

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
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 = 32



DESIGN DESIGNATION

A.A.D.T.	2027	=	17,570
A.A.D.T.	2047	=	19,250
D.H.V.		=	2272
D.D.		=	60/40
T.		=	11.8%
DESIGN SPEED		=	65 mph
ESALS		=	5,450,000

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
	STORM SEWER
	TELEPHONE
MARSH AREA	WATER
	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE

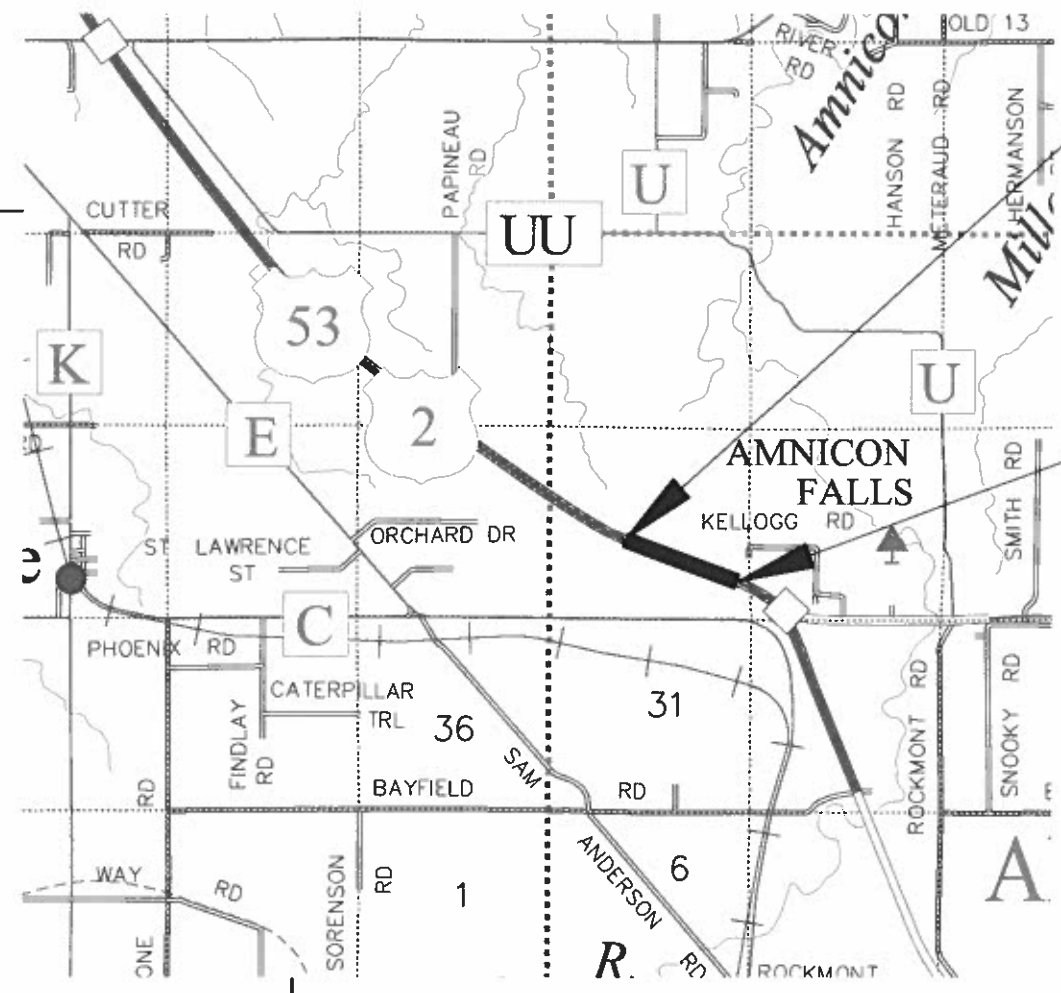
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SOLON SPRINGS - SUPERIOR

BAYFIELD ROAD TO STH 13  
USH 2  
DOUGLAS COUNTY

STATE PROJECT NUMBER  
1195-00-66



BEGIN PROJECT  
STA 368+21.83 WB  
Y = 265145.394  
X = 192439.776

END PROJECT  
STA 401+39.46 WB

LAYOUT  
SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DOUGLAS 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 XX.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1195-00-66		

ORIGINAL DESIGN PROVIDED BY

DATE: 08/08/23  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	MEAD & HUNT, INC.
Project Manager	PHIL KEPPERS
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	JEFF OLSON

APPROVED FOR THE DEPARTMENT

DATE: 8/8/2023  
Philip Keppers  
(Signature)

GENERAL NOTES

THERE MAY BE UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

PIPE AND INLET ELEVATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

PRIOR TO ORDERING DRAINAGE PIPES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

BEARINGS SHOWN ON THE PLAN ARE TRUE BEARINGS.

BEARINGS SHOWN ON THE PLAN ARE GROUND BEARINGS TO THE NEAREST SECOND.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN WETLANDS OR WATERWAYS.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
TRAFFIC CONTROL

RUNOFF COEFFICIENT TABLE

Table with columns for Land Use, Hydrologic Soil Group (A, B, C, D), and Slope Range (Percent). Rows include ROW CROPS, MEDIAN STRIPTURF, SIDE SLOPETURF, PAVEMENT (ASPHALT, CONCRETE, BRICK, DRIVES, WALKS, ROOFS, GRAVEL ROADS, SHOULDERS).

TOTAL PROJECT AREA = 0.055 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.055 ACRES

UTILITIES CONTACTS
NO KNOWN UTILITIES WITHIN WORKZONE.

DESIGN CONSULTANT



Mead and Hunt, Inc.
2440 DEMING WAY
MIDDLETON, WI. 53562
ATTN: BRIAN VEIT, P.E.
PHONE: (608) 443-0412
EMAIL: BRIAN.VEIT@MEADHUNT.COM

WISCONSIN DNR LIAISON

AMY CRONK
NORTHWEST REGION
810 W. MAPLE STREET
SPOONER, WI. 54801
PHONE: 715-635-4229
EMAIL: amy.cronk@wisconsin.gov

WISCONSIN DOT

WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION
ATTN: PHILIP KEPPERS
1701 N. 4TH STREET
SUPERIOR, WI 54880
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EMAIL: philip.keppers@dot.wi.gov

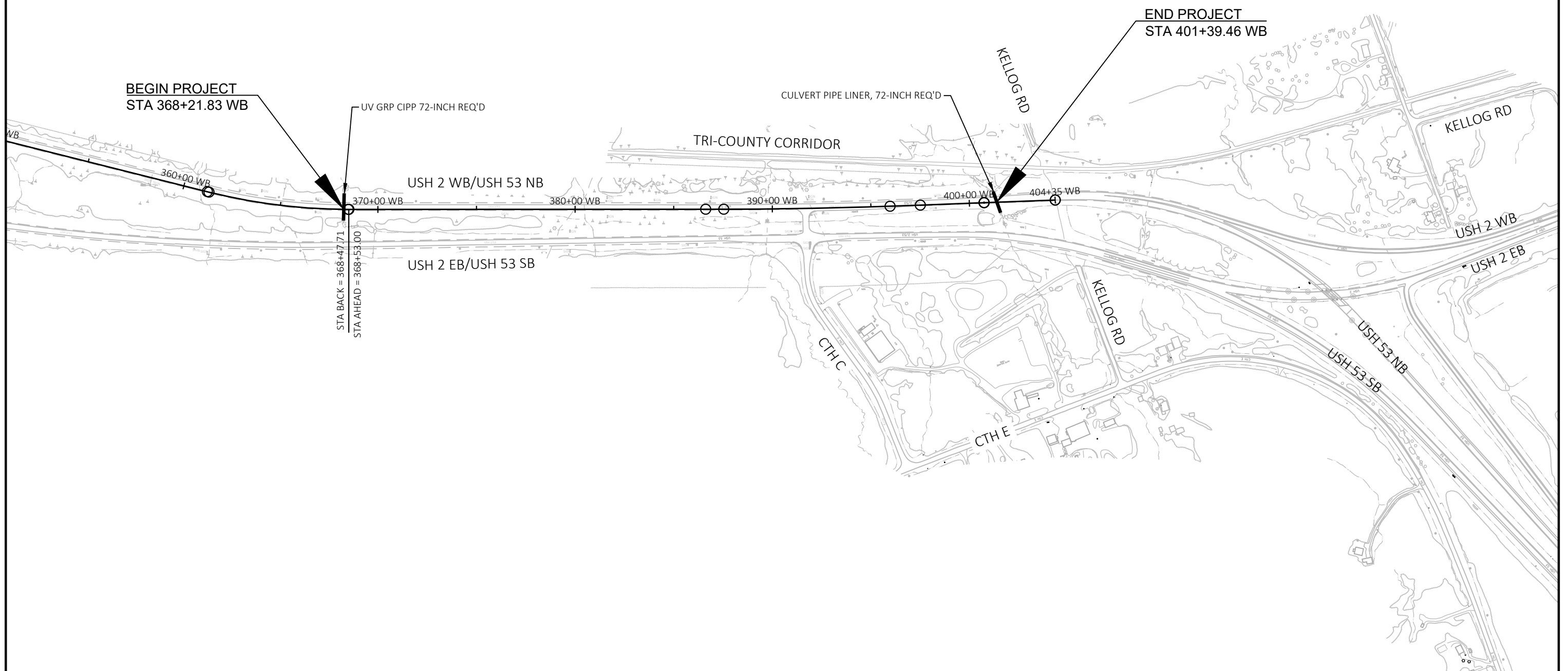
STANDARD ABBREVIATIONS

Table listing standard abbreviations for construction terms such as ABUT, AC, AGG, AH, ANGLE, AADT, AEW, ASPH, BK, BC, BAD, BL OR B/L, BM, CB, CL OR C/L, DELTA, CE, CONC, CSW, CONST, CP, CO, CTH, CY, CP, CPCA, CPCPE, CPCPP, CPCS, CPCSAC, CPCSPC, CPRC, CPRCHE, CPS, CPT, C & G, D, DHV, DIA, DD, DE, DWY, EA, EB, EL OR ELEV, EMB, EW, EAT, ESALS, EXC, EBS, EXIST, FERT, FE, FL OR F/L, FT, FTMS, HES, HE, CWT, IN DIA, INL, ID, INTERS, IH, INV, JT, LT, LHF, L, LF, LC, LS, MGAL, MH, ML OR M/L, NOM, NC, NB, NO, OD, PAVT, PLE, PC, PI, PT, PCC, LB, PSI, PE, PROJ, PL, PRW, R, RL OR R/L, REQD, RT, RHF, R/W, RD, RDWY, SHLDR, SW, SB, SPECS, SF, SY, SDD, STH, STA, SSPC, SSCPE, SSCPP, SSPNRC, SSPRC, SSPRCHE, SE, SL OR S/L, TEMP, TI, TLE, TC, TL OR T/L, T, TYP, USH, VAR, VC, VPC, VPI, VPT, W, WB.

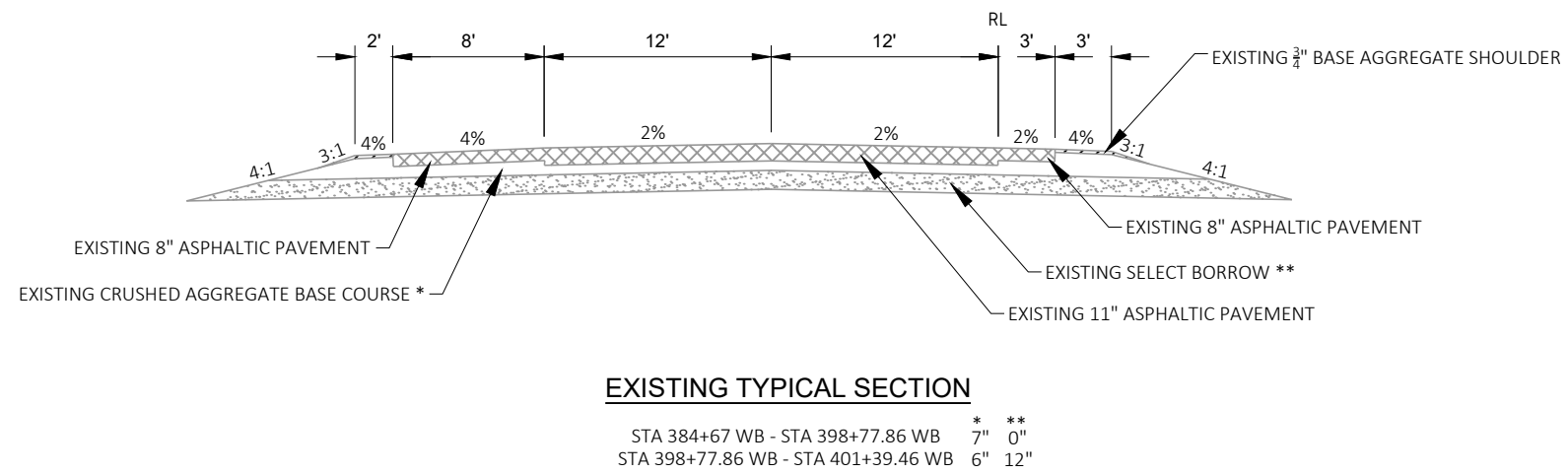
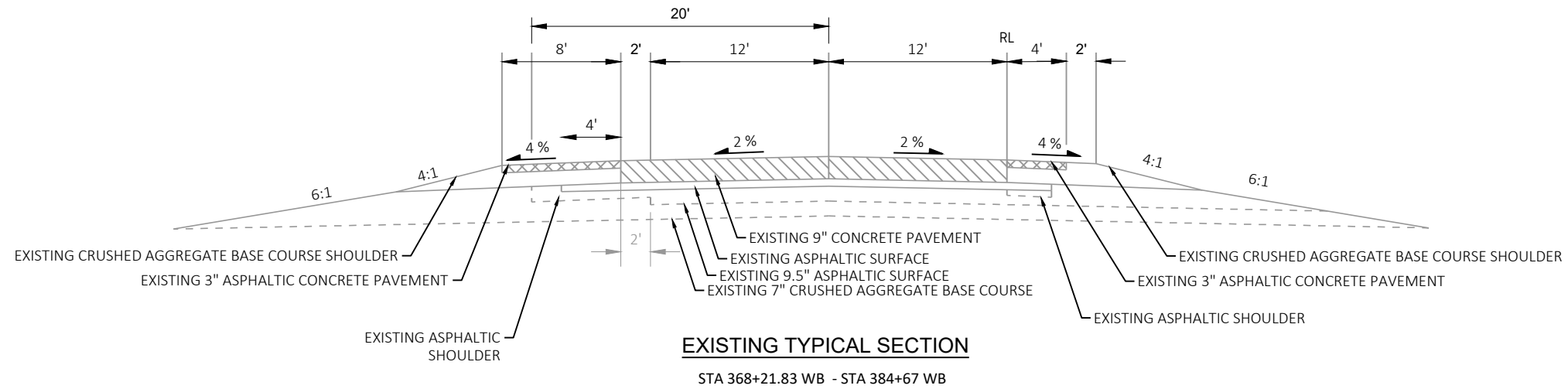


