
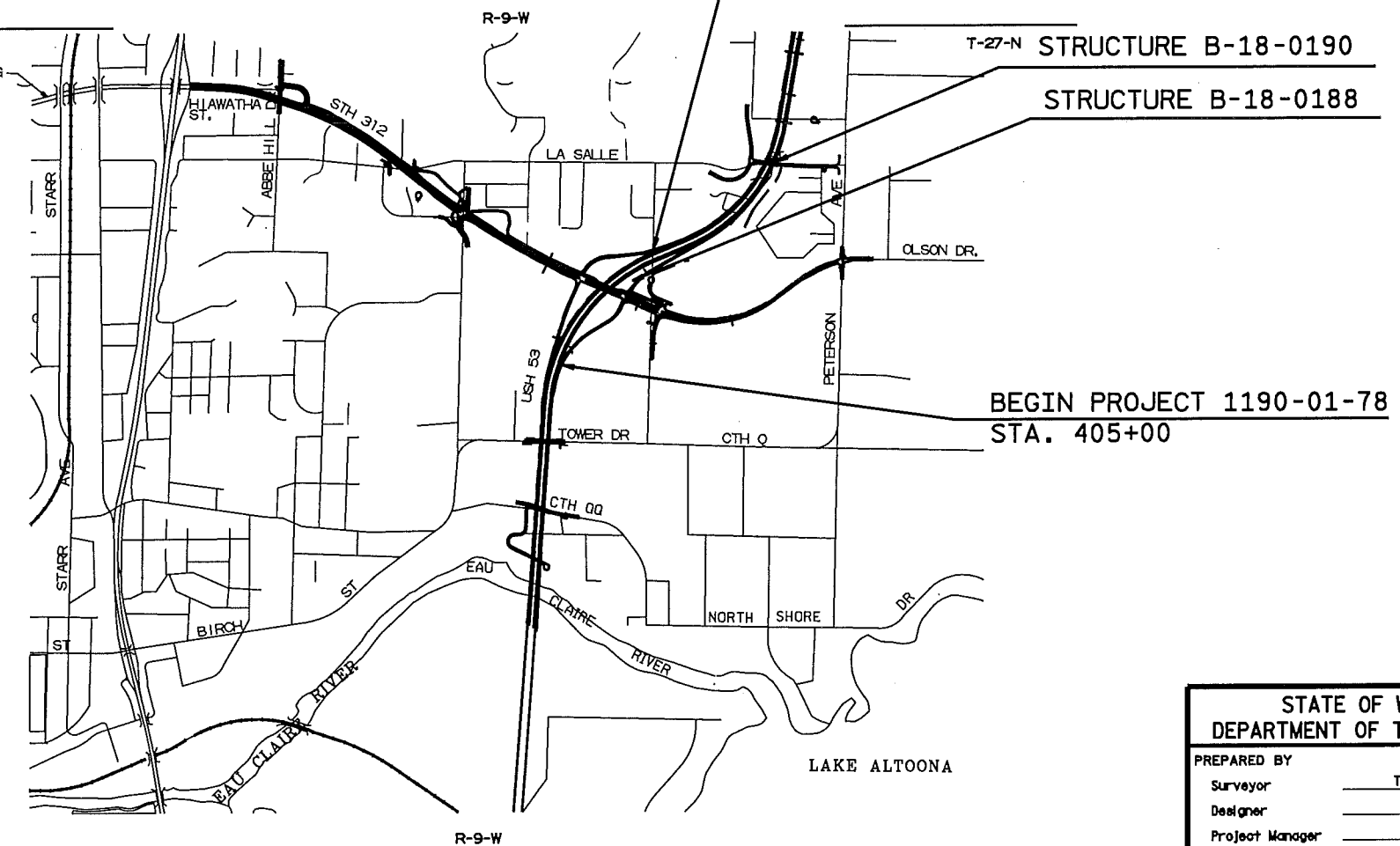


STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	THOMAS ARMSTRONG
Designer	MIKE BERTHOLD
Project Manager	DAVID KOEPP
Regional Examiner	DAN OJIBWAY
Regional Supervisor	TIMOTHY MASON
C.O. Examiner	
APPROVED FOR THE DEPARTMENT	
DATE: 1/28/2015	 (Signature)

STATE PROJECT NUMBER
1190-01-78



"Coordinates on this plan are referenced to the Wisconsin State Plane Coordinate System (WSPCS), 'Central' Zone."

APPROVED FOR THE DEPARTMENT
DATE: 1/28/2015 D.K.
(Signature)

E

WISDOT/CADDS SHEET 10

LIST OF STANDARD ABBREVIATIONS

GENERAL NOTES

UTILITIES

AH.	AHEAD
APPROX.	APPROXIMATE
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
BK.	BACK
C/L OR '	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
C.T.H.	COUNTY TRUNK HIGHWAY
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
E.	EAST
EB	EASTBOUND
ELECT.	ELECTRIC
ELEV.	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXIST.	EXISTING
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
MAX.	MAXIMUM
MISC.	MISCELLANEOUS
N.	NORTH
NOR.	NORMALLY
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
REQ'D	REQUIRED
R/L OR ~	REFERENCE LINE
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
S.	SOUTH
S.D.D.	STANDARD DETAIL DRAWINGS
SHLDR.	SHOULDER
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
TEL.	TELEPHONE
TEMP.	TEMPORARY
T.	TRUCKS (PERCENT OF)
W.	WEST
WB	WESTBOUND
WZ	WORK ZONE

CURVE DATA IS BASED ON THE ARC DEFINITION.

RESHAPE AND SEED ANY PREVIOUSLY GRASSED AREAS THAT ARE DISTURBED BY OPERATIONS OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. 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 UTILITES ARE MEMBERS OF DIGGERS HOTLINE. UTILITY FACILITIES WERE NOT FIELD LOCATED AND VERIFIED.

REMOVAL OF ANY SURVEY MARKER REQUIRES APPROVAL OF THE ENGINEER.

PLACE CONCRETE RUMBLE STRIPS IN THE EXISTING LOCATION.

THE SOUTH BOUND EXIT RAMP TO 312 SHALL REMAIN OPEN AT ALL TIMES.

AT&T WISCONSIN
(COMMUNICATIONS)
RICK PODOLAK
304 SOUTH DEWEY STREET - 4TH FLOOR
EAU CLAIRE, WI 54701
715839-5565 (OFFICE)
715-410-0656 (MOBILE)
rick.t.podolak@att.com

CITY OF EAU CLAIRE
(SEWER & WATER)
JEFFREY PIPPENGER
UTILITIES ADMINISTRATOR
910 FOREST ST.
EAU CLAIRE, WI 54703
715-839-4920 (OFFICE)
715-828-6802 (MOBILE)
jeff.pippenger@eauclairewi.gov

EAU CLAIRE ENERGY COOPERATIVE
(ELECTRICITY - DISTRIBUTION)
DONALD DRAEGER
8214 HWY 12
PO BOX 368
FALL CREEK, WI 54742-0368
715-836-6479 (OFFICE)
ddraeger@ecec.com

XCEL ENERGY
(GAS)
24-HOUR EMERGENCY:
800-895-2999
FIELD CONTACT:
TO BE DETERMINED

(ELECTRICITY-DISTRIBUTION)
FIELD CONTACT:
DAN KLEIN
PO BOX 8
EAU CLAIRE, WI 54702-0008
715-737-4203 (OFFICE)
715 577-7729 (MOBILE)
daniel.j.klein@xcelenergy.com

COPY ALL XCEL CORRESPONDENCE:
DAWN SCHULTZ
1414 W HAMILTON AVE
PO BOX 8
EAU CLAIRE, WI 54702-0008
715-737-2482 (OFFICE)
dawn.schultz@xcelenergy.com

WISDOT CONTACT

TIMOTHY MASON, P.E.
WISDOT NW REGION
718 W. CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-833-5366
timothy.mason@dot.wi.gov

DESIGN CONTACT

MIKE BERTHOLD, P.E.
WISDOT NW REGION
718 W. CLAIREMONT AVENUE
EAU CLAIRE, WI. 54701
(715)836--3922
MIKE.BERTHOLD@DOT.WI.GOV

TYPICAL SECTION & DETAIL INDEX

GENERAL NOTES
TYPICAL SECTIONS
CONSTRCUCTION DETAILS
TRAFFIC CONTROL

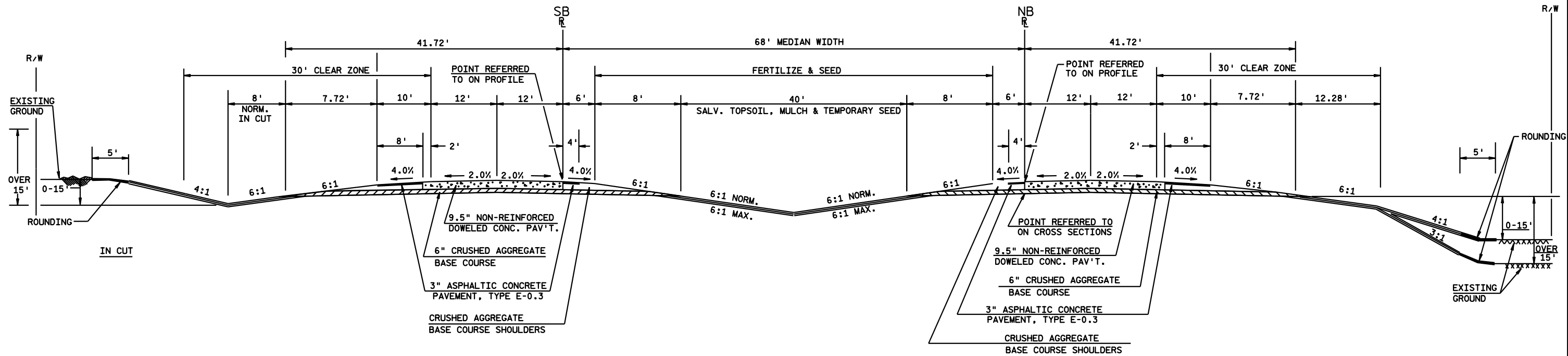
24-HOUR SPILLS HOTLINE
(800)943-0003

DNR LIASON

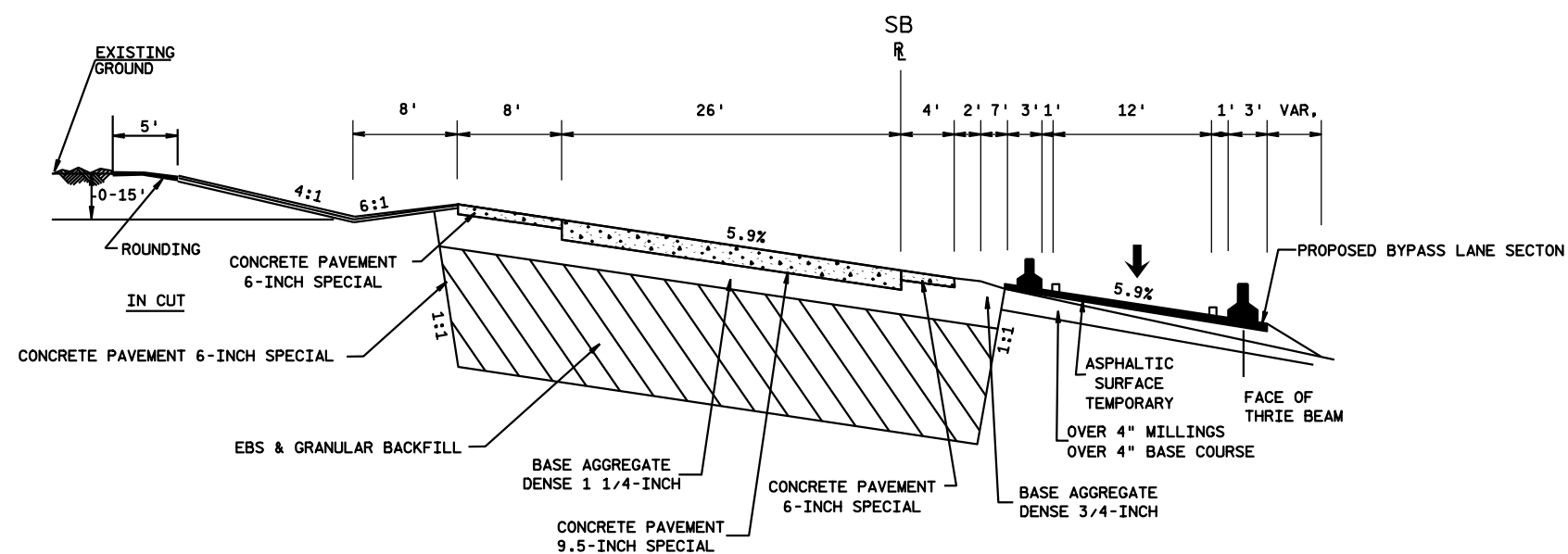
DNR WEST CENTRAL REGION HEADQUARTERS
ATTN: CHRIS WILLGER
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54702-4001
715-839-1609
christopher.j.willger@wisconsin.gov



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



TYPICAL EXISTING SECTION U.S.H. 53
STA. 406+00 to 425+00



TYPICAL CONCRETE PAVEMENT REPAIR SECTION
(LOOKING NORTH)

STA. 413+00 TO 416+44

NOTE: 4" MILLING (RECLAIMED) ASPHALTIC PAVEMENT)

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
REINFORCED	30"	20' AND MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDERS
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDERS

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.

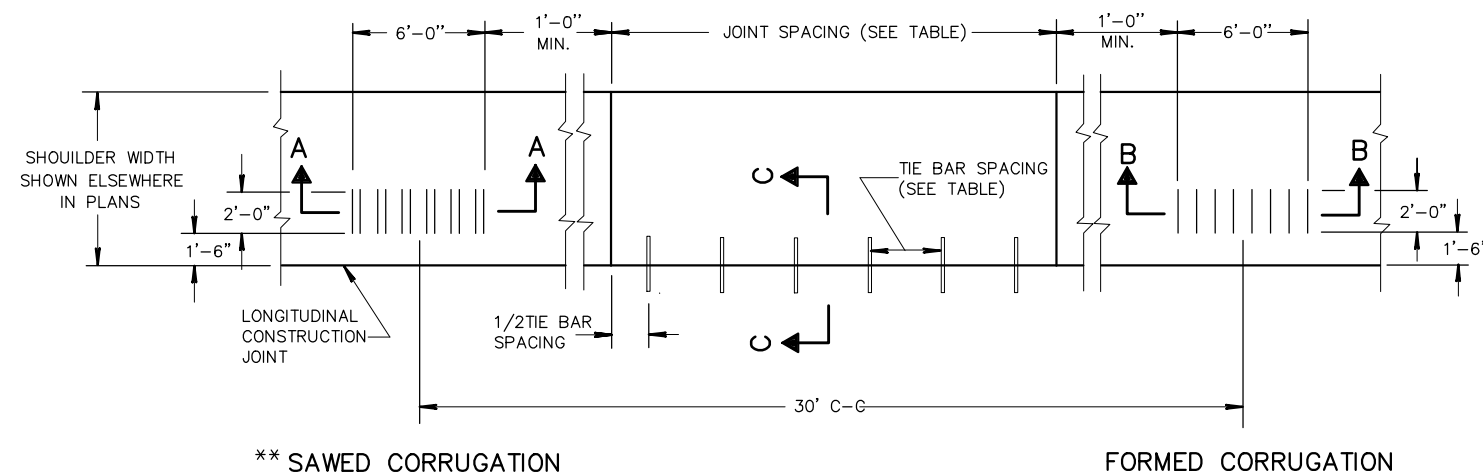
CORRUGATIONS SHALL BE PERPENDICULAR TO THE PAVEMENT EDGE.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

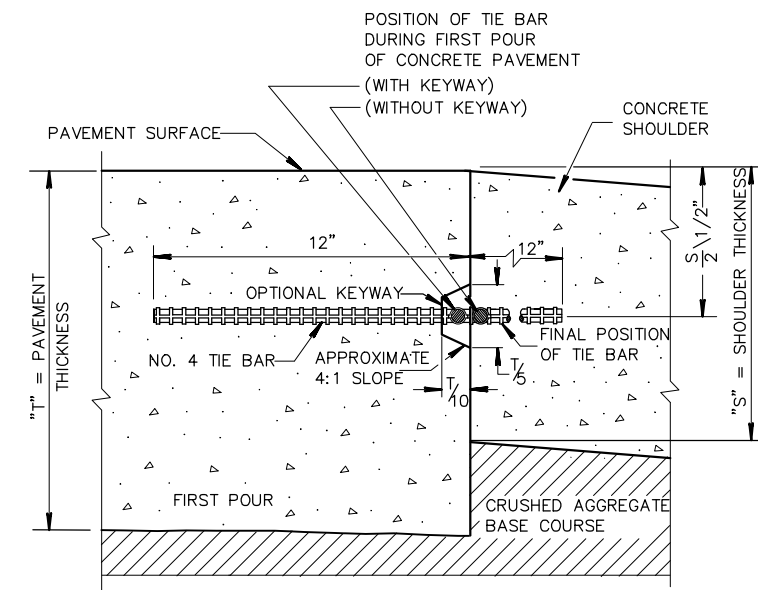
THE SHOULDER PAVEMENT SHALL RECEIVE A FINISH WITH AN ARTIFICIAL TURF DRAG IN CONFORMANCE WITH SUBSECTION 415.5.9.6.2 OF THE STANDARD SPECIFICATIONS

TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

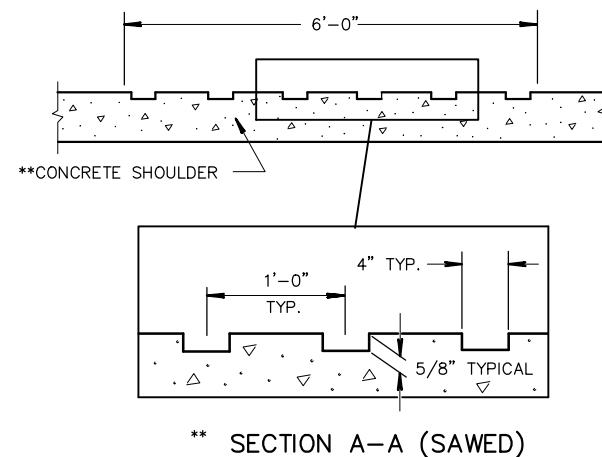
** SAWED CORRUGATIONS SHALL NOT BE USED UNLESS SPECIFIED ELSEWHERE IN THIS CONTRACT.



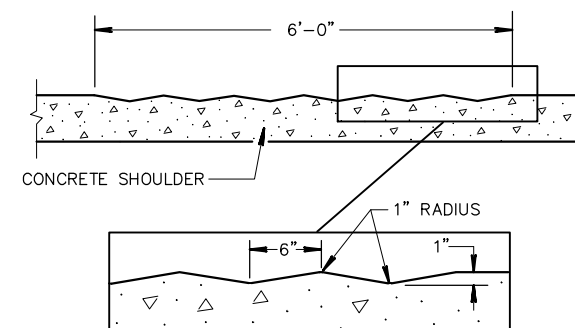
PLAN VIEW OF CONCRETE SHOULDER



SECTION C-C
LONGITUDINAL CONSTRUCTION JOINT

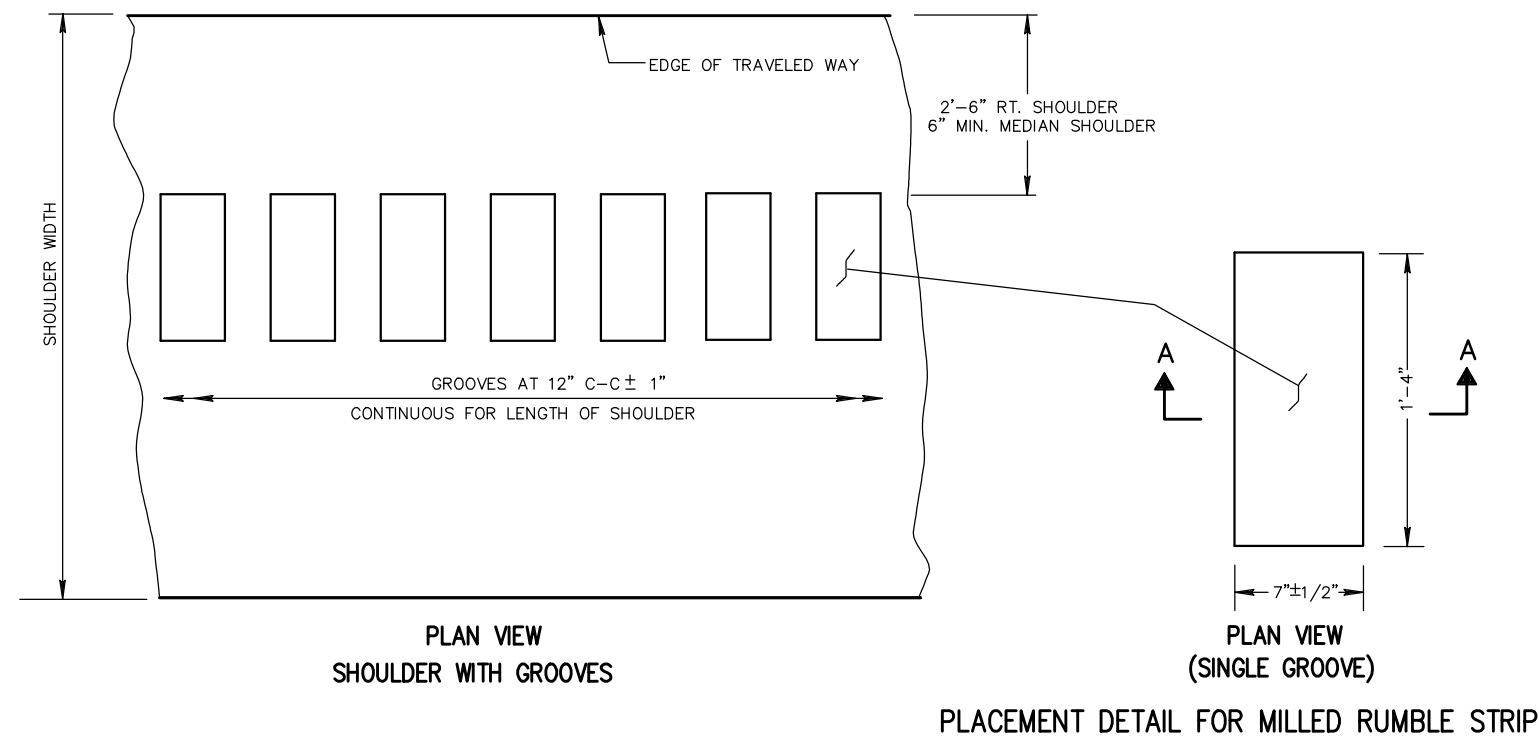


** SECTION A-A (SAWED)



SECTION B-B (FORMED)

CORRUGATION DETAIL



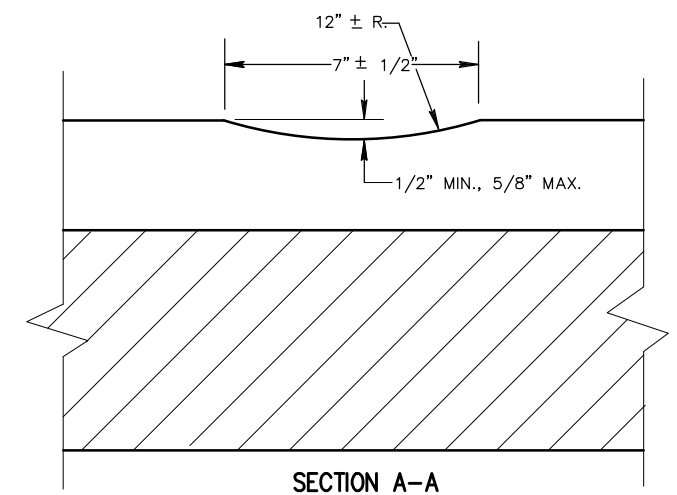
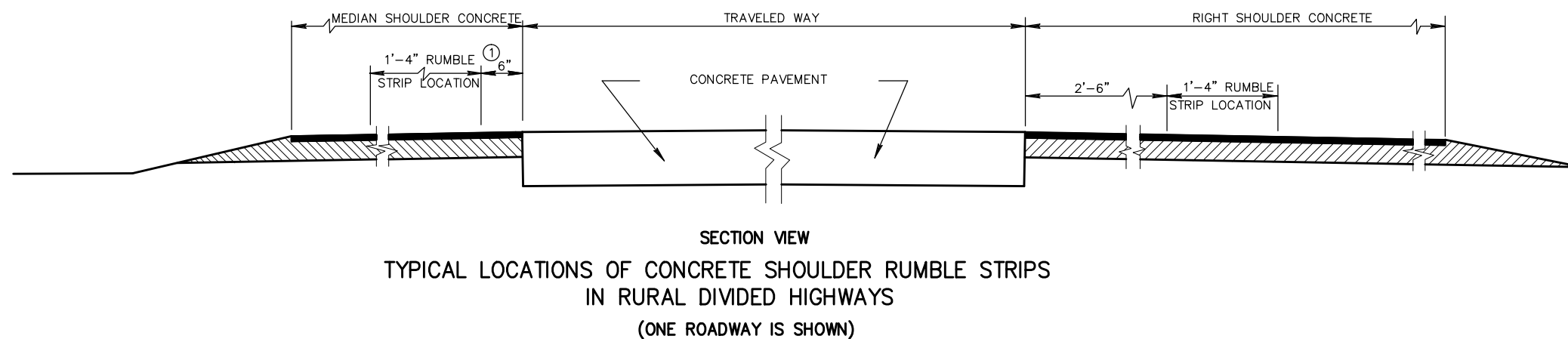
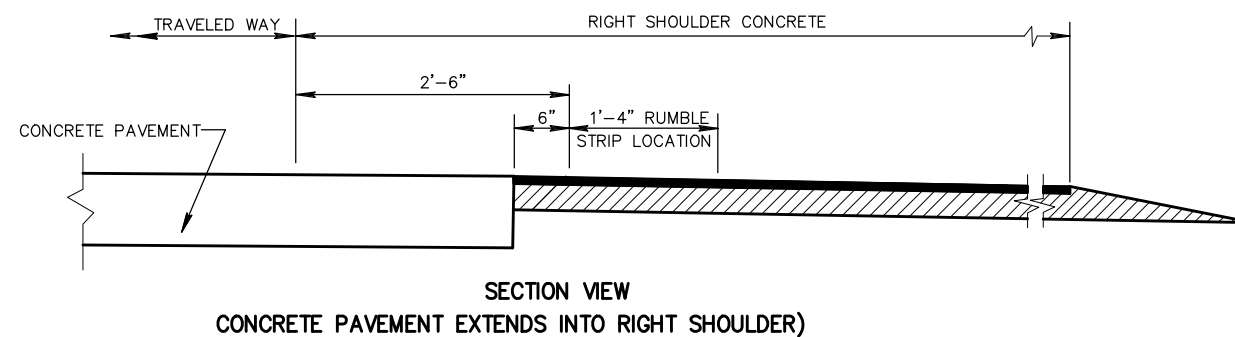
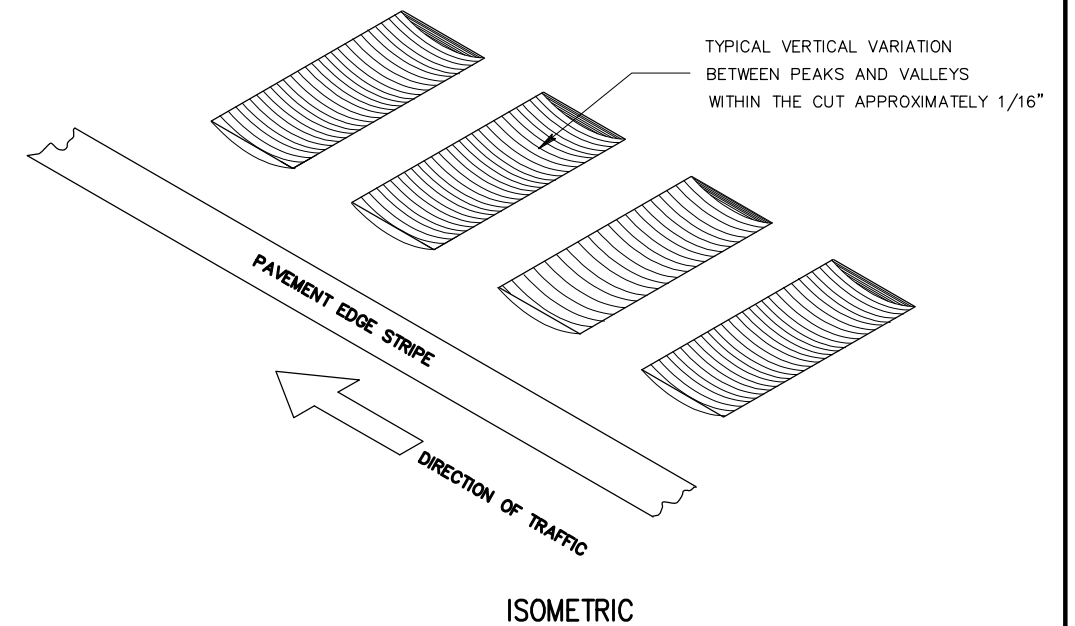
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES OR TURN LANE TAPERS. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

① 2'-6" FOR MEDIAN SHOULDERS THAT HAVE A PAVED WIDTH OF 5'-0" OR MORE.



2

2

STH 312

WORK
ZONE

N

USH 53

PROJECT NO:1190-01-78

HWY:USH 53

COUNTY:EAU CLAIRE

PROJECT OVERVIEW - WORK ZONE

SHEET

E

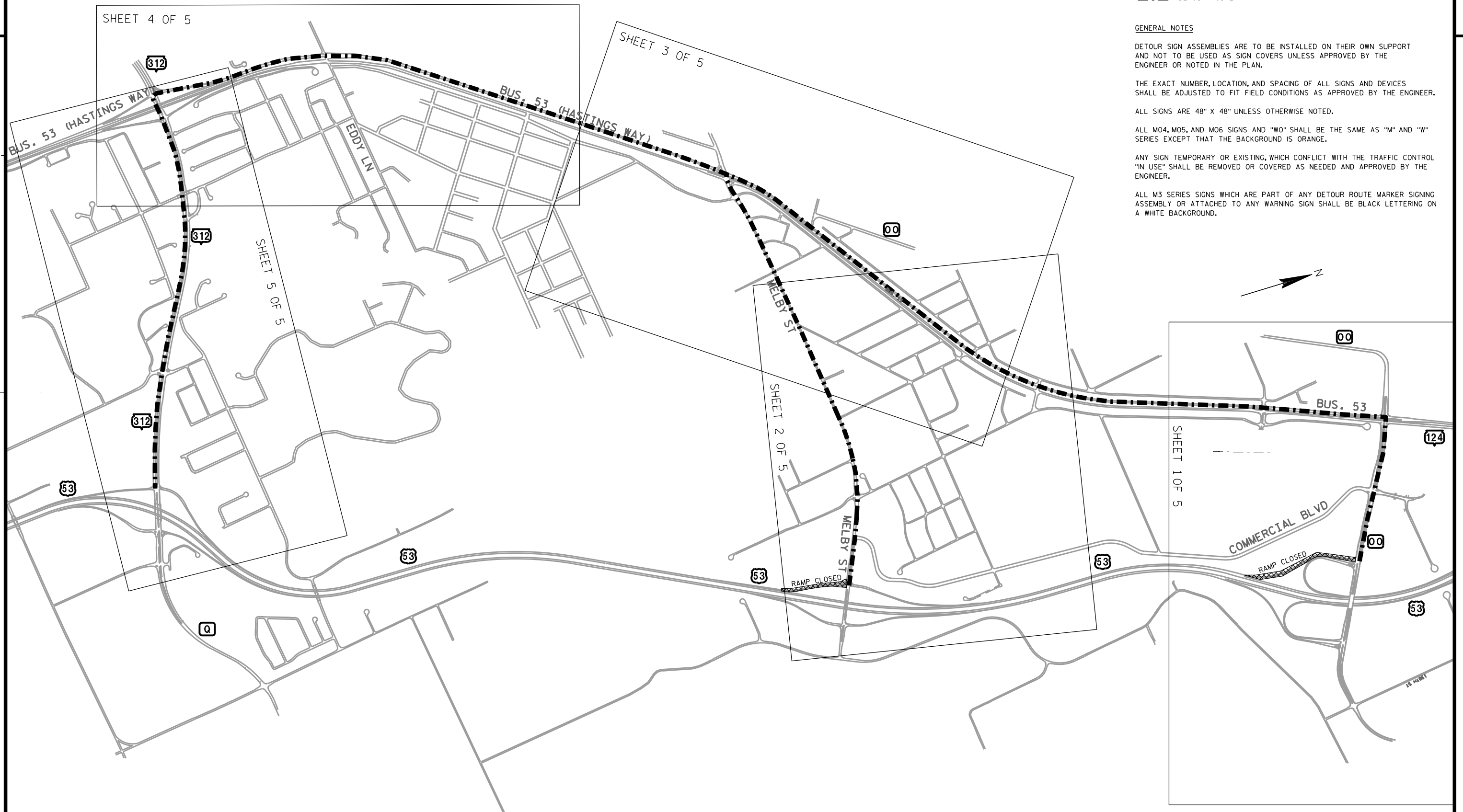
FILE NAME : N:\PDS\C3D\11900108\SHEETSPLAN\020201-PO-WZ.DWG
LAYOUT NAME - *****

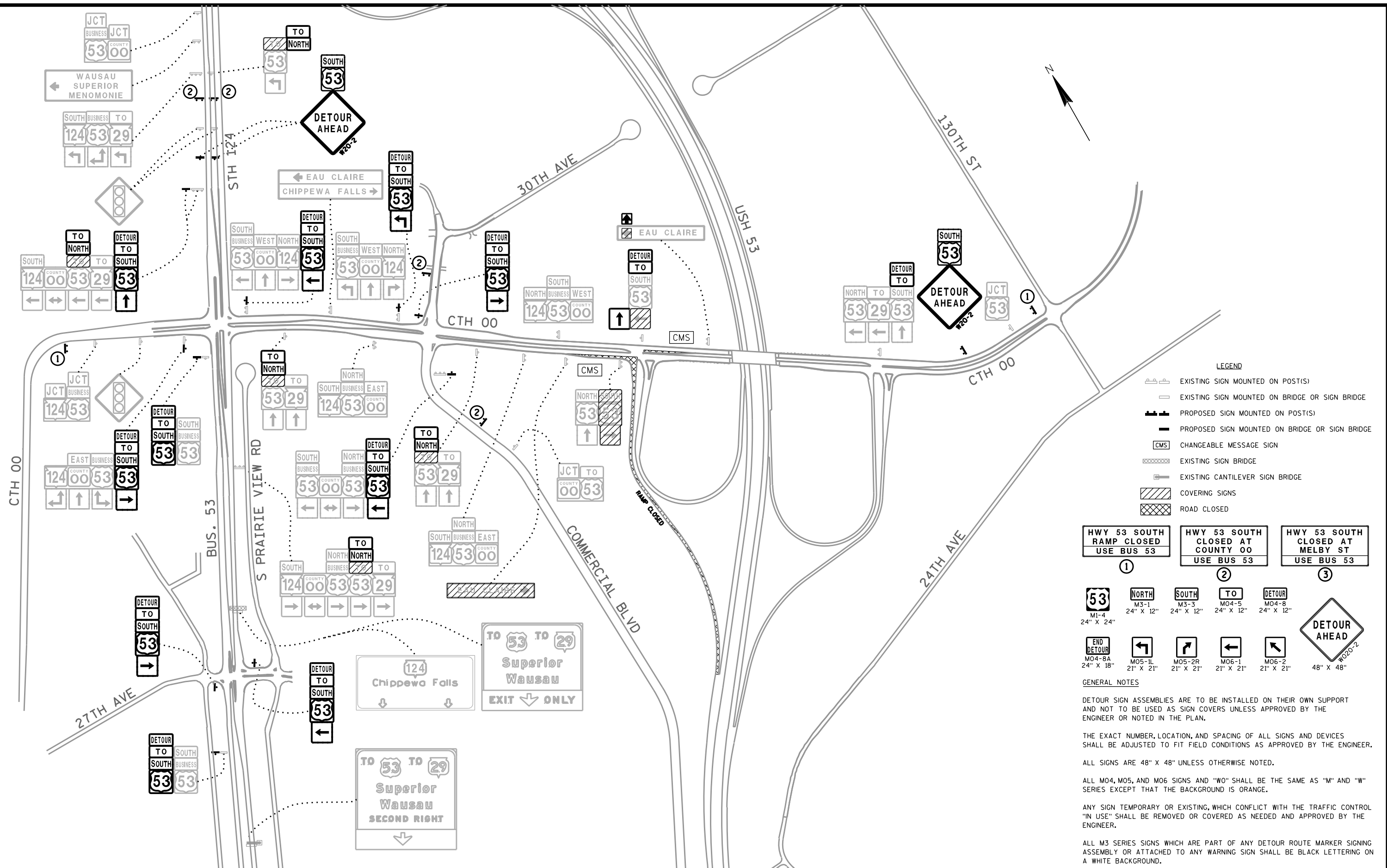
PLOT DATE : 10/2/2014 10:46 AM

PLOT BY : BERTHOLD, MICHAEL E PLOT NAME :

PLOT SCALE : 0.003820

WISDOT/CADDs SHEET 42





LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
PROPOSED SIGN MOUNTED ON POST(S)
PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
CHANGEABLE MESSAGE SIGN
EXISTING SIGN BRIDGE
EXISTING CANTILEVER SIGN BRIDGE
COVERING SIGNS
ROAD CLOSED

HWY 53 SOUTH
RAMP CLOSED
USE BUS 53

①

HWY 53 SOUTH
CLOSED AT
COUNTY 00
USE BUS 53

②

HWY 53 SOUTH
CLOSED AT
MELBY ST
USE BUS 53

③

53
M1-4
24" X 24"NORTH
M3-1
24" X 12"SOUTH
M3-3
24" X 12"TO
M04-5
24" X 12"DETOUR
M04-8
24" X 12"END
DETOUR
M04-8A
24" X 18"M05-1L
21" X 21"M05-2R
21" X 21"M06-1
21" X 21"M06-2
21" X 21"DETOUR
AHEAD
W020-2
48" X 48"

GENERAL NOTES

DETOUR SIGN ASSEMBLIES ARE TO BE INSTALLED ON THEIR OWN SUPPORT AND NOT TO BE USED AS SIGN COVERS UNLESS APPROVED BY THE ENGINEER OR NOTED IN THE PLAN.

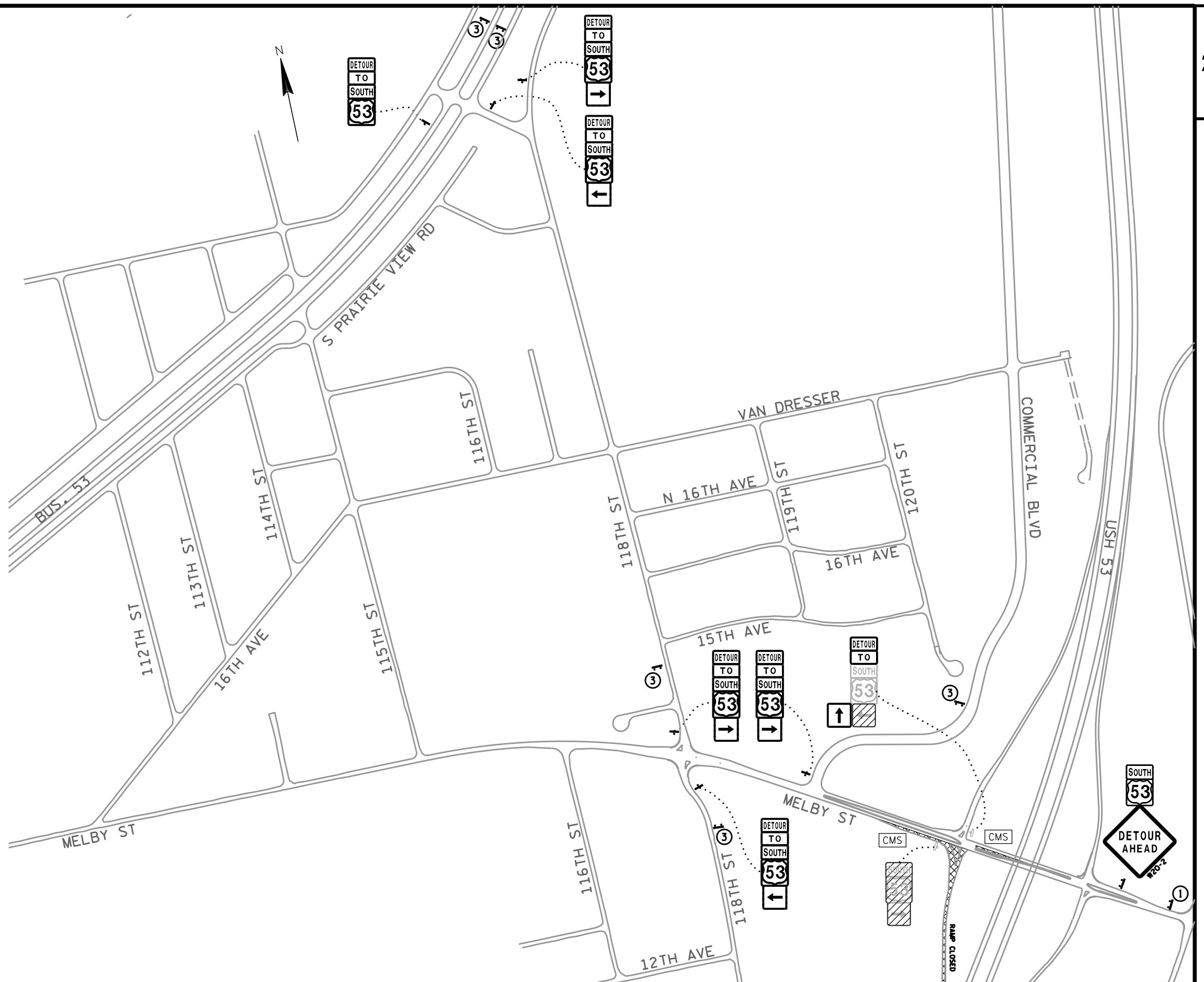
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

ALL M04, M05, AND M06 SIGNS AND "W0" SHALL BE THE SAME AS "M" AND "W" SERIES EXCEPT THAT THE BACKGROUND IS ORANGE.

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

ALL M3 SERIES SIGNS WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.



PROJECT NO: 1190-01-78

HWY: USH 53

COUNTY: EAU CLAIRE

DETOUR PLAN SHEET 2 OF 5

SHEET

E

FILE NAME : \$\$....designfile....\$\$

PLOT DATE : \$\$...plottingdate...\$\$

PLOT BY : \$\$...plotuser...\$\$

PLOT NAME :

PLOT SCALE : \$\$.....plotscale.....\$\$

WISDOT/CADDS SHEET 42

GENERAL NOTES

- HWY 53 SOUTH
RAMP CLOSED
USE BUS 53

①

HWY 53 SOUTH
CLOSED AT
COUNTY 00
USE BUS 53

②

HWY 53 SOUTH
CLOSED AT
MELBY ST
USE BUS 53

③

53
M1-4
24" X 24"

NORTH
M3-1
24" X 12"

SOUTH
M3-3
24" X 12"

TO
M04-5
24" X 12"

DETOUR
M04-8
24" X 12"

DETOUR
AHEAD
W020-2
48" X 48"

END
DETOUR
M04-8A
24" X 18"

LEFT TURN
M05-1L
21" X 21"

RIGHT TURN
M05-2R
21" X 21"

LEFT TURN
M06-1
21" X 21"

LEFT TURN
M06-2
21" X 21"

ALL M3 SERIES SIGNS WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.



