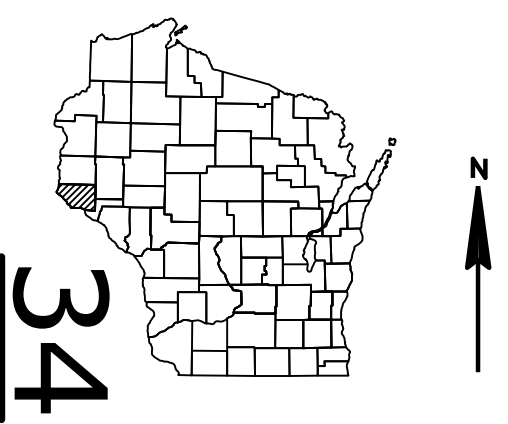


EAU MAY 2024  
 PROJECT ID: 7994-00-51  
 WITH: N/A  
 COUNTY: PIERCE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 296



DESIGN DESIGNATION

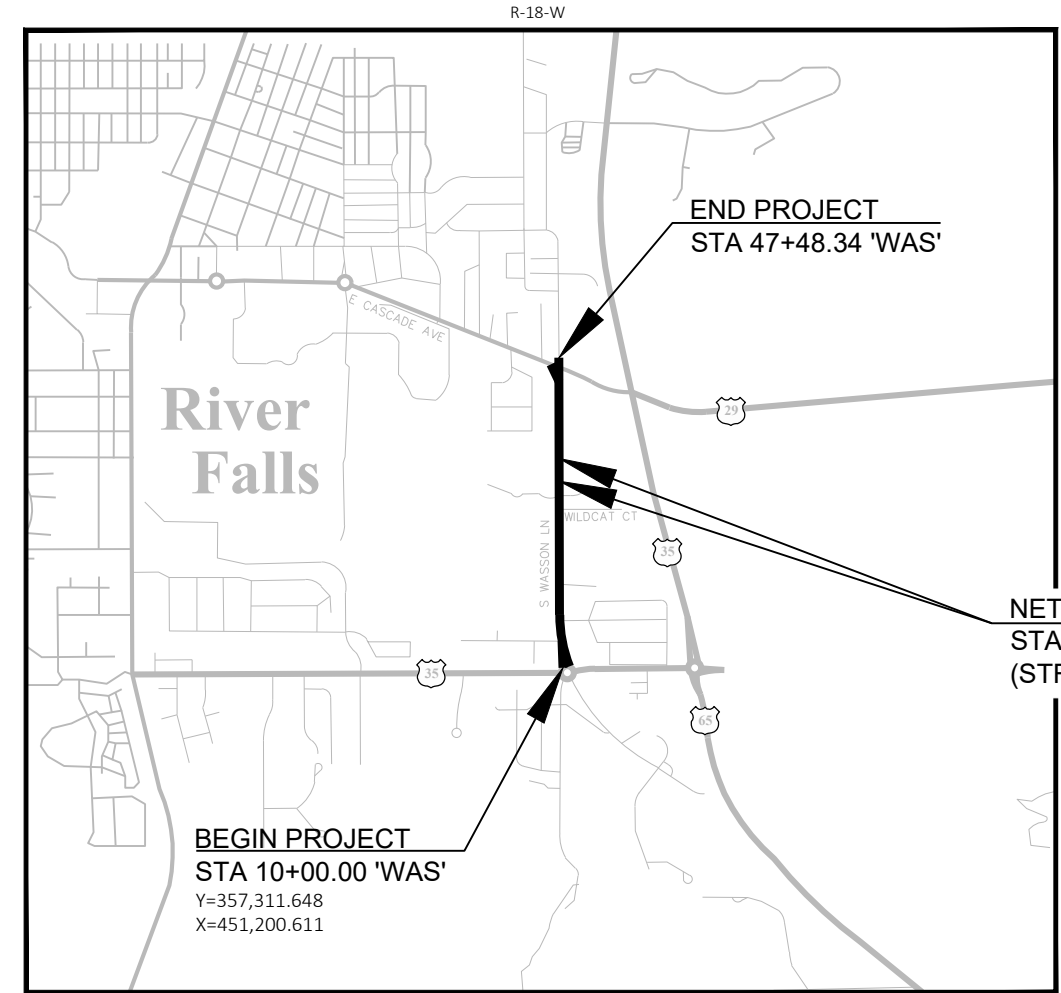
A.A.D.T. (2024)	=	2777
A.A.D.T. (2044)	=	3314
D.H.V.	=	338
D.D.	=	50/50
T.	=	6.3%
DESIGN SPEED	=	40 MPH
ESALS	=	600,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PLAN OF PROPOSED IMPROVEMENT  
 C RIVER FALLS, S WASSON LANE  
 830TH AVE TO E CASCADE AVE  
 LOCAL STREET  
 PIERCE COUNTY

STATE PROJECT NUMBER  
 7994-00-51



LAYOUT  
 SCALE 0 0.5 MI  
 TOTAL NET LENGTH OF CENTERLINE = 0.661 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.  
 ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7994-00-51	WISC 2024333	1

ACCEPTED FOR  
 CITY OF RIVER FALLS  
 SIGNATURE: *John Habel*  
 TITLE: CITY ENGINEER  
 DATE: 1-24-2024

ORIGINAL PLANS PREPARED BY:

WISCONSIN PROFESSIONAL ENGINEER  
 ZACHARY R. SIMPSON  
 E-41694  
 MADISON WI  
*Zachary R. Simpson*  
 1-24-2024

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

PREPARED BY: \_\_\_\_\_ STRAND ASSOCIATES, INC.  
 Designer: \_\_\_\_\_ STRAND ASSOCIATES, INC.  
 Project Manager: \_\_\_\_\_ MATTHEW BERG, P.E.  
 Regional Examiner: \_\_\_\_\_ TONY YANG, P.E.  
 Regional Supervisor: \_\_\_\_\_ TYLER RONGSTAD, P.E.

APPROVED FOR THE DEPARTMENT  
 DATE: 1/24/2024  
*Matthew Berg*  
 (Signature)

**GENERAL NOTES**

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

WHEN THE QUANTITY OF BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT IN TONS, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

**UTILITY CONTACTS**

- \* AT&T  
RICK PODOLAK  
304 S DEWEY ST  
EAU CLAIRE, WI 54701  
PHONE: 715-839-5565  
EMAIL: RP4514@ATT.COM
- \* COMCAST  
BEN UELAND  
4255 LEXINGTON AVE N, SUITE 100  
ARDEN HILLS, MN 55126  
PHONE: 651-492-7911  
EMAIL: BENJAMIN\_UELAND@COMCAST.COM

- RIVER FALLS SCHOOL DISTRICT  
BRIAN DADO  
SCHOOL DISTRICT OF RIVER FALLS  
825 E. DIVISION ST  
RIVER FALLS, WI, 54022  
PHONE: 715-425-1800  
EMAIL: BRIAN.DADO@RFSD.K12.WI.US
- ST. CROIX VALLEY NATURAL GAS  
GREG LEE  
PHONE (OFFICE): 715-425-6177  
PHONE (MOBILE): 715-760-5038  
EMAIL: GREG@STCROIXGAS.COM

- \* RIVER FALLS MUNICIPAL UTILITY (ELECTRIC)  
WAYNE SIVERLING  
222 LEWIS ST  
RIVER FALLS, WI, 54022  
PHONE: 715-426-3480  
MOBILE: 715-495-6317  
EMAIL: WSIVERLING@RFCITY.ORG
- RIVER FALLS PUBLIC UTILITIES (SEWER/WATER)  
ADAM MARTINSON  
222 LEWIS STREET  
RIVER FALLS, WI, 54022  
PHONE: 715-426-3457  
PHONE (CELL): 715-821-1730
- PIERCE PEPIN COOPERATIVE SERVICES  
BRAD RISTOW  
PHONE: 715-273-2473  
EMAIL: BRISTOW@PIERCEPEPIN.COOP

**HMA PAVEMENT SUMMARY TABLE**

HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSE THICKNESSES AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS.

WASSON LANE - 5.5" HMA PAVEMENT		
LAYER	THICKNESS	HMA TYPE
UPPER	2.5"	4 MT 58-34 H
LOWER	3.0"	3 LT 58-28 S



Dial **811** or (800)242-8511  
www.DiggersHotline.com

\* DENOTES DIGGERS HOTLINE MEMBERS

**ORDER OF SECTION 2 SHEETS**

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAIL (ROUNDOABOUT)
- PLAN DETAILS
- CURB RAMP DETAILS
- EROSION CONTROL
- STORM SEWER REMOVALS
- STORM SEWER PLAN
- PERMANENT SIGNING
- LIGHTING PLAN
- PAVEMENT MARKING
- TRAFFIC CONTROL
- DETOUR PLAN
- ALIGNMENT DETAILS (INCLUDES CONTROL POINTS)

**WISDOT REGION**

MATTHEW BERG, P.E.  
NORTHWEST REGION  
718 WEST CLAIREMONT AVENUE  
EAU CLAIRE, WI 54701  
PHONE: (920) 492-4147  
MATTHEW.BERG@DOT.WI.GOV

**DNR LIAISON**

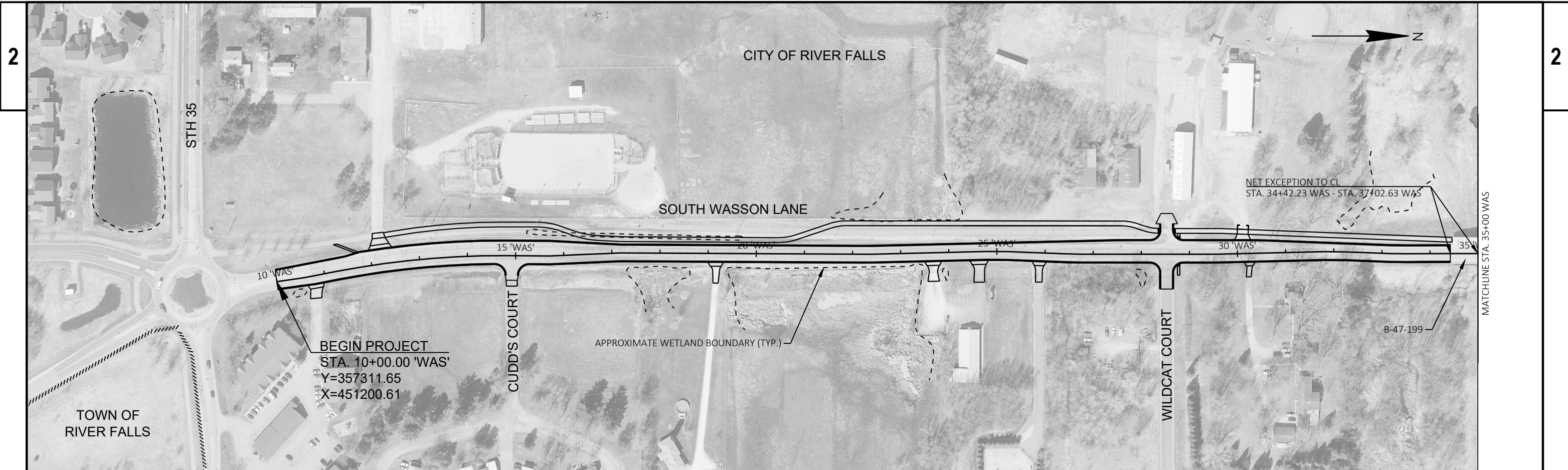
AMY LESIK  
WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
WEST CENTRAL REGION HEADQUARTERS  
1300 W CLAIREMONT  
EAU CLAIRE, WI 54701  
PHONE: (715) 495-1903  
AMY.LESIK@WISCONSIN@WISCONSIN.GOV

**DESIGN CONSULTANT**

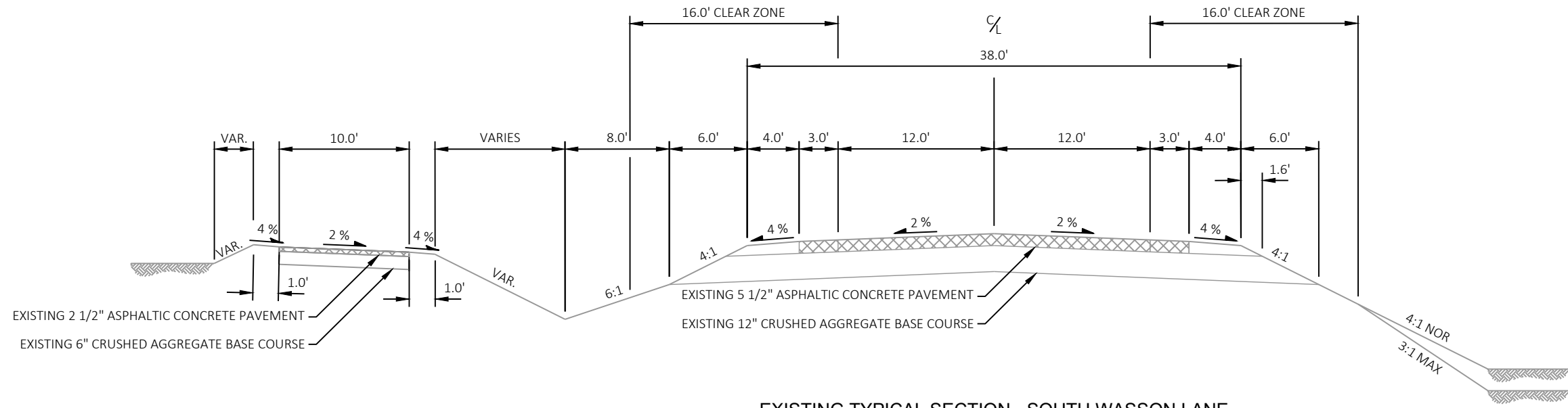
ZACH SIMPSON, P.E.  
STRAND ASSOCIATES, INC.  
910 WEST WINGRA DRIVE  
MADISON, WI 53715  
PHONE: (608) 251-4843  
ZACH.SIMPSON@STRAND.COM

**CITY CONTACT**

TODD NICKLESKI, P.E.  
CITY OF RIVER FALLS  
222 LEWIS STREET  
RIVER FALLS, WI 54022  
PHONE: (715) 426-3409  
TNICKLESKI@RFCITY.ORG

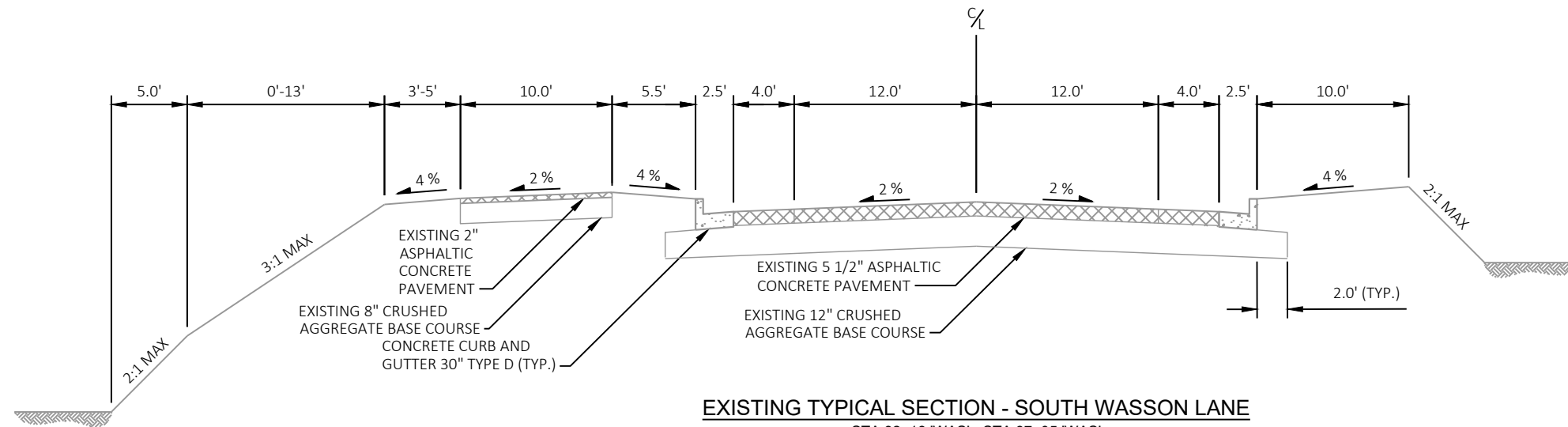


PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PROJECT OVERVIEW	SHEET	<b>E</b>
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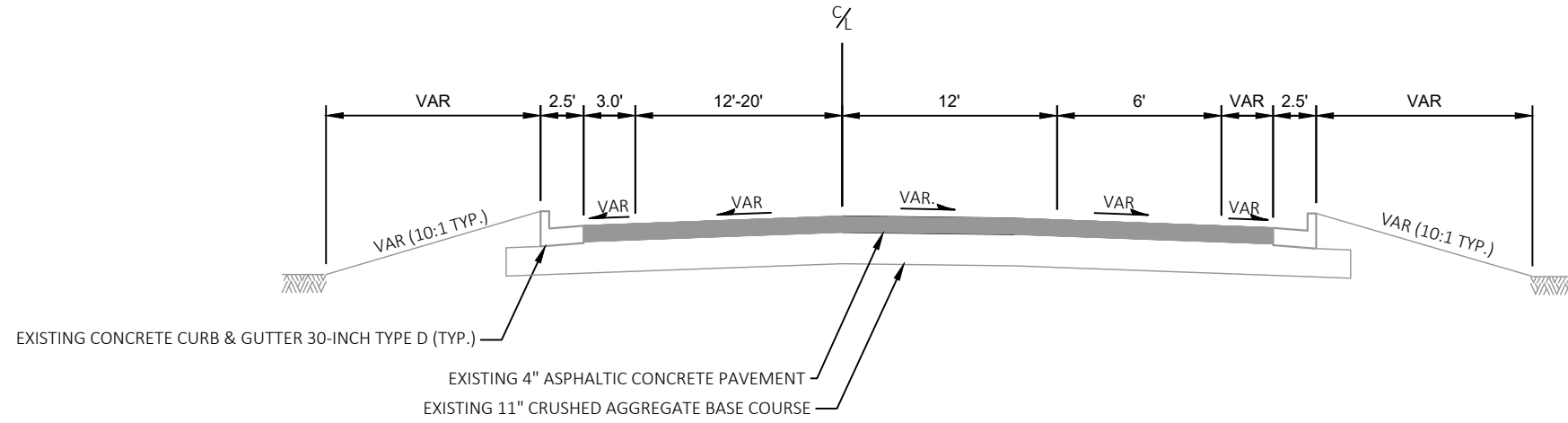
**EXISTING TYPICAL SECTION - SOUTH WASSON LANE**

STA 10+00 'WAS' - STA 32+18 'WAS'  
STA 37+05 'WAS' - STA 47+48 'WAS'

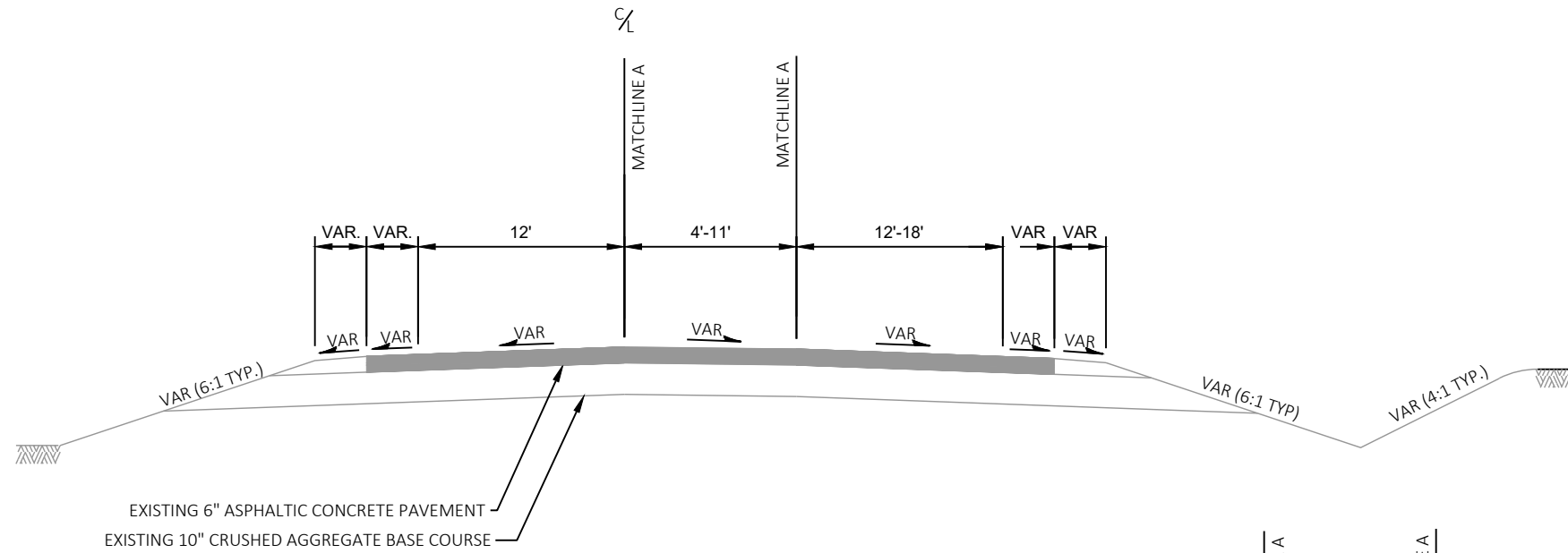


**EXISTING TYPICAL SECTION - SOUTH WASSON LANE**

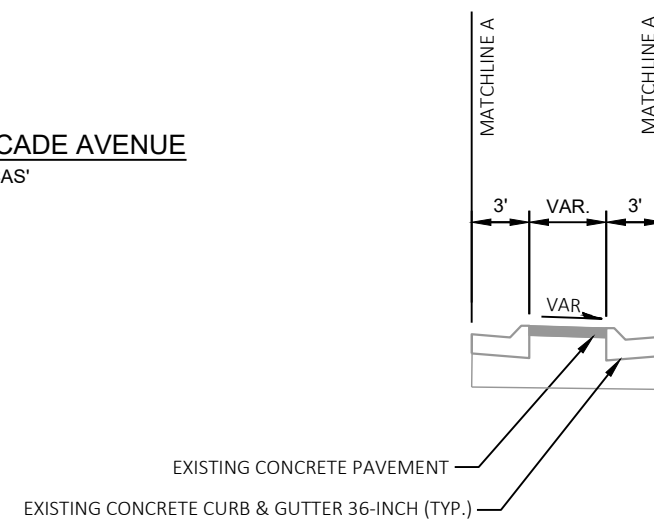
STA 32+18 'WAS' - STA 37+05 'WAS'



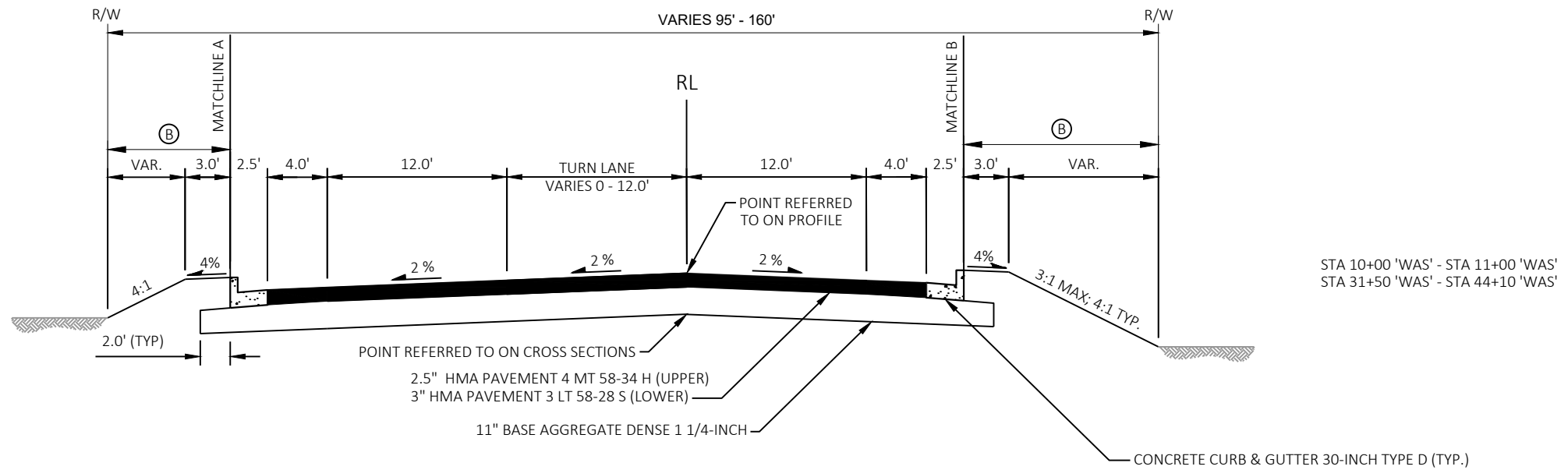
**EXISTING TYPICAL SECTION - CASCADE AVENUE**  
 STA 101+50 'CAS' - STA 103+24 'CAS'



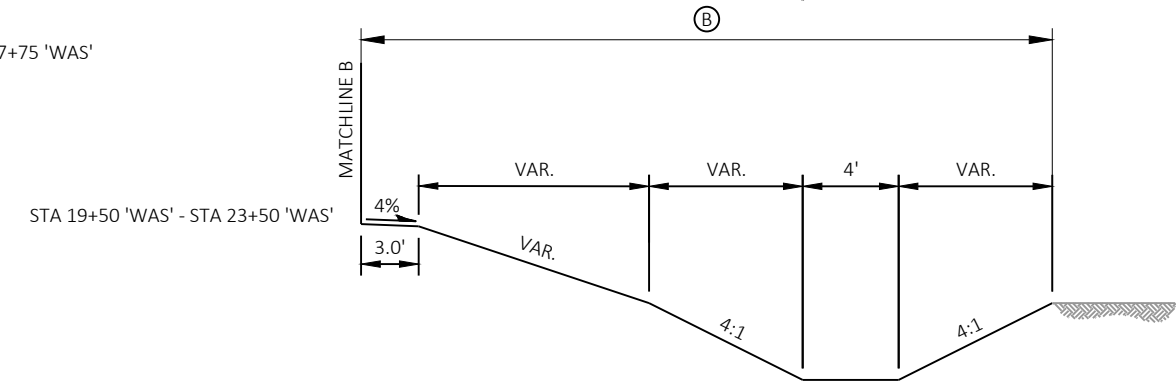
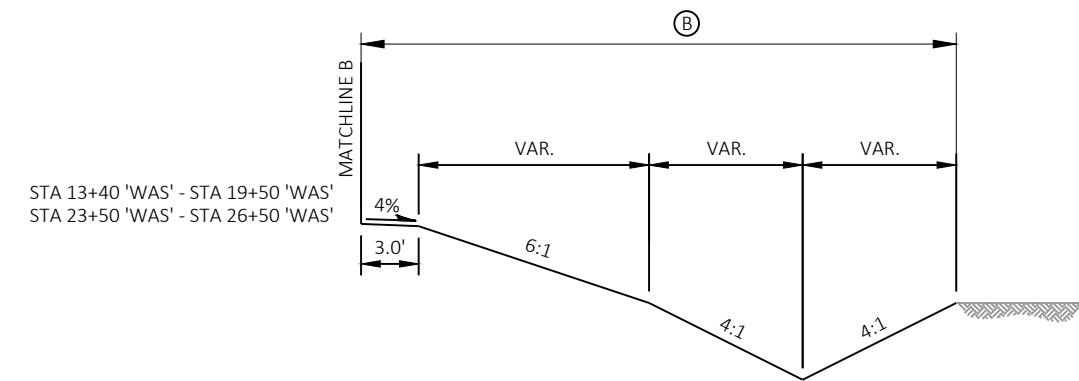
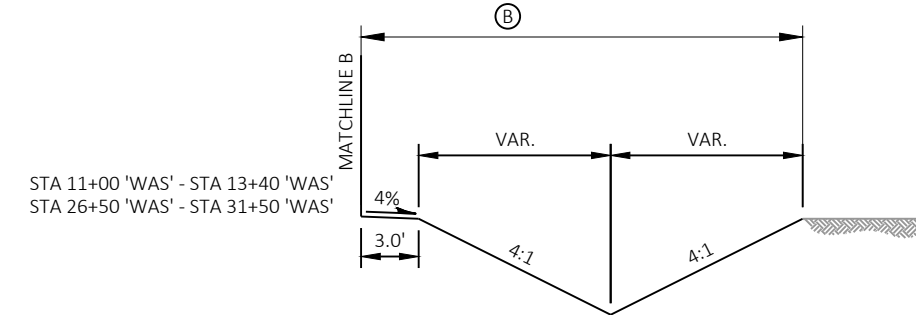
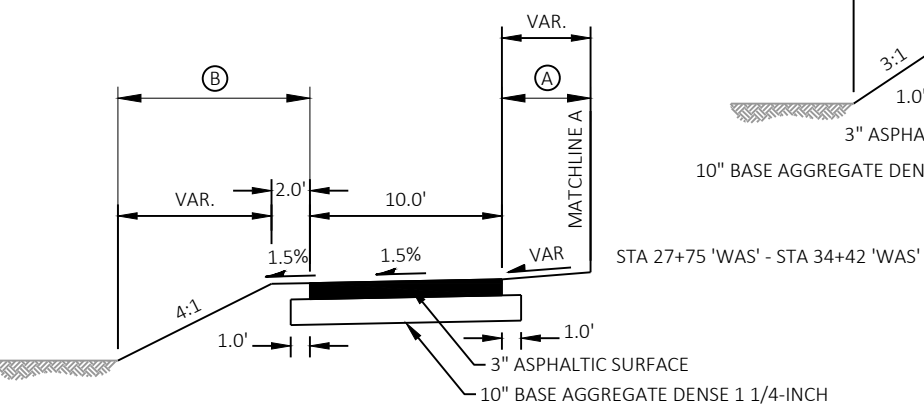
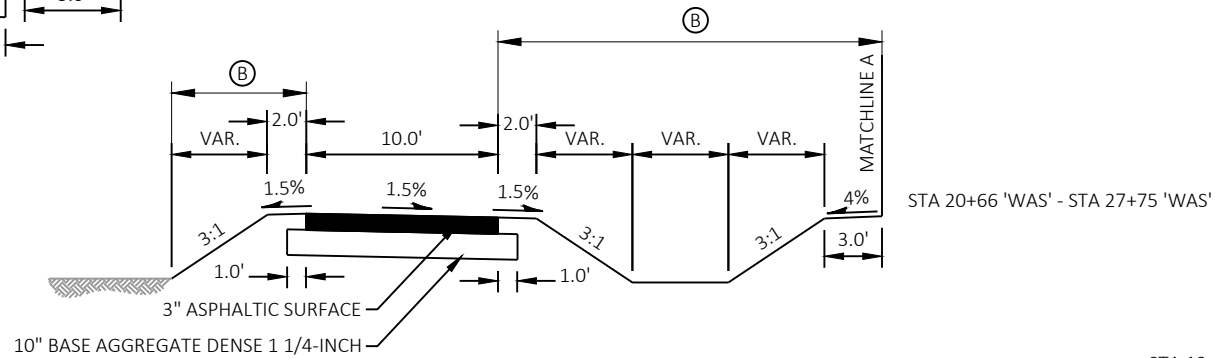
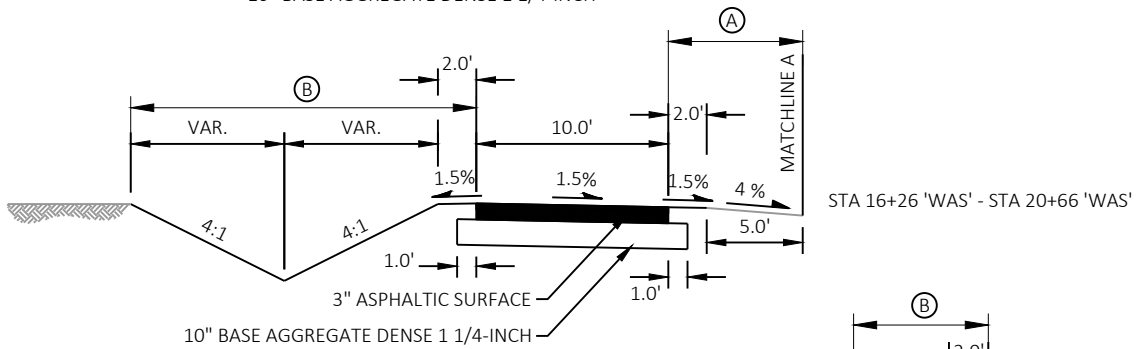
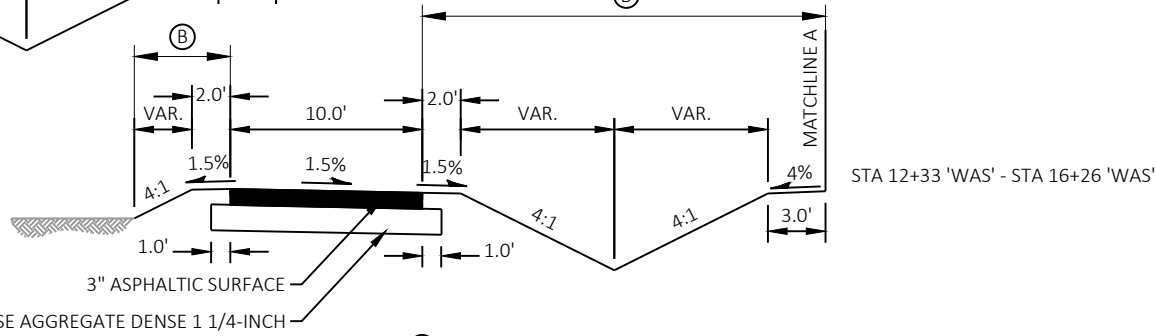
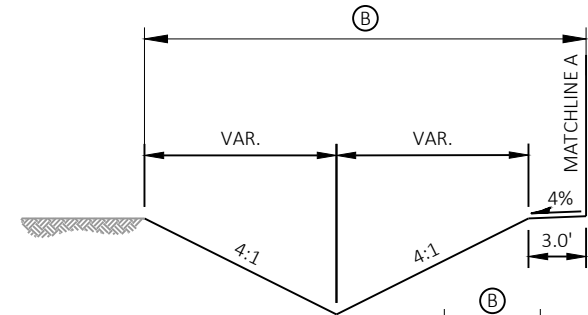
**EXISTING TYPICAL SECTION - CASCADE AVENUE**  
 STA 100+00 'CAS' - STA 100+75 'CAS'

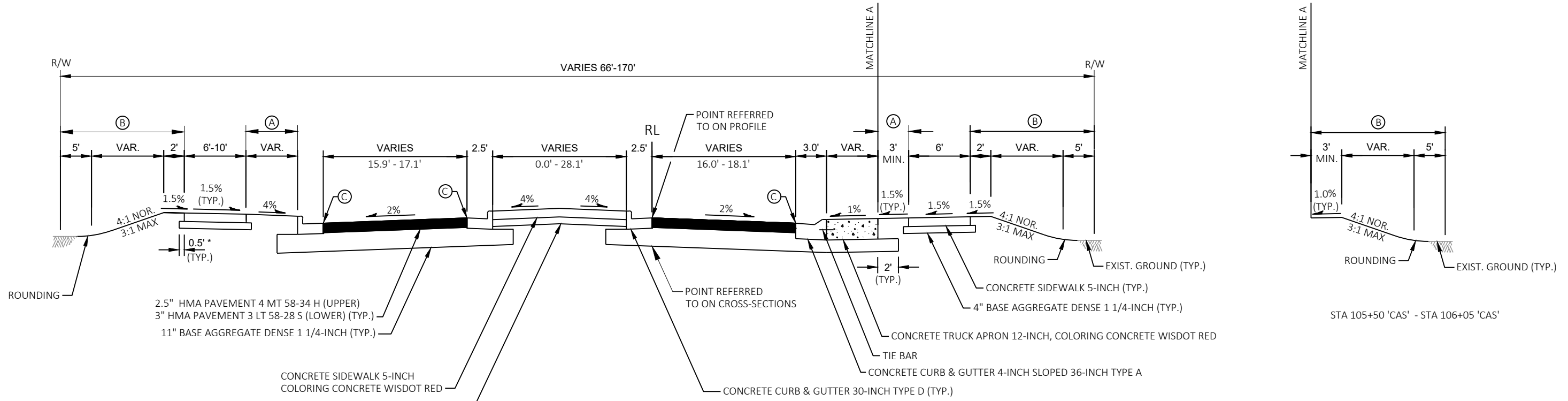


- (A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE A.\*
  - (B) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.\*
- \*UNLESS OTHERWISE NOTED IN THE PLAN.



**FINISHED TYPICAL SECTION - SOUTH WASSON LANE**  
STA 10+00 'WAS' - STA 44+10 'WAS'



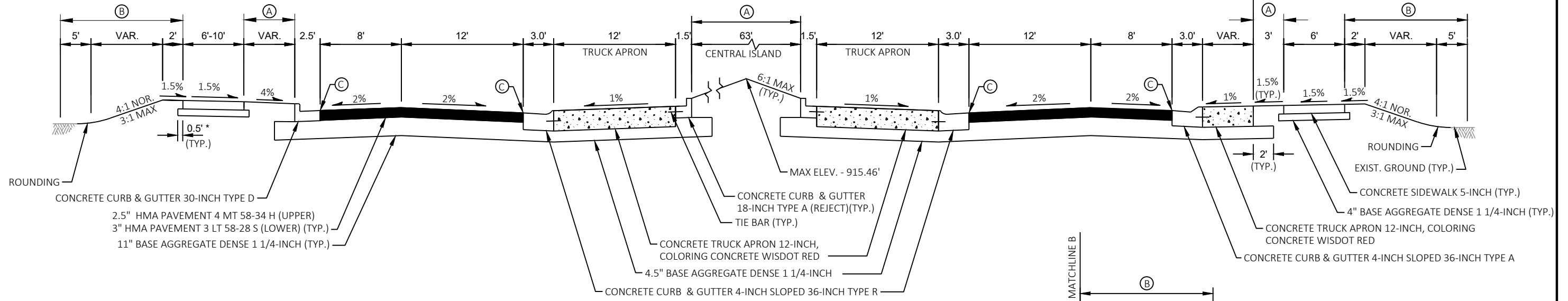


TYPICAL FINISHED SECTION WASSON LANE AND CASCADE AVENUE

STA 103+05 'CAS' - STA 104+30 'CAS'  
 STA 105+50 'CAS' - STA 106+78 'CAS'  
 STA 44+10 'WAS' - STA 45+11 'WAS'  
 STA 46+41 'WAS' - STA 47+48 'WAS'

- (A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE A.\*\*
- (B) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.\*\*
- (C) POINT REFERRED TO ON SUPPLEMENTAL PROFILE. SEE PLAN DETAIL SHEETS FOR ALIGNMENT INFORMATION.

\*\*UNLESS OTHERWISE NOTED IN THE PLAN.



TYPICAL FINISHED SECTION THROUGH ROUNDABOUT

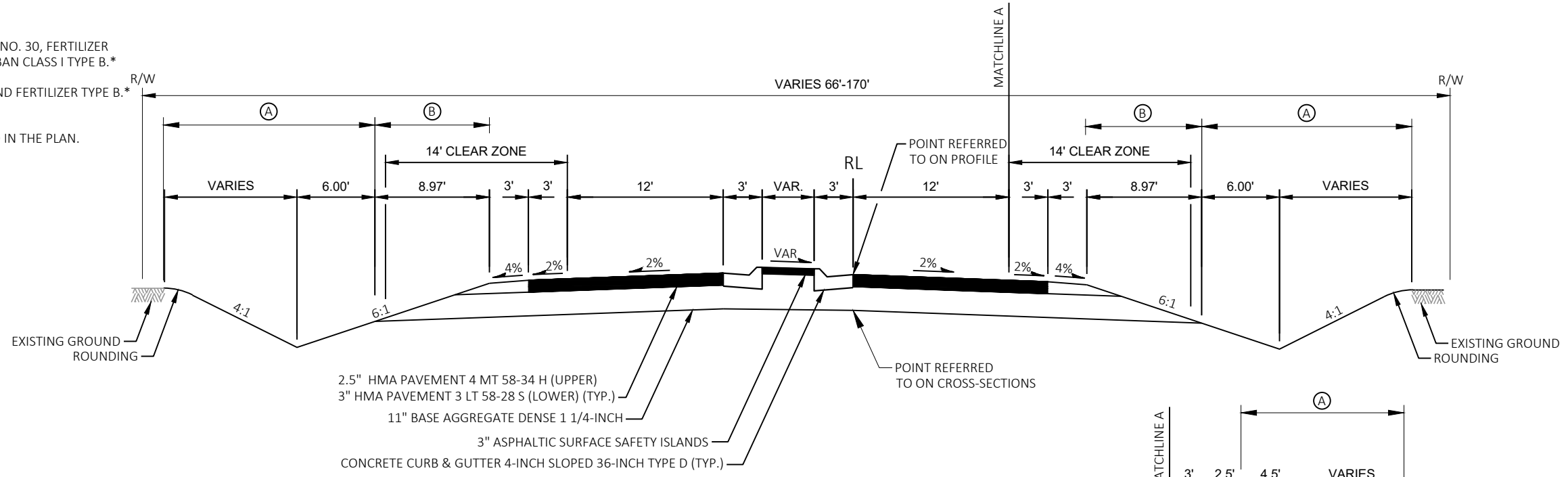
STA 10+00 A - STA 13+02 A

\* 1' OFFSET OF BASE AGGREGATE DENSE 1 1/4 INCH REQUIRED WHEN SIDEWALK IS 10' WIDE.

(A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.\*

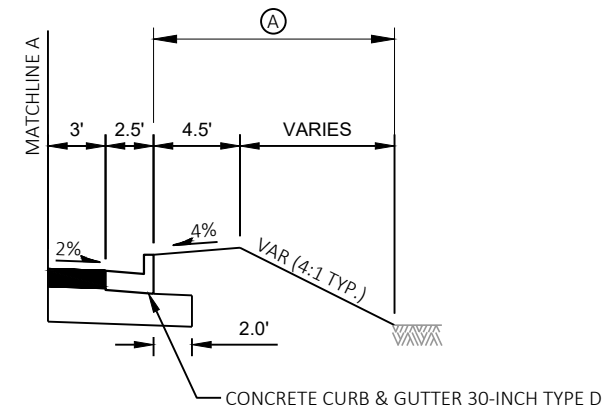
(B) SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B.\*

\*UNLESS OTHERWISE NOTED IN THE PLAN.

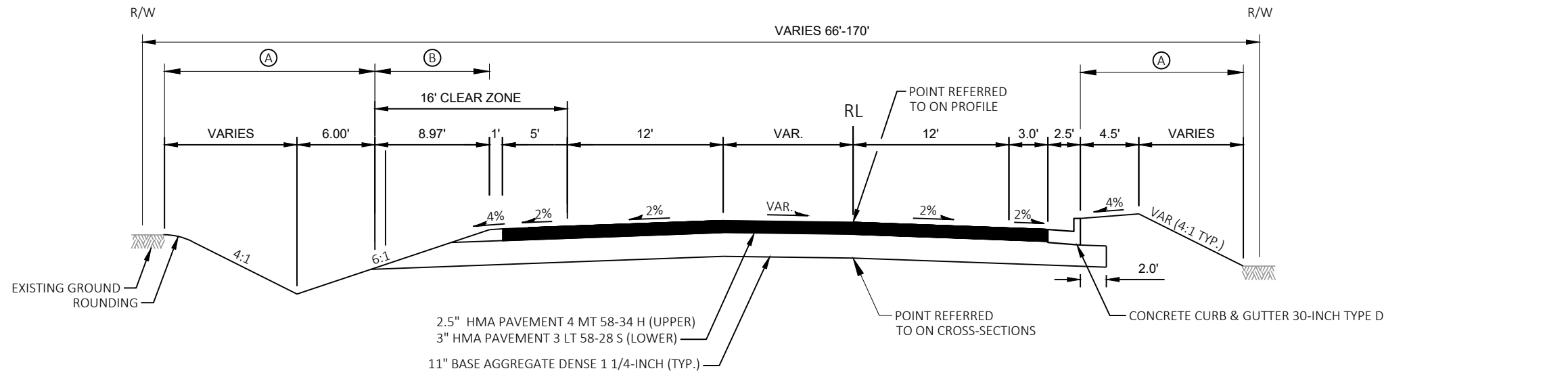


**FINISHED TYPICAL SECTION - CASCADE AVENUE**

STA 100+00 'CAS' - STA 100+75 'CAS'



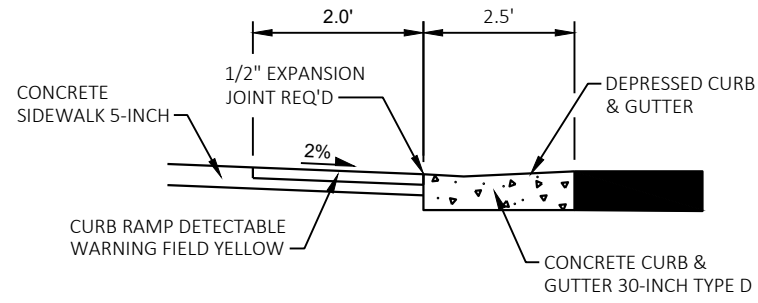
STA 101+75 'CAS' - STA 101+50 'CAS'



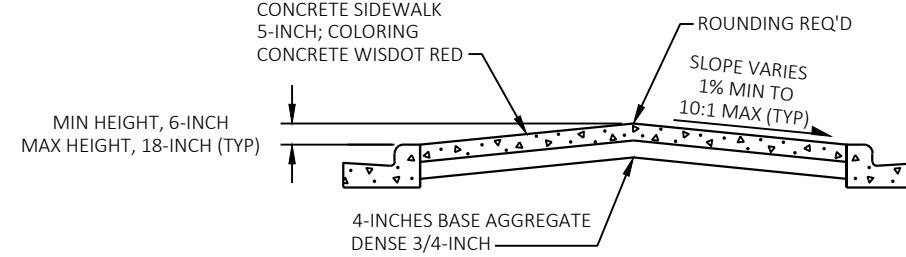
**FINISHED TYPICAL SECTION - CASCADE AVENUE**

STA 101+50 'CAS' - STA 103+24 'CAS'

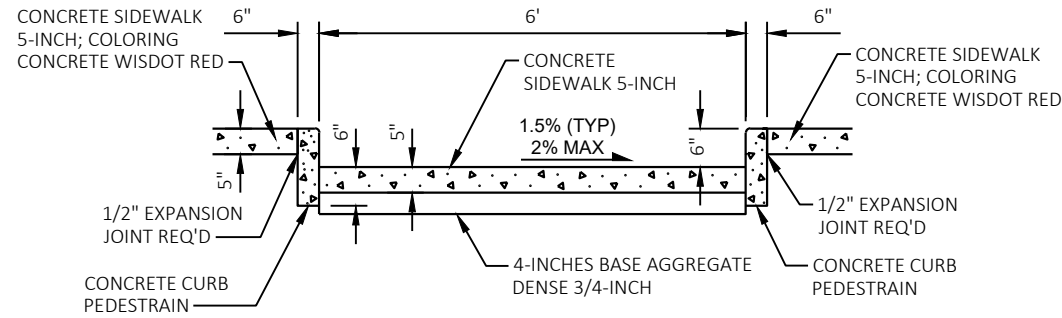




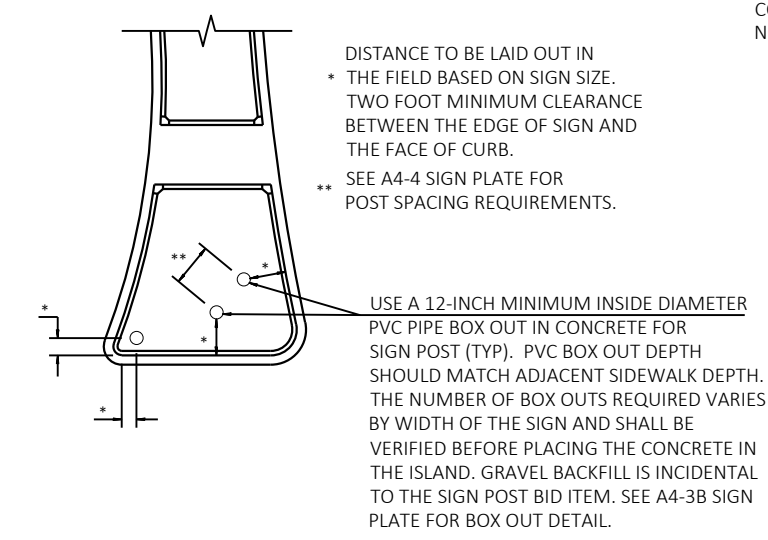
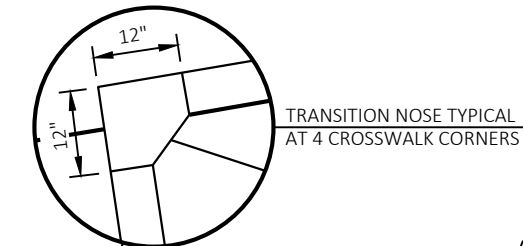
SECTION A-A



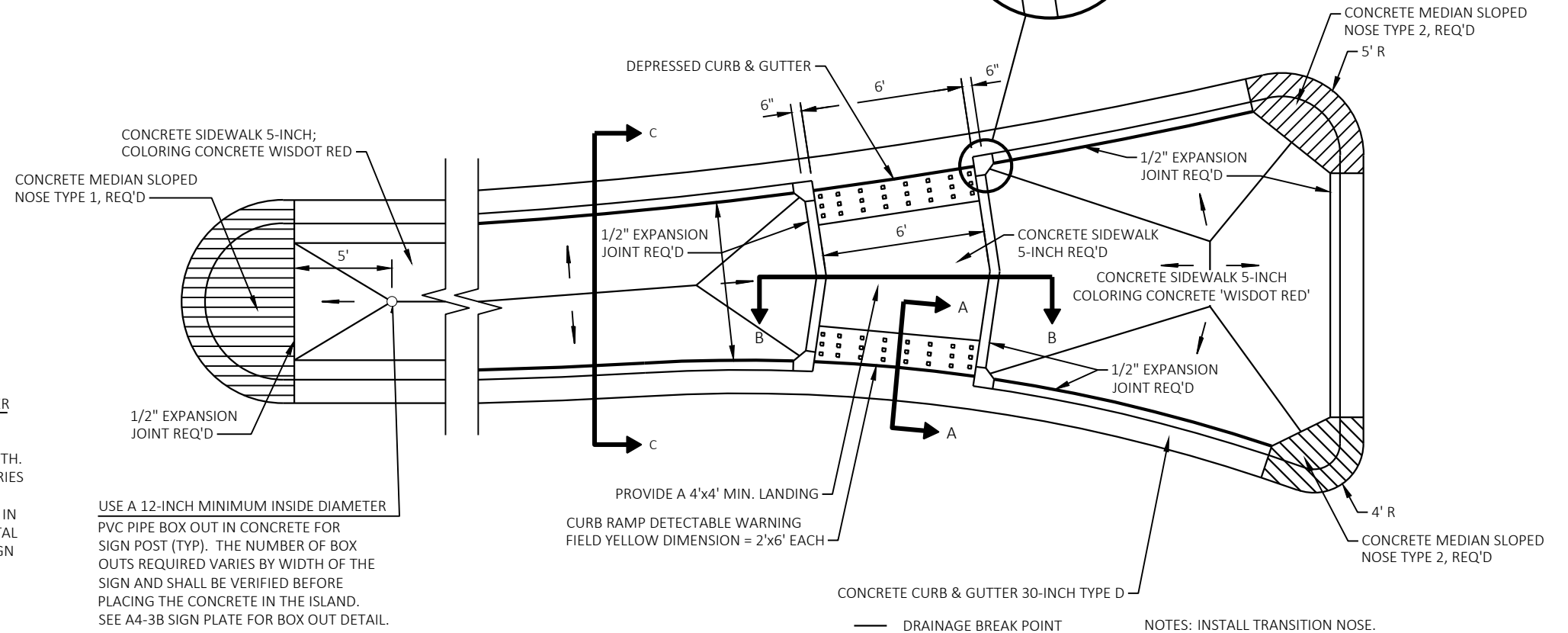
SECTION C-C



SECTION B-B



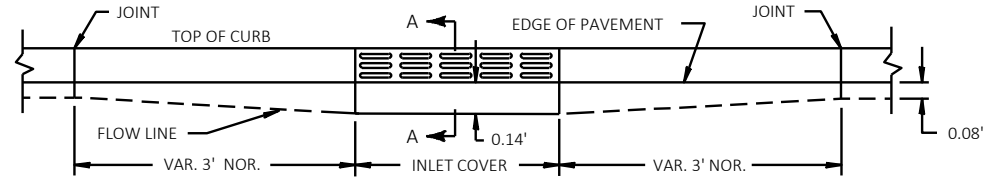
CENTER AND SPLITTER ISLAND SIGN LOCATION DETAIL (TYP.)



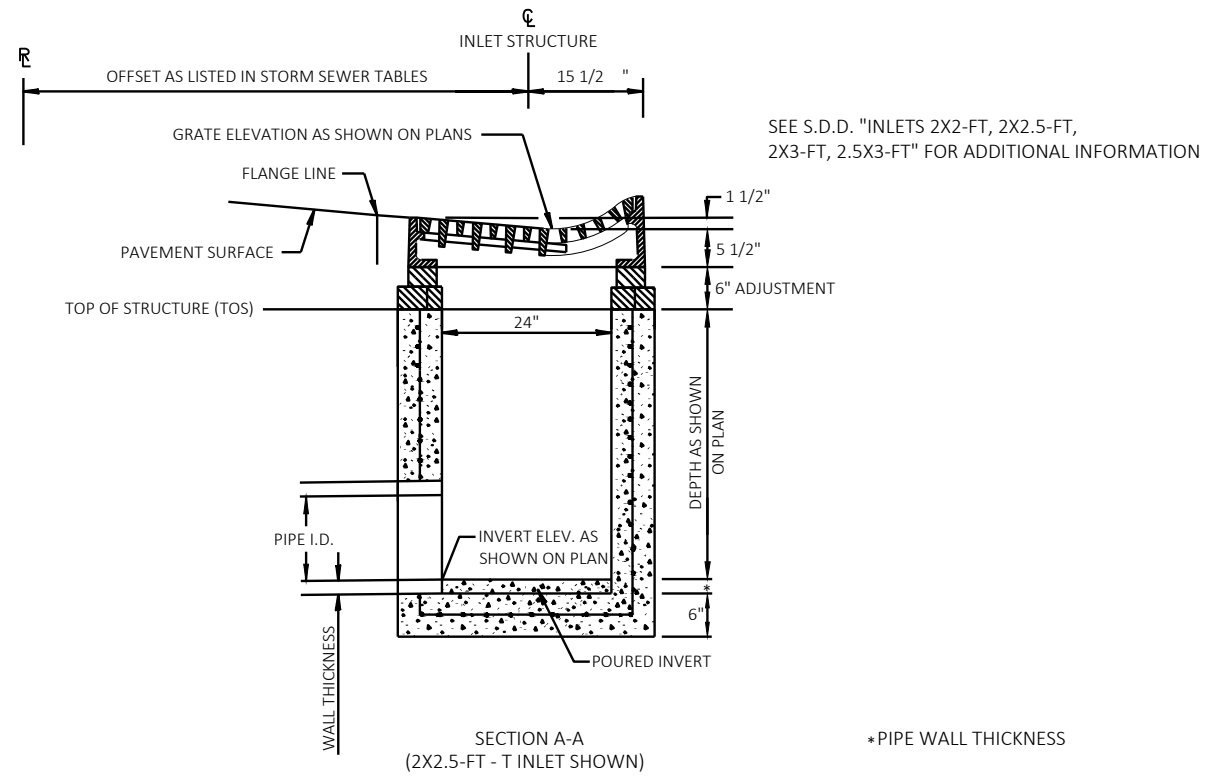
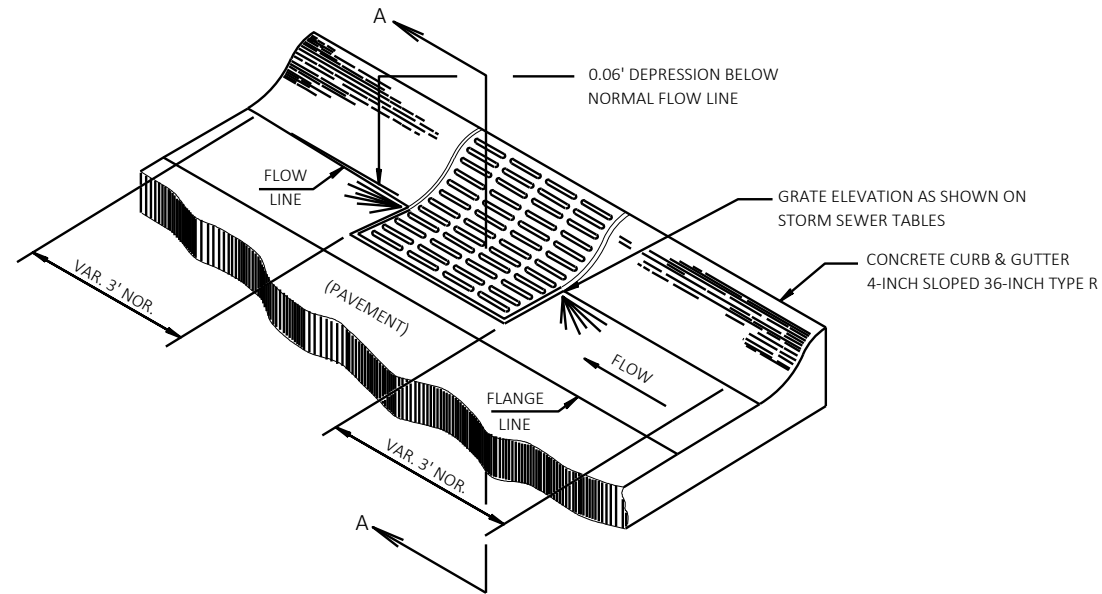
SPLITTER ISLAND DETAIL

— DRAINAGE BREAK POINT  
 ← DIRECTION OF DRAINAGE

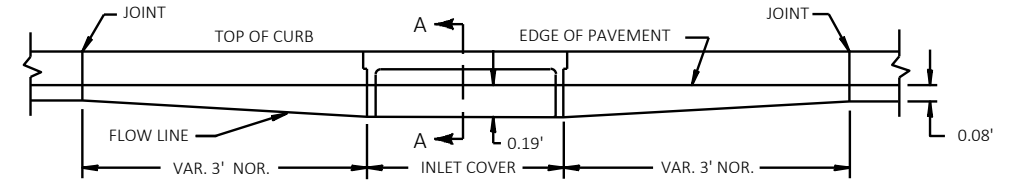
NOTES: INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE. CONTRACTOR TO USE FULL WIDTH DETECTABLE WARNING FIELD PANELS.



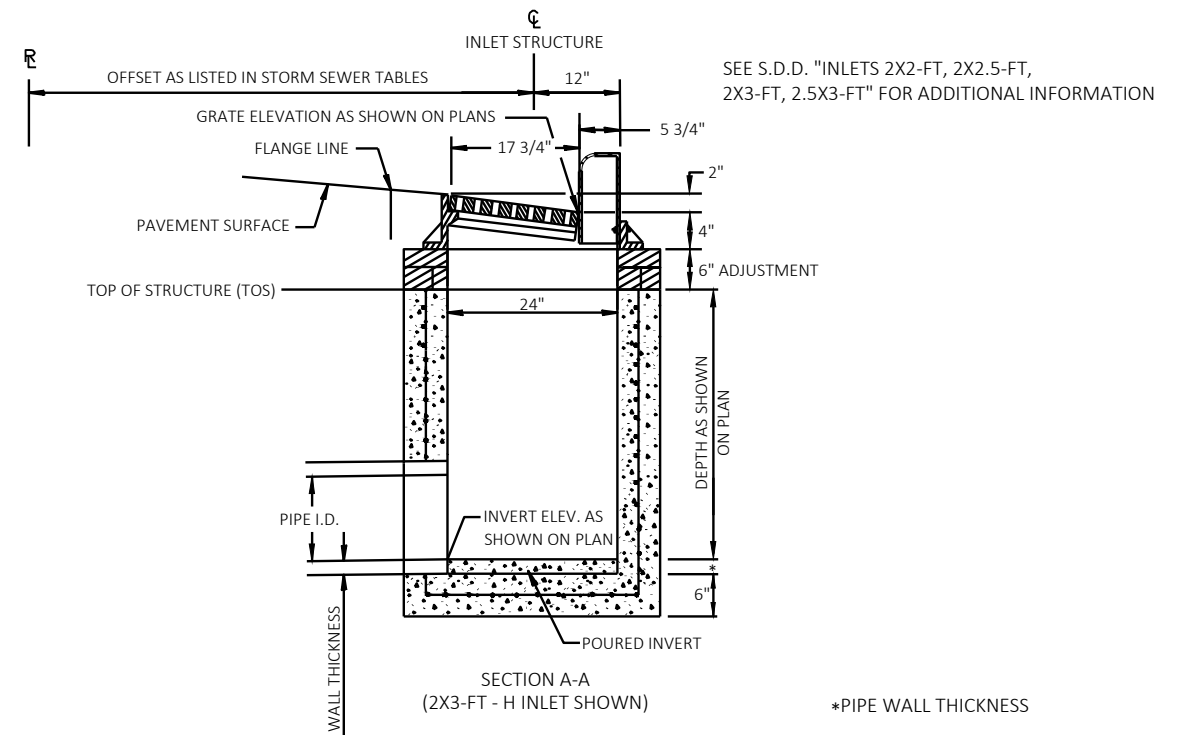
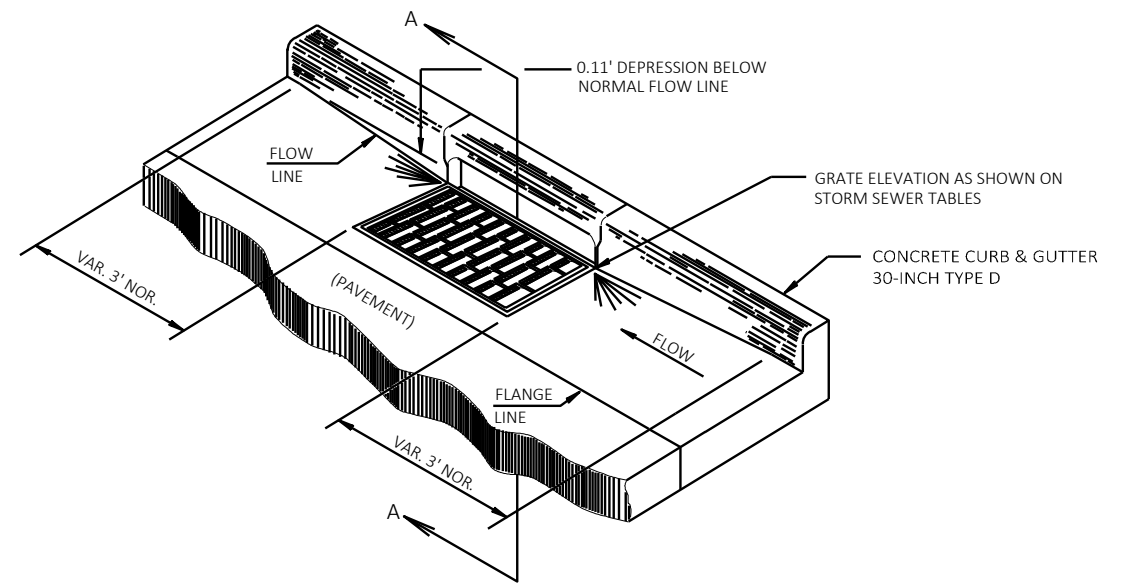
ELEVATION



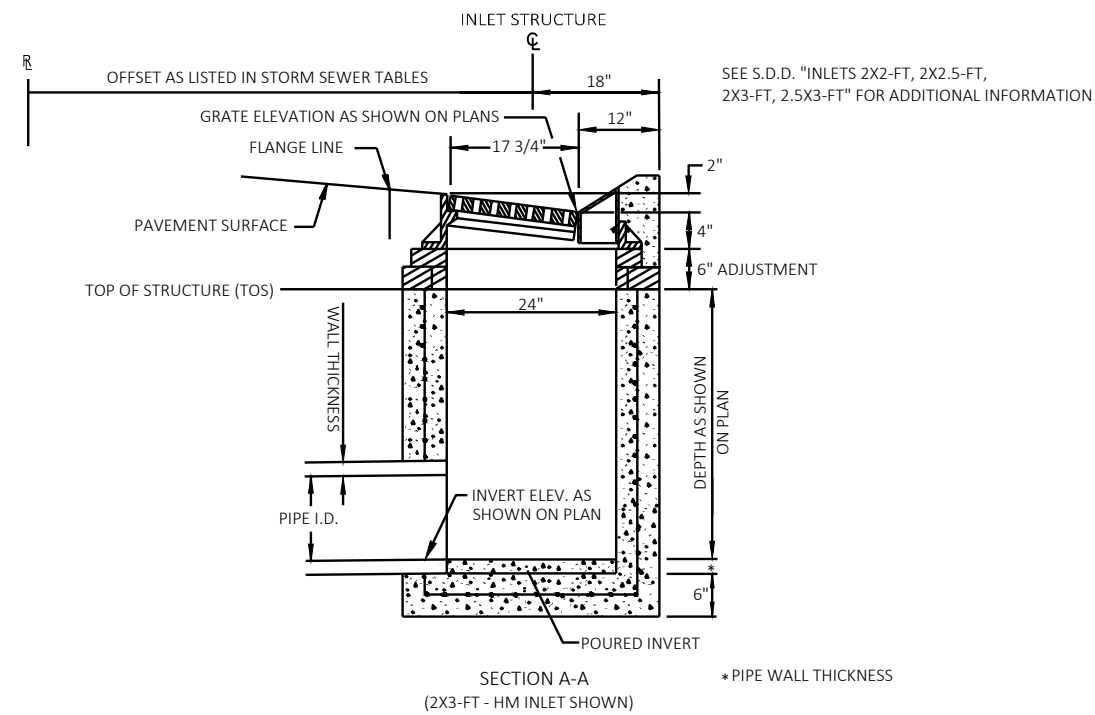
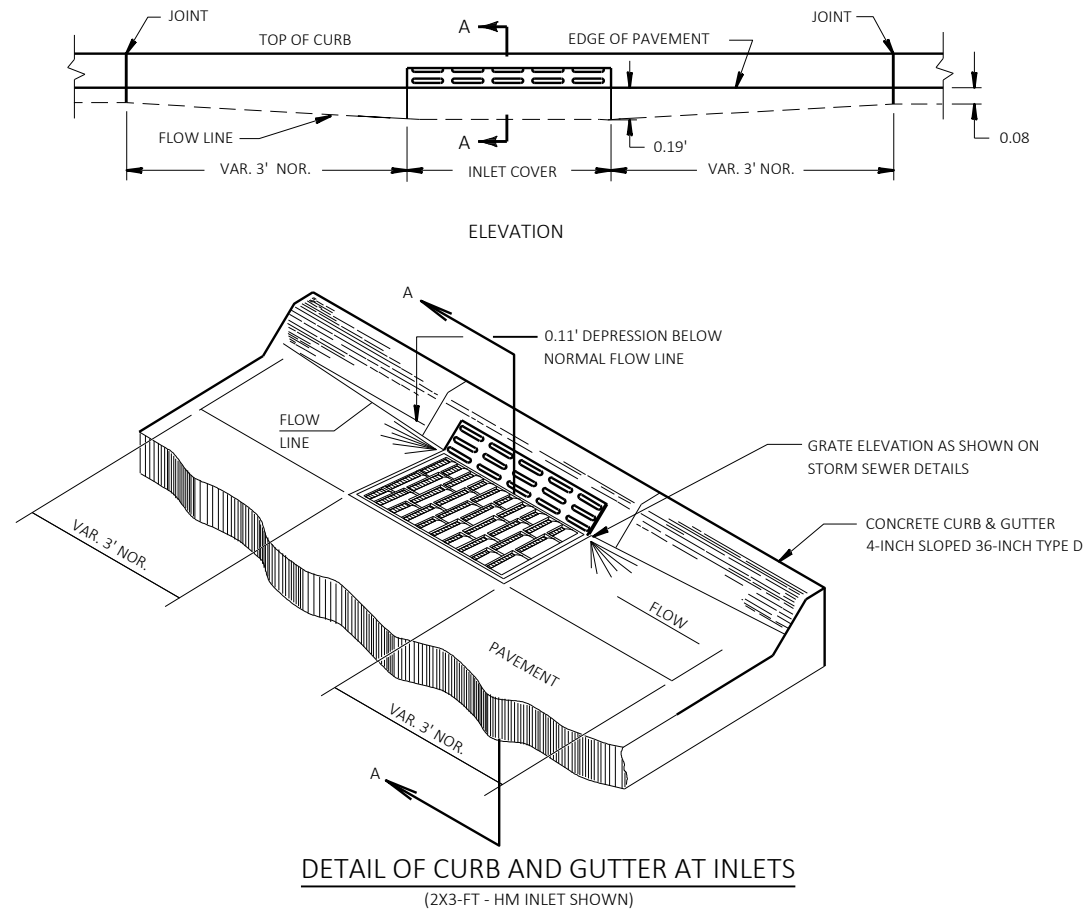
DETAIL OF CONCRETE CURB & GUTTER 36-INCH TYPE R AT INLETS



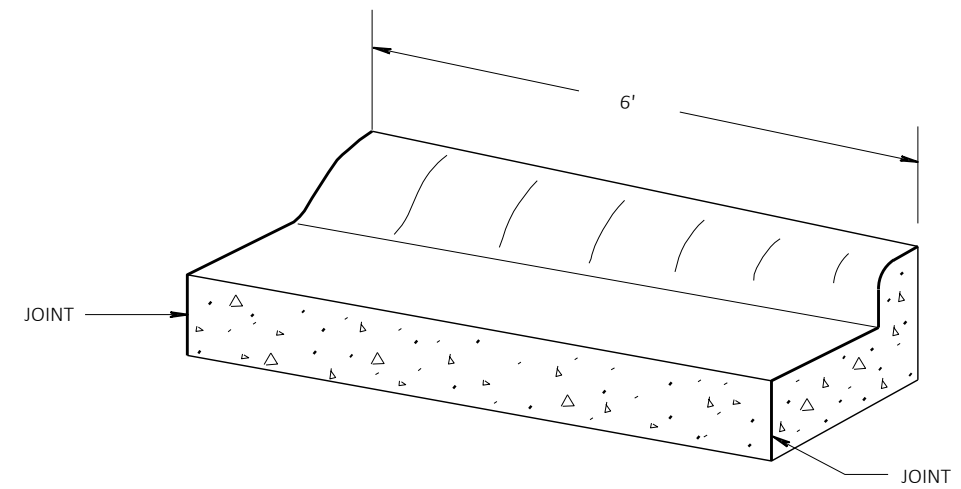
ELEVATION



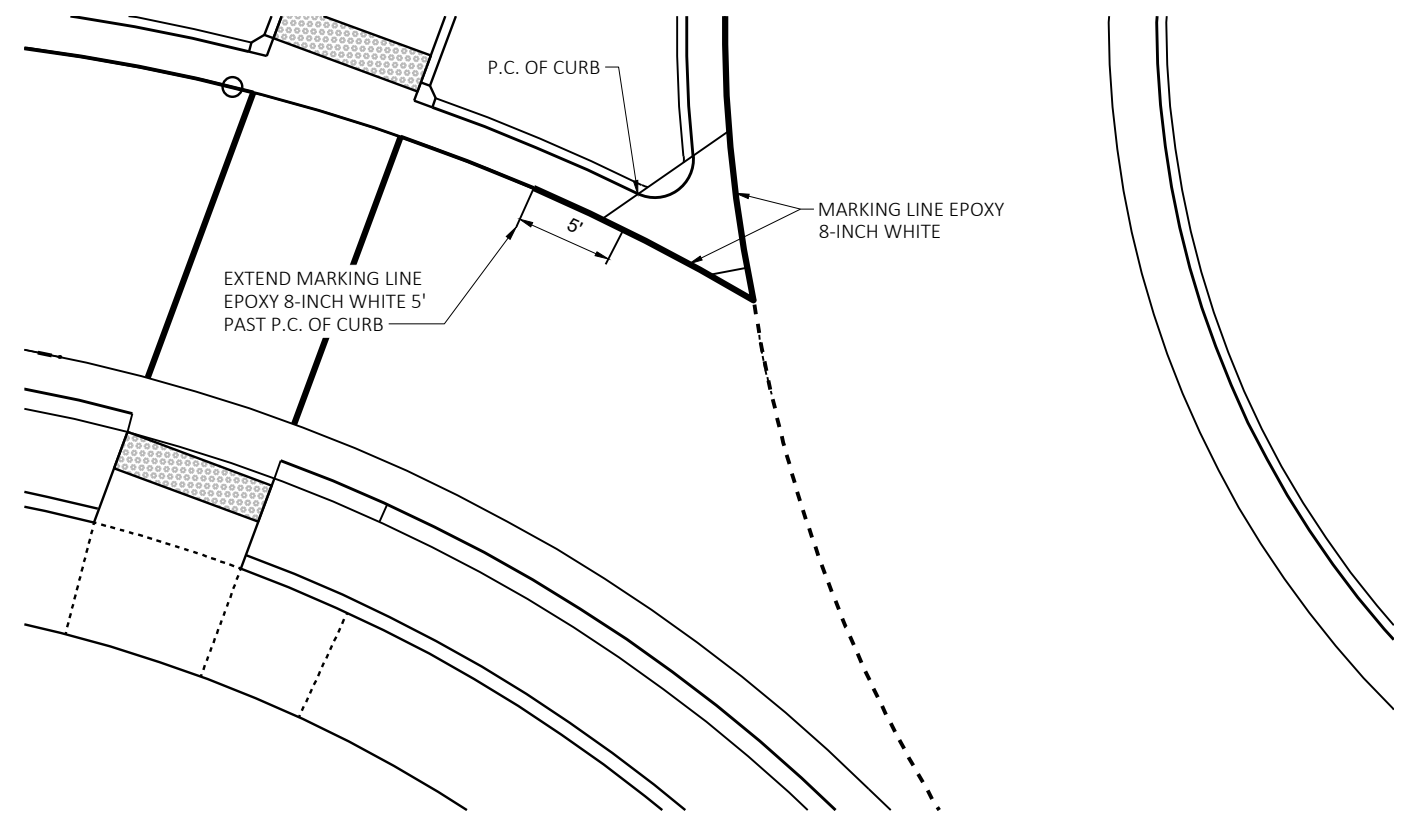
DETAIL OF CONCRETE CURB & GUTTER 30-INCH TYPE D AT INLETS

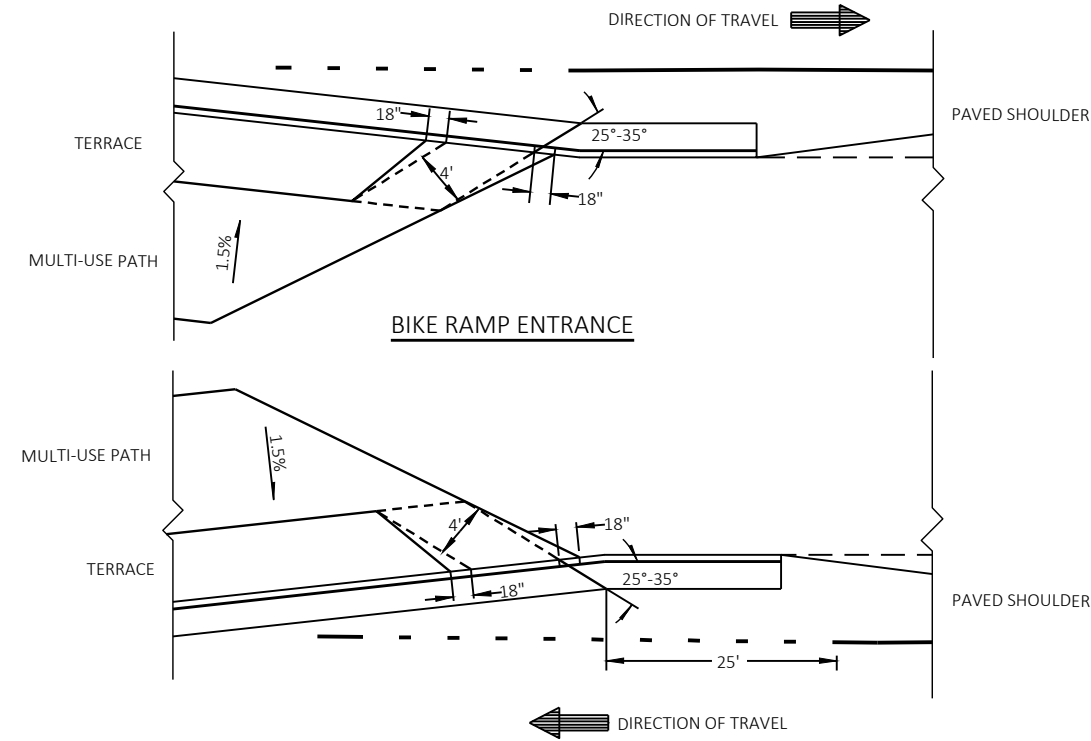


**DETAIL OF CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D AT INLETS**



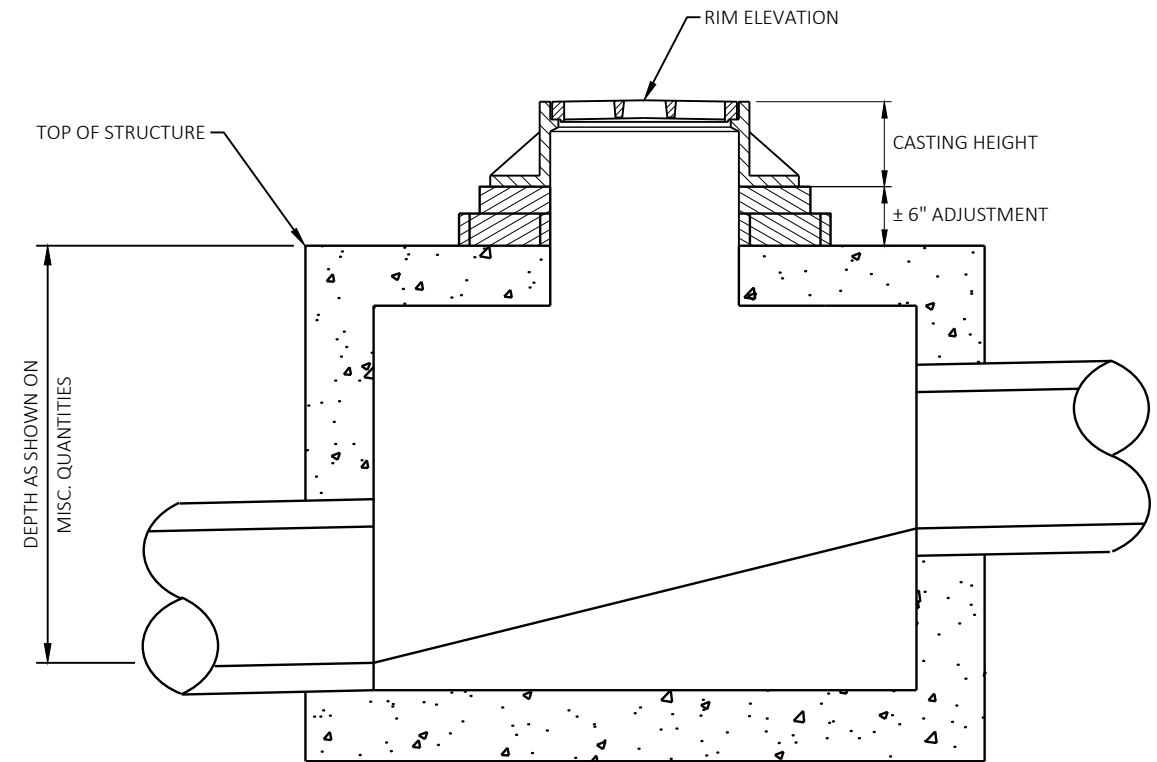
**CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D TO CONCRETE CURB & GUTTER 30-INCH TYPE D (TO BE MEASURED & PAID FOR AS CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D)**





**BIKE RAMP ENTRANCE AND EXIT**

STA. 44+20 (LT) STA. 103+33 (RT)  
 STA. 44+20 (RT) STA. 103+55 (LT)  
 STA. 47+34 (LT) STA. 106+55 (LT)  
 STA. 47+34 (RT) STA. 106+67 (RT)



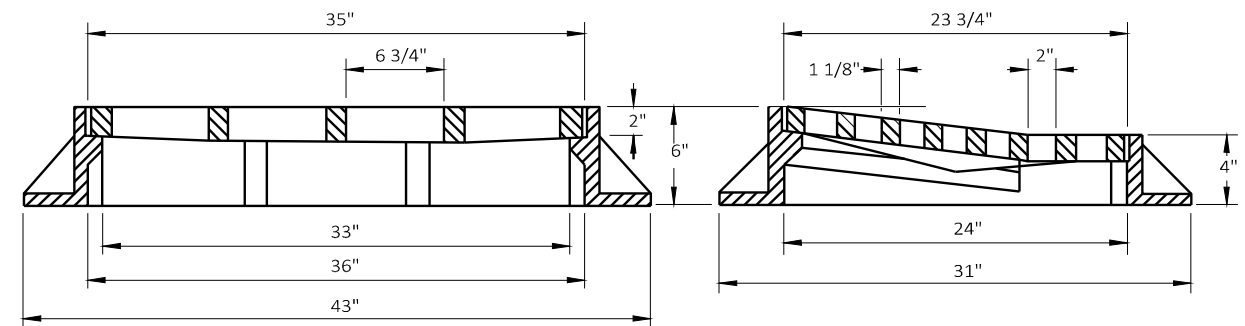
**DETAIL FOR COMPUTING MANHOLE STRUCTURE ELEVATIONS**

**RUNOFF COEFFICIENT TABLE**

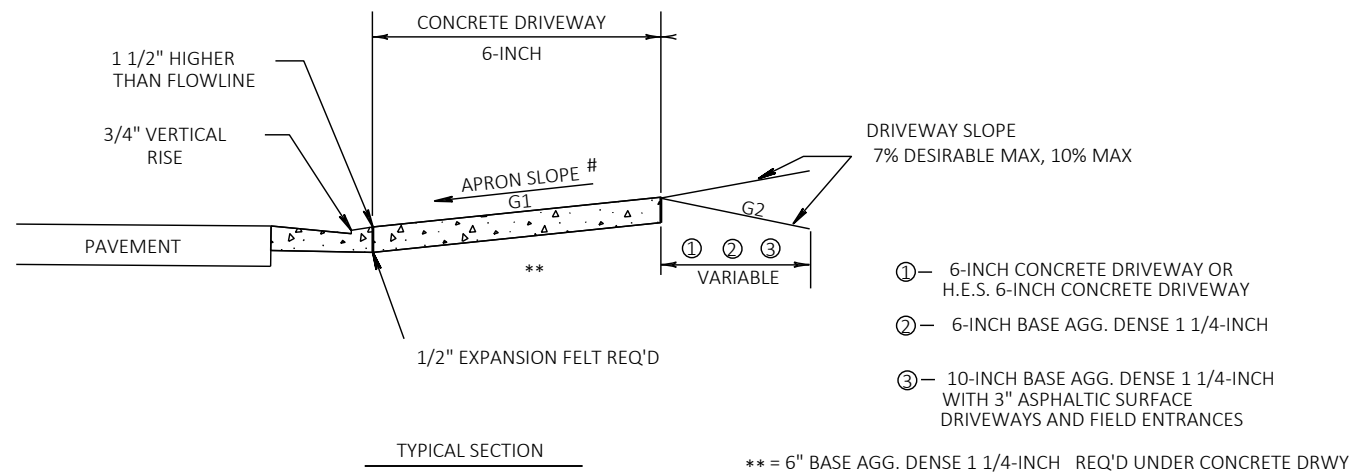
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT				.70 - .95								
CONCRETE				.80 - .95								
BRICK				.70 - .80								
DRIVES, WALKS				.75 - .85								
ROOFS				.75 - .95								
GRAVEL ROADS, SHOULDERS				.40 - .60								

TOTAL PROJECT AREA = 14.69 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.28 ACRES

TOTAL WEIGHT APPROXIMATELY 420 POUNDS



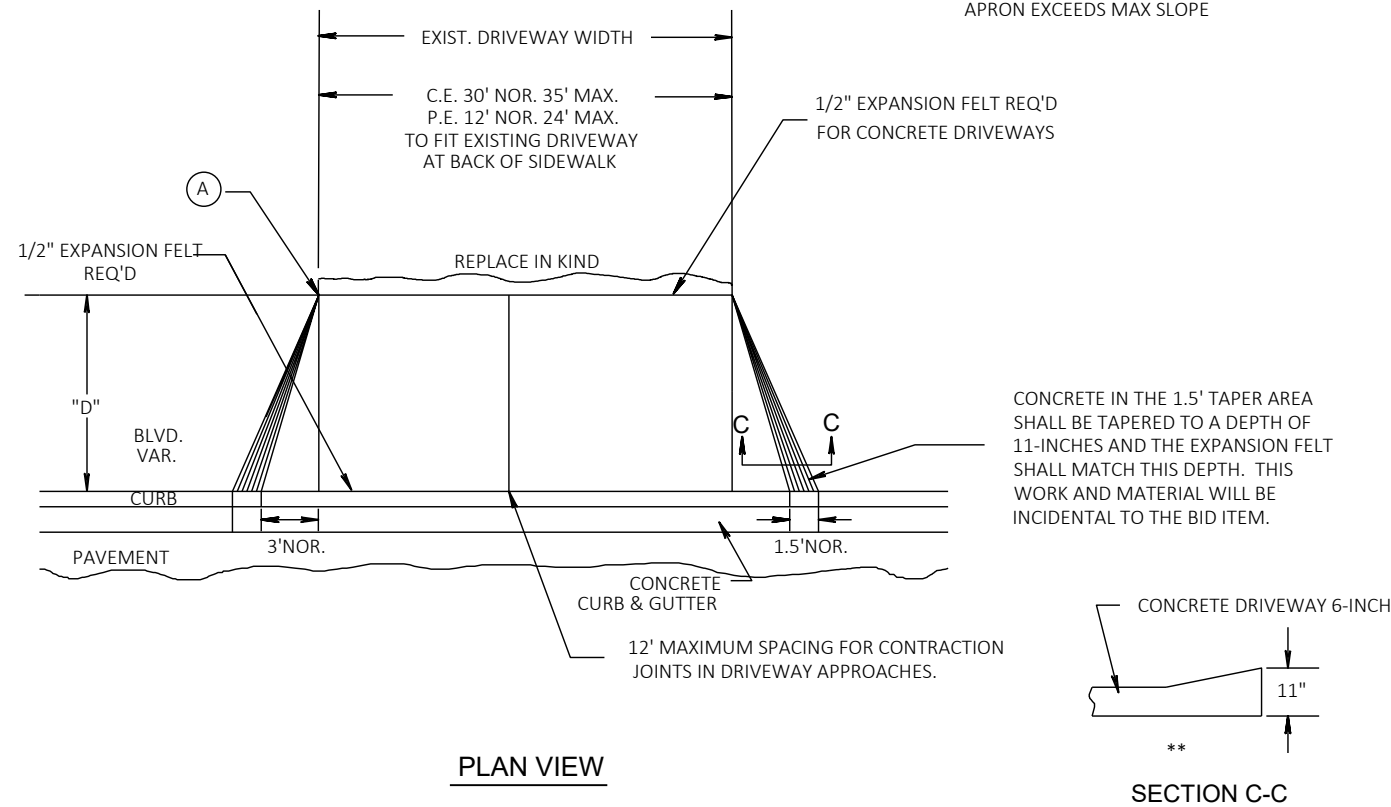
**INLET COVERS TYPE DW**



- ① — 6-INCH CONCRETE DRIVEWAY OR H.E.S. 6-INCH CONCRETE DRIVEWAY
- ② — 6-INCH BASE AGG. DENSE 1 1/4-INCH
- ③ — 10-INCH BASE AGG. DENSE 1 1/4-INCH WITH 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

#	TERRACE WIDTH	APRON SLOPE (G1)		
		MIN %	DESIRABLE %	MAX %
	3 FT	7.0	8.5	9.0
	4 FT	5.0	7.0	9.0
	5 FT	4.0	7.0	9.0
	6 FT	4.0	7.0	9.0
	7 FT	3.5	7.0	9.0
	8 FT	3.0	7.0	9.0

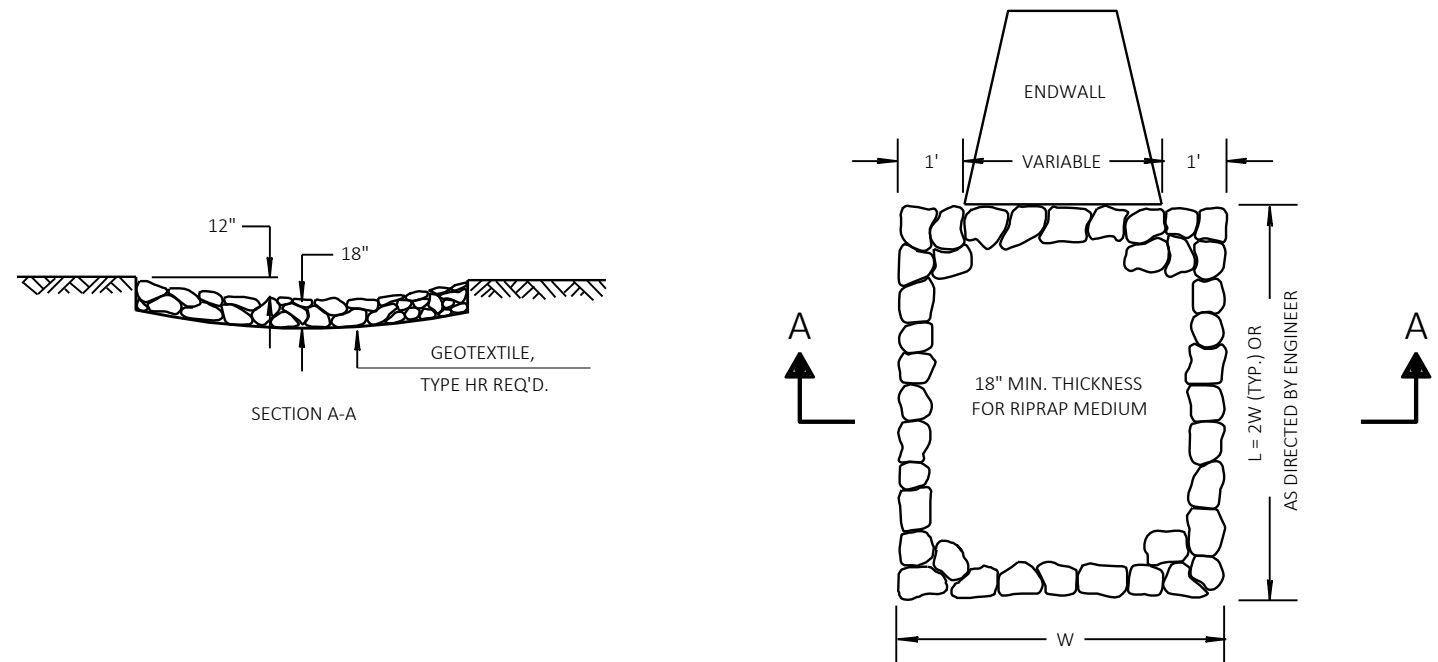
NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 TO NOT EXCEED 15%  
DEPRESS SIDEWALK PROFILE IF DRIVEWAY APRON EXCEEDS MAX SLOPE



PLAN VIEW

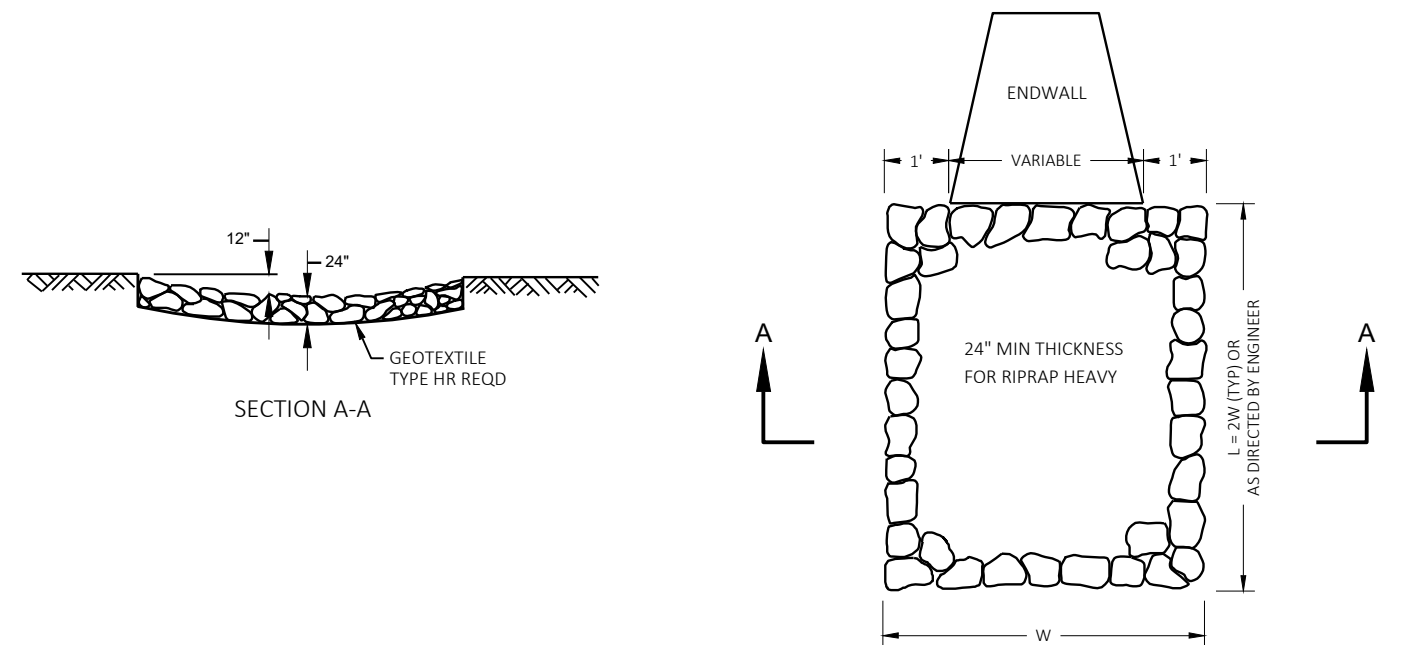
SECTION C-C

DRIVEWAY ENTRANCE DETAIL WITH CURB & GUTTER



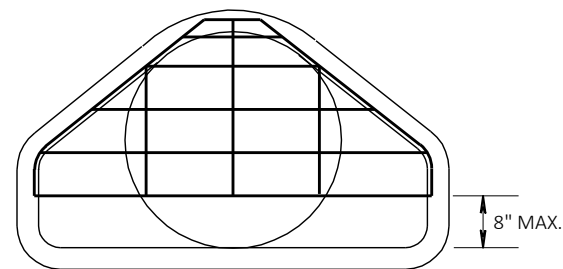
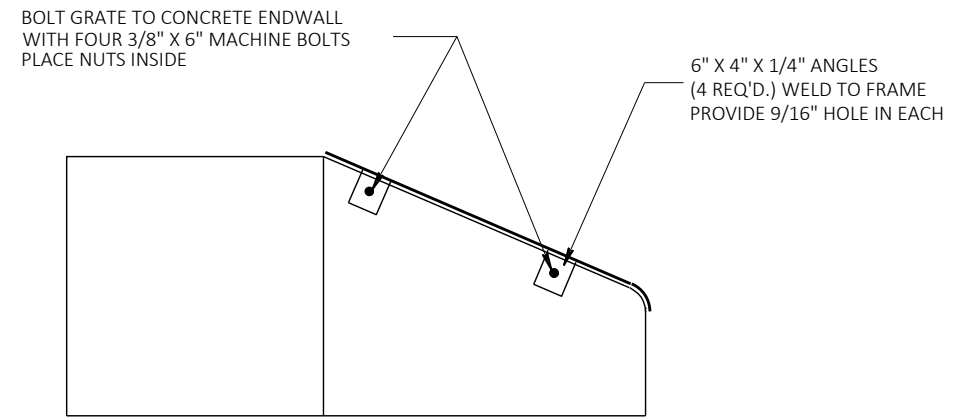
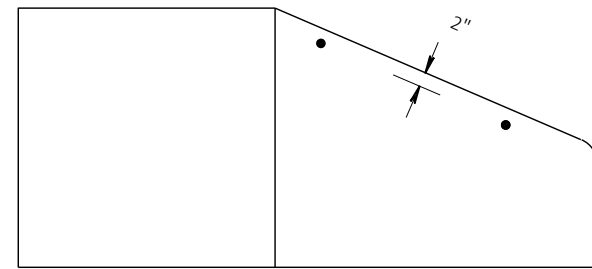
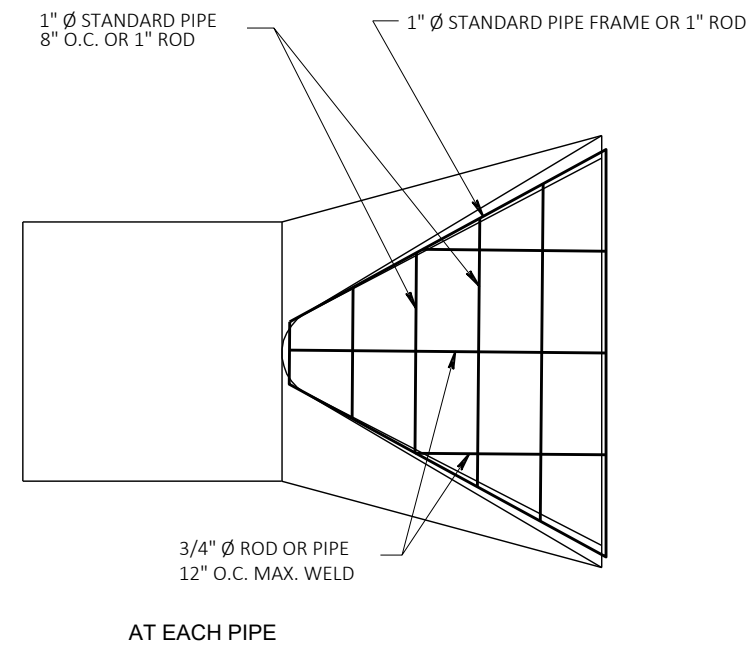
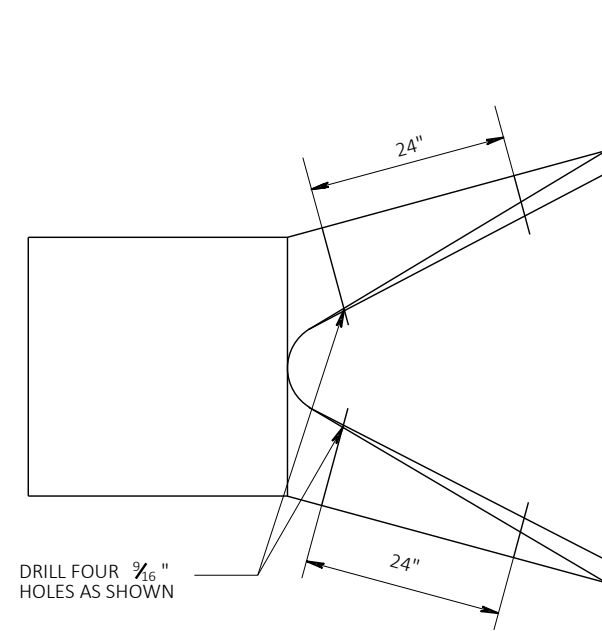
RIPRAP MEDIUM TREATMENT AT CULVERTS

SEE EROSION CONTROL PLANS FOR LOCATIONS



RIPRAP HEAVY TREATMENT AT CULVERTS

SEE EROSION CONTROL PLANS FOR LOCATIONS

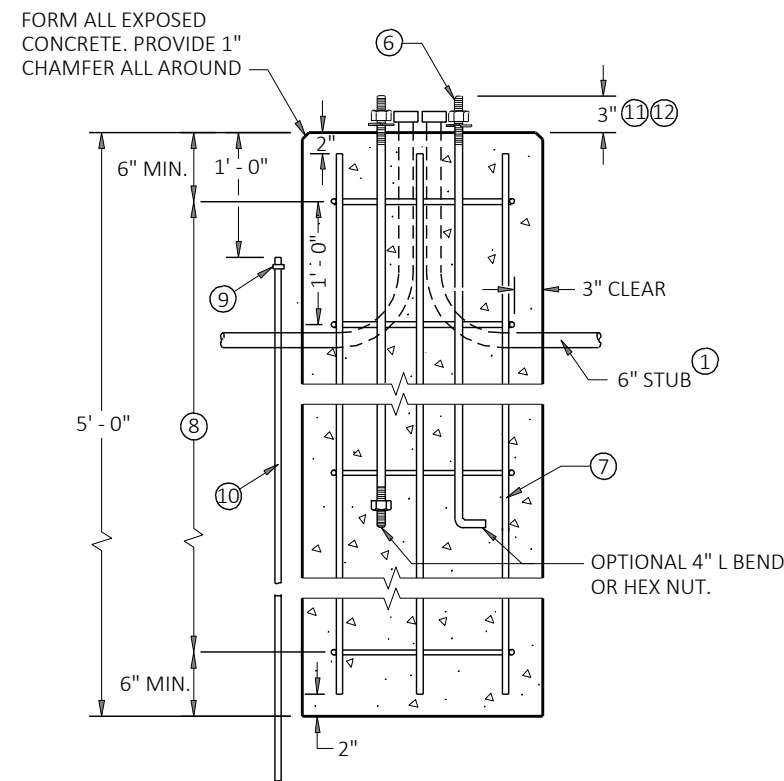
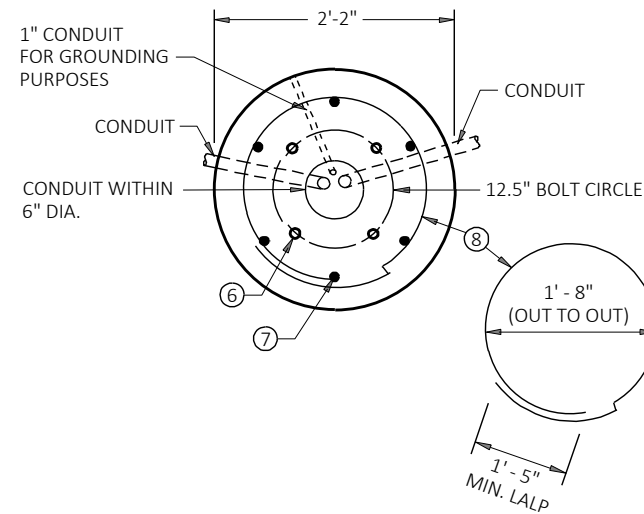


**PIPE GRATE DETAIL**  
SEE MQ TABLES FOR  
PIPE GRATE LOCATIONS

GENERAL NOTES:

- 1. CONFIRM ANCHOR ROD PATTERN AND ORIENTATION FOR REQUIRED LIGHT POLE ORIENTATION PRIOR TO INSTALLATION.
- 2. ALL NOTES FROM WISDOT S.D.D. 9C2 CONCRETE BASES, TYPES 1, 2, 5, & 6 SHALL APPLY TO THIS DETAIL. UNLESS REPLACED BELOW:

- ⑥ (4) 1" DIA. X 36" ANCHOR RODS
- ⑧ (5) NO. 4 X 6'-8" BAR STEEL REINFORCEMENT @ 1'-0" C-C



CONCRETE BASES SPECIAL TYPE A DETAIL

NOT TO SCALE

### GENERAL NOTES

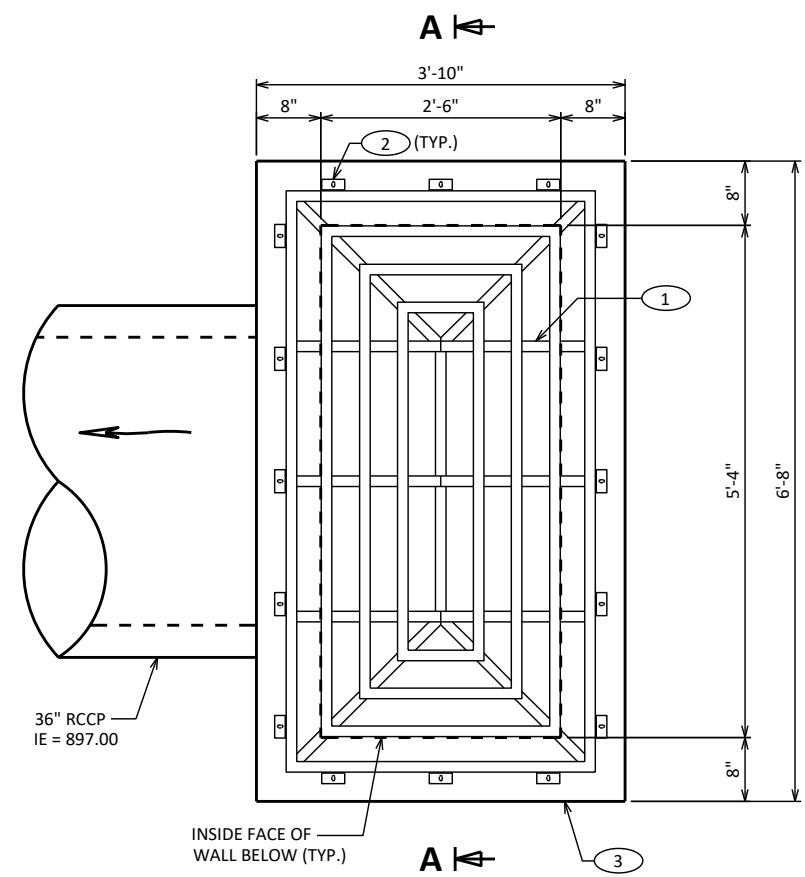
ALL ITEMS SHOWN IN THIS DETAIL, EXCEPT FOR STORM SEWER PIPES AND PYRAMIDAL INLET GRATE 2'-6" x 5'-4" ARE INCLUDED IN THE BID ITEM "INLET 249".

REFER TO STORM SEWER PLANS FOR PIPE SIZES, INVERT ELEVATIONS AND STATION/OFFSET TO CENTER OF STRUCTURE.

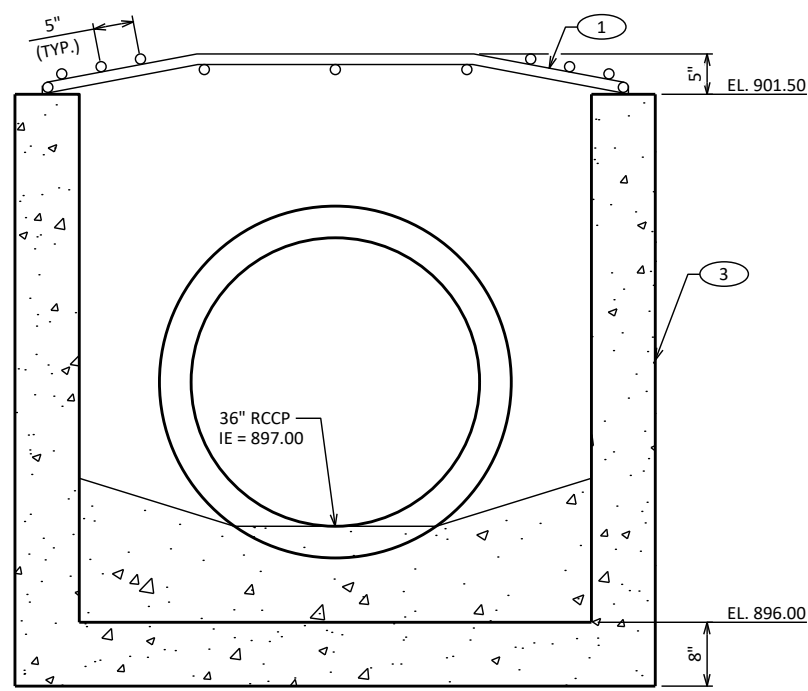
REFER TO S.D.D. "INLETS MEDIAN 1 AND 2 GRATE" FOR GENERAL NOTES.

### KEYNOTES

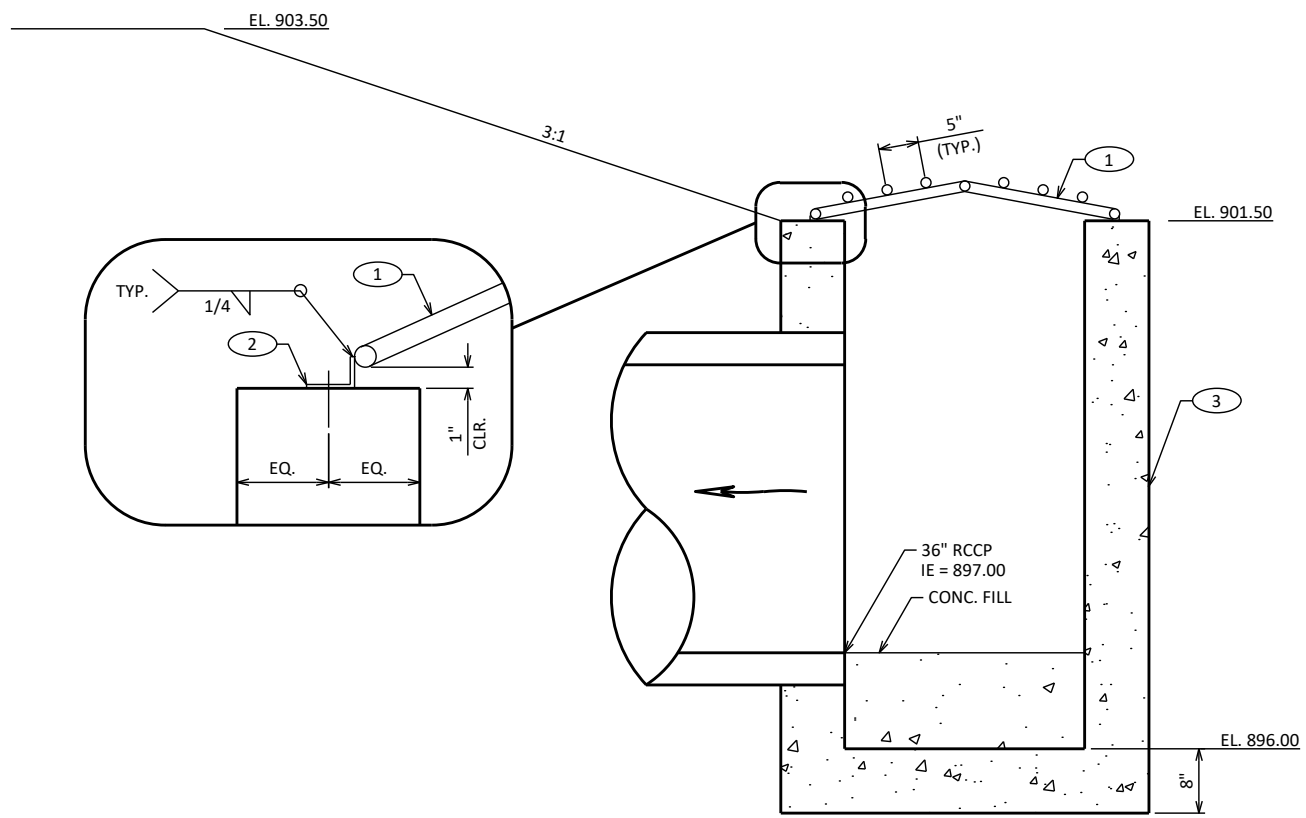
- 1 PYRAMIDAL INLET GRATE 2'-6" x 5'-4" CONSTRUCTED OF 1" SCHEDULE 40 PIPE. PROVIDE FULLY-WELDED CONSTRUCTION AND HOT-DIP GALVANIZE AFTER FABRICATION.
- 2 CLIP ANGLE 3"x2"x 3/4" (SHORT LEG VERTICAL) X 6" LONG WITH 5/8"x1 1/2" SLOTTED HOLES FOR 1/2" DIA. STAINLESS STEEL ADHESIVE ANCHOR. PROVIDE MIN. 4" EMBED FOR ADHESIVE ANCHOR. SPACE MAX. 2'-0" O.C. CLIP ANGLE AND ADHESIVE ANCHORS ARE INCLUDED IN THE BID ITEM "PYRAMIDAL INLET GRATE 2'-6" x 5'-4".
- 3 PRECAST INLET STRUCTURE PER S.D.D. "INLETS MEDIAN 1 AND 2 GRATE". TOP OF WALLS SHALL BE FLUSH AS SHOWN ON THIS SHEET.



**TOP PLAN**

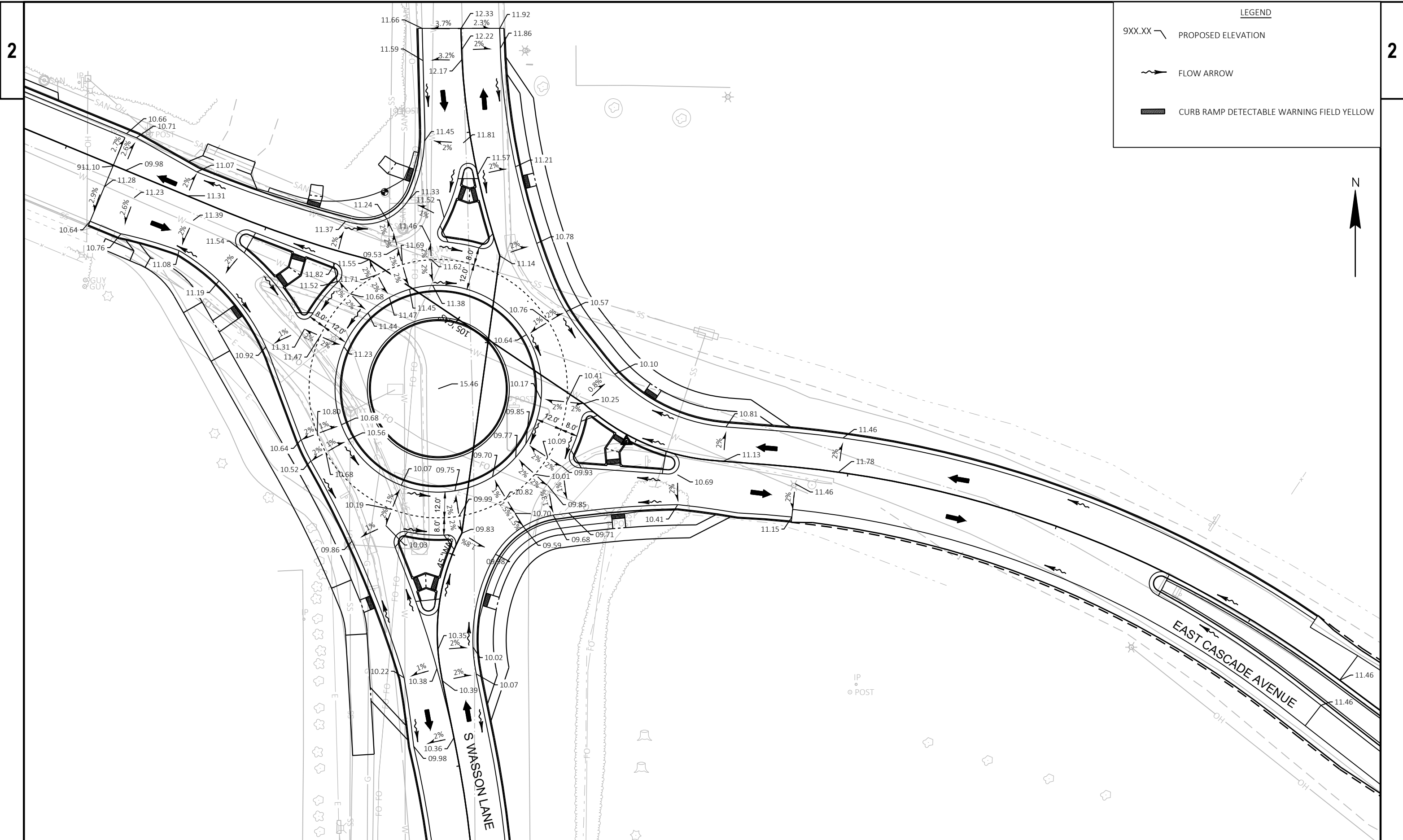


**SECTION A-A**



**SECTION B-B**





PROJECT NO: 7994-00-51

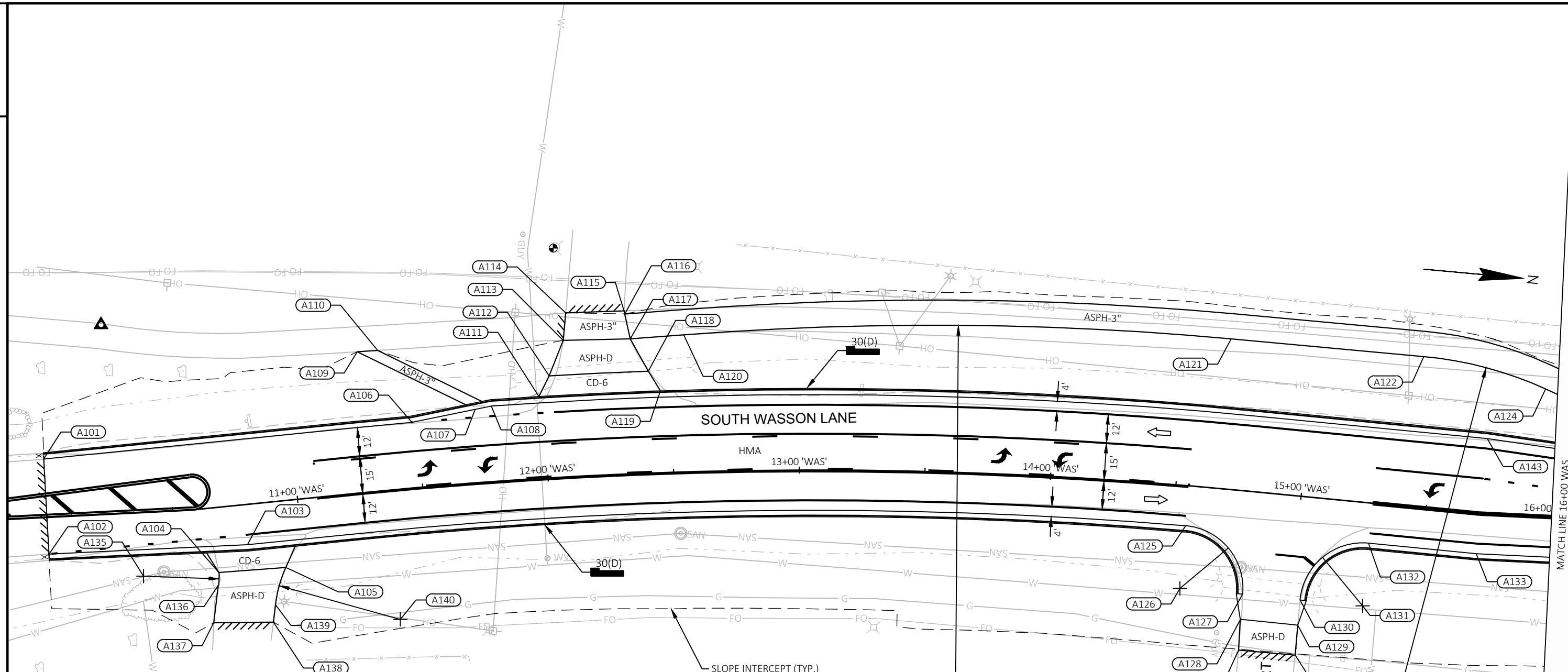
HWY: WASSON LANE

COUNTY: PIERCE

INTERSECTION DETAILS

SHEET

**E**



LEGEND

	P CONCRETE CURB PEDESTRIAN		ASPH-3" ASPHALTIC SURFACE
	18(R) CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)		CD-6 CONCRETE DRIVEWAY 6-INCH
	30(D) CONCRETE CURB & GUTTER 30-INCH TYPE D		HMA HMA PAVEMENT
	36(D) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D		HMA-SH HMA PAVEMENT (SHOULDERS)
	36(A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A		
	R CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		(A) CONCRETE MEDIAN SLOPED NOSE (TYPE 1)
	BAD BASE AGGREGATE DENSE 3/4-INCH		(B) CONCRETE MEDIAN SLOPED NOSE (TYPE 2)
	CRTA-12(R) CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED		(XXX) LAYOUT POINT NUMBER
	ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		////// SAWING ASPHALT REQ'D
	CCS-5 CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED		XXXX SAWING CONCRETE REQ'D
	CS-5 CONCRETE SIDEWALK 5-INCH		➔ TRAFFIC FLOW
	ASPH-SI ASPHALTIC SURFACE SAFETY ISLAND		

NOTE: SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE INFORMATION

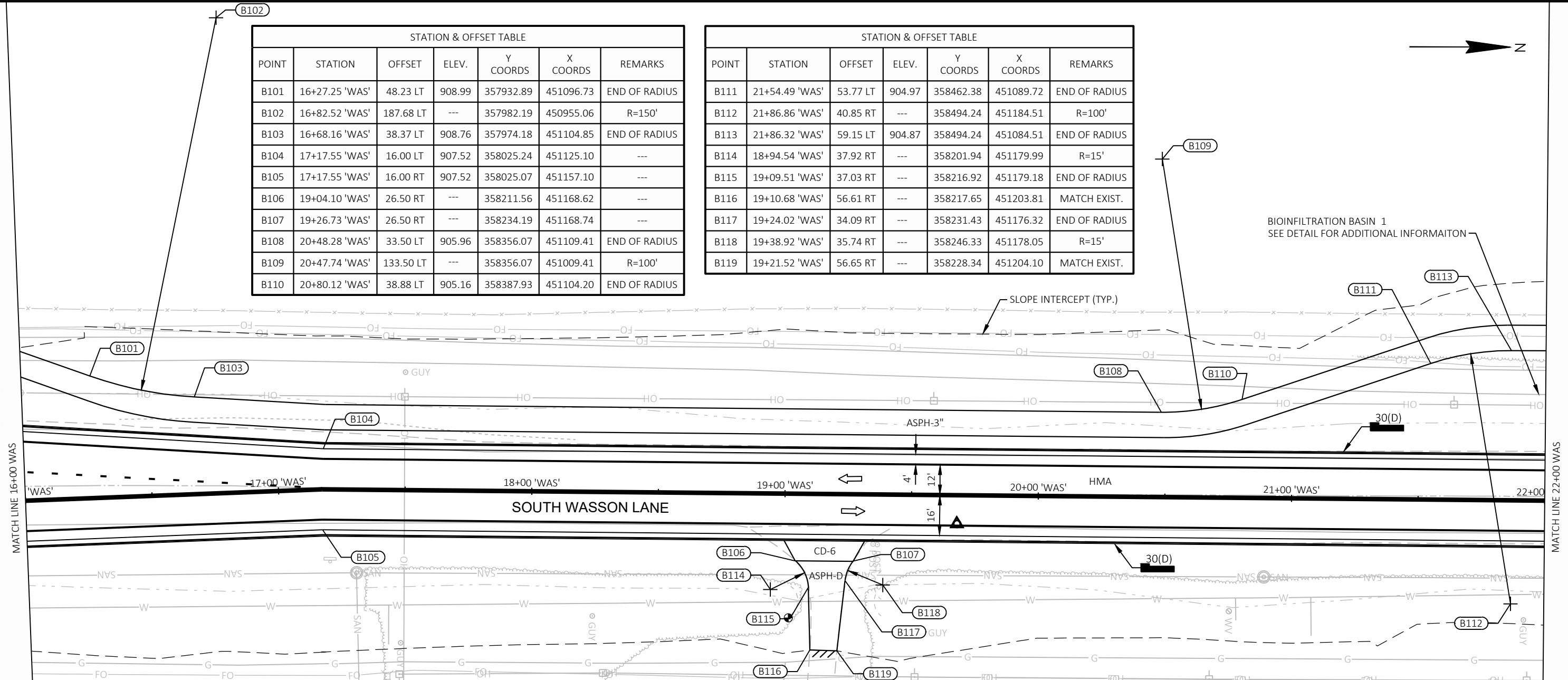
PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN DETAILS	SHEET	E
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STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
A101	0+00.00 'WAS'	0.00	---	357308.27	451177.78	MATCH EXIST.
A102	10+00.09 'WAS'	14.74 RT	---	357313.81	451215.20	MATCH EXIST.
A103	10+78.32 'WAS'	16.00 RT	915.59	357392.06	451204.32	---
A104	10+65.92 'WAS'	25.85 RT	---	357381.77	451216.35	---
A105	10+92.66 'WAS'	26.50 RT	---	357408.15	451211.90	---
A106	11+47.98 'WAS'	26.00 LT	914.67	357452.80	451149.91	---
A107	11+73.14 'WAS'	29.14 LT	914.31	357477.43	451142.43	---
A108	11+79.52 'WAS'	30.00 LT	914.22	357483.69	451140.53	---
A109	11+29.39 'WAS'	55.99 LT	---	357428.61	451123.91	MATCH EXIST.
A110	11+37.24 'WAS'	55.72 LT	---	357436.61	451122.67	MATCH EXIST.
A111	11+98.33 'WAS'	32.51 LT	---	357502.21	451135.08	END OF RADIUS
A112	12+02.75 'WAS'	40.50 LT	---	357505.47	451126.50	---
A113	12+08.96 'WAS'	54.30 LT	---	357509.76	451111.92	END OF RADIUS
A114	12+10.49 'WAS'	65.13 LT	---	357509.76	451100.97	MATCH EXIST.
A115	12+32.90 'WAS'	64.84 LT	---	357532.80	451098.06	MATCH EXIST.
A116	12+33.13 'WAS'	63.56 LT	---	357533.21	451099.30	MATCH EXIST.
A117	12+34.83 'WAS'	53.61 LT	---	357536.25	451108.93	---
A118	12+41.37 'WAS'	40.50 LT	---	357544.59	451121.07	---
A119	12+45.81 'WAS'	32.52 LT	---	357550.09	451128.42	END OF RADIUS
A120	12+55.55 'WAS'	54.53 LT	914.87	357557.31	451105.36	---
A121	14+66.68 'WAS'	59.66 LT	911.17	357774.34	451087.12	---
A122	15+43.22 'WAS'	59.99 LT	909.84	357851.29	451087.16	END OF RADIUS

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
A123	15+43.96 'WAS'	90.00 RT	---	357851.21	451237.16	R=150'
A124	15+95.12 'WAS'	50.78 LT	908.92	357900.68	451095.55	END OF RADIUS
A125	14+55.22 'WAS'	16.00 RT	911.10	357763.09	451162.83	END OF RADIUS
A126	14+55.02 'WAS'	41.00 RT	---	357763.09	451187.83	R=25'
A127	14+80.57 'WAS'	41.02 RT	908.91	357788.09	451187.83	END OF RADIUS
A128	14+80.63 'WAS'	51.27 RT	---	357788.09	451198.08	---
A129	15+03.63 'WAS'	51.14 RT	---	357811.09	451198.08	---
A130	15+03.57 'WAS'	41.14 RT	909.31	357811.09	451188.07	END OF RADIUS
A131	15+28.57 'WAS'	41.00 RT	---	357836.09	451188.07	R=25'
A132	15+28.44 'WAS'	16.00 RT	910.00	357836.09	451163.07	END OF RADIUS
A133	0+00.00 'WAS'	0.00	909.37	357879.20	451163.31	---
A134	14+60.57 'WAS'	1240.33 RT	---	357774.34	452387.12	R=1300'
A135	10+37.21 'WAS'	25.39 RT	---	357352.06	451220.52	R=30'
A136	10+65.23 'WAS'	30.87 RT	---	357382.04	451221.41	END OF RADIUS
A137	10+61.94 'WAS'	45.51 RT	---	357381.60	451236.41	MATCH EXIST.
A138	10+85.56 'WAS'	47.66 RT	---	357405.20	451234.02	MATCH EXIST.
A139	10+87.06 'WAS'	40.86 RT	---	357405.38	451227.06	END OF RADIUS
A140	11+36.18 'WAS'	51.61 RT	---	357455.36	451228.35	R=50'
A141	14+81.14 'WAS'	63.34 RT	---	357788.53	451210.15	MATCH EXIST.
A142	15+03.76 'WAS'	63.10 RT	---	357811.15	451210.04	MATCH EXIST.
A143	15+72.95 'WAS'	29.94 LT	909.06	357879.41	451117.31	

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
B101	16+27.25 'WAS'	48.23 LT	908.99	357932.89	451096.73	END OF RADIUS
B102	16+82.52 'WAS'	187.68 LT	---	357982.19	450955.06	R=150'
B103	16+68.16 'WAS'	38.37 LT	908.76	357974.18	451104.85	END OF RADIUS
B104	17+17.55 'WAS'	16.00 LT	907.52	358025.24	451125.10	---
B105	17+17.55 'WAS'	16.00 RT	907.52	358025.07	451157.10	---
B106	19+04.10 'WAS'	26.50 RT	---	358211.56	451168.62	---
B107	19+26.73 'WAS'	26.50 RT	---	358234.19	451168.74	---
B108	20+48.28 'WAS'	33.50 LT	905.96	358356.07	451109.41	END OF RADIUS
B109	20+47.74 'WAS'	133.50 LT	---	358356.07	451009.41	R=100'
B110	20+80.12 'WAS'	38.88 LT	905.16	358387.93	451104.20	END OF RADIUS

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
B111	21+54.49 'WAS'	53.77 LT	904.97	358462.38	451089.72	END OF RADIUS
B112	21+86.86 'WAS'	40.85 RT	---	358494.24	451184.51	R=100'
B113	21+86.32 'WAS'	59.15 LT	904.87	358494.24	451084.51	END OF RADIUS
B114	18+94.54 'WAS'	37.92 RT	---	358201.94	451179.99	R=15'
B115	19+09.51 'WAS'	37.03 RT	---	358216.92	451179.18	END OF RADIUS
B116	19+10.68 'WAS'	56.61 RT	---	358217.65	451203.81	MATCH EXIST.
B117	19+24.02 'WAS'	34.09 RT	---	358231.43	451176.32	END OF RADIUS
B118	19+38.92 'WAS'	35.74 RT	---	358246.33	451178.05	R=15'
B119	19+21.52 'WAS'	56.65 RT	---	358228.34	451204.10	MATCH EXIST.



BIOINFILTRATION BASIN 1  
SEE DETAIL FOR ADDITIONAL INFORMATION

**LEGEND**

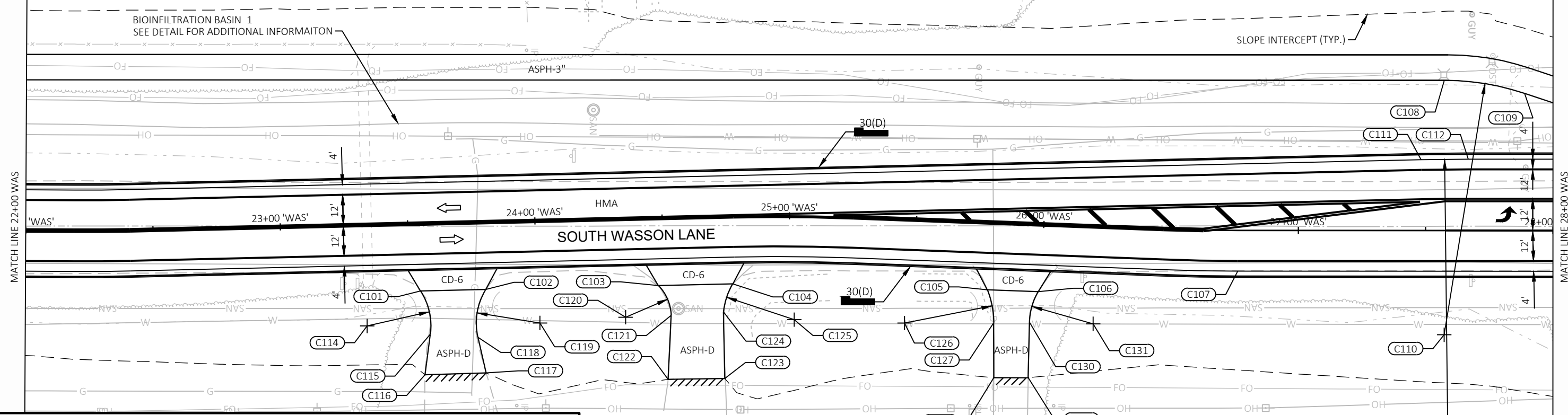
- |   |   |
|---|---|
| CONCRETE CURB PEDESTRIAN  | ASPH-3" ASPHALTIC SURFACE                 |
| CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)                        | CD-6 CONCRETE DRIVEWAY 6-INCH             |
| CONCRETE CURB & GUTTER 30-INCH TYPE D                                 | HMA HMA PAVEMENT                          |
| CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D                   | HMA-SH HMA PAVEMENT (SHOULDERS)           |
| CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A                   | CURB RAMP DETECTABLE WARNING FIELD YELLOW |
| CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R                   | CONCRETE MEDIAN SLOPED NOSE (TYPE 1)      |
| BAD BASE AGGREGATE DENSE 3/4-INCH                                     | CONCRETE MEDIAN SLOPED NOSE (TYPE 2)      |
| CRTA-12(R) CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED | LAYOUT POINT NUMBER                       |
| ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES                | SAWING ASPHALT REQ'D                      |
| CCS-5 CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED          | SAWING CONCRETE REQ'D                     |
| CS-5 CONCRETE SIDEWALK 5-INCH   | TRAFFIC FLOW                              |
| ASPH-SI ASPHALTIC SURFACE SAFETY ISLAND                               |   |

NOTE: SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE INFORMATION

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
C101	23+54.40 'WAS'	26.50 RT	---	358662.58	451167.54	---
C102	23+80.14 'WAS'	26.50 RT	---	358688.31	451166.95	---
C103	24+47.87 'WAS'	26.51 RT	---	358756.02	451165.41	---
C104	24+77.12 'WAS'	26.50 RT	---	358785.27	451164.73	---
C105	25+78.73 'WAS'	26.50 RT	---	358885.21	451167.09	---
C106	25+98.79 'WAS'	26.50 RT	---	358905.26	451167.86	---
C107	26+76.18 'WAS'	16.00 RT	904.05	358983.60	451159.77	---
C108	27+57.28 'WAS'	59.00 LT	903.61	359064.74	451084.82	END OF RADIUS
C109	27+88.85 'WAS'	53.89 LT	902.91	359096.31	451089.95	END OF RADIUS

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
C110	27+57.28 'WAS'	41.00 RT	---	359064.68	451184.82	R=100'
C111	27+48.20 'WAS'	27.78 LT	903.45	359055.65	451116.03	END OF RADIUS
C112	27+66.74 'WAS'	28.00 LT	903.36	359074.18	451115.82	END OF RADIUS
C113	27+66.74 'WAS'	763.00 RT	---	359073.75	451906.82	R=791'
C114	23+33.21 'WAS'	39.76 RT	---	358641.69	451181.28	R=25'
C115	23+57.91 'WAS'	43.59 RT	---	358666.48	451184.55	END OF RADIUS
C116	23+55.45 'WAS'	59.47 RT	---	358664.38	451200.48	MATCH EXIST.
C117	23+79.52 'WAS'	59.28 RT	---	358688.44	451199.74	MATCH EXIST.
C118	23+76.61 'WAS'	45.20 RT	---	358685.20	451185.73	END OF RADIUS

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
C119	24+01.09 'WAS'	40.13 RT	---	358709.56	451180.10	R=25'
C120	24+34.76 'WAS'	38.66 RT	---	358743.20	451177.86	R=18'
C121	24+52.64 'WAS'	38.34 RT	---	358761.05	451177.13	END OF RADIUS
C122	24+50.86 'WAS'	63.44 RT	---	358759.86	451202.26	MATCH EXIST.
C123	24+73.17 'WAS'	63.61 RT	---	358782.16	451201.92	MATCH EXIST.
C124	24+73.24 'WAS'	37.42 RT	---	358781.63	451175.74	END OF RADIUS
C125	25+02.25 'WAS'	40.78 RT	---	358809.44	451178.82	R=28'
C126	25+46.78 'WAS'	40.79 RT	---	358852.74	451180.16	R=35'
C127	25+81.75 'WAS'	39.37 RT	---	358887.74	451180.07	END OF RADIUS



**LEGEND**

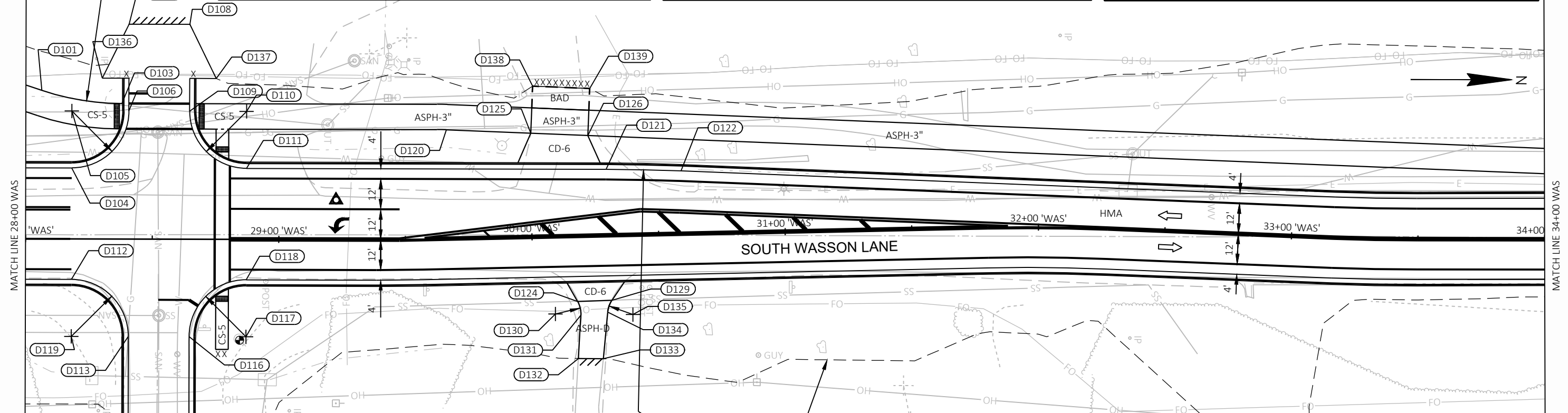
- P** CONCRETE CURB PEDESTRIAN
- 18(R)** CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)
- 30(D)** CONCRETE CURB & GUTTER 30-INCH TYPE D
- 36(D)** CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
- 36(A)** CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- R** CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
- BAD** BASE AGGREGATE DENSE 3/4-INCH
- CRTA-12(R)** CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED
- ASPH-D** ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- CCS-5** CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED
- CS-5** CONCRETE SIDEWALK 5-INCH
- ASPH-SI** ASPHALTIC SURFACE SAFETY ISLAND
- ASPH-3"** ASPHALTIC SURFACE
- CD-6** CONCRETE DRIVEWAY 6-INCH
- HMA** HMA PAVEMENT
- HMA-SH** HMA PAVEMENT (SHOULDERS)
- ▨** CURB RAMP DETECTABLE WARNING FIELD YELLOW
- (A)** CONCRETE MEDIAN SLOPED NOSE (TYPE 1)
- (B)** CONCRETE MEDIAN SLOPED NOSE (TYPE 2)
- (XXX)** LAYOUT POINT NUMBER
- SAWING ASPHALT REQ'D
- XXXX** SAWING CONCRETE REQ'D
- ➡** TRAFFIC FLOW

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
C128	25+82.62 'WAS'	60.93 RT	---	358887.79	451201.65	MATCH EXIST.
C129	25+96.18 'WAS'	60.49 RT	---	358901.35	451201.72	MATCH EXIST.
C130	25+95.83 'WAS'	38.62 RT	---	358901.84	451179.85	END OF RADIUS
C131	26+20.83 'WAS'	38.30 RT	---	358926.83	451180.48	R=25'

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
D101	28+06.31 'WAS'	58.61 LT	902.58	359113.77	451085.23	END OF RADIUS
D102	28+37.88 'WAS'	153.50 LT	---	359145.39	450990.36	R=100'
D103	28+37.88 'WAS'	53.50 LT	---	359145.34	451090.36	END OF RADIUS
D104	28+18.15 'WAS'	28.00 LT	901.09	359125.60	451115.85	END OF RADIUS
D105	28+18.15 'WAS'	50.50 LT	---	359125.61	451093.35	R=22.5'
D106	28+40.65 'WAS'	50.50 LT	900.32	359148.11	451093.36	---
D107	28+40.65 'WAS'	84.86 LT	---	359148.13	451059.00	MATCH EXIST.
D108	28+64.65 'WAS'	84.86 LT	---	359172.13	451059.02	MATCH EXIST.
D109	28+64.65 'WAS'	50.50 LT	900.55	359172.11	451093.38	END OF RADIUS

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
D110	28+87.15 'WAS'	50.50 LT	---	359194.61	451093.39	R=22.5'
D111	28+87.15 'WAS'	28.00 LT	901.80	359194.60	451115.89	END OF RADIUS
D112	28+18.15 'WAS'	16.00 RT	903.04	359125.58	451159.85	END OF RADIUS
D113	28+40.65 'WAS'	38.49 RT	902.51	359148.06	451182.35	END OF RADIUS
D114	28+40.65 'WAS'	72.24 RT	---	359148.05	451216.10	MATCH EXIST.
D115	28+64.65 'WAS'	72.24 RT	---	359172.05	451216.11	MATCH EXIST.
D116	28+64.65 'WAS'	38.50 RT	902.50	359172.06	451182.38	END OF RADIUS
D117	28+87.15 'WAS'	38.50 RT	---	359194.56	451182.39	R=22.5'
D118	28+87.14 'WAS'	16.00 RT	902.85	359194.56	451159.89	END OF RADIUS

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
D119	28+18.15 'WAS'	38.50 RT	---	359125.56	451182.35	R=22.5'
D120	29+67.07 'WAS'	42.99 LT	901.32	359273.52	451100.50	---
D121	30+29.76 'WAS'	26.08 LT	903.13	359336.57	451115.97	END OF RADIUS
D122	30+59.38 'WAS'	24.83 LT	903.05	359366.22	451116.54	END OF RADIUS
D123	30+11.23 'WAS'	764.70 RT	---	359336.15	451906.97	R=791'
D124	30+17.42 'WAS'	25.85 RT	---	359325.43	451168.17	---
D125	30+00.35 'WAS'	40.96 LT	901.83	359306.83	451101.77	---
D126	30+22.85 'WAS'	39.58 LT	902.94	359329.35	451102.63	---
D129	30+31.05 'WAS'	25.70 RT	---	359339.05	451167.71	---



STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
D130	30+08.63 'WAS'	30.61 RT	---	359316.75	451173.13	R=10'
D131	30+18.60 'WAS'	31.39 RT	---	359326.73	451173.68	END OF RADIUS
D132	30+17.28 'WAS'	48.37 RT	---	359325.80	451190.68	MATCH EXIST.
D133	30+27.14 'WAS'	48.70 RT	---	359335.67	451190.78	MATCH EXIST.
D134	30+29.29 'WAS'	30.31 RT	---	359337.39	451172.36	END OF RADIUS
D135	30+39.22 'WAS'	31.47 RT	---	359347.35	451173.29	R=10'
D136	28+30.15 'WAS'	63.50 LT	---	359137.62	451080.36	---
D137	28+75.15 'WAS'	63.50 LT	---	359182.62	451080.38	---
D138	30+01.48 'WAS'	59.53 LT	---	359307.54	451083.17	MATCH EXIST.

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
D139	30+23.98 'WAS'	58.16 LT	---	359330.06	451084.03	MATCH EXIST.

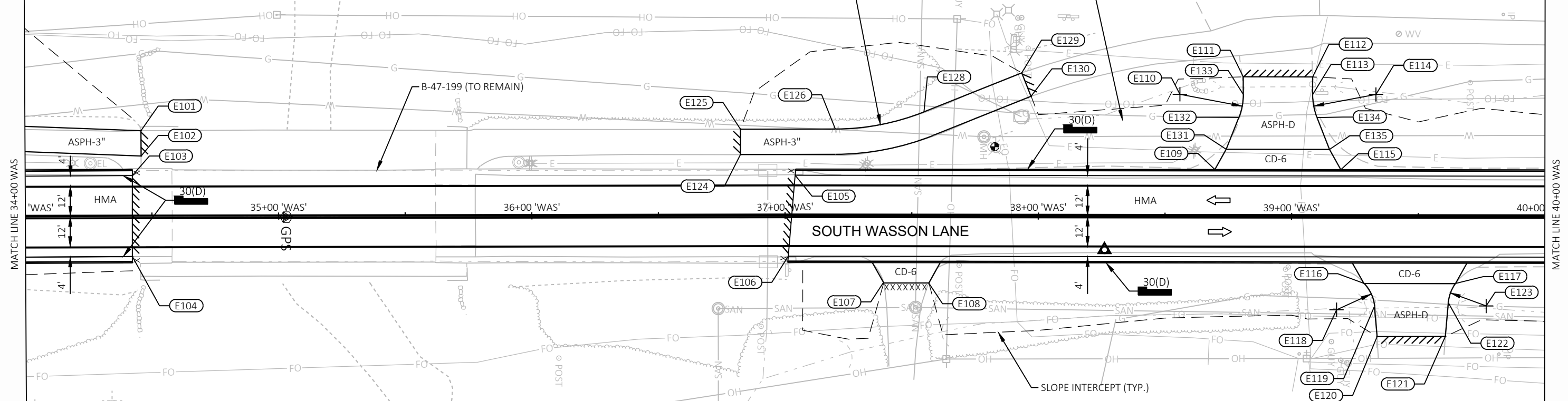
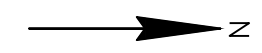
**LEGEND**

	CONCRETE CURB PEDESTRIAN		ASPH-3" ASPHALTIC SURFACE
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)		CD-6 CONCRETE DRIVEWAY 6-INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE D		HMA HMA PAVEMENT
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D		HMA-SH HMA PAVEMENT (SHOULDERS)
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A		CURB RAMP DETECTABLE WARNING FIELD YELLOW
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		CONCRETE MEDIAN SLOPED NOSE (TYPE 1)
	BAD BASE AGGREGATE DENSE 3/4-INCH		CONCRETE MEDIAN SLOPED NOSE (TYPE 2)
	CRTA-12(R) CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED		LAYOUT POINT NUMBER
	ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		SAWING ASPHALT REQ'D
	CCS-5 CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED		SAWING CONCRETE REQ'D
	CS-5 CONCRETE SIDEWALK 5-INCH		TRAFFIC FLOW
	ASPH-SI ASPHALTIC SURFACE SAFETY ISLAND		

NOTE: SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE INFORMATION

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
E121	39+60.77 'WAS'	47.43 RT	---	360267.98	451190.34	MATCH EXIST.
E122	39+61.92 'WAS'	34.06 RT	---	360269.15	451176.97	END OF RADIUS
E123	39+76.86 'WAS'	35.34 RT	---	360284.09	451178.28	R=15'
E124	36+82.39 'WAS'	24.20 LT	---	359989.68	451118.26	MATCH EXIST.
E125	36+82.37 'WAS'	34.20 LT	---	359989.66	451108.26	MATCH EXIST.
E126	37+19.79 'WAS'	34.31 LT	899.97	360027.14	451108.18	END OF RADIUS
E127	37+19.42 'WAS'	129.31 LT	---	360026.93	451013.18	R=95'
E128	37+54.77 'WAS'	41.14 LT	898.83	360062.14	451101.42	END OF RADIUS
E129	37+93.35 'WAS'	56.60 LT	---	360100.74	451086.02	MATCH EXIST.
E130	37+97.08 'WAS'	47.32 LT	---	360104.45	451095.30	MATCH EXIST.

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
E131	38+74.15 'WAS'	26.50 LT	---	360181.49	451116.26	---
E132	38+79.09 'WAS'	39.09 LT	---	360186.45	451103.67	END OF RADIUS
E133	38+80.82 'WAS'	48.23 LT	---	360188.19	451094.55	END OF RADIUS
E134	39+09.99 'WAS'	39.09 LT	---	360217.34	451103.73	END OF RADIUS
E135	39+14.93 'WAS'	26.50 LT	---	360222.26	451116.33	---



**LEGEND**

- |   |   |
|---|---|
| CONCRETE CURB PEDESTRIAN  | ASPH-3" ASPHALTIC SURFACE                 |
| CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)                        | CD-6 CONCRETE DRIVEWAY 6-INCH             |
| CONCRETE CURB & GUTTER 30-INCH TYPE D                                 | HMA HMA PAVEMENT                          |
| CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D                   | HMA-SH HMA PAVEMENT (SHOULDERS)           |
| CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A                   | CURB RAMP DETECTABLE WARNING FIELD YELLOW |
| CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R                   | CONCRETE MEDIAN SLOPED NOSE (TYPE 1)      |
| BAD BASE AGGREGATE DENSE 3/4-INCH                                     | CONCRETE MEDIAN SLOPED NOSE (TYPE 2)      |
| CRTA-12(R) CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED | LAYOUT POINT NUMBER                       |
| ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES                | SAWING ASPHALT REQ'D                      |
| CCS-5 CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED          | SAWING CONCRETE REQ'D                     |
| CS-5 CONCRETE SIDEWALK 5-INCH   | TRAFFIC FLOW                              |
| ASPH-SI ASPHALTIC SURFACE SAFETY ISLAND                               |   |

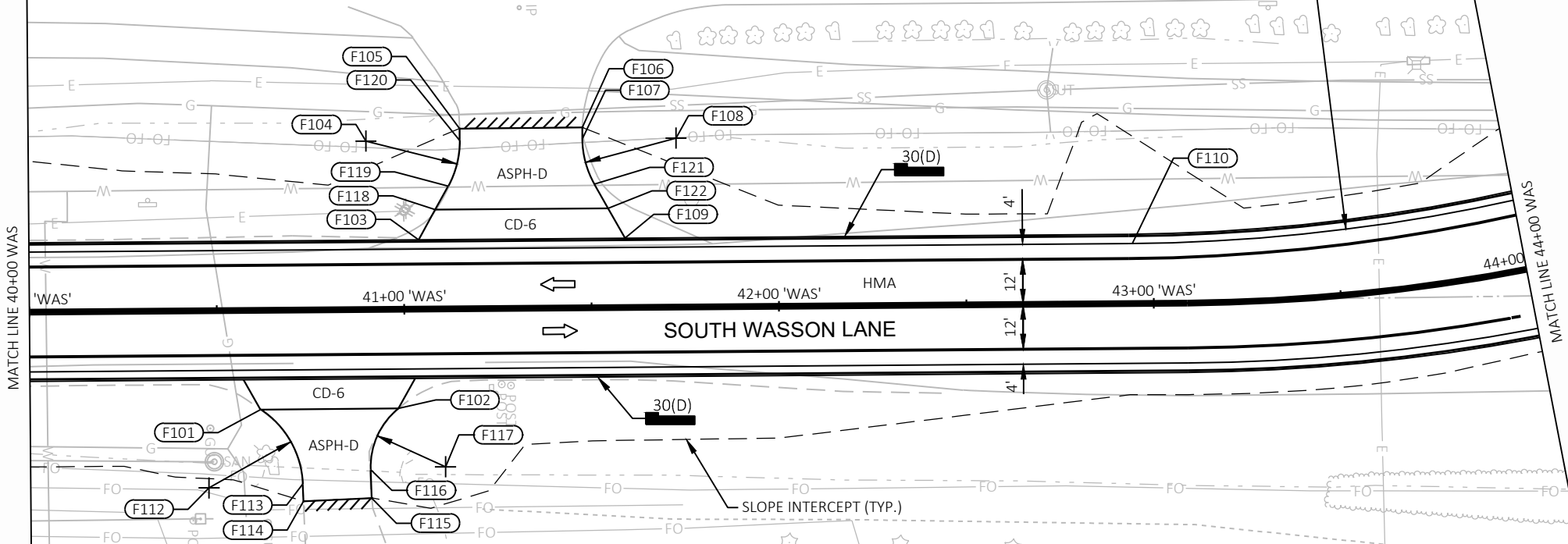
NOTE: SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE INFORMATION

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
E101	34+45.63 'WAS'	33.78 LT	---	359752.92	451108.68	MATCH EXIST.
E102	34+45.68 'WAS'	23.72 LT	---	359752.97	451118.74	MATCH EXIST.
E103	34+42.26 'WAS'	16.00 LT	---	359749.55	451126.46	MATCH EXIST.
E104	34+42.13 'WAS'	15.94 RT	---	359749.50	451158.41	MATCH EXIST.
E105	37+03.97 'WAS'	16.00 LT	---	360011.28	451126.47	MATCH EXIST.
E106	37+01.26 'WAS'	16.00 RT	---	360008.55	451158.46	MATCH EXIST.
E107	37+38.76 'WAS'	26.50 RT	---	360046.00	451169.03	MATCH EXIST.
E108	37+56.70 'WAS'	26.50 RT	---	360063.95	451169.06	MATCH EXIST.
E109	38+69.65 'WAS'	18.50 LT	---	360176.97	451124.25	END OF RADIUS
E110	38+55.82 'WAS'	48.23 LT	---	360163.19	451094.50	R=25'

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
E111	38+80.82 'WAS'	55.14 LT	---	360188.21	451087.63	MATCH EXIST.
E112	39+08.26 'WAS'	55.14 LT	---	360215.64	451087.68	MATCH EXIST.
E113	39+08.26 'WAS'	48.14 LT	---	360215.63	451094.68	END OF RADIUS
E114	39+33.26 'WAS'	48.22 LT	---	360240.63	451094.64	R=25'
E115	39+19.43 'WAS'	18.50 LT	---	360226.75	451124.34	END OF RADIUS
E116	39+28.75 'WAS'	26.50 RT	---	360236.00	451169.35	---
E117	39+64.48 'WAS'	26.50 RT	---	360271.73	451169.41	---
E118	39+17.78 'WAS'	36.90 RT	---	360225.01	451179.74	R=15'
E119	39+32.72 'WAS'	35.56 RT	---	360239.95	451178.42	END OF RADIUS
E120	39+33.80 'WAS'	47.49 RT	---	360241.00	451190.35	MATCH EXIST.



STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
F101	40+61.47 'WAS'	26.50 RT	---	360368.71	451169.58	---
F102	40+98.27 'WAS'	26.50 RT	---	360405.51	451169.64	---
F103	41+03.97 'WAS'	18.49 LT	---	360411.29	451124.66	END OF RADIUS
F104	40+90.12 'WAS'	44.92 LT	---	360397.49	451098.21	R=25'
F105	41+15.14 'WAS'	48.08 LT	---	360422.52	451095.09	MATCH EXIST.
F106	41+47.91 'WAS'	48.14 LT	---	360455.29	451095.09	MATCH EXIST.
F107	41+47.87 'WAS'	45.03 LT	---	360455.23	451098.19	END OF RADIUS
F108	41+72.87 'WAS'	45.08 LT	---	360480.23	451098.19	R=25'
F109	41+59.08 'WAS'	18.49 LT	---	360466.40	451124.76	END OF RADIUS
F110	42+94.35 'WAS'	15.99 LT	908.93	360601.66	451127.49	END OF RADIUS
F111	42+93.50 'WAS'	511.99 LT	---	360601.66	450631.49	R=500'



**LEGEND**

- |   |   |
|---|---|
| P CONCRETE CURB PEDESTRIAN  | ASPH-3" ASPHALTIC SURFACE                 |
| 18(R) CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)                  | CD-6 CONCRETE DRIVEWAY 6-INCH             |
| 30(D) CONCRETE CURB & GUTTER 30-INCH TYPE D                           | HMA HMA PAVEMENT                          |
| 36(D) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D             | HMA-SH HMA PAVEMENT (SHOULDERS)           |
| 36(A) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A             | CURB RAMP DETECTABLE WARNING FIELD YELLOW |
| R CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R                 | (A) CONCRETE MEDIAN SLOPED NOSE (TYPE 1)  |
| BAD BASE AGGREGATE DENSE 3/4-INCH                                     | (B) CONCRETE MEDIAN SLOPED NOSE (TYPE 2)  |
| CRTA-12(R) CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED | (XXX) LAYOUT POINT NUMBER                 |
| ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES                | SAWING ASPHALT REQ'D                      |
| CCS-5 CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED          | XXXX SAWING CONCRETE REQ'D                |
| CS-5 CONCRETE SIDEWALK 5-INCH   | TRAFFIC FLOW                              |
| ASPH-SI ASPHALTIC SURFACE SAFETY ISLAND                               |   |

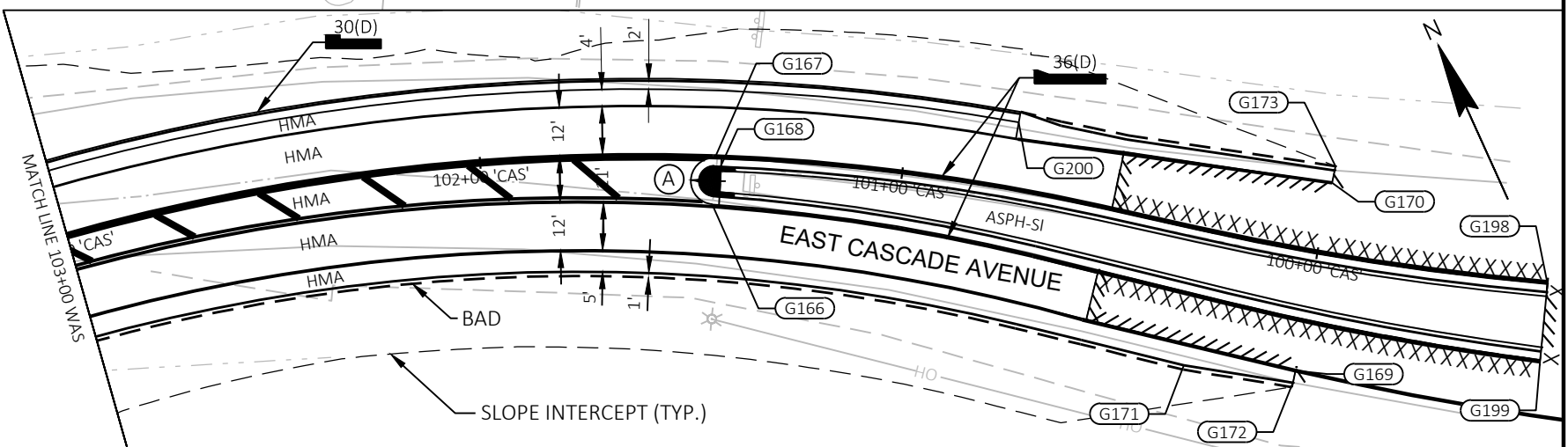
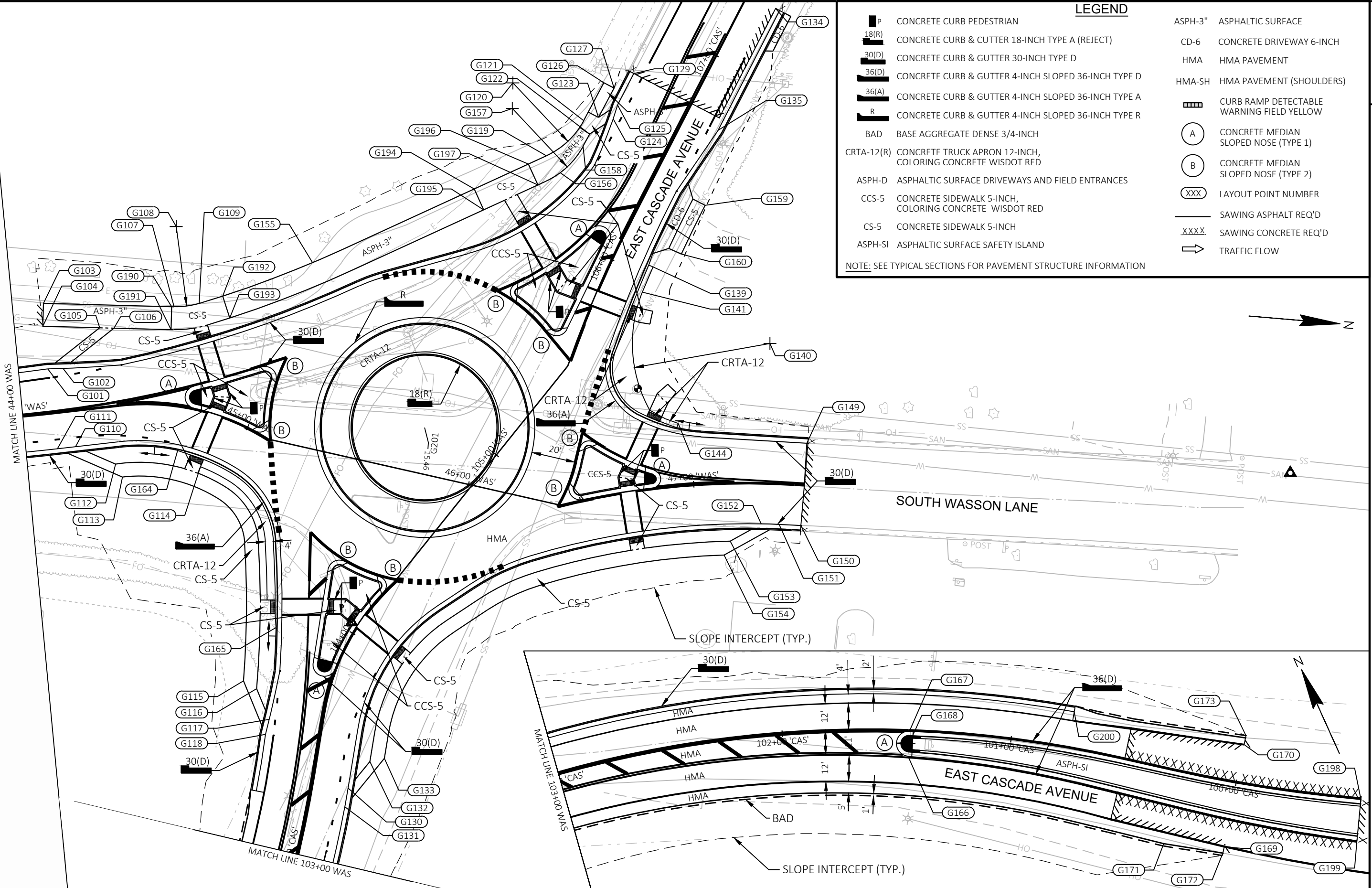
STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
F112	40+47.57 'WAS'	47.28 RT	---	360354.78	451190.34	R=25'
F113	40+72.56 'WAS'	46.48 RT	---	360379.77	451189.58	END OF RADIUS
F114	40+72.70 'WAS'	51.04 RT	---	360379.90	451194.14	MATCH EXIST.
F115	40+90.94 'WAS'	50.35 RT	---	360398.14	451193.48	MATCH EXIST.
F116	40+90.71 'WAS'	42.75 RT	---	360397.93	451185.88	END OF RADIUS
F117	41+10.70 'WAS'	42.16 RT	---	360417.92	451185.33	R=20'
F118	41+08.47 'WAS'	26.49 LT	---	360415.81	451116.67	---
F119	41+11.96 'WAS'	32.75 LT	---	360419.31	451110.42	END OF RADIUS
F120	41+15.12 'WAS'	44.92 LT	---	360422.49	451098.25	END OF RADIUS
F121	41+51.00 'WAS'	32.96 LT	---	360458.35	451110.28	END OF RADIUS
F122	41+54.58 'WAS'	26.49 LT	---	360461.92	451116.75	---



LEGEND

	CONCRETE CURB PEDESTRIAN		ASPH-3" ASPHALTIC SURFACE
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)		CONCRETE DRIVEWAY 6-INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE D		HMA PAVEMENT
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D		HMA PAVEMENT (SHOULDERS)
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A		CURB RAMP DETECTABLE WARNING FIELD YELLOW
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		CONCRETE MEDIAN SLOPED NOSE (TYPE 1)
	BASE AGGREGATE DENSE 3/4-INCH		CONCRETE MEDIAN SLOPED NOSE (TYPE 2)
	CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED		LAYOUT POINT NUMBER
	ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		SAWING ASPHALT REQ'D
	CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED		SAWING CONCRETE REQ'D
	CONCRETE SIDEWALK 5-INCH		TRAFFIC FLOW
	ASPH-SI ASPHALTIC SURFACE SAFETY ISLAND		

NOTE: SEE TYPICAL SECTIONS FOR PAVEMENT STRUCTURE INFORMATION

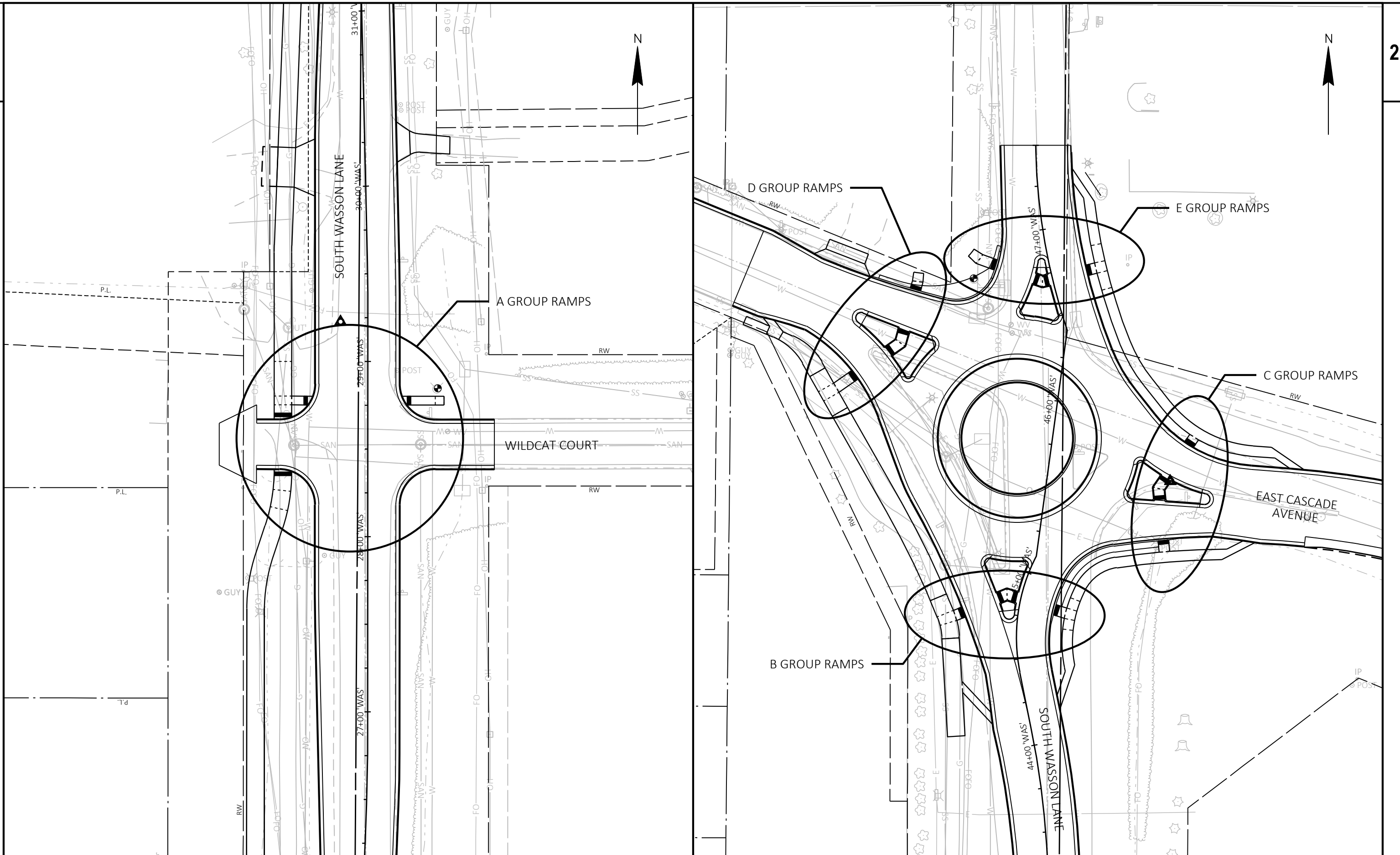


STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
G115	103+68.68 'CAS'	36.89 LT	---	360812.635	451242.376	---
G116	103+67.09 'CAS'	30.55 LT	---	360818.644	451245.305	---
G117	103+56.16 'CAS'	22.82 LT	---	360825.280	451258.187	---
G118	103+49.46 'CAS'	23.39 LT	---	360824.197	451264.819	---
G119	106+27.08 'CAS'	45.52 LT	---	360924.692	451002.982	END OF RADIUS
G120	106+48.62 'CAS'	73.11 LT	---	360907.425	450972.538	R=35'
G121	106+48.20 'CAS'	38.11 LT	---	360939.609	450986.293	END OF RADIUS
G122	106+44.19 'CAS'	33.16 LT	---	360942.656	450991.888	---
G123	106+52.40 'CAS'	33.06 LT	---	360945.881	450984.342	---
G124	106+54.80 'CAS'	27.07 LT	---	360952.338	450984.409	---
G125	106+61.02 'CAS'	28.11 LT	---	360953.750	450978.264	---
G126	106+66.93 'CAS'	37.89 LT	---	360946.970	450969.070	MATCH EXIST.
G127	106+66.87 'CAS'	32.89 LT	---	360951.568	450971.035	MATCH EXIST.
G129	106+76.51 'CAS'	28.15 LT	---	360959.629	450963.938	MATCH EXIST.
G130	103+32.22 'CAS'	16.00 RT	---	360862.145	451285.118	---
G131	103+24.26 'CAS'	16.00 RT	---	360861.401	451293.294	---
G132	103+45.12 'CAS'	23.50 RT	---	360870.624	451272.716	---
G133	103+47.51 'CAS'	29.50 RT	---	360876.789	451270.787	---
G134	107+30.15 'CAS'	13.71 RT	---	361018.809	450930.365	MATCH EXIST.
G135	106+71.44 'CAS'	15.86 RT	---	360998.368	450985.437	---
G139	106+04.96 'CAS'	17.84 RT	---	360975.196	451047.215	---
G141	105+92.52 'CAS'	18.28 RT	---	360971.500	451058.629	---
G156	106+23.37 'CAS'	36.73 LT	---	360931.398	451009.771	---
G157	106+38.62 'CAS'	68.22 LT	---	360908.117	450983.642	---
G158	106+38.20 'CAS'	33.23 LT	---	360940.301	450997.397	---
G160	106+15.88 'CAS'	26.46 RT	---	360987.020	451040.639	---

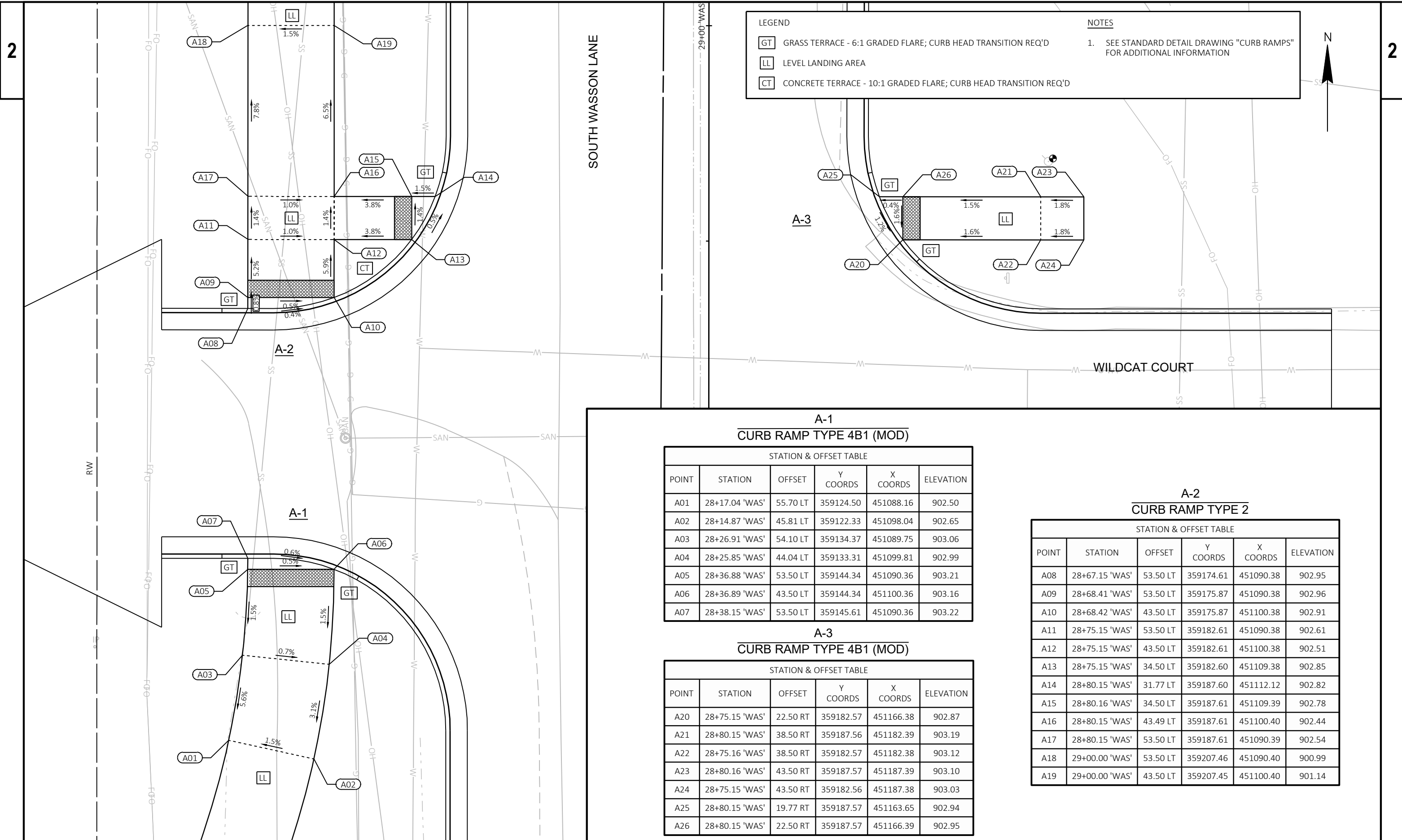
STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
G165	103+88.58 'CAS'	30.77 LT	---	360824.803	451217.972	---
G166	101+44.68 'CAS'	10.98 LT	913.41	360786.537	451458.594	END OF RADIUS
G167	101+44.50 'CAS'	0.02 RT	913.36	360796.317	451463.625	END OF RADIUS
G168	101+44.49 'CAS'	5.48 LT	---	360791.385	451461.192	R=5.5'
G169	100+00.26 'CAS'	28.23 LT	---	360694.127	451568.226	MATCH EXIST.
G170	99+99.38 'CAS'	17.03 RT	---	360731.056	451594.403	MATCH EXIST.
G171	100+25.17 'CAS'	32.13 LT	---	360706.046	451544.690	---
G172	100+00.31 'CAS'	31.10 LT	---	360691.780	451566.563	---
G173	99+99.29 'CAS'	21.00 RT	---	360734.294	451596.700	MATCH EXIST.
G190	104+61.66 'CAS'	150.87 LT	---	360767.477	451082.548	---
G191	104+53.70 'CAS'	144.81 LT	---	360768.067	451092.531	---
G192	104+79.22 'CAS'	136.41 LT	---	360789.265	451076.027	---
G193	104+73.74 'CAS'	128.05 LT	---	360793.154	451085.240	---
G194	106+02.15 'CAS'	67.19 LT	---	360894.557	451020.074	---
G195	105+96.40 'CAS'	59.57 LT	---	360899.490	451028.773	---
G196	106+20.28 'CAS'	50.82 LT	---	360917.196	451007.234	---
G197	106+14.59 'CAS'	42.97 LT	---	360922.129	451015.933	---
G198	99+45.04 'CAS'	0.00 RT	---	360688.403	451631.045	MATCH EXIST.
G199	99+45.16 'CAS'	18.10 LT	---	360672.674	451622.083	MATCH EXIST.
G200	100+74.94 'CAS'	16.03 RT	---	360774.538	451532.667	---

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV.	Y COORDS	X COORDS	REMARKS
G101	44+13.12 'WAS'	19.10 LT	---	360715.89	451114.16	---
G102	44+19.79 'WAS'	18.52 LT	---	360722.54	451113.40	---
G103	44+14.55 'WAS'	47.69 LT	---	360711.62	451085.85	MATCH EXIST.
G104	44+13.16 'WAS'	37.83 LT	---	360712.21	451095.80	MATCH EXIST.
G105	44+37.69 'WAS'	34.31 LT	---	360736.96	451094.37	---
G106	44+43.53 'WAS'	33.45 LT	---	360743.19	451094.00	---
G107	44+62.61 'WAS'	42.58 LT	---	360768.51	451082.49	END OF RADIUS
G108	44+61.42 'WAS'	77.53 LT	---	360766.44	451047.55	R=35'
G109	44+70.06 'WAS'	45.39 LT	---	360779.33	451080.09	END OF RADIUS
G110	44+21.36 'WAS'	16.00 RT	---	360730.92	451146.93	---
G111	44+13.36 'WAS'	16.00 RT	---	360723.08	451148.51	---
G112	44+37.81 'WAS'	25.50 RT	---	360748.93	451152.97	---
G113	44+40.20 'WAS'	31.50 RT	---	360752.47	451158.38	---
G114	44+85.85 'WAS'	23.89 RT	---	360785.94	451151.03	---
G140	47+31.77 'WAS'	60.70 LT	---	361028.88	451076.15	R=60'
G144	46+95.42 'WAS'	26.97 LT	---	360992.00	451114.28	---
G149	47+48.31 'WAS'	18.00 LT	---	361048.65	451118.12	MATCH EXIST.
G150	47+47.89 'WAS'	18.00 RT	---	361049.14	451154.11	MATCH EXIST.
G151	47+38.04 'WAS'	18.00 RT	---	361039.62	451154.40	---
G152	47+29.82 'WAS'	18.00 RT	---	361031.84	451154.83	---
G153	47+15.38 'WAS'	25.50 RT	---	361019.02	451163.48	---
G154	47+12.27 'WAS'	31.50 RT	---	361016.86	451169.77	---
G155	44+96.31 'WAS'	77.01 LT	911.05	360827.09	451058.10	---
G159	47+09.80 'WAS'	121.18 LT	---	360995.59	451018.55	---
G164	44+71.30 'WAS'	19.36 RT	---	360775.42	451144.74	---
G201	45+75.78 'WAS'	19.99 LT	915.46	360881.88	451125.56	HP OF CIRCLE

THE FOLLOWING POINTS HAVE BEEN OMITTED FROM THE PLAN SET: G128, G136, G137, G138, G142, G143, G145, G146, G147, G148, G161, G162, G163



PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CURB RAMP DETAILS - OVERVIEW	SHEET <b>E</b>
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**LEGEND**

- GT GRASS TERRACE - 6:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D
- LL LEVEL LANDING AREA
- CT CONCRETE TERRACE - 10:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D

**NOTES**

1. SEE STANDARD DETAIL DRAWING "CURB RAMPS" FOR ADDITIONAL INFORMATION

**A-1**  
**CURB RAMP TYPE 4B1 (MOD)**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
A01	28+17.04 'WAS'	55.70 LT	359124.50	451088.16	902.50
A02	28+14.87 'WAS'	45.81 LT	359122.33	451098.04	902.65
A03	28+26.91 'WAS'	54.10 LT	359134.37	451089.75	903.06
A04	28+25.85 'WAS'	44.04 LT	359133.31	451099.81	902.99
A05	28+36.88 'WAS'	53.50 LT	359144.34	451090.36	903.21
A06	28+36.89 'WAS'	43.50 LT	359144.34	451100.36	903.16
A07	28+38.15 'WAS'	53.50 LT	359145.61	451090.36	903.22

**A-2**  
**CURB RAMP TYPE 2**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
A08	28+67.15 'WAS'	53.50 LT	359174.61	451090.38	902.95
A09	28+68.41 'WAS'	53.50 LT	359175.87	451090.38	902.96
A10	28+68.42 'WAS'	43.50 LT	359175.87	451100.38	902.91
A11	28+75.15 'WAS'	53.50 LT	359182.61	451090.38	902.61
A12	28+75.15 'WAS'	43.50 LT	359182.61	451100.38	902.51
A13	28+75.15 'WAS'	34.50 LT	359182.60	451109.38	902.85
A14	28+80.15 'WAS'	31.77 LT	359187.60	451112.12	902.82
A15	28+80.16 'WAS'	34.50 LT	359187.61	451109.39	902.78
A16	28+80.15 'WAS'	43.49 LT	359187.61	451100.40	902.44
A17	28+80.15 'WAS'	53.50 LT	359187.61	451090.39	902.54
A18	29+00.00 'WAS'	53.50 LT	359207.46	451090.40	900.99
A19	29+00.00 'WAS'	43.50 LT	359207.45	451100.40	901.14

**A-3**  
**CURB RAMP TYPE 4B1 (MOD)**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
A20	28+75.15 'WAS'	22.50 RT	359182.57	451166.38	902.87
A21	28+80.15 'WAS'	38.50 RT	359187.56	451182.39	903.19
A22	28+75.16 'WAS'	38.50 RT	359182.57	451182.38	903.12
A23	28+80.16 'WAS'	43.50 RT	359187.57	451187.39	903.10
A24	28+75.15 'WAS'	43.50 RT	359182.56	451187.38	903.03
A25	28+80.15 'WAS'	19.77 RT	359187.57	451163.65	902.94
A26	28+80.15 'WAS'	22.50 RT	359187.57	451166.39	902.95

**B-1**  
**CURB RAMP TYPE 3**

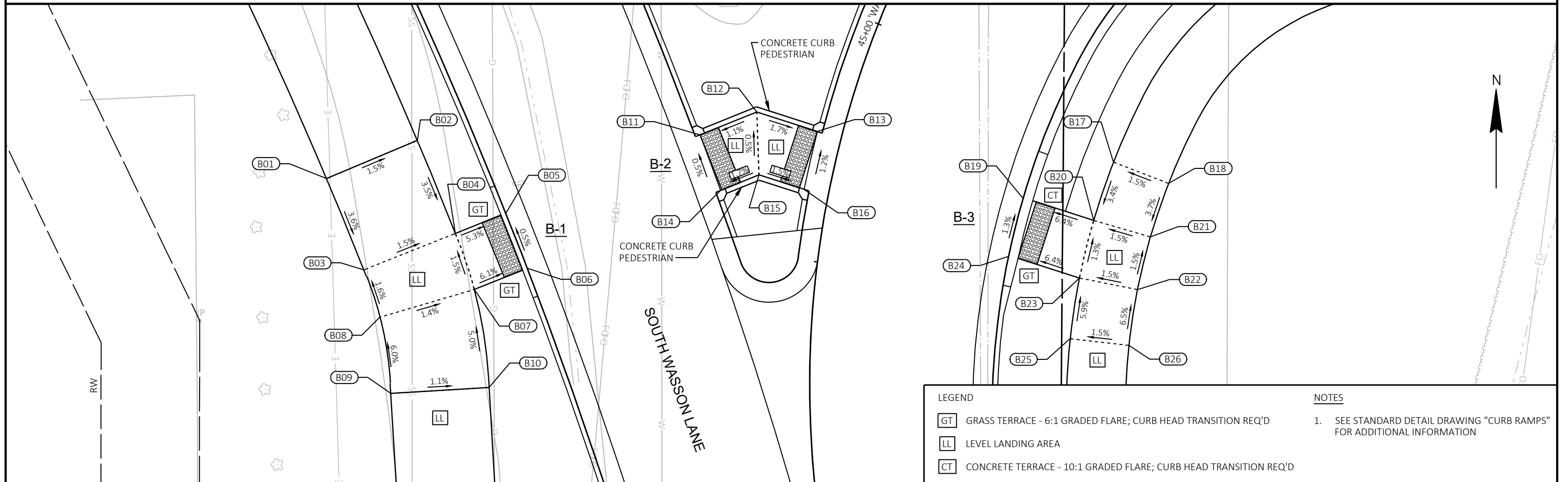
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
B01	44+76.44 'WAS'	50.50 LT	360789.27	451076.03	910.72
B02	44+80.05 'WAS'	42.01 LT	360793.15	451085.24	910.57
B03	44+70.51 'WAS'	45.72 LT	360780.01	451079.82	910.36
B04	44+73.75 'WAS'	36.82 LT	360783.71	451089.11	910.21
B07	44+69.70 'WAS'	34.38 LT	360778.02	451091.03	910.30
B08	44+67.26 'WAS'	43.79 LT	360775.20	451081.44	910.44
B09	44+61.88 'WAS'	42.52 LT	360767.48	451082.55	910.91
B10	44+62.29 'WAS'	32.53 LT	360768.07	451092.53	910.80

**B-2**  
**CURB RAMP TYPE 5**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
B11	44+84.94 'WAS'	13.99 LT	360793.70	451113.94	910.10
B12	44+88.19 'WAS'	8.95 LT	360796.02	451119.69	910.17
B13	44+87.84 'WAS'	2.50 LT	360794.04	451125.85	910.06
B14	44+80.40 'WAS'	10.82 LT	360788.07	451116.02	910.13
B15	44+82.49 'WAS'	7.29 LT	360789.64	451119.92	910.20
B16	44+81.97 'WAS'	2.50 LT	360788.17	451124.51	910.13

**B-3**  
**CURB RAMP TYPE 3**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
B17	44+94.10 'WAS'	27.22 RT	360790.95	451155.89	910.39
B18	44+93.63 'WAS'	33.21 RT	360788.79	451161.49	910.48
B19	44+86.23 'WAS'	19.40 RT	360787.28	451146.73	909.70
B20	44+85.53 'WAS'	26.88 RT	360785.02	451153.88	910.18
B21	44+85.07 'WAS'	32.87 RT	360783.35	451159.64	910.27
B22	44+76.90 'WAS'	32.57 RT	360778.00	451158.34	910.35
B23	44+77.33 'WAS'	26.58 RT	360779.18	451152.45	910.26
B24	44+78.71 'WAS'	19.12 RT	360781.39	451145.25	909.78
B25	44+68.86 'WAS'	26.29 RT	360773.02	451151.50	910.63
B26	44+68.43 'WAS'	32.28 RT	360772.35	451157.46	910.72



<b>LEGEND</b>	<b>NOTES</b>
<ul style="list-style-type: none"> <li>[GT] GRASS TERRACE - 6:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D</li> <li>[LL] LEVEL LANDING AREA</li> <li>[CT] CONCRETE TERRACE - 10:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D</li> </ul>	<ul style="list-style-type: none"> <li>1. SEE STANDARD DETAIL DRAWING "CURB RAMPS" FOR ADDITIONAL INFORMATION</li> </ul>

PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

CURB RAMP DETAILS - B GROUP

SHEET

E

LEGEND

- GT GRASS TERRACE - 6:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D
- LL LEVEL LANDING AREA
- CT CONCRETE TERRACE - 10:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D

NOTES

1. SEE STANDARD DETAIL DRAWING "CURB RAMPS" FOR ADDITIONAL INFORMATION

**C-1**  
**CURB RAMP TYPE 3**

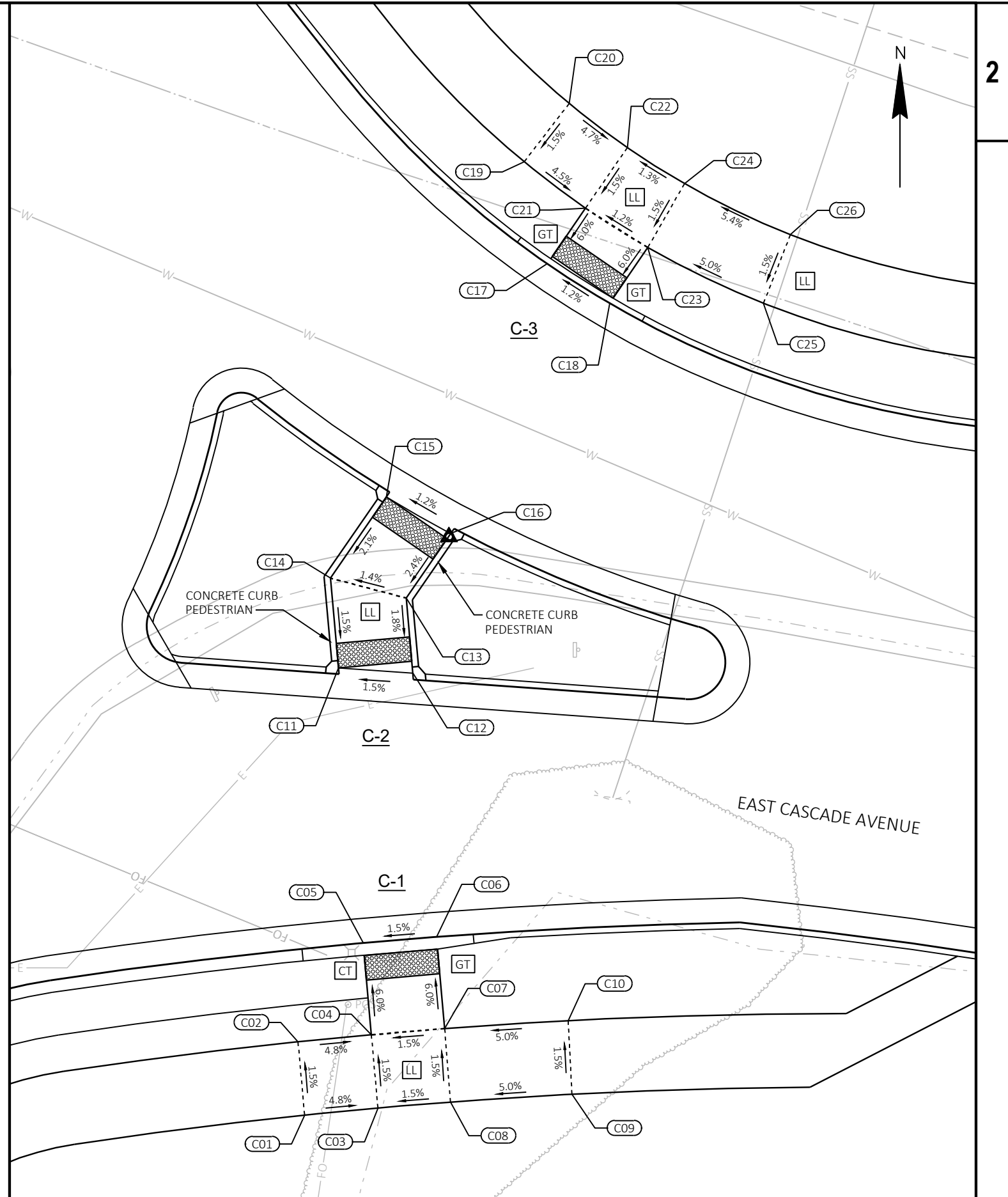
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
C01	45+15.23 'WAS'	64.68 RT	360810.37	451201.19	910.73
C02	45+21.08 'WAS'	63.33 RT	360816.35	451200.66	910.64
C03	45+16.62 'WAS'	70.52 RT	360810.95	451207.17	910.44
C04	45+22.46 'WAS'	69.17 RT	360816.92	451206.63	910.35
C05	45+29.77 'WAS'	67.49 RT	360824.39	451205.96	909.90
C06	45+31.08 'WAS'	73.36 RT	360824.89	451211.95	909.99
C07	45+23.77 'WAS'	75.03 RT	360817.42	451212.61	910.44
C08	45+17.90 'WAS'	76.29 RT	360811.43	451213.06	910.53
C09	45+19.88 'WAS'	86.02 RT	360812.07	451222.97	911.03
C10	45+25.77 'WAS'	84.90 RT	360818.06	451222.66	910.94