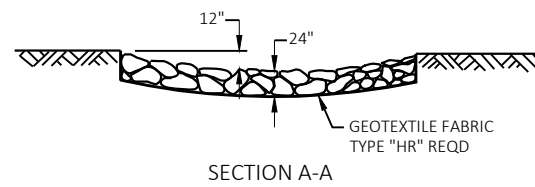
Dial 811 or (800)242-8511

www.DiggersHotline.com

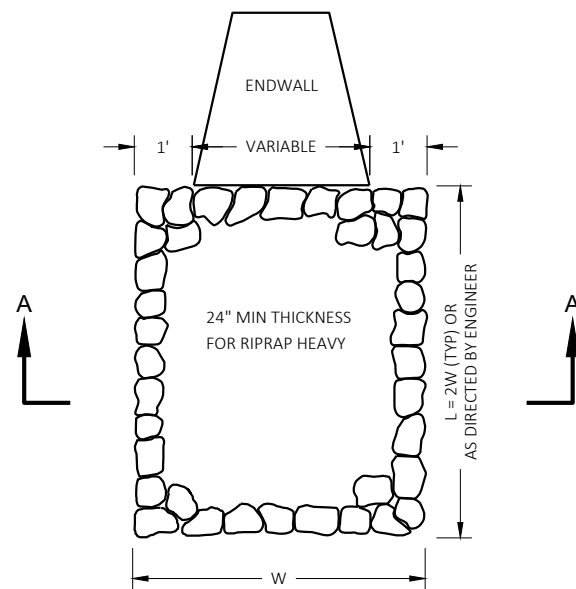


PROJECT NO: 1195-00-66	HWY: USH 2	COUNTY: DOUGLAS	PROJECT OVERVIEW	SHEET <b>E</b>
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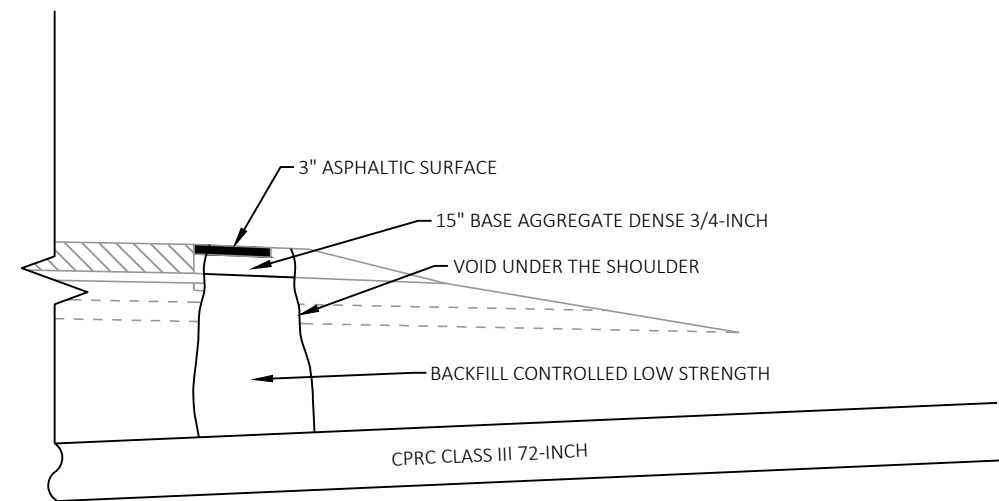




SECTION A-A



RIPRAP HEAVY TREATMENT AT CULVERTS



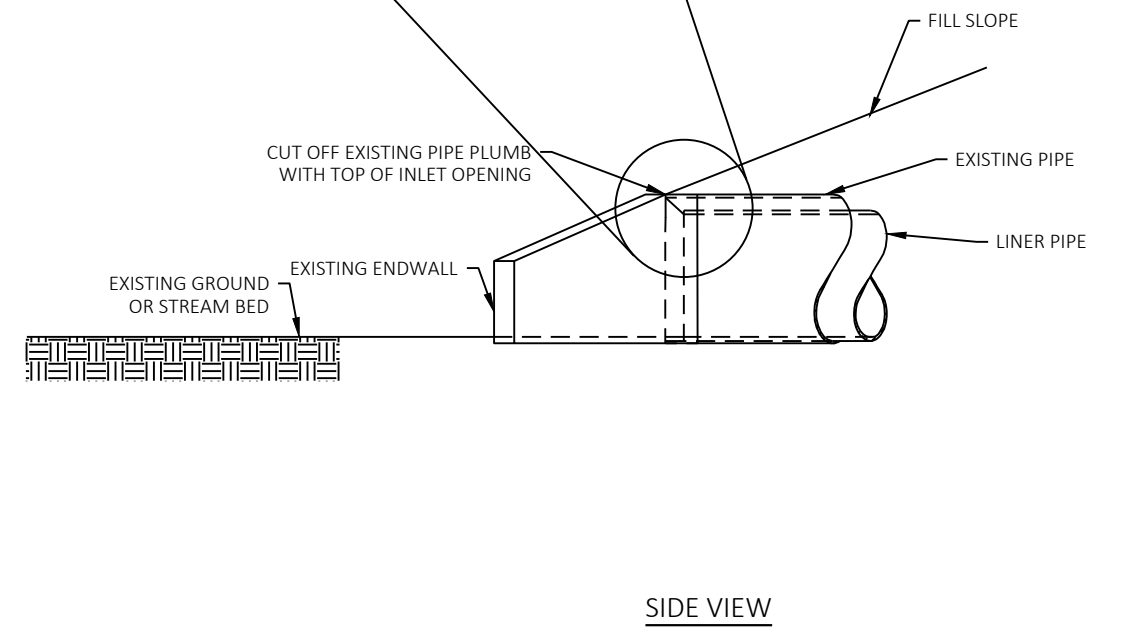
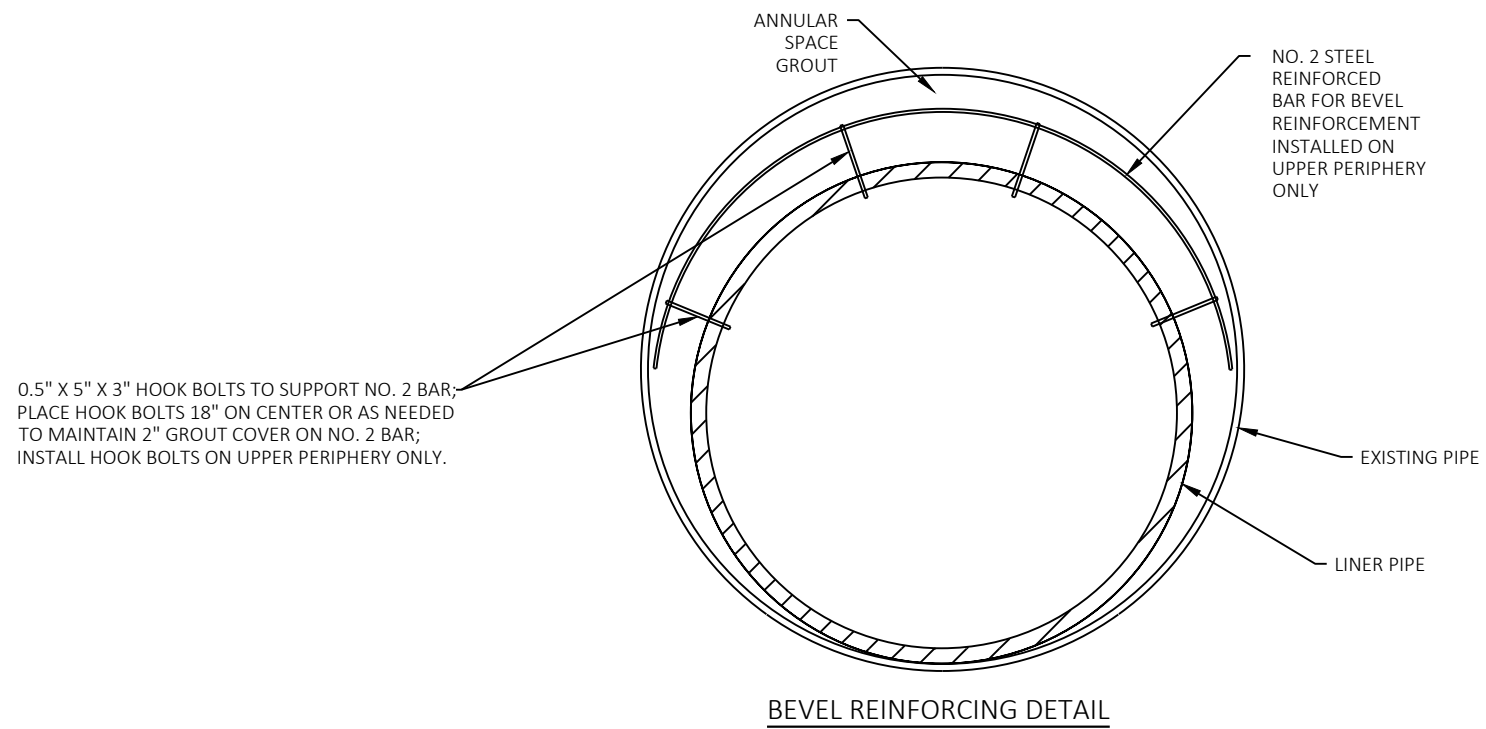
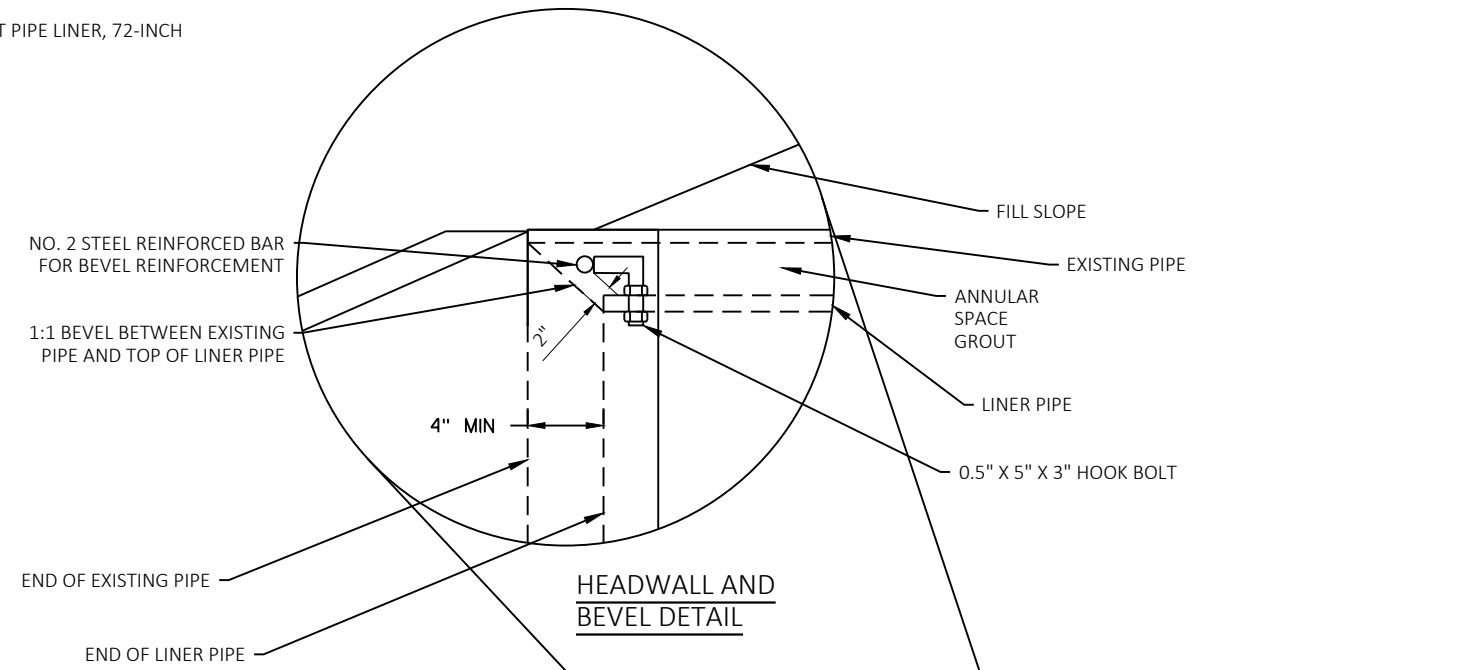
SUB-SURFACE EXPLORATION/BACKFILL CONTROLLED LOW STRENGTH DETAIL

NOTES:

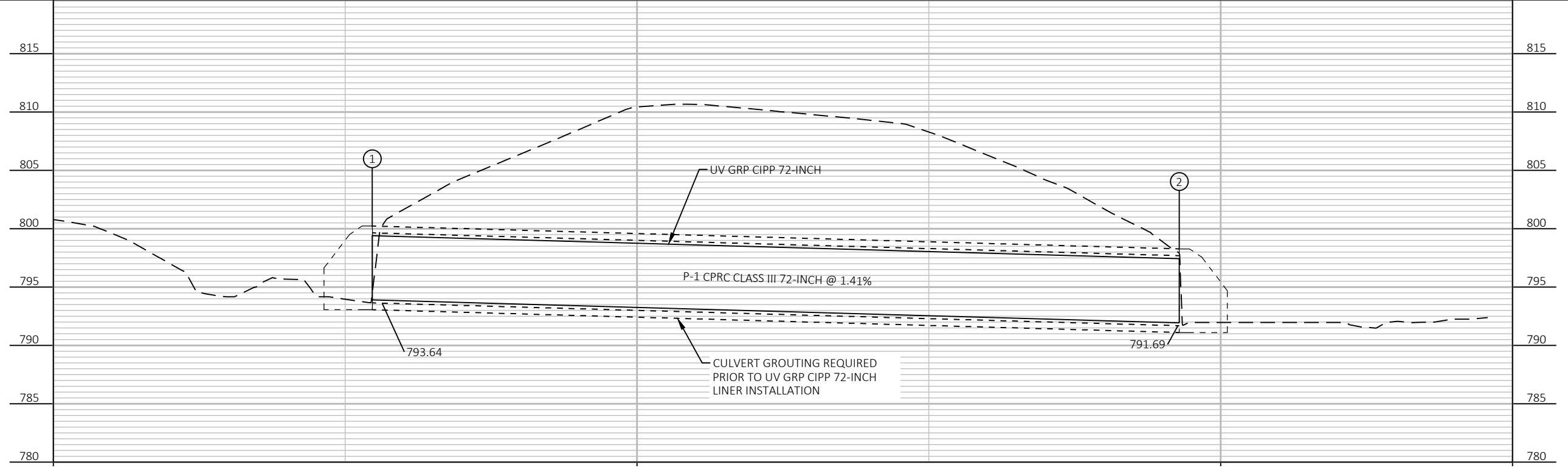
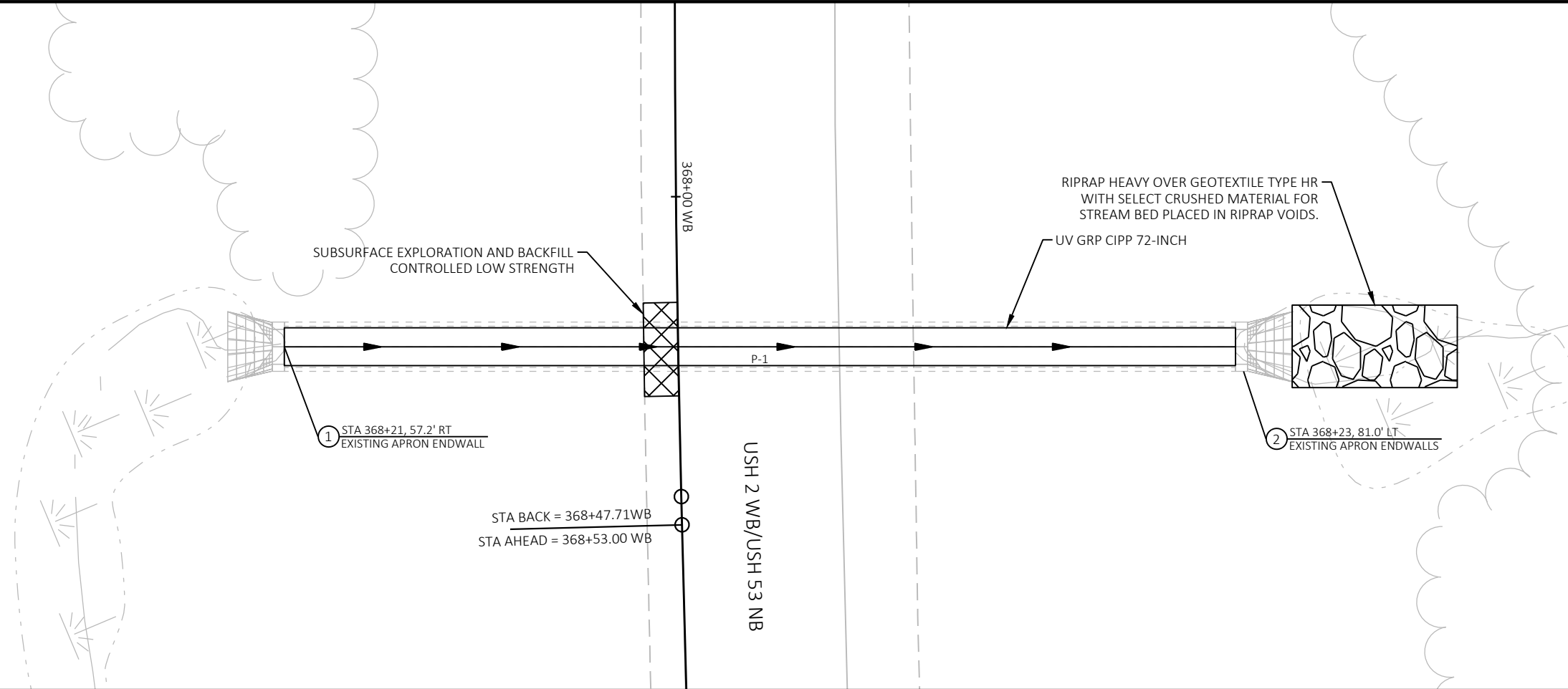
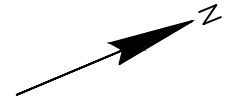
1. EXCAVATE SHOULDER AT 368+21 WB TO EXPOSE VOID BELOW THE SHOULDER. EXCAVATE AREA AS DIRECTED BY ENGINEER.
2. SAWCUT SHOULDER PERPENDICULAR TO THE ROADWAY AND REMOVE ASPHALT SHOULDER AND BASE MATERIAL TO A DEPTH OF 18" FROM THE EDGE OF THE CONCRETE TO EXPOSE THE CAVE-IN.
3. IF VOID IS FOUND FILL WITH BACKFILL CONTROLLED LOW STRENGTH UP TO THE EXISTING PAVEMENT STRUCTURE. MATCH EXISTING PAVEMENT STRUCTURE TO REBUILD THE SHOULDER.
4. PAYMENT FOR LOCATING VOID, EXCAVATION AND ANY OTHER WORK NOT INCLUDED IN BID ITEMS SHALL BE PAID FOR UNDER THE SUB-SURFACE EXPLORATION BID ITEM.
5. IF NO VOID IS FOUND RECONSTRUCT SHOULDER TO ORIGINAL CONDITION.