GENERAL NOTES

- HWY 53 SOUTH
RAMP CLOSED
USE BUS 53

HWY 53 SOUTH
CLOSED AT
COUNTY 00
USE BUS 53

HWY 53 SOUTH
CLOSED AT
MELBY ST
USE BUS 53

①

②

③

53
M1-4
24" X 24"

NORTH
M3-1
24" X 12"

SOUTH
M3-3
24" X 12"

TO
M04-5
24" X 12"

DETOUR
M04-8
24" X 12"

DETOUR
AHEAD
W020-2
48" X 48"

END
DETOUR
M04-8A
24" X 18"

LEFT TURN
M05-1L
21" X 21"

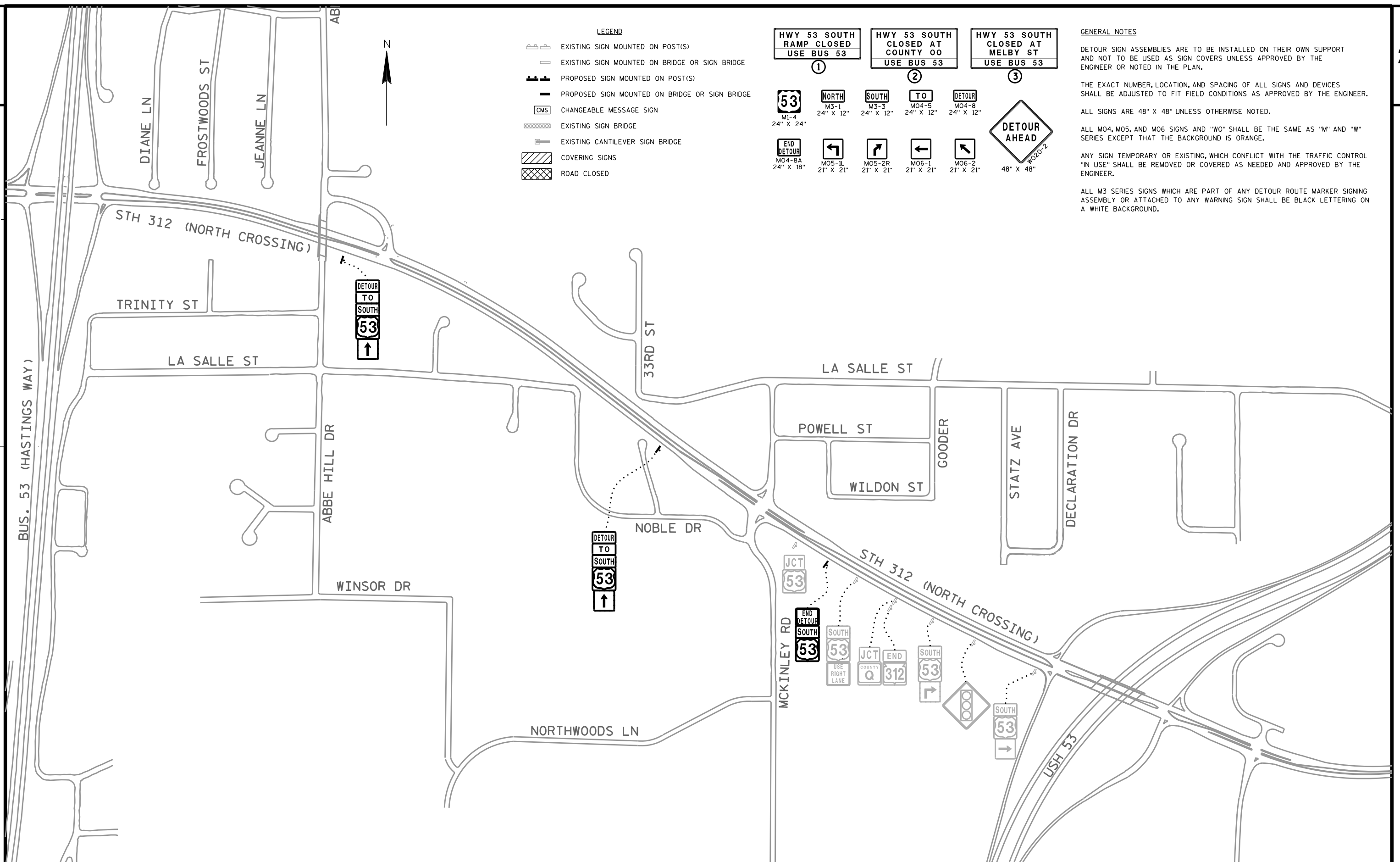
RIGHT TURN
M05-2R
21" X 21"

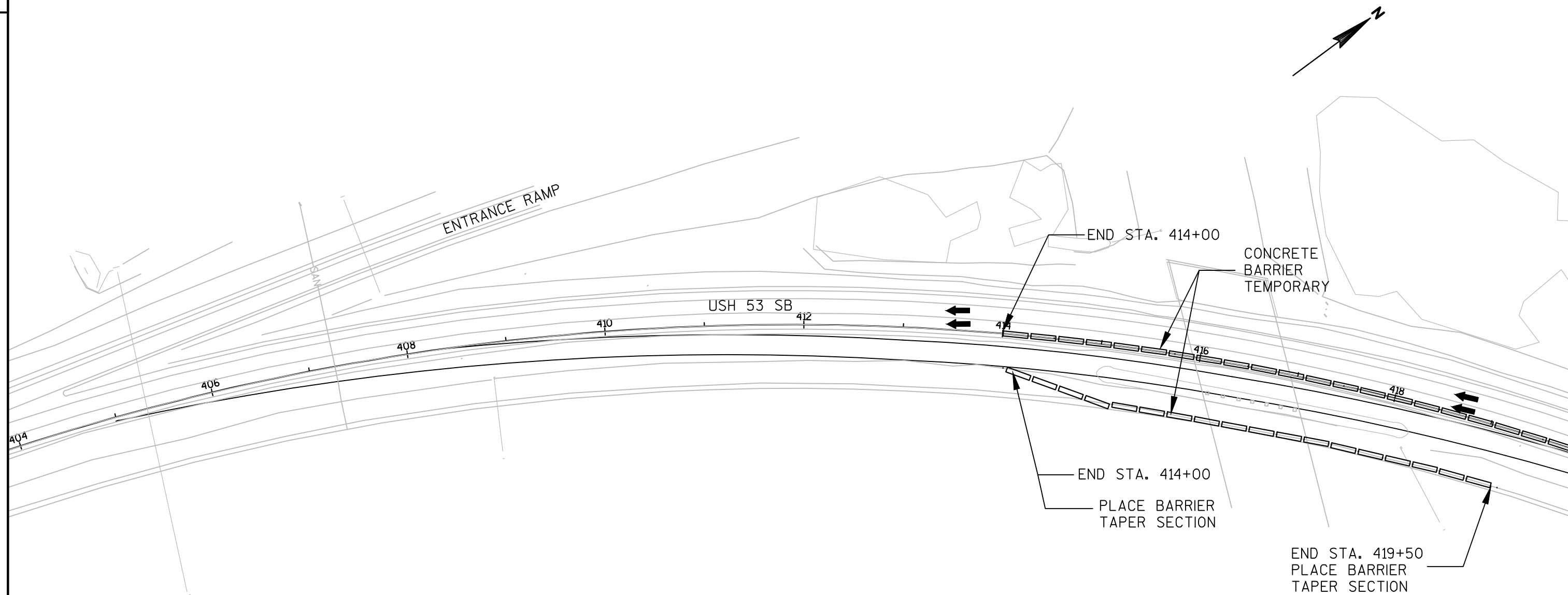
LEFT TURN
M06-1
21" X 21"

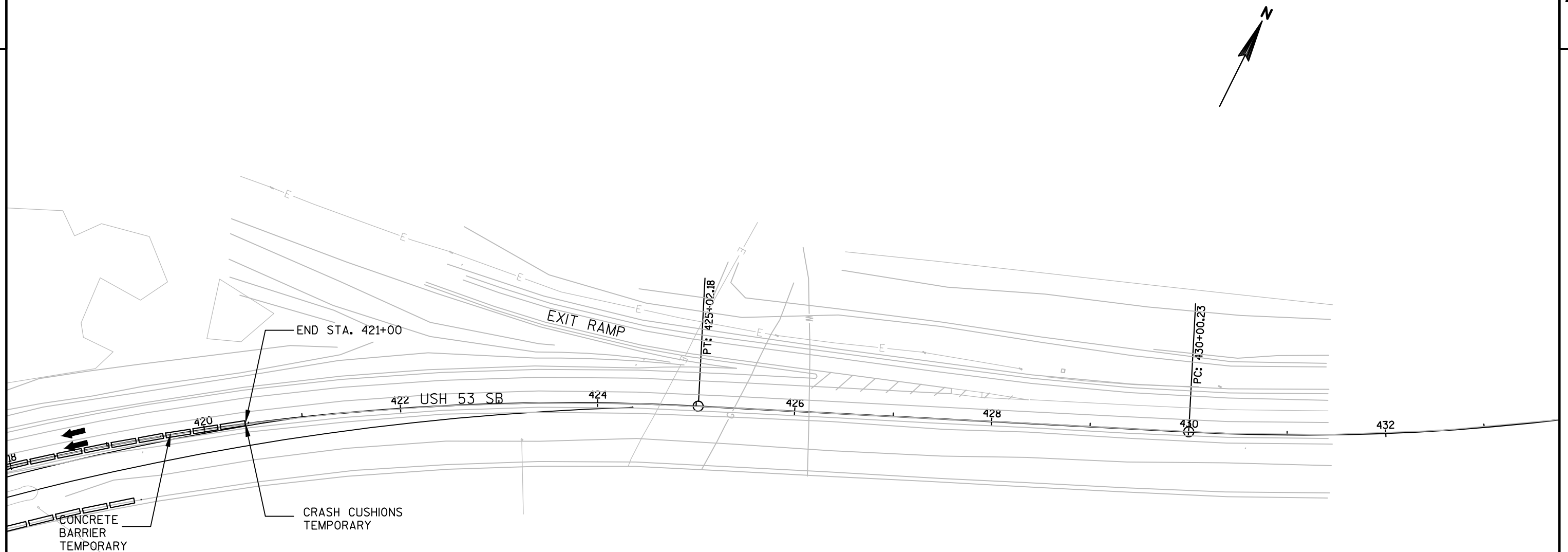
RIGHT TURN
M06-2
21" X 21"

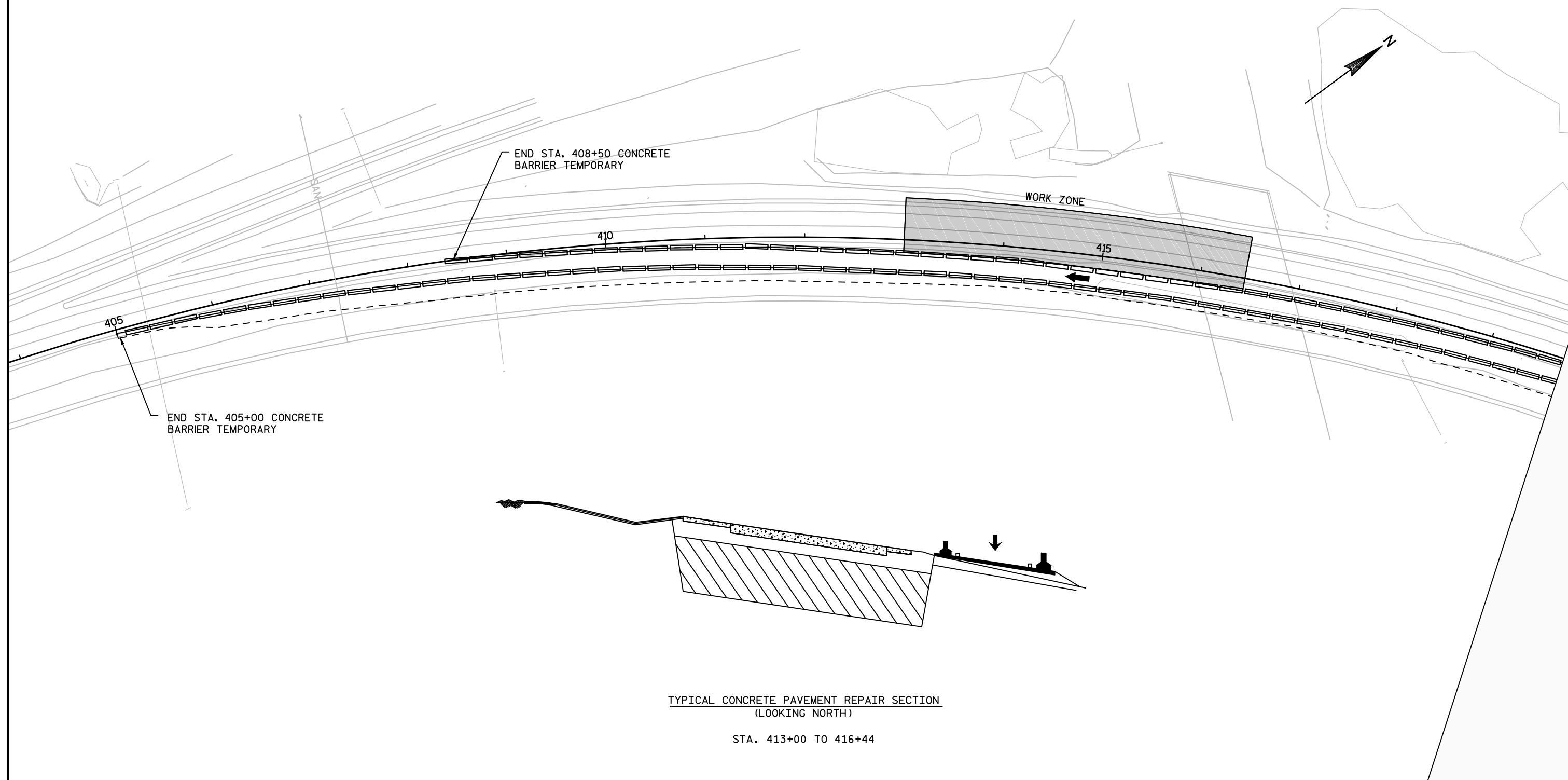
ALL M3 SERIES SIGNS WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

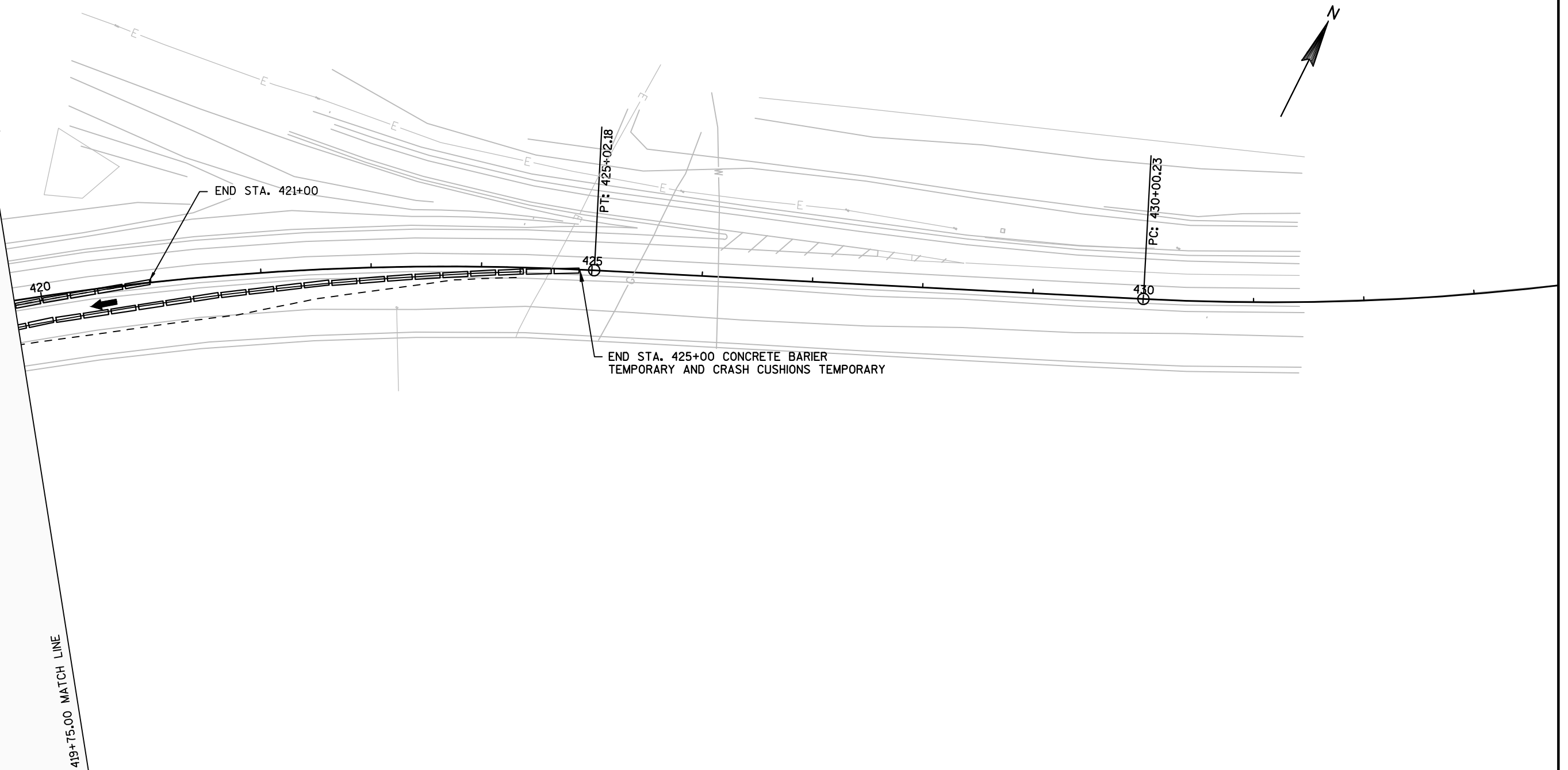






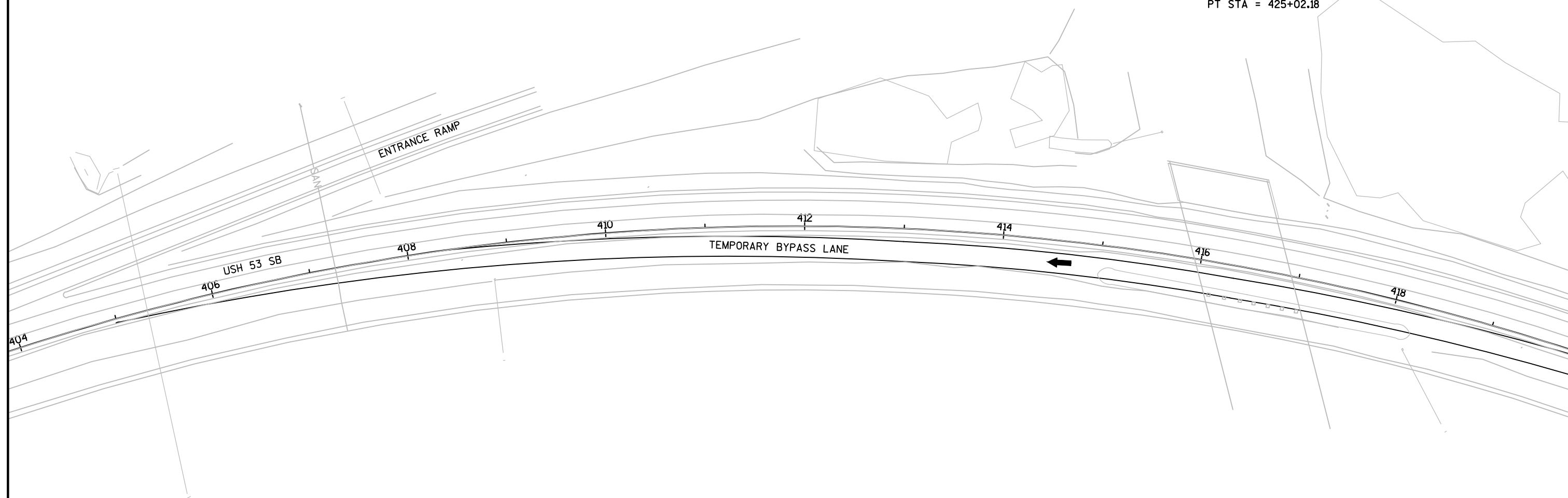




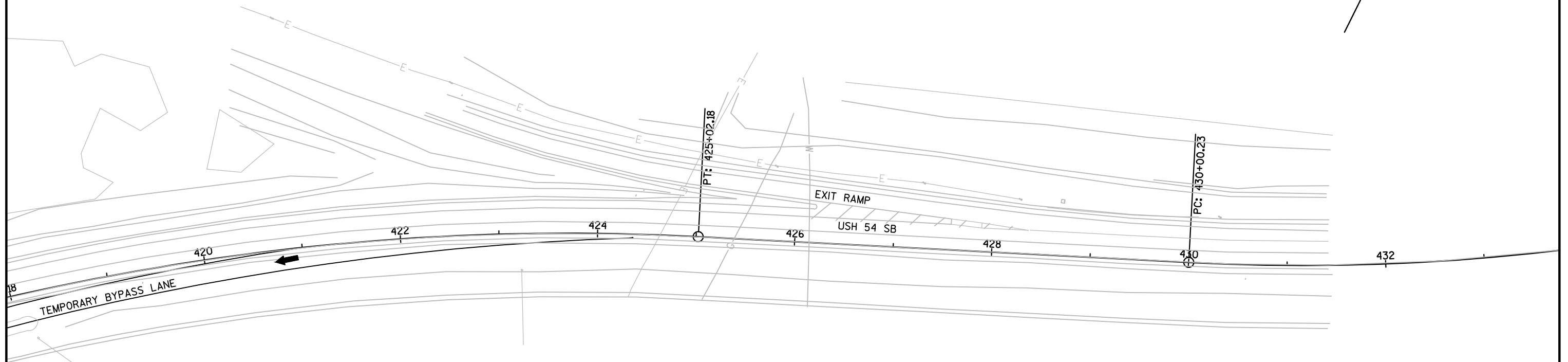
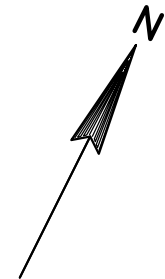


BEGIN ALIGNMENT USH 53
STA. 390+00 N 284852.046 E 351216.8

PI STA = 412+71.35
Y = 287119.679
X = 351346.720
DELTA = 63°10'53"
D = 2°16'14"
T = 1551.92'
L = 2782.75'
R = 2523.53'
PC STA = 397+19.43
PT STA = 425+02.18



END ALIGNMENT USH 53
STA. 463+86.32 N 290772.191 E 354707.6



PI STA = 442+28.67
Y = 288429.066
X = 354352.285
DELTA = 57°50'14"
D = 2°34'36"
T = 1228.44'
L = 2244.61'
R = 2223.60'
PC STA = 430+00.23
PT STA = 452+44.84

DATE 11MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE				1190-01-78	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	204.0100	Removing Pavement	SY	994.000	994.000
0020	205.0100	Excavation Common	CY	6,141.000	6,141.000
0030	208.0100	Borrow	CY	1,654.000	1,654.000
0040	209.0100	Backfill Granular	CY	2,987.000	2,987.000
0050	213.0100	Finishing Roadway (project) 01. 1190-01-78	EACH	1.000	1.000
0060	305.0110	Base Aggregate Dense 3/4-Inch	TON	50.000	50.000
0070	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,809.000	2,809.000
0080	416.0620	Drilled Dowel Bars	EACH	48.000	48.000
0090	416.1110	Concrete Shoulder Rumble Strips	LF	688.000	688.000
0100	465.0125	Asphaltic Surface Temporary	TON	692.000	692.000
0110	465.0400	Asphaltic Shoulder Rumble Strips	LF	600.000	600.000
0120	603.8000	Concrete Barrier Temporary Precast Delivered	LF	3,709.000	3,709.000
0130	603.8125	Concrete Barrier Temporary Precast Installed	LF	5,073.000	5,073.000
0140	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0150	614.0920	Salvaged Rail	LF	390.000	390.000
0160	614.0950	Replacing Guardrail Posts and Blocks	EACH	144.000	144.000
0170	614.0951	Replacing Guardrail Rail and Hardware	LF	390.000	390.000
0180	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1190-01-78	EACH	1.000	1.000
0190	619.1000	Mobilization	EACH	1.000	1.000
0200	625.0500	Salvaged Topsoil	SY	10,600.000	10,600.000
0210	627.0200	Mulching	SY	3,800.000	3,800.000
0220	628.1504	Silt Fence	LF	1,919.000	1,919.000
0230	628.1520	Silt Fence Maintenance	LF	1,919.000	1,919.000
0240	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0250	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0260	628.2004	Erosion Mat Class I Type B	SY	1,705.000	1,705.000
0270	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0280	629.0210	Fertilizer Type B	CWT	4.000	4.000
0290	630.0120	Seeding Mixture No. 20	LB	150.000	150.000
0300	630.0200	Seeding Temporary	LB	150.000	150.000
0310	642.5201	Field Office Type C	EACH	1.000	1.000
0320	643.0100	Traffic Control (project) 01. 1190-01-78	EACH	1.000	1.000
0330	643.0300	Traffic Control Drums	DAY	2,254.000	2,254.000
0340	643.0420	Traffic Control Barricades Type III	DAY	256.000	256.000
0350	643.0705	Traffic Control Warning Lights Type A	DAY	512.000	512.000
0360	643.0715	Traffic Control Warning Lights Type C	DAY	299.000	299.000
0370	643.0800	Traffic Control Arrow Boards	DAY	46.000	46.000
0380	643.0900	Traffic Control Signs	DAY	864.000	864.000
0390	643.0920	Traffic Control Covering Signs Type II	EACH	15.000	15.000
0400	643.1000	Traffic Control Signs Fixed Message	SF	203.000	203.000
0410	643.1050	Traffic Control Signs PCMS	DAY	164.000	164.000
0420	643.2000	Traffic Control Detour (project) 01. 1190-01-78	EACH	1.000	1.000
0430	643.3000	Traffic Control Detour Signs	DAY	1,870.000	1,870.000
0440	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,488.000	1,488.000
0450	646.0600	Removing Pavement Markings	LF	965.000	965.000
0460	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	251.000	251.000
0470	649.0200	Temporary Pavement Marking Reflective Paint 4-Inch	LF	3,178.000	3,178.000
0480	650.4500	Construction Staking Subgrade	LF	1,933.000	1,933.000

DATE 11MAR15		E S T I M A T E O F Q U A N T I T I E S				
LINE					1190-01-78	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	
0490	650.5000	Construction Staking Base	LF	1,589.000	1,589.000	
0500	650.7000	Construction Staking Concrete Pavement	LF	344.000	344.000	
0510	650.9910	Construction Staking Supplemental Control (project) 01. 1198-01-78	LS	1.000	1.000	
0520	650.9920	Construction Staking Slope Stakes	LF	1,589.000	1,589.000	
0530	690.0150	Sawing Asphalt	LF	712.000	712.000	
0540	690.0250	Sawing Concrete	LF	52.000	52.000	
0550	SPV.0105	Special 01. Project Concrete Crack Mitigation And Repair Special	LS	1.000	1.000	
0560	SPV.0180	Special 01. Concrete Pavement 6-Inch Special	SY	459.000	459.000	
0570	SPV.0180	Special 02. Concrete Pavement 9.5-Inch Special	SY	995.000	995.000	

3

REMOVING PAVEMENT

CATEGORY	STATION TO	STATION	LOCATION	204. 0100 SY	REMARKS
0010	41300 -	41644	USH 53 SB	994	344' X 26'
TOTAL 0010				994	

ASPHALTIC SURFACE TEMPORARY

CATEGORY	STATION TO	STATION	LOCATION	465. 0125 TON	REMARKS
0010	405+00 -	424+35	TEMPORARY ROADWAY	692	
TOTAL 0010				692	

CATEGORY	STATION TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305. 0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305. 0120 TON	REMARKS
0010	413+00 -	416+44	USH 53 SB	50		
0010	413+00 -	416+44	USH 53 SB		720	UNDER THE ROADWAY
0010	413+00 -	416+44	USH 53 SB		205	SHOULDERS
0010	405+00 -	424+35	TEMP. ROADWAY		942	TOP 4" USE MILLINGS
0010	405+00 -	424+35	TEMP. ROADWAY		942	LOWER 4" AS PER 305.2.1 GENERAL
TOTAL 0010				50	2809	

ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION TO	STATION	LOCATION	465. 0400 LF	REMARKS
0010	406+00 -	409+00	USH 53	300	MEDIAN SHOULDER
0010	421+00 -	424+00	USH 53	300	MEDIAN SHOULDER
TOTAL 0010				600	

DRI LLED DOWEL BARS

CATEGORY	STATION TO	STATION	LOCATION	416. 0620 EACH	REMARKS
0010	413+00 -	416+44	USH 53 SB	48	
TOTAL 0010				48	

CONCRETE SHOULDER RUMBLE STRIPS

CATEGORY	STATION TO	STATION	LOCATION	416. 1110 LF	REMARKS
0010	413+00 -	416+44	USH 53 SB	344	RIGHT SIDE
0010	413+00 -	416+44	USH 53 SB	344	LEFT SIDE
TOTAL 0010				688	

3

Phase	From/To Station	Common Excavation (1)	Salvaged/Unusable Pavement Material (3)	Available Material (4)	Unexpanded Fill	Expanded Fill (5)	Mass Ordinate +/- (6)	Waste	Borrow	Backfill Granular		
		Cut (2)				Factor 1.25						
Phase 1									(item #208.0100)	(item #209.0100)		
Temporary Bypass Lanes	405+00/424+35	69	0	69	1,379	1,723	-1,654	0	1,654	0		
Phase 1 Subtotal		69	0	69	1,379	1,723	-1,654	0	1,654	0		
Phase 2												
USH 53 - Excavation	413+00/416+44	3,232	0	3,232	2	3	3,229	3,229	0	0		
Phase 2 Subtotal		3,232	0	3,232	2	3	3,229	3,229	0	0		
USH 53 - Reconstruct	413+00/416+44	0	0	0	2,393	2,991	0	0	0	2,987		
Phase 3												
REMOVE TEMP. LANE	405+00/424+35	2,840	0	0	0	0	0	0	0	0		
Phase 3 Subtotal		2,840	0	0	0	0	0	0	0	0		
Grand Total		6,141.23	0.00	3,301.23	1,381.02	1,726.28	1,574.95	3,229.32	1,654.37	2,987.00		
Total Common Exc			6,141	Total							1,654	2,987.00

- 1) Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) Salvaged/Unusable Pavement Material
- 4) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 5) Expanded Fill. Factor = 1.25
- 6) 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.

CATEGORY	STATION TO	STATION	LOCATION	CONCRETE BARRI ER TEMPORARY PRECAST DELI VERED 603. 8000 LF	CONCRETE BARRI ER TEMPORARY PRECAST I NSTALLLED 603. 8125 LF	CRASH CUSHI ONS TEMPORARY 614. 0905 EACH	REMARKS
0010	414+00 -	421+00	USH 53 RT. SHLD.	688	688	1	55 SECTI ONS
0010	408+50 -	421+00	TEMP. ROADWAY LT.	549	1225	0	97 SECTI ONS
0010	405+00 -	425+00	TEMP. ROADWAY RT.	1924	1924	1	151 SECTI ONS
0010	414+00 -	419+50	N. B. MEDI AN	548	548	0	43 SECTI ONS
0010	414+00 -	421+00	USH 53 RT. SHLD.	0	688	0	55 SECTI ONS
TOTAL 0010				3709	5073	2	

NOTE: SALVAGED RAIL MAY BE USED FOR REPLACING RAIL				SALVAGED RAIL 614.0920 LF	REPLACING GUARDRAIL POSTS AND BLOCKS 614.0950 EACH	REPLACING GUARDRAIL RAIL AND HARDWARE 614.0951 LF		
CATEGORY	STATION TO	STATION	LOCATION				REMARKS	
0010	415+00	- 418+50	USH 53 S.B. RT.	390	144	390	S. B. SIDE OF THE BULLNOSE TERMINAL	
TOTAL 0010				390	144	390		

CATEGORY	STATION TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	REMARKS
0010	405+00	- 424+35	FOR TEMP. ROAD	5300	3800	4	150	150	
0010	405+00	- 424+35	FROM TEMP. ROAD	5300					
TOTAL 0010				10600	3800	4	150	150	

CATEGORY	STATION TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	EROSION MAT CLASS 1 TYPE B 628.2004 SY	INLET PROTECTION TYPE A 628.7005 EACH	REMARKS
0010	405+00	- 424+35	TEMP. ROADWAY	1919	1919	1705		
0010		408+80	MEDI AN				1	
0010		418+20	MEDI AN				1	
0010		423+20	MEDI AN				1	
TOTAL 0010				1919	1919	1705	3	

CATEGORY	STATION TO	STATION	LOCATION	TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL ARROW BOARDS	TRAFFIC CONTROL SIGNS	REMARKS
				643.0300 DAY	643.0420 DAY	643.0705 DAY	643.0715 DAY	643.0800 DAY	643.0900 DAY	
0010 0010	405+00	- 441+35	USH 53 SB PHASE 1 LANE CLOSURE SDD 15D12-4	378	21	42	91	14	119	54 DRUMS & 3 BARRICADES 17 SIGNS / 7 DAYS
0010 0010	405+00	- 456+35	USH 53 SB PHASE 2 TEMPORARY LANE SDD 15D3-2 T. C. E. A. E. R. W. L. C SDD 15D15-1	990	66	132	143	22	264	90 DRUMS & 6 BARRICADES 24 SIGNS / 11 DAYS
0010 0010	405+00	- 441+35	USH 53 SB PHASE 3 LANE CLOSURE SDD 15D12-4	270	15	30	65	10	85	54 DRUMS & 3 BARRICADES 17 SIGNS / 5 DAYS
0010 0010	37+00	- 45+00	MELBY STREET SB RAMP CLOSURE	352	77	154	0	0	132	32 DRUMS & 7 BARRICADES 12 SIGNS / 11 DAYS
0010	5+580	- 5+720	CTH 00 SB RAMP CLOSURE	264	77	154	0	0	264	24 DRUMS & 7 BARRICADES 24 SIGNS / 11 DAYS
TOTAL 0010				2254	256	512	299	46	864	

CATEGORY	SHEET	LOCATION	TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL SIGNS FIXED MESSAGE	TRAFFIC CONTROL SIGNS PCMS	TRAFFIC CONTROL DETOUR SIGNS	REMARKS
			643.0920 EACH	643.1000 SF	643.1050 DAY	643.3000 DAY	
0010	1 OF 5	CTH 00	11	100	36	759	69 SIGNS / 11 DAYS 2 CMS / 18 DAYS
0010	2 OF 5	MELBY STREET	4	103	36	385	35 SIGNS / 11 DAYS 2 CMS / 18 DAYS
0010	3 OF 5	MELBY STREET	0	0	0	264	24 SIGNS / 0 CMS 11 DAYS
0010	4 OF 5	BUS. 53	0	0	0	319	29 SIGNS / 0 CMS 11 DAYS
0010	5 OF 5	STH 312	0	0	0	143	13 SIGNS / 0 CMS 11 DAYS
0010		SB USH 53 N. OF CTH 00	0	0	23	0	1 CMS / 23 DAYS
0010		SB USH 53 N. OF MELBY ST.	0	0	23	0	1 CMS / 23 DAYS
0010		SB USH 53 N. OF LA SALLE	0	0	23	0	1 CMS / 23 DAYS
0010		NB USH 53 S. OF STH 312	0	0	23	0	1 CMS / 23 DAYS
TOTAL 0010			15	203	164	1870	

CATEGORY	STATION TO	STATION	LOCATION	PAVEMENT	REMOVING	PAVEMENT	TEMPORARY
				MARKING		MARKING	
				EPOXY		REFLECTIVE	
				4-INCH		CONTRAST	
				646.0106	646.0600	646.0841.S	649.0200
				LF	LF	LF	LF
0010	413+00 -	416+44	USH 53 S. B.	688			800
0010							
0010	405+00 -	409+00	USH 53 SB E/L	400	400		MEDIAN EDGE LINE
0010	420+00 -	424+00	USH 53 SB E/L	400	400		MEDIAN EDGE LINE
0010	444+50	451+10	USH 53 SB C/L		165	165	LANE CLOSURE
0010	413+00 -	416+44				86	
0010	408+36 -	420+99	TEMP. LANE LT.				1259
0010	405+00 -	424+35	TEMP. LANE RT.				1919
TOTAL 0010				1488	965	251	3178

CATEGORY	STATION TO	STATION	LOCATION	CONSTRUCTI ON	CONSTRUCTI ON	CONSTRUCTI ON	CONSTRUCTI ON
				STAKI NG		STAKI NG	
				SUBGRADE		CONCRETE	
				650.4500		PAVEMENT	
				LF	LF	LF	LF
0010	413+00 -	416+44	USH 53 SOUTHBOUND	344	0	344	0
0010	405+00 -	424+35	TEMPORARY ROAD	1589	1589	0	1589
TOTAL 0010				1933	1589	344	1589

CATEGORY	STATION TO	STATION	LOCATION	SAWI NG	SAWI NG	REMARKS
				ASPHALT		
				690.0150	690.0250	
				LF	LF	
0010	405+00		USH 53 S. B.	4		RIGHT SHOULDER
0010	408+36		USH 53 S. B.	4		RIGHT SHOULDER
0010	413+00		USH 53 S. B.	12	26	BOTH SHOULDERS
0010	416+44		USH 53 S. B.	12	26	BOTH SHOULDERS
0010	420+99		USH 53 S. B.	4		RIGHT SHOULDER
0010	424+35		USH 53 S. B.	4		RIGHT SHOULDER
0010	405+00 -	408+36	TEMPORARY LANE	336		
0010	420+99 -	424+35	TEMPORARY LANE	336		
TOTAL 0010				712	52	

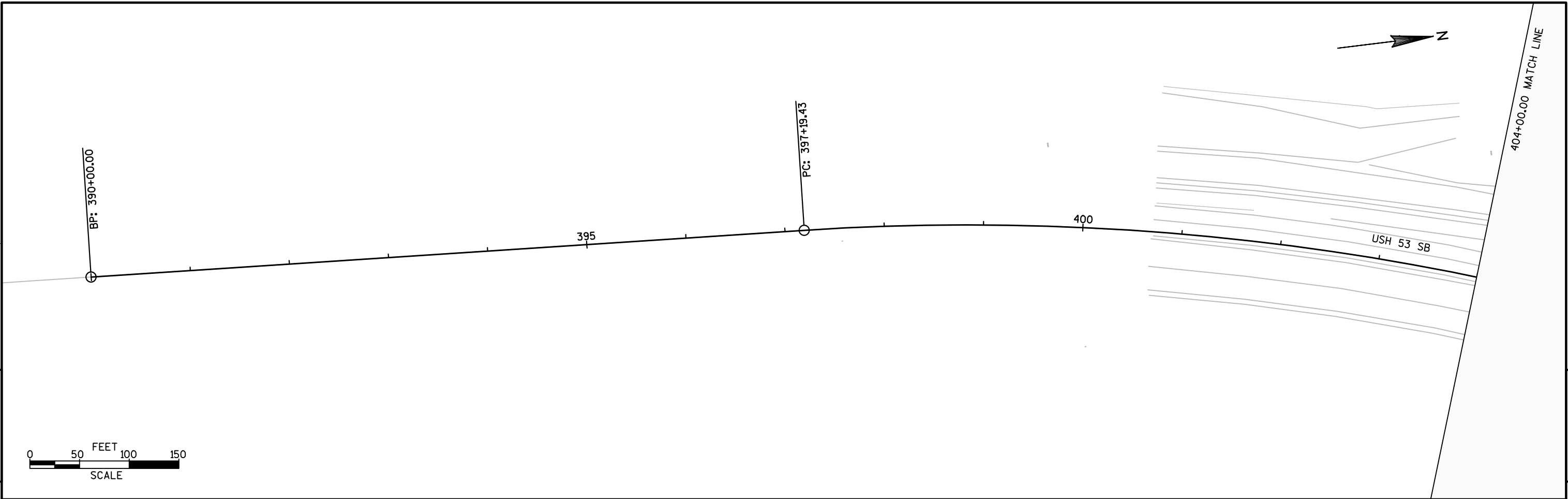
SPECIAL (01. CONCRETE PAVEMENT 6-INCH SPECIAL)

CATEGORY	STATION TO	STATION	LOCATION	SPV. 0180. 01		REMARKS
				SY		
0010	413+00	- 416+44	USH 53 SB LT.	306	8'	TINED
0010	413+00	- 416+44	USH 53 SB RT.	153	4'	TINED
TOTAL 0010				459		

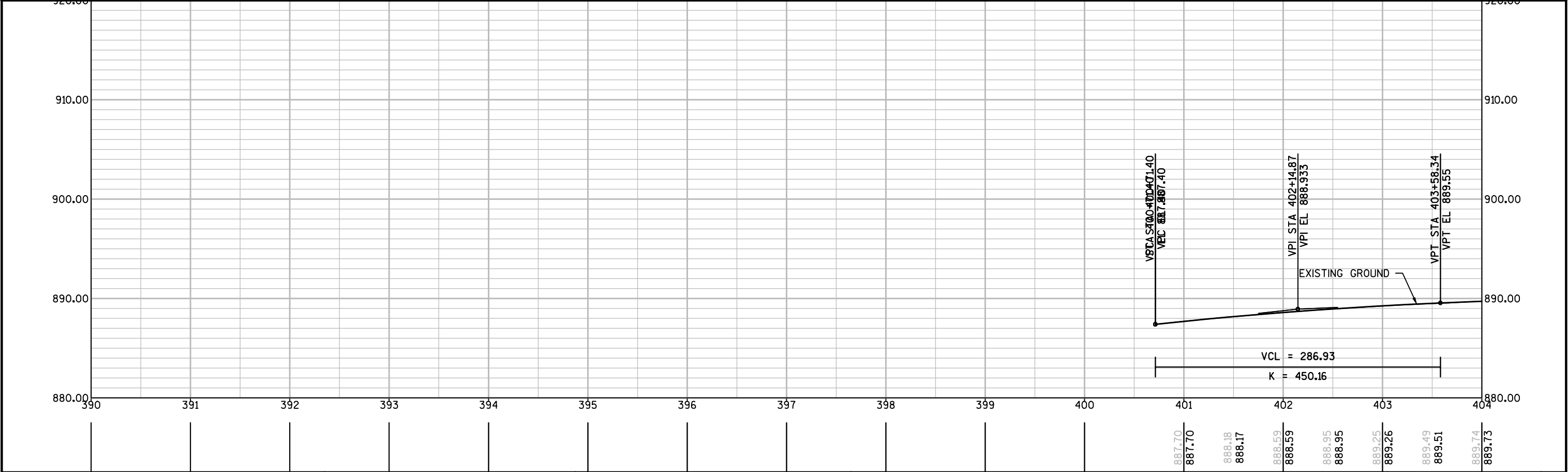
SPECIAL (02. CONCRETE PAVEMENT 9.5-INCH SPECIAL)

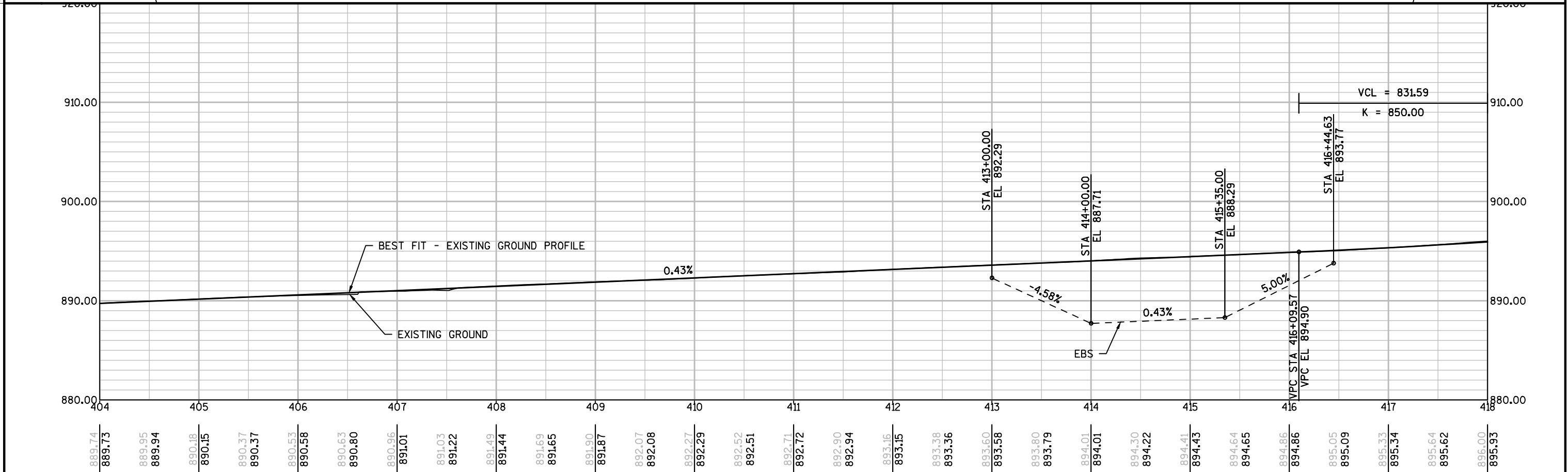
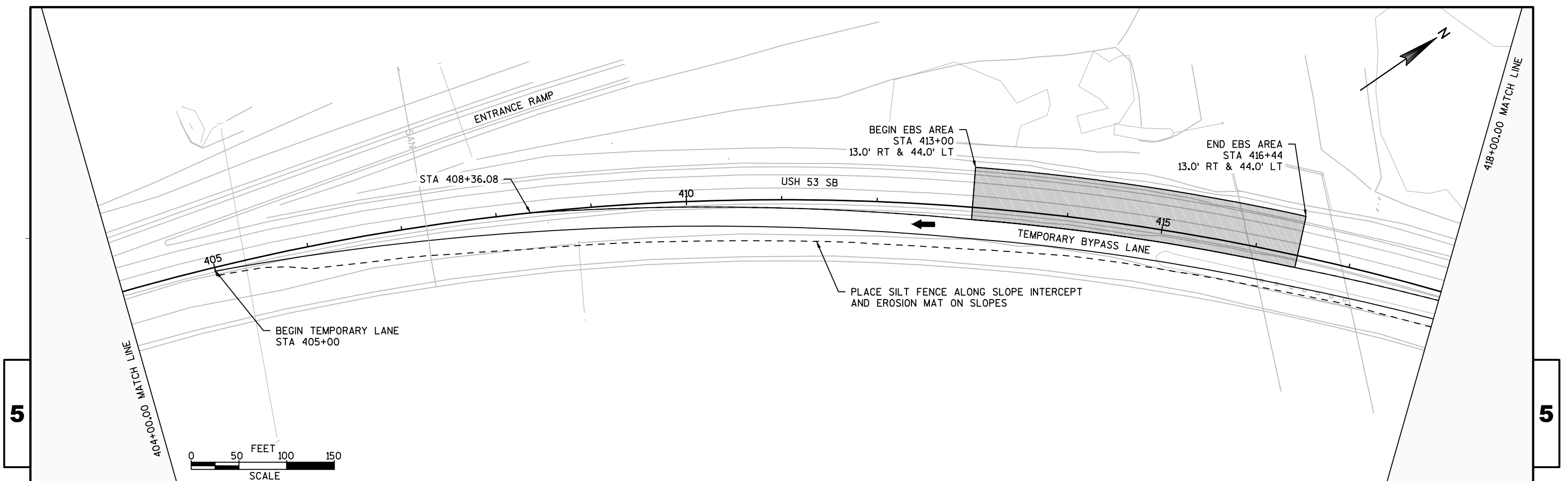
CATEGORY	STATION TO	STATION	LOCATION	SPV. 0180. 02		REMARKS
				SY		
0010	413+00	- 416+44	USH 53 SB	995		
TOTAL 0010				995		

5

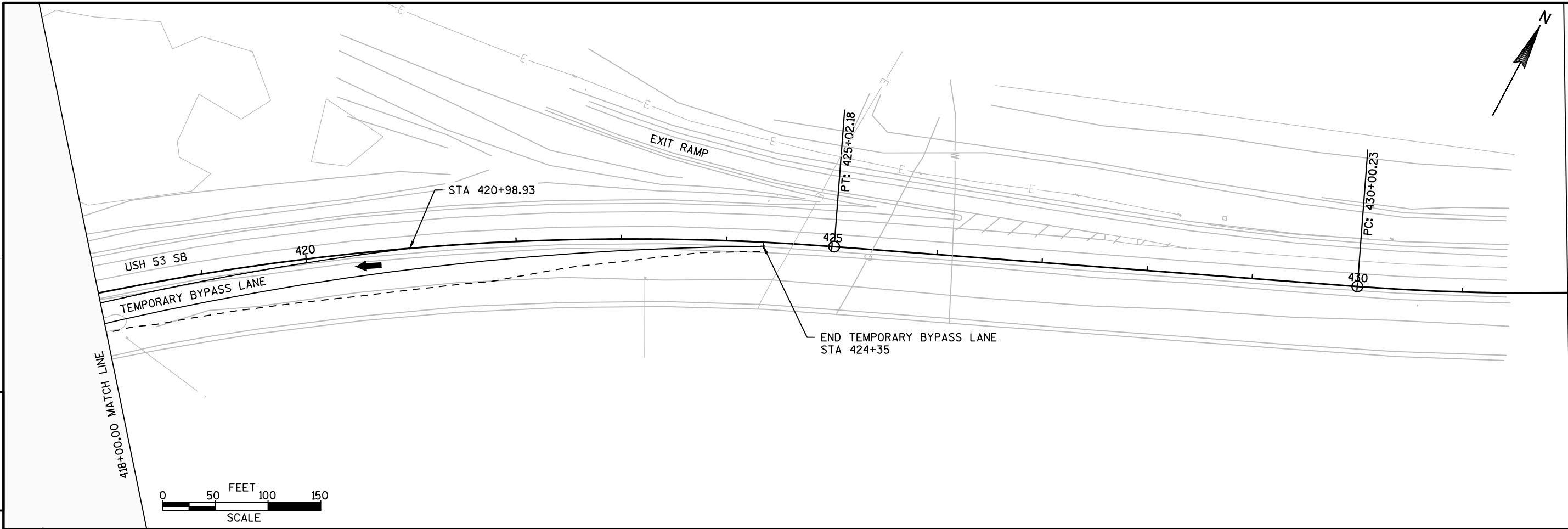


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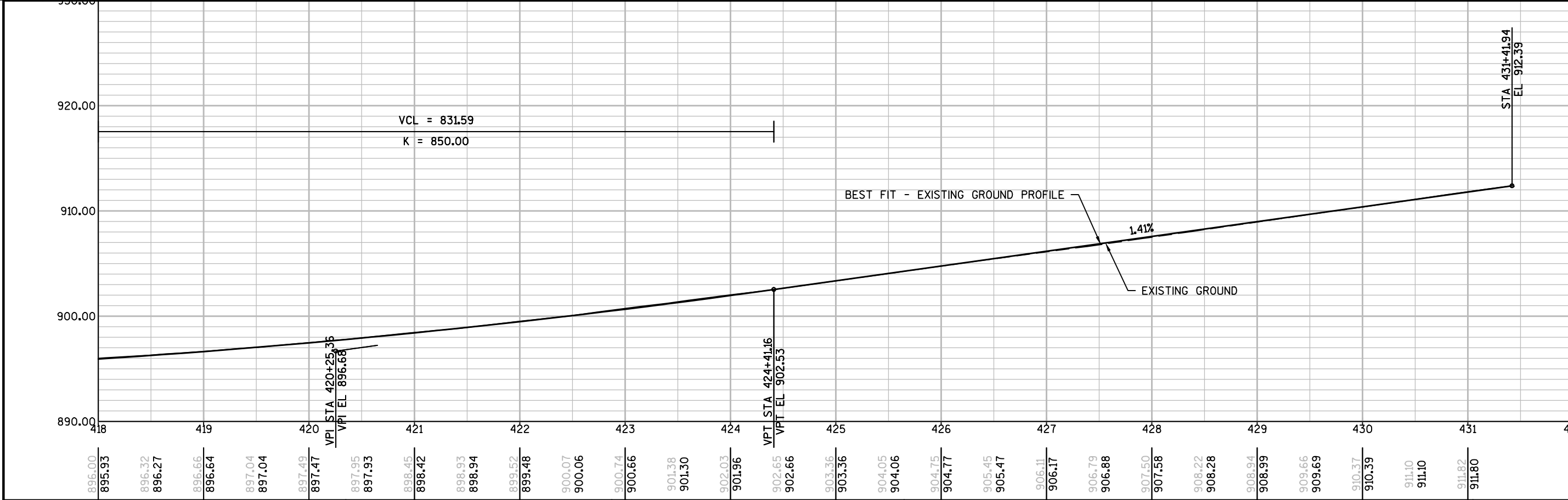




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5



Standard Detail Drawing List

08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B26-03A	STEEL THREE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THREE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THREE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THREE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THREE BEAM BULLNOSE TERMINAL
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D12-04	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE



- 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.



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.