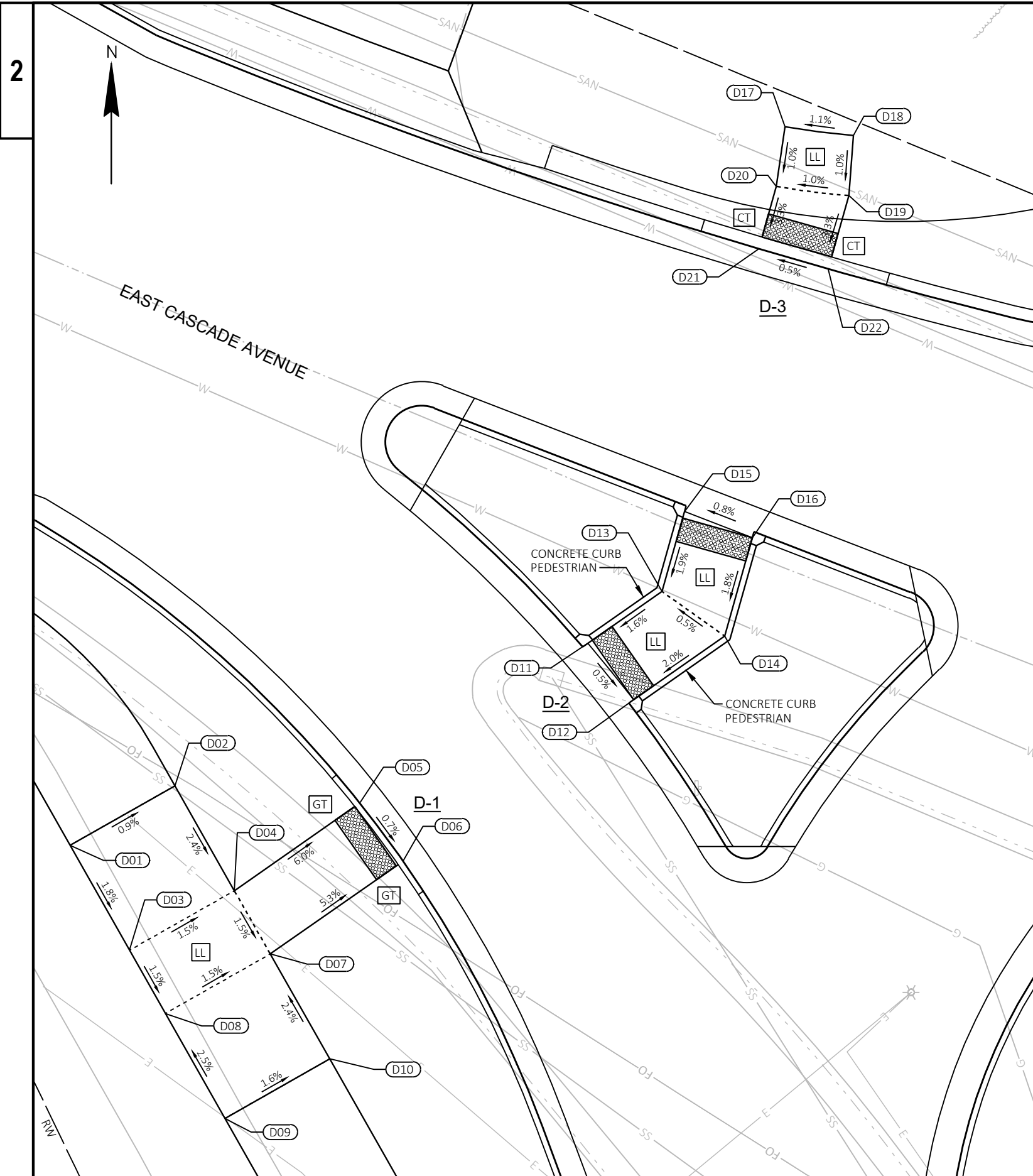
**C-2**  
**CURB RAMP TYPE 5**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
C11	45+51.68 'WAS'	62.45 RT	360846.79	451203.95	910.15
C12	45+52.08 'WAS'	68.52 RT	360846.35	451210.02	910.24
C13	45+58.07 'WAS'	67.14 RT	360852.48	451209.47	910.35
C14	45+58.84 'WAS'	60.81 RT	360854.10	451203.30	910.26
C15	45+66.00 'WAS'	64.42 RT	360860.70	451207.85	910.43
C16	45+63.76 'WAS'	70.01 RT	360857.72	451213.08	910.50

**C-3**  
**CURB RAMP TYPE 3**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
C17	45+86.60 'WAS'	74.82 RT	360879.70	451220.95	910.23
C18	45+84.09 'WAS'	80.31 RT	360876.46	451226.06	910.30
C19	45+94.57 'WAS'	71.83 RT	360888.00	451219.08	910.84
C20	45+99.78 'WAS'	74.81 RT	360892.75	451222.74	910.93
C21	45+91.51 'WAS'	77.29 RT	360884.22	451224.08	910.56
C22	45+96.87 'WAS'	80.00 RT	360889.16	451227.48	910.65
C23	45+89.03 'WAS'	82.76 RT	360881.02	451229.16	910.63
C24	45+94.59 'WAS'	85.01 RT	360886.23	451232.14	910.72
C25	45+85.82 'WAS'	92.71 RT	360876.49	451238.58	911.15
C26	45+91.65 'WAS'	94.13 RT	360882.07	451240.77	911.24





**LEGEND**

- GT GRASS TERRACE - 6:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D
- LL LEVEL LANDING AREA
- CT CONCRETE TERRACE - 10:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D

**NOTES**

1. SEE STANDARD DETAIL DRAWING "CURB RAMPS" FOR ADDITIONAL INFORMATION

**D-1  
CURB RAMP TYPE 3**

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
D01	45+94.67 'WAS'	142.02 LT	360917.20	451007.23	912.10
D02	46+00.74 'WAS'	134.07 LT	360922.13	451015.93	912.01
D03	45+86.72 'WAS'	135.94 LT	360908.50	451012.17	911.92
D04	45+92.79 'WAS'	128.00 LT	360913.43	451020.87	911.77
D05	46+01.41 'WAS'	118.69 LT	360920.70	451031.26	911.01
D06	45+97.13 'WAS'	114.48 LT	360915.89	451034.85	910.97
D07	45+88.00 'WAS'	124.34 LT	360908.19	451023.84	911.68
D08	45+81.93 'WAS'	132.29 LT	360903.26	451015.14	911.83
D09	45+73.99 'WAS'	126.21 LT	360894.56	451020.07	912.08
D10	45+80.06 'WAS'	118.27 LT	360899.49	451028.77	911.92

**D-2  
CURB RAMP TYPE 5**

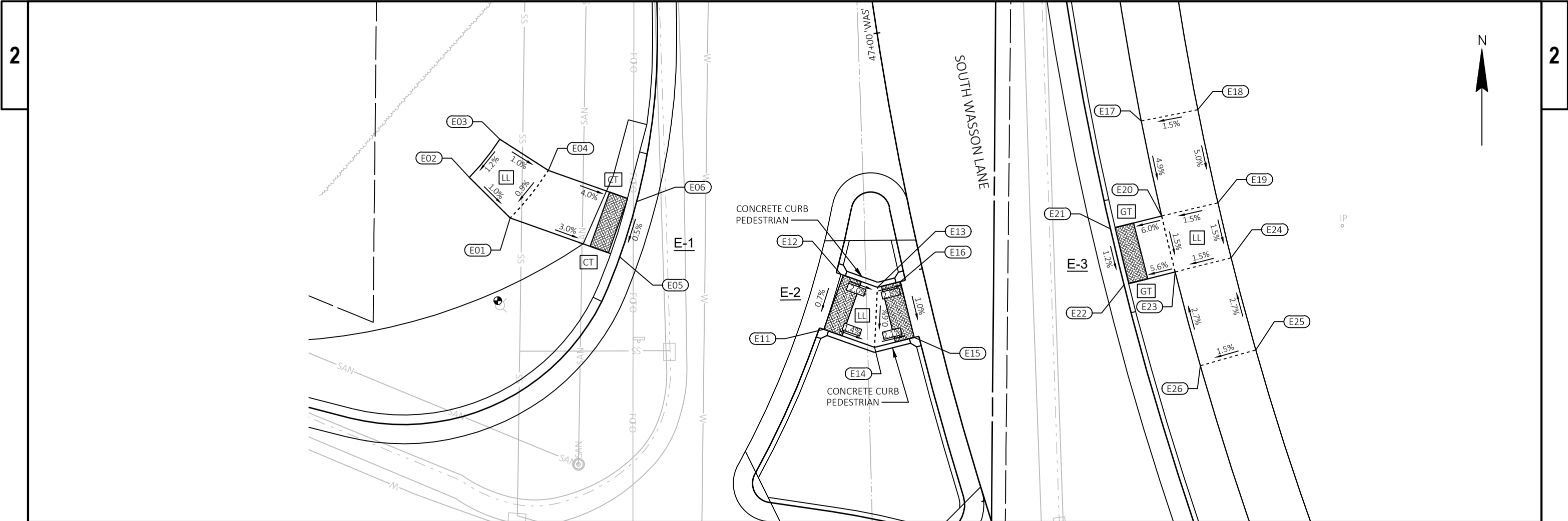
STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
D11	46+17.09 'WAS'	101.76 LT	360933.93	451050.17	911.38
D12	46+12.99 'WAS'	97.36 LT	360929.27	451053.97	911.35
D13	46+61.41 'WAS'	95.22 LT	360938.23	451056.31	911.50
D14	46+19.24 'WAS'	90.61 LT	360934.54	451061.51	911.53
D15	46+66.07 'WAS'	91.71 LT	360944.86	451058.19	911.63
D16	46+63.27 'WAS'	86.83 LT	360942.69	451063.81	911.68

**D-3  
CURB RAMP TYPE 3**

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
D17	46+89.63 'WAS'	76.66 LT	360976.77	451066.52	911.49
D18	46+88.18 'WAS'	71.23 LT	360976.03	451072.19	911.55
D19	46+84.19 'WAS'	72.56 LT	360971.05	451071.81	911.50
D20	46+85.78 'WAS'	78.31 LT	360971.82	451065.79	911.44
D21	46+81.89 'WAS'	80.77 LT	360966.64	451064.33	911.26
D22	46+79.59 'WAS'	75.48 LT	360964.97	451070.10	911.29



**E-1**  
**CURB RAMP TYPE 3**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
E01	46+84.20 'WAS'	51.74 LT	360981.76	451101.99	911.64
E02	46+89.30 'WAS'	52.94 LT	360985.99	451097.73	911.70
E03	46+92.61 'WAS'	44.31 LT	360989.95	451100.90	911.76
E04	46+88.23 'WAS'	40.88 LT	360986.72	451105.96	911.70
E05	46+82.61 'WAS'	30.49 LT	360977.71	451113.39	911.28
E06	46+87.49 'WAS'	27.64 LT	360983.45	451115.15	911.31

**E-2**  
**CURB RAMP TYPE 5**

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
E11	46+71.28 'WAS'	11.41 LT	360970.15	451134.63	911.54
E12	46+76.32 'WAS'	8.39 LT	360975.90	451136.39	911.58
E13	46+74.20 'WAS'	4.99 LT	360974.55	451140.20	911.50
E14	46+68.28 'WAS'	6.75 LT	360968.28	451139.90	911.46
E15	46+68.28 'WAS'	2.50 LT	360969.32	451144.02	911.37
E16	46+74.24 'WAS'	2.50 LT	360975.15	451142.61	911.43

**E-3**  
**CURB RAMP TYPE 3**

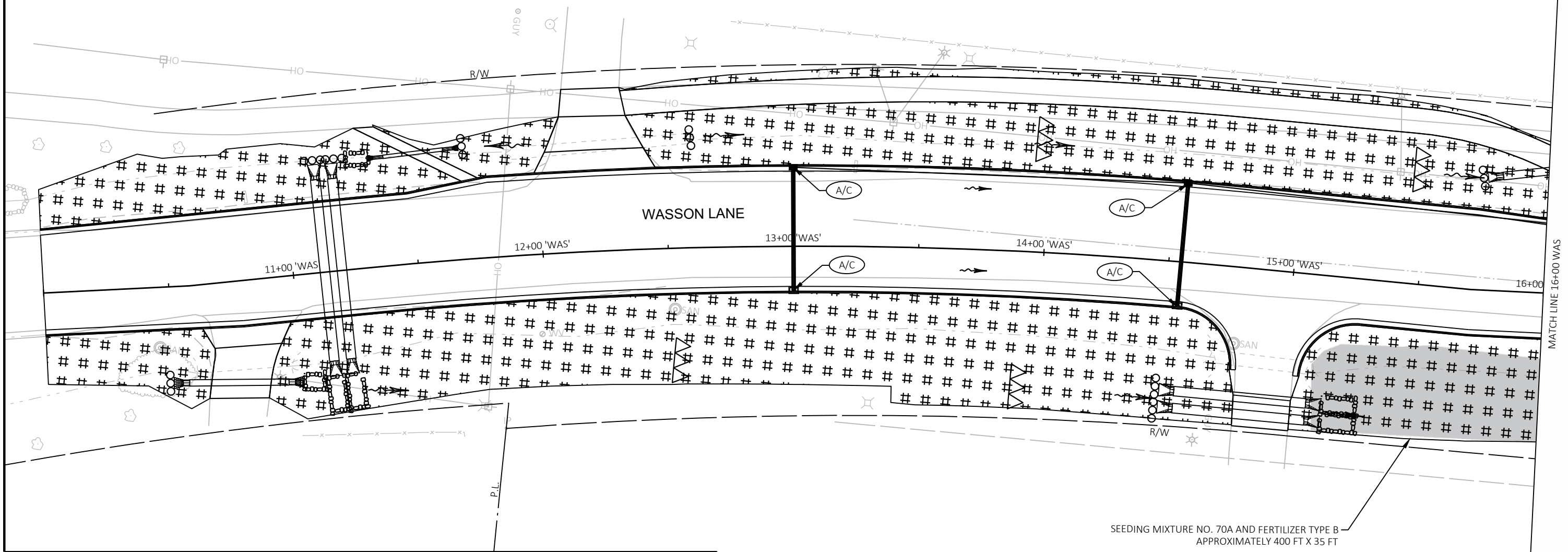
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
E17	46+85.69 'WAS'	25.50 RT	360991.86	451167.65	911.90
E18	46+85.69 'WAS'	31.50 RT	360993.03	451173.53	911.99
E19	46+74.76 'WAS'	31.50 RT	360983.33	451175.61	911.49
E20	46+74.76 'WAS'	25.50 RT	360981.97	451169.77	911.40
E21	46+74.65 'WAS'	20.00 RT	360980.63	451164.43	911.07
E22	46+68.28 'WAS'	20.00 RT	360974.80	451165.84	911.00
E23	46+68.28 'WAS'	25.50 RT	360976.14	451171.17	911.31
E24	46+68.28 'WAS'	31.50 RT	360977.60	451176.99	911.40
E25	46+57.35 'WAS'	31.50 RT	360968.02	451179.56	911.67
E26	46+57.35 'WAS'	25.50 RT	360966.37	451173.79	911.58

- LEGEND**
- GT GRASS TERRACE - 6:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D
  - LL LEVEL LANDING AREA
  - CT CONCRETE TERRACE - 10:1 GRADED FLARE; CURB HEAD TRANSITION REQ'D

**NOTES**

- SEE STANDARD DETAIL DRAWING "CURB RAMPS" FOR ADDITIONAL INFORMATION





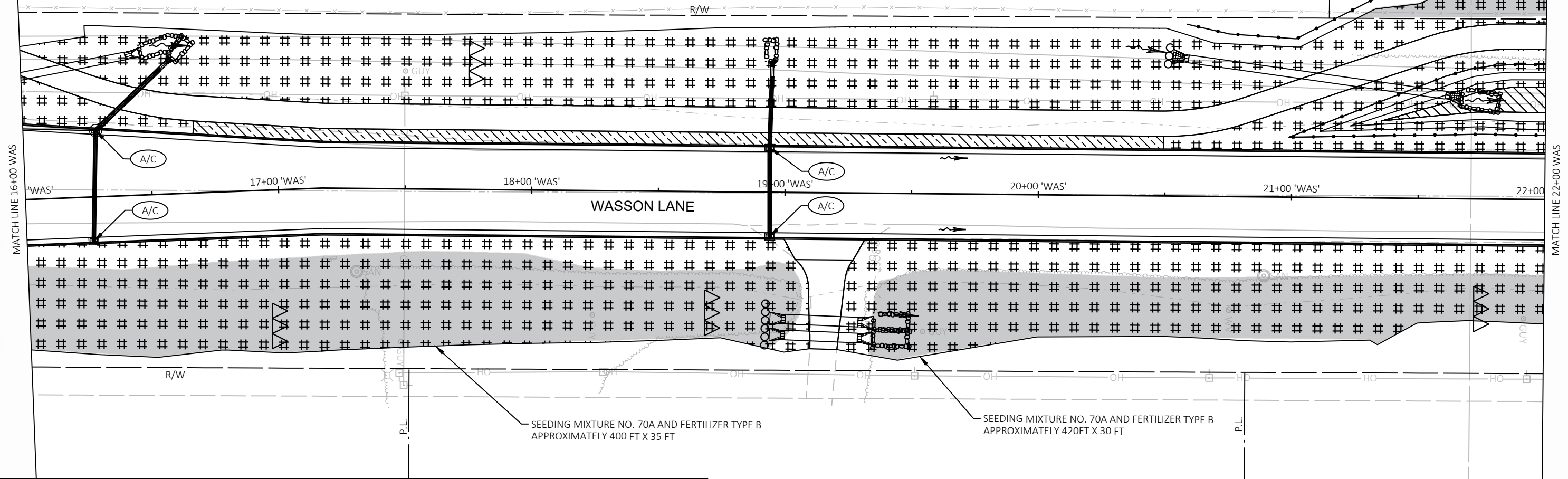
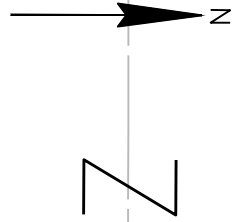
MATCH LINE 16+00 WAS

LEGEND

	TOPSOIL, EROSION MAT URBAN CLASS I TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B		TEMPORARY DITCH CHECKS
	TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED)		CULVERT PIPE CHECKS
	EROSION MAT CLASS II TYPE B, STORMWATER BIOFILTRATION MIX AND FERTILIZER TYPE B		PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.
	SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B		PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.
	SILT FENCE		PLACE INLET PROTECTION TYPE A.
	RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)		PLACE INLET PROTECTION TYPE C.
	SURFACE WATER FLOW		

SEEDING MIXTURE NO. 70A AND FERTILIZER TYPE B  
APPROXIMATELY 400 FT X 35 FT

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	EROSION CONTROL	SHEET	E
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LEGEND

- |  |  |  |  |
|--|--|--|--|
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B                          |  | TEMPORARY DITCH CHECKS   |
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED) |  | CULVERT PIPE CHECKS  |
|  | EROSION MAT CLASS II TYPE B, STORMWATER BIOFILTRATION MIX AND FERTILIZER TYPE B                                  |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C. |
|  | SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B   |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D. |
|  | SILT FENCE   |  | PLACE INLET PROTECTION TYPE A.   |
|  | RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)   |  | PLACE INLET PROTECTION TYPE C.   |
|  | SURFACE WATER FLOW   |  |  |

PROJECT NO: 7994-00-51

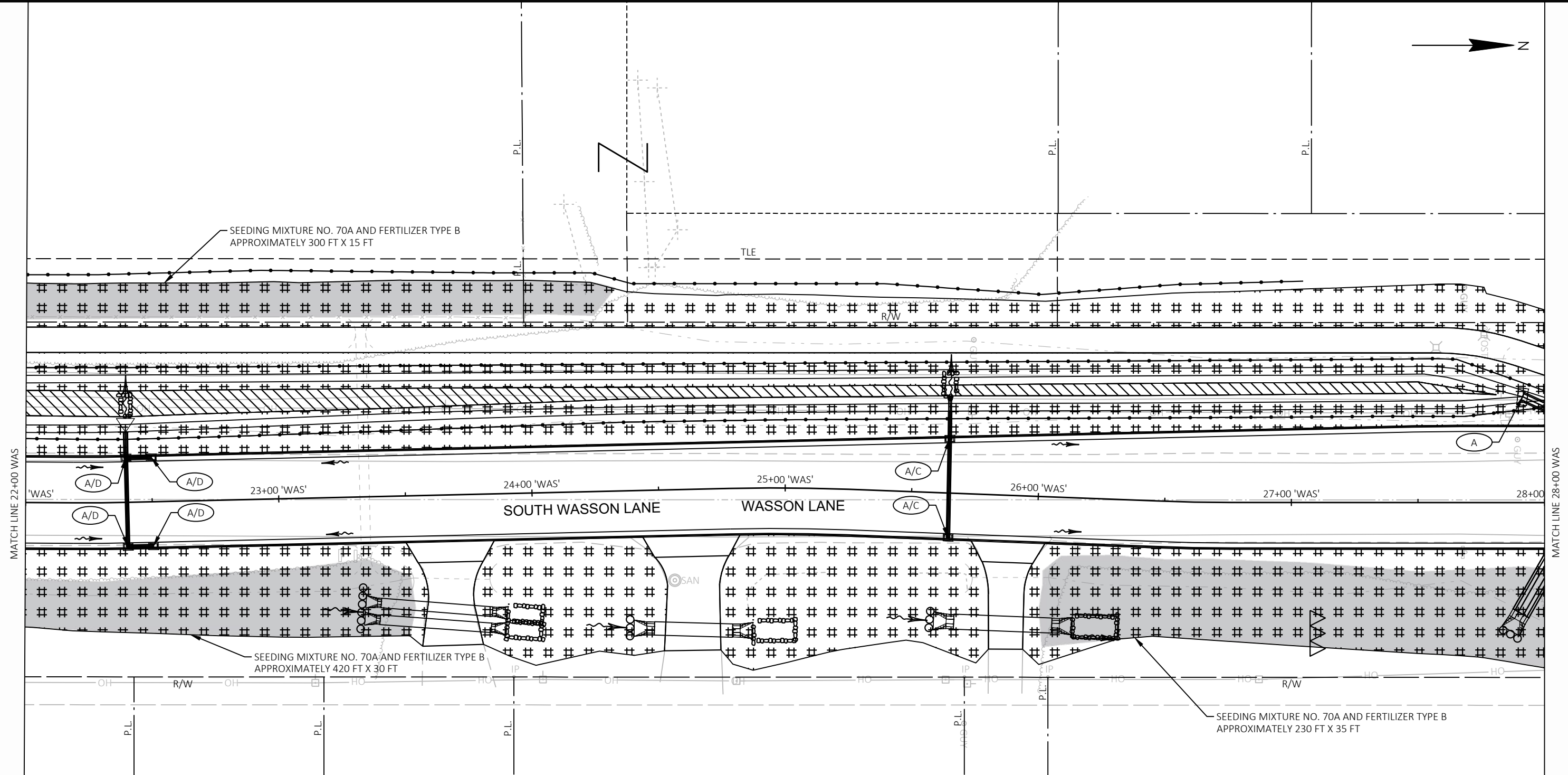
HWY: WASSON LANE

COUNTY: PIERCE

EROSION CONTROL

SHEET

E



LEGEND

- |  |  |  |  |
|--|--|--|--|
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B                          |  | TEMPORARY DITCH CHECKS   |
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED) |  | CULVERT PIPE CHECKS  |
|  | EROSION MAT CLASS II TYPE B, STORMWATER BIOFILTRATION MIX AND FERTILIZER TYPE B                                  |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C. |
|  | SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B   |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D. |
|  | SILT FENCE   |  | PLACE INLET PROTECTION TYPE A.   |
|  | RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)   |  | PLACE INLET PROTECTION TYPE C.   |
|  | SURFACE WATER FLOW   |  |  |

PROJECT NO: 7994-00-51

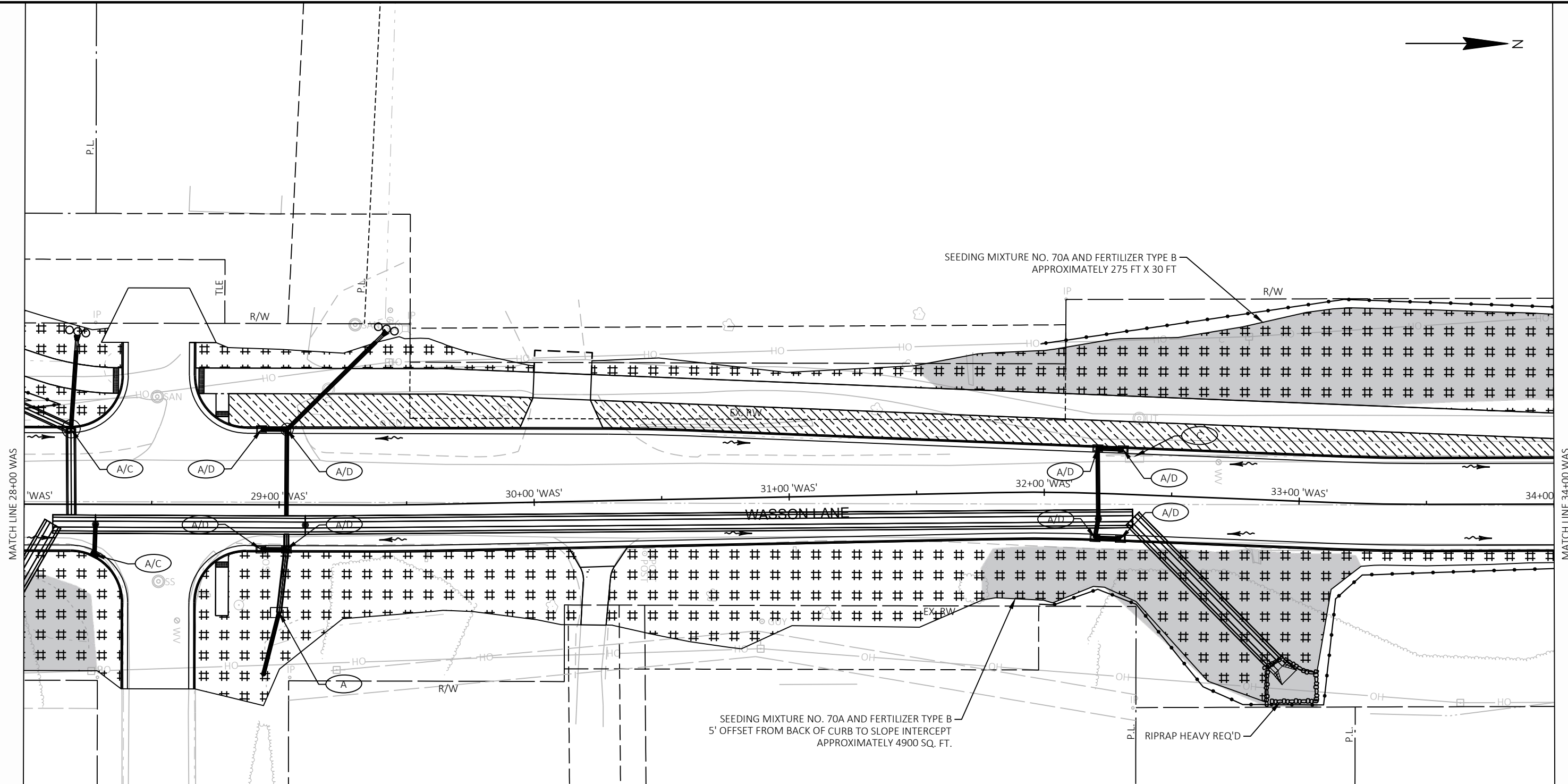
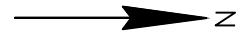
HWY: WASSON LANE

COUNTY: PIERCE

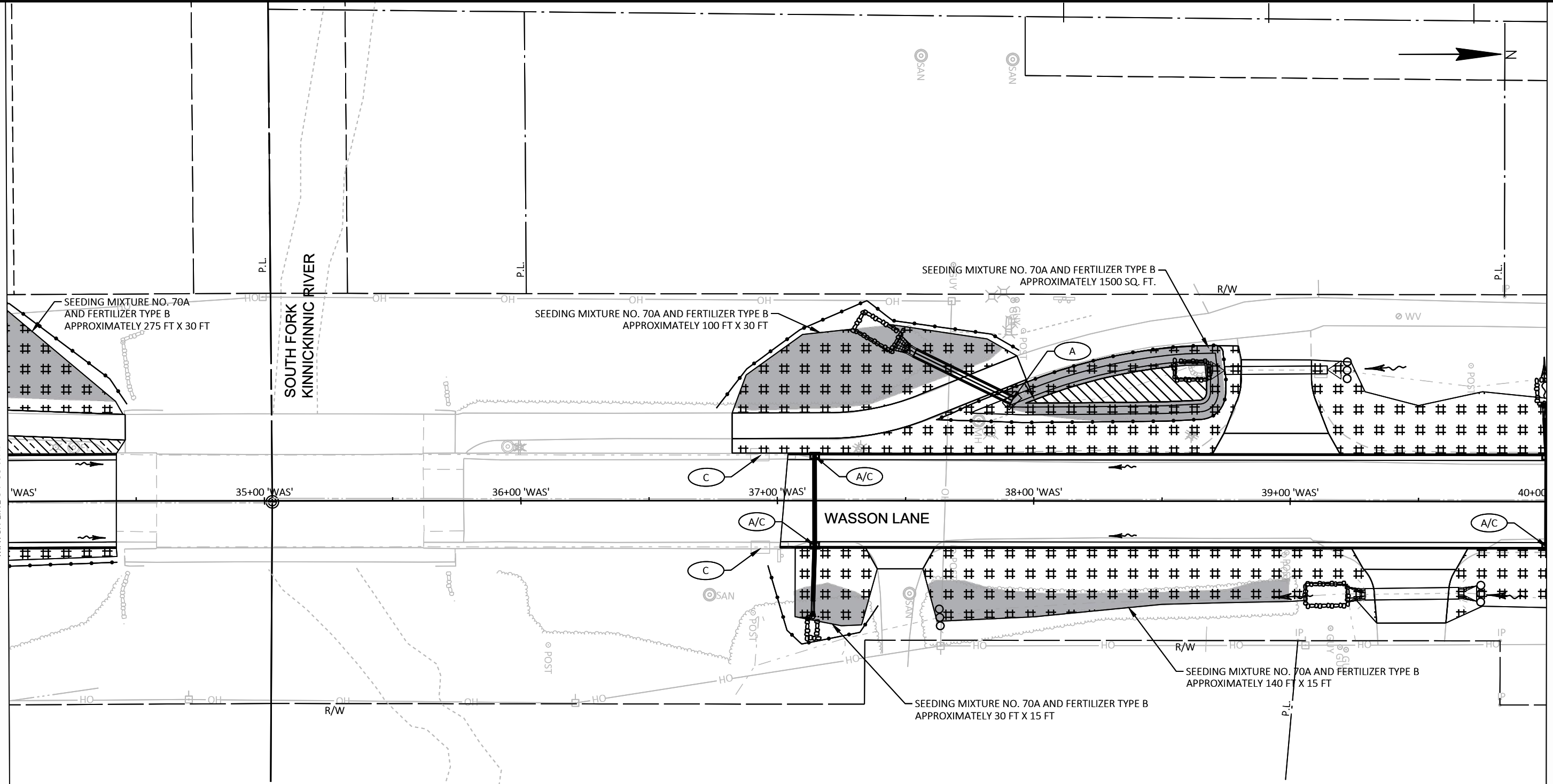
EROSION CONTROL

SHEET

E



LEGEND	
	TOPSOIL, EROSION MAT URBAN CLASS I TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
	TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED)
	EROSION MAT CLASS II TYPE B, STORMWATER BIOFILTRATION MIX AND FERTILIZER TYPE B
	SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
	SILT FENCE
	RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)
	SURFACE WATER FLOW
	TEMPORARY DITCH CHECKS
	CULVERT PIPE CHECKS
	PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.
	PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.
	PLACE INLET PROTECTION TYPE A.
	PLACE INLET PROTECTION TYPE C.



LEGEND

- |  |  |  |  |
|--|--|--|--|
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B                          |  | TEMPORARY DITCH CHECKS   |
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED) |  | CULVERT PIPE CHECKS  |
|  | EROSION MAT CLASS II TYPE B, STORMWATER BIOFILTRATION MIX AND FERTILIZER TYPE B                                  |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C. |
|  | SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B   |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D. |
|  | SILT FENCE   |  | PLACE INLET PROTECTION TYPE A.   |
|  | RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)   |  | PLACE INLET PROTECTION TYPE C.   |
|  | SURFACE WATER FLOW   |  |  |

PROJECT NO: 7994-00-51

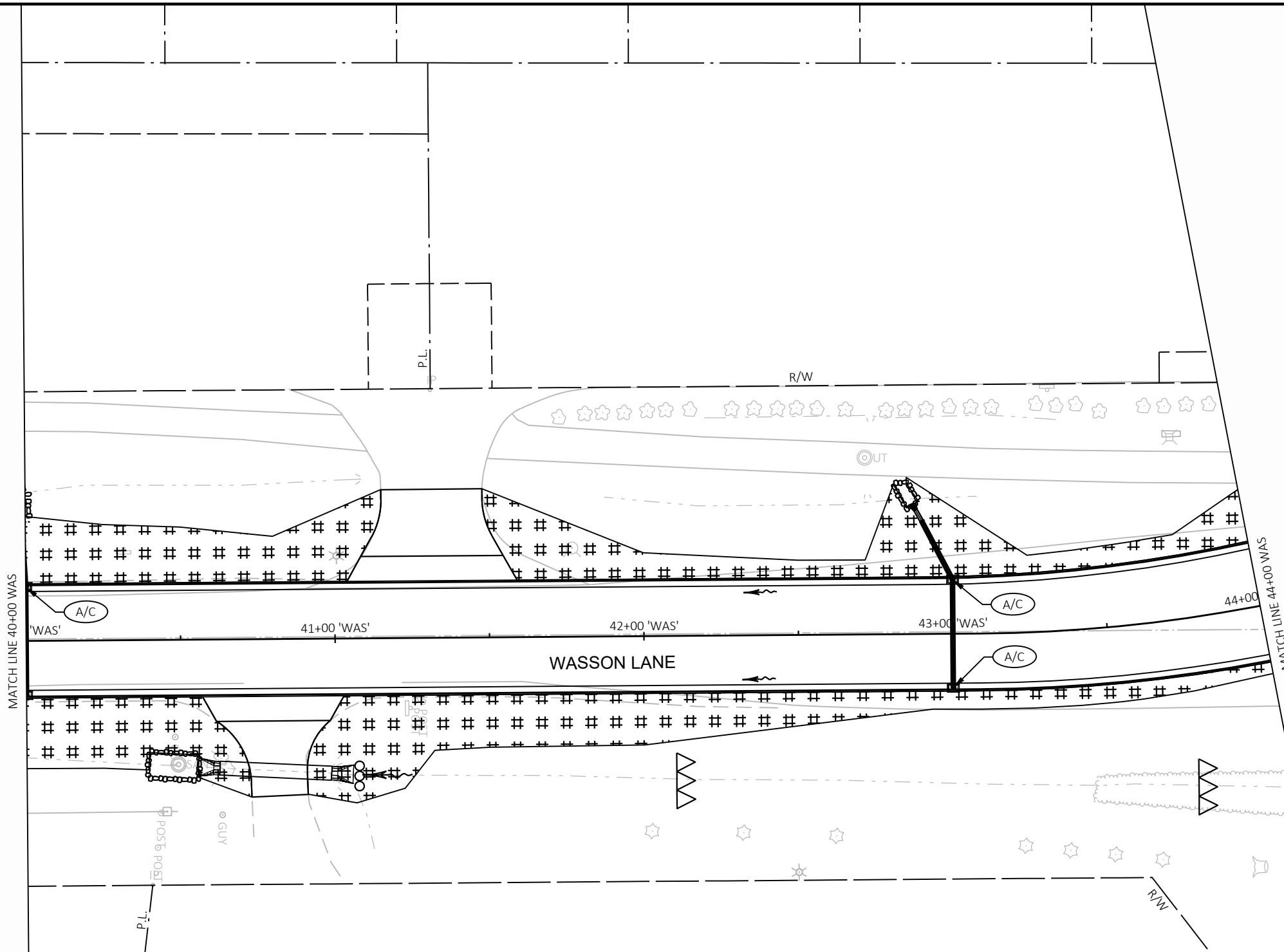
HWY: WASSON LANE

COUNTY: PIERCE

EROSION CONTROL

SHEET

E



LEGEND

- |  |  |  |  |
|--|--|--|--|
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B                          |  | TEMPORARY DITCH CHECKS   |
|  | TOPSOIL, EROSION MAT URBAN CLASS I TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B (UNLESS OTHERWISE NOTED) |  | CULVERT PIPE CHECKS  |
|  | EROSION MAT CLASS II TYPE B, STORMWATER BIOFILTRATION MIX AND FERTILIZER TYPE B                                  |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C. |
|  | SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B   |  | PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D. |
|  | SILT FENCE   |  | PLACE INLET PROTECTION TYPE A.   |
|  | RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)   |  | PLACE INLET PROTECTION TYPE C.   |
|  | SURFACE WATER FLOW   |  |  |

PROJECT NO: 7994-00-51

HWY: WASSON LANE














COUNTY: PIERCE

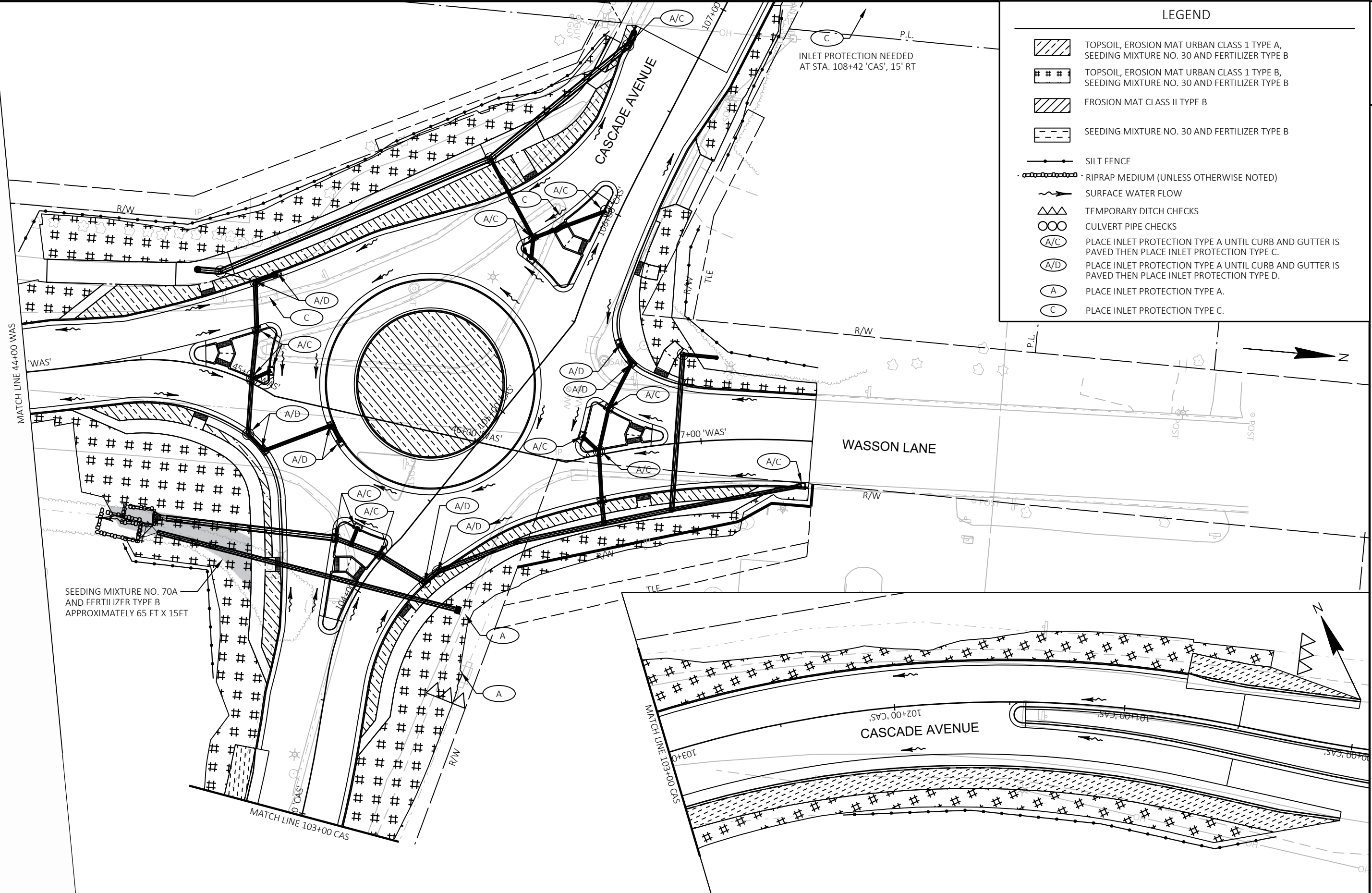
EROSION CONTROL

SHEET

E

LEGEND

-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  EROSION MAT CLASS II TYPE B
-  SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  SILT FENCE
-  RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)
-  SURFACE WATER FLOW
-  TEMPORARY DITCH CHECKS
-  CULVERT PIPE CHECKS
-  PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.
-  PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.
-  PLACE INLET PROTECTION TYPE A.
-  PLACE INLET PROTECTION TYPE C.



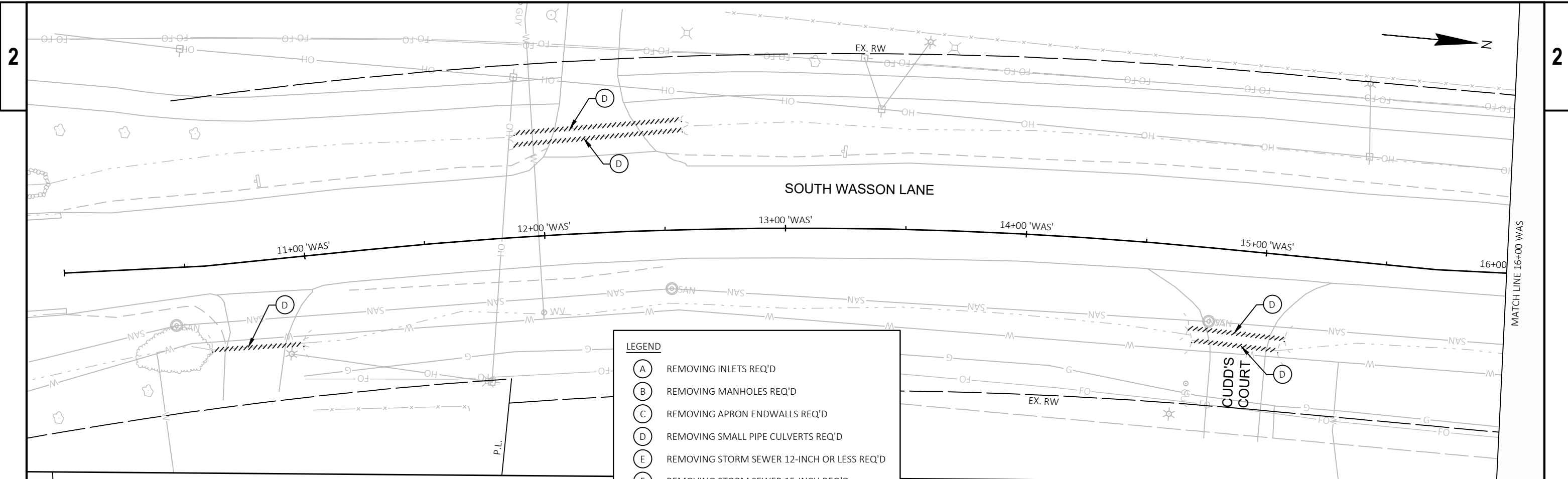
SEEDING MIXTURE NO. 70A  
AND FERTILIZER TYPE B  
APPROXIMATELY 65 FT X 15FT

INLET PROTECTION NEEDED  
AT STA. 108+42 'CAS', 15' RT

MATCH LINE 44+00 WAS

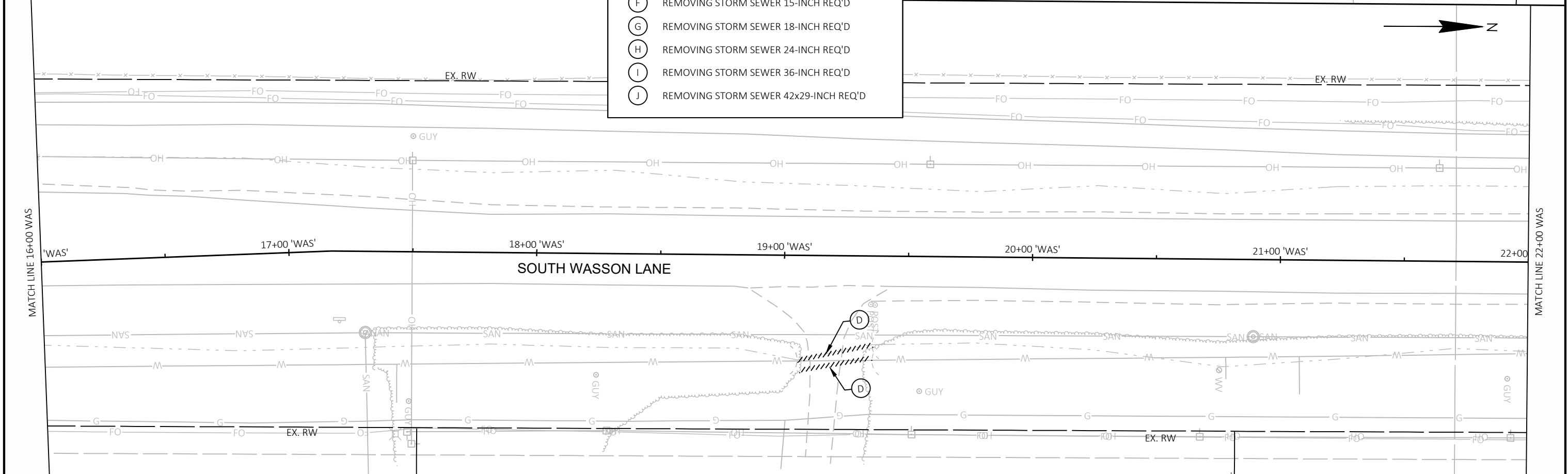
MATCH LINE 103+00 CAS

MATCH LINE 103+00 CAS



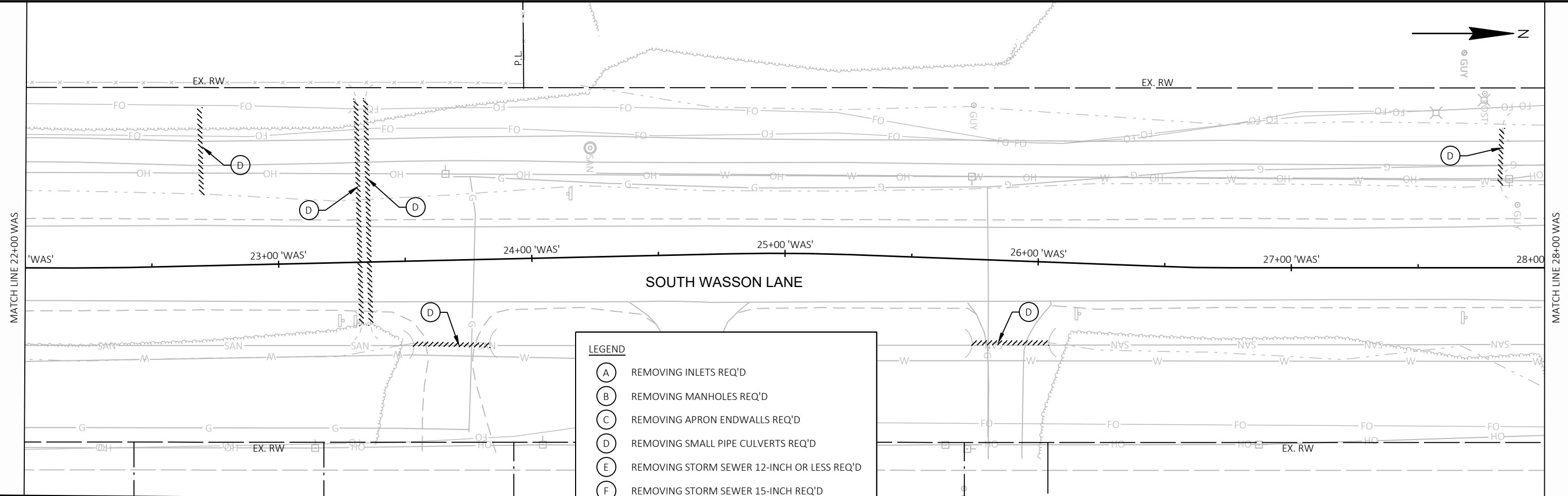
**LEGEND**

- (A) REMOVING INLETS REQ'D
- (B) REMOVING MANHOLES REQ'D
- (C) REMOVING APRON ENDWALLS REQ'D
- (D) REMOVING SMALL PIPE CULVERTS REQ'D
- (E) REMOVING STORM SEWER 12-INCH OR LESS REQ'D
- (F) REMOVING STORM SEWER 15-INCH REQ'D
- (G) REMOVING STORM SEWER 18-INCH REQ'D
- (H) REMOVING STORM SEWER 24-INCH REQ'D
- (I) REMOVING STORM SEWER 36-INCH REQ'D
- (J) REMOVING STORM SEWER 42x29-INCH REQ'D



PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	STORM SEWER REMOVALS	SHEET	<b>E</b>
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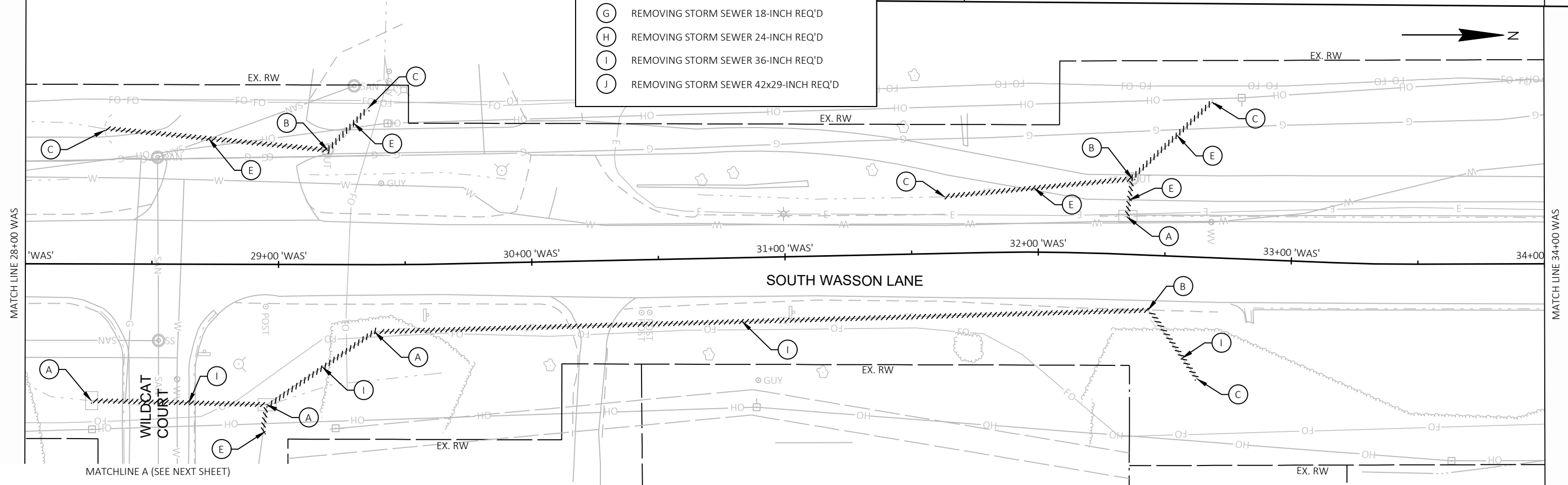




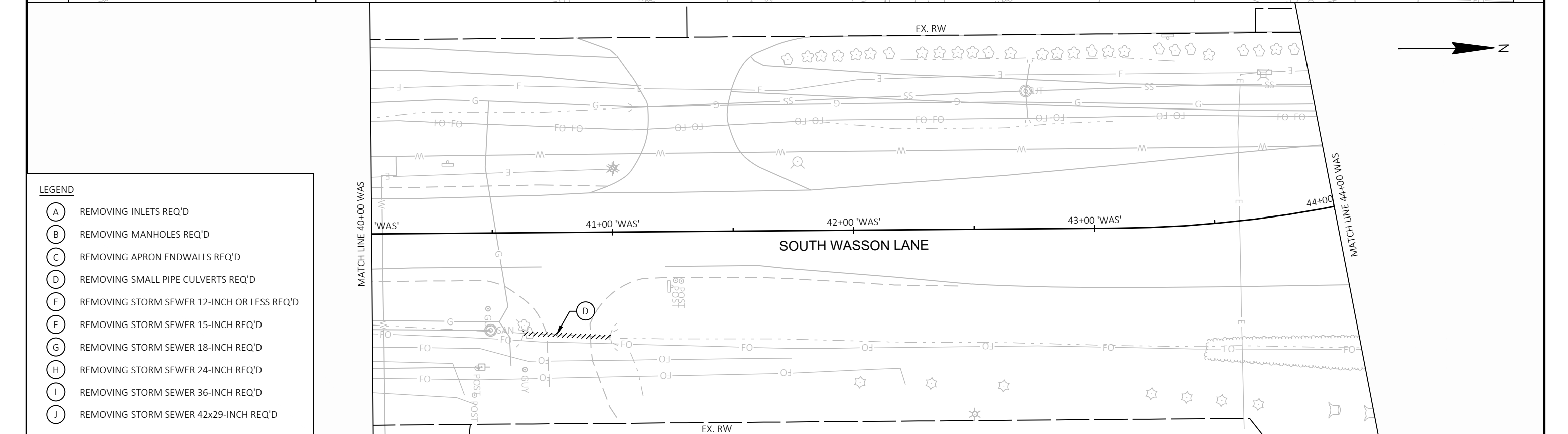
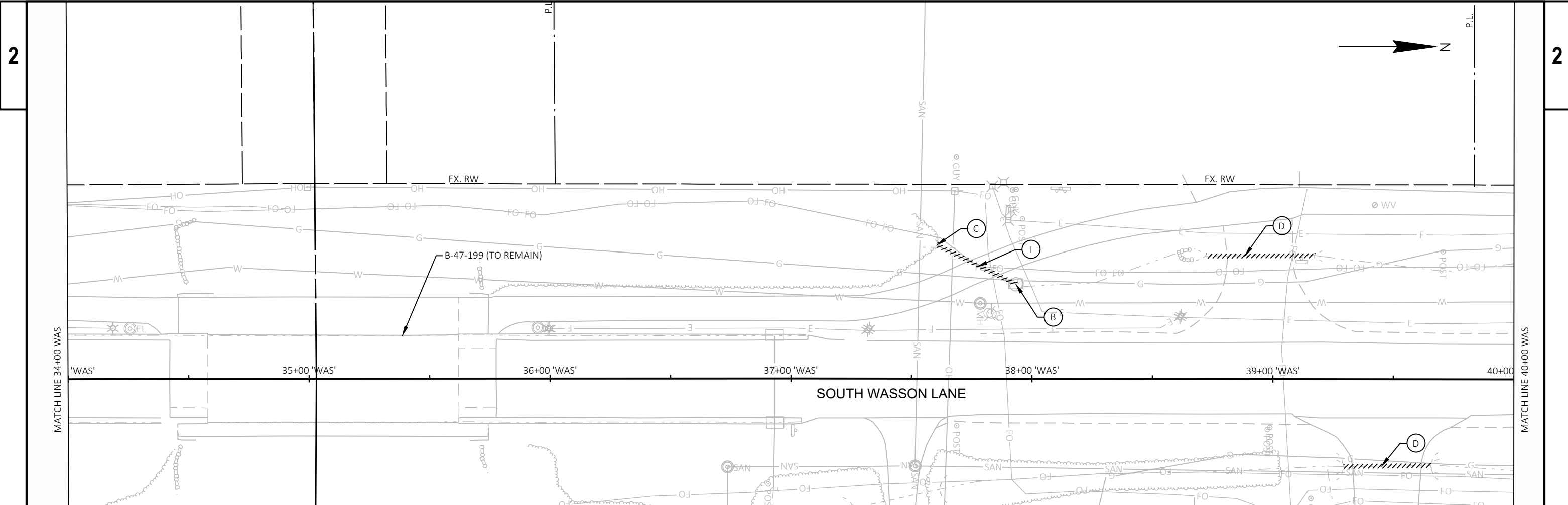
SOUTH WASSON LANE

**LEGEND**

- (A) REMOVING INLETS REQ'D
- (B) REMOVING MANHOLES REQ'D
- (C) REMOVING APRON ENDWALLS REQ'D
- (D) REMOVING SMALL PIPE CULVERTS REQ'D
- (E) REMOVING STORM SEWER 12-INCH OR LESS REQ'D
- (F) REMOVING STORM SEWER 15-INCH REQ'D
- (G) REMOVING STORM SEWER 18-INCH REQ'D
- (H) REMOVING STORM SEWER 24-INCH REQ'D
- (I) REMOVING STORM SEWER 36-INCH REQ'D
- (J) REMOVING STORM SEWER 42x29-INCH REQ'D



SOUTH WASSON LANE



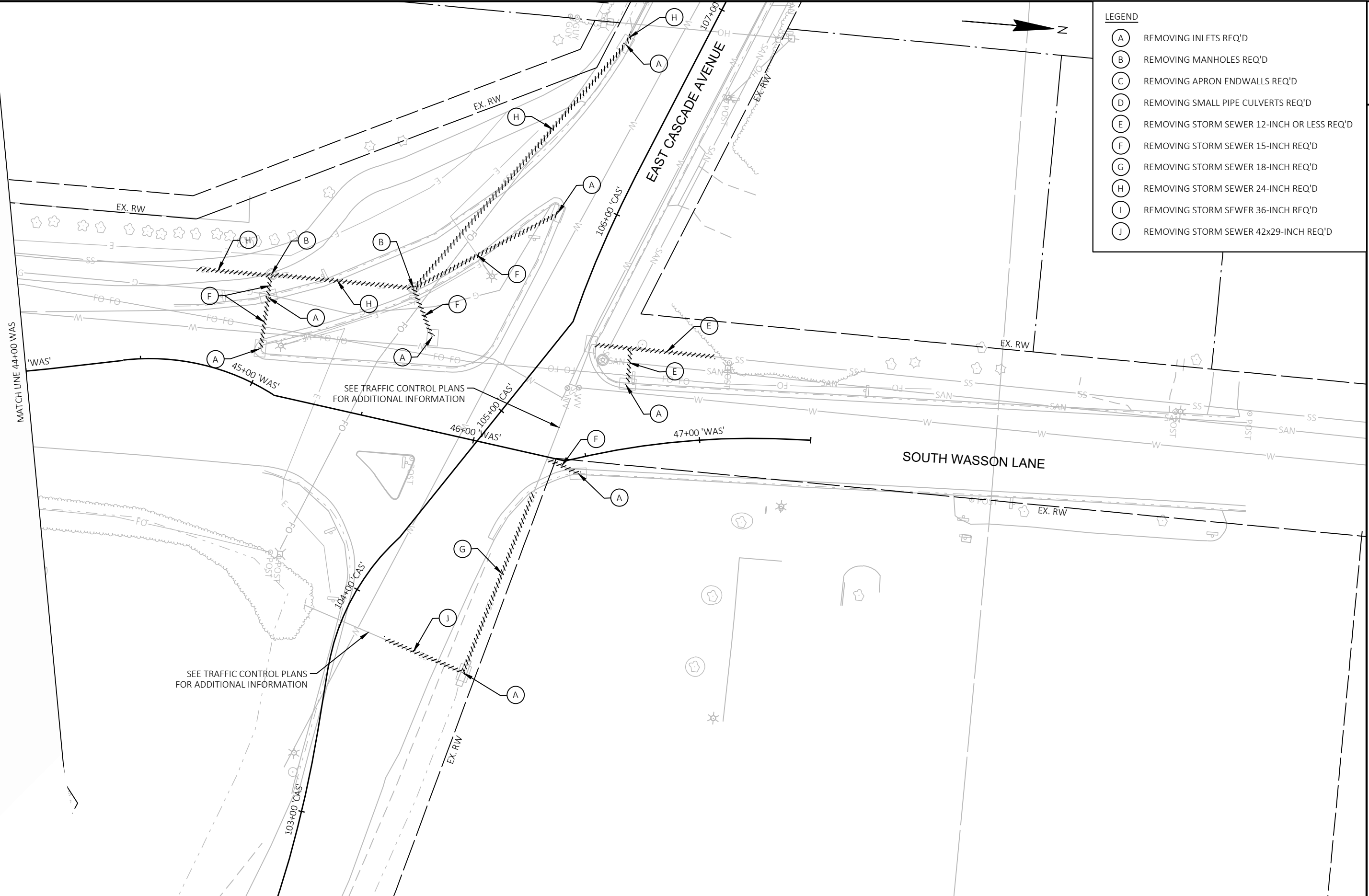
**LEGEND**

(A)	REMOVING INLETS REQ'D
(B)	REMOVING MANHOLES REQ'D
(C)	REMOVING APRON ENDWALLS REQ'D
(D)	REMOVING SMALL PIPE CULVERTS REQ'D
(E)	REMOVING STORM SEWER 12-INCH OR LESS REQ'D
(F)	REMOVING STORM SEWER 15-INCH REQ'D
(G)	REMOVING STORM SEWER 18-INCH REQ'D
(H)	REMOVING STORM SEWER 24-INCH REQ'D
(I)	REMOVING STORM SEWER 36-INCH REQ'D
(J)	REMOVING STORM SEWER 42x29-INCH REQ'D

PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      STORM SEWER REMOVALS      SHEET      E

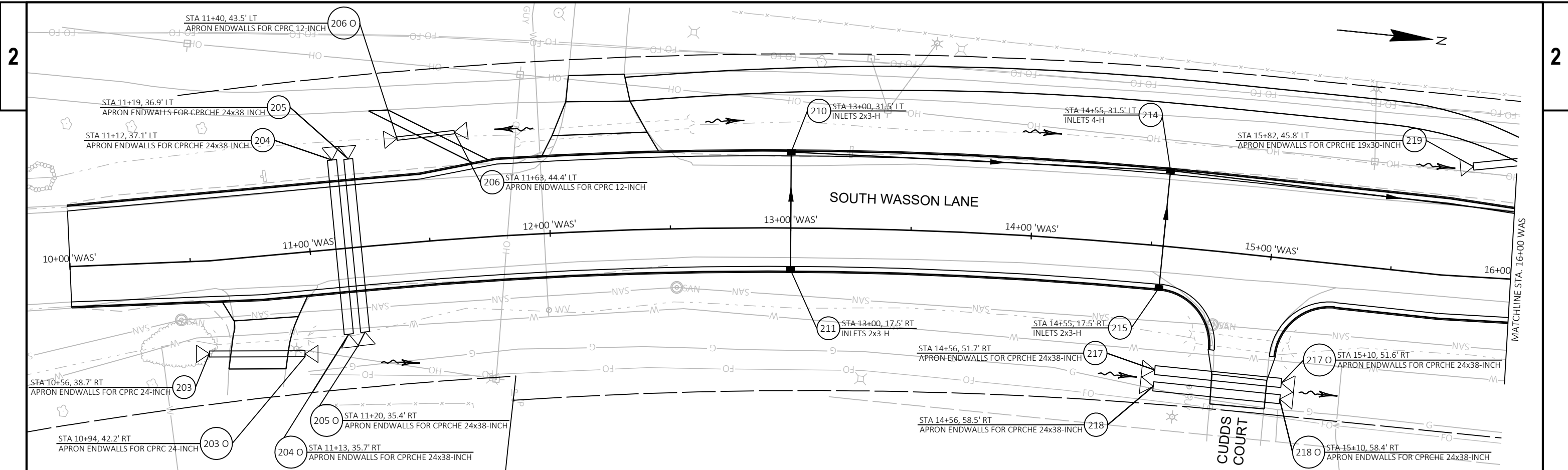
**LEGEND**

(A)	REMOVING INLETS REQ'D
(B)	REMOVING MANHOLES REQ'D
(C)	REMOVING APRON ENDWALLS REQ'D
(D)	REMOVING SMALL PIPE CULVERTS REQ'D
(E)	REMOVING STORM SEWER 12-INCH OR LESS REQ'D
(F)	REMOVING STORM SEWER 15-INCH REQ'D
(G)	REMOVING STORM SEWER 18-INCH REQ'D
(H)	REMOVING STORM SEWER 24-INCH REQ'D
(I)	REMOVING STORM SEWER 36-INCH REQ'D
(J)	REMOVING STORM SEWER 42x29-INCH REQ'D



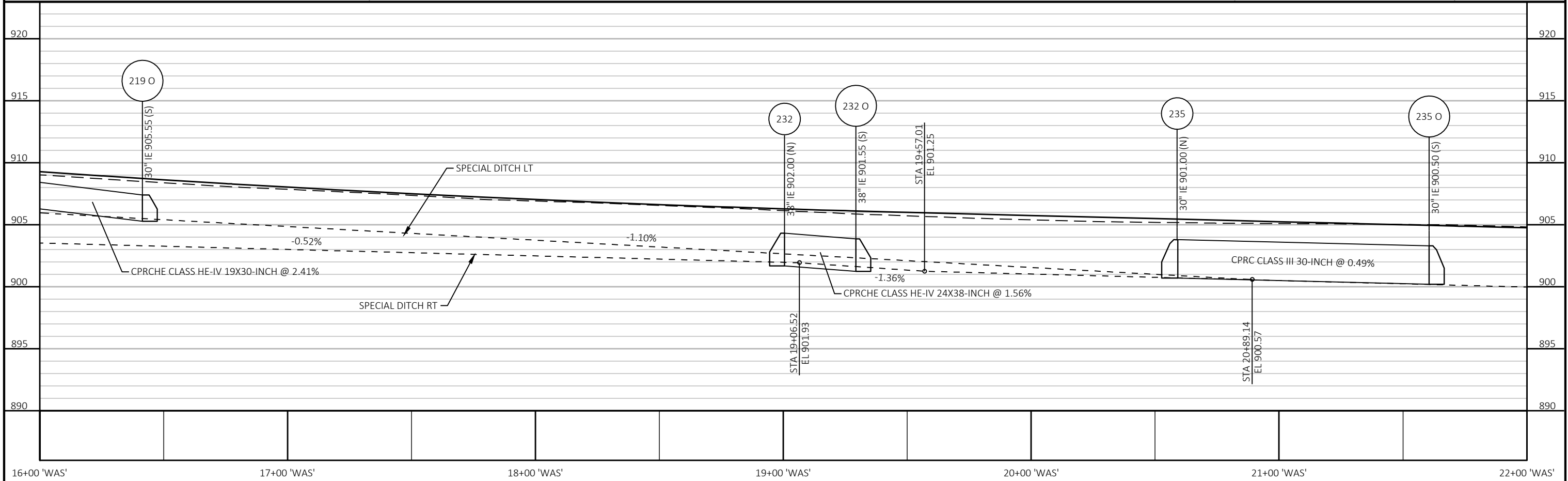
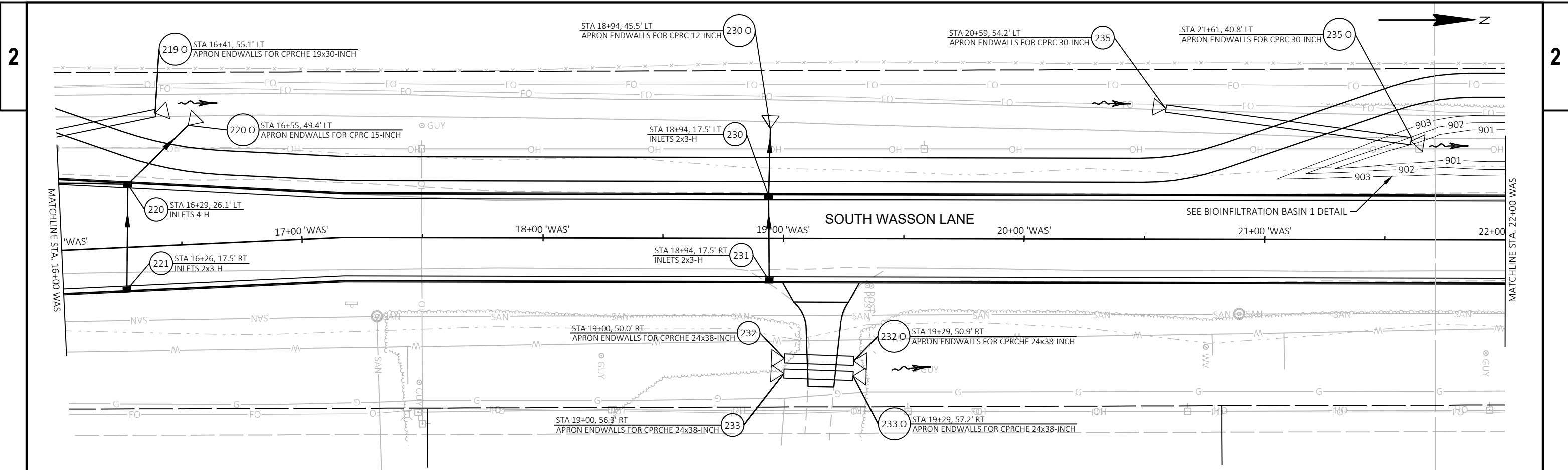
SEE TRAFFIC CONTROL PLANS FOR ADDITIONAL INFORMATION

SEE TRAFFIC CONTROL PLANS FOR ADDITIONAL INFORMATION



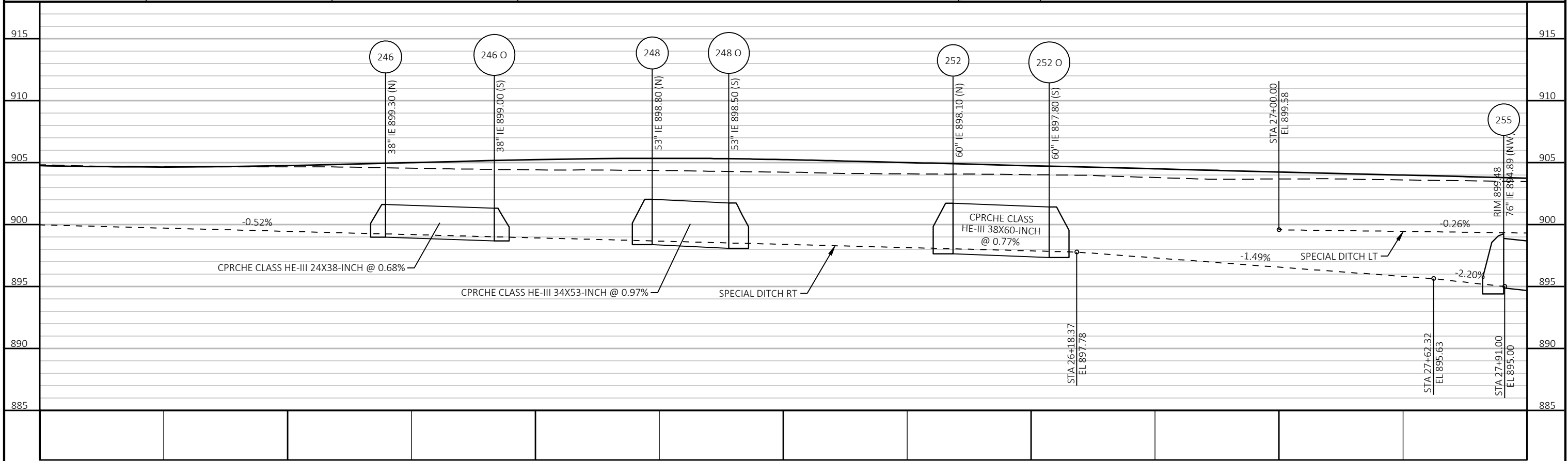
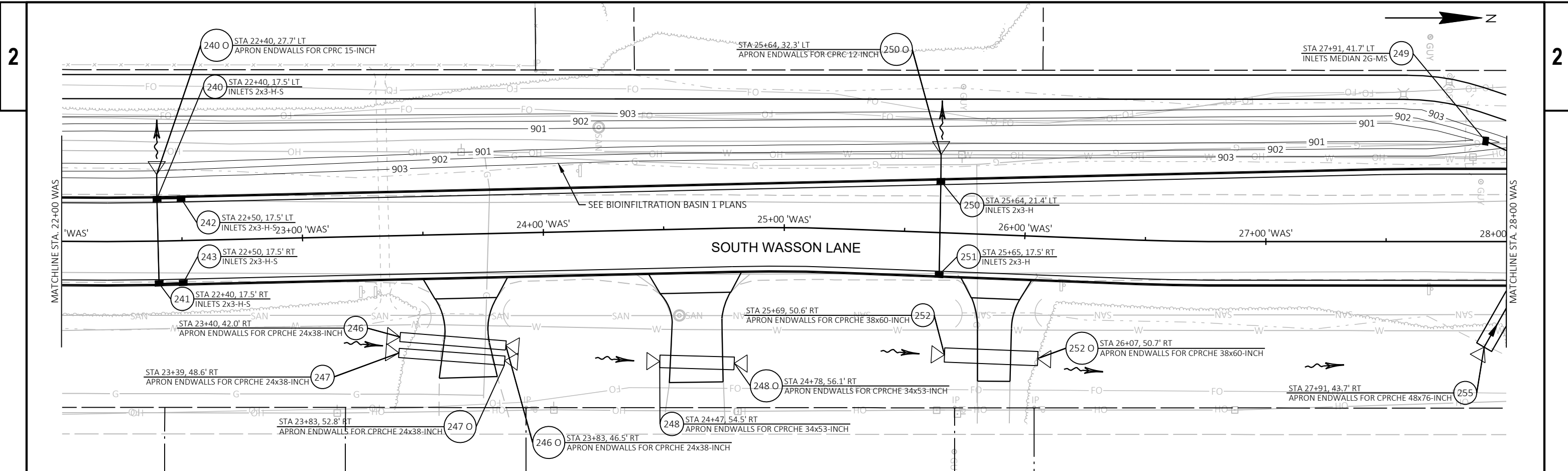
10+00 'WAS'	11+00 'WAS'	12+00 'WAS'	13+00 'WAS'	14+00 'WAS'	15+00 'WAS'	16+00 'WAS'
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      STORM SEWER PLAN      SHEET      E

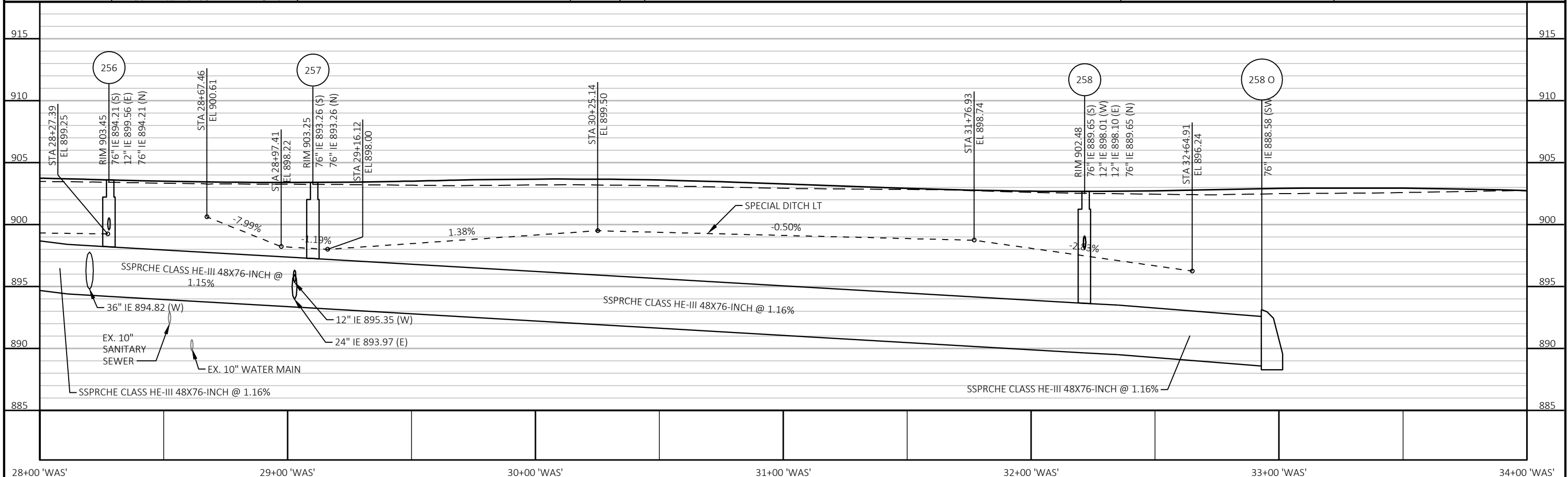
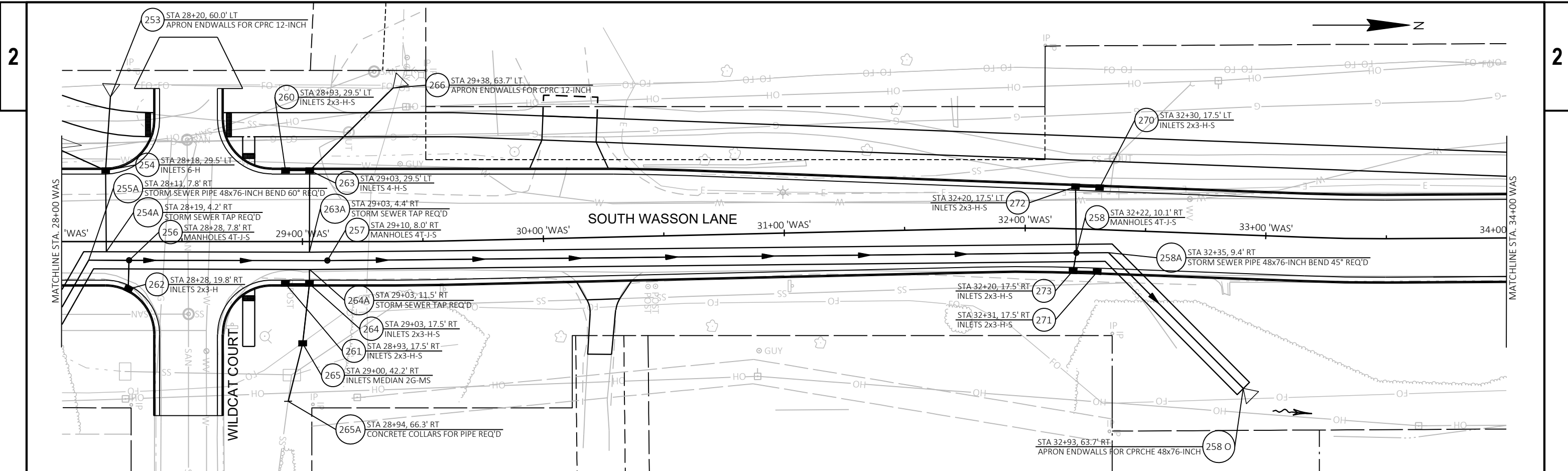


16+00 'WAS'	17+00 'WAS'	18+00 'WAS'	19+00 'WAS'	20+00 'WAS'	21+00 'WAS'	22+00 'WAS'
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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	STORM SEWER PLAN	SHEET	E
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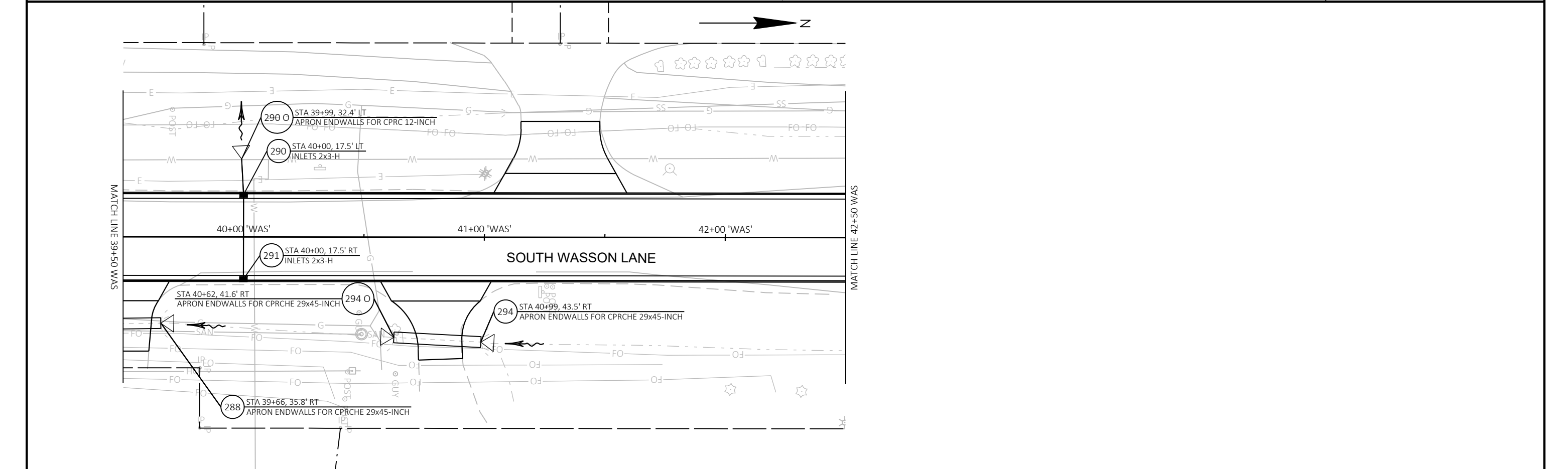
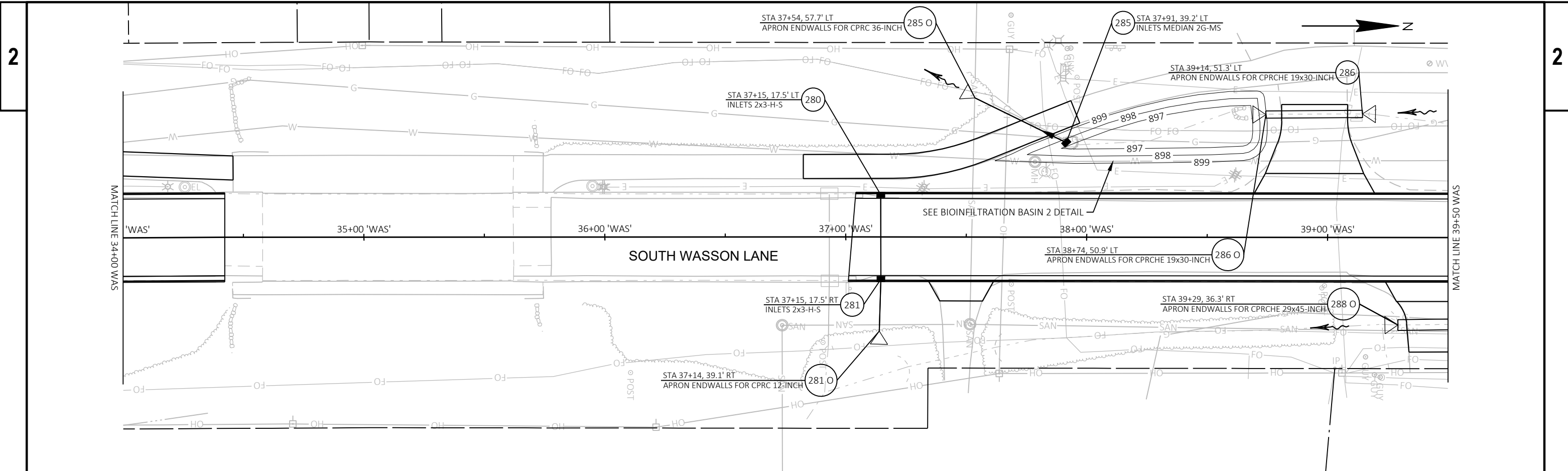


22+00 'WAS'	23+00 'WAS'	24+00 'WAS'	25+00 'WAS'	26+00 'WAS'	27+00 'WAS'	28+00 'WAS'
PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	STORM SEWER PLAN	SHEET	E	



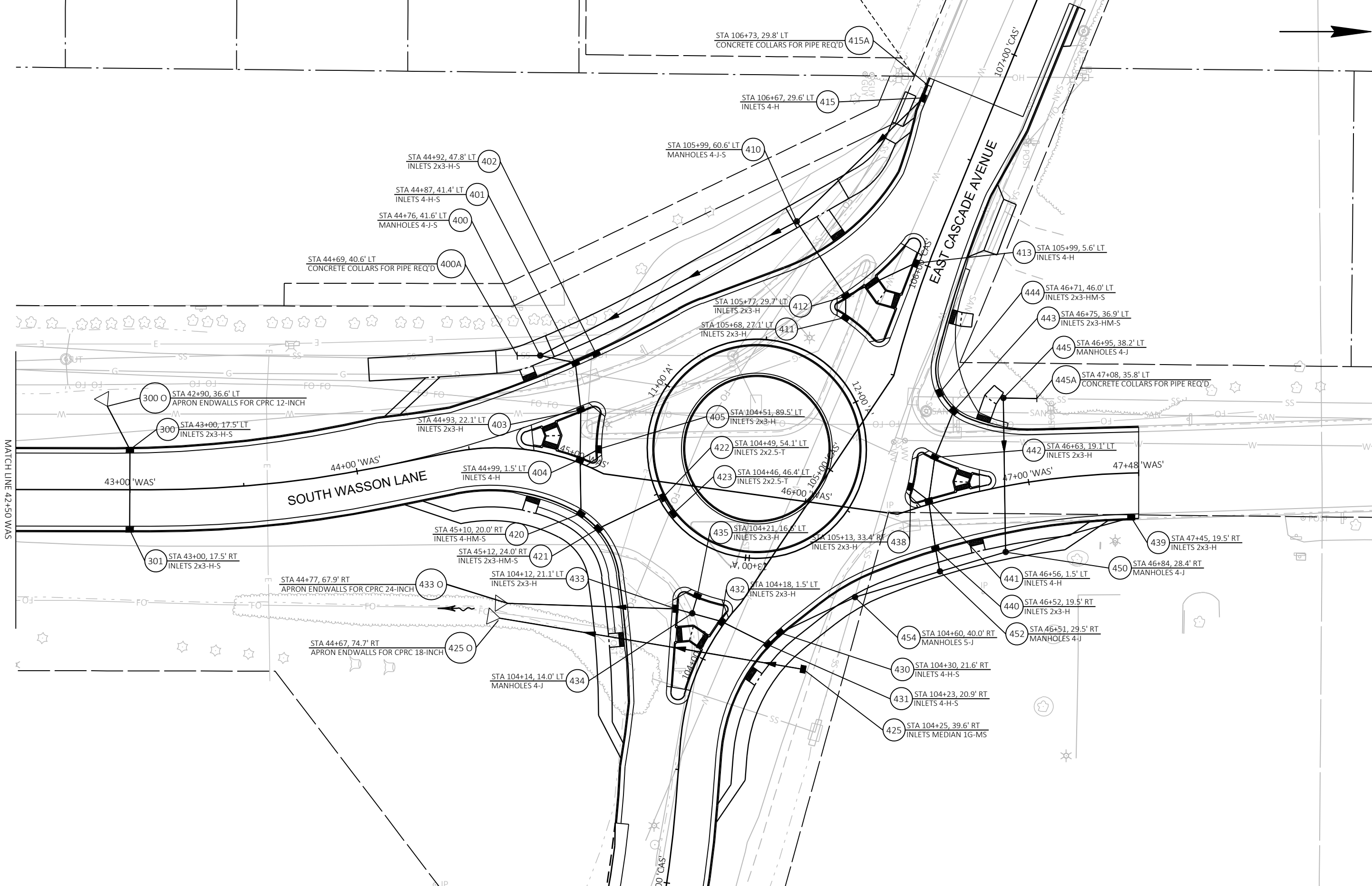
28+00 'WAS'	29+00 'WAS'	30+00 'WAS'	31+00 'WAS'	32+00 'WAS'	33+00 'WAS'	34+00 'WAS'
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      STORM SEWER PLAN      SHEET      E



PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      STORM SEWER PLAN      SHEET      E





PROJECT NO: 7994-00-51

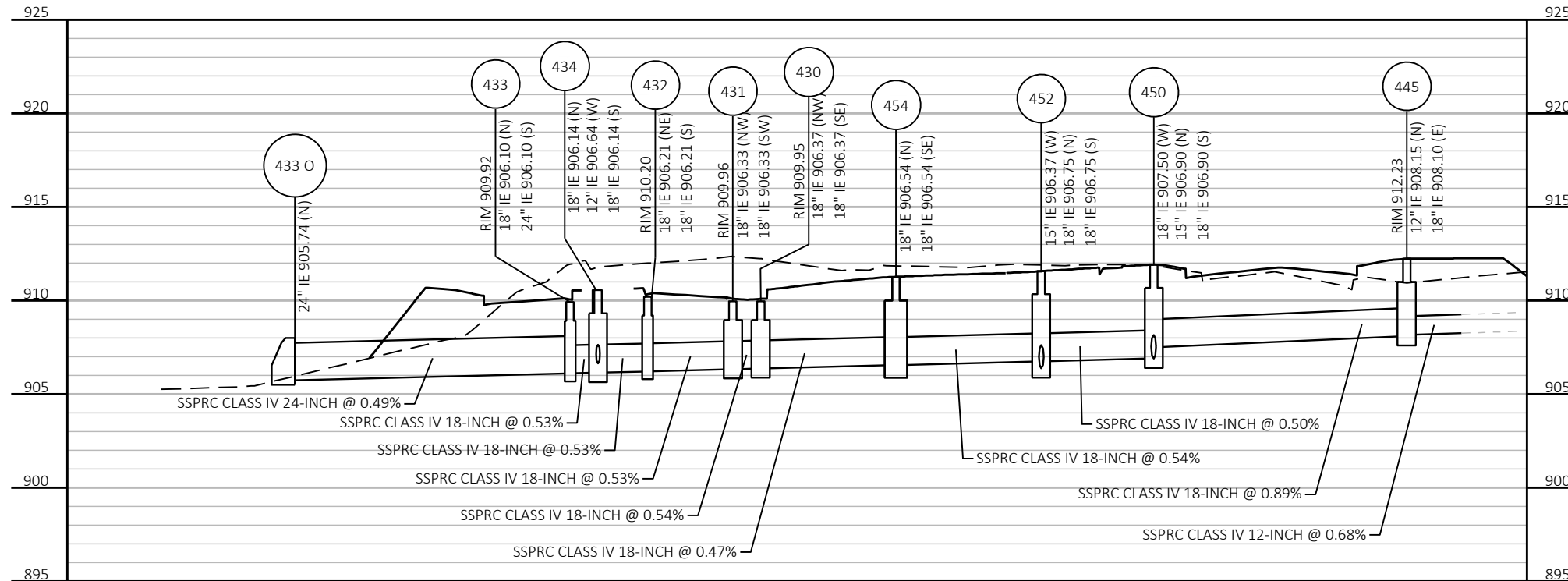
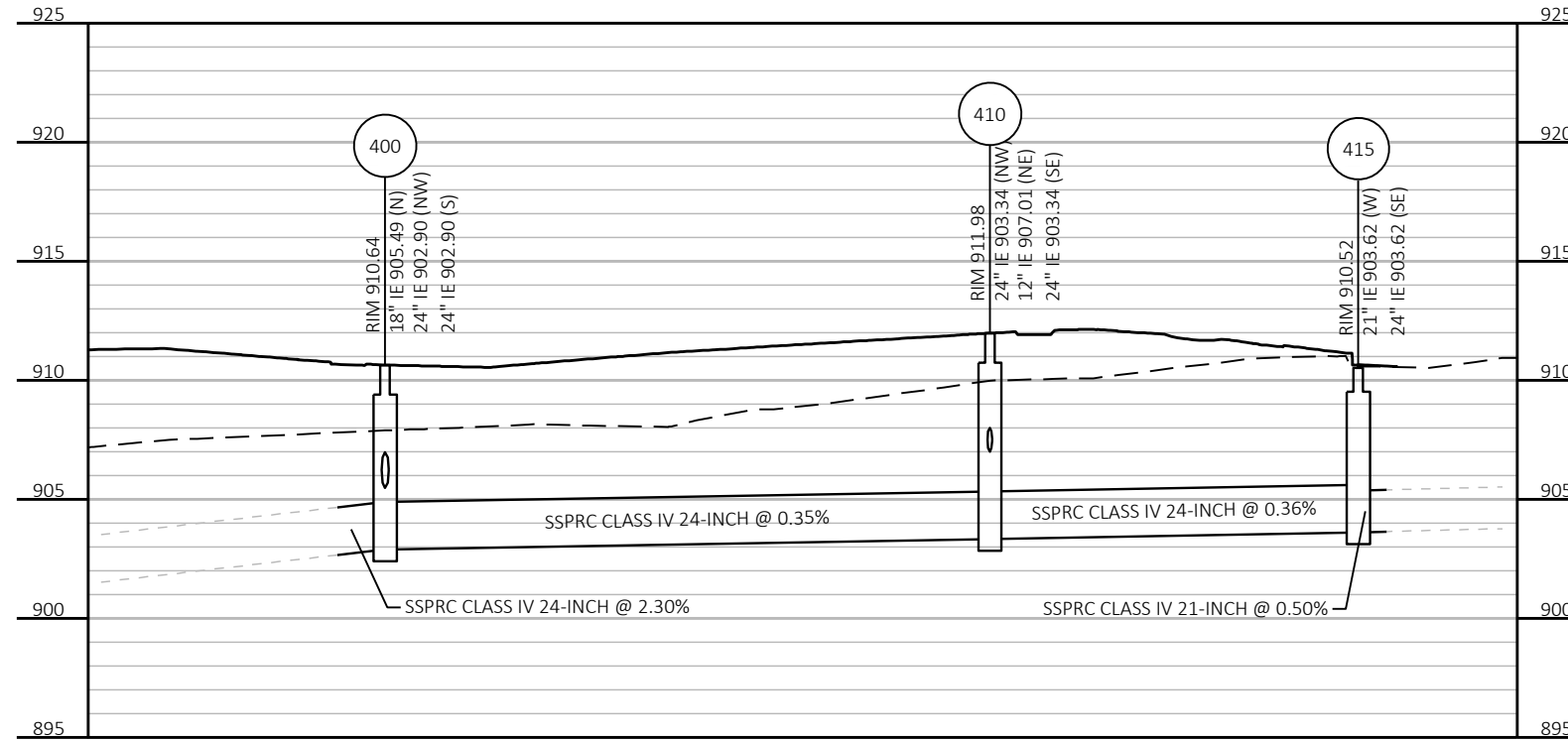
HWY: WASSON LANE

COUNTY: PIERCE

STORM SEWER PLAN

SHEET

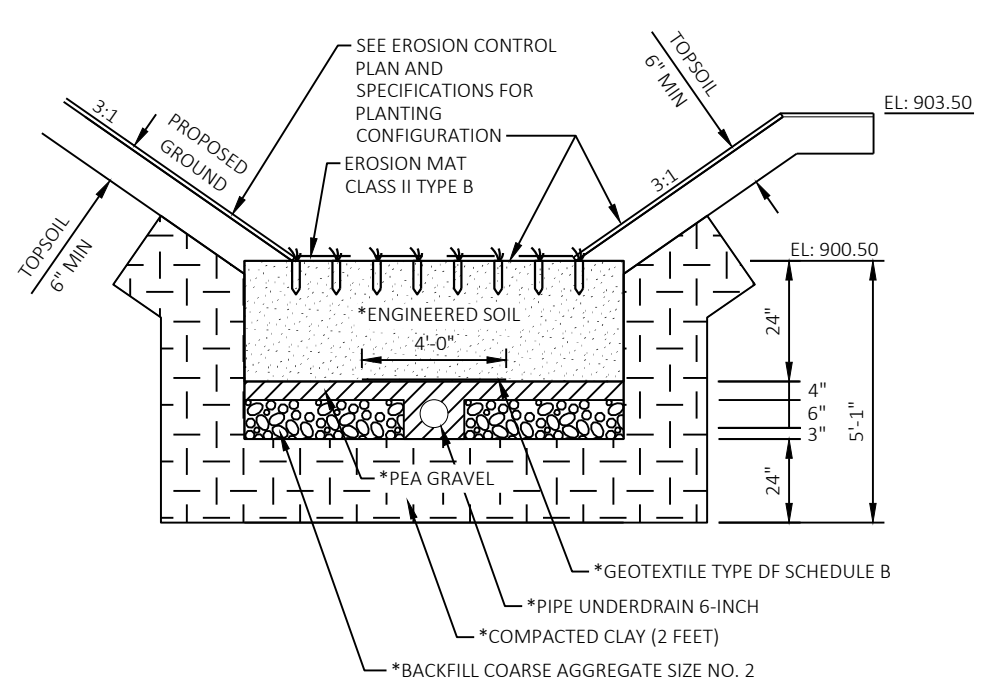
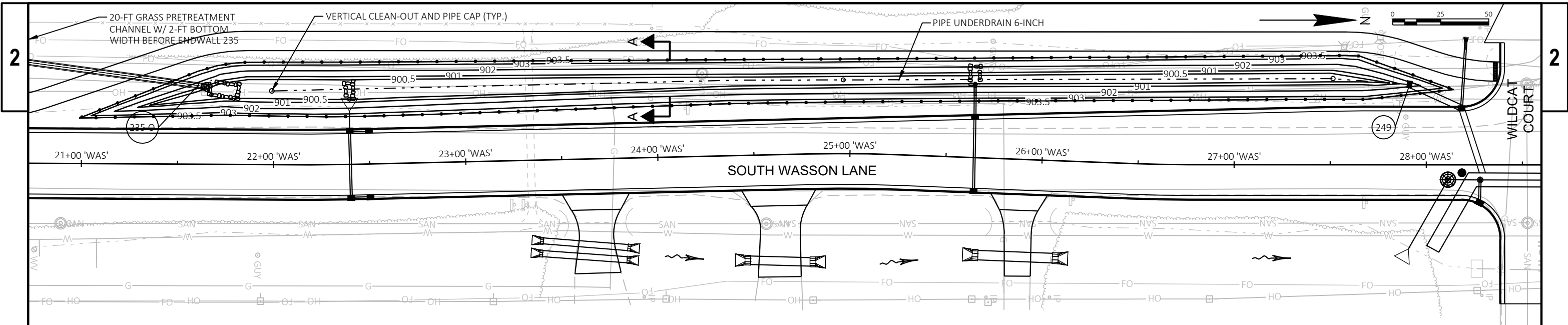
E



STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	INLET TYPE	COVER	MH TYPE	COVER	RIM/GRATE ELEV.	TOP OF STRUCTURE ELEV.	DISCHARGE PIPE					REMARKS	
											DEPTH (FT)	SIZE (IN)	INLET ELEV.	DISCHARGE ELEV.	LENGTH (FT)		SLOPE (%)
203	10+56.46 'WAS'	38.7 'RT	39.6	203 O	-	-	-	-	-	-	-	24	911.60	910.50	40	2.78%	APRON ENDWALLS FOR CPRC 24-INCH REQ'D
203 O	10+93.98 'WAS'	42.2 'RT	-	-	-	-	-	-	-	-	-	-	910.50	-	-	-	APRON ENDWALLS FOR CPRC 24-INCH REQ'D
204	11+12.48 'WAS'	37.1 'LT	72.8	204 O	-	-	-	-	-	-	-	24X38	911.40	910.50	73	1.24%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
204 O	11+12.85 'WAS'	35.7 'RT	-	-	-	-	-	-	-	-	-	-	910.50	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
205	11+19.26 'WAS'	36.9 'LT	72.3	205 O	-	-	-	-	-	-	-	24X38	911.40	910.50	72	1.25%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
205 O	11+19.66 'WAS'	35.4 'RT	-	-	-	-	-	-	-	-	-	-	910.50	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
206	11+63.25 'WAS'	44.4 'LT	24.0	206 O	-	-	-	-	-	-	-	12	912.00	911.70	24	1.25%	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
206 O	11+39.87 'WAS'	43.5 'LT	-	-	-	-	-	-	-	-	-	-	911.70	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
210	13+00.00 'WAS'	31.5 'LT	157.8	214	2X3-FT	H	-	-	912.63	911.80	3.56	12	908.24	907.06	158	0.75%	
211	13+00.00 'WAS'	17.5 'RT	49.0	210	2X3-FT	H	-	-	912.91	912.08	2.33	12	909.75	909.50	49	0.51%	
214	14+55.14 'WAS'	31.5 'LT	172.7	220	4-FT	H	-	-	910.63	909.80	2.74	15	907.06	905.76	173	0.75%	
215	14+54.78 'WAS'	17.5 'RT	49.0	214	2X3-FT	H	-	-	910.92	910.09	2.78	12	907.31	907.06	49	0.51%	
217	14+56.25 'WAS'	51.7 'RT	52.9	217 O	-	-	-	-	-	-	-	24X38	905.10	904.00	53	2.08%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
217 O	15+09.76 'WAS'	51.6 'RT	-	-	-	-	-	-	-	-	-	-	904.00	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
218	14+56.20 'WAS'	58.5 'RT	52.9	218 O	-	-	-	-	-	-	-	24X38	905.10	904.00	53	2.08%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
218 O	15+09.80 'WAS'	58.4 'RT	-	-	-	-	-	-	-	-	-	-	904.00	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
219	15+81.90 'WAS'	45.8 'LT	60.2	219 O	-	-	-	-	-	-	-	19X30	907.00	905.55	60	2.41%	APRON ENDWALLS FOR CPRCHE 19x30-INCH REQ'D
219 O	16+41.38 'WAS'	55.1 'LT	-	-	-	-	-	-	-	-	-	-	905.55	-	-	-	APRON ENDWALLS FOR CPRCHE 19x30-INCH REQ'D
220	16+28.70 'WAS'	26.1 'LT	35.1	220 O	4-FT	H	-	-	908.72	907.89	2.39	15	905.49	905.40	35	0.26%	3-INCHES ADJ. RINGS REQ'D
220 O	16+54.86 'WAS'	49.4 'LT	-	-	-	-	-	-	-	-	-	-	905.40	-	-	-	APRON ENDWALLS FOR CPRC 15-INCH REQ'D
221	16+26.32 'WAS'	17.5 'RT	43.7	220	2X3-FT	H	-	-	908.92	908.09	2.11	12	905.98	905.76	44	0.50%	
230	18+93.80 'WAS'	17.5 'LT	28.0	230 O	2X3-FT	H	-	-	905.81	904.98	2.14	12	902.84	902.70	28	0.50%	
230 O	18+94.42 'WAS'	45.5 'LT	-	-	-	-	-	-	-	-	-	-	902.70	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
231	18+94.10 'WAS'	17.5 'RT	35.0	230	2X3-FT	H	-	-	905.81	904.98	2.34	12	902.64	902.46	35	0.51%	
232	19+00.50 'WAS'	50.0 'RT	28.8	232 O	-	-	-	-	-	-	-	24X38	902.00	901.55	29	1.56%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
232 O	19+29.28 'WAS'	50.9 'RT	-	-	-	-	-	-	-	-	-	-	901.55	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
233	19+00.30 'WAS'	56.3 'RT	28.8	233 O	-	-	-	-	-	-	-	24X38	902.00	901.55	29	1.56%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
233 O	19+29.07 'WAS'	57.2 'RT	-	-	-	-	-	-	-	-	-	-	901.55	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
235	20+58.89 'WAS'	54.2 'LT	102.5	235 O	-	-	-	-	-	-	-	30	901.00	900.50	103	0.49%	APRON ENDWALLS FOR CPRC 30-INCH REQ'D
235 O	21+60.55 'WAS'	40.8 'LT	-	-	-	-	-	-	-	-	-	-	900.50	-	-	-	APRON ENDWALLS FOR CPRC 30-INCH REQ'D
240	22+39.98 'WAS'	17.5 'LT	10.2	240 O	2X3-FT	H-S	-	-	904.15	903.32	2.76	15	900.55	900.50	10	0.49%	2-FT SUMP REQ'D
240 O	22+40.06 'WAS'	27.7 'LT	-	-	-	-	-	-	-	-	-	-	900.50	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
241	22+40.11 'WAS'	17.5 'RT	35.0	240	2X3-FT	H-S	-	-	904.14	903.31	2.58	12	900.73	900.55	35	0.51%	
242	22+50.00 'WAS'	17.5 'LT	10.0	240	2X3-FT	H-S	-	-	904.14	903.31	2.71	12	900.60	900.55	10	0.50%	
243	22+50.09 'WAS'	17.5 'RT	10.0	241	2X3-FT	H-S	-	-	904.14	903.31	2.53	12	900.78	900.73	10	0.50%	
246	23+39.55 'WAS'	42.0 'RT	44.0	246 O	-	-	-	-	-	-	-	24X38	899.30	899.00	44	0.68%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
246 O	23+83.36 'WAS'	46.5 'RT	-	-	-	-	-	-	-	-	-	-	899.00	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
247	23+38.94 'WAS'	48.6 'RT	44.0	247 O	-	-	-	-	-	-	-	24X38	899.30	899.00	44	0.68%	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
247 O	23+82.74 'WAS'	52.8 'RT	-	-	-	-	-	-	-	-	-	-	899.00	-	-	-	APRON ENDWALLS FOR CPRCHE 24x38-INCH REQ'D
248	24+47.12 'WAS'	54.5 'RT	30.9	248 O	-	-	-	-	-	-	-	34X53	898.80	898.50	31	0.97%	APRON ENDWALLS FOR CPRCHE 34x53-INCH REQ'D
248 O	24+77.95 'WAS'	56.1 'RT	-	-	-	-	-	-	-	-	-	-	898.50	-	-	-	APRON ENDWALLS FOR CPRCHE 34x53-INCH REQ'D
249	27+91.25 'WAS'	41.7 'LT	29.7	254	MEDIAN 2 GRATE	MS	-	-	901.50	901.50	4.50	36	897.00	896.50	30	1.69%	BIOINFILTRATION BASIN 1 STANDPIPE (SEE BIOINFILTRATION BASIN 1 DETAIL); PYRAMIDAL GRATE 2'-6" x 5'-4" REQ'D
250	25+64.26 'WAS'	21.4 'LT	11.0	250 O	2X3-FT	H	-	-	904.34	903.51	2.95	12	900.56	900.50	11	0.55%	2-FT SUMP REQ'D
250 O	25+63.95 'WAS'	32.3 'LT	-	-	-	-	-	-	-	-	-	-	900.50	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
251	25+65.01 'WAS'	17.5 'RT	38.9	250	2X3-FT	H	-	-	904.42	903.59	2.82	12	900.76	900.56	39	0.51%	
252	25+68.51 'WAS'	50.6 'RT	38.7	252 O	-	-	-	-	-	-	-	38X60	898.10	897.80	39	0.77%	APRON ENDWALLS FOR CPRCHE 38x60-INCH REQ'D

STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	INLET TYPE	COVER	MH TYPE	COVER	RIM/GRATE ELEV.	TOP OF STRUCTURE ELEV.	DISCHARGE PIPE					REMARKS	
											DEPTH (FT)	SIZE (IN)	INLET ELEV.	DISCHARGE ELEV.	LENGTH (FT)		SLOPE (%)
252 O	26+07.23 'WAS'	50.7 'RT	-	-	-	-	-	-	-	-	-	-	897.80	-	-	-	APRON ENDWALLS FOR CPRCHE 38x60-INCH REQ'D
253	28+20.28 'WAS'	60.0 'LT	30.6	254	-	-	-	-	-	-	-	12	899.30	899.00	31	0.98%	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
254	28+18.28 'WAS'	29.5 'LT	33.7	254A	-	H	6-FT	-	902.91	902.08	6.08	36	896.00	894.82	34	3.50%	FLAT SLAB TOP 2'X3' OPENING REQ'D
254A	28+18.52 'WAS'	4.2 'RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	STORM SEWER TAP REQ'D; 36-INCH PIPE CONNECTS DIRECTLY INTO SIDE OF 48x76-INCH PIPE
255	27+90.66 'WAS'	43.7 'RT	41.4	255A	-	-	-	-	-	-	-	48X76	894.89	894.41	41	1.16%	APRON ENDWALLS FOR CPRCHE 48x76-INCH
255A	28+11.21 'WAS'	7.8 'RT	16.8	256	-	-	-	-	-	-	-	48X76	894.41	894.21	17	1.19%	STORM SEWER PIPE 48x76-INCH BEND 60° REQ'D
256	28+27.97 'WAS'	7.8 'RT	82.3	257	-	-	VARIABLE TEE 4-FT	J-S	903.45	902.20	3.45	48X76	894.21	893.26	82	1.15%	DEPTH IS MEASURED FROM TOP OF STRUCTURE ELEV. TO TOP OF PIPE
257	29+10.26 'WAS'	8.0 'RT	310.9	258	-	-	VARIABLE TEE 4-FT	J-S	903.25	902.00	4.20	48X76	893.26	889.65	311	1.16%	DEPTH IS MEASURED FROM TOP OF STRUCTURE ELEV. TO TOP OF PIPE
258	32+21.55 'WAS'	10.1 'RT	13.4	258A	-	-	VARIABLE TEE 4-FT	J-S	902.48	901.23	7.03	48X76	889.65	889.50	13	1.12%	DEPTH IS MEASURED FROM TOP OF STRUCTURE ELEV. TO TOP OF PIPE
258A	32+35.03 'WAS'	9.4 'RT	79.4	258 O	-	-	-	-	-	-	-	48X76	889.50	888.58	79	1.16%	STORM SEWER PIPE 48x76-INCH BEND 45° REQ'D
258 O	32+93.01 'WAS'	63.7 'RT	-	-	-	-	-	-	-	-	-	-	889.50	-	-	-	APRON ENDWALLS FOR CPRCHE 48x76-INCH
260	28+92.93 'WAS'	29.5 'LT	10.0	263	2X3-FT	H-S	-	-	902.65	901.82	3.17	12	898.65	898.60	10	0.50%	
261	28+92.87 'WAS'	17.5 'RT	10.0	264	2X3-FT	H-S	-	-	902.89	902.06	3.13	12	898.93	898.88	10	0.50%	
262	28+27.64 'WAS'	19.8 'RT	12.0	256	2X3-FT	H	-	-	901.38	900.55	0.87	12	899.68	899.56	12	1.00%	
263	29+02.93 'WAS'	29.5 'LT	33.9	263A	4-FT	H-S	-	-	902.65	901.82	5.32	12	896.50	895.35	34	3.40%	
263A	29+02.86 'WAS'	4.4 'RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	STORM SEWER TAP REQ'D; 12-INCH PIPE CONNECTS DIRECTLY INTO SIDE OF 48x76-INCH PIPE
264	29+02.86 'WAS'	17.5 'RT	6.0	264A	2X3-FT	H-S	-	-	902.89	902.06	8.06	18	894.00	893.97	6	0.50%	
264A	29+02.85 'WAS'	11.5 'RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	STORM SEWER TAP REQ'D; 18-INCH PIPE CONNECTS DIRECTLY INTO SIDE OF 48x76-INCH PIPE
265	29+00.04 'WAS'	42.2 'RT	24.9	264	MEDIAN 2 GRATE	MS	-	-	898.20	898.20	4.15	18	894.05	894.00	25	0.20%	2 MS CASTINGS REQ'D
265A	28+94.03 'WAS'	66.3 'RT	24.8	265	-	-	-	-	-	-	-	12	894.18	894.05	25	0.52%	CONCRETE COLLARS FOR PIPE REQ'D; CONTRACTOR TO FIELD VERIFY SIZE AND INVERT ELEVATIONS
266	29+37.55 'WAS'	63.7 'LT	48.7	263	-	-	-	-	-	-	-	12	898.00	896.50	49	3.08%	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
270	32+30.28 'WAS'	17.5 'LT	10.0	272	2X3-FT	H-S	-	-	902.17	901.34	3.14	12	898.20	898.15	10	0.50%	
271	32+30.59 'WAS'	17.5 'RT	10.0	273	2X3-FT	H-S	-	-	902.17	901.34	3.14	12	898.20	898.15	10	0.50%	
272	32+20.44 'WAS'	17.5 'LT	27.6	258	2X3-FT	H-S	-	-	902.17	901.34	3.18	12	898.15	898.01	28	0.51%	
273	32+20.44 'WAS'	17.5 'RT	7.5	258	2X3-FT	H-S	-	-	902.17	901.34	3.19	12	898.15	898.10	8	0.66%	
280	37+14.50 'WAS'	17.5 'LT	35.0	281	2X3-FT	H-S	-	-	901.10	900.27	3.22	12	897.05	896.70	35	1.00%	
281	37+14.59 'WAS'	17.5 'RT	21.6	281 O	2X3-FT	H-S	-	-	901.10	900.27	3.57	12	896.70	895.70	22	4.63%	
281 O	37+13.97 'WAS'	39.1 'RT	-	-	-	-	-	-	-	-	-	-	895.70	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
285	37+91.45 'WAS'	39.2 'LT	42.2	285 O	MEDIAN 2 GRATE	MS	-	-	897.50	897.50	3.83	36	893.67	893.46	42	0.50%	BIOINFILTRATION BASIN 2 STANDPIPE (SEE BIOINFILTRATION BASIN 2 DETAIL); 2 MS CASTINGS REQ'D
285 O	37+53.55 'WAS'	57.7 'LT	-	-	-	-	-	-	-	-	-	-	893.46	-	-	-	APRON ENDWALLS FOR CPRC 36-INCH REQ'D
286	39+14.41 'WAS'	51.3 'LT	40.1	286 O	-	-	-	-	-	-	-	19X30	897.50	896.90	40	1.50%	APRON ENDWALLS FOR CPRCHE 19x30-INCH REQ'D
286 O	38+74.28 'WAS'	50.9 'LT	-	-	-	-	-	-	-	-	-	-	896.90	-	-	-	APRON ENDWALLS FOR CPRCHE 19x30-INCH REQ'D
288	39+65.70 'WAS'	35.8 'RT	36.5	288 O	-	-	-	-	-	-	-	29X45	898.20	898.00	36	0.55%	APRON ENDWALLS FOR CPRCHE 29x45-INCH REQ'D
288 O	39+29.21 'WAS'	36.3 'RT	-	-	-	-	-	-	-	-	-	-	898.00	-	-	-	APRON ENDWALLS FOR CPRCHE 29x45-INCH REQ'D
290	40+00.00 'WAS'	17.5 'LT	14.9	290 O	2X3-FT	H	-	-	903.27	902.44	2.79	12	899.65	899.50	15	1.00%	
290 O	39+99.18 'WAS'	32.4 'LT	-	-	-	-	-	-	-	-	-	-	899.50	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
291	40+00.00 'WAS'	17.5 'RT	35.0	290	2X3-FT	H	-	-	903.27	902.44	2.61	12	899.83	899.65	35	0.51%	
294	40+98.57 'WAS'	43.5 'RT	36.2	294 O	-	-	-	-	-	-	-	29X45	900.30	899.20	36	3.04%	APRON ENDWALLS FOR CPRCHE 29x45-INCH REQ'D
294 O	40+62.44 'WAS'	41.6 'RT	-	-	-	-	-	-	-	-	-	-	899.20	-	-	-	APRON ENDWALLS FOR CPRCHE 29x45-INCH REQ'D
300	43+00.01 'WAS'	17.5 'LT	21.5	300 O	2X3-FT	H-S	-	-	908.85	908.02	2.96	12	905.06	904.90	21	0.74%	
300 O	42+90.13 'WAS'	36.6 'LT	-	-	-	-	-	-	-	-	-	-	904.90	-	-	-	APRON ENDWALLS FOR CPRC 12-INCH REQ'D
301	43+00.00 'WAS'	17.5 'RT	35.0	300	2X3-FT	H-S	-	-	908.85	908.02	2.78	12	905.24	905.06	35	0.51%	
400	44+75.67 'WAS'	41.6 'LT	10.0	400A	-	-	4-FT	J-S	910.64	909.39	6.49	24	902.90	902.67	10	2.30%	

STRUCT NO.	STATION	OFFSET	C-C (FT)	TO STRUCT	INLET TYPE	COVER	MH TYPE	COVER	RIM/GRATE ELEV.	TOP OF STRUCTURE ELEV.	DISCHARGE PIPE					REMARKS	
											DEPTH (FT)	SIZE (IN)	INLET ELEV.	DISCHARGE ELEV.	LENGTH (FT)		SLOPE (%)
400A	44+68.62 'WAS'	40.6 'LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CONCRETE COLLARS FOR PIPE REQ'D; FIELD VERIFY SIZE AND INVERT ELEVATIONS
401	44+86.79 'WAS'	41.4 'LT	15.7	400	4-FT	H-S	-	-	909.72	908.89	3.32	18	905.57	905.49	16	0.51%	
402	44+92.10 'WAS'	47.8 'LT	10.0	401	2X3-FT	H-S	-	-	909.69	908.86	3.04	12	905.82	905.77	10	0.50%	
403	44+92.83 'WAS'	22.1 'LT	20.9	401	2X3-FT	H	-	-	909.92	909.09	3.41	15	905.68	905.57	21	0.53%	
404	44+98.94 'WAS'	1.5 'LT	21.7	403	4-FT	H	-	-	909.79	908.96	3.17	15	905.79	905.68	22	0.51%	
405	10+70.32 'A'	21.5 'LT	9.0	404	2X3-FT	H	-	-	909.67	908.84	2.67	12	906.17	906.12	9	0.55%	
410	105+98.80 'CAS'	60.6 'LT	126.9	400	-	-	4-FT	J-S	911.98	910.73	7.39	24	903.34	902.90	127	0.35%	
411	11+74.40 'A'	21.5 'LT	9.3	412	2X3-FT	H	-	-	911.23	910.40	2.90	12	907.50	907.41	9	0.96%	
412	105+76.70 'CAS'	29.7 'LT	39.2	410	2X3-FT	H	-	-	911.18	910.35	2.94	12	907.41	907.01	39	1.02%	
413	105+99.34 'CAS'	5.6 'LT	33.6	412	4-FT	H	-	-	911.42	910.59	2.84	12	907.75	907.41	34	1.01%	
415	106+67.34 'CAS'	29.6 'LT	77.4	410	4-FT	H	-	-	910.52	909.69	6.07	24	903.62	903.34	77	0.36%	
415A	106+73.34 'CAS'	29.8 'LT	6.0	415	-	-	-	-	-	-	-	21	903.65	903.62	6	0.50%	CONCRETE COLLARS FOR PIPE REQ'D; CONTRACTOR TO FIELD VERIFY SIZE AND INVERT ELEVATIONS
420	45+10.01 'WAS'	20.0 'RT	23.7	404	4-FT	HM-S	-	-	909.33	908.50	2.59	15	905.91	905.79	24	0.51%	
421	45+11.80 'WAS'	24.0 'RT	10.0	420	2X3-FT	HM-S	-	-	909.37	908.54	2.59	12	905.95	905.91	10	0.40%	
422	10+47.44 'A'	1.7 'RT	31.4	421	2X2.5-FT	T	-	-	909.56	908.64	2.53	12	906.11	905.95	31	0.51%	
423	10+38.77 'A'	1.7 'RT	8.4	422	2X2.5-FT	T	-	-	909.58	908.66	2.51	12	906.15	906.11	8	0.48%	
425	104+25.26 'CAS'	39.6 'RT	134.6	425 O	MEDIAN 1 GRATE	MS	-	-	909.87	909.87	4.38	18	905.49	905.10	135	0.29%	
425 O	44+66.91 'WAS'	74.7 'RT	-	-	-	-	-	-	-	-	-	-	905.10	-	-	-	APRON ENDWALLS FOR CPRCHE 29x45-INCH REQ'D
430	104+29.67 'CAS'	21.6 'RT	7.4	431	4-FT	H-S	-	-	909.96	909.13	2.76	18	906.37	906.33	7	0.54%	
431	104+23.06 'CAS'	20.9 'RT	22.8	432	4-FT	H-S	-	-	909.96	909.13	2.80	18	906.33	906.21	23	0.53%	
432	104+18.11 'CAS'	1.5 'LT	13.3	434	2X3-FT	H	-	-	910.20	909.37	3.16	18	906.21	906.14	13	0.53%	
433	104+12.07 'CAS'	21.1 'LT	73.6	433 O	2X3-FT	H	-	-	909.92	909.09	2.98	24	906.10	905.74	74	0.49%	
433 O	44+76.68 'WAS'	67.9 'RT	-	-	-	-	-	-	-	-	-	-	905.74	-	-	-	APRON ENDWALLS FOR CPRC 24-INCH REQ'D
434	104+14.00 'CAS'	14.0 'LT	7.5	433	-	-	4-FT	J	910.56	909.31	3.17	18	906.14	906.10	7	0.53%	
435	10+13.49 'A'	21.5 'LT	8.0	434	2X3-FT	H	-	-	909.82	908.99	2.31	12	906.68	906.64	8	0.50%	
438	12+32.93 'A'	21.5 'LT	9.9	441	2X3-FT	H	-	-	911.09	910.26	2.21	12	908.05	908.00	10	0.50%	
439	47+44.62 'WAS'	19.5 'RT	57.1	450	2X3-FT	H	-	-	911.71	910.88	3.68	15	907.20	906.90	57	0.53%	
440	46+52.37 'WAS'	19.5 'RT	10.1	452	2X3-FT	H	-	-	910.72	909.89	3.10	15	906.79	906.37	10	4.16%	
441	46+55.53 'WAS'	1.5 'LT	21.2	440	4-FT	H	-	-	911.10	910.27	3.37	12	906.90	906.79	21	0.52%	FLAT SLAB TOP 2'X3' OPENING REQ'D
442	46+62.95 'WAS'	19.1 'LT	19.2	441	2X3-FT	H	-	-	911.33	910.50	3.53	12	906.97	906.90	19	0.36%	
443	46+74.98 'WAS'	36.9 'LT	22.1	442	2X3-FT	HM-S	-	-	911.12	910.29	3.18	12	907.11	906.97	22	0.63%	
444	46+71.29 'WAS'	46.0 'LT	10.0	443	2X3-FT	HM-S	-	-	911.05	910.22	2.92	12	907.30	907.26	10	0.40%	
445	46+95.20 'WAS'	38.2 'LT	67.6	450	-	-	4-FT	J	912.23	910.98	2.88	18	908.10	907.50	68	0.89%	
445A	47+08.25 'WAS'	35.8 'LT	14.7	445	-	-	-	-	-	-	-	12	908.25	908.15	15	0.68%	CONCRETE COLLARS FOR PIPE REQ'D; CONTRACTOR TO FIELD VERIFY SIZE AND INVERT ELEVATIONS
450	46+83.90 'WAS'	28.4 'RT	29.9	452	-	-	4-FT	J	911.92	910.67	3.77	18	906.90	906.75	30	0.50%	
452	46+51.20 'WAS'	29.5 'RT	38.9	454	-	-	4-FT	J	911.58	910.33	3.58	18	906.75	906.54	39	0.54%	
454	12+68.65 'A'	29.9 'LT	36.2	430	-	-	5-FT	J	911.23	909.98	3.44	18	906.54	906.37	36	0.47%	



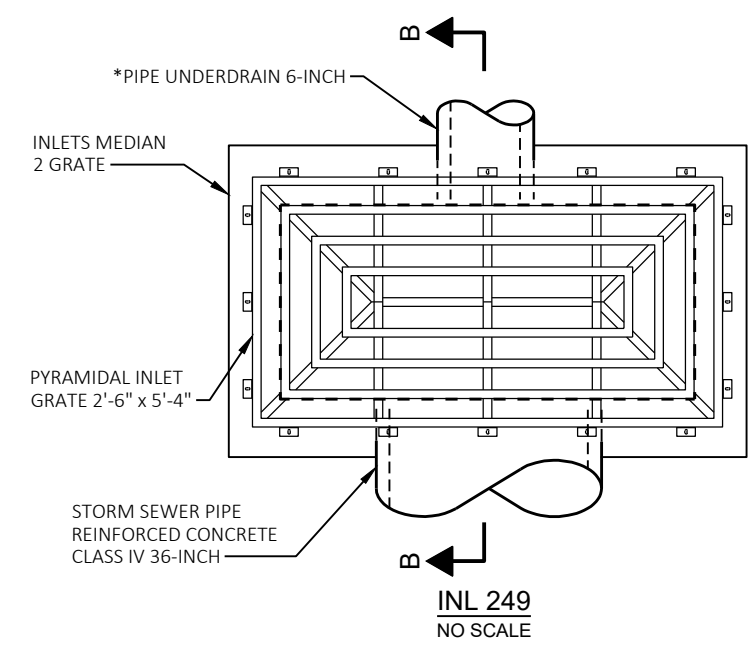
**SECTION A-A**  
NO SCALE

\* INCIDENTAL TO ITEM  
BIORETENTION BASIN

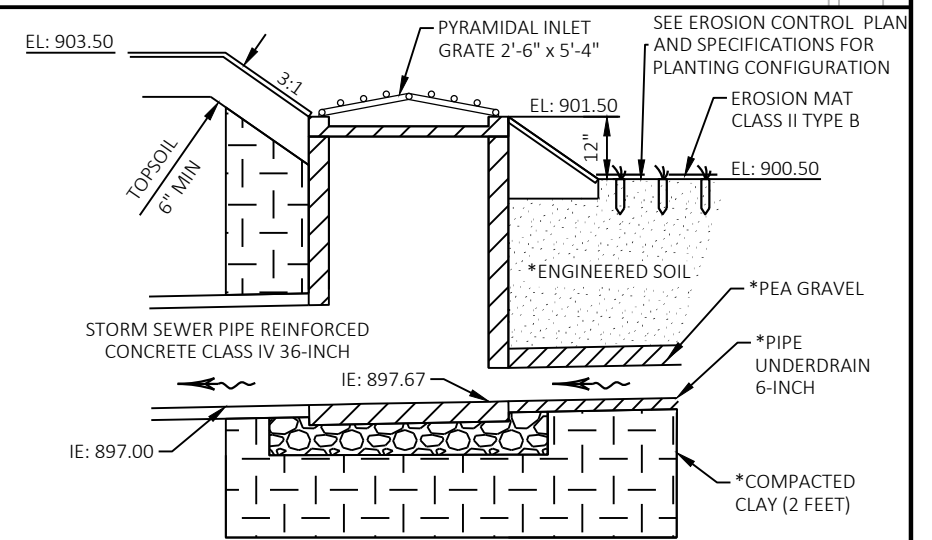
**BIOINFILTRATION BASIN 1 TYPICAL SECTION**  
NO SCALE

**GENERAL NOTES:**

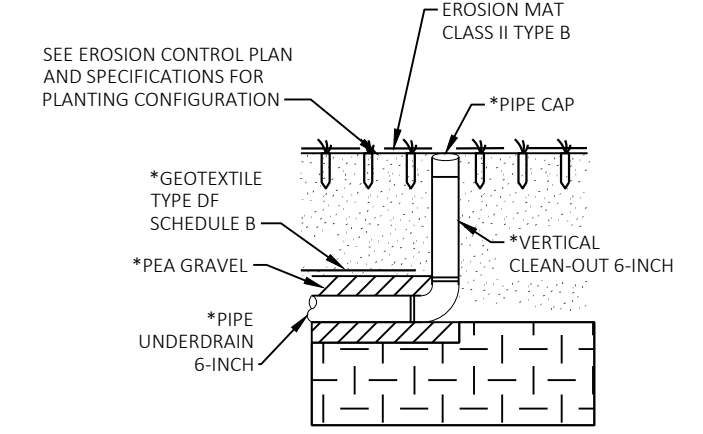
1. REFER TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) TECHNICAL STANDARD BIORETENTION FOR INFILTRATION (1004) FOR ADDITIONAL INFORMATION ON CONSTRUCTION SEQUENCING AND OVERSIGHT FOR THE BIORETENTION BASIN.
2. COMPACTED CLAY SHALL MEET THE REQUIREMENTS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) TYPE B CLAY LINER, PER THE WDNR TECHNICAL STANDARD 1001 APPENDIX D.



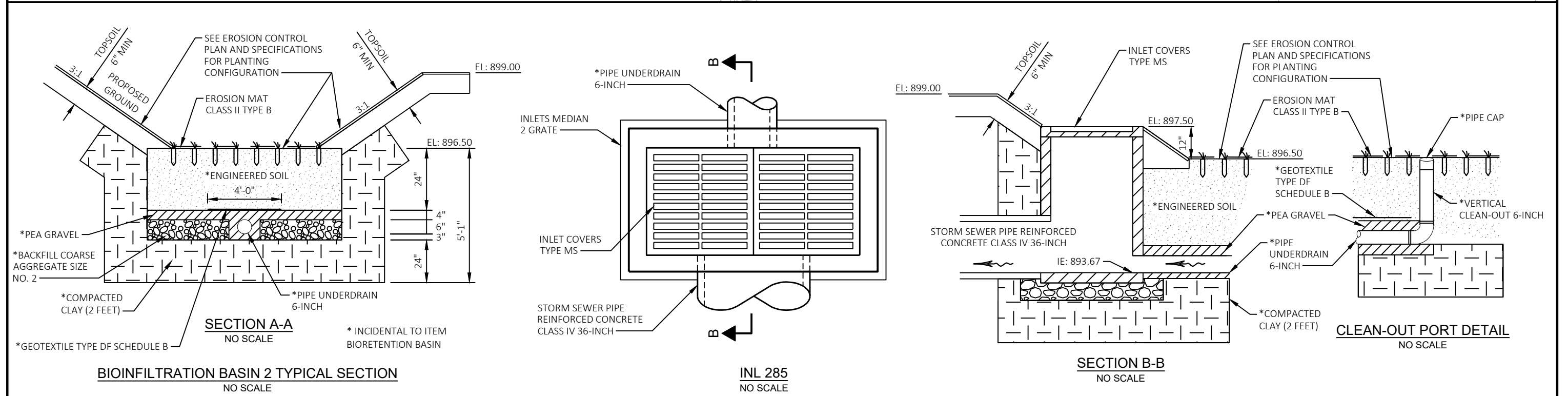
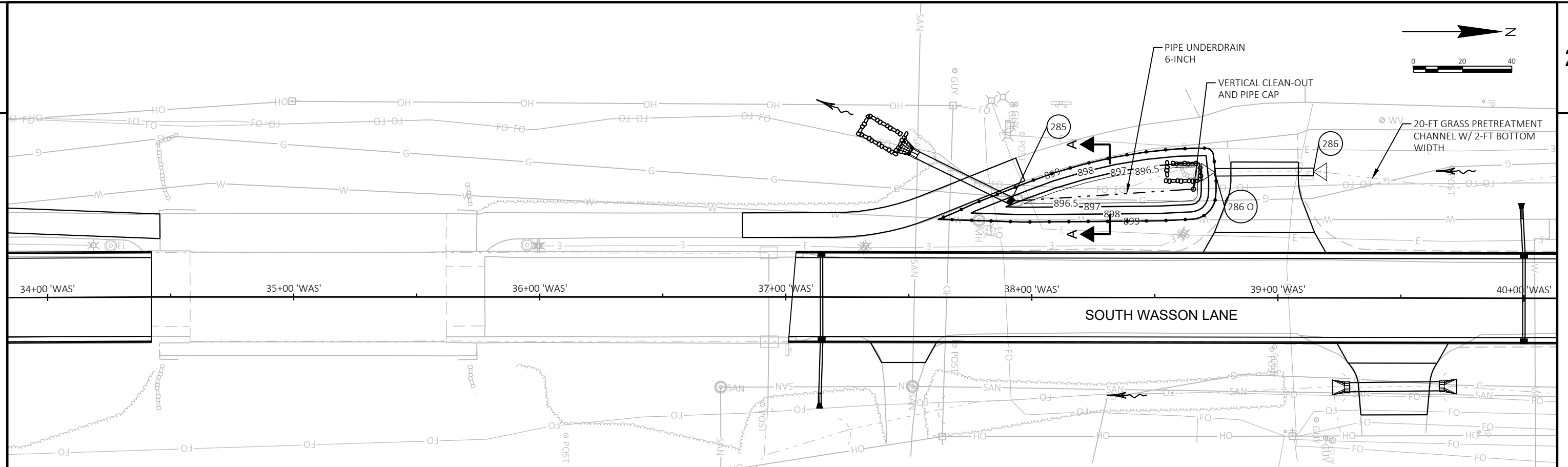
**BIOINFILTRATION BASIN 1**



**SECTION B-B**  
NO SCALE



**CLEAN-OUT PORT DETAIL**  
NO SCALE






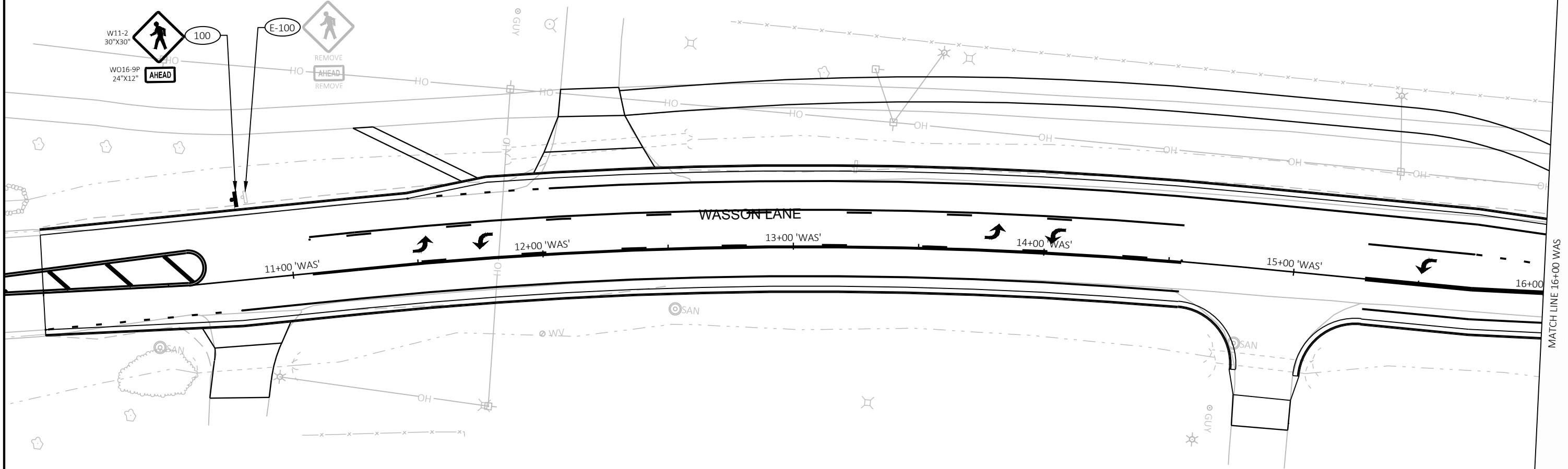
**BIOINFILTRATION BASIN 2**

- GENERAL NOTES:**
- REFER TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) TECHNICAL STANDARD BIORETENTION FOR INFILTRATION (1004) FOR ADDITIONAL INFORMATION ON CONSTRUCTION SEQUENCING AND OVERSIGHT FOR THE BIORETENTION BASIN.
  - COMPACTED CLAY SHALL MEET THE REQUIREMENTS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) TYPE B CLAY LINER, PER THE WDNR TECHNICAL STANDARD 1001 APPENDIX D.

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	STORM SEWER PLAN	SHEET	E
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**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER






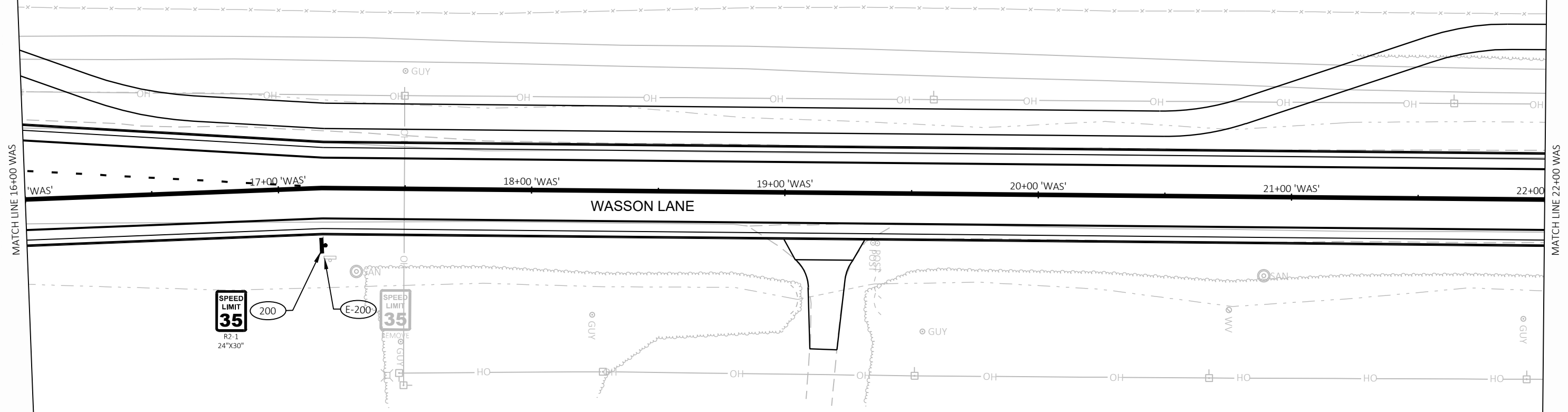
MATCH LINE 16+00 WAS

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	<b>E</b>
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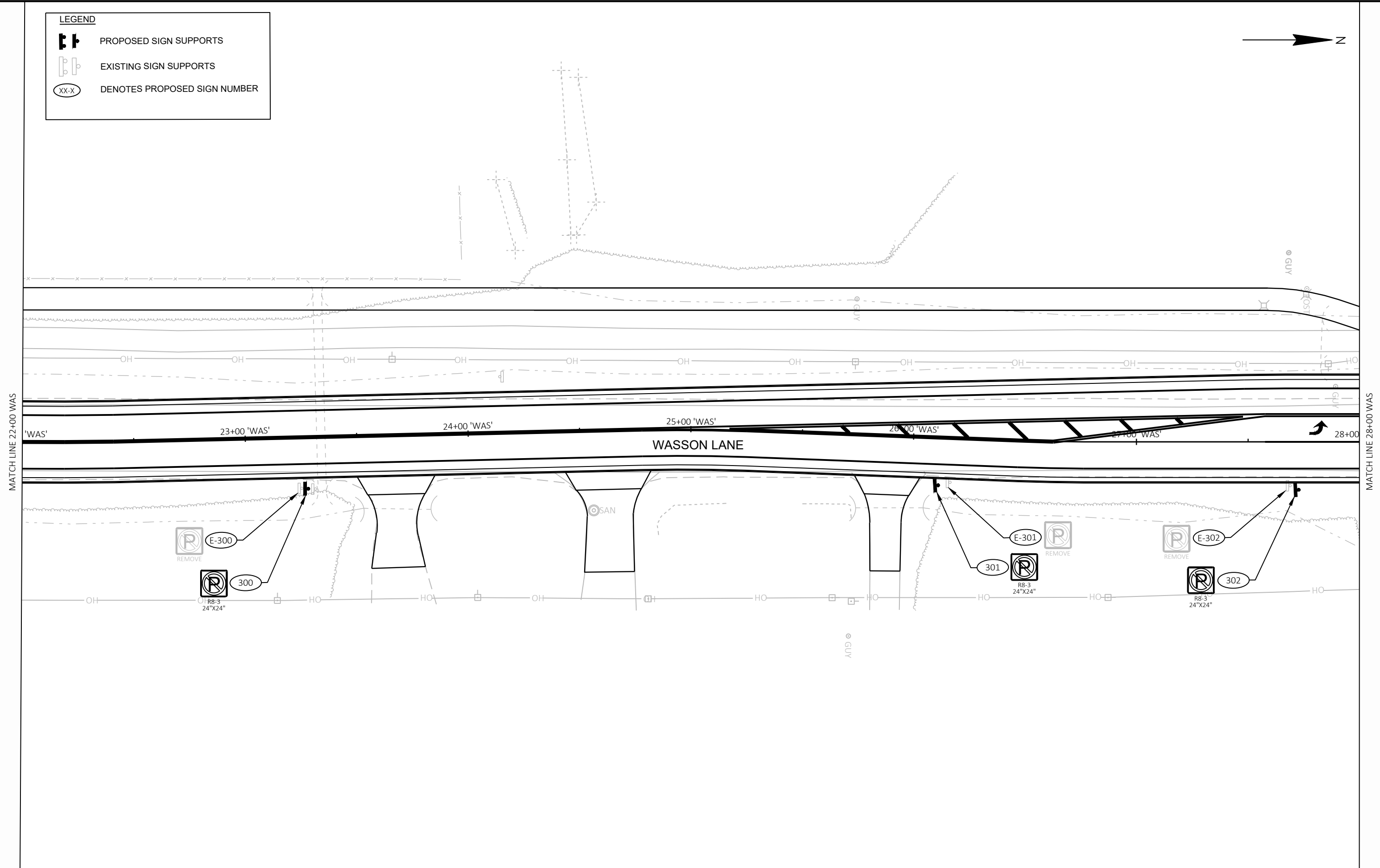
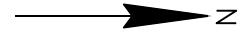
**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER






**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER



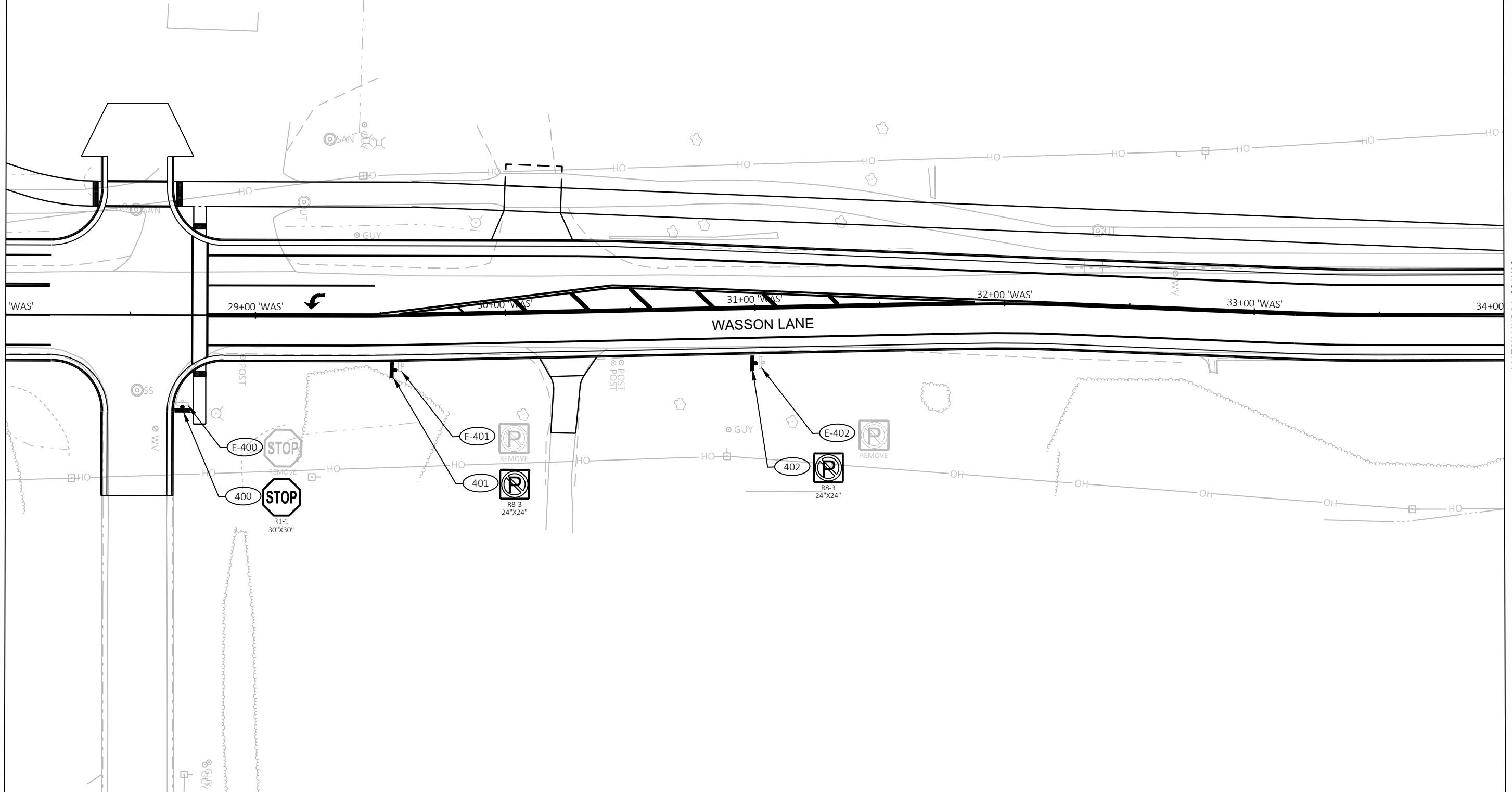
**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER



MATCH LINE 28+00 WAS

MATCH LINE 34+00 WAS



PROJECT NO: 7994-00-51

HWY: WASSON LANE




COUNTY: PIERCE

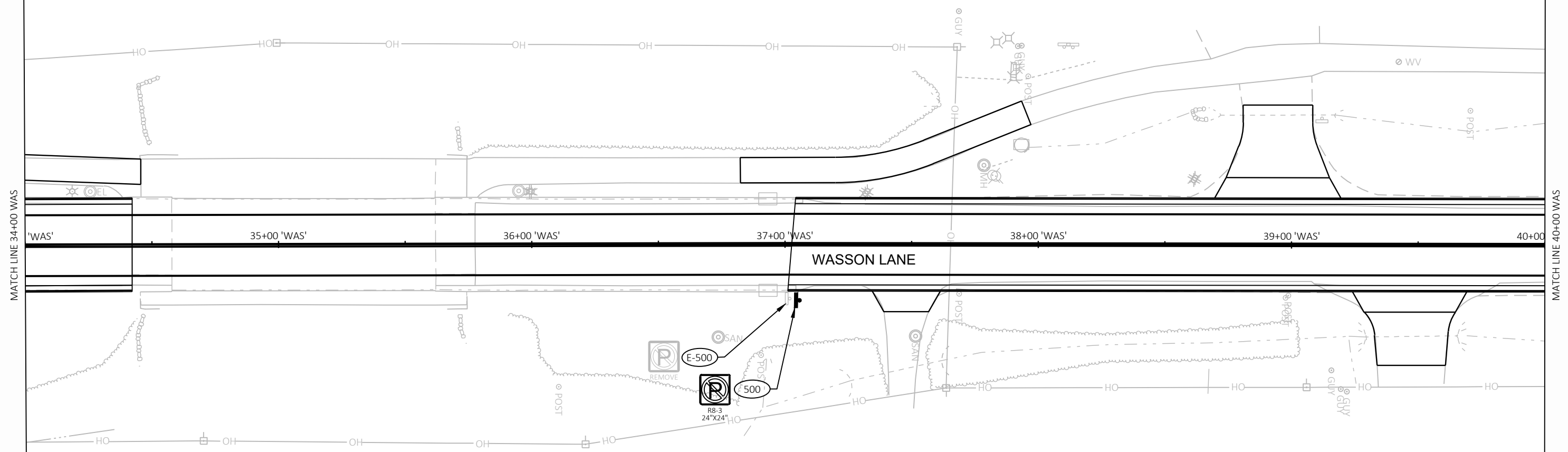
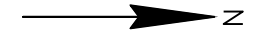
PERMANENT SIGNING

SHEET

E




**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER



PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PERMANENT SIGNING	SHEET	<b>E</b>
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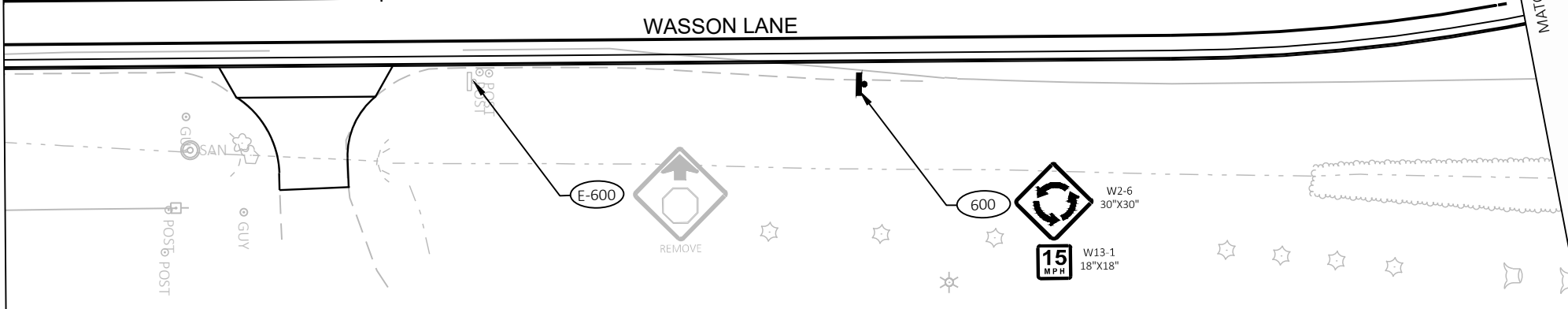
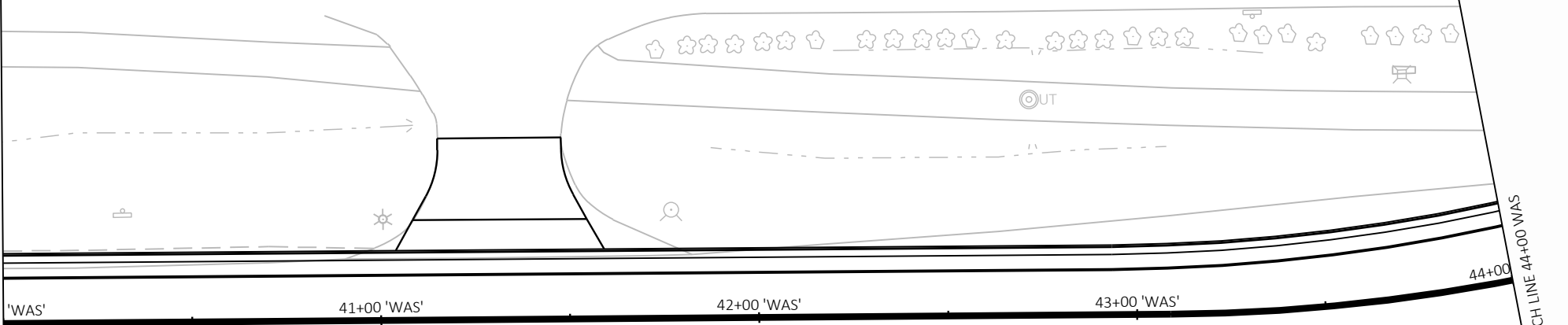
**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER






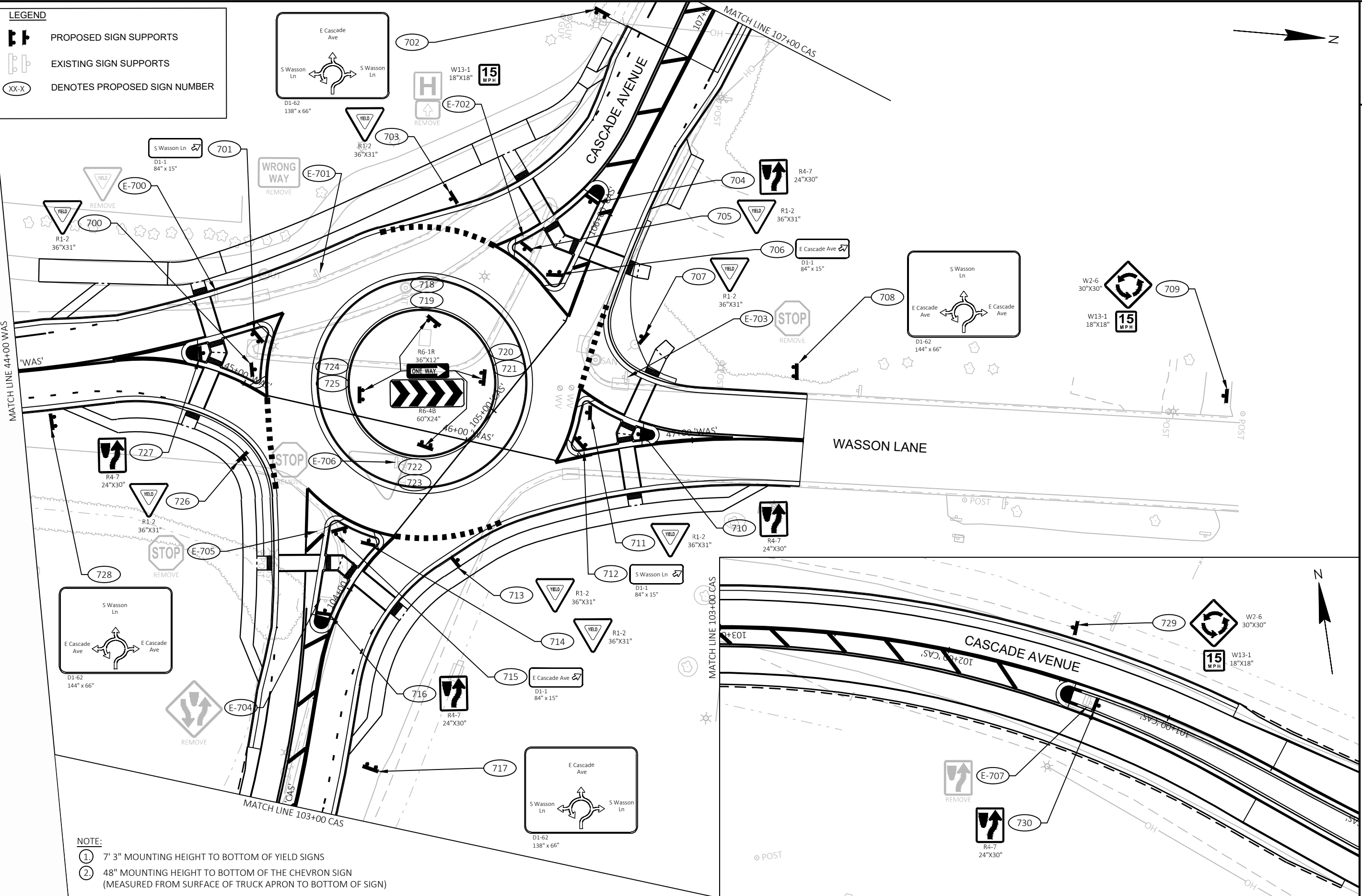
MATCH LINE 40+00 WAS

MATCH LINE 44+00 WAS



**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER






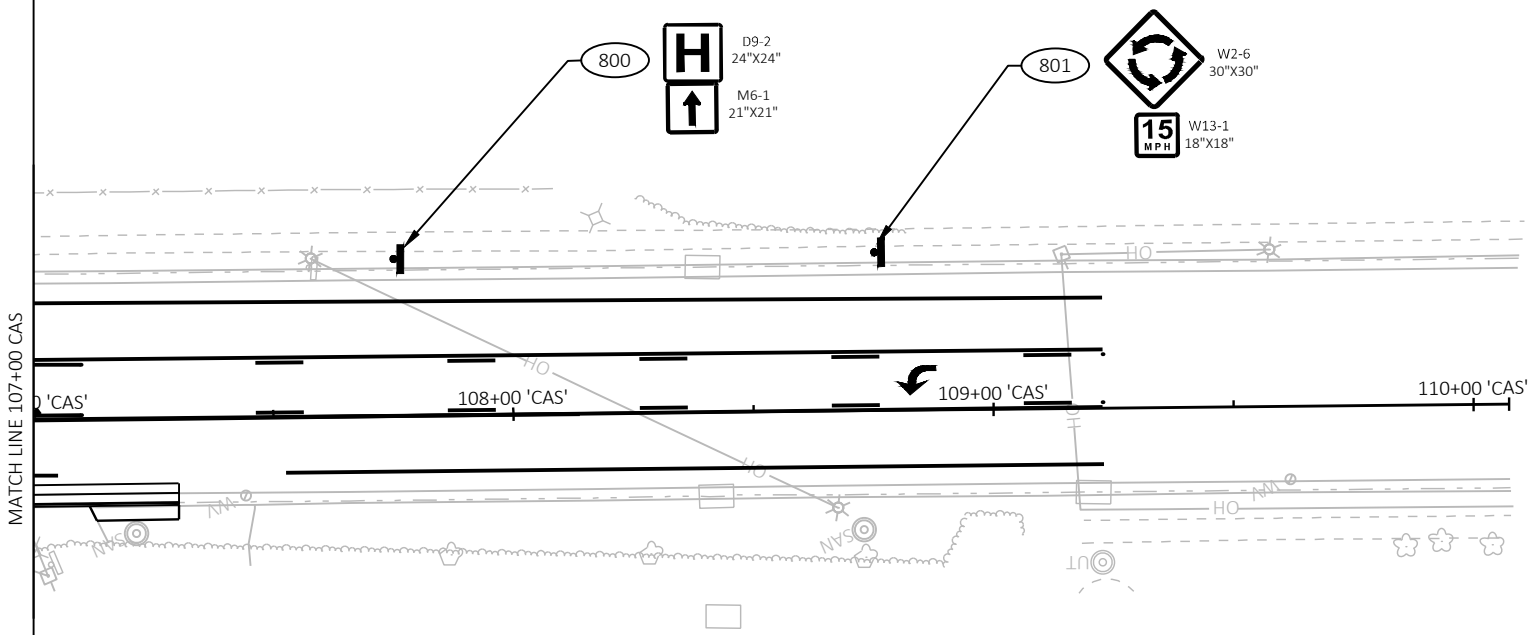
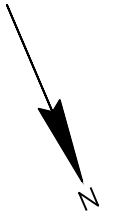
**NOTE:**

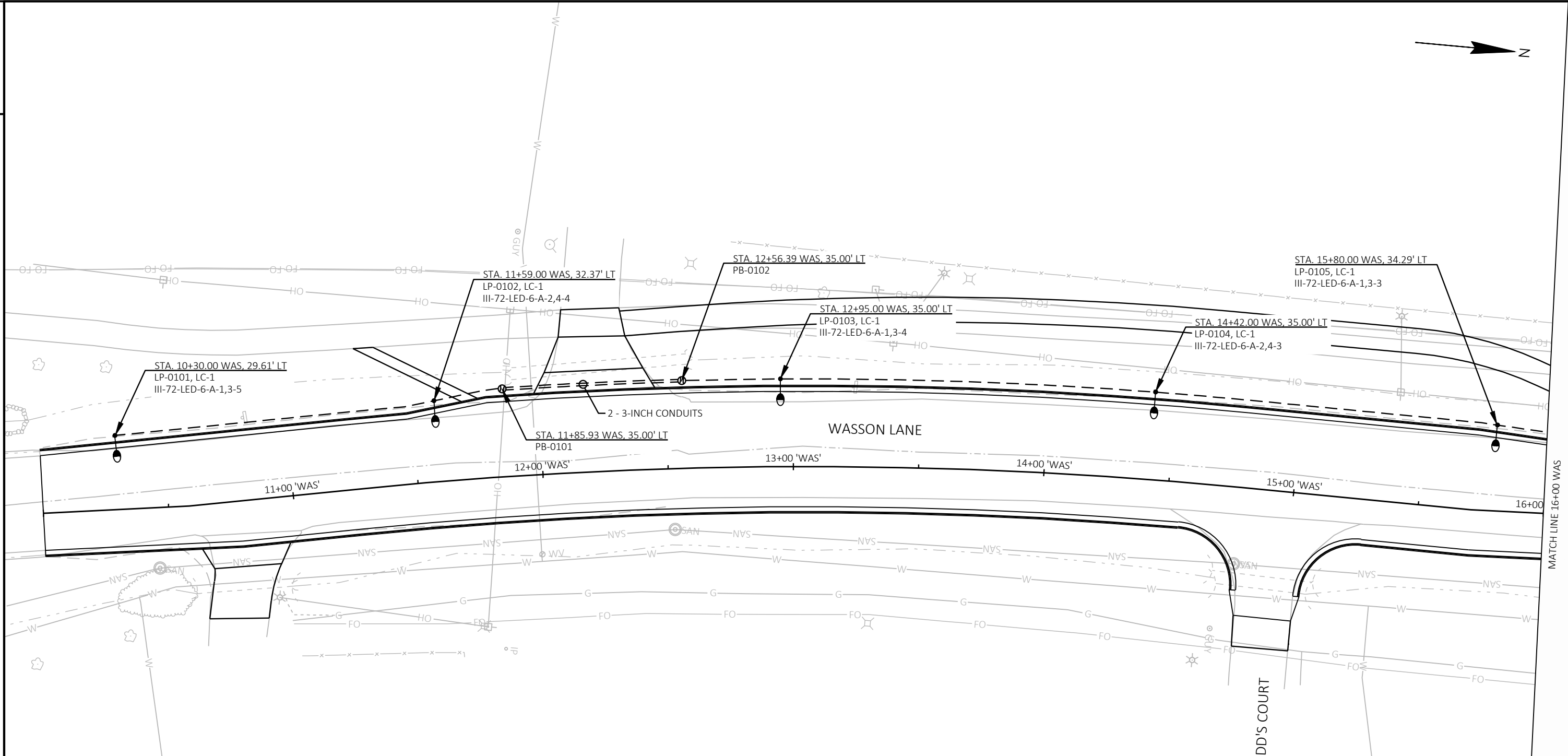
1. 7' 3" MOUNTING HEIGHT TO BOTTOM OF YIELD SIGNS
2. 48" MOUNTING HEIGHT TO BOTTOM OF THE CHEVRON SIGN (MEASURED FROM SURFACE OF TRUCK APRON TO BOTTOM OF SIGN)

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PERMANENT SIGNING	SHEET E
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**LEGEND**

-  PROPOSED SIGN SUPPORTS
-  EXISTING SIGN SUPPORTS
-  DENOTES PROPOSED SIGN NUMBER





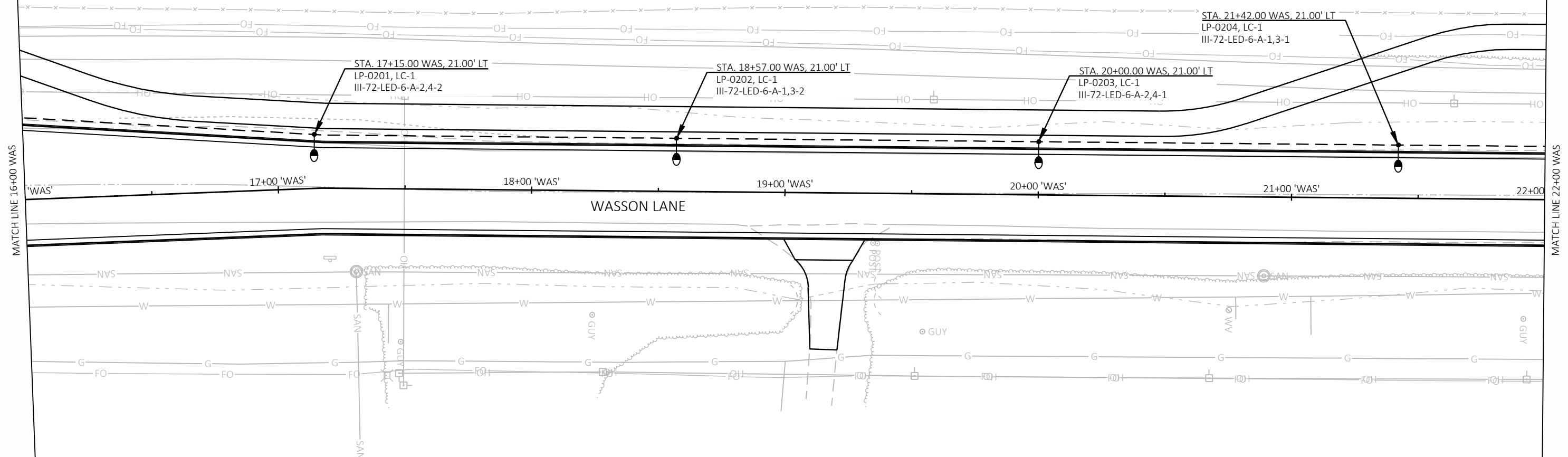
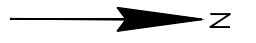
**LEGEND**

	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED		STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)		CONTROL CABINET DESIGNATION
	PULL BOXES STEEL 24x42-INCH		LIGHT POLE NUMBER
	EXISTING LIGHT POLE		LIGHT UNIT NUMBER IN CIRCUIT
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		CIRCUIT NUMBERS
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)		BASE TYPE
			MAST ARM BRACKET LENGTH IN FEET
			LAMP WATTAGE
			DISTRIBUTION TYPE

**GENERAL NOTES**

1. ALL LUMINARIES SHALL BE WIRED AT 240 VOLT AND BE LED.
2. CONDUIT SHALL BE PLACED 2 FEET BELOW GRADE AND LOCATED PARALLEL TO CURB AND/OR ROADWAY WHEN POSSIBLE.
3. ALL LIGHTING SHALL HAVE A MINIMUM 2-FOOT SETBACK FROM THE FACE OF THE POLE TO THE FACE OF CURB IN AREAS WITH CURB & GUTTER.
4. ALL LIGHTING SHALL HAVE A MINIMUM 16-FOOT SETBACK FROM THE FACE OF THE POLE TO THE EDGE OF TRAVEL LANE IN AREAS WITH A RURAL SHOULDER SECTION. SEE TYPICAL SECTIONS FOR CLEAR ZONE REQUIREMENTS.
5. ALL LIGHTING SHALL HAVE A MINIMUM 3-FOOT SETBACK FROM THE FACE OF THE POLE TO THE EDGE OF ASPHALT BIKE PATH, UNLESS OTHERWISE SHOWN.



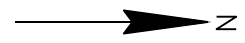


**LEGEND**

	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED	<u>STA. XX+XX.XX, XX.XX' LT</u>	STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)	<u>LP-XXXX, LC-1</u>	CONTROL CABINET DESIGNATION
	PULL BOXES STEEL 24x42-INCH	<u>III-72-LED-6-A-1,3-1</u>	LIGHT POLE NUMBER
	EXISTING LIGHT POLE		LIGHT UNIT NUMBER IN CIRCUIT
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		CIRCUIT NUMBERS
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)		BASE TYPE
			MAST ARM BRACKET LENGTH IN FEET
			LAMP WATTAGE
			DISTRIBUTION TYPE

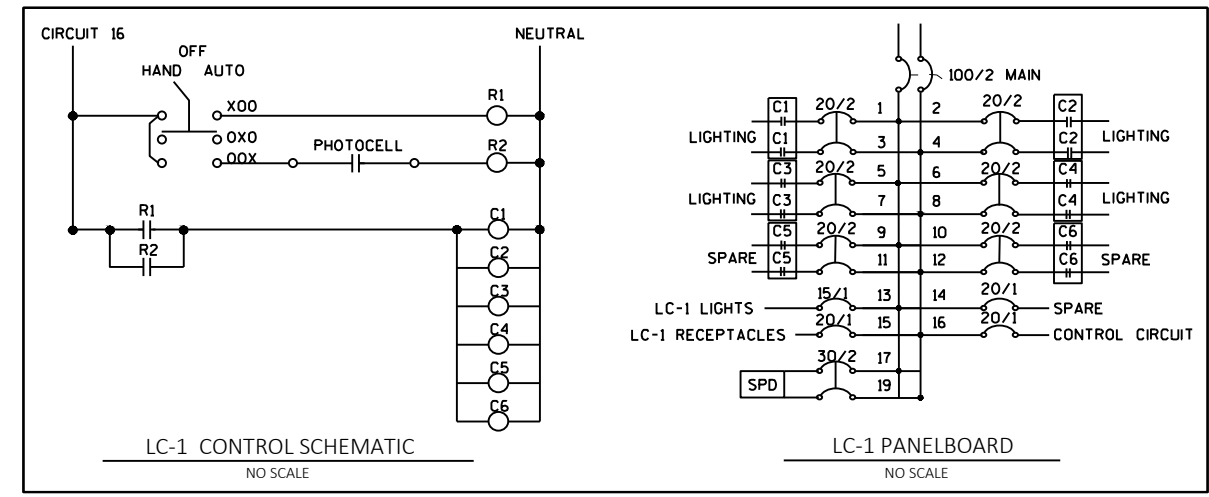
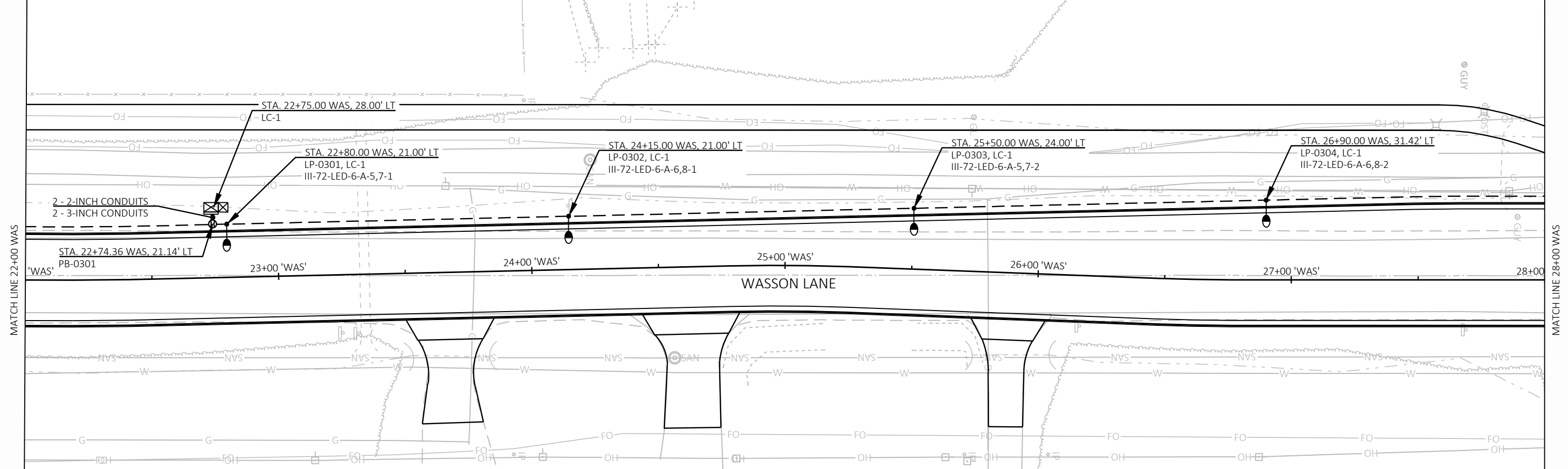
**GENERAL NOTES**

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2. CONDUIT SHALL BE PLACED 2 FEET BELOW GRADE AND LOCATED PARALLEL TO CURB AND/OR ROADWAY WHEN POSSIBLE.
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**LEGEND**


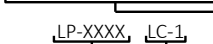

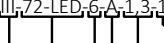










	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED		STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)		CONTROL CABINET DESIGNATION
	PULL BOXES STEEL 24x42-INCH		LIGHT POLE NUMBER
	EXISTING LIGHT POLE		LIGHT UNIT NUMBER IN CIRCUIT
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		CIRCUIT NUMBERS
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)		BASE TYPE
			MAST ARM BRACKET LENGTH IN FEET
			LAMP WATTAGE
			DISTRIBUTION TYPE

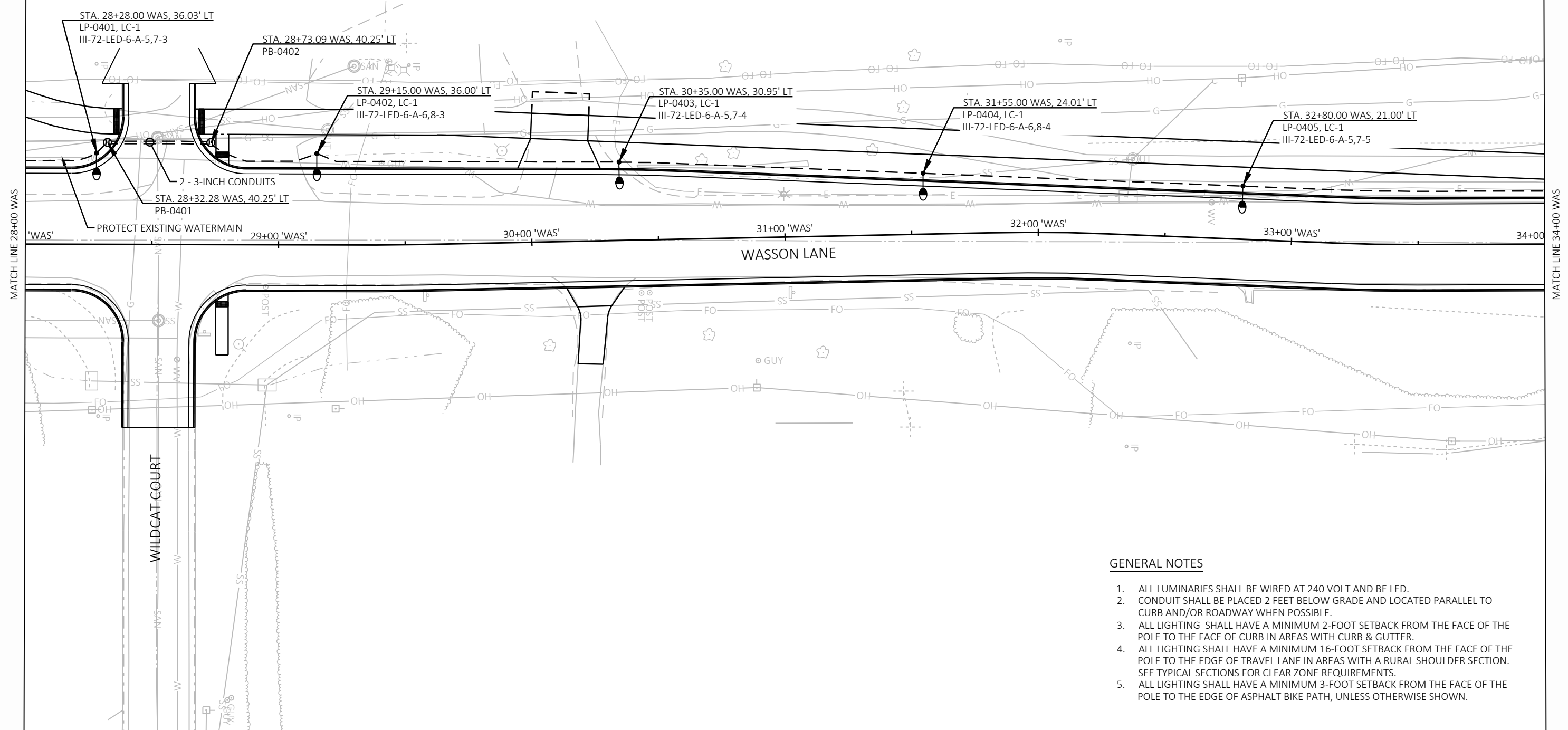


**GENERAL NOTES**

1. ALL LUMINARIES SHALL BE WIRED AT 240 VOLT AND BE LED.
2. CONDUIT SHALL BE PLACED 2 FEET BELOW GRADE AND LOCATED PARALLEL TO CURB AND/OR ROADWAY WHEN POSSIBLE.
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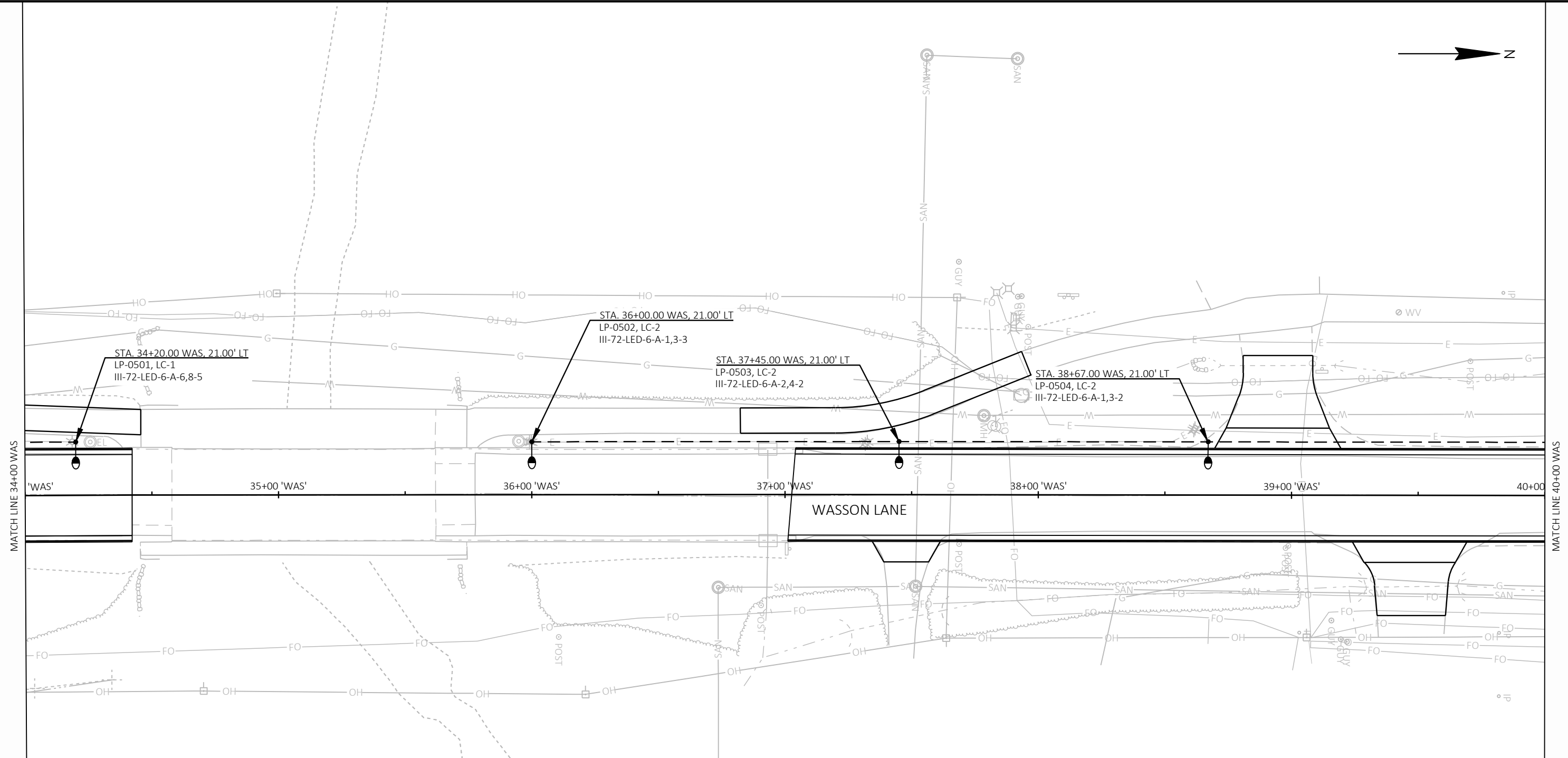
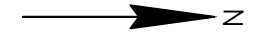
**LEGEND**

	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED		STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)		CONTROL CABINET DESIGNATION
	PULL BOXES STEEL 24x42-INCH		LIGHT POLE NUMBER
	EXISTING LIGHT POLE		LIGHT UNIT NUMBER IN CIRCUIT
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		CIRCUIT NUMBERS
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)		BASE TYPE
			MAST ARM BRACKET LENGTH IN FEET
			LAMP WATTAGE
			DISTRIBUTION TYPE



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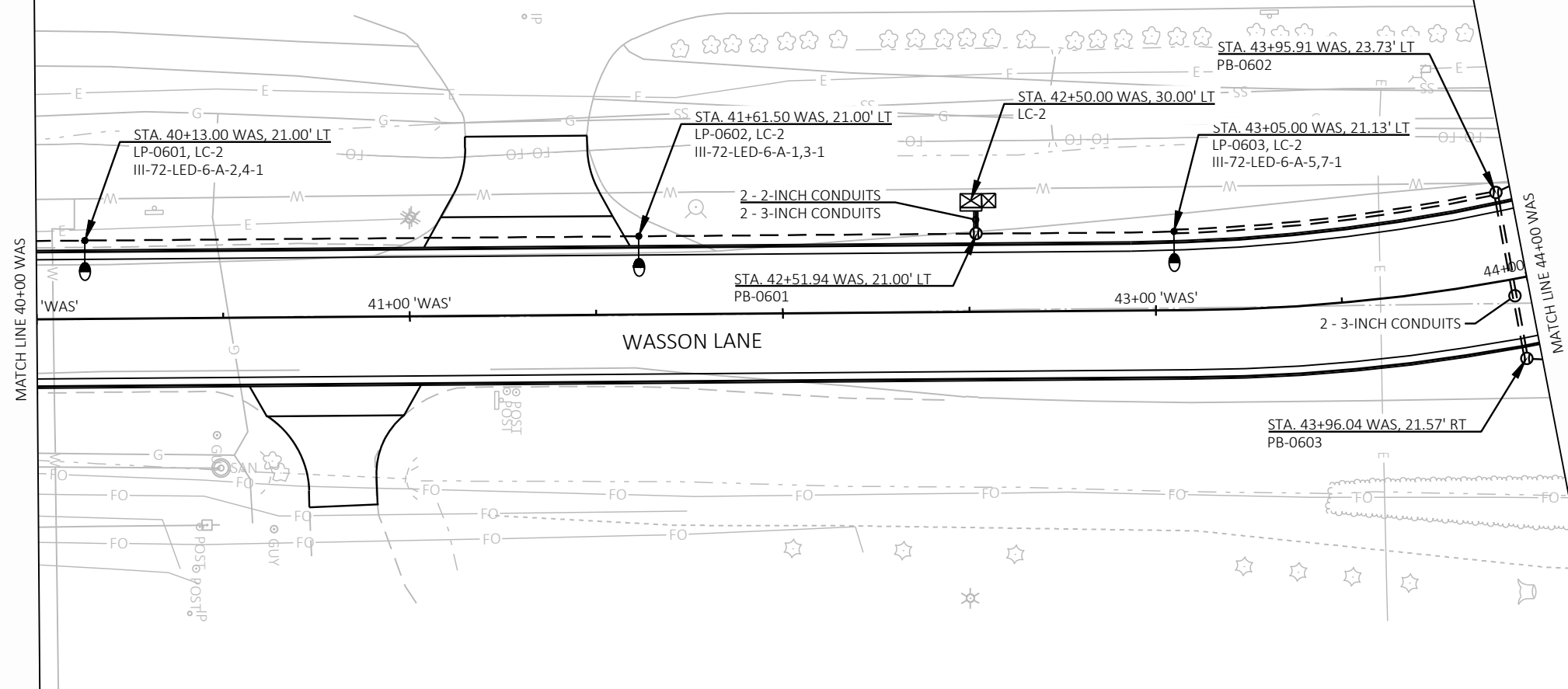
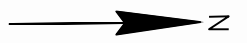
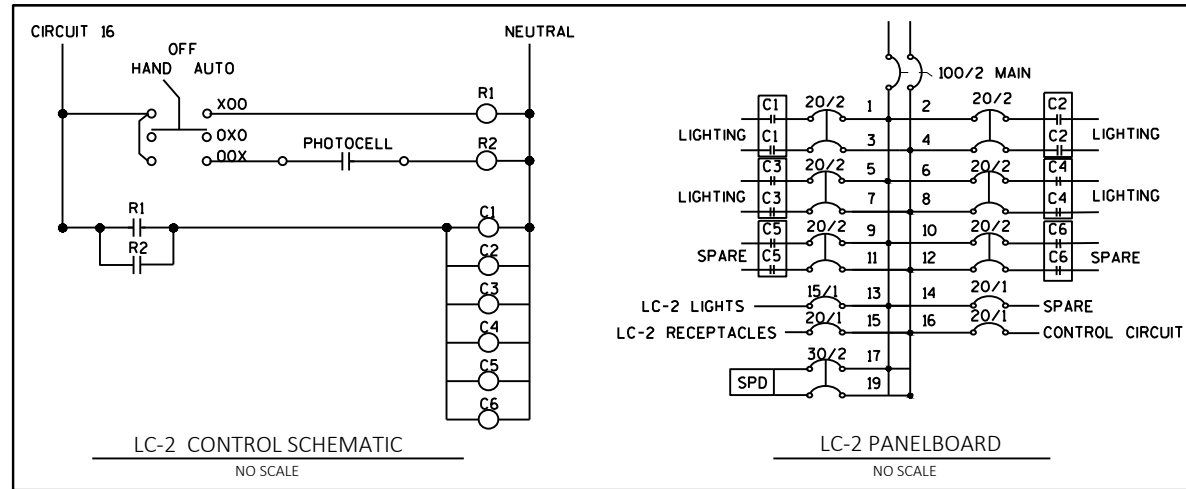


**LEGEND**

	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED		STA. XX+XX.XX, XX.XX' LT	STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)		LP-XXXX, LC-1	CONTROL CABINET DESIGNATION
	PULL BOXES STEEL 24x42-INCH		III-72-LED-6-A-1,3-1	LIGHT POLE NUMBER
	EXISTING LIGHT POLE			LIGHT UNIT NUMBER IN CIRCUIT
	ELECTRICAL SERVICE METER BREAKER PEDESTAL			CIRCUIT NUMBERS
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)			BASE TYPE
				MAST ARM BRACKET LENGTH IN FEET
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				DISTRIBUTION TYPE

**GENERAL NOTES**

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**LEGEND**

	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED		STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)		CONTROL CABINET DESIGNATION
	PULL BOXES STEEL 24x42-INCH		LIGHT POLE NUMBER
	EXISTING LIGHT POLE		LIGHT UNIT NUMBER IN CIRCUIT
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		CIRCUIT NUMBERS
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)		BASE TYPE
			MAST ARM BRACKET LENGTH IN FEET
			LAMP WATTAGE
			DISTRIBUTION TYPE

**GENERAL NOTES**

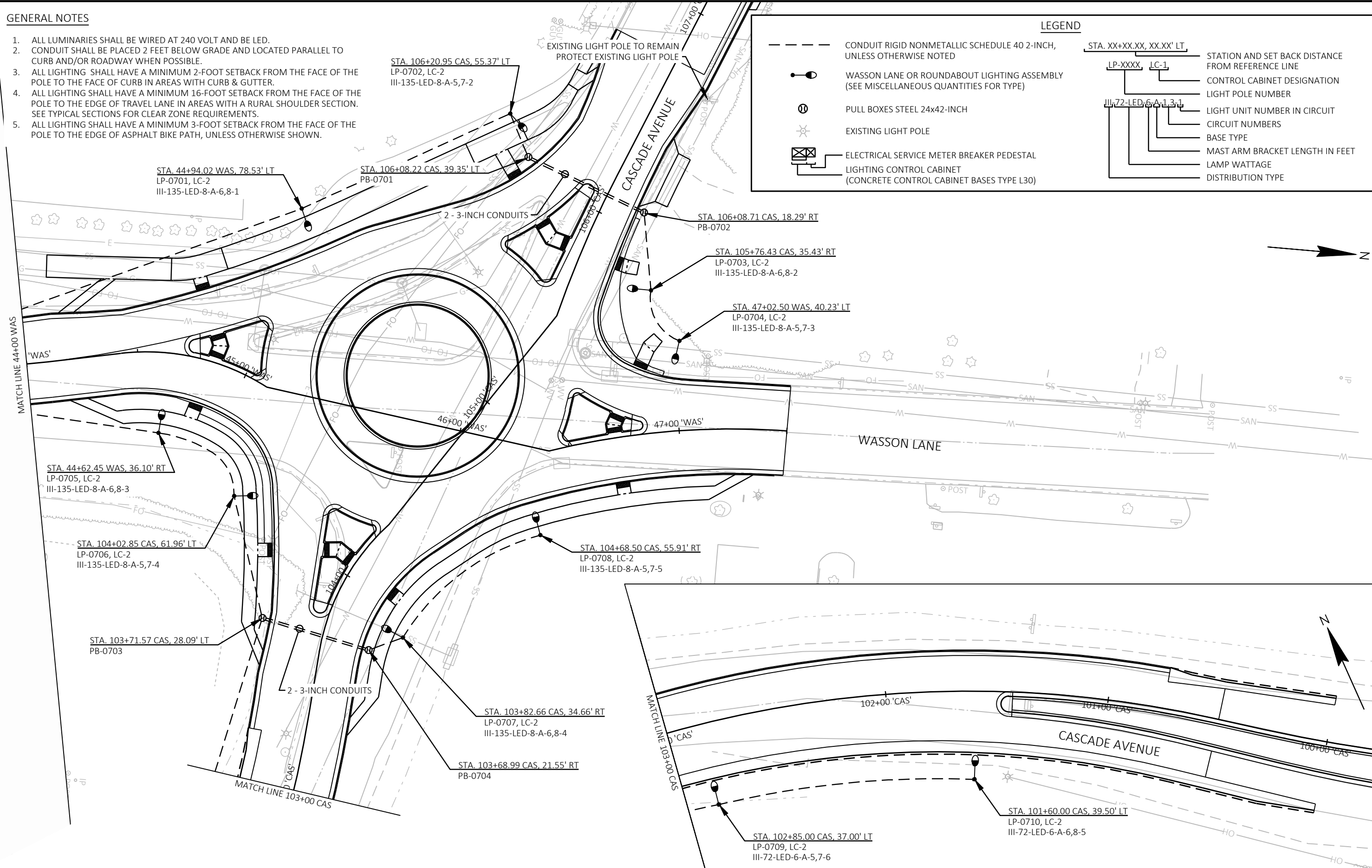
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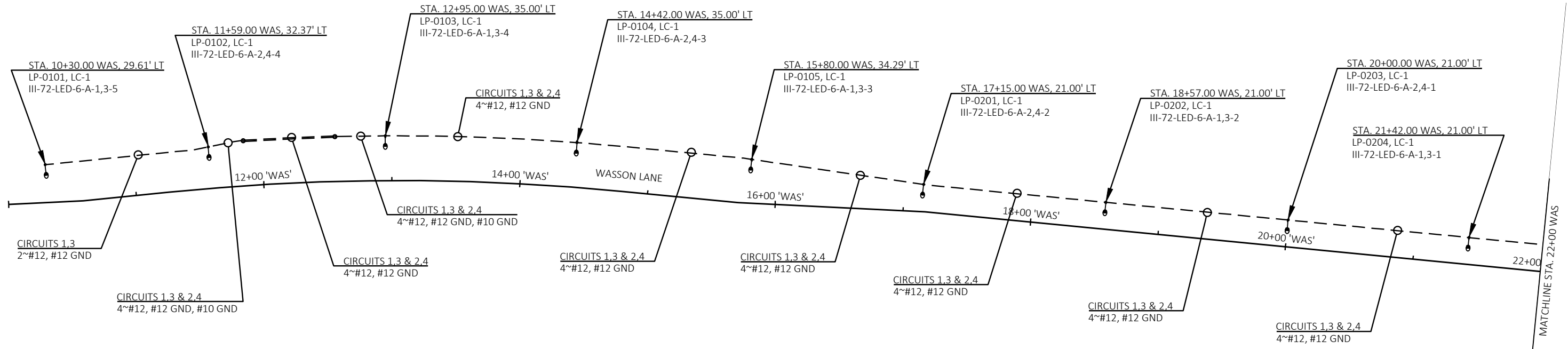
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LEGEND

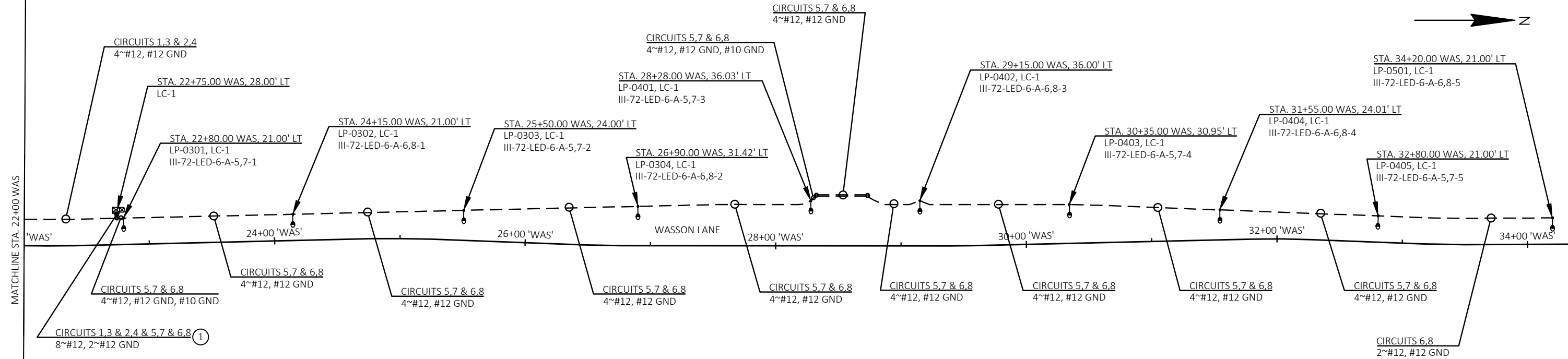
	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH, UNLESS OTHERWISE NOTED		STATION AND SET BACK DISTANCE FROM REFERENCE LINE
	WASSON LANE OR ROUNDABOUT LIGHTING ASSEMBLY (SEE MISCELLANEOUS QUANTITIES FOR TYPE)		CONTROL CABINET DESIGNATION LIGHT POLE NUMBER
	PULL BOXES STEEL 24x42-INCH		LIGHT UNIT NUMBER IN CIRCUIT CIRCUIT NUMBERS
	EXISTING LIGHT POLE		BASE TYPE
	ELECTRICAL SERVICE METER BREAKER PEDESTAL		MAST ARM BRACKET LENGTH IN FEET
	LIGHTING CONTROL CABINET (CONCRETE CONTROL CABINET BASES TYPE L30)		LAMP WATTAGE
			DISTRIBUTION TYPE

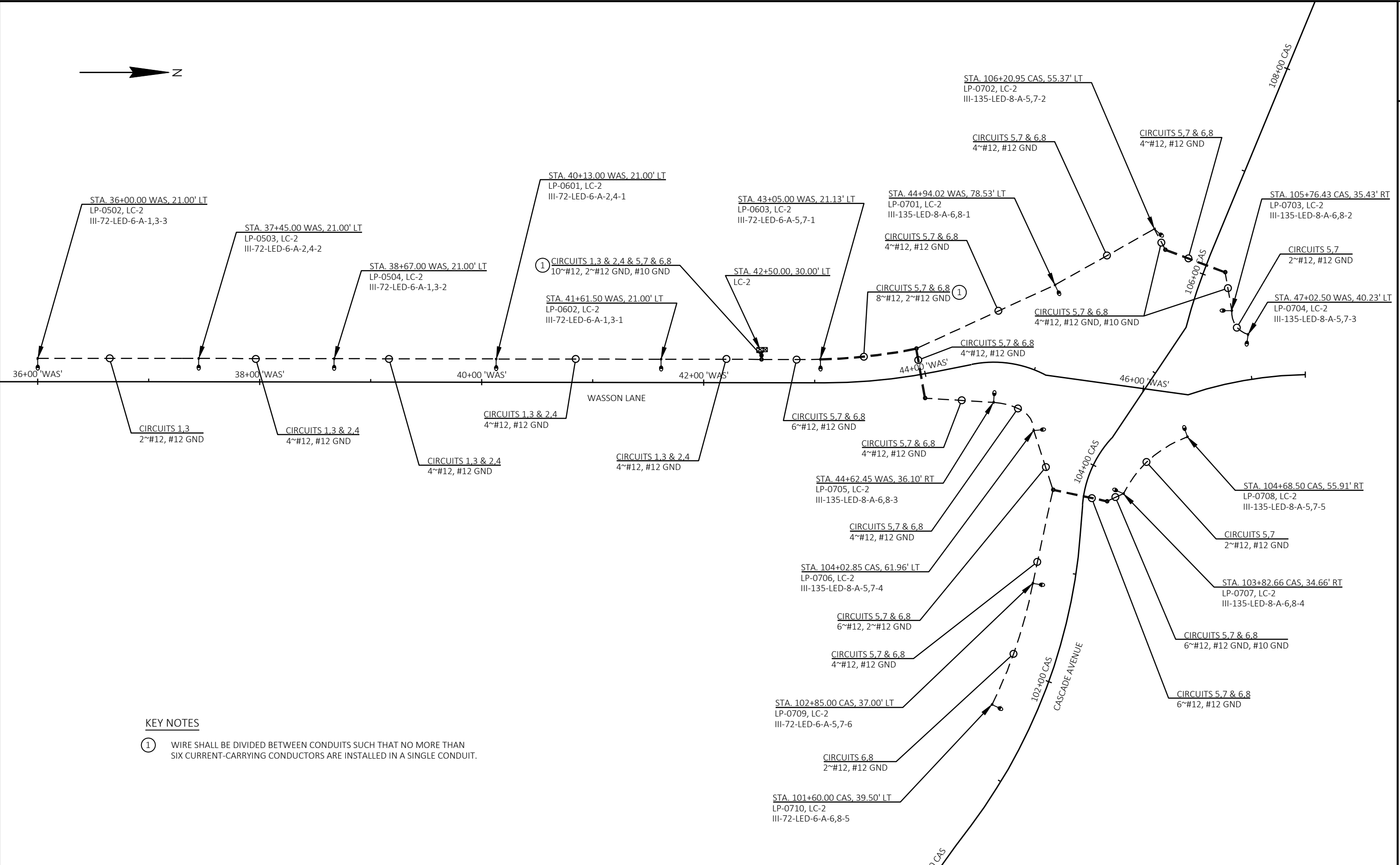




**KEY NOTES**

① WIRE SHALL BE DIVIDED BETWEEN CONDUITS SUCH THAT NO MORE THAN SIX CURRENT-CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE CONDUIT.