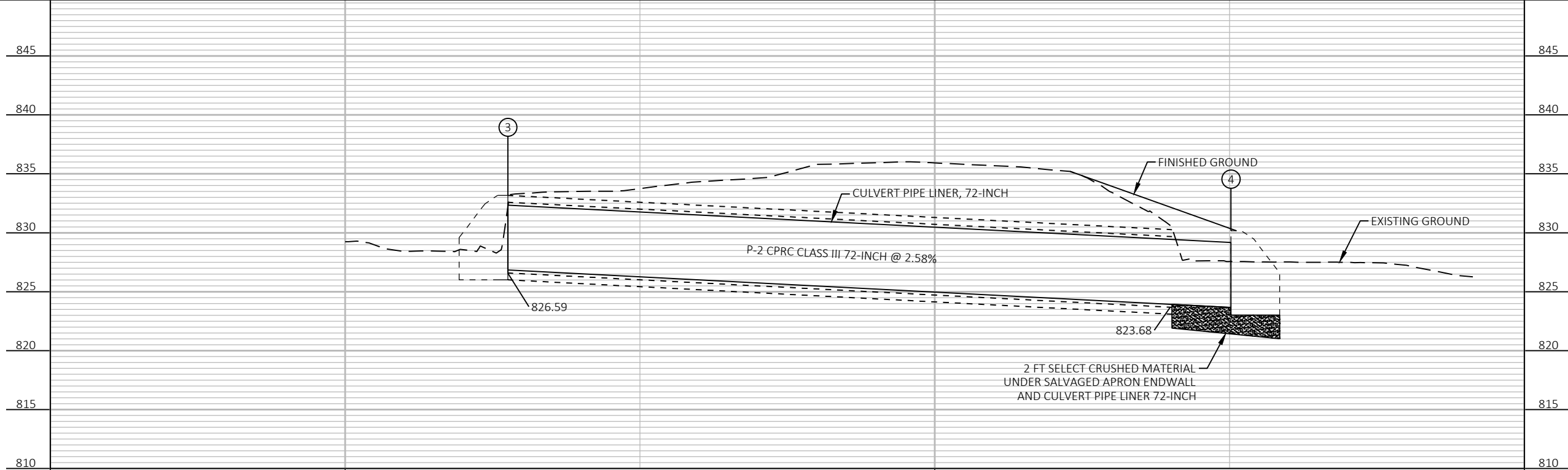
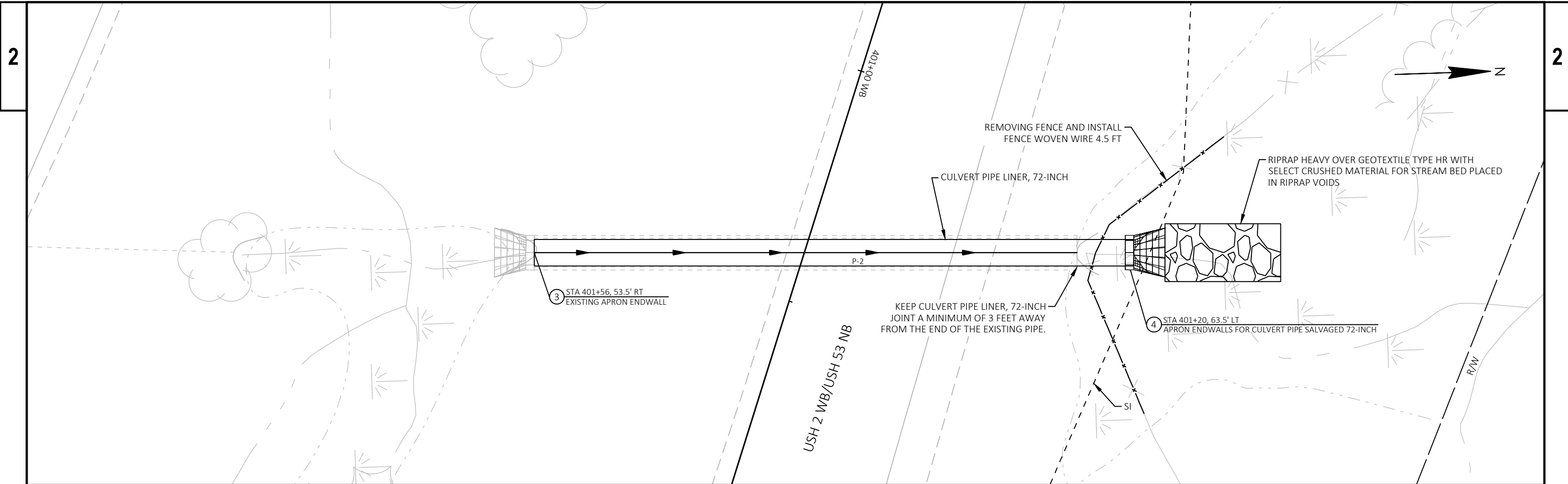
NOTES:

- 1. BEVEL REINFORCING REQUIRED ON THE INLET SIDE OF THE CULVERT PIPE LINER, 72-INCH AT STATION 401+39 WB, RT.
- 2. FORM BEVEL BETWEEN EXISTING PIPE AND LINER PIPE SUCH THAT THE BEVEL AT THE TOP OF PIPE IS 1:1. BOTTOM OF LINER PIPE TO BE INSTALLED ON INVERT OF EXISTING PIPE.
- 3. BEVEL REINFORCING IS INCIDENTAL TO CULVERT PIPE LINER, 72-INCH



0.5" X 5" X 3" HOOK BOLTS TO SUPPORT NO. 2 BAR;  
 PLACE HOOK BOLTS 18" ON CENTER OR AS NEEDED  
 TO MAINTAIN 2" GROUT COVER ON NO. 2 BAR;  
 INSTALL HOOK BOLTS ON UPPER PERIPHERY ONLY.





PROJECT NO: 1195-00-66

HWY: USH 2

COUNTY: DOUGLAS

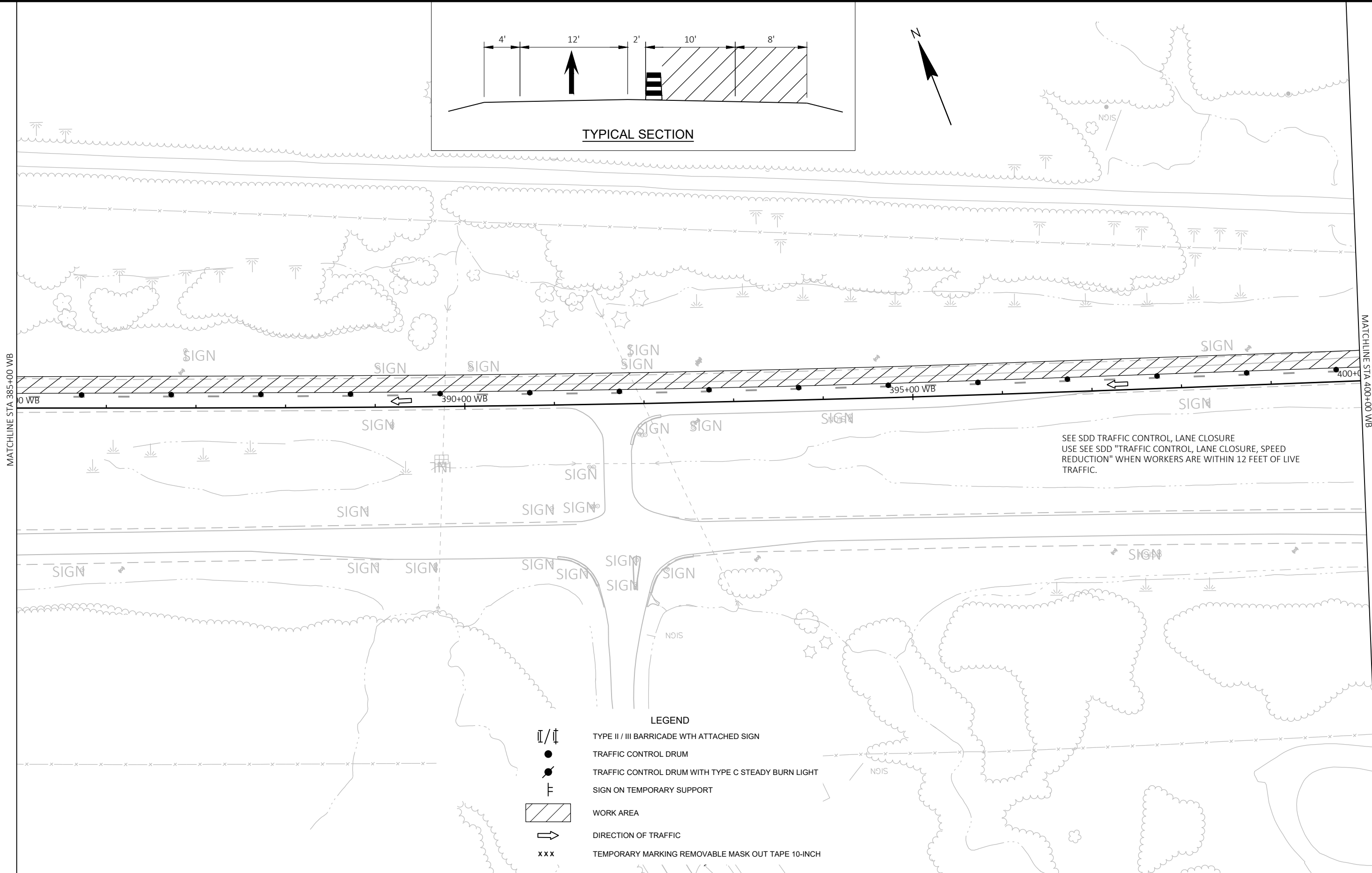
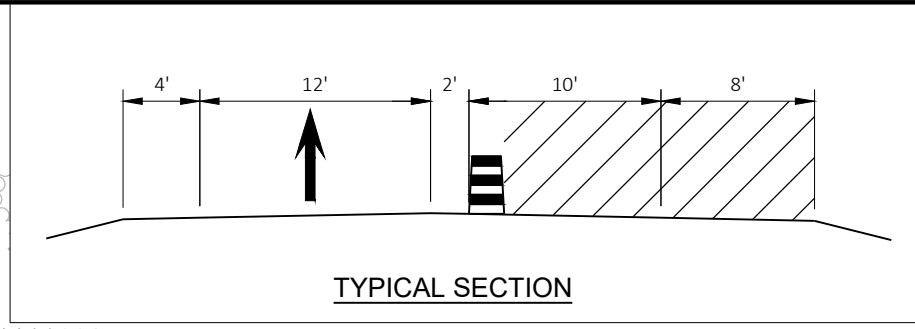
CONSTRUCTION DETAILS - STA 401+39 WB

SHEET

E



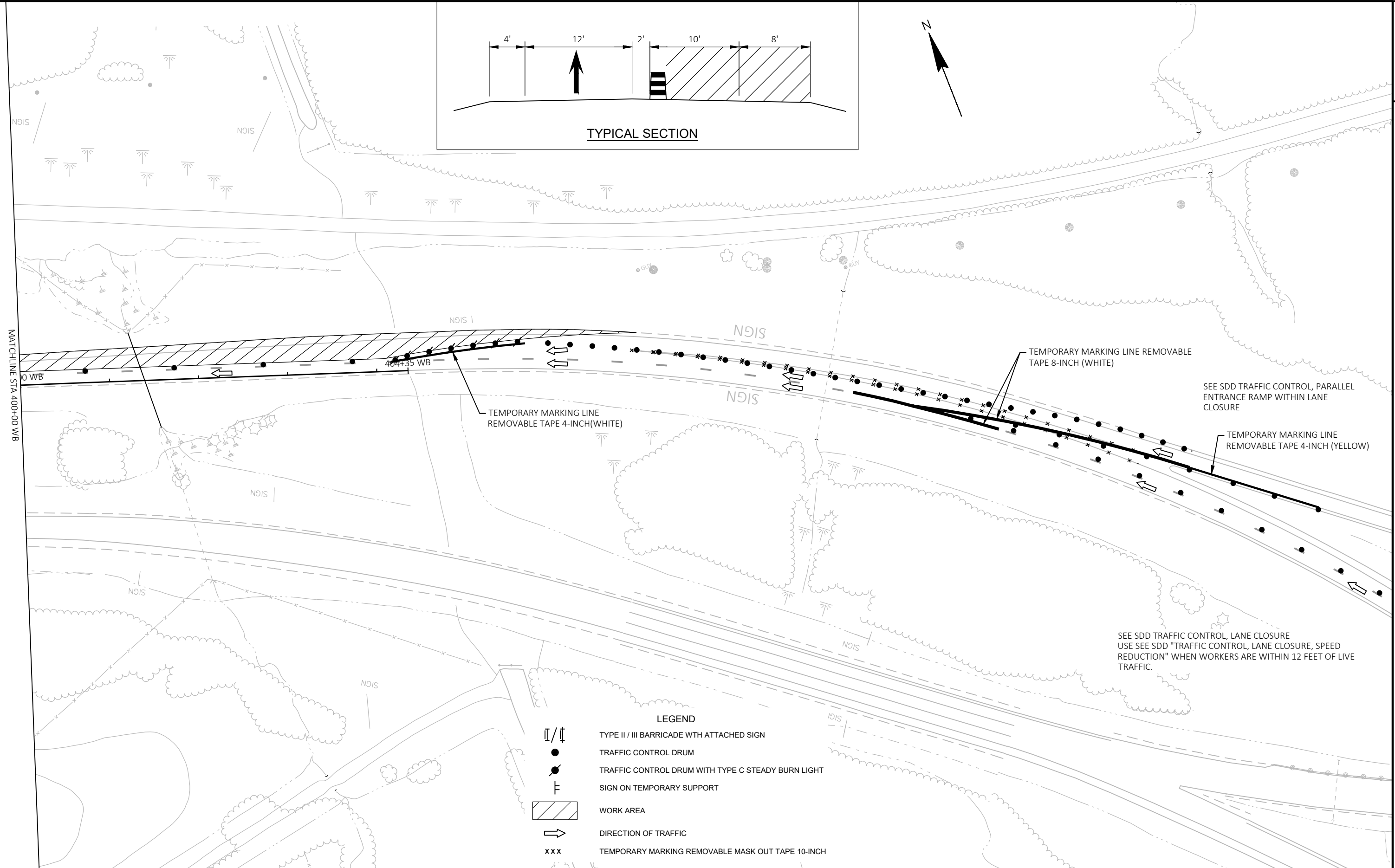
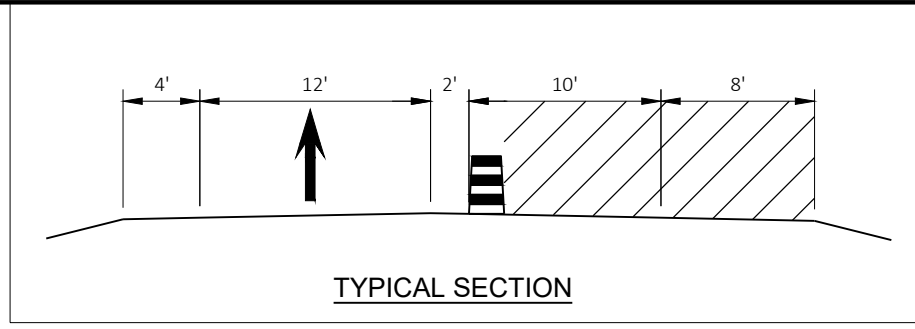




LEGEND

- TYPE II / III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE 10-INCH

SEE SDD TRAFFIC CONTROL, LANE CLOSURE  
 USE SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED  
 REDUCTION" WHEN WORKERS ARE WITHIN 12 FEET OF LIVE  
 TRAFFIC.



