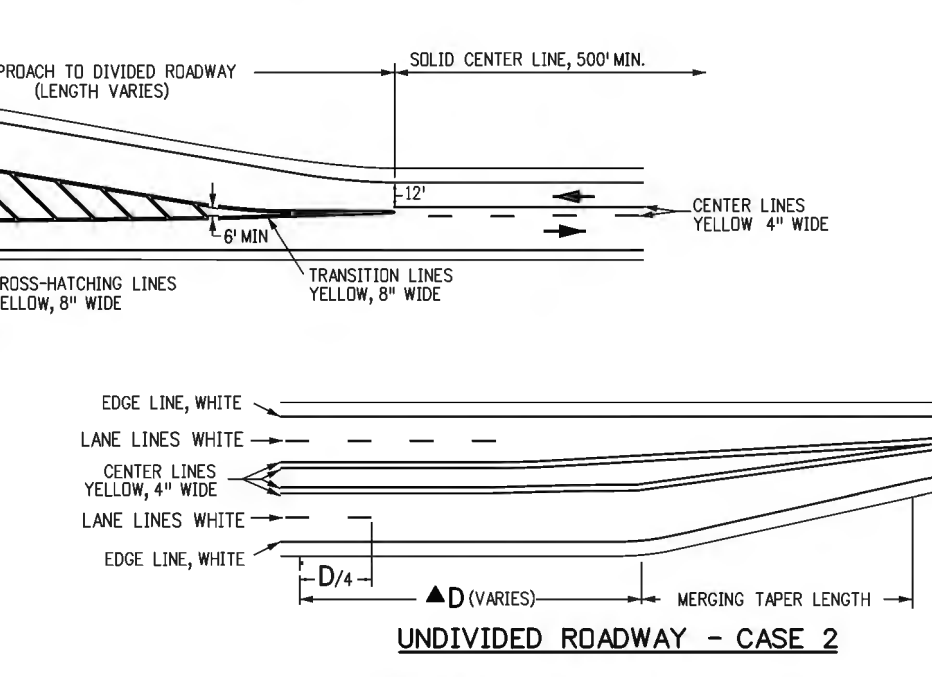
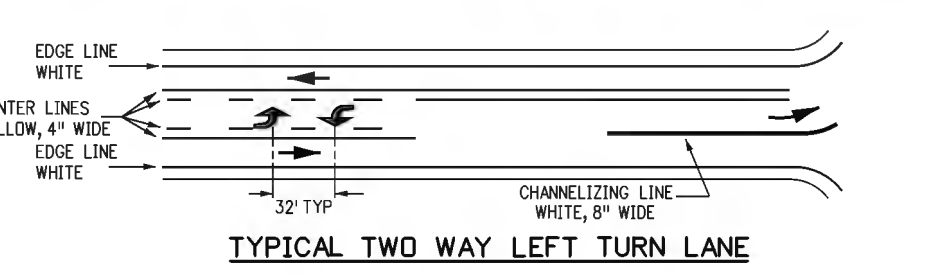
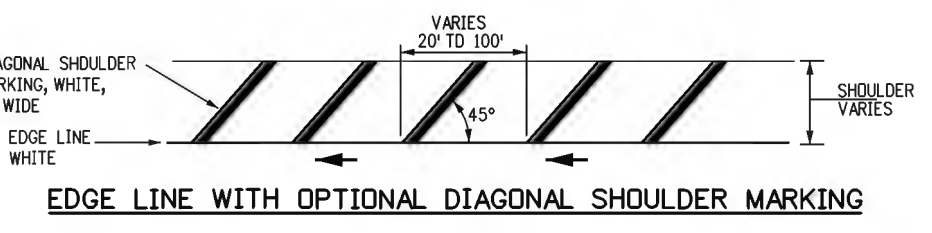
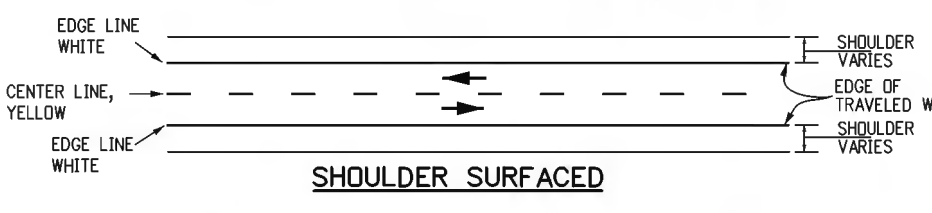
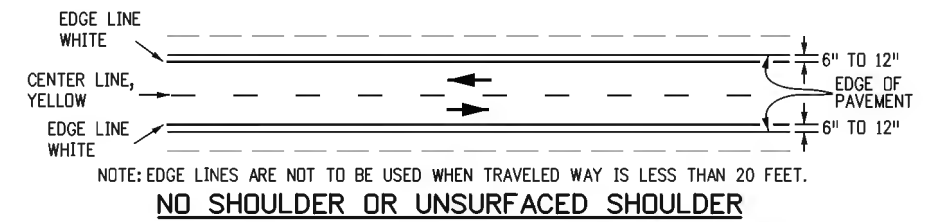
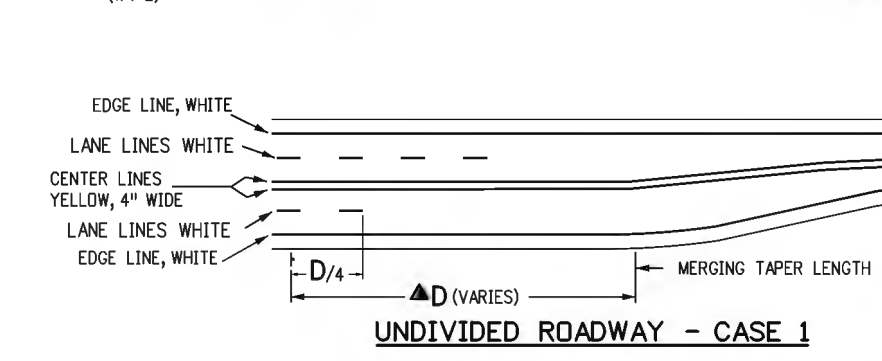
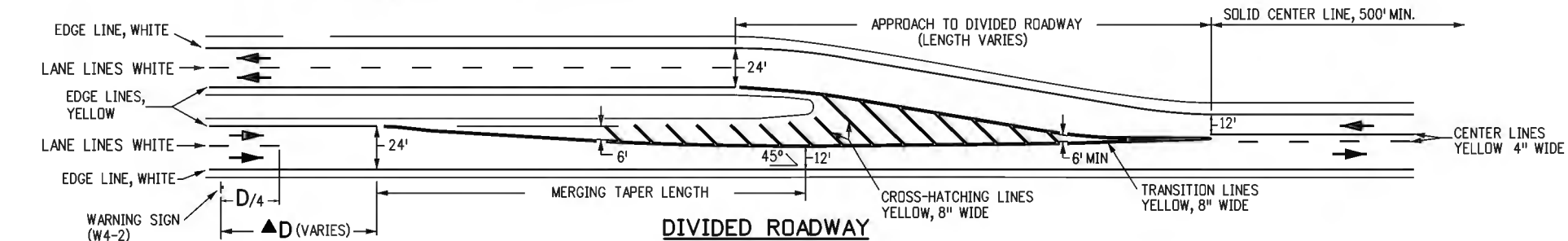
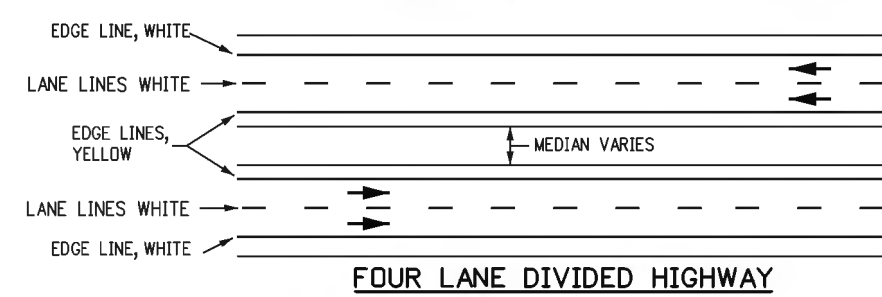
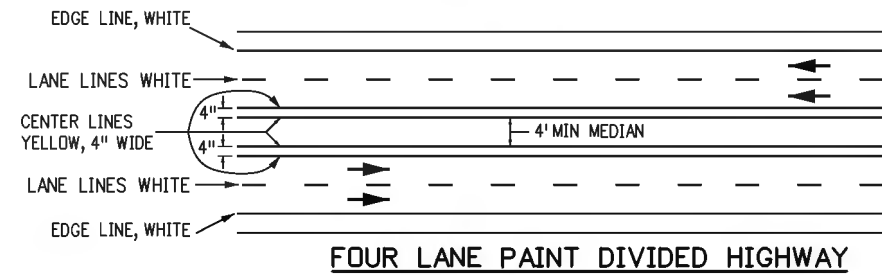
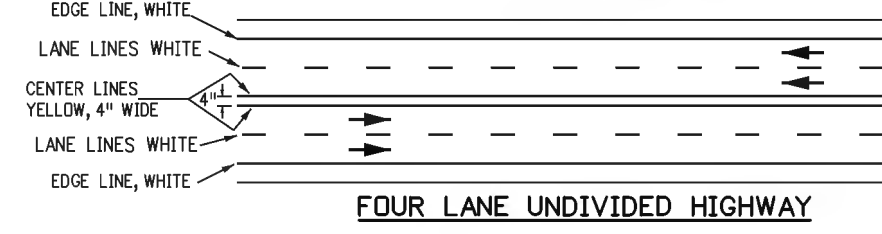
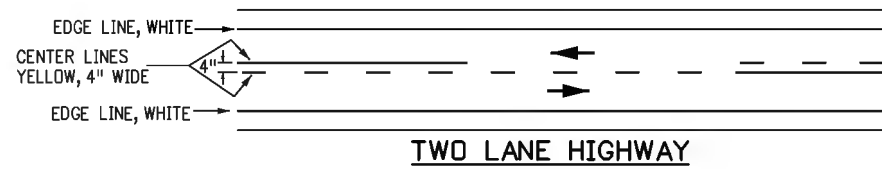
SOLID YELLOW, 8 INCHES WIDE. THESE LINES ARE USED WHERE ADDITIONAL EMPHASIS OR VISIBILITY IS DESIRABLE AT PAVEMENT WIDTH TRANSITIONS. PLACE AT LOCATIONS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
18. SPEED MEASURING MARKING
 

SOLID WHITE, 24 INCHES EXTEND 4 FEET FROM OUTSIDE OF EDGE LINES ON SHOULDERS.
19. ALL SPACING IS DETERMINED CENTER ON CENTER EXCEPT FOR DOUBLE LINES.

**NOTE:**  
**D** = THE DISTANCE FROM THE LANE ENDS SIGN (W4-2) TO THE BEGINNING OF THE MERGING TAPER. FOR MORE INFORMATION ON THE "D" VALUE REGARDING SIGN AND PAVEMENT MARKING PLACEMENT, SEE THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", TABLE 2C-4, CONDITION A: SPEED REDUCTION AND LANE CHANGING IN HEAVY TRAFFIC AND FOOTNOTE 2 REGARDING TYPICAL CONDITIONS.