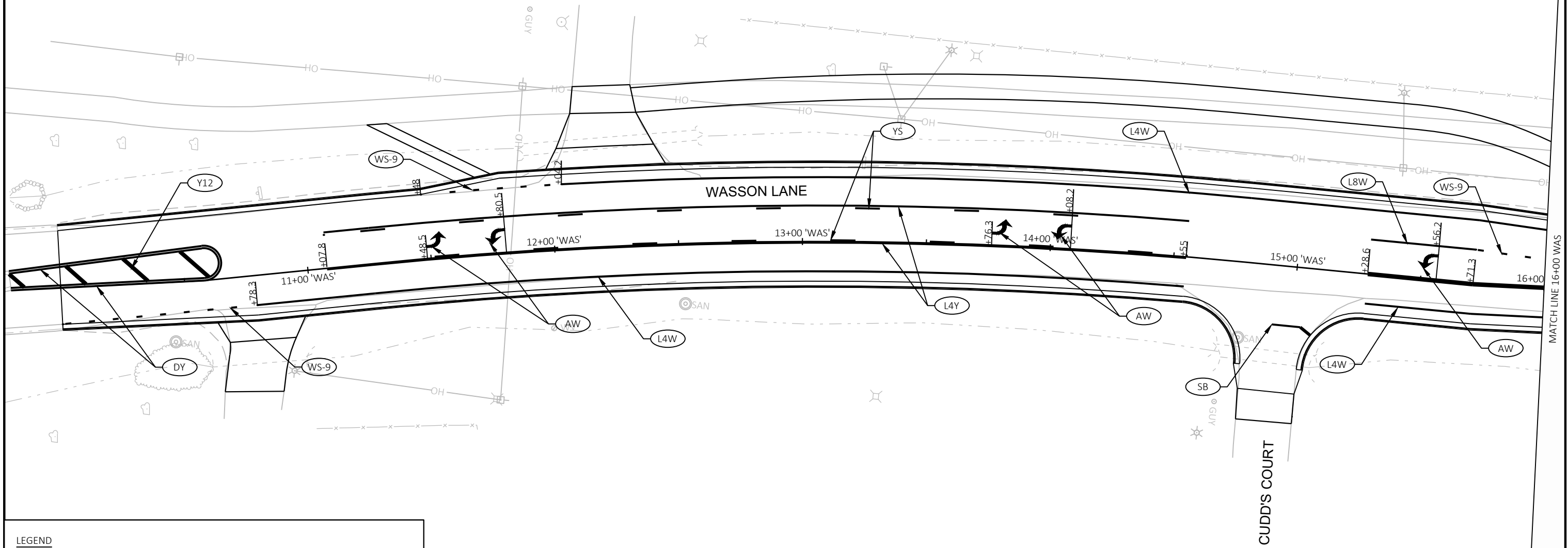




KEY NOTES

- ① WIRE SHALL BE DIVIDED BETWEEN CONDUITS SUCH THAT NO MORE THAN SIX CURRENT-CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE CONDUIT.

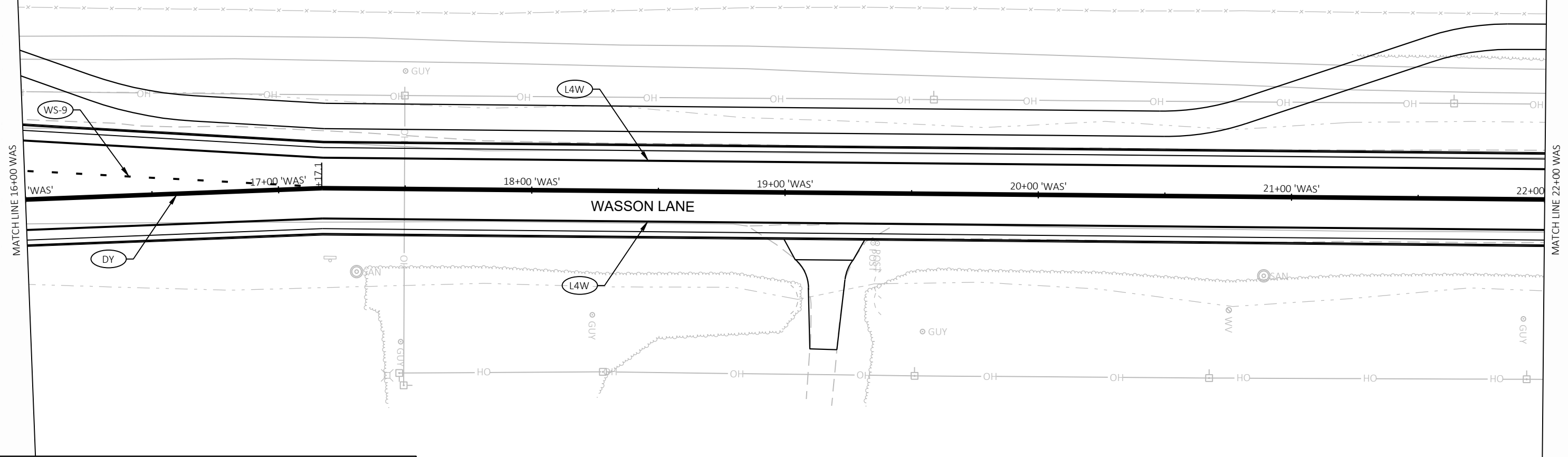
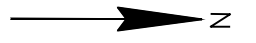




**LEGEND**

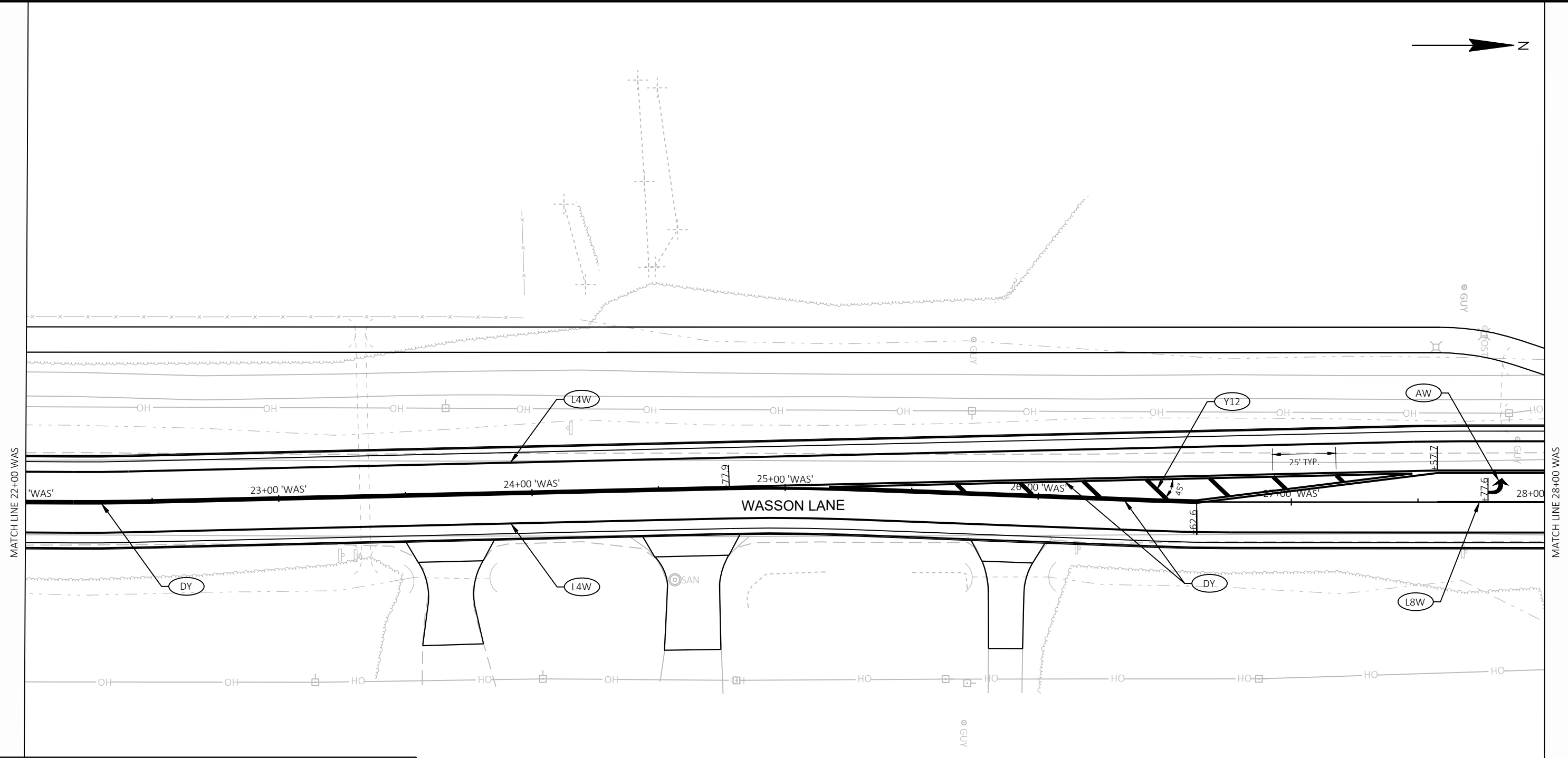
L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PAVEMENT MARKINGS	SHEET	<b>E</b>
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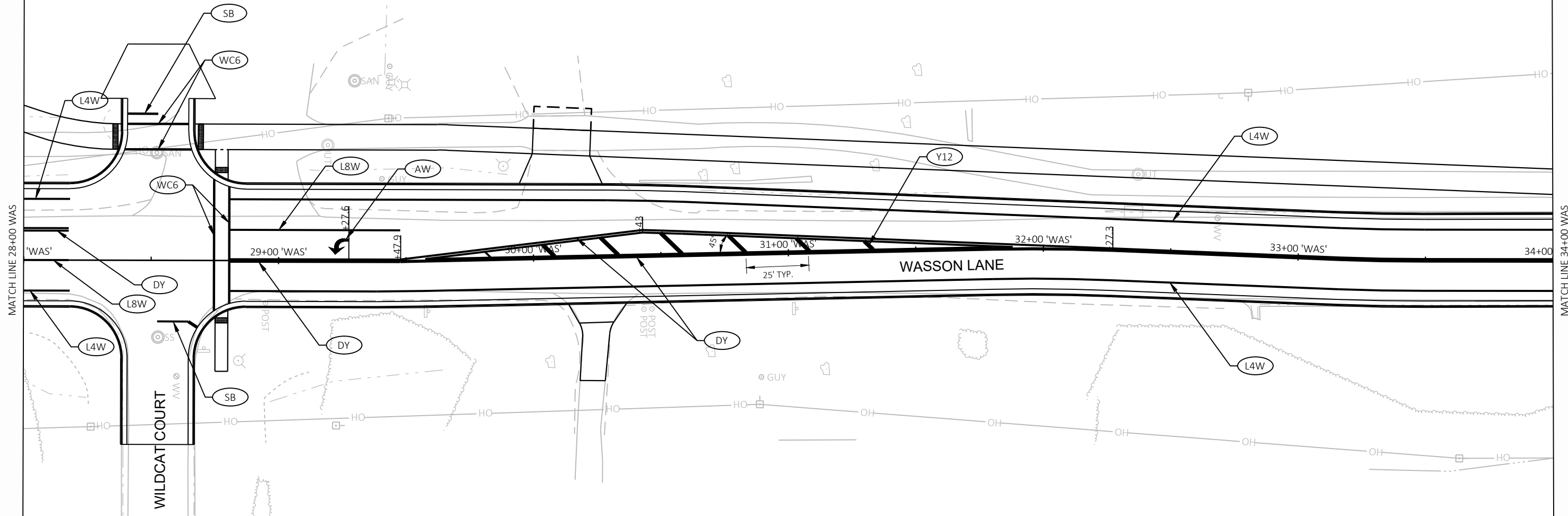
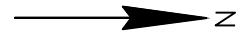
**LEGEND**

L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
IN	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)



**LEGEND**

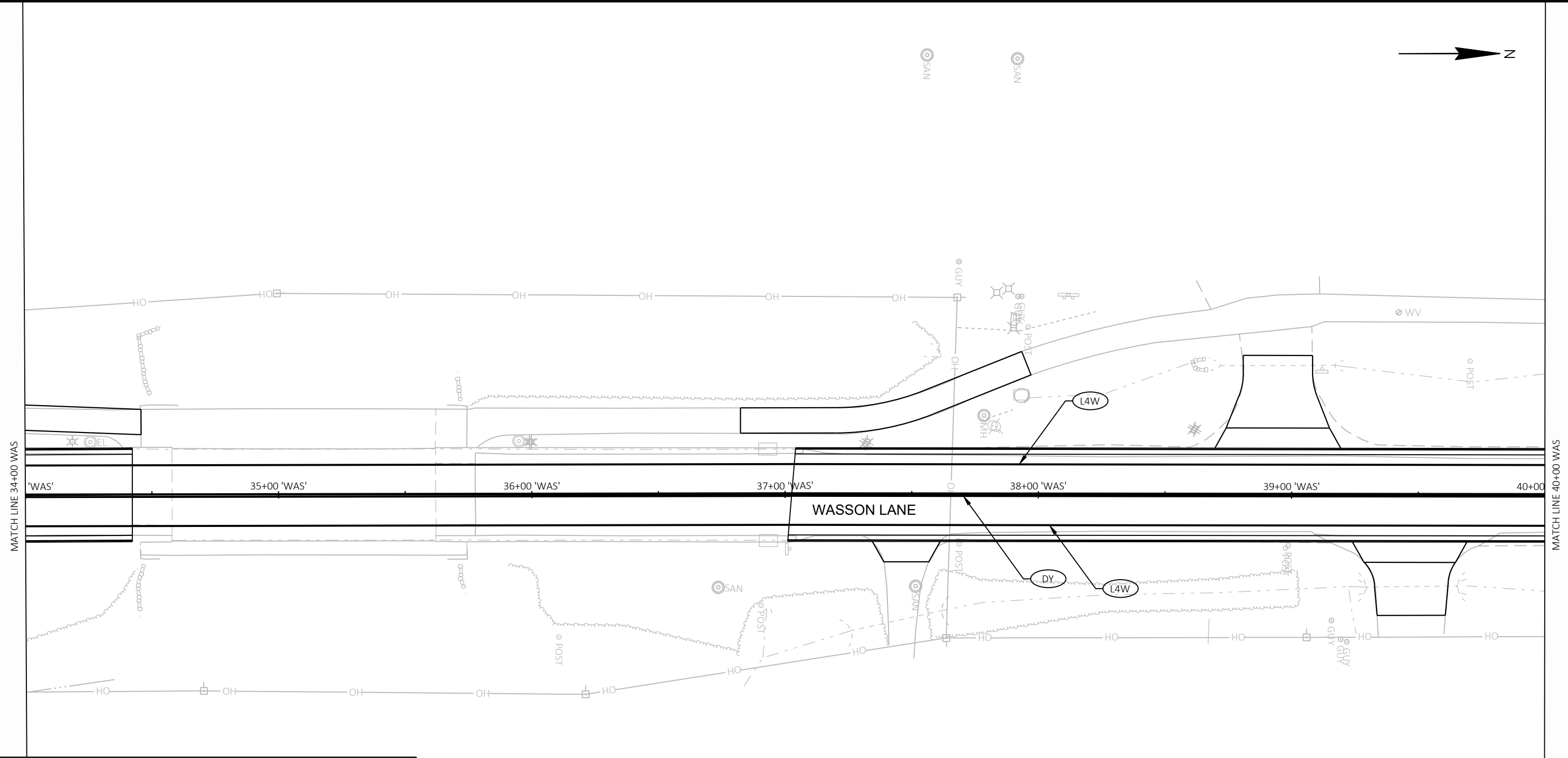
L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)



**LEGEND**

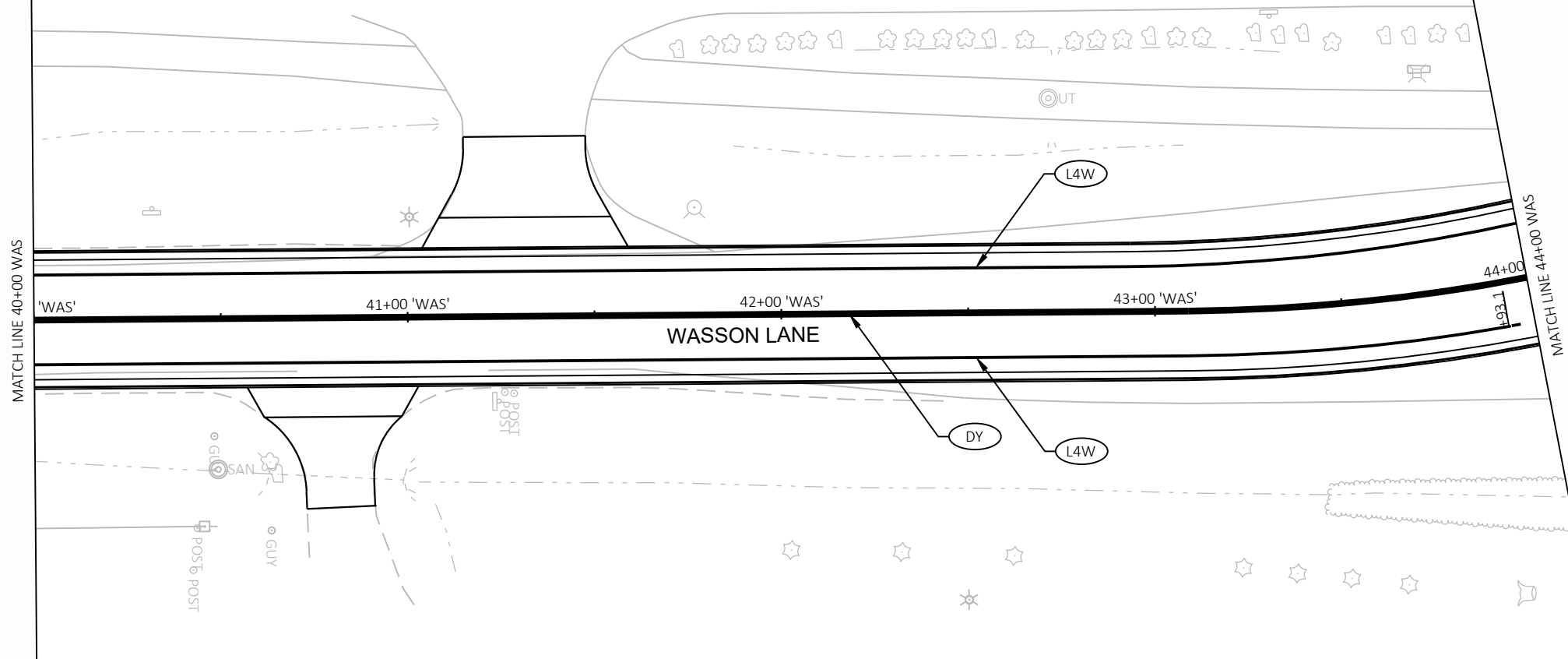
L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PAVEMENT MARKINGS	SHEET	<b>E</b>
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**LEGEND**

L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)



**LEGEND**

L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)

PROJECT NO: 7994-00-51

HWY: WASSON LANE

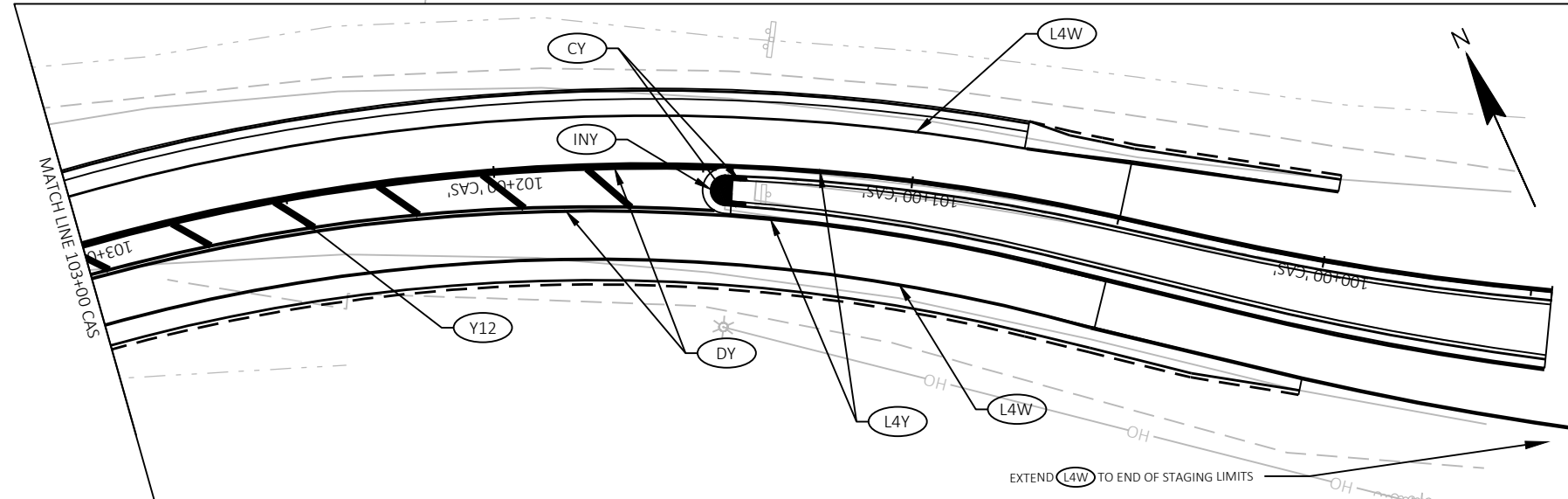
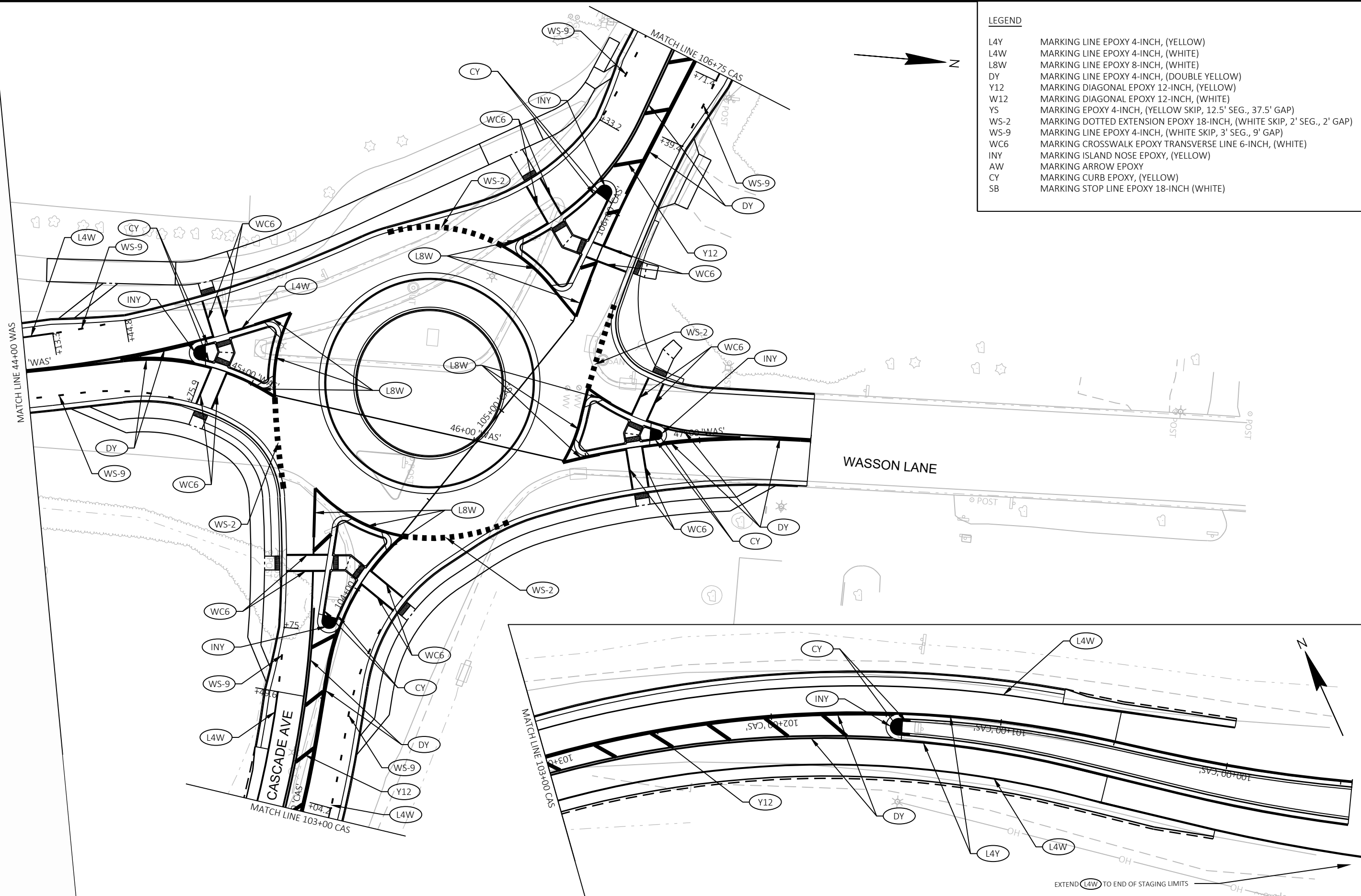
COUNTY: PIERCE

PAVEMENT MARKINGS

SHEET

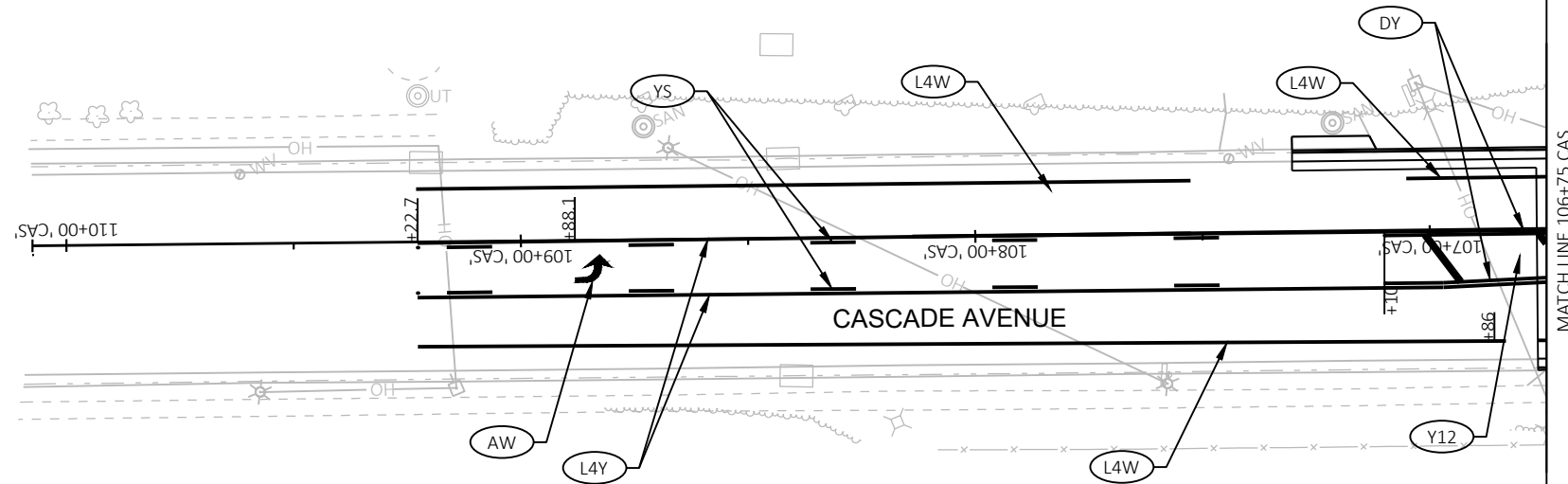
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LEGEND	
L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
W12	MARKING DIAGONAL EPOXY 12-INCH, (WHITE)
YS	MARKING EPOXY 4-INCH, (YELLOW SKIP, 12.5' SEG., 37.5' GAP)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)





LEGEND	
L4Y	MARKING LINE EPOXY 4-INCH, (YELLOW)
L4W	MARKING LINE EPOXY 4-INCH, (WHITE)
L8W	MARKING LINE EPOXY 8-INCH, (WHITE)
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Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
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WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
INY	MARKING ISLAND NOSE EPOXY, (YELLOW)
AW	MARKING ARROW EPOXY
CY	MARKING CURB EPOXY, (YELLOW)
SB	MARKING STOP LINE EPOXY 18-INCH (WHITE)





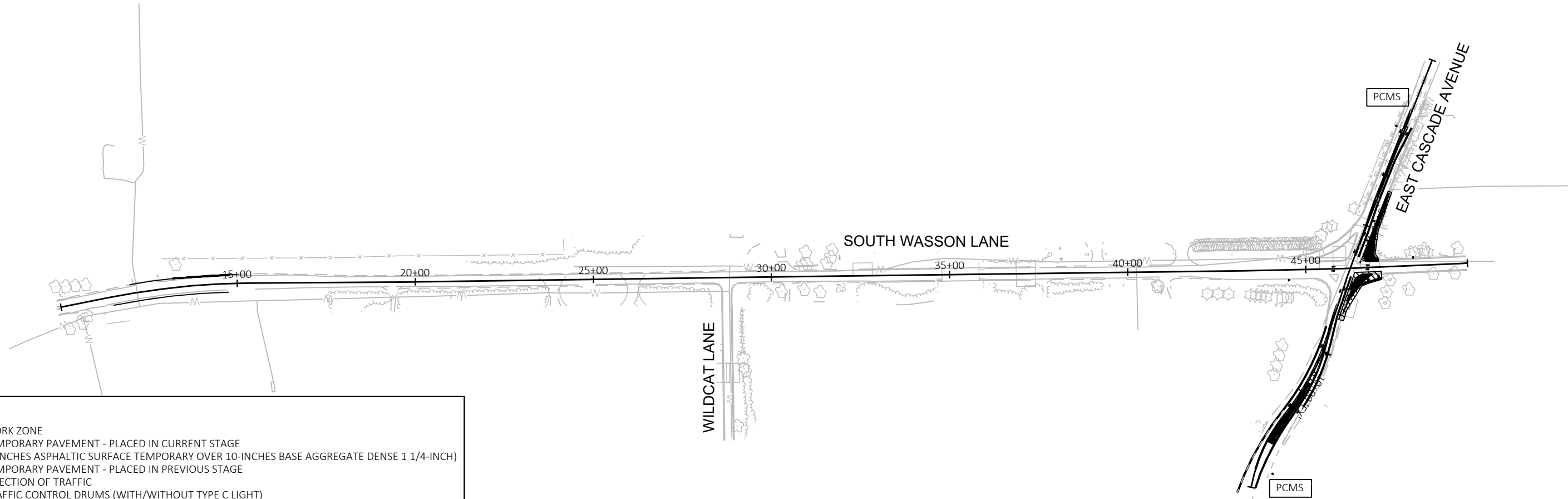
TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
3. ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
4. SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
5. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
6. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
7. TEMPORARY MARKING ON TEMPORARY OR NEW (LOWER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING PAINT.
8. TEMPORARY MARKING ON EXISTING PAVEMENT TO REMAIN OR NEW (UPPER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING REMOVABLE TAPE.
9. PLACE TRAFFIC CONTROL SIGNS PCMS ON CASCADE AVENUE 7 DAYS PRIOR TO CONSTRUCTION.



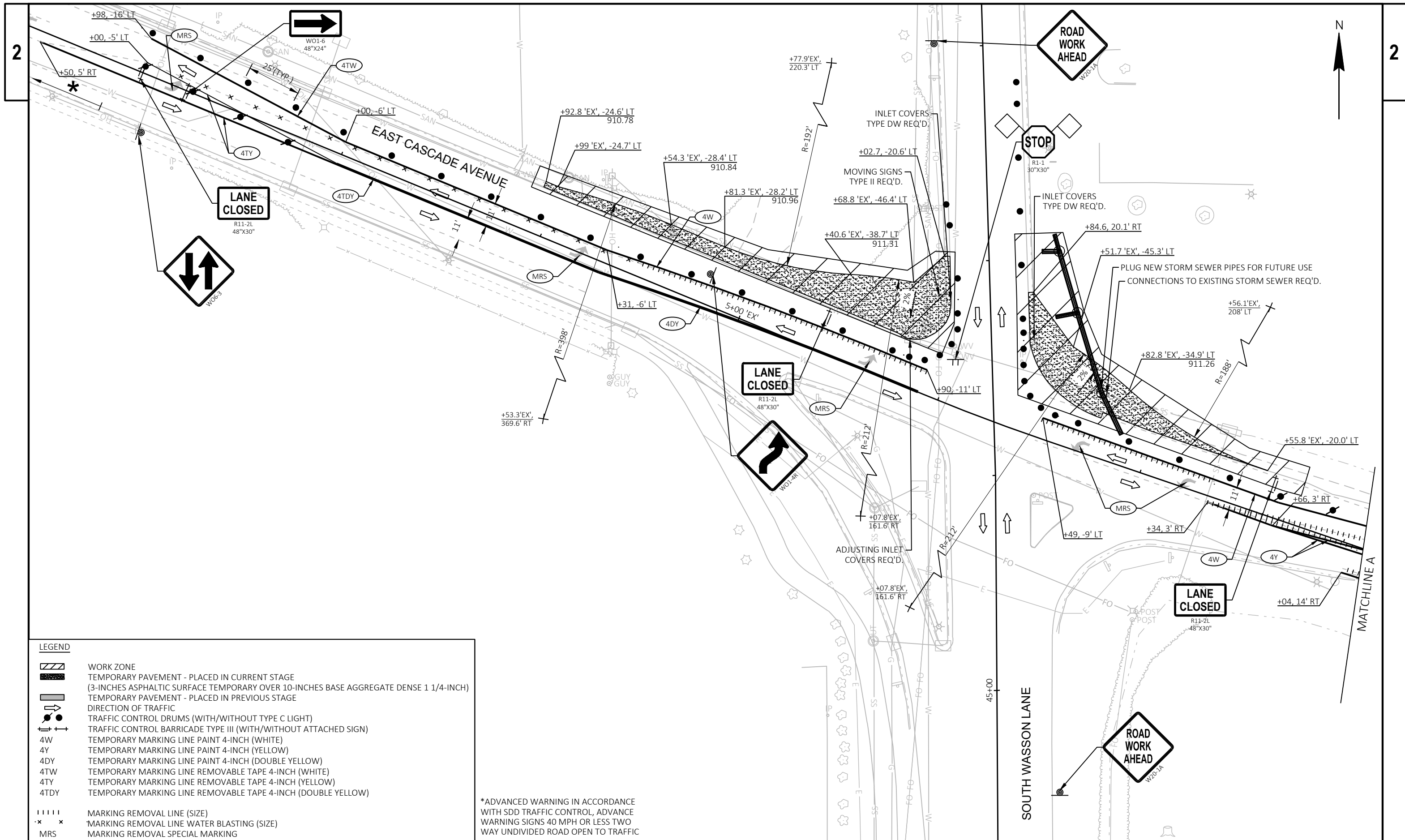
PCMS TRAFFIC CONTROL SIGNS PCMS

PANEL 1	PANEL 2
ROAD	STARTING
WORK	DATE
BEGINS	



LEGEND

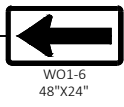
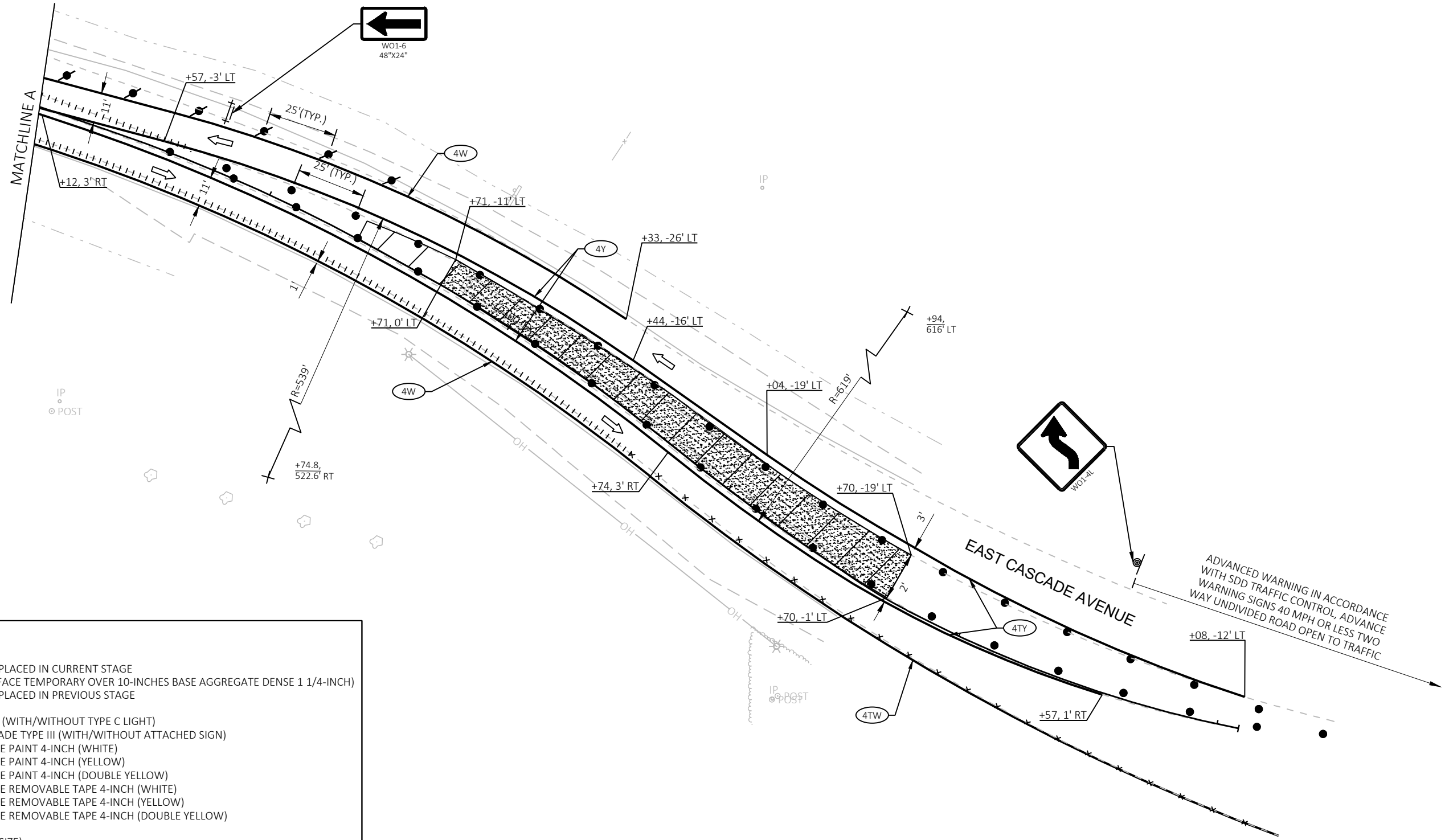
- WORK ZONE
- TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
- TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
- TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
- 4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- 4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- 4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- 4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- 4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- ||||| MARKING REMOVAL LINE (SIZE)
- x·x MARKING REMOVAL LINE WATER BLASTING (SIZE)
- MRS MARKING REMOVAL SPECIAL MARKING



**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

\*ADVANCED WARNING IN ACCORDANCE WITH SDD TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC



LEGEND	
	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

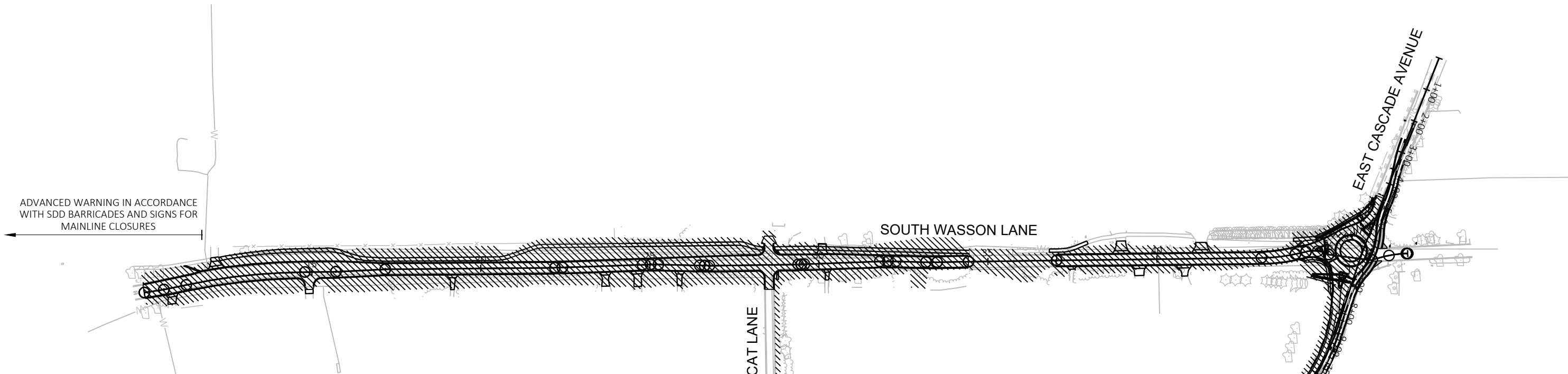
TRAFFIC CONTROL - PRE STAGE

SHEET

E

TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
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4. SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
5. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
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7. TEMPORARY MARKING ON TEMPORARY OR NEW (LOWER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING PAINT.
8. TEMPORARY MARKING ON EXISTING PAVEMENT TO REMAIN OR NEW (UPPER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING REMOVABLE TAPE.
9. PLACE TRAFFIC CONTROL SIGNS PCMS ON WASSON LANE 7 DAYS PRIOR TO CONSTRUCTION.



**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
4W	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
4Y	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
4DY	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
4TW	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
4TY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
4TDY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
·x·x	MARKING REMOVAL LINE WATER BLASTING (SIZE)
MRS	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51

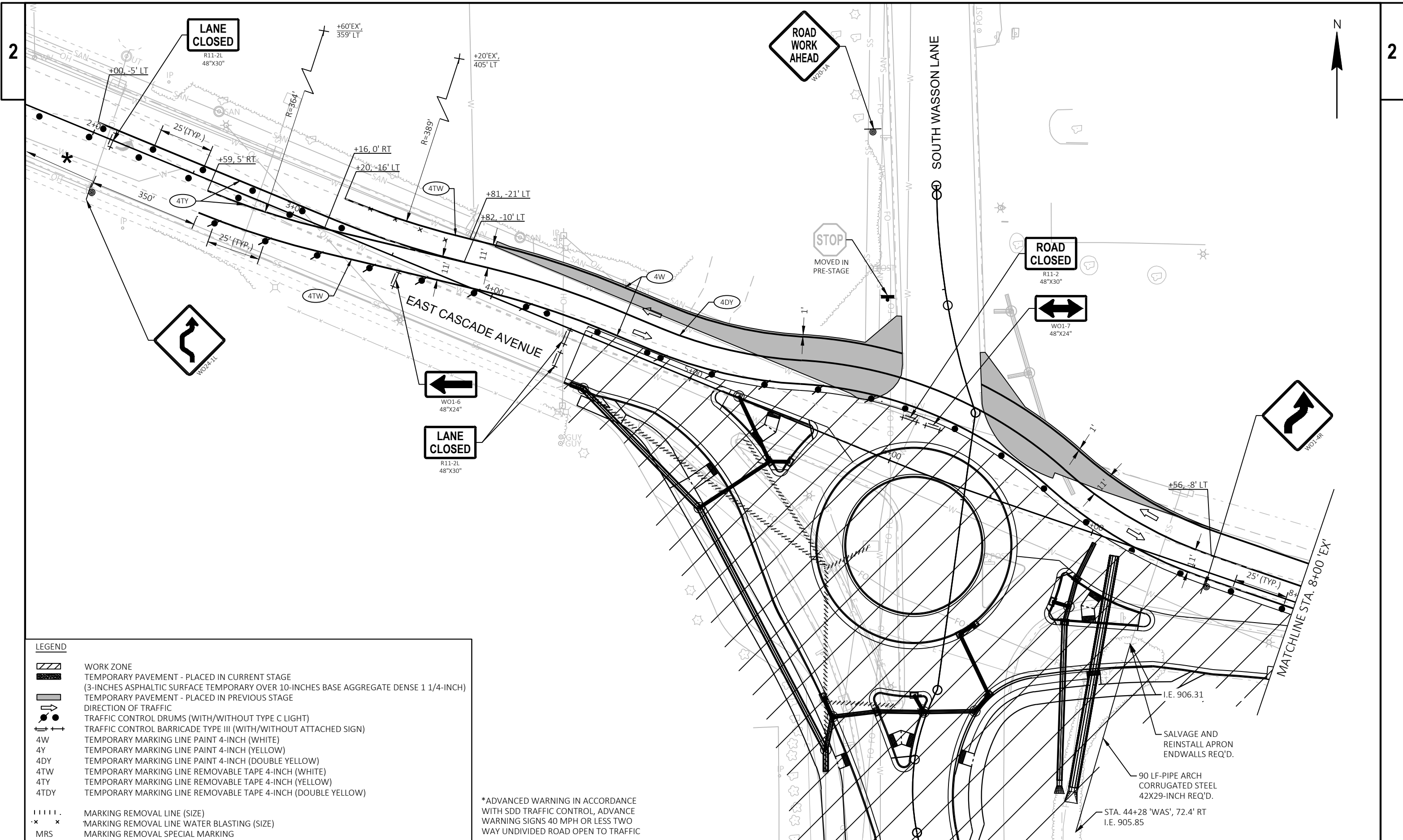
HWY: WASSON LANE

COUNTY: PIERCE

TRAFFIC CONTROL - STAGE 1 OVERVIEW

SHEET

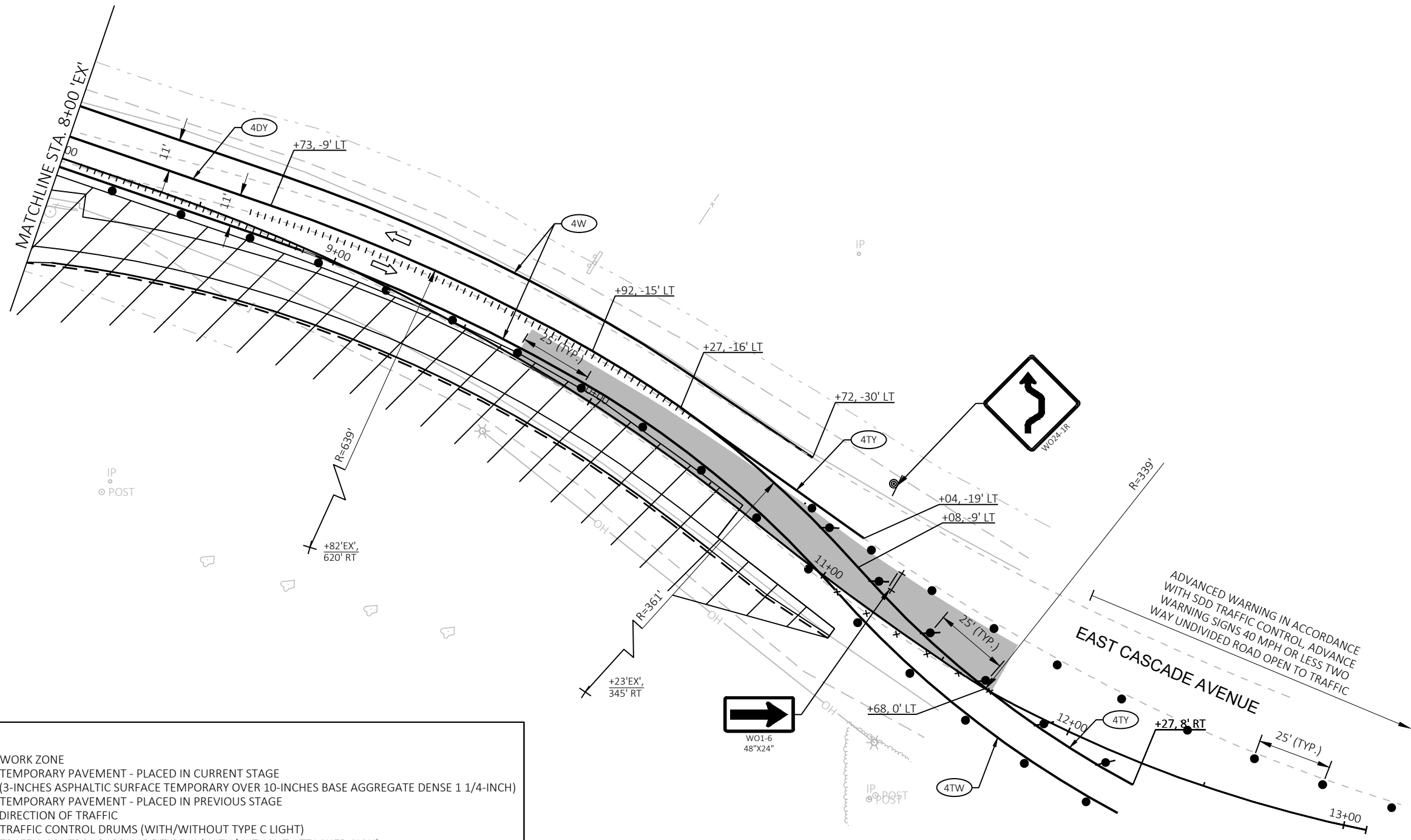
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**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

\*ADVANCED WARNING IN ACCORDANCE WITH SDD TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC



**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

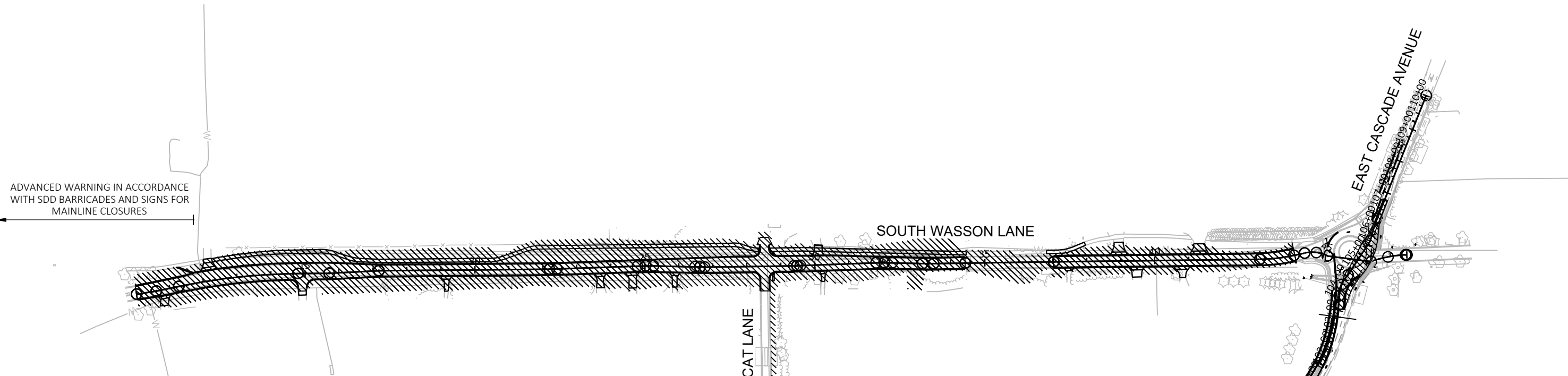
TRAFFIC CONTROL - STAGE 1

SHEET

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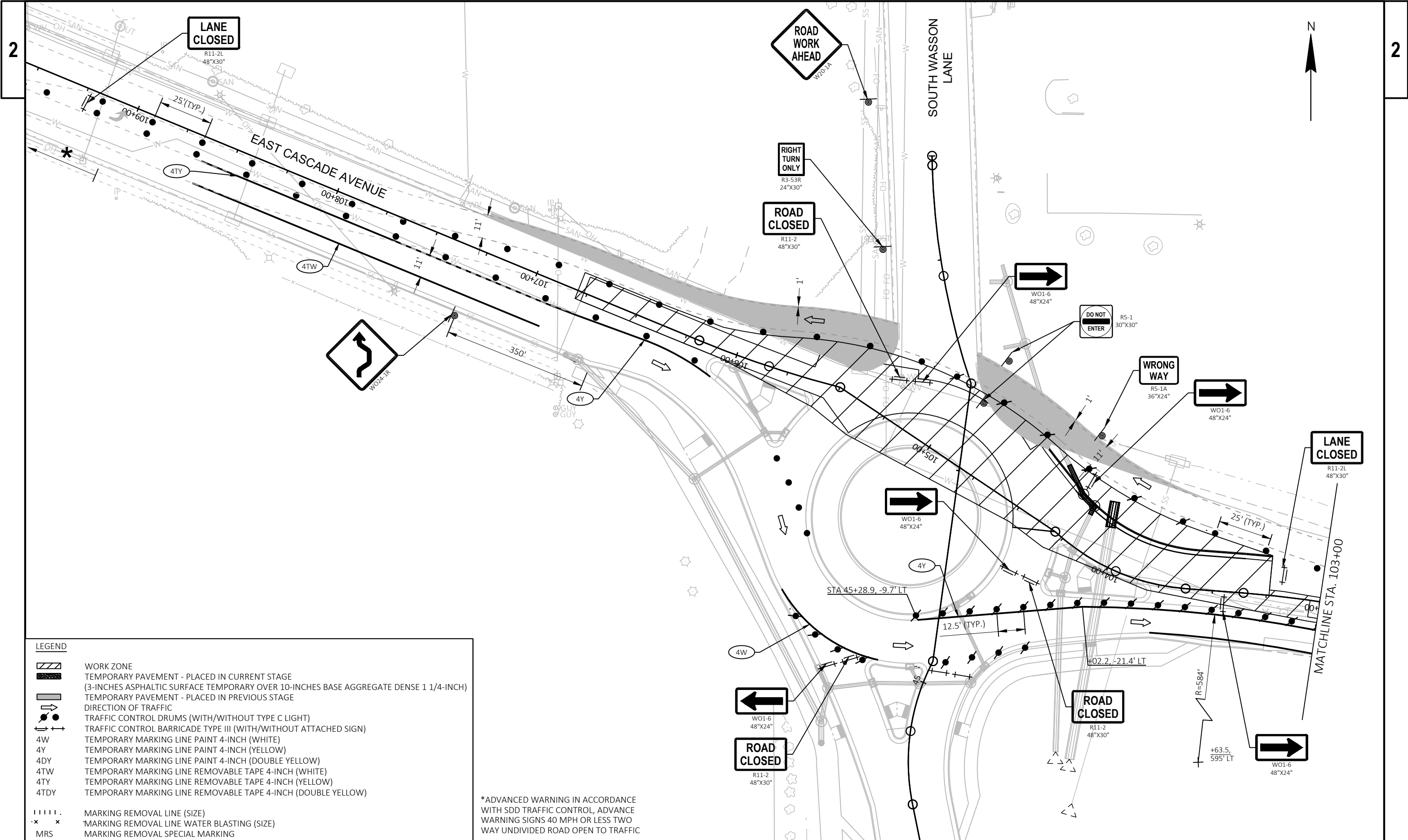
TRAFFIC CONTROL NOTES

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4. SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
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8. TEMPORARY MARKING ON EXISTING PAVEMENT TO REMAIN OR NEW (UPPER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING REMOVABLE TAPE.



**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
4W	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
4Y	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
4DY	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
4TW	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
4TY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
4TDY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
·x·x	MARKING REMOVAL LINE WATER BLASTING (SIZE)
MRS	MARKING REMOVAL SPECIAL MARKING

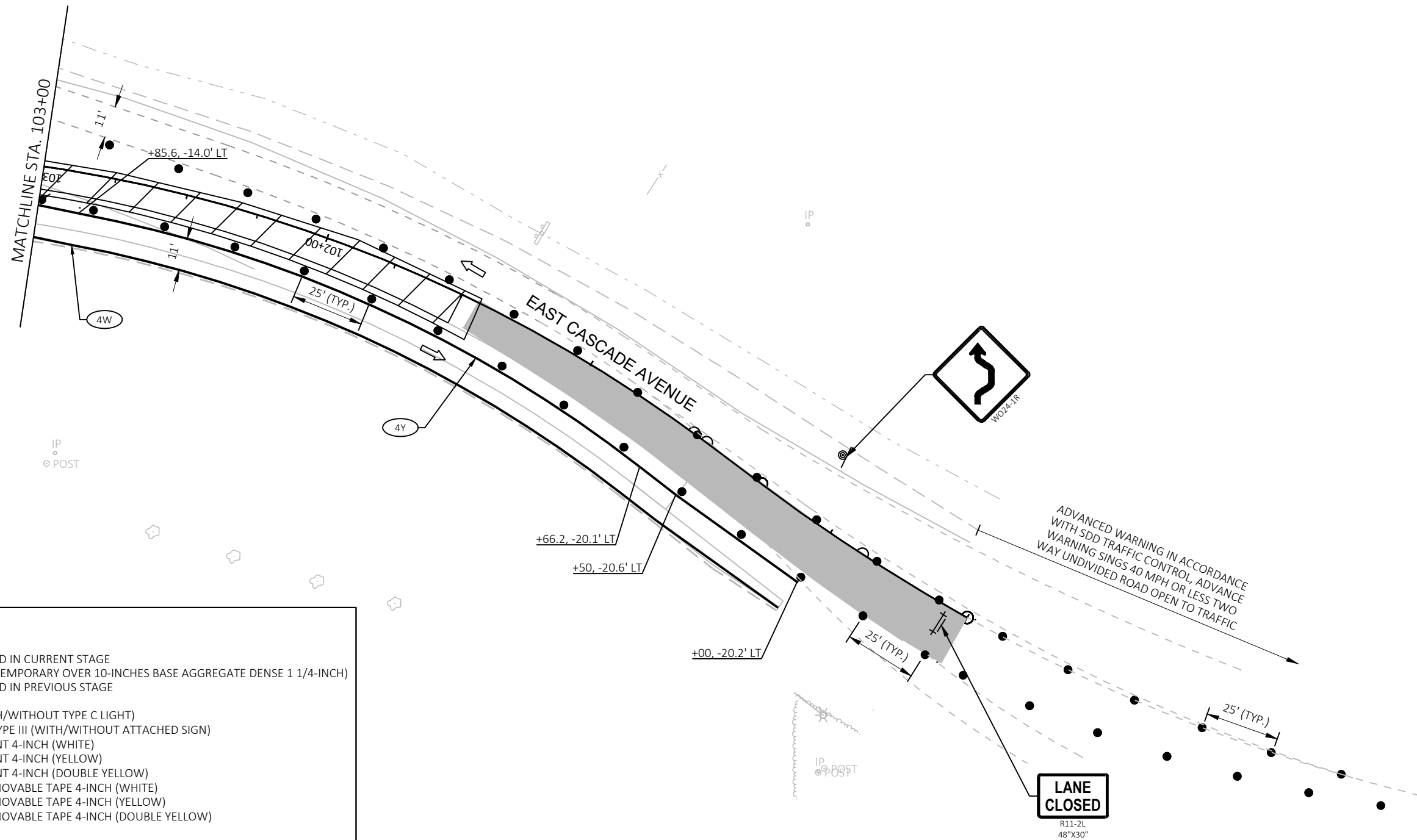


**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

\*ADVANCED WARNING IN ACCORDANCE WITH SDD TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC





**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

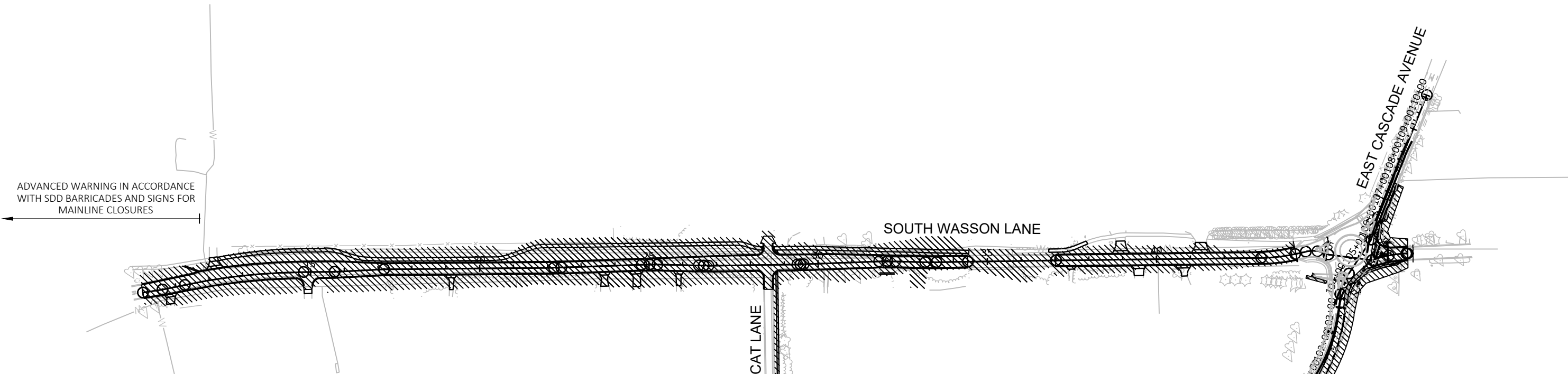
TRAFFIC CONTROL - STAGE 2

SHEET

E

TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
3. ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
4. SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
5. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
6. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
7. TEMPORARY MARKING ON TEMPORARY OR NEW (LOWER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING PAINT.
8. TEMPORARY MARKING ON EXISTING PAVEMENT TO REMAIN OR NEW (UPPER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING REMOVABLE TAPE.



**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
4W	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
4Y	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
4DY	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
4TW	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
4TY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
4TDY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
·x·x	MARKING REMOVAL LINE WATER BLASTING (SIZE)
MRS	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51

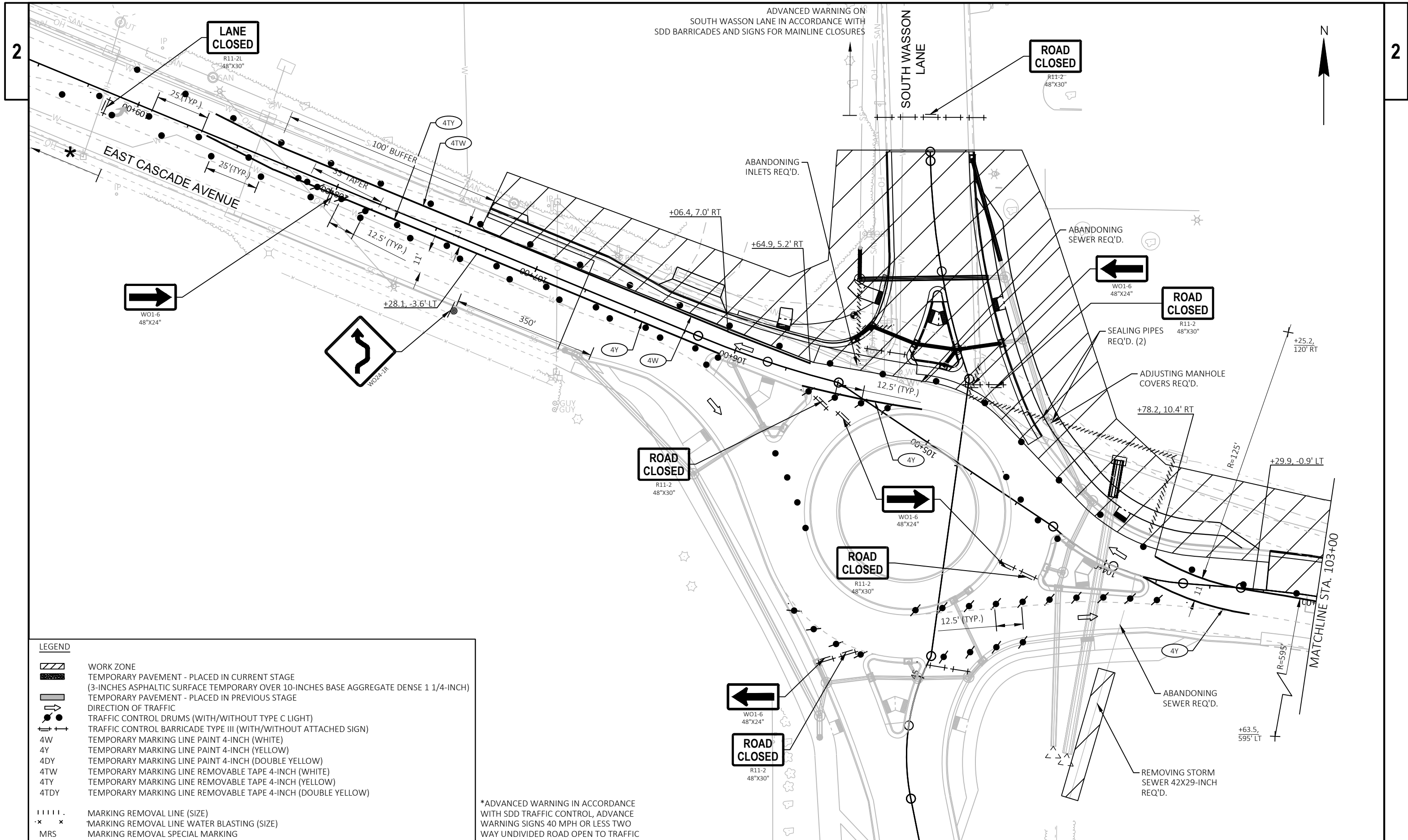
HWY: WASSON LANE

COUNTY: PIERCE

TRAFFIC CONTROL - STAGE 3 OVERVIEW

SHEET

E



ADVANCED WARNING ON SOUTH WASSON LANE IN ACCORDANCE WITH SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES



**LANE CLOSED**

**ROAD CLOSED**

**ROAD CLOSED**

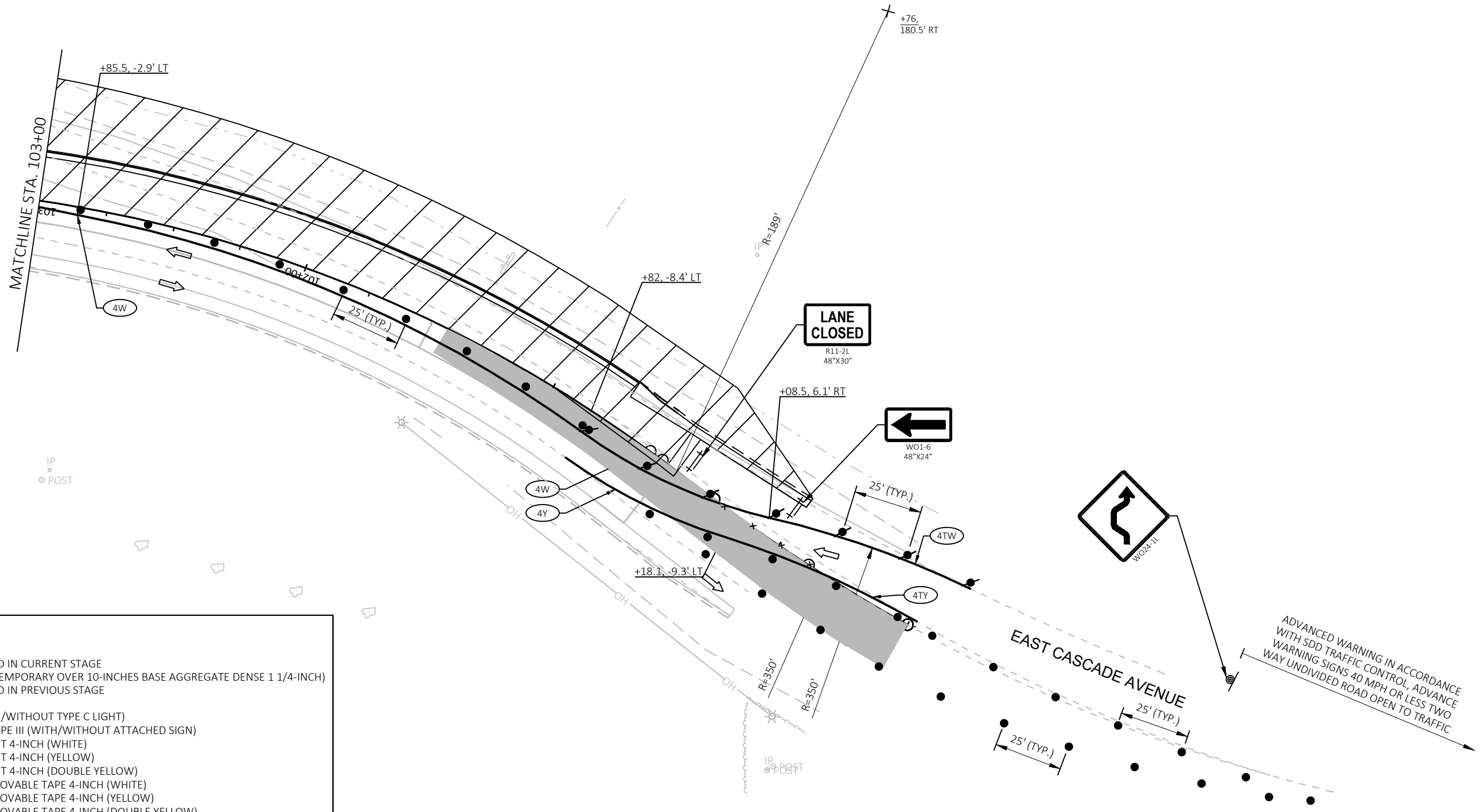
**ROAD CLOSED**

**ROAD CLOSED**

**ROAD CLOSED**

LEGEND	
	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
4W	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
4Y	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
4DY	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
4TW	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
4TY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
4TDY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
-----	MARKING REMOVAL LINE (SIZE)
* * *	MARKING REMOVAL LINE WATER BLASTING (SIZE)
MRS	MARKING REMOVAL SPECIAL MARKING

\*ADVANCED WARNING IN ACCORDANCE WITH SDD TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC



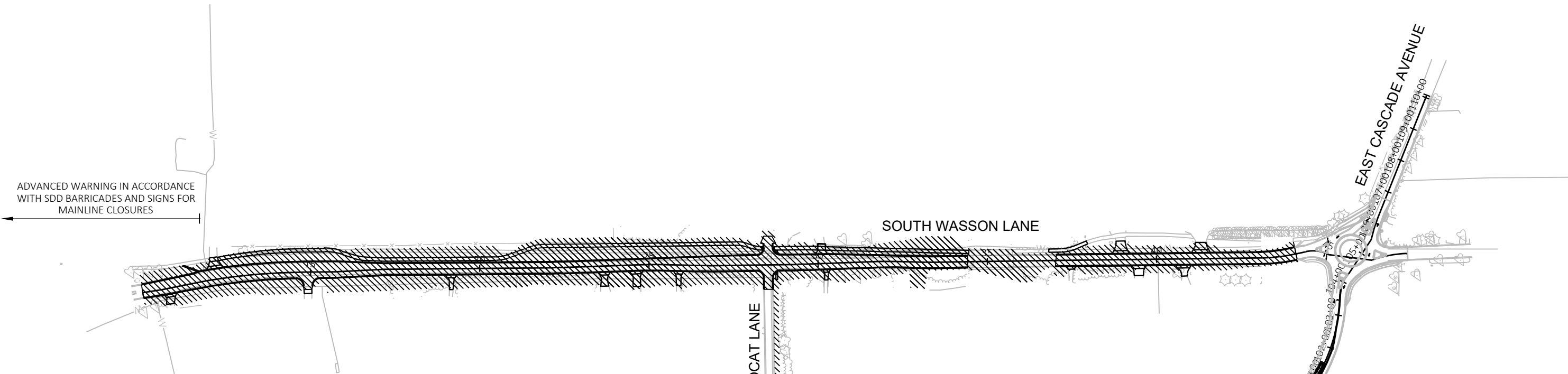
**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	4Y TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	4TW TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	4TY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	4TDY TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	TRAFFIC CONTROL - STAGE 3	SHEET	<b>E</b>
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TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
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4. SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
5. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
6. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
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8. TEMPORARY MARKING ON EXISTING PAVEMENT TO REMAIN OR NEW (UPPER LAYER) PAVEMENT SHALL BE TEMPORARY MARKING REMOVABLE TAPE.



**LEGEND**

	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
4W	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
4Y	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
4DY	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
4TW	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
4TY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
4TDY	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
·x·x	MARKING REMOVAL LINE WATER BLASTING (SIZE)
MRS	MARKING REMOVAL SPECIAL MARKING

PROJECT NO: 7994-00-51

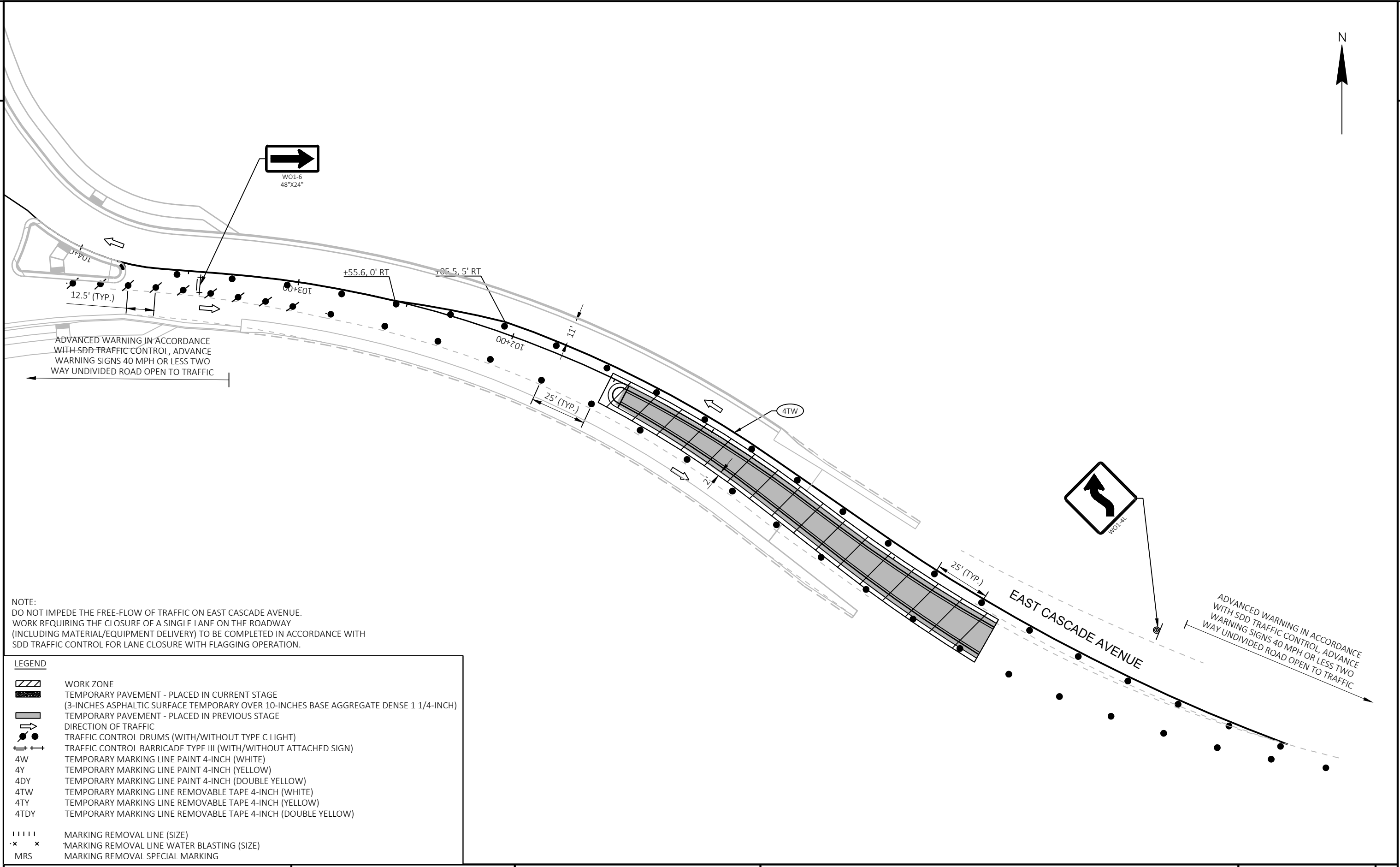
HWY: WASSON LANE

COUNTY: PIERCE

TRAFFIC CONTROL - STAGE 4 OVERVIEW

SHEET

E



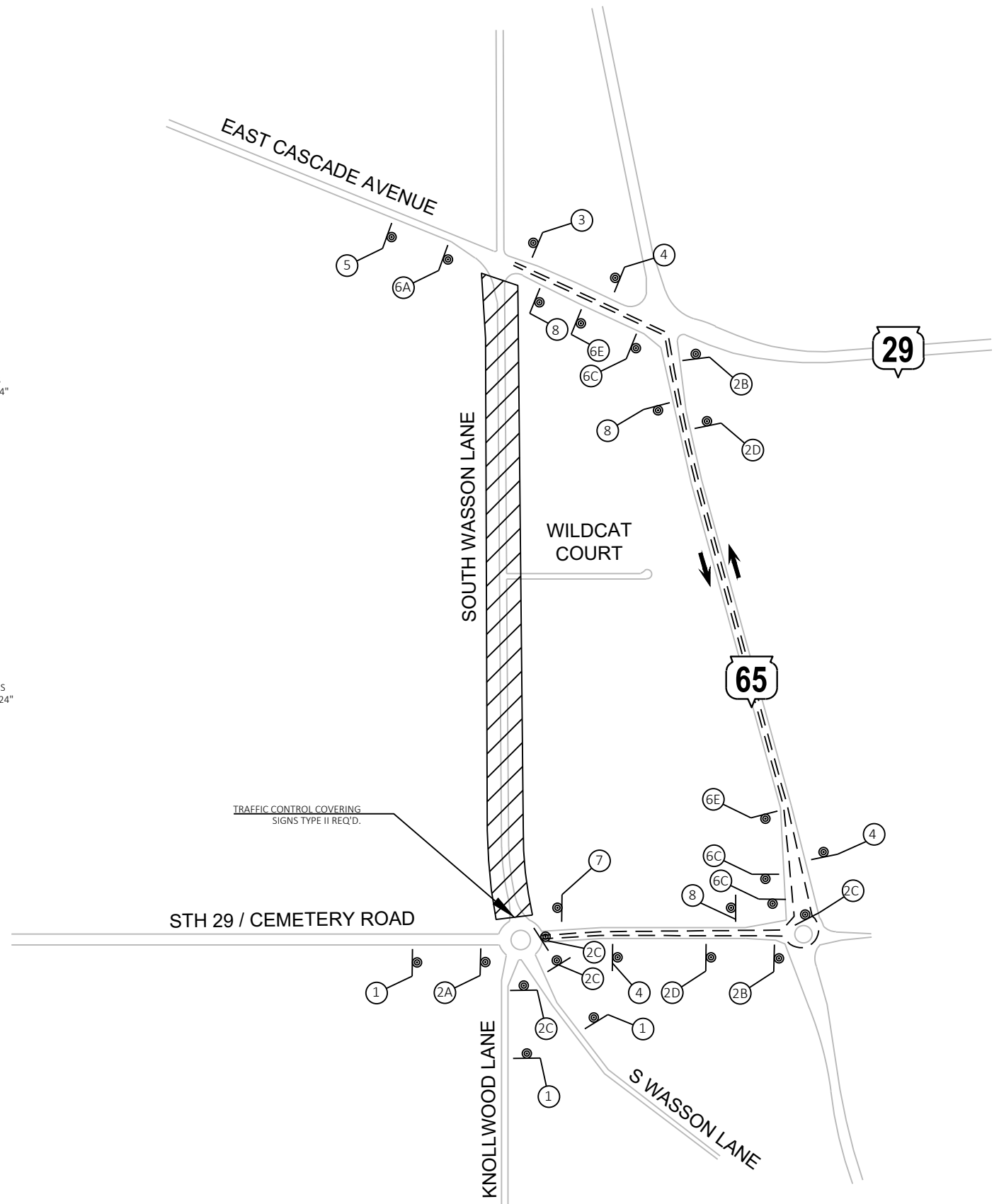
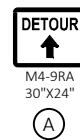
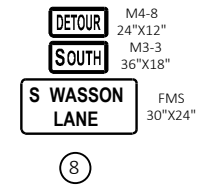
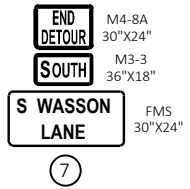
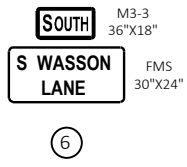
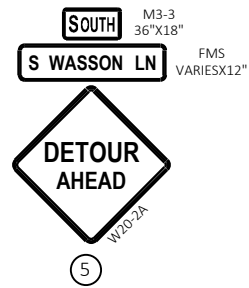
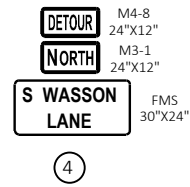
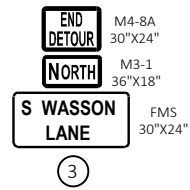
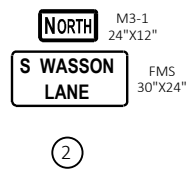
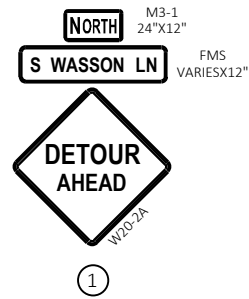
NOTE:  
 DO NOT IMPEDE THE FREE-FLOW OF TRAFFIC ON EAST CASCADE AVENUE.  
 WORK REQUIRING THE CLOSURE OF A SINGLE LANE ON THE ROADWAY  
 (INCLUDING MATERIAL/EQUIPMENT DELIVERY) TO BE COMPLETED IN ACCORDANCE WITH  
 SDD TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION.

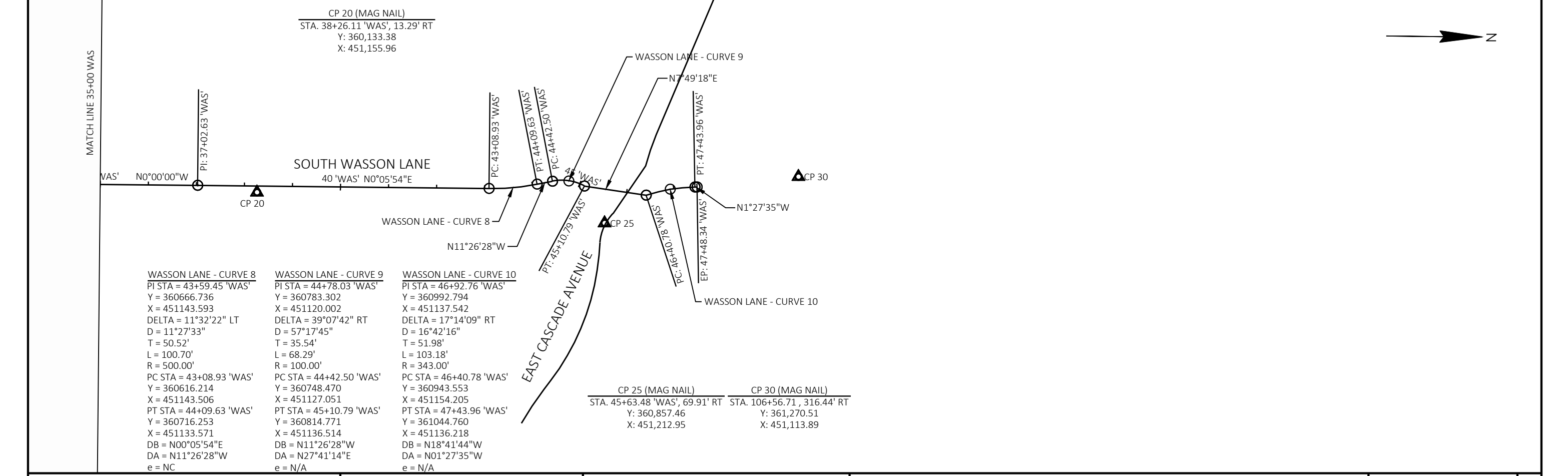
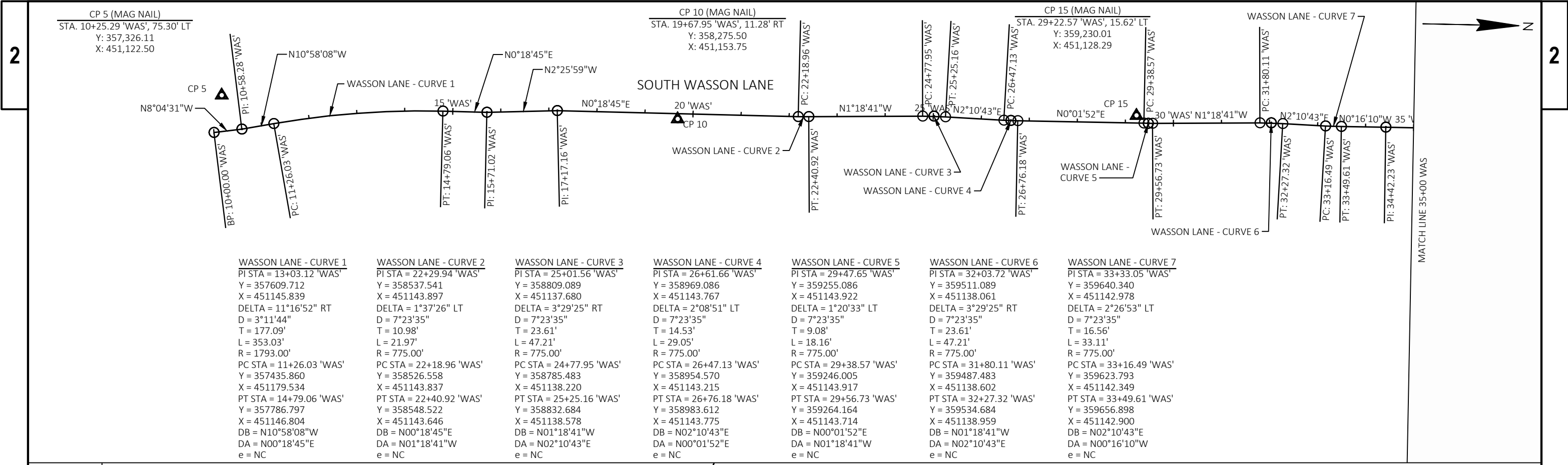
LEGEND	
	WORK ZONE
	TEMPORARY PAVEMENT - PLACED IN CURRENT STAGE (3-INCHES ASPHALTIC SURFACE TEMPORARY OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4-INCH)
	TEMPORARY PAVEMENT - PLACED IN PREVIOUS STAGE
	DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT TYPE C LIGHT)
	TRAFFIC CONTROL BARRICADE TYPE III (WITH/WITHOUT ATTACHED SIGN)
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	MARKING REMOVAL LINE (SIZE)
	MARKING REMOVAL LINE WATER BLASTING (SIZE)
	MARKING REMOVAL SPECIAL MARKING

**LEGEND**

- WORK ZONE - ROAD CLOSED TO THROUGH TRAFFIC
- POSTED DETOUR ROUTE
- TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)

**S WASSON LANE**  
 REFLECTIVE BACKGROUND  
 APPROX. SIZE 30"x24"  
 BACKGROUND - ORANGE  
 MESSAGE - BLACK  
 5" SERIES C LETTERS





PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	ALIGNMENT DETAILS (INCLUDING CONTROL POINTS)	SHEET	E
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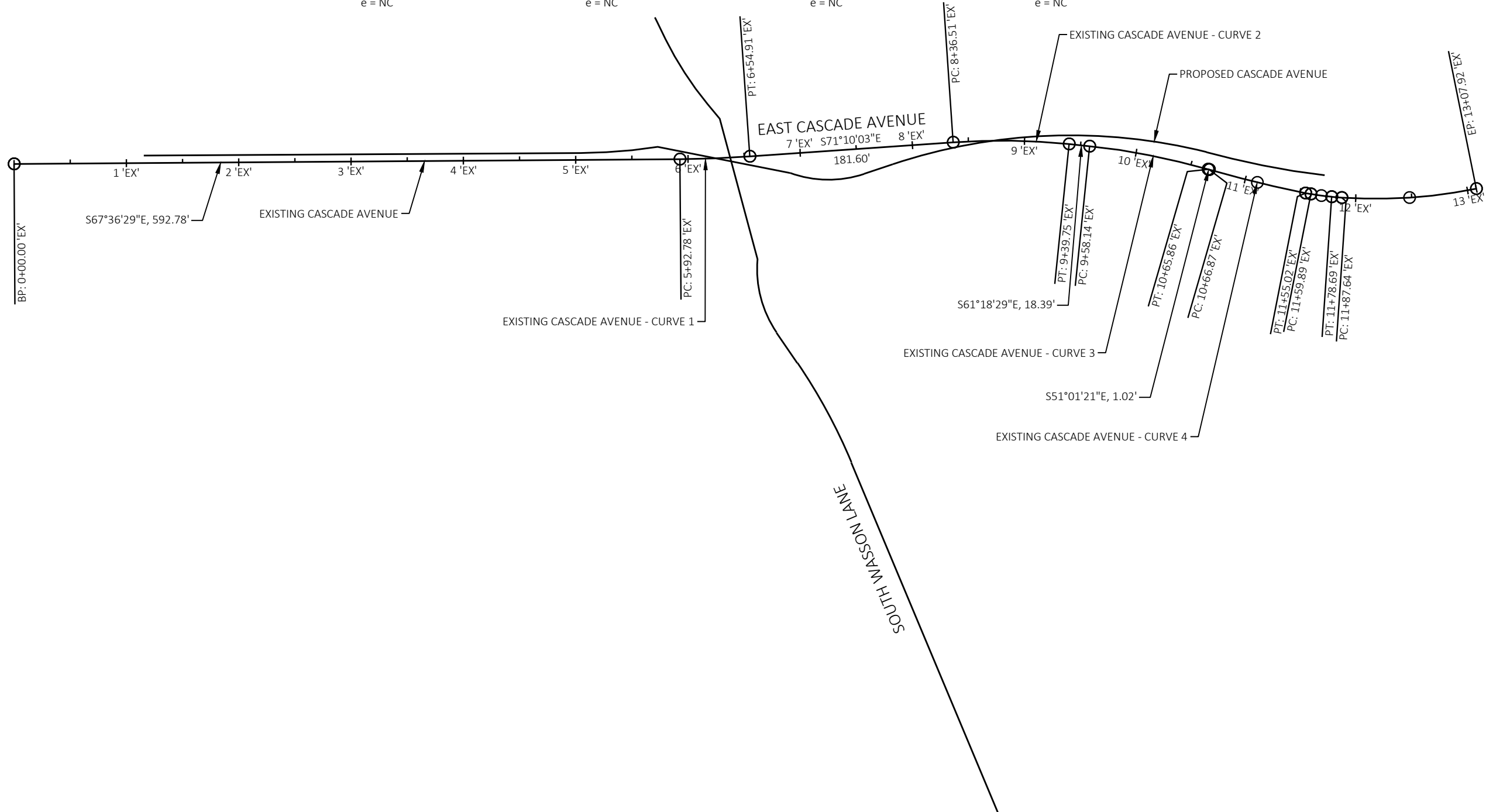
EXISTING CASCADE AVENUE ALIGNMENT

EXISTING CASCADE AVENUE - CURVE 1  
 PI STA = 6+23.85 'EX'  
 Y = 360912.388  
 X = 451136.351  
 DELTA = 3°33'34" LT  
 D = 5°43'46"  
 T = 31.07'  
 L = 62.12'  
 R = 1000.00'  
 PC STA = 5+92.78 'EX'  
 Y = 360924.224  
 X = 451107.622  
 PT STA = 6+54.91 'EX'  
 Y = 360902.358  
 X = 451165.759  
 DB = S67°36'29"E  
 DA = S71°10'03"E  
 e = NC

EXISTING CASCADE AVENUE - CURVE 2  
 PI STA = 8+88.26 'EX'  
 Y = 360827.032  
 X = 451386.619  
 DELTA = 9°51'34" RT  
 D = 9°32'57"  
 T = 51.75'  
 L = 103.25'  
 R = 600.00'  
 PC STA = 8+36.51 'EX'  
 Y = 360843.737  
 X = 451337.638  
 PT STA = 9+39.75 'EX'  
 Y = 360802.186  
 X = 451432.017  
 DB = S71°10'03"E  
 DA = S61°18'29"E  
 e = NC

EXISTING CASCADE AVENUE - CURVE 3  
 PI STA = 10+12.14 'EX'  
 Y = 360767.432  
 X = 451495.518  
 DELTA = 10°17'09" RT  
 D = 9°32'57"  
 T = 54.00'  
 L = 107.71'  
 R = 600.00'  
 PC STA = 9+58.14 'EX'  
 Y = 360793.358  
 X = 451448.147  
 PT STA = 10+65.86 'EX'  
 Y = 360733.464  
 X = 451537.498  
 DB = S61°18'29"E  
 DA = S51°01'21"E  
 e = NC

EXISTING CASCADE AVENUE - CURVE 4  
 PI STA = 11+10.98 'EX'  
 Y = 360705.084  
 X = 451572.575  
 DELTA = 5°02'36" LT  
 D = 5°43'16"  
 T = 44.10'  
 L = 88.15'  
 R = 1001.48'  
 PC STA = 10+66.87 'EX'  
 Y = 360732.825  
 X = 451538.287  
 PT STA = 11+55.02 'EX'  
 Y = 360680.464  
 X = 451609.168  
 DB = S51°01'27"E  
 DA = S56°04'03"E  
 e = NC

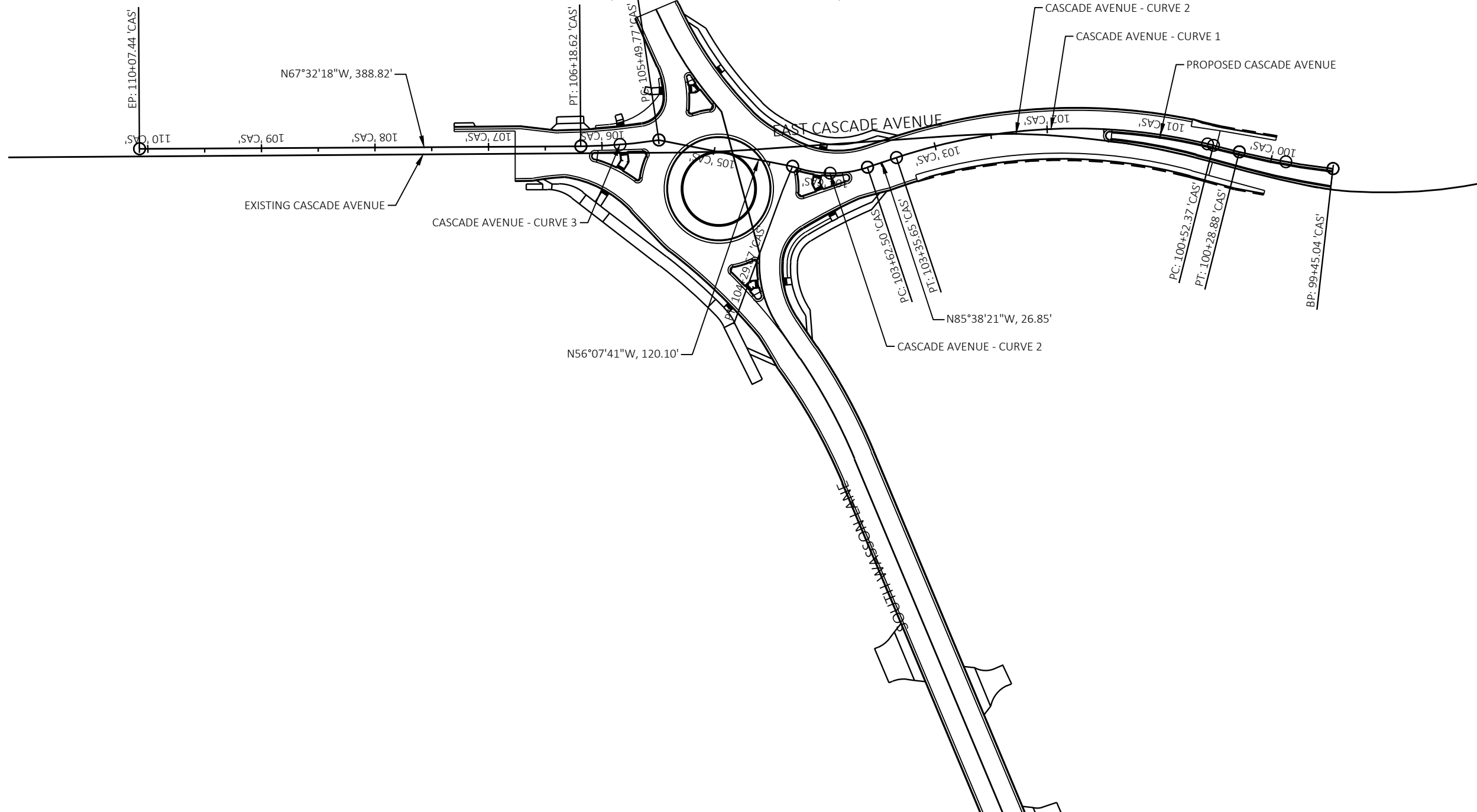


### CASCADE AVENUE ALIGNMENT

CASCADE AVENUE - CURVE 1  
 PI STA = 101+97.92 'CAS'  
 Y = 360835.405  
 X = 451425.503  
 DELTA = 32°27'40" LT  
 D = 11°27'33"  
 T = 145.55'  
 L = 283.28'  
 R = 500.00'  
 PC STA = 100+52.37 'CAS'  
 Y = 360748.172  
 X = 451542.019  
 PT STA = 103+35.65 'CAS'  
 Y = 360846.472  
 X = 451280.372  
 DB = N53°10'42"W  
 DA = N85°38'21"W  
 e = NC

CASCADE AVENUE - CURVE 2  
 PI STA = 103+97.40 'CAS'  
 Y = 360851.168  
 X = 451218.792  
 DELTA = 38°29'10" RT  
 D = 57°17'45"  
 T = 34.91'  
 L = 67.17'  
 R = 100.00'  
 PC STA = 103+62.50 'CAS'  
 Y = 360848.514  
 X = 451253.599  
 PT STA = 104+29.67 'CAS'  
 Y = 360874.907  
 X = 451193.199  
 DB = N85°38'21"W  
 DA = N47°09'11"W  
 e = N/A

CASCADE AVENUE - CURVE 3  
 PI STA = 105+84.25 'CAS'  
 Y = 360950.432  
 X = 451060.089  
 DELTA = 7°53'24" RT  
 D = 11°27'33"  
 T = 34.48'  
 L = 68.85'  
 R = 500.00'  
 PC STA = 105+49.77 'CAS'  
 Y = 360941.843  
 X = 451093.483  
 PT STA = 106+18.62 'CAS'  
 Y = 360963.525  
 X = 451028.190  
 DB = N75°34'30"W  
 DA = N67°41'06"W  
 e = N/A





**G ALIGNMENT**

CURVE - G 1  
 PI STA = 10+20.20 G  
 Y = 360986.306  
 X = 450941.081  
 DELTA = 2°14'01" LT  
 D = 10°25'03"  
 T = 10.72'  
 L = 21.44'  
 R = 550.00'  
 PC STA = 10+09.48 G  
 Y = 360990.377  
 X = 450931.162  
 PT STA = 10+30.92 G  
 Y = 360982.625  
 X = 450951.151  
 DB = S67°41'06"E  
 DA = S69°55'07"E

CURVE - G 2  
 PI STA = 11+29.66 G  
 Y = 360948.722  
 X = 451043.888  
 DELTA = 43°25'23" RT  
 D = 52°05'13"  
 T = 43.80'  
 L = 83.37'  
 R = 110.00'  
 PC STA = 10+85.86 G  
 Y = 360963.761  
 X = 451002.751  
 PT STA = 11+69.22 G  
 Y = 360909.522  
 X = 451063.428  
 DB = S69°55'07"E  
 DA = S26°29'44"E

**E ALIGNMENT**

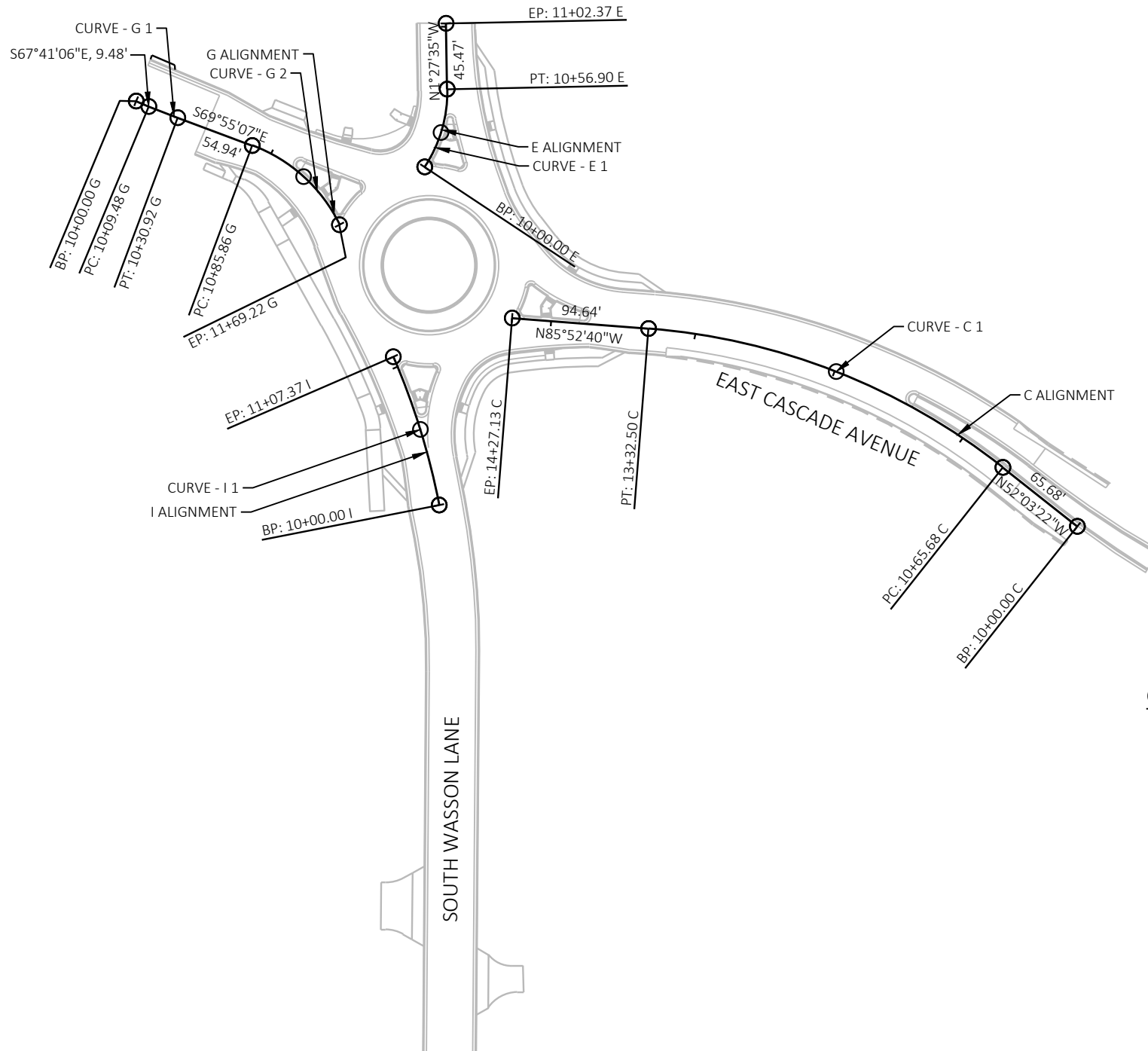
CURVE - E 1  
 PI STA = 10+29.35 E  
 Y = 360974.340  
 X = 451138.012  
 DELTA = 34°41'00" LT  
 D = 60°57'11"  
 T = 29.35'  
 L = 56.90'  
 R = 94.00'  
 PC STA = 10+00.00 E  
 Y = 360949.786  
 X = 451121.930  
 PT STA = 10+56.90 E  
 Y = 361003.684  
 X = 451137.265  
 DB = N33°13'25"E  
 DA = N01°27'35"W

**I ALIGNMENT**

CURVE - I 1  
 PI STA = 10+53.89 I  
 Y = 360769.073  
 X = 451122.881  
 DELTA = 12°18'12" LT  
 D = 11°27'33"  
 T = 53.89'  
 L = 107.37'  
 R = 500.00'  
 PC STA = 10+00.00 I  
 Y = 360716.253  
 X = 451133.571  
 PT STA = 11+07.37 I  
 Y = 360818.401  
 X = 451101.182  
 DB = N11°26'28"W  
 DA = N23°44'40"W

**C ALIGNMENT**

CURVE - C 1  
 PI STA = 12+03.10 C  
 Y = 360829.096  
 X = 451414.640  
 DELTA = 33°49'18" LT  
 D = 12°40'34"  
 T = 137.42'  
 L = 266.82'  
 R = 452.00'  
 PC STA = 10+65.68 C  
 Y = 360744.597  
 X = 451523.012  
 PT STA = 13+32.50 C  
 Y = 360838.974  
 X = 451277.574  
 DB = N52°03'22"W  
 DA = N85°52'40"W



F ALIGNMENT

**CURVE - F 1**  
 PI STA = 10+61.75 F  
 Y = 360987.410  
 X = 451119.673  
 DELTA = 23°59'14" RT  
 D = 81°51'04"  
 T = 14.87'  
 L = 29.31'  
 R = 70.00'  
 PC STA = 10+46.88 F  
 Y = 361002.276  
 X = 451119.295  
 PT STA = 10+76.19 F  
 Y = 360973.674  
 X = 451113.976  
 DB = S01°27'35"E  
 DA = S22°31'39"W

**CURVE - F 2**  
 PI STA = 10+97.70 F  
 Y = 360953.804  
 X = 451105.734  
 DELTA = 81°25'17" RT  
 D = 229°10'59"  
 T = 21.51'  
 L = 35.53'  
 R = 25.00'  
 PC STA = 10+76.19 F  
 Y = 360973.674  
 X = 451113.976  
 PT STA = 11+11.71 F  
 Y = 360958.989  
 X = 451084.857  
 DB = S22°31'39"W  
 DA = N76°03'04"W

**CURVE - F 3**  
 PI STA = 11+49.38 F  
 Y = 360968.071  
 X = 451048.305  
 DELTA = 78°36'06" RT  
 D = 11°26'26"  
 T = 37.66'  
 L = 75.19'  
 R = 500.82'  
 PC STA = 11+11.71 F  
 Y = 360958.989  
 X = 451084.857  
 PT STA = 11+86.90 F  
 Y = 360982.517  
 X = 451013.521  
 DB = N76°02'51"W  
 DA = N67°26'45"W

A ALIGNMENT

**CURVE - A 1**  
 PI STA = 10+00.00 A  
 Y = 360876.959  
 X = 451173.304  
 DELTA = 360°00'00" RT  
 D = 119°21'58"  
 T = 0.00'  
 L = 301.59'  
 R = 48.00'  
 PC STA = 10+00.00 A  
 Y = 360876.959  
 X = 451173.304  
 PT STA = 13+01.59 A  
 Y = 360876.959  
 X = 451173.304  
 DB = S05°53'15"W  
 DA = S05°53'15"W

H ALIGNMENT

**CURVE - H 1**  
 PI STA = 10+29.50 H  
 Y = 360950.818  
 X = 450991.974  
 DELTA = 8°08'23" RT  
 D = 28°56'14"  
 T = 14.09'  
 L = 28.13'  
 R = 198.00'  
 PC STA = 10+15.42 H  
 Y = 360953.776  
 X = 450978.200  
 PT STA = 10+43.55 H  
 Y = 360945.941  
 X = 451005.191  
 DB = S77°52'57"E  
 DA = S69°44'33"E

**CURVE - H 2**  
 PI STA = 10+79.12 H  
 Y = 360927.928  
 X = 451035.863  
 DELTA = 39°09'39" RT  
 D = 57°17'45"  
 T = 35.57'  
 L = 68.35'  
 R = 100.00'  
 PC STA = 10+43.55 H  
 Y = 360945.941  
 X = 451005.191  
 PT STA = 11+11.89 H  
 Y = 360894.592  
 X = 451048.270  
 DB = S59°34'31"E  
 DA = S20°24'52"E

**CURVE - H 3**  
 PI STA = 11+56.20 H  
 Y = 360853.066  
 X = 451063.725  
 DELTA = 9°08'46" LT  
 D = 84°15'31"  
 T = 5.44'  
 L = 10.85'  
 R = 68.00'  
 PC STA = 11+50.76 H  
 Y = 360858.163  
 X = 451061.828  
 PT STA = 11+61.62 H  
 Y = 360848.335  
 X = 451066.409  
 DB = S20°24'52"E  
 DA = S29°33'38"E

**CURVE - H 4**  
 PI STA = 12+16.73 H  
 Y = 360800.399  
 X = 451093.597  
 DELTA = 12°34'46" RT  
 D = 11°27'33"  
 T = 55.11'  
 L = 109.78'  
 R = 500.00'  
 PC STA = 11+61.62 H  
 Y = 360848.335  
 X = 451066.409  
 PT STA = 12+71.39 H  
 Y = 360747.692  
 X = 451109.692  
 DB = S29°33'38"E  
 DA = S16°58'52"E

**CURVE - H 5**  
 PI STA = 12+87.46 H  
 Y = 360731.863  
 X = 451112.443  
 DELTA = 3°43'26" RT  
 D = 11°35'33"  
 T = 16.07'  
 L = 32.12'  
 R = 494.24'  
 PC STA = 12+71.39 H  
 Y = 360747.692  
 X = 451109.692  
 PT STA = 13+03.52 H  
 Y = 360715.888  
 X = 451114.160  
 DB = S09°51'31"E  
 DA = S06°08'06"E

D ALIGNMENT

**CURVE - D 1**  
 PI STA = 10+16.04 D  
 Y = 360861.202  
 X = 451297.636  
 DELTA = 3°33'38" LT  
 D = 11°06'14"  
 T = 16.04'  
 L = 32.07'  
 R = 516.00'  
 PC STA = 10+00.00 D  
 Y = 360858.992  
 X = 451313.521  
 PT STA = 10+32.07 D  
 Y = 360862.422  
 X = 451281.644  
 DB = N82°04'43"W  
 DA = N85°38'21"W

**CURVE - D 2**  
 PI STA = 10+89.61 D  
 Y = 360866.797  
 X = 451224.266  
 DELTA = 47°14'58" RT  
 D = 71°37'11"  
 T = 34.99'  
 L = 65.97'  
 R = 80.00'  
 PC STA = 10+54.62 D  
 Y = 360864.137  
 X = 451259.157  
 PT STA = 11+20.59 D  
 Y = 360894.224  
 X = 451202.535  
 DB = N85°38'21"W  
 DA = N38°23'23"W

**CURVE - D 3**  
 PI STA = 11+52.27 D  
 Y = 360919.057  
 X = 451182.860  
 DELTA = 16°32'29" RT  
 D = 57°17'45"  
 T = 14.54'  
 L = 28.87'  
 R = 100.00'  
 PC STA = 11+37.74 D  
 Y = 360907.664  
 X = 451191.887  
 PT STA = 11+66.61 D  
 Y = 360932.549  
 X = 451177.451  
 DB = N38°23'23"W  
 DA = N21°50'54"W

**CURVE - D 4**  
 PI STA = 12+25.05 D  
 Y = 360986.795  
 X = 451155.701  
 DELTA = 20°23'19" RT  
 D = 17°37'46"  
 T = 58.44'  
 L = 115.65'  
 R = 325.00'  
 PC STA = 11+66.61 D  
 Y = 360932.549  
 X = 451177.451  
 PT STA = 12+82.26 D  
 Y = 361045.219  
 X = 451154.212  
 DB = N21°50'54"W  
 DA = N01°27'35"W

B ALIGNMENT

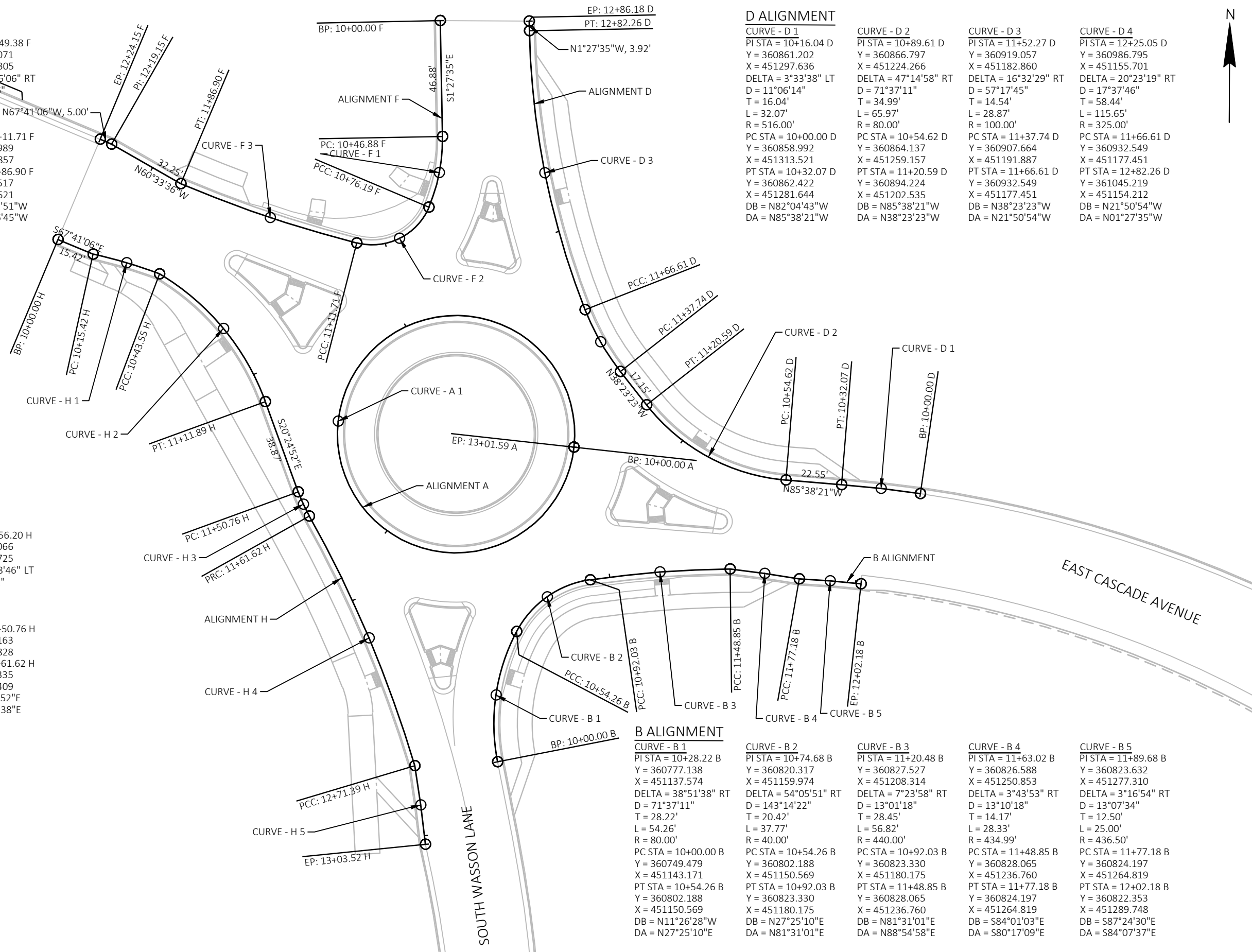
**CURVE - B 1**  
 PI STA = 10+28.22 B  
 Y = 360777.138  
 X = 451137.574  
 DELTA = 38°51'38" RT  
 D = 71°37'11"  
 T = 28.22'  
 L = 54.26'  
 R = 80.00'  
 PC STA = 10+00.00 B  
 Y = 360749.479  
 X = 451143.171  
 PT STA = 10+54.26 B  
 Y = 360802.188  
 X = 451150.569  
 DB = N11°26'28"W  
 DA = N27°25'10"E

**CURVE - B 2**  
 PI STA = 10+74.68 B  
 Y = 360820.317  
 X = 451159.974  
 DELTA = 54°05'51" RT  
 D = 143°14'22"  
 T = 20.42'  
 L = 37.77'  
 R = 40.00'  
 PC STA = 10+54.26 B  
 Y = 360802.188  
 X = 451150.569  
 PT STA = 11+92.03 B  
 Y = 360823.330  
 X = 451180.175  
 DB = N27°25'10"E  
 DA = N81°31'01"E

**CURVE - B 3**  
 PI STA = 11+20.48 B  
 Y = 360827.527  
 X = 451208.314  
 DELTA = 7°23'58" RT  
 D = 13°01'18"  
 T = 28.45'  
 L = 56.82'  
 R = 440.00'  
 PC STA = 11+48.85 B  
 Y = 360823.330  
 X = 451180.175  
 PT STA = 11+77.18 B  
 Y = 360828.065  
 X = 451236.760  
 DB = N81°31'01"E  
 DA = N88°54'58"E

**CURVE - B 4**  
 PI STA = 11+63.02 B  
 Y = 360826.588  
 X = 451250.853  
 DELTA = 3°43'53" RT  
 D = 13°10'18"  
 T = 14.17'  
 L = 28.33'  
 R = 434.99'  
 PC STA = 11+48.85 B  
 Y = 360828.065  
 X = 451236.760  
 PT STA = 11+77.18 B  
 Y = 360824.197  
 X = 451264.819  
 DB = S84°01'03"E  
 DA = S80°17'09"E

**CURVE - B 5**  
 PI STA = 11+89.68 B  
 Y = 360823.632  
 X = 451277.310  
 DELTA = 3°16'54" RT  
 D = 13°07'34"  
 T = 12.50'  
 L = 25.00'  
 R = 436.50'  
 PC STA = 11+77.18 B  
 Y = 360824.197  
 X = 451264.819  
 PT STA = 12+02.18 B  
 Y = 360822.353  
 X = 451289.748  
 DB = S87°24'30"E  
 DA = S84°07'37"E



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Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	15.000	15.000
0004	203.0100	Removing Small Pipe Culverts	EACH	16.000	16.000
0006	204.0100	Removing Concrete Pavement	SY	32.000	32.000
0008	204.0110	Removing Asphaltic Surface	SY	620.000	620.000
0010	204.0150	Removing Curb & Gutter	LF	2,844.000	2,844.000
0012	204.0195	Removing Concrete Bases	EACH	13.000	13.000
0014	204.0210	Removing Manholes	EACH	6.000	6.000
0016	204.0220	Removing Inlets	EACH	12.000	12.000
0018	204.0245	Removing Storm Sewer (size) 01. 12-Inch or Less	LF	350.000	350.000
0020	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	130.000	130.000
0022	204.0245	Removing Storm Sewer (size) 03. 18-Inch	LF	85.000	85.000
0024	204.0245	Removing Storm Sewer (size) 04. 24-Inch	LF	266.000	266.000
0026	204.0245	Removing Storm Sewer (size) 05. 36-Inch	LF	500.000	500.000
0028	204.0245	Removing Storm Sewer (size) 06. 42x29-Inch CMPA	LF	105.000	105.000
0030	204.0260	Abandoning Inlets	EACH	1.000	1.000
0032	204.0280	Sealing Pipes	EACH	2.000	2.000
0034	204.0291.S	Abandoning Sewer	CY	20.000	20.000
0036	204.9060.S	Removing (item description) 01. Removing Apron Endwalls	EACH	7.000	7.000
0038	205.0100	Excavation Common	CY	13,813.000	13,813.000
0040	213.0100	Finishing Roadway (project) 01. 7994-00-51	EACH	1.000	1.000
0042	305.0110	Base Aggregate Dense 3/4-Inch	TON	77.000	77.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	16,585.000	16,585.000
0046	305.0130	Base Aggregate Dense 3-Inch	TON	1,450.000	1,450.000
0048	405.0100	Coloring Concrete WisDOT Red	CY	164.000	164.000
0050	415.2010	Concrete Truck Apron 12-inch	SY	405.000	405.000
0052	450.4000	HMA Cold Weather Paving	TON	300.000	300.000
0054	455.0605	Tack Coat	GAL	871.000	871.000
0056	460.2000	Incentive Density HMA Pavement	DOL	3,420.000	3,420.000
0058	460.5223	HMA Pavement 3 LT 58-28 S	TON	2,914.000	2,914.000
0060	460.6444	HMA Pavement 4 MT 58-34 H	TON	2,428.000	2,428.000
0062	465.0105	Asphaltic Surface	TON	505.000	505.000
0064	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	127.000	127.000
0066	465.0125	Asphaltic Surface Temporary	TON	125.000	125.000
0068	465.0305	Asphaltic Surface Safety Islands	TON	32.000	32.000
0070	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0072	521.3742	Pipe Arch Corrugated Steel 42x29-Inch	LF	90.000	90.000
0074	522.0112	Culvert Pipe Reinforced Concrete Class III 12-Inch	LF	24.000	24.000
0076	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	40.000	40.000
0078	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	103.000	103.000
0080	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	9.000	9.000
0082	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2.000	2.000
0084	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0086	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	3.000
0088	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0090	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000
0092	522.2324	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 24x38-Inch	LF	194.000	194.000
0094	522.2329	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	73.000	73.000
0096	522.2334	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	31.000	31.000
0098	522.2338	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 38x60-Inch	LF	39.000	39.000
0100	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	100.000	100.000

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Line	Item	Item Description	Unit	Total	Qty
0102	522.2424	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	LF	203.000	203.000
0104	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	4.000	4.000
0106	522.2624	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	EACH	16.000	16.000
0108	522.2629	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	EACH	4.000	4.000
0110	522.2634	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	EACH	2.000	2.000
0112	522.2638	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	EACH	2.000	2.000
0114	522.2648	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 48x76-Inch	EACH	2.000	2.000
0116	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	200.000	200.000
0118	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	7,853.000	7,853.000
0120	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	197.000	197.000
0122	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	395.000	395.000
0124	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	285.000	285.000
0126	601.0600	Concrete Curb Pedestrian	LF	106.000	106.000
0128	602.0410	Concrete Sidewalk 5-Inch	SF	3,940.000	3,940.000
0130	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	252.000	252.000
0132	602.0810	Concrete Driveway 6-Inch	SY	461.000	461.000
0134	606.0200	Riprap Medium	CY	126.000	126.000
0136	606.0300	Riprap Heavy	CY	24.000	24.000
0138	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	1,111.000	1,111.000
0140	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	351.000	351.000
0142	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	405.000	405.000
0144	608.0421	Storm Sewer Pipe Reinforced Concrete Class IV 21-Inch	LF	6.000	6.000
0146	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	288.000	288.000
0148	608.0436	Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	LF	106.000	106.000
0150	608.2348	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 48x76-Inch	LF	544.000	544.000
0152	611.0530	Manhole Covers Type J	EACH	5.000	5.000
0154	611.0535	Manhole Covers Type J-Special	EACH	5.000	5.000
0156	611.0624	Inlet Covers Type H	EACH	29.000	29.000
0158	611.0636	Inlet Covers Type HM-S	EACH	4.000	4.000
0160	611.0639	Inlet Covers Type H-S	EACH	20.000	20.000
0162	611.0642	Inlet Covers Type MS	EACH	5.000	5.000
0164	611.0652	Inlet Covers Type T	EACH	2.000	2.000
0166	611.2004	Manholes 4-FT Diameter	EACH	6.000	6.000
0168	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0170	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0172	611.2504	Manholes Variable Tee 4-FT Diameter	EACH	3.000	3.000
0174	611.3004	Inlets 4-FT Diameter	EACH	11.000	11.000
0176	611.3225	Inlets 2x2.5-FT	EACH	2.000	2.000
0178	611.3230	Inlets 2x3-FT	EACH	41.000	41.000
0180	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0182	611.3902	Inlets Median 2 Grate	EACH	3.000	3.000
0184	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0186	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0188	611.9850.S	Pipe Grates (size) 01. 24-Inch	EACH	1.000	1.000
0190	611.9850.S	Pipe Grates (size) 02. 30-Inch	EACH	1.000	1.000
0192	611.9850.S	Pipe Grates (size) 03. 19x30-Inch	EACH	2.000	2.000
0194	611.9850.S	Pipe Grates (size) 04. 24x38-Inch	EACH	8.000	8.000
0196	611.9850.S	Pipe Grates (size) 05. 29x45-Inch	EACH	2.000	2.000
0198	611.9850.S	Pipe Grates (size) 06. 34x53-Inch	EACH	1.000	1.000
0200	611.9850.S	Pipe Grates (size) 07. 38x60-Inch	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0202	611.9850.S	Pipe Grates (size) 08. 48 x 76-Inch	EACH	1.000	1.000
0204	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7994-00-51	EACH	1.000	1.000
0206	619.1000	Mobilization	EACH	1.000	1.000
0208	620.0300	Concrete Median Sloped Nose	SF	446.000	446.000
0210	624.0100	Water	MGAL	282.000	282.000
0212	625.0100	Topsoil	SY	30,009.000	30,009.000
0214	627.0200	Mulching	SY	2,450.000	2,450.000
0216	628.1504	Silt Fence	LF	3,920.000	3,920.000
0218	628.1520	Silt Fence Maintenance	LF	3,920.000	3,920.000
0220	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0222	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0224	628.2006	Erosion Mat Urban Class I Type A	SY	1,970.000	1,970.000
0226	628.2008	Erosion Mat Urban Class I Type B	SY	28,050.000	28,050.000
0228	628.2023	Erosion Mat Class II Type B	SY	620.000	620.000
0230	628.7005	Inlet Protection Type A	EACH	60.000	60.000
0232	628.7015	Inlet Protection Type C	EACH	39.000	39.000
0234	628.7020	Inlet Protection Type D	EACH	22.000	22.000
0236	628.7504	Temporary Ditch Checks	LF	171.000	171.000
0238	628.7555	Culvert Pipe Checks	EACH	162.000	162.000
0240	628.7560	Tracking Pads	EACH	4.000	4.000
0242	629.0210	Fertilizer Type B	CWT	2.300	2.300
0244	630.0130	Seeding Mixture No. 30	LB	377.000	377.000
0246	630.0171	Seeding Mixture No. 70A	LB	28.600	28.600
0248	630.0300	Seeding Borrow Pit	LB	66.000	66.000
0250	630.0500	Seed Water	MGAL	721.300	721.300
0252	633.5200	Markers Culvert End	EACH	48.000	48.000
0254	634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	4.000	4.000
0256	634.0811	Posts Tubular Steel 2x2-Inch X 11-FT	EACH	11.000	11.000
0258	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	6.000	6.000
0260	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	14.000	14.000
0262	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	4.000	4.000
0264	637.2210	Signs Type II Reflective H	SF	184.200	184.200
0266	637.2230	Signs Type II Reflective F	SF	42.300	42.300
0268	638.2102	Moving Signs Type II	EACH	1.000	1.000
0270	638.2602	Removing Signs Type II	EACH	20.000	20.000
0272	638.3000	Removing Small Sign Supports	EACH	18.000	18.000
0274	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0276	640.1303.S	Pond Liner Clay	CY	651.000	651.000
0278	642.5201	Field Office Type C	EACH	1.000	1.000
0280	643.0300	Traffic Control Drums	DAY	8,401.000	8,401.000
0282	643.0420	Traffic Control Barricades Type III	DAY	1,953.000	1,953.000
0284	643.0705	Traffic Control Warning Lights Type A	DAY	3,906.000	3,906.000
0286	643.0715	Traffic Control Warning Lights Type C	DAY	2,285.000	2,285.000
0288	643.0900	Traffic Control Signs	DAY	8,362.000	8,362.000
0290	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0292	643.1000	Traffic Control Signs Fixed Message	SF	135.000	135.000
0294	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0296	643.3105	Temporary Marking Line Paint 4-Inch	LF	7,415.000	7,415.000
0298	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	4,663.000	4,663.000
0300	643.5000	Traffic Control	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0302	645.0120	Geotextile Type HR	SY	450.000	450.000
0304	646.1020	Marking Line Epoxy 4-Inch	LF	17,380.000	17,380.000
0306	646.3020	Marking Line Epoxy 8-Inch	LF	457.000	457.000
0308	646.5020	Marking Arrow Epoxy	EACH	8.000	8.000
0310	646.6120	Marking Stop Line Epoxy 18-Inch	LF	46.000	46.000
0312	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	175.000	175.000
0314	646.7120	Marking Diagonal Epoxy 12-Inch	LF	328.000	328.000
0316	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	435.000	435.000
0318	646.8120	Marking Curb Epoxy	LF	47.000	47.000
0320	646.8220	Marking Island Nose Epoxy	EACH	5.000	5.000
0322	646.9000	Marking Removal Line 4-Inch	LF	1,230.000	1,230.000
0324	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	924.000	924.000
0326	646.9100	Marking Removal Line 8-Inch	LF	210.000	210.000
0328	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	240.000	240.000
0330	646.9200	Marking Removal Line Wide	LF	57.000	57.000
0332	646.9300	Marking Removal Special Marking	EACH	3.000	3.000
0334	646.9310	Marking Removal Special Marking Water Blasting	EACH	2.000	2.000
0336	650.4000	Construction Staking Storm Sewer	EACH	117.000	117.000
0338	650.4500	Construction Staking Subgrade	LF	3,750.000	3,750.000
0340	650.5000	Construction Staking Base	LF	3,805.000	3,805.000
0342	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	9,038.000	9,038.000
0344	650.8501	Construction Staking Electrical Installations (project) 01. 7994-00-51	EACH	1.000	1.000
0346	650.9000	Construction Staking Curb Ramps	EACH	20.000	20.000
0348	650.9500	Construction Staking Sidewalk (project) 01. 7994-00-51	EACH	1.000	1.000
0350	650.9911	Construction Staking Supplemental Control (project) 01. 7994-00-51	EACH	1.000	1.000
0352	650.9920	Construction Staking Slope Stakes	LF	3,750.000	3,750.000
0354	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	3,996.000	3,996.000
0356	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	562.000	562.000
0358	653.0140	Pull Boxes Steel 24x42-Inch	EACH	12.000	12.000
0360	654.0230	Concrete Control Cabinet Bases Type L30	EACH	2.000	2.000
0362	655.0610	Electrical Wire Lighting 12 AWG	LF	26,871.000	26,871.000
0364	655.0615	Electrical Wire Lighting 10 AWG	LF	448.000	448.000
0366	655.0635	Electrical Wire Lighting 2 AWG	LF	60.000	60.000
0368	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. LC-1	EACH	1.000	1.000
0370	656.0201	Electrical Service Meter Breaker Pedestal (location) 02. LC-2	EACH	1.000	1.000
0372	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	2.000	2.000
0374	690.0150	Sawing Asphalt	LF	2,383.000	2,383.000
0376	690.0250	Sawing Concrete	LF	786.000	786.000
0378	740.0440	Incentive IRI Ride	DOL	1,850.000	1,850.000
0380	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,500.000	1,500.000
0382	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	990.000	990.000
0384	SPV.0060	Special 01. Wasson Lane Lighting Assembly	EACH	27.000	27.000
0386	SPV.0060	Special 02. Roundabout Lighting Assembly	EACH	8.000	8.000
0388	SPV.0060	Special 03. Inlet Covers Type DW	EACH	2.000	2.000
0390	SPV.0060	Special 04. Salvage and Replace Apron Endwall	EACH	1.000	1.000
0392	SPV.0060	Special 05. Pyramidal Inlet Grate 2 FT 6 IN x 5 FT 4 IN	EACH	1.000	1.000
0394	SPV.0060	Special 06. Temporary Lighting System, South Wasson Lane and East Cascade Avenue	EACH	1.000	1.000
0396	SPV.0060	Special 07. Construction Staking Roundabout	EACH	1.000	1.000
0398	SPV.0060	Special 08. Bioinfiltration Basin 1	EACH	1.000	1.000
0400	SPV.0060	Special 09. Bioinfiltration Basin 2	EACH	1.000	1.000



Estimate Of Quantities

7994-00-51

Line	Item	Item Description	Unit	Total	Qty
0402	SPV.0060	Special 10. Concrete Bases Special Type A	EACH	35.000	35.000
0404	SPV.0060	Special 11. Construction Staking Stormwater Management Bioinfiltration Basin 1	EACH	1.000	1.000
0406	SPV.0060	Special 12. Construction Staking Stormwater Management Bioinfiltration Basin 2	EACH	1.000	1.000
0408	SPV.0060	Special 13. Storm Sewer Pipe 48x76-inch Bend	EACH	2.000	2.000
0410	SPV.0060	Special 14. Storm Sewer Tap	EACH	3.000	3.000
0412	SPV.0085	Special 01. Stormwater Bioinfiltration Mix	LB	0.140	0.140

3

REMOVING CONCRETE PAVEMENT

CATEGORY	STAGE	STATION	-	STATION	LOCATION	204.0100 SY
0010	1	45+51 'WAS'	-	45+77 'WAS'	RT	32

REMOVING ASPHALTIC SURFACE

CATEGORY	STAGE	STATION	-	STATION	LOCATION	204.0110 SY
0010	1	44+14 'WAS'	-	46+89 'WAS'	LT	310
				UNDISTRIBUTED	LT/RT	310
TOTAL						620

REMOVING CURB & GUTTER

CATEGORY	STAGE	STATION	-	STATION	LOCATION	204.0150 LF
0010	PRE	46+15 'WAS'	-	47+18 'WAS'	LT/RT	290
		99+45 'CAS'	-	101+44 'CAS'	LT	400
SUBTOTAL (PRE-STAGE)						690
1		10+00 'WAS'	-	23+00 'WAS'	LT/RT	---
		23+00 'WAS'	-	35+00 'WAS'	LT/RT	1270
		35+00 'WAS'	-	44+00 'WAS'	LT/RT	---
		44+00 'WAS'	-	46+91 'WAS'	LT/RT	690
		103+06 'CAS'	-	103+50 'CAS'	LT	44
SUBTOTAL (STAGE 1)						2,004
3		44+00 'WAS'	-	47+49 'WAS'	LT/RT	150
SUBTOTAL (STAGE 3)						150
TOTAL						2,844

REMOVING CONCRETE BASES

CATEGORY	STAGE	STATION	LOCATION	204.0195 EACH
0010	PRE	46+39 'WAS'	RT	1
		106+67 'CAS'	RT	1
SUBTOTAL (PRE-STAGE)				2
1		32+60 'WAS'	LT	1
		34+19 'WAS'	LT	1
		35+99 'WAS'	LT	1
		37+32 'WAS'	LT	1
		38+62 'WAS'	LT	1
		41+01 'WAS'	LT	1
		45+03 'WAS'	LT	1
		45+92 'WAS'	LT	1
		101+44 'CAS'	LT	1
		103+25 'CAS'	LT	1
SUBTOTAL (STAGE 1)				10
3		46+78 'WAS'	RT	1
SUBTOTAL (STAGE 3)				1
TOTAL				13

GRUBBING

CATEGORY	STATION	-	STATION	LOCATION	201.0205 STA
0010	24+00 'WAS'	-	26+00 'WAS'	LT	2
	26+00 'WAS'	-	28+00 'WAS'	RT	2
	29+00 'WAS'	-	33+00 'WAS'	RT	4
	37+00 'WAS'	-	38+00 'WAS'	LT	1
	36+00 'WAS'	-	38+00 'WAS'	RT	2
	40+00 'WAS'	-	41+00 'WAS'	RT	1
	44+00 'WAS'	-	46+00 'WAS'	LT	2
	47+00 'WAS'	-	48+00 'WAS'	LT	1
TOTAL					15

STORM SEWER ABANDONMENT

STAGE	STATION	-	STATION	LOCATION	LF	* 204.0245.06 REMOVING STORM SEWER 42X29-INCH CMPA			
						204.0260 ABANDONING INLETS	204.0280 SEALING PIPES	204.0291.S ABANDONING SEWER	
						EACH	EACH		CY
3	103+82	-	103+84	CAS LT	65	---	---	---	---
	103+82	-	103+84	CAS LT/RT	---	---	---	---	15
	104+57	-	104+62	CAS RT	---	---	2	---	---
	104+82	-	105+47	CAS RT	---	1	---	---	5
TOTALS					65	1	2	---	20

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

REMOVING SMALL PIPE CULVERTS

STATION - STATION		LOCATION	203.0100		SIZE
			EACH		
10+58 - 10+96	'WAS'	RT	1	38' X 24" CMCP	
11+90 - 12+58	'WAS'	LT	2	70' X 19x30" RCCP	
14+71 - 15+09	'WAS'	RT	2	38' X 18" CMCP	
19+06 - 19+34	'WAS'	RT	2	31' X 24" CMCP	
22+70 - 22+70	'WAS'	LT	1	34' X 12" CMCP	
23+34 - 23+34	'WAS'	LT/RT	2	90' X 30" CMCP	
23+52 - 23+83	'WAS'	RT	1	30' X 18" CMCP	
25+75 - 26+05	'WAS'	RT	1	30' X 14" CMCP	
27+83 - 27+83	'WAS'	LT	1	22' X 12" CMCP	
38+74 - 39+14	'WAS'	LT	1	45' X 24" RCCP	
39+29 - 39+66	'WAS'	RT	1	36' X 29X42" CMPA	
40+62 - 40+99	'WAS'	RT	1	36' X 29X42" CMPA	
TOTAL			16		

REMOVING INLETS

STATION	OFFSET	204.0220	
		EACH	
28+26	'WAS' 54.0' RT	1	
28+96	'WAS' 55.4' RT	1	
29+38	'WAS' 26.6' RT	1	
32+35	'WAS' 15.0' LT	1	
104+76	'CAS' 110.2' LT	1	
104+55	'CAS' 98.7' LT	1	
105+06	'CAS' 43.5' LT	1	
105+90	'CAS' 23.7' LT	1	
106+67	'CAS' 29.5' LT	1	
103+82	'CAS' 57.6' RT	1	
105+00	'CAS' 43.4' RT	1	
105+44	'CAS' 35.7' RT	1	
TOTAL		12	

3

REMOVING STORM SEWER

STATION - STATION		LOCATION	204.0245					
			.01	.02	.03	.04	.05	.06
			12-INCH OR LESS LF	15-INCH LF	18-INCH LF	24-INCH LF	36-INCH LF	42X29-INCH CMPA LF
28+31 - 29+19	'WAS'	LT	90	---	---	---	---	---
29+19 - 29+35	'WAS'	LT	25	---	---	---	---	---
28+26 - 28+96	'WAS'	RT	---	---	---	---	70	---
28+93 - 28+96	'WAS'	RT	20	---	---	---	---	---
28+96 - 29+38	'WAS'	RT	---	---	---	---	50	---
29+38 - 32+44	'WAS'	RT	---	---	---	---	310	---
32+44 - 32+65	'WAS'	RT	---	---	---	---	35	---
31+64 - 32+36	'WAS'	LT	75	---	---	---	---	---
32+35 - 32+36	'WAS'	LT	15	---	---	---	---	---
32+36 - 32+66	'WAS'	LT	45	---	---	---	---	---
37+60 - 37+93	'WAS'	LT	---	---	---	---	35	---
104+50 - 104+84	'CAS'	LT	---	---	---	60	---	---
104+76 - 104+84	'CAS'	LT	---	10	---	---	---	---
104+55 - 104+76	'CAS'	LT	---	25	---	---	---	---
104+84 - 105+18	'CAS'	LT	---	---	---	60	---	---
105+06 - 105+18	'CAS'	LT	---	25	---	---	---	---
105+18 - 105+90	'CAS'	LT	---	70	---	---	---	---
105+18 - 106+67	'CAS'	LT	---	---	---	140	---	---
106+67 - 106+73	'CAS'	LT	---	---	---	6	---	---
103+82 - 103+84	'CAS'	LT/RT	---	---	---	---	---	40
103+82 - 104+82	'CAS'	RT	---	---	85	---	---	---
104+96 - 105+00	'CAS'	RT	15	---	---	---	---	---
105+44 - 105+50	'CAS'	RT	15	---	---	---	---	---
105+47 - 105+57	'CAS'	RT	50	---	---	---	---	---
TOTALS			350	130	85	266	500	40

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

REMOVING MANHOLES

STATION	OFFSET	204.0210	
		EACH	
29+19	'WAS' 45.2' LT	1	
32+44	'WAS' 21.6' RT	1	
32+36	'WAS' 29.9' LT	1	
37+93	'WAS' 39.2' LT	1	
104+84	'CAS' 115.0' LT	1	
105+18	'CAS' 63.3' LT	1	
TOTAL		6	

REMOVING APRON ENDWALLS

STATION		OFFSET	EACH	REMARKS
28+31	'WAS'	53.5' LT	1	12-INCH CMCP
29+35	'WAS'	62.0' LT	1	12-INCH CMCP
32+65	'WAS'	48.1' RT	1	36-INCH RCCP
31+64	'WAS'	22.4' LT	1	12-INCH HDPE
32+66	'WAS'	61.7' LT	1	12-INCH HDPE
37+60	'WAS'	55.4' LT	1	36-INCH HDPE
44+28	'WAS'	72.4' RT	1	42x29-INCH CMPA
TOTAL			7	

EARTHWORK SUMMARY

STAGE	FROM/TO STATION	205.0100 EXCAVATION COMMON	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL (1)	MASS ORDINATE +/- (2)	WASTE	305.0130 BASE AGGREGATE DENSE 3-INCH	COMMENT
		CUT			FACTOR 1.25				
PRE-STAGE									
CASCADE AVE	3+92.00/11+70.00 'EX CAS'	257.0	257.0	0	0	257.0	257.0	0	TEMPORARY WIDENING
PRE-STAGE SUBTOTAL		257	257	0	0	257	257	0	
STAGE 1									
WASSON LN	10+00.00/45+10.79	9,395	9,395	5,980	7,475	1,920	1,920	0	
C	10+50.00/14+27.12	446	446	281	351	95	95	0	
A	10+00.00/13+00.00	768	768	630	788	-20	-20	0	
B	10+57.48/10+98.01	109	109	10	13	97	97	0	
G	10+51.92/11+68.89	155	155	114	143	13	13	0	
H	11+04.62/12+03.42	39	39	174	218	-179	-179	0	
I	10+00.00/11+07.36	114	114	245	306	-192	-192	0	
STAGE 1 SUBTOTAL		11,026	11,026	7,434	9,293	1,734	1,734	0	
STAGE 2									
CASCADE AVE	101+50.02/106+76.40	571	571	0	0	571	571	0	
A	11+91.16/13+01.59	194	194	0	0	194	194	0	
D	11+13.09/11+47.76	108	108	0	0	108	108	0	
STAGE 2 SUBTOTAL		873	873	0	0	873	873	0	
STAGE 3									
CASCADE AVE	100+52.37/103+23.75	412	412	0	0	412	412	0	
WASSON LN	46+41.00/47+47.90	224	224	3	4	220	220	0	
E	10+20.00/11+02.37	94	94	24	30	64	64	0	
F	10+76.24/12+24.06	70	70	52	65	5	5	0	
STAGE 3 SUBTOTAL		800	800	79	99	701	701	0	
STAGE 4									
CASCADE AVE	99+45.04/101+51.86	199	199	0	0	199	199	0	
STAGE 4 SUBTOTAL		199	199	0	0	199	199	0	
SUBTOTAL		13,155	13,155	7,513	9,391	3,764	3,764	0	
UNDISTRIBUTED EBS		658						1,450	
GRAND TOTAL		13,813	13,155	7,513	9,391	3,764	3,764	1,450	

NOTES:

(1) EXPANDED FILL FACTOR = 1.25

**EXPANDED FILL = (UNEXPANDED FILL) \* FILL FACTOR**

(2) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(3) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

(4) EBS EXCAVATION TO BE BACKFILLED WITH BASE AGGREGATE DENSE 3-INCH.

3

3

BASE AGGREGATE DENSE ITEMS

FINISHING ROADWAY

CATEGORY	PROJECT	213.0100 EACH
0010	7994-00-51	1

CATEGORY	STAGE	STATION -	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
0010	PRE	46+01 ' WAS'	- 46+92 ' WAS'	LT/RT	---	235	4
		99+45 ' CAS'	- 101+45 ' CAS'	LT/RT	---	180	3
SUBTOTALS (PRE-STAGE)					---	415	7
1		10+00 ' WAS'	- 23+00 ' WAS'	LT/RT	---	5,230	89
		23+00 ' WAS'	- 35+00 ' WAS'	LT/RT	---	4,880	83
		35+00 ' WAS'	- 44+00 ' WAS'	LT/RT	---	2,300	39
		44+00 ' WAS'	- 47+05 ' WAS'	LT/RT	38	1,600	28
		100+0C ' CAS'	- 103+50 ' CAS'	LT	24	535	9
SUBTOTALS (STAGE 1)					62	14,545	248
2		45+60 ' WAS'	- 47+12 ' WAS'	LT/RT	---	420	7
		101+5C ' CAS'	- 103+50 ' CAS'	LT/RT	---	130	2
SUBTOTALS (STAGE 2)					0	550	9
3		46+14 ' WAS'	- 47+49 ' WAS'	LT/RT	9	600	10
		100+0C ' CAS'	- 103+24 ' CAS'	RT	6	475	8
SUBTOTALS (STAGE 3)					15	1,075	18
TOTALS					77	16,585	282

HMA COLD WEATHER PAVING

CATEGORY	PROJECT	450.4000 TON
0010	7994-00-51	300

CONCRETE ITEMS

CATEGORY	STAGE	STATION -	STATION	LOCATION	405.0100 COLORING CONCRETE WISDOT RED CY	415.2010 CONCRETE TRUCK APRON 12-INCH SY	602.0810 CONCRETE DRIVEWAY 6-INCH SY
0010	1	10+62 ' WAS'	- 10+97 ' WAS'	RT	---	---	27
		11+98 ' WAS'	- 12+46 ' WAS'	RT	---	---	39
		19+00 ' WAS'	- 19+32 ' WAS'	RT	---	---	24
		23+50 ' WAS'	- 23+85 ' WAS'	RT	---	---	27
		24+43 ' WAS'	- 24+82 ' WAS'	RT	---	---	30
		25+74 ' WAS'	- 26+03 ' WAS'	RT	---	---	22
		29+95 ' WAS'	- 30+28 ' WAS'	LT	---	---	59
		30+13 ' WAS'	- 30+36 ' WAS'	RT	---	---	15
		37+34 ' WAS'	- 37+61 ' WAS'	RT	---	---	20
		38+70 ' WAS'	- 39+20 ' WAS'	RT	---	---	40
		39+24 ' WAS'	- 39+69 ' WAS'	RT	---	---	36
		40+57 ' WAS'	- 41+03 ' WAS'	RT	---	---	37
		41+04 ' WAS'	- 41+60 ' WAS'	RT	---	---	45
		45+31 ' WAS'	- 46+21 ' WAS'	LT/RT	110	327	---
		44+78 ' WAS'	- 45+31 ' WAS'	RT	11	33	---
SUBTOTALS (STAGE 1)					121	360	421
3		46+72 ' WAS'	- 46+96 ' WAS'	LT	15	45	---
		106+10 ' CAS'	- 106+45 ' CAS'	RT	---	---	34
		107+12 ' CAS'	- 107+30 ' CAS'	RT	---	---	6
SUBTOTALS (STAGE 3)					15	45	40
TOTALS					136	405	461

PIPE ARCH CORRUGATED STEEL ITEMS

CATEGORY	STAGE	STATION -	STATION	LOCATION	521.3742 PIPE ARCH CORRUGATED STEEL 42X29-INCH LF	SPV.0060.04 SALVAGE & REINSTALL APRON ENDWALL EACH
0010	1	44+28 ' WAS'	- 45+44 ' WAS'	RT	90	1
TOTALS					90	1

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE.

CULVERT PIPE SUMMARY

CULVERT PIPE REINFORCED CONCRETE											
HORIZONTAL ELLIPTICAL											
CATEGORY	FROM STRUCTURE	TO STRUCTURE	CLASS III			CLASS HE-III				CLASS HE-IV	
			522.0112	522.0124	522.0130	522.2324	522.2329	522.2334	522.2338	522.2419	522.2424
			12-INCH LF	24-INCH LF	30-INCH LF	24X38-INCH LF	29X45-INCH LF	34X53-INCH LF	38X60-INCH LF	19X30-INCH LF	24X38-INCH LF
0010	203	203 0	---	40	---	---	---	---	---	---	---
	204	204 0	---	---	---	---	---	---	---	---	73
	205	205 0	---	---	---	---	---	---	---	---	72
	206	206 0	24	---	---	---	---	---	---	---	---
	217	217 0	---	---	---	53	---	---	---	---	---
	218	218 0	---	---	---	53	---	---	---	---	---
	219	219 0	---	---	---	---	---	---	60	---	---
	232	232 0	---	---	---	---	---	---	---	---	29
	233	233 0	---	---	---	---	---	---	---	---	29
	235	235 0	---	---	103	---	---	---	---	---	---
	246	246 0	---	---	---	44	---	---	---	---	---
	247	247 0	---	---	---	44	---	---	---	---	---
	248	248 0	---	---	---	---	---	31	---	---	---
	252	252 0	---	---	---	---	---	---	39	---	---
	286	286 0	---	---	---	---	---	---	---	40	---
	288	288 0	---	---	---	---	36	---	---	---	---
	294	294 0	---	---	---	---	36	---	---	---	---
TOTALS			24	40	103	194	73	31	39	100	203

STORM SEWER PIPE REINFORCED CONCRETE

		608.0412 608.0415 608.0418 608.0421 608.0424 608.0436						608.2348
		CLASS IV						HORIZONTAL ELLIPTICAL CLASS HE-III
FROM	TO	12-INCH	15-INCH	18-INCH	21-INCH	24-INCH	36-INCH	48X76-INCH
STRUCTURE		LF	LF	LF	LF	LF	LF	LF
210	214	158	---	---	---	---	---	---
211	210	49	---	---	---	---	---	---
214	220	---	173	---	---	---	---	---
215	214	49	---	---	---	---	---	---
220	220 0	---	35	---	---	---	---	---
221	220	44	---	---	---	---	---	---
230	230 0	28	---	---	---	---	---	---
231	230	35	---	---	---	---	---	---
240	240 0	---	10	---	---	---	---	---
241	240	35	---	---	---	---	---	---
242	240	10	---	---	---	---	---	---
243	241	10	---	---	---	---	---	---
249	254	---	---	---	---	---	30	---
250	250 0	11	---	---	---	---	---	---
251	250	39	---	---	---	---	---	---
253	254	31	---	---	---	---	---	---
254	254A	---	---	---	---	---	34	---
255	255A	---	---	---	---	---	---	41
255A	256	---	---	---	---	---	---	17
256	257	---	---	---	---	---	---	82
257	258	---	---	---	---	---	---	311
258	258A	---	---	---	---	---	---	13
258A	258 0	---	---	---	---	---	---	79
260	263	10	---	---	---	---	---	---
261	264	10	---	---	---	---	---	---
262	256	12	---	---	---	---	---	---
263	263A	34	---	---	---	---	---	---
264	264A	---	---	6	---	---	---	---
265	264	---	---	25	---	---	---	---
265A	265	25	---	---	---	---	---	---
266	263	49	---	---	---	---	---	---
270	272	10	---	---	---	---	---	---
271	273	10	---	---	---	---	---	---
272	258	28	---	---	---	---	---	---
273	258	8	---	---	---	---	---	---
280	281	35	---	---	---	---	---	---
281	281 0	22	---	---	---	---	---	---
285	285 0	---	---	---	---	---	42	---
290	290 0	15	---	---	---	---	---	---
291	290	35	---	---	---	---	---	---
300	300 0	21	---	---	---	---	---	---
301	300	35	---	---	---	---	---	---
400	400A	---	---	---	---	10	---	---
401	400	---	---	16	---	---	---	---
402	401	10	---	---	---	---	---	---

CON' T ABOVE

STORM SEWER PIPE REINFORCED CONCRETE (CON' T)

403	401	---	21	---	---	---	---	---
404	403	---	22	---	---	---	---	---
405	404	9	---	---	---	---	---	---
410	400	---	---	---	---	127	---	---
411	412	9	---	---	---	---	---	---
412	410	39	---	---	---	---	---	---
413	412	34	---	---	---	---	---	---
415	410	---	---	---	---	77	---	---
415A	415	---	---	---	---	6	---	---
420	404	---	24	---	---	---	---	---
421	420	10	---	---	---	---	---	---
422	421	31	---	---	---	---	---	---
423	422	8	---	---	---	---	---	---
425	425 0	---	---	135	---	---	---	---
430	431	---	---	7	---	---	---	---
431	432	---	---	23	---	---	---	---
432	434	---	---	13	---	---	---	---
433	433 0	---	---	---	---	74	---	---
434	433	---	---	7	---	---	---	---
435	434	8	---	---	---	---	---	---
438	441	10	---	---	---	---	---	---
439	450	---	57	---	---	---	---	---
440	452	---	10	---	---	---	---	---
441	440	21	---	---	---	---	---	---
442	441	19	---	---	---	---	---	---
443	442	22	---	---	---	---	---	---
444	443	10	---	---	---	---	---	---
445	450	---	---	68	---	---	---	---
445A	445	15	---	---	---	---	---	---
450	452	---	---	30	---	---	---	---
452	454	---	---	39	---	---	---	---
454	430	---	---	36	---	---	---	---
TOTALS		1111	351	405	6	288	106	544

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APRON ENDWALLS AND RIP RAP SUMMARY

522.101 522.102 522.1018 522.1024 522.1030 522.1036 522.2619 522.2624 522.2629 522.2634 522.2638 522.2648 633.5200 650.4000 606.0200 606.0300 645.0120

APRON ENDWALLS FOR CULVERT PIPE

REINFORCED CONCRETE

HORIZONTAL ELLIPTICAL

CATEGORY	STRUCT. NO.	STATION	OFFSET	12-INCH EACH	15-INCH EACH	18-INCH EACH	24-INCH EACH	30-INCH EACH	36-INCH EACH	HORIZONTAL ELLIPTICAL						MARKERS CULVERT EACH	CONSTRUCTION STAKING STORM SEWER EACH	RI PRAP MEDIUM CY	RI PRAP HEAVY CY	GEOTEXTILE TYPE HR SY
										19X30-INCH EACH	24X38-INCH EACH	29X45-INCH EACH	34X53-INCH EACH	38X60-INCH EACH	48X76-INCH EACH					
0010	203	10+56.46	'WAS' 38.7' RT	---	---	---	1	---	---	---	---	---	---	---	1	1	---	---	---	
	203 0	10+93.98	'WAS' 42.2' RT	---	---	---	1	---	---	---	---	---	---	---	1	1	3	---	9	
	204	11+12.48	'WAS' 37.1' LT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	204 0	11+12.85	'WAS' 35.7' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	205	11+19.26	'WAS' 36.9' LT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	205 0	11+19.66	'WAS' 35.4' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	206	11+63.25	'WAS' 44.4' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	---	---	---	
	206 0	11+39.87	'WAS' 43.5' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	217	14+56.25	'WAS' 51.7' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	217 0	15+09.76	'WAS' 51.6' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	218	14+56.20	'WAS' 58.5' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	218 0	15+09.80	'WAS' 58.4' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	219	15+81.90	'WAS' 45.8' LT	---	---	---	---	---	---	1	---	---	---	---	1	1	---	---	---	
	219 0	16+41.38	'WAS' 55.1' LT	---	---	---	---	---	---	1	---	---	---	---	1	1	3	---	9	
	220 0	16+54.86	'WAS' 49.4' LT	---	1	---	---	---	---	---	---	---	---	---	1	1	3	---	9	
	230 0	18+94.42	'WAS' 45.5' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	232	19+00.50	'WAS' 50.0' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	232 0	19+29.28	'WAS' 50.9' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	233	19+00.30	'WAS' 56.3' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	233 0	19+29.07	'WAS' 57.2' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	235	20+58.89	'WAS' 54.2' LT	---	---	---	---	1	---	---	---	---	---	---	1	1	---	---	---	
	235 0	21+60.55	'WAS' 40.8' LT	---	---	---	---	1	---	---	---	---	---	---	1	1	6	---	18	
	240 0	22+40.06	'WAS' 27.7' LT	---	1	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	246	23+39.55	'WAS' 42.0' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	246 0	23+83.36	'WAS' 46.5' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	247	23+38.94	'WAS' 48.6' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	247 0	23+82.74	'WAS' 52.8' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	5	---	15	
	248	24+47.12	'WAS' 54.5' RT	---	---	---	---	---	---	---	---	---	1	---	1	1	---	---	---	
	248 0	24+77.95	'WAS' 56.1' RT	---	---	---	---	---	---	---	---	---	1	---	1	1	8	---	24	
	250 0	25+63.95	'WAS' 32.3' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	252	25+68.51	'WAS' 50.6' RT	---	---	---	---	---	---	---	---	---	---	1	1	1	---	---	---	
	252 0	26+07.23	'WAS' 50.7' RT	---	---	---	---	---	---	---	---	---	---	1	1	1	9	---	27	
	253	28+20.28	'WAS' 60.0' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	---	---	---	
	255	27+90.66	'WAS' 43.7' RT	---	---	---	---	---	---	---	---	---	---	---	1	1	---	---	---	
	258 0	32+93.01	'WAS' 63.7' RT	---	---	---	---	---	---	---	---	---	---	---	1	1	---	24	72	
	266	29+37.55	'WAS' 63.7' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	---	---	---	
	281 0	37+13.97	'WAS' 39.1' RT	1	---	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	285 0	37+53.55	'WAS' 57.7' LT	---	---	---	---	---	1	---	---	---	---	---	1	1	8	---	24	
	286	39+14.41	'WAS' 51.3' LT	---	---	---	---	---	---	1	---	---	---	---	1	1	---	---	---	
	286 0	38+74.28	'WAS' 50.9' LT	---	---	---	---	---	---	1	---	---	---	---	1	1	5	---	15	
	288	39+65.70	'WAS' 35.8' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	288 0	39+29.21	'WAS' 36.3' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	7	---	21	
	290 0	39+99.18	'WAS' 32.4' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	294	40+98.57	'WAS' 43.5' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	---	---	---	
	294 0	40+62.44	'WAS' 41.6' RT	---	---	---	---	---	---	---	1	---	---	---	1	1	7	---	21	
	300 0	42+90.13	'WAS' 36.6' LT	1	---	---	---	---	---	---	---	---	---	---	1	1	2	---	6	
	425 0	44+66.91	'WAS' 74.7' RT	---	---	1	---	---	---	---	---	---	---	---	1	1	8	---	24	
	433 0	44+76.68	'WAS' 67.9' RT	---	---	---	1	---	---	---	---	---	---	---	1	1	5	---	15	
TOTALS				9	2	1	3	2	1	4	16	4	2	2	2	48	48	126	24	450

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE



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ASPHALTIC ITEMS

CATEGORY	STAGE	STATION	- STATION	LOCATION	455.0605	460.5223	460.6444	465.0105	465.0120	465.0125	465.0305
					TACK COAT GAL	HMA PAVEMENT 3 LT 58-28 S TON	HMA PAVEMENT 4 MT 58-34 H TON	ASPHALTIC SURFACE TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	ASPHALTIC SURFACE TEMPORARY TON	ASPHALTIC SURFACE SAFETY ISLANDS TON
0010	PRE	46+01 'WAS'	- 46+92 'WAS'	LT/RT	---	---	---	---	---	71	---
		99+45 'CAS'	- 101+45 'CAS'	LT/RT	---	---	---	---	---	54	---
SUBTOTALS (PRE-STAGE)					---	---	---	---	---	125	---
1	10+00 'WAS'	- 23+00 'WAS'		LT/RT	285	951	793	210	32	---	---
	23+00 'WAS'	- 35+00 'WAS'		LT/RT	255	852	710	199	42	---	---
	35+00 'WAS'	- 44+00 'WAS'		LT/RT	125	417	348	22	53	---	---
	44+00 'WAS'	- 47+05 'WAS'		LT/RT	---	251	---	55	---	---	---
	100+00 'CAS'	- 103+50 'CAS'		LT	---	102	---	---	---	---	---
SUBTOTALS (STAGE 1)					665	2,573	1,851	486	127	---	---
2	45+60 'WAS'	- 47+12 'WAS'			---	107	---	---	---	---	---
	101+50 'CAS'	- 103+50 'CAS'			---	34	---	---	---	---	---
SUBTOTALS (STAGE 2)					---	141	---	---	---	---	---
3	46+14 'WAS'	- 47+49 'WAS'			---	97	---	17	---	---	---
	100+00 'CAS'	- 103+24 'CAS'			---	87	---	2	---	---	---
SUBTOTALS (STAGE 3)					---	184	---	19	---	---	---
4	99+45 'CAS'	- 101+53 'CAS'			---	16	---	---	---	---	32
SUBTOTALS (STAGE 4)					---	16	---	---	---	---	32
5	44+00 'WAS'	- 47+49 'WAS'			135	---	379	---	---	---	---
	101+50 'CAS'	- 103+50 'CAS'			71	---	198	---	---	---	---
SUBTOTALS (STAGE 5)					206	---	577	---	---	---	---
TOTALS					871	2,914	2,428	505	127	125	32

CONCRETE CURB AND CONCRETE CURB & GUTTER SUMMARY

CATEGORY	STAGE	STATION	- STATION	LOCATION	601.0405	601.0411	601.0551	601.0553	601.0580	601.0600	650.5500
					18-INCH TYPE A LF	30-INCH TYPE D LF	4-INCH SLOPED 36-INCH TYPE A LF	4-INCH SLOPED 36-INCH TYPE D LF	4-INCH SLOPED 36-INCH TYPE R LF	CONCRETE CURB PEDESTRIAN LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	1	10+00 'WAS'	- 23+00 'WAS'	LT/RT	---	2,600	---	---	---	---	2,600
		23+00 'WAS'	- 35+00 'WAS'	LT/RT	---	2,370	---	---	---	---	2,370
		35+00 'WAS'	- 44+00 'WAS'	LT/RT	---	1,390	---	---	---	---	1,390
		44+00 'WAS'	- 46+77 'WAS'	LT/RT	200	695	100	---	285	88	1,370
		100+00 'CAS'	- 103+23 'CAS'	LT	---	26	---	---	---	---	26
SUBTOTALS (STAGE 1)					200	7,081	100	0	285	88	7,756
2	45+78 'WAS'	- 46+19 'WAS'		RT	---	100	---	---	---	---	100
	100+00 'CAS'	- 103+50 'CAS'		RT	---	27	---	---	---	---	27
SUBTOTALS (STAGE 2)					0	127	0	0	0	0	127
3	46+18 'WAS'	- 47+49 'WAS'		LT/RT	---	385	97	---	---	18	500
	99+45 'CAS'	- 103+24 'CAS'		LT/RT	---	260	---	---	---	---	260
SUBTOTALS (STAGE 3)					0	645	97	0	0	18	760
4	99+45 'CAS'	- 101+43 'CAS'		LT	---	---	---	395	---	---	395
SUBTOTALS (STAGE 4)					0	0	0	395	0	0	395
TOTALS					200	7,853	197	395	285	106	9,038

CONCRETE SIDEWALK SUMMARY

CATEGORY	STAGE	STATION	-	STATION	LOCATION	602.0410	602.0505	405.0100	650.9000
						CONCRETE SIDEWALK 5-INCH SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	COLORING CONCRETE WISDOT RED CY	CONSTRUCTION STAKING CURB RAMPS EACH
0010	1	23+00	'WAS'	-	35+00	'WAS'	LT/RT	---	4
		44+00	'WAS'	-	46+75	'WAS'	LT/RT	23	10
SUBTOTALS (STAGE 1)						3,125	180	23	14
3	3	45+84	'WAS'	-	47+00	'WAS'	LT/RT	5	6
		SUBTOTALS (STAGE 3)						815	72
TOTALS						3,940	252	28	20

MOBILIZATION

CATEGORY	PROJECT	619.1000 EACH
0010	7994-00-51	1

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE.

ADJUSTING COVERS SUMMARY

CATEGORY	STAGE	STATION	LOCATION	611.8110	611.8115	SPV.0060.03
				ADJUSTING MANHOLE COVERS EACH	ADJUSTING INLET COVERS EACH	INLET COVERS TYPE DW EACH
0010	PRE-STAGE	5+78'	EX CA'	22'	LT	---
		5+86'	EX CA'	44'	LT	---
		6+32'	EX CA'	43'	LT	---
	3	104+56'	'CAS'	41'	RT	---
TOTALS				1	1	2

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STAGE	STATION	LOCATION	620.0300	REMARKS	
				SF		
0010	1	44+75'	'WAS'	LT	61	TYPE 1
		44+98'	'WAS'	LT	20	TYPE 2
		45+05'	'WAS'	LT	17	TYPE 2
		103+82'	'CAS'	LT	60	TYPE 1
		104+18'	'CAS'	LT	20	TYPE 2
		104+25'	'CAS'	LT	17	TYPE 2
		105+62'	'CAS'	LT	20	TYPE 2
		105+71'	'CAS'	LT	17	TYPE 2
		106+07'	'CAS'	LT	60	TYPE 1
		SUBTOTAL (STAGE 1)				292
3	3	46+48'	'WAS'	LT	20	TYPE 2
		46+57'	'WAS'	LT	18	TYPE 2
		46+82'	'WAS'	LT	52	TYPE 1
SUBTOTAL (STAGE 3)				90		
4	4	101+46'	'WAS'	LT	64	TYPE 1
SUBTOTAL (STAGE 4)				64		
TOTAL				446		

MANHOLES AND INLETS SUMMARY

STRUCTURE NUMBER	STATION	OFFSET	611. 2004 611. 2504 611. 2005 611. 2006				611. 3230 611. 3004 611. 3901 611. 3902 611. 3225			611. 0535 611. 0530		611. 0624 611. 0636 611. 0639 611. 0642 611. 0652		650. 4000						
			MANHOLES				INLETS			MANHOLE COVERS		INLET COVERS		CONSTRUCTION						
			VARIABLE				2X3-FT	4-FT	MEDI AN	MEDI AN	2X2. 5-FT	TYPE		STAKING						
			4-FT	TEE	4-FT	5-FT						6-FT	DI AMETER	1	2	J-SPECIAL	TYPE J	TYPE H	TYPE HM-S	TYPE H-S
			DI AMETER	DI AMETER	DI AMETER	DI AMETER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH			
210	13+00.00	'WAS'	31.5	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
211	13+00.00	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
214	14+55.14	'WAS'	31.5	'LT	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---	1
215	14+54.78	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
220	16+28.70	'WAS'	26.1	'LT	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---	1
221	16+26.32	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
230	18+93.80	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
231	18+94.10	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
240	22+39.98	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
241	22+40.11	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
242	22+50.00	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
243	22+50.09	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
249	27+91.25	'WAS'	41.7	'LT	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1
250	25+64.26	'WAS'	21.4	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
251	25+65.01	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
254	28+18.28	'WAS'	29.5	'LT	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1
256	28+27.97	'WAS'	7.8	'RT	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	1
257	29+10.26	'WAS'	8.0	'RT	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	1
258	32+21.55	'WAS'	10.1	'RT	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	1
260	28+92.93	'WAS'	29.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
261	28+92.87	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
262	28+27.64	'WAS'	19.8	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
263	29+02.93	'WAS'	29.5	'LT	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	1
264	29+02.86	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
265	29+00.04	'WAS'	42.2	'RT	---	---	---	---	---	---	---	1	---	---	---	---	---	2	---	1
270	32+30.28	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
271	32+30.59	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
272	32+20.44	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
273	32+20.44	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
280	37+14.50	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
281	37+14.59	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
285	37+91.45	'WAS'	39.2	'LT	---	---	---	---	---	---	---	1	---	---	---	---	---	2	---	1
290	40+00.00	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
291	40+00.00	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
300	43+00.01	'WAS'	17.5	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
301	43+00.00	'WAS'	17.5	'RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
400	44+75.67	'WAS'	41.6	'LT	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	1
401	44+86.79	'WAS'	41.4	'LT	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	1
402	44+92.10	'WAS'	47.8	'LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	1
403	44+92.83	'WAS'	22.1	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
404	44+98.94	'WAS'	1.5	'LT	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---	1
405	10+70.32	'A'	21.5	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
410	105+98.80	'CAS'	60.6	'LT	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	1
411	11+74.40	'A'	21.5	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1
412	105+76.70	'CAS'	29.7	'LT	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1

CON' T ON NEXT PAGE

MANHOLES AND INLETS SUMMARY (CON'T)

STRUCTURE NUMBER	STATION	OFFSET	611. 2004 611. 2504 611. 2005 611. 2006 MANHOLES				611. 3230 611. 3004 611. 3901 611. 3902 611. 3225 INLETS					611. 0535 611. 0530 MANHOLE COVERS		611. 0624 611. 0636 611. 0639 611. 0642 611. 0652 INLET COVERS				650. 4000 CONSTRUCTION		
			4-FT DIAMETER EACH	VARIABLE TEE		5-FT DIAMETER EACH	6-FT DIAMETER EACH	2X3-FT EACH	4-FT DIAMETER EACH	MEDI AN 1 GRATE EACH	MEDI AN 2 GRATE EACH	2X2. 5-FT EACH	TYPE		TYPE H EACH	TYPE HM-S EACH	TYPE H-S EACH	TYPE MS EACH	TYPE T EACH	STORM SEWER EACH
				4-FT DIAMETER EACH	4-FT DIAMETER EACH								J-SPECIAL EACH	TYPE J EACH						
413	105+99. 34	' CAS' 5. 6 ' LT	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1	
415	106+67. 34	' CAS' 29. 6 ' LT	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1	
420	45+10. 01	' WAS' 20. 0 ' RT	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	1	
421	45+11. 80	' WAS' 24. 0 ' RT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	1	
422	10+47. 44	' A' 1. 7 ' RT	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	1	
423	10+38. 77	' A' 1. 7 ' RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	1	1	
425	104+25. 26	' CAS' 39. 6 ' RT	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	1	
430	104+29. 67	' CAS' 21. 6 ' RT	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	1	
431	104+23. 06	' CAS' 20. 9 ' RT	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	1	
432	104+18. 11	' CAS' 1. 5 ' LT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
433	104+12. 07	' CAS' 21. 1 ' LT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
434	104+14. 00	' CAS' 14. 0 ' LT	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1	
435	10+13. 49	' A' 21. 5 ' LT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
438	12+32. 93	' A' 21. 5 ' LT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
439	47+44. 62	' WAS' 19. 5 ' RT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
440	46+52. 37	' WAS' 19. 5 ' RT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
441	46+55. 53	' WAS' 1. 5 ' LT	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	1	
442	46+62. 95	' WAS' 19. 1 ' LT	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---	---	1	
443	46+74. 98	' WAS' 36. 9 ' LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	1	
444	46+71. 29	' WAS' 46. 0 ' LT	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	1	
445	46+95. 20	' WAS' 38. 2 ' LT	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1	
450	46+83. 90	' WAS' 28. 4 ' RT	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1	
452	46+51. 20	' WAS' 29. 5 ' RT	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	1	
454	12+68. 65	' A' 29. 9 ' LT	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	1	
TOTALS			6	3	1	1	41	11	1	3	2	5	5	29	4	20	5	2	69	

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

STORM SEWER ITEMS

CATEGORY	STRUCT. NO.	STATION	OFFSET	SPV. 0060. 14 520. 8000 STORM SEWER TAP CONCRETE COLLARS FOR PIPE	
				EACH	EACH
0010	265A	28+94. 03 ' WAS'	66. 3 ' RT	---	1
	400A	44+68. 62 ' WAS'	40. 6 ' LT	---	1
	415A	106+73. 34 ' CAS'	29. 8 ' LT	---	1
	445A	47+08. 25 ' WAS'	35. 8 ' LT	---	1
	254A	28+18. 52 ' WAS'	4. 2 ' RT	1	---
	255A	28+11. 21 ' WAS'	7. 8 ' RT	---	---
	258A	32+35. 03 ' WAS'	9. 4 ' RT	---	---
	263A	29+02. 86 ' WAS'	4. 4 ' RT	1	---
	264A	29+02. 85 ' WAS'	11. 5 ' RT	1	---
TOTALS				3	4

MISCELLANEOUS STORM SEWER ITEMS

CATEGORY	STRUCT. NO.	STATION	OFFSET	SPV. 0060. 13 48x76-INCH BEND STORM SEWER PIPE		SPV. 0060. 05 PYRAMIDAL INLET GRATE 2 FT 6 IN x 5 FT 4 IN	
				EACH	EACH	EACH	EACH
0010	255A	28+11. 21 ' WAS'	7. 8 ' RT	1	---	---	---
	258A	32+35. 03 ' WAS'	9. 4 ' RT	1	---	---	---
	249	27+91. 25 ' WAS'	41. 7 ' LT	---	---	1	---
TOTALS				2	1	---	---

PIPE GRATE SUMMARY

611. 9850. S. 01 611. 9850. S. 02 611. 9850. S. 03 611. 9850. S. 04 611. 9850. S. 05 611. 9850. S. 06 611. 9850. S. 07 611. 9850. S. 08

CATEGORY	STRUCT. NO.	STATION	OFFSET	PIPE GRATES								
				24-INCH EACH	30-INCH EACH	19X30-INCH EACH	24X38-INCH EACH	29X45-INCH EACH	34X53-INCH EACH	38X60-INCH EACH	48X76-INCH EACH	
0010	203	10+56.46 'WAS'	38.7 'RT	1	---	---	---	---	---	---	---	---
	204	11+12.48 'WAS'	37.1 'LT	---	---	---	1	---	---	---	---	---
	205	11+19.26 'WAS'	36.9 'LT	---	---	---	1	---	---	---	---	---
	217	14+56.25 'WAS'	51.7 'RT	---	---	---	1	---	---	---	---	---
	218	14+56.20 'WAS'	58.5 'RT	---	---	---	1	---	---	---	---	---
	219	15+81.90 'WAS'	45.8 'LT	---	---	1	---	---	---	---	---	---
	232	19+00.50 'WAS'	50.0 'RT	---	---	---	1	---	---	---	---	---
	233	19+00.30 'WAS'	56.3 'RT	---	---	---	1	---	---	---	---	---
	235	20+58.89 'WAS'	54.2 'LT	---	1	---	---	---	---	---	---	---
	246	23+39.55 'WAS'	42.0 'RT	---	---	---	1	---	---	---	---	---
	247	23+38.94 'WAS'	48.6 'RT	---	---	---	1	---	---	---	---	---
	248	24+47.12 'WAS'	54.5 'RT	---	---	---	---	---	1	---	---	---
	252	25+68.51 'WAS'	50.6 'RT	---	---	---	---	---	---	1	---	---
	255	27+90.66 'WAS'	43.7 'RT	---	---	---	---	---	---	---	1	---
	286	39+14.41 'WAS'	51.3 'LT	---	---	1	---	---	---	---	---	---
	288	39+65.70 'WAS'	35.8 'RT	---	---	---	---	1	---	---	---	---
	294	40+98.57 'WAS'	43.5 'RT	---	---	---	---	1	---	---	---	---
TOTALS				1	1	2	8	2	1	1	1	1

POND AND RESTORATION SUMMARY

CATEGORY	LOCATION	SPV. 0060. 08	SPV. 0060. 09	640. 1303. S	SPV. 0060. 11	SPV. 0060. 12
		BI OI NFIL TRATI ON	BI OI NFIL TRATI ON	POND	CONSTRUCTI ON STAKI NG	CONSTRUCTI ON STAKI NG
		BASI N	BASI N	LINER CLAY	STORMWATER MANAGEMENT	STORMWATER MANAGEMENT
		1	2		BI OI NFIL TRATI ON BASI N 1	BI OI NFIL TRATI ON BASI N 2
		EACH	EACH	CY	EACH	EACH
001	21+05 - 28+05' WAS'	1	---	563	1	---
	37+62 - 38+74' WAS'	---	1	88	---	1
TOTALS		1	1	651	1	1

SILT FENCE

CATEGORY	STATION - STATION	LOCATION	628. 1504	628. 1520
			SILT FENCE LF	SILT FENCE MAINTENANCE LF
0010	20+58 'WAS' - 27+05 'WAS'	LT	655	655
	20+99 'WAS' - 28+14 'WAS'	LT	1,440	1,440
	31+98 'WAS' - 34+46 'WAS'	RT	265	265
	31+98 'WAS' - 34+43 'WAS'	LT	305	305
	36+76 'WAS' - 37+94 'WAS'	LT	140	140
	36+96 'WAS' - 37+39 'WAS'	RT	70	70
	37+62 'WAS' - 38+75 'WAS'	LT	255	255
	44+01 'WAS' - 46+86 'WAS'	LT	300	300
	44+33 'WAS' - 45+12 'WAS'	RT	89	89
	46+97 'WAS' - 47+49 'WAS'	LT	105	105
	100+00 'CAS' - 102+30 'CAS'	LT	220	220
	106+34 'CAS' - 107+12 'CAS'	RT	76	76
TOTALS			3,920	3,920

EROSION MAT

CATEGORY	STAGE	STATION - STATION	LOCATION	628. 2006	628. 2008	628. 2023
				URBAN CLASS I TYPE A SY	URBAN CLASS I TYPE B SY	CLASS II TYPE B SY
0010	1	10+00 'WAS' - 23+00 'WAS'	LT/RT	215	9,560	150
		23+00 'WAS' - 35+00 'WAS'	LT/RT	605	7,480	270
		35+00 'WAS' - 44+00 'WAS'	LT/RT	---	2,720	75
		44+00 'WAS' - 47+49 'WAS'	LT/RT	750	1,550	---
		100+00 'CAS' - 103+50 'CAS'	RT	5	1,130	---
UNDISTRIBUTED				395	5,610	125
TOTALS				1,970	28,050	620

MOBILIZATIONS EROSION CONTROL

CATEGORY	STAGE	628. 1905	628. 1910
		MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PRE	1	0
	1	2	3
	2	1	0
	3	1	1
TOTALS		5	4

FINISHING SUMMARY

CATEGORY	STATION - STATION	LOCATION	625. 0100	627. 0200	629. 0210	630. 0130	630. 0171	630. 0300	SPV. 0085. 01	630. 0500
			TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	SEEDING MIXTURE NO. 70A LB	SEEDING BORROW PIT LB	STORMWATER BIOFILTRATION MIX LB	SEED WATER MGAL
0010	10+00 'WAS' - 23+00 'WAS'	RT/LT	9,773	---	0.7	121	11.0	---	0.04	235.0
	23+00 'WAS' - 35+00 'WAS'	RT/LT	8,082	---	0.6	96	10.0	---	0.08	194.3
	35+00 'WAS' - 44+00 'WAS'	RT/LT	2,719	---	0.2	35	2.8	---	0.02	65.4
	44+00 'WAS' - 47+49 'WAS'	RT/LT	2,305	---	0.2	24	3.5	---	---	55.4
	100+00 'CAS' - 103+50 'CAS'	RT/LT	1,131	---	0.1	27	1.3	---	---	27.2
WASTE/BORROW SITE			---	2,450	0.2	---	---	66	---	---
UNDISTRIBUTED			6,000	---	0.4	75	---	---	---	144
TOTALS			30,009	2,450	2.3	377	28.6	66	0.14	721.3

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	628. 7504 LF
0010	12+52	' WAS' RT	12
	13+89	' WAS' RT	12
	13+94	' WAS' LT	14
	15+44	' WAS' LT	15
	16+96	' WAS' RT	12
	17+75	' WAS' LT	12
	18+69	' WAS' RT	12
	21+72	' WAS' RT	16
	27+07	' WAS' RT	10
	42+10	' WAS' RT	20
	43+72	' WAS' RT	20
	100+28	' CAS' RT	8
	103+60	' CAS' RT	8
TOTAL			171

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	SIZE PIPE	628. 7555 EACH
0010	10+50	' WAS' RT	24 INCH	6
	11+12	' WAS' LT	24X38 INCH	8
	11+19	' WAS' LT	24X38 INCH	8
	11+69	' WAS' LT	12 INCH	4
	12+60	' WAS' LT	19X30 INCH	6
	12+60	' WAS' LT	19X30 INCH	6
	14+50	' WAS' RT	24X38 INCH	8
	14+50	' WAS' RT	24X38 INCH	8
	15+76	' WAS' LT	19X30 INCH	6
	18+94	' WAS' RT	24X38 INCH	8
	18+94	' WAS' RT	24X38 INCH	8
	20+53	' WAS' LT	30 INCH	6
	23+33	' WAS' RT	24X38 INCH	8
	23+34	' WAS' RT	24X38 INCH	8
	24+39	' WAS' RT	34X53 INCH	10
	25+60	' WAS' RT	38X60 INCH	10
	27+87	' WAS' RT	48X76 INCH	10
	29+42	' WAS' LT	24-INCH	6
	37+64	' WAS' RT	36-INCH	6
	39+21	' WAS' LT	24 INCH	6
	39+72	' WAS' RT	29X45 INCH	8
	41+06	' WAS' RT	29X45 INCH	8
TOTAL				162

INLET PROTECTION SUMMARY

CATEGORY	STATION - STATION	LOCATION	628. 7005	628. 7015	628. 7020
			INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE C EACH	INLET PROTECTION TYPE D EACH
0010	10+00 ' WAS' - 23+00 ' WAS'	RT/LT	12	8	4
	23+00 ' WAS' - 35+00 ' WAS'	RT/LT	14	5	8
	35+00 ' WAS' - 44+00 ' WAS'	RT/LT	7	8	---
	44+00 ' WAS' - 47+49 ' WAS'	RT/LT	26	16	10
	106+50 ' CAS' - 108+50 ' CAS'	RT/LT	1	2	---
TOTALS			60	39	22

FIELD OFFICE TYPE C

CATEGORY	PROJECT	642. 5201 EACH
0010	7994-00-51	1

TRACKING PADS

CATEGORY	LOCATION	628. 7560 EACH
0010	UNDI STRIBUTED	4

PERMANENT SIGNING SUMMARY

637.2210 637.2230 634.0810 634.0811 634.0812 634.0814 634.0816

CATEGORY	SIGN APPROX. NO.	STA.	ALIGNMENT	LOC.	SIGN CODE	SIGN MESSAGE	SIGN SIZE (W x H) IN	SIGNS		POSTS TUBULAR STEEL 2x2-INCH					REMARKS
								TYPE II REFLECTIVE H SF	TYPE II REFLECTIVE F SF	x 10-FT	x 11-FT	x 12-FT	x 14-FT	x 16-FT	
0010															
	100	10+80	' WAS'	LT	W11-2	PEDESTRIAN CROSSING SYMBOL	30 x 30	---	6.3	---	---	---	1	---	
	100	10+80	' WAS'	LT	W016-9P	CONVENTIONAL ARROW AHEAD PLAQUE	24 x 12	---	2.0	---	---	---	---	---	MOUNT BELOW W11-2
	200	17+15	' WAS'	RT	R2-1	SPEED LIMIT_ MPH	24 x 30	5.0	---	---	---	1	---	---	
	300	23+25	' WAS'	RT	R8-3	NO PARKING	24 x 24	4.0	---	---	1	---	---	---	
	301	26+10	' WAS'	RT	R8-3	NO PARKING	24 x 24	4.0	---	---	1	---	---	---	
	302	27+70	' WAS'	RT	R8-3	NO PARKING	24 x 24	4.0	---	---	1	---	---	---	
	400	28+70	' WAS'	RT	R1-1	STOP	30 x 30	5.2	---	---	1	---	---	---	
	401	29+55	' WAS'	RT	R8-3	NO PARKING	24 x 24	4.0	---	---	1	---	---	---	
	402	31+00	' WAS'	RT	R8-3	NO PARKING	24 x 24	4.0	---	---	1	---	---	---	
	500	37+05	' WAS'	RT	R8-3	NO PARKING	24 x 24	4.0	---	---	1	---	---	---	
	600	42+27	' WAS'	RT	W2-6	CIRCULAR INTERSECTION SIGN	30 x 30	---	6.3	---	---	---	1	---	
	600	42+27	' WAS'	RT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	18 x 18	---	2.3	---	---	---	---	---	MOUNT BELOW W2-6
	700	45+00	' WAS'	MEDI AN	R1-2	YIELD	36 x 31	3.9	---	---	---	---	1	---	
	701	44+95	' WAS'	MEDI AN	D1-1	ONE DESTINATION (ARROW)	84 x 15	8.8	---	---	1	---	---	---	
	702	106+76	' CAS'	LT	D1-62	ROUNDABOUT DESTINATION - DI RECTION SIGN	138 x 66	---	---	---	---	---	---	1	
	703	105+80	' CAS'	LT	R1-2	YIELD	36 x 31	3.9	---	---	---	---	1	---	
	704	106+01	' CAS'	MEDI AN	R4-7	KEEP RIGHT	24 x 30	5.0	---	---	1	---	---	---	
	705	105+72	' CAS'	MEDI AN	R1-2	YIELD	36 x 31	3.9	---	---	---	1	---	---	
	706	105+66	' CAS'	MEDI AN	D1-1	ONE DESTINATION (ARROW)	84 x 15	8.8	---	---	1	---	---	---	
	707	46+83	' WAS'	LT	R1-2	YIELD	36 x 31	3.9	---	---	---	---	1	---	
	708	47+43	' WAS'	LT	D1-62	ROUNDABOUT DESTINATION - DI RECTION SIGN	144 x 66	---	---	---	---	---	---	1	
	709	106+53	' CAS'	RT	W2-6	CIRCULAR INTERSECTION SIGN	30 x 30	---	6.3	---	---	---	1	---	
	709	106+53	' CAS'	RT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	18 x 18	---	2.3	---	---	---	---	---	MOUNT BELOW W2-6
	710	46+77	' WAS'	MEDI AN	R4-7	KEEP RIGHT	24 x 30	5.0	---	---	1	---	---	---	
	711	46+58	' WAS'	MEDI AN	R1-2	YIELD	36 x 31	3.9	---	---	---	1	---	---	
	712	46+51	' WAS'	MEDI AN	D1-1	ONE DESTINATION (ARROW)	84 x 15	8.8	---	---	1	---	---	---	
	713	104+40	' CAS'	RT	R1-2	YIELD	36 x 31	3.9	---	---	---	1	---	---	
	714	104+20	' CAS'	MEDI AN	R1-2	YIELD	36 x 31	3.9	---	---	---	1	---	---	
	715	104+16	' CAS'	MEDI AN	D1-1	ONE DESTINATION (ARROW)	84 x 15	8.8	---	---	1	---	---	---	
	716	103+87	' CAS'	MEDI AN	R4-7	KEEP RIGHT	24 x 30	5.0	---	---	1	---	---	---	
	717	103+25	' CAS'	RT	D1-62	ROUNDABOUT DESTINATION - DI RECTION SIGN	138 x 66	---	---	---	---	---	---	1	
	718	11+50	' A'	MEDI AN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.0	---	---	---	---	2	---	
	719	11+50	' A'	MEDI AN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.0	---	---	---	---	---	---	
	720	12+13	' A'	MEDI AN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.0	---	---	---	---	2	---	
	721	12+13	' A'	MEDI AN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.0	---	---	---	---	---	---	

CON' T ON NEXT PAGE



PERMANENT SIGNING SUMMARY (CON'T.)