TEMPORARY MARKING LINE  
REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY MARKING LINE REMOVABLE  
TAPE 8-INCH (WHITE)

SEE SDD TRAFFIC CONTROL, PARALLEL  
ENTRANCE RAMP WITHIN LANE  
CLOSURE

TEMPORARY MARKING LINE  
REMOVABLE TAPE 4-INCH (YELLOW)

SEE SDD TRAFFIC CONTROL, LANE CLOSURE  
USE SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED  
REDUCTION" WHEN WORKERS ARE WITHIN 12 FEET OF LIVE  
TRAFFIC.

**LEGEND**

- TYPE II / III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- TEMPORARY MARKING REMOVABLE MASK OUT TAPE 10-INCH

Estimate Of Quantities

1195-00-66

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	204.0170	Removing Fence	LF	60.000	60.000
0008	208.1100	Select Borrow	CY	113.000	113.000
0010	209.0200.S	Backfill Controlled Low Strength	CY	12.000	12.000
0012	213.0100	Finishing Roadway (project) 01. 1195-00-66	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	5.000	5.000
0016	312.0110	Select Crushed Material	TON	31.000	31.000
0018	465.0105	Asphaltic Surface	TON	5.000	5.000
0020	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0022	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	2.000	2.000
0024	524.0672	Apron Endwalls for Culvert Pipe Salvaged 72-Inch	EACH	1.000	1.000
0026	606.0300	Riprap Heavy	CY	32.000	32.000
0028	616.0100	Fence Woven Wire (height) 01. 4.5-Ft	LF	60.000	60.000
0030	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1195-00-66	EACH	1.000	1.000
0032	619.1000	Mobilization	EACH	1.000	1.000
0034	625.0100	Topsoil	SY	780.000	780.000
0036	628.1504	Silt Fence	LF	551.000	551.000
0038	628.1520	Silt Fence Maintenance	LF	551.000	551.000
0040	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0042	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0044	628.2008	Erosion Mat Urban Class I Type B	SY	930.000	930.000
0046	628.7555	Culvert Pipe Checks	EACH	20.000	20.000
0048	629.0210	Fertilizer Type B	CWT	0.590	0.590
0050	630.0130	Seeding Mixture No. 30	LB	16.000	16.000
0052	630.0200	Seeding Temporary	LB	23.000	23.000
0054	630.0500	Seed Water	MGAL	8.800	8.800
0056	643.0300	Traffic Control Drums	DAY	2,375.000	2,375.000
0058	643.0420	Traffic Control Barricades Type III	DAY	114.000	114.000
0060	643.0705	Traffic Control Warning Lights Type A	DAY	228.000	228.000
0062	643.0715	Traffic Control Warning Lights Type C	DAY	114.000	114.000
0064	643.0800	Traffic Control Arrow Boards	DAY	38.000	38.000
0066	643.0900	Traffic Control Signs	DAY	380.000	380.000
0068	643.1050	Traffic Control Signs PCMS	DAY	20.000	20.000
0070	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	750.000	750.000
0072	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	500.000	500.000
0074	643.3970	Temporary Marking Removable Mask Out Tape 10-Inch	LF	1,200.000	1,200.000
0076	643.5000	Traffic Control	EACH	1.000	1.000
0078	645.0120	Geotextile Type HR	SY	90.000	90.000
0080	690.0150	Sawing Asphalt	LF	6.000	6.000
0082	SPV.0035	Special 01. Culvert Grouting	CY	5.000	5.000
0084	SPV.0060	Special 01. Subsurface Exploration	EACH	1.000	1.000
0086	SPV.0090	Special 01. Culvert Pipe Liner, 72-Inch	LF	123.000	123.000
0088	SPV.0090	Special 03. Uv Grp Cipp 72-Inch	LF	139.000	139.000
0090	SPV.0195	Special 01. Select Crushed Material for Stream Bed	TON	10.000	10.000

3

3

BACKFILL LOW STRENGTH

CATEGORY	STATION	LOCATION	209.0200.S BACKFILL CONTROLLED LOW STRENGTH CY
0010	368+21	RT	12
		TOTAL 0010	12

CLEARING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	368+00	-	369+00	LT	1	1
				TOTAL 0010	1	1

SELECT CRUSHED MATERIAL

CATEGORY	STATION	LOCATION	312.0110 SELECT CRUSHED MATERIAL TON	REMARKS
0010	401+23	LT	31	UNDER ENDWALL AND CULVERT EXTENSION
		TOTAL 0000	31	

FENCING

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF	616.0100.01 FENCE WOVEN WIRE (HEIGHT) (01. 4.5 FT) LF
0010	401+09	-	401+69	LT	60	60
				TOTAL 0010	60	60

SUBSURFACE EXPLORATION

CATEGORY	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	465.0105 ASPHALTIC SURFACE TON	690.0150 SAWING ASPHALT LF	SPV.0060.01 SPECIAL (01. SUBSURFACE EXPLORATION) EACH
0010	368+21	RT	5	5	6	1
		TOTAL 0010	5	5	6	1

EARTHWORK

DIVISION	FROM/TO STATION	LOCATION	COMMON EXCAVATION (1)		UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	208.1100 SELECT BORROW
			CUT	EBS EXCAVATION (3)		FACTOR 1.25		
USH 2-WB	400+00 - 403+00	LT	0		90	113	-113	113
GRAND TOTAL								113
	TOTAL COMMON EXC		0					

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
- (13) EXPANDED FILL FACTOR = 1.25
- (14) 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.

CULVERT LINERS

CATEGORY	STATION	TO	STATION	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	SPV.0035.01 SPECIAL (01. CULVERT GROUTING) CY	SPV.0090.02 SPECIAL (02. CULVERT PIPE LINER 72-INCH) LF	SPV.0090.03 SPECIAL (03. UV GRP CIPP 72-INCH) LF
0010	368+21	-	368+23	1			139
0010	401+23	-	401+56	1	5	123	
			TOTAL 0010	2	5	123	139

SALVAGED ENDWALL

CATEGORY	STATION	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE EACH	524.0672 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 72-INCH EACH
0010	401+22	LT	1	1
		TOTAL 0010	1	1

3

EROSION CONTROL MOBILIZATIONS

CATEGORY	LOCATION	628.1905	628.1910
		MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	Project	2	1
	TOTAL 0010	2	1

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	625.0100	628.2008	629.0210	630.0130	630.0200	630.0500
					TOPSOIL SY	EROSION MAT URBAN CLASS I TYPE B SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	SEEDING TEMPORARY LB	SEED WATER MGAL
0010	400+98	-	401+48	LT	780	780	0.49	14	21	8.70
0010	Undistributed					150	0.10	2	2	0.10
	TOTAL 0010				780	930	0.59	16	23	8.80

3

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	628.7555
			CULVERT PIPE CHECKS EACH
0010	368+23	LT	10
0010	401+23	LT	10
	TOTAL 0010		20

RIPRAP

CATEGORY	STATION	LOCATION	606.0300	645.0120	SPV.0195.01
			RIPRAP HEAVY CY	GEOTEXTILE TYPE HR SY	SPECIAL (01. SELECT CRUSHED MATERIAL FOR STREAM BED) TON
0010	368+23	LT	16	45	5
0010	401+23	LT	16	45	5
	TOTAL 0010		32	90	10

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520
					SILT FENCE LF	SILT FENCE MAINTENANCE LF
0010	367+48	-	368+98	LT	150	150
0010	400+33	-	402+18	LT	301	301
0010	UNDISTRIBUTED	-			100	100
	TOTAL 0010				551	551

TEMPORARY MARKING

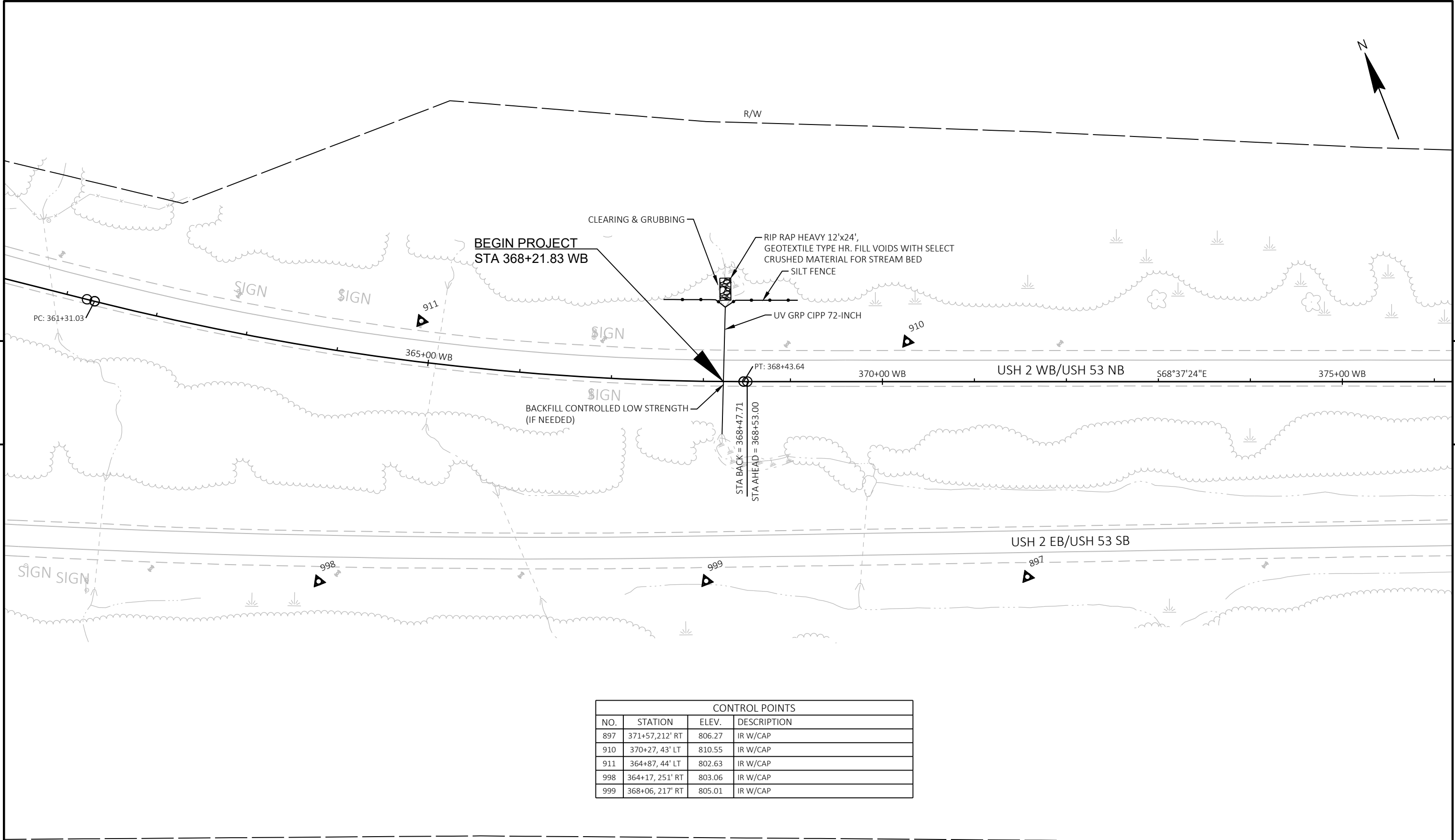
CATEGORY	LOCATION	643.3150	643.3250	643.3970	REMARKS
		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	TEMPORARY MARKING REMOVABLE MASK OUT TAPE 10-INCH LF	
0010	USH 2 WB		500	1,200	USH 2 & USH 53 GORE
0010	USH 2 WB	150			USH 2 EDGELINE (YELLOW)
0010	USH 2 WB	600			USH 2 EDGELINE (WHITE)
	TOTAL 0010	750	500	1,200	

TRAFFIC CONTROL

CATEGORY	Location	DURATION DAY	643.0300	643.0420	643.0705	643.0715	643.0800	643.0900	REMARKS
			TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	TRAFFIC CONTROL ARROW BOARDS DAY	TRAFFIC CONTROL SIGNS DAY	
0010	USH 2 WB	14	1,750	84	168	84	28	280	FALL 2023
0010	USH 2 WB	5	625	30	60	30	10	100	SPRING 2024
	TOTAL 0010		2,375	114	228	114	38	380	

