

ORDER OF SHEETS

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

TOTAL SHEETS = 140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CADOTT - CORNELL

100TH AVENUE TO SOUTH STREET/4-CULV

STH 27

CHIPPEWA COUNTY

STATE PROJECT NUMBER
8200-00-70

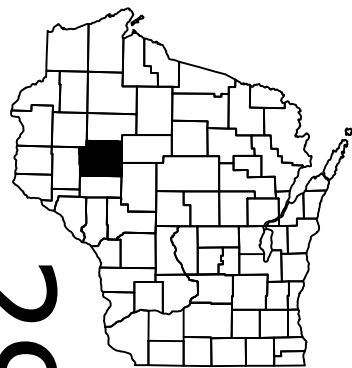
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8200-00-70	WISC 2019817	1

PROJECT ID:

8200-00-70

COUNTY:

CHIPPEWA



29

DESIGN DESIGNATION 8200-00-70

A.A.D.T. (2021)	=	3100
A.A.D.T. (2041)	=	3600
D.H.V. (2041)	=	414 VPH
D.D.	=	60/40
T. (% A.A.D.T.)	=	24.6%
DESIGN SPEED	=	55 MPH (ALI 'A' & 'B') / 45 MPH (ALI 'C')
ESALS	=	1,400,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
OVERHEAD UTILITY	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STA. 61+65.20'C'
END PROJECT
C-09-0051
CLARK CREEK

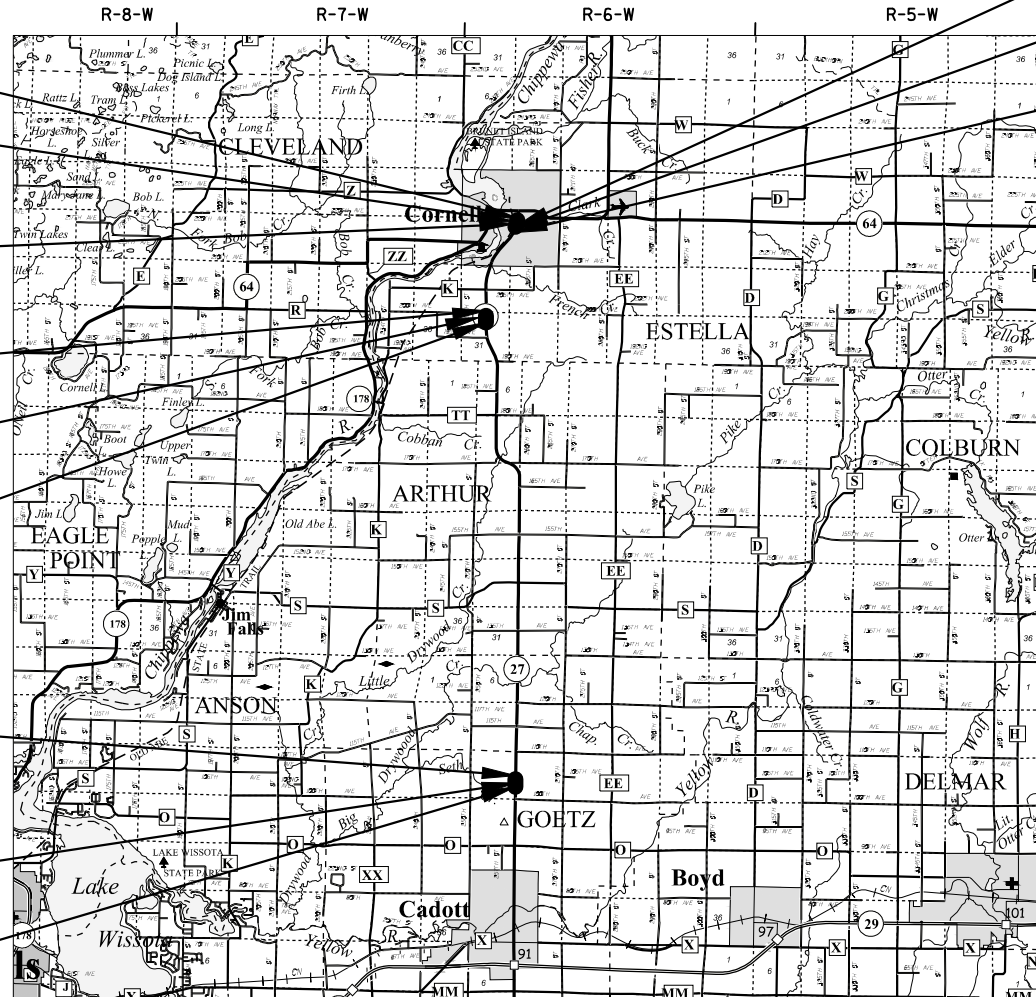
STA. 56+11.40'C'
BEGIN CONSTRUCTION

STA. 25+75.52'B'
END CONSTRUCTION
C-09-0049
LEMAN CREEK

STA. 21+90.26'B'
BEGIN CONSTRUCTION

STA. 15+76.22'A'
END CONSTRUCTION
B-09-0388
SETH CREEK

STA. 12+10.83'A'
BEGIN PROJECT
Y = 148984.560
X = 235198.713



SCALE 0 4 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, CHIPPEWA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STA. 50+16.86'C'
END CONSTRUCTION
C-09-0050
UNNAMED TRIBUTARY

STA. 45+50.14'C'
BEGIN CONSTRUCTION

ORIGINAL PLANS PREPARED BY

AECOM

8/1/19

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	WisDOT
Surveyor	
Designer	AECOM
Project Manager	TYLER RONGSTAD
Regional Examiner	TOU YANG
Regional Supervisor	JAMES KOENIG

APPROVED FOR THE DEPARTMENT

DATE: 8/1/19

(Signature)

GENERAL NOTES

THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

CROSS DRAIN PIPES ELEVATIONS, LENGTHS AND LOCATIONS AS SHOWN ON THE PLANS, SHALL BE ADJUSTED TO FIT THE EXISTING FIELD CONDITIONS, AS DIRECTED BY THE ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS), FOR REMOVAL OF UNSUITABLE MATERIAL, AS SHOWN ON THE PLANS IS MEASURED AND PAID FOR AS EXCAVATION COMMON. EXACT LOCATIONS FOR REMOVING UNSUITABLE MATERIAL WILL BE DETERMINED BY THE ENGINEER.

SALVAGED TOPSOIL, SEEDING, MULCHING, AND FERTILIZER HAVE BEEN COMPUTED BY A DIRECT MEASUREMENT ON THE CROSS SECTIONS PLUS FIVE (5) FEET BEYOND THE TOE OF SLOPE.

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED IN THE PLANS.

THE CONTRACTOR SHALL NOT OPERATE BEYOND THE SLOPE INTERCEPTS AS SHOWN IN THE PLANS WHEN ADJACENT TO WETLANDS OR ENVIRONMENTALLY SENSITIVE AREAS.

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

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

EROSION CONTROL ITEMS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS TO FIT FIELD CONDITIONS.

WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.

ELEVATIONS ARE REFERENCED TO NAVD 83 (2011).

THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON A UNIT WEIGHT OF 112 LBS/SY/IN OF DEPTH.

7.5-INCH ASPHALTIC SURFACE
(MUST MEET 4 MT 58-34 S OR HIGHER)

LAYER	THICKNESS	BID ITEM
UPPER	2.5-INCHES	ASPHALTIC SURFACE
MIDDLE	2.5-INCHES	ASPHALTIC SURFACE
LOWER	2.5-INCHES	ASPHALTIC SURFACE

ABBREVIATIONS

(100')
A.A.D.T. ANNUAL AVERAGE DAILY TRAFFIC
AC ACRES
AP ACCESS POINT/DRIVEWAY CONNECTION
AR ACCESS RIGHTS
ASPH. ASPHALTIC
ET. AL. AND OTHERS
B.A.D. BASE AGGREGATE DENSE
BM BENCH MARK
C & G CURB AND GUTTER
€ OR CL CENTERLINE
C.A.B.C. CRUSHED AGGREGATE BASE COURSE
C.P. CULVERT PIPE
C.P.C.S. CULVERT PIPE CORRUGATED STEEL
C.P.R.C. CULVERT PIPE REINFORCED CONCRETE
C.T.H. COUNTY TRUNK HIGHWAY
CE COMMERCIAL ENTRANCE
C.M.C.P. CORRUGATED METAL CULVERT PIPE
CONC. CONCRETE
COR. CORNER
CSM CERTIFIED SURVEY MAP
CWT. HUNDREDWEIGHT
D DEGREE OF CURVE
D.D. DIRECTIONAL DISTRIBUTION
D.H.V. DESIGN HOUR VOLUME
DIA. DIAMETER
DOC. DOCUMENT
E. EAST
E.B.S. EXCAVATION BELOW SUBGRADE
E.S.A.L. EQUIVALENT SINGLE AXLE LOAD
EASE. EASEMENT
EB EASTBOUND
EL OR ELEV ELEVATION
ELEC. ELECTRIC (AL)
EXC. EXCAVATION
EXIST. EXISTING
F.E. FIELD ENTRANCE
F.L. OR F/L FLOW LINE
FT. FOOT
H.E. HIGHWAY EASEMENT
HMA HOT MIX ASPHALT
INL. INLET
INV. INVERT
IP OR I.P. IRON PIN
L LENGTH OF CURVE
L.H.F. LEFT-HAND FORWARD
L.S. LUMP SUM
LB. POUND
LN LANE
LT. OR LT LEFT
M.L. OR M/L MATCH LINE
MATL. MATERIAL
MAX. MAXIMUM
MH. MANHOLE
MIN. MINIMUM
MON. MONUMENT
MP ROADWAY MILEAGE
N. NORTH
N.C. NORMAL CROWN
NB NORTH BOUND
OBLIT OBLITERATE
P. PAGE
P.A.S.P. PIPE ARCH STRUCTURAL PLATE
P.C. POINT OF CURVATURE
P.C.C. POINT OF COMPOUND CURVE
P.E. PRIVATE ENTRANCE
P.I. POINT OF INTERSECTION
P.L. PROPERTY LINE
P.L.E. PERMANENT LIMITED EASEMENT
P.T. POINT OF TANGENCY
PAVT. PAVEMENT
PROJ. PROJECT
PT. POINT
R. RADIUS
R.H.F. RIGHT-HAND FORWARD
€ OR R/L REFERENCE LINE
R/W RIGHT-OF-WAY
R.C.C.P. REINFORCED CONCRETE CULVERT PIPE
RD. ROAD
REBAR. REINFORCEMENT BAR

ABBREVIATIONS CONT.

REINF REINFORCING OR REINFORCEMENT
REM. REMAINING
REQD. REQUIRED
ROR RELEASE OF RIGHTS
RR. RAILROAD
RRSP RAILROAD SPIKE
RT OR RT. RIGHT
S. SOUTH
S.D.D. STANDARD DETAIL DRAWINGS
S.E. SUPERELEVATION
S.F. OR SQ.FT. SQUARE FEET
S.S. STORM SEWER
S.S.P.R.C. STORM SEWER PIPE REINFORCED CONCRETE
S.T.H. STATE TRUNK HIGHWAYS
S.Y. OR SQ.YD. SQUARE YARD
SALV. SALVAGED
SB SOUTHBOUND
SEC. SECTION
SHLDR. SHOULDER
SPECS. SPECIFICATIONS
STA. STATION
STD. STANDARD
T TANGENT
T. % TRUCKS (PERCENT OF)
T.L.E. TEMPORARY LIMITED EASEMENT
T.P.M. TEMPORARY PAVEMENT MARKING
T.P.M.R.T. TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE
TEL. TELEPHONE
TEMP. TEMPORARY
TYP. TYPICAL
U.S.H. UNITED STATES HIGHWAY
UG. UNDERGROUND
V VOLUME
V.C. VERTICAL CURVE
W. WEST
WB WESTBOUND
X EAST GRID COORDINATE
Y NORTH GRID COORDINATE

DETAIL SHEET INDEX

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
PAVEMENT MARKING & SIGNING
DETOUR
ALIGNMENT DATA

UTILITIES

COMMUNICATION LINE

CENTURYLINK
BRIAN HUHN
425 ELLINGSON AVENUE
P.O. BOX 78
HAWKINS, WI 54530
(715) 532-0023 WORK
(715) 563-8294 CELL
brlan.huhn@centurylink.com

CHARTER COMMUNICATIONS
SHANE YODER
1201 MCCANN DRIVE
ALTOONA, WI 54720
(715) 831-8940 EXT 51113
shane.yoder@charter.com

ELECTRICITY

CHIPPEWA VALLEY ELECTRIC COOPERATIVE
JIM HODOWANIC
317 S 8TH ST
P.O. BOX 575
CORNELL, WI 54732
(715) 239-6800 OFFICE
(715) 827-0214 CELL
jhodowanic@cve.coop

CITY OF CORNELL
BEN MODL
300 PARK ROAD
CORNELL, WI 54732
715-577-4590
cornellutiltiydept@centurytel.net

WATER

CITY OF CORNELL
BEN MODL
300 PARK ROAD
CORNELL, WI 54732
715-577-4590
cornellutiltiydept@centurytel.net

SEWER

CITY OF CORNELL
BEN MODL
300 PARK ROAD
CORNELL, WI 54732
715-577-4590
cornellutiltiydept@centurytel.net

GAS/PETROLEUM

WE ENERGIES
STEVEN CHAVERS
104 W. SOUTH ST.
RICE LAKE, WI 54868
(715) 234-9605
Steven.chavers@we-energies.com

WE ENERGIES
24-HOUR EMERGENCY (GAS)
800-261-5325

WISDOT

WISDOT DESIGN PROJECT MANAGER
TYLER RONGSTAD
718 CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: (715) 836-2094
tyler.rongstad@dot.wi.gov

WISDNR

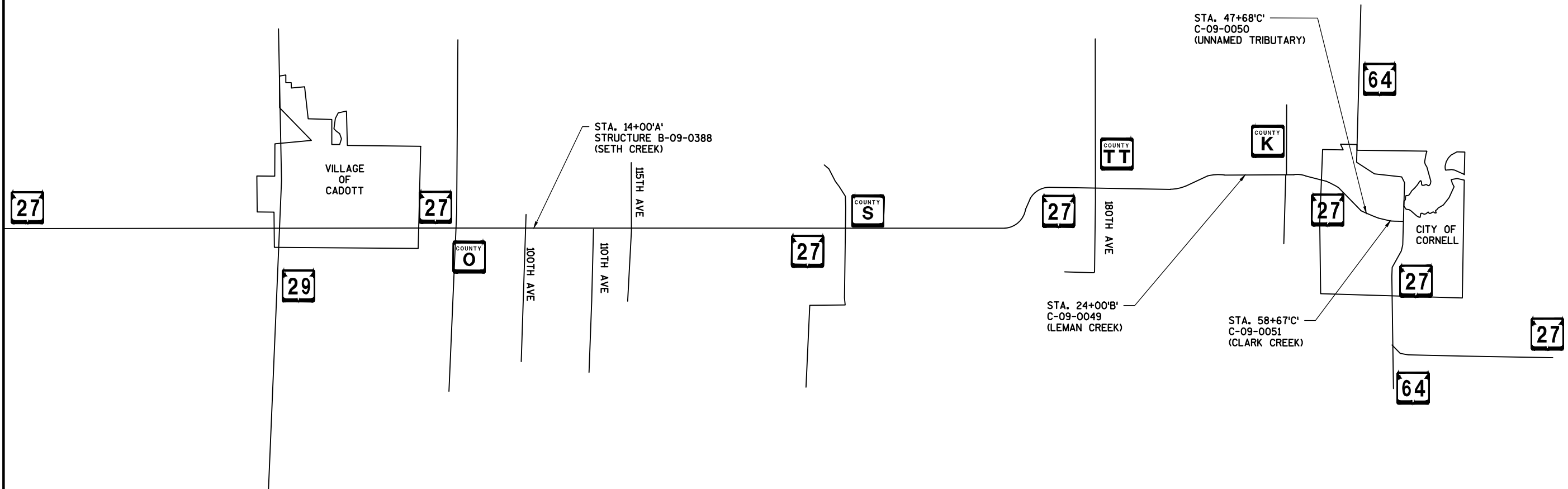
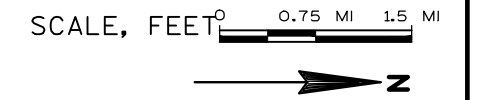
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
(NORTHERN REGION)
CHIPPEWA COUNTY
AMY CRONK
810 W. MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 635-4229
amy.cronk@wisconsin.gov

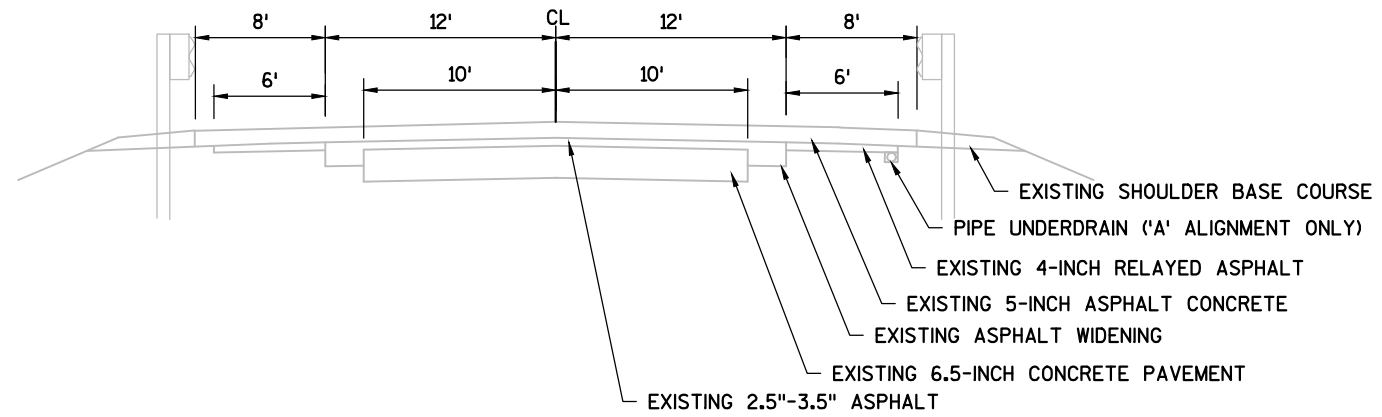
DESIGN CONTRACT (ROADWAY)

AECOM
ZACH LARSON
1350 DEMING WAY
SUITE 100
MIDDLETON, WI 53562
PHONE: (608) 828-8165
zachary.larson@aecom.com

OTHER AGENCIES

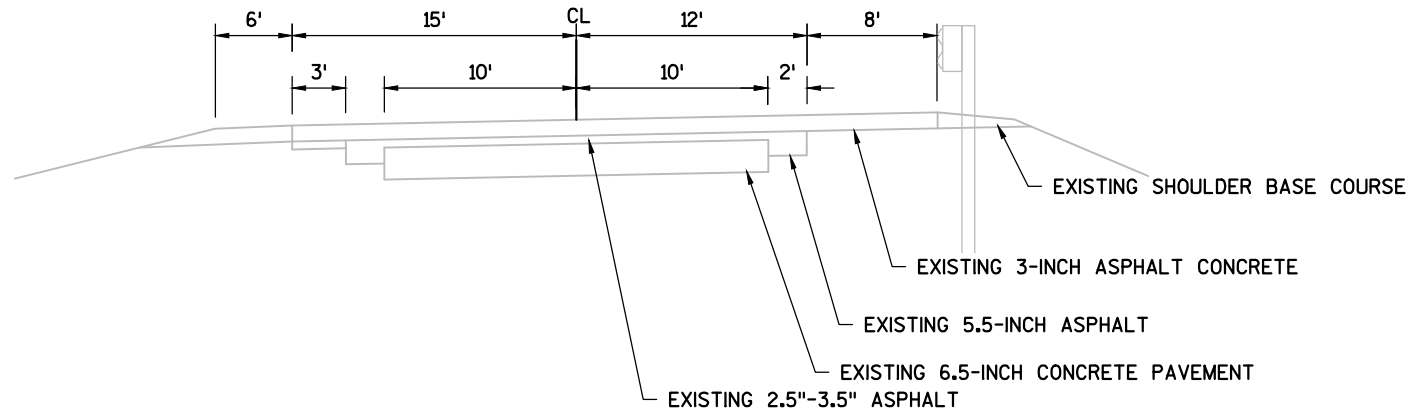






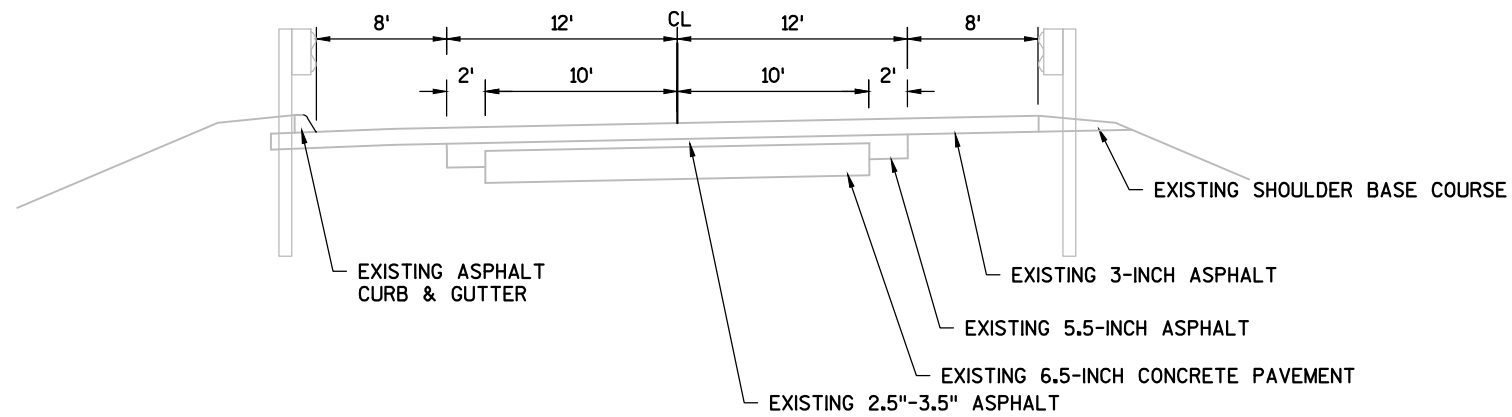
TYPICAL EXISTING SECTION - STH 27

STA. 12+11'A' - STA. 15+76'A'
STA. 21+90'B' - STA. 25+76'B'



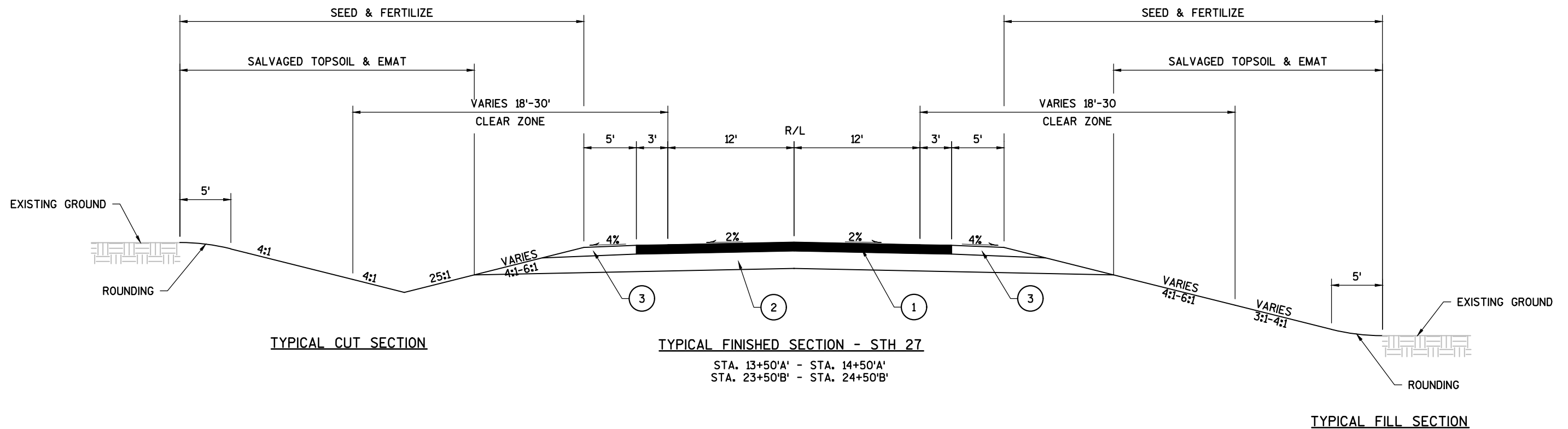
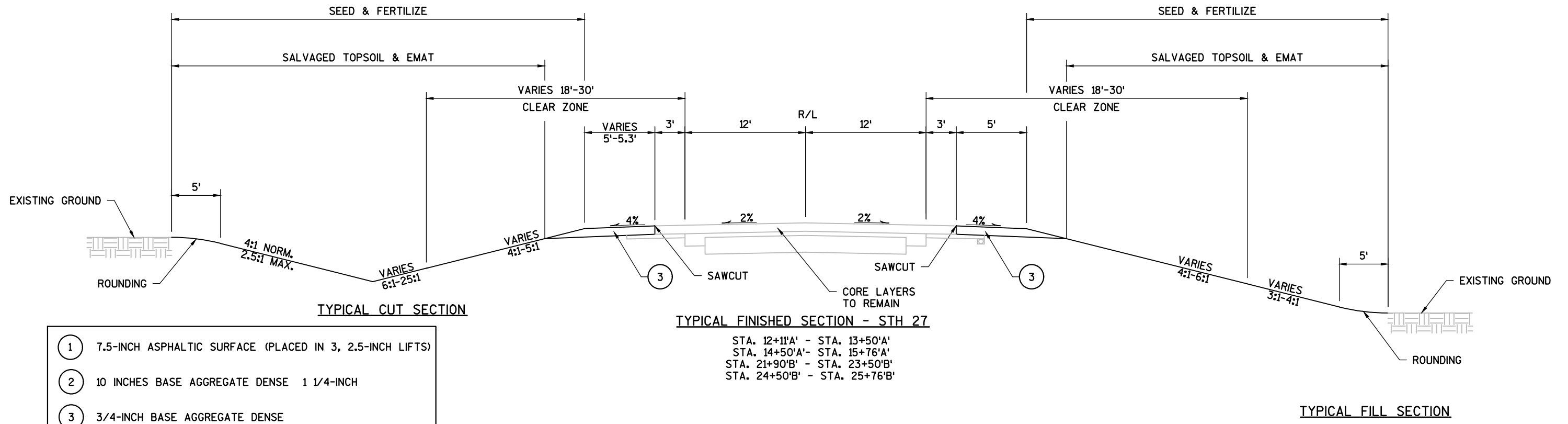
TYPICAL EXISTING SECTION - STH 27

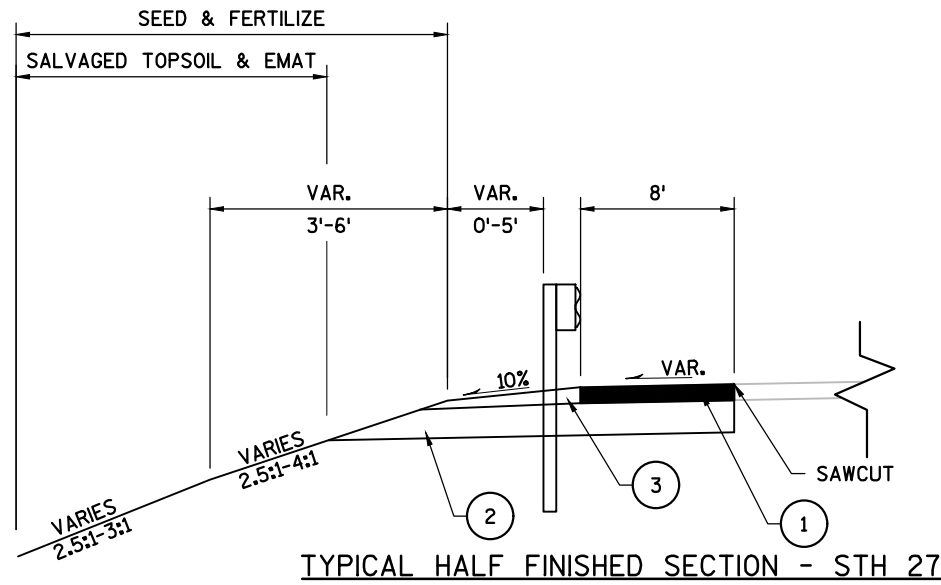
STA. 45+50'C' - STA. 50+17'C'



TYPICAL EXISTING SECTION - STH 27

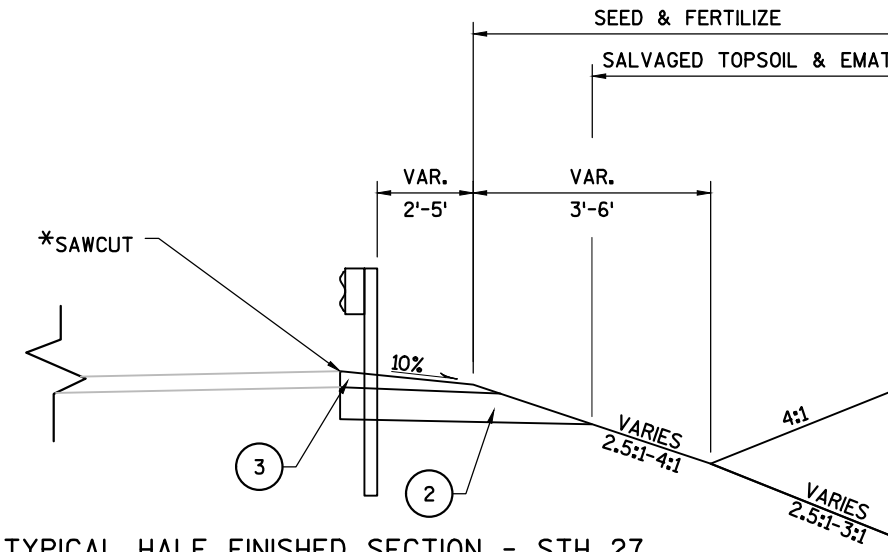
STA. 56+11'C' - STA. 61+65'C'





TYPICAL HALF FINISHED SECTION - STH 27

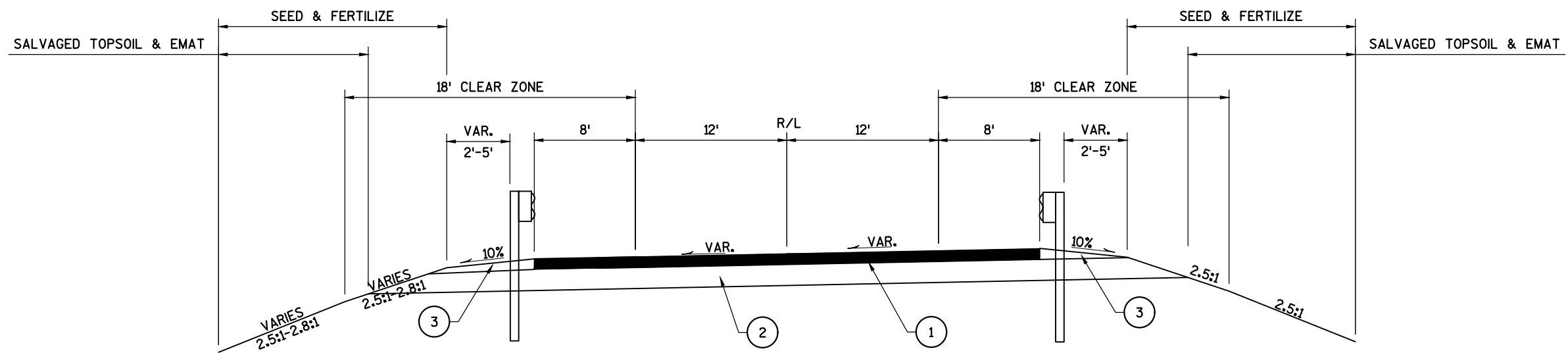
STA. 46+18'C' LT - STA. 47+19'C' LT
STA. 48+19'C' LT - STA. 50+17'C' LT



TYPICAL HALF FINISHED SECTION - STH 27

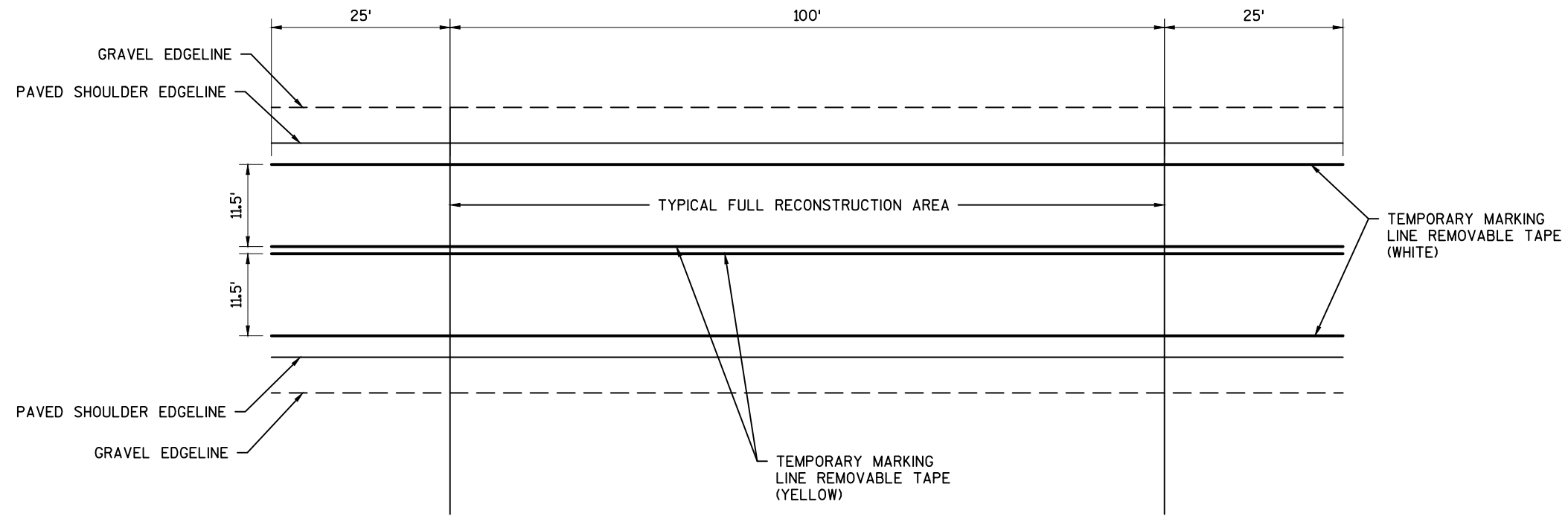
STA. 45+50'C' RT - STA. 47+19'C' RT
STA. 48+19'C' RT - STA. 48+76'C' RT
STA. 56+77'C' RT - STA. 58+07'C' RT *
STA. 57+58'C' LT - STA. 58+07'C' LT
STA. 59+17'C' RT - STA. 60+57'C' RT
STA. 59+17'C' LT - STA. 61+65'C' LT *

- ① 7.5-INCH ASPHALTIC SURFACE (PLACED IN 3, 2.5-INCH LIFTS)
- ② 10 INCHES BASE AGGREGATE DENSE 1 1/4-INCH
- ③ 3/4-INCH BASE AGGREGATE DENSE

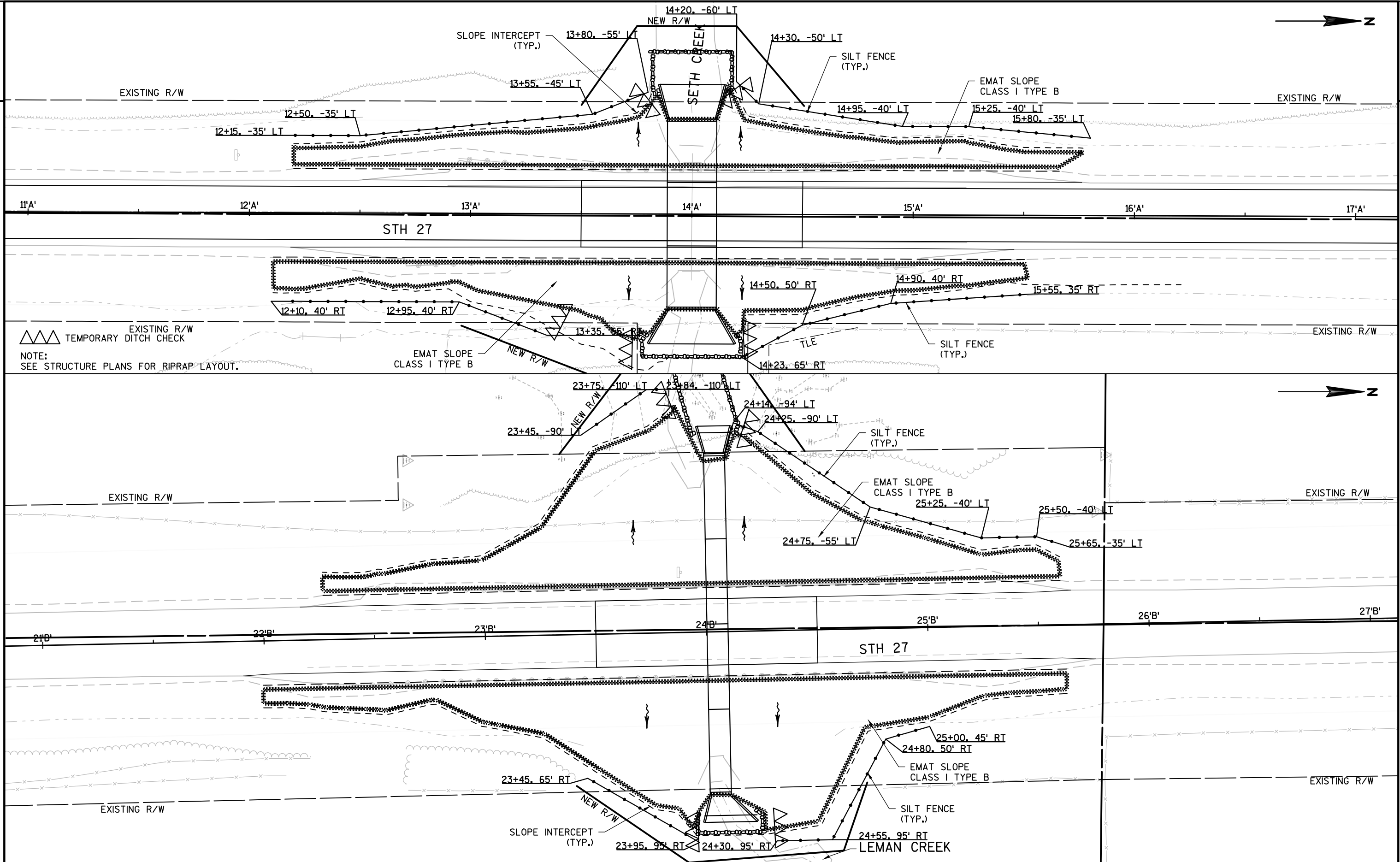


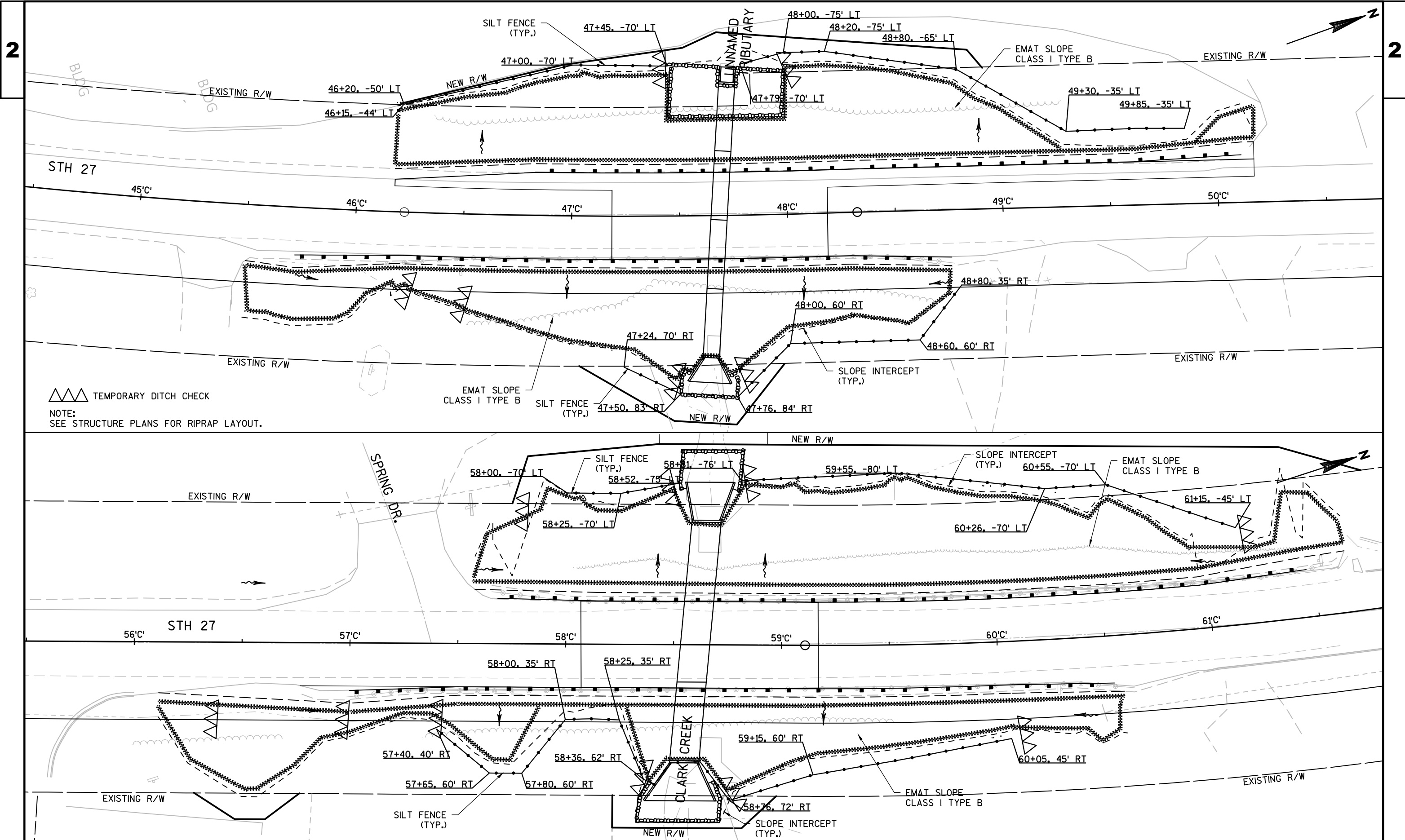
TYPICAL FINISHED SECTION - STH 27

STA. 47+19'C' - STA. 48+19'C'
STA. 58+07'C' - STA. 59+17'C'

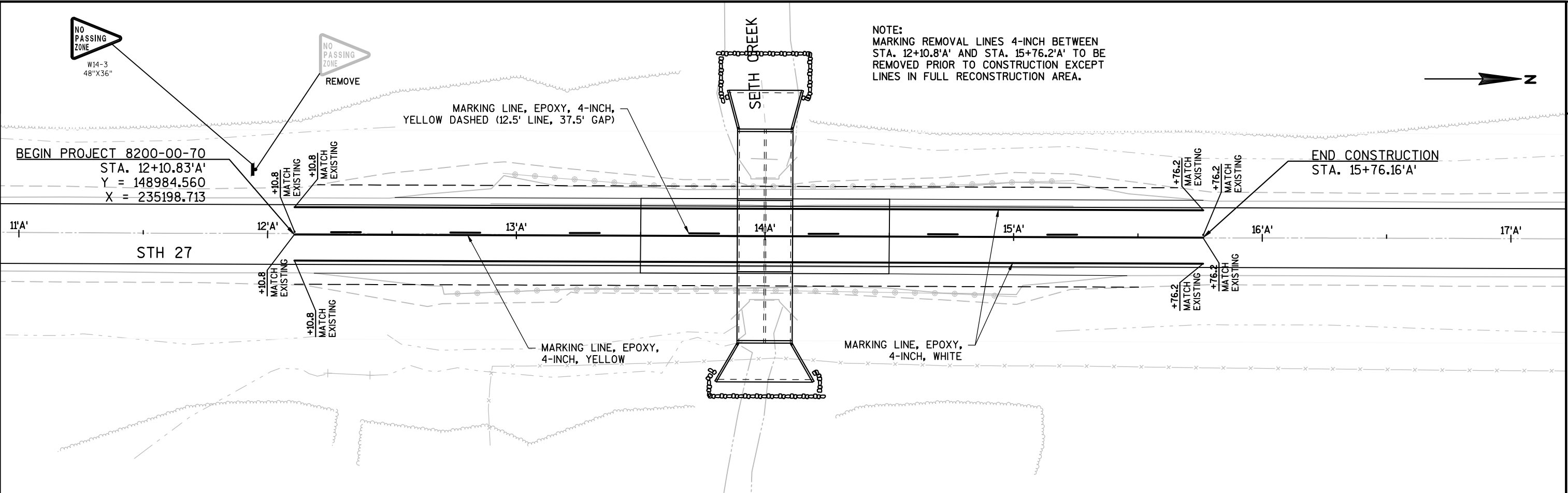


TEMPORARY PAVEMENT MARKING
 TO BE USED AT WORK ZONES WHILE SPECIAL EVENTS
 OCCUR SUCH AS COUNTRYFEST AND ROCKFEST.

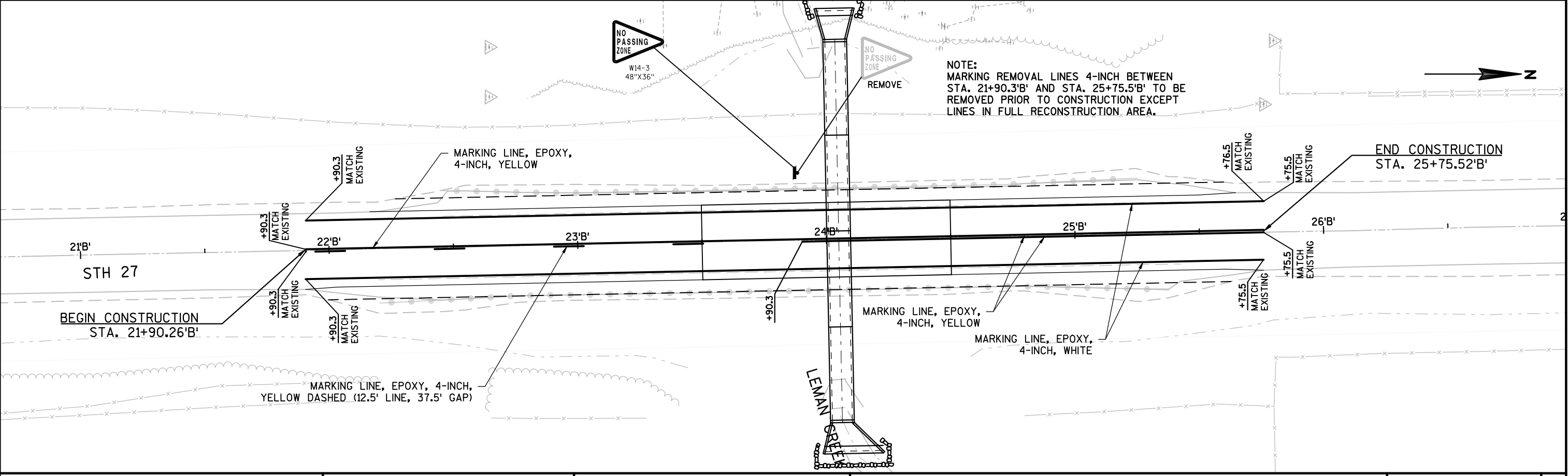




TEMPORARY DITCH CHECK
 NOTE:
 SEE STRUCTURE PLANS FOR RIPRAP LAYOUT.

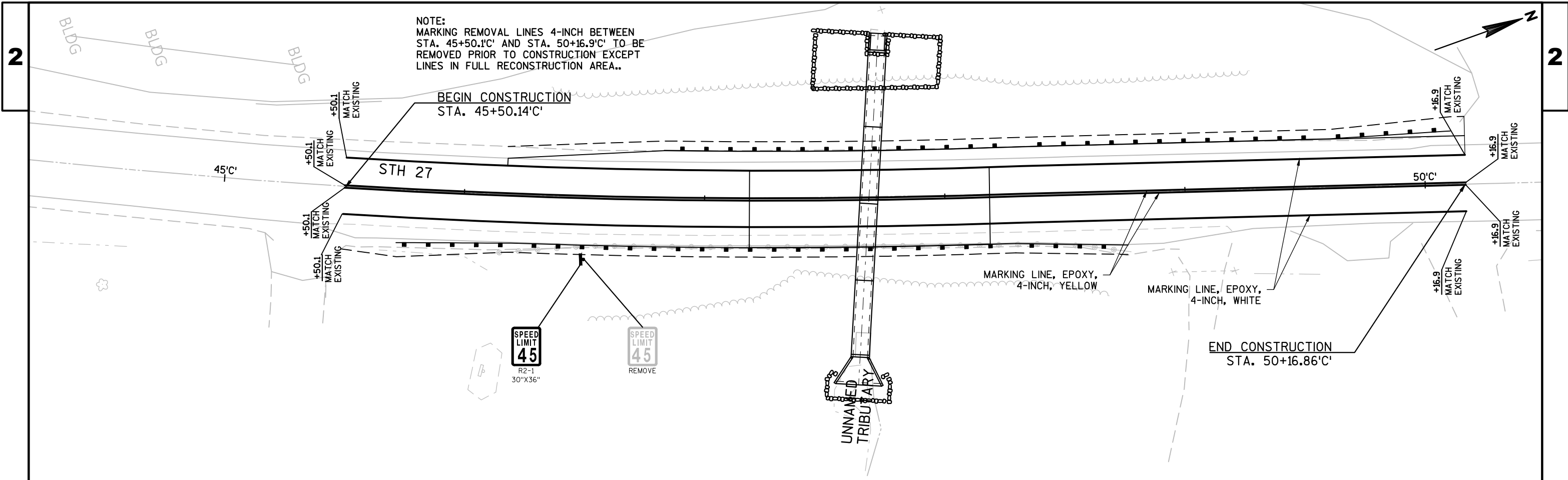


NOTE:
 MARKING REMOVAL LINES 4-INCH BETWEEN
 STA. 12+10.8'A' AND STA. 15+76.2'A' TO BE
 REMOVED PRIOR TO CONSTRUCTION EXCEPT
 LINES IN FULL RECONSTRUCTION AREA.



NOTE:
 MARKING REMOVAL LINES 4-INCH BETWEEN
 STA. 21+90.3'B' AND STA. 25+75.5'B' TO BE
 REMOVED PRIOR TO CONSTRUCTION EXCEPT
 LINES IN FULL RECONSTRUCTION AREA.





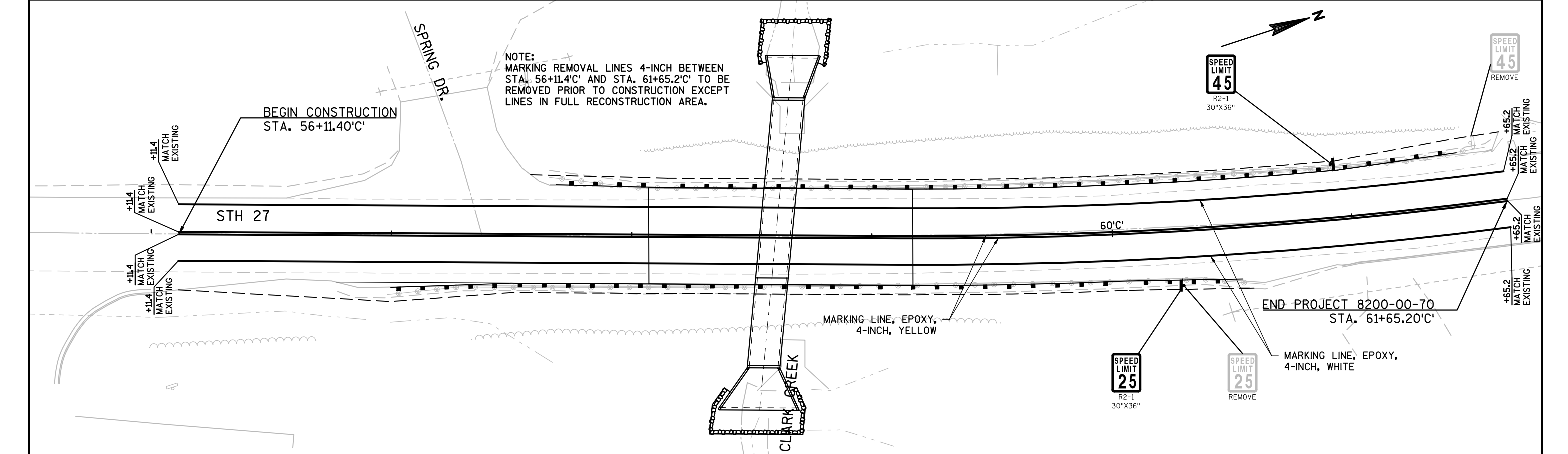
NOTE:
MARKING REMOVAL LINES 4-INCH BETWEEN
STA. 45+50.1'C' AND STA. 50+16.9'C' TO BE
REMOVED PRIOR TO CONSTRUCTION EXCEPT
LINES IN FULL RECONSTRUCTION AREA..

SPEED
LIMIT
45
R2-1
30\"X36\"

SPEED
LIMIT
45
REMOVE

SPEED
LIMIT
45
R2-1
30\"X36\"

SPEED
LIMIT
45
REMOVE



NOTE:
MARKING REMOVAL LINES 4-INCH BETWEEN
STA. 56+11.4'C' AND STA. 61+65.2'C' TO BE
REMOVED PRIOR TO CONSTRUCTION EXCEPT
LINES IN FULL RECONSTRUCTION AREA.

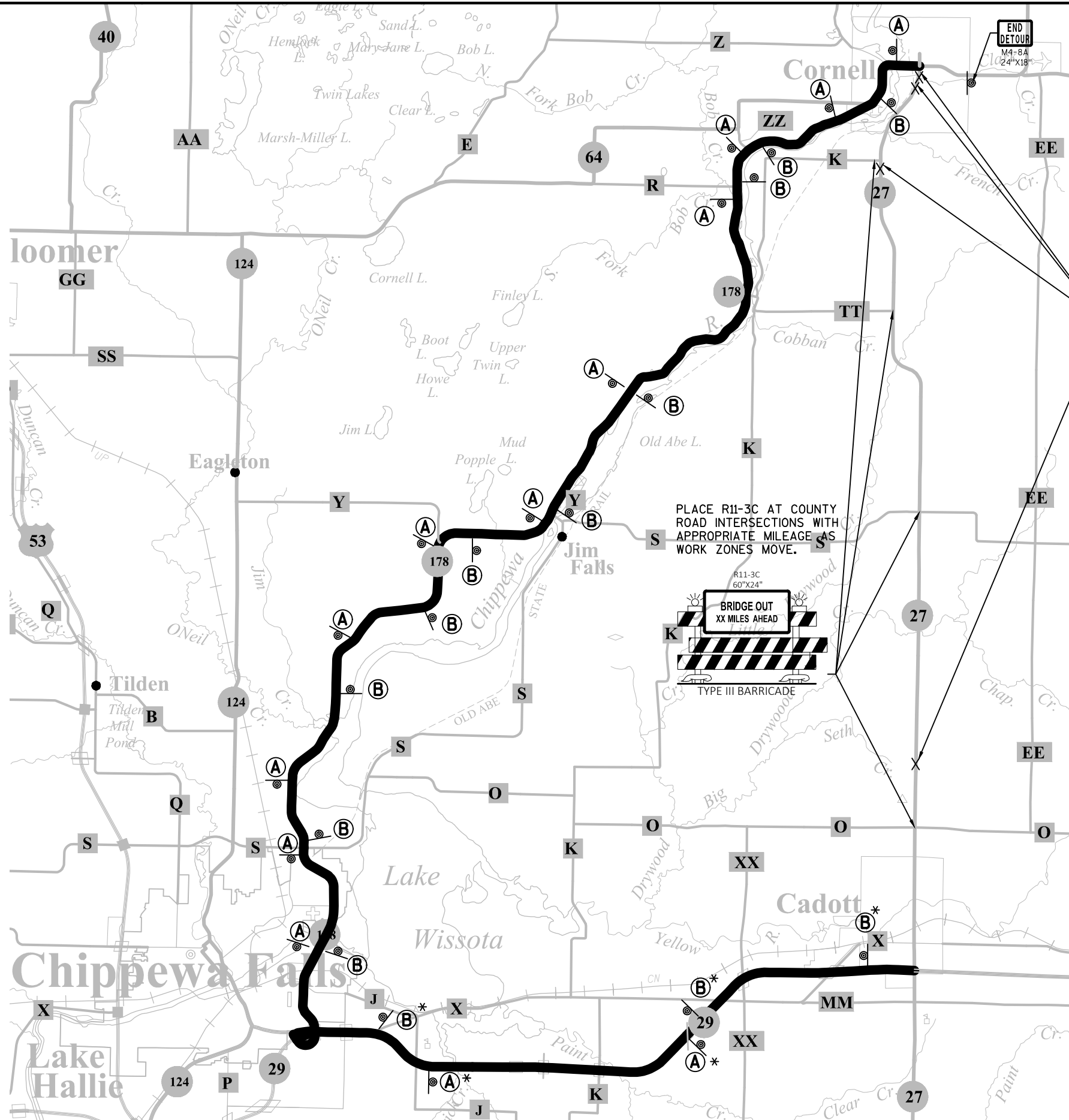
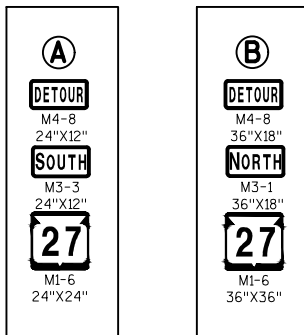
SPEED
LIMIT
25
R2-1
30\"X36\"

SPEED
LIMIT
25
REMOVE

SEE SDD
"BARRICADES AND SIGNS FOR SIDEROAD CLOSURES"
FOR GUIDANCE WHERE STH 27 INTERSECTS WITH:

- SOUTHRIDGE AVE
- E MD ST
- CTH X
- E MILLS ST
- PARK PLACE RD
- E OAK ST
- 80TH AVE/E NORTH RD
- CTH O
- 100TH AVE
- 110TH AVE
- 115TH AVE
- 120TH AVE
- 135TH AVE
- CTH S
- 155TH AVE
- 165TH AVE
- JENSEN RD
- 170TH AVE
- CTH TT/180TH AVE
- 185TH AVE
- 190TH AVE
- BOSANOC RD
- CTH K/ELMER RD
- JOHNSON RD
- RAVENSWOOD CT
- SPRING DR
- SOUTH ST
- BATES ST

REASSURANCE SIGNAGE



FULL CLOSURE APPROXIMATE LOCATIONS:
SEE SDD
"BARRICADES AND SIGNS FOR MAINLINE CLOSURES,
MAINLINE CLOSURE, NO POSTED DETOUR"
FOR GUIDANCE

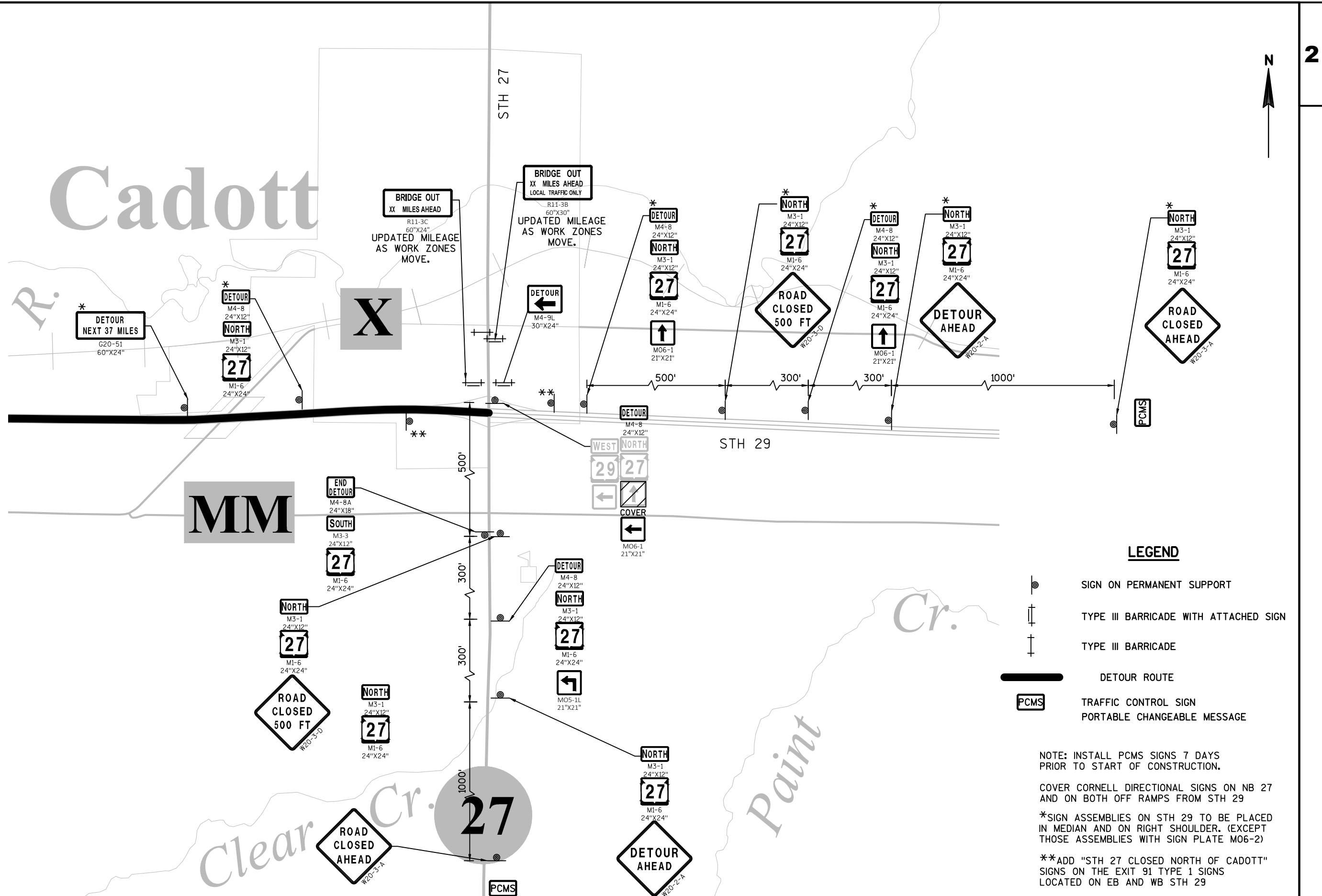
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- DETOUR ROUTE
- X FULL CLOSURE LOCATION

NOTE: SEE SUBSEQUENT DETOUR SHEETS FOR DETAIL AT
STH 27 AND STH 29 INTERSECTION IN CADOTT,
STH 27 AND STH 64 INTERSECTION IN CORNELL, AND
THE STH 29 & STH 178 INTERSECTION

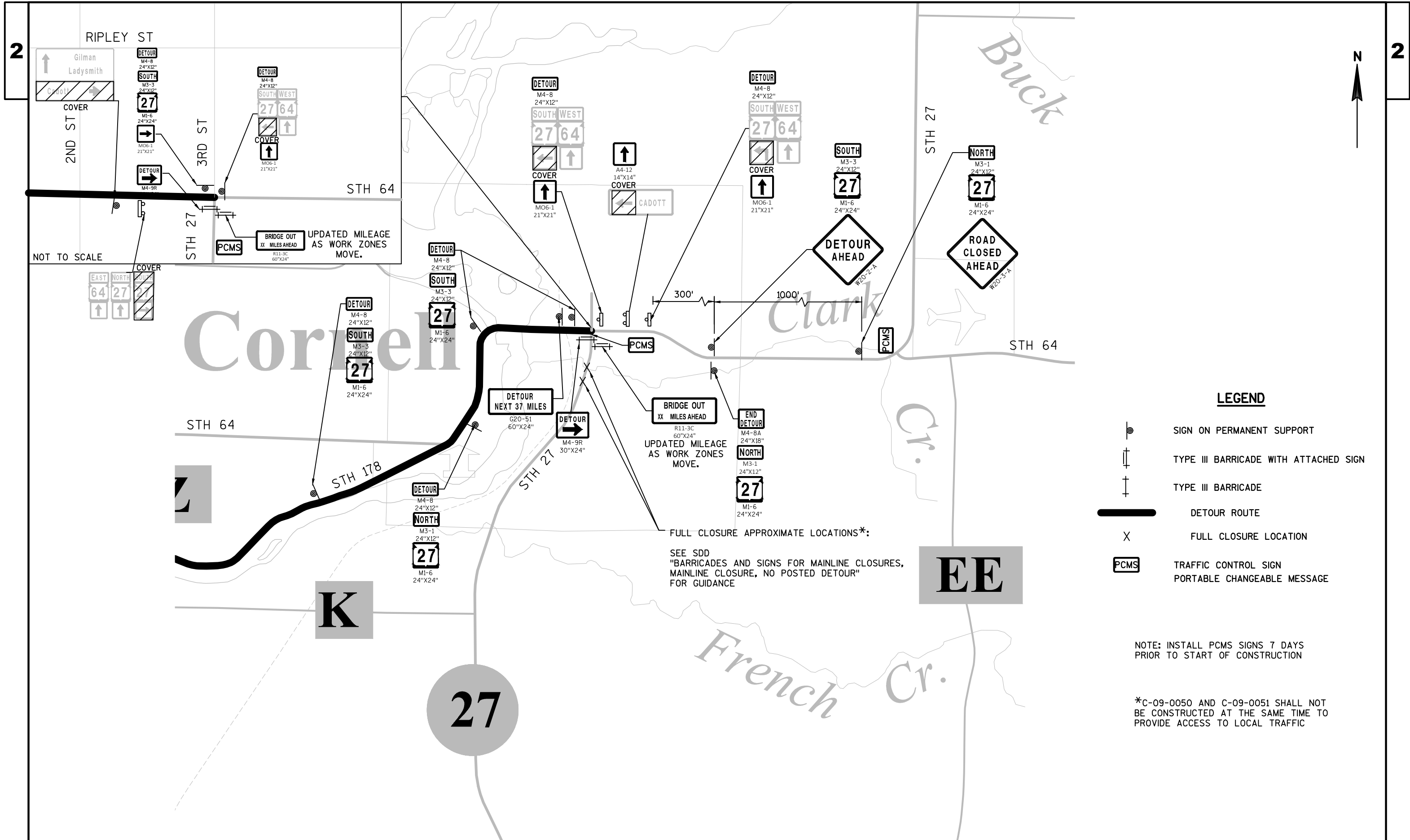
*SIGN ASSEMBLIES ON STH 29 TO BE PLACED IN MEDIAN
AND ON RIGHT SHOULDER. (EXCEPT THOSE ASSEMBLIES WITH
SIGN PLATE M06-2)

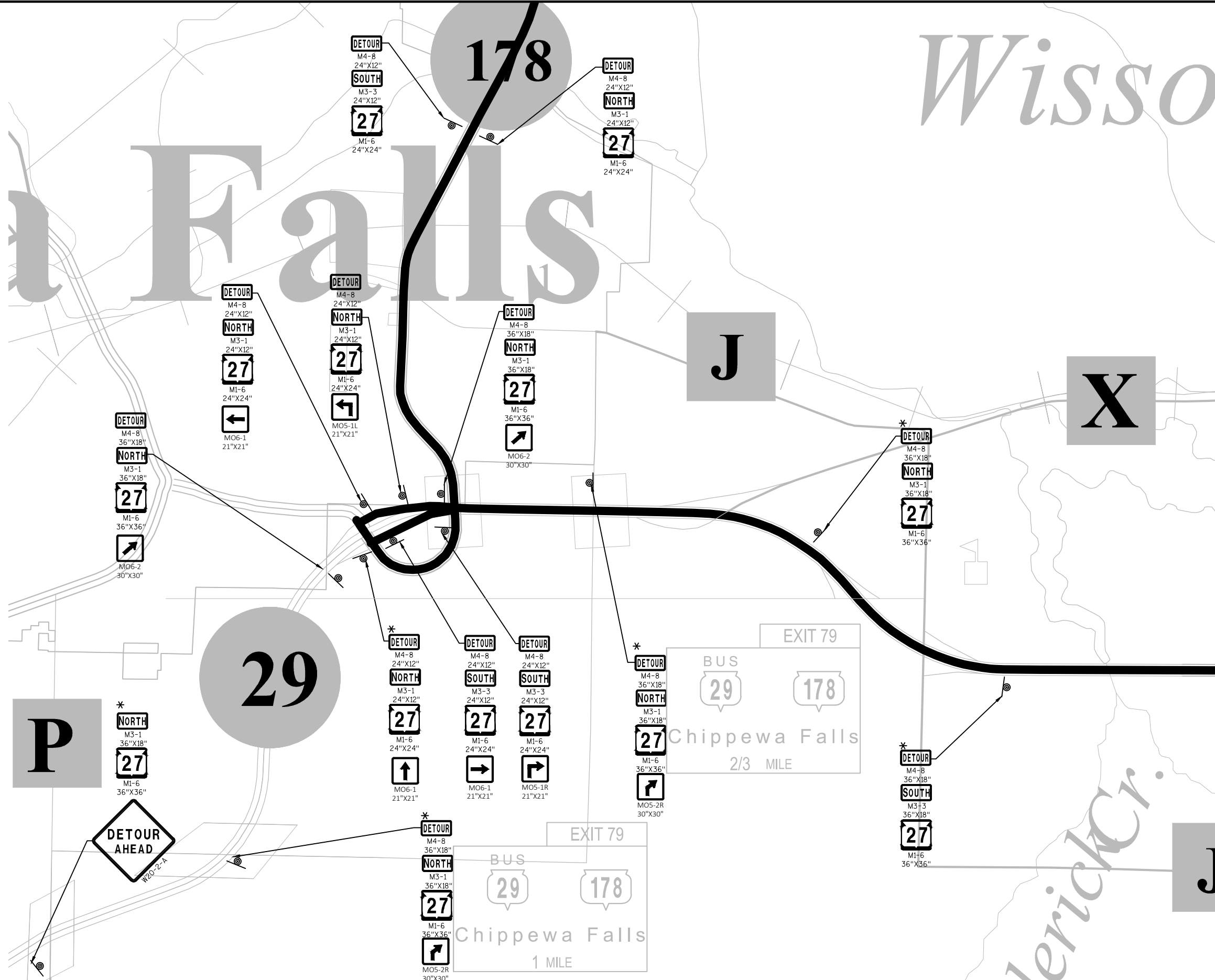
Cadott



- LEGEND**
- SIGN ON PERMANENT SUPPORT
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TYPE III BARRICADE
 - DETOUR ROUTE
 - PCMS
TRAFFIC CONTROL SIGN
PORTABLE CHANGEABLE MESSAGE

NOTE: INSTALL PCMS SIGNS 7 DAYS PRIOR TO START OF CONSTRUCTION.
 COVER CORNELL DIRECTIONAL SIGNS ON NB 27 AND ON BOTH OFF RAMP FROM STH 29
 *SIGN ASSEMBLIES ON STH 29 TO BE PLACED IN MEDIAN AND ON RIGHT SHOULDER. (EXCEPT THOSE ASSEMBLIES WITH SIGN PLATE M06-2)
 **ADD "STH 27 CLOSED NORTH OF CADOTT" SIGNS ON THE EXIT 91 TYPE 1 SIGNS LOCATED ON EB AND WB STH 29





Wisso

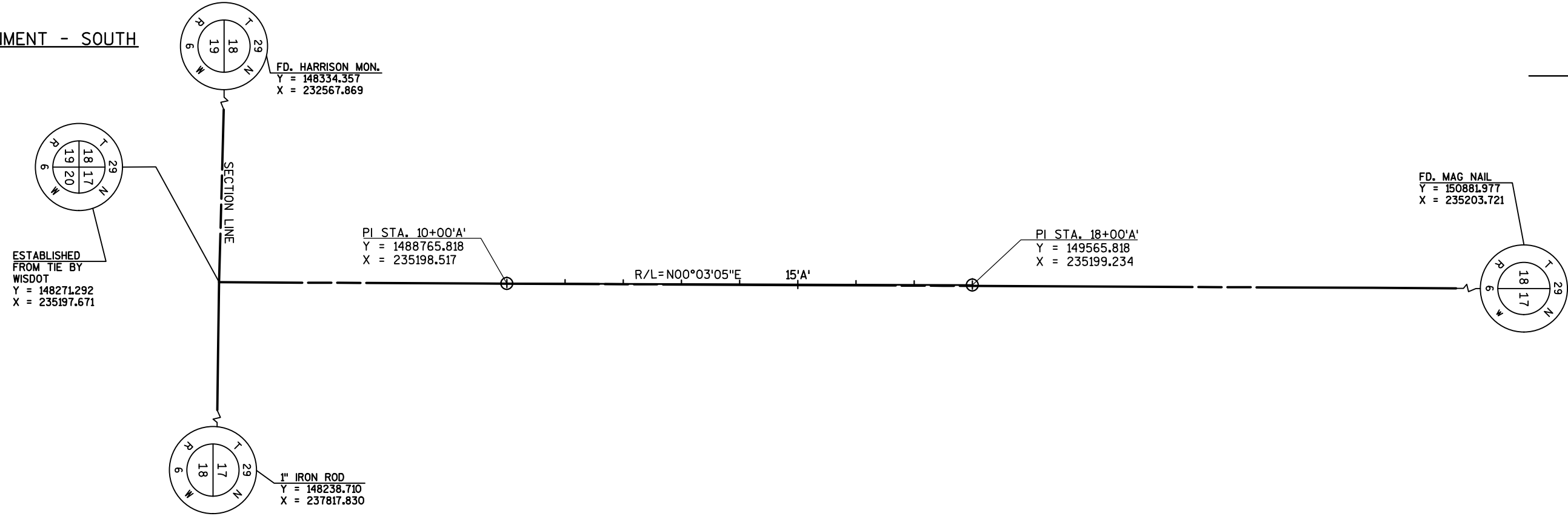


LEGEND

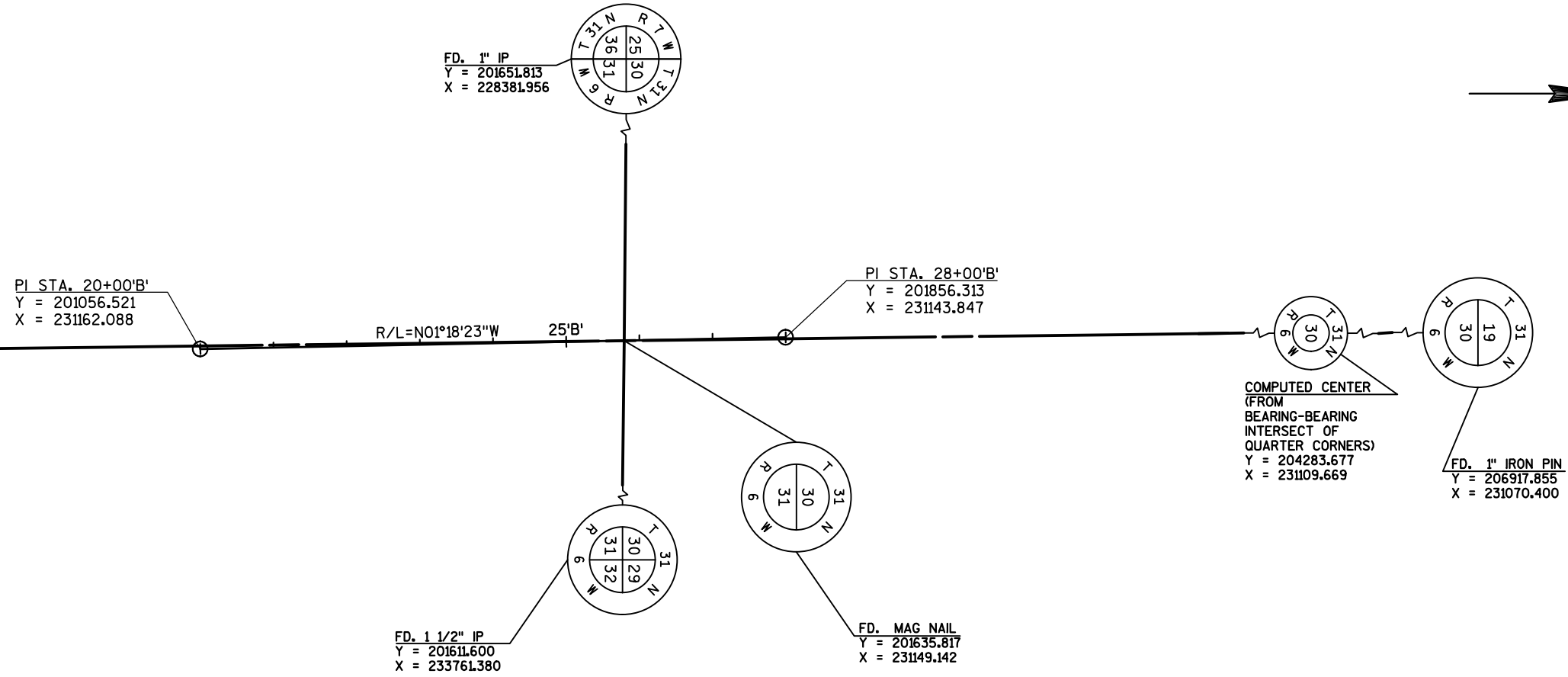
- SIGN ON PERMANENT SUPPORT
- DETOUR ROUTE

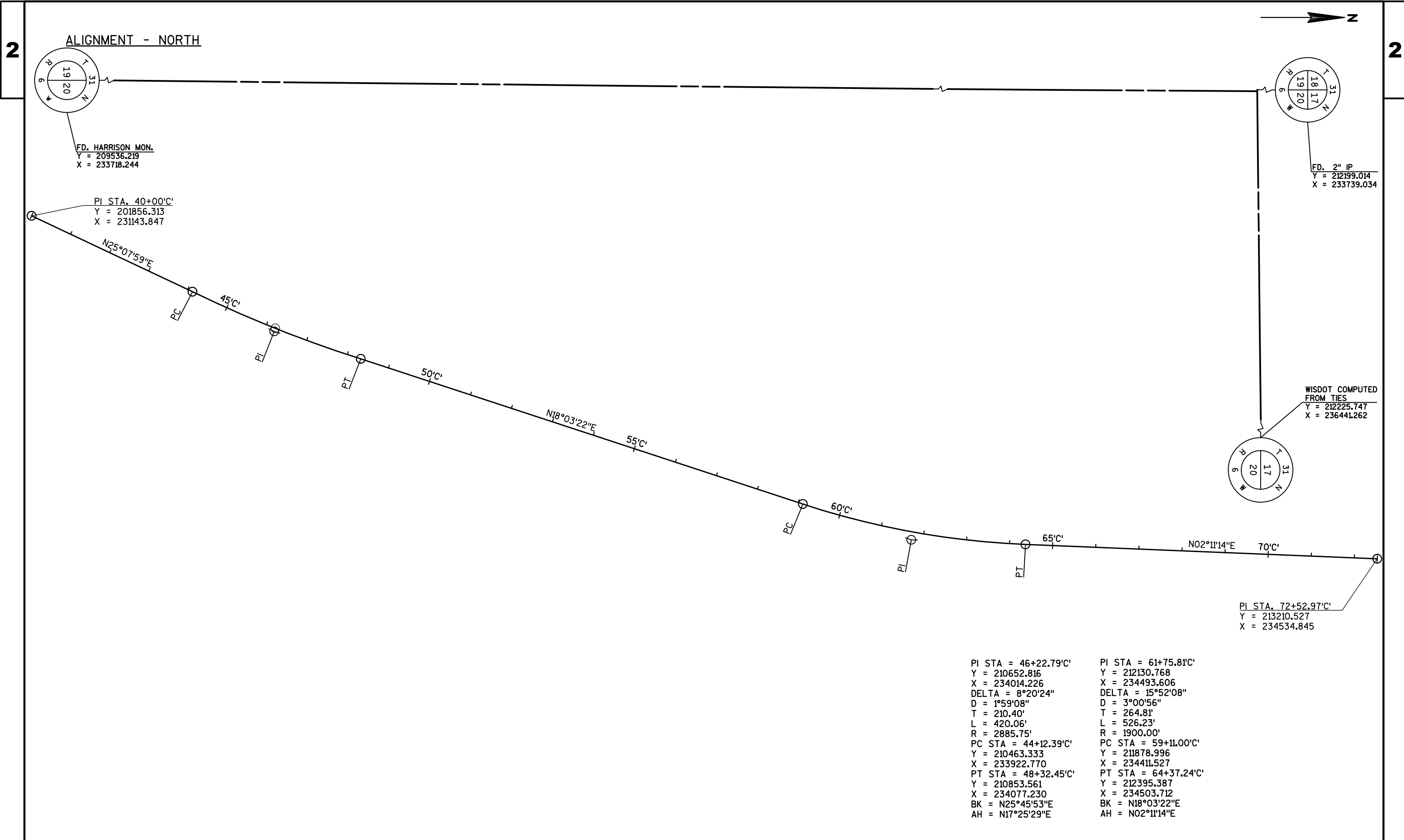
*SIGN ASSEMBLIES ON STH 29 TO BE PLACED IN MEDIAN AND ON RIGHT SHOULDER. (EXCEPT THOSE ASSEMBLIES WITH SIGN PLATE M06-2)

ALIGNMENT - SOUTH



ALIGNMENT - MID





PI STA = 46+22.79'	PI STA = 61+75.81'
Y = 210652.816	Y = 212130.768
X = 234014.226	X = 234493.606
DELTA = 8°20'24"	DELTA = 15°52'08"
D = 1°59'08"	D = 3°00'56"
T = 210.40'	T = 264.81'
L = 420.06'	L = 526.23'
R = 2885.75'	R = 1900.00'
PC STA = 44+12.39'	PC STA = 59+11.00'
Y = 210463.333	Y = 211878.996
X = 233922.770	X = 234411.527
PT STA = 48+32.45'	PT STA = 64+37.24'
Y = 210853.561	Y = 212395.387
X = 234077.230	X = 234503.712
BK = N25°45'53"E	BK = N18°03'22"E
AH = N17°25'29"E	AH = N02°11'14"E

Estimate Of Quantities

8200-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	13.000	13.000
0004	201.0205	Grubbing	STA	13.000	13.000
0006	203.0200	Removing Old Structure (station) 01. 14+00	LS	1.000	1.000
0008	203.0200	Removing Old Structure (station) 02. 24+00	LS	1.000	1.000
0010	203.0200	Removing Old Structure (station) 03. 47+68	LS	1.000	1.000
0012	203.0200	Removing Old Structure (station) 04. 58+60	LS	1.000	1.000
0014	204.0100	Removing Pavement	SY	912.000	912.000
0016	204.0165	Removing Guardrail	LF	2,077.000	2,077.000
0018	204.0170	Removing Fence	LF	395.000	395.000
0020	204.0220	Removing Inlets	EACH	1.000	1.000
0022	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	50.000	50.000
0024	205.0100	Excavation Common	CY	2,217.000	2,217.000
0026	206.2000	Excavation for Structures Culverts (structure) 01. B-9-388	LS	1.000	1.000
0028	206.2000	Excavation for Structures Culverts (structure) 02. C-9-49	LS	1.000	1.000
0030	206.2000	Excavation for Structures Culverts (structure) 03. C-9-50	LS	1.000	1.000
0032	206.2000	Excavation for Structures Culverts (structure) 04. C-9-51	LS	1.000	1.000
0034	208.0100	Borrow	CY	5,655.000	5,655.000
0036	210.2500	Backfill Structure Type B	TON	7,679.000	7,679.000
0038	213.0100	Finishing Roadway (project) 01. 8200-00-70	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	925.000	925.000
0042	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,610.000	1,610.000
0044	311.0115	Breaker Run	CY	433.000	433.000
0046	450.4000	HMA Cold Weather Paving	TON	247.000	247.000
0048	455.0605	Tack Coat	GAL	150.000	150.000
0050	465.0105	Asphaltic Surface	TON	987.000	987.000
0052	504.0100	Concrete Masonry Culverts	CY	738.000	738.000
0054	505.0400	Bar Steel Reinforcement HS Structures	LB	91,100.000	91,100.000
0056	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	7,560.000	7,560.000
0058	516.0500	Rubberized Membrane Waterproofing	SY	103.000	103.000
0060	606.0300	Riprap Heavy	CY	297.000	297.000
0062	614.2300	MGS Guardrail 3	LF	1,150.000	1,150.000
0064	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0066	614.2620	MGS Guardrail Terminal Type 2	EACH	4.000	4.000
0068	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8200-00-70	EACH	1.000	1.000
0070	619.1000	Mobilization	EACH	1.000	1.000
0072	624.0100	Water	MGAL	25.000	25.000

Estimate Of Quantities

8200-00-70

Line	Item	Item Description	Unit	Total	Qty
0074	625.0500	Salvaged Topsoil	SY	8,498.000	8,498.000
0076	627.0200	Mulching	SY	3,115.000	3,115.000
0078	628.1504	Silt Fence	LF	2,670.000	2,670.000
0080	628.1520	Silt Fence Maintenance	LF	2,670.000	2,670.000
0082	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0084	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0086	628.2004	Erosion Mat Class I Type B	SY	11,070.000	11,070.000
0088	628.7504	Temporary Ditch Checks	LF	230.000	230.000
0090	629.0205	Fertilizer Type A	CWT	8.000	8.000
0092	630.0120	Seeding Mixture No. 20	LB	340.000	340.000
0094	630.0200	Seeding Temporary	LB	340.000	340.000
0096	630.0300	Seeding Borrow Pit	LB	35.000	35.000
0098	630.0500	Seed Water	MGAL	300.000	300.000
0100	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	5.000	5.000
0102	637.2210	Signs Type II Reflective H	SF	22.500	22.500
0104	637.2230	Signs Type II Reflective F	SF	11.120	11.120
0106	638.2602	Removing Signs Type II	EACH	5.000	5.000
0108	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0110	642.5001	Field Office Type B	EACH	1.000	1.000
0112	643.0420	Traffic Control Barricades Type III	DAY	26,058.000	26,058.000
0114	643.0705	Traffic Control Warning Lights Type A	DAY	50,298.000	50,298.000
0116	643.0900	Traffic Control Signs	DAY	1,212.000	1,212.000
0118	643.0920	Traffic Control Covering Signs Type II	EACH	48.000	48.000
0120	643.1000	Traffic Control Signs Fixed Message	SF	108.000	108.000
0122	643.1050	Traffic Control Signs PCMS	DAY	294.000	294.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	645.0105	Geotextile Type C	SY	1,422.000	1,422.000
0128	645.0120	Geotextile Type HR	SY	591.000	591.000
0130	646.1020	Marking Line Epoxy 4-Inch	LF	6,664.000	6,664.000
0132	646.9000	Marking Removal Line 4-Inch	LF	5,112.000	5,112.000
0134	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	1,200.000	1,200.000
0136	650.4500	Construction Staking Subgrade	LF	410.000	410.000
0138	650.5000	Construction Staking Base	LF	410.000	410.000
0140	650.9910	Construction Staking Supplemental Control (project) 01. 8200-00-70	LS	1.000	1.000
0142	650.9920	Construction Staking Slope Stakes	LF	1,772.000	1,772.000
0144	690.0150	Sawing Asphalt	LF	1,910.000	1,910.000
0146	715.0502	Incentive Strength Concrete Structures	DOL	4,428.000	4,428.000
0148	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0150	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000

CLEARING & GRUBBING

STATION	-	STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
13+50'A'	-	15+00'A'	LT/RT	3	3
23+00'B'	-	25+00'B'	LT/RT	2	2
46+00'C'	-	50+00'C'	LT/RT	4	4
58+00'C'	-	61+50'C'	LT/RT	4	4
PROJECT TOTALS				13	13

REMOVING INLETS & REMOVING STORM SEWER

STATION	LOCATION	204.0220 REMOVING INLETS (EACH)	204.0245 REMOVING STORM SEWER 12-INCH (LF)	COMMENTS
59+05'C'	LT	1	--	
59+05'C'	LT	--	50	12-INCH PLASTIC
PROJECT TOTALS		1	50	

REMOVING PAVEMENT

STATION	-	STATION	204.0100 REMOVING PAVEMENT (SY)	COMMENTS
13+50'A'	-	14+50'A'	222	
23+50'B'	-	24+50'B'	222	
47+18'C'	-	48+19'C'	224	
58+07'C'	-	59+17'C'	244	
PROJECT TOTALS			912	

BASE AGGREGATE DENSE

STATION	-	STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	624.0100 WATER (MGAL)	COMMENTS
12+11'A'	-	15+76'A'	199	300	5	
21+90'B'	-	25+76'B'	197	282	5	
45+50'C'	-	50+17'C'	146	353	5	
56+11'C'	-	61+65'C'	196	353	5	
UNDISTRIBUTED			187	322	5	
PROJECT TOTALS			925	1,610	25	