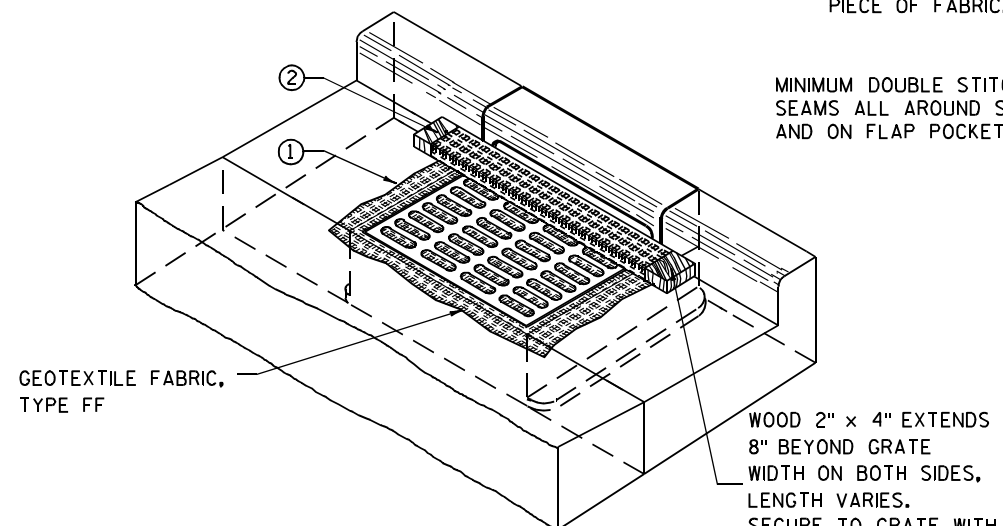
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



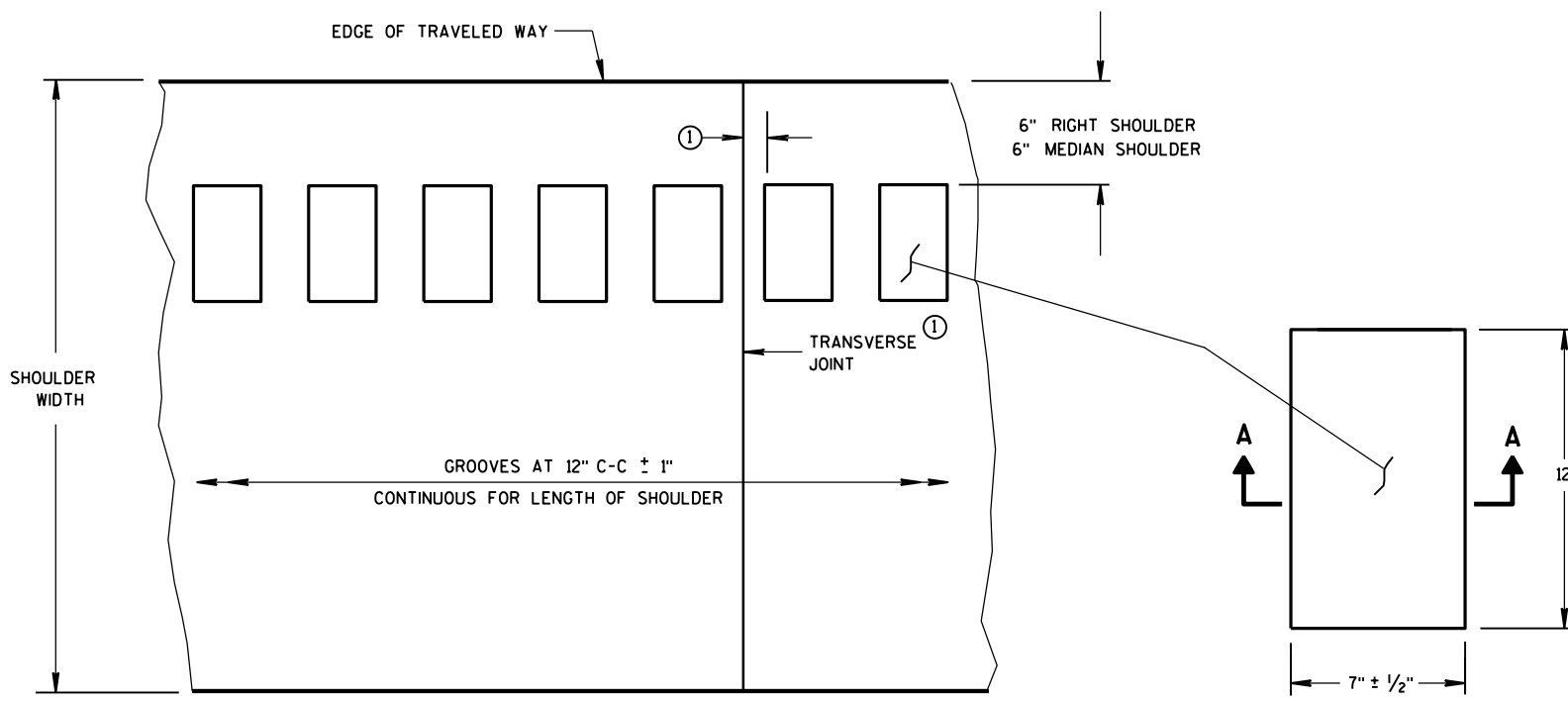
INLET PROTECTION, TYPE D

(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 Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

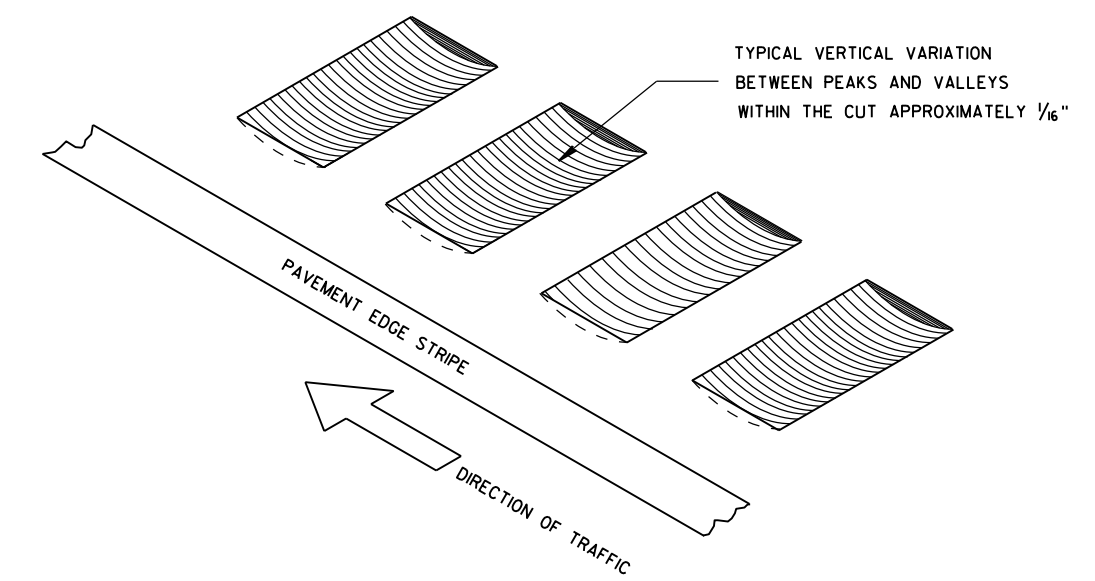
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

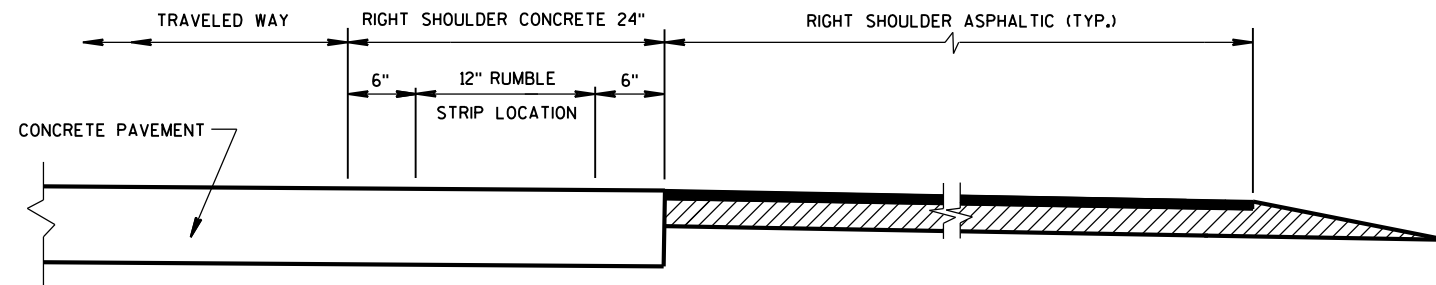
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

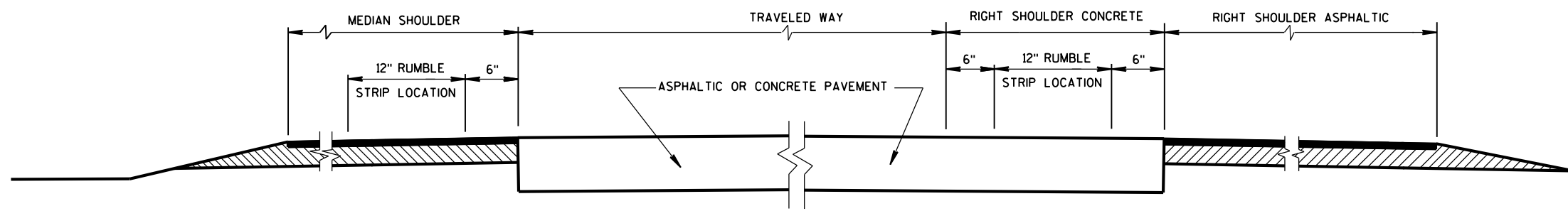
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



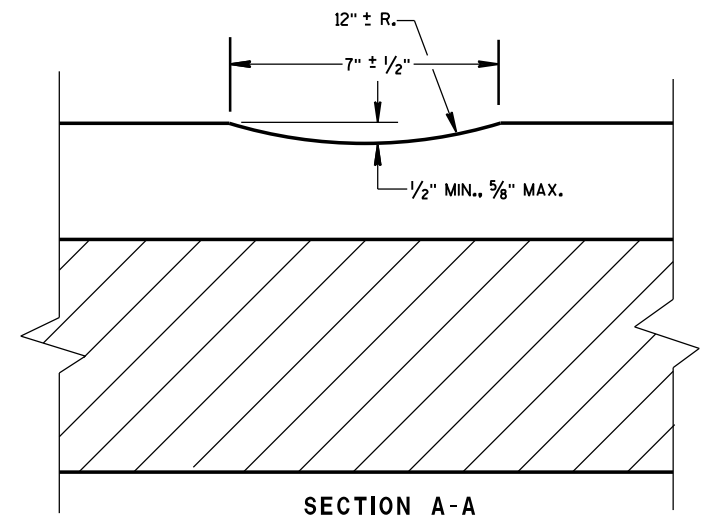
ISOMETRIC



SECTION VIEW
(CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



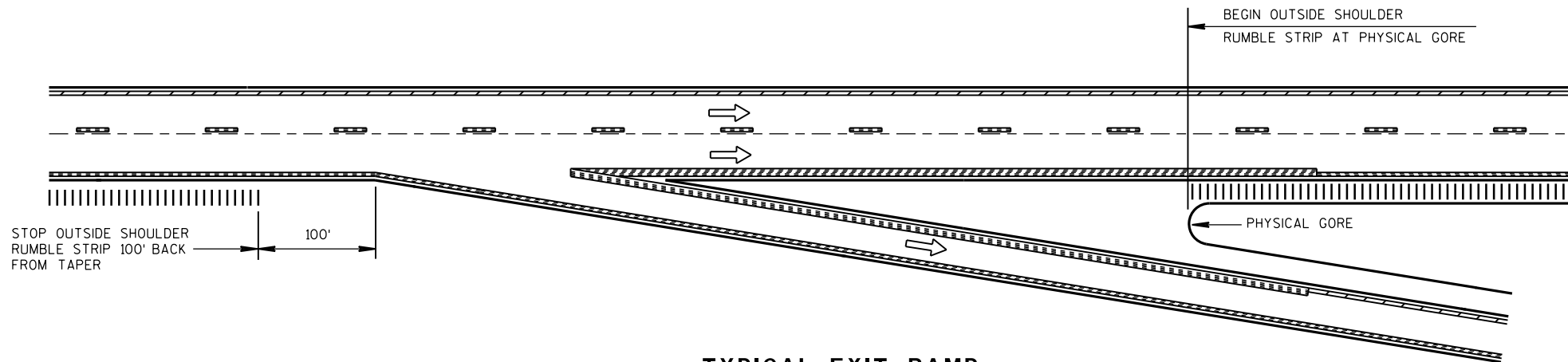
SECTION VIEW
TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS
IN RURAL DIVIDED HIGHWAYS
(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP,
MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



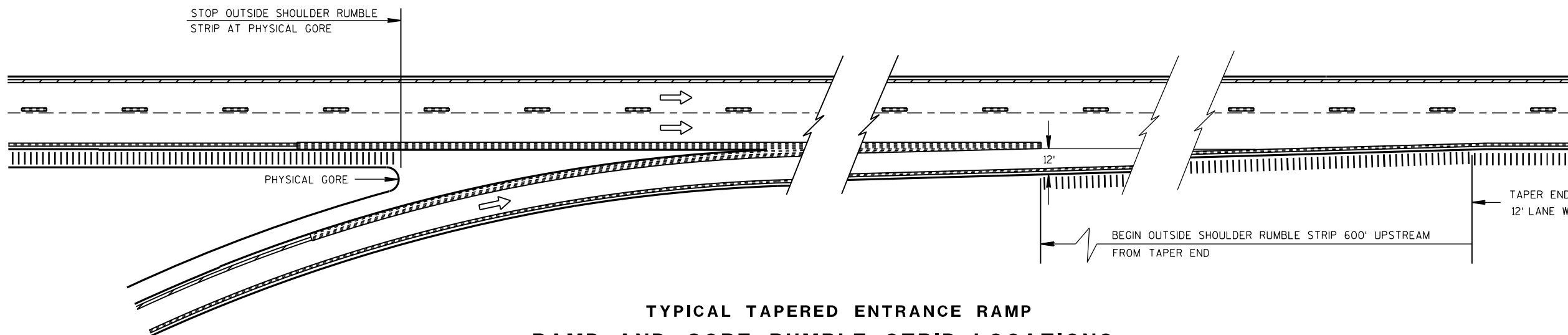
TYPICAL EXIT RAMP

NOTES:

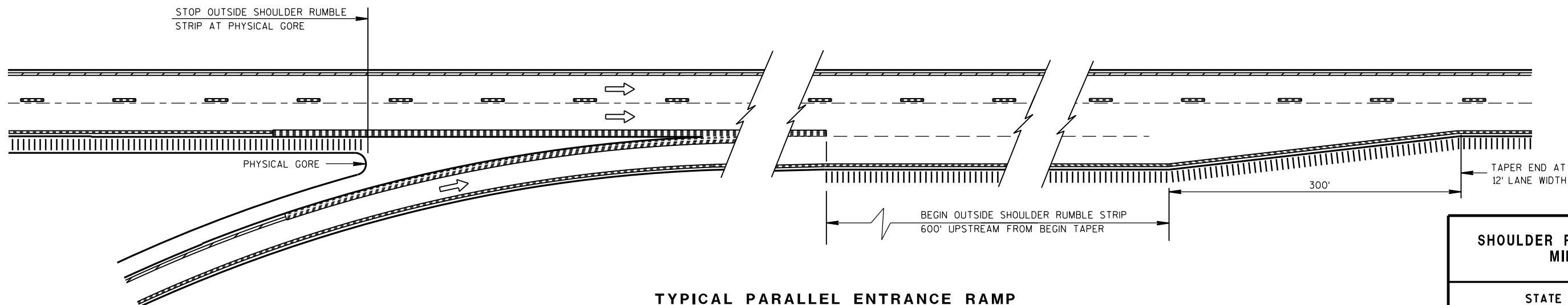
NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL



**TYPICAL TAPERED ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS**



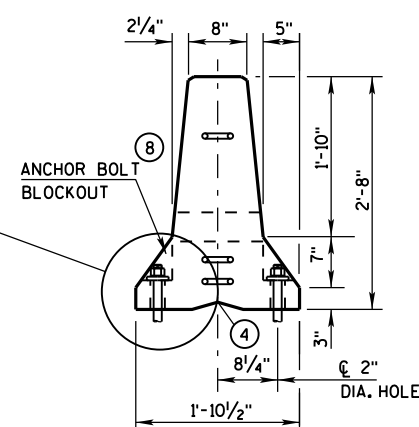
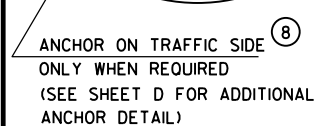
**TYPICAL PARALLEL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS**

**SHOULDER RUMBLE STRIP,
MILLING**

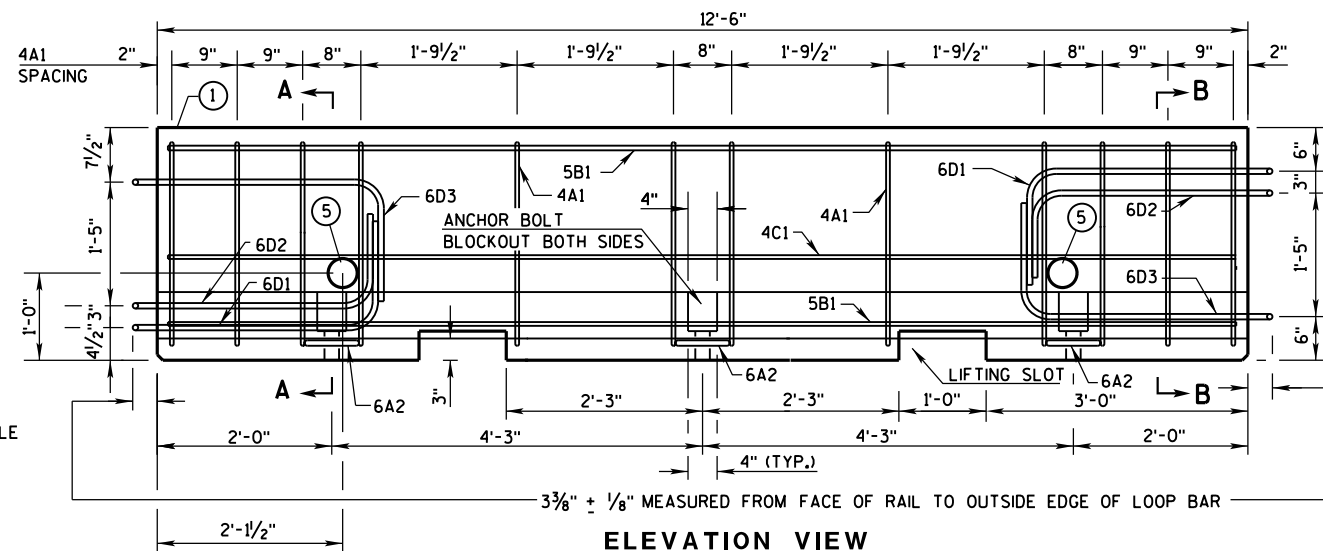
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012
DATE
FHWA

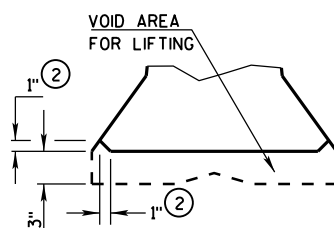
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



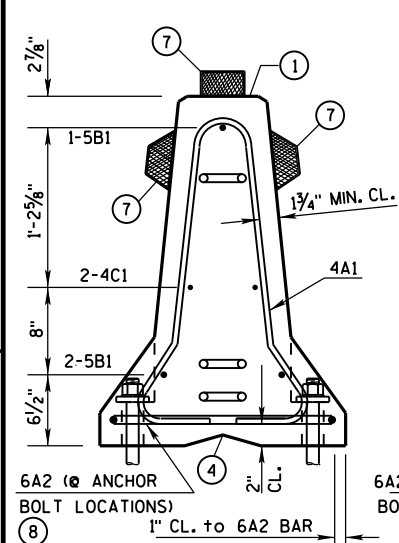
END VIEW



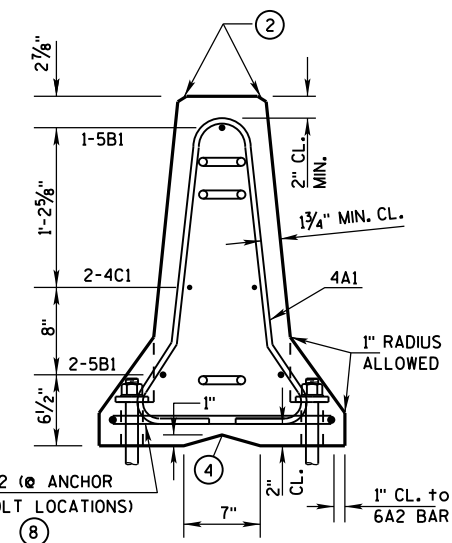
ELEVATION VIEW



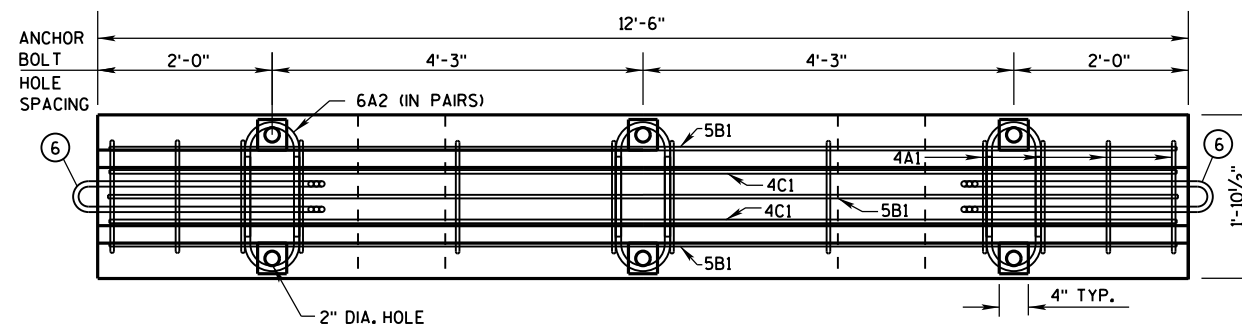
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

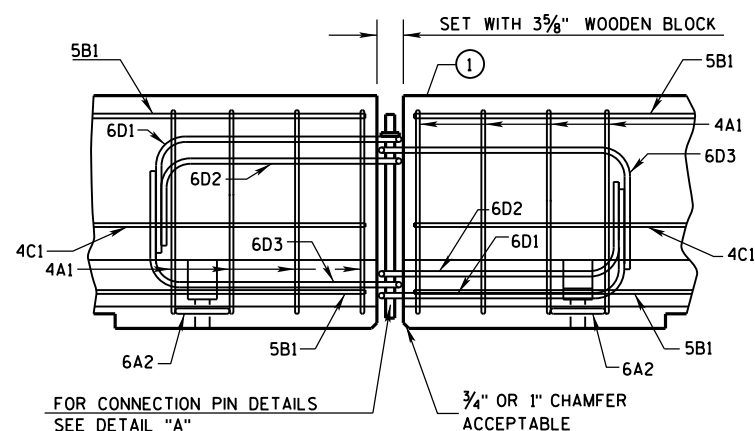


SECTION B-B
(STIRRUP PLACEMENT)

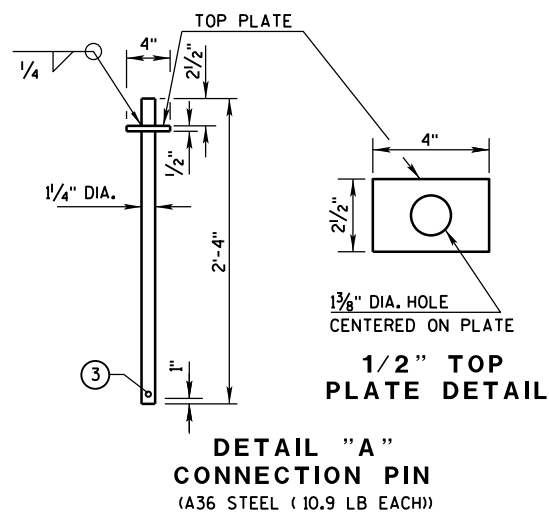


PLAN VIEW

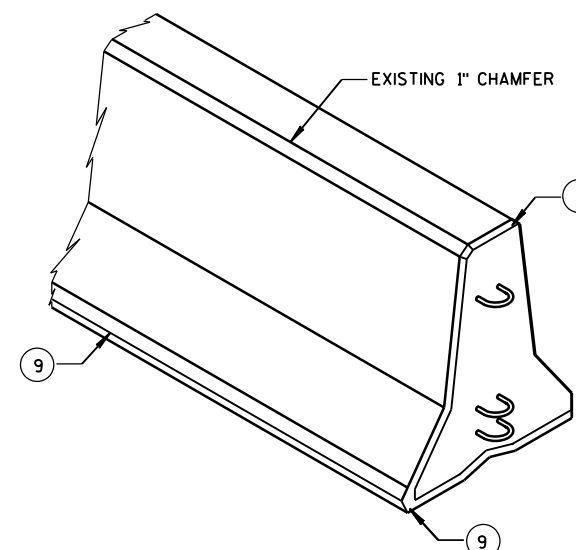
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(d) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE $\frac{3}{4}$ " SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A $3\frac{1}{2}$ " PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN $\frac{1}{8}$ " OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

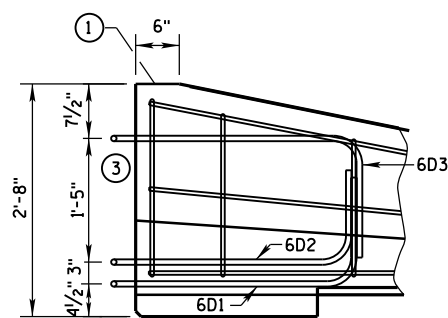
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE: WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ A $\frac{3}{8}$ " HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- ④ "V" NOTCH IS OPTIONAL.
- ⑤ THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- ⑥ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- ⑦ USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- ⑧ SEE SHEET D FOR ANCHORING CRITERIA.
- ⑨ 1" CHAMFER OPTIONAL.

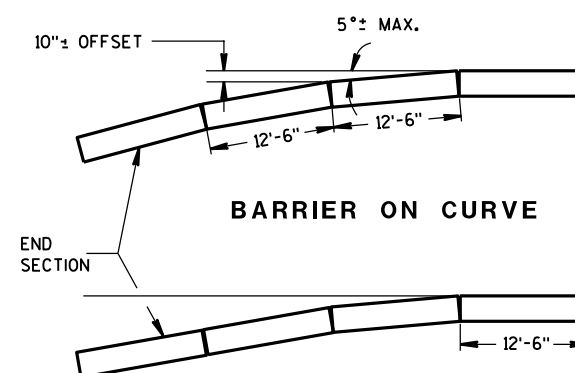
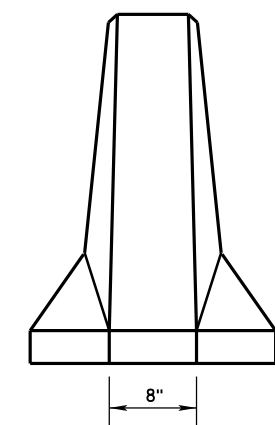
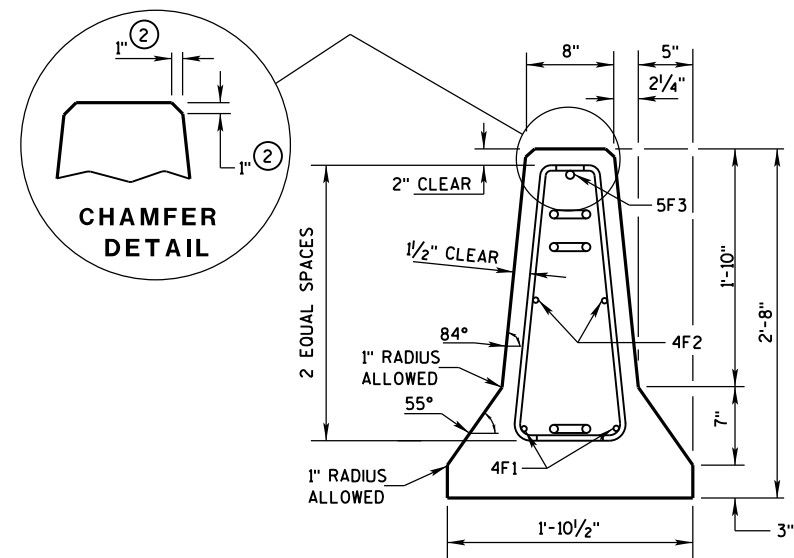
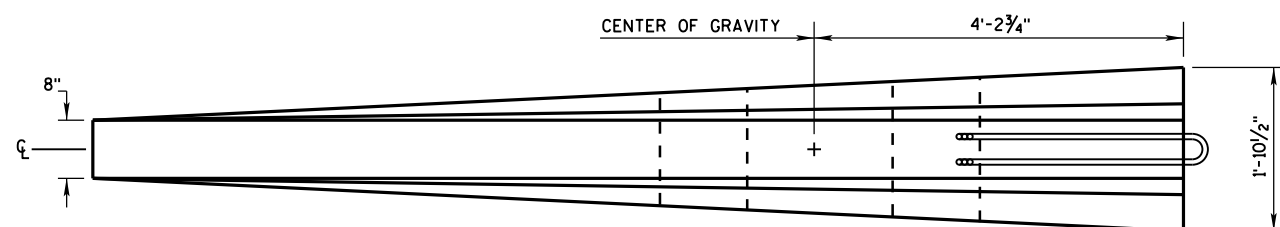
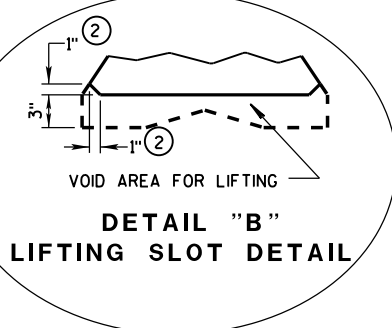
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)



POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

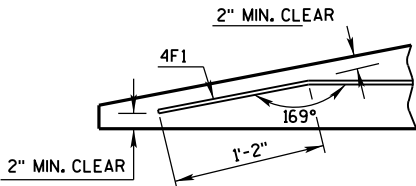
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

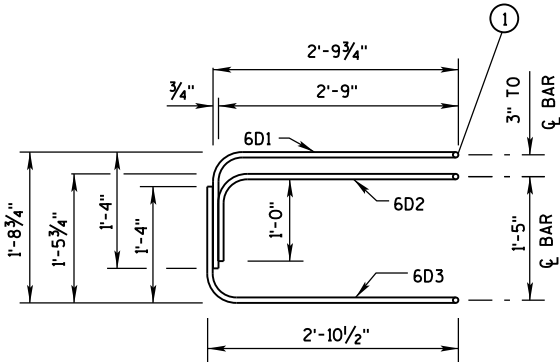
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

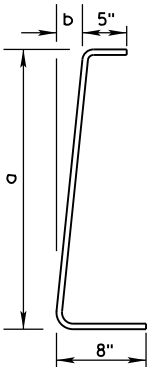
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

TAPER BARRIER SECTION

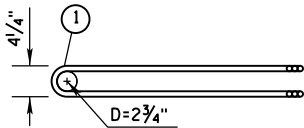
GENERAL NOTES

① NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION
BILL OF MATERIALS

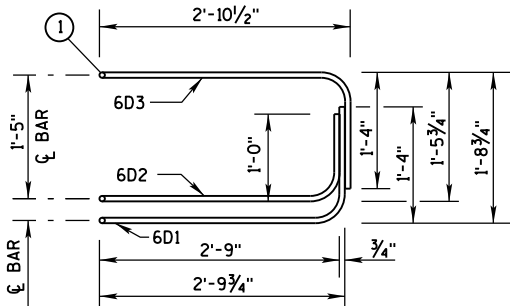
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

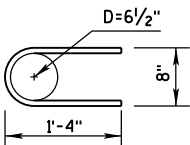


PLAN VIEW
LOOP BAR ASSEMBLY

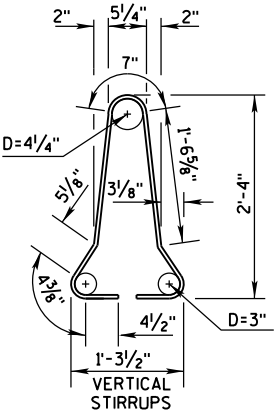
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

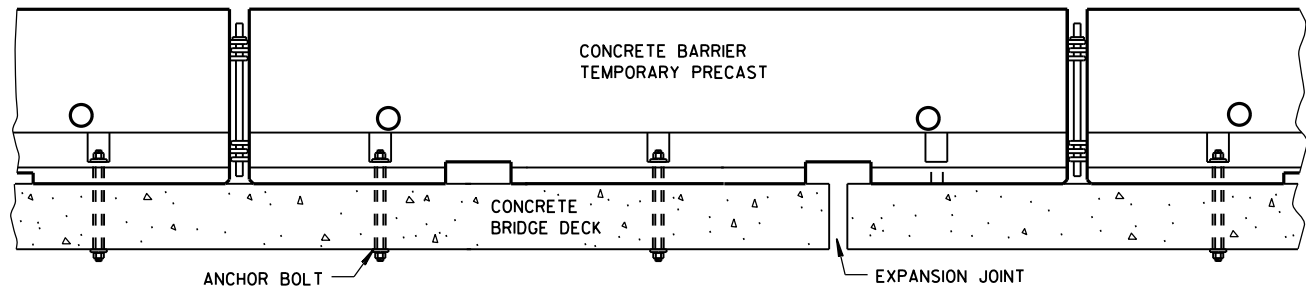
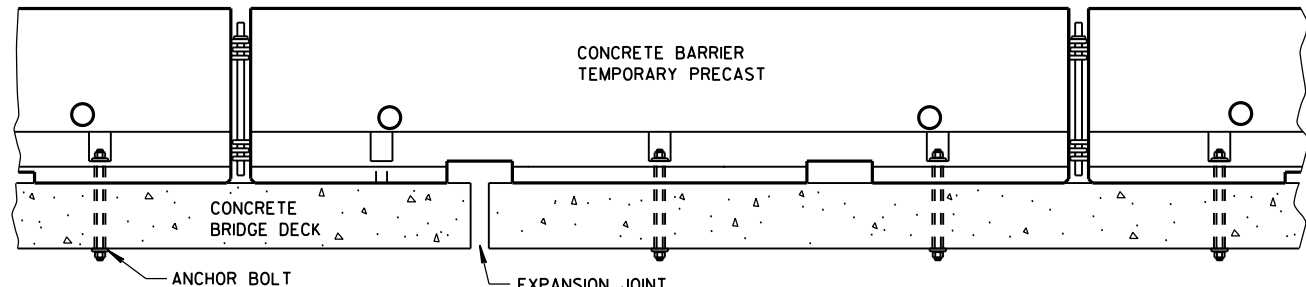


4A1

BARRIER SECTION

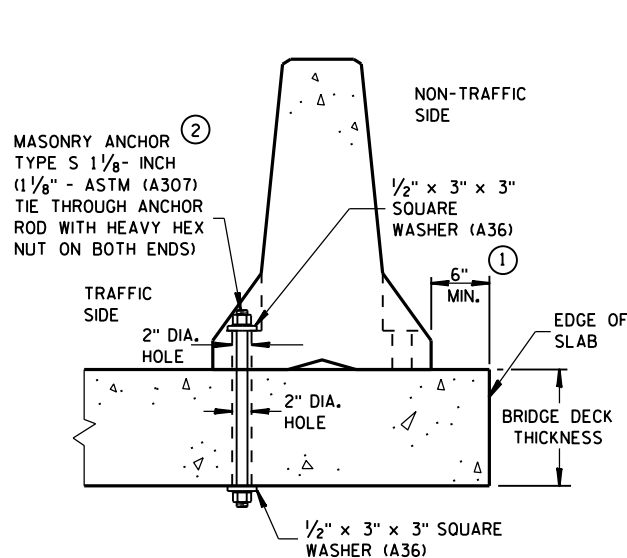
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



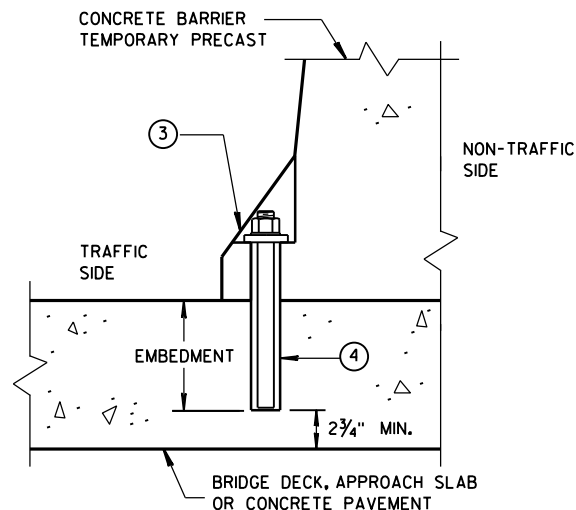
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



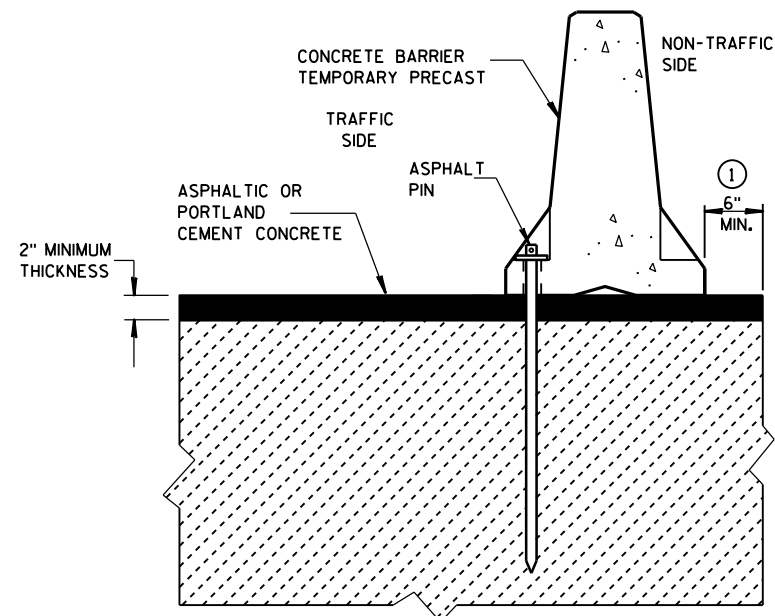
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



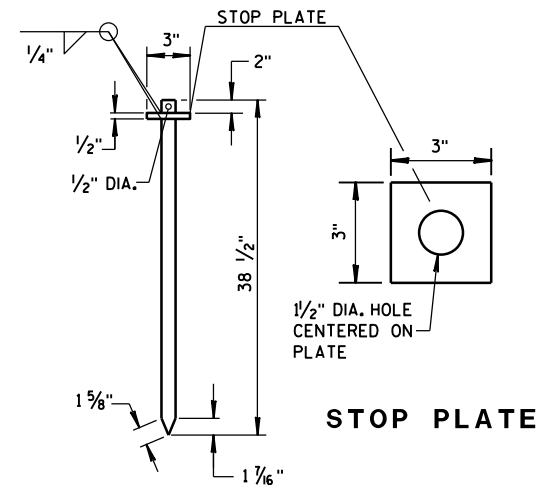
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

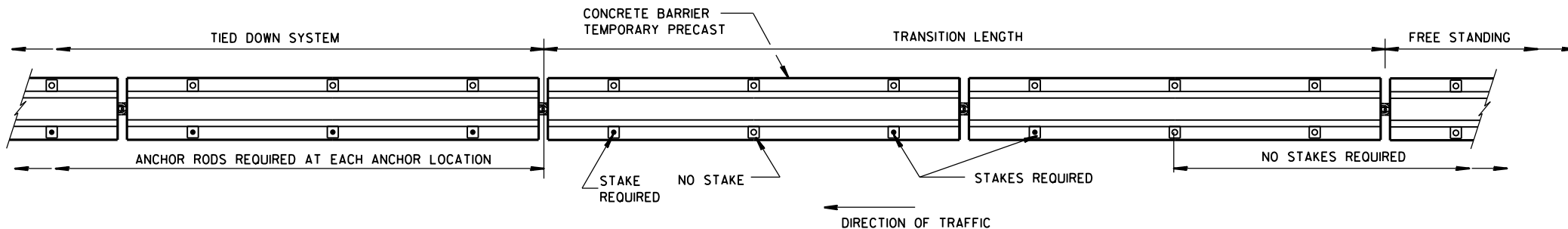


STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPHALT PIN
(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

GENERAL NOTES

- CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

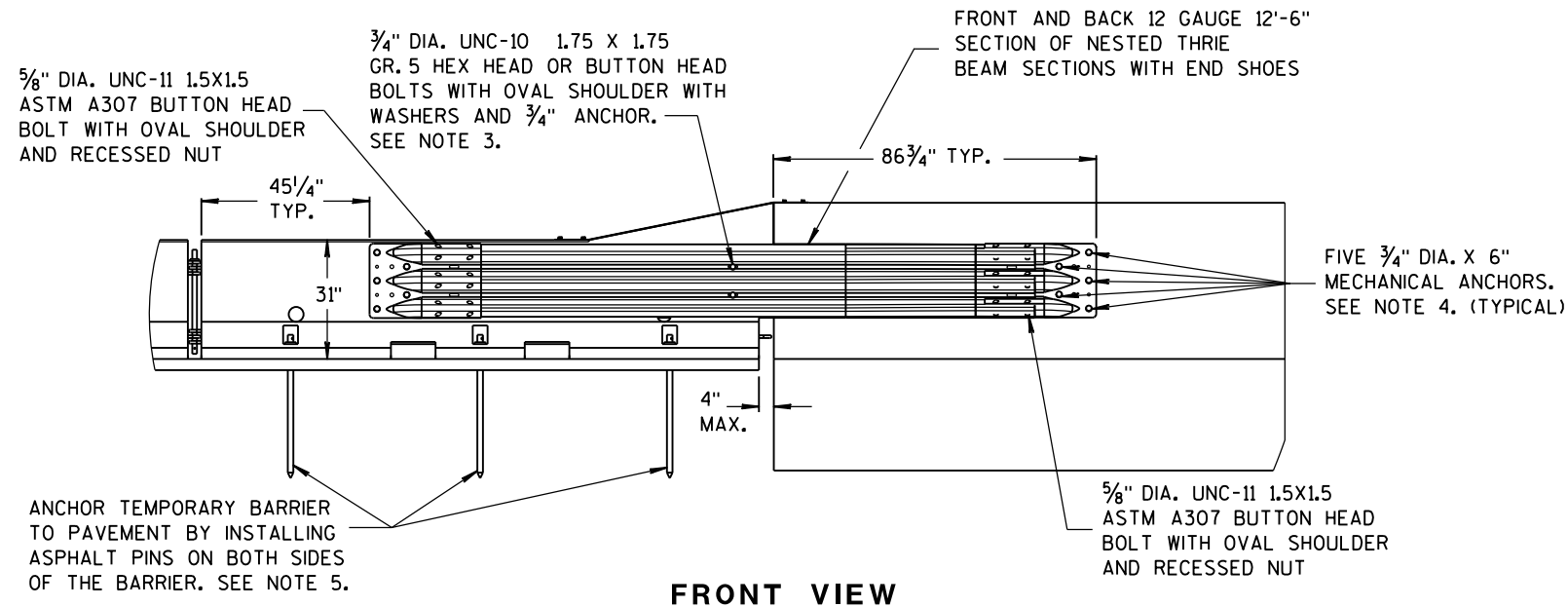
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.
- 1/8" DIAMETER A307 THREADED ROD, 1/2" x 3" x 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



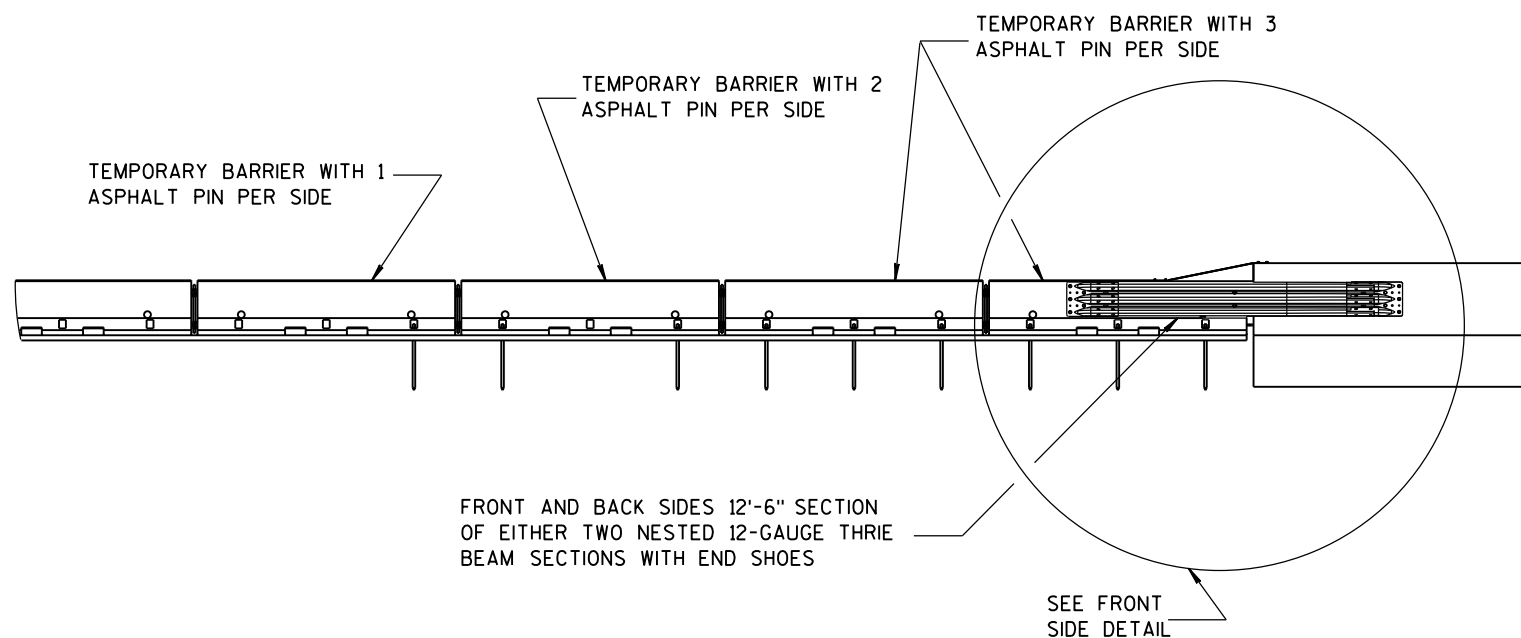
FRONT VIEW

NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

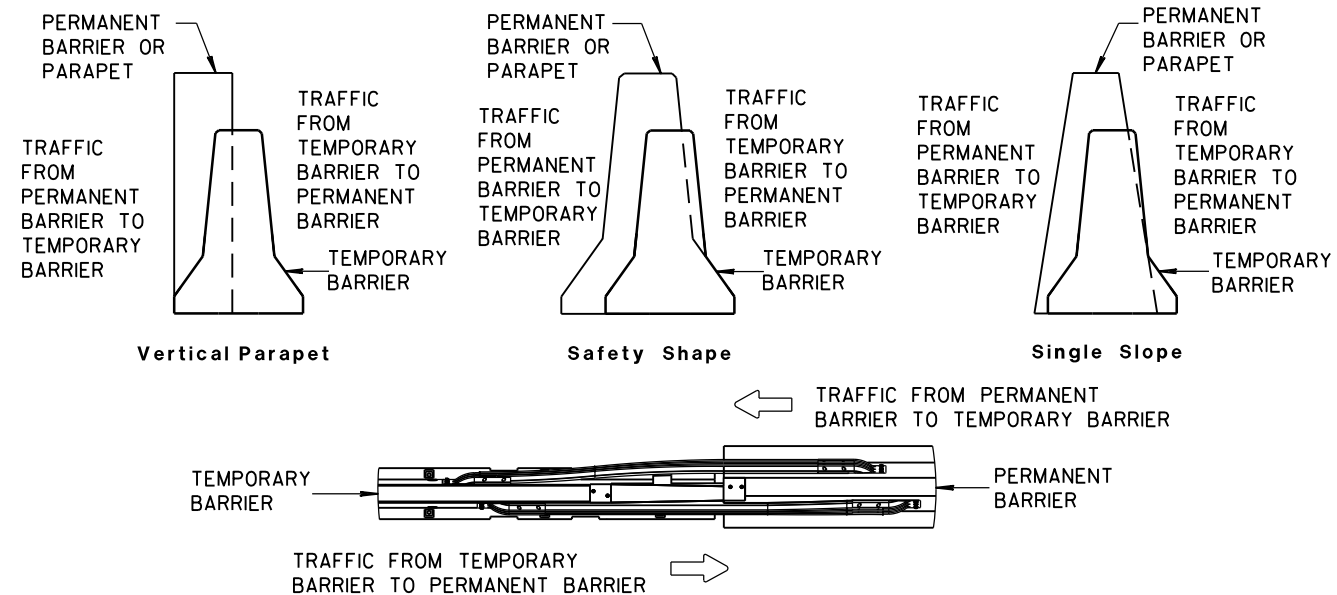
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.