637.2210 637.2230 634.0810 634.0811 634.0812 634.0814 634.0816

CATEGORY	SIGN NO.	APPROX.		SIGN CODE	SIGN MESSAGE	SIGN SIZE (W x H) IN	SIGNS TYPE II REFLECTIVE H		SIGNS TYPE II REFLECTIVE F		POSTS TUBULAR STEEL 2x2-1 NCH					REMARKS
		STA.	ALIGNMENT				LOC.	SF	SF	x 10-FT	x 11-FT	x 12-FT	x 14-FT	x 16-FT		
	722	12+91	'A'	MEDIAN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.0	---	---	---	---	2	---		
	723	12+91	'A'	MEDIAN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.0	---	---	---	---	---	---		
	724	10+58	'A'	MEDIAN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.0	---	---	---	---	2	---		
	725	10+58	'A'	MEDIAN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.0	---	---	---	---	---	---		
	726	45+11	'WAS'	RT	R1-2	YIELD	36 x 31	3.9	---	---	---	1	---	---		
	727	44+78	'WAS'	MEDIAN	R4-7	KEEP RIGHT	24 x 30	5.0	---	---	1	---	---	---		
	728	44+13	'WAS'	RT	D1-62	ROUNDABOUT DESTINATION - DIRECTION SIGN	144 x 66	---	---	---	---	---	---	1		
	729	101+50	'CAS'	RT	W2-6	CIRCULAR INTERSECTION SIGN	30 x 30	---	6.3	---	---	---	---	---		
	729	101+50	'CAS'	RT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	18 x 18	---	2.3	---	---	---	---	---	MOUNT BELOW W2-6	
	730	101+31	'CAS'	MEDIAN	R4-7	KEEP RIGHT	24 x 30	5.0	---	---	---	---	---	---		
	800	107+75	'CAS'	LT	D9-2	HOSPITAL	24 x 24	4.0	---	---	---	---	---	---		
	800	107+75	'CAS'	LT	M6-1	ARROW- RIGHT LEFT OR AHEAD	21 x 21	3.1	---	---	---	---	---	---	MOUNT BELOW D9-2	
	801	108+75	'CAS'	LT	W2-6	CIRCULAR INTERSECTION SIGN	30 x 30	---	6.3	---	---	---	---	---		
	801	108+75	'CAS'	LT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	18 x 18	---	2.3	---	---	---	---	---		
TOTALS									184.2	42.3	4.0	11.0	6.0	14.0	4.0	

REMOVING SIGN ITEMS

CATEGORY	SIGN NUMBER	REMOVING SIGNS	
		638.2602 TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	E-100	2	1
	E-200	1	1
	E-300	1	1
	E-301	1	1
	E-302	1	1
	E-400	1	1
	E-401	1	1
	E-402	1	1
	E-500	1	1
	E-600	1	1
	E-700	1	1
	E-701	1	1
	E-702	2	1
	E-703	1	1
	E-704	1	1
	E-705	1	1
E-706	1	1	
E-707	1	1	
TOTALS		20	18

TRAFFIC CONTROL SUMMARY

CATEGORY	STAGE	DURATION DAYS	643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0715 WARNING LIGHTS TYPE C		643.0900 SIGNS		643.0920 COVERING SIGNS TYPE II		643.1000	643.1050		
			EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	CYCLES	EACH	SF	EACH	DAY	
																		MESSAGE
0010	PRESTAGE	11	95	1,045	5	55	10	110	14	154	20	220	0	0	0	0	0	
	1	38	68	2,584	16	608	32	1,216	18	684	26	988	0	0	0	0	0	
	2	13	108	1,404	22	286	44	572	29	377	32	416	0	0	0	0	0	
	3	26	102	2,652	34	884	68	1,768	37	962	36	936	0	0	0	0	0	
	4	7	48	336	10	70	20	140	9	63	11	77	0	0	0	0	0	
	5	5	48	240	10	50	20	100	9	45	11	55	0	0	0	0	0	
	PREWARN (PRE-STAGE, STAGE 1)	7	20	140	0	0	0	0	0	0	0	0	0	0	0	4	28	
	DETOUR	70	0	0	0	0	0	0	0	0	81	5,670	1	1	135	0	0	
TOTALS				8,401		1,953		3,906		2,285		8,362		1		135		28

TEMPORARY MARKING LINE

CATEGORY	STAGE	STATION - STATION	LOCATION	643.3105 PAINT 4-INCH			643.3150 REMOVABLE TAPE 4-INCH		
				LF	(WHI TE)	(YELLOW)	LF	(WHI TE)	(YELLOW)
0010	PRESTAGE	1+50' EX CA' - 6+25' EX CA'	LT/RT	125	---	250	860	250	295
		6+25' EX CA' - 13+00' EX CA'	LT/RT	645	585	76	275	430	---
SUBTOTALS (PRESTAGE)				770	585	326	1,135	680	295
	1	2+00' EX CA' - 6+25' EX CA'	LT/RT	315	---	980	315	470	130
		6+50' EX CA' - 13+00' EX CA'	LT/RT	935	180	840	545	95	---
SUBTOTALS (STAGE 1)				1,250	180	1,820	860	565	130
	2	99+45' CA' - 105+00' CA'	LT	365	430	---	65	115	---
		105+00' CA' - 109+00' CA'	LT	---	69	---	175	185	---
		45+00' WL' - 45+35' WL'	LT	57	---	---	---	---	---
SUBTOTALS (STAGE 2)				365	499	0	240	300	0
	3	99+45' CA' - 105+00' CA'	LT/RT	350	385	---	96	51	---
		105+00' CA' - 109+00' CA'	LT/RT	110	125	---	135	135	---
SUBTOTALS (STAGE 3)				350	385	0	96	51	0
	4	99+45' CA' - 105+00' CA'	LT/RT	405	335	---	66	245	---
		46+75' WL' - 47+48' WL'	LT/RT	---	145	---	---	---	---
SUBTOTALS (STAGE 4)				405	480	0	66	245	0
TOTALS					7,415			4,663	

TRAFFIC CONTROL

CATEGORY	PROJECT	643.5000 EACH
0010	7994-00-51	1

MOVING SIGNS SUMMARY

CATEGORY	STAGE	STATION	LOCATION	EACH	EACH
0010	PRE-STAGE	46+84' EX WAS'	LT	1	1

638.2102 MOVING SIGNS TYPE II  
638.4000 MOVING SMALL SIGN SUPPORTS

3

3

PAVEMENT MARKING ITEMS

CATEGORY	STATION	-	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH					646.3020	646.5020	646.6120	646.6320 MARKING DOTTED EXTENSION	646.7120	646.7420	646.8120	646.8220	
					(WHITE SKIP 3' SEG., 9' GAP)		(YELLOW SKIP 12.5' SEG., (DOUBLE 37.5' GAP) YELLOW)			MARKING LINE EPOXY 8-INCH (WHITE)	MARKING ARROW EPOXY (WHITE)	MARKING STOP LINE EPOXY 18-INCH	MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)	MARKING CURB EPOXY (YELLOW)	MARKING ISLAND NOSE EPOXY (YELLOW)	
					LF	LF	LF	LF	LF	LF	EACH	LF	LF	LF	LF	LF	LF	
					(WHITE)	9' GAP)	(YELLOW)	37.5' GAP)	YELLOW)	(WHITE)	(WHITE)	18-INCH	(WHITE)	(YELLOW)	(WHITE)	(YELLOW)	(YELLOW)	
0010	10+00	'WAS'	23+00	'WAS'	LT/RT	2250	70	695	175	1900	42	5	17	---	48	---	---	
	23+00	'WAS'	35+00	'WAS'	LT/RT	2160	---	---	---	3080	125	2	29	---	105	150	---	
	35+00	'WAS'	44+00	'WAS'	LT/RT	1390	---	---	---	1390	---	---	---	---	---	---	---	
	44+00	'WAS'	47+49	'WAS'	LT/RT	18	63	170	---	815	290	---	---	175	75	285	37	4
	100+00	'CAS'	103+50	'CAS'	LT/RT	875	12	405	---	805	---	---	---	---	87	---	10	1
	106+76	'CAS'	109+23	'CAS'	LT/RT	440	2	425	105	135	---	1	---	---	13	---	---	---
					SUBTOTALS	7,133	147	1,695	280	8,125	457	8	46	175	328	435	47	5
					TOTALS			17,380			457	8	46	175	328	435	47	5

MARKING REMOVAL

CATEGORY	STAGE	STATION - STATION	LOCATION	646.9000	646.9010	646.9100	646.9110	646.9200	646.9300	646.9310
				WATER BLASTING 4-INCH		WATER BLASTING 8-INCH		WIDE	WATER BLASTING	
				LF	LF	LF	LF	LF	EACH	EACH
0010	PRESTAGE	1+50' EX CA' - 6+25' EX CA'	LT/RT	290	490	125	240	---	1	2
		6+25' EX CA' - 13+00' EX CA'	LT/RT	655	275	85	---	20	2	---
		SUBTOTALS (PRESTAGE)		945	765	210	240	20	3	2
1		2+00' EX CA' - 6+25' EX CA'	LT/RT	---	51	---	---	---	---	---
		6+50' EX CA' - 13+00' EX CA'	LT/RT	285	63	---	---	37	---	---
		SUBTOTALS (STAGE 1)		285	114	0	0	37	0	0
2		99+45' CA' - 105+00' CA'	LT	---	45	---	---	---	---	---
		SUBTOTALS (STAGE 2)		0	45	0	0	0	0	0
		TOTALS		1,230	924	210	240	57	3	2

3

CONSTRUCTION STAKING ITEMS

CATEGORY	STATION	-	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	10+00	'WAS'	23+00	'WAS'	1300	1300	1300
	23+00	'WAS'	35+00	'WAS'	1200	1200	1200
	35+00	'WAS'	44+00	'WAS'	900	900	900
	99+45	'CAS'	103+50	'CAS'	350	405	350
TOTALS					3,750	3,805	3,750

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	PROJECT	618.0100 EACH
0020	7994-00-51	1

3

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

CATEGORY	PROJECT	650.8501 EACH
0010	7994-00-51	1

CONSTRUCTION STAKING SIDEWALK

CATEGORY	PROJECT	650.9500 EACH
0010	7994-00-51	1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

CATEGORY	PROJECT	650.9911 EACH
0010	7994-00-51	1

CONSTRUCTION STAKING ROUNDABOUT

CATEGORY	PROJECT	SPV. 0060.07 EACH
0010	7994-00-51	1

SAWING SUMMARY

CATEGORY	STAGE	STATION	-	STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
0010	PRE-STAGE	3+50	'EX CAS'	12+00	'EX CAS'	82	745
SUBTOTALS (PRE-STAGE)						82	745
	1	10+00	'WAS'	23+00	'WAS'	120	5
		23+00	'WAS'	35+00	'WAS'	92	16
		35+00	'WAS'	44+00	'WAS'	130	5
		44+00	'WAS'	47+49	'WAS'	360	10
		100+00	'CAS'	103+50	'CAS'	370	---
SUBTOTALS (STAGE 1)						1,072	36
	2	44+00	'WAS'	47+49	'WAS'	330	---
		100+00	'CAS'	103+50	'CAS'	305	---
SUBTOTALS (STAGE 2)						635	0
	3	44+00	'WAS'	47+49	'WAS'	100	5
		100+00	'CAS'	103+50	'CAS'	69	---
SUBTOTALS (STAGE 3)						169	5
	4	100+00	'CAS'	103+50	'CAS'	425	---
SUBTOTALS (STAGE 4)						425	0
TOTALS						2,383	786

STREET LIGHTING CONDUIT SUMMARY

CATEGORY	LOCATION		652.0225	652.0235
	FROM	TO	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF
0010	LP-0101	LP-0102	129	---
	LP-0102	PB-0101	28	---
	PB-0101	PB-0102	---	144
	PB-0102	LP-0103	40	---
	LP-0103	LP-0104	151	---
	LP-0104	LP-0105	138	---
	LP-0105	LP-0201	136	---
	LP-0201	LP-0202	143	---
	LP-0202	LP-0203	143	---
	LP-0203	LP-0204	142	---
	LP-0204	PB-0301	132	---
	PB-0301	LC-01	12	12
	PB-0301	LP-0301	6	---
	LP-0301	LP-0302	135	---
	LP-0302	LP-0303	137	---
	LP-0303	LP-0304	139	---
	LP-0304	LP-0401	140	---
	LP-0401	PB-0401	6	---
	PB-0401	PB-0402	---	82
	PB-0402	LP-0402	45	---
	LP-0402	LP-0403	120	---
	LP-0403	LP-0404	120	---
	LP-0404	LP-0405	127	---
	LP-0405	LP-0501	140	---
	LP-0502	LP-0503	145	---
	LP-0503	LP-0504	122	---
	LP-0504	LP-0601	146	---
	LP-0601	LP-0602	149	---
	LP-0602	PB-0601	91	---
	PB-0601	LC-02	16	16
	PB-0601	LP-0603	53	---
	LP-0603	PB-0602	176	---
	PB-0602	LP-0701	138	---
	LP-0701	LP-0702	103	---
	LP-0702	PB-0701	21	---
	PB-0701	PB-0702	---	116
	PB-0702	LP-0703	36	---
	LP-0703	LP-0704	28	---
	PB-0602	PB-0603	---	92
	PB-0603	LP-0705	62	---
	LP-0705	LP-0706	49	---
	LP-0706	PB-0703	55	---
	PB-0703	PB-0704	---	100
	PB-0704	LP-0707	17	---
	LP-0707	LP-0708	79	---
	PB-0703	LP-0709	85	---
	LP-0709	LP-0710	116	---
	TOTALS		3,996	562

LIGHTING PULL BOXES

CATEGORY	PULL BOX NUMBER	LOCATION **		653.0140
		STATION	OFFSET	PULL BOXES STEEL 24X42-INCH EACH
0010	PB-0101	11+85.93 WAS	35.00' LT	1
	PB-0102	12+56.39 WAS	35.00' LT	1
	PB-0301	22+74.36 WAS	21.14' LT	1
	PB-0401	28+32.28 WAS	40.25' LT	1
	PB-0402	28+73.09 WAS	40.25' LT	1
	PB-0601	42+51.94 WAS	21.00' LT	1
	PB-0602	43+95.91 WAS	23.73' LT	1
	PB-0603	43+96.04 WAS	21.57' RT	1
	PB-0701	106+08.22 CAS	39.35' LT	1
	PB-0702	106+08.71 CAS	18.29' RT	1
	PB-0703	103+71.57 CAS	28.09' LT	1
	PB-0704	103+68.99 CAS	21.55' RT	1
	TOTAL			12

\*\*FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ELECTRICAL WIRE LIGHTING (LC-1)

CATEGORY	LOCATION		655.0610
	FROM	TO	12 AWG LF
0010	LC-1	LP-0204	352
	LP-0204	LP-0202	582
	LP-0202	LP-0105	570
	LP-0105	LP-0103	590
	LP-0103	LP-0101	610
	LC-1	LP-0203	636
	LP-0203	LP-0201	584
	LP-0201	LP-0104	560
	LP-0104	LP-0102	654
	LC-1	LP-0301	100
	LP-0301	LP-0303	556
	LP-0303	LP-0401	570
	LP-0401	LP-0403	496
	LP-0403	LP-0405	506
	LC-1	LP-0302	370
	LP-0302	LP-0304	564
	LP-0304	LP-0402	536
	LP-0402	LP-0404	492
	LP-0404	LP-0501	546
	TOTAL		9,874

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

ELECTRICAL WIRE LIGHTING (LC-2)

CATEGORY	LOCATION		655.0610
	FROM	TO	12 AWG LF
0010	LC-2	LP-0602	274
	LP-0602	LP-0504	602
	LP-0504	LP-0502	546
	LC-2	LP-0601	572
	LP-0601	LP-0503	550
	LC-2	LP-0603	198
	LP-0603	LP-0702	700
	LP-0702	LP-0704	358
	LP-0603	LP-0706	562
	LP-0706	LP-0708	474
	LP-0706	LP-0709	322
	LC-2	LP-0701	680
	LP-0701	LP-0703	508
	LC-2	LP-0705	650
	LP-0705	LP-0707	414
	LP-0707	LP-0710	608
	TOTAL		8,018

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

ELECTRICAL WIRE LIGHTING (SYSTEM GROUNDING CONDUCTOR)

CATEGORY	EQUIP. LOCATION		655.0610	655.0615	REMARKS	
	FROM	TO	12 AWG LF	10 AWG LF		
0010	LP-0101	LP-0102	135		INSTALL TAP TO CONNECT PB-0102 TO SYSTEM GROUND	
	LP-0102	LP-0103	176	24		
	LP-0103	LP-0104	157			
	LP-0104	LP-0105	144			
	LP-0105	LP-0201	142			
	LP-0201	LP-0202	149			
	LP-0202	LP-0203	149			
	LP-0203	LP-0204	148			
	LP-0204	LC-1	176			
	LC-1	LP-0301	50			
	LP-0301	LP-0302	141			
	LP-0302	LP-0303	143			
	LP-0303	LP-0304	145			
	LP-0304	LP-0401	146			
	LP-0401	LP-0402	128	24		INSTALL TAP TO CONNECT PB-0402 TO SYSTEM GROUND
	LP-0402	LP-0403	126			
	LP-0403	LP-0404	126			
	LP-0404	LP-0405	133			
	LP-0405	LP-0501	146			
	LP-0502	LP-0503	151			
	LP-0503	LP-0504	128			
	LP-0504	LP-0601	152			
	LP-0601	LP-0602	155			
	LP-0602	LC-2	137			
	LC-2	LP-0603	99			
	LP-0603	LP-0701	247	24		INSTALL TAP TO CONNECT PB-0602 TO SYSTEM GROUND
	LP-0701	LP-0702	109			
	LP-0702	LP-0703	151			
	LP-0703	LP-0704	34			
	LP-0603	LP-0705	232	24		INSTALL TAP TO CONNECT PB-0603 TO SYSTEM GROUND
	LP-0705	LP-0706	55			
	LP-0706	LP-0707	158	24		INSTALL TAP TO CONNECT PB-0703 TO SYSTEM GROUND
	LP-0707	LP-0708	85			
LP-0706	LP-0709	161				
LP-0709	LP-0710	122				
PB-0101	LP-0102		55			
PB-0301	LP-0301		33			
PB-0401	LP-0401		33			
PB-0601	LC-2		52			
PB-0704	LP-0707		44			
PB-0701	LP-0702		48			
PB-0702	LP-0703		63			
TOTAL			4,836	448		

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

TEMPORARY LIGHTING SYSTEM

CATEGORY	LOCATION	SPV. 0060.06 EACH
0010	SOUTH WASSON LANE AND EAST CASCADE AVENUE INTERSECTION	1

LIGHTING CONTROL CABINET SUMMARY

CATEGORY	CABINET NO.	STATION	LOCATION	654.0230	655.0635	656.0201.01	656.0201.02	659.2130
				CONCRETE CONTROL CABINET BASES TYPE L30 EACH	ELECTRICAL WIRE LIGHTING 2 AWG LF	ELECTRICAL SERVICE METER BREAKER PEDESTAL LC-1 EACH	ELECTRICAL SERVICE METER BREAKER PEDESTAL LC-2 EACH	LIGHTING CONTROL CABINETS 120/240 30-INCH EACH
0010	LC-1	22+75.00 WAS	28.00' LT	1	30	1		1
	LC-2	42+50.00 WAS	30.00' LT	1	30		1	1
TOTALS				2	60	1	1	2

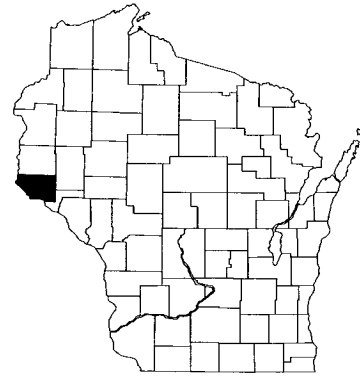
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STREET LIGHTING SUMMARY

CATEGORY	LP. NO.	STATION	LOCATION	SPV. 0060.10	SPV. 0060.01	SPV. 0060.02	655.0610	655.0610
				CONCRETE BASES SPECIAL TYPE A EACH	WASSON LANE LIGHTING ASSEMBLY EACH	ROUNDABOUT LIGHTING ASSEMBLY EACH	ELECTRICAL WIRE LIGHTING 12 AWG LF	ELECTRICAL WIRE LIGHTING 12 AWG (GROUND) LF
0010	LP-0101	10+30.00 WAS	29.61' LT	1	1	--	78	39
	LP-0102	11+59.00 WAS	32.37' LT	1	1	--	78	39
	LP-0103	12+95.00 WAS	35.00' LT	1	1	--	78	39
	LP-0104	14+42.00 WAS	35.00' LT	1	1	--	78	39
	LP-0105	15+80.00 WAS	34.29' LT	1	1	--	78	39
	LP-0201	17+15.00 WAS	21.00' LT	1	1	--	78	39
	LP-0202	18+57.00 WAS	21.00' LT	1	1	--	78	39
	LP-0203	20+00.00 WAS	21.00' LT	1	1	--	78	39
	LP-0204	21+42.00 WAS	21.00' LT	1	1	--	78	39
	LP-0301	22+80.00 WAS	21.00' LT	1	1	--	78	39
	LP-0302	24+15.00 WAS	21.00' LT	1	1	--	78	39
	LP-0303	25+50.00 WAS	24.00' LT	1	1	--	78	39
	LP-0304	26+90.00 WAS	31.42' LT	1	1	--	78	39
	LP-0401	28+28.00 WAS	36.03' LT	1	1	--	78	39
	LP-0402	29+15.00 WAS	36.00' LT	1	1	--	78	39
	LP-0403	30+35.00 WAS	30.95' LT	1	1	--	78	39
	LP-0404	31+55.00 WAS	24.01' LT	1	1	--	78	39
	LP-0405	32+80.00 WAS	21.00' LT	1	1	--	78	39
	LP-0501	34+20.00 WAS	21.00' LT	1	1	--	78	39
	LP-0502	36+00.00 WAS	21.00' LT	1	1	--	78	39
	LP-0503	37+45.00 WAS	21.00' LT	1	1	--	78	39
	LP-0504	38+67.00 WAS	21.00' LT	1	1	--	78	39
	LP-0601	40+13.00 WAS	21.00' LT	1	1	--	78	39
	LP-0602	41+61.50 WAS	21.00' LT	1	1	--	78	39
	LP-0603	43+05.00 WAS	21.13' LT	1	1	--	78	39
	LP-0701	44+94.02 WAS	78.53' LT	1	--	1	82	41
	LP-0702	106+20.95 CAS	55.37' LT	1	--	1	82	41
	LP-0703	105+76.43 CAS	35.43' RT	1	--	1	82	41
	LP-0704	47+02.50 WAS	40.23' LT	1	--	1	82	41
	LP-0705	44+62.45 WAS	36.10' RT	1	--	1	82	41
	LP-0706	104+02.85 CAS	61.96' LT	1	--	1	82	41
	LP-0707	103+82.66 CAS	34.66' RT	1	--	1	82	41
	LP-0708	104+68.50 CAS	55.91' RT	1	--	1	82	41
LP-0709	102+85.00 CAS	37.00' LT	1	--	1	78	39	
LP-0710	101+60.00 CAS	39.50' LT	1	--	1	78	39	
TOTALS				35	27	8	2,762	1,381

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE.

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION TRANSPORTATION PROJECT PLAT TITLE SHEET 7994-00-49 C RIVER FALLS, WASSON LANE (CEMETERY ROAD TO CASCADE AVENUE) LOCAL STREET PIERCE COUNTY



### CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	---	SIGN		COMPENSABLE	
EXISTING R/W OR HE LINE	---	PARCEL NUMBER	25	NON-COMPENSABLE	
PROPERTY LINE	---	UTILITY NUMBER	40		
LOT, TIE & OTHER MINOR LINES	---	PARALLEL OFFSETS			
SLOPE INTERCEPT	---				
CORPORATE LIMITS	---				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---				
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
TRANSMISSION STRUCTURES	---				
BUILDING TO BE REMOVED	---				
BRIDGE	---				
CULVERT	---				

### CONVENTIONAL ABBREVIATIONS

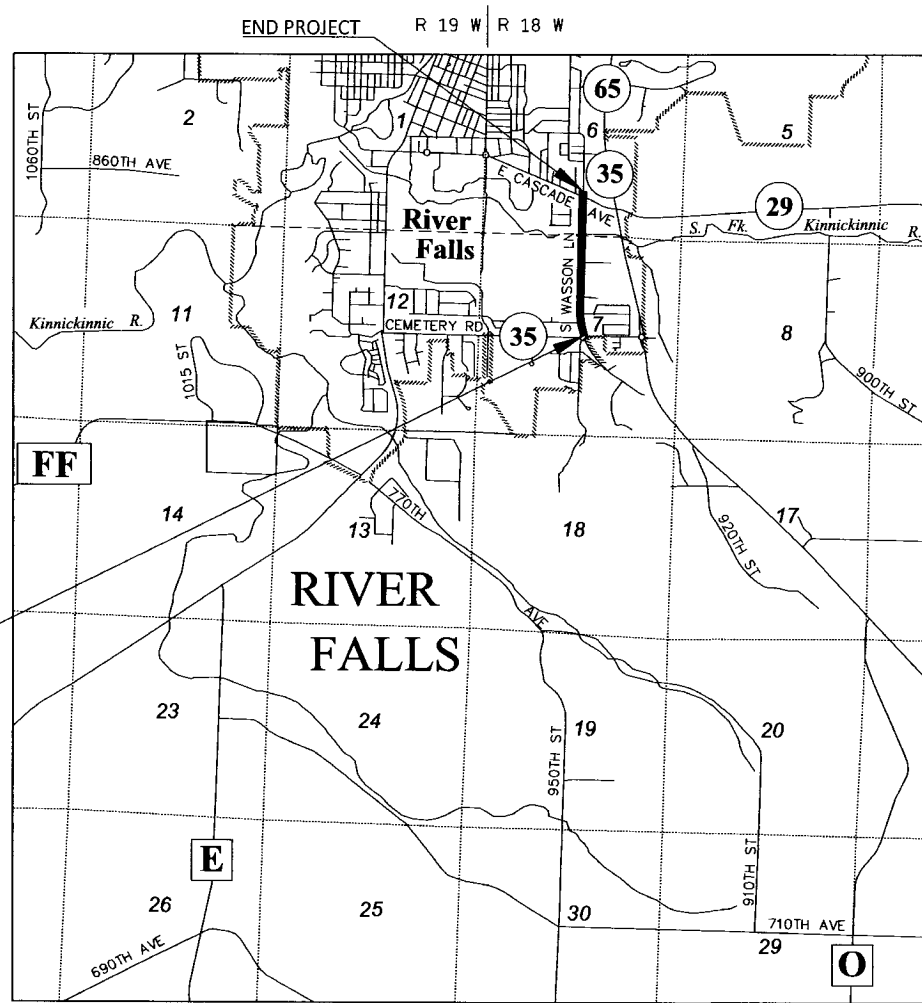
ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REEL / IMAGE	R/I
BACK	BK	REFERENCE LINE	R/L
BLOCK	BLK	REMAINING	REM
CENTERLINE	C/L	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CERTIFIED SURVEY MAP	CSM		
CONCRETE	CONC	RIGHT	RT
COUNTY	CO	RIGHT OF WAY	R/W
COUNTY TRUNK HIGHWAY	CTH	SECTION	SEC
DISTANCE	DIST	SEPTIC VENT	SEPV
CORNER	COR	SQUARE FEET	SF
DOCUMENT NUMBER	DOC	STATE TRUNK HIGHWAY	STH
EASEMENT	EASE	STATION	STA
EXISTING	EX	TELEPHONE PEDESTAL	TP
GAS VALVE	GV	TEMPORARY LIMITED EASEMENT	TLE
GRID NORTH	GN		
HIGHWAY EASEMENT	HE	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

### CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

### CONVENTIONAL UTILITY SYMBOLS

WATER	---
GAS	---
TELEPHONE	---
OVERHEAD TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
ELECTRIC TOWER	---



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 7994-00-49.

### NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS, AND/OR EXISTING OCCUPATIONAL LINES.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RIVER FALLS LAND USE AND ZONING DEPARTMENT.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

PROJECT NUMBER 7994-00-49-4.01  
SHEET 2 OF 2

# TRANSPORTATION PROJECT PLAT NO: 7994-00-49-4.01

THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 4, PAGE 121 AS DOCUMENT NUMBER 347554 AND THAT PART OF LOT 2 OF CSM RECORDED IN VOLUME 4, PAGE 120 AS DOCUMENT NUMBER 347553 AND OTHER LANDS LOCATED IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 AND THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 2, PAGE 76 AS DOCUMENT NUMBER 300475 BEING LOCATED IN THE NORTHWEST 1/4 OF THE NORTHEAST 1/4, AND THAT PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 ALL IN SECTION 7, TOWN 27 NORTH, RANGE 18 WEST, CITY OF RIVER FALLS, PIERCE COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET C OF RIVER FALLS, WASSON LANE (CEMETERY ROAD TO CASCADE AVENUE) PIERCE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RIVER FALLS DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, WISCONSIN STATUTES, THE CITY OF RIVER FALLS

HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RIVER FALLS, PURSUANT TO THE PROVISIONS OF SECTION 62.22, WISCONSIN STATUTES.



## SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY

PARCEL NUMBER	OWNERS	INTERESTS REQUIRED	S.F. REQUIRED			TLE S.F.
			R/W NEW	EXISTING	TOTAL	
1	BOARD OF REGENTS OF STATE UNIVERSITIES	TLE	---	---	---	7048
2	PAUL CUDD & SONS, INC.	TLE	---	---	---	15720
3	BRIAN J. & JODI L. HAUK	TLE	---	---	---	4650

## UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
100	AT&T WISCONSIN	RELEASE OF RIGHTS
101	RIVER FALLS SCHOOL DISTRICT	RELEASE OF RIGHTS

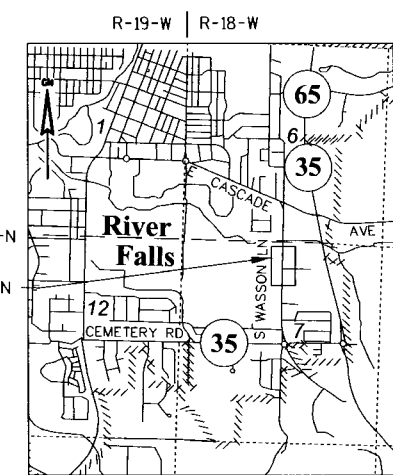
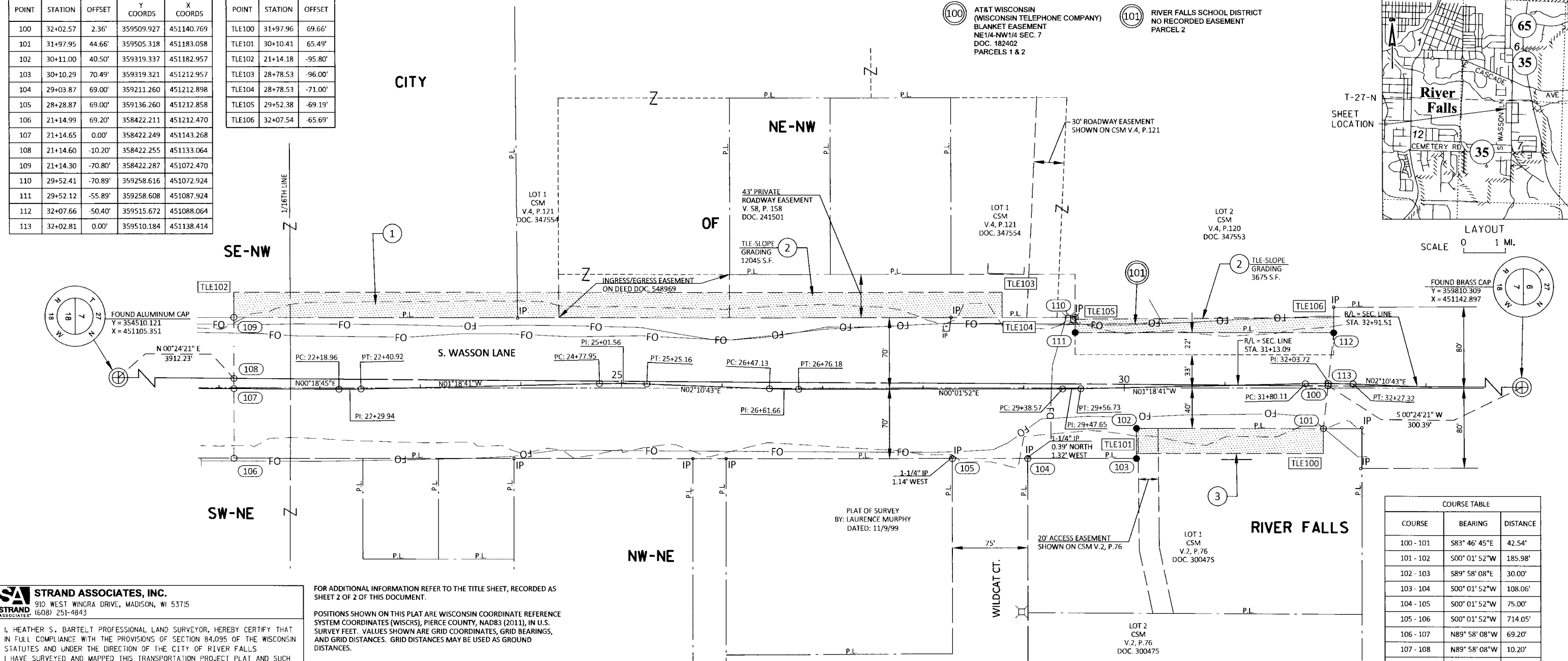
ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 7994-00-49-4.01  
SHEET 1 OF 2

617487  
PIERCE COUNTY  
REGISTER OF DEEDS  
JULIE HIMES  
RECEIVED FOR RECORDING  
08/02/2023 01:04 PM  
RECORDING FEE: 25.00  
PAGES: 2

POINT	STATION	OFFSET	Y COORDS	X COORDS
100	32+02.57	2.36'	359509.927	451140.769
101	31+97.95	44.66'	359505.318	451183.058
102	30+11.00	40.50'	359319.337	451182.957
103	30+10.29	70.49'	359319.321	451212.957
104	29+03.87	69.00'	359211.260	451212.898
105	28+28.87	69.00'	359136.260	451212.858
106	21+14.99	69.20'	358422.211	451212.470
107	21+14.65	0.00'	358422.249	451143.268
108	21+14.60	-10.20'	358422.255	451133.064
109	21+14.30	-70.80'	358422.287	451072.470
110	29+52.41	-70.89'	359258.616	451072.924
111	29+52.12	-55.89'	359258.608	451087.924
112	32+07.66	-50.40'	359515.672	451088.064
113	32+02.81	0.00'	359510.184	451138.414

POINT	STATION	OFFSET
TLE100	31+97.96	69.66'
TLE101	30+10.41	65.49'
TLE102	21+14.18	-95.80'
TLE103	28+78.53	-96.00'
TLE104	28+78.53	-71.00'
TLE105	29+52.38	-69.19'
TLE106	32+07.54	-65.69'



COURSE	BEARING	DISTANCE
100 - 101	S83° 46' 45"E	42.54'
101 - 102	S00° 01' 52"W	185.98'
102 - 103	S89° 58' 08"E	30.00'
103 - 104	S00° 01' 52"W	108.06'
104 - 105	S00° 01' 52"W	75.00'
105 - 106	S00° 01' 52"W	714.05'
106 - 107	N89° 58' 08"W	69.20'
107 - 108	N89° 58' 08"W	10.20'
108 - 109	N89° 58' 08"W	60.59'
109 - 110	N00° 01' 52"E	836.33'
110 - 111	S89° 58' 08"E	15.00'
111 - 112	N00° 01' 52"E	257.06'
112 - 113	S83° 46' 45"E	50.65'
113 - 100	S83° 46' 45"E	2.37'
100 - 108	S00° 24' 21"W	1087.70'

**STRAND ASSOCIATES, INC.**  
910 WEST WINGRA DRIVE, MADISON, WI 53715  
(608) 251-4843

I, HEATHER S. BARTELT PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RIVER FALLS I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Heather Bartelt* DATE: 7/25/23  
PRINT NAME: HEATHER S. BARTELT  
REGISTRATION NUMBER: S-2797

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RIVER FALLS

SIGNATURE: *Todd Nickleski* DATE: 7/27/23  
PRINT NAME: TODD NICKLESKI, CITY ENGINEER

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOUND IRON PINS ARE 1-1/4" IRON PIPES UNLESS OTHERWISE NOTED.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

EXISTING HIGHWAY RIGHT-OF-WAY ON WASSON LANE BASED ON PREVIOUS PROJECT: F028-2(13), CSM V.4, P.120, CSM V.4, P.121, CSM V.2, P.76-77.

EXISTING HIGHWAY RIGHT-OF-WAY COURT BASED ON CSM V. 2, P.76-77.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RIVER FALLS LAND USE AND ZONING DEPARTMENT.

PI STA = 22+29.94 Y = 358537.541 X = 451143.897 DELTA = 1°37'26" LT D = 7°23'35" T = 10.98' L = 21.97' R = 775.00' PC STA = 22+18.96 PT STA = 22+40.92	PI STA = 25+01.56 Y = 358809.089 X = 451143.767 DELTA = 3°29'25" RT D = 7°23'35" T = 23.61' L = 47.21' R = 775.00' PC STA = 24+77.95 PT STA = 25+25.16	PI STA = 26+61.66 Y = 358969.086 X = 451143.922 DELTA = 2°08'51" LT D = 7°23'35" T = 14.53' L = 29.05' R = 775.00' PC STA = 26+47.13 PT STA = 26+76.18	PI STA = 29+47.65 Y = 359255.086 X = 451143.922 DELTA = 1°20'33" RT D = 7°23'35" T = 9.08' L = 18.16' R = 775.00' PC STA = 29+38.57 PT STA = 29+56.73	PI STA = 32+03.72 Y = 359511.089 X = 451138.061 DELTA = 3°29'25" RT D = 7°23'35" T = 23.61' L = 47.21' R = 775.00' PC STA = 31+80.11 PT STA = 32+27.32
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ALIGNMENT SUB-CURVE  
PC 31+80.11 TO STA. 32+02.81  
R = 775.00'  
L = 22.70'  
LCH = 22.70'  
LCB = 500' 28' 20"E  
DELTA = 001°40'42" RT

ALIGNMENT SUB-CURVE  
STA. 32+02.81 TO PT 32+27.32  
R = 775.00'  
L = 24.51'  
LCH = 24.51'  
LCB = 501' 16' 22"W  
DELTA = 001°48'42" RT



# TRANSPORTATION PROJECT PLAT NO: 7994-00-49-4.02

THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 1, PAGES 94 AS DOCUMENT NUMBER 273018 AND THAT PART OF OUTLOT 134 OF AMENDED ASSESSOR'S PLAT FOR CITY OF RIVER FALLS AND THAT PART OF LOTS 31 AND 32 OF GROTENHUIS ADDITION LOCATED IN THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 AND THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 15, PAGE 89 AS DOCUMENT NUMBER 594444 BEING LOCATED IN THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4, ALL IN SECTION 6, TOWN 27 NORTH, RANGE 18 WEST, CITY OF RIVER FALLS, PIERCE COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET C OF RIVER FALLS, WASSON LANE (CEMETERY ROAD TO CASCADE AVENUE) PIERCE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RIVER FALLS DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, WISCONSIN STATUTES, THE CITY OF RIVER FALLS

HEREBY ORDERS THAT:  
 1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.  
 2. THE LANDS OR INTERESTS OR RIGHTS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RIVER FALLS, PURSUANT TO THE PROVISIONS OF SECTION 62.22, WISCONSIN STATUTES.

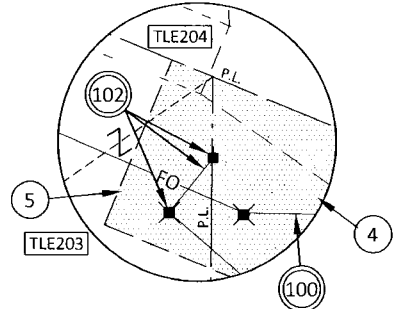
PI STA = 43+59.45 Y = 360666.736 X = 451143.593 DELTA = 11°32'22" LT D = 11'27'33" T = 50.52' L = 100.70' R = 500.00' PC STA = 43+08.93 PT STA = 44+09.63	PI STA = 44+78.03 Y = 360783.302 X = 451120.002 DELTA = 39°07'42" RT D = 57°17'45" T = 35.54' L = 68.29' R = 100.00' PC STA = 44+42.50 PT STA = 45+10.79 Y = 360814.771 X = 451136.514 DA = N27°41'14"E	PI STA = 46+92.76 Y = 360992.794 X = 451137.542 DELTA = 17°14'09" RT D = 16°42'16" T = 51.98' L = 103.18' R = 343.00' PC STA = 46+40.78 PT STA = 47+43.96 Y = 360943.553 X = 451154.205 DB = N18°41'44"W
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PI STA = 102+00.43 Y = 360835.625 X = 451422.617 DELTA = 31°50'13" LT D = 11'27'33" T = 142.60' L = 277.83' R = 500.00' PC STA = 100+57.83 PT STA = 103+35.66 DB = N53°48'09"W	PI STA = 103+97.47 Y = 360851.168 X = 451218.792 DELTA = 38°29'10" RT D = 57°17'45" T = 34.91' L = 67.17' R = 100.00' PC STA = 103+62.56 PT STA = 104+29.73 Y = 360874.907 X = 451093.483 DA = N47°09'11"W	PI STA = 105+84.31 Y = 360950.432 X = 451060.089 DELTA = 7°53'24" RT D = 11'27'33" T = 34.48' L = 68.85' R = 500.00' PC STA = 105+49.83 PT STA = 106+18.69 Y = 360941.843 X = 451093.483 DB = N75°34'30"W
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ALIGNMENT SUB-CURVE  
 PC 100+57.83 TO STA. 102+69.44  
 R = 500.00'  
 L = 211.61'  
 LCH = 210.03'  
 LCB = N65°55'36"W  
 DELTA = 24°14'55" LT

ALIGNMENT SUB-CURVE  
 STA. 102+69.44 TO PT 103+35.66  
 R = 500.00'  
 L = 66.22'  
 LCH = 66.17'  
 LCB = N81°50'43"W  
 DELTA = 07°35'18" LT

COURSE	BEARING	DISTANCE
200 - 201	N89° 54' 02"W	9.25'
201 - 202	N89° 54' 02"W	77.60'
202 - 203	N00° 05' 58"E	103.62'
203 - 204	N25° 38' 02"W	186.10'
204 - 205	N67° 42' 27"W	37.11'
205 - 206	N22° 18' 54"E	36.62'
206 - 207	N22° 18' 54"E	29.38'
207 - 208	S67° 42' 27"E	82.47'
208 - 209	S83° 33' 23"E	38.40'
209 - 210	N00° 36' 06"E	69.44'
210 - 211	S89° 23' 54"E	47.49'
211 - 212	S89° 23' 54"E	16.83'
212 - 213	S89° 23' 54"E	1.67'
213 - 214	N89° 49' 42"E	9.77'
214 - 215	S16° 35' 29"E	130.02'
215 - 216	S74° 33' 05"E	163.04'
216 - 217	S15° 26' 55"W	47.56'
217 - 218	S15° 26' 55"W	95.38'
218 - 219	S52° 44' 58"W	122.55'
219 - 200	N89° 54' 02"W	73.15'
200 - 212	N00° 27' 41"E	379.86'



DETAIL 1

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF REGISTER OF DEEDS IN PIERCE COUNTY AS SHEET 2 OF 2 OF DOCUMENT 617487.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOUND IRON PINS ARE 2" IRON PIPES UNLESS OTHERWISE NOTED.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

EXISTING HIGHWAY RIGHT-OF-WAY ON WASSON LANE BASED ON PREVIOUS PROJECT: F028-2(13), GROTENHUIS ADDITION, AMENDED ASSESSOR'S PLAT FOR THE CITY OF RIVER FALLS, CSM V. 1, P. 94, CSM V. 15, P. 89.

EXISTING HIGHWAY RIGHT-OF-WAY CASCADE AVE BASED ON PREVIOUS PROJECT: F028-2(13), GROTENHUIS ADDITION, AMENDED ASSESSOR'S PLAT FOR THE CITY OF RIVER FALLS, CSM V. 1, P. 94, CSM V. 15, P. 89.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RIVER FALLS LAND USE AND ZONING DEPARTMENT.

## SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY

PARCEL NUMBER	OWNERS	INTERESTS REQUIRED	R/W			TLE S.F.
			NEW	EXISTING	TOTAL	
4	ASSOCIATION OF THE SOUTH FORK CONDOMINIUM - NORTH BUILDING	TLE	---	---	---	691
5	M&S WOTHE PROPERTIES LLC.	TLE	---	---	---	36
6	FRED J. MARNARCH	FEE, TLE	216	---	216	323
7	CHIPPEWA VALLEY TECHNICAL COLLEGE	FEE, TLE	3291	---	3291	1988
16	FRED J. MARNARCH	TLE	---	---	---	558
17	CHIPPEWA VALLEY TECHNICAL COLLEGE	TLE	---	---	---	1033

## UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
100	AT&T WISCONSIN	RELEASE OF RIGHTS
102	RIVER FALLS ELECTRIC	RELEASE OF RIGHTS

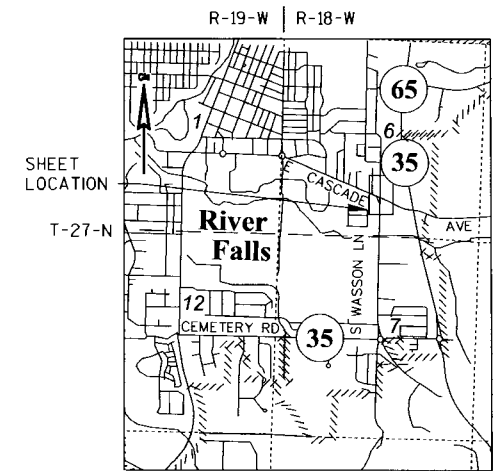
ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

617656  
 PIERCE COUNTY  
 REGISTER OF DEEDS  
 JULIE HINES  
 RECEIVED FOR RECORDING  
 09/15/2023 10:26 AM  
 RECORDING FEE: 25.00  
 PAGES: 1

RESERVED FOR REGISTER OF DEEDS  
 PROJECT NUMBER 7994-00-49-4.02



SCALE, FEET  
 0 50 100



LAYOUT  
 SCALE 0 1 MI.

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	
200	43+62.93	9.20'	360671.095	451149.828	
201	43+63.93	0.00'	360671.111	451140.578	
202	43+74.00	-77.05'	360671.246	451062.974	
203	44+66.51	-62.04'	360774.863	451063.154	
204	106+52.89	-36.61'	360942.646	450982.644	
205	106+90.00	-36.62'	360956.722	450948.311	
206	106+90.00	0.00'	360990.603	450962.217	
207	106+90.00	29.38'	361017.779	450973.371	
208	106+06.84	29.28'	360986.497	451049.674	
209	46+90.87	-54.72'	360982.187	451087.834	
210	47+52.04	-47.46'	361051.623	451088.563	
211	47+50.33	0.00'	361051.124	451136.056	
212	47+49.72	16.82'	361050.947	451152.887	
213	47+49.66	18.49'	361050.930	451154.560	
214	47+49.44	28.26'	361050.959	451164.327	
215	46+30.17	49.15'	360926.350	451201.454	
216	102+66.79	47.48'	360882.922	451358.598	
217	102+69.44	0.00'	360837.082	451345.930	
218	102+76.63	-95.16'	360745.148	451320.523	
219	43+56.15	81.97'	360670.968	451222.974	

STATION & OFFSET TABLE		
POINT	STATION	OFFSET
TLE200	45+31.85	-113.88'
TLE201	45+29.09	-118.05'
TLE202	106+50.71	-45.61'
TLE203	106+77.07	-45.62'
TLE204	106+77.08	-36.62'
TLE205	106+66.59	29.39'
TLE206	106+66.59	37.39'
TLE207	106+18.80	37.40'
TLE208	47+00.08	-52.81'
TLE209	47+48.95	50.03'
TLE210	46+26.37	77.54'
TLE250	106+66.59	31.39'
TLE251	106+18.80	31.40'
TLE252	46+95.13	-53.80'
TLE253	47+49.09	43.89'
TLE254	46+27.82	66.69'

**STRAND ASSOCIATES, INC.**  
 910 WEST WINGRA DRIVE, MADISON, WI 53715  
 (608) 251-4843

I, HEATHER S. BARTELT PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RIVER FALLS I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Heather Bartelt* DATE: 8/3/23  
 PRINT NAME: HEATHER S. BARTELT  
 REGISTRATION NUMBER: S-2797

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RIVER FALLS

SIGNATURE: *Todd Niculeski* DATE: 8/19/23  
 PRINT NAME: TODD NICULESKI - CITY ENGINEER

TRANSPORTATION PROJECT PLAT NO: 7994-00-49-4.02 AMENDMENT NO. 1

AMENDS PARCEL 7 OF TRANSPORTATION PROJECT PLAT 7994-00-49-4.02 RECORDED AS DOCUMENT NUMBER 617656 AT THE PIERCE COUNTY WISCONSIN REGISTER OF DEEDS.

THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 1, PAGES 94 AS DOCUMENT NUMBER 273018 AND THAT PART OF OUTLOT 134 OF AMENDED ASSESSOR'S PLAT FOR CITY OF RIVER FALLS AND THAT PART OF LOTS 31 AND 32 OF GROTENHUIS ADDITION LOCATED IN THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 AND THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 15, PAGE 89 AS DOCUMENT NUMBER 594444 BEING LOCATED IN THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4, ALL IN SECTION 6, TOWN 27 NORTH, RANGE 18 WEST, CITY OF RIVER FALLS, PIERCE COUNTY, WISCONSIN.

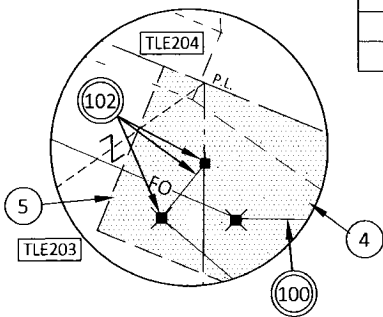
RELOCATION ORDER LOCAL STREET C OF RIVER FALLS, WASSON LANE (CEMETERY ROAD TO CASCADE AVENUE) PIERCE COUNTY TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE. THE CITY OF RIVER FALLS DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, WISCONSIN STATUTES, THE CITY OF RIVER FALLS HEREBY ORDERS THAT: 1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT. 2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RIVER FALLS, PURSUANT TO THE PROVISIONS OF SECTION 62.22, WISCONSIN STATUTES.

Table with 3 columns: Stationing (PI STA, Y, X, DELTA, D, T, L, R, PC STA, PT STA), Bearing, and Distance. Includes data for various points along the alignment.

Table with 3 columns: Stationing (PI STA, Y, X, DELTA, D, T, L, R, PC STA, PT STA), Bearing, and Distance. Includes data for various points along the alignment.

ALIGNMENT SUB-CURVE PC 100+57.83 TO STA. 102+69.44 R=500.00' L=211.61' LCH=210.03' LCB=N65°55'36"W DELTA=24°14'55" LT



DETAIL 1

COURSE TABLE with columns: COURSE, BEARING, DISTANCE. Lists courses from 200-201 to 200-212.

STRAND ASSOCIATES, INC. 910 WEST WINGRA DRIVE, MADISON, WI 53715 (608) 251-4843

I, HEATHER S. BARTELT PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RIVER FALLS I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SIGNATURE: Heather Bartelt DATE: 9/14/23 PRINT NAME: HEATHER S. BARTELT REGISTRATION NUMBER: S-2797 THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RIVER FALLS SIGNATURE: Todd Nuckols DATE: 9/18/23 PRINT NAME: Todd Nuckols, City Engineer

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF REGISTER OF DEEDS IN PIERCE COUNTY AS SHEET 2 OF 2 OF DOCUMENT 617487.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOUND IRON PINS ARE 2" IRON PIPES UNLESS OTHERWISE NOTED.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

EXISTING HIGHWAY RIGHT-OF-WAY ON WASSON LANE BASED ON PREVIOUS PROJECT: F028-2(13), GROTENHUIS ADDITION, AMENDED ASSESSOR'S PLAT FOR THE CITY OF RIVER FALLS, CSM V. 1, P. 94, CSM V. 15, P. 89.

EXISTING HIGHWAY RIGHT-OF-WAY CASCADE AVE BASED ON PREVIOUS PROJECT: F028-2(13), GROTENHUIS ADDITION, AMENDED ASSESSOR'S PLAT FOR THE CITY OF RIVER FALLS, CSM V. 1, P. 94, CSM V. 15, P. 89.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RIVER FALLS LAND USE AND ZONING DEPARTMENT.

FOUND ALUMINUM CAP Y=362448.851 X=451164.143

FOUND BRASS CAP Y=359810.309 X=451142.897

SCHEDULE OF LANDS & INTERESTS REQUIRED

Table with columns: PARCEL NUMBER, OWNERS, INTERESTS REQUIRED, R/W NEW, S.F. EXISTING, S.F. TOTAL, TLE S.F. Lists parcels 4, 5, 6, 7, 16, and 17.

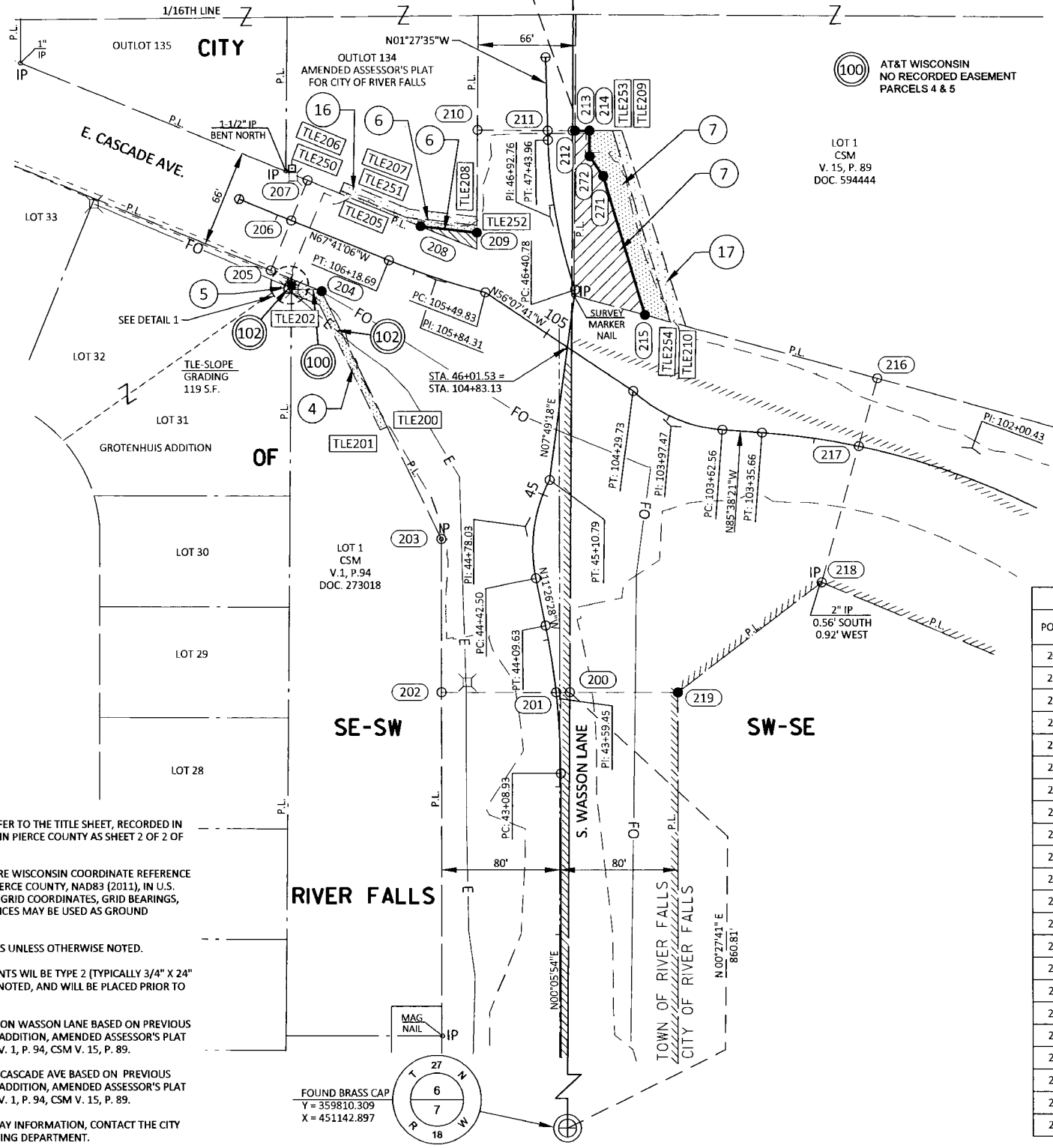
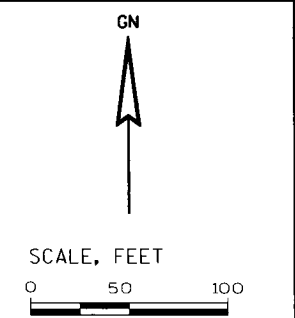
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY

UTILITY INTERESTS REQUIRED

Table with columns: UTILITY NUMBER, UTILITY OWNER(S), INTERESTS REQUIRED. Lists utilities 100 (AT&T WISCONSIN) and 102 (RIVER FALLS ELECTRIC).

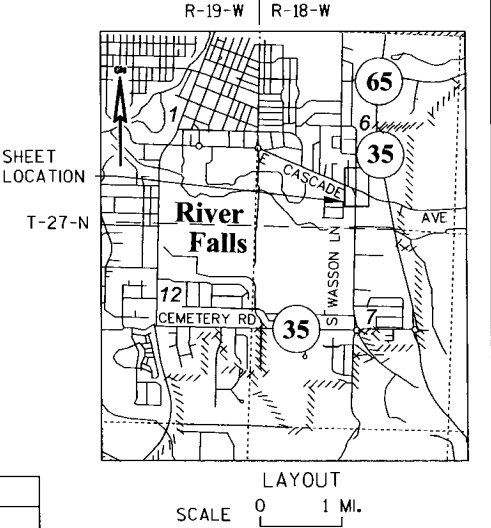
ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

618211 PIERCE COUNTY REGISTER OF DEEDS JULIE HINES RECEIVED FOR RECORDING 09/21/2023 11:52 AM RECORDING FEE: \$5.00 PAGES: 1 RESERVED FOR REGISTER OF DEEDS PROJECT NUMBER 7994-00-49-4.02 AMENDMENT NO. 1



STATION & OFFSET TABLE with columns: POINT, STATION, OFFSET, Y COORDS, X COORDS. Lists data for points 200 through 272.

STATION & OFFSET TABLE with columns: POINT, STATION, OFFSET. Lists data for TLE points from TLE200 to TLE254.



# TRANSPORTATION PROJECT PLAT NO: 7994-00-49-4.02 AMENDMENT NO. 2

REMOVES PARCELS 5 AND 6 AND AMENDS PARCEL 16 AND AMENDS UTILITY NUMBERS 100 AND 102 OF TRANSPORTATION PROJECT PLAT 7994-00-49-4.02 AMENDMENT NO. 1 RECORDED AS DOCUMENT NUMBER 618211 AT THE PIERCE COUNTY WISCONSIN REGISTER OF DEEDS.

THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 1, PAGES 94 AS DOCUMENT NUMBER 273018 AND THAT PART OF OUTLOT 134 OF AMENDED ASSESSOR'S PLAT FOR CITY OF RIVER FALLS AND THAT PART OF LOTS 31 AND 32 OF GROTENHUIS ADDITION LOCATED IN THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 AND THAT PART OF LOT 1 OF CSM RECORDED IN VOLUME 15, PAGE 89 AS DOCUMENT NUMBER 594444 BEING LOCATED IN THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4, ALL IN SECTION 6, TOWN 27 NORTH, RANGE 18 WEST, CITY OF RIVER FALLS, PIERCE COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET C OF RIVER FALLS, WASSON LANE (CEMETERY ROAD TO CASCADE AVENUE) PIERCE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF RIVER FALLS DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, WISCONSIN STATUTES, THE CITY OF RIVER FALLS HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS Laid OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF RIVER FALLS, PURSUANT TO THE PROVISIONS OF SECTION 62.22, WISCONSIN STATUTES.

## SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY

PARCEL NUMBER	OWNERS	INTERESTS REQUIRED	R/W NEW	S.F. REQUIRED		TLE S.F.
				EXISTING	TOTAL	
4	ASSOCIATION OF THE SOUTH FORK CONDOMINIUM - NORTH BUILDING	TLE	---	---	---	691
7	CHIPPEWA VALLEY TECHNICAL COLLEGE	FEE, TLE	3214	---	3214	2065
16	FRED J. MARNARCH	TLE	---	---	---	1097
17	CHIPPEWA VALLEY TECHNICAL COLLEGE	TLE	---	---	---	1033

## UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
100	AT&T WISCONSIN	RELEASE OF RIGHTS
102	RIVER FALLS ELECTRIC	RELEASE OF RIGHTS

ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

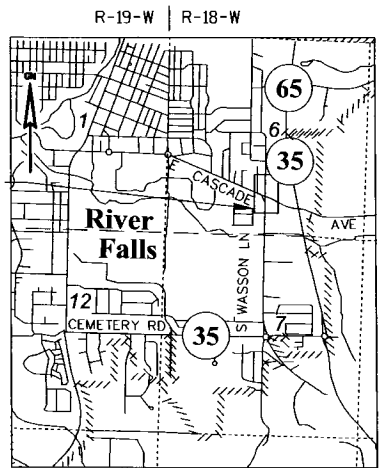
619466  
PIERCE COUNTY  
REGISTER OF DEEDS  
JULIE HINES

RECEIVED FOR RECORDING  
12/21/2023 10:45 AM  
RECORDING FEE: 25.00  
PAGES: 1

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 7994-00-49-4.02  
AMENDMENT NO. 2



SCALE, FEET



LAYOUT  
SCALE 0 1 MI.

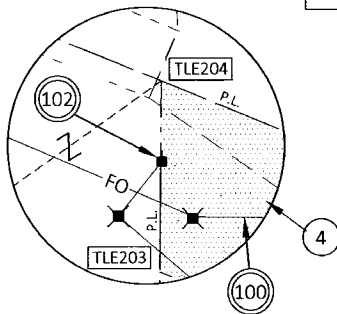
COURSE	BEARING	DISTANCE
200-201	N89° 54' 02" W	9.25'
201-202	N89° 54' 02" W	77.60'
202-203	N00° 05' 58" E	103.62'
203-204	N25° 38' 02" W	186.10'
204-205	N67° 42' 27" W	37.11'
205-206	N22° 18' 54" E	36.62'
206-207	N22° 18' 54" E	29.38'
207-209	S67° 42' 27" E	123.58'
209-210	N00° 36' 06" E	80.73'
210-211	S89° 23' 54" E	47.49'
211-212	S89° 23' 54" E	16.83'
212-213	S89° 23' 54" E	1.67'
213-214	N89° 49' 42" E	9.77'
214-272	S00° 10' 18" E	17.18'
272-271	S34° 01' 53" E	16.20'
271-215	S16° 35' 29" E	98.08'
215-216	S74° 33' 05" E	163.04'
216-217	S15° 26' 55" W	47.56'
217-218	S15° 26' 55" W	95.38'
218-219	S52° 44' 58" W	122.55'
219-200	N89° 54' 02" W	73.15'

PI STA	Y	X	DELTA	D	T	L	R	PC STA	PT STA
43+59.45	360666.736	451143.593	11°32'22" LT	11°27'33"	50.52'	100.70'	500.00'	43+08.93	44+09.63
44+78.03	360783.302	451120.002	39°07'42" RT	57°17'45"	35.54'	68.29'	100.00'	44+42.50	45+10.79
46+92.76	360992.794	451137.542	17°14'09" RT	16°42'16"	51.98'	103.18'	343.00'	46+40.78	47+43.96

PI STA	Y	X	DELTA	D	T	L	R	PC STA	PT STA
102+00.43	360835.625	451422.617	31°50'13" LT	11°27'33"	142.60'	277.83'	500.00'	100+57.83	103+35.66
103+97.47	360851.168	451218.792	38°29'10" RT	57°17'45"	34.91'	67.17'	100.00'	103+62.56	104+29.73
105+84.31	360950.432	451060.089	7°53'24" RT	57°17'45"	34.48'	68.85'	500.00'	105+49.83	106+18.69

ALIGNMENT SUB-CURVE  
PC 100+57.83 TO STA. 102+69.44  
R = 500.00'  
L = 211.61'  
LCH = 210.03'  
LCB = N65° 55' 36" W  
DELTA = 24° 14' 55" LT

ALIGNMENT SUB-CURVE  
STA. 102+69.44 TO PT 103+35.66  
R = 500.00'  
L = 66.22'  
LCH = 66.17'  
LCB = N81° 50' 43" W  
DELTA = 07° 35' 18" LT



DETAIL 1

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF REGISTER OF DEEDS IN PIERCE COUNTY AS SHEET 2 OF 2 OF DOCUMENT 617487.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

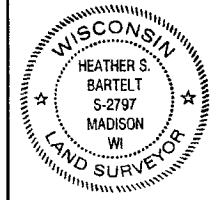
EXISTING HIGHWAY RIGHT-OF-WAY ON WASSON LANE BASED ON PREVIOUS PROJECT: F028-2(13), GROTENHUIS ADDITION, AMENDED ASSESSOR'S PLAT FOR THE CITY OF RIVER FALLS, CSM V. 1, P. 94, CSM V. 15, P. 89.

EXISTING HIGHWAY RIGHT-OF-WAY CASCADE AVE BASED ON PREVIOUS PROJECT: F028-2(13), GROTENHUIS ADDITION, AMENDED ASSESSOR'S PLAT FOR THE CITY OF RIVER FALLS, CSM V. 1, P. 94, CSM V. 15, P. 89.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF RIVER FALLS LAND USE AND ZONING DEPARTMENT.

**STRAND ASSOCIATES, INC.**  
910 WEST WINGRA DRIVE, MADISON, WI 53715  
(608) 251-4843

I, HEATHER S. BARTELT PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF RIVER FALLS I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SIGNATURE: *Heather S. Bartelt* DATE: 12/18/23

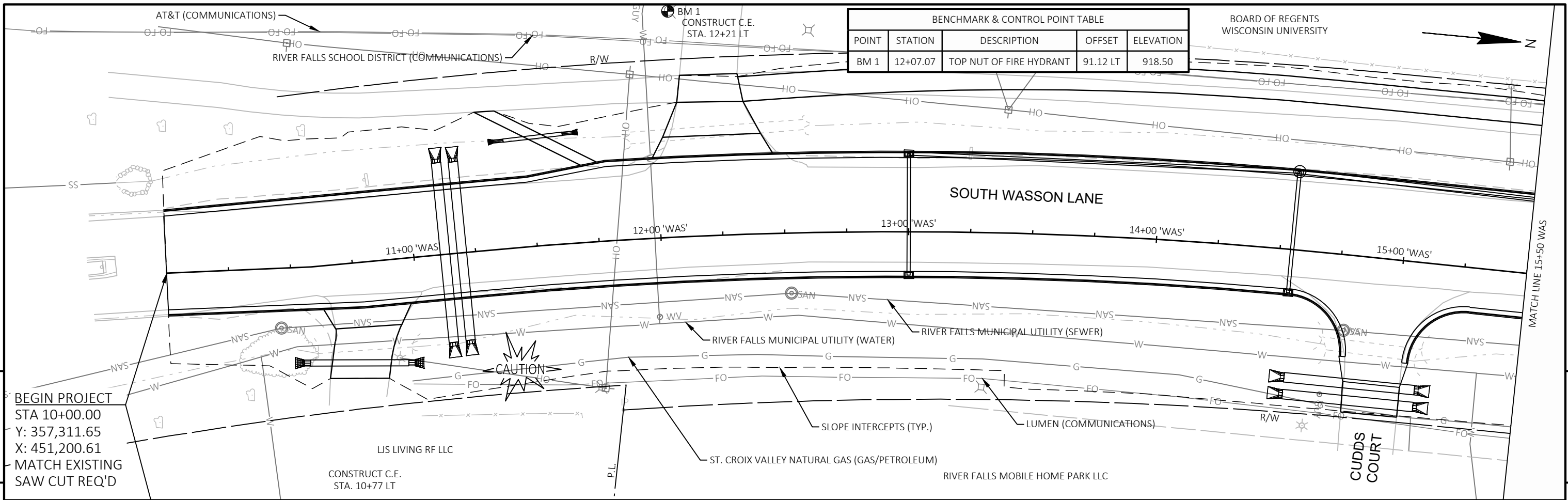
PRINT NAME: HEATHER S. BARTELT  
REGISTRATION NUMBER: S-2797

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF RIVER FALLS

SIGNATURE: *Todd N. Klopski* DATE: 12-14-23

PRINT NAME: TODD N. KLOPSKI, CITY ENGINEER

FOUND BRASS CAP  
Y = 359810.309  
X = 451142.897



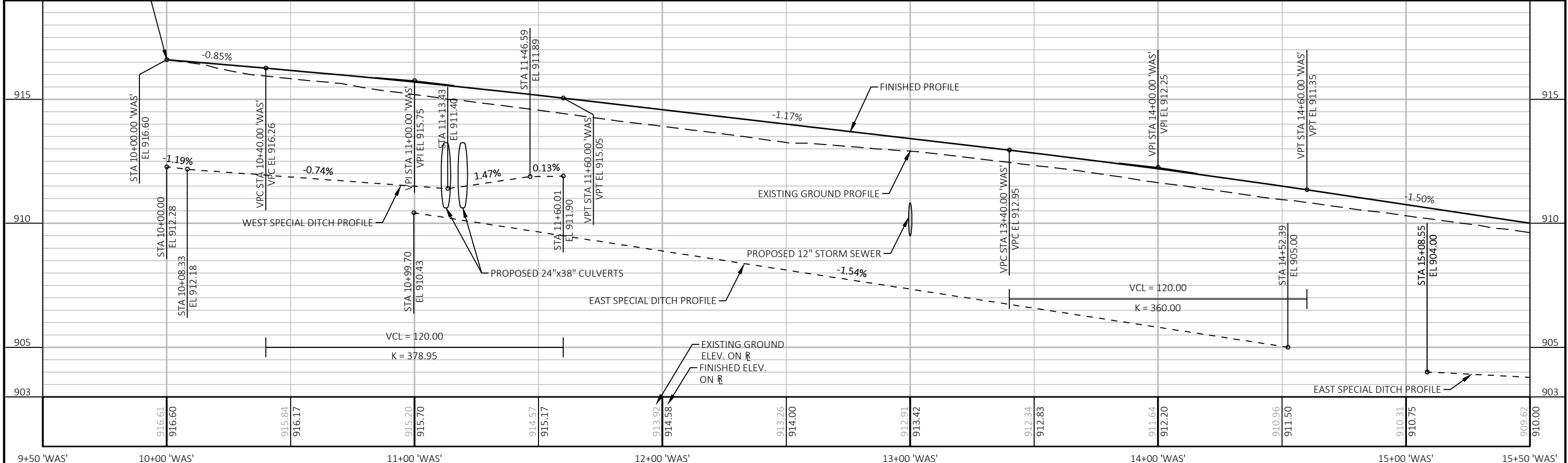
BENCHMARK & CONTROL POINT TABLE				
POINT	STATION	DESCRIPTION	OFFSET	ELEVATION
BM 1	12+07.07	TOP NUT OF FIRE HYDRANT	91.12 LT	918.50

BOARD OF REGENTS  
WISCONSIN UNIVERSITY

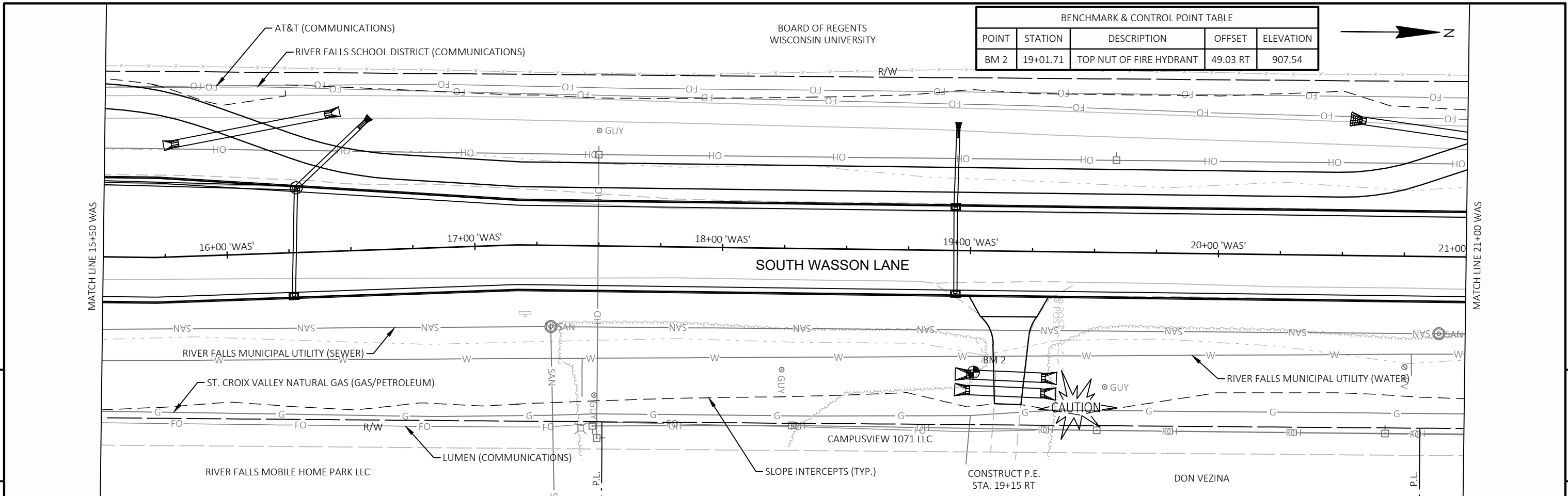


**5**  
BEGIN PROJECT  
STA 10+00.00  
Y: 357,311.65  
X: 451,200.61  
MATCH EXISTING  
SAW CUT REQ'D

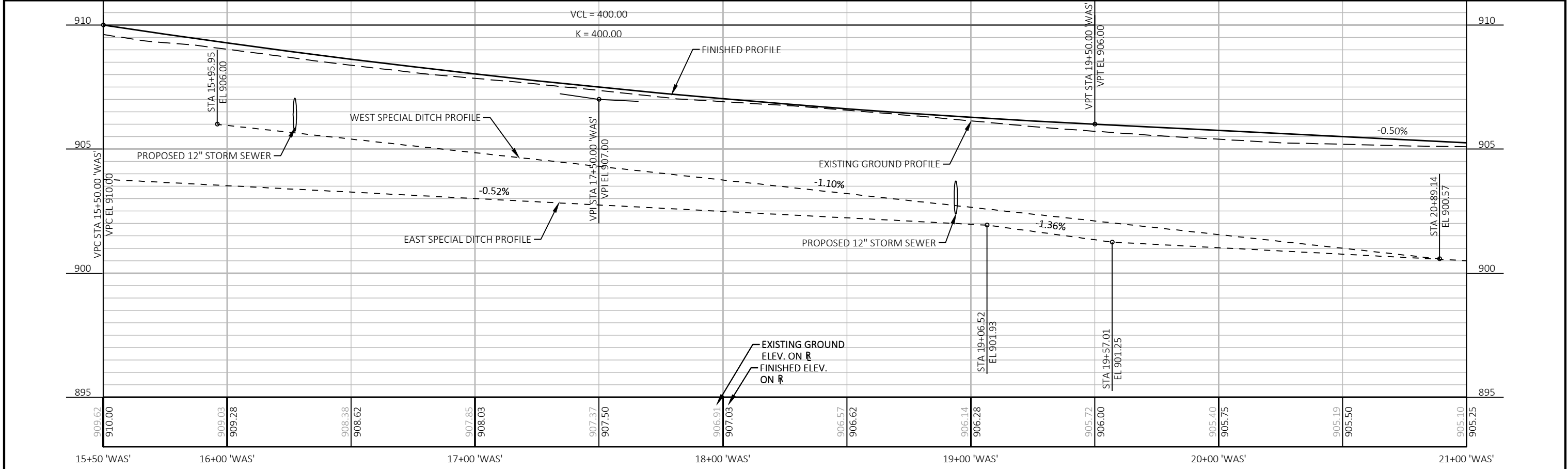
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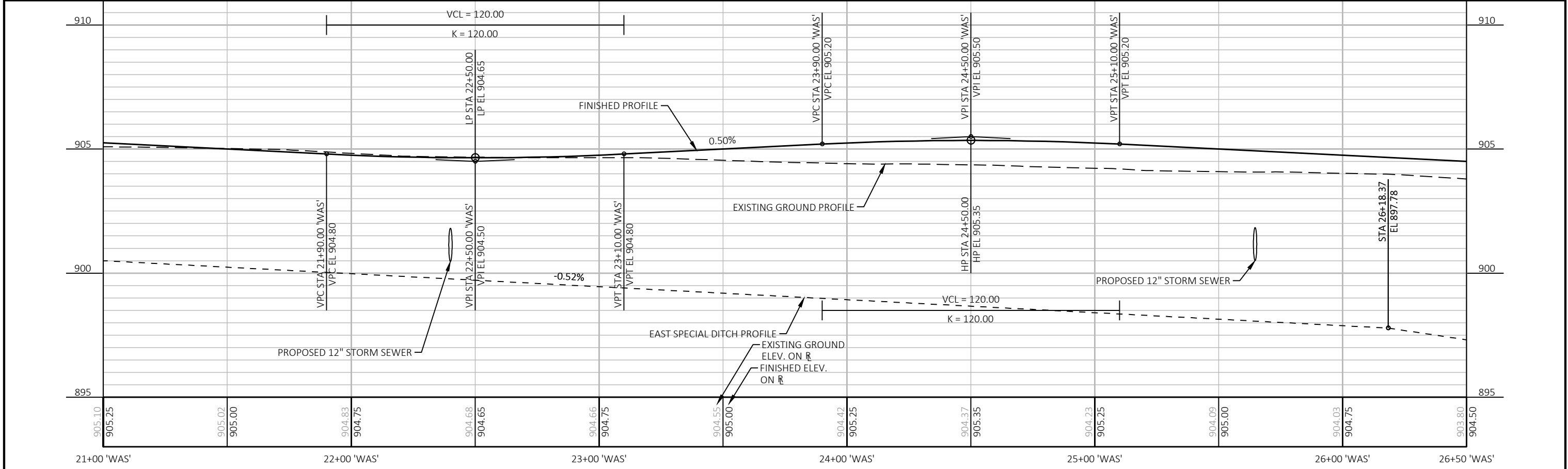
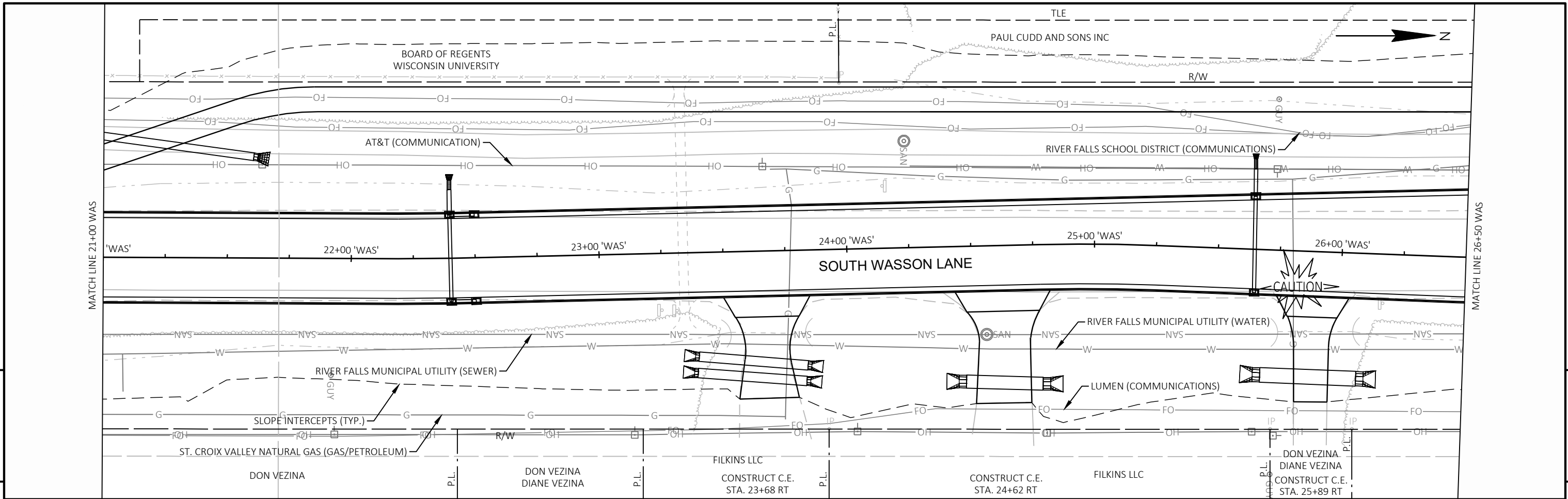
PROJECT NO: 7994-00-51    HWY: WASSON LANE    COUNTY: PIERCE    PLAN AND PROFILE: WASSON LANE    SHEET **E**



BENCHMARK & CONTROL POINT TABLE				
POINT	STATION	DESCRIPTION	OFFSET	ELEVATION
BM 2	19+01.71	TOP NUT OF FIRE HYDRANT	49.03 RT	907.54

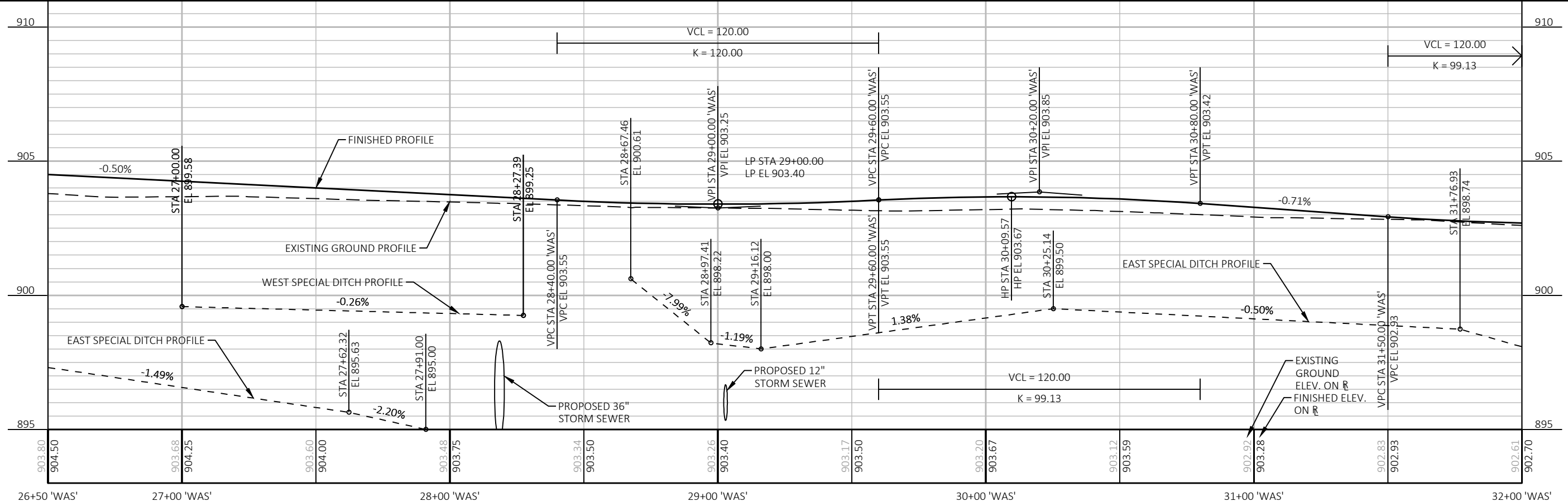
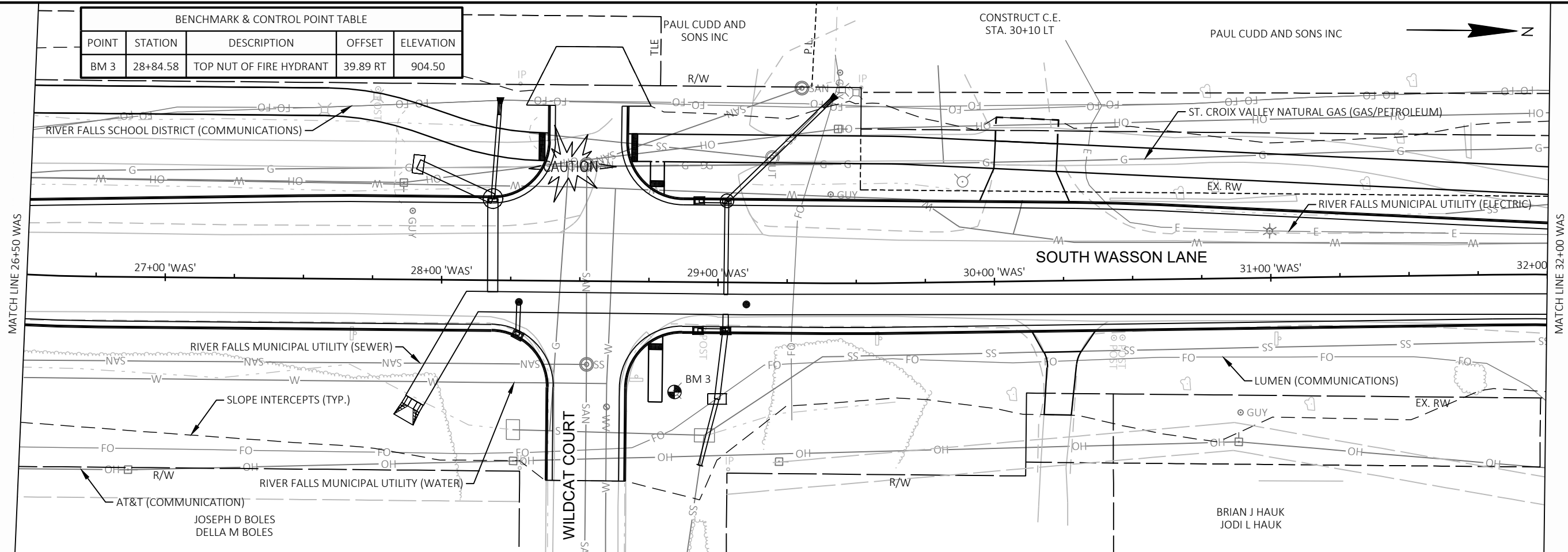


PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: WASSON LANE	SHEET	<b>E</b>
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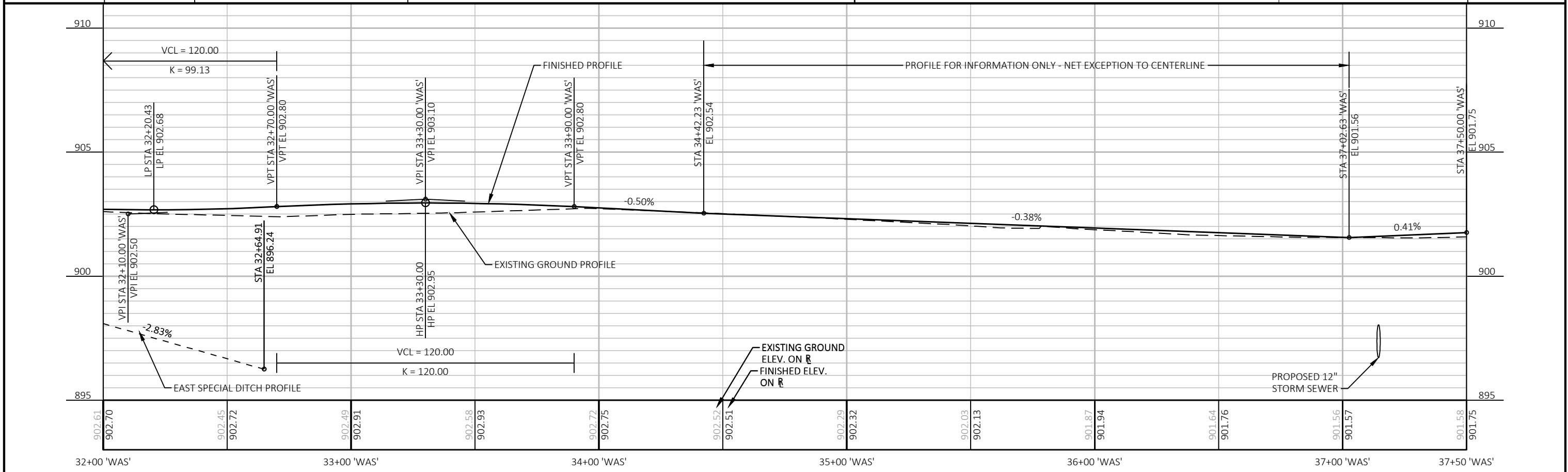
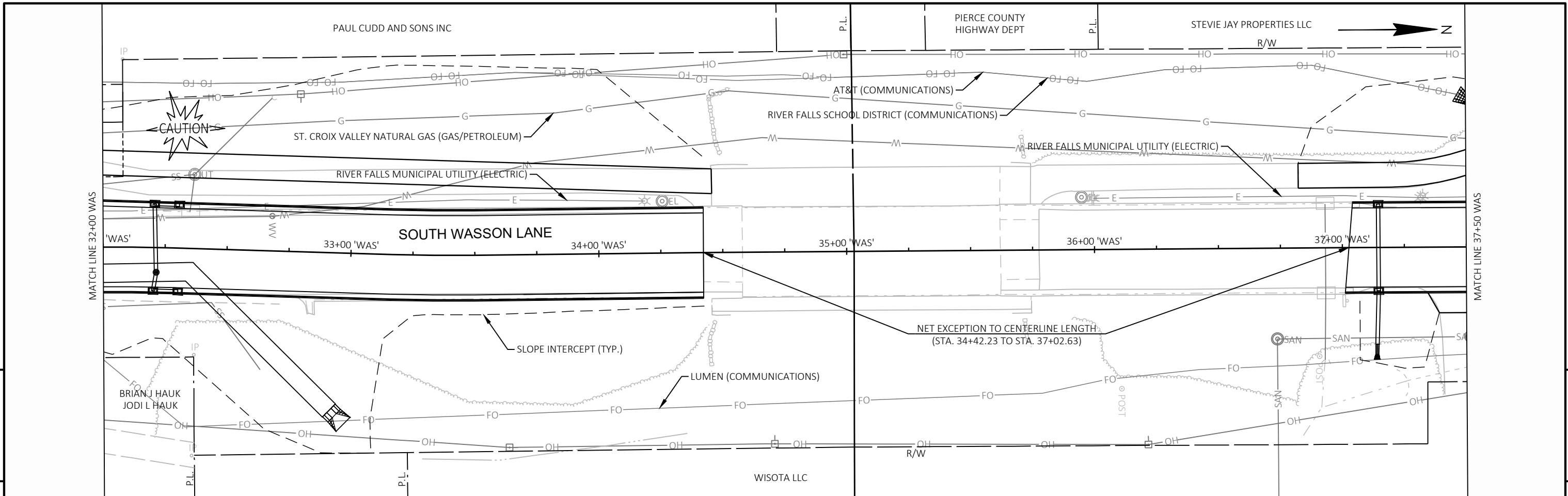


PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: WASSON LANE
SHEET			<b>E</b>

BENCHMARK & CONTROL POINT TABLE				
POINT	STATION	DESCRIPTION	OFFSET	ELEVATION
BM 3	28+84.58	TOP NUT OF FIRE HYDRANT	39.89 RT	904.50

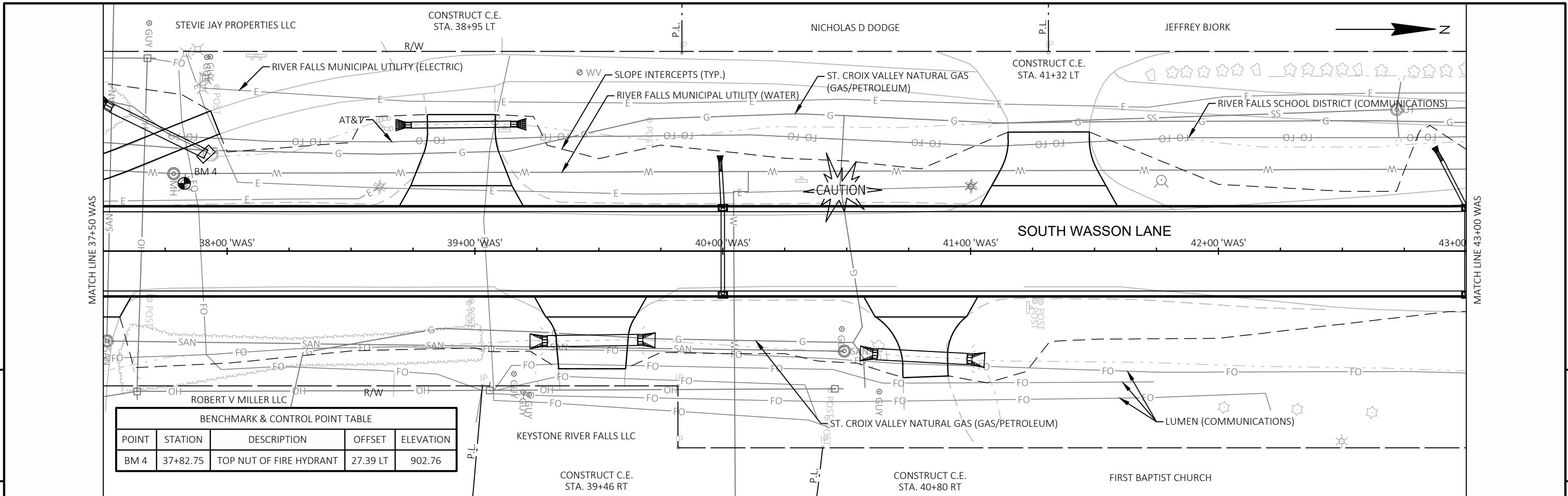


PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      PLAN AND PROFILE: WASSON LANE      SHEET: E

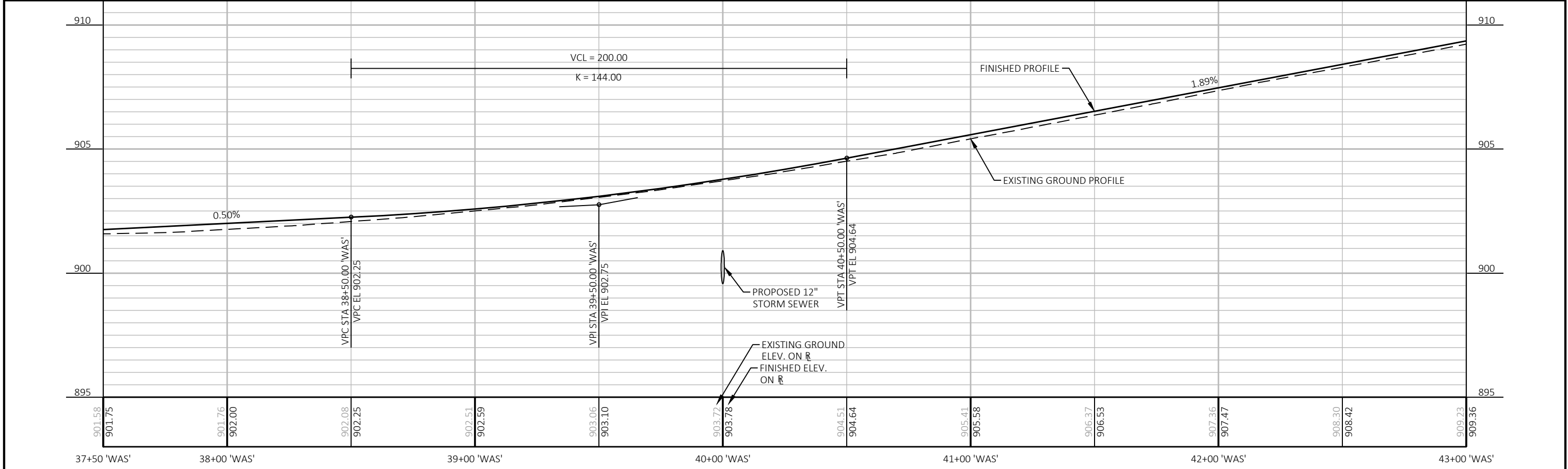


PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: WASSON LANE	SHEET	<b>E</b>
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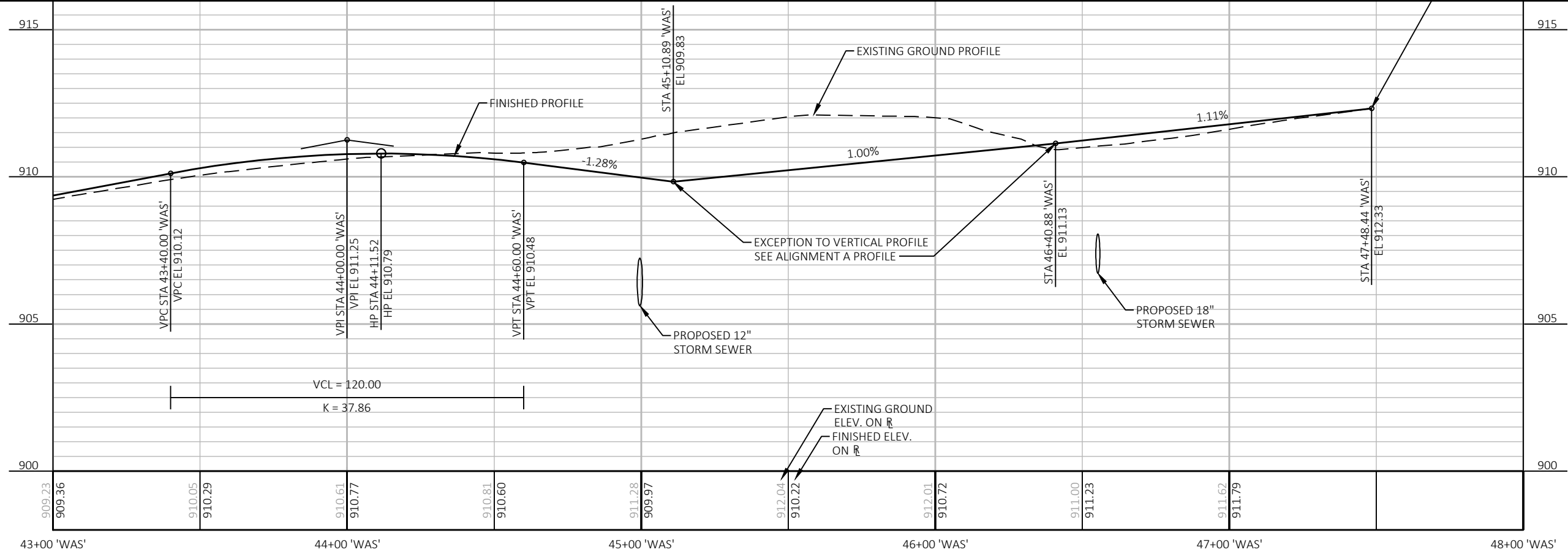
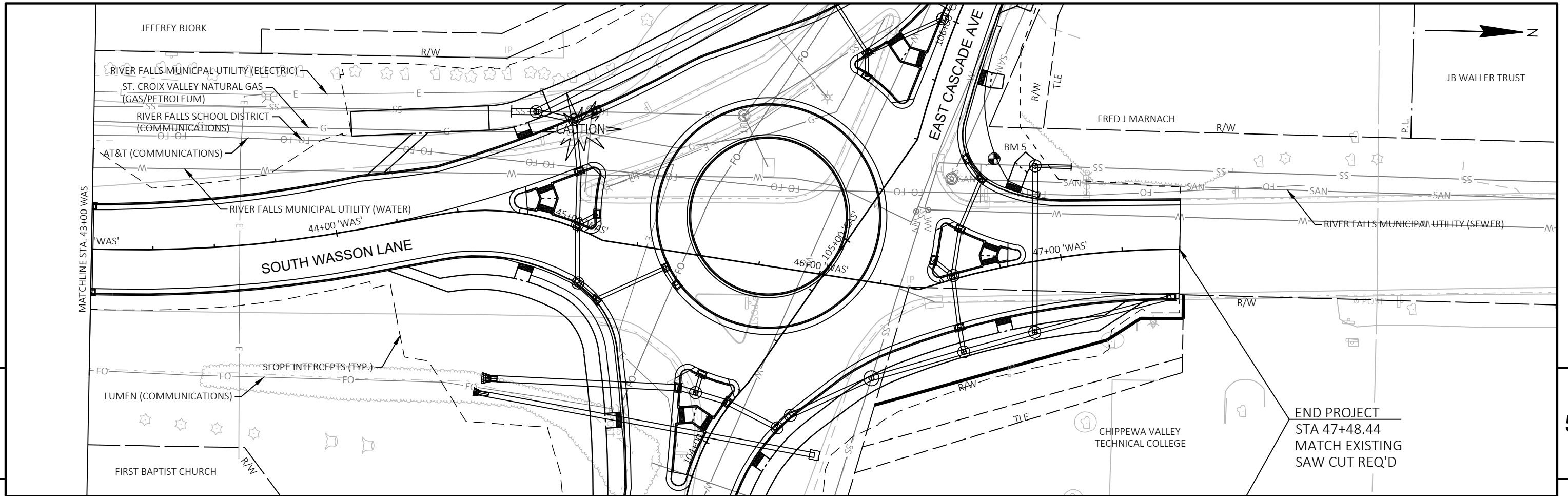




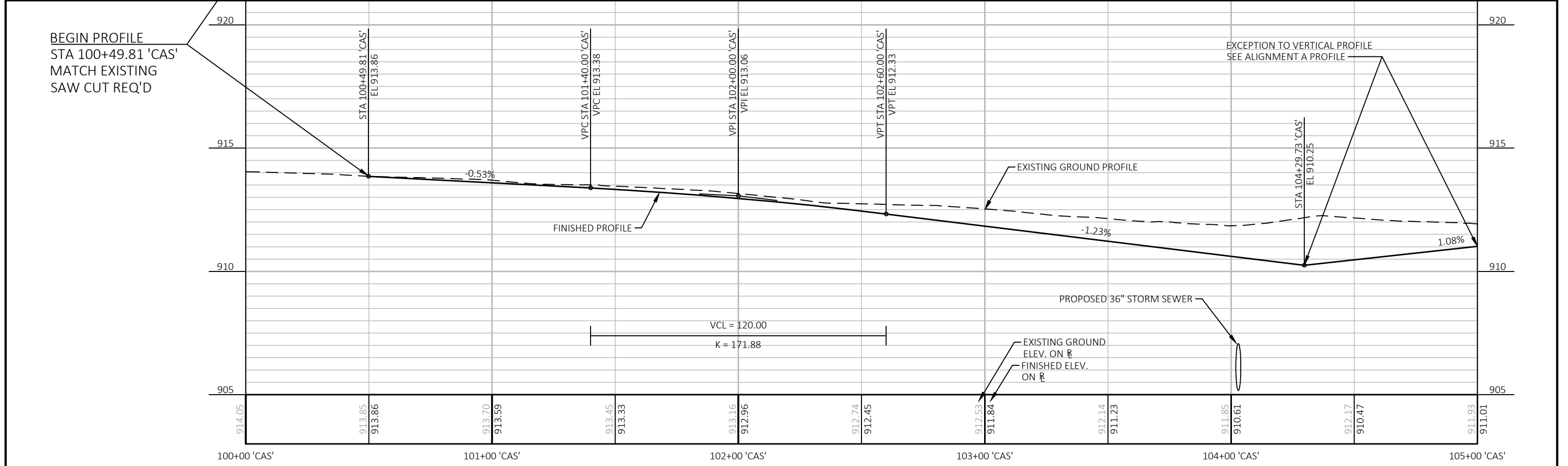
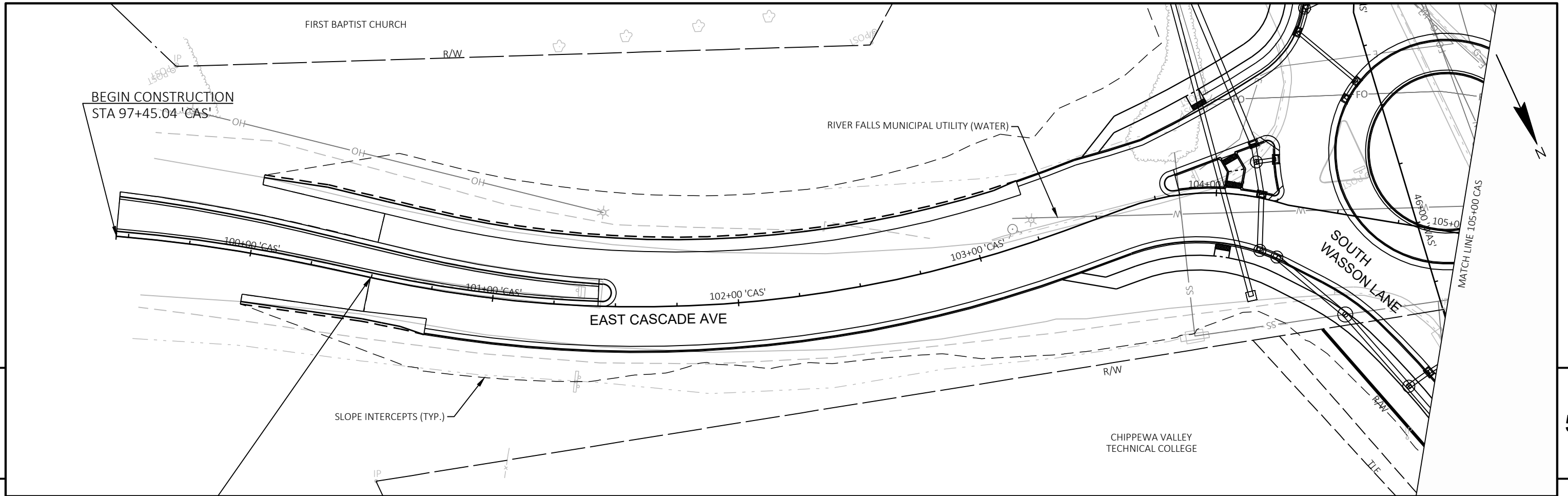
BENCHMARK & CONTROL POINT TABLE				
POINT	STATION	DESCRIPTION	OFFSET	ELEVATION
BM 4	37+82.75	TOP NUT OF FIRE HYDRANT	27.39 LT	902.76



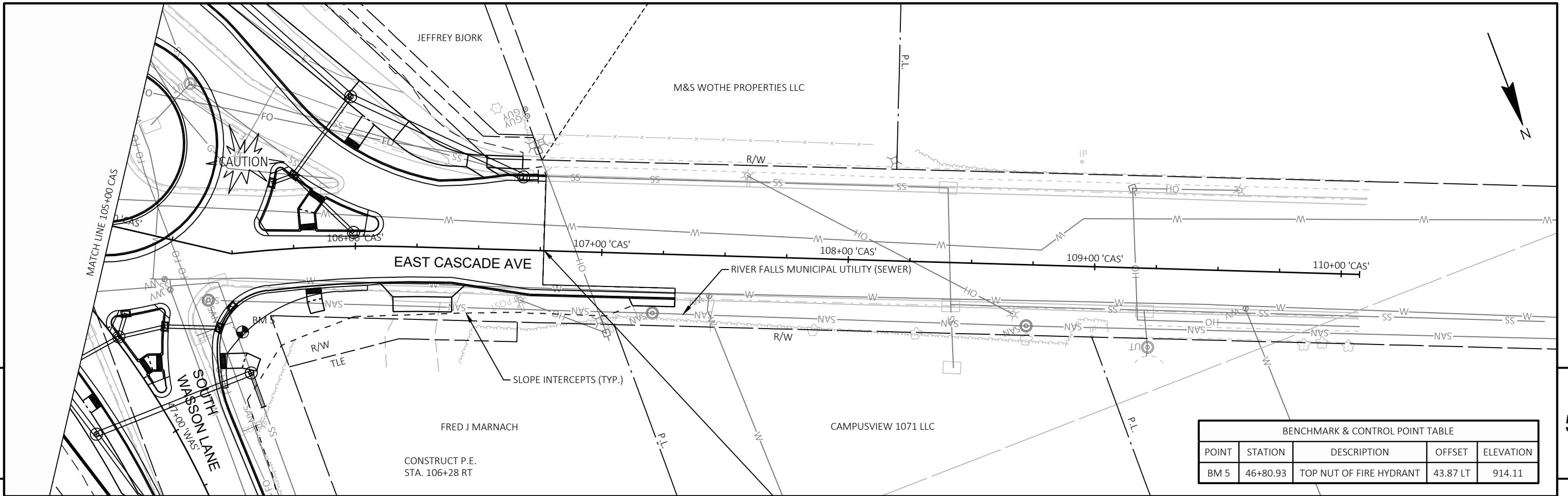
PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      PLAN AND PROFILE: WASSON LANE      SHEET: E



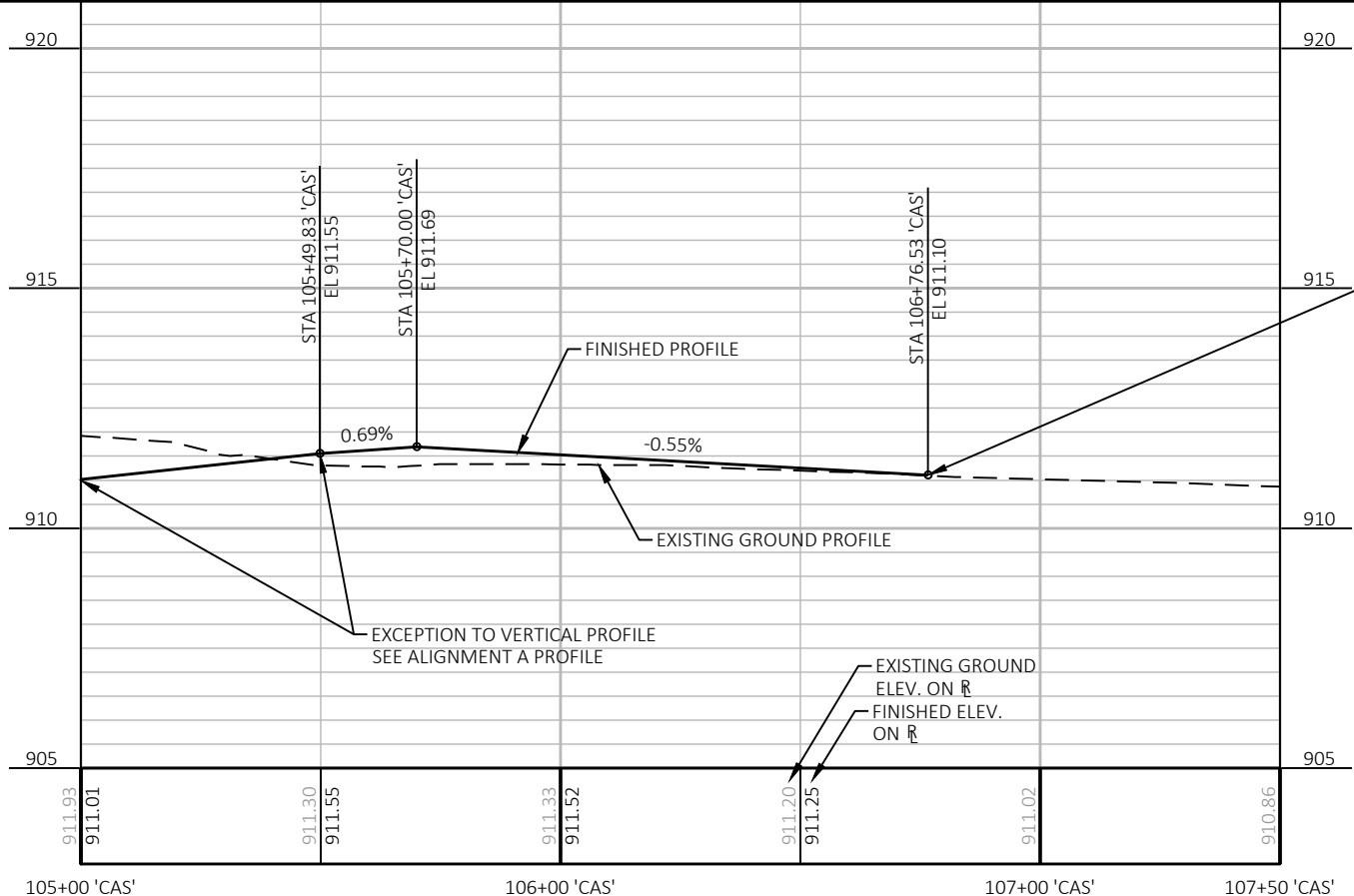
PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: WASSON LANE	SHEET: E
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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: EAST CASCADE AVENUE	SHEET	<b>E</b>
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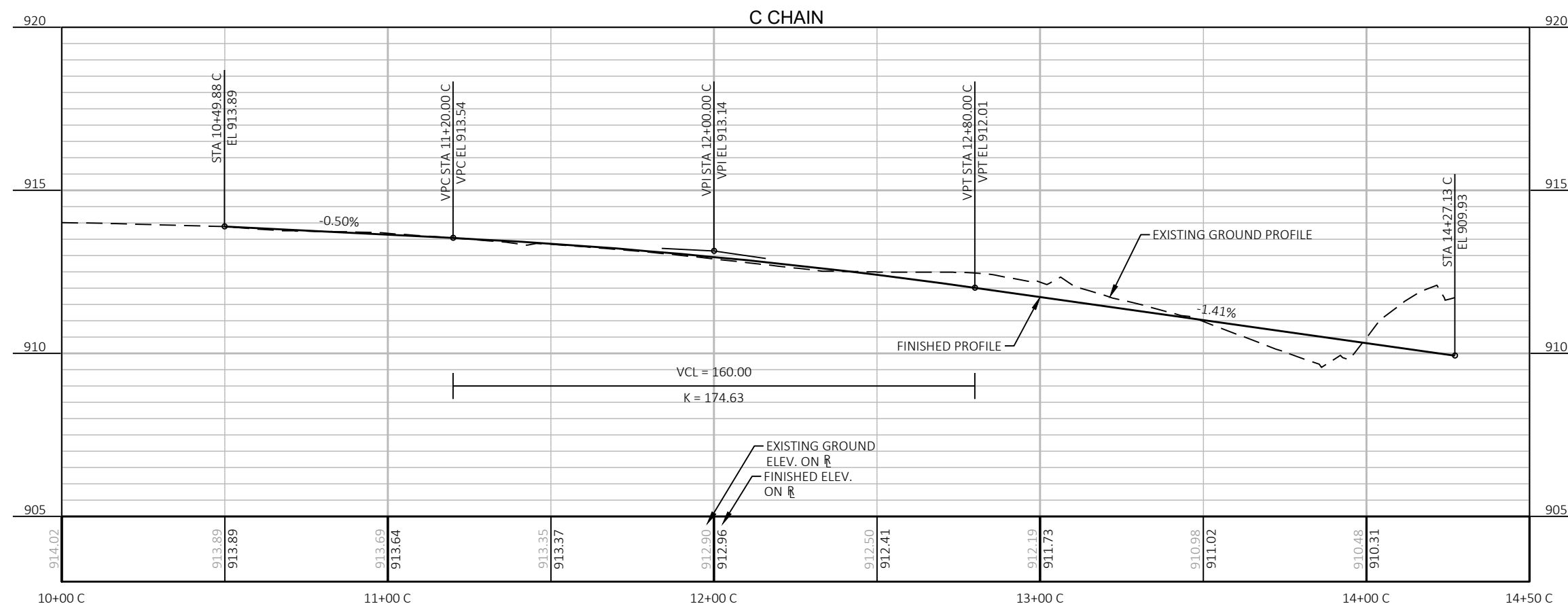
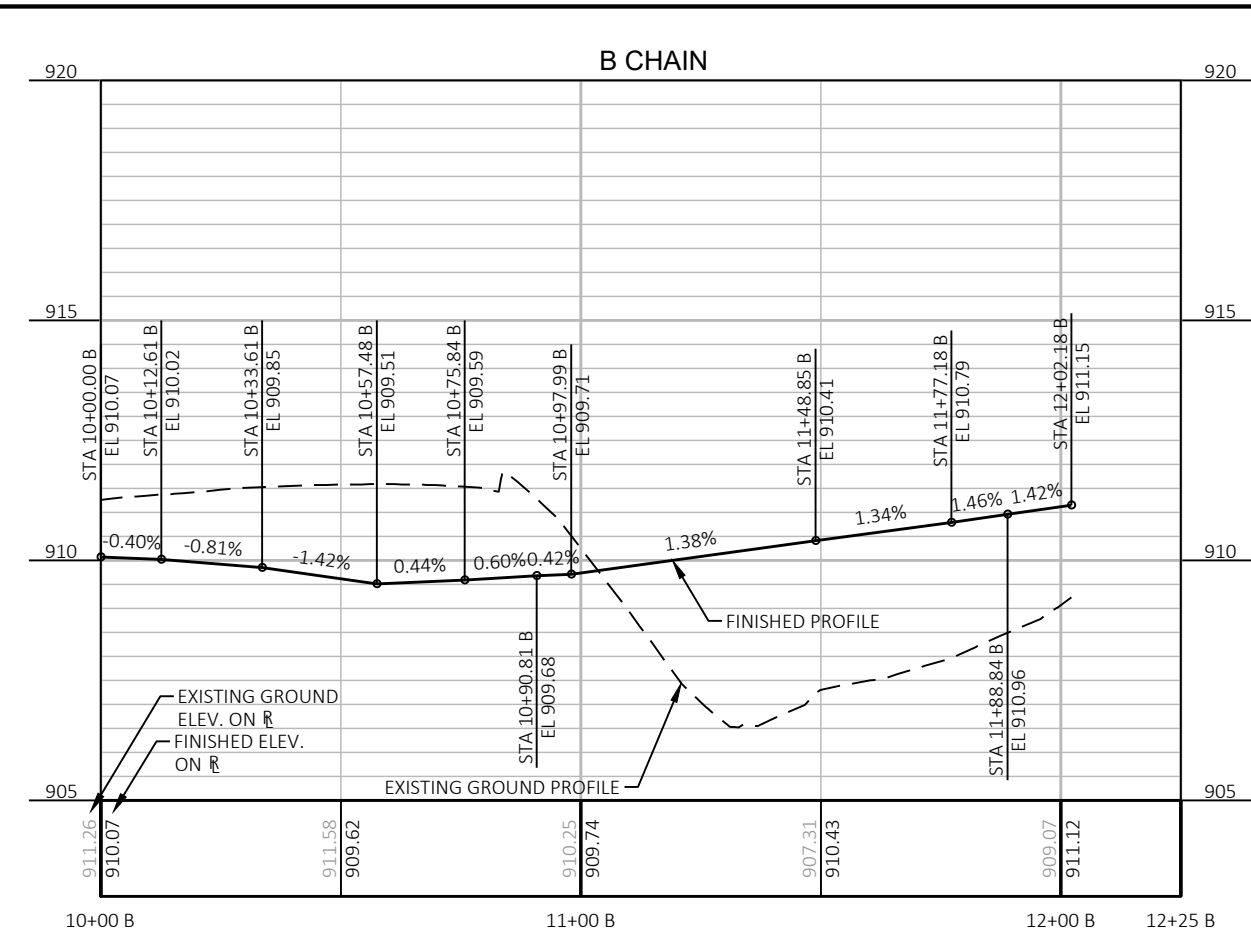
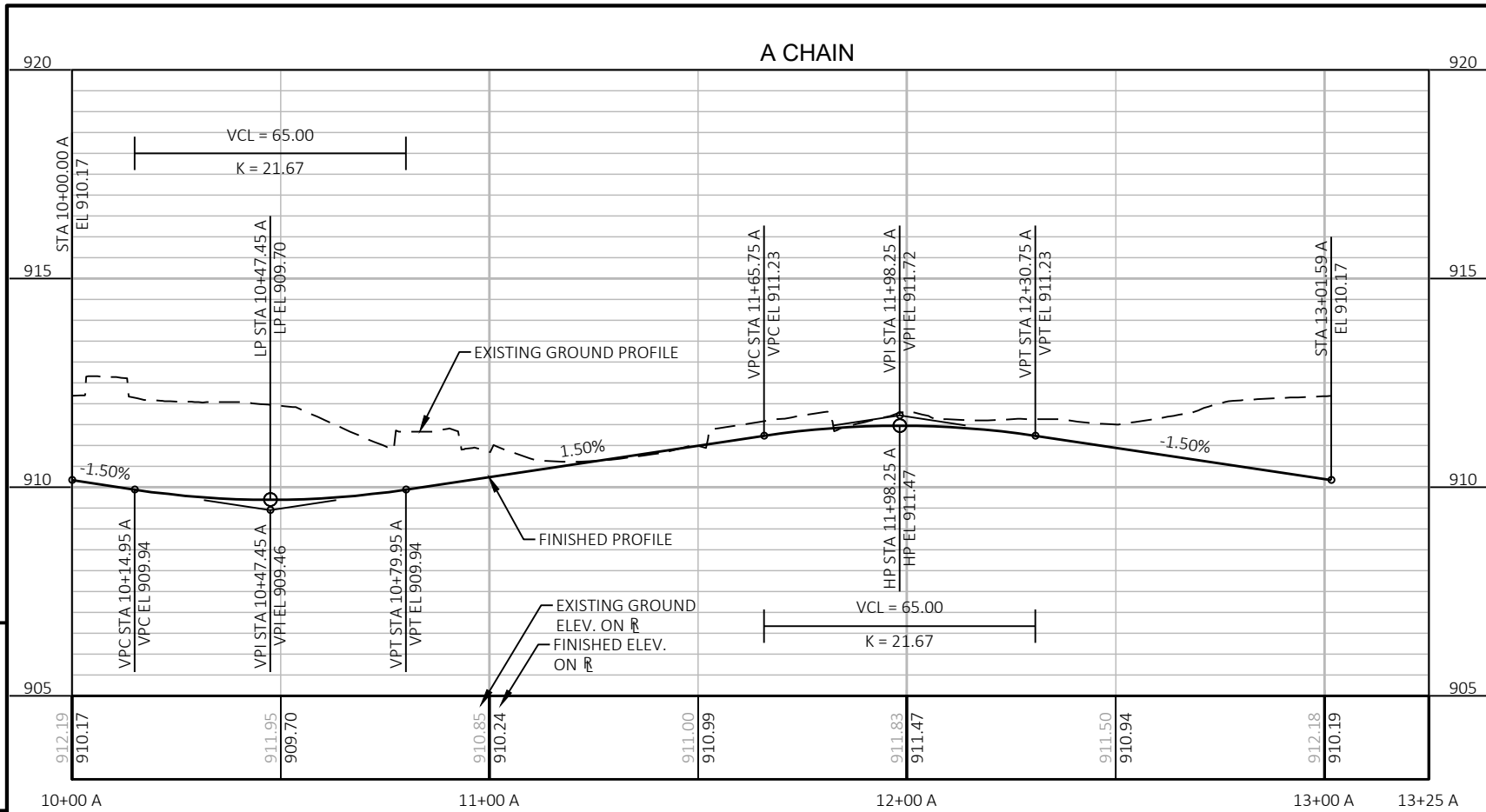


BENCHMARK & CONTROL POINT TABLE				
POINT	STATION	DESCRIPTION	OFFSET	ELEVATION
BM 5	46+80.93	TOP NUT OF FIRE HYDRANT	43.87 LT	914.11



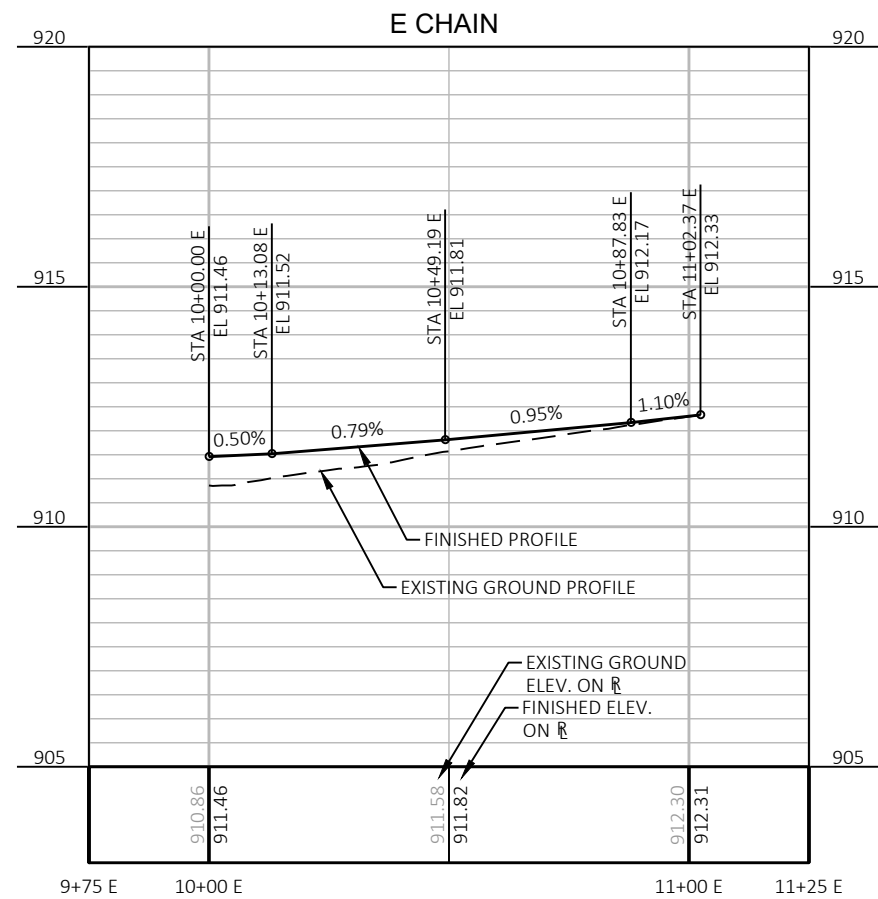
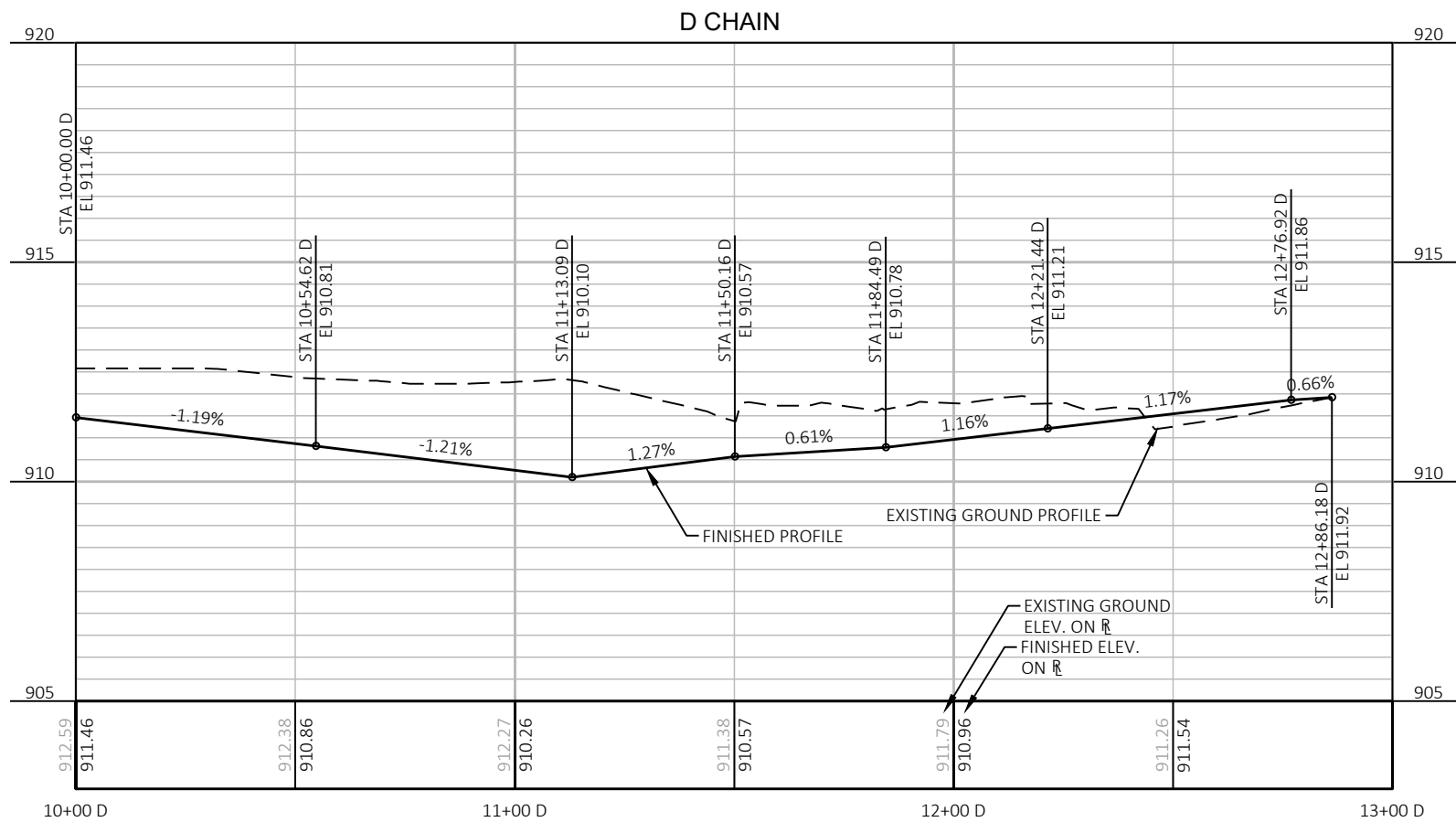
END PROFILE  
 STA 106+76.53 'CAS'  
 MATCH EXISTING  
 SAW CUT REQ'D

PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      PLAN AND PROFILE: EAST CASCADE AVENUE      SHEET: **E**



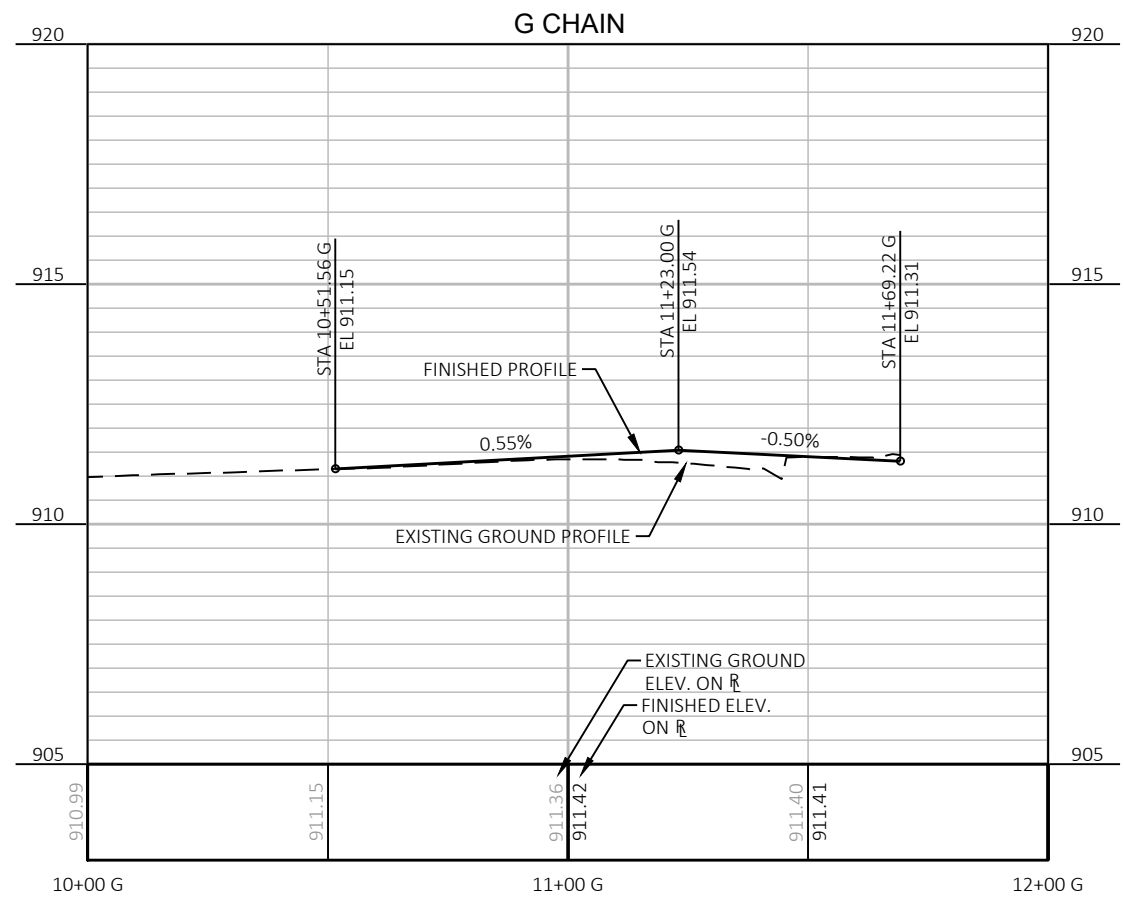
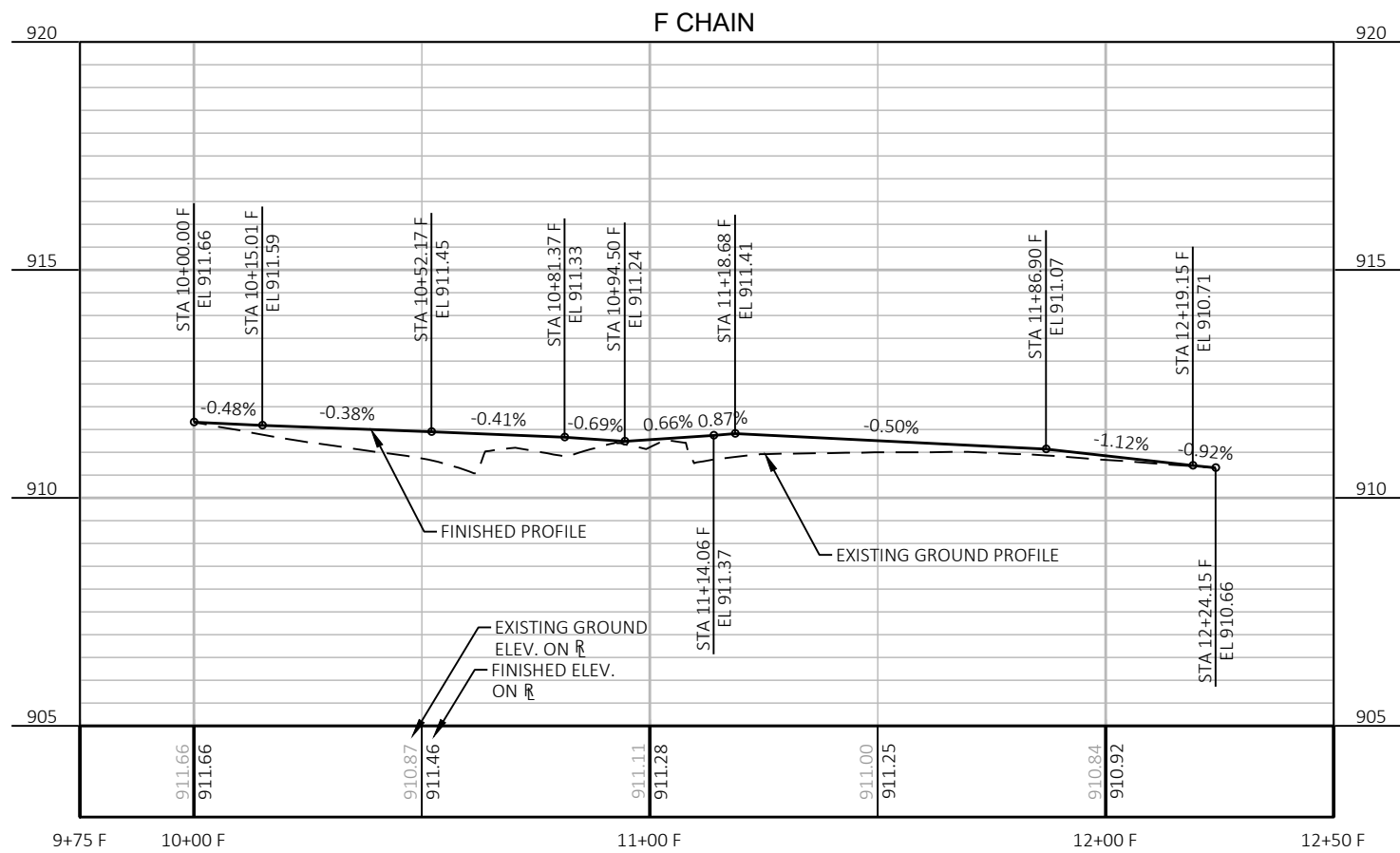
PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: ROUNDABOUT PROFILES
SHEET			<b>E</b>

5



5

5



PROJECT NO: 7994-00-51

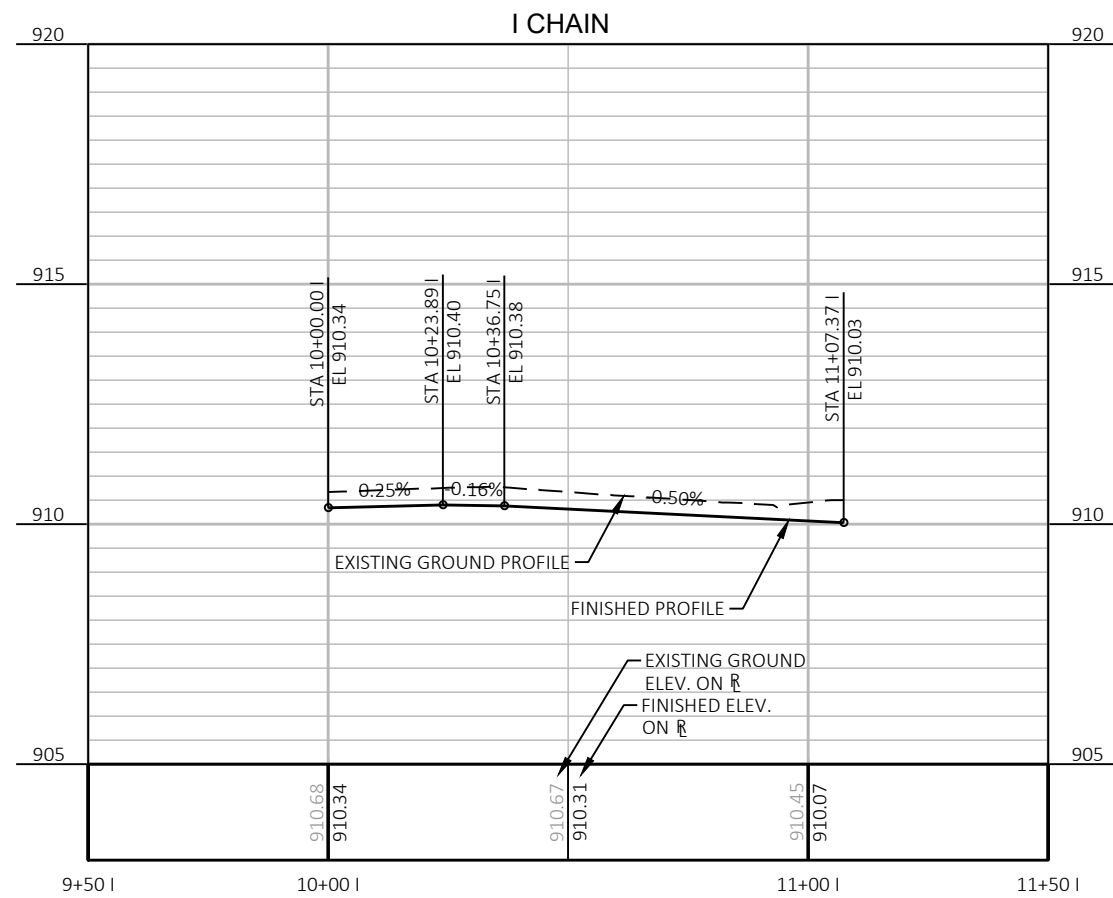
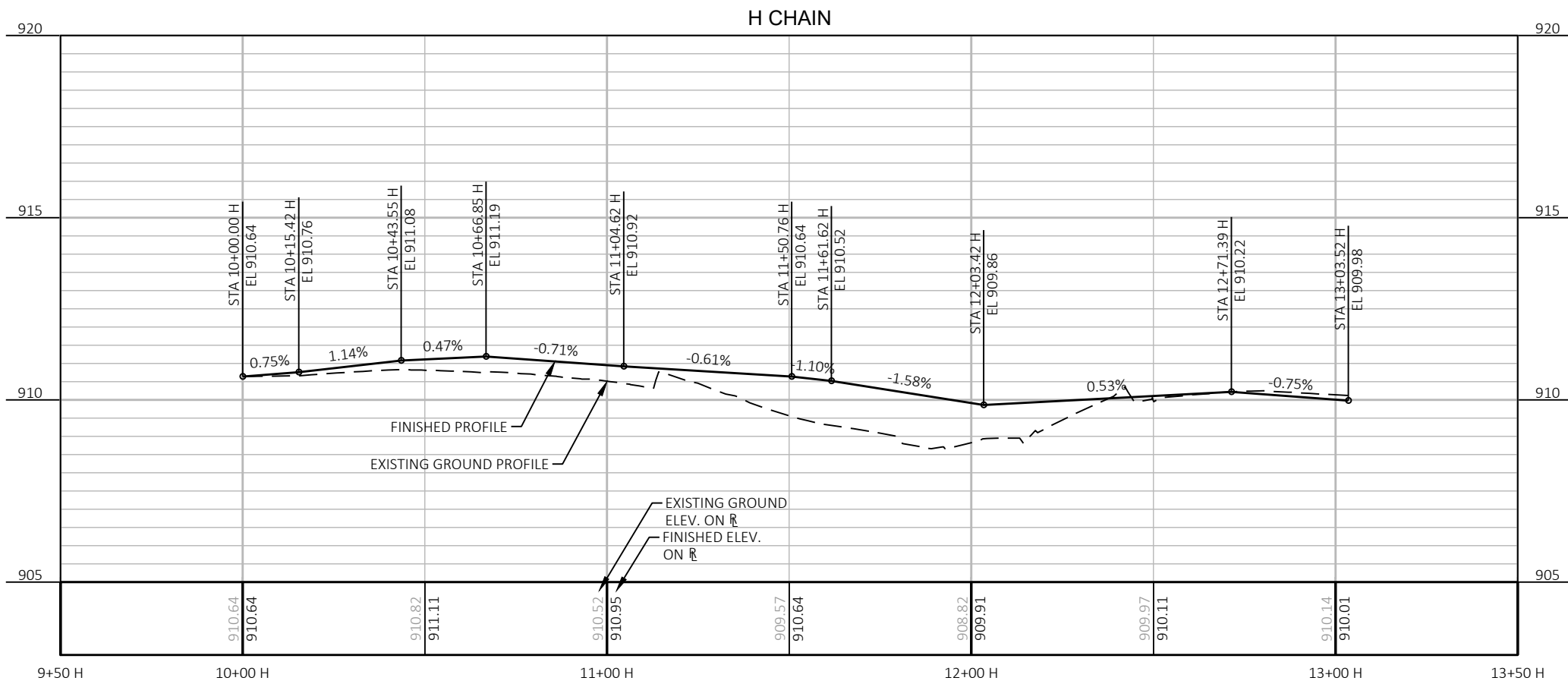
HWY: WASSON LANE

COUNTY: PIERCE

PLAN AND PROFILE: ROUNDABOUT PROFILES

SHEET

E



PROJECT NO: 7994-00-51

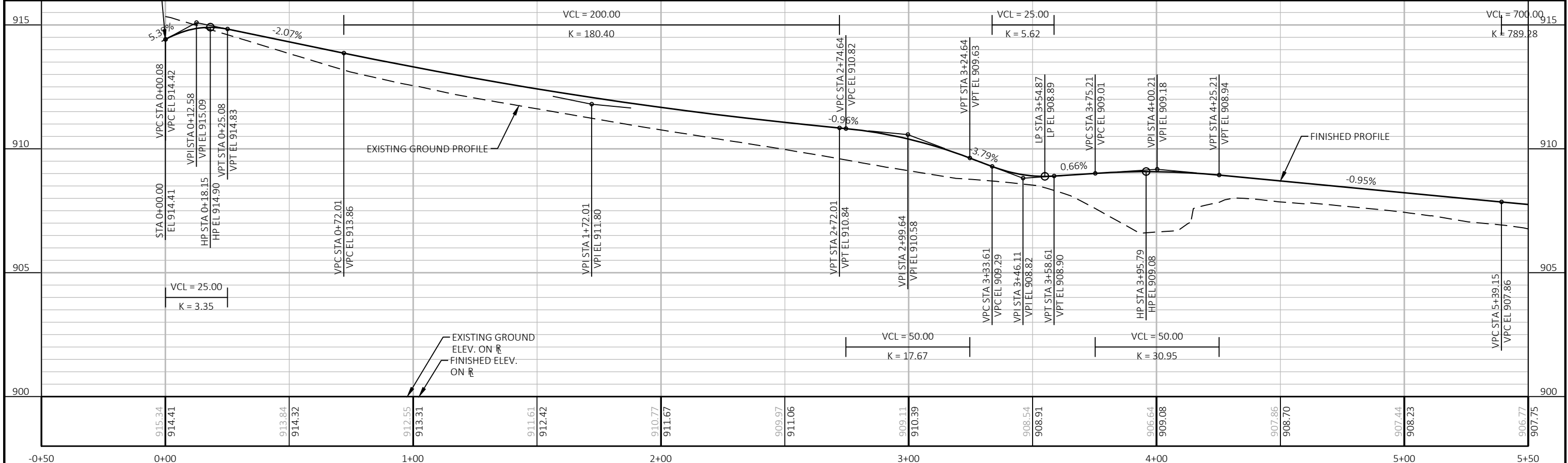
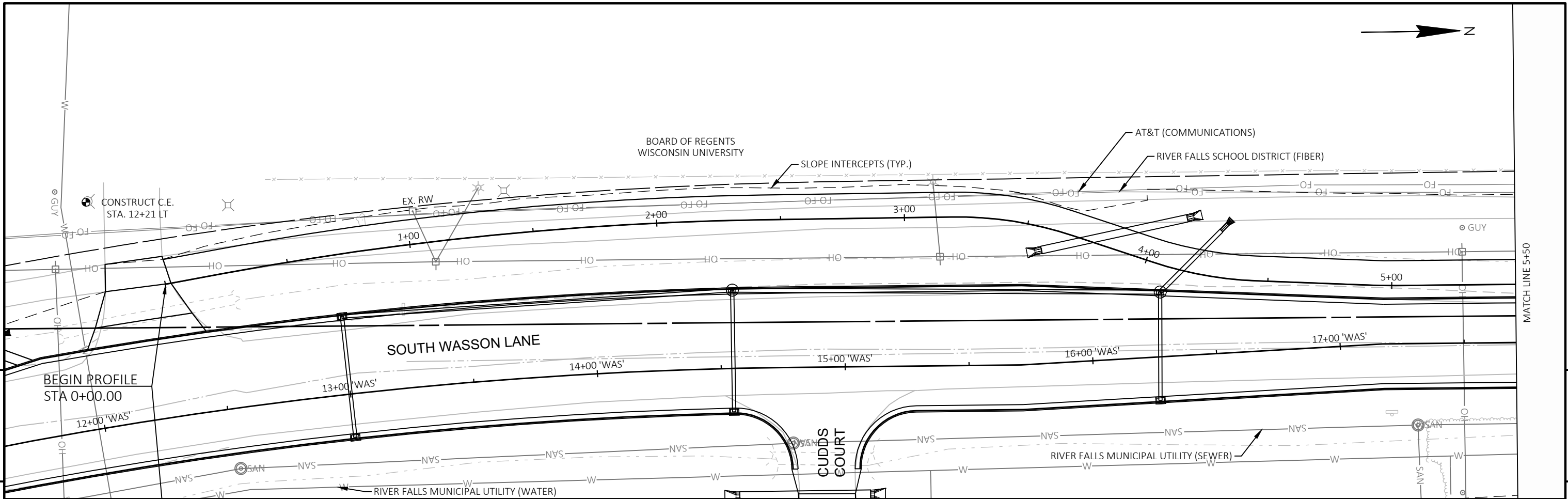
HWY: WASSON LANE

COUNTY: PIERCE

PLAN AND PROFILE: ROUNDABOUT PROFILES

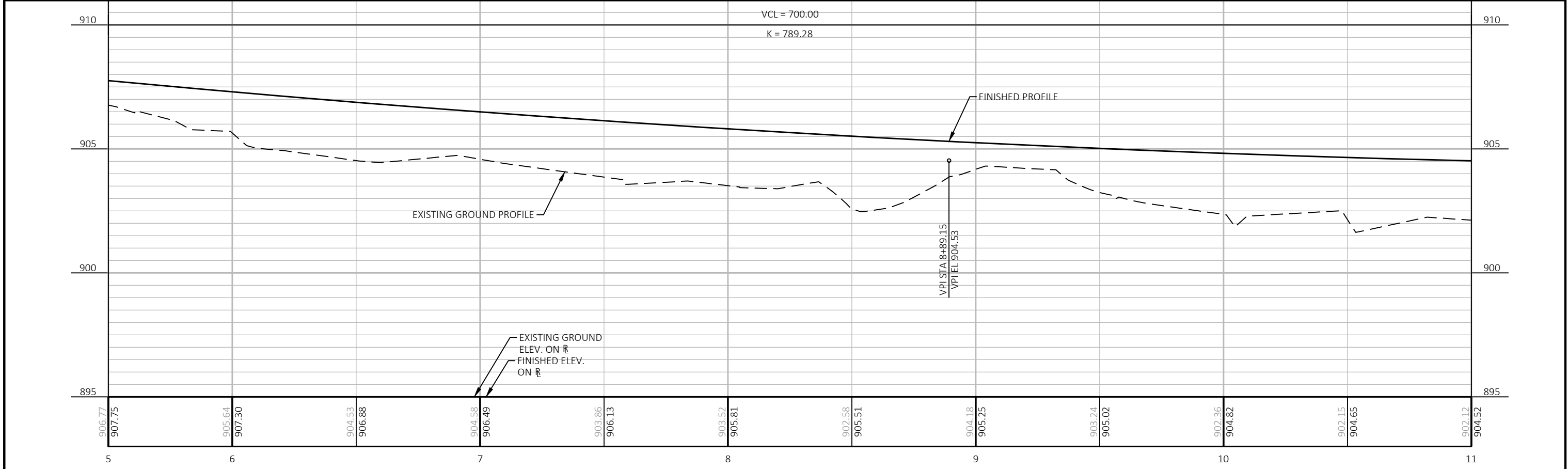
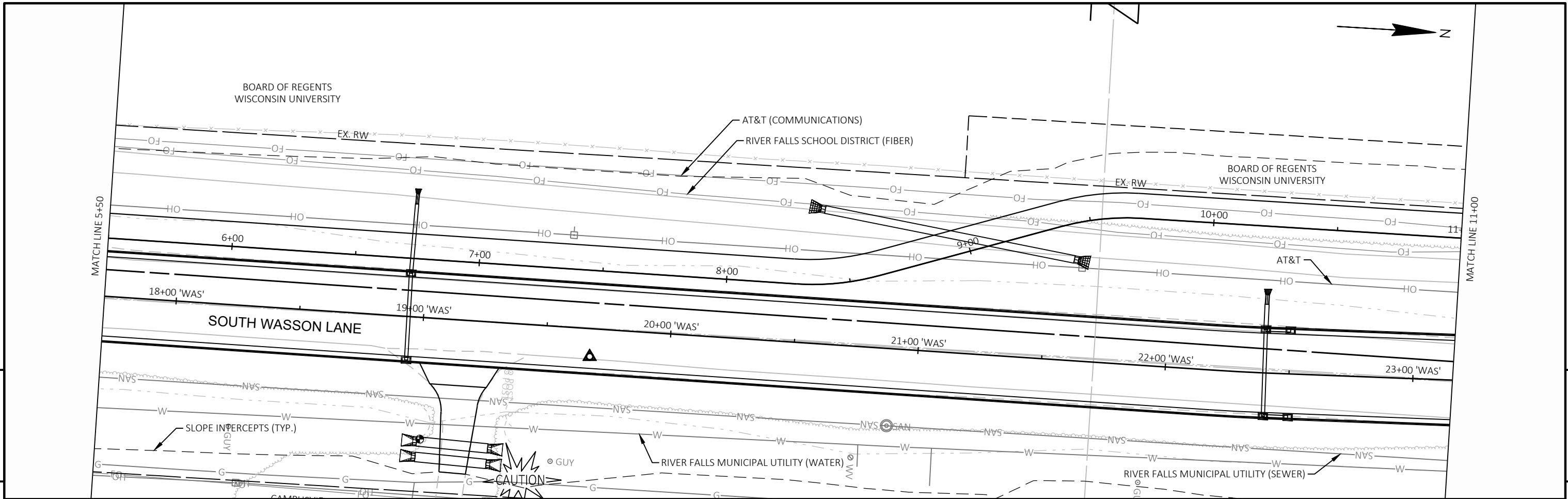
SHEET

E

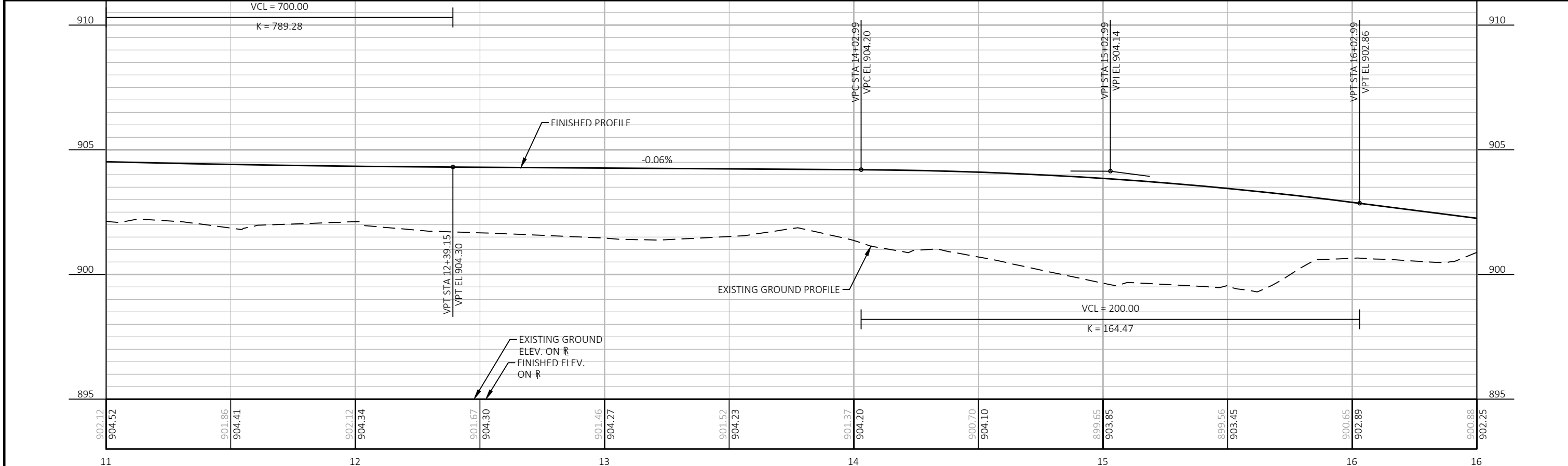
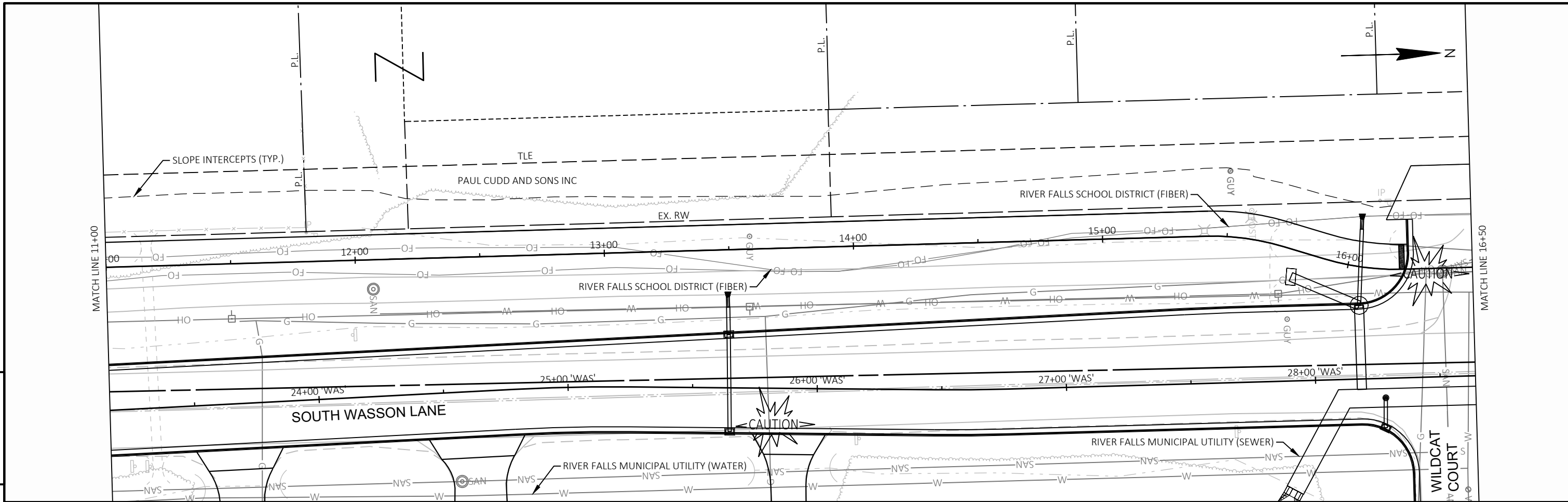


PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: SIDEWALK PROFILE	SHEET	E
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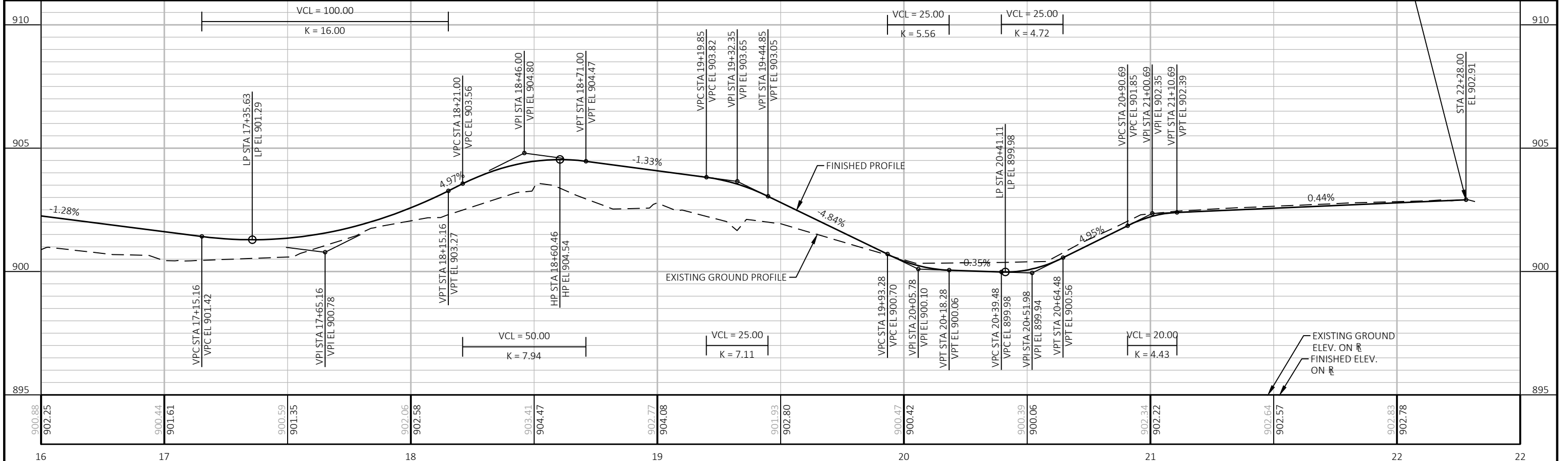
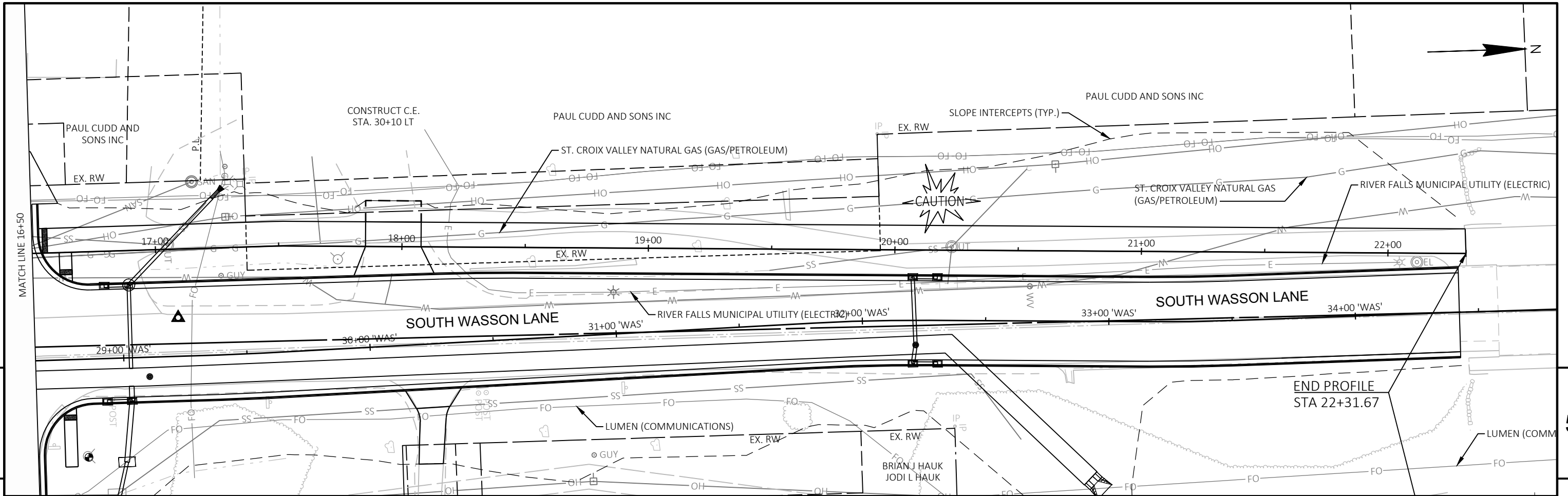




PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: SIDEWALK PROFILE	SHEET	E
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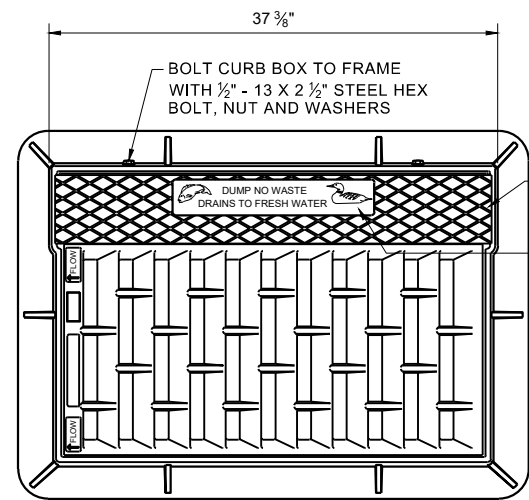
PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: SIDEWALK PROFILE	SHEET 5
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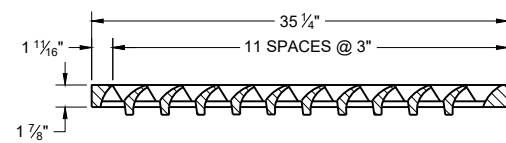
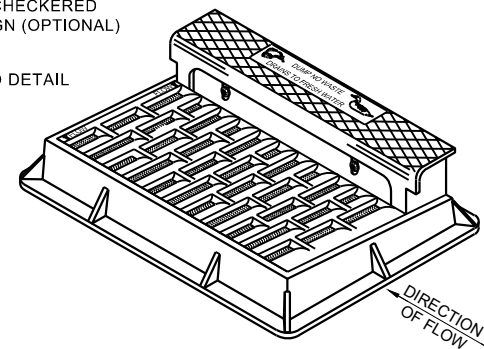
PROJECT NO: 7994-00-151	HWY: WASSON LANE	COUNTY: PIERCE	PLAN AND PROFILE: SIDEWALK PROFILE
SHEET			<b>E</b>

## Standard Detail Drawing List

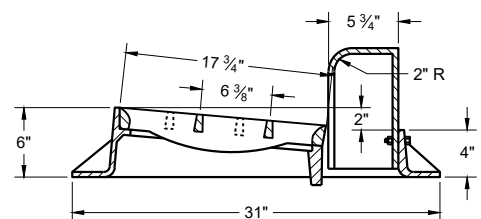
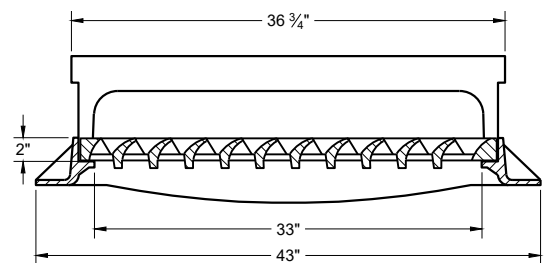
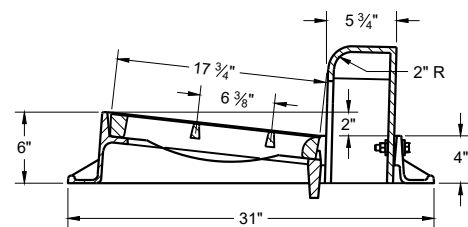
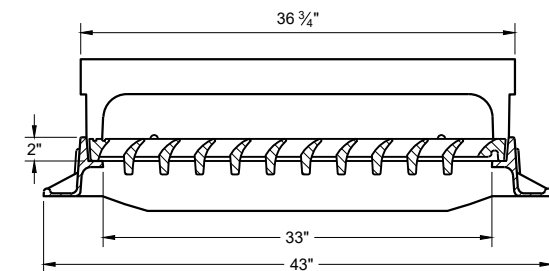
08A05-20A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-20B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-20C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-20D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08B11-02	MANHOLES VARIABLE TEE AND SPECIAL 4-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-12	PULL BOX
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-03	LIGHTING CONTROL CABINET 120/240 VOLT
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-17	URBAN NON-DOWELED CONCRETE PAVEMENT
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-08E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15C	PAVEMENT MARKING ARROWS
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D37-03	TRAFFIC CONTROL, 2-LANE ROUNDABOUT
15D40-05C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTI LANE DIVIDED 45 MPH AND UNDER



NOTE: EITHER CASTING IS ACCEPTABLE



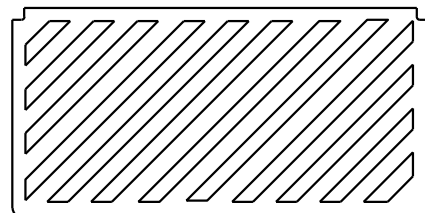
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



**TYPE "H"**

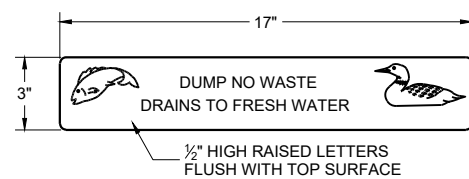
NOTE: EITHER CASTING IS ACCEPTABLE

1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



**SPECIAL GRATE FOR TYPE "H" COVER**

(MEASURES 35" X 17 3/4" X 2")  
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



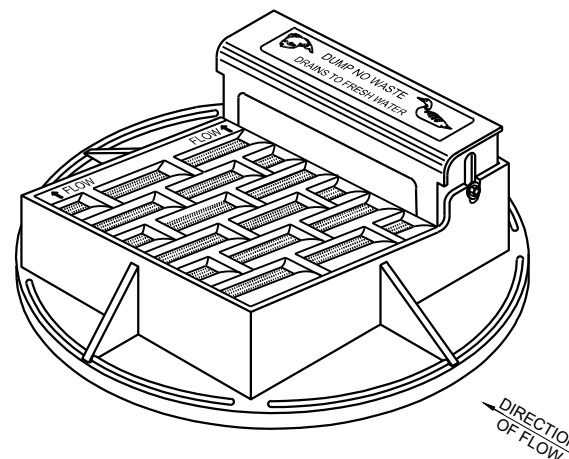
**LOGO DETAIL**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

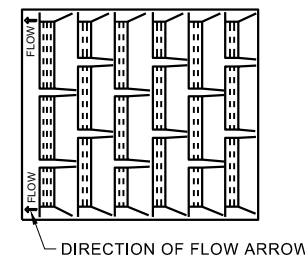
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

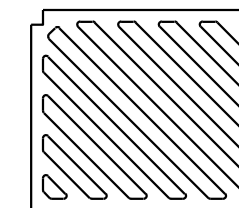


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE

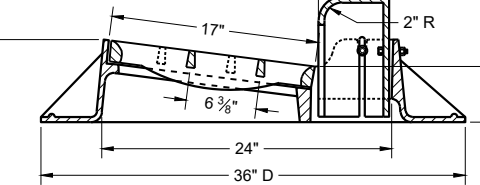
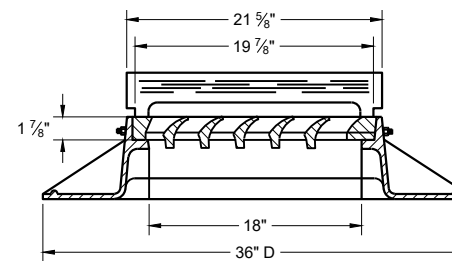
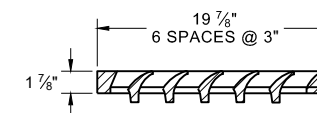


1" DIAGONAL BARS WITH 1 1/2" OPENINGS

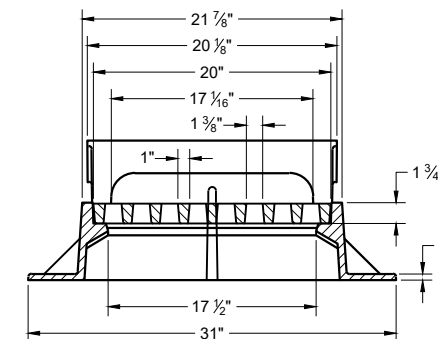
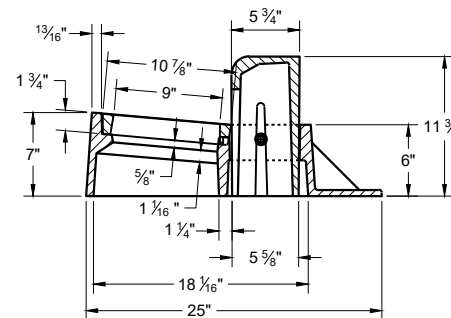


**SPECIAL GRATE FOR TYPE "A" COVER**

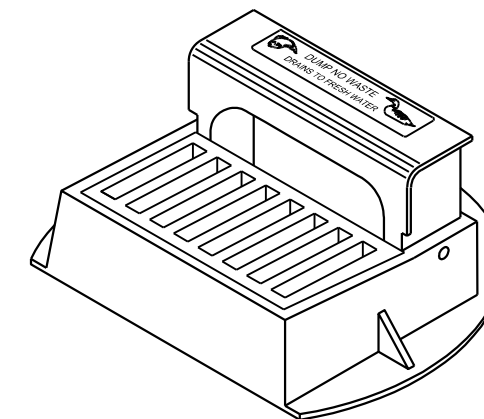
(MEASURES 19 3/4" X 17" X 1 7/8")  
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



**TYPE "A"**



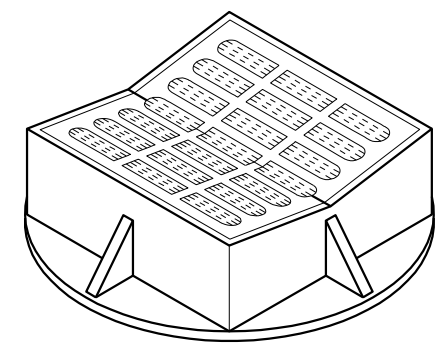
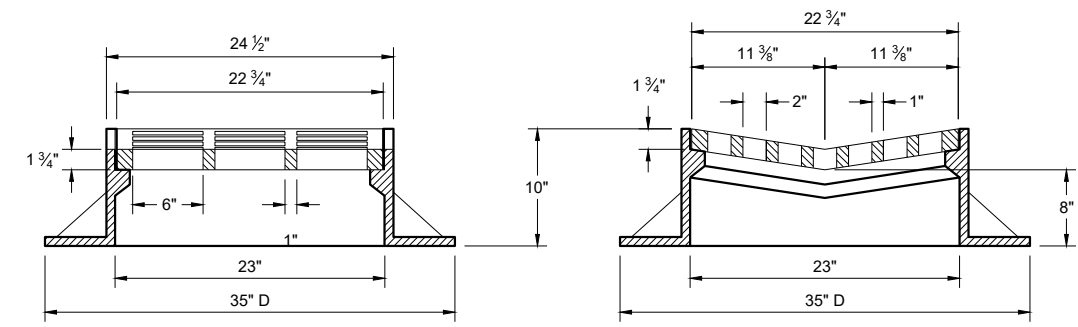
**TYPE "Z"**



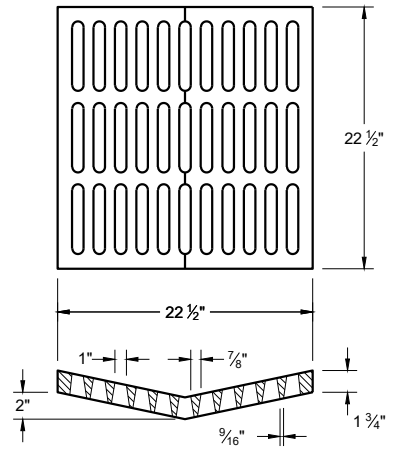
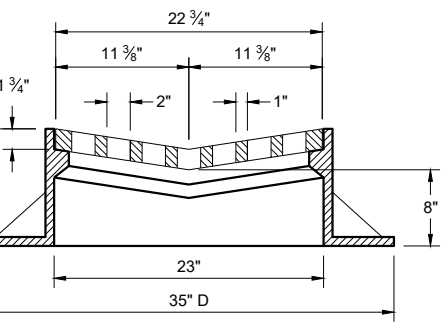
**INLET COVERS TYPES A, H, A-S, H-S AND Z**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2023 DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
FHWA

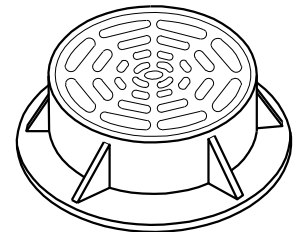
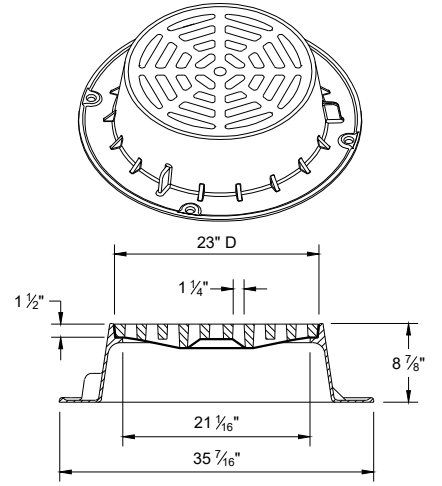


**TYPE "B"**



**ALTERNATIVE GRATE FOR TYPE "B" COVER**

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE  
**NOTED AS TYPE B - A ON THE DRAINAGE TABLE**



**TYPE "C"**

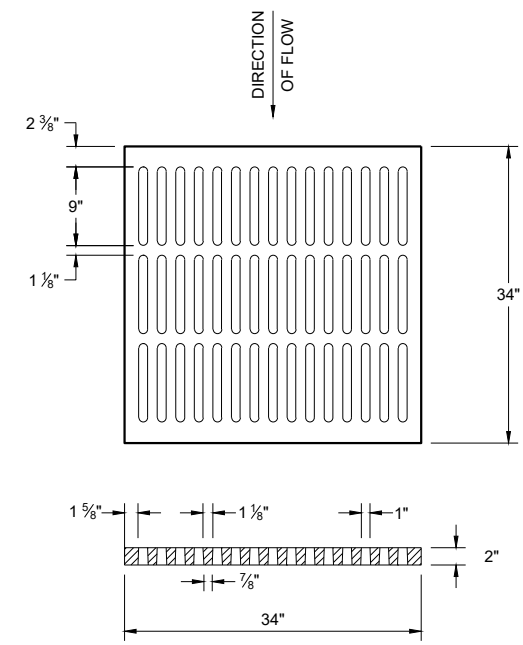
NOTE: EITHER CASTING IS ACCEPTABLE

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

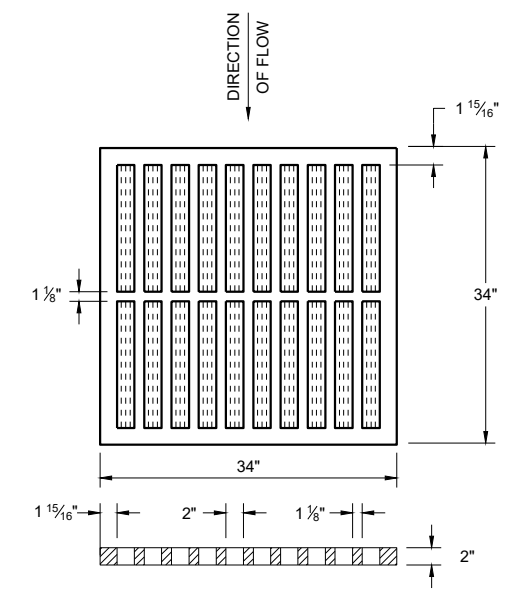
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



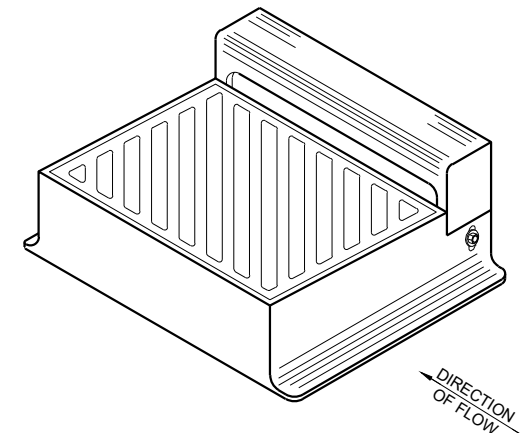
**ALTERNATIVE TYPE "MS"**

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED  
**NOTED AS TYPE MS-A ON THE DRAINAGE TABLE**

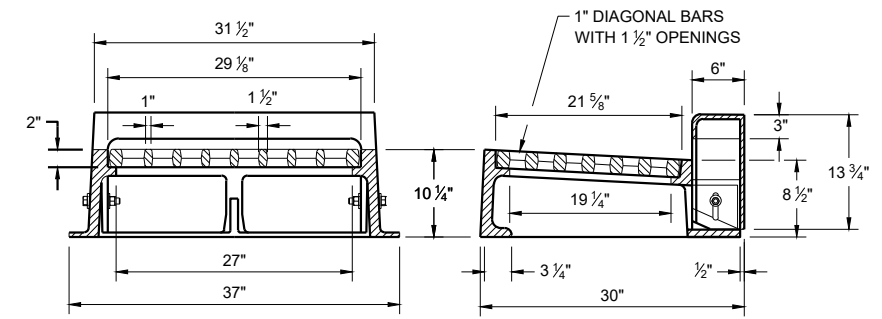


**TYPE "MS"**

USE ON FREEWAYS AND EXPRESSWAYS  
**NOTED AS TYPE MS ON THE DRAINAGE TABLE**



DIAGONAL SLOTS SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED.  
 GRATES ARE MANUFACTURED TO BE REVERSIBLE.



**TYPE "WM"**

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

6

6

SDD 08A05-20b

SDD 08A05-20b

**INLET COVERS  
 TYPES B, B-A, C,  
 MS, MS-A AND WM**

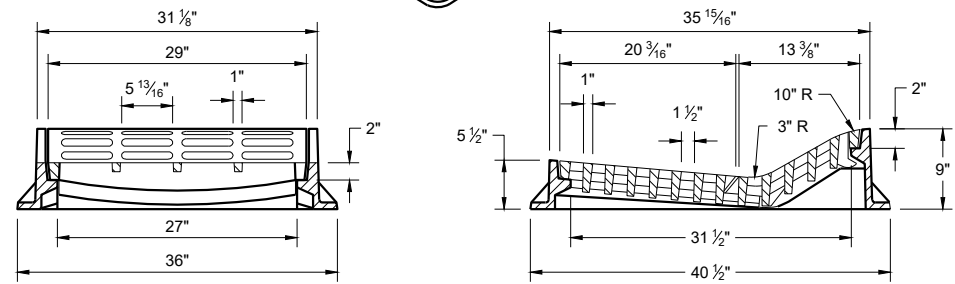
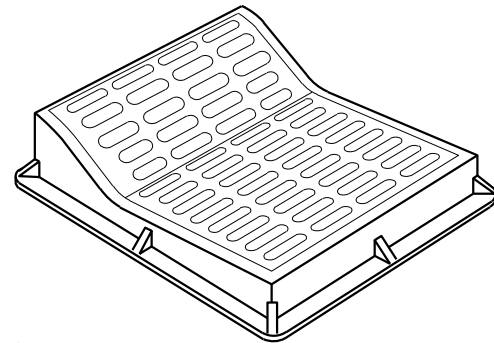
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 July 2023 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR

**GENERAL NOTES**

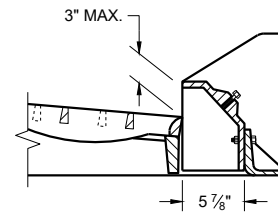
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



**TYPE "F"**

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

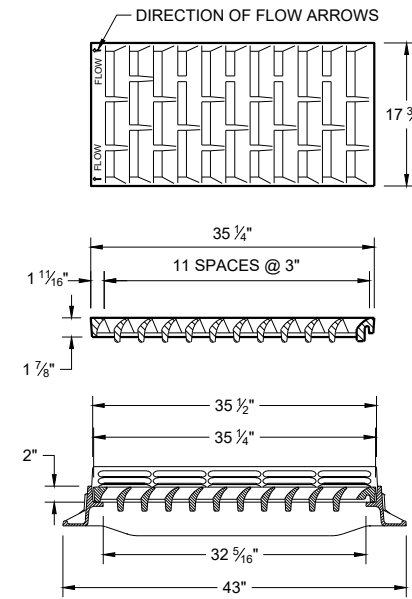


**ALTERNATIVE CURB BOX FOR TYPE "HM" COVER**

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

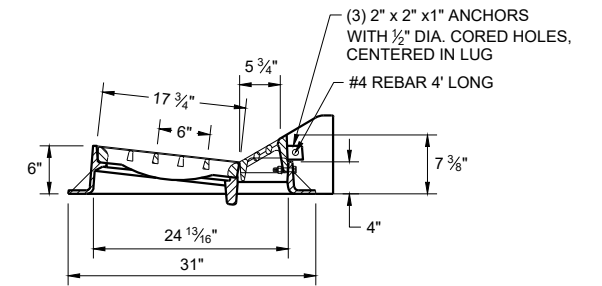
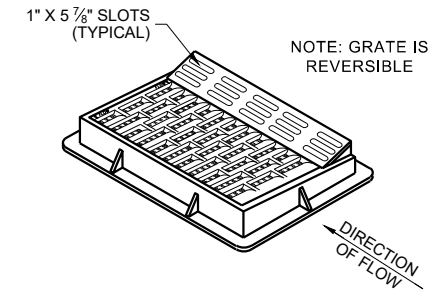
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



**TYPE "HM"**

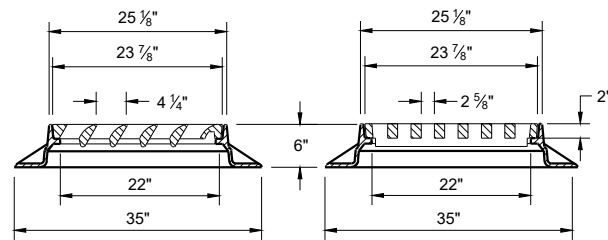
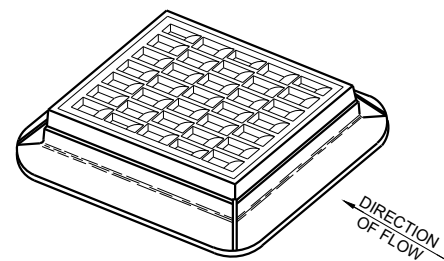
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

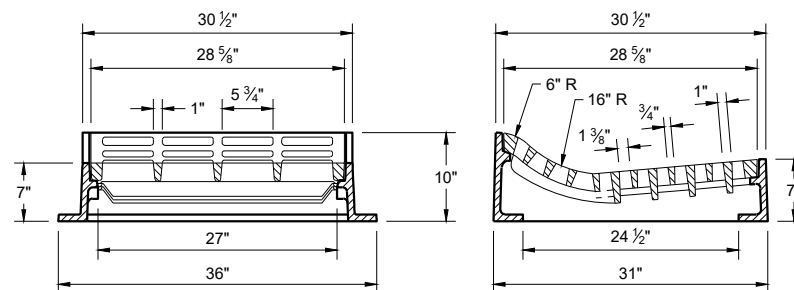
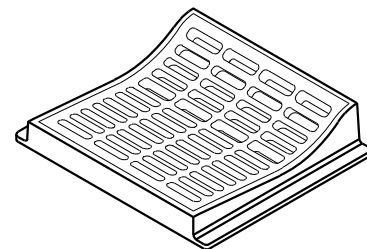
NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.