REMOVING GUARDRAIL AND REMOVING FENCE

STATION	-	STATION	LT/RT	204.0165 REMOVING GUARDRAIL (LF)	204.0170 REMOVING FENCE (LF)
12+70'A'	-	15+00'A'	RT	230	--
12+90'A'	-	14+75'A'	RT	--	185
12+94'A'	-	15+24'A'	LT	230	--
22+20'B'	-	25+37'B'	RT	317	--
22+46'B'	-	25+25'B'	LT	279	--
22+95'B'	-	25+05'B'	LT	--	210
46+12'C'	-	48+77'C'	RT	262	--
56+98'C'	-	60+62'C'	RT	366	--
57+66'C'	-	61+59'C'	LT	393	--
PROJECT TOTALS				2,077	395

EARTHWORK (PROJECT 8200-00-70)

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1)		SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (6)	REDUCED EBS IN FILL	EXPANDED EBS BACKFILL	UNEXPANDED FILL	EXPANDED FILL (4)	MASS ORDINATE +/- (5)	WASTE	208.0100 BORROW
			CUT (2)	EBS (3)			FACTOR 0.00	FACTOR 1.30		FACTOR 1.30			
1	12+09.30'A' - 15+76.68'A'	Seth Creek	388	0	195	193	0	0	630	820	-626	195	626
	21+99.24'B' - 25+62.38'B'	Leman Creek	386	0	193	193	0	0	1844	2397	-2204	193	2,204
	45+50.14'C' to 50+16.88'C'	Unnamed Tributary	648	0	128	520	0	0	1462	1888	-1369	128	1,369
	56+11.40'C' to 61+65.20'C'	Clark Creek	595	0	116	479	0	0	1495	1935	-1456	116	1,456
	UNDISTRIBUTED		0	200	0	0	0	260	0	0	0	200	0
DIVISION 1 SUBTOTAL			2017	200			0	260	5431	7040	-5655	832	5,655
PROJECT TOTALS			2,217				0	260	5,431	7,040	-5,655	832	5,655

- 1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS.
- 2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- 3) EBS EXCAVATION TO BE BACKFILLED WITH BORROW, OR COMMON EXCAVATION AS DIRECTED BY THE ENGINEER
- 4) EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
- 5) 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.
- 6) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

3

HMA PAVEMENT ITEMS

STATION - STATION	PAVEMENT DEPTH (INCHES)	465.0105 ASPHALTIC SURFACE (TON)	455.0605 TACK COAT (GAL)	450.4000 HMA COLD WEATHER PAVINC (TON)
13+50'A' - 14+50'A'	7.5	160	30	--
23+50'B' - 24+50'B'	7.5	160	30	--
47+18'C' - 48+19'C'	7.5	436	40	--
58+07'C' - 59+17'C'	7.5	230	50	--
UNDISTRIBUTED			--	247
PROJECT TOTALS		987	150	247

MGS GUARDRAIL AND TERMINALS

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)
45+73'C' - 48+76'C'	RT	250.0	1	1
46+83'C' - 50+11'C'	LT	275.0	1	1
57+00'C' - 60+53'C'	RT	300.0	1	1
57+68'C' - 61+46'C'	LT	325.0	1	1
		1,150.0	4	4

3

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT ID	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS EACH
8200-00-70	1
PROJECT TOTAL	1

SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEEDING, & TEMPORARY SEEDING

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0205 FERTILIZER TYPE A (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)	630.0500 SEED WATER (MGAL)
10+99'A' - 16+21'A'	RT	783	--	0.7	30	30	--	21
12+20'A' - 15+77'A'	LT	544	--	0.5	21	21	--	17
21+99'B' - 25+62'B'	RT	1,056	--	0.8	35	35	--	29
22+27'B' - 25+50'B'	LT	1,118	--	0.8	36	36	--	30
45+49'C' - 48+76'C'	RT	986	--	0.7	29	29	--	24
46+17'C' - 50+17'C'	LT	1,279	--	0.9	38	38	--	28
56+11'C' - 60+57'C'	RT	1,157	--	0.8	35	35	--	28
57+58'C' - 61+65'C'	LT	1,575	--	1.1	46	46	--	40
BORROW PIT		--	1,111	0.1	--	--	30	25
UNDISTRIBUTED		--	2,004	2	70	70	5	58
PROJECT TOTALS		8,498	3,115	8.0	340	340	35	300

EROSION CONTROL ITEMS

STATION	STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
12+10'A'	- 15+50'A'	RT	264	264	--	24	--	--
12+10'A'	- 15+50'A'	RT	--	--	922	--	--	--
12+20'A'	- 15+80'A'	LT	332	332	--	16	--	--
12+20'A'	- 15+80'A'	LT	--	--	743	--	--	--
22+00'B'	- 25+60'B'	RT	--	--	1291	--	--	--
22+00'B'	- 25+60'B'	RT	155	155	--	16	--	--
22+90'B'	- 25+70'B'	LT	--	--	1345	--	--	--
22+90'B'	- 25+70'B'	LT	275	275	--	--	--	--
45+45'C'	- 48+90'C'	RT	156	156	--	32	--	--
45+45'C'	- 48+90'C'	RT	--	--	957	--	--	--
46+15'C'	- 50+10'C'	LT	347	347	--	16	--	--
46+15'C'	- 50+10'C'	LT	--	--	1239	--	--	--
56+10'C'	- 60+60'C'	RT	322	322	--	48	--	--
56+10'C'	- 60+60'C'	RT	--	--	917	--	--	--
57+50'C'	- 61+55'C'	LT	284	284	--	32	--	--
57+50'C'	- 61+55'C'	LT	--	--	1440	--	--	--
	UNDISTRIBUTED		535	535	2216	46	5	4
	PROJECT TOTALS		2,670	2,670	11,070	230	5	4

SIGNS TYPE II AND POSTS

STATION	LOCATION	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0616 POSTS WOOD 4X6-INCH-16 FT (EACH)	DESCRIPTION
11+95'A'	LT	--	5.56	1	NO PASSING ZONE
23+90'B'	LT	--	5.56	1	NO PASSING ZONE
46+49'C'	RT	7.50	--	1	SPEED LIMIT 45 MPH
60+28'C'	RT	7.50	--	1	SPEED LIMIT 25 MPH
60+95'C'	LT	7.50	--	1	SPEED LIMIT 45 MPH
	PROJECT TOTALS	22.50	11.12	5	

TRAFFIC CONTROL - DRUMS, BARRICADES, WARNING LIGHTS, ARROW BOARDS, AND SIGNS

ROADWAY	DAYS IN SERVICE	643.0420 BARRICADES TYPE III NO. (DAYS)	643.0705 WARNING LIGHTS TYPE A NO. (DAYS)	643.0900 SIGNS NO. (DAYS)	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II NO.	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE (SF)	643.1050 TRAFFIC CONTROL SIGNS PCMS NO. (DAYS)	COMMENTS
STH 27	303	86 26,058	166 50,298	75 22725	9	--	2 196	DETOUR SIGNING, 3 CYLCES
STH 29	303	-- --	-- --	137 41511	18	108	1 98	DETOUR SIGNING, 3 CYLCES
STH 178	303	-- --	-- --	78 23634	--	--	-- --	DETOUR SIGNING, 3 CYLCES
STH 64	303	-- --	-- --	32 9696	21	--	-- --	DETOUR SIGNING, 3 CYLCES
3rd ST	303	-- --	-- --	4 1212	--	--	-- --	DETOUR SIGNING, 3 CYLCES
	PROJECT TOTALS	26,058	50,298	1,212	48	108	294	

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS

STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	DESCRIPTION
11+95'A'	LT	1	1	NO PASSING
23+90'B'	LT	1	1	NO PASSING
46+49'C'	RT	1	1	SPEED LIMIT 45 MPH
60+28'C'	RT	1	1	SPEED LIMIT 25 MPH
61+50'C'	LT	1	1	SPEED LIMIT 45 MPH
	PROJECT TOTALS	5	5	

PAVEMENT MARKING

STATION	- STATION	646.0120 EPOXY 4-INCH		646.9000 MARKING REMOVAL LINE 4-INCH (LF)	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (LF)	COMMENTS
		YELLOW (LF)	WHITE (LF)			
12+11'A'	- 15+76'A'	456	730	836	--	
21+90'B'	- 25+76'B'	622	772	1,032	--	
45+50'C'	- 50+17'C'	934	934	1,468	--	
56+11'C'	- 61+65'C'	1,108	1,108	1,776	--	
	UNDISTRIBUTED	--	--	--	1,200	TEMPORARY MARKING FOR FESTIVAL EVENTS IF NEEDED
	SUBTOTALS	3,120	3,544	5,112	1,200	
	TOTAL FOR 646.0106	6,664				
	PROJECT TOTALS		6,664	5,112	1,200	

3

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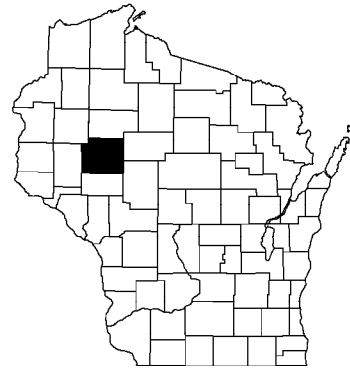
CONSTRUCTION STAKING

STATION	- STATION	650.4500	650.5000	650.9910	650.9920
		CONSTRUCTION STAKING SUBGRADE (LF)	CONSTRUCTION STAKING BASE (LF)	CONSTRUCTION STAKING SUPPLEMENTAL (PROJECT) (LS)	CONSTRUCTION STAKING SLOPE STAKES (LF)
12+11'A'	- 15+76'A'	100	100	--	365
21+90'B'	- 25+76'B'	100	100	--	386
45+50'C'	- 50+17'C'	100	100	--	467
56+11'C'	- 61+65'C'	110	110	--	554
	PROJECT TOTALS	410	410	1	1,772

SAWING ASPHALT

STATION	- STATION	LOCATION	690.0150 SAWING ASPHALT (LF)
12+11'A'	- 13+50'A'	LT & RT	260
14+50'A'	- 15+76'A'	LT & RT	252
21+90'B'	- 23+50'B'	LT & RT	324
24+50'B'	- 25+76'B'	LT & RT	271
46+18'C'	- 47+19'C'	LT & RT	145
48+19'C'	- 50+17'C'	LT & RT	239
56+77'C'	- 58+07'C'	LT & RT	173
59+17'C'	- 61+26'C'	LT & RT	246
	PROJECT TOTALS		1,910

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION PROJECT PLAT TITLE SHEET
8200-00-20
 CADOTT - CORNELL
 100TH AVENUE TO SOUTH STREET/4-CULV
STH 27
 CHIPPEWA COUNTY



CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE	---	NON-MONUMENTED R/W POINT	○	FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
SIXTEENTH LINE	---	SECTION CORNER MONUMENT		OFF-PREMISE SIGN	
NEW REFERENCE LINE	---	GEODETIC SURVEY MONUMENT		COMPENSABLE	
NEW R/W LINE	---	SIXTEENTH CORNER MONUMENT		NON-COMPENSABLE	
EXISTING R/W OR HE LINE	---	SIGN		ACCESS RESTRICTED BY ACQUISITION	
PROPERTY LINE	---	TELEPHONE POLE		NO ACCESS (BY STATUTORY AUTHORITY)	
LOT, TIE & OTHER MINOR LINES	---	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		ACCESS RESTRICTED (BY PREVIOUS PROJECT) OR CONTROL	
SLOPE INTERCEPT	---	ACCESS RESTRICTED (NEW HIGHWAY)		NO ACCESS (NEW HIGHWAY)	
CORPORATE LIMITS	---	PARCEL NUMBER		UTILITY NUMBER	
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---	IP POINT NUMBER		R/W POINT NUMBER	
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---	TLE POINT NUMBER		PARALLEL OFFSETS	
TEMPORARY LIMITED EASEMENT AREA	---	PARCEL NUMBER		UTILITY NUMBER	
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---	IP POINT NUMBER		R/W POINT NUMBER	
TRANSMISSION STRUCTURES	---	TLE POINT NUMBER		PARALLEL OFFSETS	
BUILDING TO BE REMOVED		PARCEL NUMBER		UTILITY NUMBER	
BRIDGE		IP POINT NUMBER		R/W POINT NUMBER	

CONVENTIONAL ABBREVIATIONS

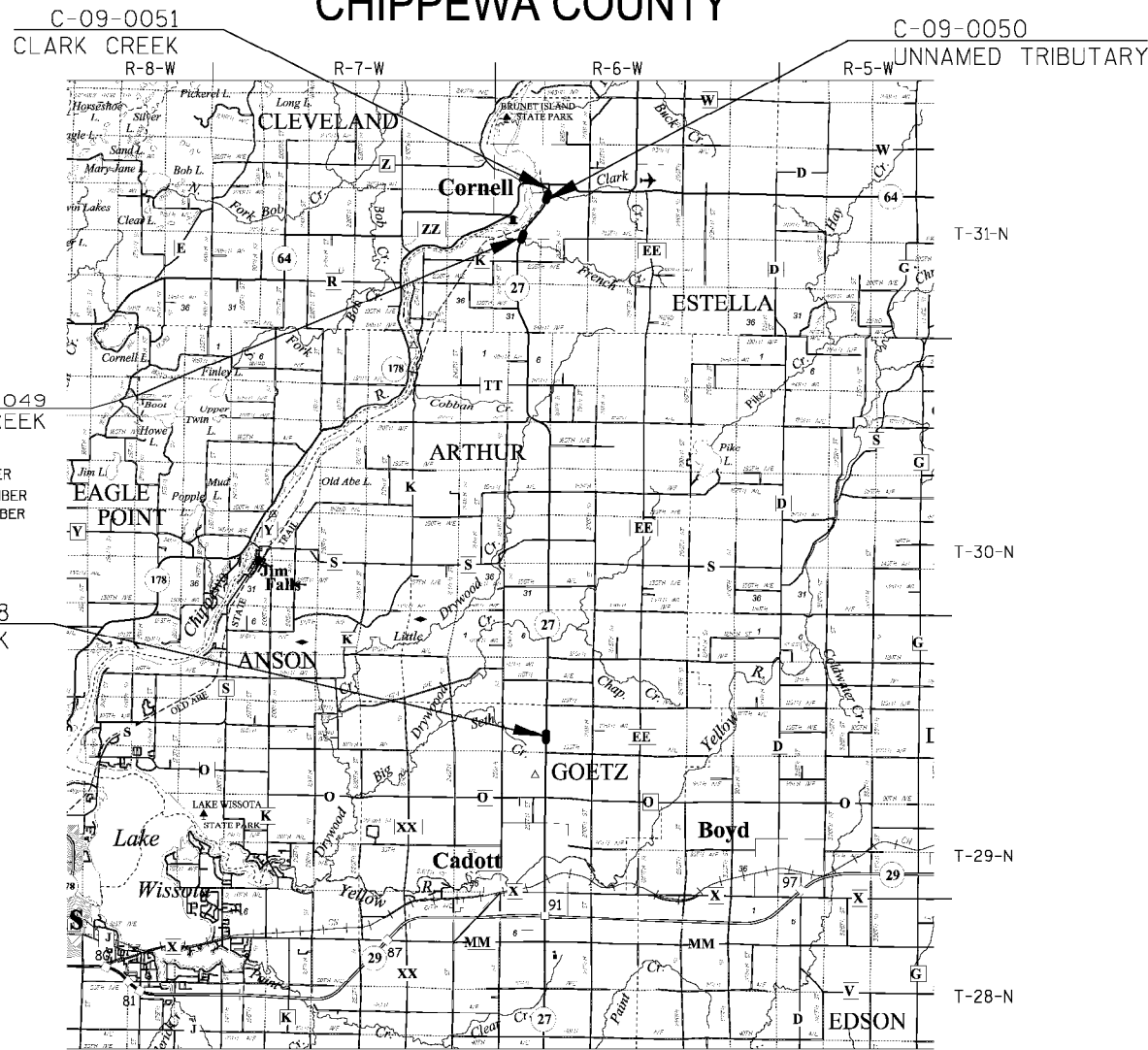
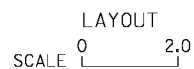
ACCESS RIGHTS	AR	POINT OF CURVATURE	PC
ACRES	AC	POINT OF COMPOUND CURVE	PCC
AHEAD	AH	POINT OF INTERSECTION	PI
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	REMAINING	REM
CERTIFIED SURVEY MAP	CSM	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CONCRETE	CONC	RIGHT	RT
COUNTY	CO	RIGHT OF WAY	R/W
COUNTY TRUNK HIGHWAY	CTH	SECTION	SEC
DISTANCE	DIST	SEPTIC VENT	SEPV
CORNER	COR	SQUARE FEET	SF
DOCUMENT NUMBER	DOC	STATE TRUNK HIGHWAY	STH
EASEMENT	EASE	STATION	STA
EXISTING	EX	TELEPHONE PEDESTAL	TP
FOUND	FD	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV	TRANSPORTATION PROJECT	TPP
GRID NORTH	GN	PLAT	PLAT
HIGHWAY EASEMENT	HE	UNITED STATES HIGHWAY	USH
IDENTIFICATION	ID	VOLUME	V
IRON PIN	IP	EASTING COORDINATE	X
LAND CONTRACT	LC	NORTHING COORDINATE	Y
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY NUMBER	NGS NO		
NOT TO SCALE	N.T.S.		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE OVERHEAD	—T—
TRANSMISSION LINES	—OH—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 8200-00-20

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CHIPPEWA COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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

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

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

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

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

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE.

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

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 27 SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: DIVISION JOB 6301, PLAT OF SURVEY 1655, CSM 3466, PLAT OF SURVEY 003267b

EXISTING SECTION CORNER AND PROPERTY CORNER INFORMATION PROVIDED BY WISDOT NORTHWEST REGION.

RESERVED FOR REGISTER OF DEEDS
 PROJECT NUMBER 8200-00-20 - 4.01
 SHEET 02 OF 02
 AMENDMENT NO:

SCHEDULE OF LANDS & INTEREST REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY
 AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF
 LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER	FEE	AREAS SF REQUIRED			TLE SF	PLE SF
			NEW	EXISTING	TOTAL		
1	DUANE R. & CHRISTINE A. RICE	FEE	2,610	-----	2,610	-----	-----
2	MERLIN E. & JOYCE L. HUHN	FEE/TLE	1,191	-----	1,191	392	-----

TRANSPORTATION PROJECT PLAT NO: 8200-00-20 - 4.01

THAT PART OF THE SE 1/4 OF THE SE 1/4 OF SECTION 18 AND THAT PART OF THE SW 1/4 OF THE SW 1/4 OF SECTION 17, ALL IN TOWNSHIP 29 NORTH, RANGE 6 WEST, TOWN OF GOETZ, CHIPPEWA COUNTY, WISCONSIN

RELOCATION ORDER STH 27 CHIPPEWA COUNTY, CADOTT - CORNELL (100TH AVENUE TO SOUTH STREET/4-CULV)

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
 1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
 2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

RESERVED FOR REGISTER OF DEEDS
 PROJECT NUMBER 8200-00-20-4.01
 AMENDMENT NO.: SHEET 1 OF 2

RIGHT OF WAY COURSE TABLE

FROM - TO	BEARING	DISTANCE
817 - 808 (R/L)	N 89°56'50" W	0.30'
808 (R/L) - 809	N 89°56'50" W	49.70'
809 - 799	N 0°07'58" E	349.99'
799 - 800	N 55°01'00" W	43.66'
800 - 801	N 0°03'05" E	45.00'
801 - 802	N 49°41'22" E	47.17'
802 - 811	N 0°07'58" E	299.46'
811 - 806 (R/L)	S 89°56'40" E	48.63'
806 (R/L) - 818	S 89°56'40" E	1.37'
818 - 812	S 89°56'40" E	50.00'
812 - 740	S 0°07'58" W	324.60'
740 - 737	N 89°57'58" E	82.00'
737 - 738	S 0°07'58" W	50.00'
738 - 814	S 89°57'58" W	52.00'
814 - 816	S 20°48'32" W	84.97'
816 - 813	S 0°07'58" W	296.00'
813 - 817	N 89°56'50" W	50.00'
2326 - 817	N 0°07'58" E	494.53'
817 - 818	N 0°07'58" E	750.00'
818 - 12264	N 0°07'58" E	1366.16'
12264 - 2326	S 0°07'58" W	2610.69'
12325 - 2326	S 88°37'35" E	2630.56'
2327 - 2326	N 89°17'15" W	2620.36'

R/W STATION AND OFFSET TABLE

POINT	STATION	OFFSET
143 (R/L)	7+88.52'A	0.00'
737	14+25.53'A	132.90'
738	13+75.53'A	132.83'
740	14+25.40'A	50.90'
799	13+50.00'A	49.20'
800	13+75.00'A	85.00'
801	14+20.00'A	85.00'
802	14+50.55'A	49.06'
806 (R/L)	17+50.00'A	0.00'
808 (R/L)	10+00.00'A	0.00'
809	10+00.00'A	49.70'
811	17+50.00'A	48.63'
812	17+50.00'A	51.37'
813	10+00.00'A	50.30'
814	13+75.45'A	80.83'
816	12+96.00'A	50.72'
817	10+00.00'A	0.30'
818	17+50.00'A	1.37'
2326	5+05.48'A	0.40'

TLE STATION AND OFFSET TABLE

POINT	STATION	OFFSET
892	14+74.99'A	50.98'
994	14+25.44'A	75.00'
995	14+35.00'A	75.00'
996	14+35.00'A	59.00'

MANAGED FOREST LAW
 DOC 801153
 MANAGED FOREST CORRECTION ORDER
 DOC. #806348
 PARCEL 1

RIGHT OF WAY EASEMENT - UTIL 200
 NORTH-WEST TEL DBA
 PTI COMMUNICATIONS
 V. 803 P. 305
 DOC. #538498
 PARCEL 1

RIGHT OF WAY EASEMENT - UTIL 201
 CHIPPEWA VALLEY ELECTRIC
 COOPERATIVE
 V. 727 P. 187
 DOC. #511552
 PARCEL 1

RIGHT OF WAY EASEMENT - UTIL 201
 CHIPPEWA VALLEY ELECTRIC
 COOPERATIVE
 DOC. #844466
 PARCEL 1

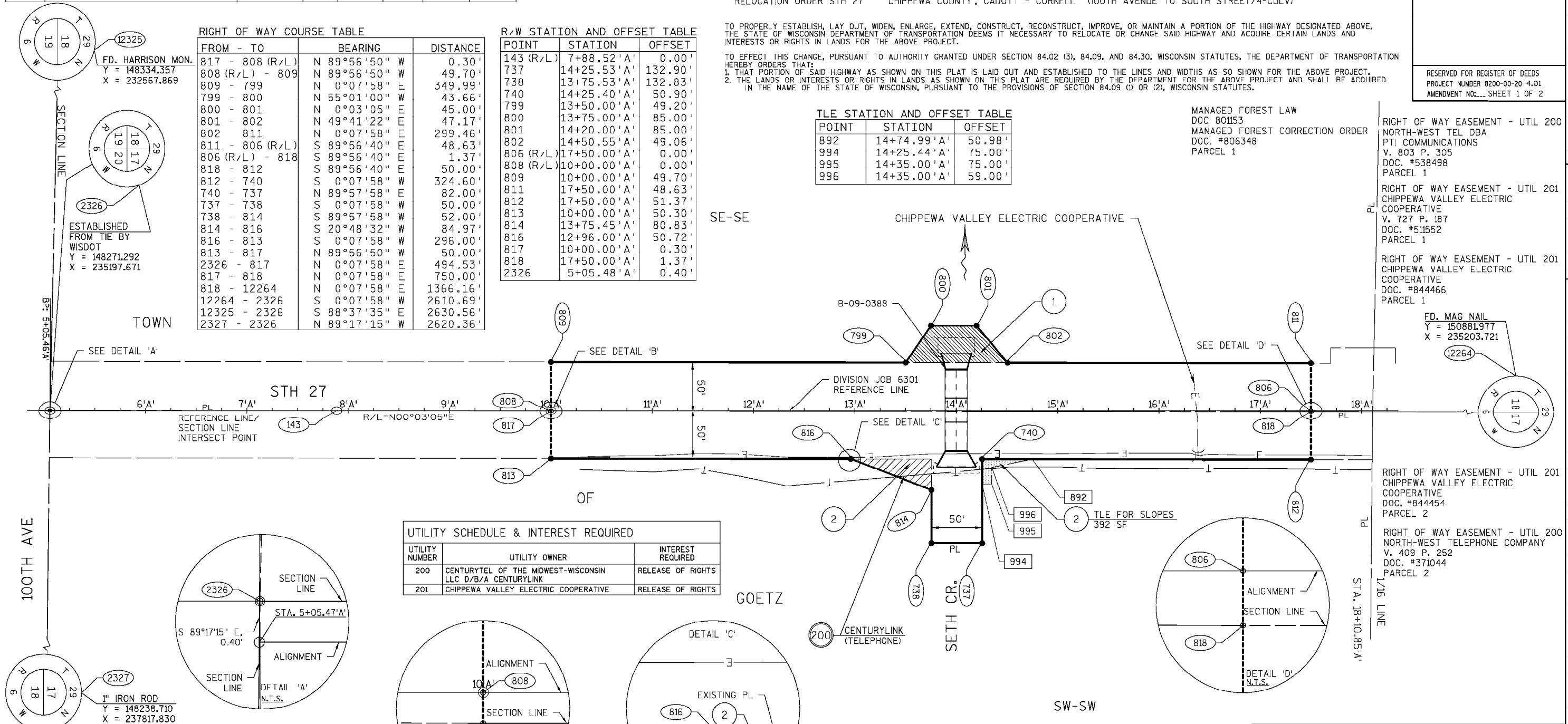
FD. MAG NAIL
 Y = 150881.977
 X = 235203.721

RIGHT OF WAY EASEMENT - UTIL 201
 CHIPPEWA VALLEY ELECTRIC
 COOPERATIVE
 DOC. #844454
 PARCEL 2

RIGHT OF WAY EASEMENT - UTIL 200
 NORTH-WEST TELEPHONE COMPANY
 V. 409 P. 252
 DOC. #371044
 PARCEL 2

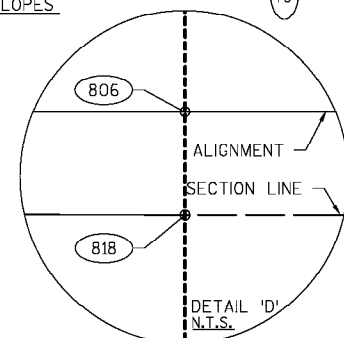
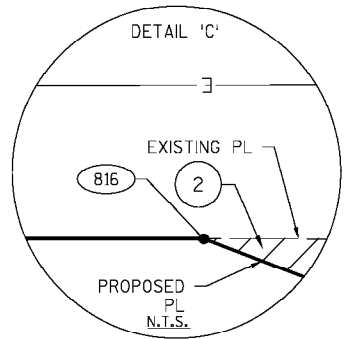
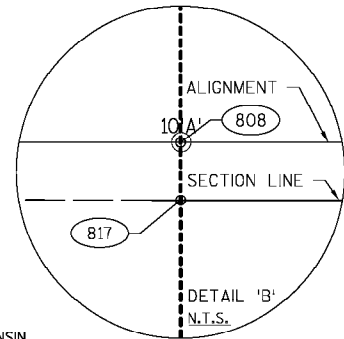
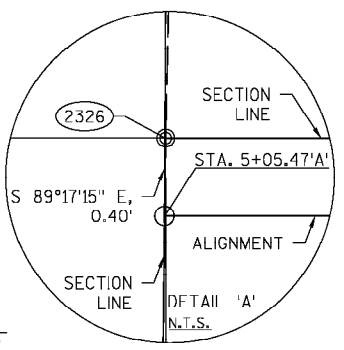
4

4



UTILITY SCHEDULE & INTEREST REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
200	CENTURYTEL OF THE MIDWEST-WISCONSIN LLC D/B/A CENTURYLINK	RELEASE OF RIGHTS
201	CHIPPEWA VALLEY ELECTRIC COOPERATIVE	RELEASE OF RIGHTS



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

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGION OFFICE IN EAU CLAIRE.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

EXISTING RIGHT OF WAY FOR STH 27 IS ESTABLISHED FROM PREVIOUS DIVISION JOB NO. 630L

EXISTING SECTION CORNER AND PROPERTY CORNER INFORMATION PROVIDED BY WISDOT NW REGION.

EXISTING PL DIMENSIONS TO SECTION LINE.

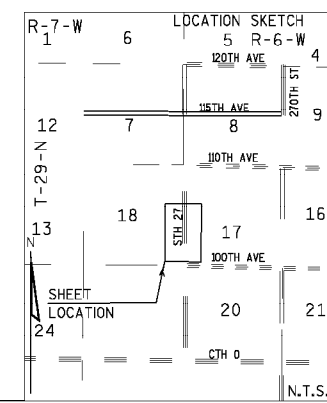
REFERENCE LINE DOES NOT FOLLOW THE SECTION LINE.

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

PI STA = 5+05.47'A
 Y = 148271.285
 X = 235198.073

PI STA = 19+00.00'A
 Y = 149665.820
 X = 235199.324

SCALE, FEET 0 50 100



AECOM

I, RODERICK D. STEEGE PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8200-00-20-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Roderick D. Steege* DATE: 02/04/19
 PRINT NAME: RODERICK D. STEEGE
 REGISTRATION NUMBER: 1761

SIGNATURE: *Michael Pillar* DATE: 02/05/19
 PRINT NAME: MICHAEL PILLAR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGION - EAU CLAIRE

WISCONSIN LAND SURVEYOR
 RODERICK D. STEEGE
 1761
 PRINCETON, WI

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET,
RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN CHIPPEWA COUNTY
AS SHEET 2 OF 2 OF DOCUMENT NO. 886184.

RIGHT OF WAY COURSE TABLE CONT.

FROM - TO	BEARING	DISTANCE
1153 - 834	N 89°28'08" W	2542.33'
11152 - 834	N 89°28'08" W	70.02'
11042 - 753	S 0°51'15" E	2634.47'
753 - 837	S 0°51'15" E	2427.59'
837 - 11152	S 0°51'15" E	220.56'

TRANSPORTATION PROJECT PLAT NO: 8200-00-20 - 4.02

THAT PART OF THE NE 1/4 OF THE NW 1/4 AND THAT PART OF THE NW 1/4 OF THE NE 1/4 OF SECTION 31,
ALL IN TOWNSHIP 31 NORTH, RANGE 6 WEST, TOWN OF ESTELLA, CHIPPEWA COUNTY, WISCONSIN

RELOCATION ORDER STH 27 CHIPPEWA COUNTY, CADOTT - CORNELL (100TH AVENUE TO SOUTH STREET/4-CULV)

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

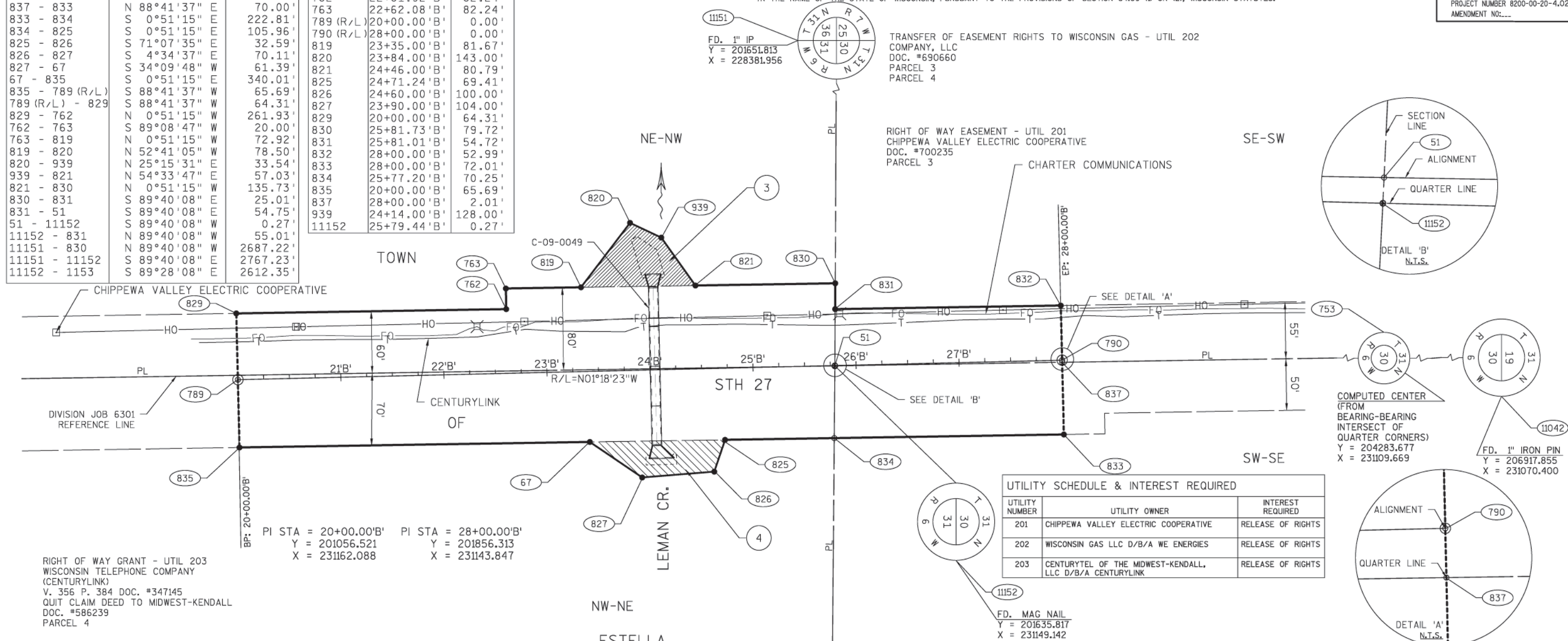
TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION
HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED
IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

RIGHT OF WAY COURSE TABLE

FROM - TO	BEARING	DISTANCE
831 - 832	N 0°51'15" W	218.99'
832 - 790 (R/L)	N 88°41'37" E	52.99'
790 (R/L) - 837	N 88°41'37" E	2.01'
837 - 833	N 88°41'37" E	70.00'
833 - 834	S 0°51'15" E	222.81'
834 - 825	S 0°51'15" E	105.96'
825 - 826	S 71°07'35" E	32.59'
826 - 827	S 4°34'37" E	70.11'
827 - 67	S 34°09'48" W	61.39'
67 - 835	S 0°51'15" E	340.01'
835 - 789 (R/L)	S 88°41'37" W	65.69'
789 (R/L) - 829	S 88°41'37" W	64.31'
829 - 762	N 0°51'15" W	261.93'
762 - 763	S 89°08'47" W	20.00'
763 - 819	N 0°51'15" W	72.92'
819 - 820	N 52°41'05" W	78.50'
820 - 939	N 25°15'31" E	33.54'
939 - 821	N 54°33'47" E	57.03'
821 - 830	N 0°51'15" W	135.73'
830 - 831	S 89°40'08" E	25.01'
831 - 51	S 89°40'08" E	54.75'
51 - 11152	S 89°40'08" W	0.27'
11152 - 831	N 89°40'08" W	55.01'
11151 - 830	N 89°40'08" W	2687.22'
11151 - 11152	S 89°40'08" E	2767.23'
11152 - 1153	S 89°28'08" E	2612.35'

R/W STATION AND OFFSET TABLE

POINT	STATION	OFFSET
51	25+79.45'B	0.00'
67	23+40.00'B	68.38'
762	22+61.92'B	62.24'
763	22+62.08'B	82.24'
789 (R/L)	20+00.00'B	0.00'
790 (R/L)	28+00.00'B	0.00'
819	23+35.00'B	81.67'
820	23+84.00'B	143.00'
821	24+46.00'B	80.79'
825	24+71.24'B	69.41'
826	24+60.00'B	100.00'
827	23+90.00'B	104.00'
829	20+00.00'B	64.31'
830	25+81.73'B	79.72'
831	25+81.01'B	54.72'
832	28+00.00'B	52.99'
833	28+00.00'B	72.01'
834	25+77.20'B	70.25'
835	20+00.00'B	65.69'
837	28+00.00'B	2.01'
939	24+14.00'B	128.00'
11152	25+79.44'B	0.27'



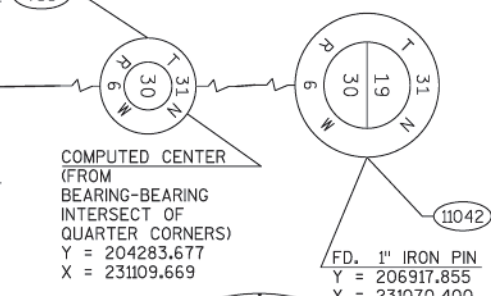
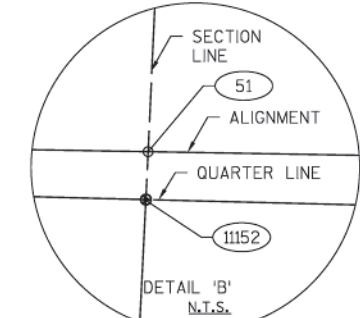
RIGHT OF WAY GRANT - UTIL 203
WISCONSIN TELEPHONE COMPANY
(CENTURYLINK)
V. 356 P. 384 DOC. #347145
QUIT CLAIM DEED TO MIDWEST-KENDALL
DOC. #586239
PARCEL 4

PI STA = 20+00.00'B Y = 201056.521 X = 231162.088
PI STA = 28+00.00'B Y = 201856.313 X = 231143.847

TRANSFER OF EASEMENT RIGHTS TO WISCONSIN GAS - UTIL 202
COMPANY, LLC
DOC. #690660
PARCEL 3
PARCEL 4

RIGHT OF WAY EASEMENT - UTIL 201
CHIPPEWA VALLEY ELECTRIC COOPERATIVE
DOC. #700235
PARCEL 3

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
201	CHIPPEWA VALLEY ELECTRIC COOPERATIVE	RELEASE OF RIGHTS
202	WISCONSIN GAS LLC D/B/A WE ENERGIES	RELEASE OF RIGHTS
203	CENTURYTEL OF THE MIDWEST-KENDALL, LLC D/B/A CENTURYLINK	RELEASE OF RIGHTS



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

EXISTING SECTION CORNER AND PROPERTY CORNER INFORMATION PROVIDED BY
WISDOT NORTHWEST REGION.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE
WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGION OFFICE IN EAU CLAIRE.

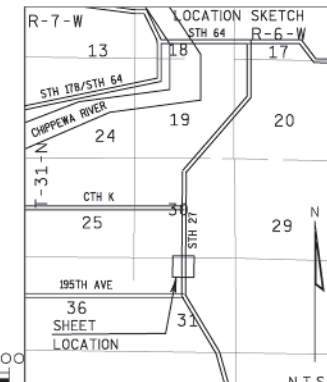
EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF
REFERENCE:
EXISTING RIGHT OF WAY FOR STH 27 IS ESTABLISHED FROM PREVIOUS DIVISION JOB 630L

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS SF REQUIRED		TLE SF	PLE SF
			NEW	EXISTING		
3	PAMELA J. HERRELL	FEE	3,894	-----	3,894	-----
4	JANICE L. CURRIE	FEE	3,360	-----	3,360	-----

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY
AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF
LAND INTERESTS TO THE DEPARTMENT.

FD. 1 1/2" IP
Y = 201611.600
X = 233761.380

SCALE, FEET 0 50 100



AECOM

I, RODERICK D. STEEGE PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN
FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN
STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I
HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8200-00-20-4.02
AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR
BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Roderick D. Steege* DATE: 02/11/19
PRINT NAME: RODERICK D. STEEGE
REGISTRATION NUMBER: 1761

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
THE WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION - EAU CLAIRE
SIGNATURE: *Michael Pillar* DATE: 02/11/19
PRINT NAME: MICHAEL PILLAR

TRANSPORTATION PROJECT PLAT NO: 8200-00-20 - 4.03

THAT PART OF THE NW 1/4 OF THE NW 1/4 AND THAT PART OF THE SW 1/4 OF THE NW 1/4 OF SECTION 20,
 TOWNSHIP 31 NORTH, RANGE 6 WEST, CITY OF CORNELL, CHIPPEWA COUNTY, WISCONSIN

RELOCATION ORDER STH 27 CHIPPEWA COUNTY, CADOTT - CORNELL (100TH AVENUE TO SOUTH STREET/4-CULV)

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION
 HEREBY ORDERS THAT:
 1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
 2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED
 IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTEREST REQUIRED OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY
 AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF
 LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS SF REQUIRED			TLE SF	PLE SF
			NEW	EXISTING	TOTAL		
6	KURT MANUFACTURING COMPANY, INC. A MINNESOTA CORPORATION	FEE	4,438	-----	4,438	-----	-----
7	CORNELL CORPORATION	FEE	393	-----	393	-----	-----
8	HAROLD B. & FERN E. HALL	FEE	1,241	-----	1,241	-----	-----

UTILITY SCHEDULE & INTEREST REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
202	WISCONSIN GAS LLC D/B/A/ WE ENERGIES	RELEASE OF RIGHTS

EXISTING MONUMENTS

POINT	Y	X	DESCRIPTION
16	210198.670	233859.784	1" REBAR
24	210739.220	234112.459	1" REBAR

PL CURVE TABLE

FROM - TO	RADIUS	LENGTH	CHORD	CHORD BEARING
138 - 949	2814.93'	203.02'	202.98'	N23°37'26"E
960 - 139	2934.93'	298.66'	298.53'	S22°46'41"W

RIGHT OF WAY COURSE TABLE

FROM - TO	BEARING	DISTANCE
105 (R/L) - 138	N 64°14'07" W	49.96'
138 - 949	SEE CURVE DATA	
949 - 950	N 6°03'55" E	76.98'
950 - 951	N 11°23'29" E	56.11'
951 - 952	N 5°22'29" W	17.05'
952 - 969	N 23°28'24" E	62.90'
969 - 953	N 23°28'24" E	53.66'
953 - 954	N 68°50'05" E	11.07'
954 - 955 (R/L)	S 71°56'38" E	65.42'
955 (R/L) - 956	S 71°56'38" E	69.58'
956 - 957	S 18°04'42" W	95.09'
957 - 958	S 32°19'56" E	35.72'
958 - 959	S 22°47'51" W	29.00'
959 - 960	S 49°27'20" W	51.02'
960 - 139	SEE CURVE DATA	
139 - 105 (R/L)	N 64°14'07" W	70.04'
934 - 10933	S 89°25'59" W	2702.36'
10933 - 919	S 0°26'50" W	1734.19'
919 - 105	S 89°33'10" E	197.28'
919 - 10981	S 0°26'50" W	928.68'
10981 - 10933	N 0°26'50" E	2662.88'

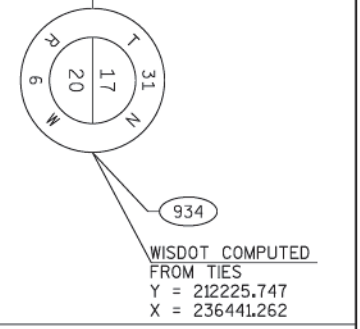
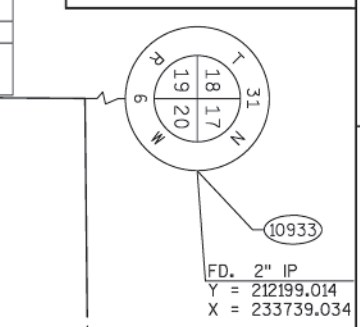
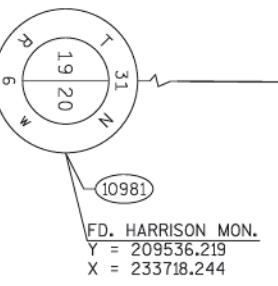
R/W STATION AND OFFSET TABLE

POINT	STATION	OFFSET
105 (R/L)	44+12.39'C	0.00'
138	44+12.39'C	49.96'
139	44+12.39'C	70.04'
949	46+19.00'C	50.28'
950	46+95.00'C	70.00'
951	47+52.00'C	78.00'
952	47+68.00'C	85.00'
953	48+85.00'C	74.00'
954	48+92.00'C	65.42'
955 (R/L)	48+92.00'C	0.00'
956	48+92.00'C	69.58'
957	47+97.00'C	69.37'
958	47+75.00'C	97.00'
959	47+47.00'C	95.00'
960	47+04.00'C	69.56'
969	48+32.45'C	79.07'

PI STA = 46+22.79'C
 Y = 210652.816
 X = 234014.226
 DELTA = 8°20'24" LT
 D = 1°59'08"
 T = 210.40'
 L = 420.06'
 R = 2885.75'
 PC STA = 44+12.39'C
 Y = 210463.333
 X = 233922.770
 PT STA = 48+32.45'C
 Y = 210853.561
 X = 234077.230
 BK T = S25°45'53"W
 AH T = N17°25'29"E

PI STA = 44+12.39'C
 Y = 210463.333
 X = 233922.770
 DELTA = 0°37'53" LT

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET,
 RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN CHIPPEWA COUNTY
 AS SHEET 2 OF 2 OF DOCUMENT NO. 886184.

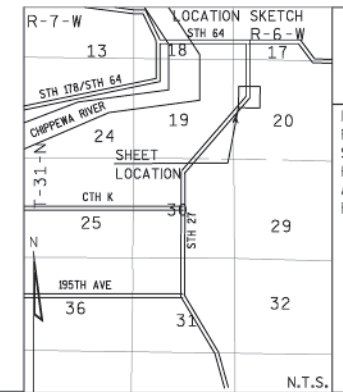


NOTES:
 POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM
 COORDINATES (WISCRS), CHIPPEWA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET.
 VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES.
 GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

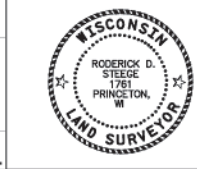
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN
 DEPARTMENT OF TRANSPORTATION NORTHWEST REGION OFFICE IN EAU CLAIRE.

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF
 REFERENCE:
 EXISTING RIGHT OF WAY FOR STH 27 IS ESTABLISHED FROM PREVIOUS PROJECT
 DIVISION JOB 6301, PLAT OF SURVEY 1655.

EXISTING SECTION CORNER AND PROPERTY CORNER INFORMATION PROVIDED BY
 WISDOT NORTHWEST REGION.



I, RODERICK D. STEEGE PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN
 FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN
 STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I
 HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8200-00-20-4.03
 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR
 BOUNDARIES OF THE SURVEYED LAND.



SIGNATURE: *Roderick D. Steege* DATE: 02/11/19
 PRINT NAME: RODERICK D. STEEGE
 REGISTRATION NUMBER: 1761
 THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
 THE WISCONSIN DEPARTMENT OF TRANSPORTATION
 NORTHWEST REGION - EAU CLAIRE
 SIGNATURE: *Michael Pillar* DATE: 02/11/19
 PRINT NAME: MICHAEL PILLER

SCHEDULE OF LANDS & INTEREST REQUIRED OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS SF REQUIRED			TLE SF	PLE SF
			NEW	EXISTING	TOTAL		
9	JOHN S. OLYNICK	FEE/TLE	9,021	-----	9,021	500	-----
11	DANIEL PAULI	FEE/TLE	1,192	-----	1,192	582	-----
12	MICHAEL V. & HOPE M. JONES	FEE	213	-----	213	-----	-----

TRANSPORTATION PROJECT PLAT NO: 8200-00-20 - 4.04

PART OF LOT 1, CERTIFIED SURVEY MAP NO. 3466 AND THAT PART OF THE NW 1/4 OF THE NW 1/4 OF SECTION 20, TOWNSHIP 31 NORTH, RANGE 6 WEST, CITY OF CORNELL, CHIPPEWA COUNTY, WISCONSIN

RELOCATION ORDER STH 27 CHIPPEWA COUNTY, CADOTT - CORNELL (100TH AVENUE TO SOUTH STREET/4-CULV)

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 8200-00-20-4.04
AMENDMENT NO:...

EXISTING MONUMENTS

POINT	Y	X	DESCRIPTION
36	211863.162	234479.960	1" IRON PIN
37	212160.379	234551.417	1" IRON PIN
38	212162.336	234669.413	FD NAIL

PL CURVE TABLE

FROM - TO	RADIUS	LENGTH	CHORD	CHORD BEARING
37 - 36	1980.75'	305.99'	305.69'	S13°31'07"W

RIGHT OF WAY COURSE TABLE

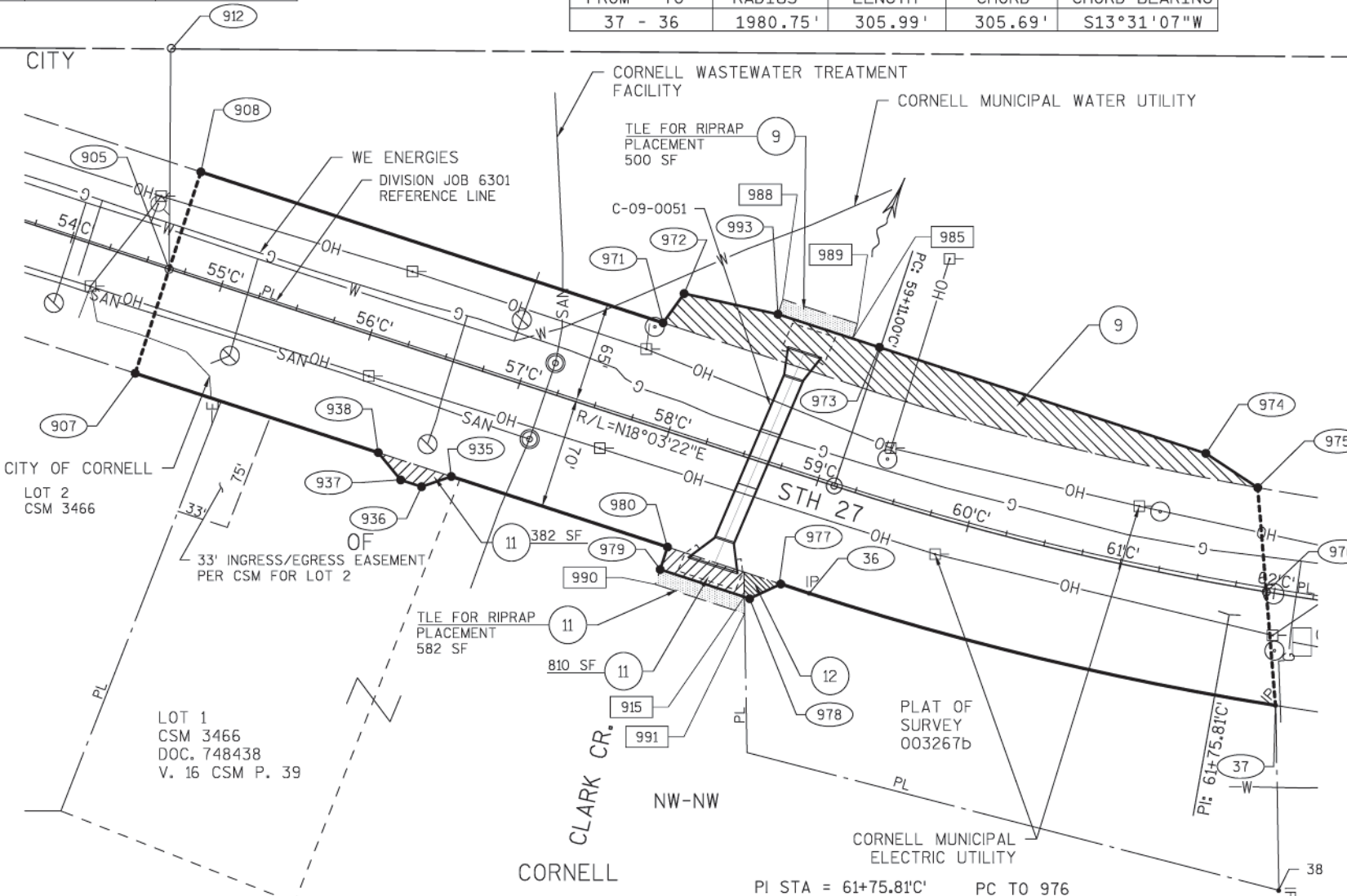
FROM - TO	BEARING	DISTANCE
905 (R/L) - 908	N 71°56'37" W	65.20'
908 - 971	N 18°04'42" E	310.00'
971 - 972	N 54°13'49" W	23.01'
972 - 993	N 12°26'19" E	61.29'
993 - 973	N 18°03'22" E	68.00'
973 - 974	N 18°00'11" E	218.83'
974 - 975	N 33°25'05" E	39.66'
975 - 976 (R/L)	N 85°19'51" E	66.70'
976 (R/L) - 37	N 85°19'51" E	72.59'
37 - 36	SEE CURVE DATA	
36 - 977	S 18°04'42" W	19.16'
977 - 978	S 25°09'58" E	21.96'
978 - 979	S 18°03'22" W	60.00'
979 - 980	N 71°56'37" W	15.07'
980 - 935	S 18°04'42" W	145.00'
935 - 936	S 19°05'30" E	20.07'
936 - 937	S 18°03'22" W	14.00'
937 - 938	S 50°38'03" W	22.55'
938 - 907	S 18°04'42" W	163.00'
907 - 905 (R/L)	N 71°56'37" W	69.80'
934 - 10933	S 89°25'59" W	2702.36'
10933 - 912	S 0°26'50" W	744.08'
912 - 905	N 90°00'00" E	540.06'
912 - 10981	S 0°26'50" W	1918.80'
10981 - 10933	N 0°26'50" E	2662.88'

R/W STATION AND OFFSET TABLE

POINT	STATION	OFFSET
36	59+16.94'C	69.98'
37	62+12.03'C	70.47'
905 (R/L)	54+65.00'C	0.00'
907	54+65.00'C	69.80'
908	54+65.00'C	65.20'
935	56+77.00'C	69.88'
936	56+61.00'C	82.00'
937	56+47.00'C	82.00'
938	56+28.00'C	69.86'
971	57+75.00'C	65.08'
972	57+82.00'C	87.00'
973	59+11.00'C	93.00'
974	61+40.00'C	80.00'
975	61+78.00'C	64.60'
976 (R/L)	61+94.90'C	0.00'
977	58+98.00'C	69.96'
978	58+82.00'C	85.00'
979	58+22.00'C	85.00'
980	58+22.00'C	69.93'
993	58+43.00'C	93.00'

TLE STATION AND OFFSET TABLE

POINT	STATION	OFFSET
915	59+11.00'C	93.00'
985	58+93.00'C	93.00'
988	58+43.00'C	103.00'
989	58+93.00'C	103.00'
990	58+22.00'C	95.00'
991	58+81.89'C	95.00'

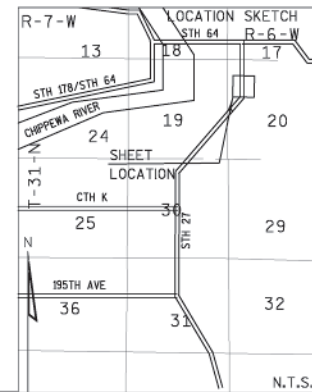


PI STA = 61+75.81'C
Y = 212130.768
X = 234493.606
DELTA = 15°52'08" LT
D = 3°00'56"
T = 264.81'
L = 526.23'
R = 1900.00'
PC STA = 59+11.00'C
Y = 211878.996
X = 234411.527
PT STA = 64+37.24'C
Y = 212395.387
X = 234503.712
BK T = N02°11'14"E
AH T = N09°29'42"E

PC TO 976
R = 1900.00'
DELTA = 8°33'40" LT
T = 142.21'
L = 283.90'
LCH = 283.63'
LCB = N13°46'32"E

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CHIPPEWA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGION OFFICE IN EAU CLAIRE.
EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING RIGHT OF WAY FOR STH 27 IS ESTABLISHED FROM PREVIOUS PROJECT, DIVISION JOB 6301, CSM 3466 AND PLAT OF SURVEY 003267b.
EXISTING SECTION CORNER AND PROPERTY CORNER INFORMATION PROVIDED BY WISDOT NORTHWEST REGION.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN CHIPPEWA COUNTY AS SHEET 2 OF 2 OF DOCUMENT NO. 886184.



AECOM

I, RODERICK D. STEEGE PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT 8200-00-20-4.04 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Roderick D. Steege* DATE: 02/11/19
PRINT NAME: RODERICK D. STEEGE
REGISTRATION NUMBER: 1761

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGION - EAU CLAIRE

SIGNATURE: *Michael Pillar* DATE: 02/11/19
PRINT NAME: MICHAEL PILLER

DATE:
2/11/2019

REVISED:

TRANSPORTATION PROJECT PLAT NO: 8200-00-20 - 4.05

RELOCATION ORDER STH 27 CHIPPEWA COUNTY, CADOTT - CORNELL (100TH AVENUE TO SOUTH STREET/4-CULV)

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

TPP 8200-00-20 - 4.01

POINT	Y	X
737	149191.222	235331.803
738	149141.222	235331.687
740	149191.174	235249.803
799	149115.857	235149.628
800	149140.891	235113.853
801	149185.891	235113.893
802	149216.405	235149.861
806	149515.818	235199.189
808	148765.818	235198.517
809	148765.864	235148.817
811	149515.865	235150.555
812	149515.768	235250.555
813	148765.772	235248.817
814	149141.191	235279.687
816	149061.767	235249.503
817	148765.818	235198.817
818	149515.817	235200.555
2326	148271.292	235197.671
12264	150881.977	235203.721

TPP 8200-00-20 - 4.02

POINT	Y	X
51	201635.819	231148.876
67	201397.992	231222.693
753	204283.677	231109.669
762	201316.958	231093.889
763	201316.660	231073.891
789	201056.521	231162.088
790	201856.313	231143.847
819	201389.572	231072.804
820	201437.161	231010.369
821	201500.563	231071.149
825	201529.223	231220.739
826	201518.682	231251.573
827	201448.791	231257.168
829	201055.057	231097.793
830	201636.280	231069.126
831	201636.135	231094.131
832	201855.105	231090.867
833	201857.955	231215.838
834	201635.168	231219.159
835	201058.019	231227.763
837	201856.359	231145.854
939	201467.495	231024.682

TPP 8200-00-20 - 4.03

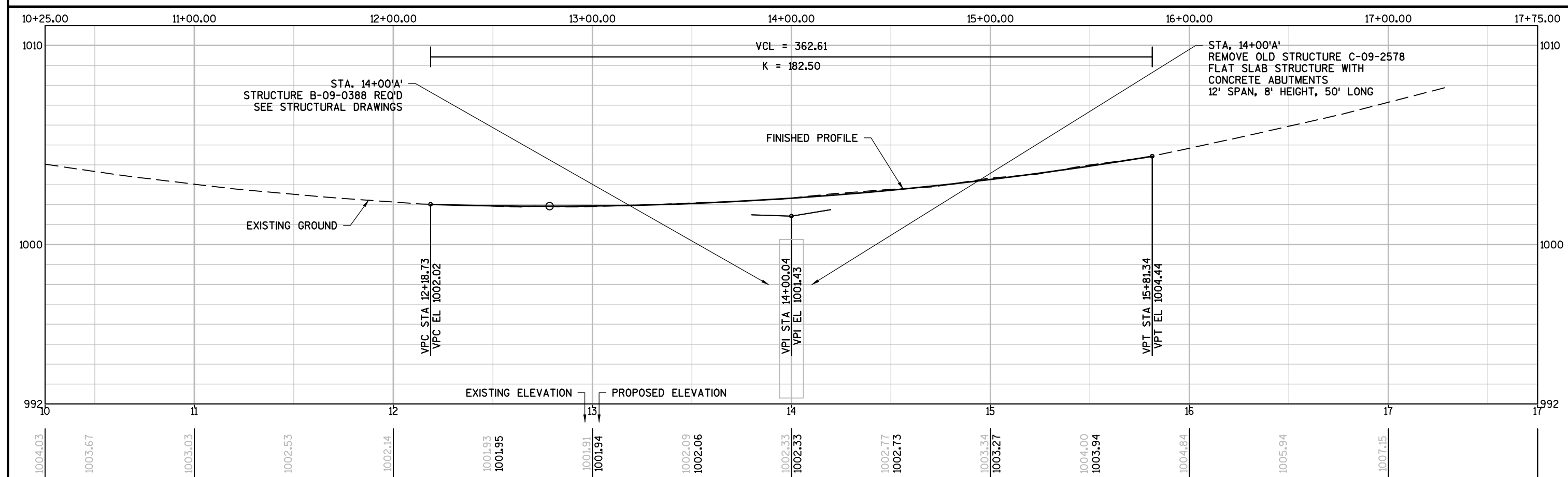
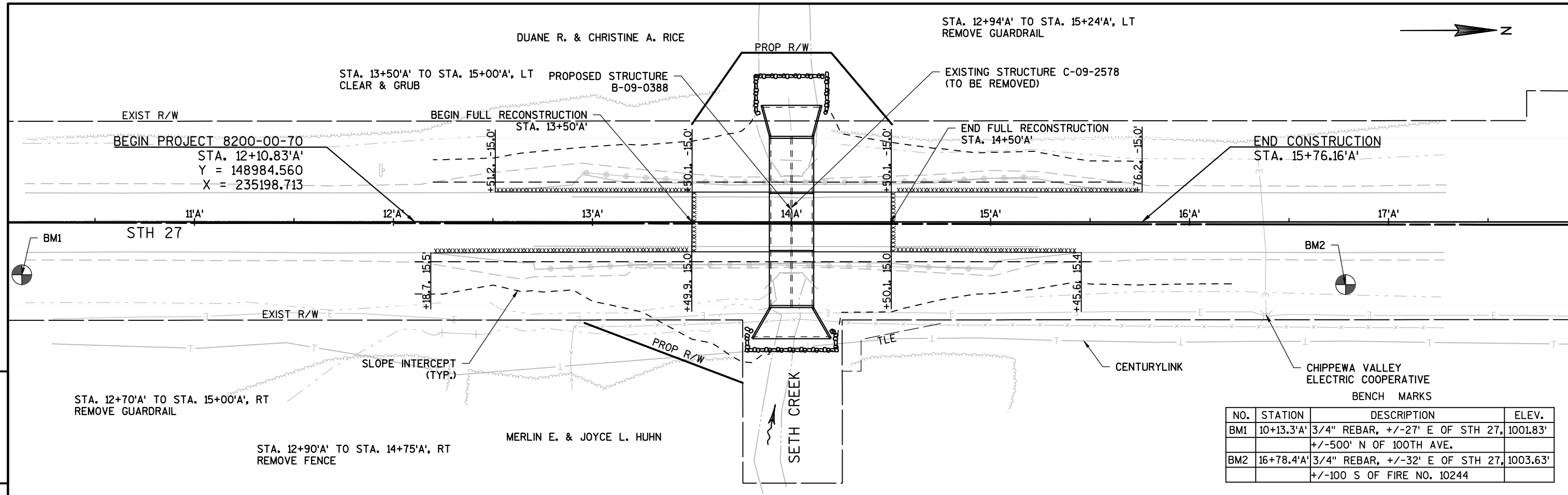
POINT	Y	X
105	210463.333	233922.770
138	210485.049	233877.777
139	210432.888	233985.847
934	212225.747	236441.262
949	210671.014	233959.115
950	210747.566	233967.249
951	210802.571	233978.332
952	210819.547	233976.735
953	210926.459	234023.162
954	210930.456	234033.485
955	210910.178	234095.688
956	210888.613	234161.837
957	210798.221	234132.330
958	210768.039	234151.434
959	210741.304	234140.197
960	210708.139	234101.427
969	210877.239	234001.788

TPP 8200-00-20 - 4.04

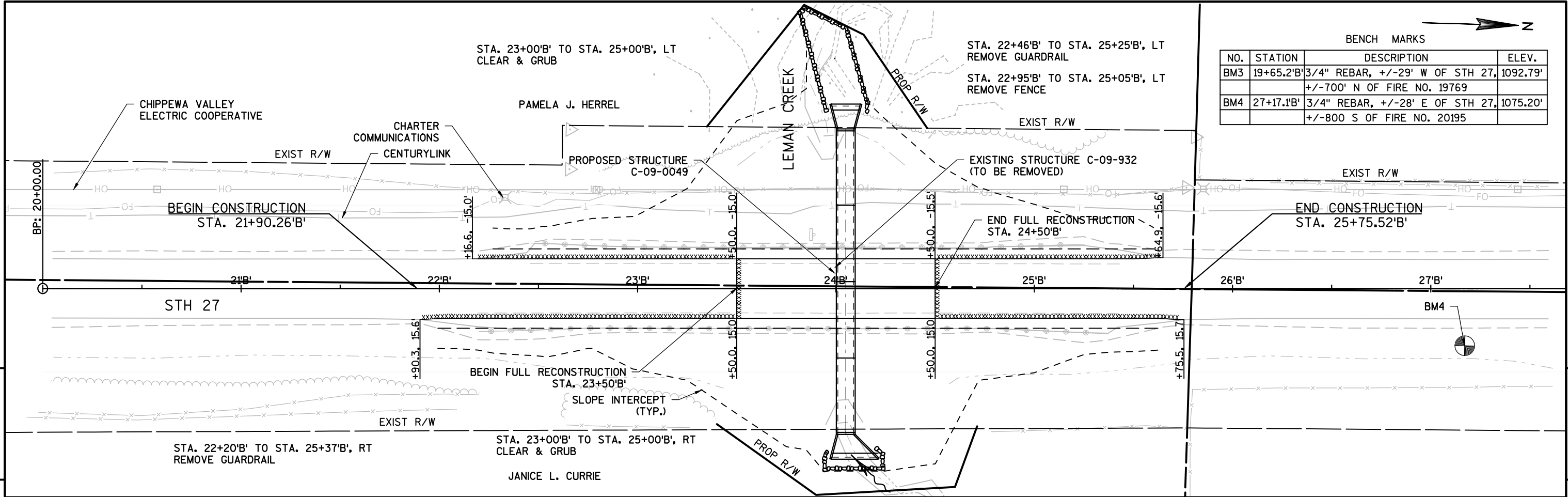
POINT	Y	X
905	211454.960	234273.289
907	211433.326	234339.648
908	211475.170	234211.297
912	211454.960	233733.225
935	211634.860	234405.435
936	211615.891	234412.001
937	211602.581	234407.662
938	211588.279	234390.230
971	211769.866	234307.495
972	211783.314	234288.828
973	211907.821	234323.107
974	212115.934	234390.739
975	212149.040	234412.583
976	212154.470	234479.066
977	211844.950	234474.015
978	211825.078	234483.352
979	211768.033	234464.755
980	211772.702	234450.431
993	211843.170	234302.030

4

4

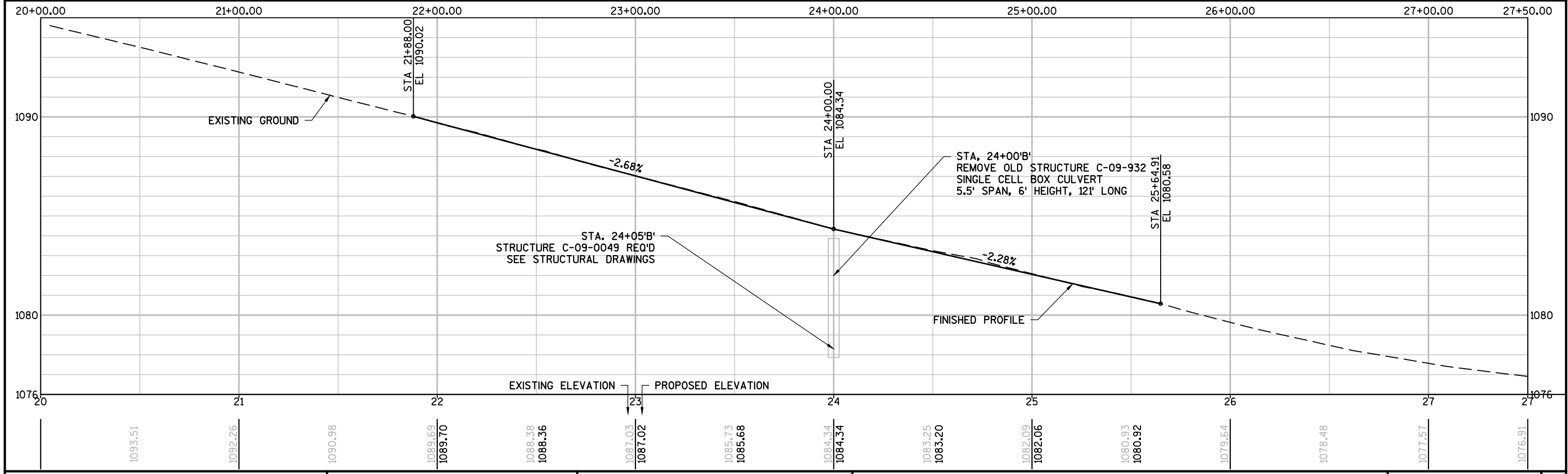


PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA PLAN AND PROFILE: SETH CREEK SHEET **E**

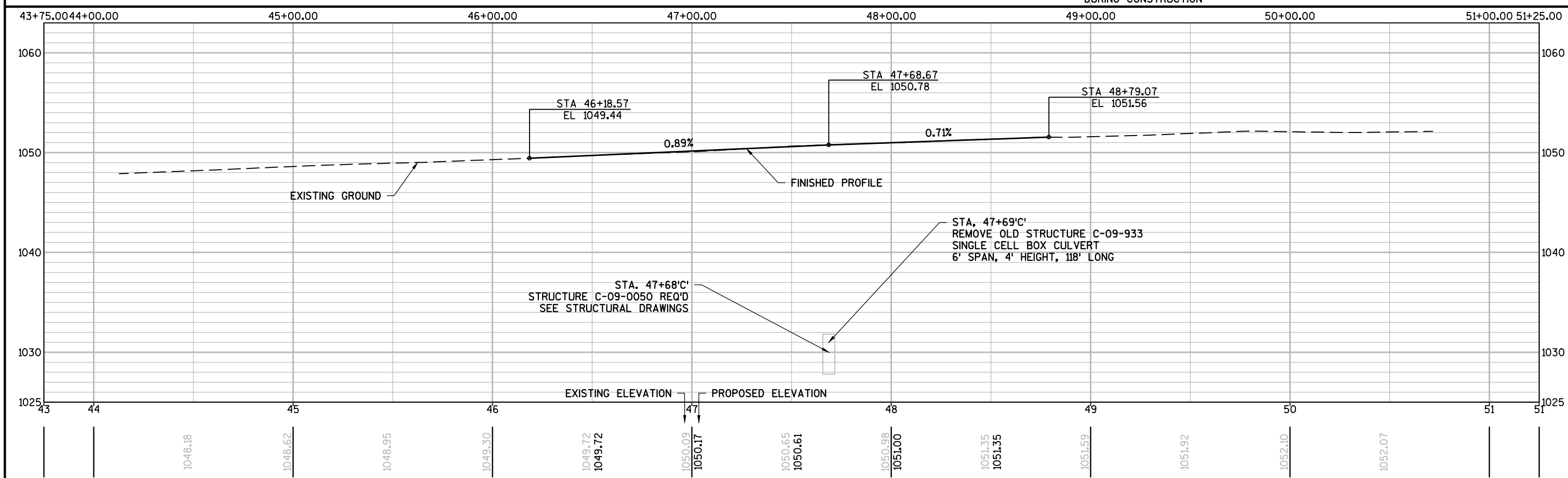
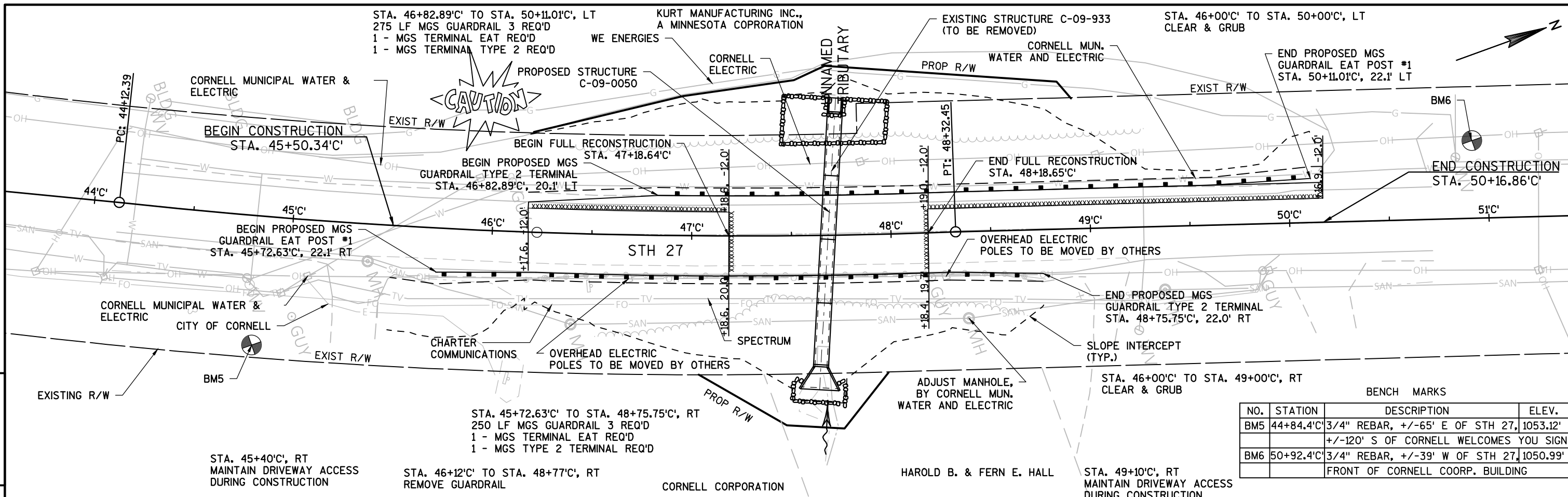


BENCH MARKS

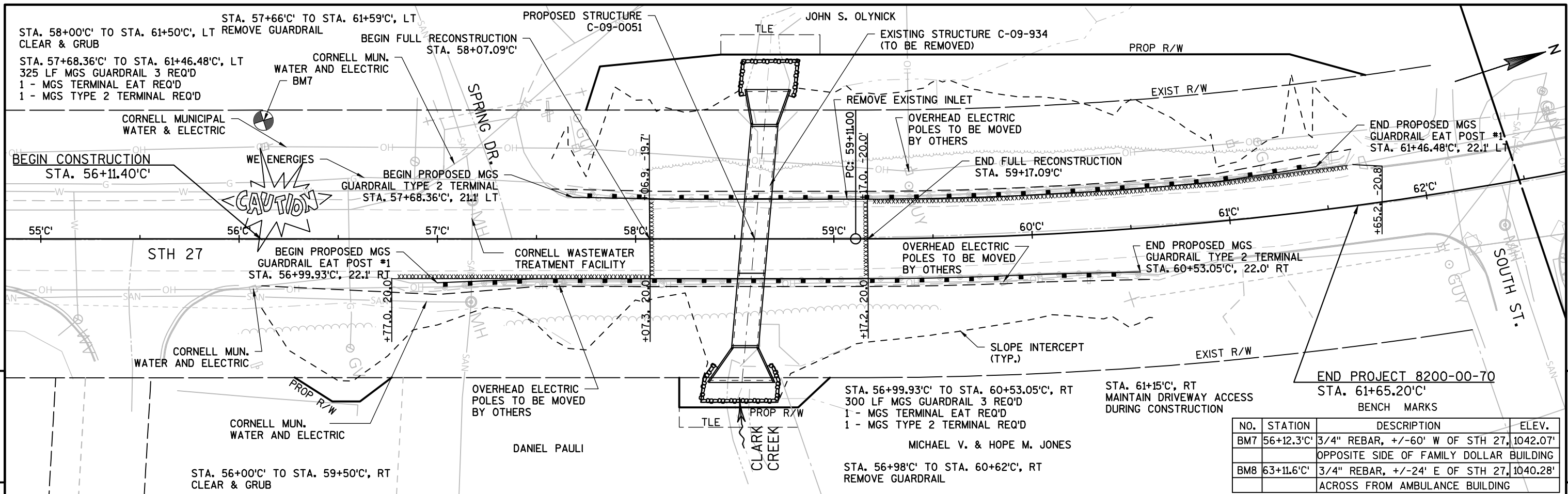
NO.	STATION	DESCRIPTION	ELEV.
BM3	19+65.2'B'	3/4" REBAR, +/-29' W OF STH 27,	1092.79'
		+/-700' N OF FIRE NO. 19769	
BM4	27+17.1'B'	3/4" REBAR, +/-28' E OF STH 27,	1075.20'
		+/-800 S OF FIRE NO. 20195	



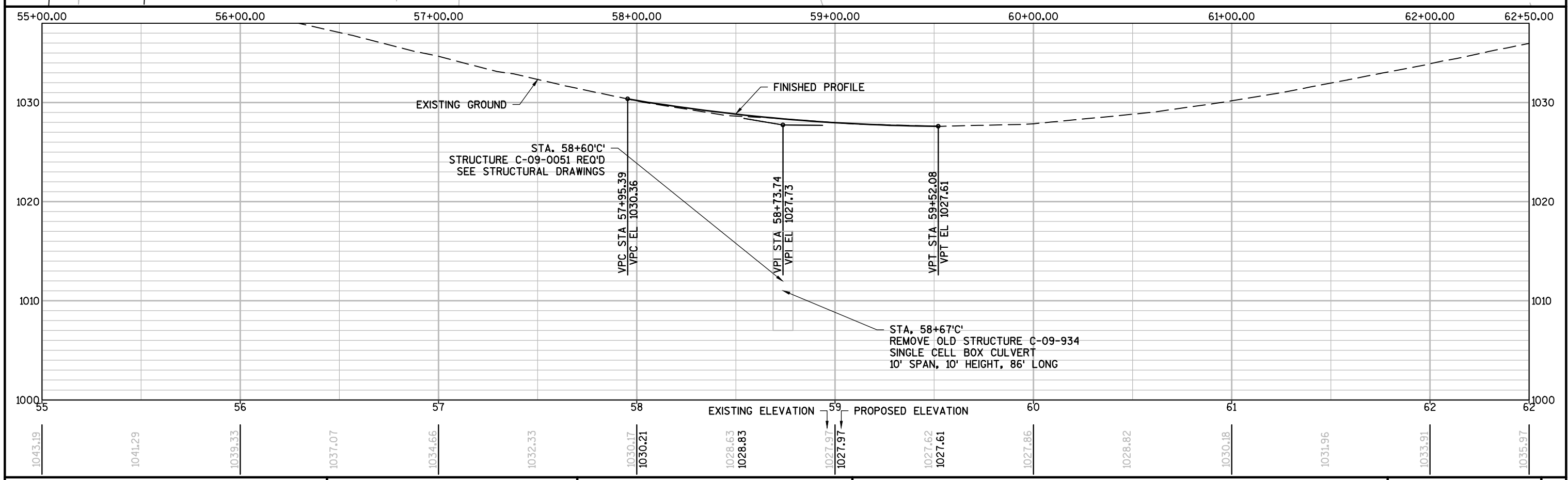
PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA PLAN AND PROFILE: LEMMAN CREEK SHEET **E**



PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA PLAN AND PROFILE: UNNAMED TRIBUTARY SHEET **E**



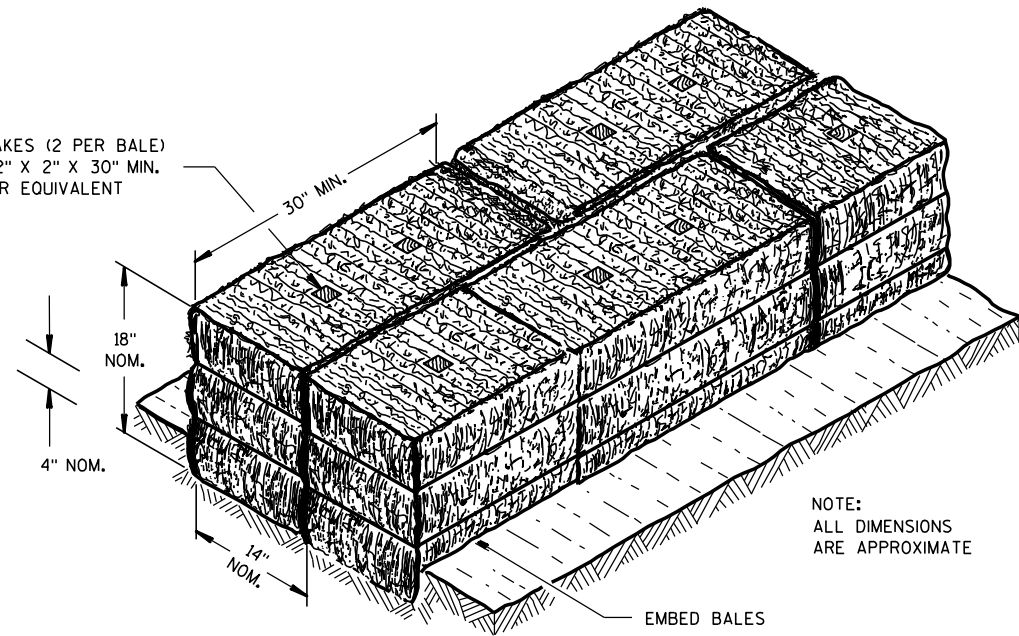
NO.	STATION	DESCRIPTION	ELEV.
BM7	56+12.3'C	3/4" REBAR, +/-60' W OF STH 27,	1042.07'
		OPPOSITE SIDE OF FAMILY DOLLAR BUILDING	
BM8	63+11.6'C	3/4" REBAR, +/-24' E OF STH 27,	1040.28'
		ACROSS FROM AMBULANCE BUILDING	



Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
13C19-01	HMA LONGITUDINAL JOINTS
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

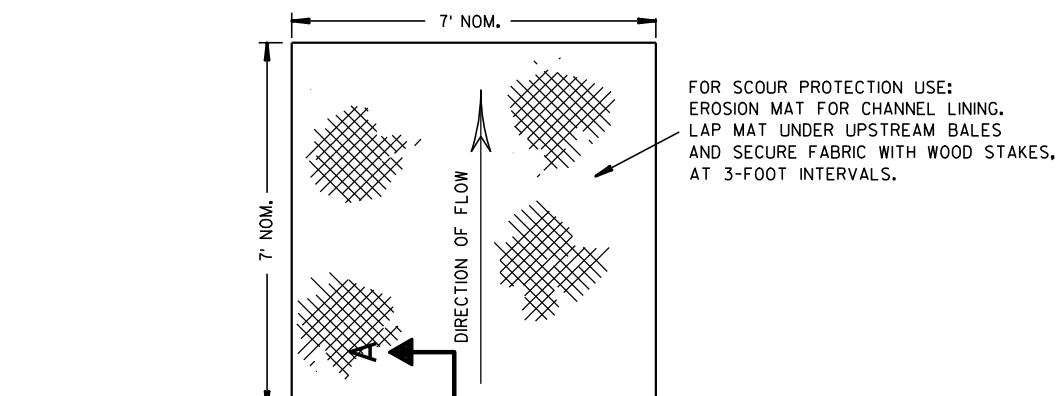
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



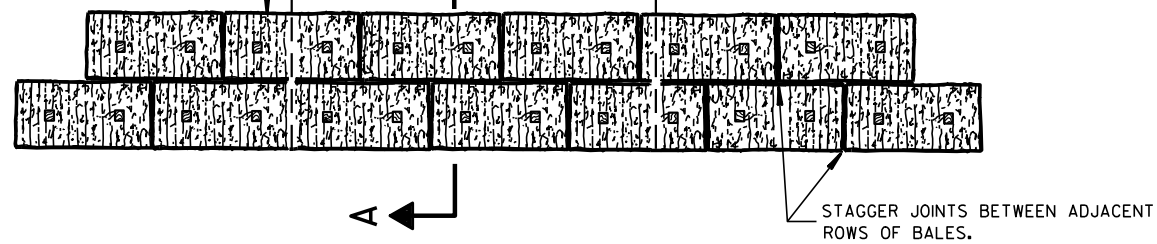
NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

SECTION A-A



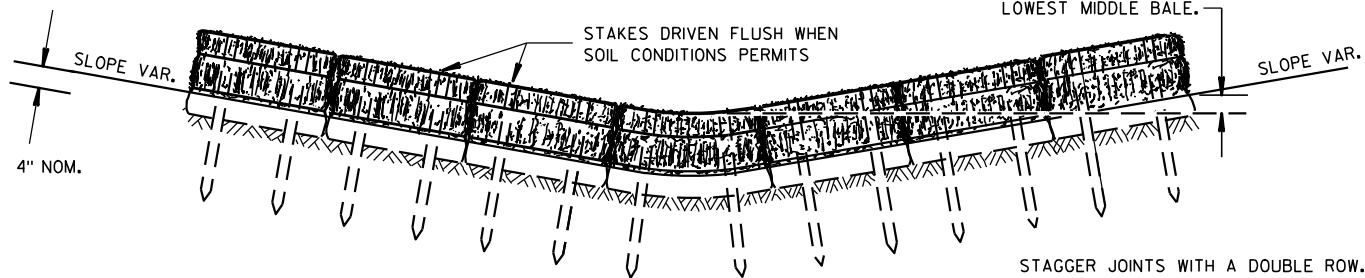
FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.



STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

PLAN VIEW

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



FRONT ELEVATION

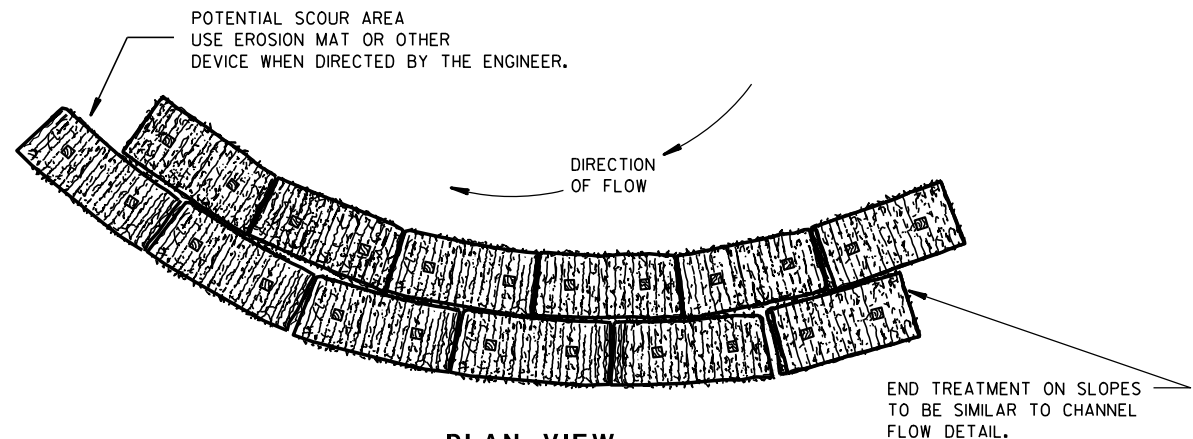
STAGGER JOINTS WITH A DOUBLE ROW.