4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

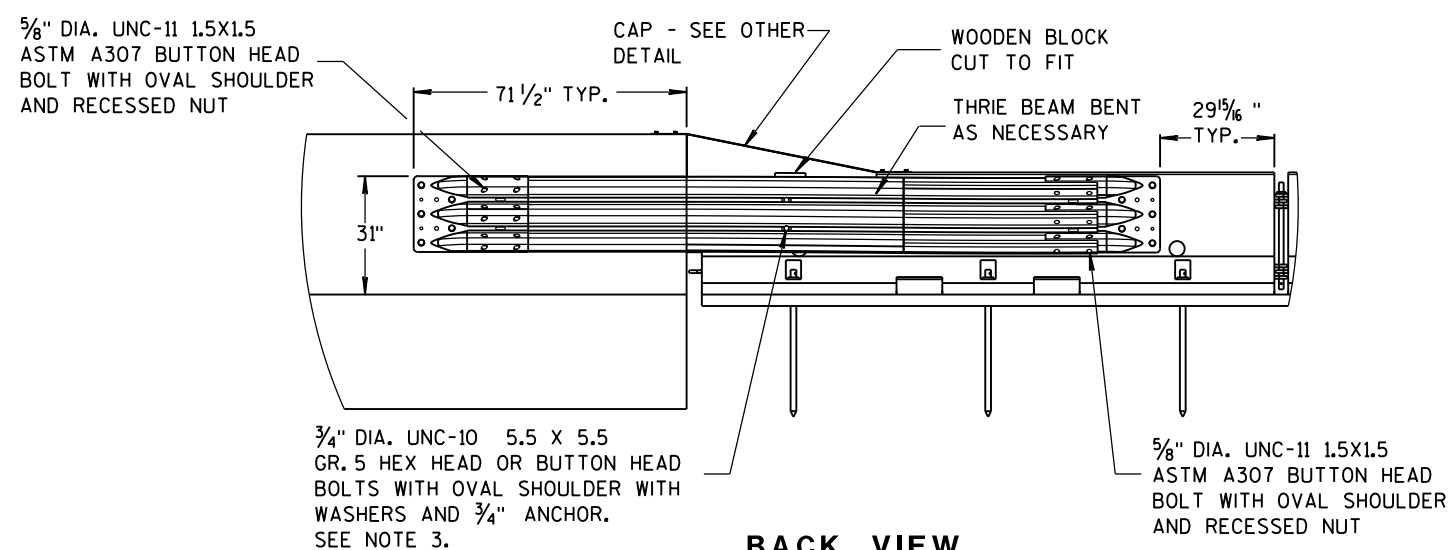


FRONT VIEW

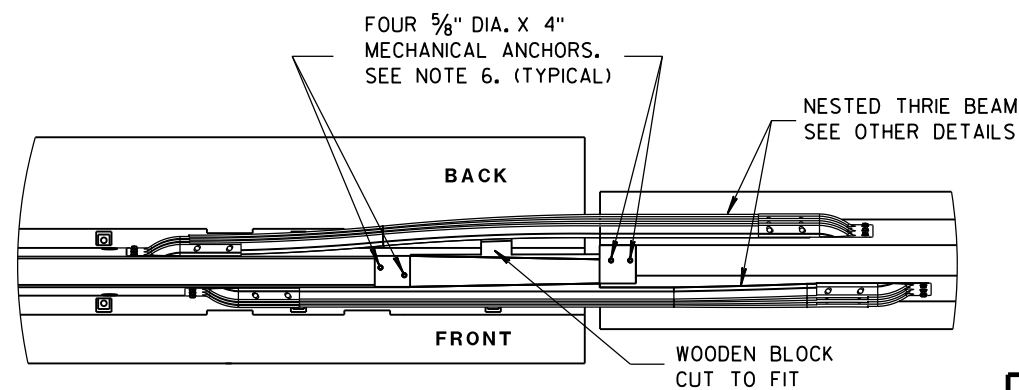
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



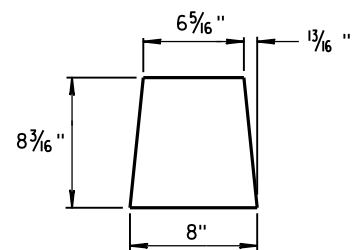
BACK VIEW



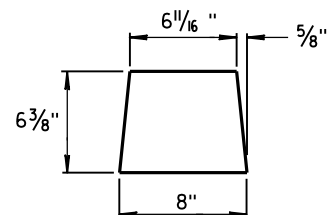
PLAN VIEW

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

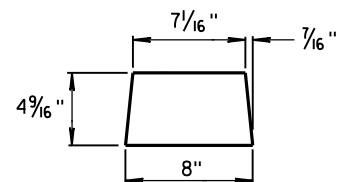
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



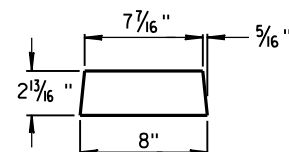
GUSSET 1



GUSSET 2

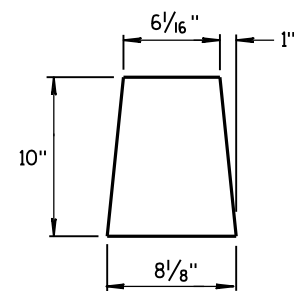


GUSSET 3

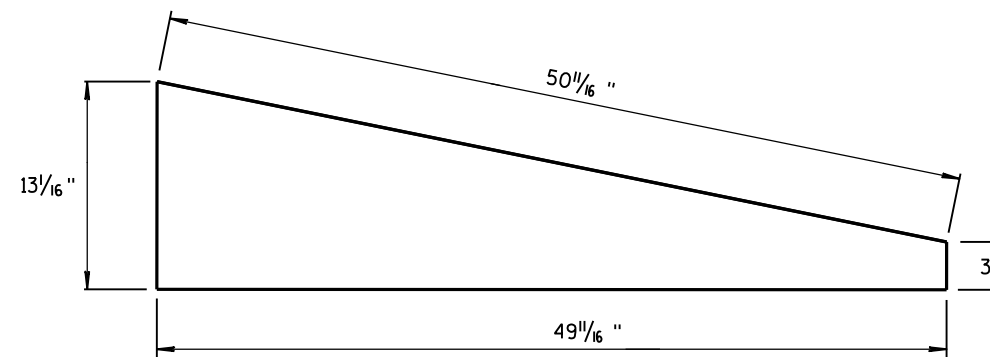


GUSSET 4

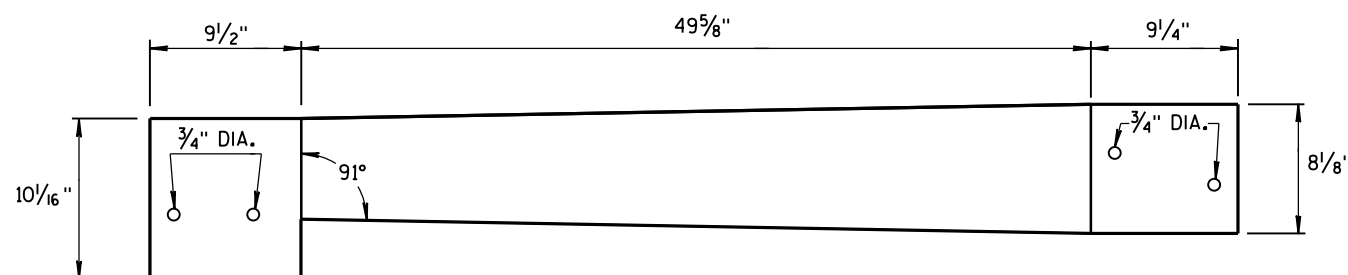
GUSSETS



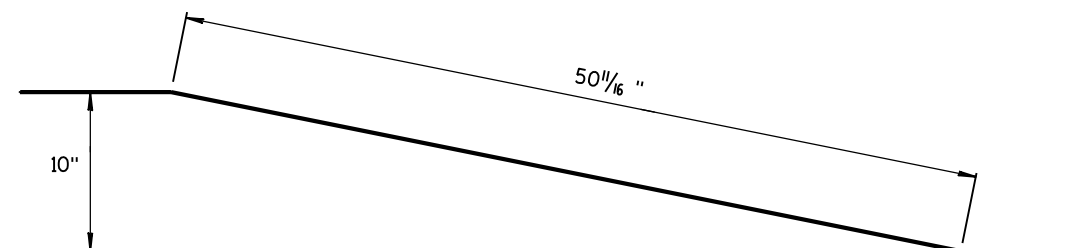
END PLATE



SIDE PLATE

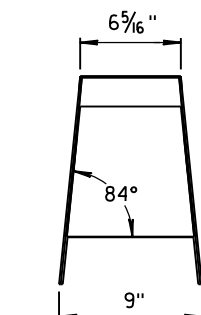
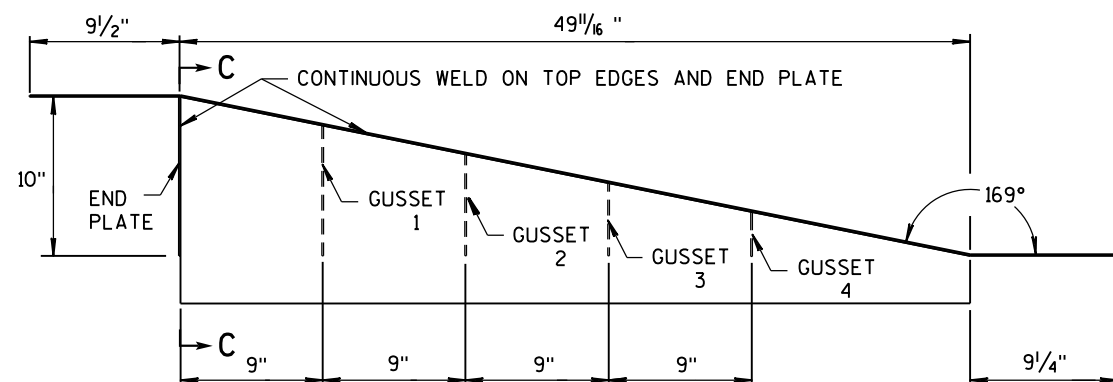
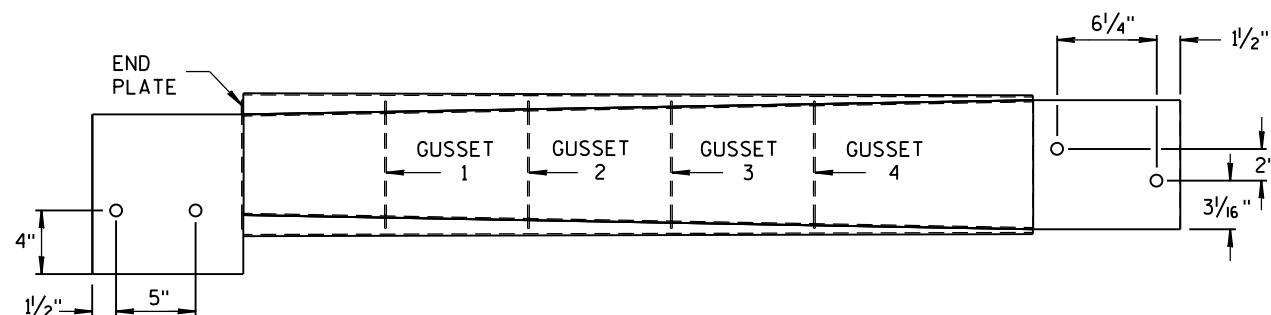


TOP PLATE



**SIDE, TOP AND END PLATES FOR CAP
FROM TEMPORARY CONCRETE BARRIER
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C

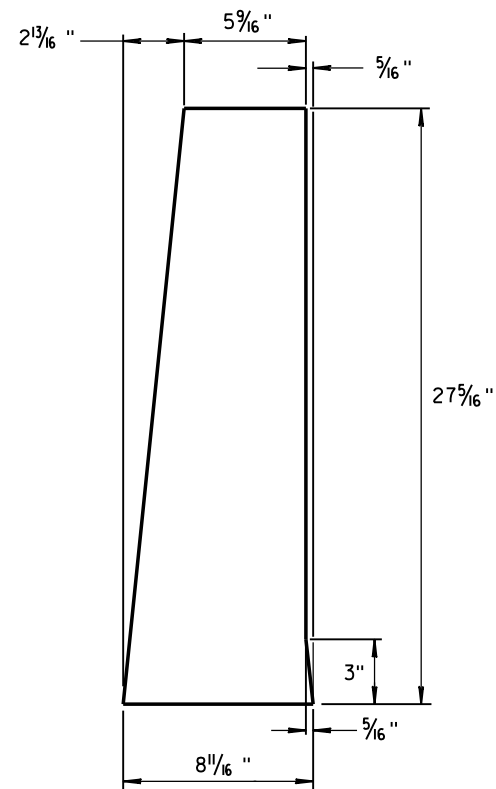
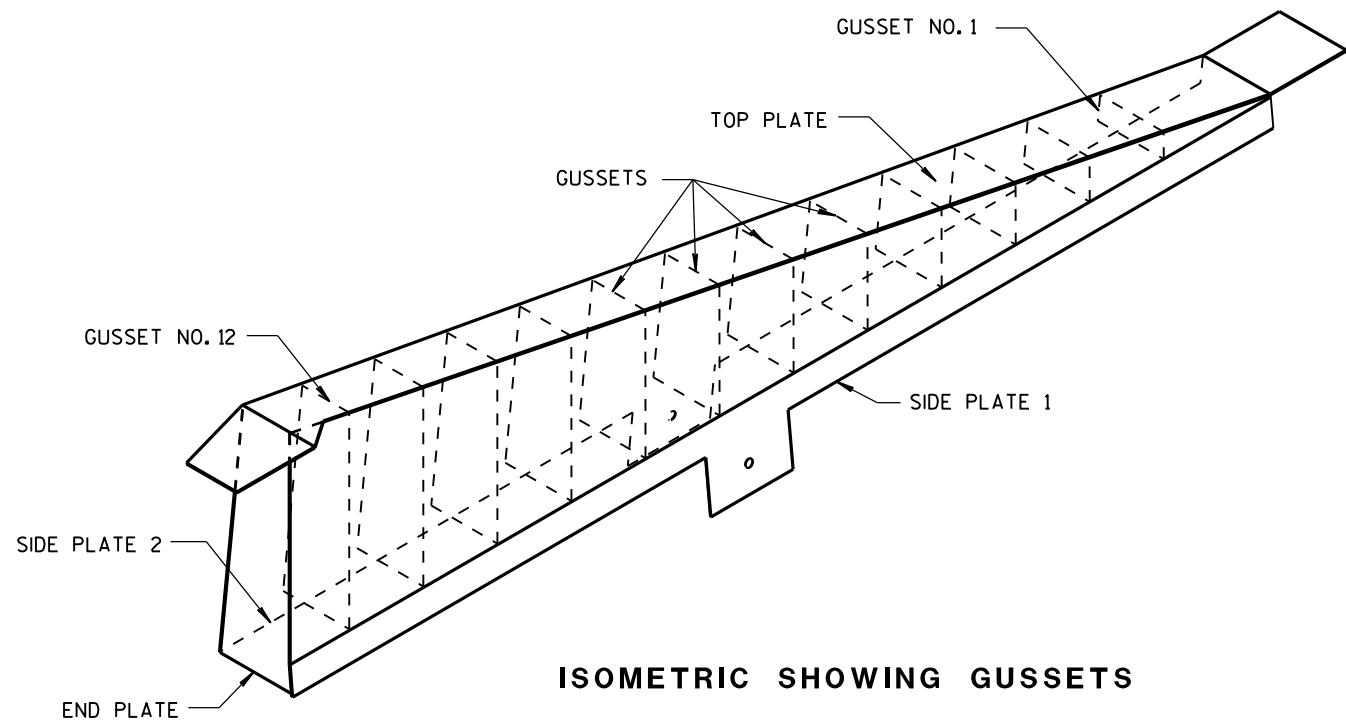
NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

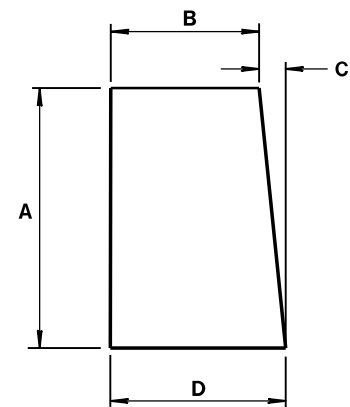
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



1/8" STEEL PLATE

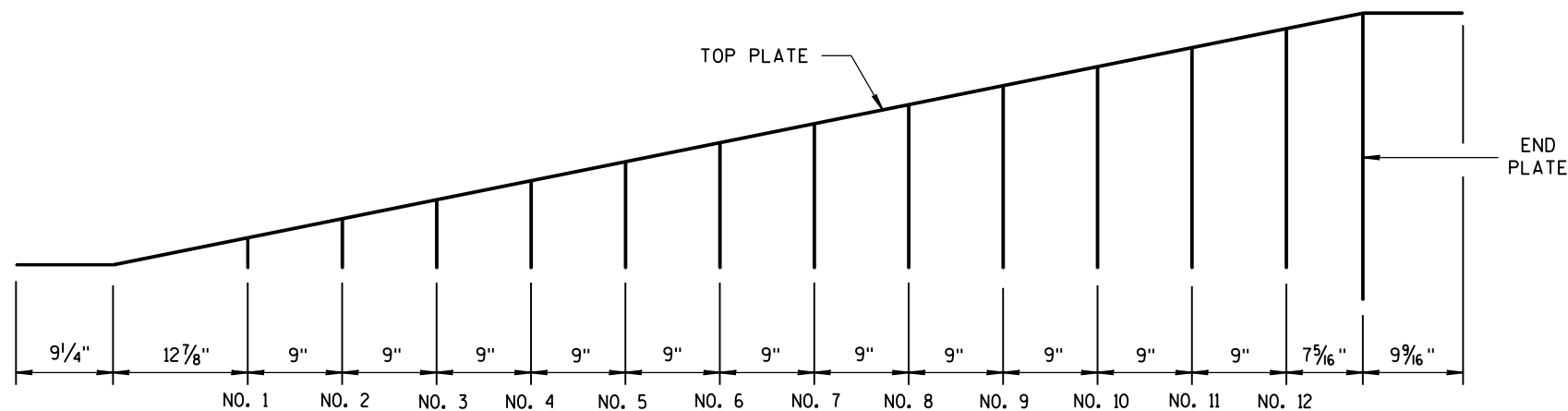


ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	1 1/16 "	8 1/16 "
4	8 5/16"	7 3/16"	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16"	6 1/16"	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16"	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16"	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

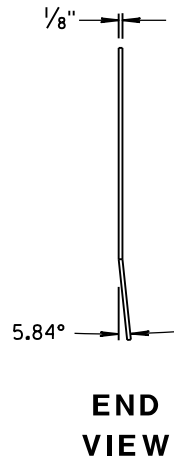
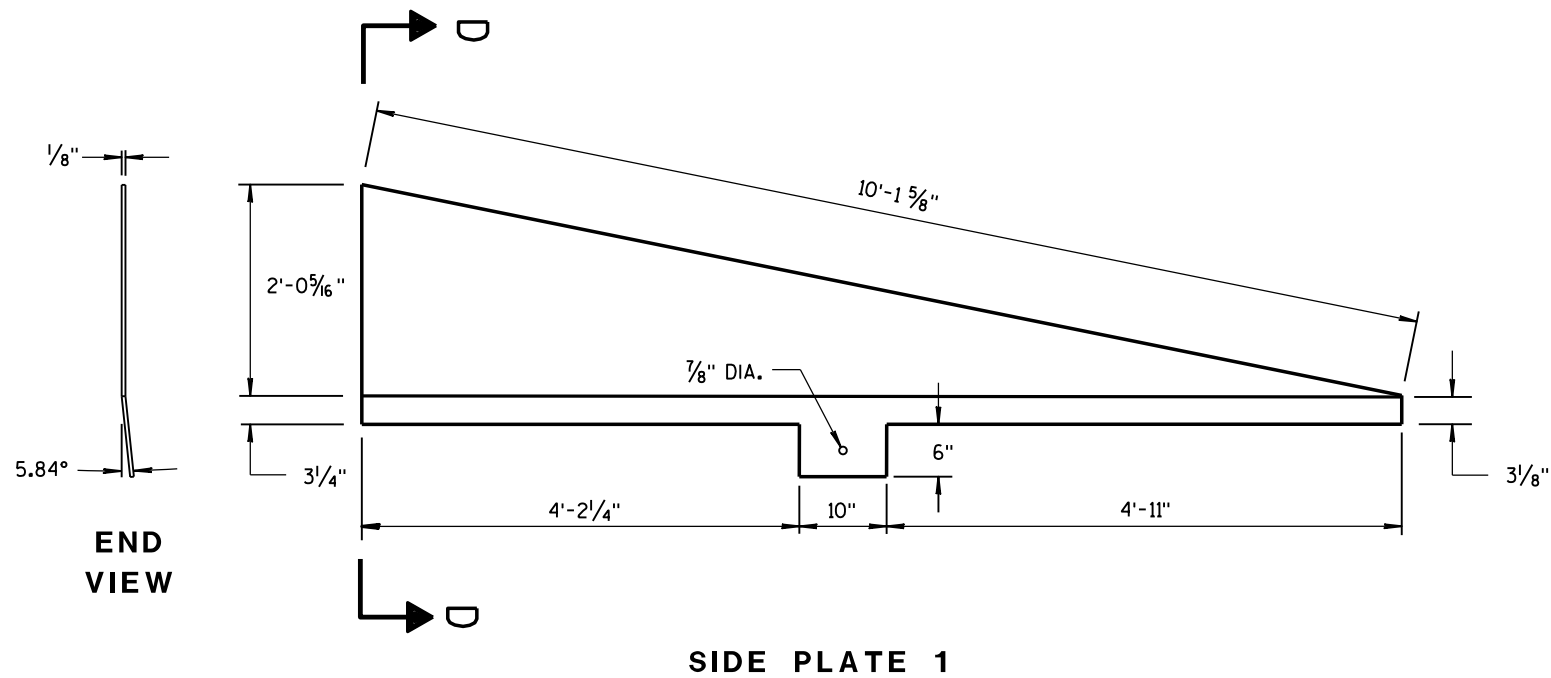
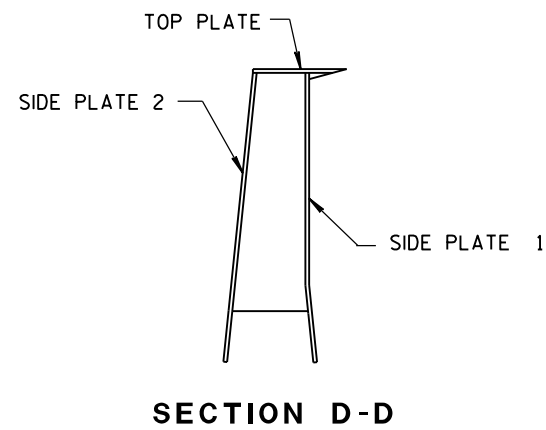
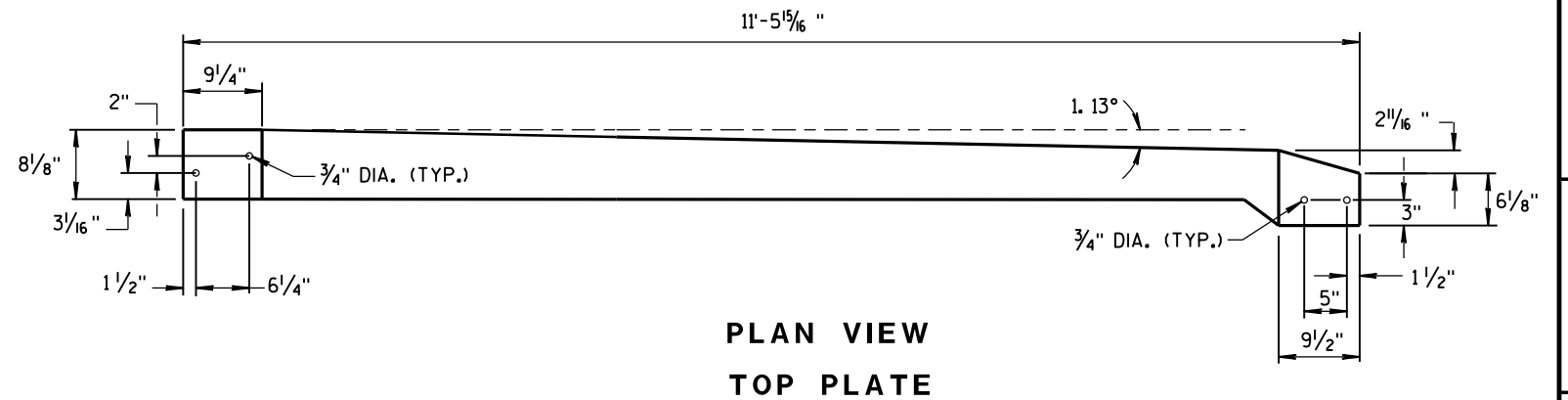
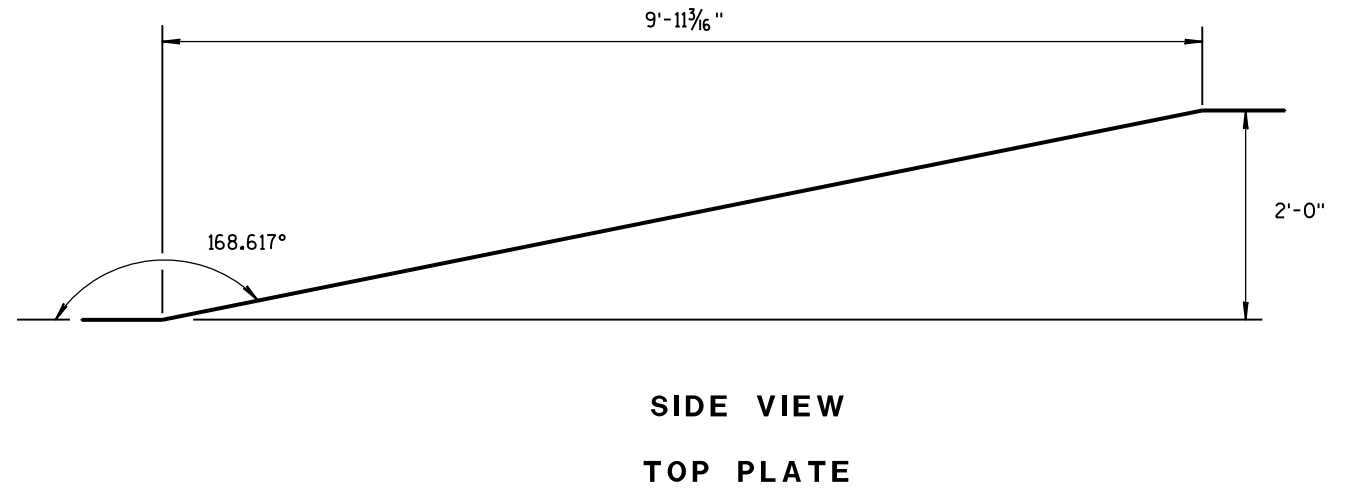
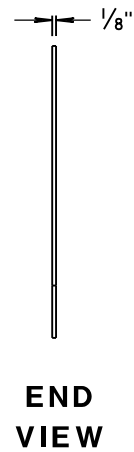
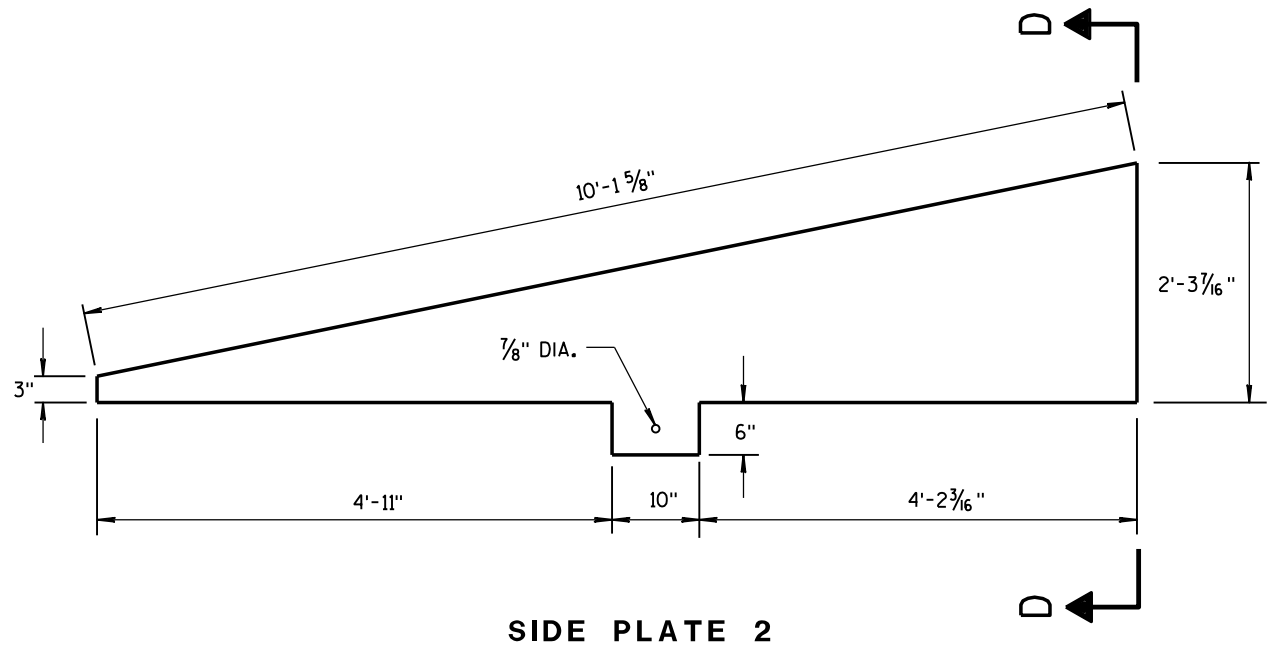
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

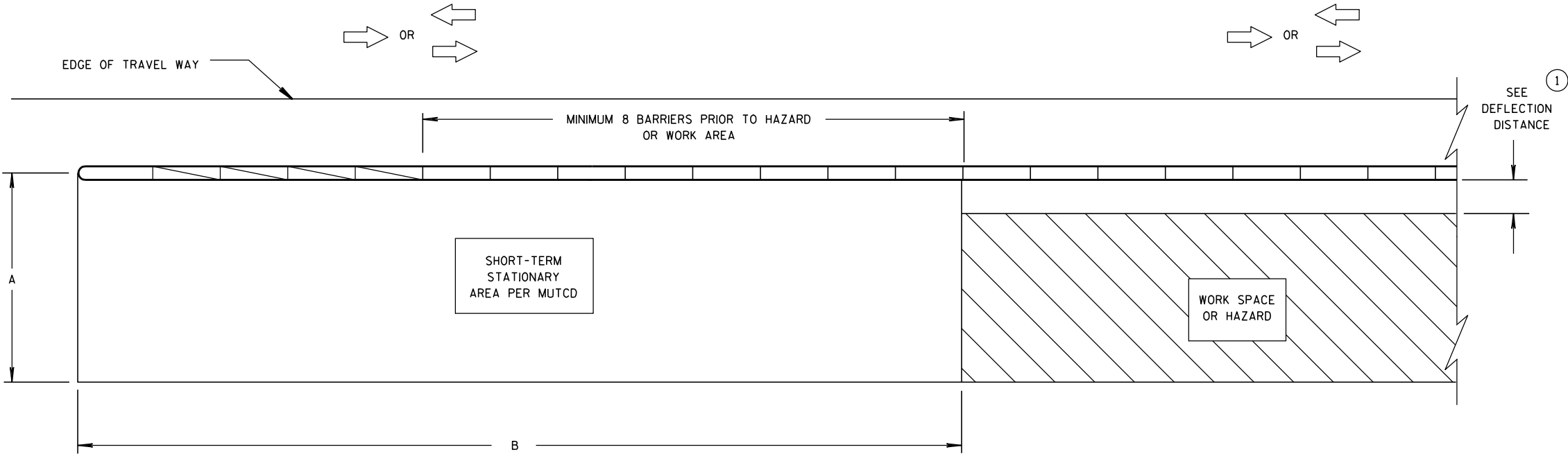
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014 DATE	/S/ Jerry H. Zogg ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA	



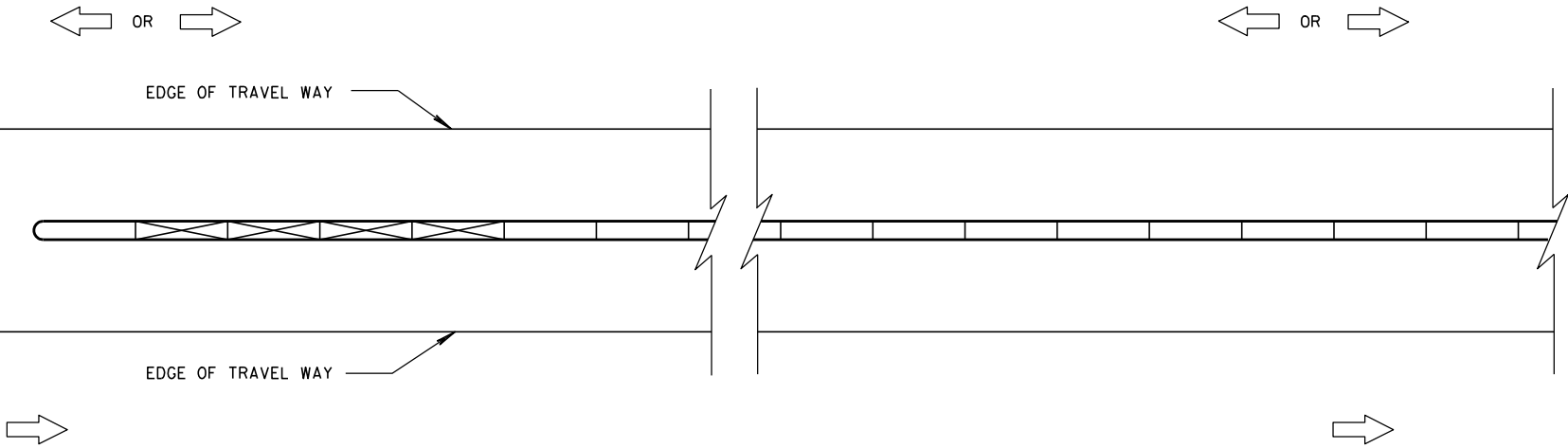
**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER**

DIMENSION A TABLE ^②

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE ^②

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER**

LEGEND

DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

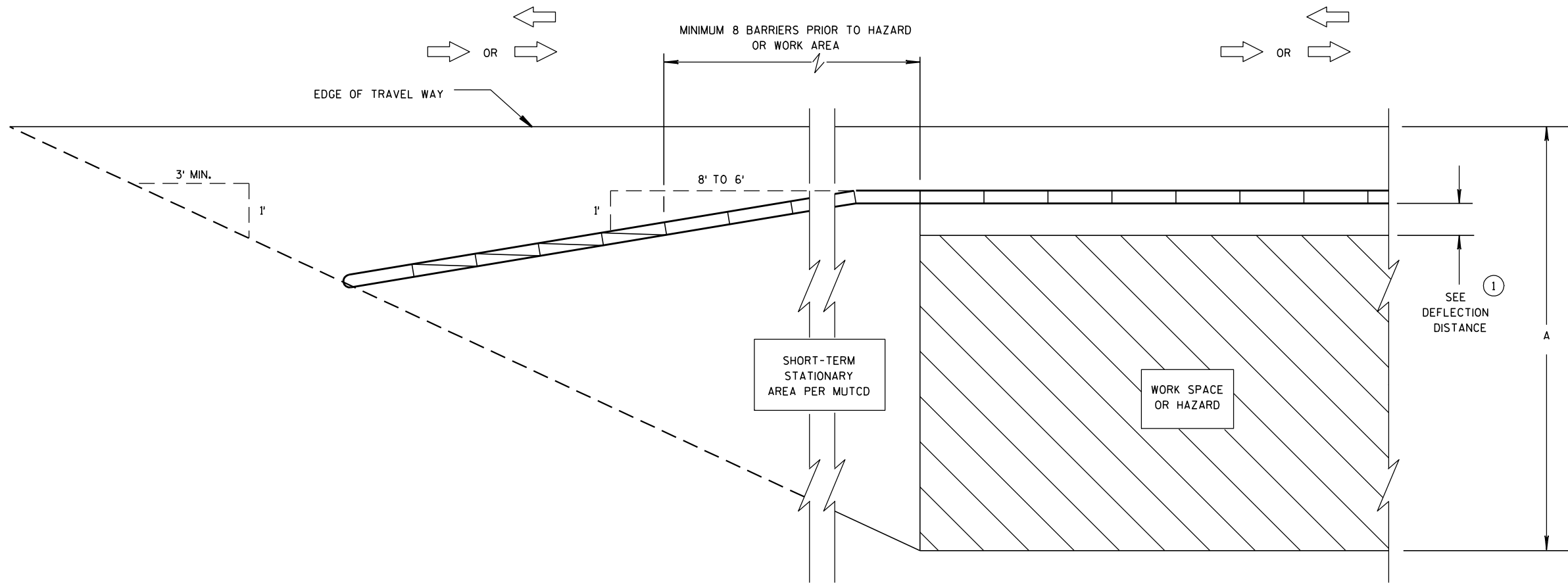
FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

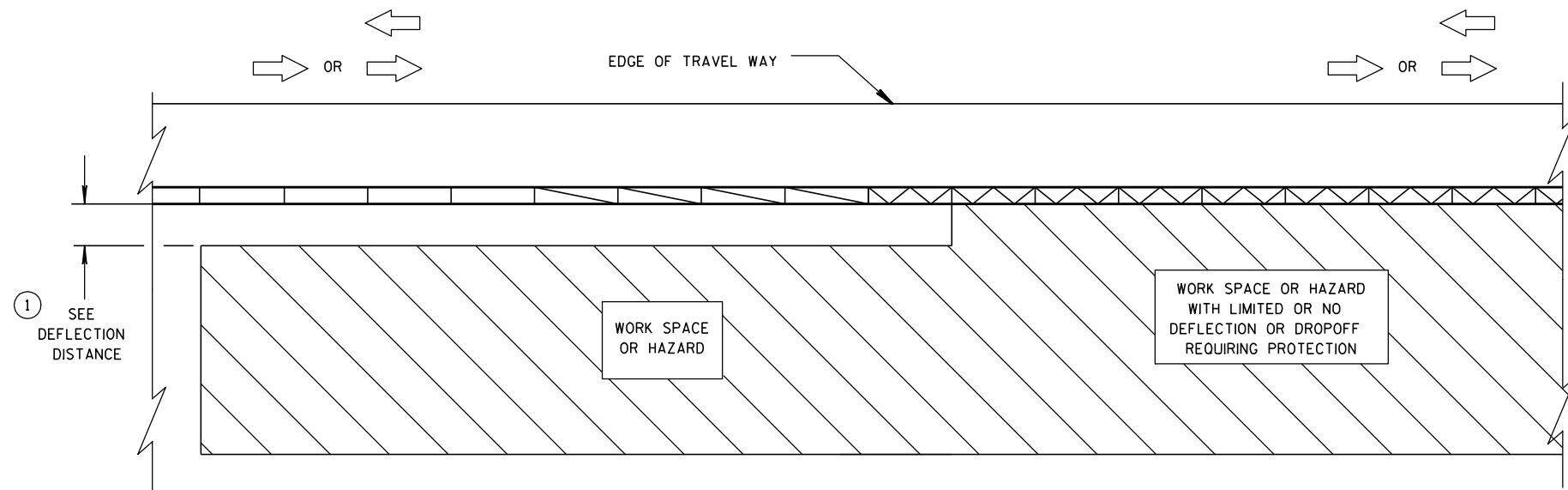
- ① FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.
- ② VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION**

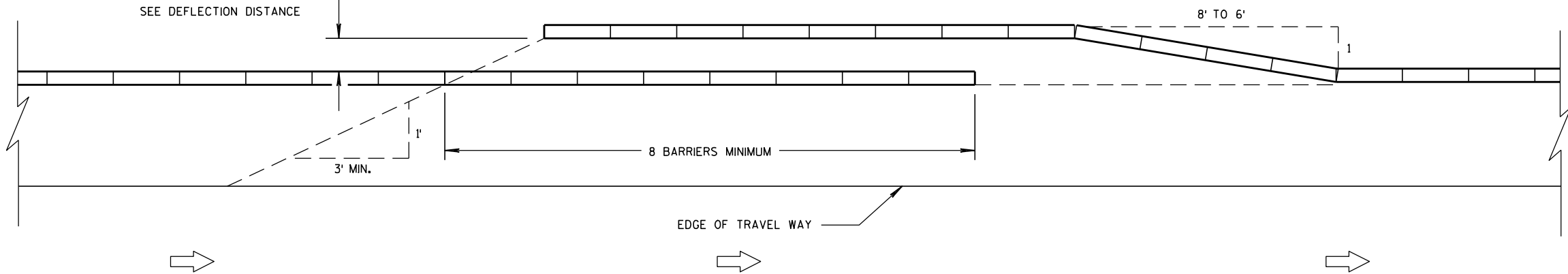


**TRANSITION FROM FREE STANDING TEMPORARY BARRIER
TO ANCHORED BARRIER**

LEGEND

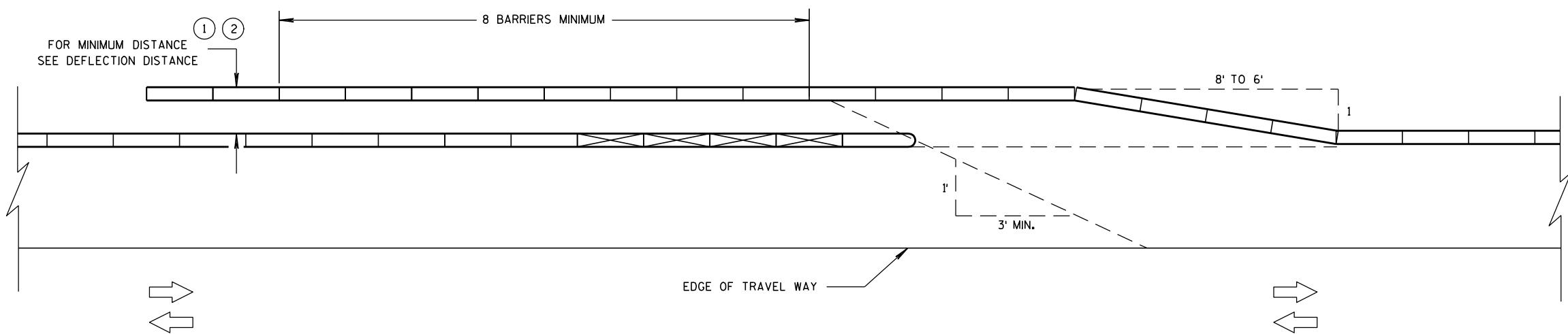
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

FOR MINIMUM DISTANCE
SEE DEFLECTION DISTANCE

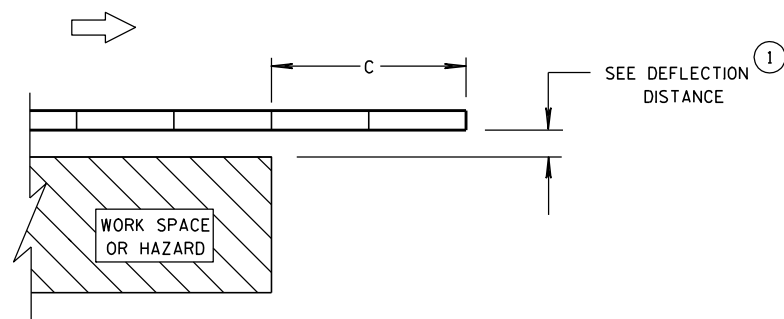


TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC

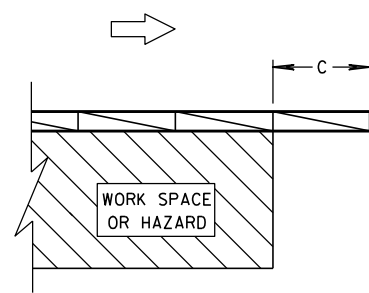
FOR MINIMUM DISTANCE
SEE DEFLECTION DISTANCE



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**



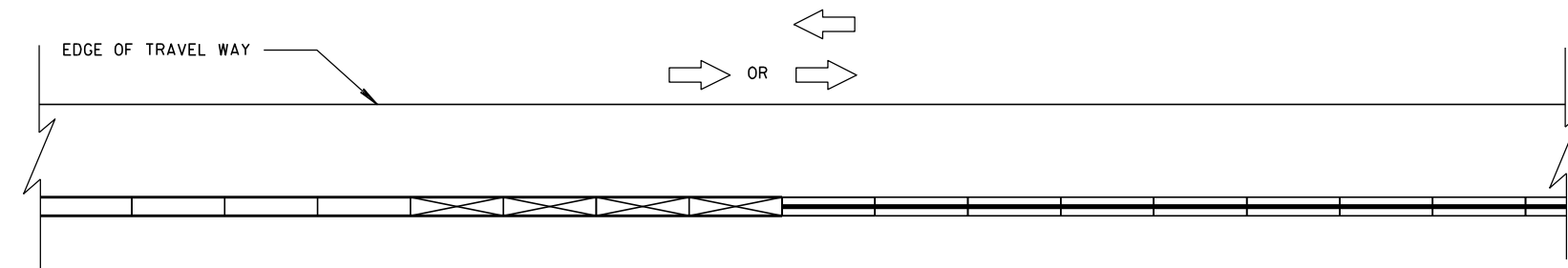
**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

LEGEND

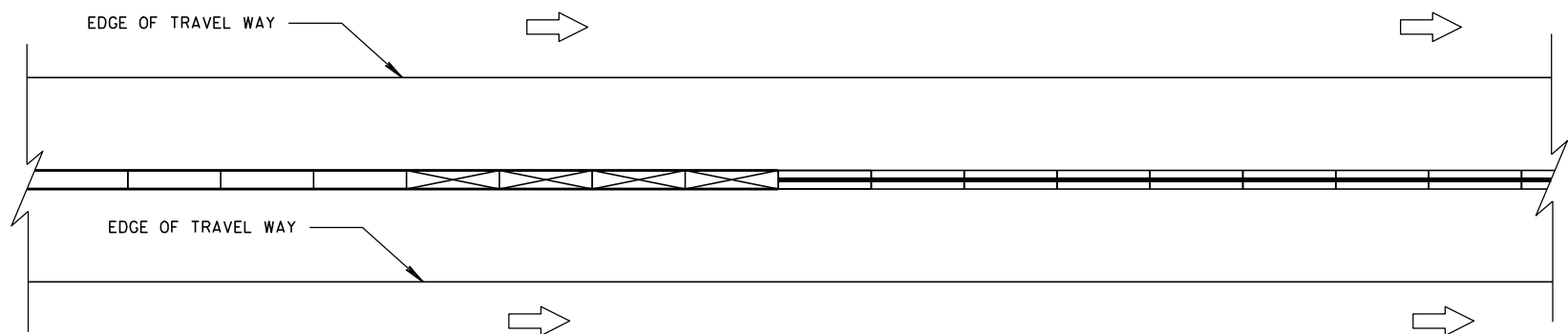
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



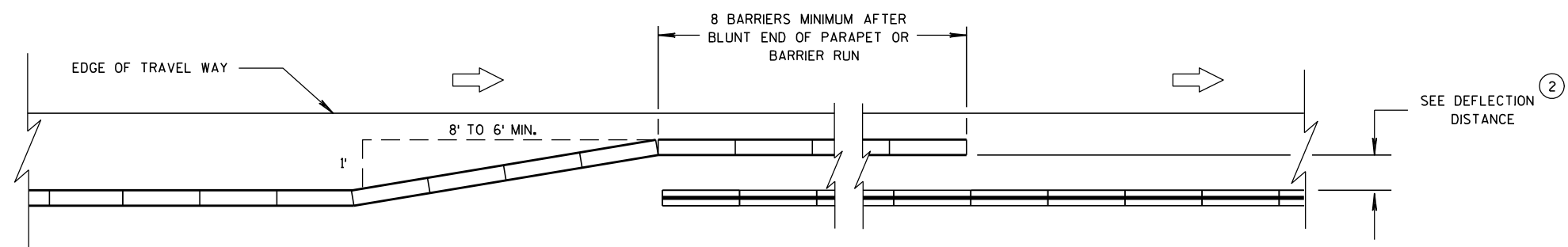
**CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE**



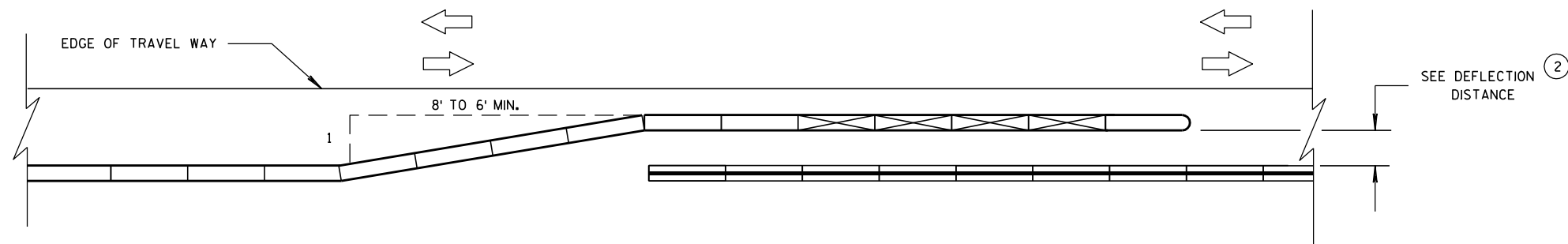
**CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES**