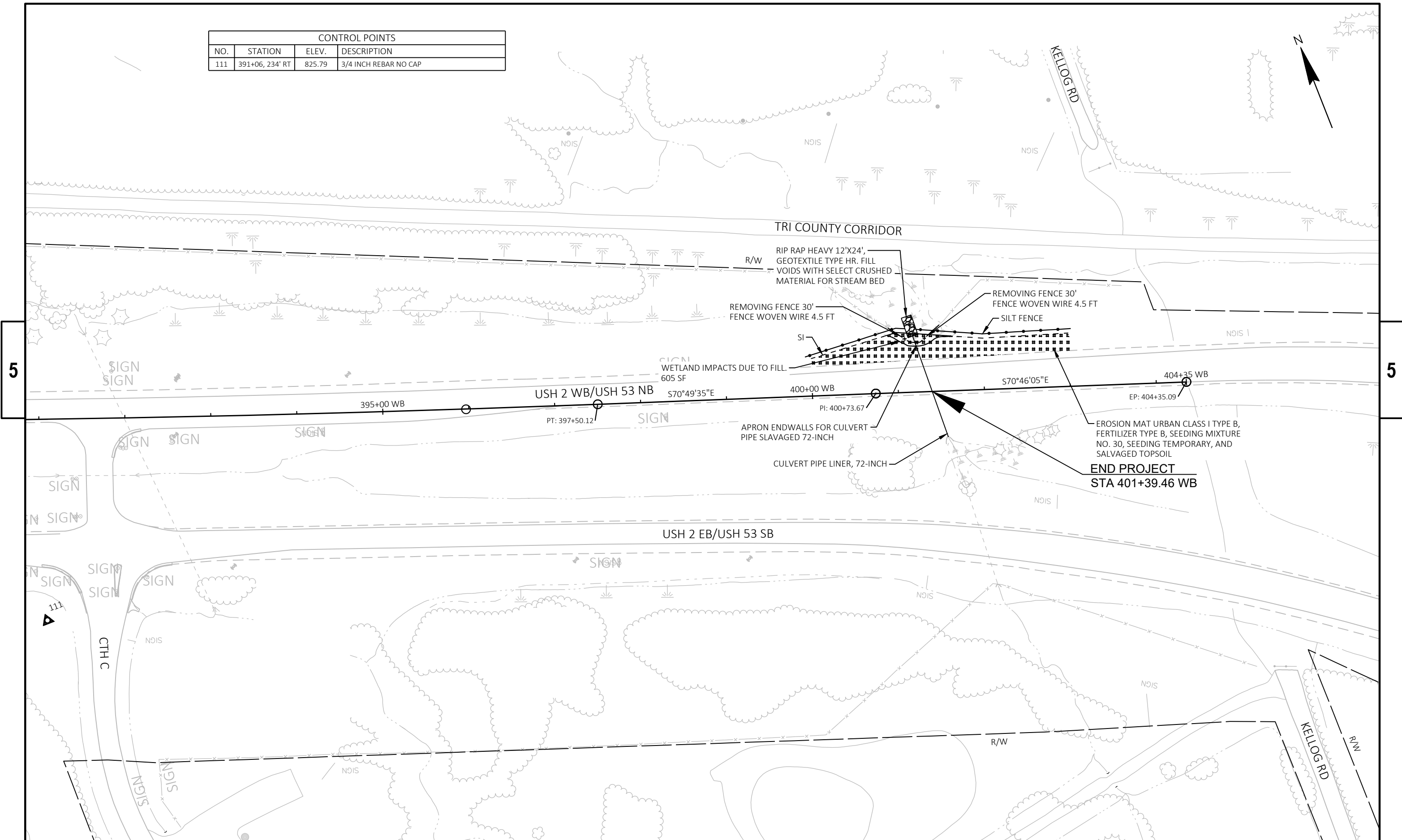
TRAFFIC CONTROL PCMS

CATEGORY	LOCATION	643.1050	REMARKS
		TRAFFIC CONTROL SIGNS PCMS DAY	
0010	USH 2/USH 53	10	FALL 2023
0010	USH 2/USH 53	10	SPRING 2024
	TOTAL 0010	20	



CONTROL POINTS			
NO.	STATION	ELEV.	DESCRIPTION
897	371+57, 212' RT	806.27	IR W/CAP
910	370+27, 43' LT	810.55	IR W/CAP
911	364+87, 44' LT	802.63	IR W/CAP
998	364+17, 251' RT	803.06	IR W/CAP
999	368+06, 217' RT	805.01	IR W/CAP

CONTROL POINTS			
NO.	STATION	ELEV.	DESCRIPTION
111	391+06, 234' RT	825.79	3/4 INCH REBAR NO CAP



5

5

PROJECT NO: 1195-00-66

HWY: USH 2

COUNTY: DOUGLAS

PLAN SHEETS

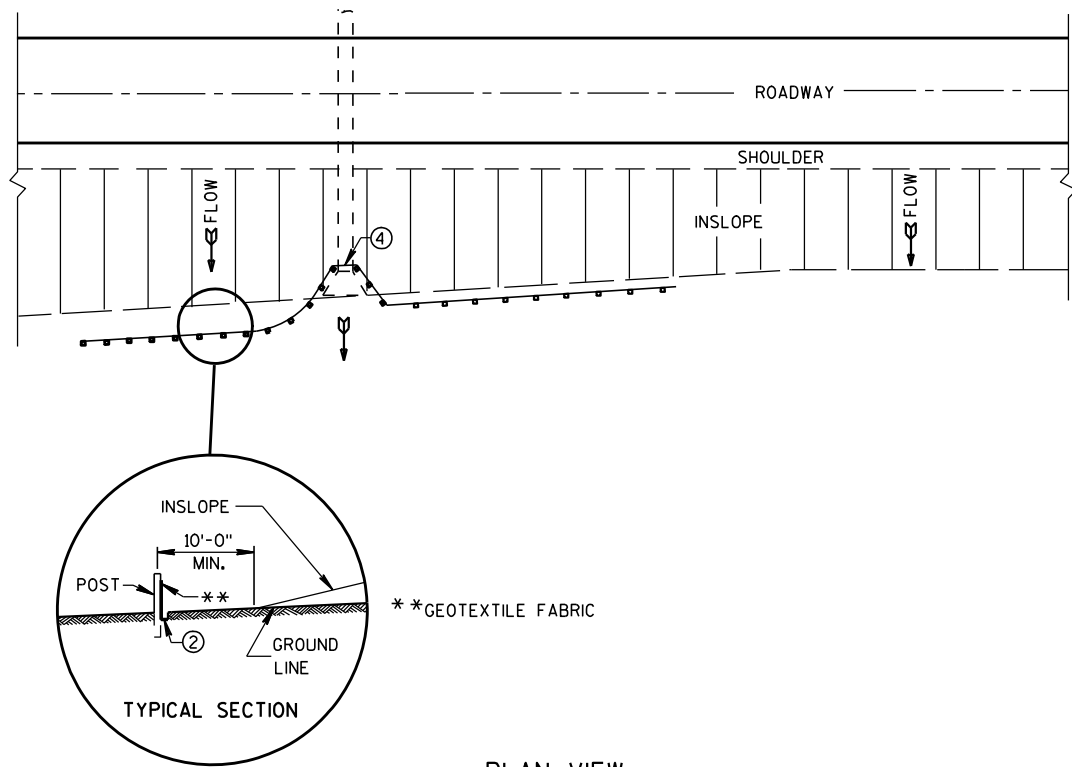
SHEET

E

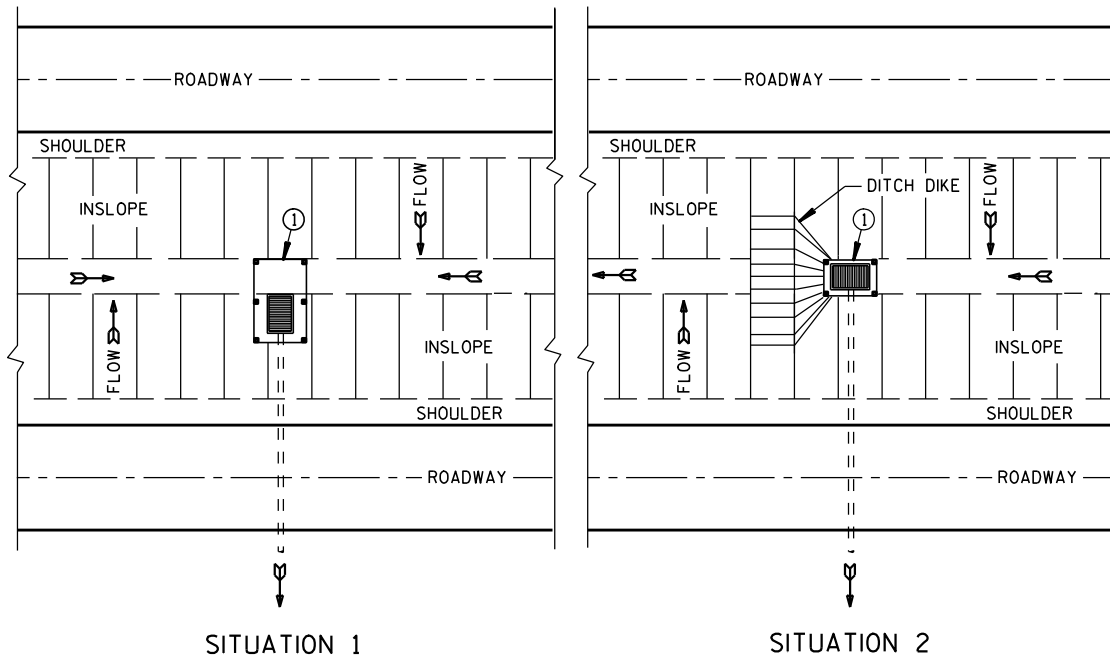


## Standard Detail Drawing List

08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-10A	TRAFFIC CONTROL, LANE CLOSURE
15D12-10B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-06A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D40-04B	TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

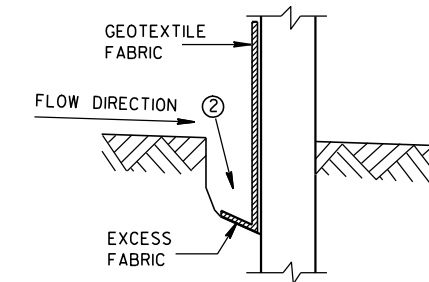


SITUATION 1      SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

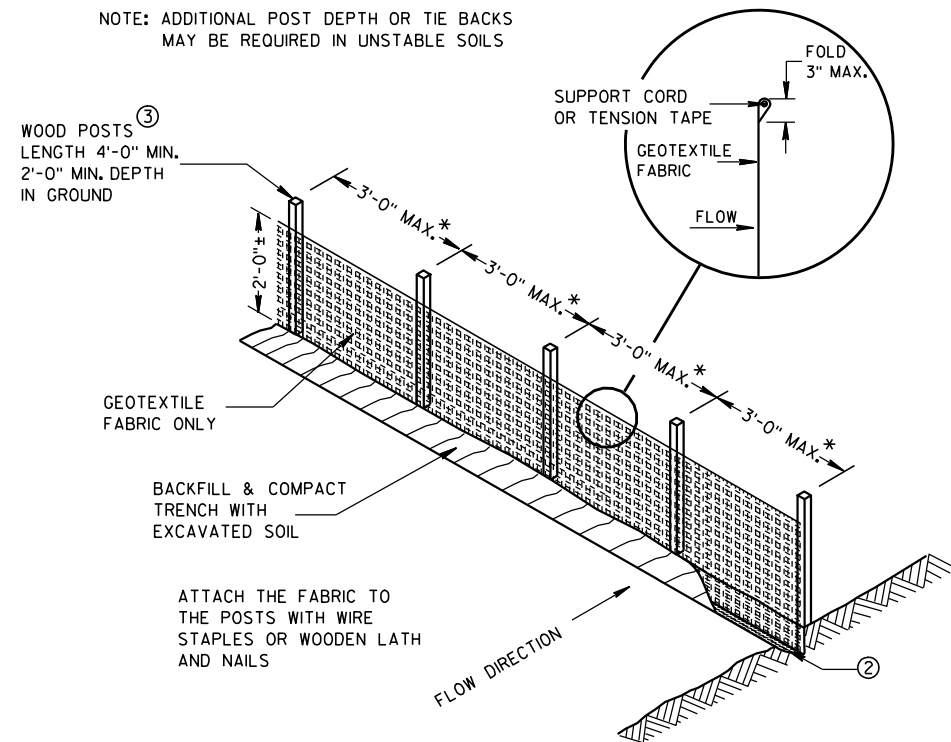
**GENERAL NOTES**

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

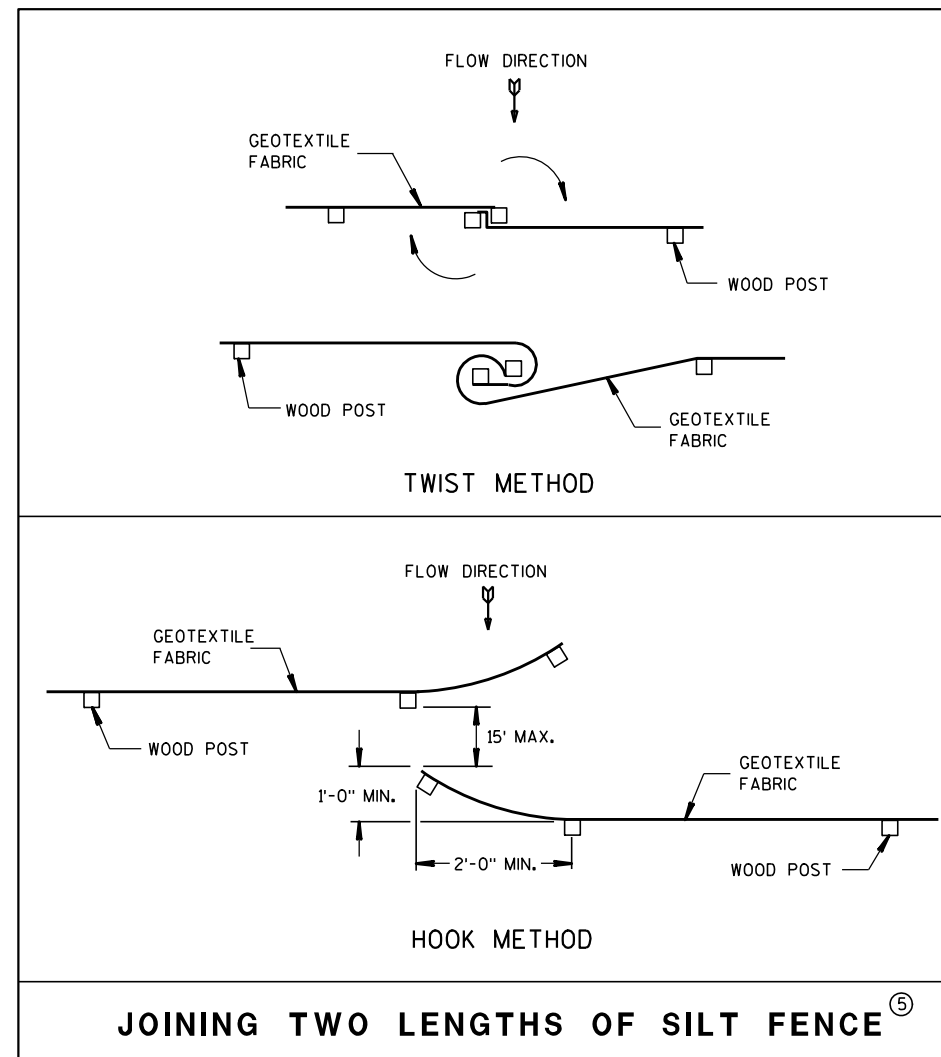
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS 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.