**LEGEND**

→ Direction of Travel



**TYPICAL PAVEMENT WIDTH TRANSITION MARKINGS**

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04/14/23	ADD GENERAL NOTE 13 & UPDATE NUMBER OF SHEETS
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Colorado Department of Transportation

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**PAVEMENT MARKINGS**

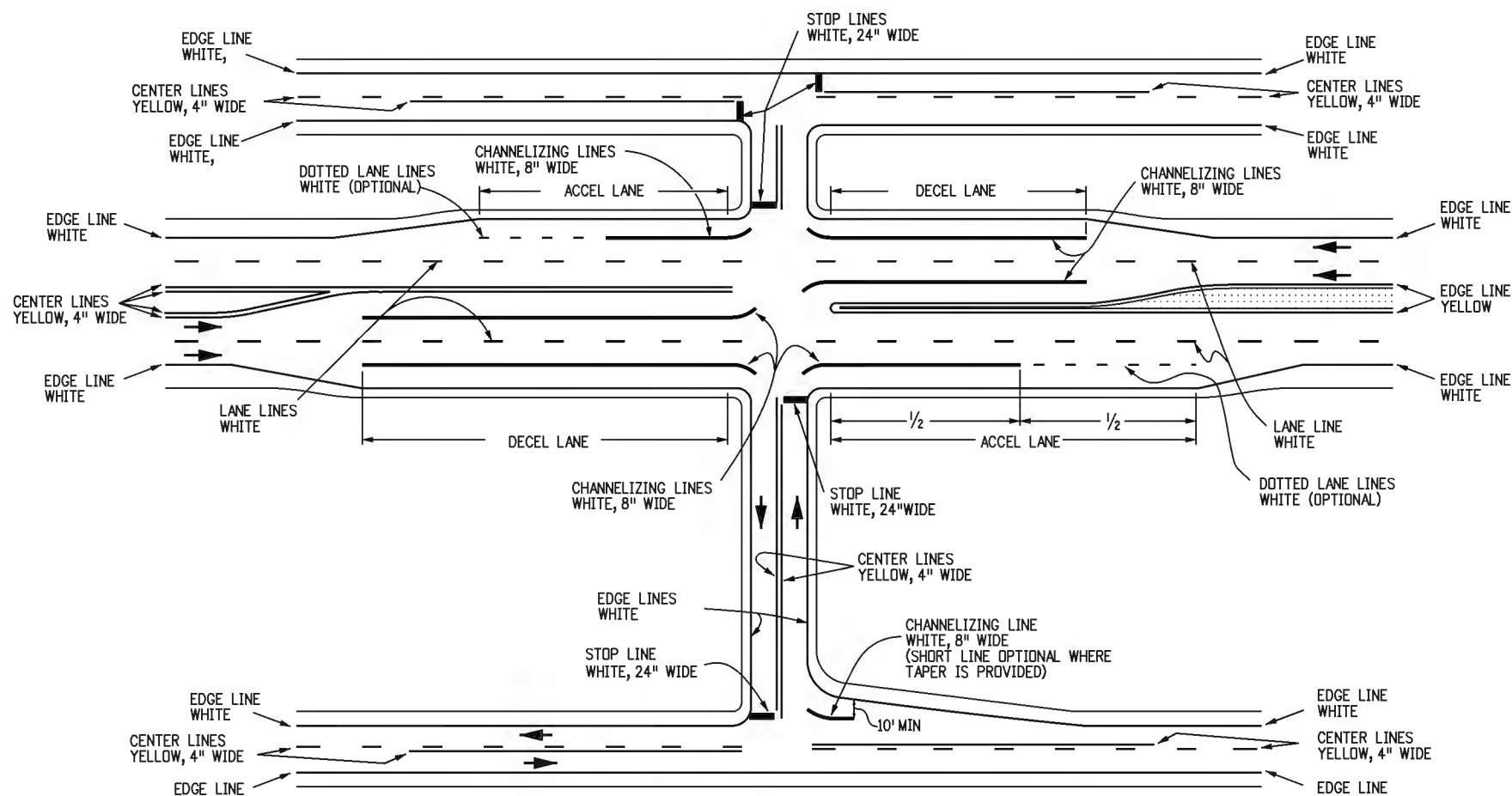
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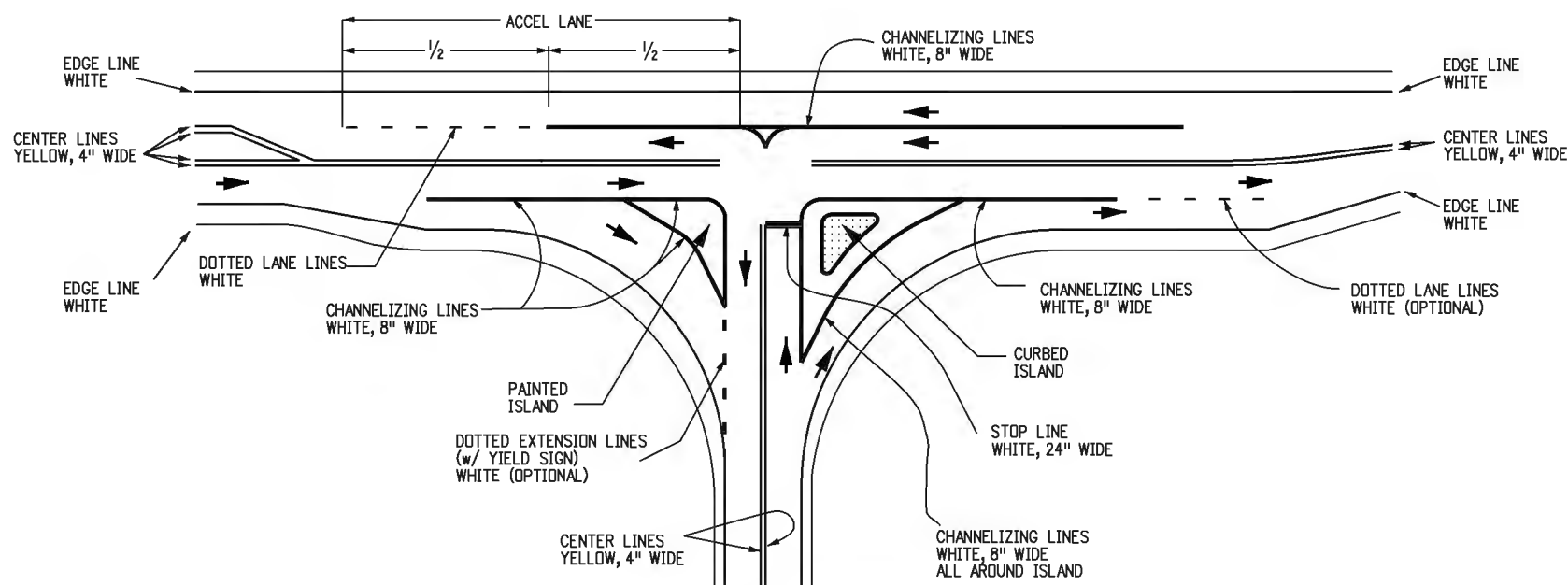
S-627-1

Standard Sheet No. 2 of 11

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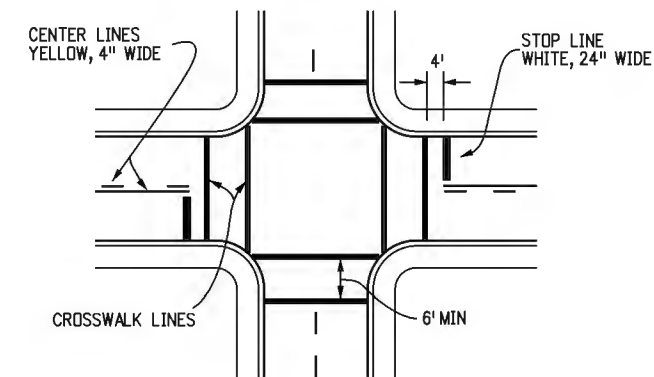


TYPICAL INTERSECTION MARKINGS

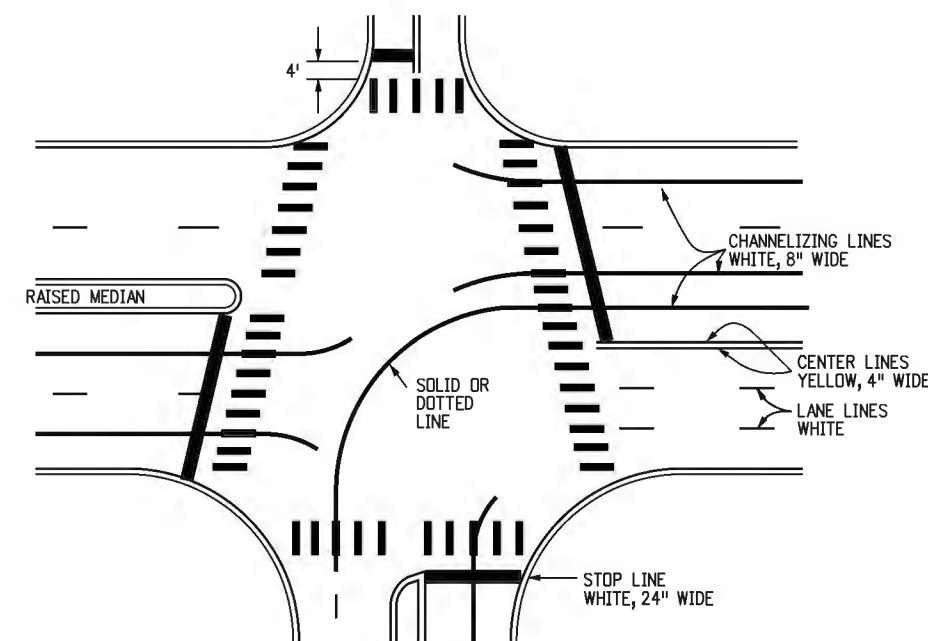


TYPICAL ISLAND MARKINGS

INTERSECTIONS, ISLANDS AND CROSSWALKS

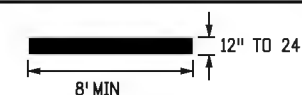


TYPICAL TRANSVERSE LINE CROSSWALK MARKINGS



TYPICAL CONTINENTAL CROSSWALK MARKINGS

CROSSWALK LINE DETAIL



LEGEND

→ Direction of Travel

CONTINENTAL CROSSWALK NOTES

1. CENTER CROSSWALKS ON CURB RAMPS. IF SUCH RAMPS ARE NOT PROVIDED, CENTER ON SIGNAL POLES WHEREVER PRACTICAL.
2. CENTER CROSSWALKS ON EDGE LINES, LANE LINES AND CHANNELIZING LINES.
3. CENTER CROSSWALKS BETWEEN ADJACENT LINES.
4. MARKINGS SHALL NOT BE WITHIN WHEEL PATH OF VEHICLES.
5. CENTER ON EXTENDED FLOW LINE.
6. LINES AND SPACES TO APPROXIMATE ADJACENT PATTERN.

