

WKE

PROJECT ID:

3240-11-70

COUNTY:

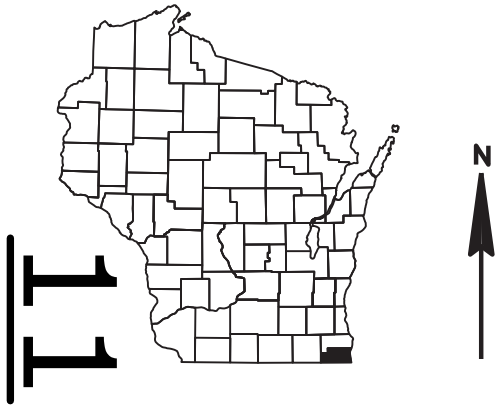
KENOSHA

SEPTEMBER 2021

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 = 208



DESIGN DESIGNATION	STH 32	STH 165
A.A.D.T. 2019	= 11,100	3,500
A.A.D.T. 2042	= 13,100	4,400
D.H.V.	= 1,360	460
D.D.	= 59/41	59/41
T.	= 2.4%	2.4%
DESIGN SPEED	= 50 MPH	45 MPH
ESALS	= 550,000	190,000

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

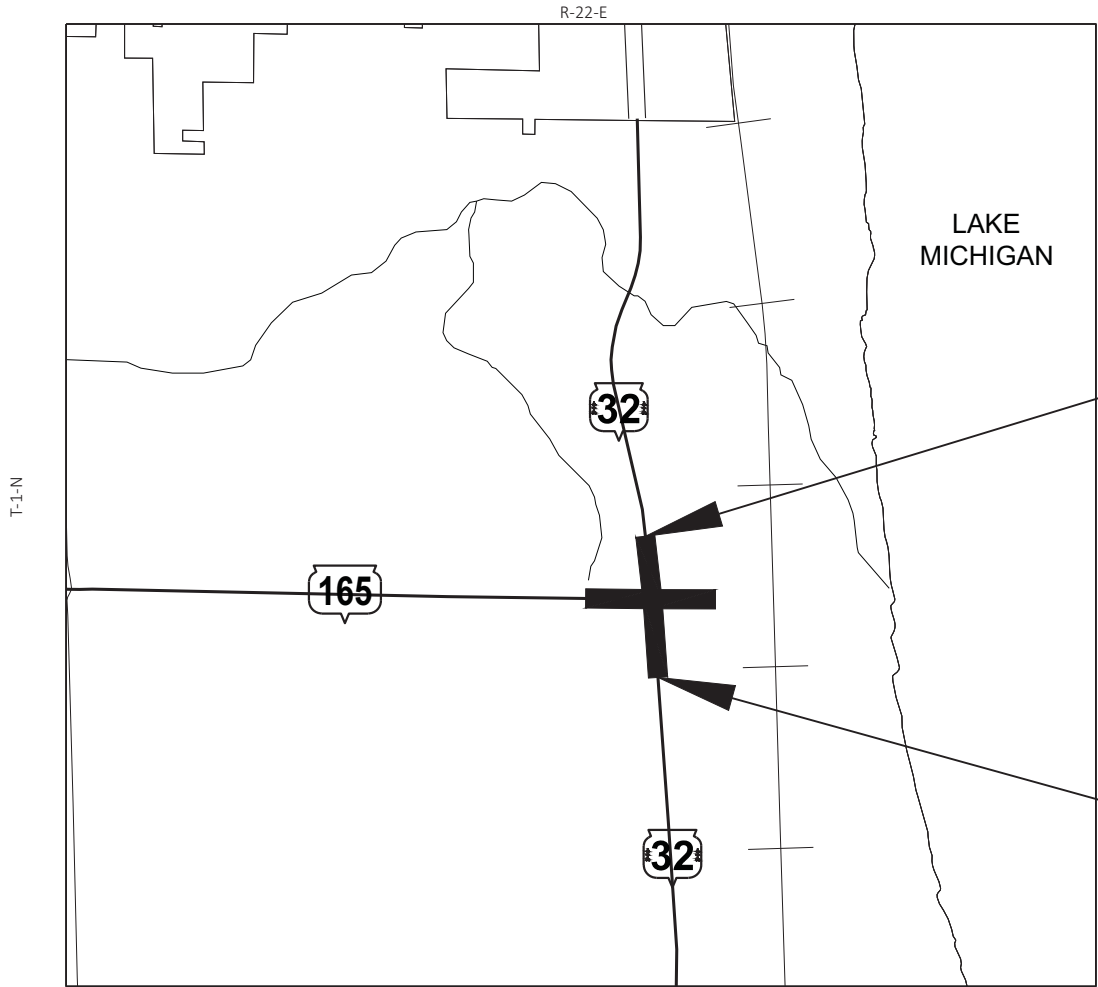
SHERIDAN RD, VIL PLEASANT PRAIRIE

STH 165 INTERSECTION

STH 32

KENOSHA COUNTY

STATE PROJECT NUMBER
3240-11-70



TOTAL NET LENGTH OF CENTERLINE = 0.379 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), KENOSHA COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD88 (2007). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 09-WI.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3240-11-70	WISC 2021480	1

ORIGINAL PLANS PREPARED BY



DATE: 4/30/21 (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	RA SMITH
Surveyor	DAAR ENGINEERING, INC.
Designer	VIDA SHAFFER, P.E.
Project Manager	STEVE CHOINACKI, P.E.
Regional Examiner	REEM SHAHIN, P.E.
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 4/30/21 (Signature) Vida Shaffer

E

GENERAL NOTES

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

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

CONTACT THE PROJECT ENGINEER, THE COUNTY SURVEYOR, AND SEWRPC AT LEAST TWO WEEKS BEFORE WORKING NEAR ANY SECTION CORNER MONUMENT.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND EXISTING PAVEMENT ELEVATIONS.

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

RESHAPE, RESTORE AND FINISH ALL PREVIOUSLY GRASSED AREAS DISTURBED BY OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT NO EXPENSE TO THE DEPARTMENT.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE TOPSOILED, FERTILIZED, SEEDED AND EROSION MATTED AS DIRECTED BY THE ENGINEER.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

BACKFILL ALL OPENINGS AND HOLES LOCATED WITHIN THE ROADWAY RESULTING FROM REMOVALS OR ABANDONMENTS WITH GRANULAR BACKFILL UNLESS THE PLANS PROVIDE FOR ALTERNATE BACKFILL.

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

EXISTING DRIVEWAYS AND FIELD ENTRANCES SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

STANDARD ABBREVIATIONS LIST

AP	ACCESS POINT	CPRCHE	CULVERT PIPE REINFORCED CONCRETE	I	INTERSECTION ANGLE	PVC	POINT OF VERTICAL CURVE	SDD	STANDARD DETAIL DRAWINGS
AC	ACRE		HORIZONTAL ELLIPTICAL	INV	INVERT	PVI	POINT OF VERTICAL INTERSECTION	STH	STATE TRUNK HIGHWAYS
ADJ	ADJUST	C & G	CURB AND GUTTER	IP	IRON PIPE OR PIN	PVT	POINT OF VERTICAL TANGENCY	STA	STATION
AECPRC	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE	D	DEGREE OF CURVE	JT	JOINT	PVC	POLYVINYL CHLORIDE	SS	STORM SEWER
AH	AHEAD	DHV	DESIGN HOUR VOLUME	LT	LEFT	PCC	PORTLAND CEMENT CONCRETE	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
AC	ASPHALT CEMENT	DIA	DIAMETER	LT	LENGTH OF CURVE	LB	POUND	ST	STREET
ASPH	ASPHALTIC	DD	DIRECTIONAL DISTRIBUTION	LF	LINEAR FOOT	PSF	POUNDS PER SQUARE FOOT	STR	STRUCTURE OR STRUCTURAL
ACP	ASPHALTIC CONCRETE PAVEMENT	DWY	DRIVEWAY	LP	LOW POINT	PSI	POUNDS PER SQUARE INCH	SEC	SUPERELEVATION
AVG	AVERAGE	E	EAST	LS	LUMP SUM	PE	PRIVATE ENTRANCE	T	TANGENT
ADT	AVERAGE DAILY TRAFFIC	X	EAST GRID COORDINATE	MH	MANHOLE	PGL	PROFILE GRADE LINE	TEMP	TEMPORARY
AEW	APRON ENWALL	EB	EASTBOUND	MAX	MAXIMUM	PL	PROPERTY LINE	TI	TEMPORARY INTEREST
BK	BACK	EL	ELEVATION	Mga l	MEGAGALLON	Q100	100-YEAR FLOW RATE	TLE	TEMPORARY LIMITED EASEMENT
BAD	BASE AGGREGATE DENSE	ESALS	EQUIVALENT SINGLE AXLE LOADS	MPH	MILES PER HOUR	R	RADIUS	t	TON
BM	BENCHMARK	EXC	EXCAVATION	MIN	MINIMUM	RR	RAILROAD	T	TOWN
CB	CATCH BASIN	EBS	EXCAVATION BELOW SUBGRADE	MON	MONUMENT	R	RANGE	T/L	TRANSIT LINE
C/L	CENTER LINE	EXIST	EXISTING	NOM	NOMINAL	R/L	R/L	T	TRUCKS (PERCENT OF)
C/L CONST	CENTER LINE CONSTRUCTION	FPS	FEET PER SECOND	NC	NORMAL CROWN	REINF	REINFORCING OR REINFORCEMENT	TYP	TYPICAL
Δ	CENTRAL ANGLE OR DELTA	FERT	FERTILIZE	N	NORTH	REQD	REQUIRED	USH	UNITED STATES HIGHWAY
CL	CLASS	FE	FIELD ENTRANCE	Y	NORTH GRID COORDINATE	RT	RIGHT	VAR	VARIABLE
CONC	CONCRETE	FL	FLOW LINE	NB	NORTHBOUND	R/W	RIGHT-OF-WAY	V	VELOCITY OF DESIGN SPEED
CONST	CONSTRUCTION	FT	FOOT	NO	NUMBER	RD	ROAD	VERT	VERTICAL
CMCP	CORRUGATED METAL CULVERT PIPE	GN	GRID NORTH	OPT	OPTIONAL	RDWY	ROADWAY	VC	VERTICAL CURVE
CTH	COUNTY TRUNK HIGHWAY	HES	HIGH EARLY STRENGTH	OD	OUTSIDE DIAMETER	SEC	SECTION	VOL	VOLUME
CABC	CRUSHED AGGREGATE BASE COURSE	HP HW	HIGH POINT	PAVT	PAVEMENT	SHLDR	SHOULDER	WM	WATERMAIN
CFS	CUBIC FEET PER SECOND	HW	HIGH WATER	PLE	PERMANENT LIMITED EASEMENT	S	SOUTH	WV	WATER VALVE
CY	CUBIC YARD	HMA	HOT MIX ASPHALT	PACS	PIPE ARCH CORRUGATED STEEL	SB	SOUTHBOUND	W	WEST
CP	CULVERT PIPE	CWT	HUNDREDWEIGHT	PT	POINT	SQ	SQUARE	WB	WESTBOUND
CPCS	CULVERT PIPE CORRUGATED STEEL	HWD	HYDRANT	PC	POINT OF CURVATURE	SF	SQUARE FEET	YD	YARD
CPRC	CULVERT PIPE REINFORCED CONCRETE	INL	INLET	PI	POINT OF INTERSECTION	SW	SIDEWALK		
		ID	INSIDE DIAMETER	PT	POINT OF TANGENCY	SY	SQUARE YARD		

RUNOFF COEFFICIENT TABLE

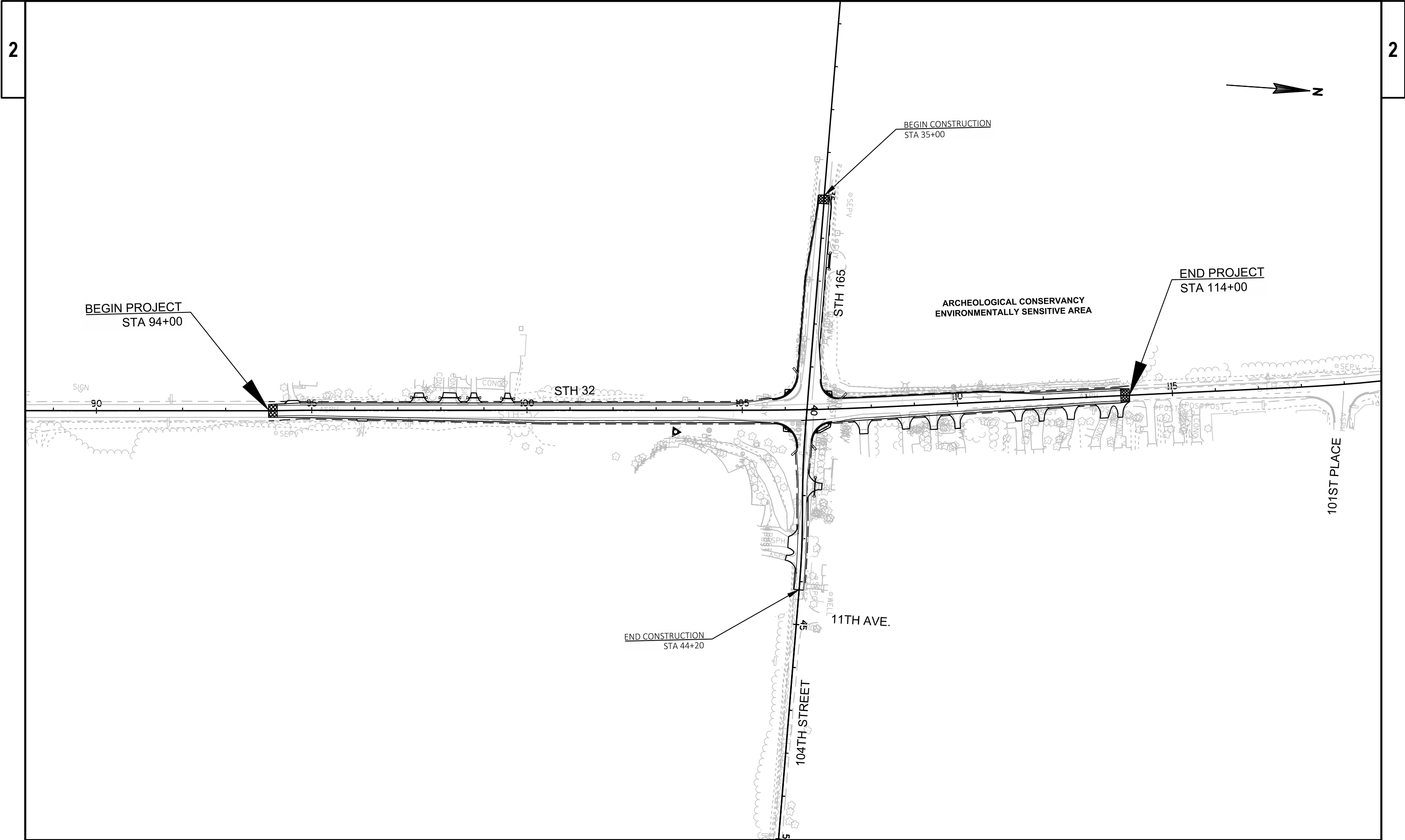
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34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

TOTAL PROJECT AREA = 4.72 ACRES
TOTAL GROUND AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.83 ACRES

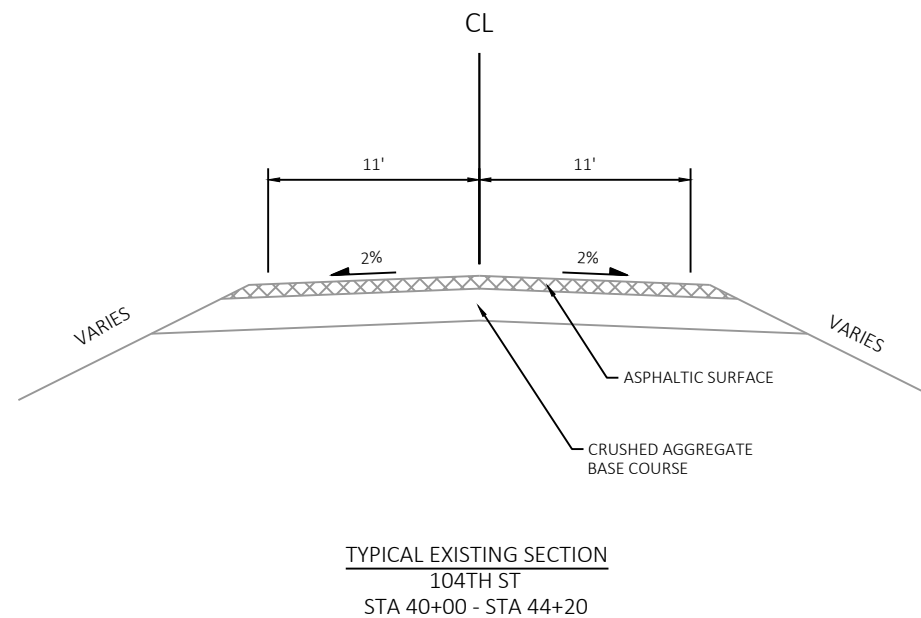
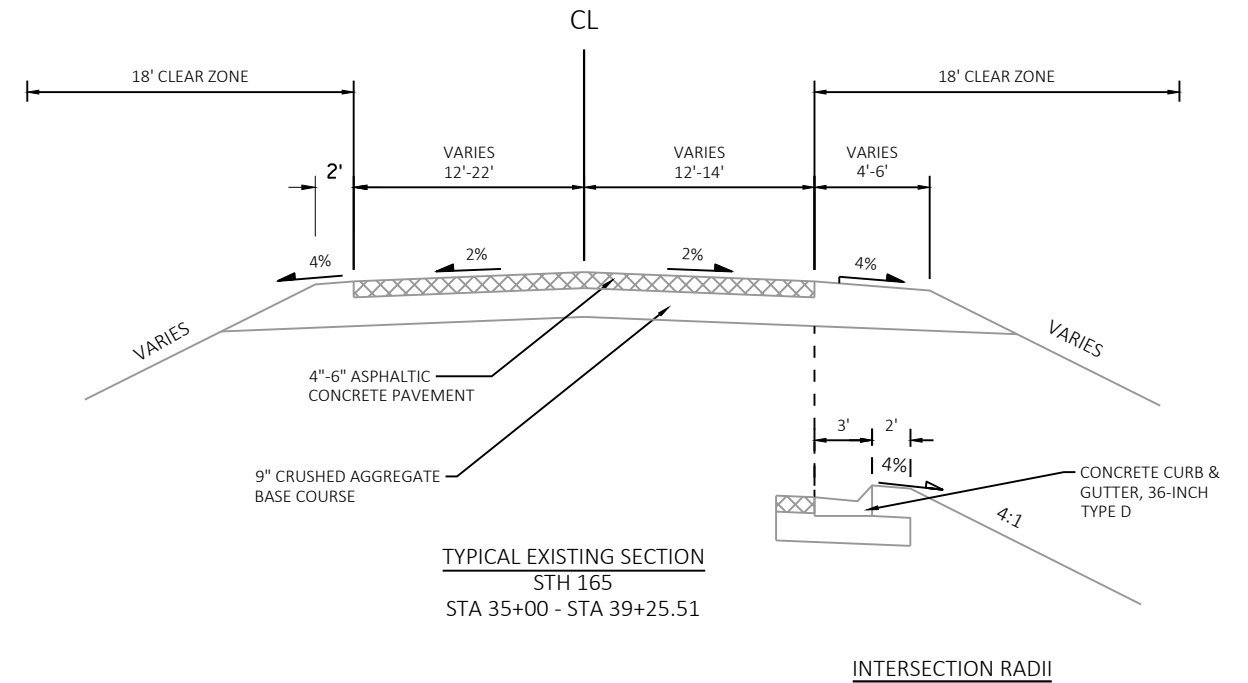
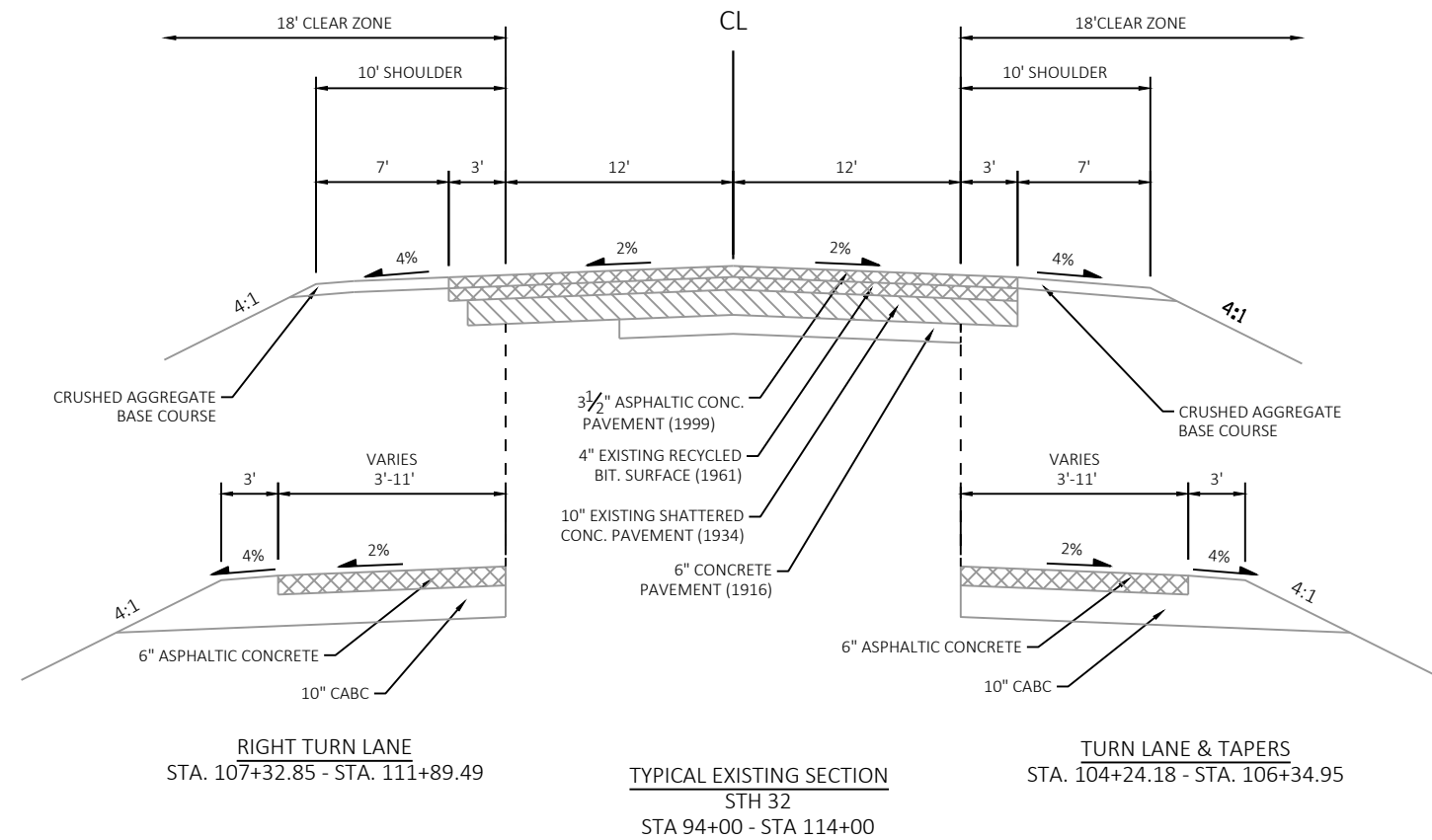
HMA PAVING

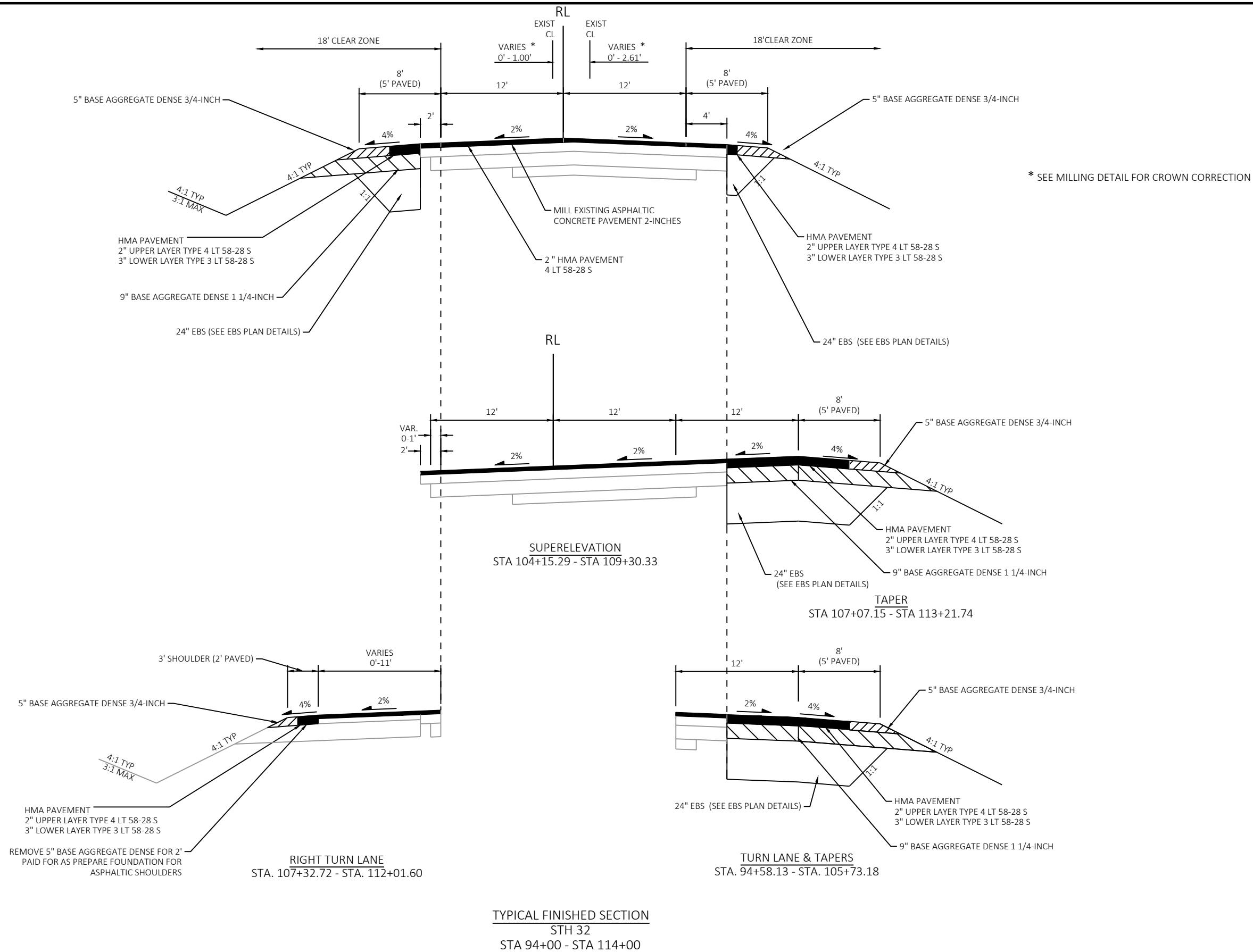
ROAD	LAYER	THICKNESS	HMA TYPE
STH 32 OVERLAY	UPPER LAYER	2-INCH TO 2.5-INCH	4 LT 58-28 S
STH 32 WIDENING	UPPER LAYER	2-INCH	4 LT 58-28 S
	LOWER LAYER	3-INCH	3 LT 58-28 S
STH 165 OVERLAY	UPPER LAYER	2-INCH	4 LT 58-28 S
STH 165 WIDENING	UPPER LAYER	2-INCH	4 LT 58-28 S
	LOWER LAYER	3-INCH	3 LT 58-28 S
104TH STREET	UPPER LAYER	2-INCH	4 LT 58-28 S
	LOWER LAYER	3-INCH	3 LT 58-28 S

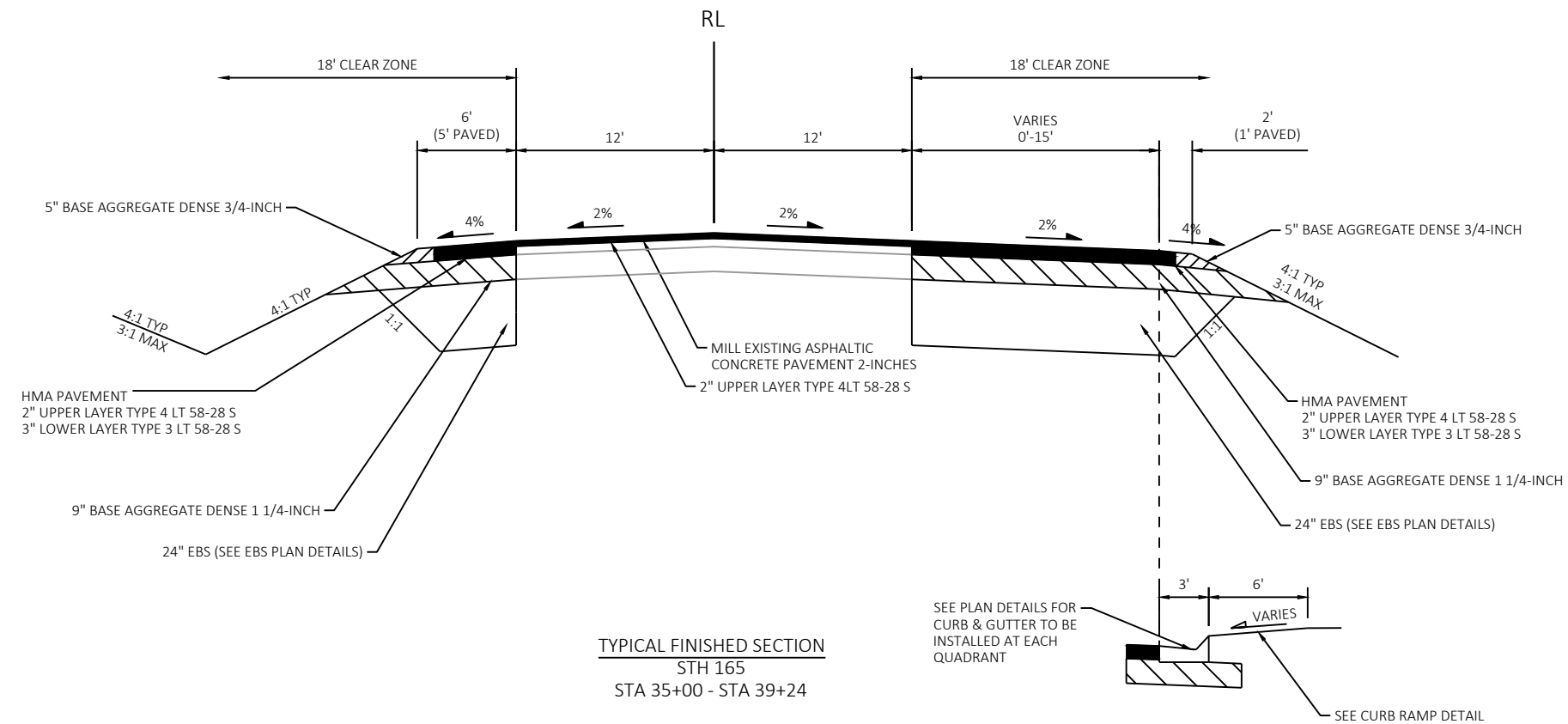
2	UTILITY CONTACTS AT&T WISCONSIN - COMMUNICATION LINE MIKE VANBOVEN 411 7th STREET RACINE, WI 53403 (262) 676-3958 MV3658@att.com CHARTER COMMUNICATIONS - COMMUNICATIONS LINE BEAU ABUYA 1320 N DR. MARTIN LUTHER KING JR DR. MILWAUKEE, WI 53212 (414) 908-1343 wis.engineering@charter.com MIDWEST FIBER NETWORKS LLC - COMMUNICATION LINE RICHARD TRGOVEC 6070 NORTH FLINT RD. GLENDALE, WI 53209 (414) 459-3554 rtgovec@midwestfibernetworks.com VILLAGE OF PLEASANT PRAIRIE - SEWER/WATER JOHN STEINBRINK, JR. 8800 GREEN BAY RD. PLEASANT PRAIRIE, WI 53158 (262) 925-6768 jsteinbrink@pleasantprairiewi.gov WE ENERGIES - GAS/PETROLEUM/ELECTRICITY 333 WEST EVERETT ST., ROOM A299 MILWAUKEE, WI 53203 (414) 221-2738 We-Utility-relocations@we-energies.com	DNR CONTACT WISCONSIN DNR BENTON STELZEL DNR SERVICE CENTER 141 NW. BARSTOW ST. WAUKESHA, WI 53188 (262) 623-0194 benton.stelzel@wisconsin.gov OTHER CONTACTS KENOSHA COUNTY - ROAD FACILITY CLEMENT ABONGWA SUITE 122-1 19600 75th STREET BRISTOL, WI 53104-9772 (262) 857-1870 clement.abongwa@kenoshacounty.org VILLAGE OF PLEASANT PRAIRIE MATT FINEOUR 9915 39th AVE. PLEASANT PRAIRIE, WI 53158 (262) 925-6778 mfineour@pleasantprairiewi.gov VILLAGE OF PLEASANT PRAIRIE KURT DAVIDSEN 9915 39th AVE. PLEASANT PRAIRIE, WI 53158 (262) 925-6728 kdavidsen@pleasantprairiewi.gov SEWRPC ROB MERRY W239 N1812 ROCKWOOD DRIVE PO BOX 1607 WAUKESHA, WI 53187-1607 (262) 953-4289 rmerry@sewrpc.org	WISDOT CONTACTS WISDOT PROJECT MANAGER VIDA SHAFFER 141 NW. BARSTOW ST. WAUKESHA, WI 53188 (262) 548-6766 vida.shaffer@dot.wi.gov WISDOT - TRAFFIC LIGHTING ERIC PEREA 141 NW. BARSTOW ST. WAUKESHA, WI 53188 (262) 574-5422 eric.perea@dot.wi.gov WISDOT - TRAFFIC SIGNALS DERRIN WOLFORD 141 NW. BARSTOW ST. WAUKESHA, WI 53188 (262) 521-4409 derrin.wolford@dot.wi.gov DIGGERSHOTLINE Dial 811 or (800)242-8511 www.DiggersHotline.com	2		
PROJECT NO: 3240-11-70		HWY: STH 32	COUNTY: KENOSHA	GENERAL NOTES & CONTACTS	SHEET 3	E



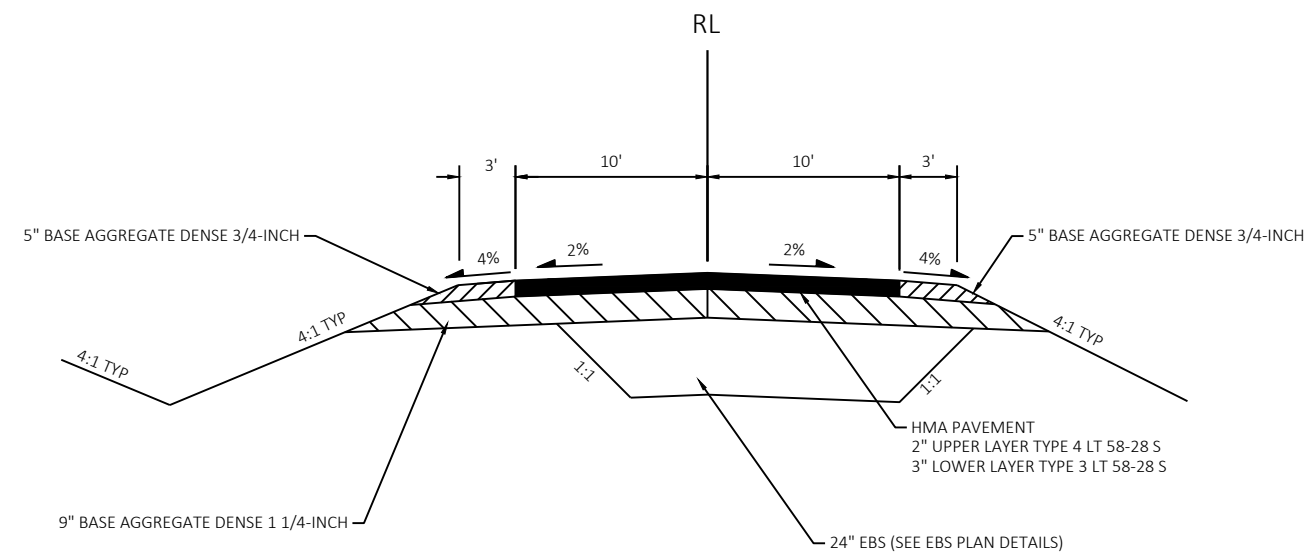
PROJECT NO: 3240-11-70	HWY: STH 32	COUNTY: KENOSHA	PROJECT OVERVIEW	SHEET 4	E
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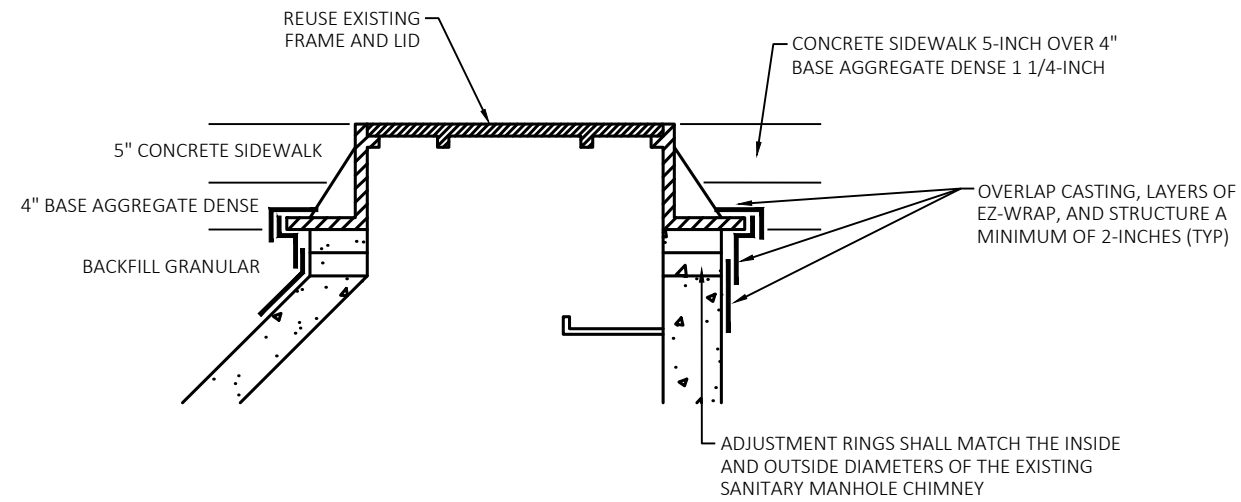




INTERSECTION RADII ALL FOUR QUADRANTS

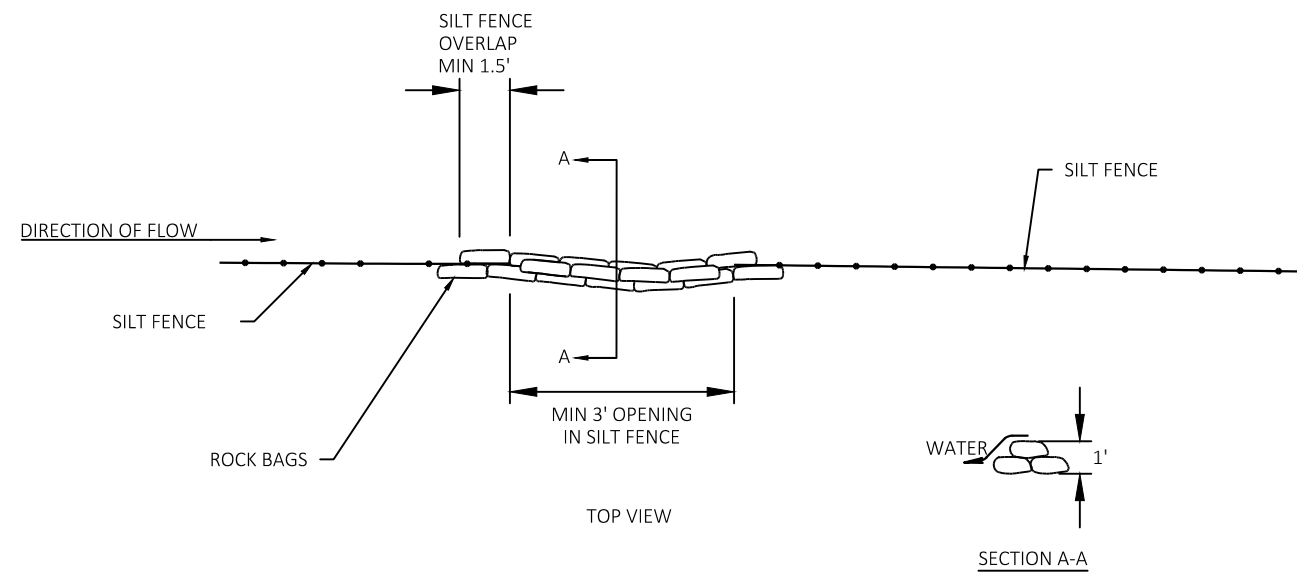


TYPICAL FINISHED SECTION
104TH ST
STA 40+89 - STA 44+20

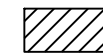
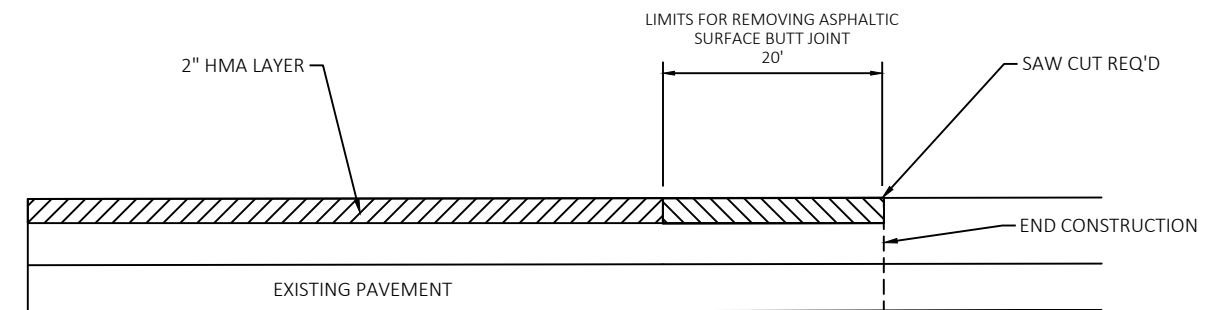


ADJUSTING SANITARY MANHOLES

NOT TO SCALE



ROCK BAGS USED FOR SILT FENCE RELIEF



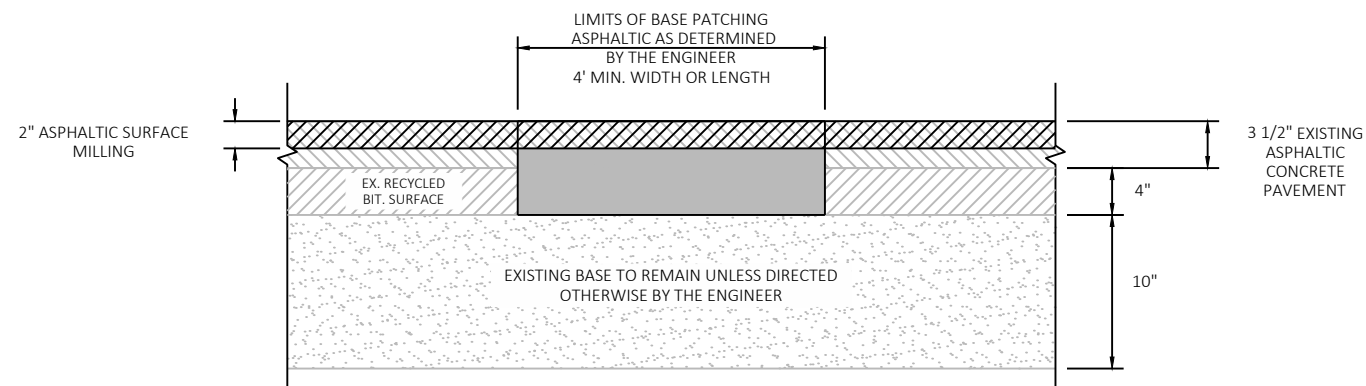
MILL TO BE PAID AS REMOVING ASPHALTIC SURFACE MILLING



MILL TO BE PAID AS REMOVING ASPHALTIC SURFACE BUTT JOINT

BUTT JOINT DETAIL

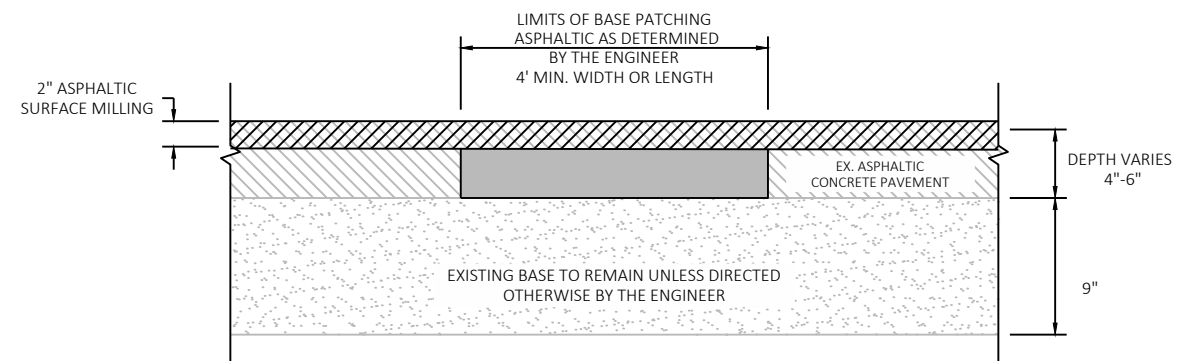
STH 32 & STH 165



STH 32
BASE PATCHING ASPHALTIC

NOTES:

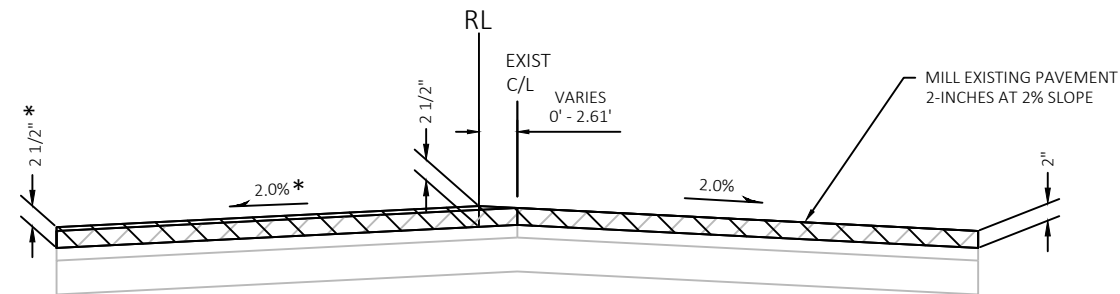
- BASE PATCH EXISTING ASPHALT AFTER MILLING ASPHALTIC SURFACE
- BASE BATCH LIMITS TO BE REMOVED AND PAVED IN SAME DAY
- BASE PATCH TO BE PLACED IN 1 LIFT UP TO MILLED SURFACE



STH 165
BASE PATCHING ASPHALTIC

NOTES:

- BASE PATCH EXISTING ASPHALT AFTER MILLING ASPHALTIC SURFACE
- BASE BATCH LIMITS TO BE REMOVED AND PAVED IN SAME DAY
- BASE PATCH TO BE PLACED IN 1 LIFT UP TO MILLED SURFACE

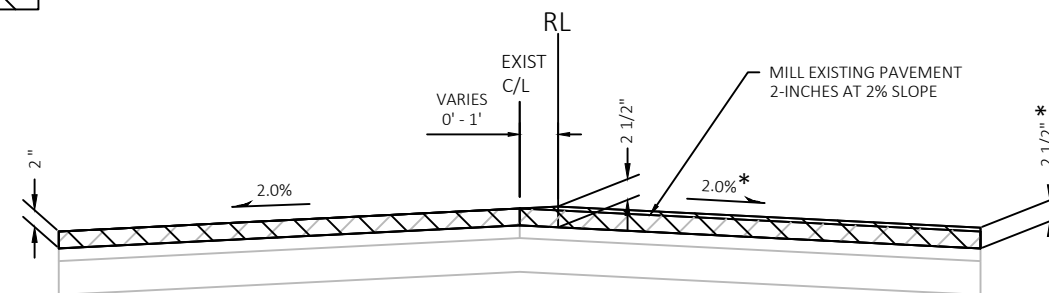


MILLING DETAIL FOR CROWN CORRECTION
STH 32
STA 94+00 - STA 107+00 (RL TO C/L VARIES 0' - 2.61')
STA 111+52 - STA 112+25 (RL TO C/L VARIES 0' - 0.37')
STA 112+40 - STA 113+27 (RL TO C/L VARIES 0' - 0.60')

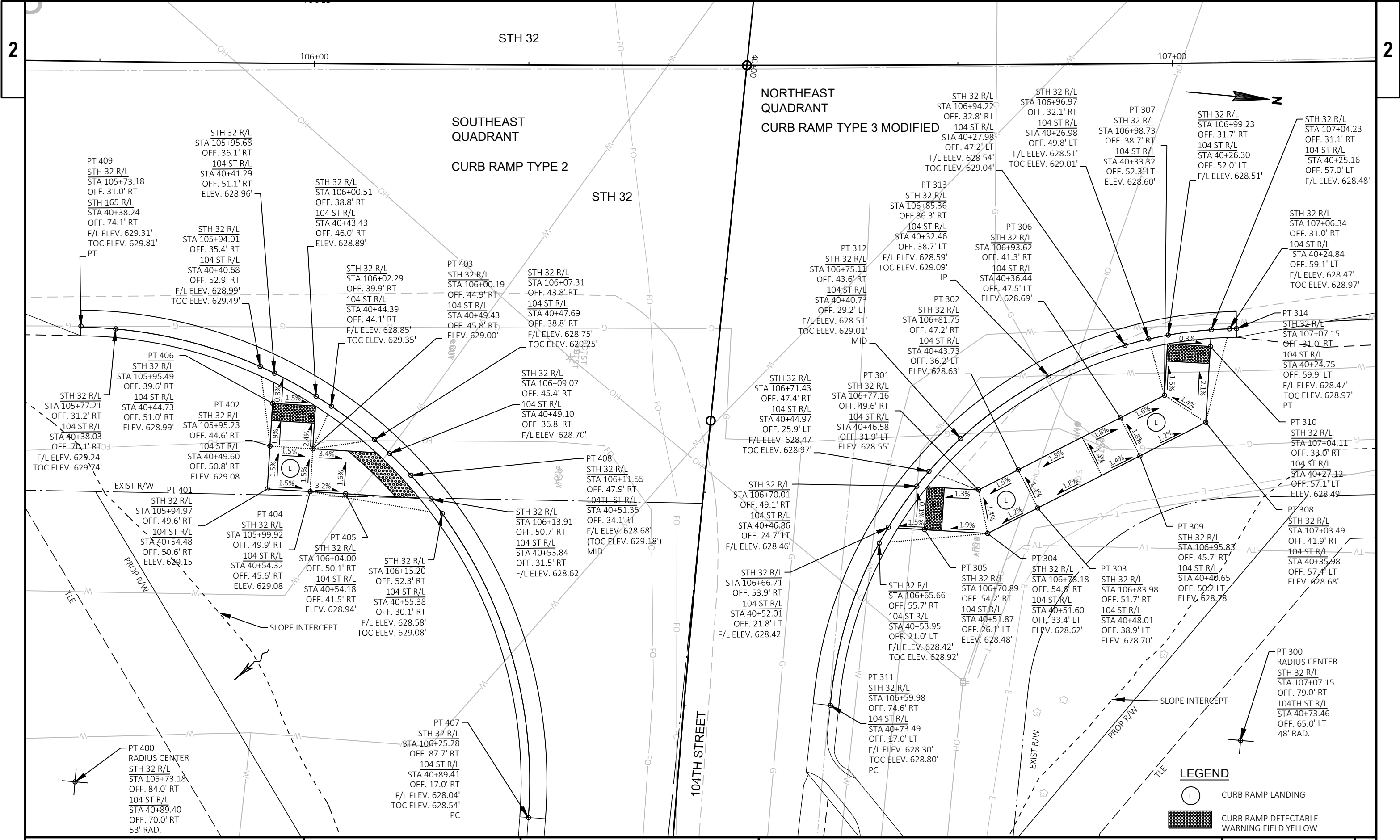
LEGEND

- MILL AT 2% SLOPE
- HMA 4LT 58-28 S

* INCREASE CROSS-SLOPE AS NEEDED TO MATCH CURB & GUTTER GRADES OR OTHER ELEVATION SENSITIVE FEATURES



MILLING DETAIL FOR CROWN CORRECTION
STH 32
STA 107+00 - STA 111+52 (RL TO C/L VARIES 0' - 1.00')
STA 112+25 - STA 112+40 (RL TO C/L VARIES 0' - 0.09')
STA 113+27 - STA 114+00 (RL TO C/L VARIES 0' - 0.05')



LEGEND

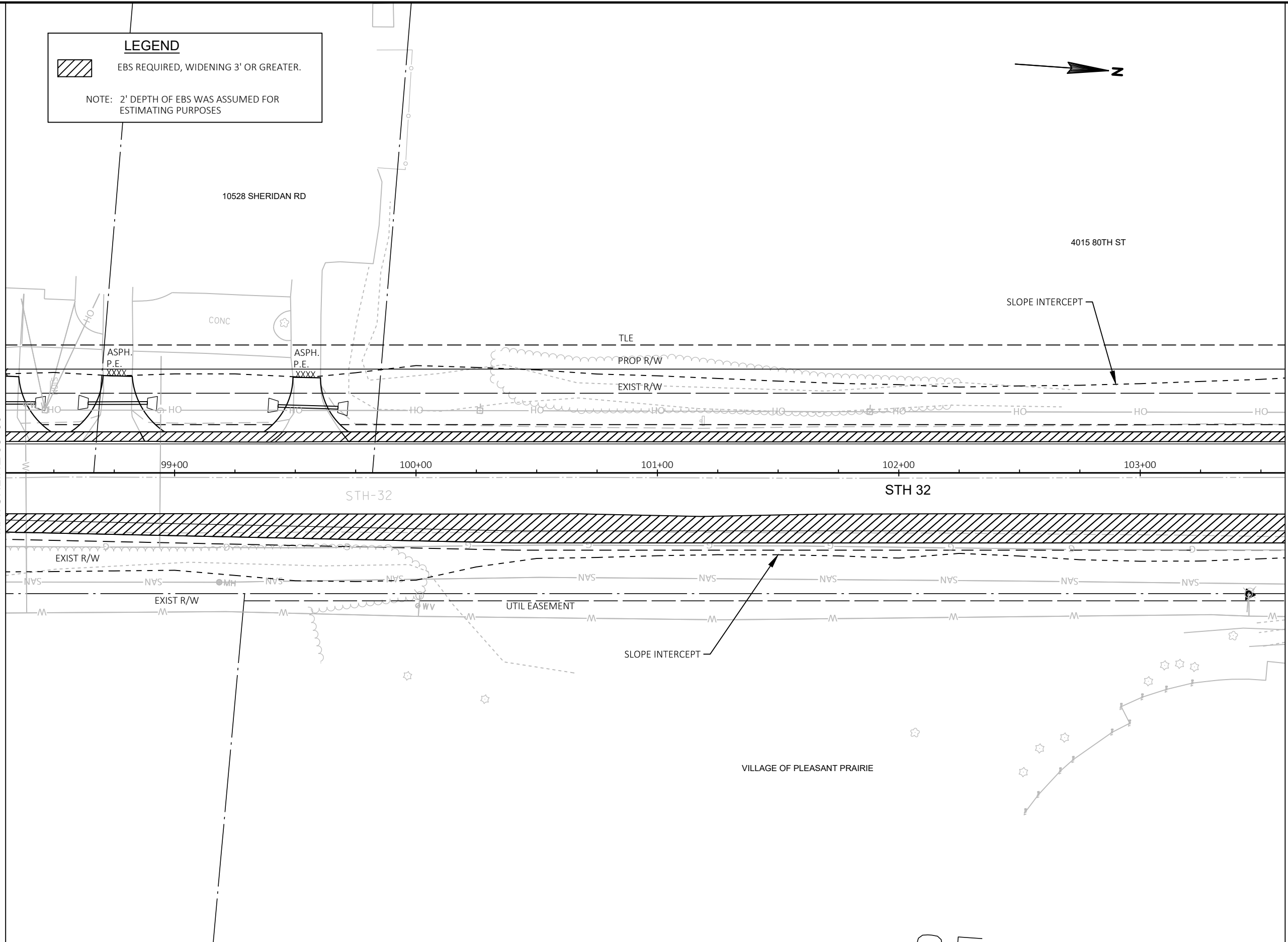
 EBS REQUIRED, WIDENING 3' OR GREATER.

NOTE: 2' DEPTH OF EBS WAS ASSUMED FOR ESTIMATING PURPOSES



MATCHLINE 98+30

MATCHLINE 103+60



LEGEND



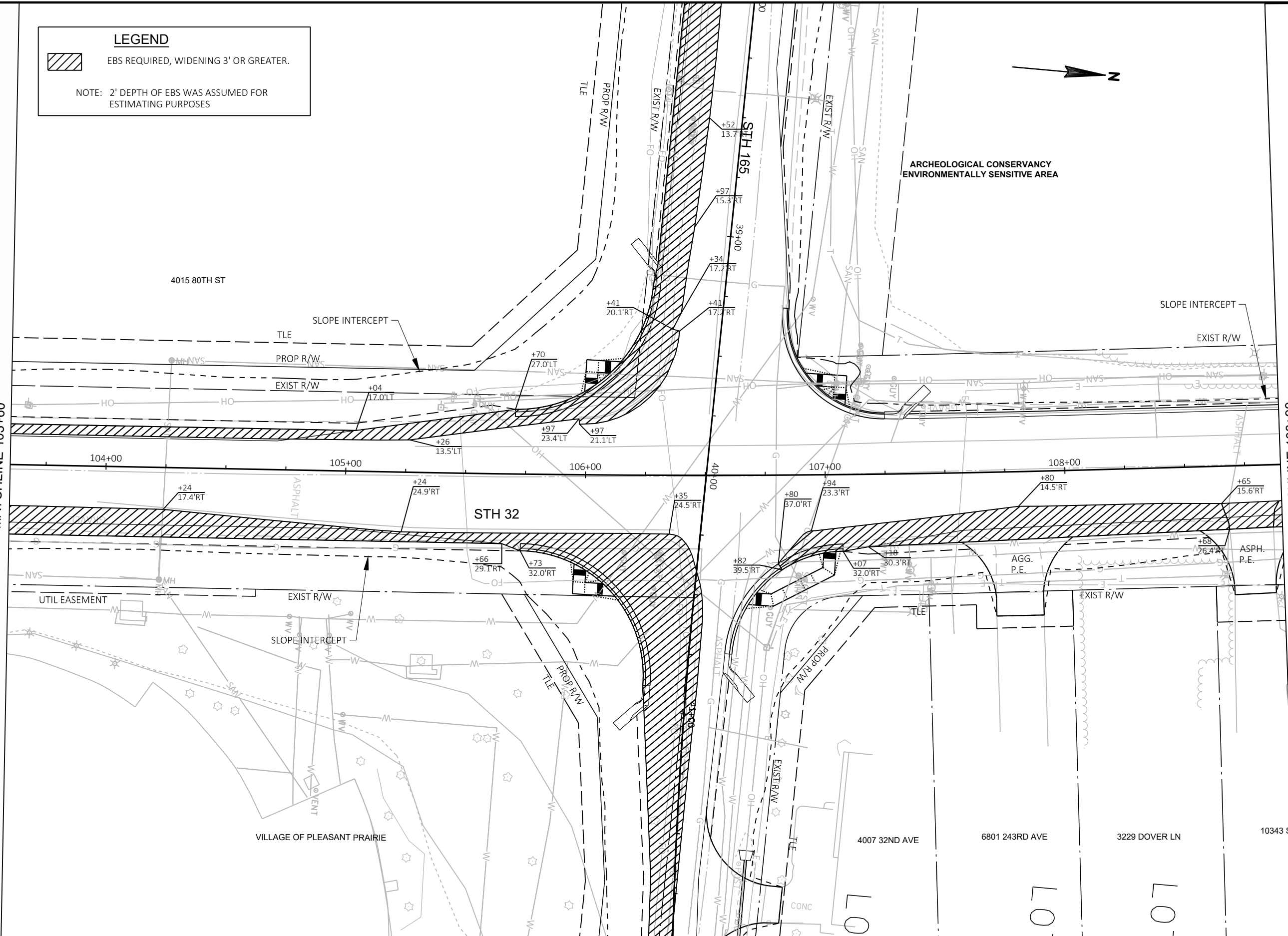
EBS REQUIRED, WIDENING 3' OR GREATER.

NOTE: 2' DEPTH OF EBS WAS ASSUMED FOR ESTIMATING PURPOSES



MATCHLINE 103+60

MATCHLINE 108+90



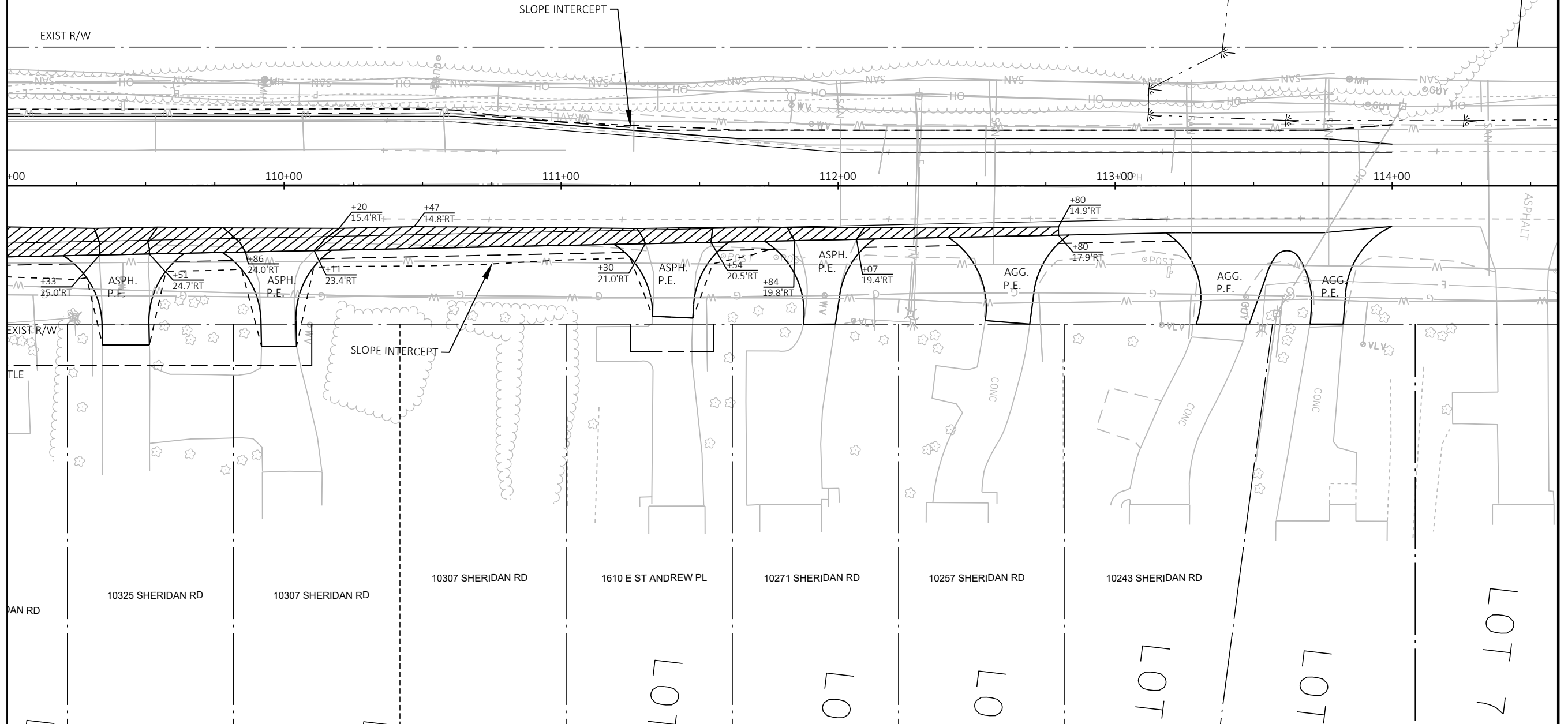
EBS REQUIRED, WIDENING 3' OR GREATER.

NOTE: 2' DEPTH OF EBS WAS ASSUMED FOR ESTIMATING PURPOSES



ARCHEOLOGICAL CONSERVANCY
ENVIRONMENTALLY SENSITIVE AREA

MATCHLINE 108+90

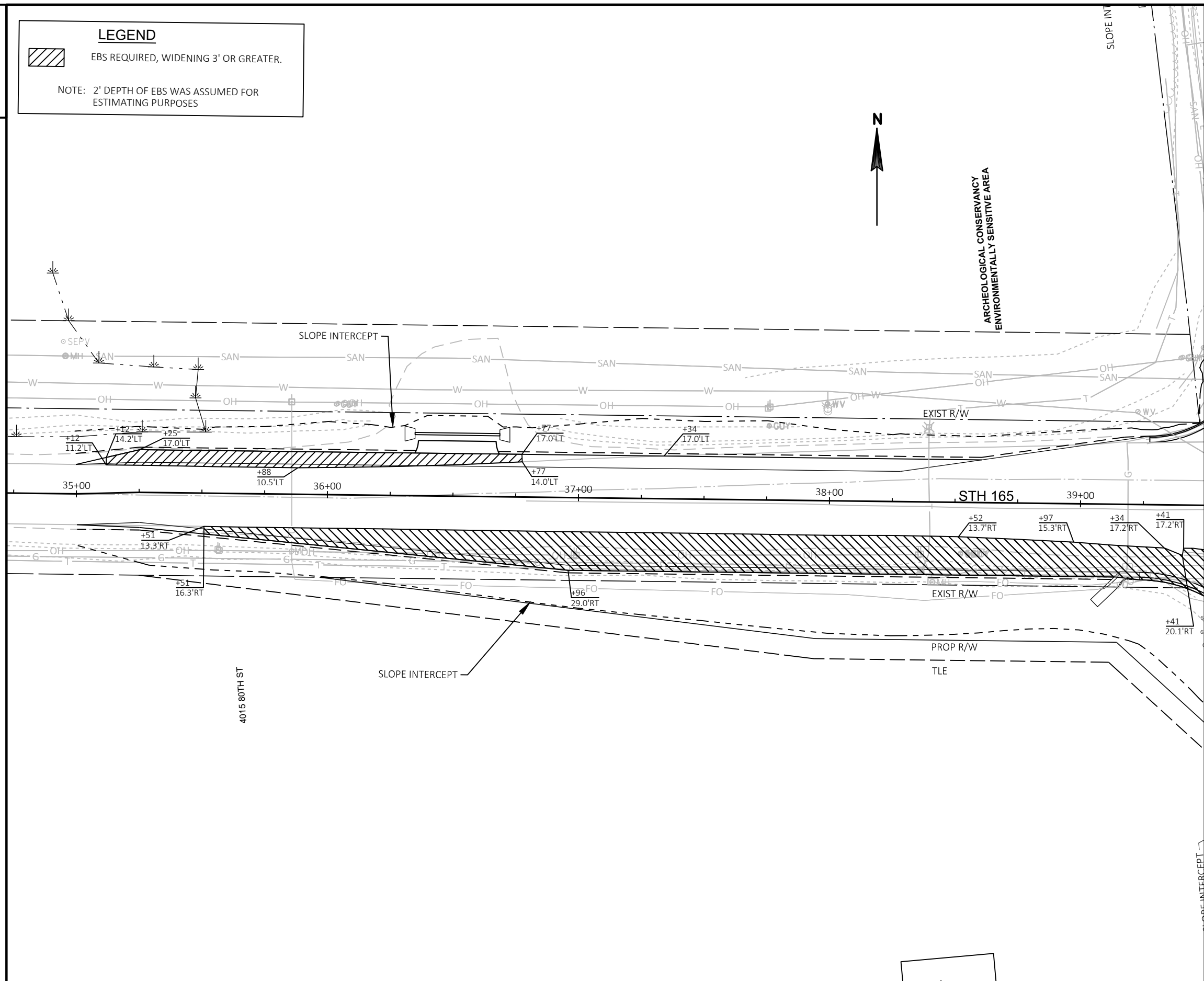


LEGEND

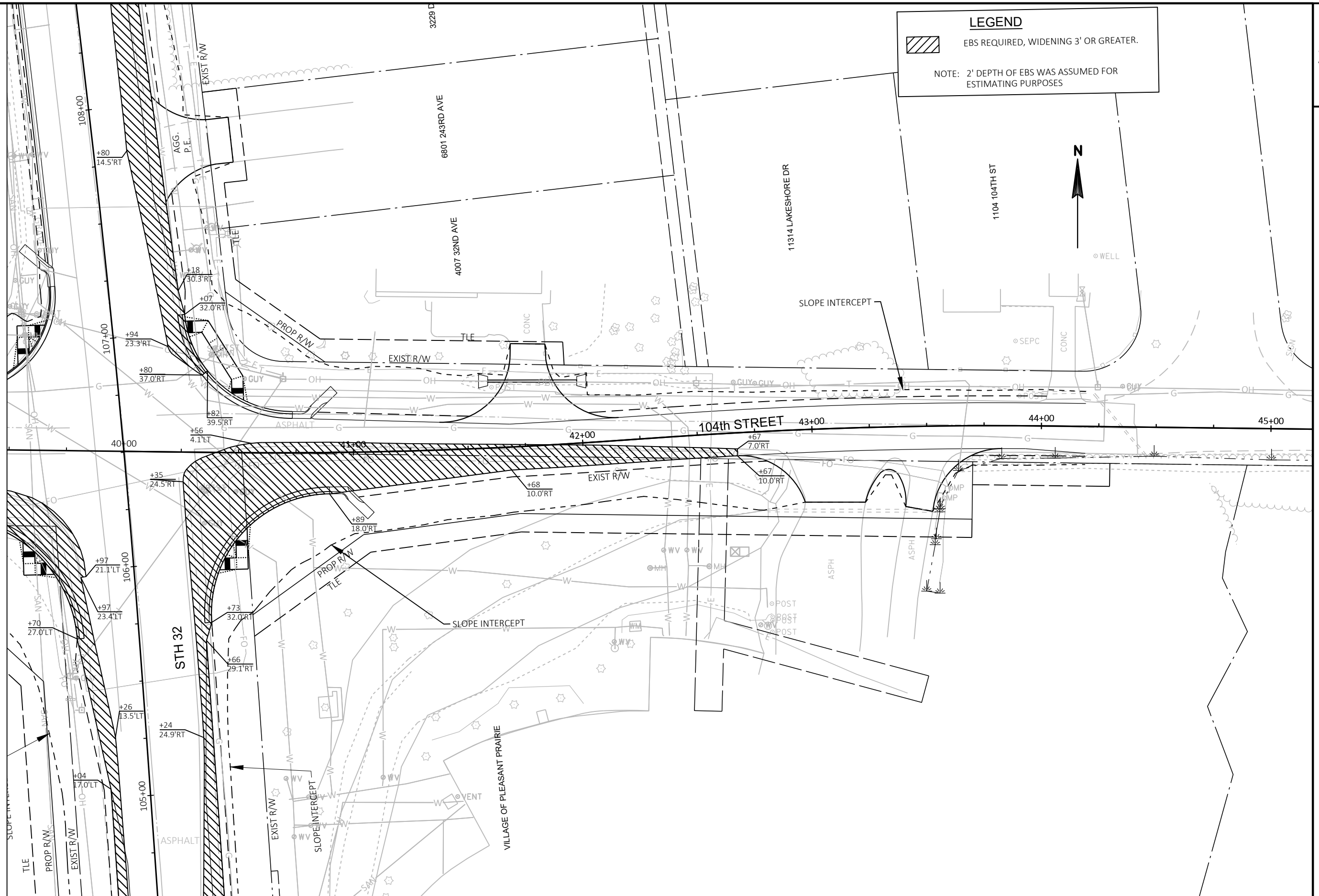


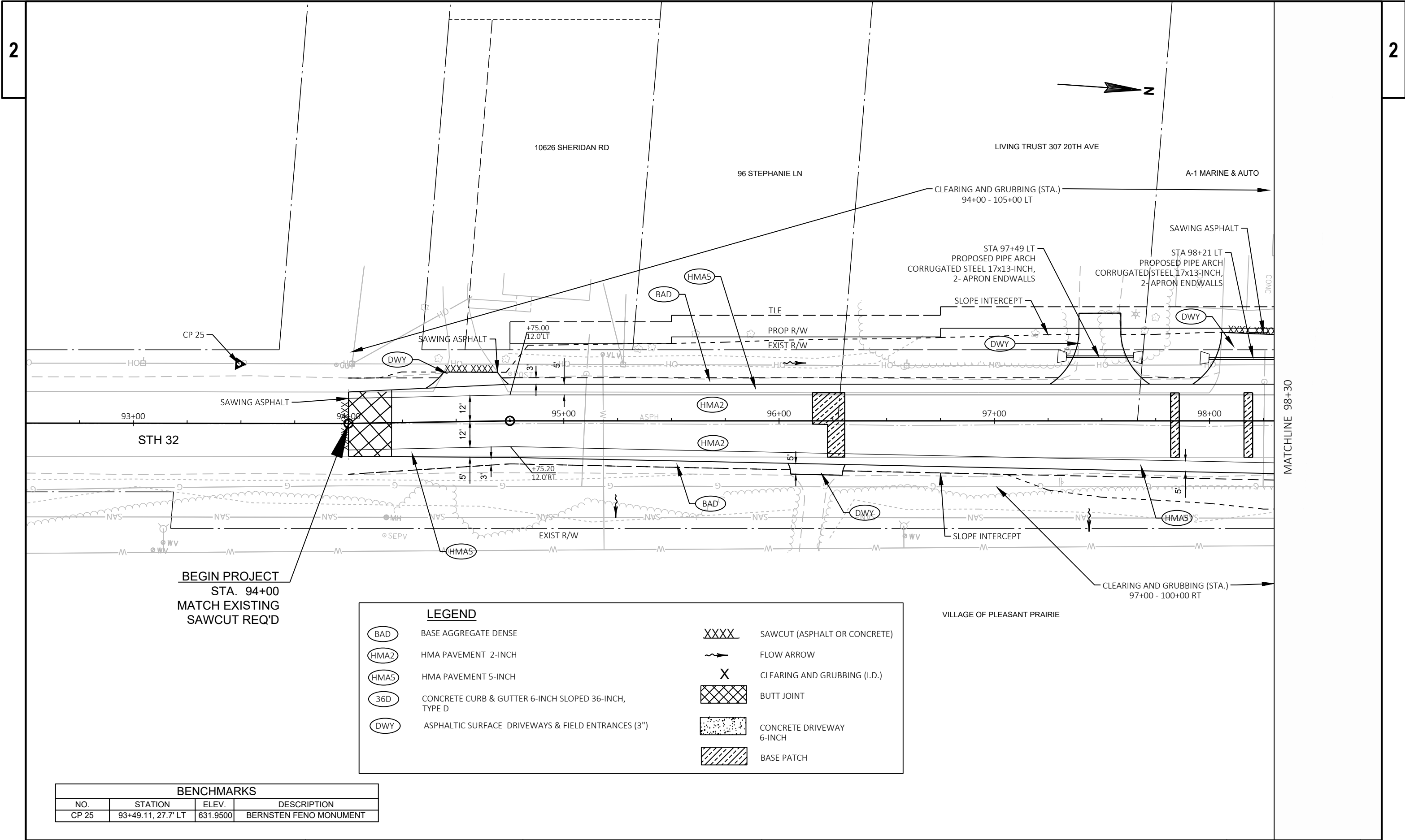
EBS REQUIRED, WIDENING 3' OR GREATER.

NOTE: 2' DEPTH OF EBS WAS ASSUMED FOR ESTIMATING PURPOSES



MATCHLINE 39+50





BEGIN PROJECT
STA. 94+00
MATCH EXISTING
SAWCUT REQ'D

BAD

HMA2

HMA5

36D

DWY

BASE AGGREGATE DENSE

HMA PAVEMENT 2-INCH

HMA PAVEMENT 5-INCH

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH, TYPE D

ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES (3")

XXXX

~>

X

SAWCUT (ASPHALT OR CONCRETE)

FLOW ARROW

CLEARING AND GRUBBING (I.D.)

BUTT JOINT

CONCRETE DRIVEWAY 6-INCH

BASE PATCH

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
CP 25	93+49.11, 27.7' LT	631.9500	BERNSTEN FENO MONUMENT

PROJECT NO: 3240-11-70

HWY: STH 32

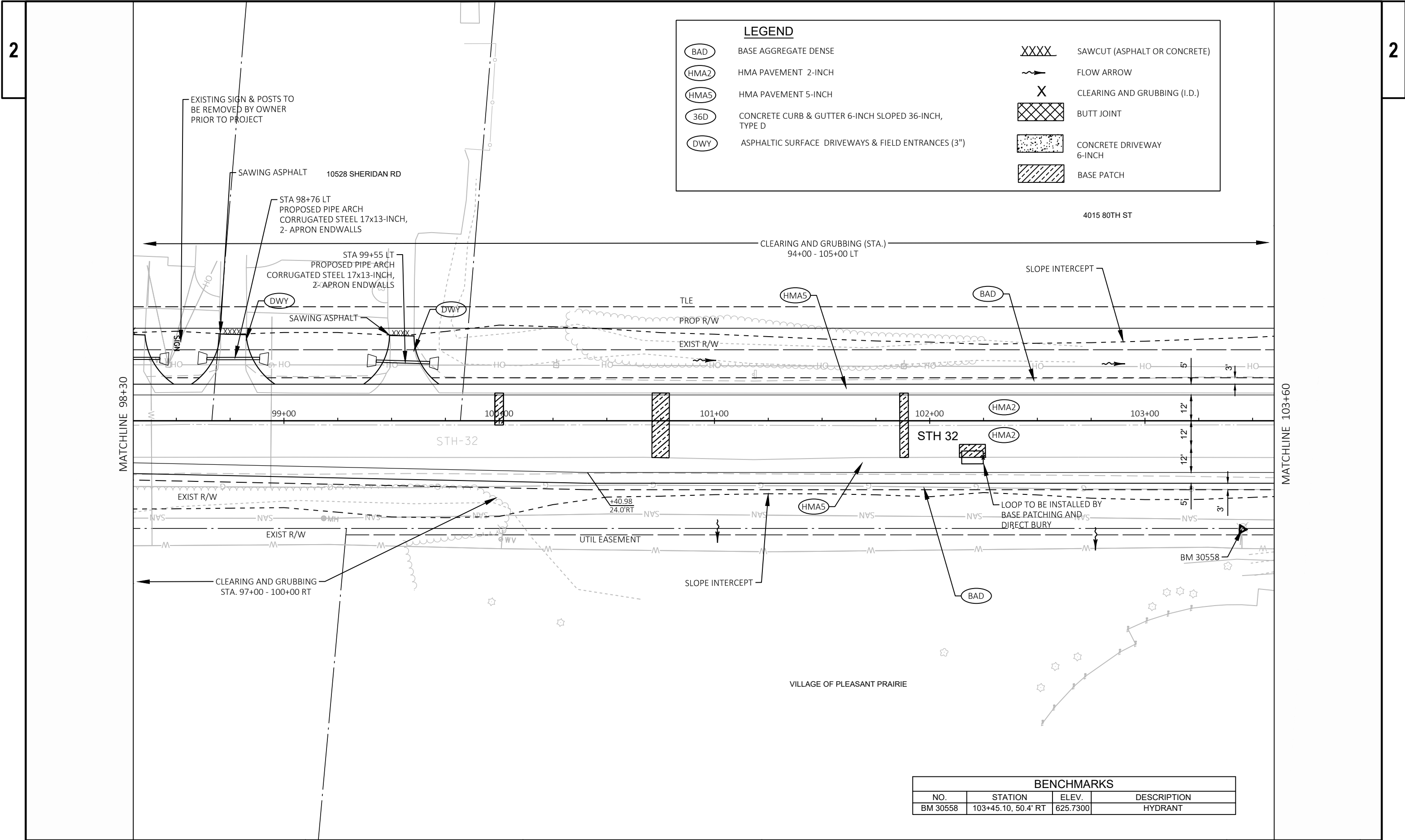
COUNTY: KENOSHA

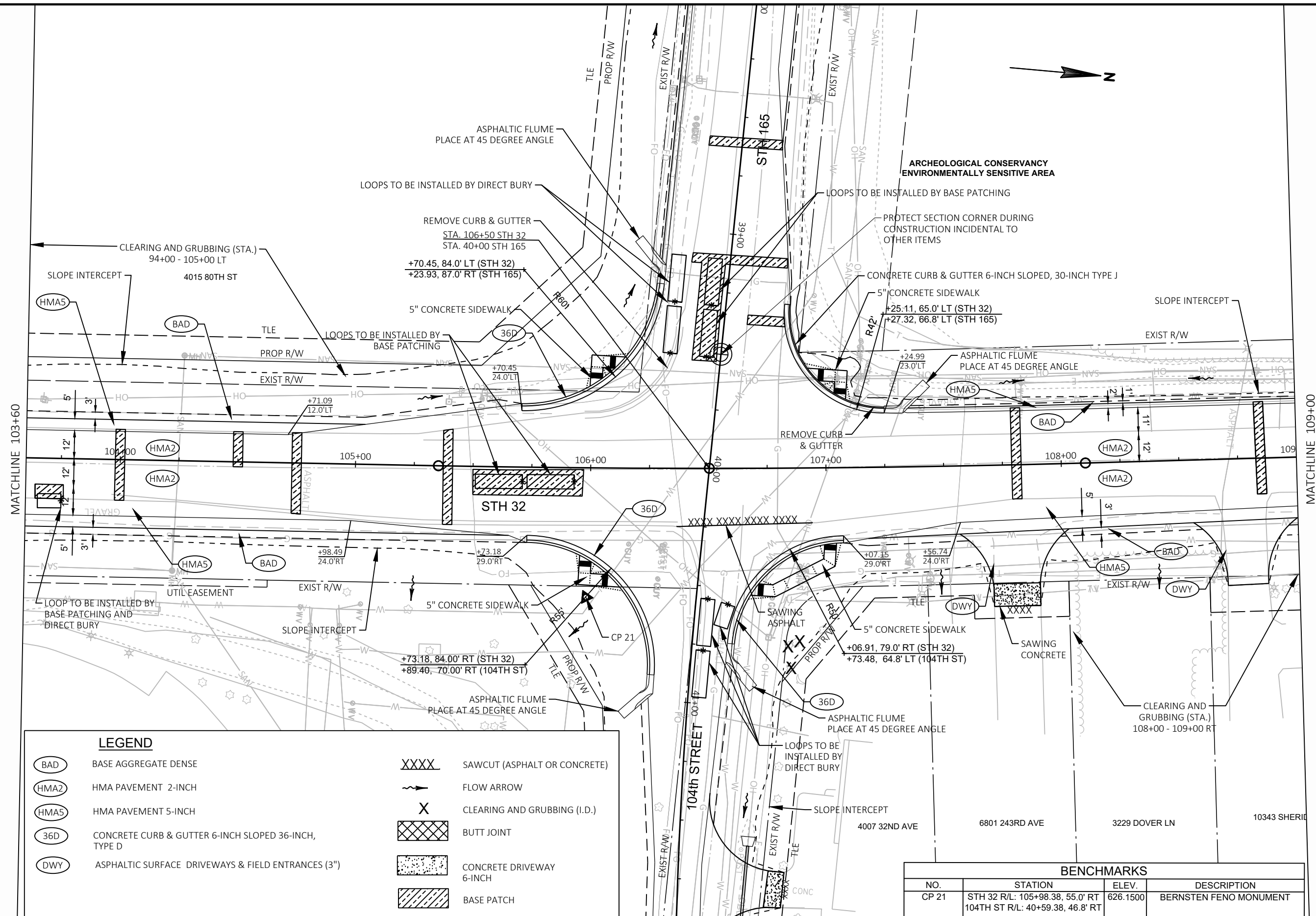
PLAN DETAILS: STH 32

SHEET

19

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PROJECT NO: 3240-11-70

HWY: STH 32

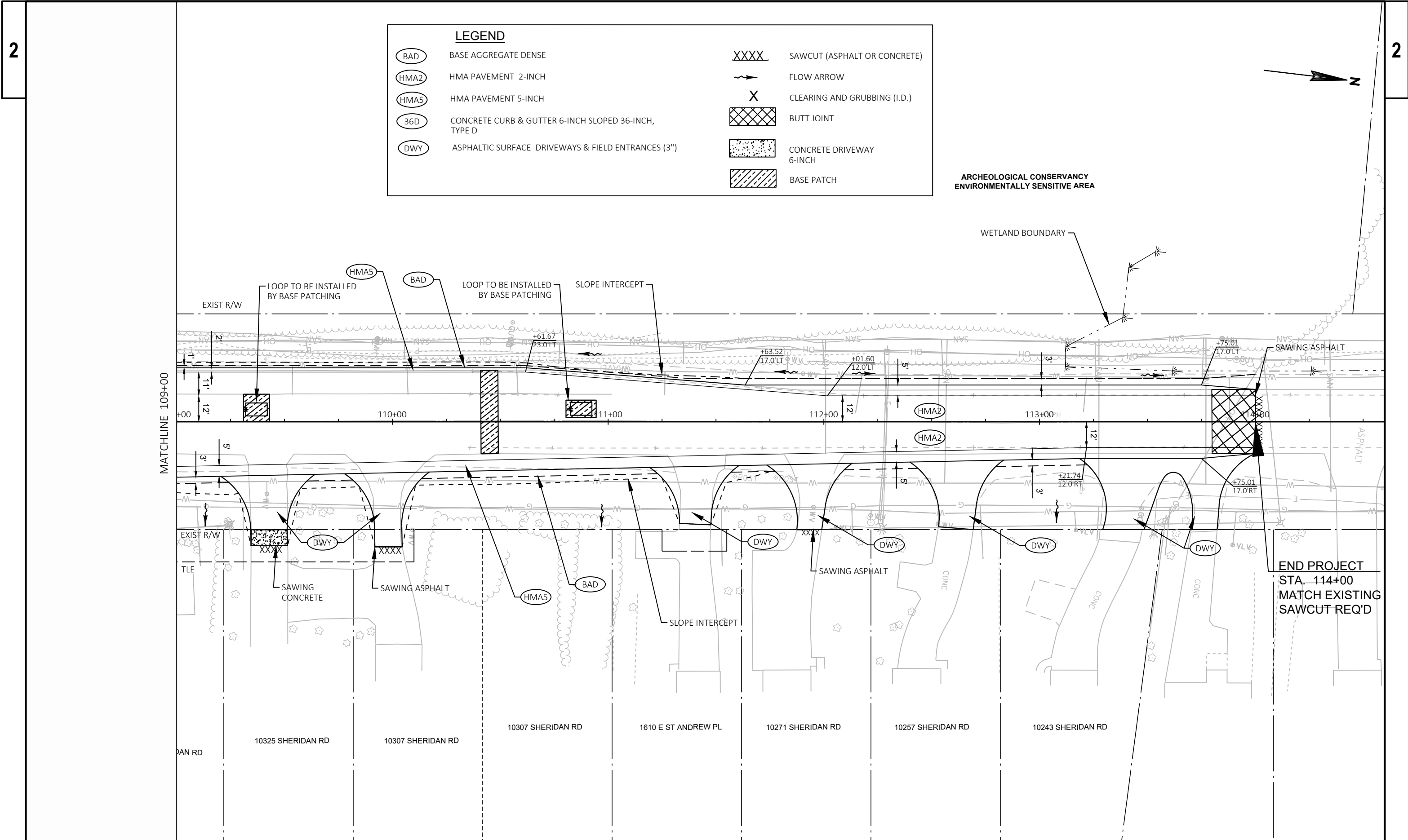
COUNTY: KENOSHA

PLAN DETAILS: STH 32

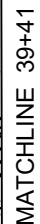
SHEET

21

E

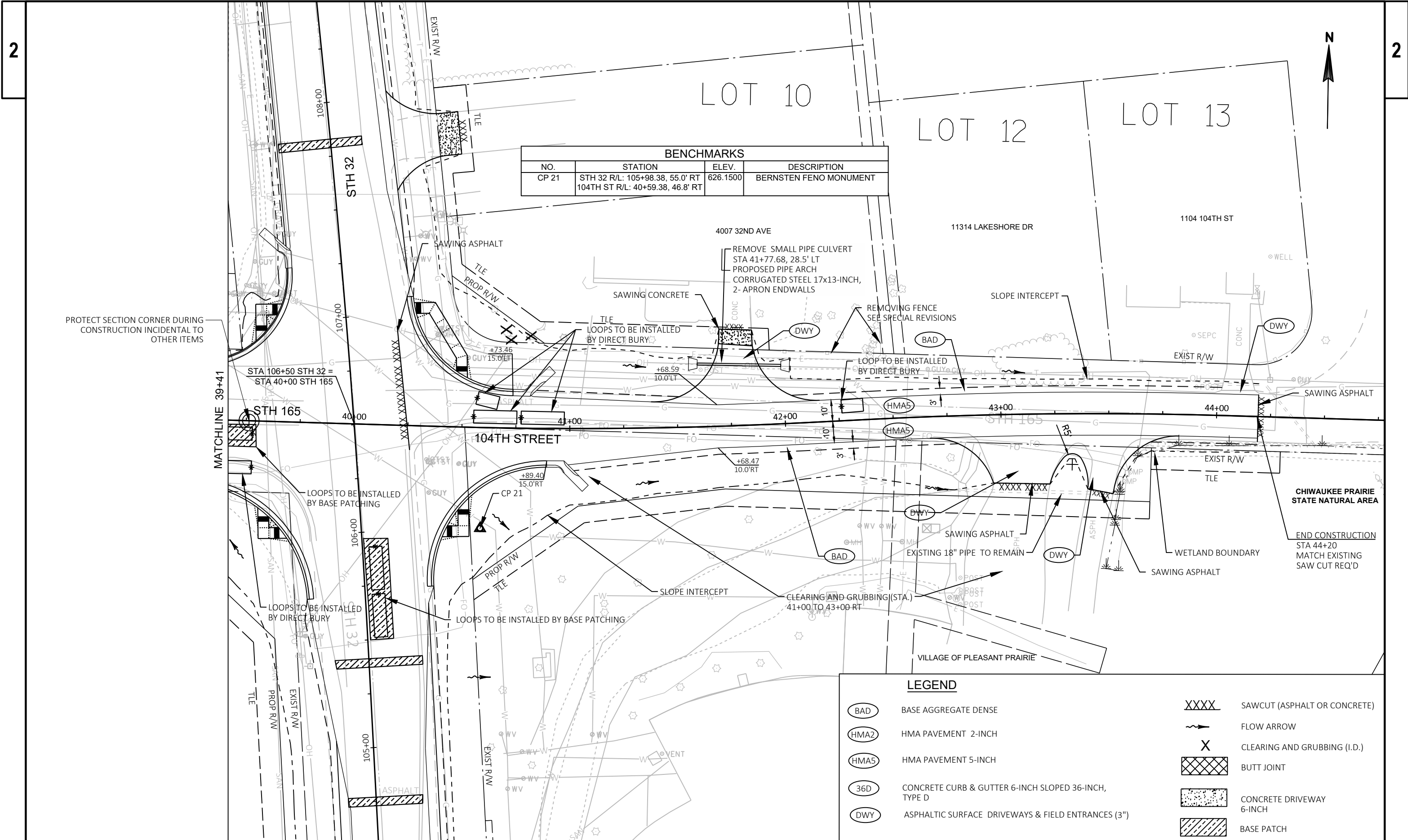


LEGEND			
(BAD)	BASE AGGREGATE DENSE	XXXX	SAWCUT (ASPHALT OR CONCRETE)
(HMA2)	HMA PAVEMENT 2-INCH	→	FLOW ARROW
(HMA5)	HMA PAVEMENT 5-INCH	X	CLEARING AND GRUBBING (I.D.)
(36D)	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH, TYPE D	[Cross-hatch]	BUTT JOINT
(DWY)	ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES (3")	[Stippled]	CONCRETE DRIVEWAY 6-INCH
		[Diagonal lines]	BASE PATCH



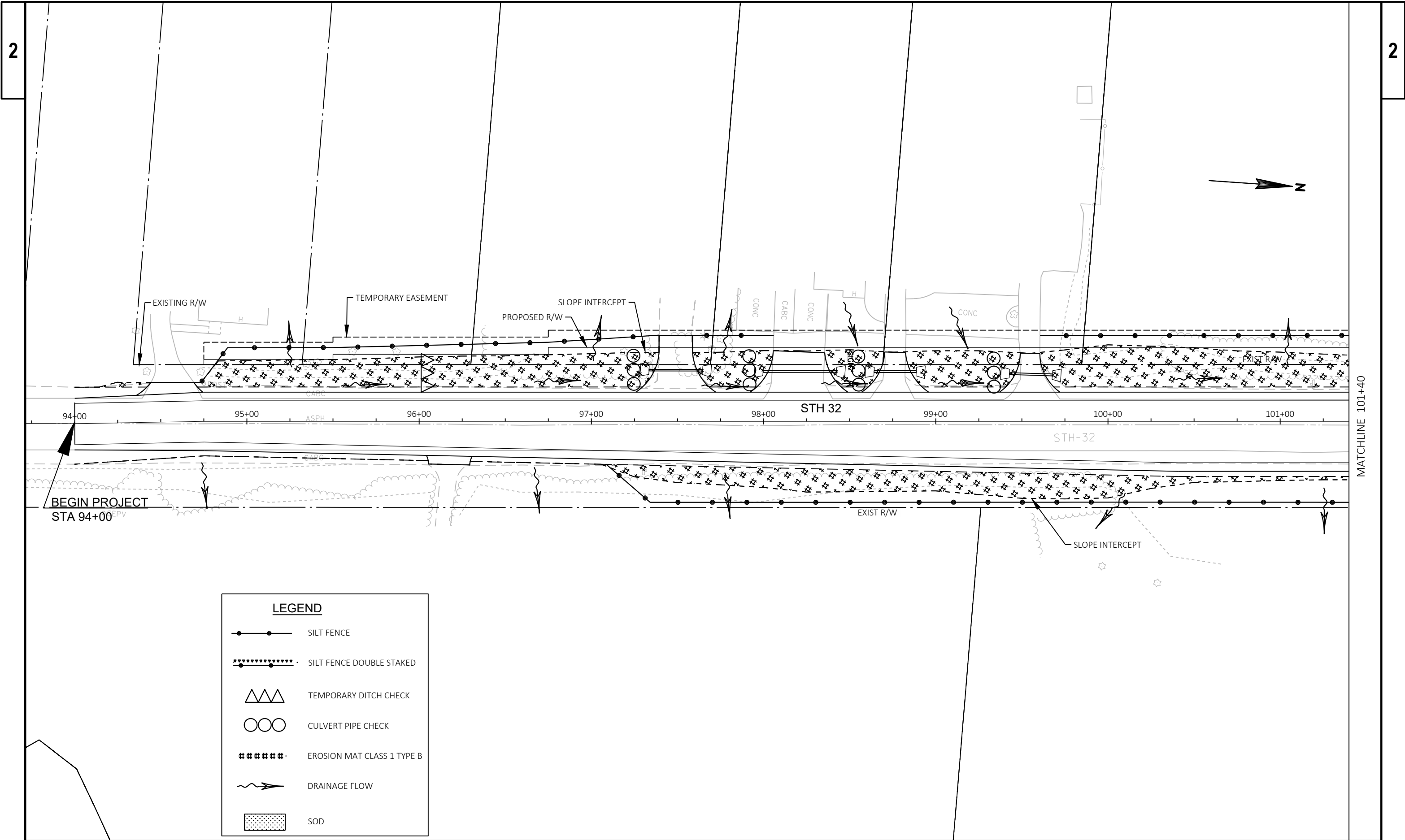
	SAWCUT (ASPHALT OR CONCRETE)
	FLOW ARROW
	CLEARING AND GRUBBING (I.D.)
	BUTT JOINT
	CONCRETE DRIVEWAY 6-INCH
	BASE PATCH