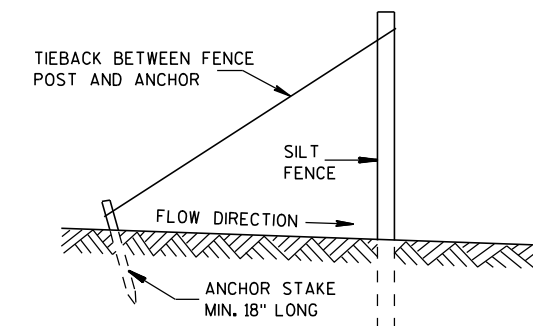
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

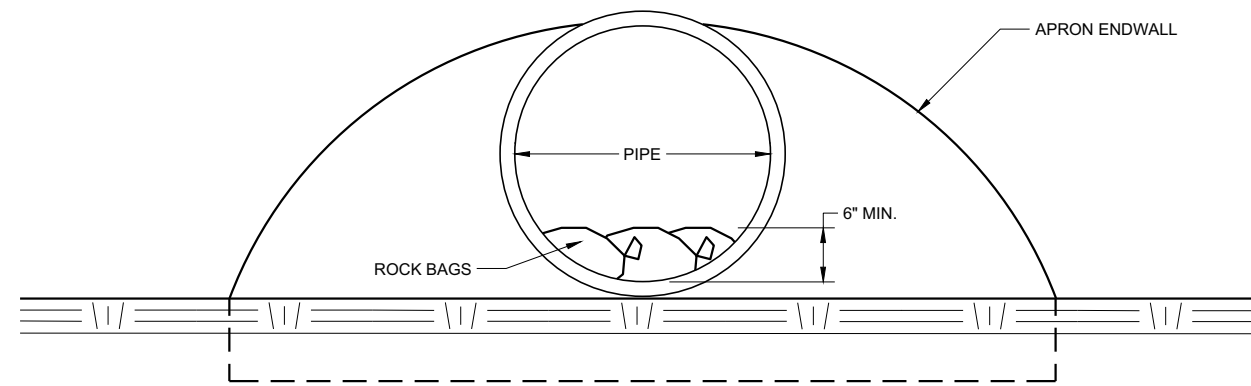


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

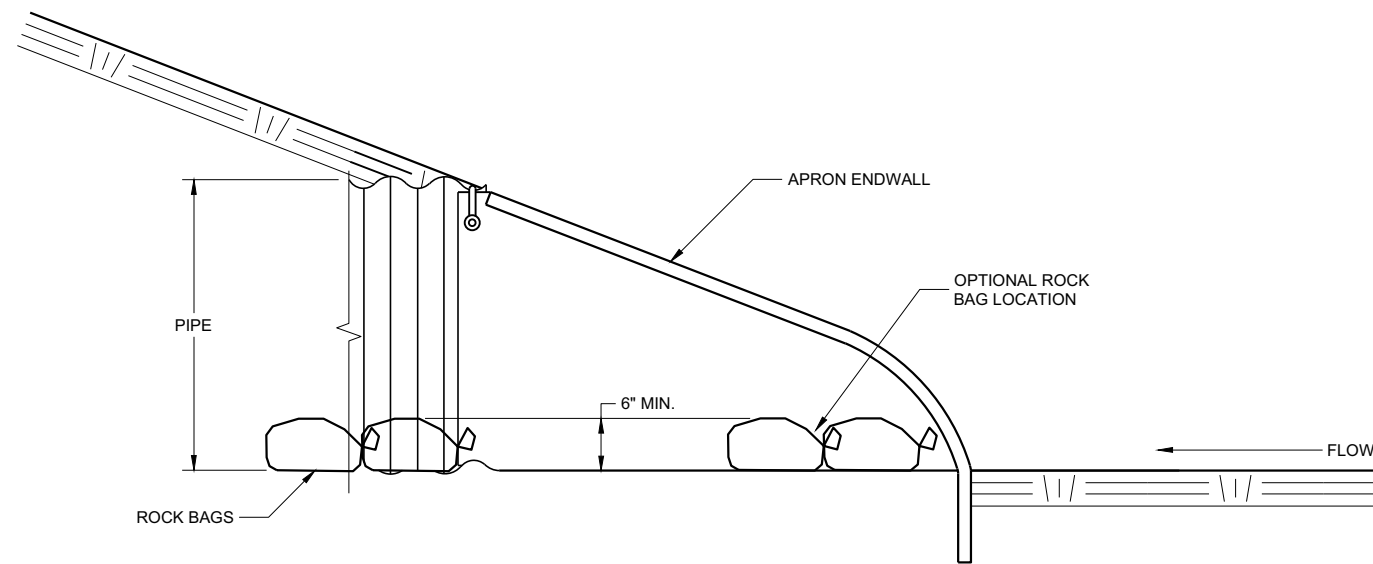
**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
4-29-05 /S/ Beth Canestra  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA



**END VIEW**



**SIDE VIEW**

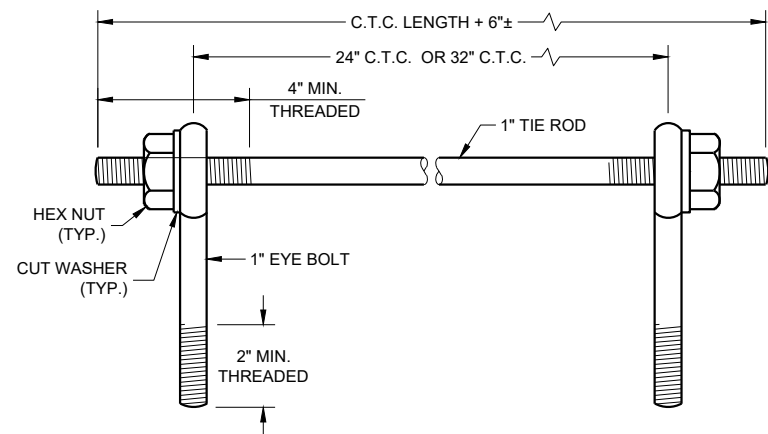
**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

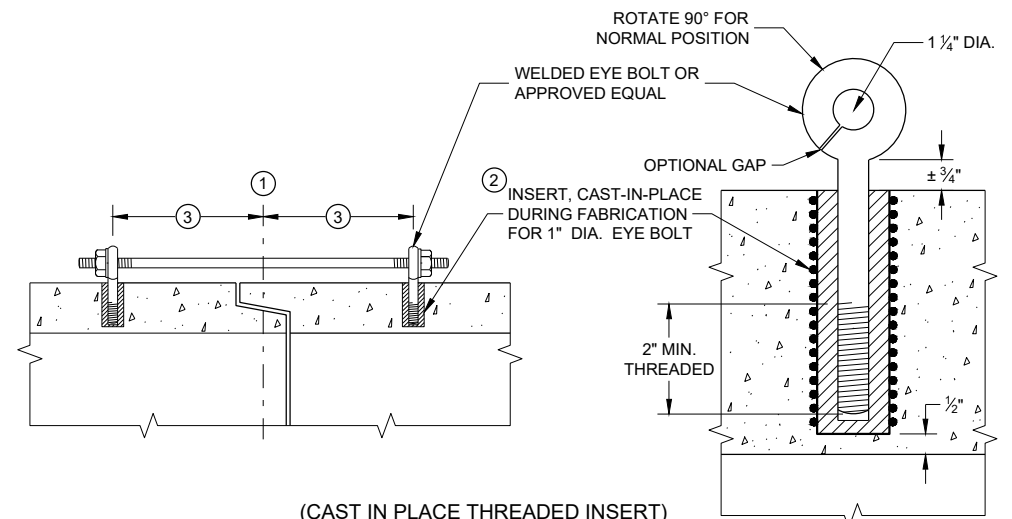
APPROVED  
May 2019 /S/ Daniel Schave  
DATE EROSION CONTROL ENGINEER

FHWA



**EYE BOLTS AND TIE ROD**

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



(CAST IN PLACE THREADED INSERT)  
**LONGITUDINAL SECTIONS**

**GENERAL NOTES**

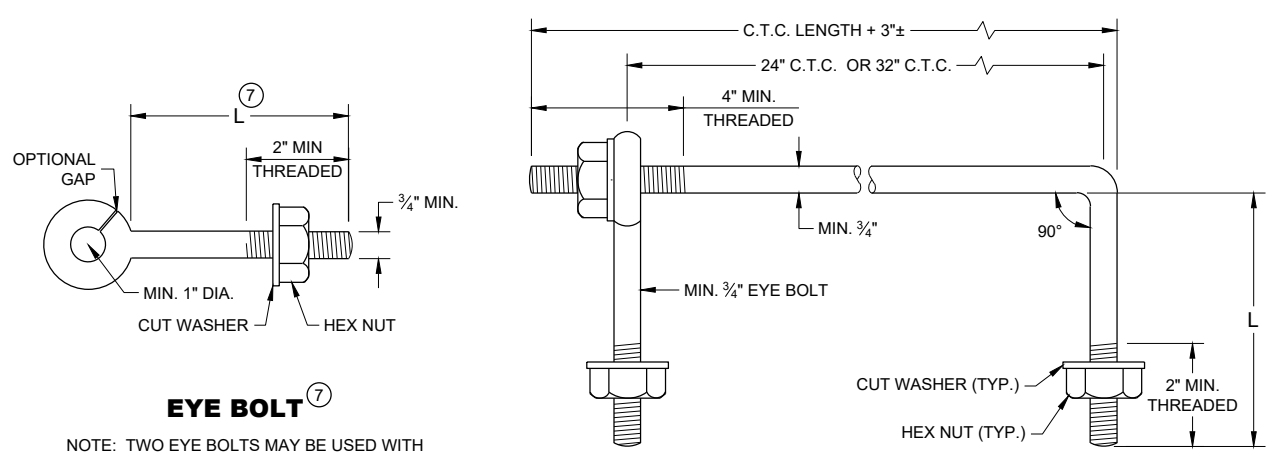
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

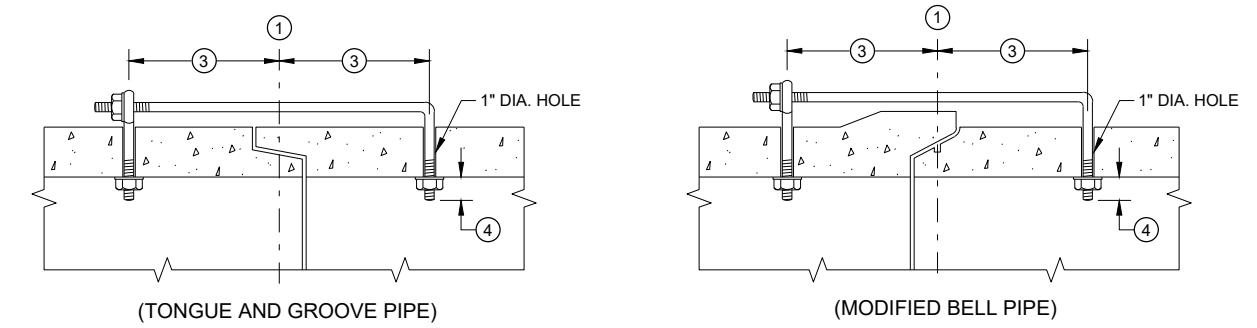
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

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



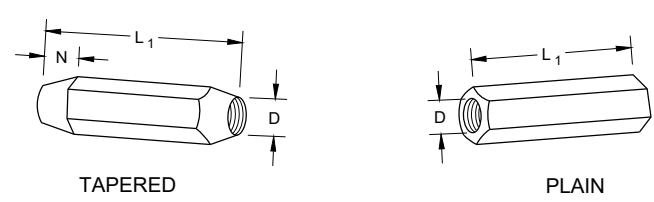
**LONGITUDINAL SECTION**  
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

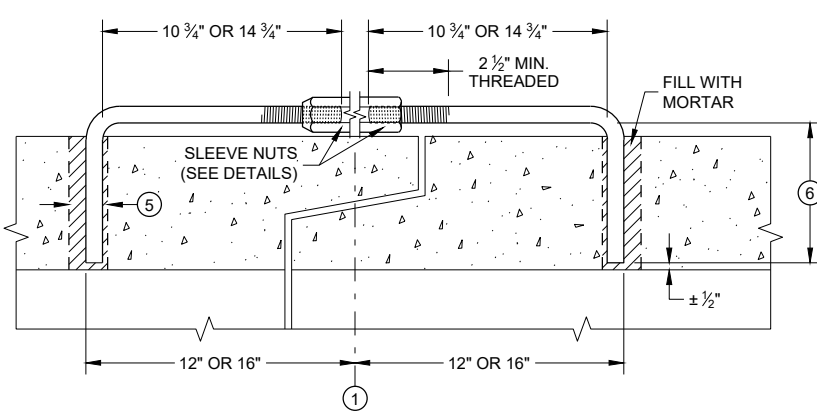
**ADJUSTABLE TIE ROD TABLE**

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 1/16

DIMENSIONS SHOWN ARE IN INCHES

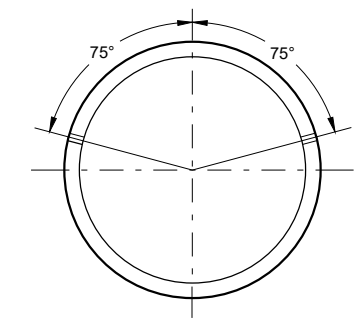


**RIGHT AND LEFT THREADS SLEEVE NUTS**



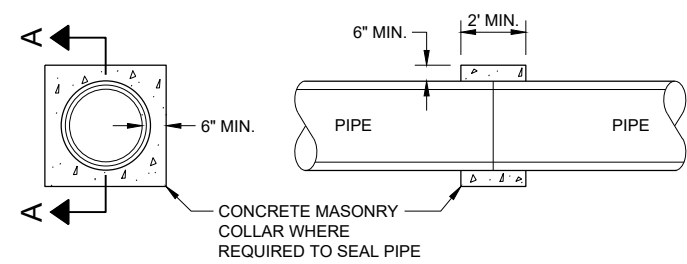
**LONGITUDINAL SECTION**

**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**

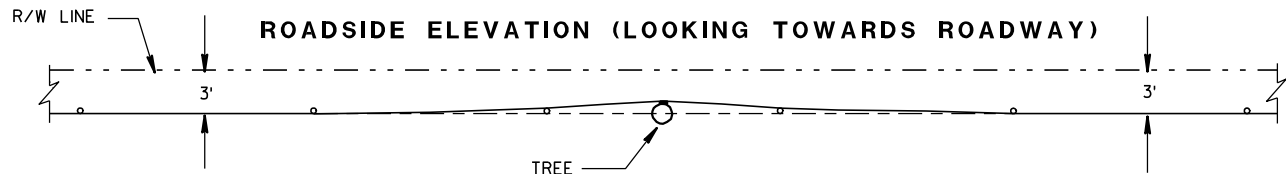
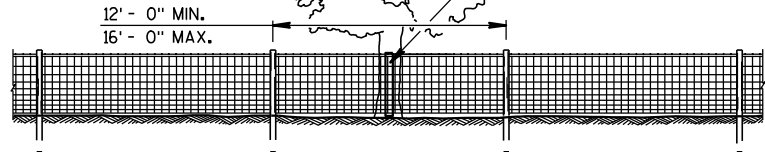
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

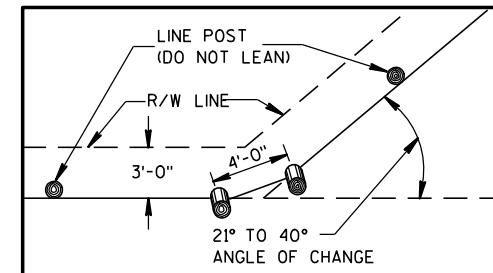
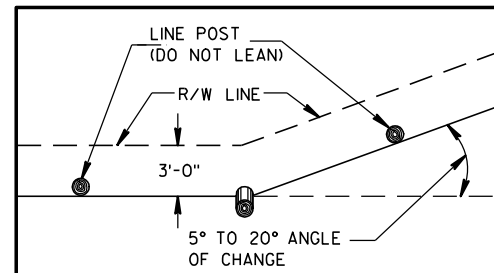


NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

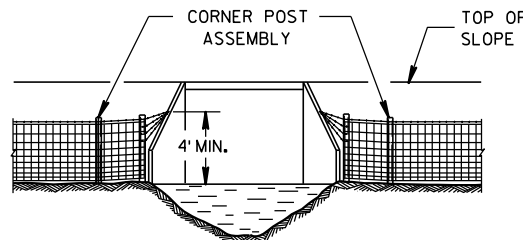


PLAN VIEW  
FENCE DESIGN AT TREES REMAINING  
IN NORMAL FENCE LINE

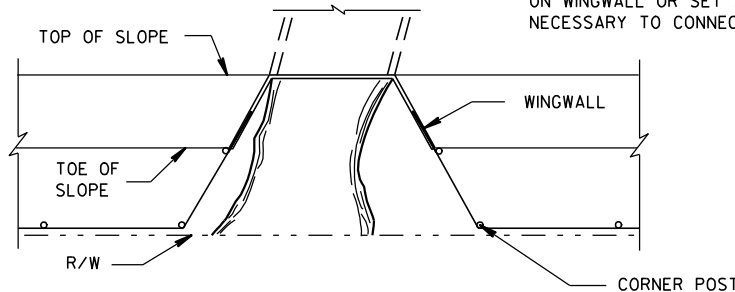


PLAN VIEW  
SINGLE POST CORNER  
PLAN VIEW  
DOUBLE POST CORNER  
RIGHT OF WAY LINE CHANGE 40° AND LESS

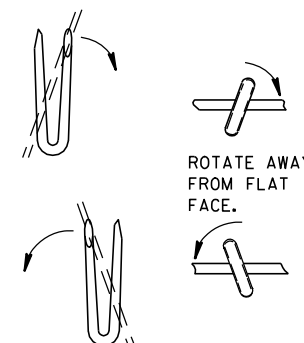
NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE. WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.