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(R-1) 04/17/20	LINE WIDTH & CROSSWALK NOTES UPDATE

Colorado Department of Transportation

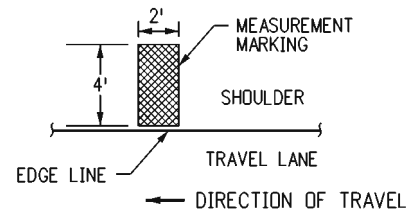
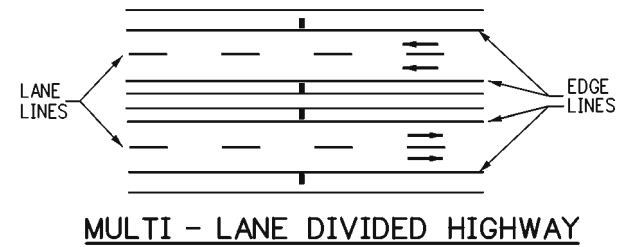
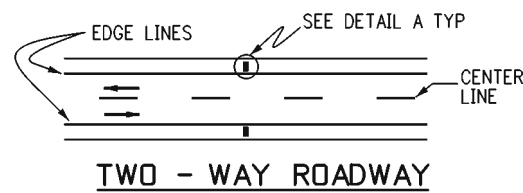
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PAVEMENT MARKINGS

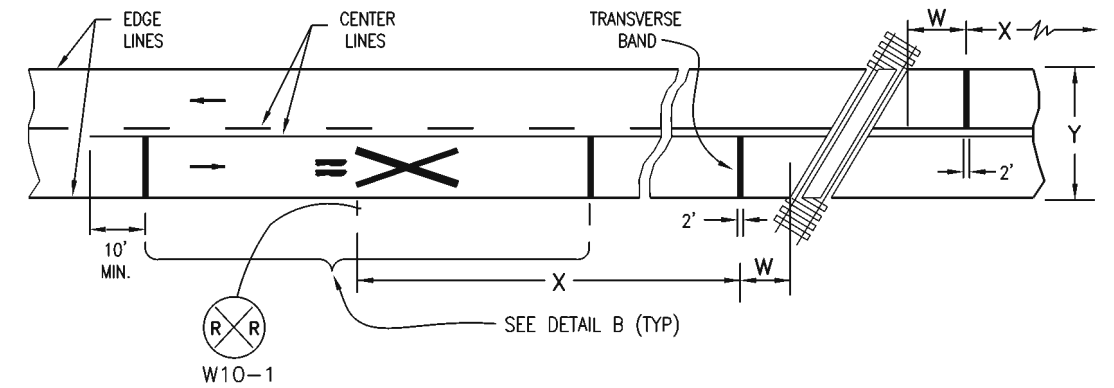
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STANDARD PLAN NO.
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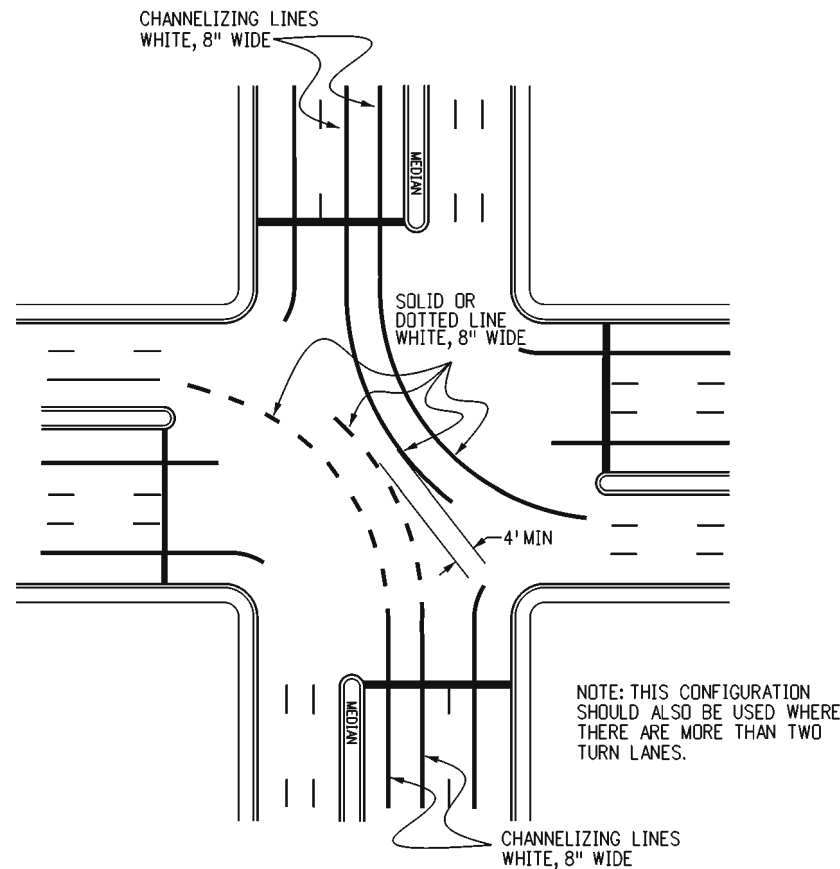


**DETAIL A**

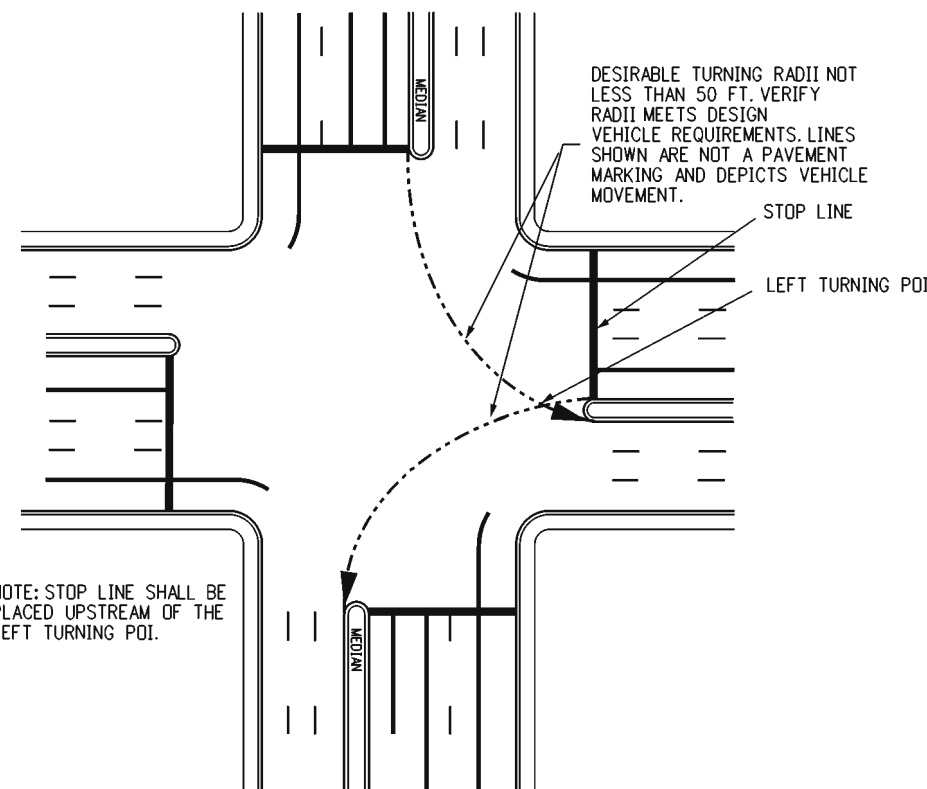
**TYPICAL SPEED MEASUREMENT MARKING**



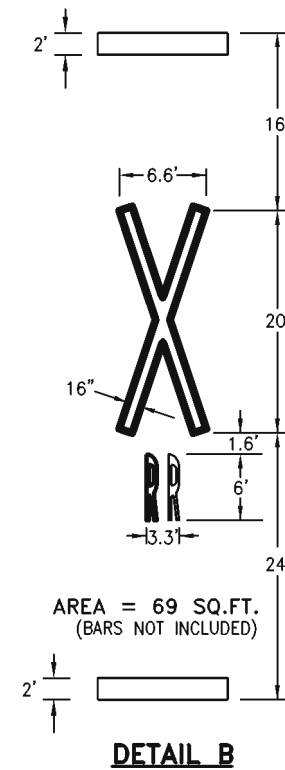
**TYPICAL PAVEMENT MARKING AT RAILROAD CROSSING**



**TYPICAL DOUBLE LEFT TURN MARKINGS**



**TYPICAL STOP LINE PLACEMENT**



- W= APPROXIMATELY 15 FT. (STOP LINE SHOULD BE 8' IN ADVANCE OF ACTIVE TRAFFIC CONTROL SYSTEMS; I.E., AUTOMATIC GATES AND/OR FLASHING SIGNALS).
- X= THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND THE SIGHT DISTANCE OF THE VEHICULAR TRAFFIC APPROACHING, BUT NOT LESS THAN 100 FT. (REFERENCE NOTE 1).
- Y= ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL RR SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

**NOTES**

1. THE WARNING SIGN SHALL BE PLACED ACCORDING TO THE WARNING SIGN PLACEMENT TABLE IN THE MUTCD (CHAPTER 2C, TABLE 2C-4). IF CONDITIONS DO NOT ALLOW PLACEMENT ACCORDING TO THE TABLE, IT SHALL BE AS APPROVED BY THE ENGINEER.
2. FOR RR SYMBOL DETAILS, REFER TO "THE STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION.

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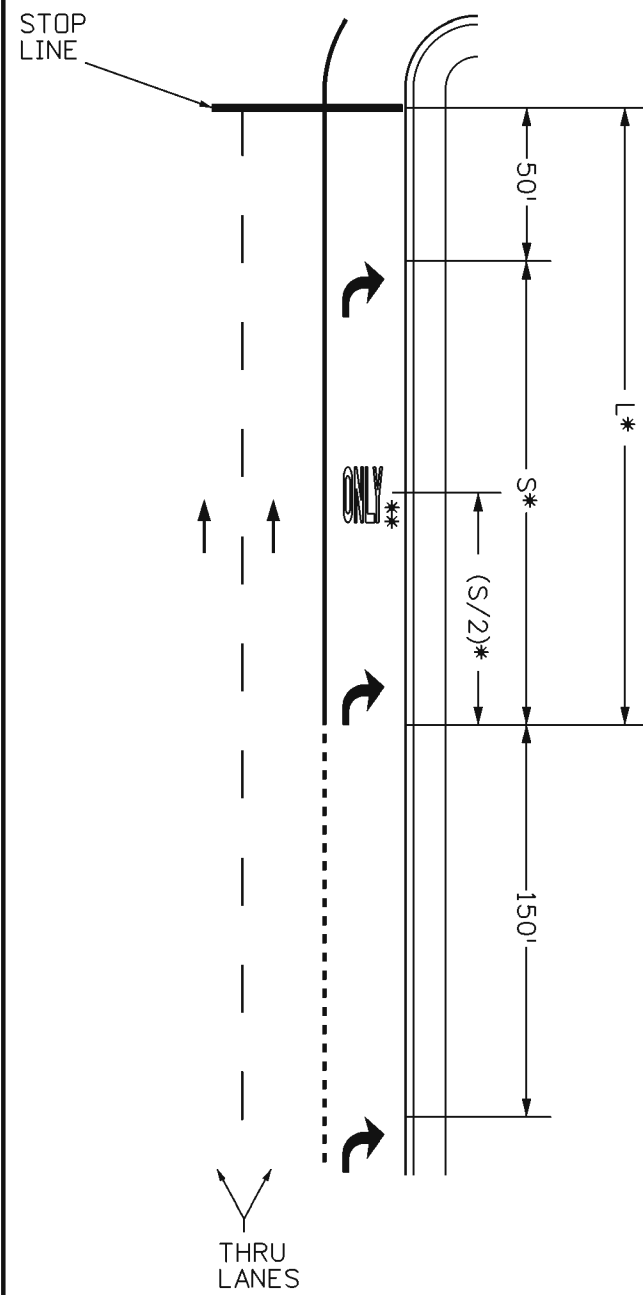
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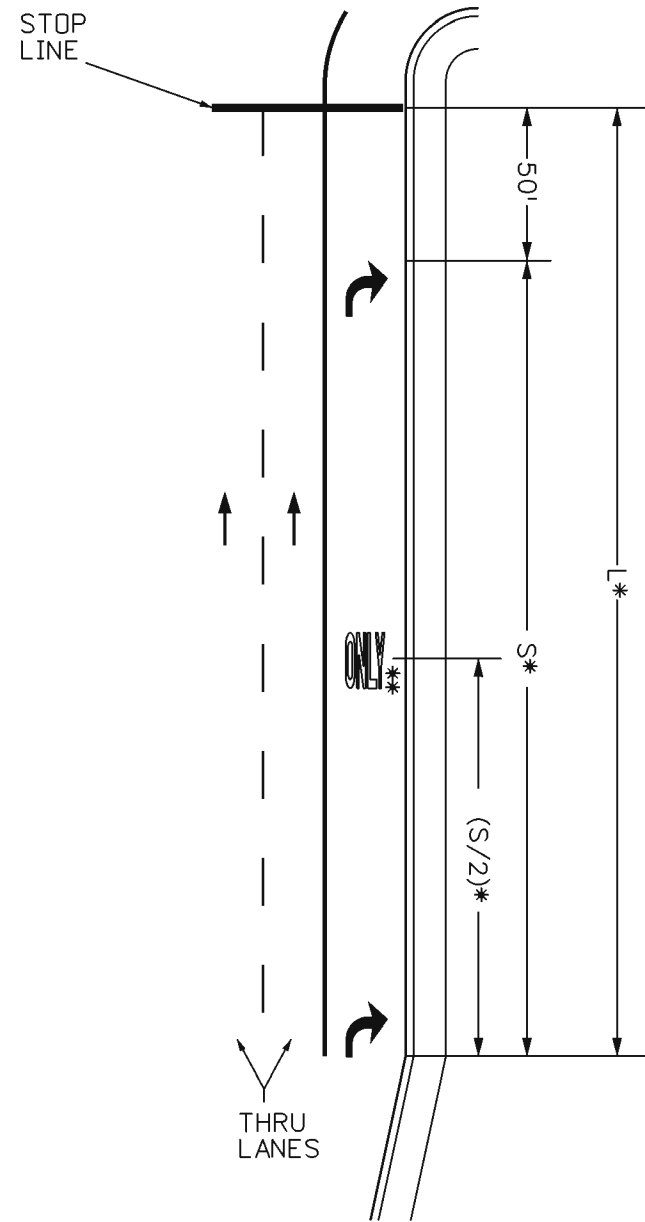
**PAVEMENT MARKINGS**