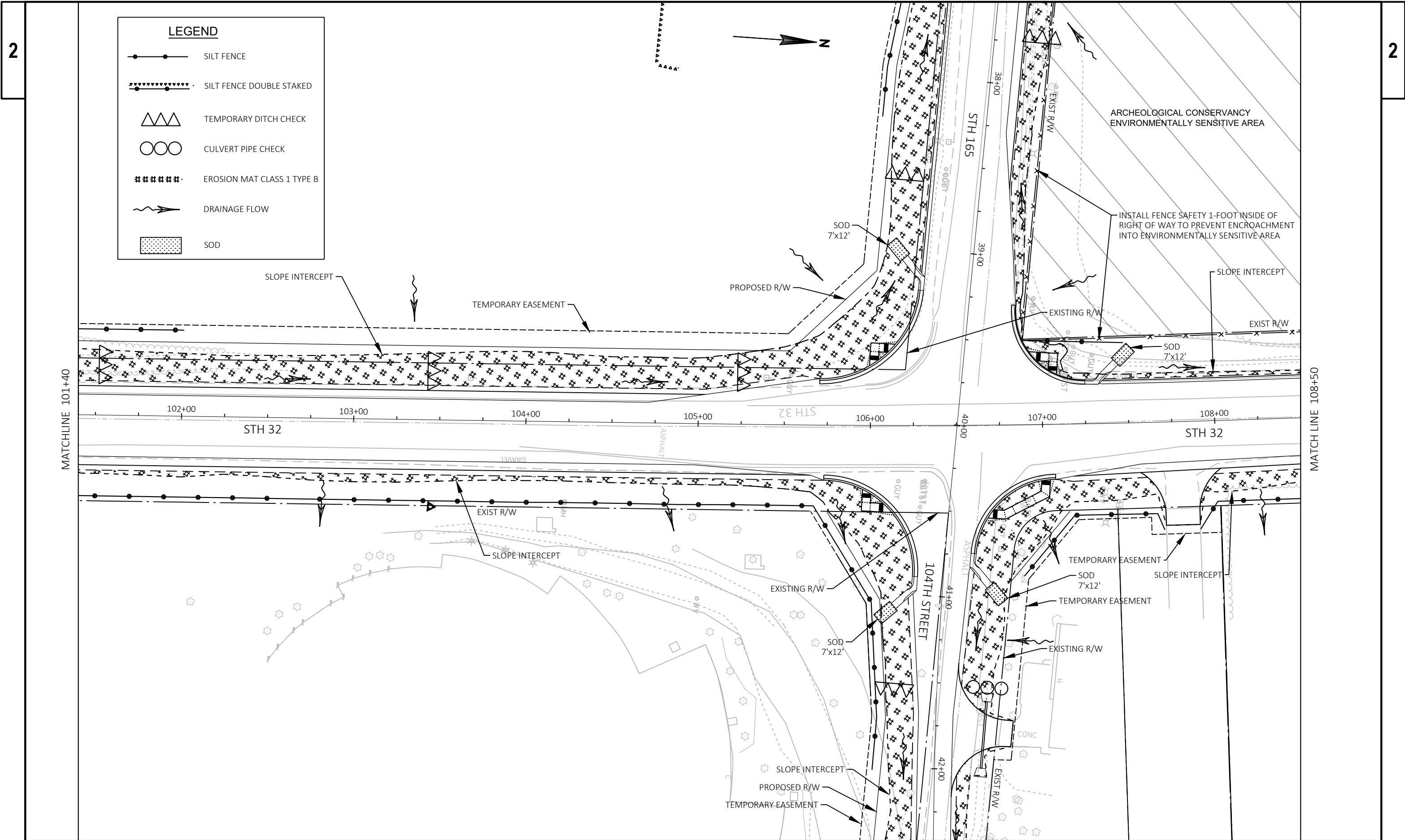
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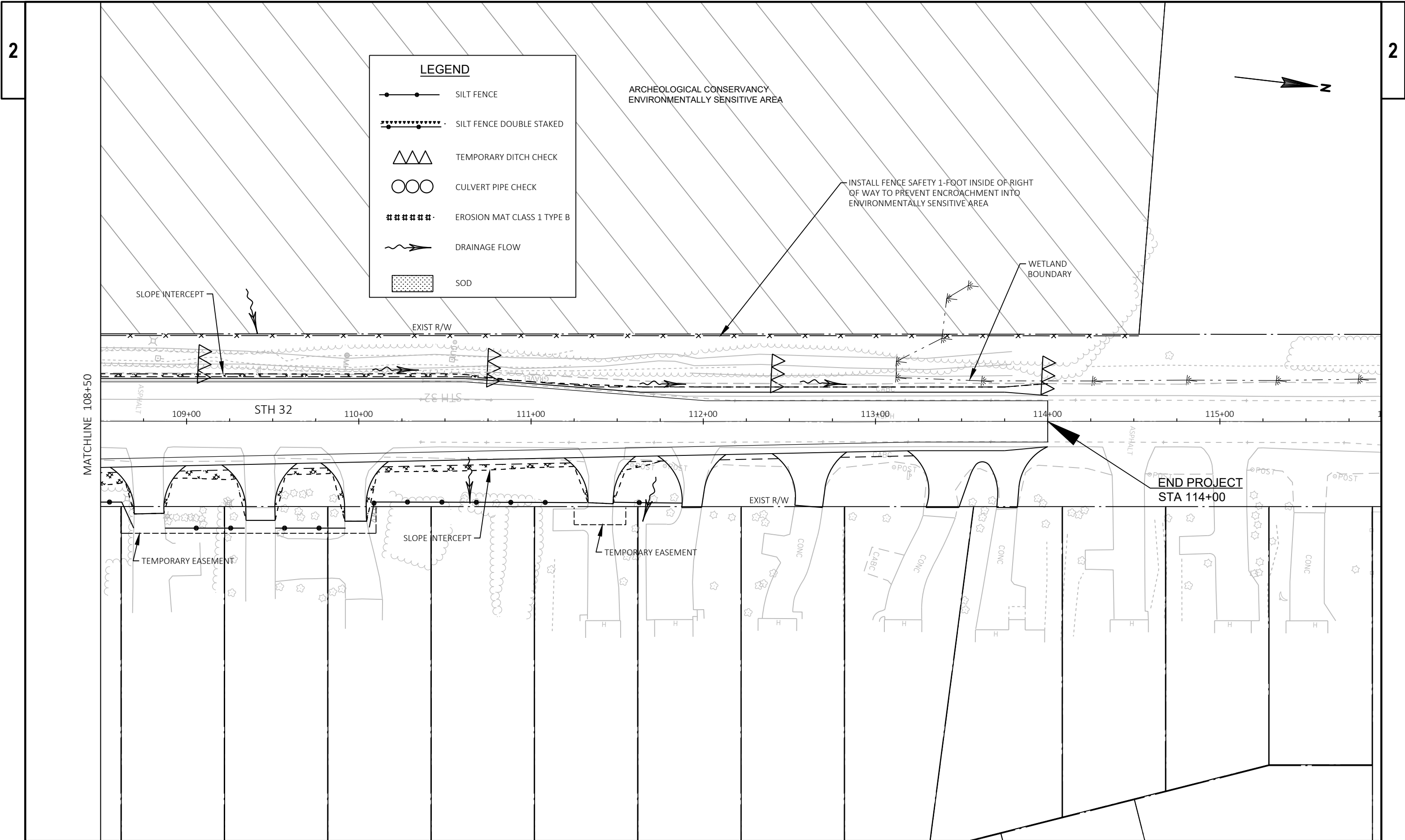


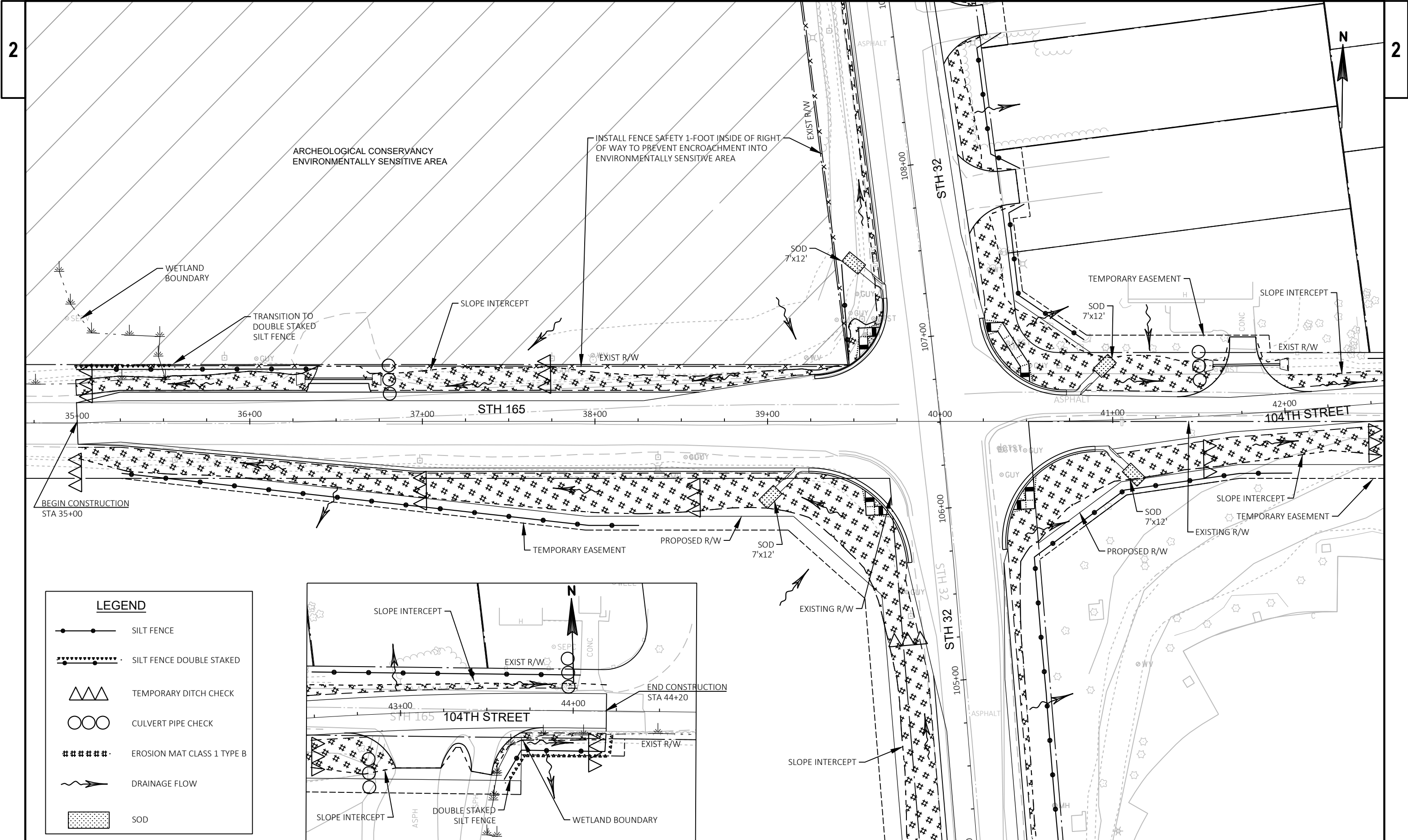
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
CP 21	STH 32 R/L: 105+98.38, 55.0' RT 104TH ST R/L: 40+59.38, 46.8' RT	626.1500	BERNSTEN FENO MONUMENT

LEGEND	
(BAD)	BASE AGGREGATE DENSE
(HMA2)	HMA PAVEMENT 2-INCH
(HMA5)	HMA PAVEMENT 5-INCH
(36D)	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH, TYPE D
(DWY)	ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES (3")
XXXX	SAWCUT (ASPHALT OR CONCRETE)
→	FLOW ARROW
X	CLEARING AND GRUBBING (I.D.)
[Cross-hatch]	BUTT JOINT
[Stippled]	CONCRETE DRIVEWAY 6-INCH
[Diagonal lines]	BASE PATCH

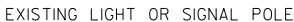


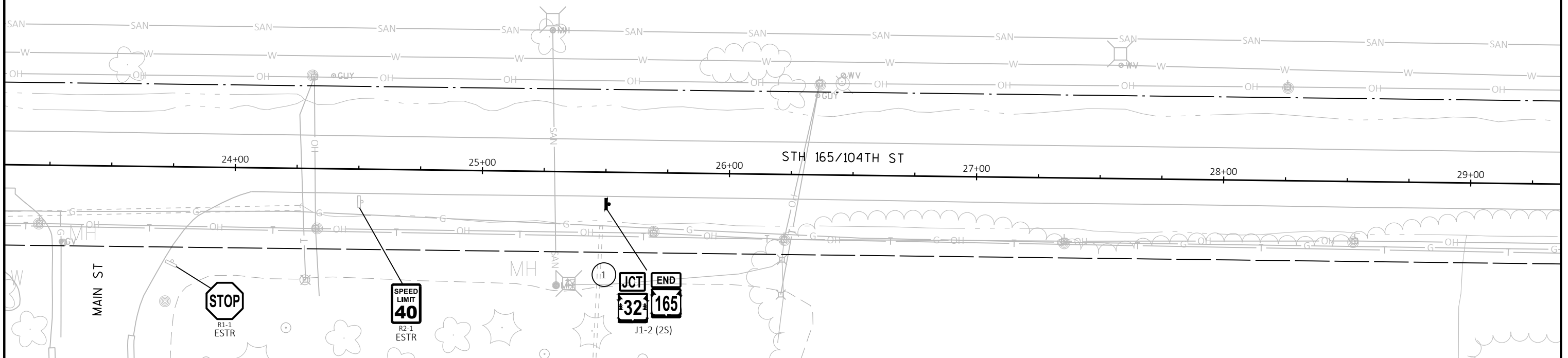






LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  VARIABLE MESSAGE SIGN
-  EXISTING LIGHT OR SIGNAL POLE
-  SIGN BRIDGE
-  CANTILEVER SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE



TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR COUNTY(S) PHONE#

- DENNIS NEWTON MILWAUKEE 414-750-0257
- DENNIS NEWTON RACINE 414-750-0257
- JENNY BUCKETT KENOSHA, WASHINGTON, OZAUKEE 414-750-2427
- CHUCK SALDIVAR WALWORTH, WAUKESHA 414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

SHEET 1 OF 11

PROJECT NO: 3240-11-70

HWY: STH 32

COUNTY: KENOSHA

PERMANENT SIGNING

SHEET

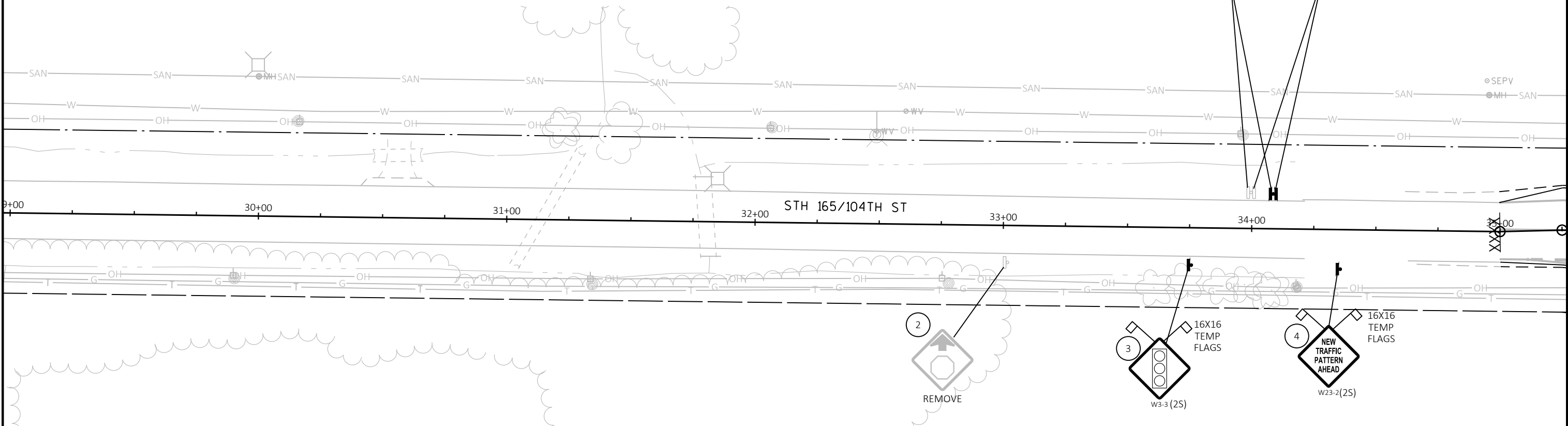
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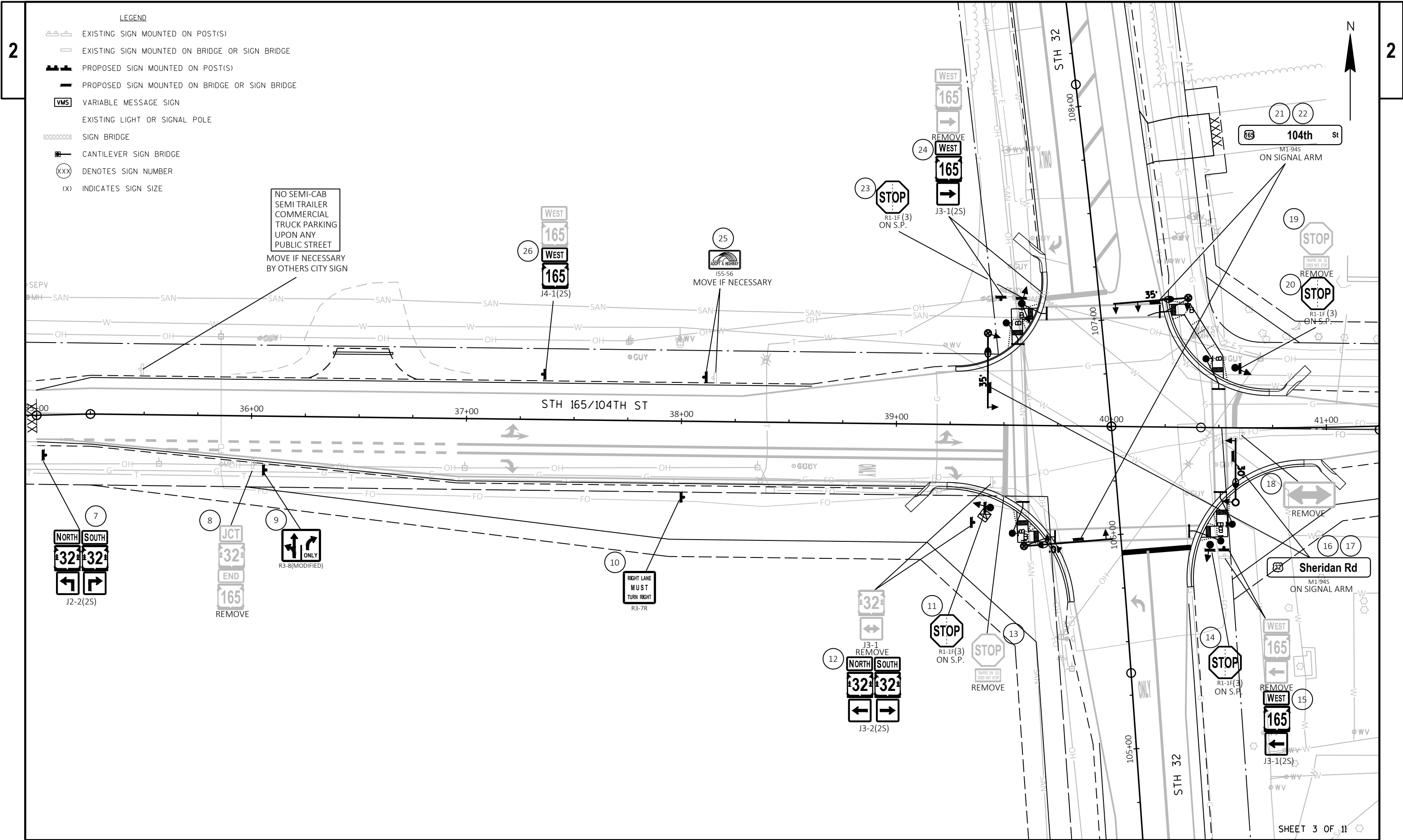
E



LEGEND

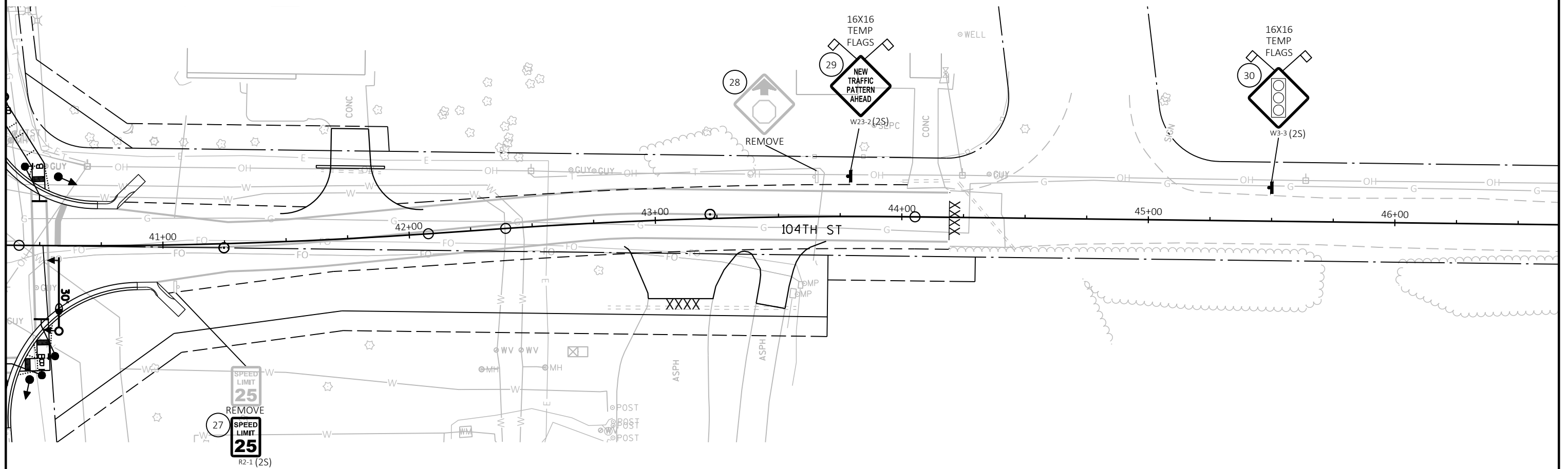
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- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE

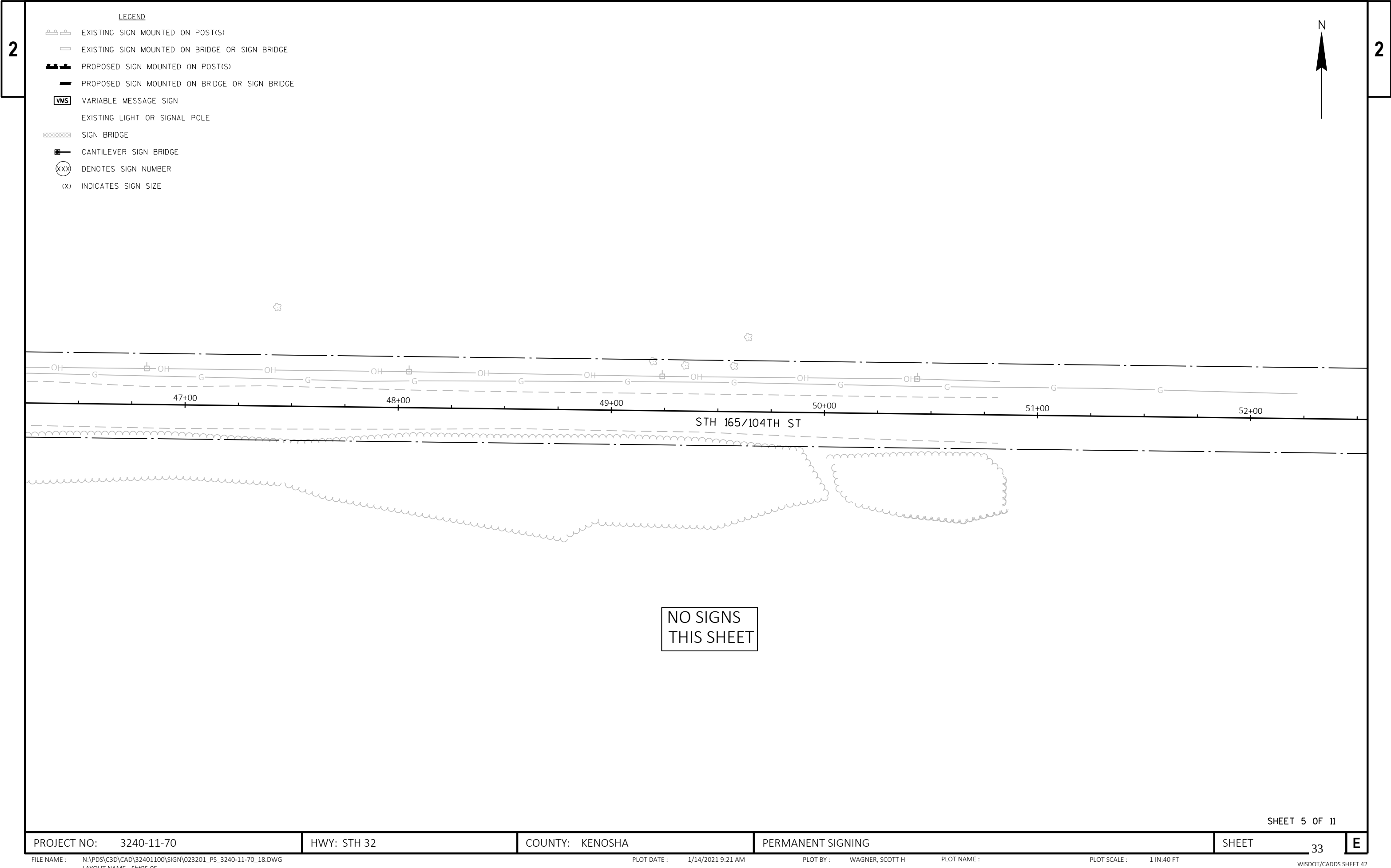






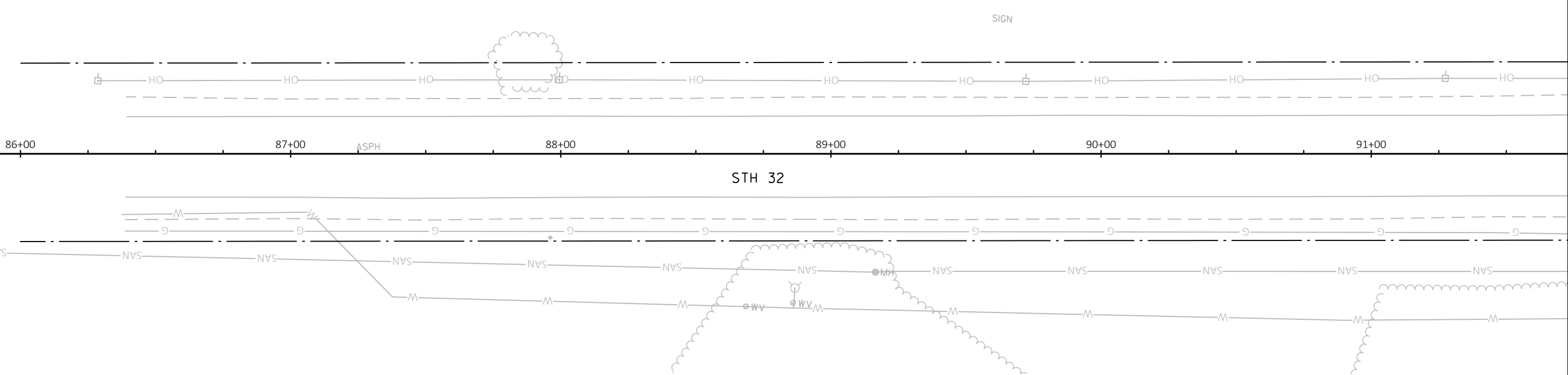
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	EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
	VARIABLE MESSAGE SIGN
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	SIGN BRIDGE
	CANTILEVER SIGN BRIDGE
	DENOTES SIGN NUMBER
(X)	INDICATES SIGN SIZE





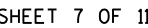
LEGEND

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- PROPOSED SIGN MOUNTED ON POST(S)
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- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE

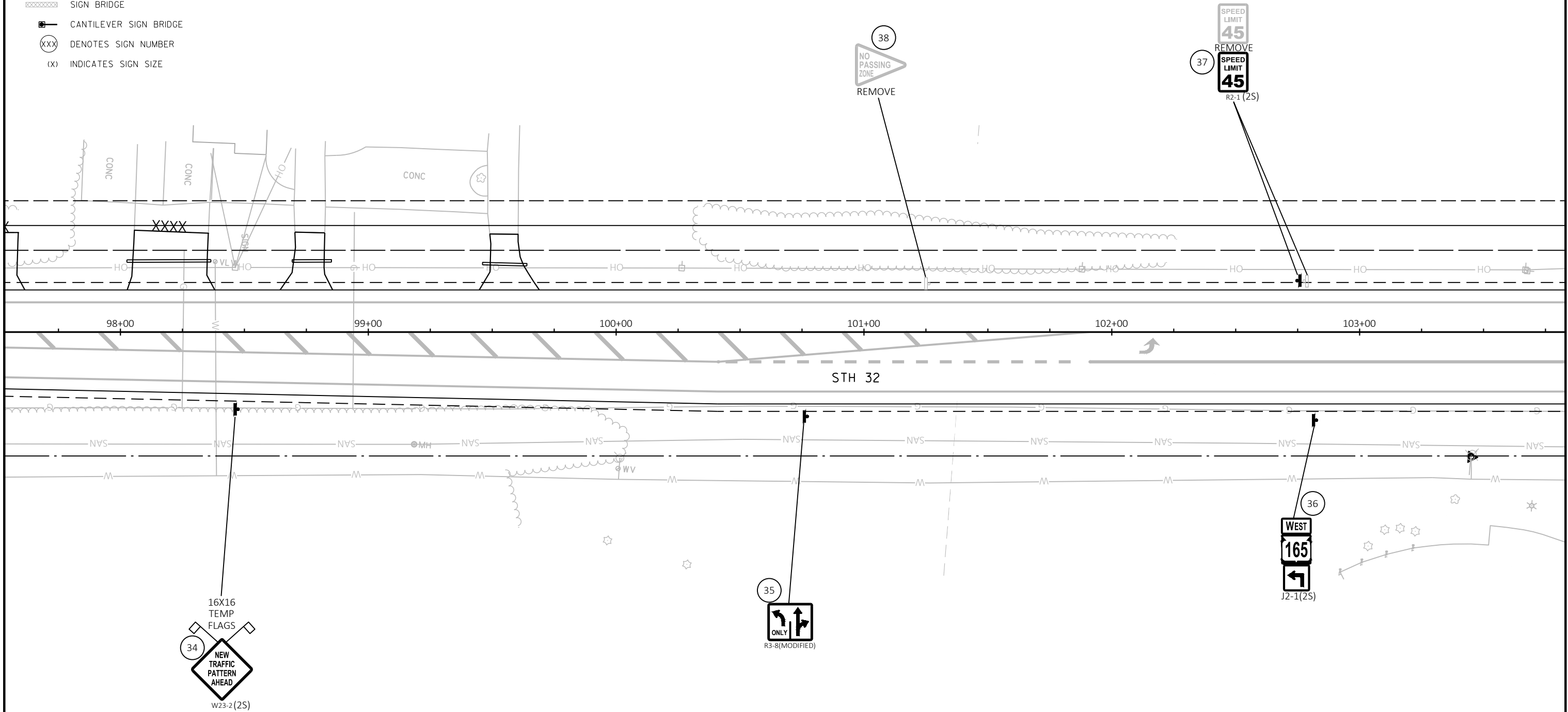


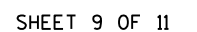
NO SIGNS
THIS SHEET

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	EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
	VARIABLE MESSAGE SIGN
	EXISTING LIGHT OR SIGNAL POLE
	SIGN BRIDGE
	CANTILEVER SIGN BRIDGE
	DENOTES SIGN NUMBER
(x)	INDICATES SIGN SIZE

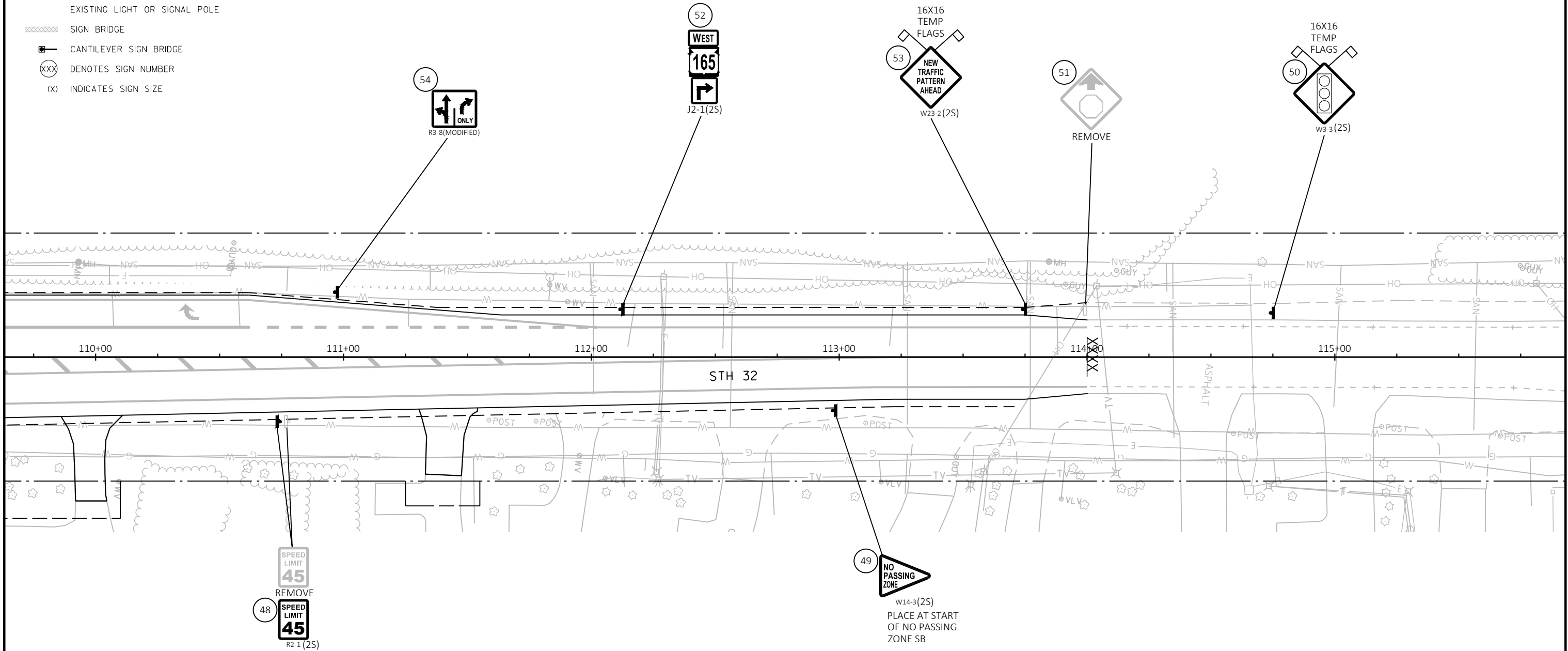


- LEGEND
- EXISTING SIGN MOUNTED ON POST(S)
 - EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
 - PROPOSED SIGN MOUNTED ON POST(S)
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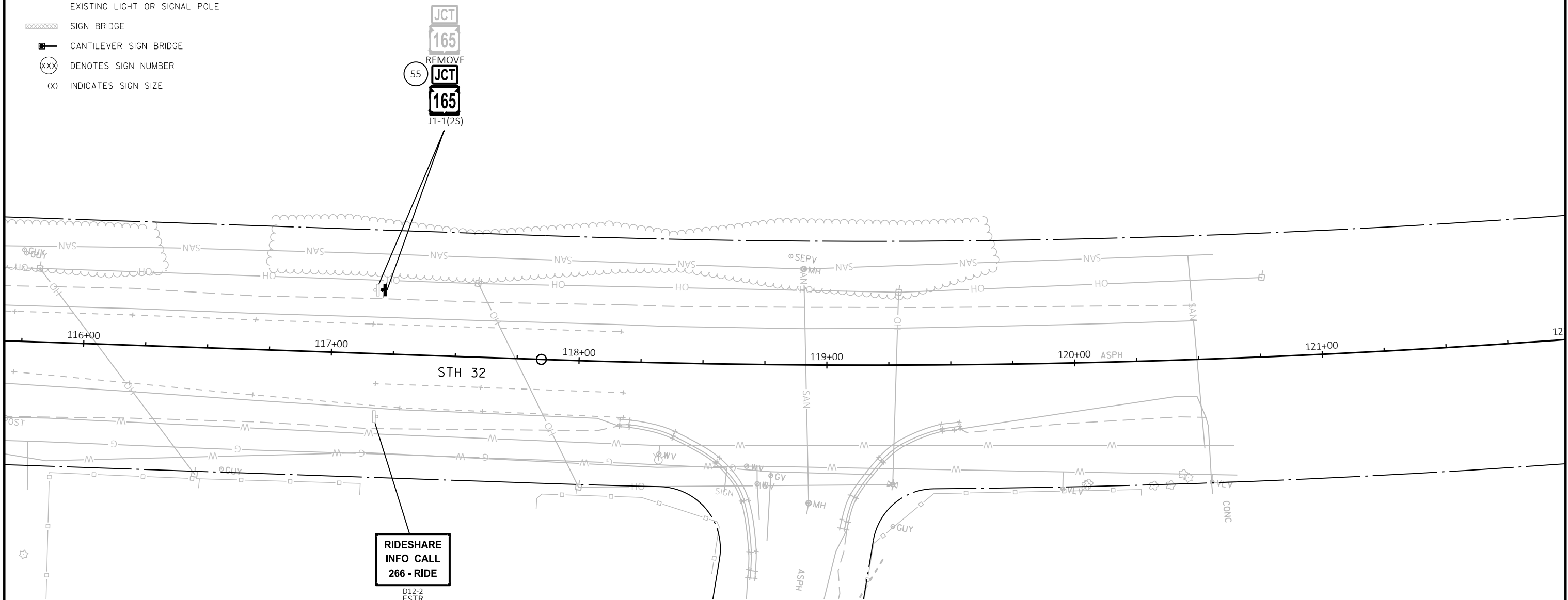
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 - PROPOSED SIGN MOUNTED ON POST(S)
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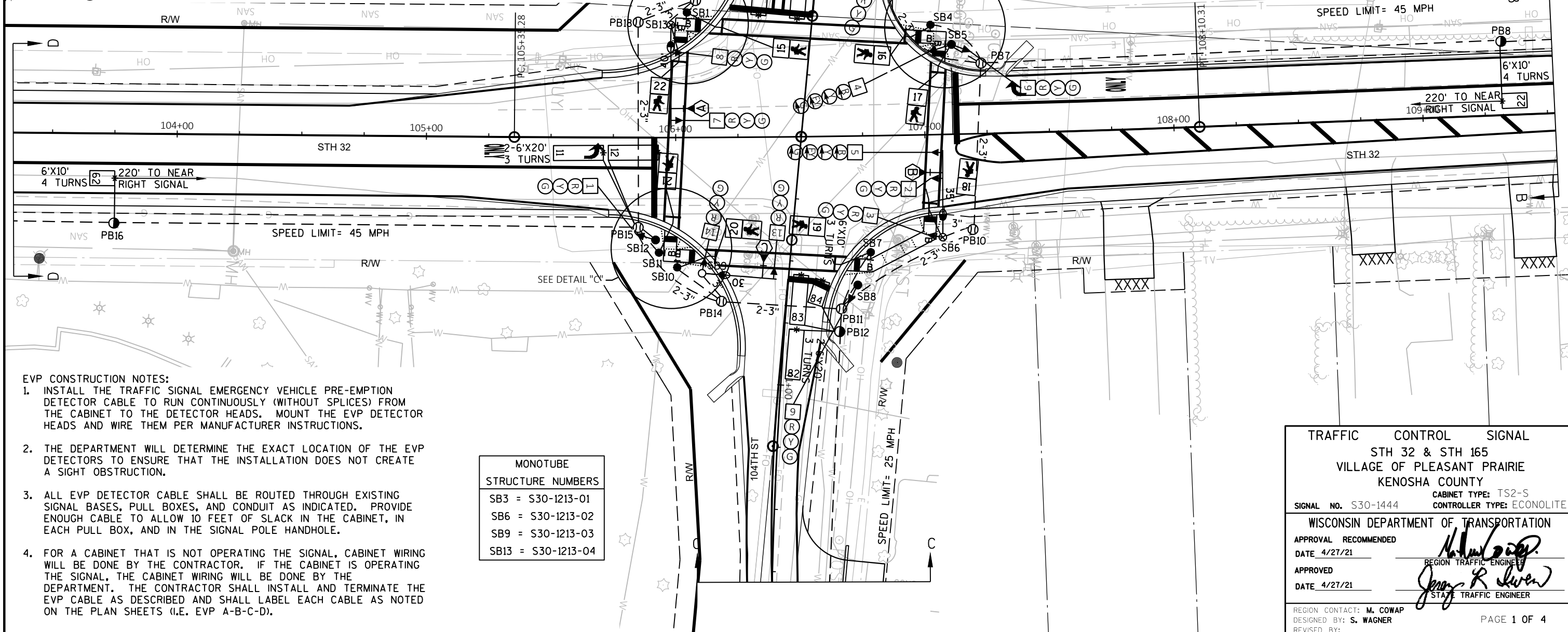
LEGEND

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- PROPOSED SIGN MOUNTED ON POST(S)
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- VARIABLE MESSAGE SIGN
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- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE



LEGEND

- — — NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
— — — LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) ○ MONOTUBE BASE, POLE, 15'-30' ARM
(XX) ⊗ MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
● PULL BOX, 24" X 42"
- (R) RED CIRCULAR INDICATOR
(Y) YELLOW CIRCULAR INDICATOR
(G) GREEN CIRCULAR INDICATOR
- ⊗ RED ARROW
⊗ YELLOW ARROW
⊗ GREEN ARROW
⊗ EVP DESIGNATOR
- ⊗ EVP DETECTOR HEAD
⊗ PEDESTRIAN HEAD
⊗ PEDESTRIAN BUTTON
- — — LANE DESIGNATION FOR INFO ONLY
- NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



PROJECT NO: 3240-11-70

HWY: STH 32

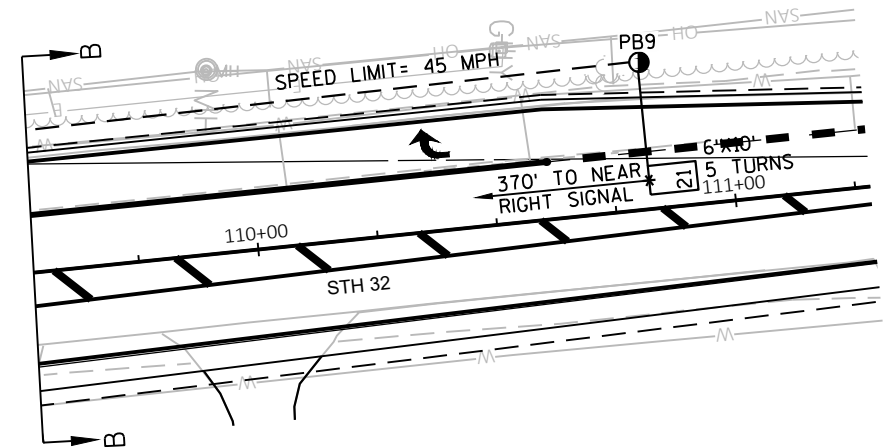
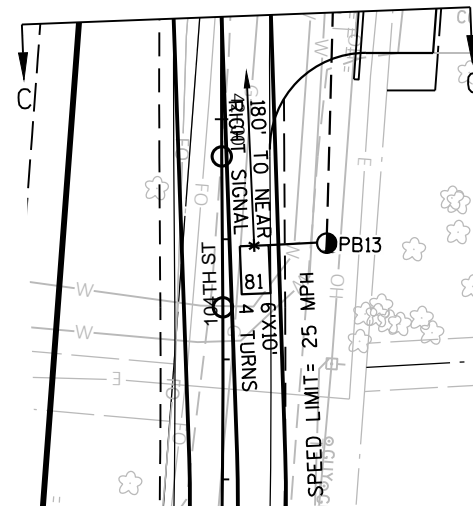
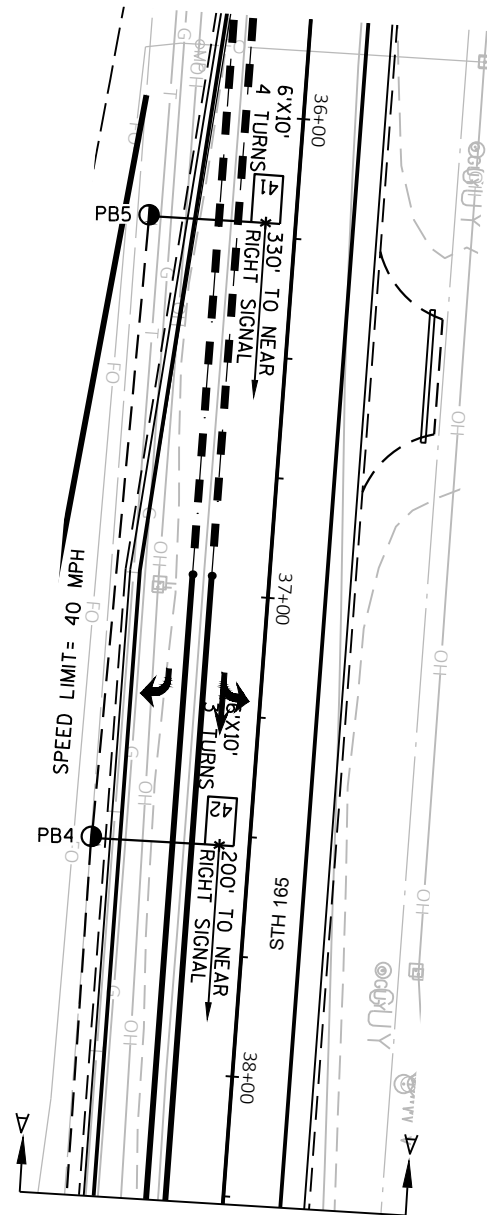
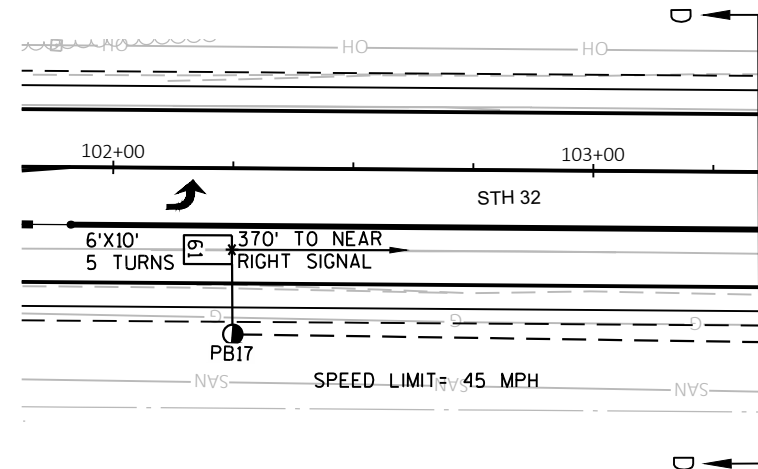
COUNTY: KENOSHA

TRAFFIC SIGNAL PLAN

SHEET

40

E



PROJECT NO: 3240-11-70

HWY: STH 32

COUNTY: KENOSHA

TRAFFIC SIGNAL PLAN

SHEET

41

E

TRAFFIC CONTROL SIGNAL
STH 32 & STH 165
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY

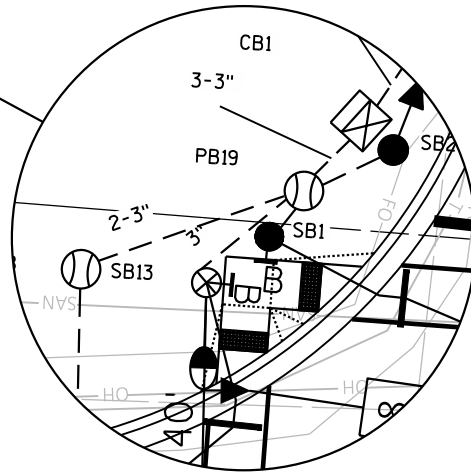
SIGNAL NO. S30-1444

REGION CONTACT: M. COWAP
DESIGNED BY: S. WAGNER
REVISED BY:

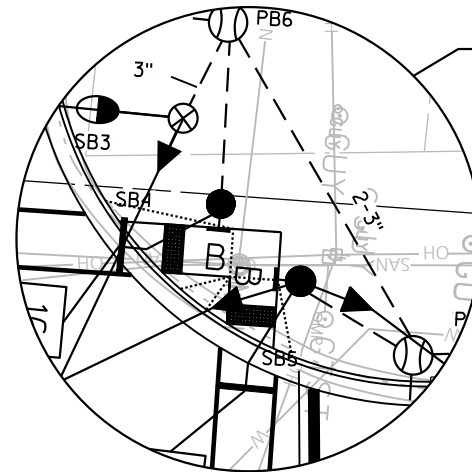
PAGE 2 OF 4



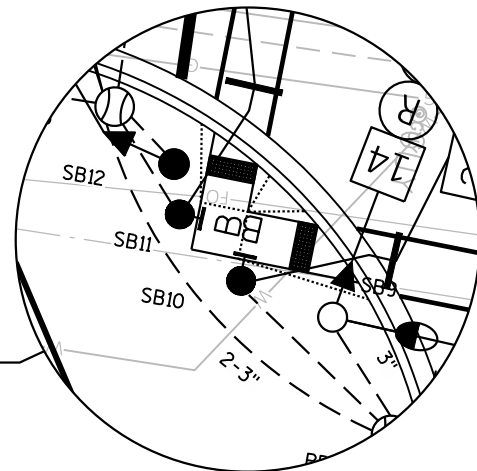
SEE DETAIL "A"



SEE DETAIL "B"

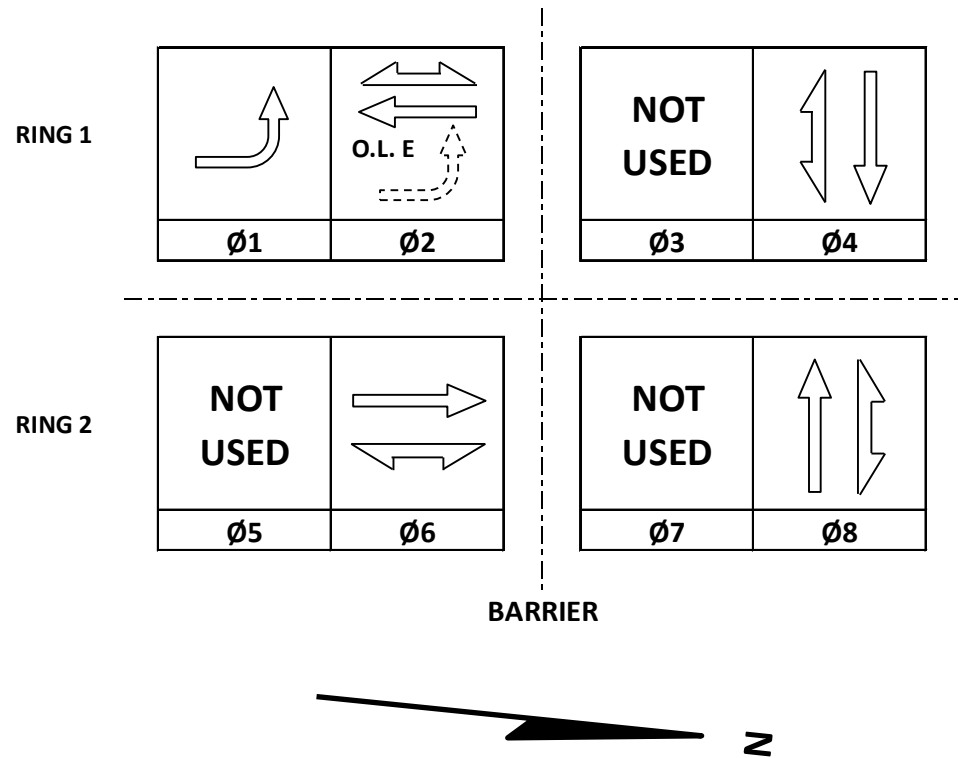


SEE DETAIL "C"



TRAFFIC	CONTROL	SIGNAL
STH 32 & STH 165		
VILLAGE OF PLEASANT PRAIRIE		
KENOSHA COUNTY		
SIGNAL NO. S30-1444		
REGION CONTACT: M. COWAP		PAGE 3 OF 4
DESIGNED BY: S. WAGNER		
REVISED BY:		

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø3		
Ø4	12,13,14	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	9,10,11	R
Ø2P	15,16	
Ø4P	21,22	
Ø6P	19,20	
Ø8P	17,18	
OLE	4,5	-
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3		8		X
4				
5				
6	X	2	MIN	X
7				
8		4		X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	41	43	45	61	81	83
CALLED PHASE	1	2	4	4	4	6	8	8
CALL OPTION	X	X		X	X	X		X
DELAY TIME	X			X	X			X
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME			X				X	
USE ADDED INITIAL		X				X		
CROSS SWITCH PHASE	2							

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22	42	44	46	62	82	84
CALLED PHASE	1	2	4	4	4	6	8	8
CALL OPTION	X	X		X	X	X	X	X
DELAY TIME	X			X	X		X	X
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME			X					
USE ADDED INITIAL		X				X		
CROSS SWITCH PHASE	2							

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	X

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

STH 32 & STH 165	
VILLAGE OF PLEASANT PRAIRIE	
KENOSHA COUNTY	
SIGNAL NO: S30-1444	CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE	
DATE: APRIL 2021	PAGE NUMBER: 3 OF 3

PROJECT ID:	3240-11-70
INTERSECTION:	STH 32 & STH 165

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB1	12	15								BLK	BLU		
		B										WHT/BLK	
SB2	7	12	RED	ORG	GRN								
SB3	7	10	RED	ORG	GRN								
		11	RED	ORG	GRN								
SB4	12	15								BLK	BLU		
		B										WHT/BLK	
SB5	15	4				RED	ORG	GRN	BLK/WHT				
		6	RED/BLK	ORG/BLK	GRN/BLK								
		17								BLK	BLU		
		B										WHT/BLK	
SB6	15	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		18								BLK	BLU		
		B										WHT/BLK	
SB7	12	19								BLK	BLU		
		B										WHT/BLK	
SB8	7	9	RED	ORG	GRN								
SB9	7	13	RED	ORG	GRN								
		14	RED	ORG	GRN								
SB10		20								BLK	BLU		
		B										WHT/BLK	
SB11	12	21								BLK	BLU		
		B										WHT/BLK	
SB12	7	1	RED	ORG	GRN								
SB13	12	7	RED	ORG	GRN								
		8	RED	ORG	GRN								
		22								BLK	BLU		
		B										WHT/BLK	

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications

*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.

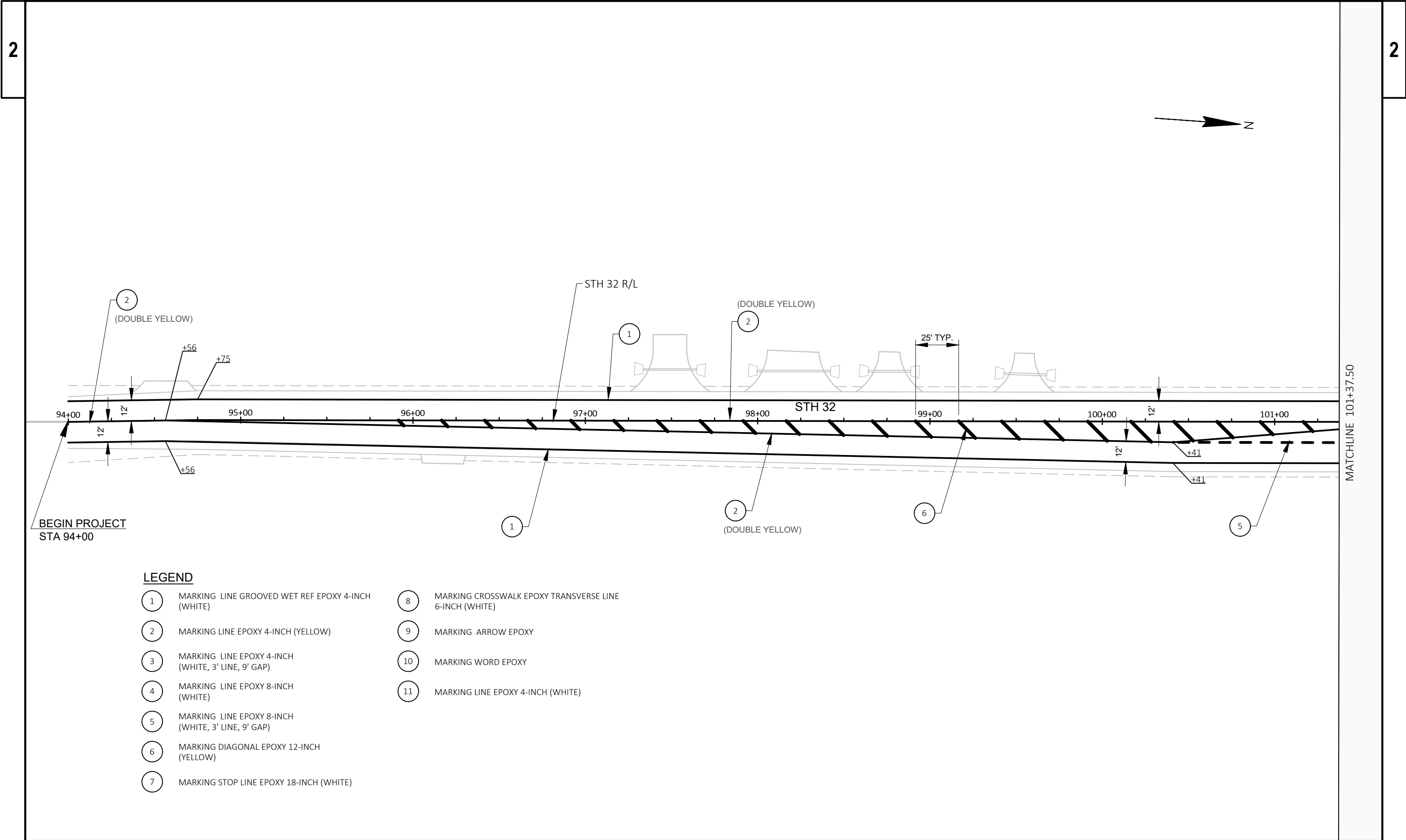
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.

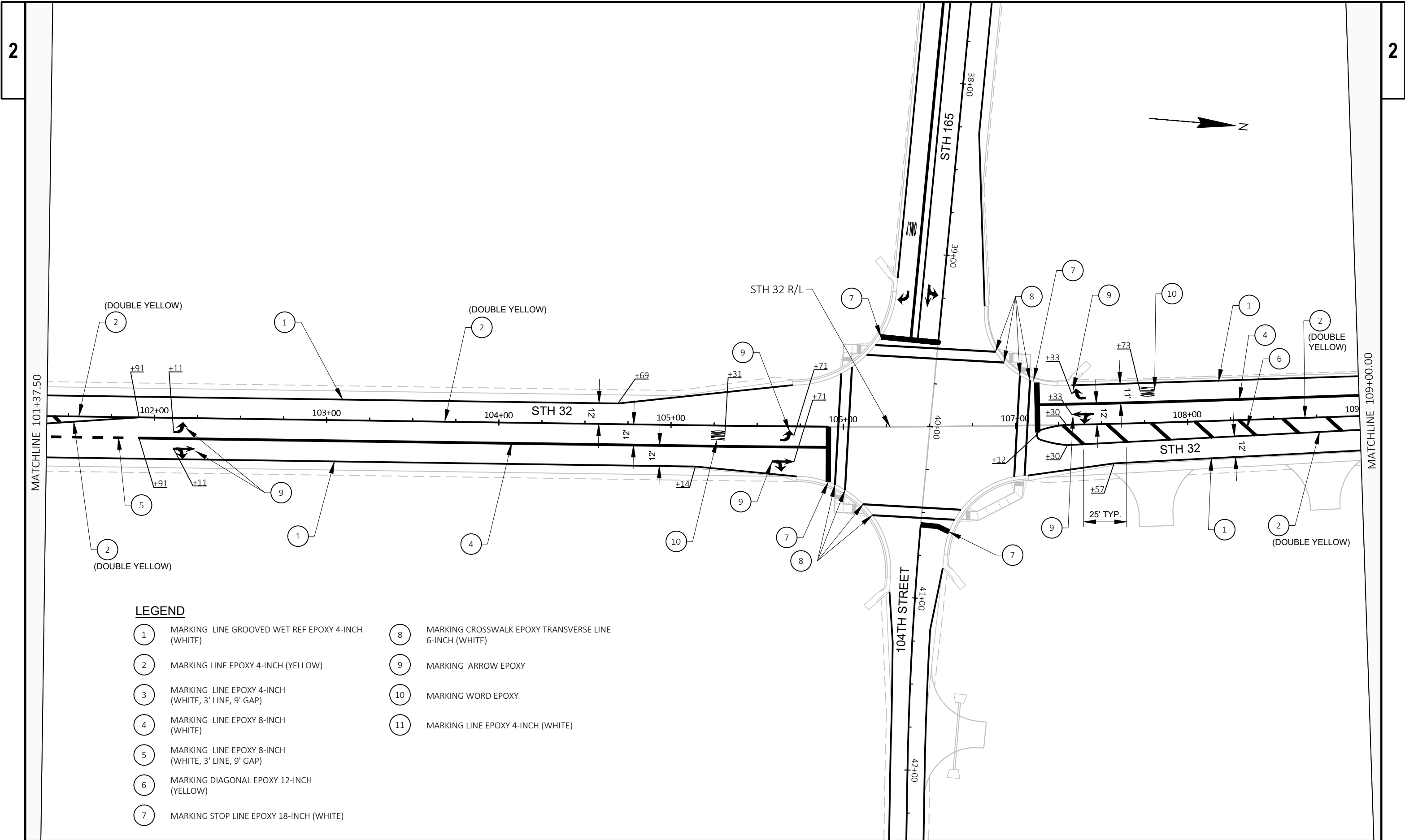
Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB6	SB3
PB7	SB3
PB10	SB6
PB11	SB8
PB14	SB9
PB15	SB12
PB18	CB1
PB19	CB1

Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB3
SB3	SB6
CB1	SB13
SB13	SB9

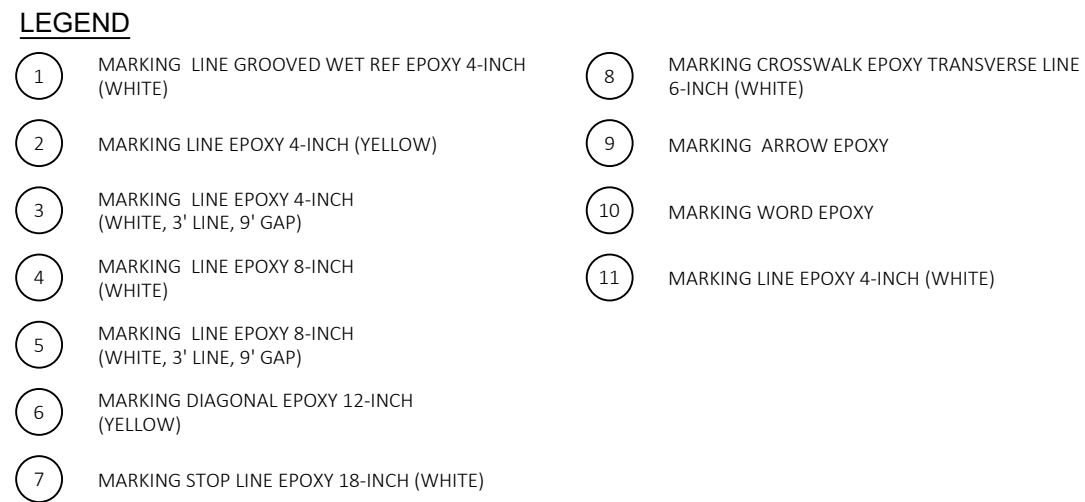
Emergency Vehicle Preemption	
From	To
CB1	HEAD A (SB13)
CB1	HEAD B (SB6)
CB1	HEAD C (SB9)
CB1	HEAD D (SB3)

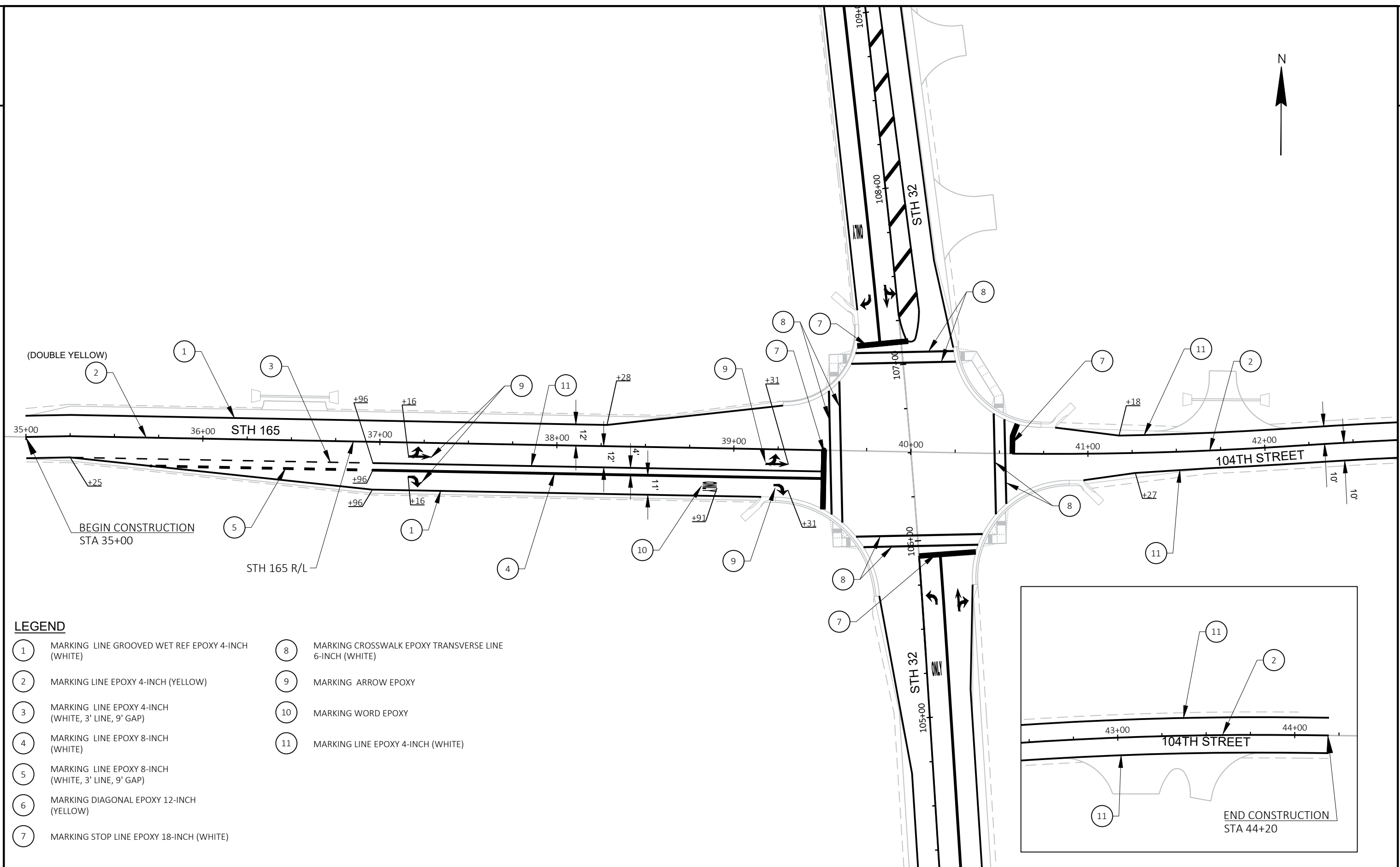




LEGEND

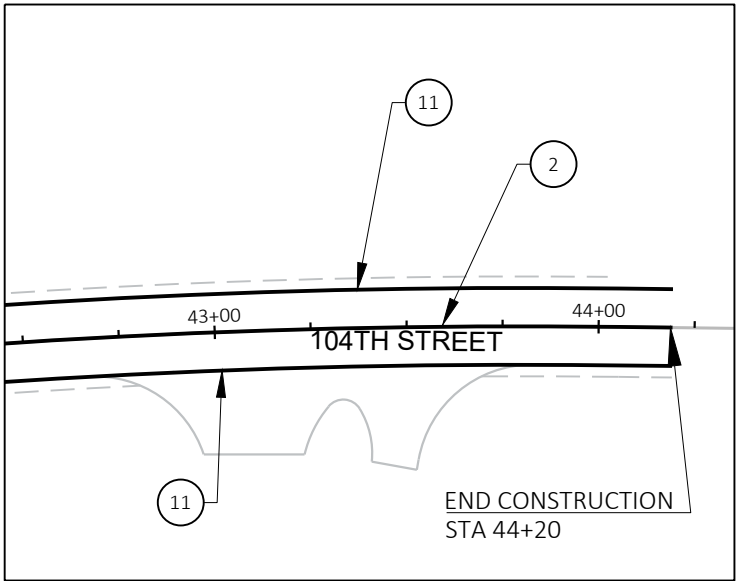
- | | |
|--|--|
| 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) | 8 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) |
| 2 MARKING LINE EPOXY 4-INCH (YELLOW) | 9 MARKING ARROW EPOXY |
| 3 MARKING LINE EPOXY 4-INCH (WHITE, 3' LINE, 9' GAP) | 10 MARKING WORD EPOXY |
| 4 MARKING LINE EPOXY 8-INCH (WHITE) | 11 MARKING LINE EPOXY 4-INCH (WHITE) |
| 5 MARKING LINE EPOXY 8-INCH (WHITE, 3' LINE, 9' GAP) | |
| 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) | |
| 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) | |

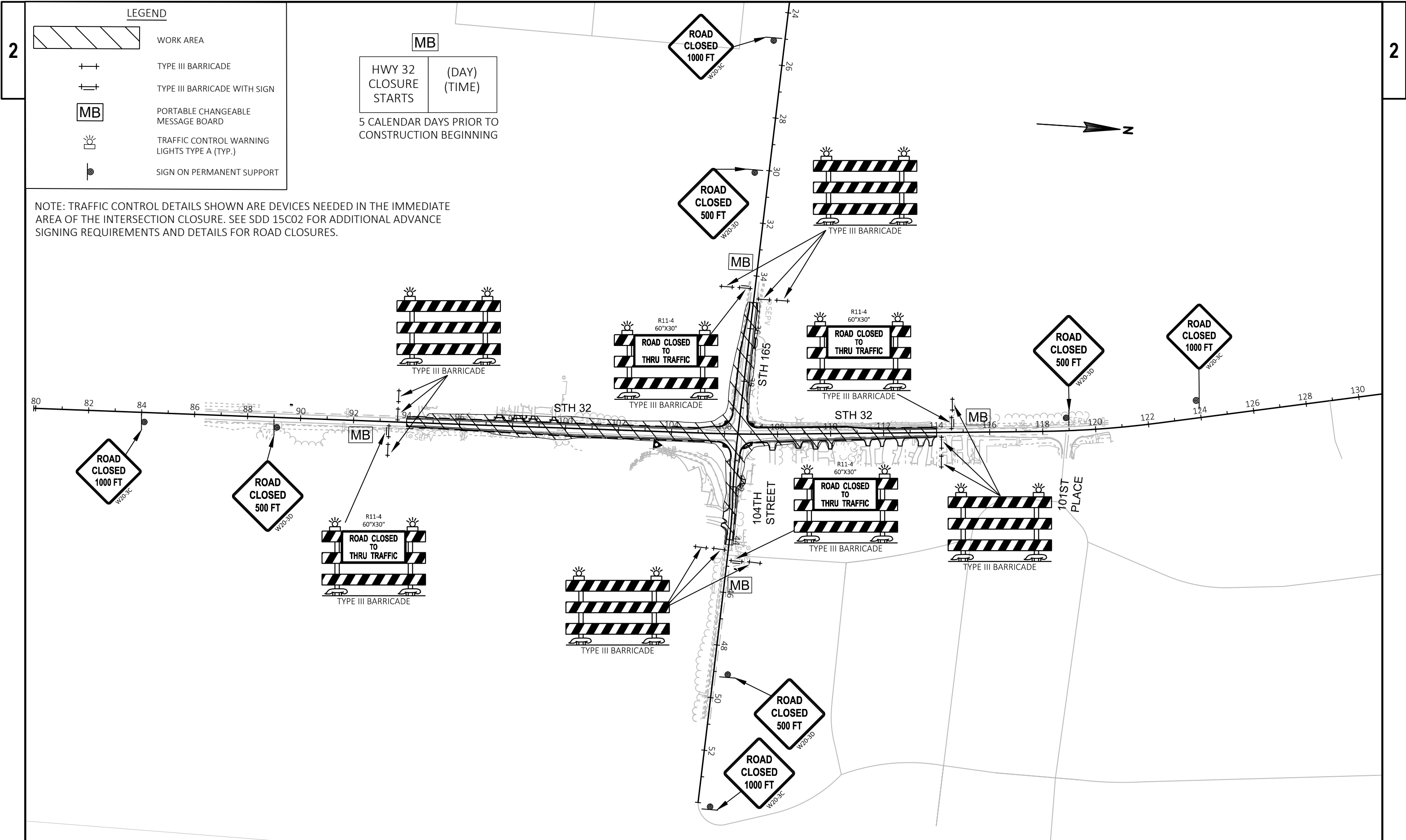




LEGEND

- | | |
|--|--|
| 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) | 8 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) |
| 2 MARKING LINE EPOXY 4-INCH (YELLOW) | 9 MARKING ARROW EPOXY |
| 3 MARKING LINE EPOXY 4-INCH (WHITE, 3' LINE, 9' GAP) | 10 MARKING WORD EPOXY |
| 4 MARKING LINE EPOXY 8-INCH (WHITE) | 11 MARKING LINE EPOXY 4-INCH (WHITE) |
| 5 MARKING LINE EPOXY 8-INCH (WHITE, 3' LINE, 9' GAP) | |
| 6 MARKING DIAGONAL EPOXY 12-INCH (YELLOW) | |
| 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) | |

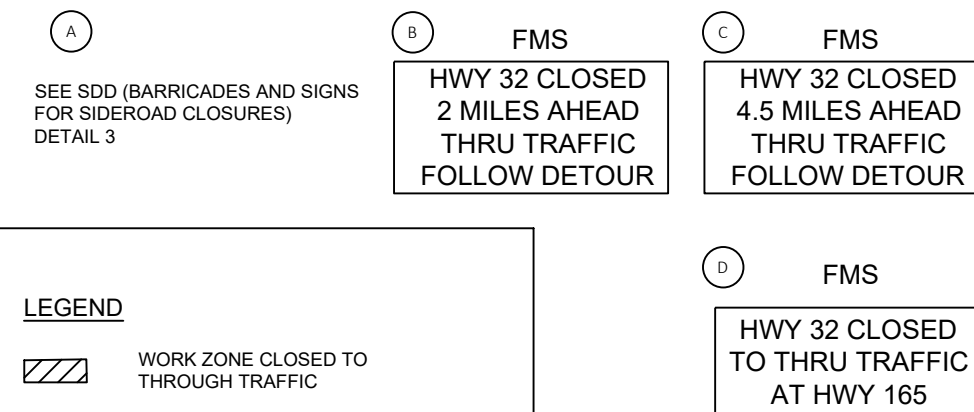
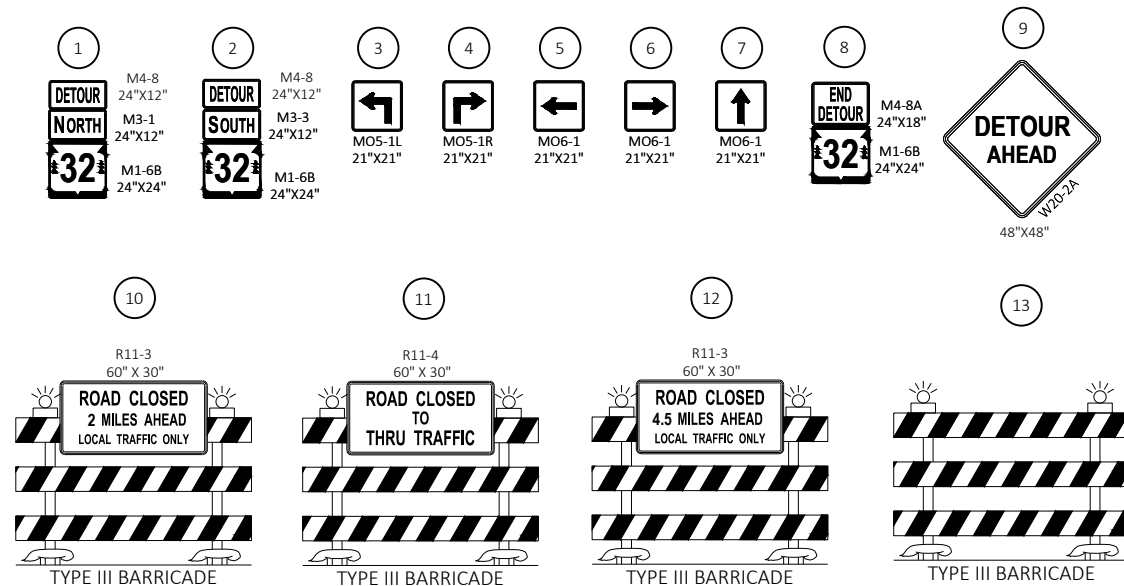




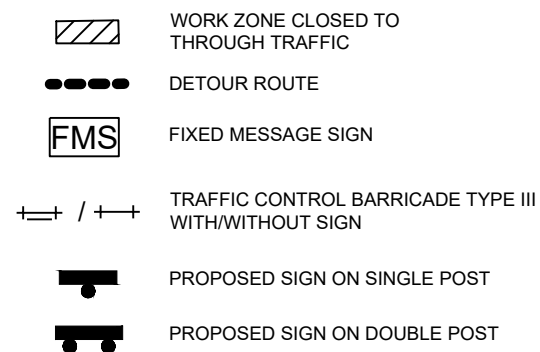
2

GENERAL NOTES:

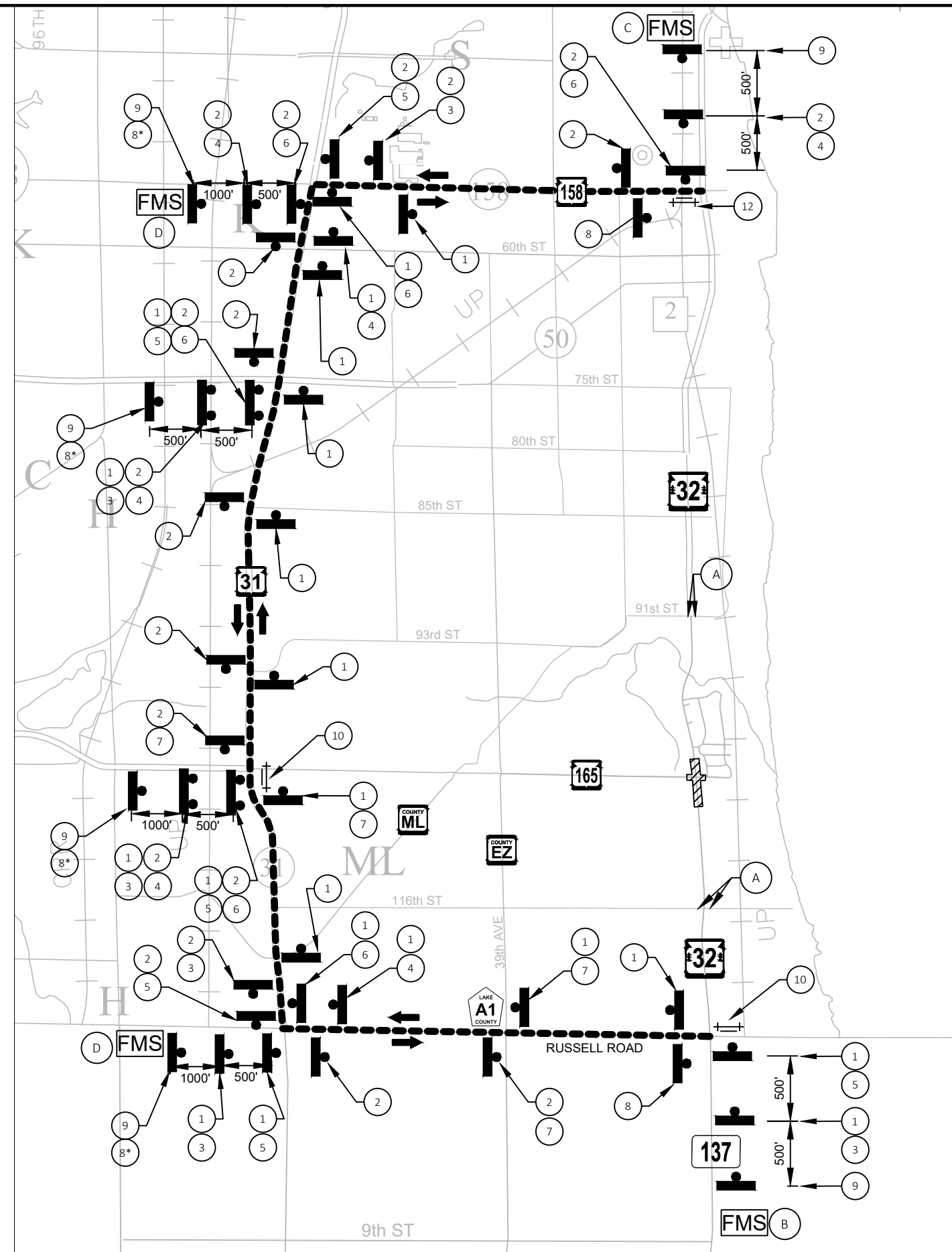
1. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
2. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER
3. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES
4. 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
5. "WO" SIGNS ARE THE SAME AS "W" AND "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE
6. ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK BLACK PANEL UNLESS OTHERWISE NOTED



LEGEND



NOTE:
* OMIT M4-8A SIGN



2

PROJECT NO:	3240-11-70
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HWY: STH 32

COUNTY: KENOSHA

DETOUR

SHEET

1

E

FILE NAME : J:\ACTIVE\SE\3240-11-00_STH 165 & STH 32\C3D\32401100\SHEETS\PLAN\DWG\027001_DT.DWG
LAYOUT NAME - 01

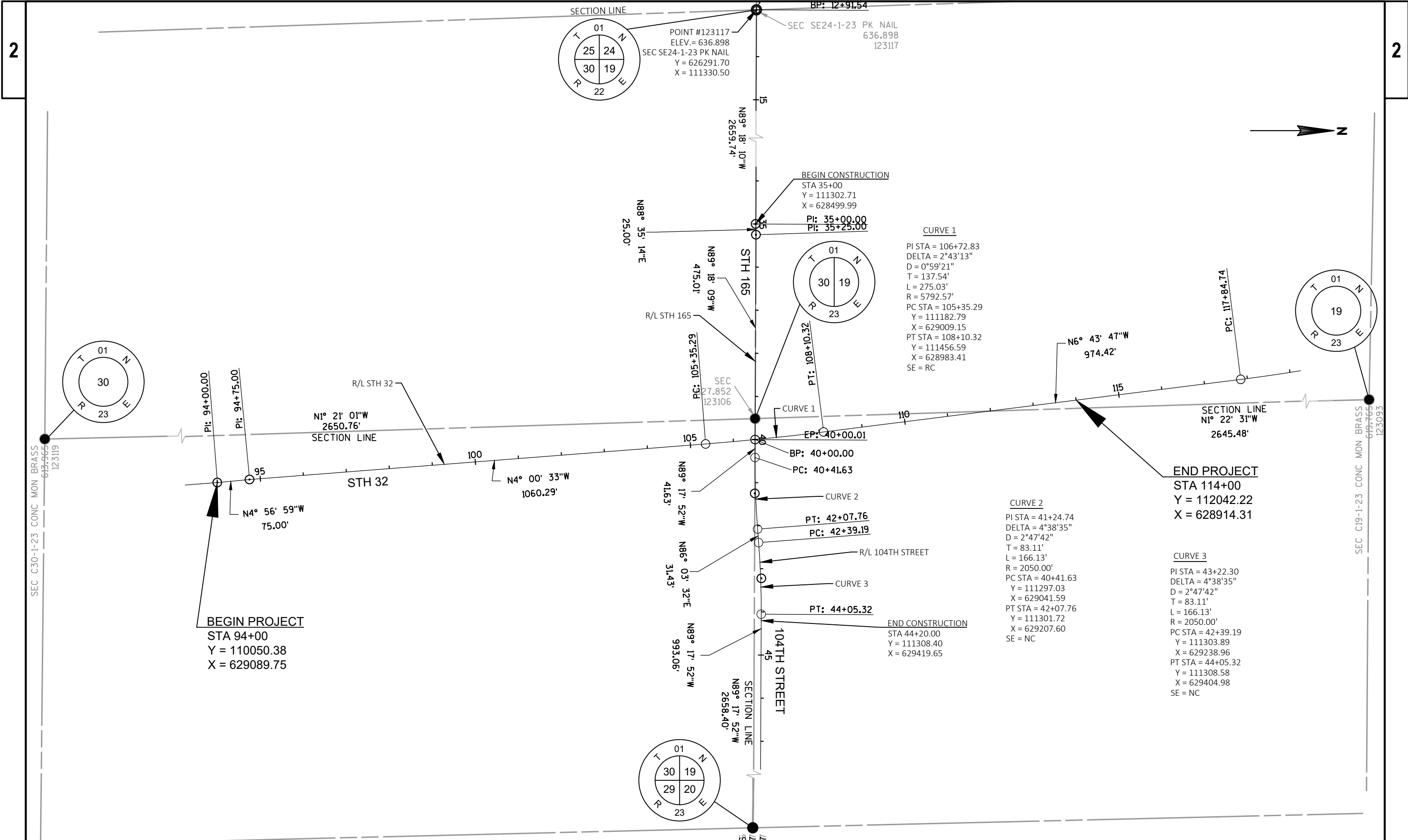
PLOT DATE : 2/1/2021 11:56 AM

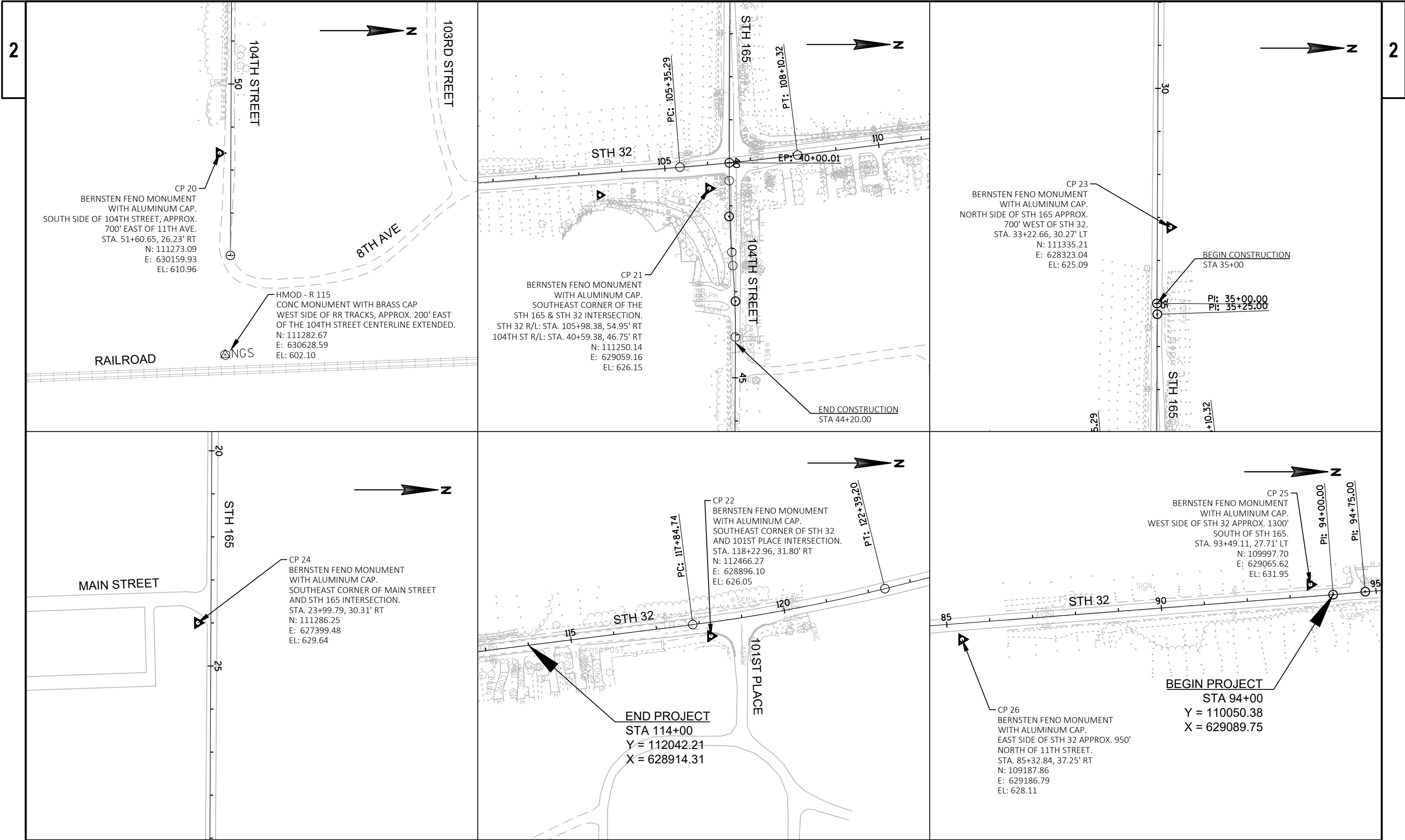
PLOT BY : KAYLA DEBACCO

PLOT NAME :

PLOT SCALE : 1 IN:1 MI

WISDOT/CADDS SHEET 42





PROJECT NO: 3240-11-70

HWY: STH 32

COUNTY: KENOSHA

ALIGNMENT DETAILS SURVEY CONTROL

SHEET

53

E

Estimate Of Quantities

3240-11-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	14.000	14.000
0004	201.0120	Clearing	ID	42.000	42.000
0006	201.0205	Grubbing	STA	14.000	14.000
0008	201.0220	Grubbing	ID	42.000	42.000
0010	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0012	204.0100	Removing Concrete Pavement	SY	50.000	50.000
0014	204.0115	Removing Asphaltic Surface Butt Joints	SY	195.000	195.000
0016	204.0120	Removing Asphaltic Surface Milling	SY	9,300.000	9,300.000
0018	204.0150	Removing Curb & Gutter	LF	145.000	145.000
0020	204.0170	Removing Fence	LF	24.000	24.000
0022	205.0100	Excavation Common	CY	2,973.000	2,973.000
0024	208.0100	Borrow	CY	3,960.000	3,960.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	14.000	14.000
0028	213.0100	Finishing Roadway (project) 01. 3240-11-70	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	550.000	550.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,775.000	3,775.000
0034	305.0410	Aggregate Detours	TON	50.000	50.000
0036	390.0203	Base Patching Asphaltic	SY	570.000	570.000
0038	416.0160	Concrete Driveway 6-Inch	SY	50.000	50.000
0040	455.0605	Tack Coat	GAL	1,000.000	1,000.000
0042	460.2000	Incentive Density HMA Pavement	DOL	1,596.000	1,596.000
0044	460.5223	HMA Pavement 3 LT 58-28 S	TON	775.000	775.000
0046	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,650.000	1,650.000
0048	465.0115	Asphaltic Surface Detours	TON	50.000	50.000
0050	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	220.000	220.000
0052	465.0315	Asphaltic Flumes	SY	4.000	4.000
0054	521.1217	Apron Endwalls for Pipe Arch Steel 17x13-Inch	EACH	12.000	12.000
0056	521.3717	Pipe Arch Corrugated Steel 17x13-Inch	LF	203.000	203.000
0058	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	72.000	72.000
0060	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	255.000	255.000
0062	602.0410	Concrete Sidewalk 5-Inch	SF	655.000	655.000
0064	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	70.000	70.000
0066	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	15.000	15.000
0068	616.0700.S	Fence Safety	LF	1,175.000	1,175.000
0070	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3240-11-70	EACH	1.000	1.000
0072	619.1000	Mobilization	EACH	1.000	1.000
0074	624.0100	Water	MGAL	91.000	91.000
0076	625.0500	Salvaged Topsoil	SY	5,900.000	5,900.000
0078	627.0200	Mulching	SY	2,950.000	2,950.000
0080	628.1504	Silt Fence	LF	3,450.000	3,450.000
0082	628.1520	Silt Fence Maintenance	LF	3,510.000	3,510.000
0084	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0086	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0088	628.2004	Erosion Mat Class I Type B	SY	5,900.000	5,900.000
0090	628.7504	Temporary Ditch Checks	LF	25.000	25.000
0092	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0094	628.7570	Rock Bags	EACH	100.000	100.000
0096	629.0205	Fertilizer Type A	CWT	6.000	6.000
0098	630.0130	Seeding Mixture No. 30	LB	109.000	109.000

Estimate Of Quantities

3240-11-70

Line	Item	Item Description	Unit	Total	Qty
0100	630.0200	Seeding Temporary	LB	162.000	162.000
0102	630.0500	Seed Water	MGAL	37.000	37.000
0104	631.1100	Sod Erosion Control	SY	50.000	50.000
0106	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	34.000	34.000
0108	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	3.000	3.000
0110	637.2210	Signs Type II Reflective H	SF	232.250	232.250
0112	637.2215	Signs Type II Reflective H Folding	SF	29.840	29.840
0114	637.2230	Signs Type II Reflective F	SF	94.240	94.240
0116	638.2102	Moving Signs Type II	EACH	3.000	3.000
0118	638.2602	Removing Signs Type II	EACH	19.000	19.000
0120	638.3000	Removing Small Sign Supports	EACH	22.000	22.000
0122	642.5001	Field Office Type B	EACH	1.000	1.000
0124	643.0300	Traffic Control Drums	DAY	2,350.000	2,350.000
0126	643.0420	Traffic Control Barricades Type III	DAY	2,914.000	2,914.000
0128	643.0705	Traffic Control Warning Lights Type A	DAY	3,760.000	3,760.000
0130	643.0900	Traffic Control Signs	DAY	20,116.000	20,116.000
0132	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
0134	643.1000	Traffic Control Signs Fixed Message	SF	90.000	90.000
0136	643.1050	Traffic Control Signs PCMS	DAY	20.000	20.000
0138	643.5000	Traffic Control	EACH	1.000	1.000
0140	646.1020	Marking Line Epoxy 4-Inch	LF	8,695.000	8,695.000
0142	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	4,555.000	4,555.000
0144	646.3020	Marking Line Epoxy 8-Inch	LF	1,115.000	1,115.000
0146	646.5020	Marking Arrow Epoxy	EACH	12.000	12.000
0148	646.5120	Marking Word Epoxy	EACH	3.000	3.000
0150	646.6120	Marking Stop Line Epoxy 18-Inch	LF	120.000	120.000
0152	646.7120	Marking Diagonal Epoxy 12-Inch	LF	450.000	450.000
0154	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	520.000	520.000
0156	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	943.000	943.000
0158	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	378.000	378.000
0160	652.0605	Conduit Special 2-Inch	LF	359.000	359.000
0162	652.0615	Conduit Special 3-Inch	LF	660.000	660.000
0164	652.0800	Conduit Loop Detector	LF	1,280.000	1,280.000
0166	653.0135	Pull Boxes Steel 24x36-Inch	EACH	10.000	10.000
0168	653.0140	Pull Boxes Steel 24x42-Inch	EACH	9.000	9.000
0170	654.0101	Concrete Bases Type 1	EACH	9.000	9.000
0172	654.0110	Concrete Bases Type 10	EACH	2.000	2.000
0174	654.0120	Concrete Bases Type 10-Special	EACH	2.000	2.000
0176	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
0178	655.0230	Cable Traffic Signal 5-14 AWG	LF	561.000	561.000
0180	655.0240	Cable Traffic Signal 7-14 AWG	LF	2,623.000	2,623.000
0182	655.0305	Cable Type UF 2-12 AWG Grounded	LF	650.000	650.000
0184	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,508.000	1,508.000
0186	655.0610	Electrical Wire Lighting 12 AWG	LF	576.000	576.000
0188	655.0700	Loop Detector Lead In Cable	LF	3,679.000	3,679.000
0190	655.0800	Loop Detector Wire	LF	4,382.000	4,382.000
0192	655.0900	Traffic Signal EVP Detector Cable	LF	1,015.000	1,015.000
0194	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. STH 32 & STH 165	LS	1.000	1.000
0196	657.0100	Pedestal Bases	EACH	9.000	9.000

Estimate Of Quantities

3240-11-70

Line	Item	Item Description	Unit	Total	Qty
0198	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	4.000	4.000
0200	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	5.000	5.000
0202	658.0173	Traffic Signal Face 3S 12-Inch	EACH	12.000	12.000
0204	658.0174	Traffic Signal Face 4S 12-Inch	EACH	2.000	2.000
0206	658.0416	Pedestrian Signal Face 16-Inch	EACH	8.000	8.000
0208	658.0500	Pedestrian Push Buttons	EACH	8.000	8.000
0210	658.5069	Signal Mounting Hardware (location) 01. STH 32 & STH 165	LS	1.000	1.000
0212	659.1125	Luminaires Utility LED C	EACH	4.000	4.000
0214	690.0150	Sawing Asphalt	LF	1,860.000	1,860.000
0216	690.0250	Sawing Concrete	LF	60.000	60.000
0218	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	800.000	800.000
0220	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	900.000	900.000
0222	SPV.0060	Special 01. Adjusting Sanitary Manholes	EACH	1.000	1.000
0224	SPV.0060	Special 02. Adjusting Water Valve Boxes	EACH	5.000	5.000
0226	SPV.0060	Special 03. Install Poles Type 10	EACH	2.000	2.000
0228	SPV.0060	Special 04. Install Poles Type 10 Special	EACH	2.000	2.000
0230	SPV.0060	Special 05. Install Monotube Arms 30-FT	EACH	2.000	2.000
0232	SPV.0060	Special 06. Install Monotube Arms 35-FT Type 9/10 Spec Pole	EACH	1.000	1.000
0234	SPV.0060	Special 07. Install Monotube Arms 40-FT Type 9/10 Spec Pole	EACH	1.000	1.000
0236	SPV.0060	Special 08. Install Luminaire Arms Steel 15-FT	EACH	4.000	4.000
0238	SPV.0090	Special 01. Silt Fence Double Stake	LF	140.000	140.000
0240	SPV.0105	Special 01. Survey Project 3240-11-70	LS	1.000	1.000
0242	SPV.0105	Special 02. Transprt & Install State Furnished Traffic Signal Cabinet (STH 32 & STH 165)	LS	1.000	1.000
0244	SPV.0105	Special 03. Transport Traffic Sgnal & Intersection Lighting Materials (STH 32 & STH 165)	LS	1.000	1.000
0246	SPV.0105	Special 04. Transport & Install State Furnished EVP Heads (STH 32 & STH 165)	LS	1.000	1.000

CLEARING AND GRUBBING									
ROADWAY	STATION	TO	STATION		201.0105	201.0120	201.0205	201.0220	
					CLEARING	CLEARING	GRUBBING	GRUBBING	
					STA	ID	STA	ID	
104TH ST	40+70	TO	40+85	LT	--	42	--	42	
104TH ST	41+00	TO	43+00	RT	2	--	2	--	
STH 32	94+00	TO	97+00	LT	3	--	3	--	
STH 32	97+00	TO	100+00	LT & RT	3	--	3	--	
STH 32	100+00	TO	105+00	LT	5	--	5	--	
STH 32	108+00	TO	109+00	RT	1	--	1	--	
TOTALS					14	42	14	42	

REMOVING SMALL PIPE CULVERTS									
ROADWAY	STATION		SIZE	LENGTH	TYPE	203.0100			
			INCH	FEET		REMOVING SMALL			
						PIPE CULVERTS			
						EACH			
104TH ST	STA41+75	28.5' LT	10	24	CPCM	1			DRIVEWAY CULVERT
TOTAL						1			

REMOVING CURB AND GUTTER	
	204.0150
	REMOVING
	CURB AND
	GUTTER
LOCATION	LF
NORTHWEST QUADRANT	80
SOUTHWEST QUADRANT	65
TOTAL	145

REMOVING FENCE	
	204.0170
	REMOVING
	FENCE
LOCATION	LF
104TH STREET - STA41+85, LT	24
TOTALS	24

<u>EBS EARTHWORK</u>					
				205.0100 *	208.0100 *
				EXCAVATION	
				COMMON	BORROW
LOCATION				CY	CY
<u>STH 165/ 104TH ST:</u>					
35+00	TO	40+00	425	511	
40+00	TO	44+20	139	168	
<u>STH 32:</u>					
94+00	TO	114+00	1351	1622	
SE QUADRANT			179	215	
SW QUADRANT			96	116	
NE QUADRANT			17	21	
TOTALS			1916	2301	
* ADDITIONAL QUANTITIES LISTED ELSEWHERE					

REMOVING PAVEMENT					
		204.0100	204.0115	204.0120	
		REMOVING	REMOVING ASPHALTIC	REMOVING	
		CONCRETE	SURFACE BUTT	ASPHALTIC	
		PAVEMENT	JOINTS	SURFACE MILLING	
STATION TO STATION		SY	SY	SY	
STH 165/ 104TH ST:					
35+00	TO	40+00	--	55	1,750
40+00	TO	44+20	--	--	0
DRIVEWAYS		15	--	--	
STH 32:					
94+00	TO	106+50	--	70	4,450
106+50	TO	114+00	--	70	3,100
DRIVEWAYS		35	--	--	
TOTALS		50	195	9300	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 * COMMON EXCAVATION (1)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 * BORROW	COMMENT		
			CUT (2)			FACTOR 1.20						
DIVISION 1	94+00/114+00											
STH 32			708	708	727	872	-164	0	164			
DIVISION 1 SUBTOTAL			708	708	727	872	-164	0	164			
DIVISION 2												
STH165	35+00/39+85		342	342	176	211	131	131	-131			
DIVISION 2 SUBTOTAL			342	342	176	211	131	131	-131			
DIVISION 3												
104TH STREET	40+20/44+19.238		7	7	1,360	1,632	-1,625	0	1,625			
DIVISION 3 SUBTOTAL			7	7	1,360	1,632	-1,625	0	1,625			
GRAND TOTAL			1,057	1,057	2,263	2,716	-1,659	131	1,659			
TOTAL COMMON EXCAVATION			1,057									

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH BORROW MATERIAL.
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
- (13) EXPANDED FILL FACTOR = 1.2
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

BASE AGGREGATE ITEMS

				211.0400	305.0110	305.0120	624.0100
				PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH	WATER
LOCATION	STATION	TO	STATION	STA	TON	TON	MGAL
STH 165/ 104TH ST	35+00	TO	40+00	3	75	650	16
STH 165/ 104TH ST	40+00	TO	44+20	--	75	775	18
STH 32	94+00	TO	106+50	3	250	1,425	34
STH 32	106+50	TO	114+00	8	100	575	14
UNDISTRIBUTED				--	50	350	9
TOTALS				14	550	3775	91

MAINTAINING DETOURS

			305.0410	465.0115
			AGGREGATE DETOURS	ASPHALTIC SURFACE DETOURS
LOCATION			TON	TON
PROJECT			50	50
TOTALS			50	50

ASPHALT ITEMS

				455.0605	460.5223	460.5224	465.0120	465.0315
				TACK COAT	HMA PAVEMENT 3 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	ASPHALTIC FLUMES
STATION	TO	STATION		GAL	TON	TON	TON	SY
STH 165/ 104TH ST:								
35+00	TO	40+00		225	150	300	--	1
40+00	TO	44+20		125	225	150	--	1
DRIVEWAYS				--	--	--	50	--
STH 32:								
94+00	TO	106+50		400	275	750	--	1
106+50	TO	114+00		250	125	450	--	1
DRIVEWAYS				--	--	--	170	--
TOTALS				1,000	775	1,650	220	4

BASE PATCHING

				390.0203	690.0150*
				BASE PATCHING ASPHALTIC	SAWING ASPHALT
LOCATION				SY	LF
STH 165/ 104TH ST:					
35+00	TO	40+00		210	440
40+00	TO	44+20		--	--
STH 32:					
94+00	TO	106+50		250	800
106+50	TO	114+00		110	340
UNDISTRIBUTED					
TOTALS				570	1,580

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

DRIVEWAY CULVERT PIPE

LOCATION	INLET END				DISCHARGE END				SLOPE	STEEL THICKNESS	521.3717 PIPE ARCH CORRUGATED STEEL 17x13-INCH	521.1217 APRON ENDWALLS FOR PIPE ARCH STEEL 17x13-INCH
	STATION	OFFSET	ELEV		STATION	OFFSET	ELEV			INCHES	LF	EACH
STH 32	97+34	LT 29.75' LT	629.77		9765.00	LT 29.97' LT	629.65	0.38%		0.064	32	2
STH 32	98+00	LT 29' LT	629.52		9842.00	LT 29' LT	629.36	0.36%		0.064	44	2
STH 32	98+64	LT 29' LT	629.28		98+89	LT 29' LT	629.19	0.36%		0.064	25	2
STH 32	99+43	LT 27.75' LT	628.98		99+68	LT 27' LT	628.89	0.35%		0.064	26	2
STH 165	36+71	LT 25' LT	625.31		36+32	LT 25' LT	625.11	0.50%		0.064	39	2
104 TH ST	41+60	LT 29' LT	621.98		41+99	LT 27.5' LT	621.29	1.86%		0.064	37	2
TOTALS											203	12

NOTES
1) PIPE STATIONS, OFFSETS, AND ELEVATIONS PROVIDED ARE TO THE END OF PIPE, NOT THE APRON END OF ENDWALLS.
2) PIPE LENGTH IS FROM END OF PIPE TO END OF PIPE AND DOES NOT INCLUDE LENGTH OF APRON ENDWALL.