6



**TYPE "S"**

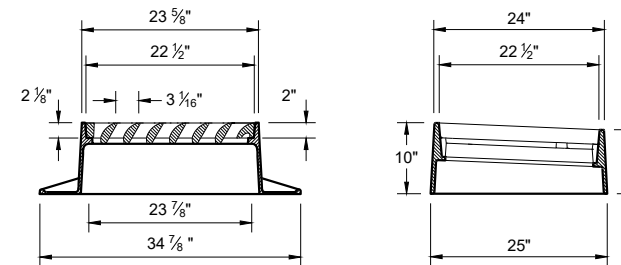
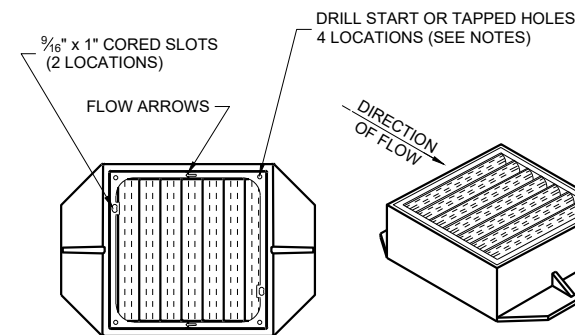
SDD 08A05-20C



**TYPE "T"**

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

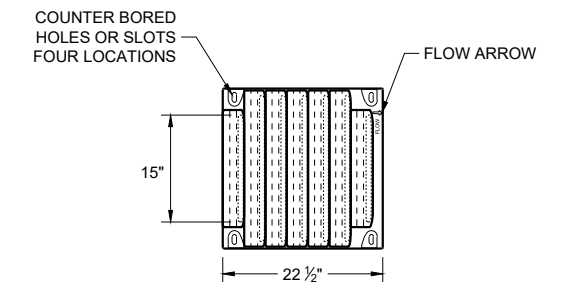
6



**TYPE "V"**

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V  
 FRAME - CAST GRAY IRON ASTM A48 CLASS 40A  
 3/8" DIA. X 1/16" DRILL START IN 4 LOCATIONS  
 GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



**BOLT DOWN GRATE FOR TYPE "V" COVER**

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" ON DRAINAGE TABLE

TAP 1/2" -13 HOLES IN FOUR LOCATIONS IN FRAME TO BOLT GRATE FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD BOLTS - 1/2" -13 STAINLESS STEEL BOLTS WITH WASHERS TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

**INLET COVERS  
 TYPES F, HM, HM-S, S, T, V,  
 HM-GJ AND HM-GJ-S**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 July 2023 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR

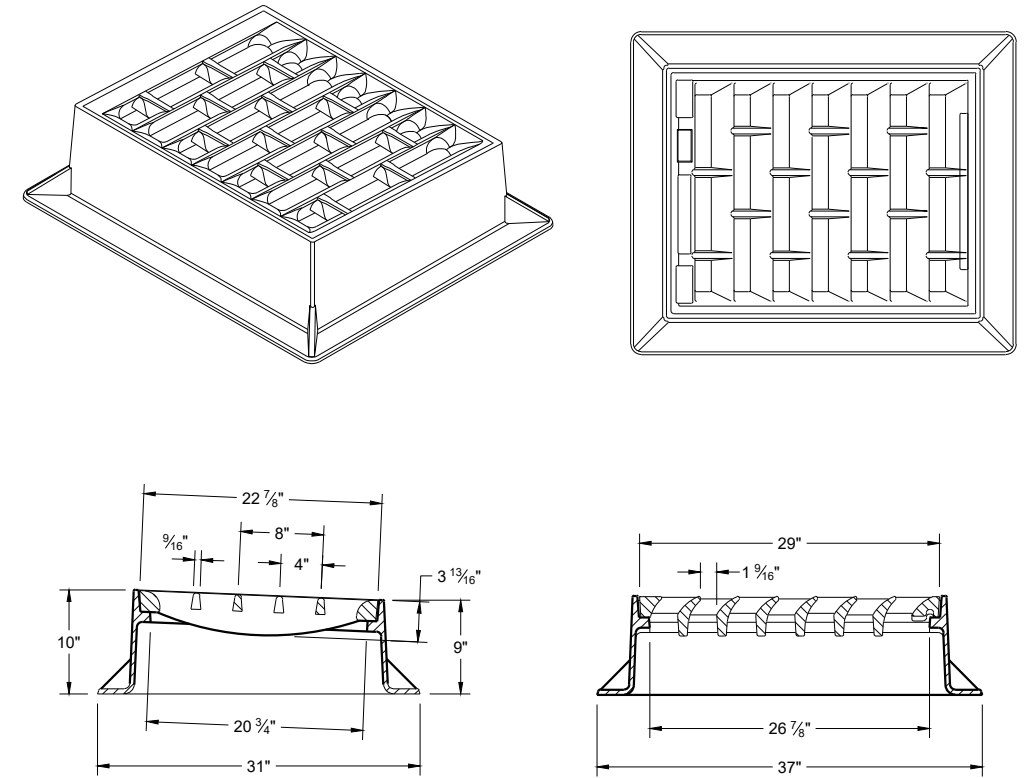
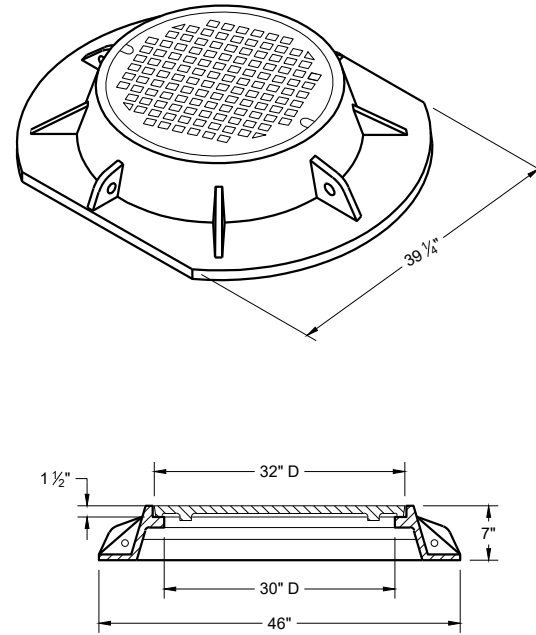
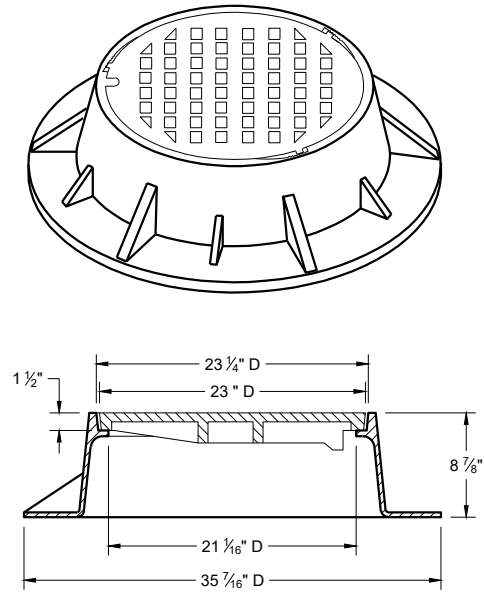
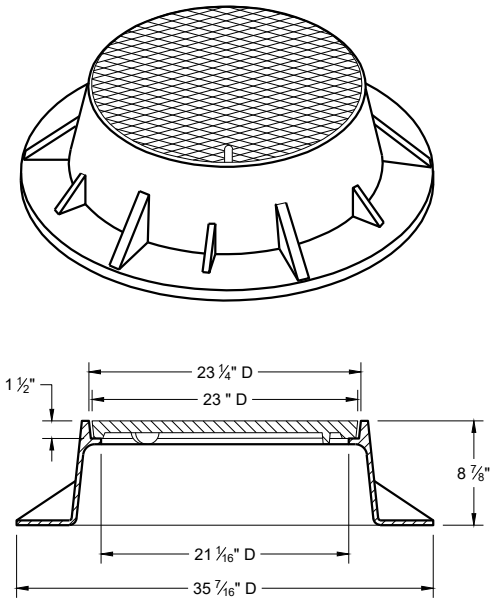
SDD 08A05-20C

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

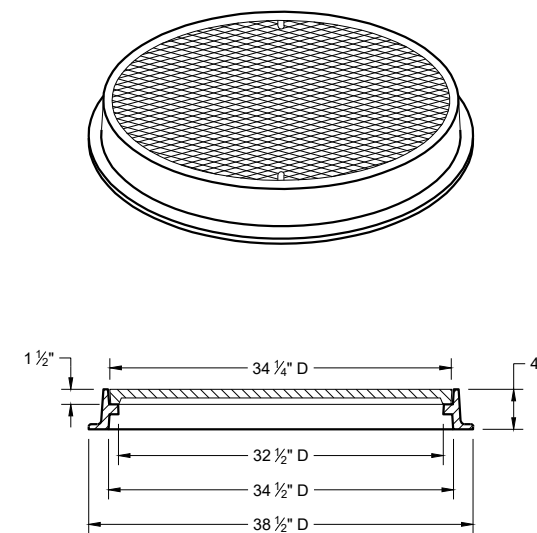
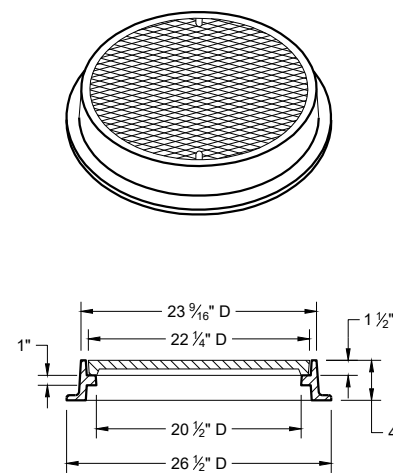
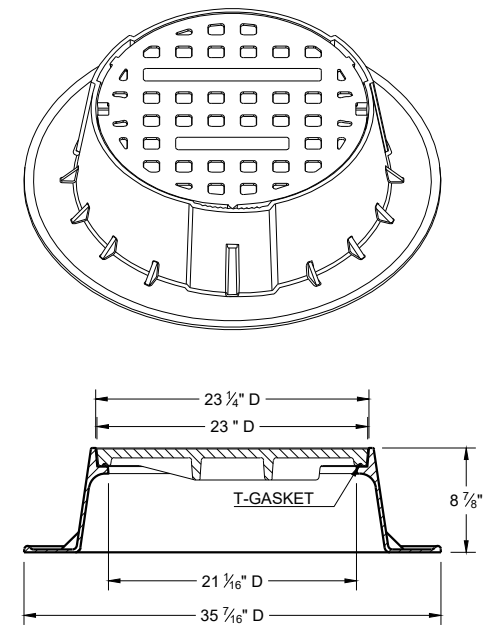
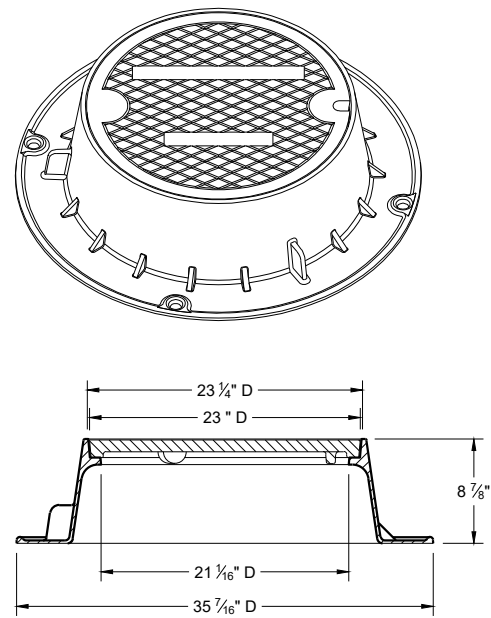
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



**TYPE "K"**

**INLET COVER TYPE "BW"**



**TYPE "J"**

NOTE: EITHER CASTING IS ACCEPTABLE

**TYPE "J" SPECIAL**

TYPE "B" NON-ROCKING SELF-SEAL LID (NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

**TYPE "L"**

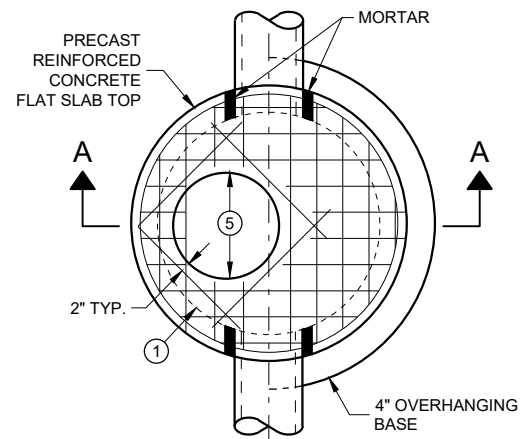
**TYPE "M"**

**INLET COVERS TYPES BW  
MANHOLE COVERS TYPES K,  
J, J-S, L, AND M**

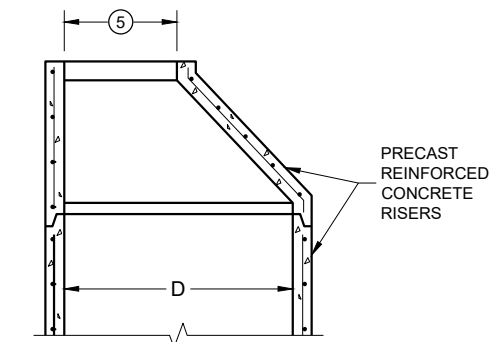
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

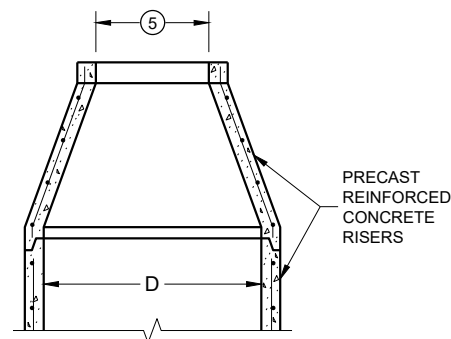




**PLAN VIEW  
CIRCULAR OPENING**



**OPTIONAL PRECAST  
REINFORCED CONCRETE  
ECCENTRIC TOP**



**OPTIONAL PRECAST  
REINFORCED CONCRETE  
CONCENTRIC TOP**

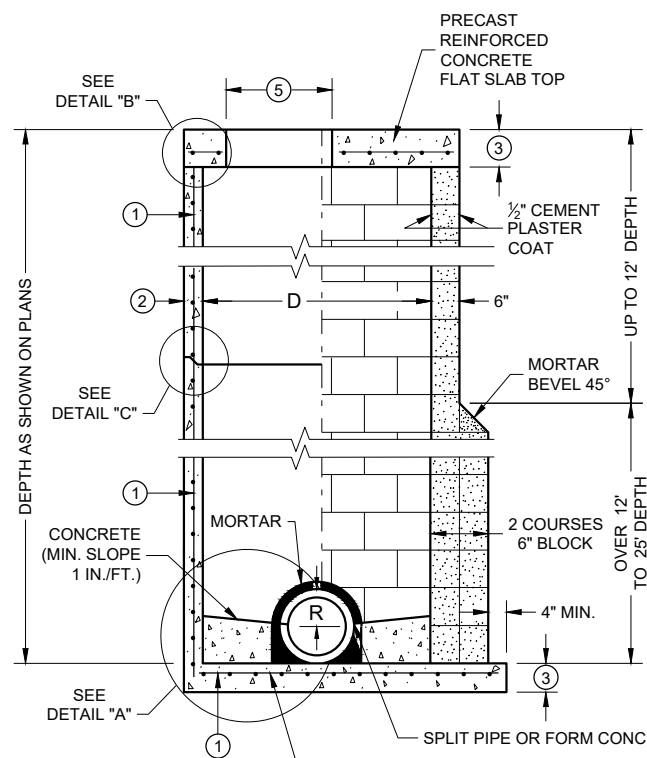
**MANHOLE COVER OPENING MATRIX**

MANHOLE COVER TYPE OPENING SIZE (FT.)	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

**PIPE MATRIX**

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

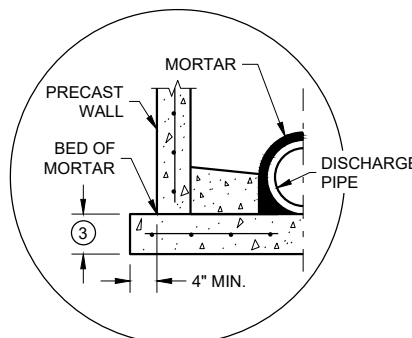
\*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.



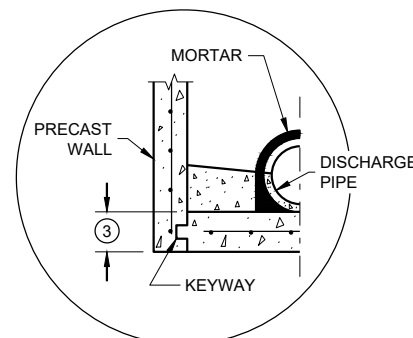
**SECTION A - A**

**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE ①**

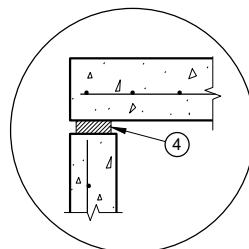


**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

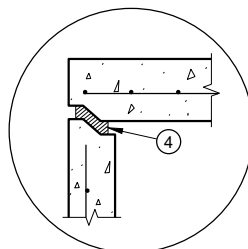


**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION**

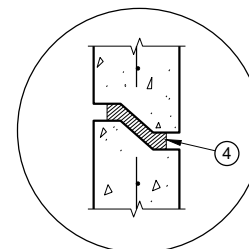
**DETAIL "A"**



**TOP WITH PLAIN END JOINT**



**TOP WITH TONGUE AND GROOVE JOINT**



**RISER WITH TONGUE AND GROOVE JOINT**

**DETAIL "B"**

**DETAIL "C"**

**MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

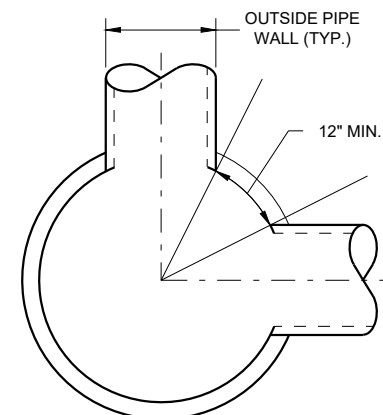
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ② SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- ③ SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- ④ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).
- ⑤ SEE MANHOLE COVER OPENING MATRIX.

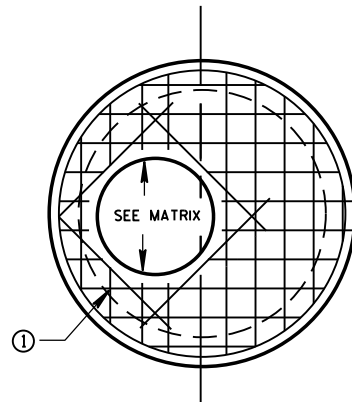
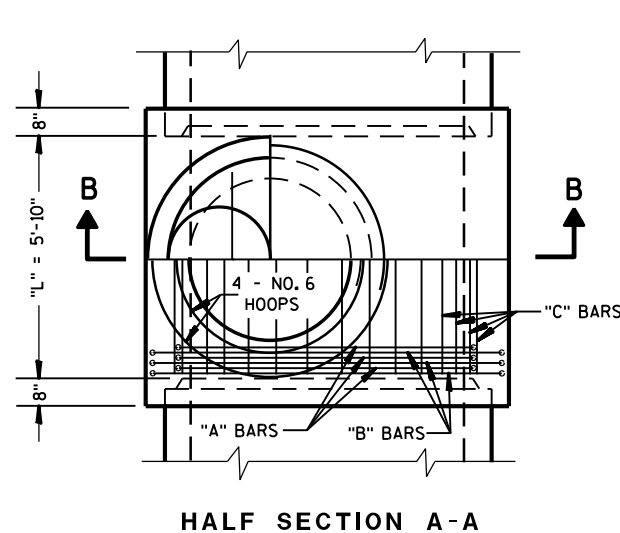


**MINIMUM HORIZONTAL PIPE SEPARATION**

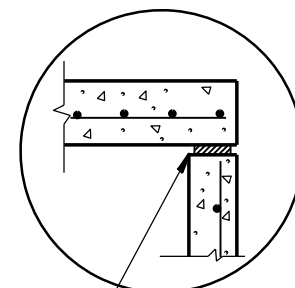
**MANHOLES, 3-FT, 4-FT  
5-FT, 6-FT, 7-FT, 8-FT, 9-FT  
AND 10-FT DIAMETER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

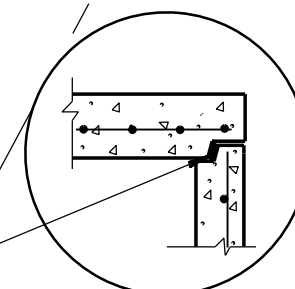
APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



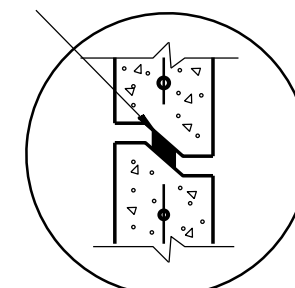
**PLAN VIEW PRECAST REINFORCED CONCRETE FLAT SLAB TOP WITH ECCENTRIC OPENING**



TOP WITH PLAIN END JOINT



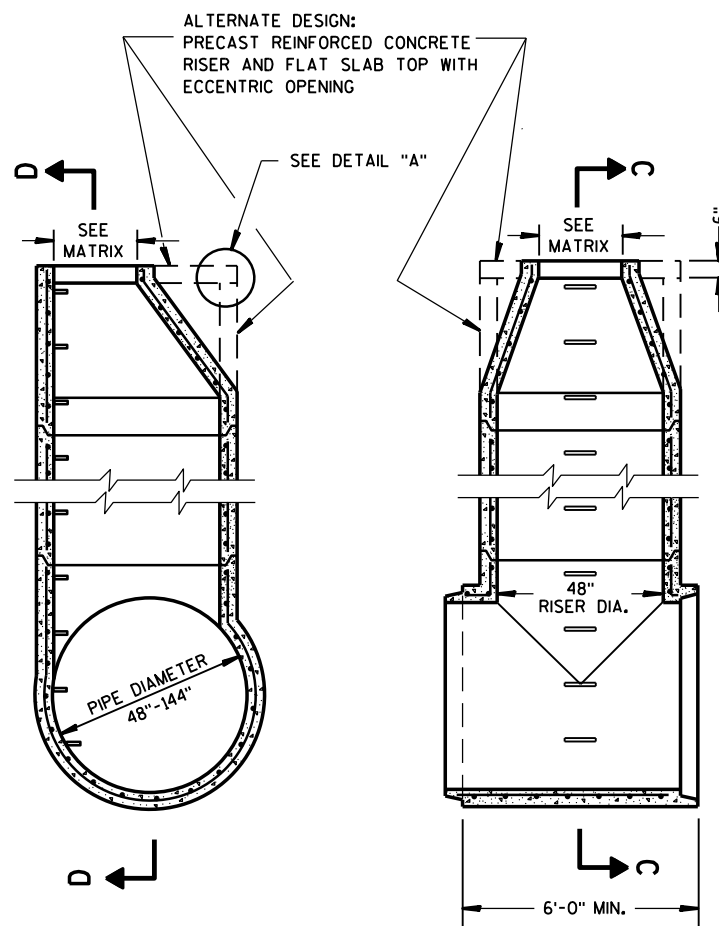
TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

**DETAIL "A"**

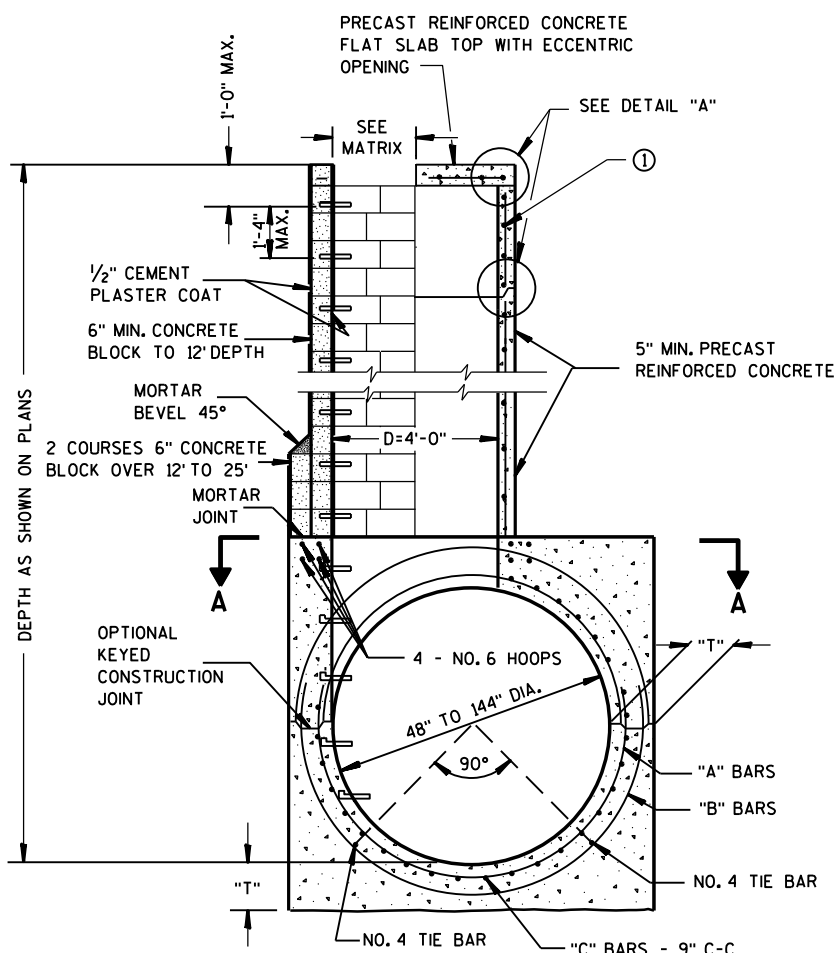
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



SECTION C-C

SECTION D-D

**MANHOLE VARIABLE TEE 4-FT DIAMETER**



SECTION B-B

**MANHOLE VARIABLE SPECIAL 4-FT DIAMETER**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 4T-L", "MANHOLES 4S-M", ETC. THE VARIABLE TEE IS DENOTED BY 4T AND THE VARIABLE SPECIAL IS DENOTED BY 4S. THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE OR CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE WITH AASHTO M 199.

**MANHOLE COVER OPENING MATRIX**

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

**NOTES FOR MANHOLE VARIABLE SPECIAL 4-FT DIAMETER**

NOTE: ALL "A", "B", AND "C" BAR STEEL REINFORCING IS THE SAME DIAMETER WHICH VARIES WITH DEPTH.  
 NO. 5 BARS TO 20' DEPTH  
 NO. 6 BARS OVER 20' TO 30' DEPTH  
 NO. 7 BARS OVER 30' TO 40' DEPTH

THE "A" AND "B" BARS MAY BE PLACED IN ONE OR TWO SEGMENTS, AND SHALL LAP 24 BAR DIAMETERS.

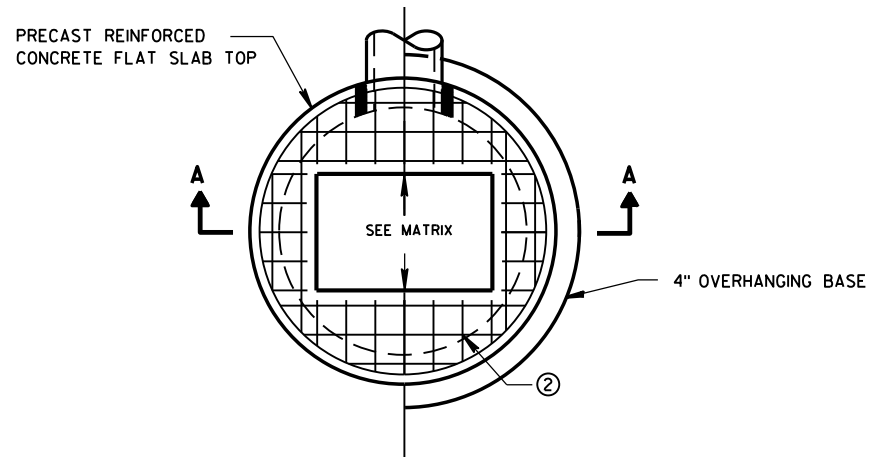
"C" BARS SHALL HAVE STANDARD HOOKED ENDS.

NOTE: "T" THROUGHOUT LENGTH "L" SHALL BE 13" FOR PIPE DIAMETER 48" TO 84" AND 15" FOR PIPE DIAMETER GREATER THAN 84".

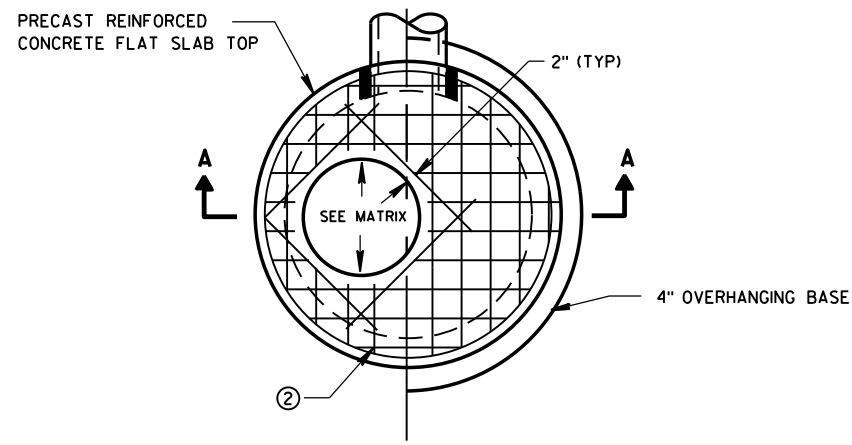
**MANHOLE VARIABLE TEE AND SPECIAL 4-FT DIAMETER**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 DATE: Sept., 2016 /S/ Rodney Taylor  
 ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
 FHWA



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

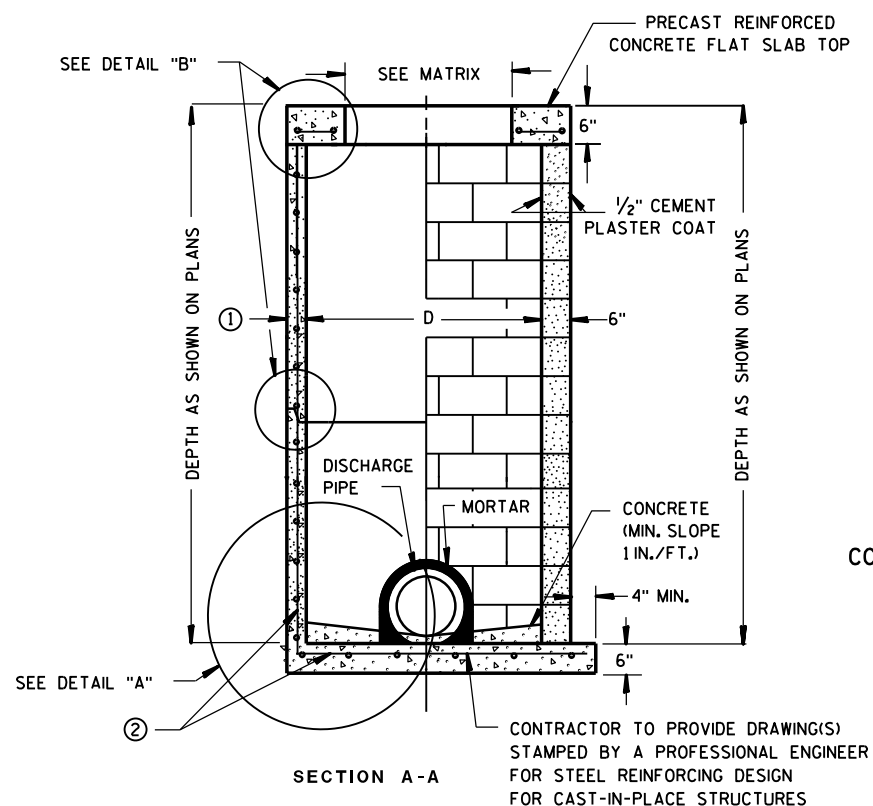
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

**INLET COVER OPENING MATRIX**

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X	X	
	2X2.5			X								
	2X3						X					
	2.5X3					X						

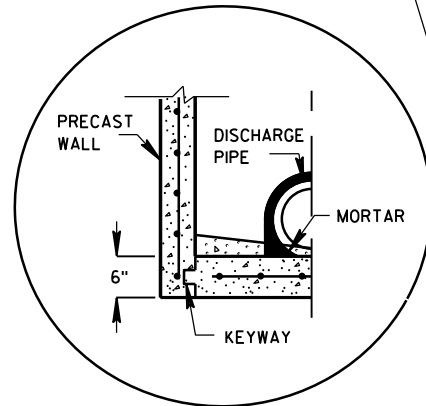


**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**      **CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②**

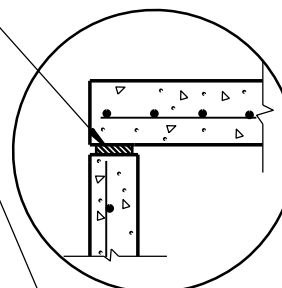
CIRCULAR INLETS W/ FLAT TOP

CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

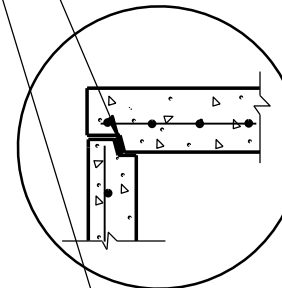
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



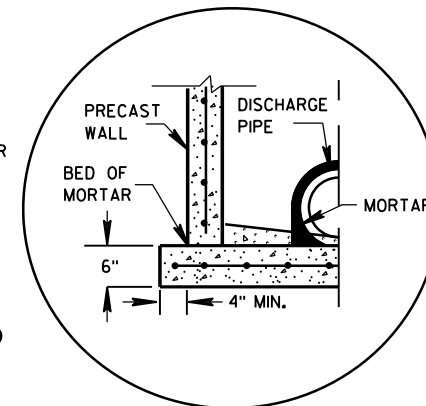
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



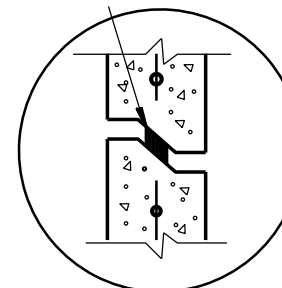
TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

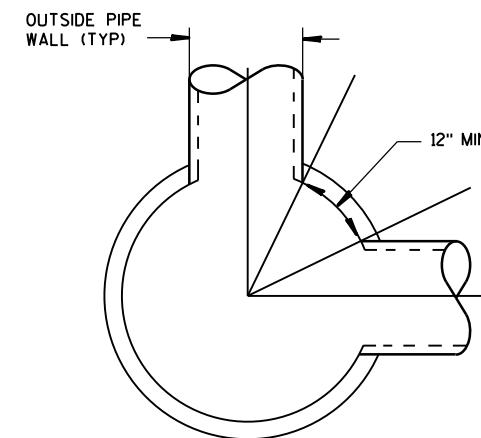


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "A"

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER



DETAIL "C"

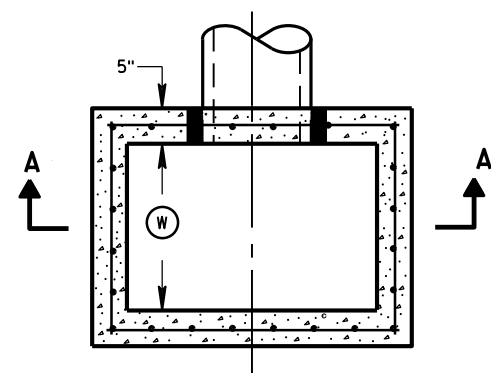
**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

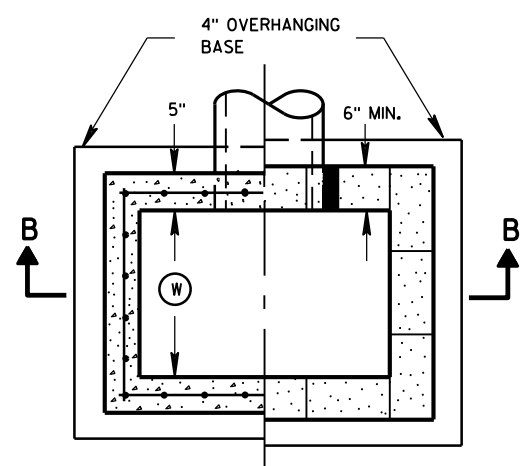
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

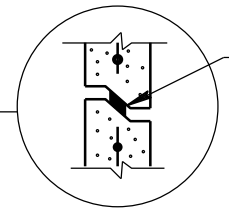
APPROVED  
 Sept., 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
 FHWA



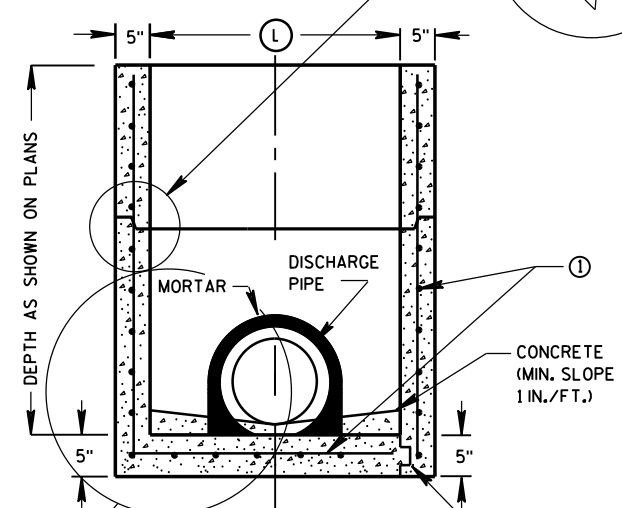
PLAN VIEW



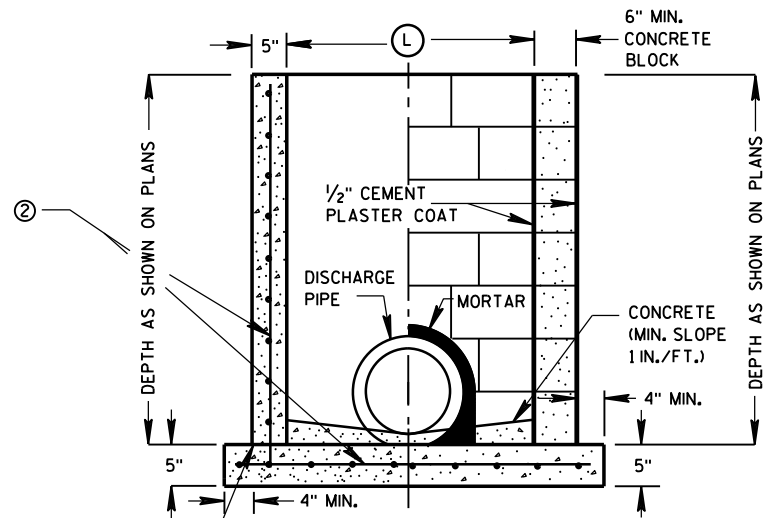
PLAN VIEW



RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



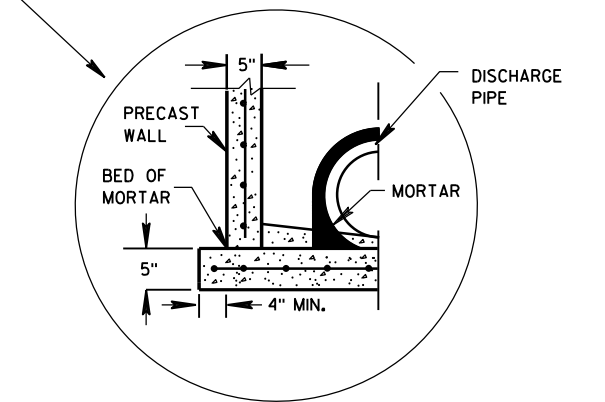
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE  
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE  
 KEYWAY  
 CONCRETE (MIN. SLOPE 1 IN./FT.)

CONSTRUCTION JOINT  
 CAST-IN-PLACE REINFORCED CONCRETE  
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

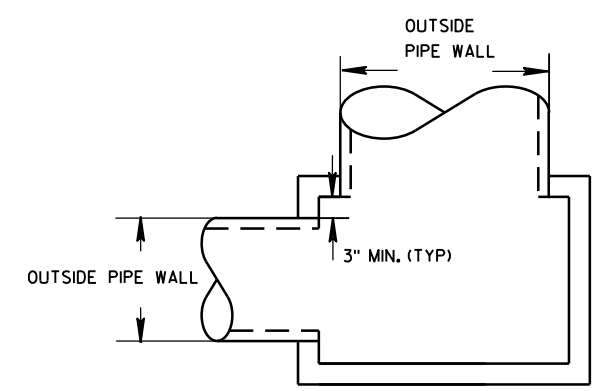
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

**INLET COVER MATRIX**

INLET SIZE	INLET COVER TYPE		ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



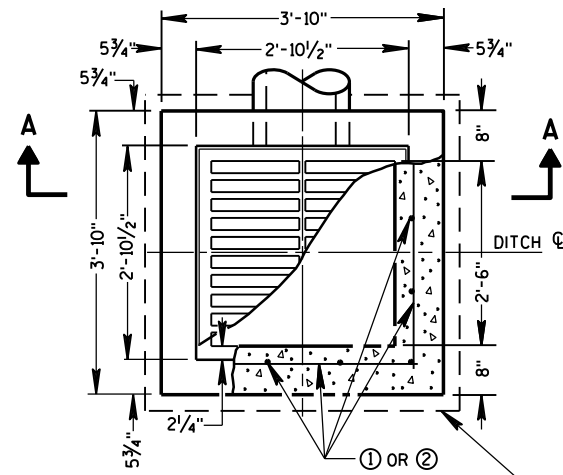
DETAIL "A"

**INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT**

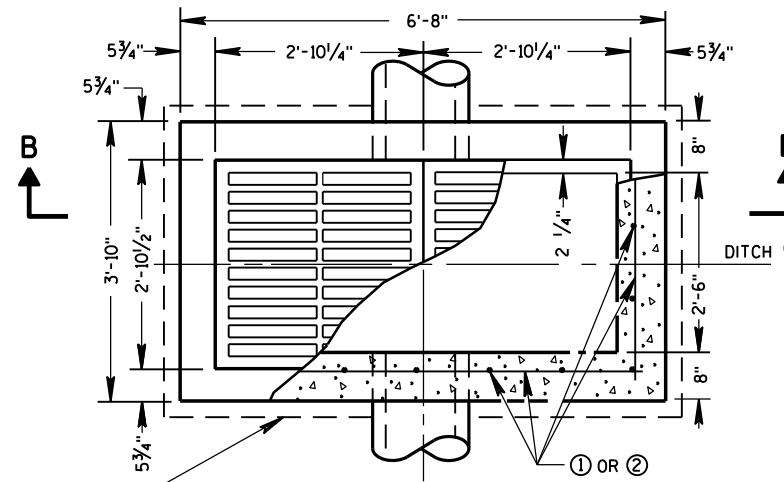
**INLETS 2X2-FT, 2X2.5-FT,  
2X3-FT AND 2.5X3-FT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 Sep 1, 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR

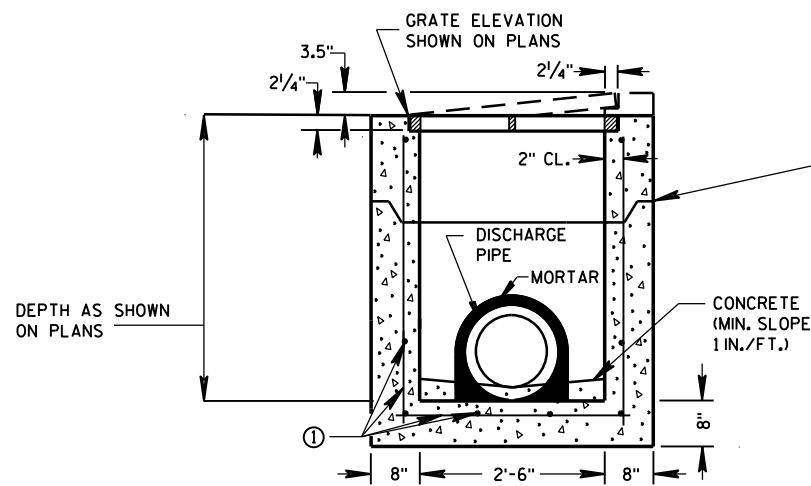


PLAN VIEW

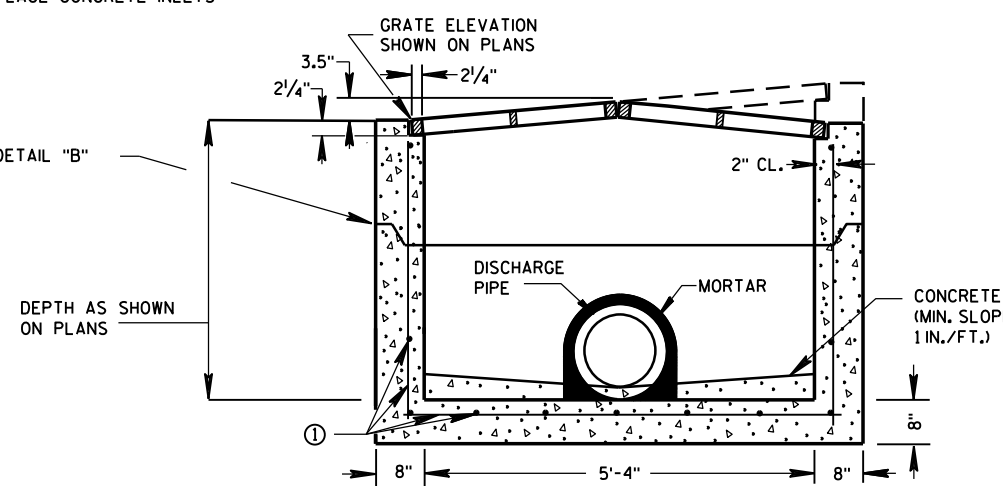


PLAN VIEW

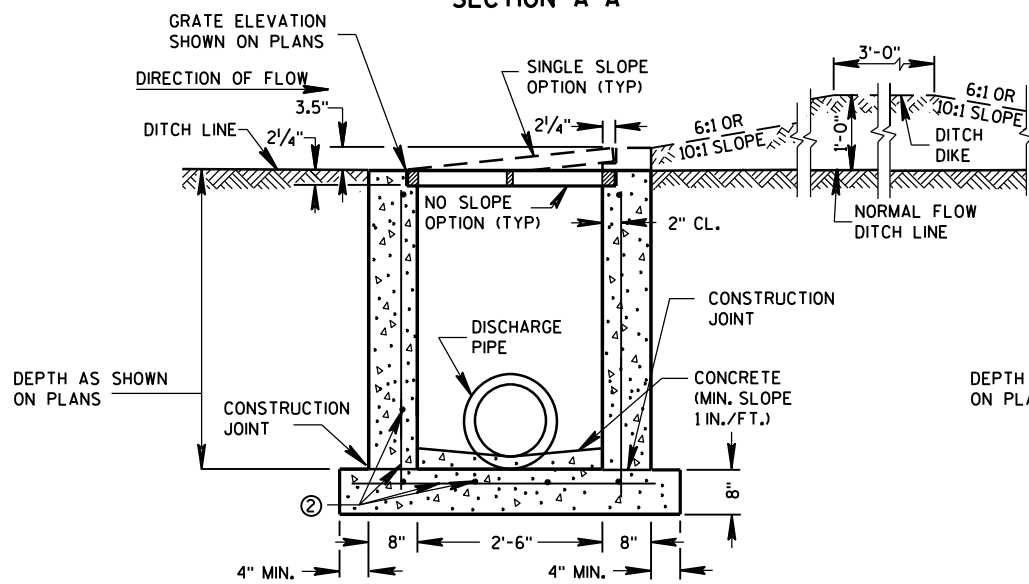
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

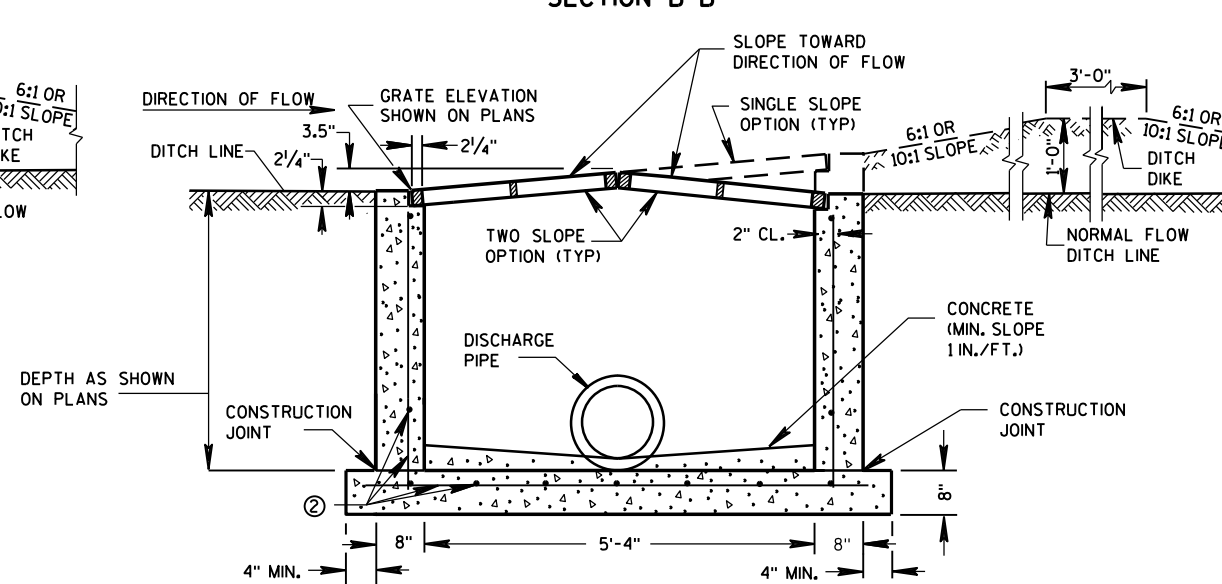


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

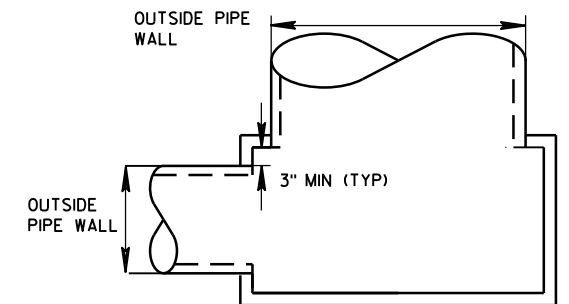
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

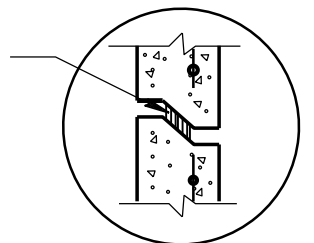
**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

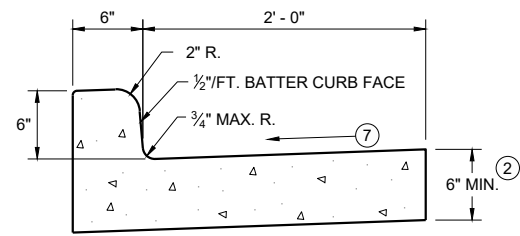


DETAIL "B"

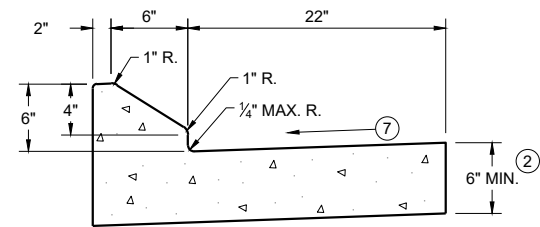
**INLETS MEDIAN 1 AND 2 GRATE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

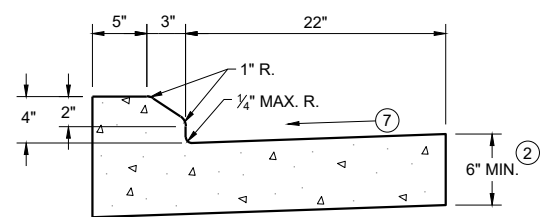
APPROVED  
Sept., 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



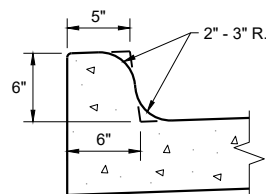
**TYPES A<sup>①</sup> & D**



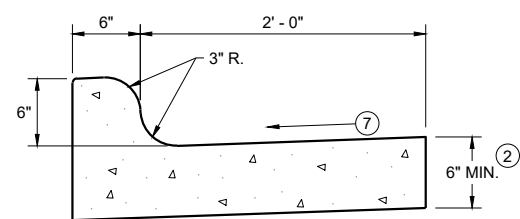
**6" SLOPED CURB TYPES G<sup>①</sup> & J**



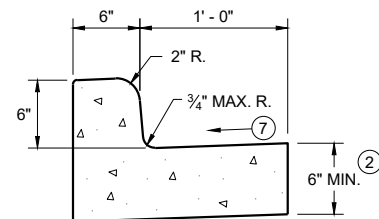
**4" SLOPED CURB TYPES G<sup>①</sup> & J**



**TYPES K<sup>①</sup> & L**  
(OPTIONAL CURB SHAPE)

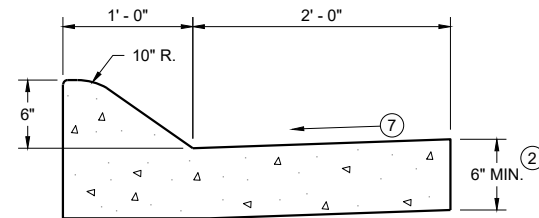


**TYPES K<sup>①</sup> & L**  
**CONCRETE CURB AND GUTTER 30"**

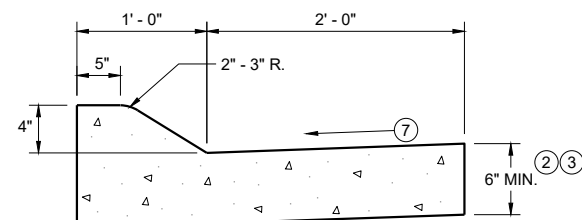


**TYPES A<sup>①</sup> & D**

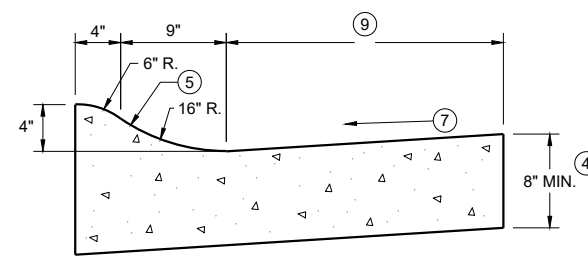
**CONCRETE CURB AND GUTTER 18"**



**6" SLOPED CURB TYPES A<sup>①</sup> & D**

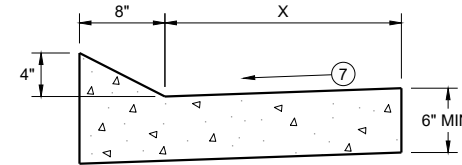


**4" SLOPED CURB TYPES A<sup>①</sup> & D**  
**CONCRETE CURB AND GUTTER 36"**



**4" SLOPED CURB TYPES R<sup>①</sup> & T**

TBT & TBTT	X
30"	22"
36"	28"

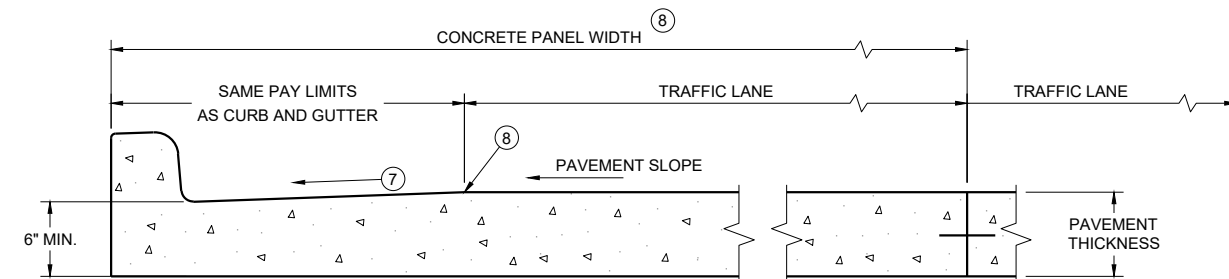


**TYPES TBT & TBTT<sup>①</sup>**

**CONCRETE CURB AND GUTTER**

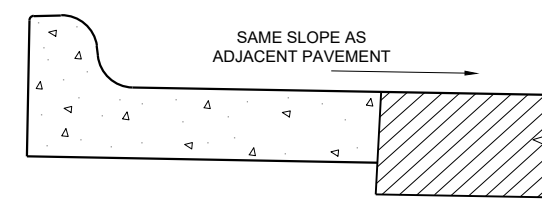
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



**PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER**

\* BIKE LANE IS NOT SHOWN



**REVERSE SLOPE GUTTER<sup>⑥</sup>**  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

**GENERAL NOTES**

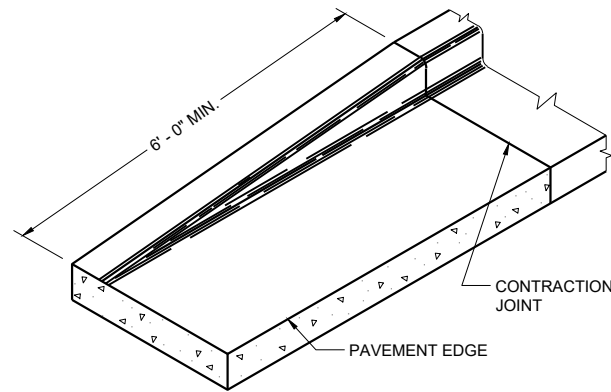
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

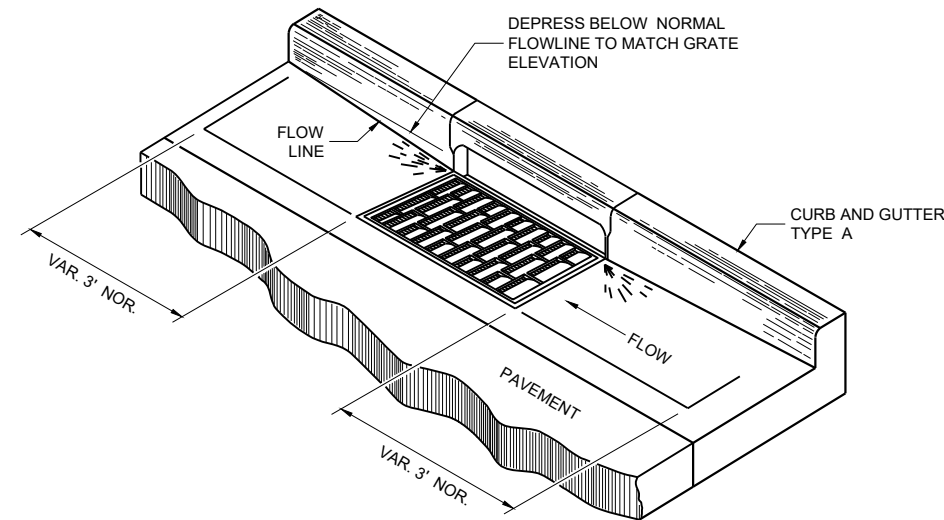
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

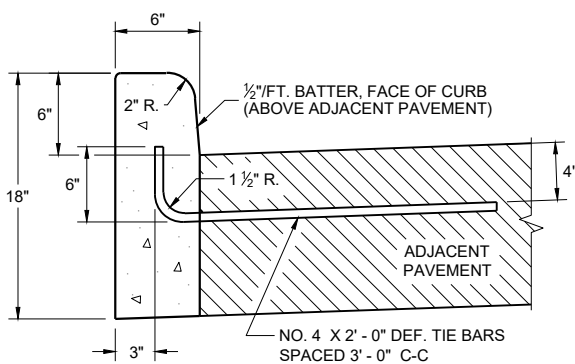


**END SECTION CURB AND GUTTER**

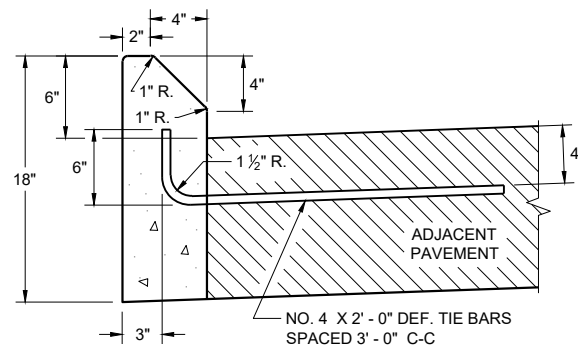


**DETAIL OF CURB AND GUTTER AT INLETS**

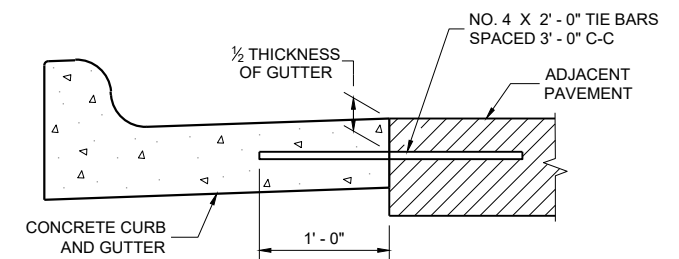
(TYPICAL H INLET COVER SHOWN)



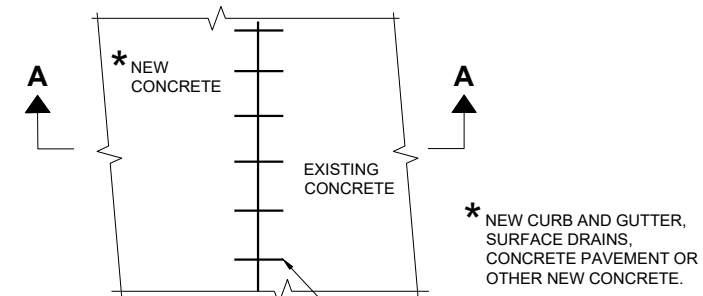
**TYPES A<sup>①</sup> & D**



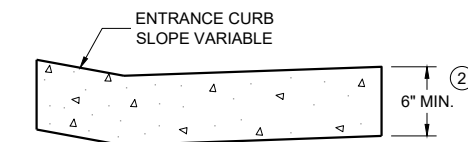
**TYPES G<sup>①</sup> & J  
CONCRETE CURB**



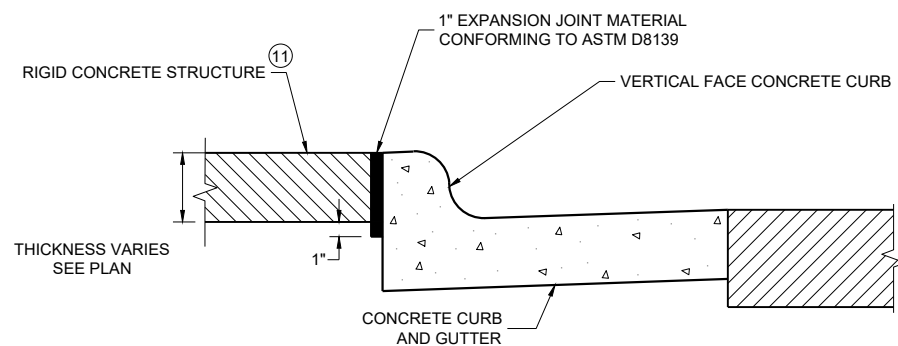
**TYPICAL TIE BAR LOCATION<sup>①</sup>**



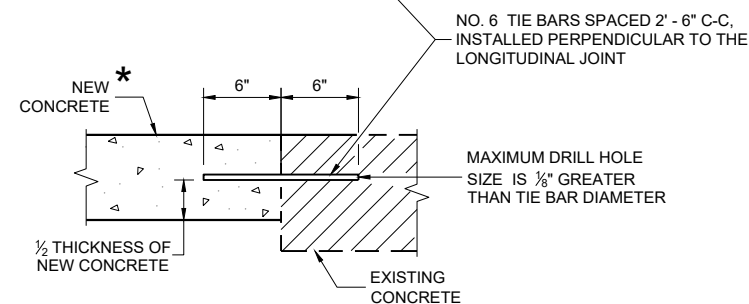
**PLAN VIEW**



**DRIVEWAY ENTRANCE CURB<sup>⑩</sup>  
(WHEN DIRECTED BY THE ENGINEER)**



**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE<sup>⑪</sup>**



**SECTION A - A  
TIE BARS DRILLED INTO EXISTING PAVEMENT**

**GENERAL NOTES**

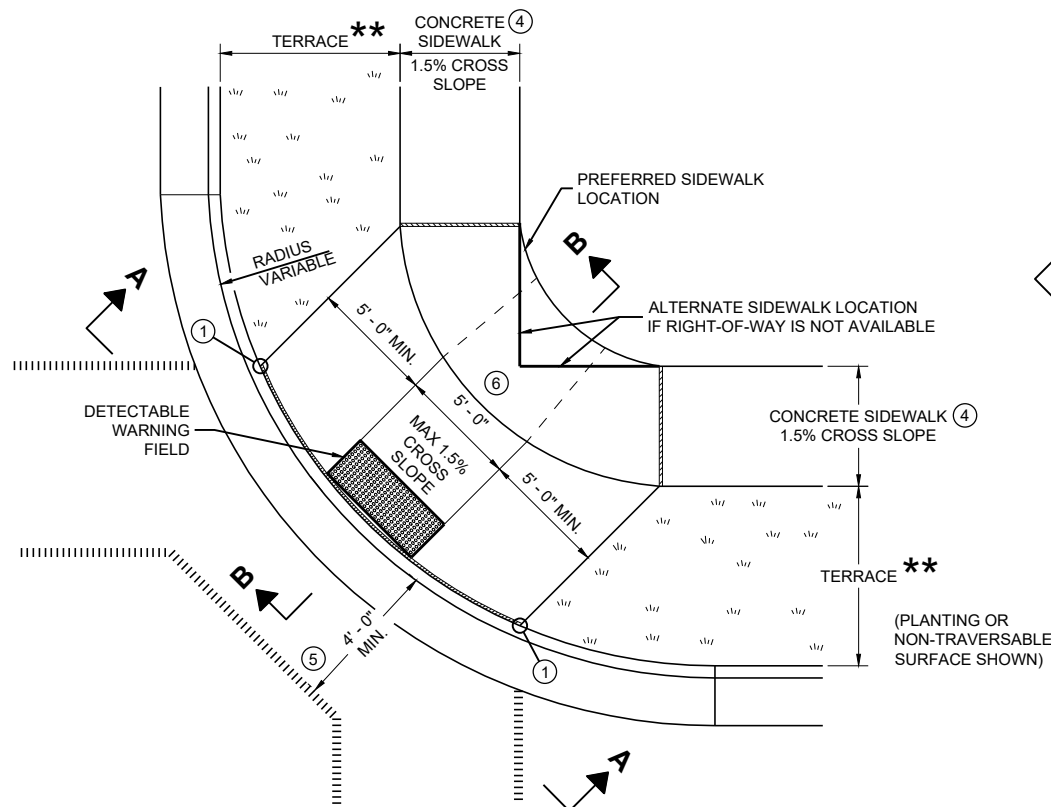
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

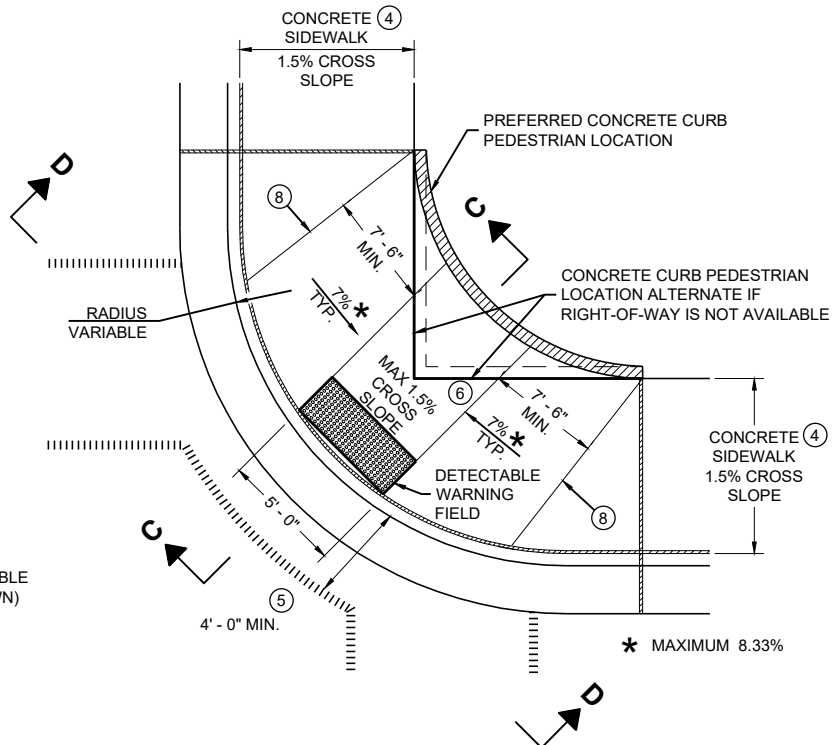
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

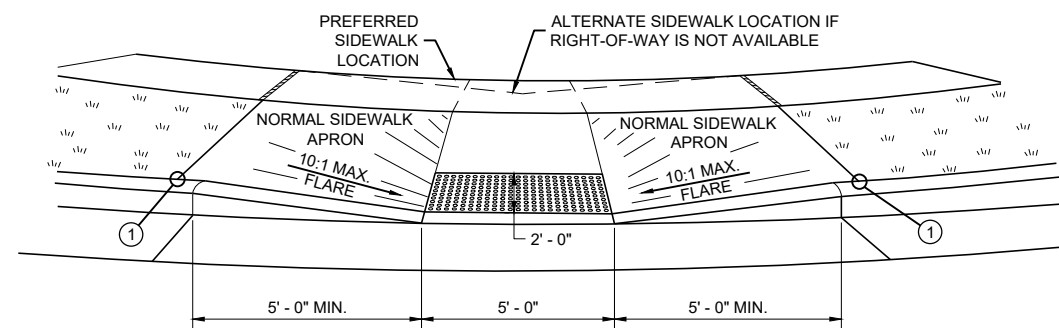
<b>CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR



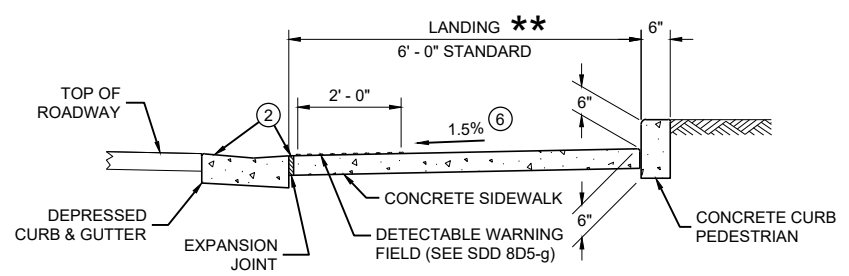
**PLAN VIEW  
CURB RAMP TYPE 1  
(CENTER OF CORNER RADIUS)**



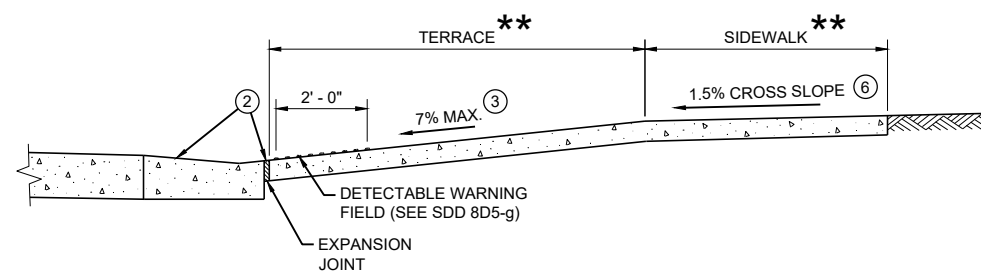
**PLAN VIEW  
CURB RAMP TYPE 1 - A  
(NO TERRACE)**



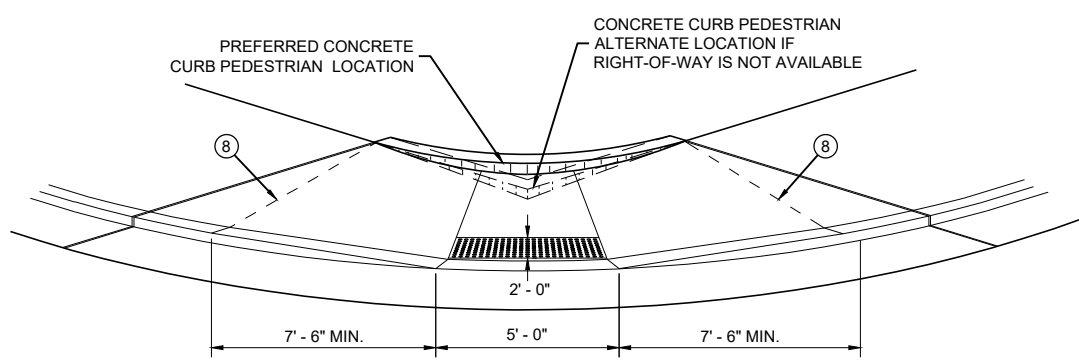
**VIEW A - A FOR TYPE 1**



**SECTION C - C FOR TYPE 1 - A**



**SECTION B - B FOR TYPE 1**



**VIEW D - D FOR TYPE 1 - A**

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
- TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.
- DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.
- SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS  
TYPE 1 AND 1-A**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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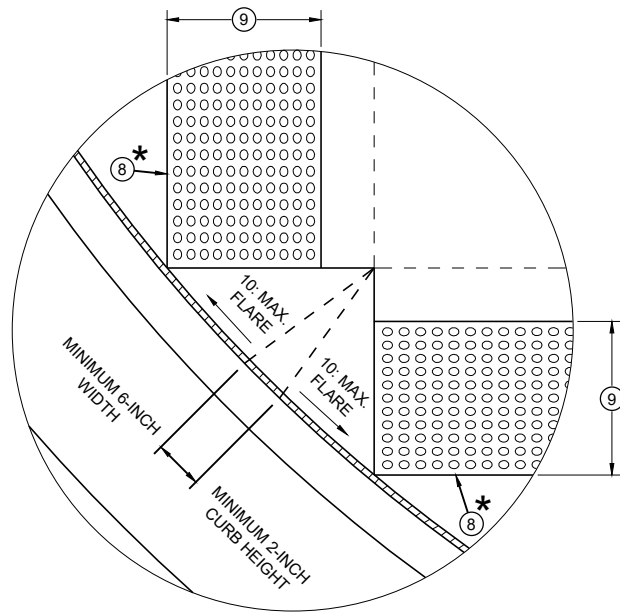
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SDD 08D05-21a

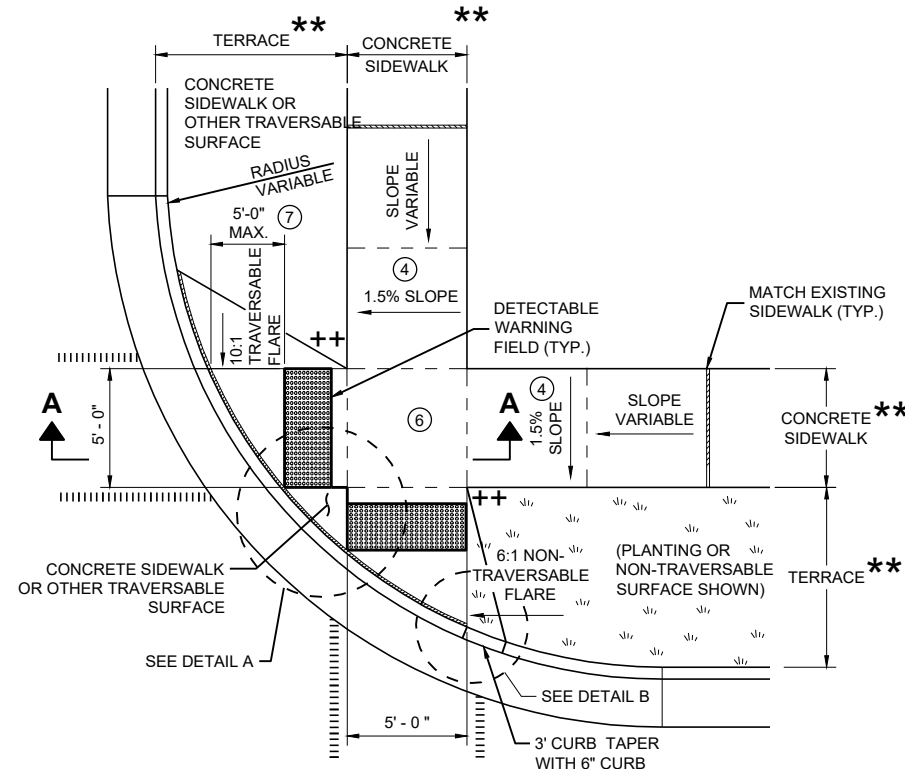
SDD 08D05-21a

\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

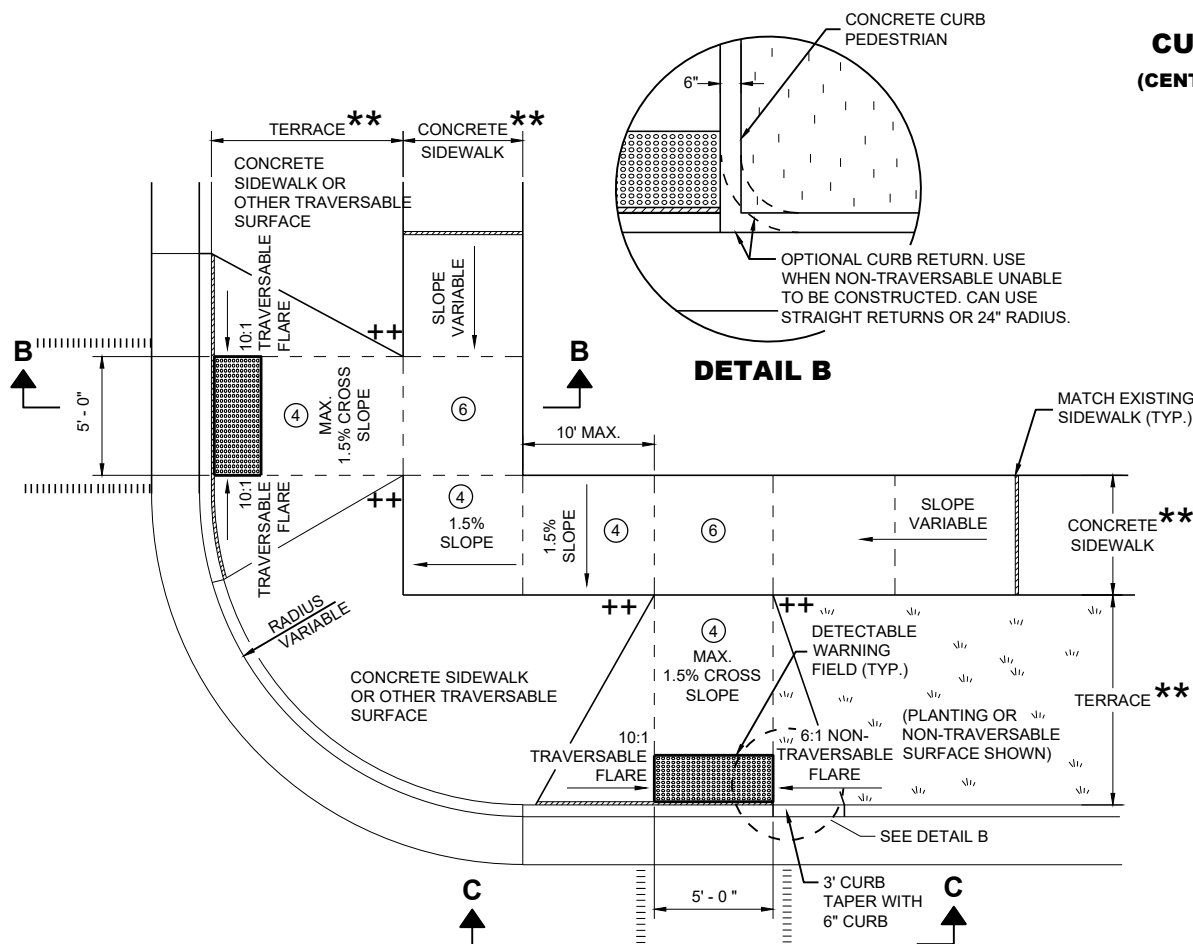




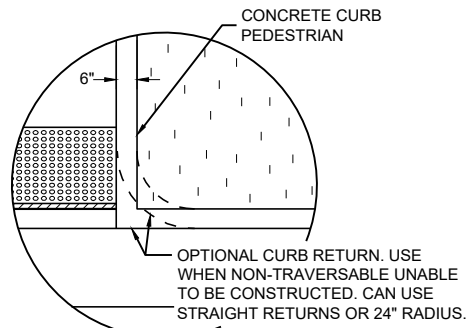
**DETAIL A**



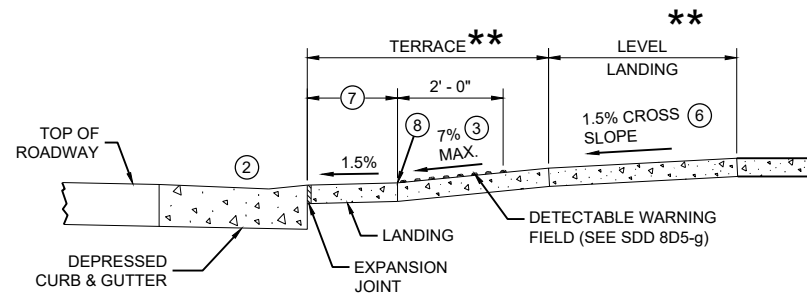
**PLAN VIEW  
CURB RAMP TYPE 2  
(CENTER OF CORNER RADIUS)**



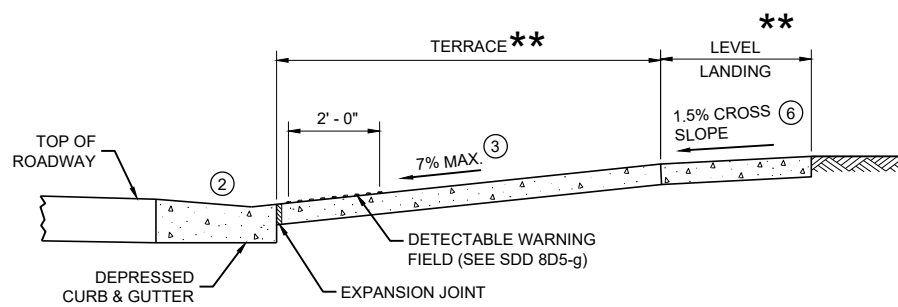
**PLAN VIEW  
CURB RAMP TYPE 3  
(OUTSIDE OF CROSSWALK AREA)**



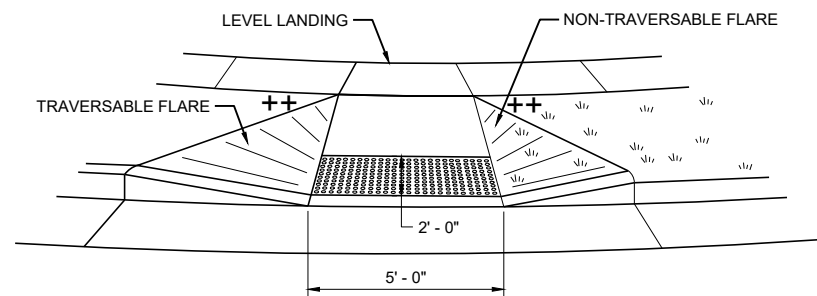
**DETAIL B**



**SECTION A - A FOR TYPE 2**



**SECTION B - B FOR TYPE 3**



**VIEW C - C FOR TYPE 3**

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

- \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- - - - CONTRACTION JOINT SIDEWALK
- |||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS  
TYPE 2 AND 3**

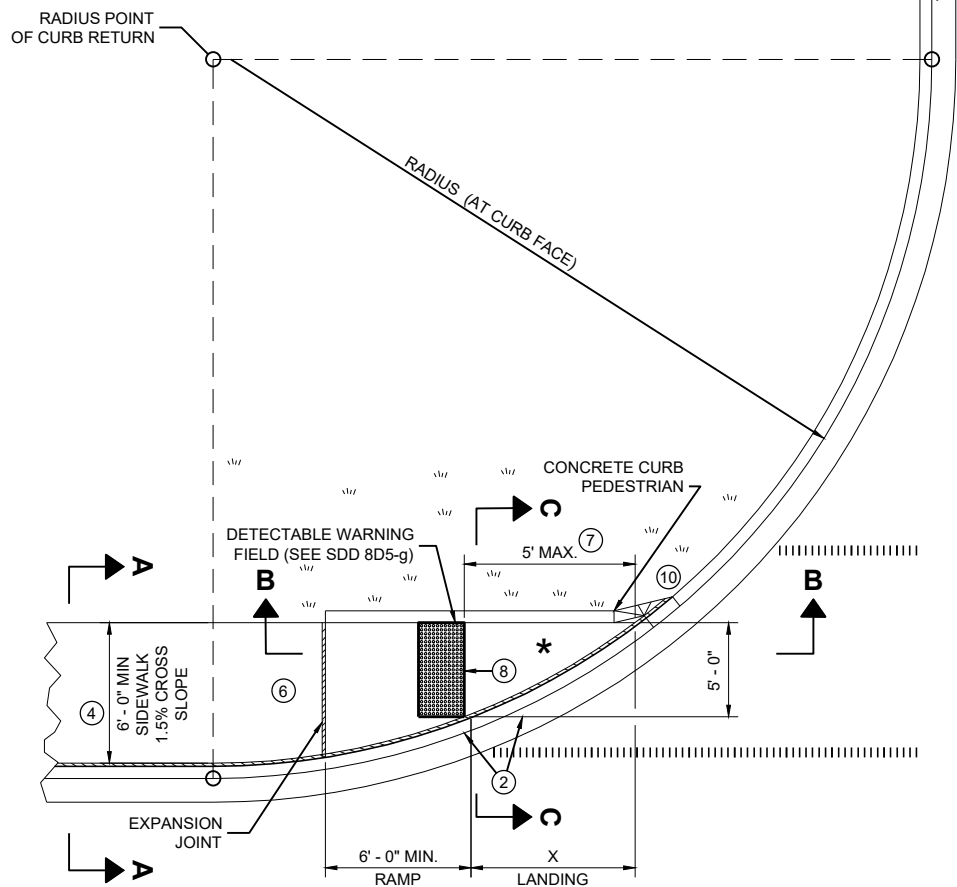
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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SDD 08D05-21b

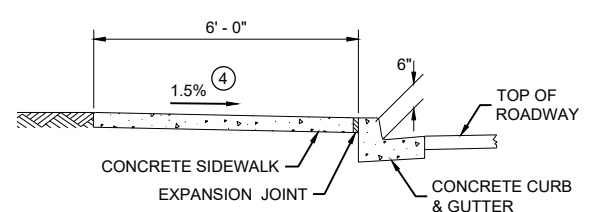
SDD 08D05-21b



**PLAN VIEW  
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



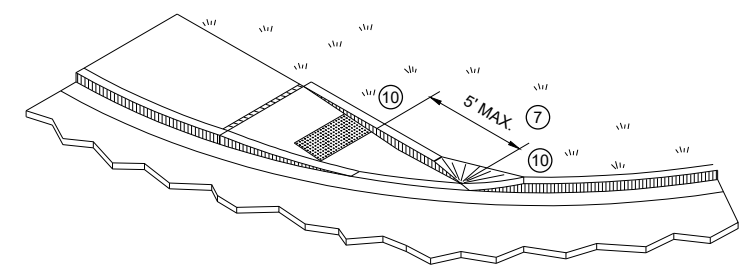
**SECTION A - A FOR TYPE 4A**

**GENERAL NOTES**

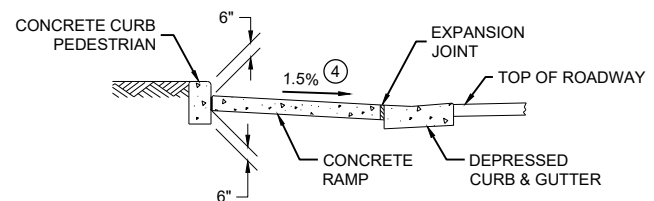
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

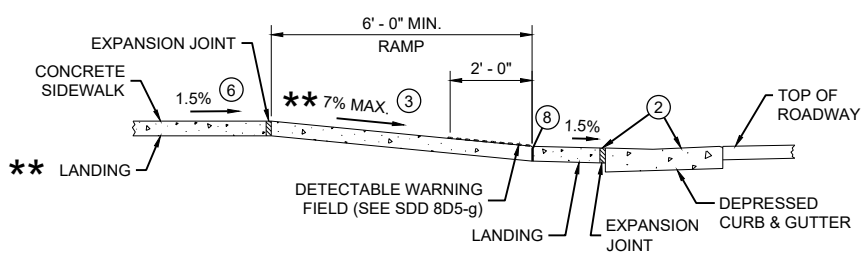


**ISOMETRIC VIEW FOR TYPE 4A**



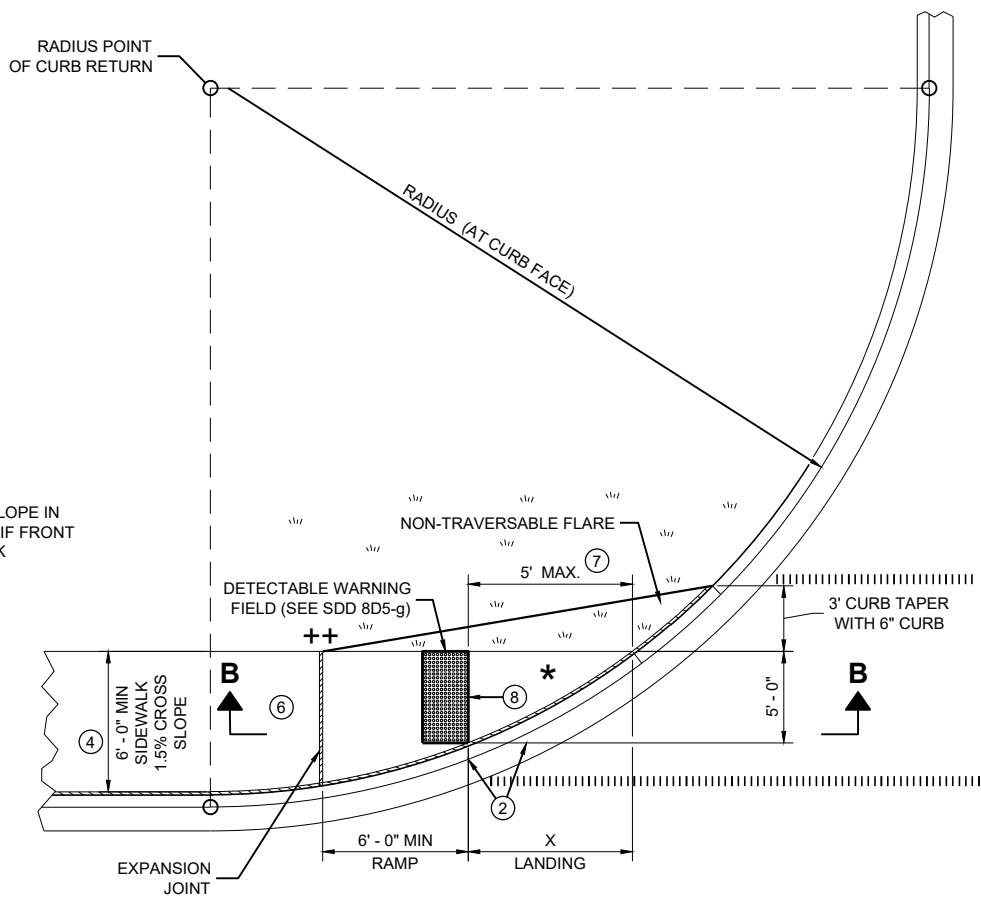
**SECTION C - C FOR TYPE 4A**

\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK



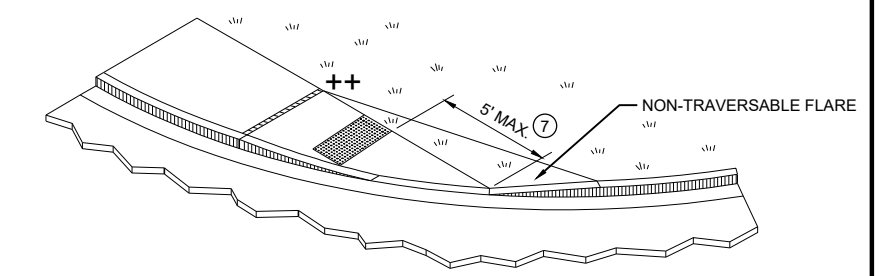
**SECTION B - B FOR  
TYPE 4A AND TYPE 4A1**

\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW  
CURB RAMP TYPE 4A1**

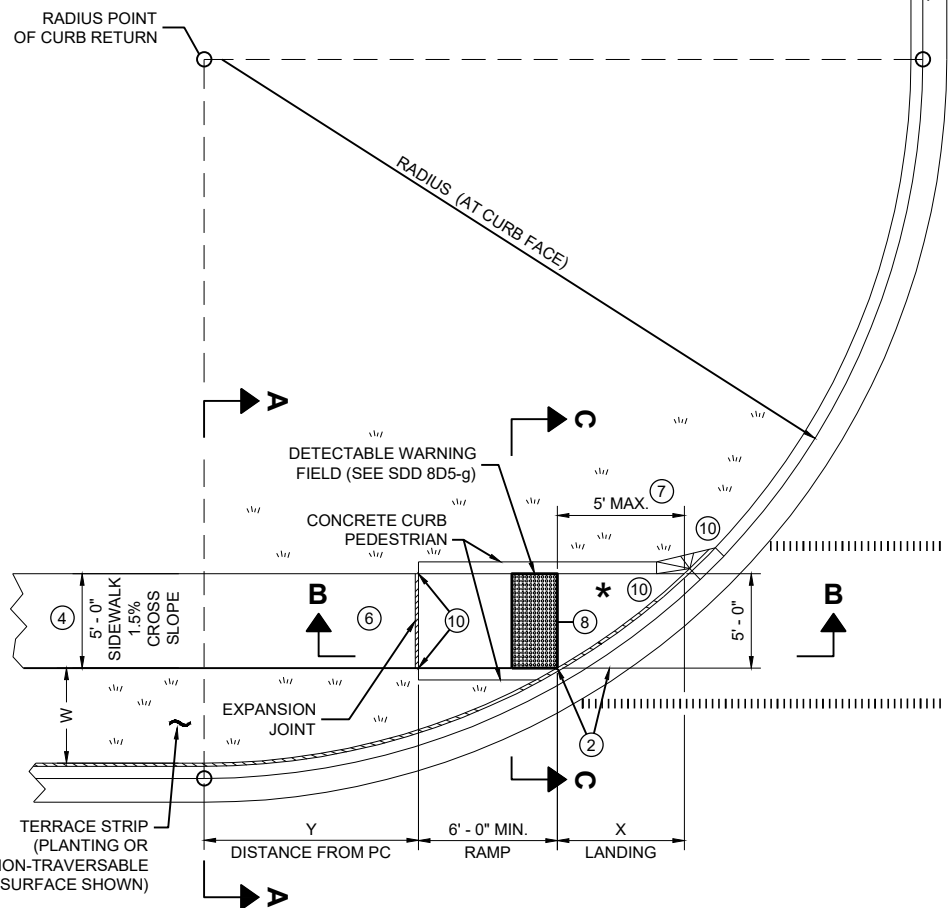
++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



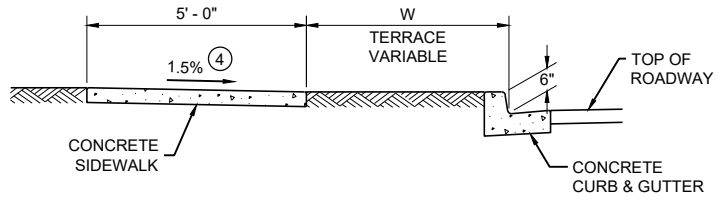
**ISOMETRIC VIEW FOR TYPE 4A1**

**CURB RAMPS  
TYPE 4A AND 4A1**

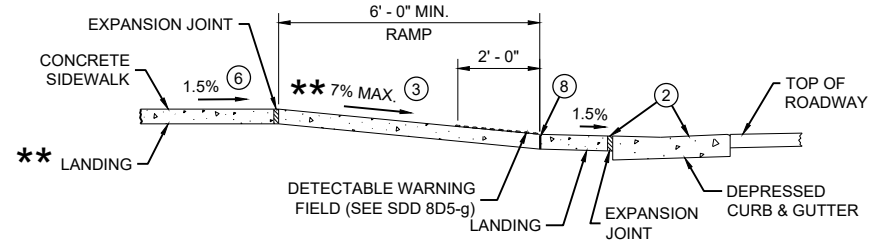
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW CURB RAMP TYPE 4B**



**SECTION A - A FOR TYPE 4B**

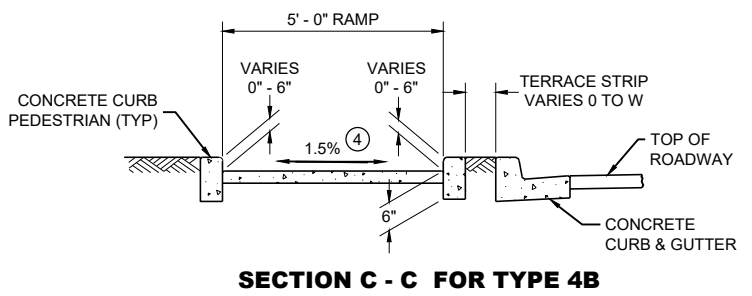


**SECTION B - B FOR TYPE 4B AND TYPE 4B1**

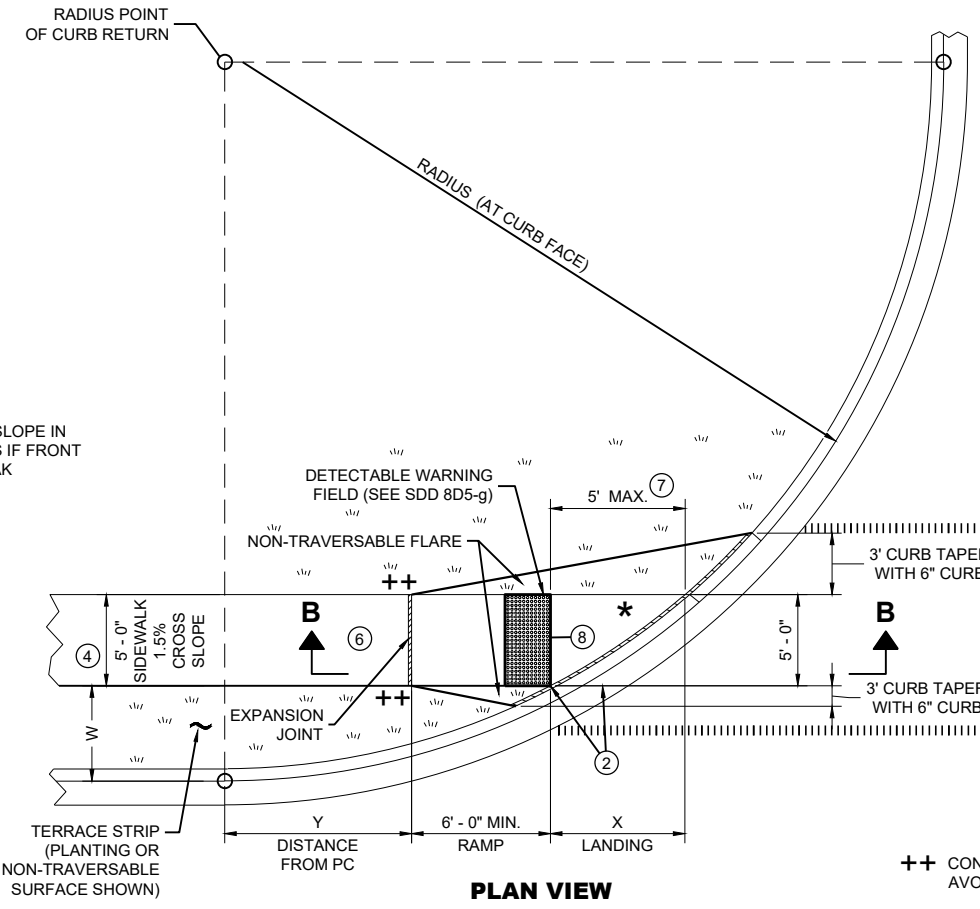
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED  
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

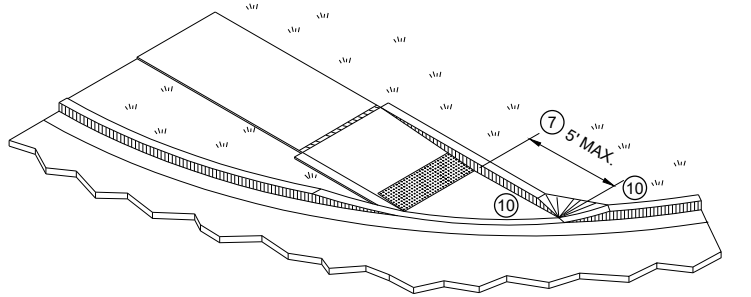


**SECTION C - C FOR TYPE 4B**

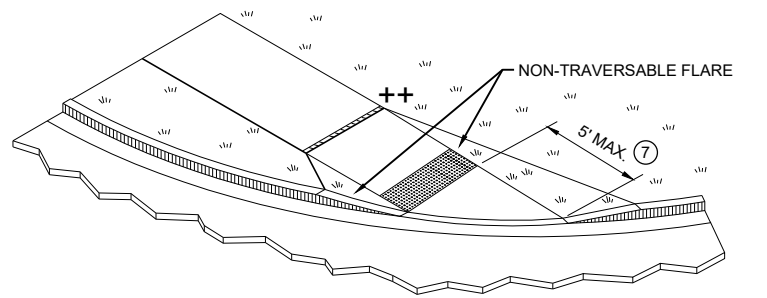


**PLAN VIEW CURB RAMP TYPE 4B1**

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



**ISOMETRIC VIEW FOR TYPE 4B**



**ISOMETRIC VIEW FOR TYPE 4B1**

**LEGEND**

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

**CURB RAMPS TYPE 4B AND 4B1**

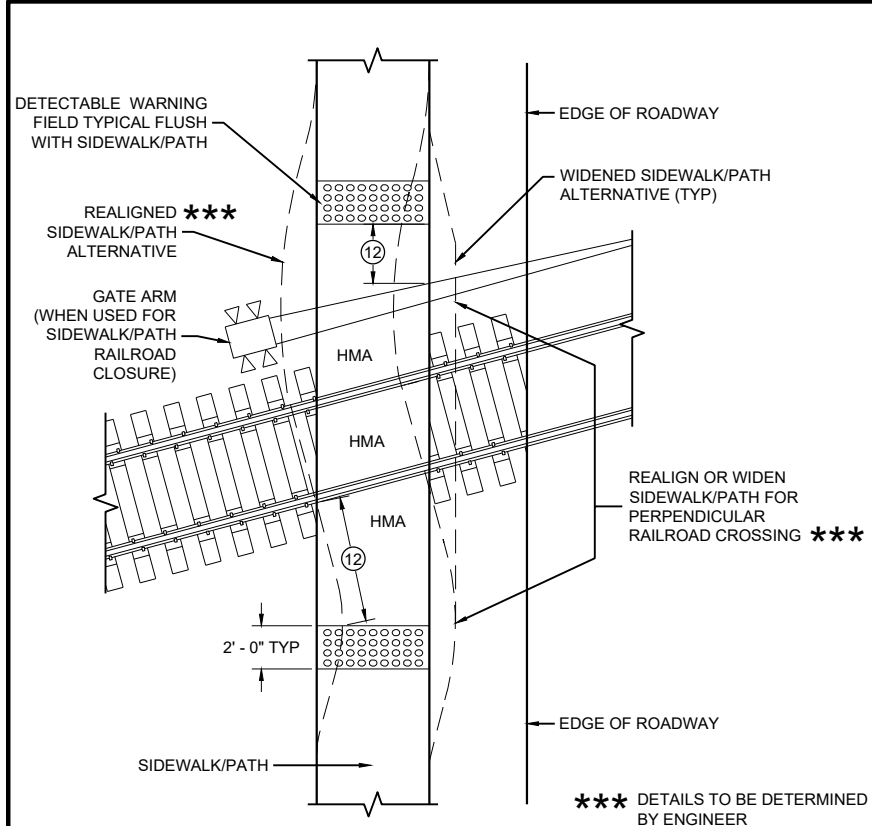
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

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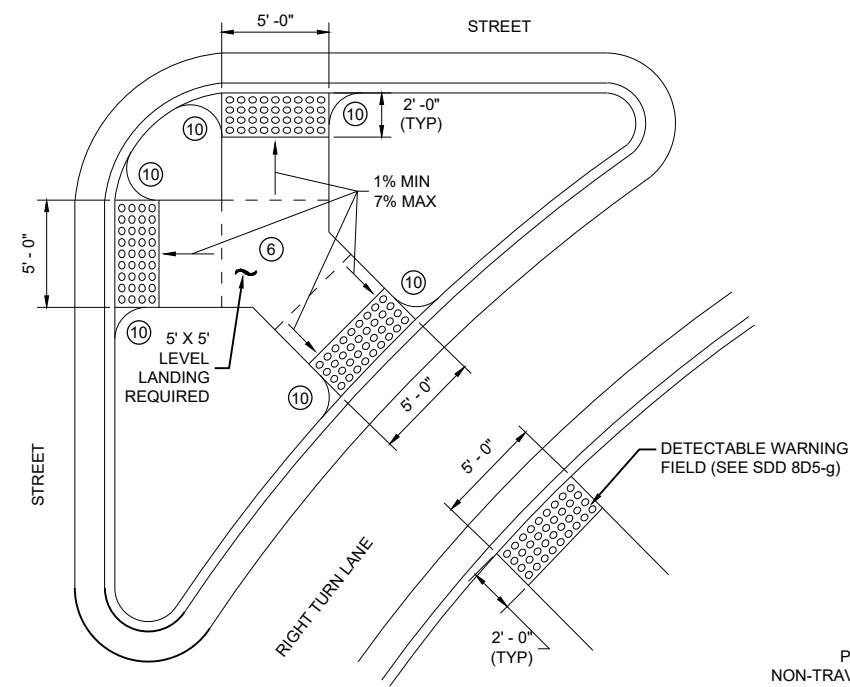
SDD 08D05-21d

SDD 08D05-21d



**CURB RAMP TYPE 8**

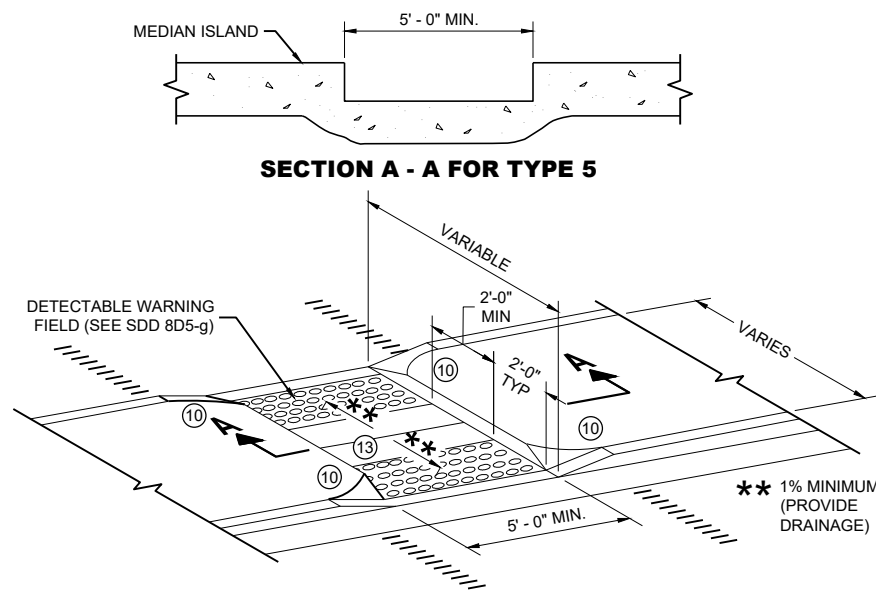
**DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS**



**CURB RAMP TYPE 6**

**DETECTABLE WARNING AT ISLANDS**

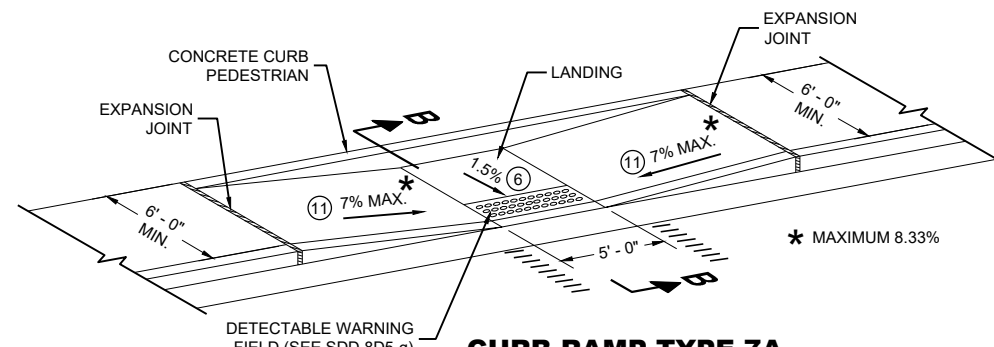
REFER TO GENERAL NOTES ② AND ③ FOR ALL ISLAND CURB RAMPS



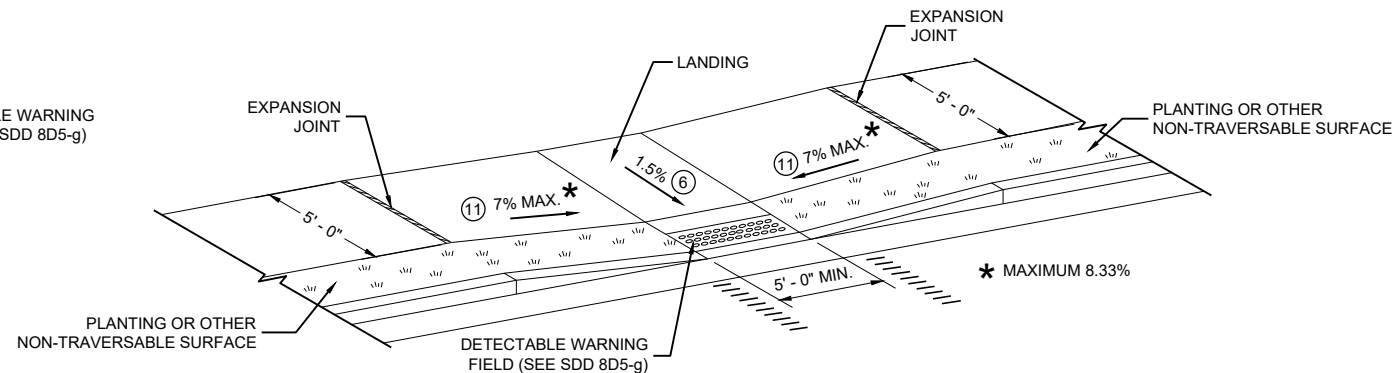
**SECTION A - A FOR TYPE 5**

**CURB RAMP TYPE 5**

**MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING**



**CURB RAMP TYPE 7A FOR INTERSECTIONS AND MID BLOCK CROSSINGS**



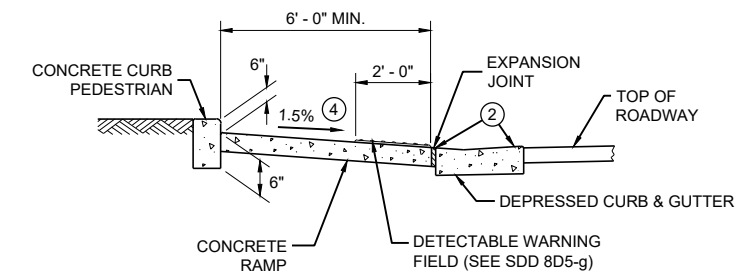
**CURB RAMP TYPE 7B FOR INTERSECTIONS AND MID BLOCK CROSSINGS**

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

**LEGEND**

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)



**SECTION B - B FOR TYPE 7A**

6

6

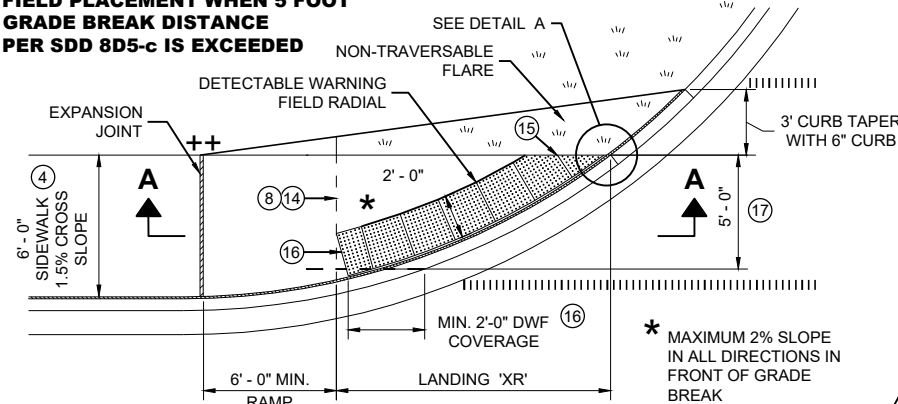
SDD 08D05-21e

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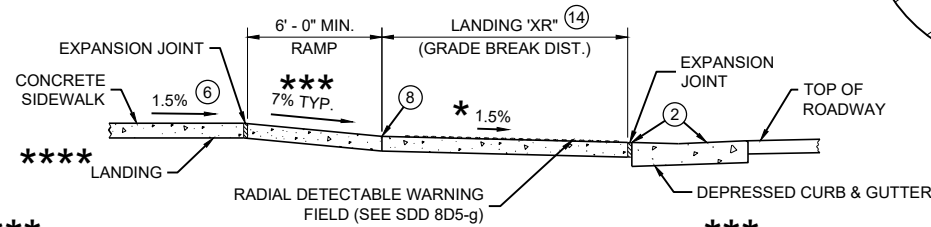
**CURB RAMPS TYPE 5, 6, 7A, 7B & 8**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-c IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



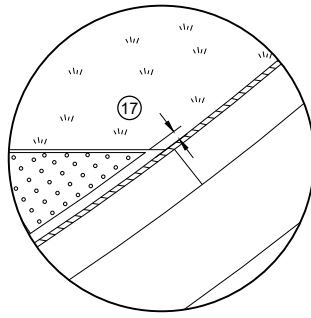
**SECTION A - A FOR TYPE 4A1**

\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%

**LEGEND**

- ===== 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- |||||| PAVEMENT MARKING CROSSWALK (WHITE)

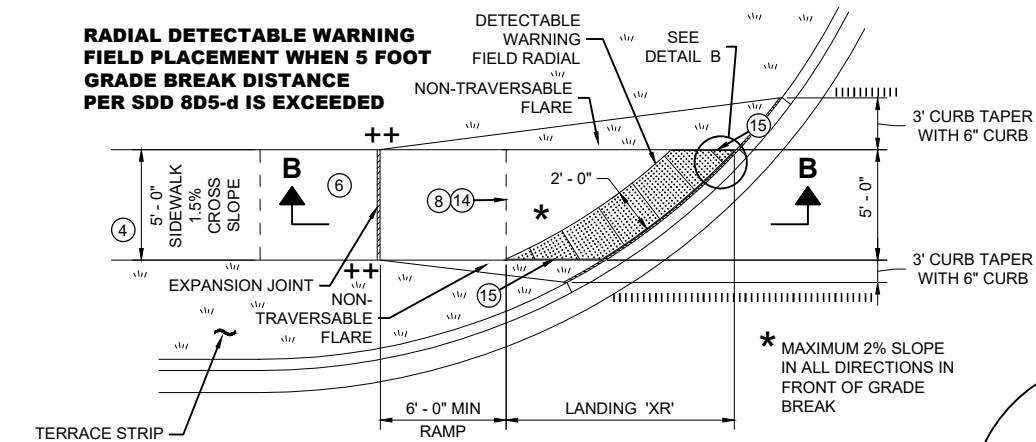


**DETAIL A**

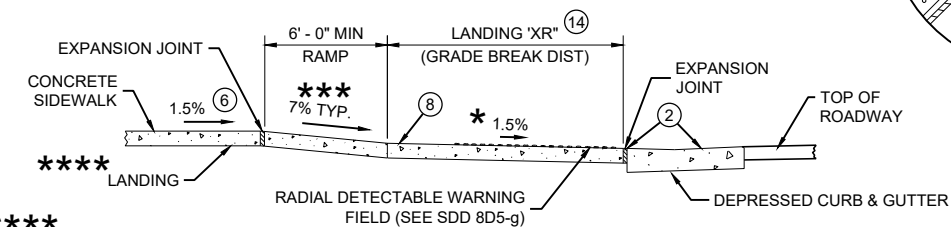
**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- (15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/2" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- (16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- (17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-d IS EXCEEDED**



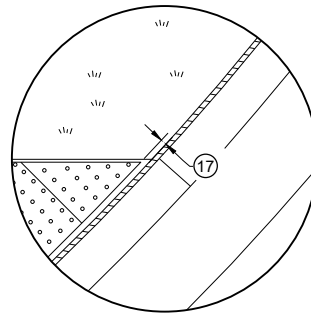
**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION B - B FOR TYPE 4B1**

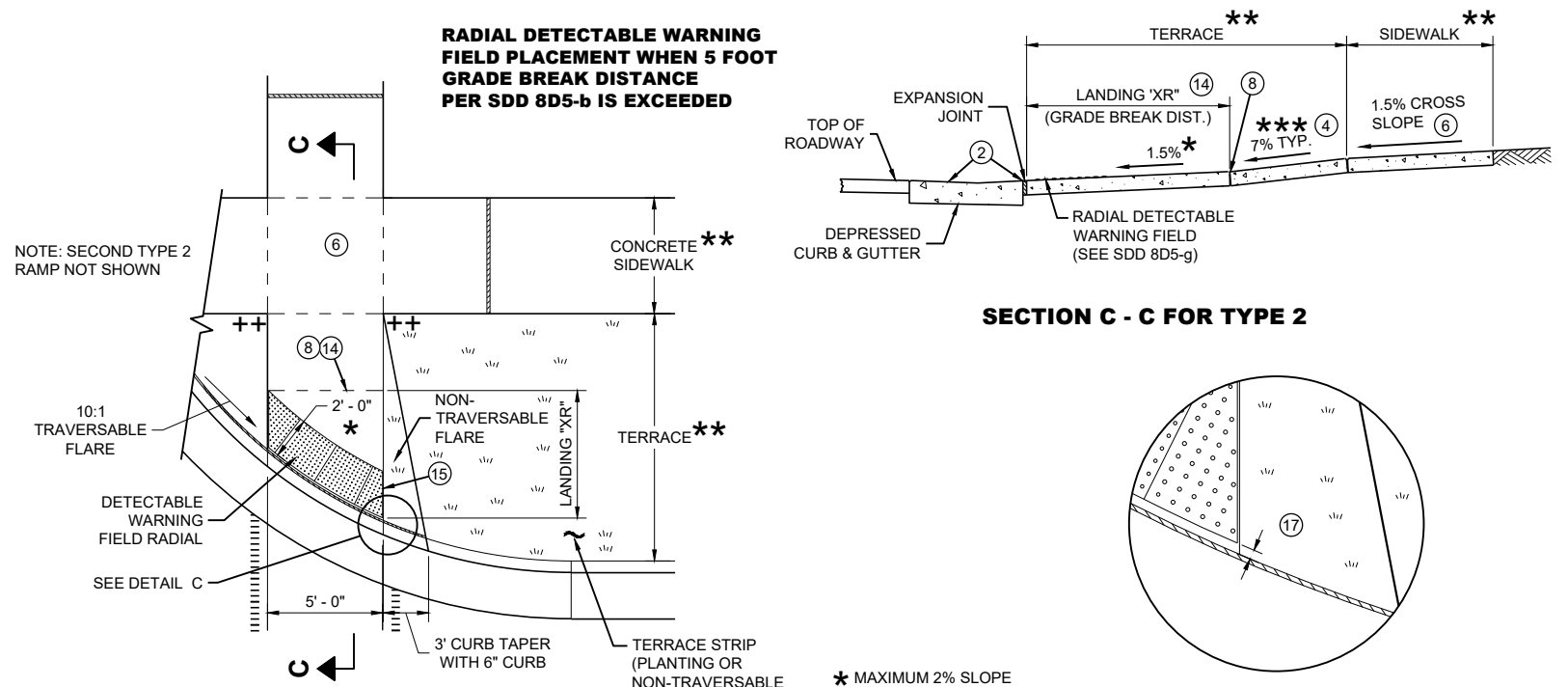
\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%



**DETAIL B**

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**

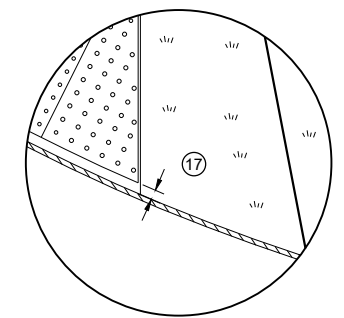
NOTE: SECOND TYPE 2 RAMP NOT SHOWN

\* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

\*\*\* MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



**DETAIL C**

**CURB RAMPS  
RADIAL DETECTABLE WARNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

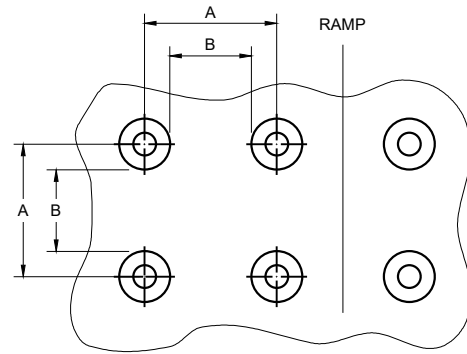
6

SDD 08D05-21f

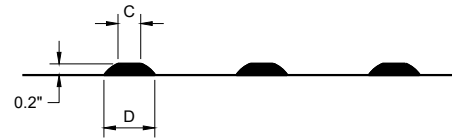
SDD 08D05-21f

	MIN.	MAX.
<b>A</b>	1.6"	2.4"
<b>B</b>	0.65"	1.5"
<b>C</b>	*	*
<b>D</b>	0.9"	1.4"

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

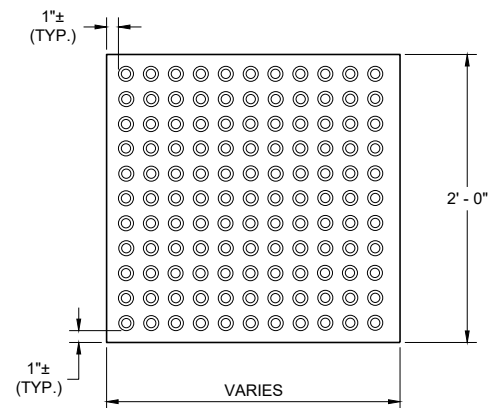


**PLAN VIEW**

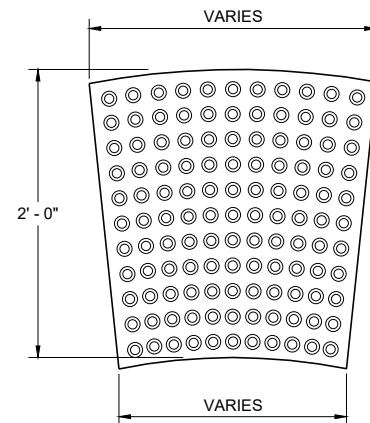


**ELEVATION VIEW**

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**

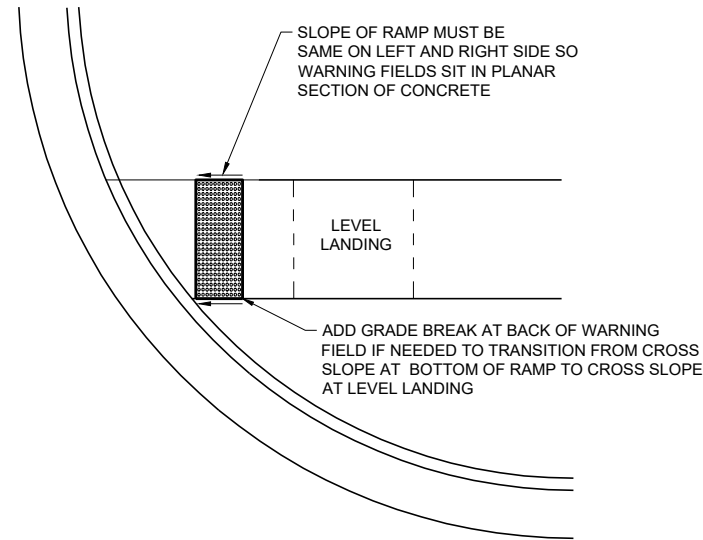


**RECTANGULAR  
PLATES**

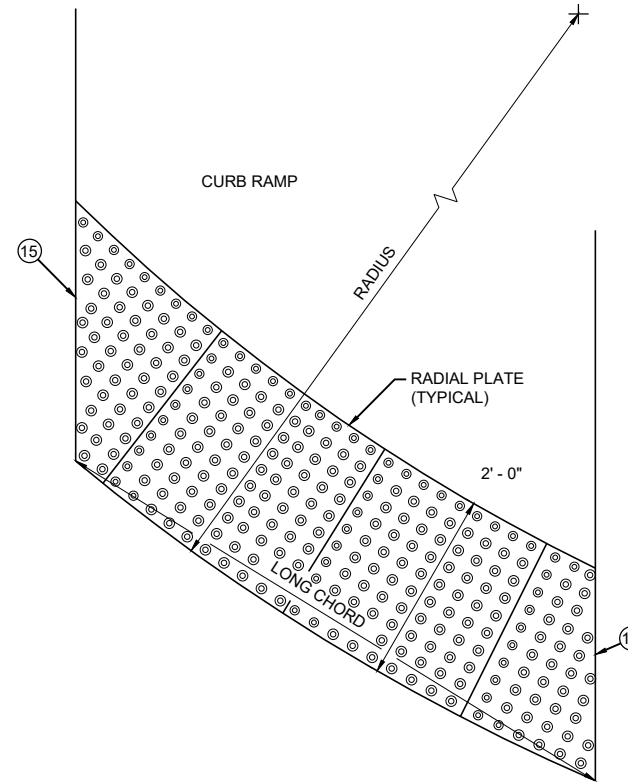


**RADIAL  
PLATES**

**PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)**



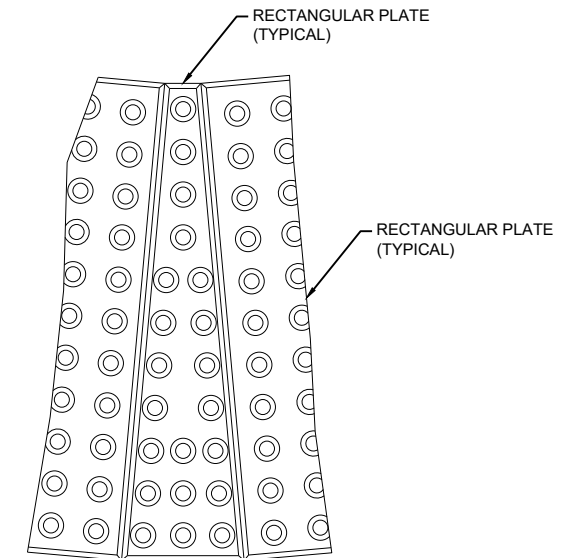
**DETECTABLE WARNING FIELD  
PLANAR INSTALLATION**



**PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES**

**GENERAL NOTES**

- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.
- PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.
- DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.
- (15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



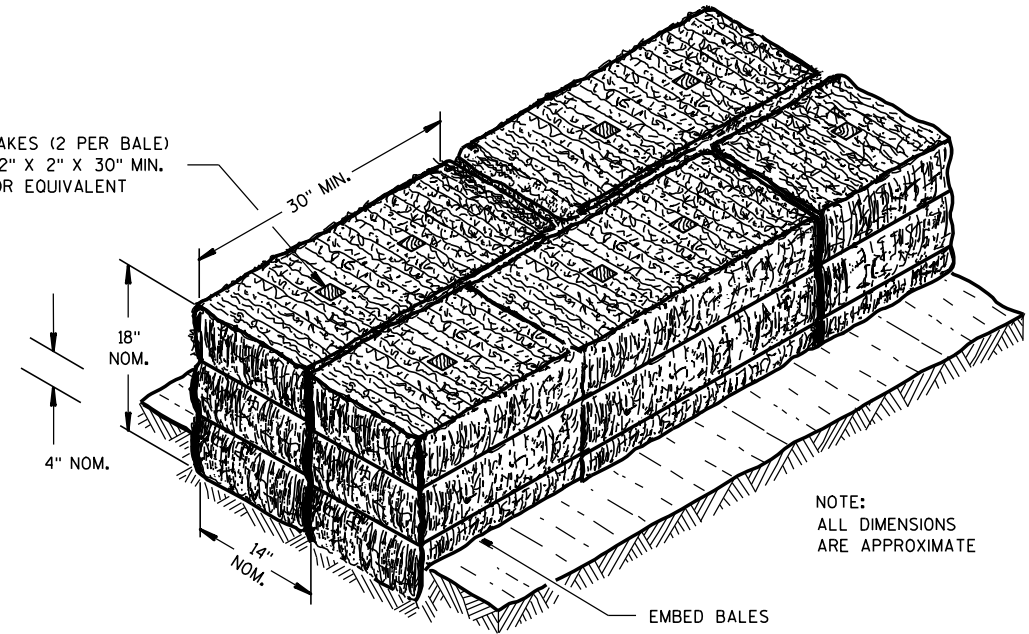
**PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL**

**CURB RAMPS  
RECTANGULAR AND RADIAL  
DETECTABLE WARNING PLATES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

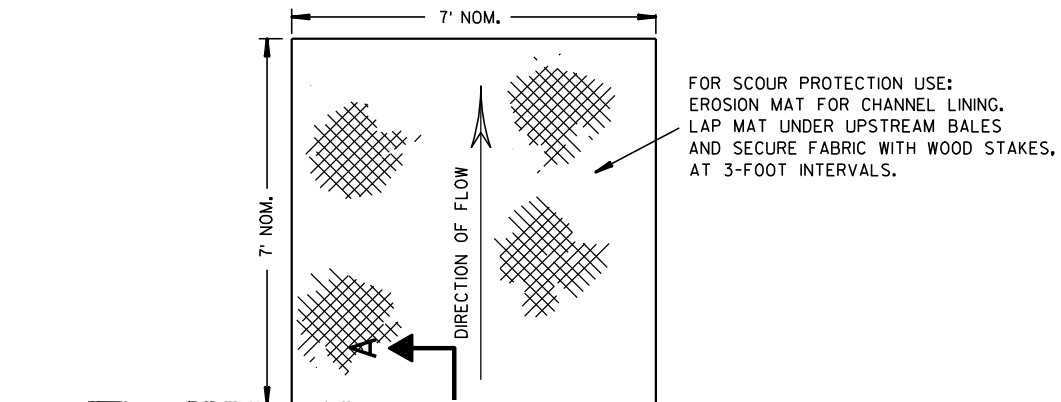
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

SECTION A-A

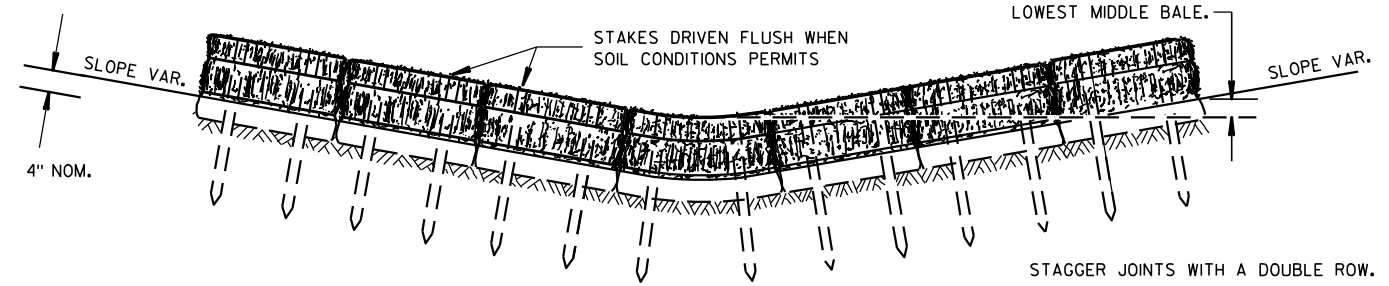


FOR SCOUR PROTECTION USE:  
EROSION MAT FOR CHANNEL LINING.  
LAP MAT UNDER UPSTREAM BALES  
AND SECURE FABRIC WITH WOOD STAKES,  
AT 3-FOOT INTERVALS.

PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



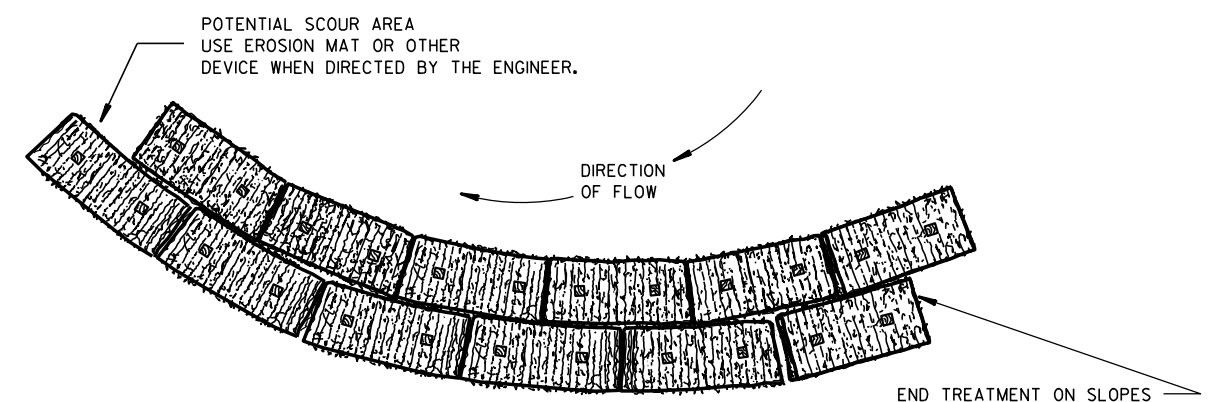
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

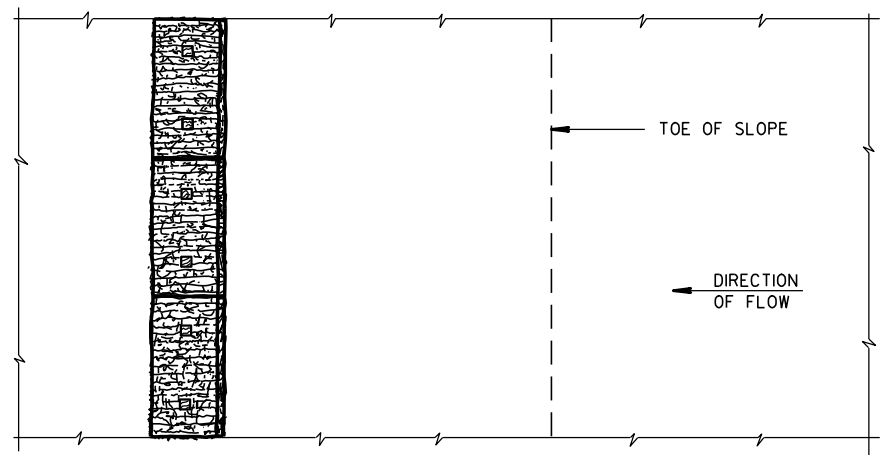
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

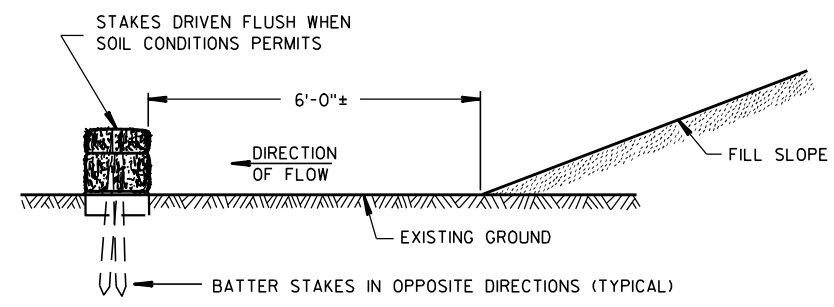


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

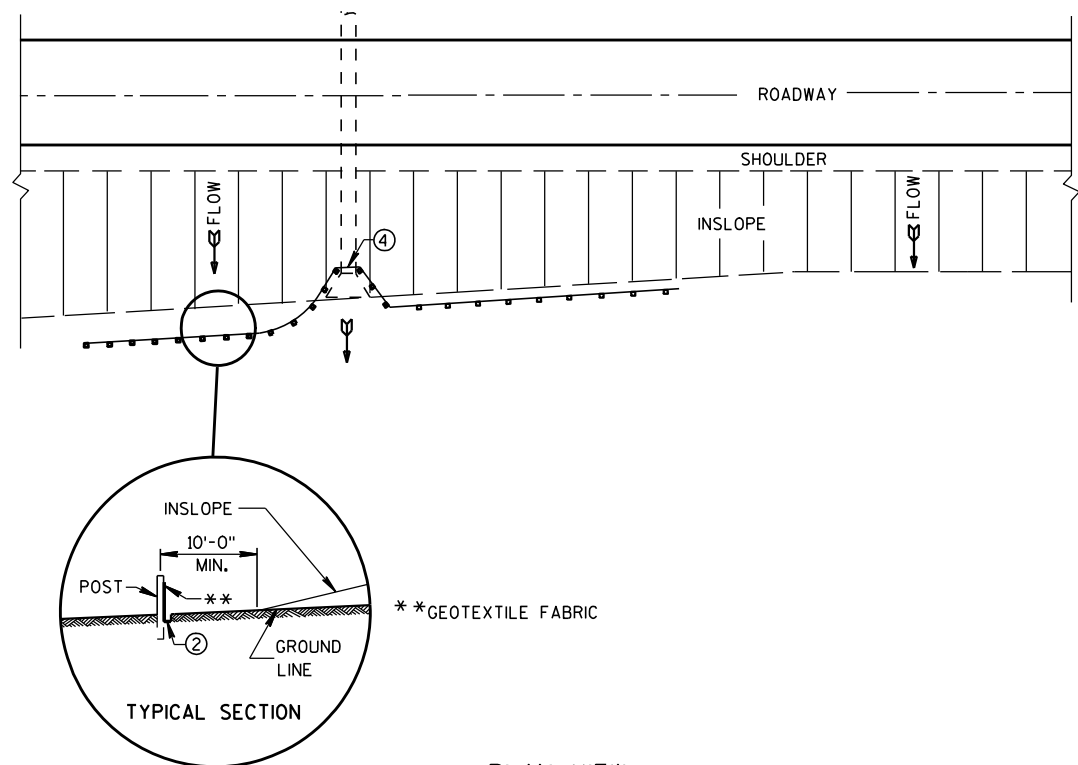
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

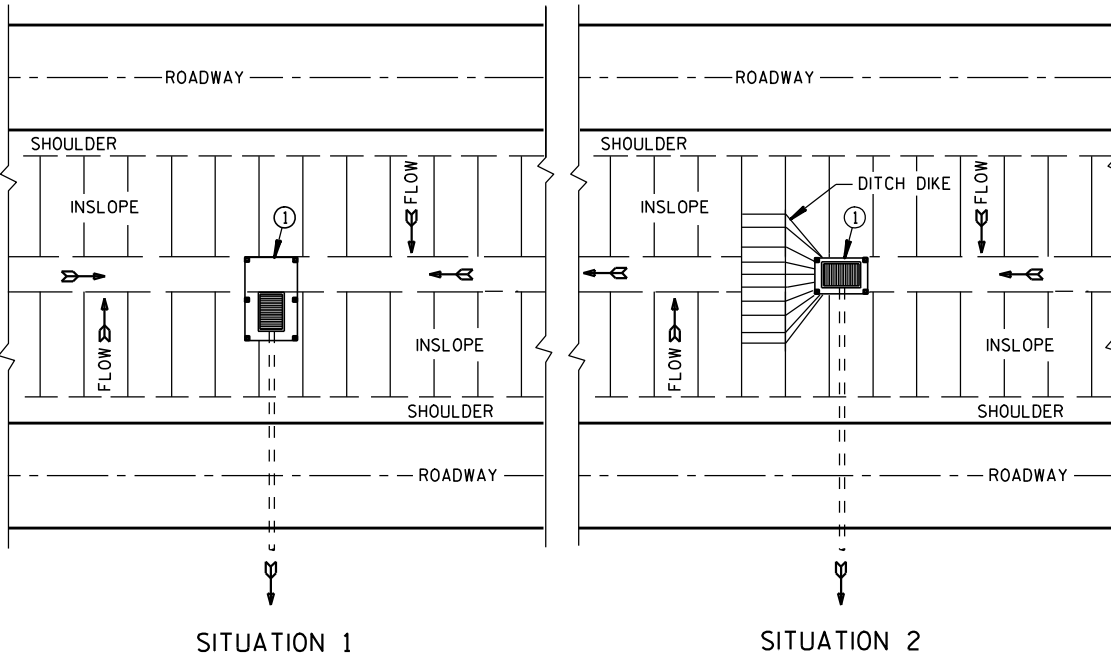
TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 6/04/02 /S/ Beth Canestra  
 DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
 FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

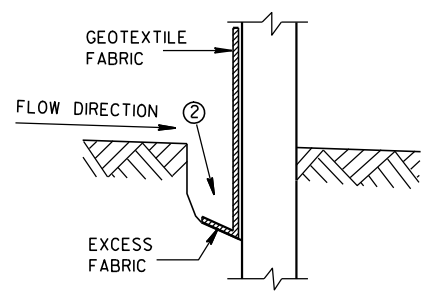


SITUATION 1      SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

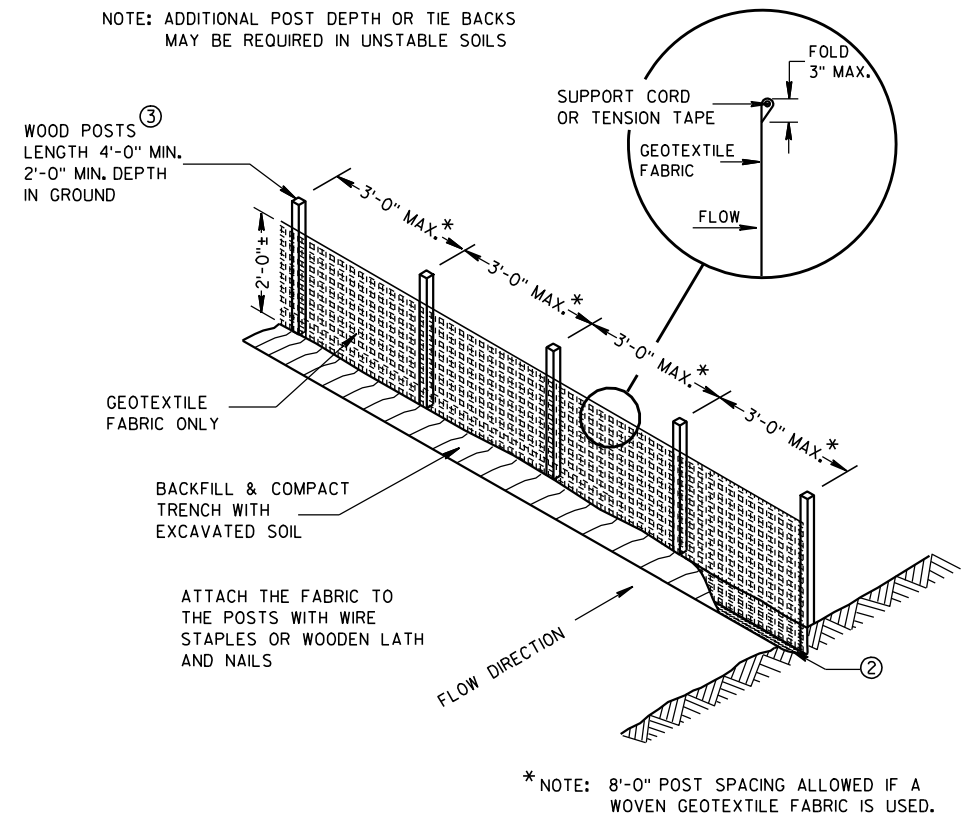
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



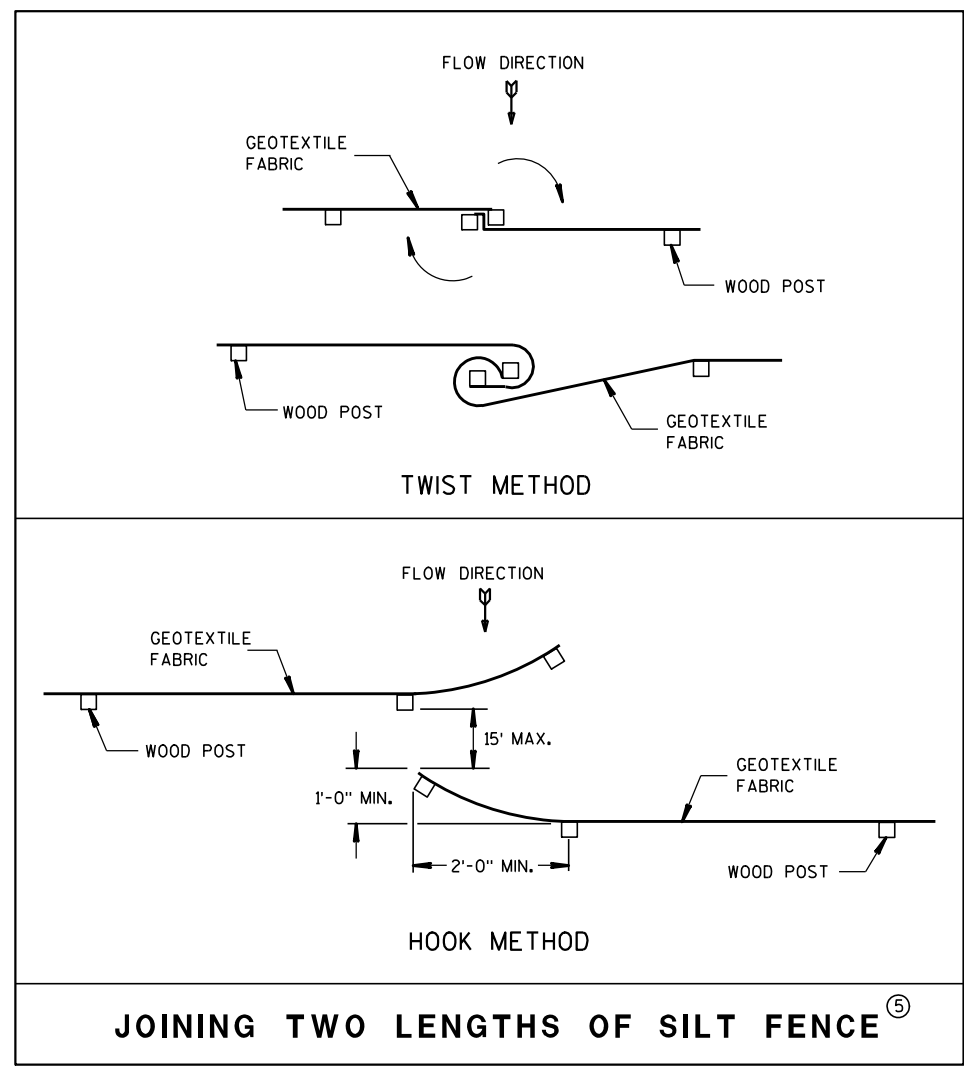
TRENCH DETAIL

6



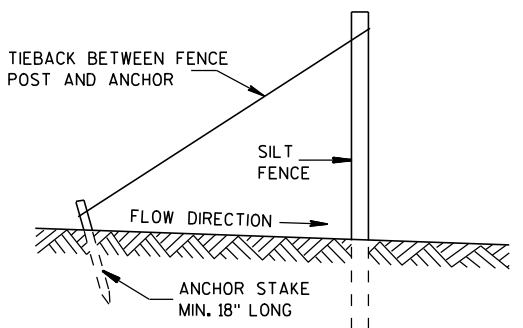
SILT FENCE

\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

6



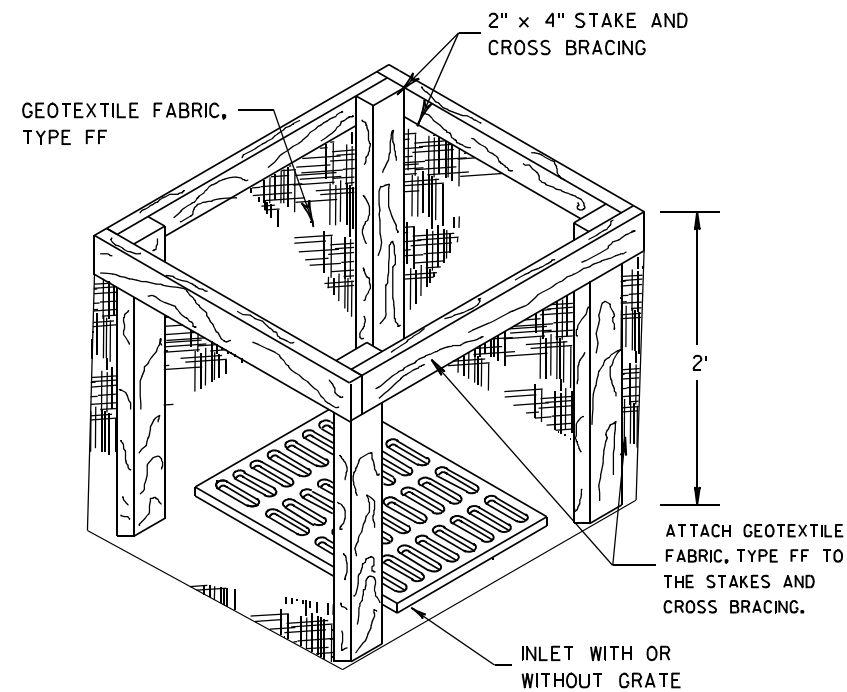
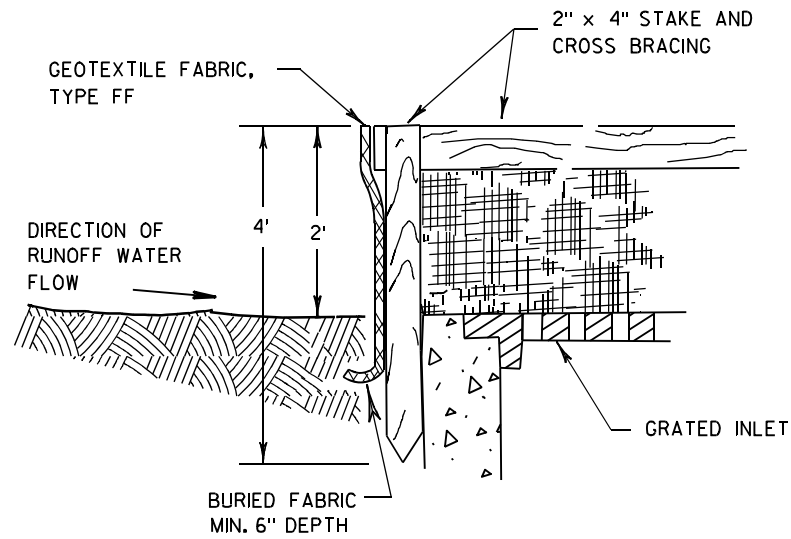
SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

<b>SILT FENCE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 E 9-6

S.D.D. 8 E 9-6





**INLET PROTECTION, TYPE A**

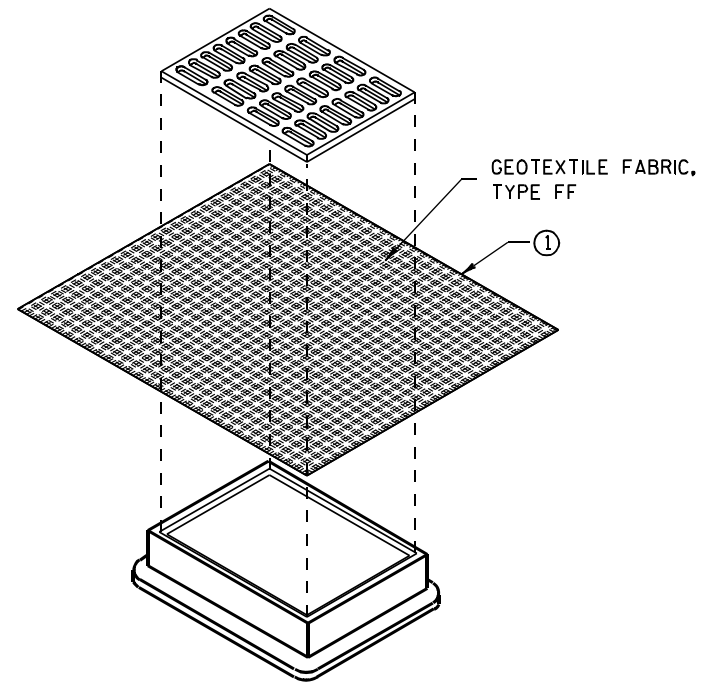
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

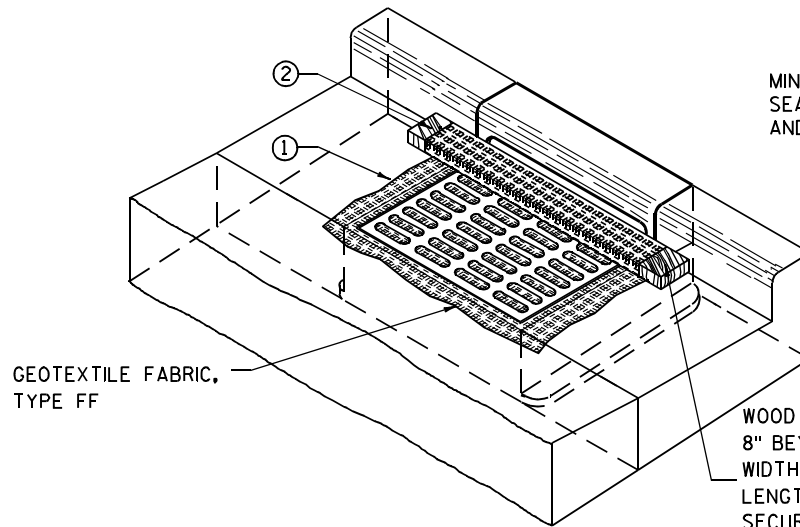
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

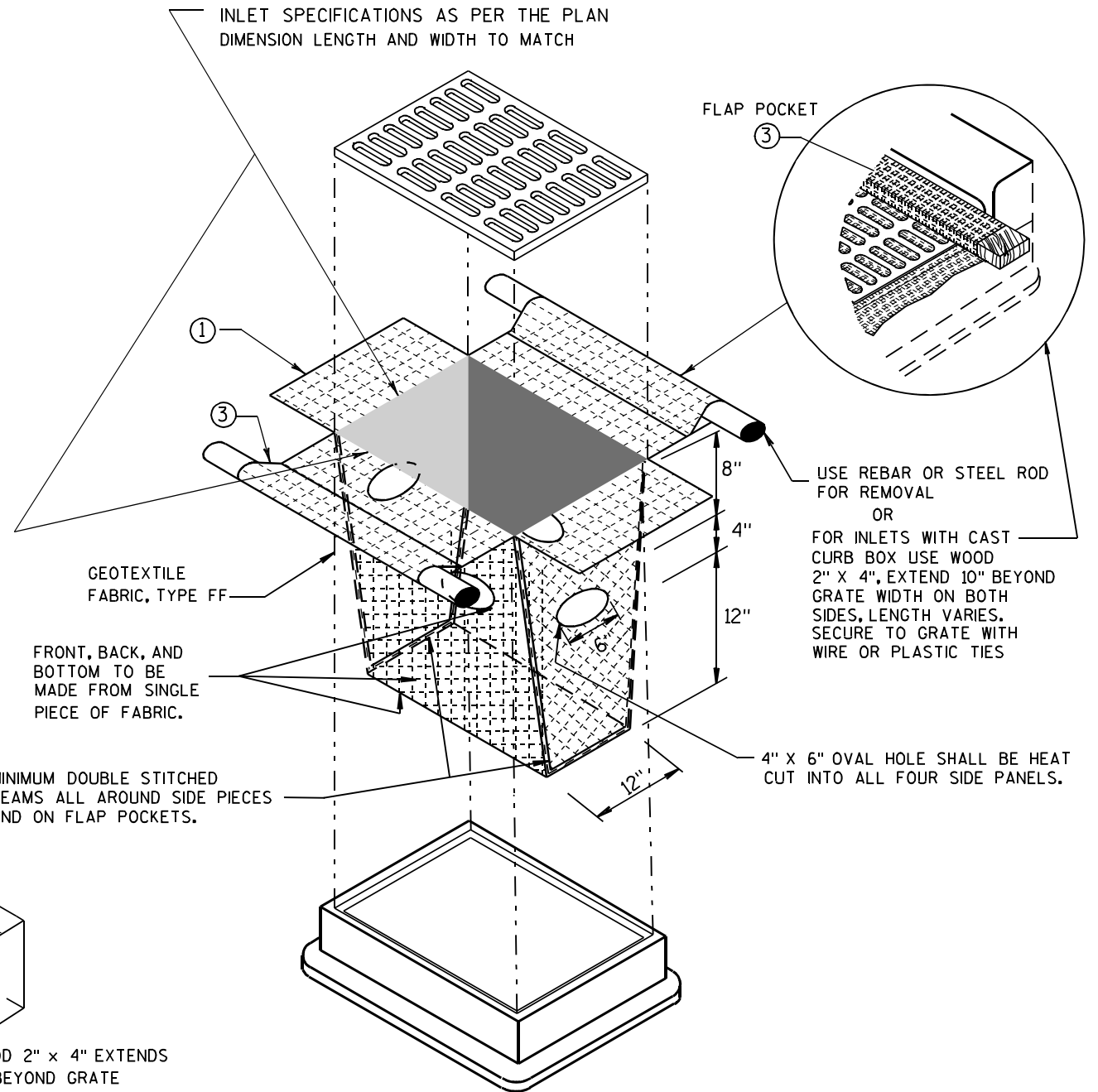
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION  
TYPE A, B, C, AND D**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/16/02 /S/ Beth Conestra  
DATE  
CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

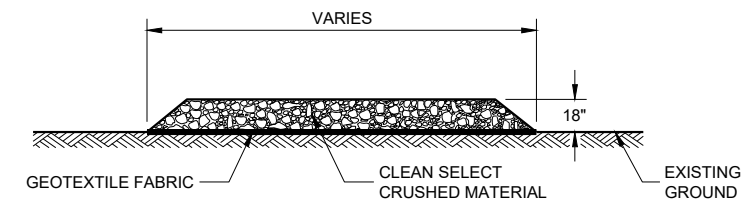
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

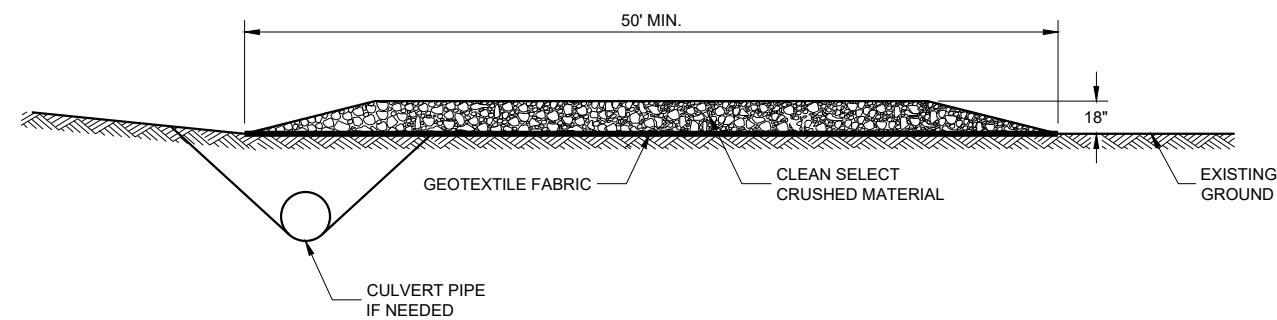
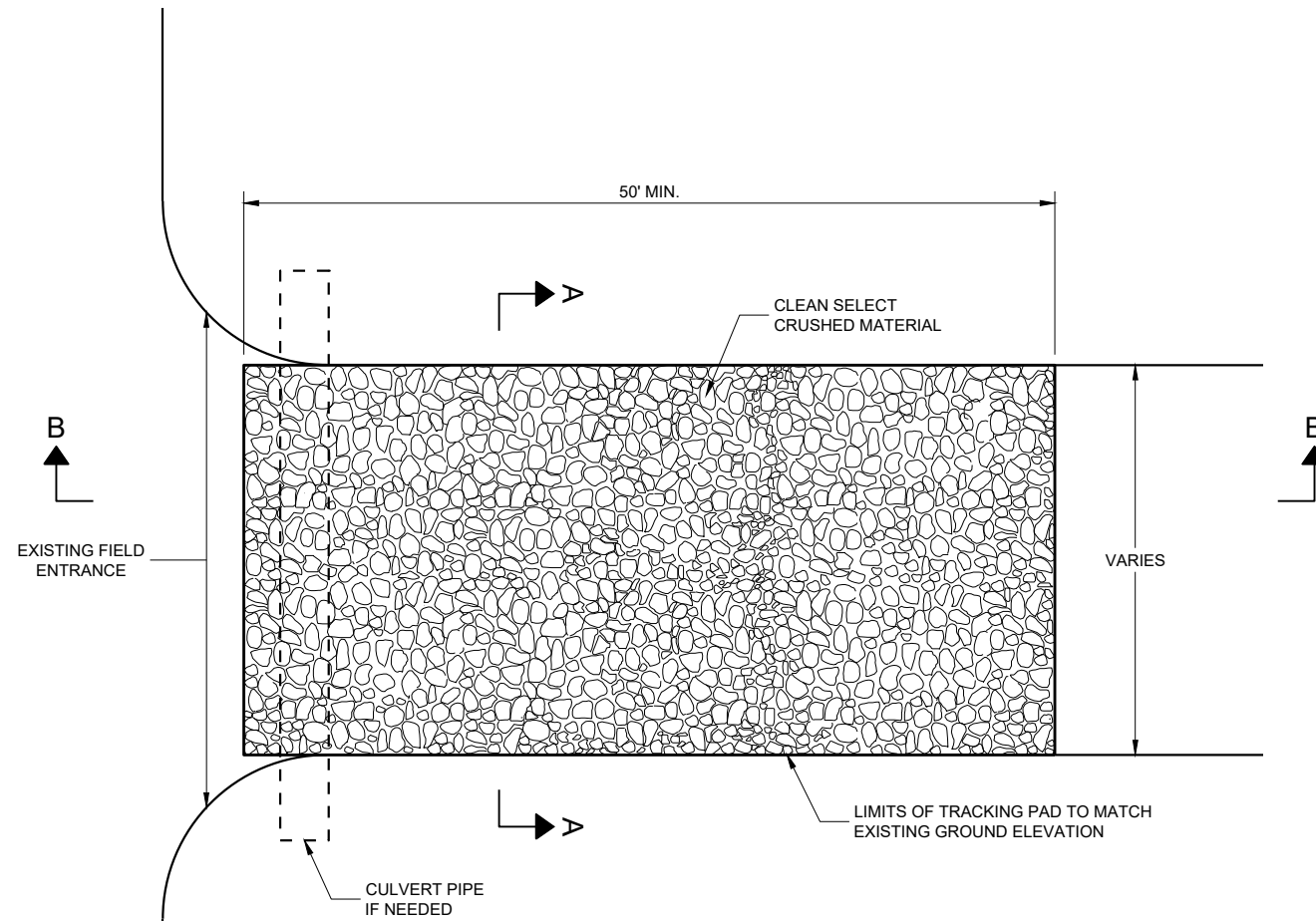
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**SECTION A - A**



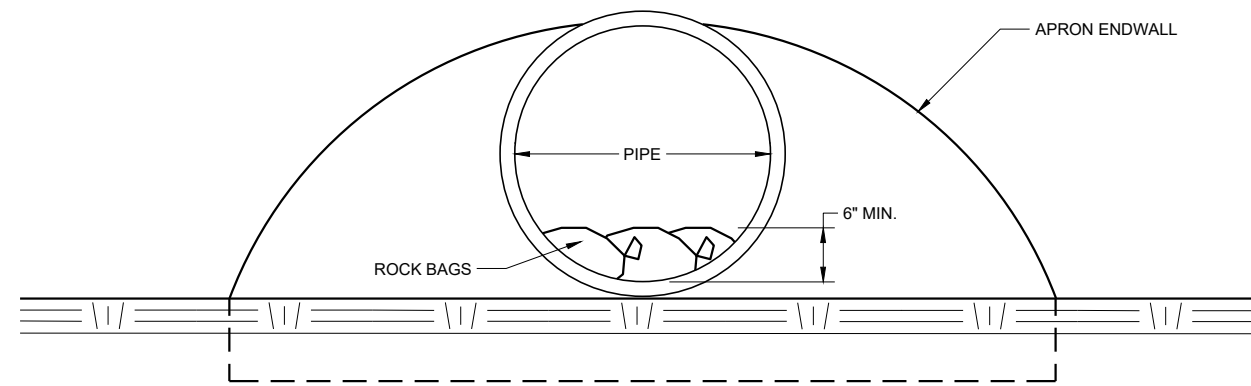
**SECTION B - B**

**TRACKING PAD**

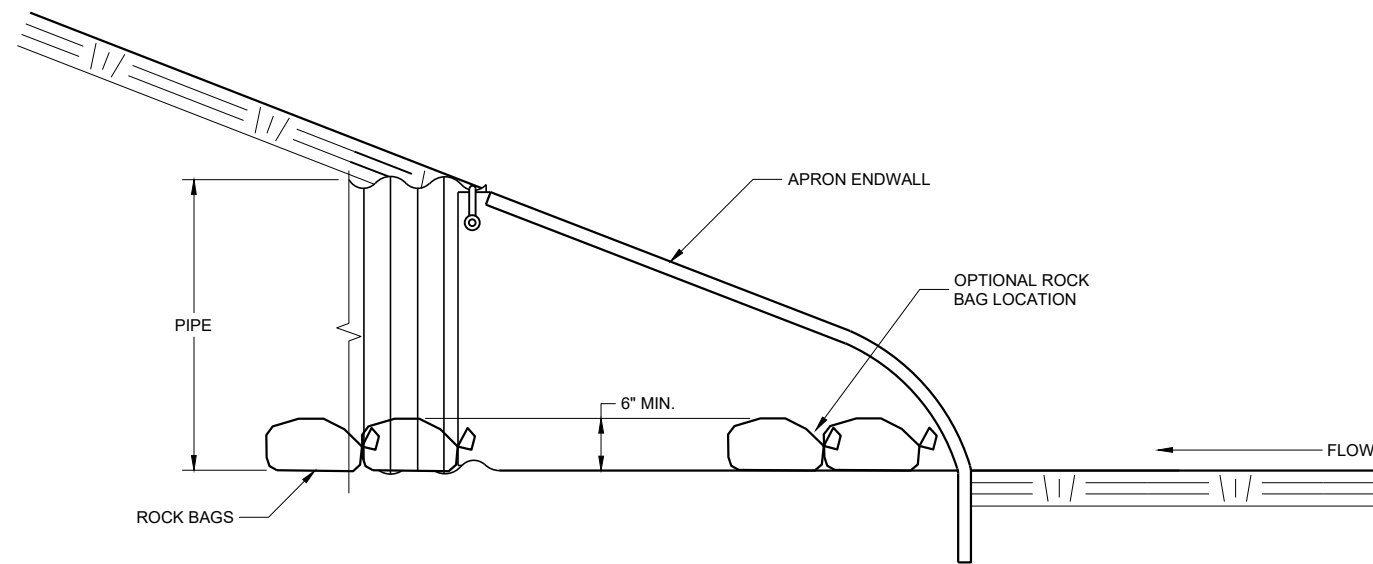
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011 DATE /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



**END VIEW**



**SIDE VIEW**

**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

6

6

SDD 08E15 - 01

SDD 08E15 - 01

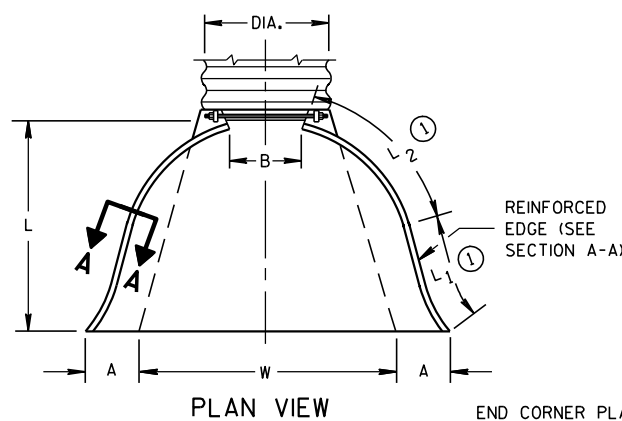
<b>CULVERT PIPE CHECK</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
<small>FHWA</small>	

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

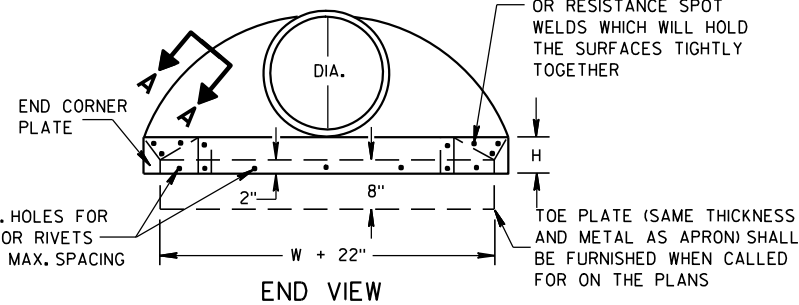
\* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	24-36	78	21	99	108	6	2 to 1	
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

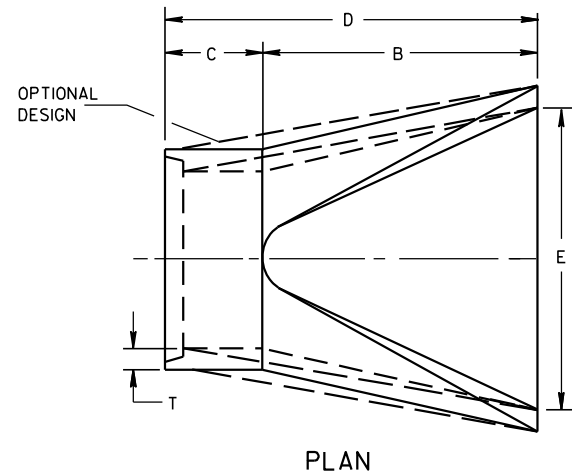
\* MINIMUM  
\*\* MAXIMUM



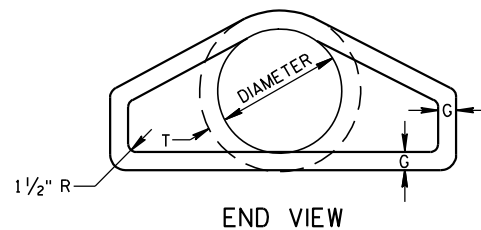
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



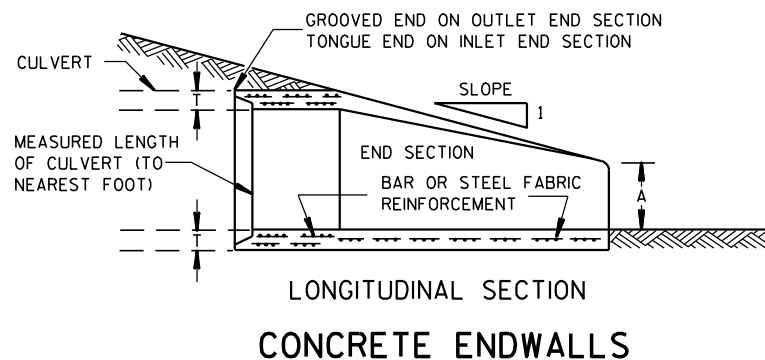
SIDE ELEVATION  
METAL ENDWALLS



PLAN

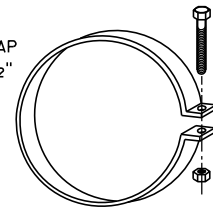


END VIEW

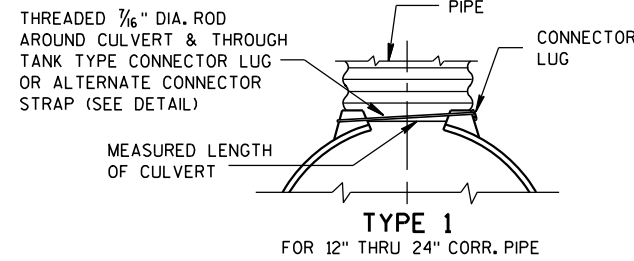


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

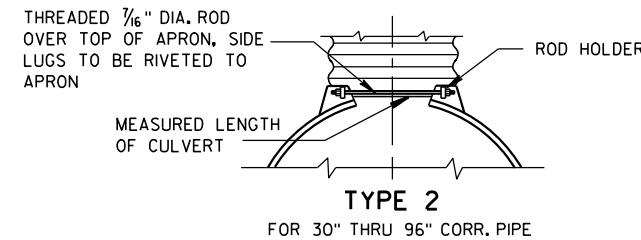
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



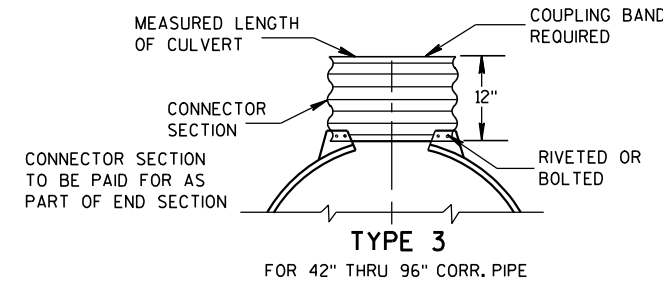
ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



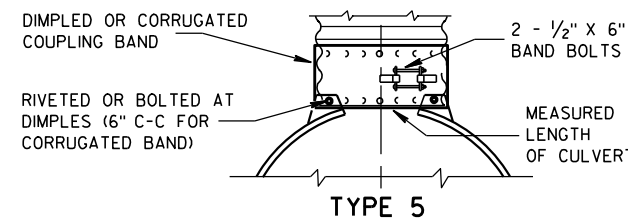
TYPE 1  
FOR 12" THRU 24" CORR. PIPE



TYPE 2  
FOR 30" THRU 96" CORR. PIPE



TYPE 3  
FOR 42" THRU 96" CORR. PIPE



ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

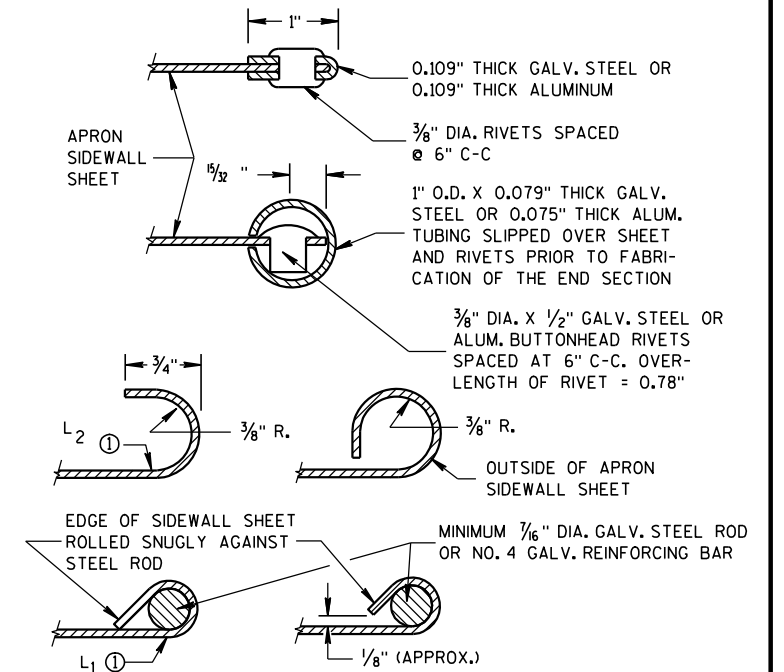
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

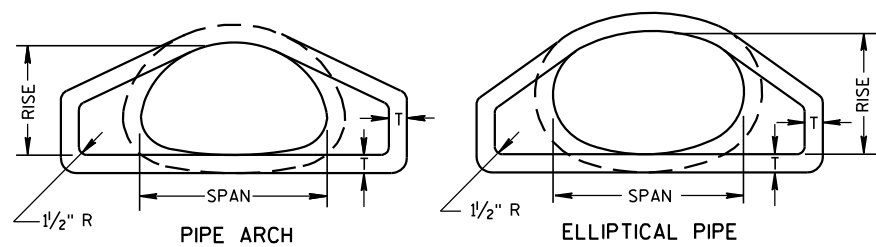
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

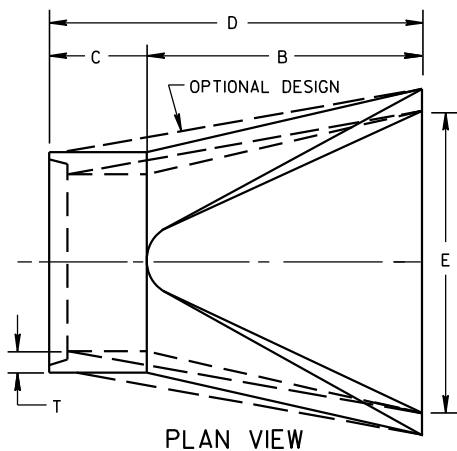
APRON ENDWALLS FOR  
CULVERT PIPE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

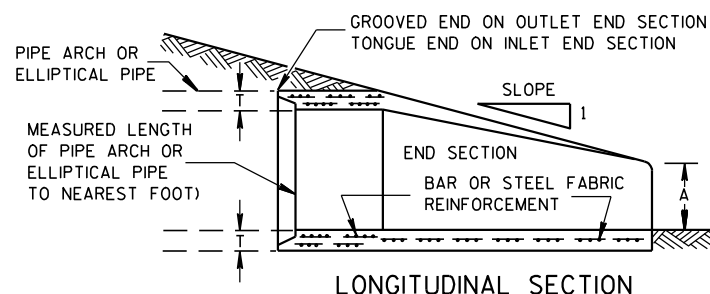
APPROVED  
11/30/94 DATE /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA



END VIEW

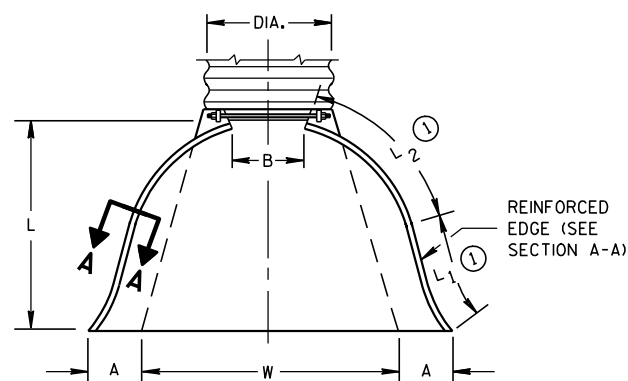


PLAN VIEW



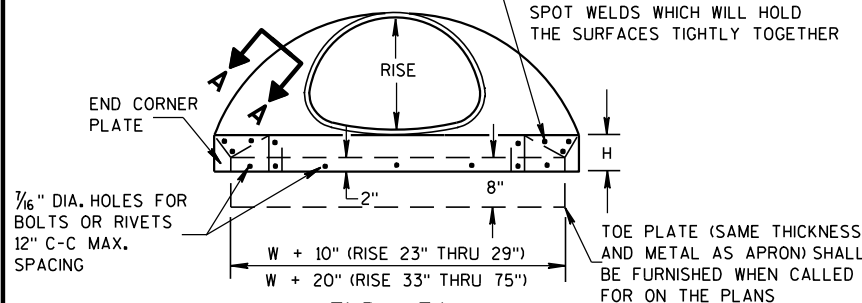
LONGITUDINAL SECTION

CONCRETE ENDWALLS

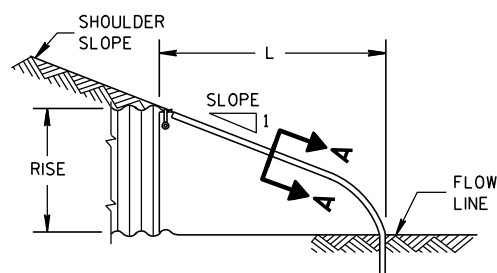


PLAN VIEW

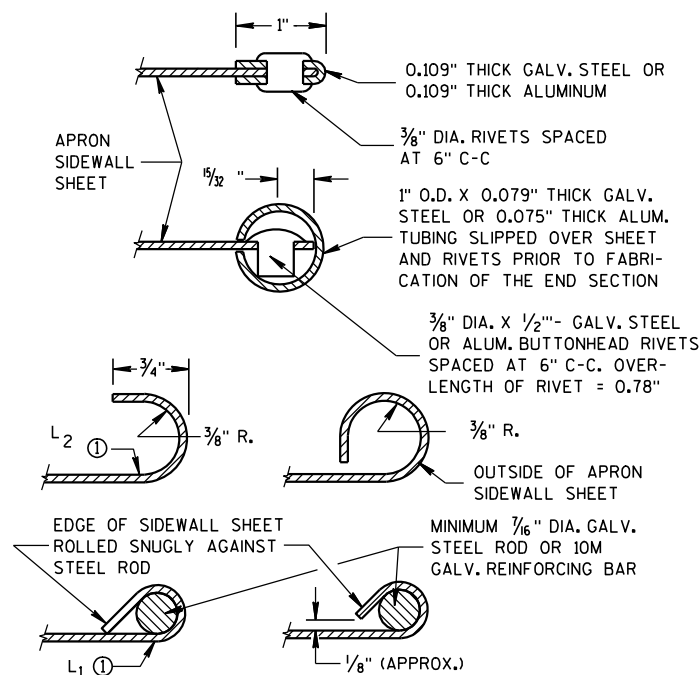
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW



SIDE ELEVATION  
METAL ENDWALLS



SECTION A-A

**2- 2 2/3" X 1/2" CORRUGATIONS**

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⊙)	L2 (⊙)	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

**3" X 1" CORRUGATIONS**

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⊙)	L2 (⊙)	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. \* EXCEPT CENTER PANEL SEE GENERAL NOTES

**REINFORCED CONCRETE PIPE ARCH**

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 1/8	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

**REINFORCED CONCRETE ELLIPTICAL PIPE**

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

\*\*NOMINAL SIZE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

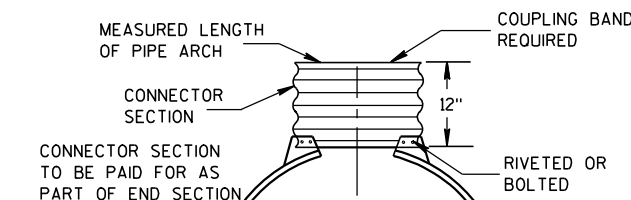
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

Ⓛ FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



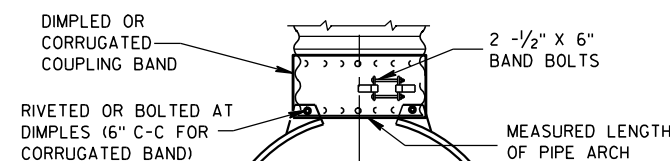
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:  
ALL SIZES CORRUGATED PIPE ARCHES

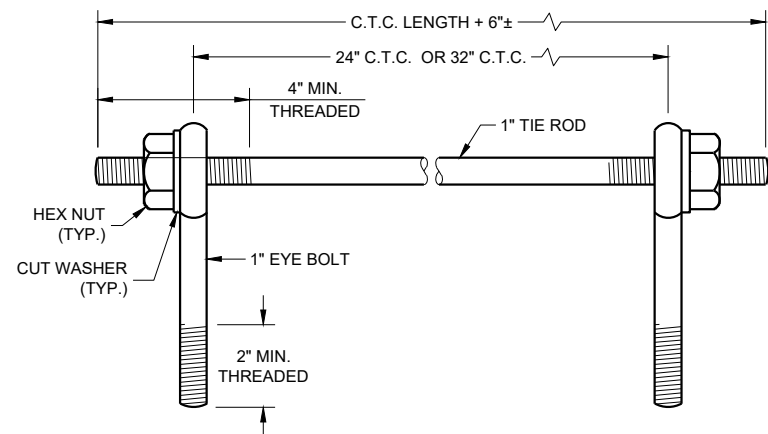
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

**APRON ENDWALLS FOR  
PIPE ARCH AND  
ELLIPTICAL PIPE**

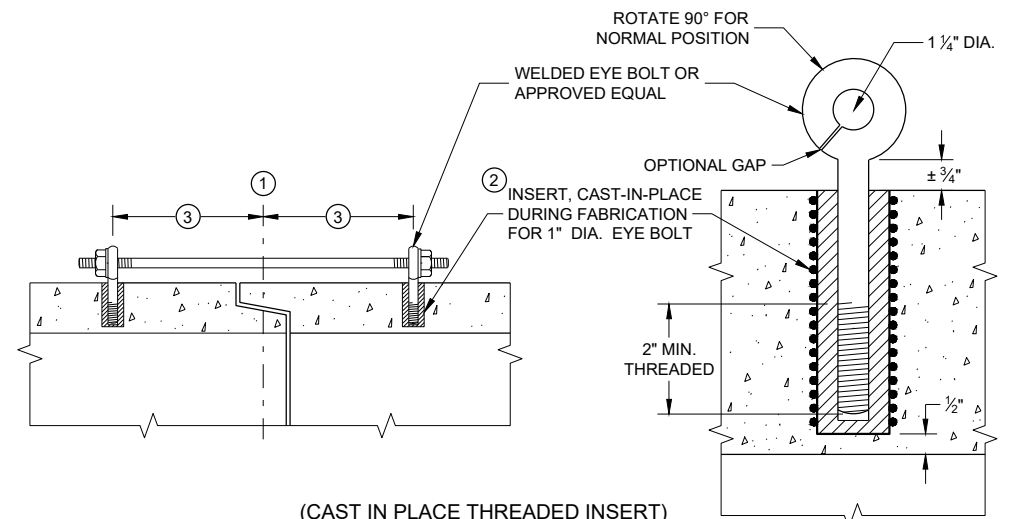
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/30/94 /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA



**EYE BOLTS AND TIE ROD**

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)**



**LONGITUDINAL SECTIONS**

**GENERAL NOTES**

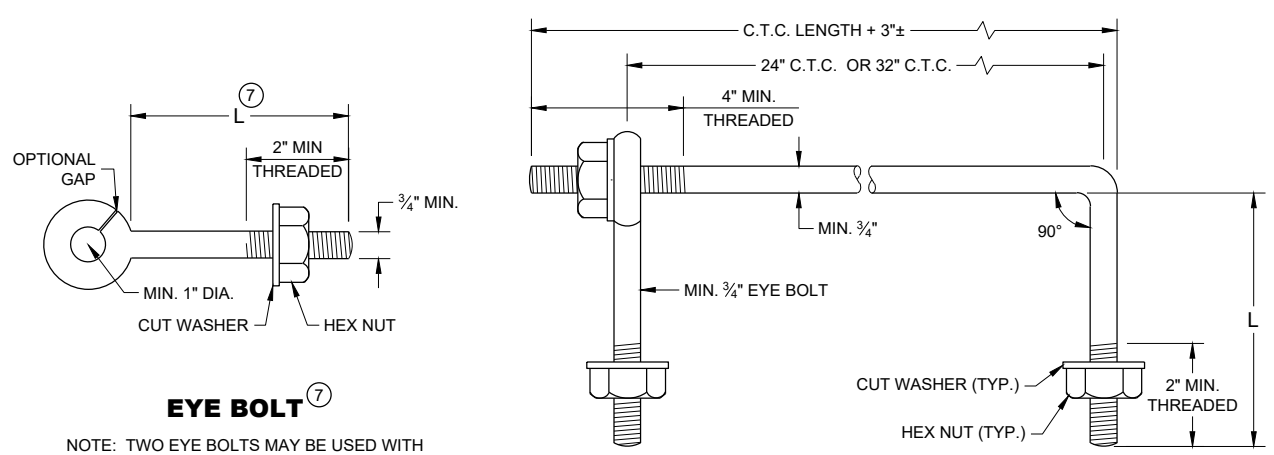
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

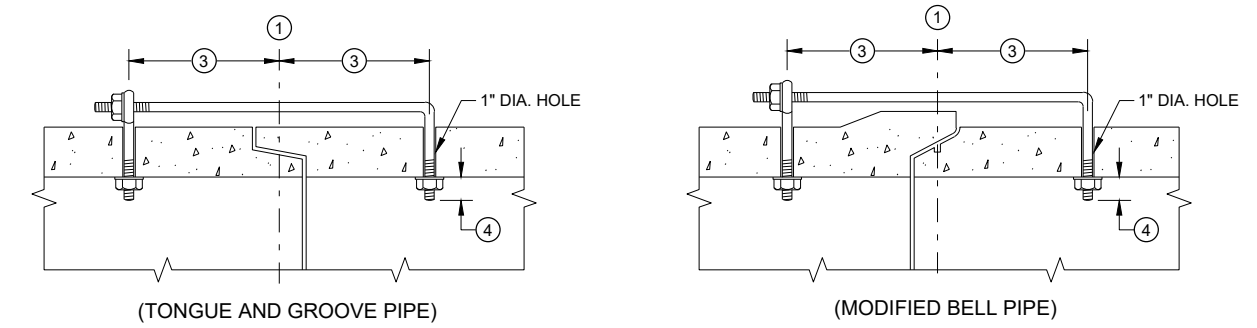
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



**EYE BOLT AND TIE ROD**

**EYE BOLT ⑦**

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



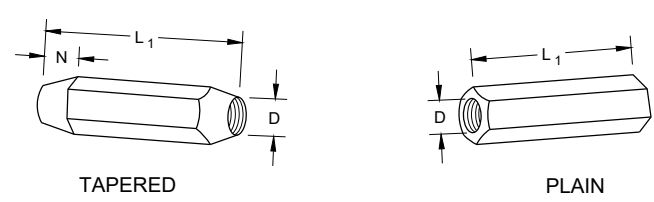
**LONGITUDINAL SECTION**  
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)**

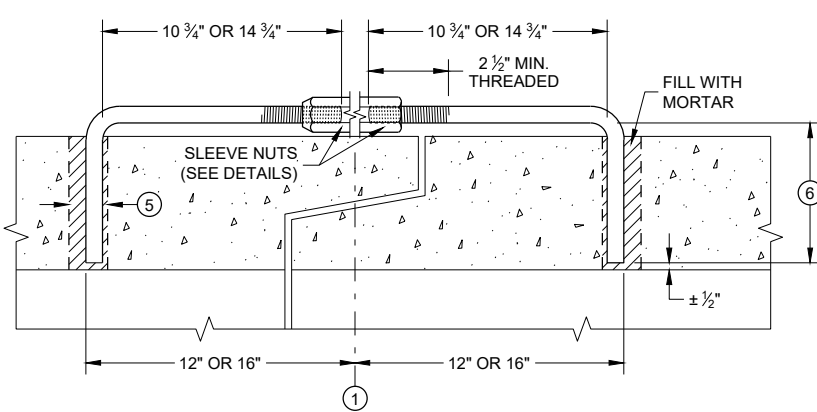
**ADJUSTABLE TIE ROD TABLE**

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES

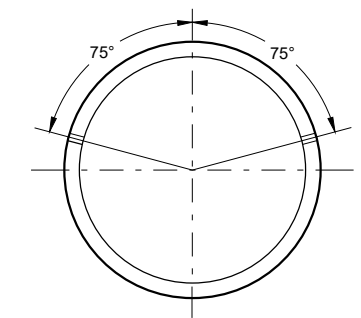


**RIGHT AND LEFT THREADS SLEEVE NUTS**



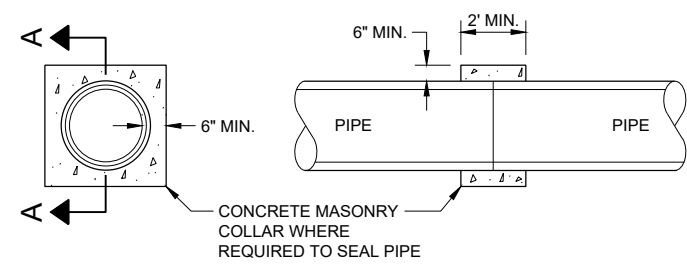
**LONGITUDINAL SECTION**

**ADJUSTABLE TIE ROD (ALTERNATE NO. 3)**



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

**TRANSVERSE SECTION**

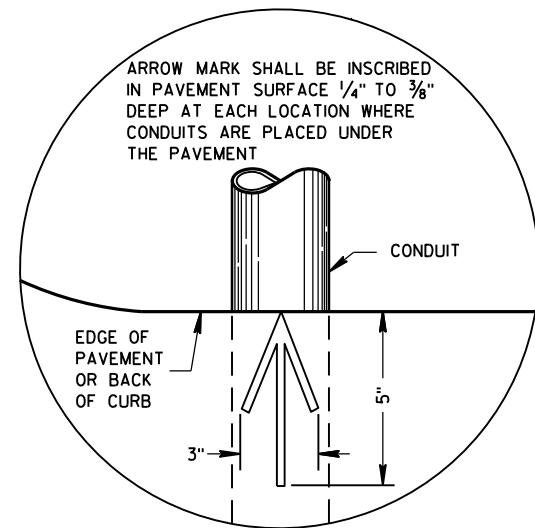


**SECTION A - A**  
**CONCRETE COLLAR DETAIL**

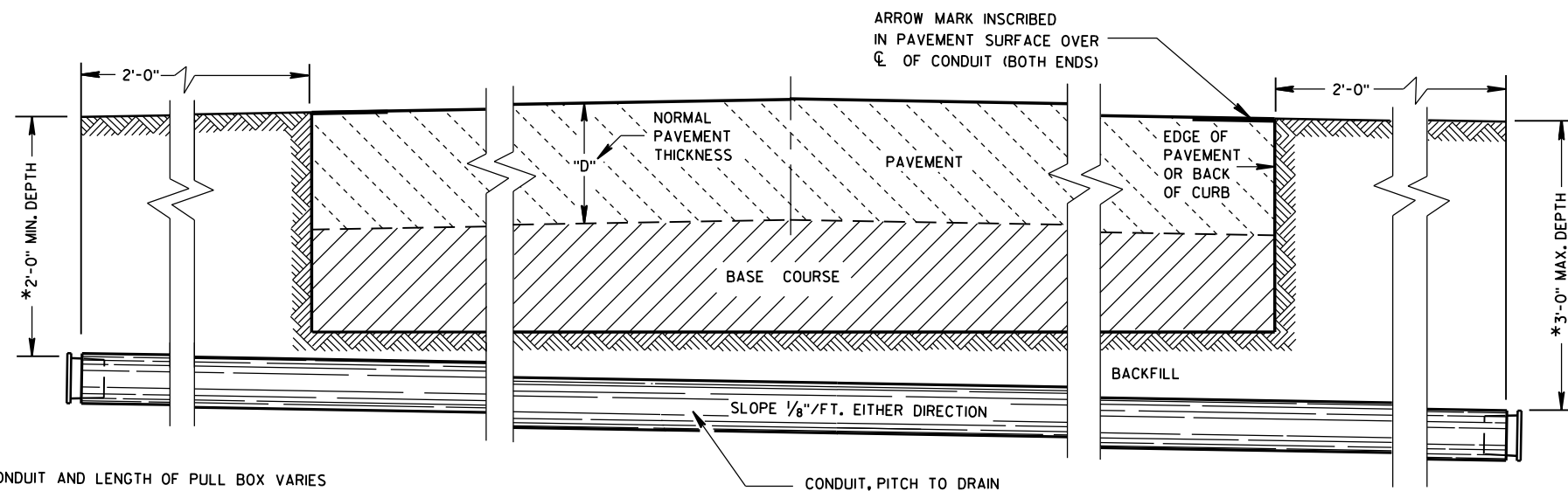
**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



**PLAN VIEW  
ARROW MARK**



**SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

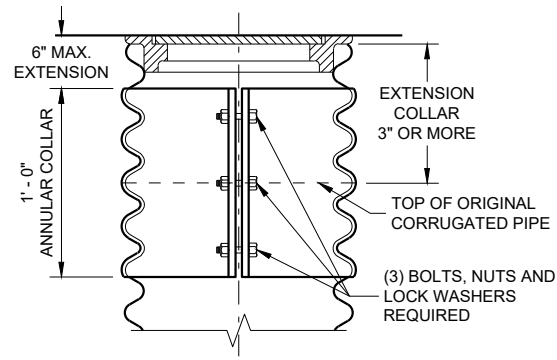
6

6

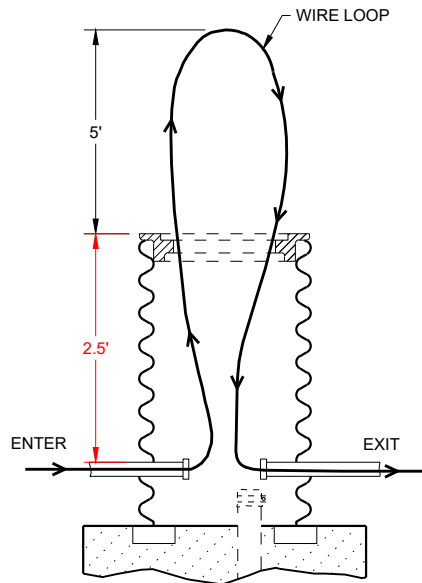
S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

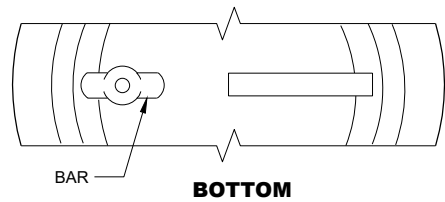
<b>CONDUIT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



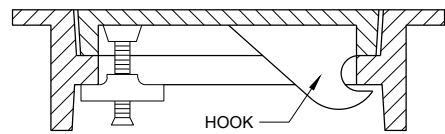
**CORRUGATED PIPE EXTENDER**



**MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX**



**BOTTOM**



**SECTION**

**ALTERNATE COVER (LOCKING)  
TIGHTENING BAR TYPE**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

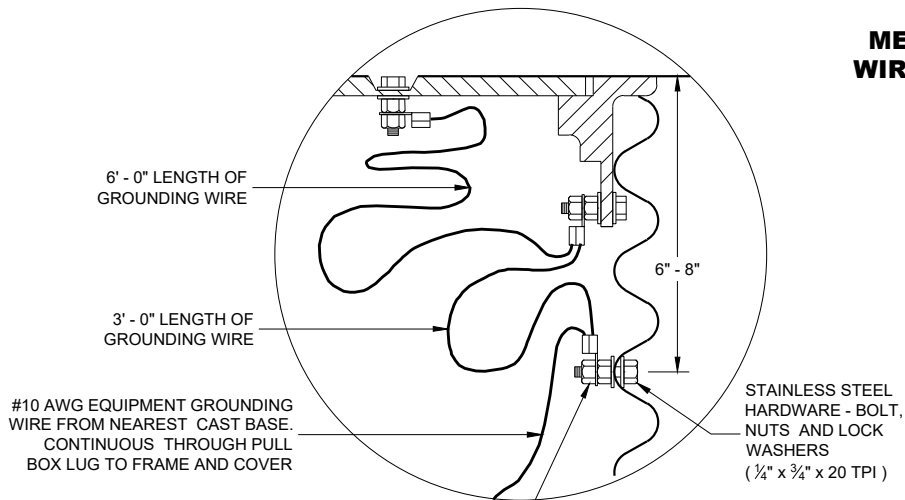
WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

**TABLE OF NOMINAL DIMENSIONS AND WEIGHTS**

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH**	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
		<b>WEIGHT IN POUNDS*</b>								
FRAME AND COVER		60	60	60	110	110	110	155	155	155

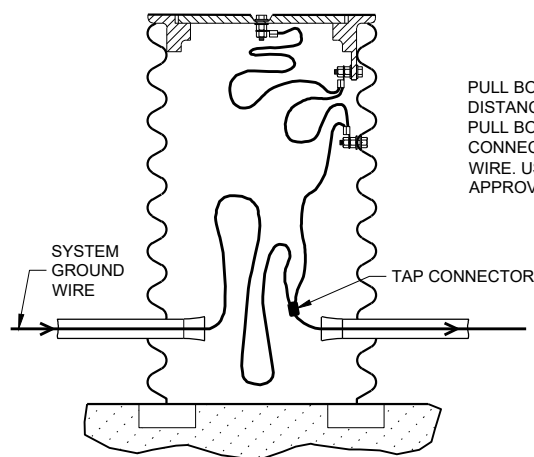
\* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

\*\* NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**

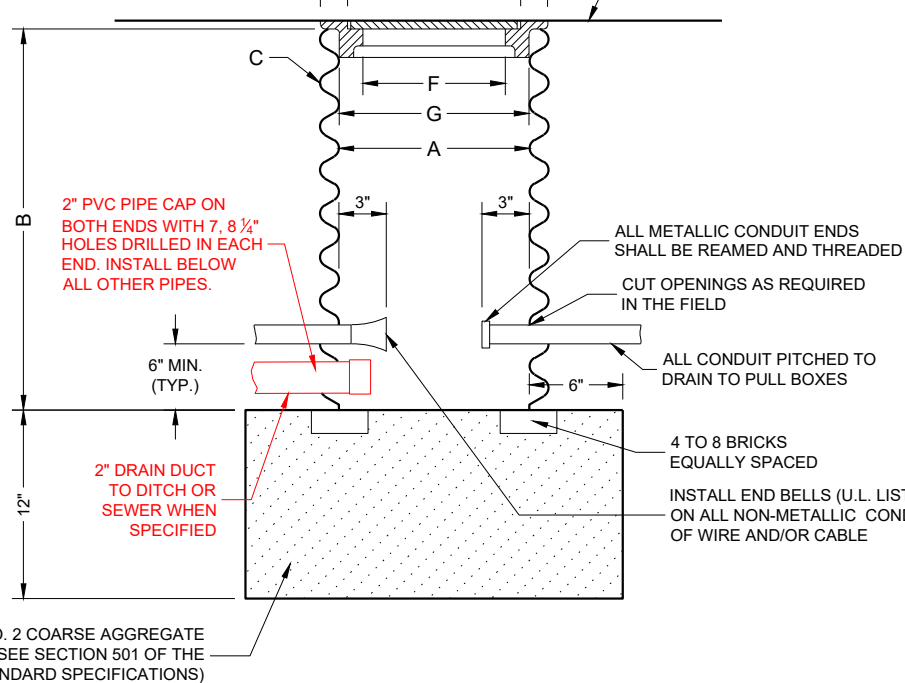
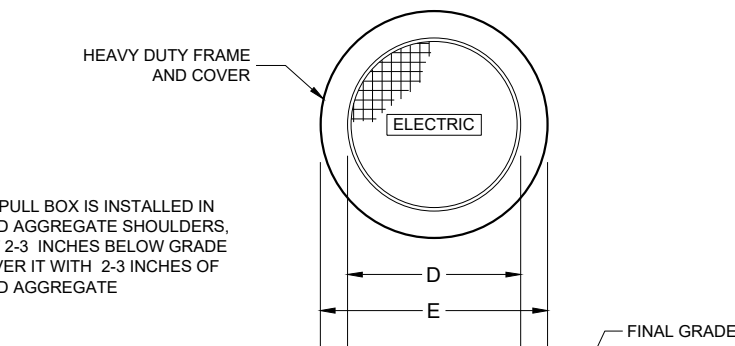
NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**

PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE



**PULL BOX**

**PULL BOX**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Ahmet Demirbilek  
STATE ELECTRICAL ENGINEER

FHWA

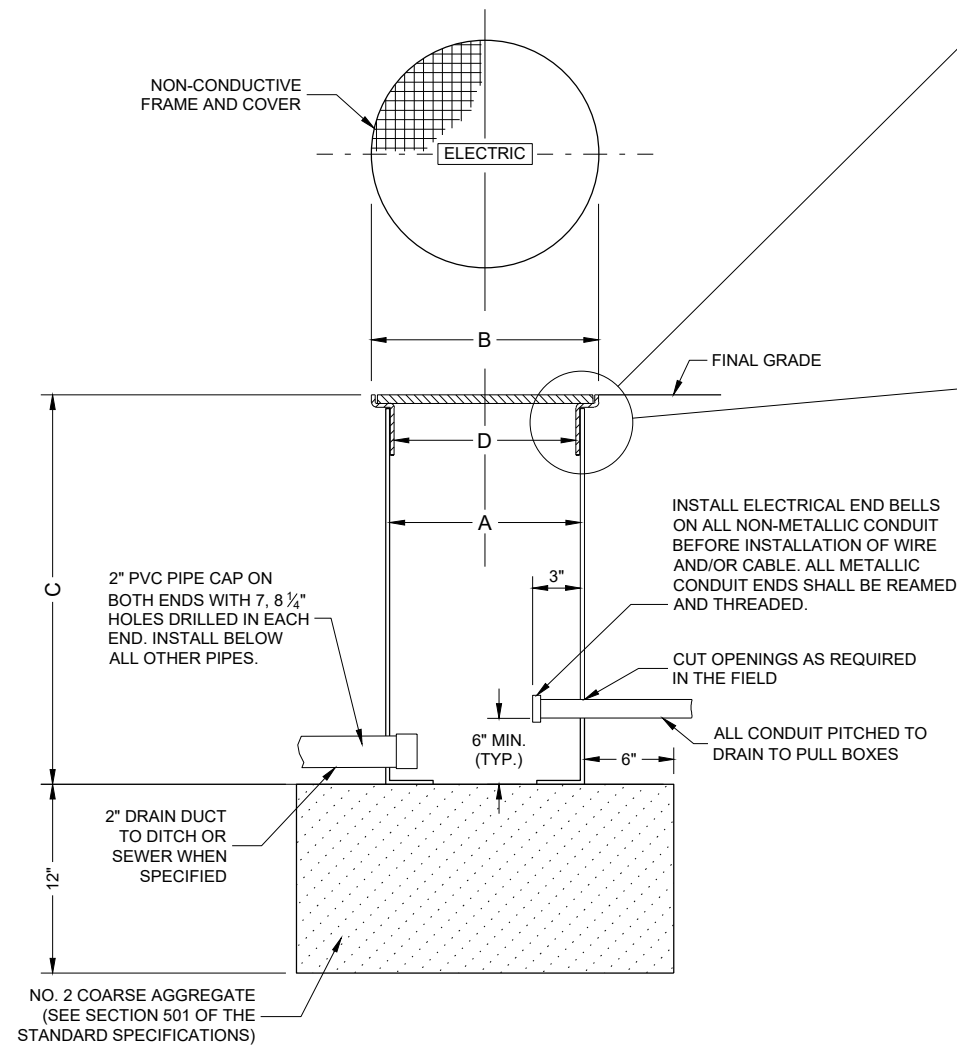


TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

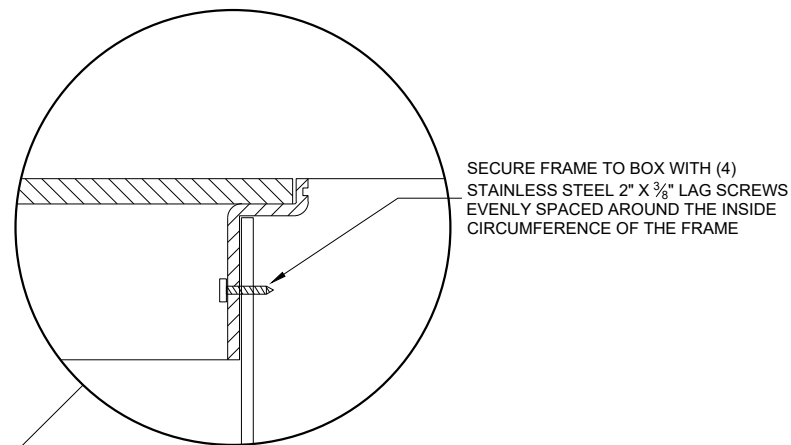
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

\* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

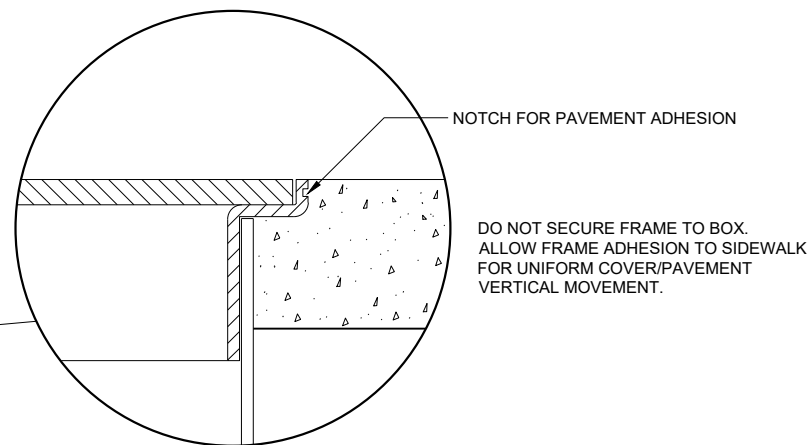
\*\* DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



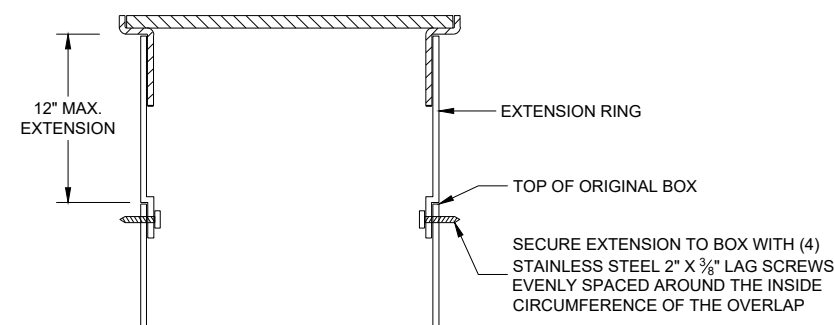
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

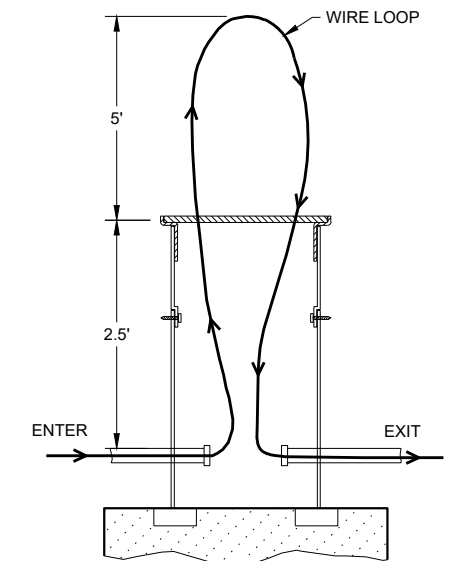
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

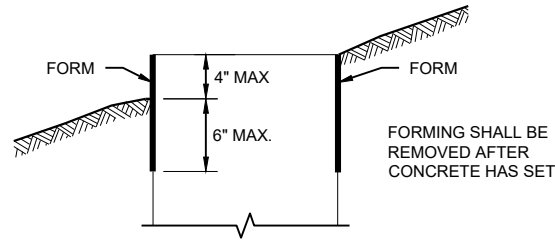
PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2022 /S/ Ahmet Demirelek DATE STATE ELECTRICAL ENGINEER

FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

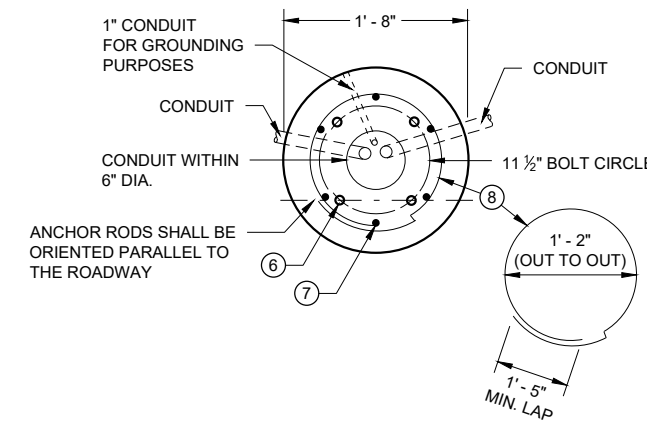
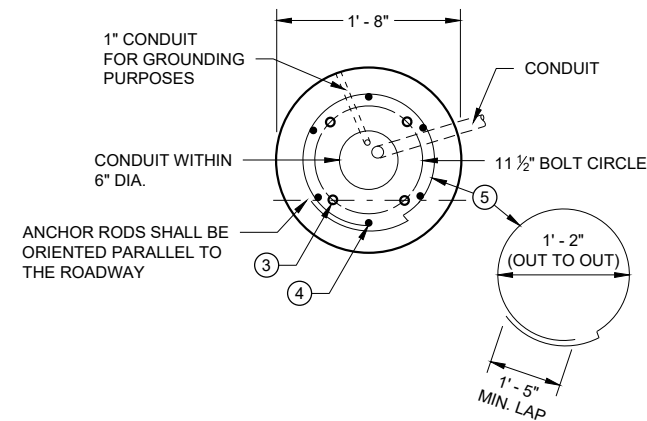
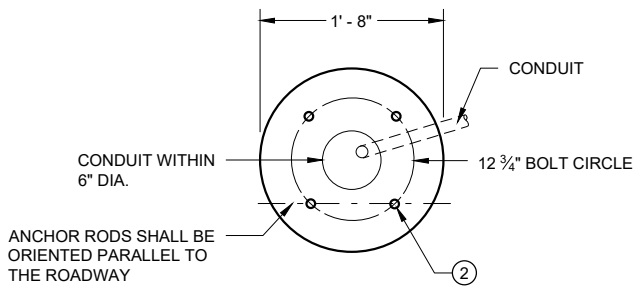
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

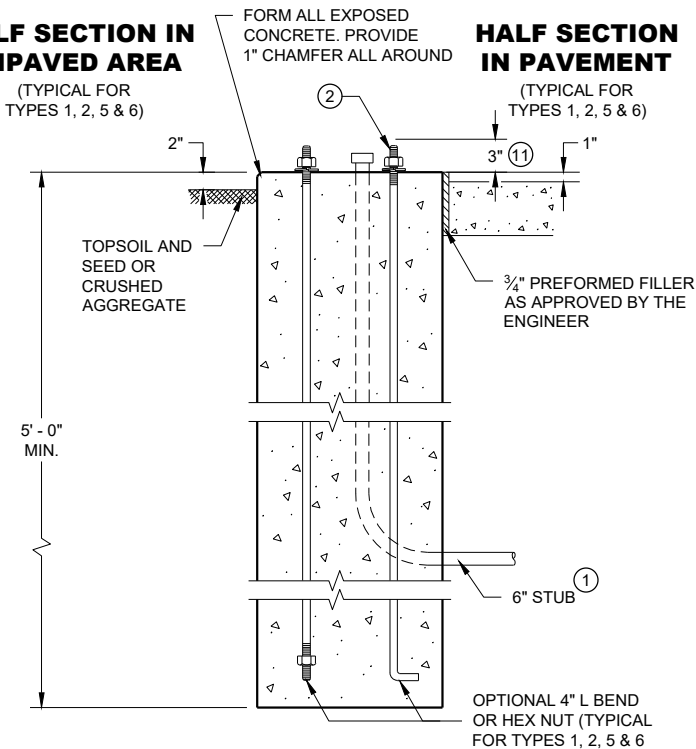
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

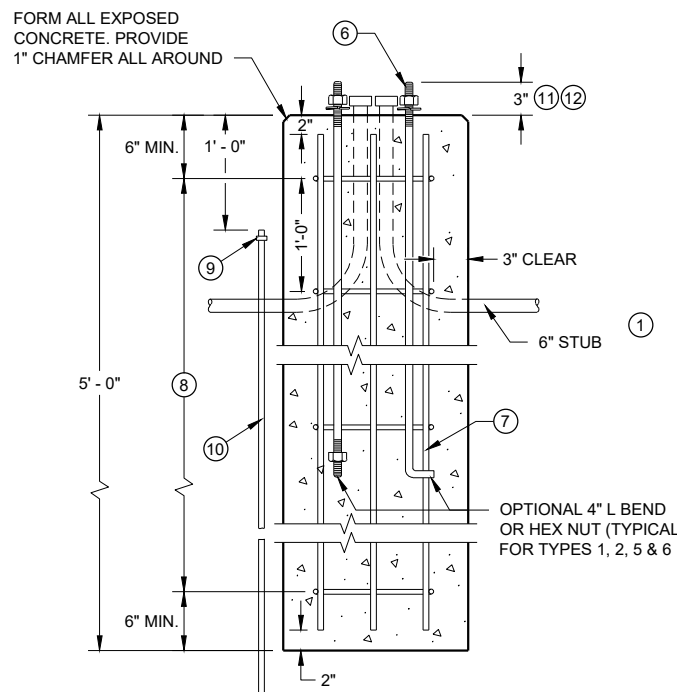
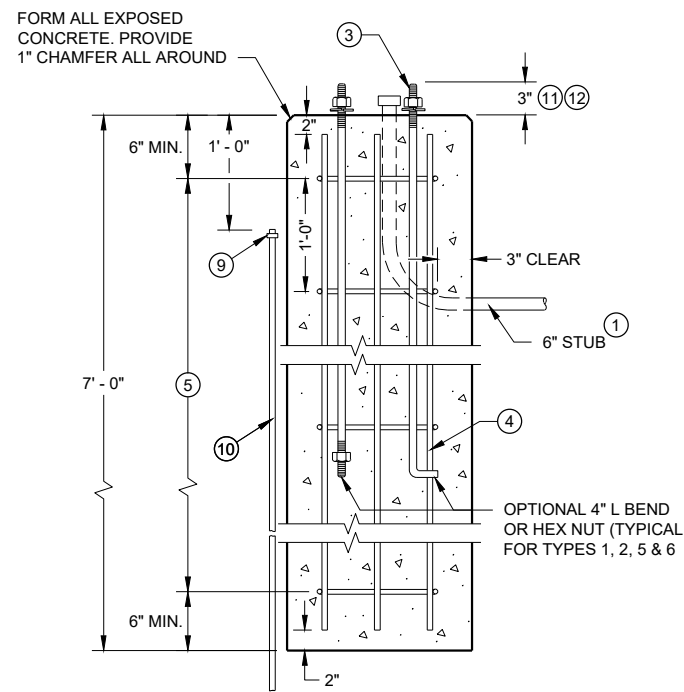
- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.