LEGEND

DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	



**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC**


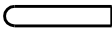




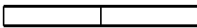


**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC**

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

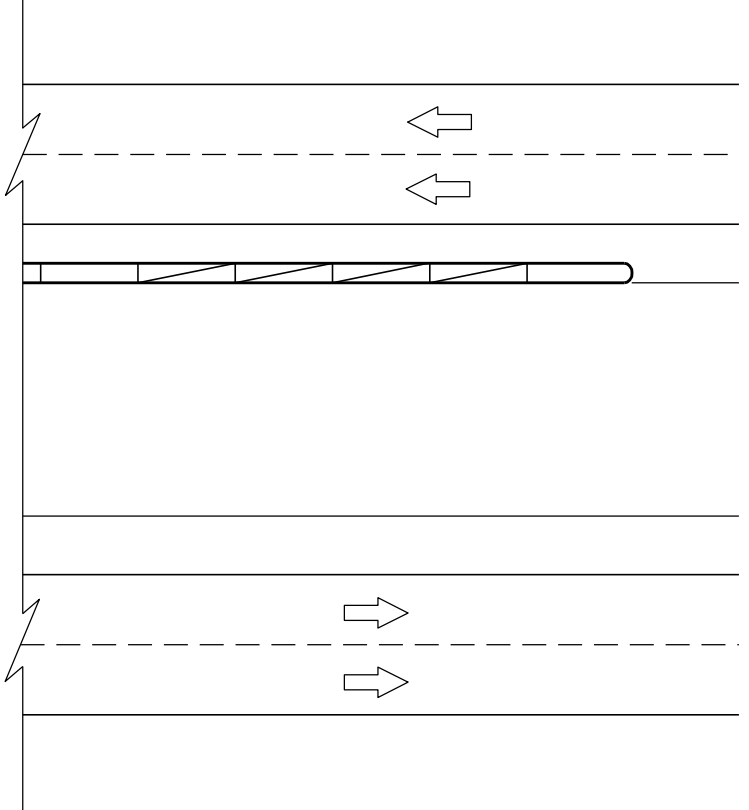
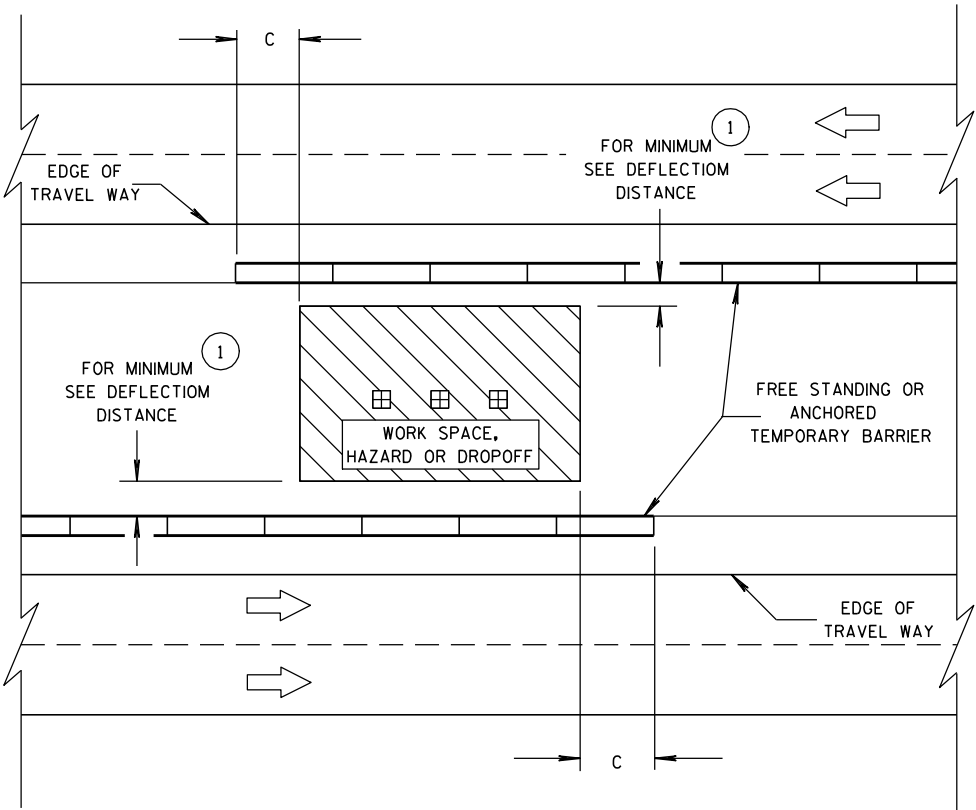
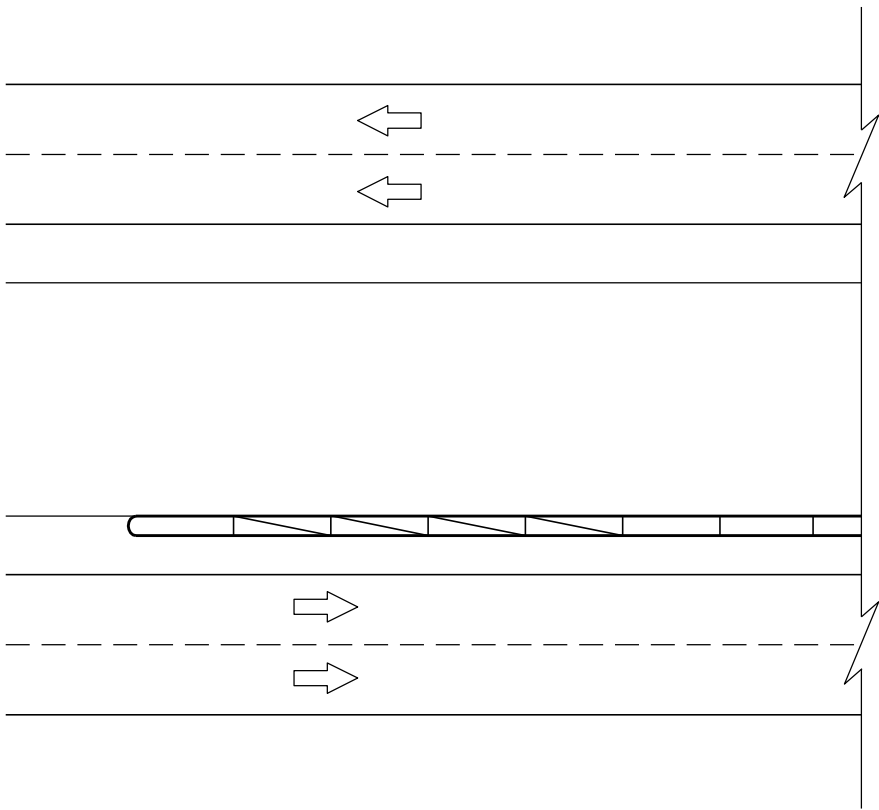
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

DIMENSION C TABLE

2

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100

6



6

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

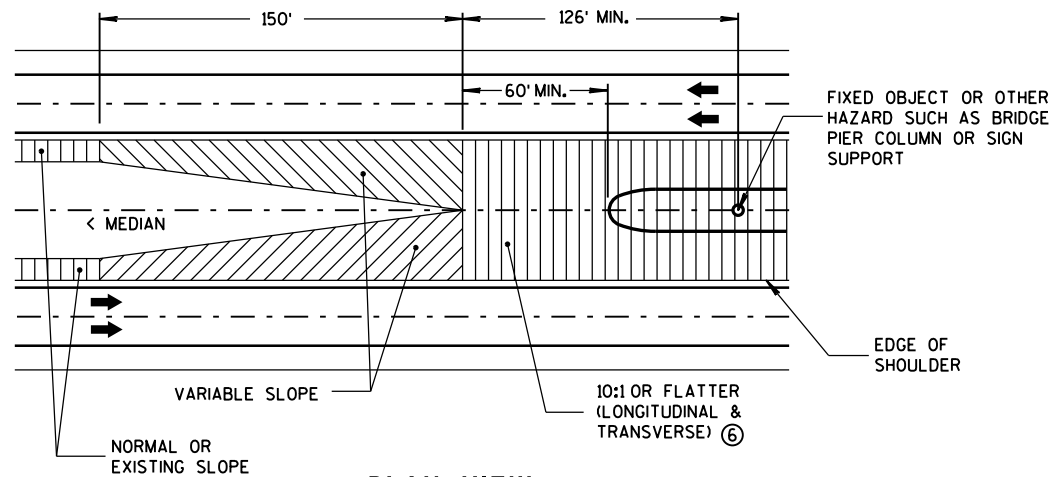
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
FHWA

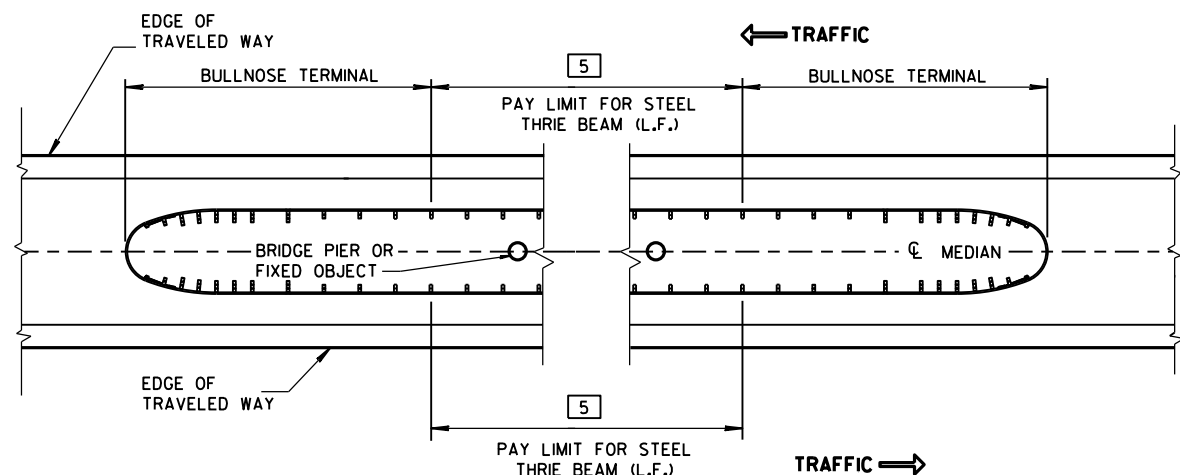
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

S.D.D. 14 B 8-1e

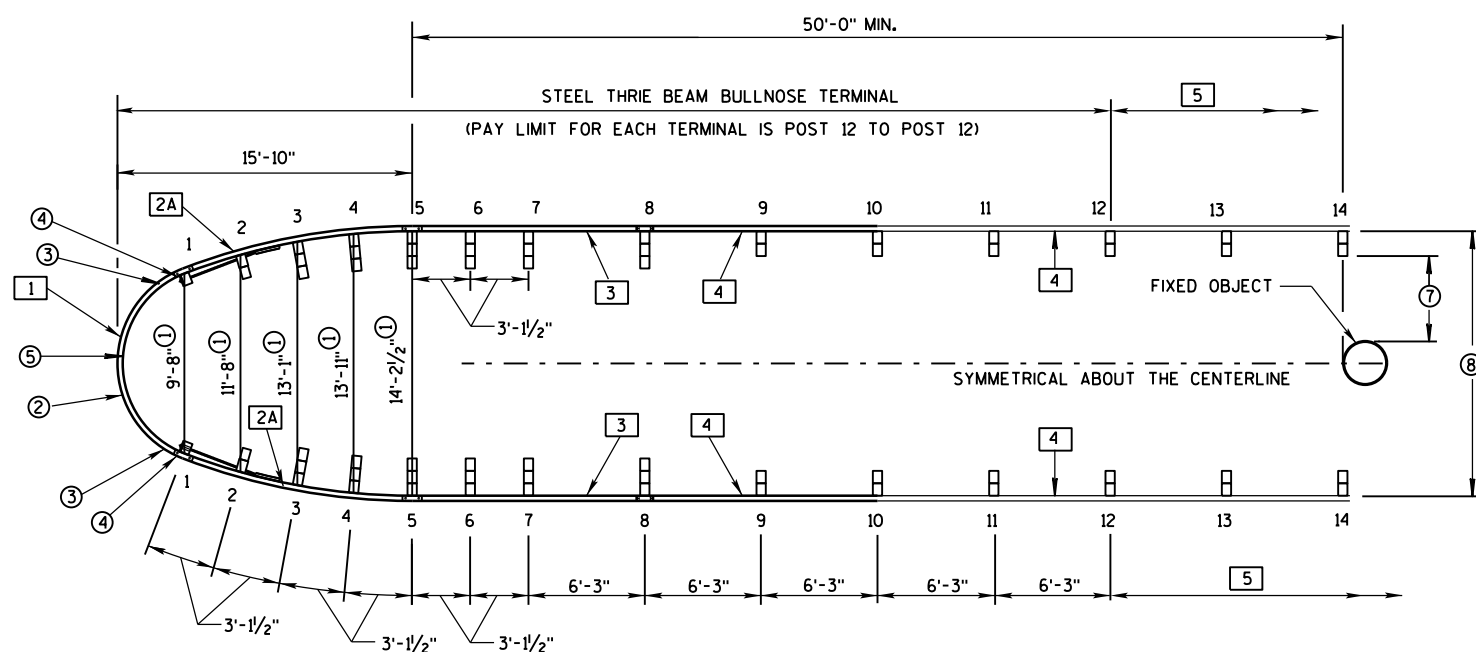
S.D.D. 14 B 8-1e



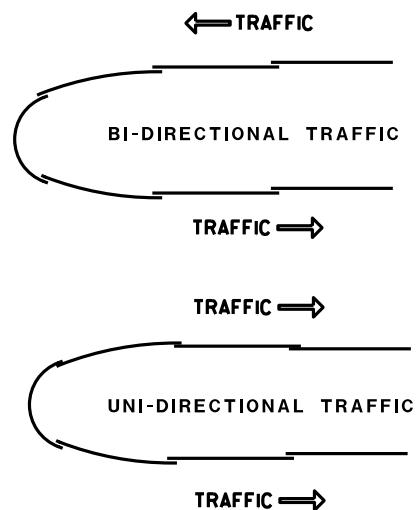
**PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)**



MEDIAN HAZARD PROTECTION PAY LIMITS



**PLAN VIEW
TYPICAL BULLNOSE LAYOUT**



**LAPPING DETAIL
(ALL INSTALLATIONS)**

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

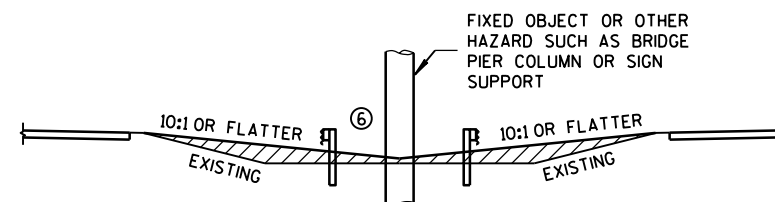
BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

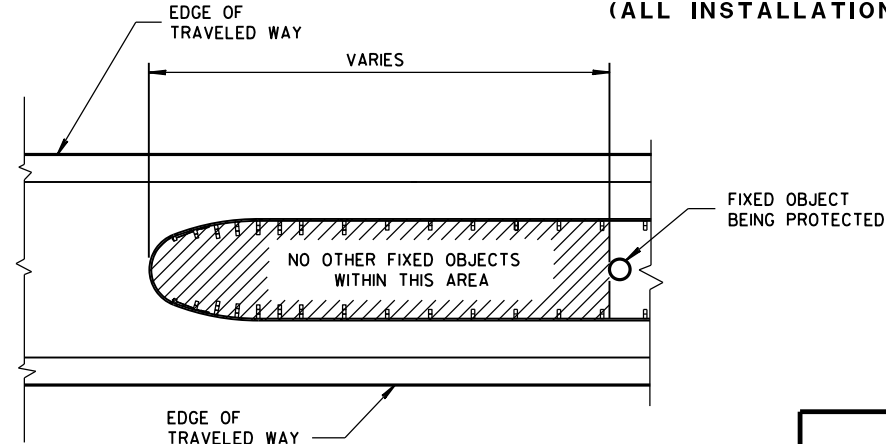
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

- ① SLOTTED THRIE BEAM RAIL NO.1. (POST 1 TO POST 1)
- ②A SLOTTED THRIE BEAM RAIL NO.2A. (POST 1 TO POST 5)
- ③ SLOTTED THRIE BEAM RAIL NO.3. (POST 5 TO POST 8)
- ④ UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)
- ⑤ BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO.5.

- ① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- ② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- ③ NOSE CABLE W/SWAGGED END BUTTONS.
- ④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- ⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO.1 ON EITHER SIDE OF THE NOSE.
- ⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.
- ⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.
- ⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2 1/2" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



**MEDIAN GRADING SECTION
(ALL INSTALLATIONS)**



**HAZARD FREE
AREA INSIDE BULLNOSE**

**STEEL THRIE BEAM
BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

SLOTTED THRIE BEAM RAIL NO. 2B. (POST 1 TO POST 5)

SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

UNBENT STANDARD THRIE-BEAM RAIL NO. 4. (POST 8 TO POST 10 & POST 10 TO POST 12)

BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

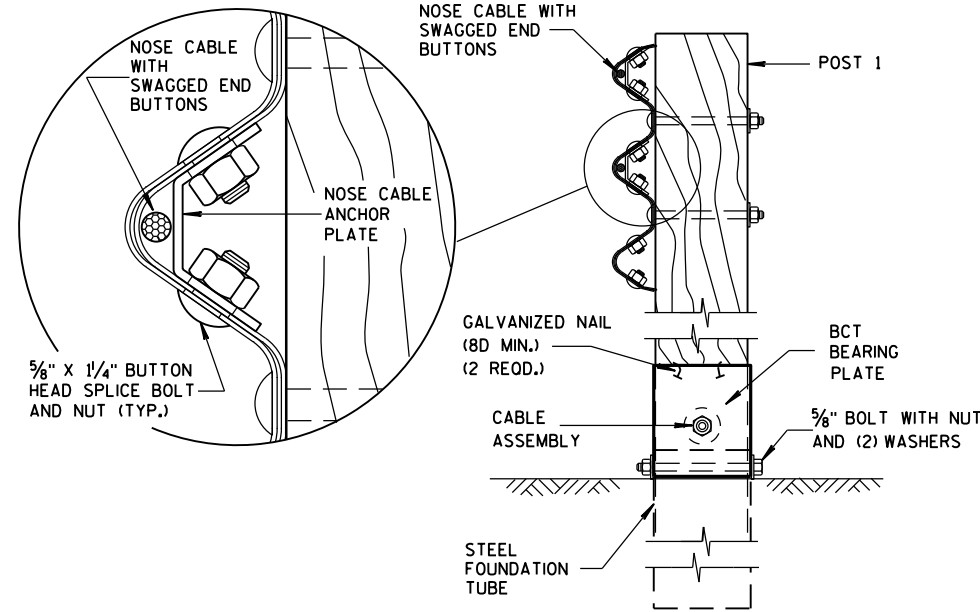
- ① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.
- ② TAPER BEGINNING AT POST NO.1 MUST CONTINUE TO POST NO.5. PAST POST NO.5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)
- ③ FOR MEDIANS WIDER THAN 14'-2 1/2" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



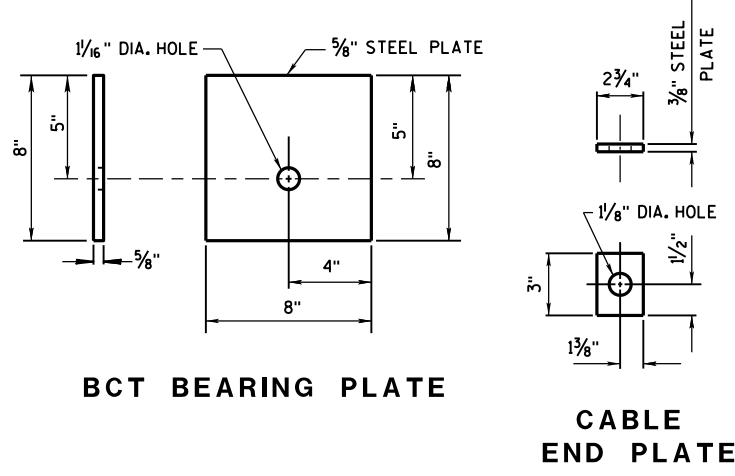
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

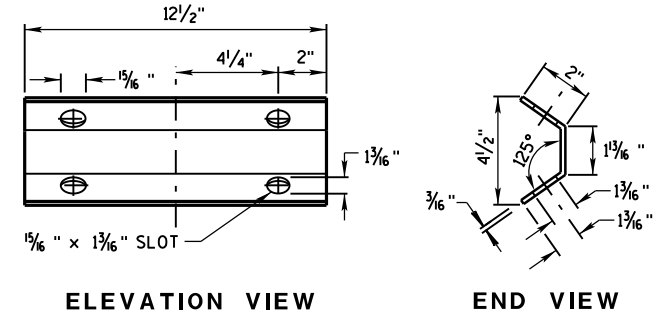


NOSE CABLE ASSEMBLY AT POST NO. 1



BCT BEARING PLATE

CABLE END PLATE

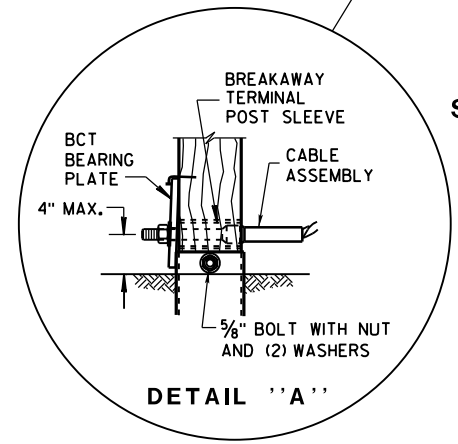


ELEVATION VIEW

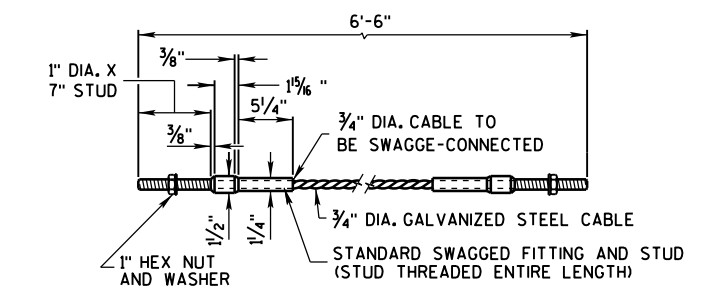
END VIEW

NOSE CABLE ANCHOR PLATE

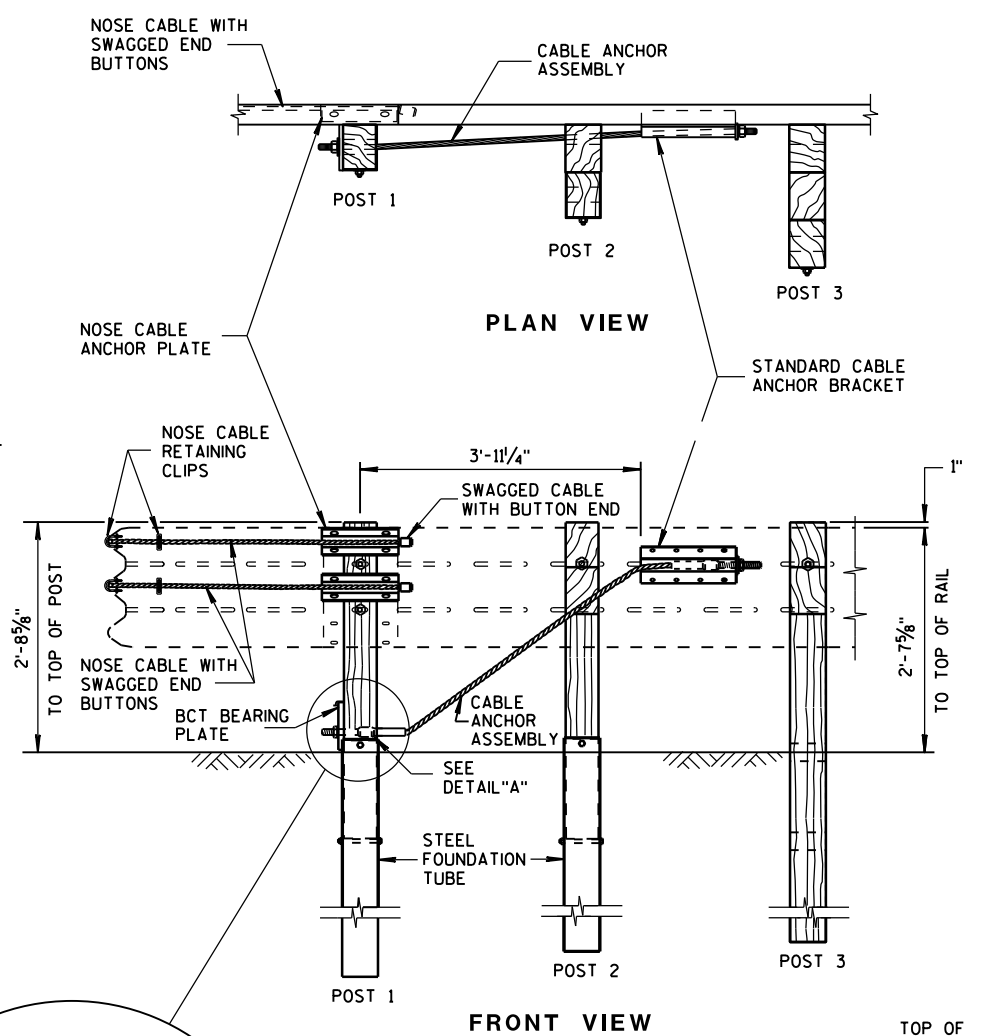
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



DETAIL 'A'



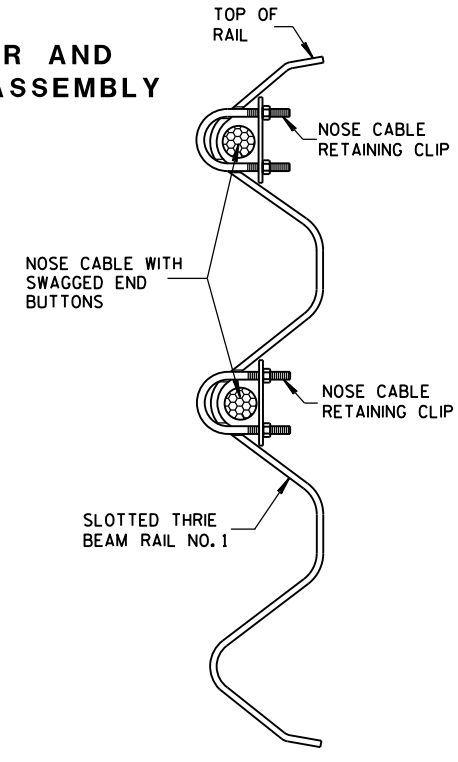
DETAILS OF CABLE ANCHOR ASSEMBLY



PLAN VIEW

FRONT VIEW

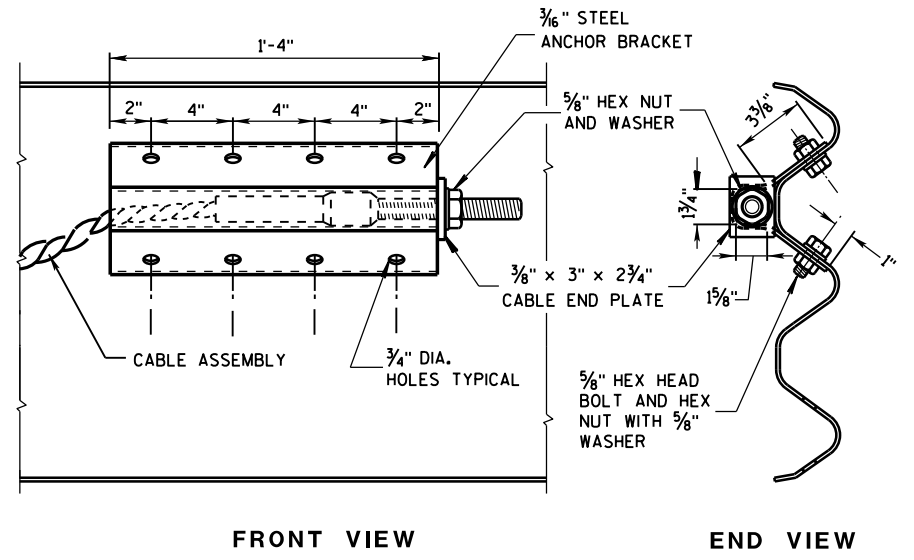
NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP

GENERAL NOTES

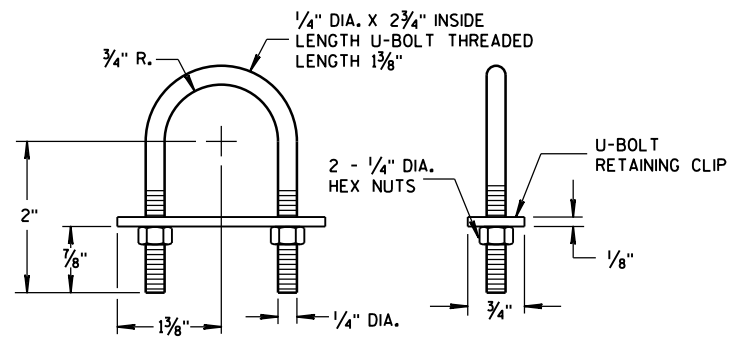
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



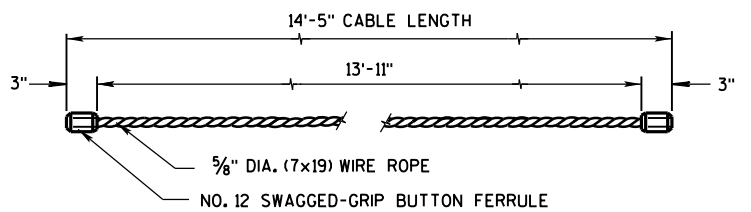
FRONT VIEW

END VIEW

DETAILS OF CABLE ANCHOR BRACKET



NOSE CABLE RETAINING CLIP

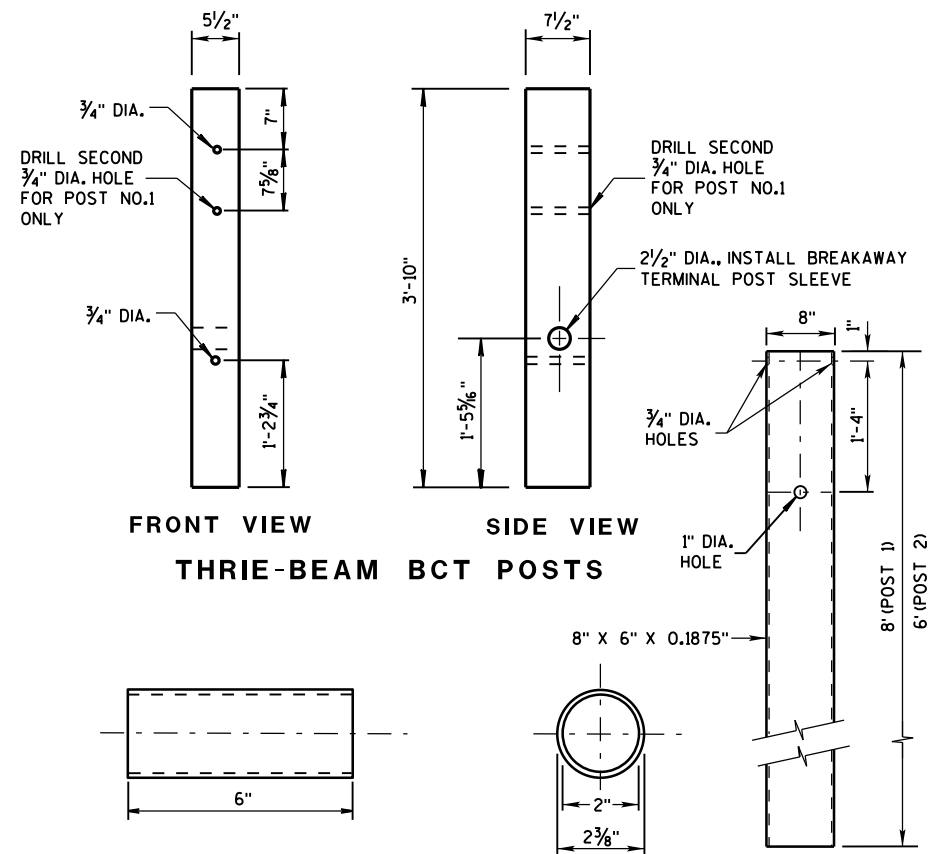


NOSE CABLE WITH SWAGGED END BUTTONS

TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGTH.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

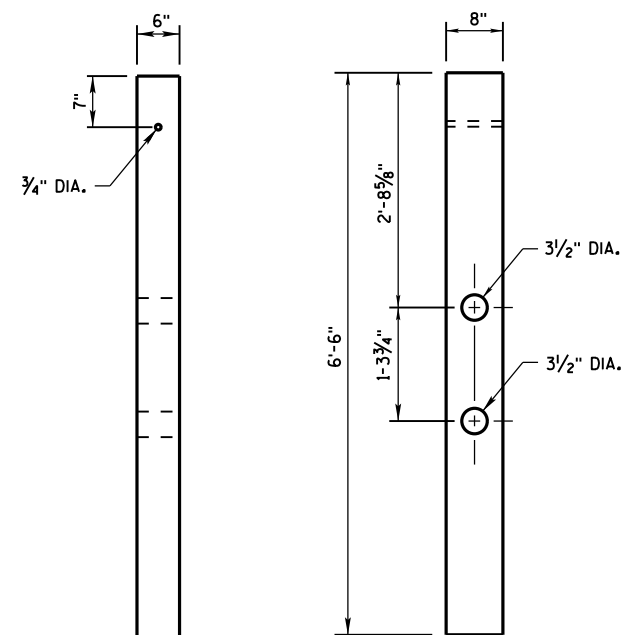


FRONT VIEW
THRIE-BEAM BCT POSTS

SIDE VIEW

BREAKAWAY TERMINAL
POST SLEEVE

STEEL
FOUNDATION TUBE



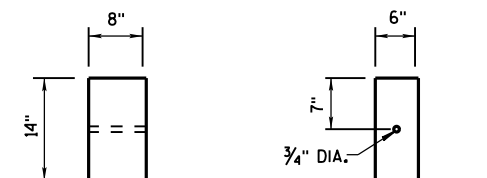
FRONT VIEW

SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

GENERAL NOTES

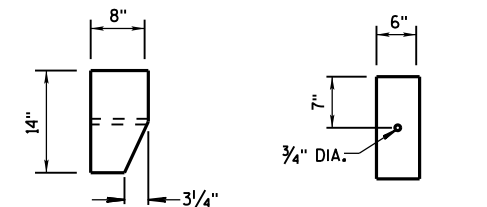
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



SIDE VIEW

FRONT VIEW

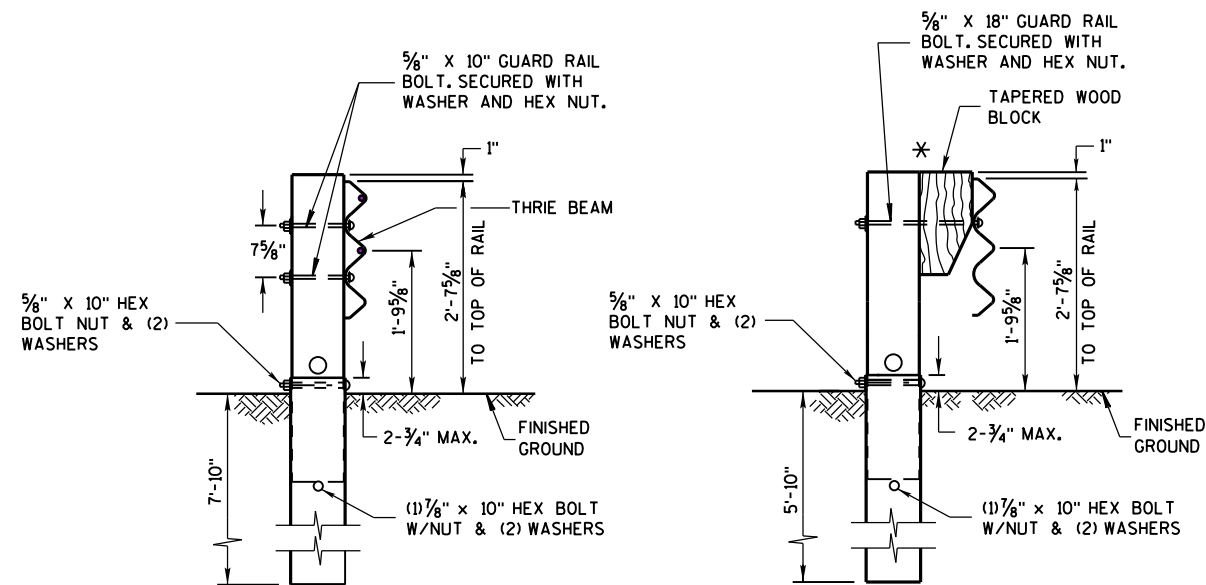
STANDARD WOOD BLOCK



SIDE VIEW

FRONT VIEW

TAPERED WOOD BLOCK

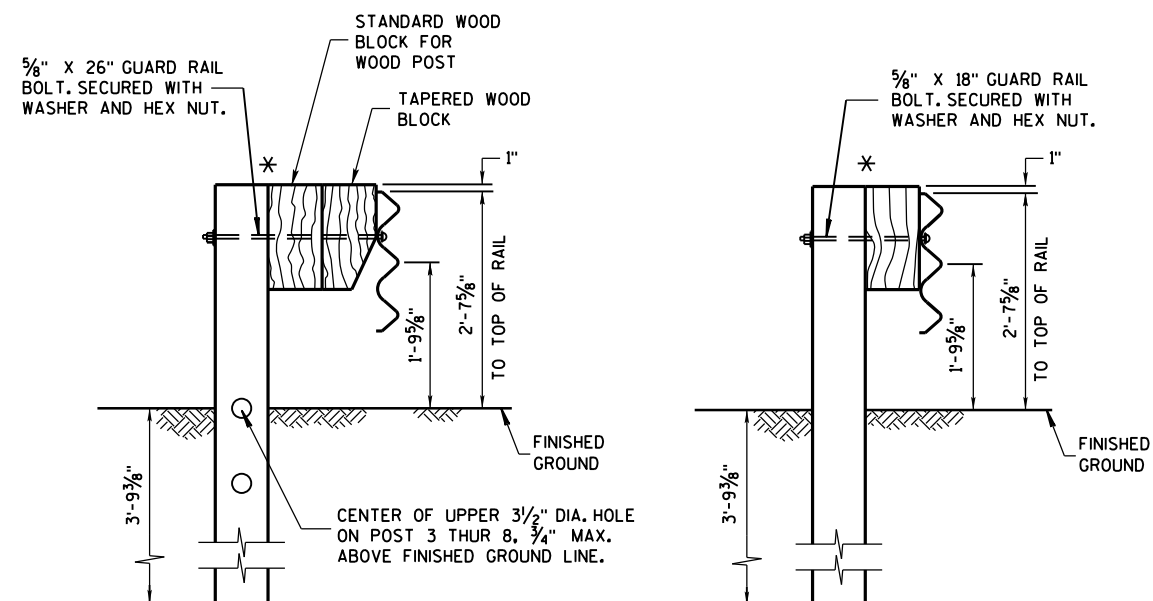


THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1

THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE
AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK
AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8

THRIE-BEAM POST
(6'-6" LONG POST
WITH 1'-2" BLOCK)

POST NO. 9,10,11, & 12
(ALSO USE FOR STEEL
THRIE BEAM BEYOND POST 12)

* IF NEEDED DUE TO AN UNDERGROUND
OBSTACLE ADD 1 ADDITIONAL STANDARD
BLOCKOUT TO POST.

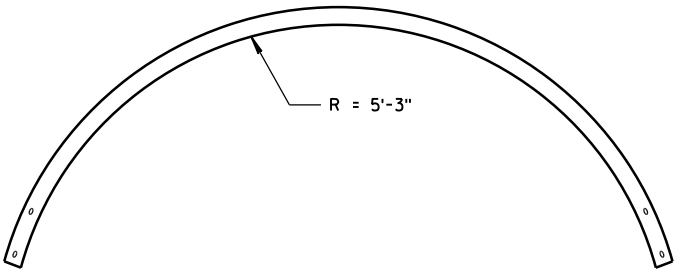
STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

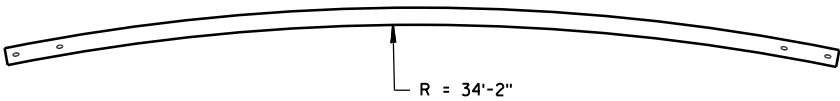
GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

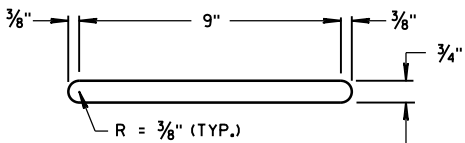
- ① SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.
② SLOT SIZE AND SPACING SYMMETRIC.
③ SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".
④ SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.
⑤ SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



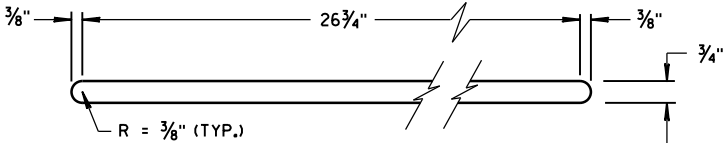
PLAN VIEW
SLOTTED THRIE BEAM RAIL NO. 1



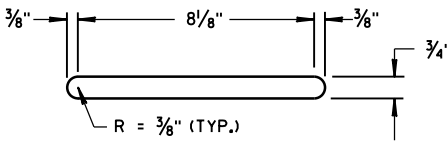
PLAN VIEW
SLOTTED THRIE BEAM RAIL NO. 2A



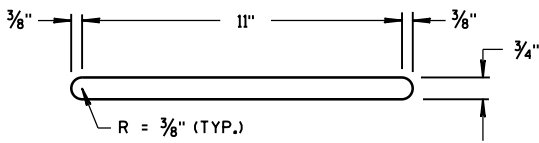
SLOT A



SLOT B

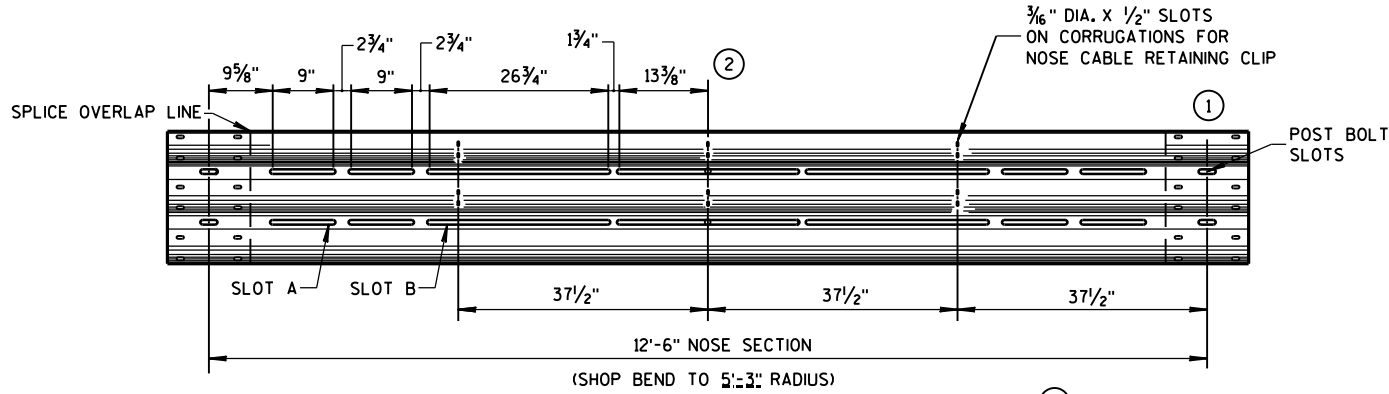


SLOT C

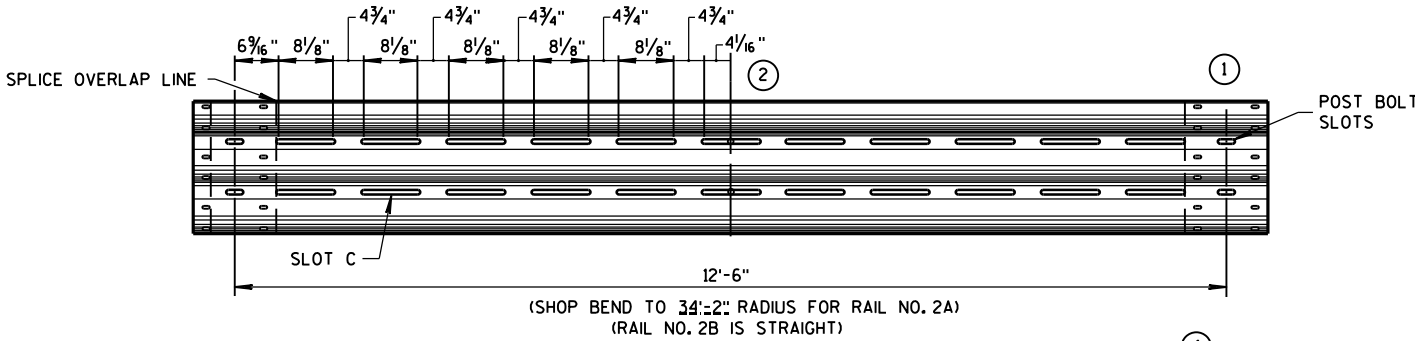


SLOT D

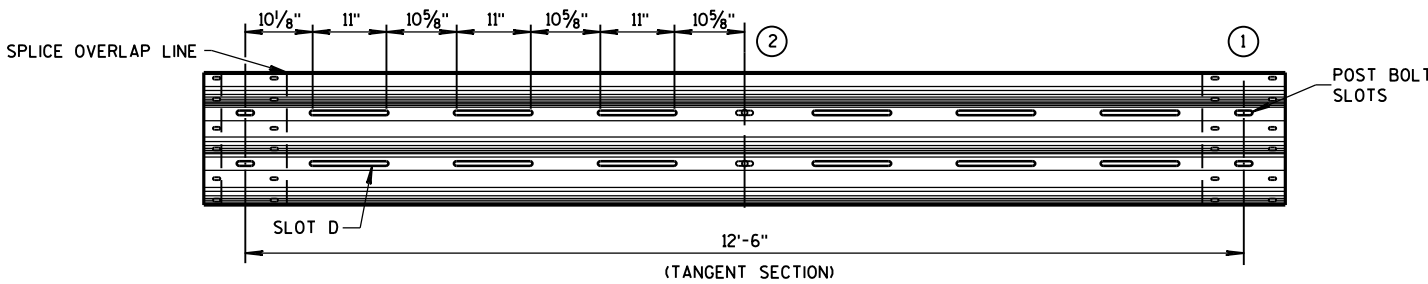
SLOT DETAILS



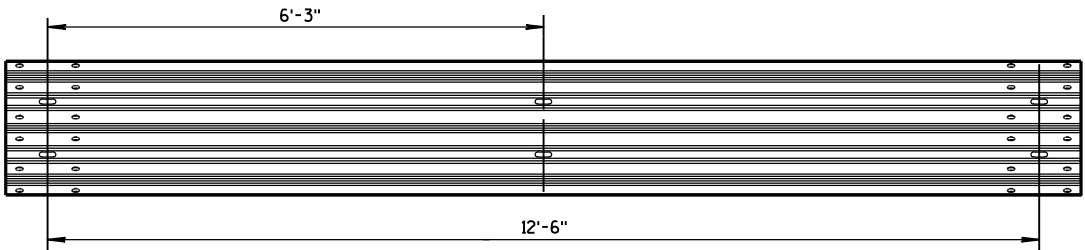
SLOTTED THRIE BEAM RAIL NO. 1



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B



SLOTTED THRIE BEAM RAIL NO. 3

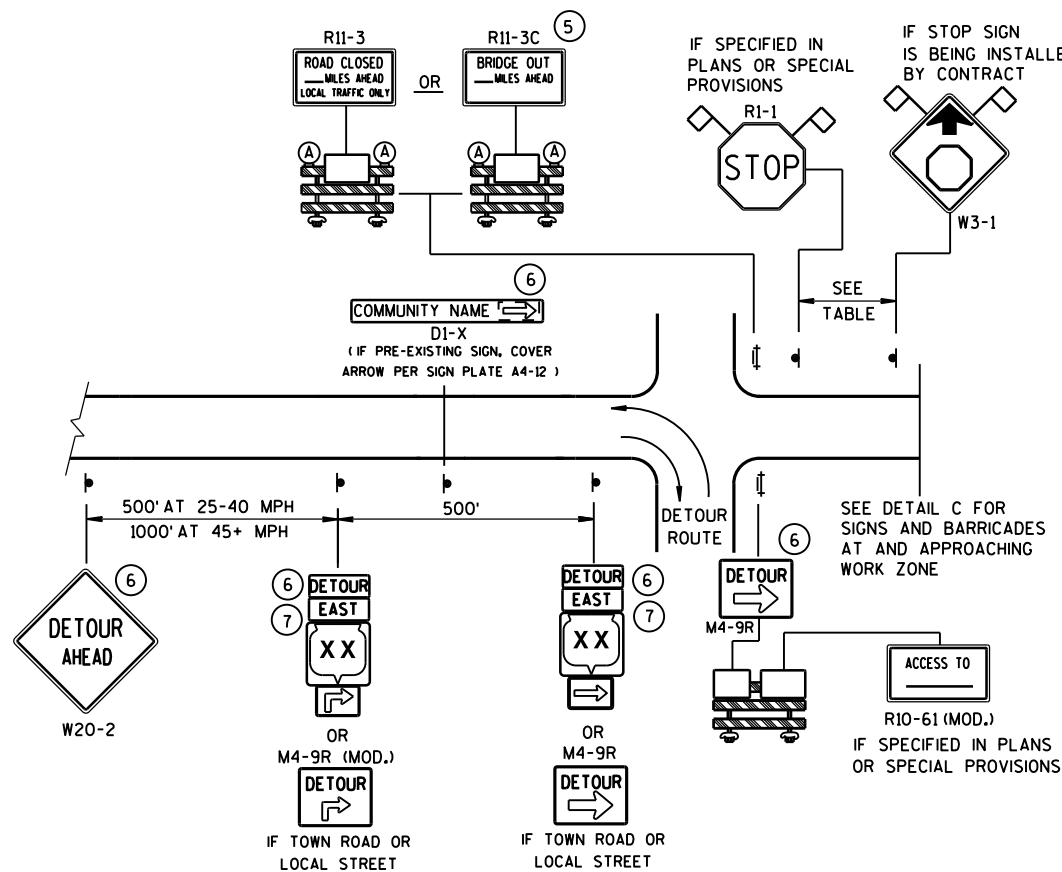


UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

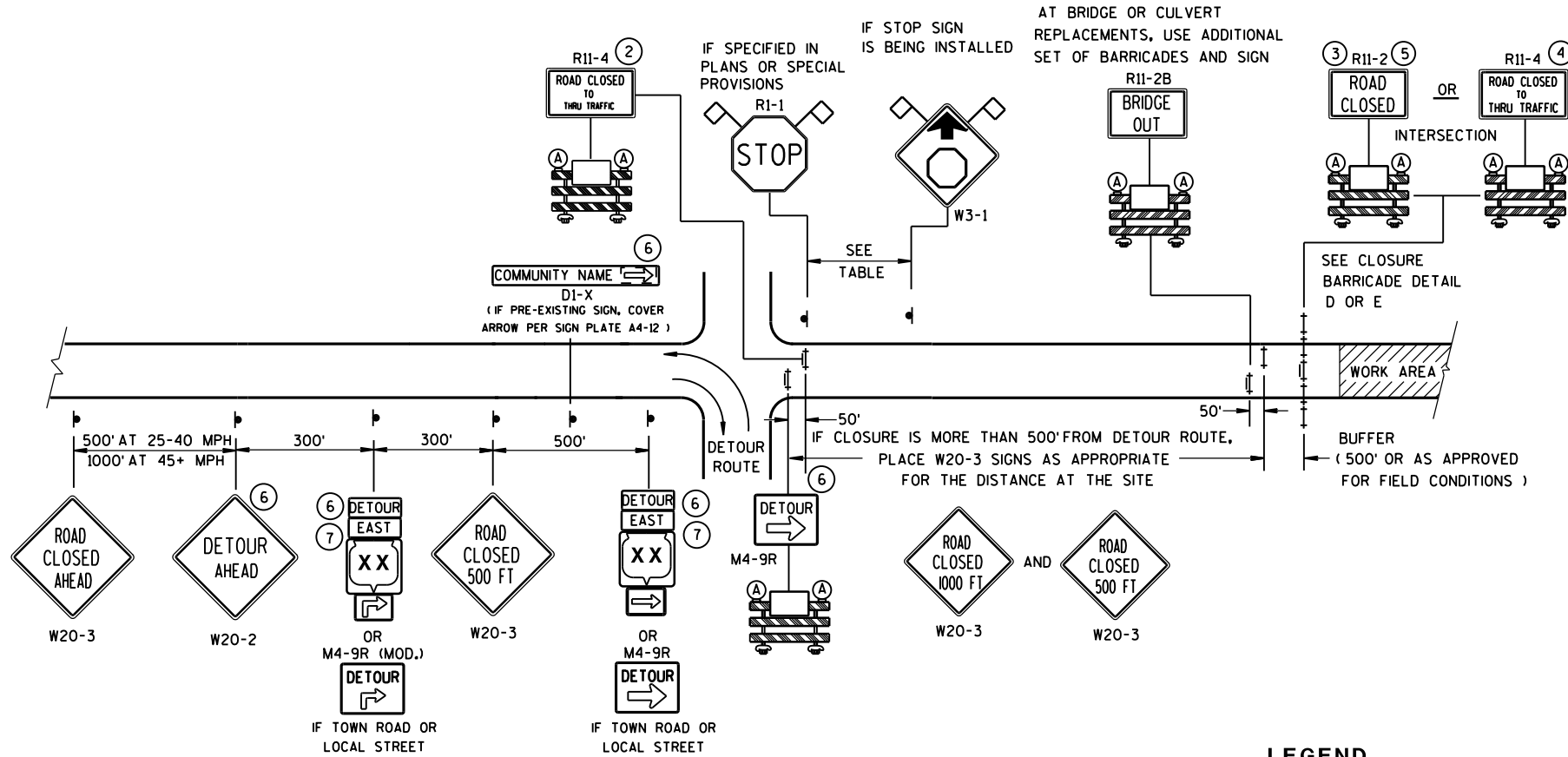
STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