CONCRETE DRIVEWAY

LOCATION		416.0160 CONCRETE DRIVEWAY 6-INCH SY
STH 32	STA 107+80, RT	35
104TH STREET	STA 41+75, LT	15
TOTALS		50

CONCRETE SIDEWALK ITEMS

LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF
SOUTHWEST QUADRANT	120	20	--
NORTHWEST QUADRANT	145	20	--
NORTHEAST QUADRANT	245	20	--
SOUTHEAST QUADRANT	145	10	15
TOTALS	655	70	15

CONCRETE CURB AND GUTTER

LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	601.0415 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J LF
SOUTHWEST QUADRANT	90	--
NORTHWEST QUADRANT	--	72
NORTHEAST QUADRANT	75	--
SOUTHEAST QUADRANT	90	--
TOTALS	255	72

SAFETY FENCE

ROADWAY					616.0700.S FENCE SAFETY LF
STH 32	107+00	TO	114+50	LT	750
STH 165	34+75	TO	39+50	LT	425
TOTALS					1,175

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

FINISHING ROADWAY 213.0100 FINISHING ROADWAY (3240-11-70) <table><tr><td>LOCATION</td><td>EACH</td></tr><tr><td>CATEGORY CODE 0010</td><td></td></tr><tr><td>PROJECT</td><td>1</td></tr><tr><td>TOTAL</td><td>1</td></tr></table>		LOCATION	EACH	CATEGORY CODE 0010		PROJECT	1	TOTAL	1
LOCATION	EACH								
CATEGORY CODE 0010									
PROJECT	1								
TOTAL	1								
MOBILIZATION 619.1000 MOBILIZATION <table><tr><td>LOCATION</td><td>EACH</td></tr><tr><td>PROJECT</td><td>1</td></tr><tr><td>TOTAL</td><td>1</td></tr></table>		LOCATION	EACH	PROJECT	1	TOTAL	1		
LOCATION	EACH								
PROJECT	1								
TOTAL	1								
HAUL ROADS 618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (3240-11-70) <table><tr><td>LOCATION</td><td>EACH</td></tr><tr><td>PROJECT</td><td>1</td></tr><tr><td>TOTAL</td><td>1</td></tr></table>		LOCATION	EACH	PROJECT	1	TOTAL	1		
LOCATION	EACH								
PROJECT	1								
TOTAL	1								
FIELD OFFICE 642.5001 FIELD OFFICE TYPE B <table><tr><td>LOCATION</td><td>EACH</td></tr><tr><td>PROJECT</td><td>1</td></tr><tr><td>TOTAL</td><td>1</td></tr></table>		LOCATION	EACH	PROJECT	1	TOTAL	1		
LOCATION	EACH								
PROJECT	1								
TOTAL	1								

RESTORATION ITEMS									
			625.0500	627.0200	628.2004	629.0205	630.0130	630.0200	630.0500
			SALVAGED		EROSION MAT	FERTILIZER	SEEDING	SEEDING	SEED
			TOPSOIL	MULCHING	CLASS I	TYPE A	MIXTURE	TEMPORARY	WATER
LOCATION			SY	SY	TYPE B	CWT	NO. 30	LB	MGAL
STH 165/ 104TH ST:									
35+00	TO	40+00	1,300	650	1,300	1	24	36	8
40+00	TO	44+20	810	405	810	1	15	22	5
STH 32:									
94+00	TO	106+50	2,860	1,430	2,860	2	52	78	17
106+50	TO	114+00	390	195	390	1	8	11	3
UNDISTRIBUTED			540	270	540	1	10	15	4
TOTALS			5,900	2,950	5,900	6	109	162	37

EROSION CONTROL ITEMS									
			628.1504	628.1520	628.7504	628.7555	631.1100	628.7570	SPV.0090.01
			SILT	SILT	TEMPORARY	CULVERT	SOD	ROCK	SILT FENCE
			FENCE	FENCE	DITCH	PIPE	EROSION	BAGS	DOUBLE
LOCATION			LF	MAINTENANCE	CHECKS	CHECKS	CONTROL	EACH	STAKED
STH 165/ 104TH ST:									
35+00	TO	40+00	390	450	5	1	10	--	60
40+00	TO	44+20	390	390	5	3	10	--	80
STH 32:									
94+00	TO	106+50	1,470	1,470	5	4	10	--	--
106+50	TO	114+00	510	510	5	--	10	--	--
UNDISTRIBUTED			690	690	5	2	10	100	
TOTALS			3,450	3,510	25	10	50	100	140

EROSION CONTROL MOBILIZATION			
		628.1905	628.1910
		MOBILIZATIONS	MOBILIZATIONS
		EROSION	EMERGENCY
		CONTROL	EROSION
		EACH	CONTROL
LOCATION		EACH	EACH
PROJECT		4	3
TOTALS		4	3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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CONSTRUCTION STAKING

SPV.0105.01	
SURVEY PROJECT	
3240-11-70	
LOCATION	LS
PROJECT	1
TOTAL	1

TRAFFIC CONTROL

643.5000	
TRAFFIC CONTROL	
LOCATION	EACH
PROJECT	1
TOTAL	1

TEMPORARY TRAFFIC CONTROL SIGNS

643.1000		
TRAFFIC CONTROL		
SIGNS FIXED MESSAGE		
ROADWAY	SIGN NO.	SF
STH 32 NB	FMS B	22
STH 32 SB	FMS C	24
STH 158 & RUSSELL RD EB	FMS D	44
TOTAL		90

TRAFFIC CONTROL ITEMS

	643.0300		643.0420*		643.0705		643.0900*		643.1050	
	TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS	
LOCATION	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY
STH 165/ 104TH ST:	--	--	10	940	20	1,880	10	940	2	10
STH 32:	--	--	10	940	20	1,880	10	940	2	10
UNDISTRIBUTED	25	2,350	--	--	--	--	--	--	--	--
TOTALS		2,350		1,880		3,760		1,880		20

* ADDITIONAL QUANTITIES LISTED ELSEWHERE
** FOR INFORMATION ONLY

TRAFFIC CONTROL DETOUR ITEMS

		643.0920			643.0900*		643.0420*	
		TRAFFIC CONTROL COVERING SIGNS			TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL BARRICADES	
		TYPE II					TYPE III	
DETOUR	DETOUR DURATION (DAYS)**	NUMBER	CYCLES	EACH	EACH**	DAY	EACH**	DAY
STH 32	94	4	1	4	194	18,236	11	1,034
TOTALS		4			18,236		1,034	

* ADDITIONAL QUANTITIES LISTED ELSEWHERE
** FOR INFORMATION ONLY

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

PAVEMENT MARKING ITEMS															
			646.1020			646.1040			646.3020		646.6120	646.7120	646.7420	646.5020	646.5120
			MARKING LINE EPOXY 4-INCH			MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH			MARKING LINE EPOXY 8-INCH		MARKING STOP LINE EPOXY 18-INCH	MARKING DIAGONAL EPOXY 12-INCH	MARKING CROSSWALK EPOXY TRANSVERSE 6-INCH	MARKING ARROW EPOXY	MARKING WORD EPOXY
			9 FT SKIPS						9 FT SKIPS						
LOCATION			YELLOW LF	WHITE LF	WHITE LF	WHITE LF	WHITE LF		WHITE LF	WHITE LF	WHITE LF	YELLOW LF	WHITE LF	WHITE EACH	WHITE EACH
STH 165/ 104TH ST:															
STA 35+00 TO STA 39+62			905	255	50	845	35	255	35	--	150		4	1	
STA 40+46 TO STA 44+20			365	660	--	--	--	--	20	--	110		--	--	
STH 32:															
STA 94+00 TO STA 106+05			3,855	--	--	2,345	40	400	35	250	140		4	1	
STA 106+98 TO STA 114+00			2,605	--	--	1,365	35	350	30	200	120		4	1	
SUBTOTALS			7,730	915	50	4,555	110	1,005	120	450	520		12	3	
TOTALS			8,695			4,555	1,115		120	450	520		12	3	

SAW CUTTING ITEMS				
		690.0150 *	690.0250	
		SAWING ASPHALT	SAWING CONCRETE	
LOCATION		LF	LF	
STH 165/ 104TH ST:				
35+00	TO	40+00	30	--
40+00	TO	44+20	120	20
STH 32:				
94+00	TO	106+50	90	--
106+50	TO	114+00	40	40
TOTALS			280	60

*ADDITIONAL QUANTITIES LISTED ELSEWHERE

SANITARY MANHOLES	
SPV.0060.01	
CATEGORY 0020	
ADJUSTING SANITARY MANHOLES	
LOCATION	EACH
STH 32	
STA 107+04, 38' LT	1
TOTAL	1

WATER VALVES	
SPV.0060.02	
CATEGORY 0020	
ADJUSTING WATER VALVE BOXES	
LOCATION	EACH
STH 32	
STA 107+25, 30' RT	1
STA 107+25, 35' RT	1
STA 107+36, 38' RT	1
STA 107+92, 27' LT	1
STA 109+42, 34' RT	1
TOTAL	5

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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STH 32 & STH 165
KENOSHA COUNTY
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STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
2	POLES TYPE 10
2	POLES TYPE 10 SPECIAL
2	MONOTUBE ARMS 30-FT
1	MONOTUBE ARMS 35-FT TYPE 9/10 SPEC POLE
1	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE
4	LUMINAIRE ARMS 15-FT
4	EVP DETECTOR HEADS

STATE FURNISHED
FOR INFORMATION ONLY

	POLES TYPE 10	POLES TYPE 10 SPECIAL	MONOTUBE ARMS 30-FT	MONOTUBE ARMS 35-FT TYPE 9/10 SPEC POLE	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE	LUMINAIRE ARMS STEEL 15-FT
SIGNAL BASE NO.	EACH	EACH	EACH	EACH	EACH	EACH
SB3	1	--	1	--	--	1
SB6	--	1	--	1	--	1
SB9	1	--	1	--	--	1
SB13	--	1	--	--	1	1
TOTAL	2	2	2	1	1	4

3

CONDUIT

		652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
FROM	TO				
CB1	PB1	--	30	--	--
PB1	PB2	7	--	--	--
PB2	PB3	26	--	--	--
PB3	PB4	149	--	--	--
PB4	PB5	130	--	--	--
PB1	PB6	--	--	--	136
PB6	SB3	--	12	--	--
PB6	PB7	--	--	--	130
PB7	SB4	27	--	--	--
PB7	SB5	14	--	--	--
PB7	PB8	--	--	209	--
PB8	PB9	--	--	150	--
PB7	PB10	--	--	--	134
PB10	SB6	--	13	--	--
PB10	PB11	--	124	--	--
PB11	SB7	26	--	--	--
PB11	SB8	12	--	--	--
PB11	PB12	7	--	--	--
PB11	PB14	--	--	--	96
PB12	PB13	146	--	--	--
PB14	SB9	--	14	--	--
PB14	SB10	23	--	--	--
PB14	PB15	--	94	--	--
PB15	SB11	13	--	--	--
PB15	SB12	9	--	--	--
PB15	PB16	188	--	--	--
PB16	PB17	150	--	--	--
PB15	PB18	--	--	--	164
PB18	PB19	--	50	--	--
PB19	SB13	--	14	--	--
PB19	SB1	6	--	--	--
PB19	SB2	10	--	--	--
PB19	CB1	--	27	--	--
TOTAL		943	378	359	660

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TRAFFIC DETECTOR LOOPS								
LOOP NO.	HOME RUN PB	LOCATION** ^	SIZE (FT)x(FT)	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
11	PB14	40+13.7, 78.5' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	112	130	336
12	PB14	40+11.5, 56.6' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	110	130	330
21	PB9	39+40.3, 428.0' LT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	504	380
22	PB8	39+60.1, 278.7' LT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	74	354	296
41	PB5	36+22.2, 6.3' RT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	74	336	296
42	PB4	37+52.1, 6.3' RT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	80	206	240
43	PB3	39+30.9, 21.8' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	57	228
44	PB2	39+52.9, 21.6' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	70	31	210
45	PB3	30+30.9, 6.3' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	100	57	300
46	PB2	39+52.9, 6.0' RT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	100	31	300
61	PB17	40+51.0, 422.6' RT	6'X10'	5	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	62	468	310
62	PB16	40+41.7, 272.8' RT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	62	318	248
81	PB13	42+26.4, 6.6' LT	6'X10'	4	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	56	382	224
82	PB12	40+77.4, 4.9' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	86	225	258
83	PB12	40+55.3, 5.0' LT	6'X20'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	84	225	252
84	PB12	40.56.9, 13.7' LT	6'X10'	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	58	225	174
TOTAL						1280	3679	4382

** LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

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PULL BOXES			
PULL BOX NO.	LOCATION^	653.0135	653.0140
		PULL BOXES	PULL BOXES
		STEEL 24x36-INCH EACH	STEEL 24x42-INCH EACH
PB1	39+32.8, 37.3' RT	--	1
PB2	39+27.9, 32.7' RT	1	--
PB3	39+01.7, 32.1' RT	1	--
PB4	37+52.3, 32.9' RT	1	--
PB5	36+22.2, 30.6' RT	1	--
PB6	39+25.1, 30.0' LT	--	1
PB7	39+64.0, 69.1' LT	--	1
PB8	39+36.3, 276.1' LT	1	--
PB9	39+15.9, 425.1' LT	1	--
PB10	40+30.8, 72.0' LT	--	1
PB11	40+67.6, 22.2' LT	--	1
PB12	40+76.9, 22.2' LT	1	--
PB13	42+26.0, 21.7' LT	1	--
PB14	40+68.4, 26.0' RT	--	1
PB15	40+42.2, 61.8' RT	--	1
PB16	40+57.5, 271.6' RT	1	--
PB17	40+65.7, 421.1' RT	1	--
PB18	39+60.2, 69.3' RT	--	1
PB19	39+49.4, 47.2' RT	--	1
TOTAL		10	9

TRAFFIC SIGNAL CABLE AND WIRE			
FROM	TO	655.0240	655.0305
		CABLE	CABLE TYPE
		TRAFFIC SIGNAL 7-14 AWG L.F.	UF 2-12 AWG GROUNDED L.F.
CB1	SB1	42	--
CB1	SB2	46	--
CB1	SB3	133	--
CB1	SB4	229	--
CB1	SB5	216	--
CB1	SB6	298	--
CB1	SB7	328	--
CB1	SB8	314	--
CB1	SB9	252	--
CB1	SB10	261	--
CB1	SB11	188	--
CB1	SB12	184	--
CB1	SB13	50	--
CB1	SB3	--	133
SB3	SB6	--	213
CB1	SB13	--	50
SB13	SB9	--	254
TOTAL		2541 *	650

TRAFFIC SIGNAL CABLE AND WIRE		
FROM	TO	655.0515
		ELECTRICAL WIRE
		TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	42
SB1	SB2	40
SB2	SB3	179
SB3	SB4	144
SB4	SB5	65
SB5	SB6	134
SB6	SB7	141
SB7	SB8	62
SB8	SB9	114
SB9	SB10	61
SB10	SB11	123
SB11	SB12	46
SB12	SB13	186
SB13	CB1	50
PB1	CB1	33
PB19	SB1	26
PB19	SB2	30
PB6	SB3	32
TOTAL		1508

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

CONCRETE BASES					
SIGNAL BASE NO.	LOCATION^	654.0101	654.0110	654.0120	654.0217
		CONCRETE BASES	CONCRETE BASES	CONCRETE BASES	CONCRETE CONTROL CABINET BASES
		TYPE 1 EACH	TYPE 10 EACH	TYPE 10 SPECIAL EACH	TYPE 9 SPECIAL EACH
CB1	39+41.9, 41.5' RT	--	--	--	1
SB1	39+54.5, 50.4' RT	1	--	--	--
SB2	39+44.1, 38.5' RT	1	--	--	--
SB3	39+13.5, 30.3' LT	--	1	--	--
SB4	39+50.5, 47.5' LT	1	--	--	--
SB5	39+57.7, 56.7' LT	1	--	--	--
SB6	40+34.9, 60.2' LT	--	--	1	--
SB7	40+43.6, 32.0' LT	1	--	--	--
SB8	40+57.4, 28.0' LT	1	--	--	--
SB9	40+57.9, 34.7' RT	--	1	--	--
SB10	40+56.4, 45.0' RT	1	--	--	--
SB11	40+51.2, 52.5' RT	1	--	--	--
SB12	40+46.5, 54.4' RT	1	--	--	--
SB13	39+60.0, 56.2' RT	--	--	1	--
TOTAL		9	2	2	1

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

STH 32 & STH 165
KENOSHA COUNTY
CATEGORY 0010
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TRAFFIC SIGNAL CABLE AND WIRE			
		655.0230	655.0240
		CABLE	CABLE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL
		5-14 AWG	7-14 AWG
FROM	TO	L.F.	L.F.
SB1	HEAD 15	15	--
SB1	BUTTON	15	--
SB2	HEAD 12	19	--
SB3	HEAD 10	64	--
SB3	HEAD 11	19	--
SB4	HEAD 16	15	--
SB4	BUTTON	15	--
SB5	HEAD 4	--	22
SB5	HEAD 6	15	--
SB5	HEAD 17	15	--
SB5	BUTTON	15	--
SB6	HEAD 2	49	--
SB6	HEAD 3	19	--
SB6	HEAD 5	--	60
SB6	HEAD 18	15	--
SB6	BUTTON	15	--
SB7	HEAD 20	15	--
SB7	BUTTON	15	--
SB8	HEAD 9	15	--
SB9	HEAD 13	54	--
SB9	HEAD 14	19	--
SB10	HEAD 21	15	--
SB10	BUTTON	15	--
SB11	HEAD 22	15	--
SB11	BUTTON	15	--
SB12	HEAD 1	15	--
SB13	HEAD 7	63	--
SB13	HEAD 8	36	--
SB13	HEAD 23	15	--
SB13	BUTTON	15	--
TOTAL		561	82 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE		
655.0610		
ELECTRICAL WIRE		
LIGHTING		
12 AWG		
FROM	TO	L.F.
SB3	LUMIN.	144
SB6	LUMIN.	144
SB9	LUMIN.	144
SB13	LUMIN.	144
TOTAL		576

TRAFFIC SIGNAL EVP DETECTOR CABLE		
655.0900		
TRAFFIC SIGNAL		
EVP DETECTOR		
CABLE		
FROM	TO	L.F.
CB1	SB13 (HEAD A)	120
CB1	SB6 (HEAD B)	351
CB1	SB9 (HEAD C)	312
CB1	SB3 (HEAD D)	232
TOTAL		1015

ELECTRICAL SERVICE METER BREAKER PEDESTAL	
656.0200.01	
ELECTRICAL SERVICE	
METER BREAKER	
PEDESTAL	
LOCATION^	L.S.
STH 32 & STH 165	1
TOTAL	1

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

STH 32 & STH 165
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SIGNAL BASES AND POLES											
	657.0100	657.0425	657.0430	658.0500	659.1125	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07	SPV.0060.08
	PEDESTAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	PEDESTRIAN	LUMINAIRES	INSTALL	INSTALL	INSTALL	INSTALL	INSTALL	INSTALL
	BASES	STANDARDS	STANDARDS	PUSH	UTILITY	POLES	POLES	MONOTUBE	MONOTUBE	MONOTUBE	LUMINAIRE ARMS
		ALUMINUM	ALUMINUM	BUTTONS	LED C	TYPE 10	TYPE 10 SPECIAL	ARMS 30-FT	ARMS 35-FT	ARMS 40-FT	STEEL 15-FT
SIGNAL		15-FT	10-FT						TYPE 9/10 SPEC POLE	TYPE 9/10 SPEC POLE	
BASE NO.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1	1	--	1	1	--	--	--	--	--	--	--
SB2	1	1	--	--	--	--	--	--	--	--	--
SB3	--	--	--	--	1	1	--	1	--	--	1
SB4	1	--	1	1	--	--	--	--	--	--	--
SB5	1	1	--	1	--	--	--	--	--	--	--
SB6	--	--	--	1	1	--	1	--	1	--	1
SB7	1	--	1	1	--	--	--	--	--	--	--
SB8	1	1	--	--	--	--	--	--	--	--	--
SB9	--	--	--	--	1	1	--	1	--	--	1
SB10	1	--	1	1	--	--	--	--	--	--	--
SB11	1	--	1	1	--	--	--	--	--	--	--
SB12	1	1	--	--	--	--	--	--	--	--	--
SB13	--	--	--	1	1	--	1	--	--	1	1
TOTAL	9	4	5	8	4	2	2	2	1	1	4

STH 32 & STH 165
KENOSHA COUNTY
CATEGORY 0010
S30-1444

FACES				
SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB12	1	--	--
2	SB6	1	--	--
3	SB6	1	--	--
4	SB5	--	1	--
5	SB6	--	1	--
6	SB5	1	--	--
7	SB13	1	--	--
8	SB13	1	--	--
9	SB8	1	--	--
10	SB3	1	--	--
11	SB3	1	--	--
12	SB2	1	--	--
13	SB9	1	--	--
14	SB9	1	--	--
15	SB1	--	--	1
16	SB4	--	--	1
17	SB5	--	--	1
18	SB6	--	--	1
19	SB7	--	--	1
20	SB10	--	--	1
21	SB11	--	--	1
22	SB13	--	--	1
TOTAL		12	2	8

SIGNAL MOUNTING HARDWARE	
658.5069.01 SIGNAL MOUNTING HARDWARE L.S.	
LOCATION	
STH 32 & STH 165	1
TOTAL	1

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET	
SPV.0105.02 TRNSPT AND INSTALL STATE FURN TRAFFIC SIGNAL CABINET L.S.	
LOCATION	
STH 32 & STH 165	1
TOTAL	1

TRANSPORT TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS	
SPV.0105.03 TRNSPT TRAFFIC SIGNAL & INTER LIGHTING MATERIALS L.S.	
LOCATION	
STH 32 & STH 165	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION	
SPV.0105.04 TRNSPT & INSTALL STATE FURN EVP HEADS L.S.	
LOCATION	
STH 32 & STH 165	1
TOTAL	1

3

3

TYPE II PERMANENT SIGNING

3240-11-70 STH 165

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X6"X18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT EA [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	J1-2(2S) M2-1 M1-6B M4-6 M1-6B	STH 32 STH 165	48 x 39 21 x 15 24 x 24 24 x 12 24 x 24	13.000					1				
2 3 4 5 6	W3-1 W3-3(2S) W23-2(2S) R2-1(2S) W14-3(2S)	 SPEED LIMIT 40	36 x 36 36 x 36 24 x 30 48 x 36	 5.000	9.000 9.000		1	1	1 1 1 1				16 X 16 TEMPORARY FLAGS INCIDENTAL 16 X 16 TEMPORARY FLAGS INCIDENTAL
7	J2-2(2S) M3-1 M1-6B M5-1L M3-3	STH 32	48 x 57 24 x 12 24 x 24 21 x 21 24 x 12	19.000					1				
8 9 10	M1-6B M5-1R JV1-2 R3-8(MODIFIED) R3-7R(2S)	STH 32	24 x 24 21 x 21 36 x 30 30 x 30	 7.500 6.250			1	1	1 1				
11 12	R1-1F(3) J3-2(2S) M3-1 M1-6B M6-1	STH 32	36 x 36 48 x 57 24 x 12 24 x 24 21 x 21	19.000		7.460	1	1	1				MOUNT ON SIGNAL POLE. SIZE 3 USED SINCE INTERSECTING TWO STATE HIGHWAYS
13 14	M3-3 M1-6B M6-1 R1-1 R1-1F(3)	STH 32	24 x 12 24 x 24 21 x 21 36 x 36			7.460	1	1					W4-4C PART OF REMOVAL MOUNT ON SIGNAL POLE. SIZE 3 USED SINCE INTERSECTING TWO STATE HIGHWAYS
15 16	J3-1(2S) M3-4 M1-6 M6-1 M1-94S	STH 165 32, SHERIDAN RD	24 x 57 24 x 12 24 x 24 21 x 21 108 x 18	9.500 13.500			1	1	1				MOUNT ON SIGNAL ARAM
17 18 19 20 21	M1-94S W1-7 R1-1 R1-1F(3) M1-94S	32, SHERIDAN RD 165. 104TH ST	108 x 18 36 x 36 84 x 18	13.500 10.500		7.460	1 1	1 1					MOUNT ON SIGNAL ARM W4-4C PART OF REMOVAL MOUNT ON SIGNAL POLE. SIZE 3 USED SINCE INTERSECTING TWO STATE HIGHWAYS MOUNT ON SIGNAL ARM
22 23 24	M1-94S R1-1F(3) J3-1(2S) M3-4 M1-6	165. 104TH ST STH 165	84 x 18 36 x 36 24 x 57 24 x 12 24 x 24	10.500 9.500		7.460		1	1	1			MOUNT ON SIGNAL ARM MOUNT ON SIGNAL POLE. SIZE 3 USED SINCE INTERSECTING TWO STATE HIGHWAYS
25 26	M6-1 J4-1(2S)	ADOPT A HIGHWAY	21 x 21 24 x 36					1 1	1 1		1		
27	M3-3 M1-6 R2-1(2S)	STH 165 SPEED LIMIT 25	24 x 12 24 x 24 24 x 30			5.000				1			LOCAL ROAD
28 29 30	W3-1 W23-2(2S) W3-3(2S)		36 x 36 36 x 36		9.000 9.000		1	1		1 1			16 X 16 TEMPORARY FLAGS INCIDENTAL 16 X 16 TEMPORARY FLAGS INCIDENTAL

3

3

TYPE II PERMANENT SIGNING

3240-11-70 STH 165

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X6"X18" [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT EA	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
31	J1-1(2S) M2-1		24 X 39 21 X 15	6.500			1	1	1				
32	M1-6 W3-3(2S)	STH 165	24 X 24 36 X 36		9.000				1				16 X 16 TEMPORARY FLAGS INCIDENTAL
33	W14-3(2S)		48 X 36		5.560				1				
34	W23-2(2S)		36 X 36		9.000				1				16 X 16 TEMPORARY FLAGS INCIDENTAL
35	R3-8(MODIFIED)		36 X 30	7.500					1				
36	J2-1 (2S)		24 X 57	9.500					1				
	M3-4		24 X 12										
	M1-6	STH 165	24 X 24										
	M5-1L		21 X 21										
37	R2-1(2S)	SPEED LIMIT 45	24 X 30				1	1	1				
38	W14-3(2S)		48 X 36		5.560		1	1	1				
39		ADOPT A HIGHWAY									1		
40	J4-1(2S)		24 x 36	6.000			1	1	1				
	M3-3		24 X 12										
	M1-6B	STH 32	24 X 24										
41	M1-93(2S)		24 X 24	4.000								40	REMOVAL OF SIGN PART OF # 40
42	R3-7L(2S)		30 X 30	6.250					1				
43		ADOPT A HIGHWAY									1		
44	J4-1(2S)		24 x 36	6.000			1	1	1				
	M3-1		24 X 12										
	M1-6B	STH 32	24 X 24										
45	M1-93(2S)		24 X 24	4.000								44	REMOVAL OF SIGN PART OF # 44
46	W2-2						1	1					
47	R3-7R(2S)		30 X 30	6.250					1				
48	R2-1(2S)	SPEED LIMIT 45	24 X 30	5.000			1	1	1				
49	W14-3(2S)		48 X 36		5.560				1				
50	W3-3(2S)		36 X 36		9.000				1				16 X 16 TEMPORARY FLAGS INCIDENTAL
51	W3-1						1	1					
52	J2-1 (2S)		24 X 57	9.500					1				
	M3-4		24 X 12										
	M1-6	STH 165	24 X 24										
	M5-1R		21 X 21										
53	W23-2(2S)		36 X 36		9.000				1				16 X 16 TEMPORARY FLAGS INCIDENTAL
54	R3-8(MODIFIED)		36 X 30	7.500					1				
55	J1-1(2S)		24 X 39	6.500			1	1	1				
	M2-1		21 X 15										
	M1-6	STH 165	24 X 24										
TOTALS				232.250	94.240	29.840	19	22	34	3	3		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
PROJECT NO. 3240-11-20
STH 32 & STH 165
STH 32 & STH 165 INTERSECTION
KENOSHA COUNTY



4

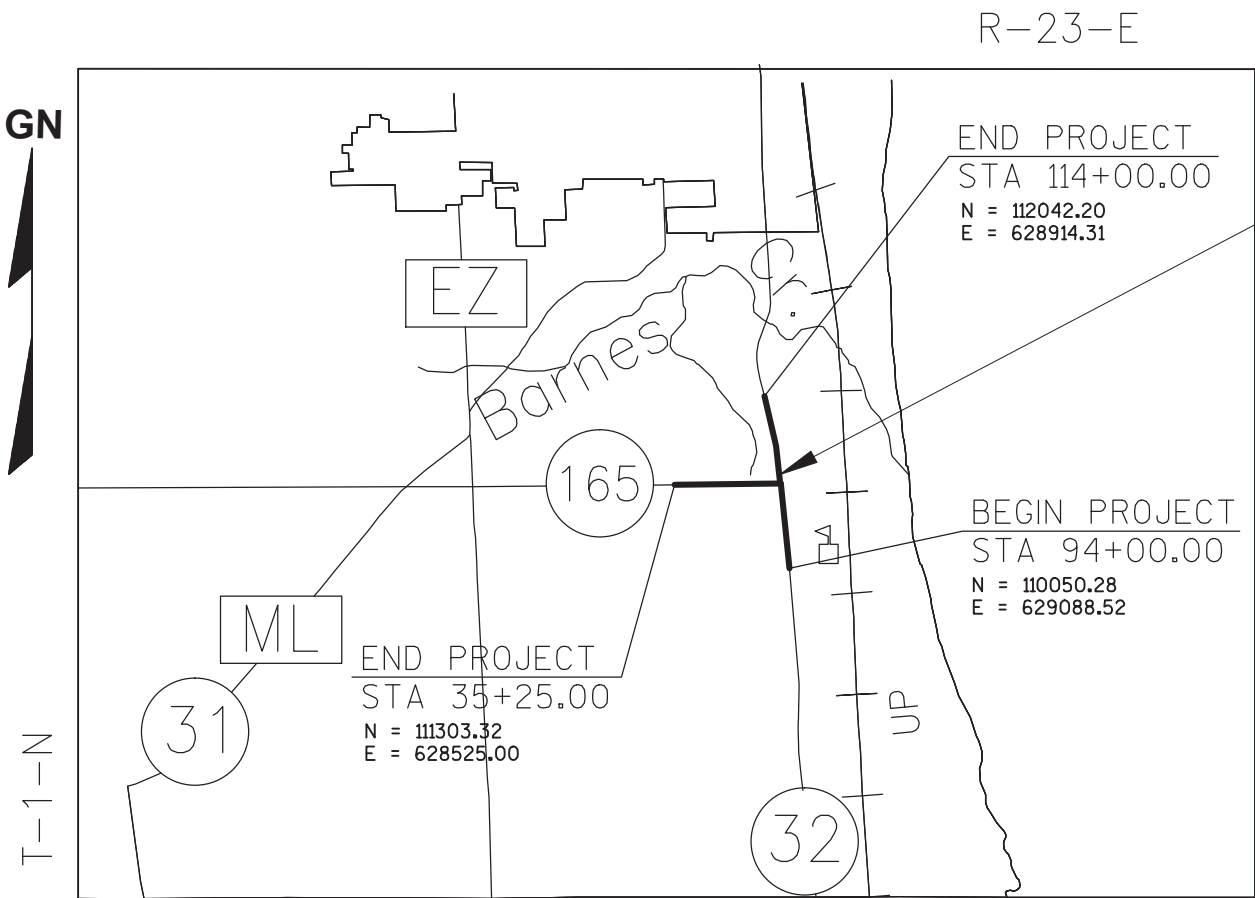
CONVENTIONAL ABBREVIATIONS			
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM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

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 SYMBOLS			
SECTION LINE	---	SECTION CORNER SYMBOL	
QUARTER LINE	---	FOUND R/W POST	
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT	
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT	
NEW R/W LINE	---	SIGN	
EXISTING R/W OR HE LINE	---	OFF-PREMISE SIGN	
PROPERTY LINE	---		
LOT, TIE & OTHER MINOR LINES	---		
SLOPE INTERCEPT	---		
CORPORATE LIMITS	---		
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---		
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---		
TEMPORARY LIMITED EASEMENT AREA	---		
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---		
TRANSMISSION STRUCTURES	---		
BUILDING	---		
TO BE REMOVED	---		
BRIDGE	---		

CONVENTIONAL UTILITY SYMBOLS			
POWER POLE	---	WATER	---
TELEPHONE POLE	---	GAS	---
TELEPHONE PEDESTAL	---	TELEPHONE	---
GUY ANCHOR	---	OVERHEAD	---
ELECTRIC TOWER	---	TRANSMISSION LINES	---
GAS VALVE	---	ELECTRIC	---

CONVENTIONAL UTILITY SYMBOLS			
NON COMPENSABLE	---	WATER	---
COMPENSABLE	---	GAS	---
COMPENSABLE	---	TELEPHONE	---
	---	OVERHEAD	---
	---	TRANSMISSION LINES	---
	---	ELECTRIC	---
	---	CABLE TELEVISION	---
	---	FIBER OPTIC	---
	---	SANITARY SEWER	---
	---	STORM SEWER	---



PROJECT LOCATION

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, KENOSHA COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

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".

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 LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AND ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 32 AND STH 165 ESTABLISHED FROM PREVIOUS PROJECT 447-E, CAROL BEACH ESTATES SUBDIVISION, CERTIFIED SURVEY MAP 1352 AND CERTIFIED SURVEY MAP 2449.

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

ORIGINAL PLAT PREPARED BY
raSmith
CREATIVITY BEYOND
ENGINEERING
16145 W. Stearns Road, Brookfield, WI 53005
262.791.1000 Fax 262.791.0466
www.raSmith.com

TPP PROJECT NUMBER 3240-11-20 - 4.01
SHEET 2 OF 2

TRANSPORTATION PROJECT PLAT NO: 3240-11-20 - 4.01

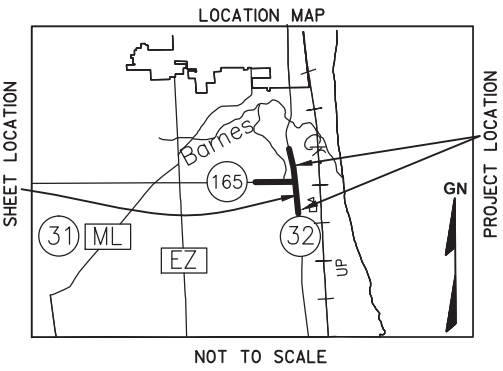
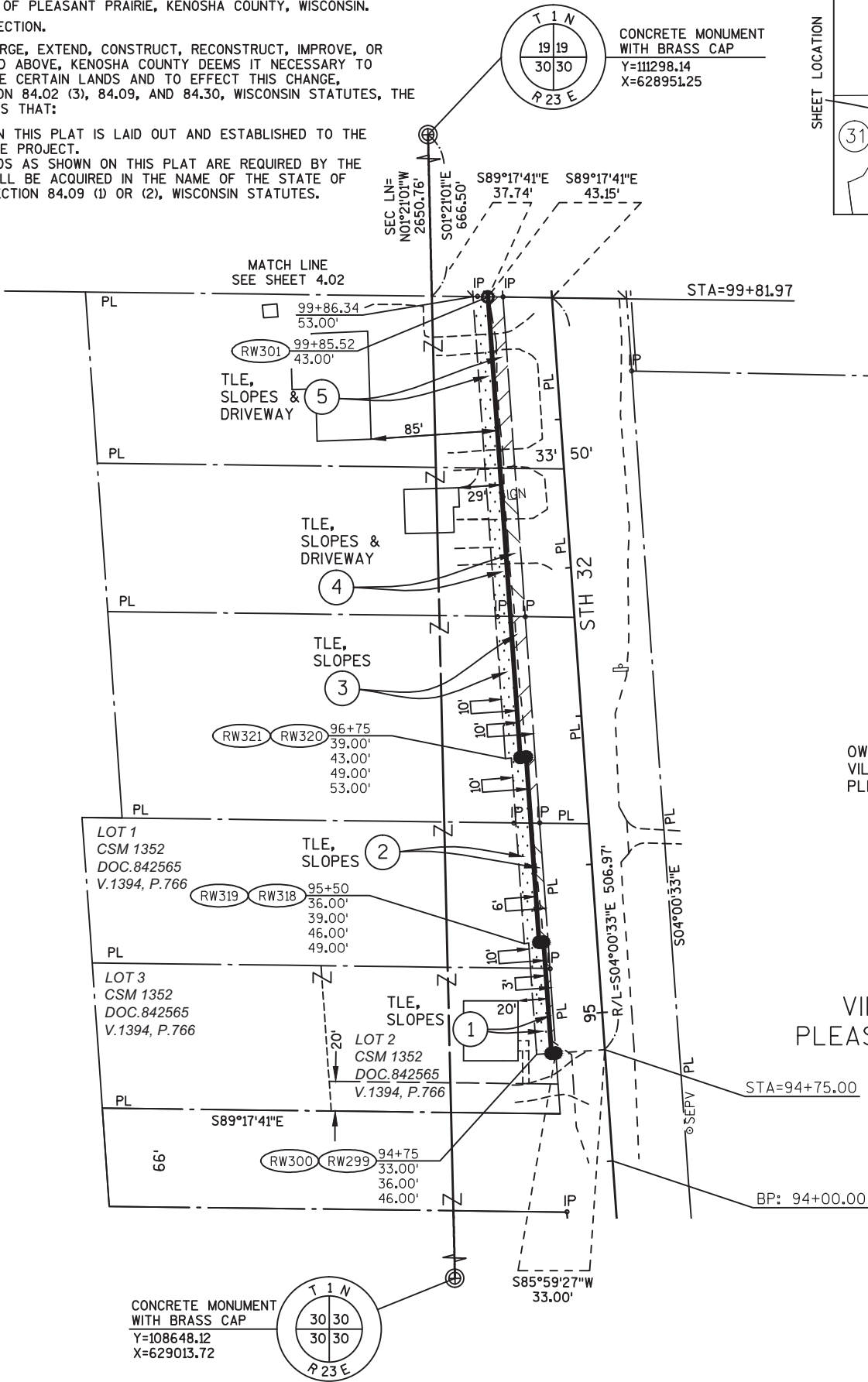
THAT PART OF LOTS 1 AND 2, CSM 1352, IN AND INCLUDING THAT PART OF THE NW 1/4-NE 1/4, SECTION 30, IN TOWNSHIP 1 NORTH, RANGE 23 EAST, VILLAGE OF PLEASANT PRAIRIE, KENOSHA COUNTY, WISCONSIN.

RELOCATION ORDER STH 32 & STH 165 INTERSECTION.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, KENOSHA COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND 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:

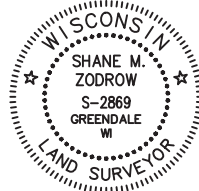
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE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

20' TEMPORARY
DRIVEWAY
EASEMENT
CSM 1352
DOC.842565
V.1394, P.766
PARCEL 1



raSmith
CREATIVITY BEYOND
ENGINEERING

I, SHANE M. ZODROW, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3240-11-20 - 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SHANE M. ZODROW
AGENT FOR raSmith
P.L.S. NUMBER 2869

04/19/19
DATE

THIS PLAT AND RELOCATION ORDER IS APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

Robert L. Duffeck
PRINTED NAME

Robert L. Duffeck
SIGNATURE

04/25/19
DATE

R/W COURSE TABLE		
299-300	S85°59'27"W	3.00'
300-318	N04°00'33"W	75.00'
318-319	S85°59'27"W	3.00'
319-320	N04°00'33"W	125.00'
320-321	S85°59'27"W	4.00'
321-301	N04°00'33"W	310.51'

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, KENOSHA COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.
FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET RECORDED AS SHEET 2 OF 2 OF THIS DOCUMENT.

HWY	BASIS OF EXESTING R/W	R/W WIDTH	YEAR
STH 32	PROJECT NO. 447-E	VARIES	1933
STH 32	CSM 1352	66'	1990

SCHEDULE OF LANDS & INTEREST REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
1	WILSON FAMILY TRUST	FEE, TLE	0.004	-	0.004	0.013
2	URSIN TRUST	FEE, TLE	0.012	-	0.012	0.023
3	DARLENE NEWMAN AND KERRY SMITH	FEE, TLE	0.028	0.105	0.133	0.032
4	MICHAEL MELVIN SURDEL	FEE, TLE	0.023	0.076	0.099	0.023
5	MICHAEL MELVIN SURDEL	FEE, TLE	0.027	0.087	0.114	0.023

TRANSPORTATION PROJECT PLAT NO: 3240-11-20 - 4.02

THAT PART OF LOT 1, CSM 2449, IN AND INCLUDING THAT PART OF THE NW 1/4-NE 1/4, SECTION 30, ALSO THAT PART OF THE NE 1/4-NW 1/4, SECTION 30, ALL BEING LOCATED IN TOWNSHIP 1 NORTH, RANGE 23 EAST, VILLAGE OF PLEASANT PRAIRIE, KENOSHA COUNTY, WISCONSIN.

RELOCATION ORDER STH 32 & STH 165 INTERSECTION.

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 SECTIONS 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.

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
STH 32	PROJECT DJ 2181	66'	1933
STH 165	CSM 2449	40'	2004
STH 32	CSM 2449	17'	2004
STH 165	TOWN ROAD RECORD	33'	1842

raSmith
CREATIVITY BEYOND
ENGINEERING

I, SHANE M. ZODROW, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3240-11-20 - 4.02 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SHANE M. ZODROW
AGENT FOR raSmith
P.L.S. NUMBER 2869

12/03/19
DATE

THIS PLAT AND RELOCATION ORDER IS APPROVED FOR THE
WISCONSIN DEPARTMENT OF TRANSPORTATION.

Robert L. Duffeck
PRINTED NAME

Robert L. Duffeck
SIGNATURE

12/03/19
DATE



DOCUMENT

1856625

RECORDED
At Kenosha County, Kenosha WI 53148
Jilliana R. Storz, Register of Deeds
December 03, 2019 12:12 PM
Page 1

Plat # 20182

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3240-11-20 - 4.02
AMENDMENT NO: _____

THIS IS A COPY.
THE ORIGINAL IS
IN THE
REGISTER OF
DEEDS OFFICE.

R/W COURSE TABLE

306-307	S00°42'08"W	25.00'
307-308	N89°17'52"W	196.89'
308-309	S82°20'10"W	68.73'
309-310	S54°06'05"W	59.53'
301-302	N04°00'33"W	567.27'
302-322	N47°35'11"W	15.78'
322-303	N47°35'11"W	52.93'
303-304	N89°18'10"W	120.00'
304-305	N82°56'55"W	198.78'

NOTES:

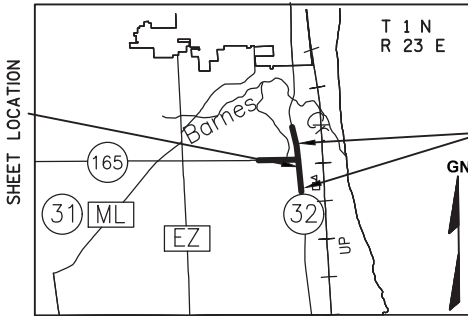
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, KENOSHA COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET RECORDED AS SHEET 2 OF 2 OF DOCUMENT 1840765, OF TRANSPORTATION PROJECT PLATS IN THE KENOSHA COUNTY REGISTER OF DEEDS.

LOCATION MAP



NOT TO SCALE

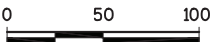
UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
101	AT&T WISCONSIN	RELEASE OF RIGHTS
102	VILLAGE OF PLEASANT PRAIRIE - SANITARY	RELEASE OF RIGHTS
103	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
6	MILLS HOLDINGS, LLC.	FEE, TLE	0.305	0.787	1.092	0.207
7	VILLAGE OF PLEASANT PRAIRIE	FEE, TLE	0.222	-	0.222	0.074

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

SCALE, FEET



TRANSPORTATION PROJECT PLAT NO: 3240-11-20 - 4.03

THAT PART OF LOTS 4, 6, 7, 8, 10 AND 11, CAROL BEACH ESTATES UNIT #7, BLOCK 7, IN THE SW1/4 - SE1/4, SECTION 19, IN TOWNSHIP 1 NORTH, RANGE 23 EAST, VILLAGE OF PLEASANT PRAIRIE, KENOSHA COUNTY, WISCONSIN.

RELOCATION ORDER STH 32 & STH 165 INTERSECTION.

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 SECTIONS 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.

WE ENERGIES -
ELECTRIC
103
NO RECORD
OF EASEMENT
PARCEL 8

TIME WARNER
CABLE
104
NO RECORD
OF EASEMENT
PARCEL 8

R/W COURSE TABLE			
L1	N06°43'47"W	41.51'	
L2	N83°16'13"E	49.80'	
316-317	S54°51'08"E	53.13'	
L3	S00°42'08"W	40.00'	

R/L 104TH ST
CURVE DATA
PI = 41+24.74
Y = 111,296.01
X = 629,124.69
DELTA = 04°38'35" LT
BACK = N89°17'52"W
AHEAD = N86°03'32"E
D = 02°47'42"
T = 83.11'
L = 166.13'
R = 2,050.00'

R/L 104TH ST
CURVE DATA
PI = 43+22.30
Y = 111,309.60
X = 629,321.87
DELTA = 04°38'35" RT
BACK = S86°03'32"W
AHEAD = S89°17'52"E
D = 02°47'42"
T = 83.11'
L = 166.13'
R = 2,050.00'

R/L STH 32
CURVE DATA
PI = 106+72.83
Y = 111,320.00
X = 628,999.53
PC = 105+35.29
DELTA = 02°43'13" LT
BACK = S04°00'33"E
AHEAD = N06°43'47"W
D = 0°59'21"
T = 137.54'
L = 275.03'
R = 5,792.57'

CONCRETE MONUMENT
WITH BRASS CAP
Y=111330.50
X=626291.70

SCHEDULE OF LANDS & INTERESTS REQUIRED

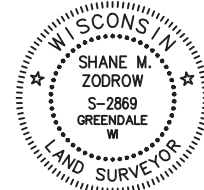
PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE ACRES	TLE ACRES
8	BENJAMIN G. NESS	FEE, TLE	0.012	0.035
9	BYRON W. OLSON & ILANA E. WOLFF	TLE	-	0.016
10	CHRISTOPHER S. AND SANDRA MIKS	TLE	-	0.021
11	TODD L. AND SANDRA M. DIGIROLAMO	TLE	-	0.021
12	JOE AND AIMEE E. ARREGUIN	TLE	-	0.010
13	WALTER AND TIFFANY NAEKRSZ	TLE	-	0.007

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

CONCRETE MONUMENT
WITH BRASS CAP
Y=111298.14
X=628951.25

raSmith
CREATIVITY BEYOND
ENGINEERING

I, SHANE M. ZODROW, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3240-11-20 - 4.03 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SHANE M. ZODROW
AGENT FOR raSmith
P.L.S. NUMBER 2869

12/03/19
DATE

THIS PLAT AND RELOCATION ORDER IS APPROVED FOR THE
WISCONSIN DEPARTMENT OF TRANSPORTATION.

Robert L. Duffeck
PRINTED NAME

SIGNATURE

12/03/19
DATE



DOCUMENT
1856626

RECORDED
At Kenosha County, Wisconsin VI 33149
Jocelyn L. Stary, Register of Deeds
Recorded 05/20/2019 12:14 PM
Page 1

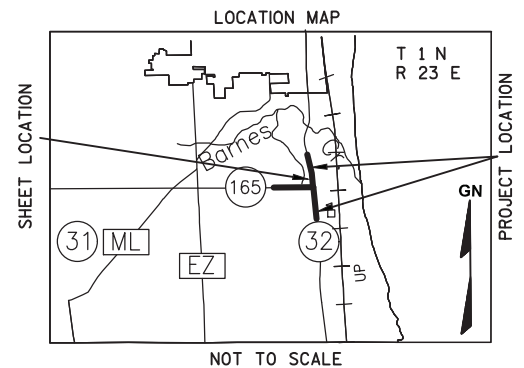
Plat # 20183

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3240-11-20 - 4.03
AMENDMENT NO: _____

THIS IS A COPY.
THE ORIGINAL IS
IN THE
REGISTER OF
DEEDS OFFICE.

VILLAGE OF
PLEASANT PRAIRIE

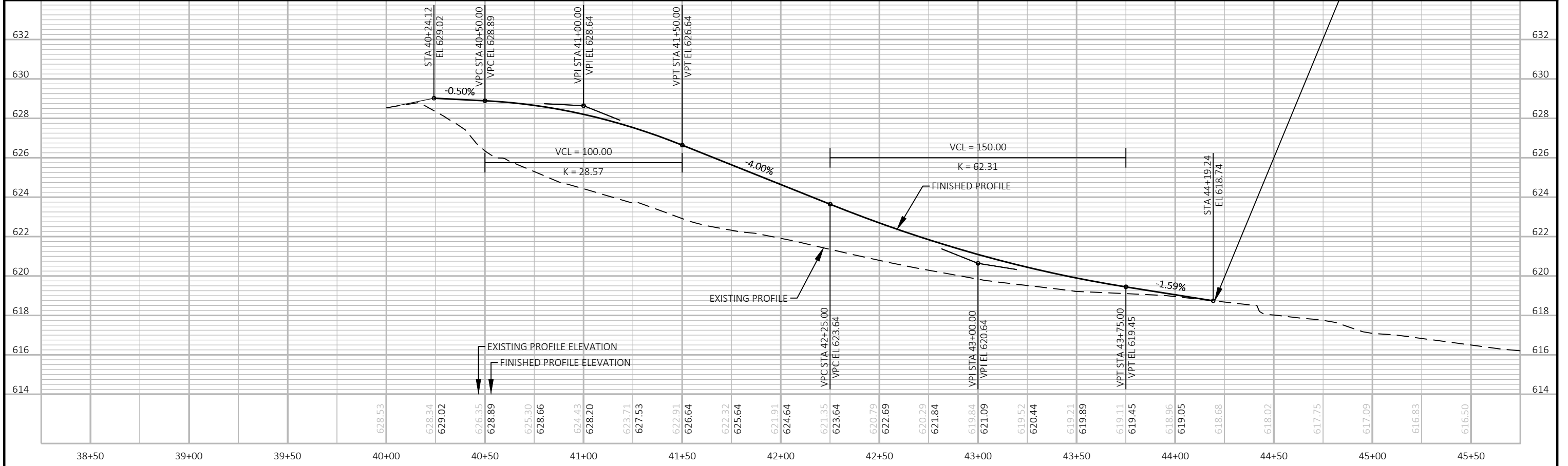
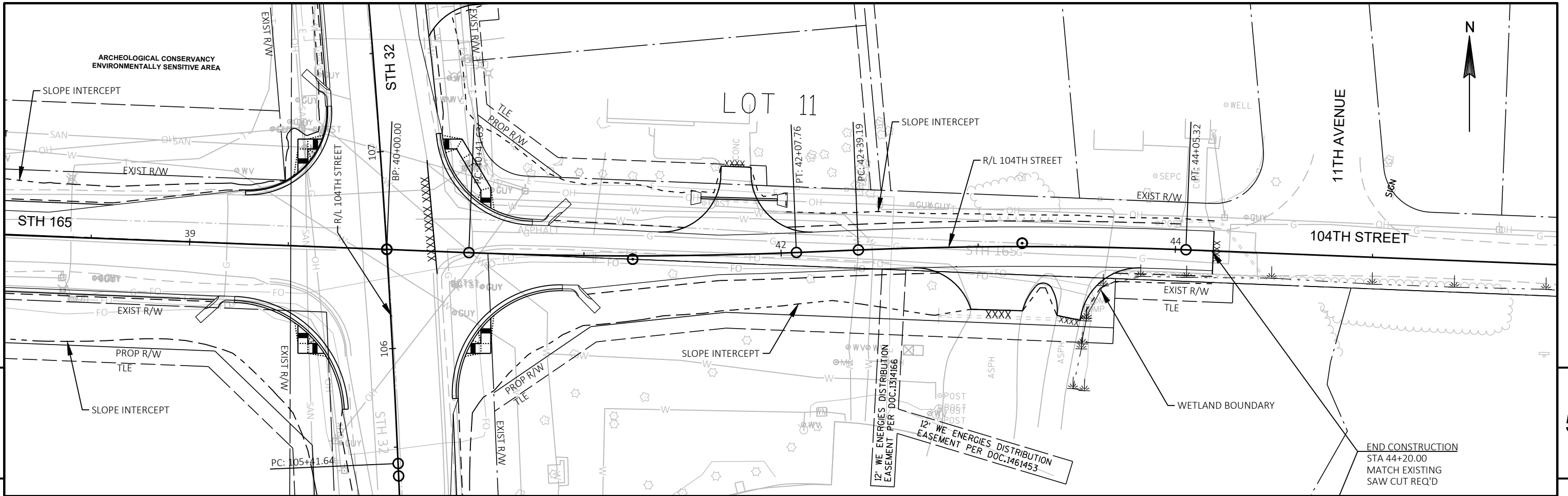
CAROL BEACH
ESTATES
UNIT #7
BLOCK 7



NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, KENOSHA COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.
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FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.
FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET RECORDED AS SHEET 2 OF 2 OF DOCUMENT 1840765, OF TRANSPORTATION PROJECT PLATS IN THE KENOSHA COUNTY REGISTER OF DEEDS.

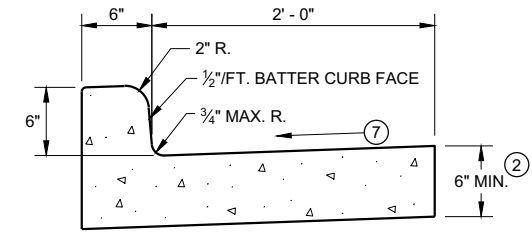
UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
103	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS
104	TIME WARNER CABLE	RELEASE OF RIGHTS

HWY	BASIS OF EXISTING R/W	R/W WIDTH	YEAR
STH 32	PROJECT DJ 2181	100'	1933
104TH ST	CSM 2449	40'	2004
STH 32	CAROL BEACH ESTATES	100'	1953
104TH ST	CAROL BEACH ESTATES	40'	1953
STH 165	TOWN ROAD RECORD	33'	1842

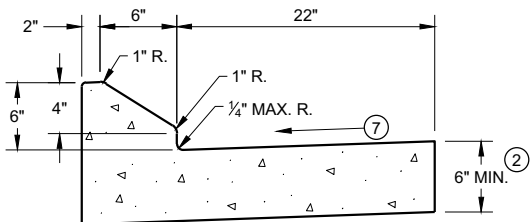


Standard Detail Drawing List

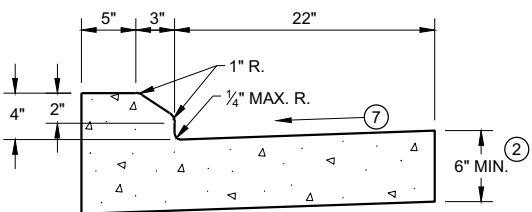
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E08-09B	TYPE 9 SPECIAL POLE 35' MONOTUBE ARM
09E08-09F	TYPE 10 SPECIAL POLE 35' MONOTUBE ARM
09E08-09G	TYPE 10 SPECIAL POLE 40' MONOTUBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/MONOTUBE ARMS
09F10-04	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-04	MEDIAN ISLAND MARKING
15C18-05A	PAVEMENT MARKINGS, MEDIAN ISLANDS
15C29-07A	BICYCLE LANE MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



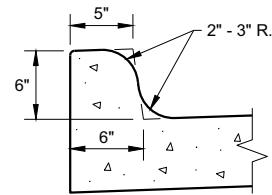
TYPES A^① & D



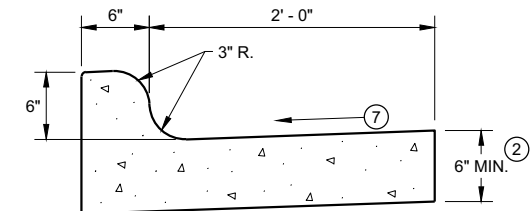
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

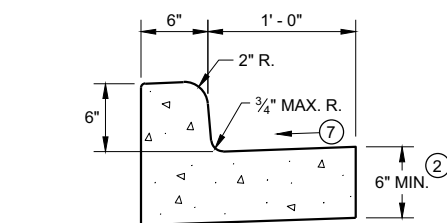


TYPES K^① & L
(OPTIONAL CURB SHAPE)



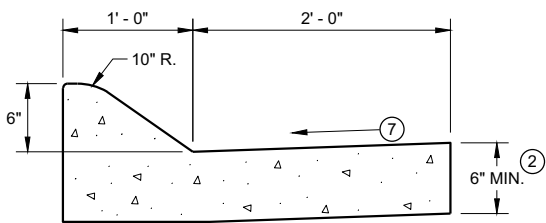
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

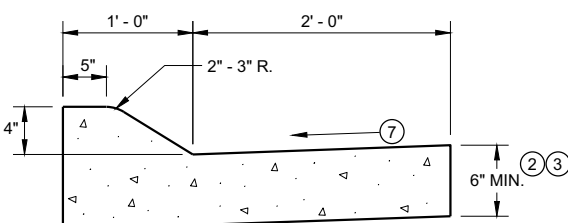


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

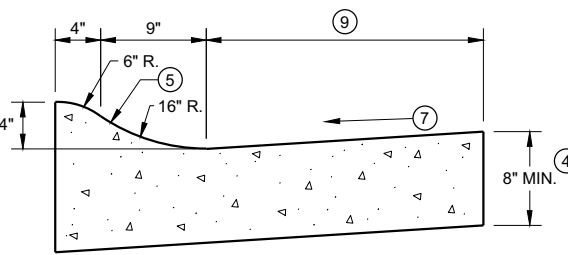


6" SLOPED CURB TYPES A^① & D



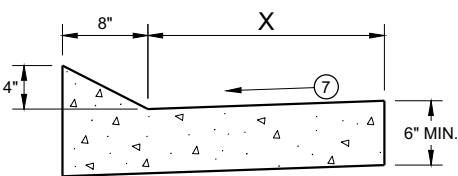
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

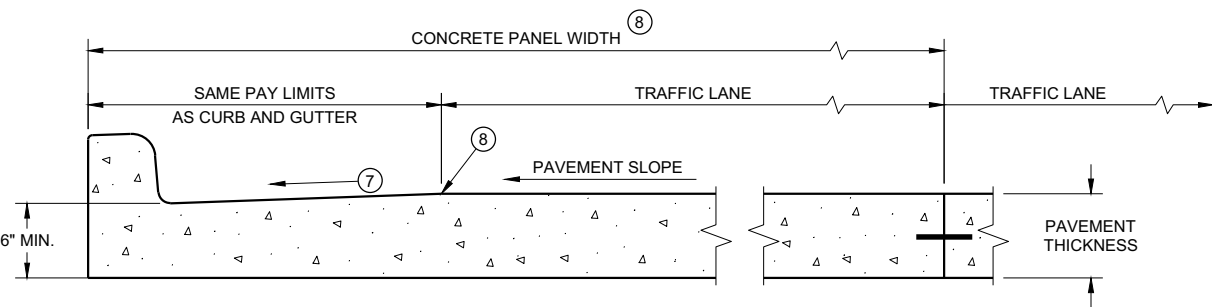


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

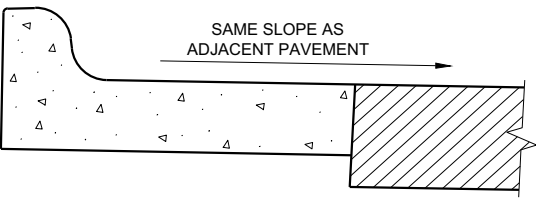
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

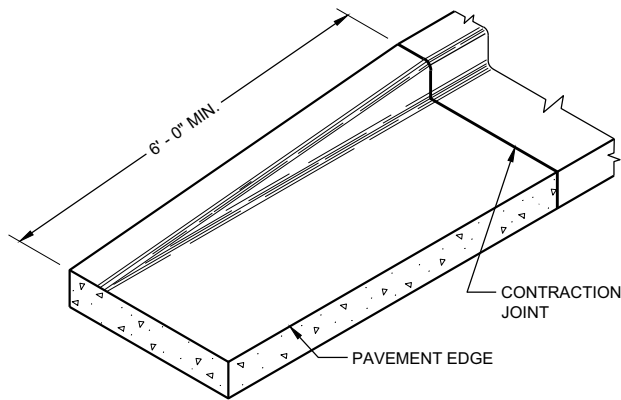
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

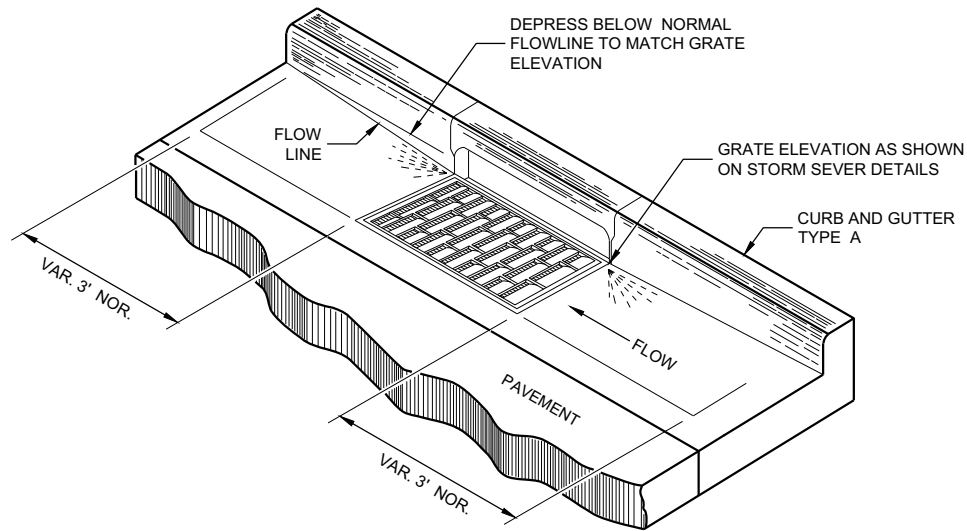
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH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

CONCRETE CURB AND GUTTER

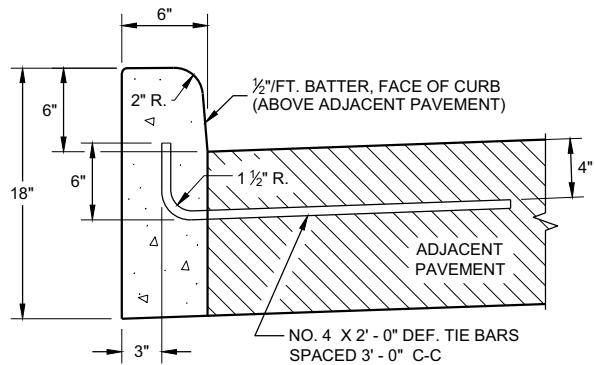
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 78



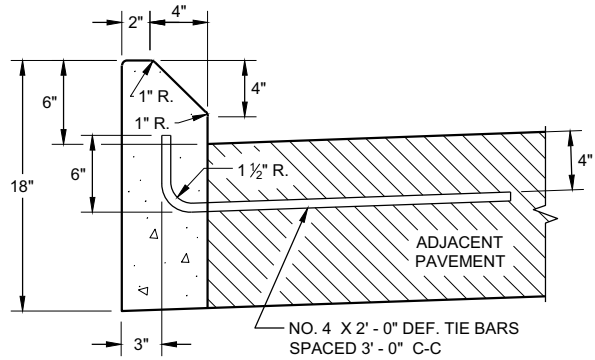
END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

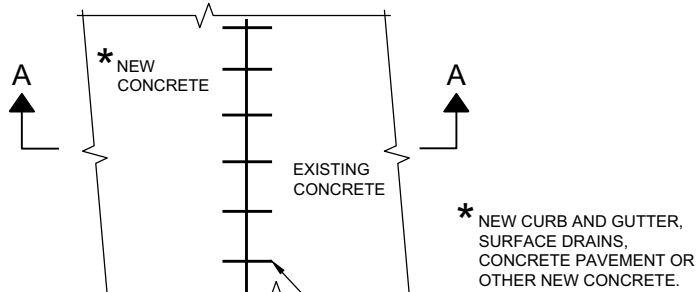


TYPES A^① & D

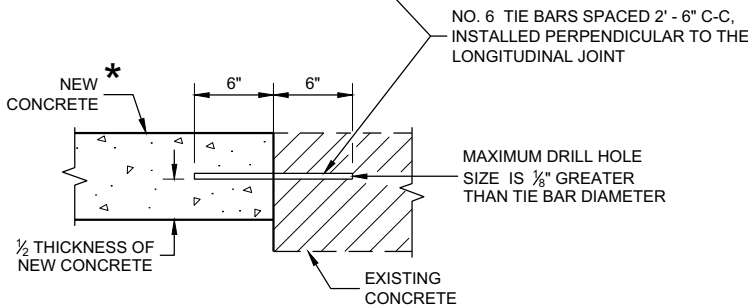


TYPES G^① & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

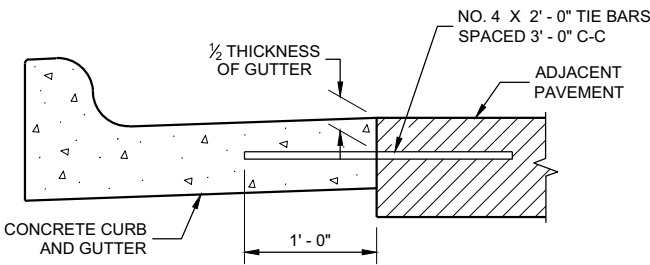
GENERAL NOTES

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

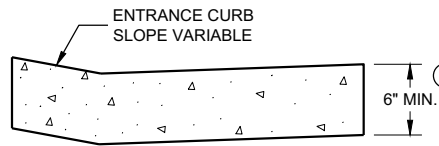
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

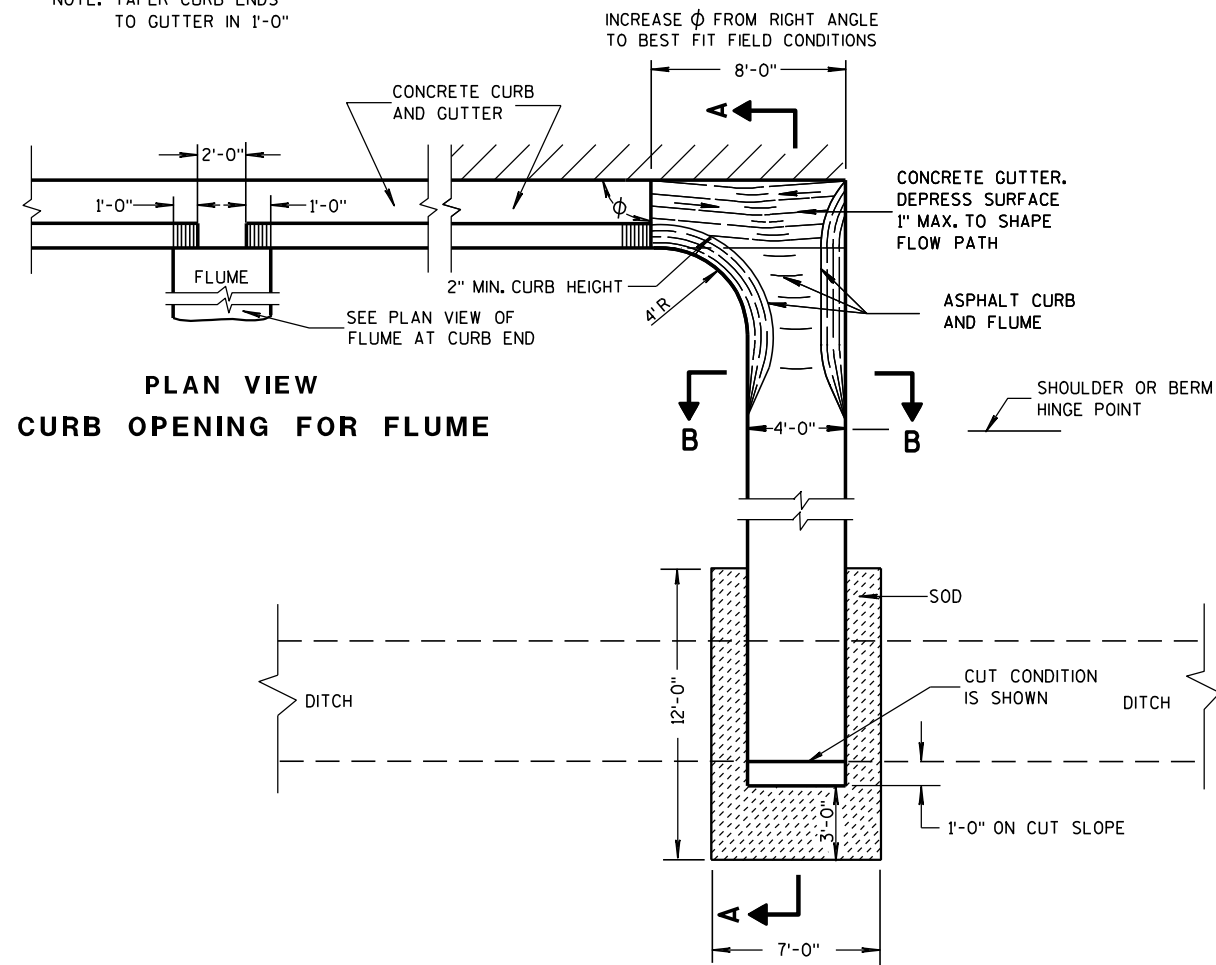
CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER 79
FHWA

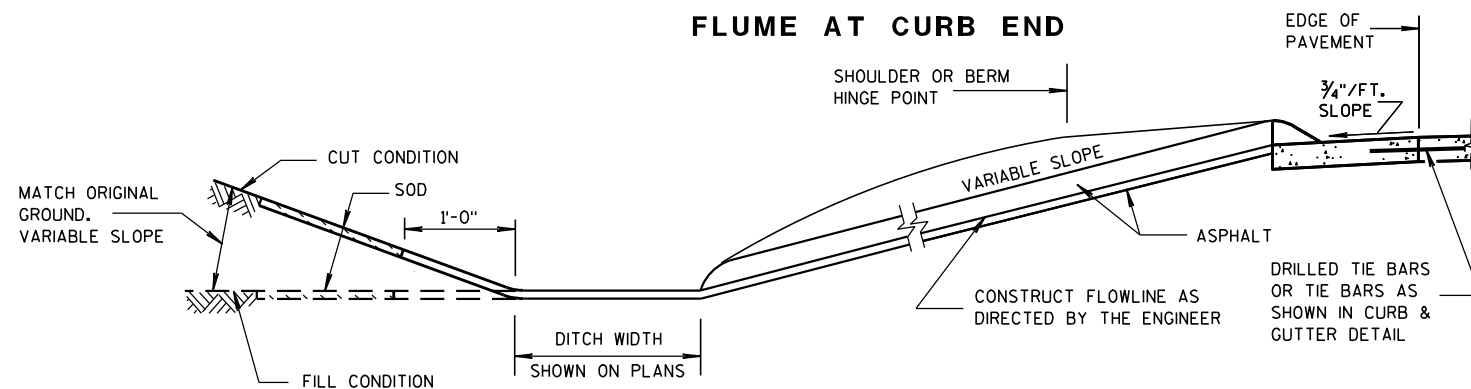
ASPHALTIC FLUME

NOTE: TAPER CURB ENDS
TO GUTTER IN 1'-0"

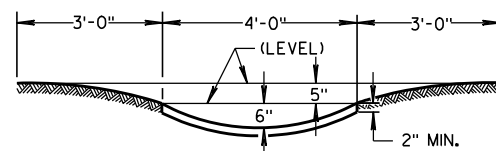


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

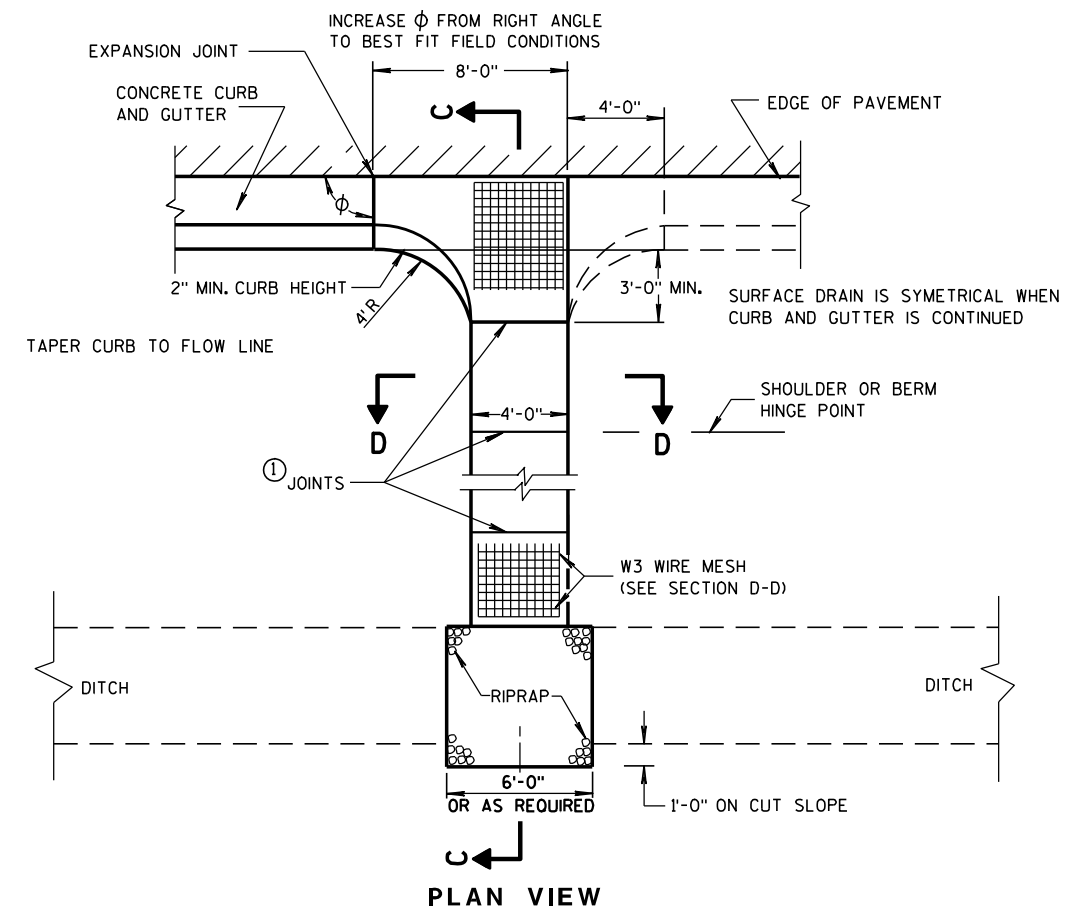
GENERAL NOTES

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

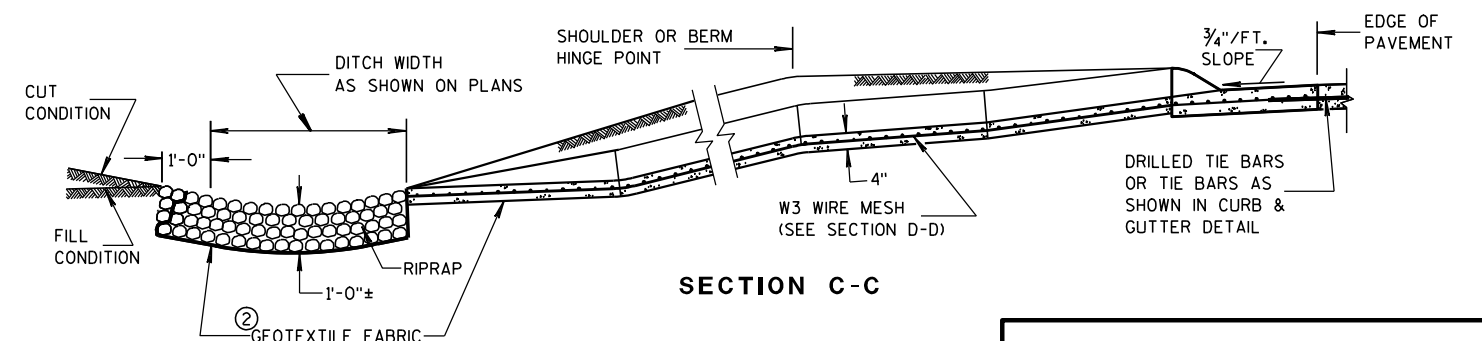
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

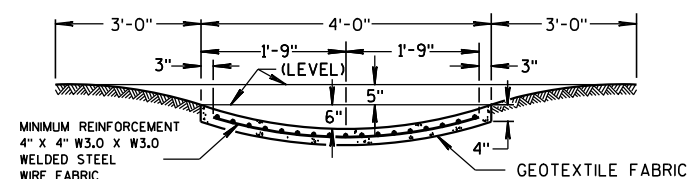
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08

DATE

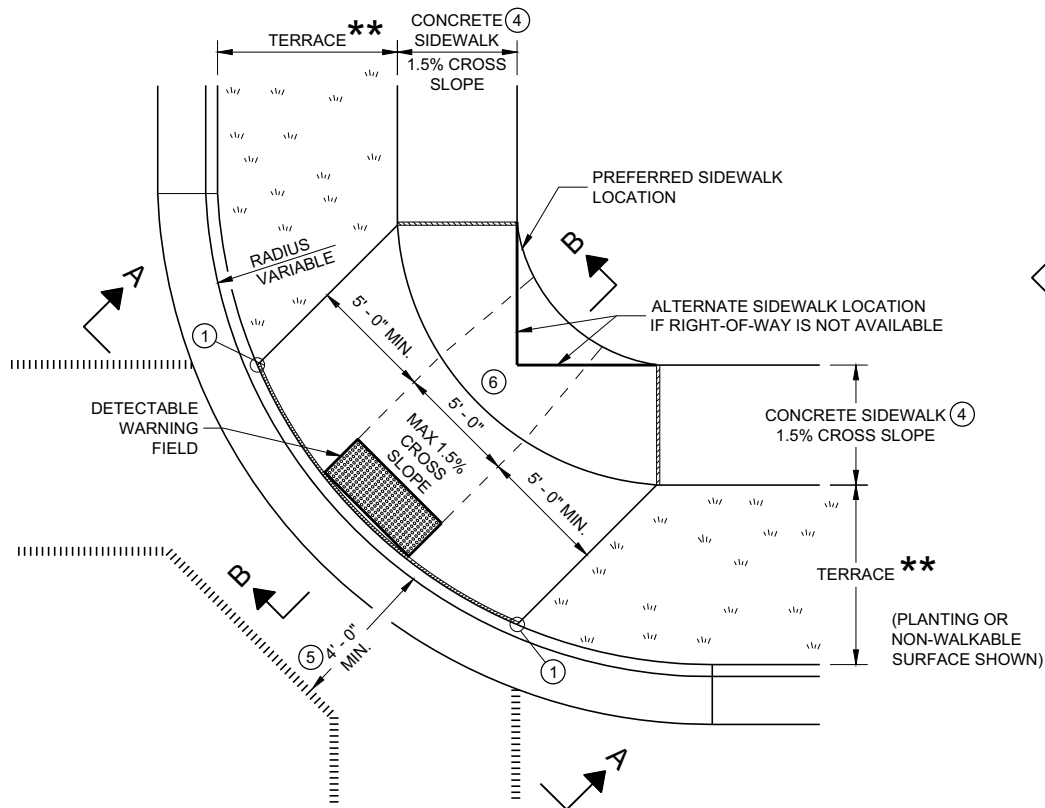
FHWA

/S/ Jerry H. 7000

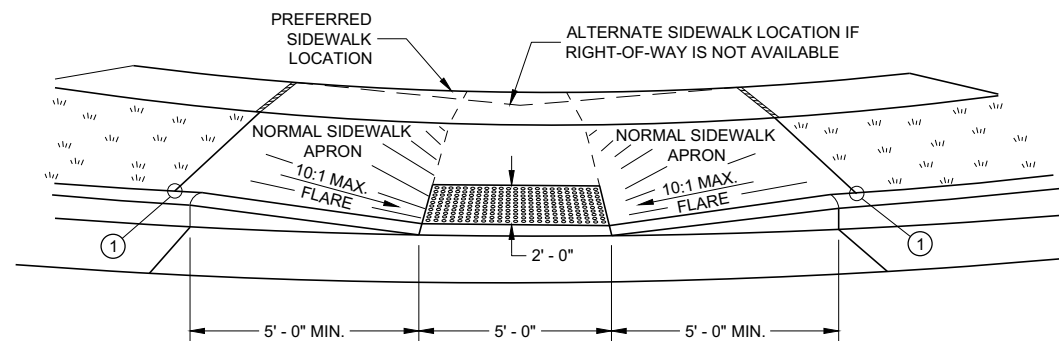
ROADWAY STANDARDS 80

ENGINEER

MENT

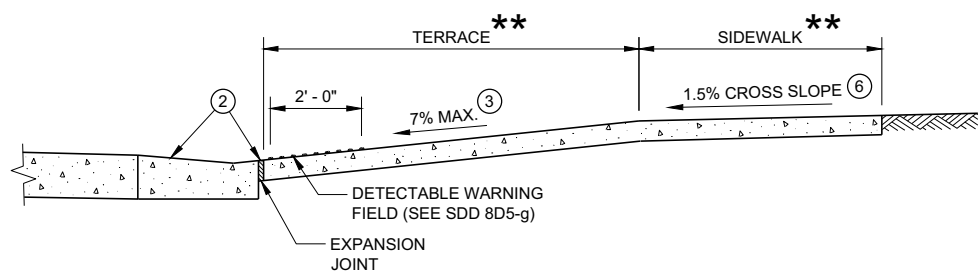


PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

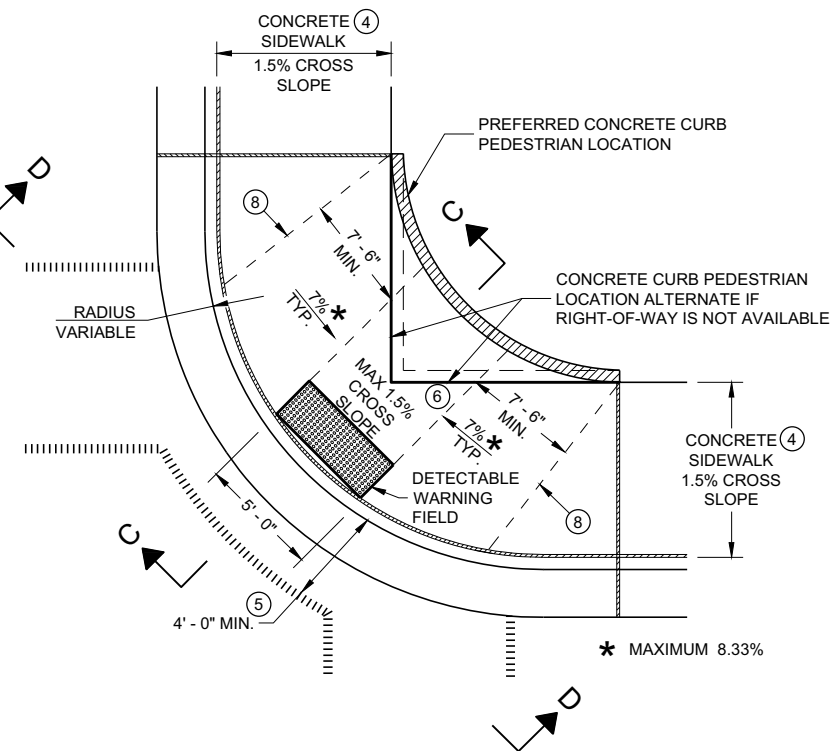


VIEW A - A FOR TYPE 1

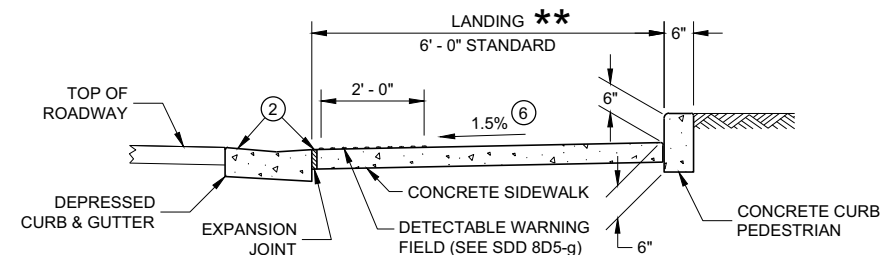
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



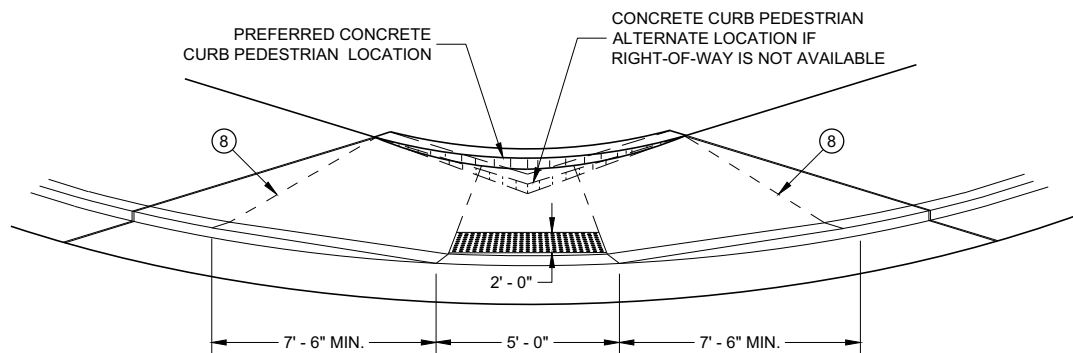
SECTION B - B FOR TYPE 1



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



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

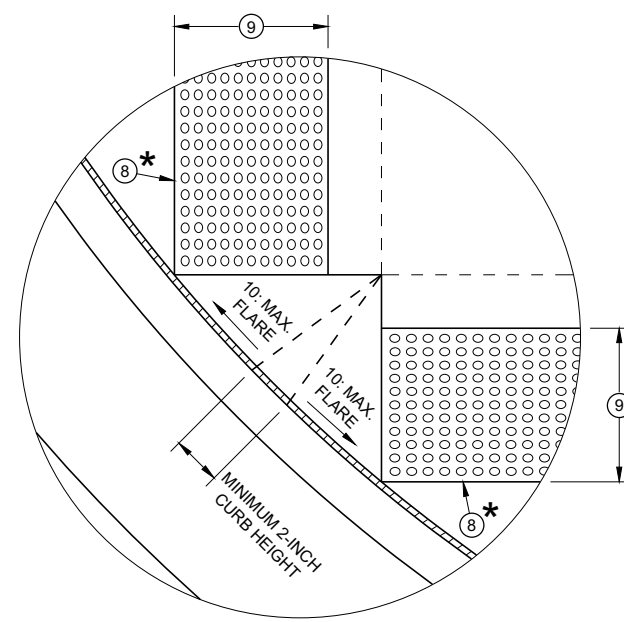
- 1 THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 5 PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