**HALF SECTION IN UNPAVED AREA**



**HALF SECTION IN PAVEMENT**



**CONCRETE BASES**

**CONCRETE BASES  
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

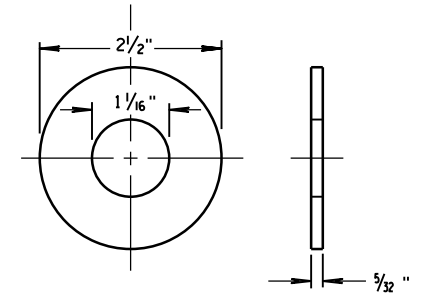
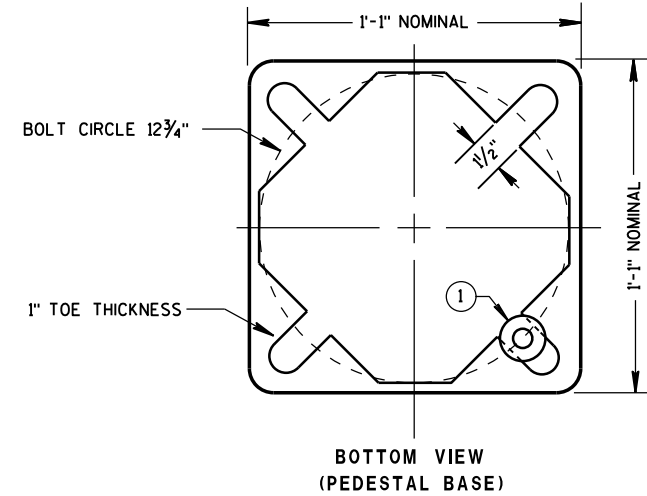
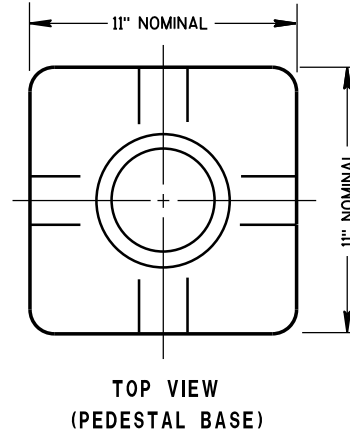
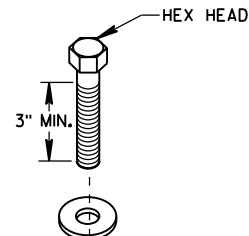
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

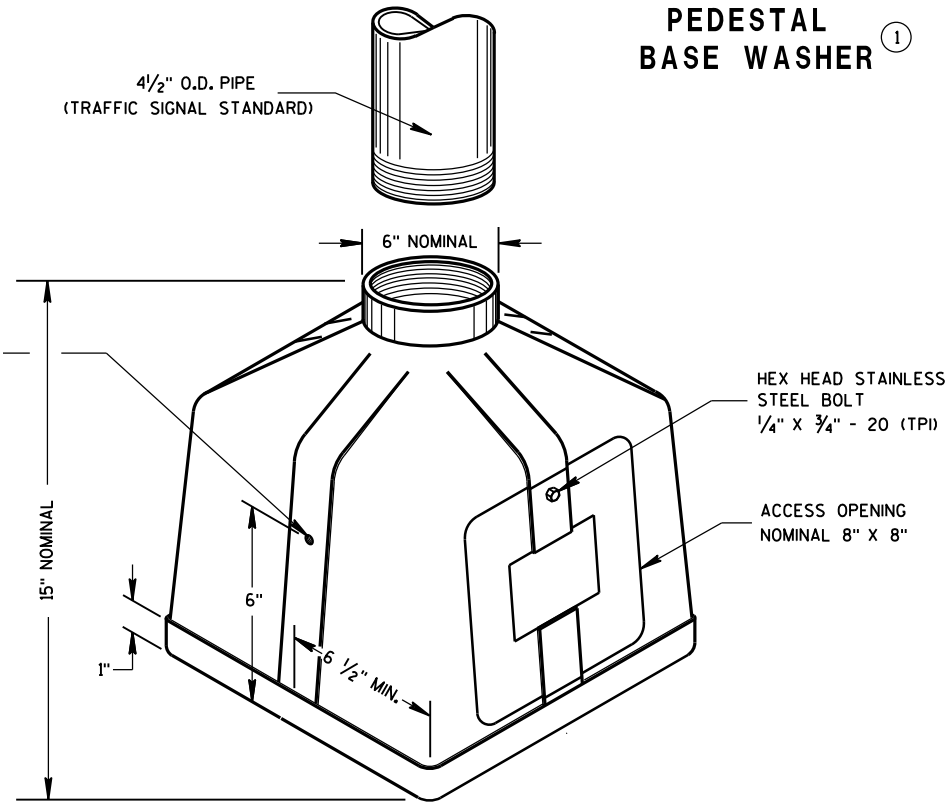
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

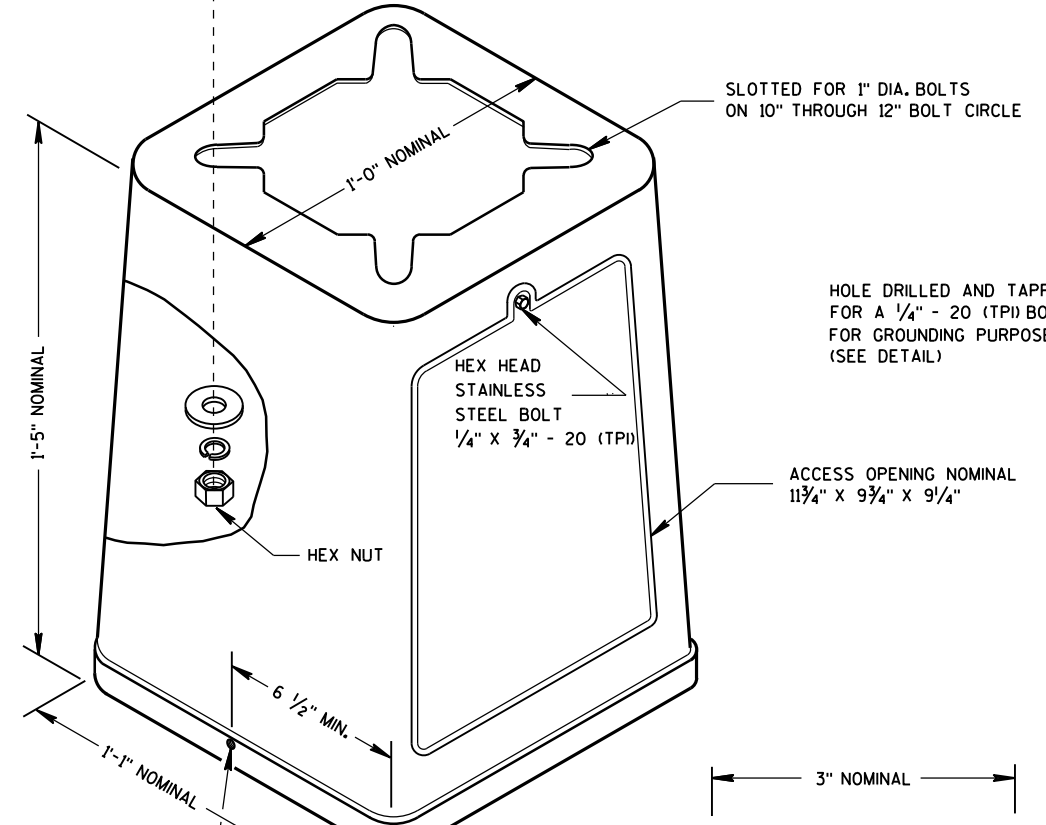
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



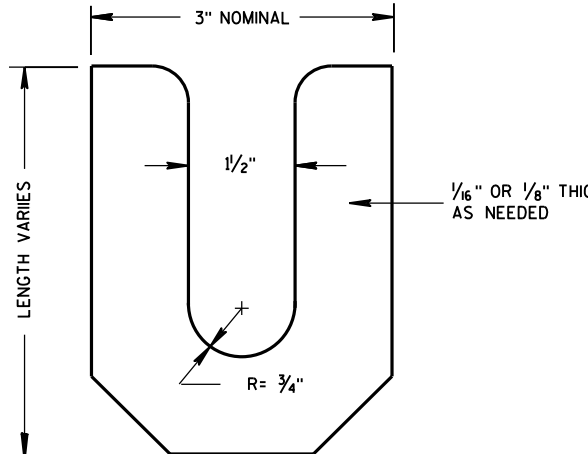
ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR  
**PEDESTAL BASE WASHER** ①



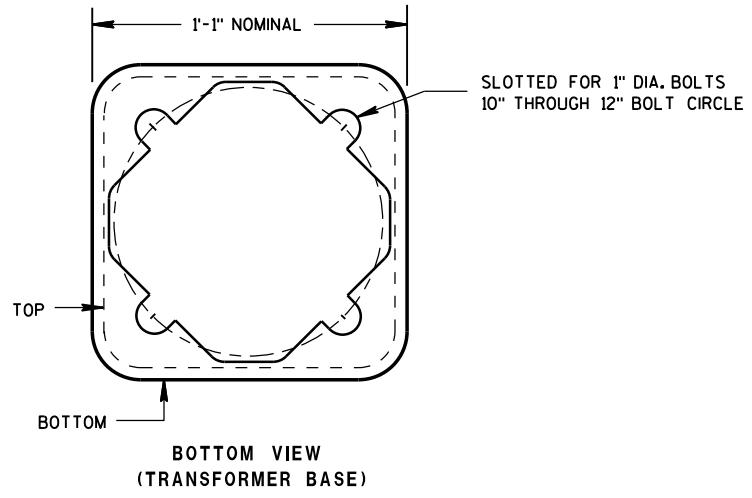
**ISOMETRIC VIEW PEDESTAL BASE**



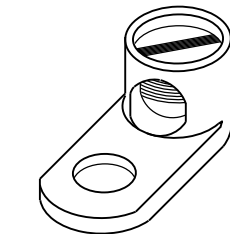
**ISOMETRIC VIEW**



**LEVELING SHIM**



**BOTTOM VIEW (TRANSFORMER BASE)**



**TYPICAL MECHANICAL CONNECTOR LUG**  
TO BE FURNISHED WITH EACH BASE

**TRANSFORMER BASE**  
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

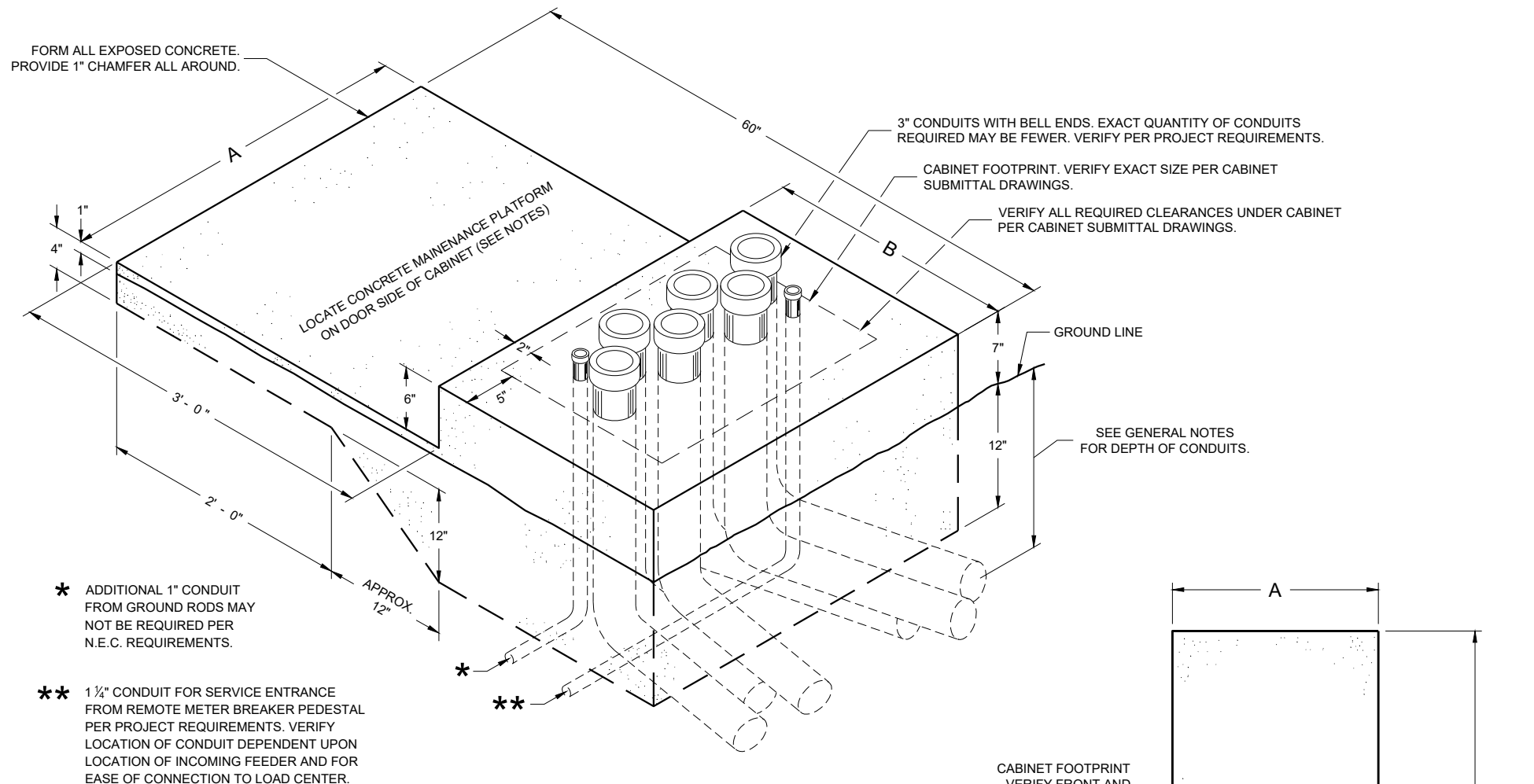
<b>TRANSFORMER/PEDESTAL BASES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4



**ISOMETRIC VIEW  
CONCRETE CONTROL CABINET BASE, TYPE L**  
(C.Y. CONCRETE = APPROX. 0.4)

FORM ALL EXPOSED CONCRETE.  
PROVIDE 1" CHAMFER ALL AROUND.

LOCATE CONCRETE MAINTENANCE PLATFORM  
ON DOOR SIDE OF CABINET (SEE NOTES)

3" CONDUITS WITH BELL ENDS. EXACT QUANTITY OF CONDUITS  
REQUIRED MAY BE FEWER. VERIFY PER PROJECT REQUIREMENTS.

CABINET FOOTPRINT. VERIFY EXACT SIZE PER CABINET  
SUBMITTAL DRAWINGS.

VERIFY ALL REQUIRED CLEARANCES UNDER CABINET  
PER CABINET SUBMITTAL DRAWINGS.

GROUND LINE

SEE GENERAL NOTES  
FOR DEPTH OF CONDUITS.

\* ADDITIONAL 1" CONDUIT  
FROM GROUND RODS MAY  
NOT BE REQUIRED PER  
N.E.C. REQUIREMENTS.

\*\* 1 1/2" CONDUIT FOR SERVICE ENTRANCE  
FROM REMOTE METER BREAKER PEDESTAL  
PER PROJECT REQUIREMENTS. VERIFY  
LOCATION OF CONDUIT DEPENDENT UPON  
LOCATION OF INCOMING FEEDER AND FOR  
EASE OF CONNECTION TO LOAD CENTER.

CABINET FOOTPRINT  
VERIFY FRONT AND  
BACK CLEARANCE  
REQUIREMENTS

CONDUIT FROM  
GROUND RODS

FEEDER CONDUIT

CABINET BASE

3" CONDUIT

3" CONDUIT

24" PULL BOX

24" PULL BOX  
INSTALL NUMBER OF CONDUITS  
REQUIRED BY PLAN.

**PLAN VIEW  
CONCRETE CONTROL CABINET BASE, TYPE L**

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

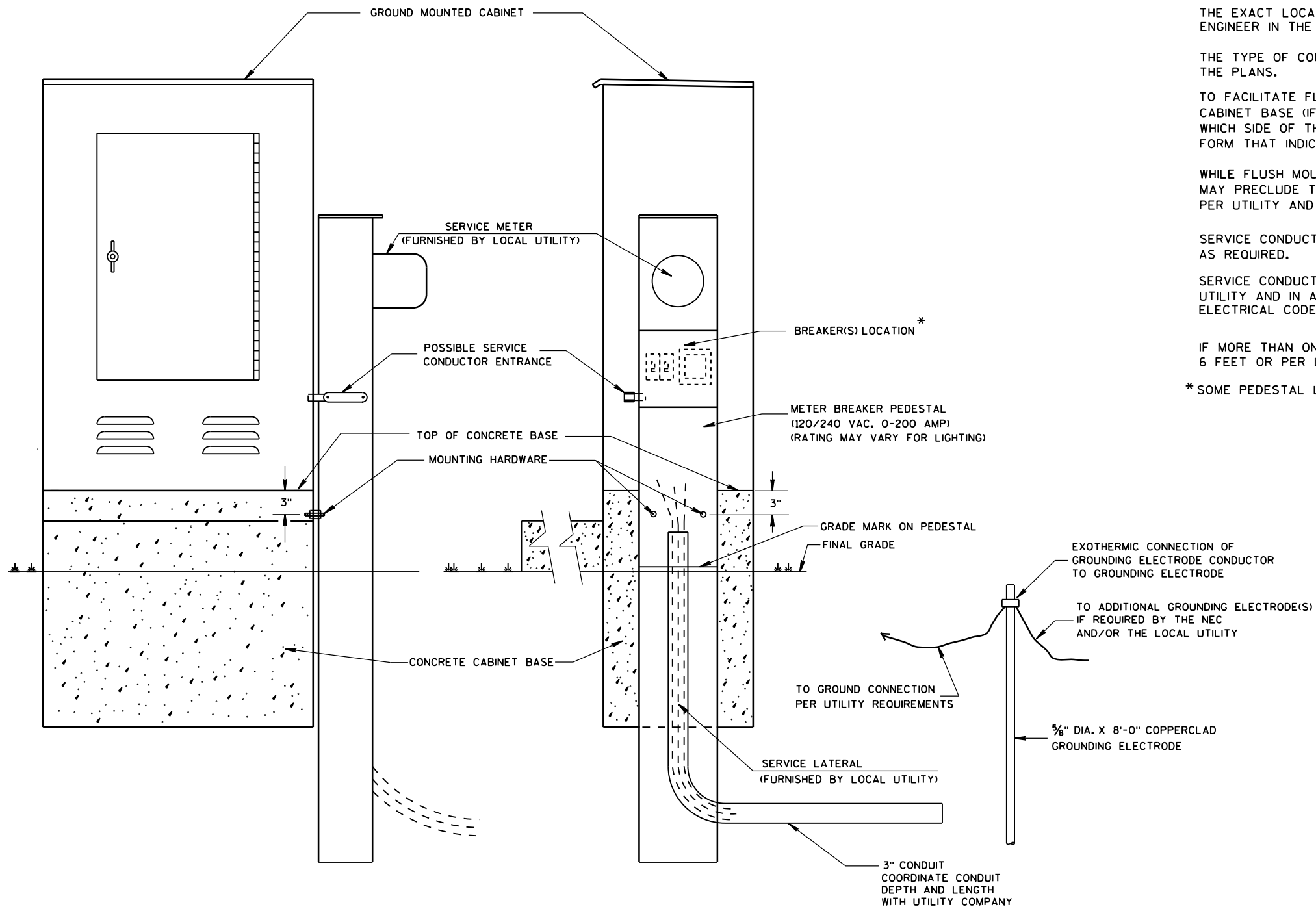
CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

**CONCRETE CONTROL  
CABINET BASE, TYPE L**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

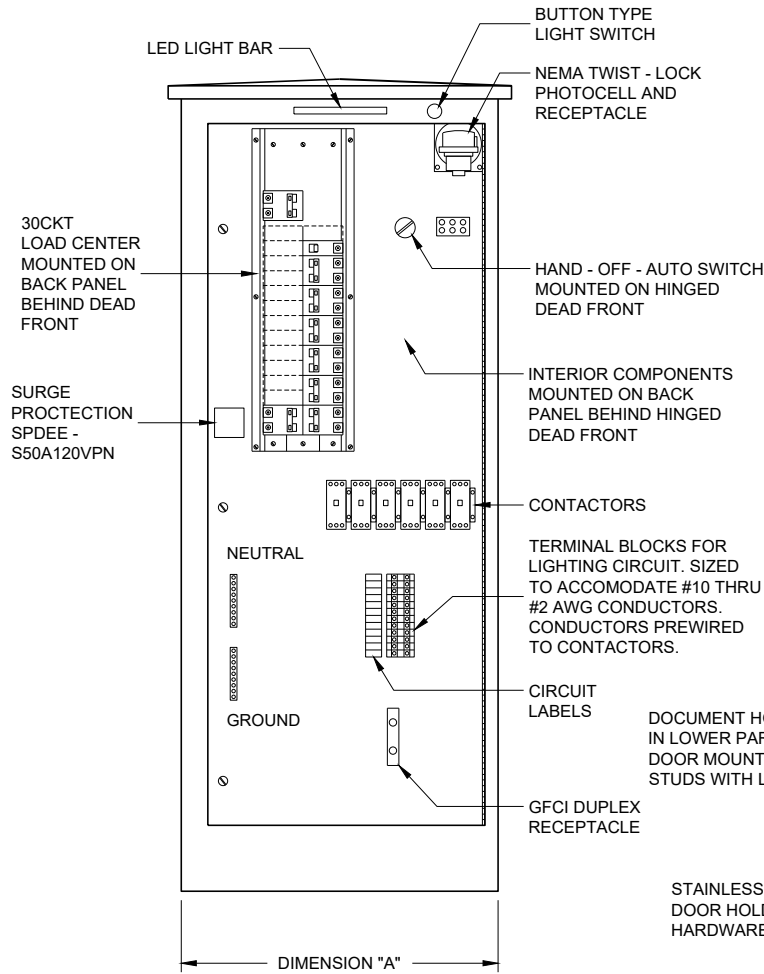
SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

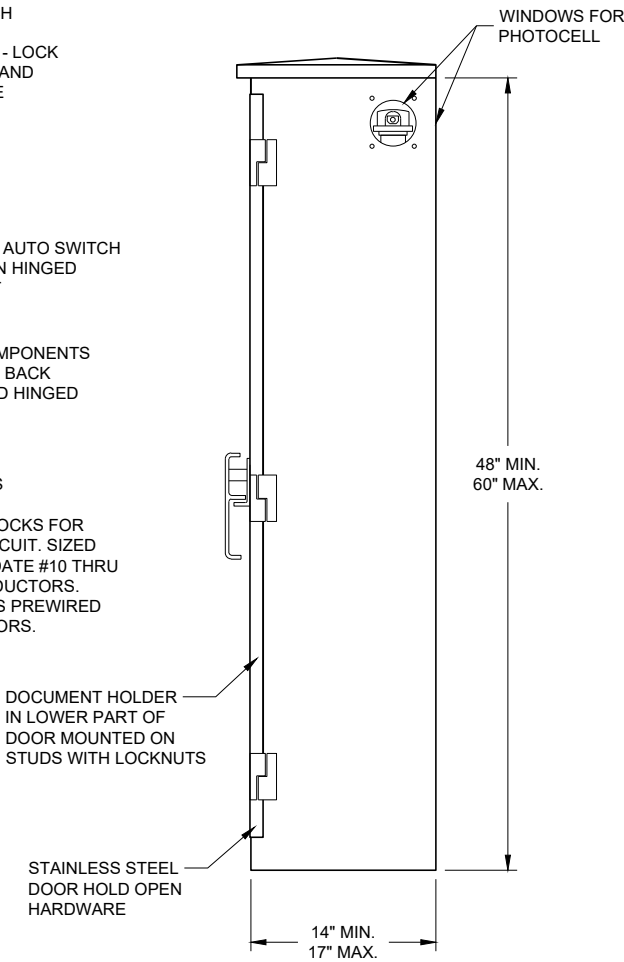
\* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER

**FRONT INTERIOR ELEVATION**



**SIDE VIEW**

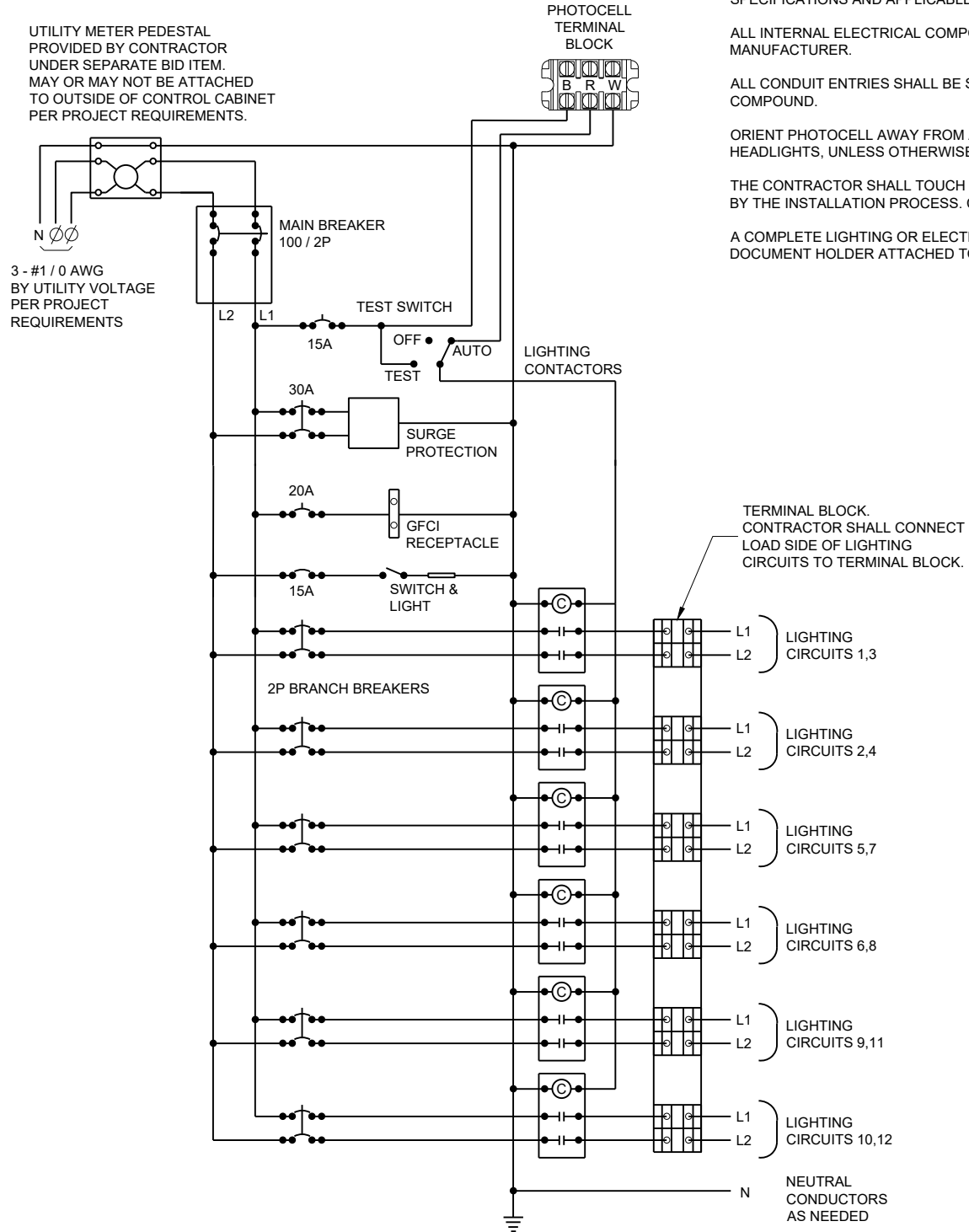


**TABLE OF DIMENSIONS (INCHES)**

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

**LIGHTING CONTROL CABINET**

UTILITY METER PEDESTAL PROVIDED BY CONTRACTOR UNDER SEPARATE BID ITEM. MAY OR MAY NOT BE ATTACHED TO OUTSIDE OF CONTROL CABINET PER PROJECT REQUIREMENTS.



**CONTROL CABINET SCHEMATIC**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINET MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

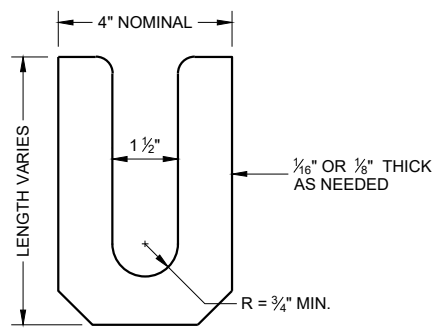
THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

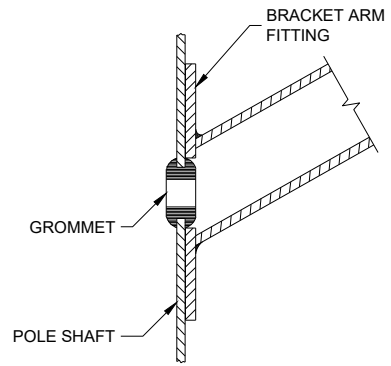
**LIGHTING CONTROL CABINET  
120 / 240 VOLT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

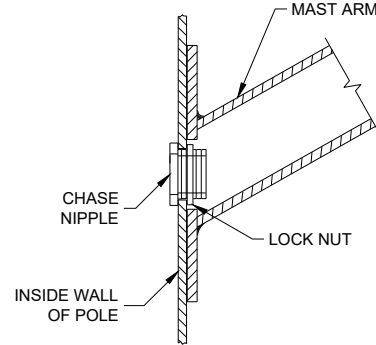
APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER



**LEVELING SHIM**  
SHALL BE ALUMINUM



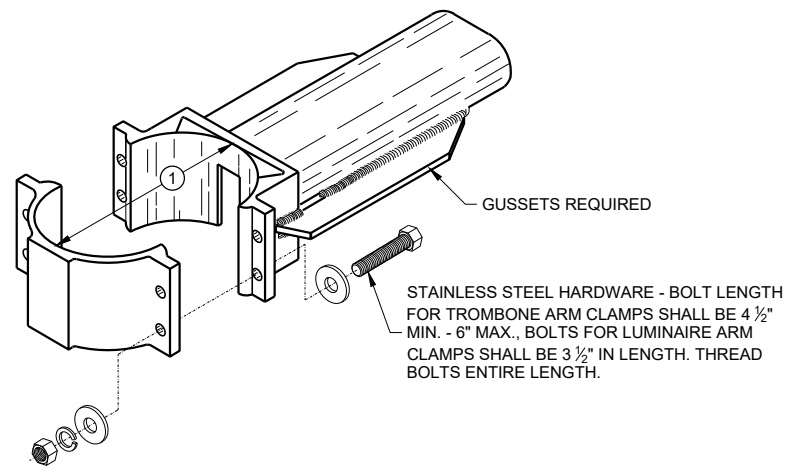
**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



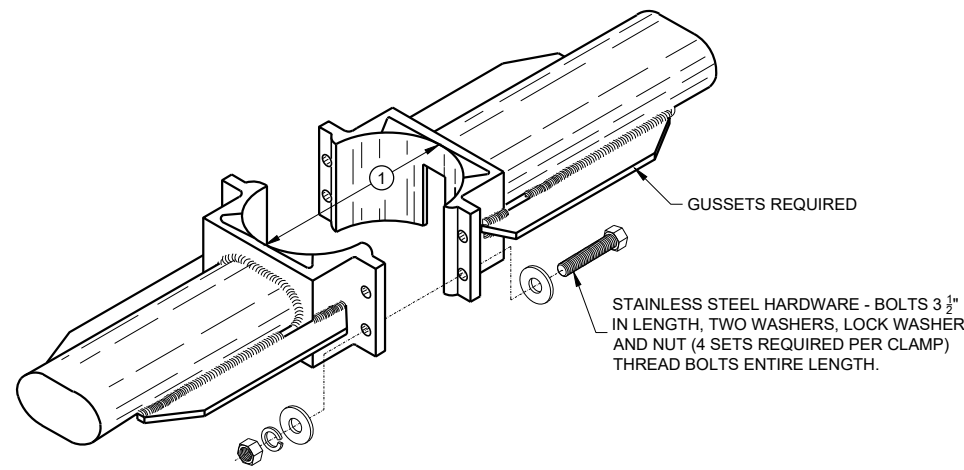
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

**GENERAL NOTES**

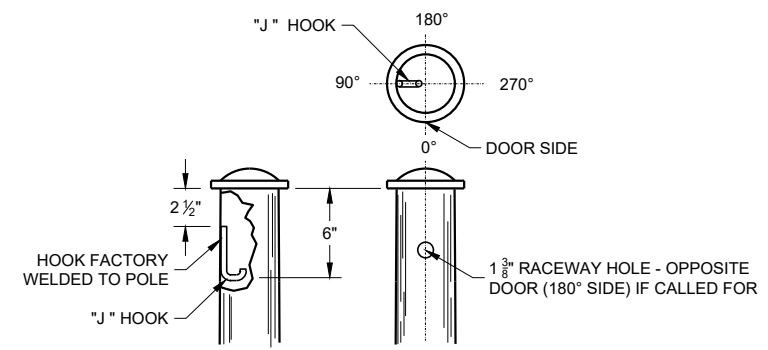
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
  - INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
  - BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
  - LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
- SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



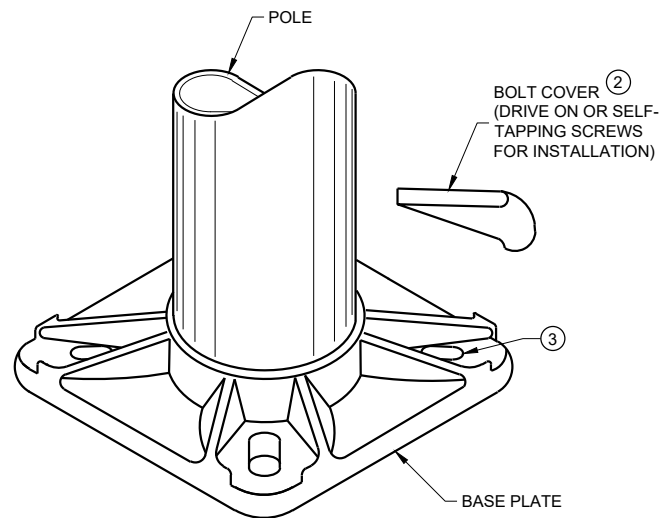
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



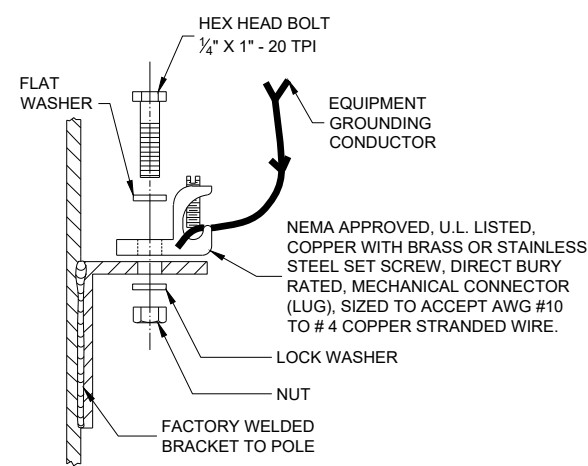
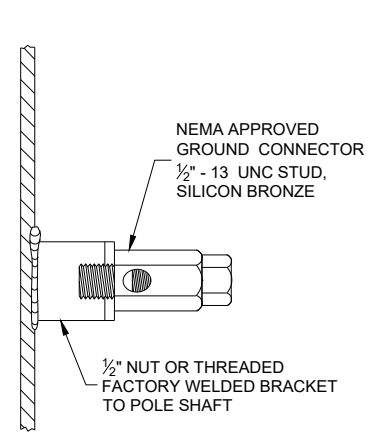
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



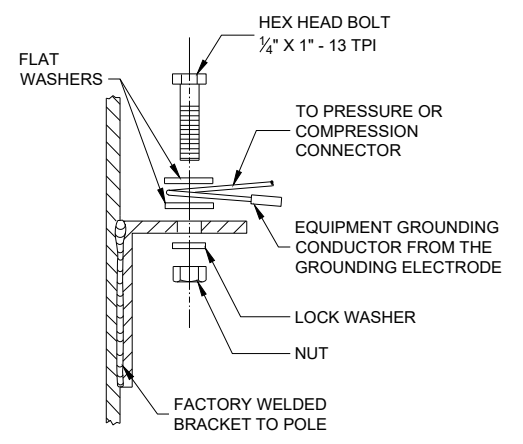
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



**HARDWARE DETAILS FOR POLE MOUNTING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

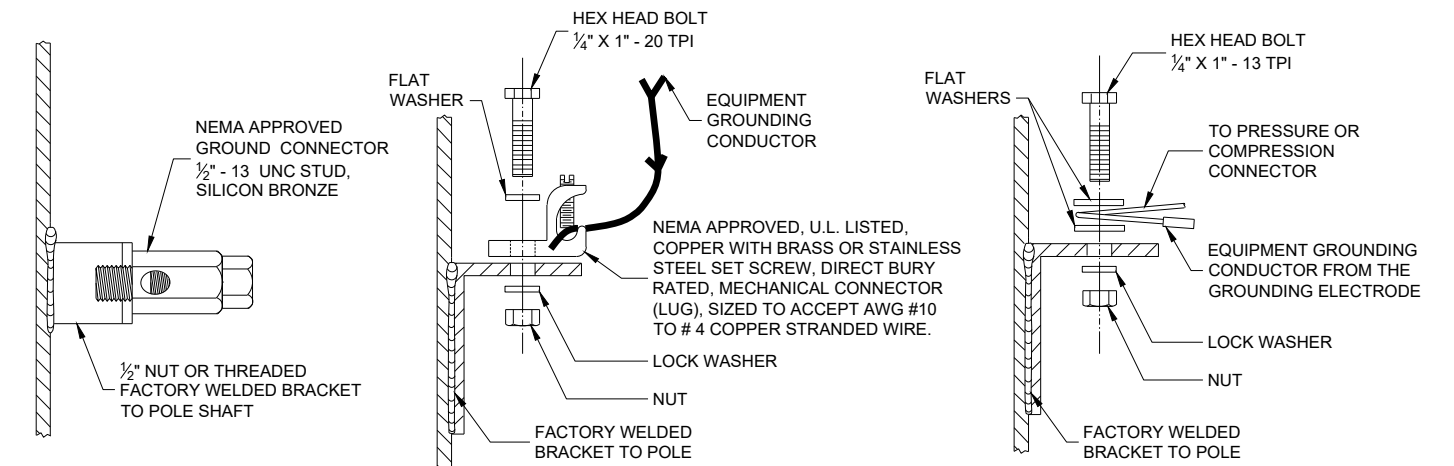
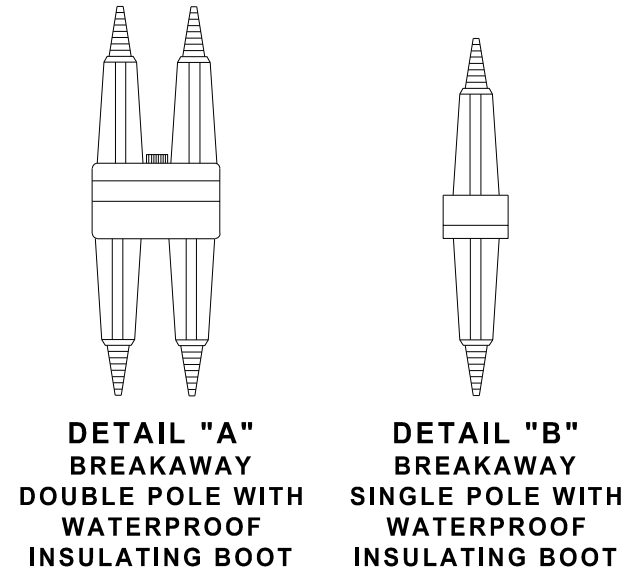
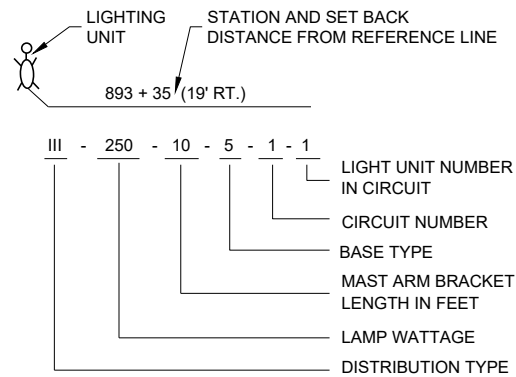
APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

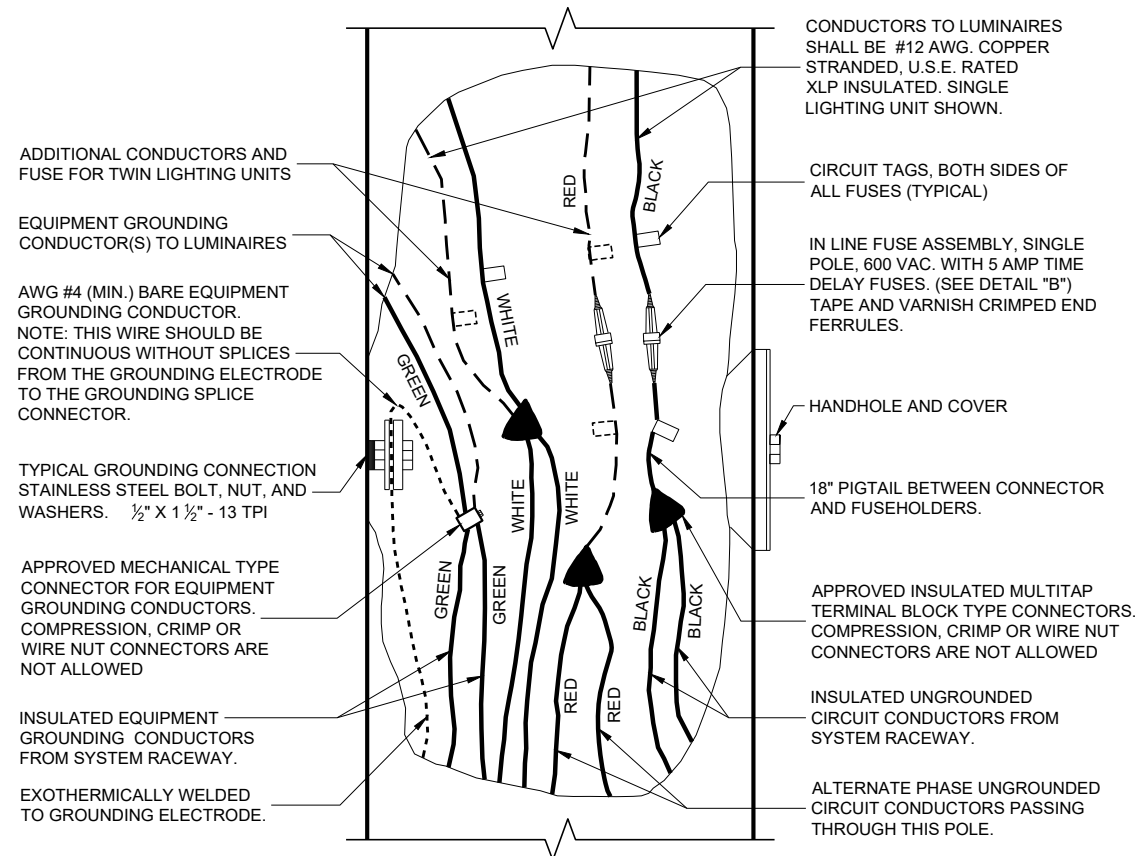
THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

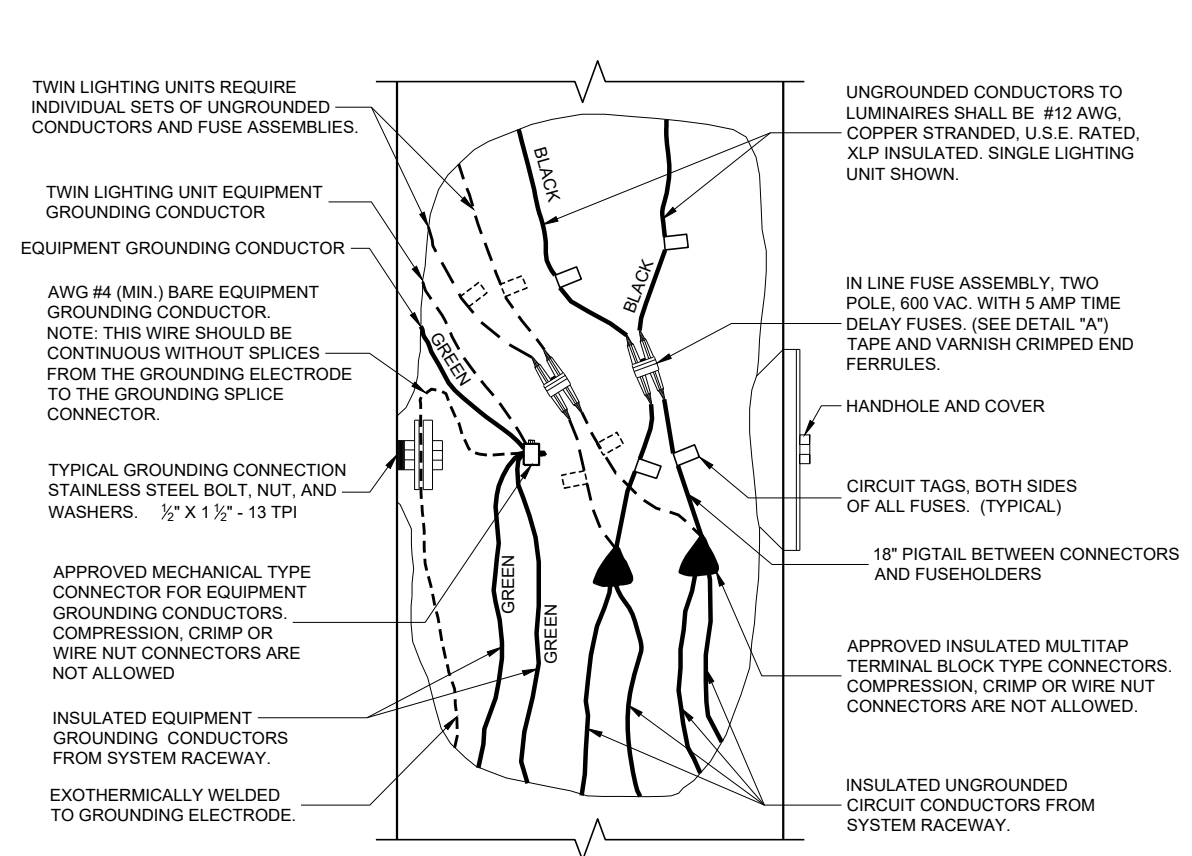


**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**LIGHTING UNIT CODE (TYPICAL)**



**3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR**



**2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR**

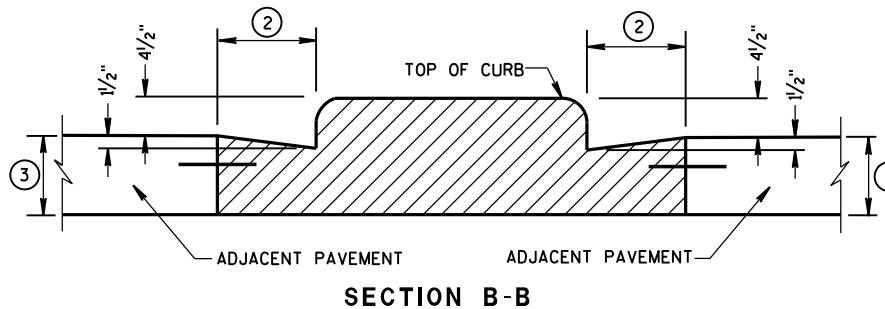
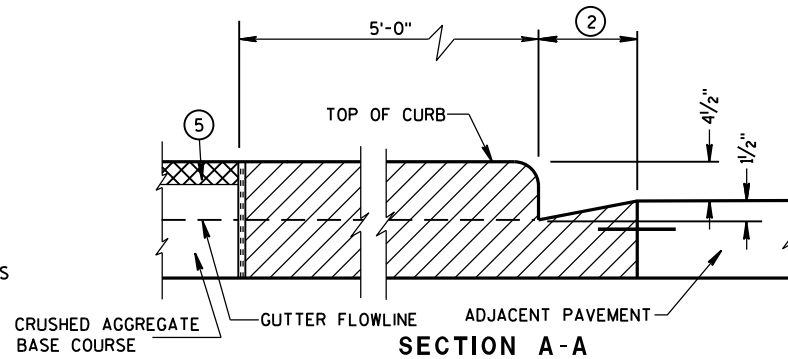
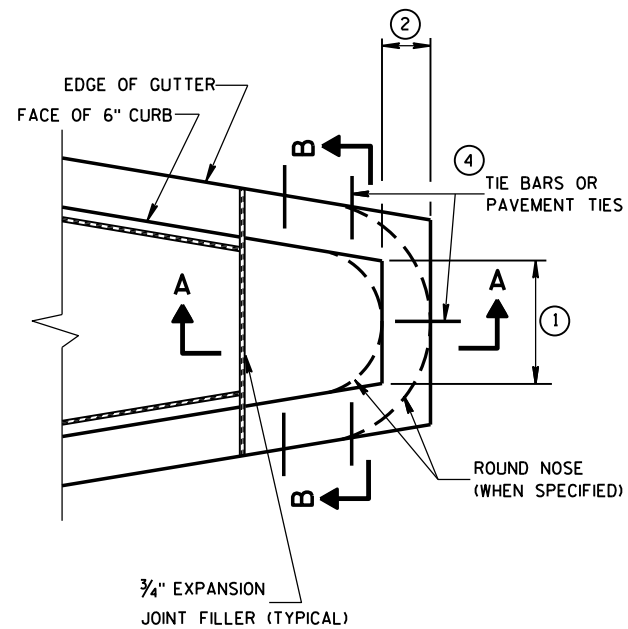
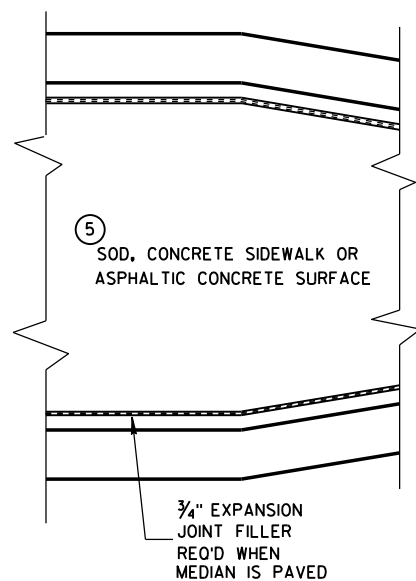
**NON - FREEWAY LIGHTING UNIT POLE WIRING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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November 2018 /S/ Ahmet Demirebilek  
DATE STATE ELECTRICAL ENGINEER

FHWA



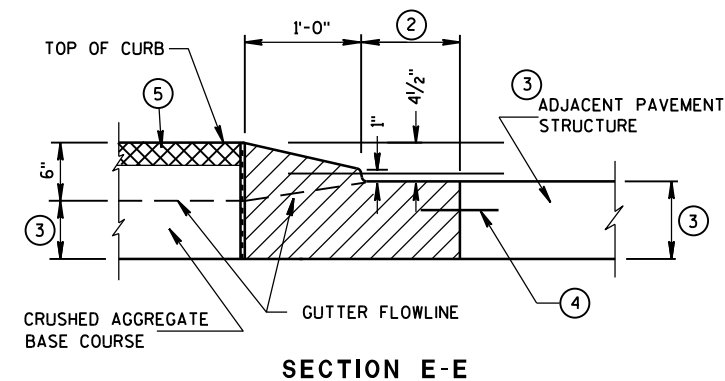
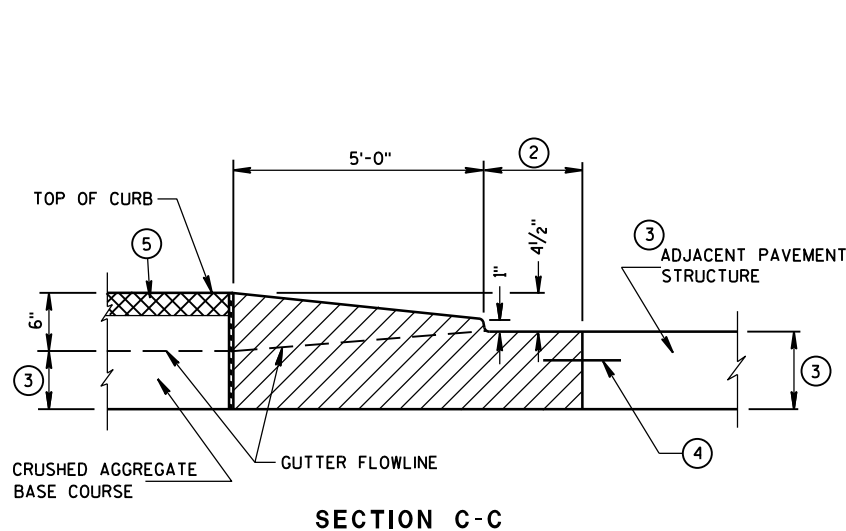
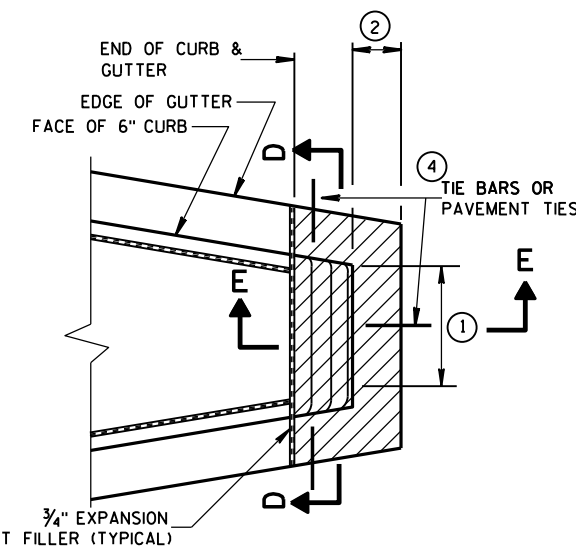


CONCRETE MEDIAN BLUNT NOSE DETAIL

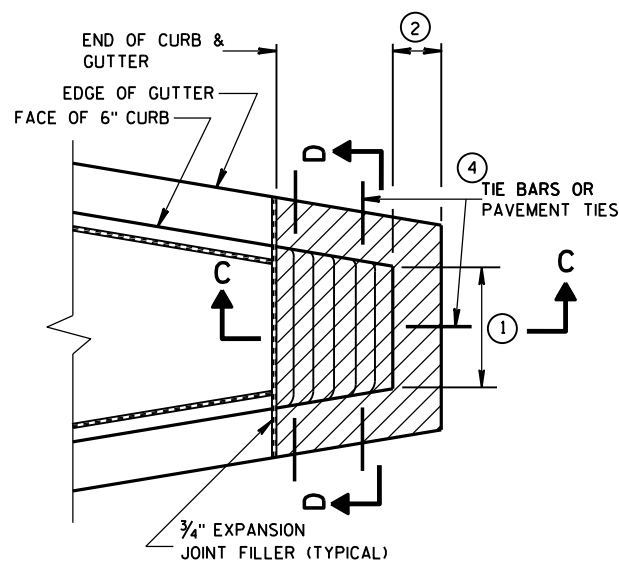
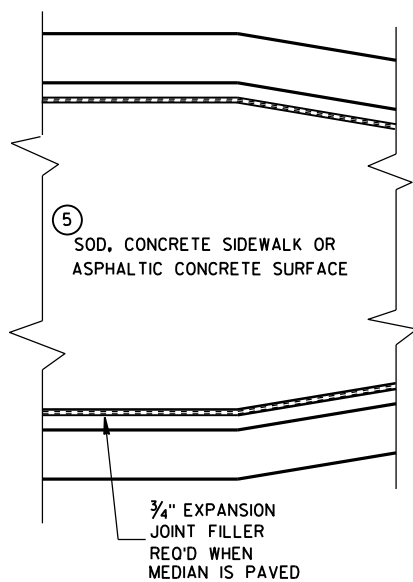
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

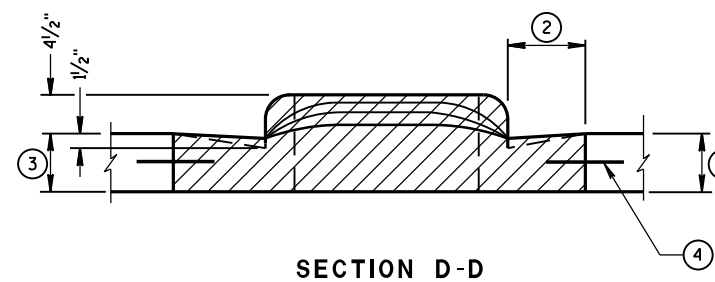
- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



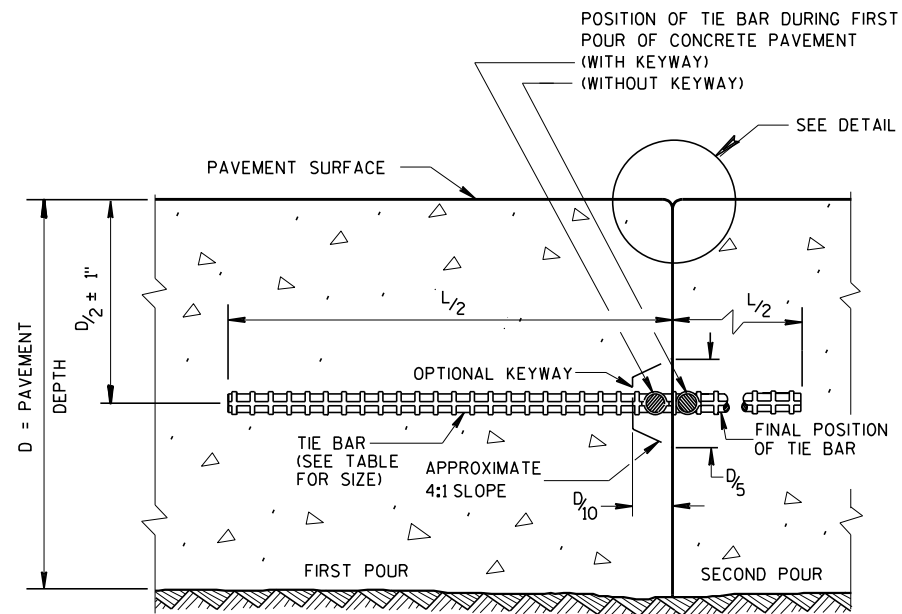
CONCRETE MEDIAN SLOPED NOSE TYPE 2



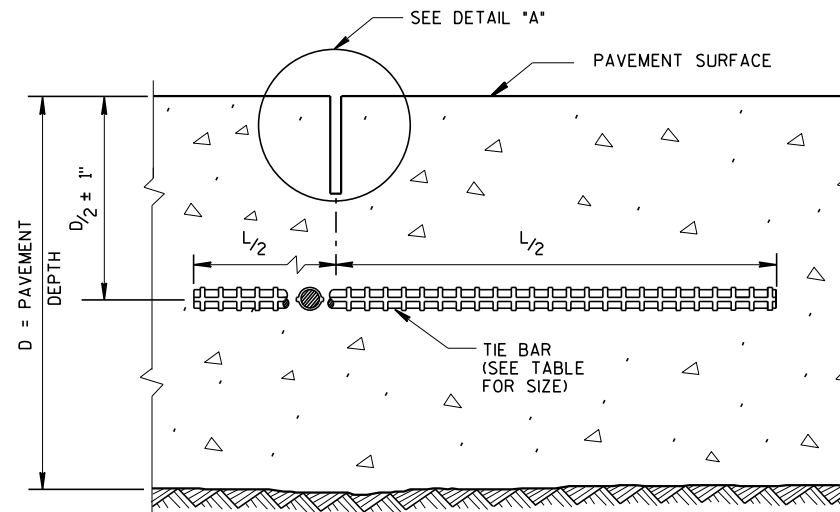
CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**CONSTRUCTION JOINT**



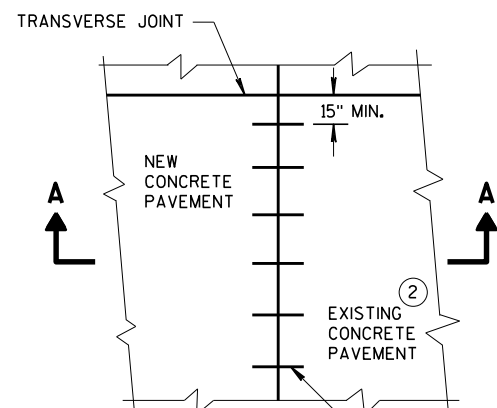
**SAWED JOINT**

**GENERAL NOTES**

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

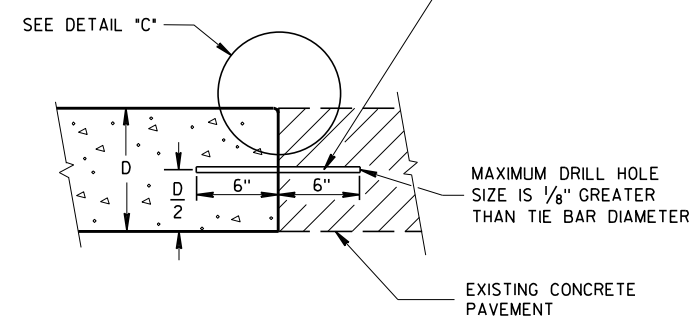
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

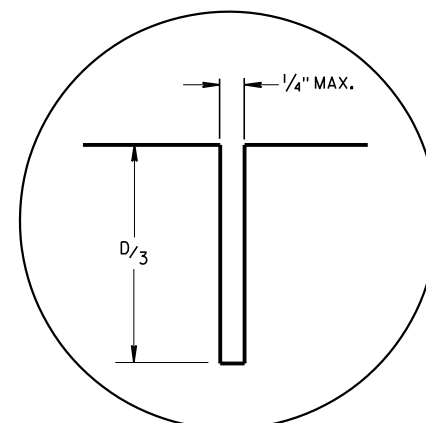


**PLAN VIEW**

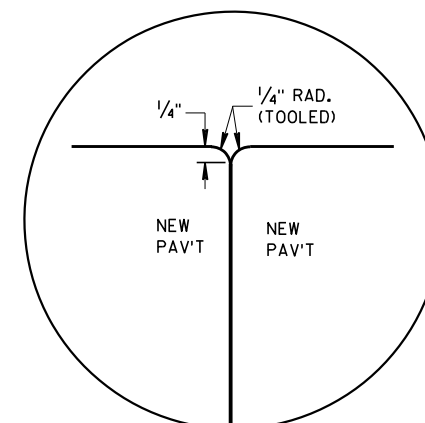
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



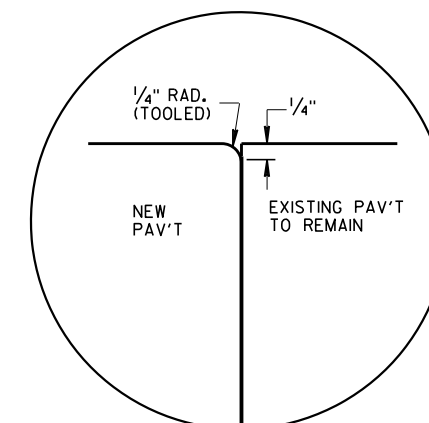
**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**



**DETAIL "A"**



**DETAIL "B"**



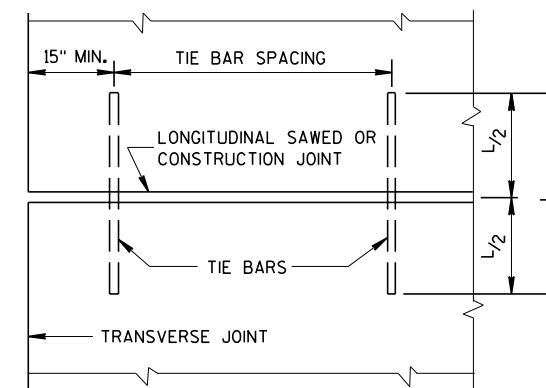
**DETAIL "C"**

**TIE BAR TABLE**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

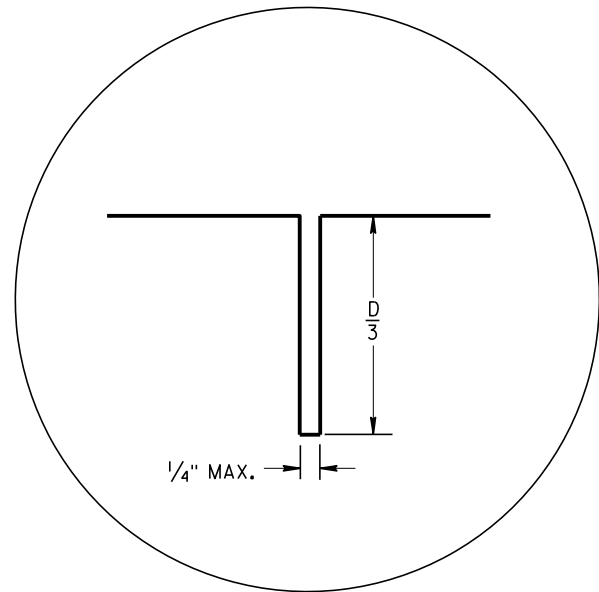


**PLAN VIEW  
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

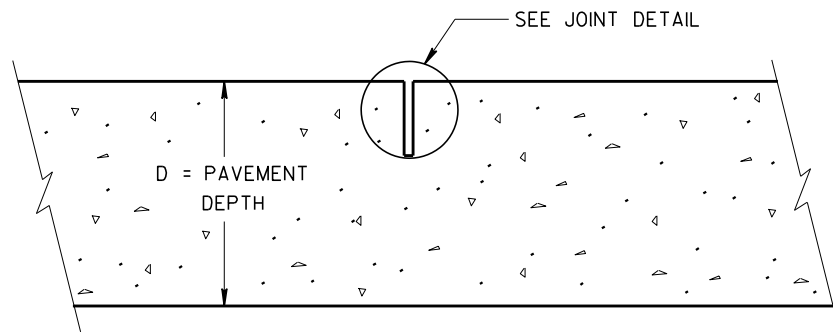
APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR  
FHWA



**JOINT DETAIL**

**PAVEMENT DEPTH AND JOINT SPACING TABLE**

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



**CONTRACTION JOINT**

**GENERAL NOTES**

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

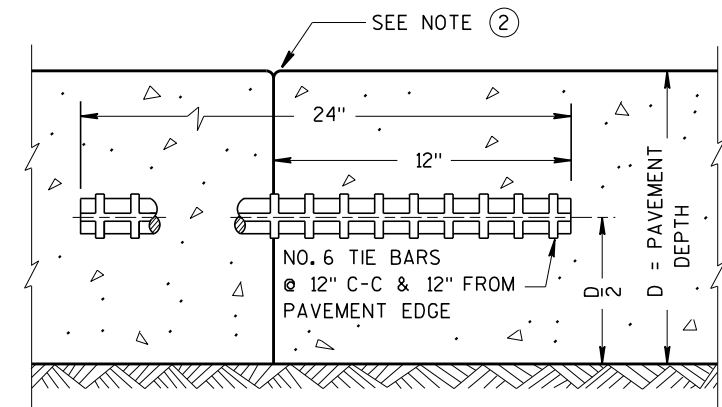
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

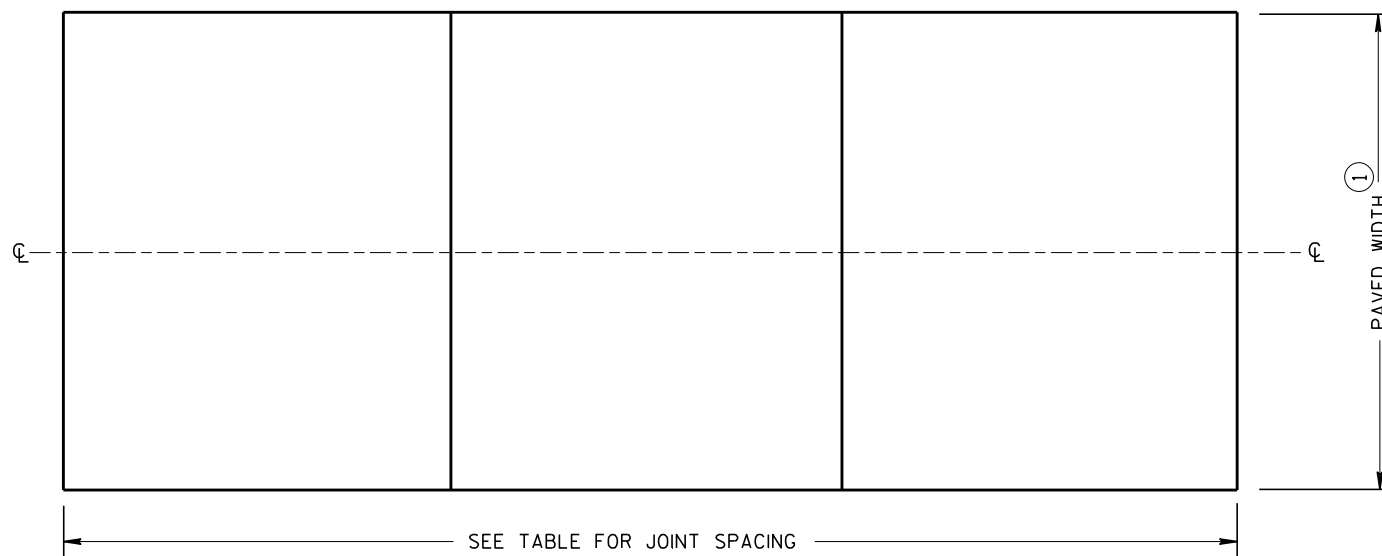
FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

- ① REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.
- ② PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

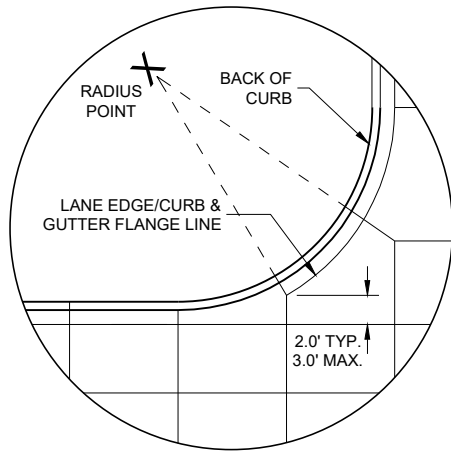


**TIED TRANSVERSE CONSTRUCTION JOINT**

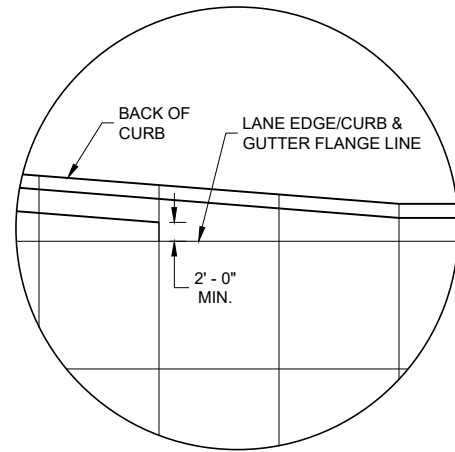


**CONTRACTION JOINT LOCATIONS**

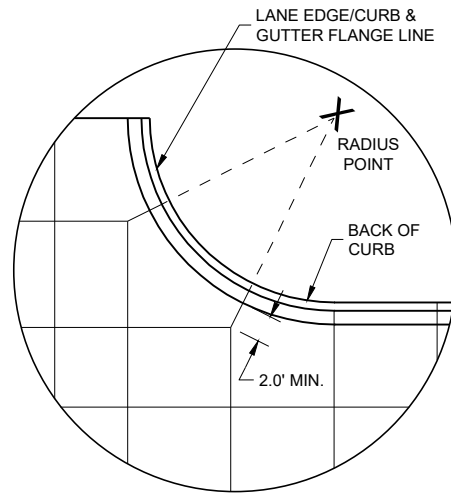
<b>URBAN NON-DOWELED CONCRETE PAVEMENT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/s/ Peter Kemp, P.E. PAVEMENT SUPERVISOR
FHWA	



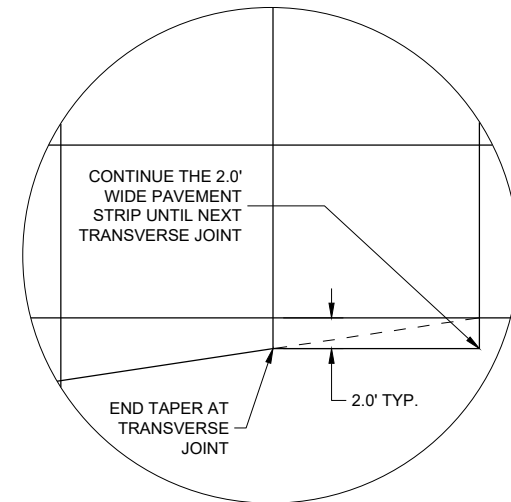
DETAIL "A"



DETAIL "B"



DETAIL "C"

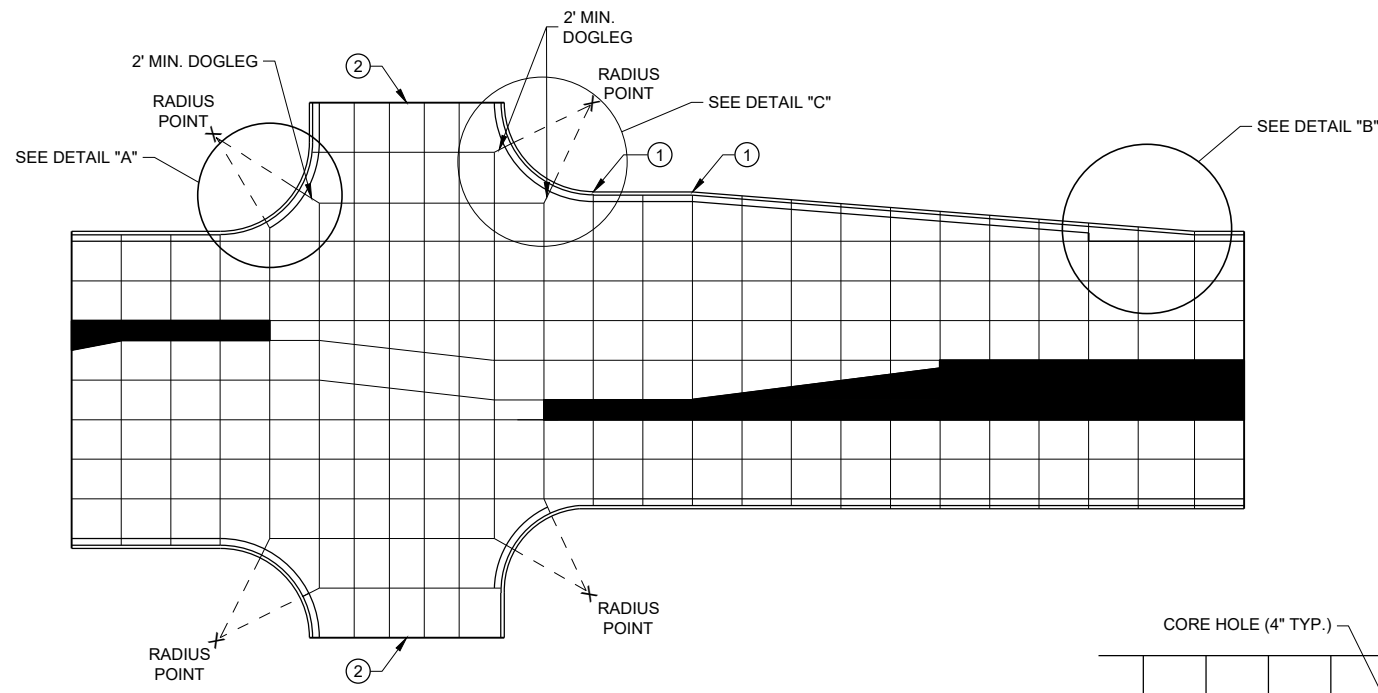


DETAIL "D"

**GENERAL NOTES**

- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

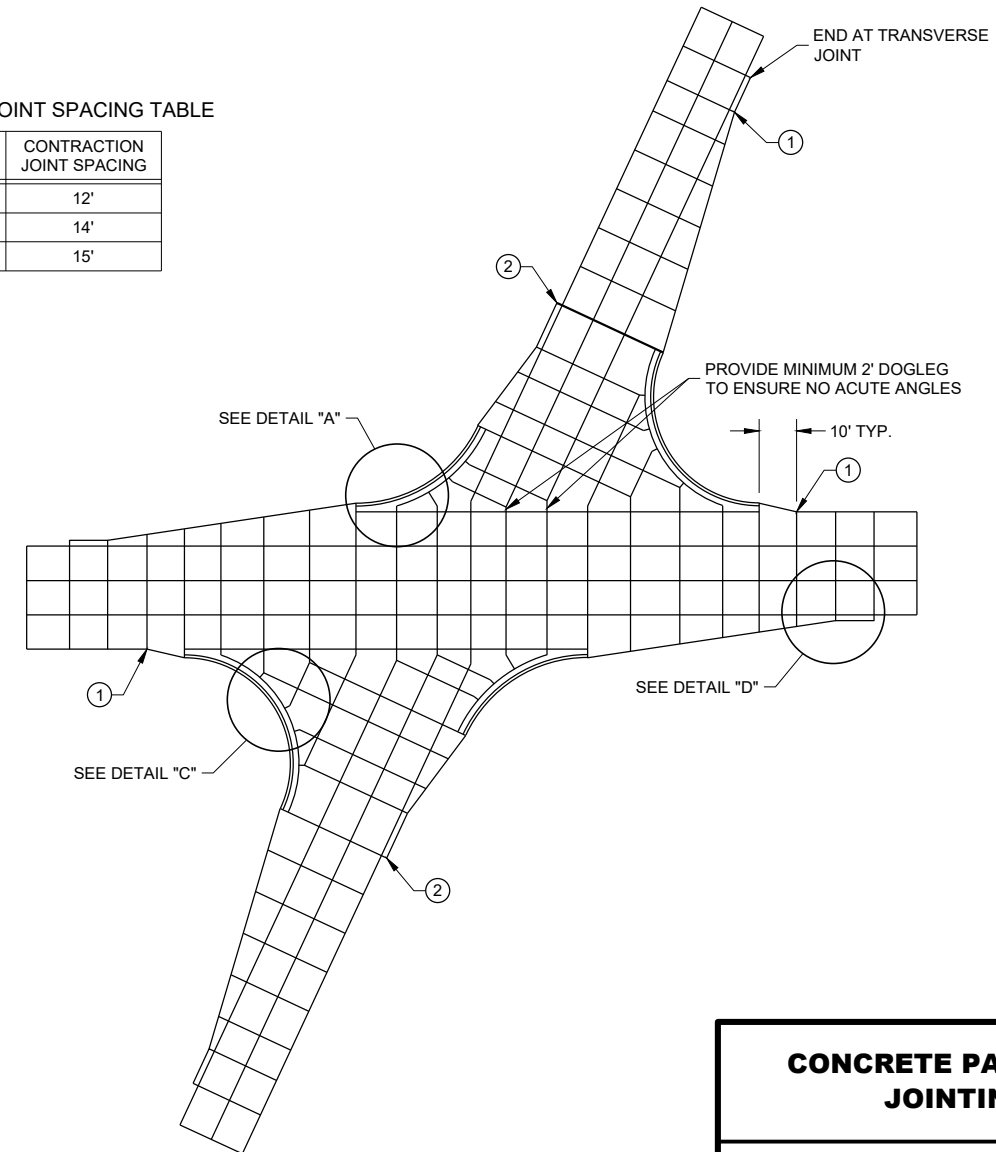
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



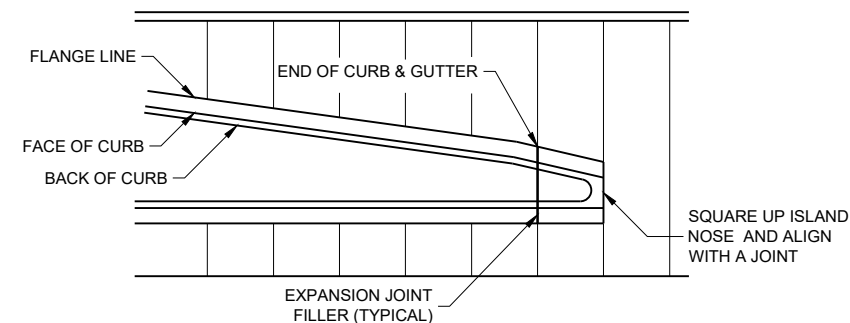
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

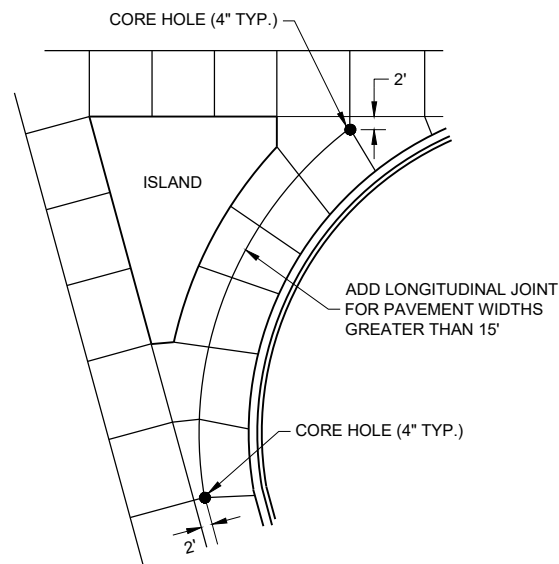
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

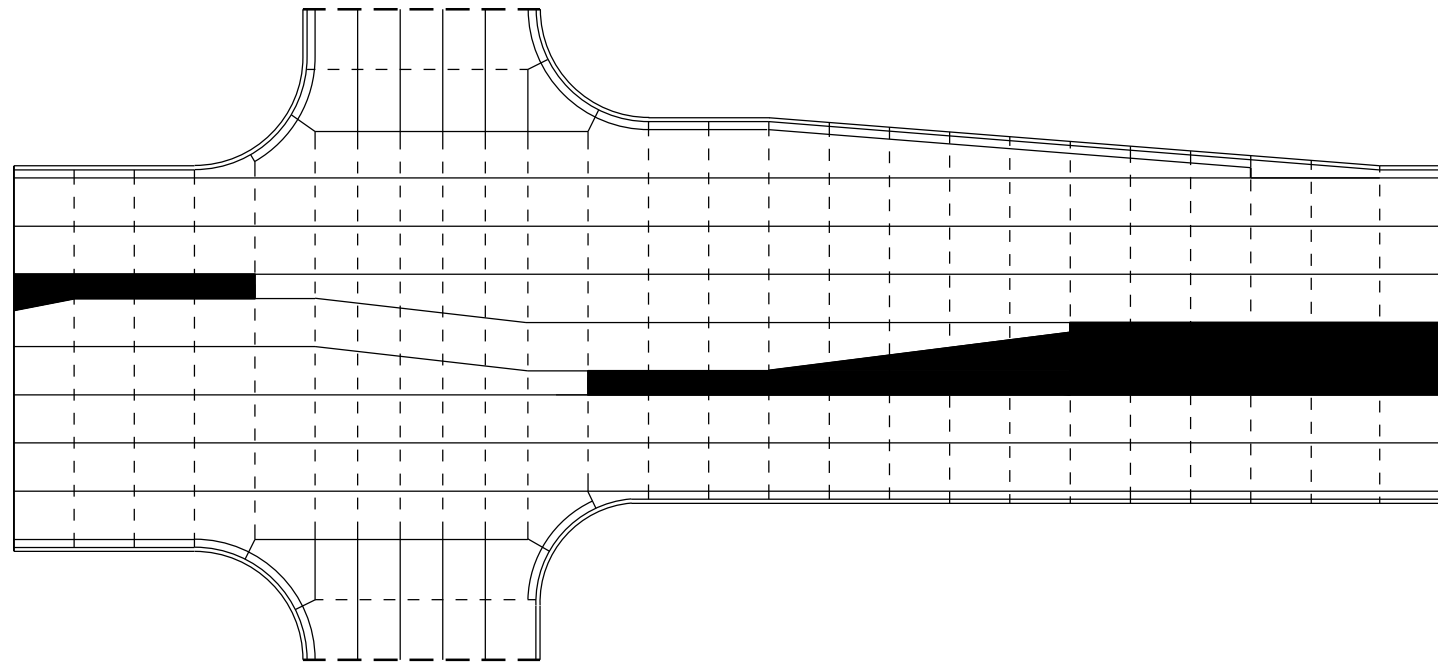
**LEGEND**

- - - - - POTENTIAL DOWELED EXPANSION JOINT
- - - - - DOWELED JOINT
- TIED JOINT

**GENERAL NOTES**

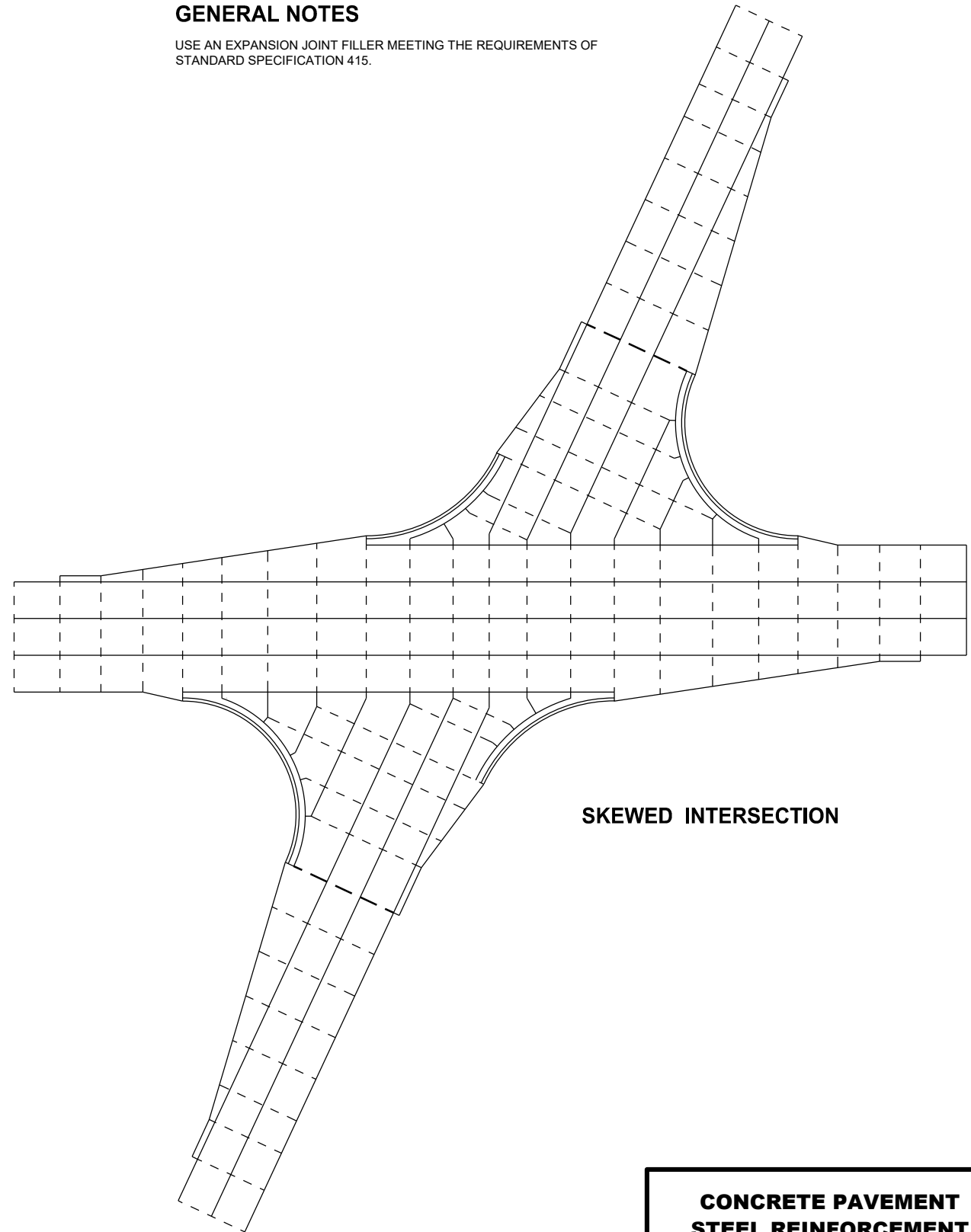
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

6



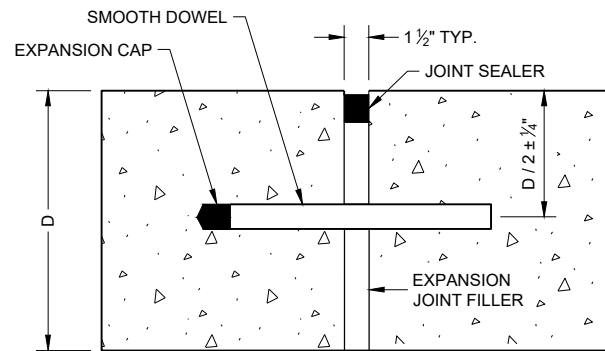
**STANDARD INTERSECTION**

6

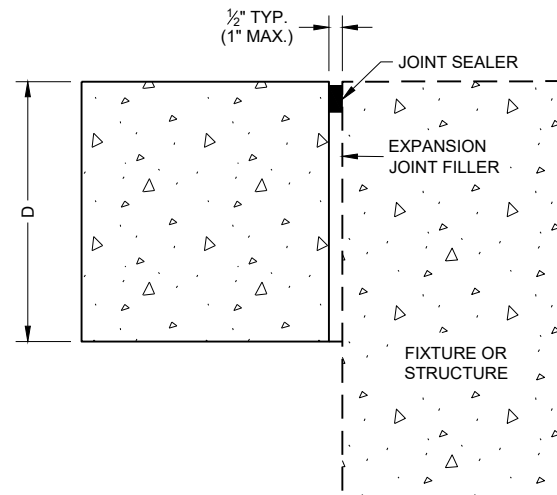


**SKewed INTERSECTION**

<b>CONCRETE PAVEMENT STEEL REINFORCEMENT</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**DOWELED TRANSVERSE** ①



**UNTIED - LONGITUDINAL**

**EXPANSION JOINTS**

**TIE BAR TABLE**

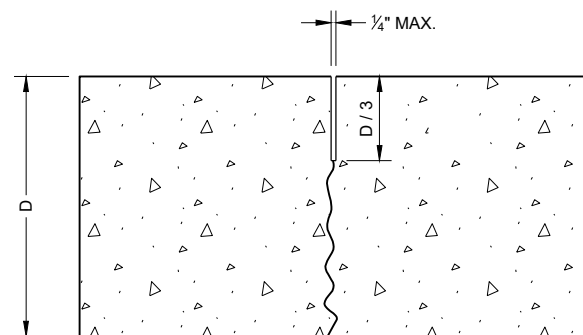
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

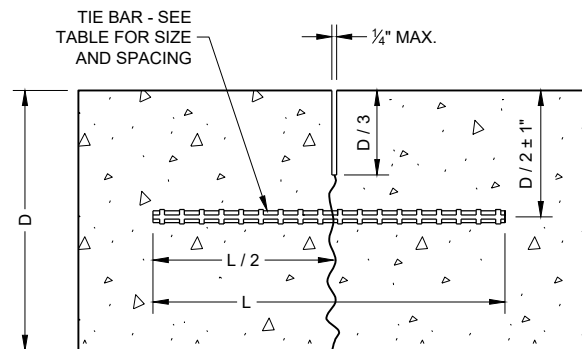
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

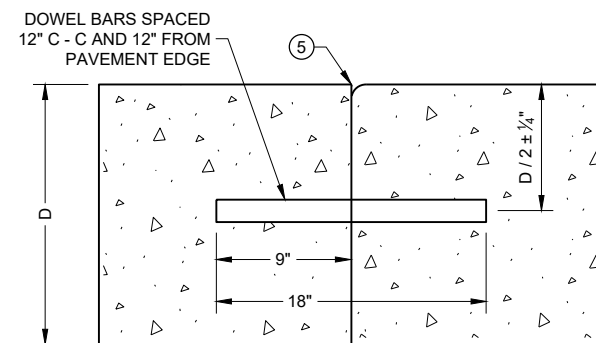
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4" RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



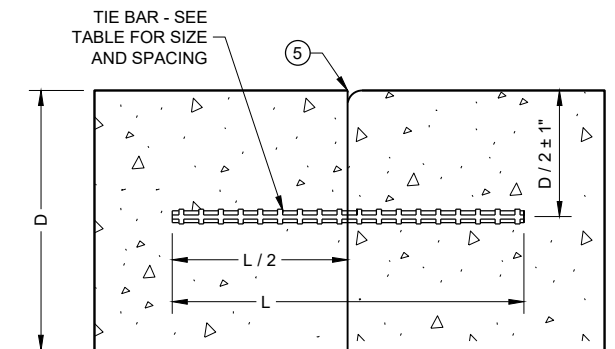
**UNDOWELED TRANSVERSE**



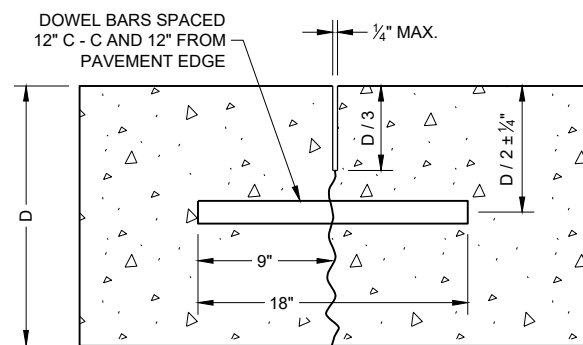
**TIED LONGITUDINAL**



**DOWELED TRANSVERSE** ③

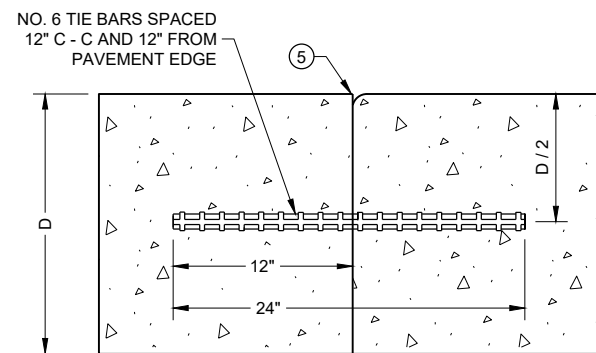


**TIED LONGITUDINAL**

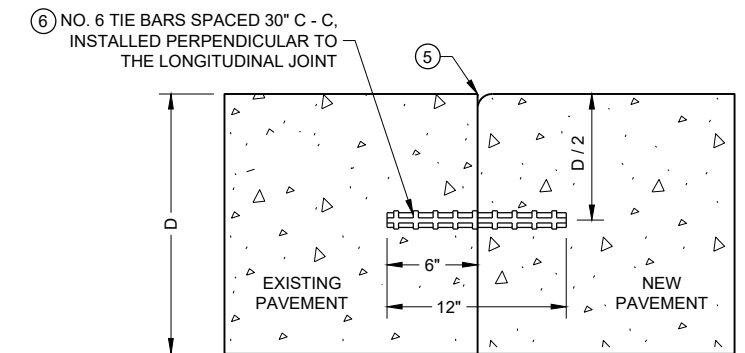


**DOWELED TRANSVERSE**

**CONTRACTION JOINTS** ②



**TIED TRANSVERSE** ③  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)

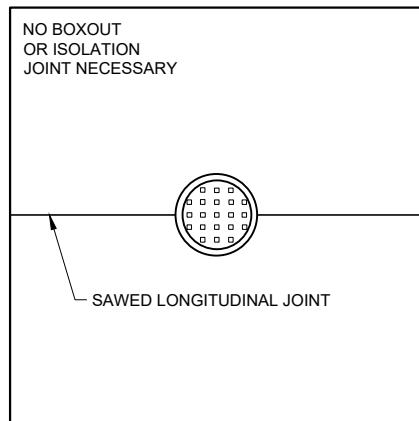


**TIED LONGITUDINAL TO EXISTING**

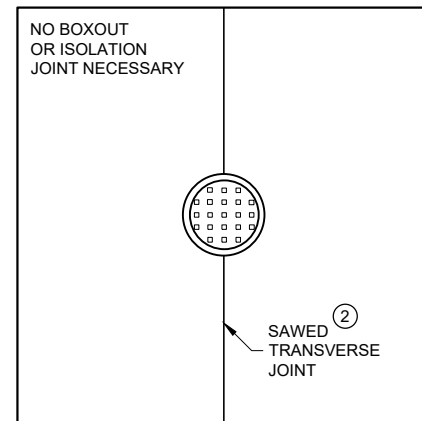
**CONSTRUCTION JOINTS** ④

**CONCRETE PAVEMENT  
JOINT TYPES**

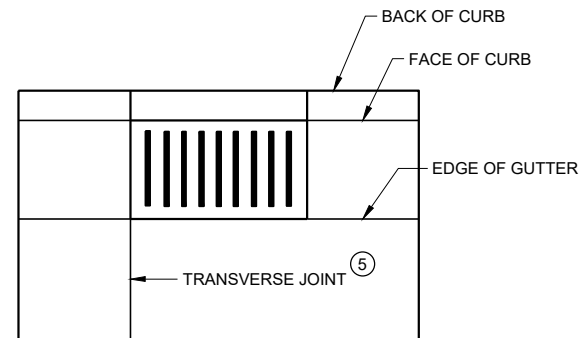
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



MANHOLE WITH LONGITUDINAL JOINT



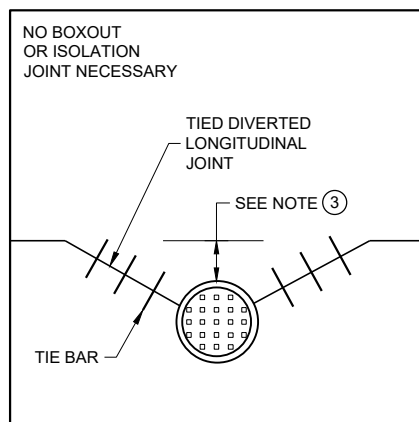
MANHOLE WITH TRANSVERSE JOINT



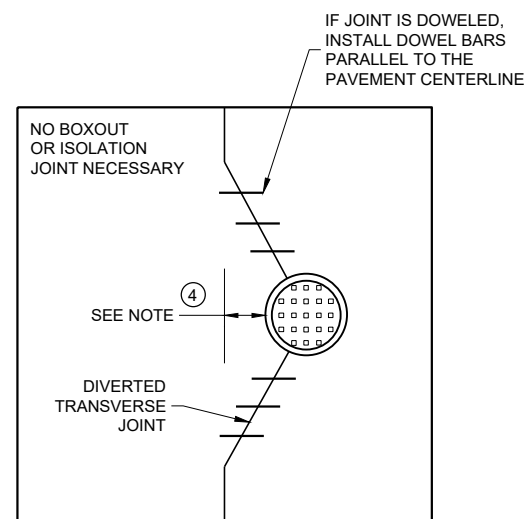
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

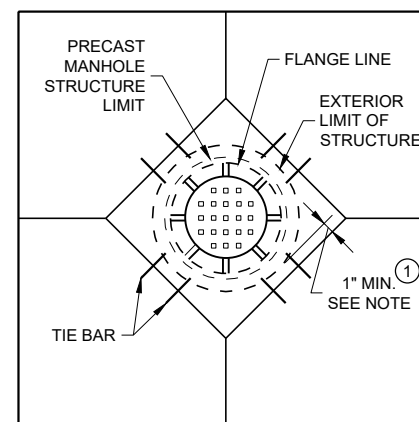
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

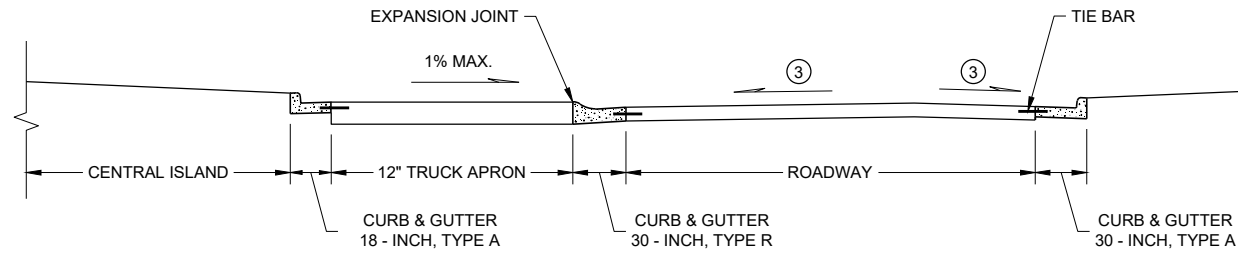


DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

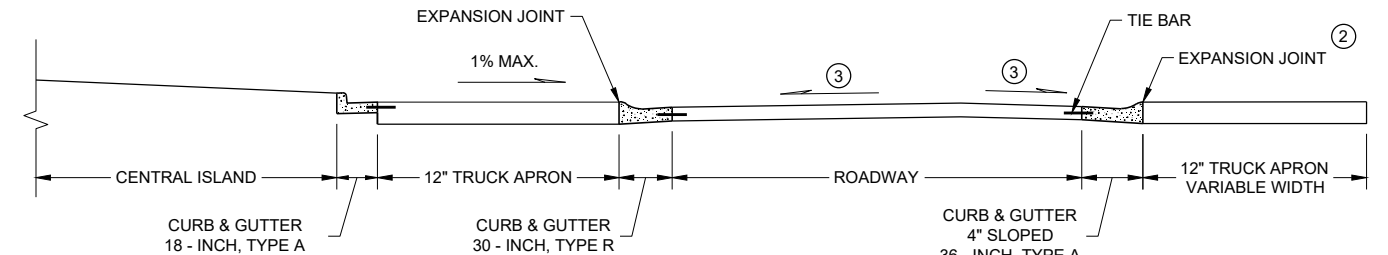
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

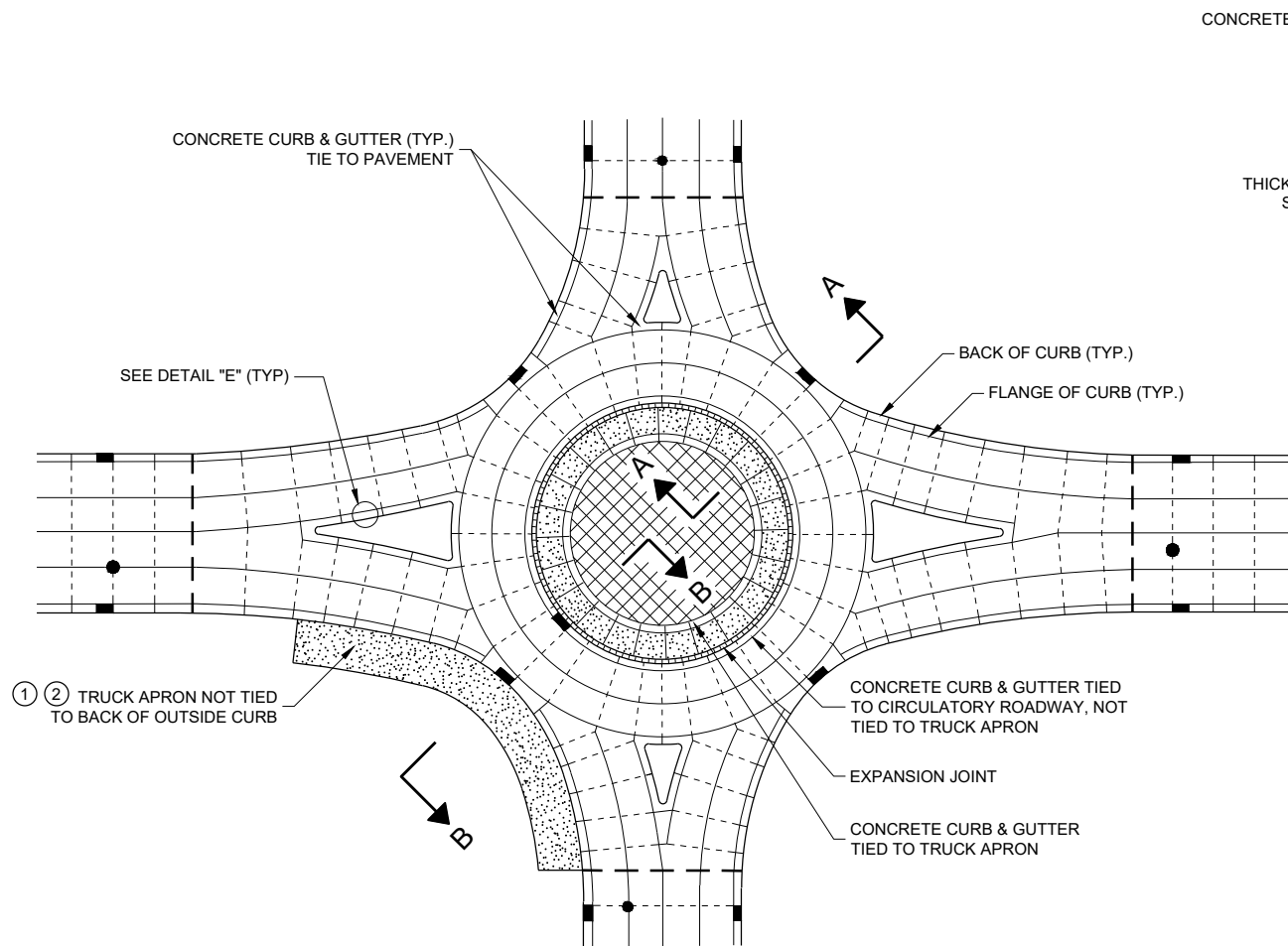
APPROVED  
 May 2023 /S/ Peter Kemp P.E.  
 DATE PAVEMENT SUPERVISOR



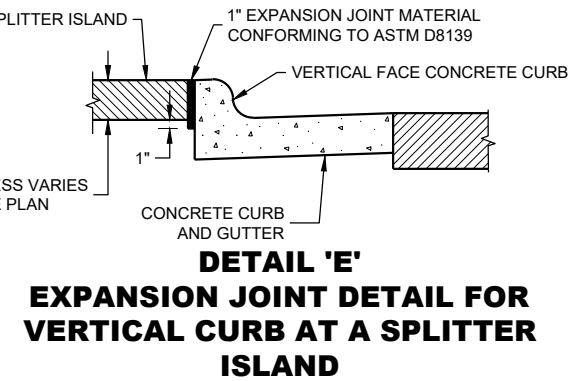
**SECTION A - A**



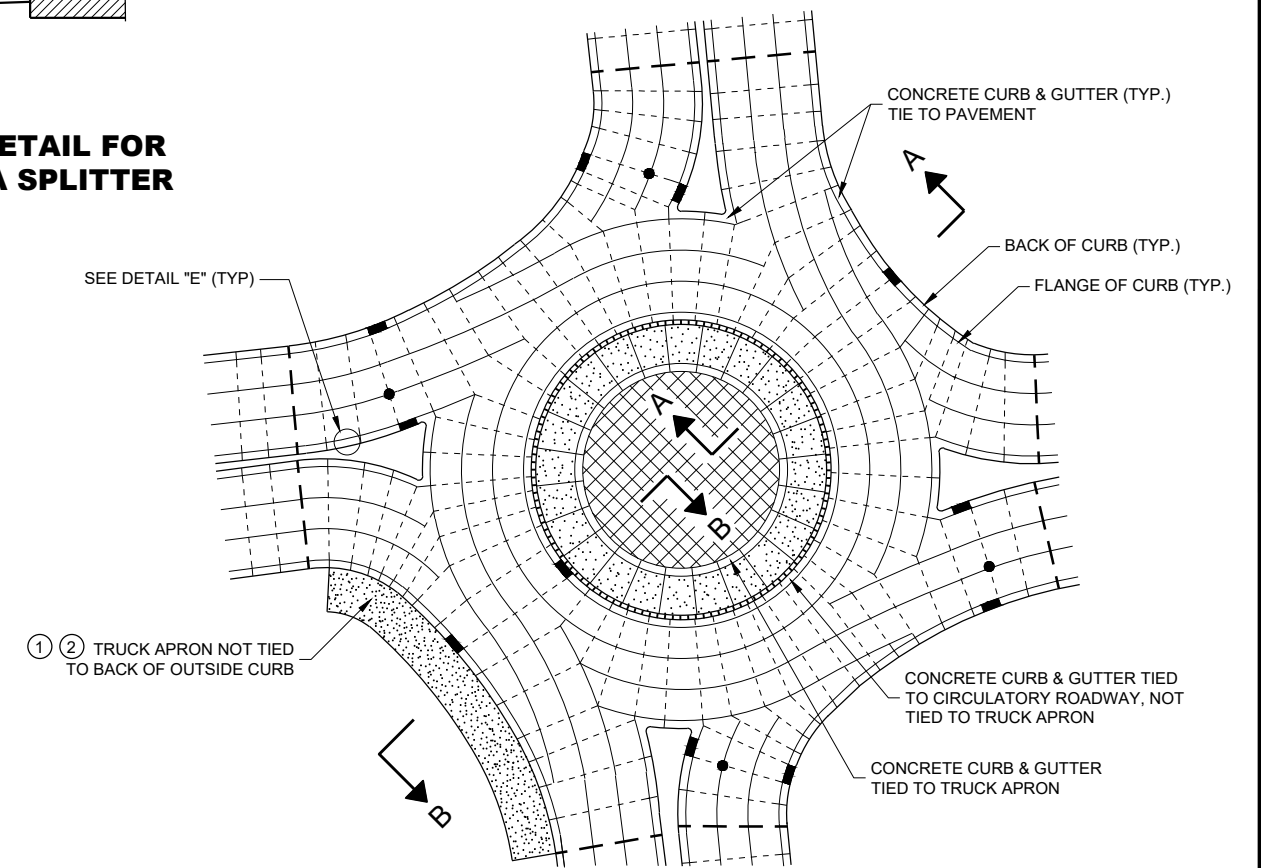
**SECTION B - B**



**ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS**



**DETAIL 'E'  
EXPANSION JOINT DETAIL FOR  
VERTICAL CURB AT A SPLITTER  
ISLAND**



**PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS**

**GENERAL NOTES**

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"  
 USE EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.  
 DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

- ① DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.
- ② TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.
- ③ CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

**LEGEND**

- DOWELED JOINT
- TIED JOINT
- ===== EXPANSION JOINT
- — — — — POTENTIAL DOWELED EXPANSION JOINT
- [Pattern] TRUCK APRON
- [Pattern] CENTRAL ISLAND
- ● UTILITY STRUCTURES

**CONCRETE PAVEMENT JOINTING  
AND STEEL REINFORCEMENT  
IN ROUNDABOUTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2023 /S/ Peter Kemp P.E.  
PAVEMENT SUPERVISOR

FHWA

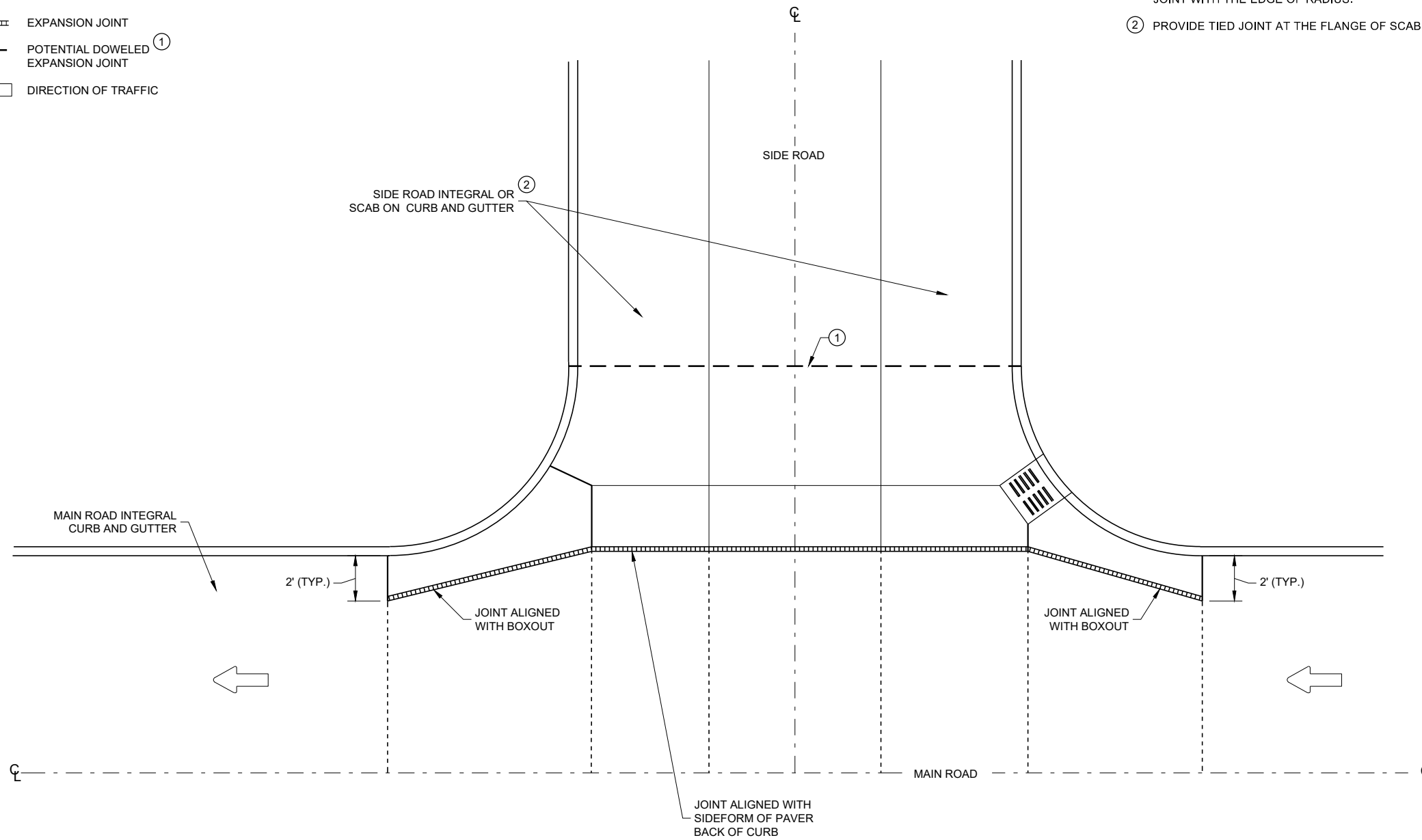


**LEGEND**

- DOWELED JOINT
- TIED JOINT
- ▨▨▨▨ EXPANSION JOINT
- — — — POTENTIAL DOWELED <sup>①</sup> EXPANSION JOINT
- ← DIRECTION OF TRAFFIC

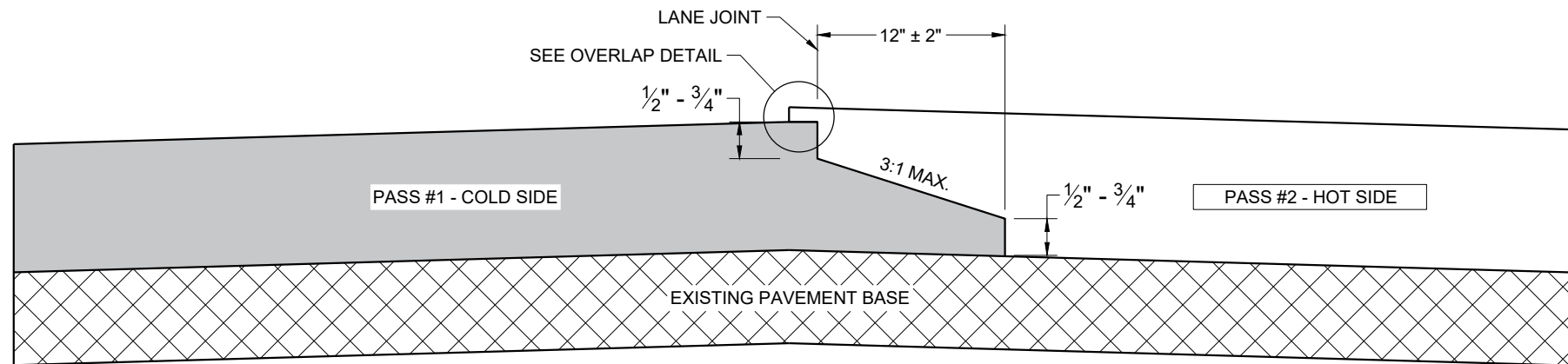
**GENERAL NOTES**

- ① CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.
- ② PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

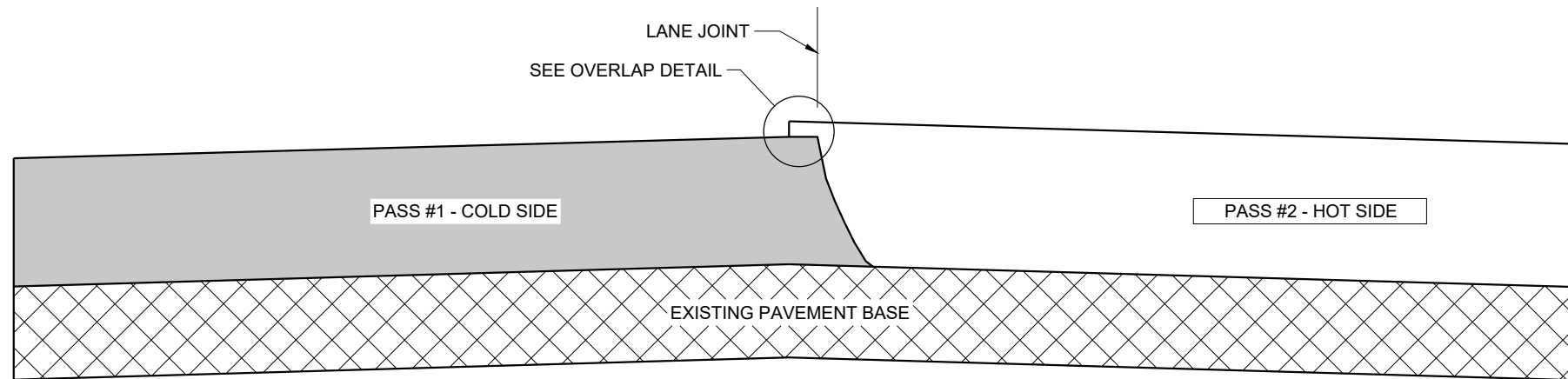


**INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

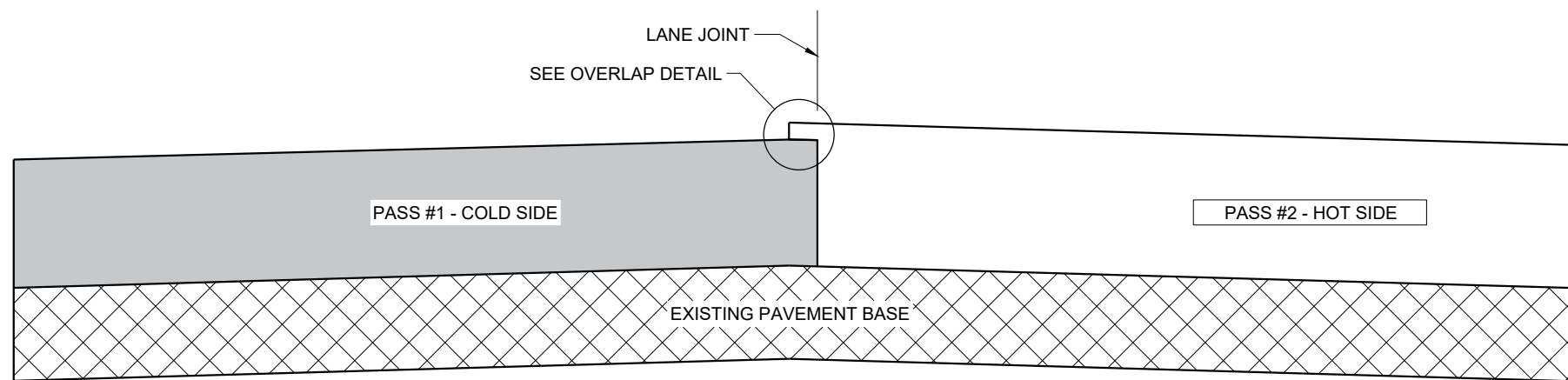
<b>CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Peter Kemp P.E. PAVEMENT SUPERVISOR
FHWA	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

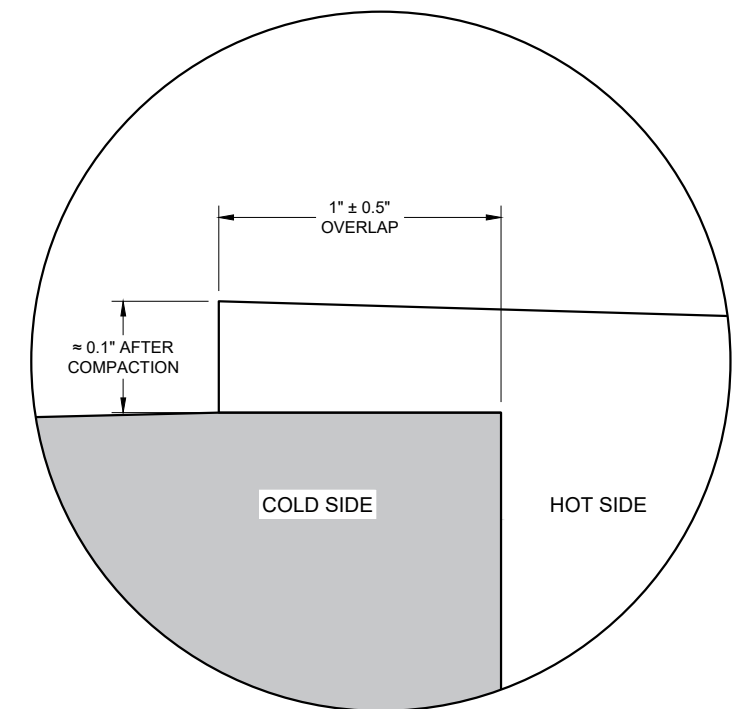
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



**OVERLAP DETAIL (TYPICAL)**

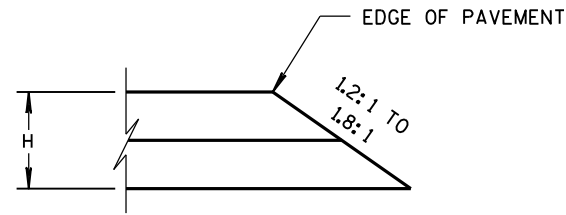
6

6

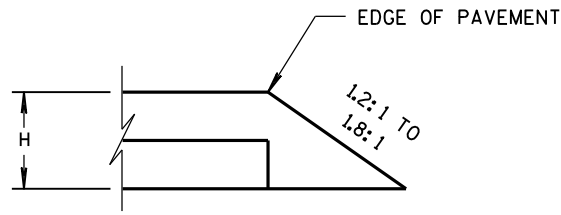
SDD 13C19 - 03

SDD 13C19 - 03

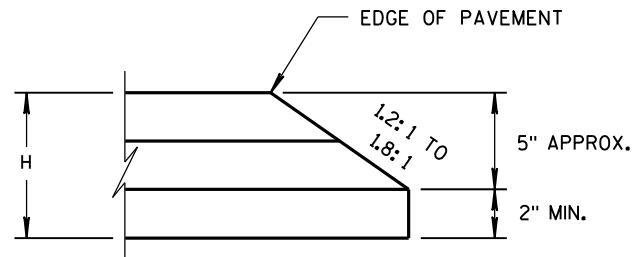
<b>HMA LONGITUDINAL JOINTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



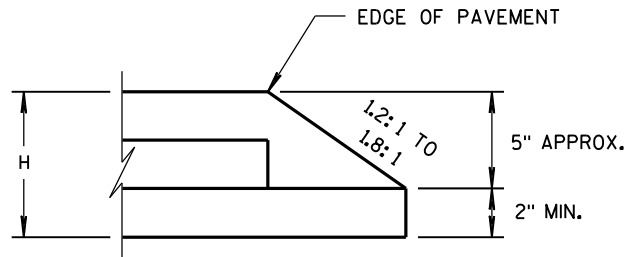
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

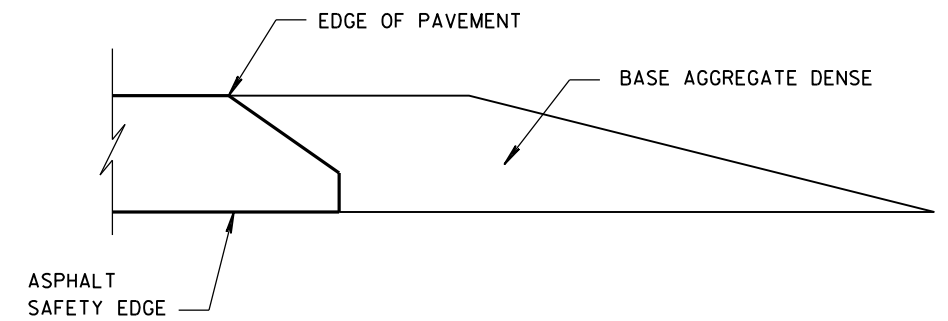


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

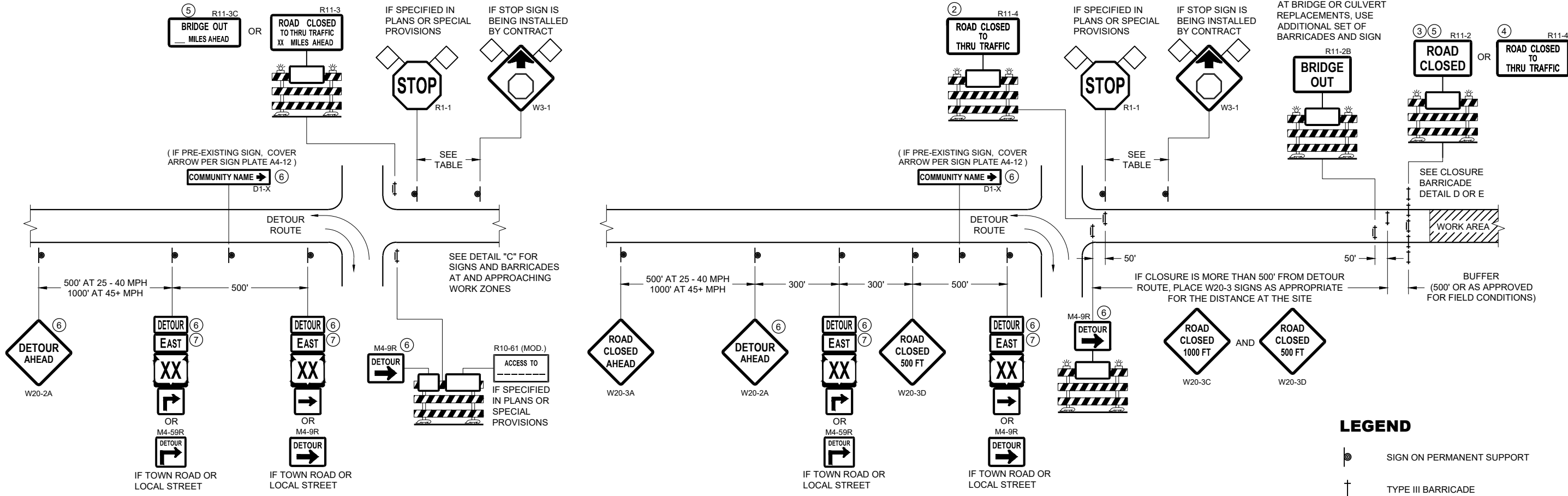
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6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE <sub>SM</sub>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

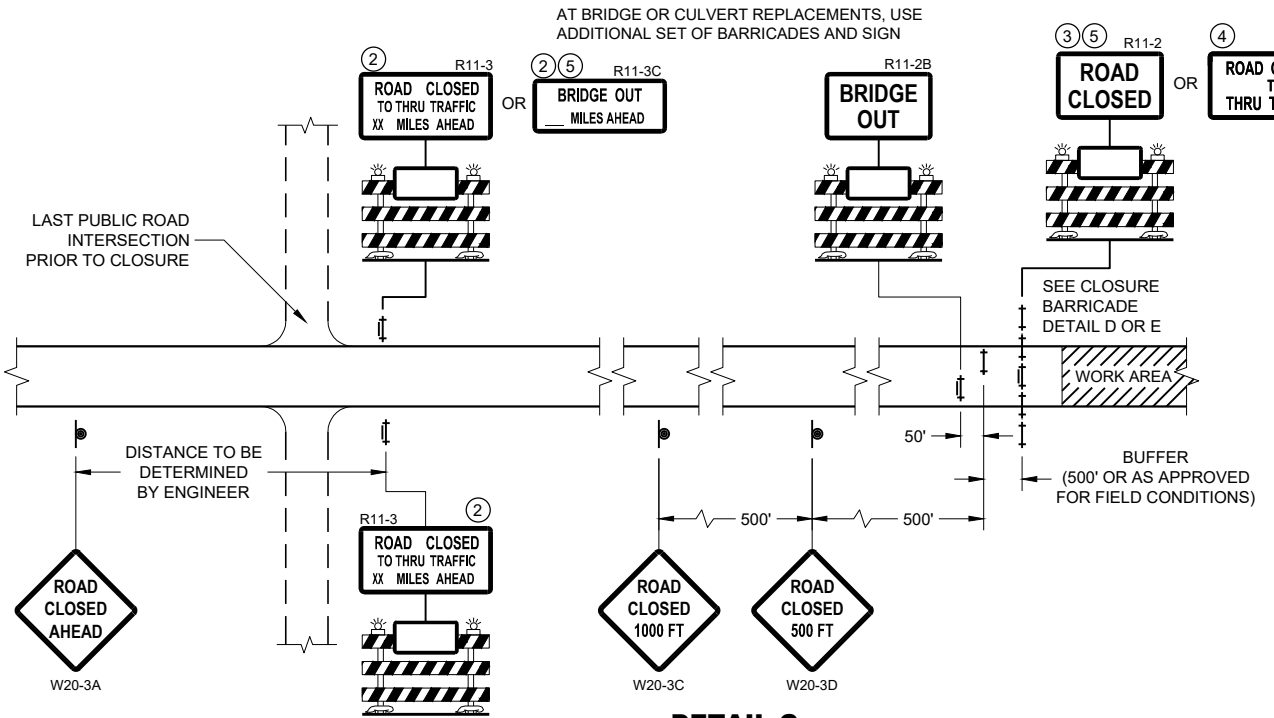
**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

- LEGEND**
- SIGN ON PERMANENT SUPPORT
  - TYPE III BARRICADE
  - TYPE III BARRICADE WITH ATTACHED SIGN
  - TYPE "A" WARNING LIGHT (FLASHING)
  - WORK AREA
  - FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



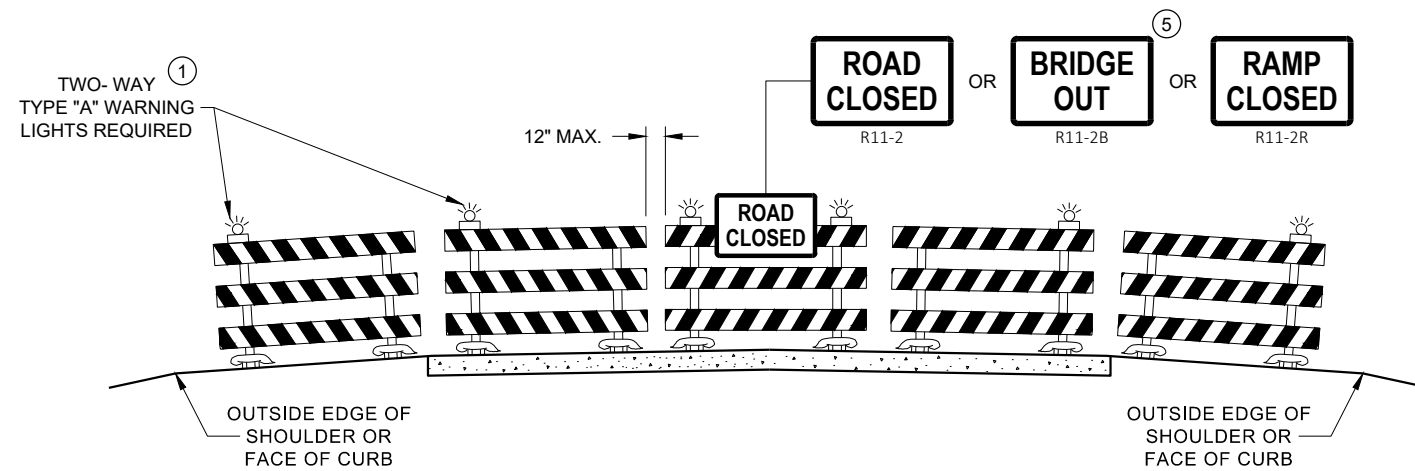
**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

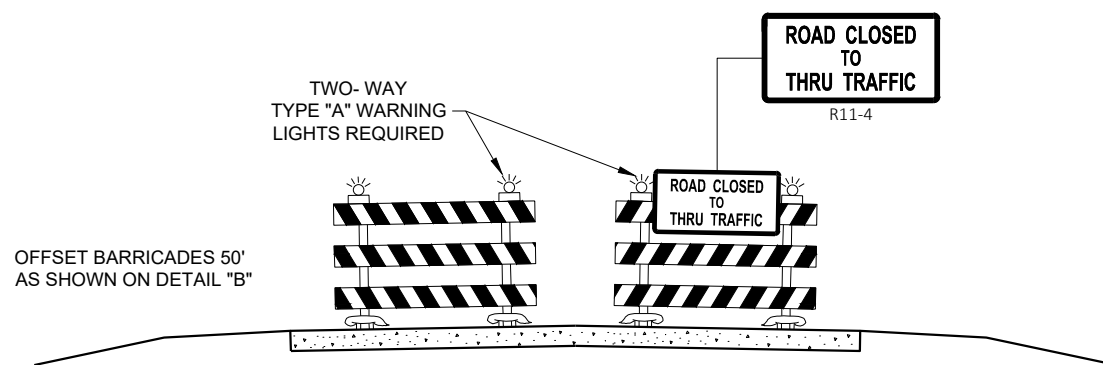
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER



**DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW**



**DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS  
FOR  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- ▨ WORK AREA
- DETOUR M4 - 8
- EAST M3 - X
- XX OR XX OR COUNTY X M1 - 4 M1 - 6 M1 - 5A
- OR OR M05 - 1 M06 - 1 M06 - 1

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

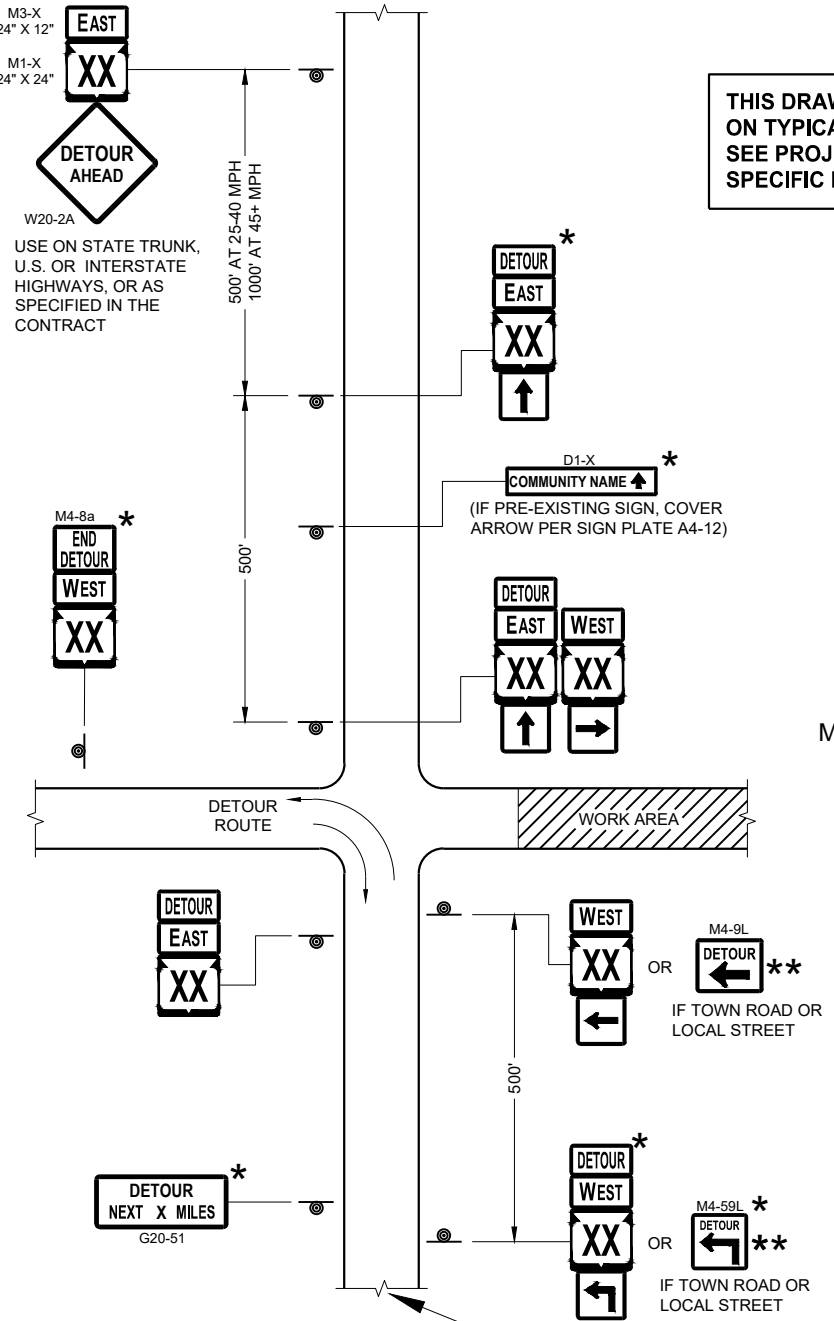
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

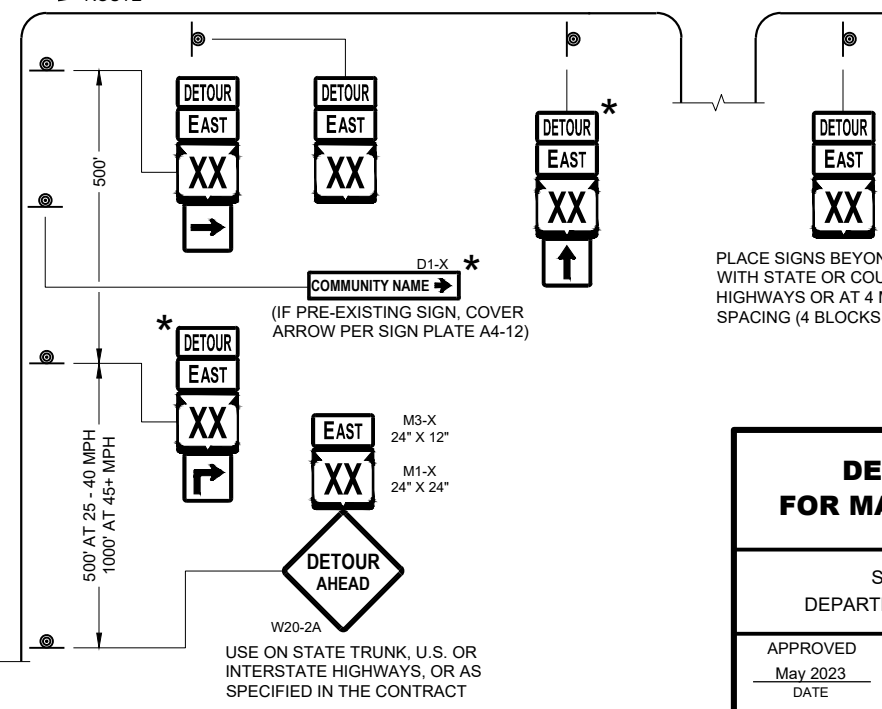
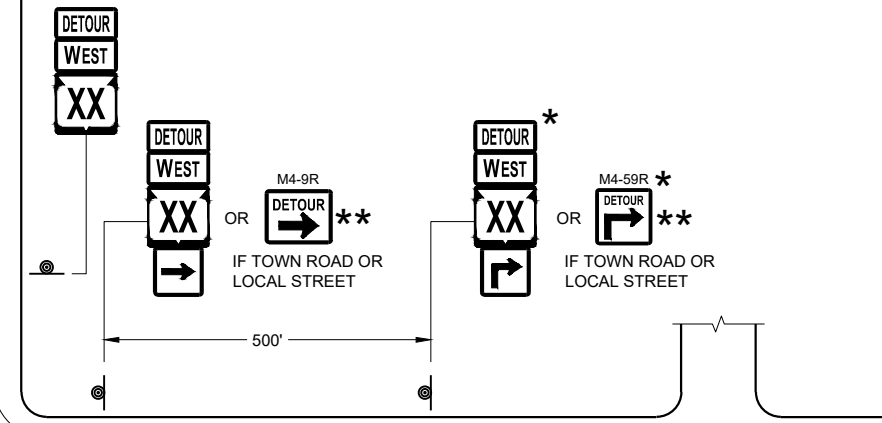
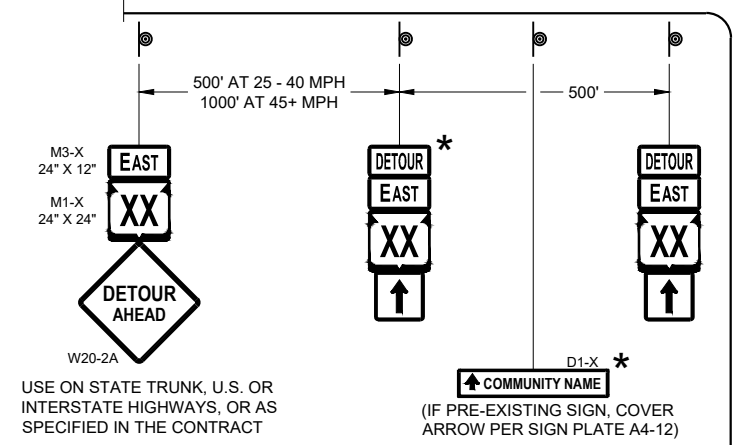
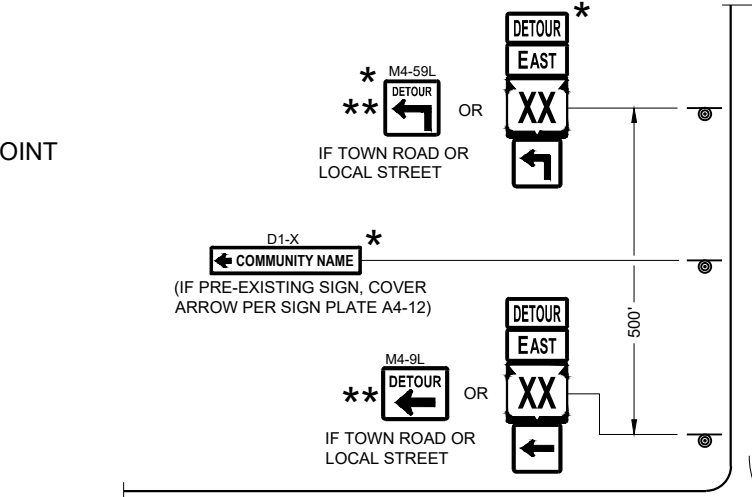
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- \* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- \*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

**THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.**



MATCH POINT



PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

**DETAIL F  
DETOUR SIGNING**

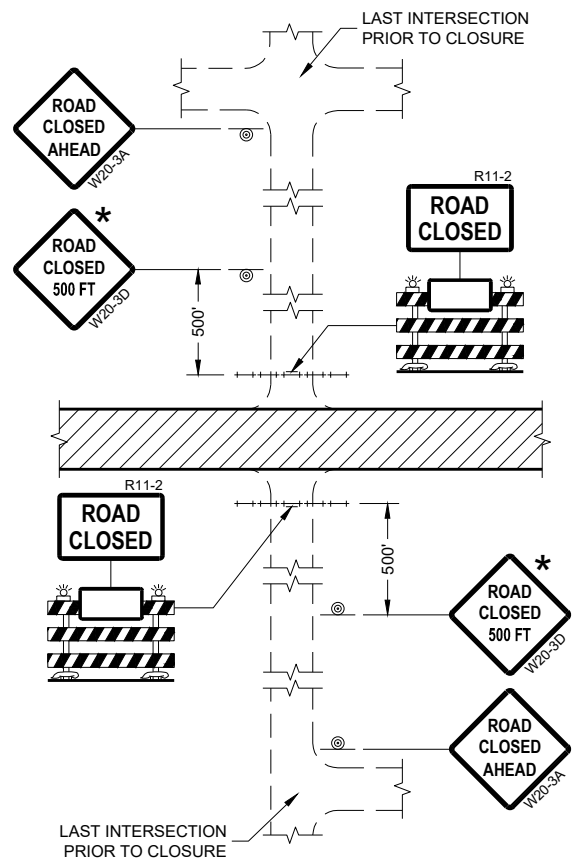
SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

**DETOUR SIGNING FOR MAINLINE CLOSURES**

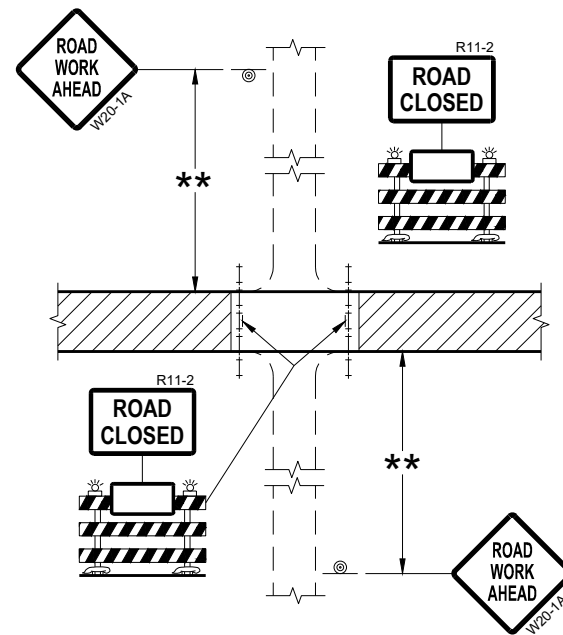
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

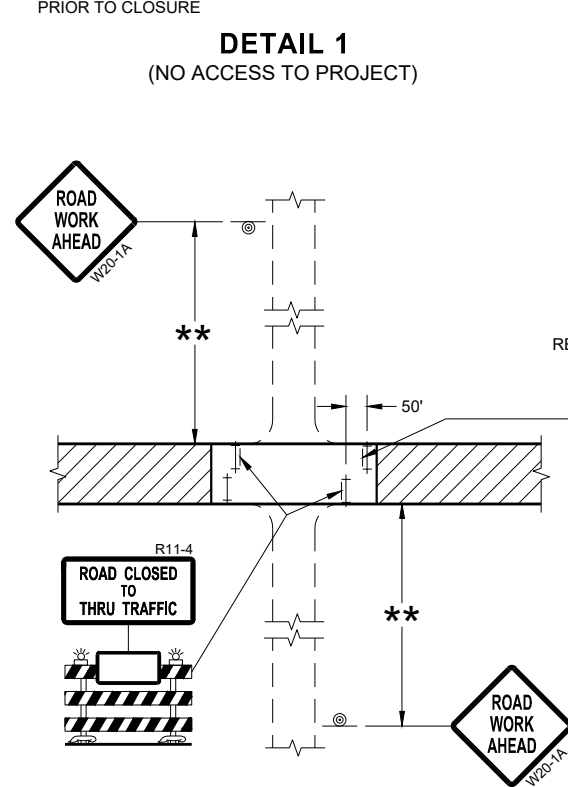
FHWA



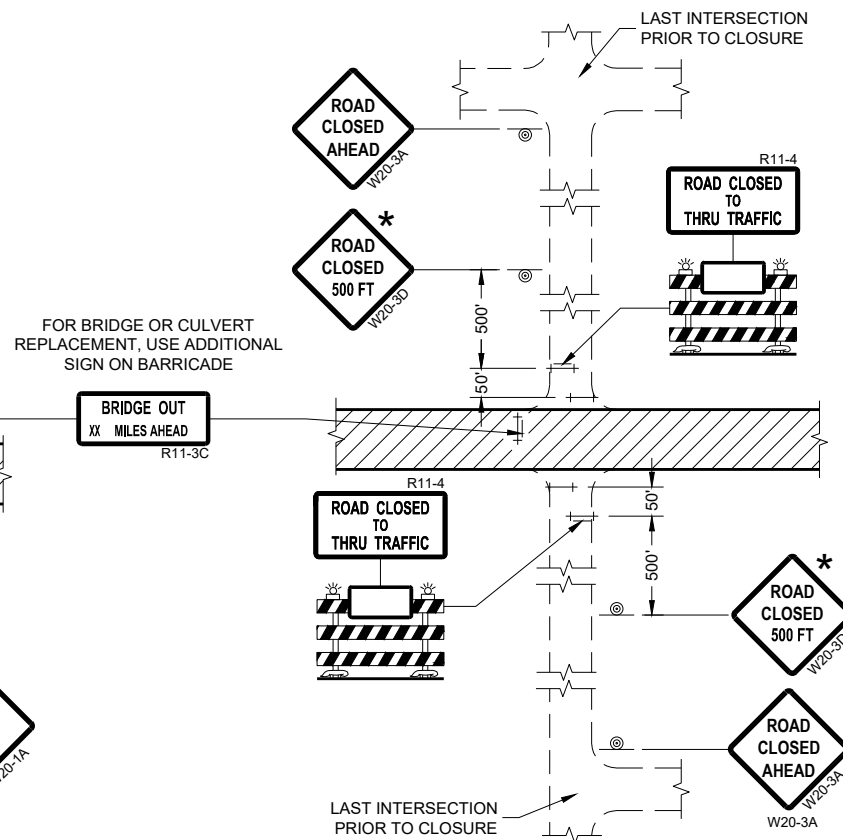
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT)



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

\* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

\*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

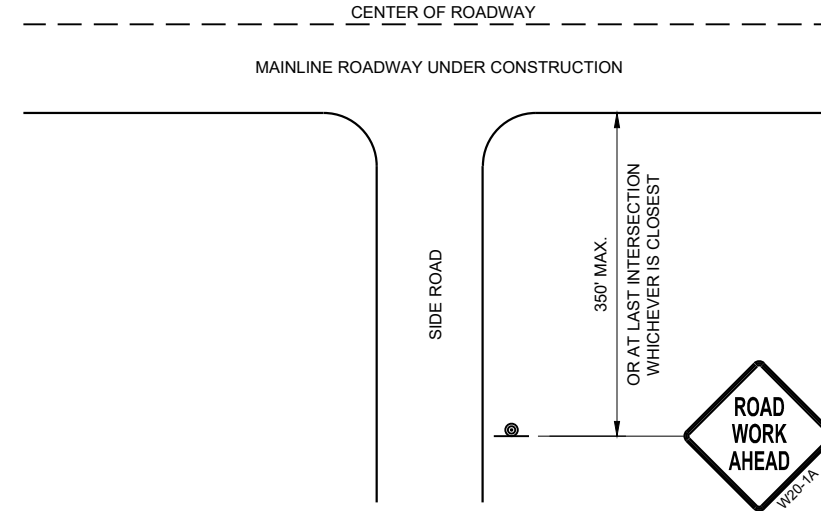
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

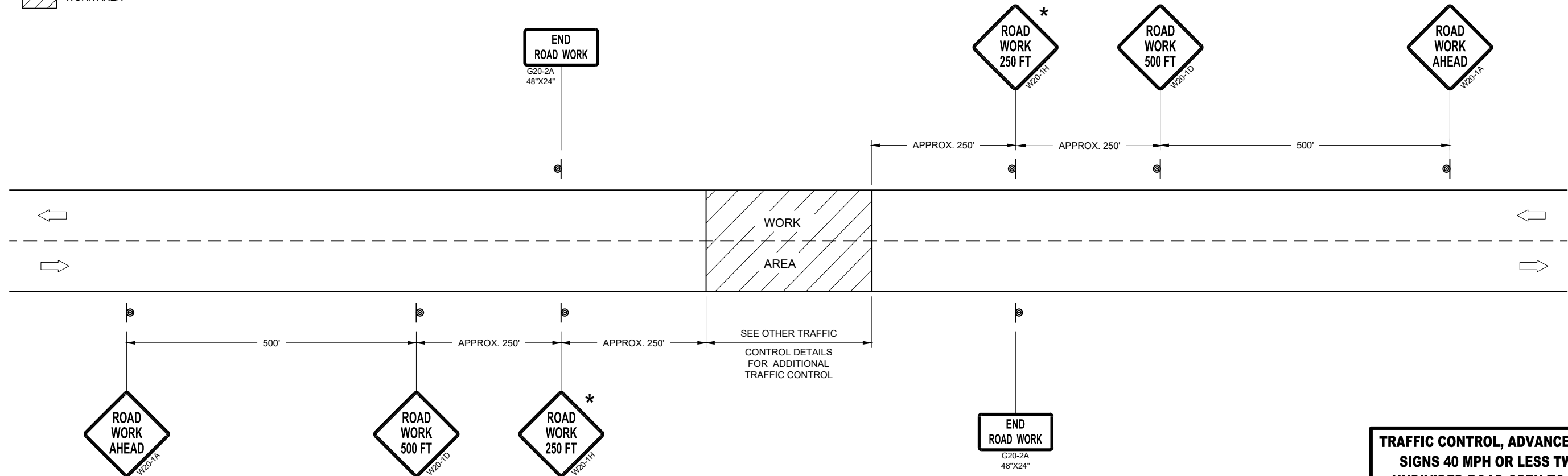
\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS**

**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 40 MPH OR LESS TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

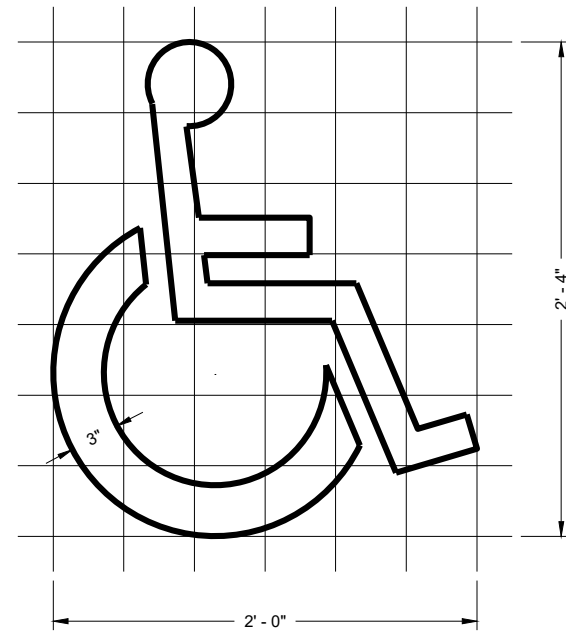
APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

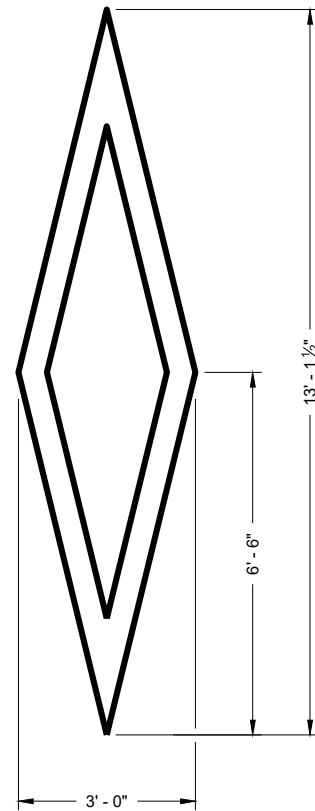


**GENERAL NOTES**

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



**HANDICAP SYMBOL**



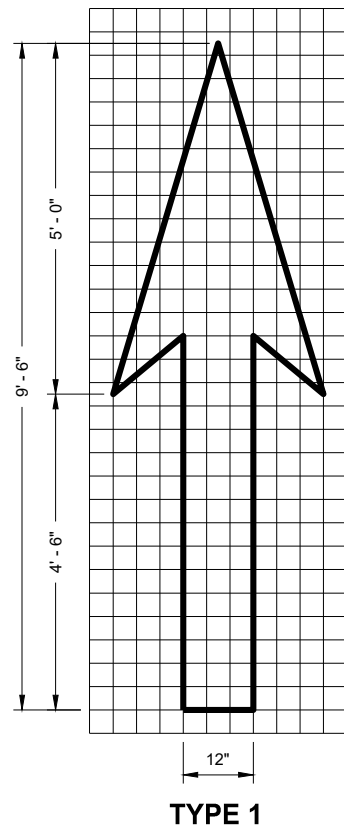
**PREFERENTIAL LANE SYMBOL**

**PAVEMENT MARKING SYMBOLS**

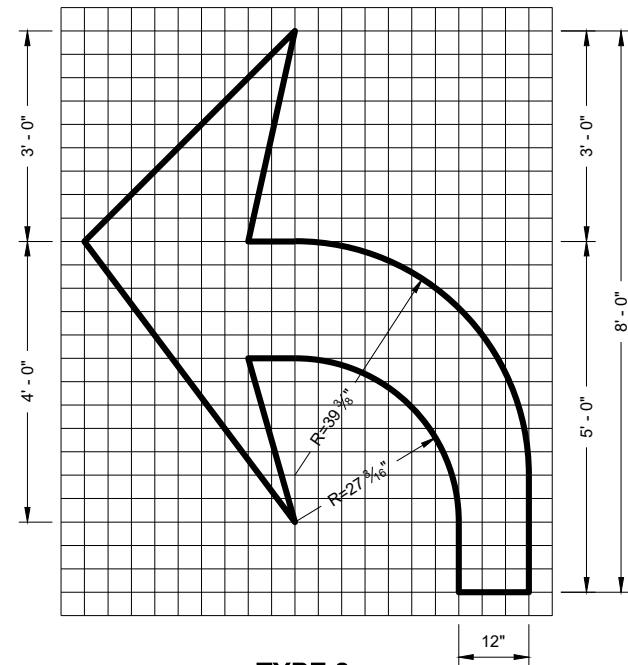
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING  
ENGINEER

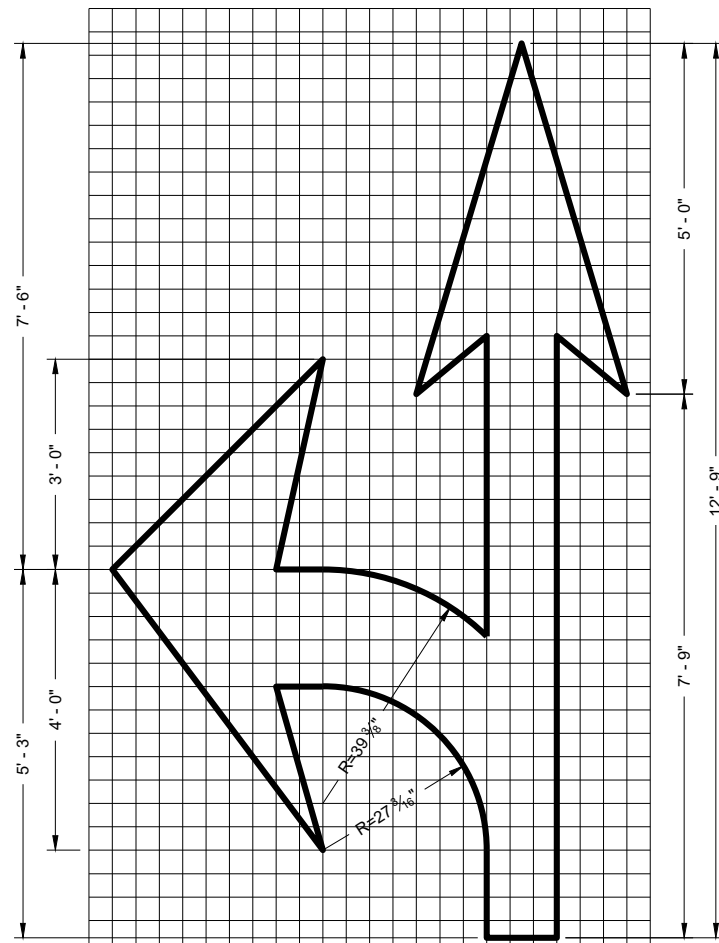
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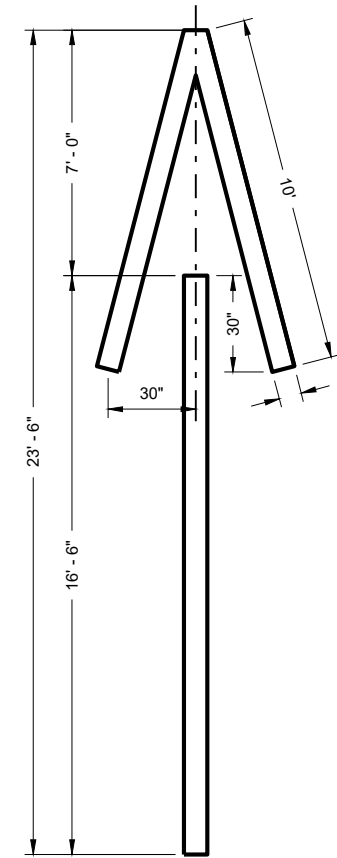
TYPE 1



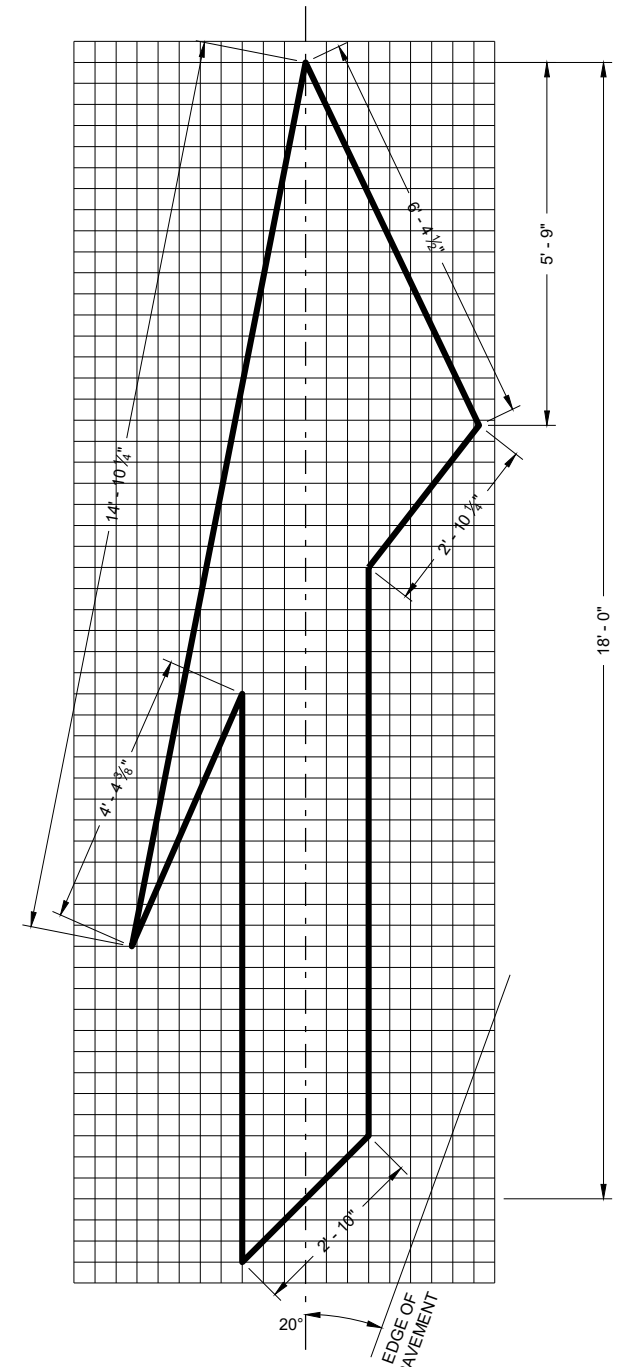
TYPE 2



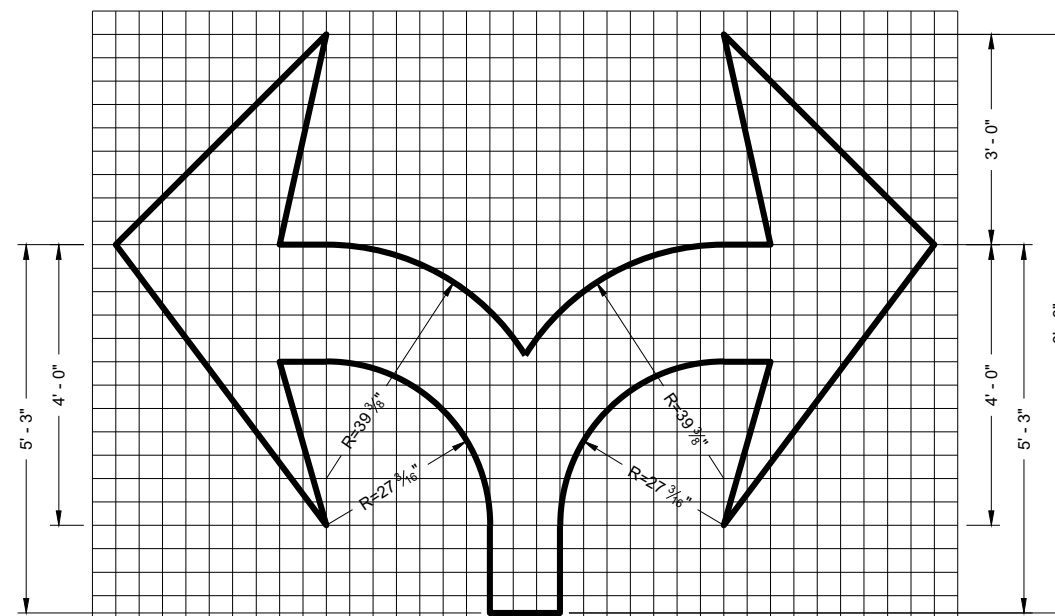
TYPE 3



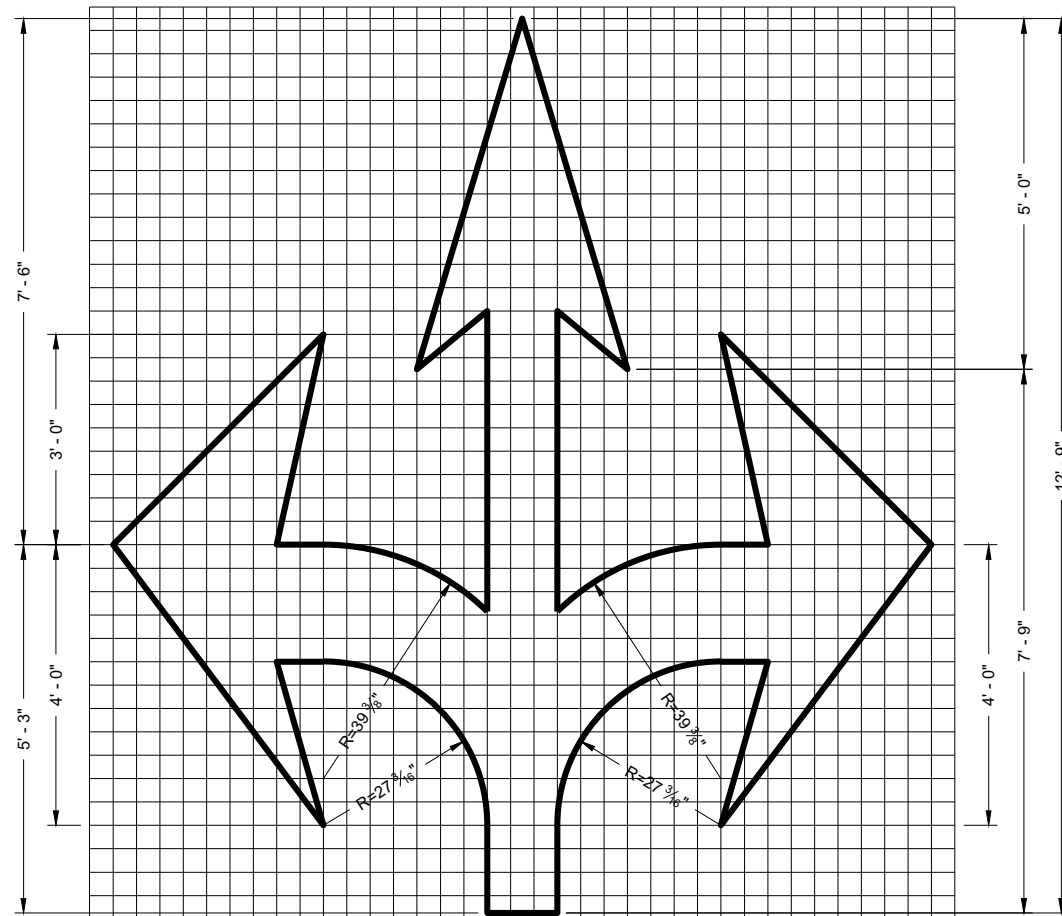
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 7



TYPE 6

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

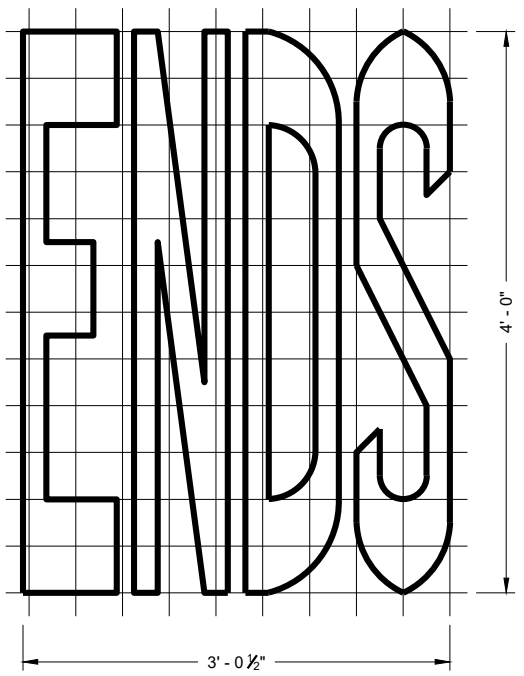
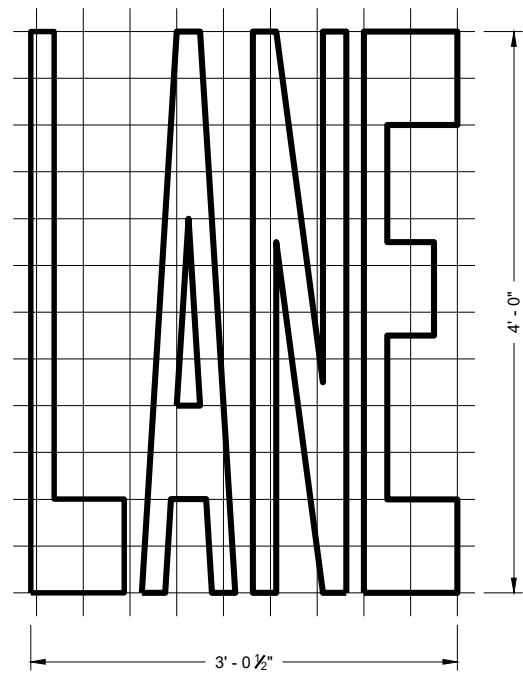
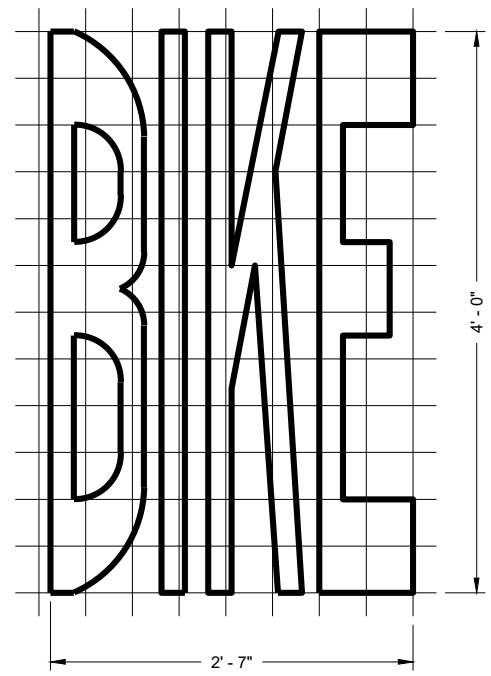
APPROVED

November 2019

DATE

FHWA

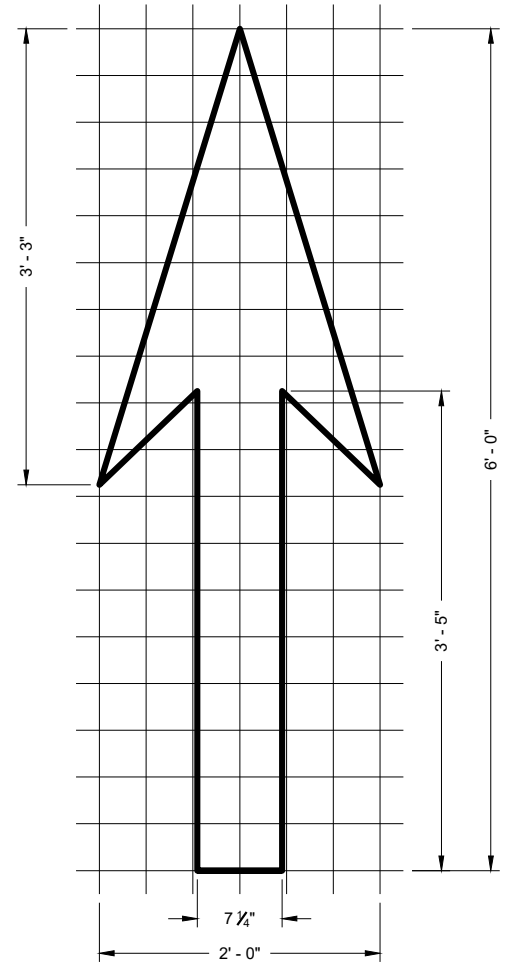
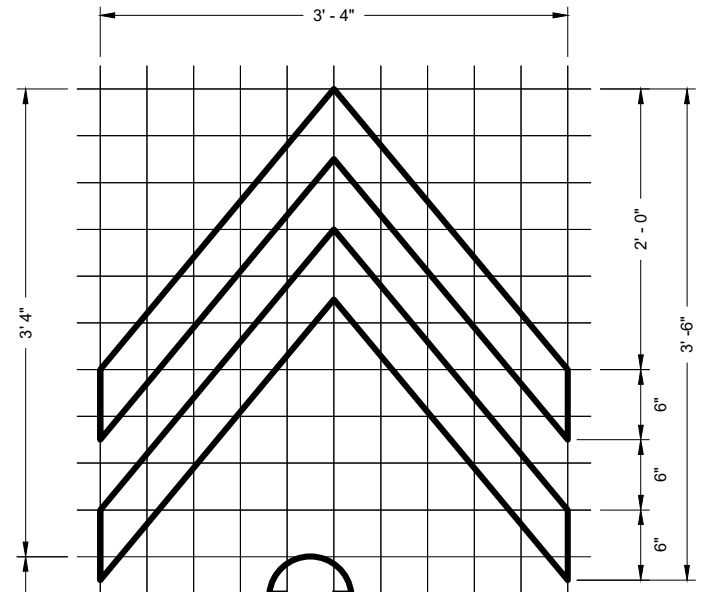
/s/ Matthew Rauch  
STATE SIGNING AND MARKING  
ENGINEER



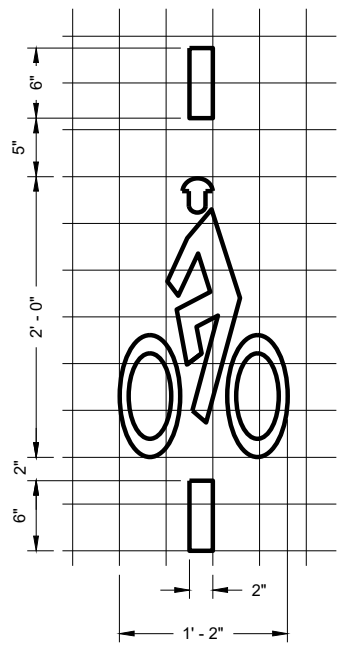
BIKE LANE WORDS

**GENERAL NOTES**

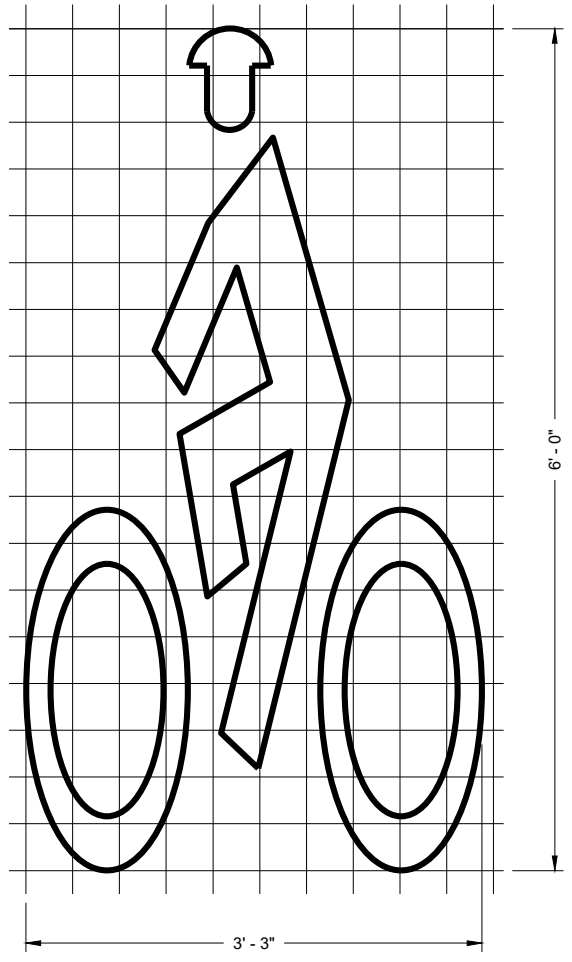
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



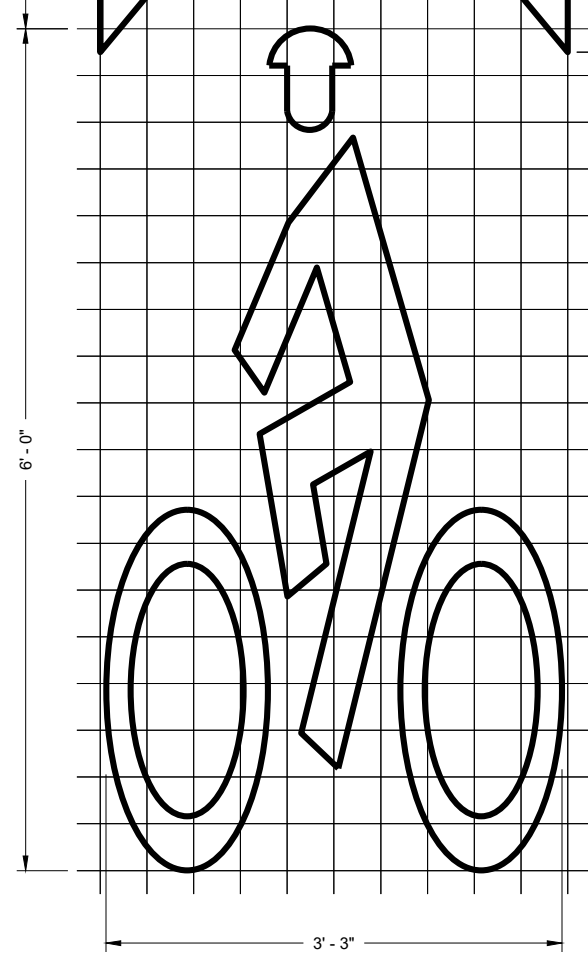
BIKE LANE ARROW



BIKE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL



BIKE LANE SYMBOL FOR SHARED LANE

6

6




<b>PAVEMENT MARKING FOR BIKE LANES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/s/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

**GENERAL NOTES**

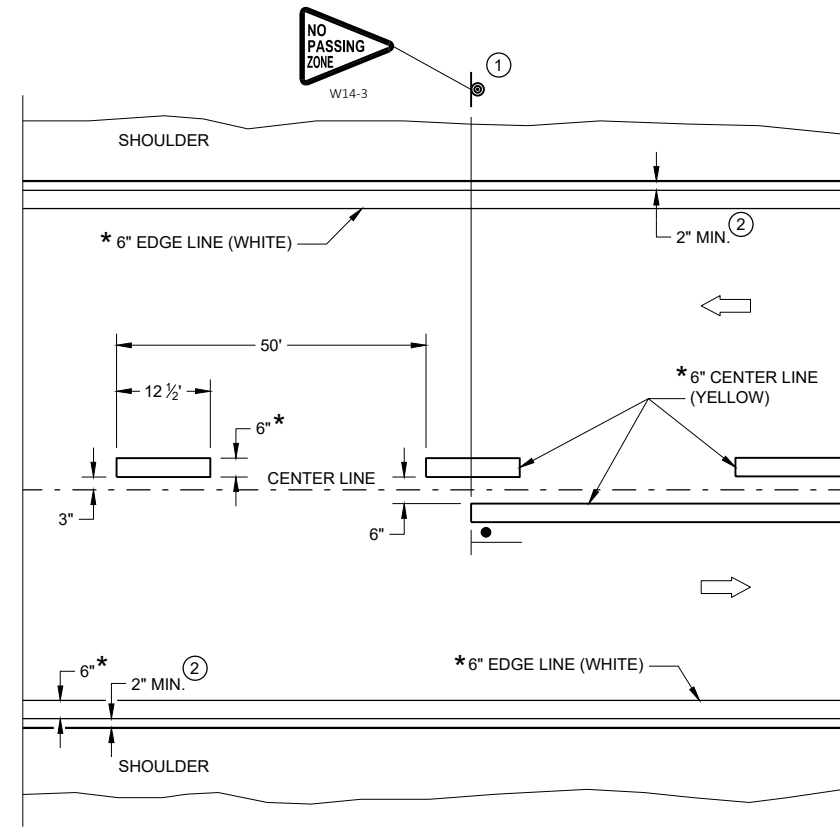
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

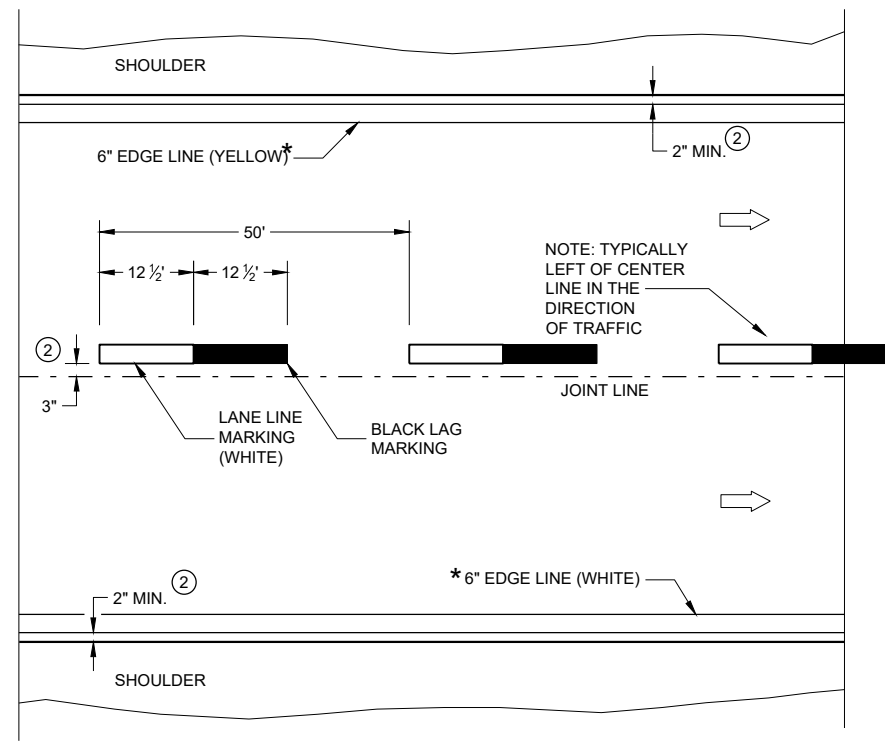
**LEGEND**

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

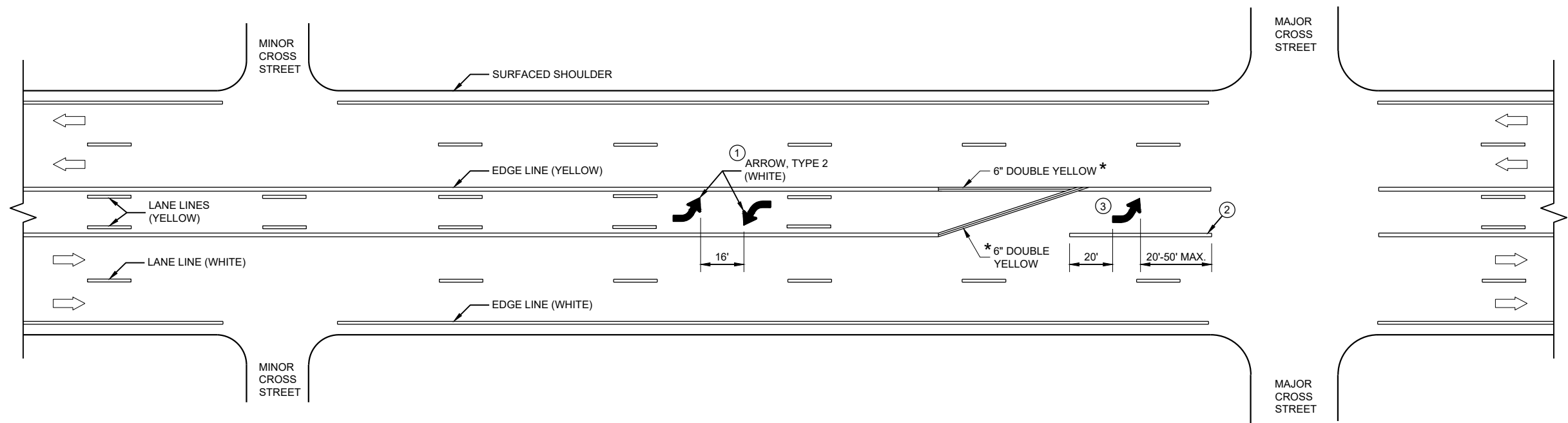
APPROVED  
May 2023 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER

**GENERAL NOTES**

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

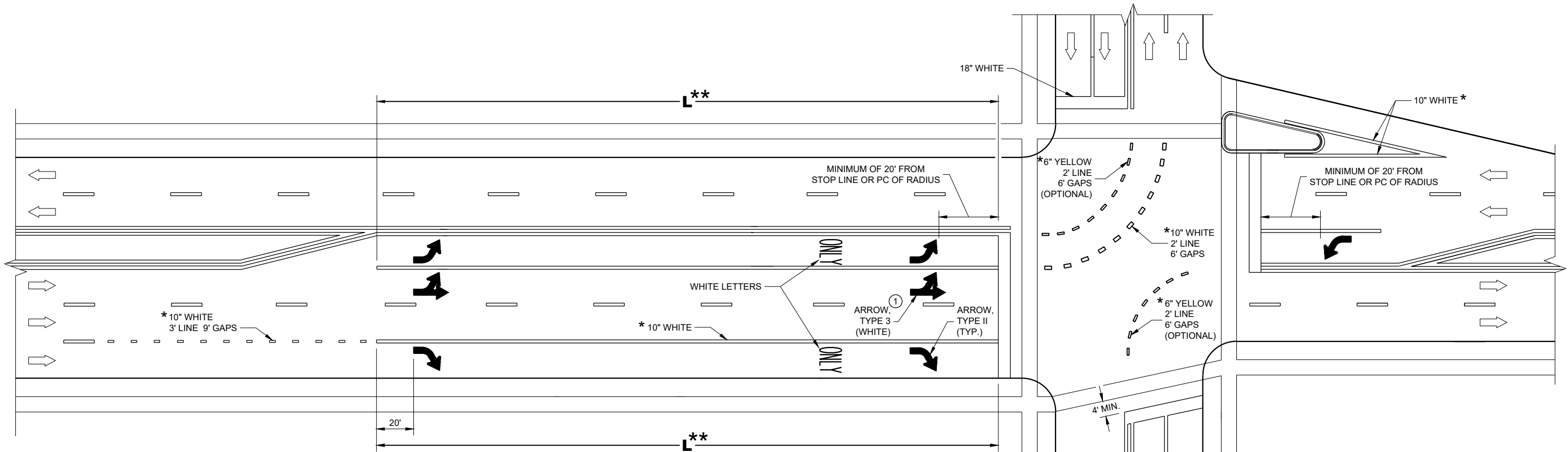
➡ DIRECTION OF TRAFFIC

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



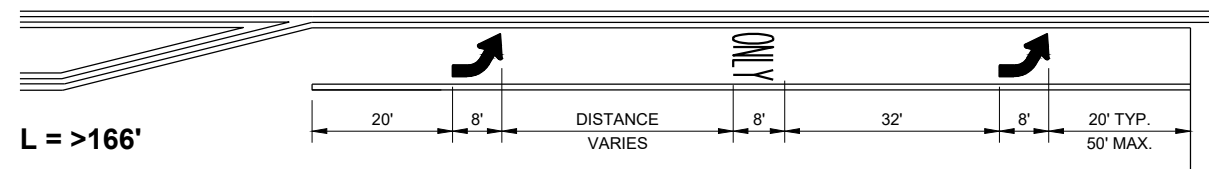
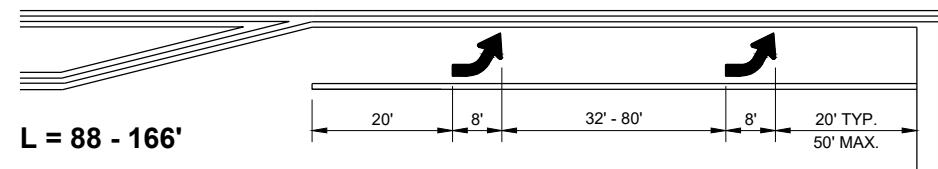
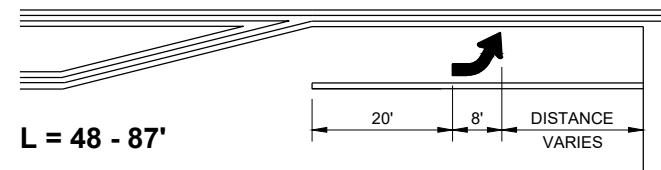
**TWO WAY LEFT TURN LANE**

<b>PAVEMENT MARKING (TURN LANES)</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**TURN LANE OPTIONS**

LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



\*\* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

**GENERAL NOTES**

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

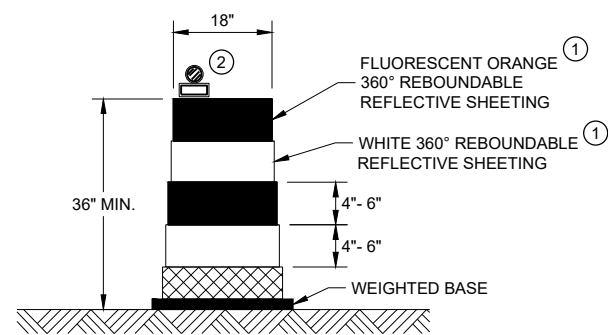
➡ DIRECTION OF TRAFFIC

**L** = LENGTH OF TURN BAY

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

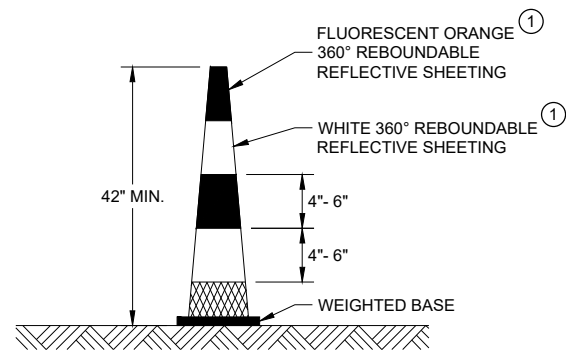
**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



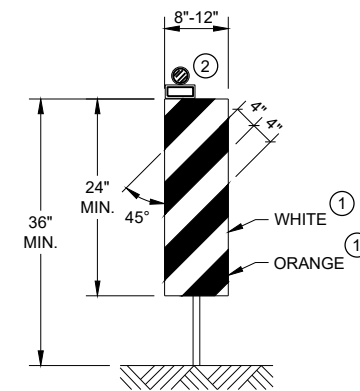
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



**42" CONE**

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS  
BALLAST WIDTHS  
RANGE FROM 14"-20"

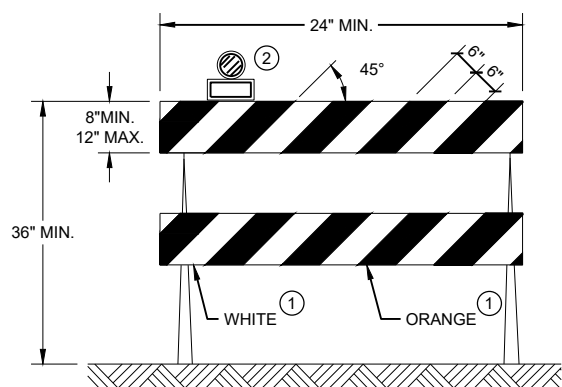


**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
THE TRAFFIC SIDE FOR CHANNELIZATION.

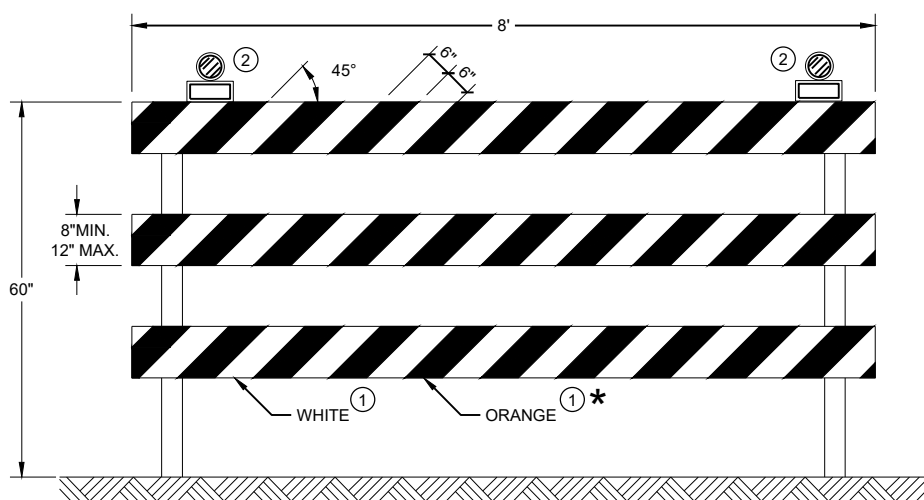
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE III BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.