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

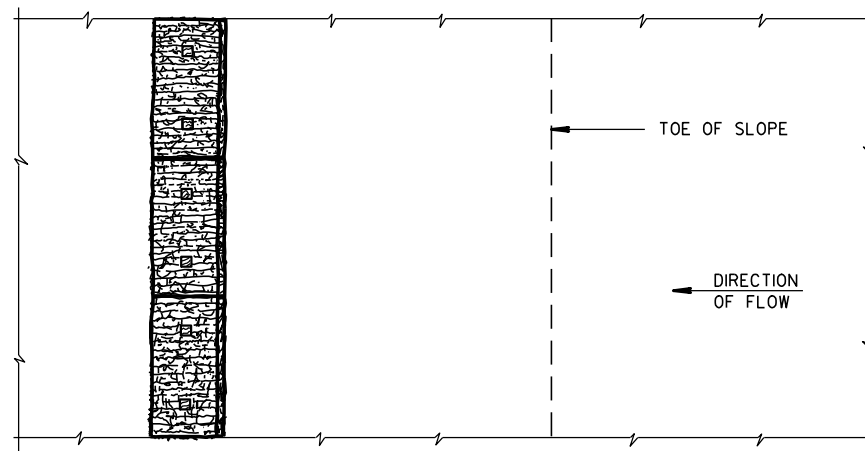
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

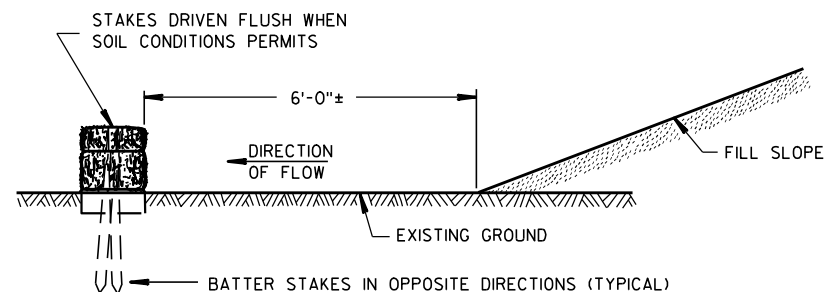


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

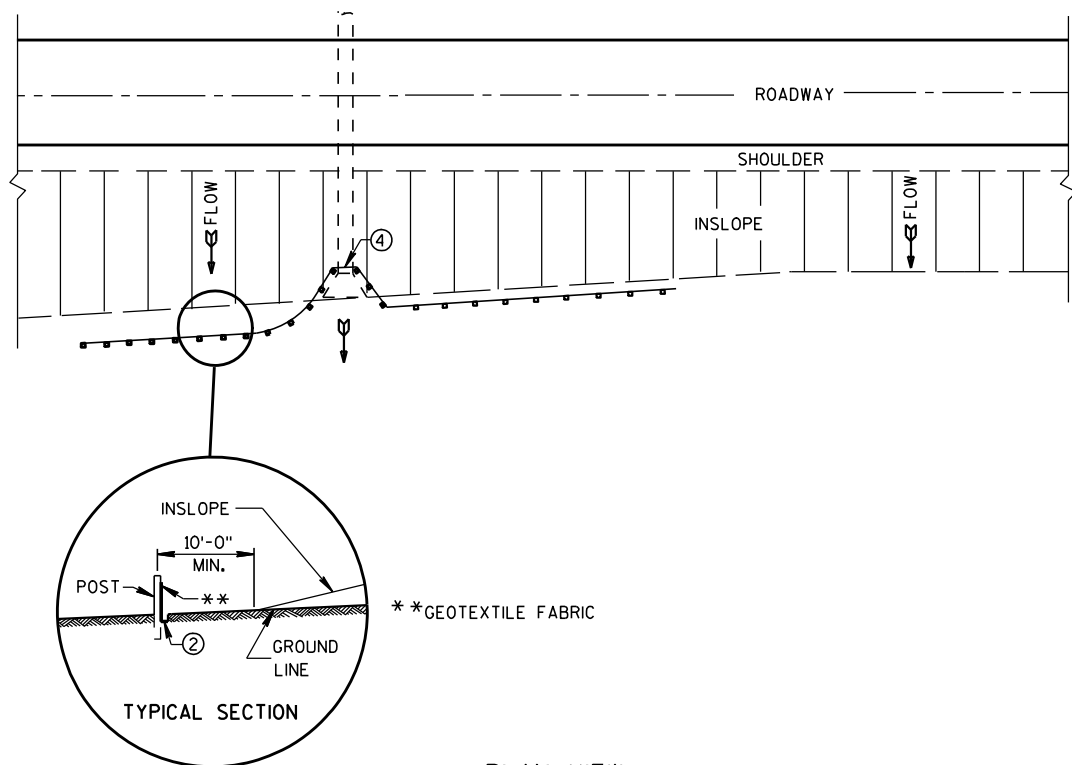
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

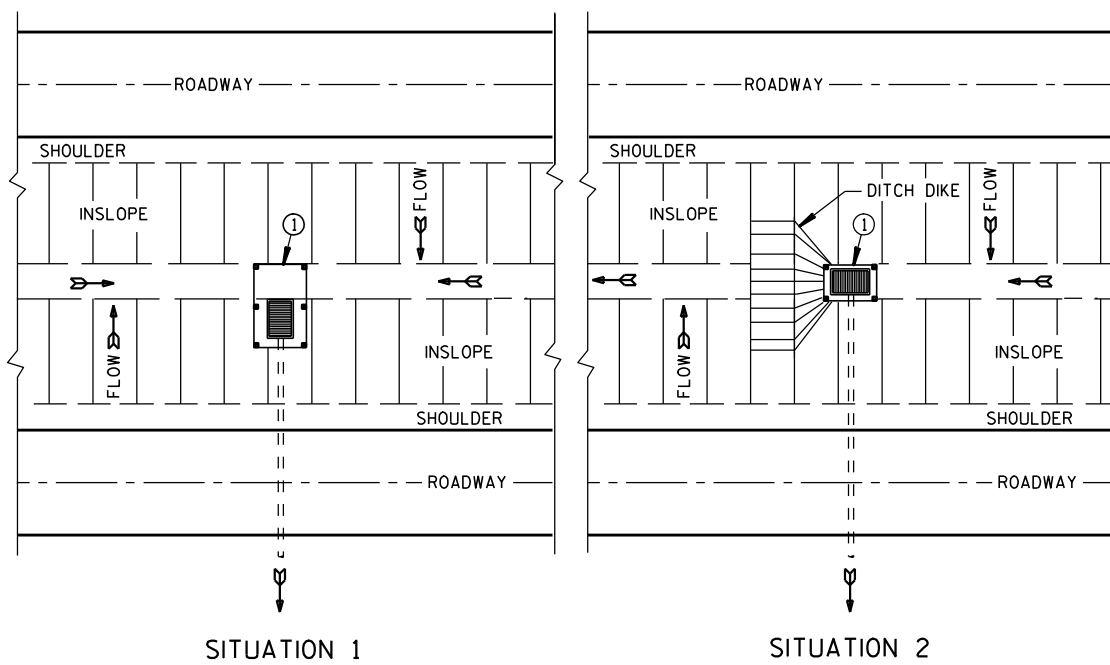
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

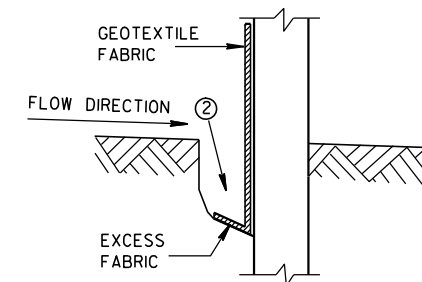


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

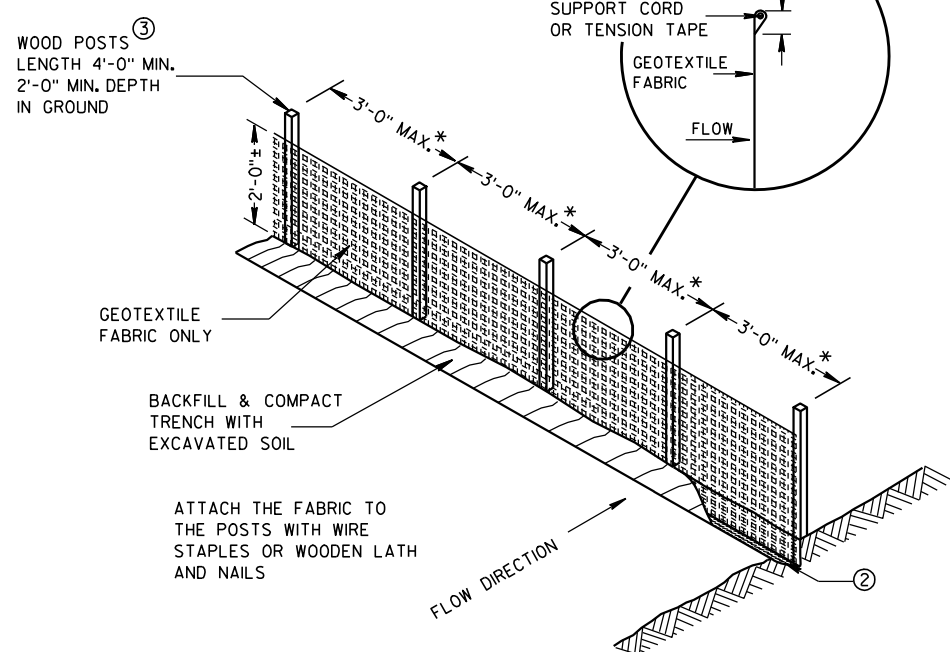
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



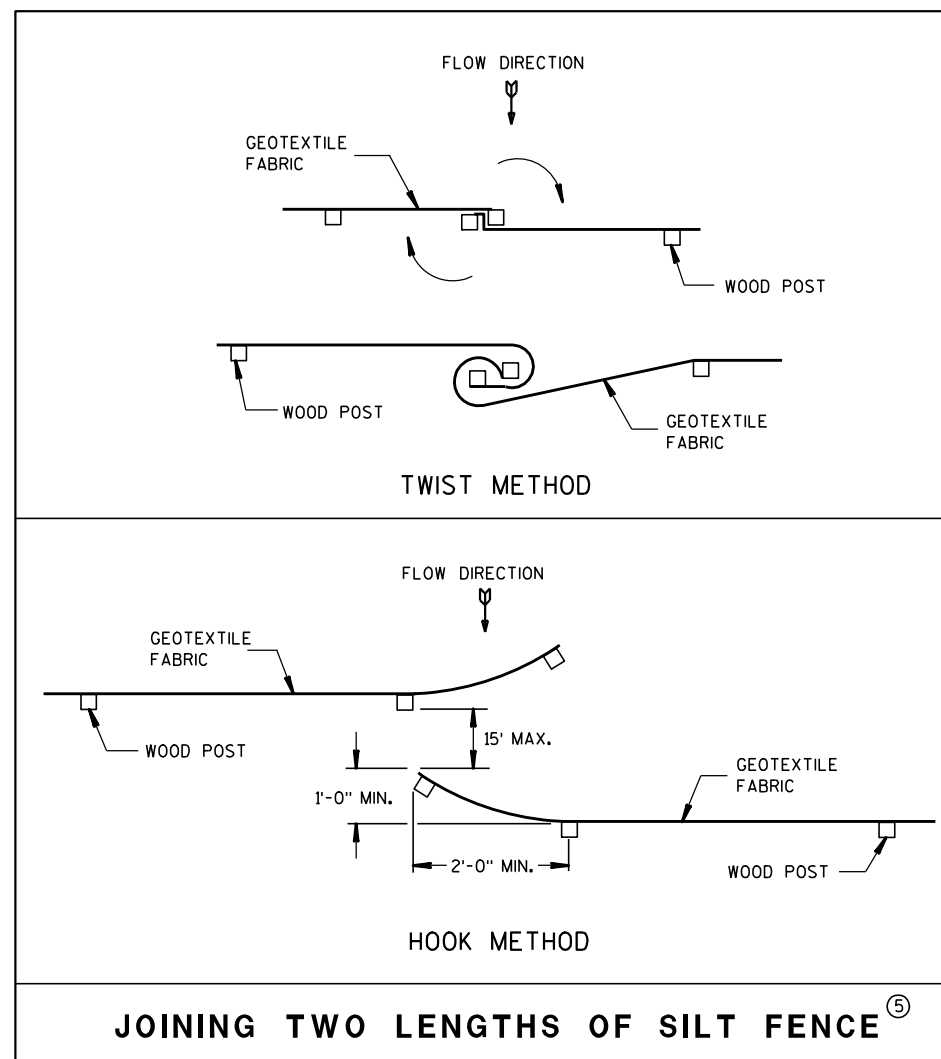
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

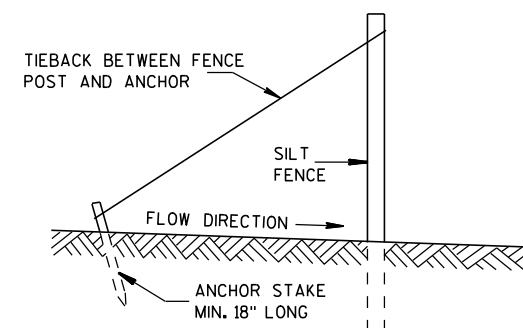


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

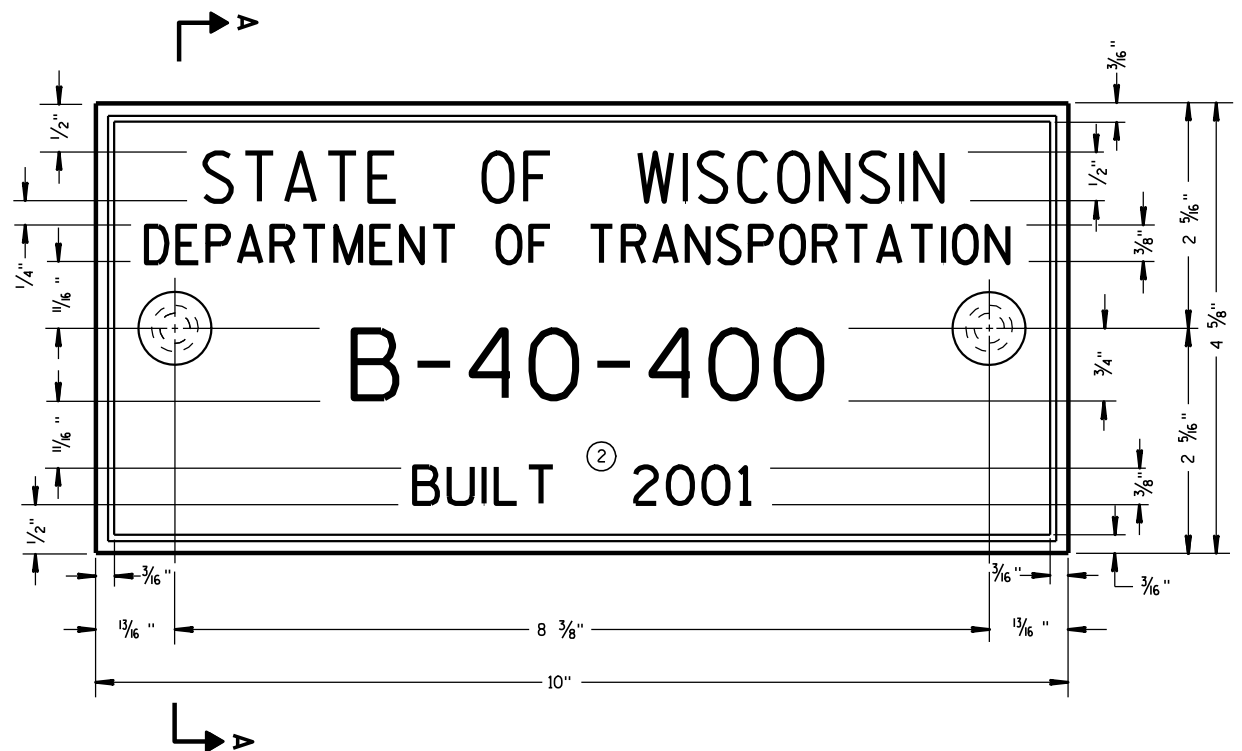
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



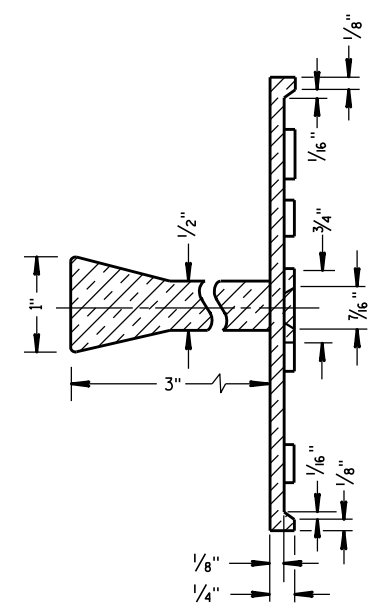
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

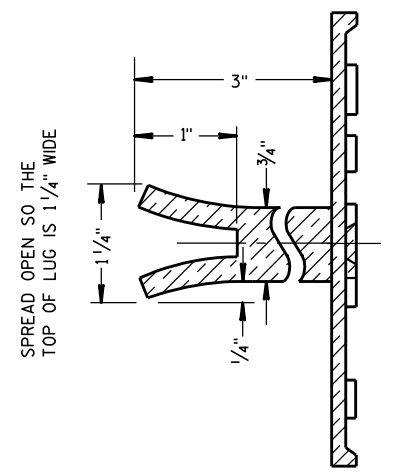
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



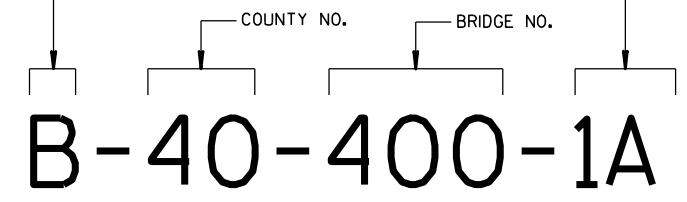
ALTERNATE LUG

6

6

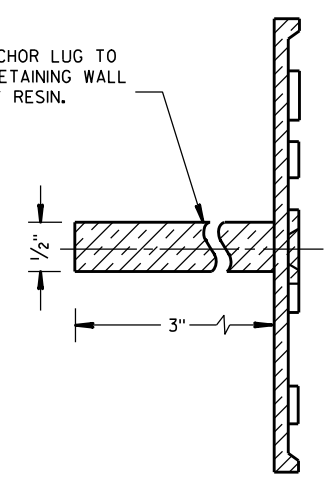
FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

- B = BRIDGE
- C = CULVERT
- R = RETAINING WALL
- UNIT NO. FOR MULTIPLE UNIT BRIDGE



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

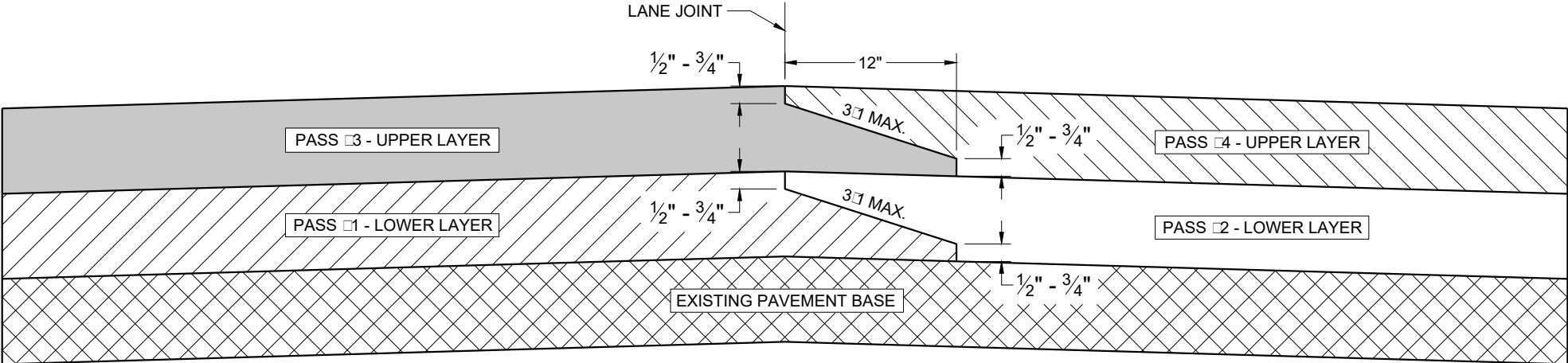
S.D.D. 12 A 3-10

S.D.D. 12 A 3-10

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

CONFORM TO STANDARD SPECIFICATION 450.3.2.8



**TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINTS**

6

6

SDD 13C19 - 01

SDD 13C19 - 01

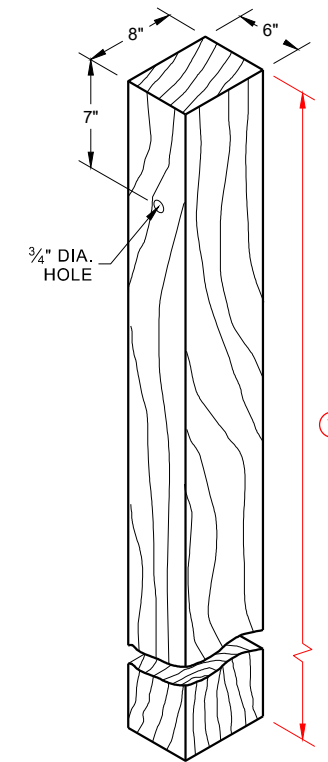
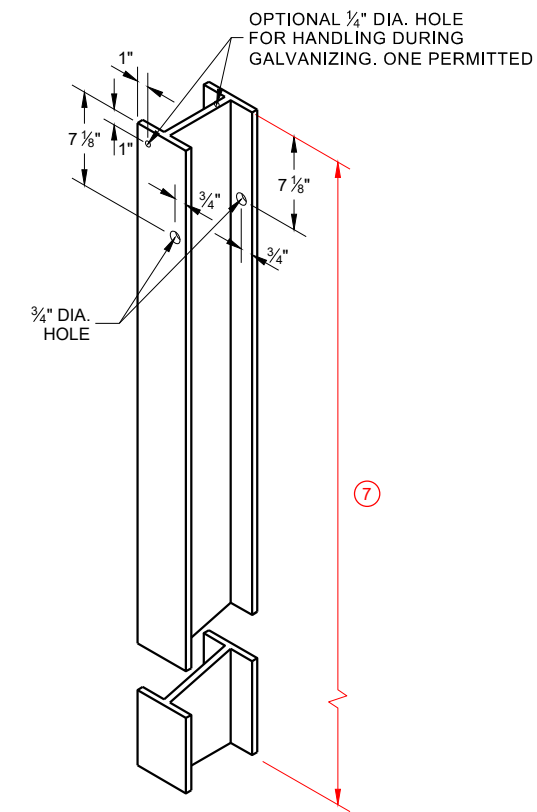
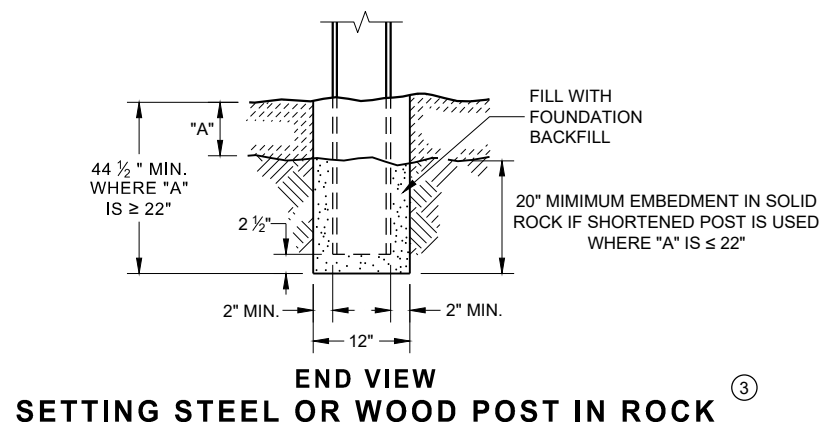
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
M 201 /S/ Steven He...
DATE HMA PAVEMENT ENGINEER

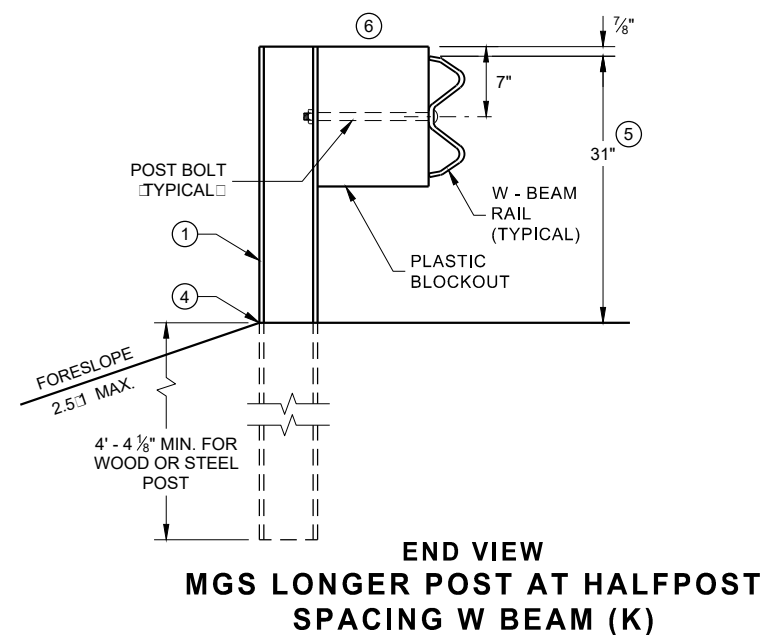
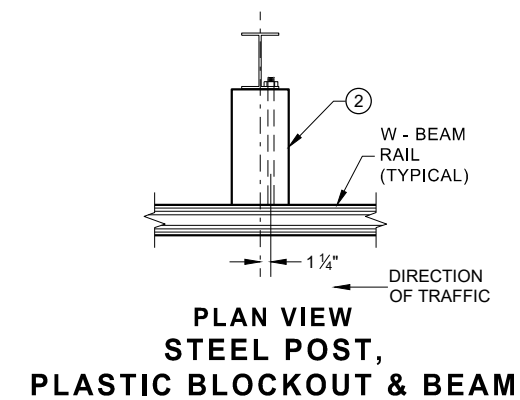
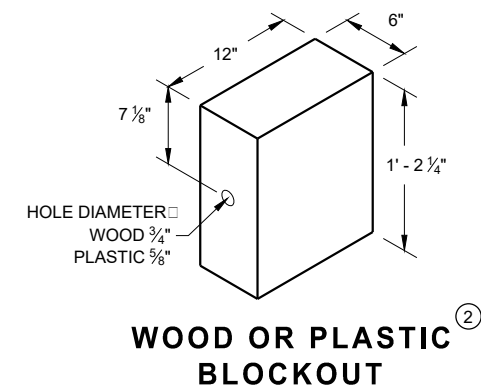
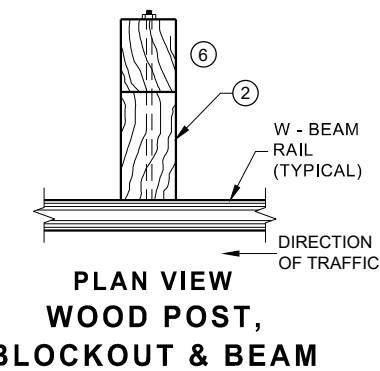
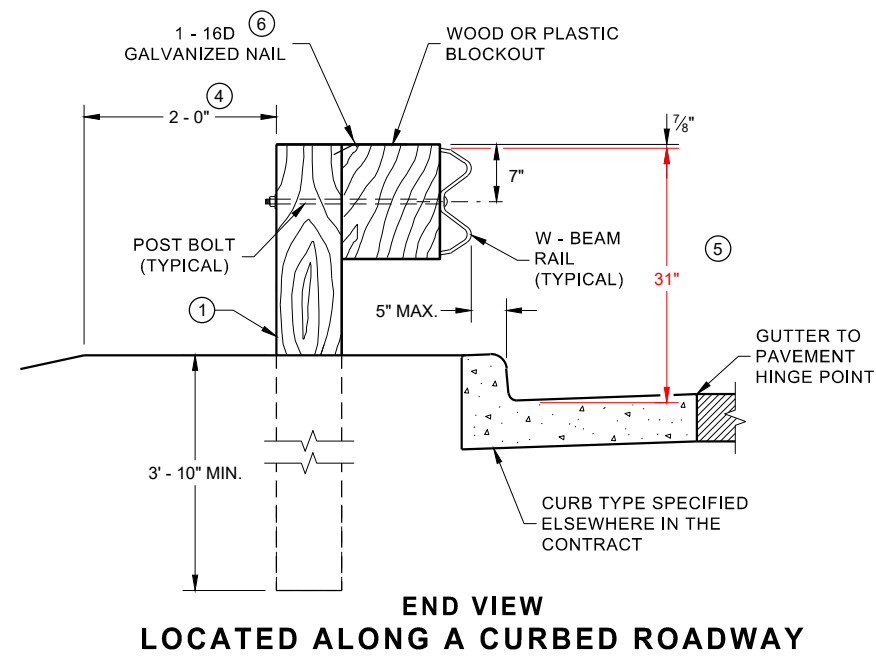
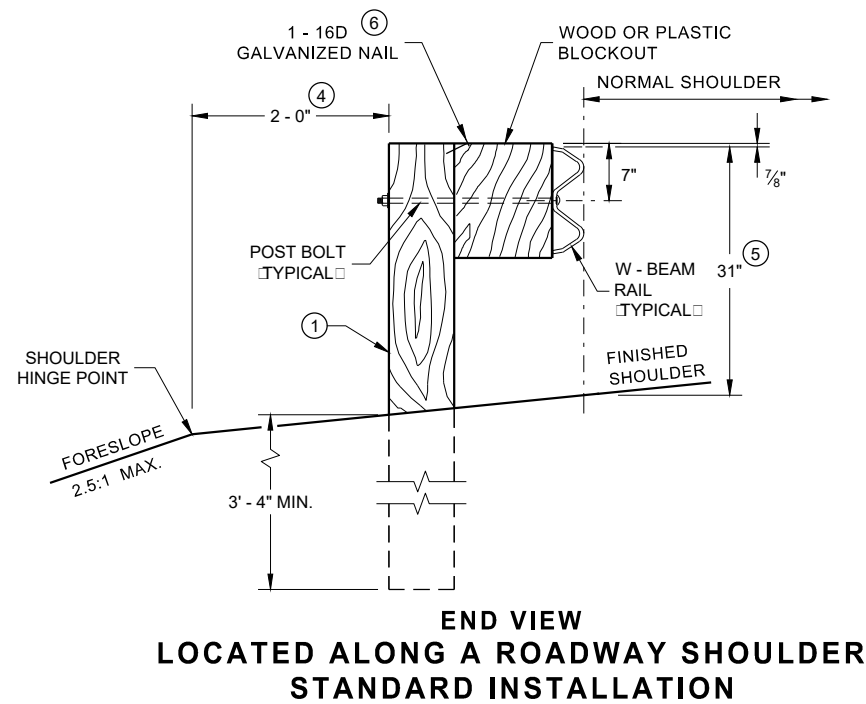
FHWA

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



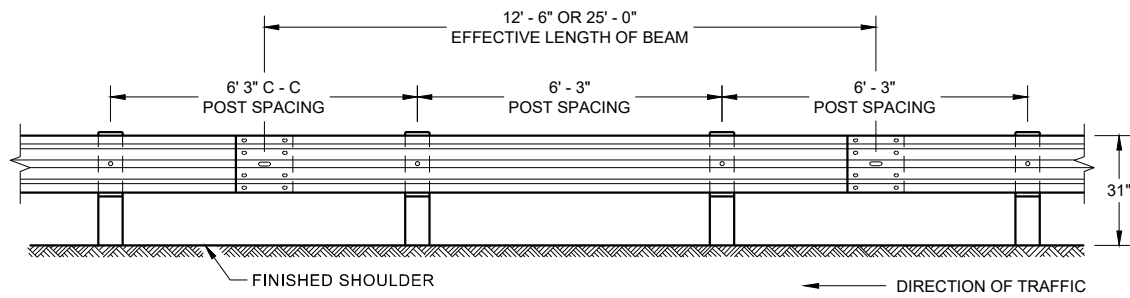
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) ①

WOOD POST (6" X 8") NOMINAL ①

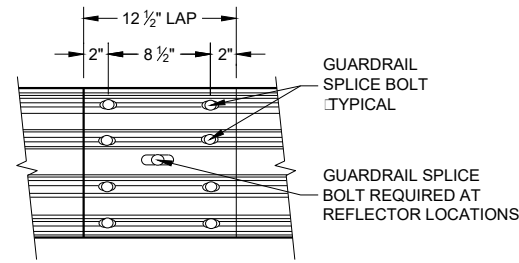


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



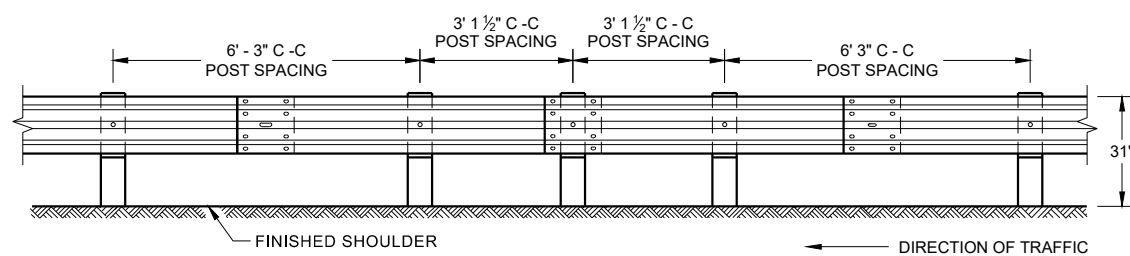
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



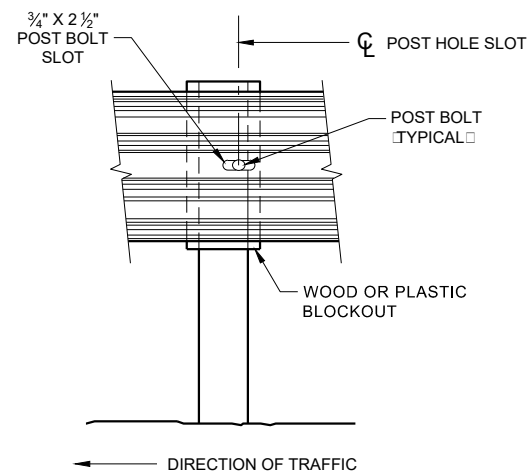
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

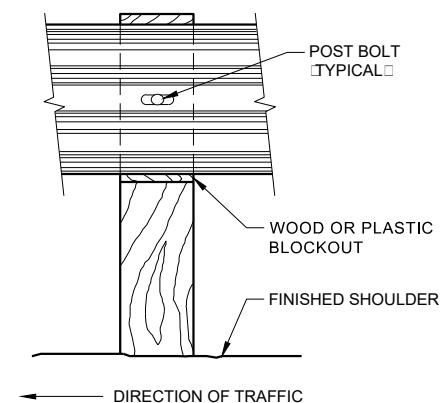
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



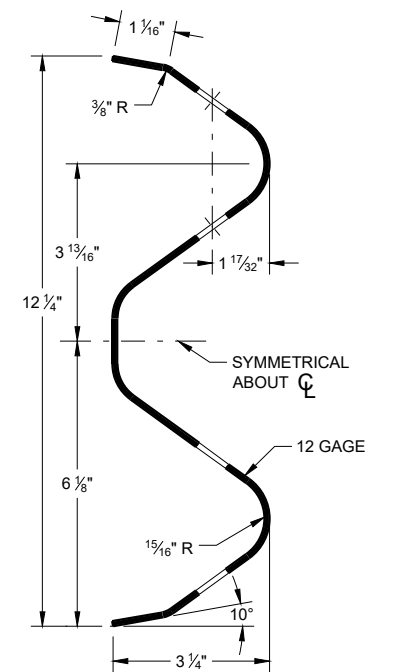
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



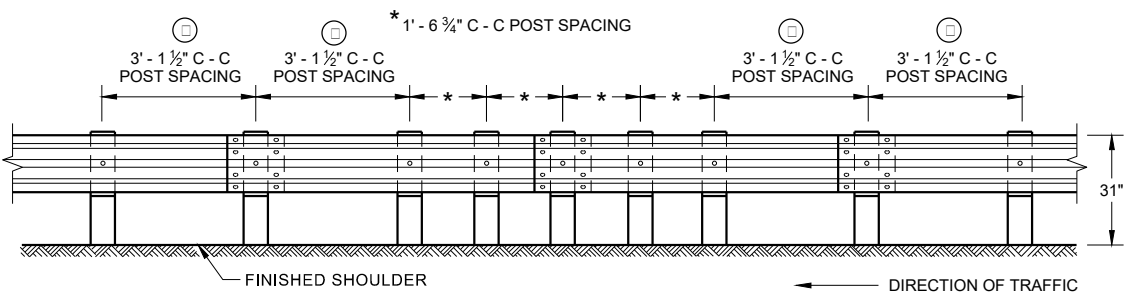
FRONT VIEW AT STEEL POST



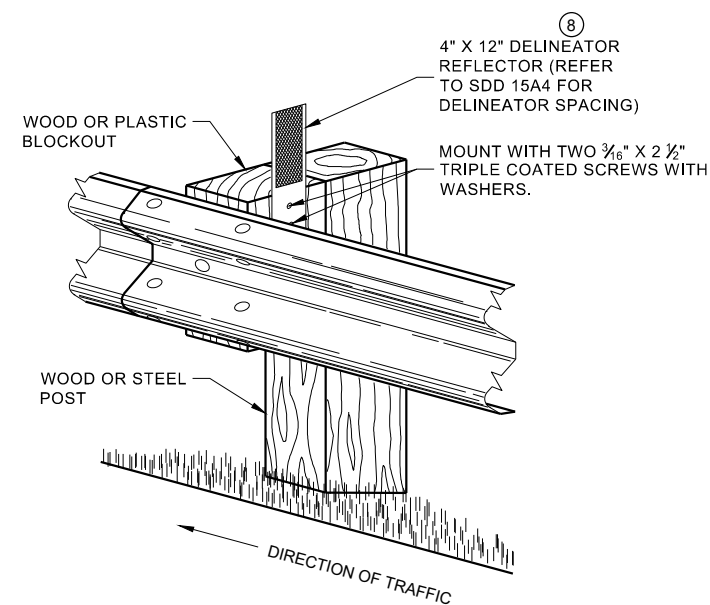
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

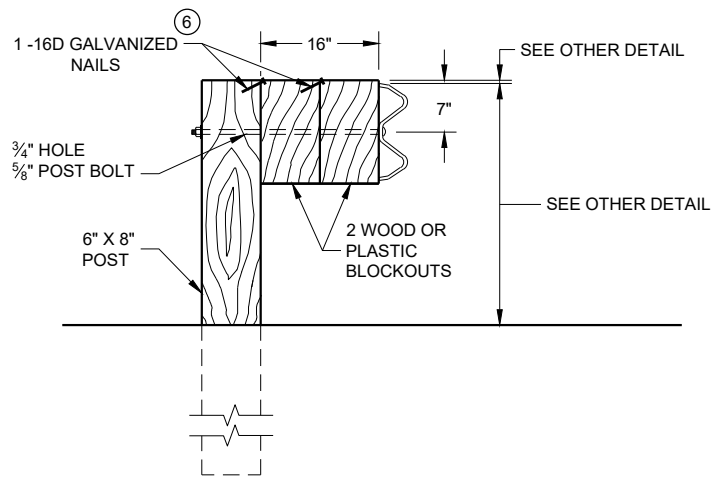
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 06b

SDD 14B42 - 06b

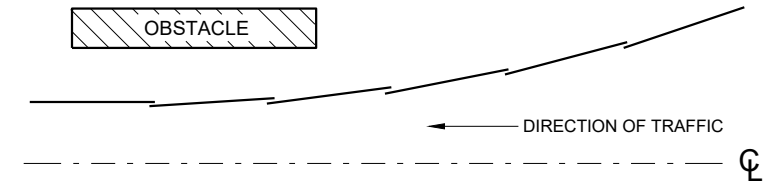
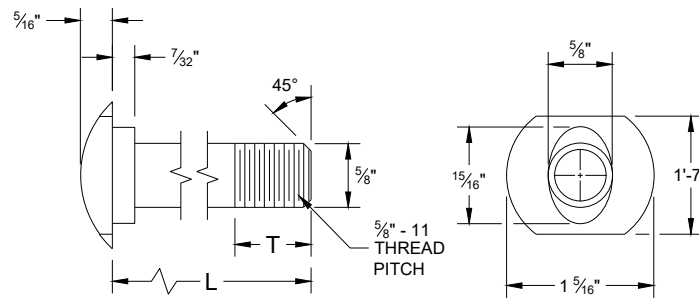


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

NOTE:

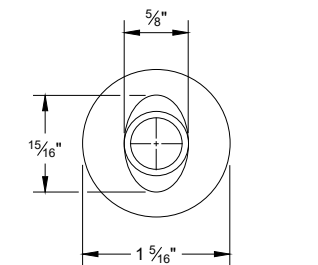
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.



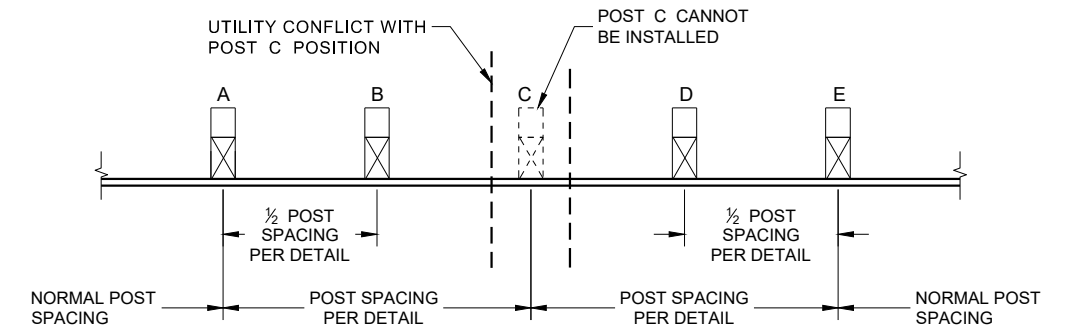
**PLAN VIEW
BEAM LAPPING DETAIL**

POST BOLT TABLE

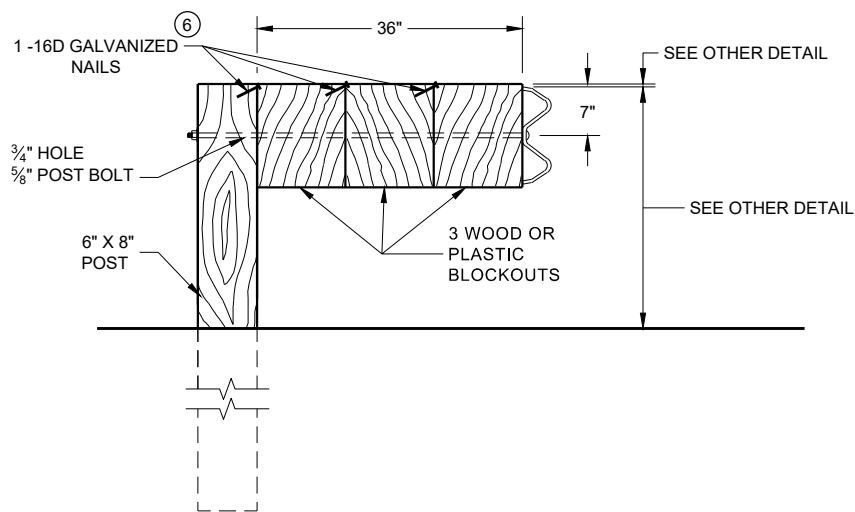
L	T MIN. □
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

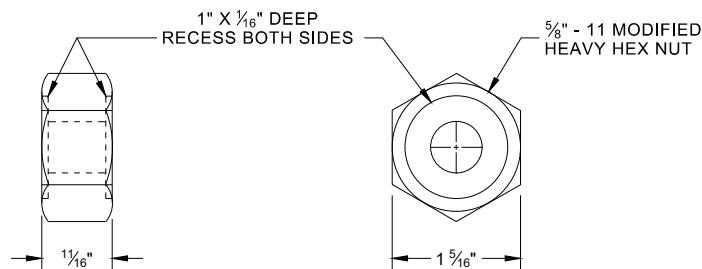


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

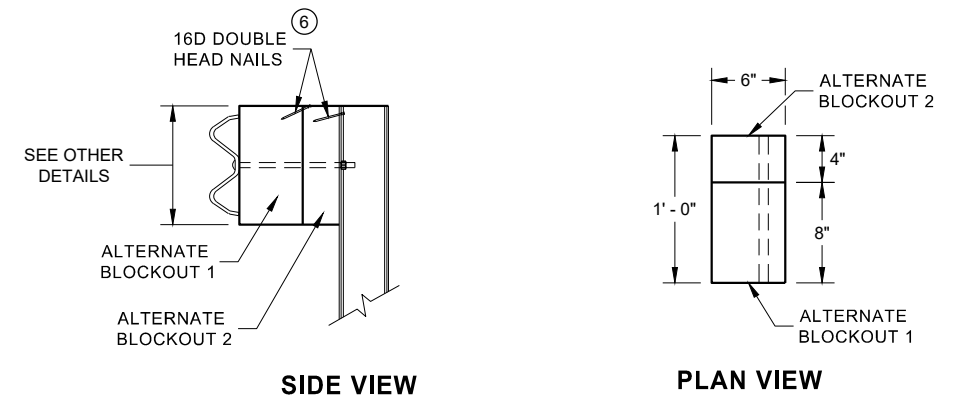


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**

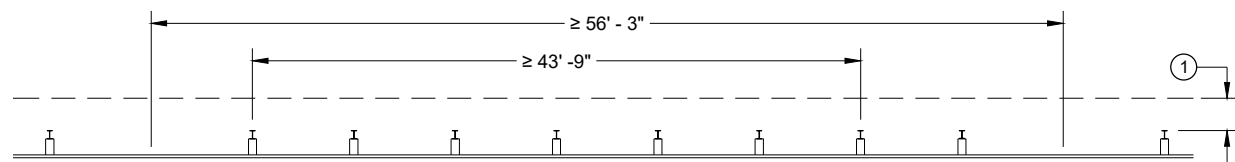


**ALTERNATE WOOD
BLOCKOUT DETAIL**

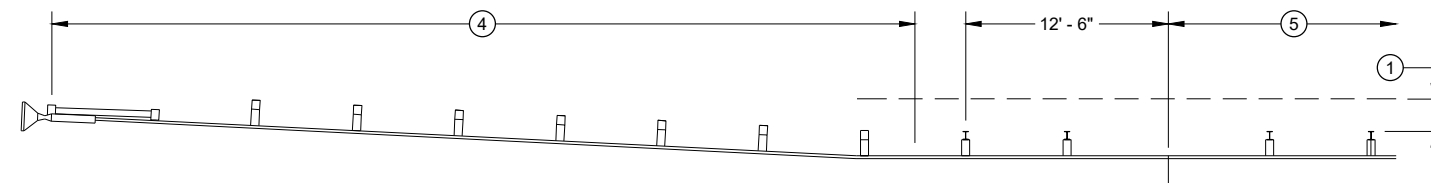
⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

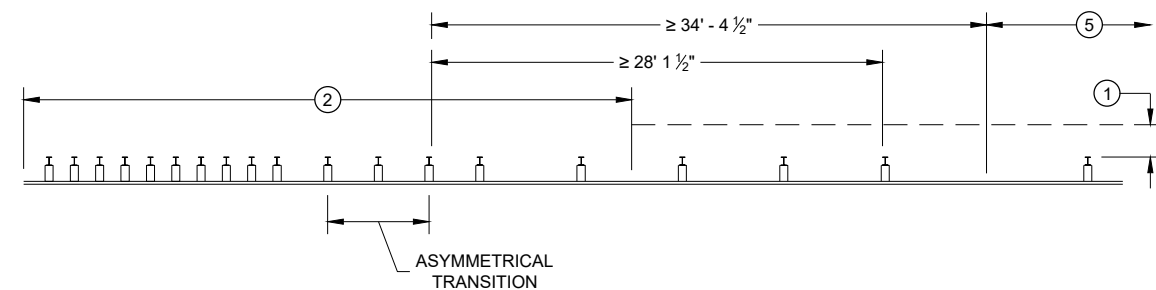
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



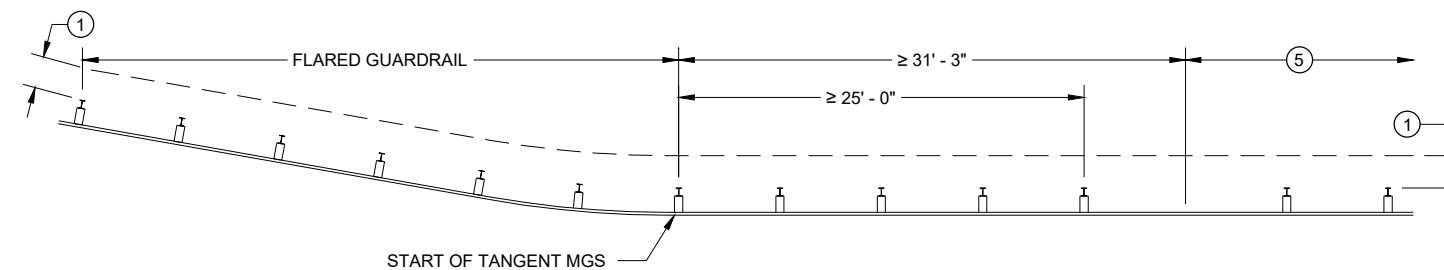
MISSING POST IN NORMAL BEAM GUARD RUN



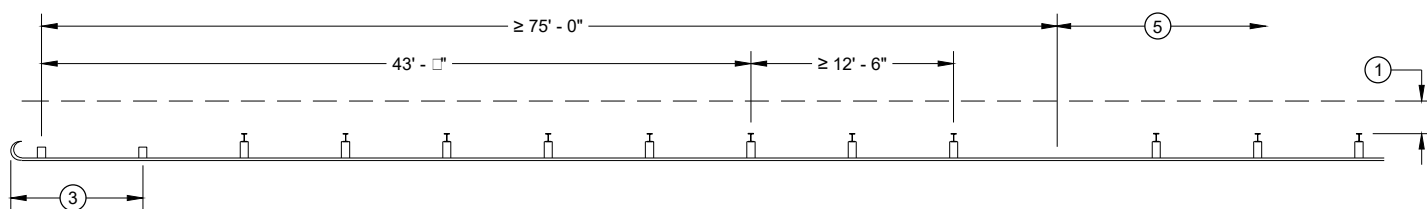
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



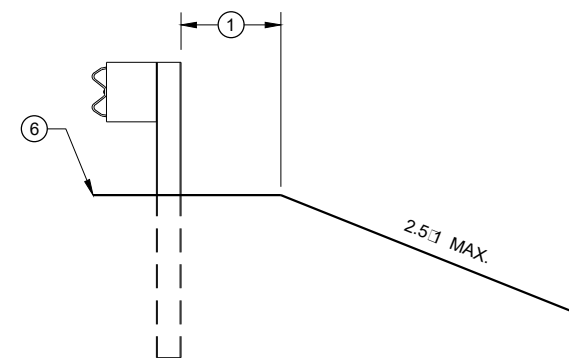
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

- ① MINIMUM OF 2 FEET OF GRADING BEHIND POST.
- ② SEE SDD 14B45 FOR MORE DETAILS.
- ③ SEE SDD 14B47 FOR MORE DETAILS.
- ④ SEE SDD 14B44 FOR MORE DETAILS.
- ⑤ SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
- ⑥ SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney T. [Signature]
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

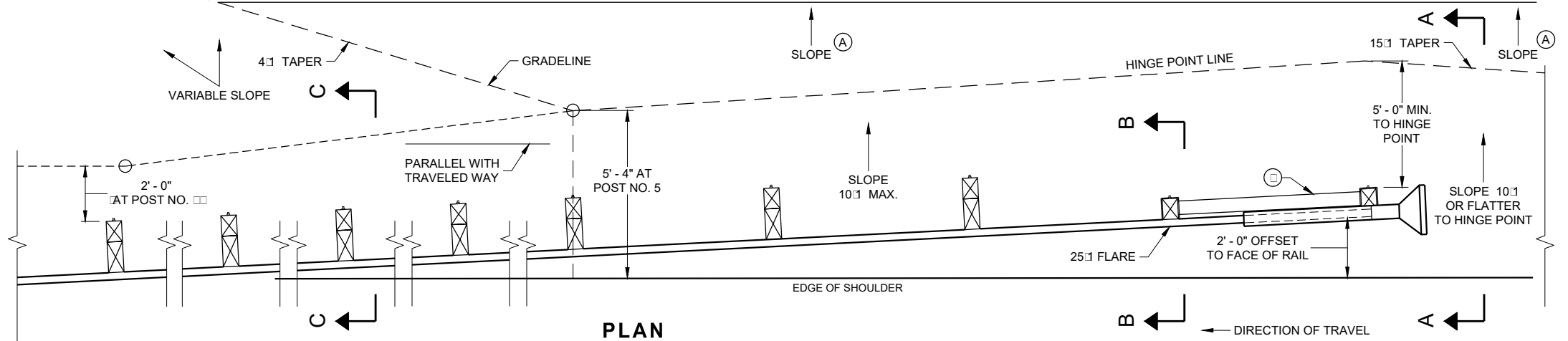
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

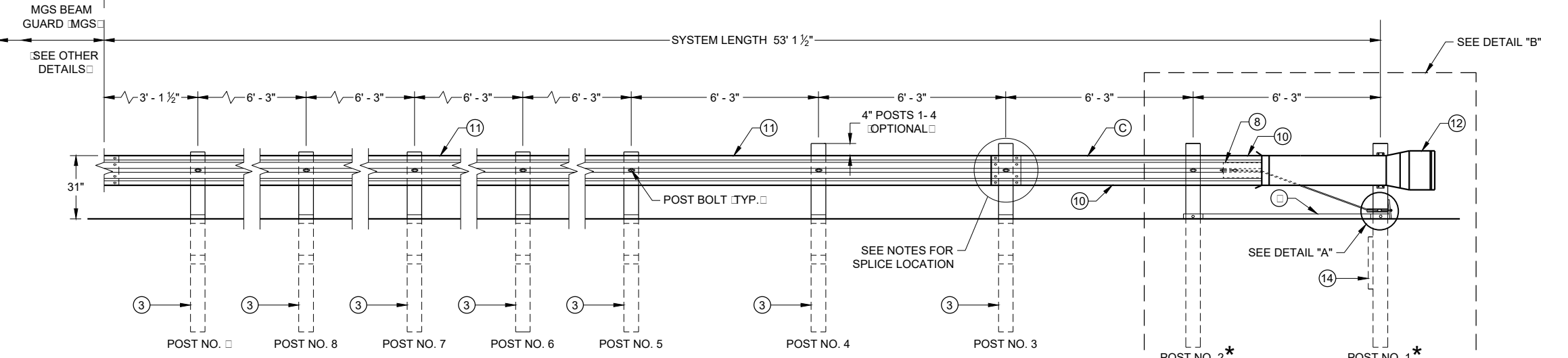
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 8 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 8 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

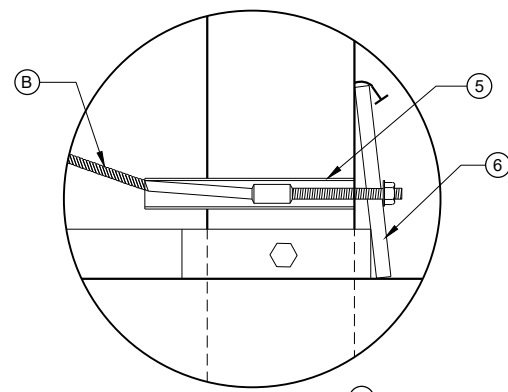
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



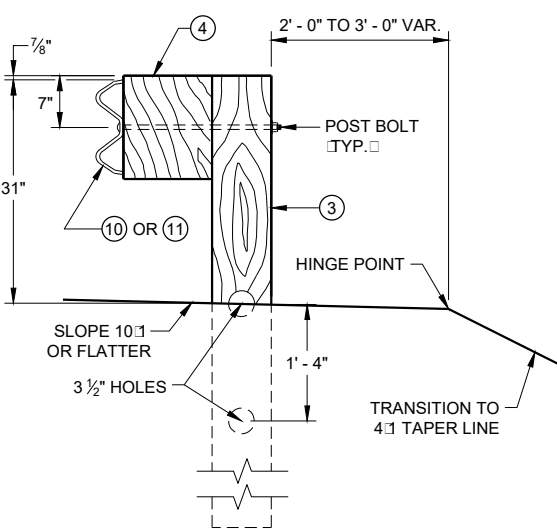
PLAN



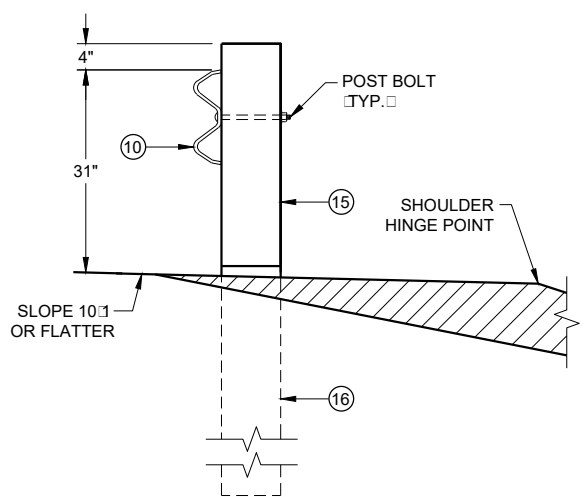
ELEVATION



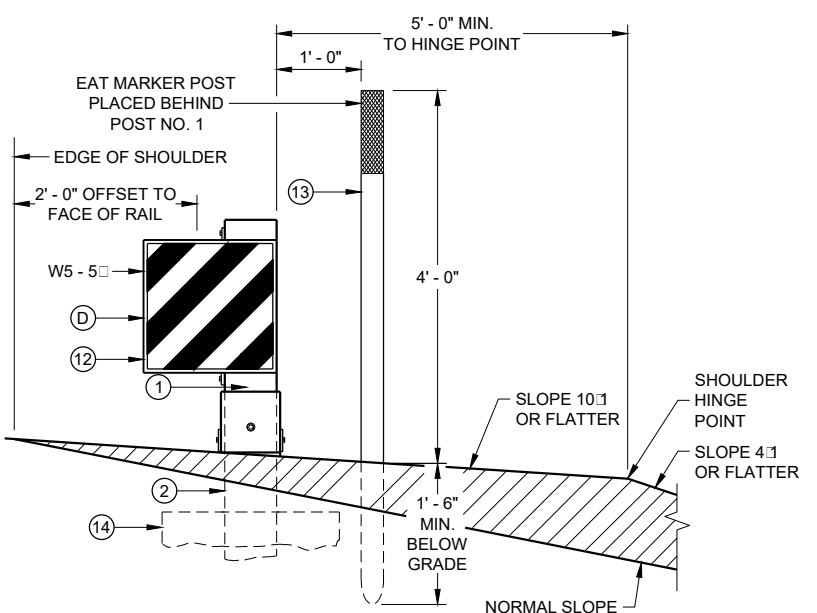
DETAIL "A"



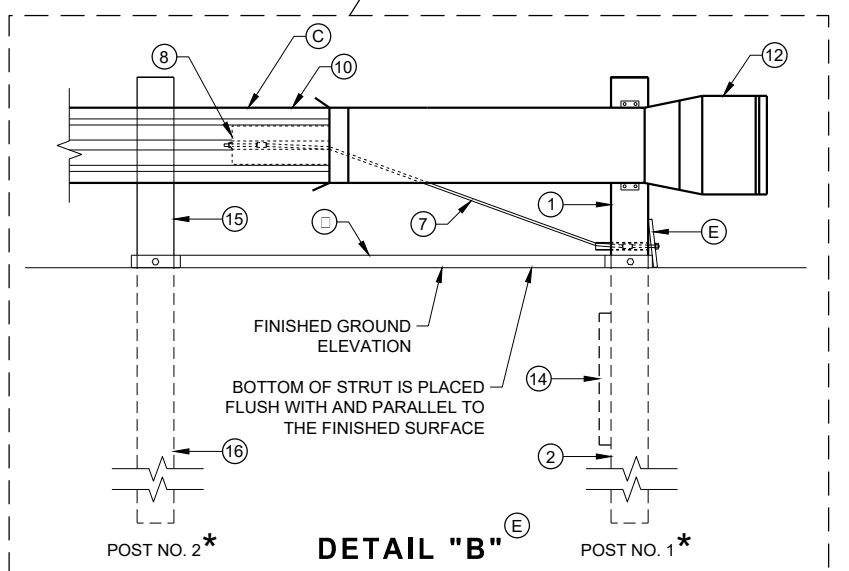
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

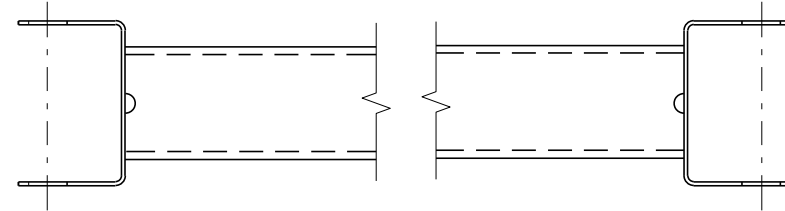
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SDD 14B44 - 04a

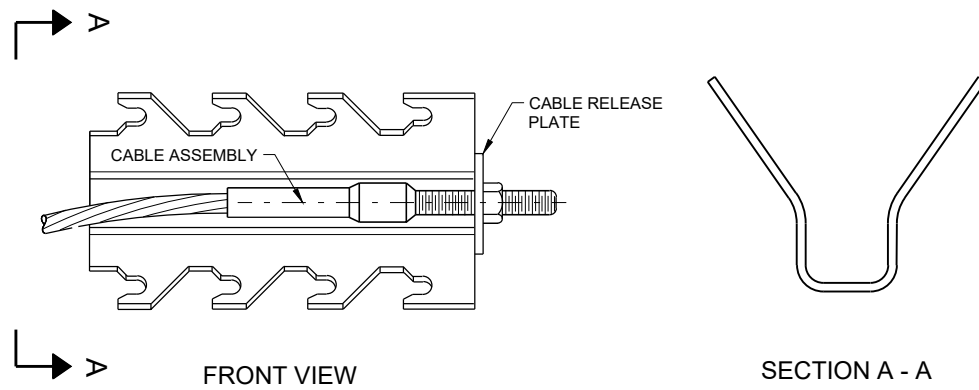
SDD 14B44 - 04a

BILL OF MATERIALS

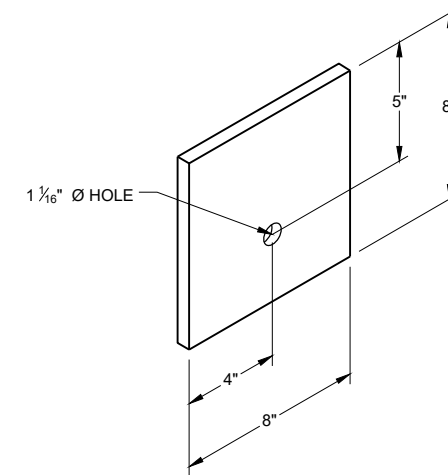
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
Ⓜ	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW [SEE APPROVED PRODUCTS LIST]
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



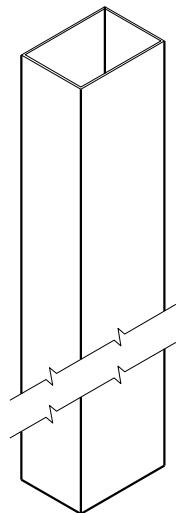
GENERIC GROUND STRUT Ⓜ Ⓜ



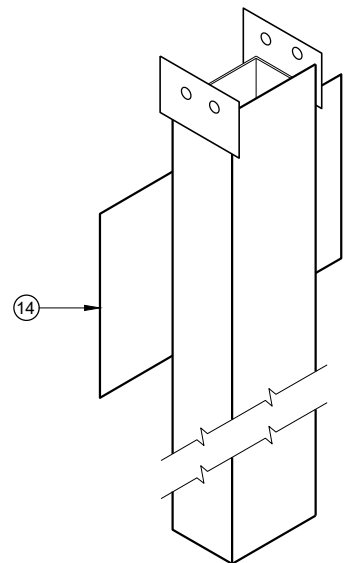
GENERIC ANCHOR CABLE BOX Ⓜ Ⓜ



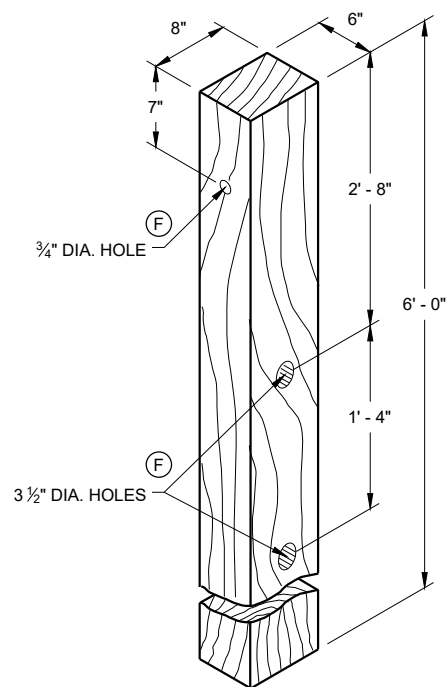
BEARING PLATE Ⓜ Ⓜ



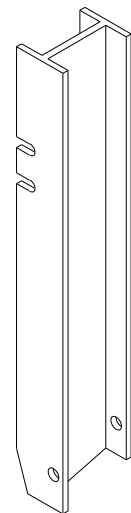
UPPER POST NO. 1 ⁽¹⁾ (E)



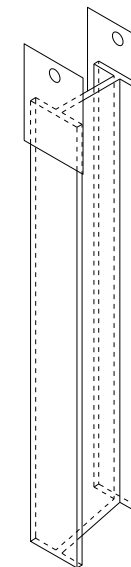
LOWER POST NO. 1 ⁽²⁾ (E)



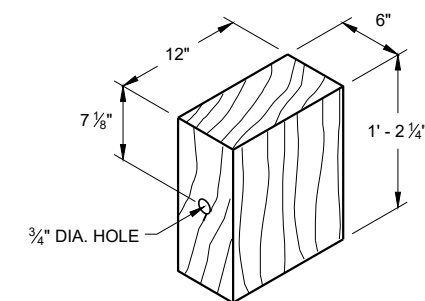
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-□



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

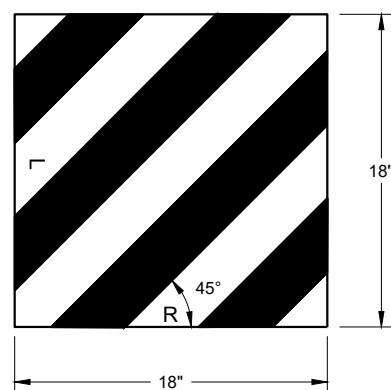


LOWER POST NO. 2 ⁽¹⁶⁾ (E)

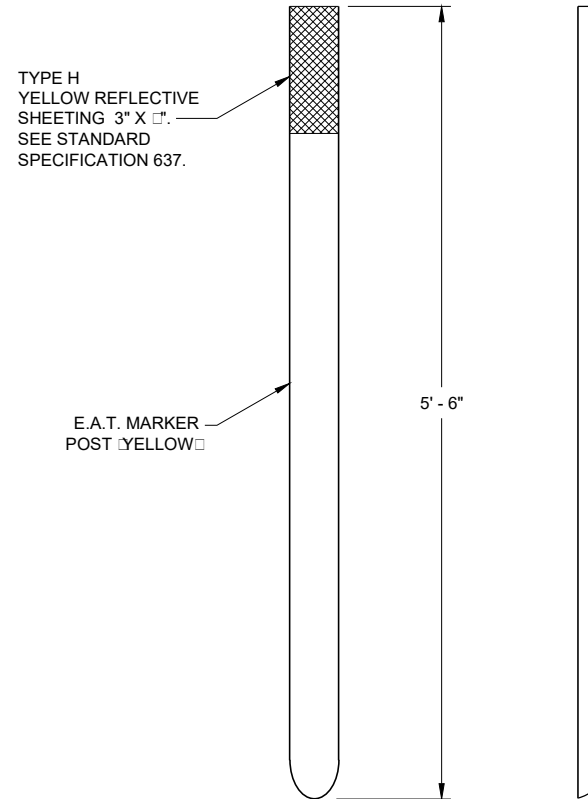


WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 □ 2

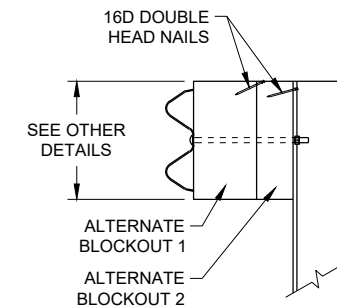
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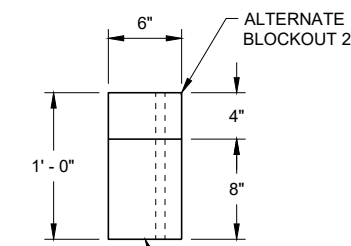
REFLECTIVE SHEETING DETAIL ^(E)
W5 - 5□



E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

6

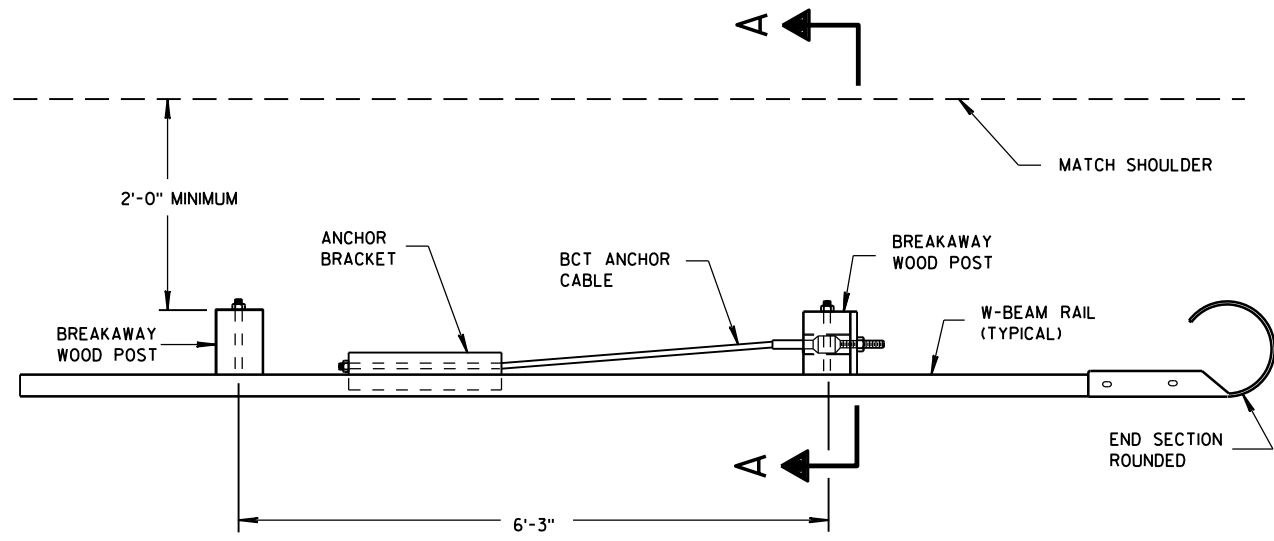
SDD 14B44 - 04c

SDD 14B44 - 04c

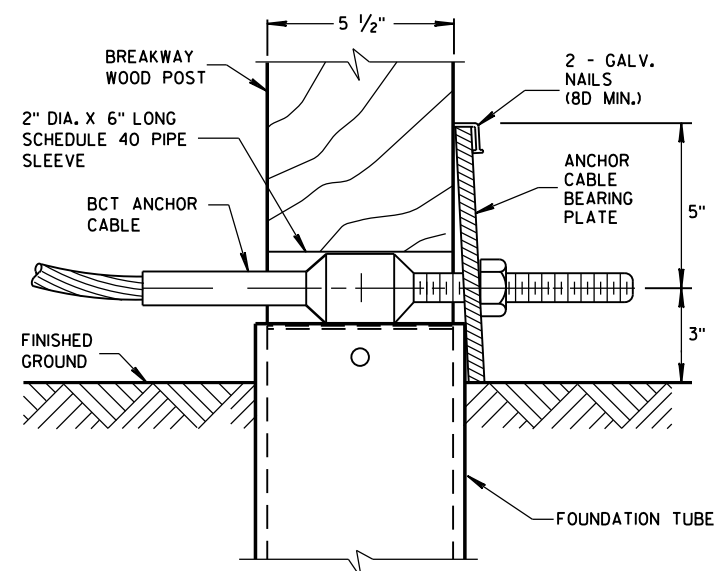
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ R. [Signature]
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



PLAN VIEW



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

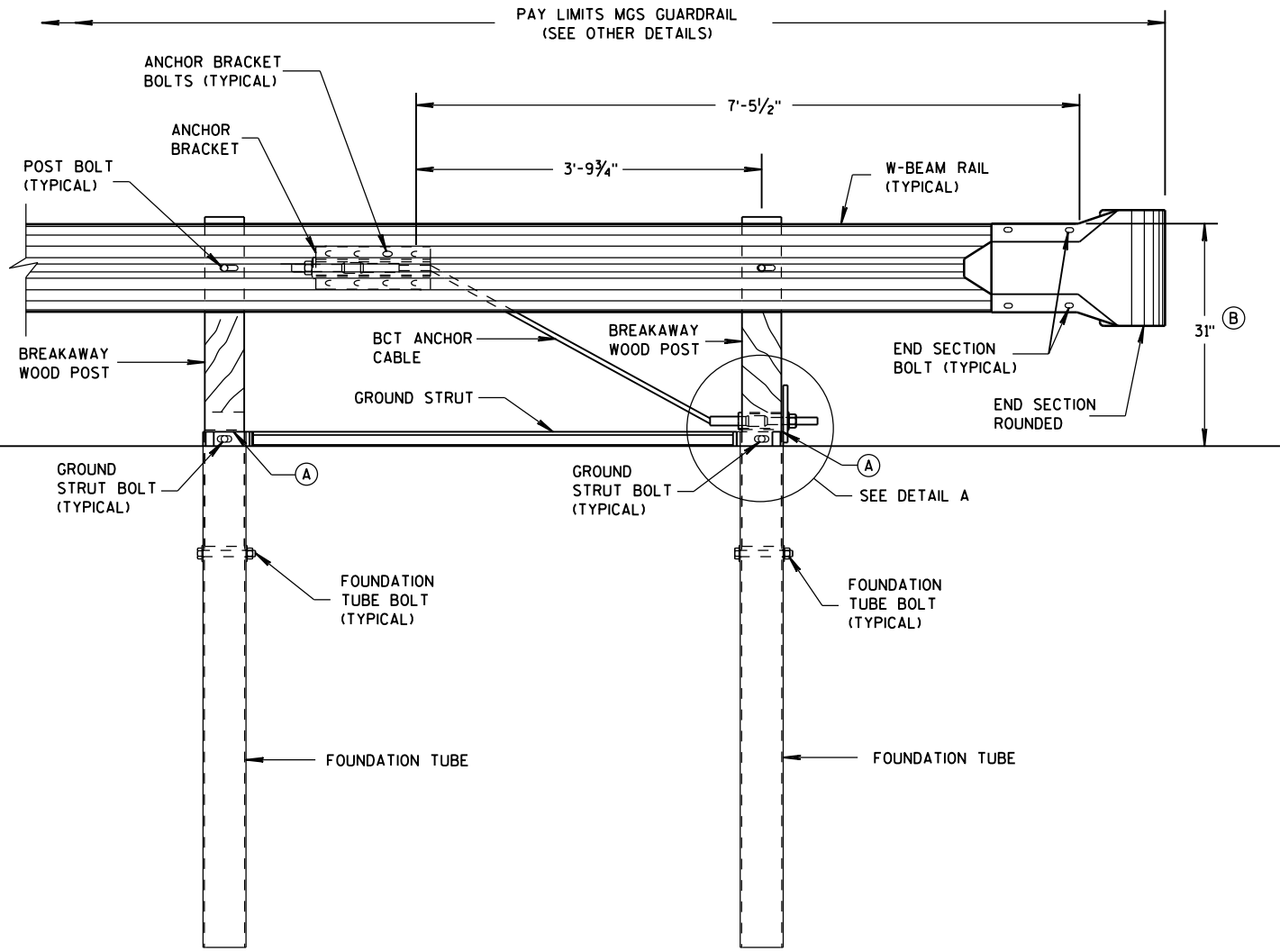
END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

FOUNDATION TUBE BOLTS ARE 7/8" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 7/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A 5/8" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 5/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

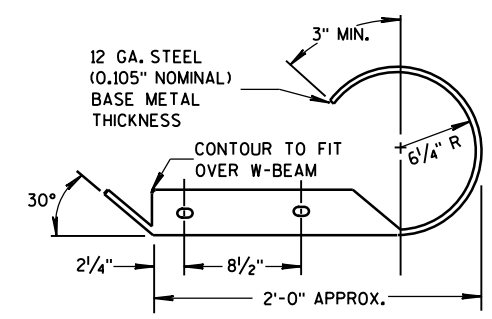
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1". FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27 3/4" TO 32" ± 1".

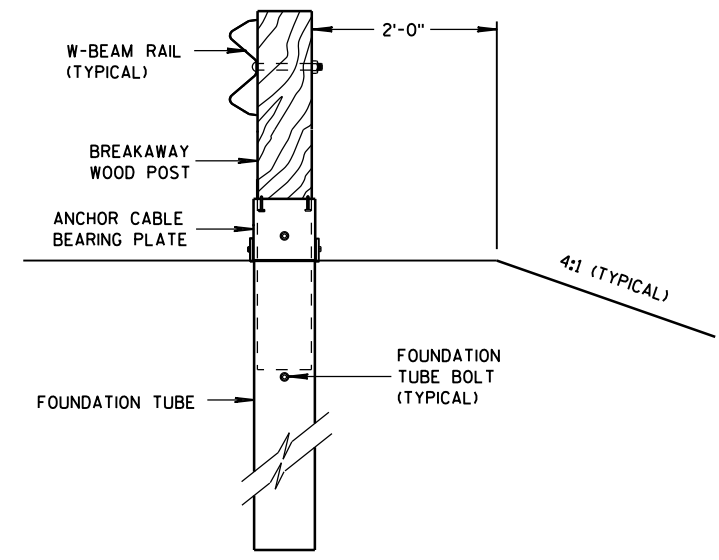


FRONT VIEW

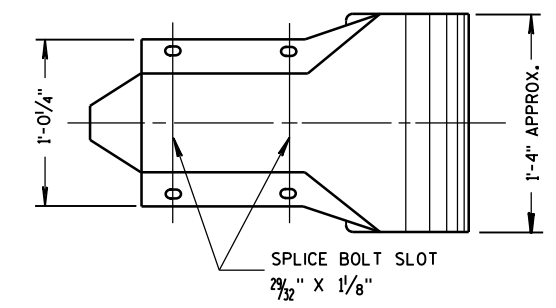
END RAIL DETAIL



PLAN VIEW



SECTION A-A



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

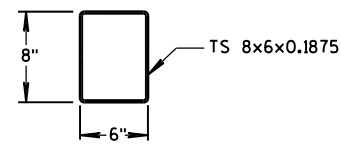
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

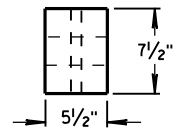
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S.D.D. 14 B 47-2a

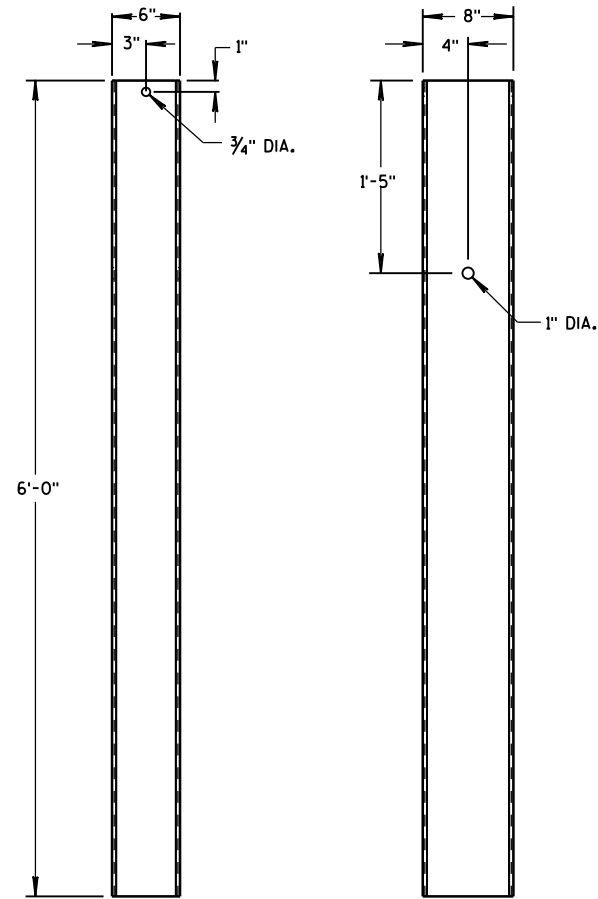
S.D.D. 14 B 47-2a



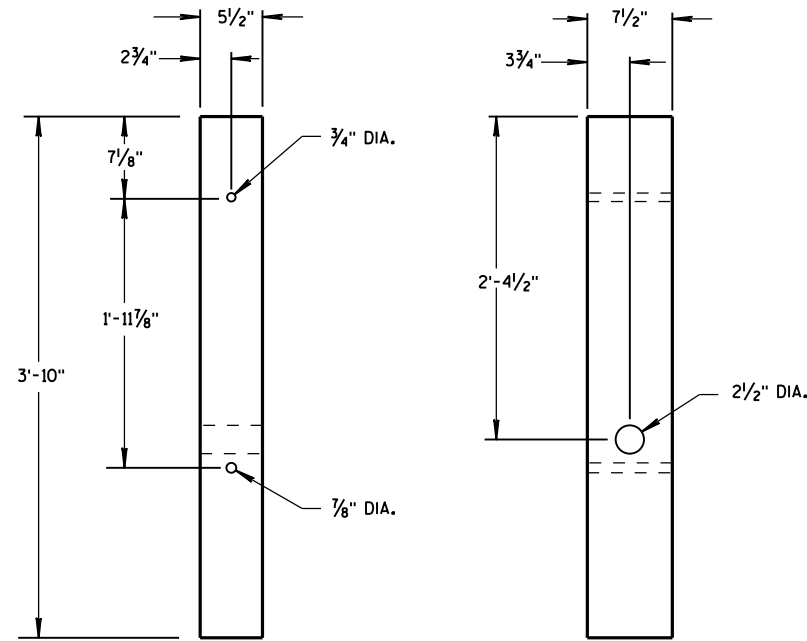
PLAN VIEW



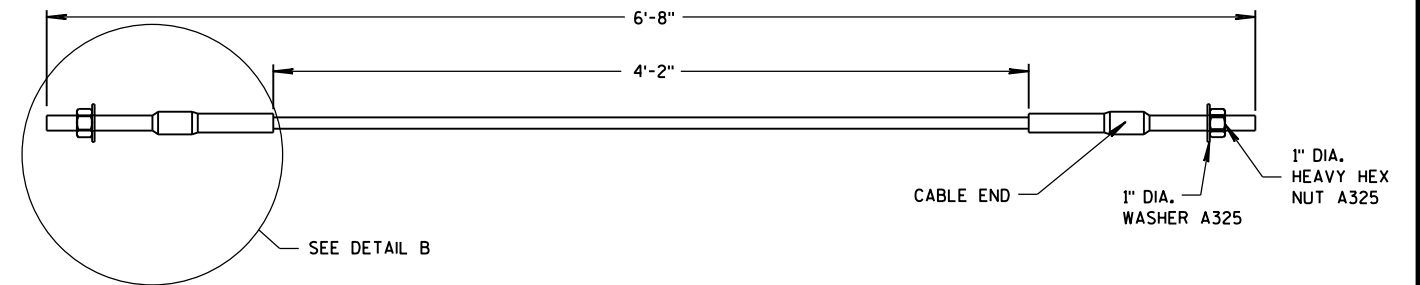
PLAN VIEW



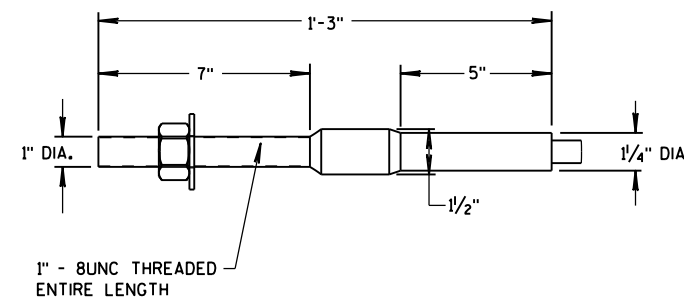
FRONT VIEW SIDE VIEW
FOUNDATION TUBE



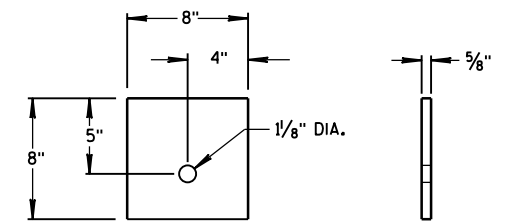
FRONT VIEW SIDE VIEW
BREAKAWAY WOOD POST



BCT ANCHOR CABLE



DETAIL B

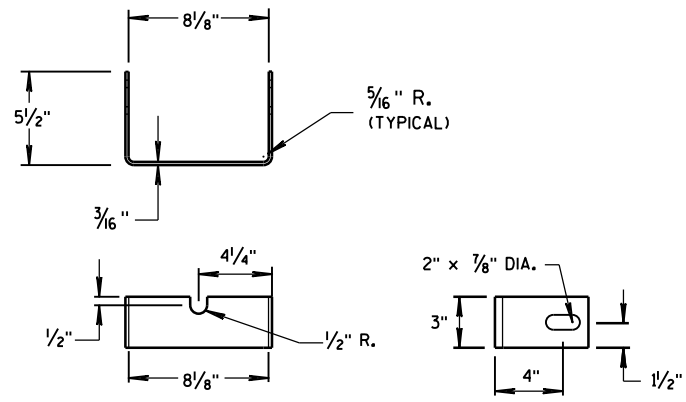


SIDE VIEW FRONT VIEW
ANCHOR CABLE BEARING PLATE

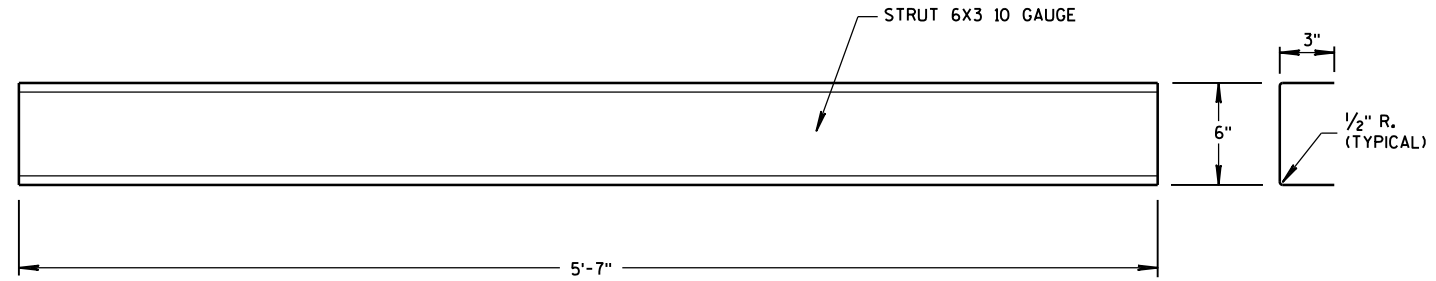
GENERAL NOTES

BCT ANCHOR CABLE IS A 3/4" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

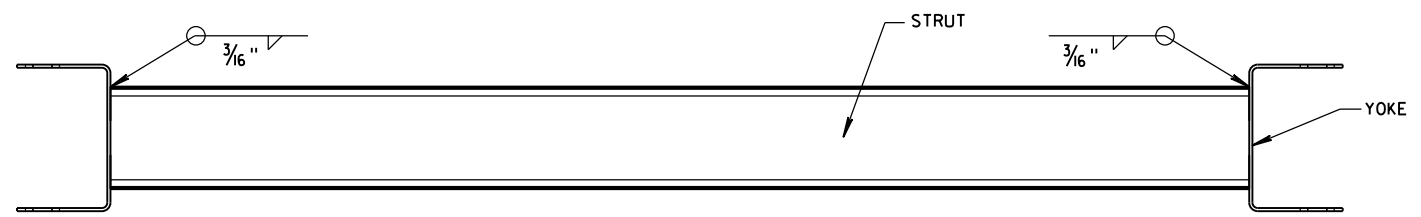
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