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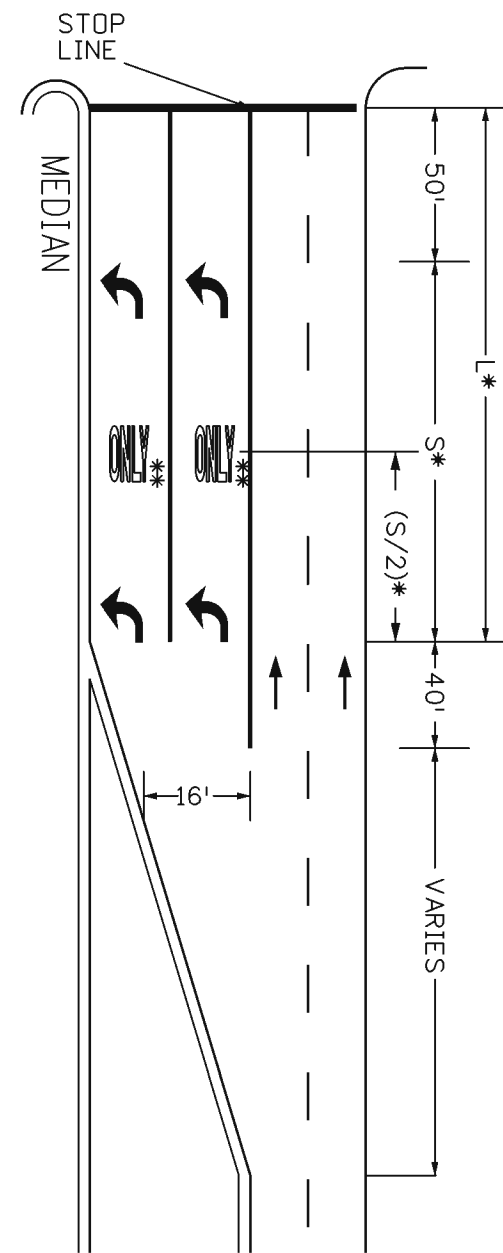
STANDARD PLAN NO.
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**LANE DROP**



**POCKET LANE**



**DOUBLE TURNING**

**ARROW PLACEMENTS AT INTERSECTIONS**

**GENERAL NOTES**

1. THE SPACING, IN THE TABLE APPLIES TO LEFT & RIGHT TURN LANES.
2. \*\* 'ONLY' MARKING IS OPTIONAL. CONTACT REGION TRAFFIC ENGINEER FOR DIRECTION.
3. WHEN ONE (1) ARROW IS USED, IT SHALL BE PLACED AT THE BEGINNING OF THE FULL WIDTH TURN LANE, OTHERWISE USE THE TABLE BELOW FOR ARROW PLACEMENT.

LENGTH (L)	LEFT AND RIGHT TURN ARROW		NO. OF 'ONLY' PER LANE
	NO. OF ARROWS PER LANE	SPACING (S)	
L < 200'	1	NA	NA
200' - 350'	2	EVENLY SPACED BETWEEN 150'-300'	1
350' - 650'	3		2
650' - 950'	4		3
950' ≤	≥5		≥4

\*L (LENGTH) AND \*S (SPACING) PROVIDED IN THE TABLE ABOVE WILL HELP DETERMINE THE NUMBER OF ARROWS AND ONLY MARKINGS NEEDED PER LANE.

**LEGEND**

→ Direction of Travel

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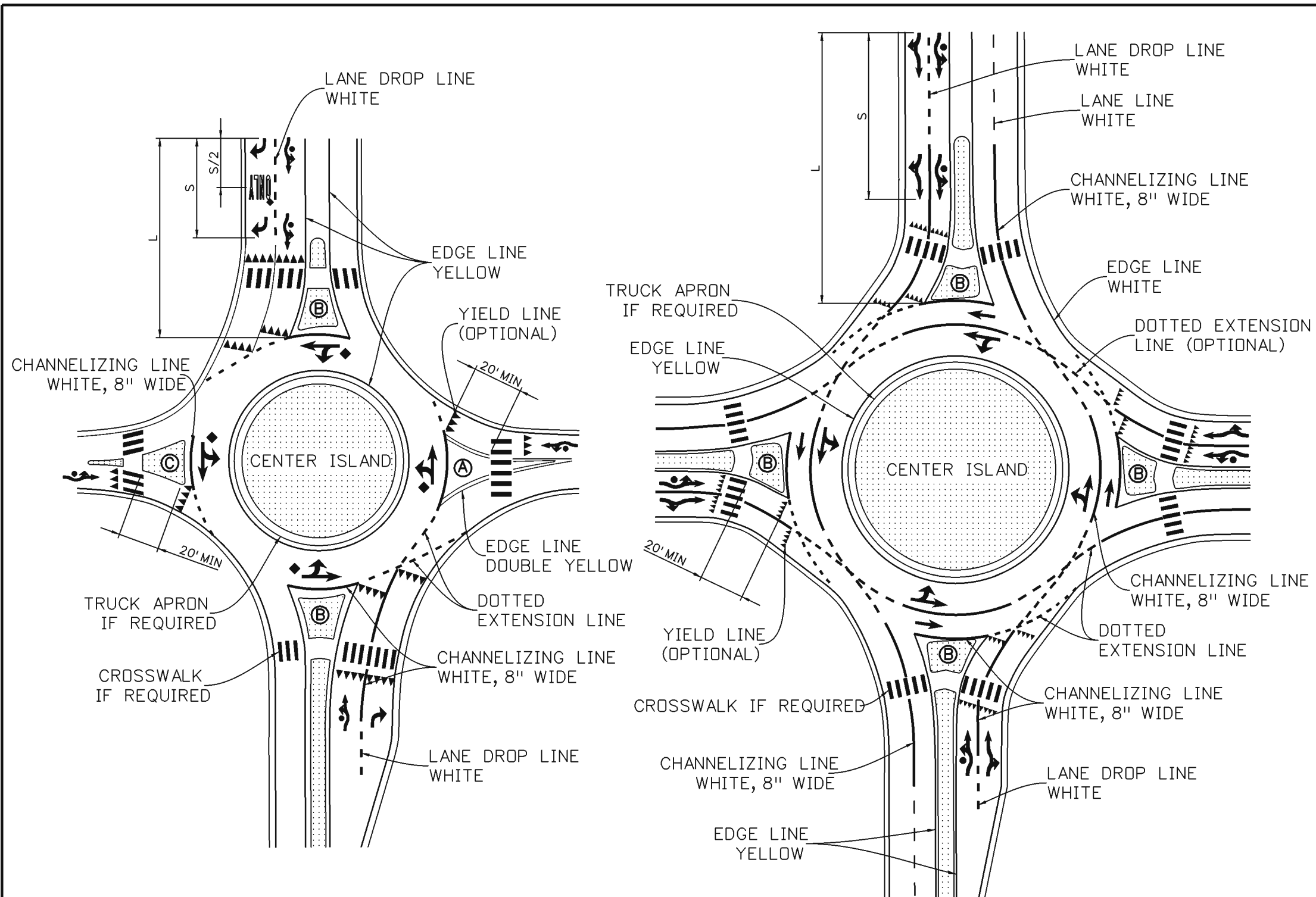
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**PAVEMENT MARKINGS**

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**SINGLE LANE ROUNDABOUT (TYPICAL)**  
 NOTE: SPLITTER ISLAND MAY BE FORMED BY TWO YELLOW LINES, RAISED NON-MOUNTABLE, OR RAISED MOUNTABLE.

**TWO LANE ROUNDABOUT (TYPICAL)**

**ROUNDABOUT PAVEMENT MARKINGS**

**NOTES**

1. UNLESS SHOWN IN THIS STANDARD, THE WIDTHS OF PAVEMENT MARKINGS SHALL MATCH THE LARGEST LINE WIDTH OF THE ADJACENT FACILITIES.
2. PAVEMENT MARKING LINES ALONG NON-MOUNTABLE SPLITTER ISLANDS ARE OPTIONAL.
3. NORMAL LANE-USE ARROWS SHALL BE USED IN THE ROUNDABOUT.
4. NORMAL OR FISH-HOOK LANE-USE ARROWS MAY BE USED ON THE APPROACH. ADVANCED SIGNING SHALL MATCH THE PAVEMENT MARKING USED.
  - A. WHEN ONE (1) ARROW IS USED ON THE APPROACH, IT SHALL BE PLACED AT THE BEGINNING OF THE CHANNELIZING LINE. OTHERWISE, USE TABLE BELOW.
5. THE INSCRIBED OVAL IS OPTIONAL AND MAY BE COMBINED WITH THE LANE-USE ARROW IN THE LEFT-MOST LANE.
6. SEE SHEET 10 FOR LANE-USE ARROW DIMENSIONS.
7. YIELD LINES UTILIZED AT CROSSWALK SHALL BE PLACED 20 TO 50 FEET IN ADVANCED OF THE CROSSWALK.

LENGTH (L)	LEFT AND RIGHT TURN ARROW		NO. OF 'ONLY' PER LANE
	NO. OF ARROWS PER LANE	SPACING (S)	
L < 200'	1	NA	NA
200' - 350'	2	EVENLY SPACED BETWEEN 150'-300'	1
350' - 650'	3		2
650' - 950'	4		3
950' ≤	≥5		≥4

**LEGEND**

- (A) SPLITTER ISLAND FORMED BY TWO YELLOW LINES
- (B) RAISED NON-MOUNTABLE SPLITTER ISLAND
- (C) MOUNTABLE SPLITTER ISLAND
- ◆ OPTIONAL

Computer File Information	
Creation Date:	04/14/23
Created By:	AVu
Last Modification Date:	
Last Modified By:	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

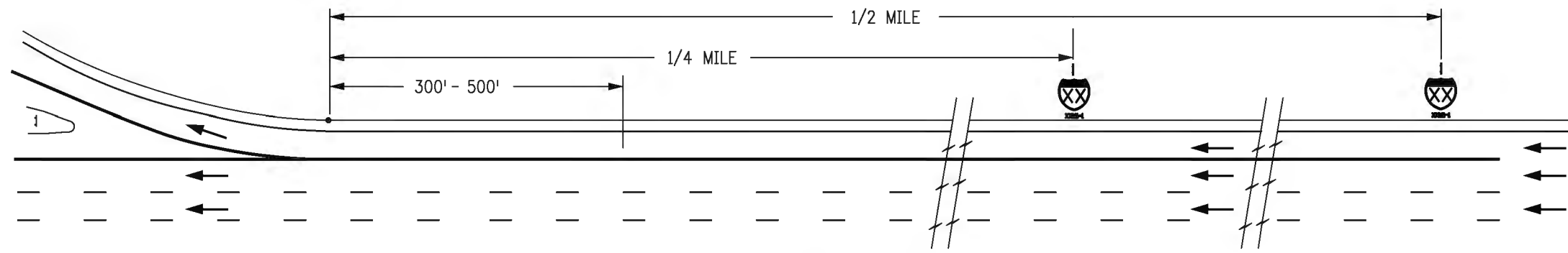
Colorado Department of Transportation  
 2829 W. Howard Pl.  
 Denver, CO 80204  
 Phone: 303-757-9654  
 FAX: 303-757-9219