\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES  
DRUMS, CONES, BARRICADES  
AND VERTICAL PANELS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 November 2022 /S/ Andrew Heidtke  
 DATE WORK ZONE ENGINEER  
 FHWA

**LEGEND**

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

**FLAGGING**

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

**TEMPORARY PORTABLE RUMBLE STRIPS**

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

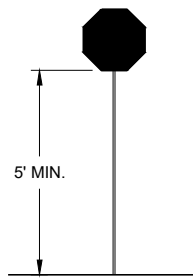
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



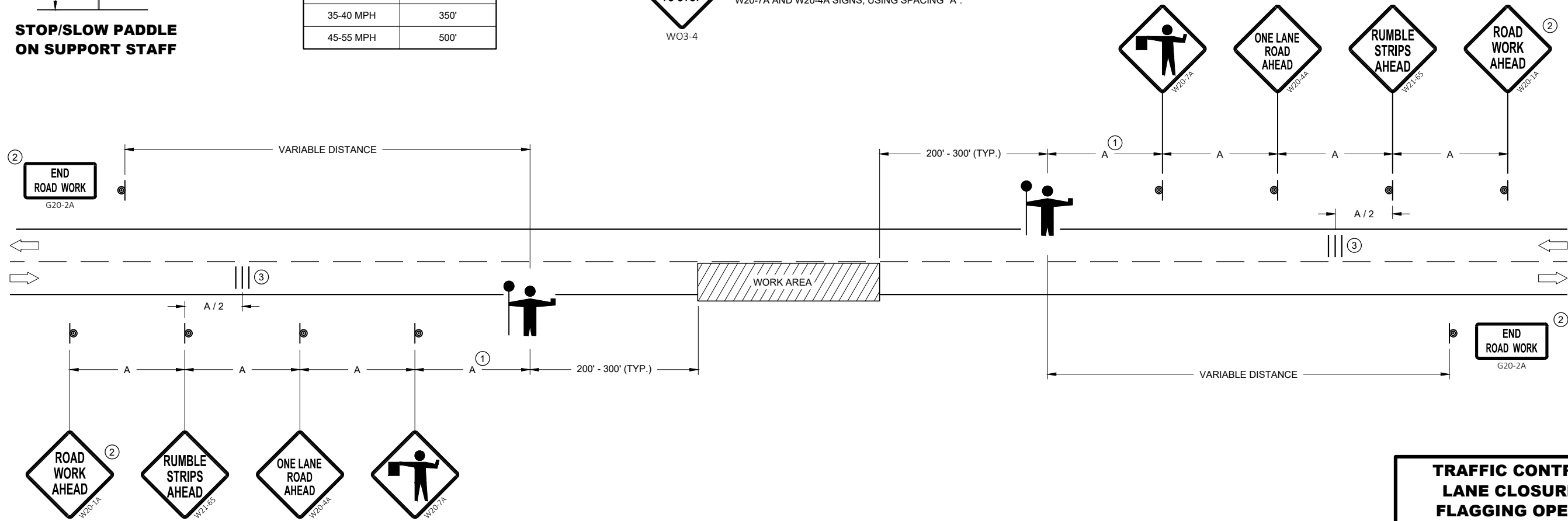
**STOP/SLOW PADDLE ON SUPPORT STAFF**

**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA



**GENERAL NOTES**

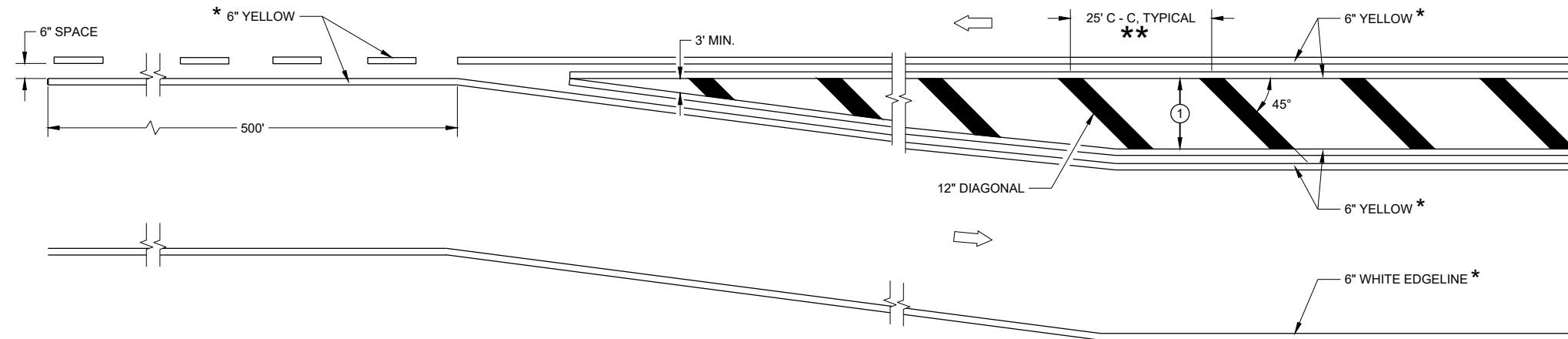
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➔ DIRECTION OF TRAVEL

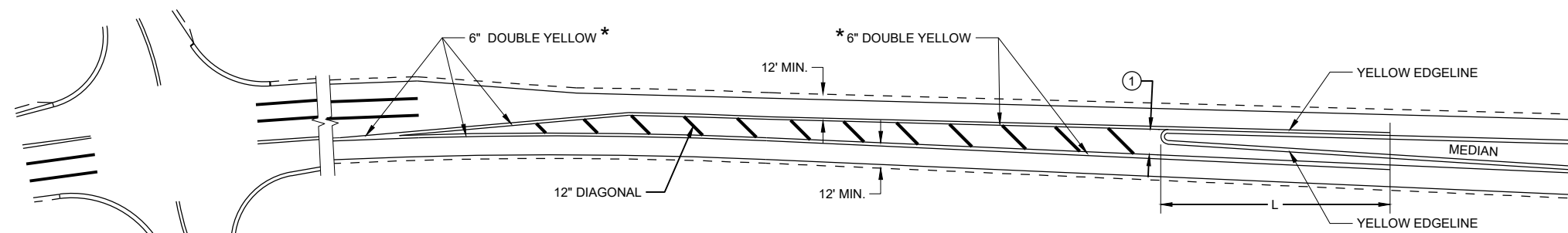
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'

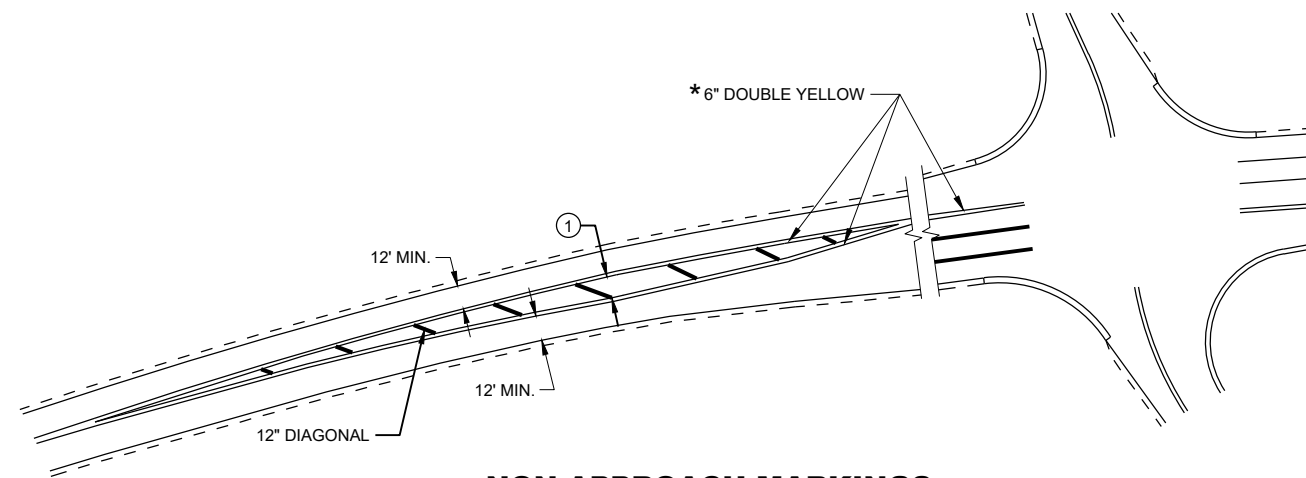
\*\* WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



**MEDIAN ISLAND DETAIL**



**APPROACH MARKINGS FOR OTHER MEDIAN TYPES**



**NON-APPROACH MARKINGS**

6

6

SDD 15C18-08a

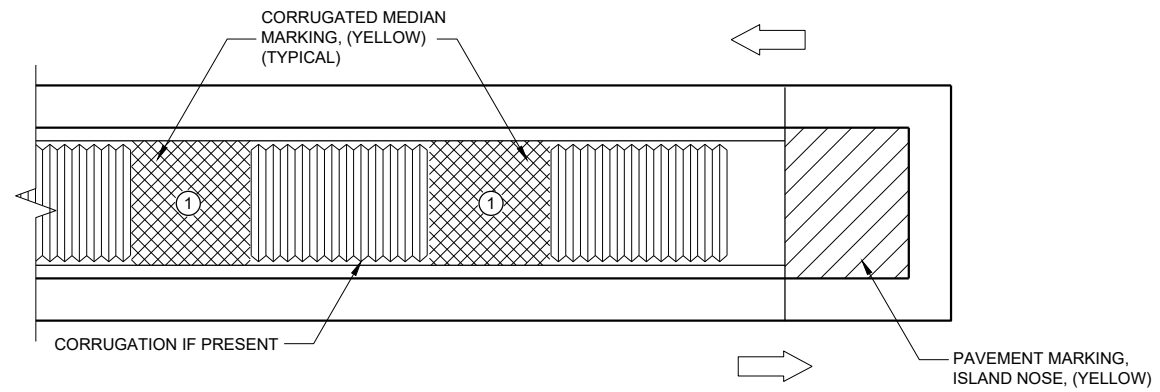
SDD 15C18-08a

**MEDIAN ISLAND PAVEMENT MARKINGS**

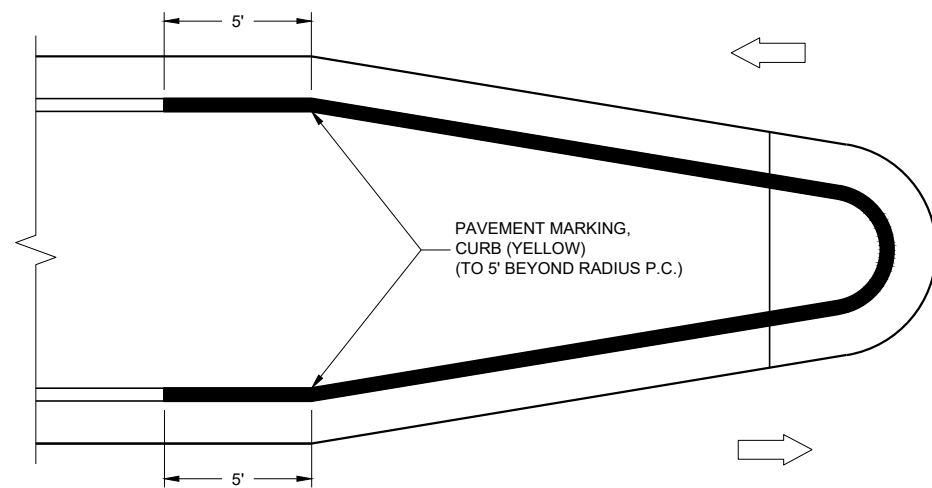
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 DATE /S/ Jeannie Silver  
STATE SIGNING AND MARKING ENGINEER

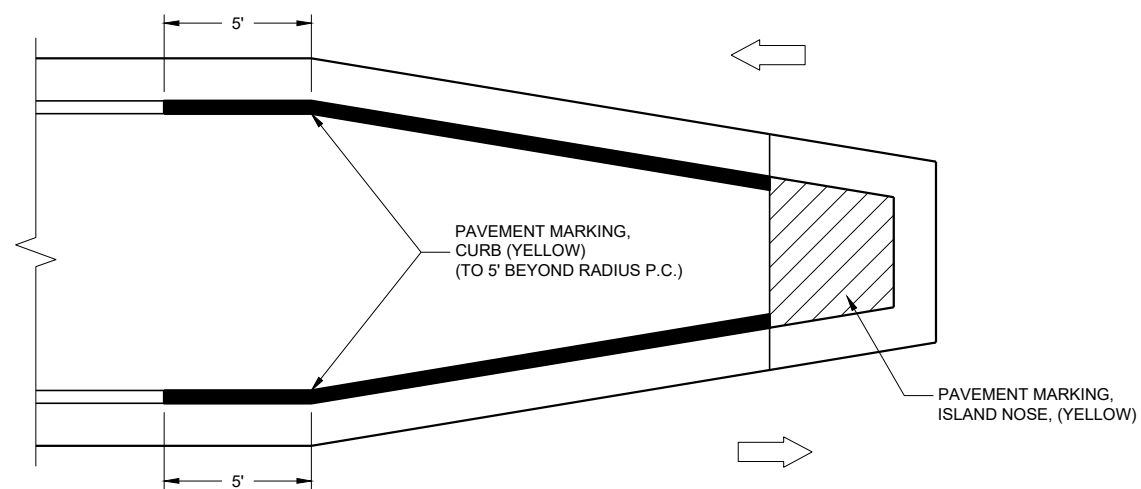
FHWA



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



**MEDIAN ISLAND WITH ROUND BLUNT NOSE**







**MEDIAN ISLAND WITH SLOPED NOSE**

**TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS**

**GENERAL NOTES**

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

**PAVEMENT MARKINGS,  
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Jeannie Silver  
DATE STATE SIGNING AND MARKING  
ENGINEER

### GENERAL NOTES

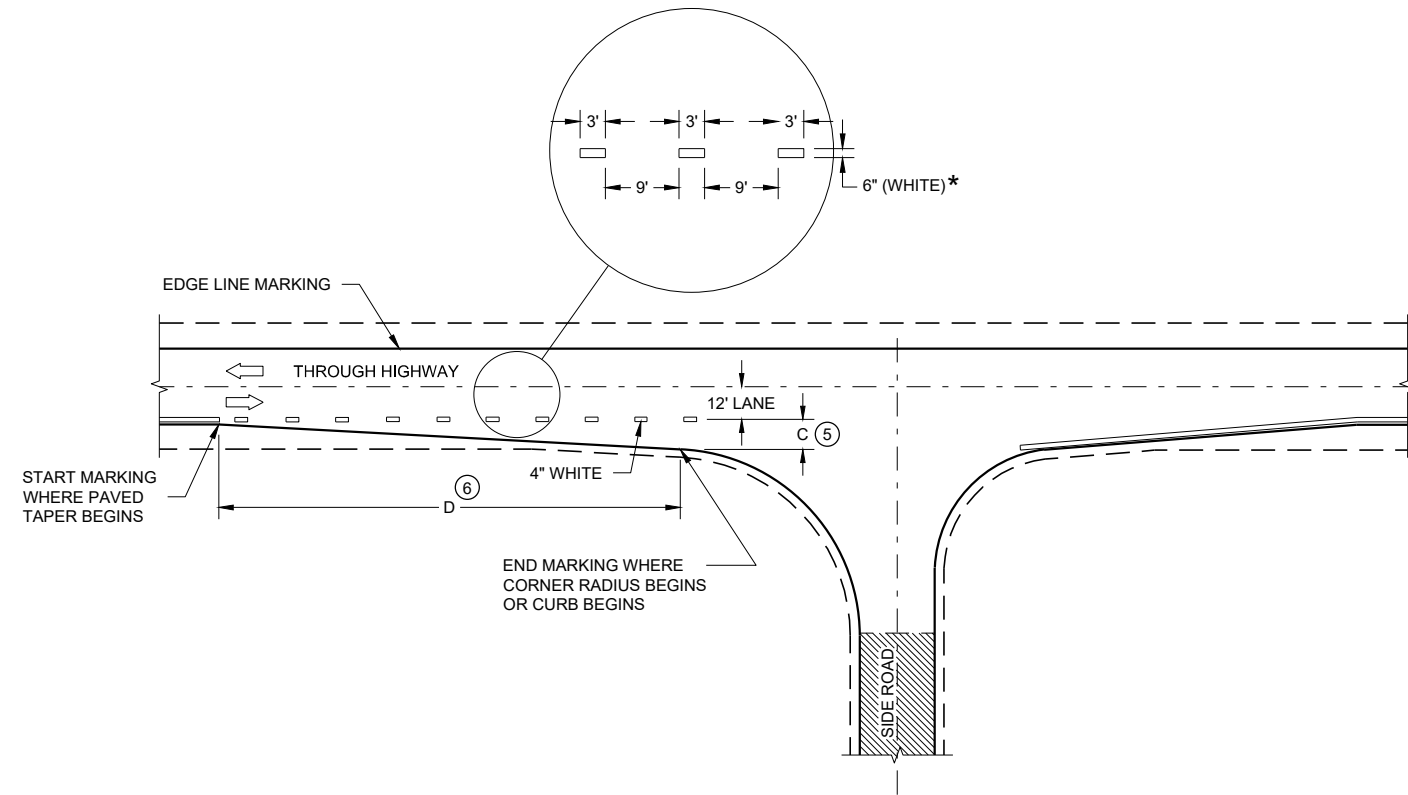
OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

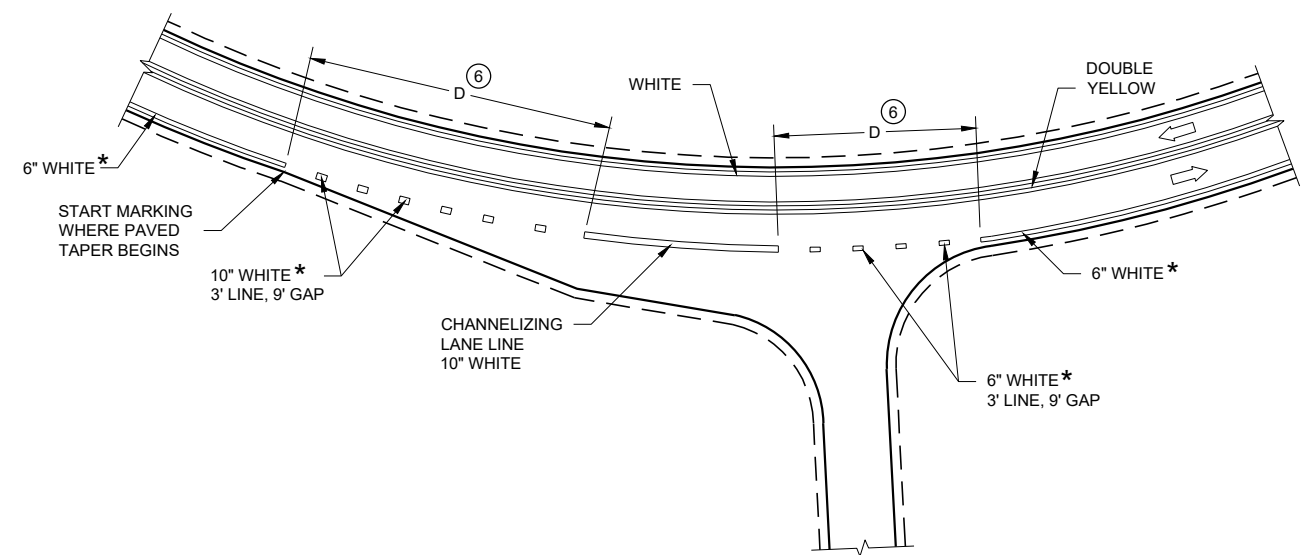
### LEGEND

➔ DIRECTION OF TRAVEL

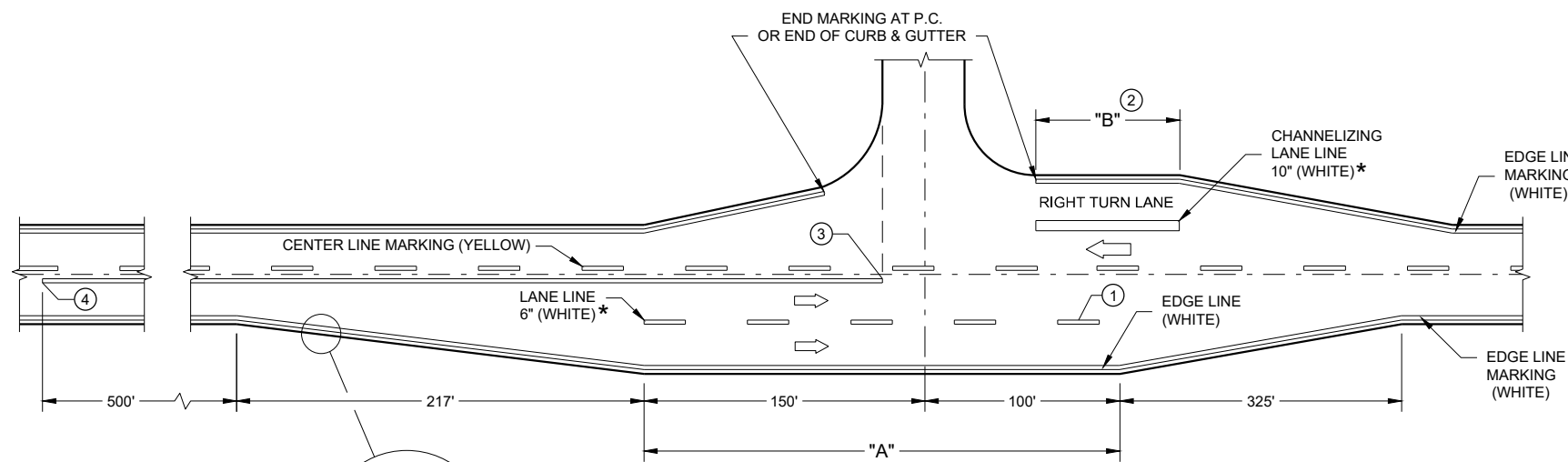
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



### MINOR INTERSECTION

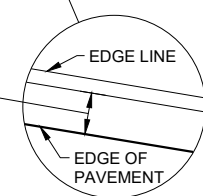


### INTERSECTION ON OUTSIDE OF CURVE



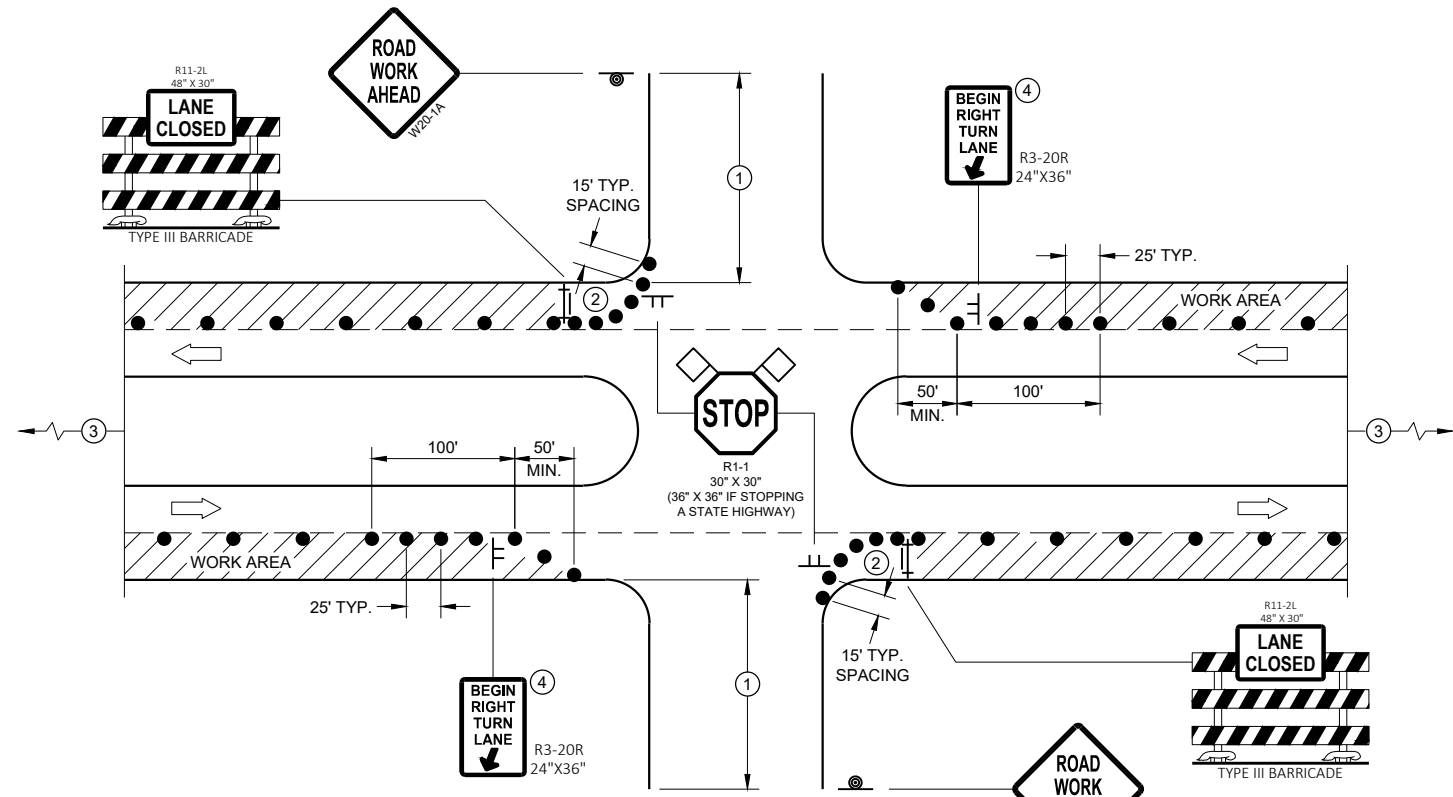
### MAJOR INTERSECTIONS (INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



### PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

**FOR RIGHT LANE CLOSURE AT INTERSECTION**

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

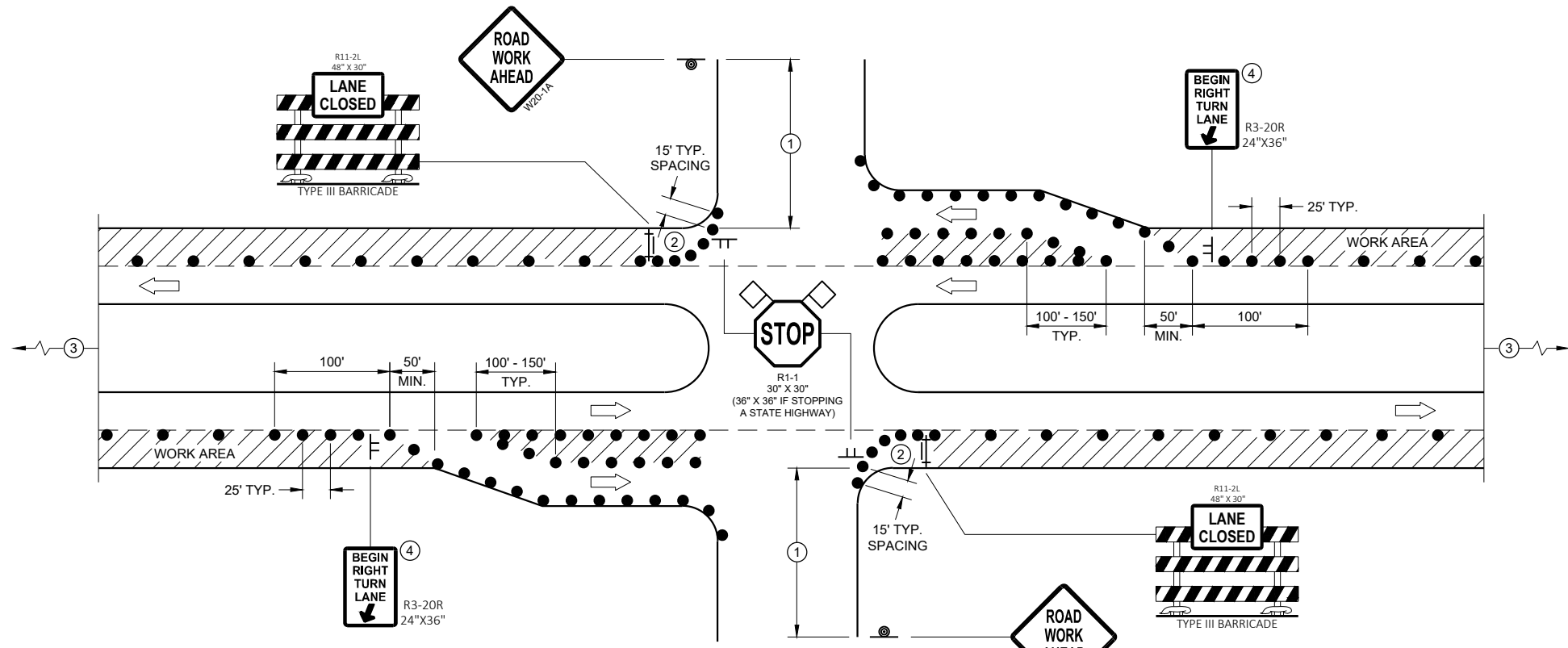
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



**FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)**







**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN SINGLE  
RIGHT LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" BLACK ON ORANGE UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ONLY ONE QUADRANT OF TRAFFIC SHALL BE RELEASED AT A TIME.

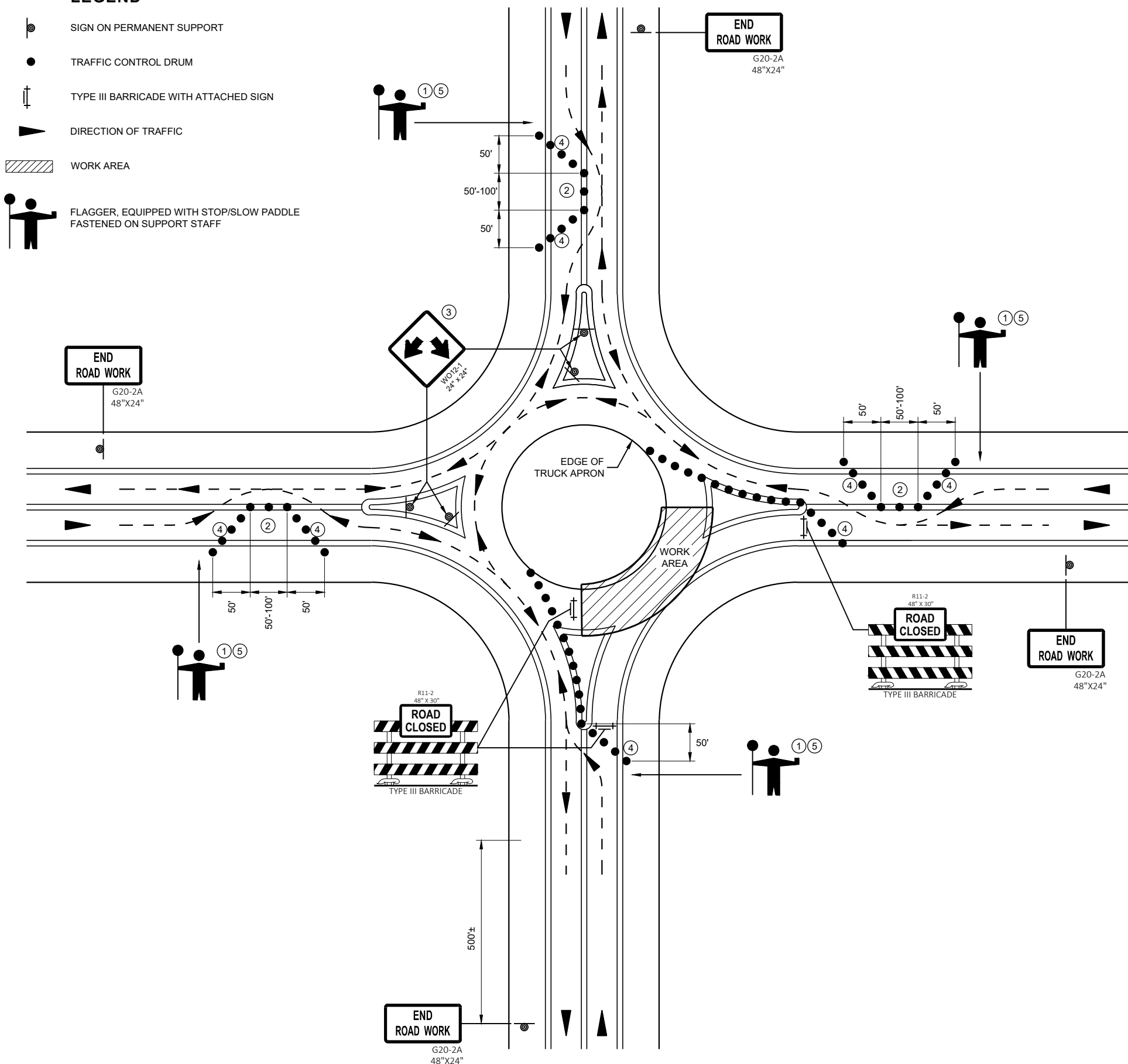
FLAGGERS SHALL CONTROL TRAFFIC ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. ONE FLAGGER SHALL BE DESIGNATED LEAD FLAGGER.

NIGHT TIME WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGER STATION(S).

- ① FLAGGERS SHALL BE IN DIRECT RADIO CONTACT AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.
- ② ADJUST CHANNELIZING DEVICES TO ACCOMMODATE FOR TURNING RADIUS OF LARGE VEHICLES AS DIRECTED BY THE ENGINEER.
- ③ GUIDE SIGN WITH ROAD NAMES MAY BE USED IN LIEU OF THE DOUBLE ARROW (WO12-1) SIGN.
- ④ THE TWO- WAY TAPER SHOULD BE 50 FEET USING 5 EQUALLY SPACED DRUMS.
- ⑤ FOLLOW SDD 15C12 FOR FLAGGING AND ADVANCE WARNING.

**RECOMMENDED REDUCED DRUM SPACING WITHIN ROUNDABOUT**

MPH	DRUM SPACING (FT)
0-40	25
45-55	50



6

6

SDD 15D37 - 03

SDD 15D37 - 03









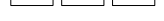
**TRAFFIC CONTROL,  
FLAGGING OPERATION,  
ROUNDABOUT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED \_\_\_\_\_  
DATE May 2020 /S/ Andrew Heidtke  
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

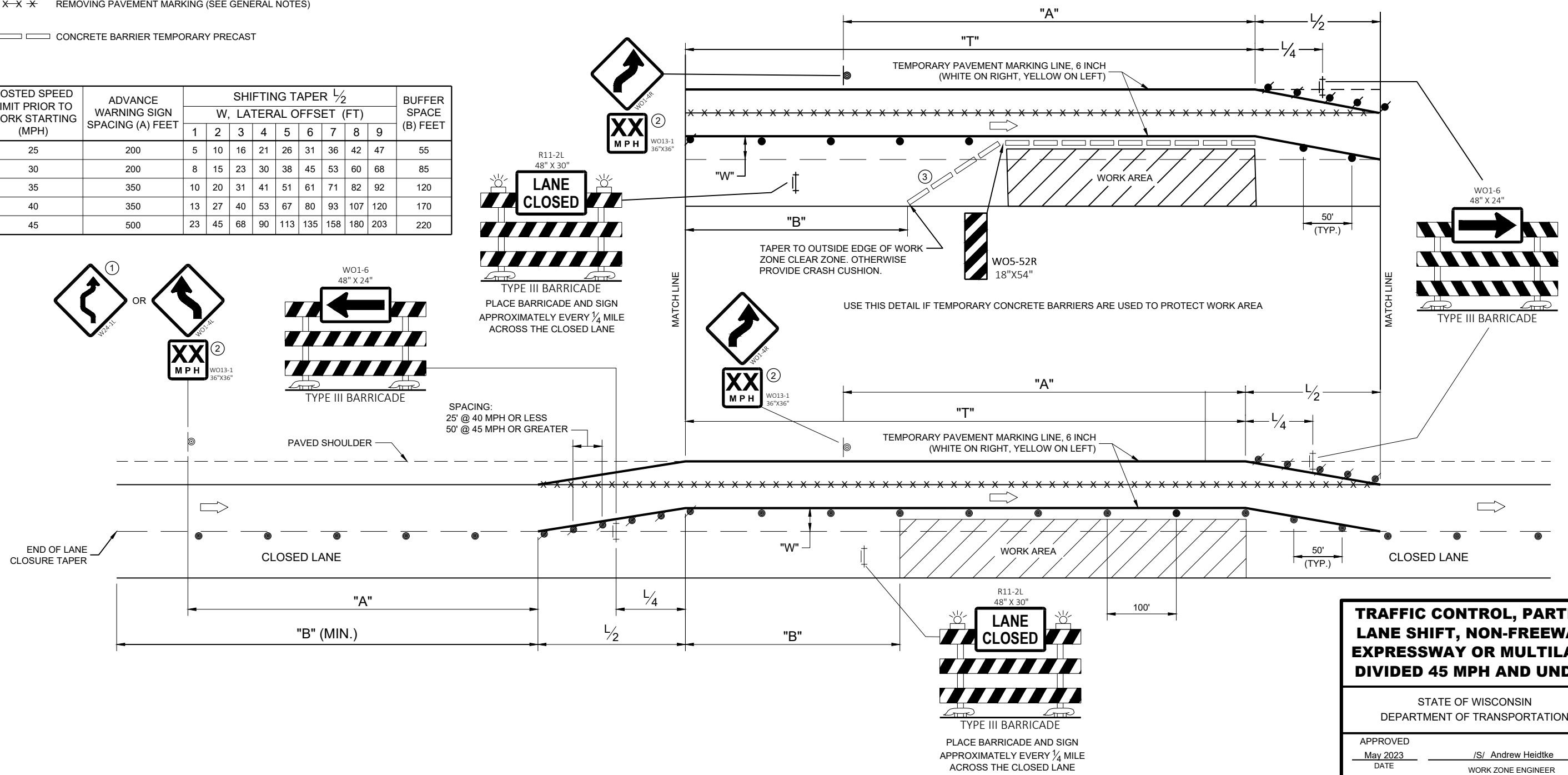
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

- ① USE ONLY WHEN T < 600', OMIT WO1-4R.
- ② IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ③ BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS  
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



6

6

SDD 15D40-05C

SDD 15D40-05C

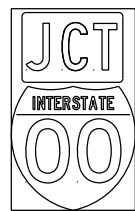
**TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

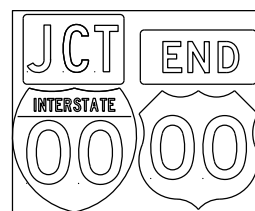
APPROVED  
DATE May 2023 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

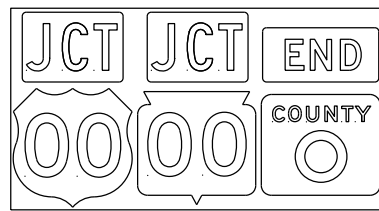
# TYPICAL ASSEMBLIES



J1-1



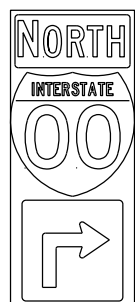
J1-2



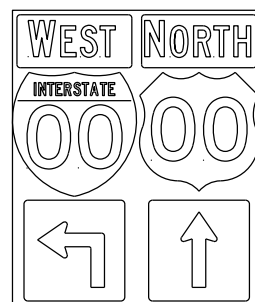
J1-3



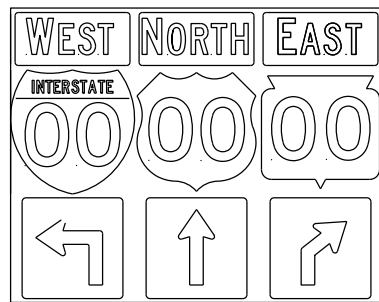
JR1-1



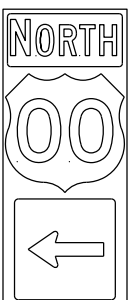
J2-1



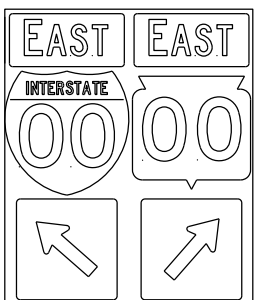
J2-2



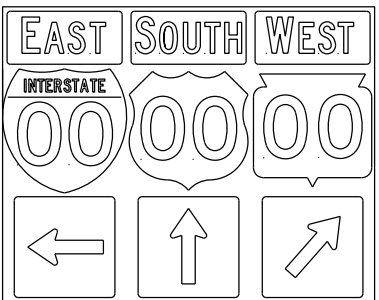
J2-3



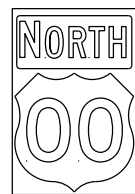
J3-1



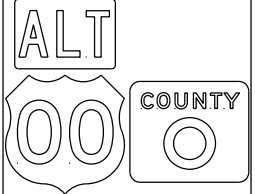
J3-2



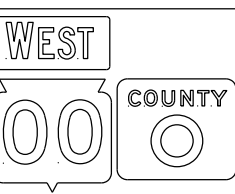
J3-3



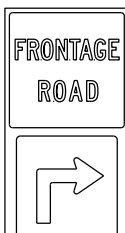
J4-1



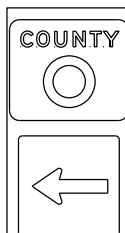
J4-2



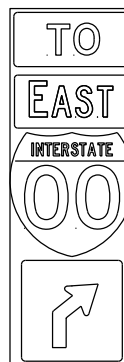
J4-2



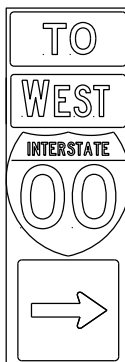
J12-1



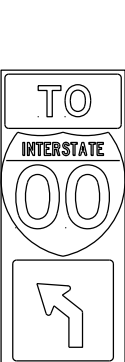
J13-1



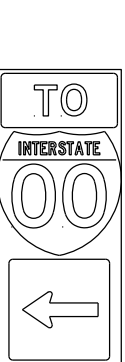
J32-1



J33-1



J22-1



J23-1



JR13-1



JR23-1

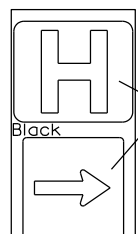


JR99-1



JV

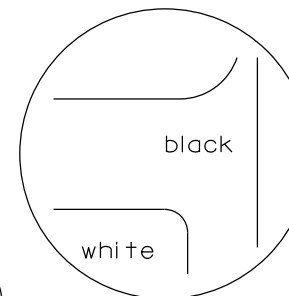
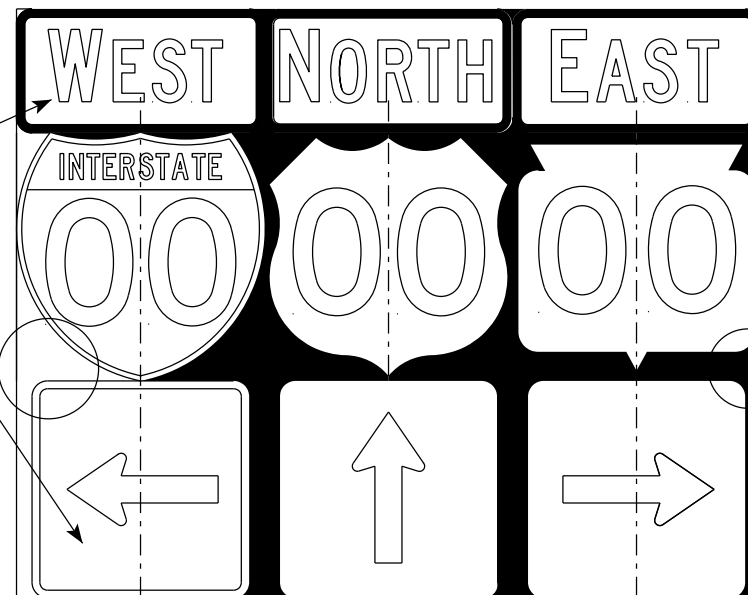
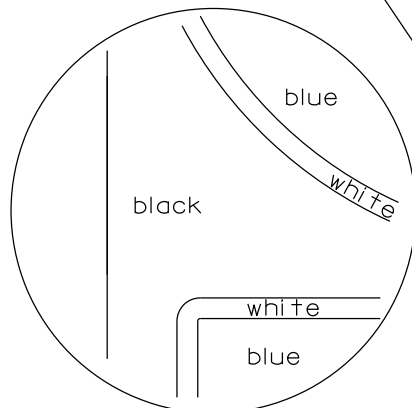
(Typical Vertical J-Assembly See Note 10 and 11)



JH-1

Blue Background

blue background with interstate



black background

## NOTES

- Signs are Type II - Type H Reflective
- Color:
  - Background - Black Non-reflective
  - Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an MI-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

7

7

PROJECT NO:

FILE NAME : C:\CAEfiles\Projects\tr\_stdplote\_A21S.dgn

PLOT DATE : 18-MAR 2021 1:37

PLOT BY : mscj9h

PLOT NAME :

SHEET NO:

E

ROUTE MARKERS & COMPONENTS  
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

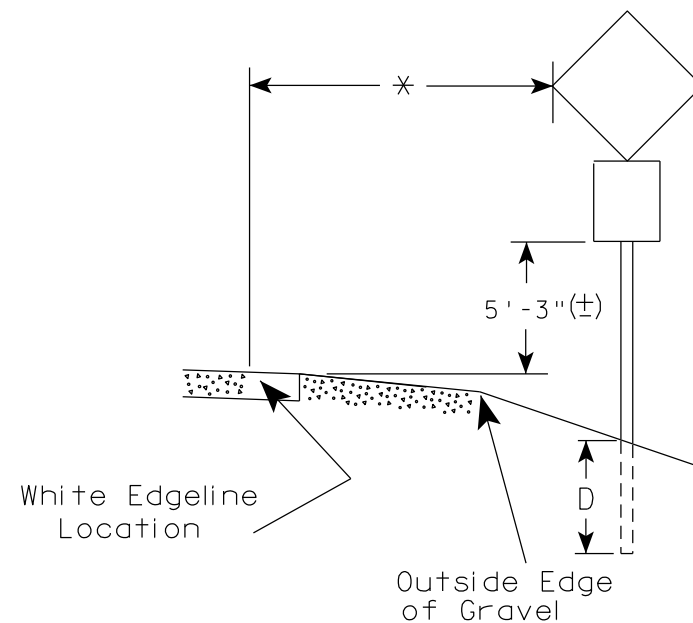
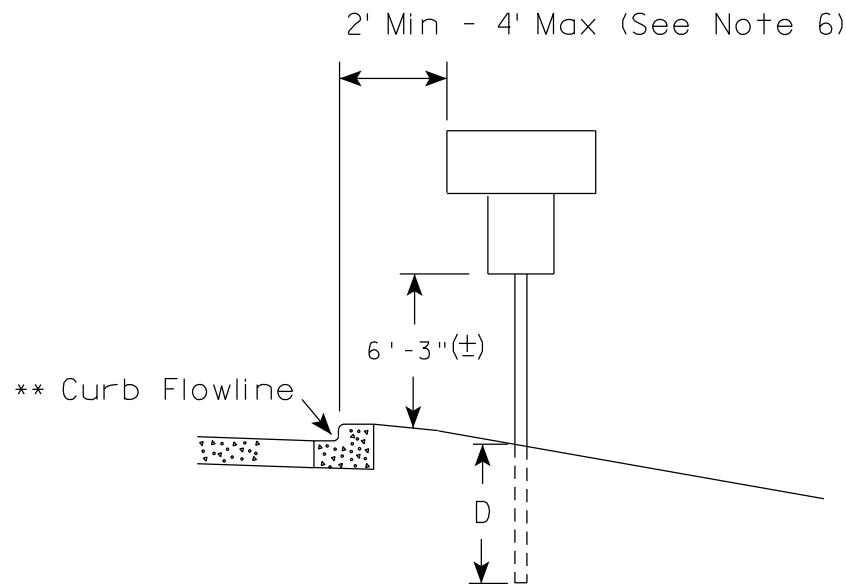
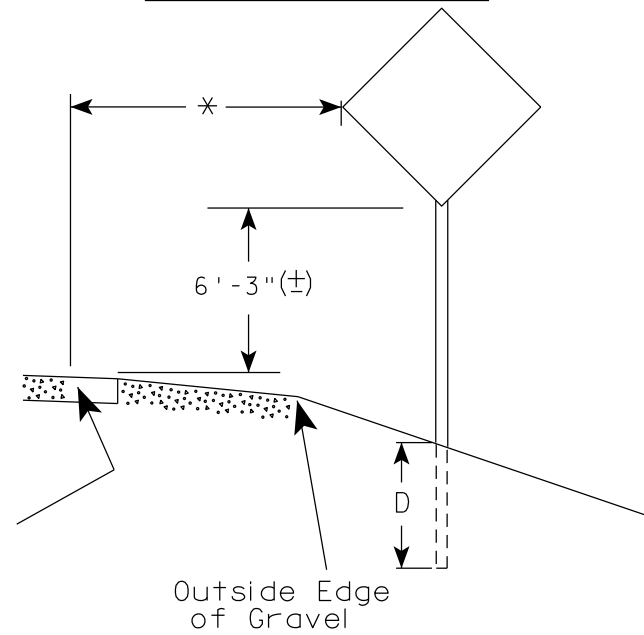
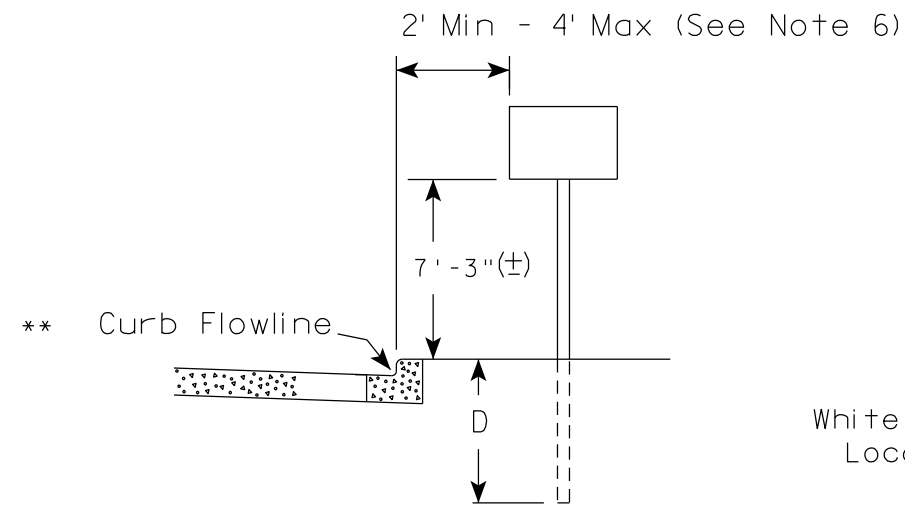
DATE 3/18/21

PLATE NO. A2-1S.9

WISDOT/CADDS SHEET 42

URBAN AREA

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

- GENERAL NOTES**
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
  2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
  3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
  4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
  5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
  6. The (±) tolerance for mounting height is 3 inches.
  7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

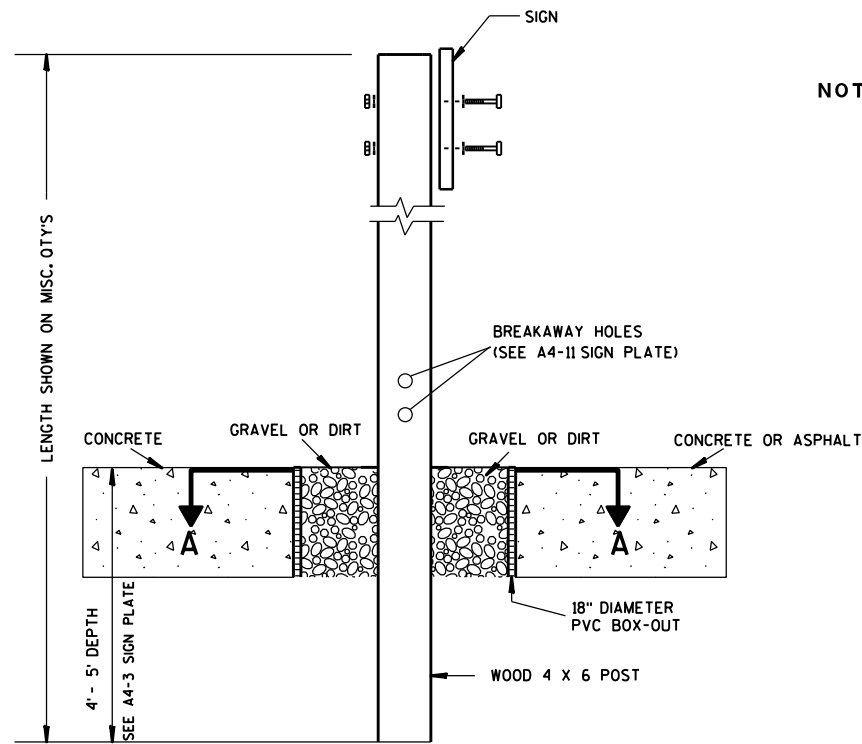
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

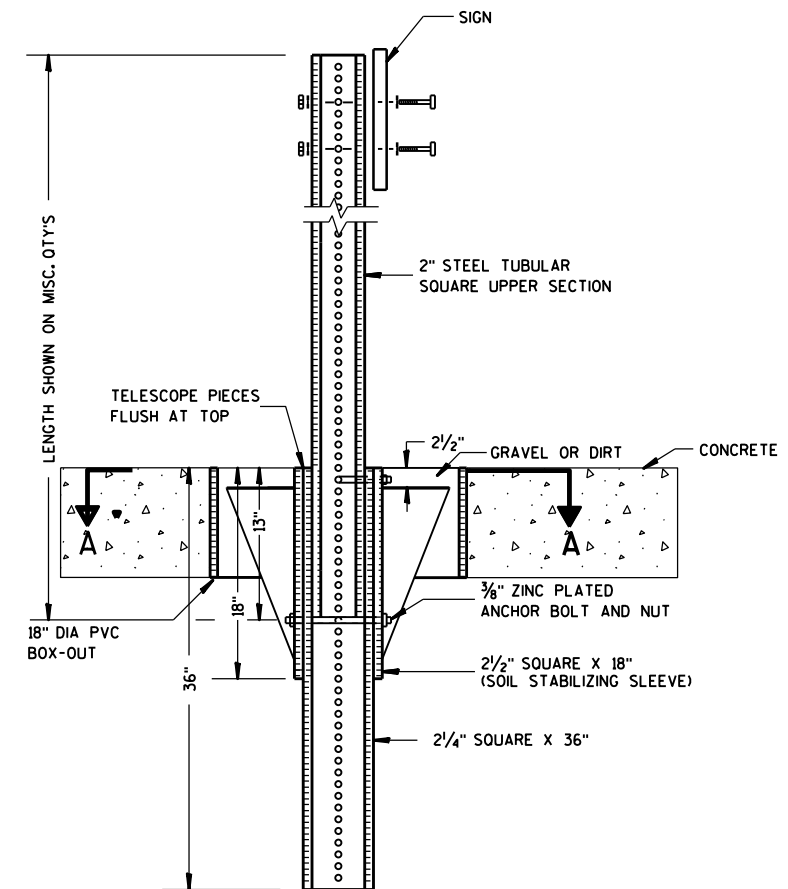




**ELEVATION VIEW**

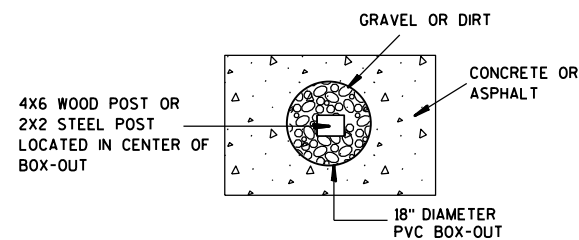
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

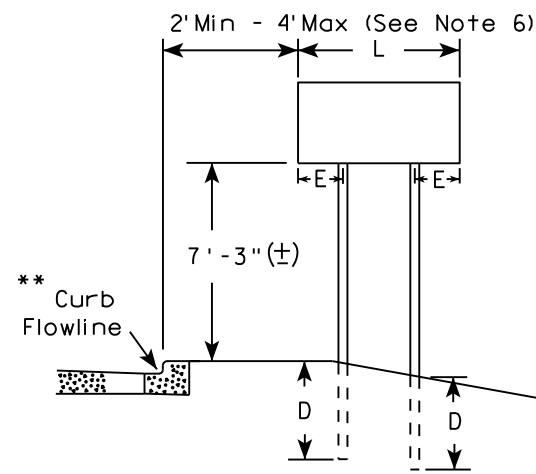
**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
DATE <u>1/27/14</u>	PLATE NO. <u>A4-3B.1</u>

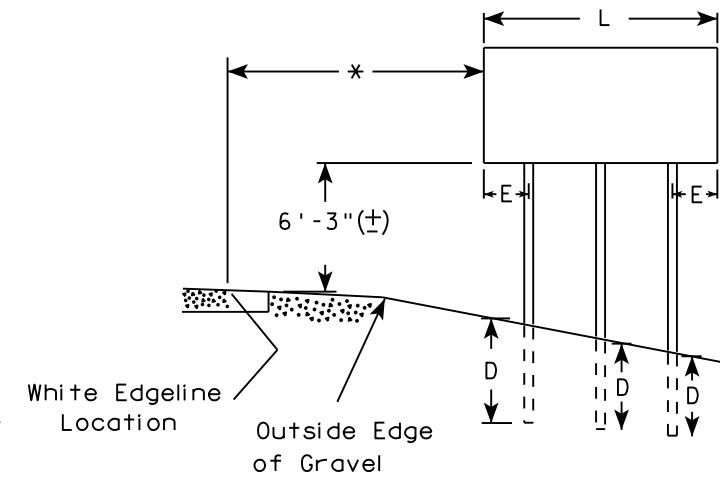
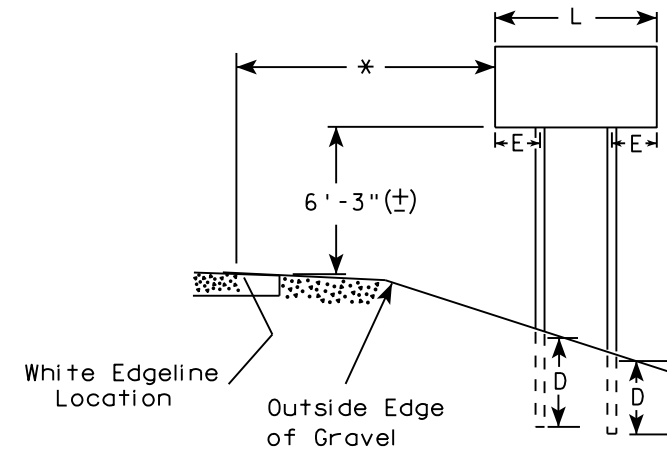
**GENERAL NOTES**

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

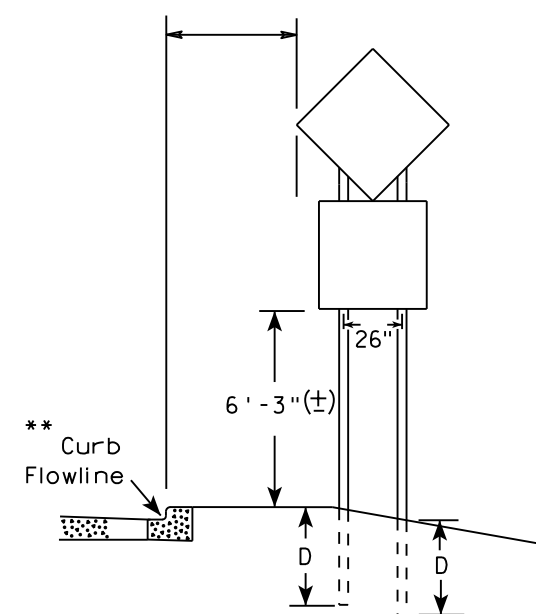
**URBAN AREA**



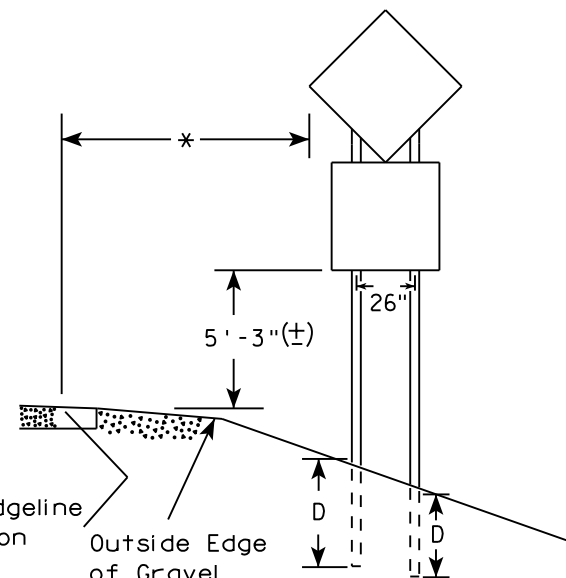
**RURAL AREA (See Note 3)**



2' Min - 4' Max (See Note 6)



**48" DIAMOND WARNING SIGN**



**48" DIAMOND WARNING SIGN**

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

\*\*\*

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

**POST EMBEDMENT DEPTH**

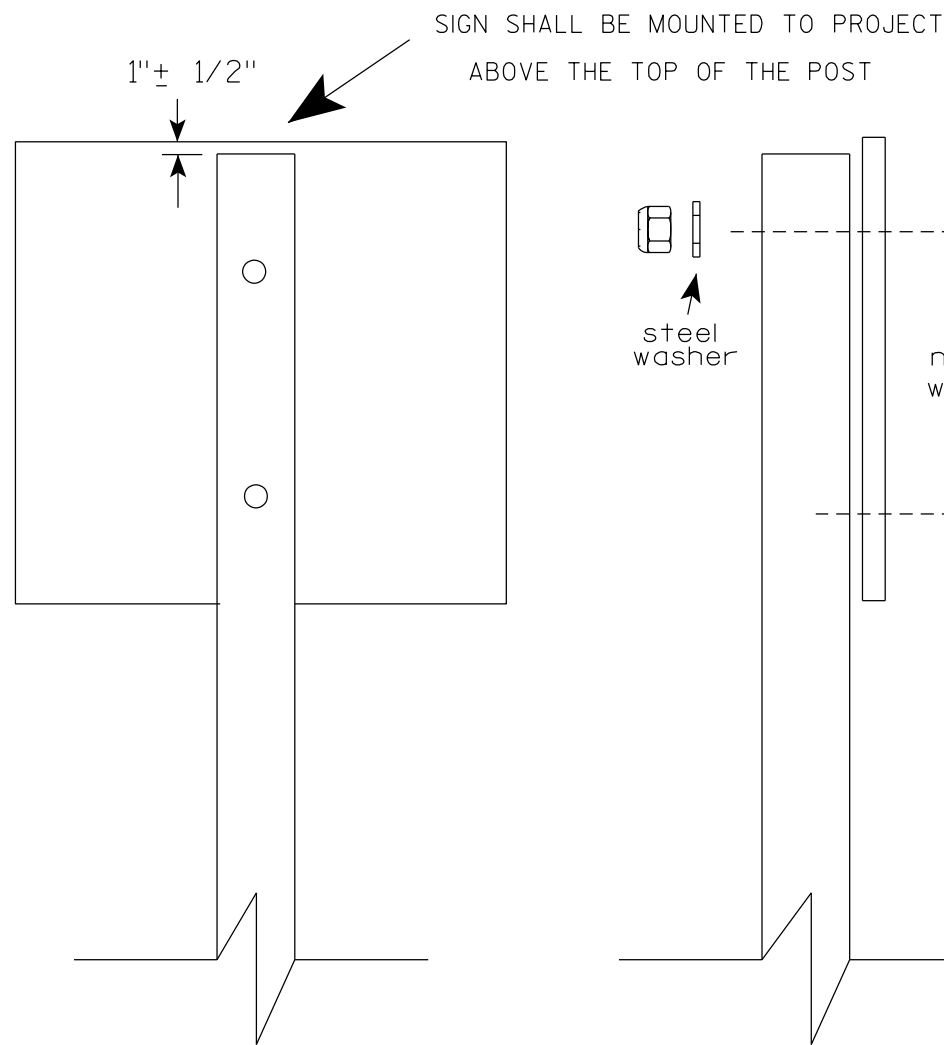
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

**TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
 O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL  
 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS  
TO POSTS

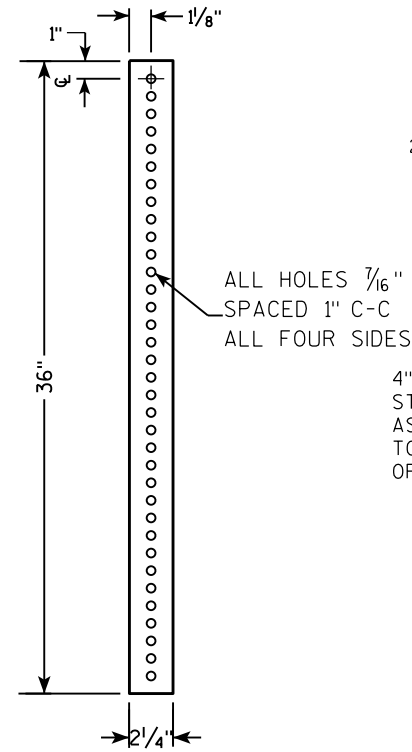
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

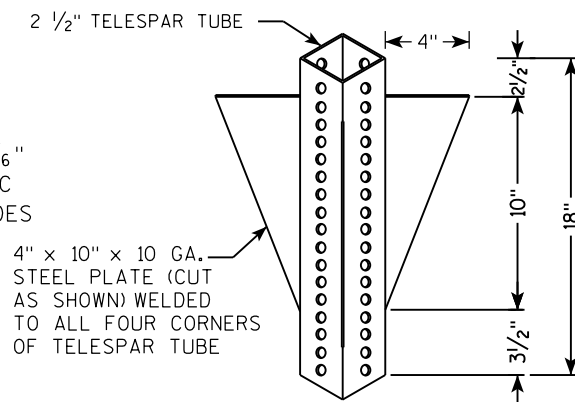
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

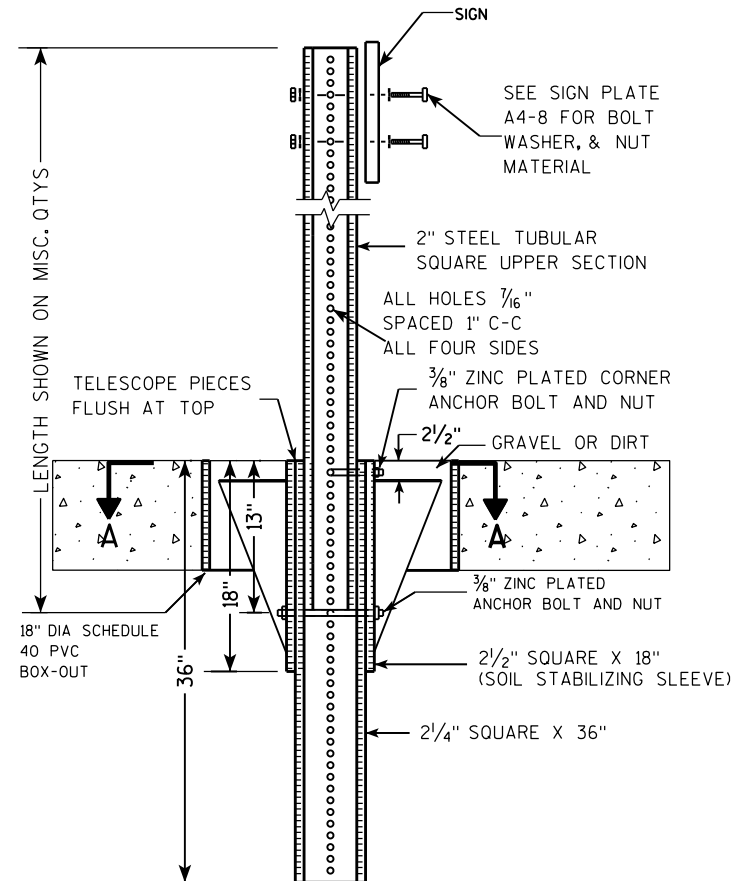
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



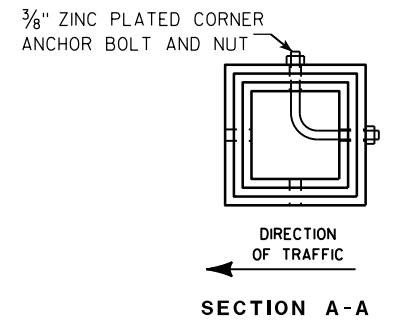
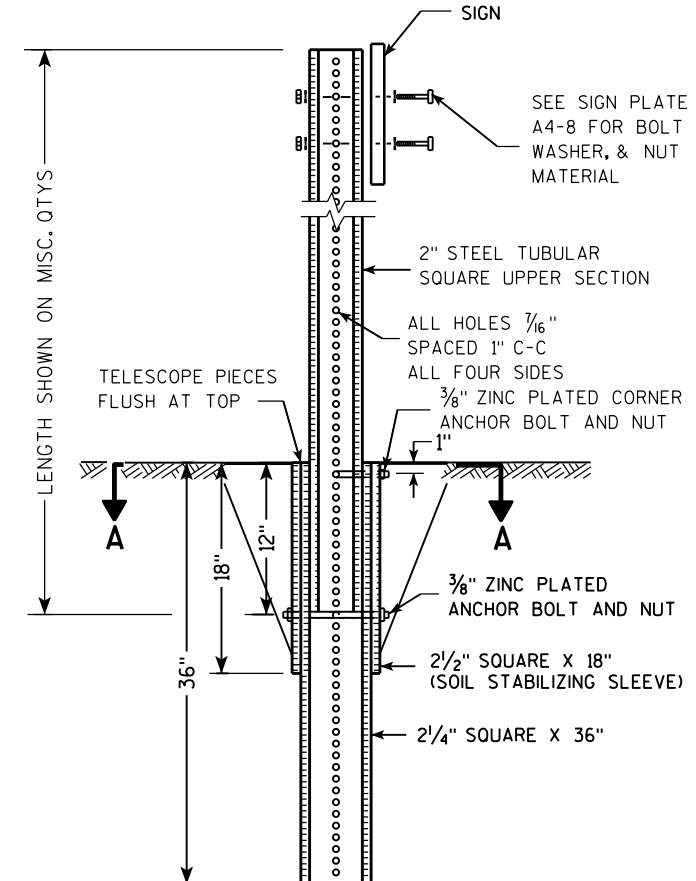
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

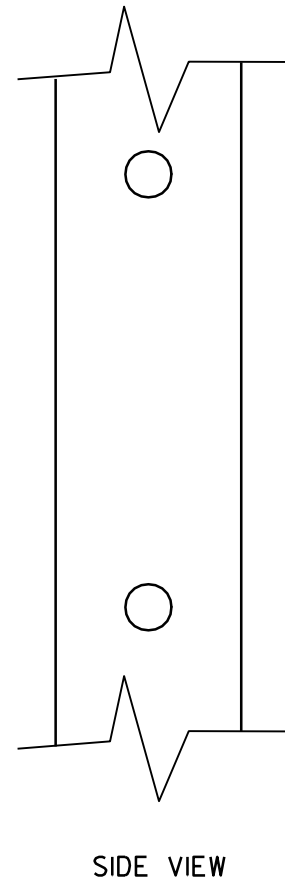
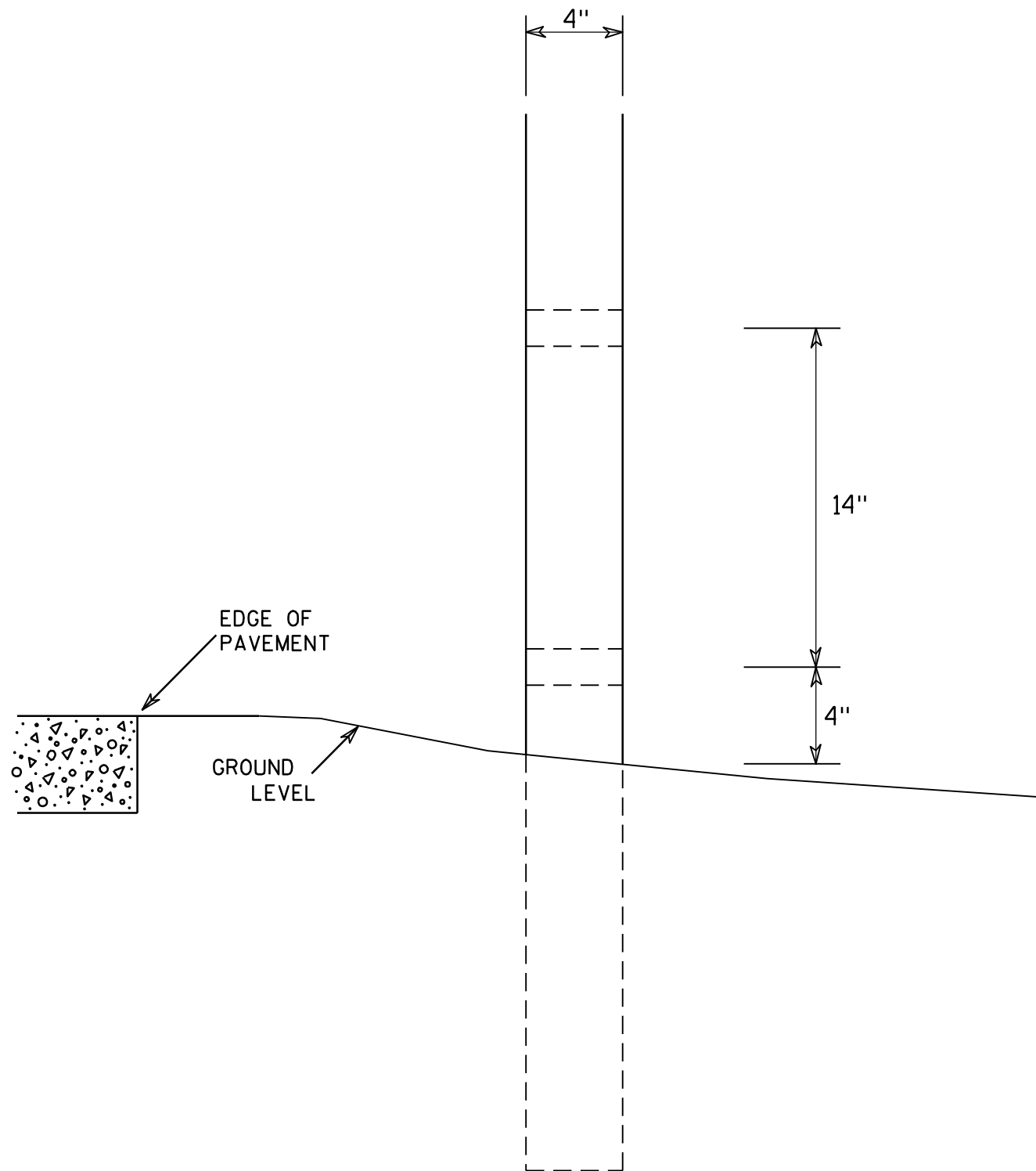
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



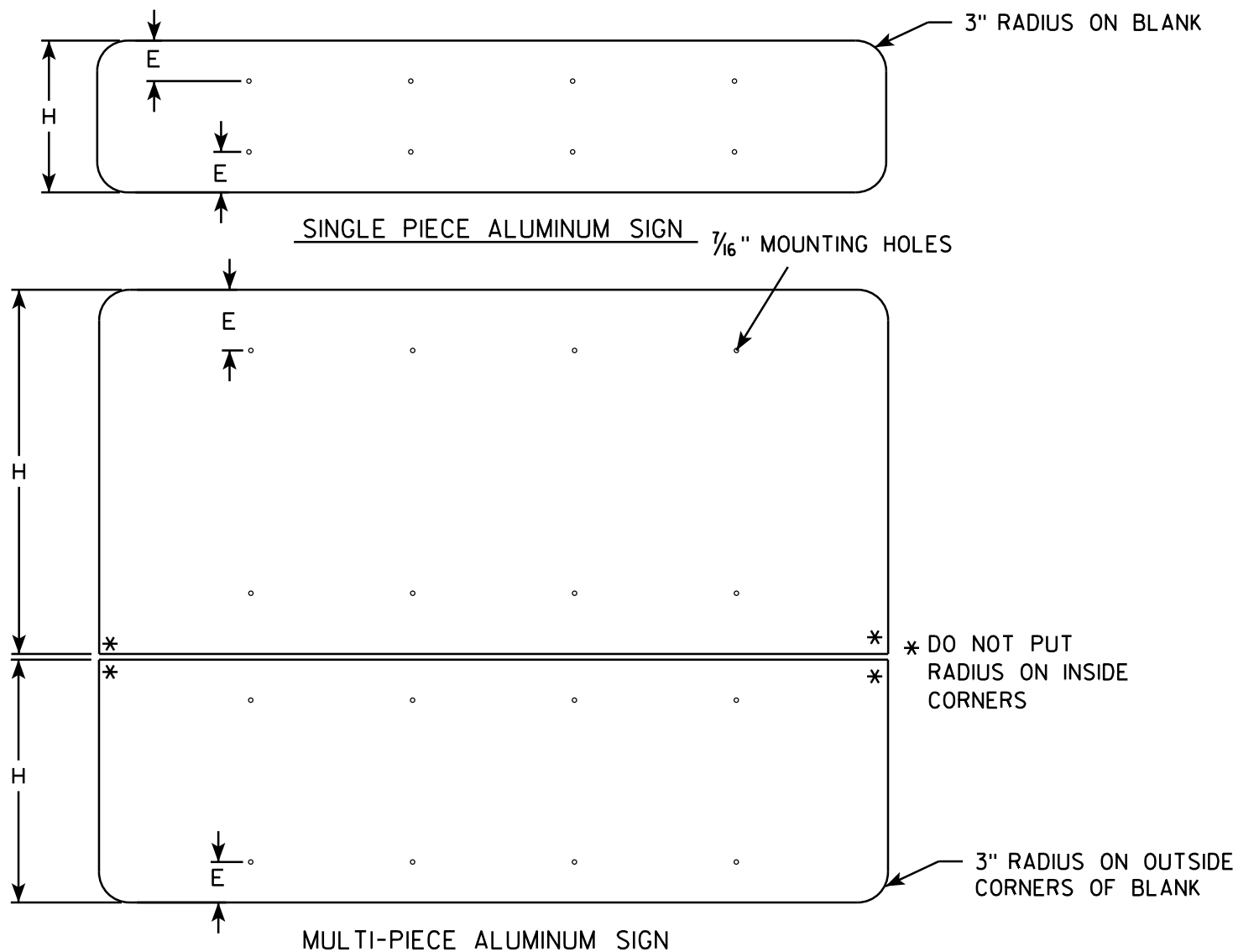
GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

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<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

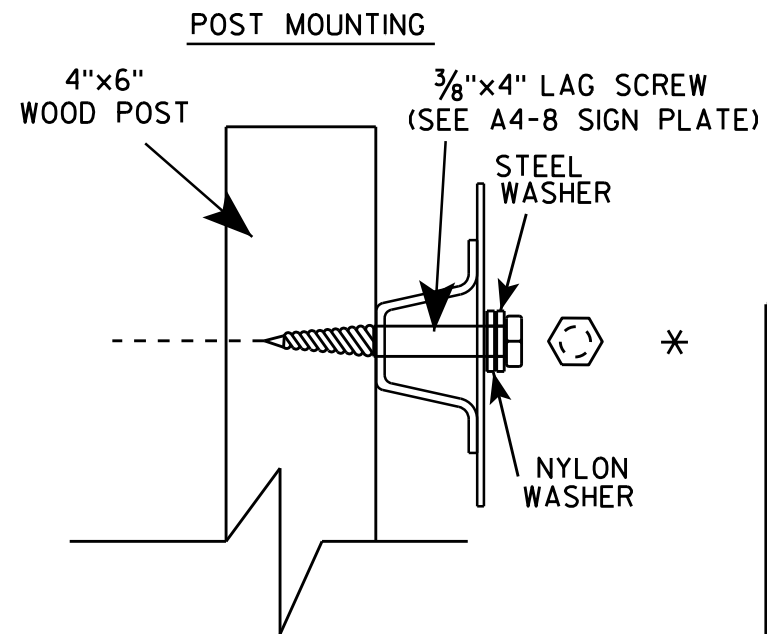
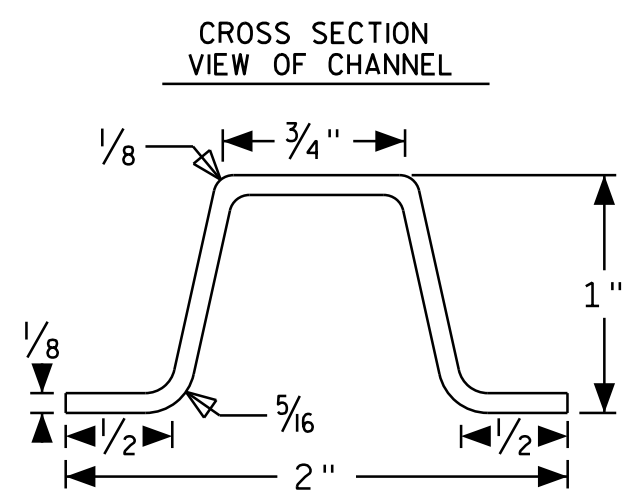
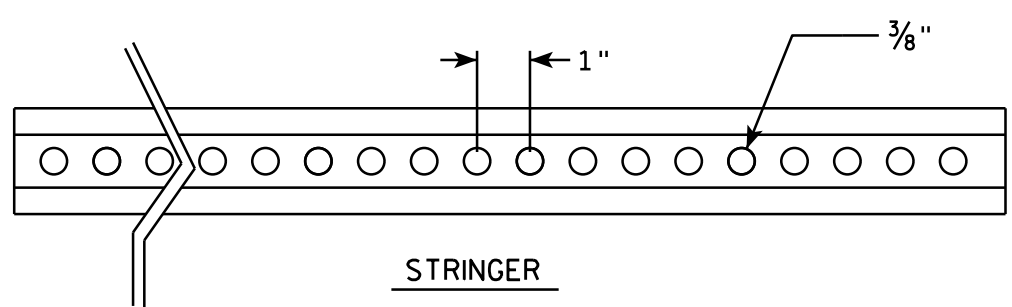


## GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE  $\frac{7}{16}$ " DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 $\frac{1}{2}$ " 33 $\frac{1}{2}$ " 50 $\frac{1}{2}$ " 67 $\frac{1}{2}$ "
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 $\frac{1}{2}$ " 38 $\frac{1}{2}$ " 57 $\frac{1}{2}$ " 76 $\frac{1}{2}$ "
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 $\frac{1}{2}$ " 43 $\frac{1}{2}$ " 64 $\frac{1}{2}$ " 85 $\frac{1}{2}$ "
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

7



7

**SIGN STRINGER MOUNTING REQUIREMENTS**

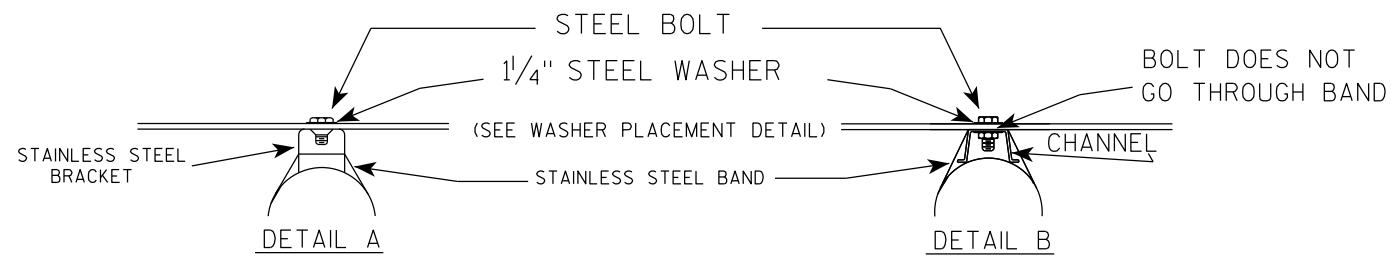
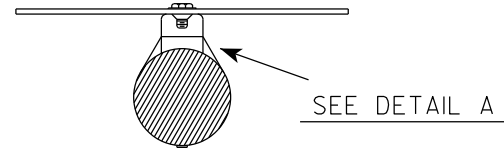
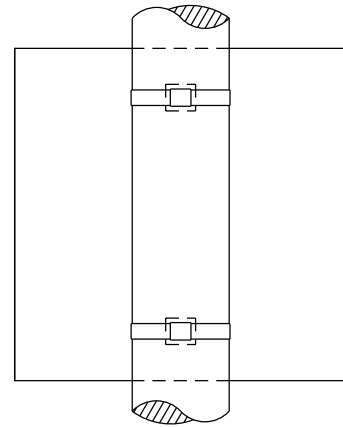
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

# BANDING

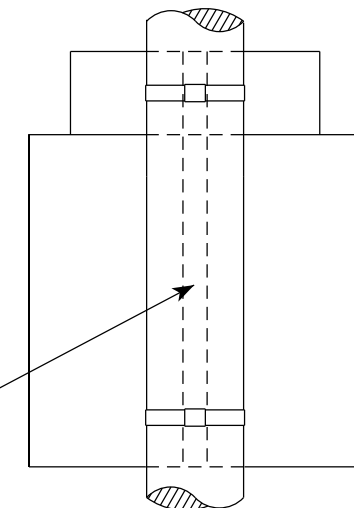
SINGLE SIGN



## GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

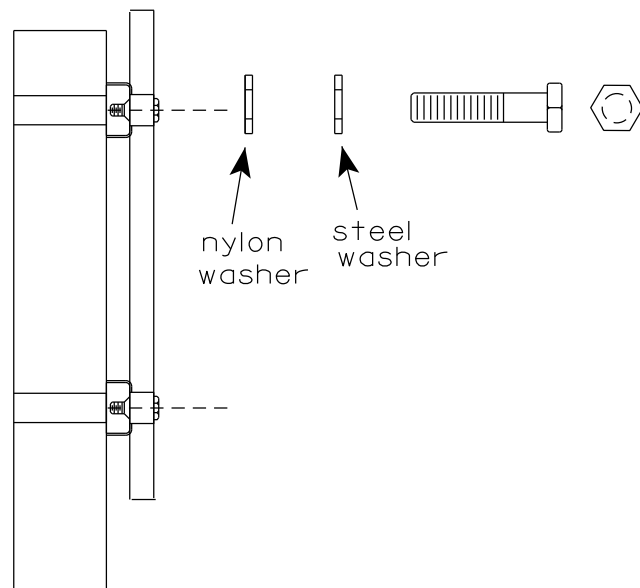
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



WASHER PLACEMENT



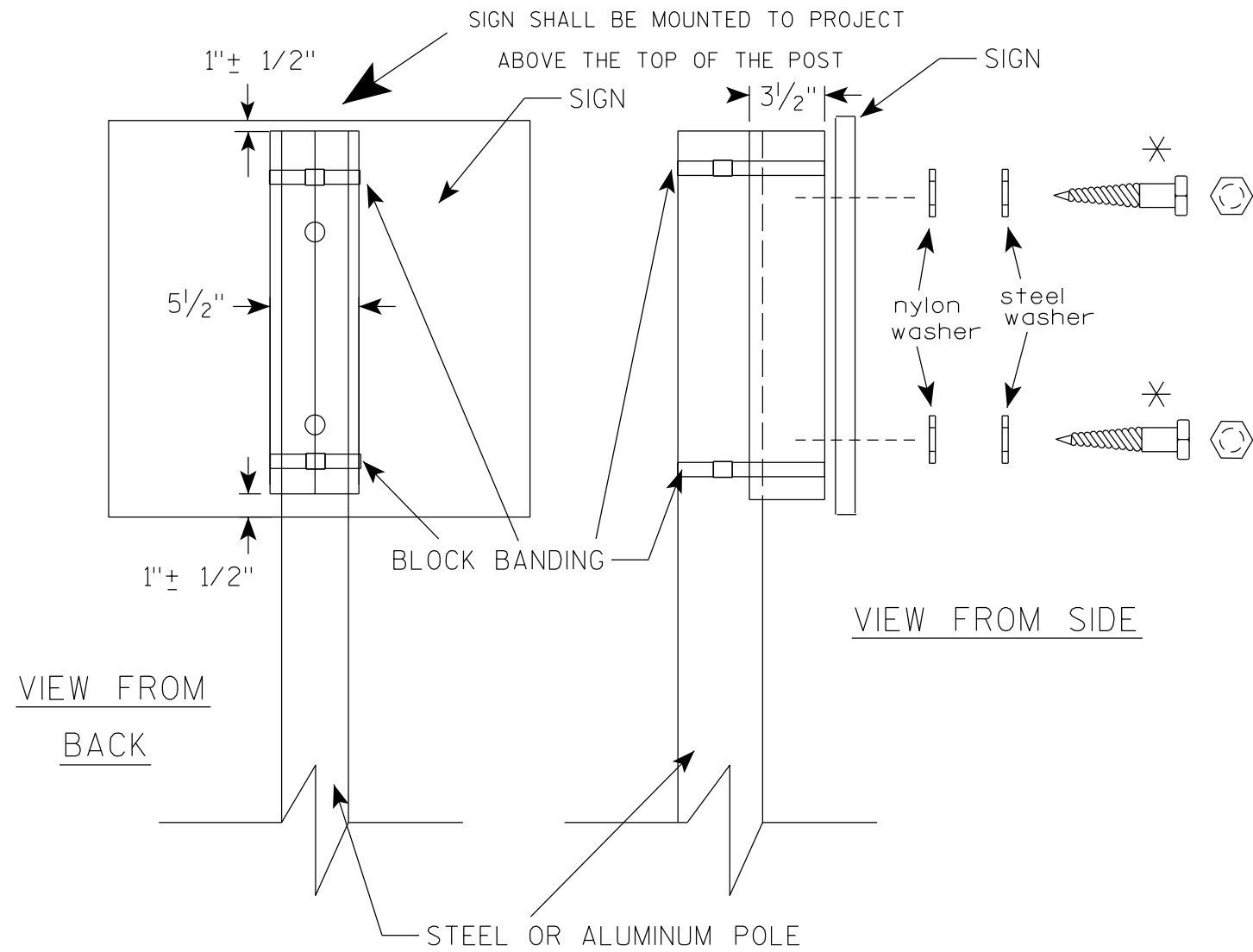
WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

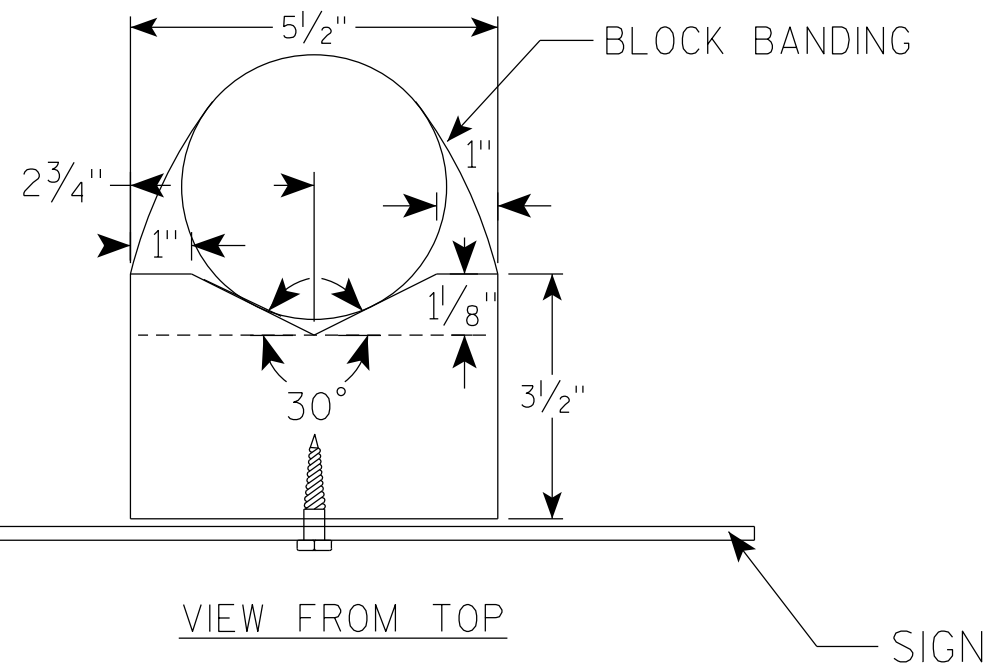
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM  
BACK

VIEW FROM SIDE

STEEL OR ALUMINUM POLE



VIEW FROM TOP

SIGN

### GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

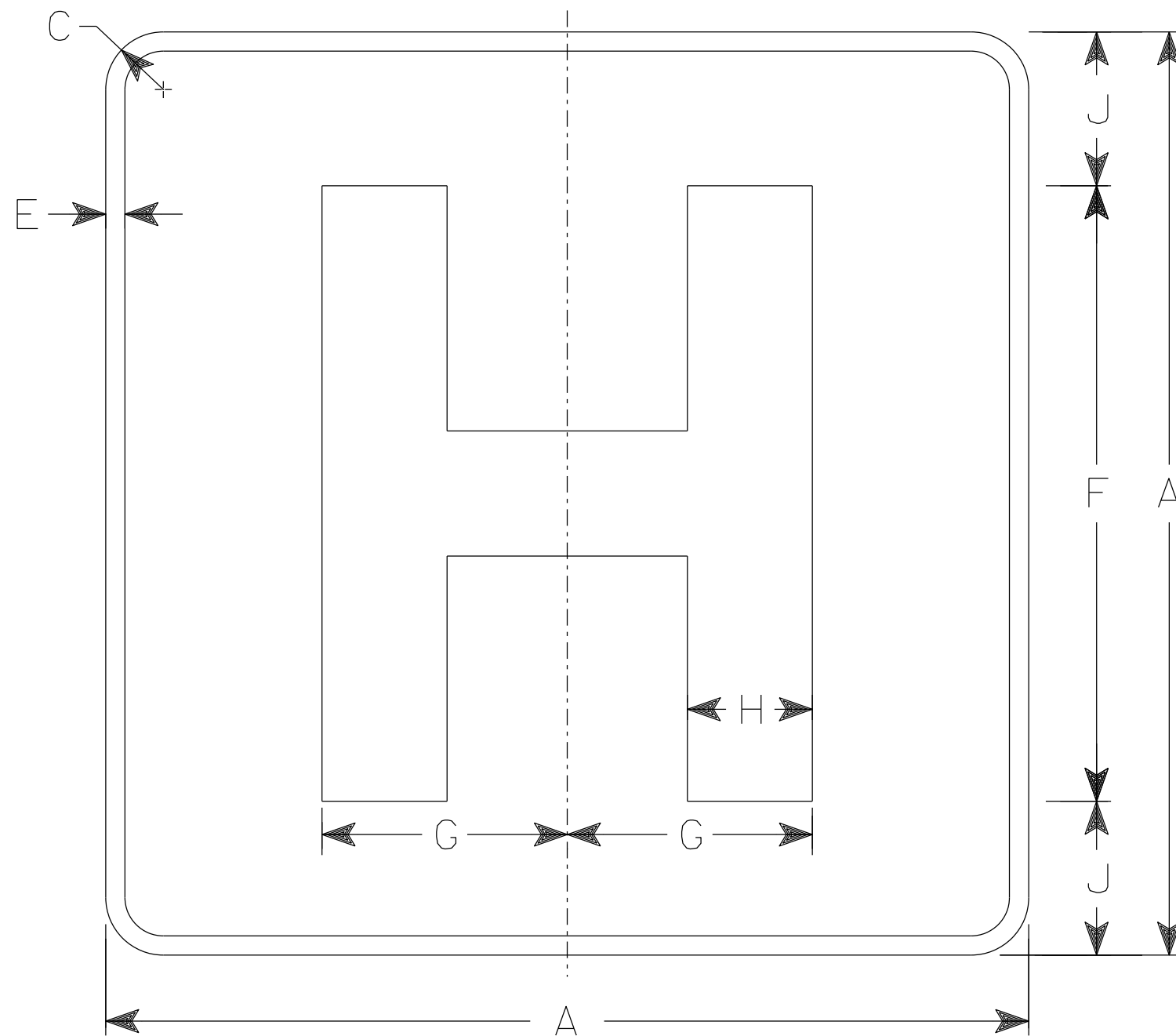
SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - Blue  
Message - White
3. Message Series - E Modified
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



D9-2

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	2.25
2S	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
2M	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN  
D9-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 1/28/21 PLATE NO. D9-2.5

PROJECT NO:

SHEET NO:

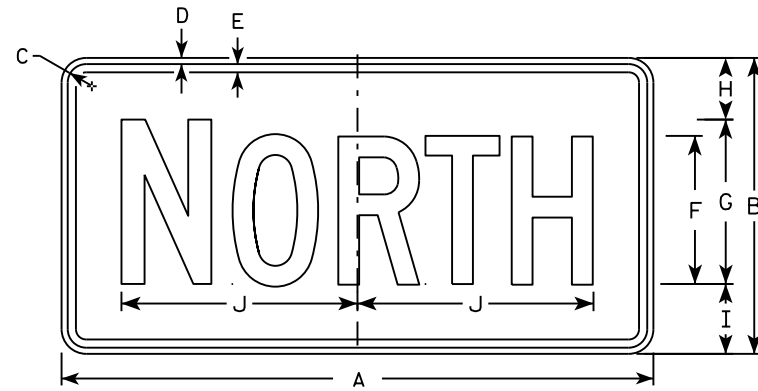
**E**

7

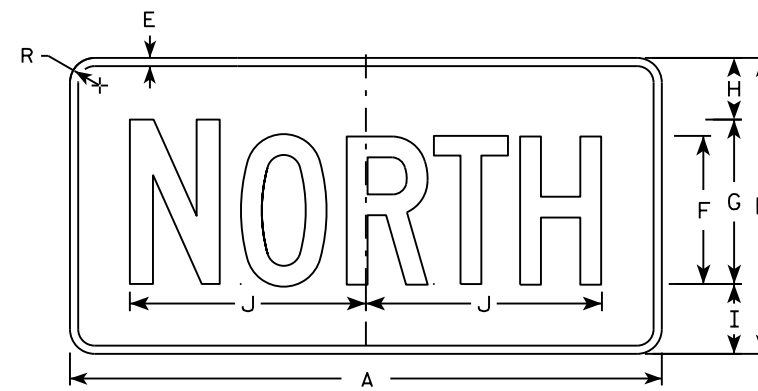
7

NOTES

- All Signs Type II - Type H
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White  
 Message - Black  
 MB3-1 thru MB3-4 Background - Blue  
 Message - White  
 MK3-1 thru MK3-4 Background - Green  
 Message - White  
 MM3-1 thru MM3-4 Background - White  
 Message - Green  
 MN3-1 thru MN3-4 Background - Brown  
 Message - White  
 MP3-1 thru MP3-4 Background - White  
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



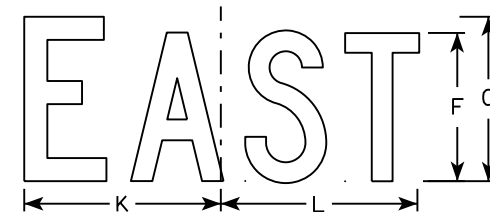
M3-1  
MM3-1  
MP3-1



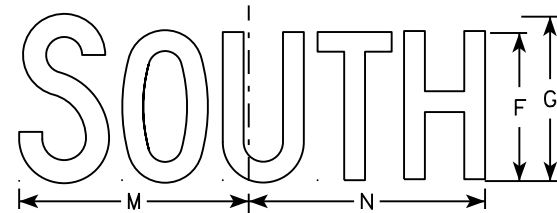
MB3-1  
MK3-1  
MN3-1



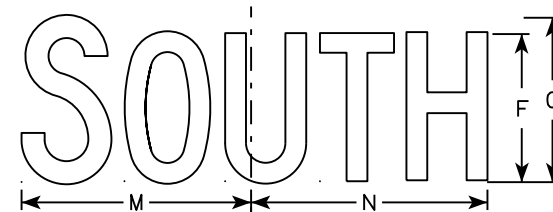
M3-2  
MM3-2  
MP3-2



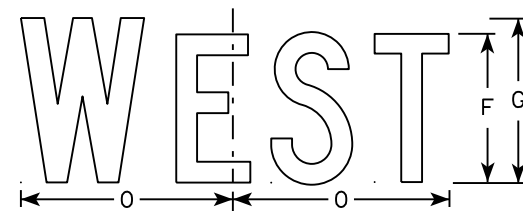
MB3-2  
MK3-2  
MN3-2



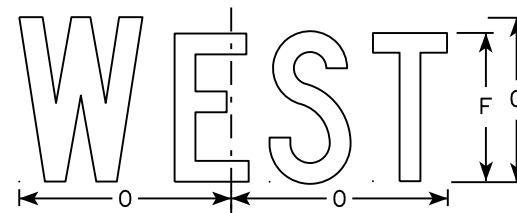
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

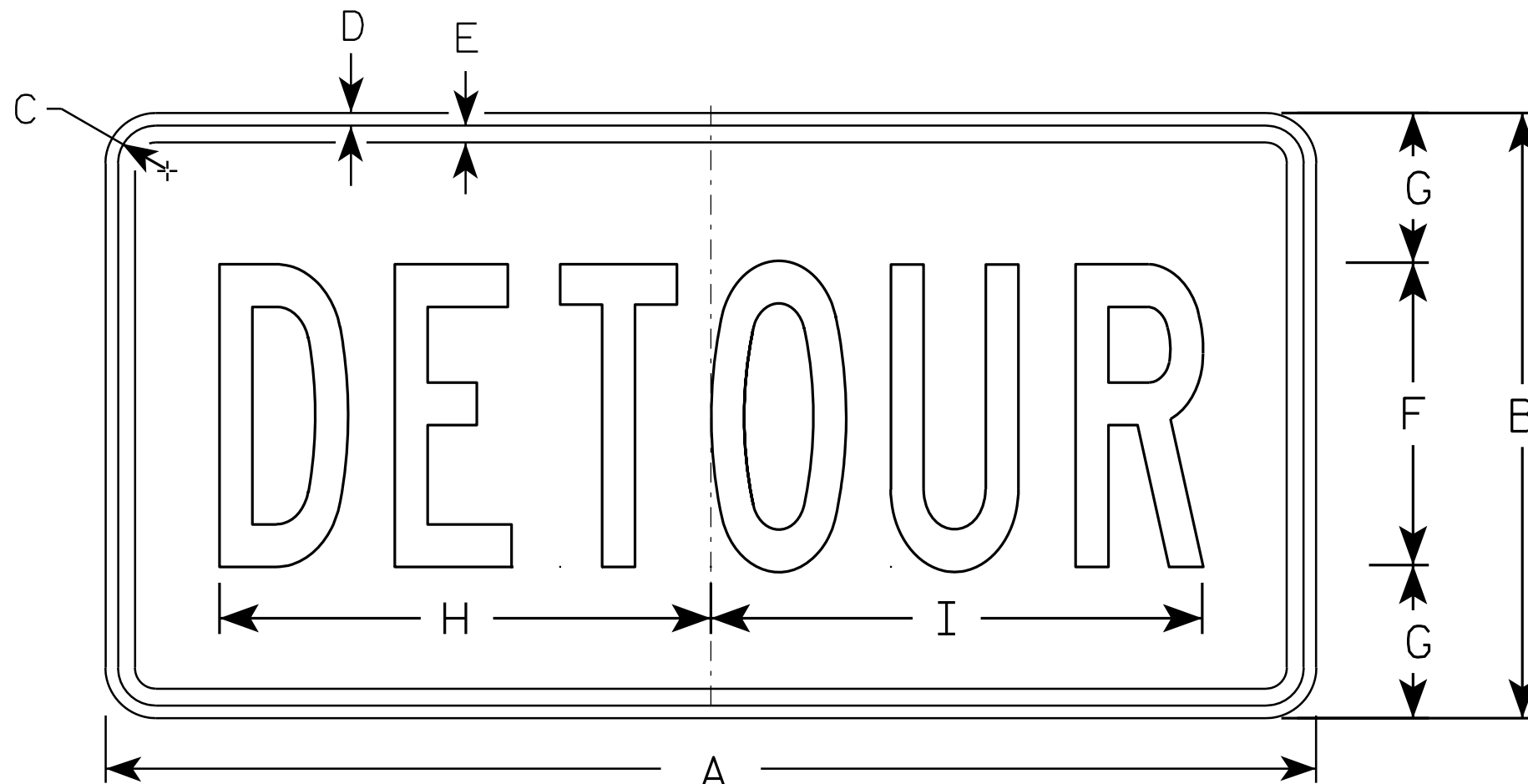
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4-8

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

**STANDARD SIGN**  
**M4-8**

WISCONSIN DEPT OF TRANSPORTATION

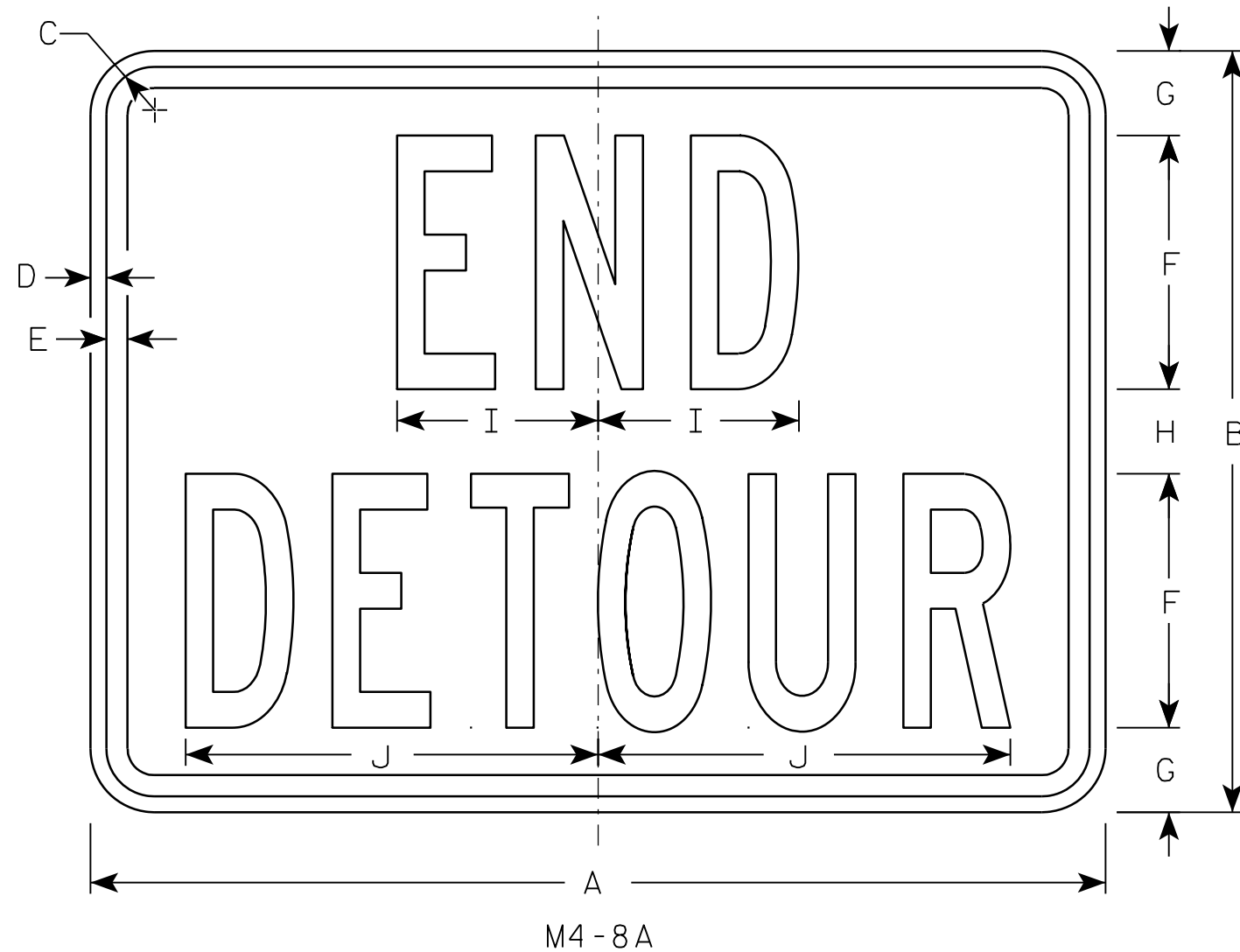
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

STANDARD SIGN  
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

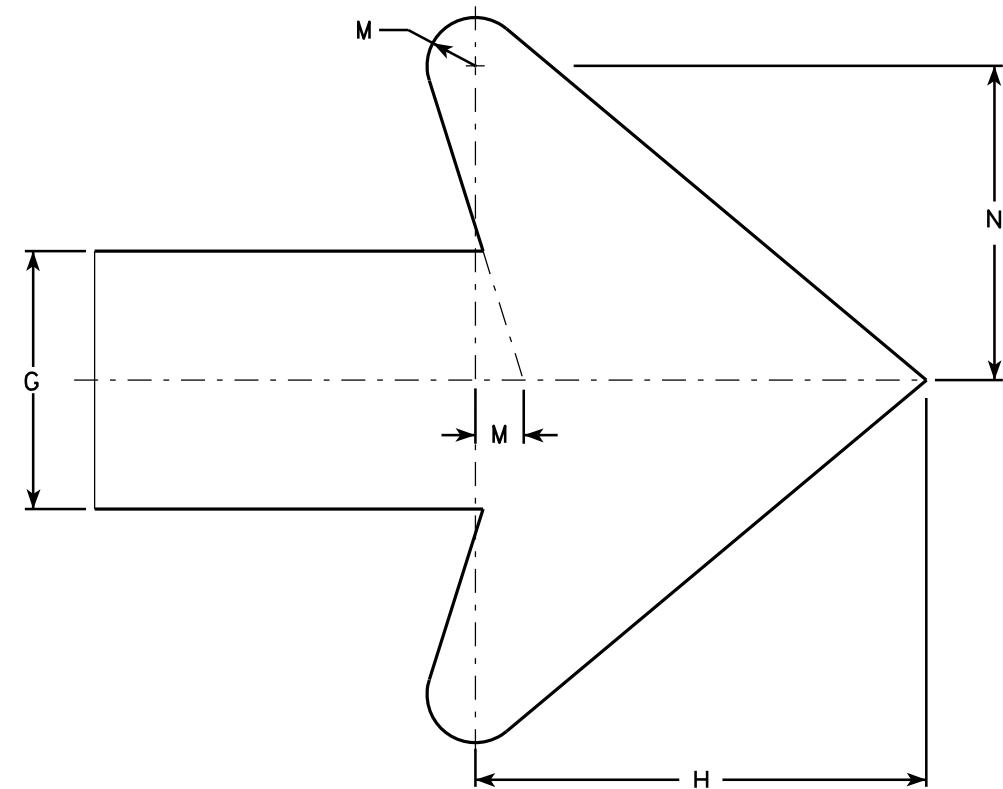
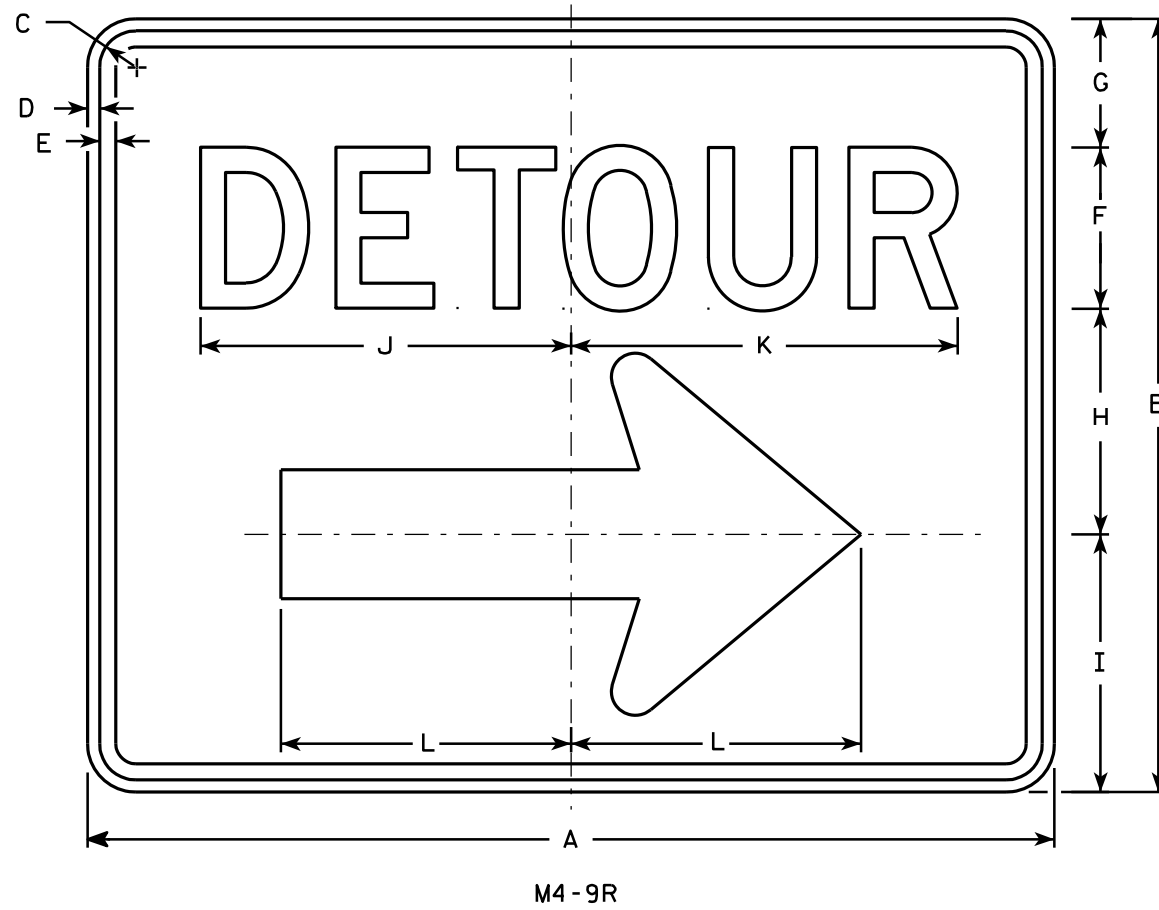
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

**STANDARD SIGN**  
**M4-9 R & L**

*WISCONSIN DEPT OF TRANSPORTATION*

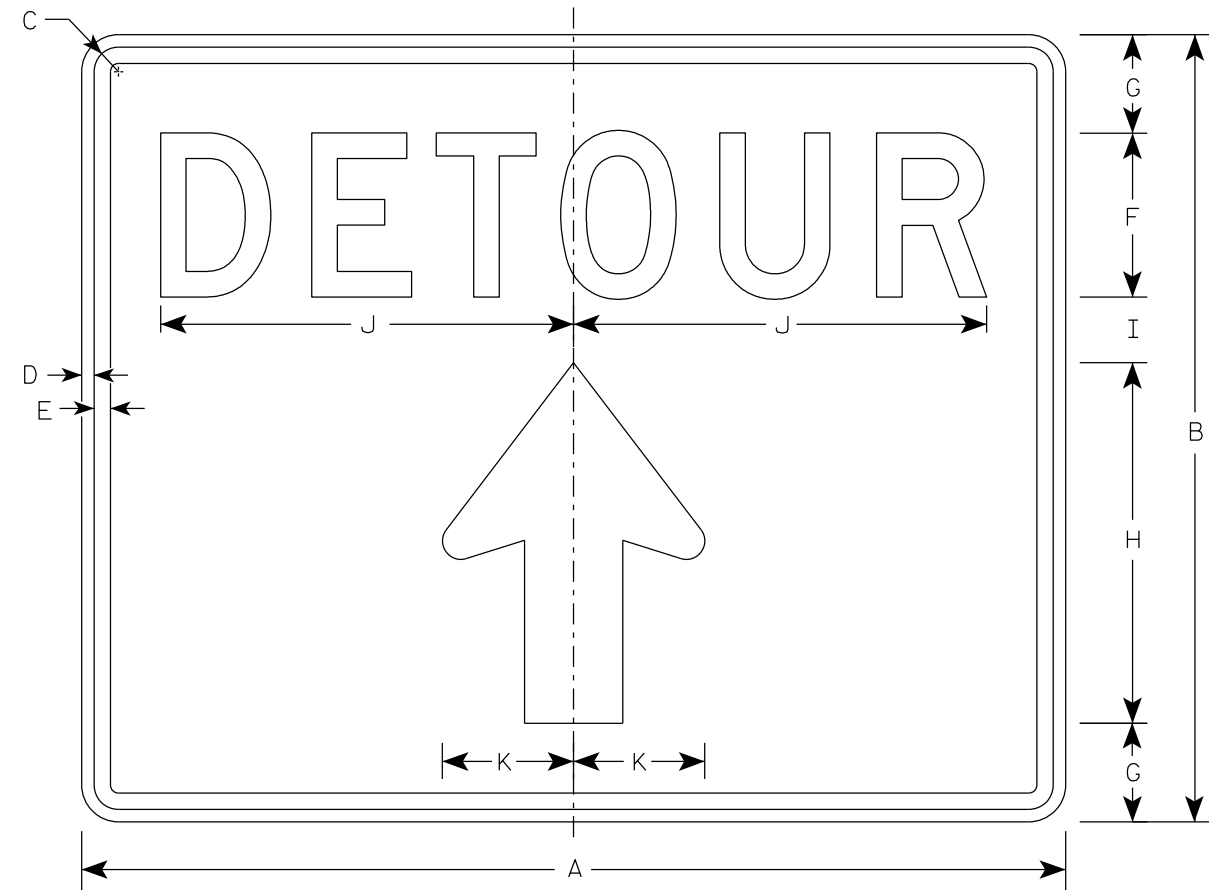
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

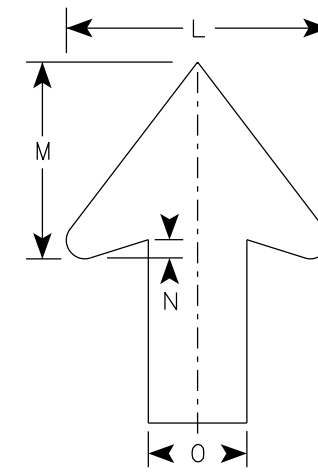
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II-Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D



M4 - 9RA

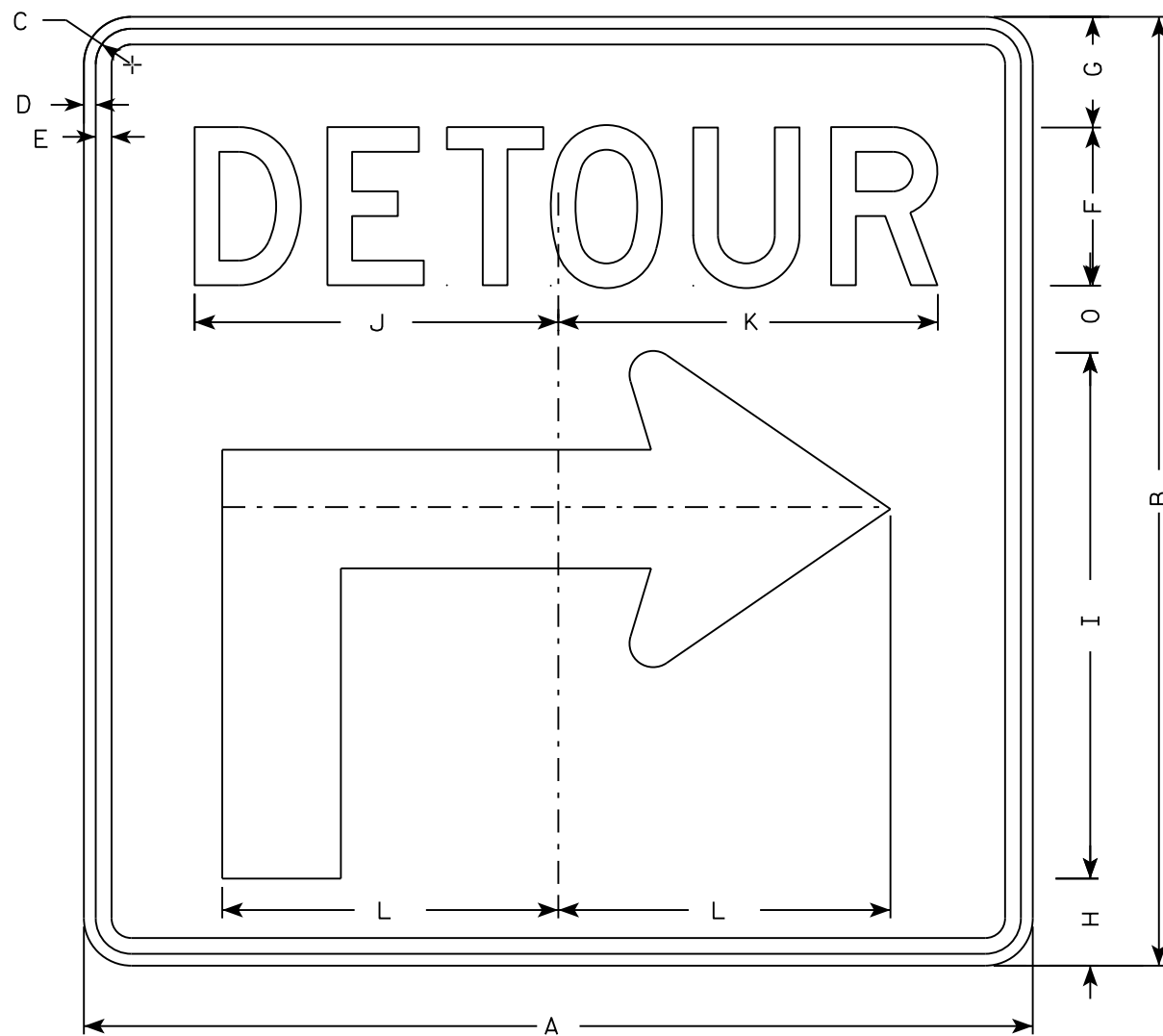


Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	3	11	2	12 5/8	4	8	6	1/2	3												5.00
3																											
4																											
5																											

STANDARD SIGN  
M4-9RA

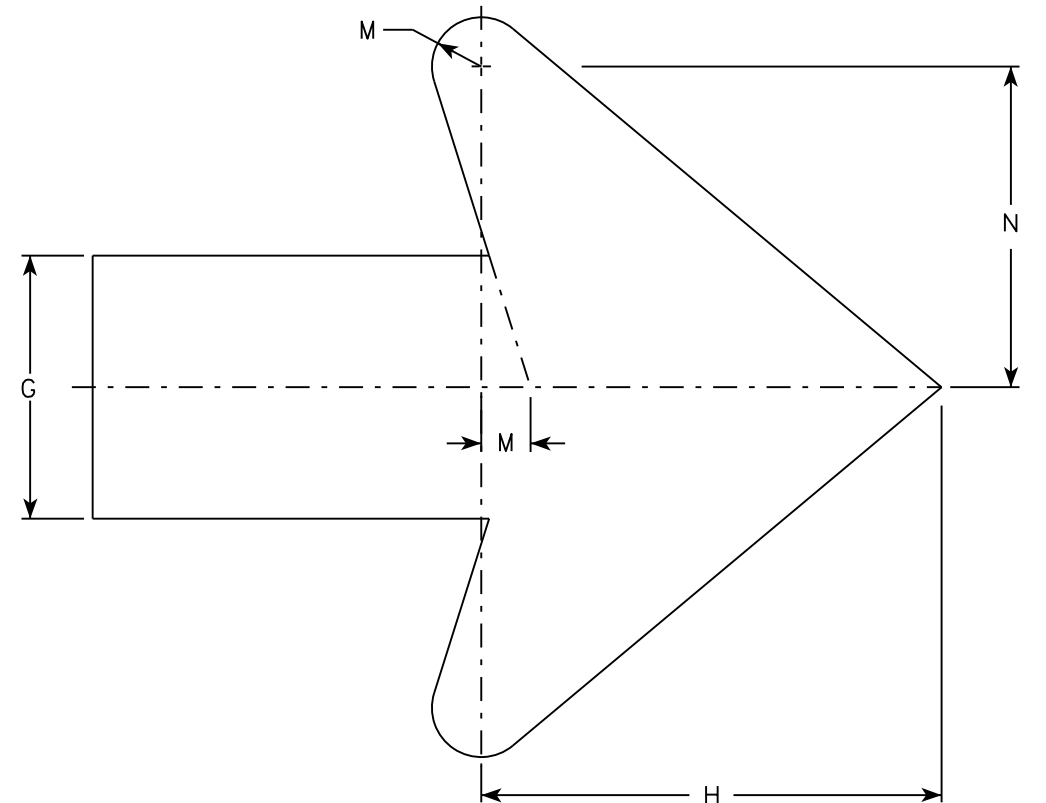
WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R Rauch*  
For State Traffic Engineer  
DATE 12/10/2020 PLATE NO. M4-9RA.1



M4-59R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown when base material is metal.
5. M4-59L is the same as M4-59R except the arrow is reversed.



Arrow Detail

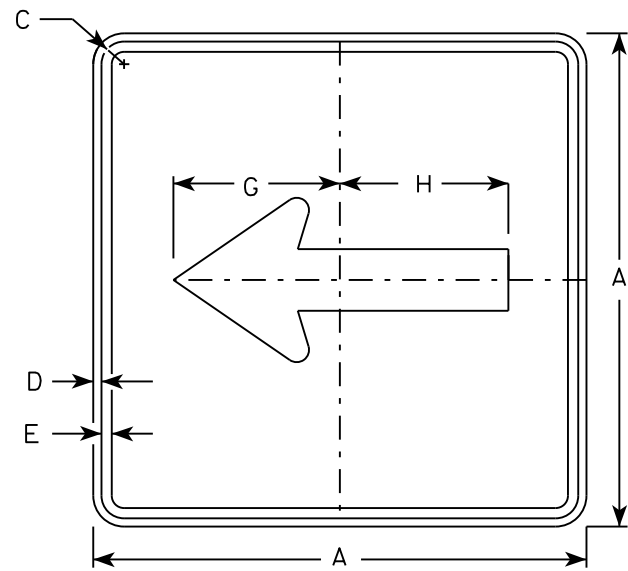
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
3	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
4	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0
5	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0

STANDARD SIGN  
M4-59 L&R

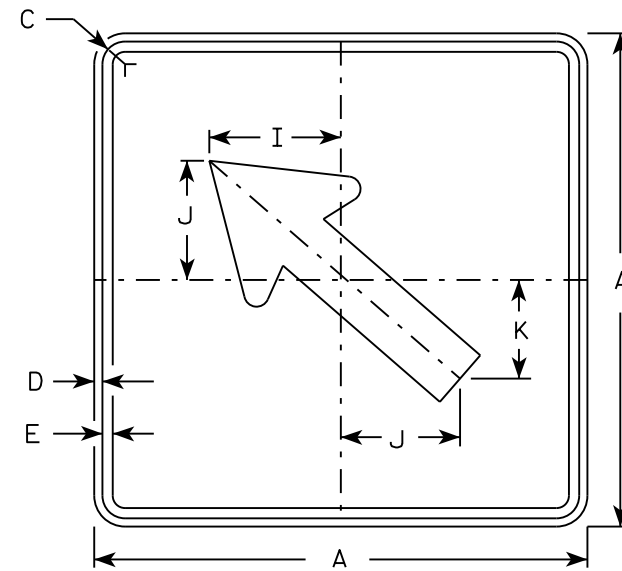
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

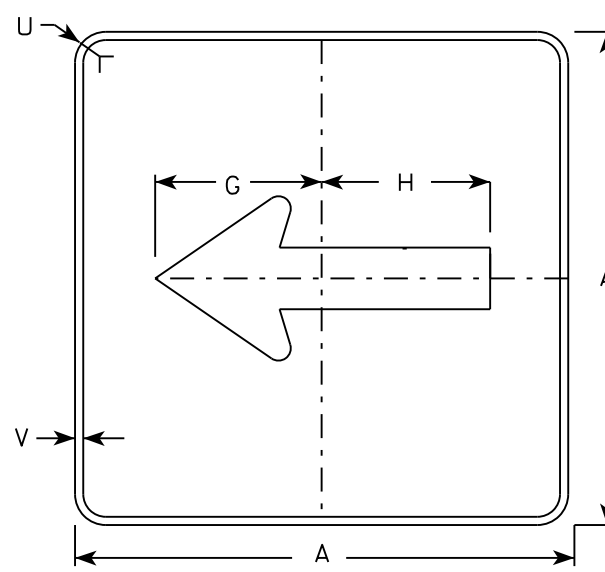
DATE 11/10/15 PLATE NO. M4-59.1



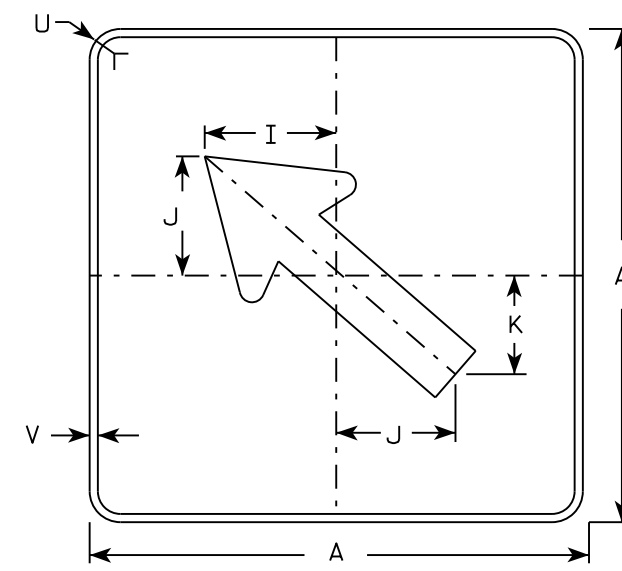
M6-1  
MM6-1  
M06-1  
MP6-1



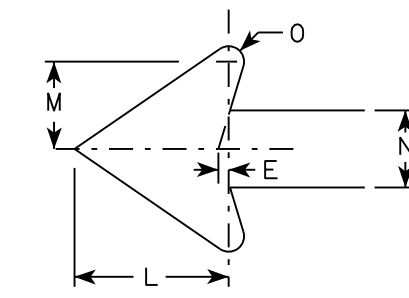
M6-2  
MM6-2  
M06-2  
MP6-2



MB6-1  
MK6-1  
MN6-1  
MR6-1



MB6-2  
MK6-2  
MN6-2  
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN  
M6-1 & M6-2  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

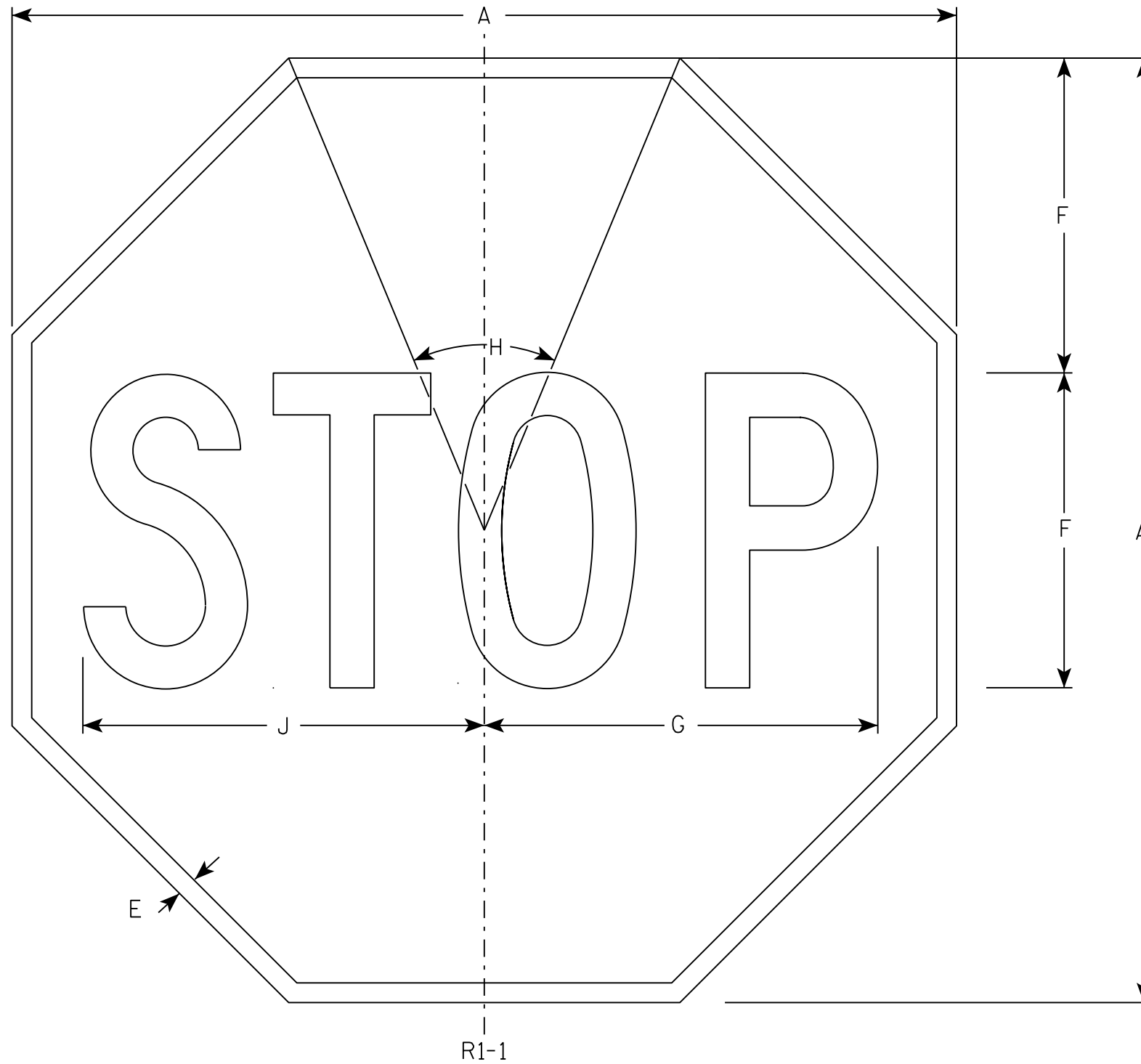
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Red  
Message - White
3. Message Series - C



R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN  
R1-1

WISCONSIN DEPT OF TRANSPORTATION

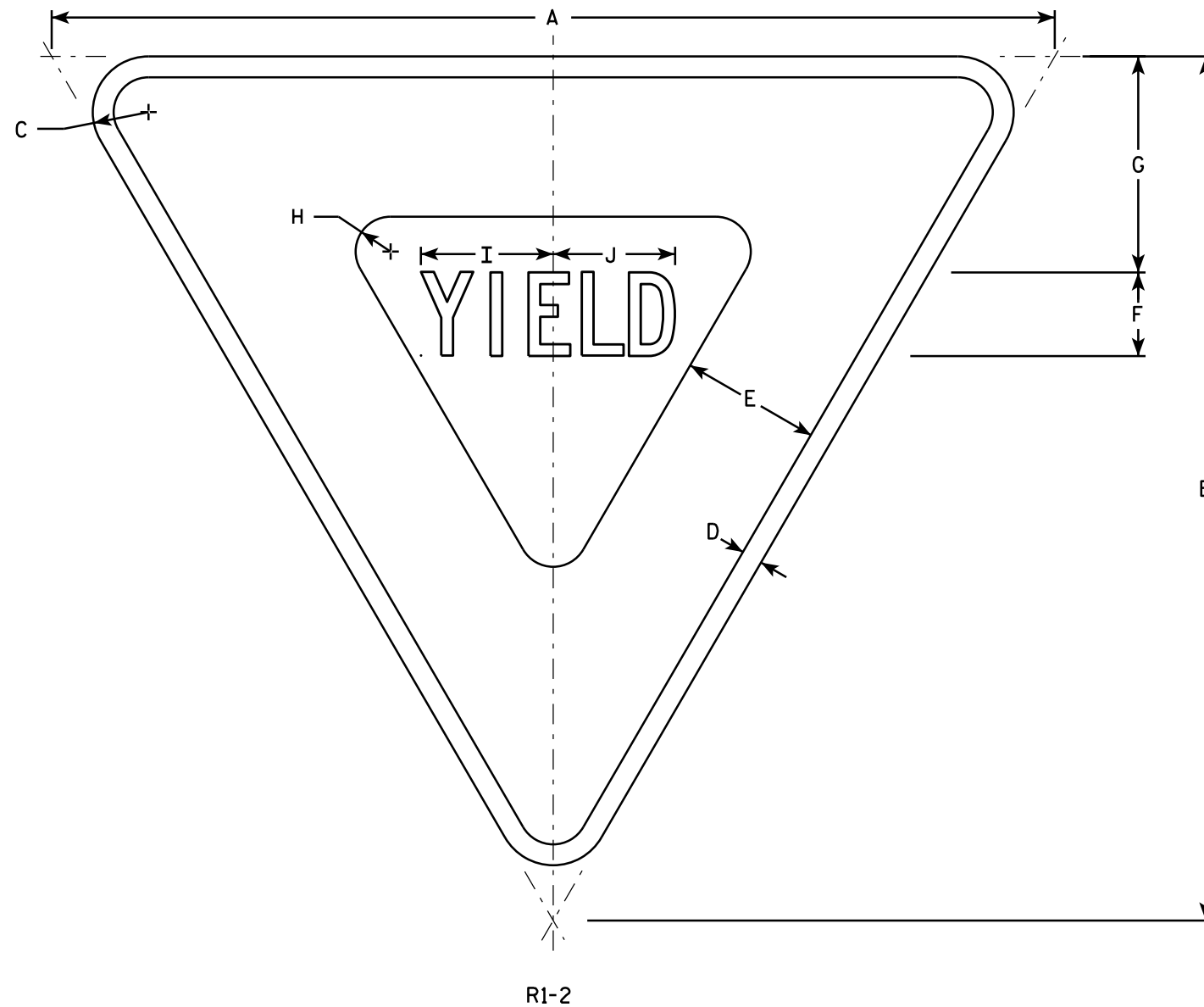
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

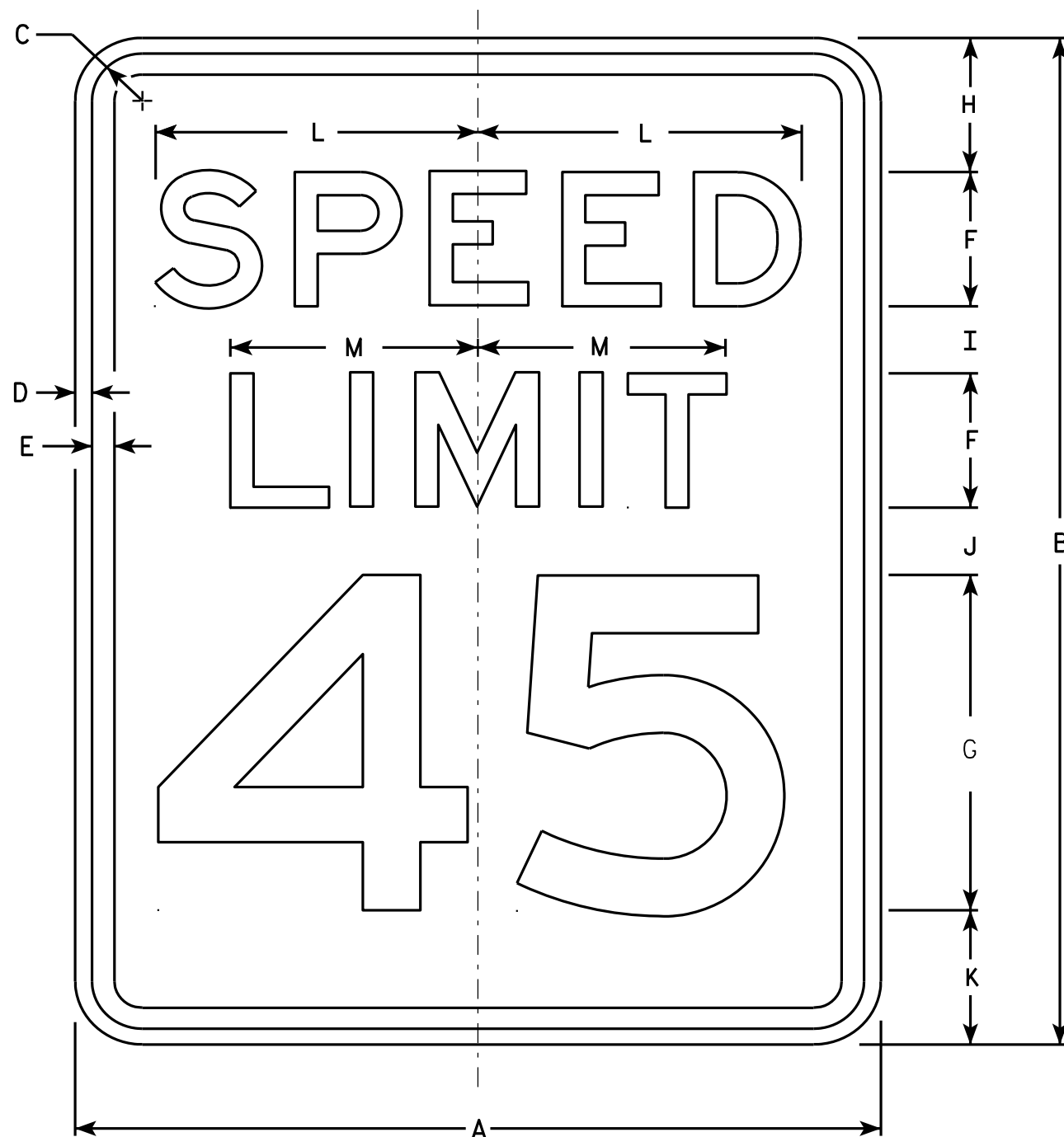
**STANDARD SIGN**  
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/13/14 PLATE NO. R1-2.12

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN  
R2-1

WISCONSIN DEPT OF TRANSPORTATION

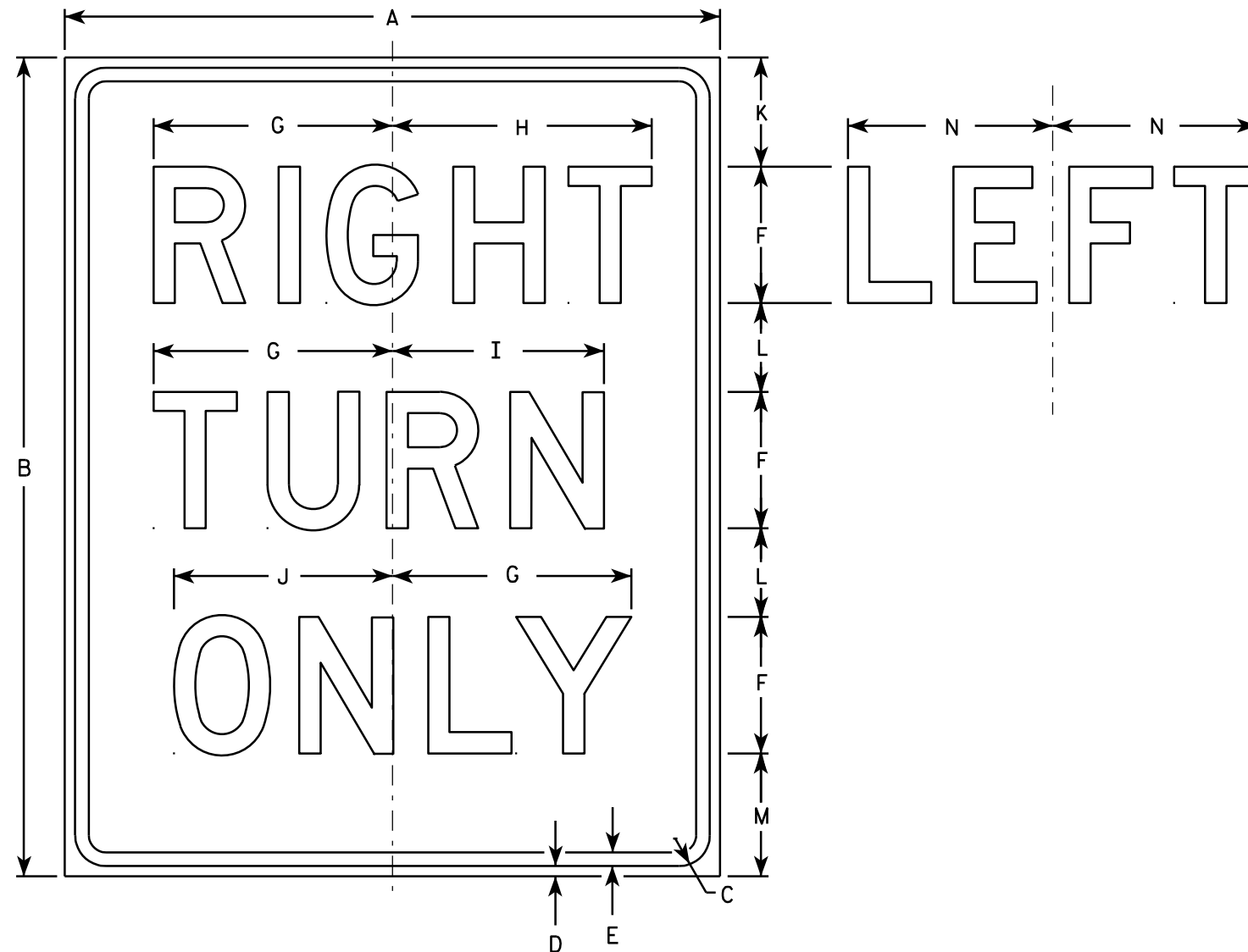
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-53L same as R3-53R except LEFT is substituted for RIGHT.