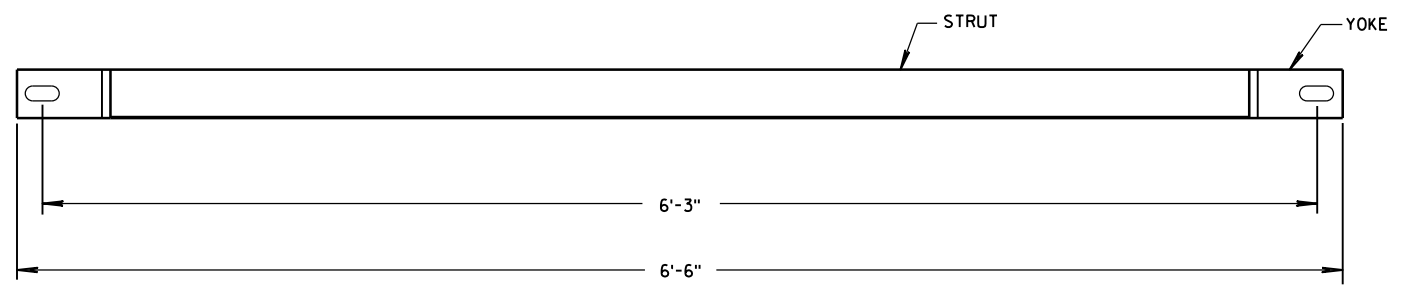
YOKE DETAIL



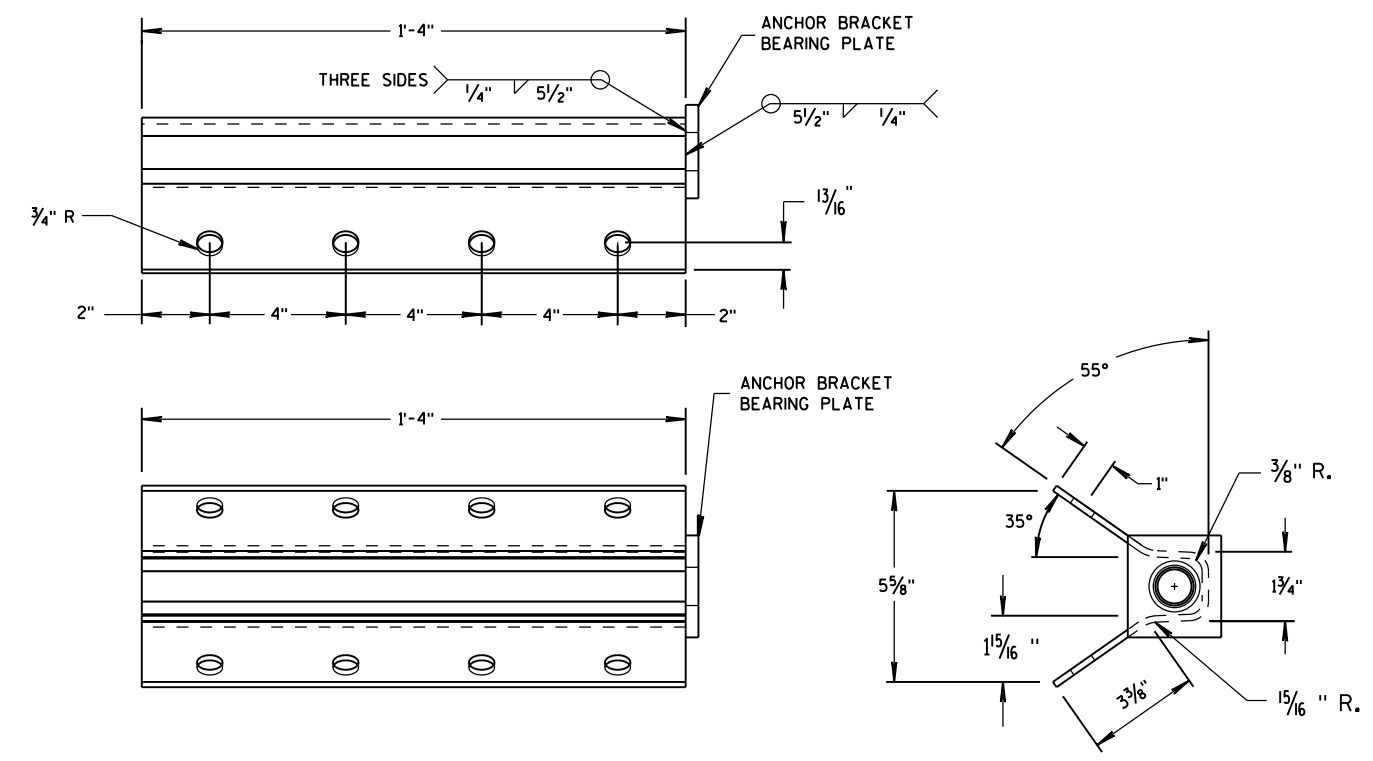
STRUT DETAIL



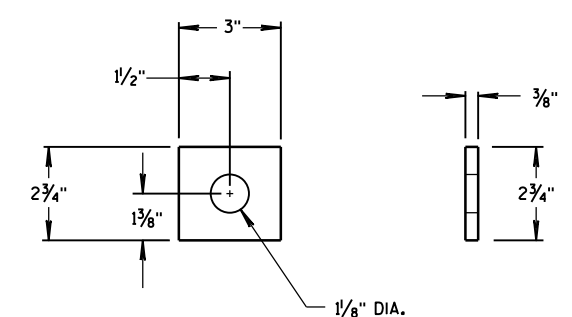
PLAN VIEW



**FRONT VIEW
GROUND STRUT DETAIL**



ANCHOR BRACKET



**ANCHOR BRACKET
BEARING PLATE**

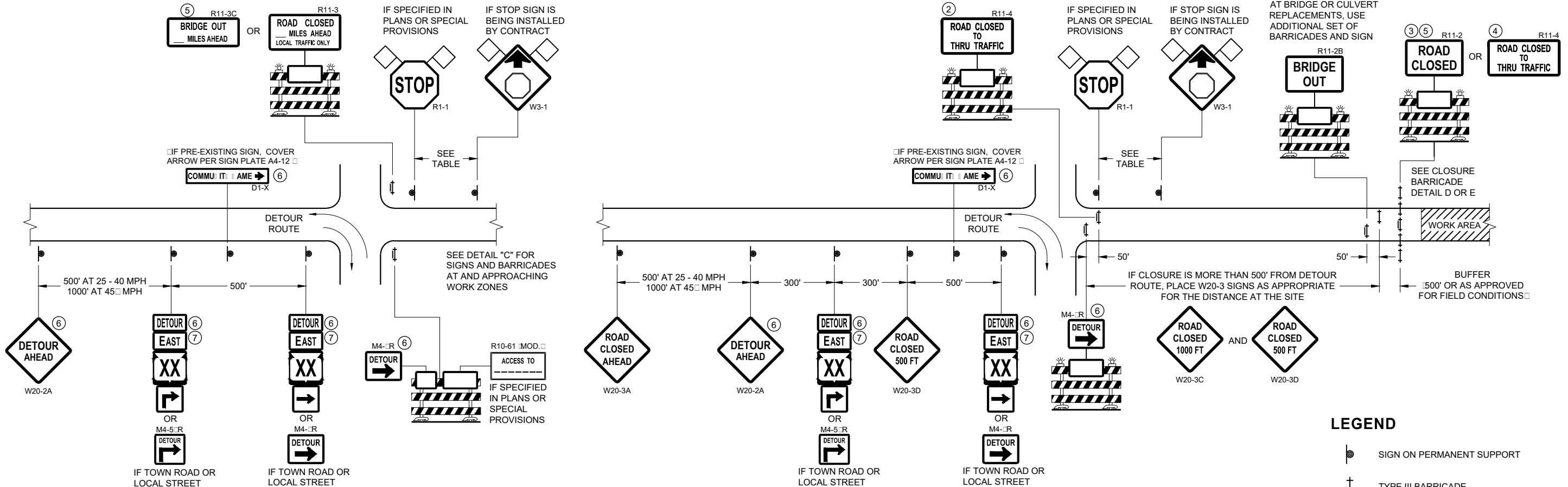
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6

S.D.D. 14 B 47-2c

S.D.D. 14 B 47-2c

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



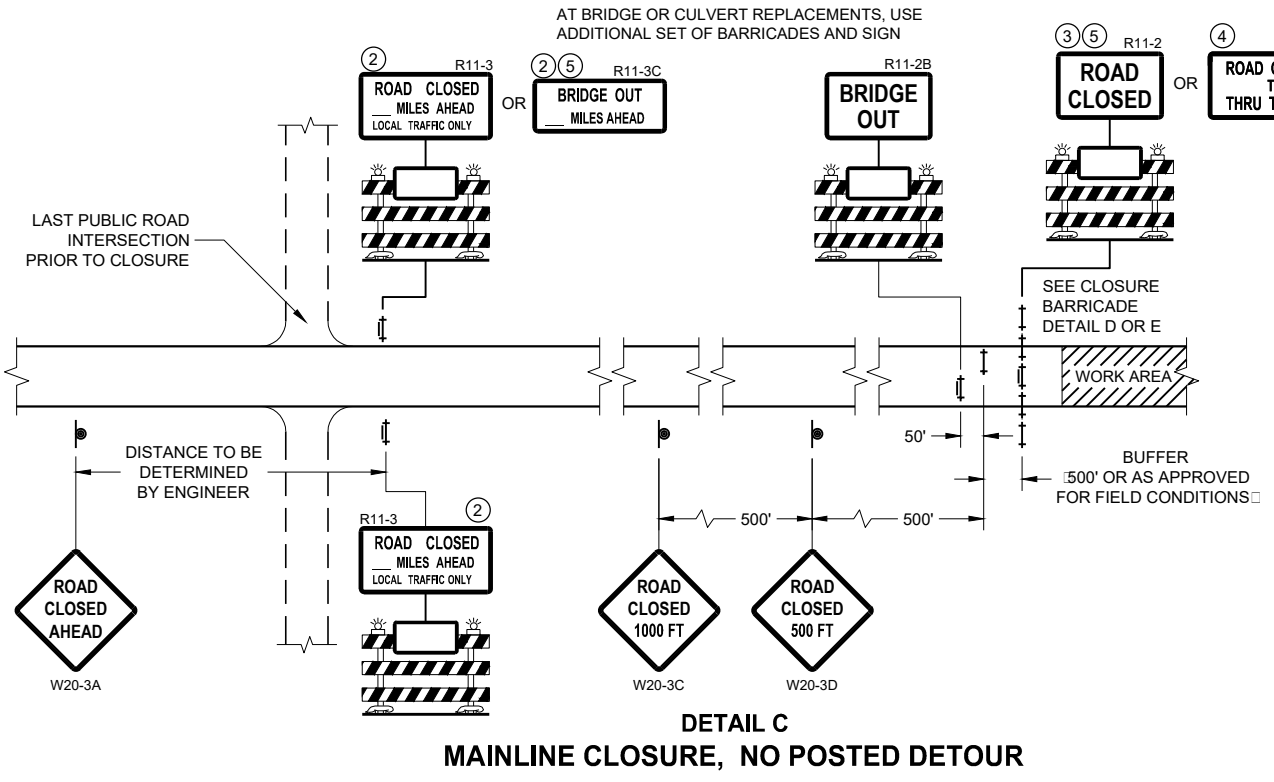
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
 DETOUR ROUTE 1000 FEET IF URBAN

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
 WORK ZONE LESS THAN 1/2 MILE FROM
 DETOUR ROUTE 1000 FEET IF URBAN

- LEGEND**
- SIGN ON PERMANENT SUPPORT
 - TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TYPE "A" WARNING LIGHT (FLASHING)
 - WORK AREA
 - FLAGS, 16" X 16" MIN. (ORANGE)

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

- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

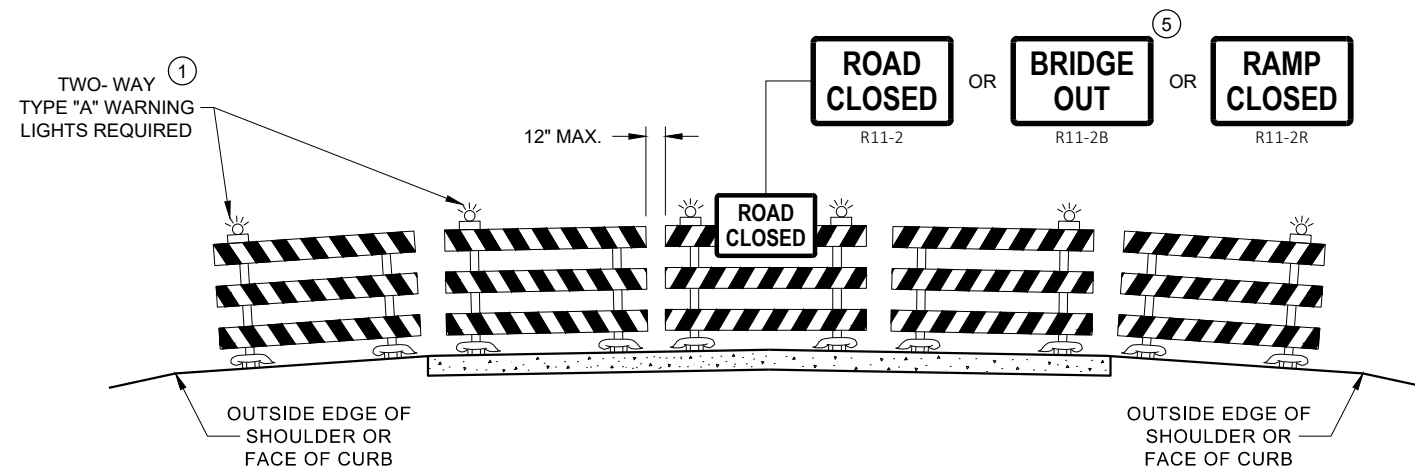
SEE SDD 15C2-SHEET "C"
 FOR GENERAL NOTES
 AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
 FOR MAINLINE CLOSURES**

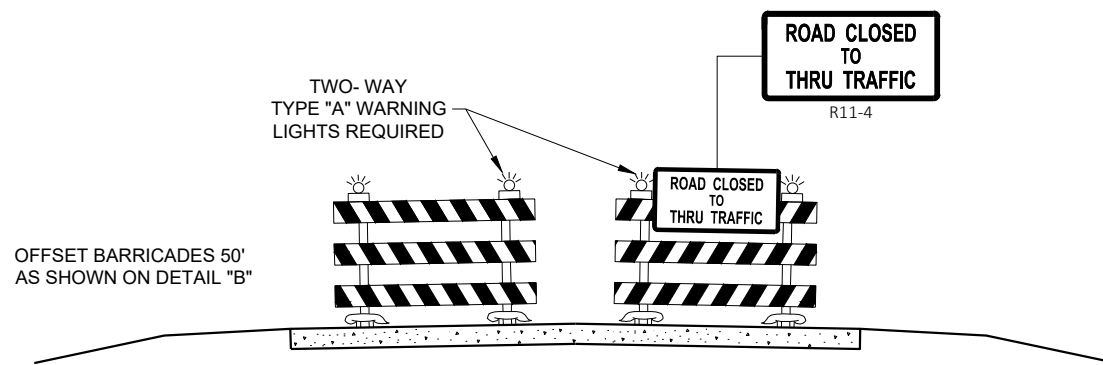
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 DATE /S/ Andrew Heidtke
 WORK ZONE ENGINEER

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 - □, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW □

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - □ SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" □36" X 18" IF NEEDED TO MATCH EXISTING SIGNS □
- M4 - 8 SHALL BE 24" X 12" □36" X 18" IF NEEDED TO MATCH EXISTING SIGNS □
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" □36" X 36" IF NEEDED TO MATCH EXISTING SIGNS □
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" □30" X 30" IF NEEDED TO MATCH EXISTING SIGNS □
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN APPROX. 8 FOOT LIGHT SPACING.
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE November 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

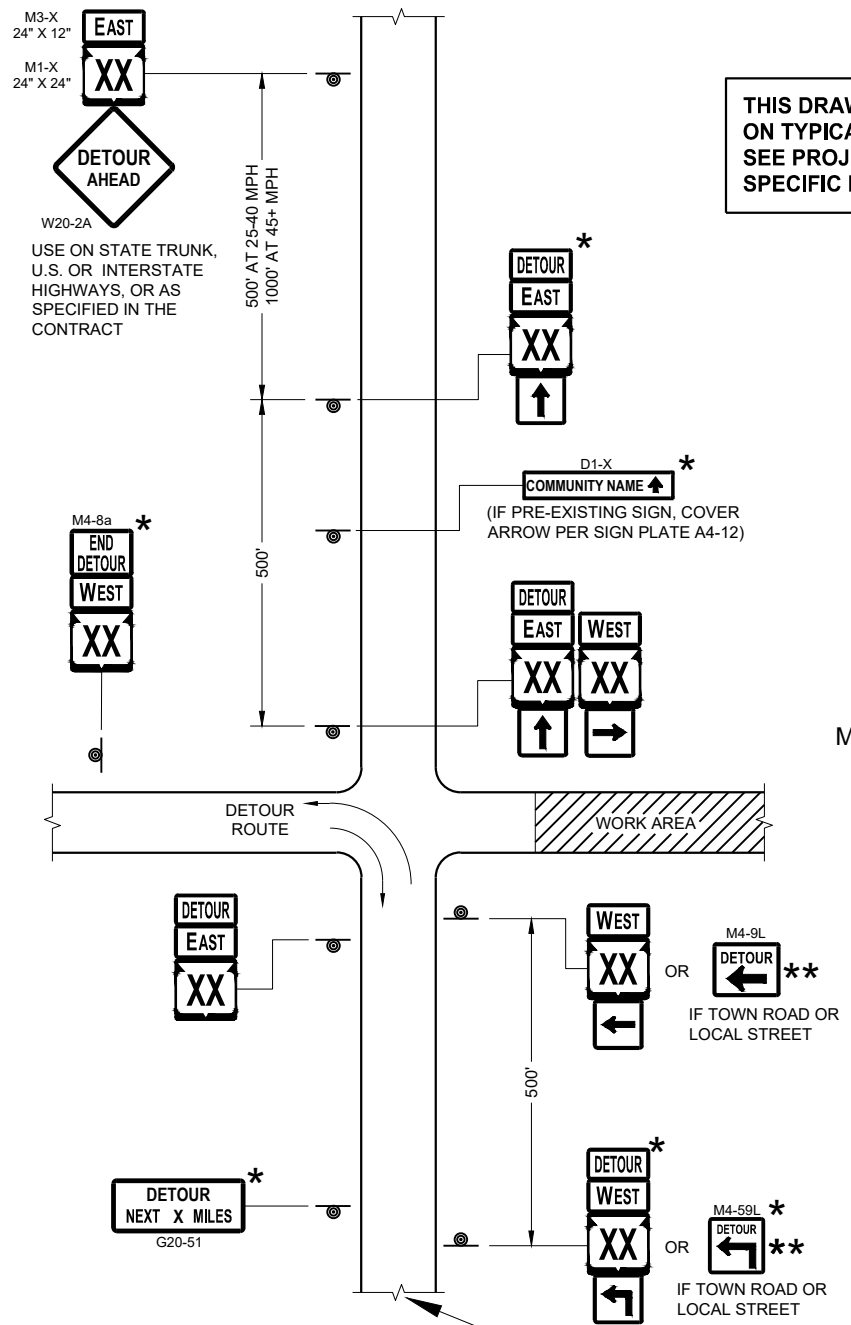
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

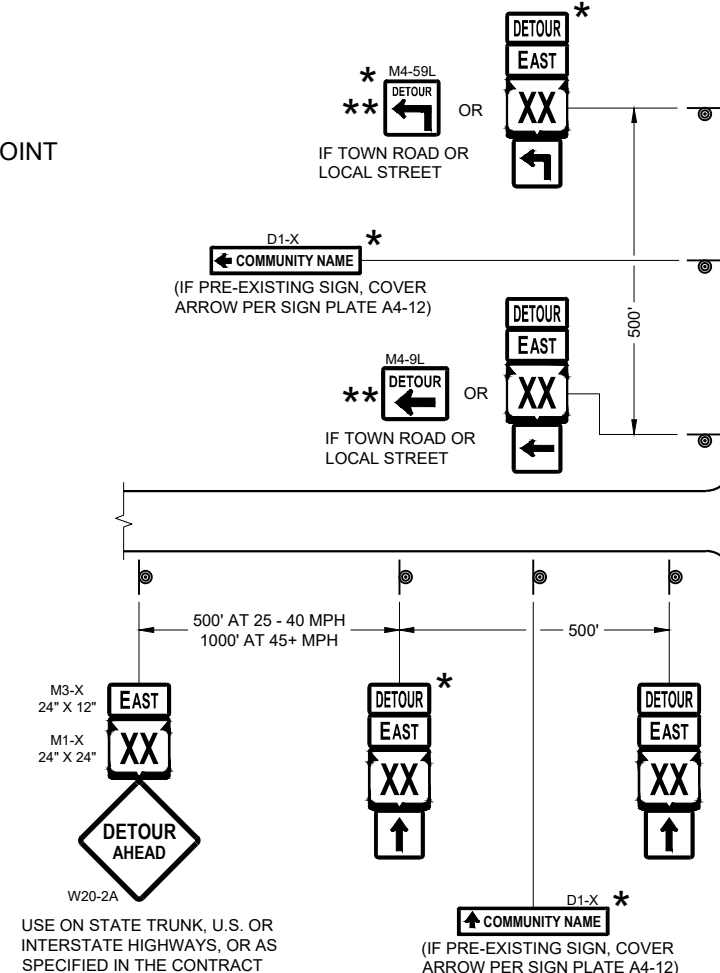
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

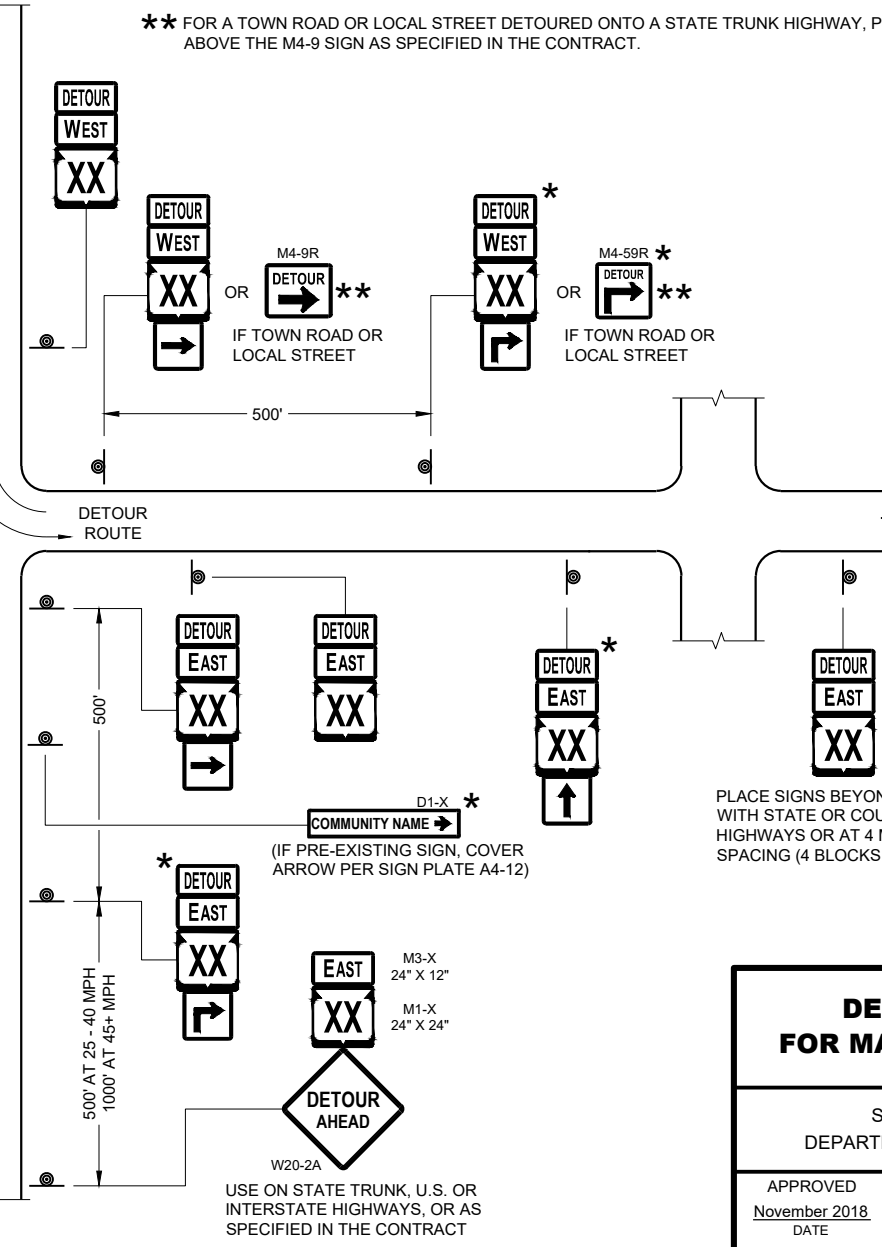
THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



MATCH POINT



DETAIL F
DETOUR SIGNING



DETOUR SIGNING FOR MAINLINE CLOSURES

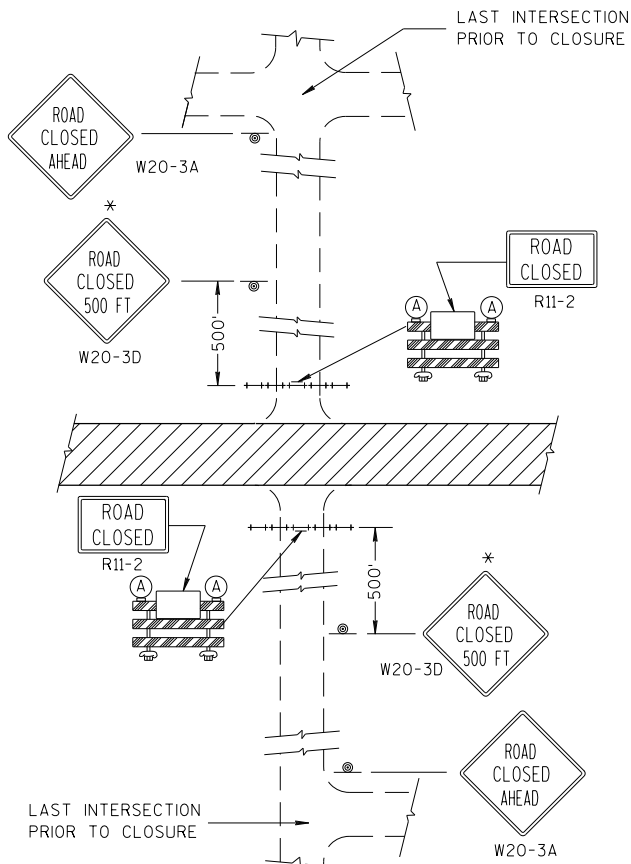
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2018 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER

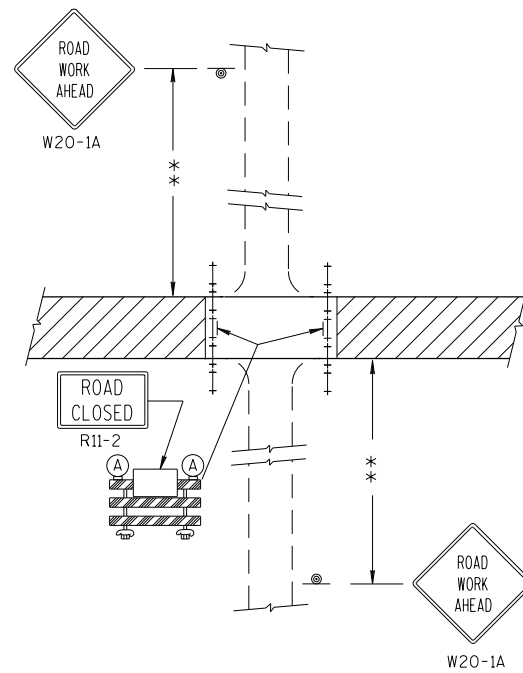
FHWA

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

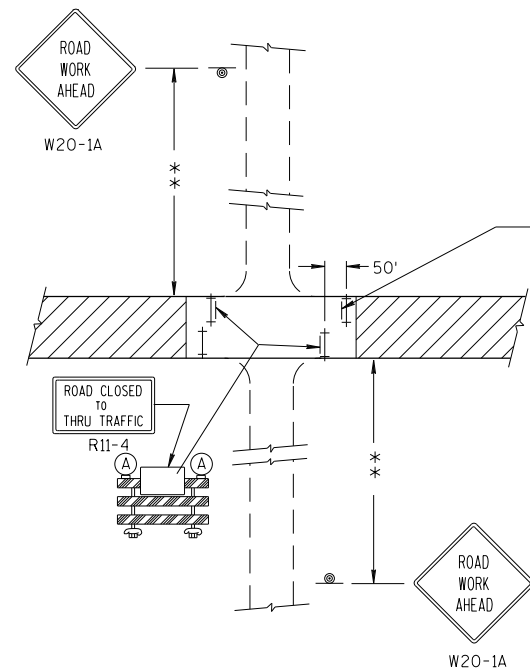
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)



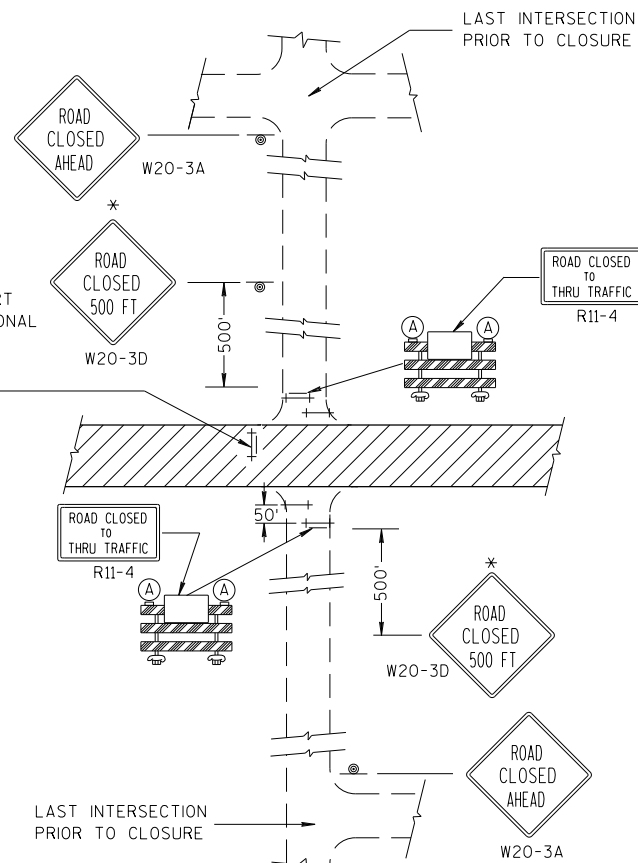
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED,
NO ACCESS TO PROJECT).



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



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.

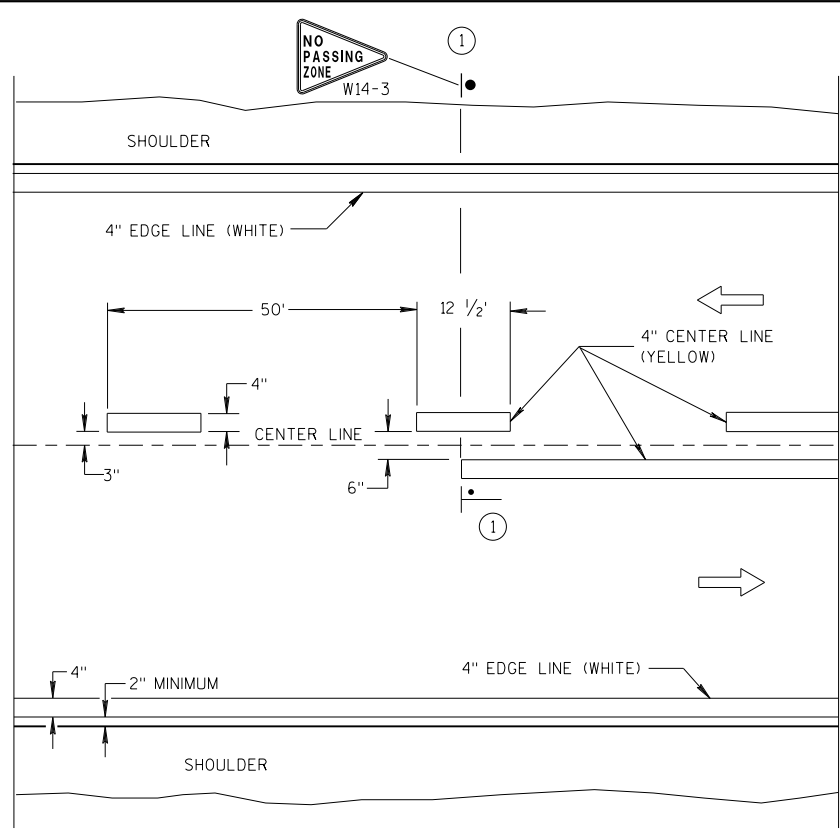
LEGEND

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

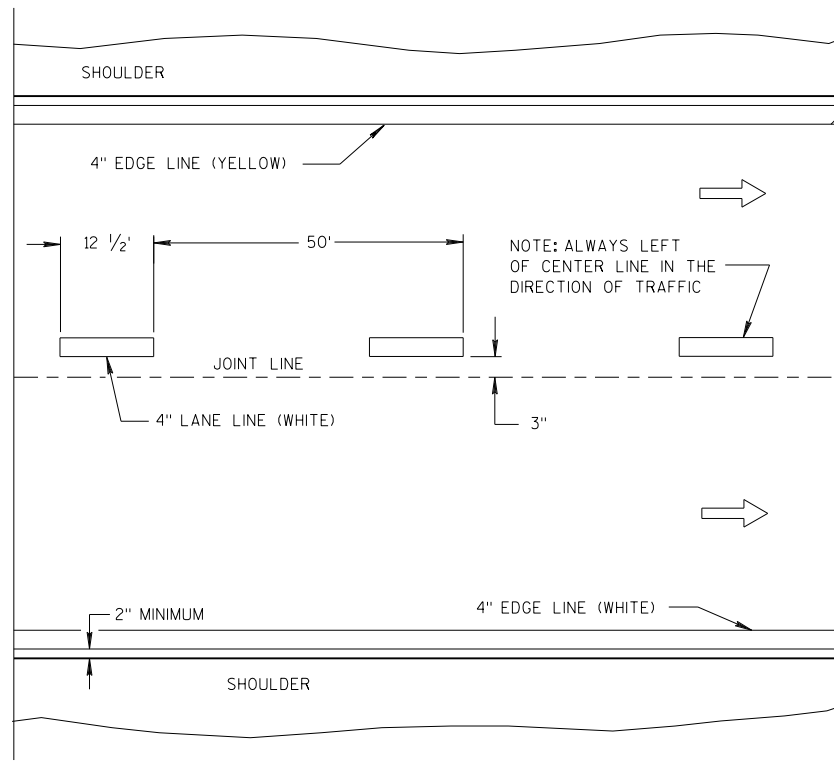
**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

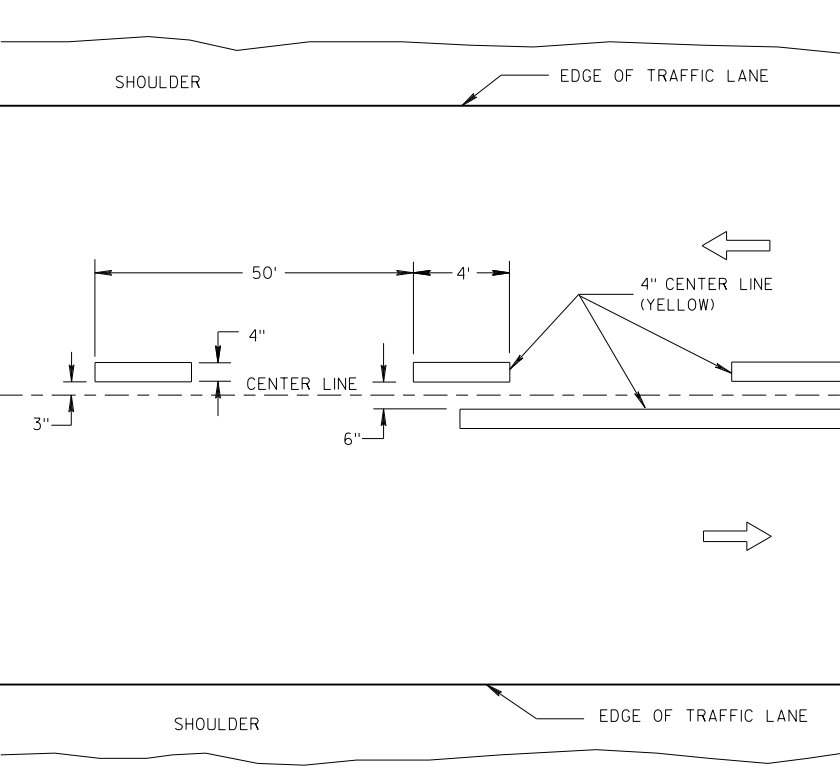


TWO WAY TRAFFIC

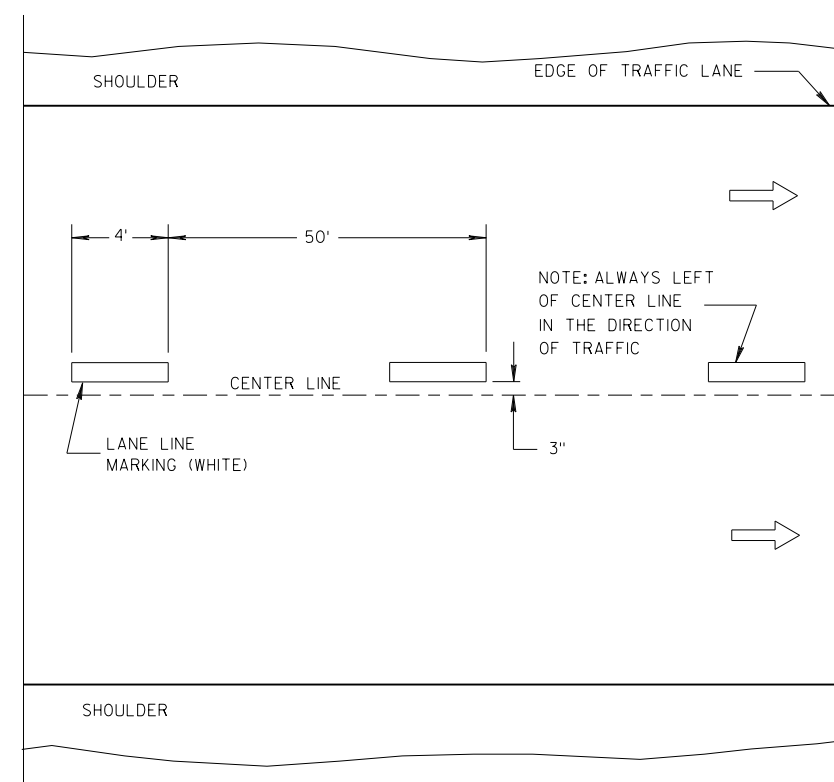


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

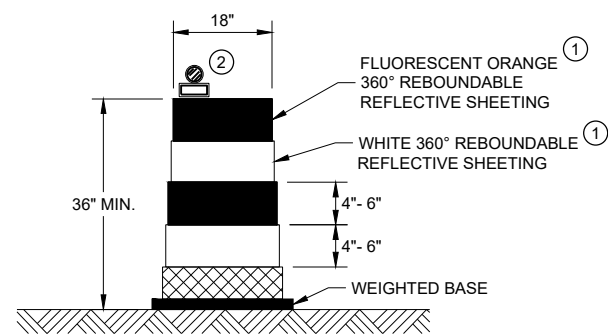
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

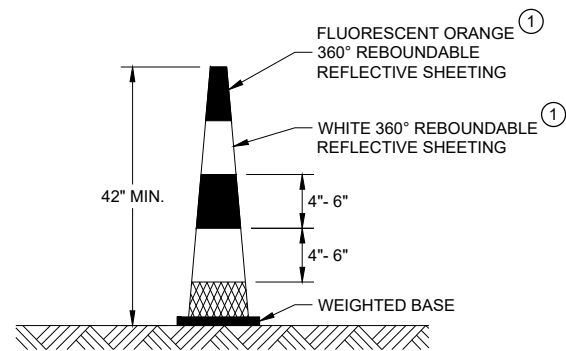
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018 /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA

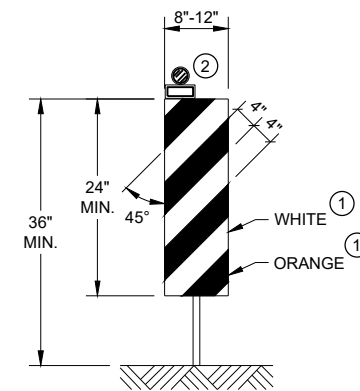


DRUM



42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

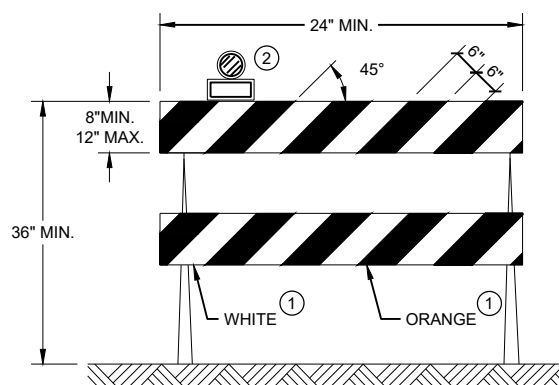


VERTICAL PANEL

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

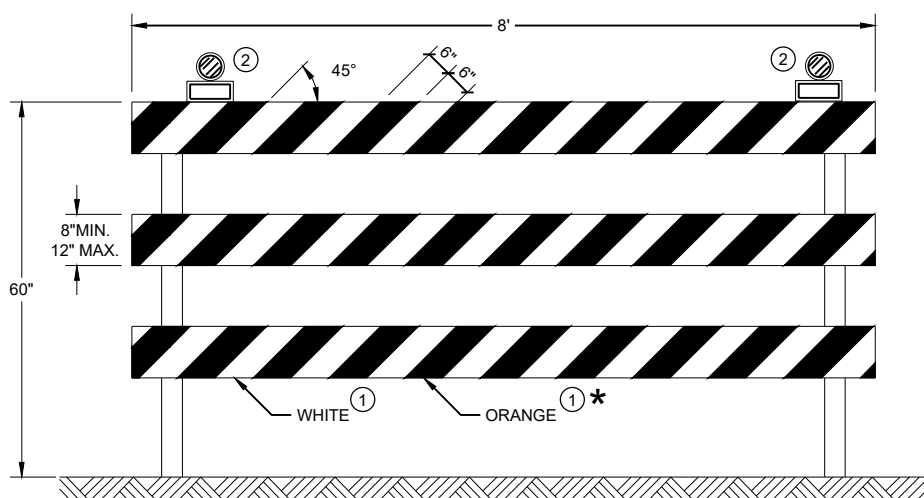
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

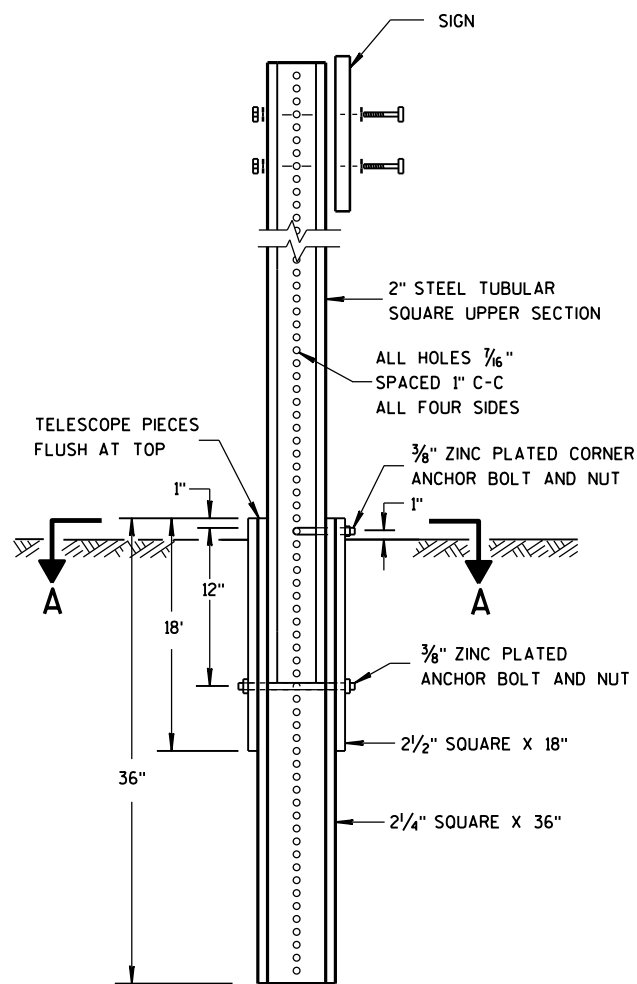
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



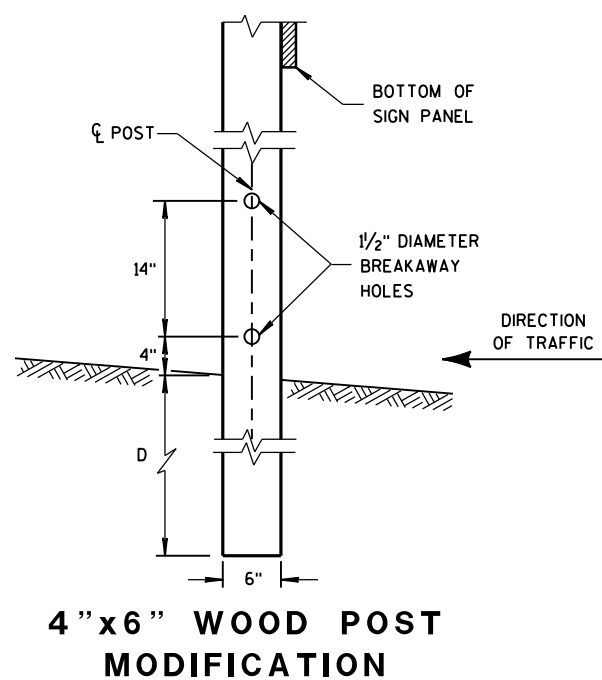
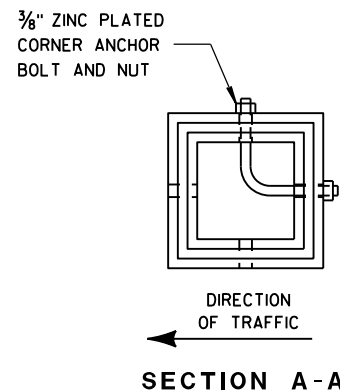
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

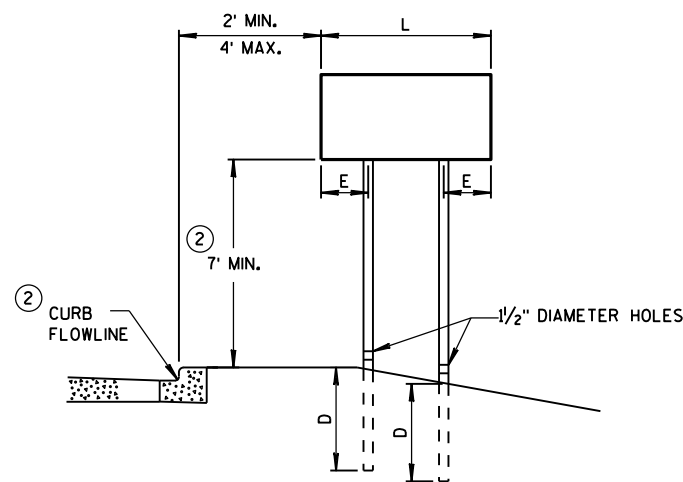
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

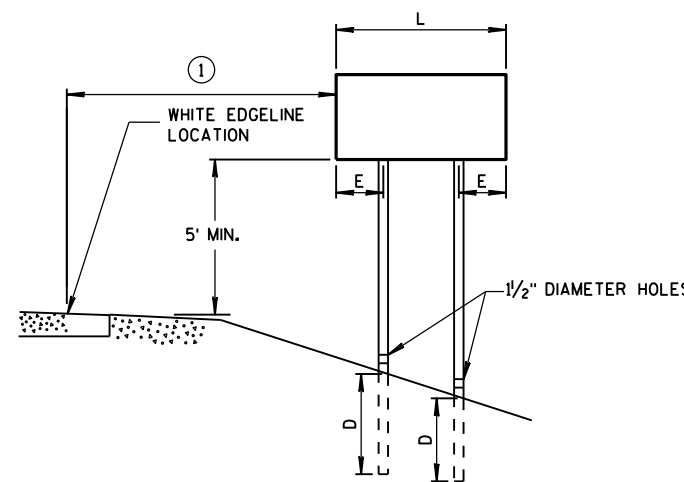


URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



RURAL AREA

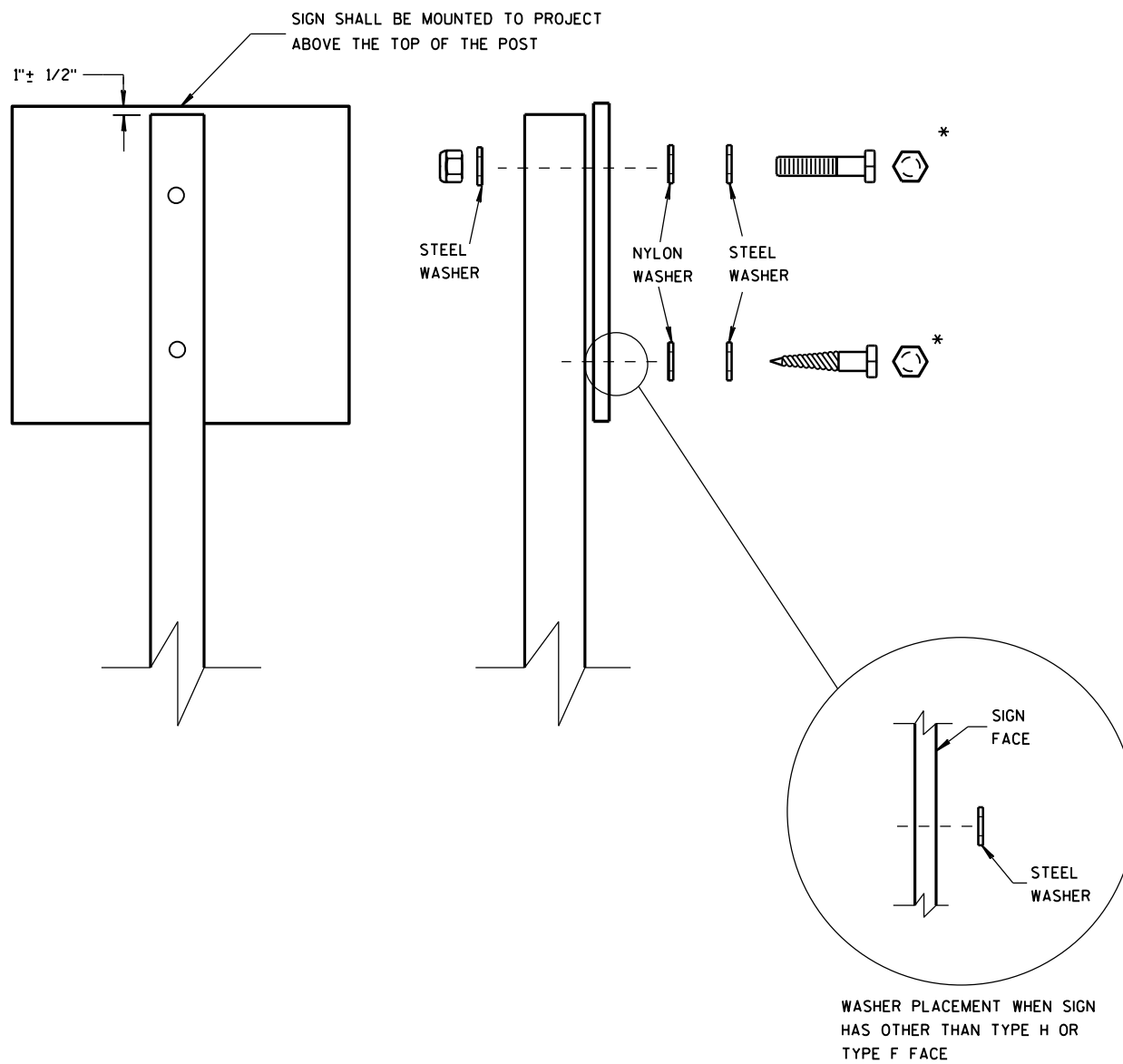
4\"/>

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48\"/>		

SEE NOTE ③

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" x 3"

MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS

RIVETS - 5/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL

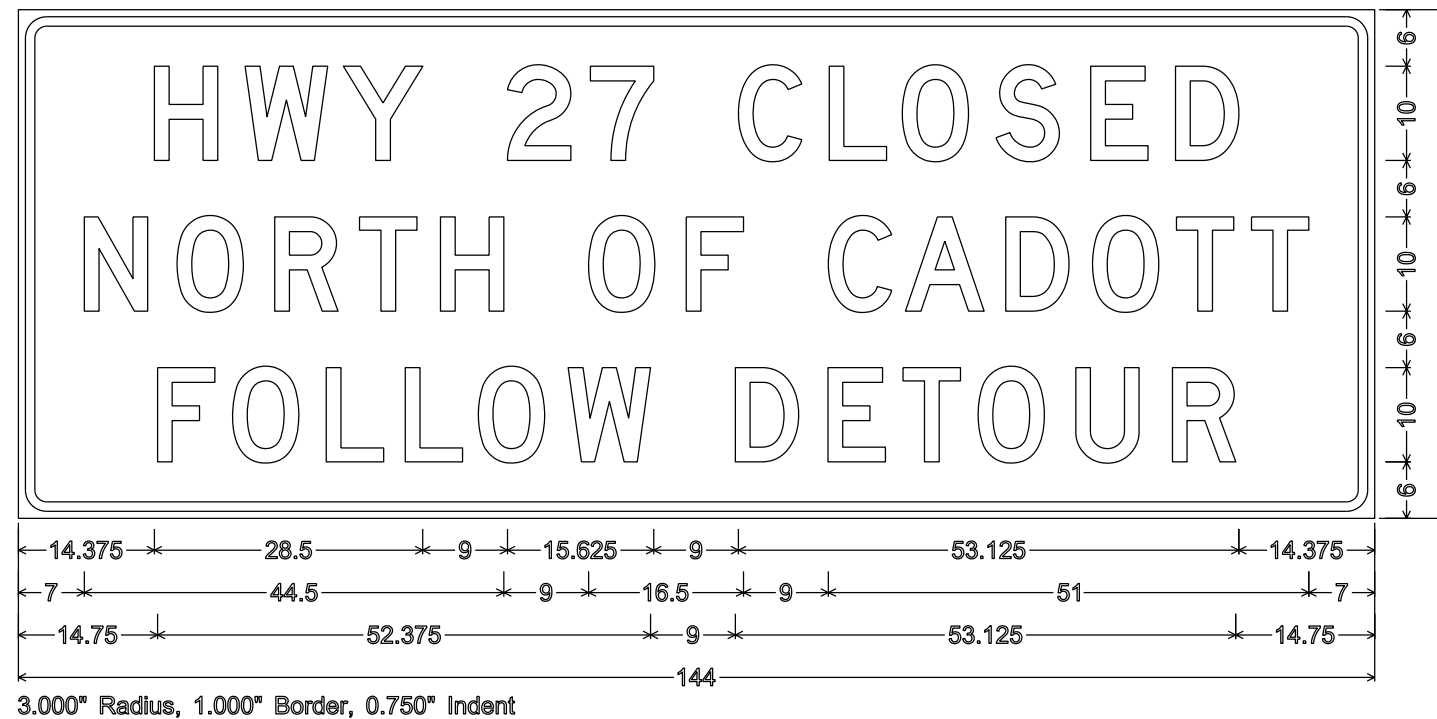
1-1/4" O.D. x 3/8" I.D. x .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/s/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

NOTES

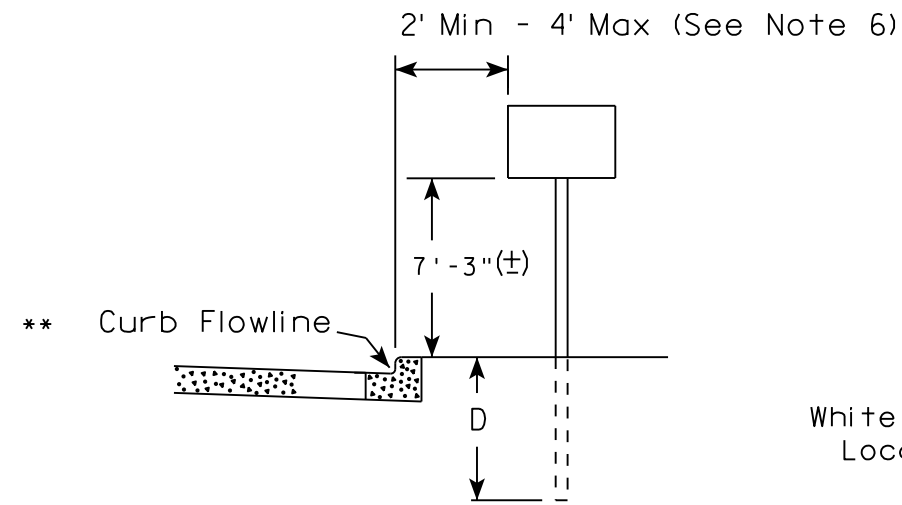
1. All Signs Type II - Type F Reflective
2. Color:
 Background - Orange
 Message - Black
3. Message Series - D



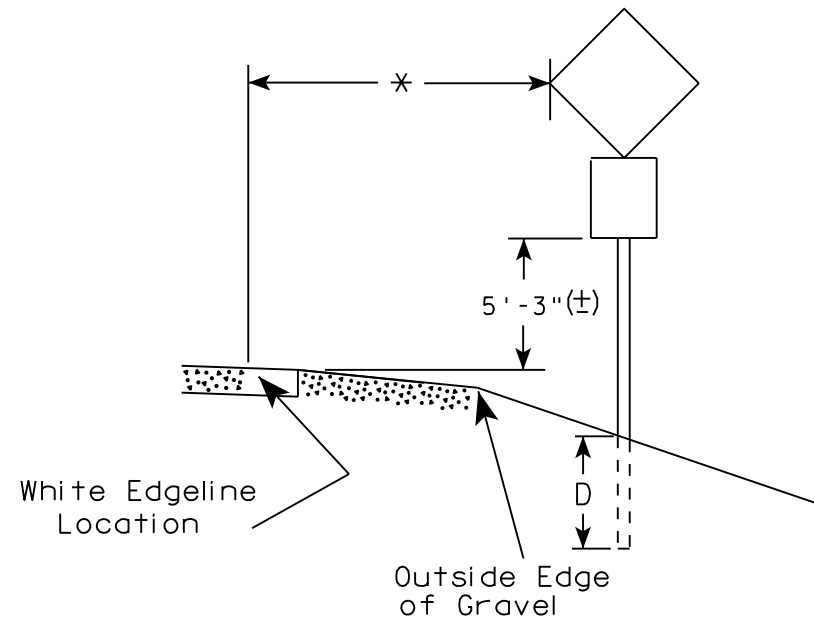
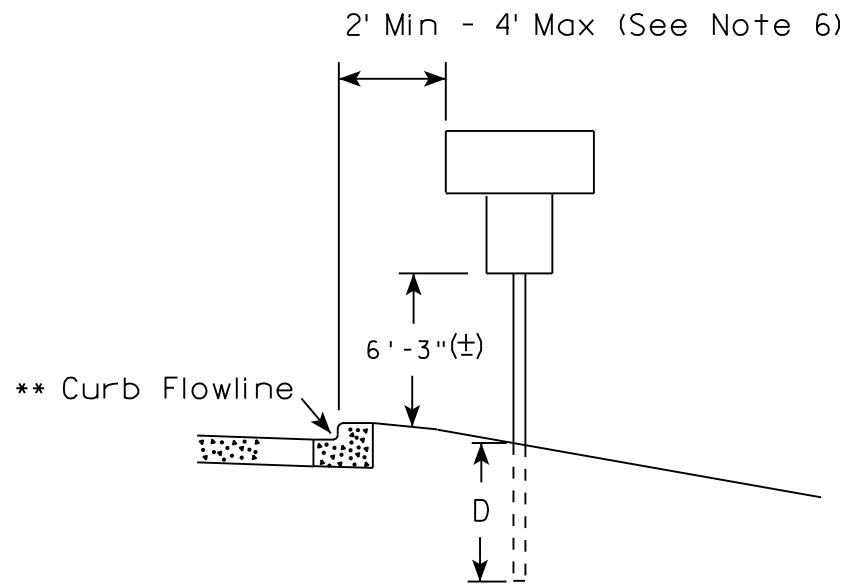
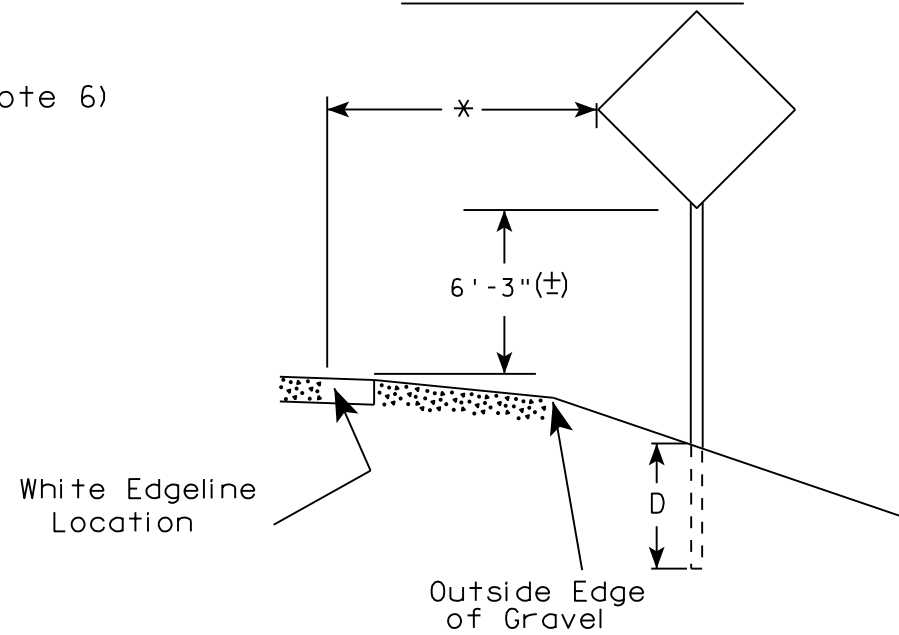
7

7

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

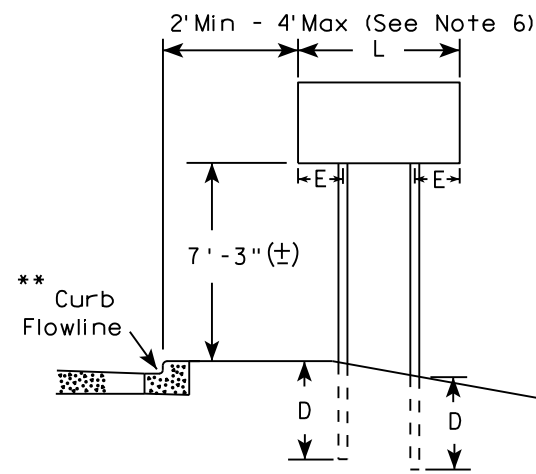
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

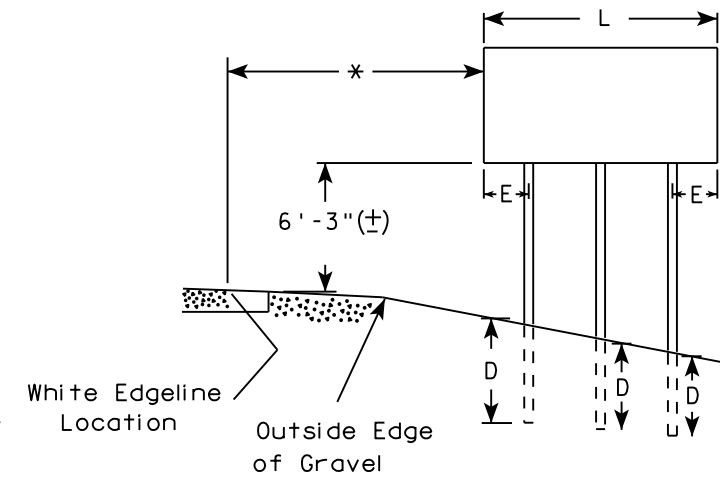
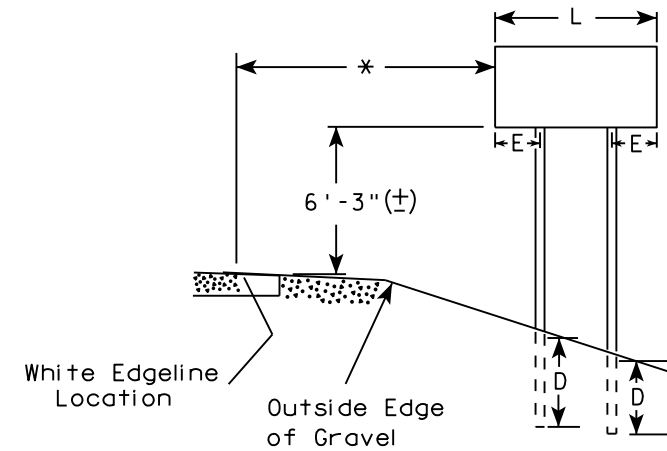
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

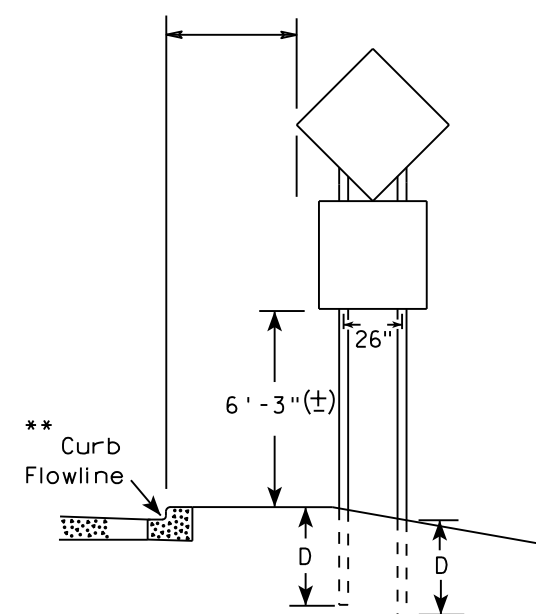
URBAN AREA



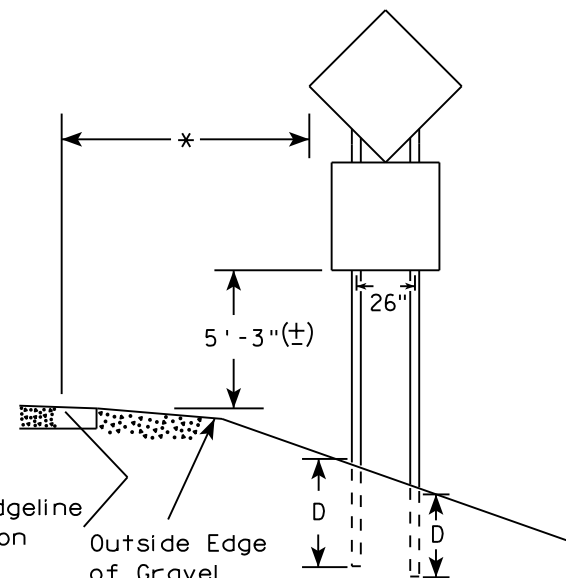
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

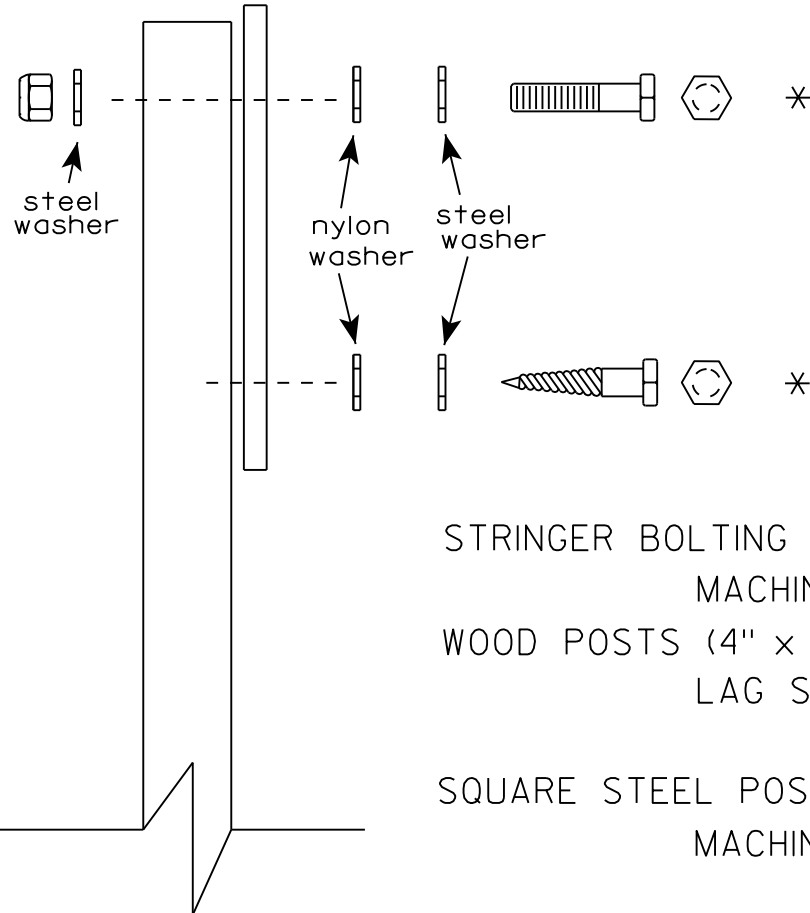
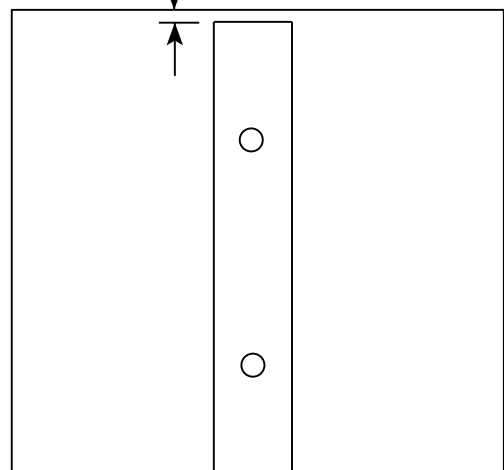
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15

1"± 1/2"

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

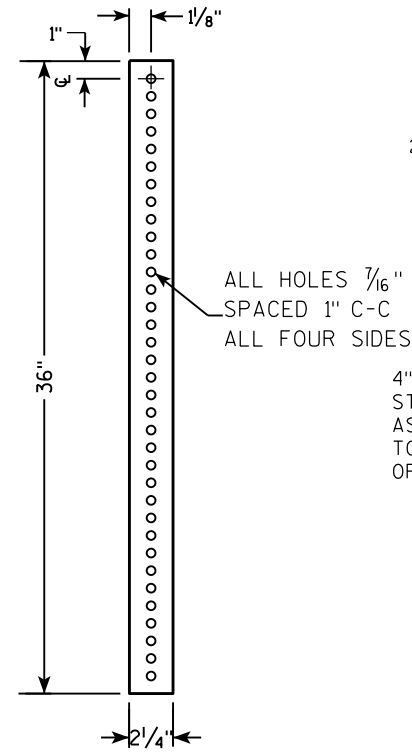
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

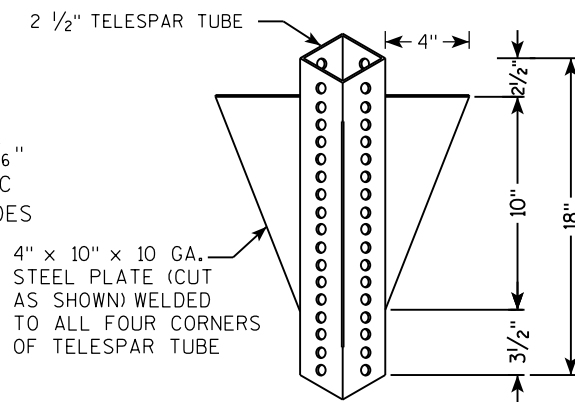
7

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

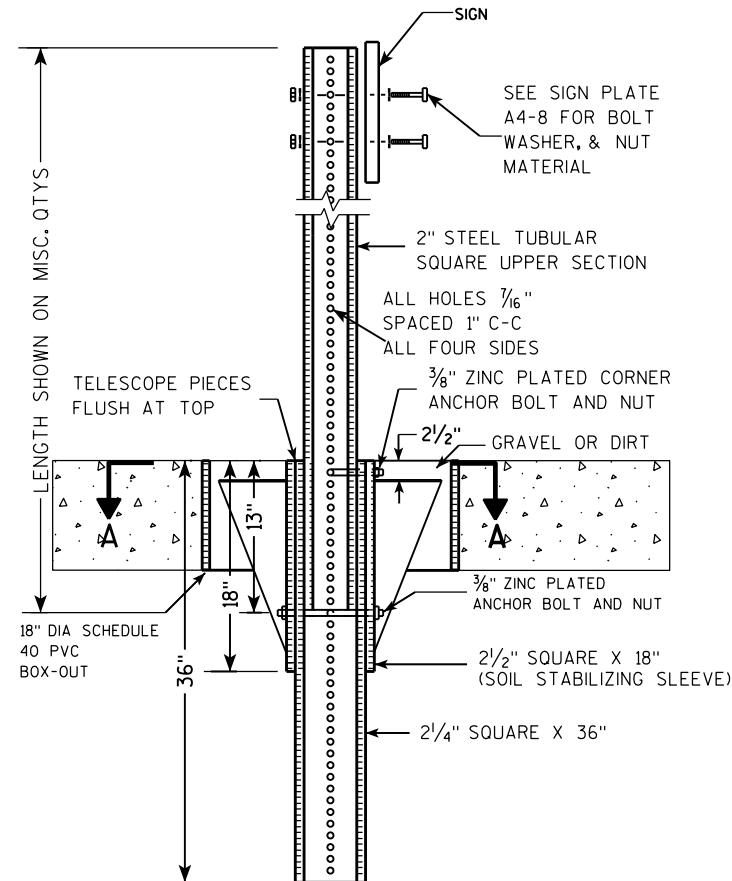
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



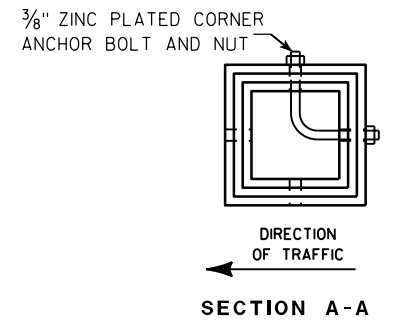
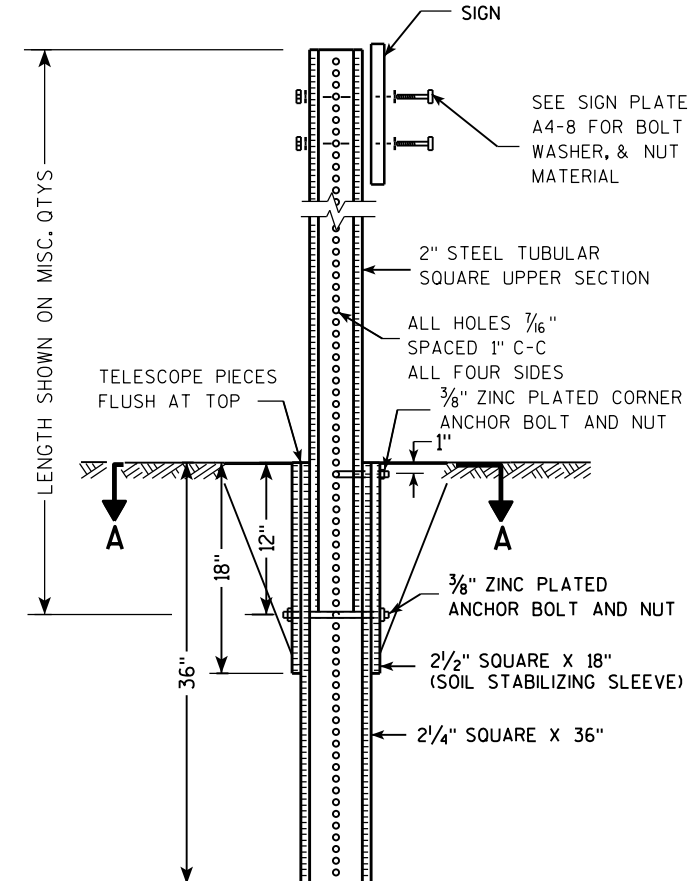
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

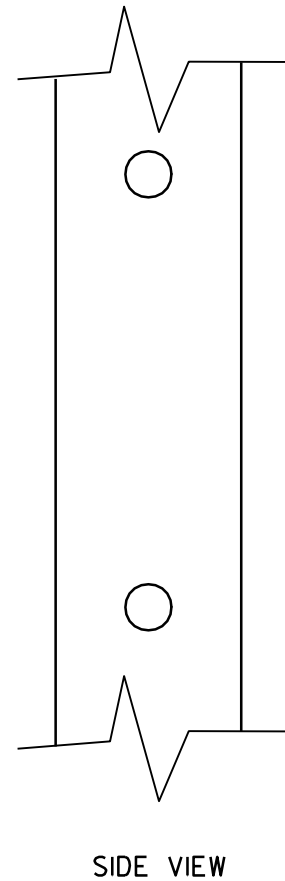
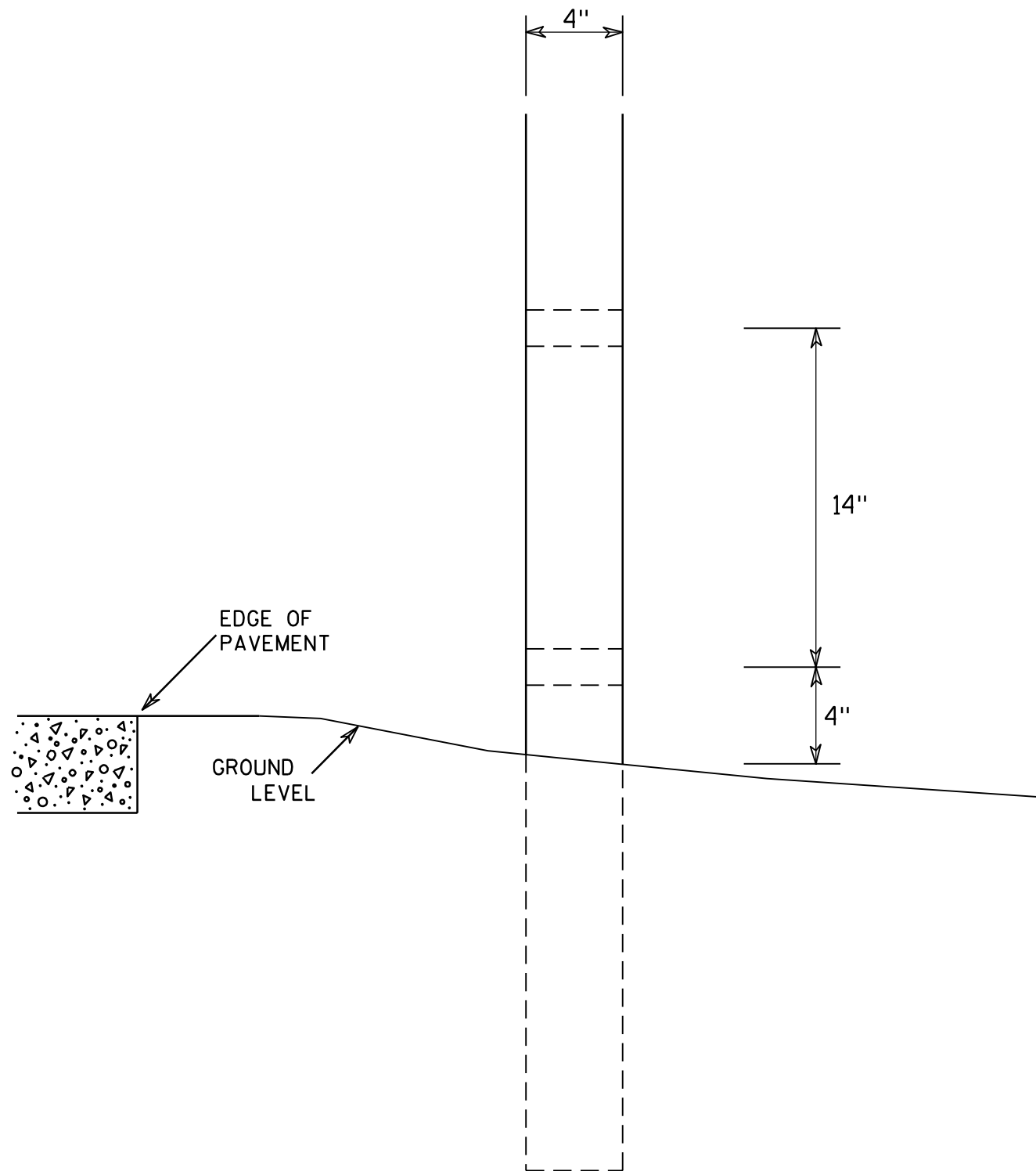
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

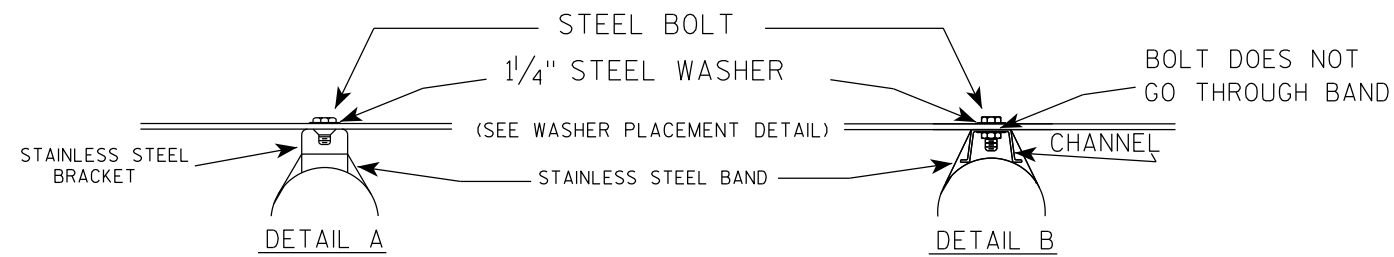
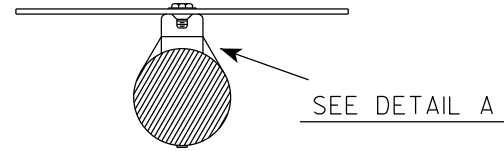
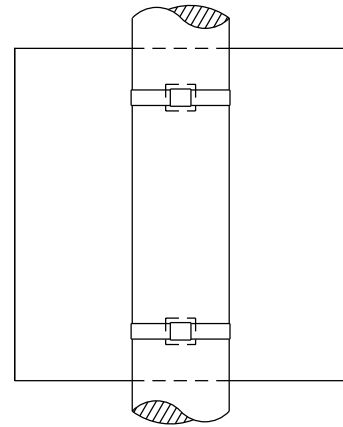
7

7

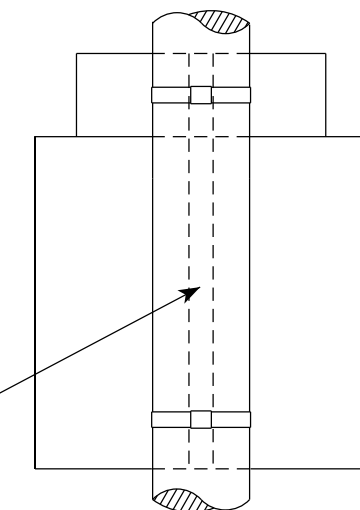
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

SINGLE SIGN



"J" ASSEMBLY

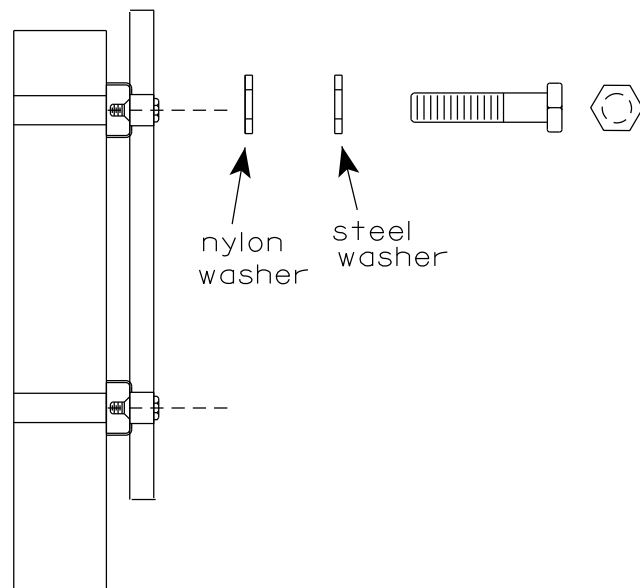


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



- GENERAL NOTES**
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
 3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

WASHER PLACEMENT



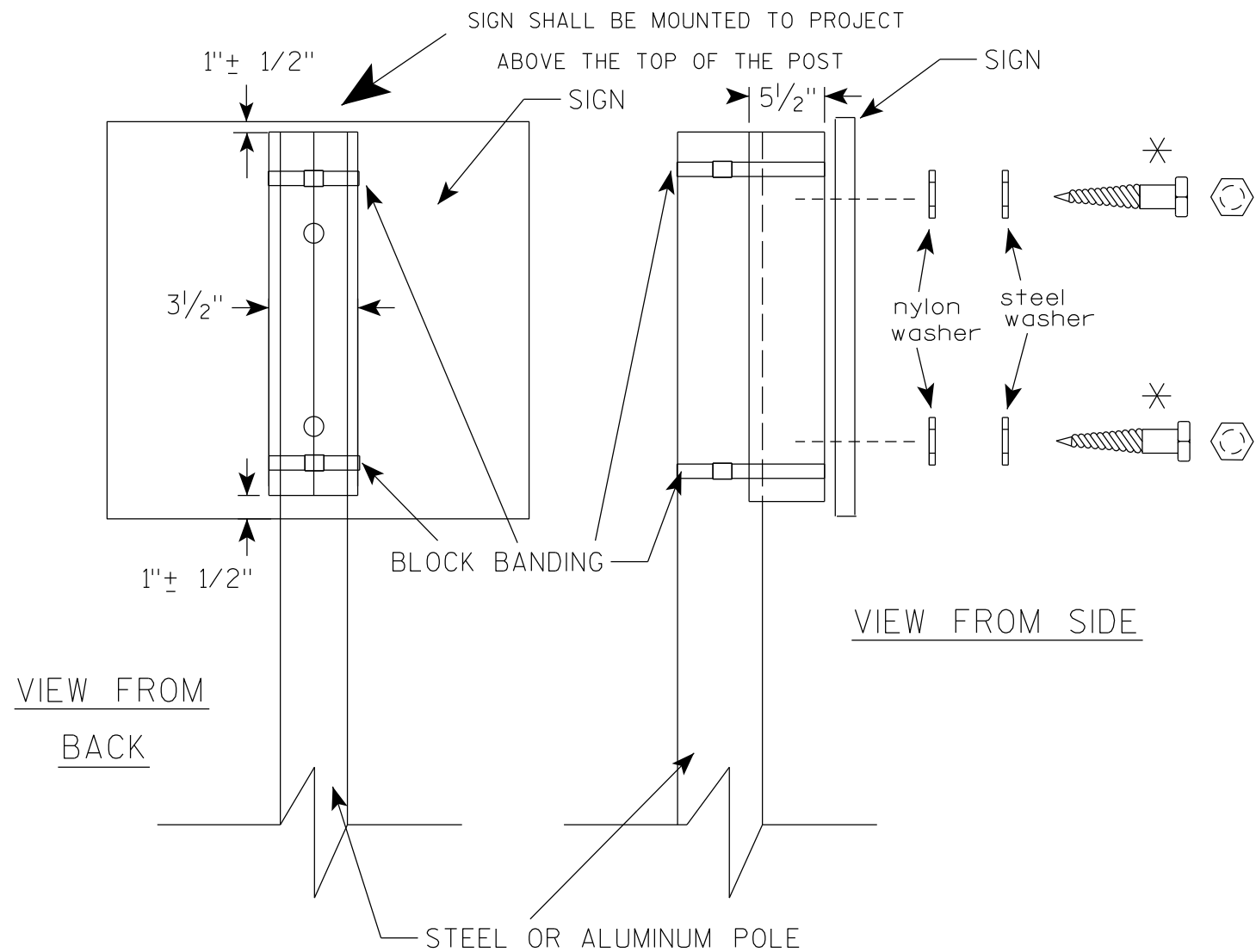
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

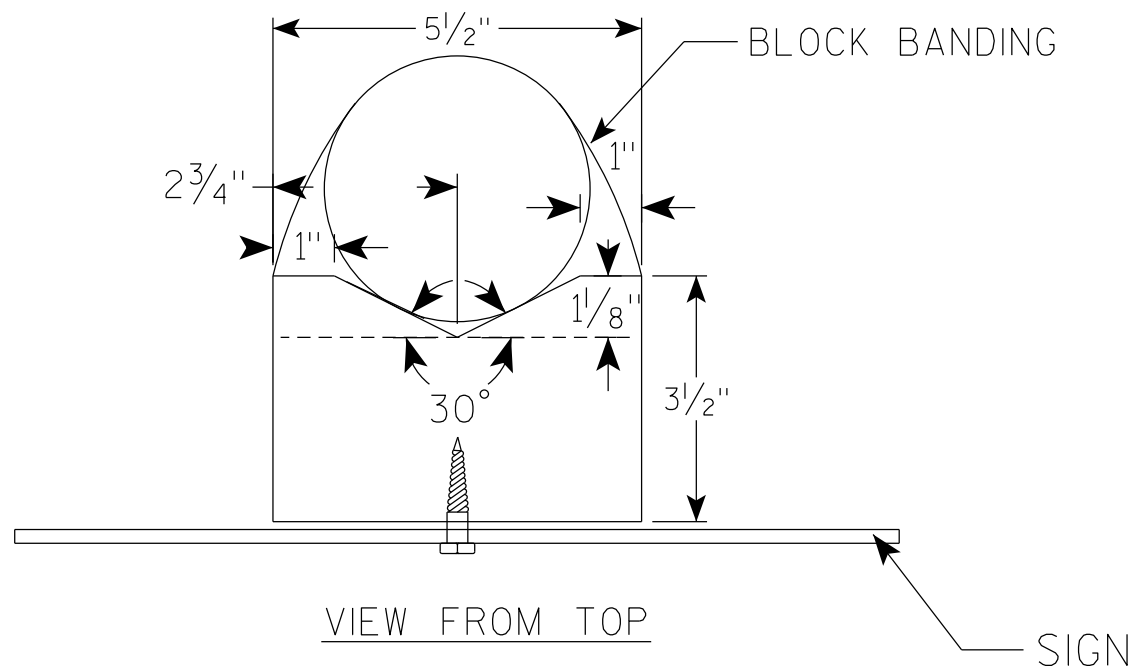
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