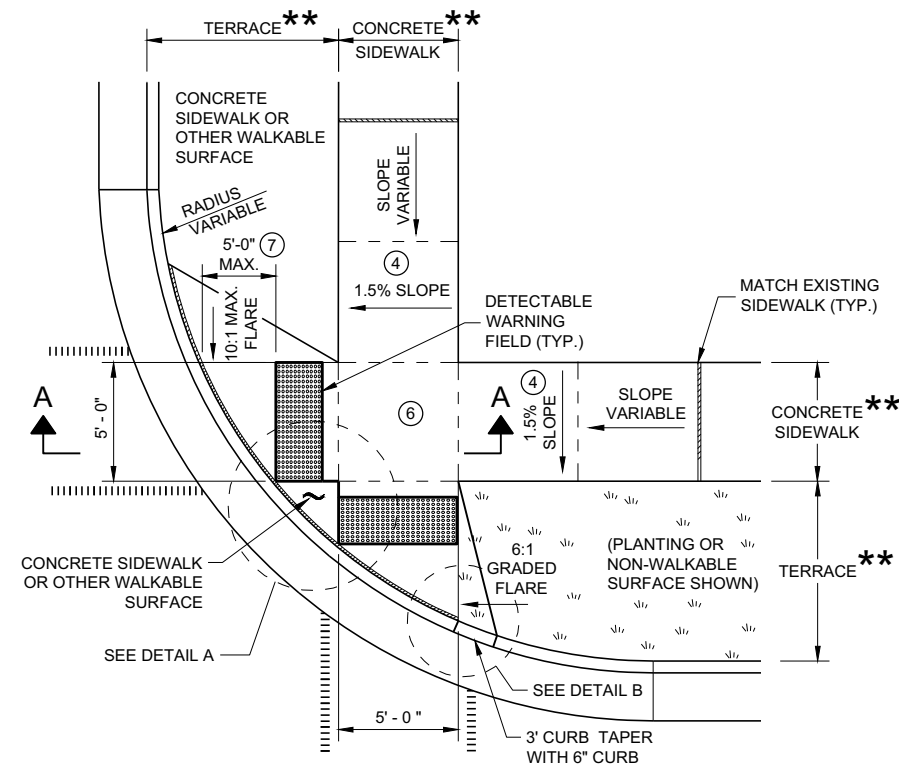
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

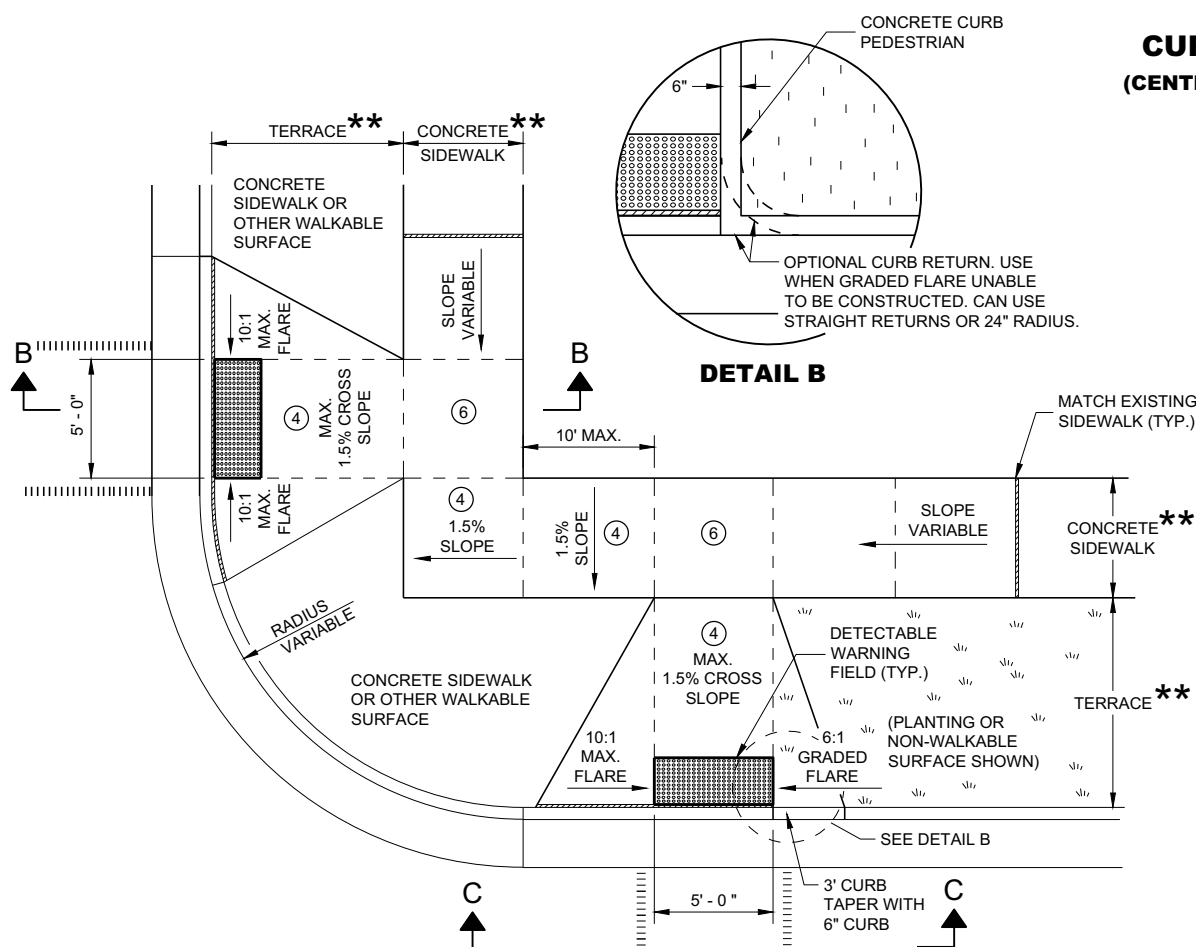
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL A



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



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

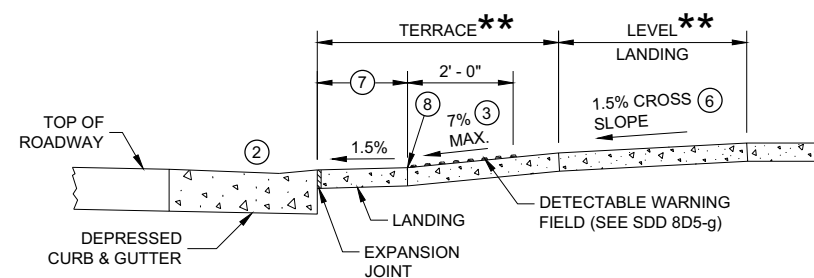
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN $\frac{1}{4}$ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

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

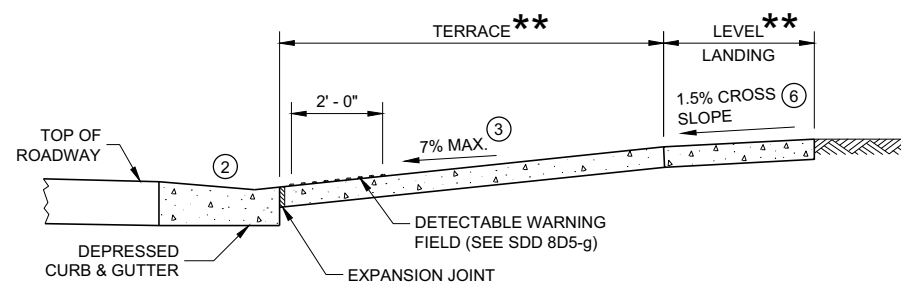
**** WIDTH SHOWN ELSEWHERE
IN THE PLANS**

6

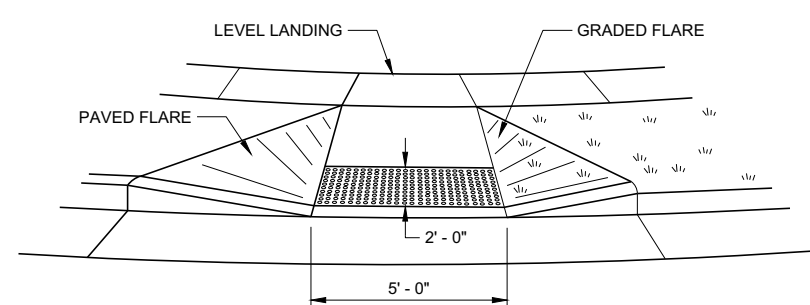
16

SDD 08D05 - 20b

SDD 08D05 - 20b



SECTION B - B FOR TYPE 3



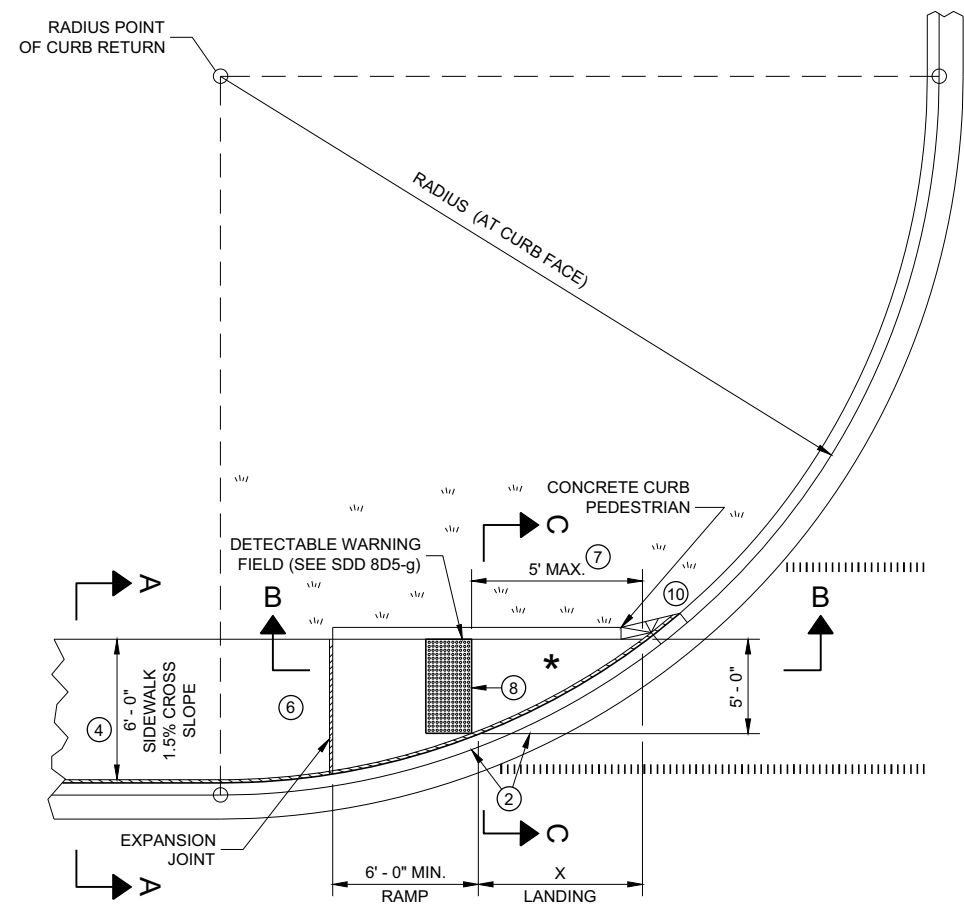
VIEW C - C FOR TYPE 3

LEGEND

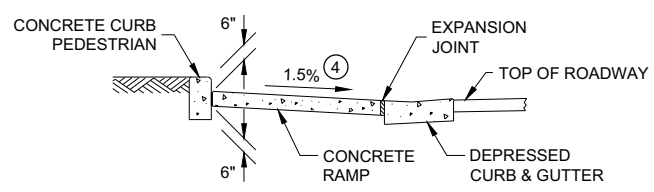
- | | |
|---|------------------------------------|
|  | 1/2" EXPANSION JOINT SIDEWALK |
|  | CONTRACTION JOINT SIDEWALK |
|  | PAVEMENT MARKING CROSSWALK (WHITE) |

CURB RAMPS TYPE 2 AND 3

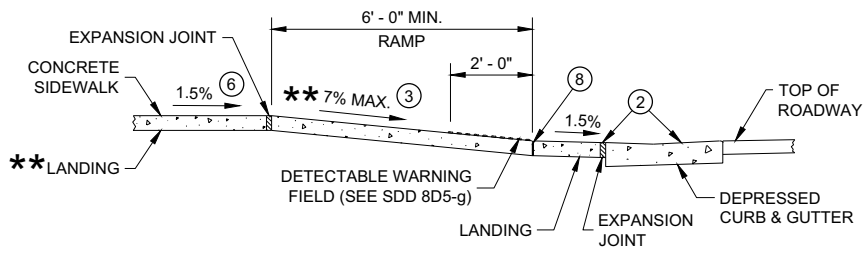
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 82



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A



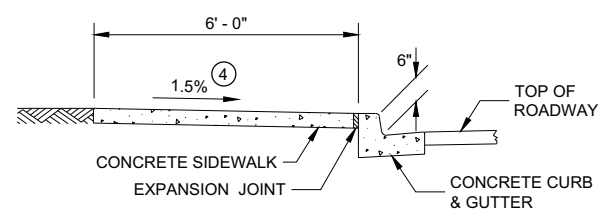
SECTION B - B FOR
TYPE 4A AND TYPE 4A1

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

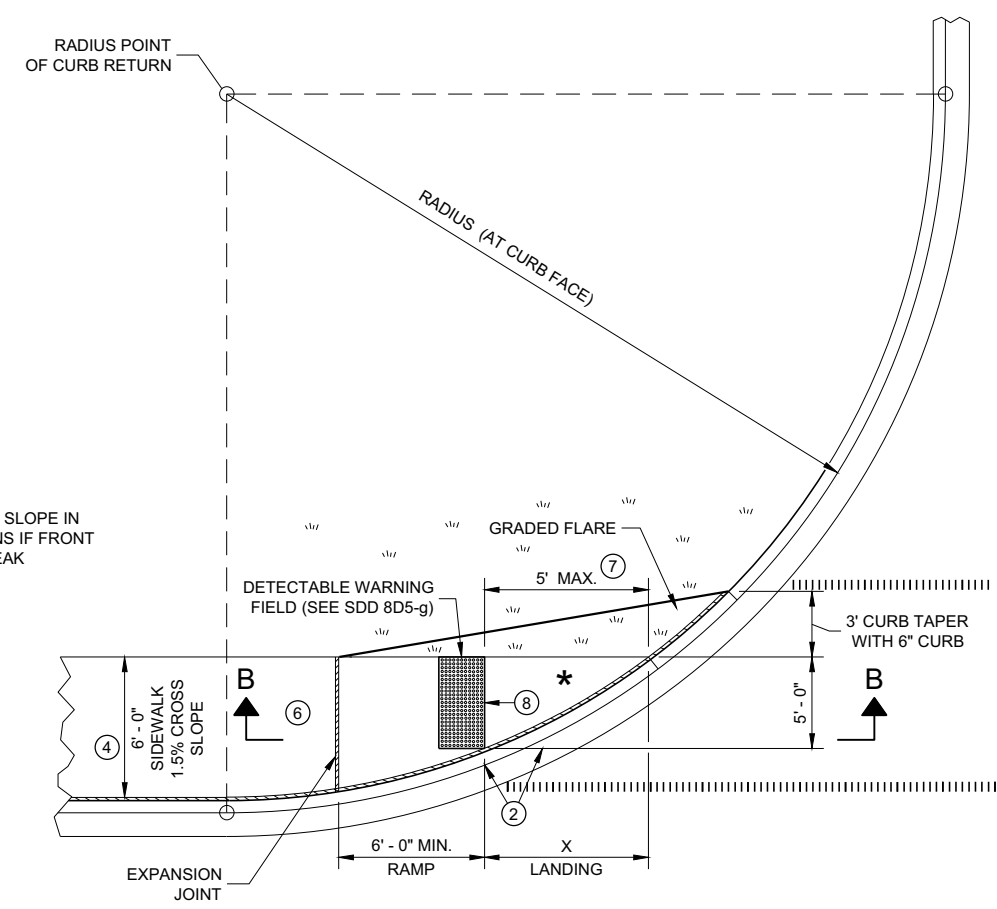
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



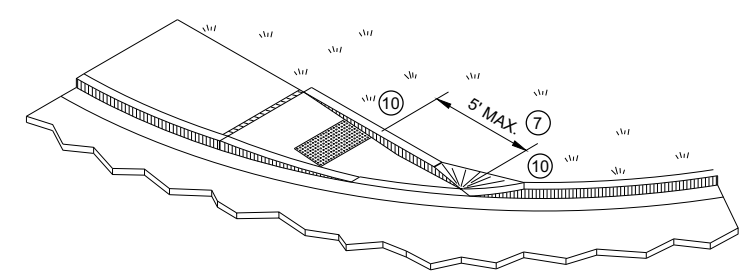
PLAN VIEW
CURB RAMP TYPE 4A1

GENERAL NOTES

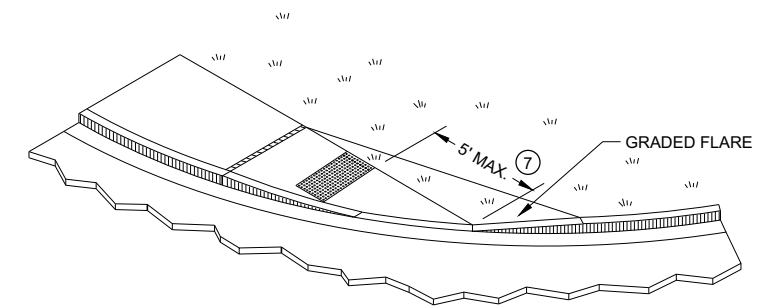
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE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

LEGEND

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



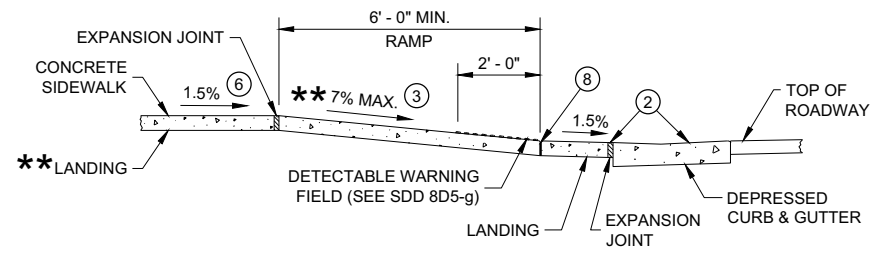
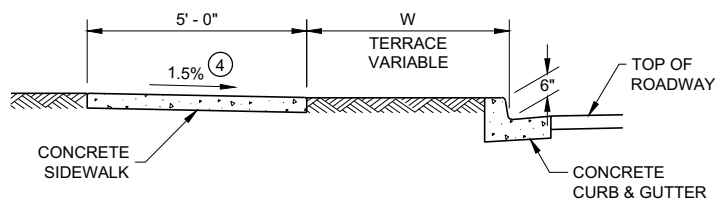
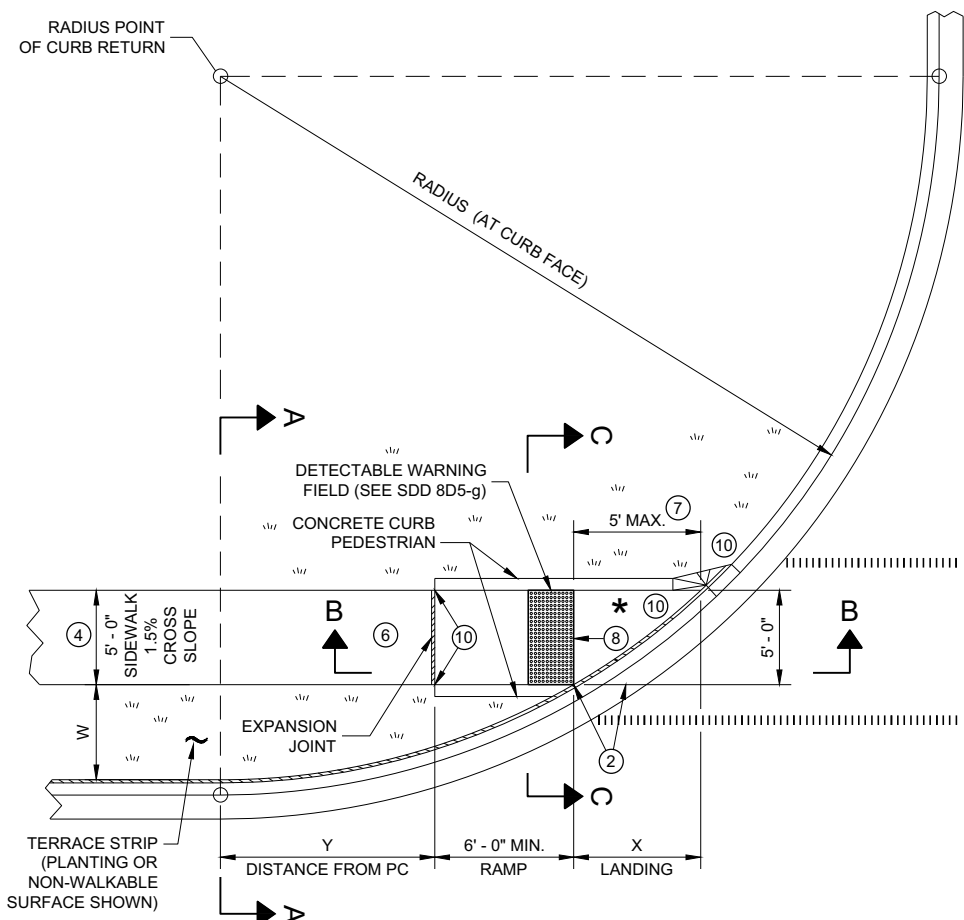
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

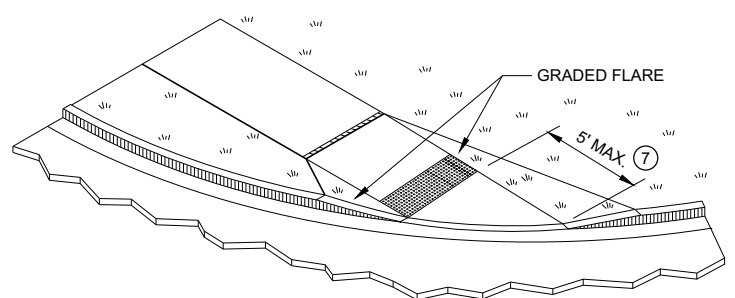
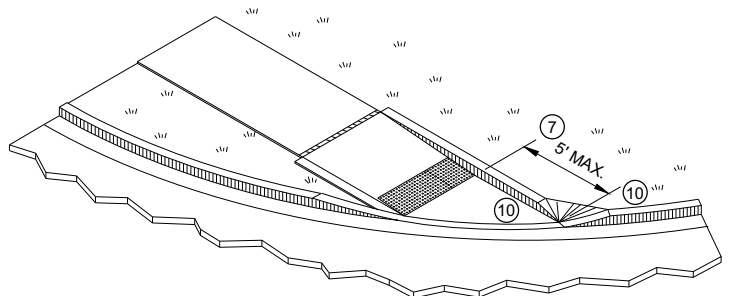
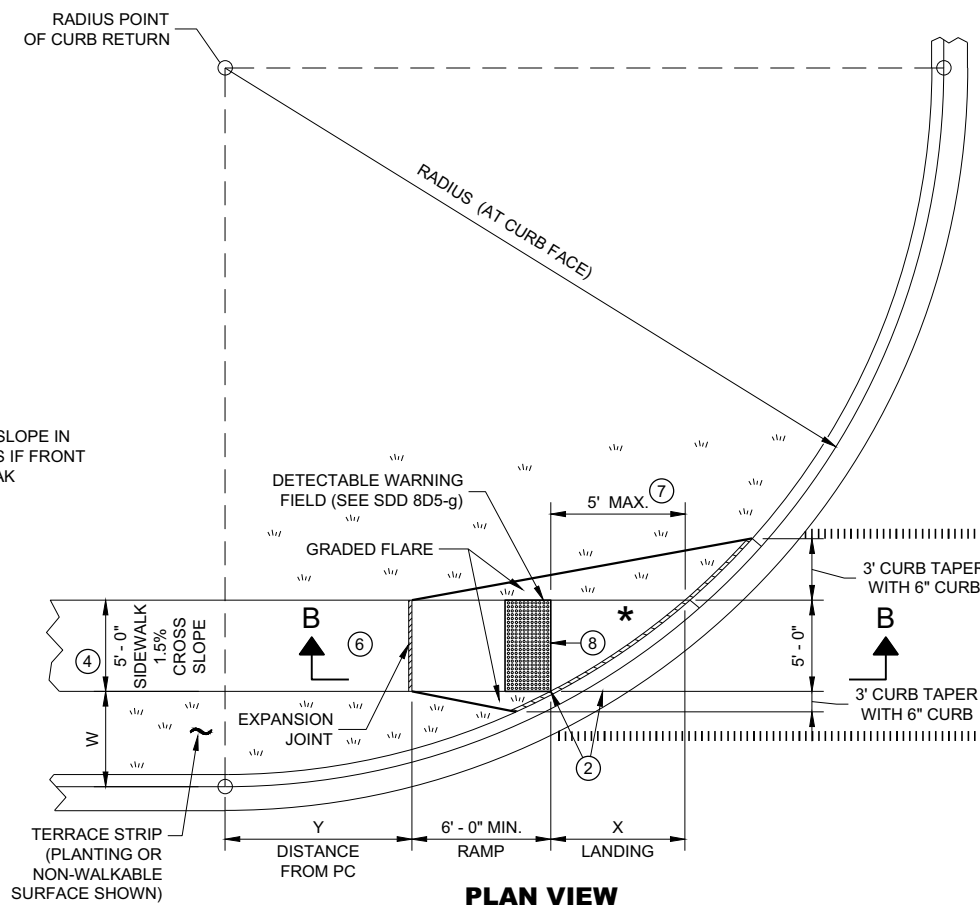
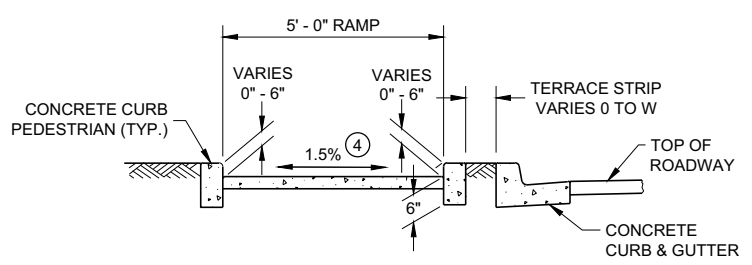


** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 3/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/2"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

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



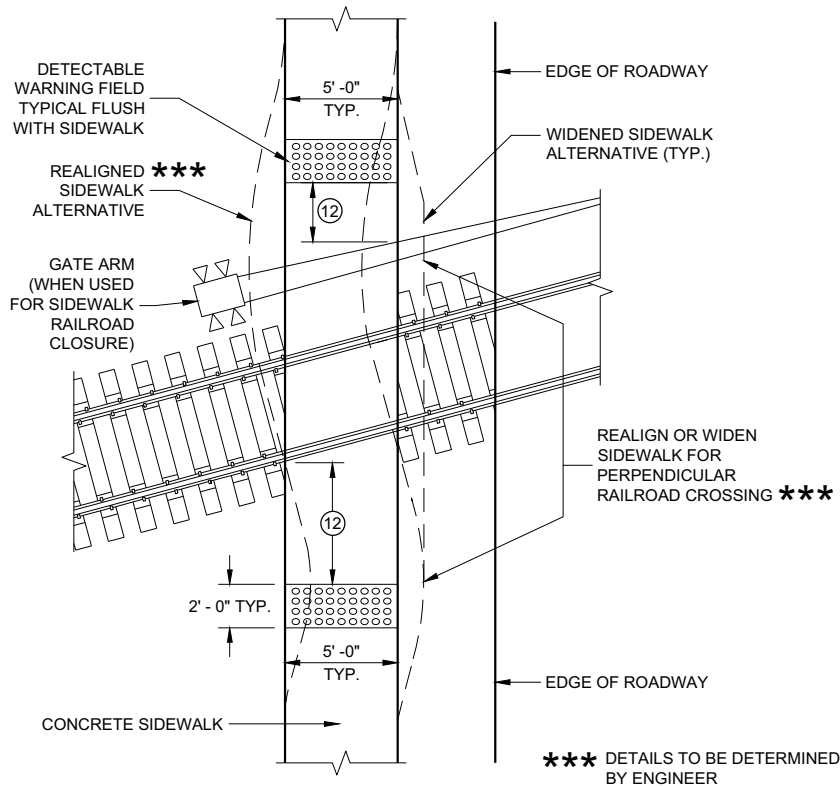
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

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

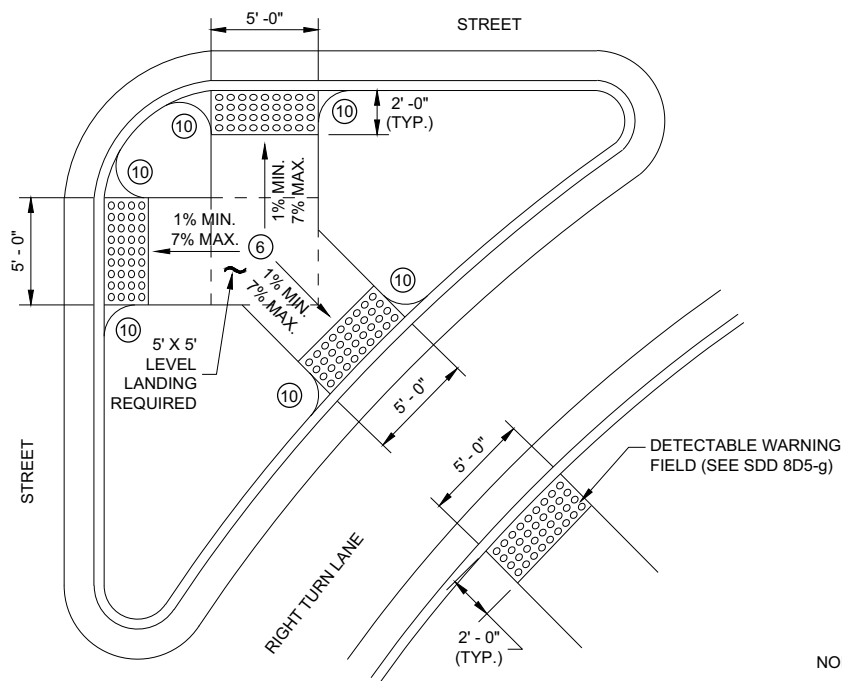
**CURB RAMPS
TYPE 4B AND 4B1**

STATE OF WISCONSIN
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CURB RAMP TYPE 8

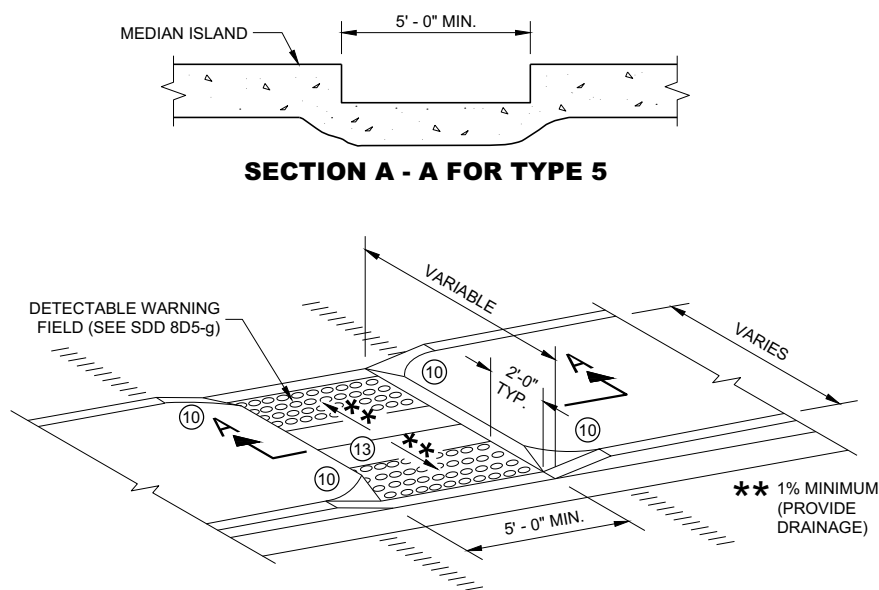
DETECTABLE WARNINGS AT RAILROAD CROSSING



CURB RAMP TYPE 6

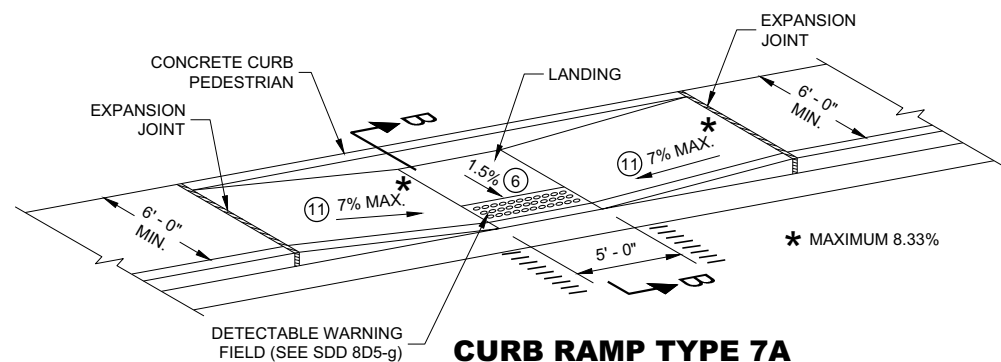
DETECTABLE WARNING AT ISLANDS

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



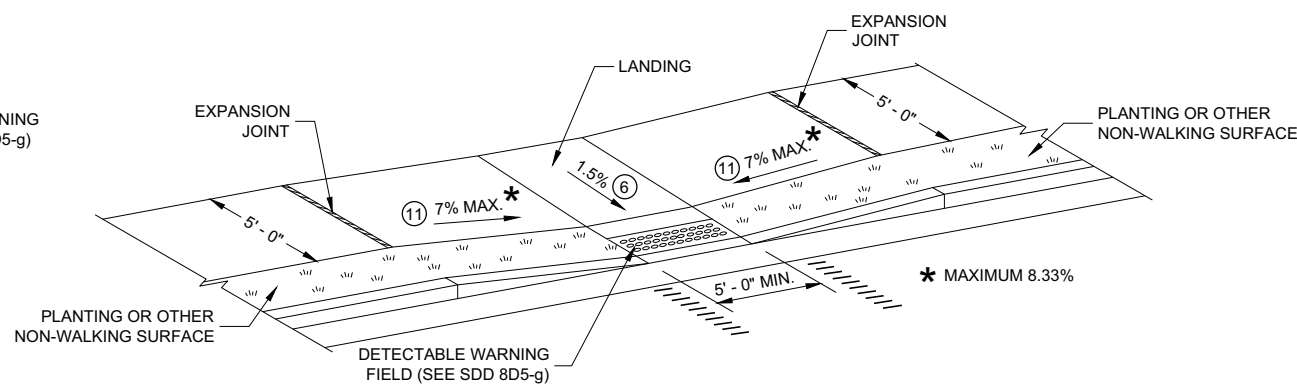
CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A

MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

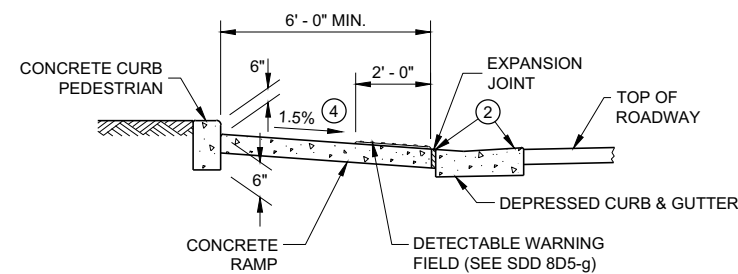
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

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



SECTION B - B FOR TYPE 7A

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

Diagram illustrating the radial detectable warning field placement when the 5-foot grade break distance per SDD 8D5-c is exceeded. The diagram shows a cross-section of a ramp and landing area.

Key components and dimensions:

- EXPANSION JOINT**: Located at the start of the ramp.
- DETECTABLE WARNING FIELD RADIAL**: The main area of the detectable warning field.
- GRADED FLARE**: The transition area between the ramp and the landing.
- SEE DETAIL A**: Reference to a detail view of the flare.
- MIN. 2'-0" DWF COVERAGE**: Minimum detectable warning field coverage required.
- LANDING 'XR'**: The landing area after the ramp.
- RAMP**: The sloped section of the ramp.
- 6'-0" MIN.**: Minimum ramp length.
- 6'-0" SIDEWALK 1.5% CROSS SLOPE**: Sidewalk dimensions and slope.
- 3' CURB TAPER WITH 6" CURB**: Curb dimensions and taper.
- 5'-0"**: Distance from the ramp to the curb.
- 15"**: Radius of the detectable warning field.
- 2'-0"**: Distance from the ramp to the start of the detectable warning field.
- * MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK**: Slope requirement for the landing area.

[illegible]

SECTION A - A FOR TYPE 4A1

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

Diagram illustrating the placement of a detectable warning field at a curb ramp when the 5-foot grade break distance is exceeded.

Key components and dimensions shown:

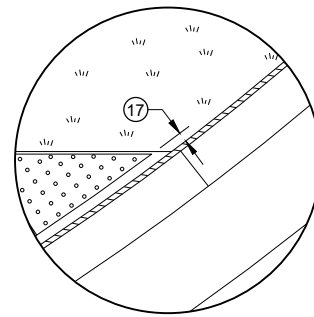
- 5'-0" SIDEWALK 1.5% CROSS SLOPE**
- EXPANSION JOINT**
- GRADED FLARE**
- DETECTABLE WARNING FIELD RADIAL**
- SEE DETAIL B**
- 3' CURB TAPER WITH 6" CURB**
- 2'-0"** (Width of the detectable warning field)
- 6'-0" MIN.** (Minimum distance from the expansion joint to the curb)
- LANDING 'XR'**
- * MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK**

[illegible]

SECTION B - B FOR TYPE 4B1

LEGEND

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



DETAIL A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN $\frac{1}{4}$ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑭ CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- ⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN $\frac{1}{8}$ " DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- ⑯ USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- ⑰ A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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

NOTE: SECOND TYPE 2

CONCRETE SIDEWALK **

EXPANSION JOINT

TOP OF ROADWAY

DEPRESSED CURB & GUTTER

RADIAL DETECTABLE WARNING FIELD (SEE SDD 8D5-g)

1.5% *

7% TYP.

1.5% CROSS SLOPE

TERRACE

SIDEWALK

LANDING "XR" (GRADE BREAK DIST.)

CONCRETE SIDEWALK **

SECTION C - C FOR TYPE 2

- * MAXIMUM 2% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE
BREAK
- ** WIDTH SHOWN ELSEWHERE
IN THE PLANS
- *** MAXIMUM 8.33%

DETAIL C

PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

SURFACE SHOWN)

DETAIL C

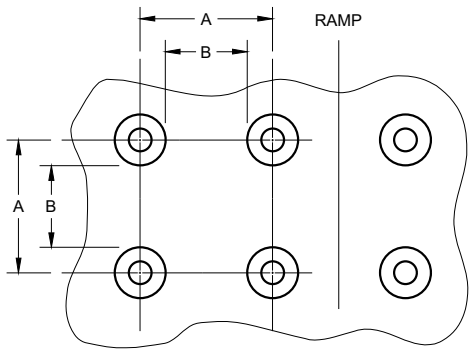
CURB RAMPS

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

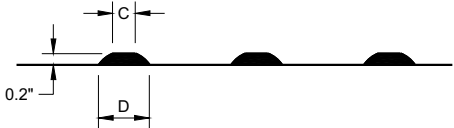
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 86

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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

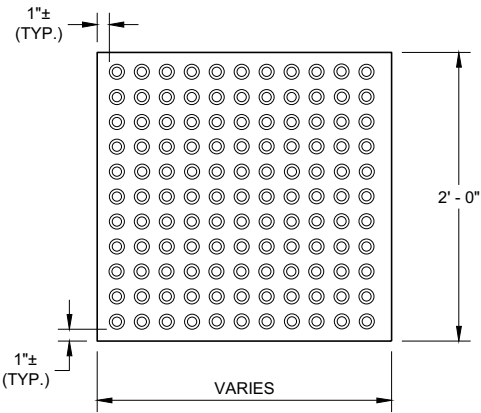


PLAN VIEW

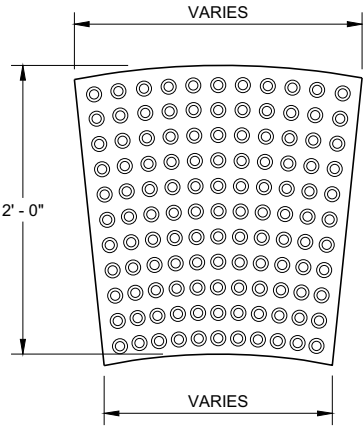


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

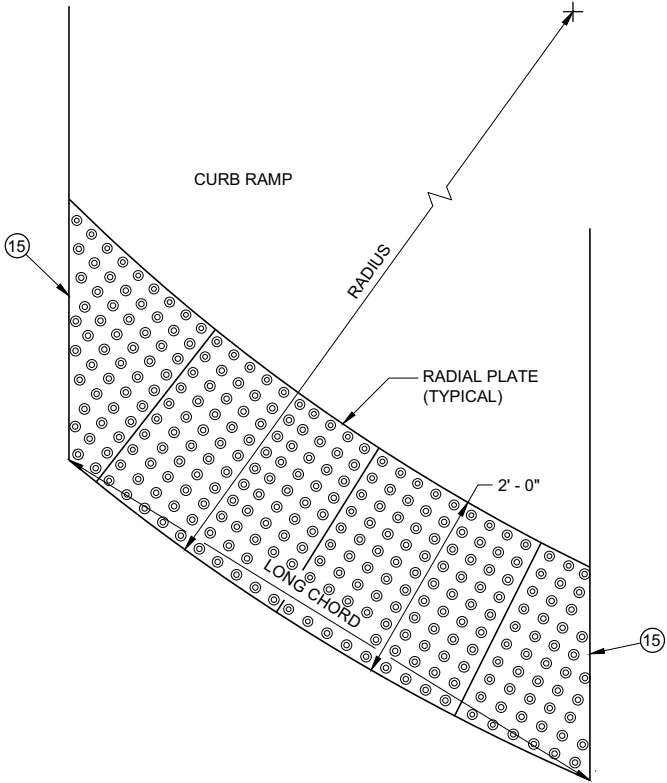


RECTANGULAR
PLATES



RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

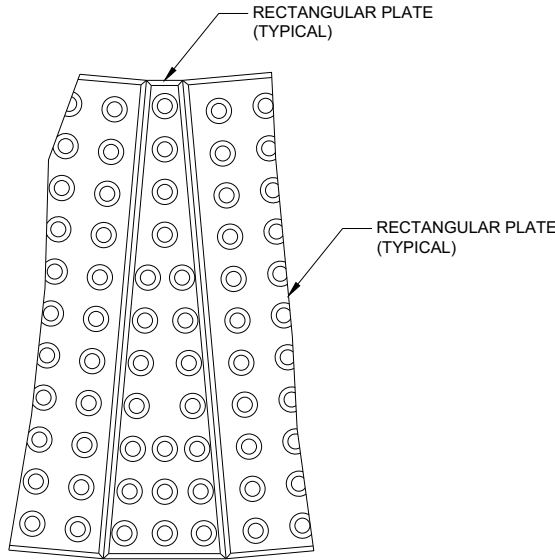
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

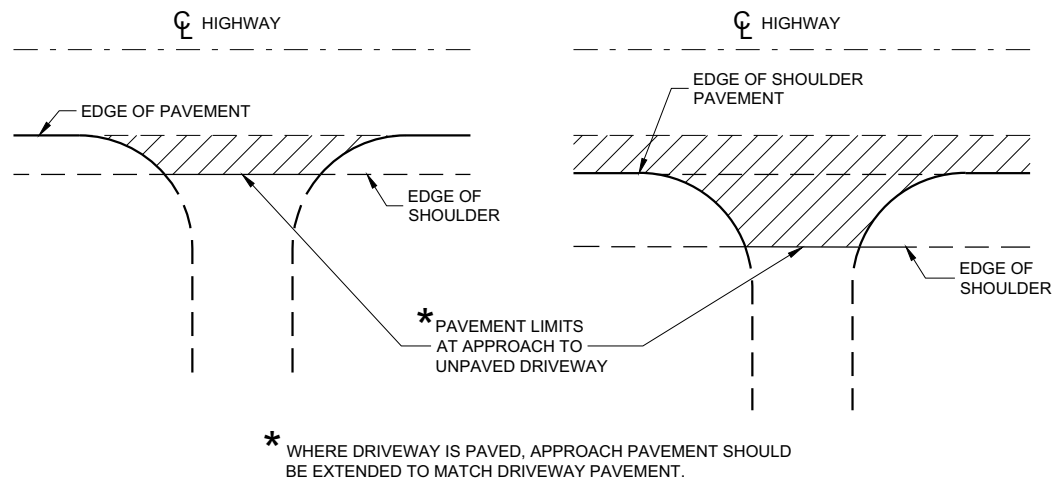


PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMP
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

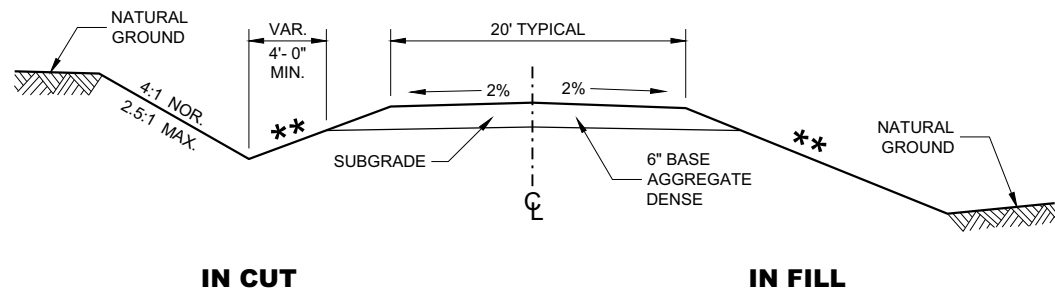
APPROVED
May 2019 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR 87
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

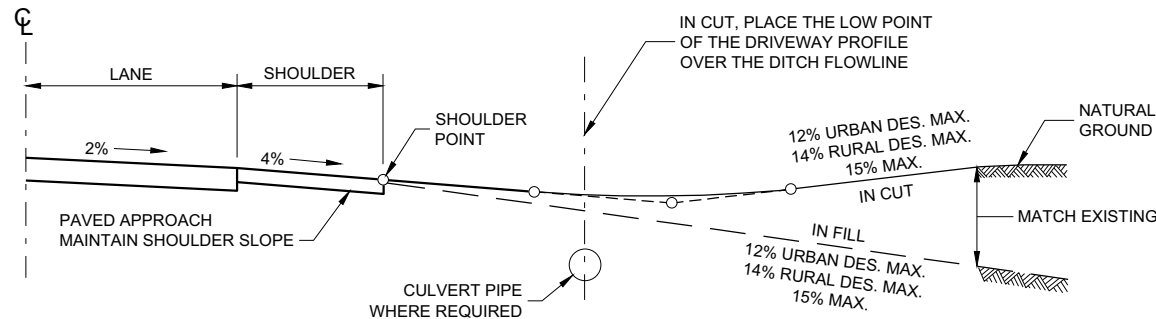
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



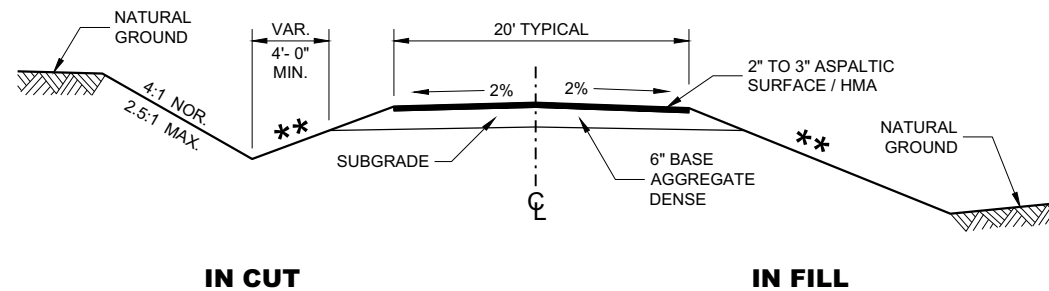
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES

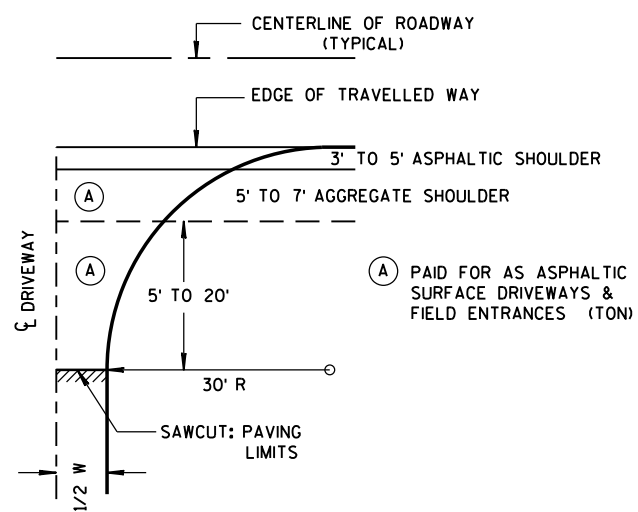


**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

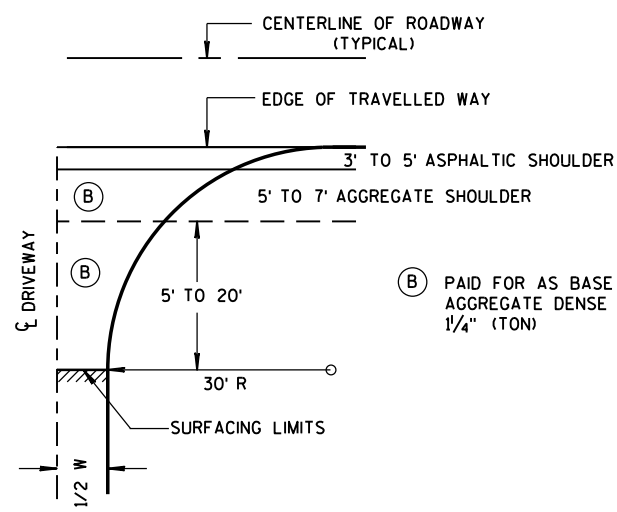
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA 88

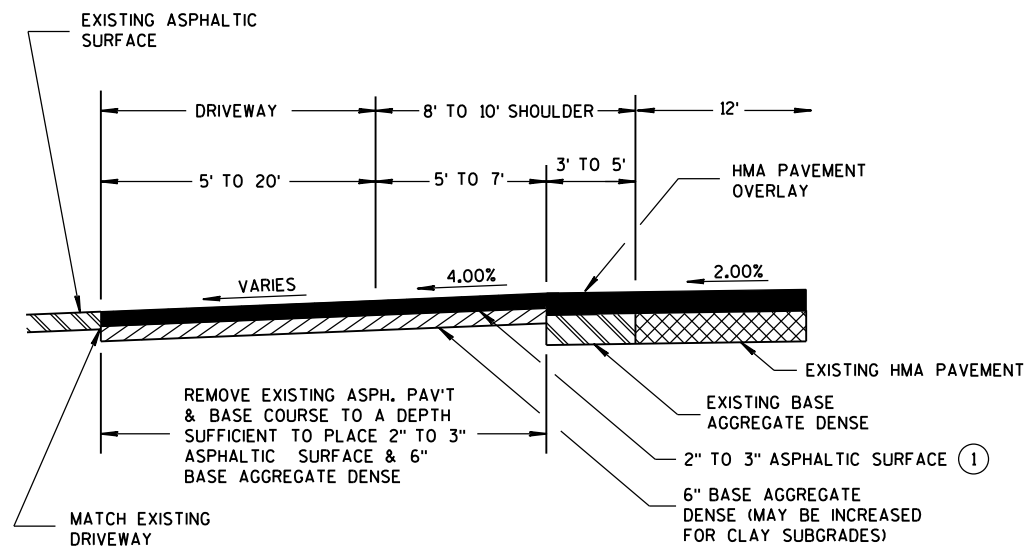


PLAN VIEW
HALF SECTION

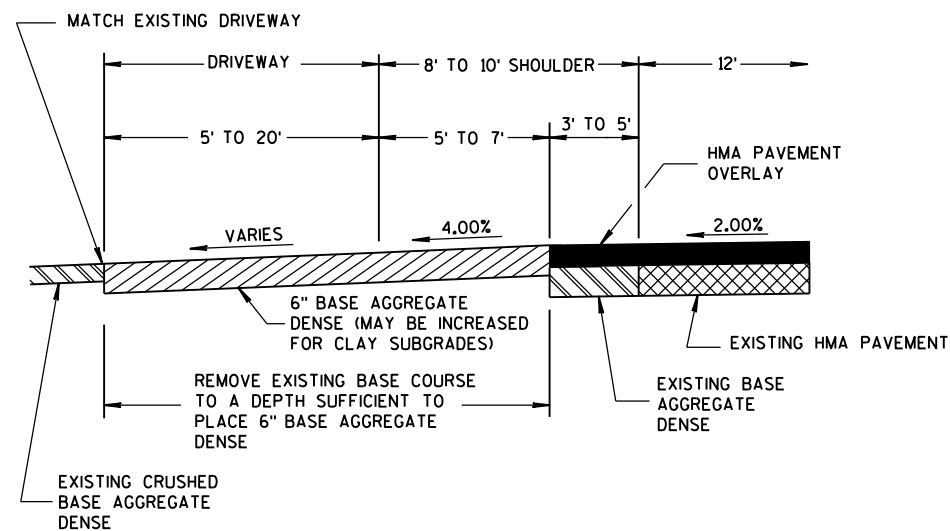
W MIN. = 16'
W MAX. = 24'



PLAN VIEW
HALF SECTION



PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

GENERAL NOTES

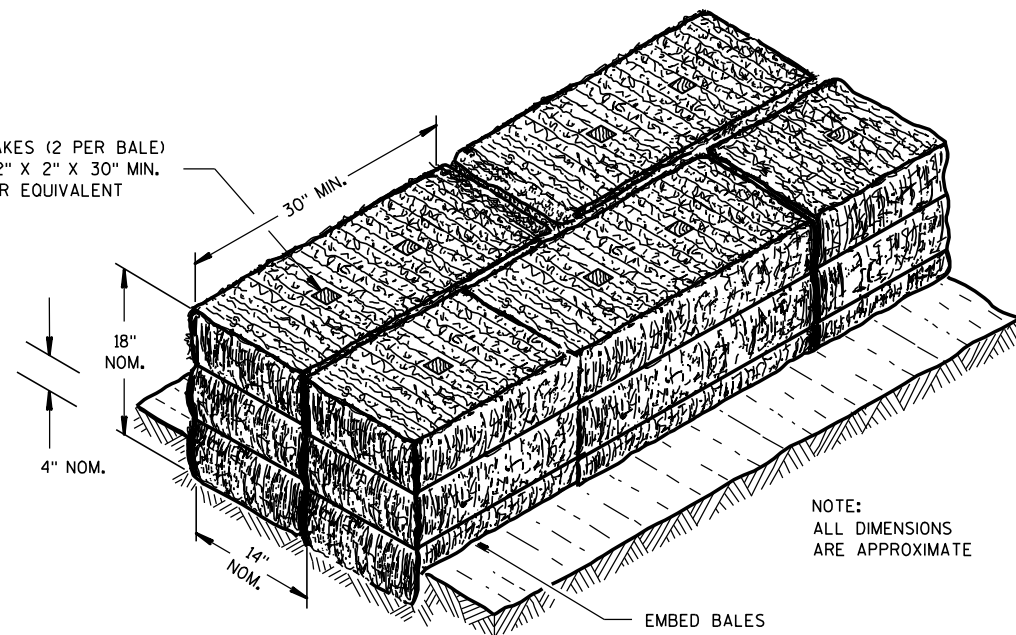
- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

DRIVEWAYS WITHOUT
CURB & GUTTER
RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

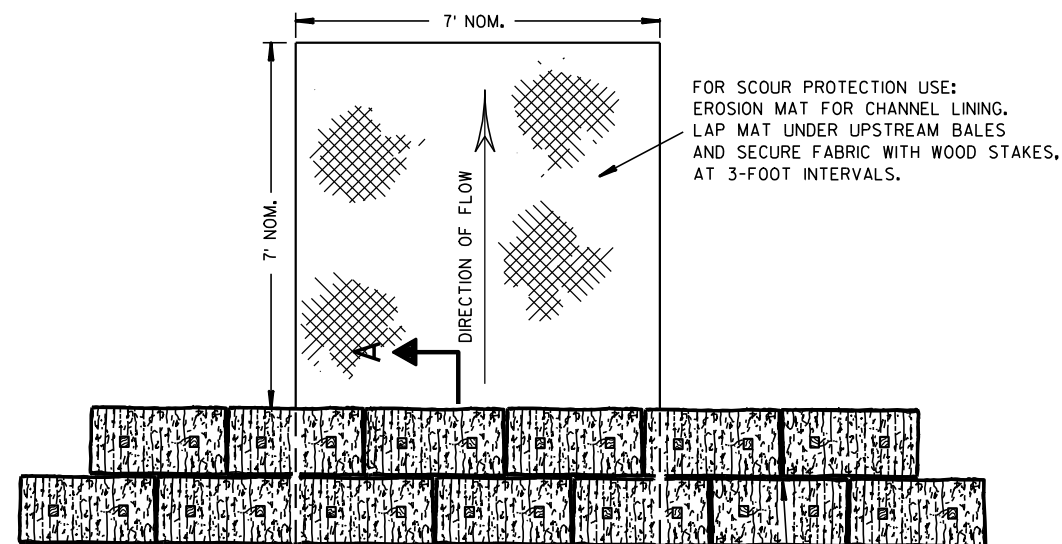
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS 89 ENT
FHWA UNIT SUPERV

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



SECTION A-A

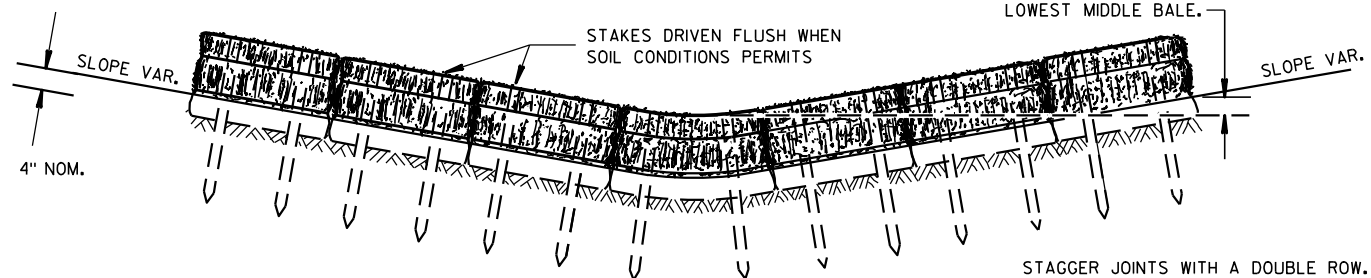
NOTE:
ALL DIMENSIONS
ARE APPROXIMATE



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

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



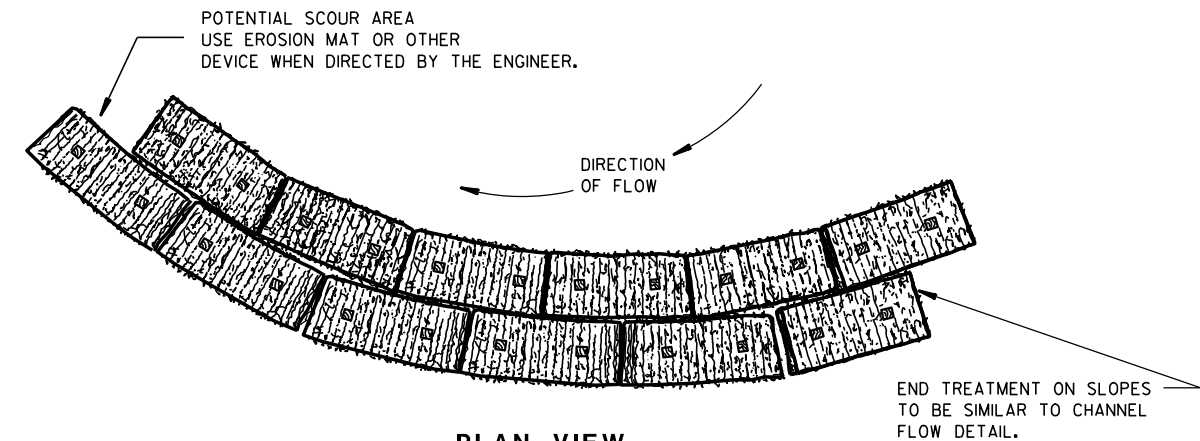
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

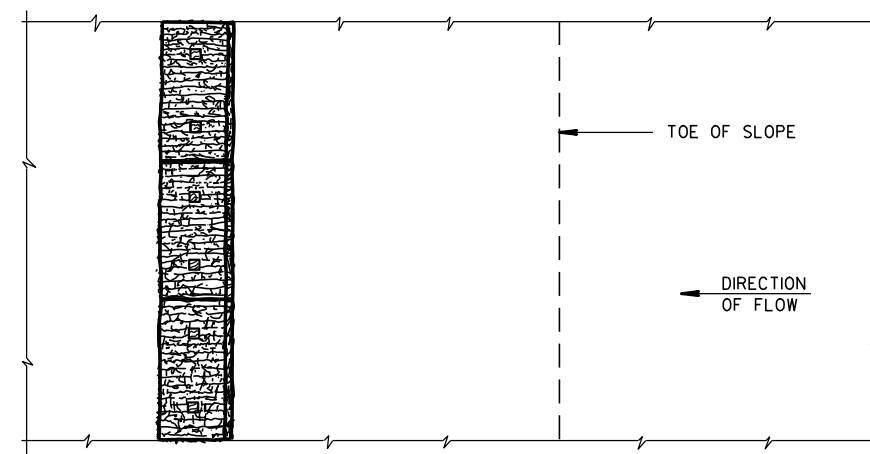
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

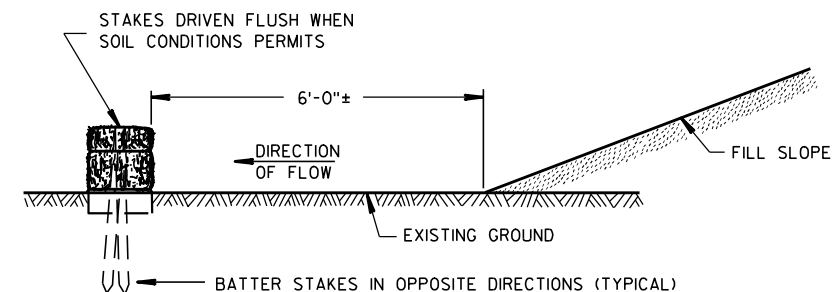


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

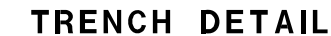
/S/ Beth Conn
CHIEF ROADWAY DEVELOPER

ENGINEER

FHWA



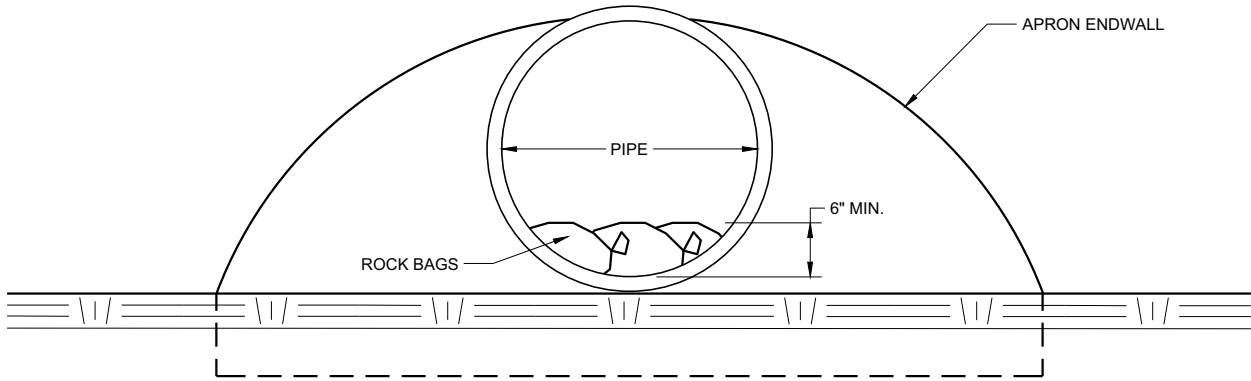
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



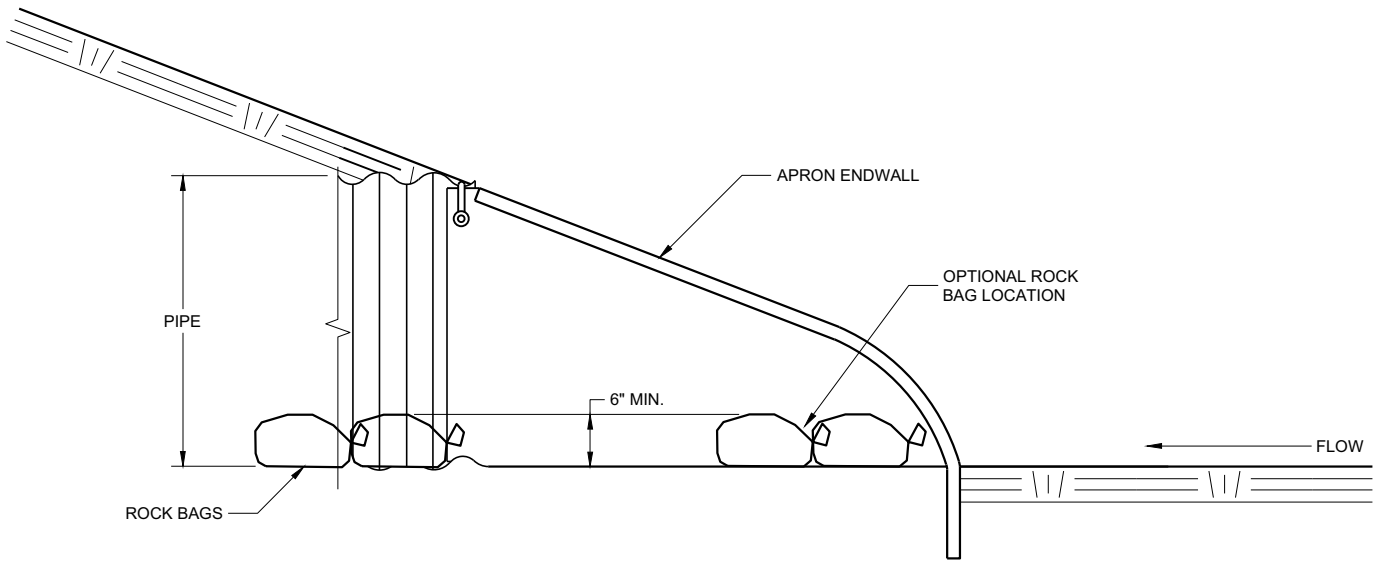
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE _____ /S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT _____
FHWA



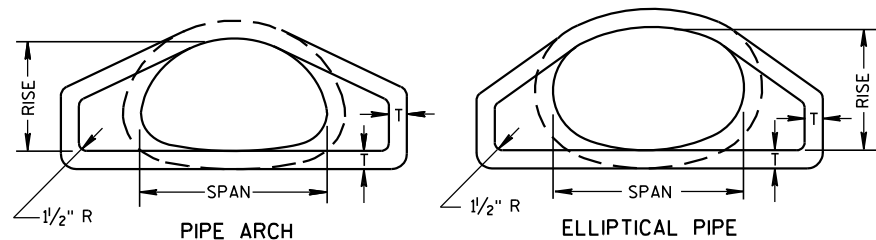
END VIEW



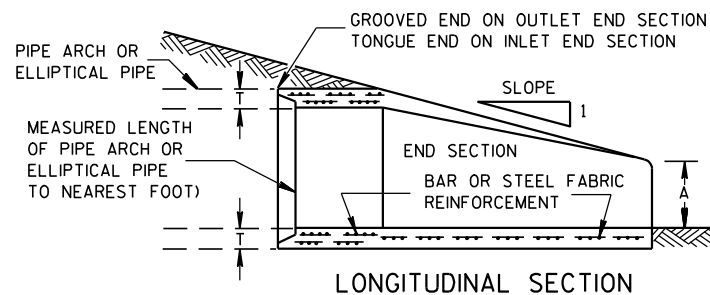
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGR 92
FHWA	

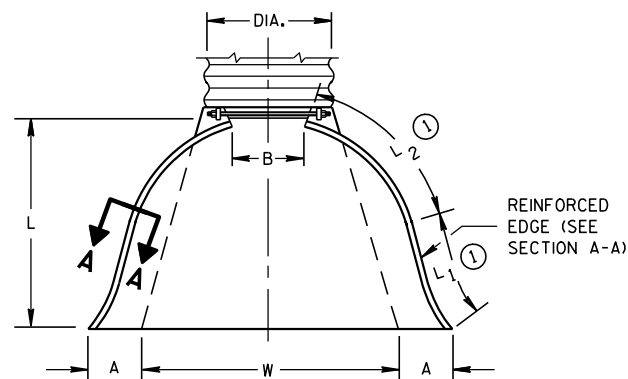


END VIEW



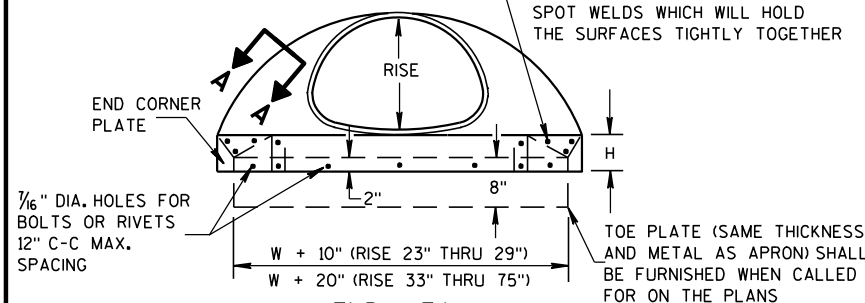
LONGITUDINAL SECTION

CONCRETE ENDWALLS

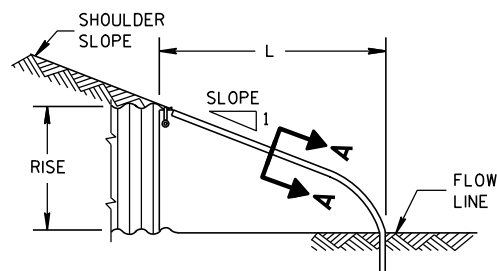
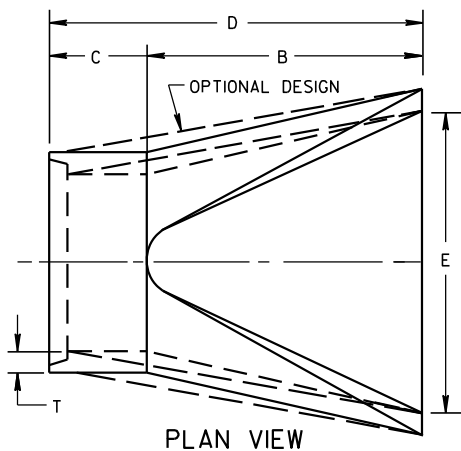


PLAN VIEW

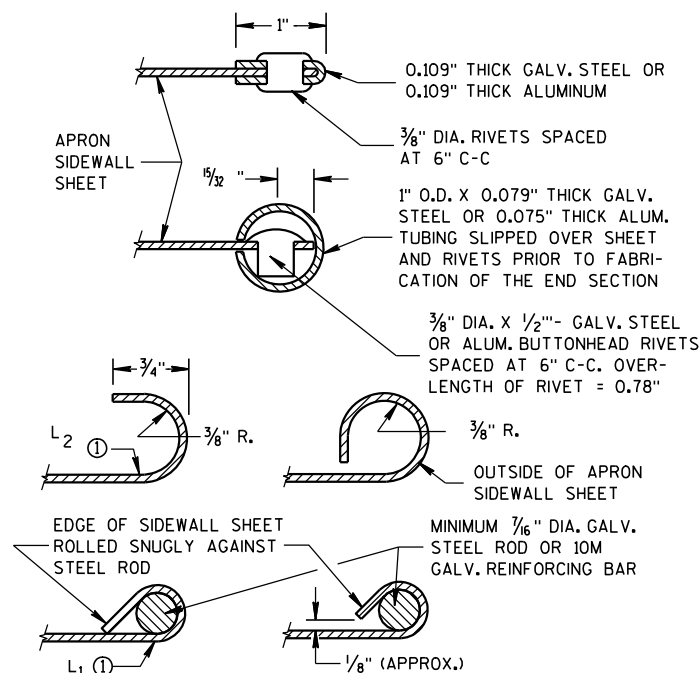
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW

SIDE ELEVATION
METAL ENDWALLS

PLAN VIEW

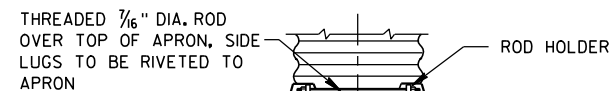


SECTION A-A

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

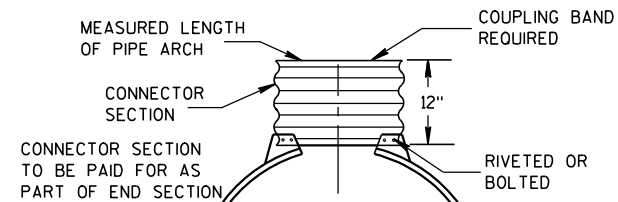
3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1/2")	L1 ⓪	L2 ⓪	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

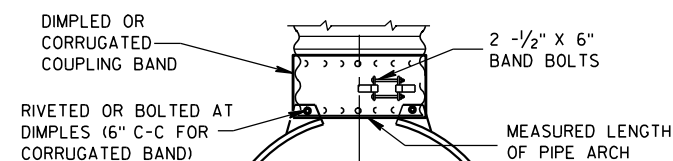
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:
ALL SIZES CORRUGATED PIPE ARCHESNOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

REINFORCED CONCRETE PIPE ARCH

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

REINFORCED CONCRETE ELLIPTICAL PIPE

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

**NOMINAL SIZE

GENERAL NOTES

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

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

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

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

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

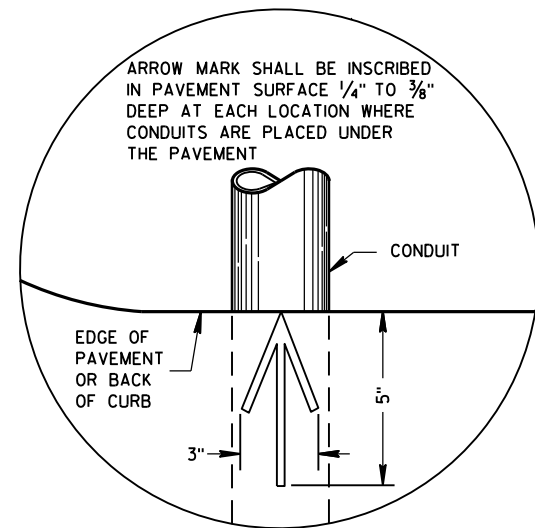
① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPESTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

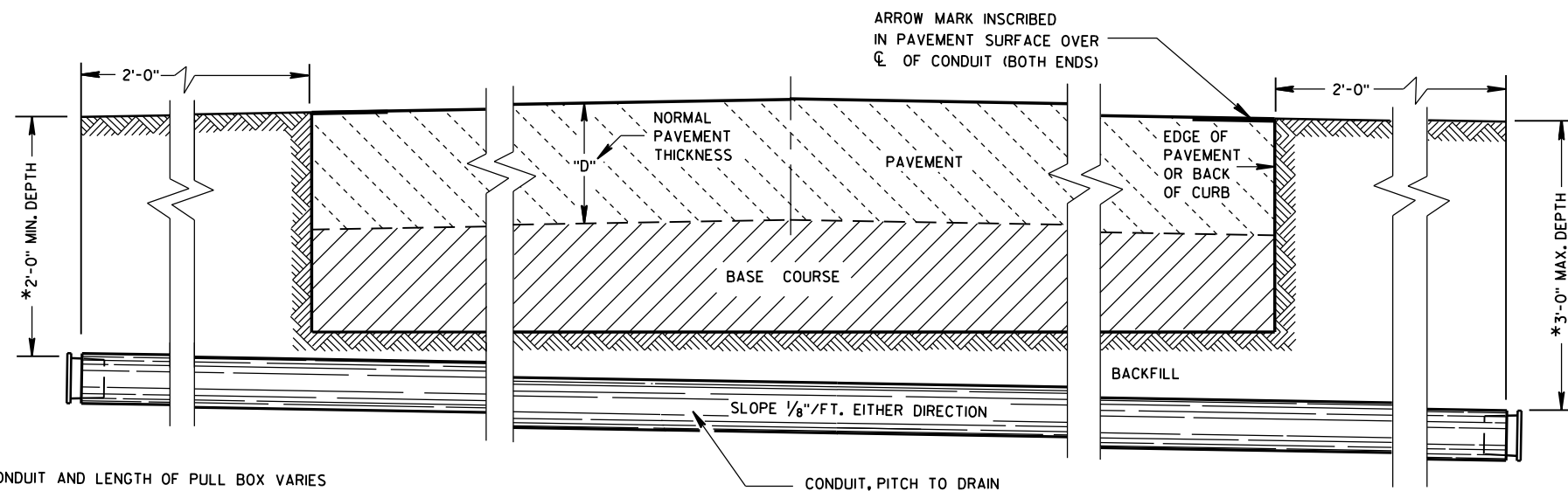
APPROVED

11/30/94
DATE/S/ Rory L. Rhinehart
CHIEF ROADWAY DEVELOPER

FHWA



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

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

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 94
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

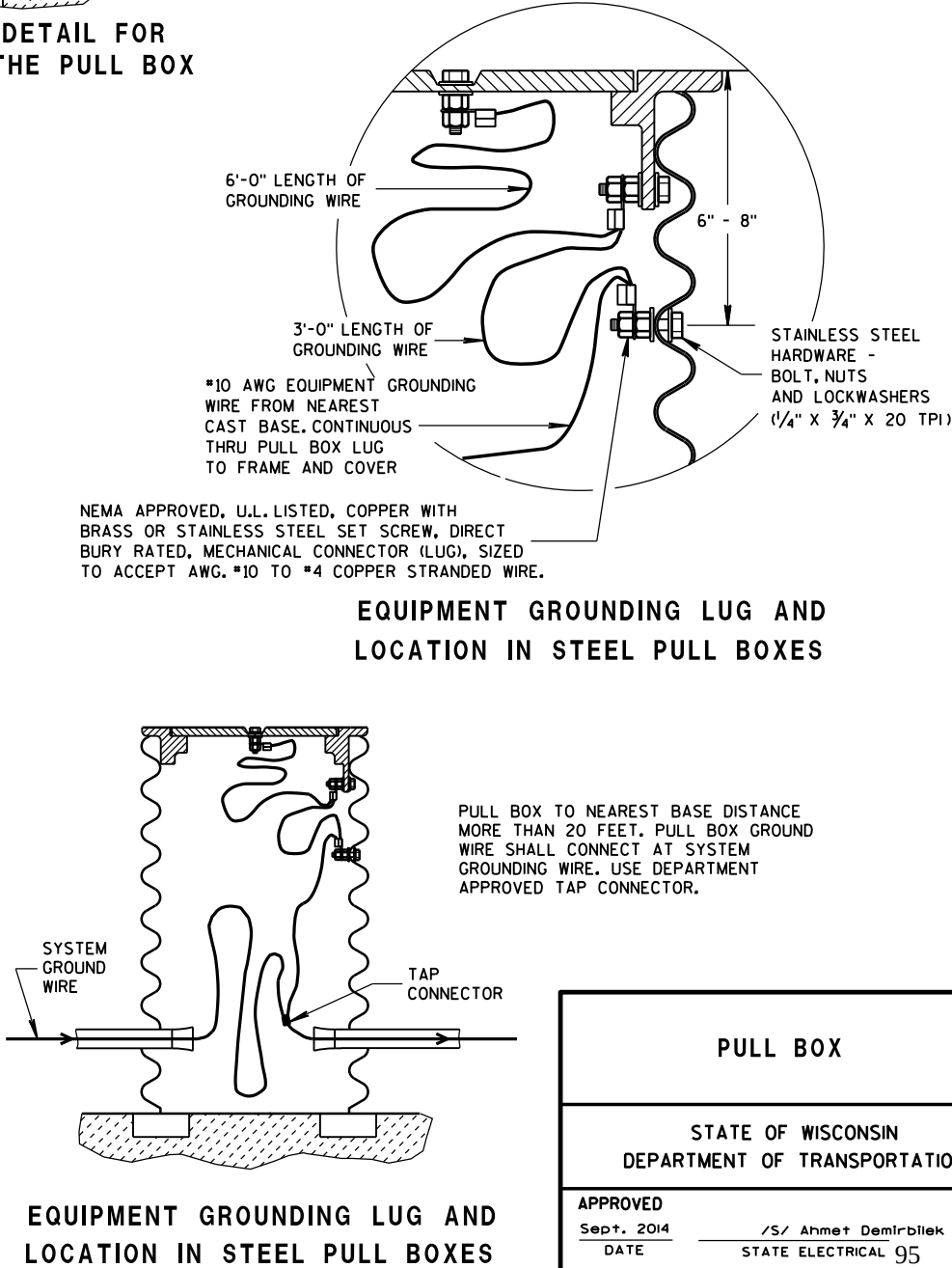
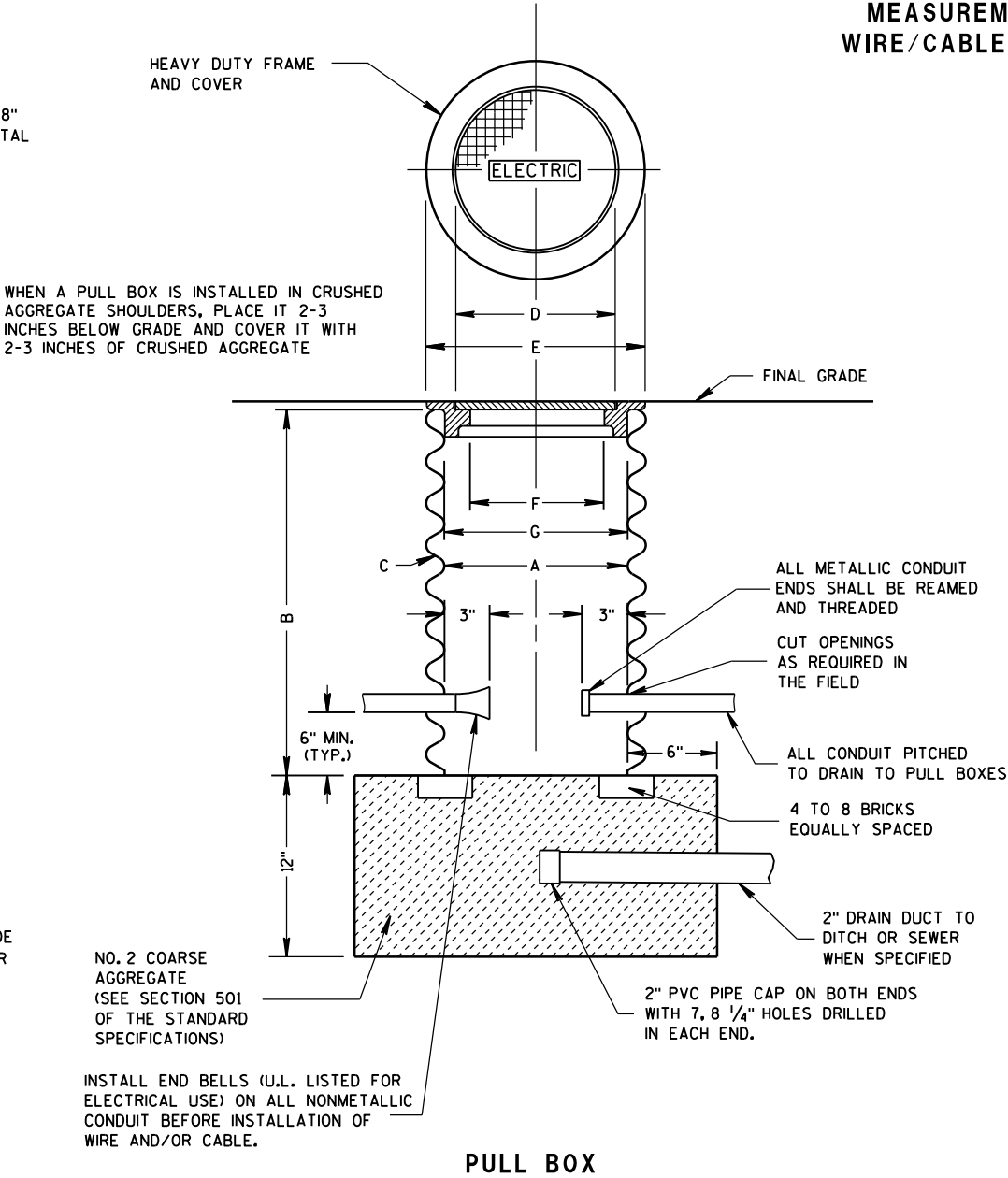
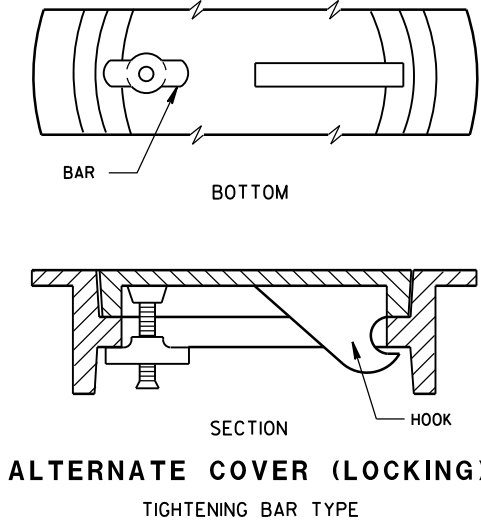
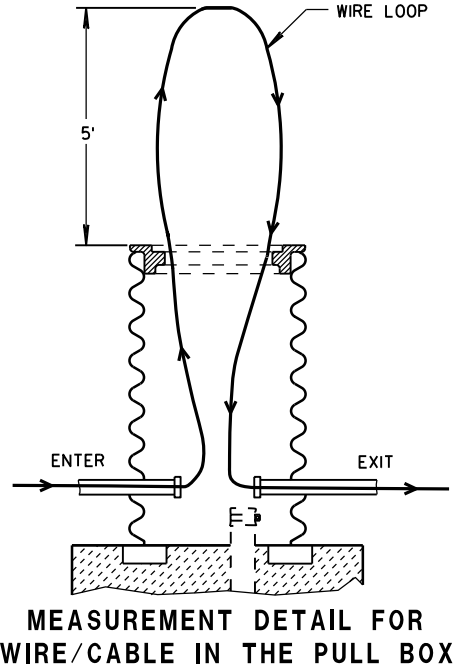
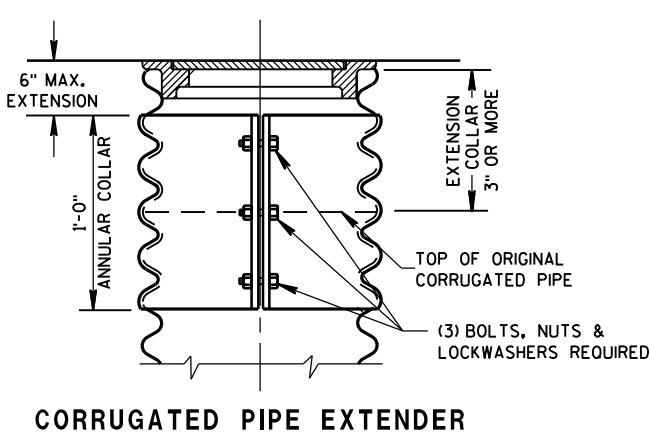
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

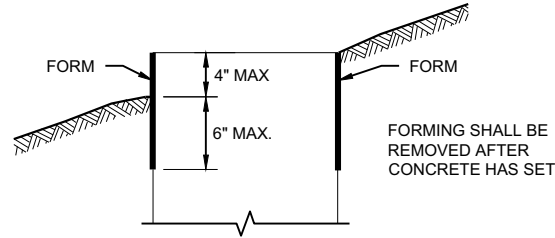
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 95
FHWA	

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

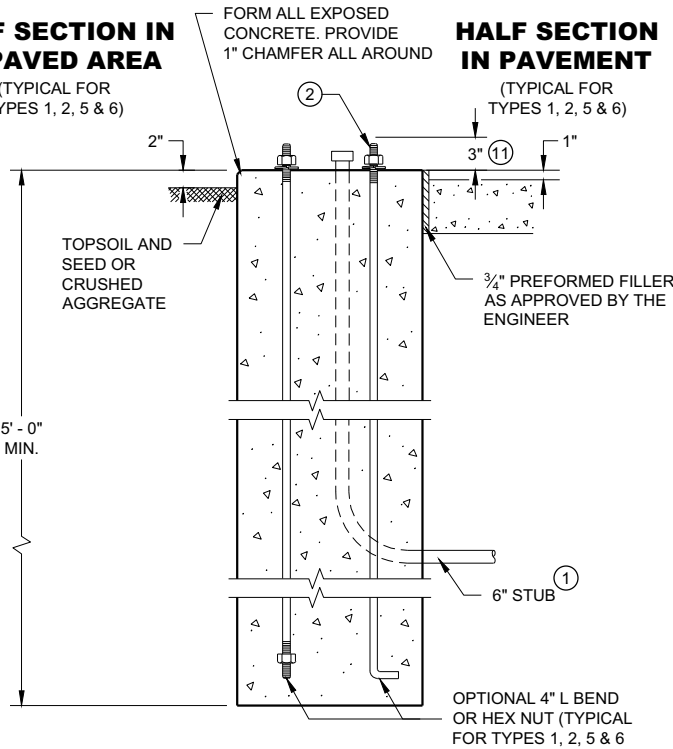
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

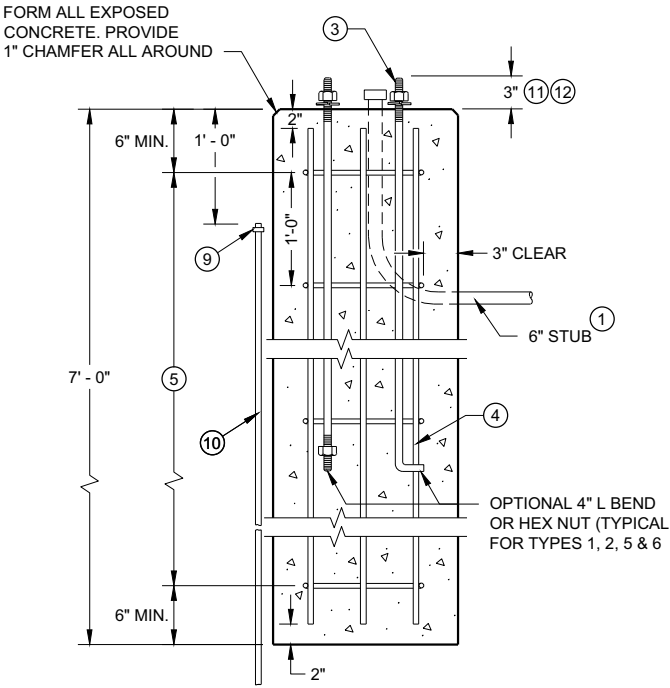
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



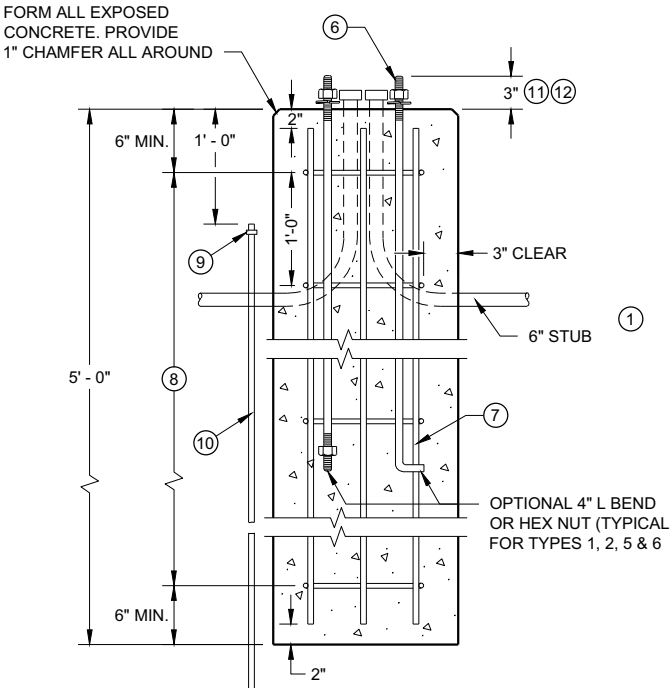
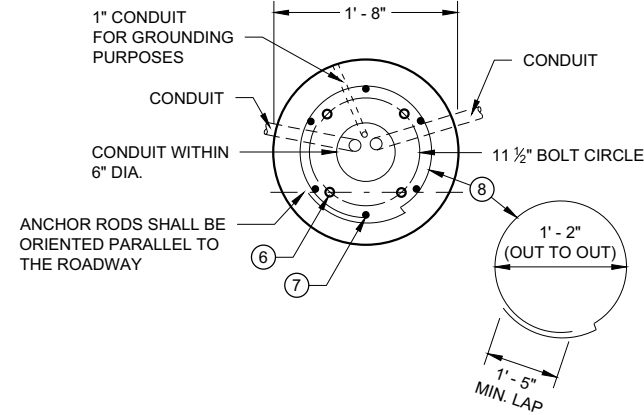
TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2

CONCRETE BASES



TYPE 5 & 6

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

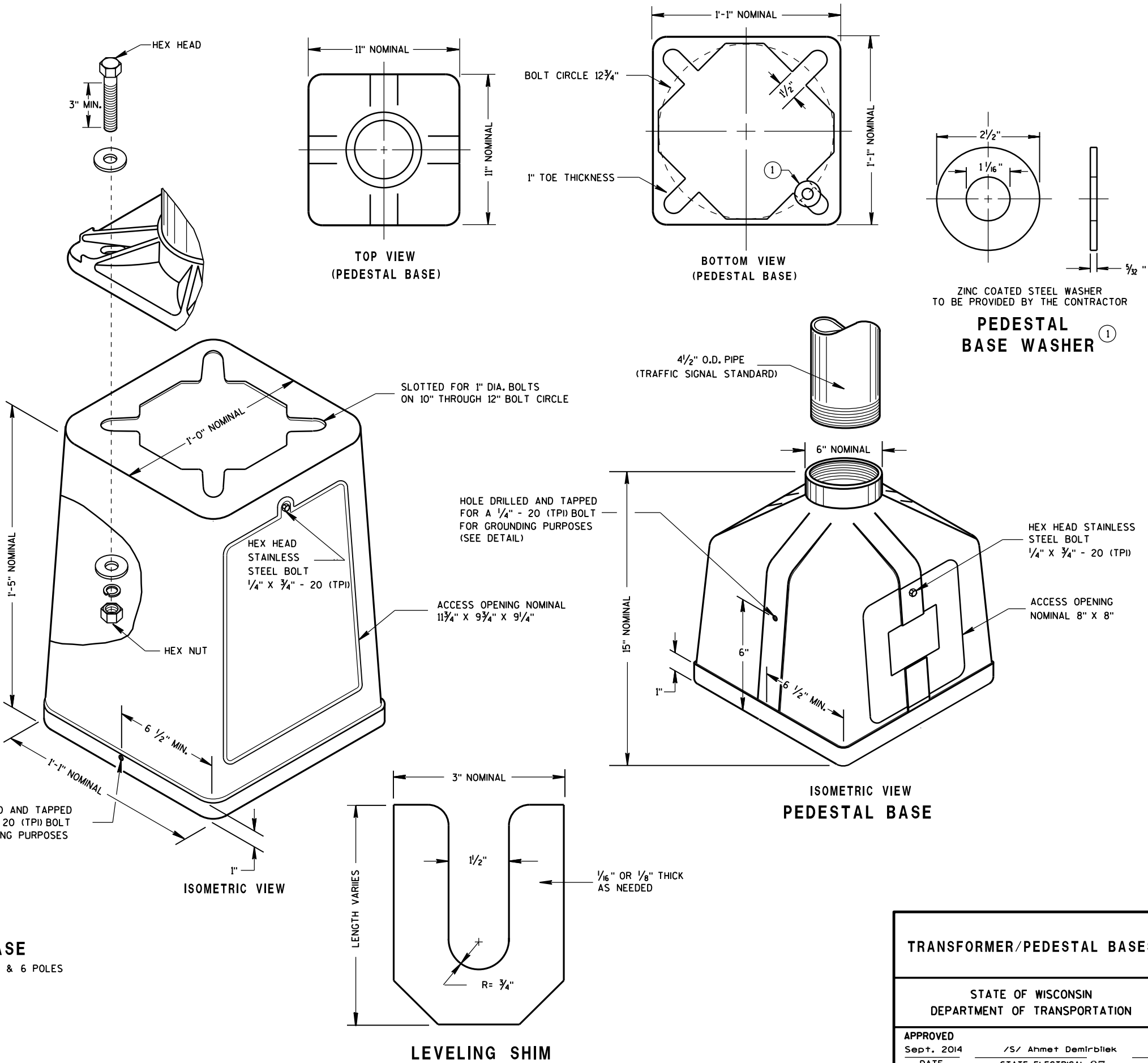
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