**Traffic Safety & Engineering** EB

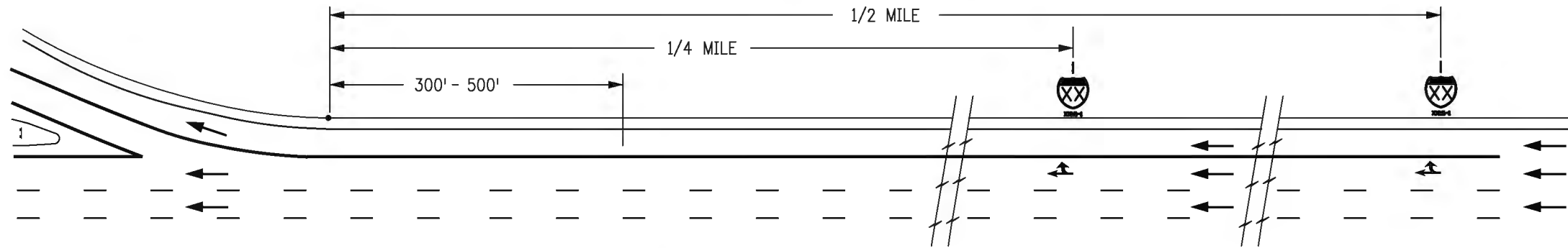
**PAVEMENT MARKINGS**

Issued By: Traffic Safety & Engineering Branch July 31, 2019

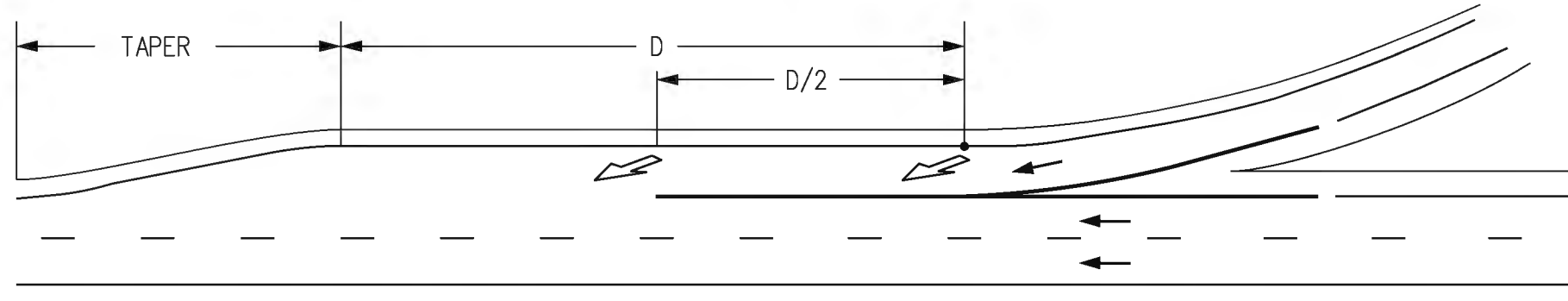
STANDARD PLAN NO.
S-627-1
Standard Sheet No. 6 of 11
Project Sheet Number:



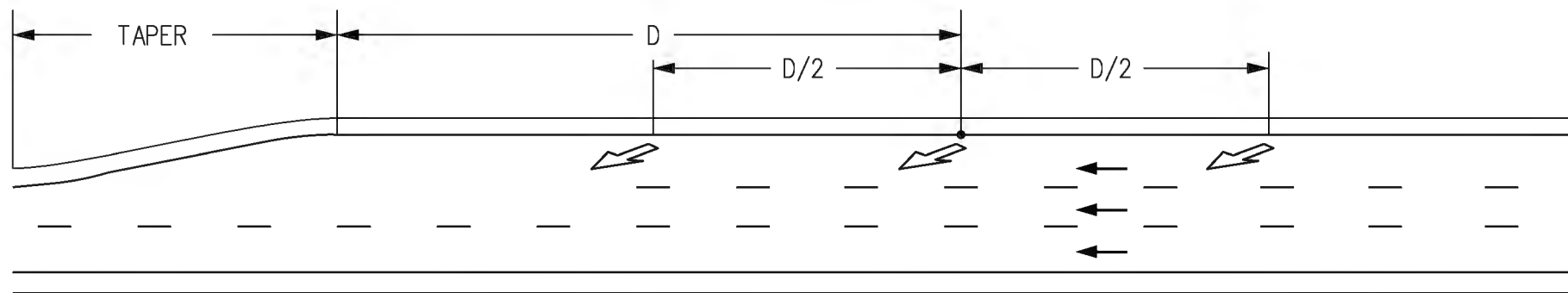
TYPICAL SHIELD PLACEMENT



TYPICAL SHIELD & OPTION ARROW PAVEMENT MARKING PLACEMENT



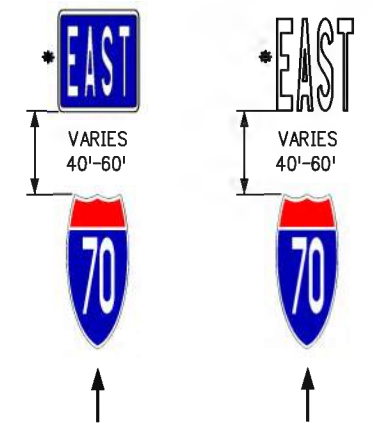
TRANSITION LANE MARKINGS



THRU LANE REDUCTION MARKINGS

LANE REDUCTION TRANSITION MARKINGS

SHIELD LAYOUT DETAIL



NOTES

D = THE DISTANCE FROM THE PAVEMENT WIDTH TRANSITION SIGN (W4-2) TO THE BEGINNING OF THE TRANSITION TAPER.

\* SEE GENERAL NOTE 2 ON SHEET 9.

LEGEND

← Direction of Travel

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Sheet Revisions

Date:	Comments
04/14/23	UPDATED SHEET NUMBER
07/22/22	Lane Drop to Thru Lane Reduction Markings

Colorado Department of Transportation



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FAX: 303-757-9219

Traffic Safety & Engineering

EB

PAVEMENT MARKINGS

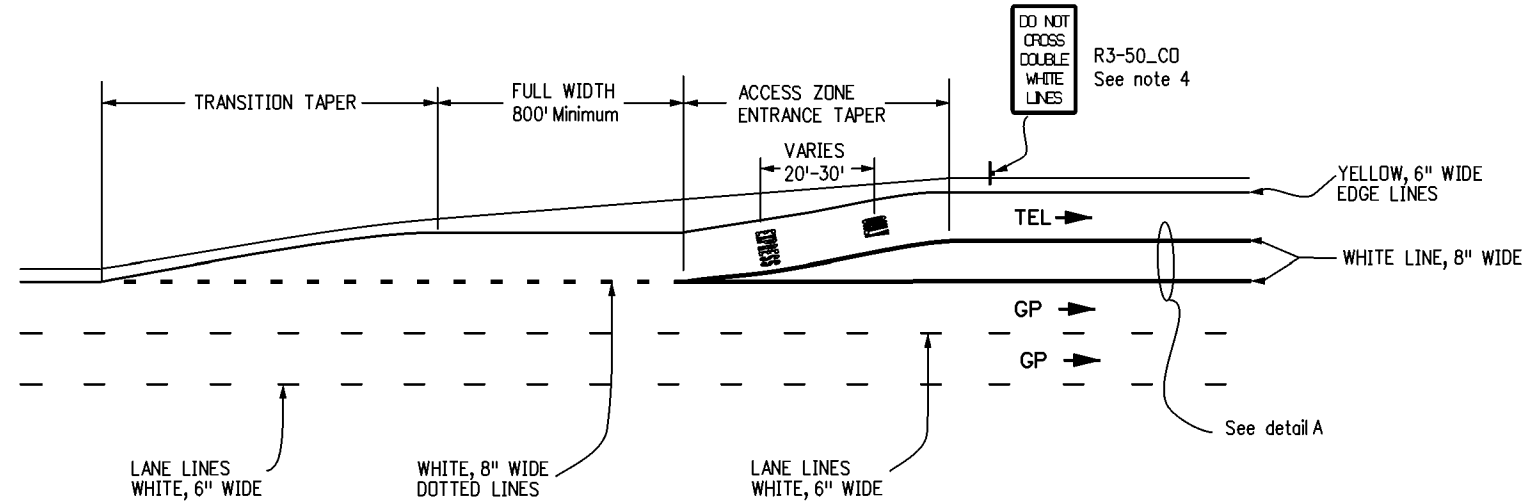
Issued By: Traffic Safety & Engineering Branch July 31, 2019

STANDARD PLAN NO.

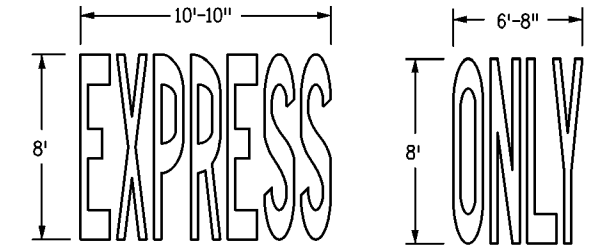
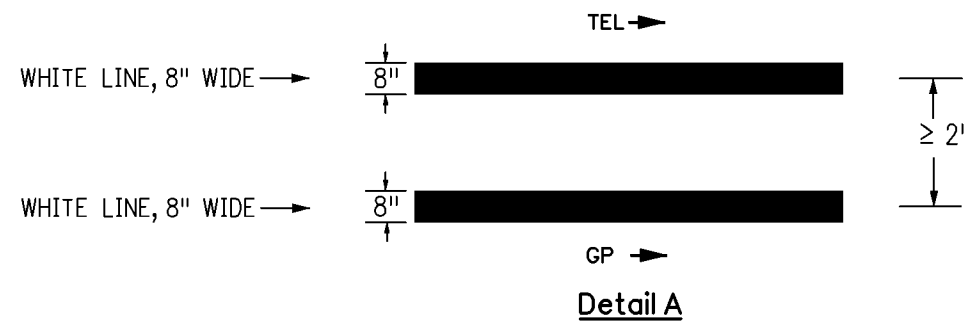
S-627-1

Standard Sheet No. 7 of 11

Project Sheet Number:



**TYPICAL ENTRANCE MARKING FOR BUFFER WIDTH  $\geq 2'$  AND WHERE BUFFER CROSSING IS PROHIBITED**



**GENERAL NOTES**

- For transition taper use 25:1 ratio.
- For access zone entrance taper length use:
 
$$L = S \times W$$
 L = MINIMUM LENGTH OF TAPER  
 S = DESIGN SPEED FOR NEW CONSTRUCTION OR NUMERICAL VALUE OF THE POSTED SPEED LIMIT  
 W = WIDTH TRANSITIONED
- If buffer space is wider than 4 feet, chevron markings are required (See MUCTD Section 3B.24 and figure 3D.2(A)).
- For each section prohibiting entering and exiting movements, the R3-50\_CD sign shall be installed within 300 feet of the start of the express lane. Additional R3-50\_CD signing shall be installed as shown in the plans.
- For each section prohibiting entering and exiting movements, an EXPRESS ONLY marking should be placed within 50 feet of the start of the express lane.
- EXPRESS ONLY markings should supplement the signs.