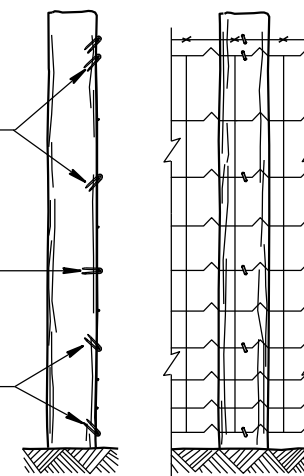


FENCE INSTALLATION TO WINGWALLS

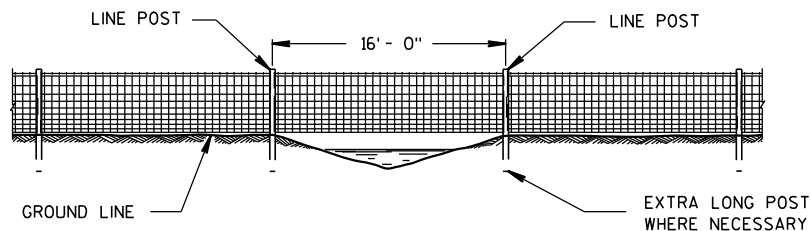


LINE POST

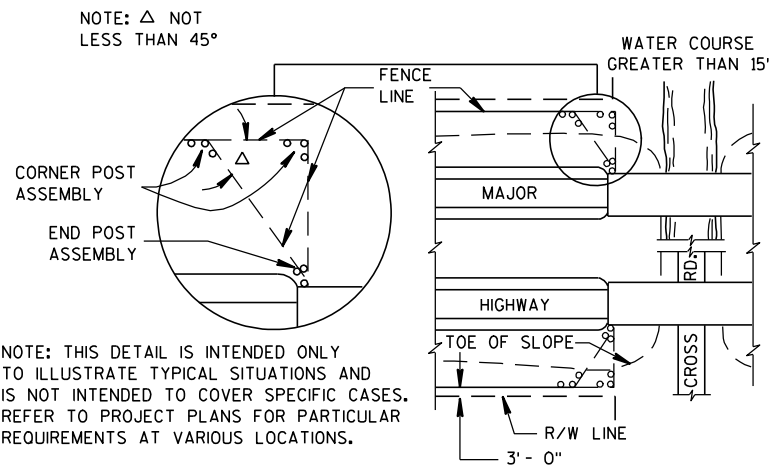
NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION  
FARM SIDE ELEVATION  
FENCE MOUNTING DETAIL

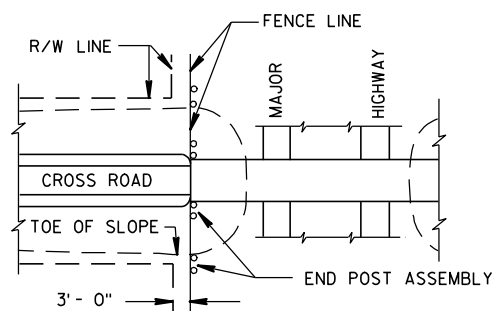


FENCE CONSTRUCTION OVER STREAM  
COURSES OF 15 FT. OR LESS IN WIDTH



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

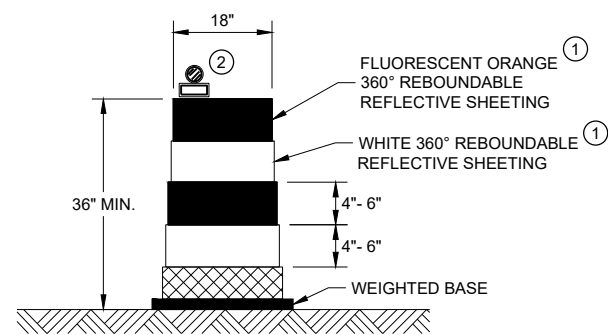
PLAN VIEW  
MAJOR HIGHWAY OVERPASS OR STREAM COURSE  
CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW  
MAJOR HIGHWAY UNDERPASS

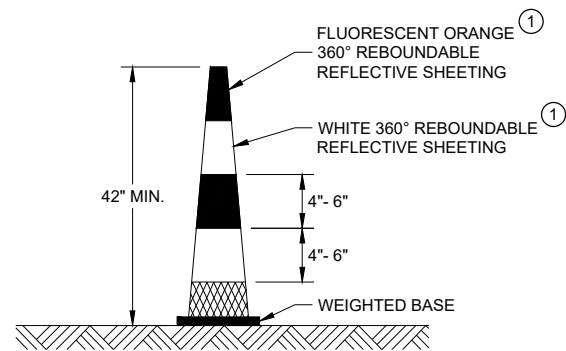
FENCE LOCATION AT STRUCTURES

<b>FENCE WOVEN WIRE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/4/2008 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



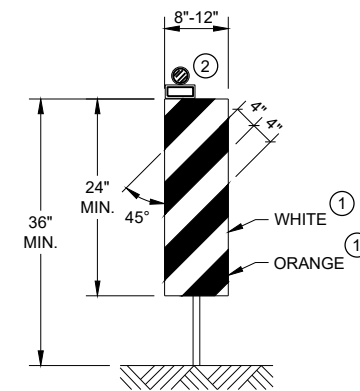
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



**42" CONE**

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS  
BALLAST WIDTHS  
RANGE FROM 14"-20"

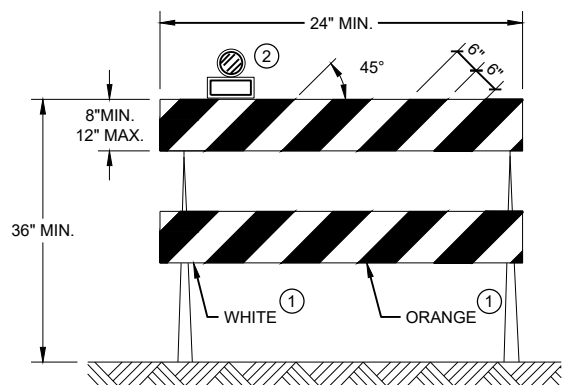


**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
THE TRAFFIC SIDE FOR CHANNELIZATION.

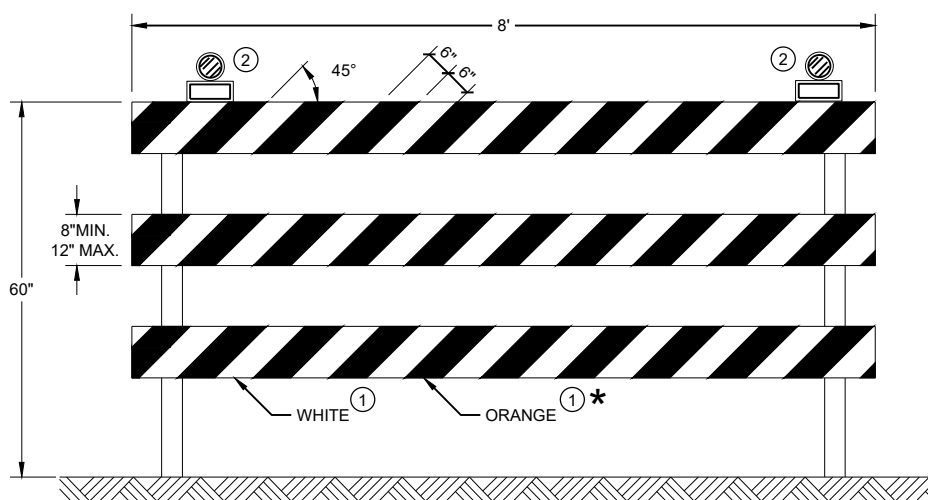
**GENERAL NOTES**

- 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

## 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) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" 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 OR AS APPROVED BY THE ENGINEER.

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 LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.










WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

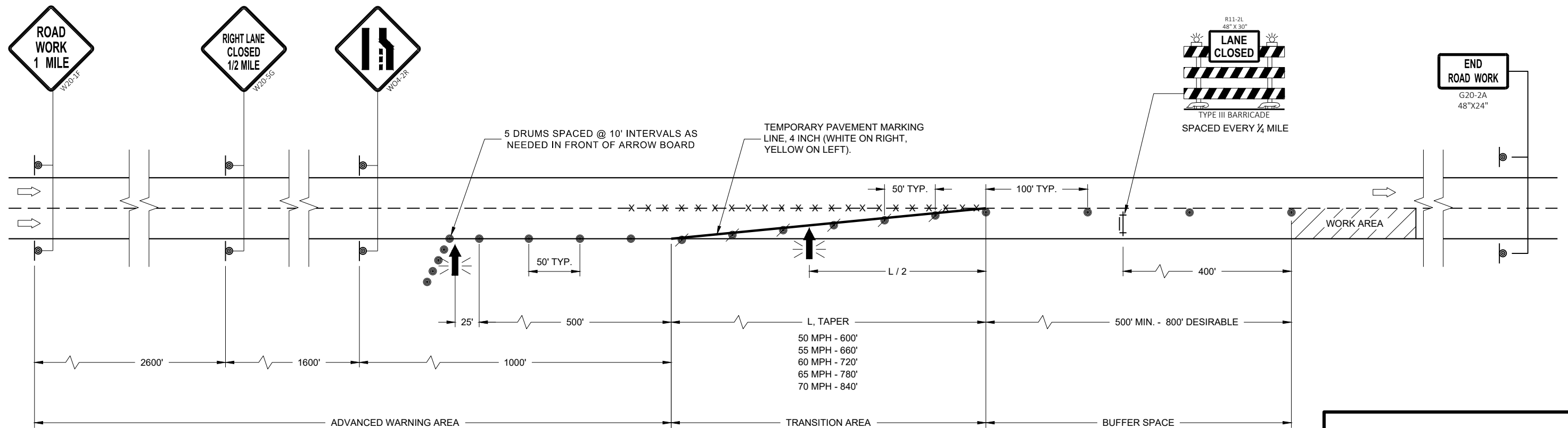
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE 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 ONE HALF 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.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

## LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD



### TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



### 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) CLEARANCE TO EXISTING SIGNS.

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ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE 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 LINE IF LANE CLOSURE IS TO BE IN PLACE 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 CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE 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 ONE HALF 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.

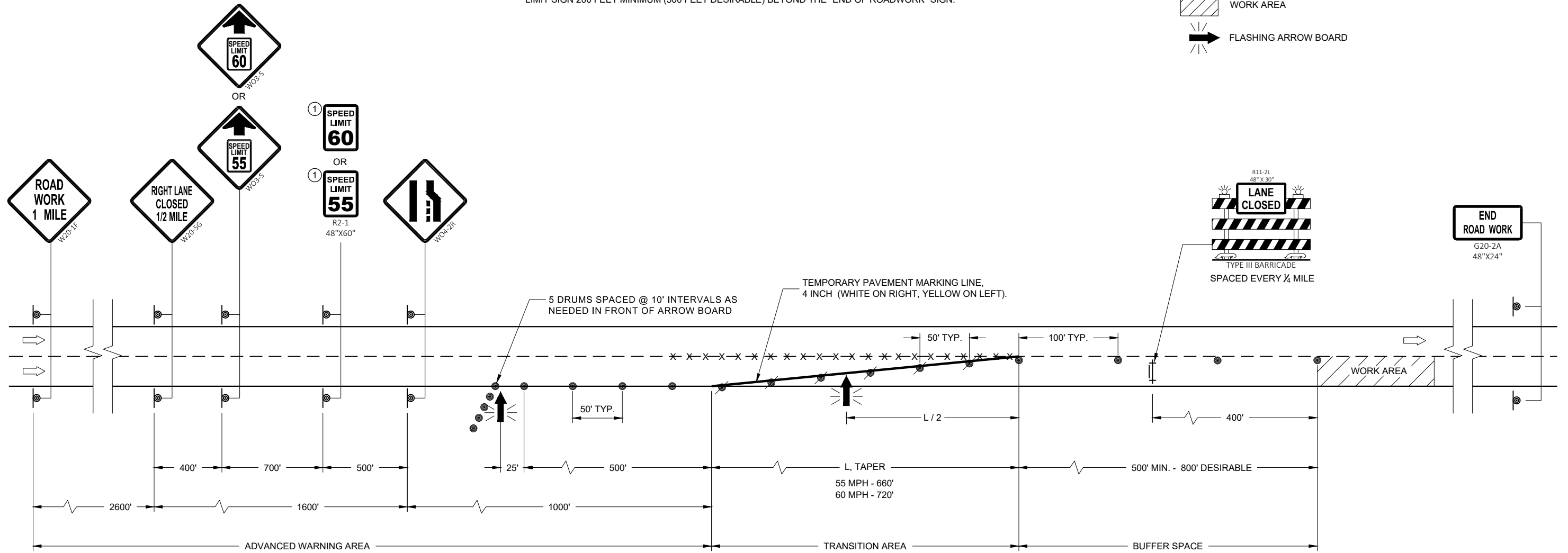
① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

### LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD

6

SDD 15D12 - 10b



6

SDD 15D12 - 10b

<b>TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

**GENERAL NOTES**

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

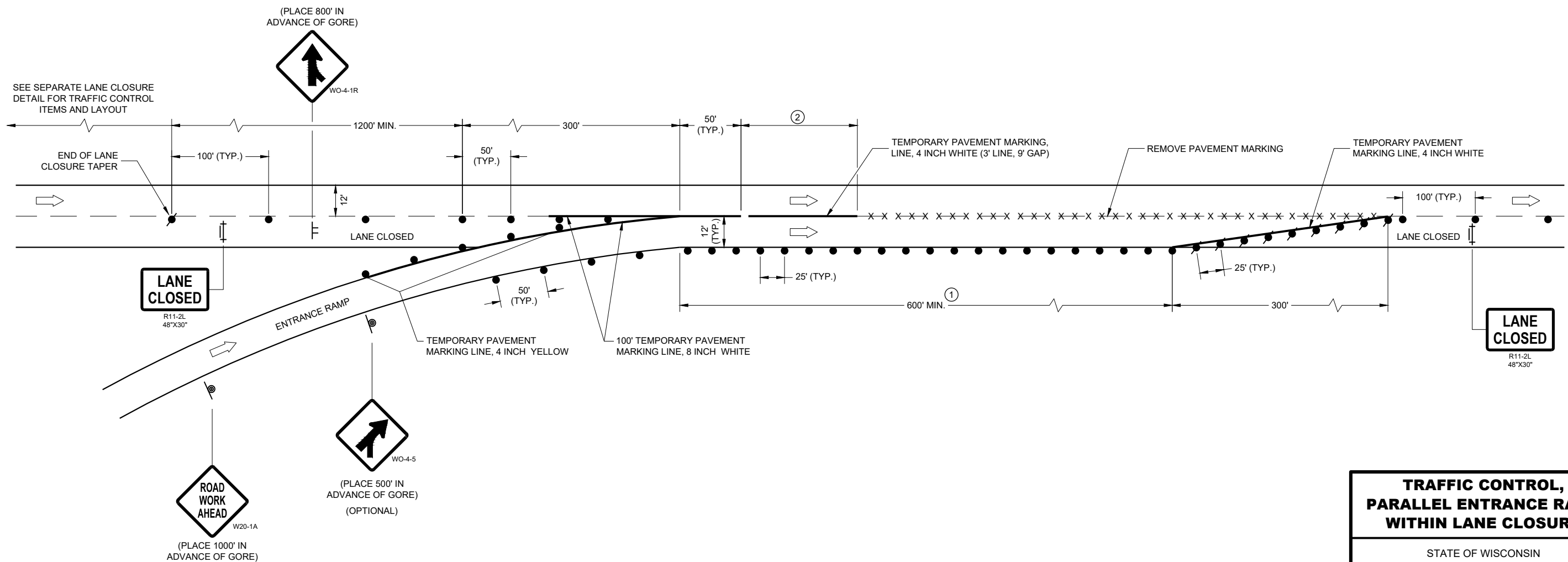
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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.

- ① EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



<b>TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

### GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

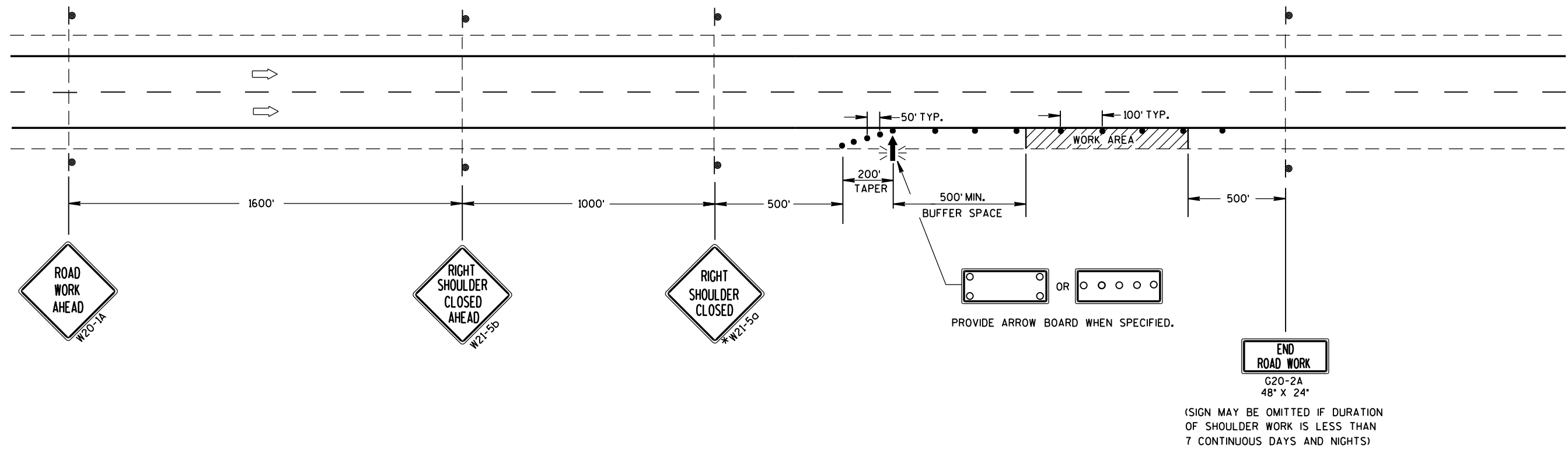
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

\*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-50 SIGN MAY BE OMITTED.

### LEGEND










- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡ FLASHING ARROW BOARD
- ▨ WORK AREA



(SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS)

<b>TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/s/ Peter Amakobe Atepe 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 RIGHT - REVERSE FOR SHIFTING LEFT.

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.

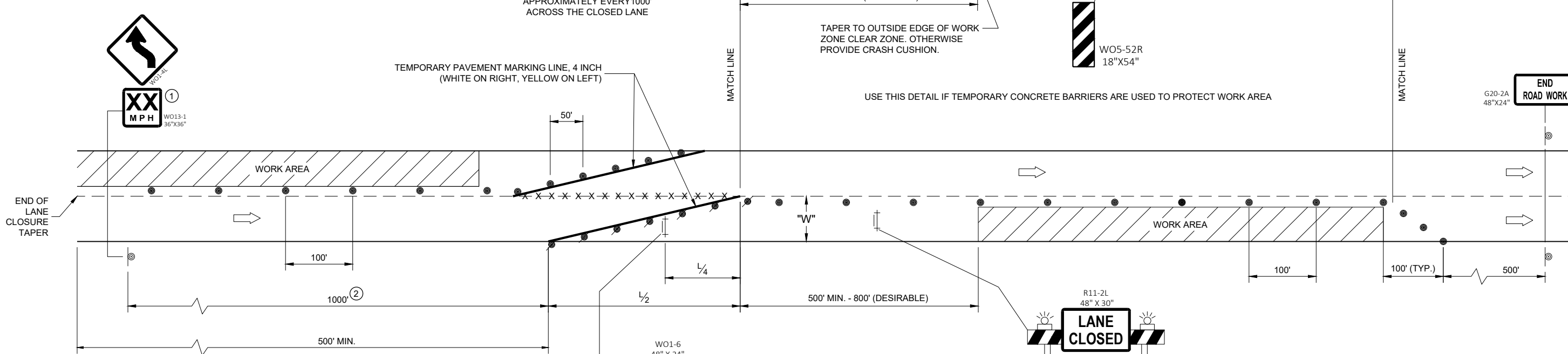
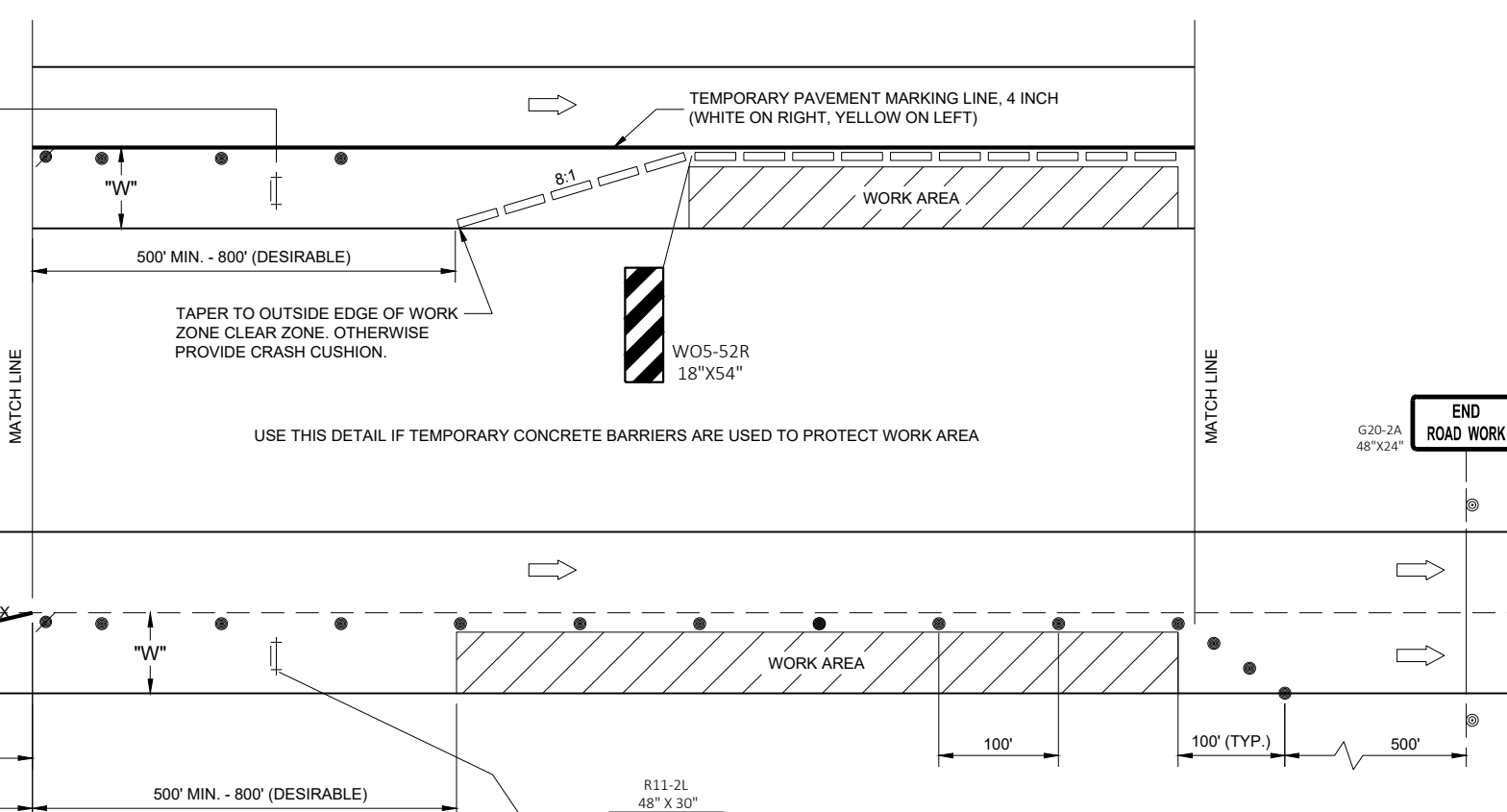
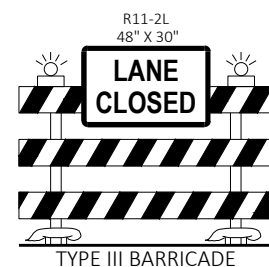
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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 IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ② IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2				
	W, LATERAL OFFSET (FT)				
	10	11	12	13	14
50	250	275	300	325	350
55	275	303	330	358	385
60	300	330	360	390	420
65	325	358	390	423	455
70	350	385	420	455	490



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SDD 15D40 - 04b

SDD 15D40 - 04b

**TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

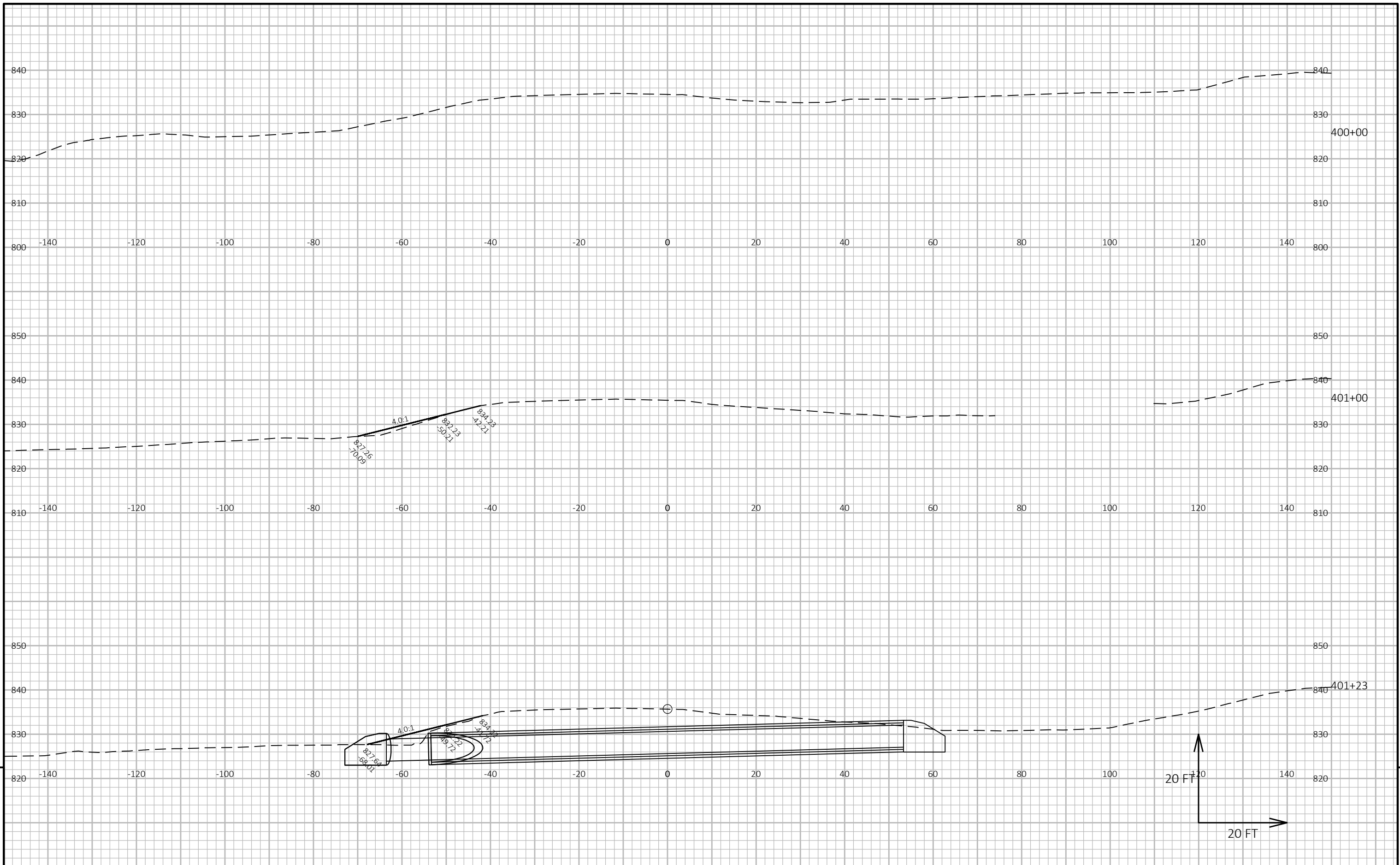
APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

DIVISION - USH 2-WB

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
										NOTE 1
400+00.00	40000.00	0.00	0.00	0.00	0	0	0	0	0	
401+00.00	40100.00	100.00	0.00	10.93	0	20	0	25	-25	
401+22.61	40122.61	22.61	0.00	26.51	0	16	0	45	-45	
402+00.00	40200.00	77.39	0.00	5.11	0	45	0	101	-101	
403+00.00	40300.00	100.00	0.00	0.00	0	9	0	113	-113	

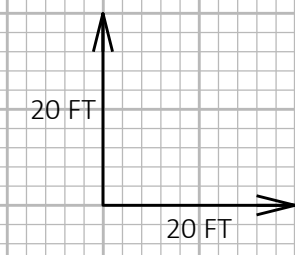
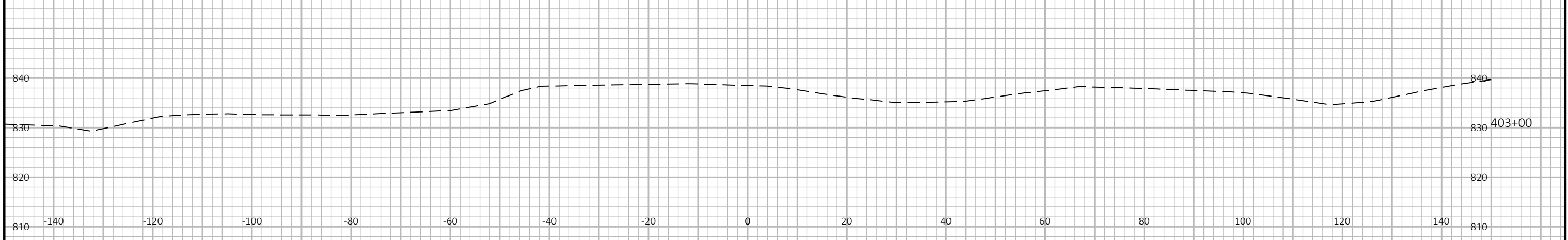
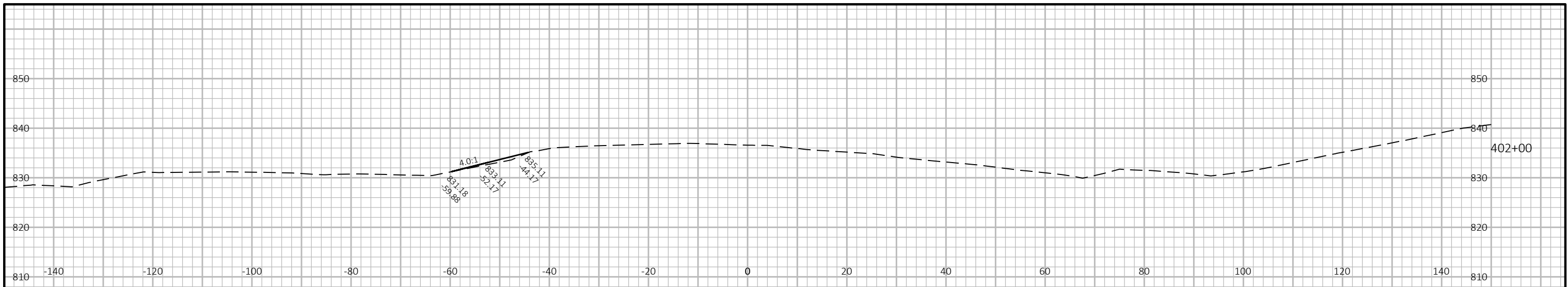
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME



9

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PROJECT NO: 1195-00-66	HWY: USH 2	COUNTY: DOUGLAS	CROSS SECTIONS: USH 2	SHEET	E
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PROJECT NO: 1195-00-66	HWY: USH 2	COUNTY: DOUGLAS	CROSS SECTIONS: USH 2	SHEET	E
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## ***Wisconsin Department of Transportation***

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