R3-53R

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

STANDARD SIGN  
R3-53

WISCONSIN DEPT OF TRANSPORTATION

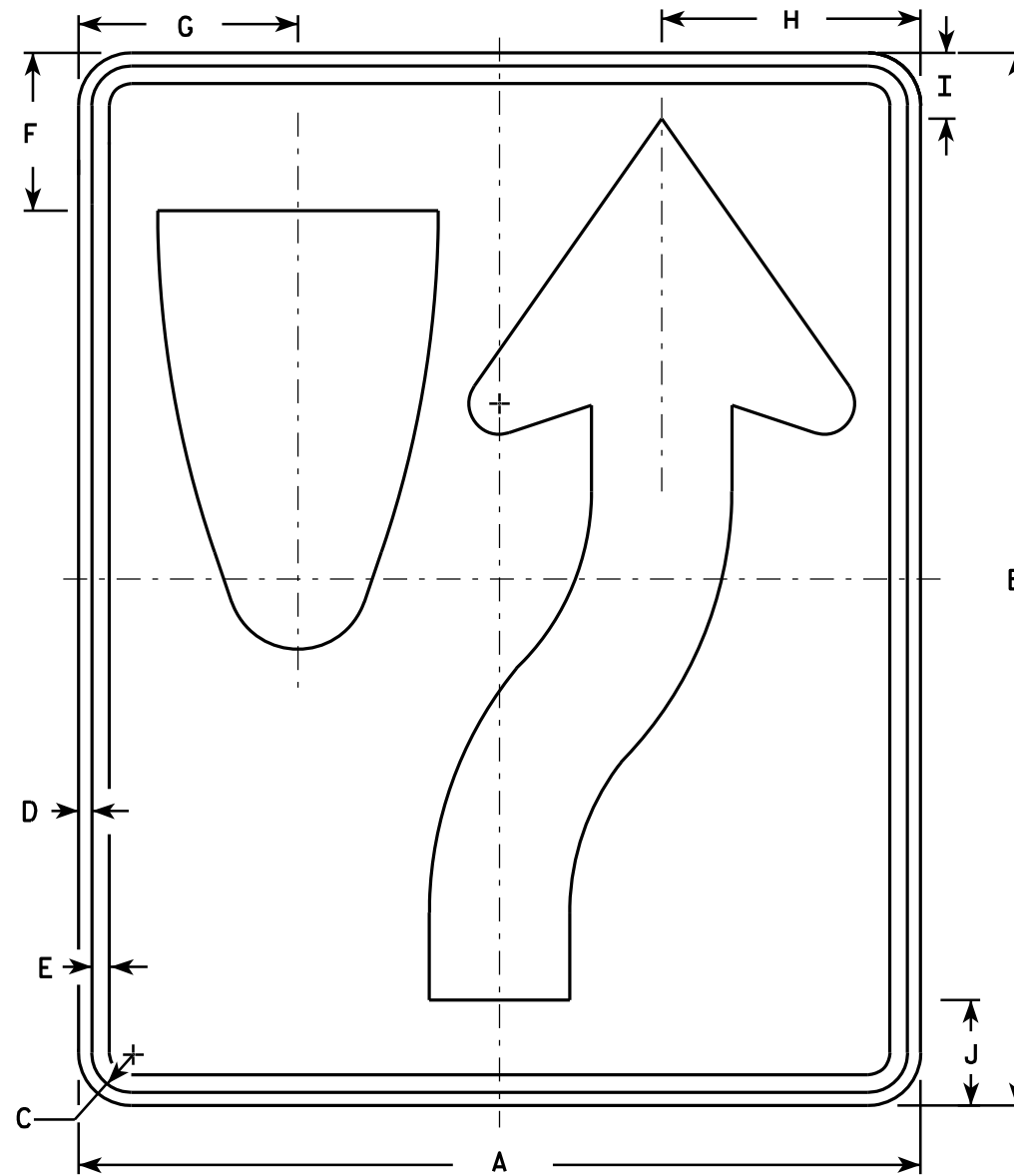
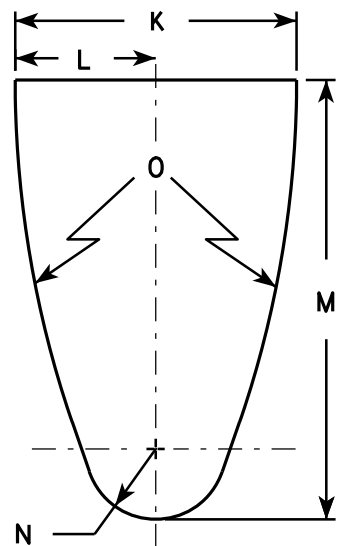
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-53.8

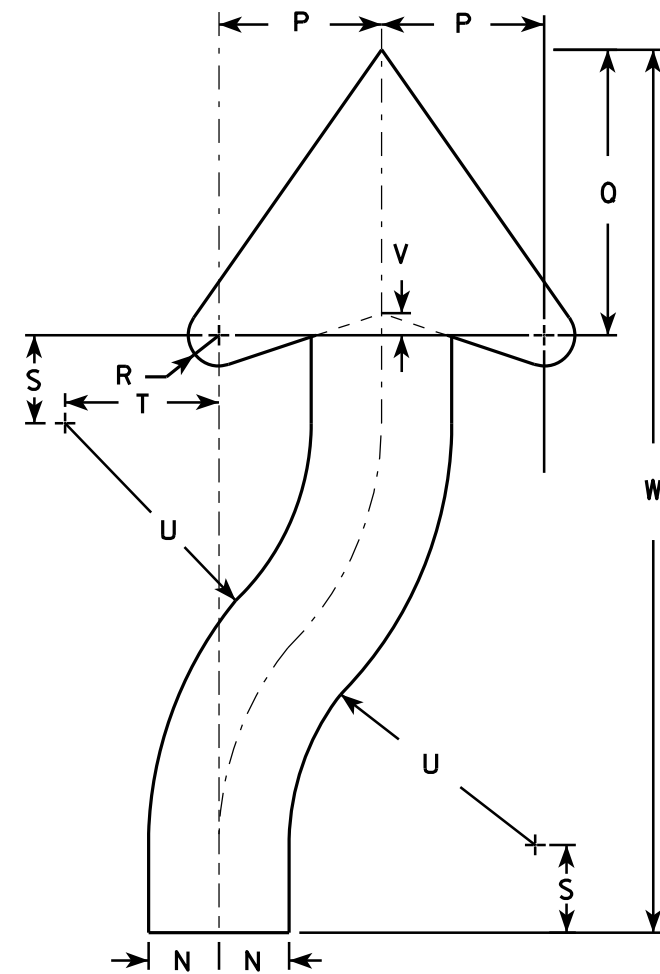
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:  
Background - White  
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

**STANDARD SIGN**  
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

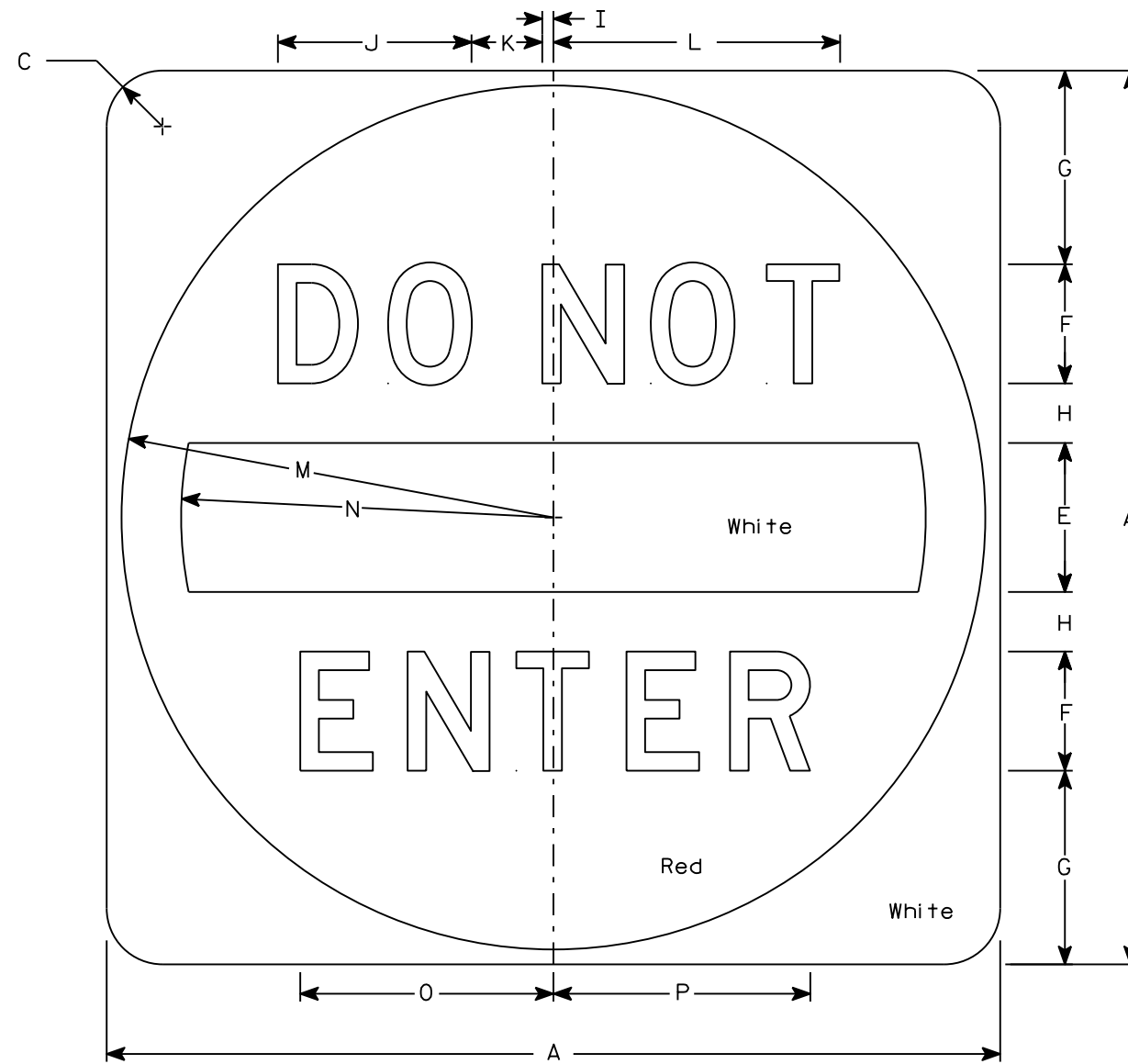
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See detail  
Message - White
3. Message Series - D



R5-1

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

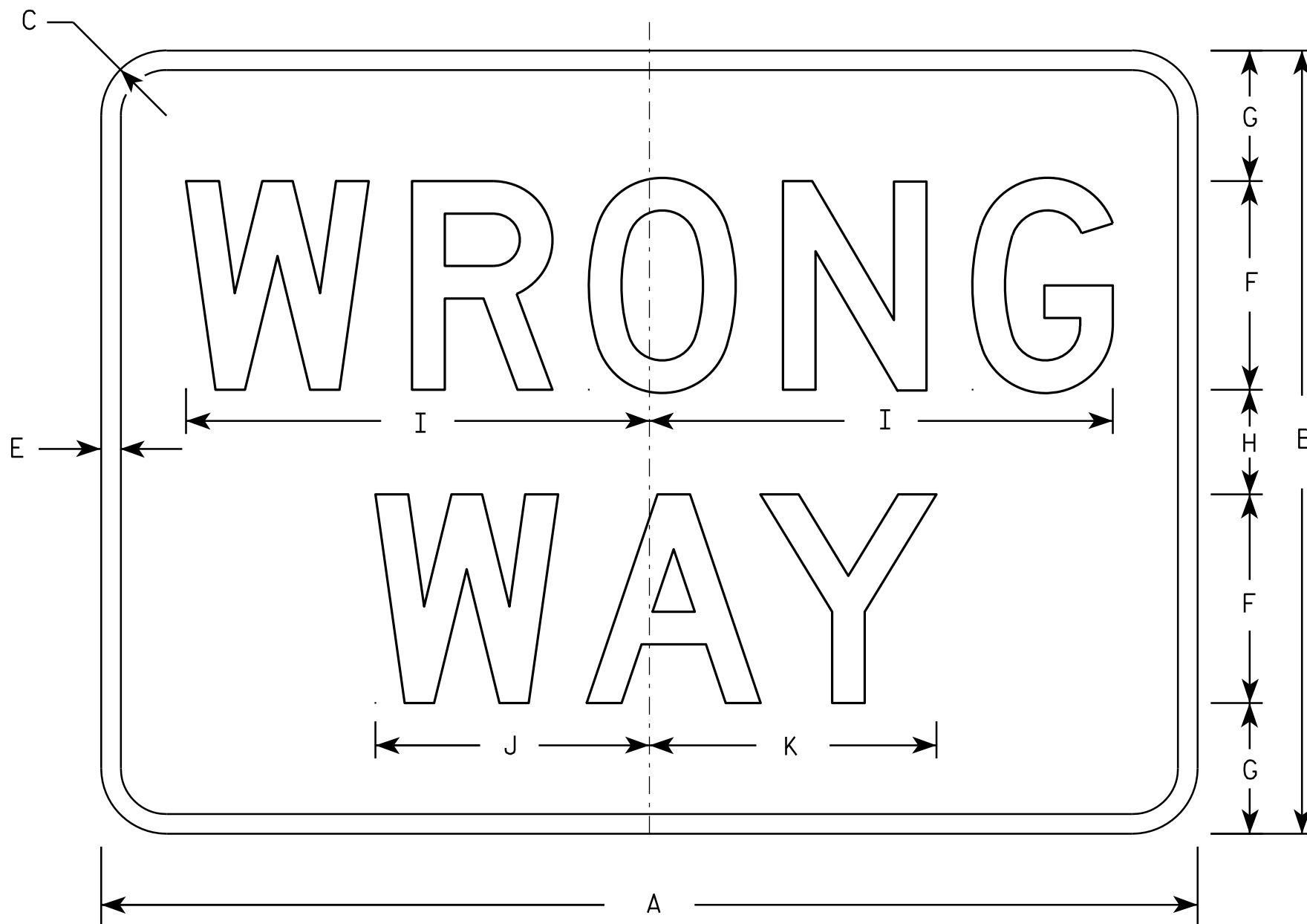
STANDARD SIGN  
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**



**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Red  
Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

R5-1A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

**STANDARD SIGN**  
R5-1A

*WISCONSIN DEPT OF TRANSPORTATION*

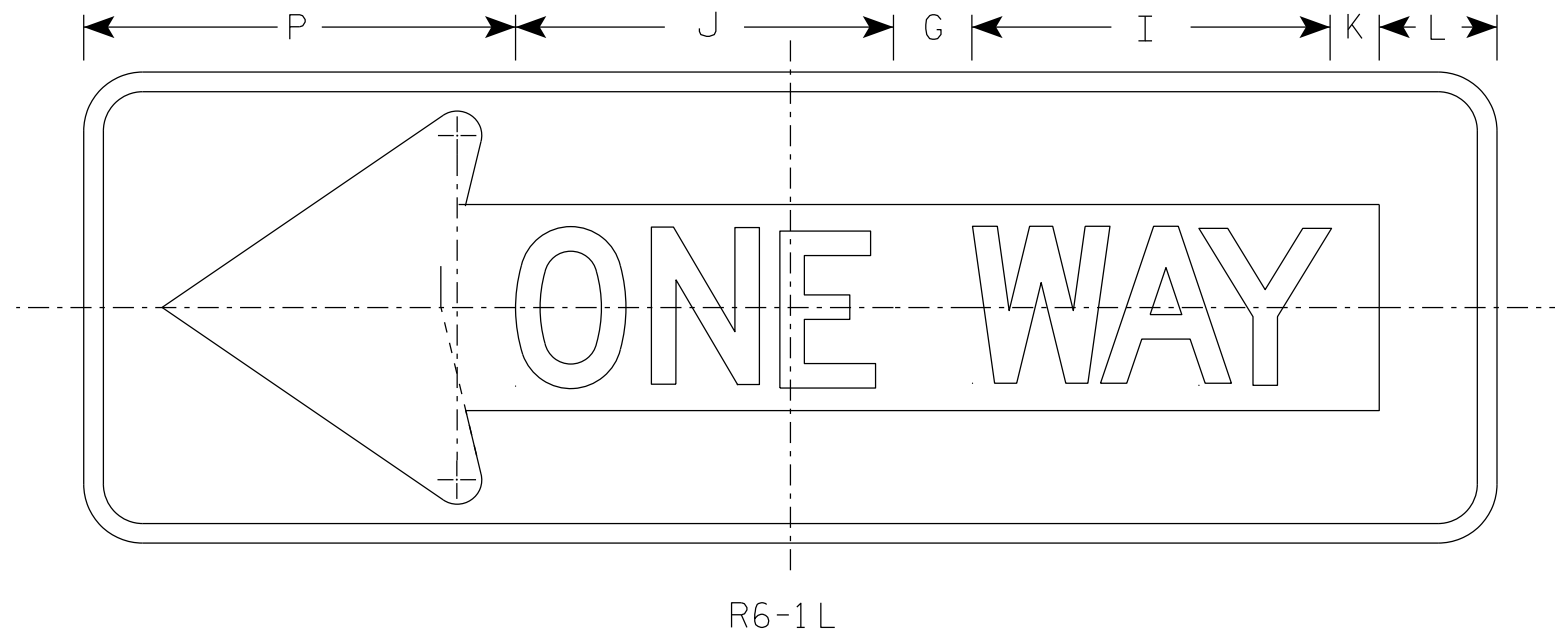
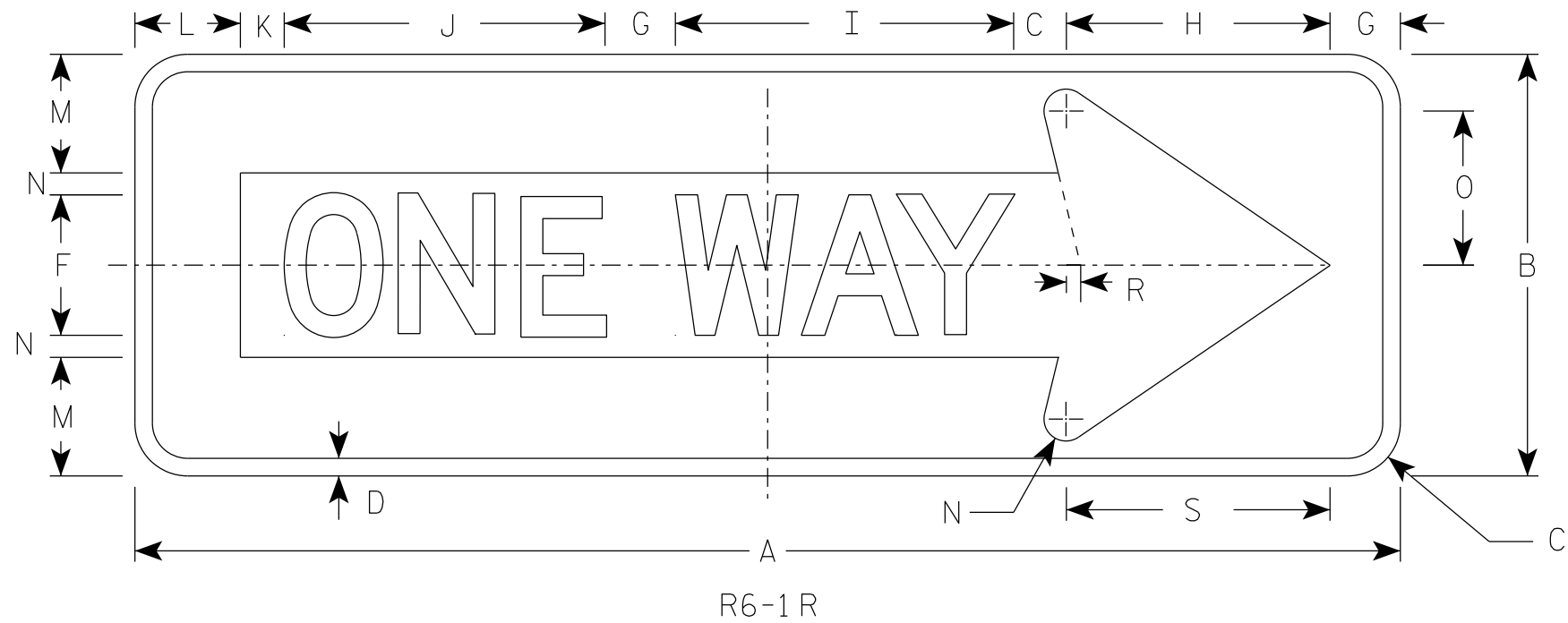
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - BLACK  
Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

STANDARD SIGN  
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 07/11/18 PLATE NO. R6-1.3

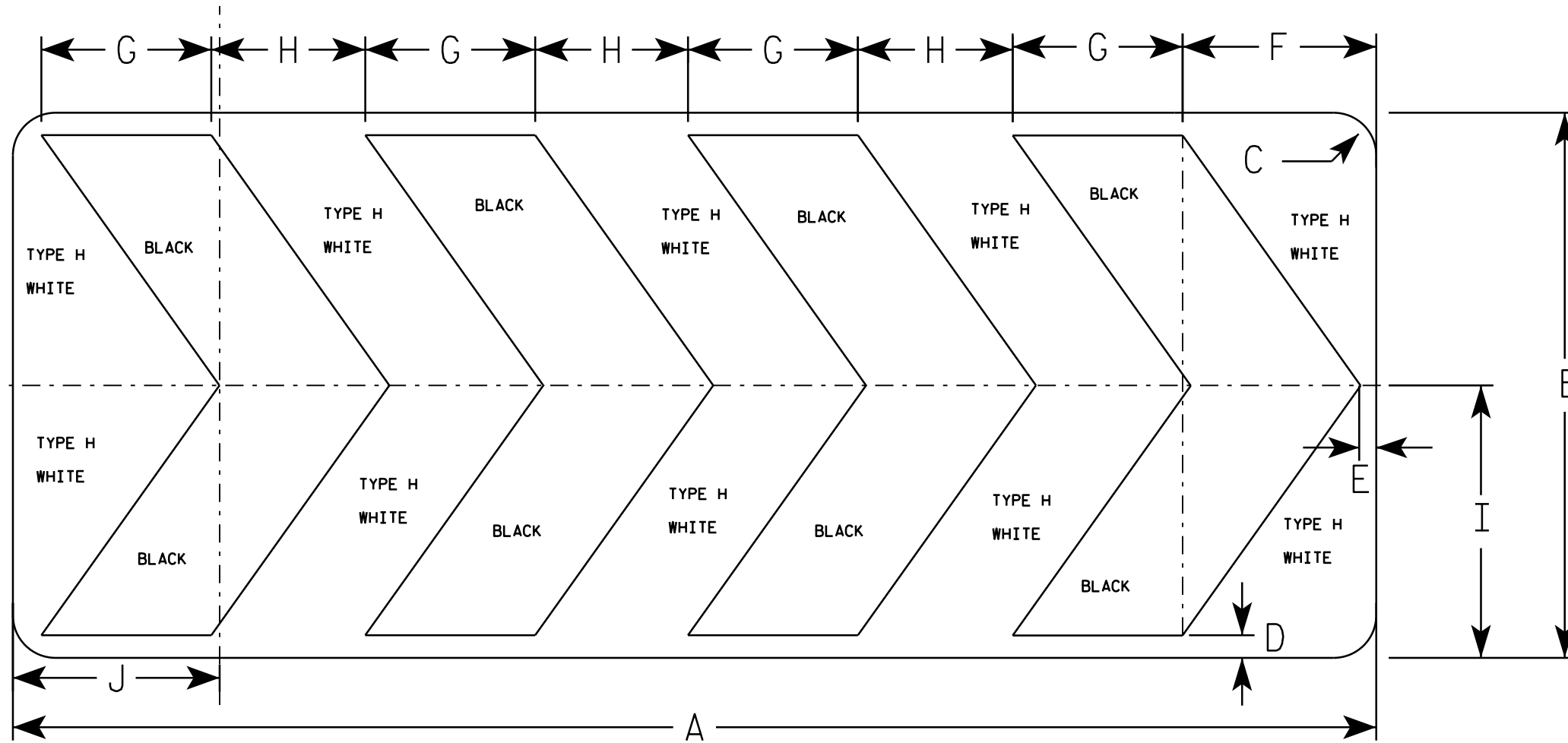
7

7



**NOTES**

1. Sign is Type II - Type H Reflective
2. Color:  
Background - WHITE  
Message - BLACK
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-4B

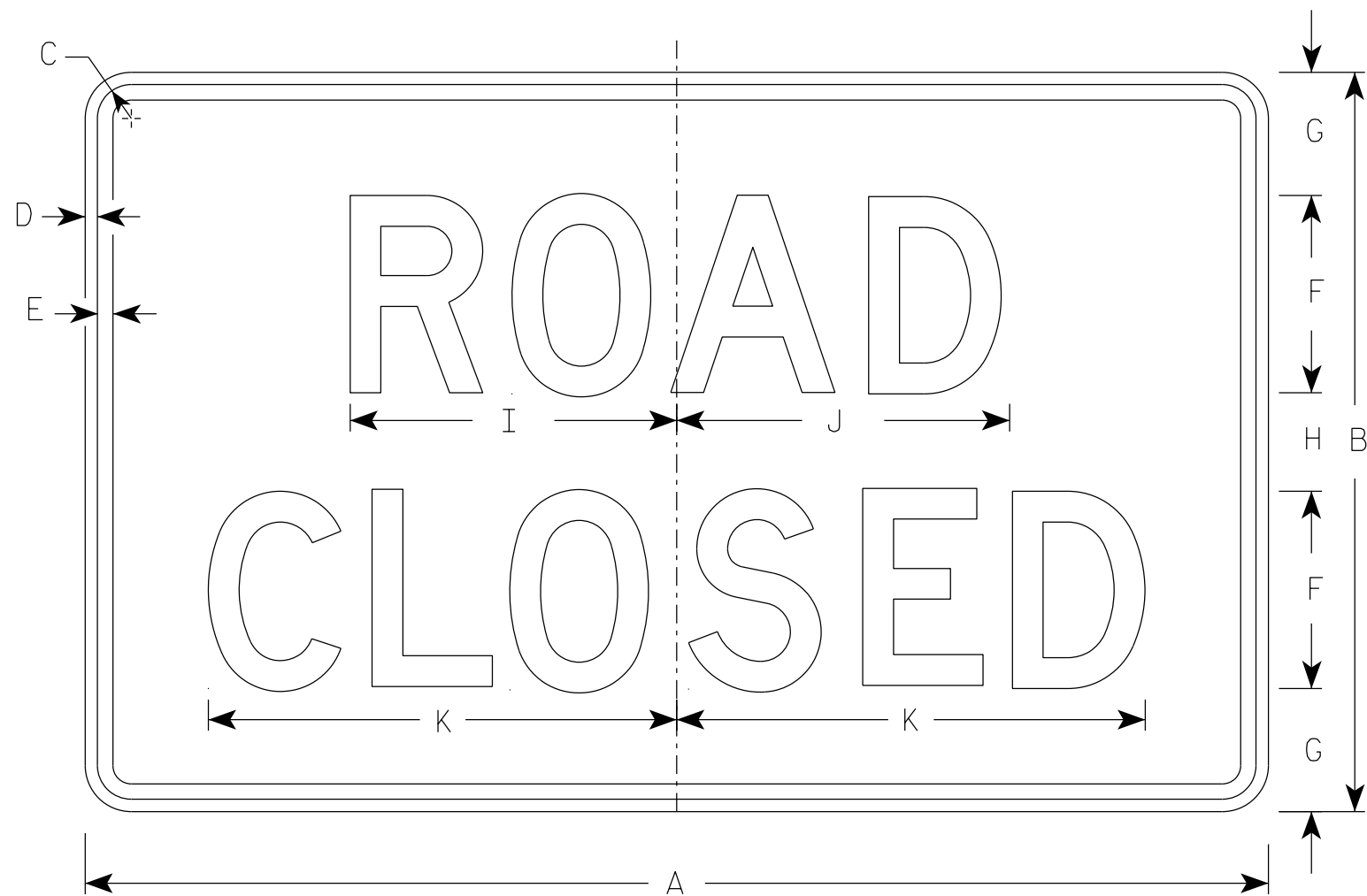
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

**STANDARD SIGN**  
**R6-4B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

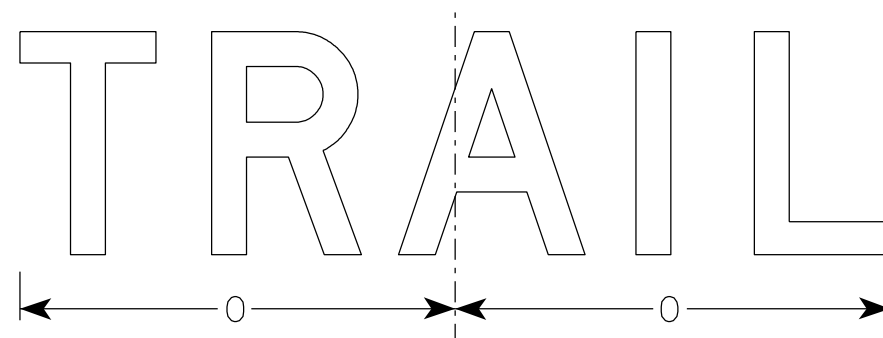
DATE 8/21/14 PLATE NO. R6-4.3



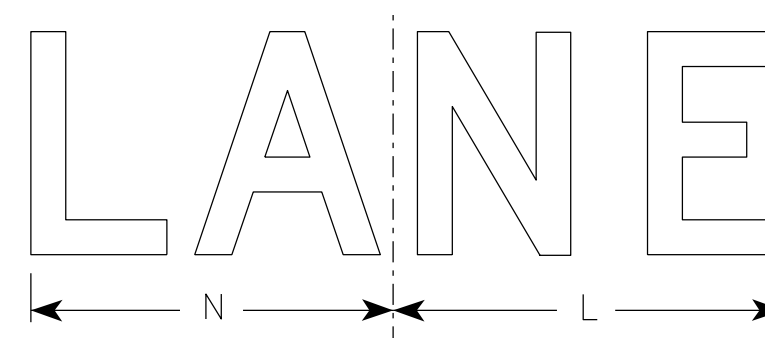
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN  
R11-2

WISCONSIN DEPT OF TRANSPORTATION

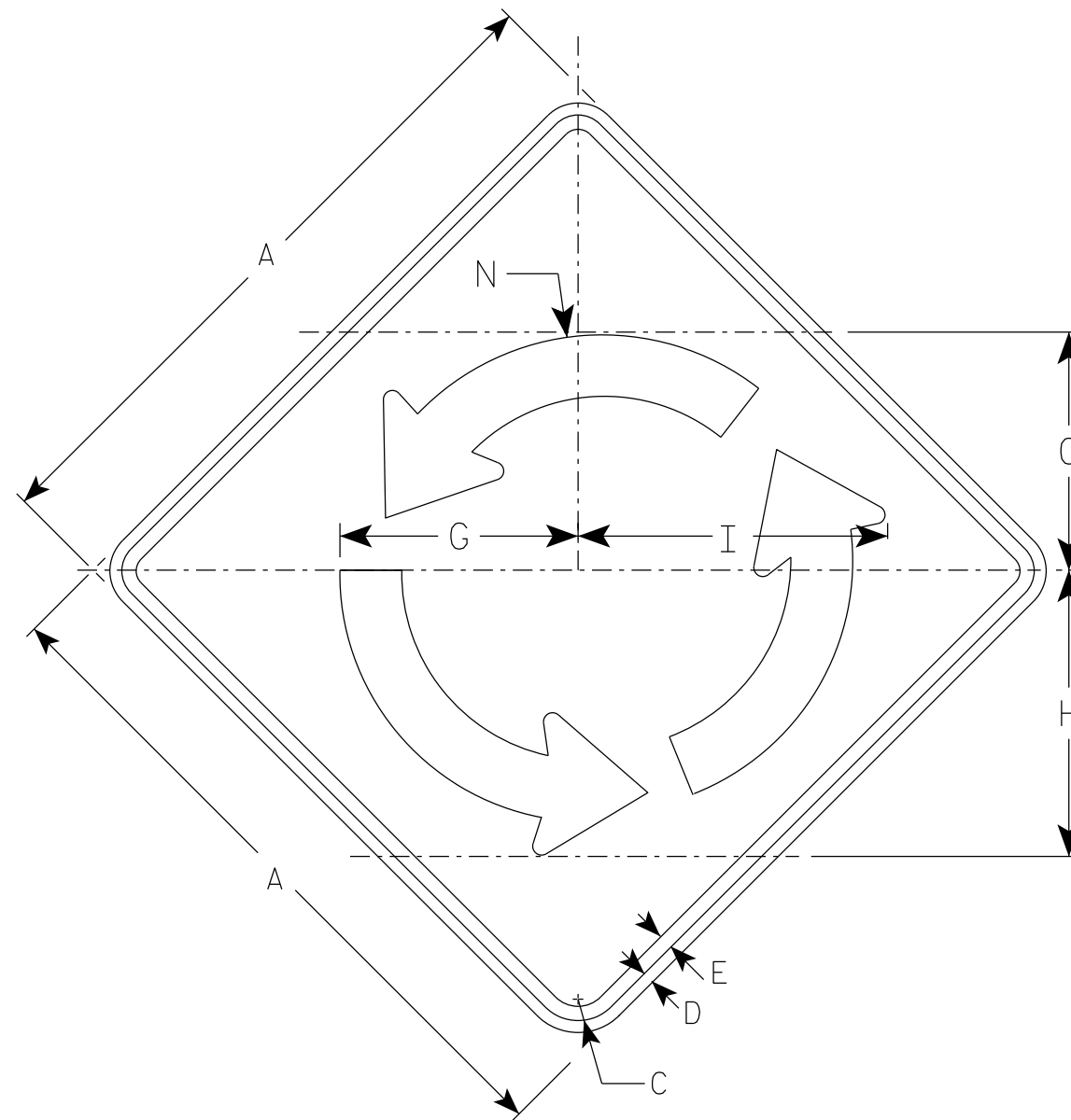
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

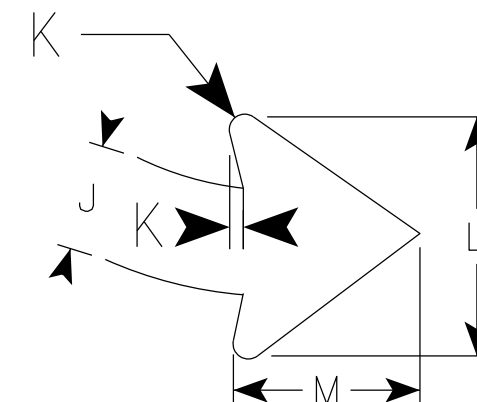
NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black



W2-6

Arrow Detail



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Area sq. ft.
1																									
2S	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
2M	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
3	36		1 5/8	5/8	3/4		12 1/2	15	16 1/4	3 1/4	1/2	7 3/8	5 3/4	13 3/8											9.00
4	48		2 1/4	3/4	1		16 5/8	20	16 1/4	4 3/8	5/8	9 3/4	7 5/8	17 7/8											16.0
5																									

STANDARD SIGN  
W2-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/24/21 PLATE NO. W2-6.7

PROJECT NO:

SHEET NO:

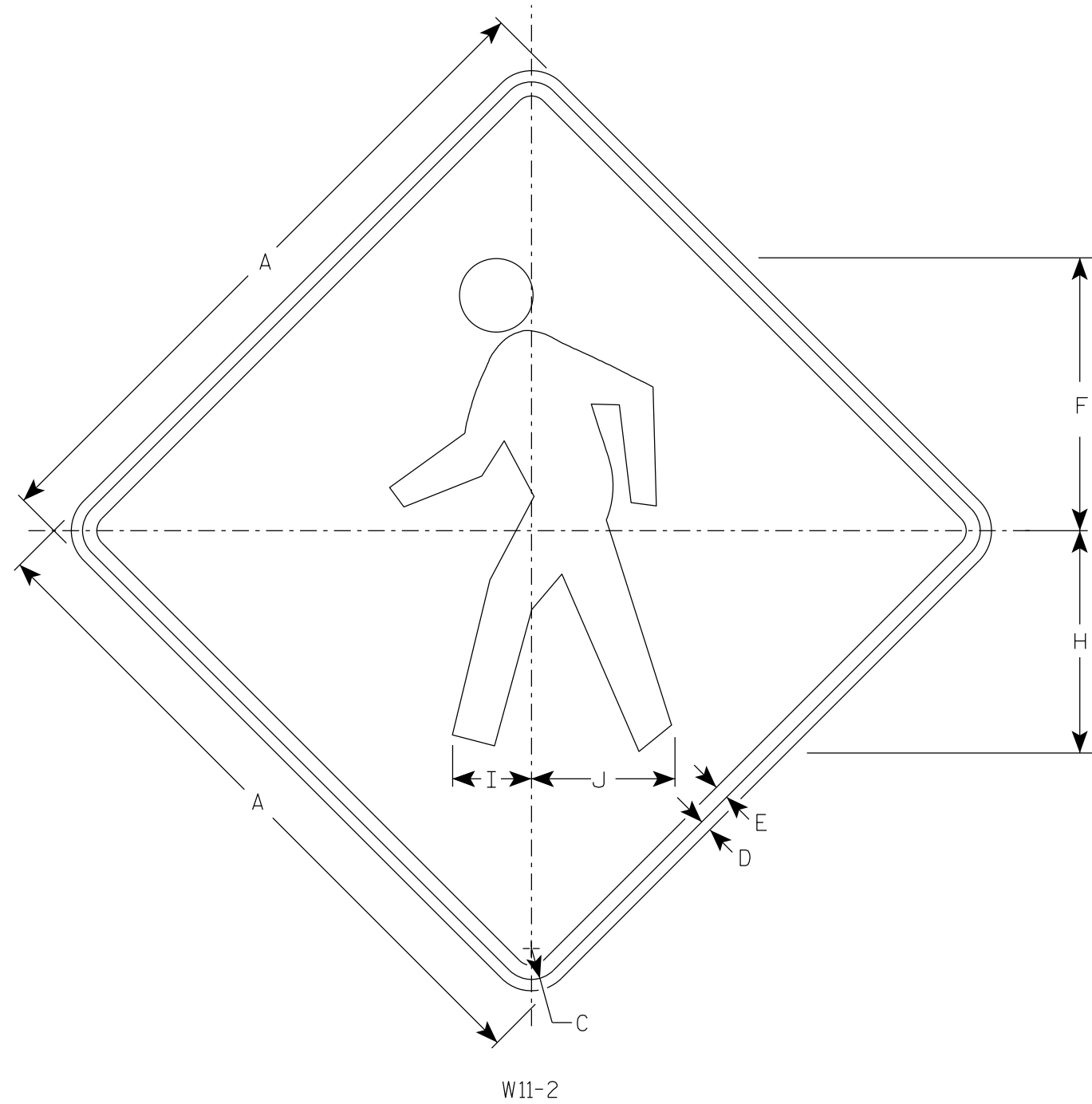
E

7

7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
     Background - Yellow  
     Message - Black



W11-2

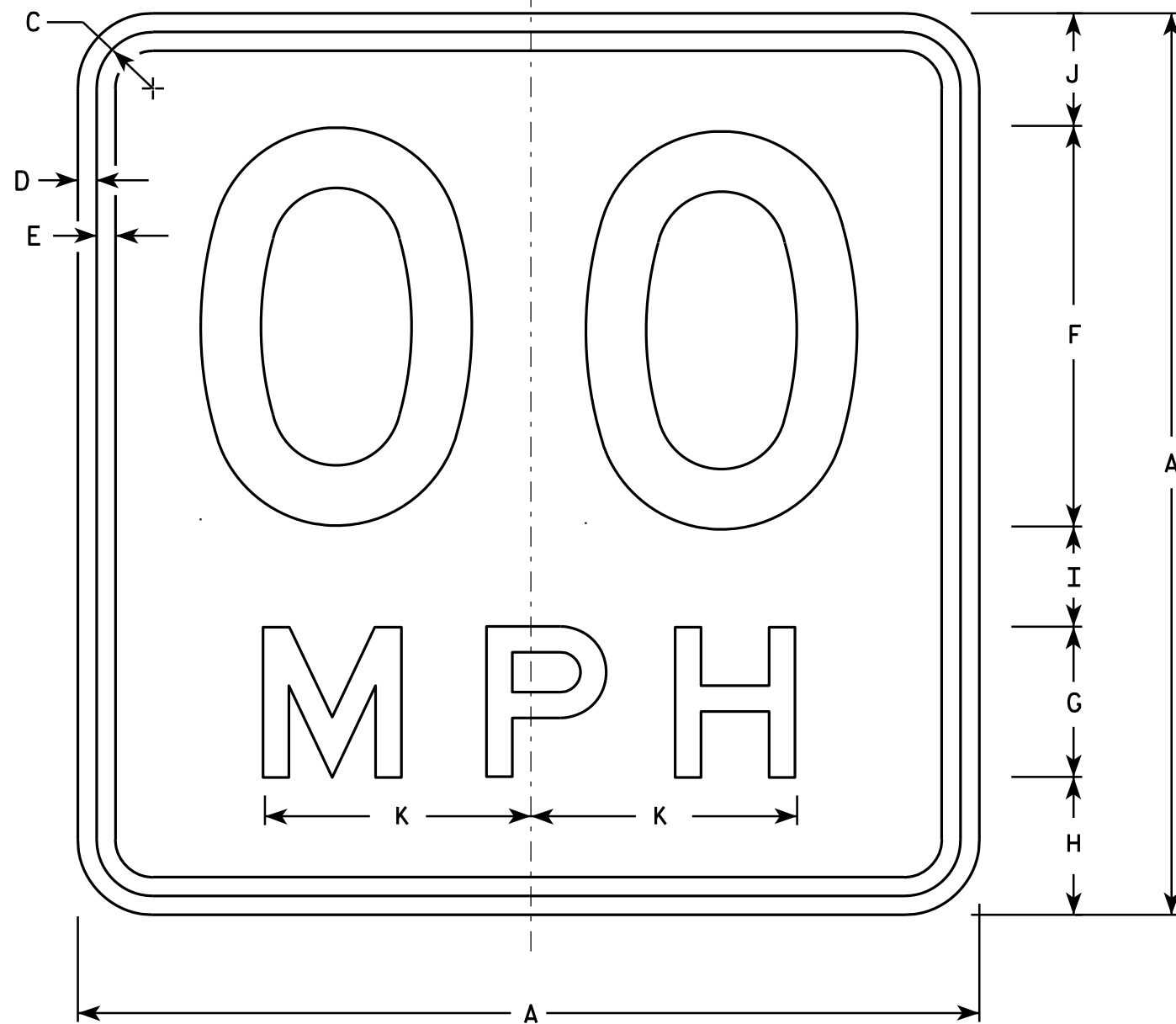
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN  
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 4/8/2020 PLATE NO. W11-2.8



**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D  
Line 2 is Series E

W13-1

\* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.  
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN  
W13-1

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer  
DATE 5/31/12 PLATE NO. W13-1.16

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - C



W16-9P

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN  
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch  
State Traffic Engineer

DATE 3/7/19 PLATE NO. W16-9P.7

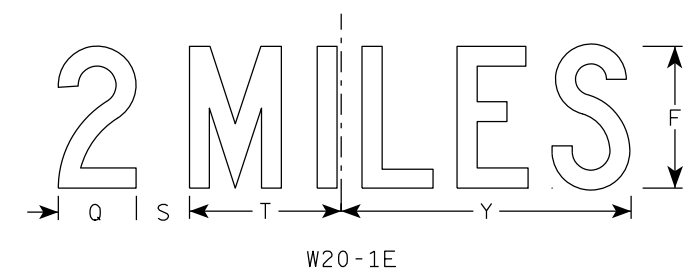
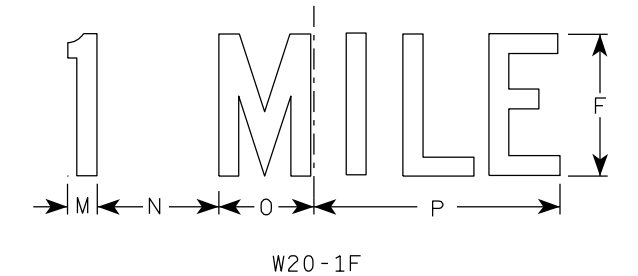
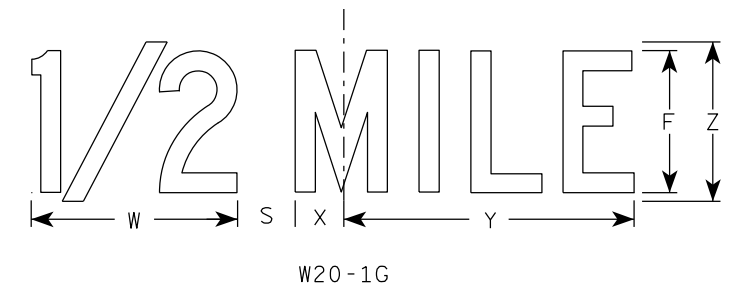
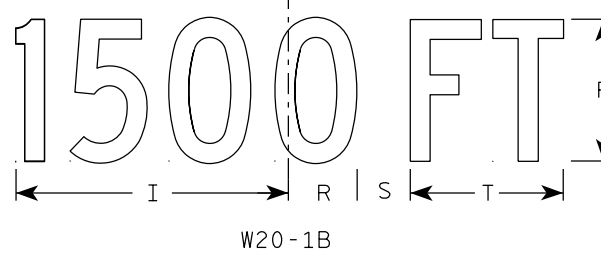
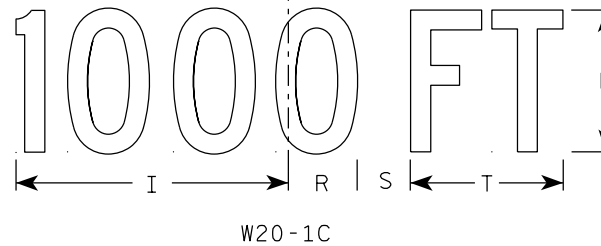
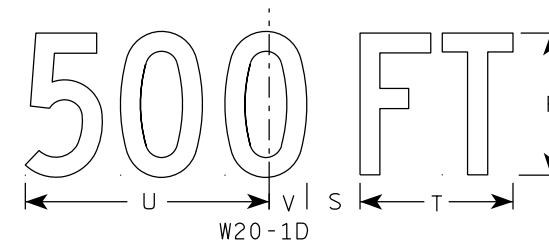
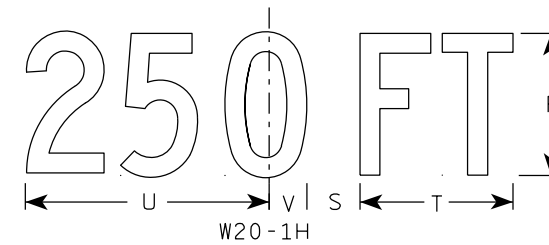
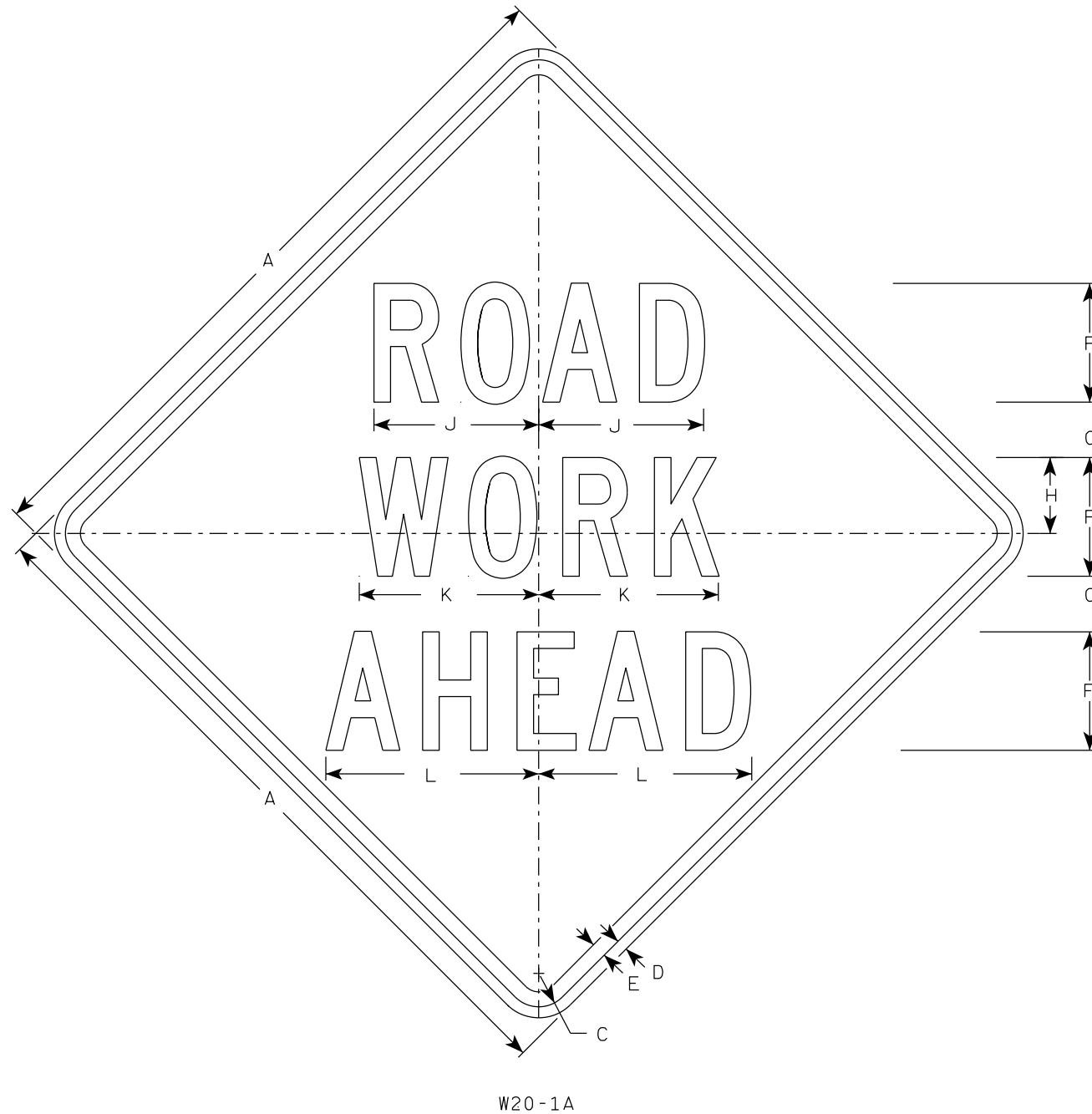
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

7

7

**NOTES**

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



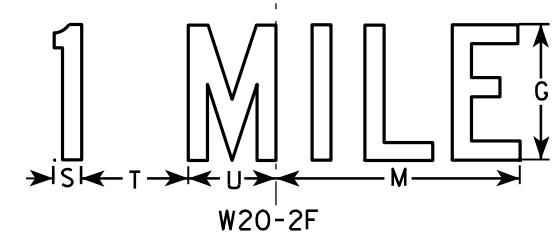
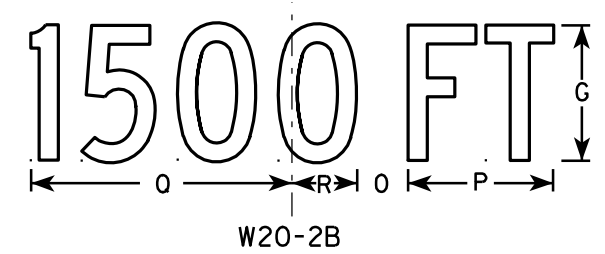
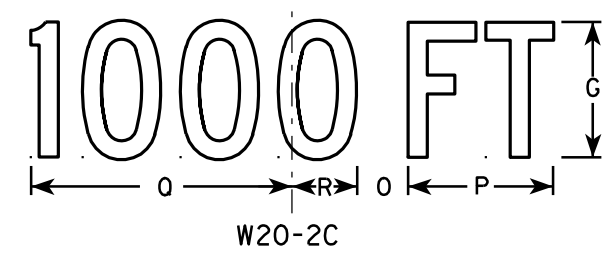
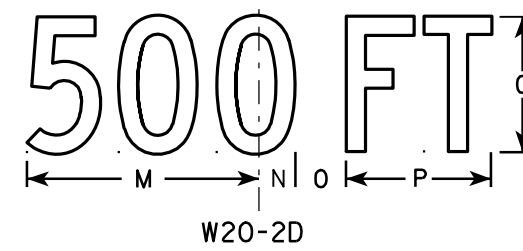
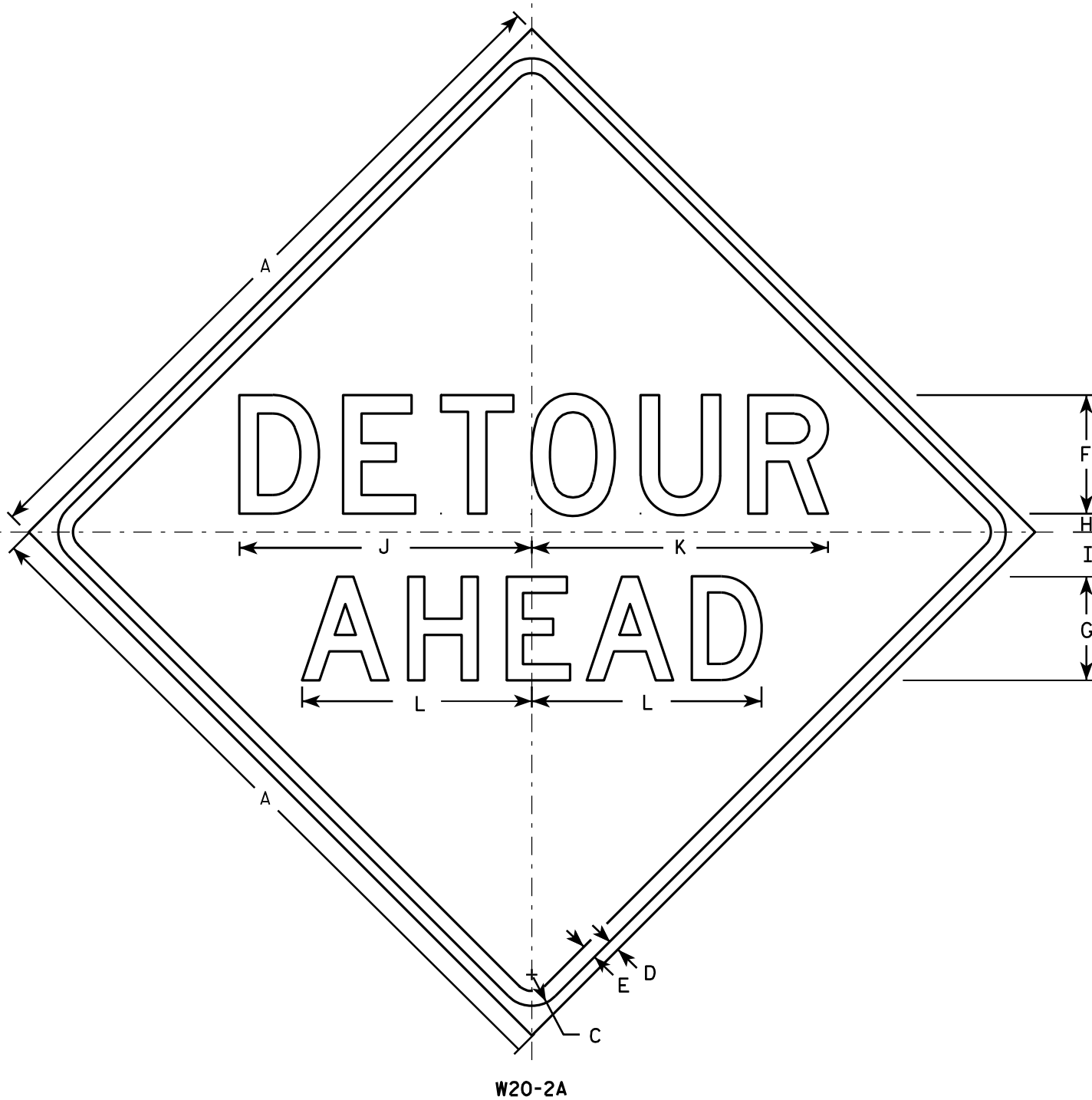
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.  
Line 2 is Series D for AHEAD and Series C for all other distances.

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN  
W20-2A, B, C, D, F & G

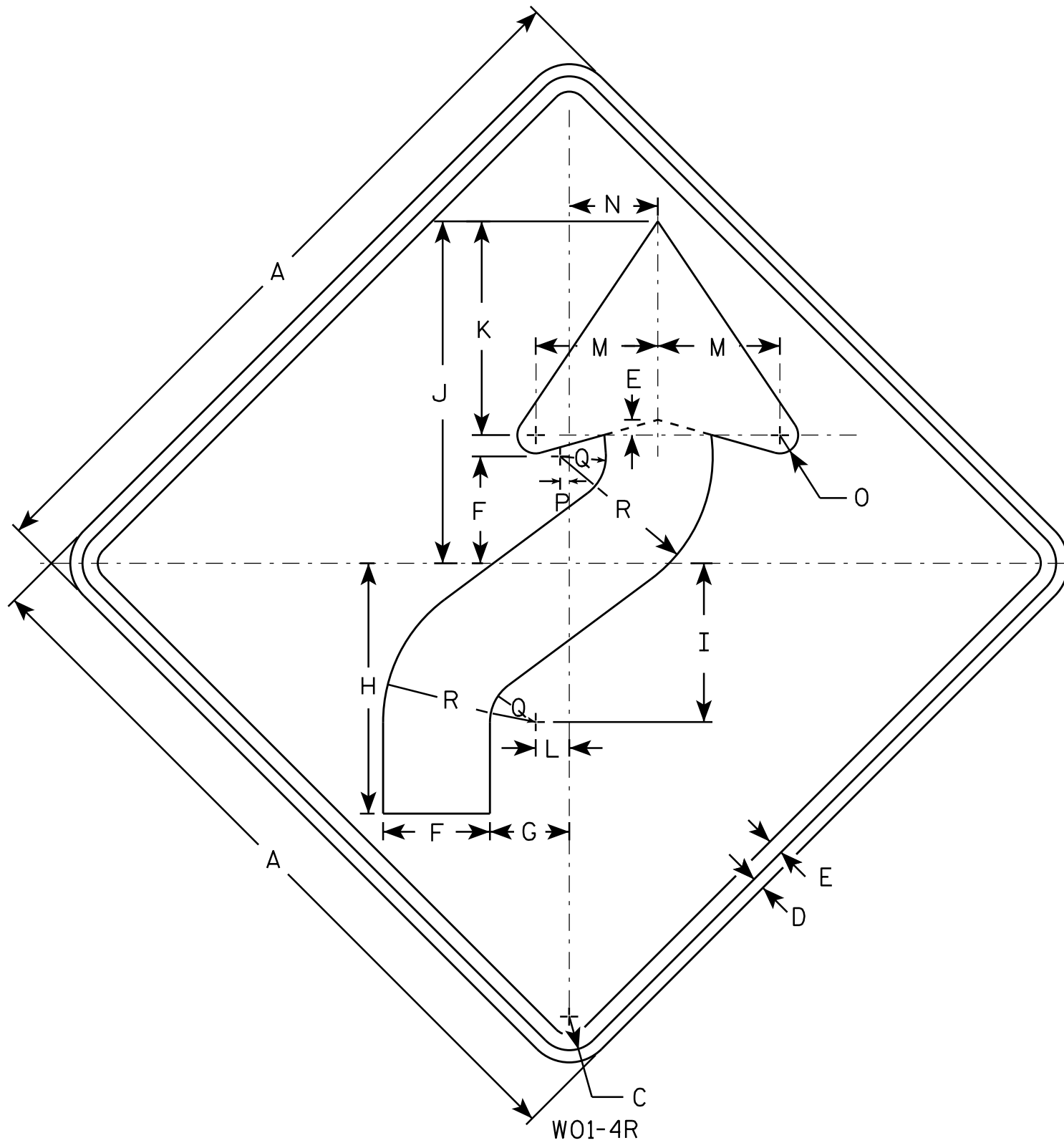
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E





NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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W01-4R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN  
W01-4

WISCONSIN DEPT OF TRANSPORTATION

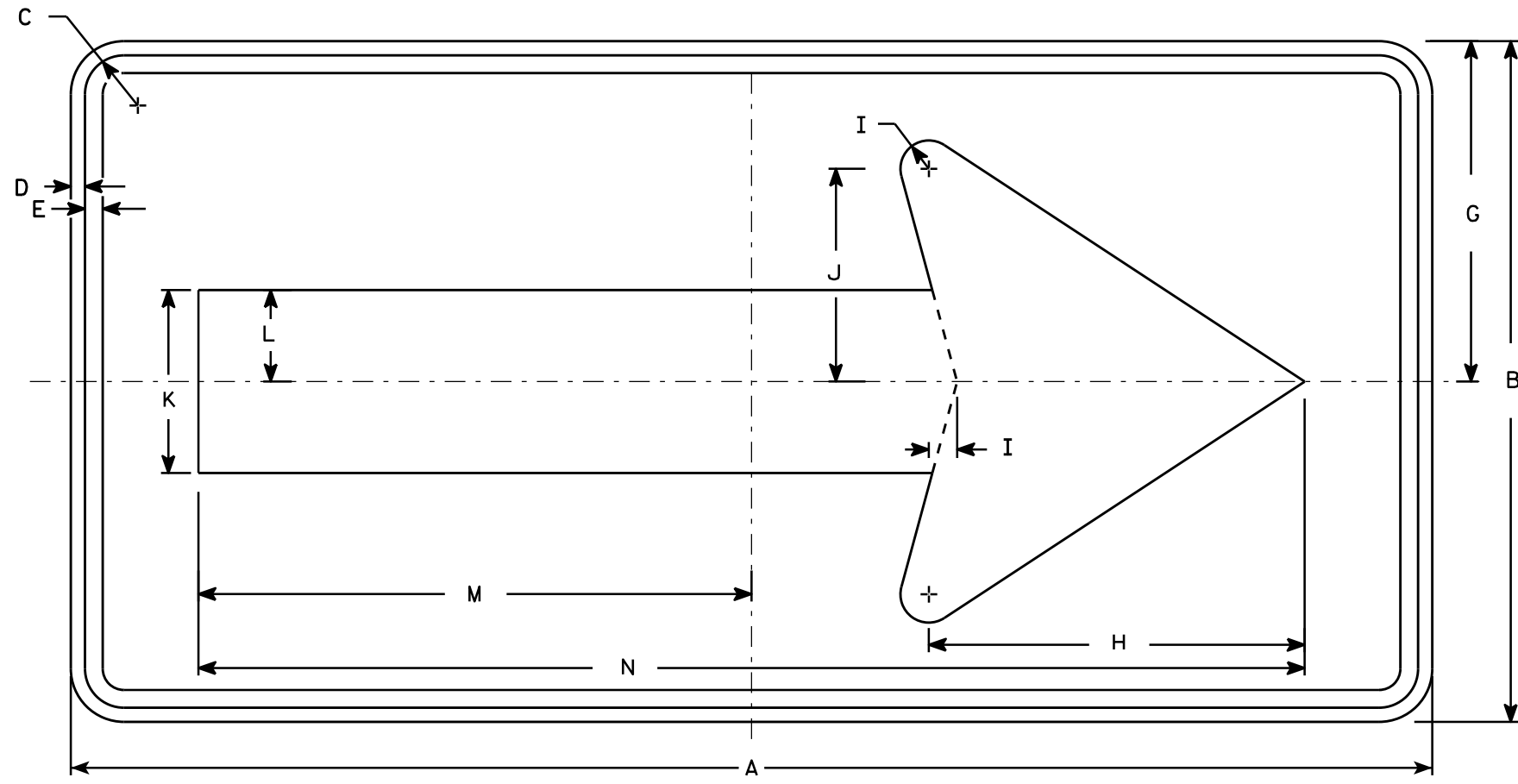
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W01-6

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

**STANDARD SIGN**  
**W01-6**

*WISCONSIN DEPT OF TRANSPORTATION*

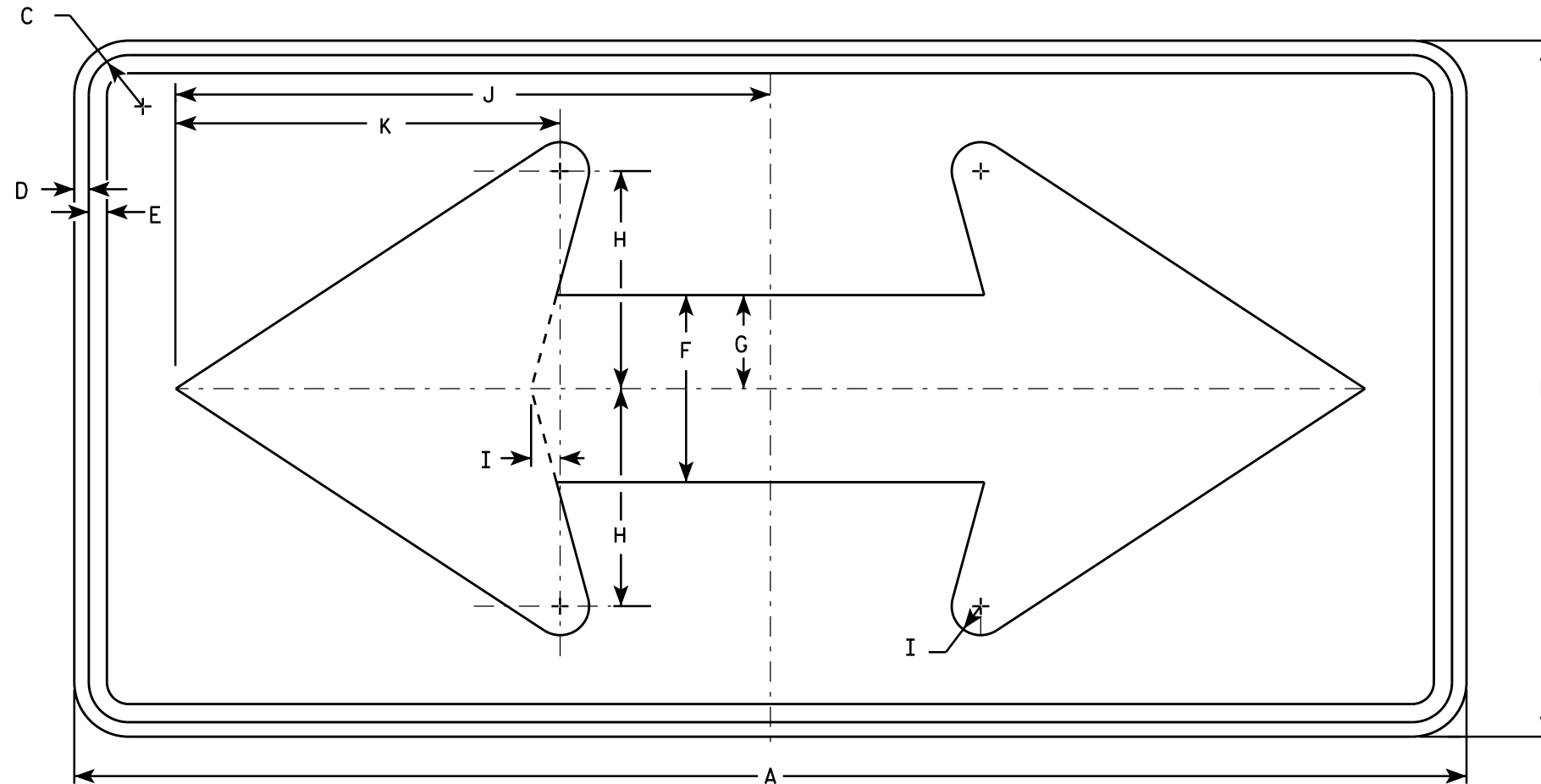
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W01-7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5

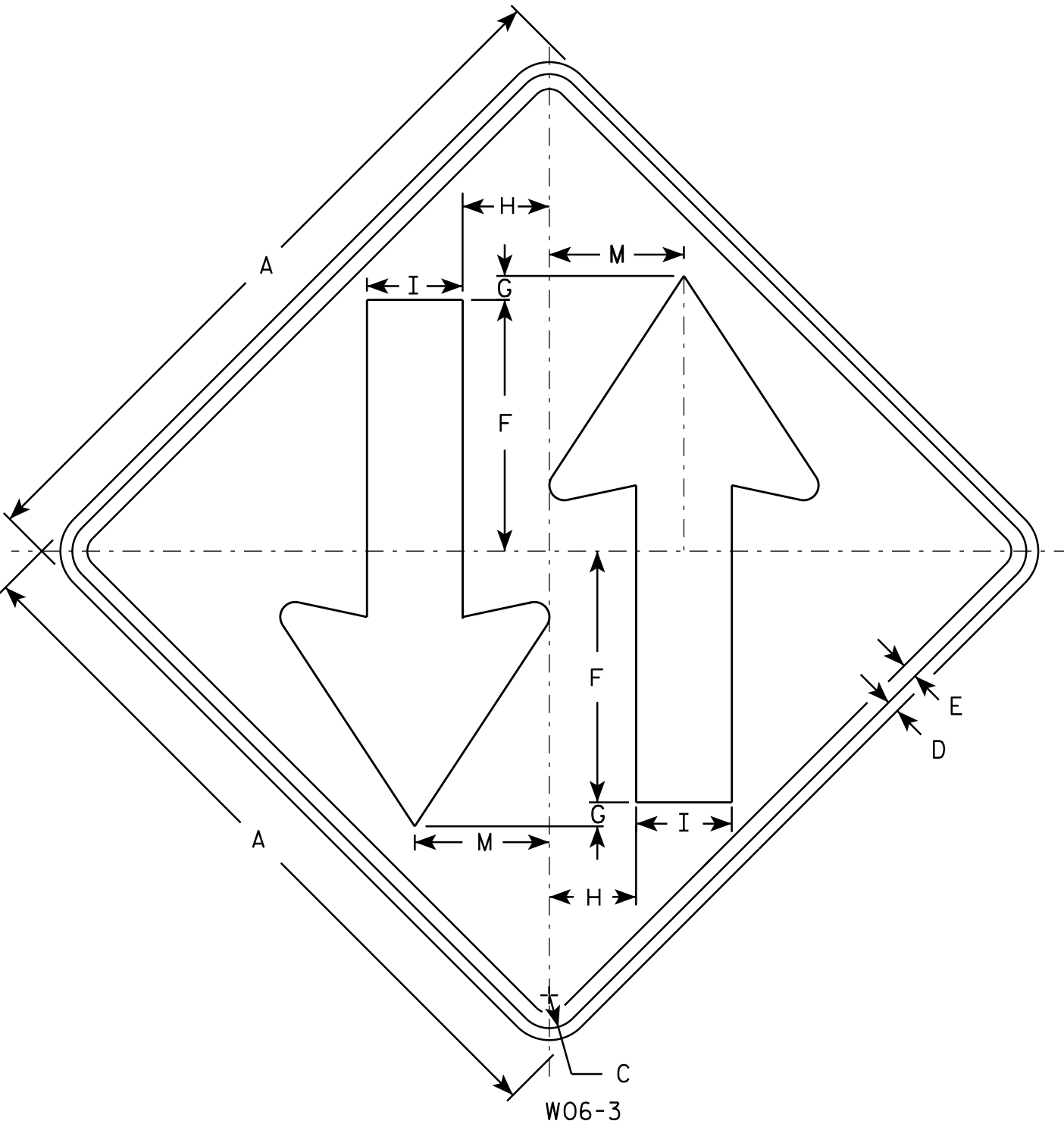
**STANDARD SIGN**  
W01-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

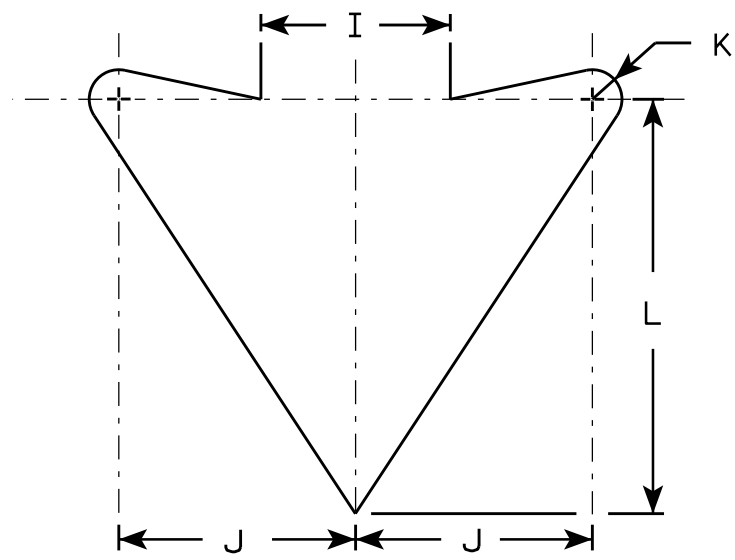
DATE 11/18/13 PLATE NO. W01-7.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

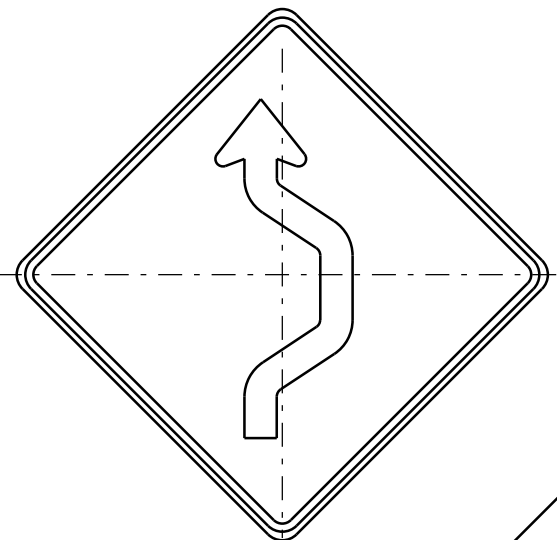
**STANDARD SIGN**  
**W06-3**

WISCONSIN DEPT OF TRANSPORTATION

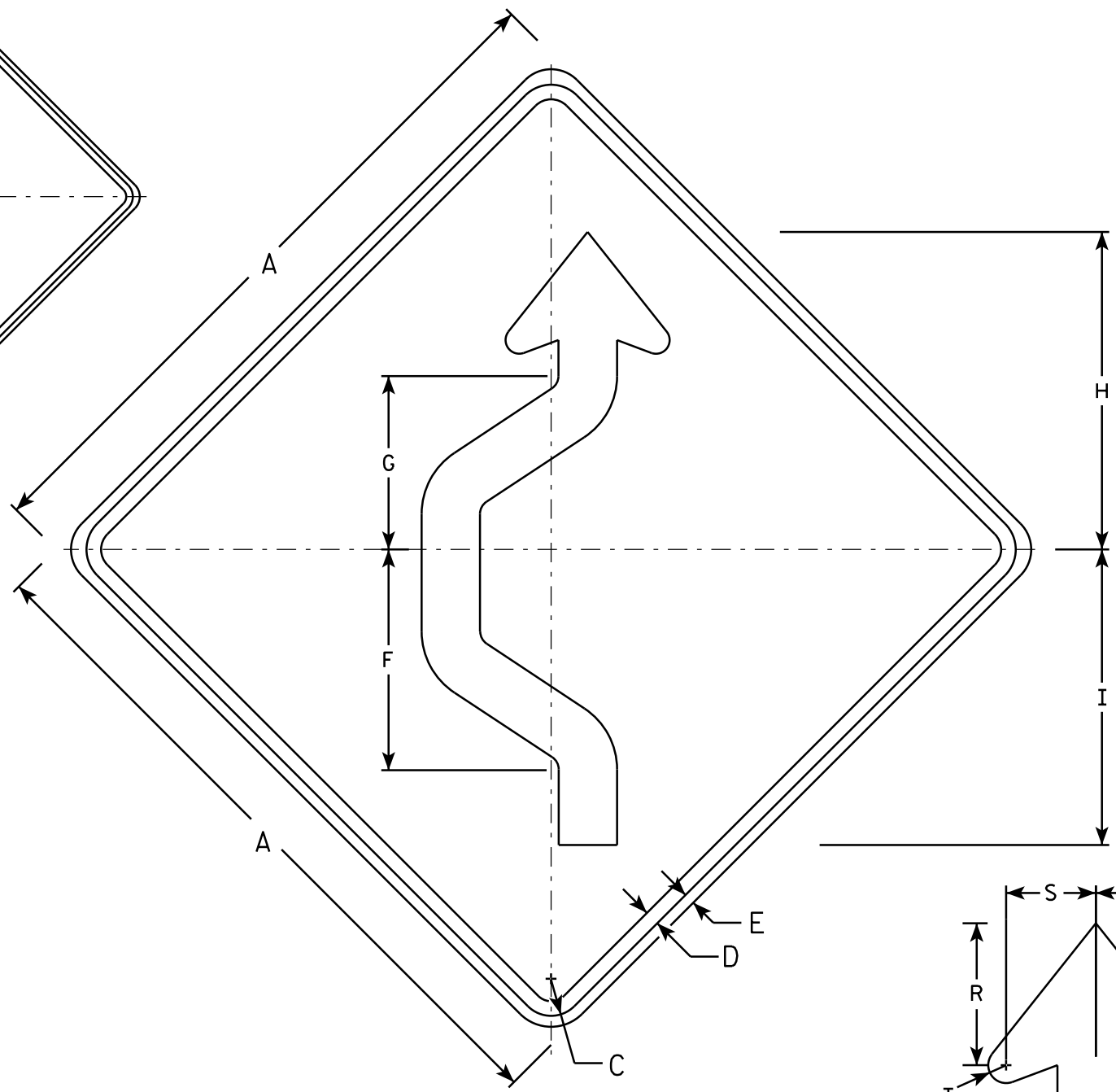
APPROVED *Matthew R. Raub*  
For State Traffic Engineer

DATE 11/20/13 PLATE NO. W06-3.1

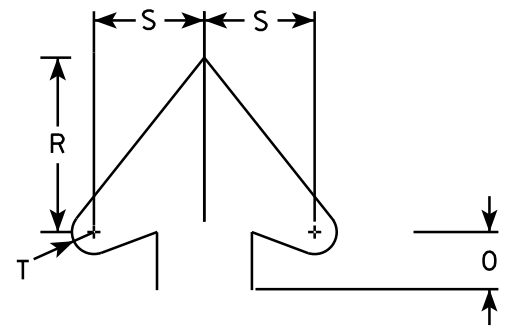
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



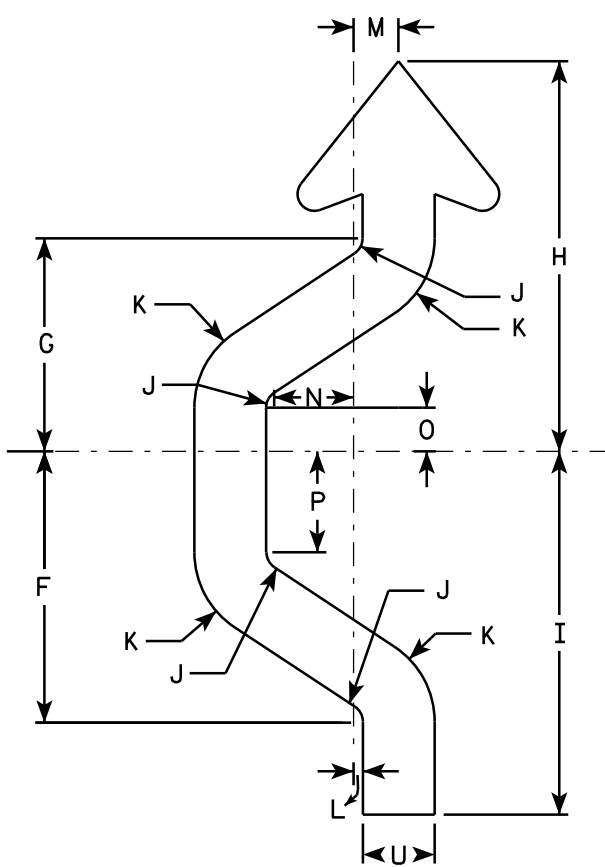
W024-1R



W024-1L



Arrowhead Detail



Arrow Detail

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W024-1R is the same as W024-1L except reversed along the vertical centerline.

7

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	11 3/8	8 7/8	16 3/8	15 1/4	3/4	3 3/4	3/8	2	3 3/8	1 7/8	4 1/4		5 1/2	3 1/2	5/8	3						9
2S	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
2M	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
3	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
4	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
5	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16

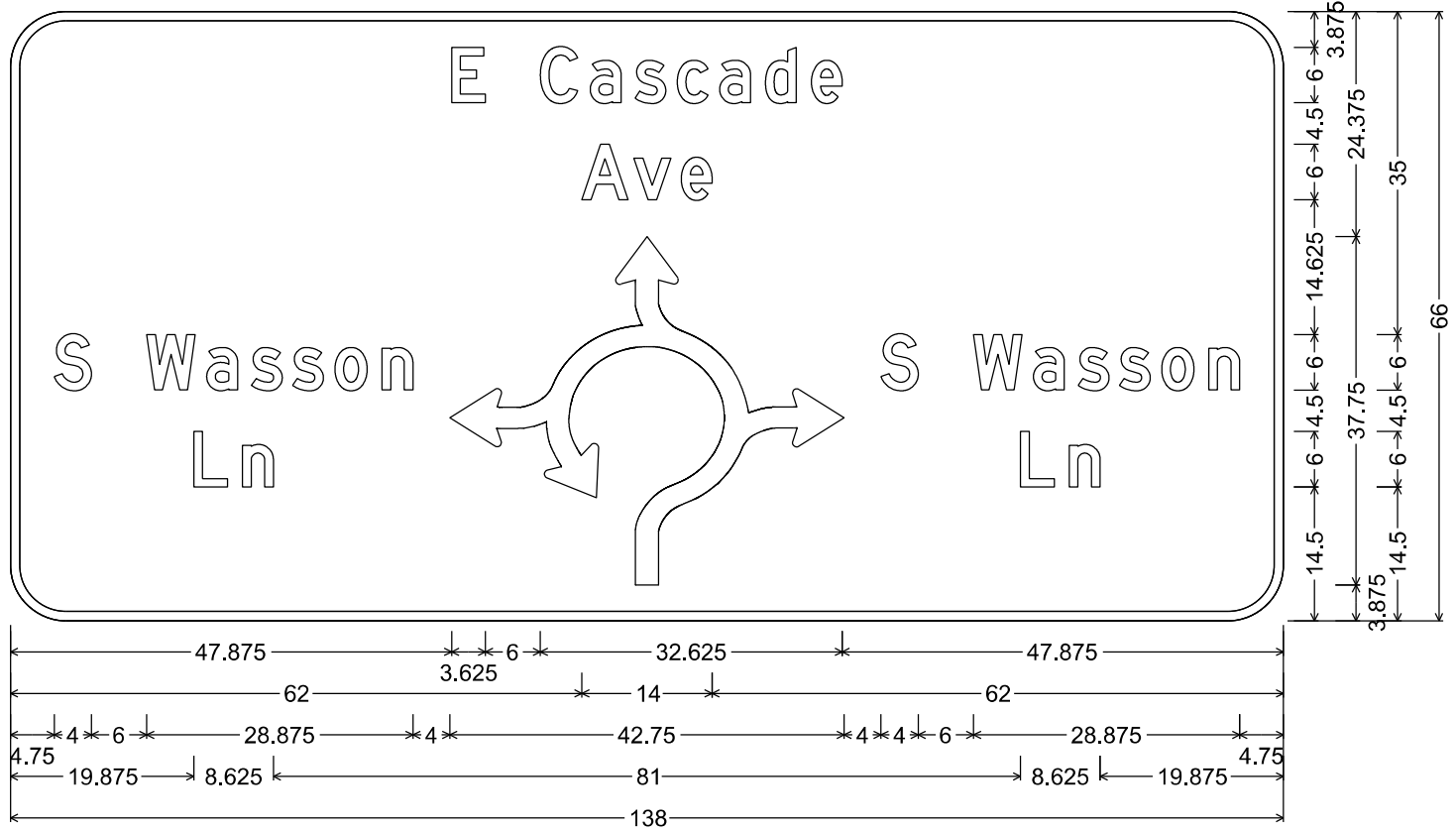
**STANDARD SIGN**  
**W024-1 L & R**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/25/2013 PLATE NO. W024-1.1

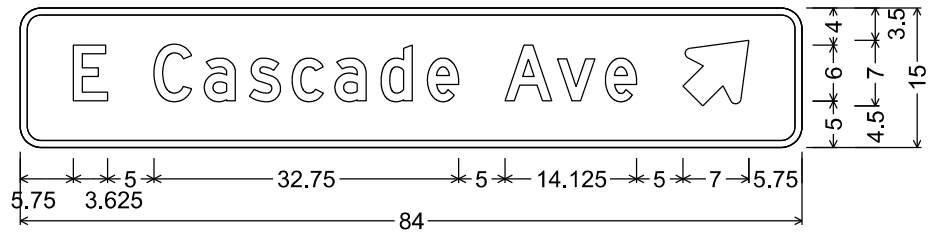
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



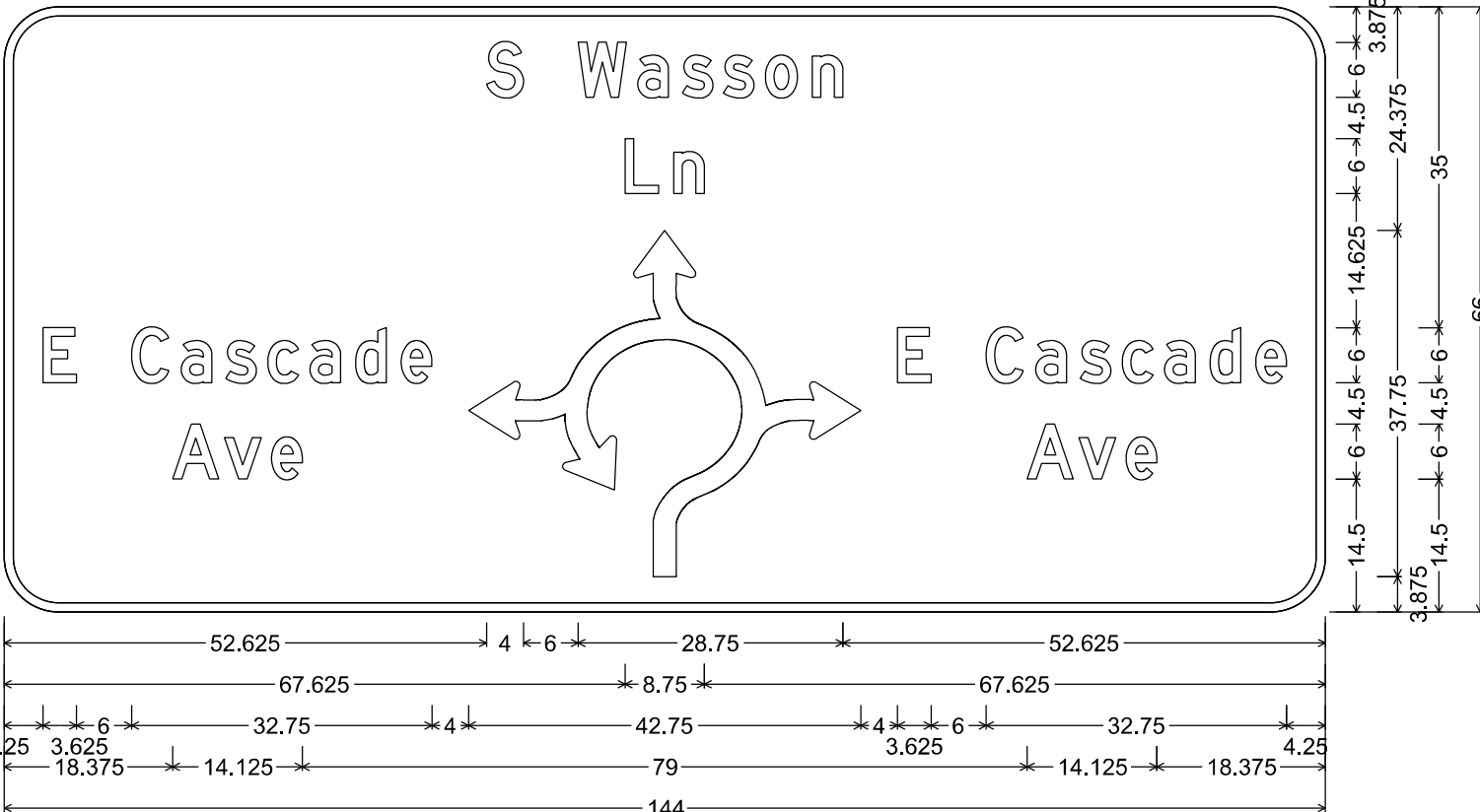
D1-62; 6.000" Radius, 1.000" Border

NOTES

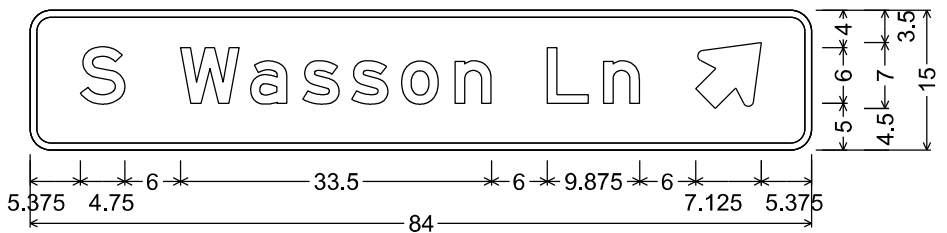
1. Signs are Type II - Type H Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - D or as noted



D1-1; 2.250" Radius, 0.750" Border



D1-62; 6.000" Radius, 1.000" Border



D1-1; 2.250" Radius, 0.750" Border  
"S", E; "Wasson", E; "Ln", E

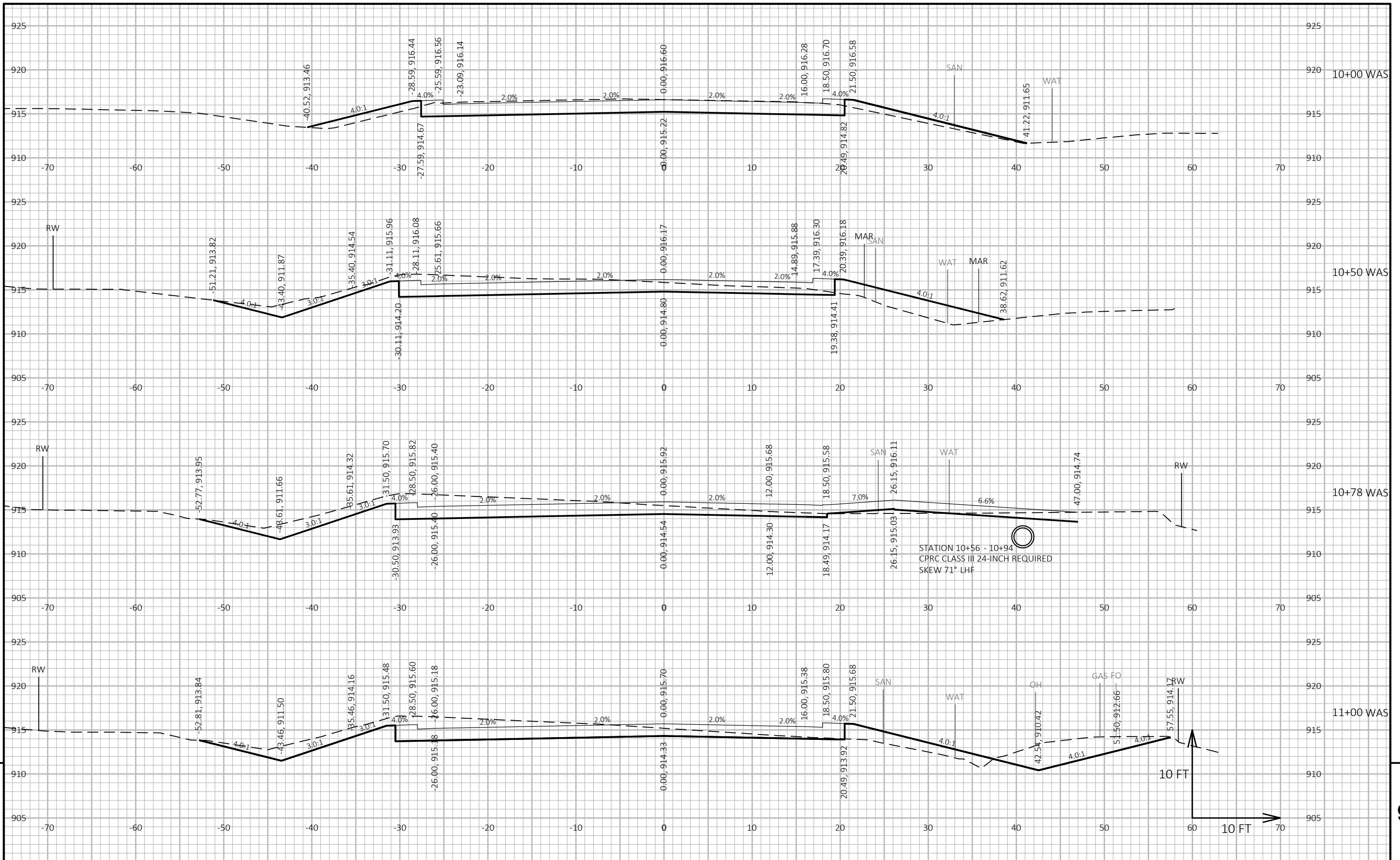
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7









PROJECT NO: 7994-00-51

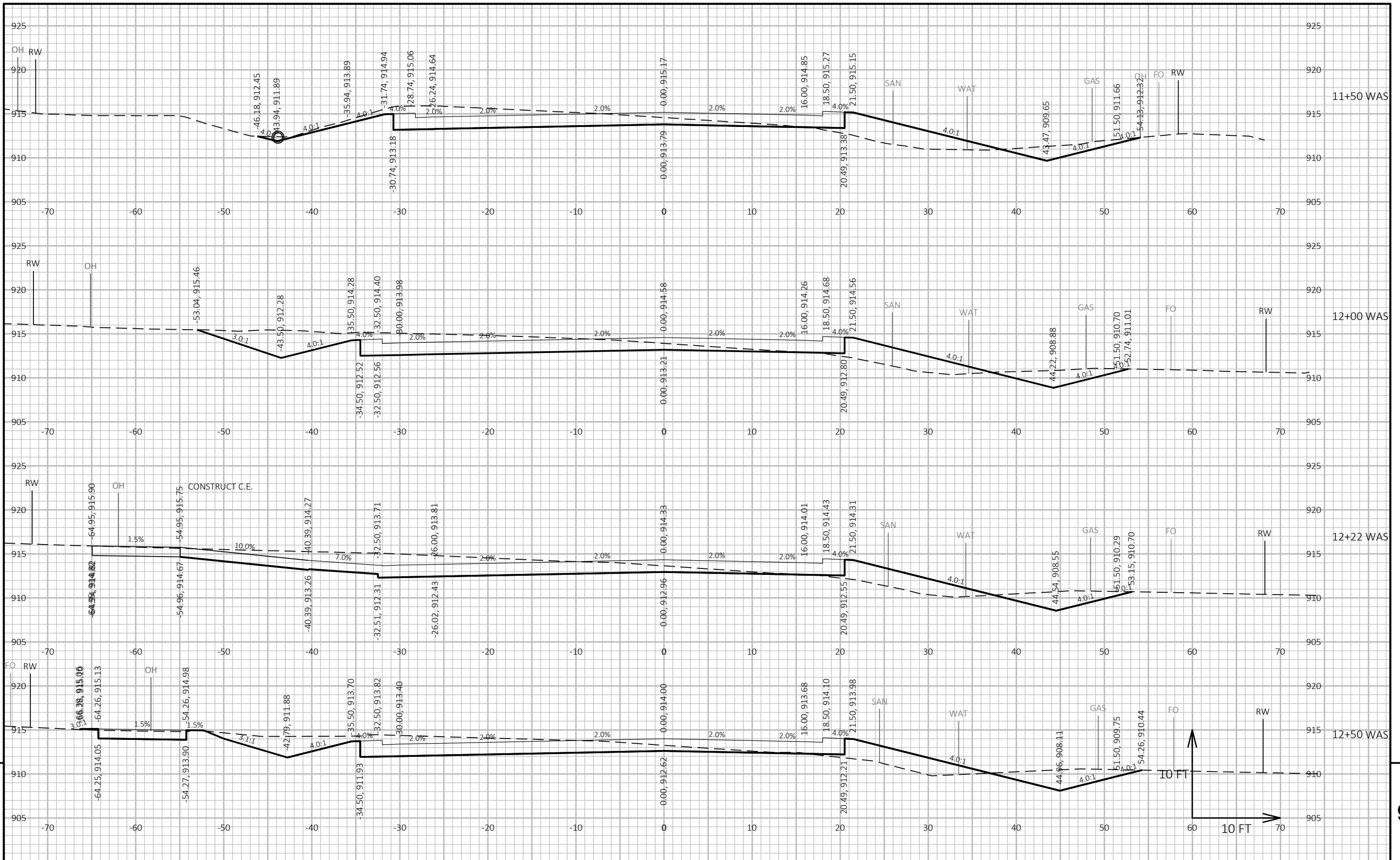
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

SHEET

E



PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E



PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E



PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

SHEET

E



PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E



PROJECT NO: 7994-00-51

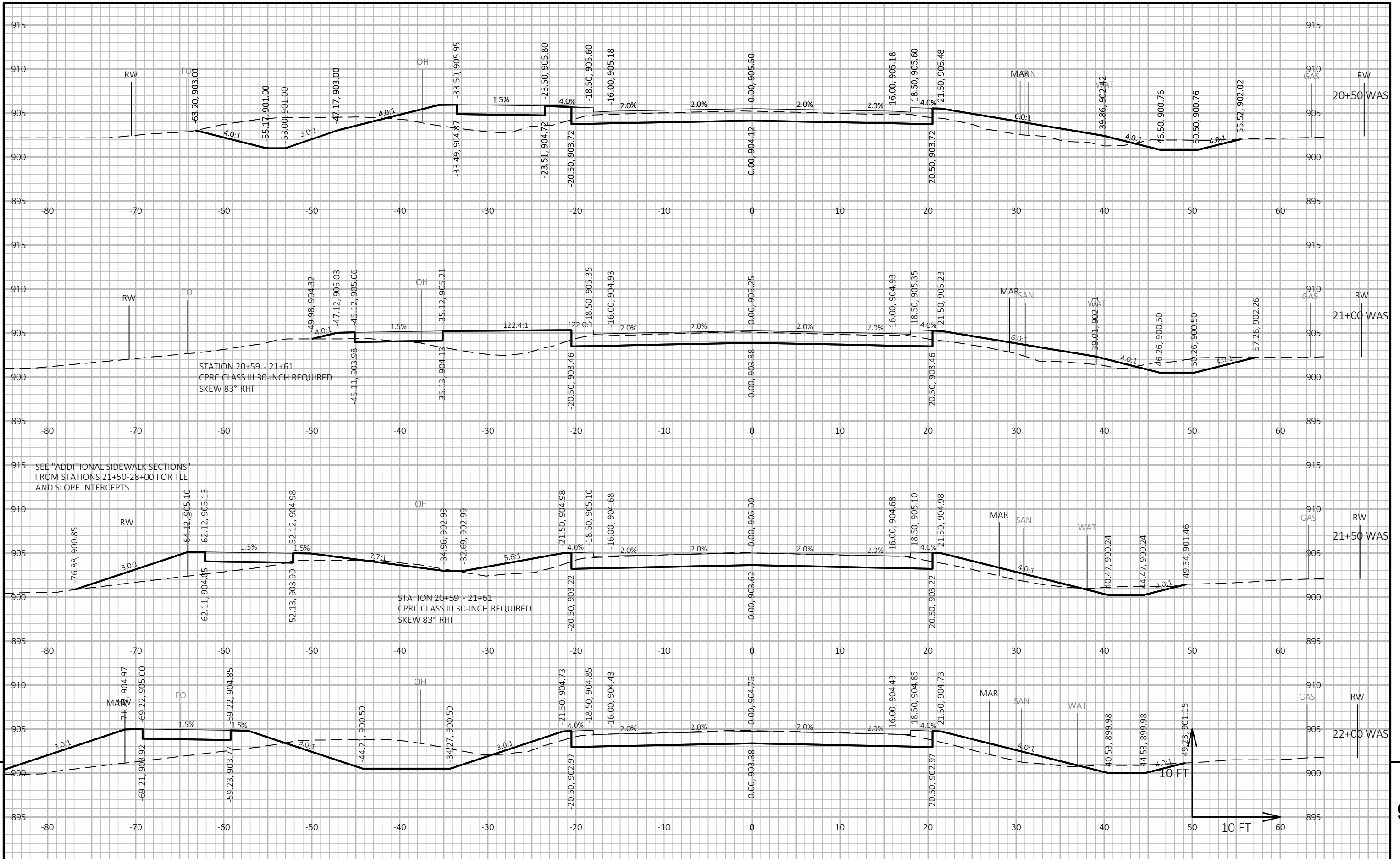
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

SHEET

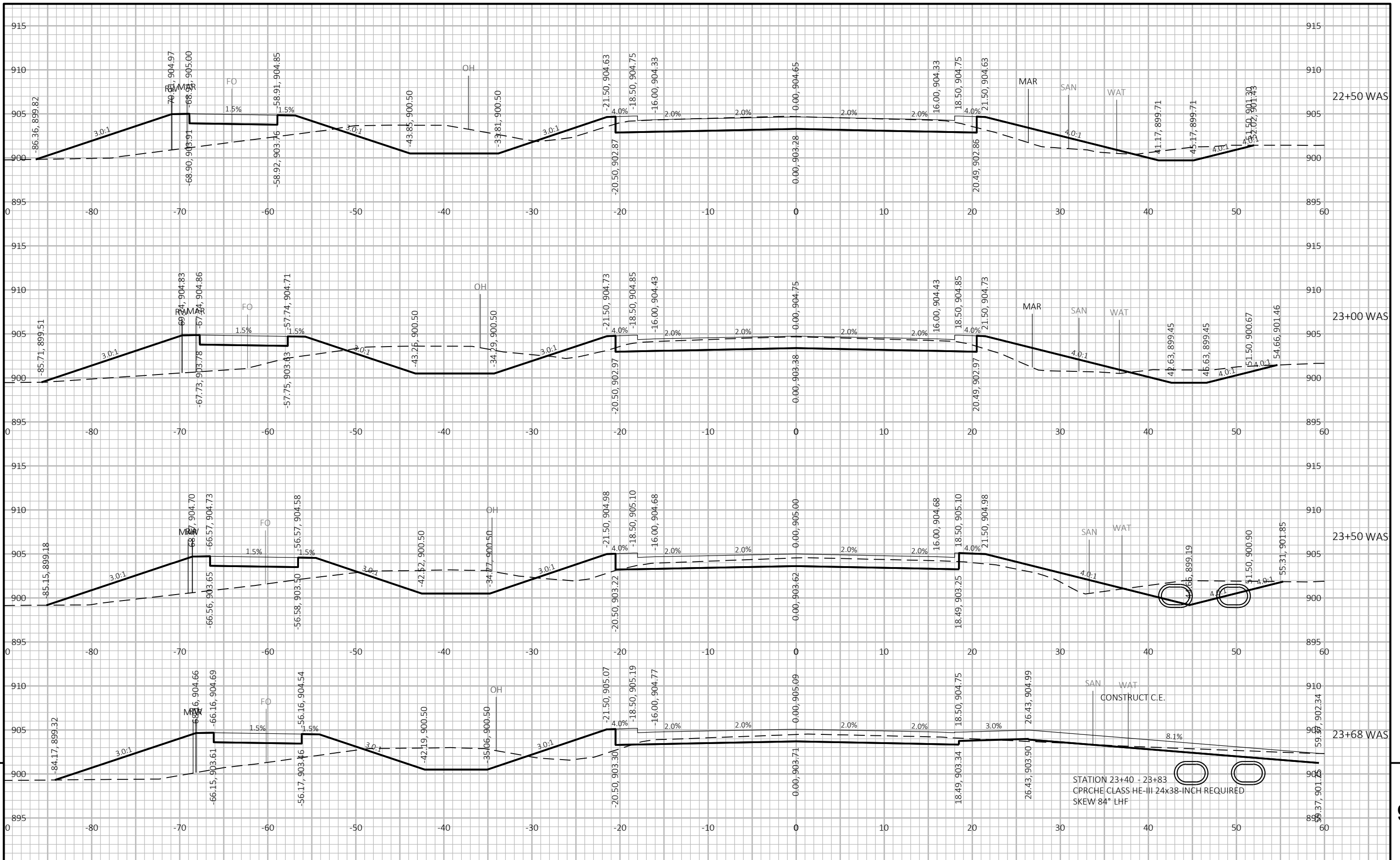
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG      PLOT DATE : 1/22/2024 10:30 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090207-xs

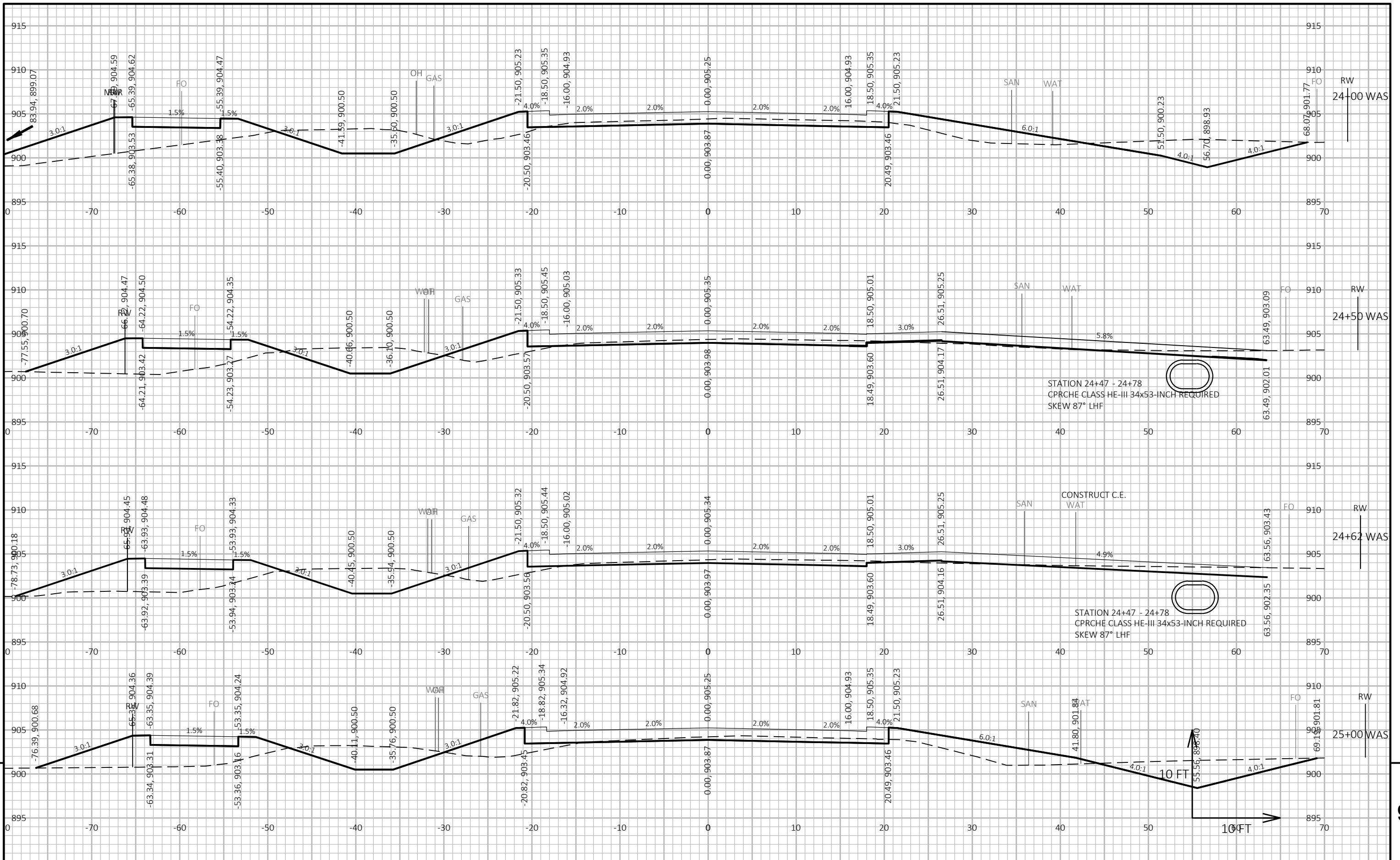


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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CROSS SECTIONS: WASSON LANE	SHEET E
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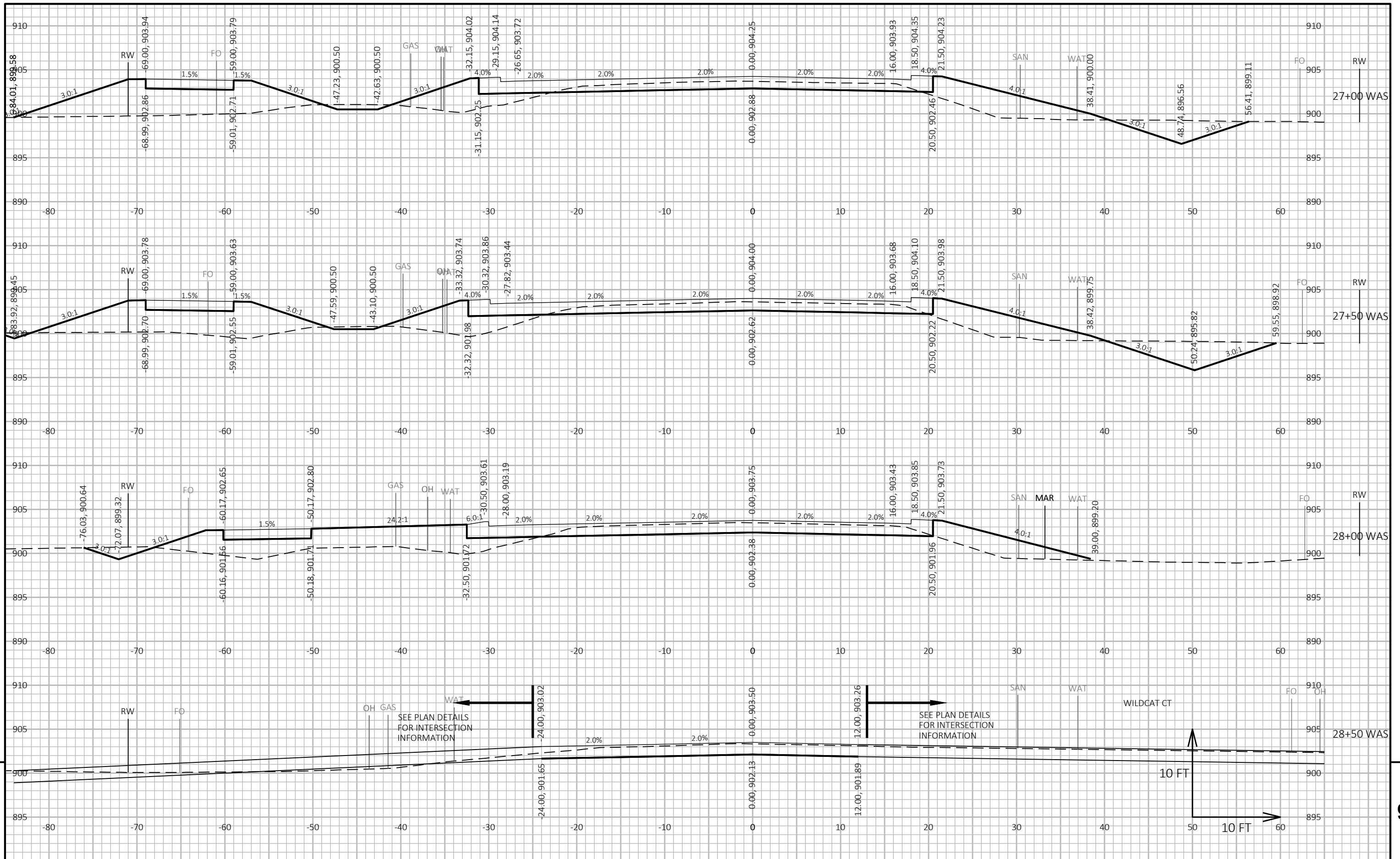




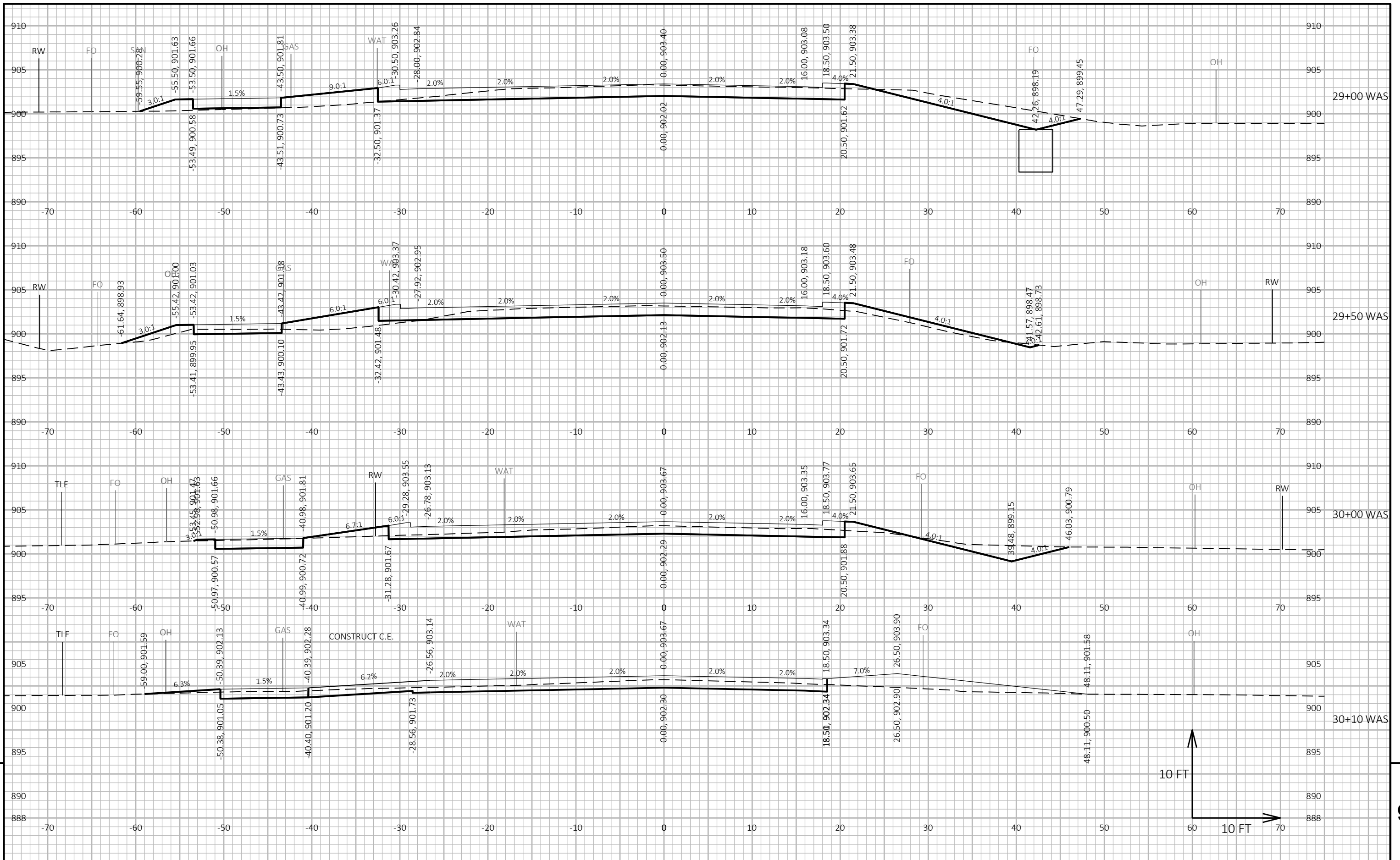
PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E



PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CROSS SECTIONS: WASSON LANE	SHEET	E
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E



PROJECT NO: 7994-00-51

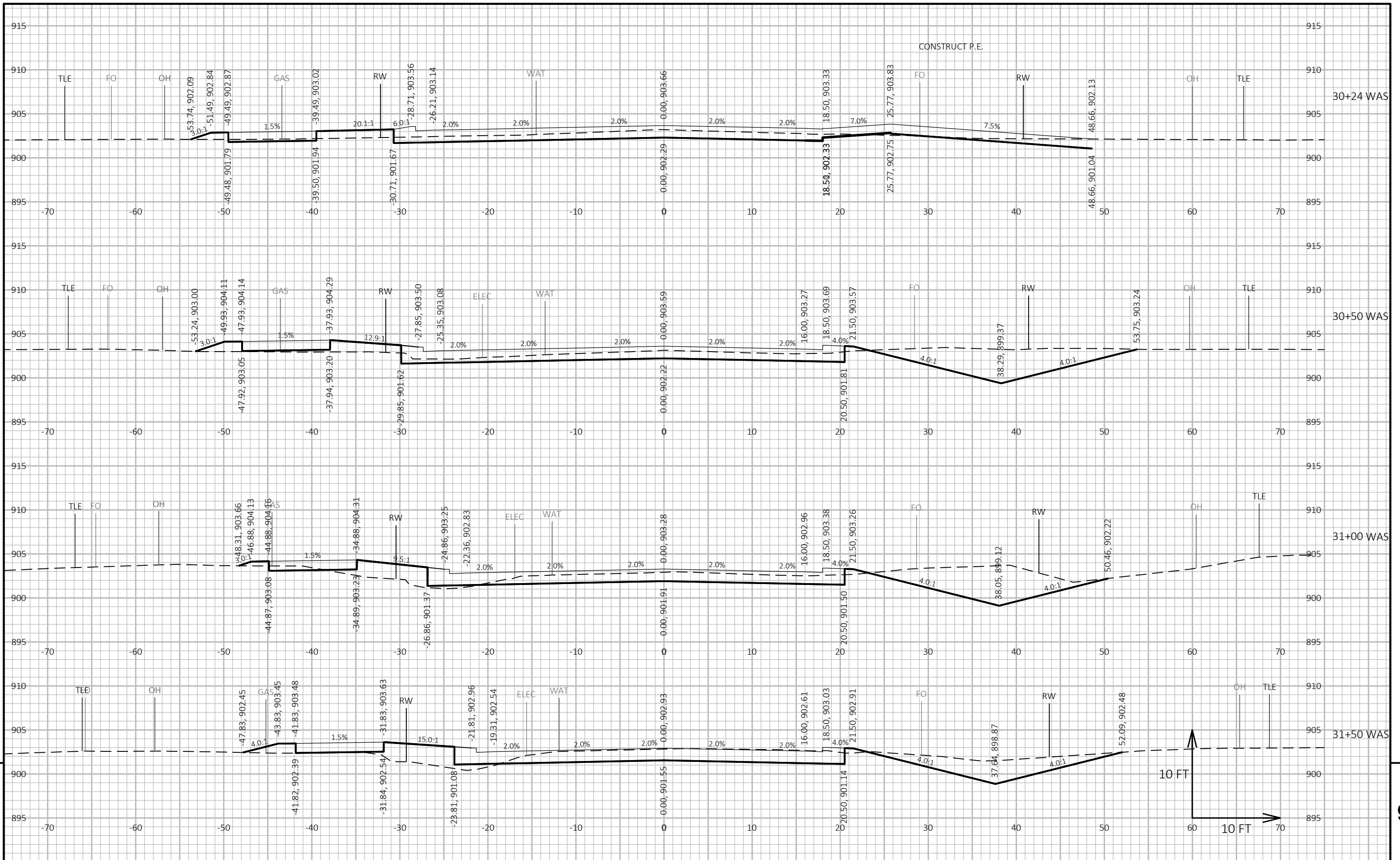
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

SHEET

E



PROJECT NO: 7994-00-51

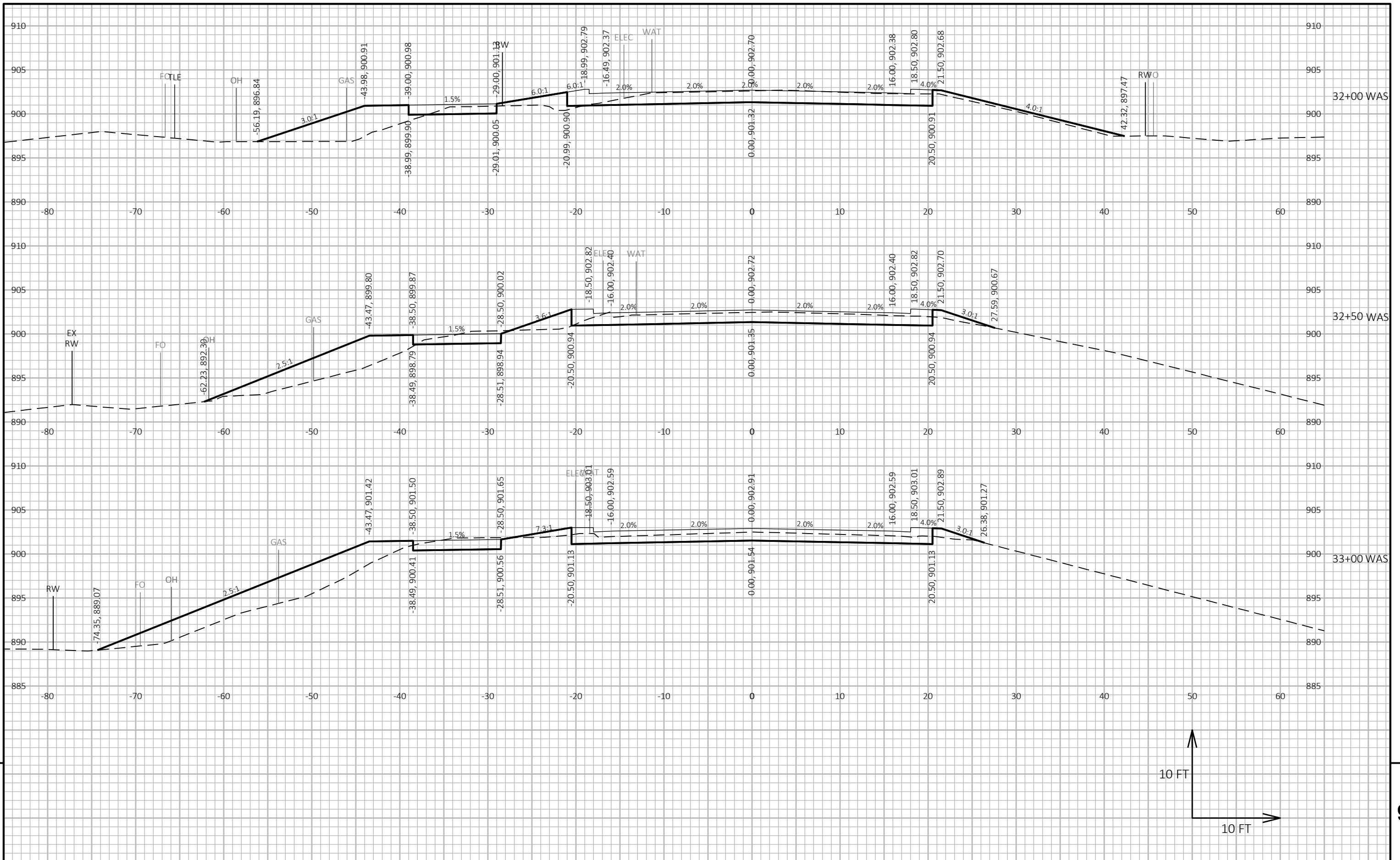
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

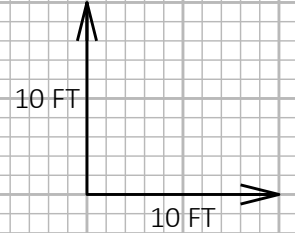
SHEET

E



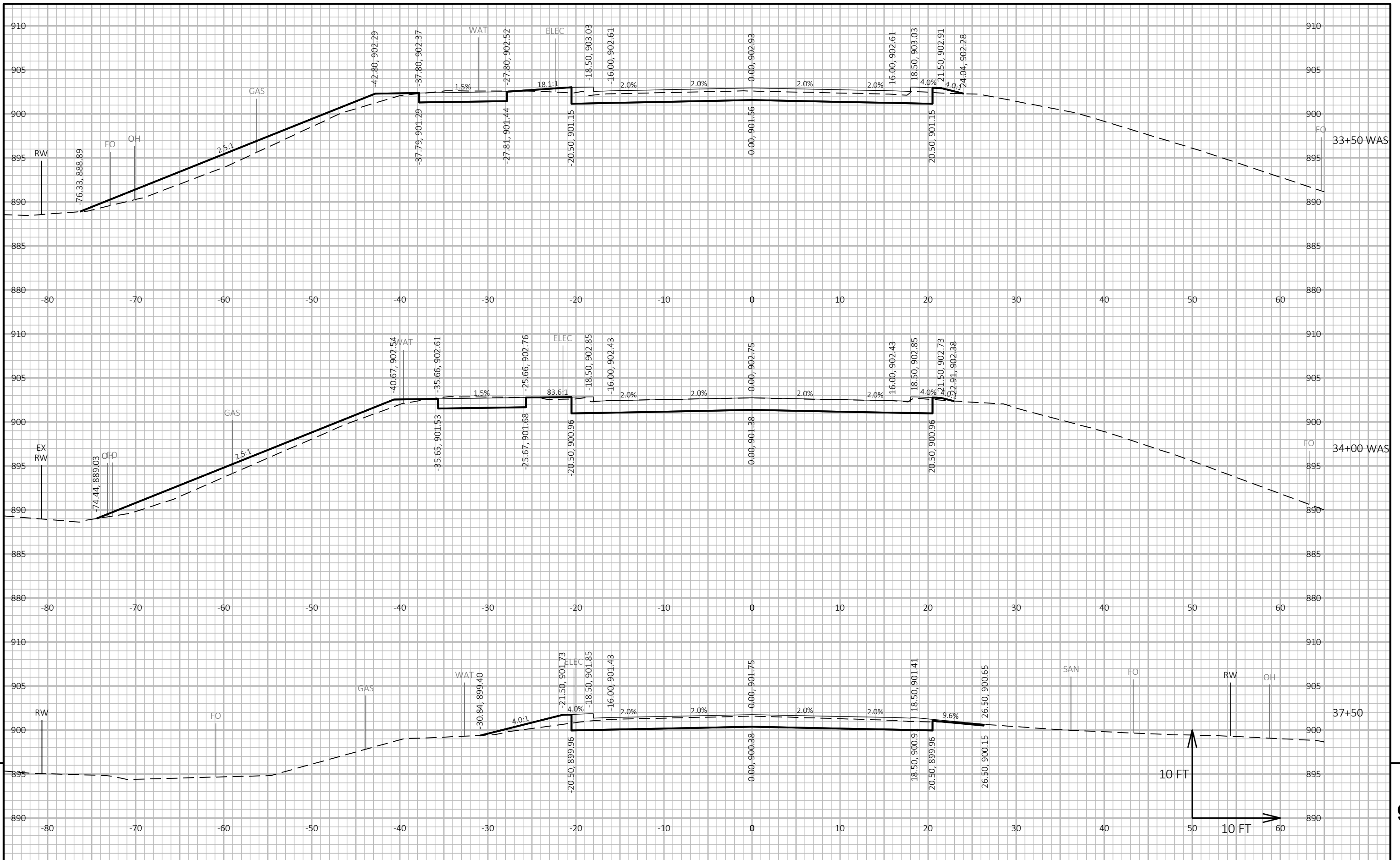
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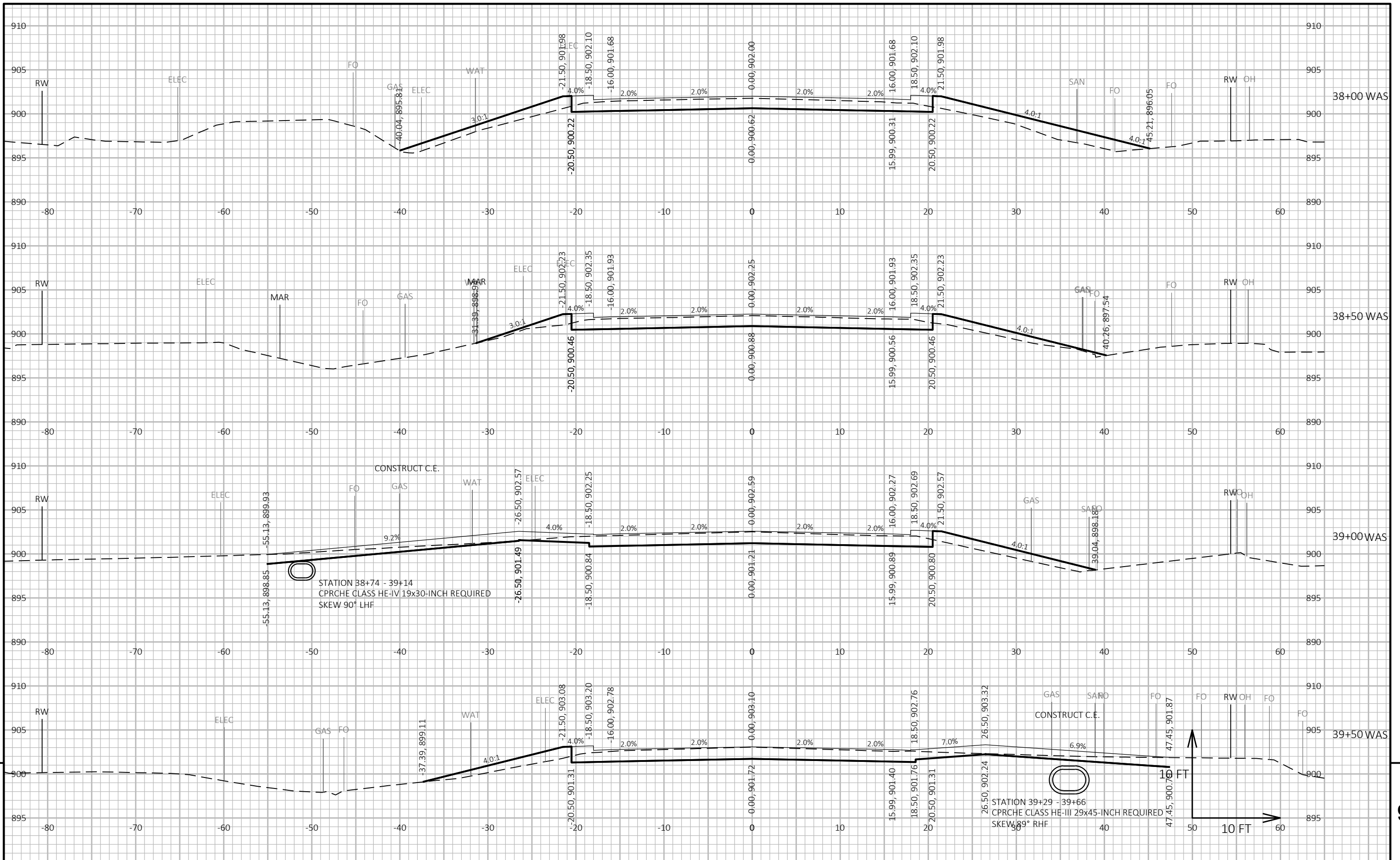


PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG      PLOT DATE : 1/22/2024 10:31 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

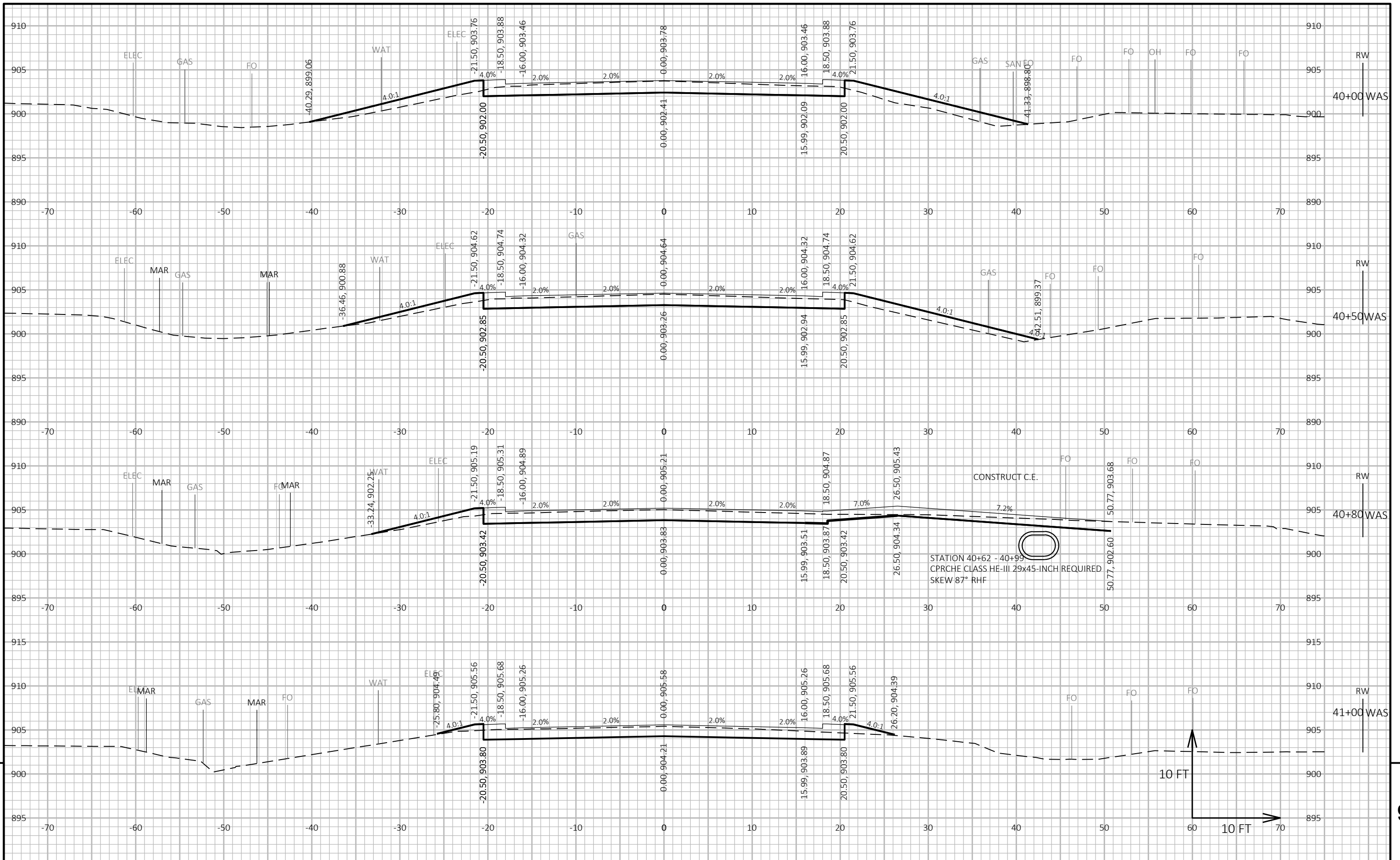


PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E



PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E





9

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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: WASSON LANE      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG      PLOT DATE : 1/30/2024 12:34 PM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090217-xs



PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

SHEET

9



PROJECT NO: 7994-00-51

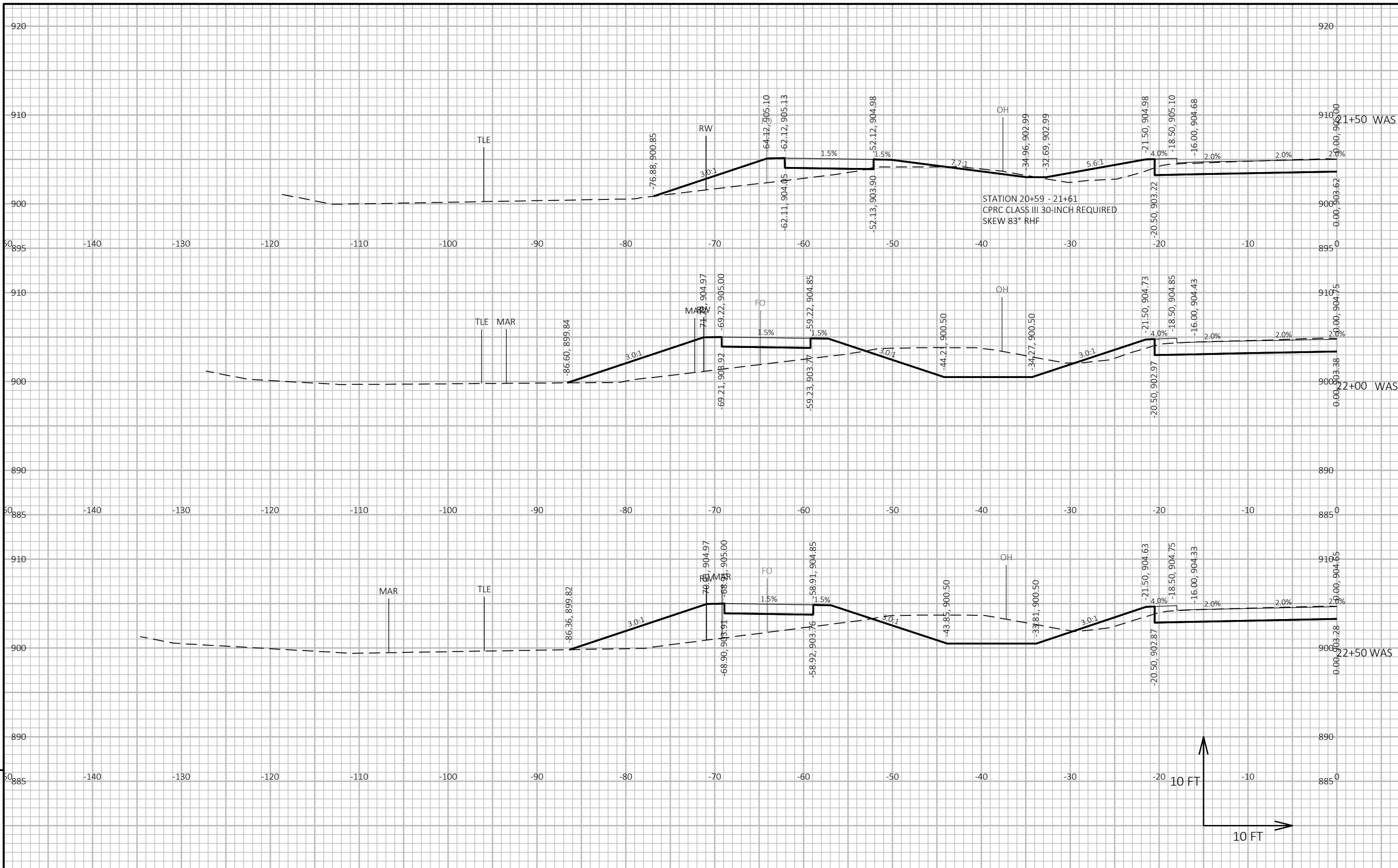
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: WASSON LANE

SHEET

9



PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: ADDITIONAL SIDEWALK SECTIONS

SHEET

E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG  
LAYOUT NAME - 090221-xs

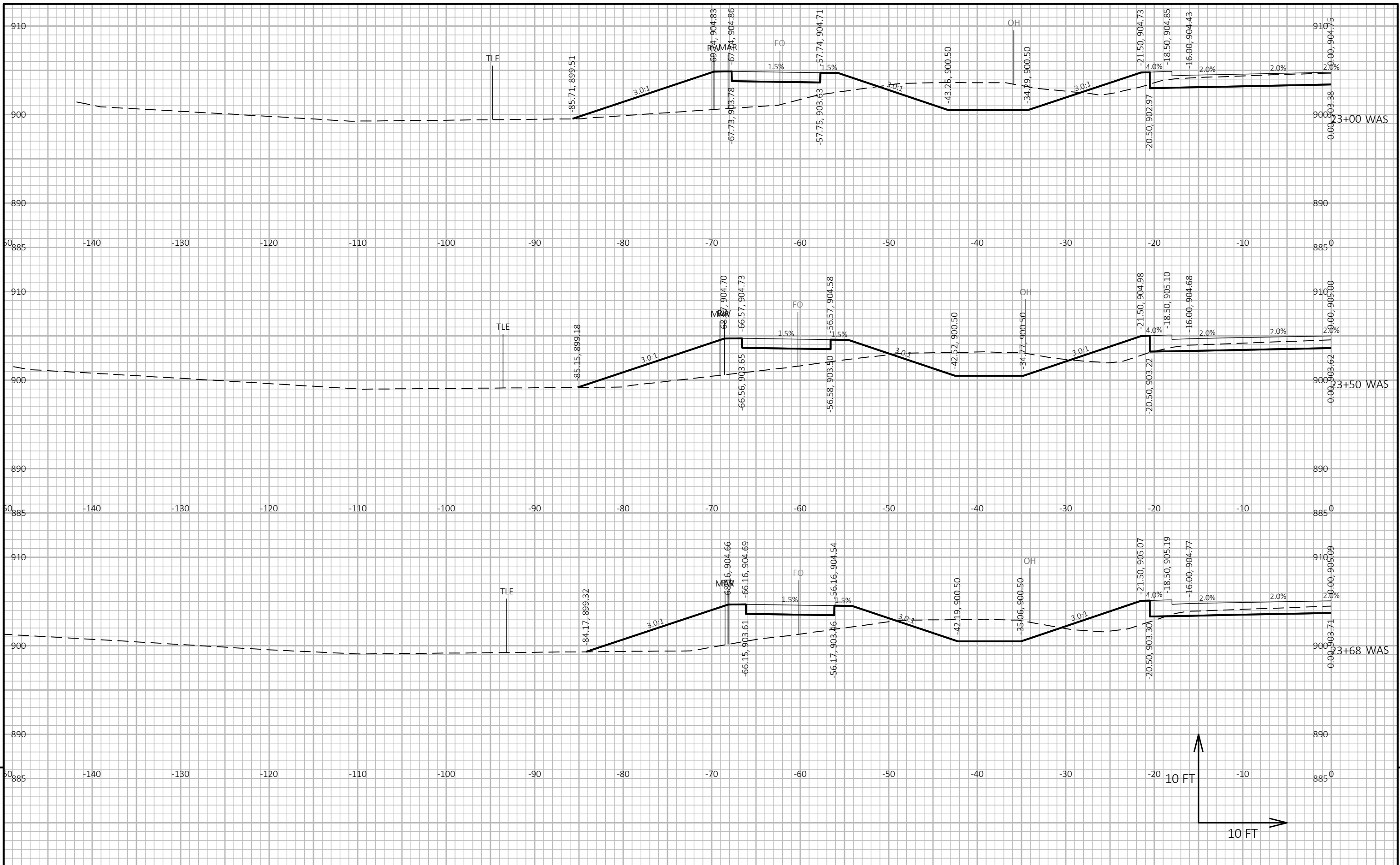
PLOT DATE : 1/22/2024 10:31 AM

PLOT BY : JURECZEK, JESSIE

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

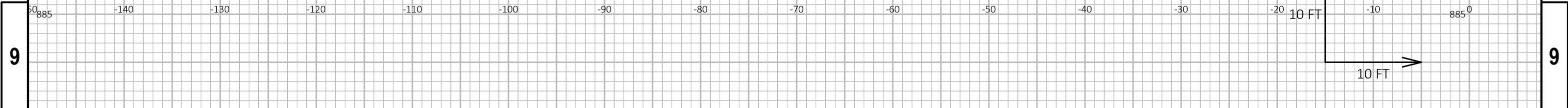
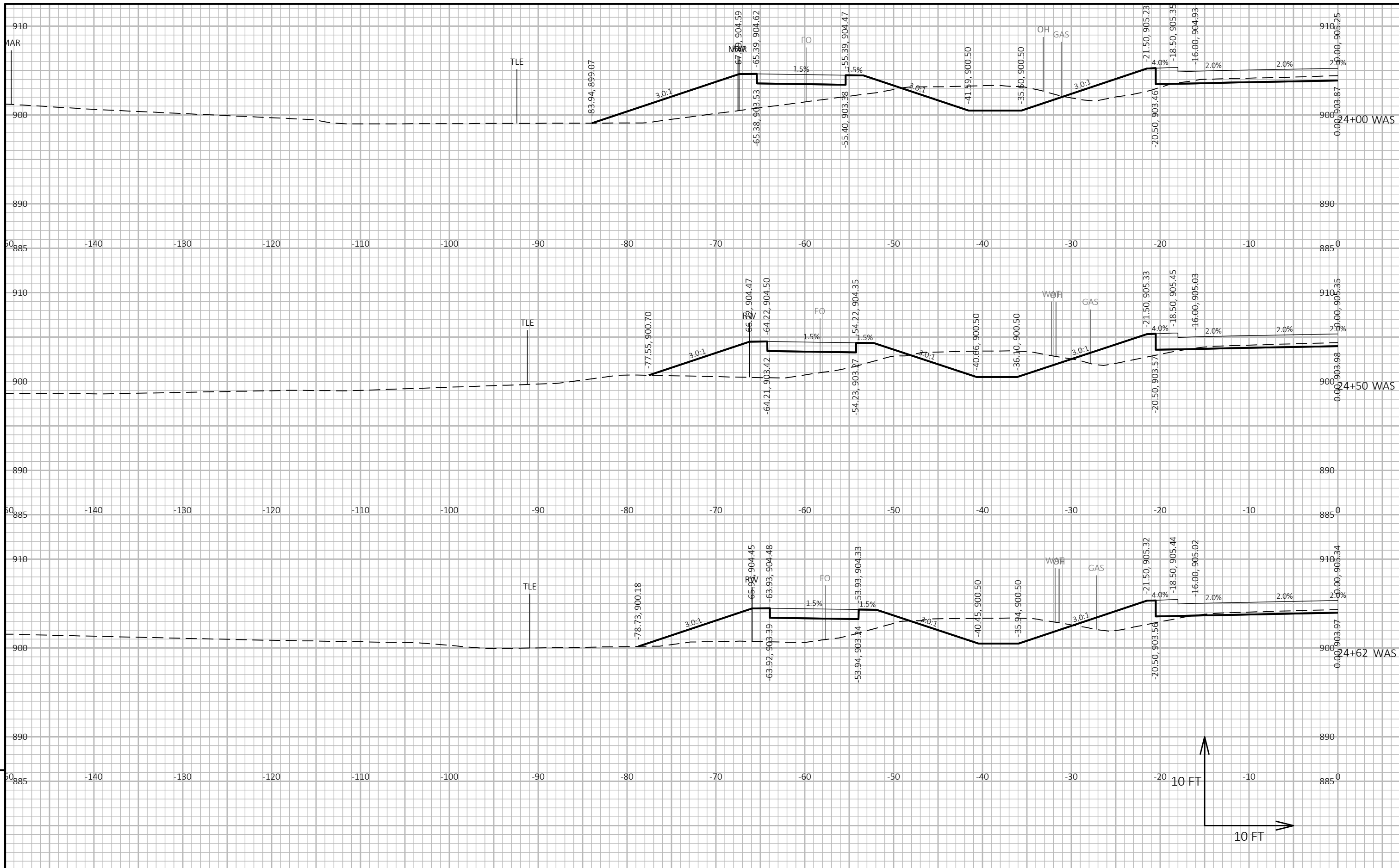
WISDOT/CADD SHEET 49



10 FT  
10 FT

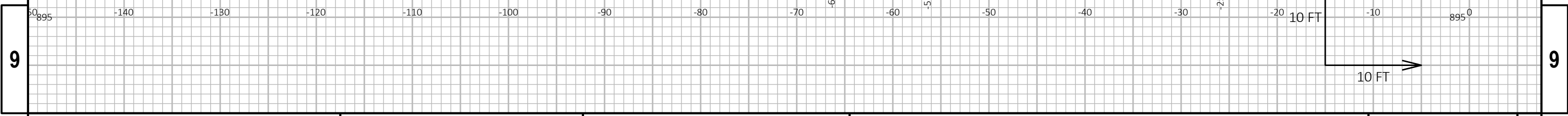
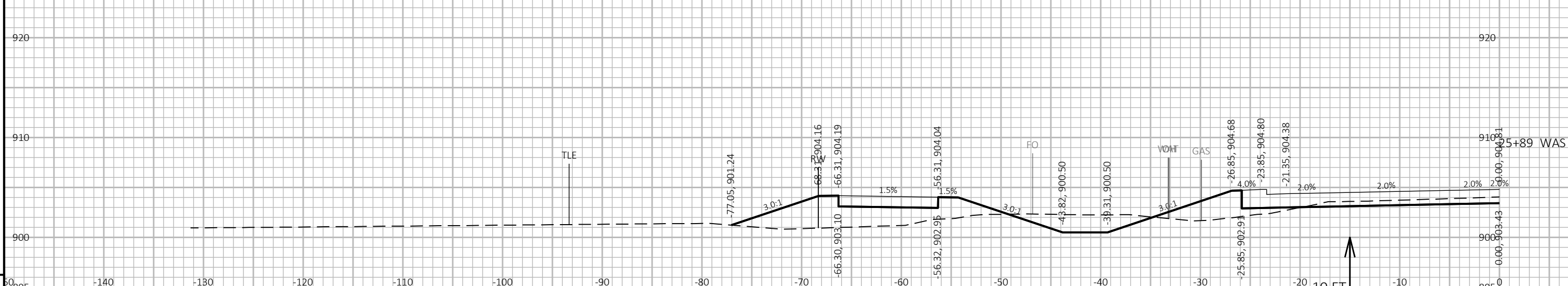
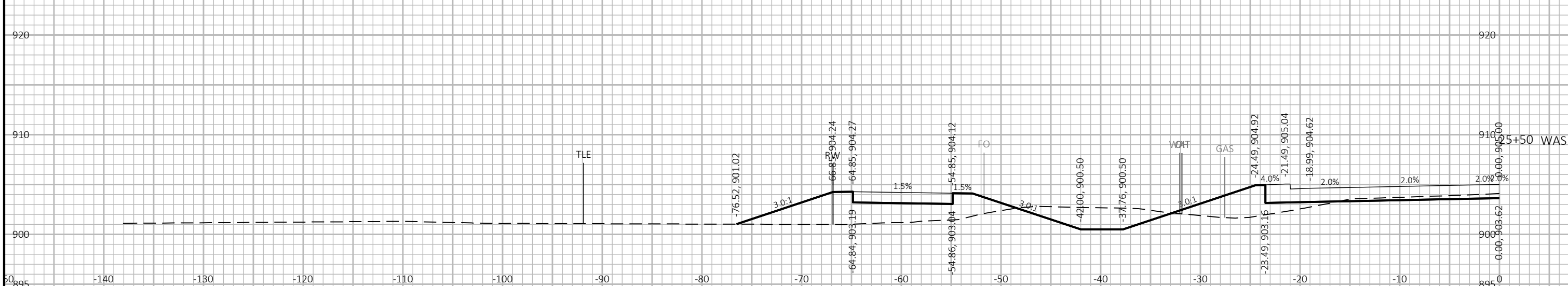
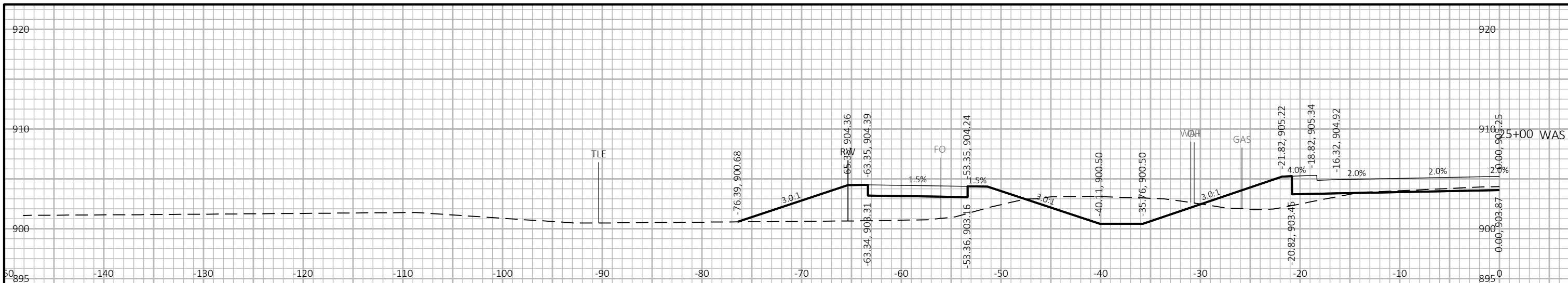
PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: ADDITIONAL SIDEWALK SECTIONS      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG      PLOT DATE : 1/22/2024 10:31 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49



PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: ADDITIONAL SIDEWALK SECTIONS      SHEET 9

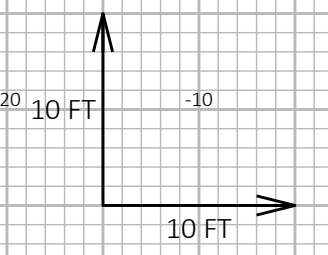
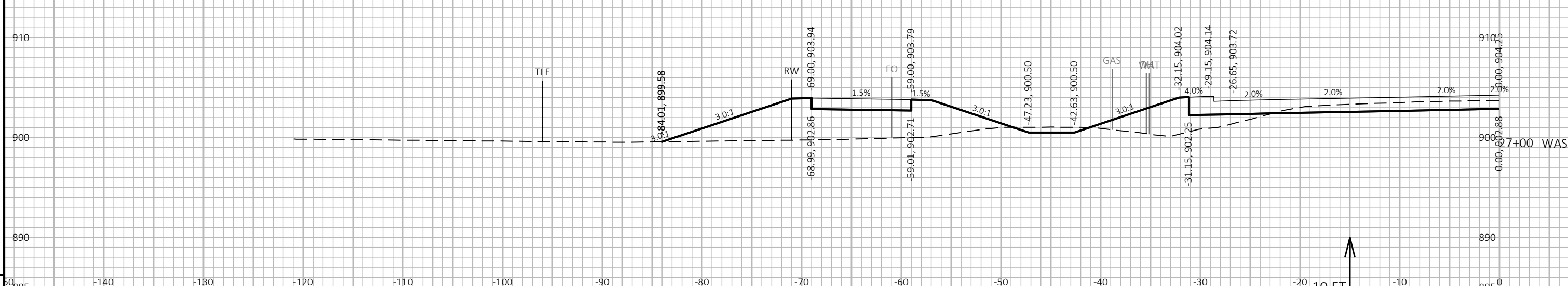
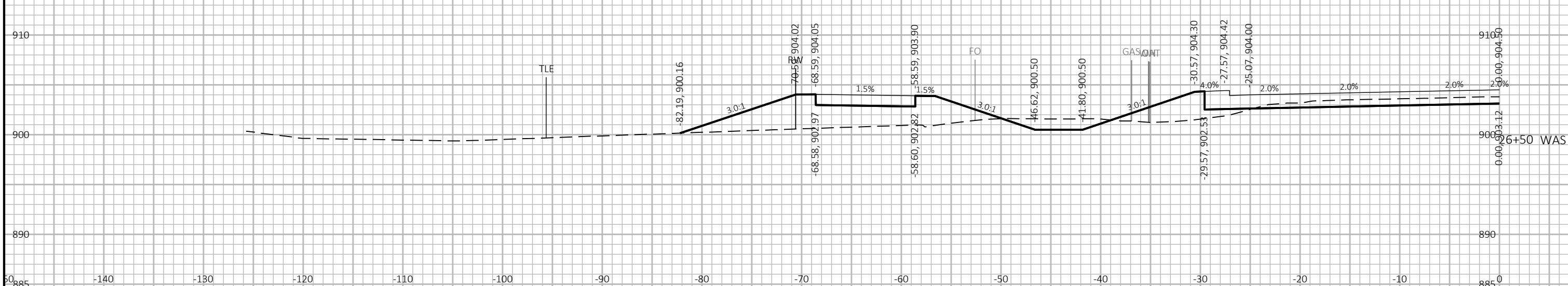
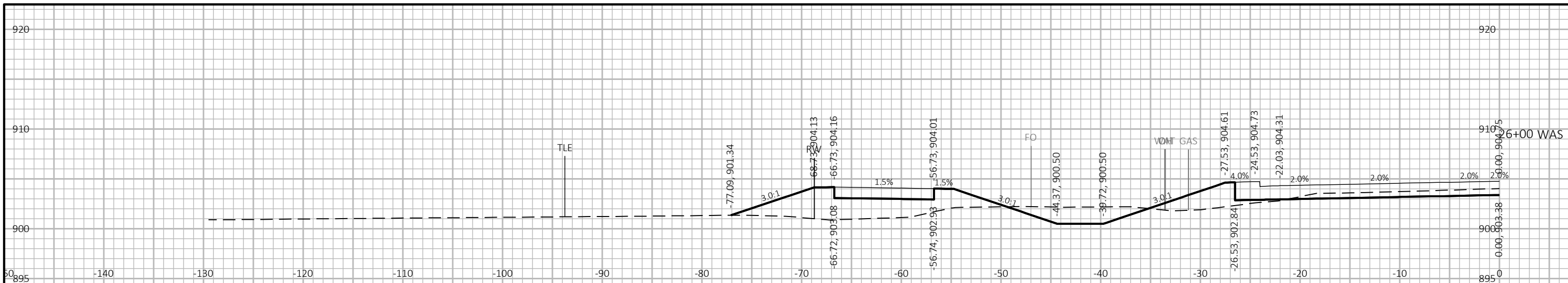
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: ADDITIONAL SIDEWALK SECTIONS      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG      PLOT DATE : 1/22/2024 10:31 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090224-xs

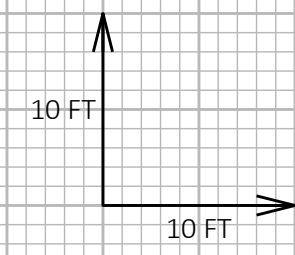
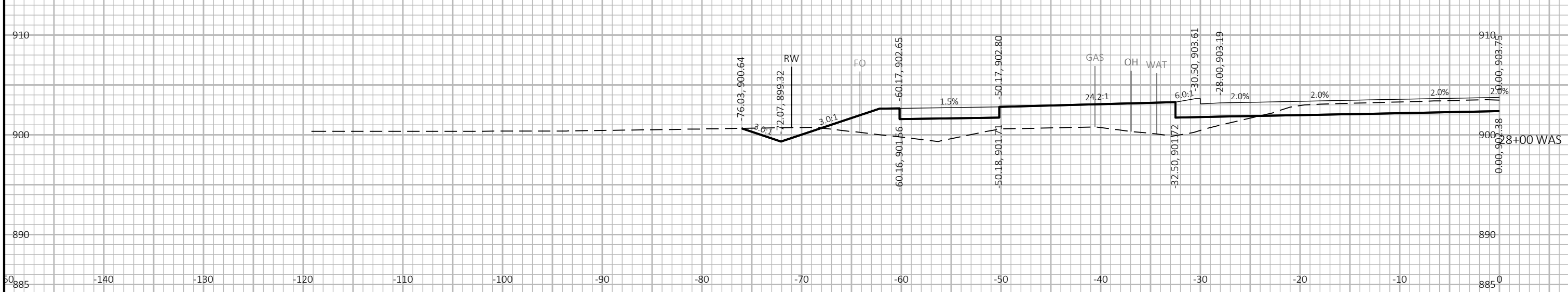
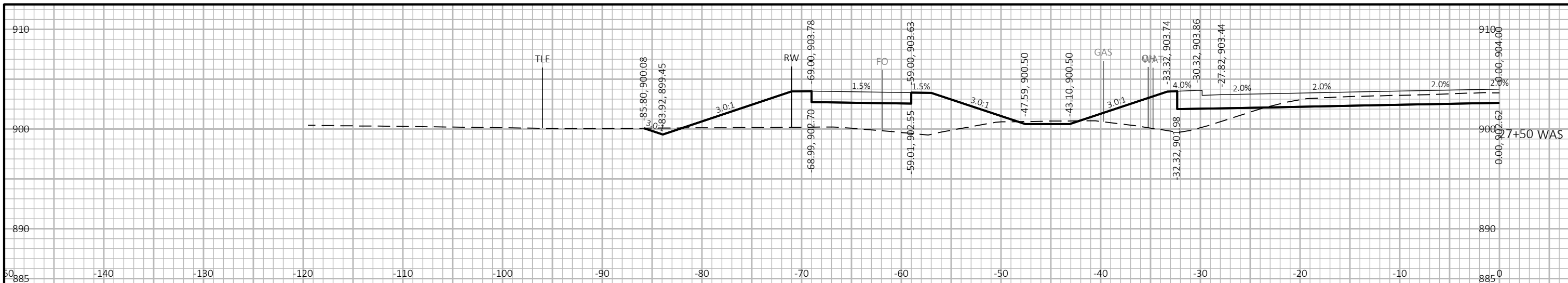


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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CROSS SECTIONS: ADDITIONAL SIDEWALK SECTIONS	SHEET
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FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201-XS.DWG      PLOT DATE : 1/22/2024 10:31 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

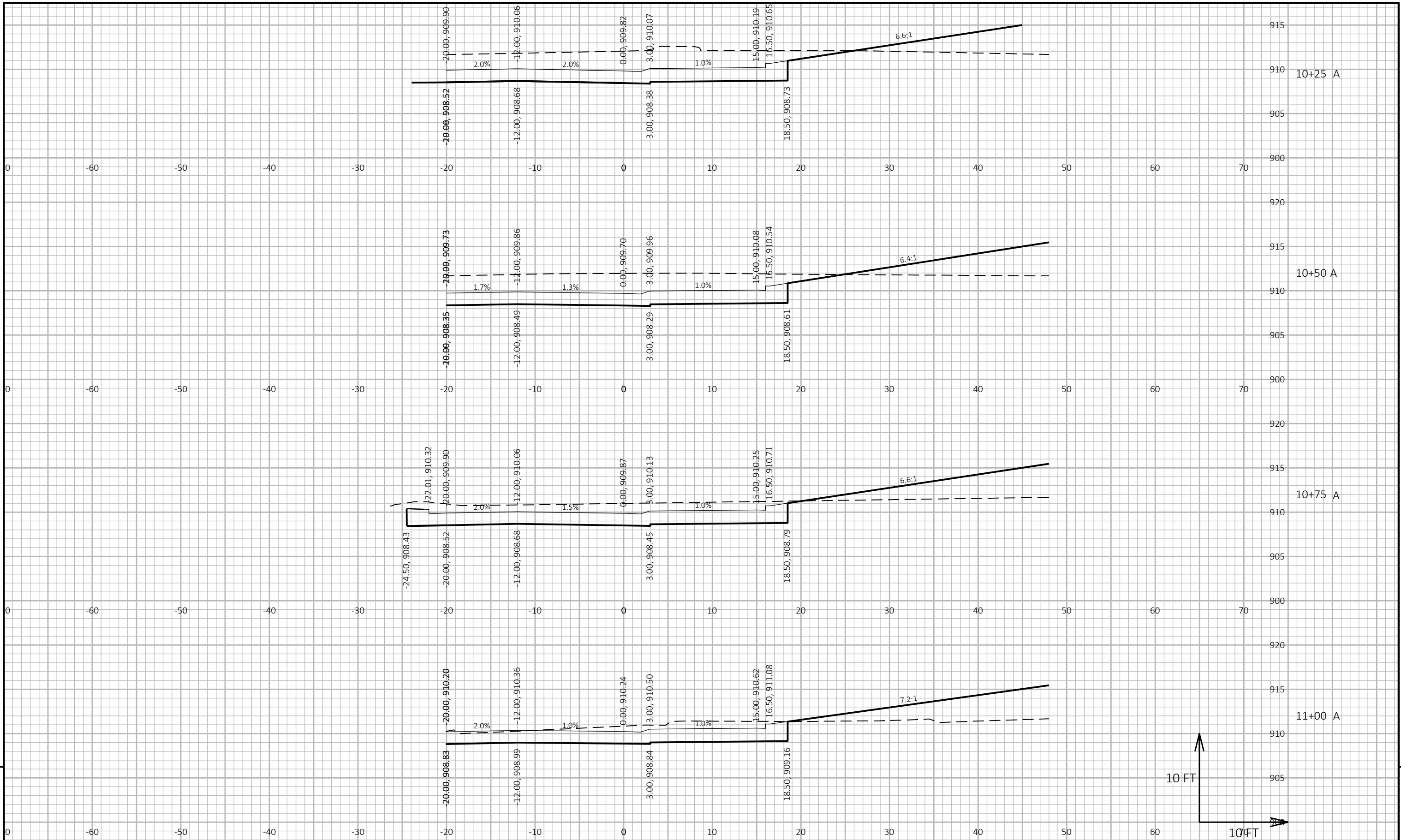




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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CROSS SECTIONS: ADDITIONAL SIDEWALK SECTIONS	SHEET	E
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PROJECT NO: 7994-00-51

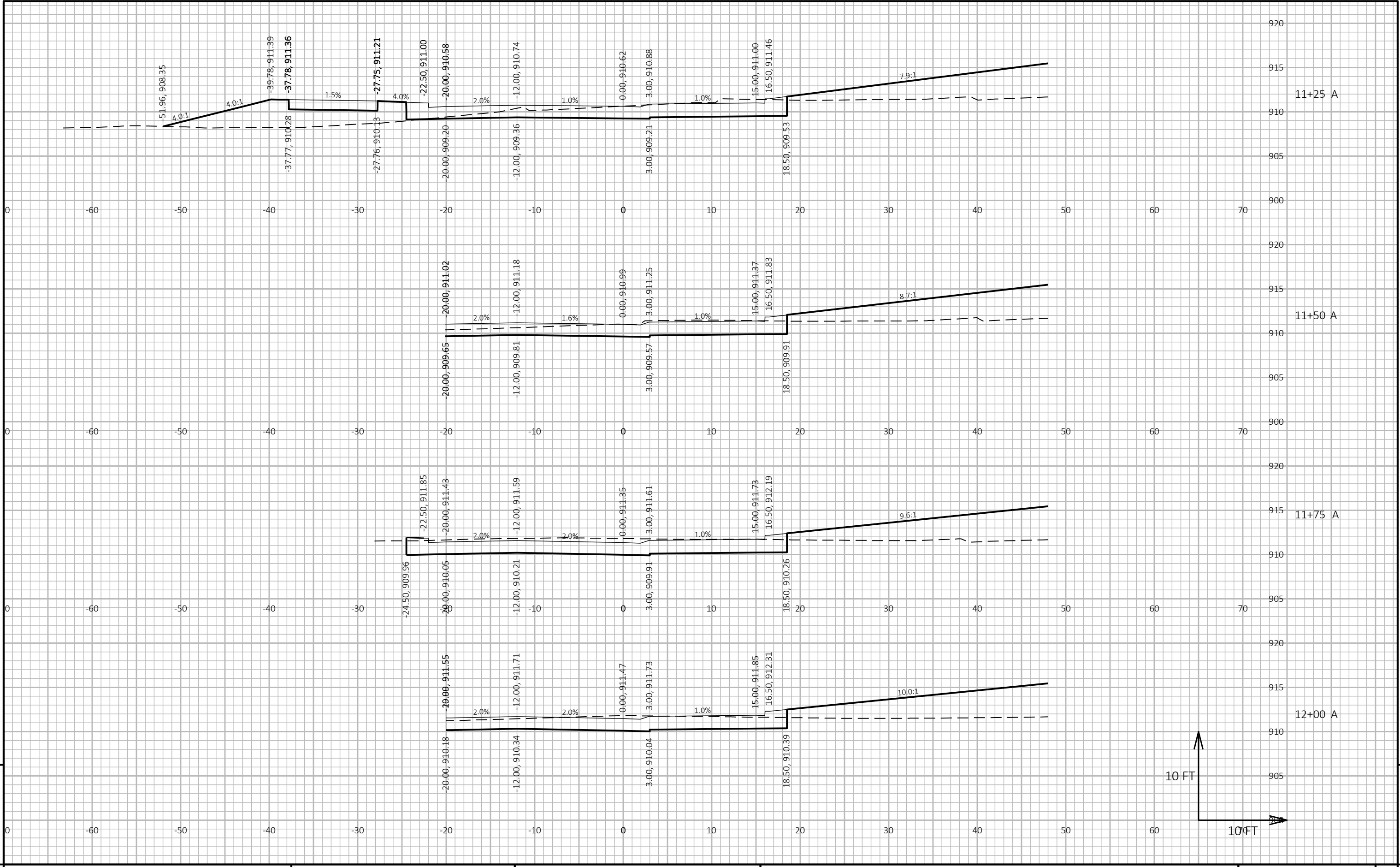
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COUNTY: PIERCE

CROSS SECTIONS: A CHAIN

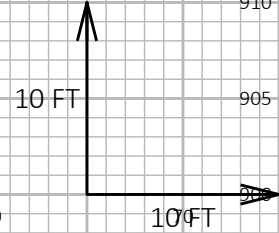
SHEET

E

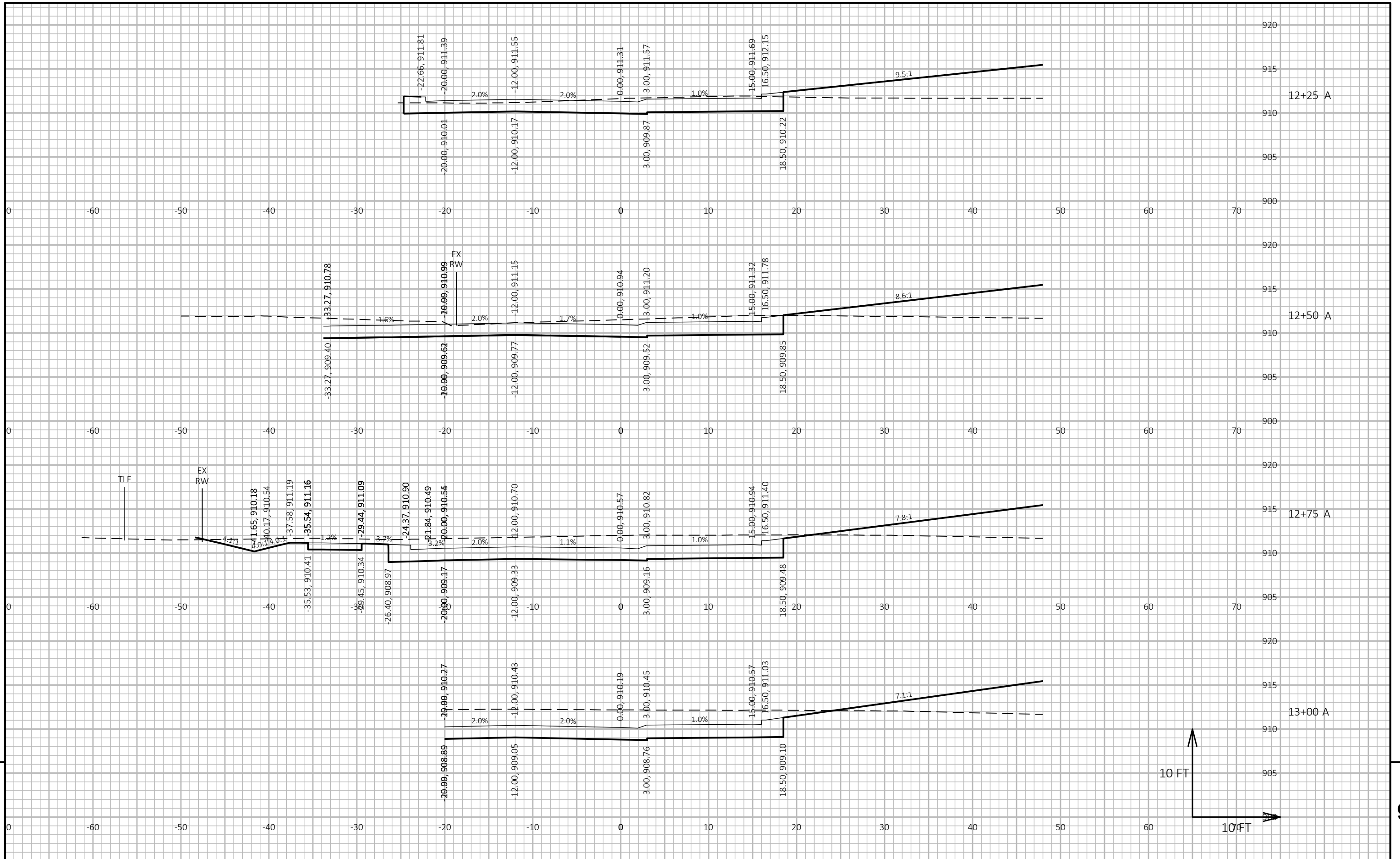


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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CROSS SECTIONS: A CHAIN	SHEET	E
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PROJECT NO: 7994-00-51

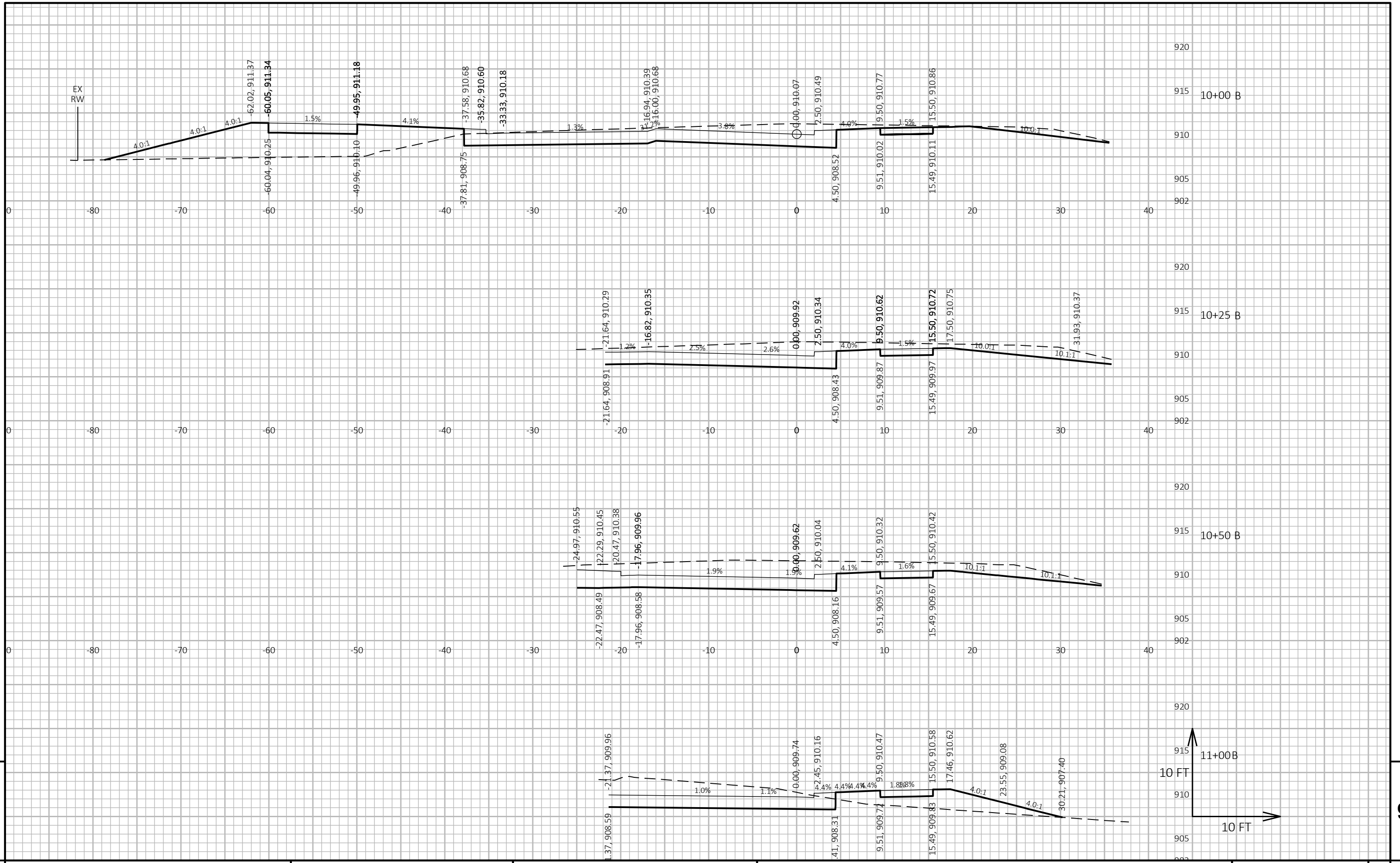
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: A CHAIN

SHEET

E



PROJECT NO: 7994-00-51

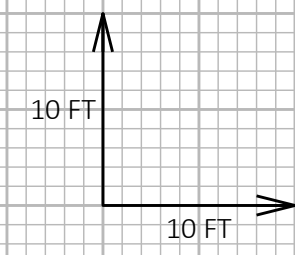
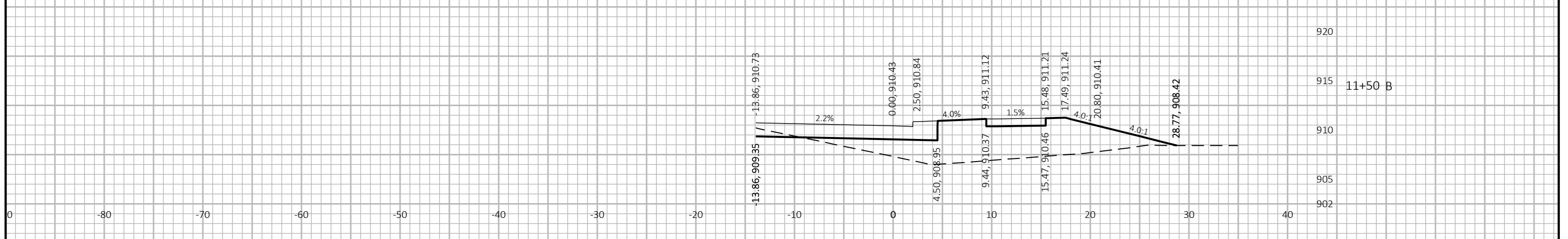
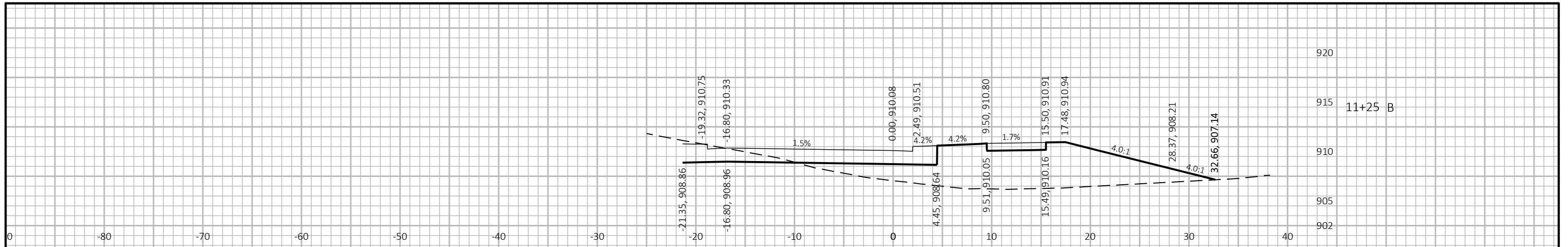
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: B CHAIN

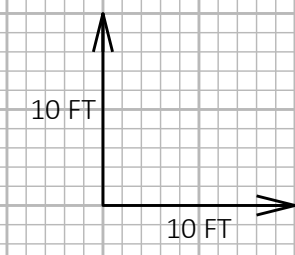
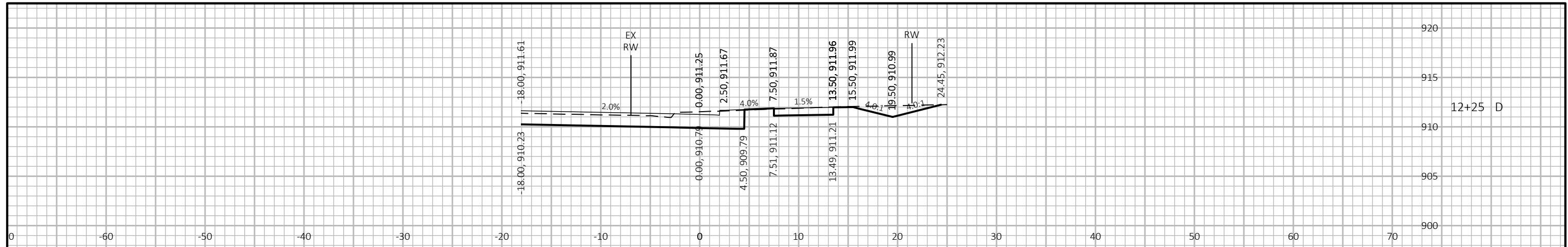
SHEET

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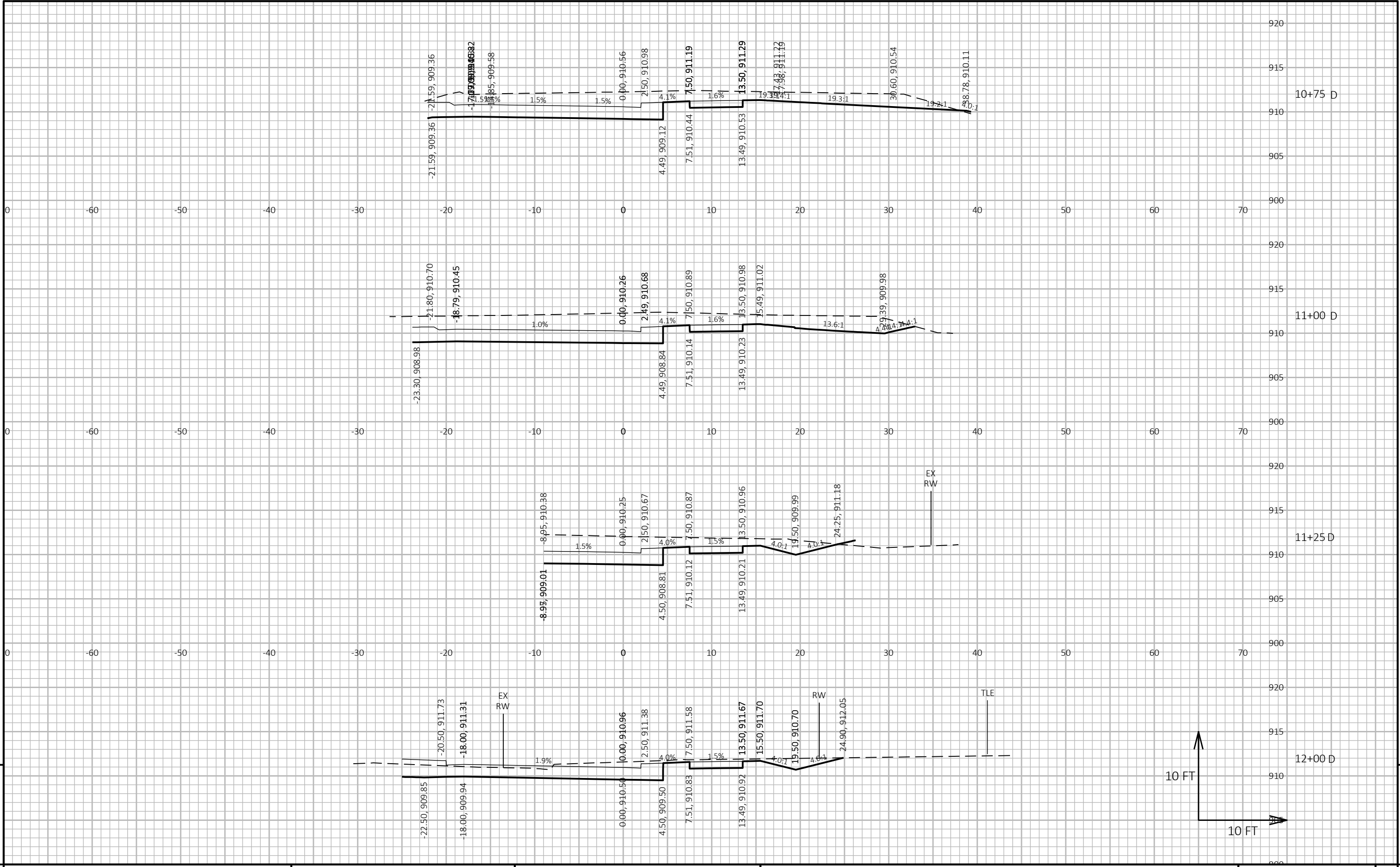
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: D CHAIN      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090202-XS.DWG      PLOT DATE : 1/22/2024 10:32 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090208\_D



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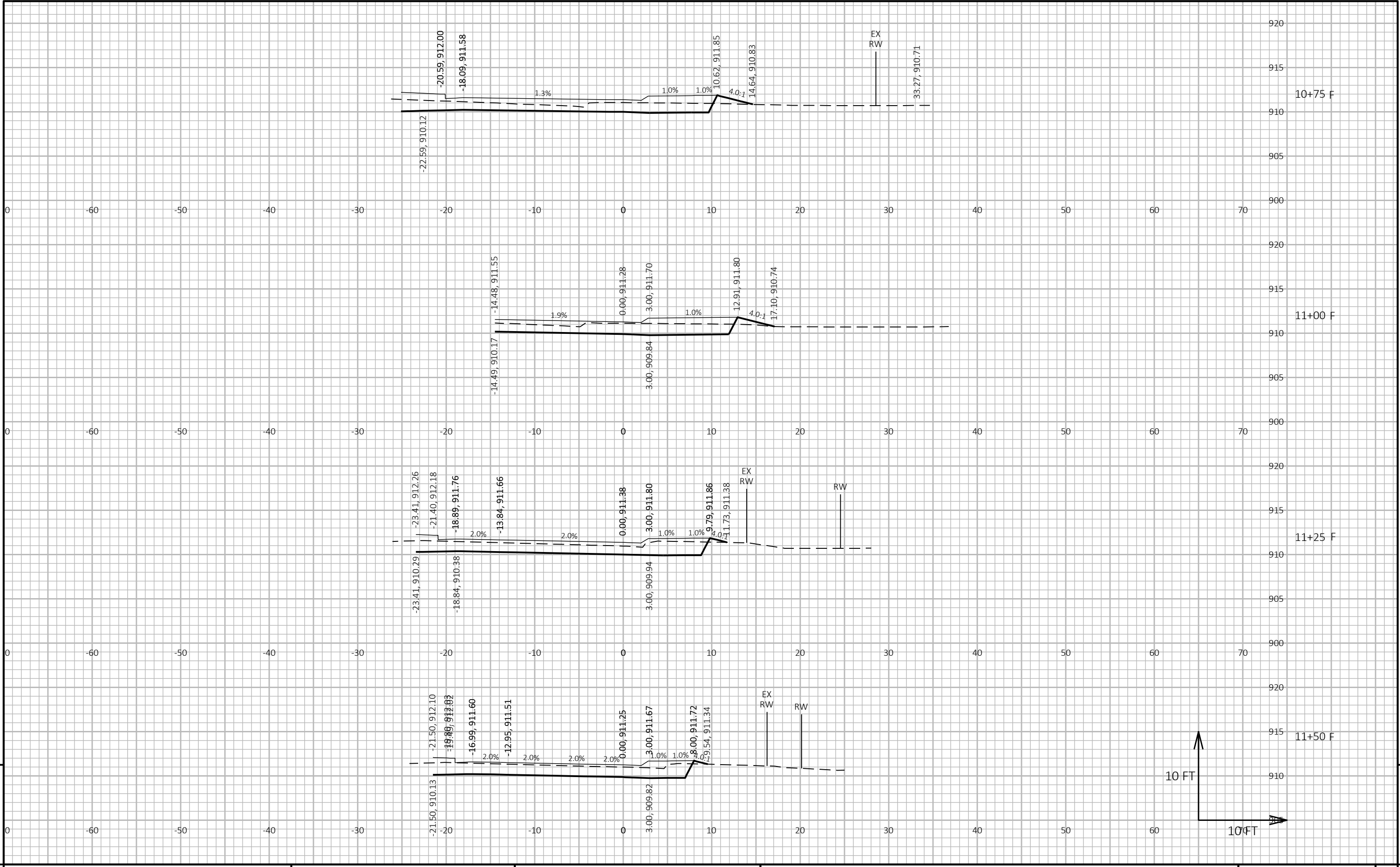
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PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: D CHAIN      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090202-XS.DWG      PLOT DATE : 1/22/2024 10:32 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090207\_D





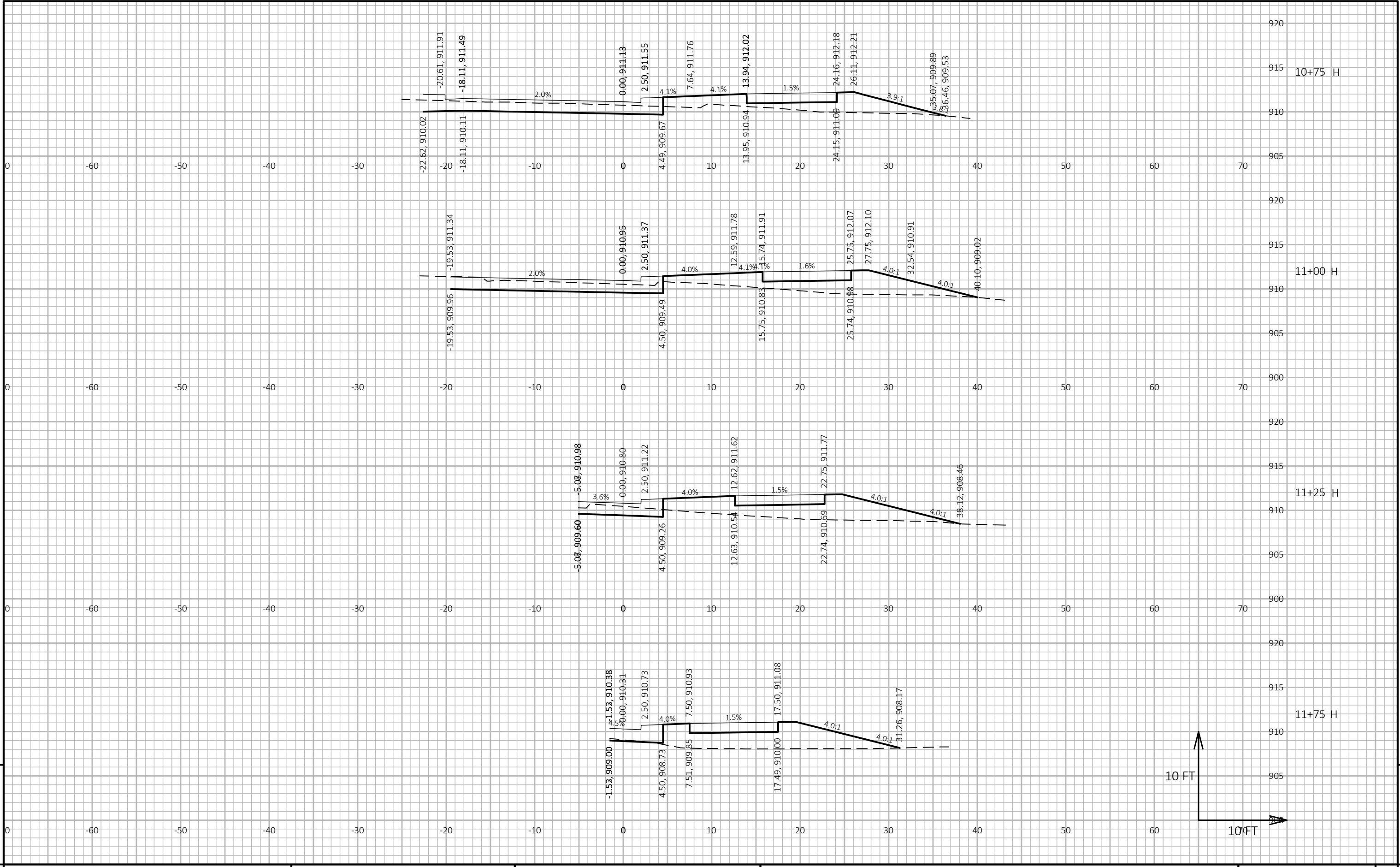
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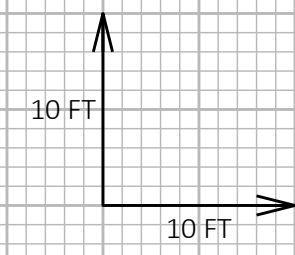
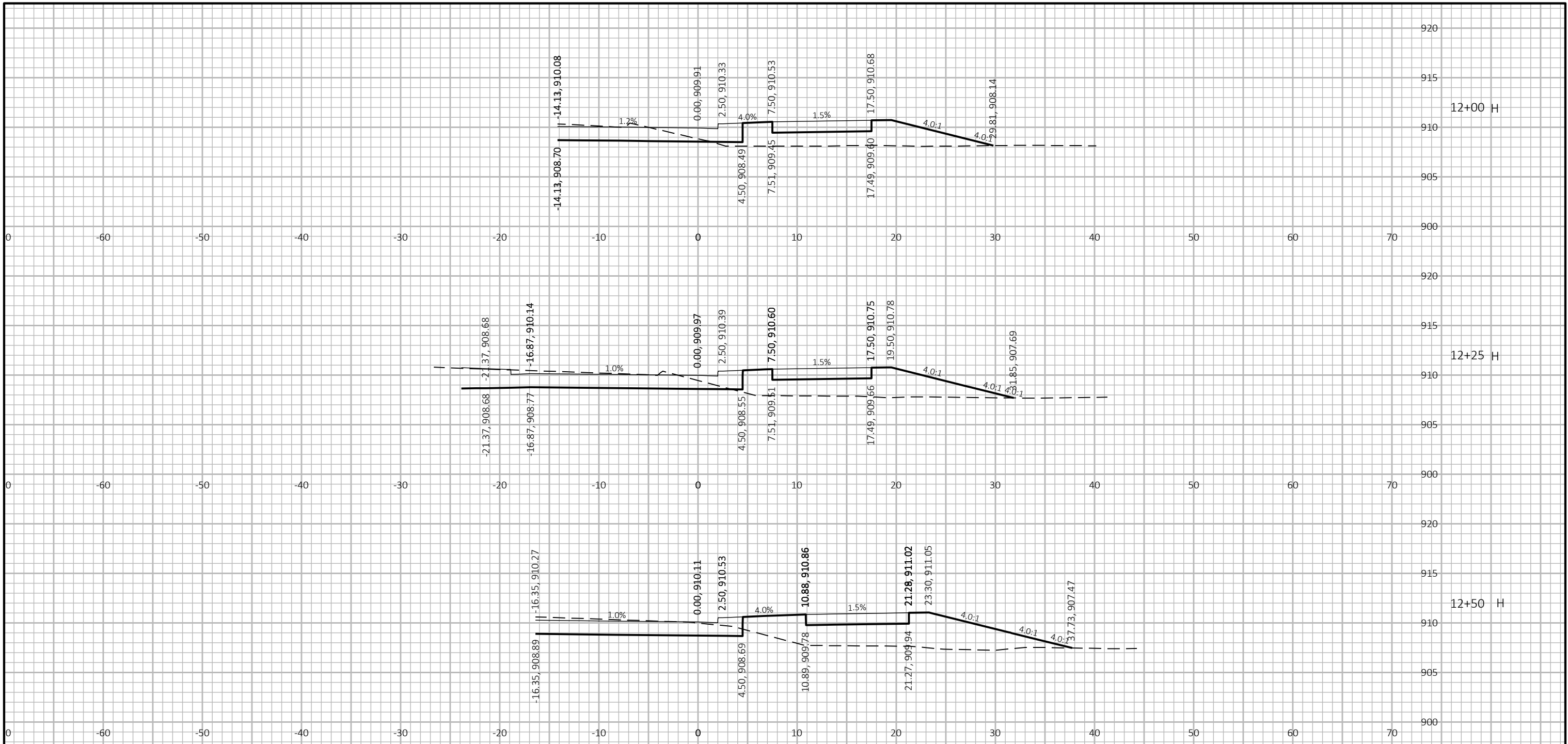
PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: F CHAIN      SHEET      E

FILE NAME : S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090202-XS.DWG      PLOT DATE : 1/22/2024 10:32 AM      PLOT BY : JURECZEK, JESSIE      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090209\_F



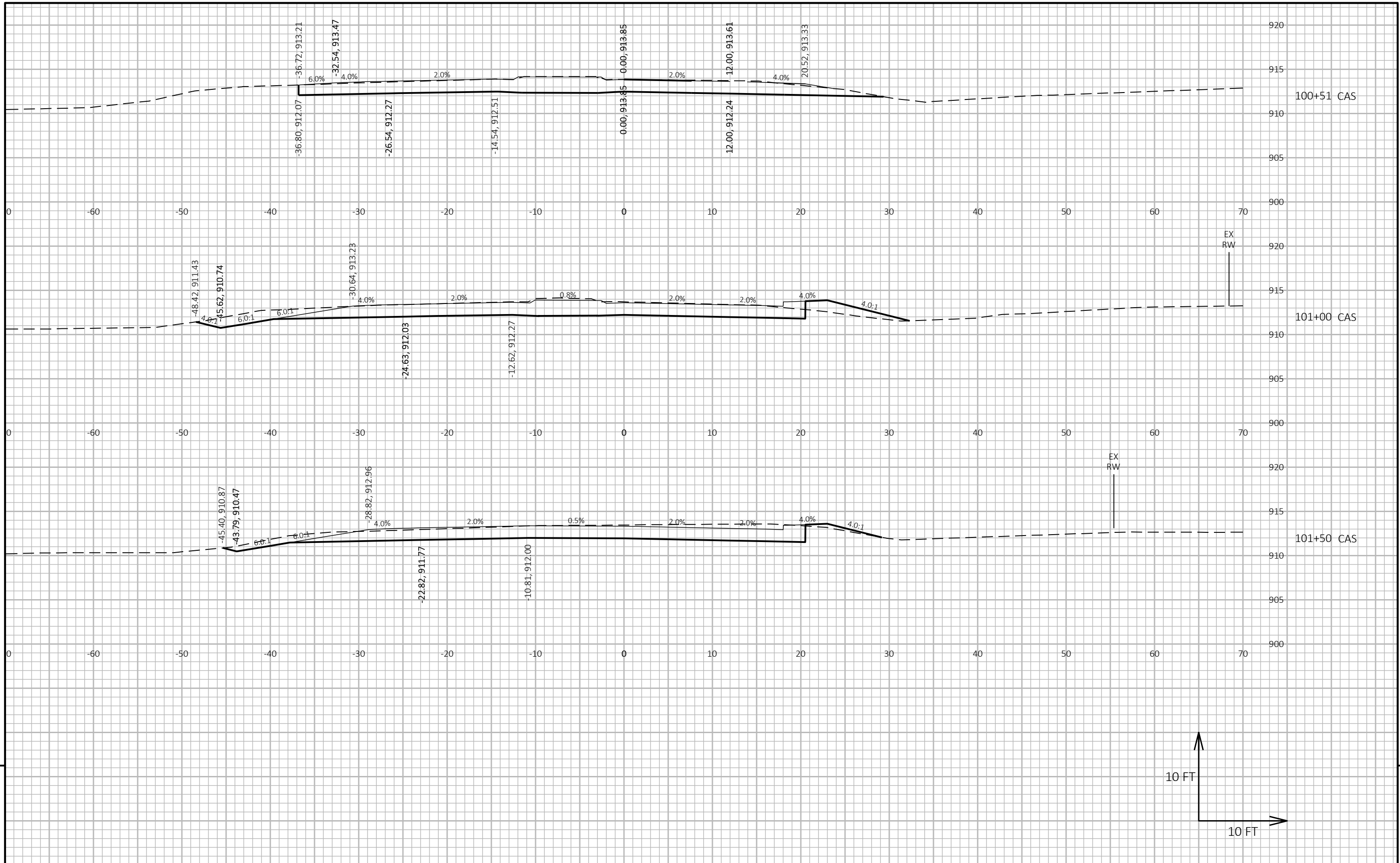
PROJECT NO: 7994-00-51      HWY: WASSON LANE      COUNTY: PIERCE      CROSS SECTIONS: H CHAIN      SHEET 9



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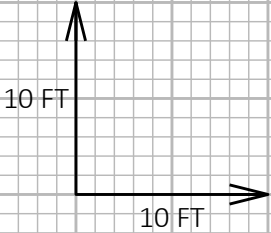
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PROJECT NO: 7994-00-51	HWY: WASSON LANE	COUNTY: PIERCE	CROSS SECTIONS: H CHAIN	SHEET	E
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PROJECT NO: 7994-00-51

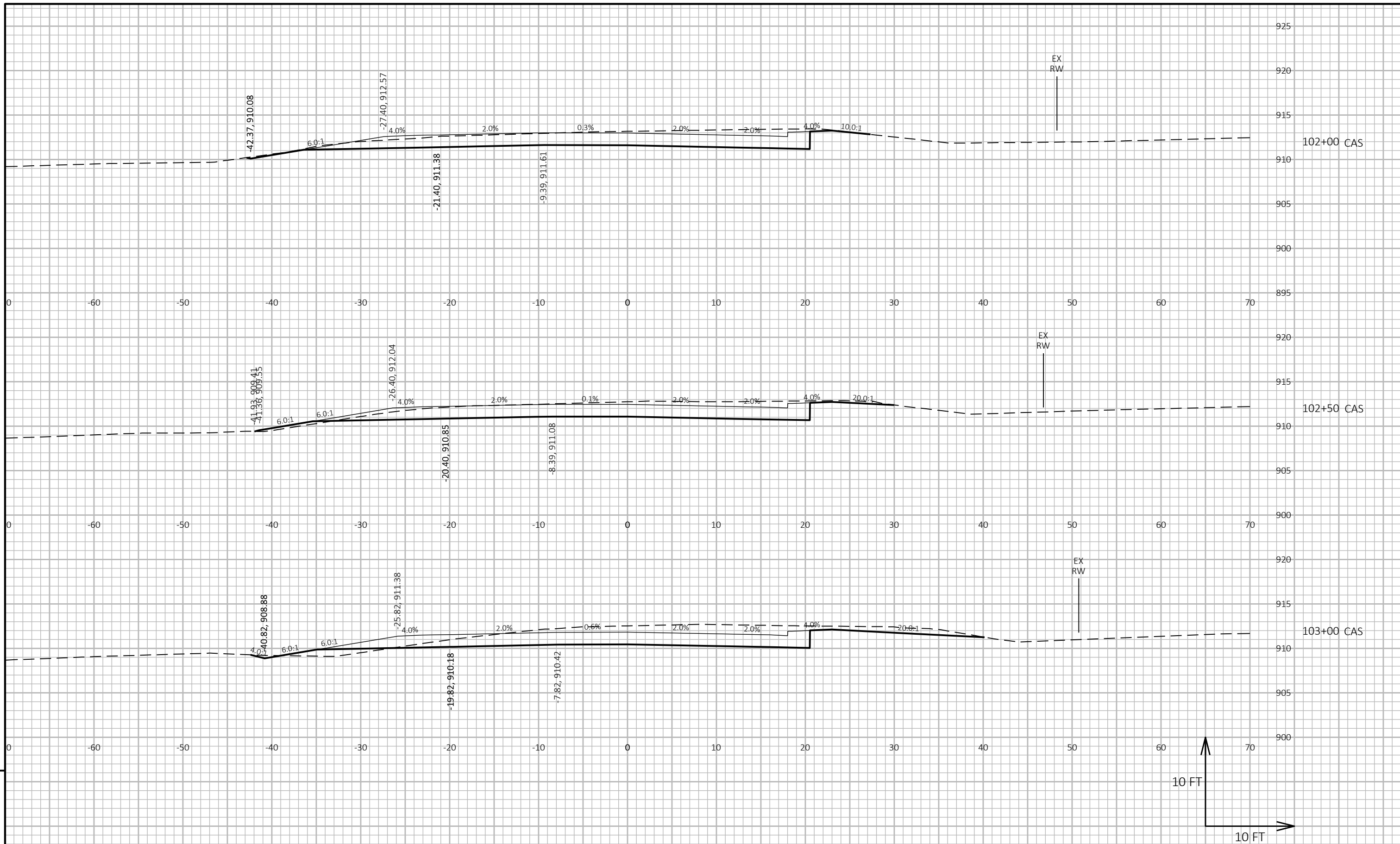
HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: CASCADE AVENUE

SHEET

E



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PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: CASCADE AVENUE

SHEET

E

FILE NAME: S:\MAD\5100-5199\5139\001\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090202-XS.DWG  
LAYOUT NAME - 090213\_CAS

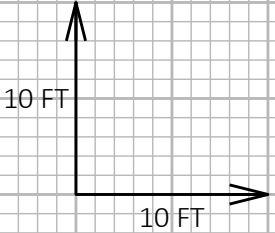
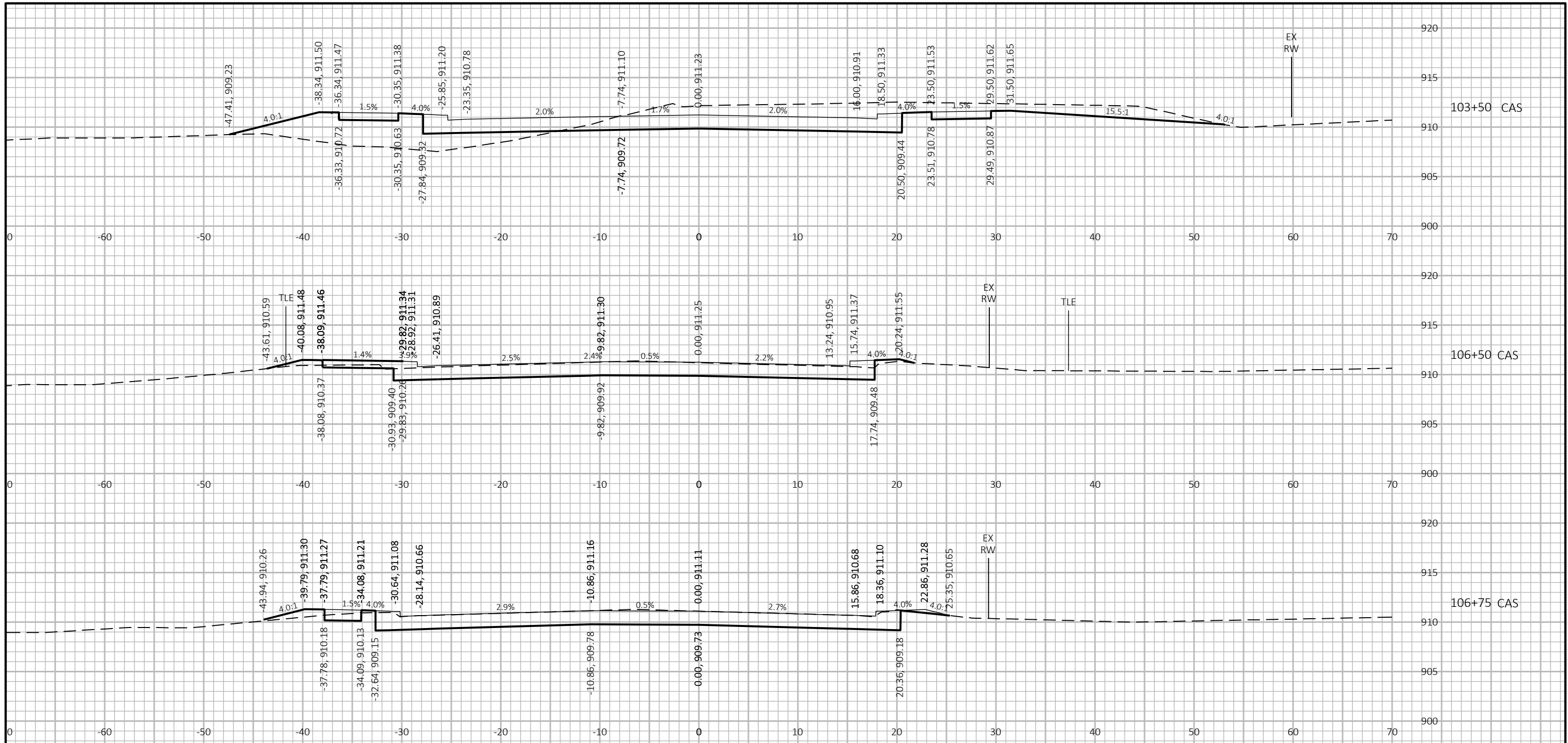
PLOT DATE: 1/22/2024 10:32 AM

PLOT BY: JURECZEK, JESSIE

PLOT NAME:

PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADD SHEET 49



9

9

PROJECT NO: 7994-00-51

HWY: WASSON LANE

COUNTY: PIERCE

CROSS SECTIONS: CASCADE AVENUE

SHEET

E

Notes



## *Wisconsin Department of Transportation*

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