**LEGEND**

TEL - TOLL/EXPRESS LANE  
 GP - GENERAL PURPOSE LANE

**TOLL EXPRESS LANE PAVEMENT MARKINGS**

<b>Computer File Information</b>		<b>Sheet Revisions</b>		Colorado Department of Transportation 2829 W. Howard Pl. Denver, CO 80204 Phone: 303-757-9654 FAX: 303-757-9219 <b>Traffic Safety &amp; Engineering</b> EB	<b>PAVEMENT MARKINGS</b>  Issued By: Traffic Safety & Engineering Branch July 31, 2019	<b>STANDARD PLAN NO.</b>	
Creation Date: 07/31/19		<b>Date:</b>	<b>Comments</b>			S-627-1	
Created By: EButta		(R-2) 04/14/23	ADD LEGEND & UPDATED SHEET NUMBER			Standard Sheet No. 8 of 11	
Last Modification Date: 04/14/23		(R-1) 04/17/20	STRIPING LAYOUT & GENERAL NOTE UPDATE				
Last Modified By: AVu						Project Sheet Number:	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							

**WORD AND SYMBOL NOTES**

- IF HEIGHT IS INCREASED OR DECREASED THEN ALL MEASUREMENTS CHANGE PROPORTIONATELY. EXAMPLE: "H" MEASUREMENT FOR STOP IS REDUCED TO 4 FT. FROM 8 FT. THEN SQUARE FEET 5.75 (1/4 OF 23.0 SQ. FT.).
- PAVEMENT WORD AND SYMBOL MARKINGS, TRANSVERSE AND LONGITUDINAL (CONTINENTAL) CROSSWALK LINES, AND STOP LINES WILL BE PAID FOR IN SQUARE FEET USING THEIR SPECIFIC BID ITEMS.
- LETTER SPACING SHALL BE 8 IN. EXCEPT FOR THE LETTER "A" WHICH IS 6 IN..
- USE THE MARKING WORD "BIKE" IF 6 FT. TO 8 FT. BIKE LANES ARE INSTALLED.

**TAPERING NOTES**

- ALL PAVEMENT MARKING APPROACH EDGES FROM THE VEHICLE DIRECTION OF TRAVEL SHALL BE TAPERED USING A PUTTY KNIFE OR SIMILAR TOOL.

**DESIGNATED PAYMENT AREAS**

FOR THE FOLLOWING H, W, AND S DIMENSIONS PAY:

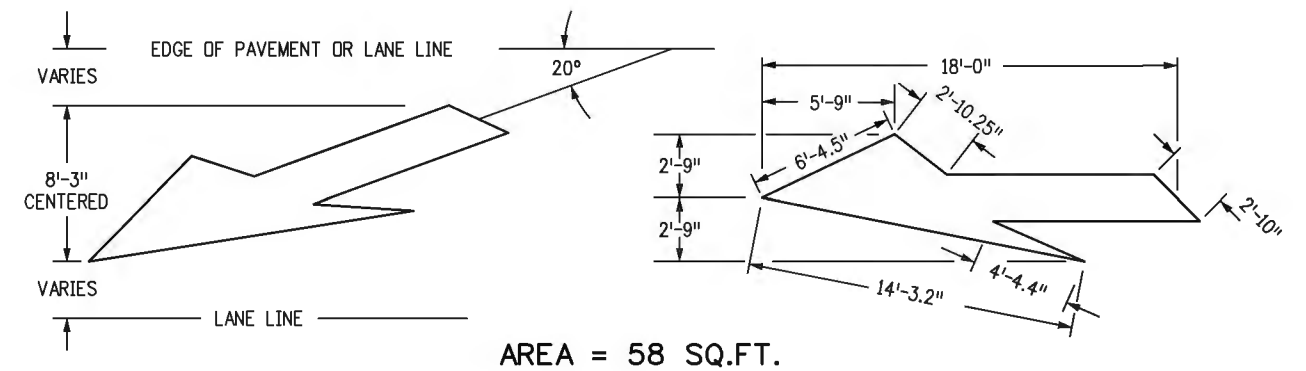
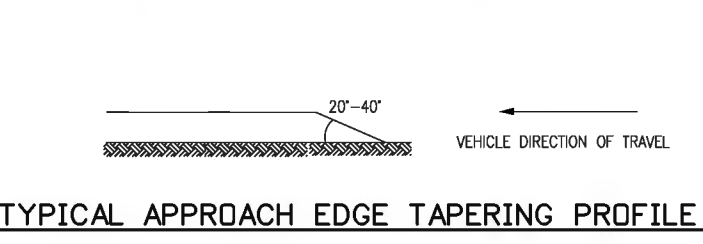
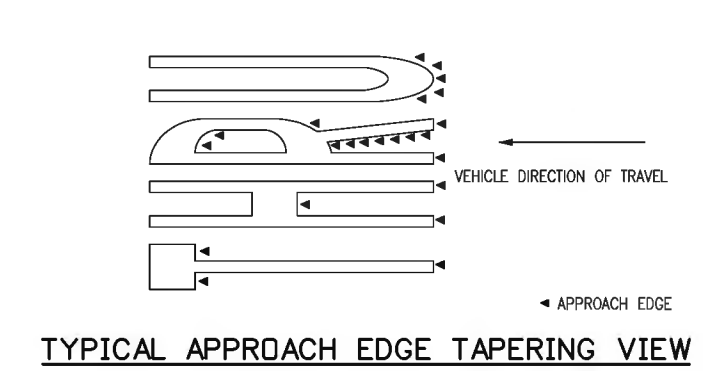
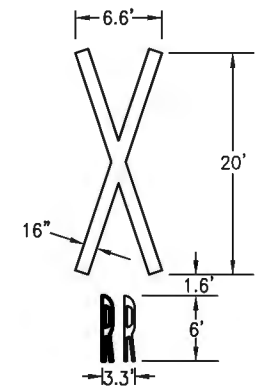
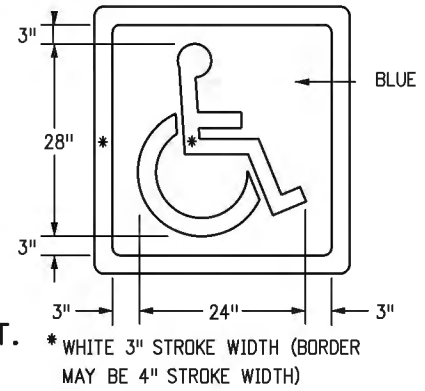
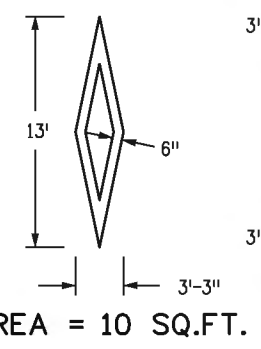
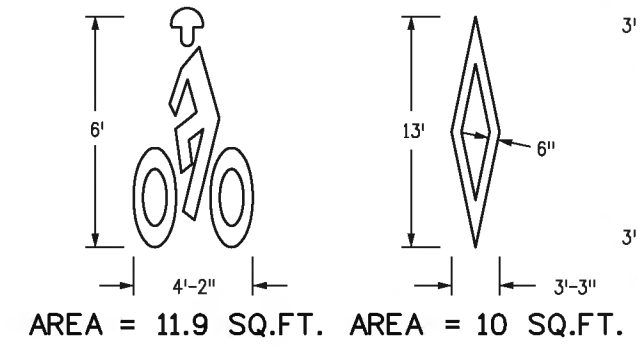
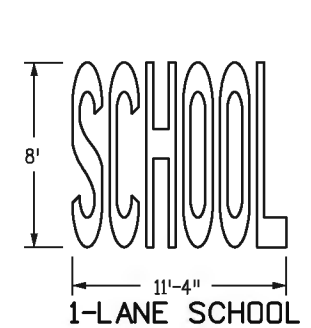
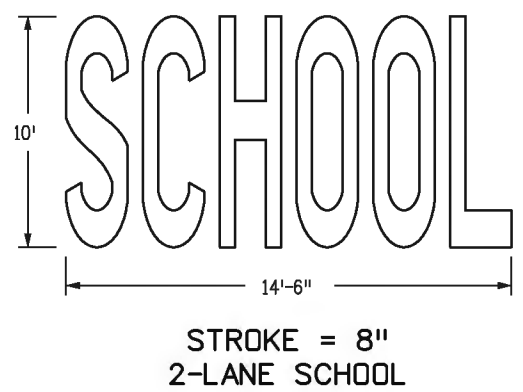
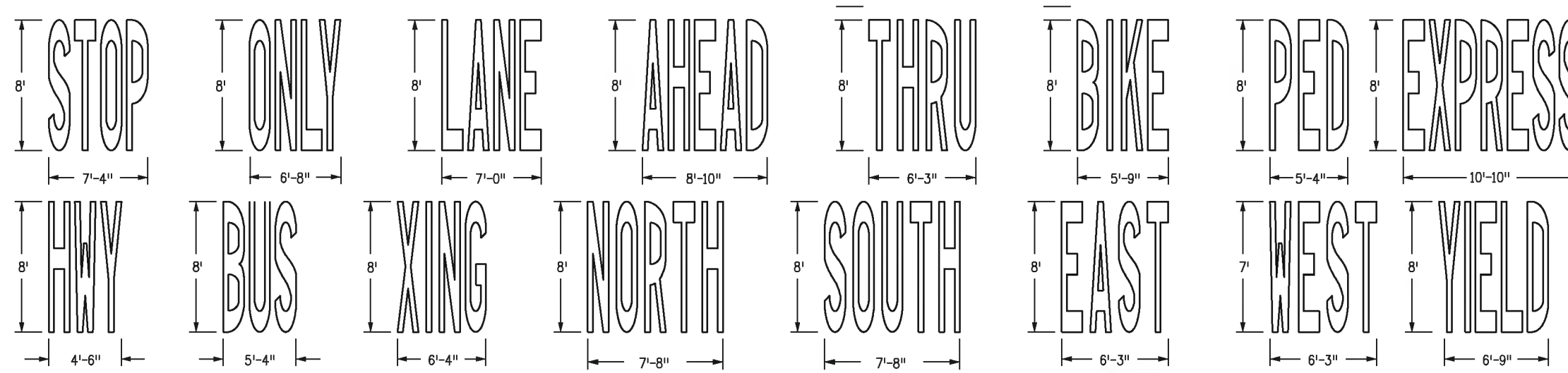
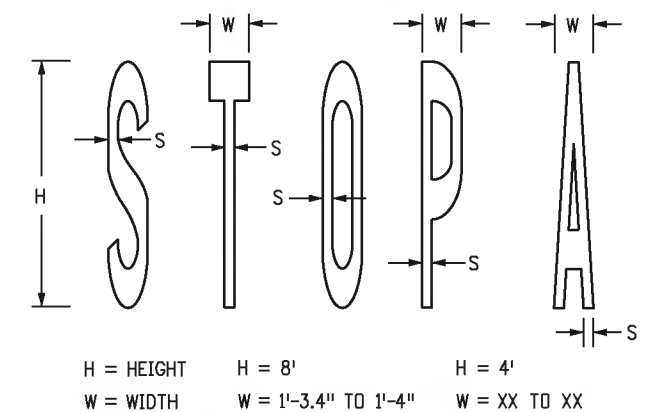
**H = 4' WORDS**

- BIKE - 5.5 SQ.FT.
- LANE - 6.0 SQ.FT.
- ONLY - 6.0 SQ.FT.
- XING - 5.0 SQ.FT.

**H = 8' WORDS**

- STOP - 23.0 SQ.FT.
- ONLY - 22.5 SQ.FT.
- AHEAD - 29.0 SQ.FT.
- BUS - 18.5 SQ.FT.
- SCHOOL(1L) - 33.0 SQ.FT.
- SCHOOL(2L) - 85.0 SQ.FT.
- NORTH - 30.6 SQ.FT.
- EAST - 22.1 SQ.FT.
- X with RR - 69 SQ.FT.
- YIELD - 23 SQ.FT.
- XING - 20.0 SQ.FT.
- LANE - 22.5 SQ.FT.
- BIKE - 21.0 SQ.FT.
- HWY - 16.5 SQ.FT.
- THRU - 22.0 SQ.FT.
- PED - 17.5 SQ.FT.
- SOUTH - 28.5 SQ.FT.
- WEST - 23.7 SQ.FT.
- EXPRESS - 41 SQ.FT.