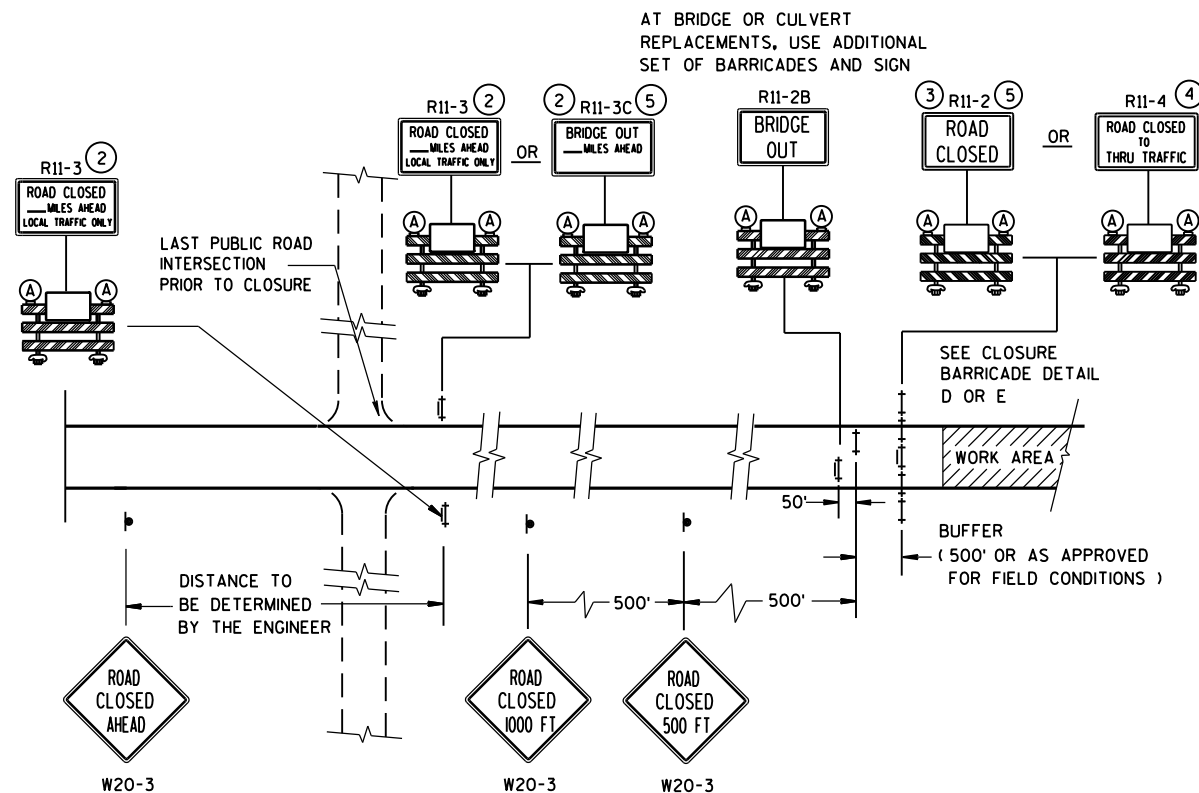
APPROVED
June 2014 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 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)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

DETOUR EAST M4-8 M3-X
XX OR COUNTY XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

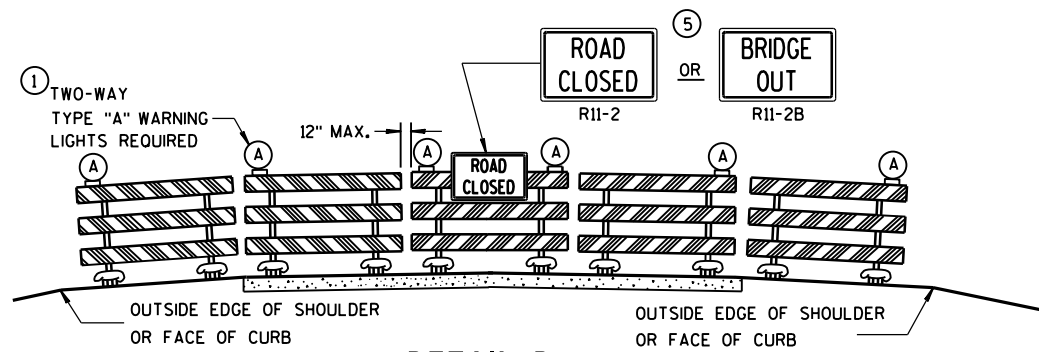
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

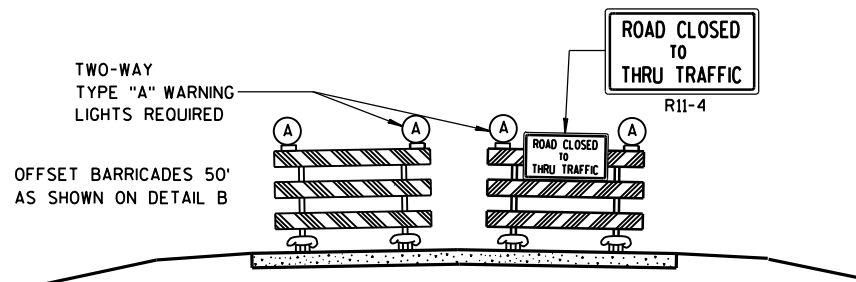
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

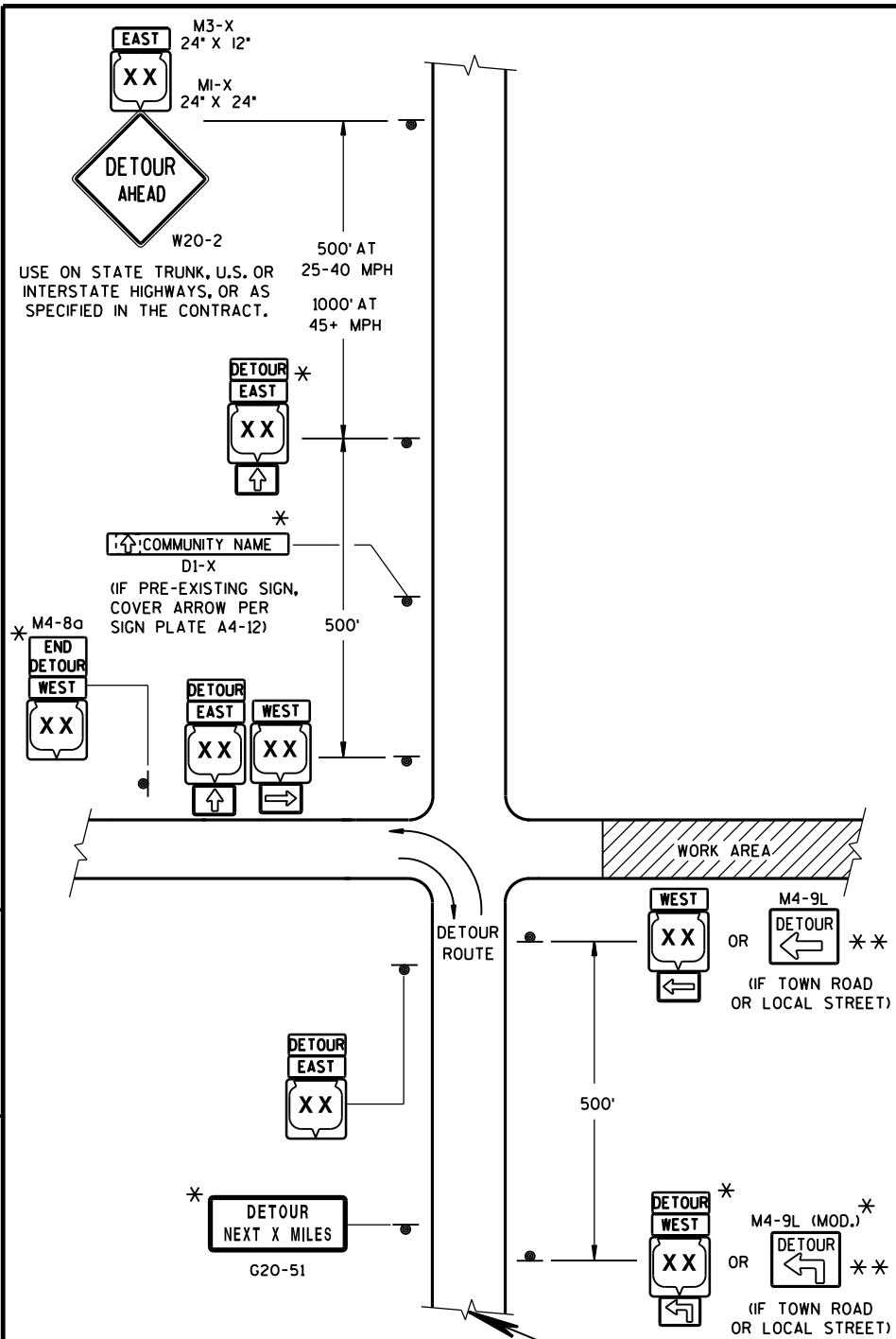
R1-1 SHALL BE 36" X 36".

- 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



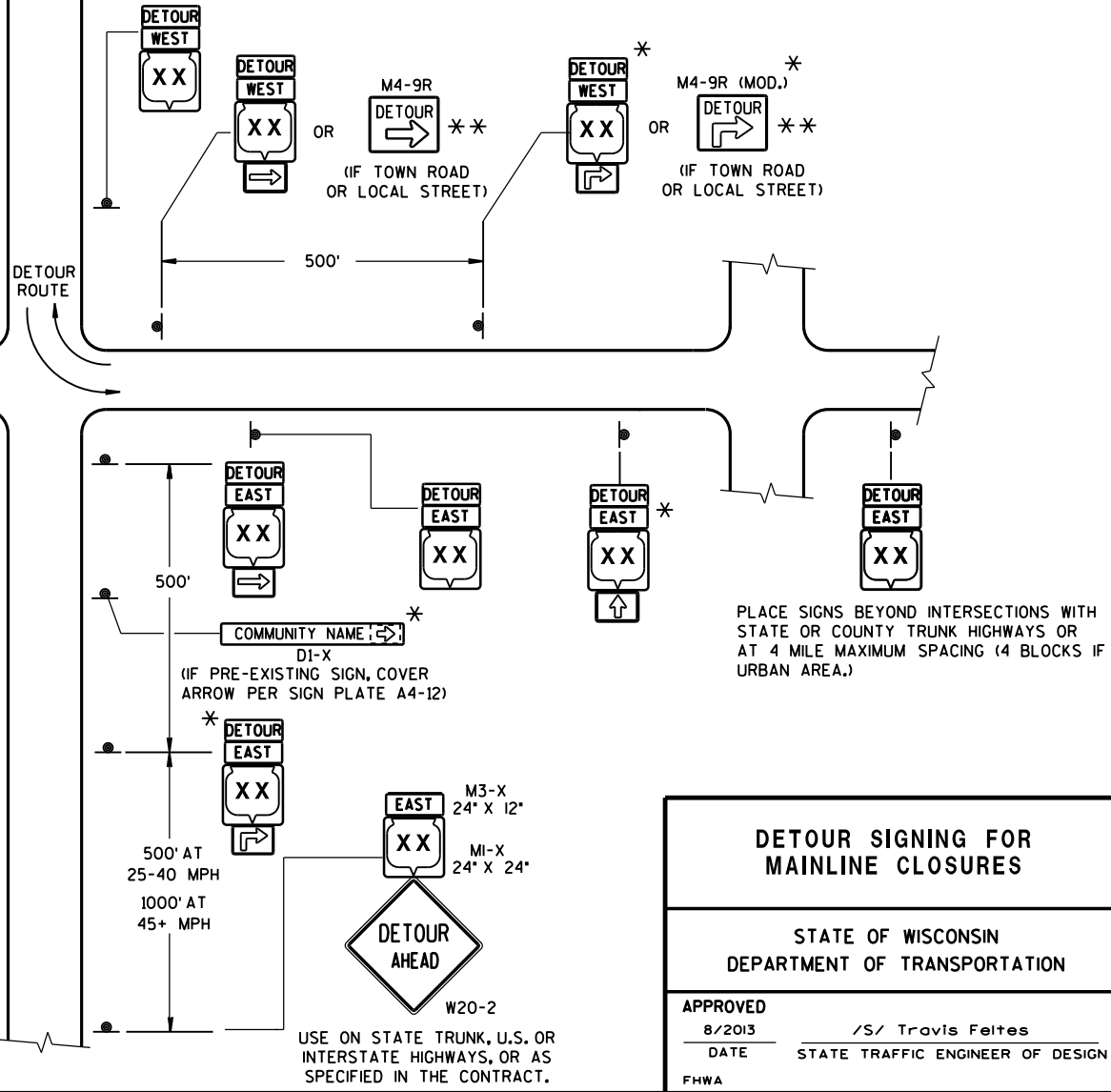
THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

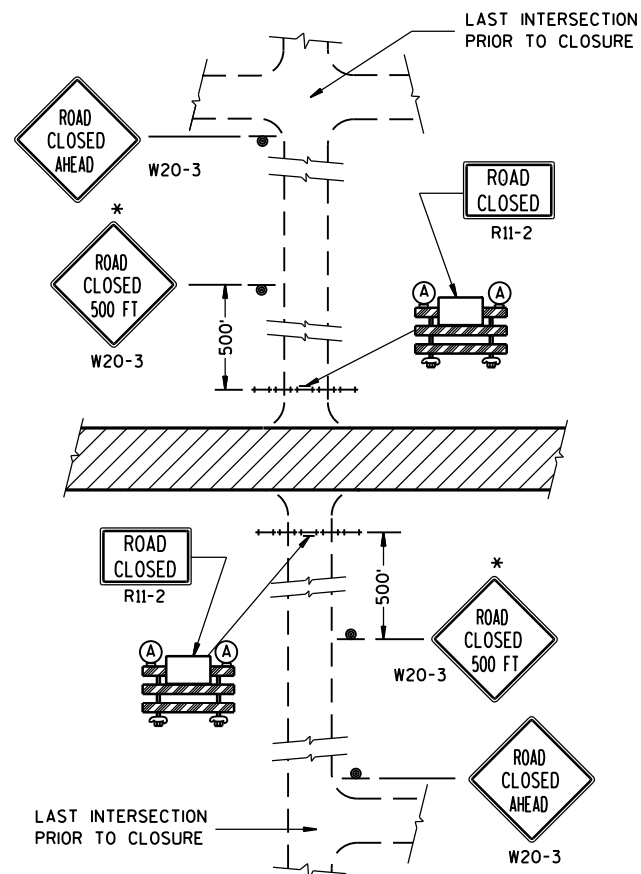
DETAIL F
DETOUR SIGNING

GENERAL NOTES

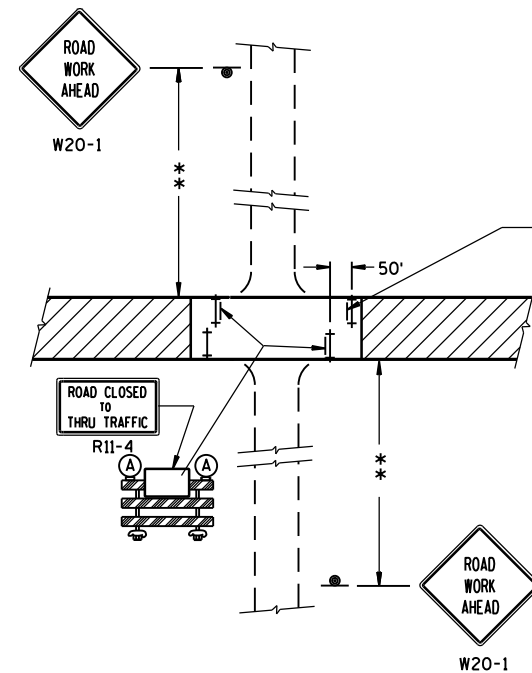
- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC 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". (30" X 15" 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 SHALL BE 30" X 24".
 - M4-8a SHALL BE 24" X 18".
 - G20-51 SHALL BE 60" X 24".
 - W20-2 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.



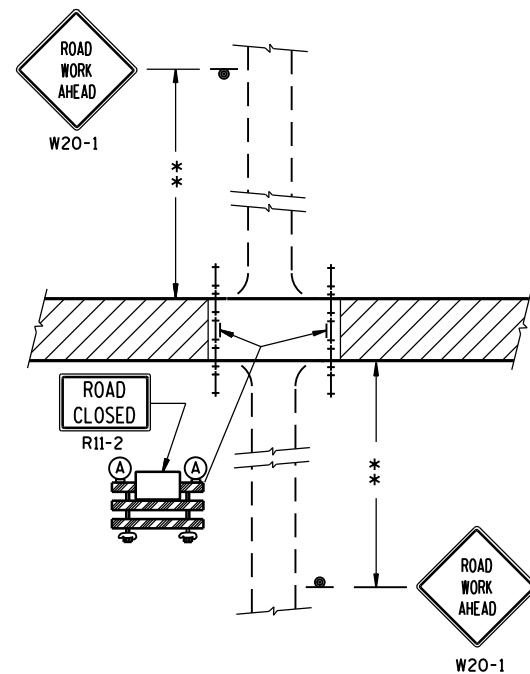
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



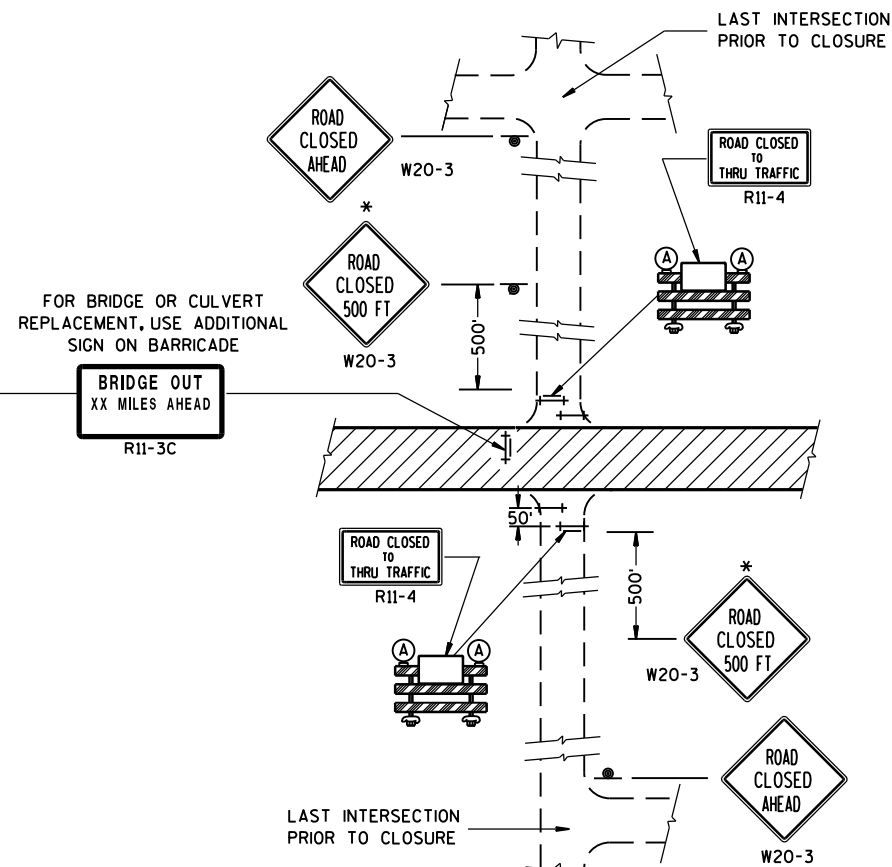
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO 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 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 RE-ESTABLISHED.

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 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 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

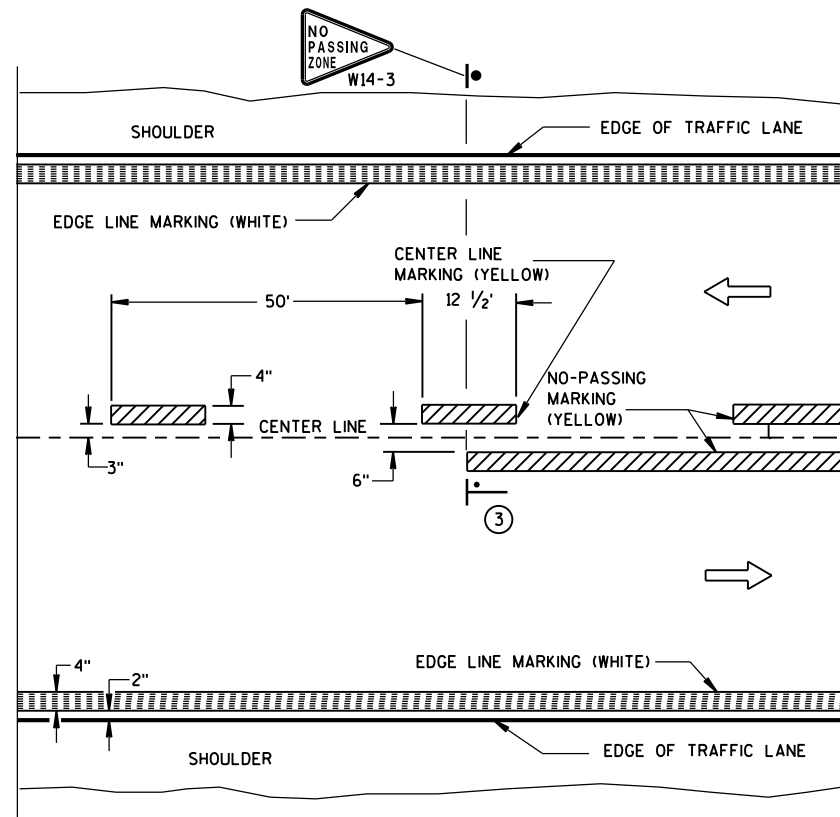
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

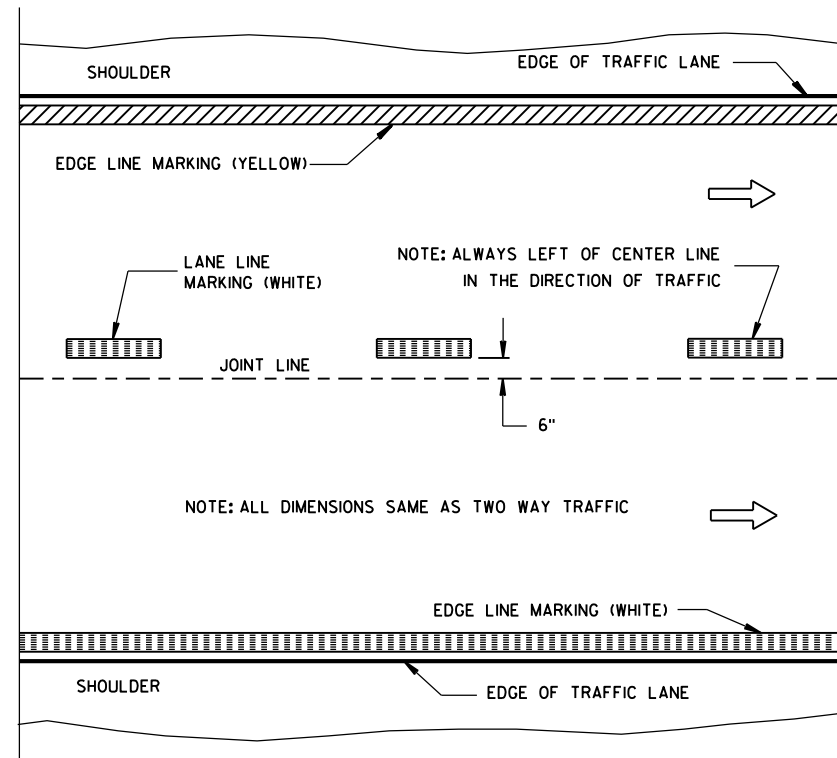
8/2013 /S/ Travis Feltes

DATE STATE TRAFFIC ENGINEER OF DESIGN

FHWA

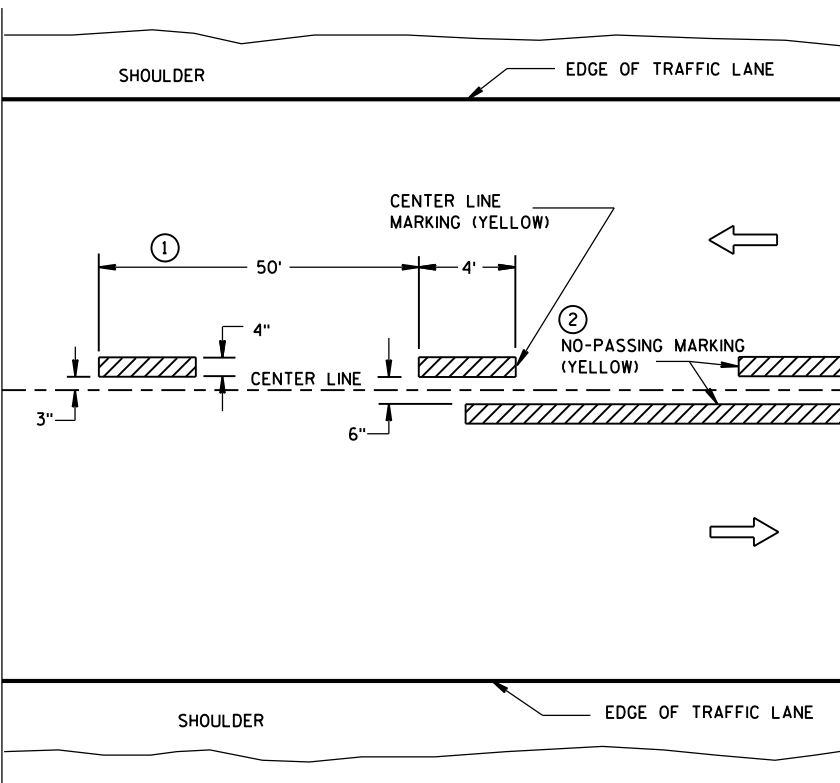


TWO WAY TRAFFIC

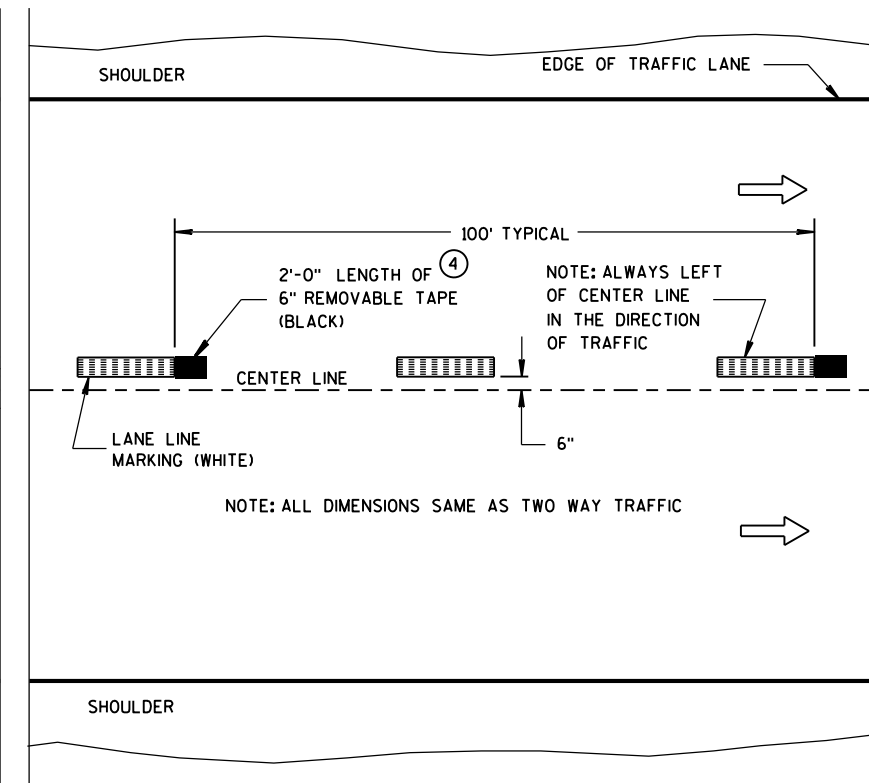


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

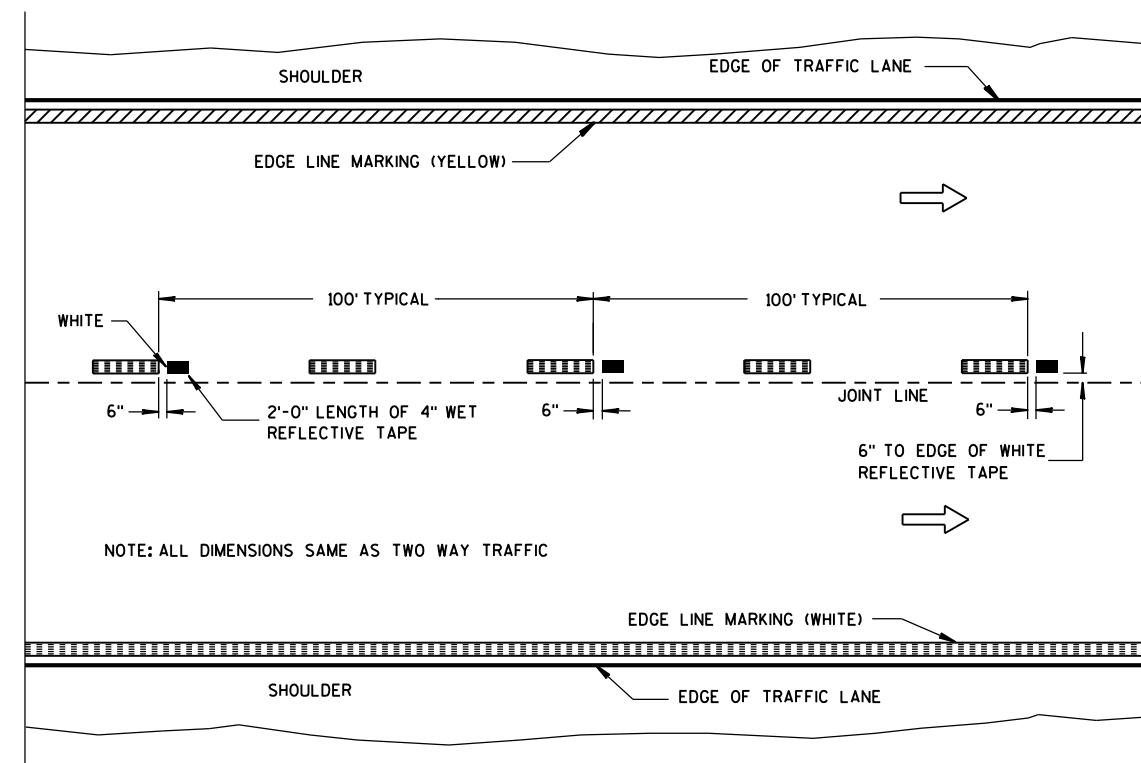
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

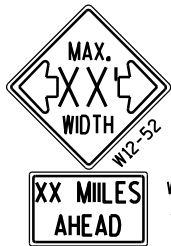
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013
DATE
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA



INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).



LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



R2-1
48"x60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

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

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.

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 OR AS APPROVED BY THE ENGINEER.

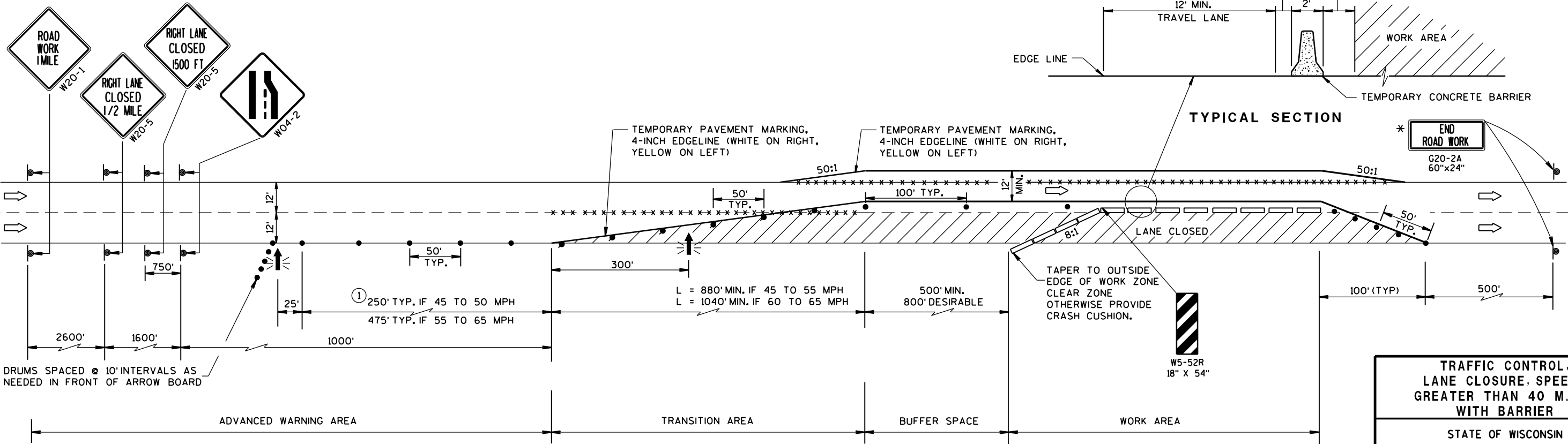
- ① CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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 IF LANE CLOSURE IS TO BE IN PLACE FOR 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.

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 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.



TRAFFIC CONTROL,
LANE CLOSURE, SPEEDS
GREATER THAN 40 M.P.H.
WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

LEGEND

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

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 DESIREABLE) DISTANCE TO EXISTING SIGNS.

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

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 "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD 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 IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

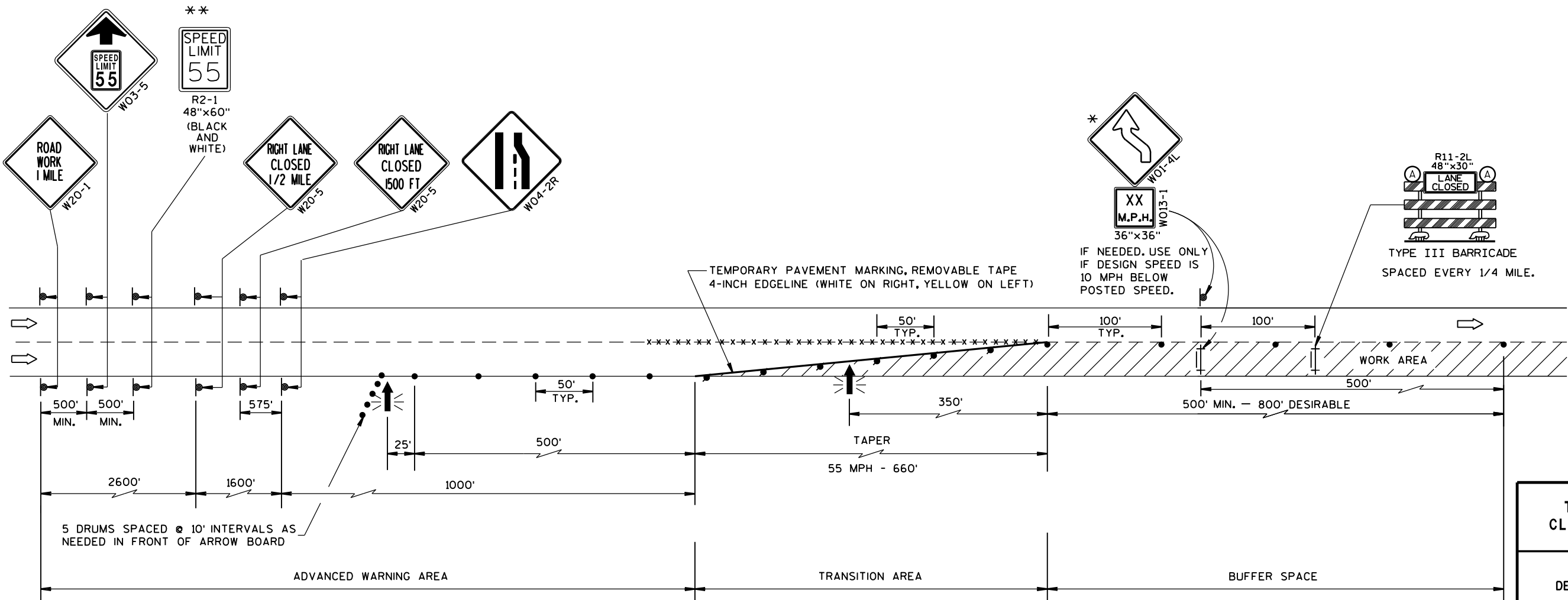
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

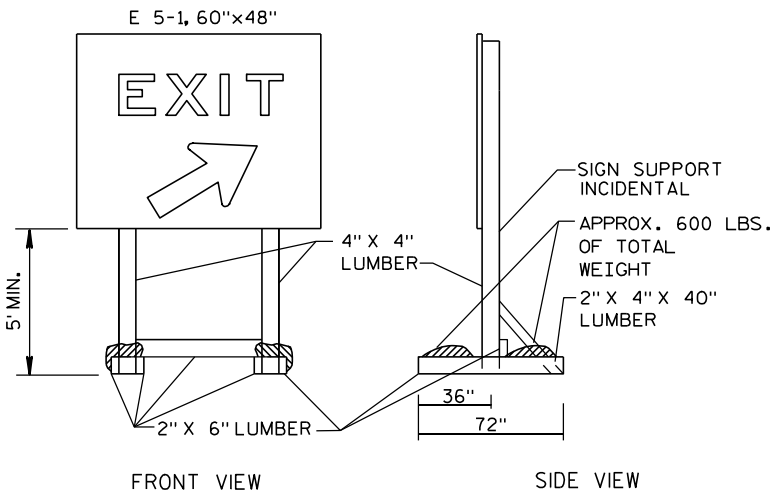
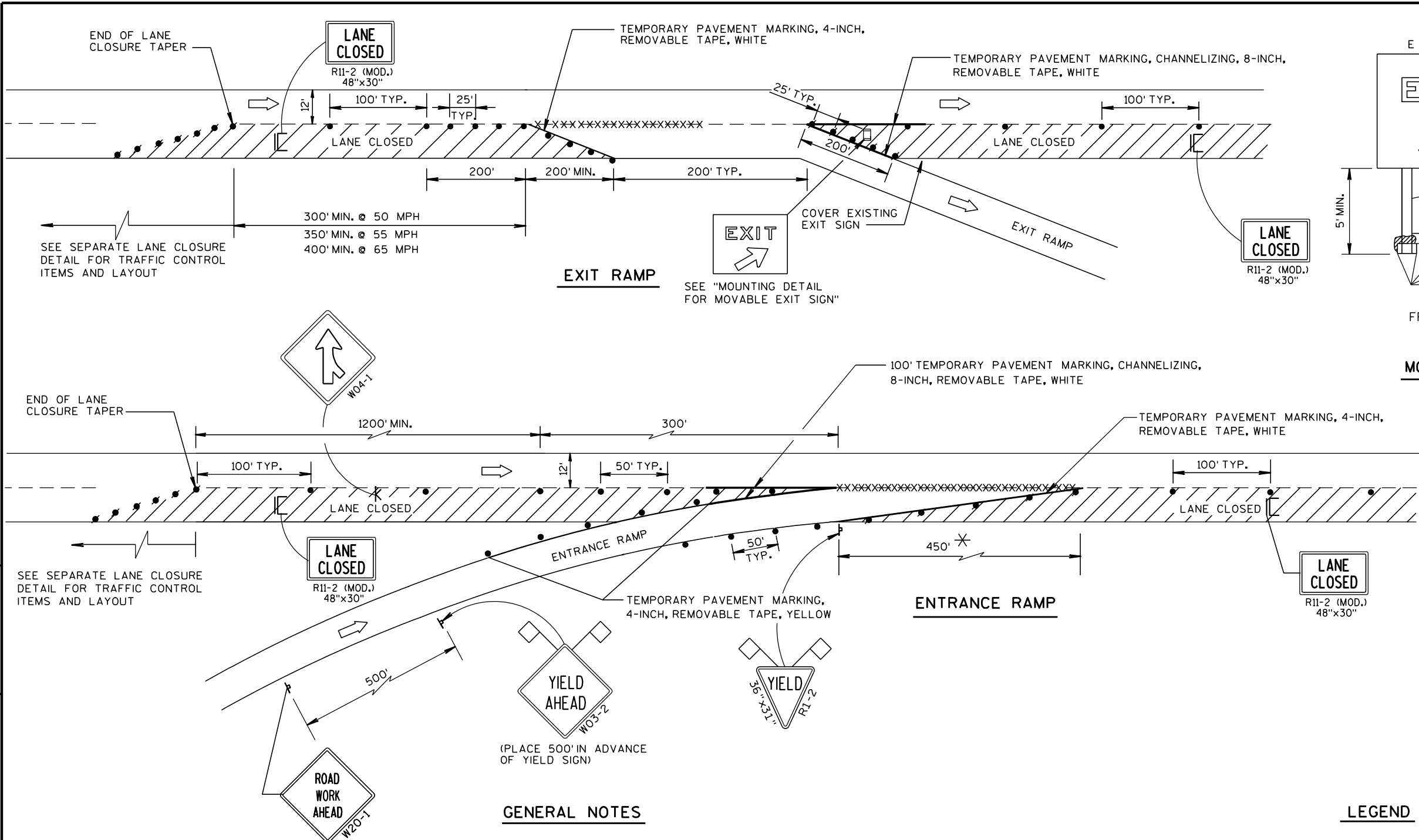
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN 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.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3-2014 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



FRONT VIEW SIDE VIEW
NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL
MOUNTING DETAIL FOR MOVABLE EXIT SIGN

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"x48" 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 R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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







* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/24/2000 DATE	/S/ Chester J. Spang CHIEF SIGNS AND MARKING ENGINEER
FHWA	

LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  SIGN ON PERMANENT SUPPORT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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.

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.