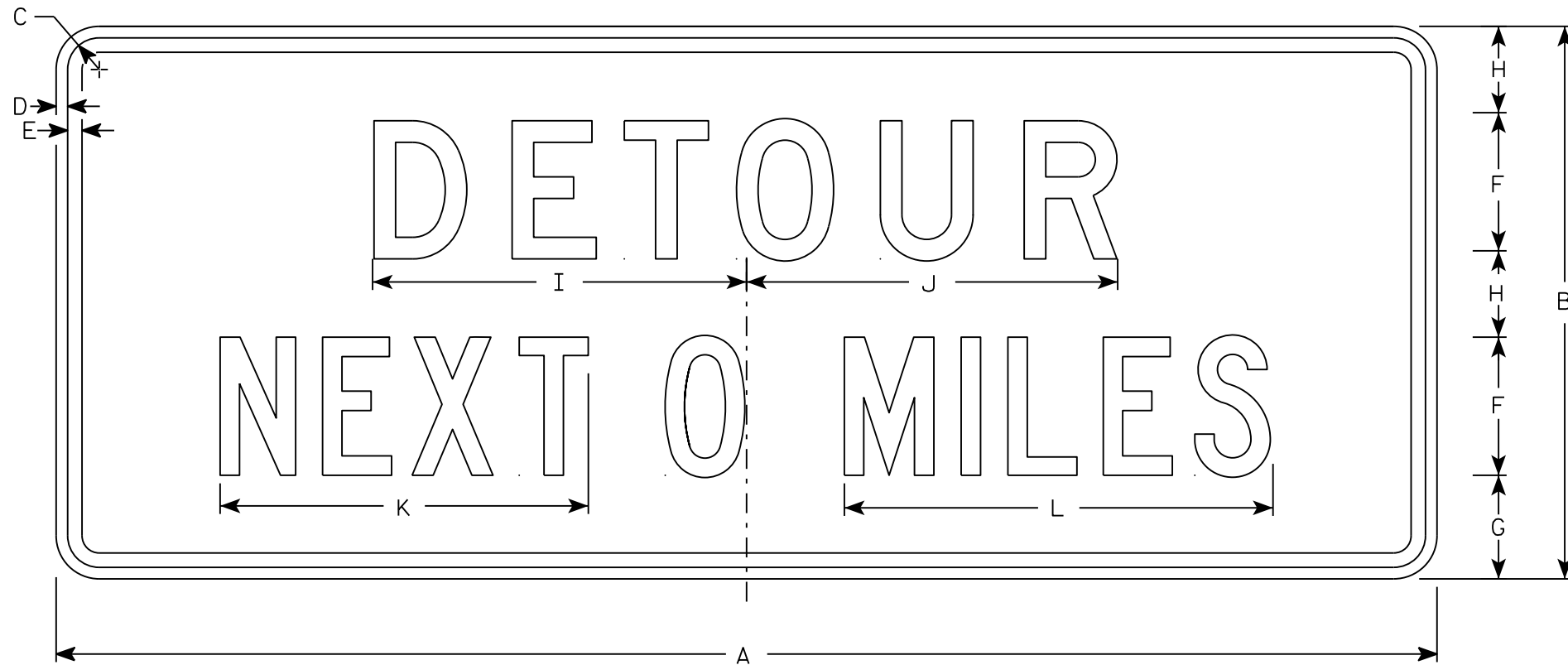
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - Line 1 is D and Line 2 is C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-51

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
5																											

STANDARD SIGN
G20-51

WISCONSIN DEPT OF TRANSPORTATION

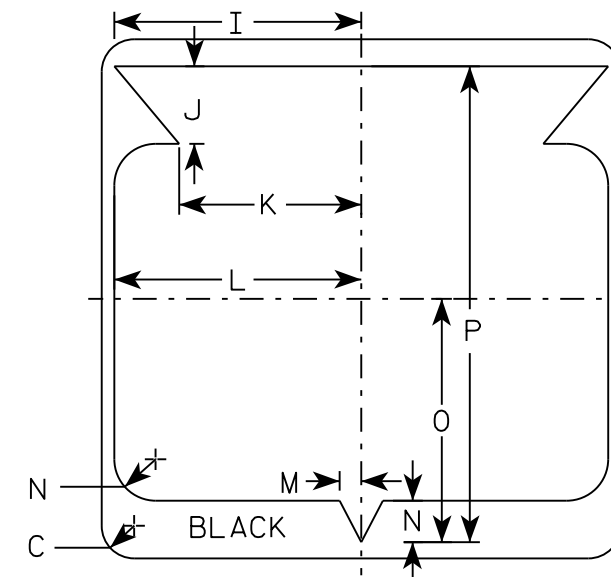
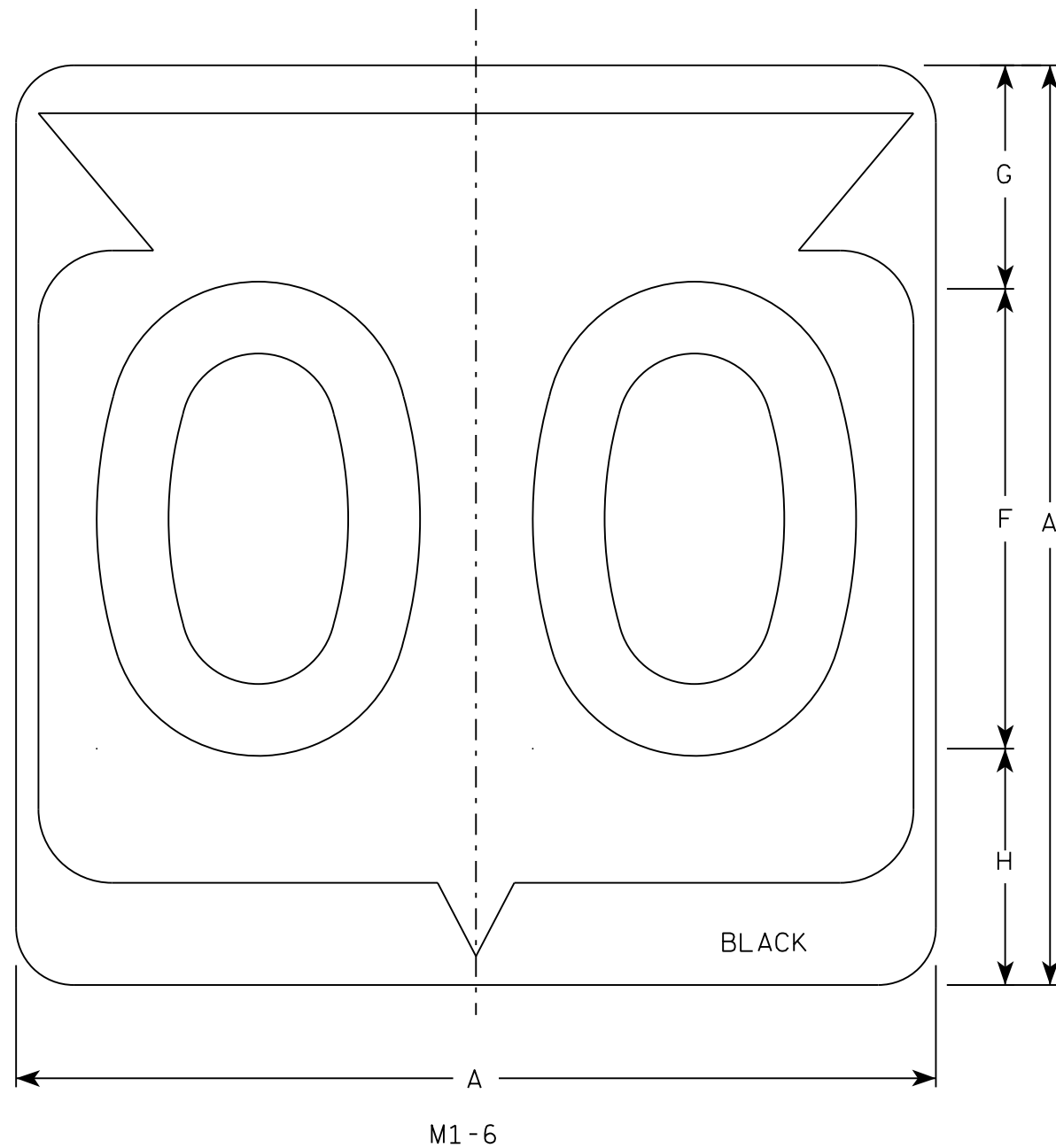
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-51.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

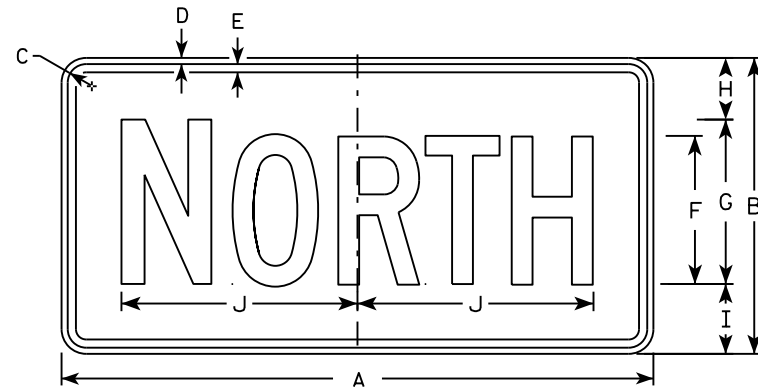
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

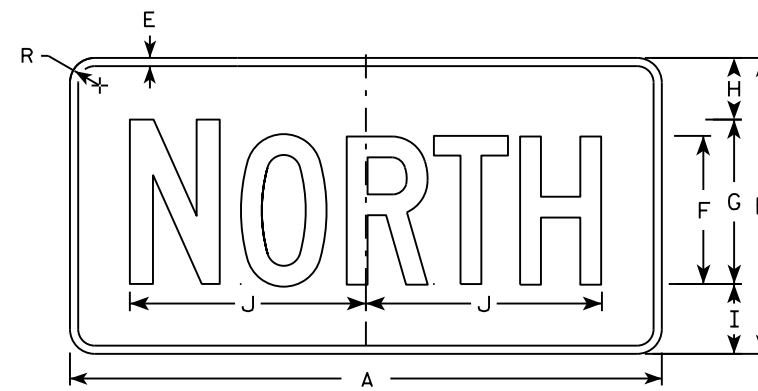
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
 Message - Black
 MB3-1 thru MB3-4 Background - Blue
 Message - White
 MK3-1 thru MK3-4 Background - Green
 Message - White
 MM3-1 thru MM3-4 Background - White
 Message - Green
 MN3-1 thru MN3-4 Background - Brown
 Message - White
 MP3-1 thru MP3-4 Background - White
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



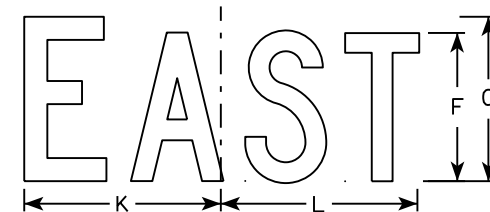
M3-1
MM3-1
MP3-1



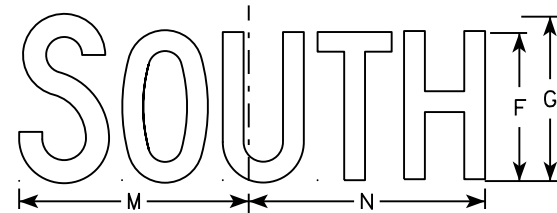
MB3-1
MK3-1
MN3-1



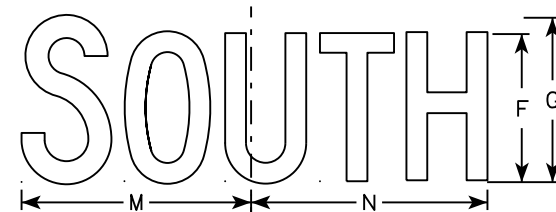
M3-2
MM3-2
MP3-2



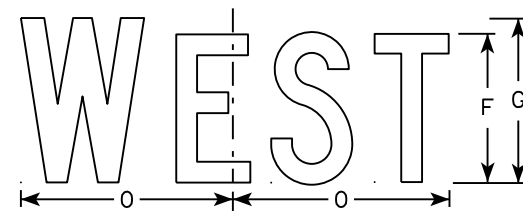
MB3-2
MK3-2
MN3-2



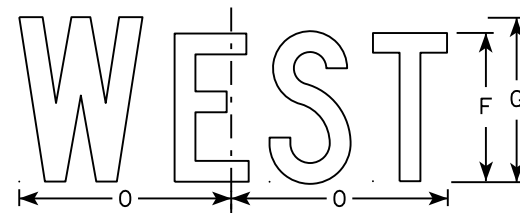
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

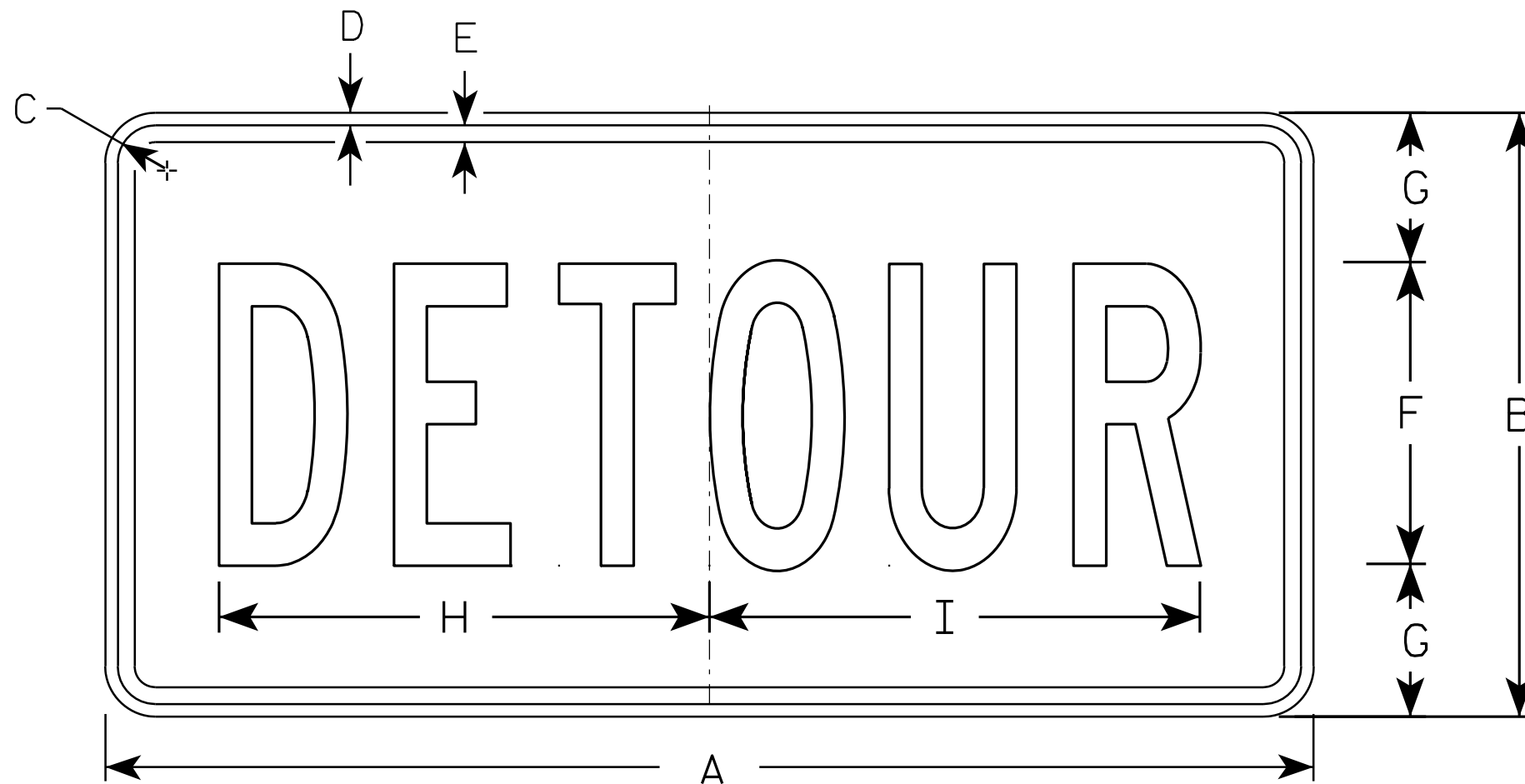
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4-8

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

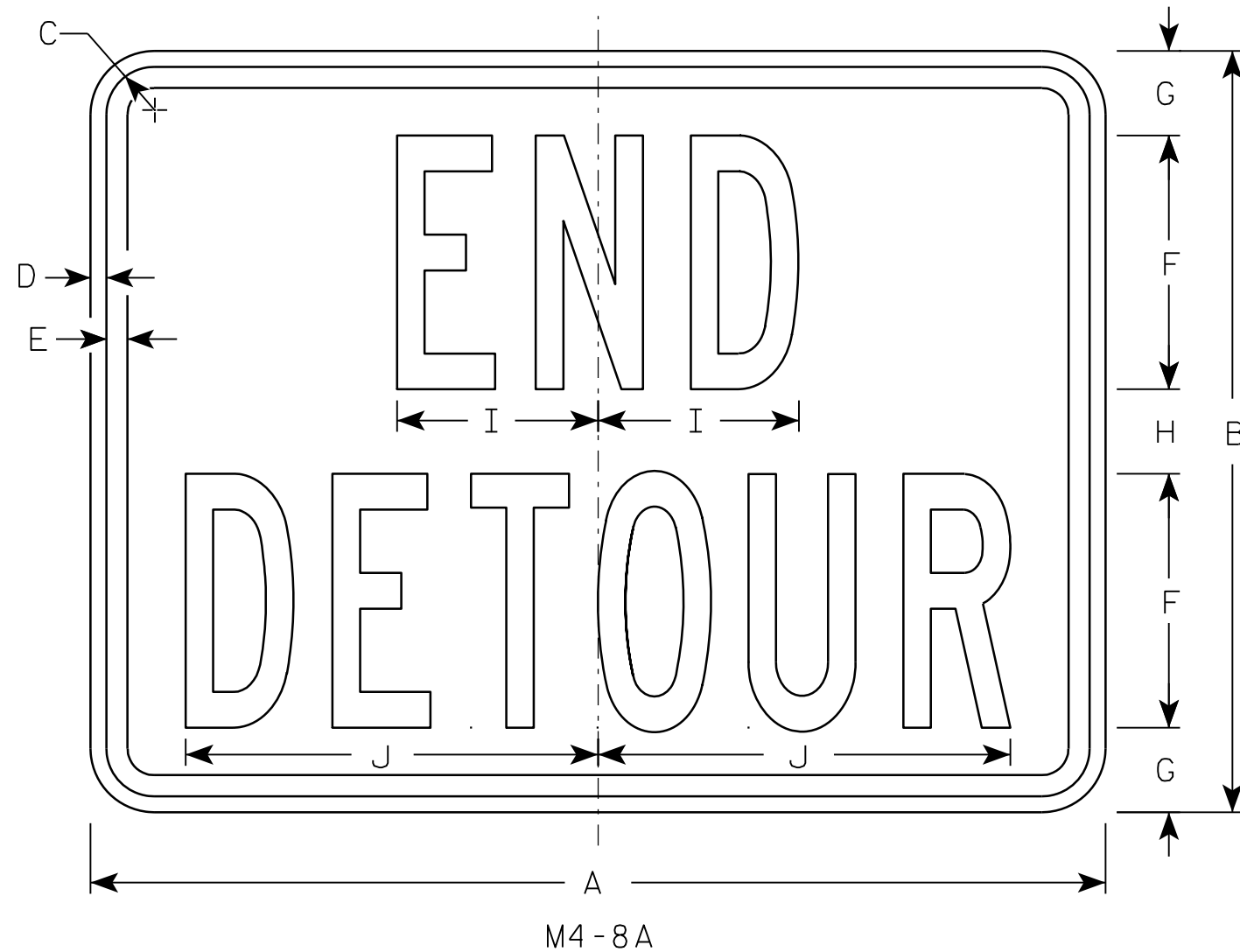
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

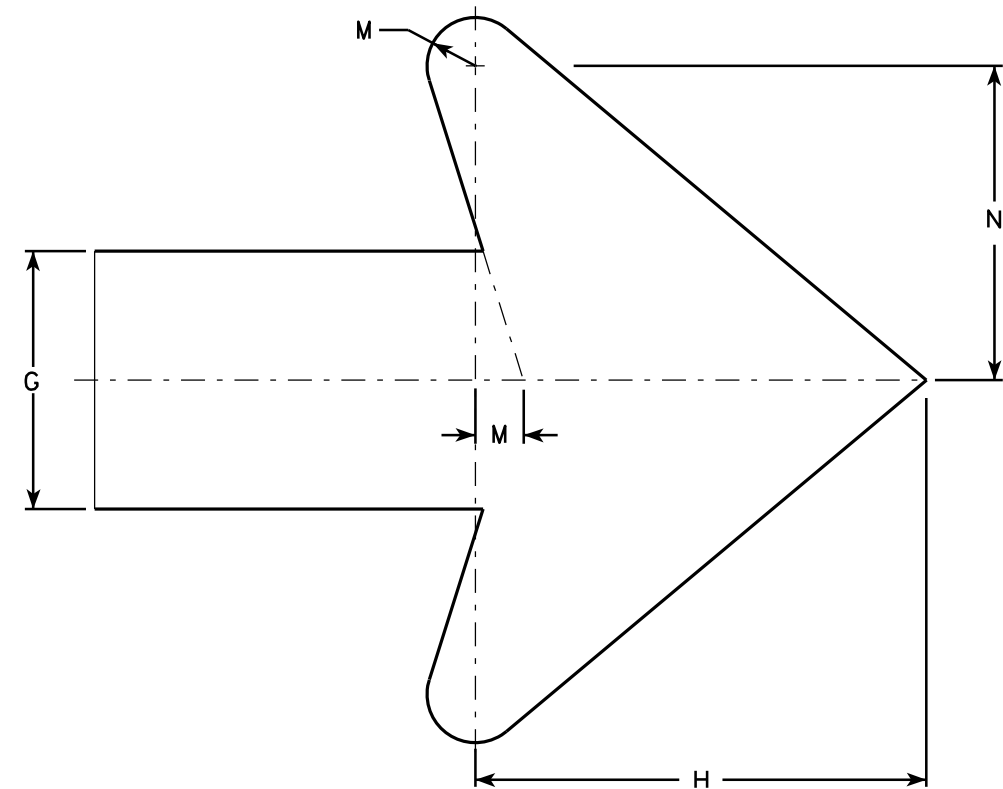
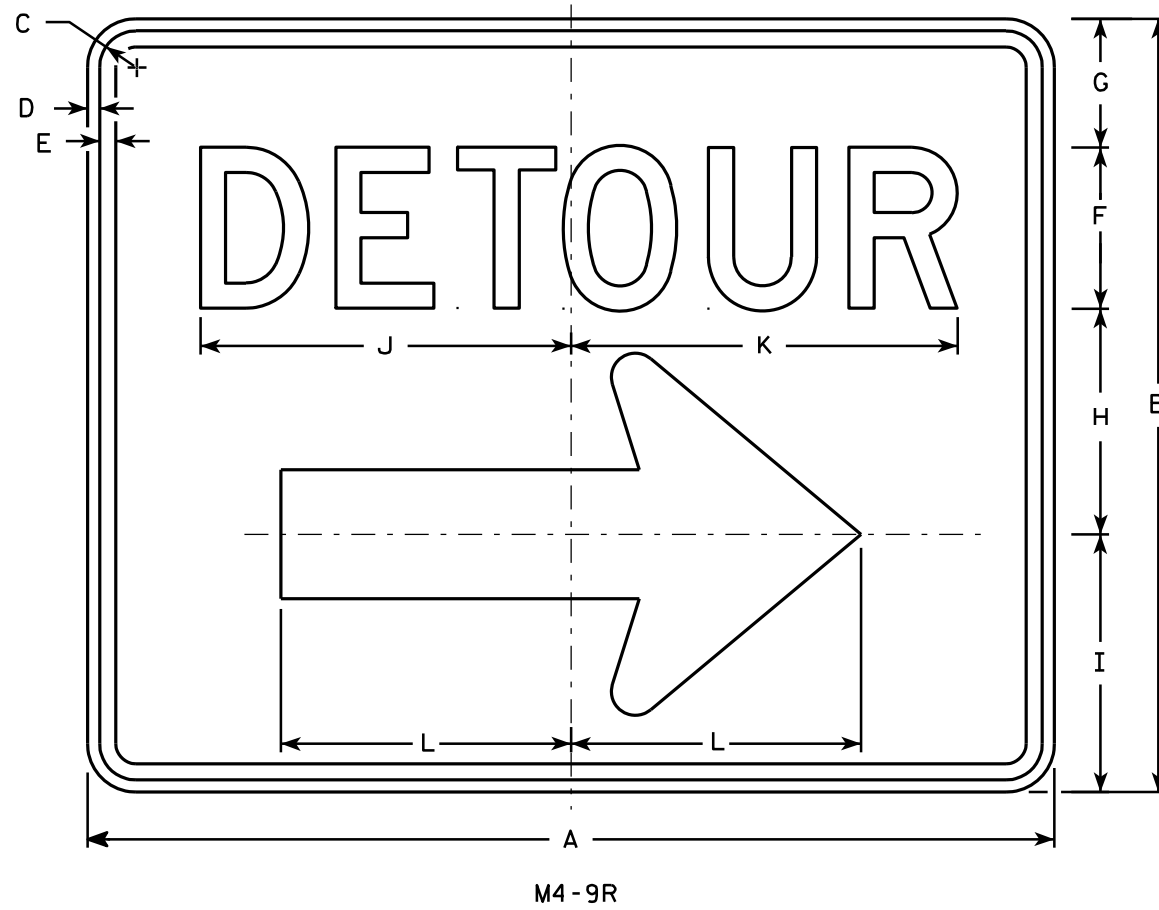
APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

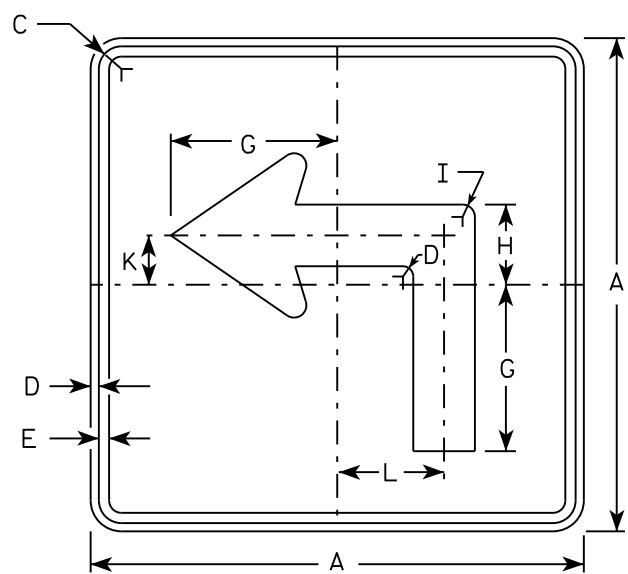
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

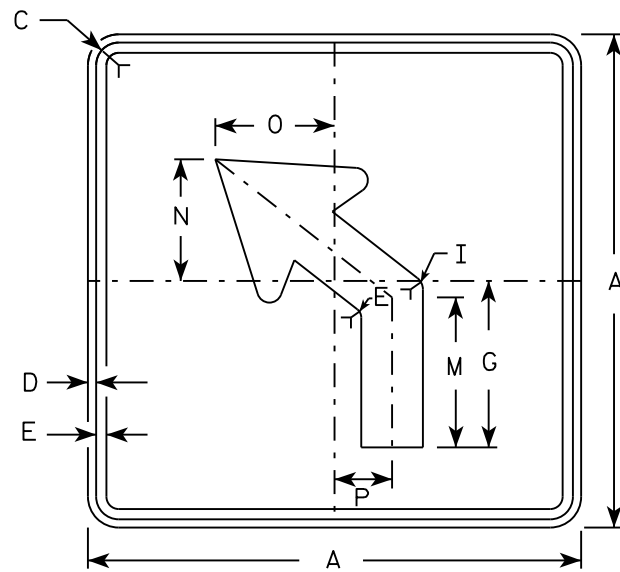
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

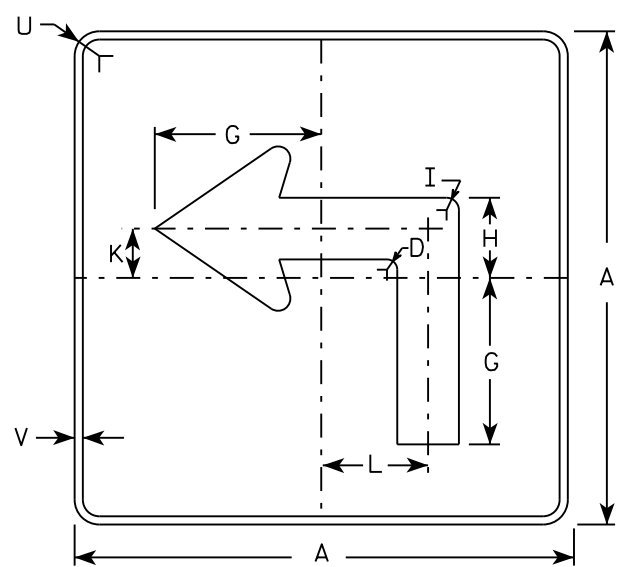
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



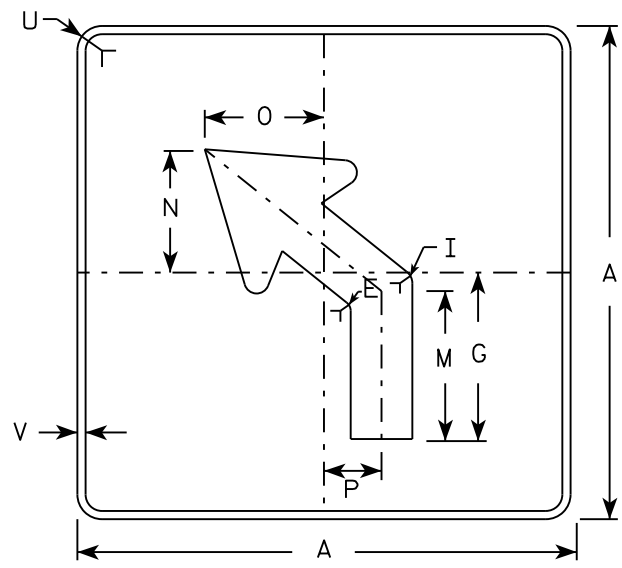
M5-1L
MM5-1L
M05-1L
MP5-1L



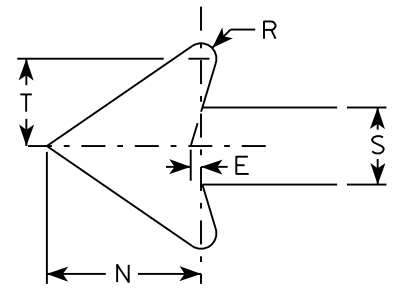
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

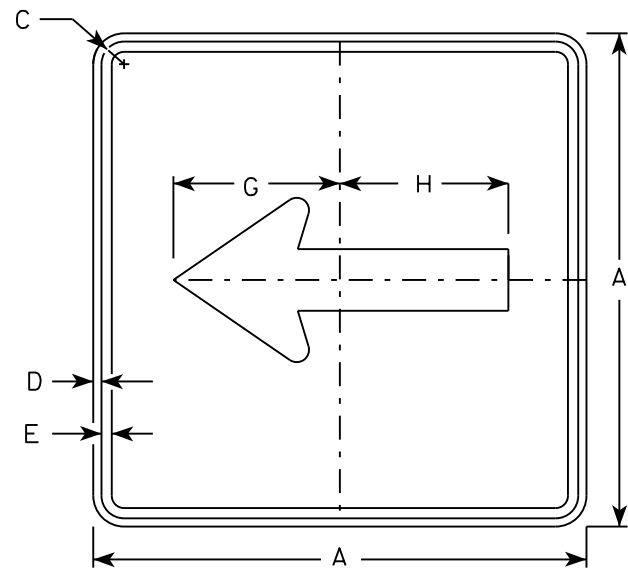
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

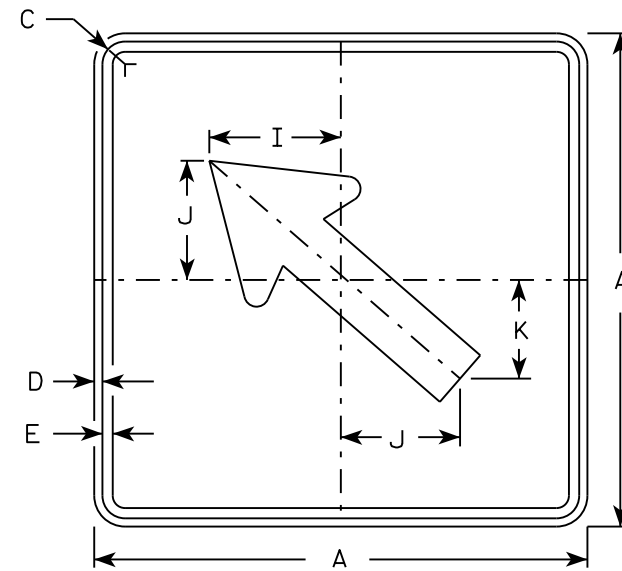
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

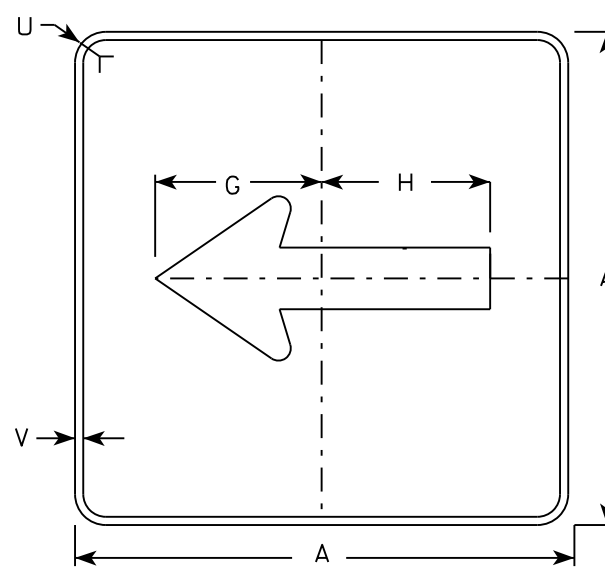
DATE 10/15/15 PLATE NO. M5-1.13



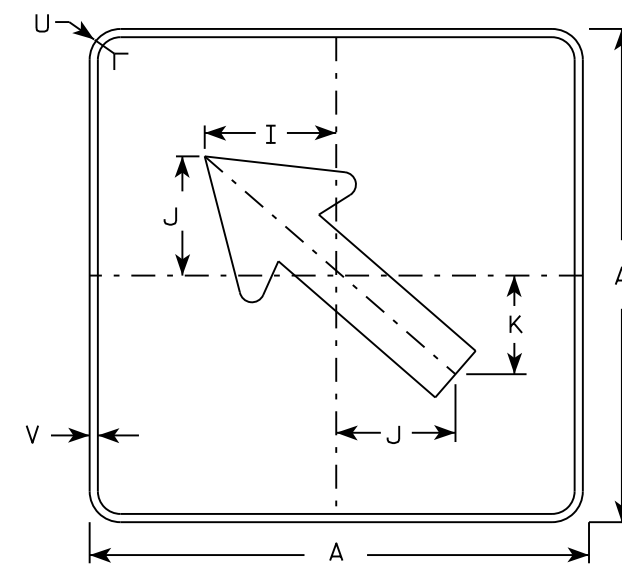
M6-1
MM6-1
M06-1
MP6-1



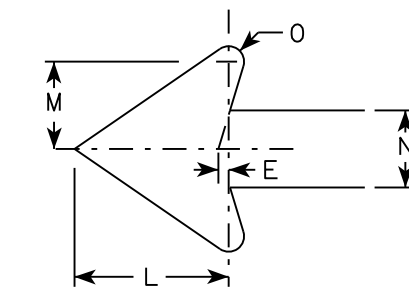
M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

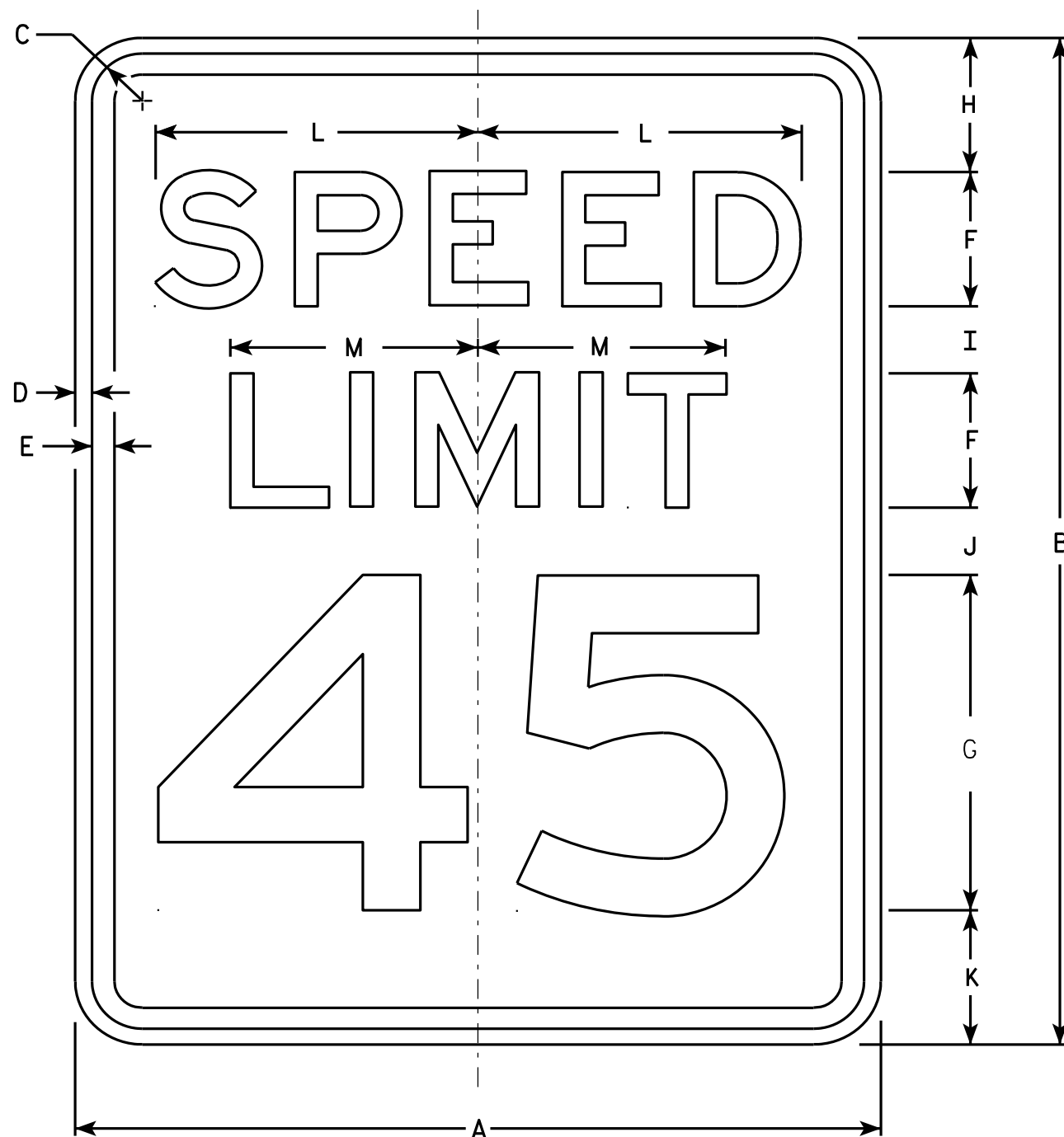
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1 1/2	1/2				3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1 7/8	1/2				6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1 7/8	1/2				6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1 7/8	1/2				6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

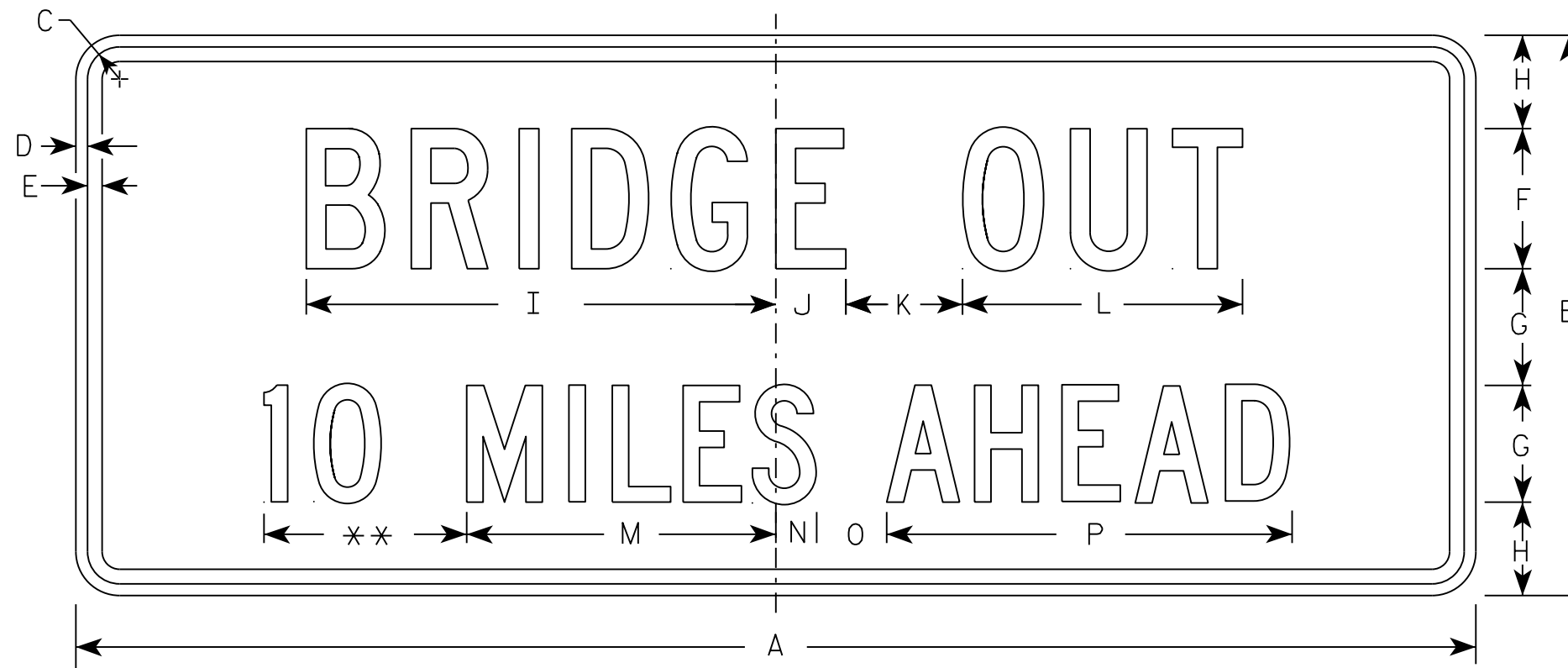
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

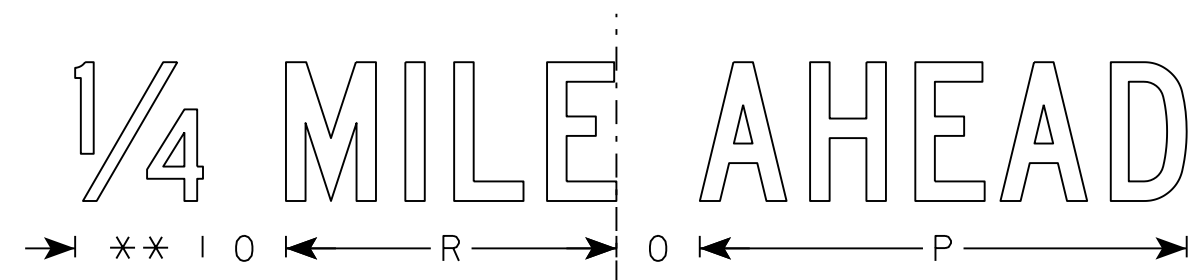
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8								3.75	
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8								10.0	
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8								10.0	
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3C.3

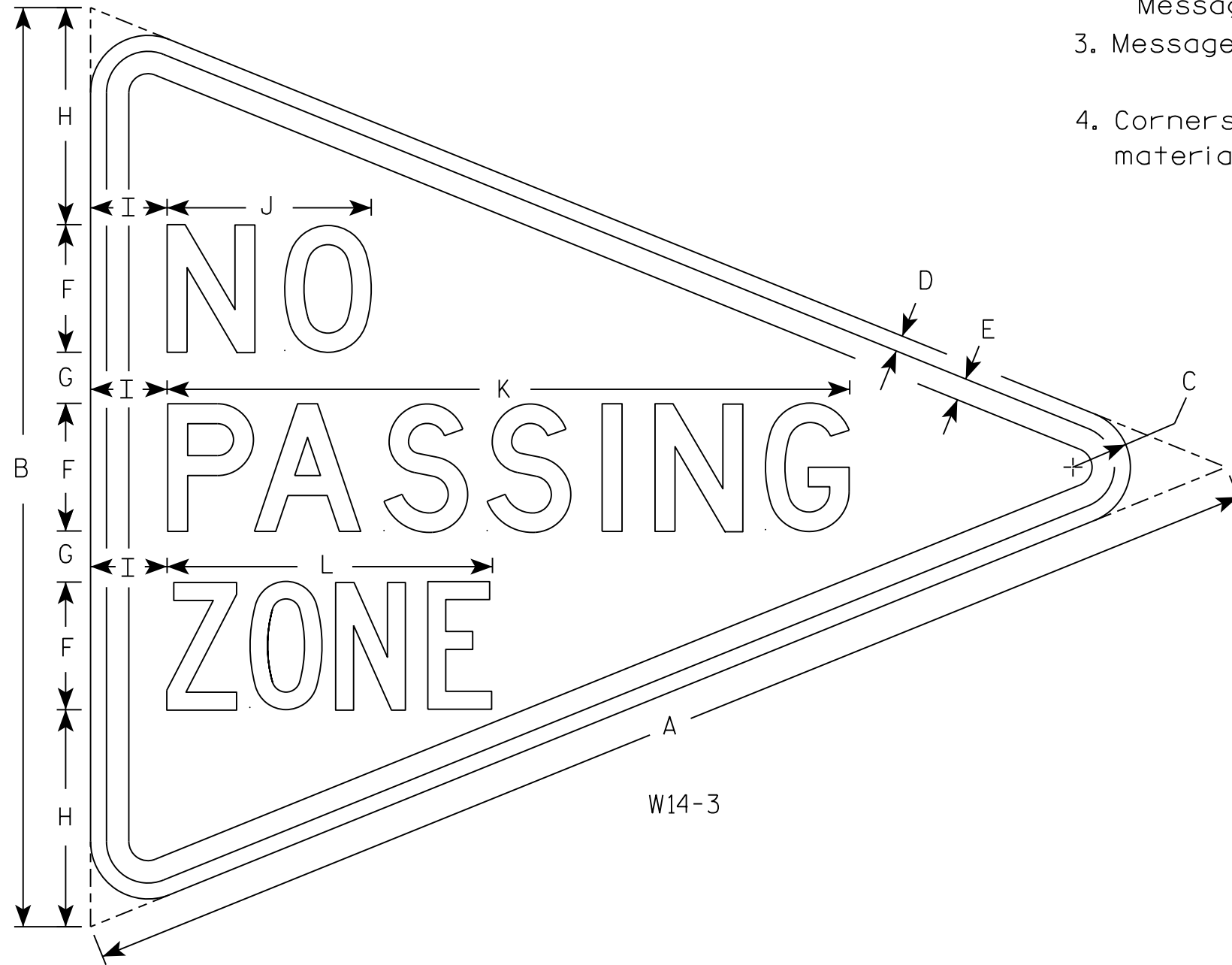
PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

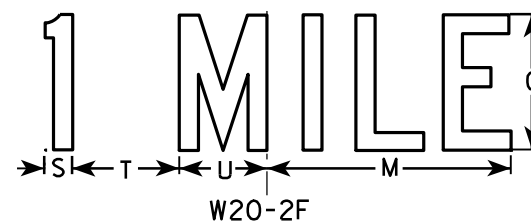
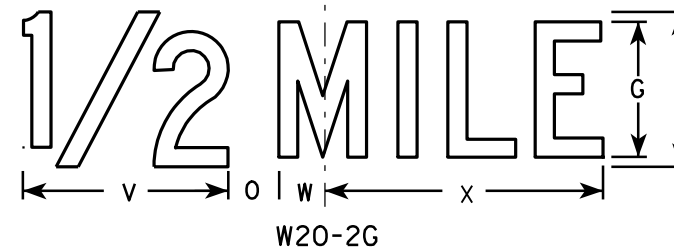
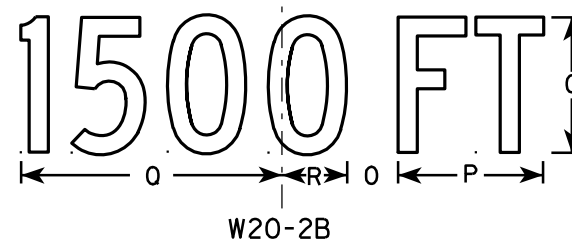
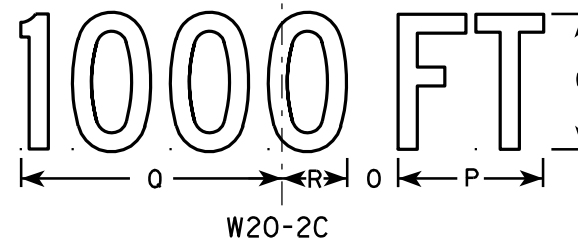
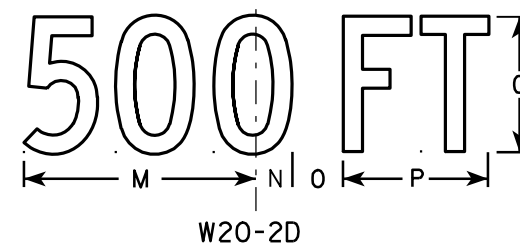
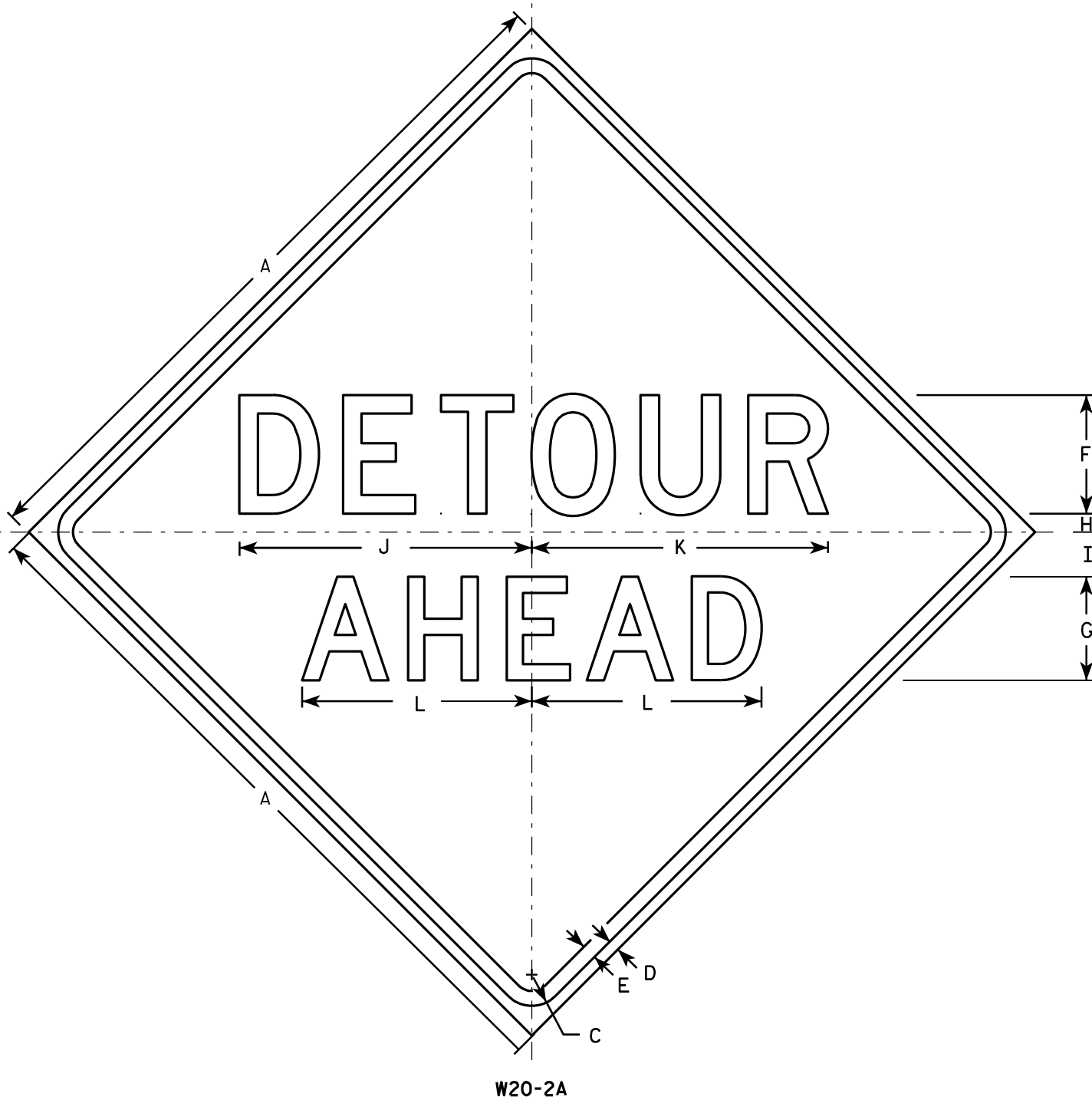
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

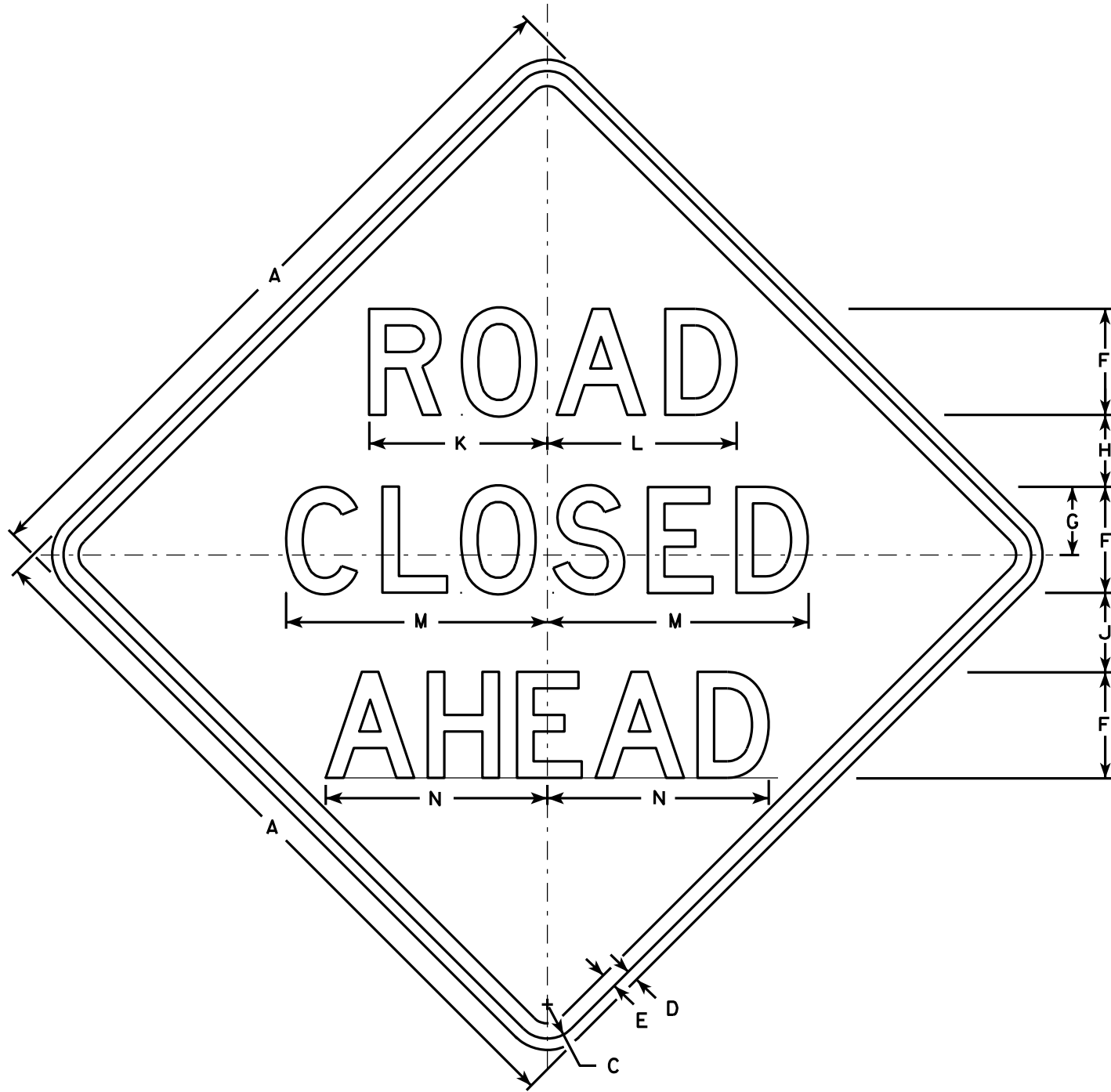
STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

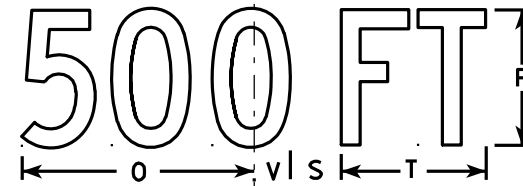
APPROVED *Matthew R. Raub*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

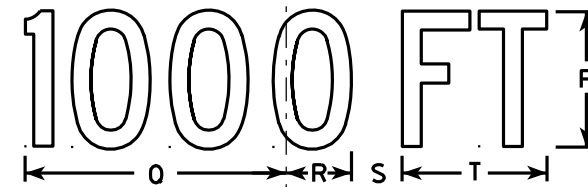
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



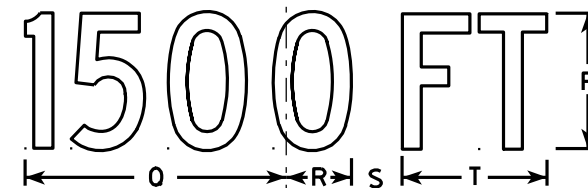
W20-3A



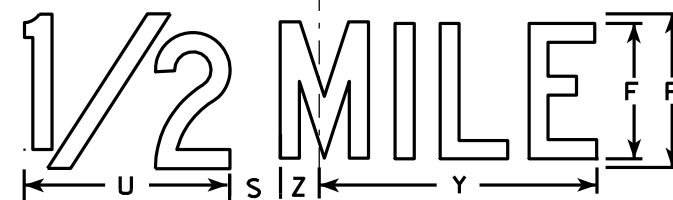
W20-3D



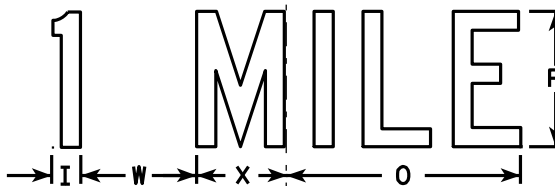
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

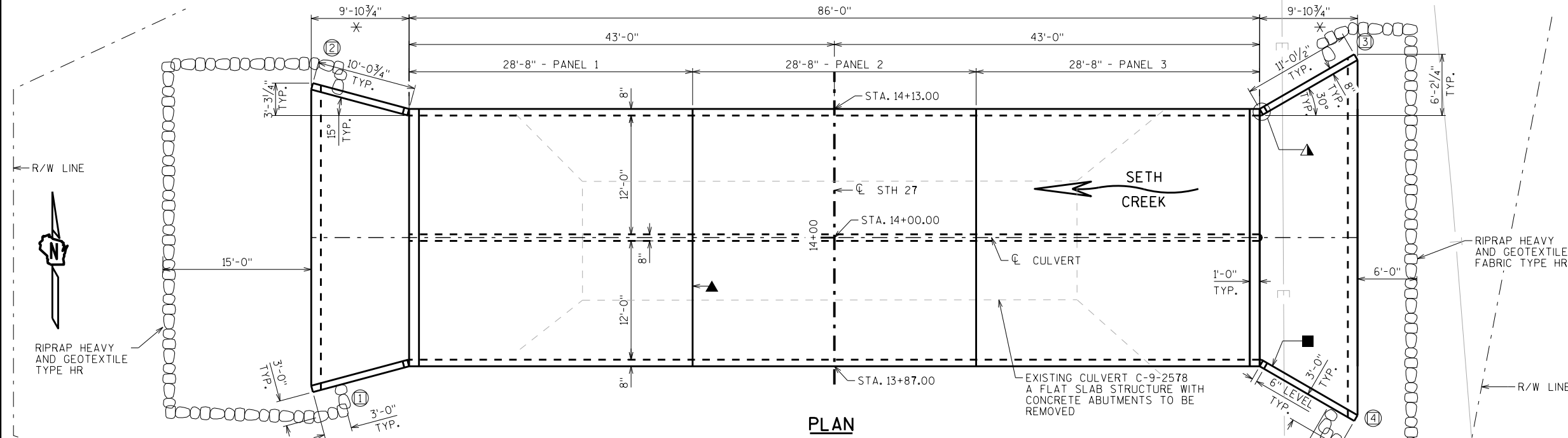
DATE 3/18/11 PLATE NO. W20-3.7

NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WING WALLS.

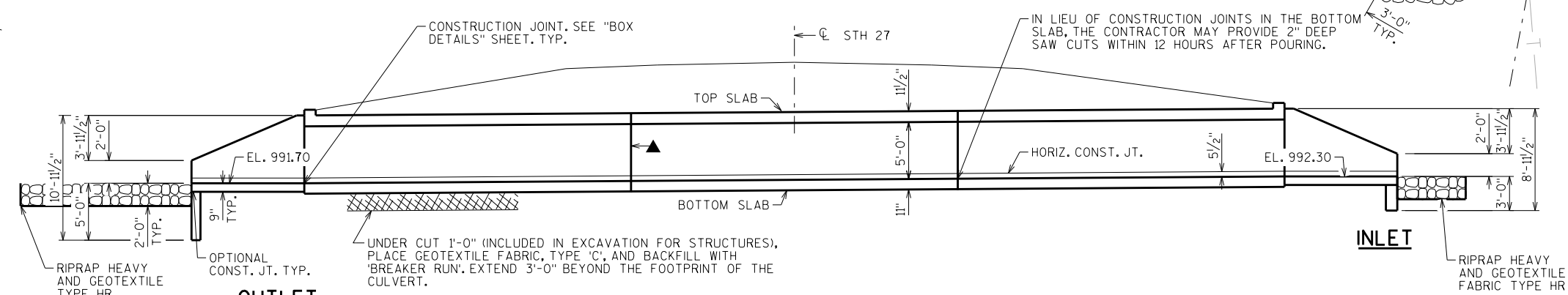
STATE PROJECT NUMBER

8200-00-70

- ▲ SEE CORNER DETAILS ON "APRON DETAILS" SHEET (TYP.)
- NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- * BUILD APRON AND END OF BOX LEVEL
- INDICATES WING NUMBER
- ▲ VERT. CONST. JOINT (TYP.)



PLAN



ELEVATION

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON DETAILS
5. SUBSURFACE EXPLORATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-9-388" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: RF = 1.05
 OPERATING RATING FACTOR: RF = 1.35
 WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:
 DESIGNED FOR 3.5 TO 4.5 FT. OF FILL.

MATERIAL PROPERTIES:
 CONCRETE MASONRY: f'c = 3,500 P.S.I.
 BAR STEEL REINFORCEMENT: fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY
 Q₁₀₀ = 1200 C.F.S.
 VEL₁₀₀ = 11.1 F.P.S.
 HW₁₀₀ = EL. 1001.42
 WATERWAY AREA = 120 SQ. FT.
 DRAINAGE AREA = 3.3 SQ. MI.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 8

TRAFFIC VOLUME

STH 27
 ADT = 3,100 (2021)
 R.D.S. = 55 M.P.H.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 14+00	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-9-388	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1,157
311.0115	BREAKER RUN	CY	129
504.0100	CONCRETE MASONRY CULVERTS	CY	217
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	25,050
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	920
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24
606.0300	RIPRAP HEAVY	CY	65
645.0105	GEOTEXTILE TYPE C	SY	409
645.0120	GEOTEXTILE TYPE HR	SY	131
	NON-BID ITEMS		
	FILLER	EACH	3/4"

8

STRUCTURE DESIGN CONTACTS:
 BRETT FOLLETT (608) 266-0214
 LAURA SHADEWALD (608) 267-9592

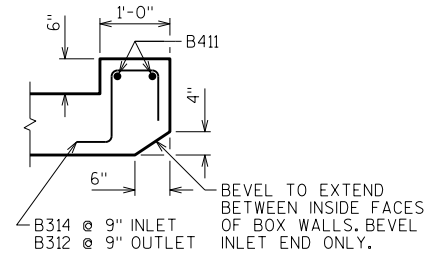
NO.	DATE	REVISION	BY
ACCEPTED		11/1/19	
WILLIAM C. DEHN, CHIEF STRUCTURES DESIGN ENGINEER		DATE	
STRUCTURE B-9-388			
STH 27 OVER SETH CREEK			
COUNTY	CHIPPEWA	TOWN	GOETZ
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	MJL	DRAWN BY	MJL
DESIGNED CK'D.	BAF	PLANS CK'D.	BAF
LAYOUT			SHEET 1 OF 5

SCALE = 6.00

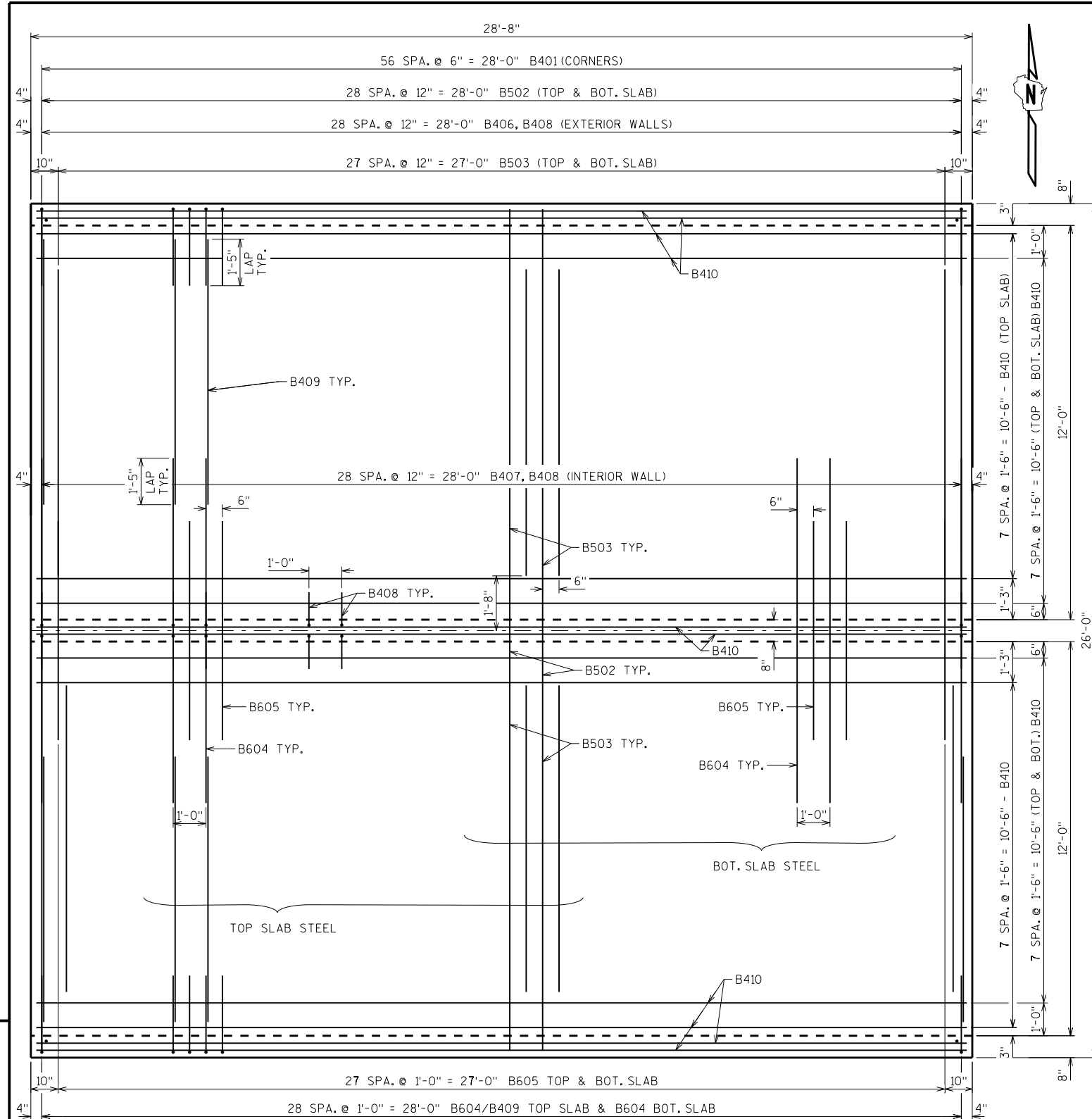
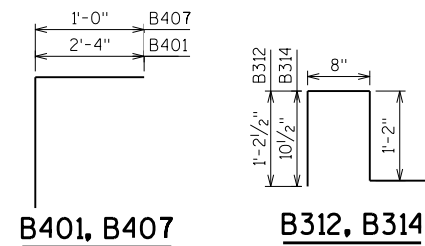
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	QTY	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401	684	6'-3"	X			CORNERS
B502	174	25'-6"				TOP AND BOT SLAB - TRANSVERSE.
B503	336	9'-4"				TOP AND BOT SLAB - TRANSVERSE.
B604	174	10'-6"				TOP AND BOT SLAB - TRANSVERSE.
B605	168	6'-8"				TOP AND BOT SLAB - TRANSVERSE.
B406	174	5'-2"				EXTERIOR WALL - VERTICAL
B407	174	6'-2"	X			INTERIOR WALL - VERTICAL
B408	348	2'-3"				WALL DOWELS - VERTICAL
B409	174	8'-1"				TOP SLAB - TRANSVERSE.
B410	264	28'-4"				BOX - HORIZONTAL
B411	4	25'-8"				HEADER - HORIZONTAL
B312	35	3'-4"	X			HEADER - VERTICAL OUTLET
B513	138	4'-0"				VERTICAL CONSTRUCTION JOINT
B314	35	3'-0"	X			HEADER - VERTICAL INLET
B515	52	4'-0"				APRON CONNECTION JOINT

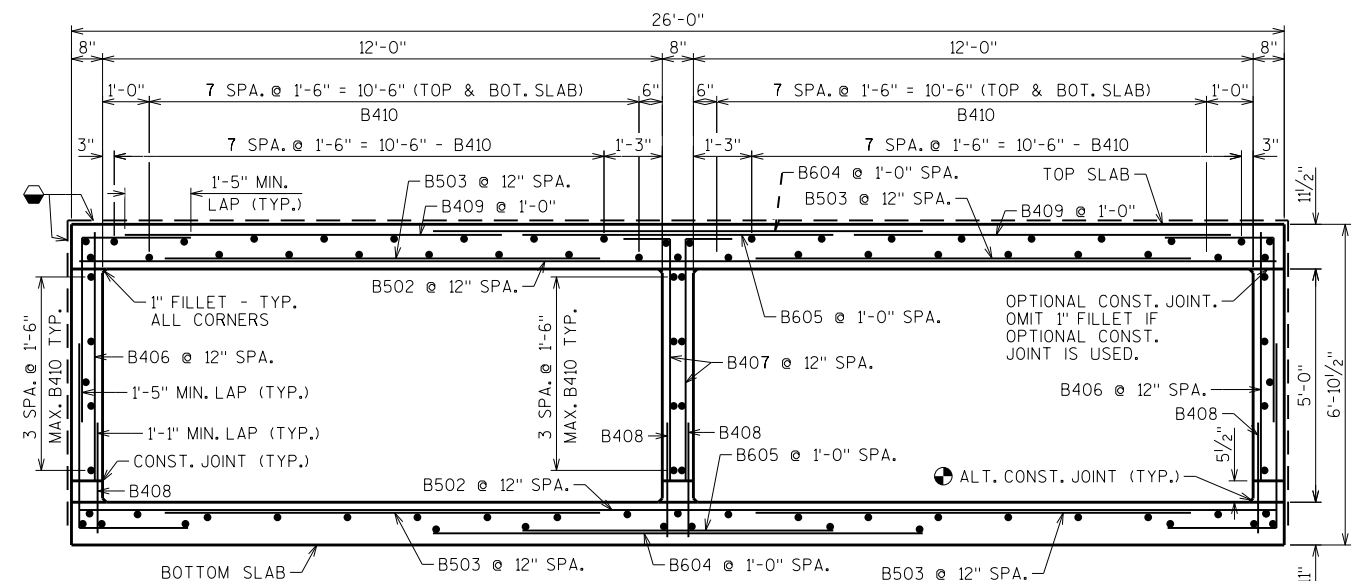


SECTION THRU HEADER



PLAN VIEW OF PANELS

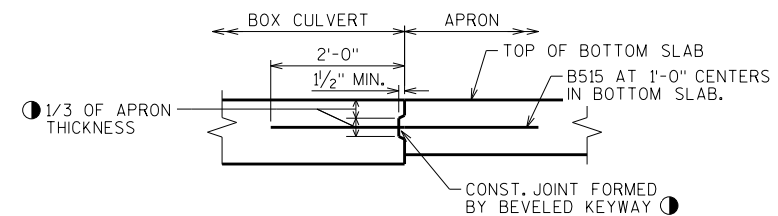
APRON AND HEADERS ARE NOT SHOWN



TYPICAL SECTION THRU BOX

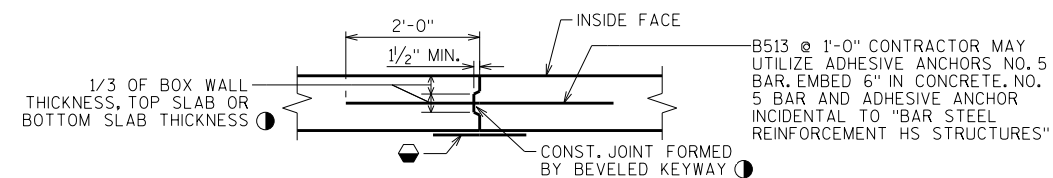
ALL LONGITUDINAL BARS NOT LABELED ARE B410 BARS AS SHOWN

OMIT 1" FILLET IF ALT. CONST. JOINT IS USED



APRON CONNECTION DETAIL

IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.



VERTICAL CONSTRUCTION JOINT

18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

NO.	DATE	REVISION	BY

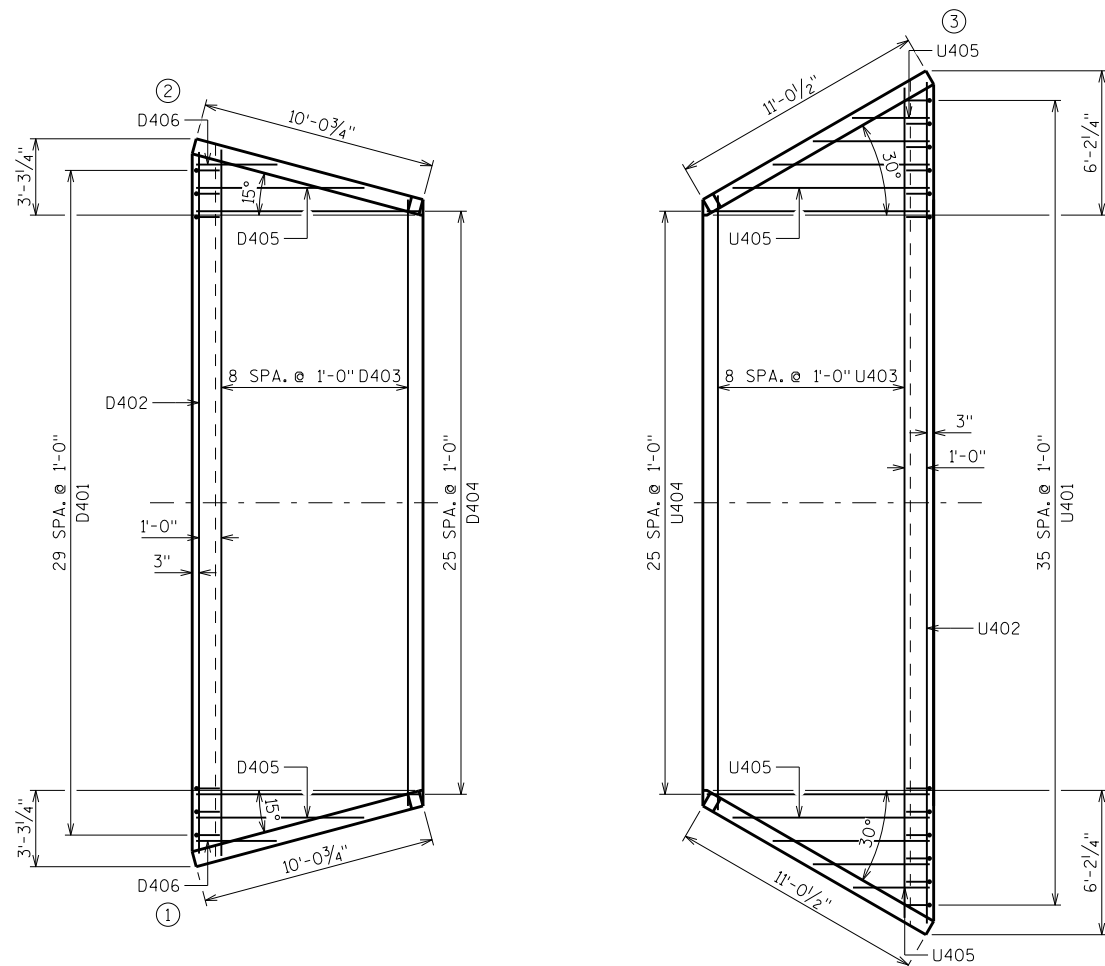
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-9-388

DRAWN BY: MJL PLANS CK'D: BAF

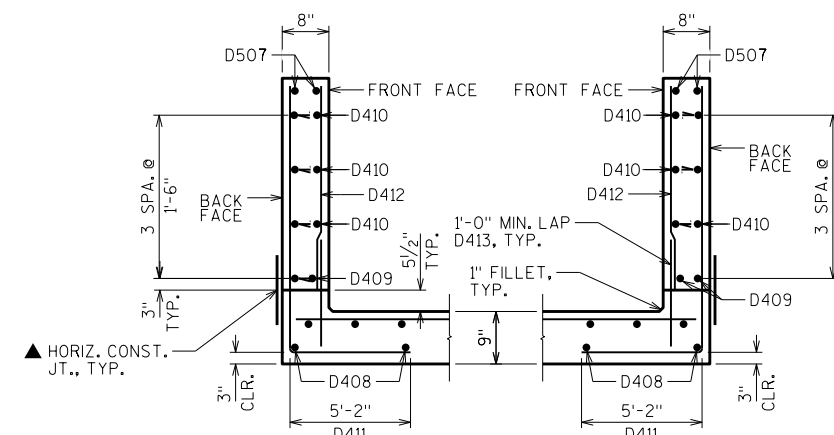
BOX DETAILS

SHEET 2

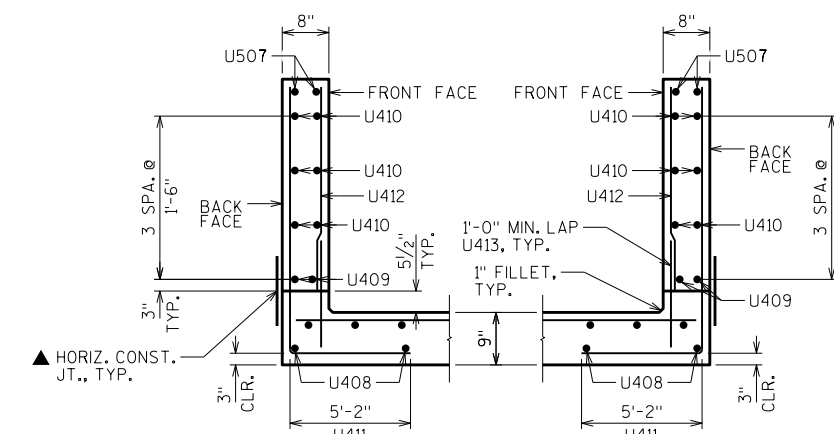


OUTLET APRON PLAN

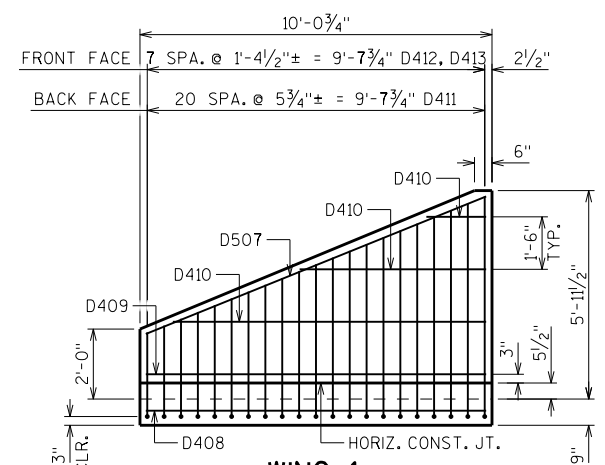
INLET APRON PLAN



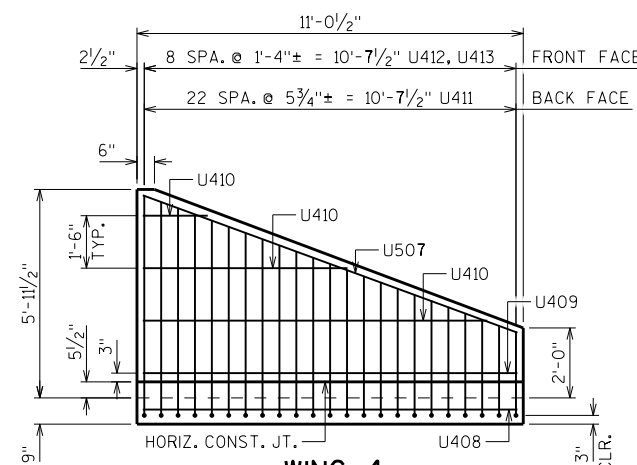
WING 2 SECTION WING 1 SECTION



WING 3 SECTION WING 4 SECTION



WING 1
 SHOWING BACK FACE REINFORCEMENT
 WING 2 SIMILAR



WING 4
 SHOWING BACK FACE REINFORCEMENT
 WING 3 SIMILAR

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH, TYP.

8

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-9-388			
DRAWN BY		MJL	PLANS CK'D. BAF
APRON		SHEET 3	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

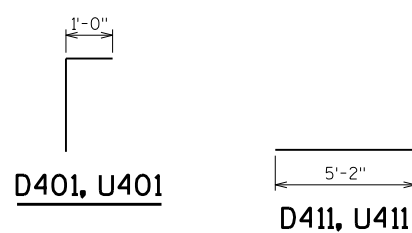
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D401		30	5'-6"	X		OUTLET APRON AND CUTOFF WALL VERT.
D402		5	30'-1"			OUTLET APRON AND CUTOFF WALL HORIZ.
D403		9	28'-2"		▲	OUTLET APRON SLAB HORIZ.
D404		26	9'-6"			OUTLET APRON HORIZ.
D405		2	7'-2"			OUTLET APRON SLAB HORIZ.
D406		2	3'-5"			OUTLET APRON SLAB HORIZ.
D507	X	4	10'-5"			OUTLET WINGS HORIZ. TOP BOTH FACES
D408		4	9'-8"			OUTLET APRON SLAB
D409	X	4	9'-8"			OUTLET WINGS HORIZ. BOTTOM BOTH FACES
D410	X	12	5'-3"		▲	OUTLET WINGS HORIZ.
D411	X	42	9'-6"	X	▲	OUTLET WINGS VERT. BACK FACE
D412	X	16	3'-5"		▲	OUTLET WINGS VERT. FRONT FACE
D413	X	16	2'-0"			OUTLET WINGS DOWELS FRONT FACE
U401		36	3'-6"	X		INLET APRON AND CUTOFF WALL VERT.
U402		3	36'-1"			INLET APRON AND CUTOFF WALL HORIZ.
U403		9	31'-0"		▲	INLET APRON SLAB HORIZ.
U404		26	9'-6"			INLET APRON HORIZ.
U405		8	5'-11"		▲	INLET APRON SLAB HORIZ.
U507	X	4	11'-3"			INLET WINGS HORIZ. TOP BOTH FACES
U408		4	10'-8"			INLET APRON SLAB
U409	X	4	10'-8"			INLET WINGS HORIZ. BOTTOM BOTH FACES
U410	X	12	5'-10"		▲	INLET WINGS HORIZ.
U411	X	46	9'-6"	X	▲	INLET WINGS VERT. BACK FACE
U412	X	18	3'-5"		▲	INLET WINGS VERT. FRONT FACE
U413	X	18	2'-0"			INLET WINGS DOWELS FRONT FACE

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

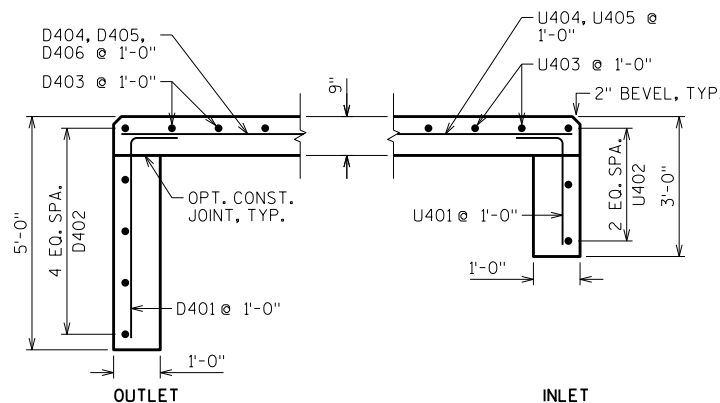
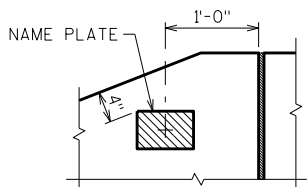
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
D403	1 SERIES OF 9	26'-0" TO 30'-3"
D410	4 SERIES OF 3	1'-8" TO 8'-11"
D411	2 SERIES OF 21	7'-6" TO 11'-5"
D412	2 SERIES OF 8	1'-5" TO 5'-4"
U403	1 SERIES OF 9	26'-4" TO 35'-7"
U405	2 SERIES OF 4	3'-4" TO 8'-5"
U410	4 SERIES OF 3	1'-10" TO 9'-10"
U411	2 SERIES OF 23	7'-6" TO 11'-5"
U412	2 SERIES OF 9	1'-5" TO 5'-4"

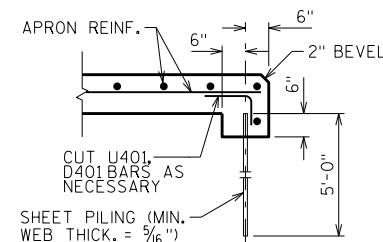
BUNDLE AND TAG EACH SERIES SEPARATELY



NAME PLATE LOCATION WING 4

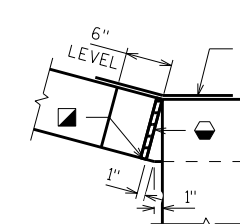


CUT-OFF WALLS

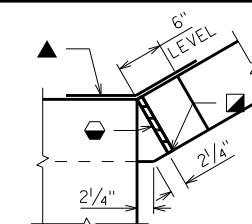


ALTERNATE CUT-OFF WALLS

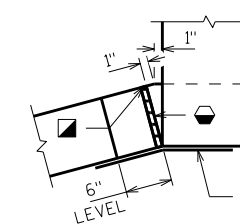
THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.