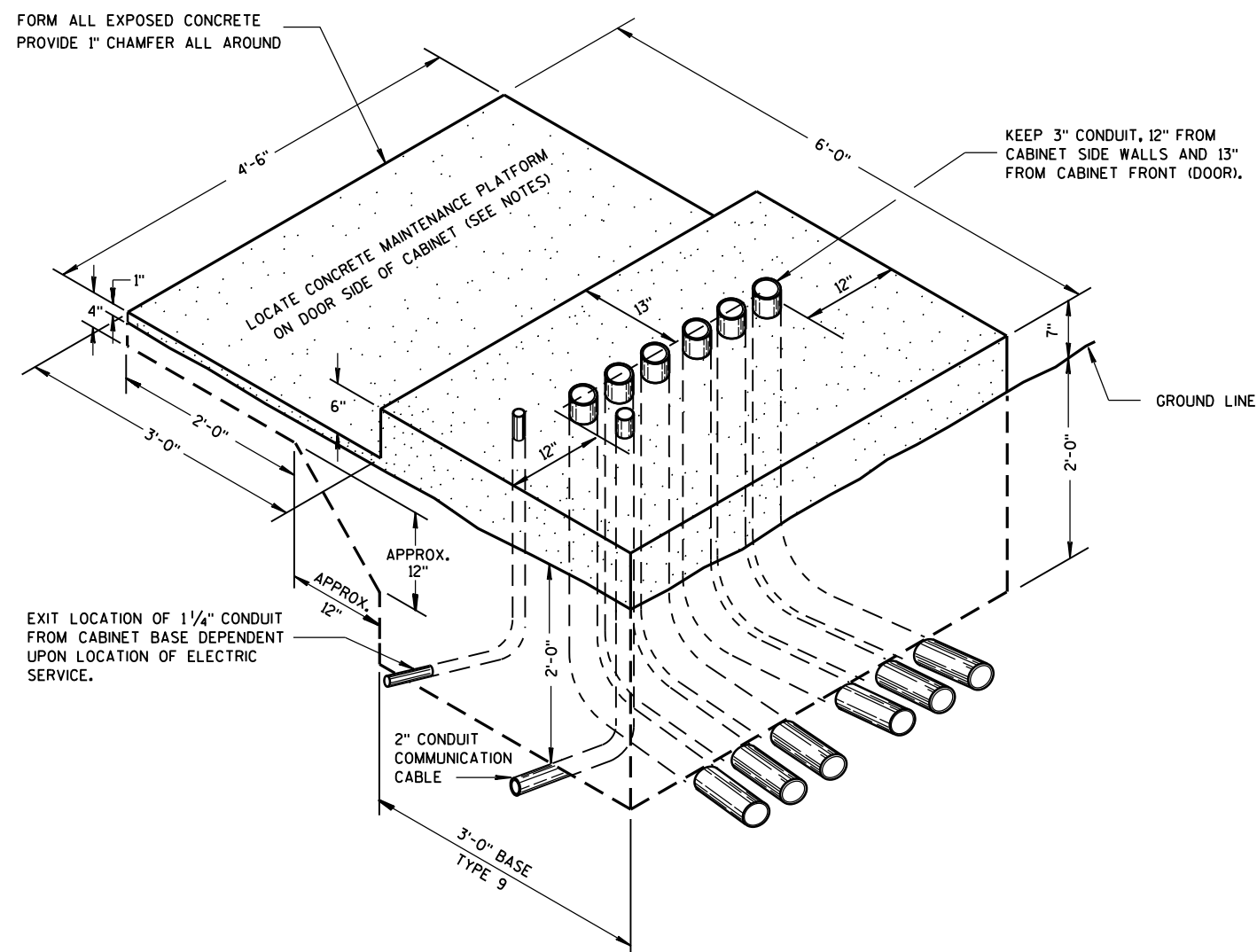
TYPICAL MECHANICAL
CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

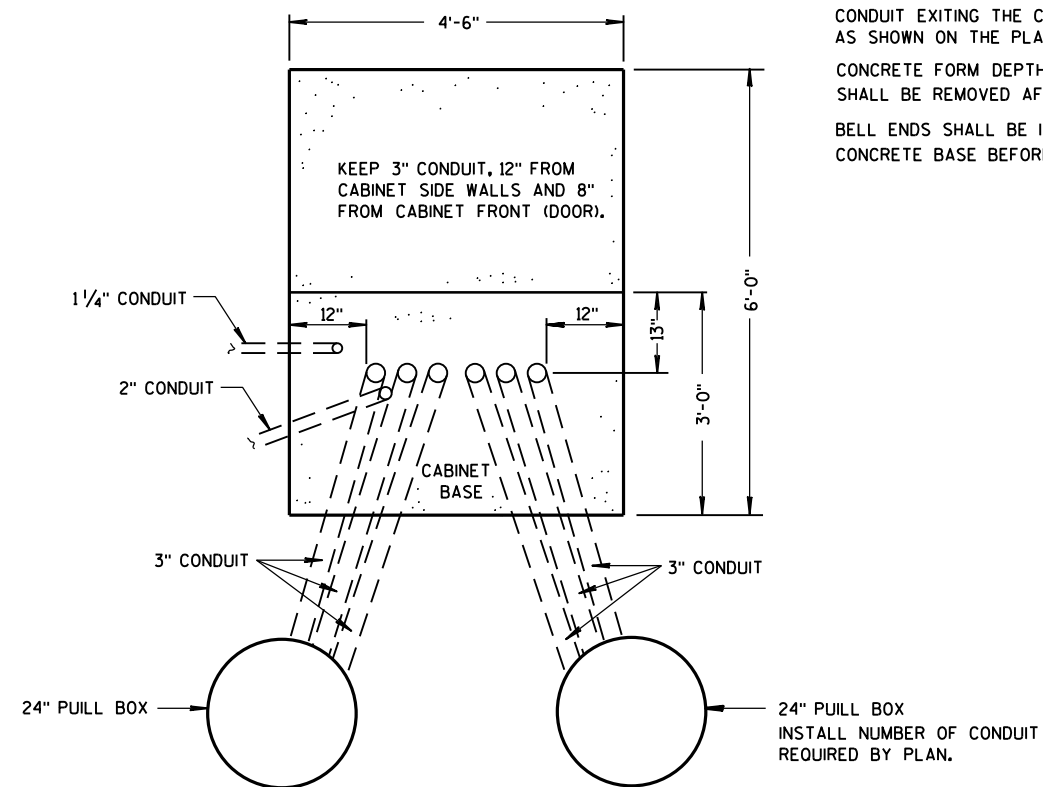
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 97
FHWA



ISOMETRIC VIEW
TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET
BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 98
FHWA

6

S.D.D. 9 C 11-10

S.D.D. 9 C 11-10

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S.D.D. 9 C 11-10



S.D.D. 9 C 11-10



S.D.D. 9 C 11-10

S.D.D. 9 C 11-10

S.D.D. 9 C 11-10

S.D.D. 9 C 11-10

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

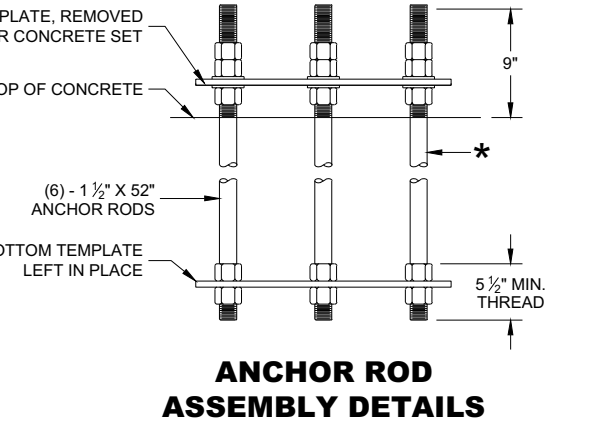
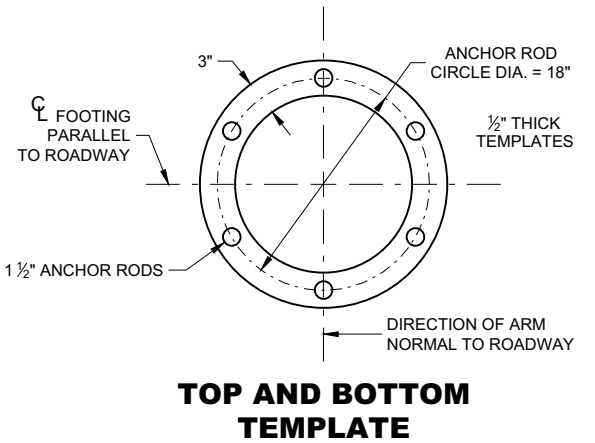
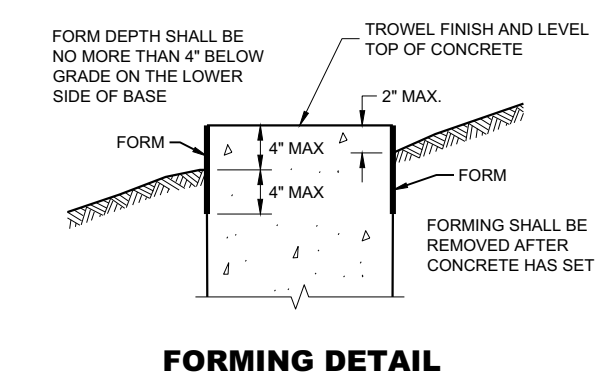
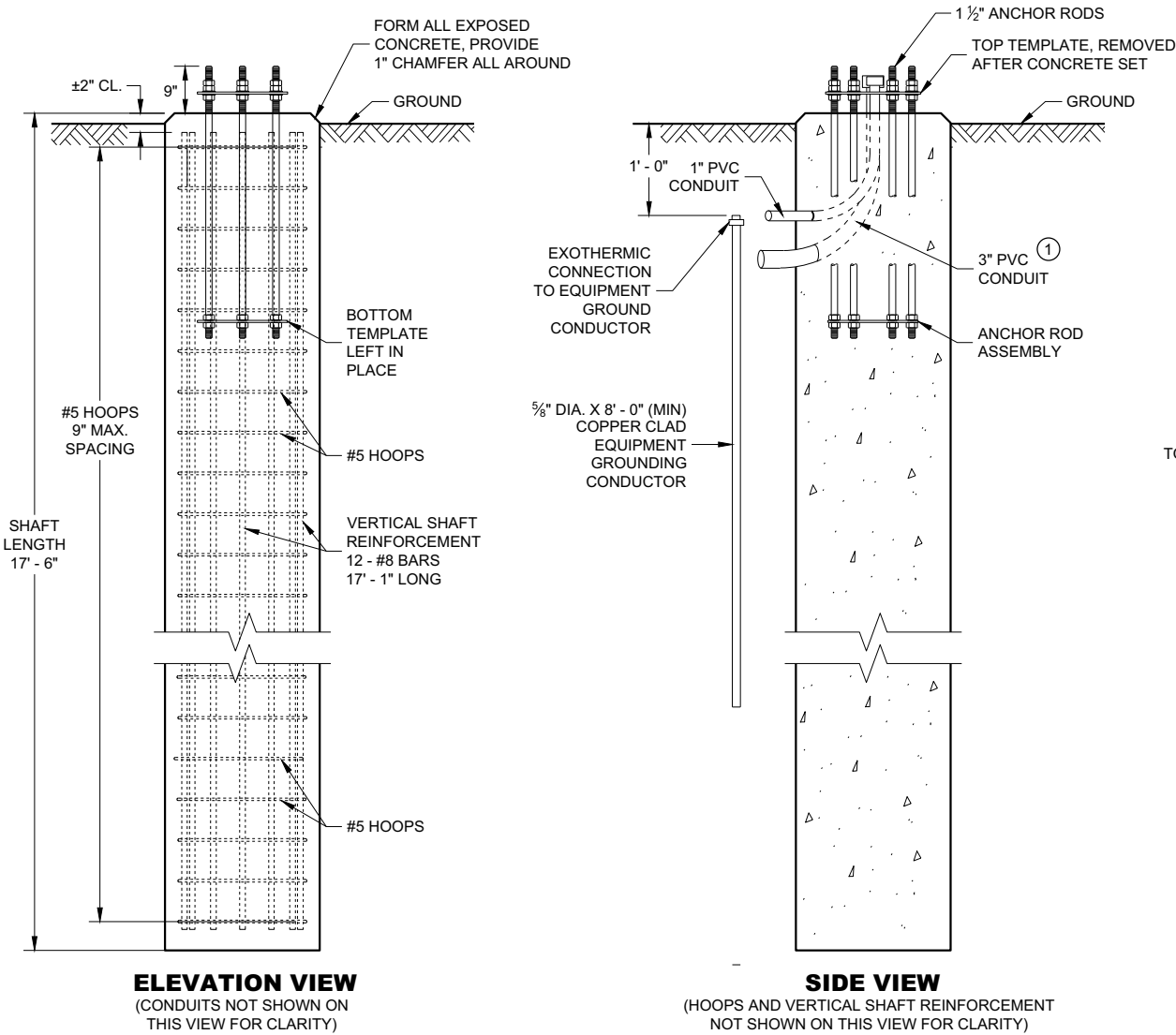
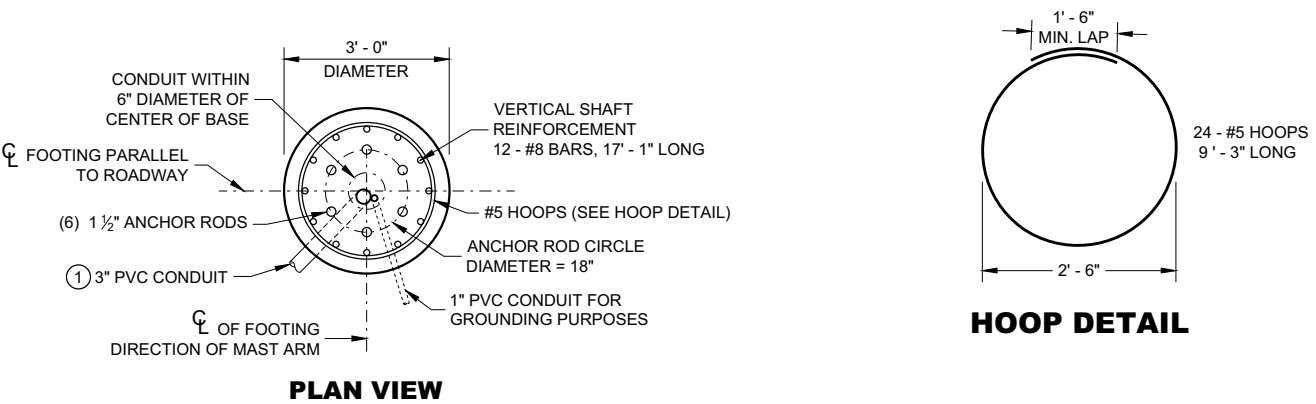
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)

CONCRETE = 4.6 CUBIC YARD
H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE
TYPE 10 SPECIAL

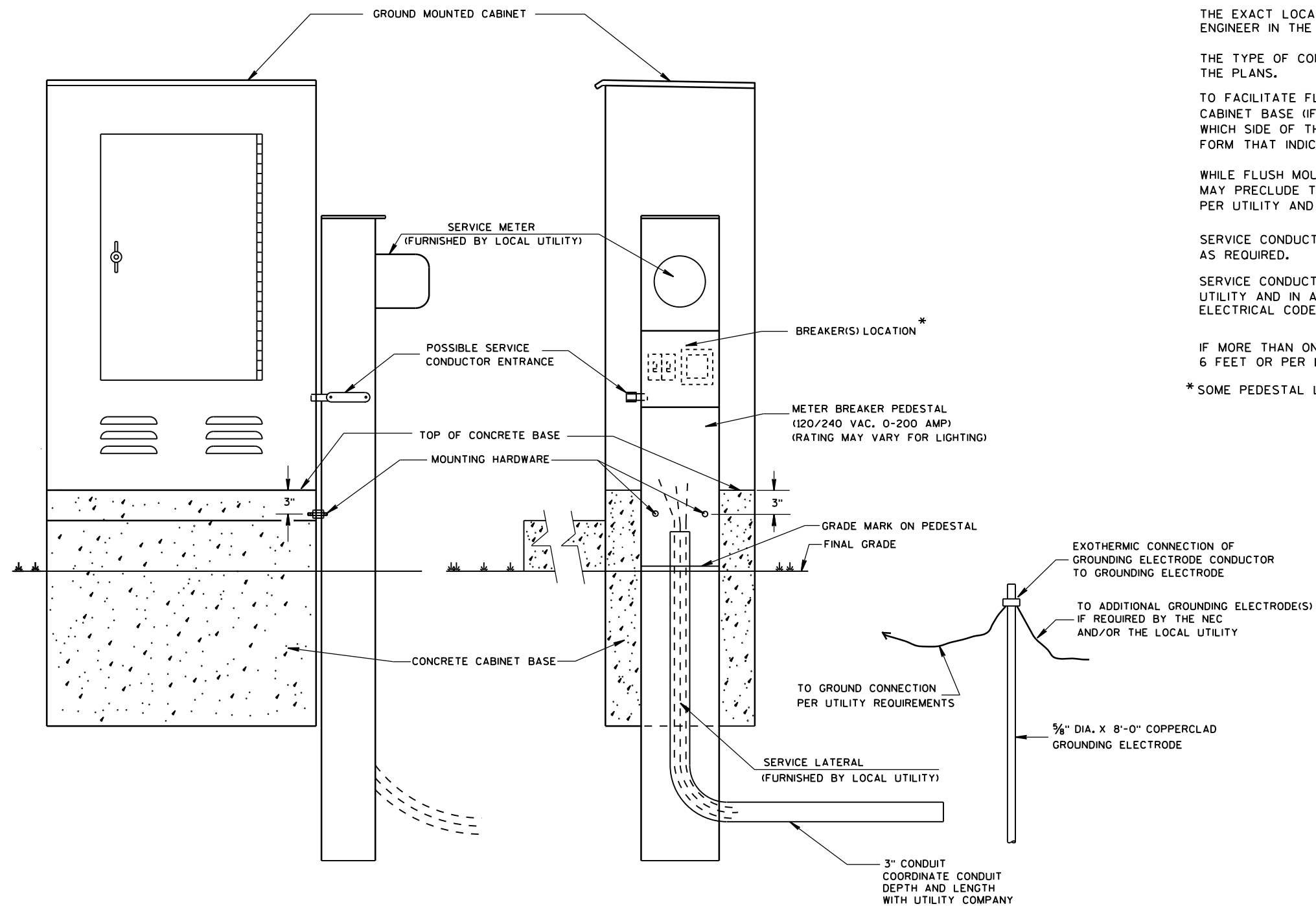
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Alex Crabtree
WIND LOADED STRUCTL
PROGRAM LEADER

100

FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

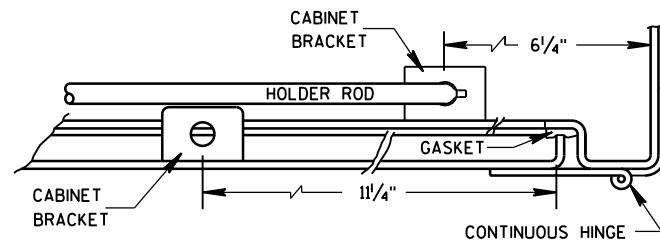
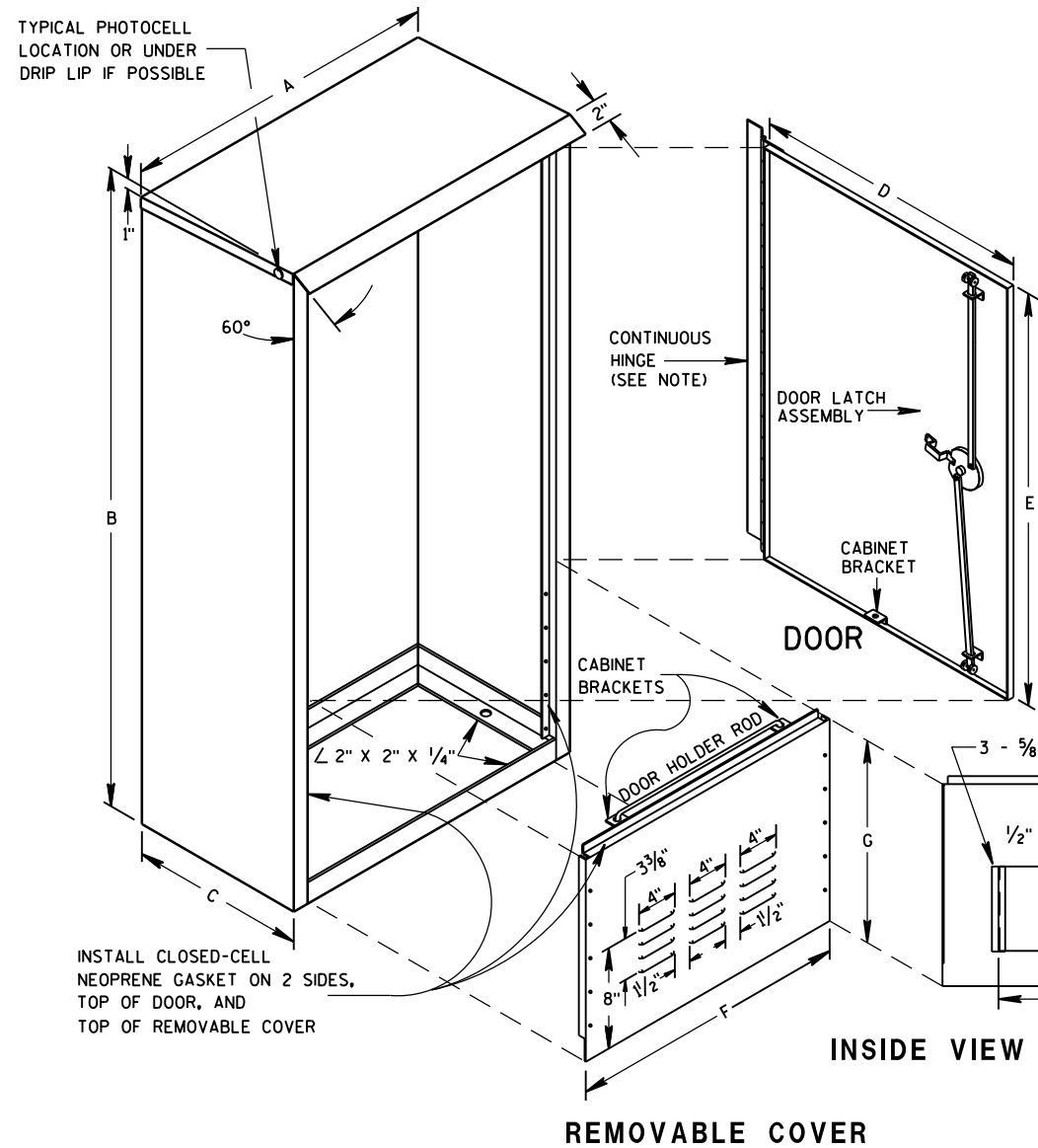
Sept. 2014

DATE

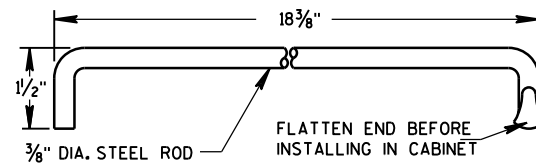
FHWA

/S/ Ahmet Demirbilek

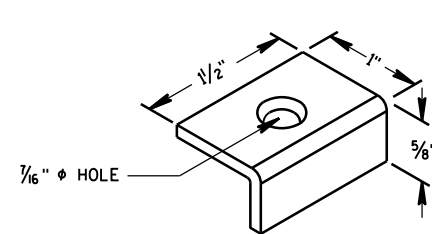
STATE ELECTRICAL 101



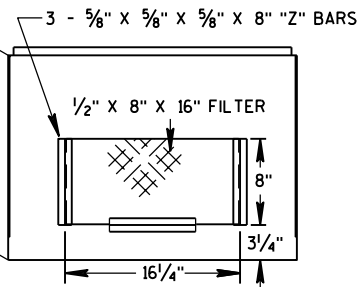
HINGE & DOOR HOLDER



HOLDER ROD



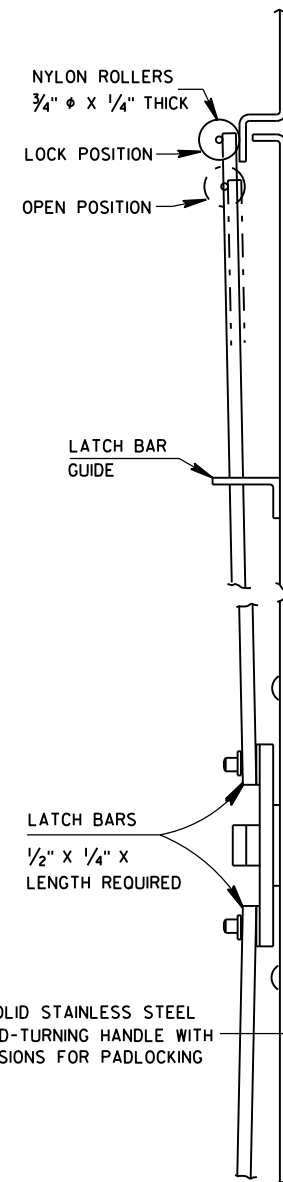
CABINET BRACKET



INSIDE VIEW SHOWING FILTER

TABLE OF DIMENSIONS (INCHES)

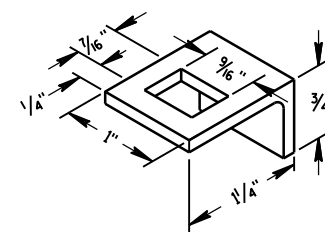
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

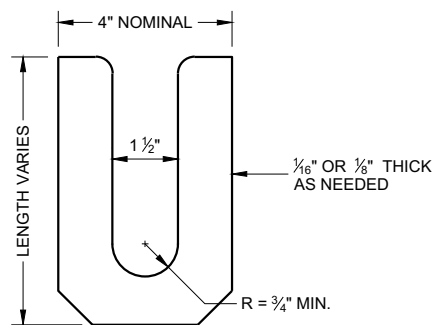
A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

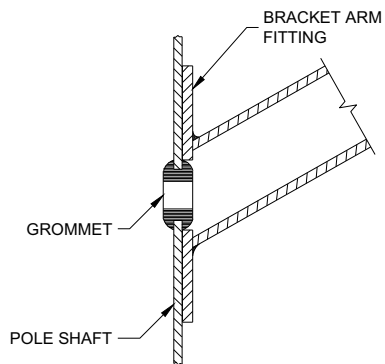
SIGNAL
CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

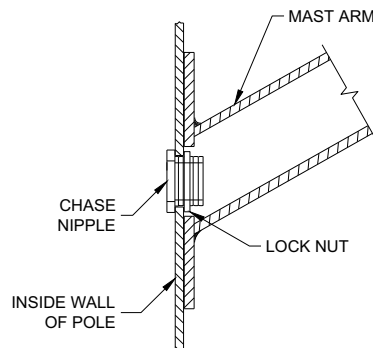
APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 102
FHWA



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



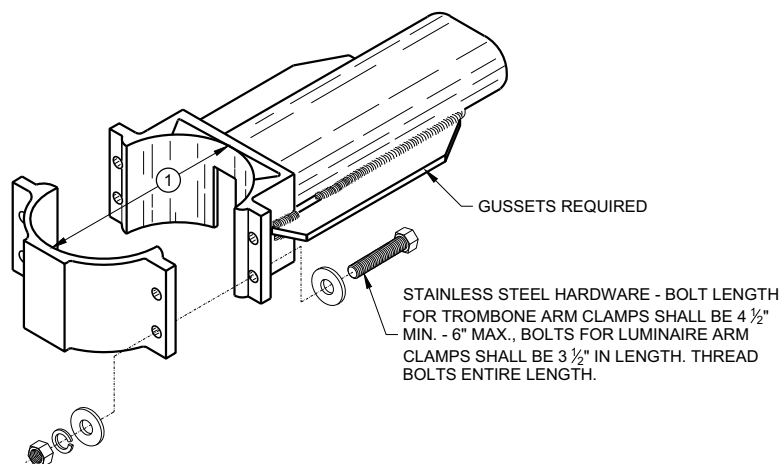
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

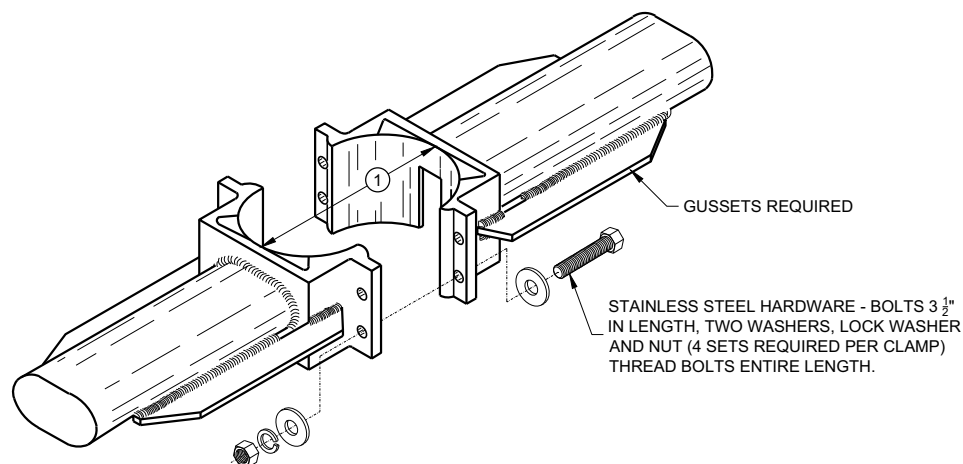
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

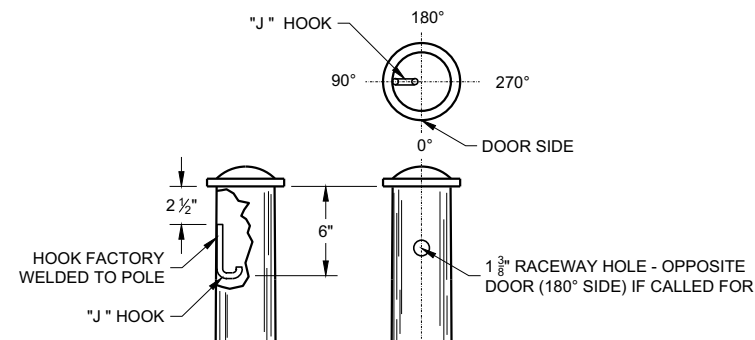
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



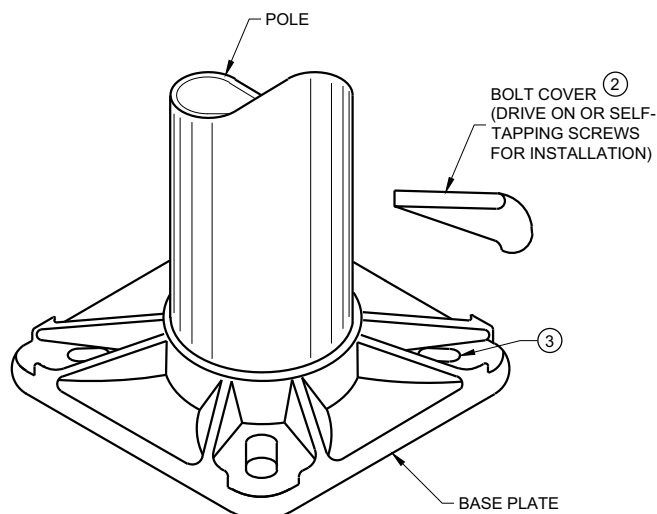
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



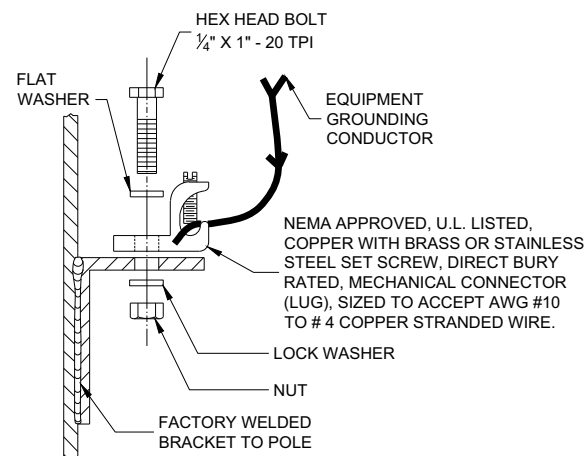
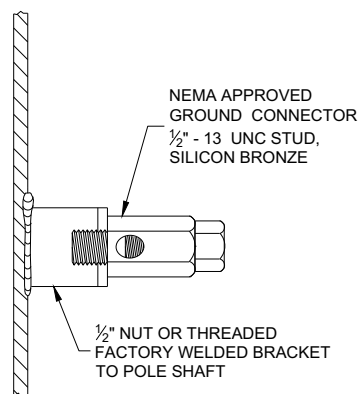
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



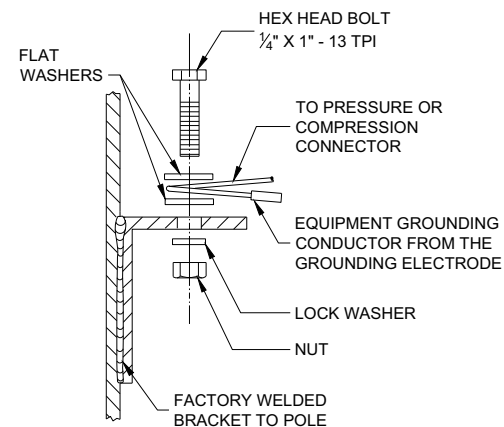
TYPICAL "J" HOOK LOCATION



BASE PLATE



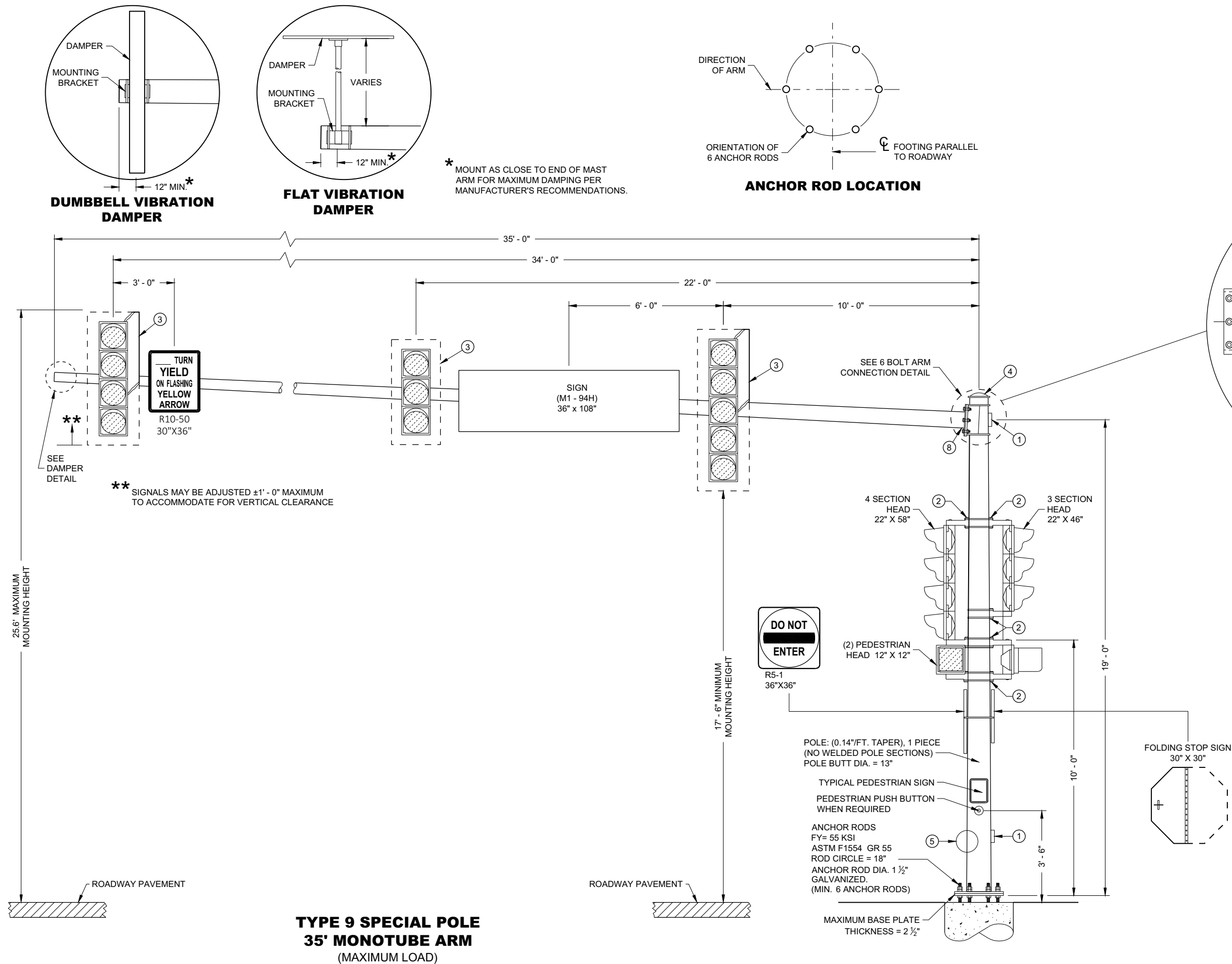
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



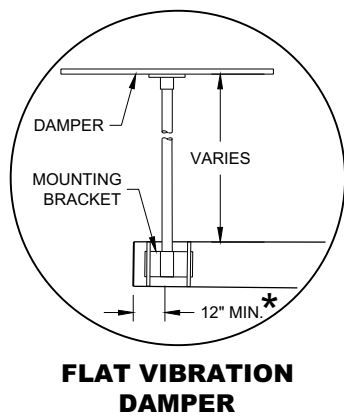
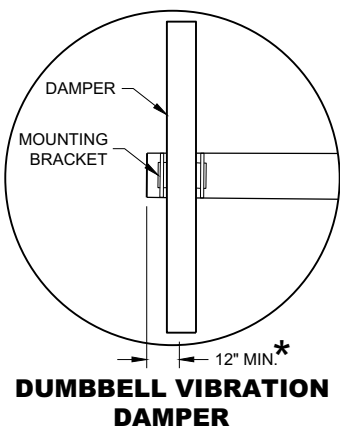
HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

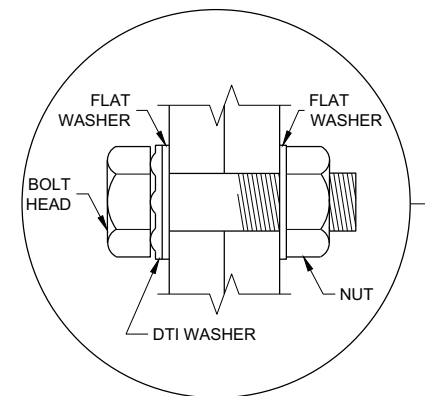
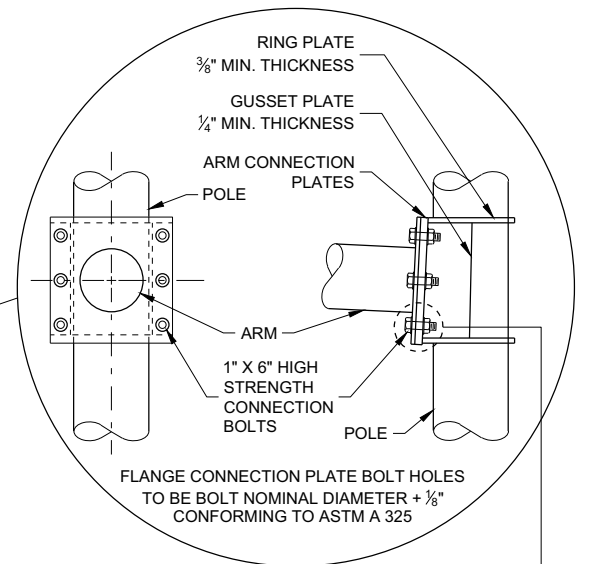
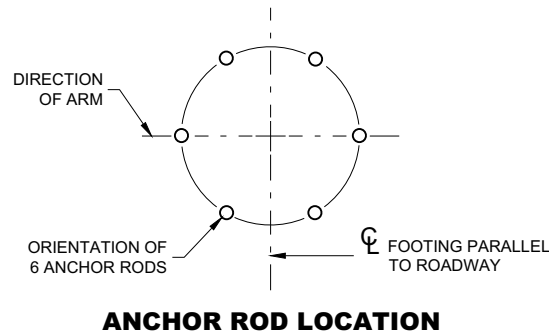
APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGI 103
FHWA



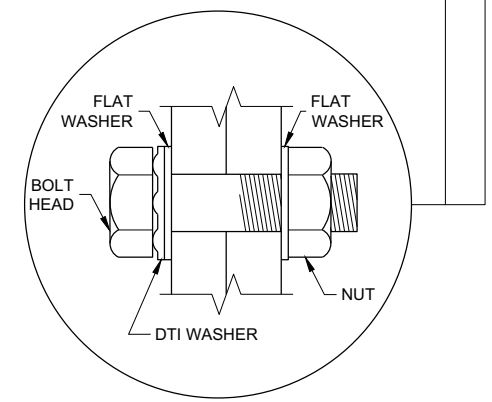
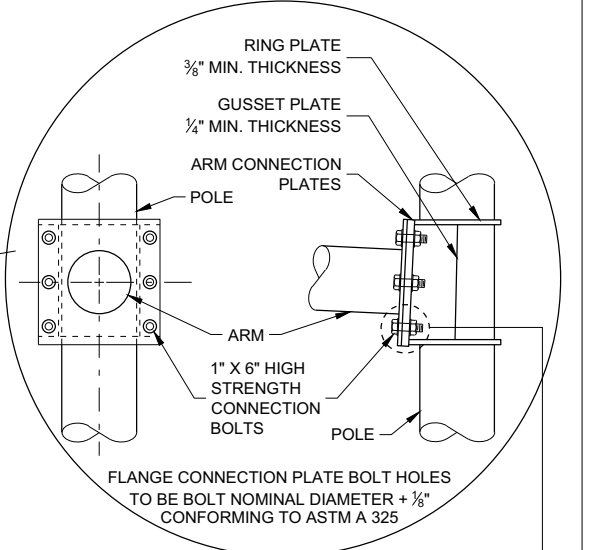
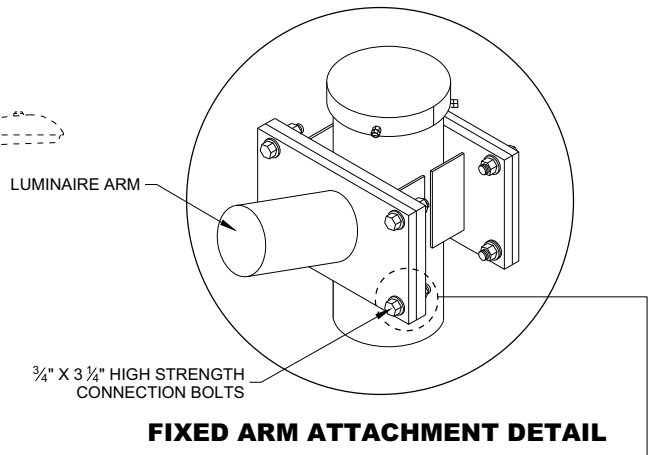
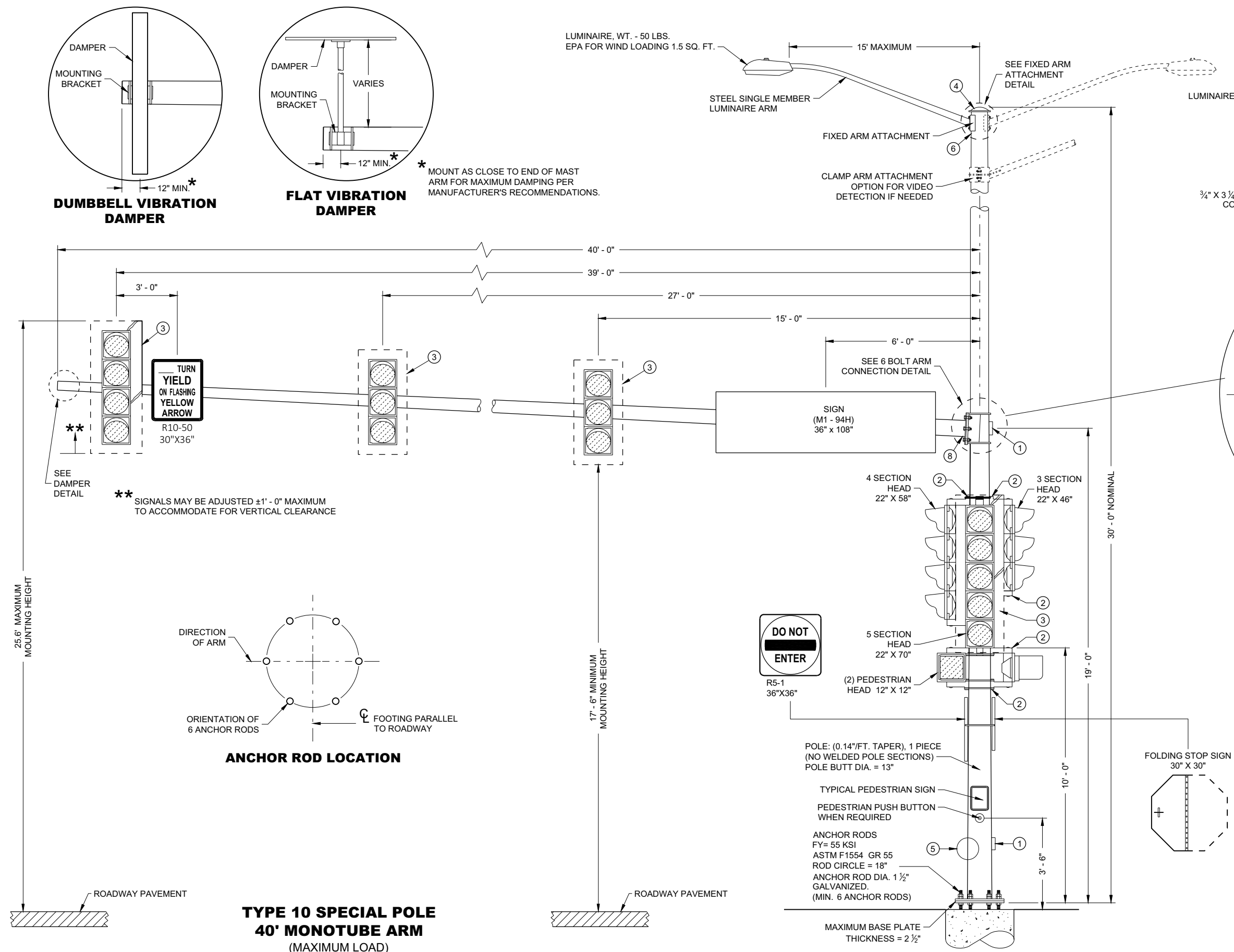
**TYPE 9 SPECIAL POLE
35' MONOTUBE ARM**
(MAXIMUM LOAD)



* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



TYPE 9 SPECIAL POLE 35' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGI 104
FHWA	



TYPE 10 SPECIAL POLE 40' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirebilek STATE ELECTRICAL ENGI 106
FHWA	

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

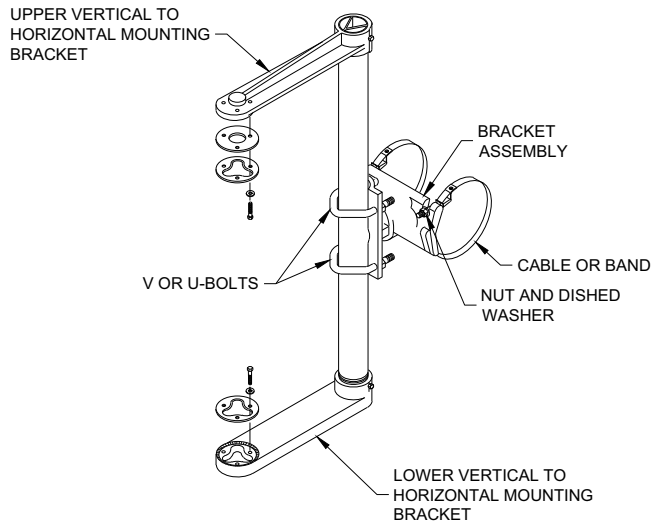
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- ① DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- ② SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).
- ③ SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- ④ THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- ⑤ FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥ FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

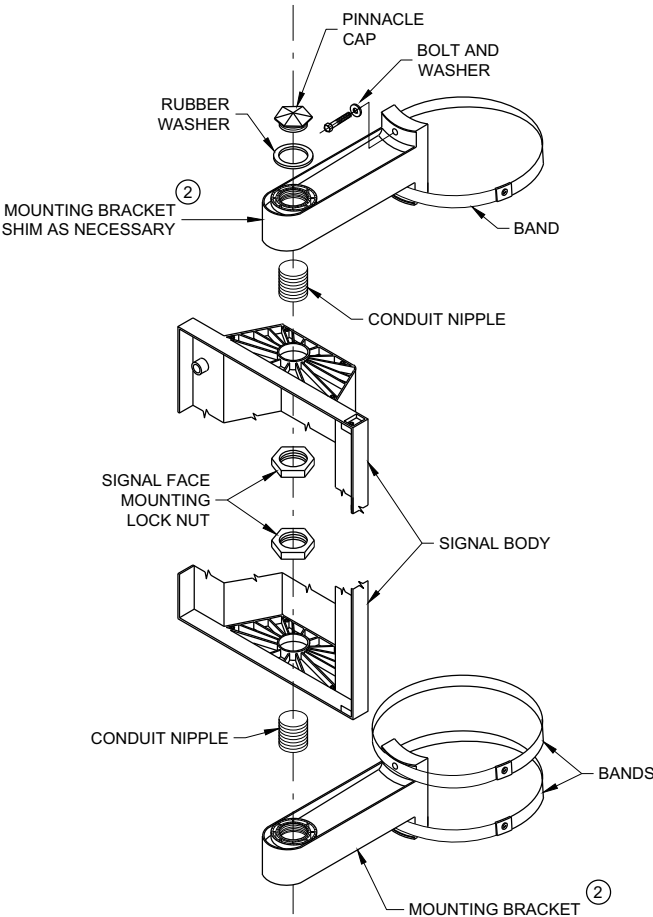
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

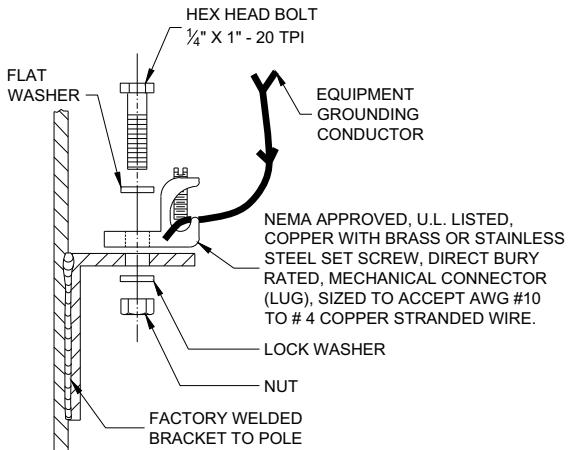
- ⑧ FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM
(MOUNT PER MANFACTURER'S RECOMMENDATION)

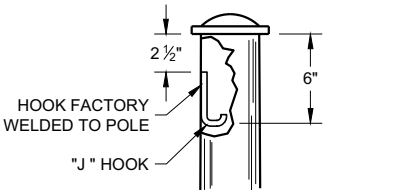


SIGNAL FACE VERTICAL
MOUNTING DETAIL

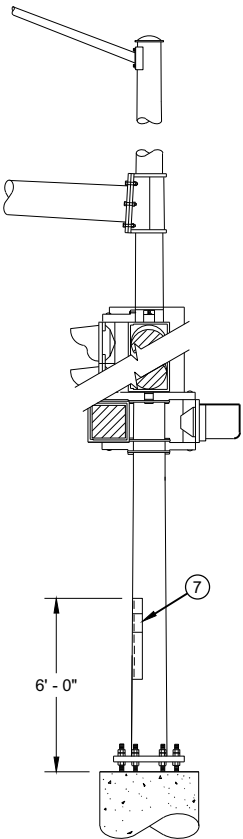


TYPICAL GROUNDING
CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



TYPICAL "J" HOOK
WIRE SUPPORT

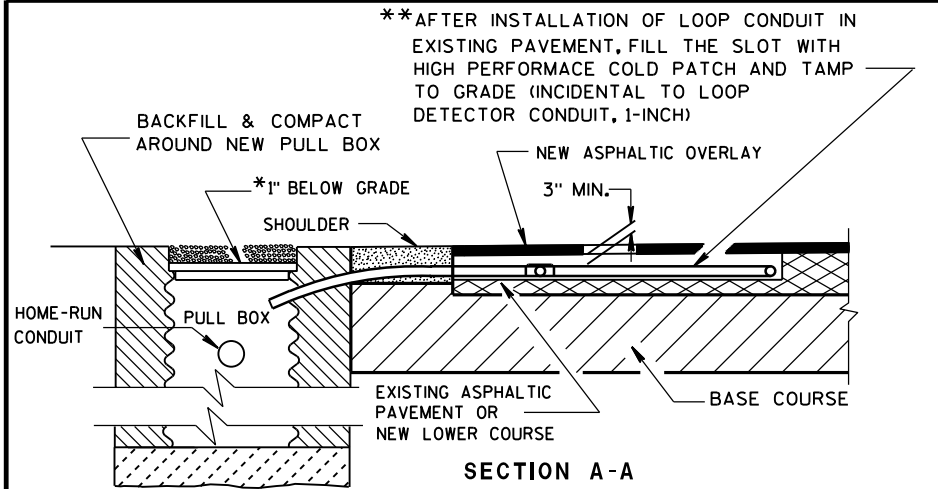


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT

GENERAL NOTES AND
HARDWARE FOR TYPES 9,10,
9/10 SPECIAL, 12 AND 13
POLES WITH MONOTUBE ARMS

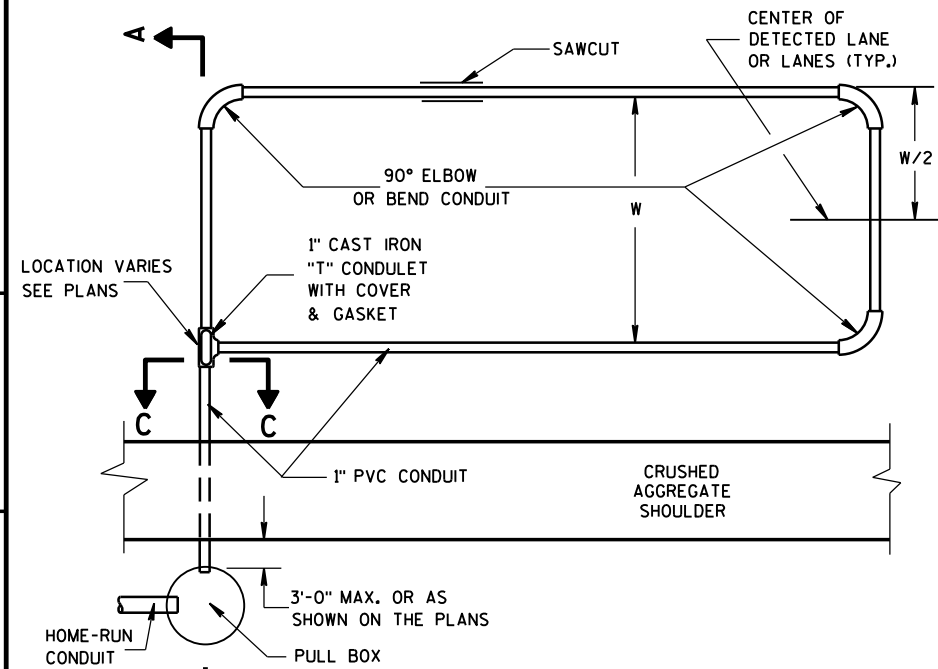
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER 107
FHWA

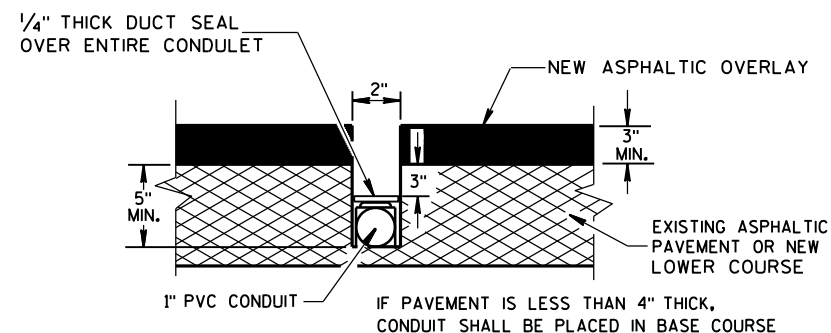


SECTION A-A
NO CURB & GUTTER
LOOP DETECTOR INSTALLATION DETAIL

**RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW
SECTION C-C
LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

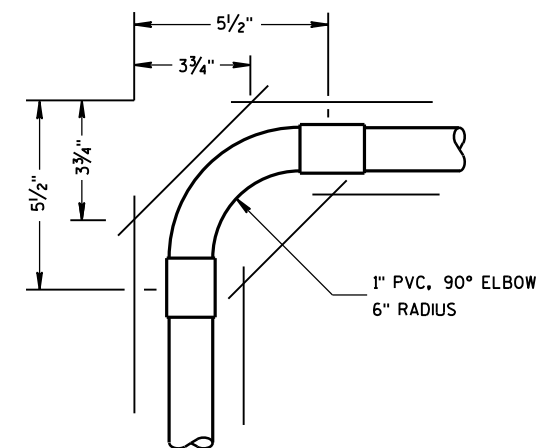
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

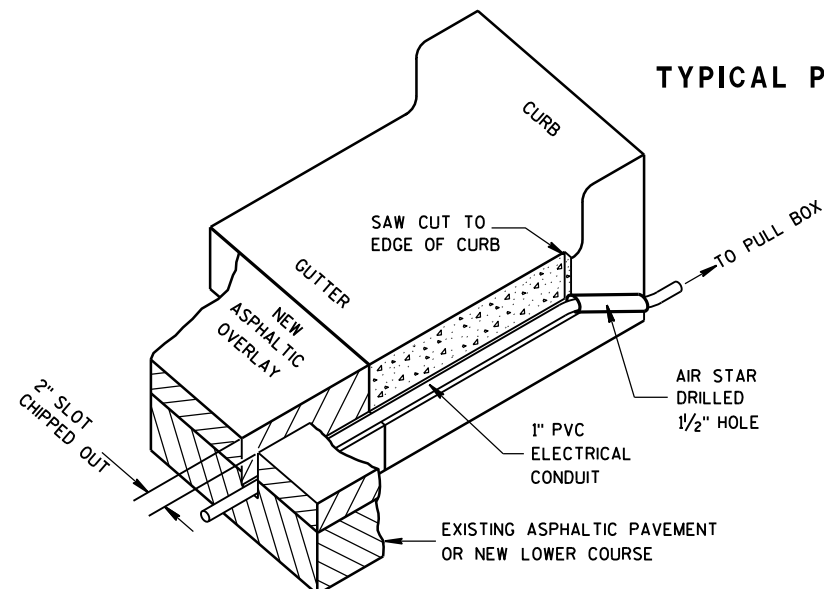
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

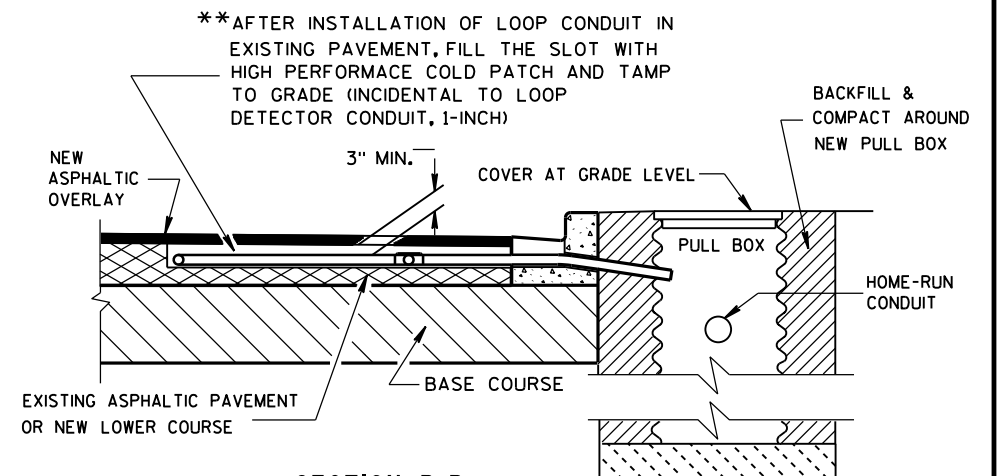
IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



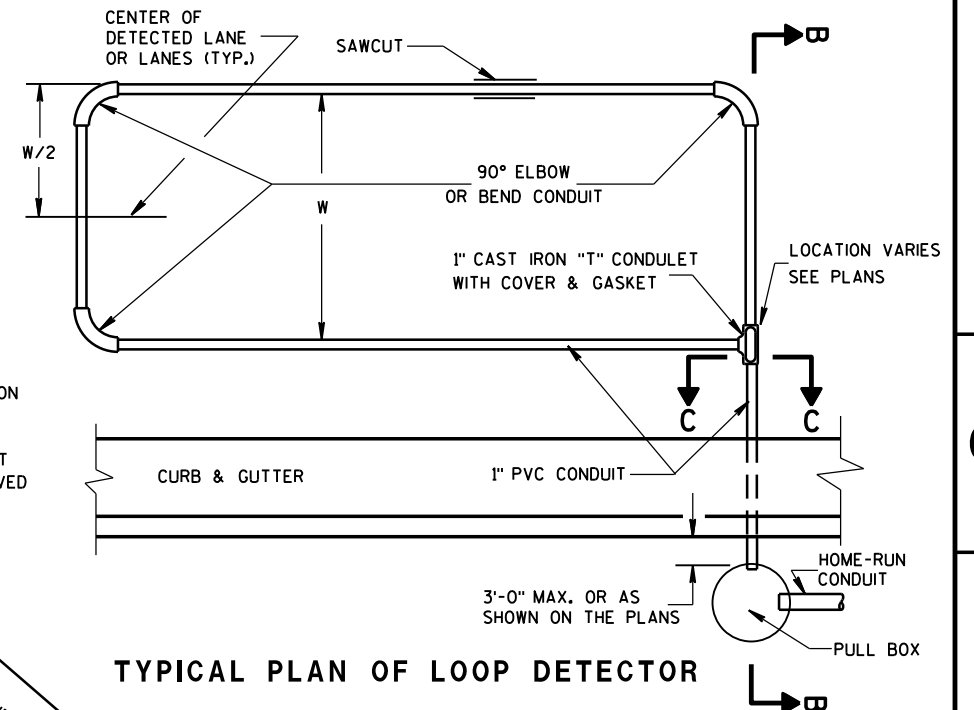
TOP VIEW
CORNER SAW SLOT DETAIL



ISOMETRIC VIEW
TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT

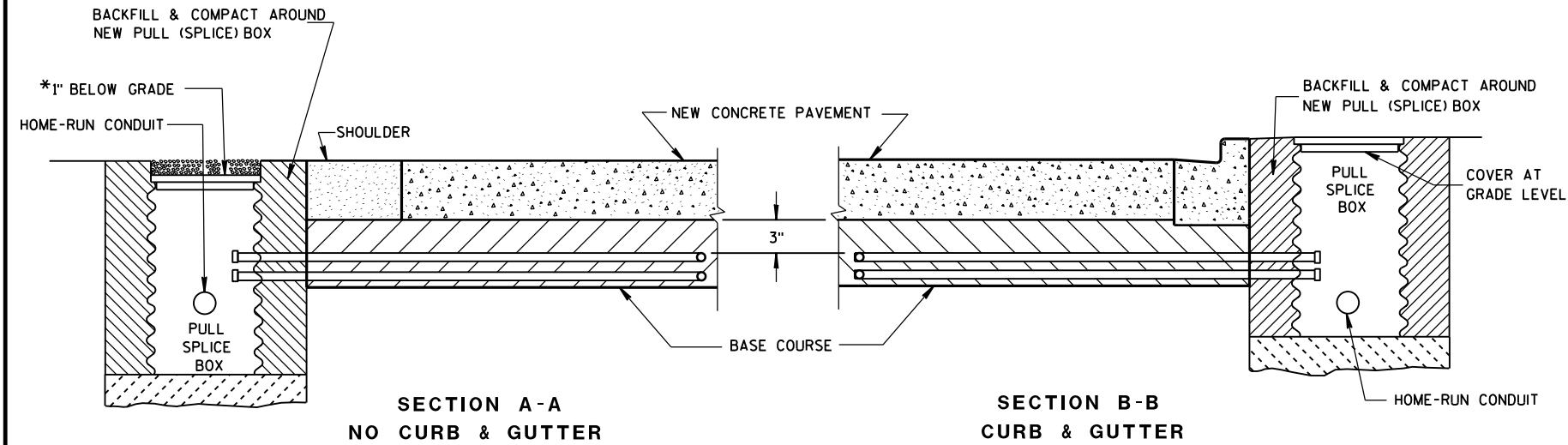


SECTION B-B
CURB & GUTTER
LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sep. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 108
FHWA	



*RECESS PULL (SPlice) BOX SO THAT THE COVER IS 3\"

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPlice) BOX.

SPlices SHALL BE INSTALLED BY USING CAST IN PLACE SPlice KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPlices TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPlices SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPlice KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPlicing THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

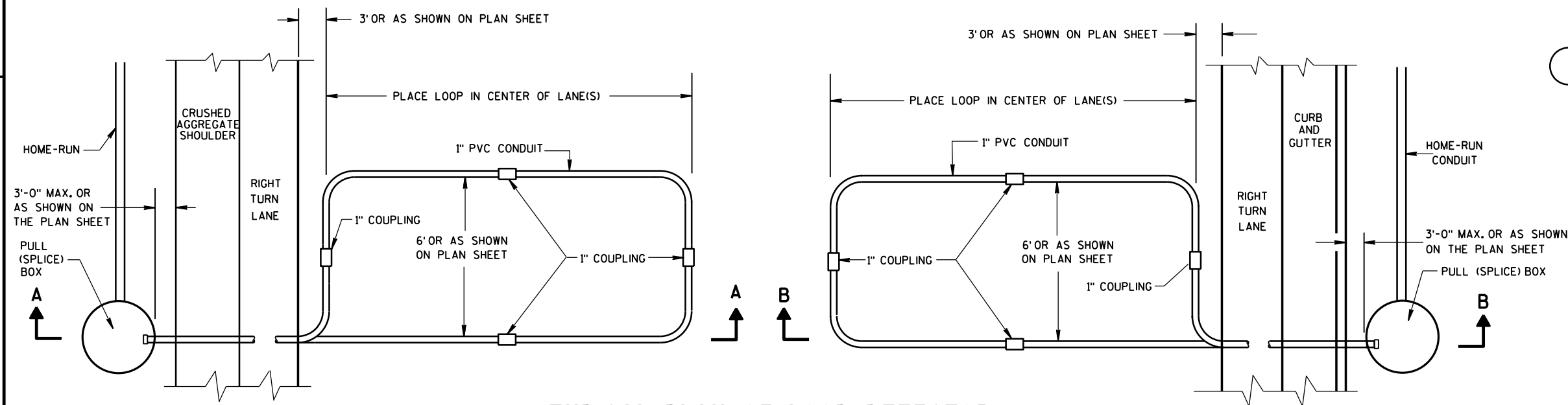
THE #12 AWG. LOOP WIRE IN THE PULL (SPlice) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPliced TO THE LOOP LEAD-IN CABLE.

SPlices OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPlice) BOXES AT THE SIDE OF THE ROAD.

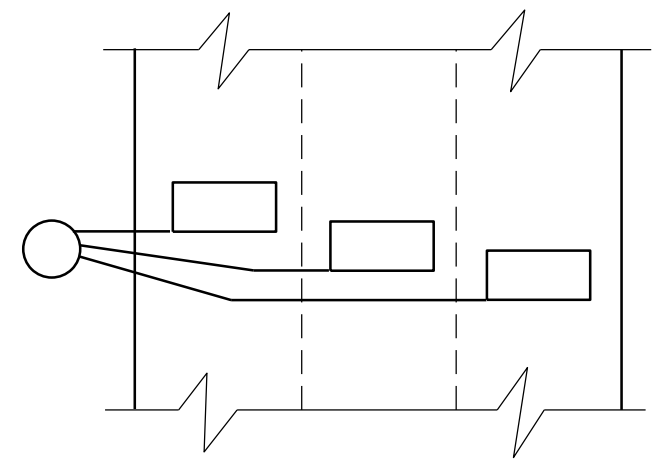
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPlice) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPlice) BOX, AND BE INSTALLED IN ONE, NON-SPliced CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 24\"

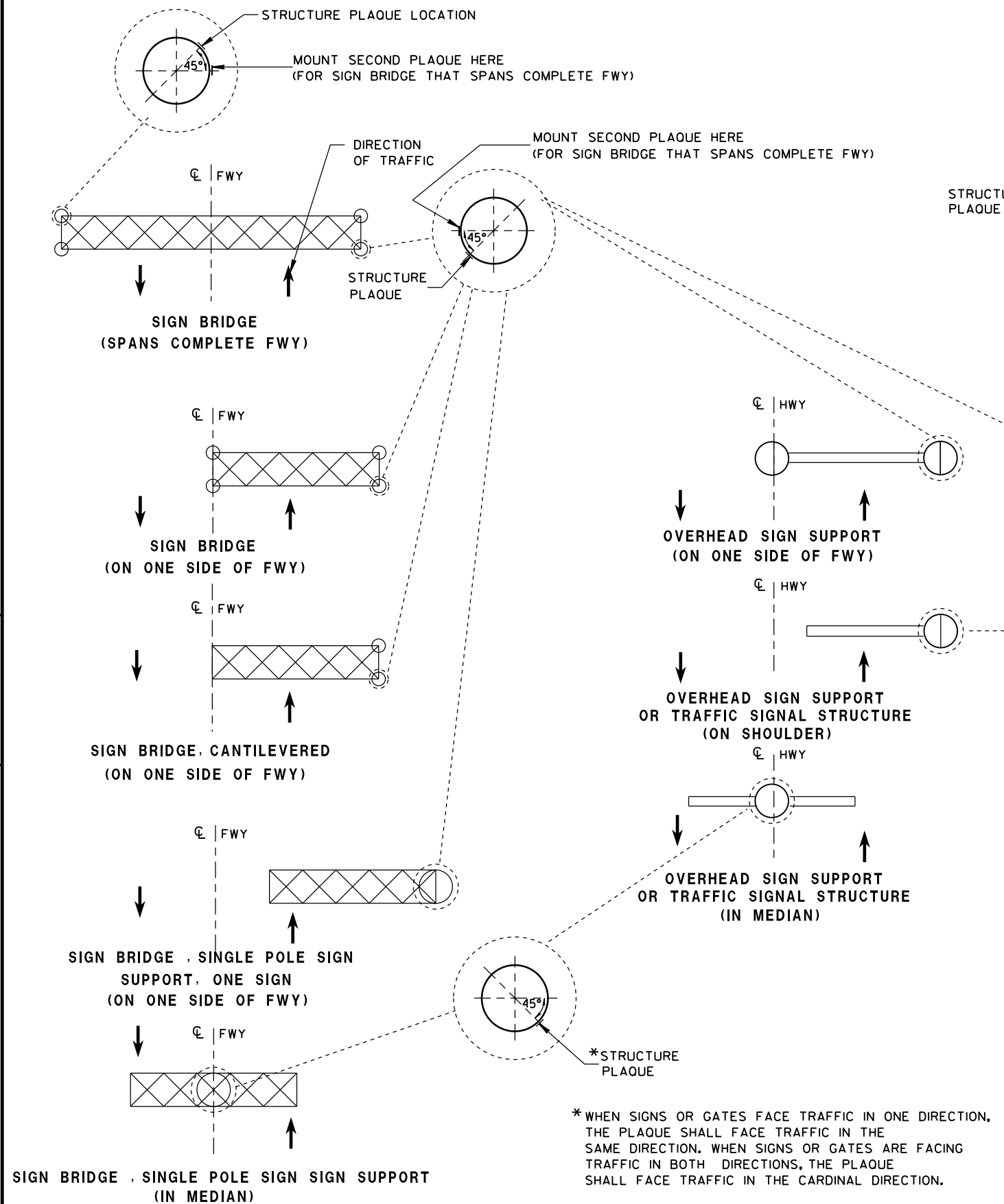


MULTI-LANE INSTALLATION

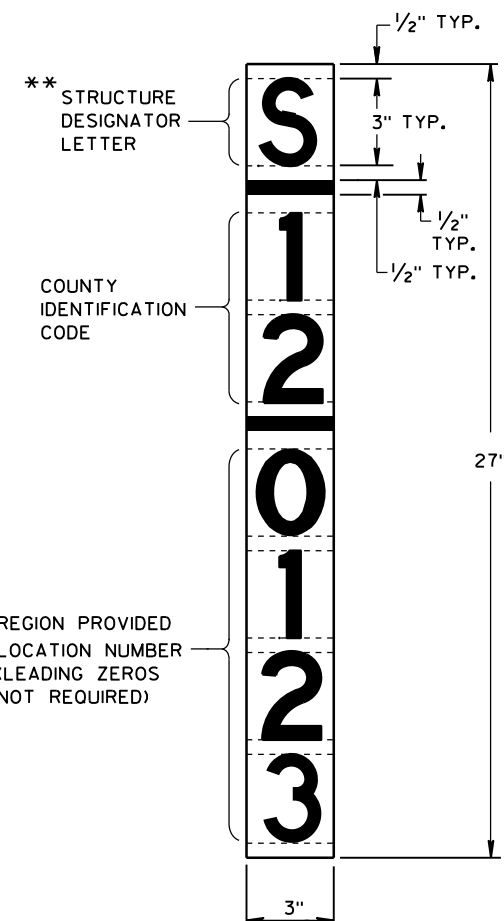
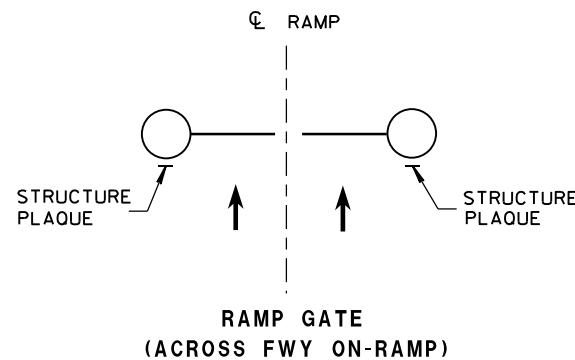
LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL 109
FHWA	

6

6



LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS;
FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

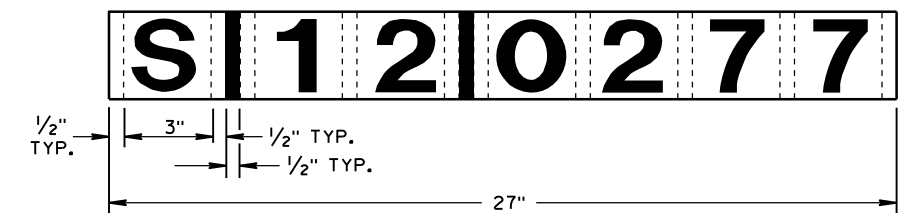
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

**** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.**

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

12/4/2012

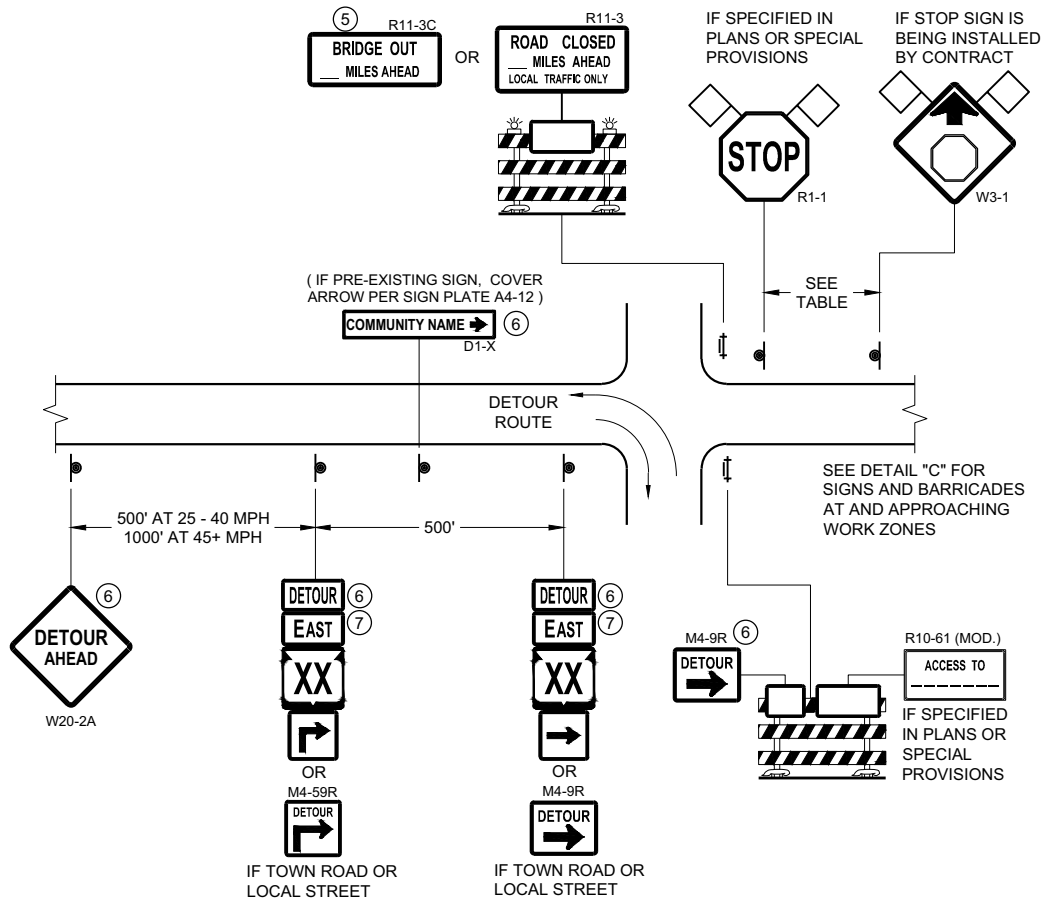
DATE

FHWA

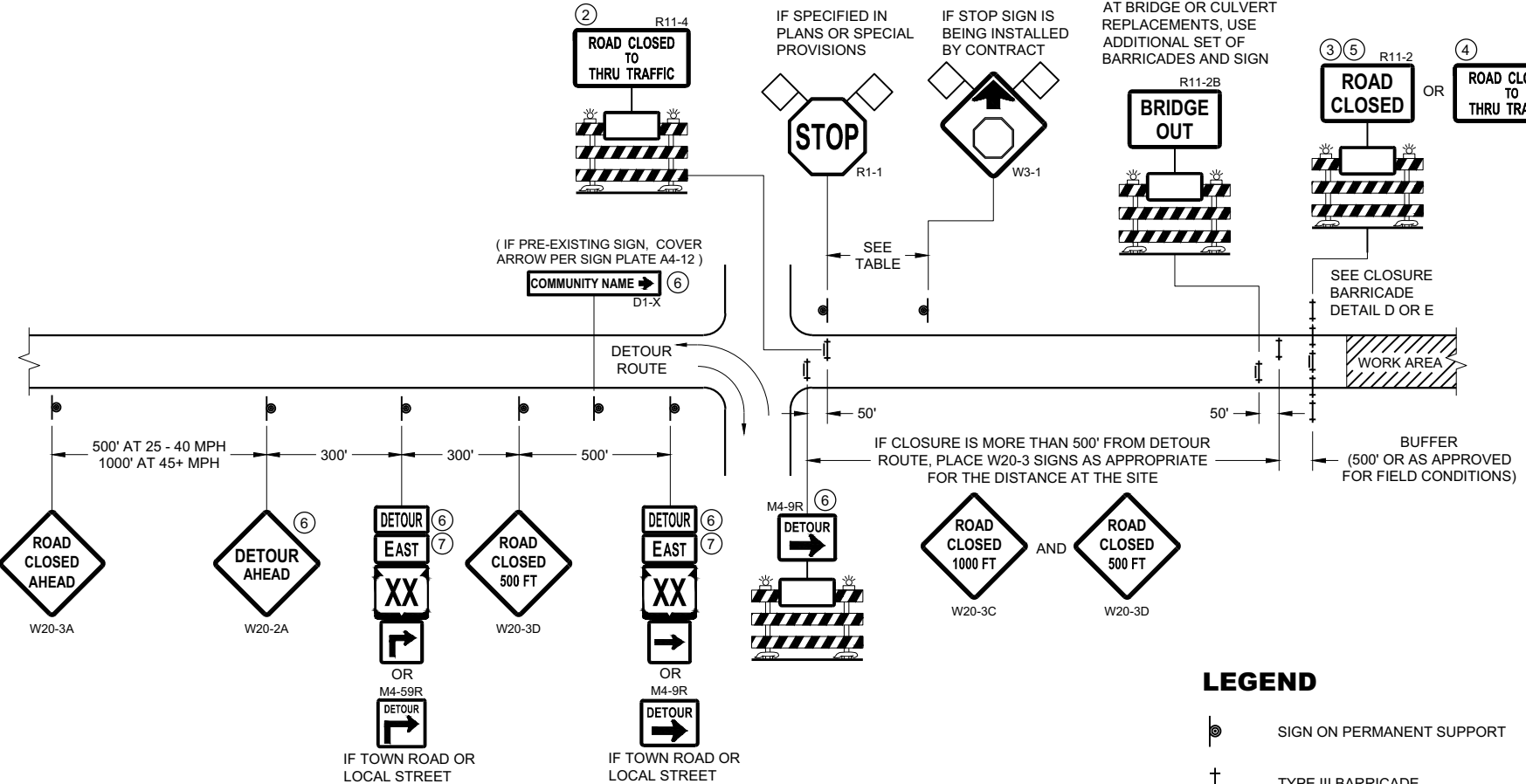
/S/ Travis Fettes

STATE TRAFFIC ENGINE 110

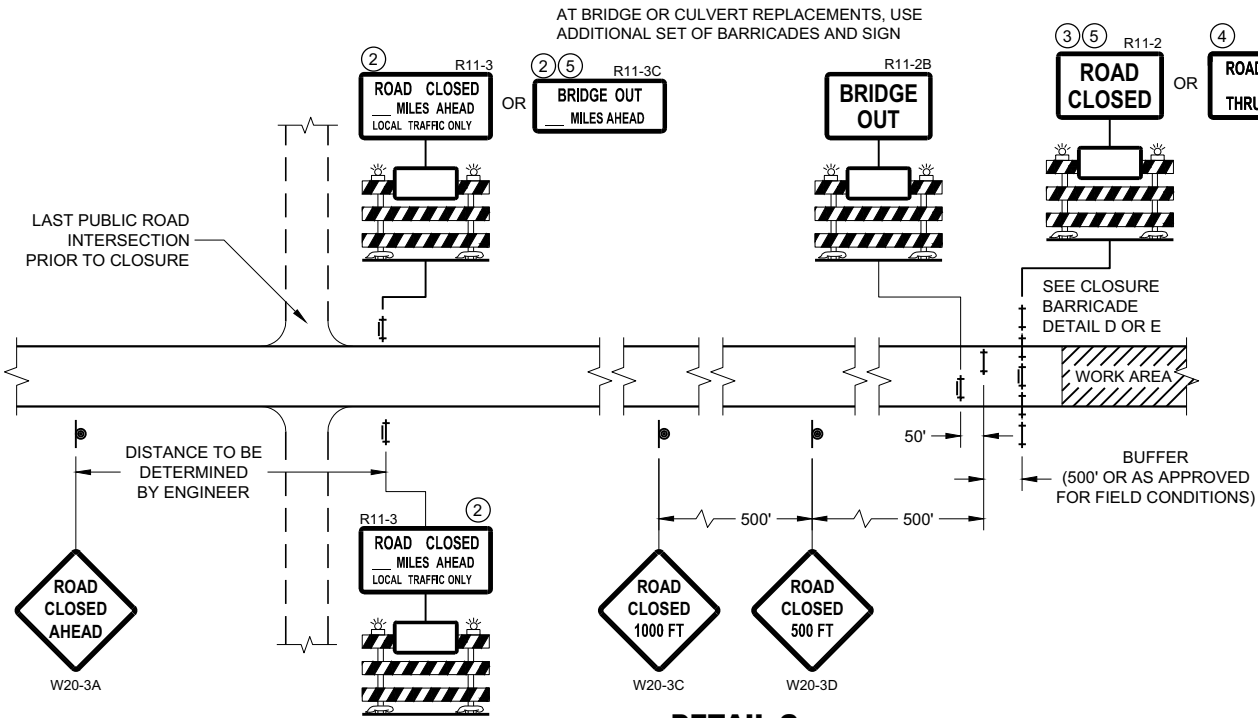
SIGN



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

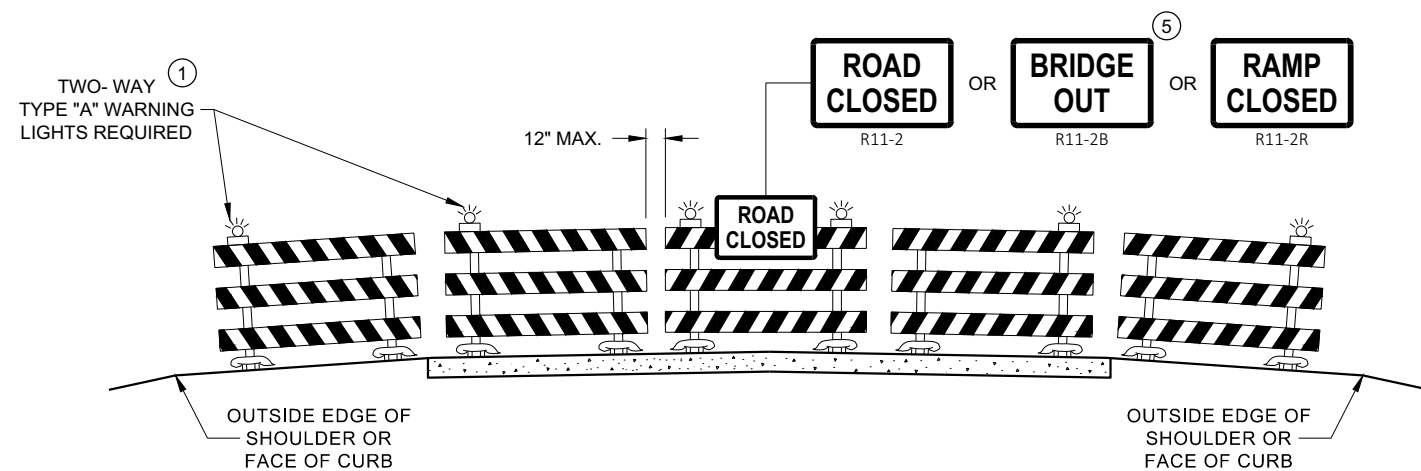
LEGEND

- 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)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
- OR M05 - 1 OR M06 - 1

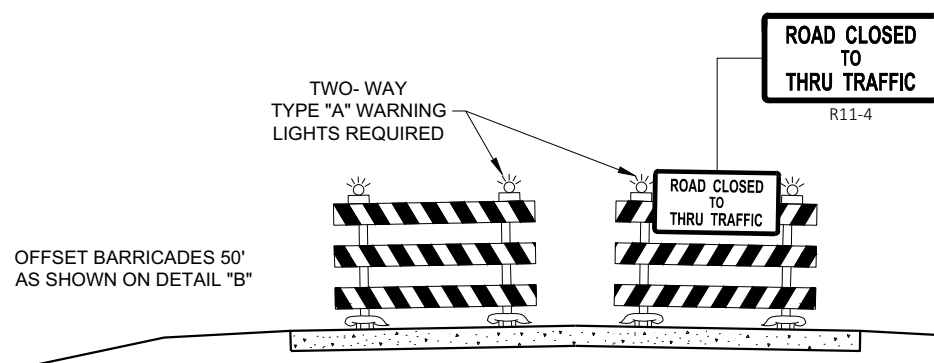
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 111
FHWA



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

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

R11 - 2 SHALL BE 48" X 30"

R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"

M4 - 9 SHALL BE 30" X 24"

M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)

M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)

M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)

MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)

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

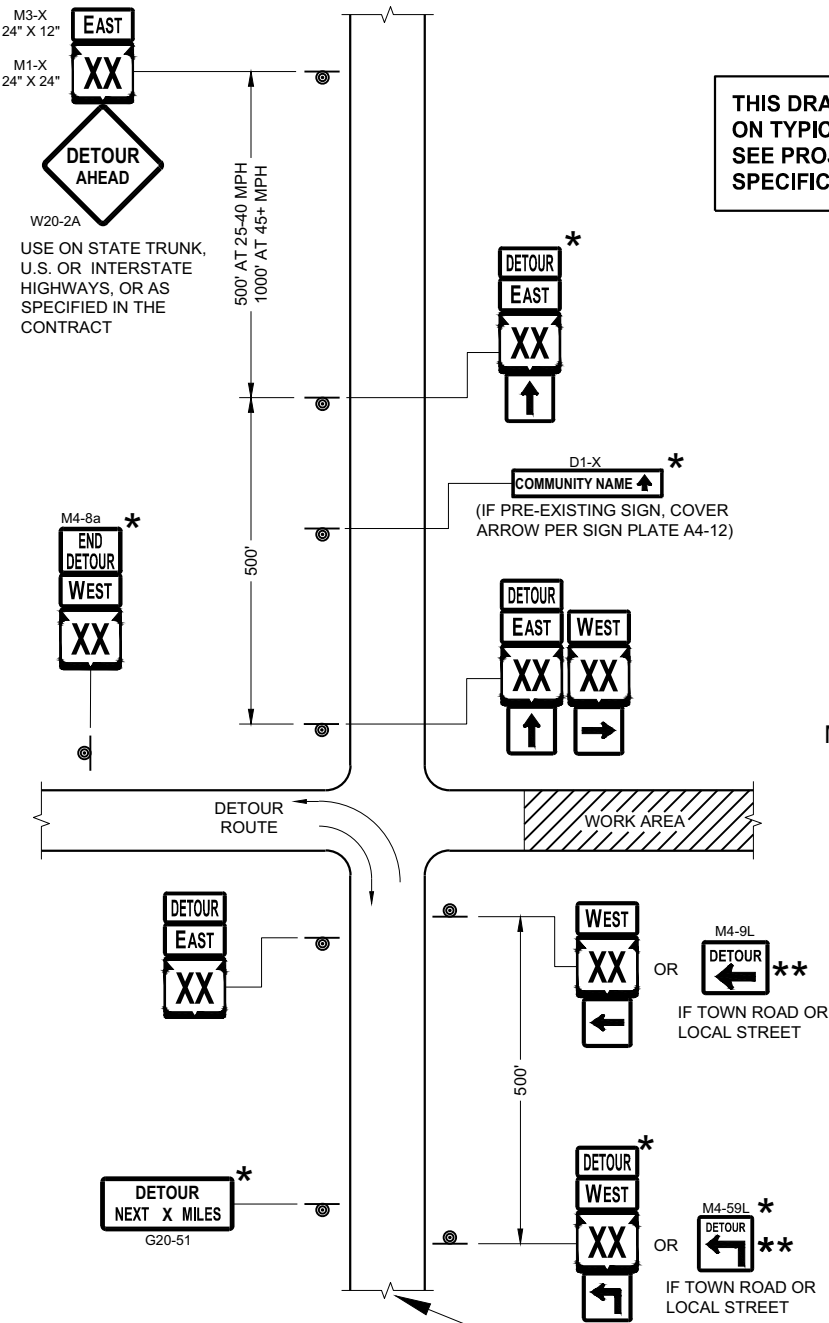
R1 - 1 SHALL BE 36" X 36"

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

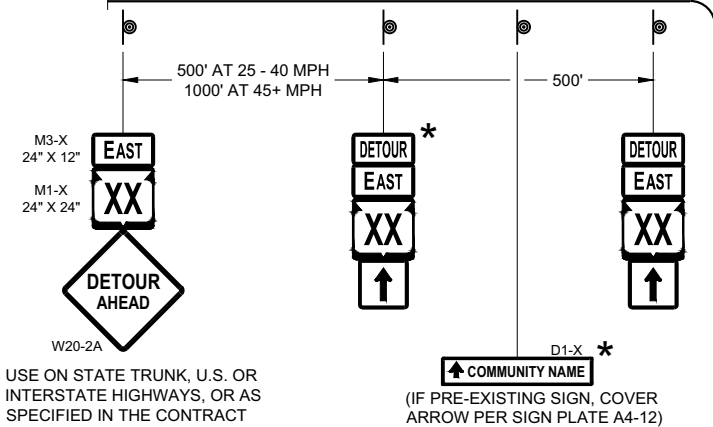
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 112
FHWA



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

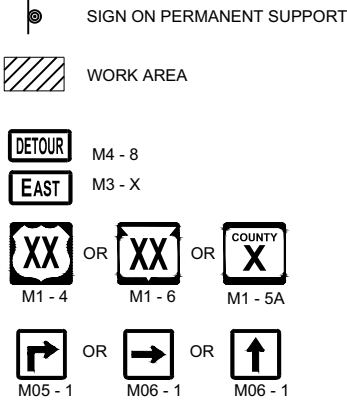
THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F
DETOUR SIGNING

LEGEND



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.

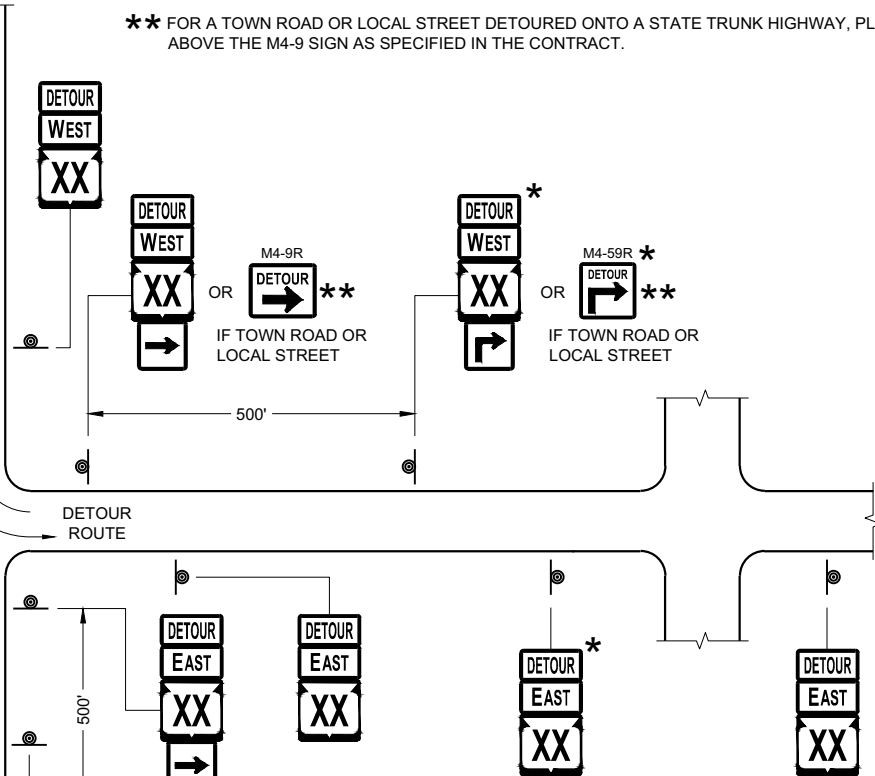
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"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.