**TYPICAL LETTER MEASUREMENTS**



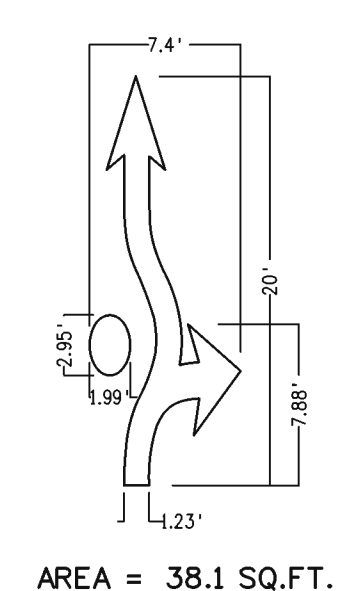
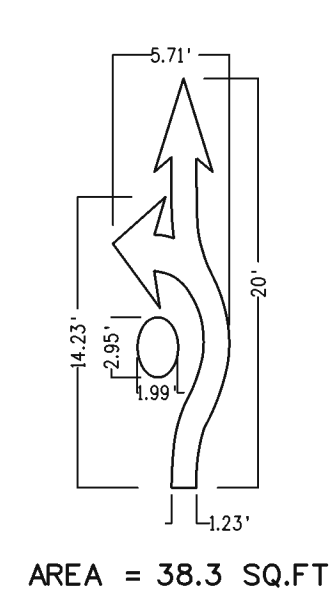
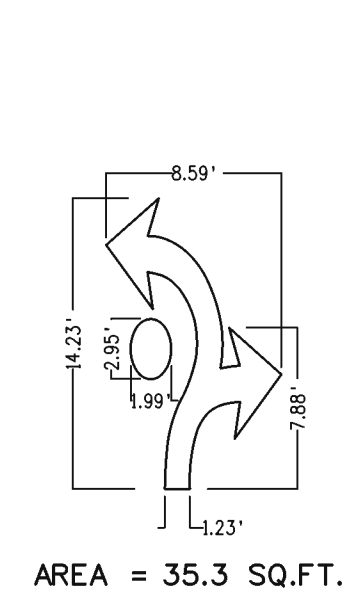
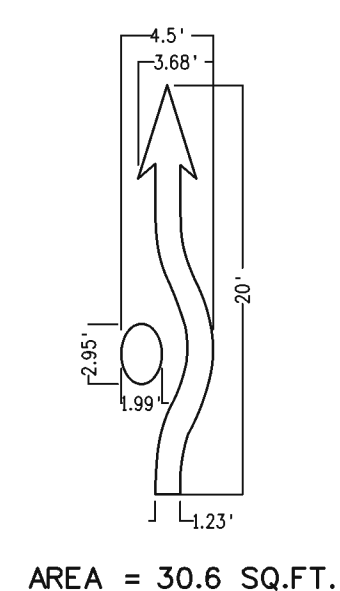
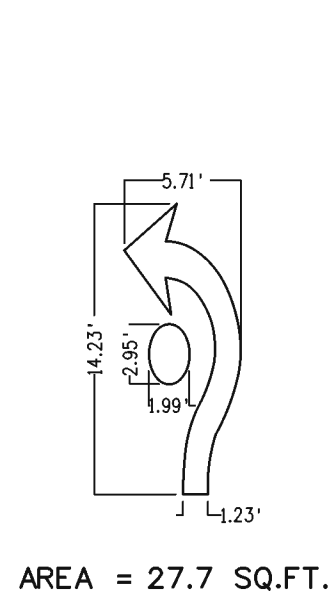
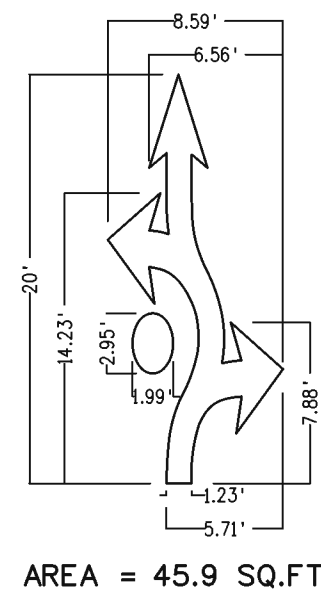
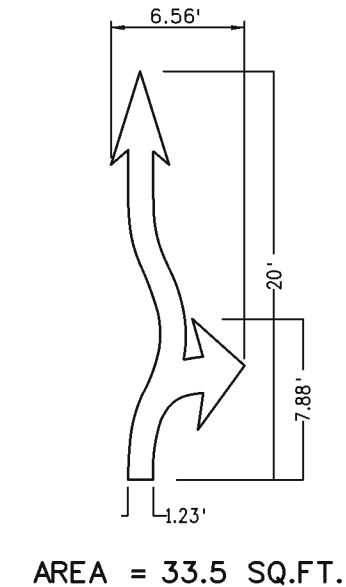
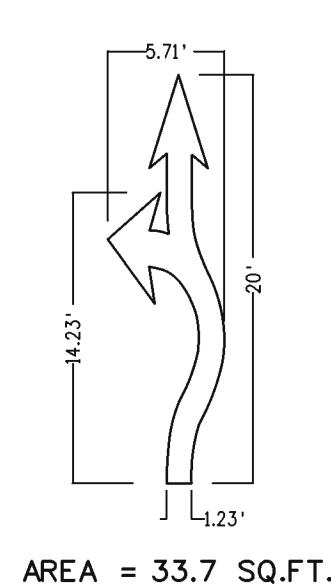
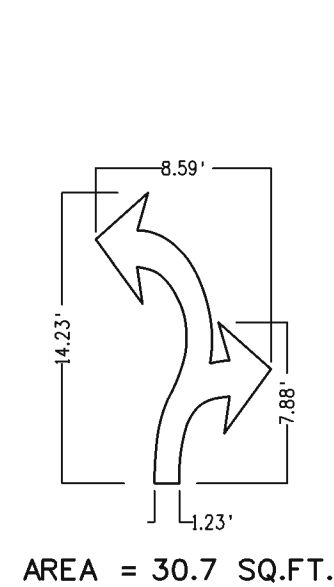
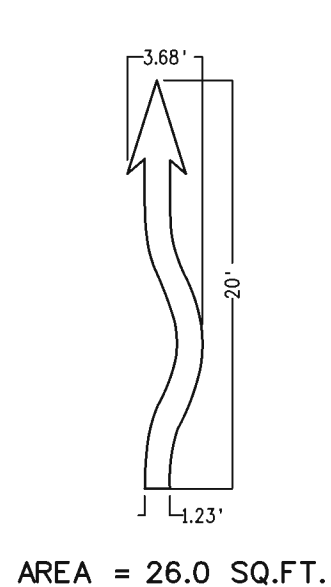
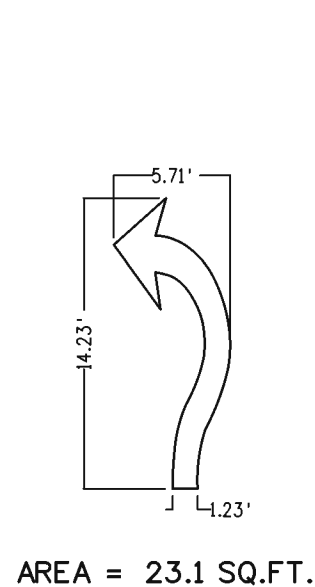
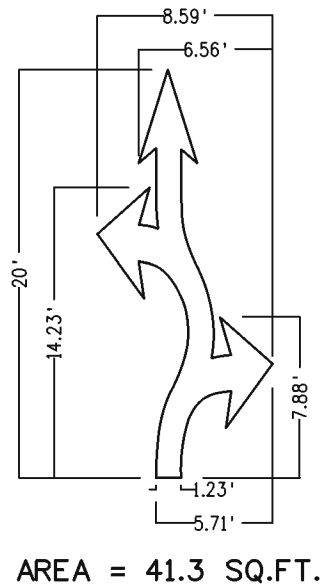
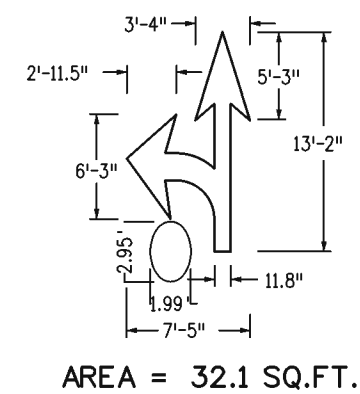
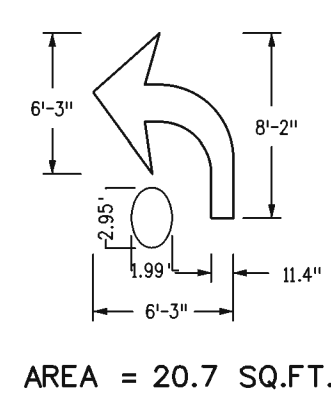
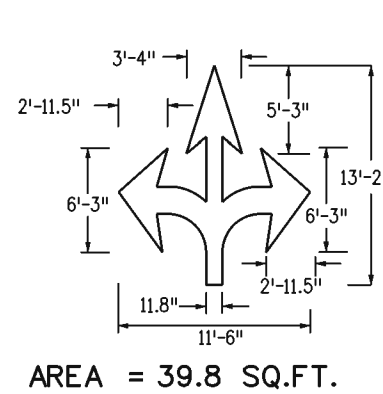
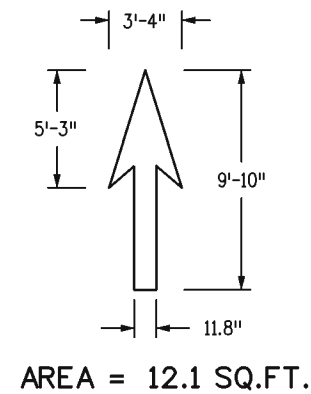
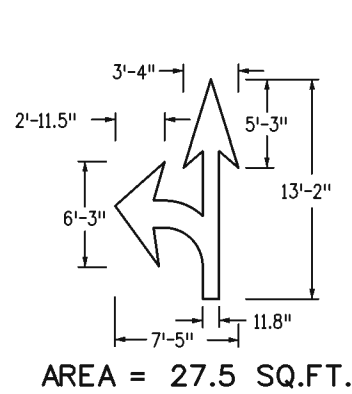
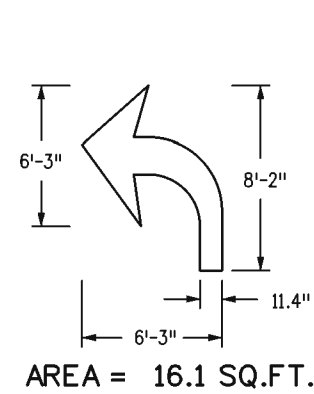
**PAVEMENT MARKING WORDS AND SYMBOLS (PAGE 1)**

<b>Computer File Information</b> Creation Date: 07/04/12 Created By: SCL Last Modification Date: 04/14/23 Last Modified By: AVu CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English		<b>Sheet Revisions</b> <table border="1"> <tr> <th>Date:</th> <th>Comments</th> </tr> <tr> <td>04/14/23</td> <td>MOVED ARROWS DIMENSIONS TO SHEET 10 UPDATED SHEET NUMBER</td> </tr> </table>		Date:	Comments	04/14/23	MOVED ARROWS DIMENSIONS TO SHEET 10 UPDATED SHEET NUMBER	<b>Colorado Department of Transportation</b> 2829 W. Howard Pl. Denver, CO 80204 Phone: 303-757-9654 FAX: 303-757-9219 <b>Traffic Safety &amp; Engineering</b>		<b>PAVEMENT MARKINGS</b> Issued By: Traffic Safety & Engineering Branch July 31, 2019		<b>STANDARD PLAN NO.</b> S-627-1 <b>Standard Sheet No. 9 of 11</b> Project Sheet Number:	
Date:	Comments												
04/14/23	MOVED ARROWS DIMENSIONS TO SHEET 10 UPDATED SHEET NUMBER												