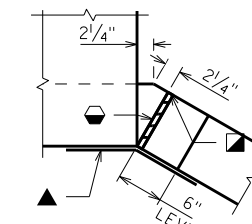
CORNER 2



CORNER 3

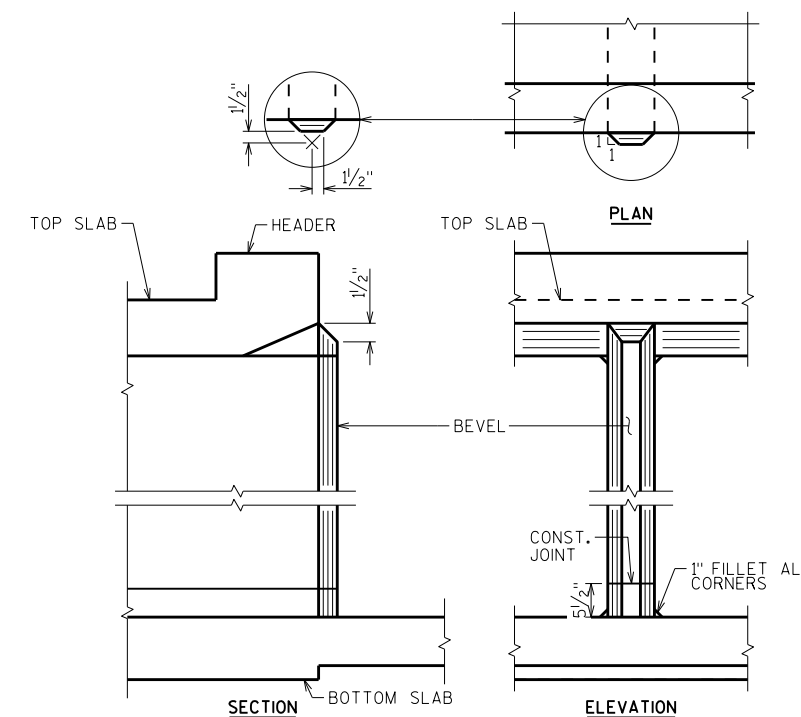


CORNER 1

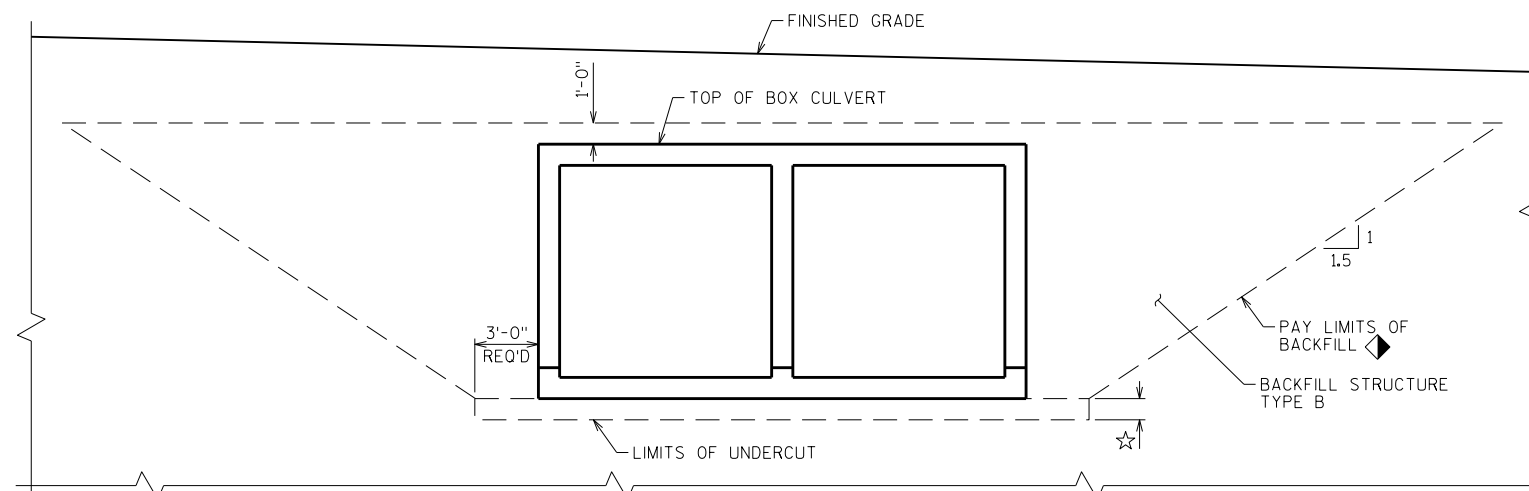


CORNER 4

CORNER DETAILS



INLET NOSE DETAILS



TYPICAL SECTION THRU BOX CULVERT

◆ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

● 3/4" FILLER, TYP. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.

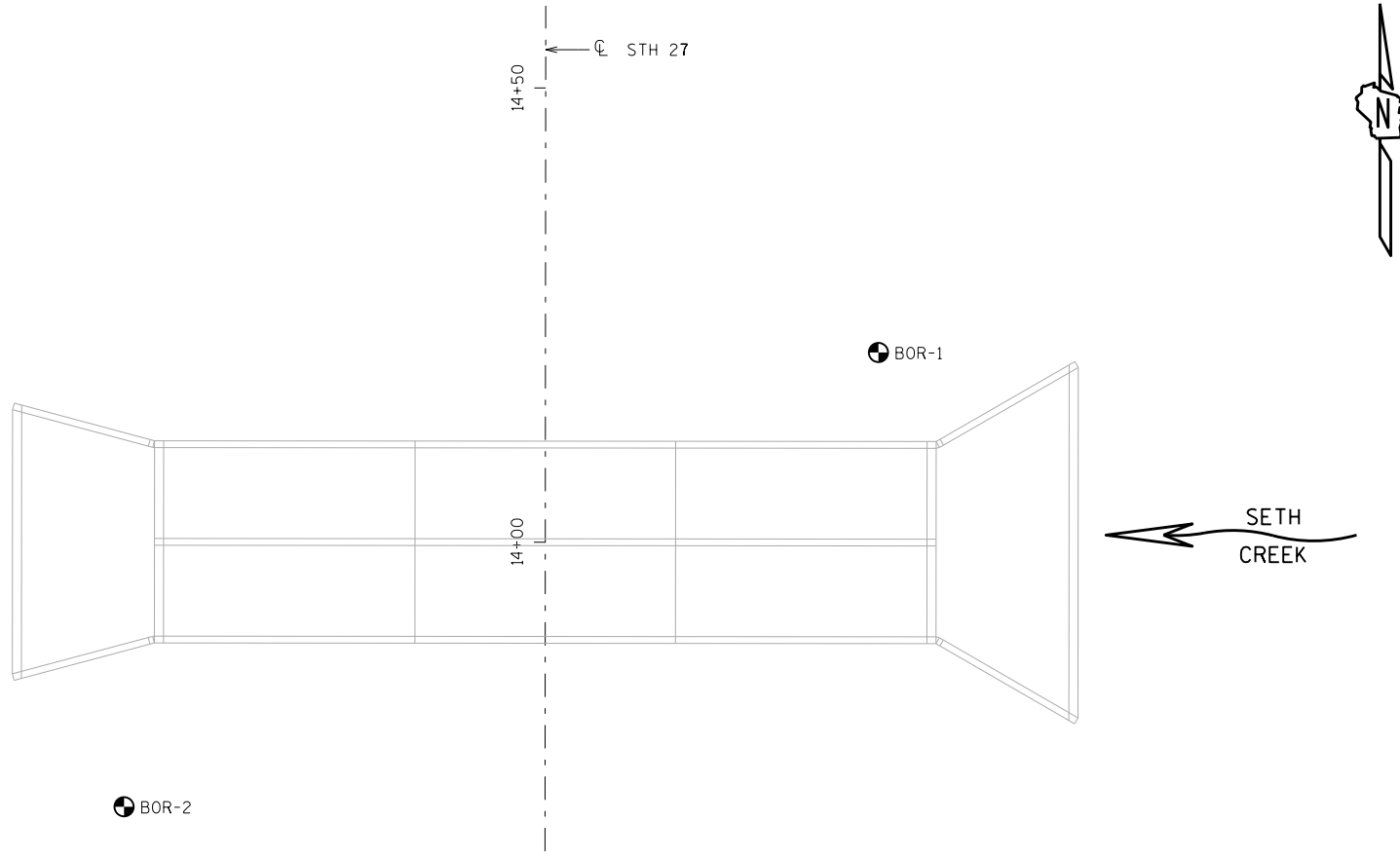
■ 1" BEVEL, TYP.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-9-388			
DRAWN BY		MJL	PLANS CK'D. BAF
APRON DETAILS			SHEET 4

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1/02/2019	149187	235236
2	1/02/2019	149137	235153

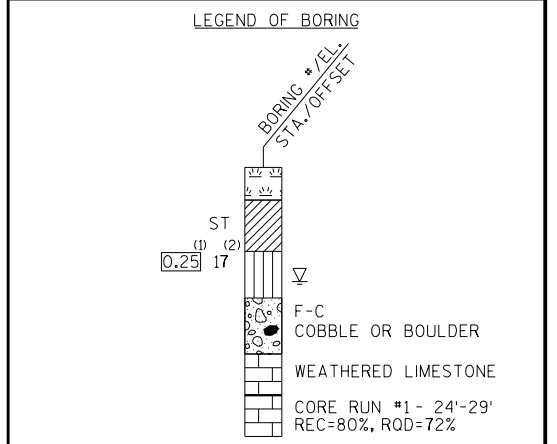
BORINGS COMPLETED BY: AET
 REPORT COMPLETED BY: WISDOT
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY
 COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT



STATE PROJECT NUMBER
8200-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META



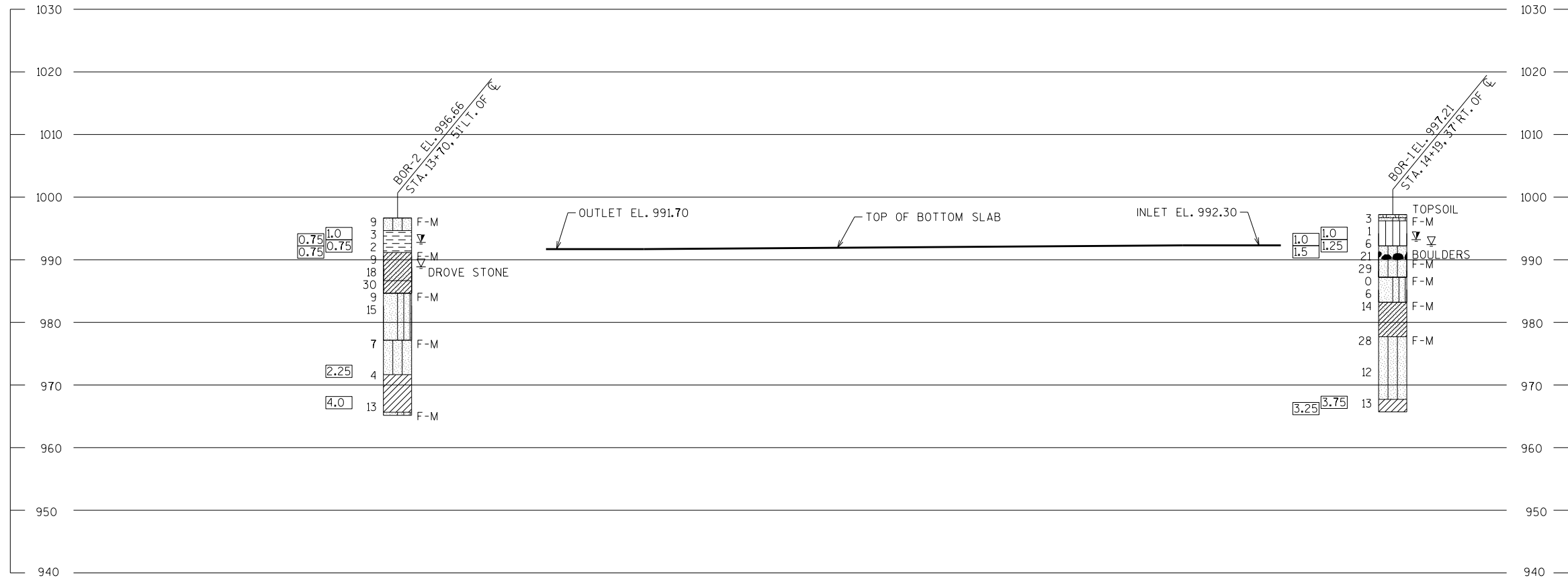
(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
 (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION
 ▽ AT TIME OF DRILLING
 ▽ END OF DRILLING
 ▽ AFTER DRILLING

ABBREVIATIONS
 F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



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NO.	DATE	REVISION	BY

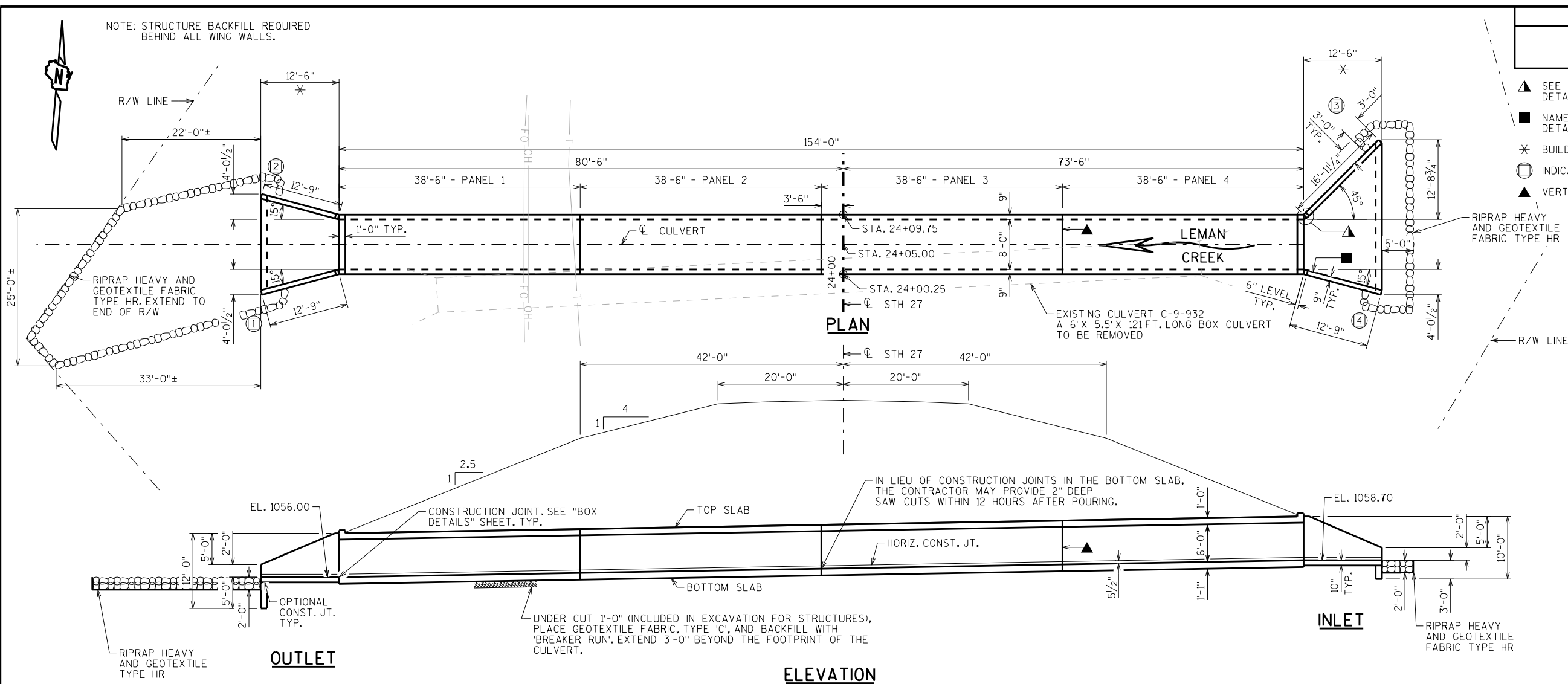
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
STRUCTURE B-09-388

DRAWN BY: TLP/MJL PLANS CKD. BAF

SUBSURFACE EXPLORATION SHEET 5

SCALE = 10

- ▲ SEE CORNER DETAILS ON "APRON DETAILS" SHEET (TYP.)
- NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- * BUILD APRON AND END OF BOX LEVEL
- INDICATES WING NUMBER
- ▲ VERT. CONST. JOINT (TYP.)



RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR

R/W LINE

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON DETAILS
5. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
LAURA SHADEWALD (608) 267-9592

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-9-49" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:
DESIGNED FOR 20 FT. OF FILL.

MATERIAL PROPERTIES:
CONCRETE MASONRY: f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT: fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY
Q₁₀₀ = 200 C.F.S.
VEL₁₀₀ = 14.1 F.P.S.
HW₁₀₀ = EL. 1064.13
WATERWAY AREA = 48 SQ. FT.
DRAINAGE AREA = 1 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

TRAFFIC VOLUME

STH 27
ADT = 3,100 (2021)
R.D.S. = 55 M.P.H.

2 YEAR FREQUENCY

Q₂ = 39 C.F.S.
VEL₂ = 3.2 F.P.S.
HW₂ = EL. 1060.64

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 24+00	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-9-49	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	2,295
311.0115	BREAKER RUN	CY	109
504.0100	CONCRETE MASONRY CULVERTS	CY	188
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	19,540
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,220
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	27
606.0300	RIPRAP HEAVY	CY	69
645.0105	GEOTEXTILE TYPE C	SY	366
645.0120	GEOTEXTILE TYPE HR	SY	138
	NON-BID ITEMS		
	FILLER	EACH	3/4"

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ACCEPTED *William C. Dehn* 11/1/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-9-49

STH 27 OVER LEMAN CREEK

COUNTY CHIPPewa TOWN ESTELLA

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY M.J.L. DESIGNED CK'D. BAF DRAWN BY M.J.L. PLANS CK'D. BAF

LAYOUT

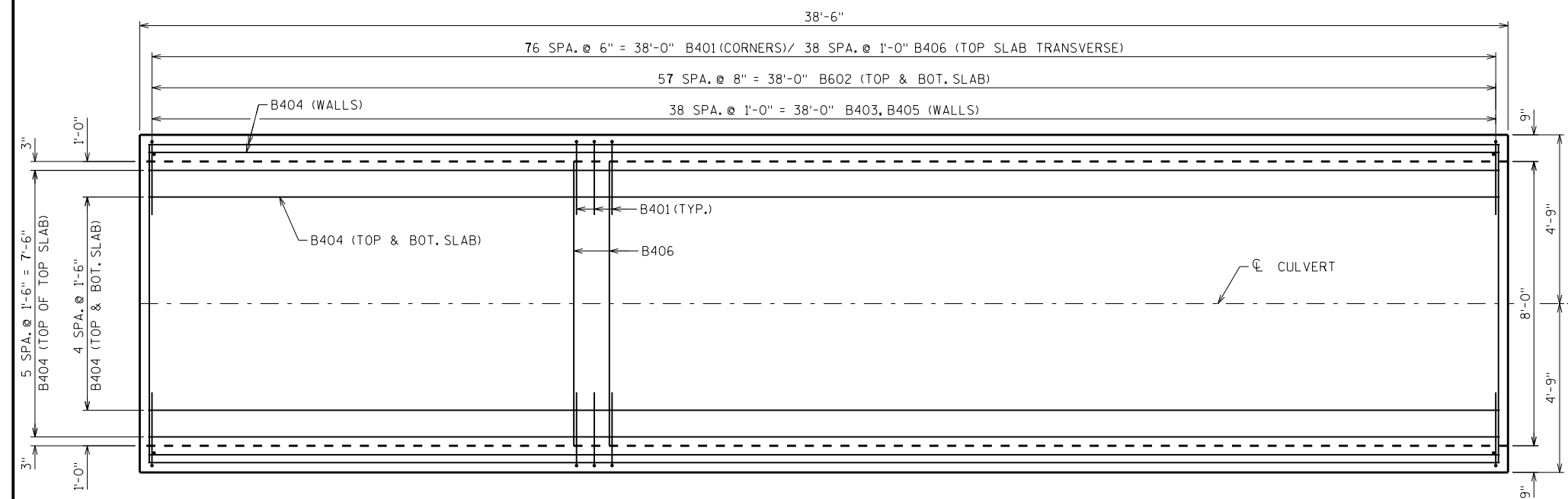
SHEET 1 OF 5

SCALE = 9.00

BILL OF BARS

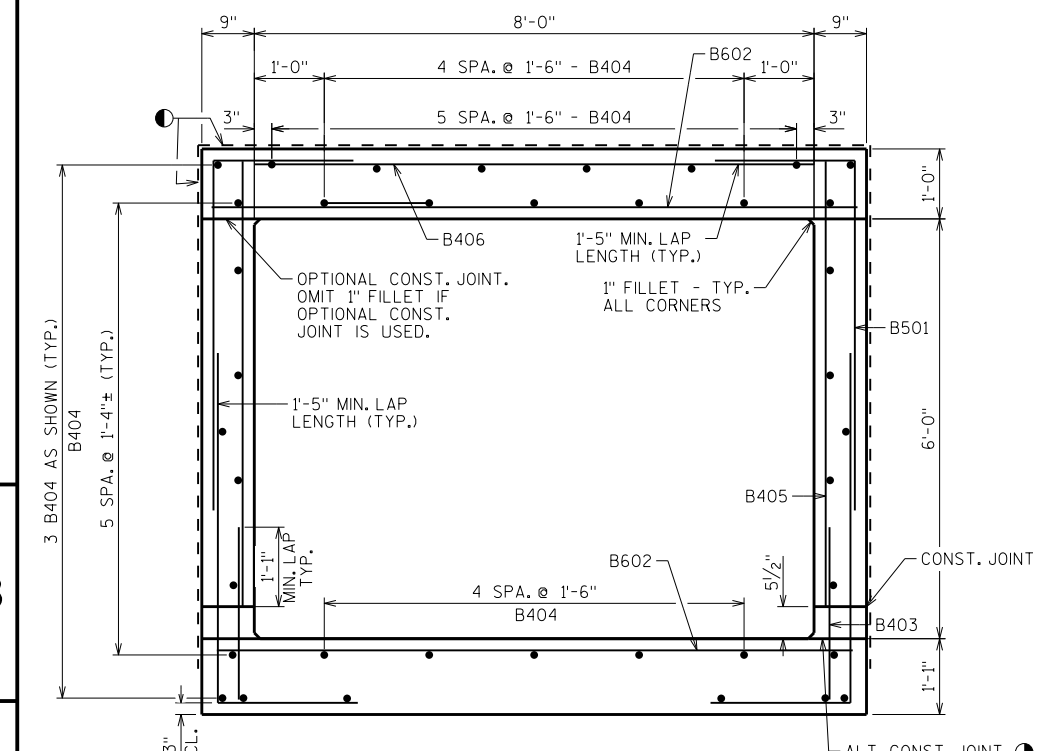
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		1232	6'-6"	X		CORNERS
B602		464	9'-2"			TOP & BOTTOM SLAB TRANS.
B403		312	2'-5"			WALLS - DOWELS VERT.
B404		152	38'-2"			BOX - HORIZONTAL
B405		312	6'-4"			WALLS VERT.
B406		156	8'-0"			TOP SLAB TRANS.
B407		4	9'-2"			HEADER HORIZ.
B308		13	3'-2"	X		HEADER STIRRUPS VERT. - OUTLET
B309		13	2'-10"	X		HEADER STIRRUPS VERT. - INLET
B510		96	4'-0"			VERT. CONST. JOINT
B511		20	4'-0"			APRON CONNECTION JOINT



PLAN VIEW OF PANEL

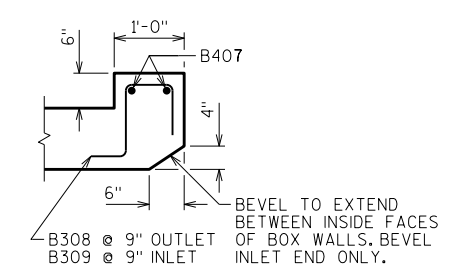
USE IDENTICAL STEEL IN OTHER PANELS
APRON AND HEADERS ARE NOT SHOWN



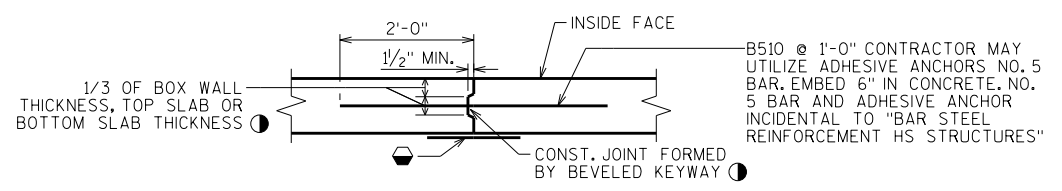
TYPICAL SECTION THRU BOX

ALL LONGITUDINAL BARS NOT LABELED ARE B404 BARS AS SHOWN

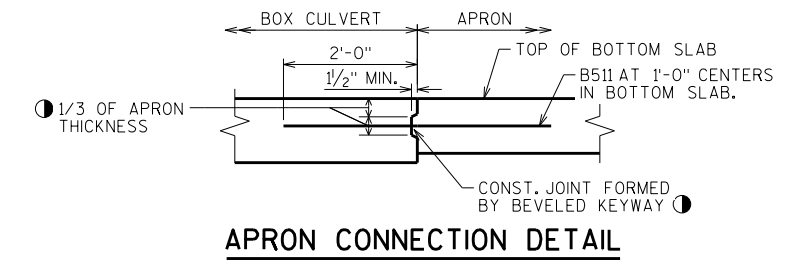
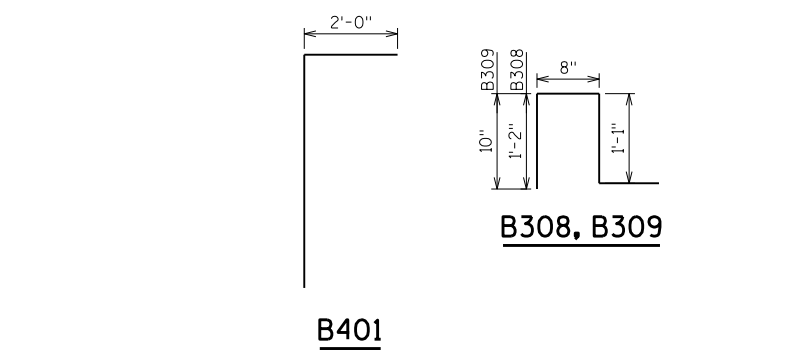
⊙ OMIT 1" FILLET IF ALT. CONST. JOINT IS USED



SECTION THRU HEADER



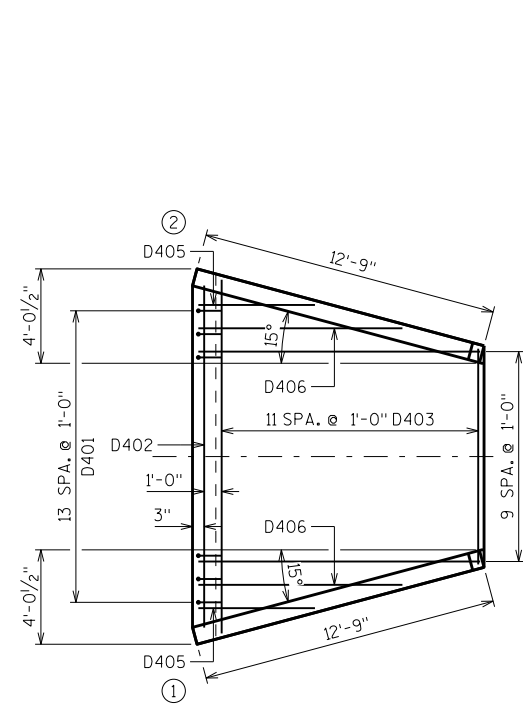
VERTICAL CONSTRUCTION JOINT



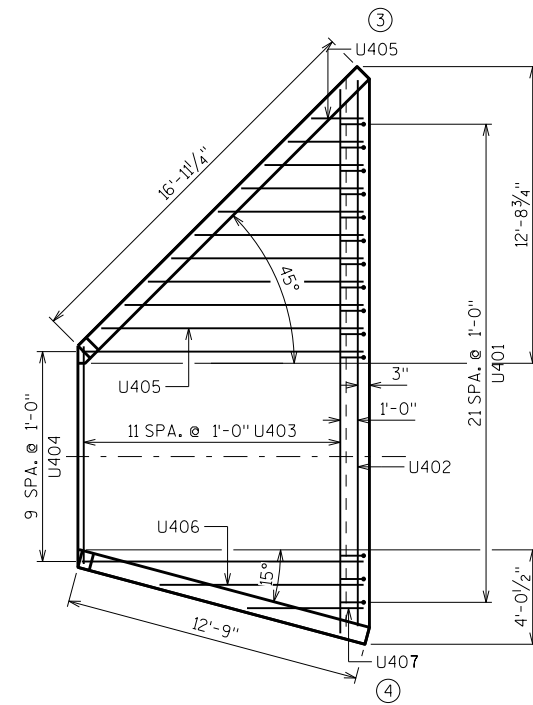
⊙ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

⊙ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

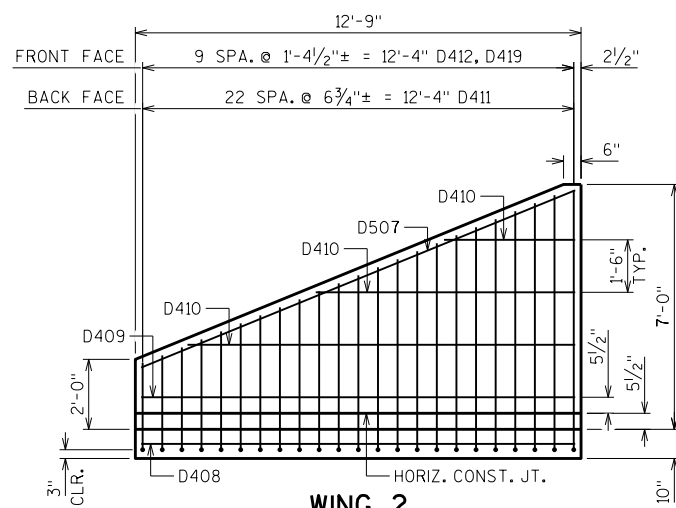
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-49			
DRAWN BY		MJL	PLANS CK'D. BAF
BOX DETAILS		SHEET 2	



OUTLET APRON PLAN

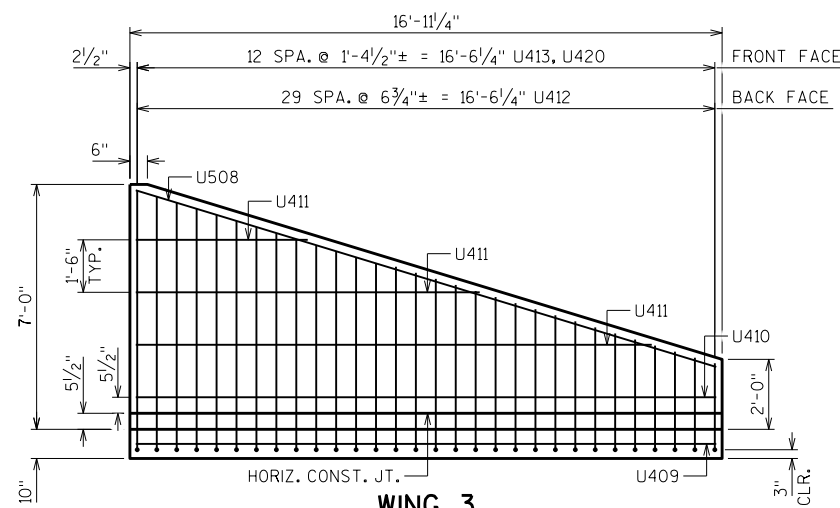


INLET APRON PLAN



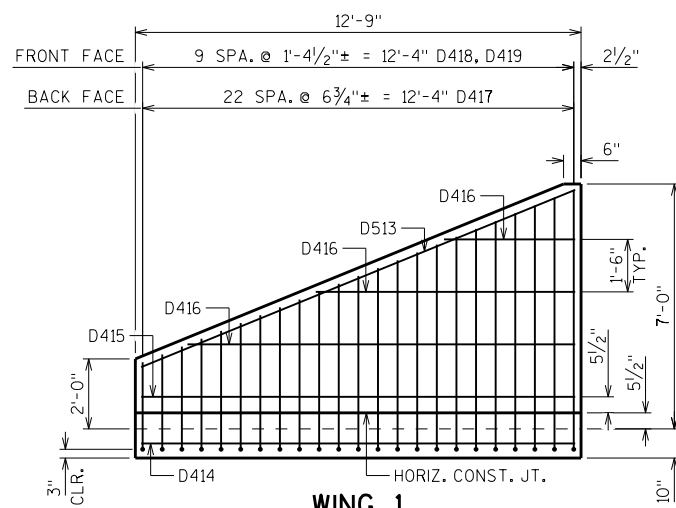
WING 2

SHOWING BACK FACE REINFORCEMENT



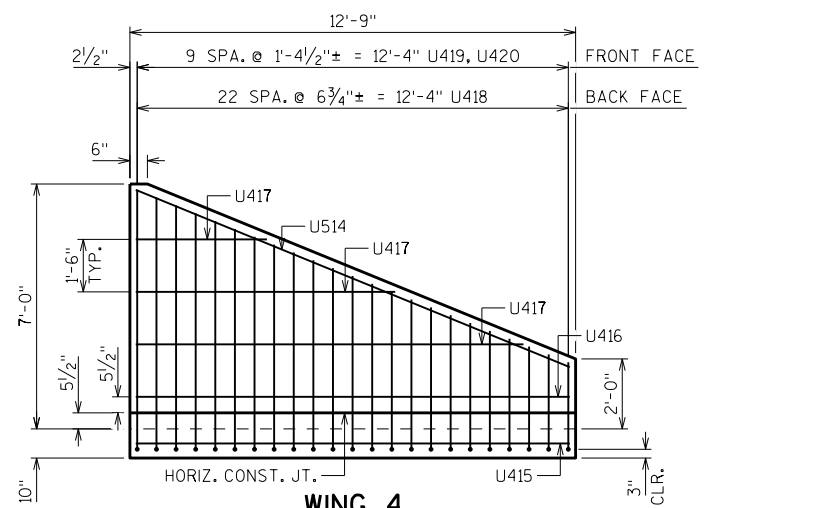
WING 3

SHOWING BACK FACE REINFORCEMENT



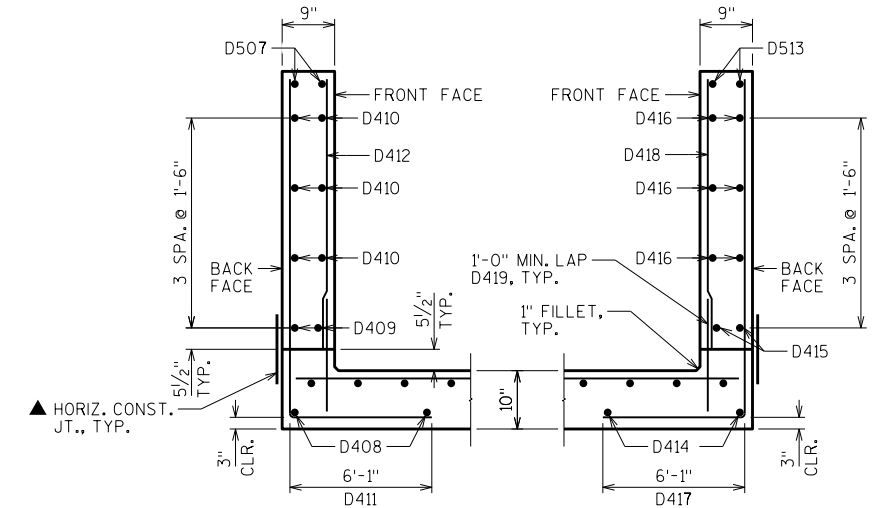
WING 1

SHOWING BACK FACE REINFORCEMENT



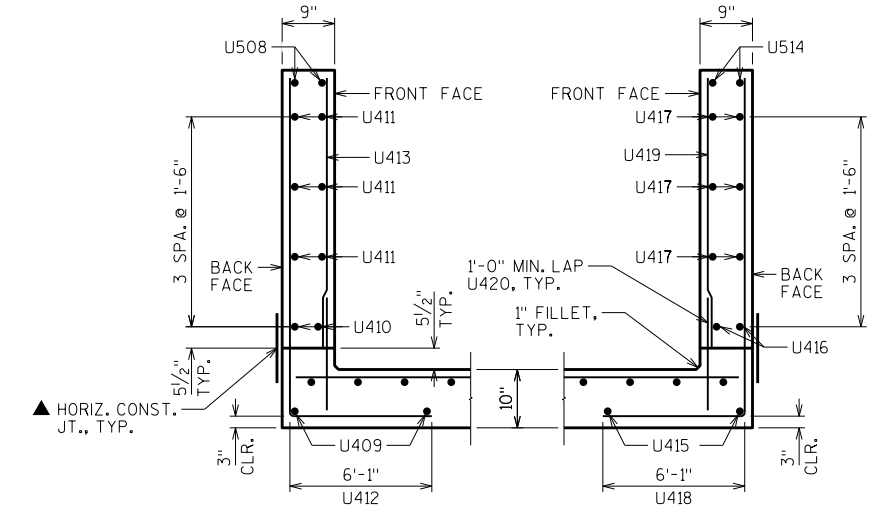
WING 4

SHOWING BACK FACE REINFORCEMENT



WING 2 SECTION

WING 1 SECTION



WING 3 SECTION

WING 4 SECTION

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH, TYP.

8

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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-49			
DRAWN BY		MJL	PLANS CK'D. BAF
APRON		SHEET 3	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

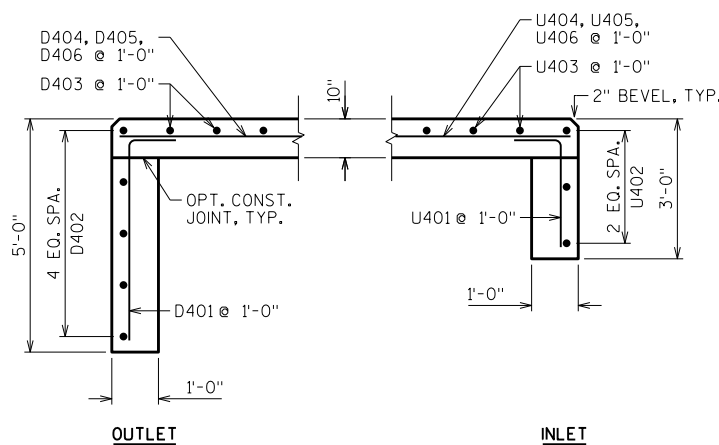
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D401		14	5'-6"	X		OUTLET APRON AND CUTOFF WALL VERT.
D402		5	14'-8"			OUTLET APRON AND CUTOFF WALL HORIZ.
D403		12	12'-3"	▲		OUTLET APRON SLAB HORIZ.
D404		10	12'-1"			OUTLET APRON HORIZ.
D405		2	5'-0"			OUTLET APRON SLAB HORIZ.
D406		2	8'-9"			OUTLET APRON SLAB HORIZ.
D507	X	2	13'-4"			WING 2 HORIZ. TOP BOTH FACES
D408		2	12'-4"			WING 2 HORIZ. APRON SLAB
D409	X	2	12'-4"			WING 2 HORIZ. BOTTOM BOTH FACES
D410	X	6	7'-5"	▲		WING 2 HORIZ.
D411	X	23	11'-0"	X	▲	WING 2 VERT. BACK FACE
D412	X	10	3'-11"	▲		WING 2 VERT. FRONT FACE
D513	X	2	13'-4"			WING 1 HORIZ. TOP BOTH FACES
D414		2	12'-4"			WING 1 HORIZ. APRON SLAB
D415	X	2	12'-4"			WING 1 HORIZ. BOTTOM BOTH FACES
D416	X	6	7'-5"	▲		WING 1 HORIZ.
D417	X	23	11'-0"	X	▲	WING 1 VERT. BACK FACE
D418	X	10	3'-11"	▲		WING 1 VERT. FRONT FACE
D419	X	20	2'-1"			WINGS 1 & 2 DOWELS FRONT FACE
U401		22	3'-6"	X		INLET APRON AND CUTOFF WALL VERT.
U402		3	23'-5"			INLET APRON AND CUTOFF WALL HORIZ.
U403		12	16'-4"	▲		INLET APRON SLAB HORIZ.
U404		10	12'-1"			INLET APRON HORIZ.
U405		10	6'-9"	▲		INLET APRON SLAB HORIZ.
U406		1	8'-9"			INLET APRON SLAB HORIZ.
U407		1	5'-0"			INLET APRON SLAB HORIZ.
U508	X	2	17'-0"			WING 3 HORIZ. TOP BOTH FACES
U409		2	16'-6"			WING 3 HORIZ. APRON SLAB
U410	X	2	16'-6"			WING 3 HORIZ. BOTTOM BOTH FACES
U411	X	6	9'-10"	▲		WING 3 HORIZ.
U412	X	30	11'-0"	X	▲	WING 3 VERT. BACK FACE
U413	X	13	3'-11"	▲		WING 3 VERT. FRONT FACE
U514	X	2	13'-4"			WING 4 HORIZ. TOP BOTH FACES
U415		2	12'-4"			WING 4 HORIZ. APRON SLAB
U416	X	2	12'-4"			WING 4 HORIZ. BOTTOM BOTH FACES
U417	X	6	7'-5"	▲		WING 4 HORIZ.
U418	X	23	11'-0"	X	▲	WING 4 VERT. BACK FACE
U419	X	10	3'-11"	▲		WING 4 VERT. FRONT FACE
U420	X	23	2'-1"			WINGS 3 & 4 DOWELS FRONT FACE

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

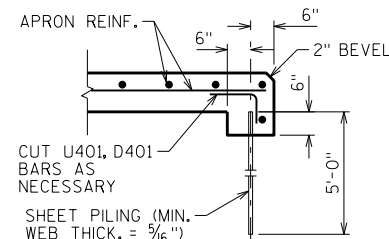
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
D403	1 SERIES OF 12	9'-3" TO 15'-2"
D410	2 SERIES OF 3	3'-9" TO 11'-1"
D411	1 SERIES OF 23	8'-6" TO 13'-5"
D412	1 SERIES OF 10	1'-5" TO 6'-4"
D416	2 SERIES OF 3	3'-9" TO 11'-1"
D417	1 SERIES OF 23	8'-6" TO 13'-5"
D418	1 SERIES OF 10	1'-5" TO 6'-4"
U403	1 SERIES OF 12	9'-4" TO 23'-4"
U405	1 SERIES OF 10	2'-3" TO 11'-3"
U411	2 SERIES OF 3	4'-11" TO 14'-9"
U412	1 SERIES OF 30	8'-6" TO 13'-5"
U413	1 SERIES OF 13	1'-5" TO 6'-4"
U417	2 SERIES OF 3	3'-9" TO 11'-1"
U418	1 SERIES OF 23	8'-6" TO 13'-5"
U419	1 SERIES OF 10	1'-5" TO 6'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY

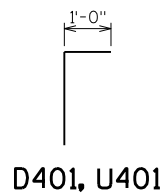


CUT-OFF WALLS

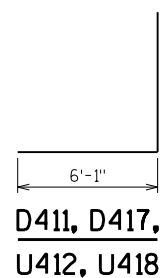


ALTERNATE CUT-OFF WALLS

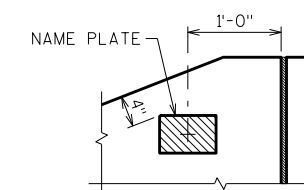
THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.



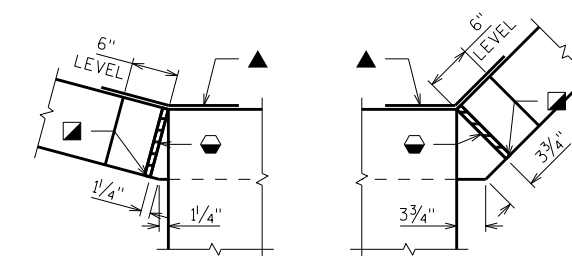
D401, U401



D411, D417, U412, U418

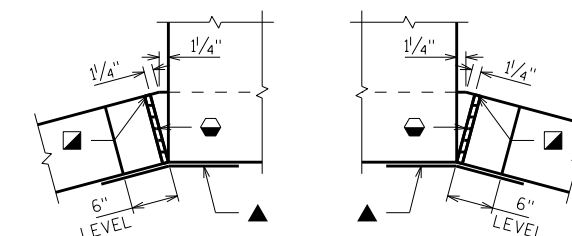


NAME PLATE LOCATION WING 4



CORNER 2

CORNER 3



CORNER 1

CORNER 4

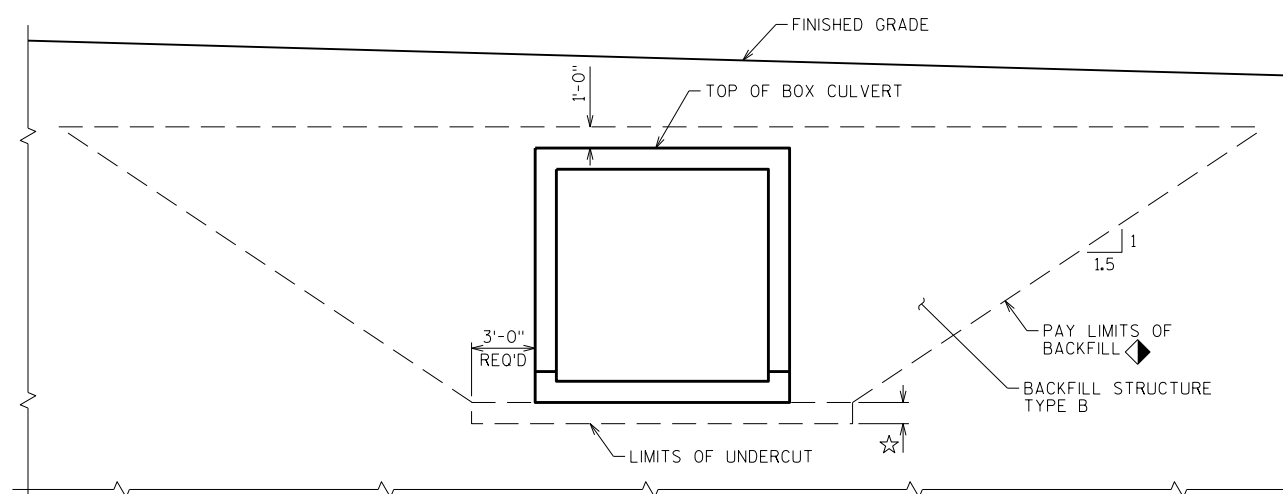
CORNER DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-49			
DRAWN BY		MJL	PLANS CK'D. BAF
APRON DETAILS			SHEET 4

● 3/4" FILLER, TYP. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.

▣ 1" BEVEL, TYP.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.



TYPICAL SECTION THRU BOX CULVERT

◆ BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1/04/2019	201442	231246
2	1/03/2019	201510	231080

BORINGS COMPLETED BY: AET
 REPORT COMPLETED BY: WISDOT
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY
 COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT

● BOR-2

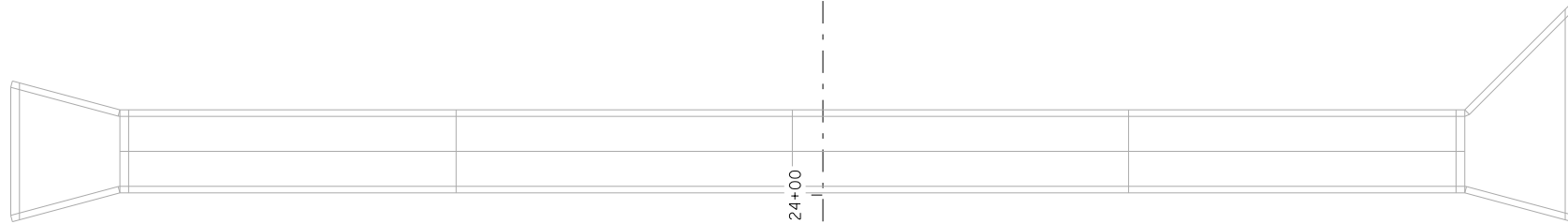
← C STH 27

24+50

24+00

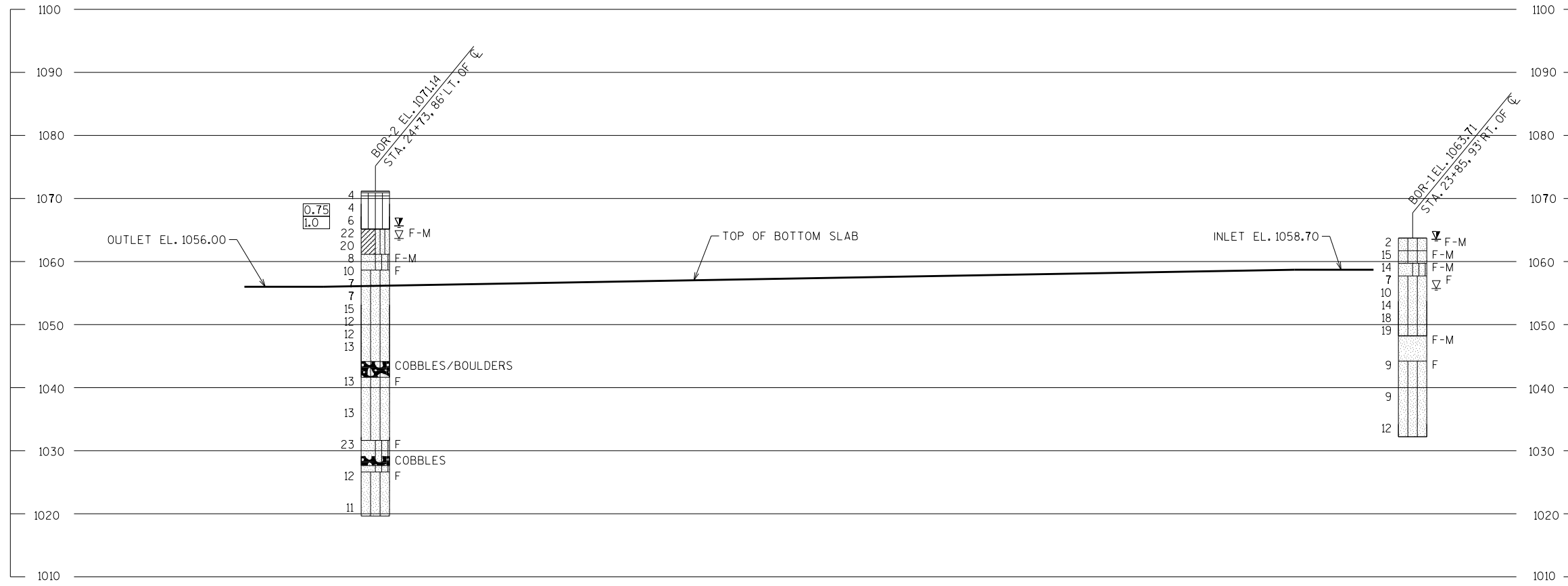


C-09-0049



← LEMAN CREEK

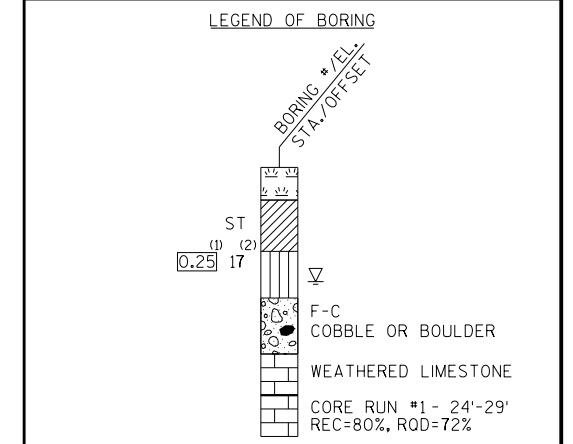
● BOR-1



STATE PROJECT NUMBER
8200-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
 (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION
 ▽ AT TIME OF DRILLING
 ▽ END OF DRILLING
 ▽ AFTER DRILLING

ABBREVIATIONS
 F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

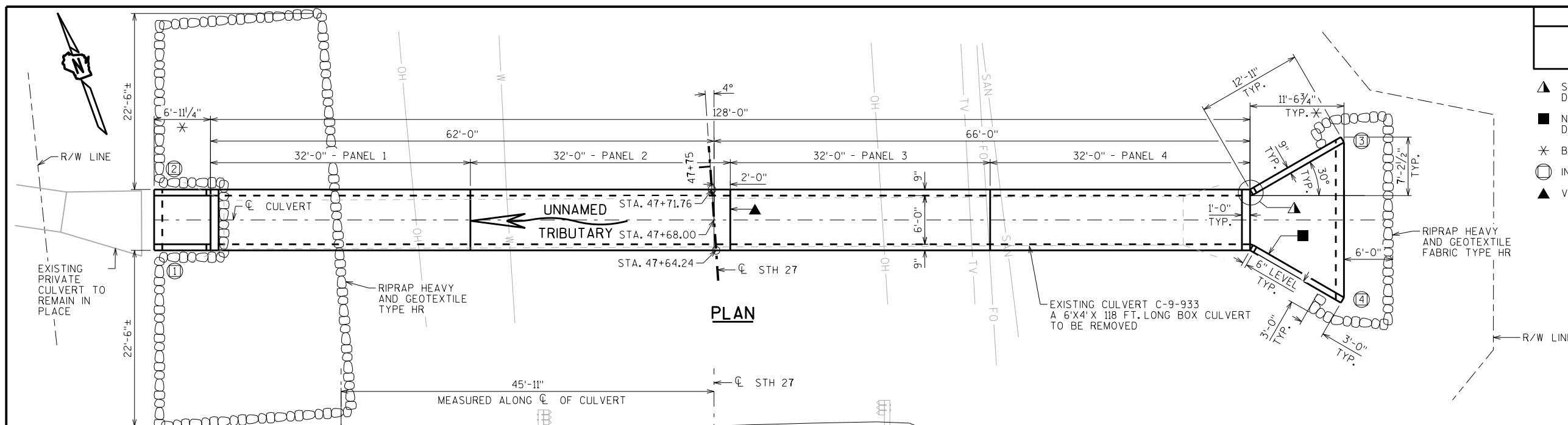
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-09-49			
DRAWN BY: TLP/MJL		PLANS CKD. BAF	
SUBSURFACE EXPLORATION			SHEET 5

8

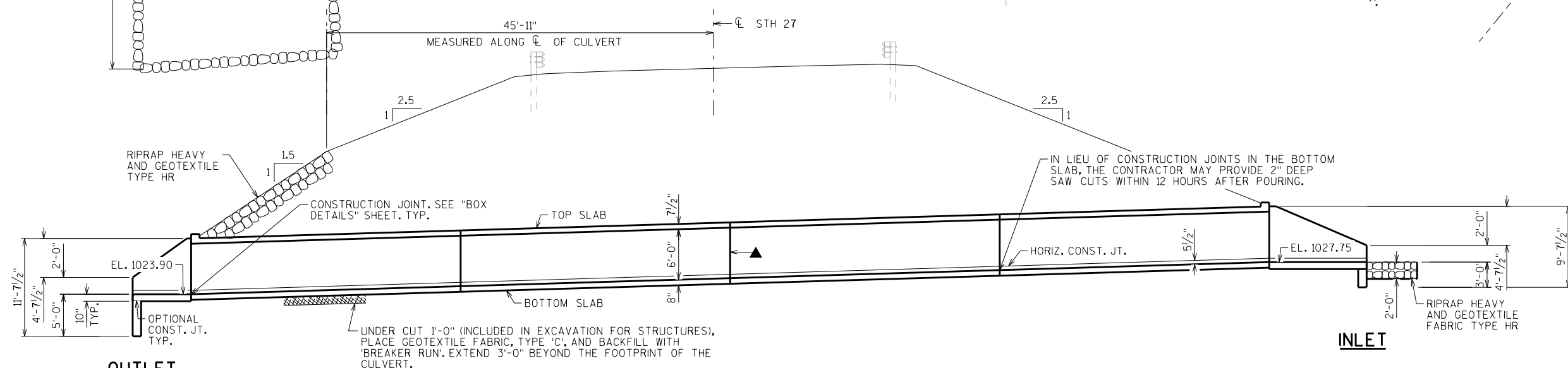
8

SCALE = 10

- ▲ SEE CORNER DETAILS ON "APRON DETAILS" SHEET (TYP.)
- NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- * BUILD APRON AND END OF BOX LEVEL
- INDICATES WING NUMBER
- ▲ VERT. CONST. JOINT (TYP.)



PLAN



ELEVATION

INLET

OUTLET

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON DETAILS
5. SUBSURFACE EXPLORATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-9-50" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #10R #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
 LAURA SHADEWALD (608) 267-9592

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: RF = 1.05
 OPERATING RATING FACTOR: RF = 1.35
 WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255 (KIPS)

EARTHLOAD:
 DESIGNED FOR 19 FT. OF FILL.

MATERIAL PROPERTIES:
 CONCRETE MASONRY: f'c = 3,500 P.S.I.
 BAR STEEL REINFORCEMENT: fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY
 Q₁₀₀ = 200 C.F.S.
 VEL₁₀₀ = 10.2 F.P.S.
 HW₁₀₀ = EL. 1041.59
 WATERWAY AREA = 36 SQ. FT.
 DRAINAGE AREA = 0.63 SQ. MI.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 8

TRAFFIC VOLUME

STH 27
 ADT = 3,100 (2021)
 R.D.S. = 45 M.P.H.

2 YEAR FREQUENCY

Q₂ = 30 C.F.S.
 VEL₂ = 7.6 F.P.S.
 HW₂ = EL. 1040.43

TOTAL ESTIMATED QUANTITIES

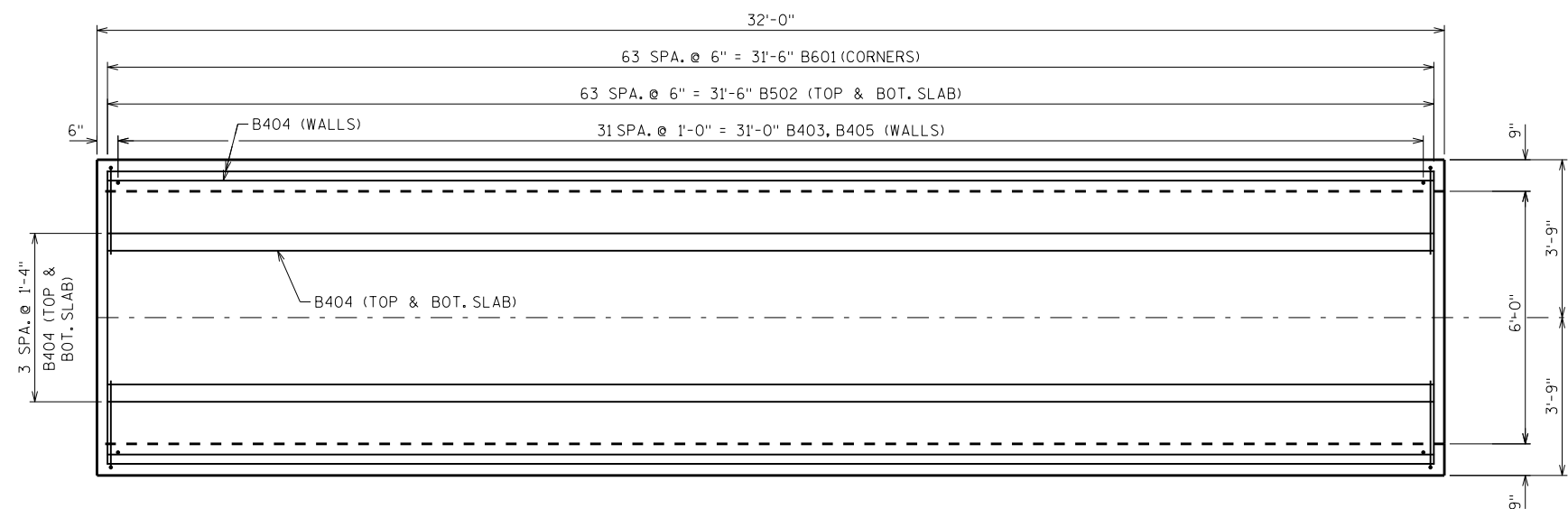
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 47+68	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-9-50	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1,625
311.0115	BREAKER RUN	CY	77
504.0100	CONCRETE MASONRY CULVERTS	CY	104
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	18,850
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	870
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	22
606.0300	RIPRAP HEAVY	CY	96
645.0105	GEOTEXTILE TYPE C	SY	262
645.0120	GEOTEXTILE TYPE HR	SY	186
	NON-BID ITEMS		
	FILLER	EACH	3/4"

NO.	DATE	REVISION	BY
ACCEPTED		William C. Decker CHIEF STRUCTURES DESIGN ENGINEER DATE: 11/1/19	
STRUCTURE C-9-50			
STH 27 OVER UNNAMED TRIBUTARY			
COUNTY	CHIPPewa	CITY	CORNELL
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	MJL	DRAWN BY	MJL
DESIGNED CK'D.	BAF	PLANS CK'D.	BAF
LAYOUT			SHEET 1 OF 5

BILL OF BARS

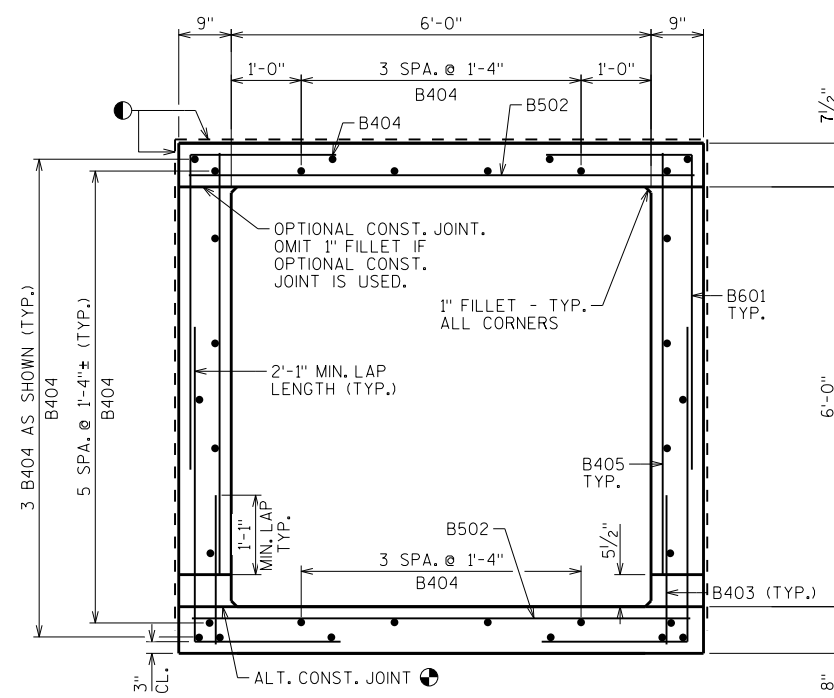
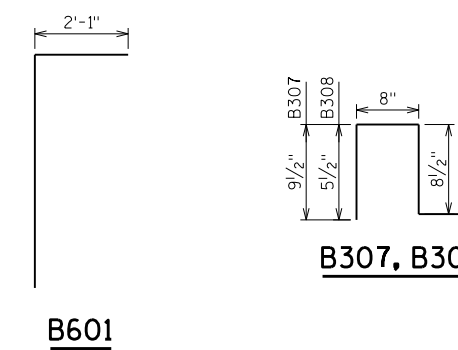
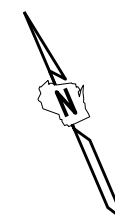
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		1024	6'-6"	X		CORNERS
B502		512	7'-2"			TOP & BOTTOM SLAB TRANS.
B403		264	2'-0"			WALLS - DOWELS VERT.
B404		128	31'-8"			LONGITUDINAL
B405		264	6'-0"			WALLS VERT.
B406		4	7'-2"			HEADER HORIZ.
B307		11	2'-5"	X		HEADER STIRRUPS VERT. - OUTLET
B308		11	2'-1"	X		HEADER STIRRUPS VERT. - INLET
B509		84	4'-0"			VERT. CONST. JOINT
B510		16	4'-0"			APRON CONNECTION JOINT



PLAN VIEW OF PANEL

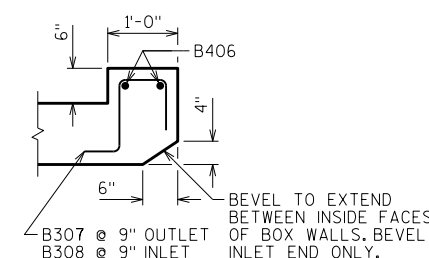
USE IDENTICAL STEEL IN OTHER PANELS
APRON AND HEADERS ARE NOT SHOWN



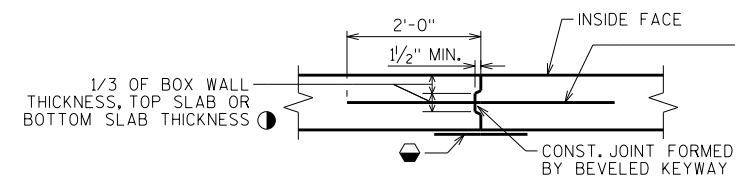
TYPICAL SECTION THRU BOX

ALL LONGITUDINAL BARS NOT LABELED
ARE B404 BARS AS SHOWN

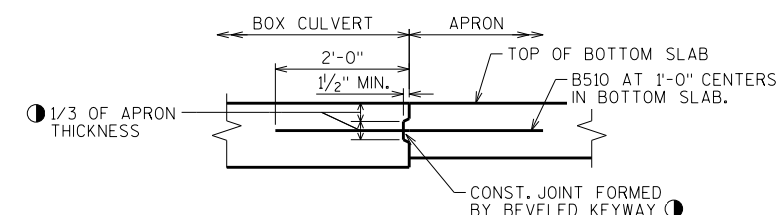
⊙ OMIT 1" FILLET IF ALT.
CONST. JOINT IS USED



SECTION THRU HEADER



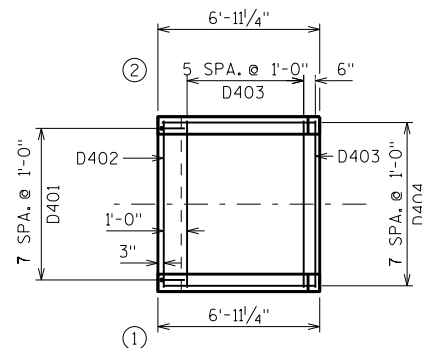
VERTICAL CONSTRUCTION JOINT



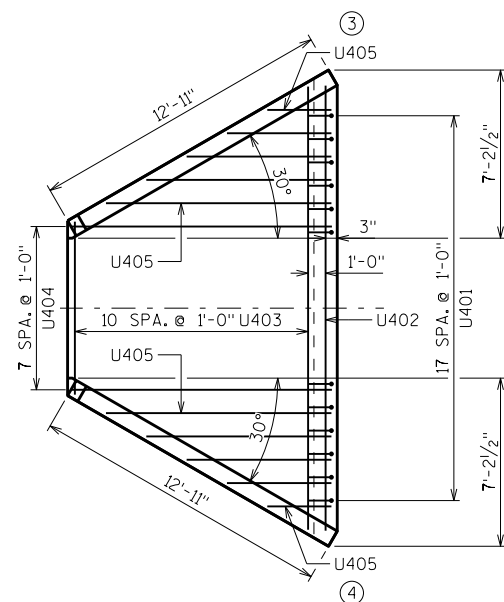
APRON CONNECTION DETAIL

⊙ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB,
THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN
12 HOURS AFTER POURING.

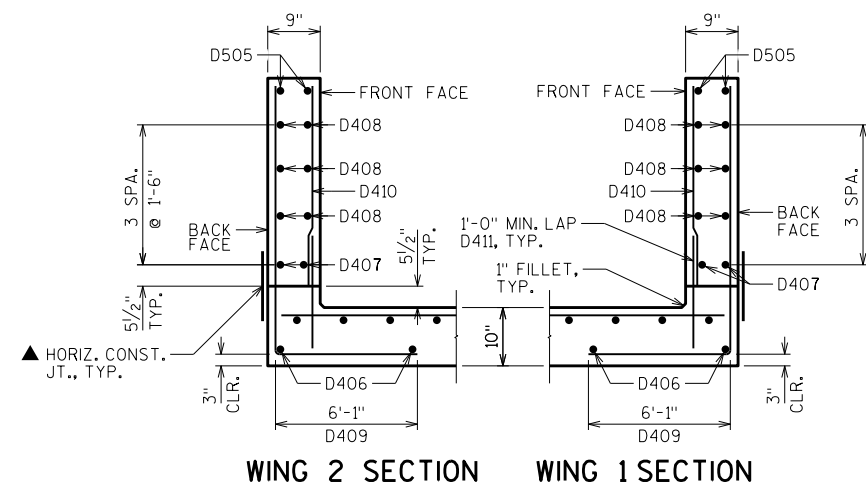
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-50			
DRAWN BY		MJL	PLANS CK'D. BAF
BOX DETAILS		SHEET 2	



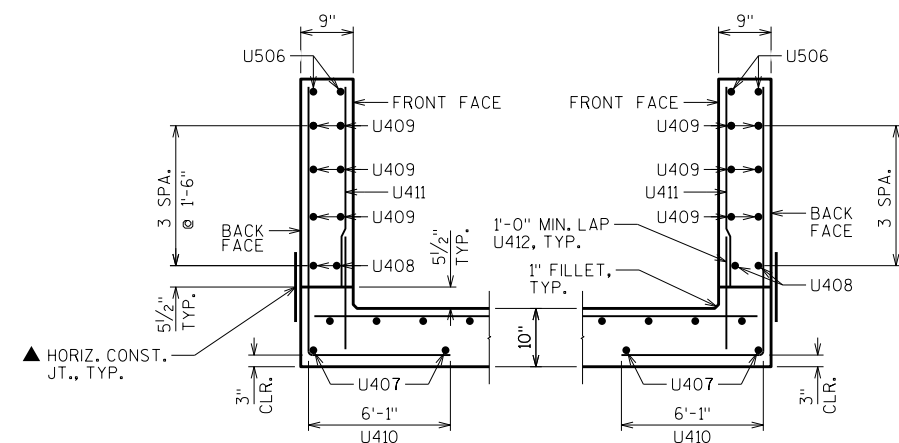
OUTLET APRON PLAN



INLET APRON PLAN

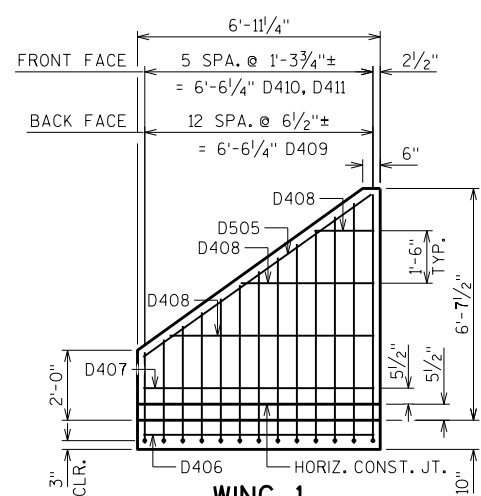


WING 2 SECTION WING 1 SECTION



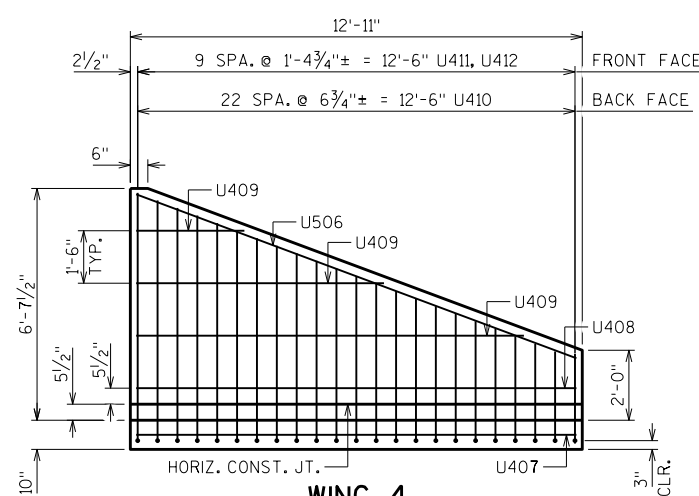
WING 3 SECTION WING 4 SECTION

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH, TYP.



WING 1

SHOWING BACK FACE REINFORCEMENT WING 2 SIMILAR



WING 4

SHOWING BACK FACE REINFORCEMENT WING 3 SIMILAR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-50			
DRAWN BY		MJL	PLANS CKD. BAF
APRON		SHEET 3	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

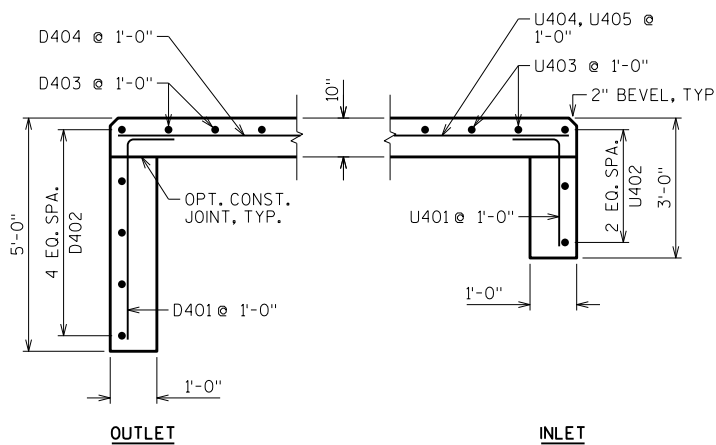
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D401		8	5'-6"	X		OUTLET APRON AND CUTOFF WALL VERT.
D402		5	7'-0"			OUTLET APRON AND CUTOFF WALL HORIZ.
D403		7	7'-2"			OUTLET APRON SLAB HORIZ.
D404		8	6'-6"			OUTLET APRON HORIZ.
D505	X	4	8'-0"			OUTLET WINGS HORIZ. TOP BOTH FACES
D406		4	6'-6"			OUTLET APRON SLAB
D407	X	4	6'-6"			OUTLET WINGS HORIZ. BOTTOM BOTH FACES
D408	X	12	3'-9"		▲	OUTLET WINGS HORIZ.
D409	X	26	10'-10"	X	▲	OUTLET WINGS VERT. BACK FACE
D410	X	12	3'-9"		▲	OUTLET WINGS VERT. FRONT FACE
D411	X	12	2'-1"			OUTLET WINGS DOWELS FRONT FACE
U401		18	3'-6"	X		INLET APRON AND CUTOFF WALL VERT.
U402		3	19'-1"			INLET APRON AND CUTOFF WALL HORIZ.
U403		11	13'-3"		▲	INLET APRON SLAB HORIZ.
U404		8	11'-1"			INLET APRON HORIZ.
U405		10	6'-3"		▲	INLET APRON SLAB HORIZ.
U506	X	4	13'-5"			INLET WINGS HORIZ. TOP BOTH FACES
U407		4	12'-6"			INLET APRON SLAB
U408	X	4	12'-6"			INLET WINGS HORIZ. BOTTOM BOTH FACES
U409	X	12	7'-1"		▲	INLET WINGS HORIZ.
U410	X	46	10'-10"	X	▲	INLET WINGS VERT. BACK FACE
U411	X	20	3'-9"		▲	INLET WINGS VERT. FRONT FACE
U412	X	20	2'-1"			INLET WINGS DOWELS FRONT FACE

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

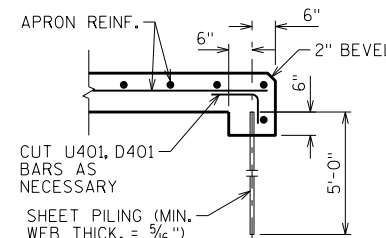
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
D408	4 SERIES OF 3	1'-8" TO 5'-10"
D409	2 SERIES OF 13	8'-7" TO 13'-1"
D410	2 SERIES OF 6	1'-5" TO 6'-0"
U403	1 SERIES OF 11	7'-5" TO 19'-0"
U405	2 SERIES OF 5	2'-9" TO 9'-8"
U409	4 SERIES OF 3	3'-1" TO 11'-1"
U410	2 SERIES OF 23	8'-7" TO 13'-1"
U411	2 SERIES OF 10	1'-5" TO 6'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY

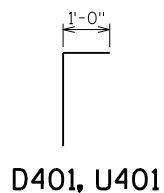


CUT-OFF WALLS

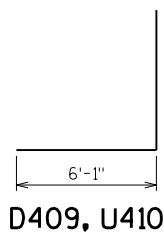


ALTERNATE CUT-OFF WALLS

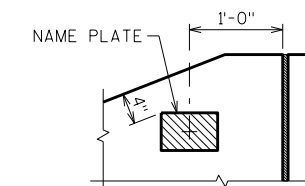
THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.



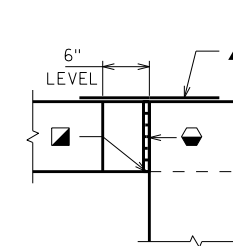
D401, U401



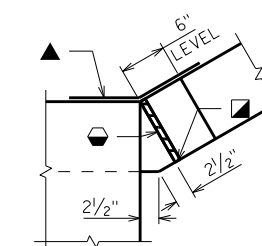
D409, U410



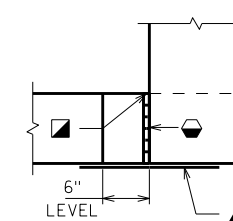
NAME PLATE LOCATION WING 4



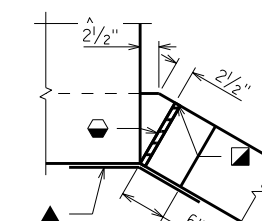
CORNER 2



CORNER 3

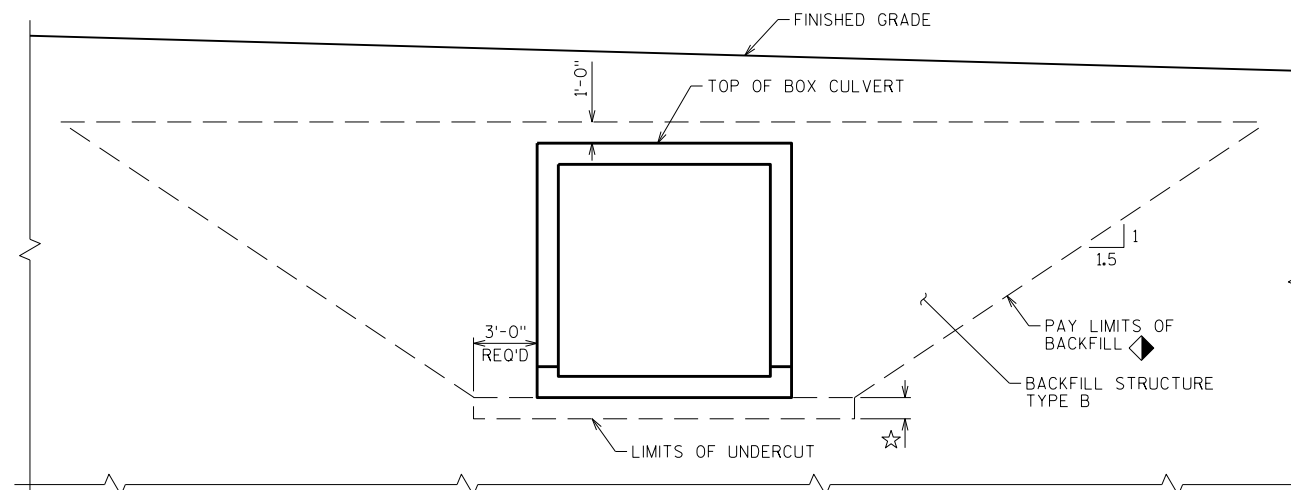


CORNER 1



CORNER 4

CORNER DETAILS



TYPICAL SECTION THRU BOX CULVERT

◆ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

◊ 3/4" FILLER, TYP. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.

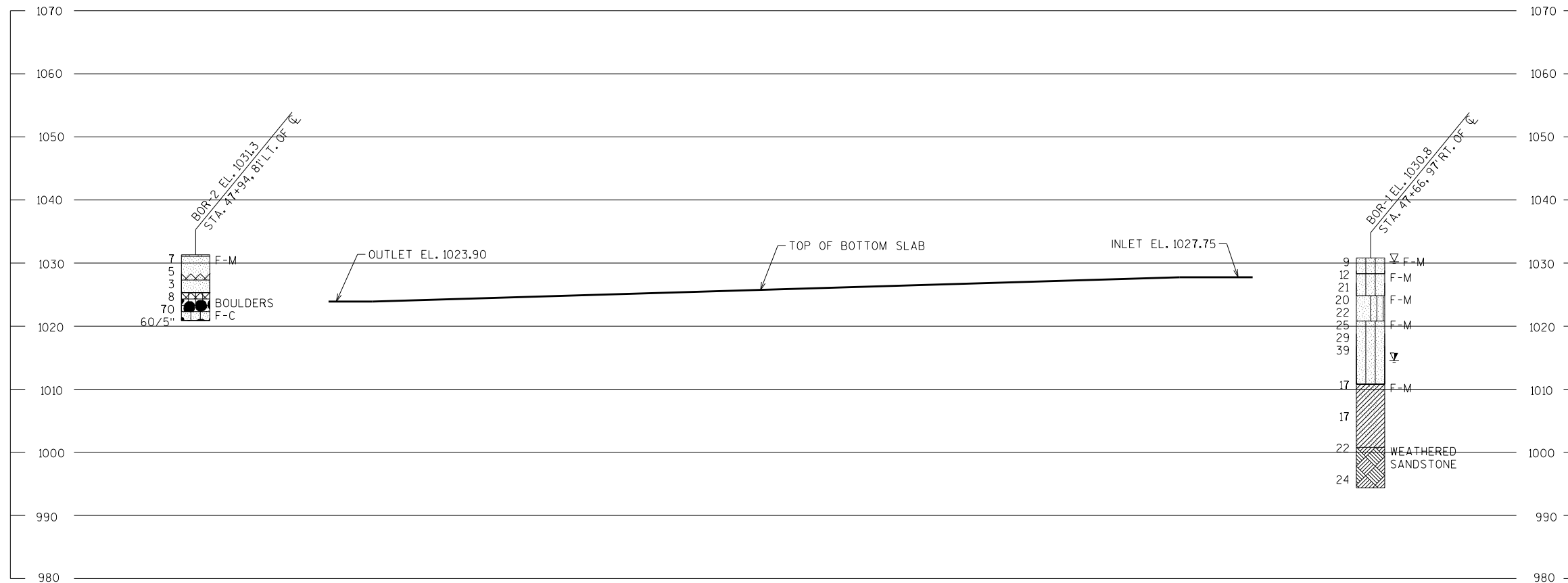
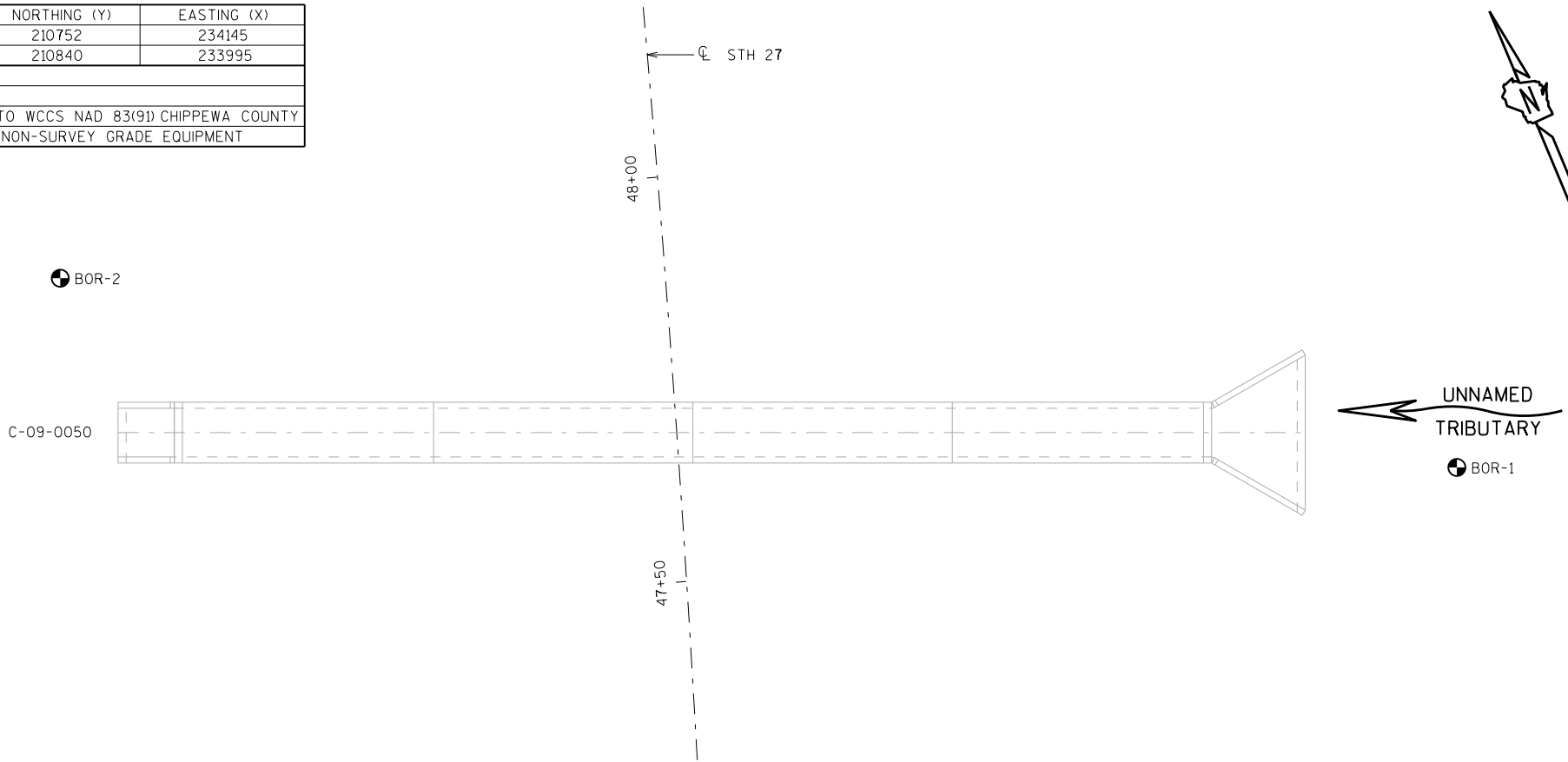
■ 1" BEVEL, TYP.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-50			
DRAWN BY		MJL	PLANS CK'D. BAF
APRON DETAILS		SHEET 4	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	12/26/2018	210752	234145
2	12/26/2018	210840	233995

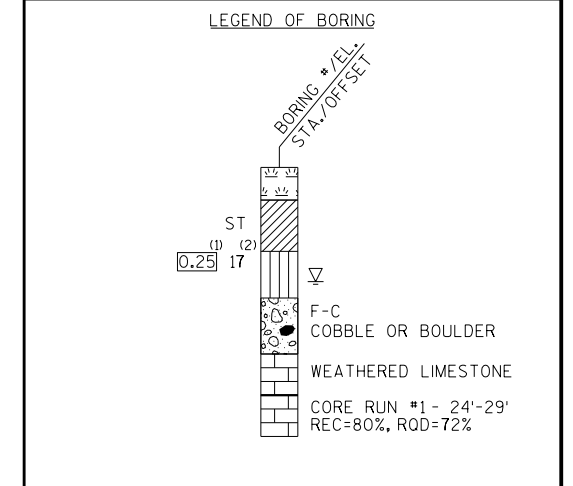
BORINGS COMPLETED BY: AET
 REPORT COMPLETED BY: WISDOT
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY
 COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT



STATE PROJECT NUMBER
8200-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
 (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION
 AT TIME OF DRILLING
 END OF DRILLING
 AFTER DRILLING

ABBREVIATIONS
 F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 STRUCTURES DESIGN SECTION

STRUCTURE C-09-50

DRAWN BY: TLP/MJL PLANS CKD. BAF

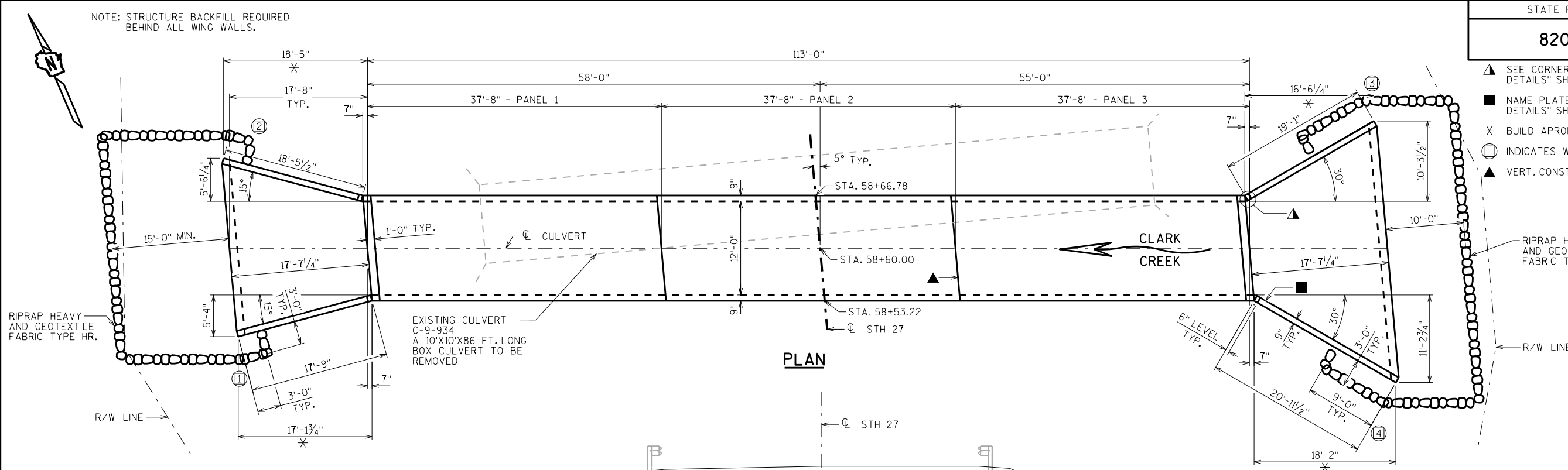
SUBSURFACE EXPLORATION SHEET 5

8

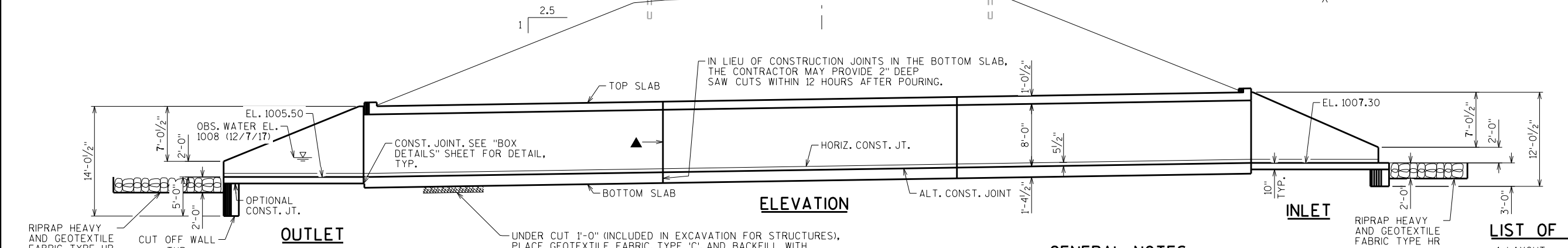
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SCALE = 10

- ▲ SEE CORNER DETAILS ON "APRON DETAILS" SHEET (TYP.)
- NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- * BUILD APRON AND END OF BOX LEVEL
- INDICATES WING NUMBER
- ▲ VERT. CONST. JOINT (TYP.)