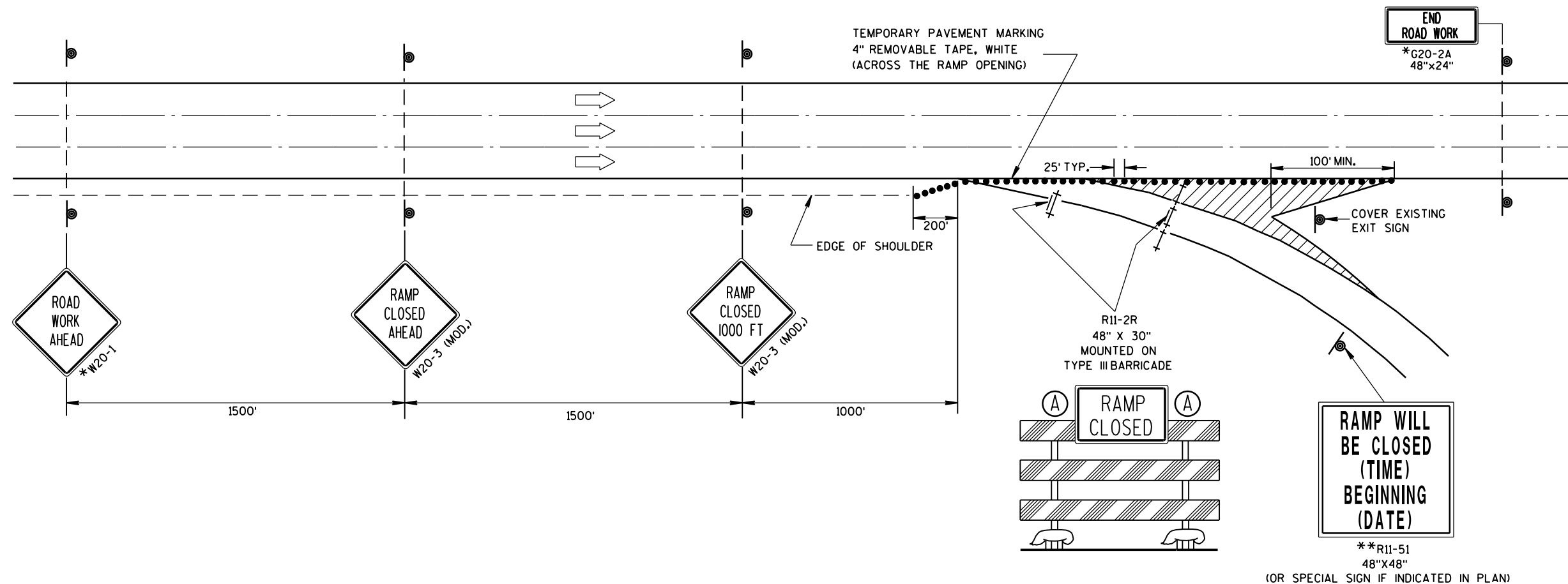
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013

DATE

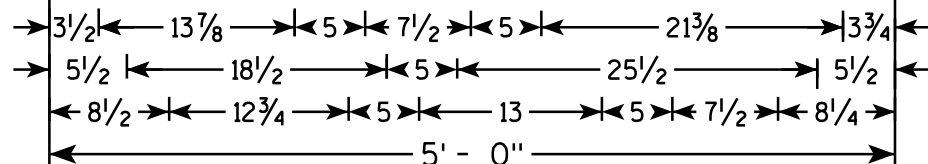
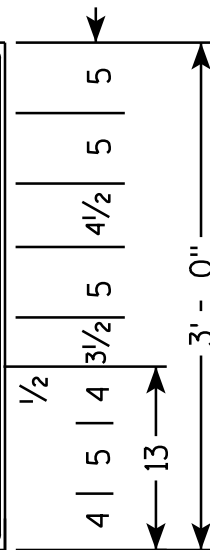
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN

HWY 53 SOUTH
RAMP CLOSED

WHITE BACKGROUND

USE BUS 53



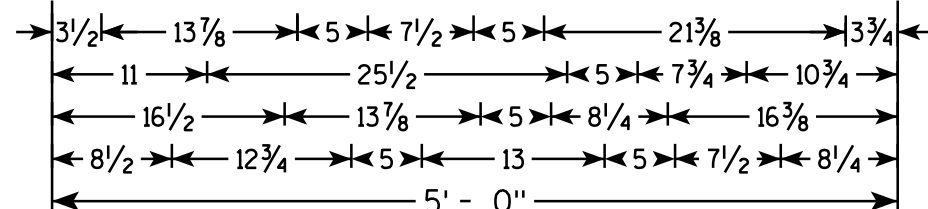
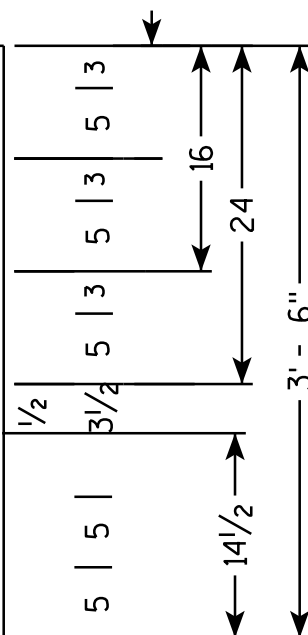
NOTES

1. All Signs Type II - Type F Reflective
2. Color:
Background - ORANGE except as Shown
Message - BLACK
3. Message Series - D

HWY 53 SOUTH
CLOSED AT
HWY 00

WHITE BACKGROUND

USE BUS 53

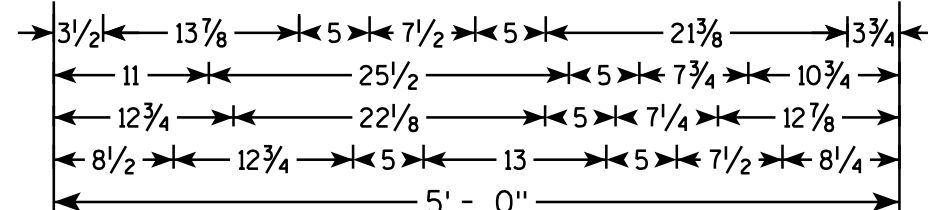
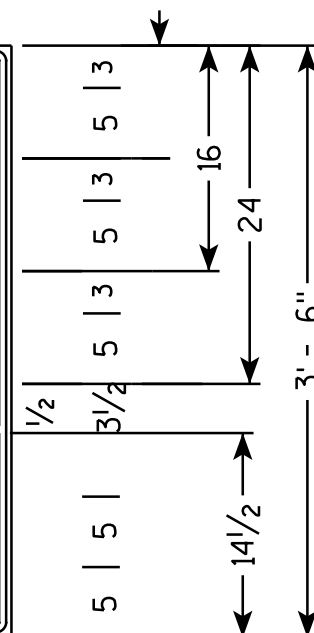


3/8" Margin
1/2" Border
1 1/8" Radius

HWY 53 SOUTH
CLOSED AT
MELBY ST

WHITE BACKGROUND

USE BUS 53



3/8" Margin
1/2" Border
1 1/8" Radius

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	
405+00	0.00	1.26	-	-	-	-	-	0.00
405+50	50.00	1.87	-	3	-	3	-	2.89
406+00	50.00	2.15	1.62	4	2	7	2	4.74
406+50	50.00	2.02	6.66	4	8	10	11	-0.98
407+00	50.00	1.83	9.68	4	15	14	30	-16.32
407+40.74	40.74	1.47	14.61	2	18	17	53	-36.73
407+50	9.26	1.65	14.78	1	5	17	60	-42.50
408+00	50.00	2.31	16.18	4	29	21	95	-74.66
408+50	50.00	1.90	21.58	4	35	25	139	-114.47
409+00	50.00	1.58	28.11	3	46	28	197	-168.76
409+50	50.00	0.73	39.50	2	63	30	275	-244.88
410+00	50.00	0.37	45.64	1	79	31	373	-342.41
410+50	50.00	-	51.17	0	90	31	485	-454.12
411+00	50.00	0.17	49.05	0	93	32	601	-569.96
411+10.81	10.81	0.20	49.00	0	20	32	626	-594.41
411+50	39.19	0.29	51.10	0	73	32	717	-684.86
412+00	50.00	-	51.48	0	95	32	836	-803.32
412+50	50.00	-	49.84	-	94	32	953	-920.60
413+00	50.00	-	49.56	-	92	32	1,068	-1,035.65
413+50	50.00	-	31.09	-	75	32	1,161	-1,128.99
414+00	50.00	-	17.47	-	45	32	1,217	-1,185.20
414+50	50.00	-	9.87	-	25	32	1,249	-1,216.85
415+00	50.00	-	5.30	-	14	32	1,267	-1,234.40
415+50	50.00	-	4.01	-	9	32	1,277	-1,245.17
416+00	50.00	-	3.02	-	7	32	1,286	-1,253.31
416+35	35.00	-	2.82	-	4	32	1,290	-1,258.04
416+44.63	9.63	-	1.25	-	1	32	1,291	-1,258.95
416+50	5.37	-	1.24	-	0	32	1,291	-1,259.26
417+00	50.00	-	0.20	-	1	32	1,293	-1,260.93
417+50	50.00	-	-	-	0	32	1,293	-1,261.17
418+00	50.00	-	3.12	-	3	32	1,297	-1,264.78
418+50	50.00	-	12.09	-	14	32	1,315	-1,282.40
419+00	50.00	0.19	21.45	0	31	32	1,353	-1,321.05
419+50	50.00	0.72	22.64	1	41	33	1,404	-1,371.25
420+00	50.00	1.52	28.25	2	47	35	1,463	-1,428.07
420+50	50.00	1.64	34.15	3	58	38	1,536	-1,497.37
421+00	50.00	2.33	27.30	4	57	42	1,607	-1,564.81
421+50	50.00	1.64	22.50	4	46	46	1,664	-1,618.77
421+94.26	44.26	1.95	11.49	3	28	49	1,699	-1,650.66
422+00	5.74	2.00	10.30	0	2	49	1,702	-1,653.13
422+50	50.00	1.93	3.81	4	13	53	1,718	-1,665.83
423+00	50.00	2.61	0.26	4	4	57	1,723	-1,666.33
423+50	50.00	2.48	-	5	0	62	1,723	-1,661.91
424+00	50.00	2.65	-	5	-	66	1,723	-1,657.17
424+35	35.00	1.24	-	3	-	69	1,723	-1,654.65

TOTAL =	69	1,379
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PROJECT: 1190-01-78

HWY: USH 53

COUNTY: EAU CLAIRE

EARTHWORK DETAILS: STAGE 1 – TEMPORARY BYPASS LANE

SHEET:

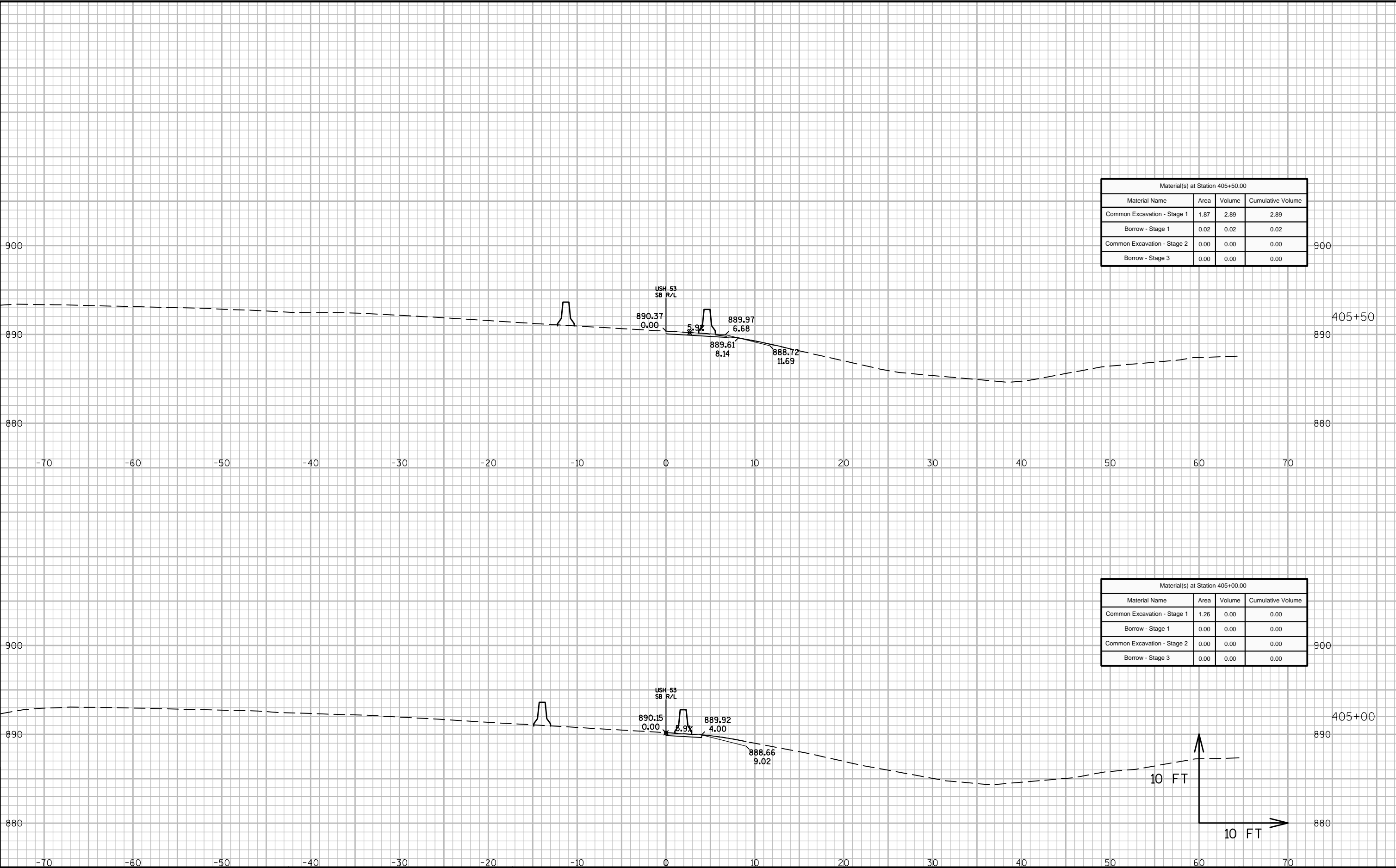
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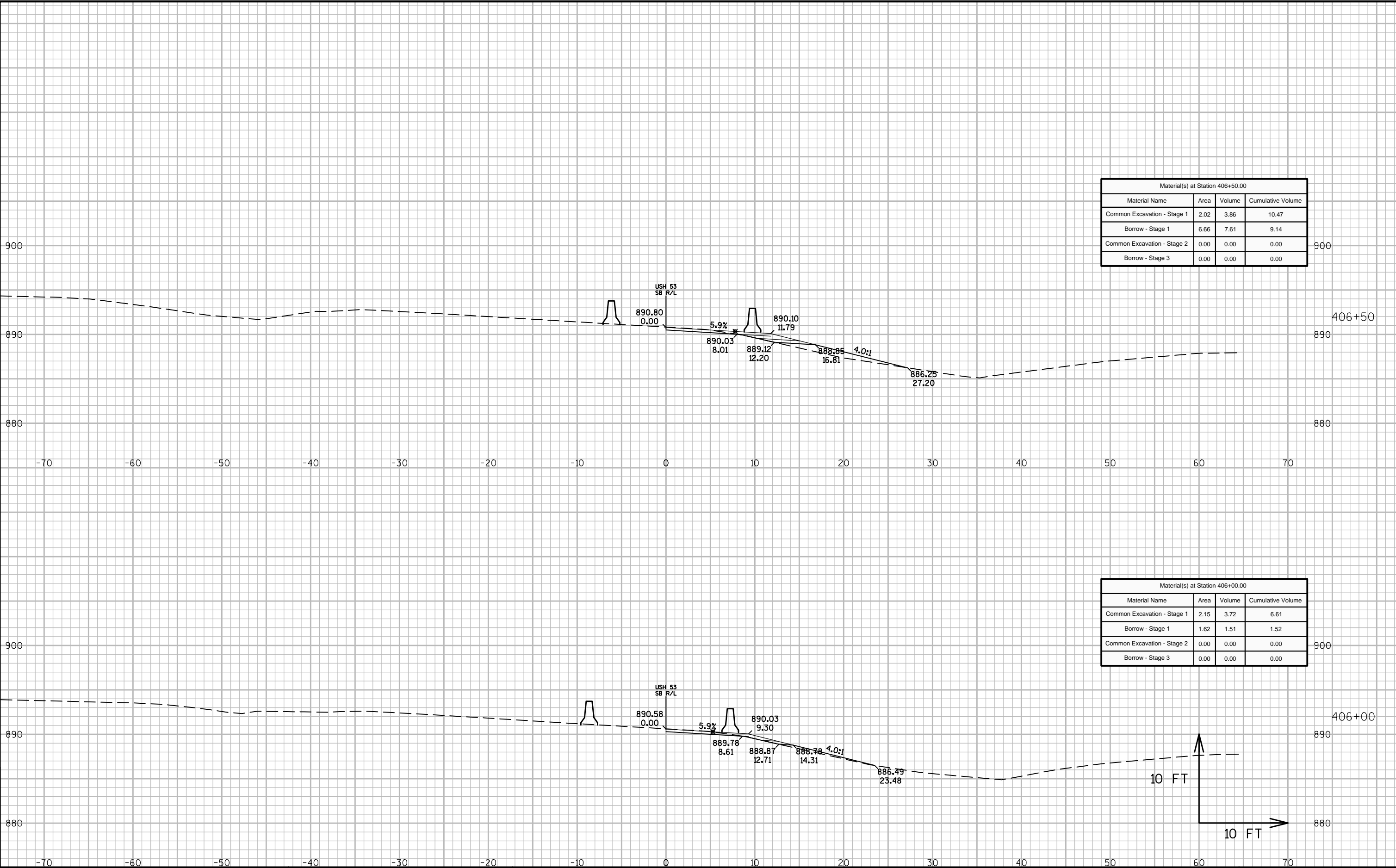
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	
413+00	50.00	64.30	0.33	60	0	60	0	59.16
413+50	50.00	190.89	0.30	236	1	296	1	294.71
414+00	50.00	306.95	0.20	461	0	757	2	755.09
414+50	50.00	310.70	0.10	572	0	1,329	2	1,326.64
415+00	50.00	308.59	0.11	573	0	1,902	2	1,899.82
415+50	50.00	279.50	-	545	0	2,447	2	2,444.22
416+00	50.00	168.63	-	415	-	2,862	2	2,859.15
416+35	35.00	214.56	-	248	-	3,110	2	3,107.51
416+44.63	9.63	302.24	0.52	92	0	3,202	3	3,199.56
416+50	5.37	-	-	30	0	3,232	3	3,229.55

TOTAL =	3,232	2
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STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	
				Note 1	Note 3	Note 1		Note 8
413+00	50.00	0.59	1.07	1	1	1	1	-0.70
413+50	50.00	0.48	129.66	1	121	2	153	-151.02
414+00	50.00	0.32	246.91	1	349	2	588	-586.14
414+50	50.00	0.19	248.47	0	459	3	1,162	-1,159.02
415+00	50.00	0.18	248.57	0	460	3	1,737	-1,733.95
415+50	50.00	-	218.90	0	433	3	2,278	-2,274.84
416+00	50.00	-	109.26	-	304	3	2,658	-2,654.65
416+35	35.00	-	155.30	-	171	3	2,872	-2,868.99
416+44.63	9.63	0.72	243.04	0	71	3	2,961	-2,957.65
416+50	5.37	-	-	0	24	3	2,991	-2,987.79

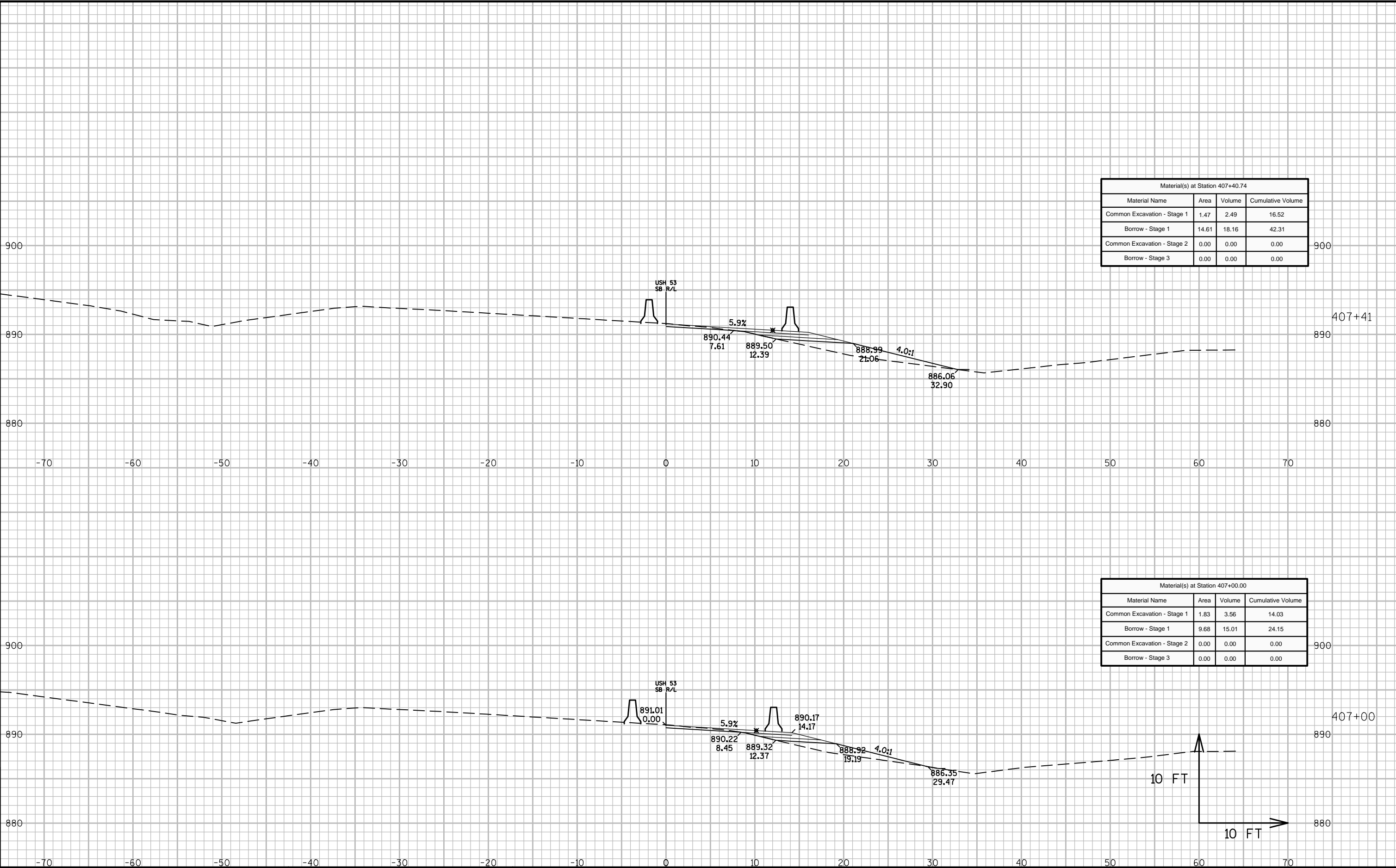
TOTAL =		3	2,393
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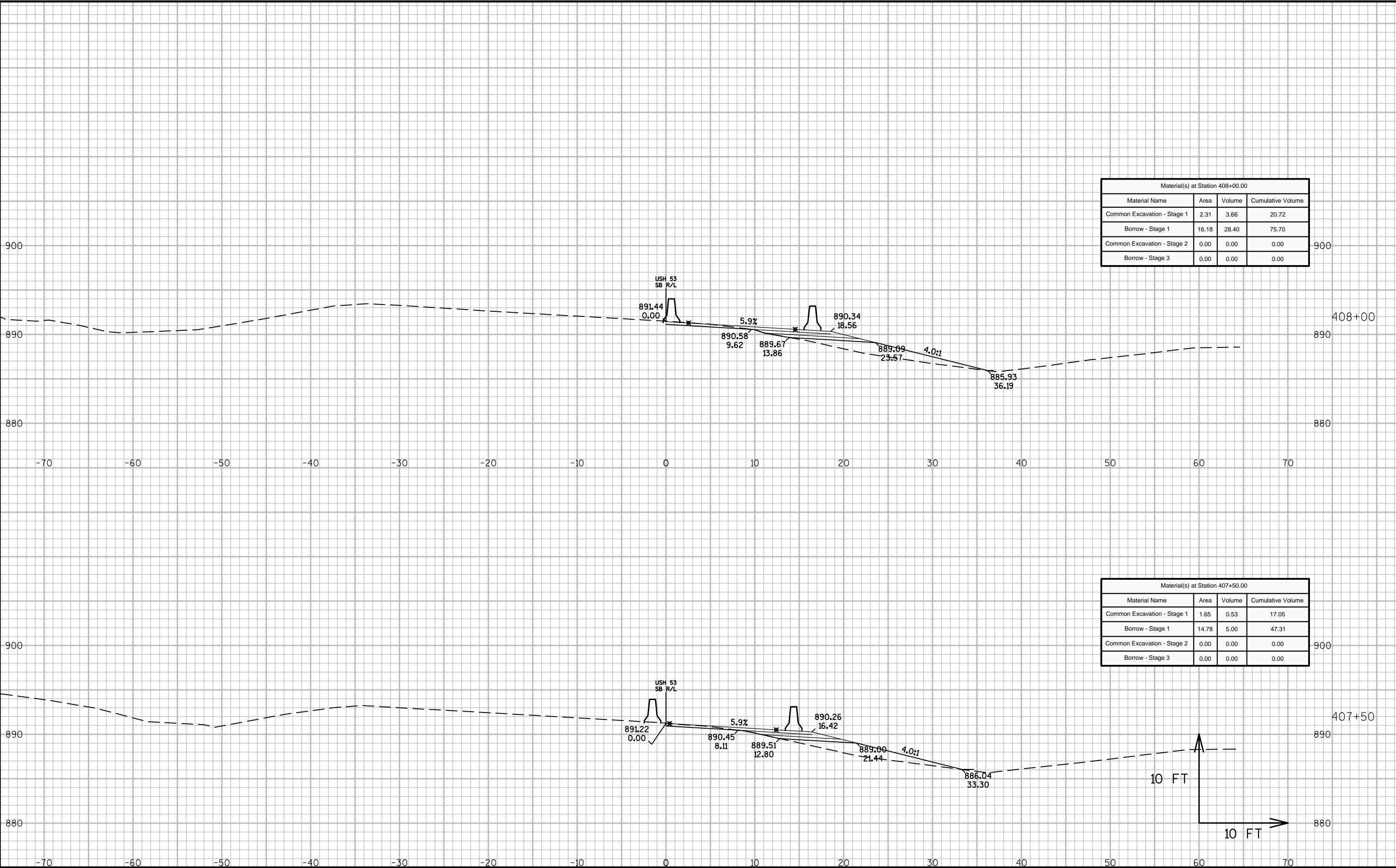
Material(s) at Station 406+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.02	3.86	10.47
Borrow - Stage 1	6.66	7.61	9.14
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 406+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.15	3.72	6.61
Borrow - Stage 1	1.62	1.51	1.52
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00



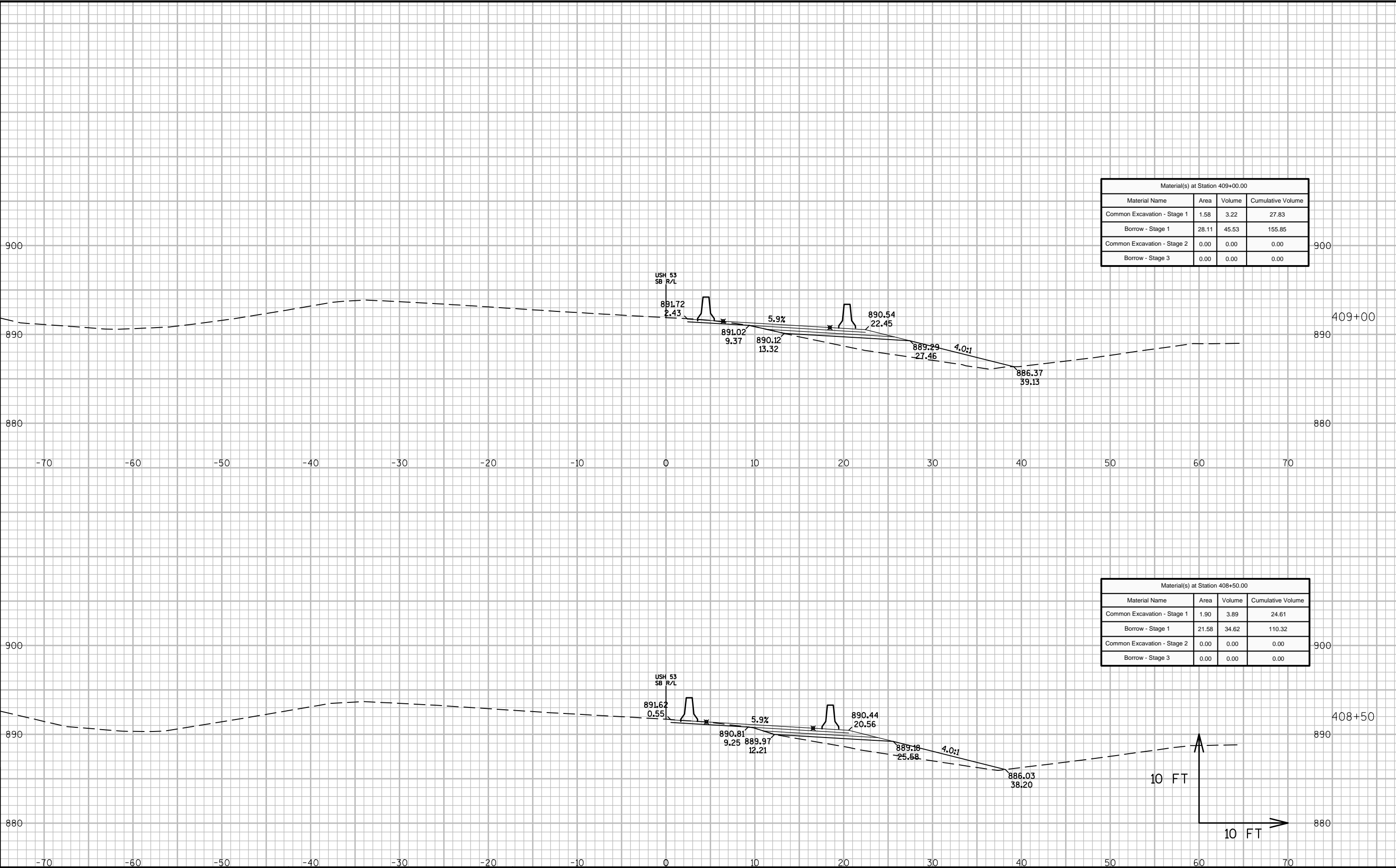
Material(s) at Station 407+40.74			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.47	2.49	16.52
Borrow - Stage 1	14.61	18.16	42.31
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 407+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.83	3.56	14.03
Borrow - Stage 1	9.68	15.01	24.15
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00



Material(s) at Station 408+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.31	3.66	20.72
Borrow - Stage 1	16.18	28.40	75.70
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 407+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.65	0.53	17.05
Borrow - Stage 1	14.78	5.00	47.31
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

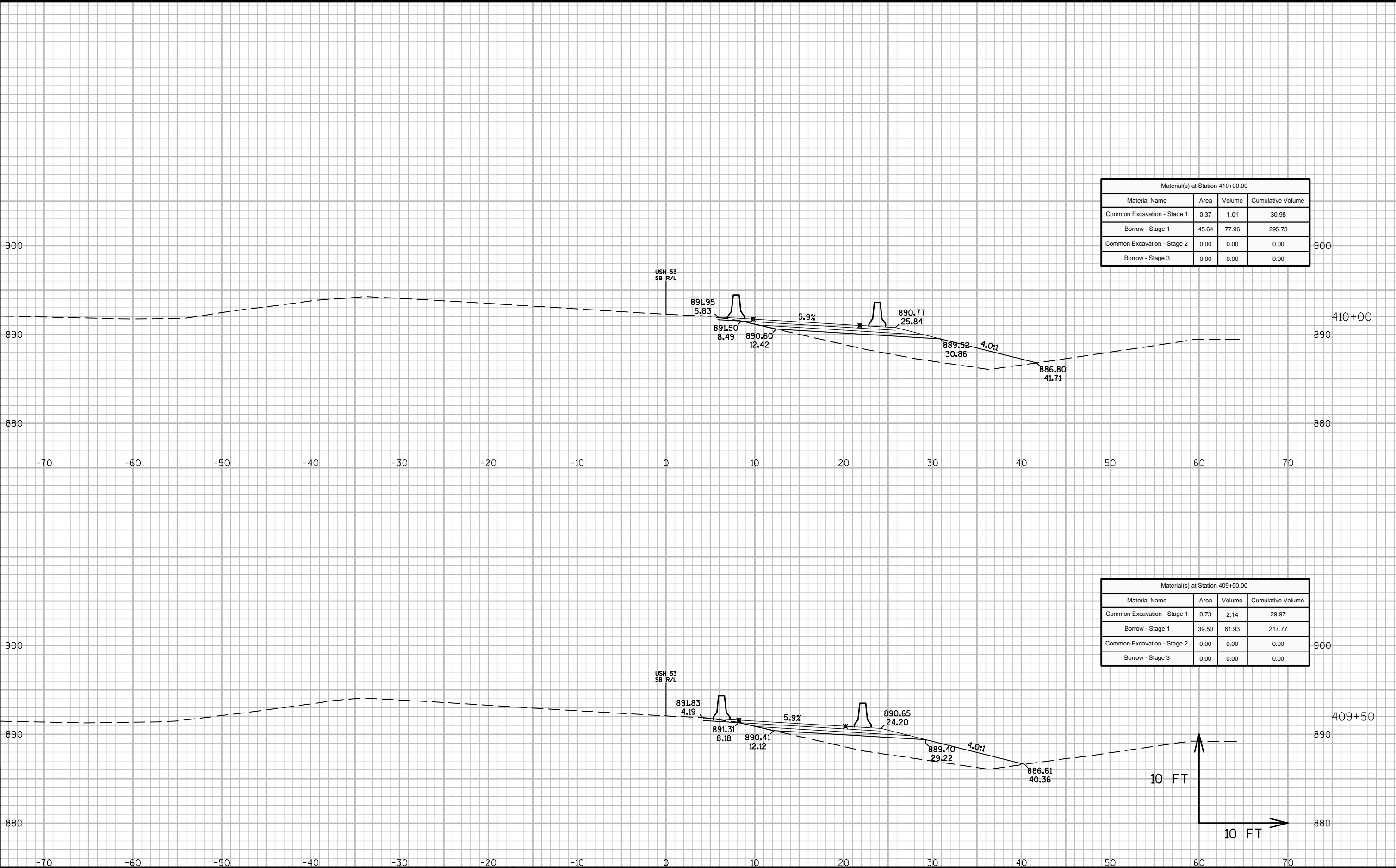


Material(s) at Station 409+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.58	3.22	27.83
Borrow - Stage 1	28.11	45.53	155.85
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 408+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.90	3.89	24.61
Borrow - Stage 1	21.58	34.62	110.32
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

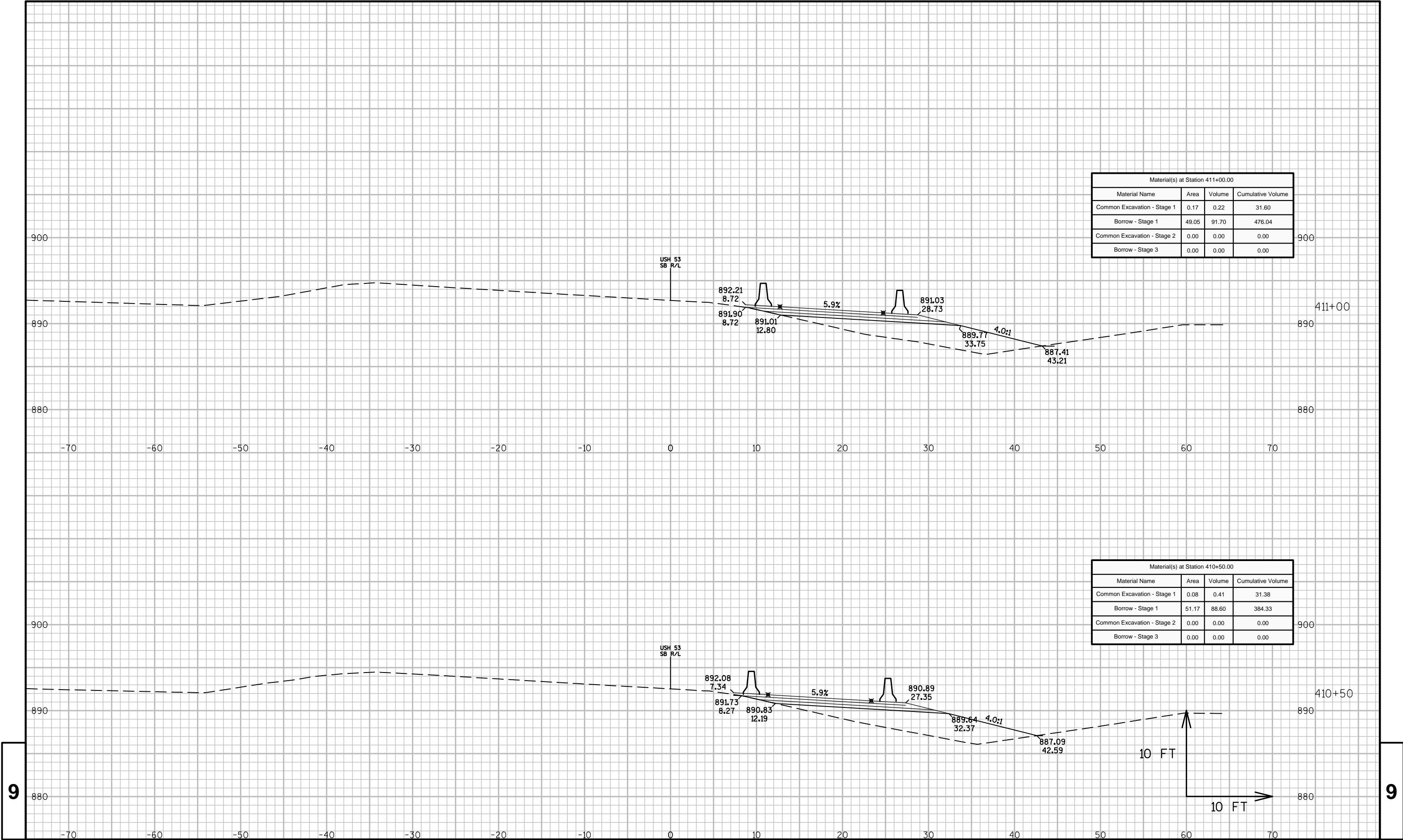
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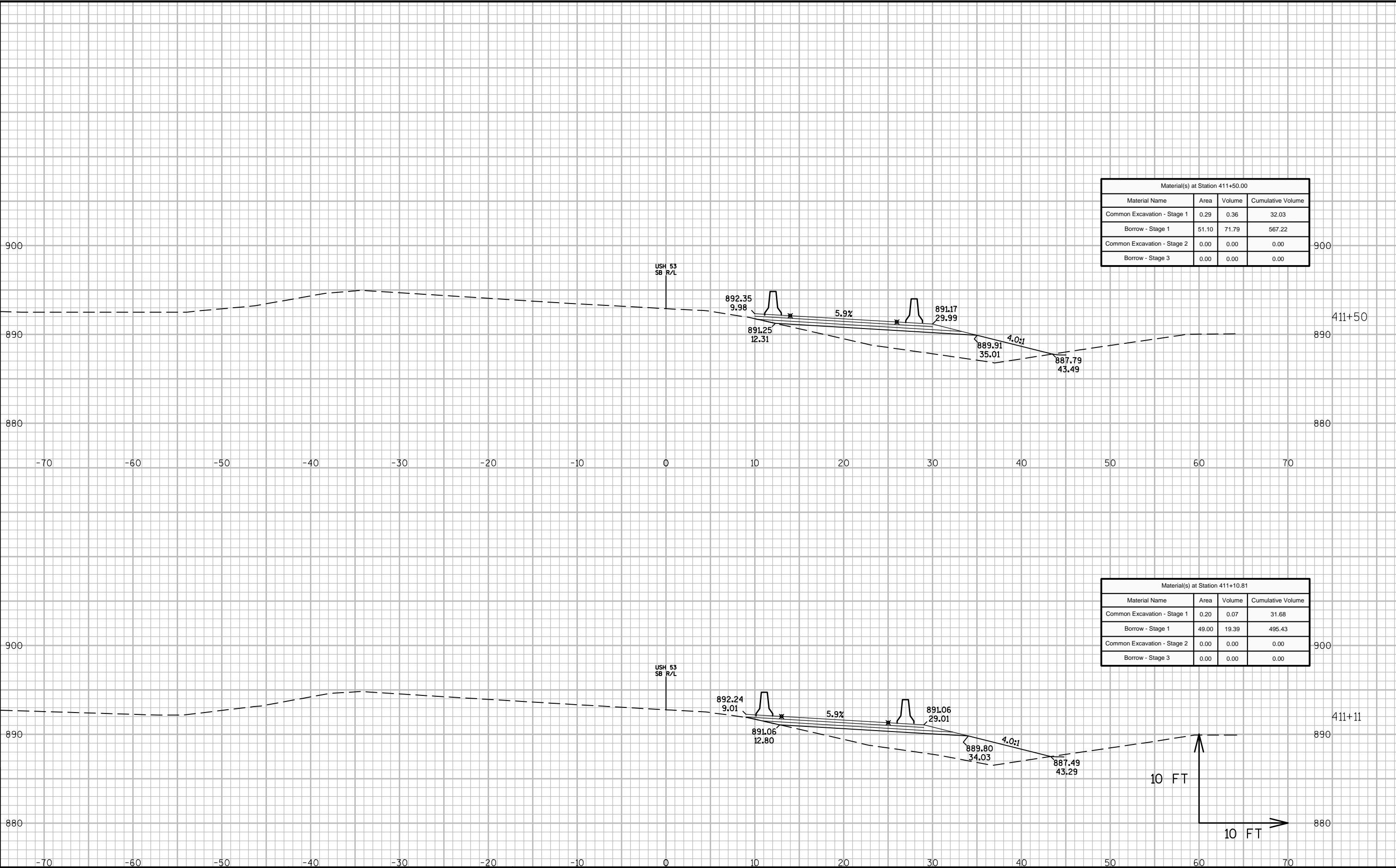
9



Material(s) at Station 410+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.37	1.01	30.98
Borrow - Stage 1	45.64	77.96	295.73
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 409+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.73	2.14	29.97
Borrow - Stage 1	39.50	61.93	217.77
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00



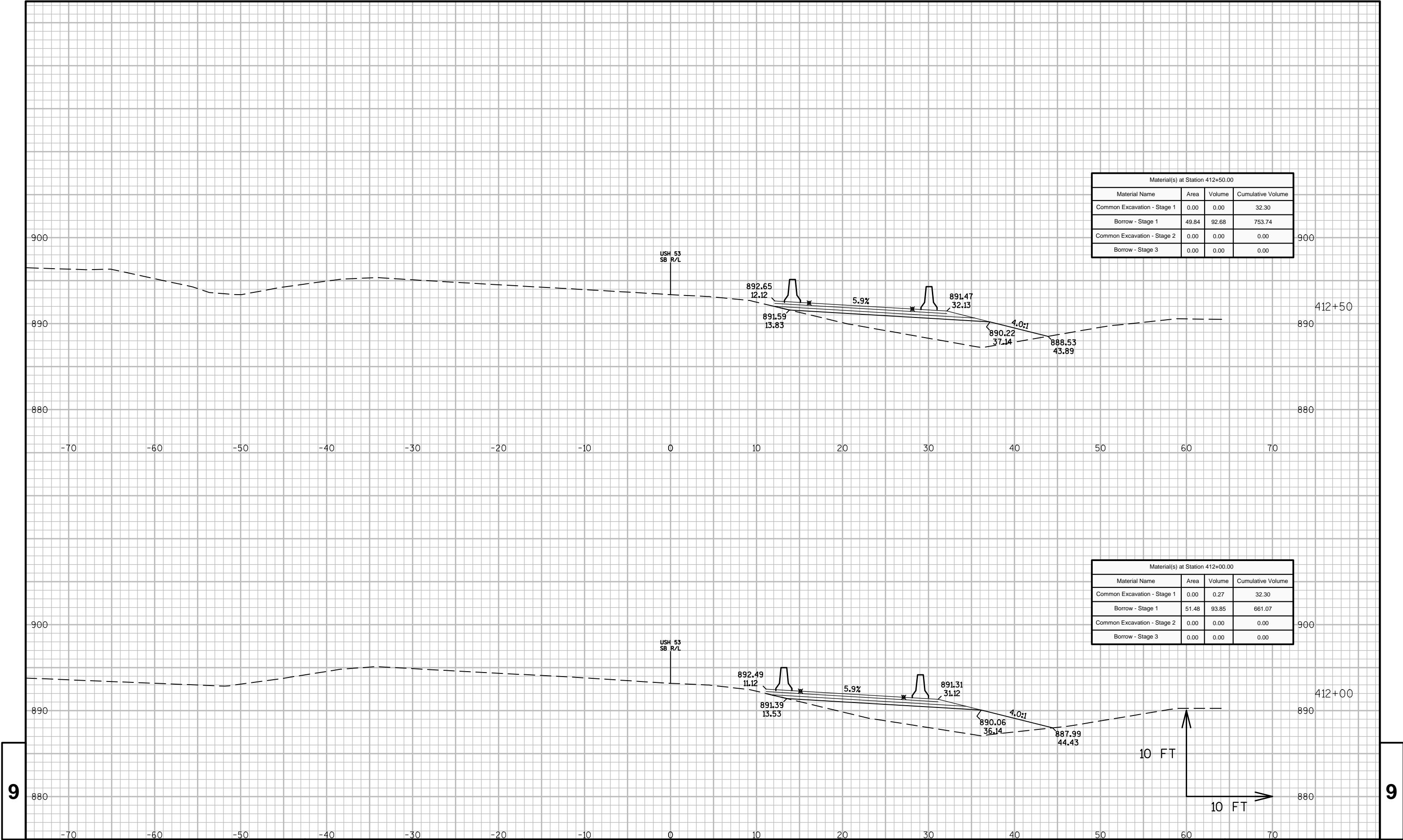


Material(s) at Station 411+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.29	0.36	32.03
Borrow - Stage 1	51.10	71.79	567.22
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 411+10.81			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.20	0.07	31.68
Borrow - Stage 1	49.00	19.39	495.43
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