**WORD AND SYMBOL NOTES**

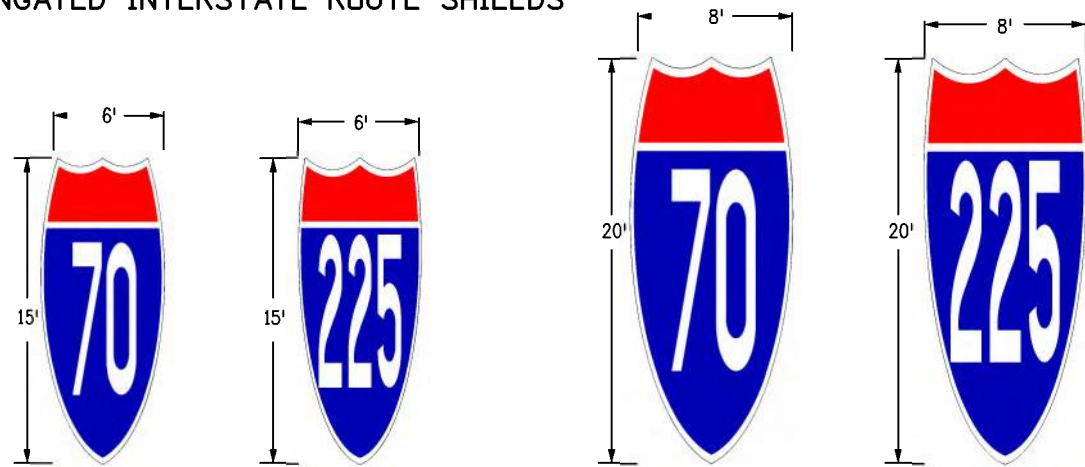
1. IF HEIGHT IS INCREASED OR DECREASED THEN ALL MEASUREMENTS CHANGE PROPORTIONATELY. EXAMPLE: "H" MEASUREMENT FOR STOP IS REDUCED TO 4 FT. FROM 8 FT. THEN SQUARE FEET 5.75 (1/4 OF 23.0 SQ. FT.).
2. PAVEMENT WORD AND SYMBOL MARKINGS, TRANSVERSE AND LONGITUDINAL (CONTINENTAL) CROSSWALK LINES, AND STOP LINES WILL BE PAID FOR IN SQUARE FEET USING THEIR SPECIFIC BID ITEMS.



**PAVEMENT MARKING WORDS AND SYMBOLS (PAGE 2)**

<b>Computer File Information</b>		<b>Sheet Revisions</b>		Colorado Department of Transportation  2829 W. Howard Pl. Denver, CO 80204 Phone: 303-757-9654 FAX: 303-757-9219 <b>Traffic Safety &amp; Engineering</b>	<b>PAVEMENT MARKINGS</b> Issued By: Traffic Safety & Engineering Branch July 31, 2019	<b>STANDARD PLAN NO.</b>	
Creation Date: 04/14/23		Date:	Comments			S-627-1	
Created By: AVu						Standard Sheet No. 10 of 11	
Last Modification Date:							
Last Modified By:							
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				EB	Project Sheet Number:		

**ELONGATED INTERSTATE ROUTE SHIELDS**



**DESIGNATED PAYMENT AREAS**

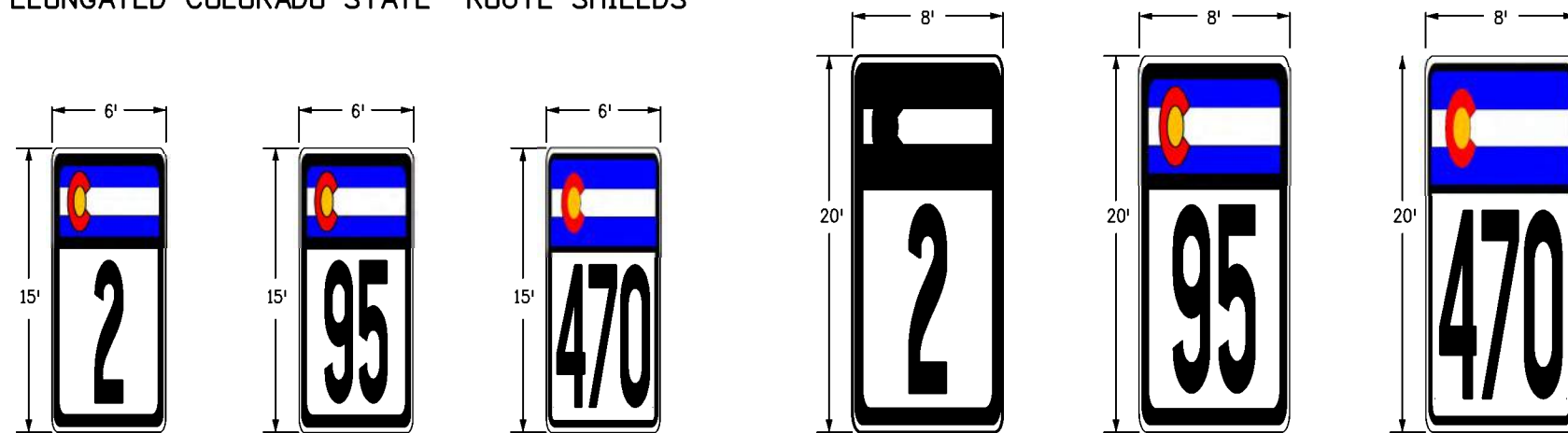
FOR THE FOLLOWING ROUTE SHIELDS & CARDINAL DIRECTIONS DIMENSIONS PAY:

INTERSTATE	
6' X 15' - 75 SQ.FT.	8' X 20' - 128 SQ.FT.
COLORADO STATE	
6' X 15' - 90 SQ.FT.	8' X 20' - 160 SQ.FT.
US HIGHWAYS	
7' X 16' - 112 SQ.FT.	9' X 21' - 189 SQ.FT.
CARDINAL	
8' X 10' - 80 SQ.FT.	9' X 10' - 90 SQ.FT.

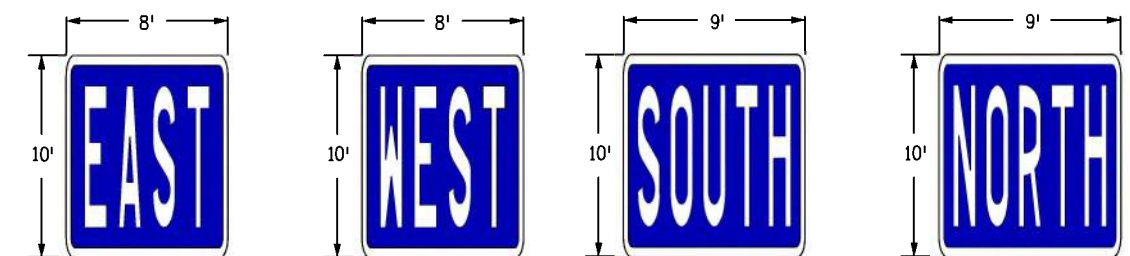
**NOTES**

- DIMENSIONS**  
ELONGATED ROUTE SHIELDS SHALL BE AT LEAST 8'x20' WHEN USED ON HIGH SPEED ROADWAYS (55 MPH OR MORE).  
PER FIGURE 3B-25 OF THE 2009 MUTCD ELONGATED ROUTE SHIELD COLORS SHALL CONFORM WITH THE STANDARD HIGHWAY SIGNS AND MARKINGS BOOK.
- CARDINAL DIRECTIONS**  
USE CARDINAL DIRECTIONS WITH WHITE ON BLUE WHEN USING INTERSTATE ROUTE SHIELDS  
USE CARDINAL DIRECTIONS WITH BLACK ON WHITE WHEN USING EITHER COLORADO STATE OR US HIGHWAY ROUTE SHIELDS.  
CARDINAL DIRECTION MARKING WORD SYMBOL FROM PAGE 8 OF 9 MAY BE USED INSTEAD OF PLAQUE.

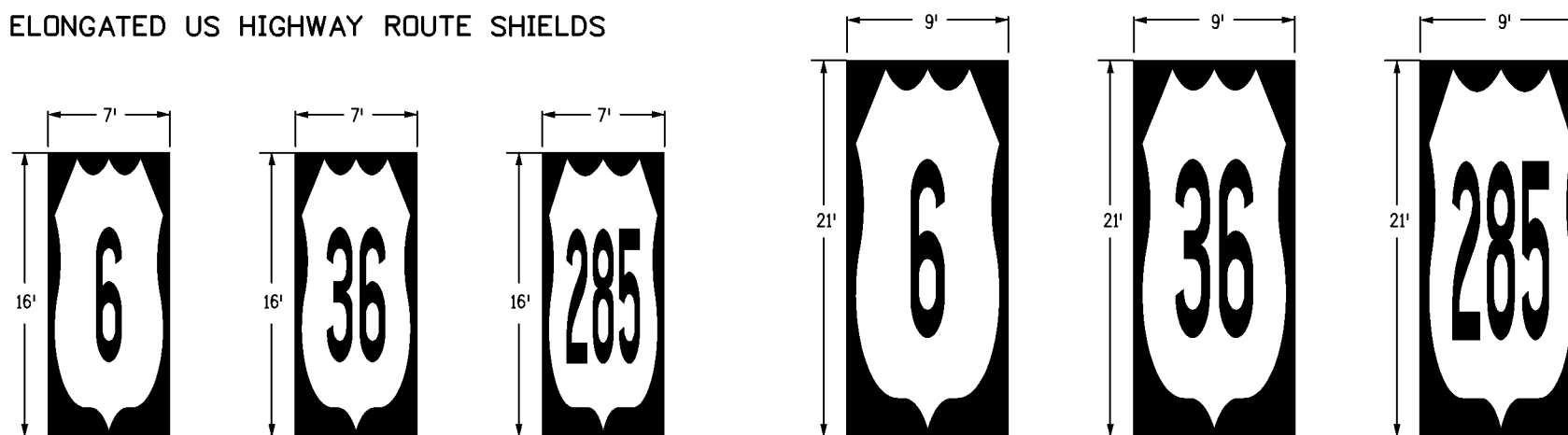
**ELONGATED COLORADO STATE ROUTE SHIELDS**



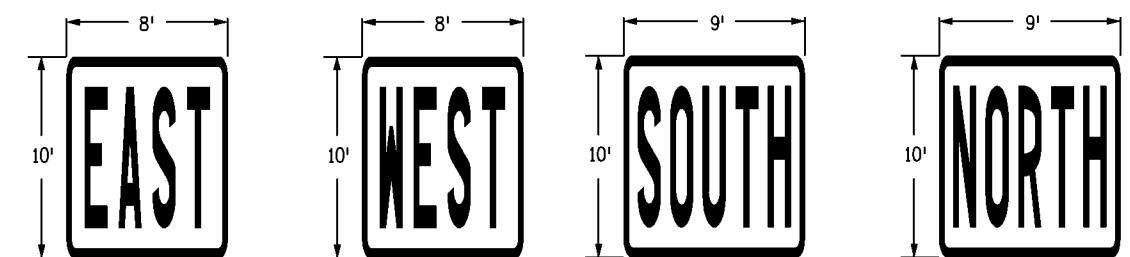
**CARDINAL DIRECTIONS (WHITE LETTERING ON BLUE BACKGROUND)**



**ELONGATED US HIGHWAY ROUTE SHIELDS**



**CARDINAL DIRECTIONS (BLACK LETTERING ON WHITE BACKGROUND WITH BLACK BORDER)**



**ELONGATED ROUTE SHIELDS & CARDINAL DIRECTION MARKINGS**

<b>Computer File Information</b>		<b>Sheet Revisions</b>		Colorado Department of Transportation  2829 W. Howard Pl. Denver, CO 80204 Phone: 303-757-9654 FAX: 303-757-9219 <b>Traffic Safety &amp; Engineering</b>	<b>PAVEMENT MARKINGS</b> Issued By: Traffic Safety & Engineering Branch July 31, 2019	<b>STANDARD PLAN NO.</b>	
Creation Date: 02/08/17		Date:	Comments			S-627-1	
Created By: MBhat		04/14/23	UPDATED SHEET NUMBER			Standard Sheet No. 11 of 11	
Last Modification Date: 04/14/23		02/16/21	GENERAL NOTE UPDATE			Project Sheet Number:	
Last Modified By: AVu			UPDATED NOTE TITLE				
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							