PLAN



ELEVATION

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-9-51" SHALL BE THE EXISTING GROUNDLINE.
- ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.
- THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
- THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.
- THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".
- THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON DETAILS
5. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACTS:

BRETT FOLLETT (608) 266-0214
 LAURA SHADEWALD (608) 267-9592

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: RF = 1.05
 OPERATING RATING FACTOR: RF = 1.35
 WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:
 DESIGNED FOR 12.0 TO 13.5 FT. OF FILL.

MATERIAL PROPERTIES:
 CONCRETE MASONRY: f'c = 3,500 P.S.I.
 BAR STEEL REINFORCEMENT: fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY
 Q₁₀₀ = 300 C.F.S.
 VEL₁₀₀ = 13.7 F.P.S.
 HW₁₀₀ = EL. 1012.65
 WATERWAY AREA = 96 SQ. FT.
 DRAINAGE AREA = 2.6 SQ. MI.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 8

TRAFFIC VOLUME

STH 27
 ADT = 3,100 (2021)
 R.D.S. = 45 M.P.H.

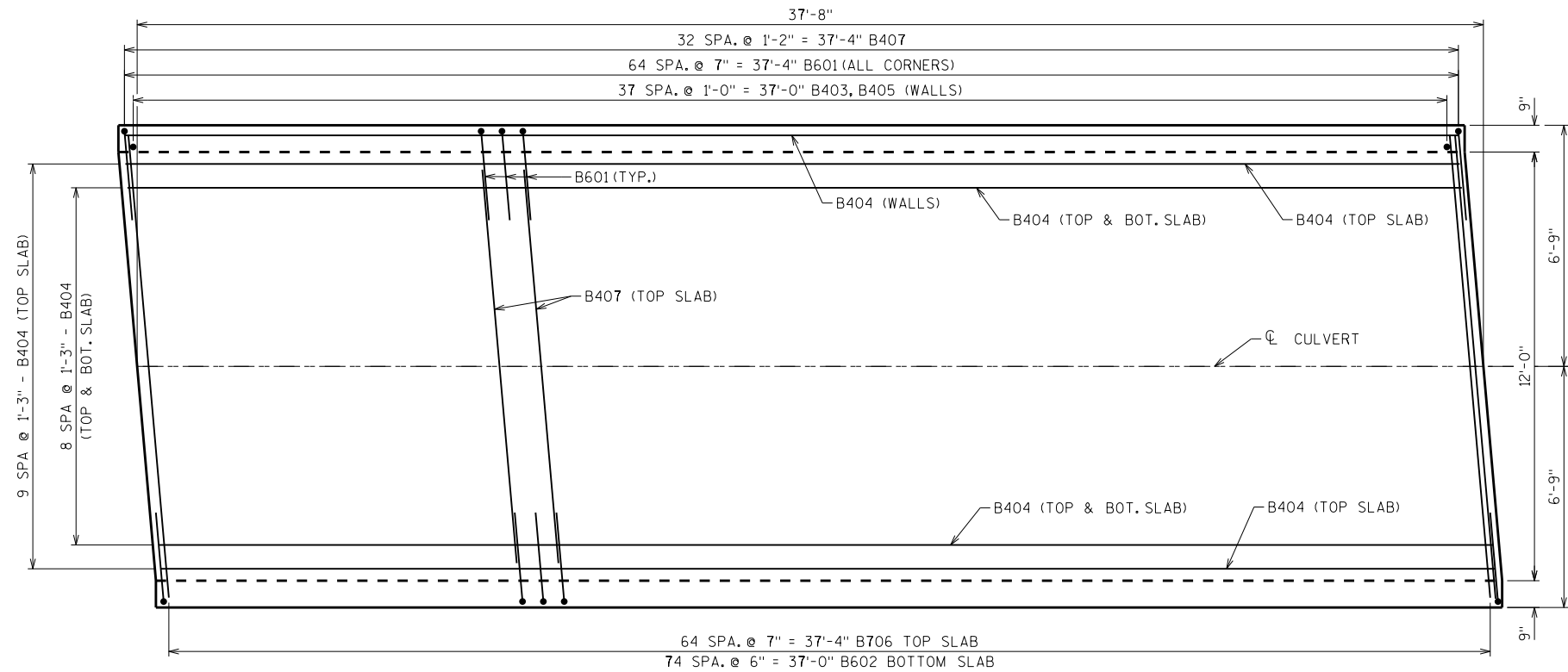
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 58+60	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-9-51	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	2602
311.0115	BREAKER RUN	CY	118
504.0100	CONCRETE MASONRY CULVERTS	CY	229
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	27,660
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4550
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	30
606.0300	RIPRAP HEAVY	CY	67
645.0105	GEOTEXTILE TYPE C	SY	385
645.0120	GEOTEXTILE TYPE HR	SY	136
	NON-BID ITEMS		
	FILLER	EACH	3/4"

8

NO.	DATE	REVISION	BY
ACCEPTED	 CHIEF STRUCTURES DESIGN ENGINEER		11/1/19 DATE
STRUCTURE C-9-51			
STH 27 OVER CLARK CREEK			
COUNTY	CHIPPewa	CITY	CORNELL
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS		
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BAF	MJL	BAF	MJL
LAYOUT			SHEET 1 OF 5

SCALE = 7.00



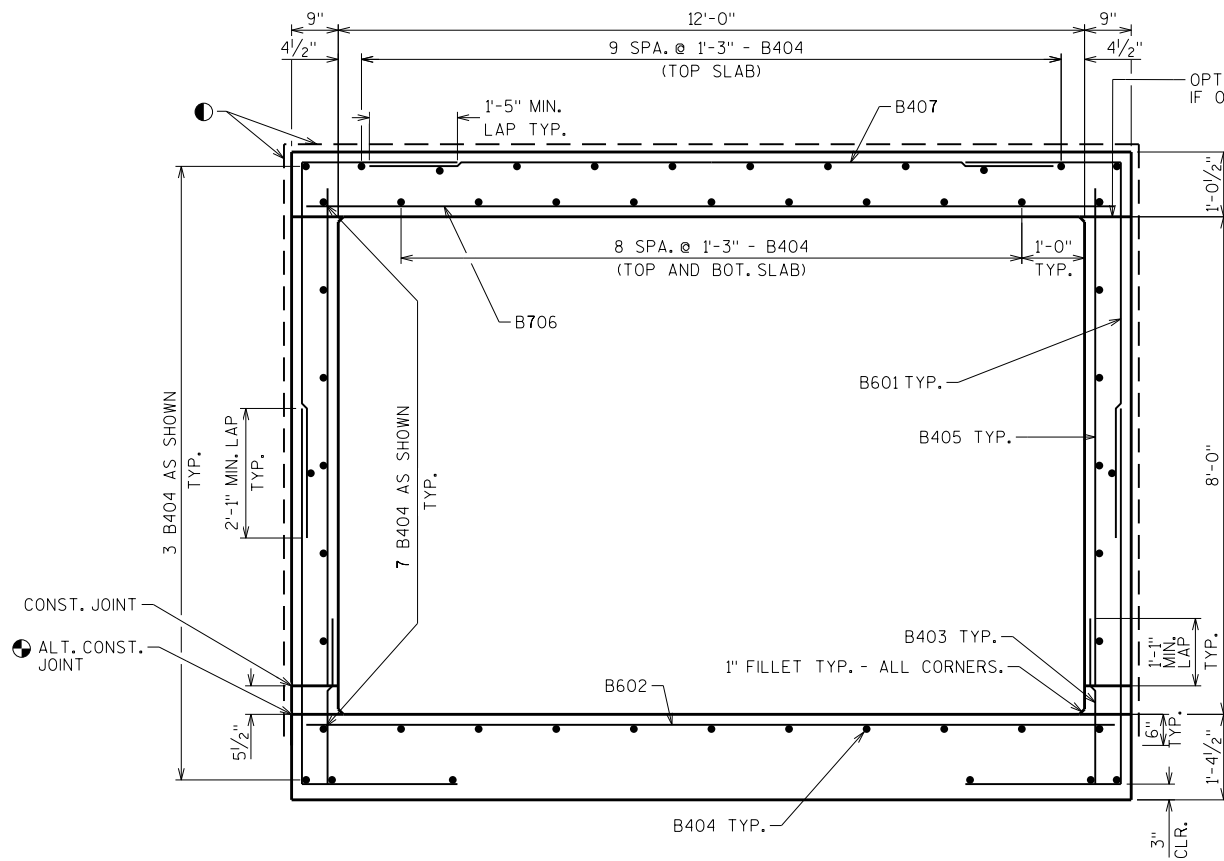
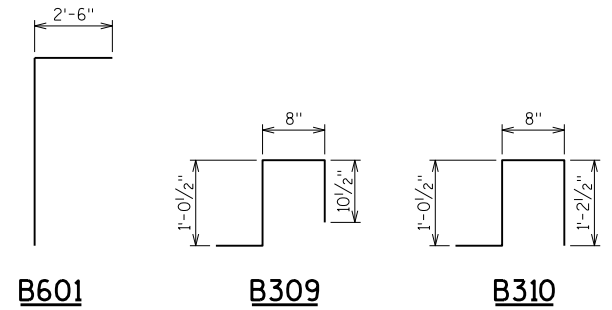
PLAN VIEW OF PANEL 2

USE IDENTICAL STEEL IN OTHER PANELS
APRON AND HEADER ARE NOT SHOWN

BILL OF BARS

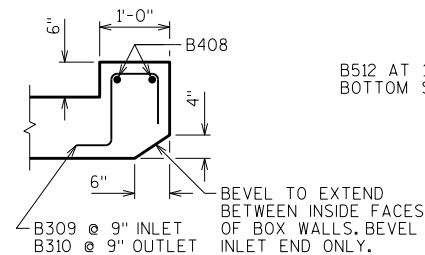
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		780	8'-6"	X		CORNERS
B602		225	13'-0"			BOT. SLAB TRANSVERSE
B403		228	2'-8"			WALLS - DOWELS VERT.
B404		156	37'-4"			TOP AND BOT. SLAB AND WALLS LONGIT.
B405		228	8'-0"			WALLS - VERTICAL
B706		195	13'-0"			TOP SLAB TRANSVERSE
B407		99	11'-1"			TOP SLAB TRANSVERSE
B408		4	13'-2"			HEADERS HORIZONTAL
B309		18	2'-10"	X		HEADER STIRRUP VERTICAL INLET
B310		18	3'-2"	X		HEADER STIRRUP VERTICAL OUTLET
B511		88	4'-0"			VERTICAL CONST. JOINT
B512		28	4'-0"			BOX-APRON CONNECTIONS

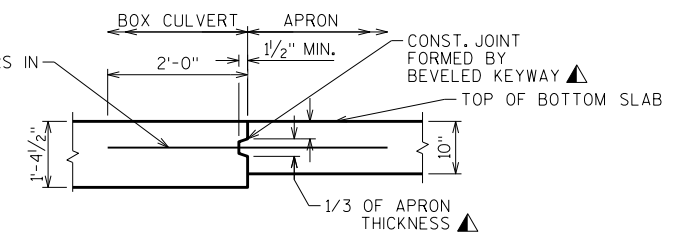


TYPICAL SECTION THRU BOX

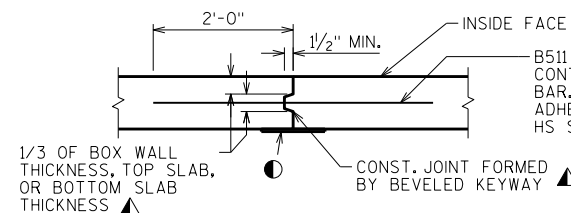
OMIT 1" FILLET IF ALT. CONST. JOINT IS USED



SECTION THRU HEADER



APRON CONNECTION DETAIL



VERTICAL CONSTRUCTION JOINT

18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

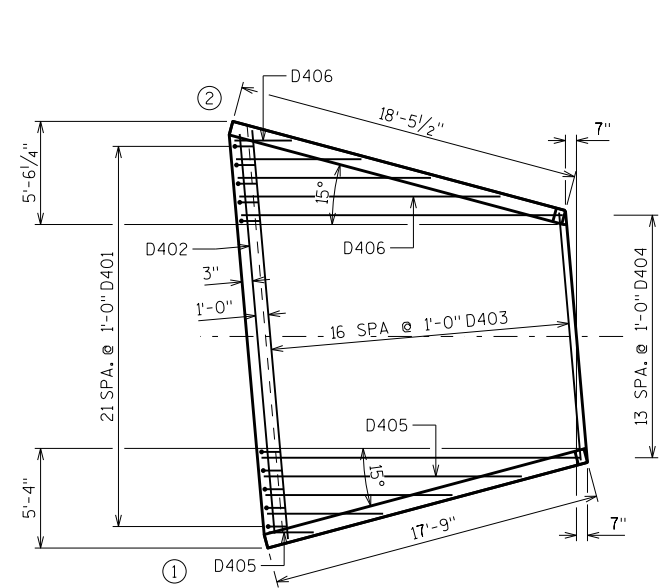
IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-51			
DRAWN BY BAF		PLANS CK'D. MJL	
BOX DETAILS			SHEET 2

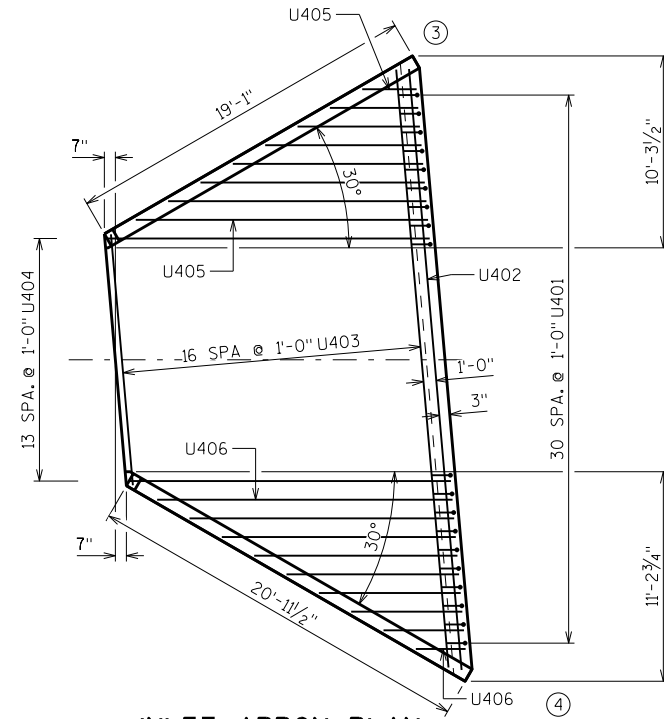
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8

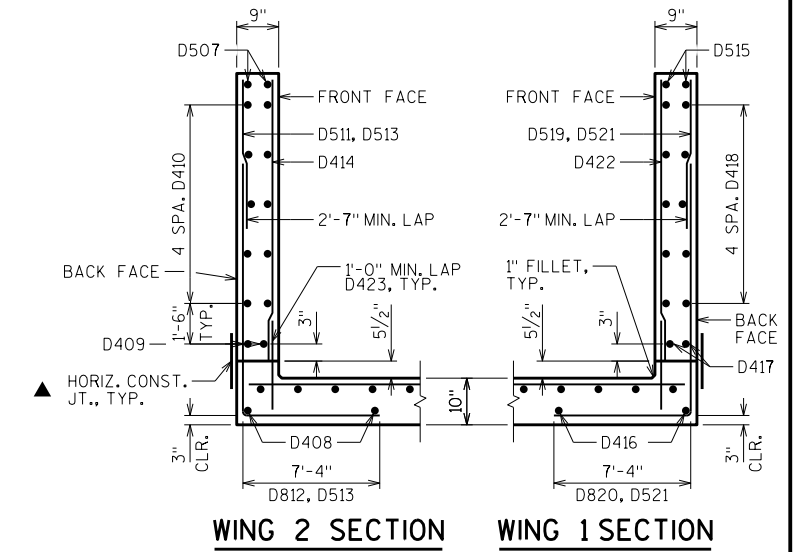
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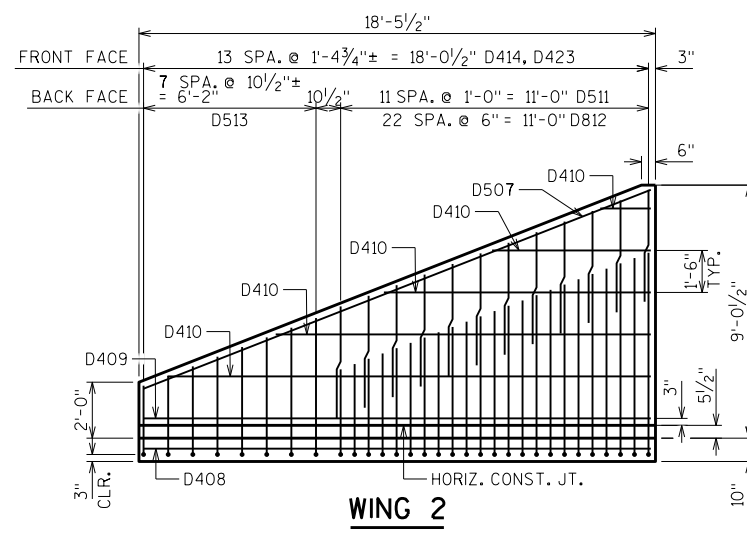
OUTLET APRON PLAN



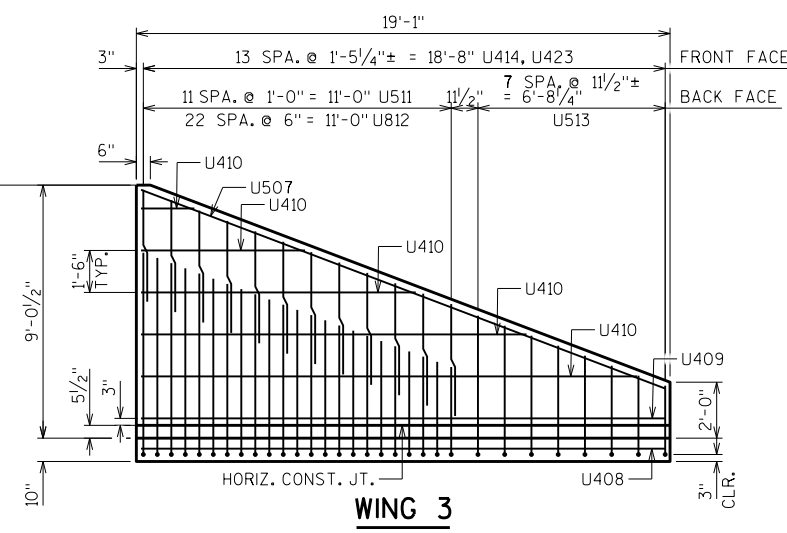
INLET APRON PLAN



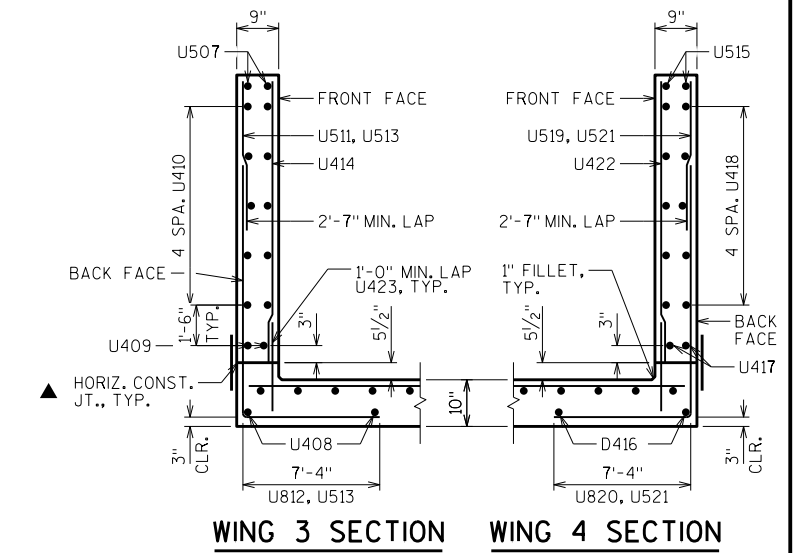
WING 2 SECTION WING 1 SECTION



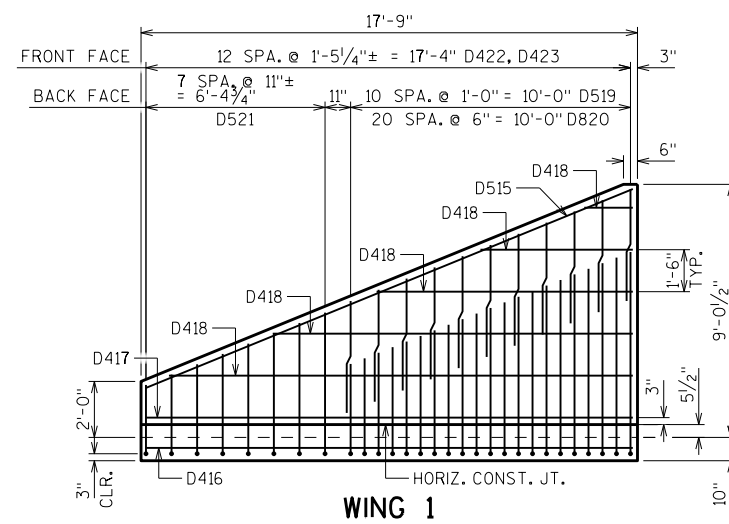
WING 2



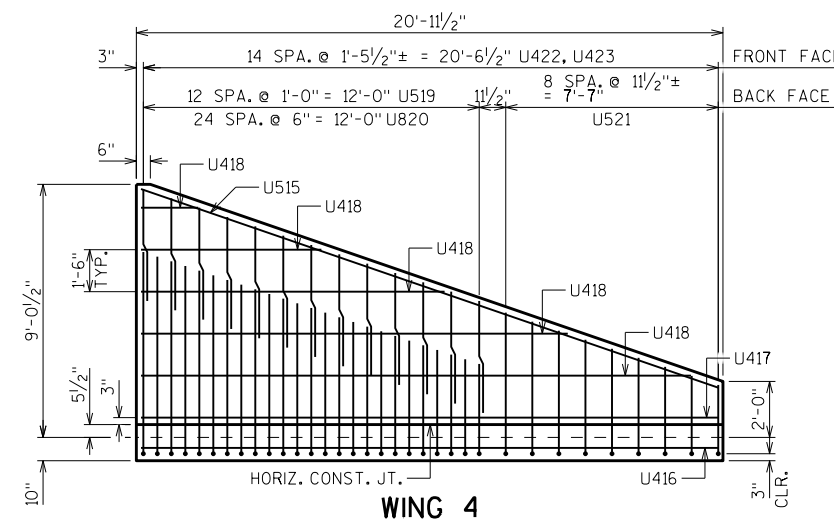
WING 3



WING 3 SECTION WING 4 SECTION



WING 1



WING 4

○ INDICATES WING NUMBER

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH, TYP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-51			
DRAWN BY		BAF	PLANS CK'D. MJL
APRON		SHEET 3	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

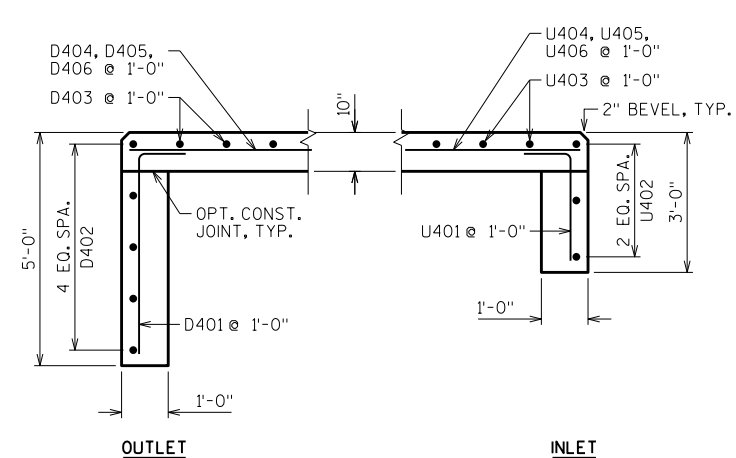
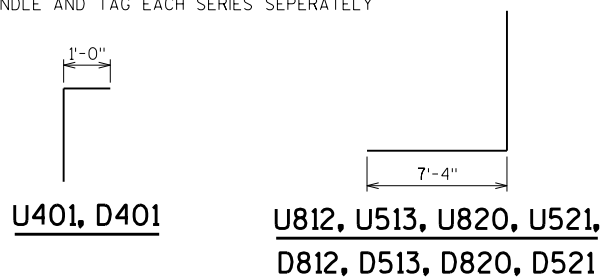
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D401		22	5'-5"	X		OUTLET APRON AND CUTOFF WALL VERT.
D402		5	21'-5"			OUTLET APRON AND CUTOFF WALL HORIZ.
D403		17	17'-8"	▲		OUTLET APRON SLAB HORIZ.
D404		14	17'-3"			OUTLET APRON HORIZ.
D405		4	8'-2"	▲		OUTLET APRON SLAB HORIZ.
D406		4	8'-7"	▲		OUTLET APRON SLAB HORIZ.
D507	X	2	19'-5"			WING 2 HORIZ. TOP BOTH FACES
D408		2	18'-1"			WING 2 HORIZ. APRON SLAB
D409	X	2	18'-1"			WING 2 HORIZ. BOTTOM BOTH FACES
D410	X	10	9'-8"	▲		WING 2 HORIZ.
D511	X	12	4'-3"			WING 2 VERT. BACK FACE
D812	X	23	12'-11"	X	▲	WING 2 VERT. BACK FACE
D513	X	8	11'-0"	X	▲	WING 2 VERT. BACK FACE
D414	X	14	4'-11"	▲		WING 2 VERT. FRONT FACE
D515	X	2	18'-9"			WING 1 HORIZ. TOP BOTH FACES
D416		2	17'-4"			WING 1 HORIZ. APRON SLAB
D417	X	2	17'-4"			WING 1 HORIZ. BOTTOM BOTH FACES
D418	X	10	9'-3"	▲		WING 1 HORIZ.
D519	X	11	4'-5"			WING 1 VERT. BACK FACE
D820	X	21	12'-9"	X	▲	WING 1 VERT. BACK FACE
D521	X	8	11'-1"	X	▲	WING 1 VERT. BACK FACE
D422	X	13	4'-11"	▲		WING 1 VERT. FRONT FACE
D423	X	27	2'-1"			WINGS 1 & 2 DOWELS FRONT FACE
U401		31	3'-5"	X		INLET APRON AND CUTOFF WALL VERT.
U402		3	32'-2"			INLET APRON AND CUTOFF WALL HORIZ.
U403		17	22'-10"	▲		INLET APRON SLAB HORIZ.
U404		14	17'-3"			INLET APRON HORIZ.
U405		8	9'-4"	▲		INLET APRON SLAB HORIZ.
U406		9	9'-3"	▲		INLET APRON SLAB HORIZ.
U507	X	2	20'-0"			WING 3 HORIZ. TOP BOTH FACES
U408		2	18'-8"			WING 3 HORIZ. APRON SLAB
U409	X	2	18'-8"			WING 3 HORIZ. BOTTOM BOTH FACES
U410	X	10	9'-11"	▲		WING 3 HORIZ.
U511	X	12	4'-4"			WING 3 VERT. BACK FACE
U812	X	23	12'-10"	X	▲	WING 3 VERT. BACK FACE
U513	X	8	11'-0"	X	▲	WING 3 VERT. BACK FACE
U414	X	14	4'-11"	▲		WING 3 VERT. FRONT FACE
U515	X	2	21'-9"			WING 4 HORIZ. TOP BOTH FACES
U416		2	20'-7"			WING 4 HORIZ. APRON SLAB
U417	X	2	20'-7"			WING 4 HORIZ. BOTTOM BOTH FACES
U418	X	10	11'-0"	▲		WING 4 HORIZ.
U519	X	13	4'-5"			WING 4 VERT. BACK FACE
U820	X	25	12'-10"	X	▲	WING 4 VERT. BACK FACE
U521	X	9	11'-0"	X	▲	WING 4 VERT. BACK FACE
U422	X	15	4'-11"	▲		WING 4 VERT. FRONT FACE
U423	X	29	2'-1"			WINGS 3 & 4 DOWELS FRONT FACE

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

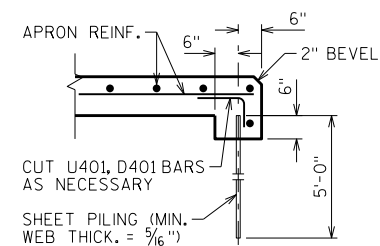
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
D403	1 SERIES OF 17	13'-4" TO 22'-0"
D405	1 SERIES OF 4	2'-5" TO 13'-11"
D406	1 SERIES OF 4	3'-1" TO 14'-0"
D410	2 SERIES OF 5	2'-0" TO 17'-3"
D812	1 SERIES OF 23	10'-9" TO 15'-0"
D513	1 SERIES OF 8	9'-9" TO 12'-2"
D414	1 SERIES OF 14	1'-5" TO 8'-5"
D418	2 SERIES OF 5	1'-11" TO 16'-7"
D820	1 SERIES OF 21	10'-9" TO 14'-9"
D521	1 SERIES OF 8	9'-9" TO 12'-4"
D422	1 SERIES OF 13	1'-5" TO 8'-5"
U403	1 SERIES OF 17	13'-6" TO 32'-2"
U405	1 SERIES OF 8	2'-11" TO 15'-8"
U406	1 SERIES OF 9	2'-8" TO 15'-10"
U410	2 SERIES OF 5	2'-0" TO 17'-10"
U812	1 SERIES OF 23	10'-9" TO 14'-10"
U513	1 SERIES OF 8	9'-8" TO 12'-3"
U414	1 SERIES OF 14	1'-5" TO 8'-5"
U418	2 SERIES OF 5	2'-3" TO 19'-8"
U820	1 SERIES OF 25	10'-9" TO 14'-10"
U521	1 SERIES OF 9	9'-8" TO 12'-4"
U422	1 SERIES OF 15	1'-5" TO 8'-5"

BUNDLE AND TAG EACH SERIES SEPERATELY

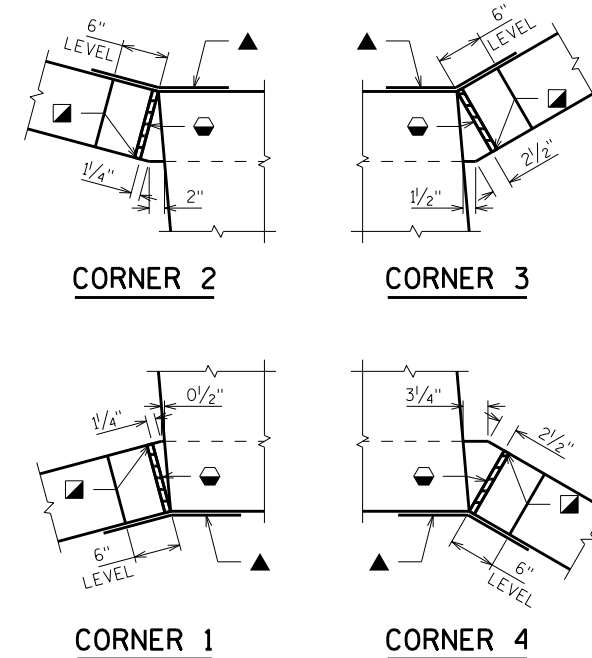


CUT-OFF WALLS

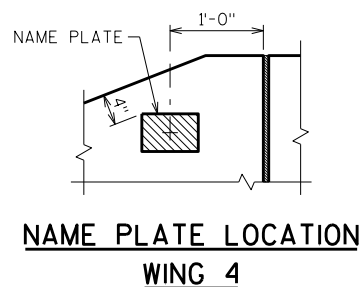


ALTERNATE CUT-OFF WALLS

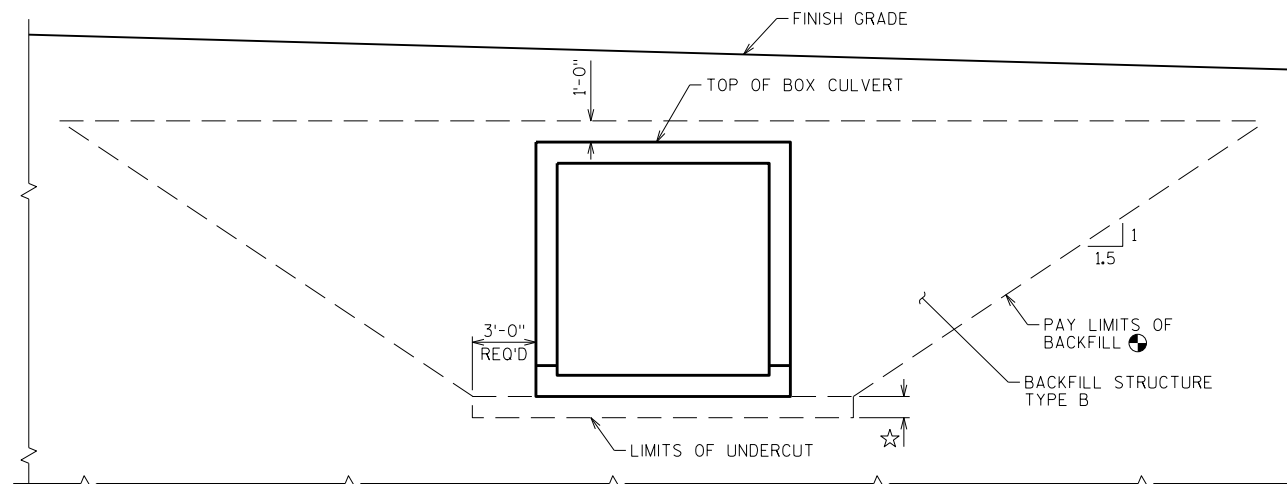
THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.



CORNER DETAILS



NAME PLATE LOCATION
WING 4



TYPICAL SECTION THRU BOX CULVERT

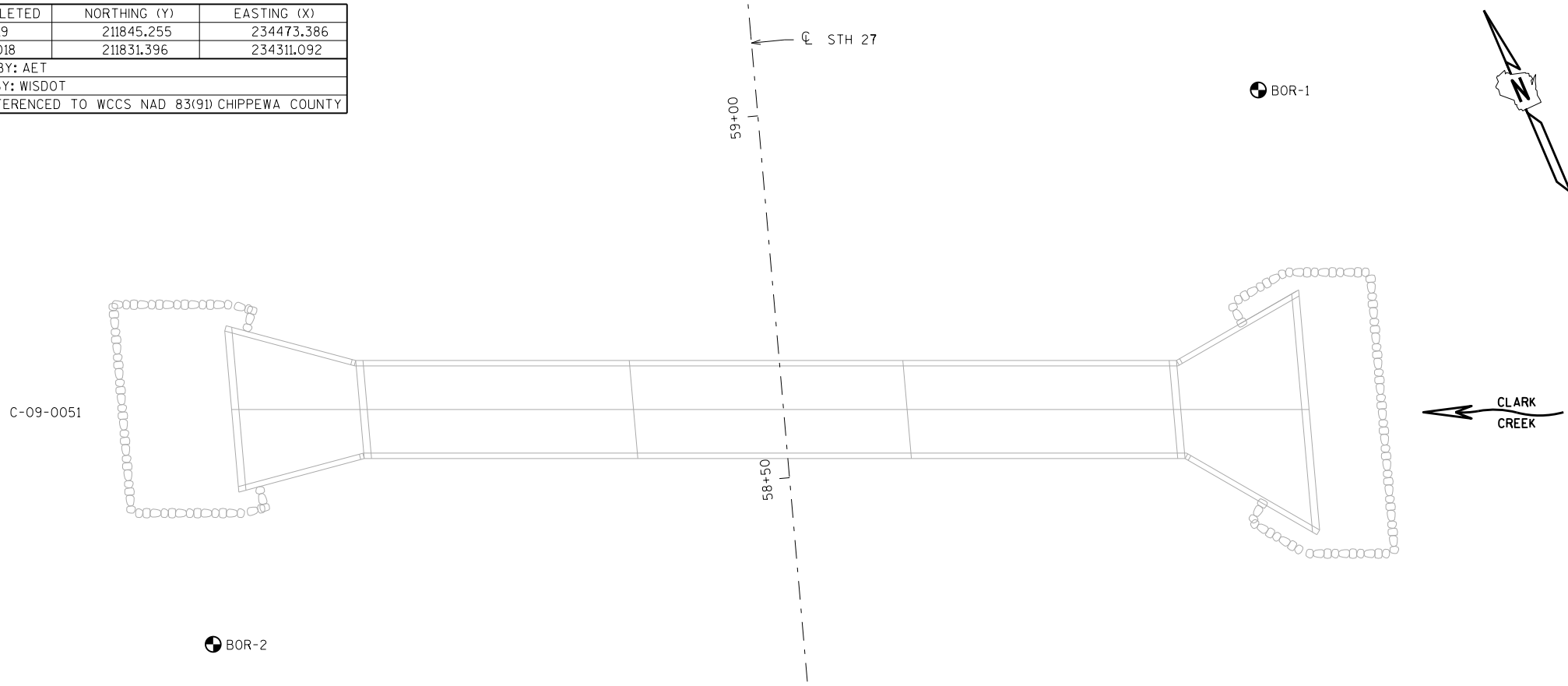
⊕ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
☆ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

⊙ 3/4" FILLER, TYP. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.
▲ 1" BEVEL, TYP.
▲ 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.

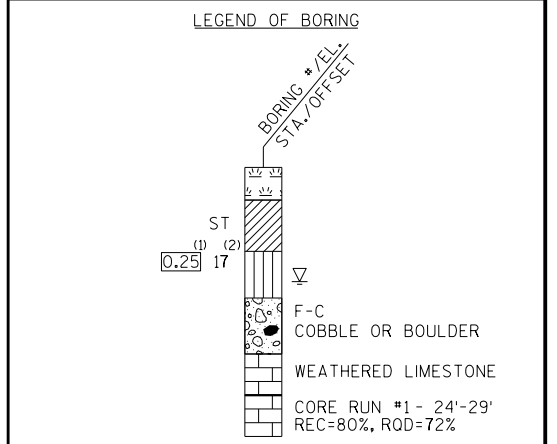
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-9-51			
DRAWN BY		BAF	PLANS CK'D. MJL
APRON DETAILS		SHEET 4	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1/07/2019	211845.255	234473.386
2	12/27/2018	211831.396	234311.092

BORINGS COMPLETED BY: AET
 REPORT COMPLETED BY: WISDOT
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CHIPPEWA COUNTY



STATE PROJECT NUMBER		
8200-00-70		
MATERIAL SYMBOLS		
ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

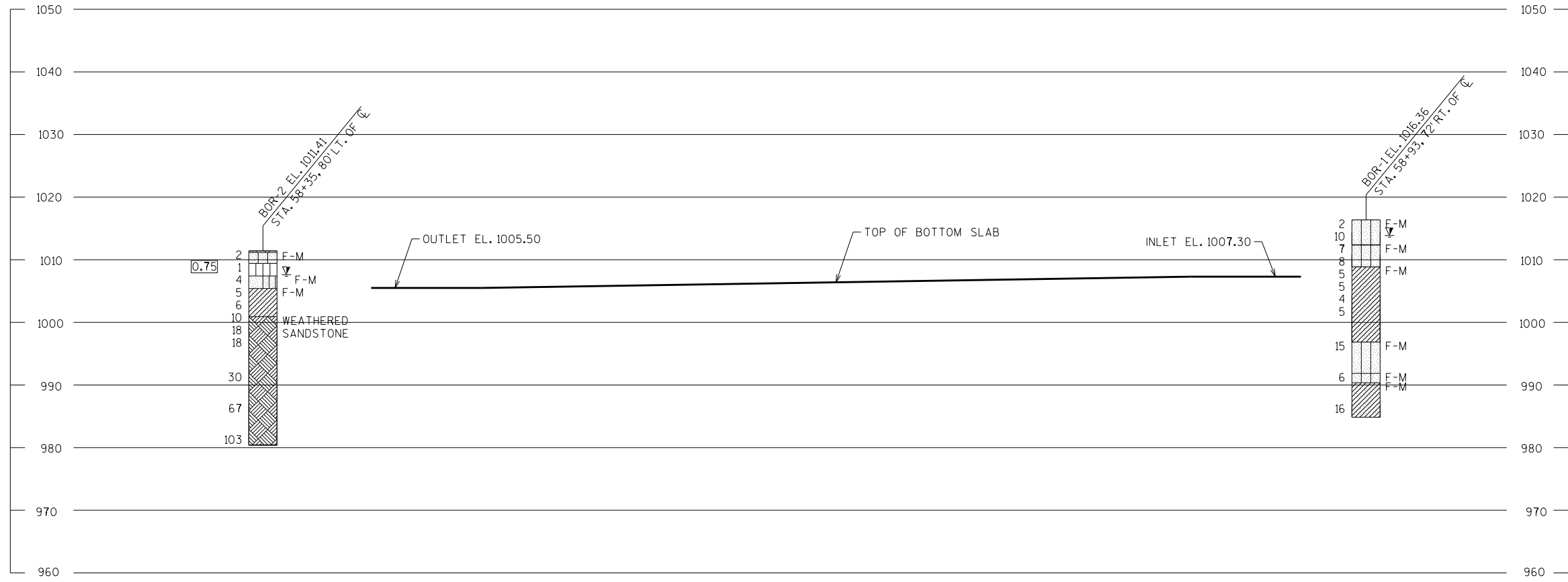
▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-09-51			
DRAWN BY TLP/BAF		PLANS CKD. MJL	
SUBSURFACE EXPLORATION		SHEET 5	

8

8

SCALE = 10

Seth Creek: STA. 12+09.30'A' - STA. 15+76.68'A'

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	
10+99'A'	0	0	0	0	0	0	0	0
12+09'A'	110	0	0	0	0	0	0	0
12+11'A'	2	0.3	7.4	0	0	0	0	0
12+20'A'	9	0.8	4.23	0	2	0	3	-3
12+20'A'	0	0.67	5.63	0	0	0	3	-3
12+50'A'	30	12.56	0	7	3	8	7	1
13+00'A'	50	23.46	1.23	33	1	41	8	33
13+50'A'	50	6.3	38.41	28	37	68	56	12
13+50'A'	0	10.43	51.98	0	0	68	56	12
13+75'A'	25	39.67	80.18	23	61	92	136	-44
14+00'A'	25	6.39	422.29	21	233	113	438	-325
14+25'A'	25	9.63	62.91	7	225	120	730	-610
14+50'A'	25	36	20.27	21	39	141	780	-639
14+50'A'	0	12.45	31.67	0	0	142	780	-639
15+00'A'	50	18.27	0	28	29	170	818	-648
15+50'A'	50	3.39	0.98	20	1	190	820	-630
15+50'A'	0	4.12	1.04	0	0	190	820	-630
15+50'A'	0	3.77	0	0	0	190	820	-630
15+75'A'	25	3.19	0	3	0	193	820	-626
15+77'A'	2	0	0	0	0	193	820	-626
15+81'A'	5	0	0	0	0	193	820	-626
				193	630			

NOTES:
1 - MASS ORDINATE = CUT - (FILL) X FILL FACTOR

Leman Creek: STA. 21+99.24'B' - STA. 25+62.38'B'

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	
21+96'B'	0	0	0	0	0	0	0	0
21+99'B'	3	2.73	0	0	0	0	0	0
22+00'B'	1	2.87	0	0	0	0	0	0
22+27'B'	27	8.65	0	6	0	6	0	6
22+27'B'	0	12.03	0.58	0	0	6	0	6
22+50'B'	23	16.77	0.02	12	0	18	0	18
23+00'B'	50	8.66	7.29	24	7	42	9	33
23+50'B'	50	7.66	189.81	15	182	57	246	-189
23+50'B'	0	17.14	194.3	0	1	57	248	-191
24+00'B'	50	23.86	524.1	38	664	95	1111	-1016
24+50'B'	50	31.15	245.69	51	713	146	2037	-1892
24+50'B'	0	14.17	265.31	0	1	146	2039	-1893
25+00'B'	50	9.96	16.46	22	260	168	2377	-2209
25+50'B'	50	12.92	0	21	15	189	2397	-2207
25+60'B'	10	6.34	0	4	0	193	2397	-2204
25+60'B'	0	3.65	0	0	0	193	2397	-2204
25+62'B'	2	2.99	0	0	0	193	2397	-2204
25+63'B'	1	0	0	0	0	193	2397	-2204
				193	1844			

NOTES:
1 - MASS ORDINATE = CUT - (FILL) X FILL FACTOR

Unnamed Tributary - Sta. 45+50.14'C to Sta. 50+16.88'C

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	
45+48'C	0	0	0	0	0	0	0	0
45+50'C	2	53.76	0	2	0	2	0	2
45+52'C	2	53.9	0	4	0	6	0	6
45+72'C	20	52	0	40	0	46	0	46
45+73'C	1	51.8	0	1	0	47	0	47
45+92'C	19	38.96	0	32	0	79	0	79
45+98'C	6	31.23	0	7	0	86	0	86
46+00'C	2	25.72	0	2	0	89	0	89
46+17'C	17	5.2	1	10	0	98	0	98
46+17'C	0	25.7	18.15	0	0	99	0	98
46+23'C	5	21.9	21.44	5	4	103	5	98
46+50'C	27	17.63	78.78	20	51	123	71	52
46+83'C	33	16.85	148.59	21	139	144	252	-107
47+00'C	17	16.53	172.88	11	102	155	384	-229
47+19'C	19	16.82	173.29	11	119	166	538	-372
47+19'C	0	37.39	154.71	0	1	166	539	-373
47+50'C	31	39.87	216.37	45	215	211	819	-608
47+68'C	18	38.21	271.68	27	166	238	1036	-798
48+00'C	32	36.56	146.68	44	245	282	1354	-1072
48+18'C	18	36.94	134.75	25	95	306	1478	-1171
48+18'C	0	18.38	144.34	0	1	307	1478	-1172
48+28'C	9	17.62	144.18	6	49	313	1543	-1230
48+29'C	1	17.57	137.5	1	6	314	1551	-1237
48+50'C	21	19.06	134.88	14	107	328	1690	-1362
48+54'C	4	19.89	128.85	3	20	331	1715	-1385
48+76'C	22	23.77	73.77	17	81	348	1820	-1472
48+76'C	0	15.36	69.48	0	0	348	1821	-1472
49+00'C	24	15.87	19.55	14	40	362	1873	-1510
49+24'C	24	16.49	0.53	14	9	377	1884	-1508
49+50'C	26	16.04	0.06	16	0	392	1885	-1492
49+61'C	11	15.89	0	7	0	399	1885	-1486
49+86'C	25	15.51	0.05	15	0	413	1885	-1471
50+00'C	14	28.13	0	11	0	425	1885	-1460
50+11'C	111	40.42	0	87	12	449	1888	-1439
50+17'C	6	24.87	0	7	0	457	1888	-1432
50+18'C	1	0	0	1	0	457	1888	-1431
				520	1462			

NOTES:
1 - MASS ORDINATE = CUT - (FILL) X FILL FACTOR

9

9

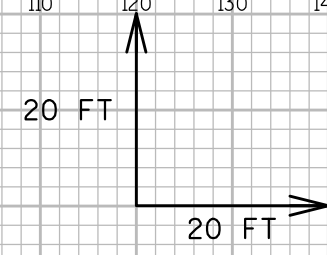
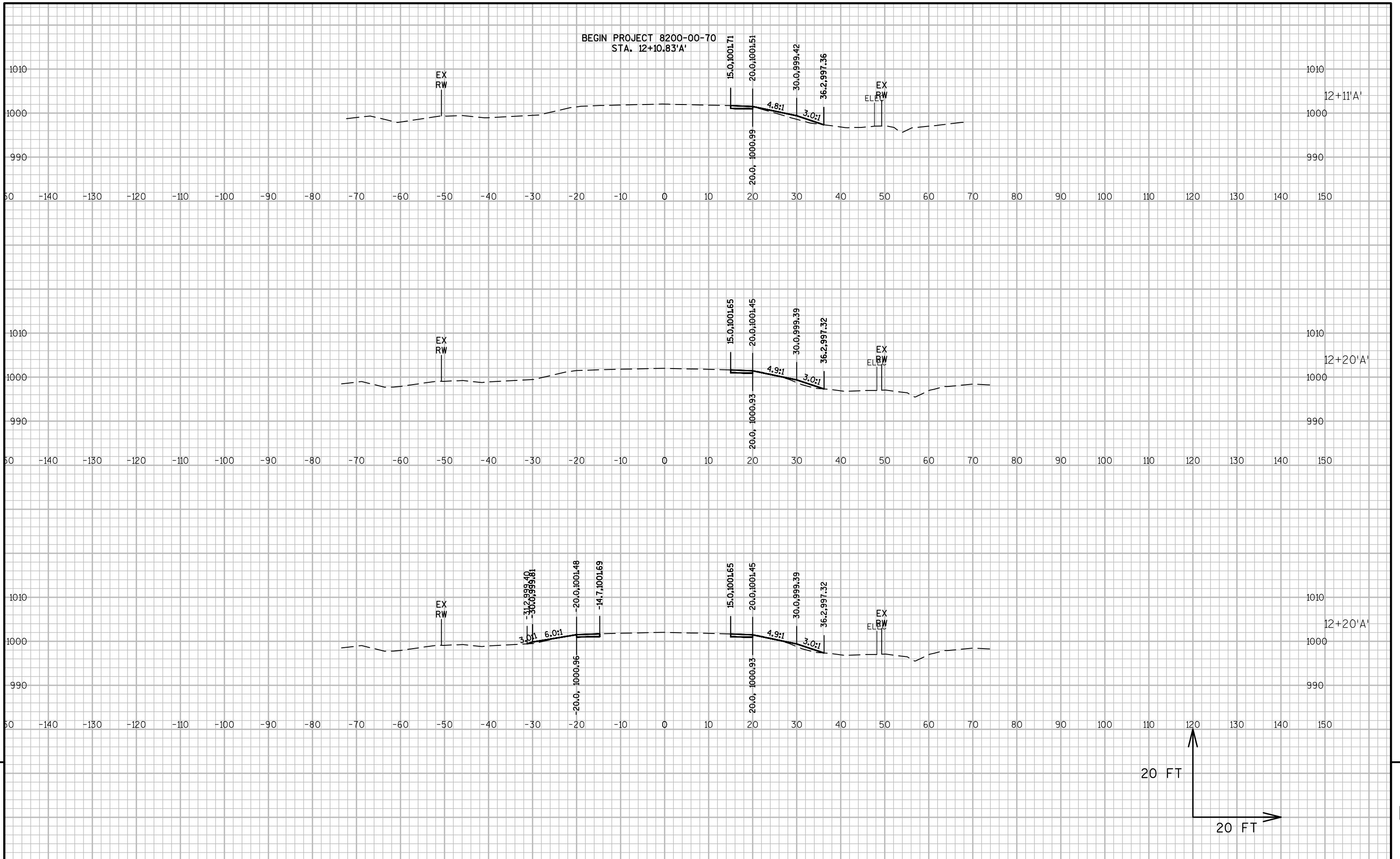
Clark Creek: Sta. 56+11.40'C to Sta. 61+65.20'C

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	
5609.769	0	0	0	0	0	0	0	0
5611.399	2	18.28	0	1	0	1	0	1
5650	39	59.45	0	56	0	56	0	56
5700	50	33.97	0	87	0	143	0	143
5724.927	25	14.24	0	22	0	165	0	165
5750	25	10.9	1.59	12	1	177	1	176
5757.68	8	9.82	19.91	3	3	179	5	175
5757.784	0	34.81	0.82	0	0	180	5	175
5764.651	7	37.51	10.89	9	1	189	7	182
5789.67	25	17.51	116.1	25	59	214	83	131
5800	10	15.39	82.81	6	38	221	133	88
5807.19	7	14.75	94.09	4	24	225	163	61
5807.293	0	57.94	69.92	0	0	225	164	61
5814.688	7	36.94	78.34	13	20	238	190	47
5850	35	29.43	185.84	43	173	281	415	-134
5860	10	33.1	269.99	12	84	293	525	-232
5900	40	34.92	145.62	50	308	343	925	-582
5917.232	17	33.94	149.35	22	94	365	1047	-682
5917.331	0	11.57	137.8	0	1	365	1048	-683
5937.331	20	11.28	142.49	8	104	374	1183	-809
5950	13	11	154.64	5	70	379	1273	-895
6000	50	11.55	110.81	21	246	400	1593	-1193
6006.157	6	11.33	111.43	3	25	402	1626	-1224
6030.91	25	11.22	96.96	10	96	413	1750	-1337
6050	19	20.39	67.62	11	58	424	1826	-1402
6057.357	7	25.35	66.91	6	18	430	1850	-1420
6057.46	0	7.17	63.36	0	0	430	1850	-1420
6095.933	38	7.73	0	11	45	441	1909	-1468
6100	4	8.54	0	1	0	442	1909	-1467
6103.839	4	8.78	0	1	0	443	1909	-1465
6121.18	17	8.38	2.74	6	1	449	1910	-1461
6146.475	25	8.02	3.78	8	3	456	1914	-1457
6150	4	8.44	38.3	1	3	457	1917	-1460
6165.203	69	8.75	9.89	21	20	462	1935	-1472
6166.913	2	0	0	0	0	462	1935	-1473
				479	1495			

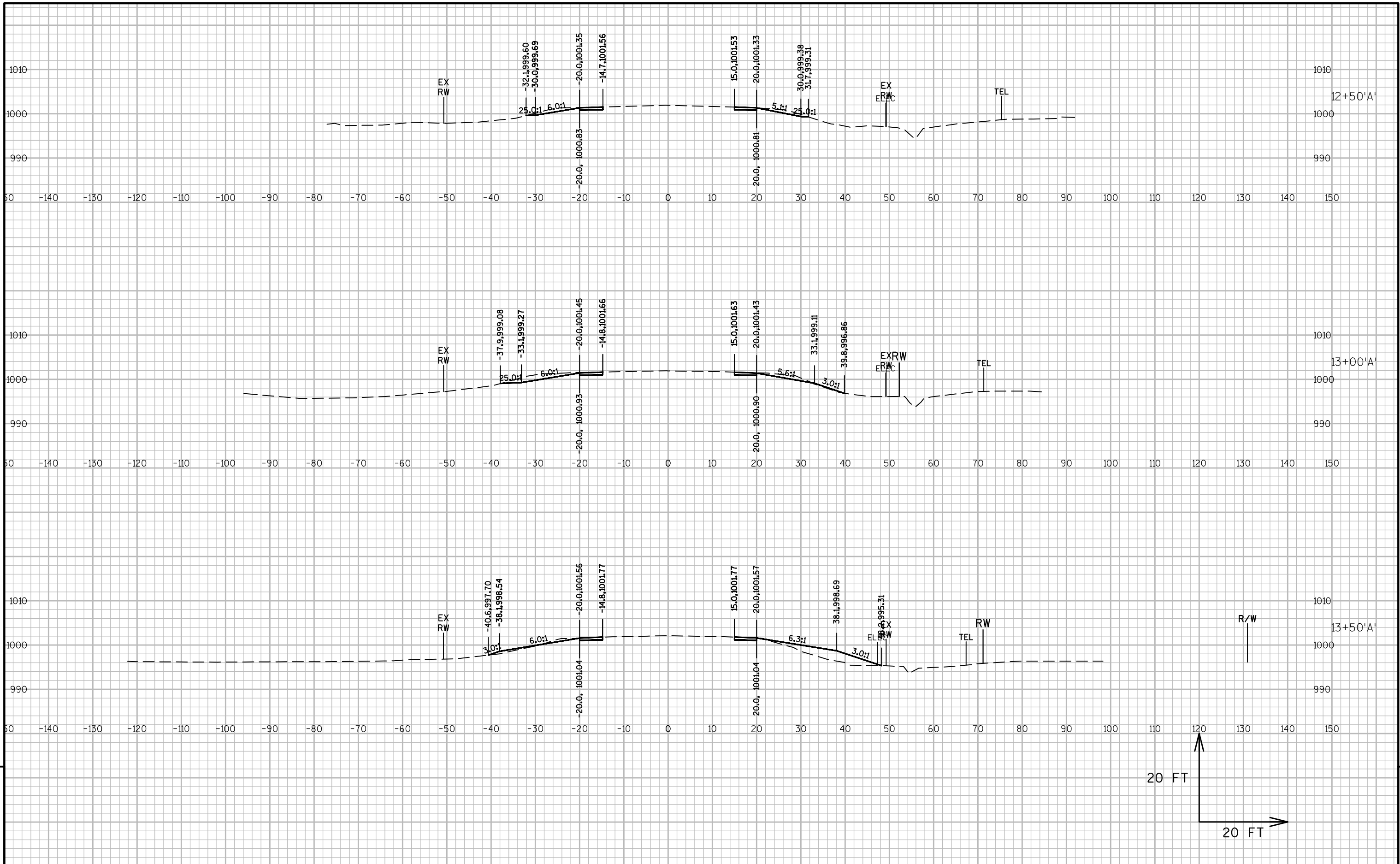
NOTES:
1 - MASS ORDINATE = CUT - (FILL) X FILL FACTOR

9

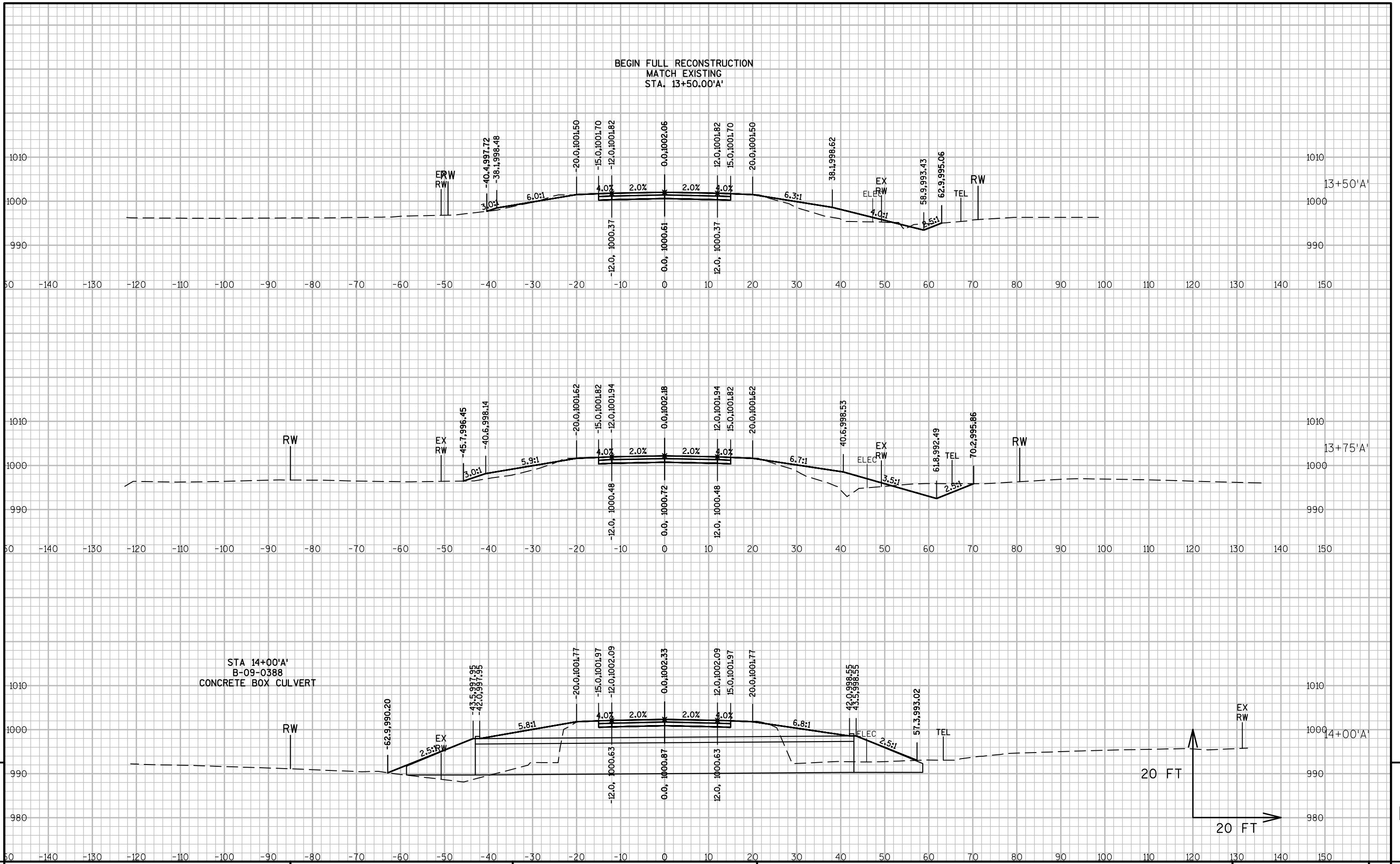
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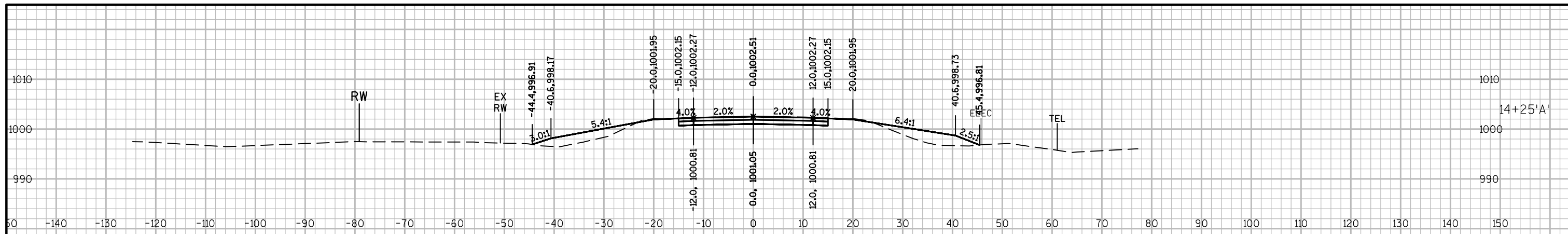
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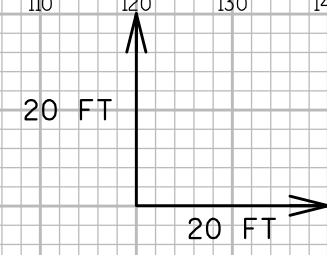
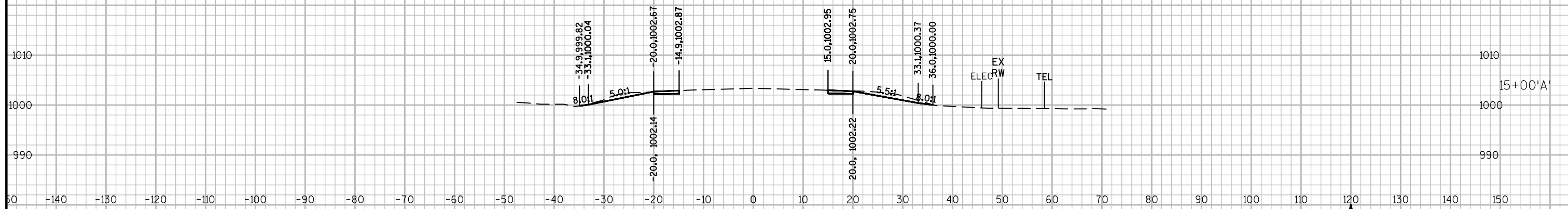
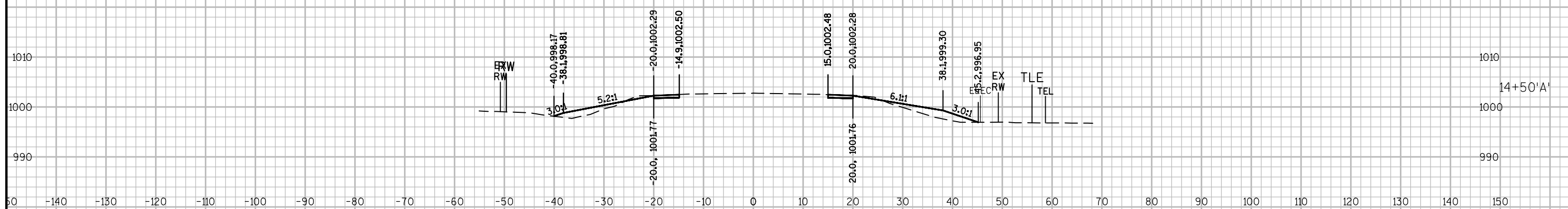
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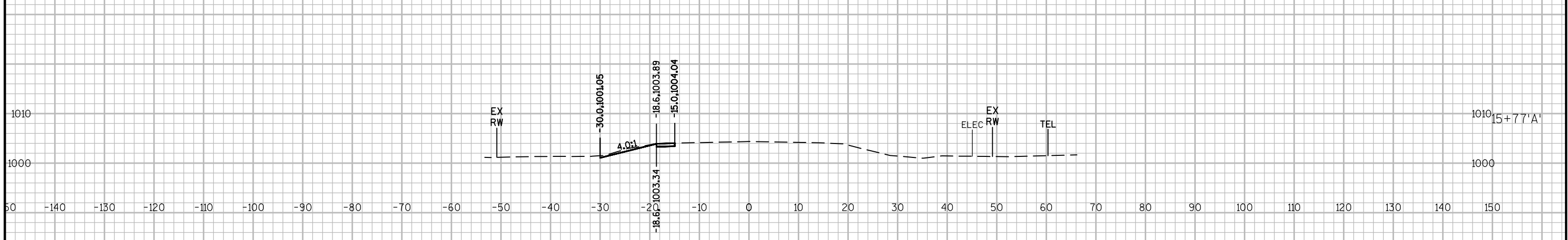
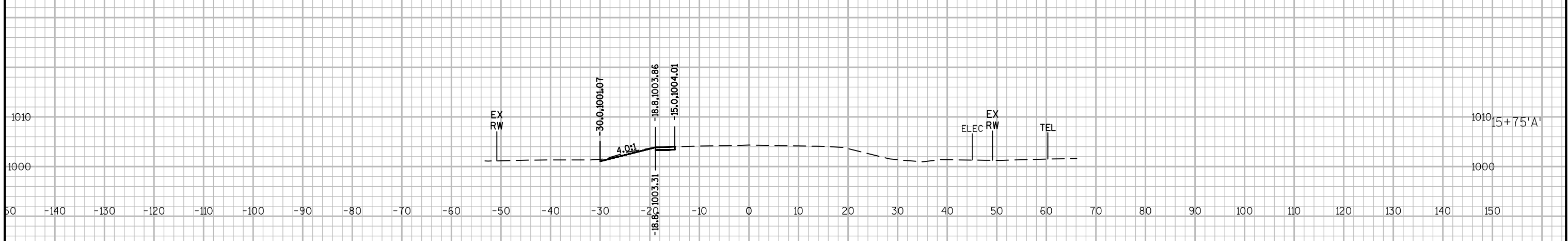
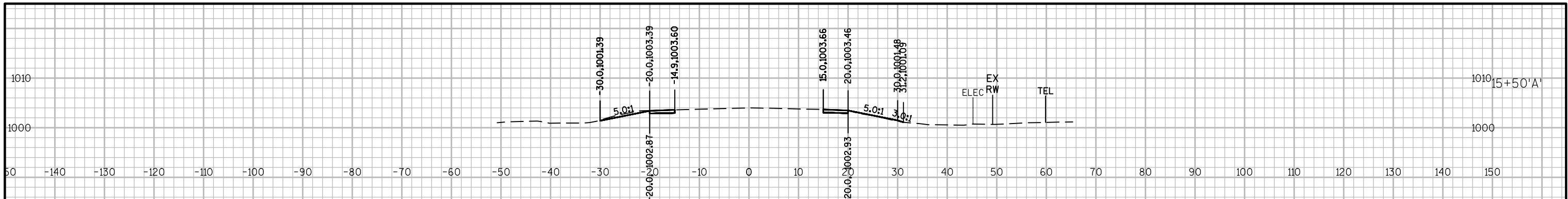


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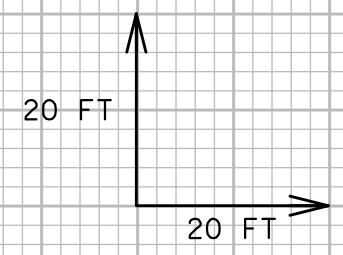


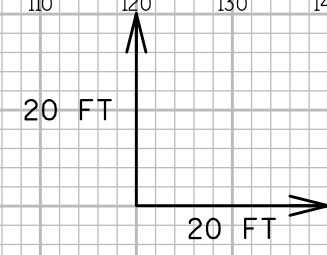
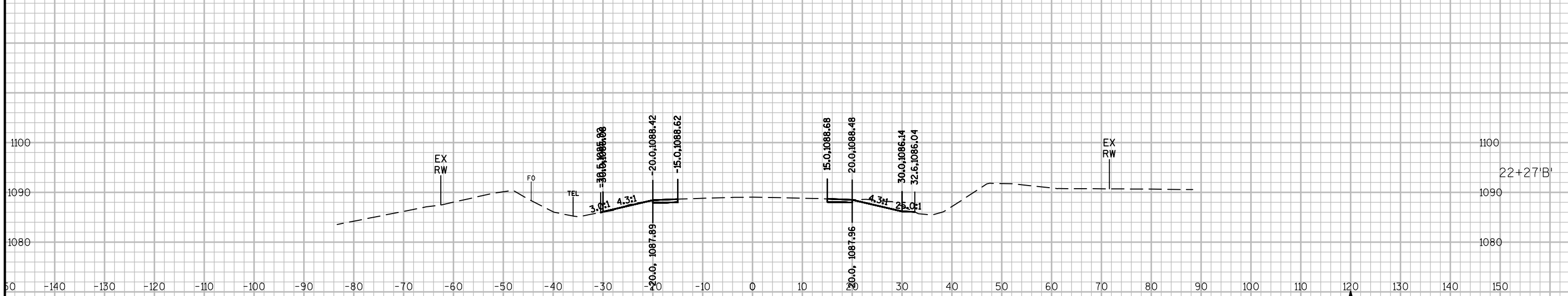
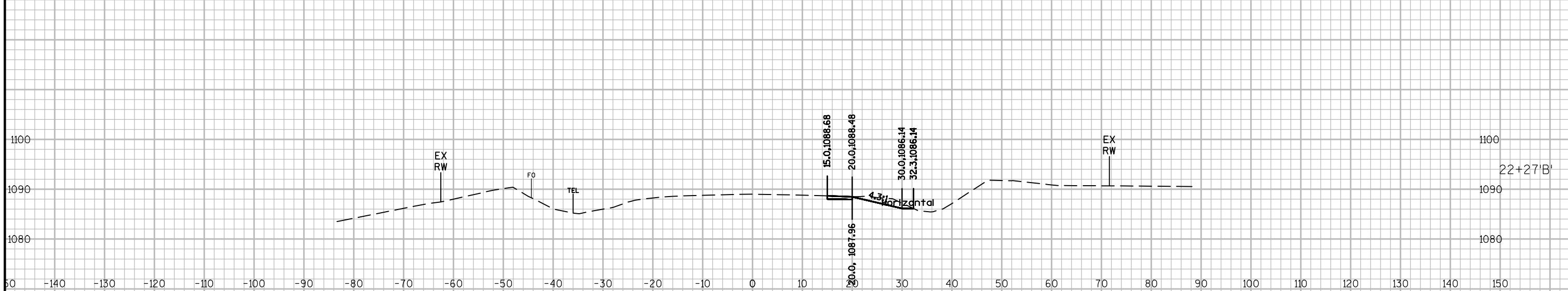
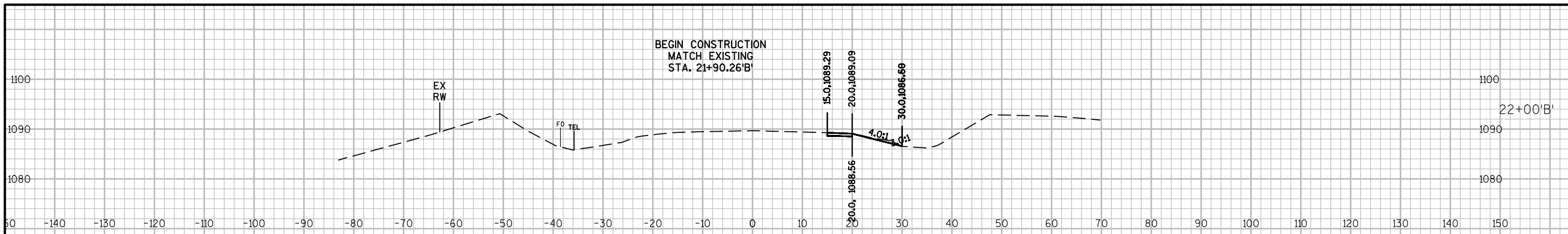
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MATCH EXISTING
STA. 14+50.00'A'



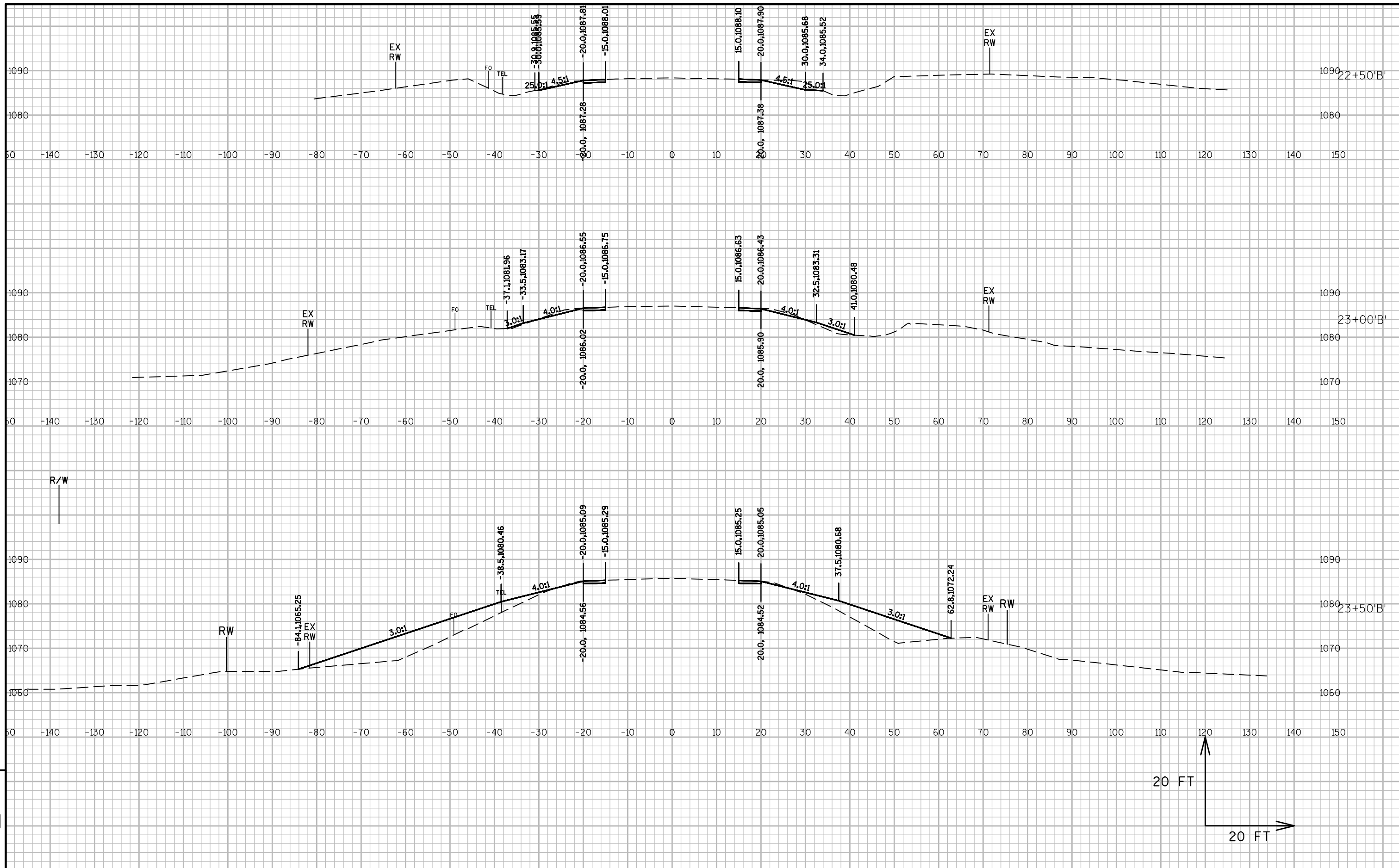


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STA. 15+76.16'A'

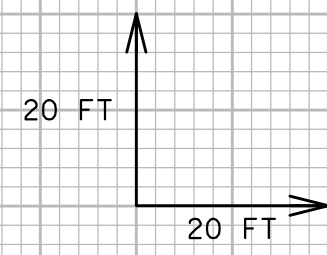
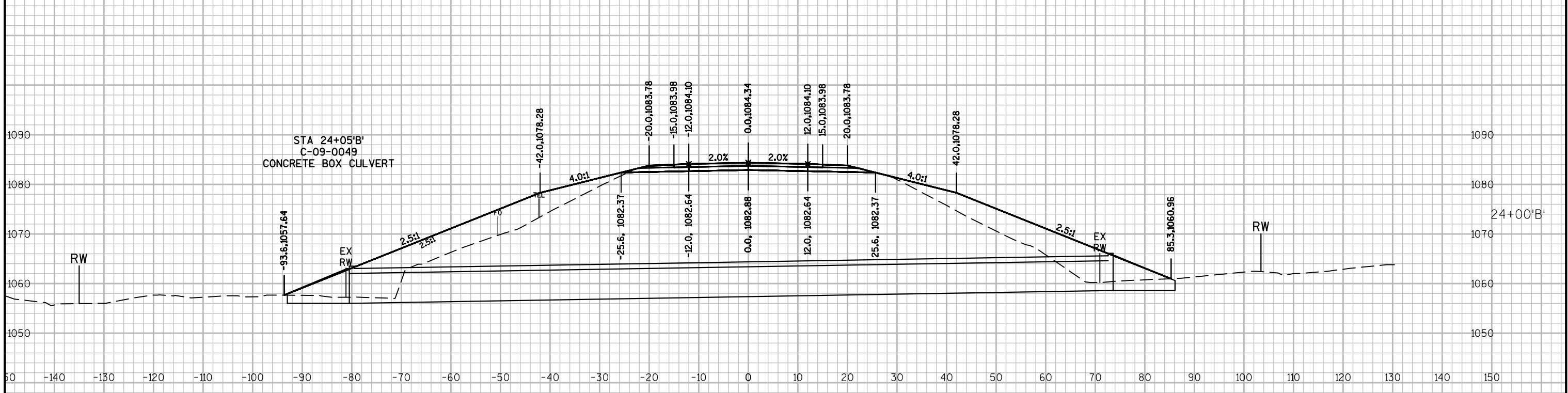
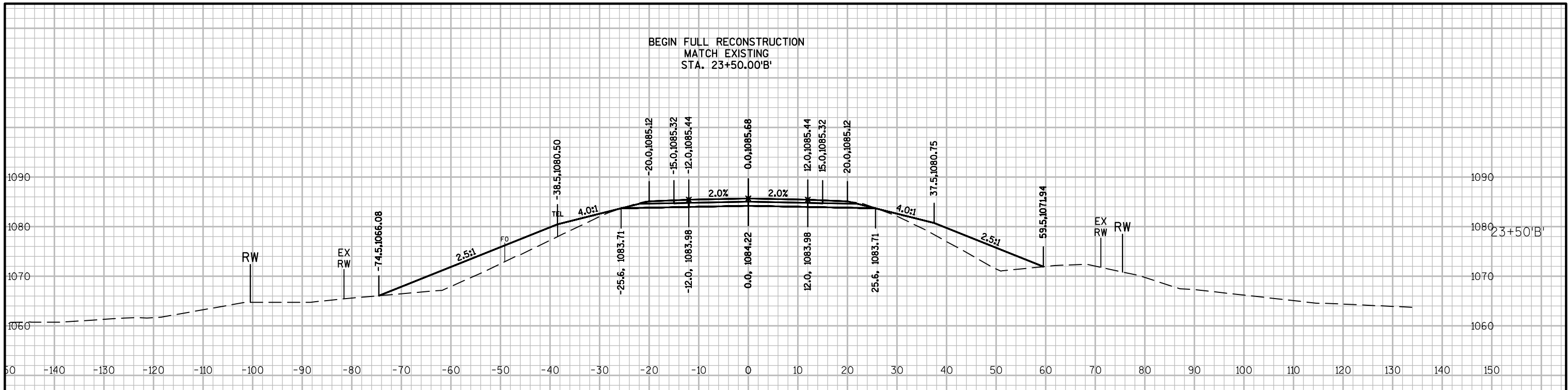


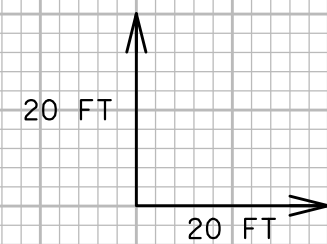
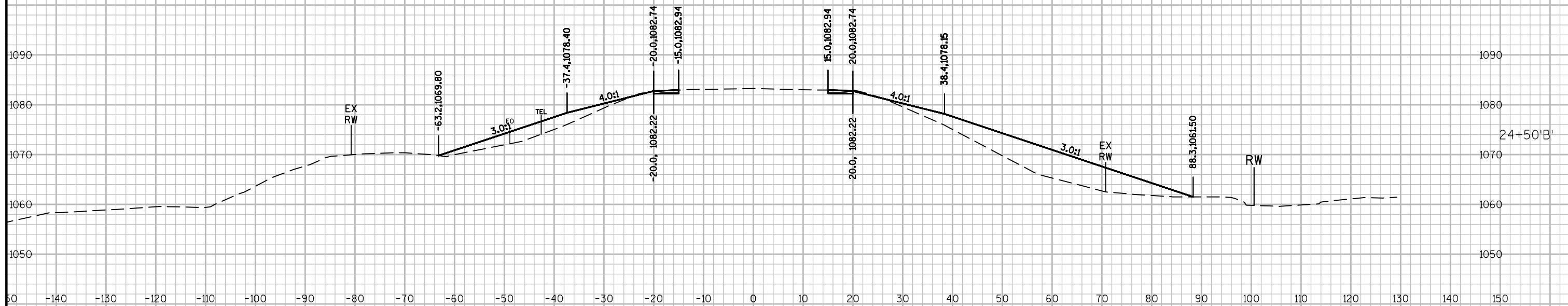
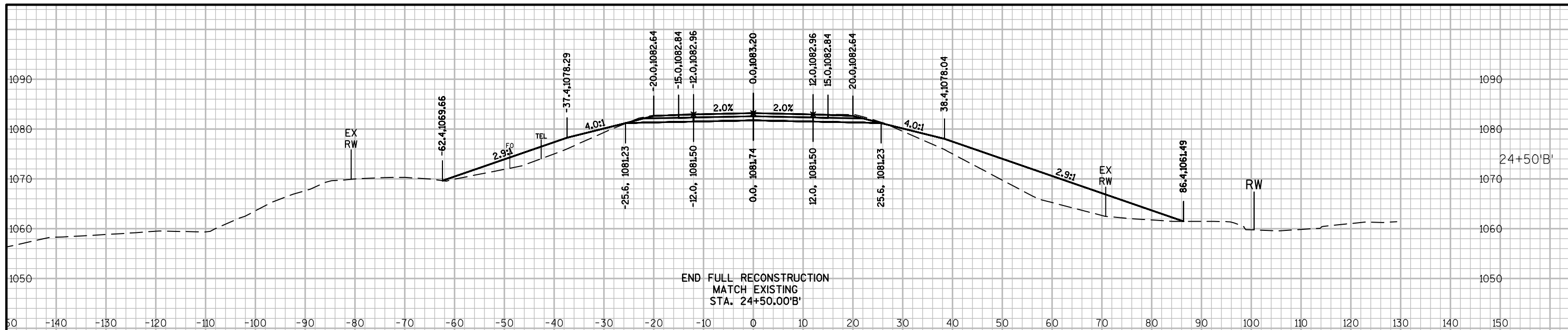


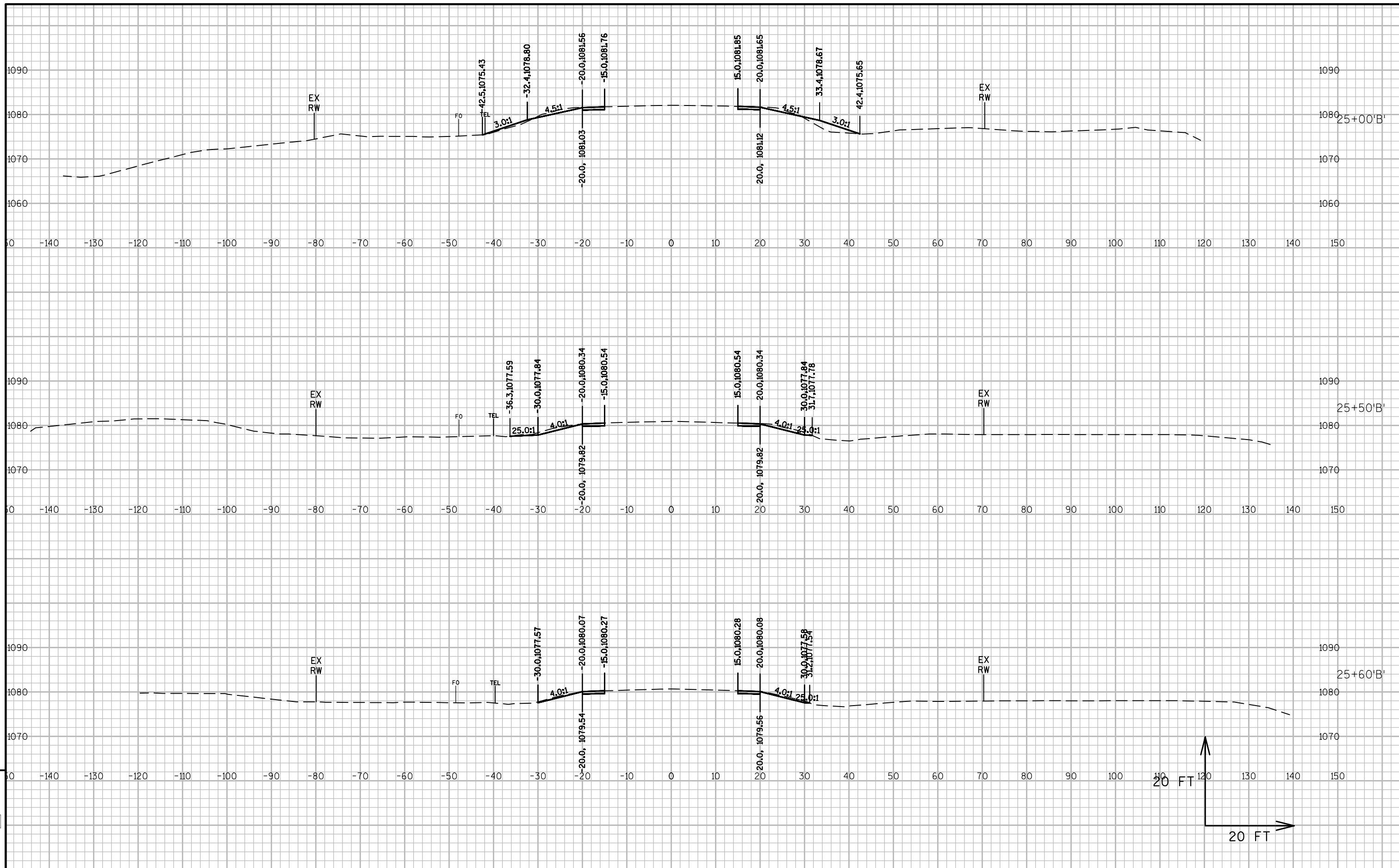
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PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: LEMAN CREEK SHEET E