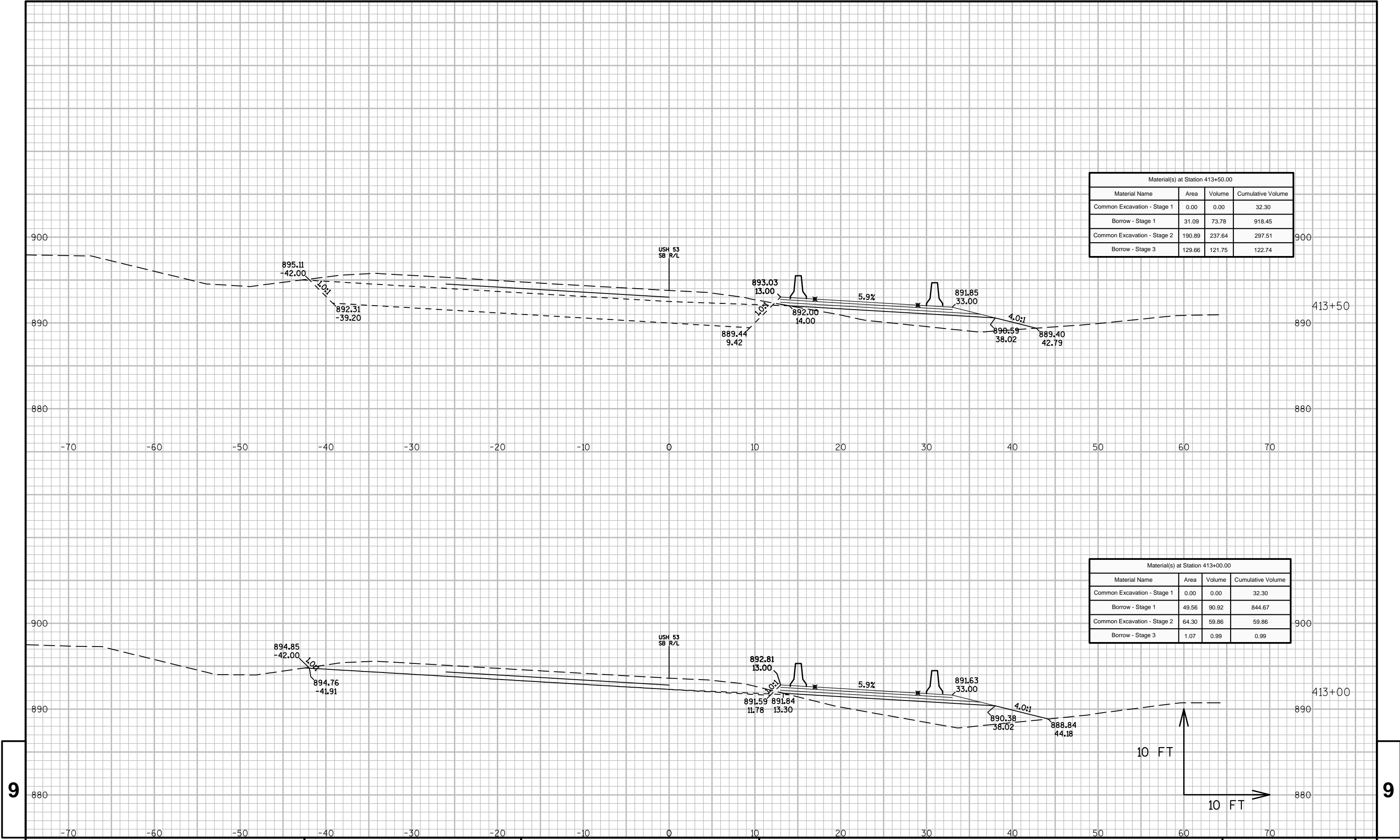
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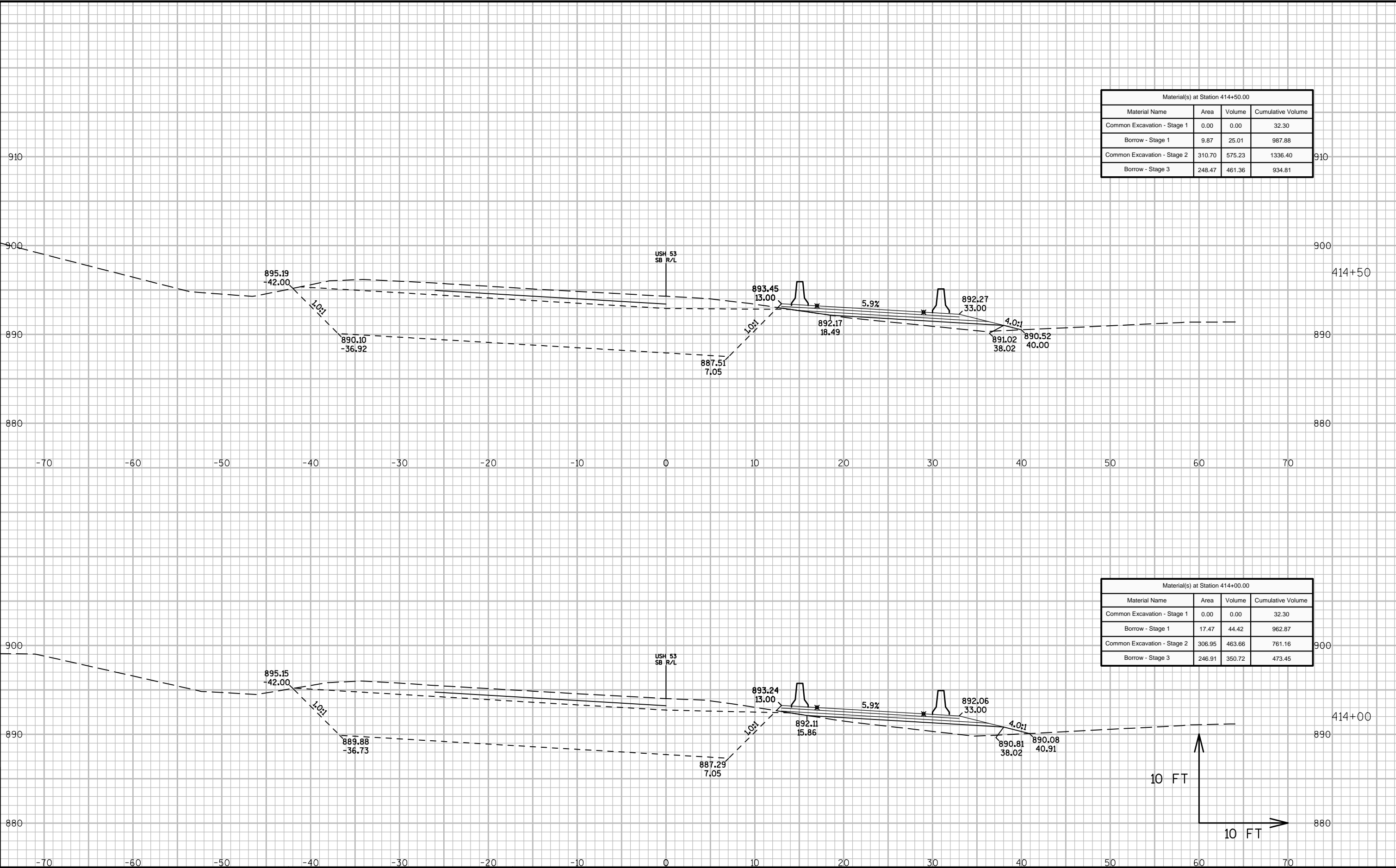
Material(s) at Station 412+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.30
Borrow - Stage 1	49.84	92.68	753.74
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00

Material(s) at Station 412+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.27	32.30
Borrow - Stage 1	51.48	93.85	661.07
Common Excavation - Stage 2	0.00	0.00	0.00
Borrow - Stage 3	0.00	0.00	0.00



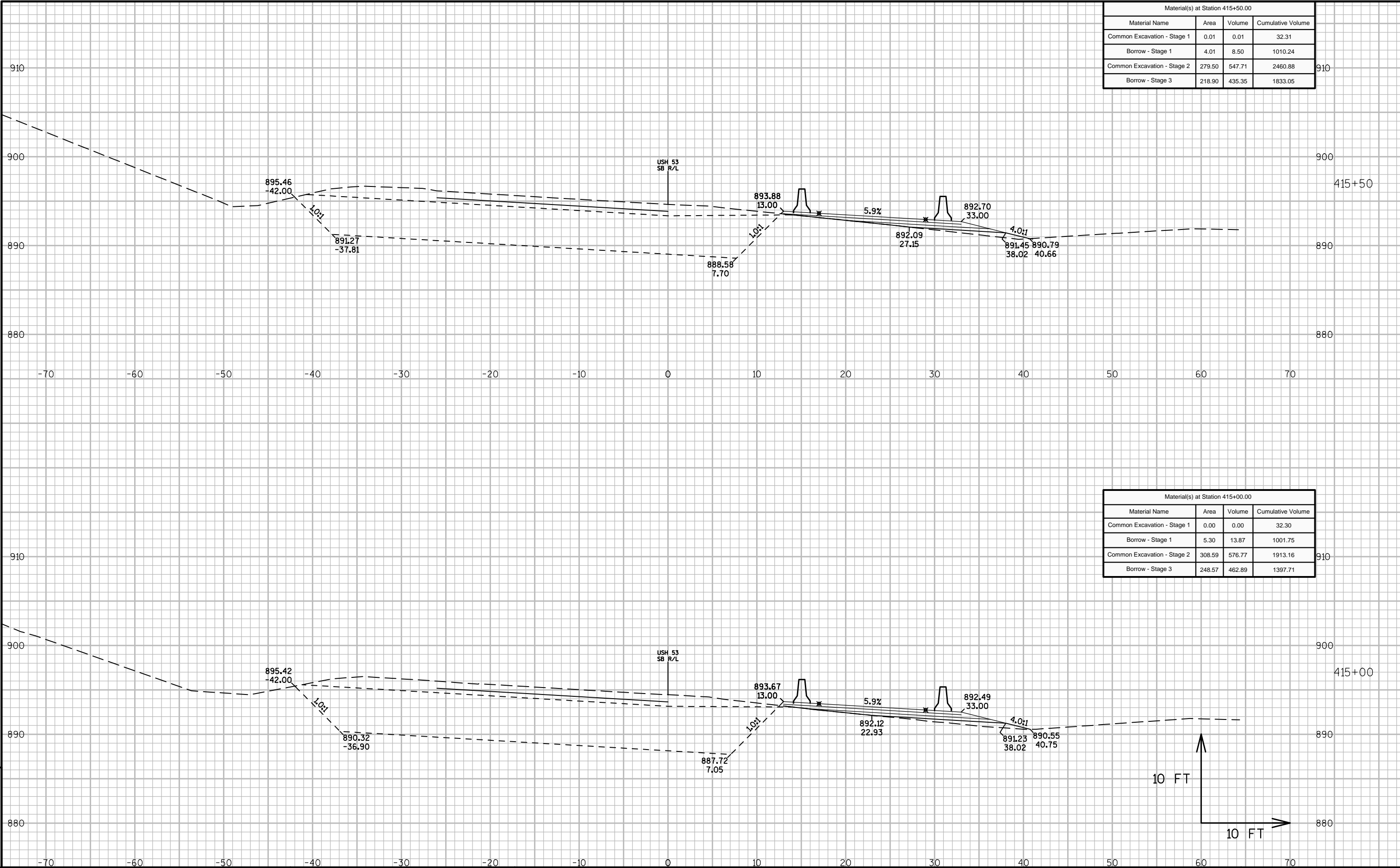
Material(s) at Station 413+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.30
Borrow - Stage 1	31.09	73.78	918.45
Common Excavation - Stage 2	190.89	237.64	297.51
Borrow - Stage 3	129.66	121.75	122.74

Material(s) at Station 413+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.30
Borrow - Stage 1	49.56	90.92	844.67
Common Excavation - Stage 2	64.30	59.86	59.86
Borrow - Stage 3	1.07	0.99	0.99



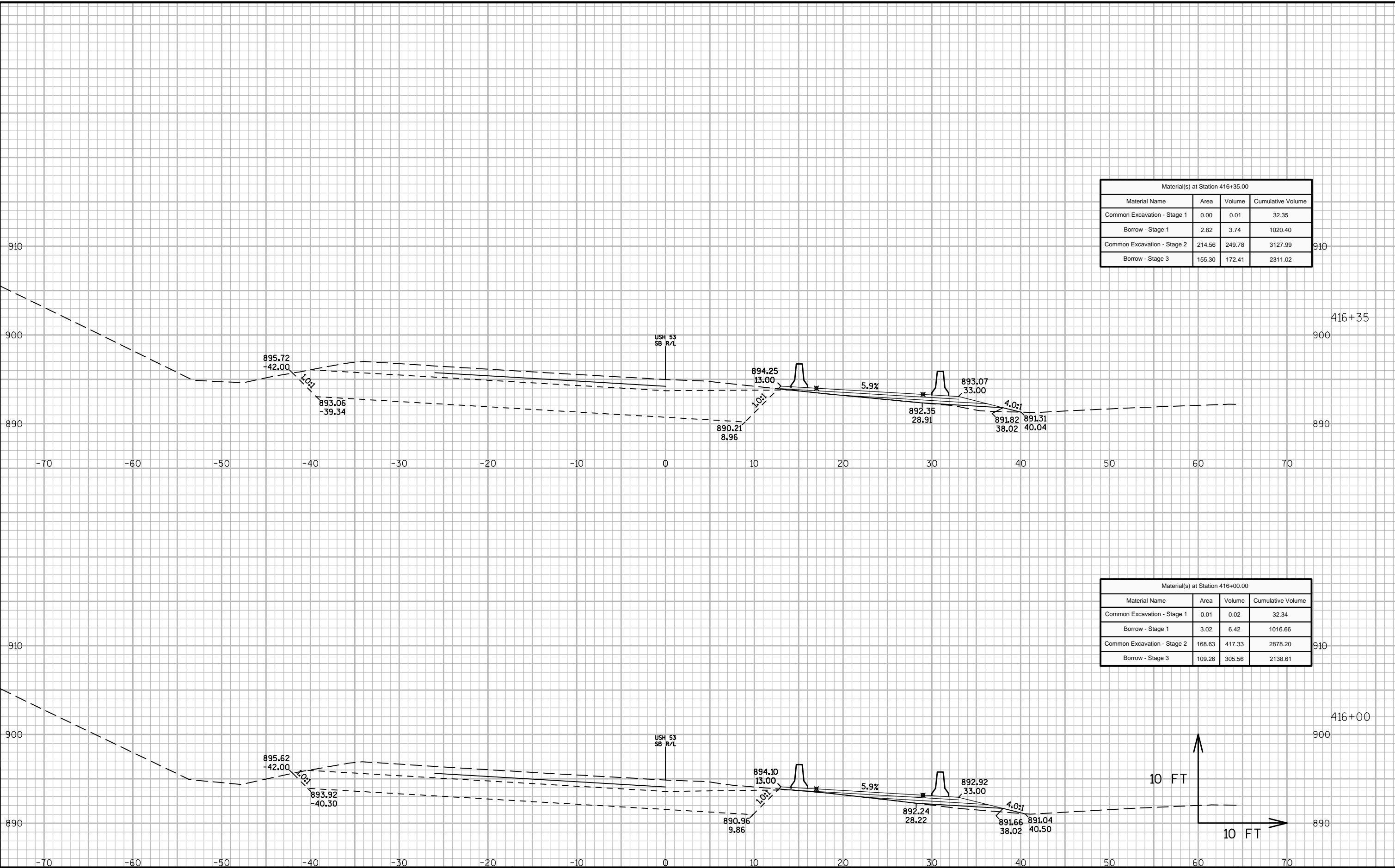
Material(s) at Station 414+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.30
Borrow - Stage 1	9.87	25.01	987.88
Common Excavation - Stage 2	310.70	575.23	1336.40
Borrow - Stage 3	248.47	461.36	934.81

Material(s) at Station 414+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.30
Borrow - Stage 1	17.47	44.42	962.87
Common Excavation - Stage 2	306.95	463.66	761.16
Borrow - Stage 3	246.91	350.72	473.45



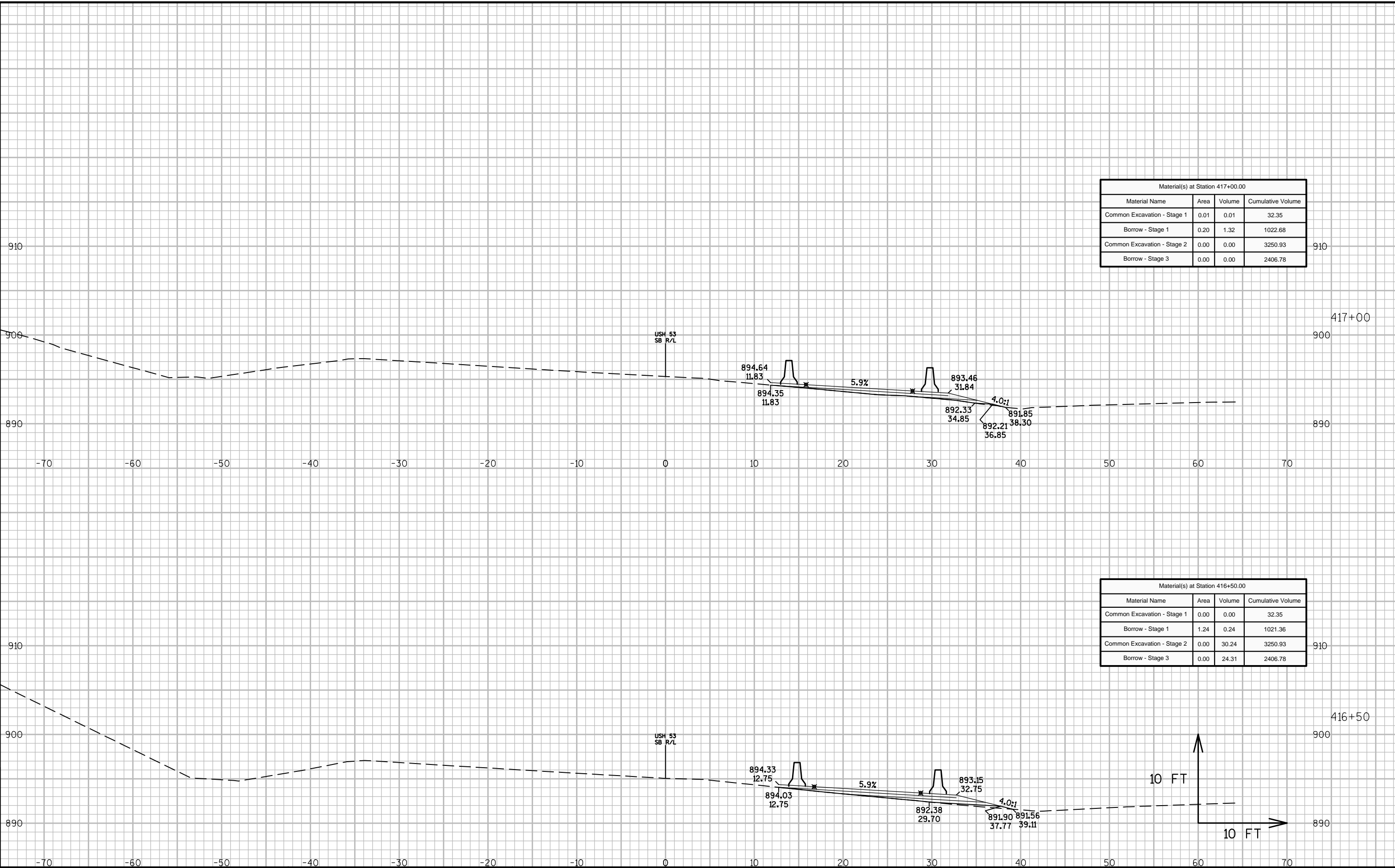
Material(s) at Station 415+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.01	0.01	32.31
Borrow - Stage 1	4.01	8.50	1010.24
Common Excavation - Stage 2	279.50	547.71	2460.88
Borrow - Stage 3	218.90	435.35	1833.05

Material(s) at Station 415+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.30
Borrow - Stage 1	5.30	13.87	1001.75
Common Excavation - Stage 2	308.59	576.77	1913.16
Borrow - Stage 3	248.57	462.89	1397.71



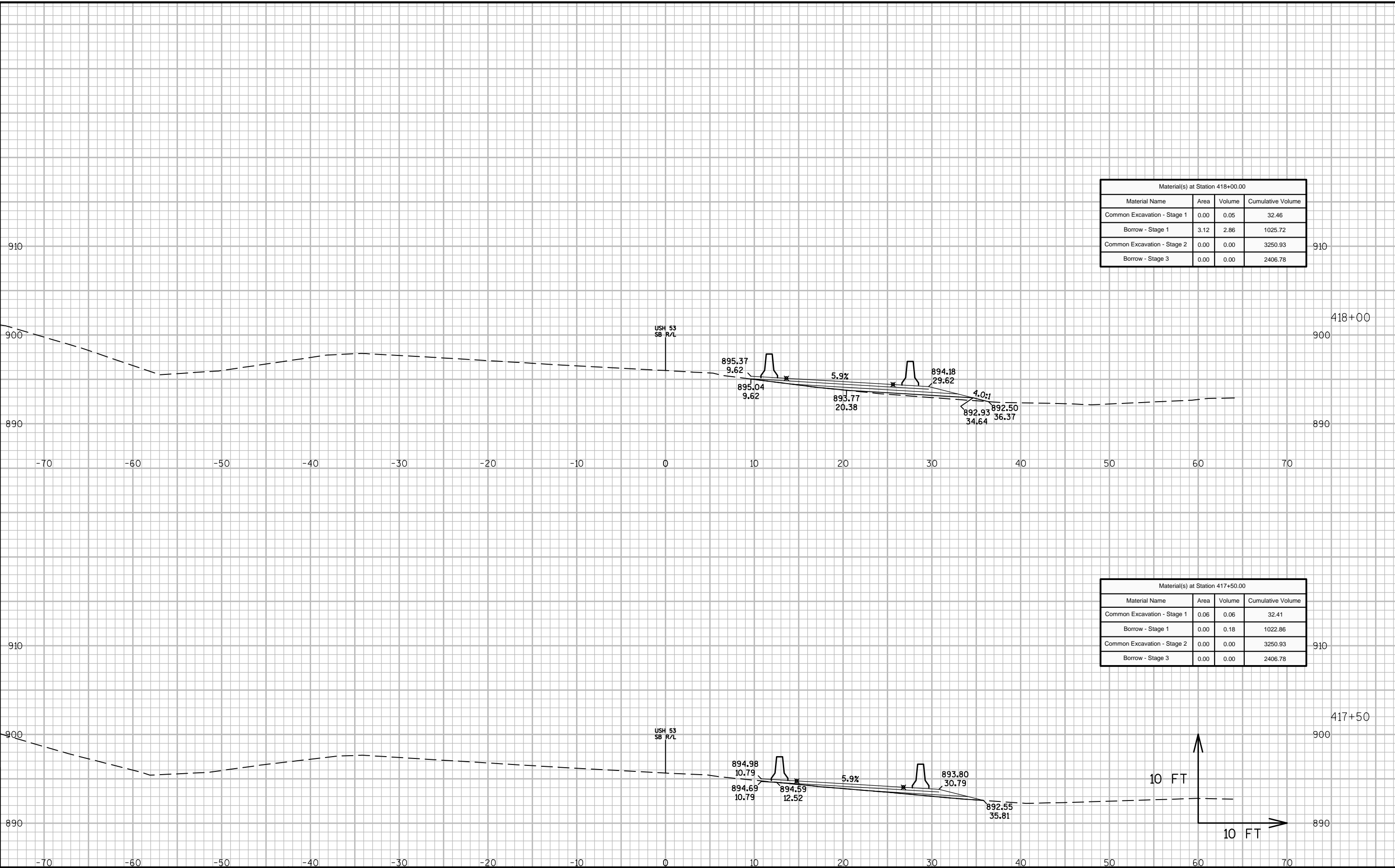
Material(s) at Station 416+35.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.01	32.35
Borrow - Stage 1	2.82	3.74	1020.40
Common Excavation - Stage 2	214.56	249.78	3127.99
Borrow - Stage 3	155.30	172.41	2311.02

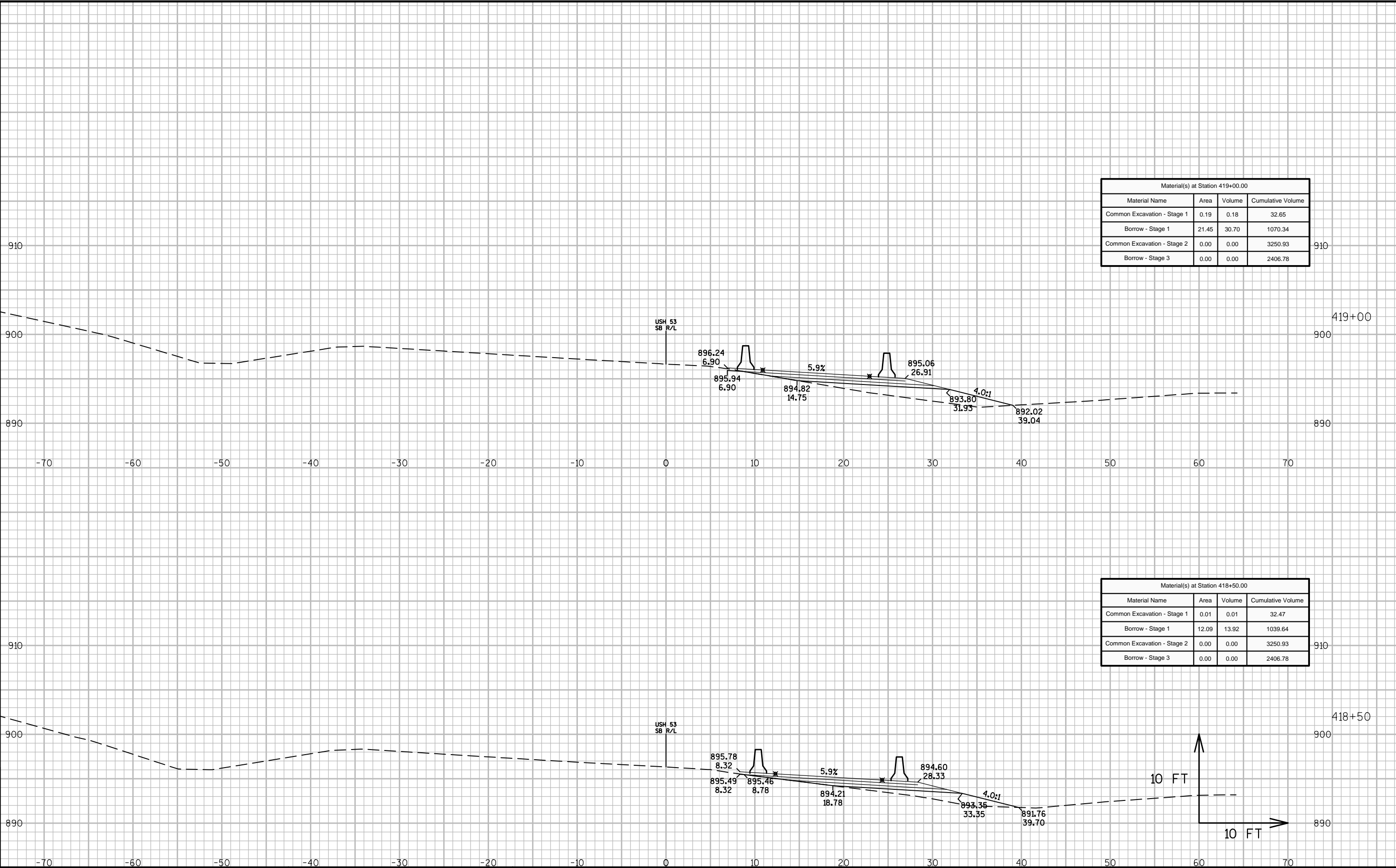
Material(s) at Station 416+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.01	0.02	32.34
Borrow - Stage 1	3.02	6.42	1016.66
Common Excavation - Stage 2	168.63	417.33	2878.20
Borrow - Stage 3	109.26	305.56	2138.61

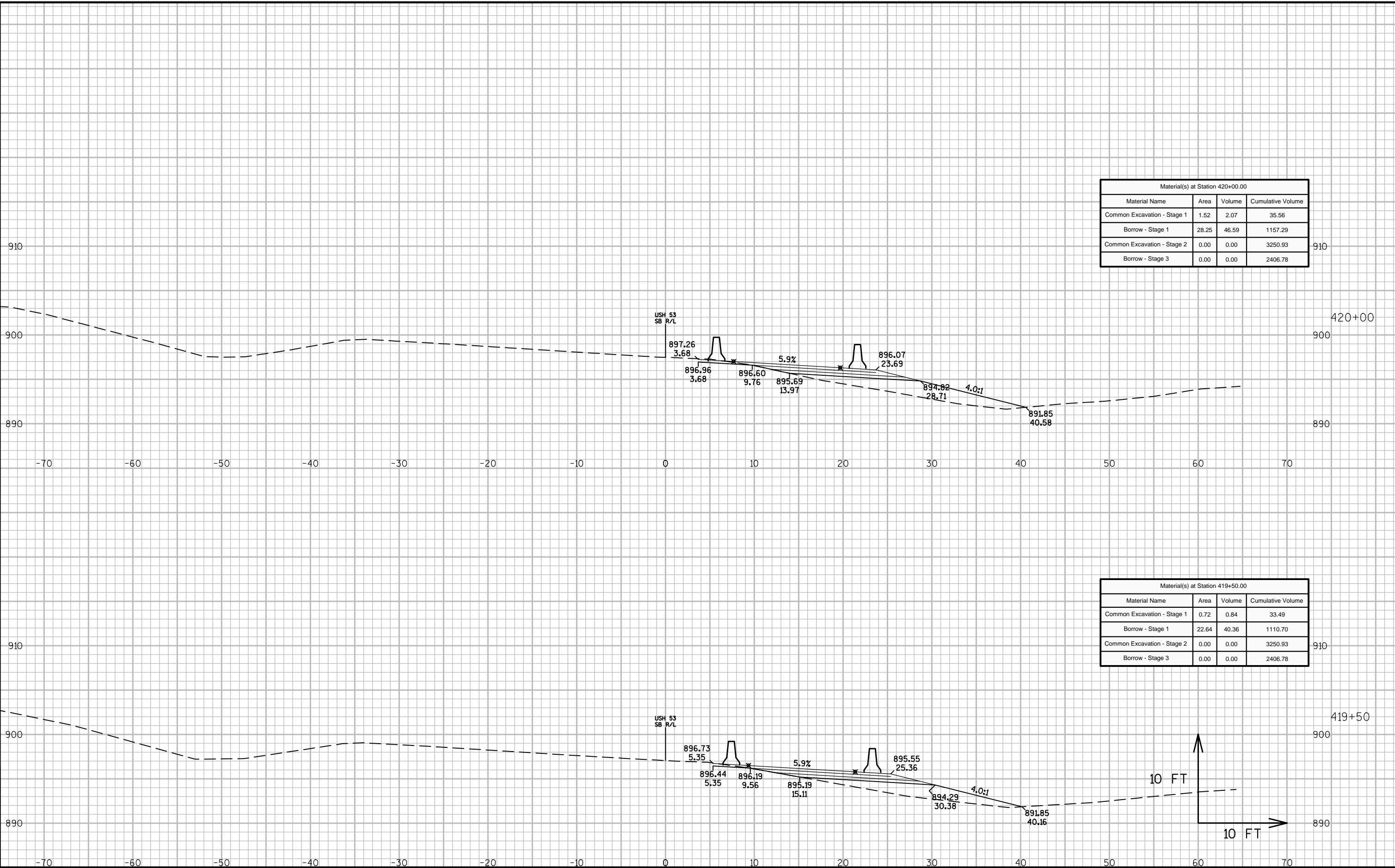


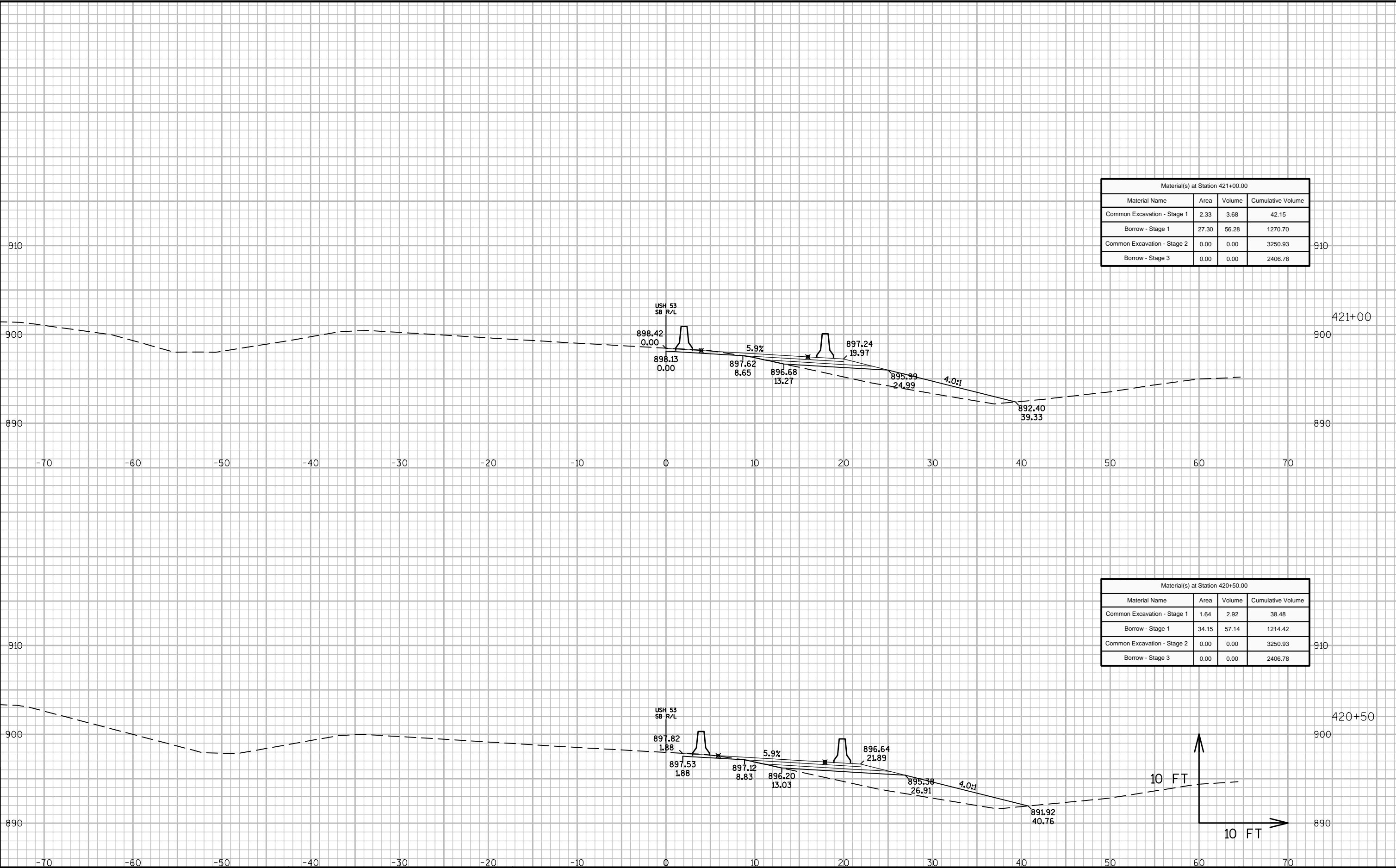
Material(s) at Station 417+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.01	0.01	32.35
Borrow - Stage 1	0.20	1.32	1022.68
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78

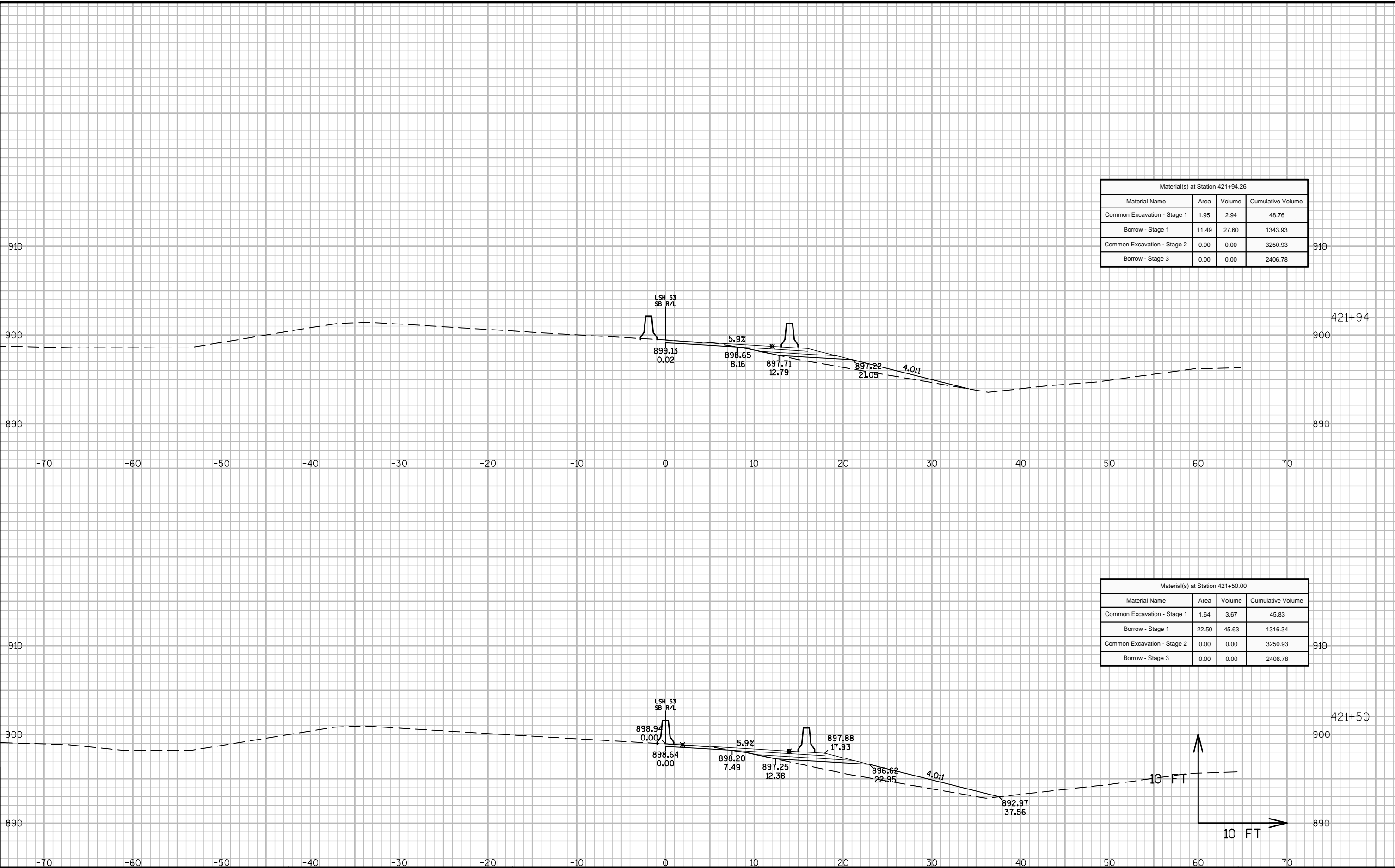
Material(s) at Station 416+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	0.00	0.00	32.35
Borrow - Stage 1	1.24	0.24	1021.36
Common Excavation - Stage 2	0.00	30.24	3250.93
Borrow - Stage 3	0.00	24.31	2406.78





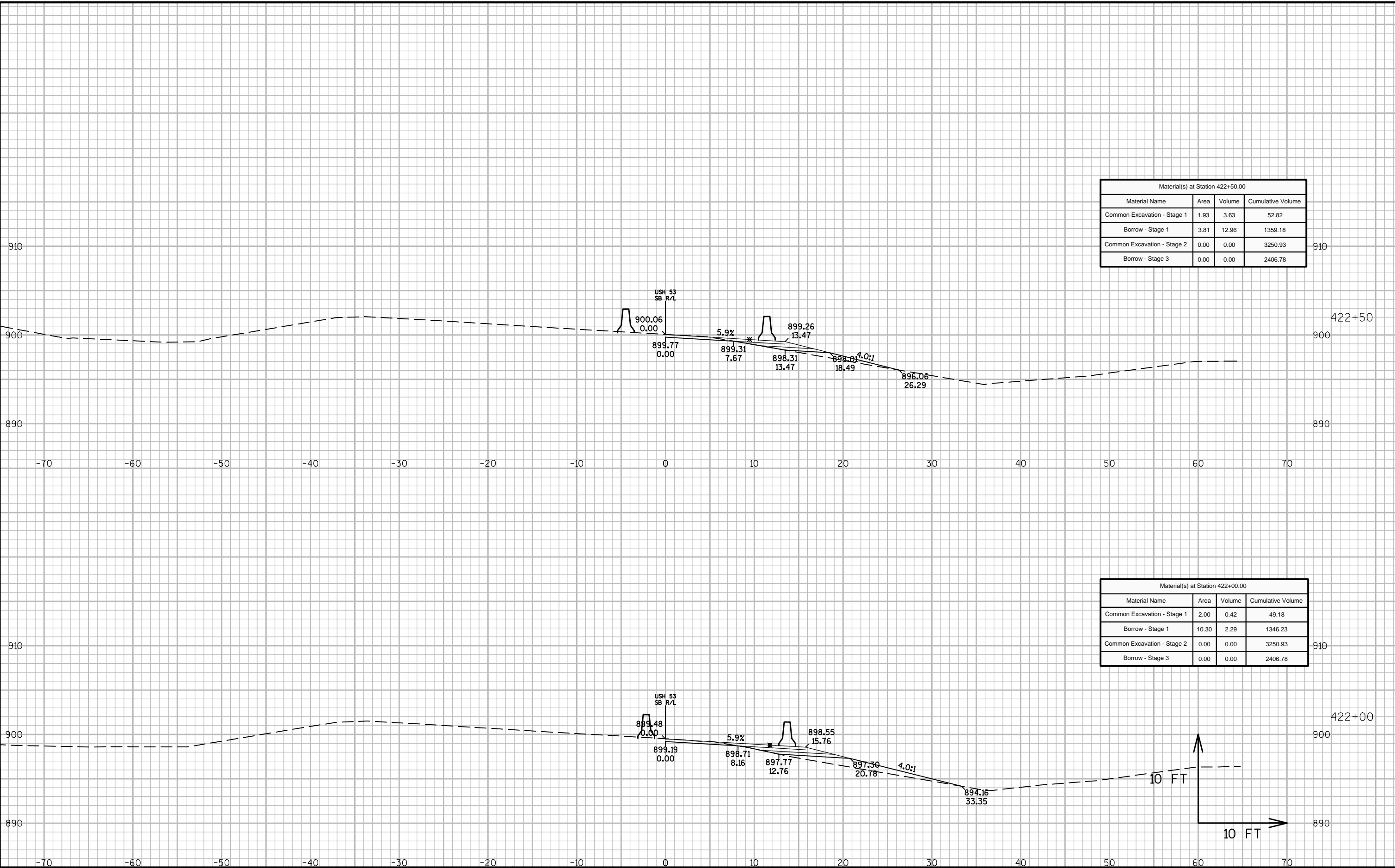






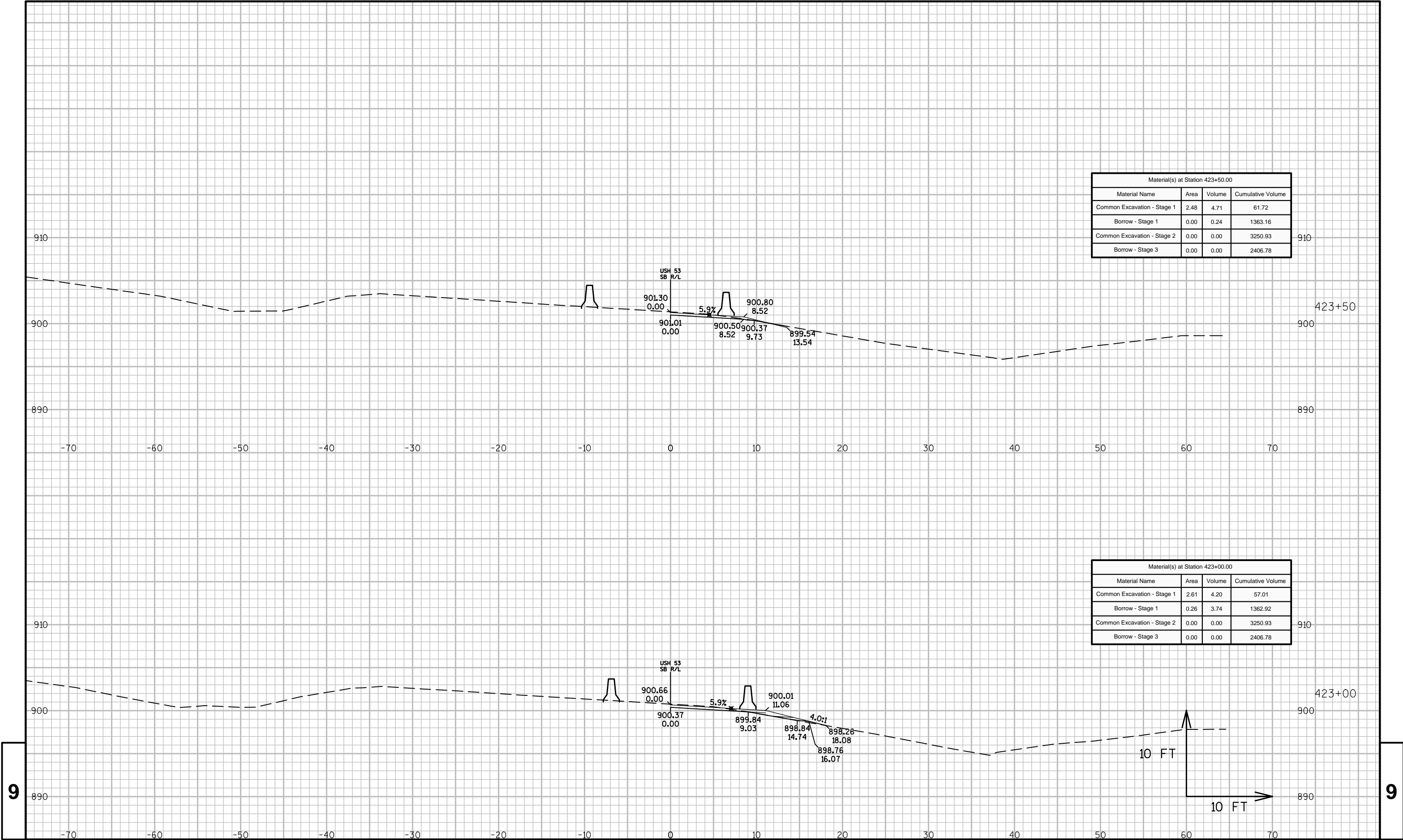
Material(s) at Station 421+94.26			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.95	2.94	48.76
Borrow - Stage 1	11.49	27.60	1343.93
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78

Material(s) at Station 421+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.64	3.67	45.83
Borrow - Stage 1	22.50	45.63	1316.34
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78



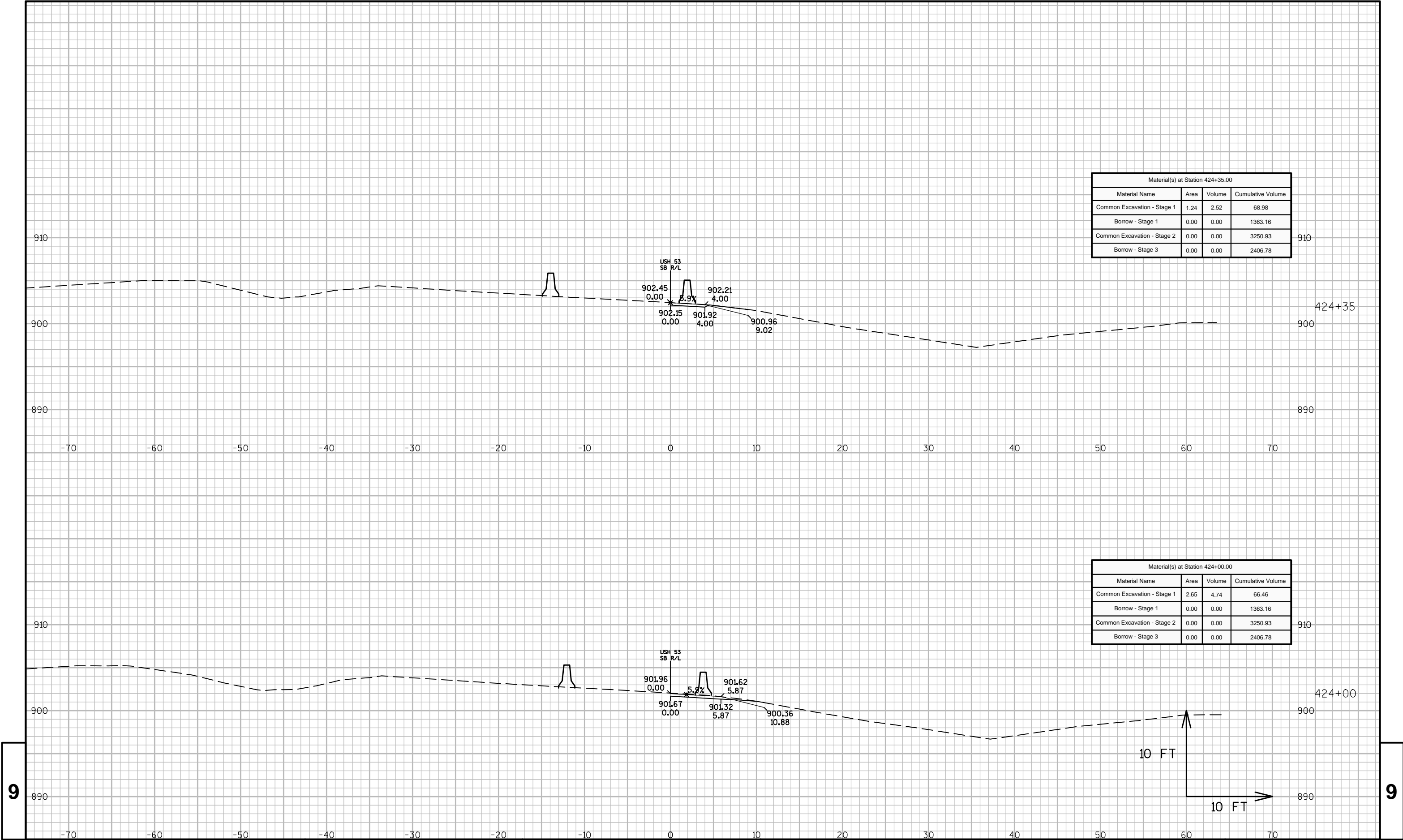
Material(s) at Station 422+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.93	3.63	52.82
Borrow - Stage 1	3.81	12.96	1359.18
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78

Material(s) at Station 422+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.00	0.42	49.18
Borrow - Stage 1	10.30	2.29	1346.23
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78



Material(s) at Station 423+50.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.48	4.71	61.72
Borrow - Stage 1	0.00	0.24	1363.16
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78

Material(s) at Station 423+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.61	4.20	57.01
Borrow - Stage 1	0.26	3.74	1362.92
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78



Material(s) at Station 424+35.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	1.24	2.52	68.98
Borrow - Stage 1	0.00	0.00	1363.16
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78

Material(s) at Station 424+00.00			
Material Name	Area	Volume	Cumulative Volume
Common Excavation - Stage 1	2.65	4.74	66.46
Borrow - Stage 1	0.00	0.00	1363.16
Common Excavation - Stage 2	0.00	0.00	3250.93
Borrow - Stage 3	0.00	0.00	2406.78

Notes



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