PROJECT NO: 8200-00-70

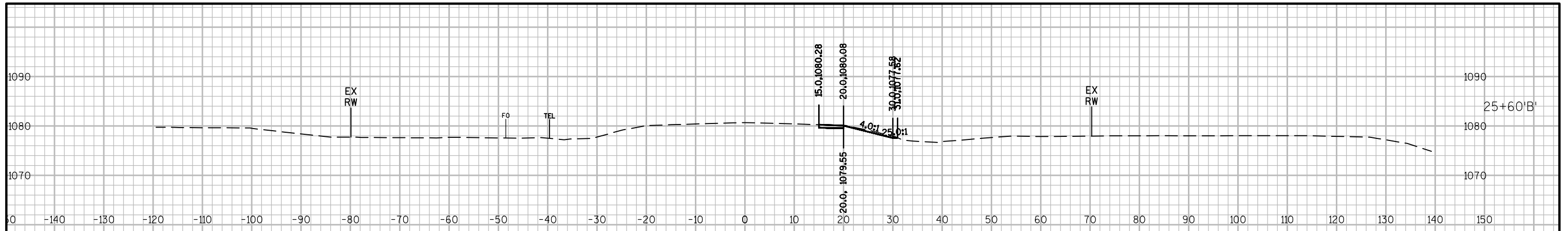
HWY: STH 27

COUNTY: CHIPPEWA

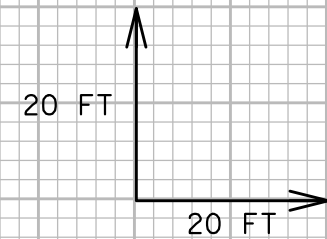
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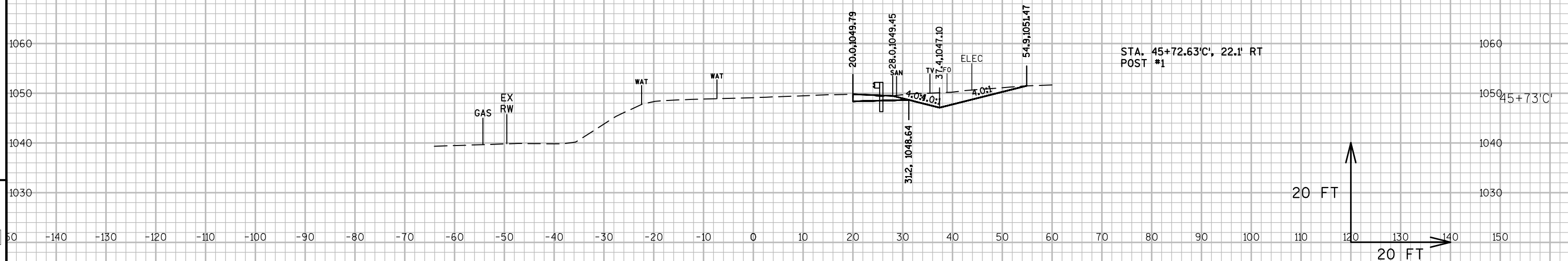
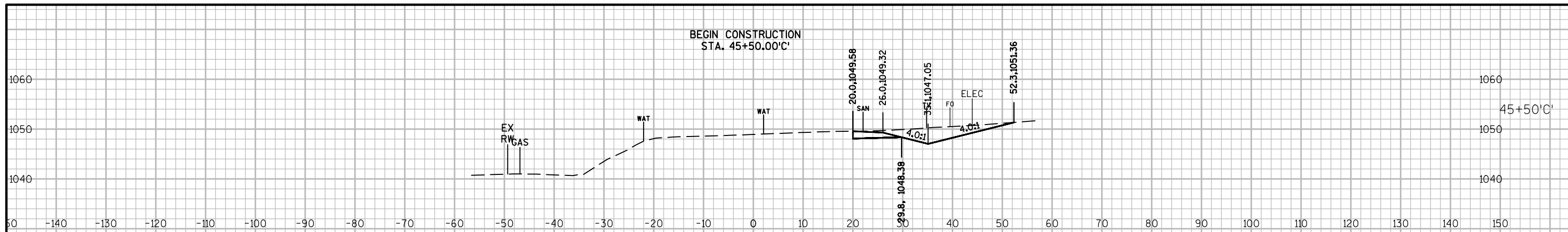
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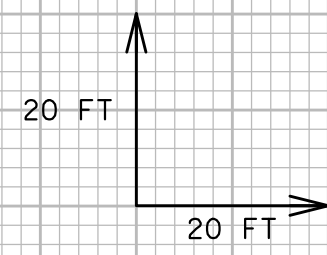
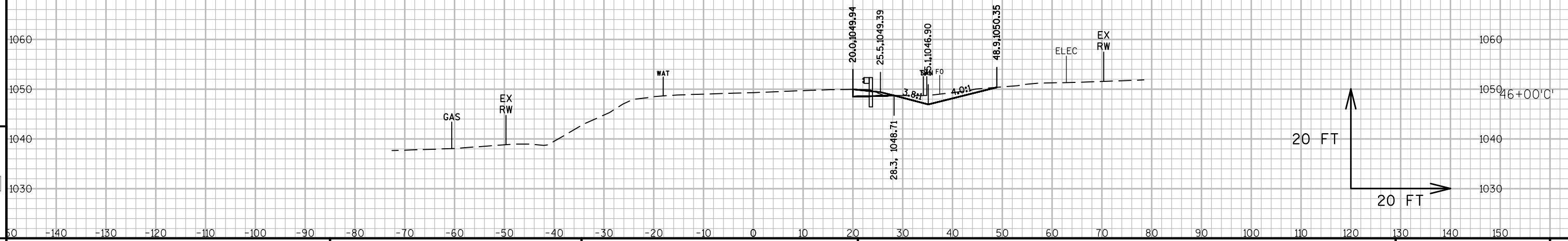
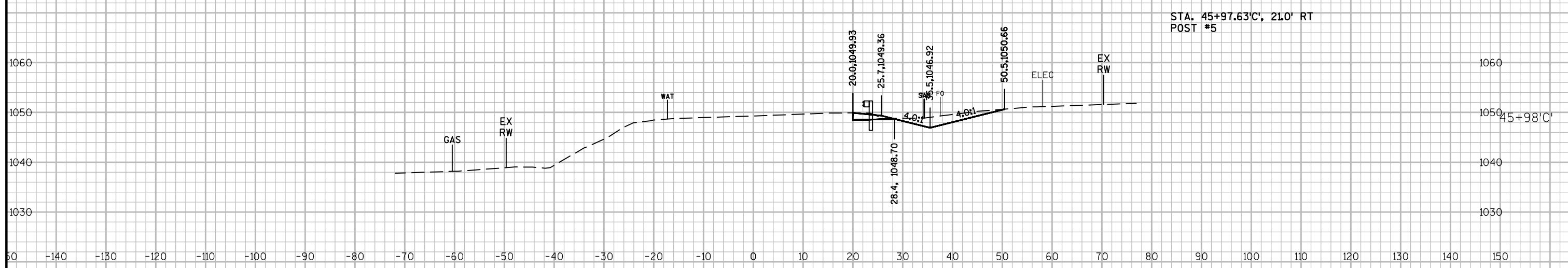
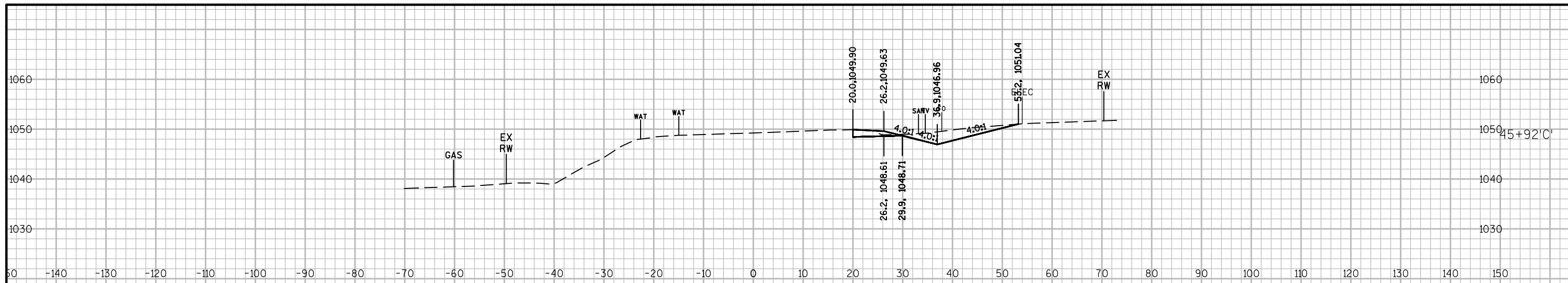
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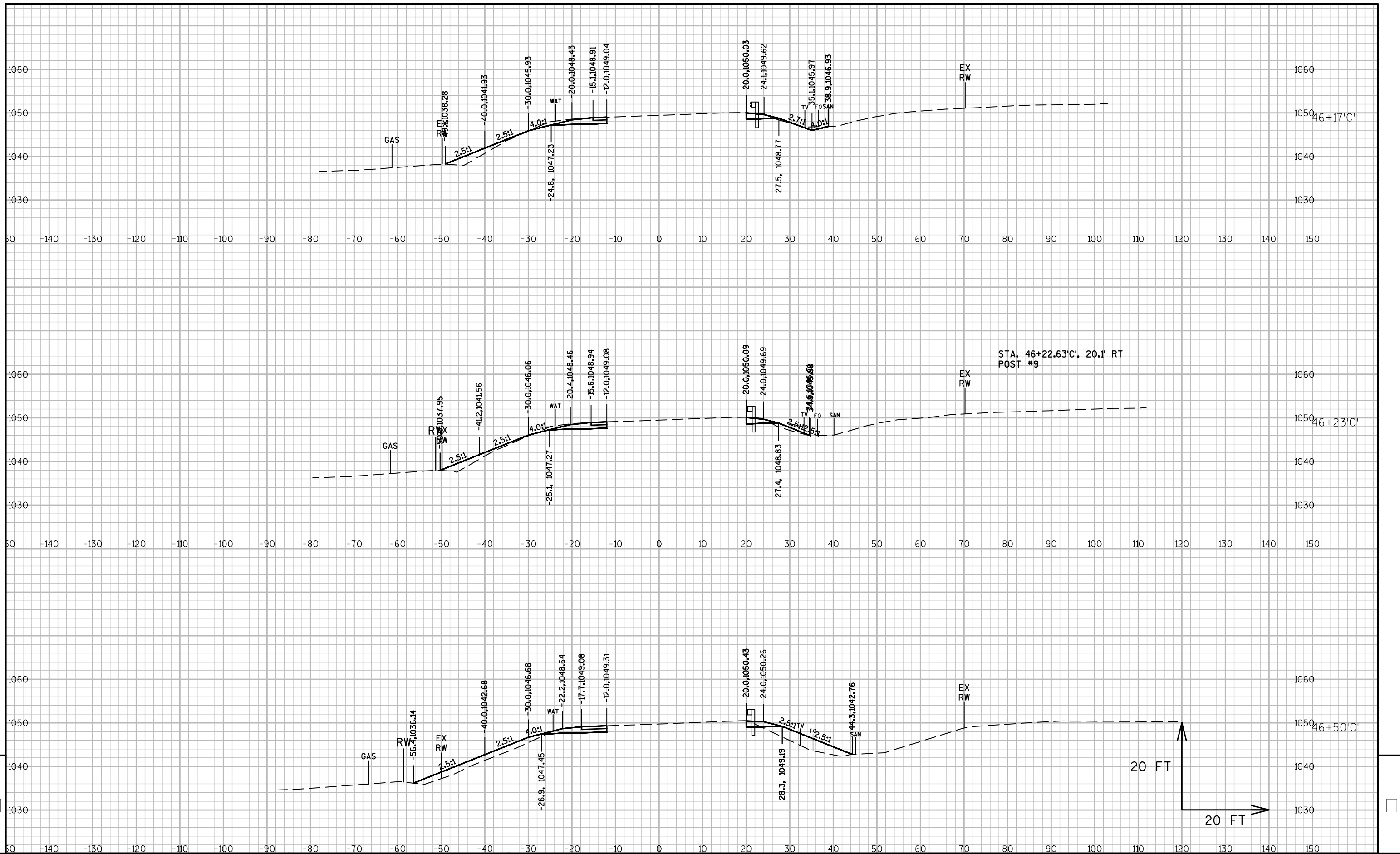
END CONSTRUCTION
MATCH EXISTING
STA. 25+75.52'B'







PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: UNNAMED TRIBUTARY SHEET E



PROJECT NO: 8200-00-70

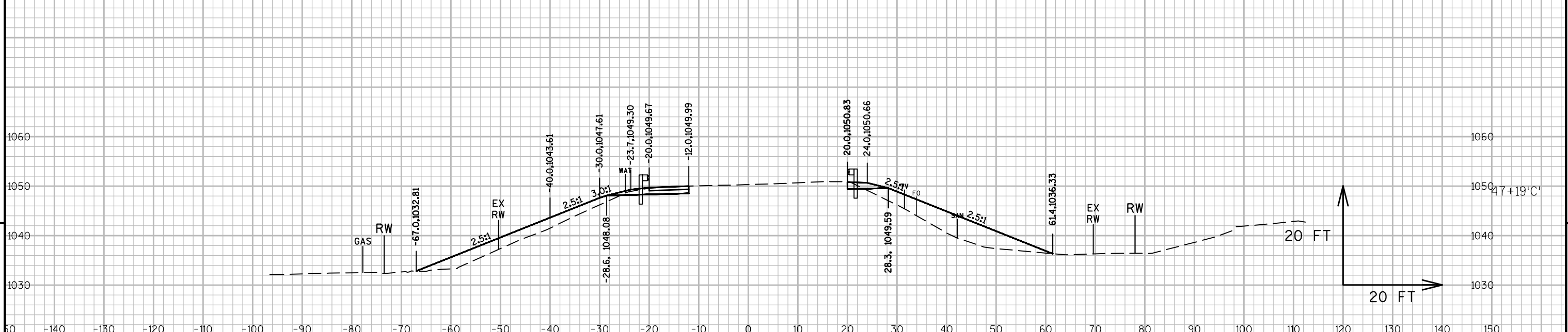
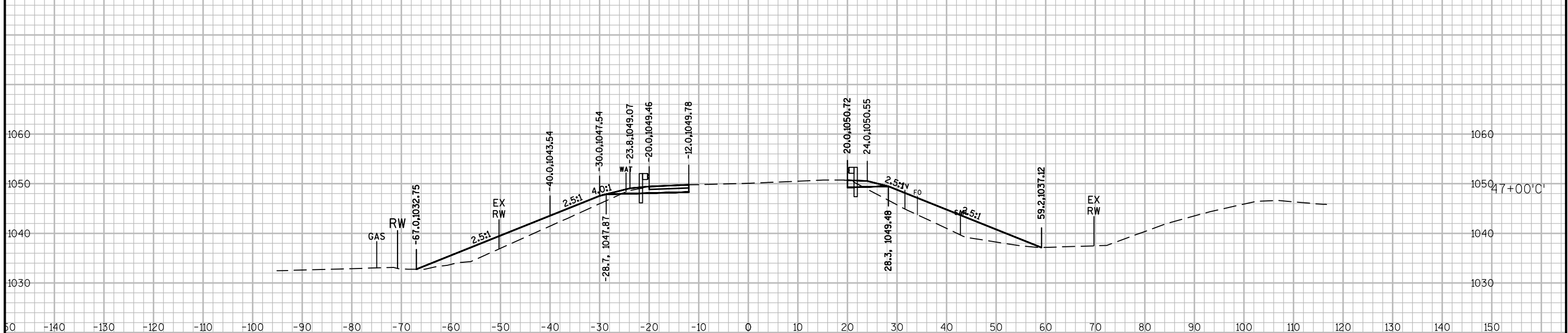
HWY: STH 27

COUNTY: CHIPPEWA

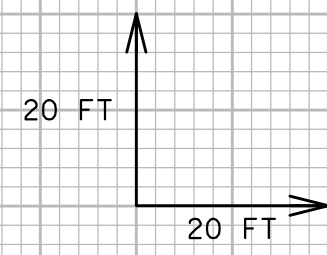
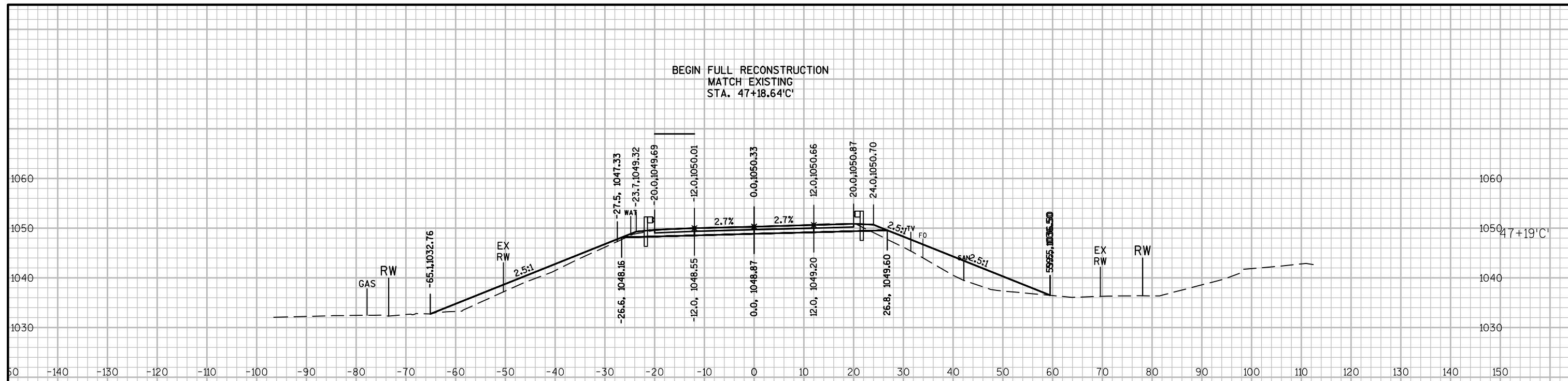
CROSS SECTIONS: UNNAMED TRIBUTARY

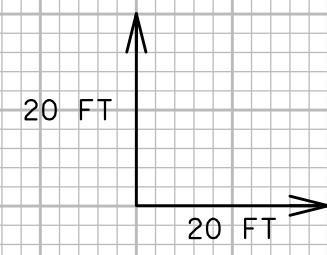
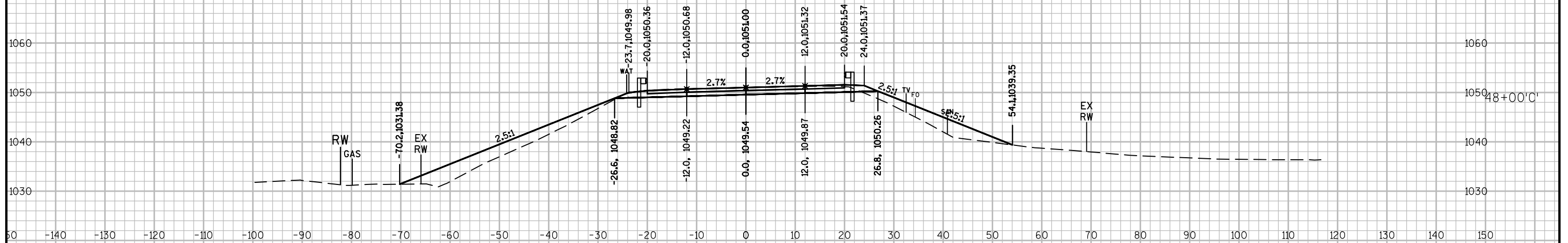
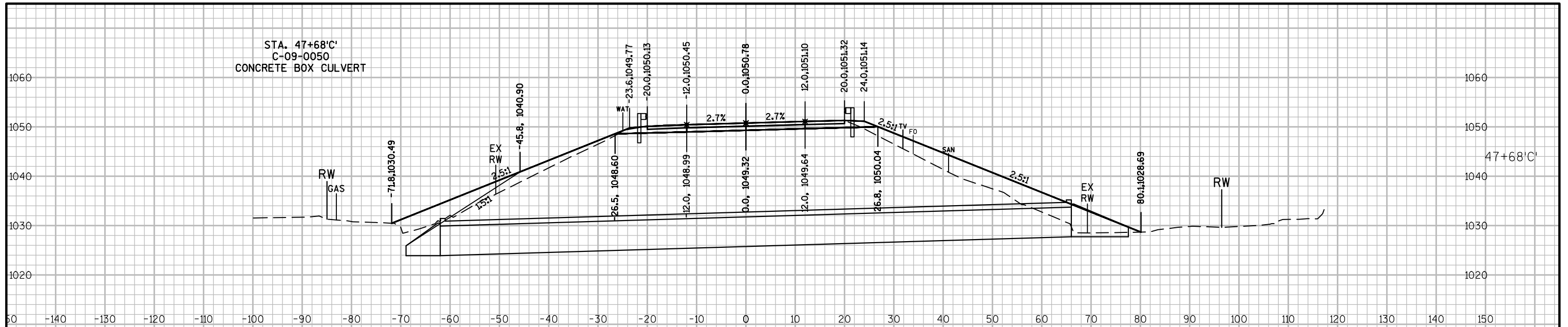
SHEET

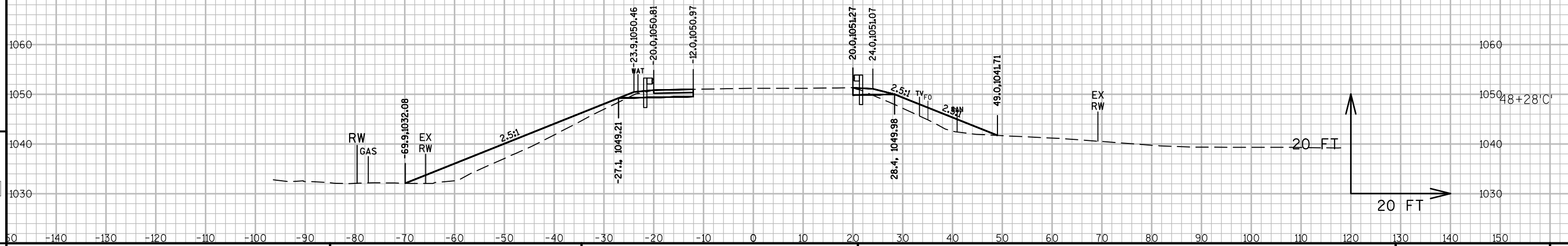
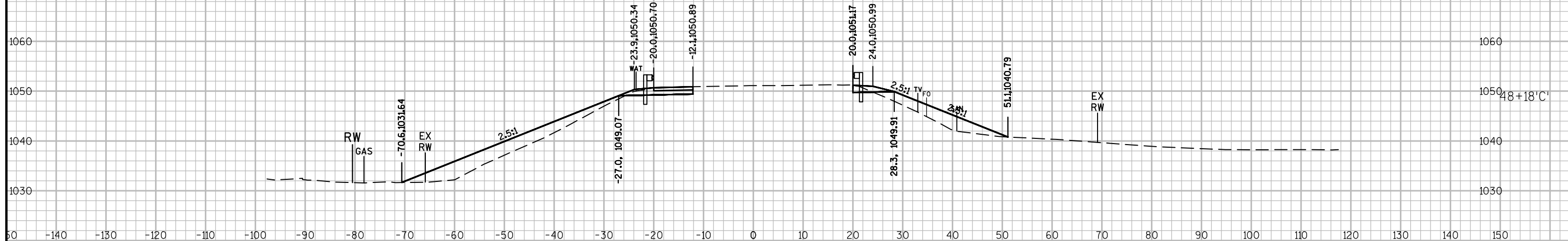
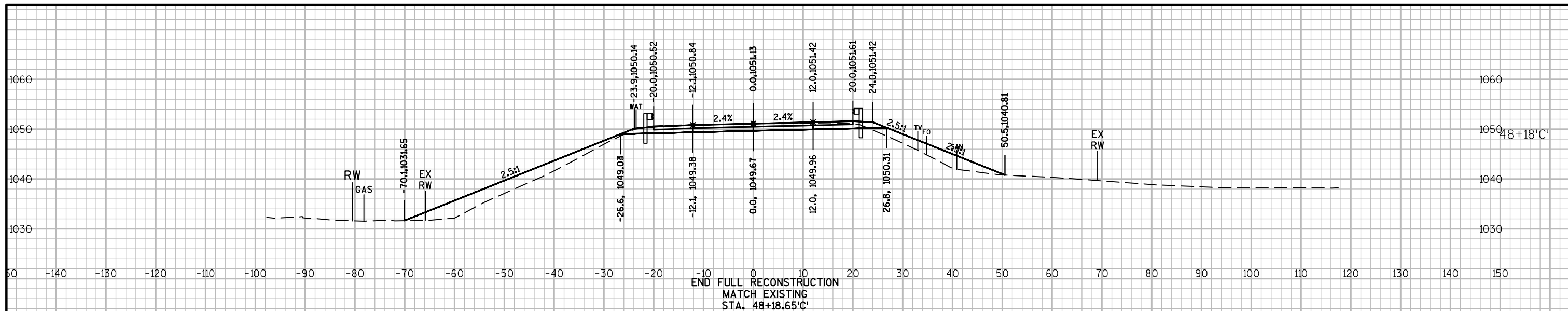
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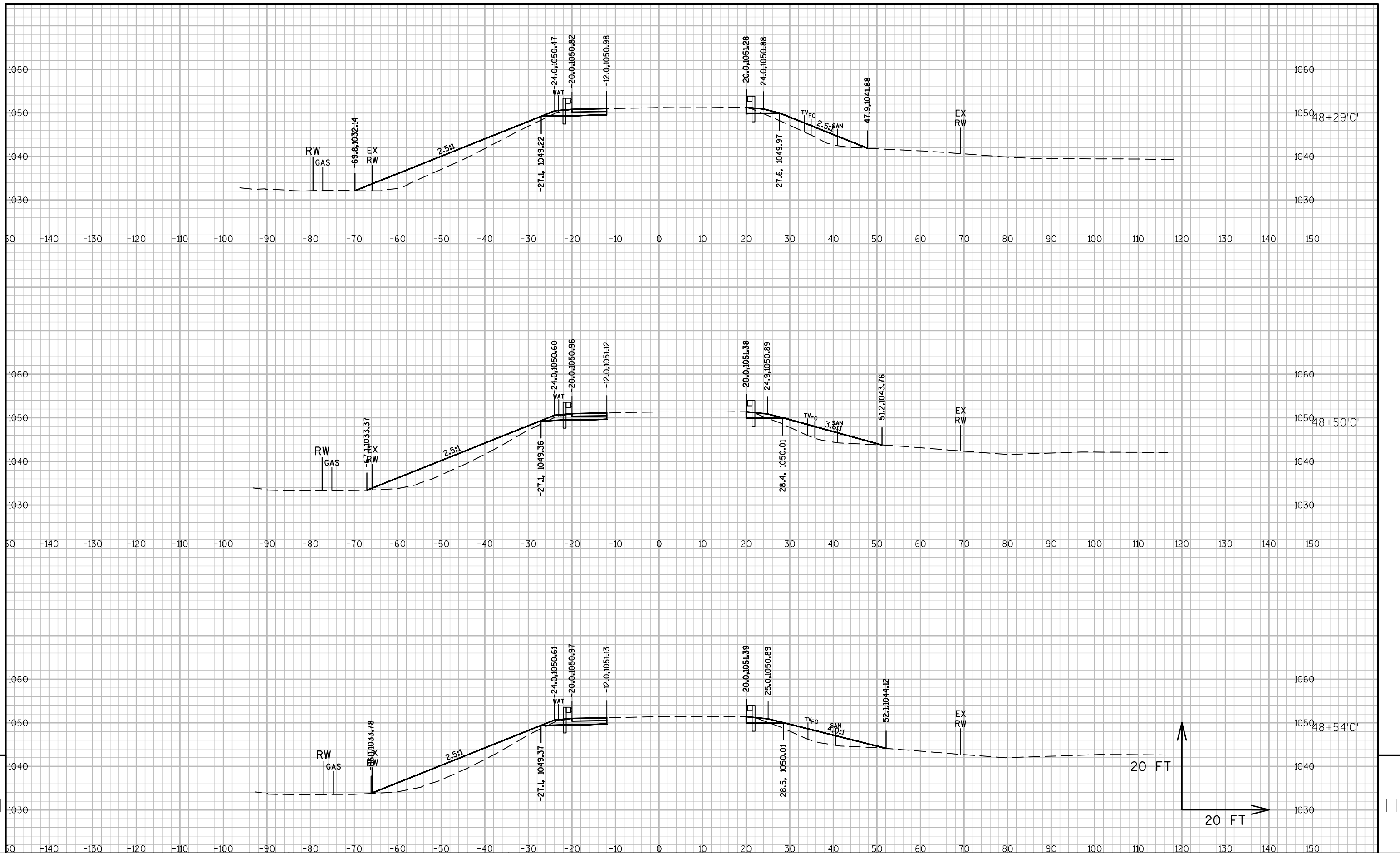
PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: UNNAMED TRIBUTARY SHEET E







PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: UNNAMED TRIBUTARY SHEET E



PROJECT NO: 8200-00-70

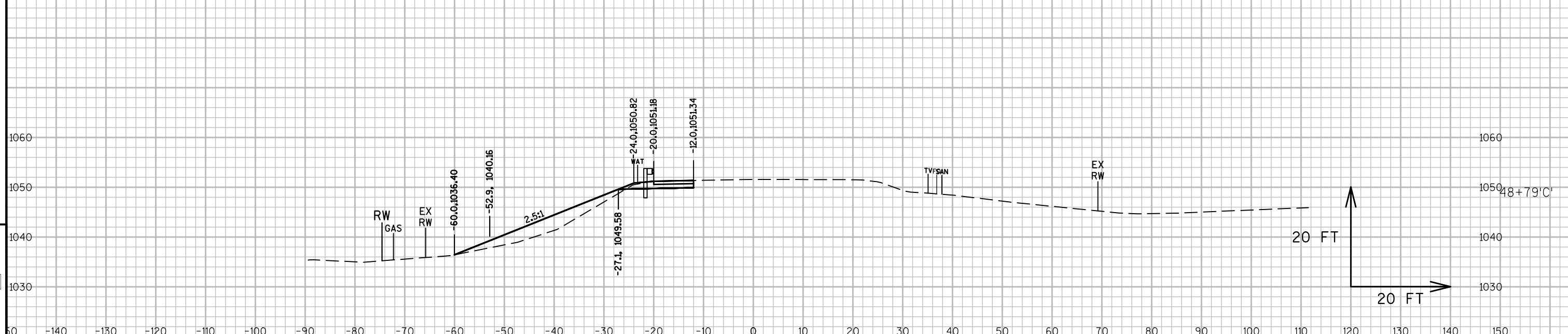
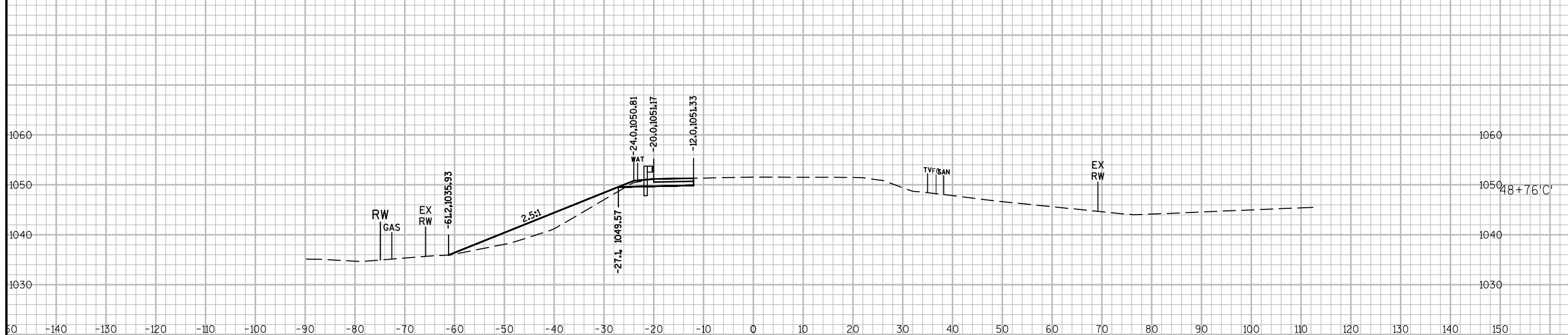
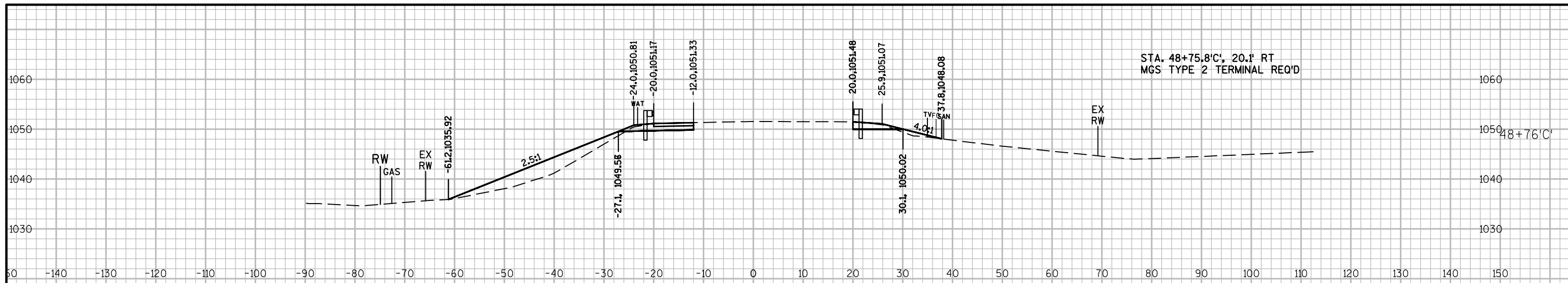
HWY: STH 27

COUNTY: CHIPPEWA

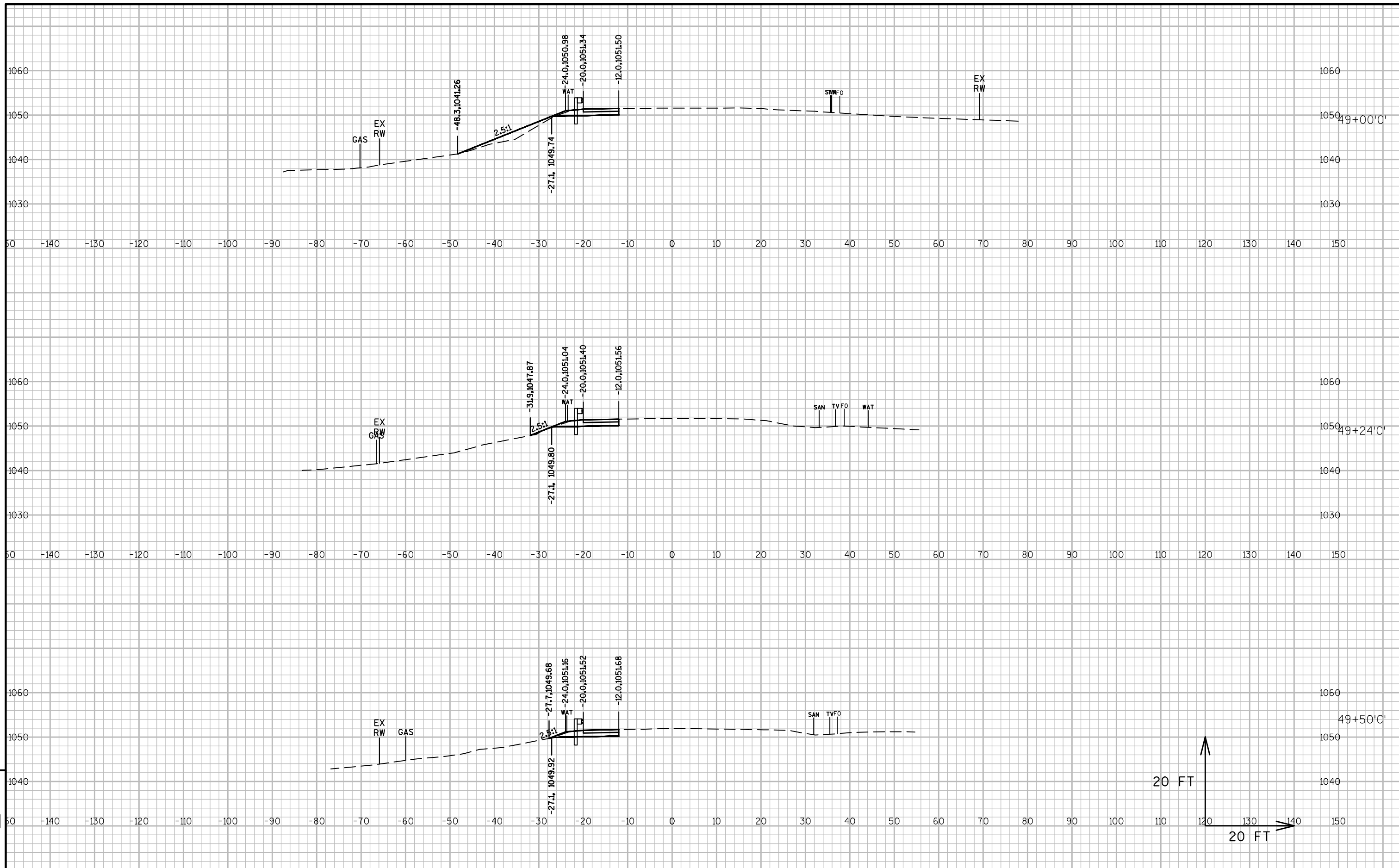
CROSS SECTIONS: UNNAMED TRIBUTARY

SHEET

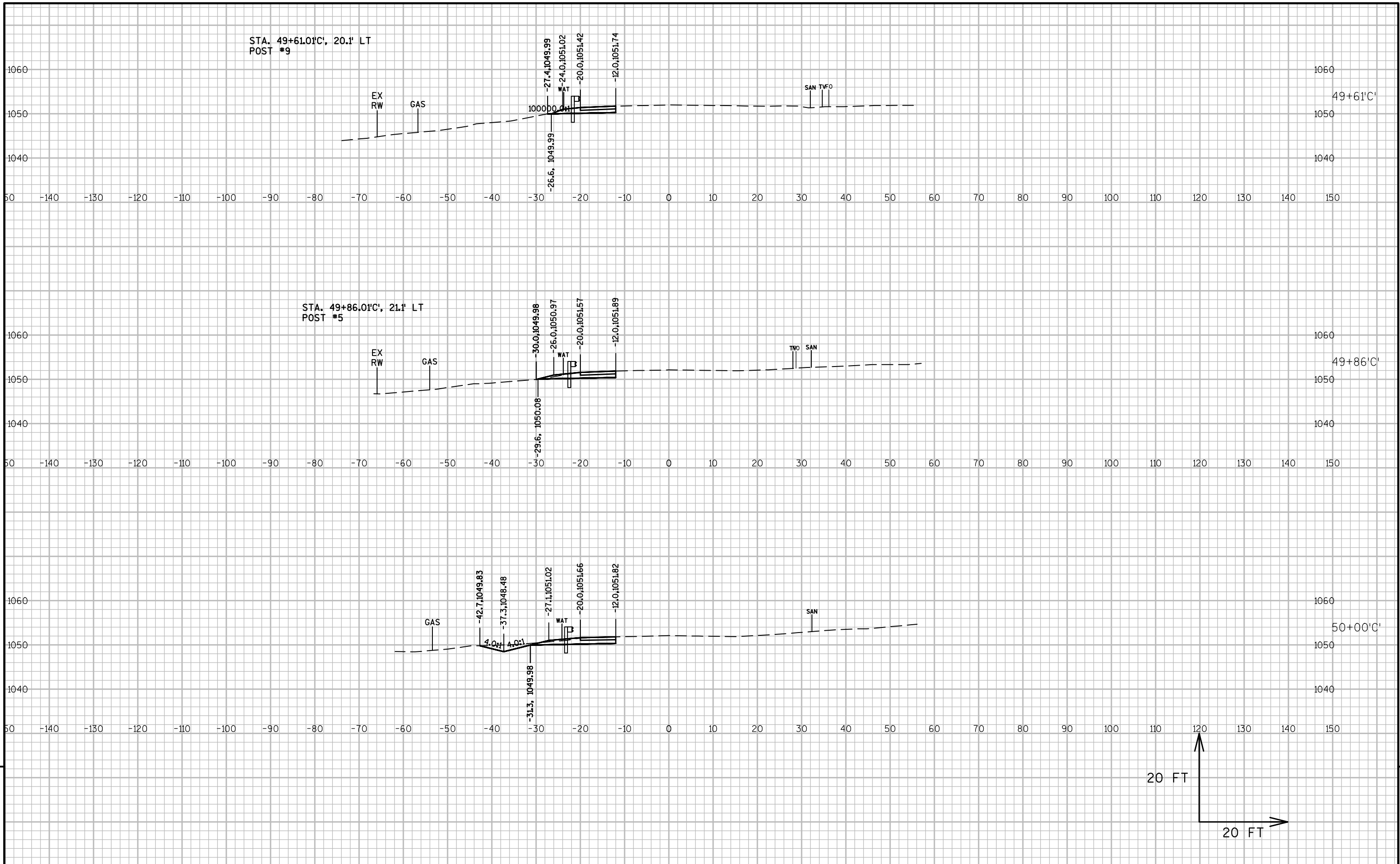
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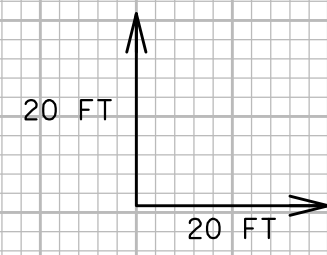
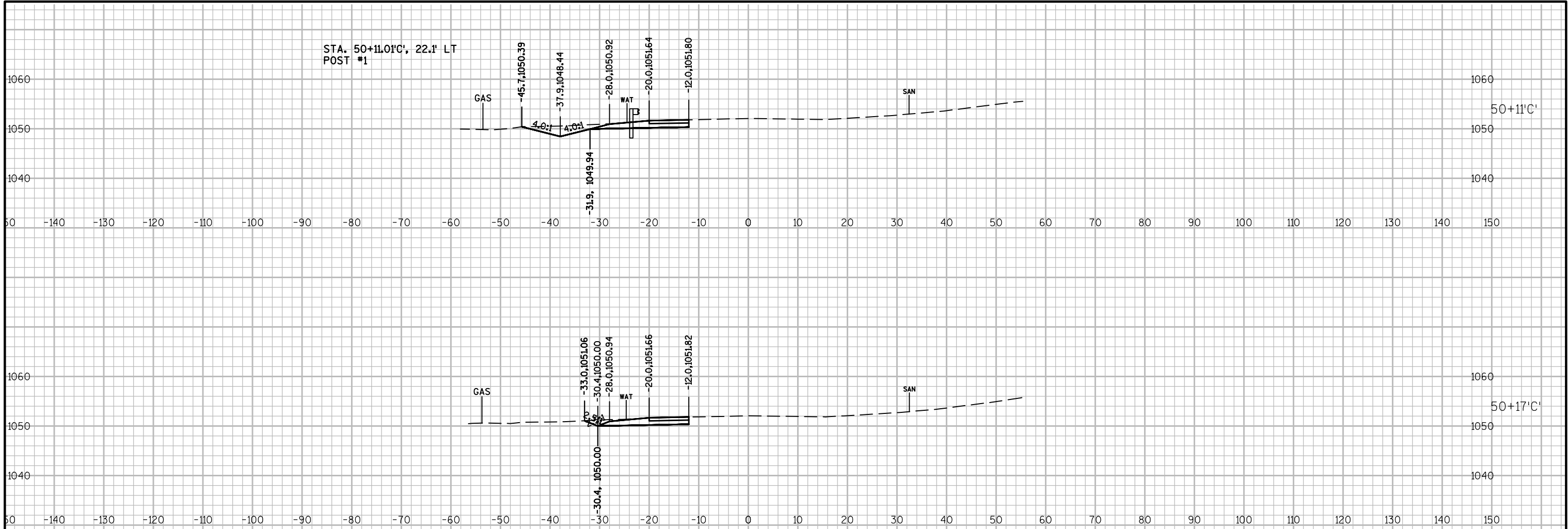


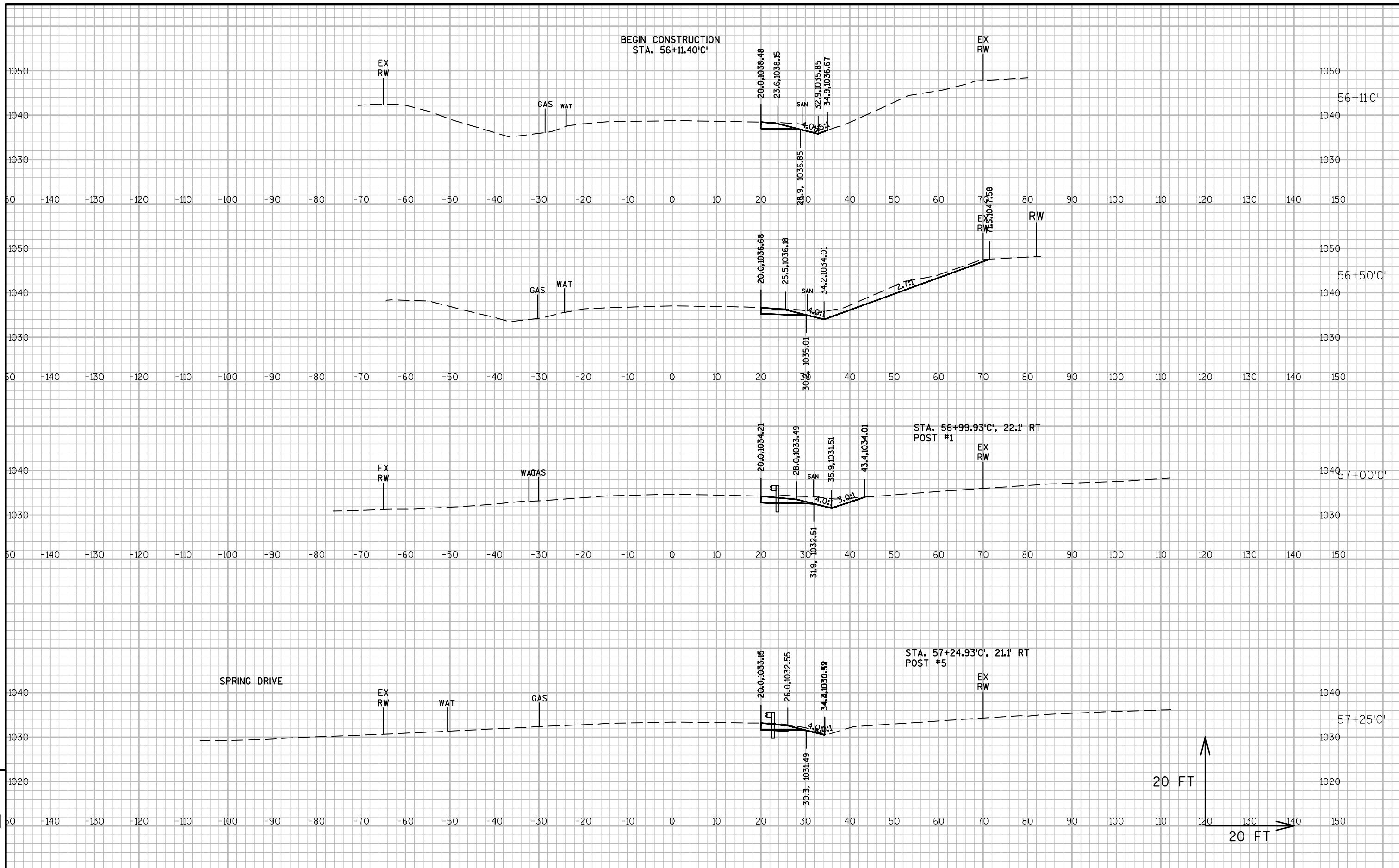
PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: UNNAMED TRIBUTARY SHEET E



PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: UNNAMED TRIBUTARY SHEET E







PROJECT NO: 8200-00-70

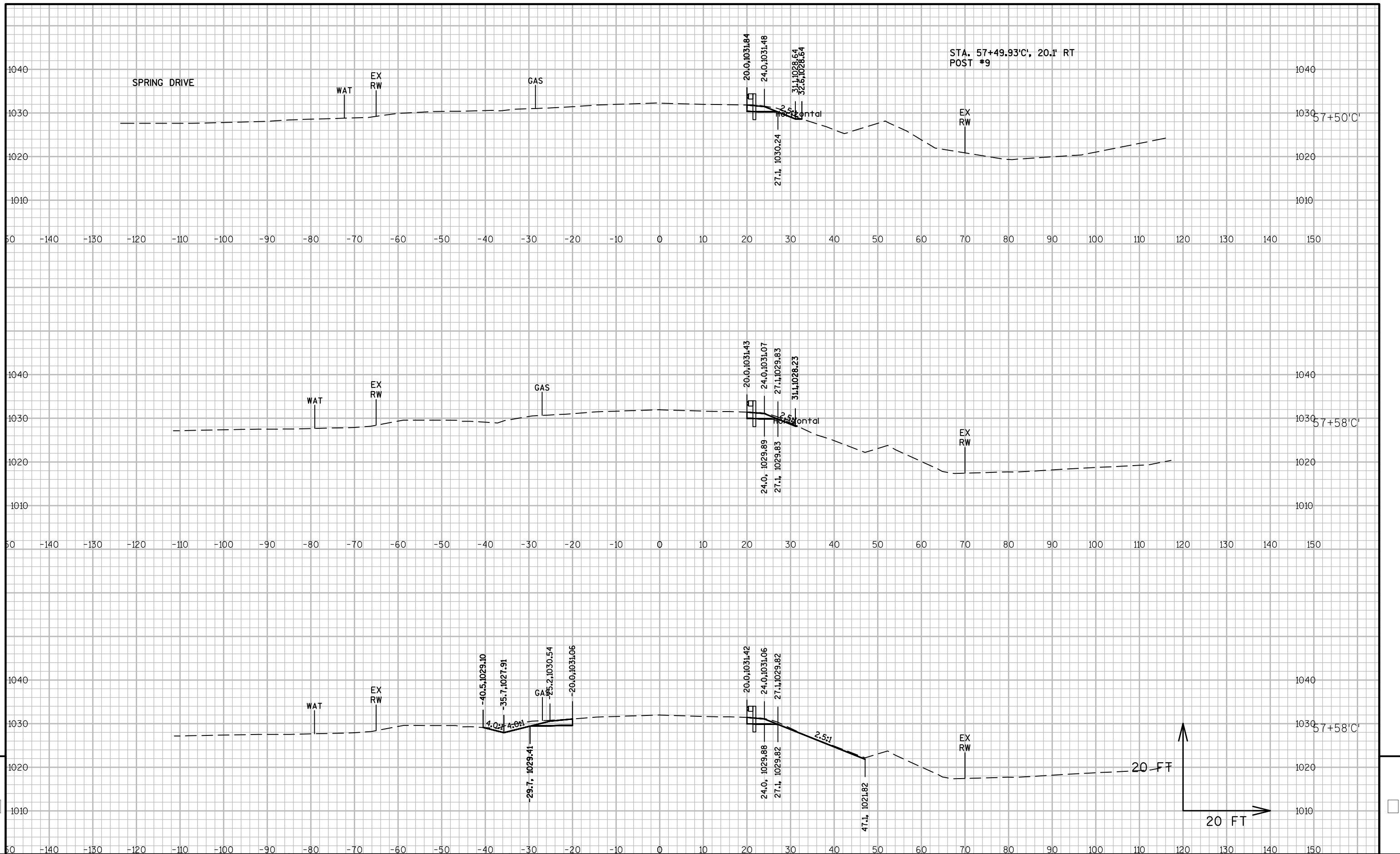
HWY: STH 27

COUNTY: CHIPPEWA

CROSS SECTIONS: CLARK CREEK

SHEET

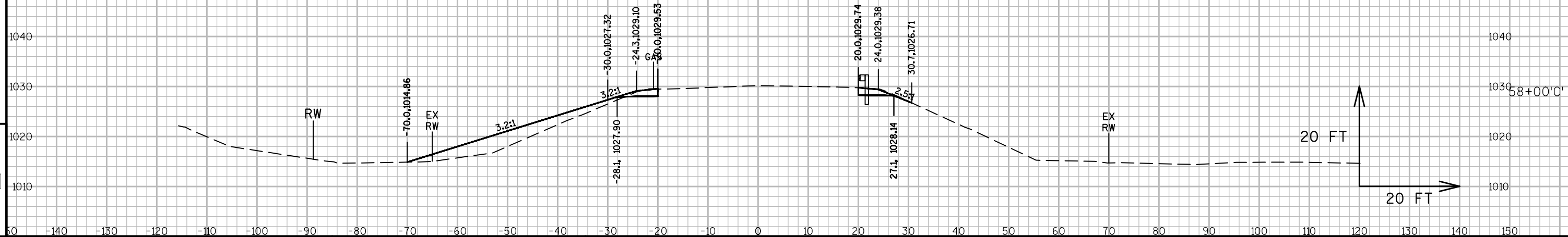
E



STA. 57+64.65'C, 20.1' LT
TYPE 2 TERMINAL REQ'D



STA. 57+89.67'C, 21.1' LT
POST #5



PROJECT NO: 8200-00-70

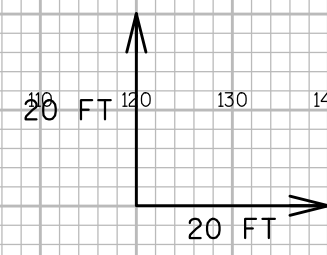
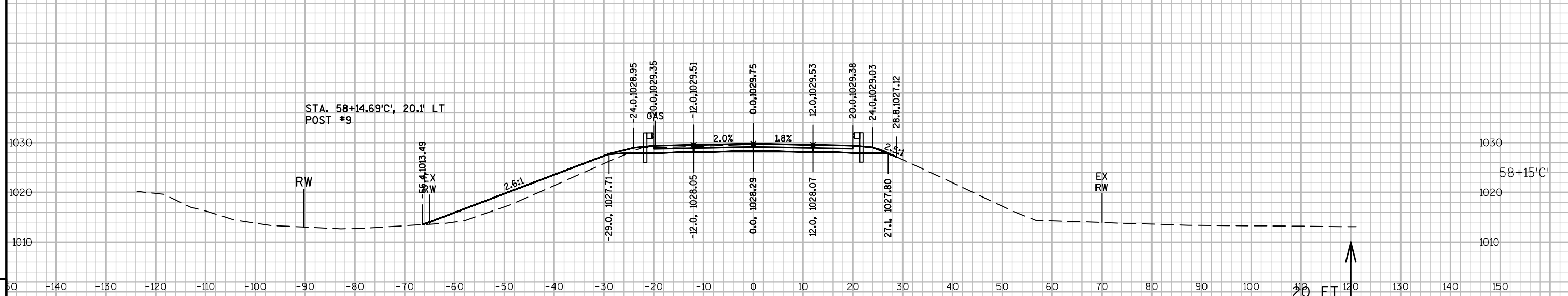
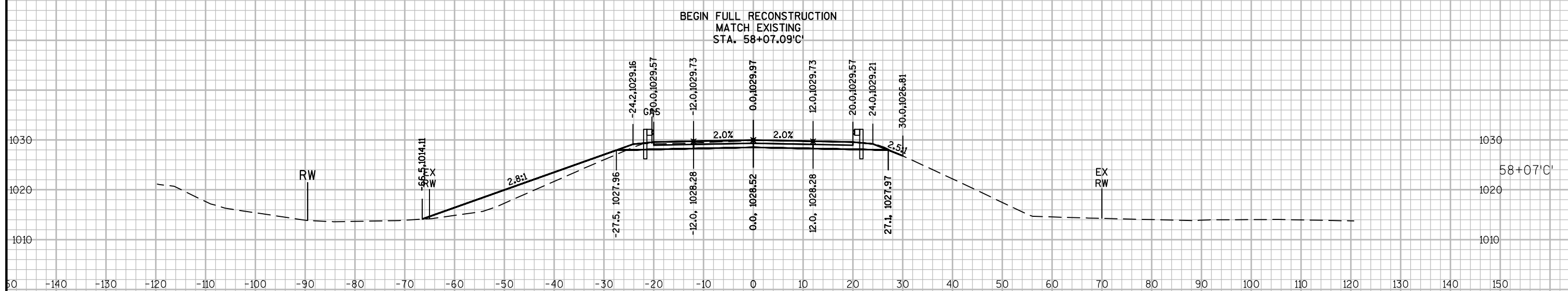
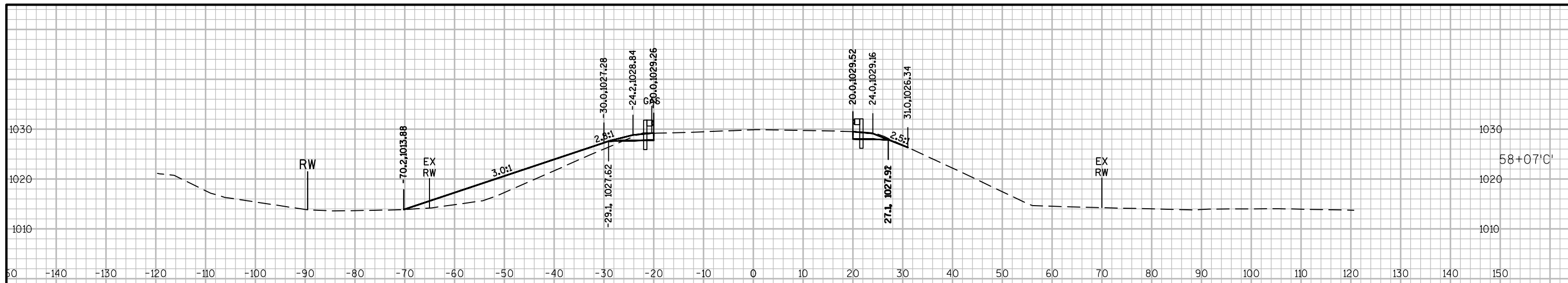
HWY: STH 27

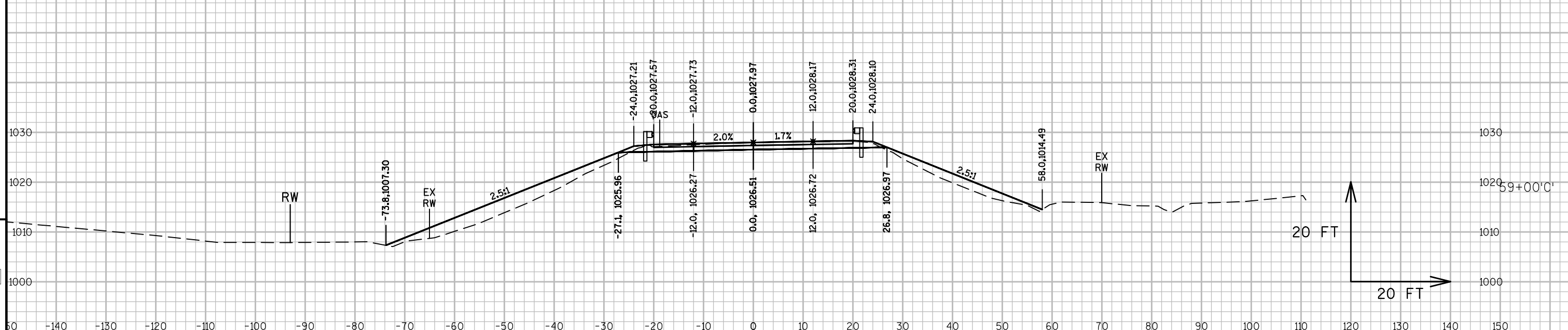
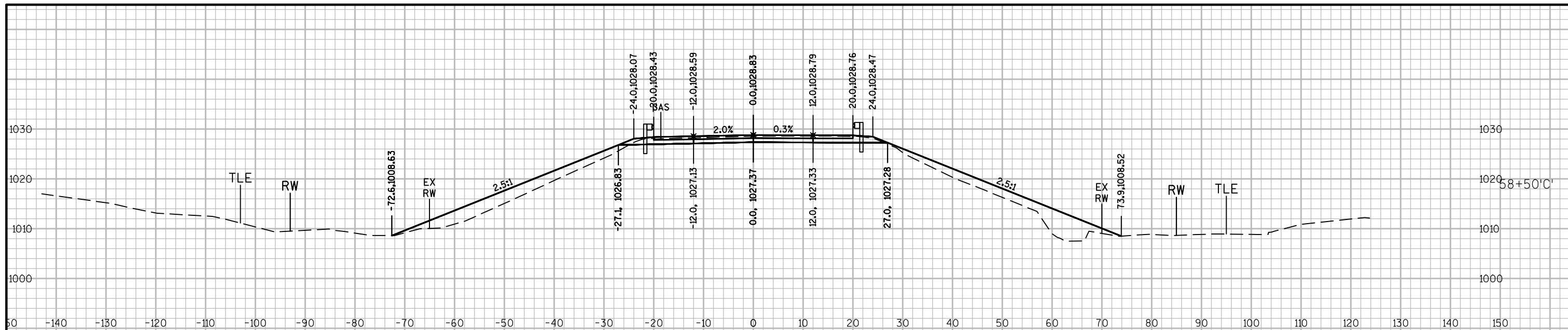
COUNTY: CHIPPEWA

CROSS SECTIONS: CLARK CREEK

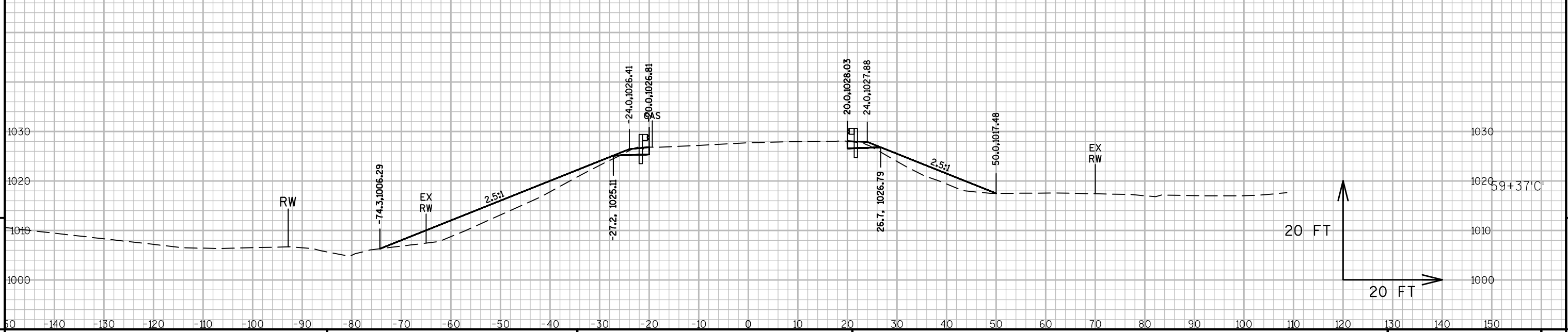
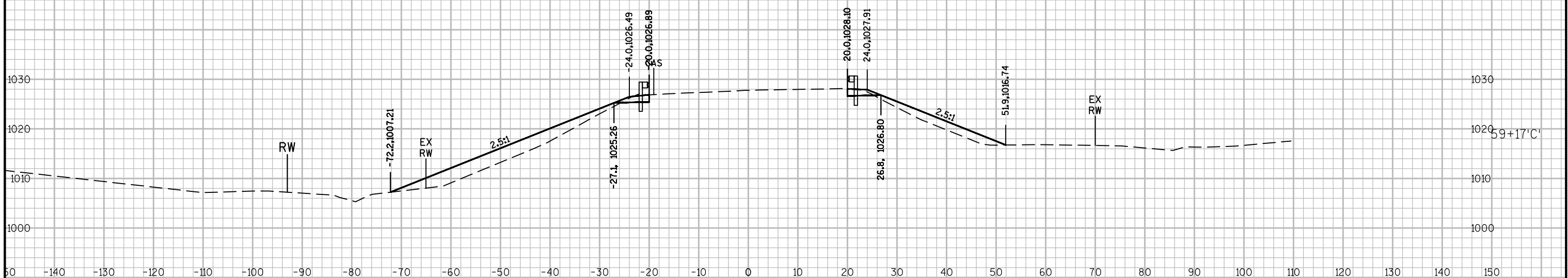
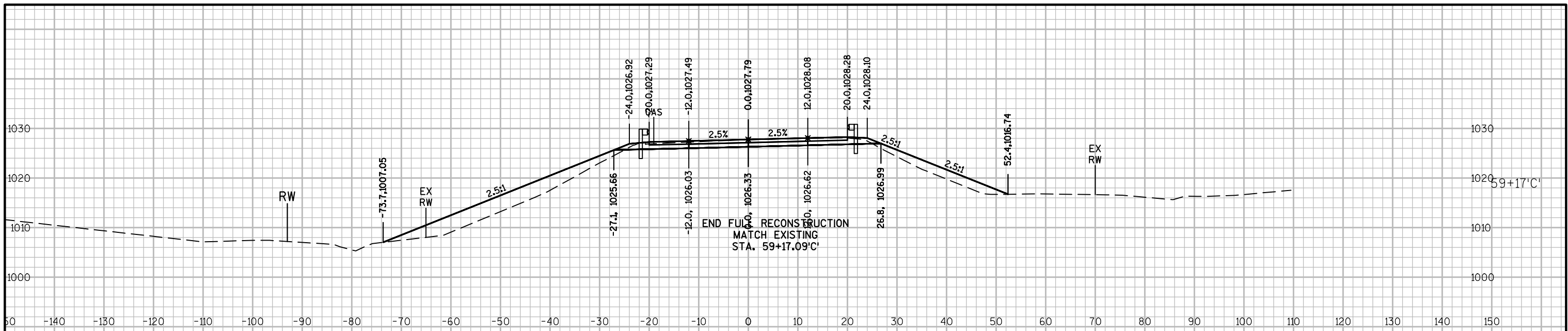
SHEET

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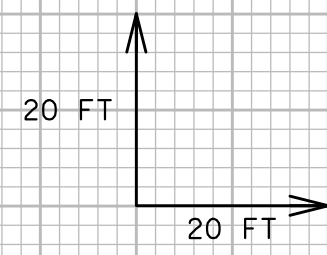
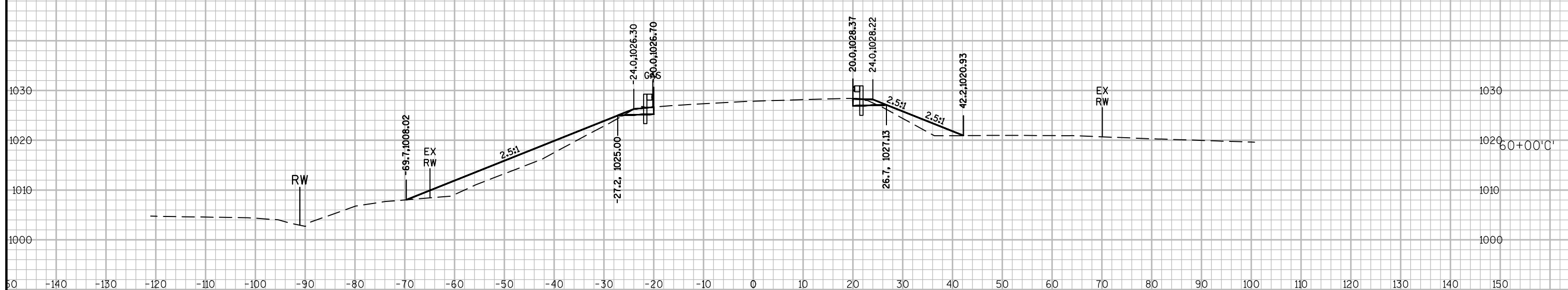
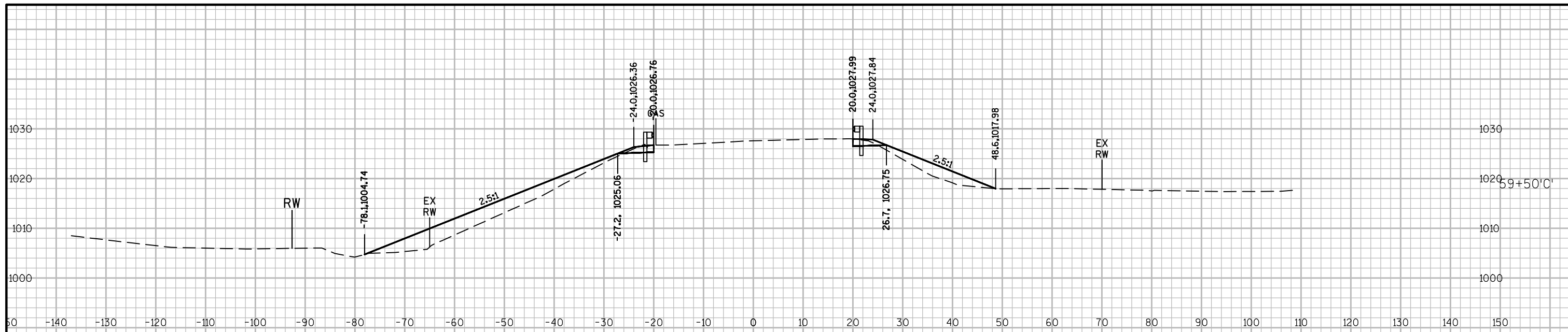




PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: CLARK CREEK SHEET E



PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: CLARK CREEK SHEET E



PROJECT NO: 8200-00-70

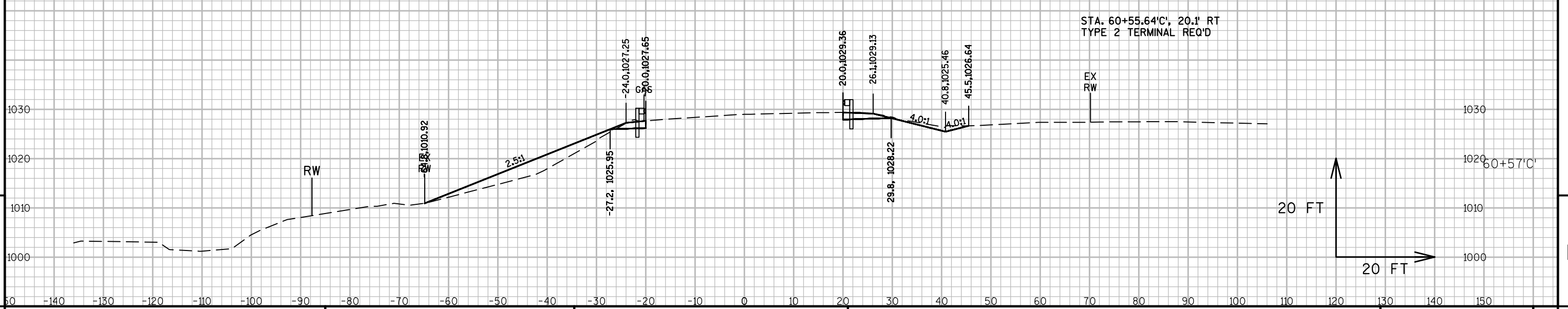
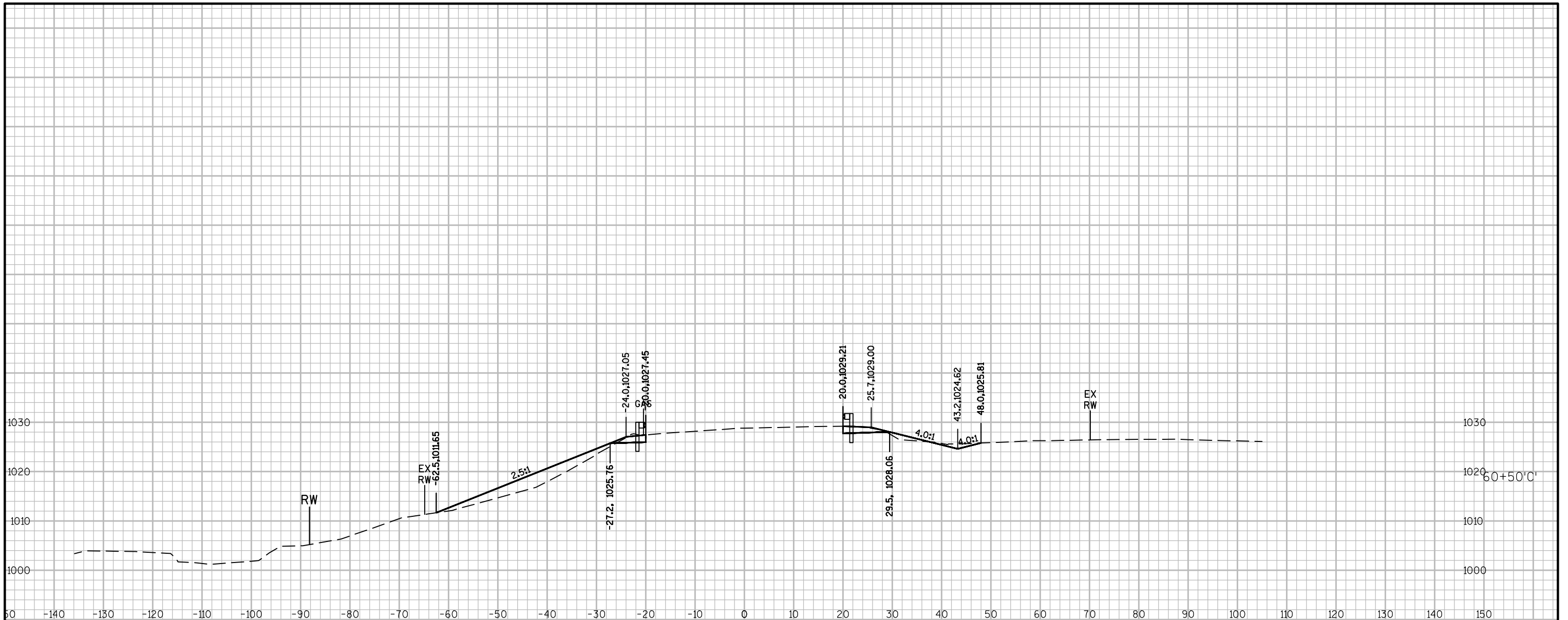
HWY: STH 27

COUNTY: CHIPPEWA

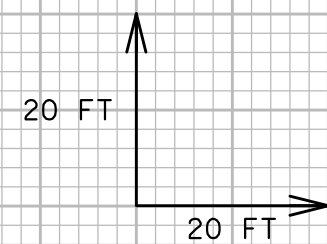
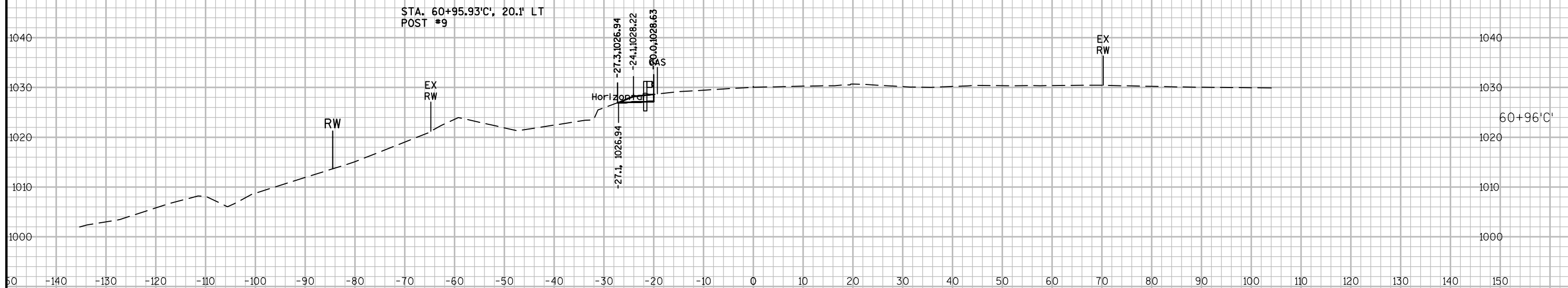
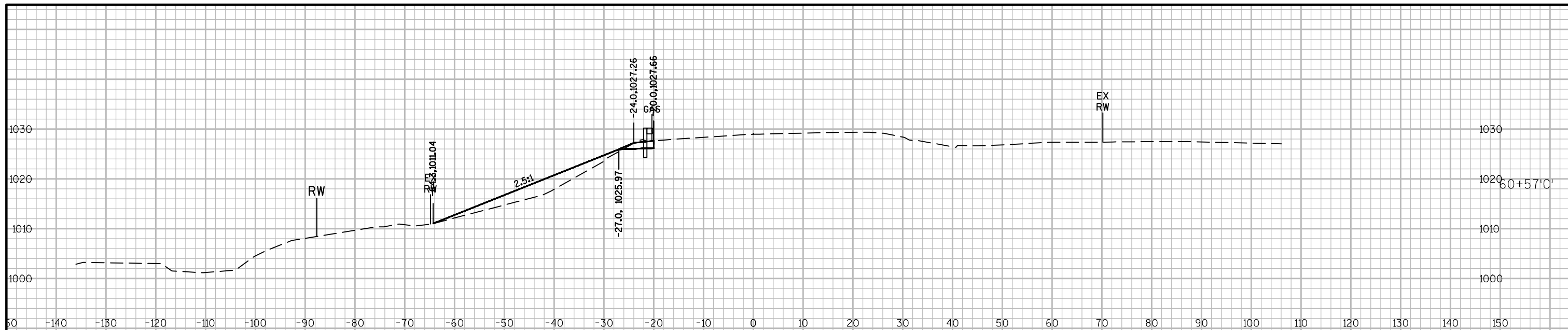
CROSS SECTIONS: CLARK CREEK

SHEET

E



PROJECT NO: 8200-00-70 HWY: STH 27 COUNTY: CHIPPEWA CROSS SECTIONS: CLARK CREEK SHEET E



PROJECT NO: 8200-00-70

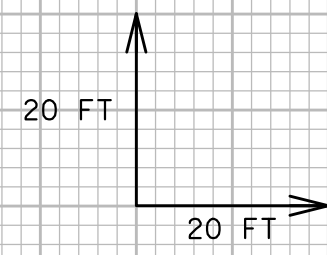
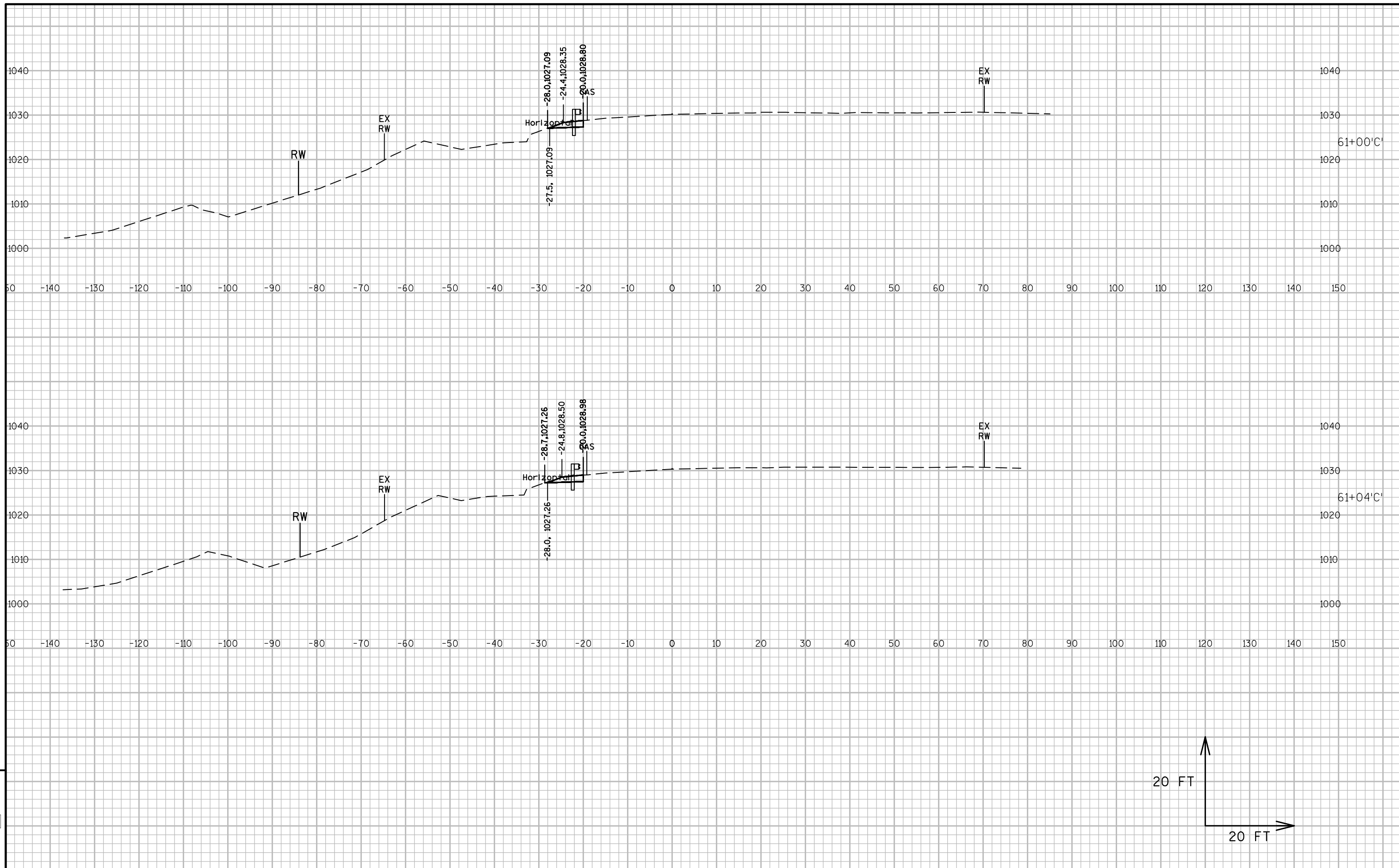
HWY: STH 27

COUNTY: CHIPPEWA

CROSS SECTIONS: CLARK CREEK

SHEET

E



PROJECT NO: 8200-00-70

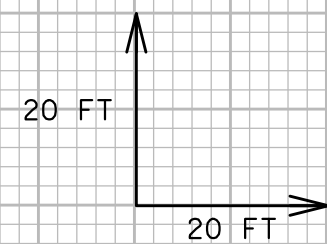
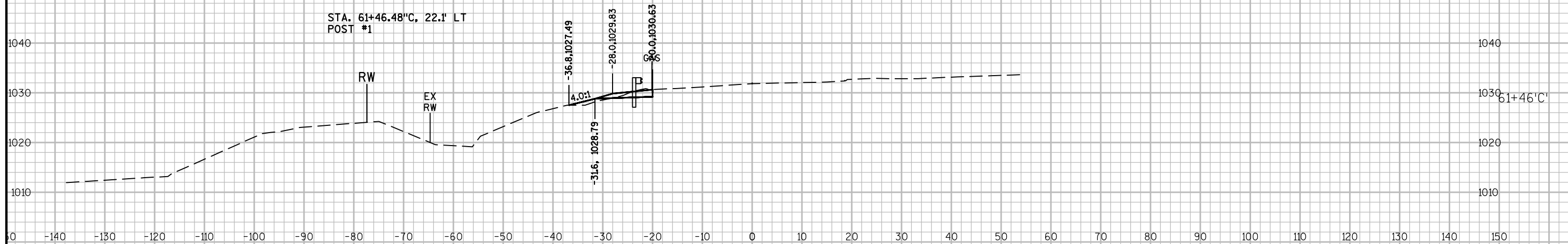
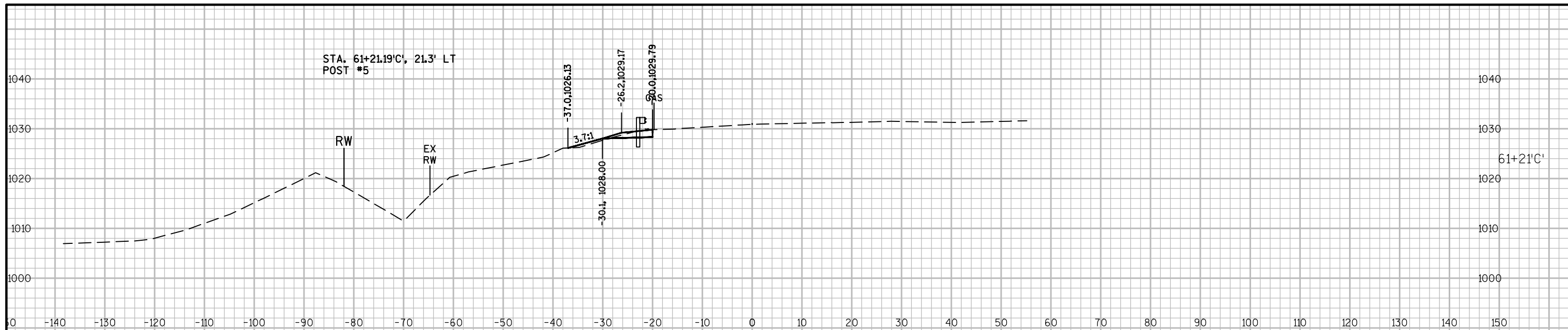
HWY: STH 27

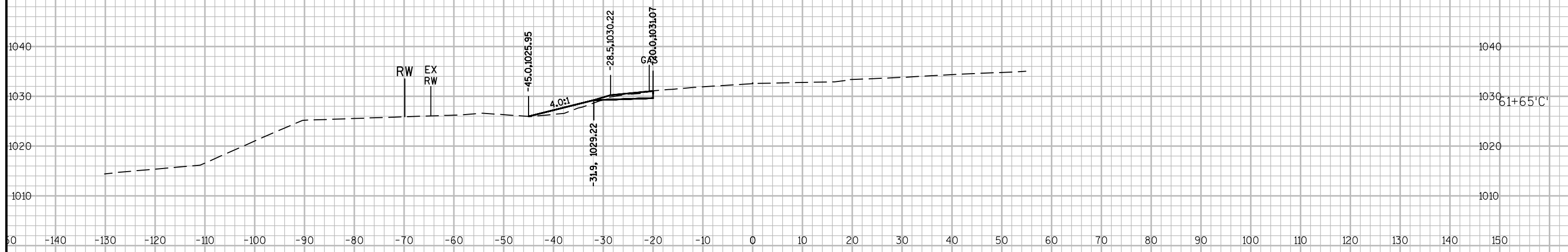
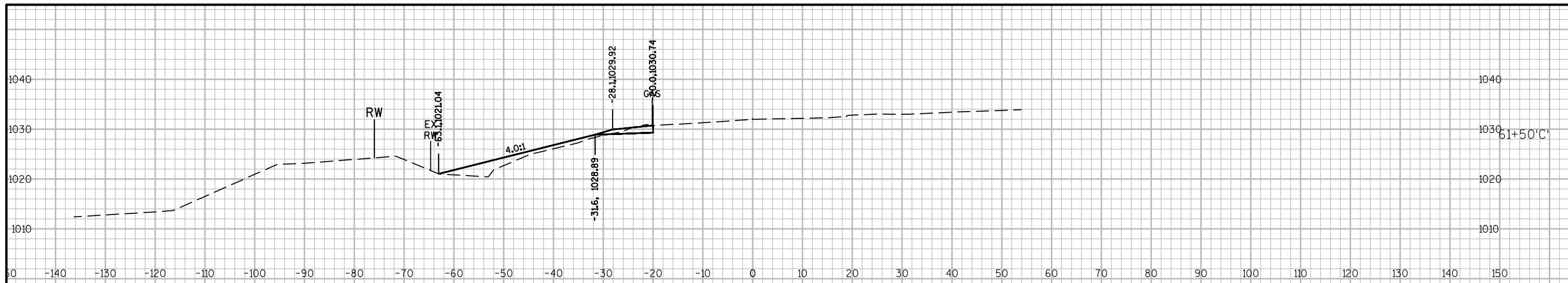
COUNTY: CHIPPEWA

CROSS SECTIONS: CLARK CREEK

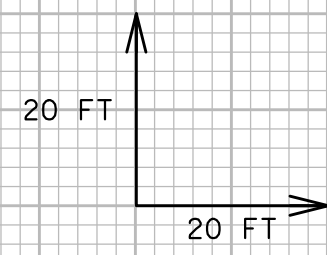
SHEET

E





END PROJECT
MATCH EXISTING
STA. 61+65.20'





Wisconsin Department of Transportation

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