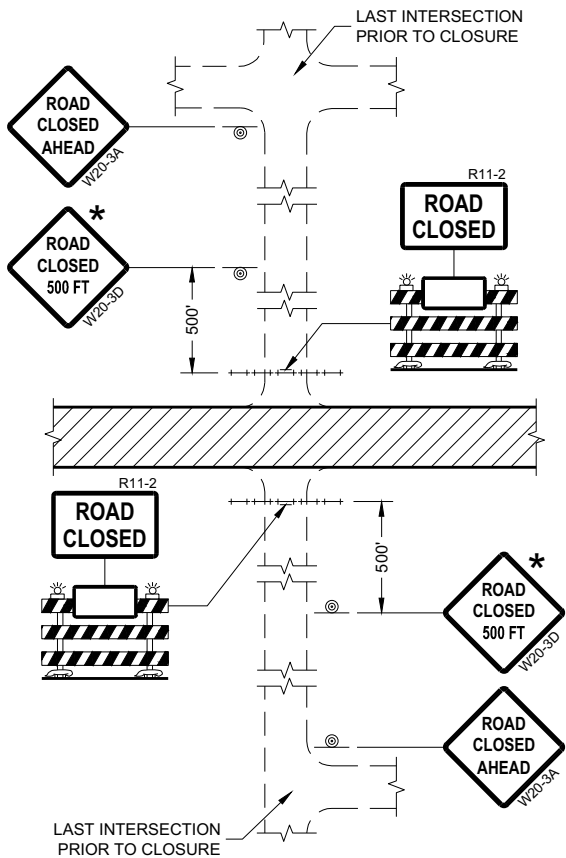
PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING
FOR MAINLINE CLOSURES

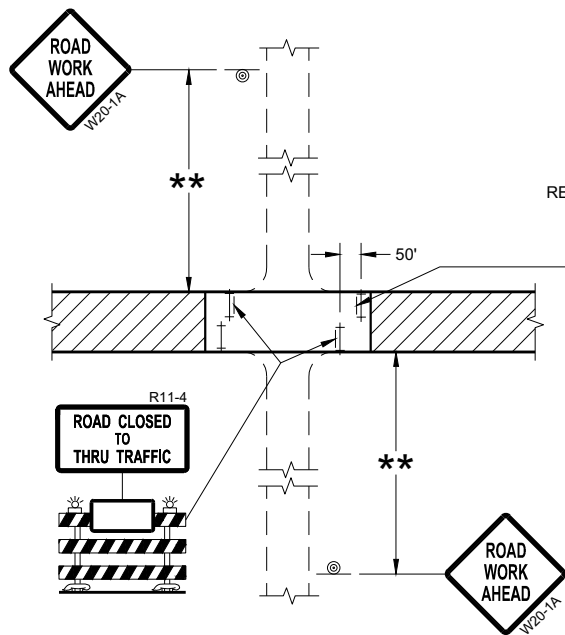
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DEPARTMENT OF TRANSPORTATION

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DATE WORK ZONE ENGINEER 113

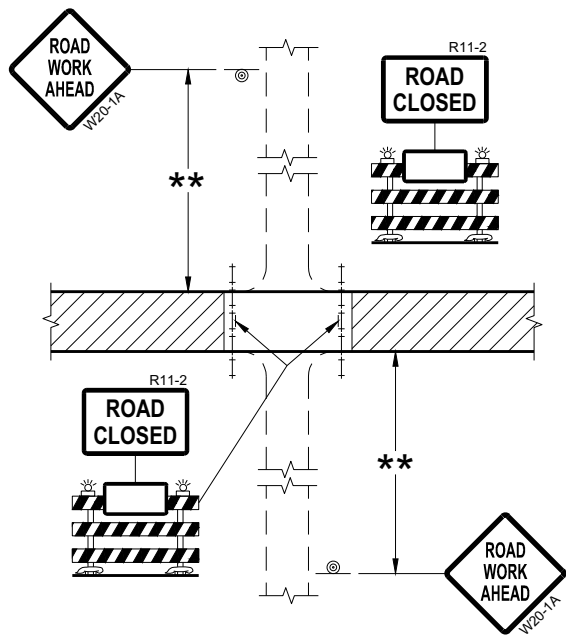
FHWA



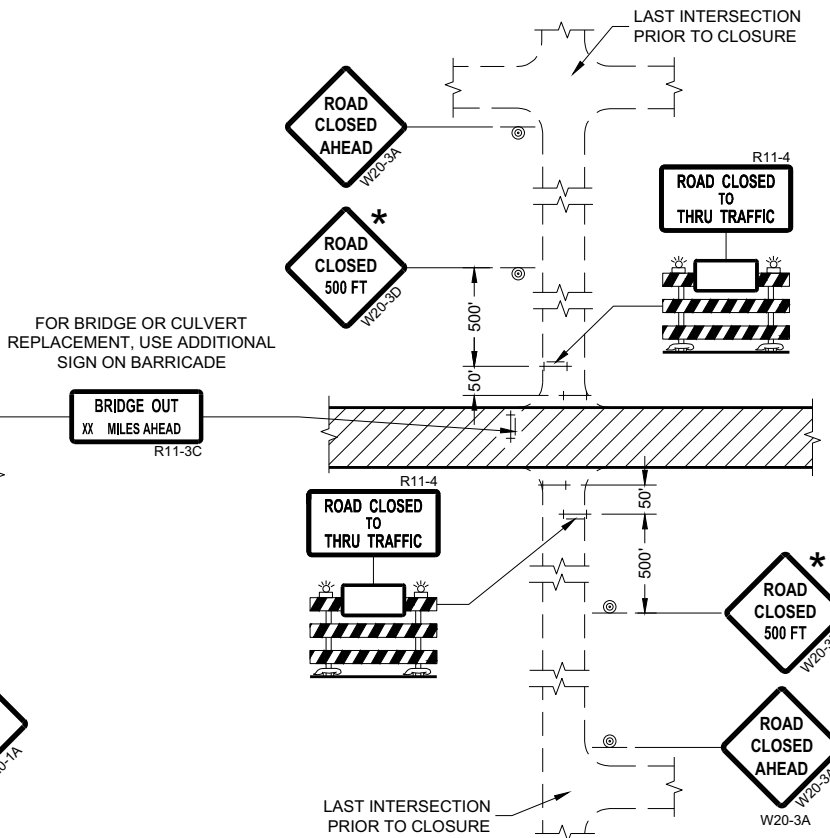
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

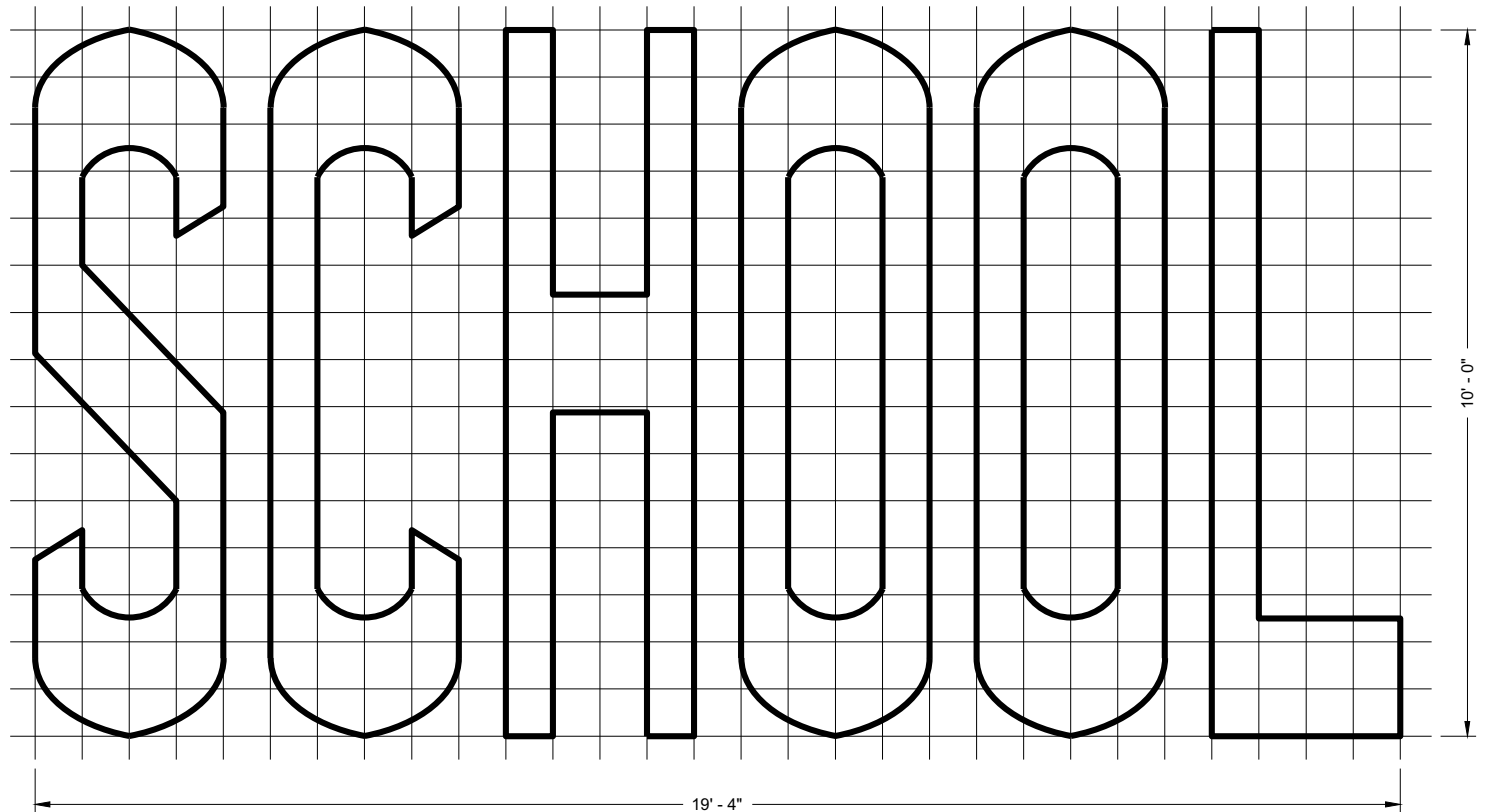
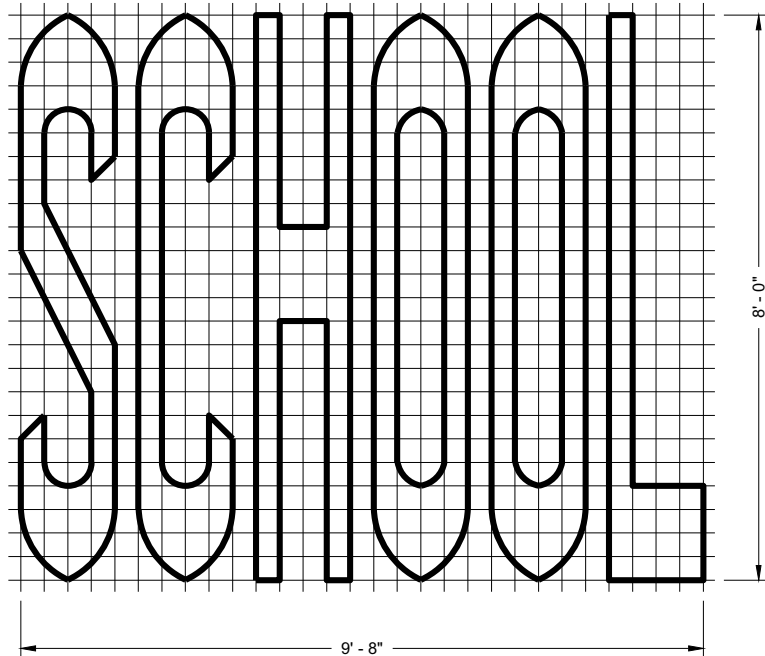
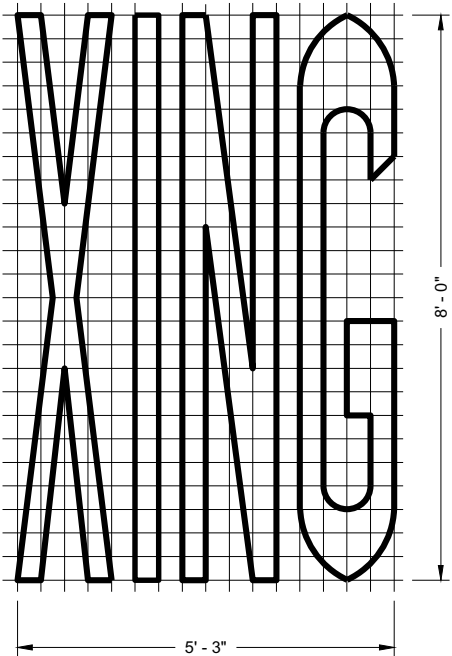
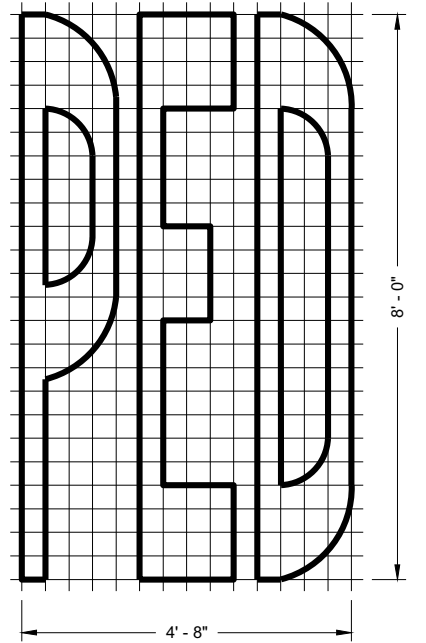
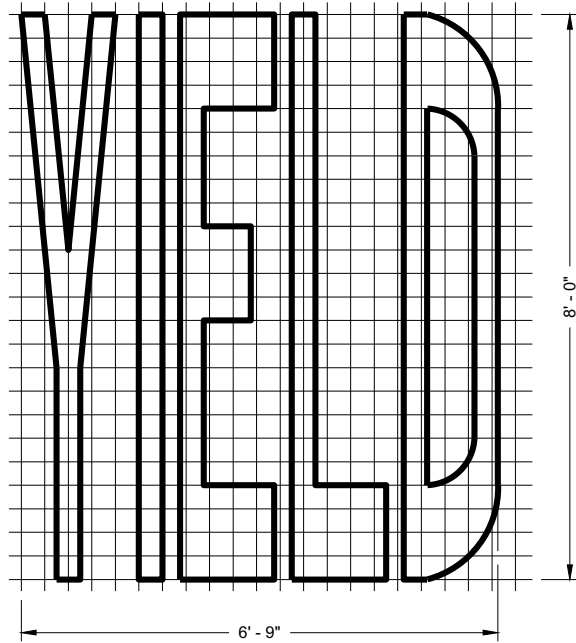
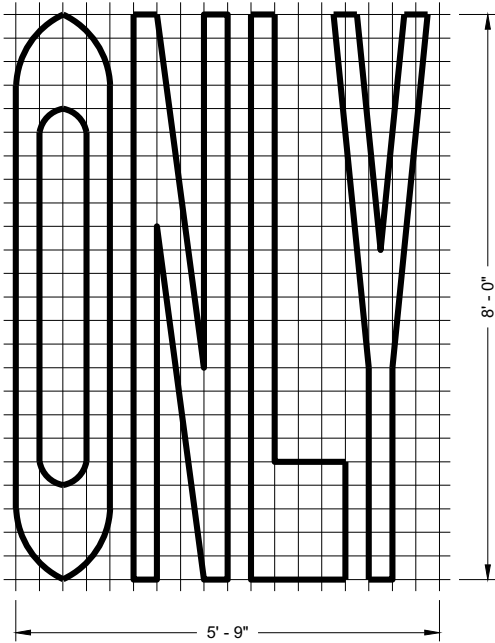
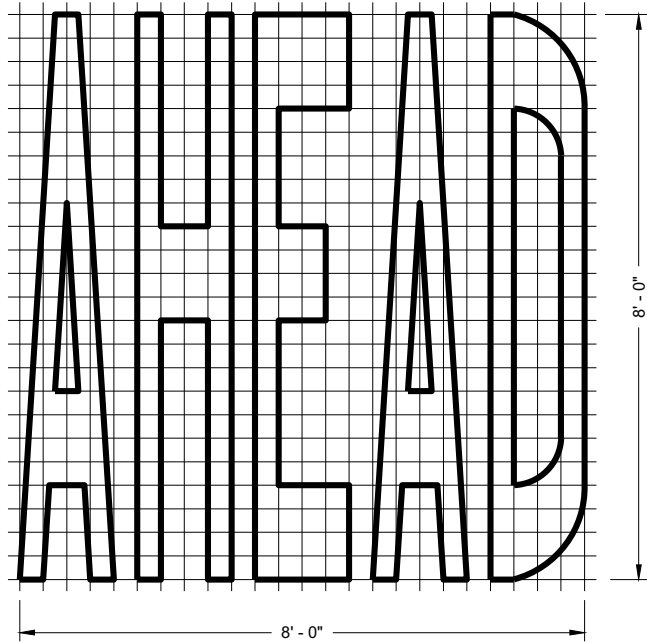
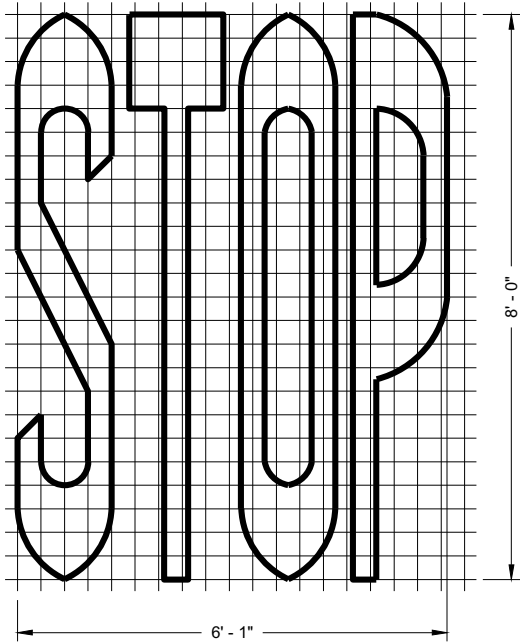
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

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SINGLE LANE

TWO - LANE

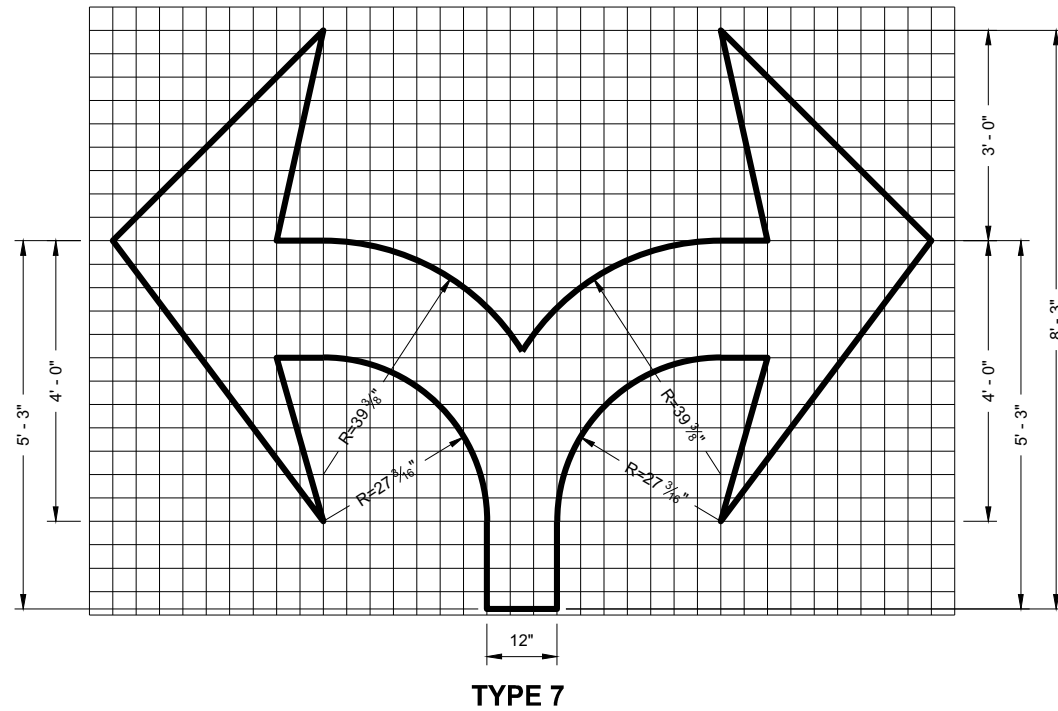
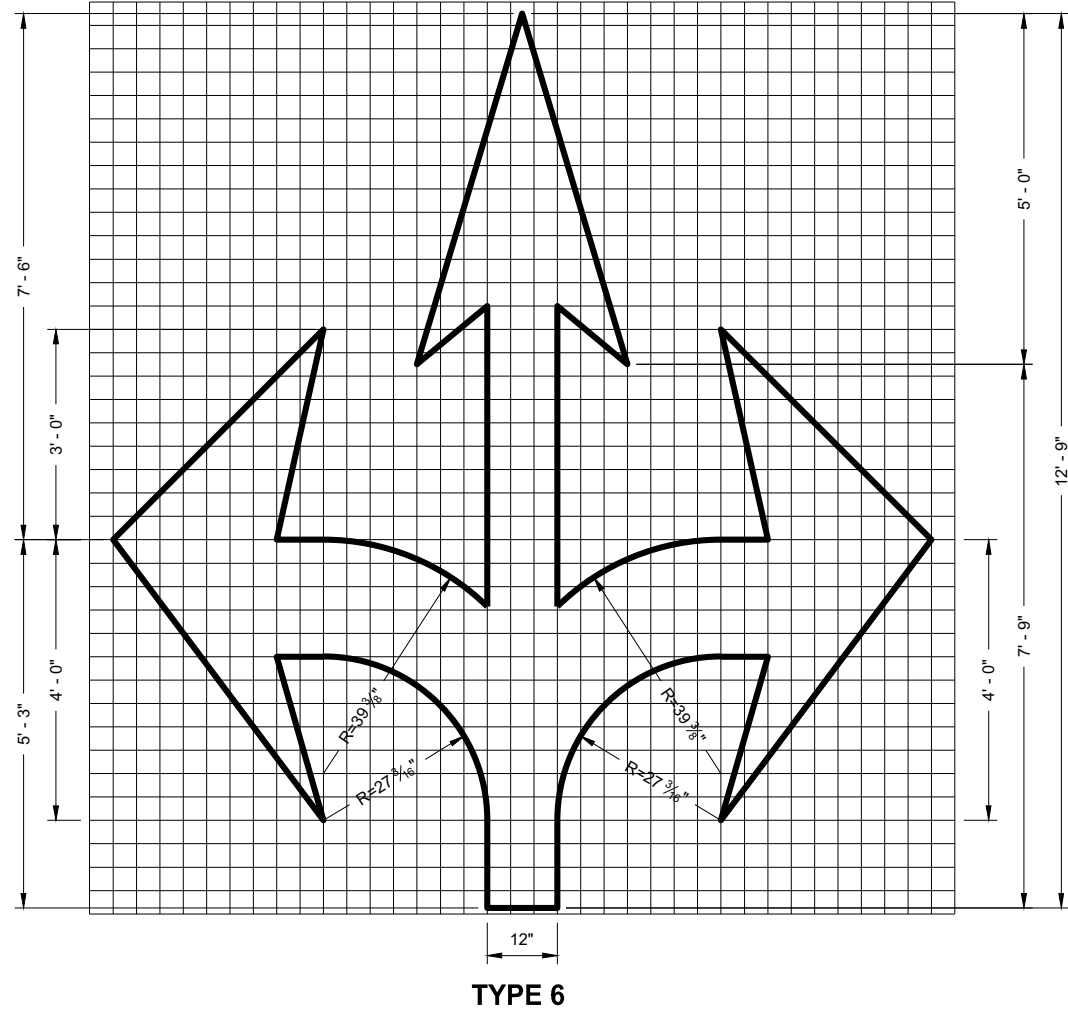
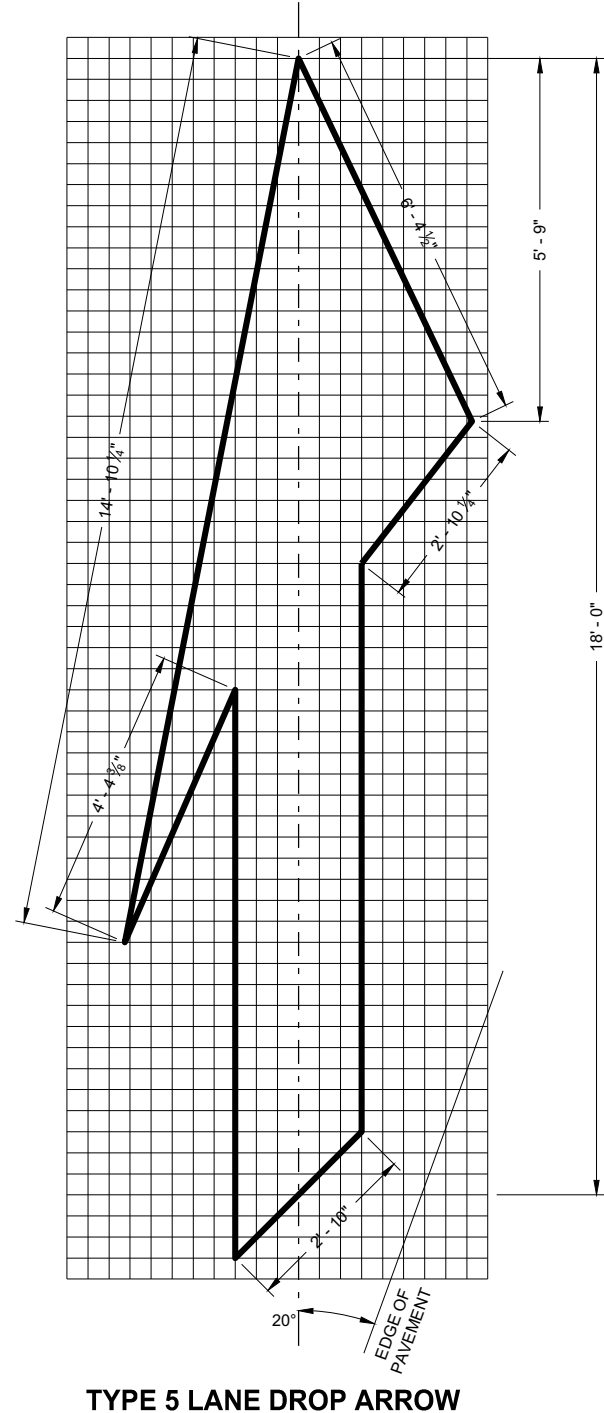
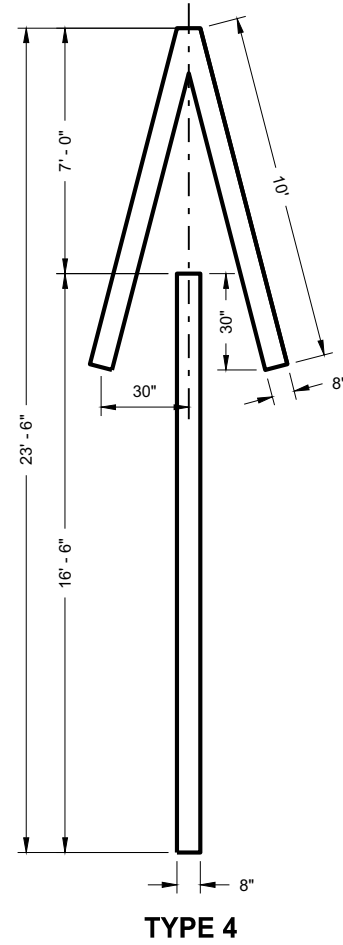
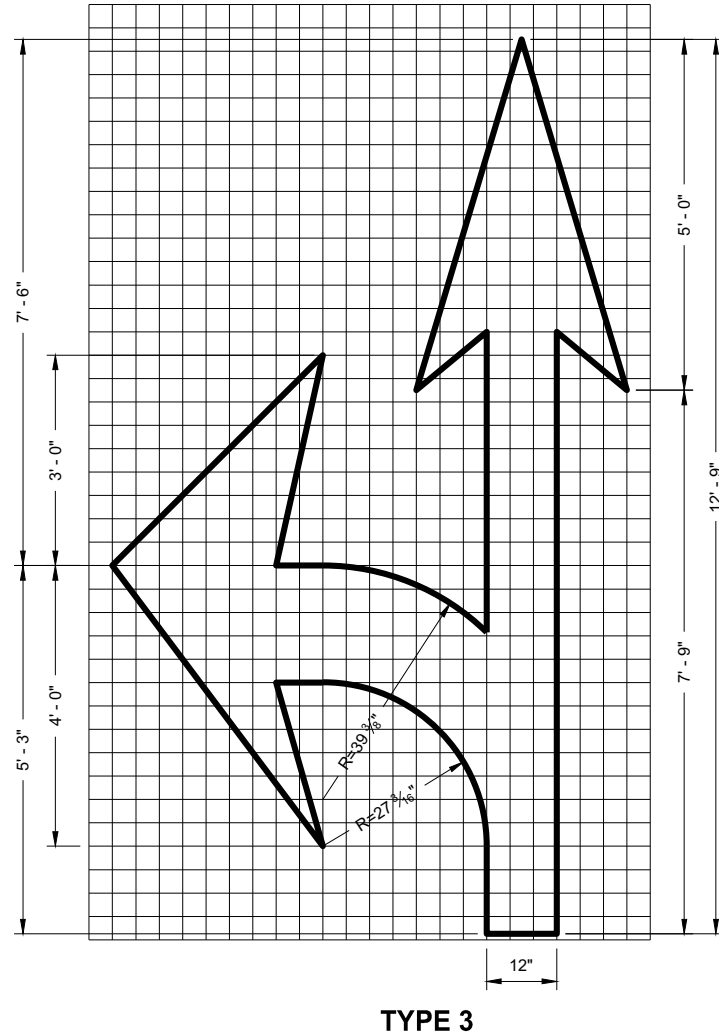
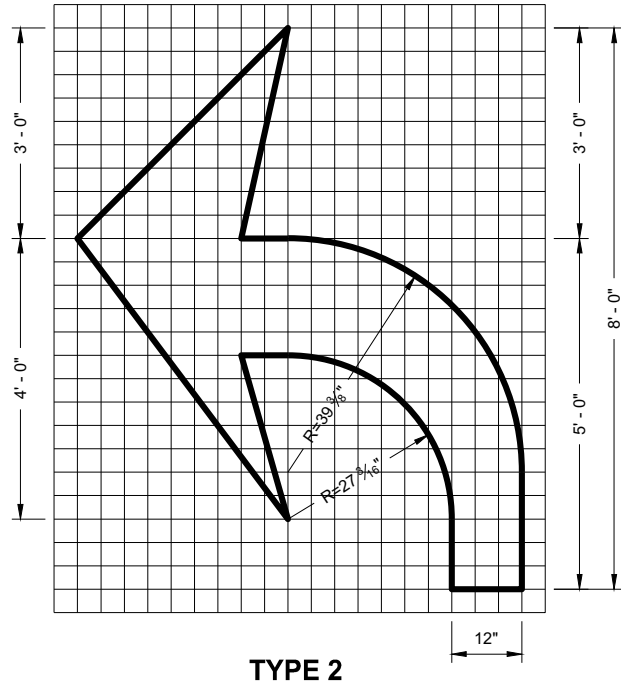
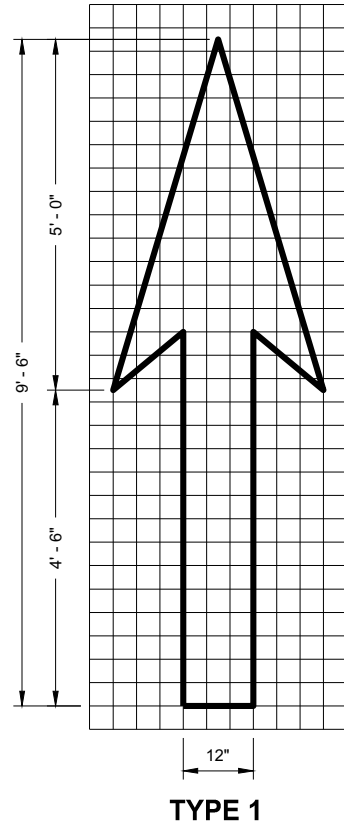
GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MAP ENGINEER 115
FHWA



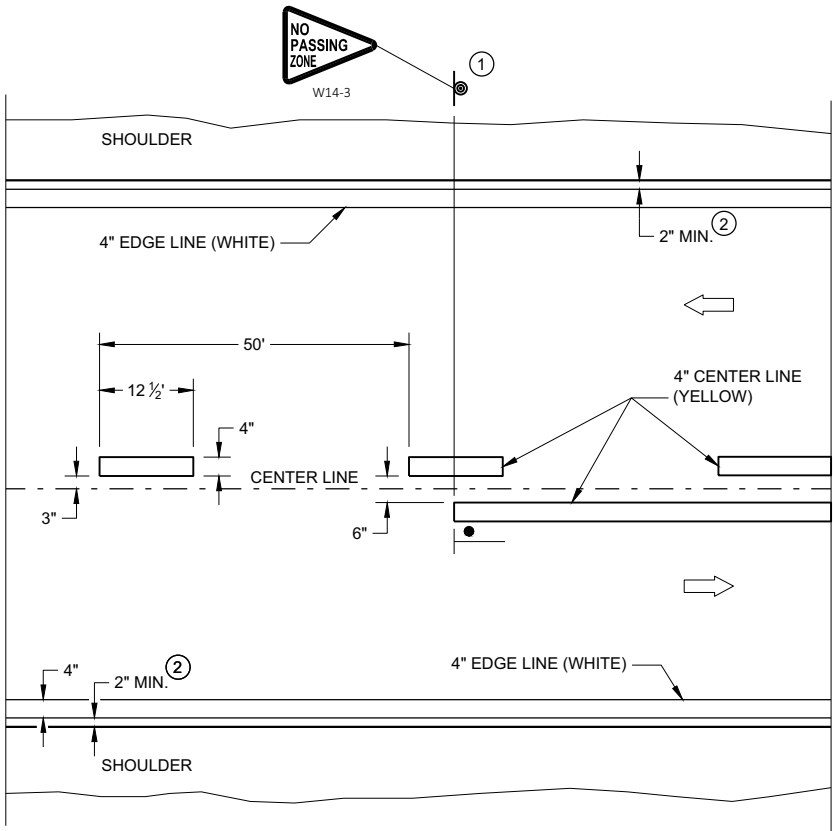
GENERAL NOTES

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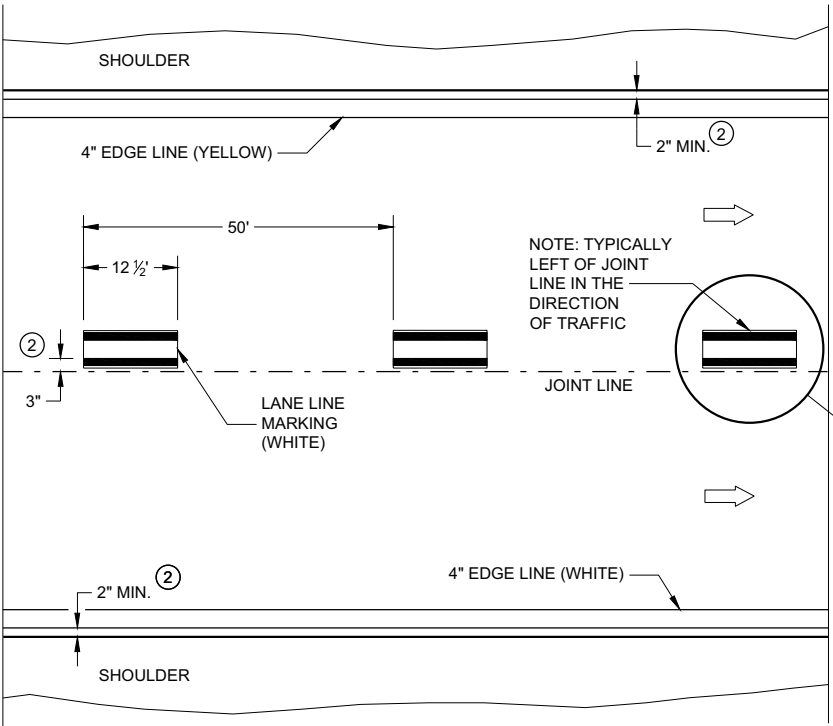
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
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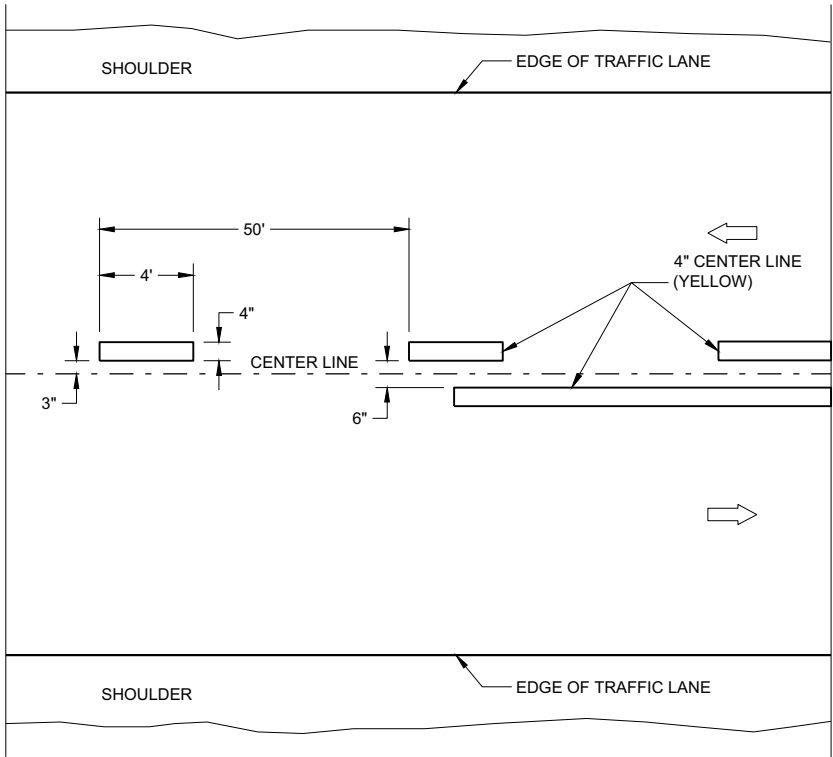


TWO WAY TRAFFIC

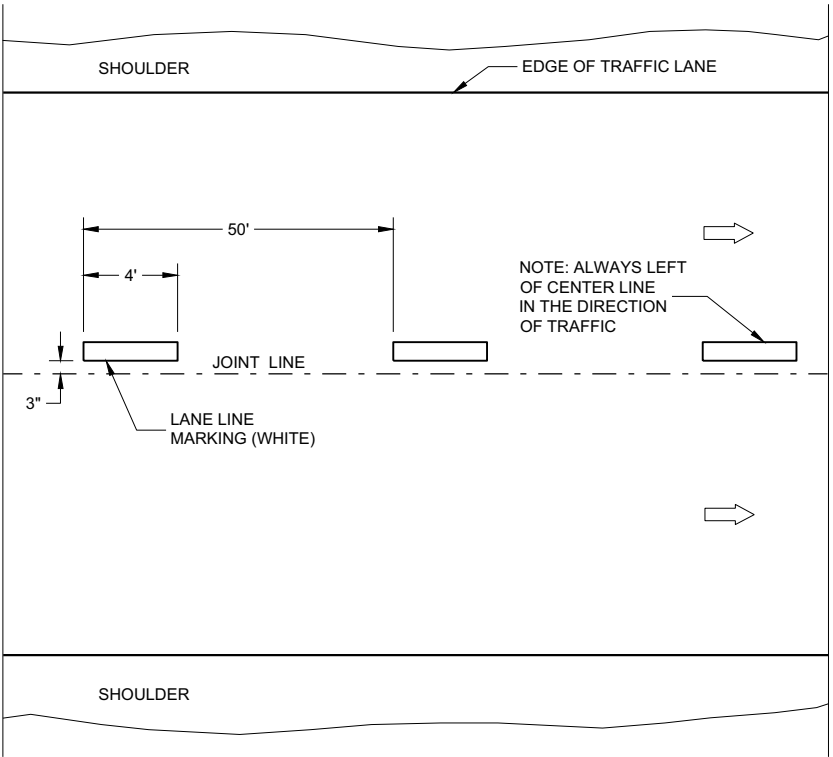


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

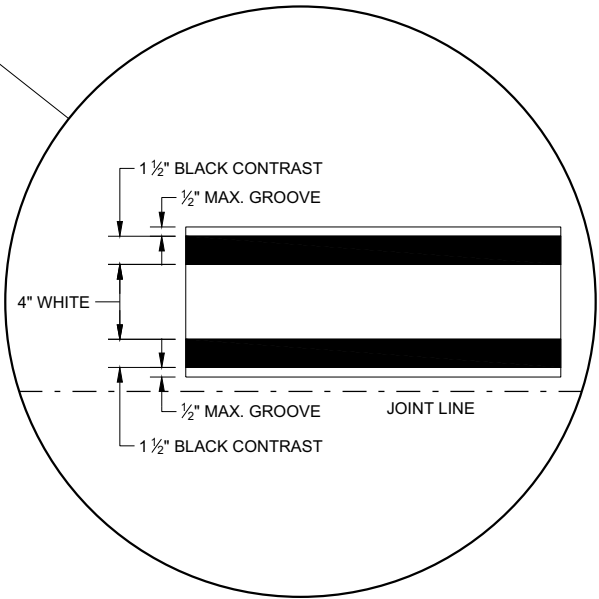
GENERAL NOTES

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 WITH 50 FEET OF THE "T" MARKING
- 2 MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

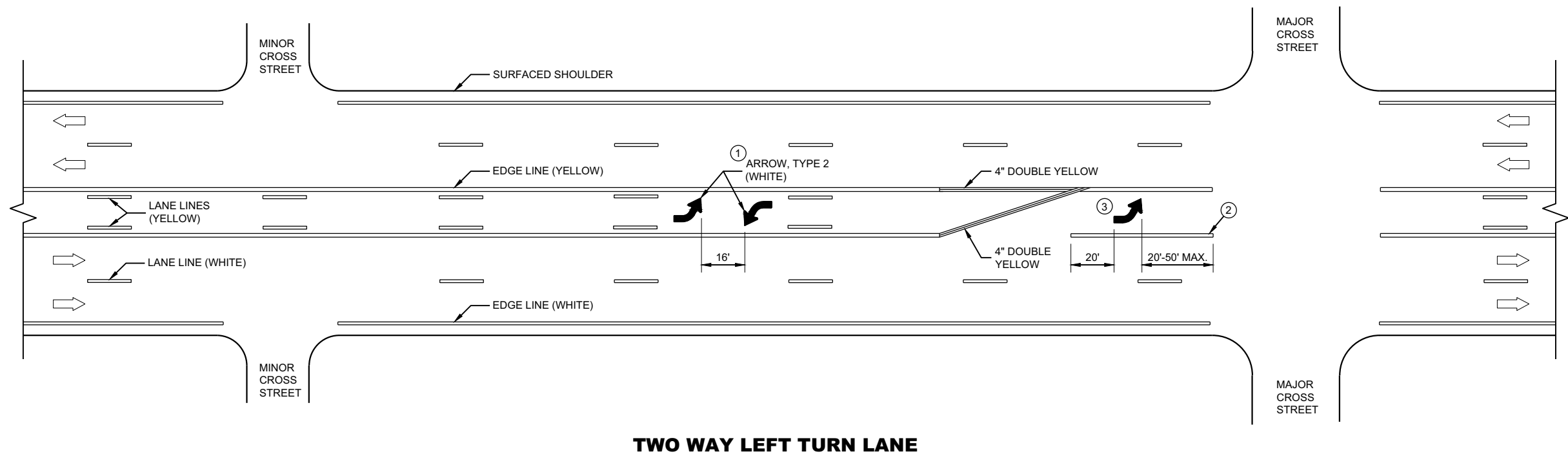


LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
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GENERAL NOTES

- 1 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 2 8" WHITE
- 3 TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

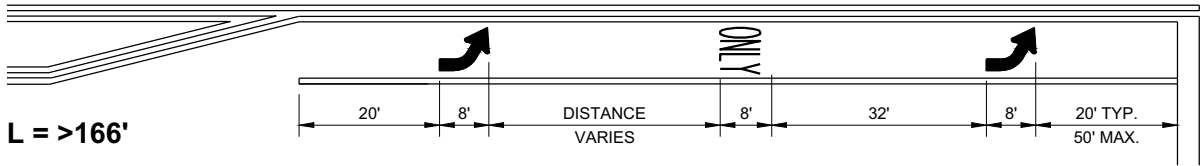
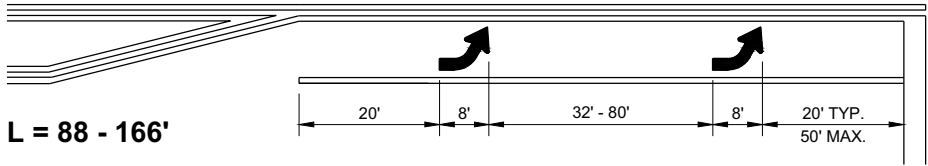
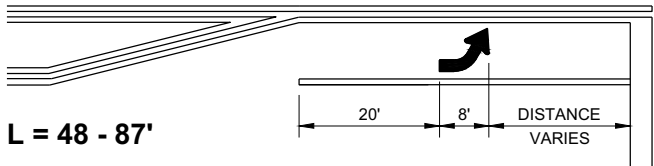
DIRECTION OF TRAFFIC

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 118

TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

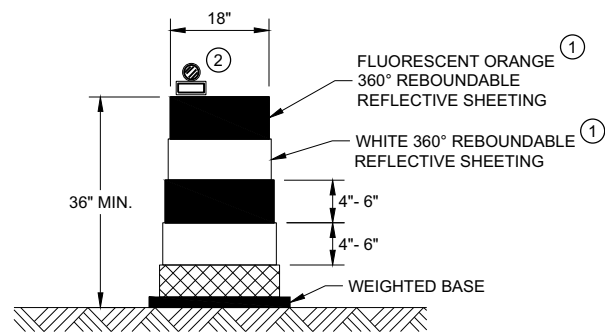
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

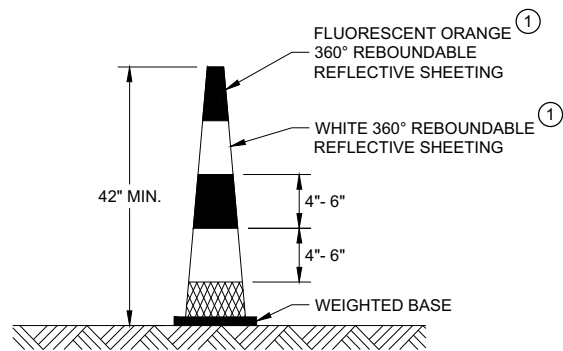
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 119

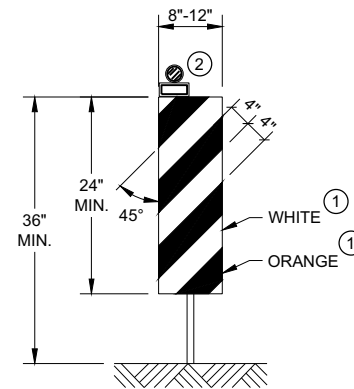


DRUM



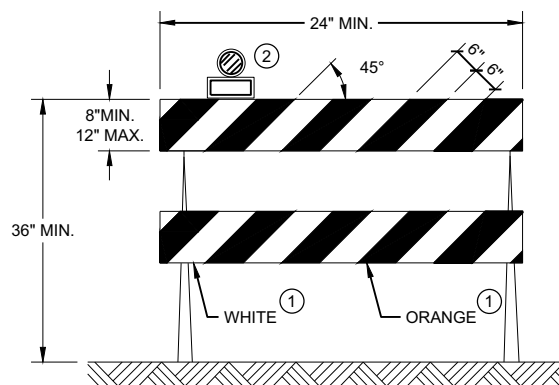
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



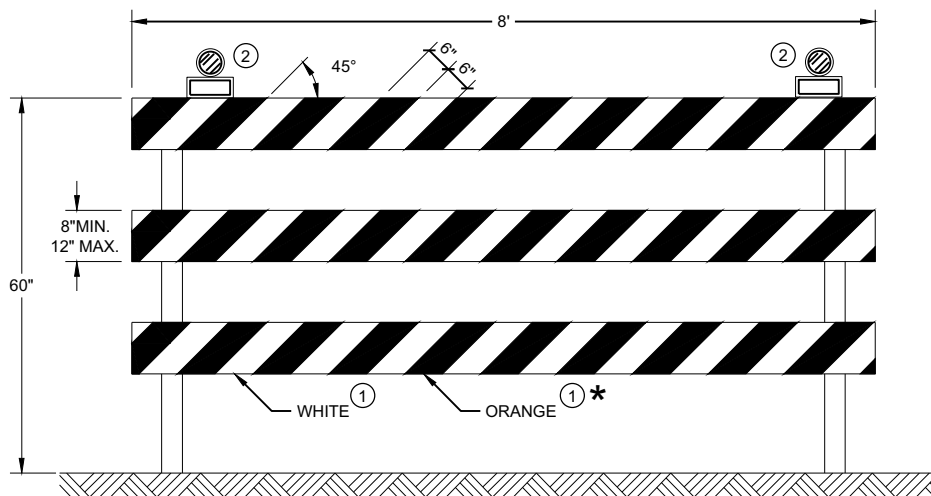
VERTICAL PANEL

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



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.

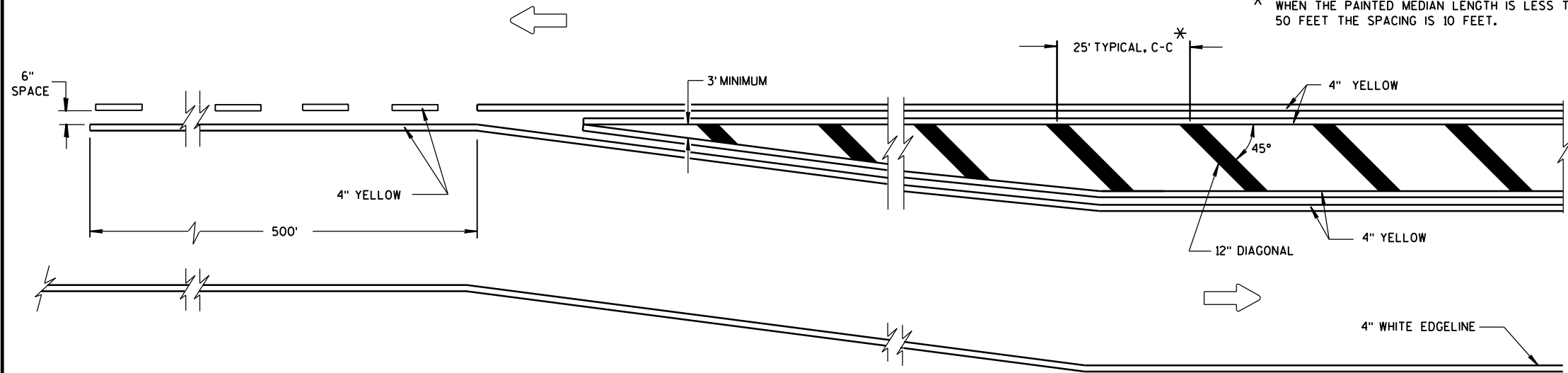
GENERAL NOTES

- 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.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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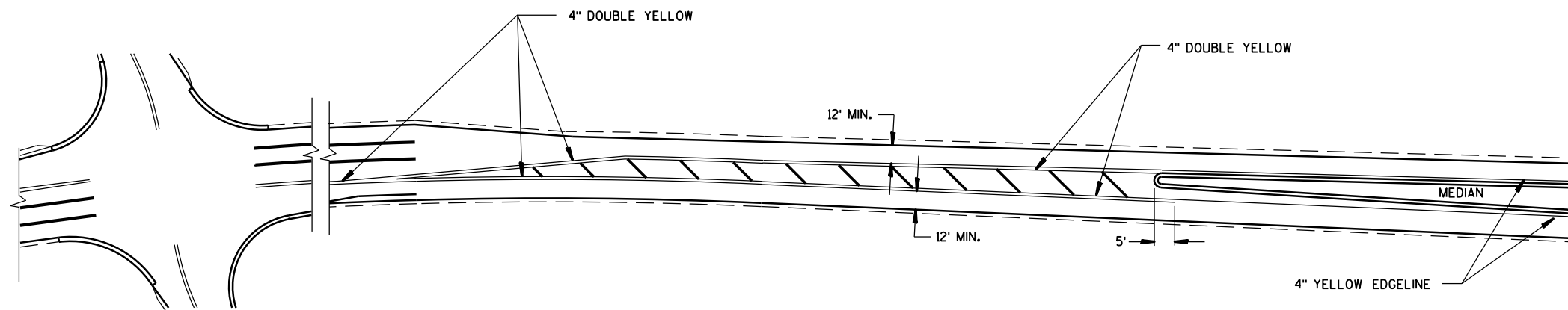


GENERAL NOTE

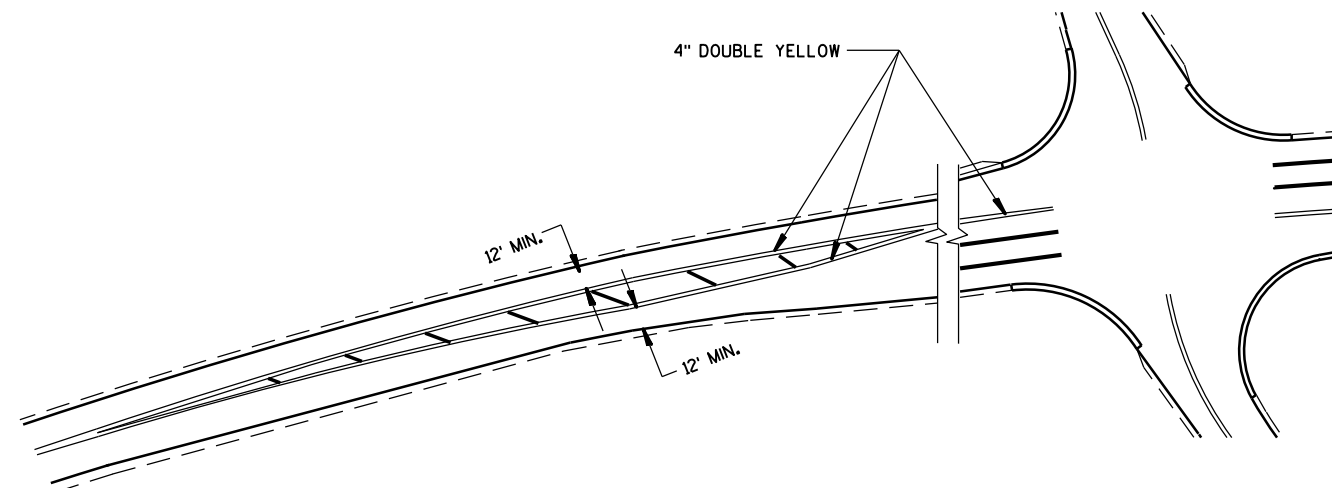
DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL

MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

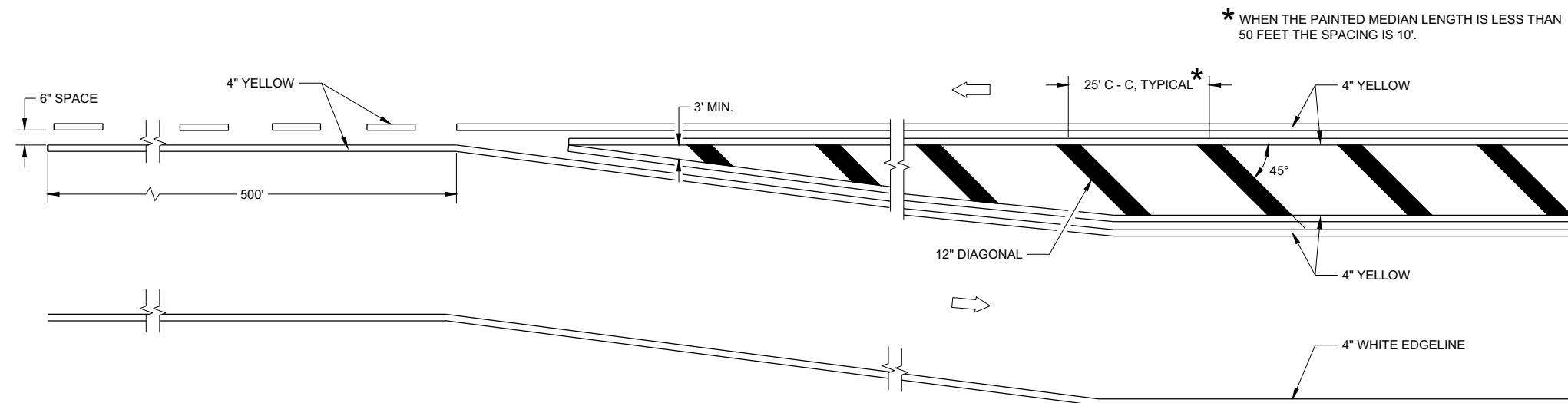


NON APPROACH MARKINGS

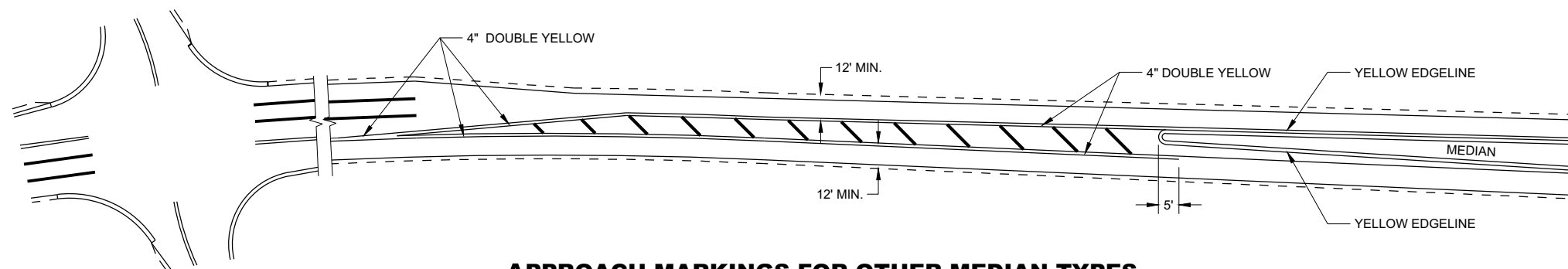
MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

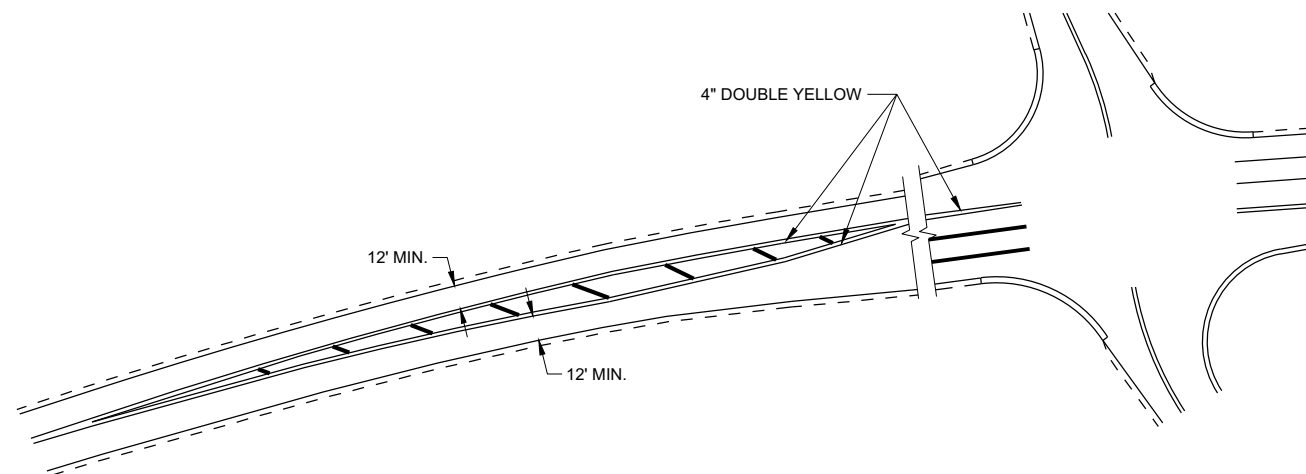
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MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

DIAGONALS ARE OPTIONAL WHEN PAINED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL

MEDIAN ISLAND PAVEMENT MARKINGS

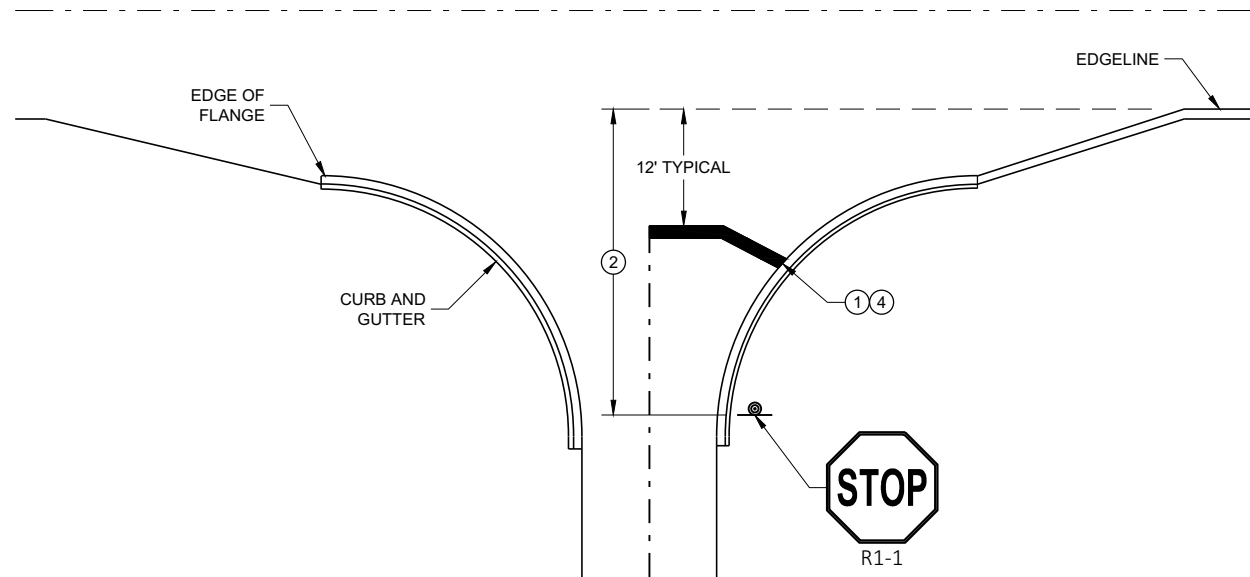
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

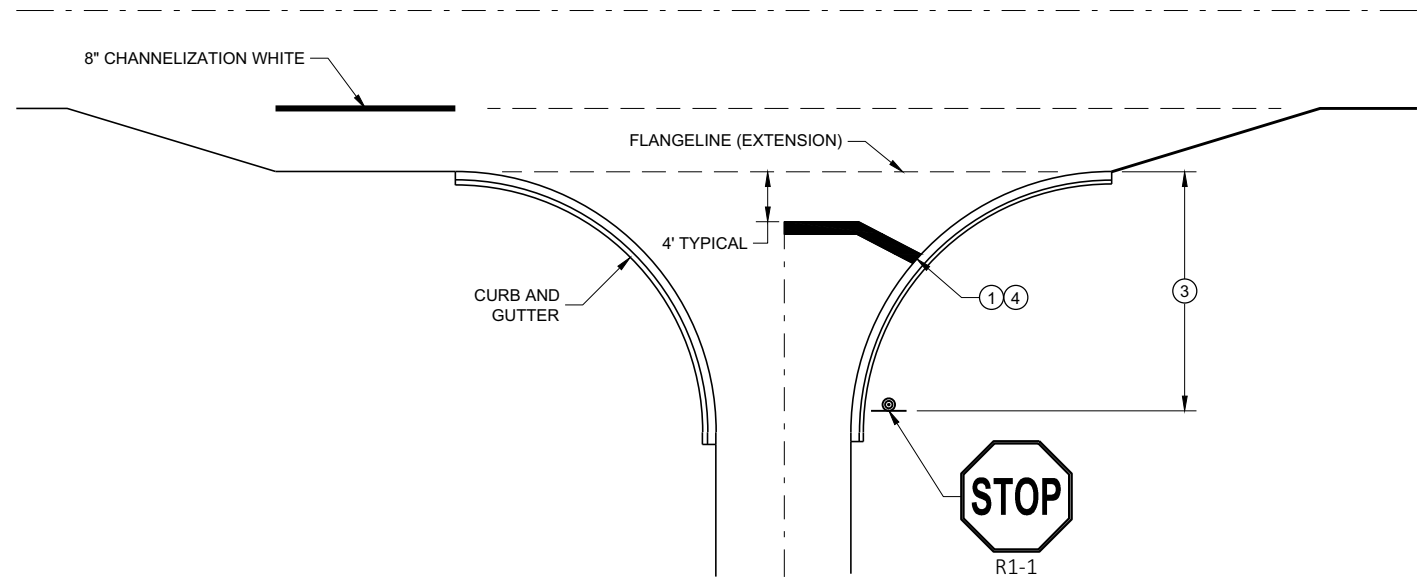
/S/ Matthew R. Rauch
STATE SIGNING AND MAP
ENGINEER

122

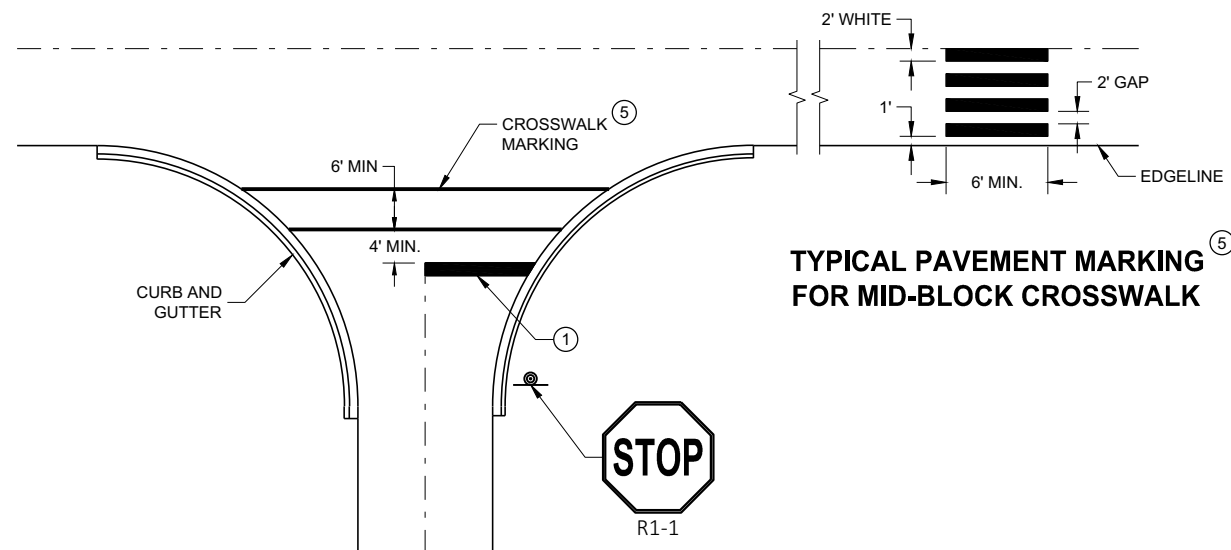
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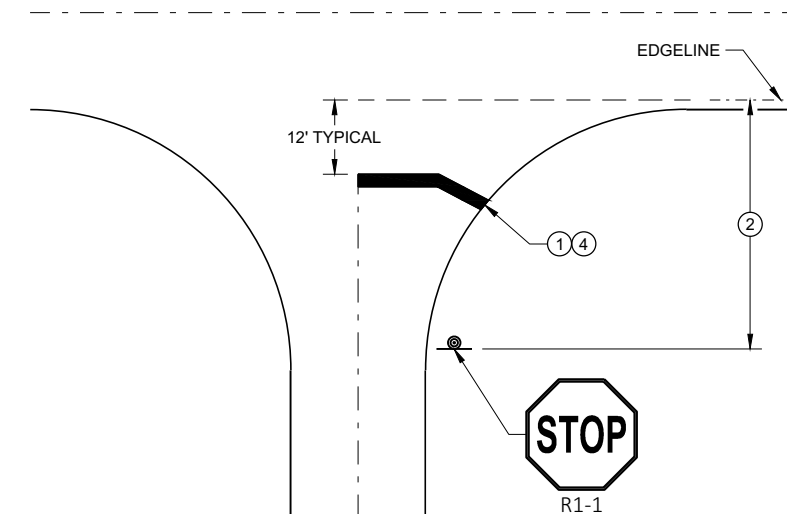
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

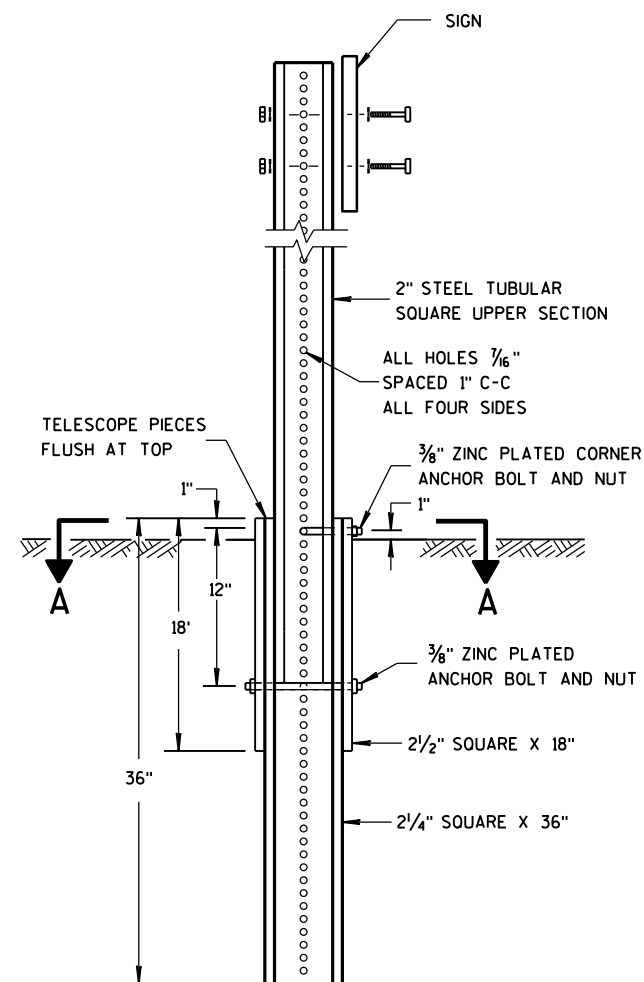
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MAP ENGINEER 124
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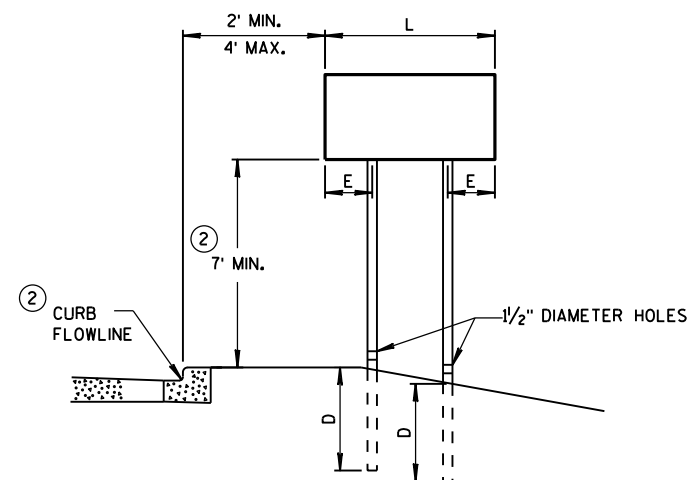
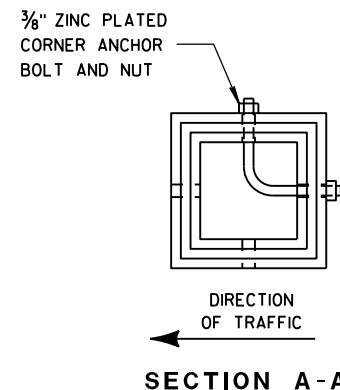


DETAIL OF TUBULAR STEEL SIGN POST

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

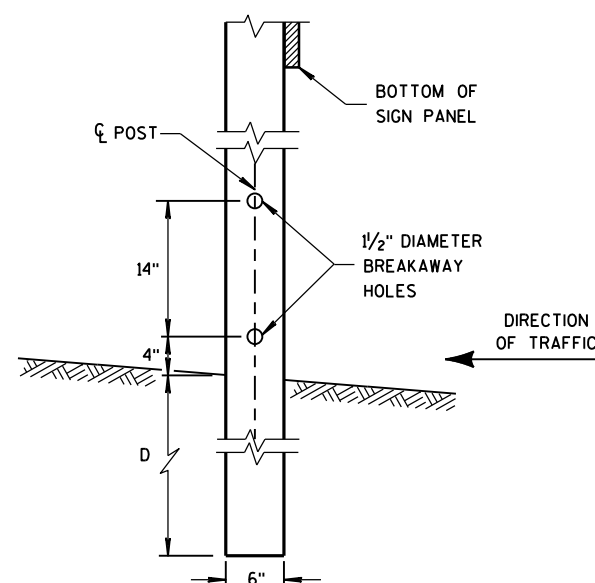
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



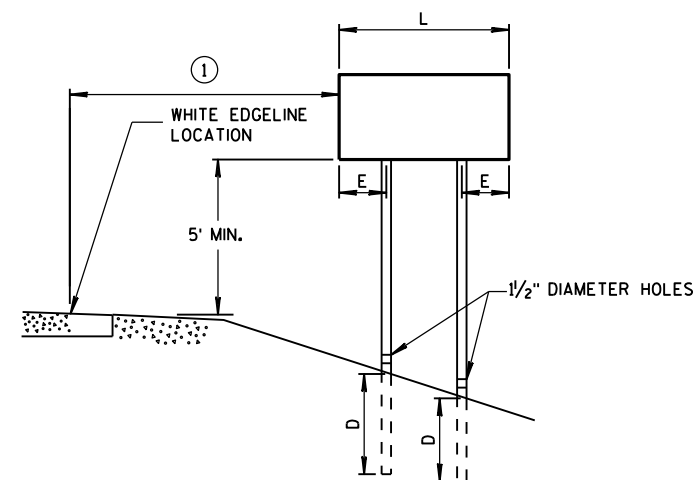
URBAN AREA

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'



4" x 6" WOOD POST MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

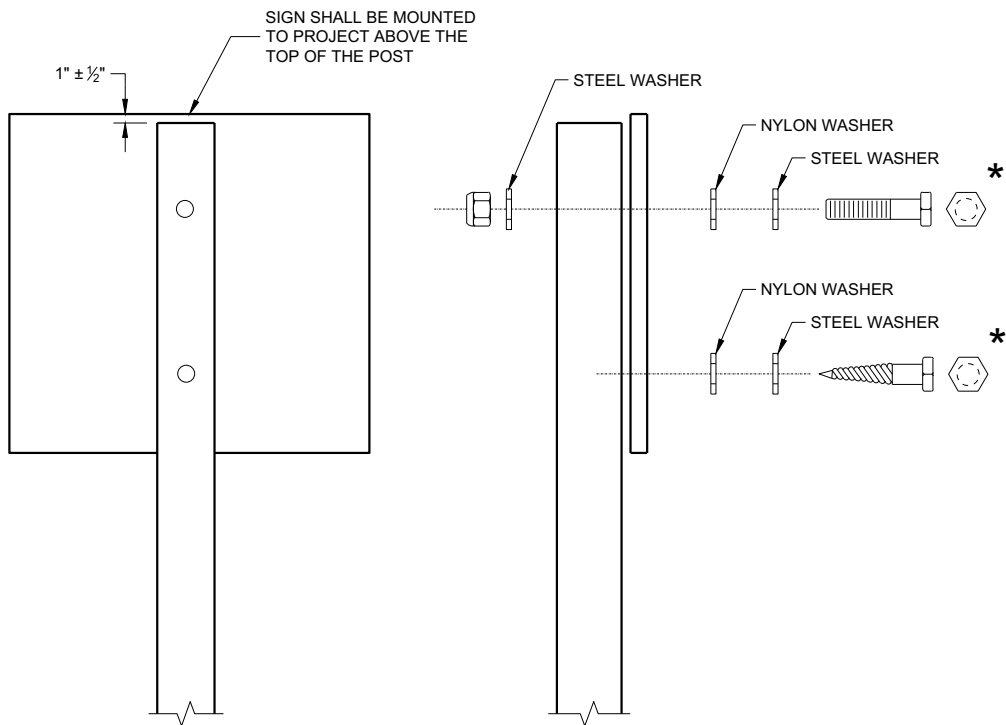
SEE NOTE ③

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.

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 POST (4" x 6")
LAG SCREWS - ¾" x 3"
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

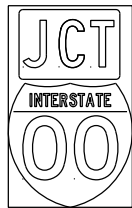
SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ¾" x 3 ¼" LENGTH W/NUTS
RIVETS - ⅝" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

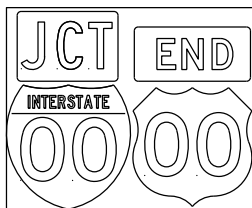
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER	126

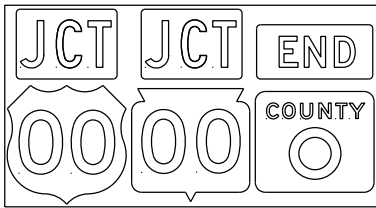
TYPICAL ASSEMBLIES



J1-1



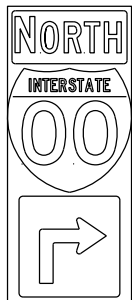
J1-2



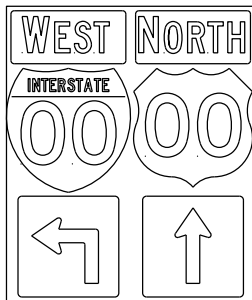
J1-3



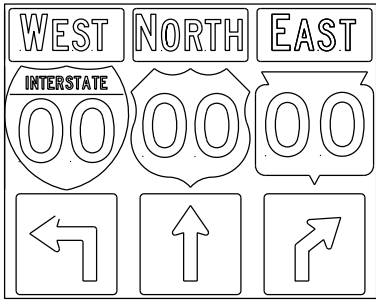
JR1-1



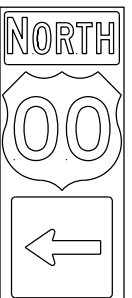
J2-1



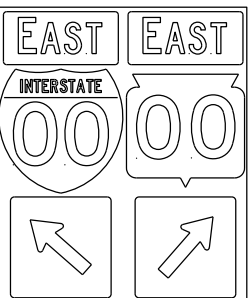
J2-2



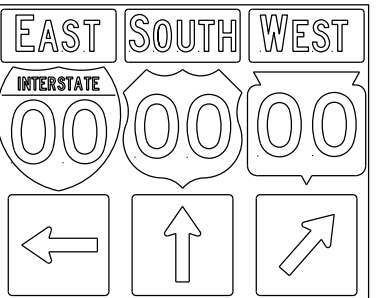
J2-3



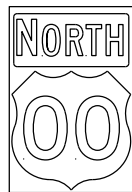
J3-1



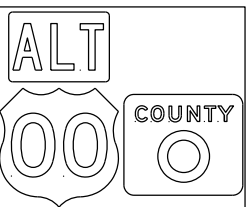
J3-2



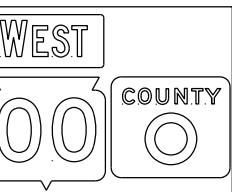
J3-3



J4-1



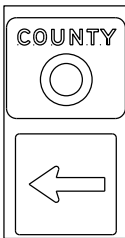
J4-2



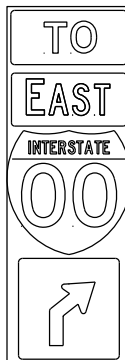
J4-2



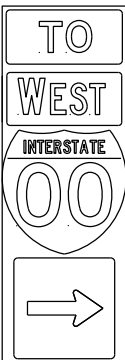
J12-1



J13-1



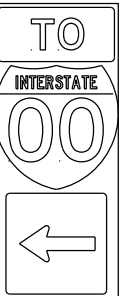
J32-1



J33-1



J22-1



J23-1



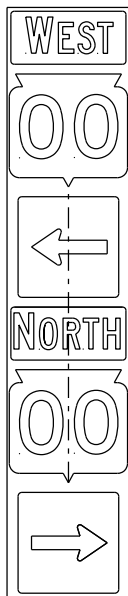
JR13-1



JR23-1

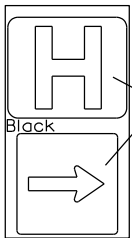


JR99-1



JV

(Typical Vertical J-Assembly
See Note 10 and 11)

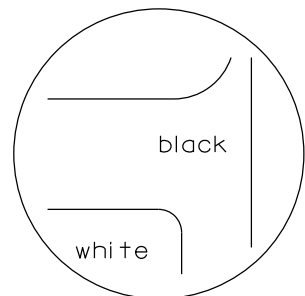
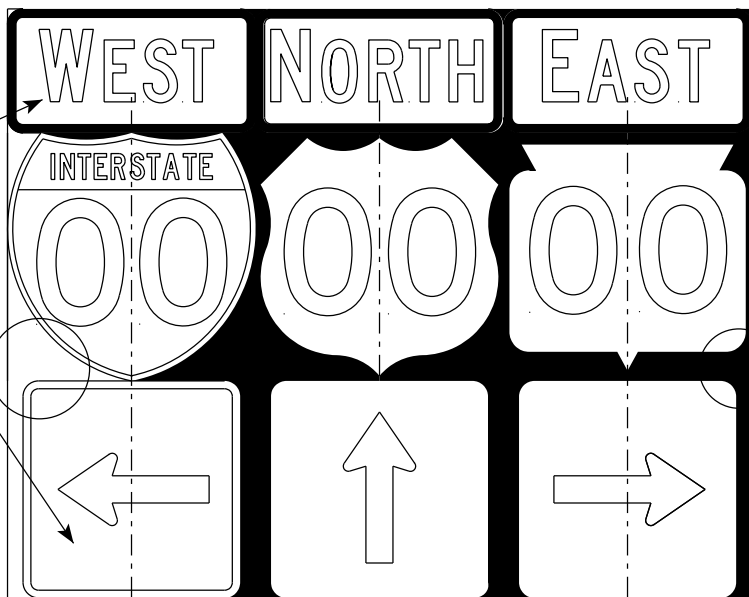
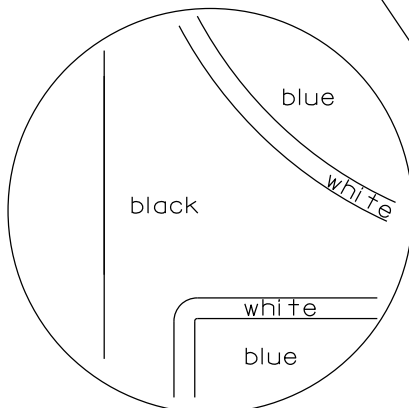


JH-1

Blue Background

Black

blue background
with interstate



black background

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

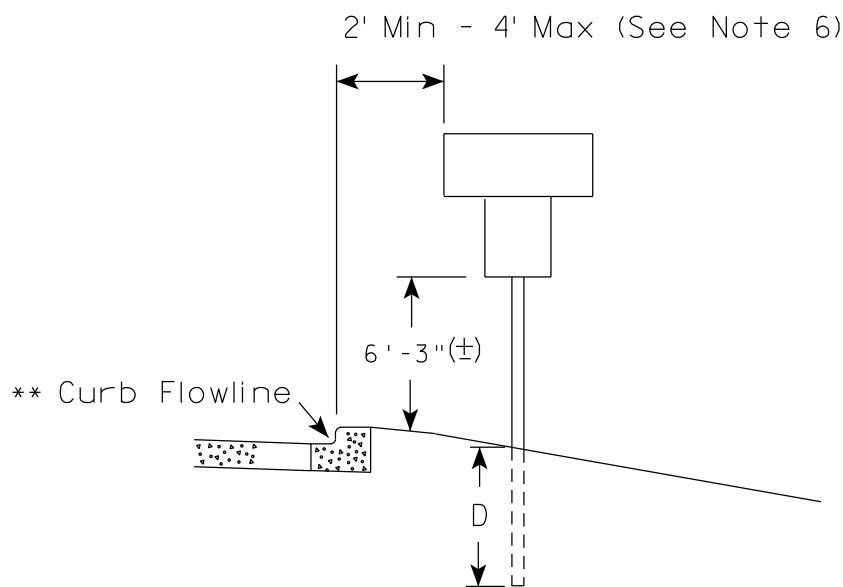
DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

SHEET NO: 127

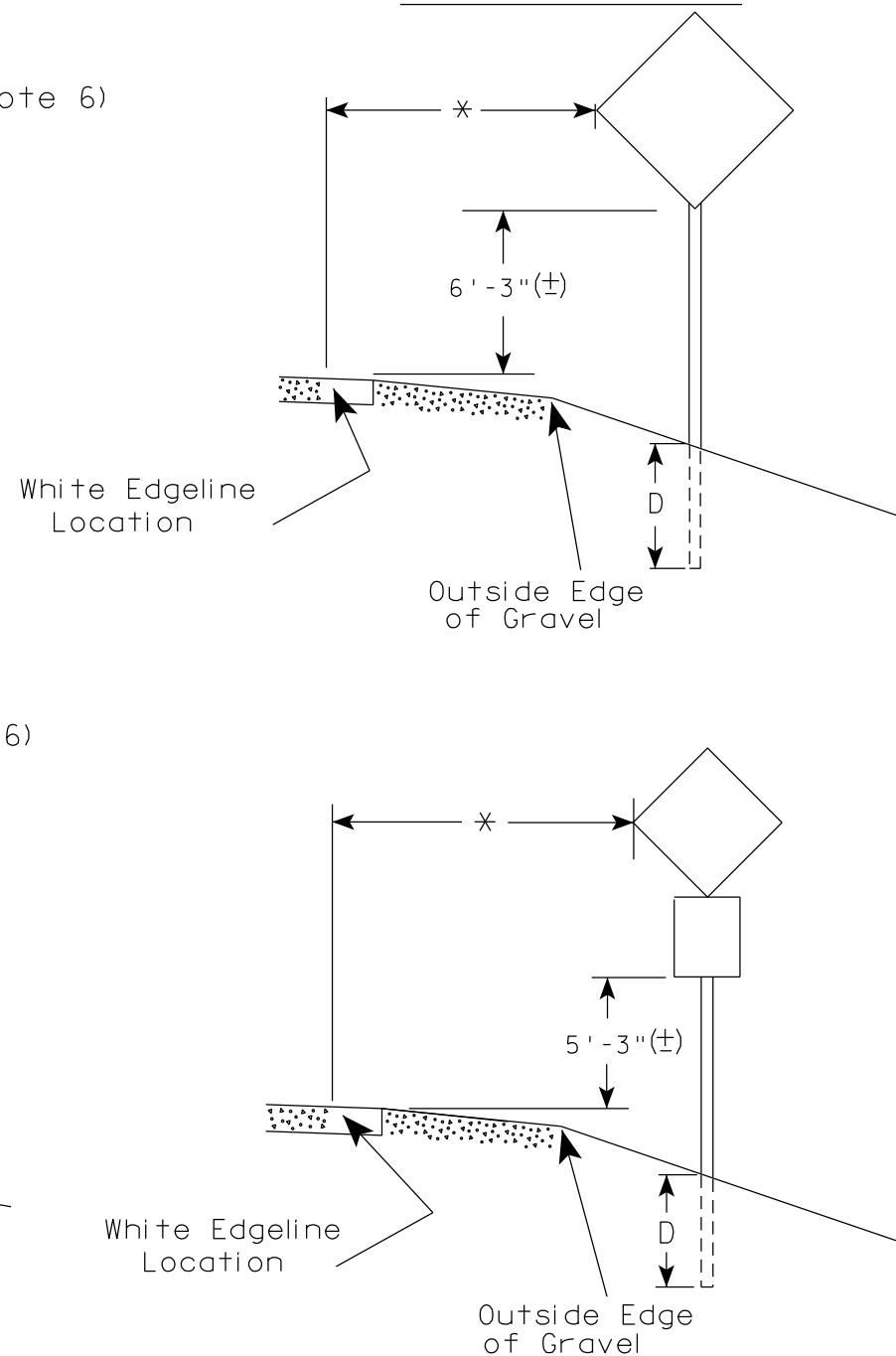
E

7



✖✖ 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.

7



* 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.

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.

The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" ($\pm$). 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" ($\pm$).

3. For expressways and freeways, mounting height is 7'- 3" ($\pm$) or 6'-3" ($\pm$) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" ($\pm$).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The ($\pm$) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" ($\pm$) or as directed by the Engineer.

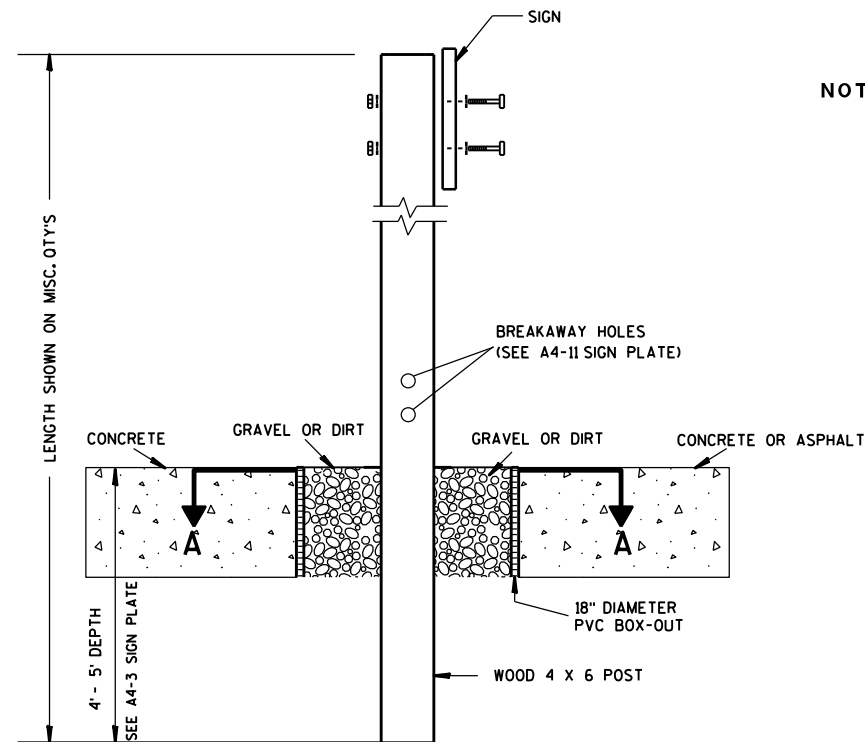
POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4"
Greater than 20	5'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

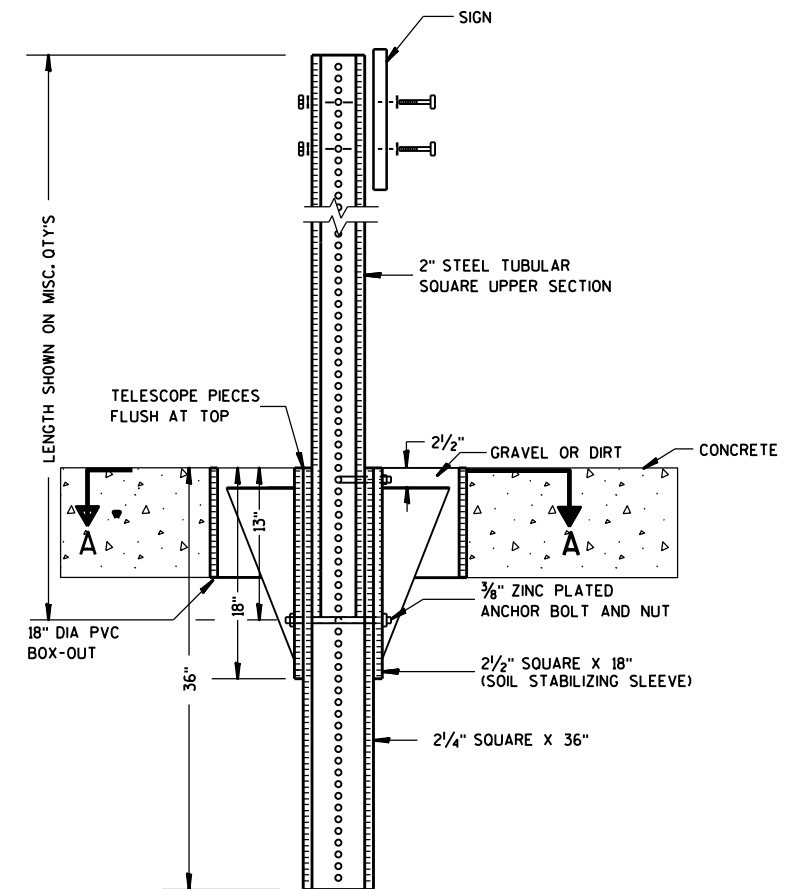
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

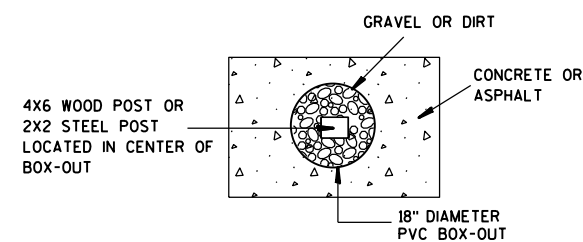
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 129 A4-3B.1

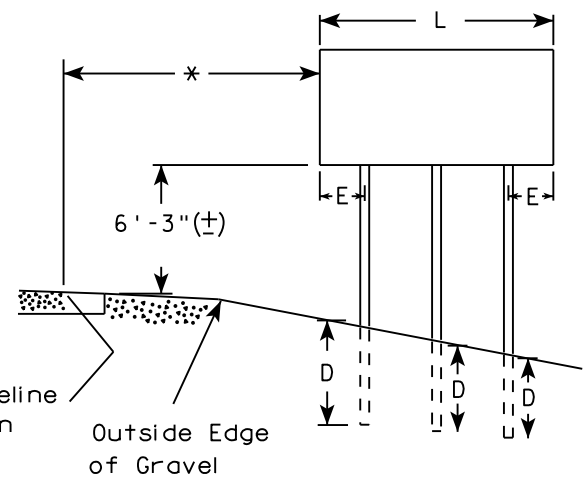
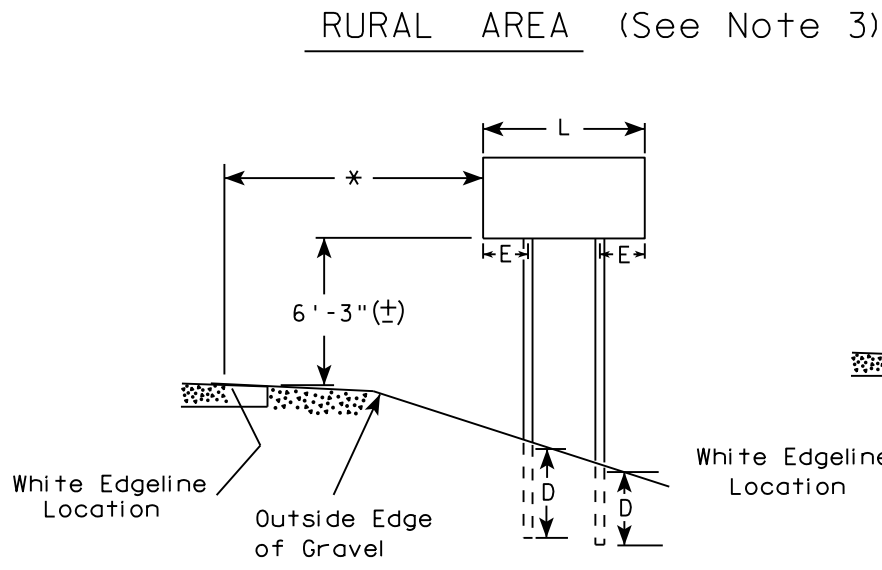
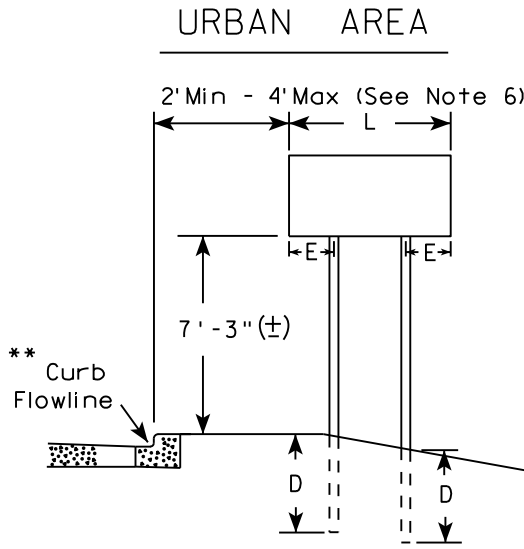
PROJECT NO:

HWY:

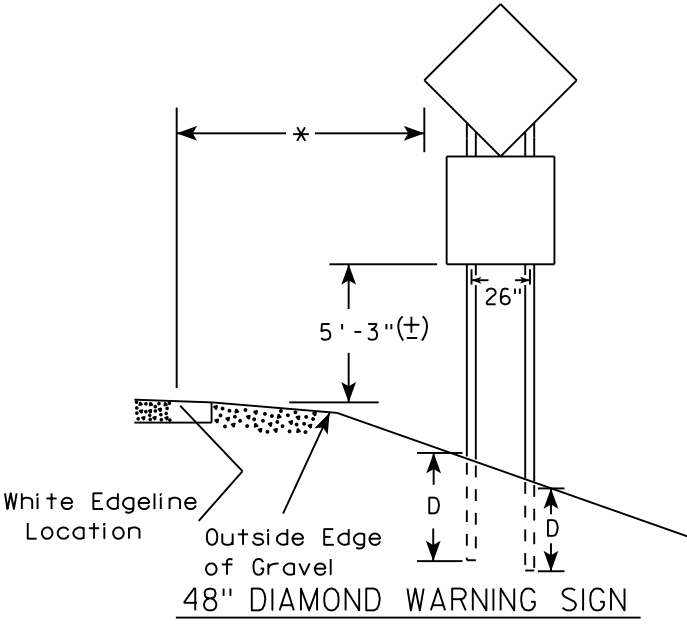
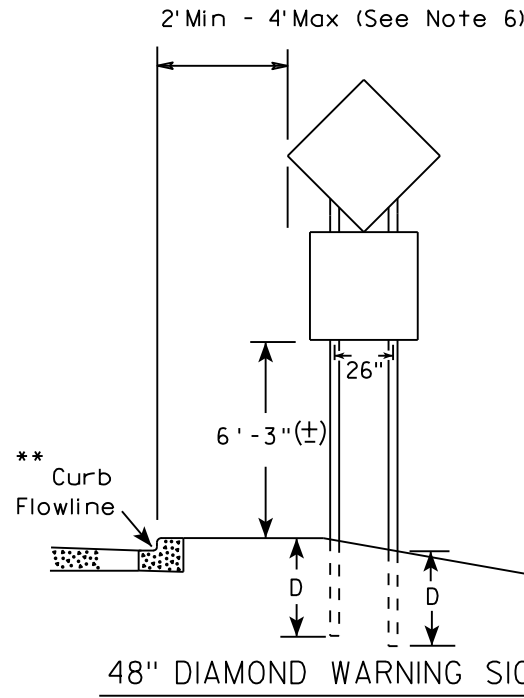
COUNTY:

SHEET NO:

E



- 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" (±).



- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

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

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

POST EMBEDMENT DEPTH

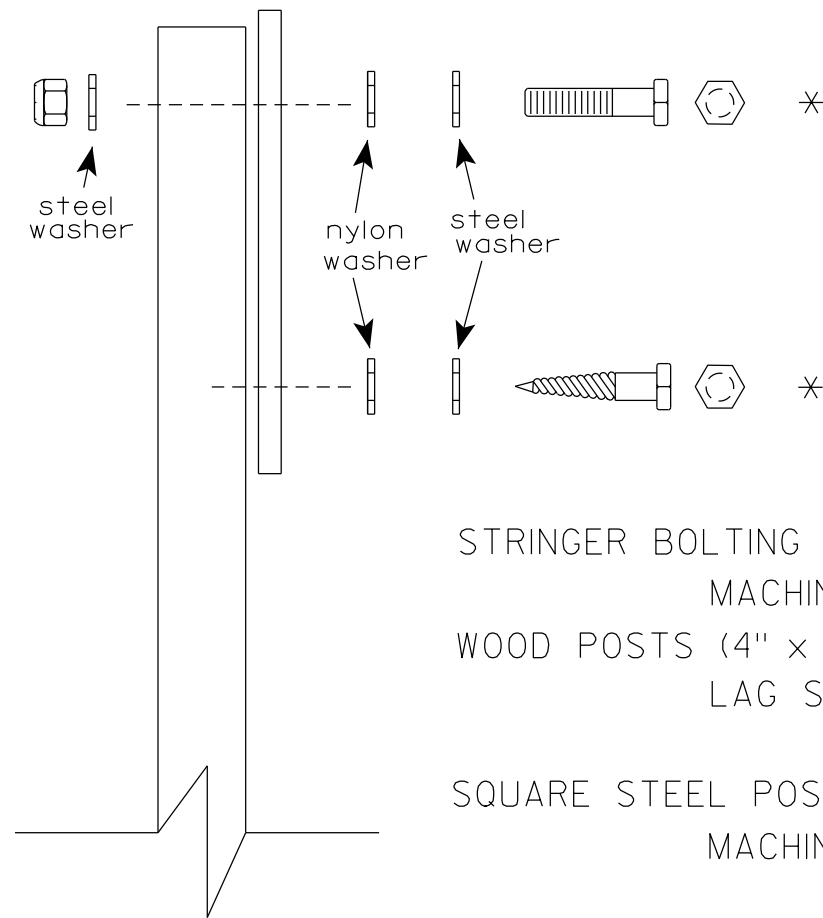
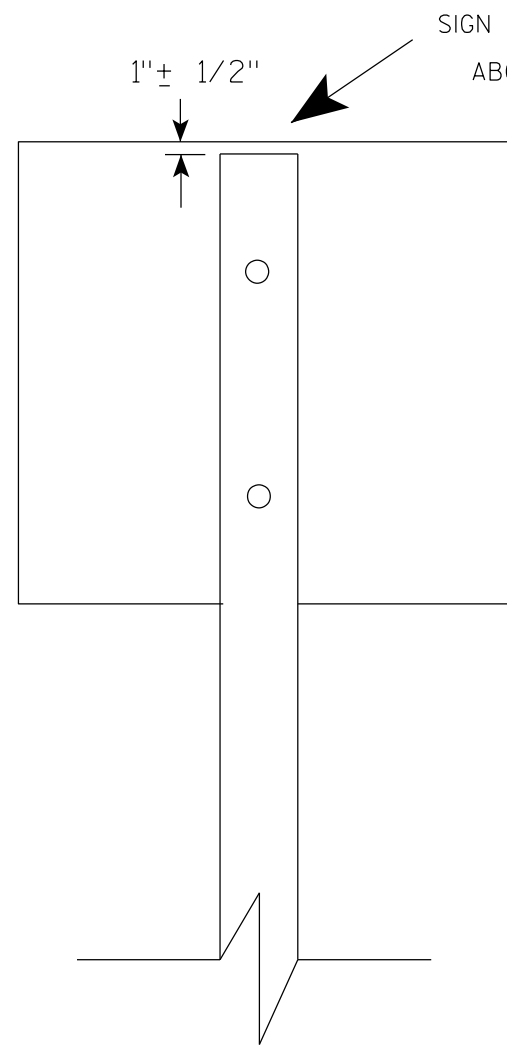
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



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

- 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.

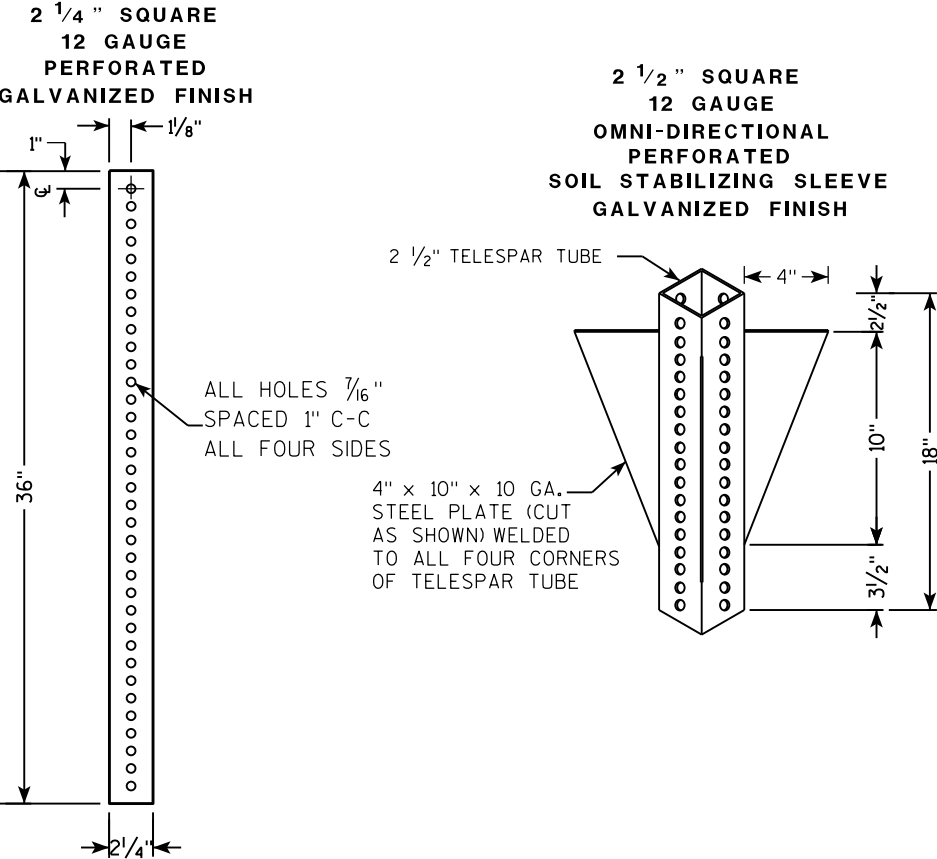
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

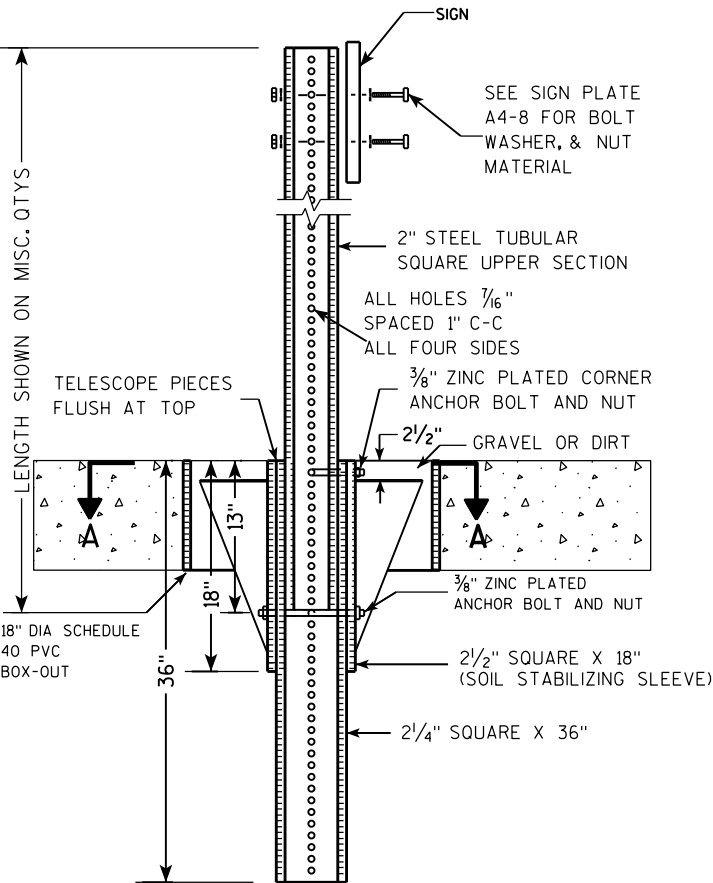
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

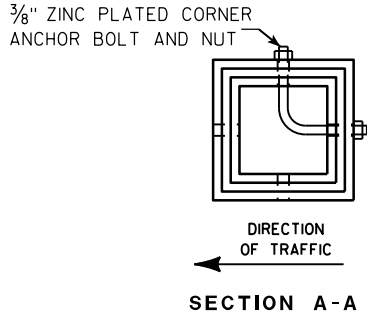
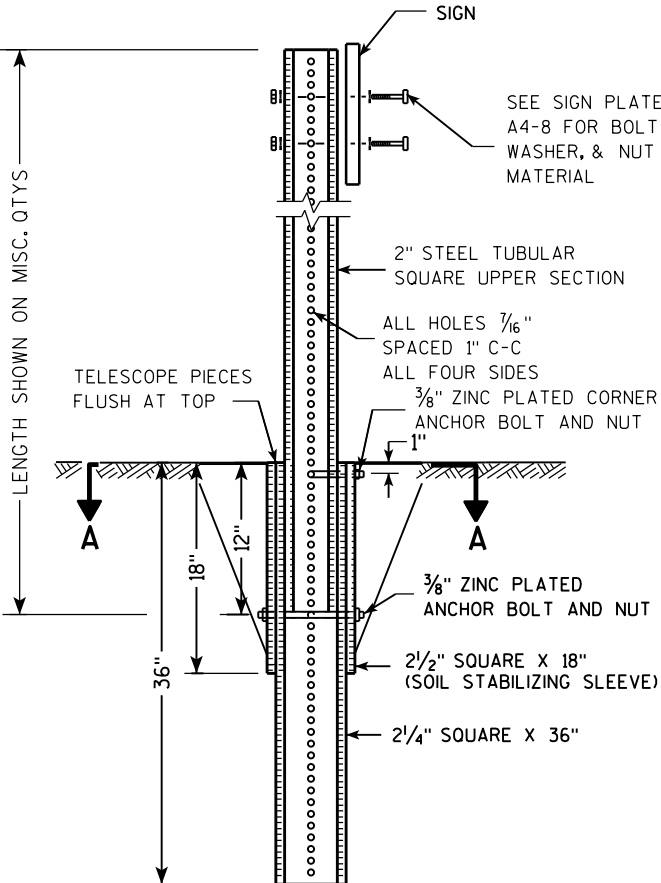
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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).

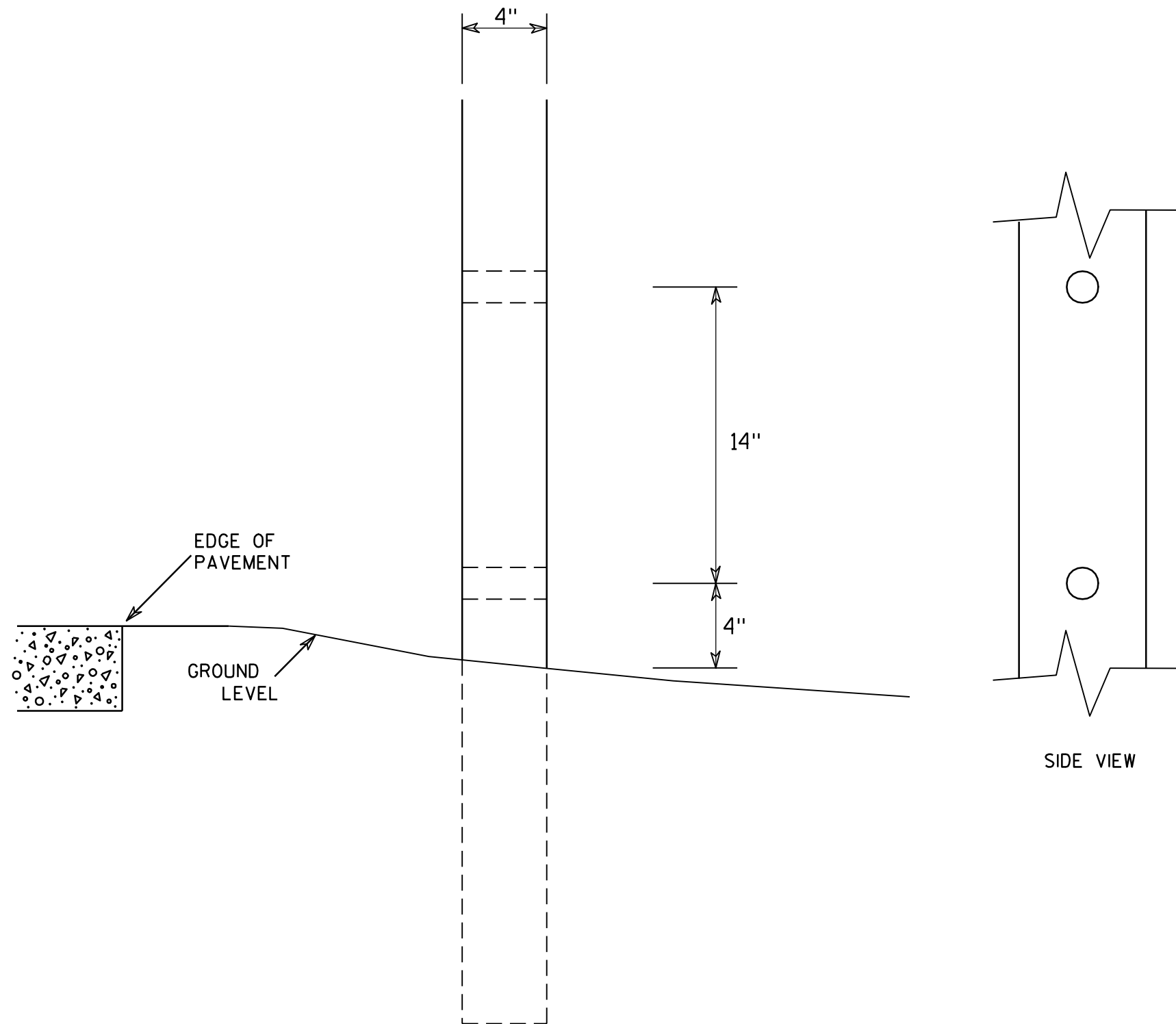
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 132 14-9.9

7



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

4 X 6 WOOD POST
MODIFICATIONS

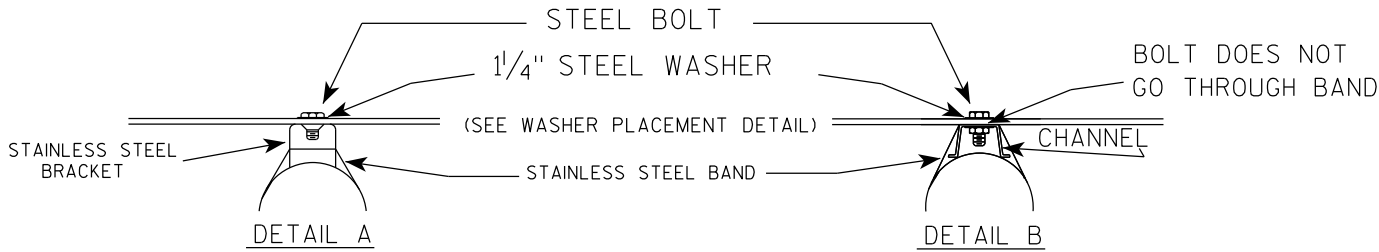
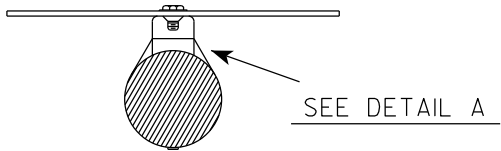
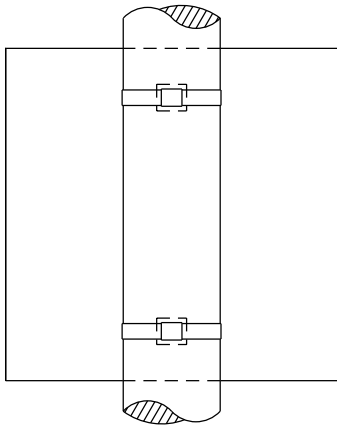
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Chester J. Spang*
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

BANDING

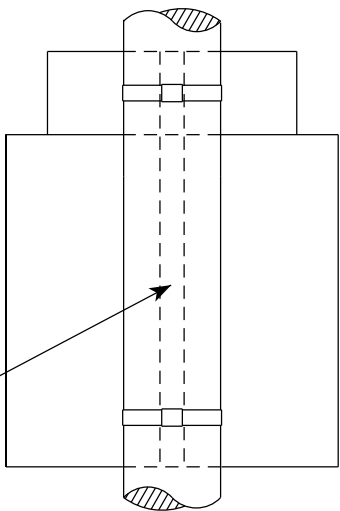
SINGLE SIGN



GENERAL NOTES

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

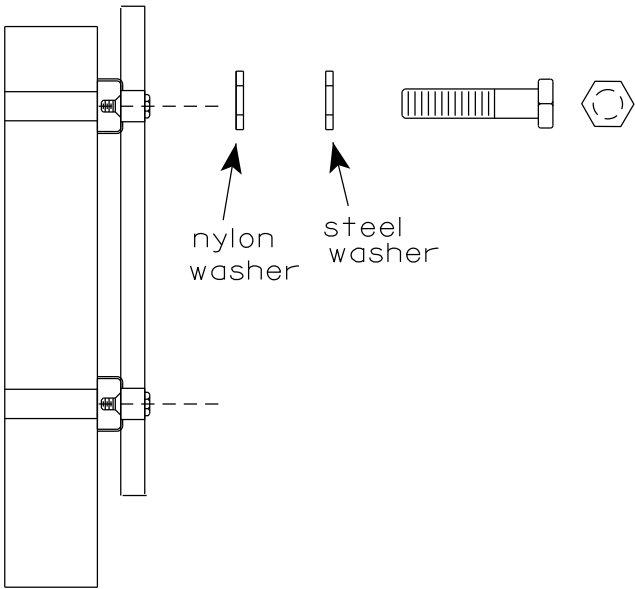
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT



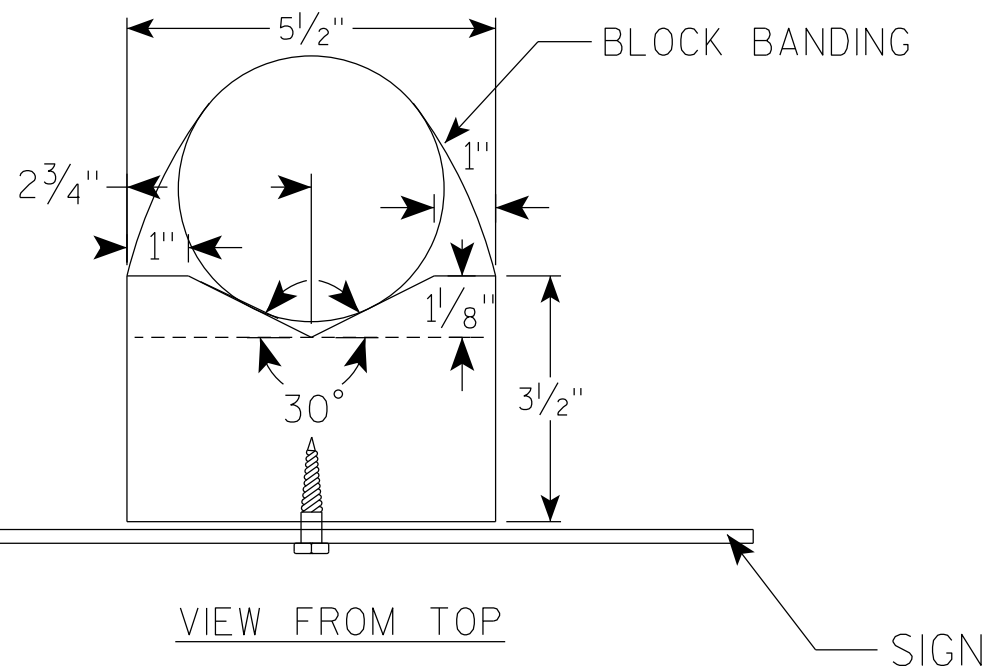
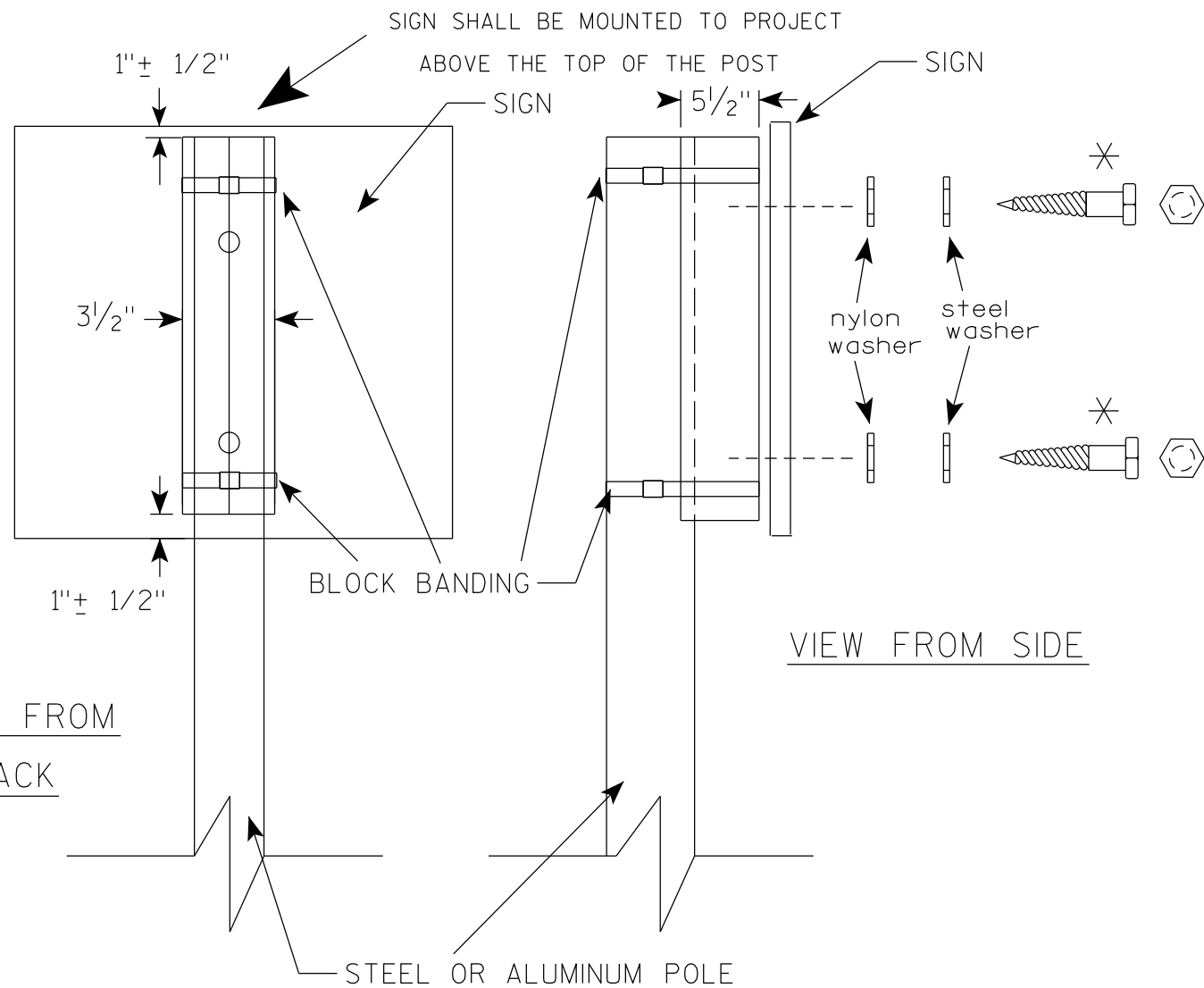
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



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, $\frac{3}{4}$ " 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 $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

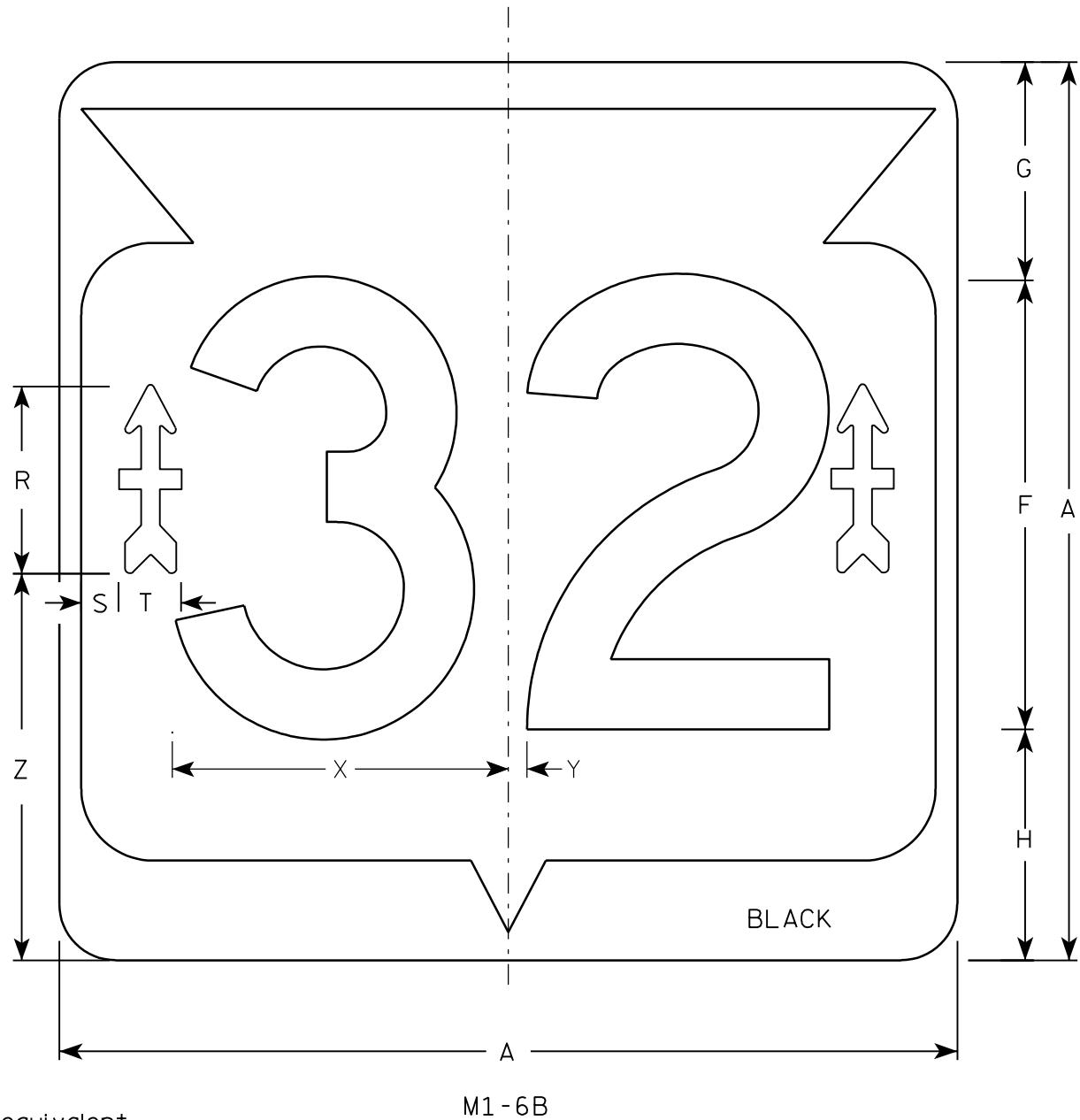
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO: 135

E

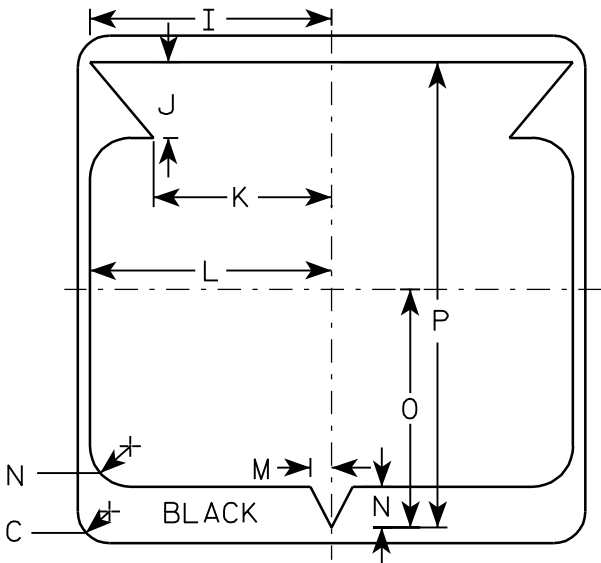


SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

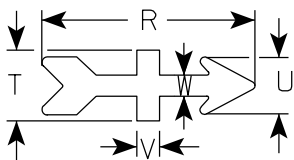
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81

NOTES

- 1. Sign is Type II - Type H - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - White & Black
 - Message - Black
 - Arrow - Type H Reflective Red
- 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.



32nd DIVISION ARROW
ACTUAL SIZE



STATE ROUTE MARKER "32"
M1-6B FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/5/05 PLATE NO. M1-6B.2



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24			1 1/8	1/2																						4.0	.36
3																												
4	36			1 5/8	3/4																						9.0	.81
5																												

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

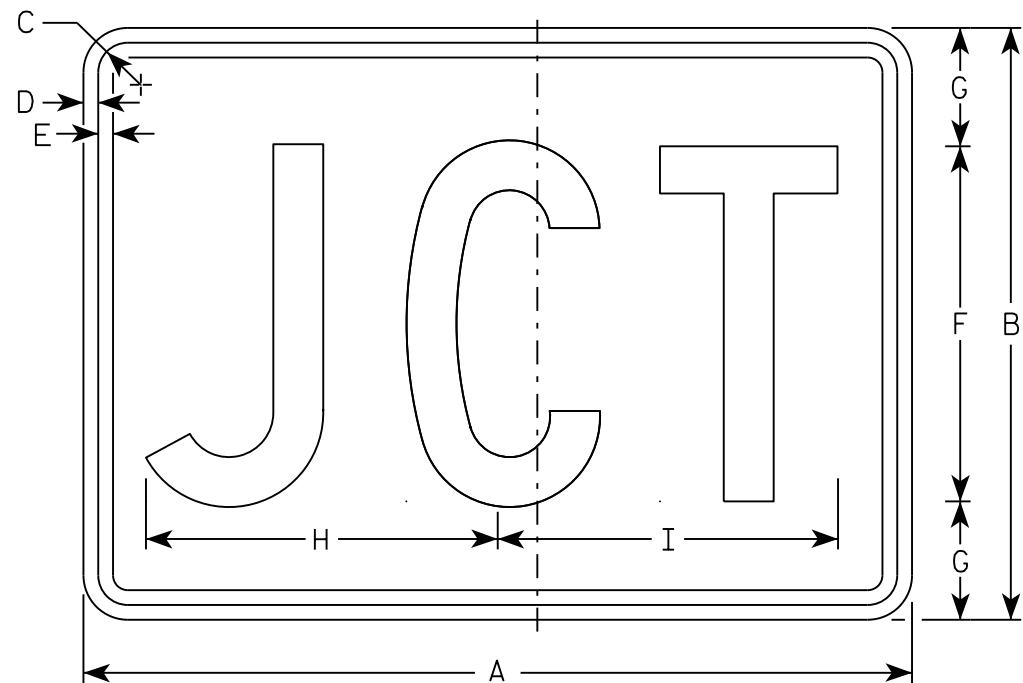
M1-93

WISCONSIN DEPT OF TRANSPORTATION

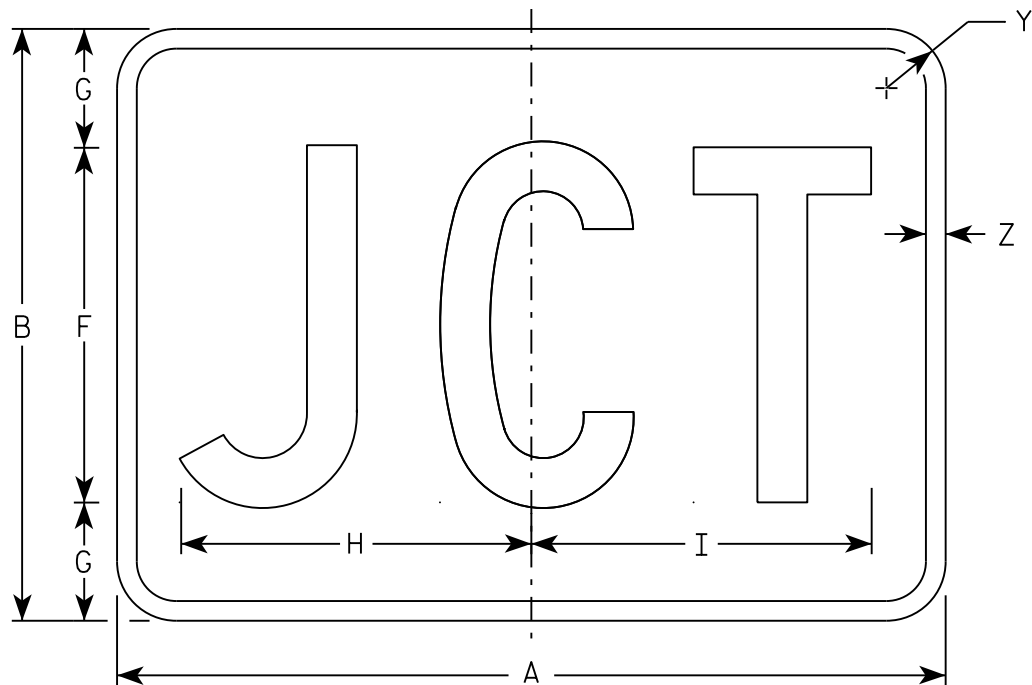
APPROVED *Matthew R. Rauch*
State Traffic Engineer

DATE 11/5/15 for PLATE NO. M1-93.2

137



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 Background - Brown
 Message - Yellow

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	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

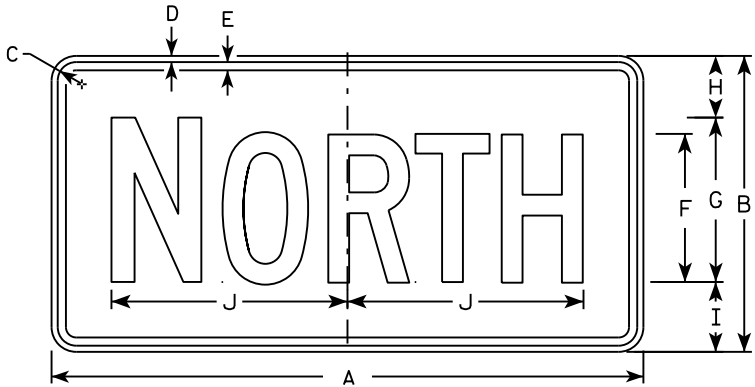
Matthew R. Rauch

For State Traffic Engineer

DATE 10/15/15

PLATE 138

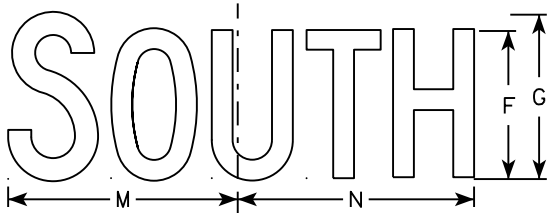
'2-1.12



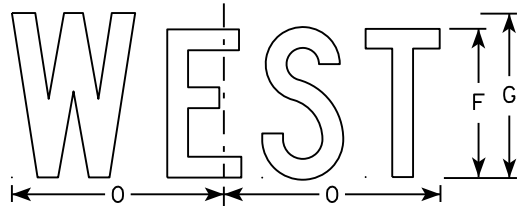
M3-1
MM3-1
MP3-1



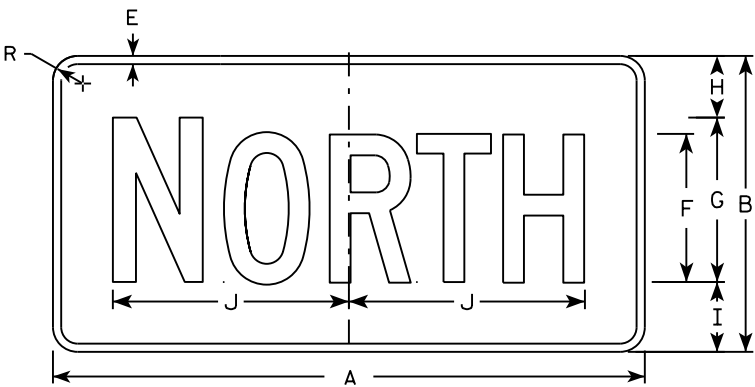
M3-2
MM3-2
MP3-2



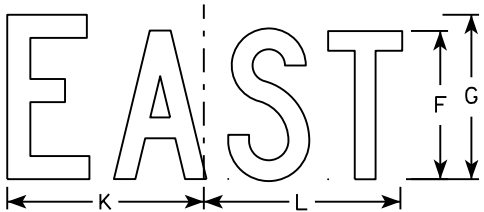
M3-3
MM3-3
MP3-3



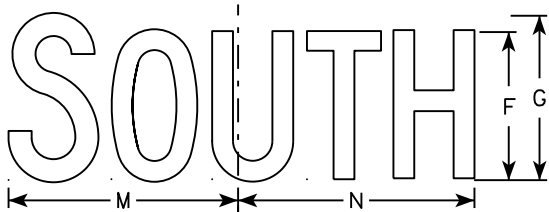
M3-4
MM3-4
MP3-4



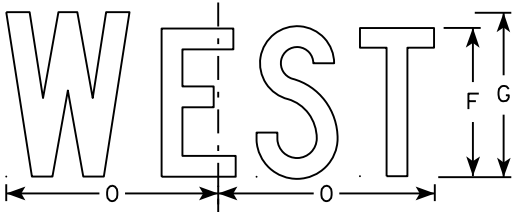
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. 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
6. Note the first letter of each direction is larger than the remainder of the message.

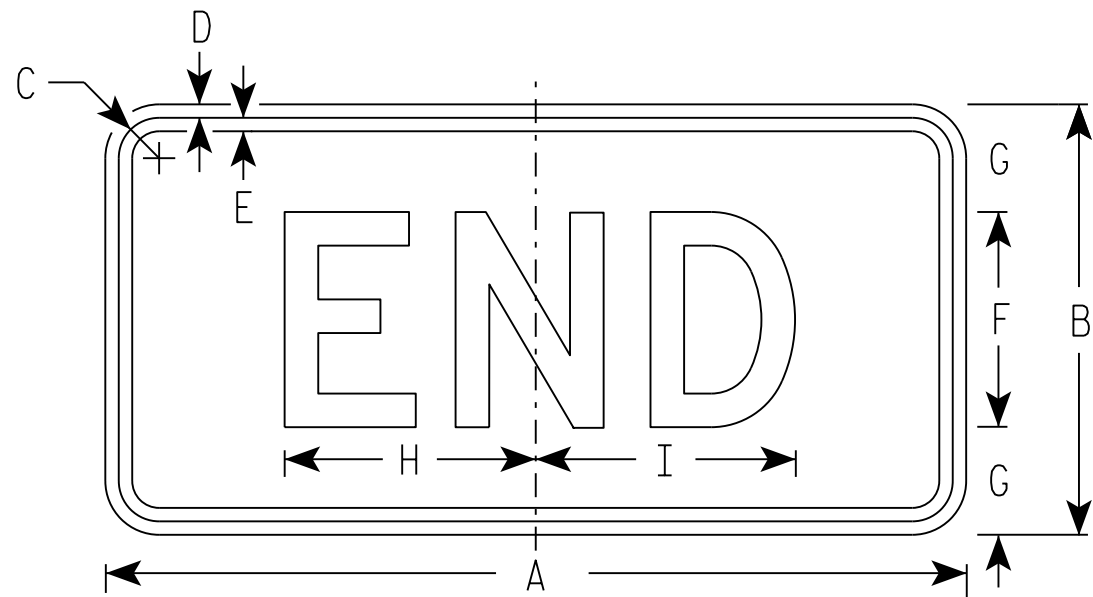
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8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

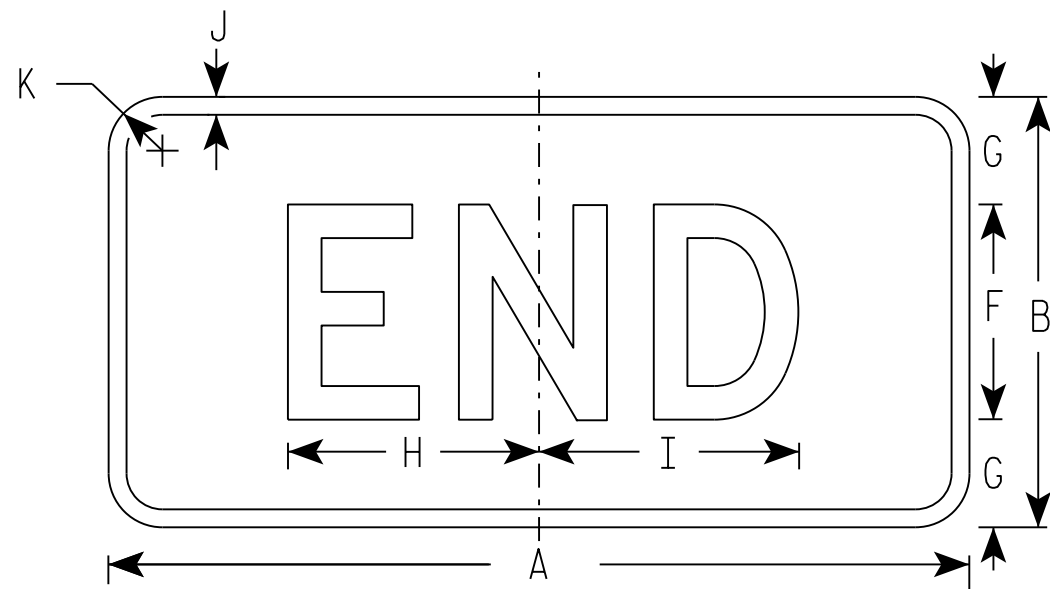
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. 139 M3-1.14



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

- Sign is Type II - Type H
- Color:
Background - See note 5
Message - See note 5
- Message Series - D
- 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.
- M4-6 Background - White
Message - Black
MB4-6 Background - Blue
Message - White
MK4-6 Background - Green
Message - White
MM4-6 Background - White
Message - Green
MN4-6 Background - Brown
Message - White
MP4-6 Background - White
Message - Blue
MR4-6 Background - Brown
Message - Yellow

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	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

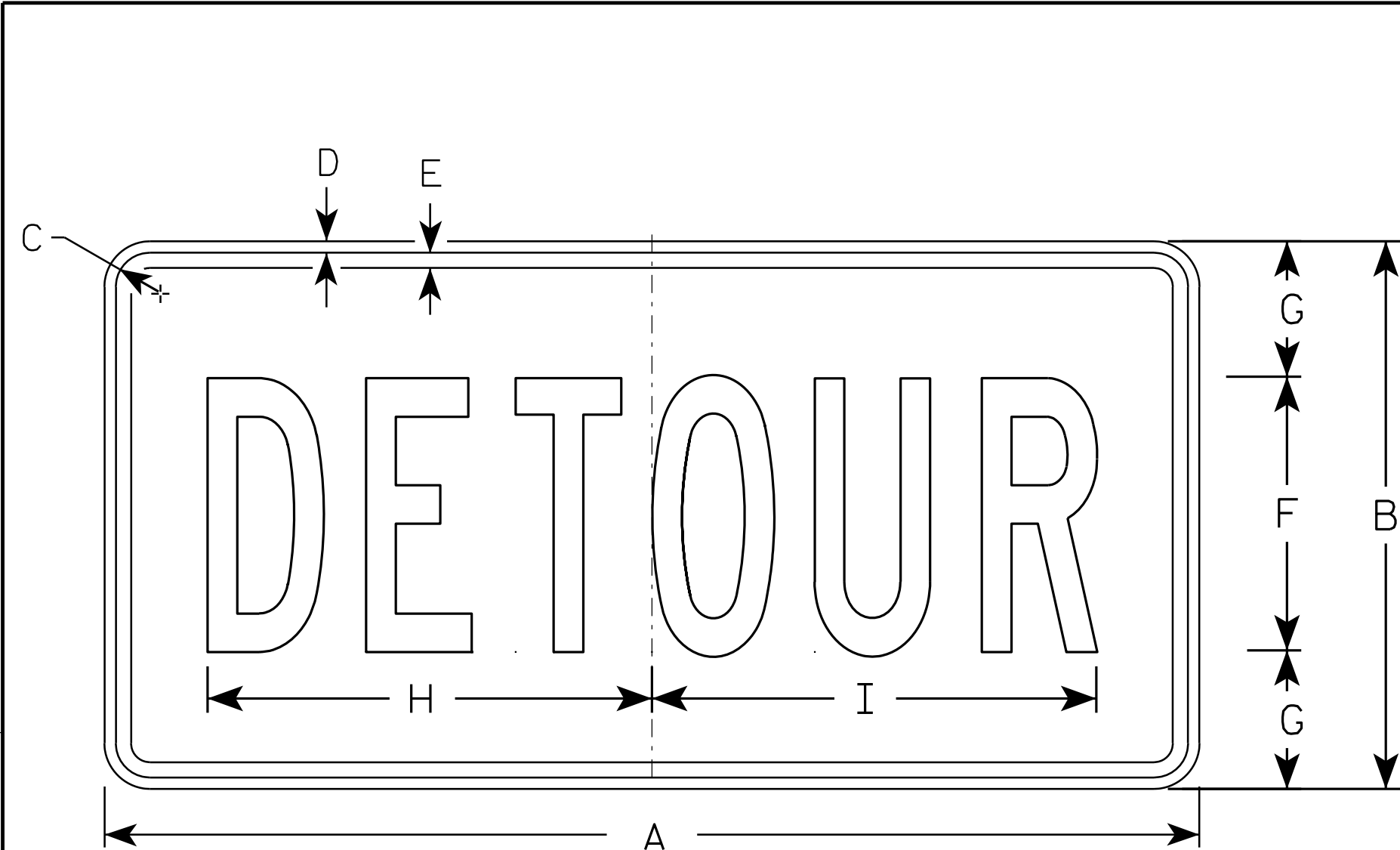
E

STANDARD SIGN
M4-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLAT 140 '14-7.9



M4 - 8

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - 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.

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

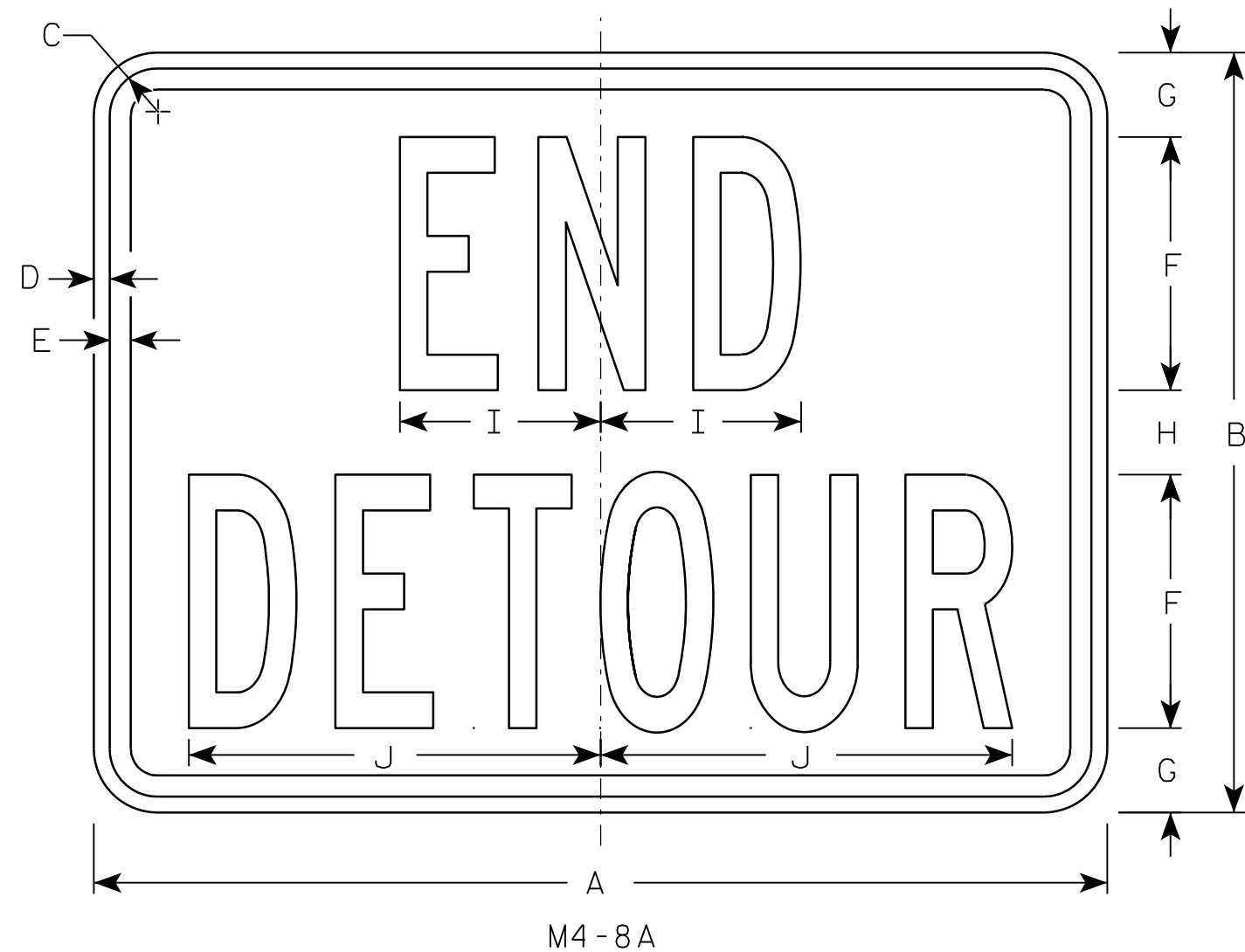
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



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

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																											

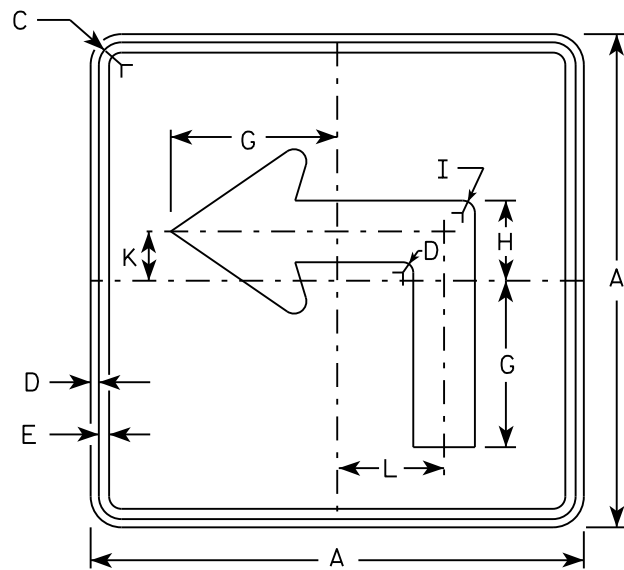
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 142	E
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STANDARD SIGN
M4-8A

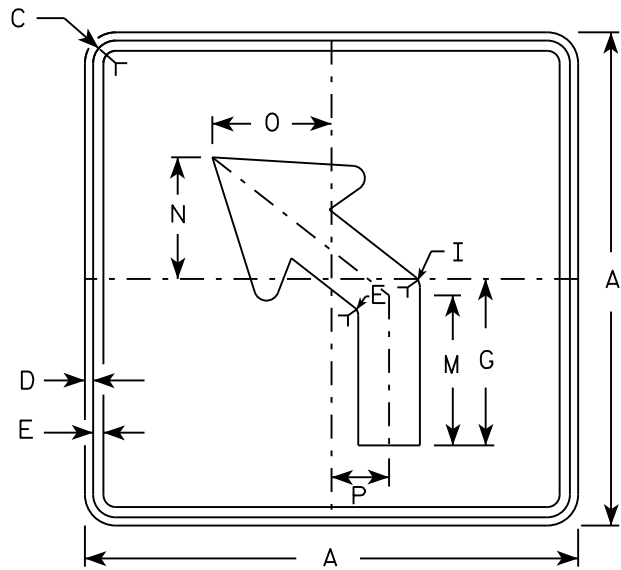
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

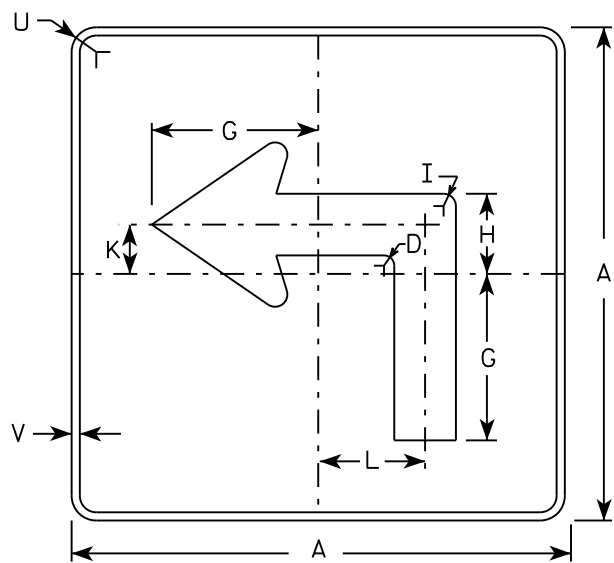
DATE 3/9/11 PLATE NO. M4-8A.2



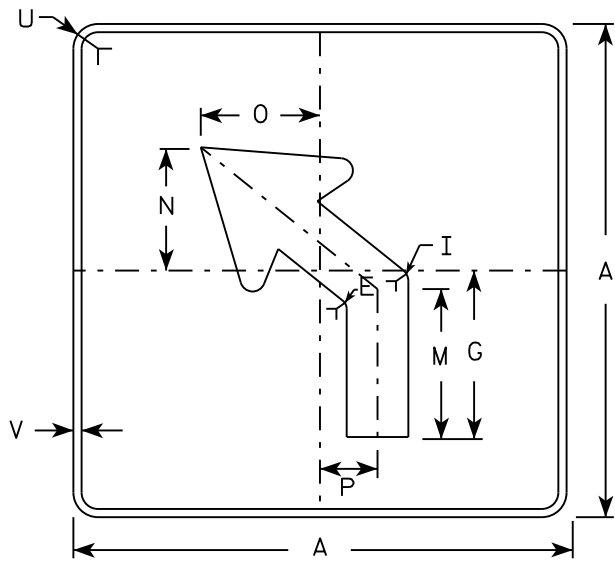
M5-1L
MM5-1L
M05-1L
MP5-1L



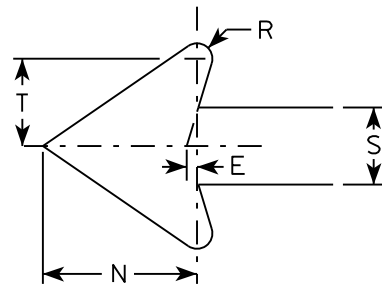
M5-2L
MM5-2L
M05-2L
MP5-2L



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
- CornerRadius 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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

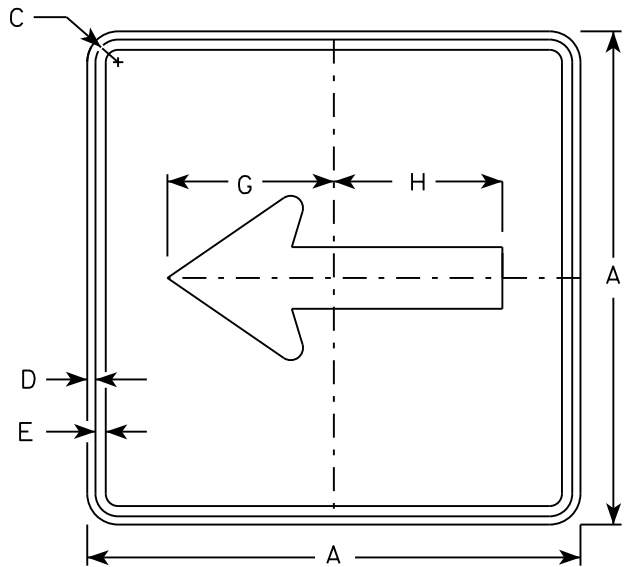
Matthew R. Rauch

for State Traffic Engineer

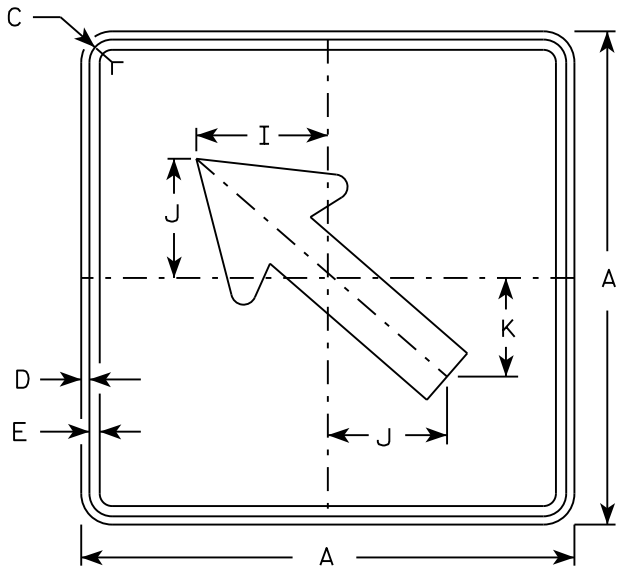
DATE 10/15/15

PLATE 143

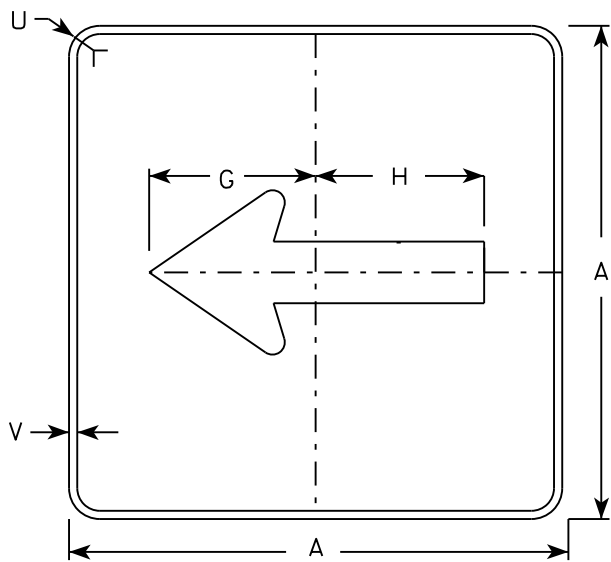
M5-1.13



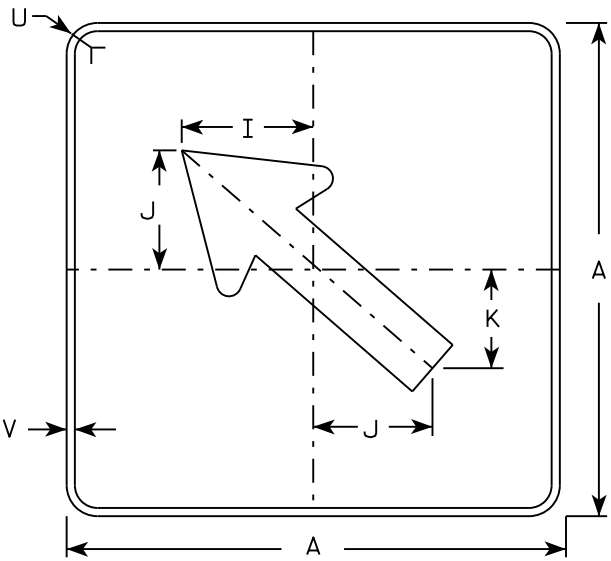
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



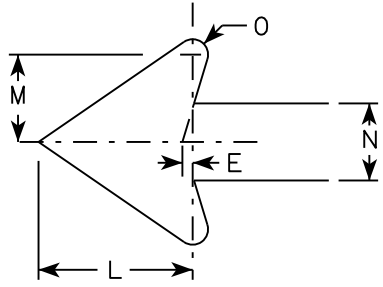
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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

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

PROJECT NO:

HWY:

COUNTY:

DATE 10/15/15

PLAT 144

SHEET NO:

E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

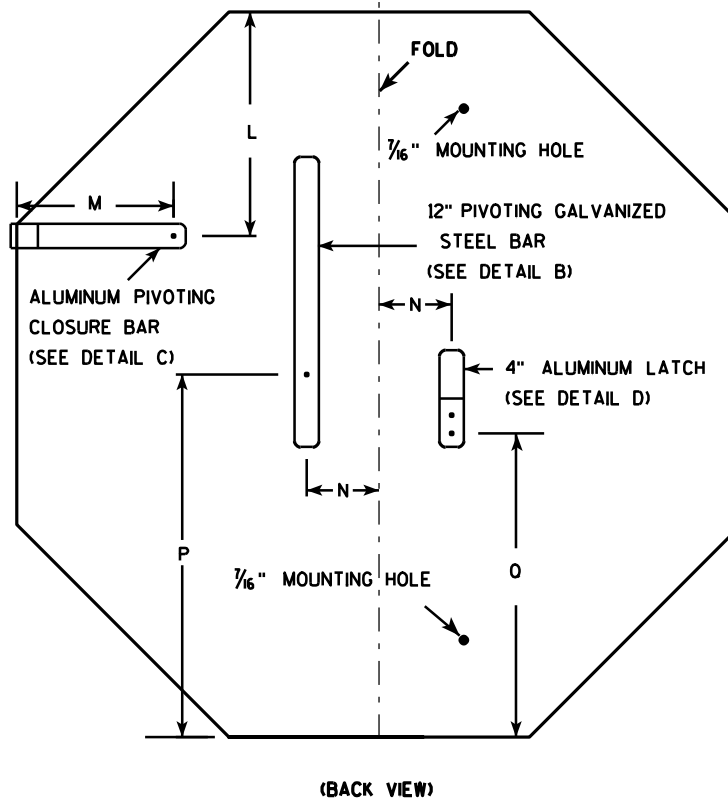
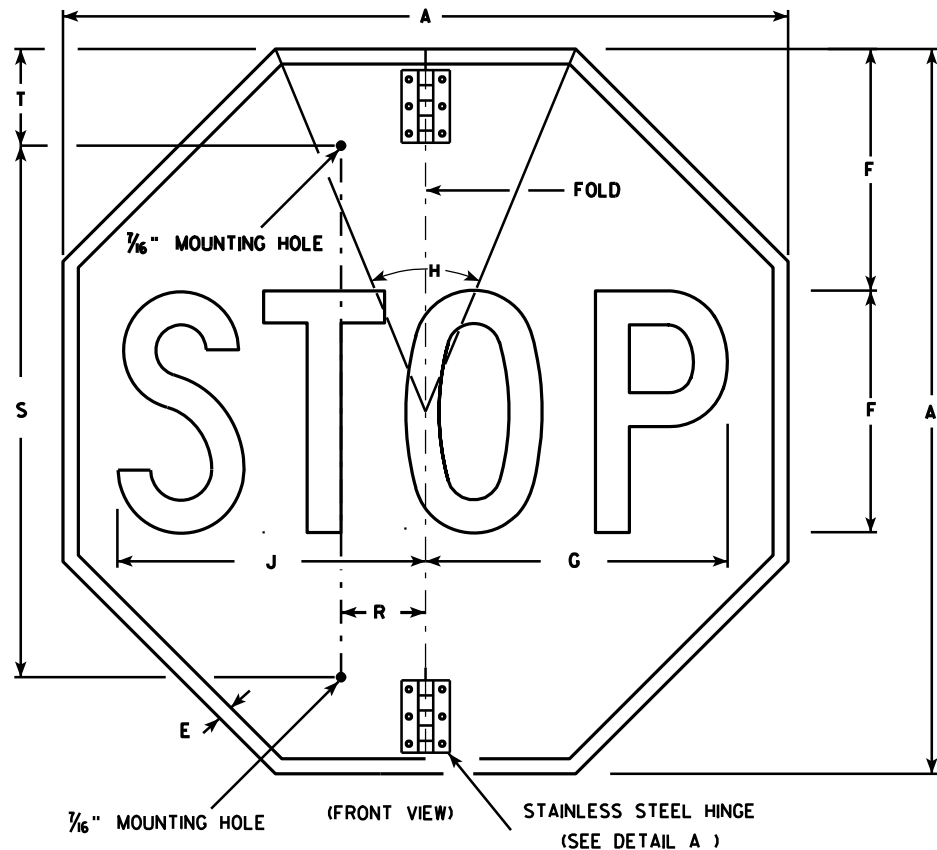
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15

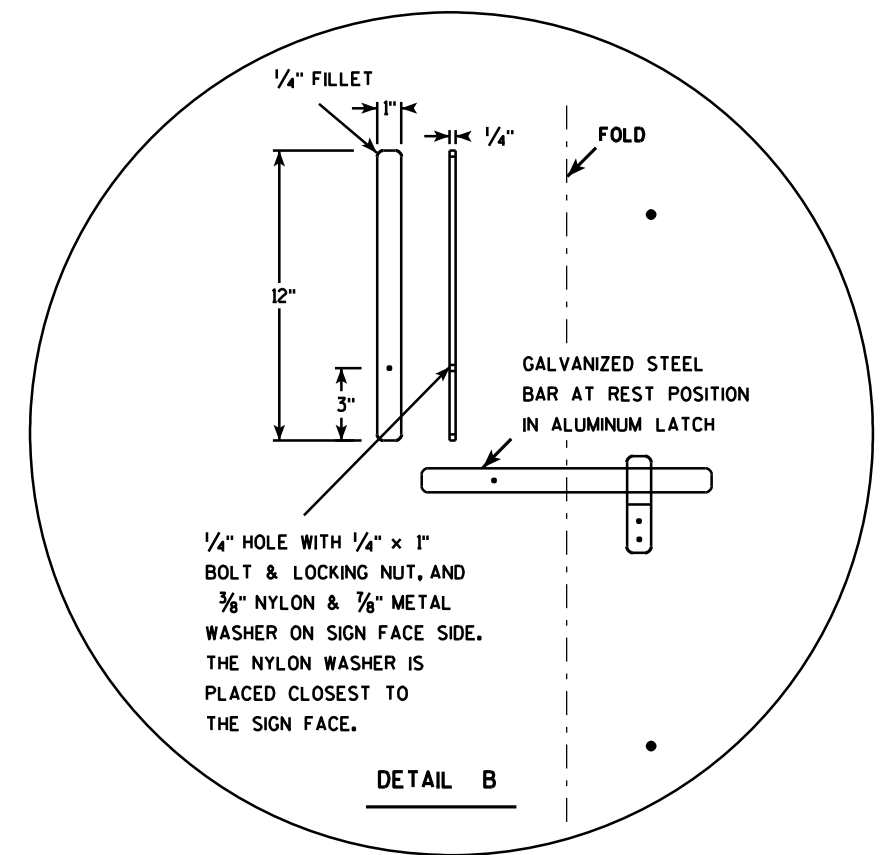
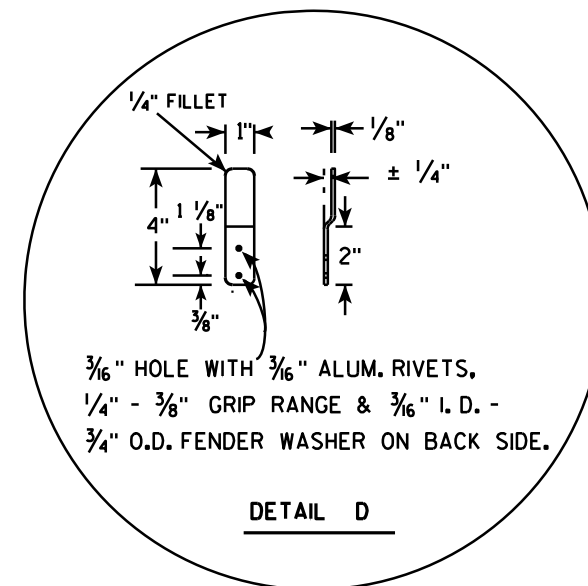
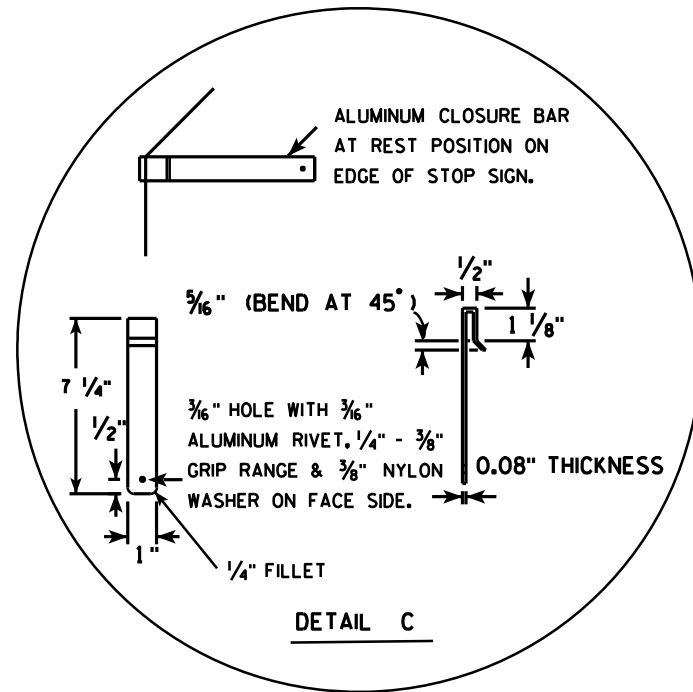
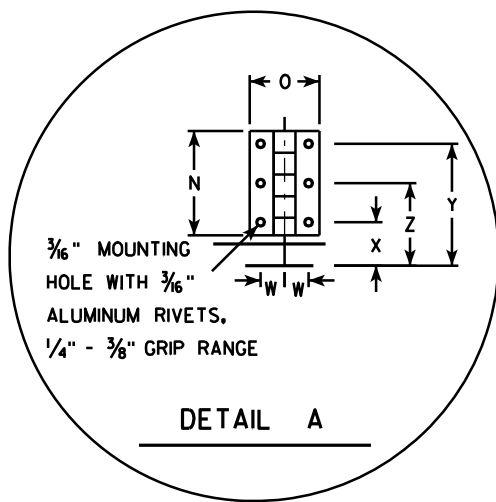
PLAT 144

M6-1.15



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

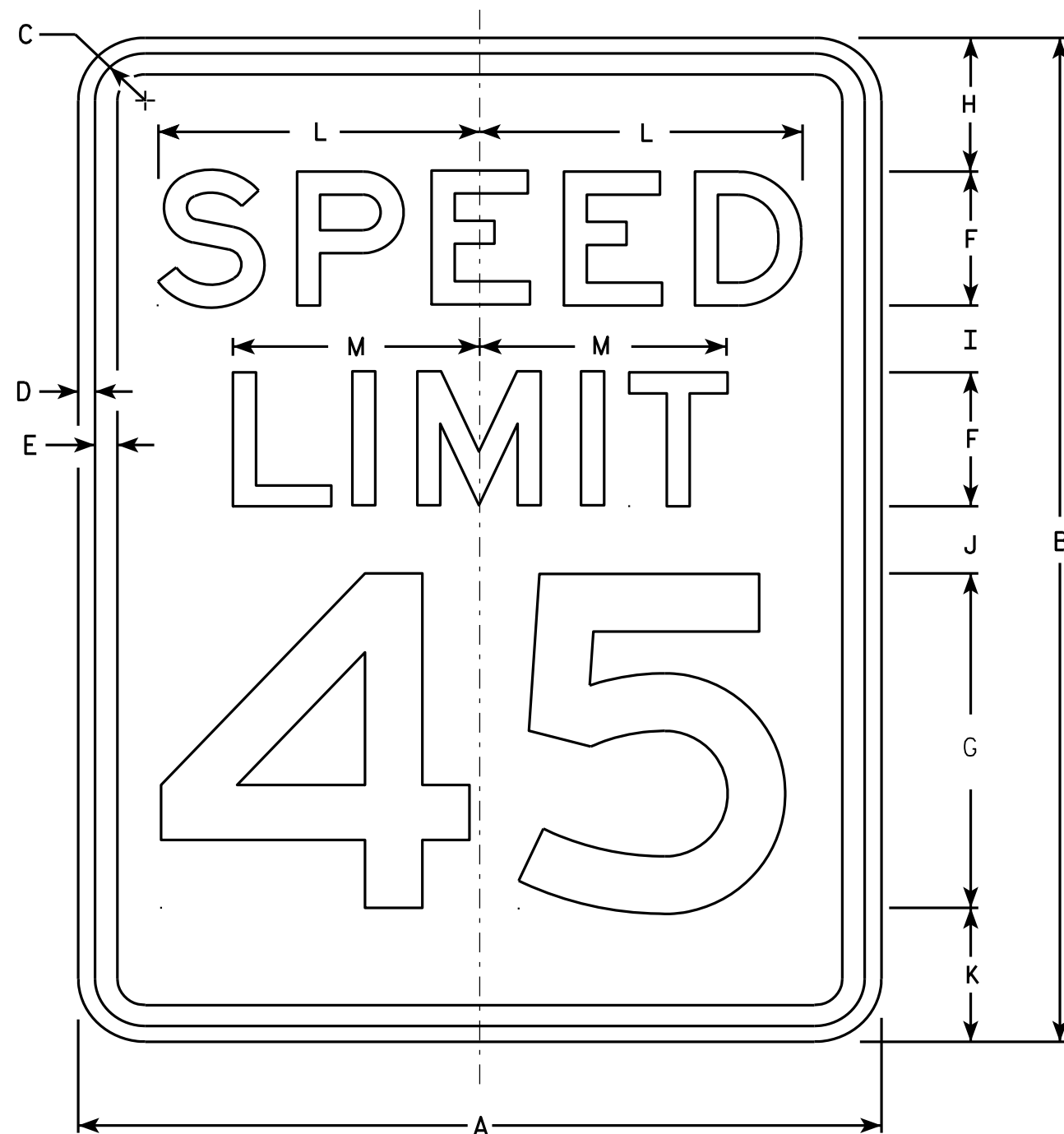
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 145	E
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STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3



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.

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

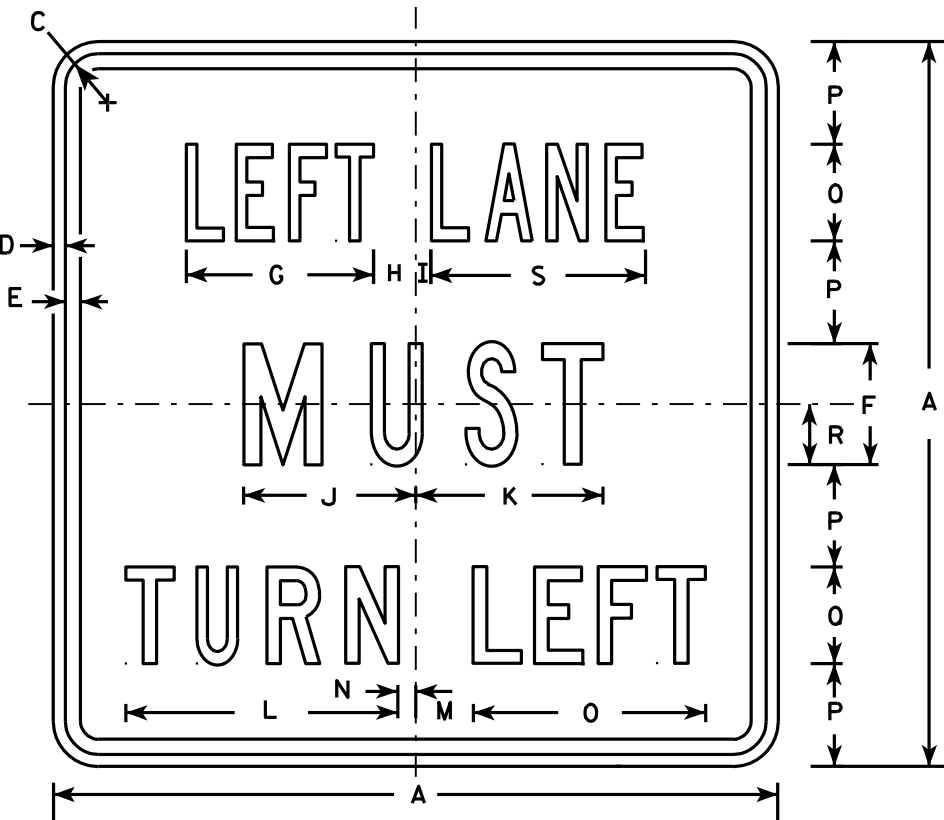
STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

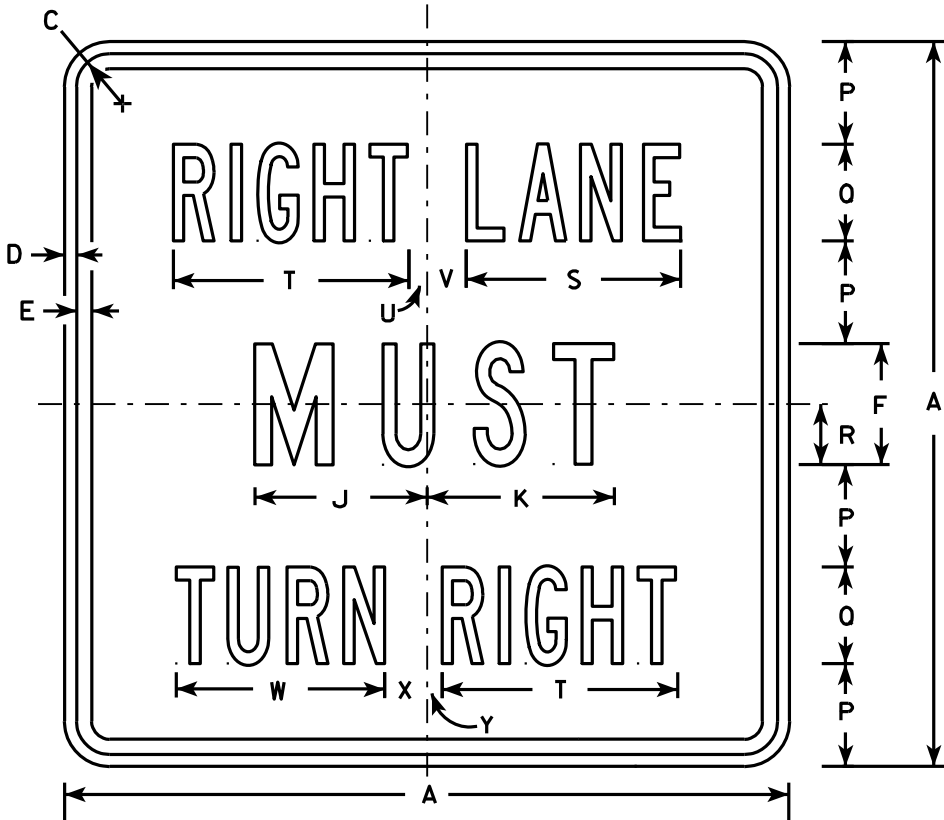
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

PROJECT NO: HWY: COUNTY: SHEET NO: 146 E



R3-7L

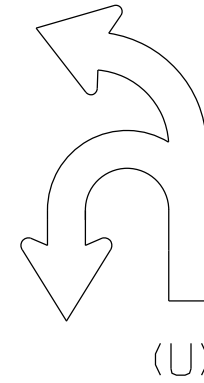
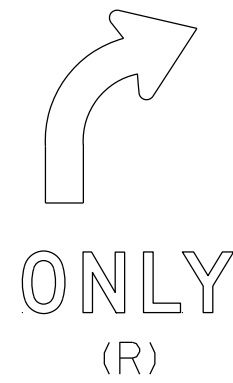
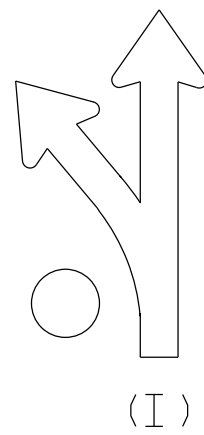
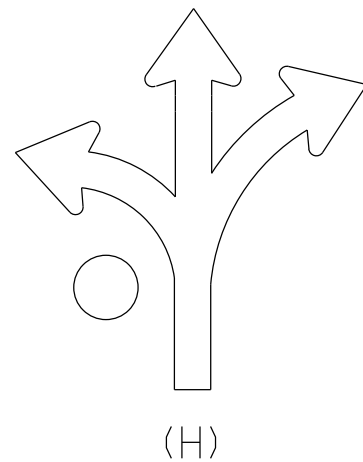
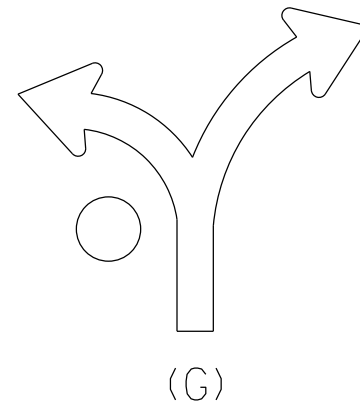
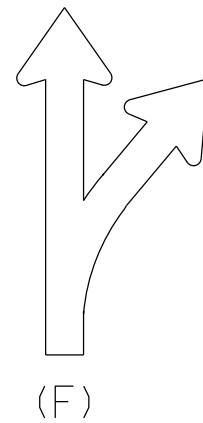
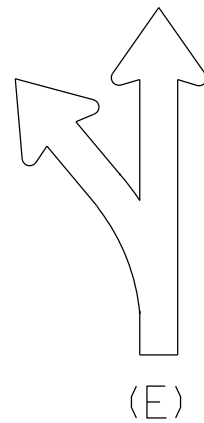
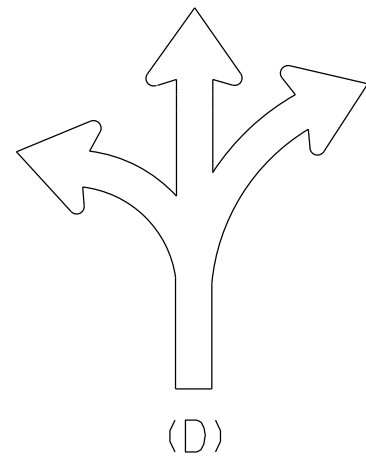
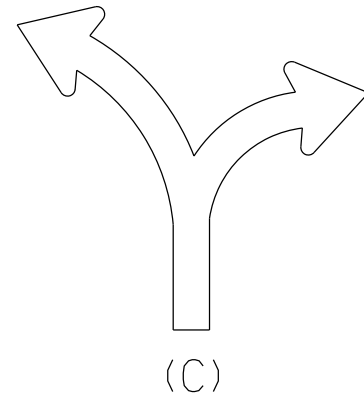
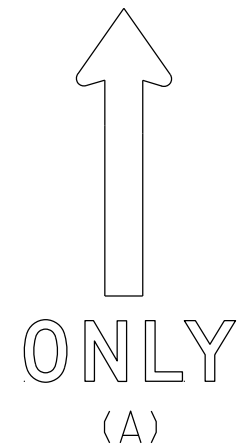


R3-7R

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 - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											



NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn

PLOT DATE : 21-MAY 2019 4:37

PLOT BY : mscj9h

PLOT NAME :

SHEET NO: 148

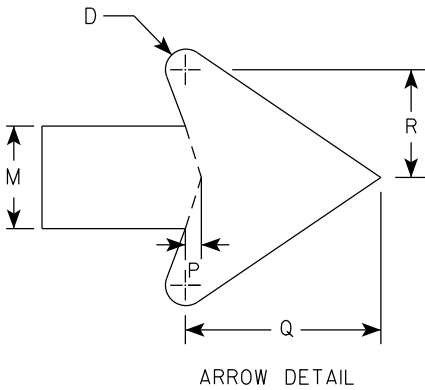
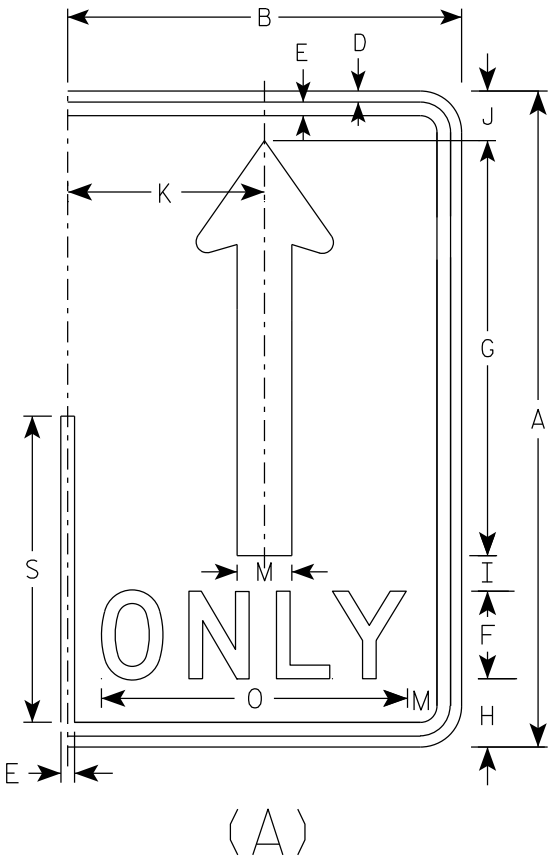
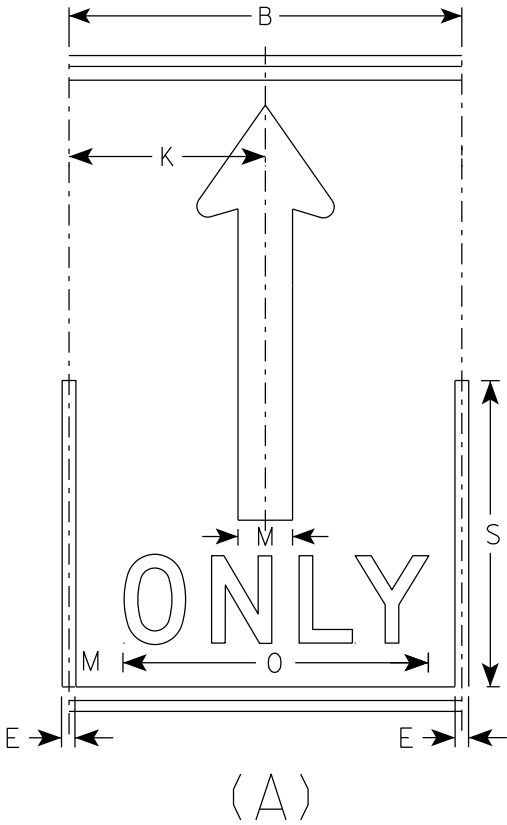
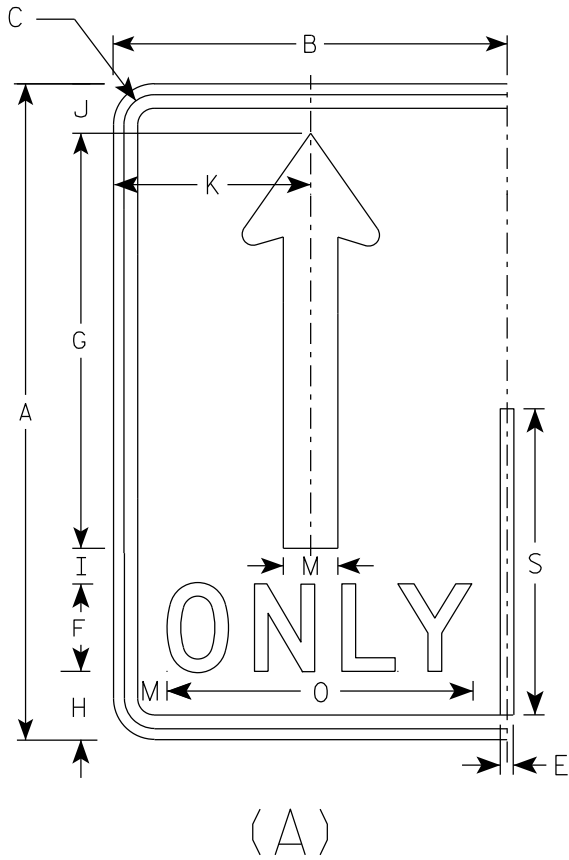
E

WISDOT/CADDs SHEET 42

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	22 3⁄4	3 3⁄4	1 3⁄4	2 3⁄4	12		3		17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

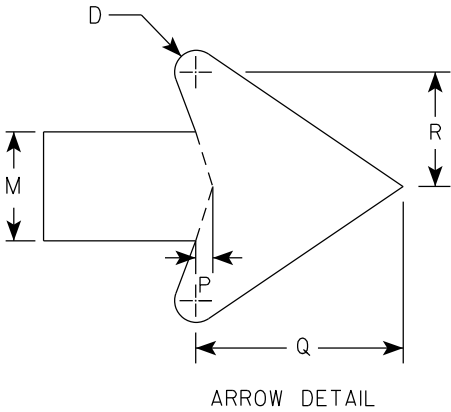
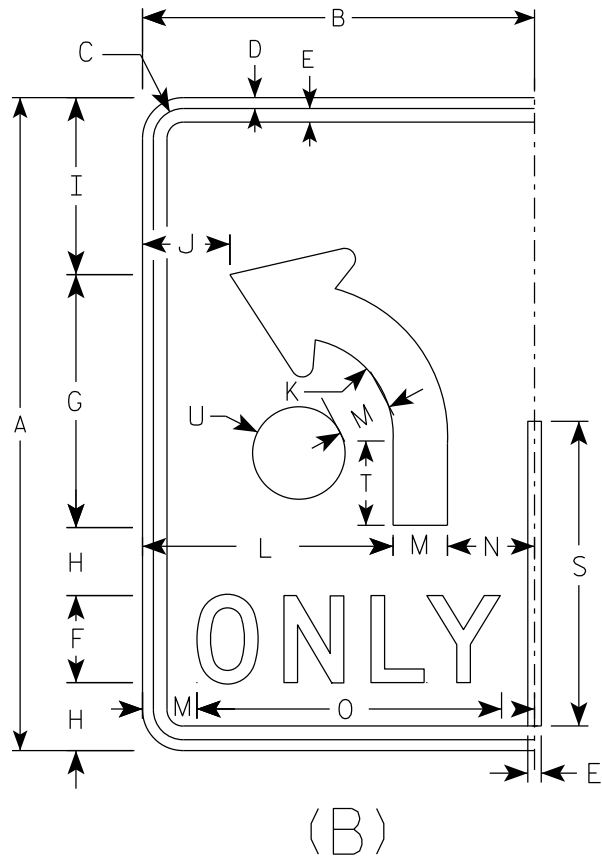
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black

Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8	2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0

PROJECT NO:

SHEET NO: 150

E

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

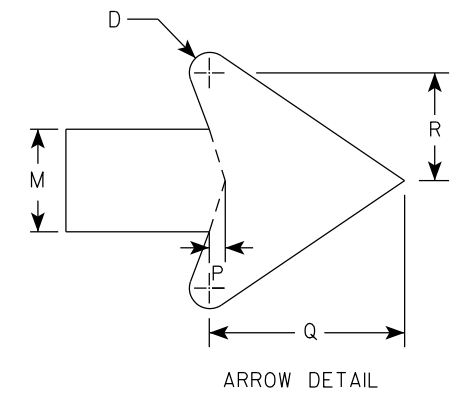
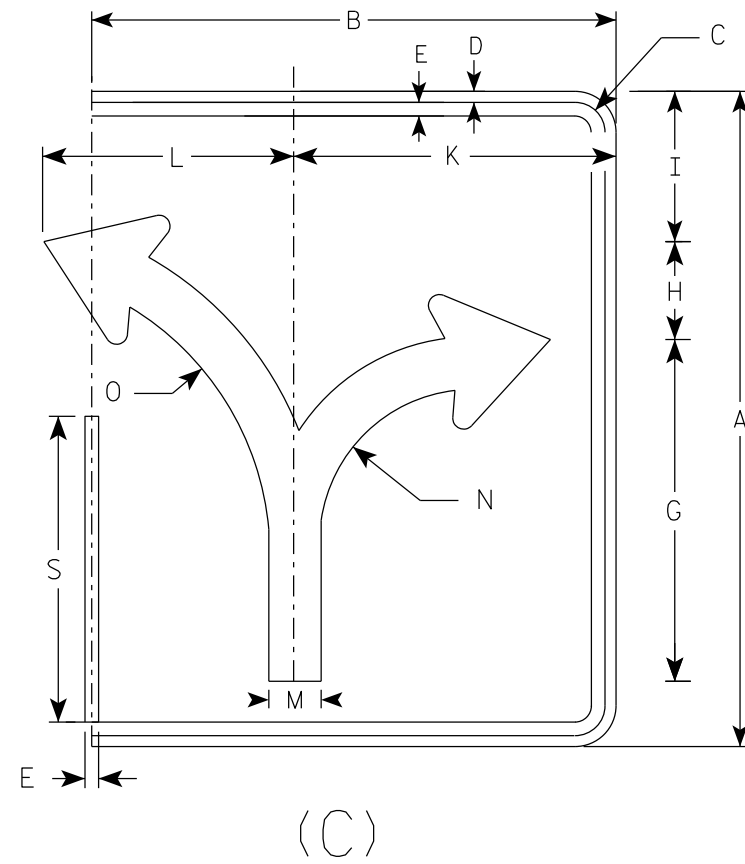
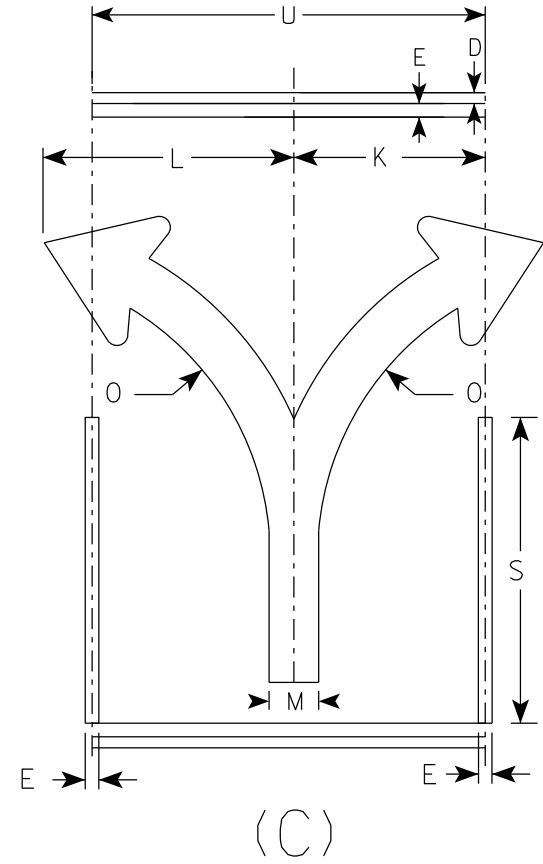
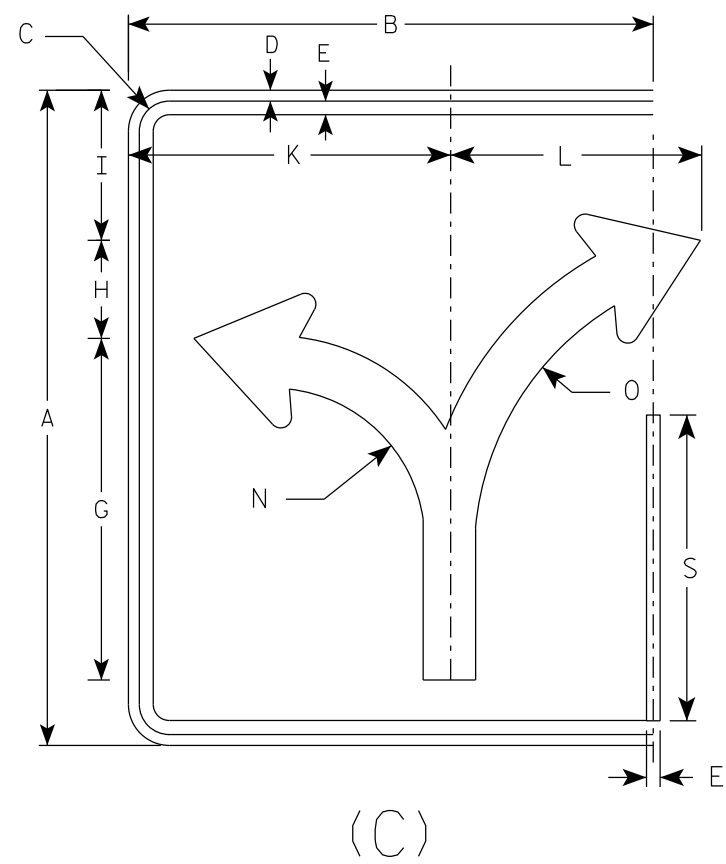
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



7

																												ENDS	MIDDLE
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.	Area sq. ft.	
1																													
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75	
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75	
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0	
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0	
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0	

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 151	E
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STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

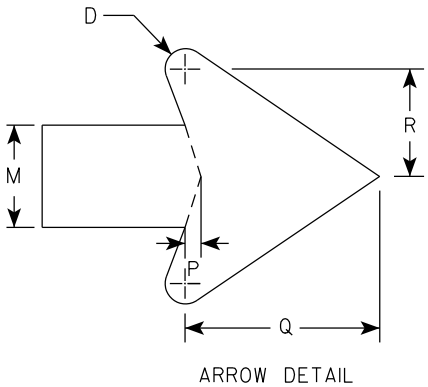
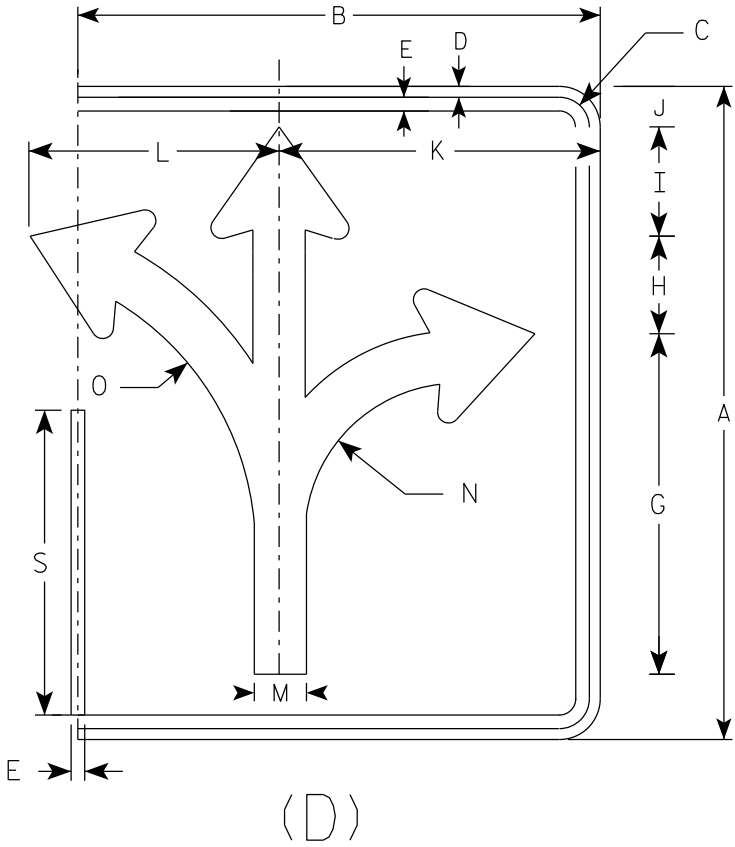
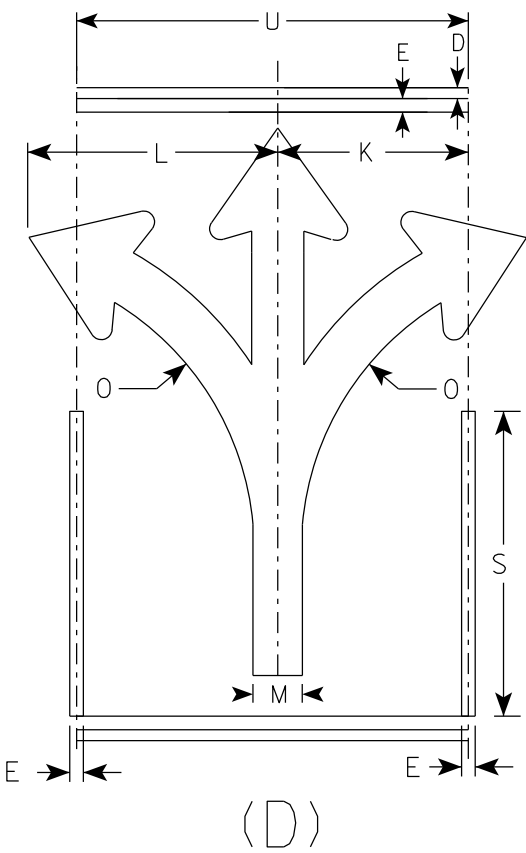
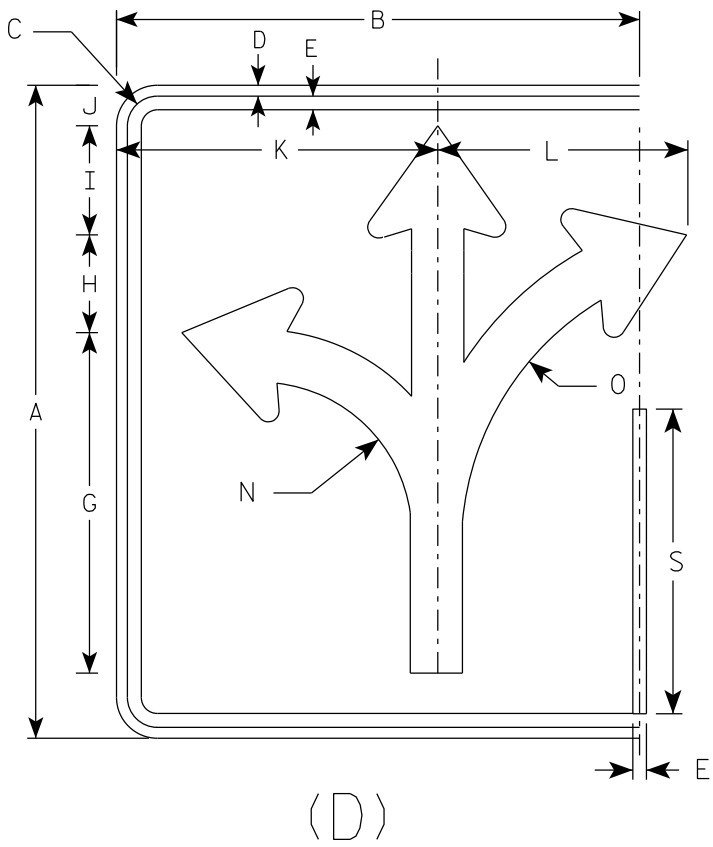
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None

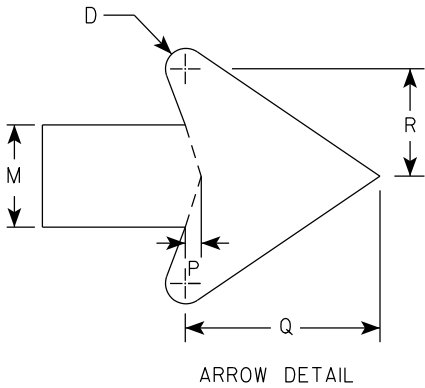
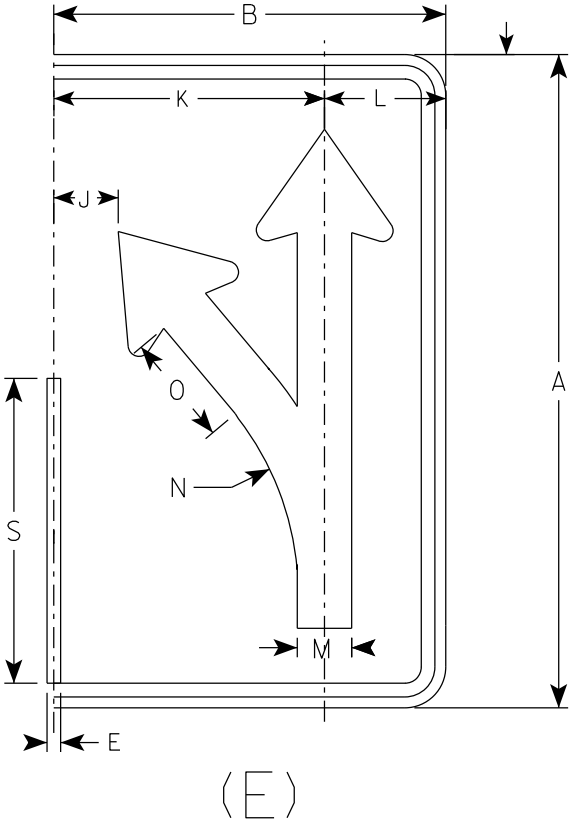
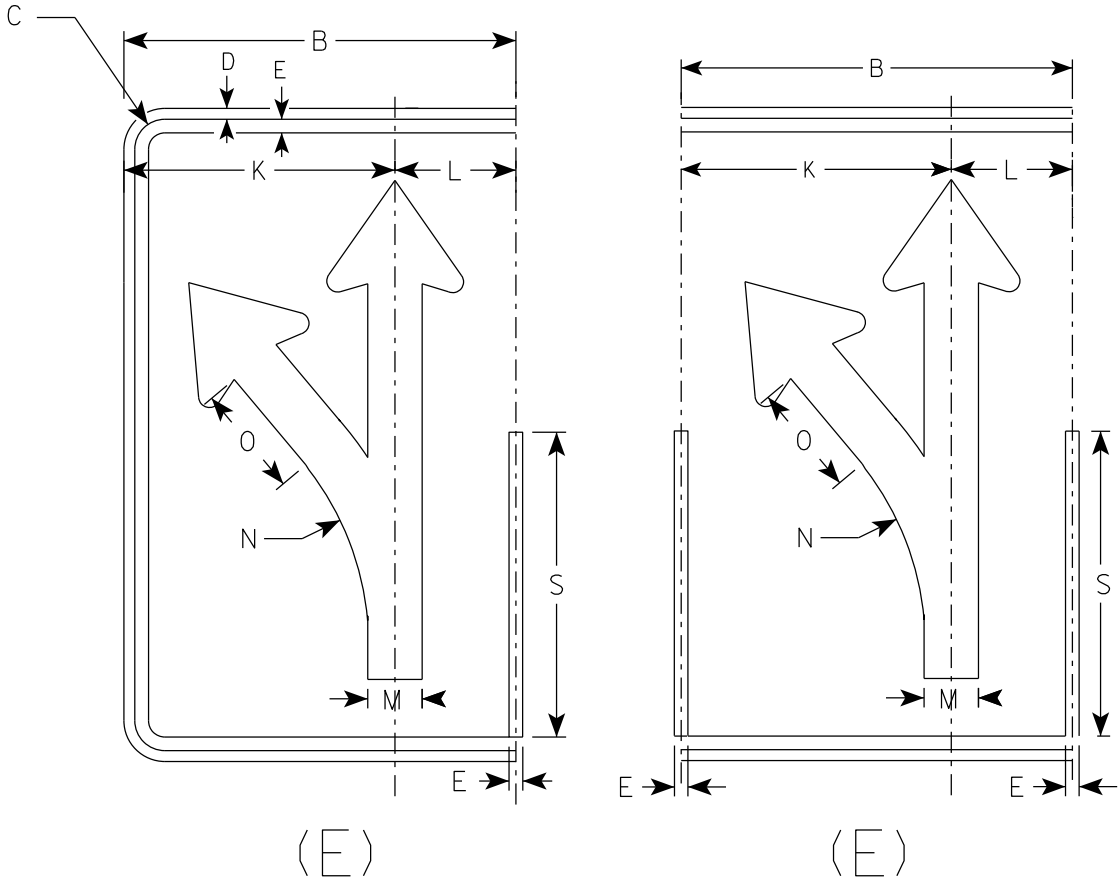


7

																											ENDS	MIDDLE
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.	Area sq. ft.
1																												
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	2 1⁄4	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

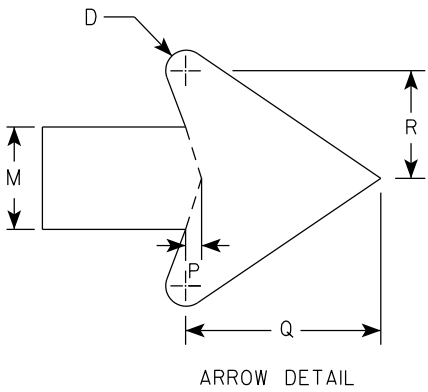
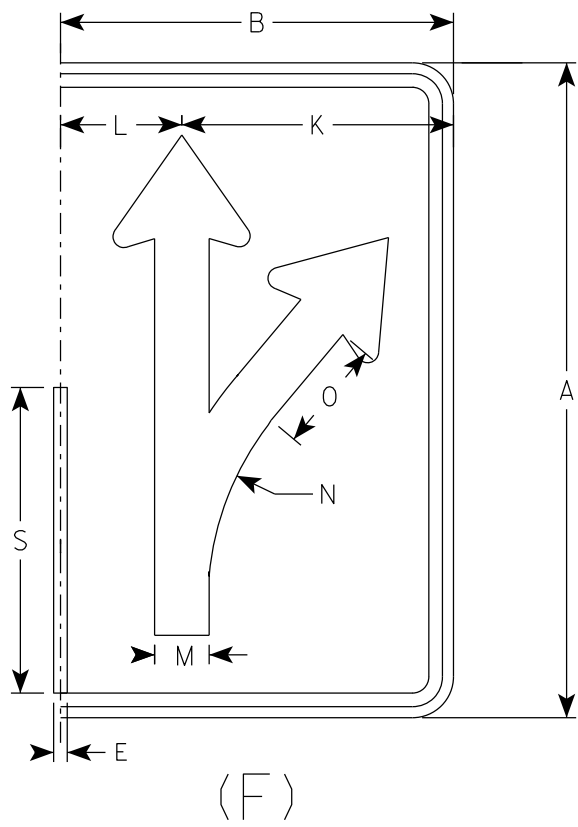
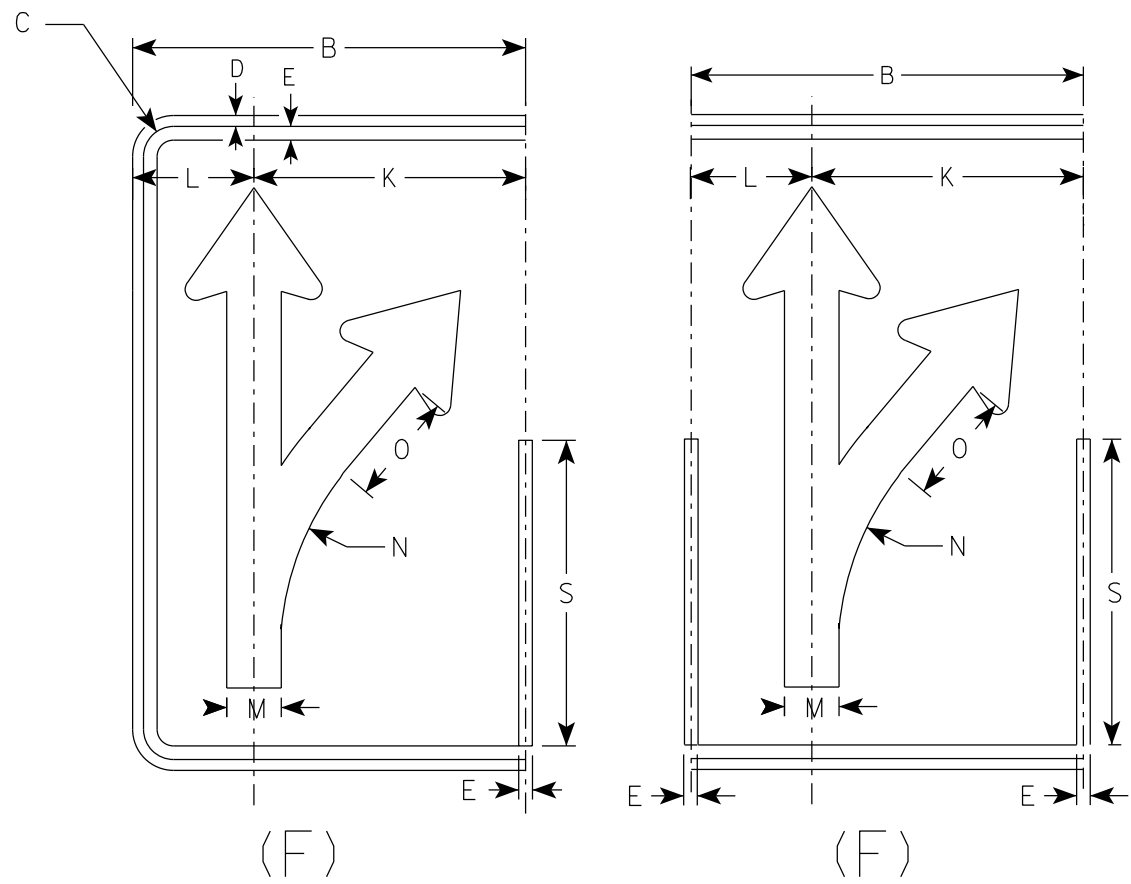
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN

R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

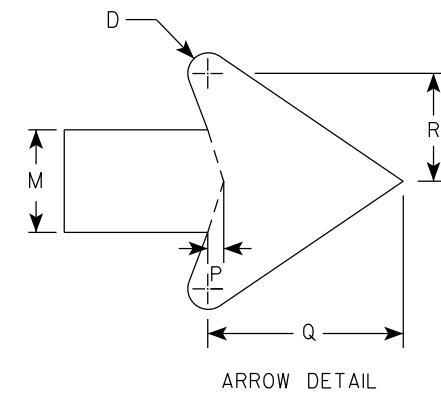
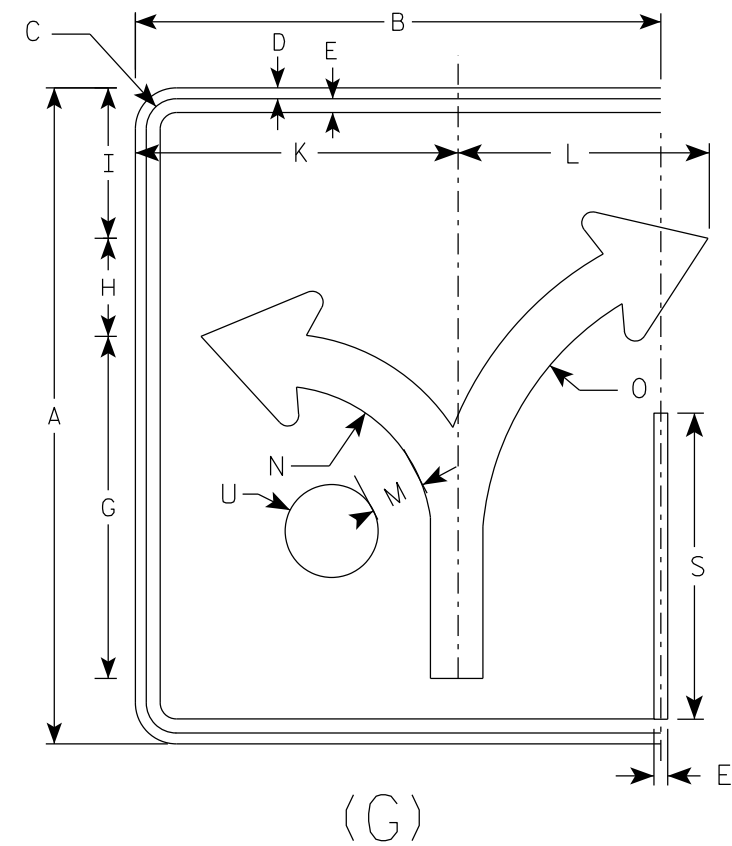
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 155

E

STANDARD SIGN

R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

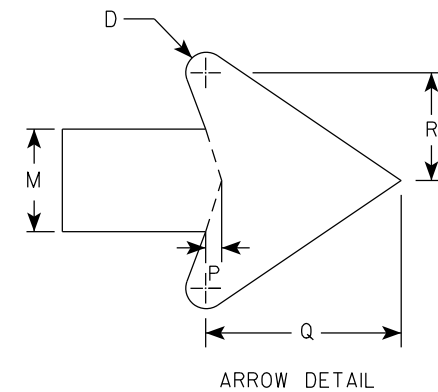
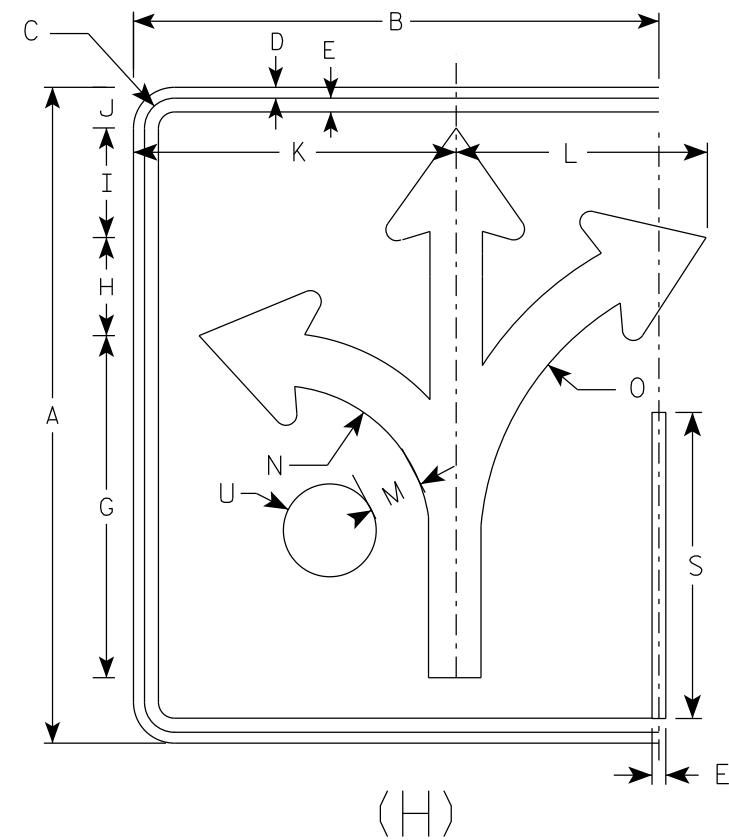
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	3 1⁄8	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: HWY: COUNTY:

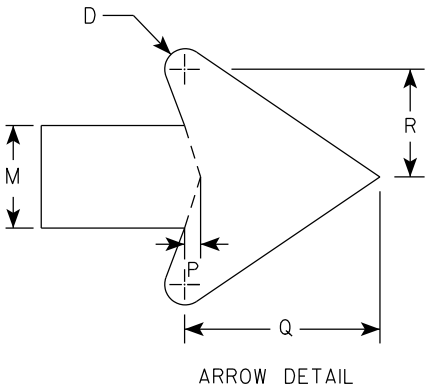
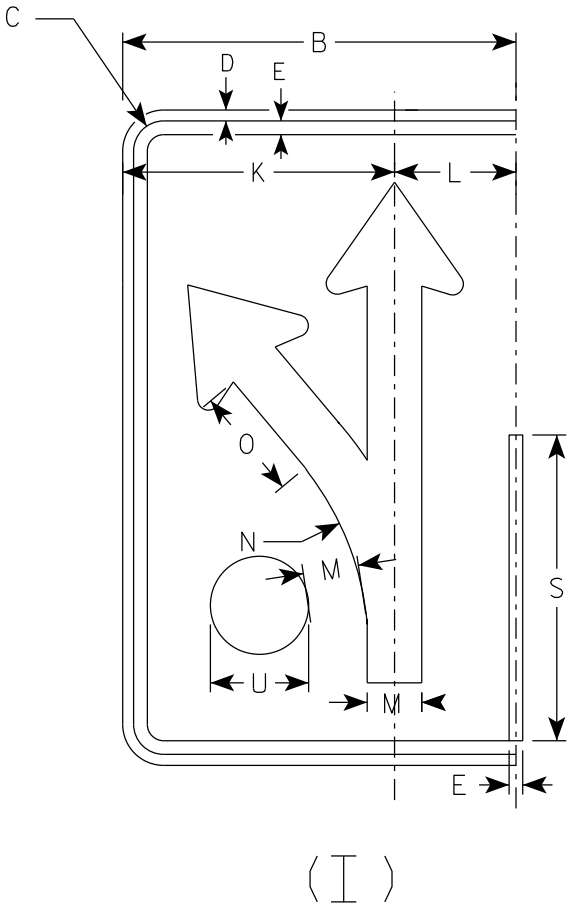
SHEET NO: 156 E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4		2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 157

E

STANDARD SIGN

R3-8 (I) Arrow

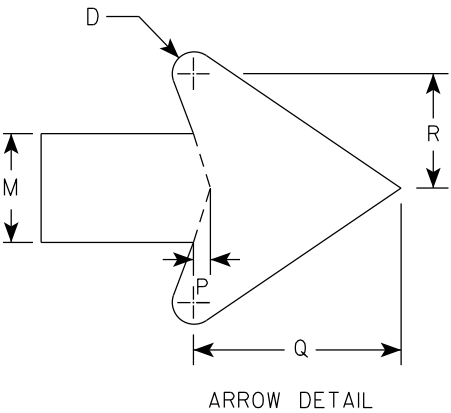
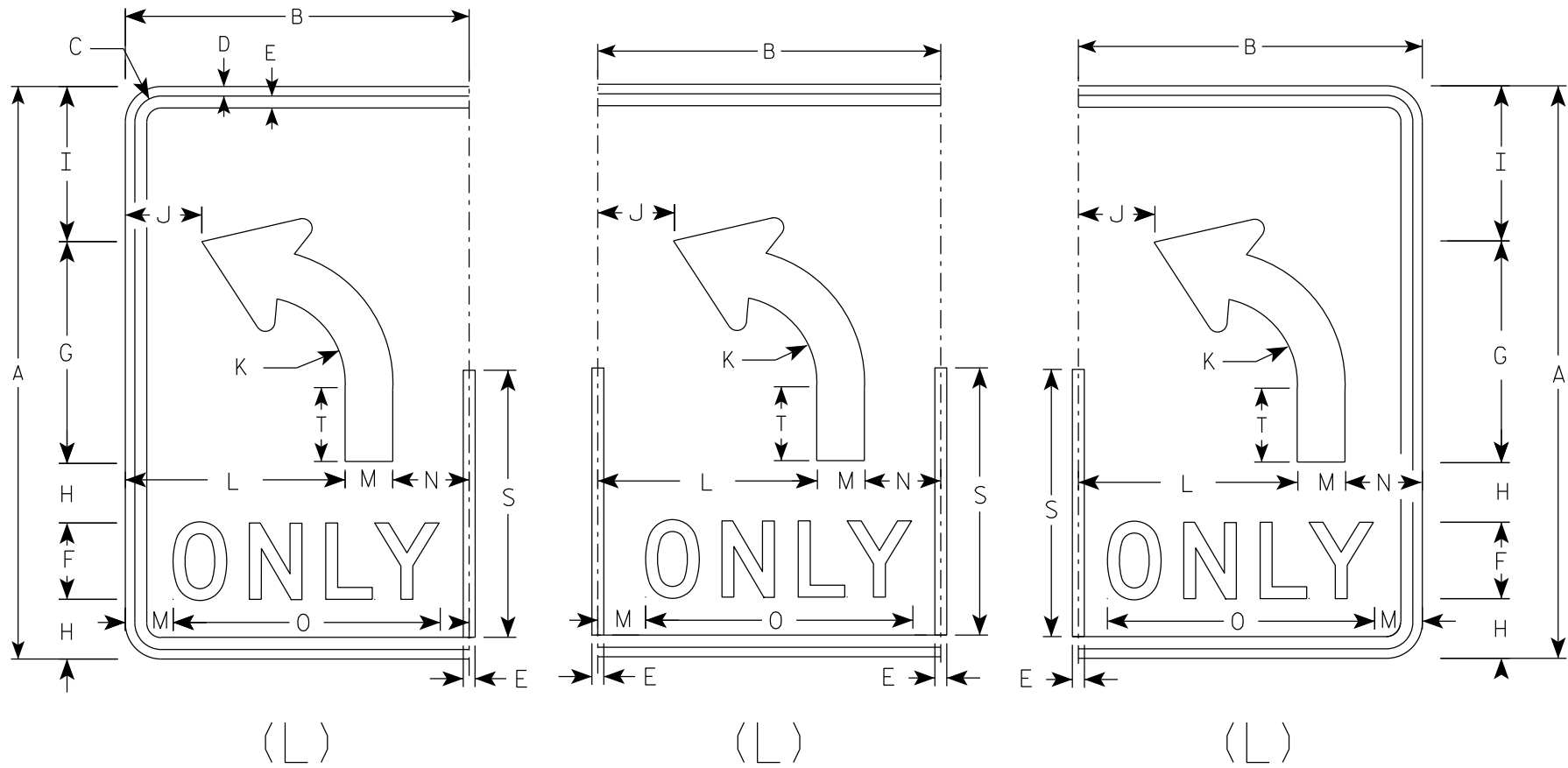
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4		5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

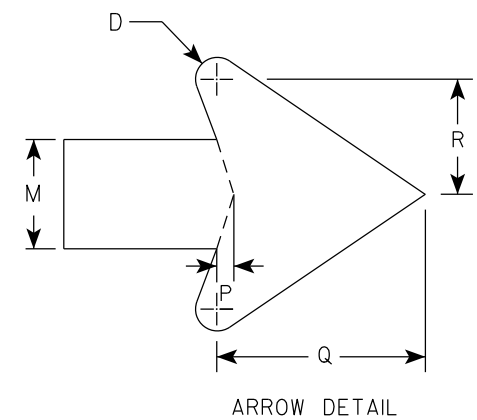
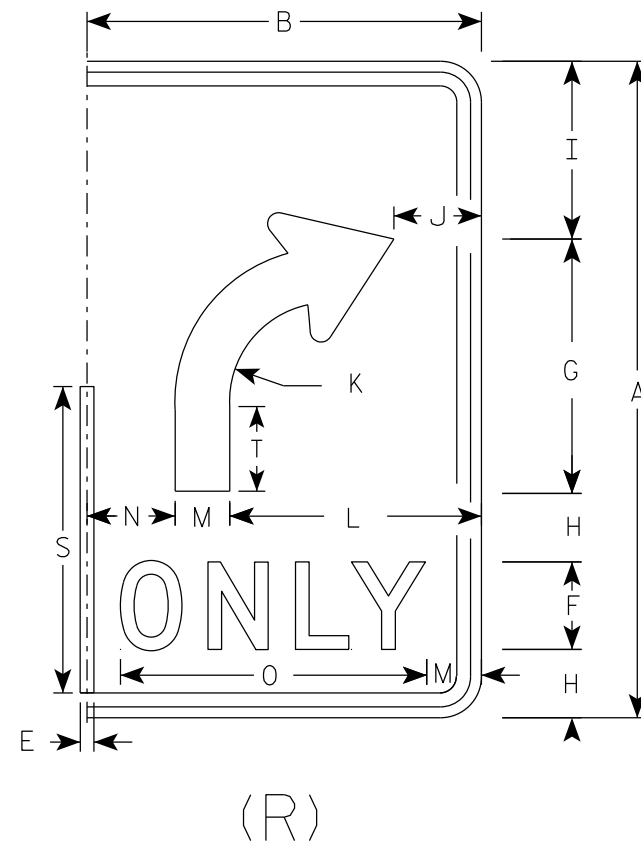
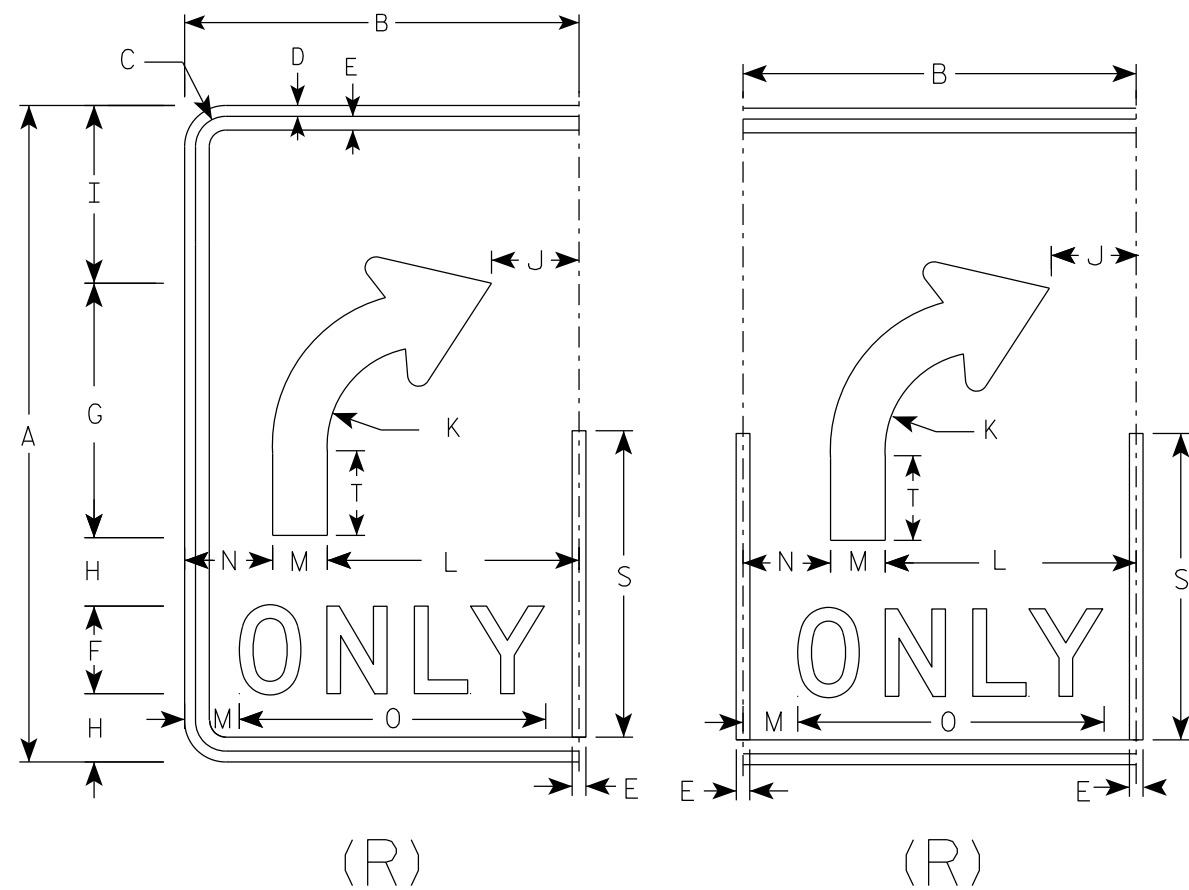
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (R) Arrow

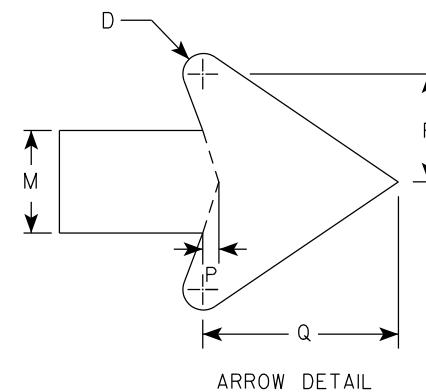
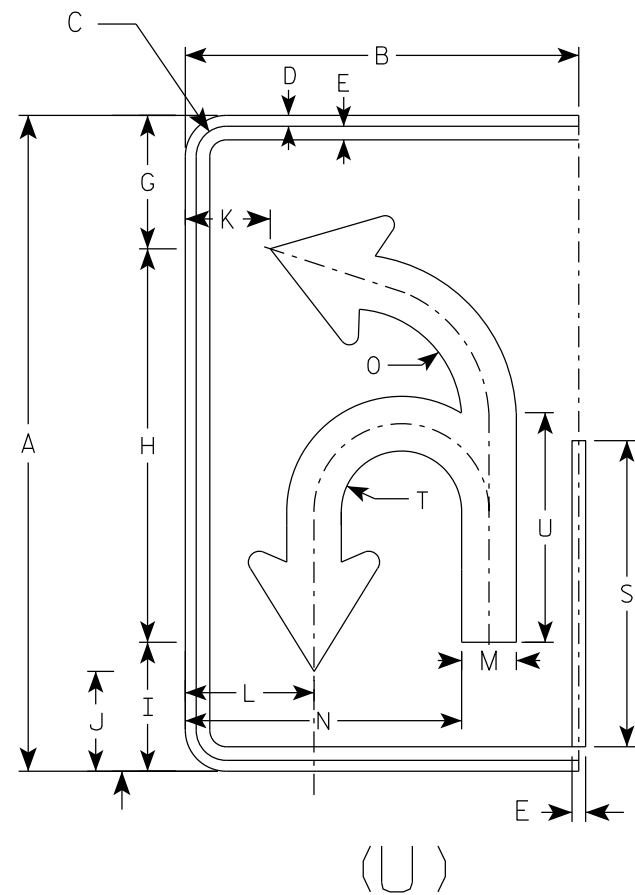
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 1⁄2	12 5⁄8	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14	2 3⁄4	10 1⁄2						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 1⁄2	12 5⁄8	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14	2 3⁄4	10 1⁄2						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	21 5⁄8	7 1⁄8	5 1⁄2	5 7⁄8	8 1⁄4	3	16 3⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	3 1⁄4	12 5⁄8						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	28 3⁄4	9 3⁄8	7 1⁄4	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	4 3⁄8	16 3⁄4						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	28 3⁄4	9 3⁄8	7 1⁄4	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	4 3⁄8	16 3⁄4						10.0

STANDARD SIGN
R3-8 (U) Arrow

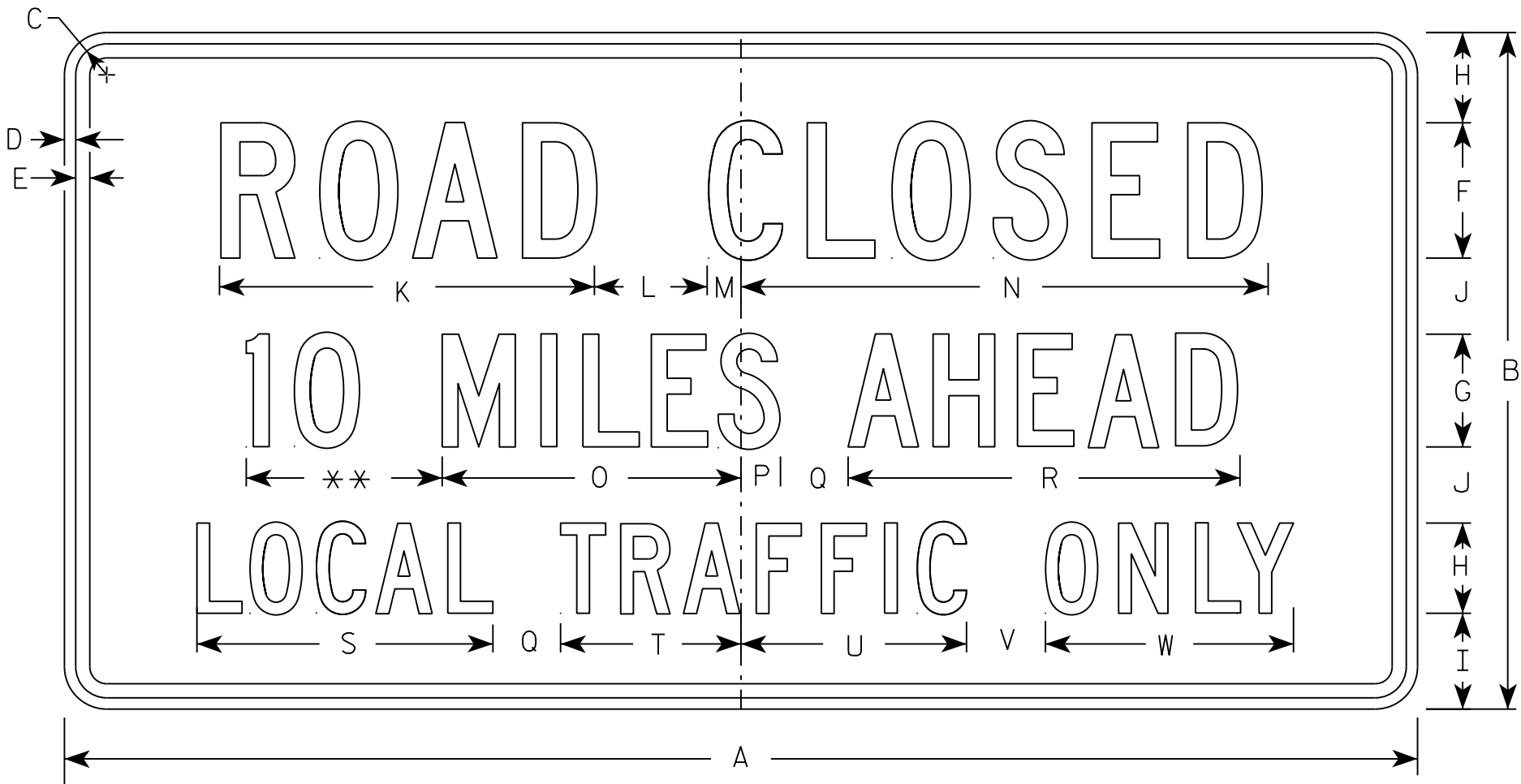
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

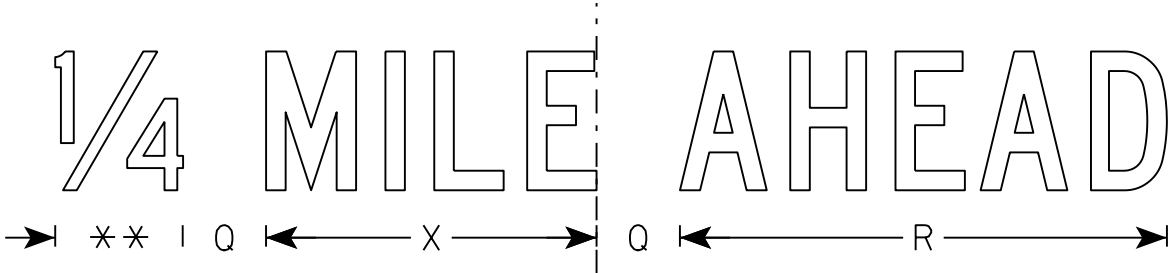
NOTES

- 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.



R11-3

** See Note 5

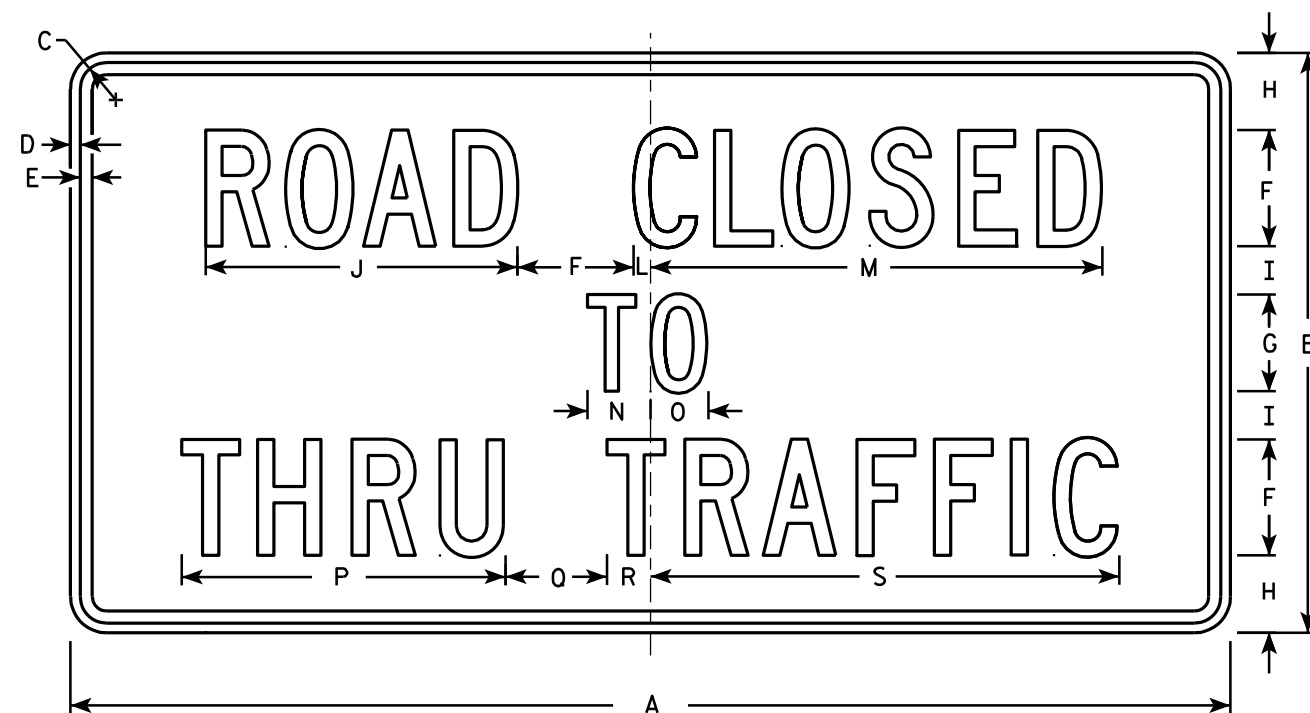


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/15/17 PLATE NO. R11-3.8



R11-4

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 - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

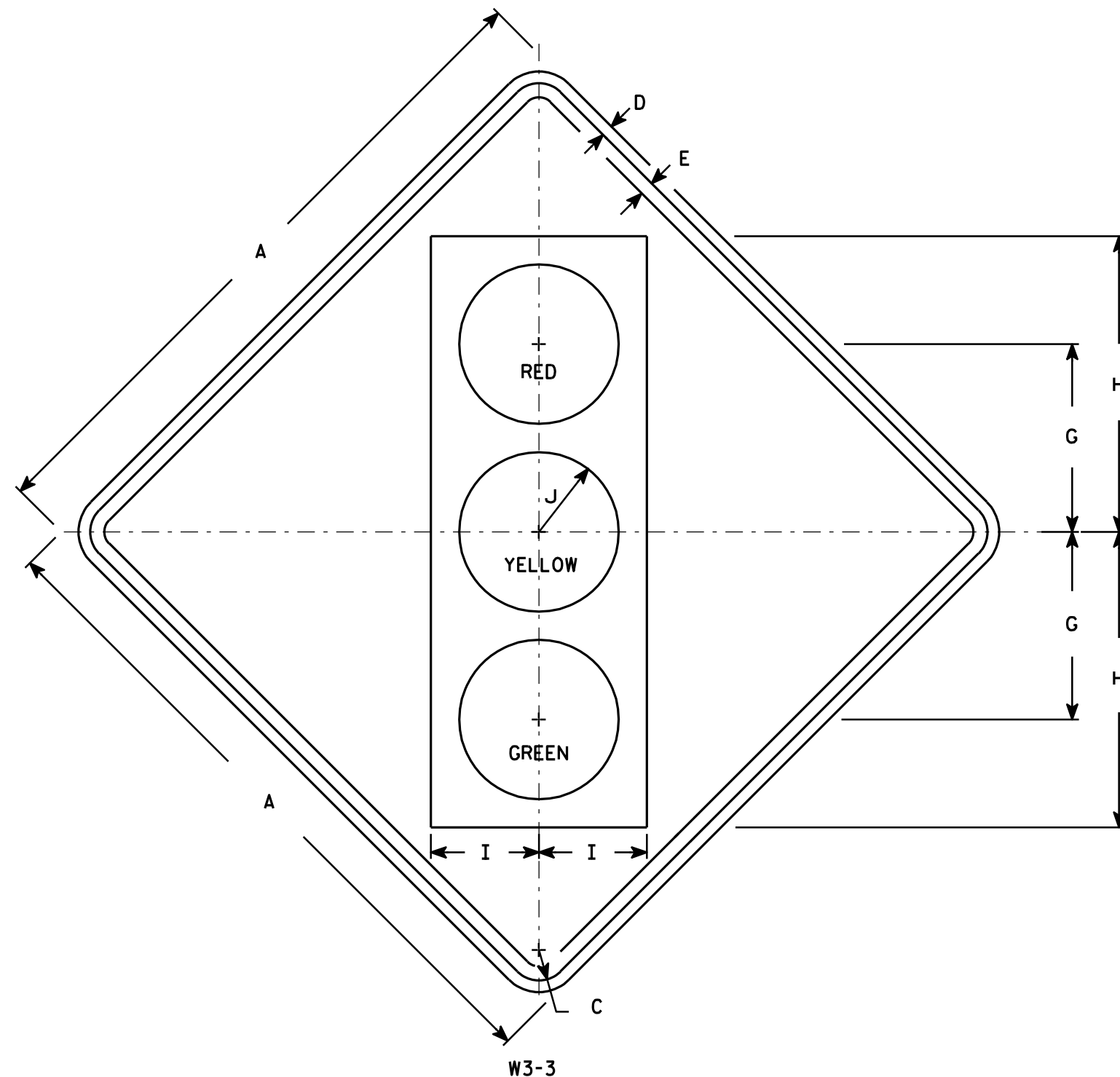
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 162

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
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.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN W3-3

WISCONSIN DEPT OF TRANSPORTATION

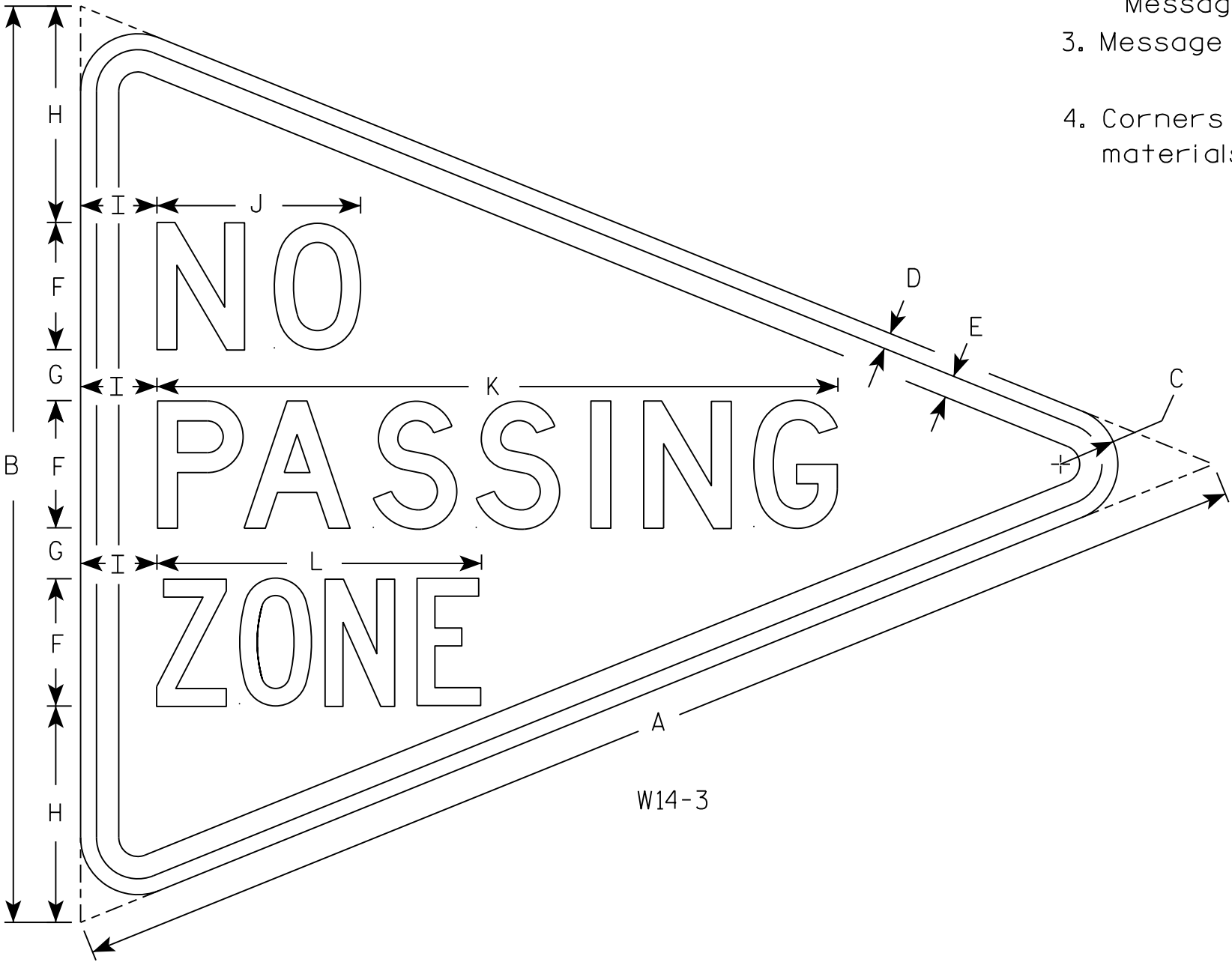
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: HWY: COUNTY: SHEET NO: 163 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.



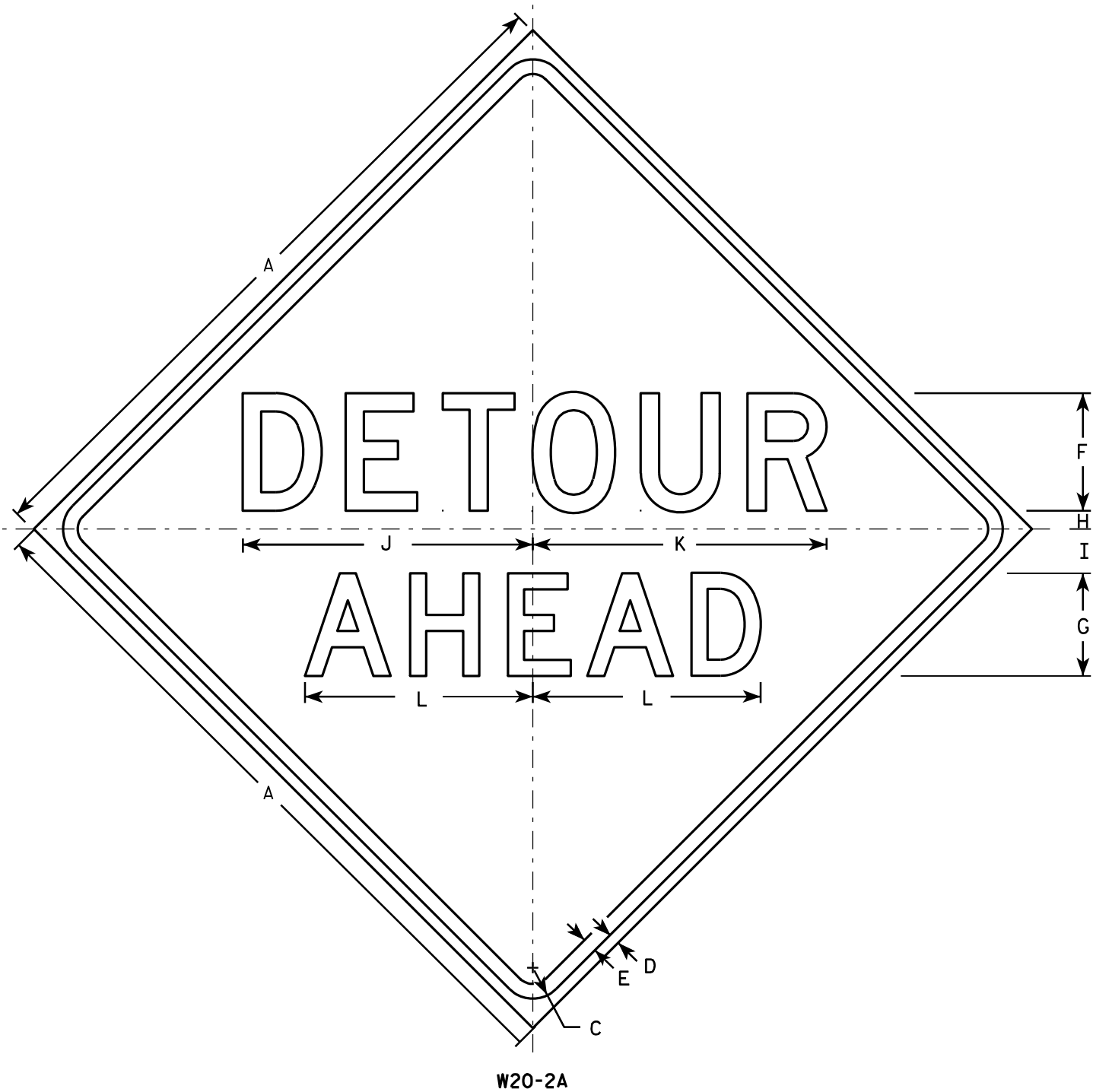
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

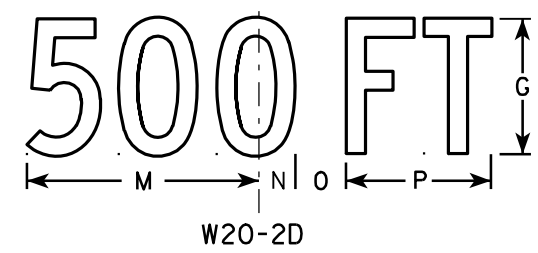
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

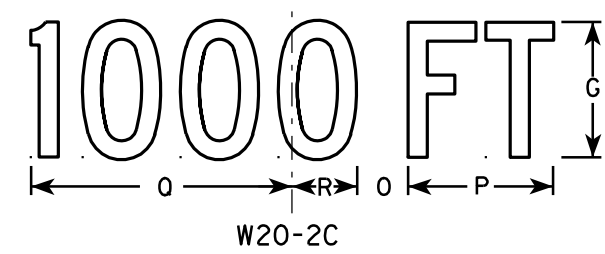
DATE 3/21/17 PLATE NO. W14-3.10



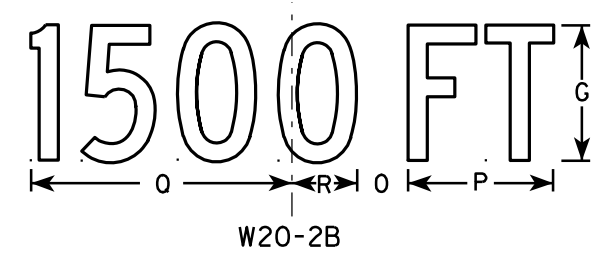
W20-2A



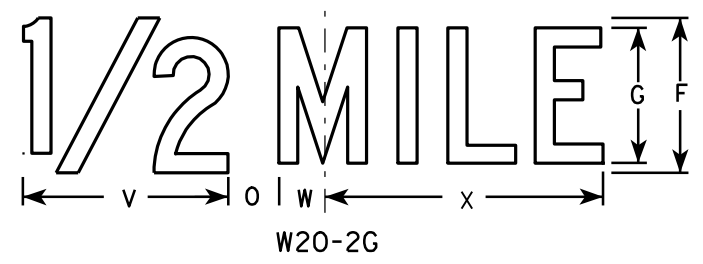
W20-2D



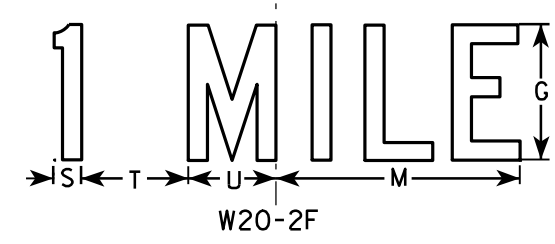
W20-2C



W20-2B



W20-2G



W20-2F

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.

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. Rauch*
for State Traffic Engineer

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

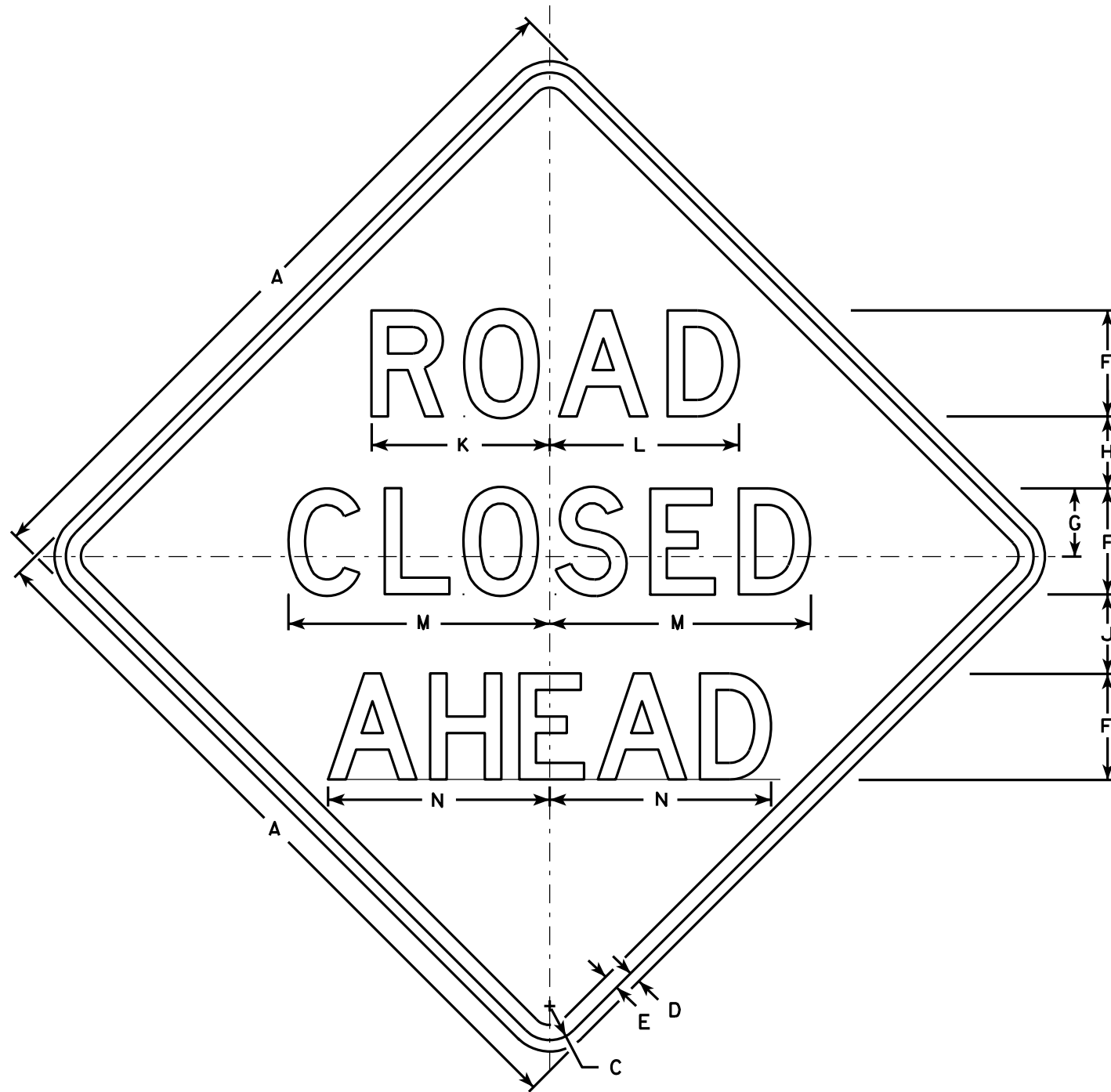
PROJECT NO:

HWY:

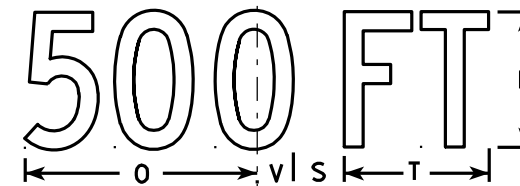
COUNTY:

SHEET NO: 165

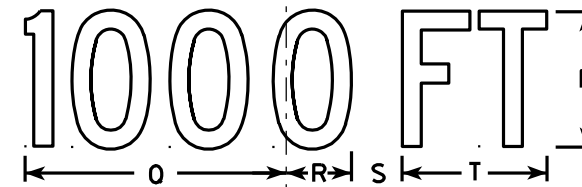
E



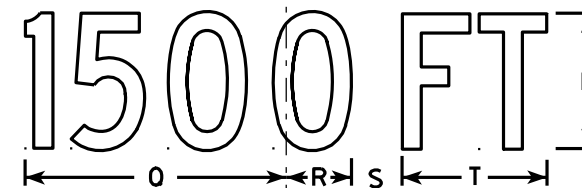
W20-3A



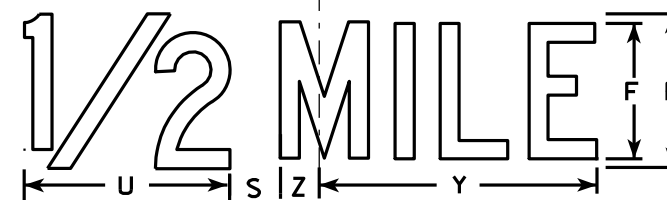
W20-3D



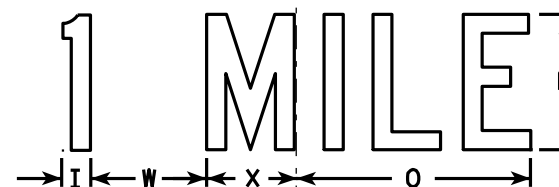
W20-3C



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.

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

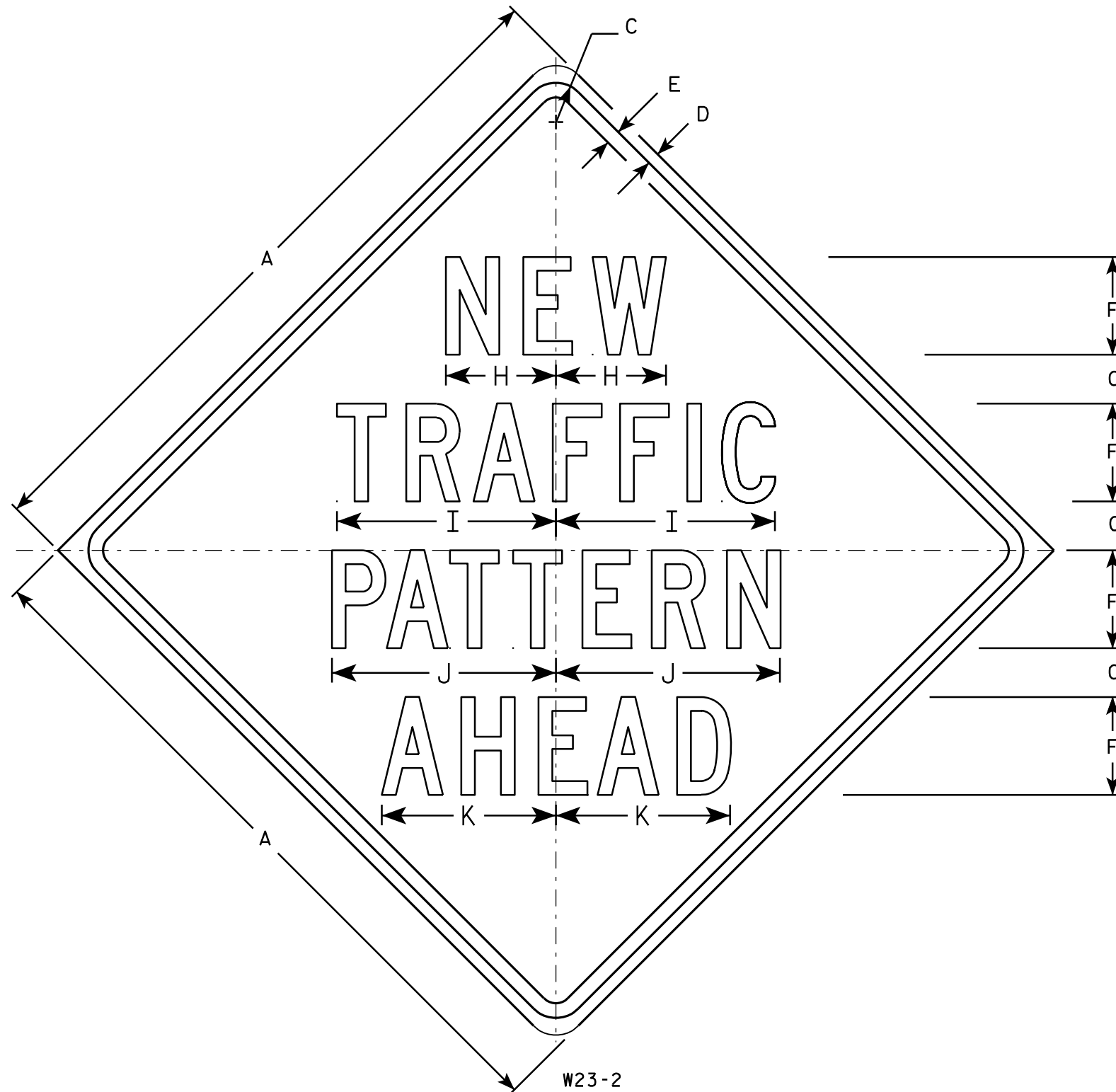
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 166

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- 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.

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

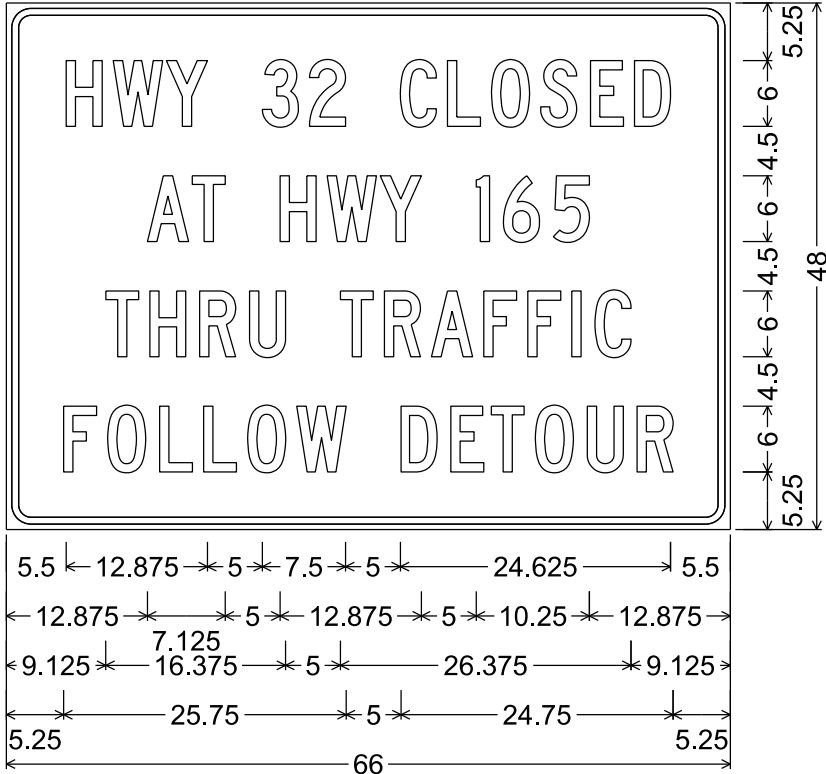
STANDARD SIGN
W23-2

WISCONSIN DEPT OF TRANSPORTATION

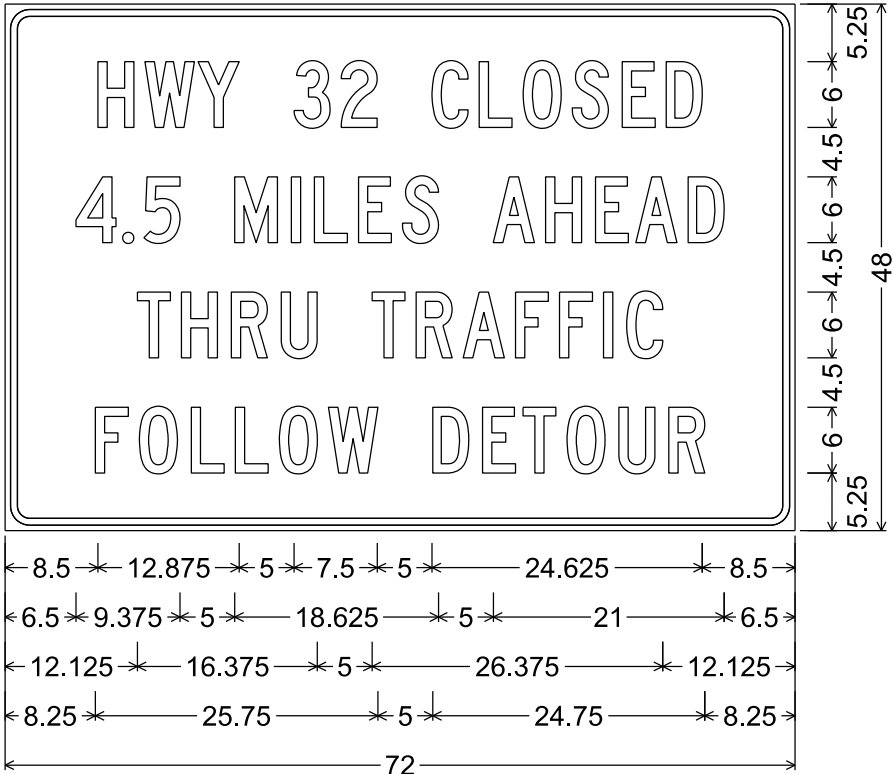
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W23-2.2

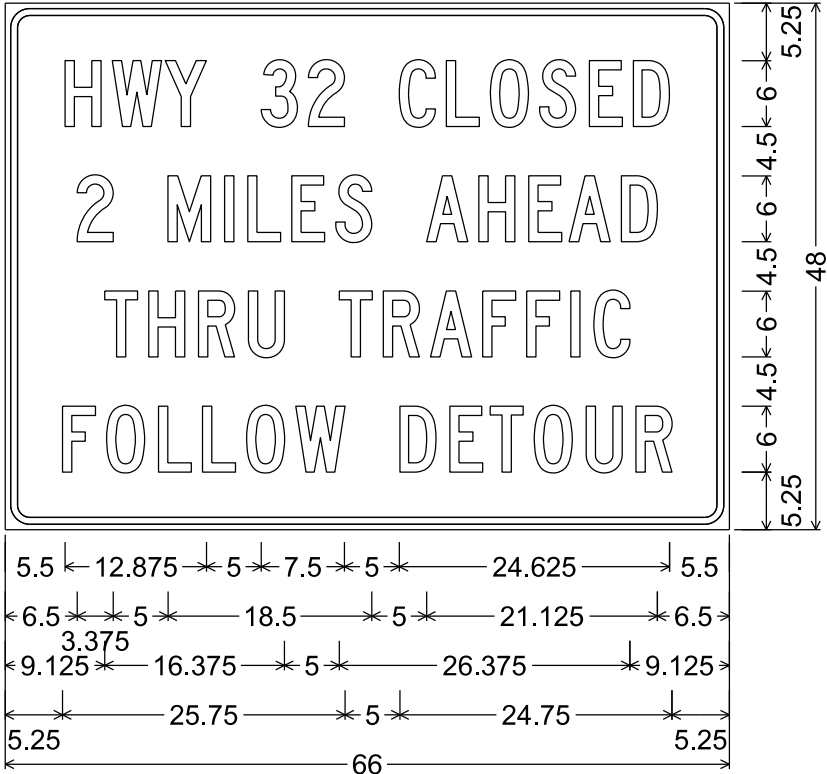
PROJECT NO: HWY: COUNTY: SHEET NO: 167 E



2.250" Radius, 0.625" Border, 0.500" Indent



2.250" Radius, 0.625" Border, 0.500" Indent



2.250" Radius, 0.625" Border, 0.500" Indent

NOTES

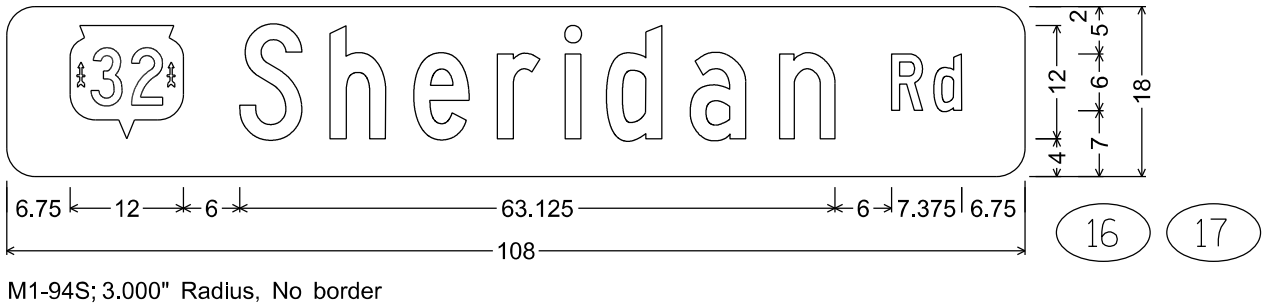
1. Fixed Message Sign - Type II Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - C

7

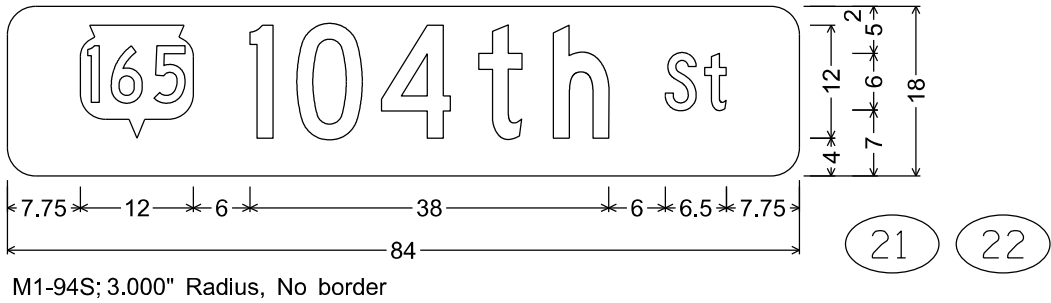
7

NOTES

- 1. All Signs Type II - Type H Reflective
- 2. Color:
Background - Green
Message - White
- 3. Message Series - C



M1-94S; 3.000" Radius, No border



M1-94S; 3.000" Radius, No border

DIVISION 1 - STH 32									
STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.20	
94+00	9400.00	0.00	0.06	0.06	0	0	0	0	0
94+50	9450.00	50.00	3.25	0.09	3	0	3	0	3
95+00	9500.00	50.00	4.88	0.00	8	0	11	0	11
95+50	9550.00	50.00	4.69	0.00	9	0	20	0	20
96+00	9600.00	50.00	4.62	0.01	9	0	29	0	29
96+50	9650.00	50.00	5.55	0.14	9	0	38	0	38
97+00	9700.00	50.00	6.44	0.48	11	1	49	1	48
97+50	9750.00	50.00	5.84	4.58	11	5	60	7	53
98+00	9800.00	50.00	8.12	5.73	13	10	73	19	54
98+50	9850.00	50.00	6.19	8.85	13	14	86	36	50
99+00	9900.00	50.00	6.82	10.90	12	18	98	58	40
99+50	9950.00	50.00	8.29	14.85	14	24	112	86	26
100+00	10000.00	50.00	46.85	31.40	51	43	163	138	25
100+50	10050.00	50.00	26.91	7.28	68	36	231	181	50
101+00	10100.00	50.00	23.99	6.33	47	13	278	197	81
101+50	10150.00	50.00	18.98	6.09	40	12	318	211	107
102+00	10200.00	50.00	12.90	7.64	30	13	348	227	121
102+50	10250.00	50.00	14.61	4.73	25	11	373	240	133
103+00	10300.00	50.00	17.64	8.34	30	12	403	254	149
103+50	10350.00	50.00	33.53	7.19	47	14	450	271	179
104+00	10400.00	50.00	40.78	3.35	69	10	519	283	236
104+50	10450.00	50.00	25.37	3.43	61	6	580	290	290
105+00	10500.00	50.00	15.61	6.58	38	9	618	301	317
105+50	10550.00	50.00	18.93	16.26	32	21	650	326	324
105+73.104	10573.10	23.10	20.64	36.16	17	22	667	353	314
105+75	10575.00	1.90	21.64	37.70	1	3	668	356	312
105+80	10580.00	5.00	24.34	48.11	4	8	672	366	306
105+85	10585.00	5.00	27.13	56.49	5	10	677	378	299
105+90	10590.00	5.00	32.23	59.14	5	11	682	391	291
105+95	10595.00	5.00	28.56	53.66	6	10	688	403	285
106+00	10600.00	5.00	9.12	43.03	3	9	691	414	277
106+05	10605.00	5.00	3.09	33.91	1	7	692	422	270
106+10	10610.00	5.00	2.48	30.01	1	6	693	430	263
106+15	10615.00	5.00	4.76	18.52	1	4	694	434	260
106+20	10620.00	5.00	3.07	14.17	1	3	695	438	257
106+25	10625.00	5.00	1.90	11.24	0	2	695	440	255
106+30	10630.00	5.00	1.13	7.57	0	2	695	443	252
106+35	10635.00	5.00	0.64	6.07	0	1	695	444	251
106+40	10640.00	5.00	0.27	4.48	0	1	695	445	250
106+45	10645.00	5.00	0.00	2.82	0	1	695	446	249
106+50	10650.00	5.00	0.00	1.80	0	0	695	446	249
106+55	10655.00	5.00	0.00	2.94	0	0	695	446	249
106+60	10660.00	5.00	0.00	4.30	0	1	695	448	247
106+65	10665.00	5.00	0.00	5.35	0	1	695	449	246
106+70	10670.00	5.00	0.01	8.32	0	1	695	450	245
106+75	10675.00	5.00	0.00	13.26	0	2	695	452	243

CONTINUED ON NEXT PAGE

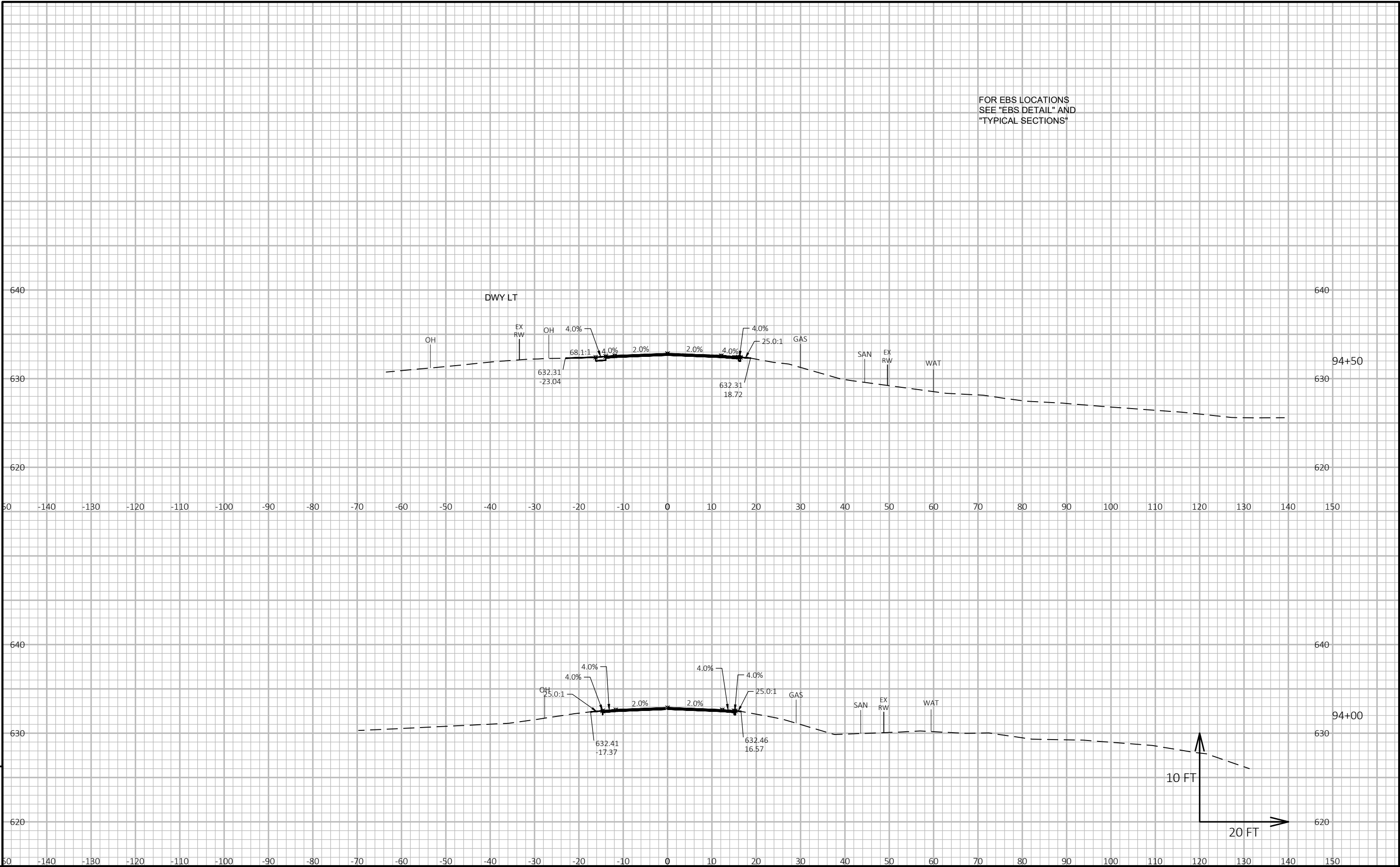
DIVISION 1 - STH 32

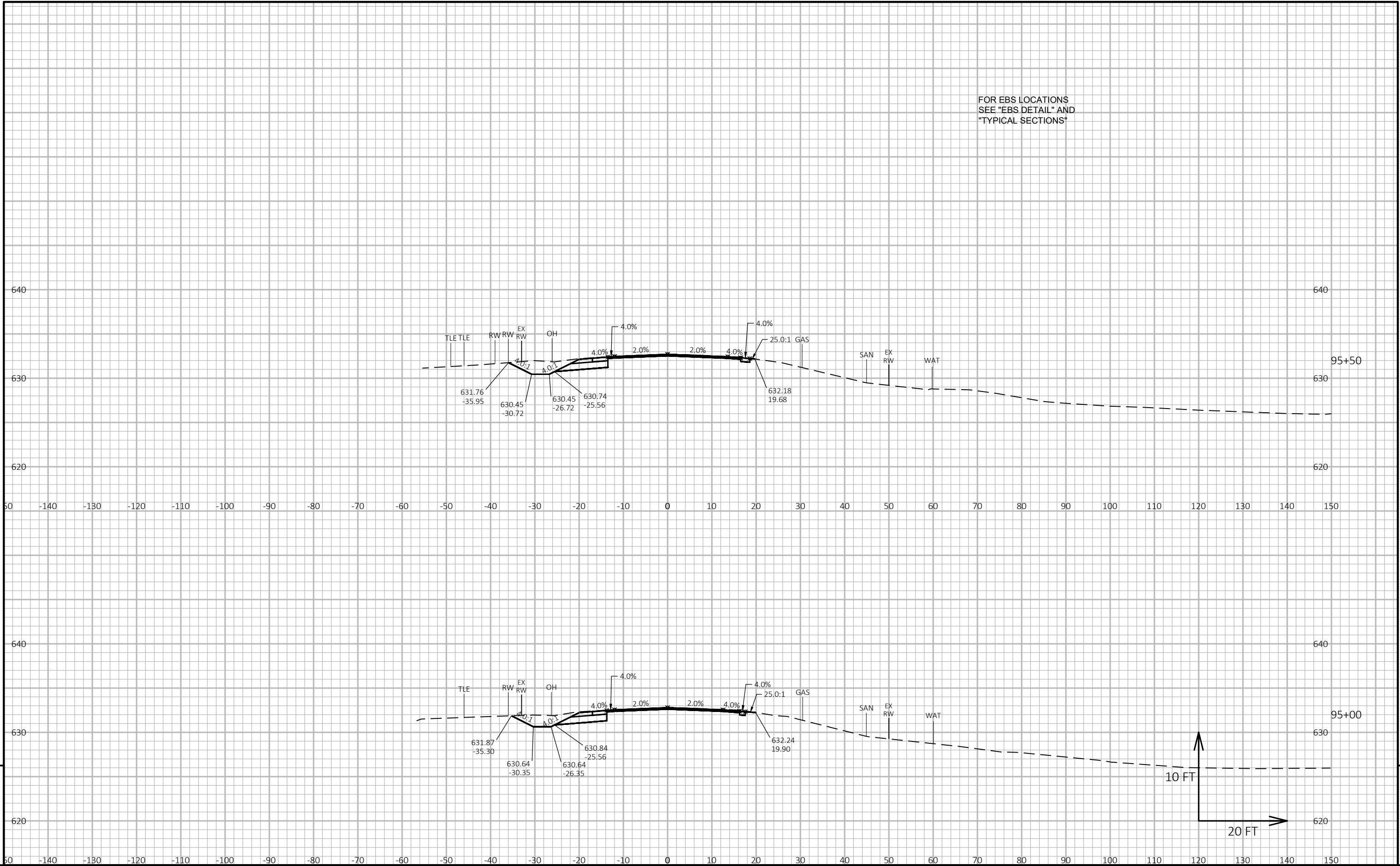
STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.20	
106+80	10680.00	5.00	0.00	31.53	0	4	695	457	238
106+85	10685.00	5.00	0.00	55.24	0	8	695	467	228
106+90	10690.00	5.00	0.00	77.74	0	12	695	481	214
106+95	10695.00	5.00	0.00	92.47	0	16	695	500	195
107+00	10700.00	5.00	0.06	78.37	0	16	695	520	175
107+05	10705.00	5.00	0.00	60.58	0	13	695	535	160
107+07.151	10707.15	2.15	0.00	48.59	0	4	695	540	155
107+50	10750.00	42.85	0.00	42.74	0	72	695	626	69
108+00	10800.00	50.00	0.08	38.34	0	75	695	716	-21
108+50	10850.00	50.00	0.62	19.18	1	53	696	780	-84
109+00	10900.00	50.00	1.51	9.13	2	26	698	811	-113
109+50	10950.00	50.00	2.44	4.54	4	13	702	827	-125
110+00	11000.00	50.00	0.59	5.40	3	9	705	838	-133
110+50	11050.00	50.00	0.11	3.96	1	9	706	848	-142
111+00	11100.00	50.00	0.04	4.45	0	8	706	858	-152
111+50	11150.00	50.00	0.03	3.54	0	7	706	866	-160
112+00	11200.00	50.00	0.05	0.62	0	4	706	871	-165
112+50	11250.00	50.00	0.11	0.51	0	1	706	872	-166
113+00	11300.00	50.00	0.55	0.00	1	0	707	872	-165
113+50	11350.00	50.00	0.30	0.39	1	0	708	872	-164
114+00	11400.00	50.00	0.02	0.09	0	0	708	872	-164

DIVISION 2 - STH 165

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.20	
35+00	3500.00	0.00	0.00	1.61	0	0	0	0	0
35+50	3550.00	50.00	1.68	7.85	2	9	2	11	-9
36+00	3600.00	50.00	1.83	12.85	3	19	5	34	-29
36+50	3650.00	50.00	9.90	11.00	11	22	16	60	-44
37+00	3700.00	50.00	12.07	12.11	20	21	36	85	-49
37+50	3750.00	50.00	38.36	8.54	47	19	83	108	-25
38+00	3800.00	50.00	43.29	11.24	76	18	159	130	29
38+50	3850.00	50.00	37.14	12.89	74	22	233	156	77
39+00	3900.00	50.00	26.77	12.36	59	23	292	184	108
39+27.295	3927.29	27.29	26.81	5.12	27	9	319	194	125
39+30	3930.00	2.71	30.86	10.18	3	1	322	196	126
39+35	3935.00	5.00	29.21	14.05	6	2	328	198	130
39+40	3940.00	5.00	27.04	12.49	5	2	333	200	133
39+45	3945.00	5.00	10.97	14.13	4	2	337	203	134
39+50	3950.00	5.00	8.56	9.61	2	2	339	205	134
39+55	3955.00	5.00	5.26	7.99	1	2	340	208	132
39+60	3960.00	5.00	4.04	5.65	1	1	341	209	132
39+65	3965.00	5.00	1.92	4.21	1	1	342	210	132
39+70	3970.00	5.00	0.35	2.07	0	1	342	211	131
39+75	3975.00	5.00	1.01	1.07	0	0	342	211	131
39+80	3980.00	5.00	0.00	0.00	0	0	342	211	131
39+85	3985.00	5.00	0.00	0.00	0	0	342	211	131

DIVISION 3 - 104TH ST									
STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.20	
40+20	4020.00	0.00	0.00	0.00	0	0	0	0	0
40+25	4025.00	5.00	0.00	4.72	0	0	0	0	0
40+30	4030.00	5.00	0.00	21.27	0	2	0	2	-2
40+35	4035.00	5.00	0.00	47.02	0	6	0	10	-10
40+40	4040.00	5.00	0.00	72.97	0	11	0	23	-23
40+45	4045.00	5.00	0.00	114.89	0	17	0	43	-43
40+50	4050.00	5.00	0.00	162.64	0	26	0	74	-74
40+55	4055.00	5.00	0.00	213.79	0	35	0	116	-116
40+60	4060.00	5.00	0.00	227.22	0	41	0	166	-166
40+65	4065.00	5.00	4.03	219.65	0	41	0	215	-215
40+70	4070.00	5.00	7.20	211.39	1	40	1	263	-262
40+73.058	4073.06	3.06	7.89	212.51	1	24	2	292	-290
41+00	4100.00	26.94	0.00	212.14	4	212	6	546	-540
41+50	4150.00	50.00	0.00	162.82	0	347	6	962	-956
42+00	4200.00	50.00	0.00	100.26	0	244	6	1,255	-1,249
42+50	4250.00	50.00	0.00	65.13	0	153	6	1,439	-1,433
43+00	4300.00	50.00	0.00	32.22	0	90	6	1,547	-1,541
43+50	4350.00	50.00	0.00	20.23	0	49	6	1,606	-1,600
44+00	4400.00	50.00	0.18	2.07	0	21	6	1,631	-1,625
44+19.238	4419.24	19.24	1.59	0.00	1	1	7	1,632	-1,625



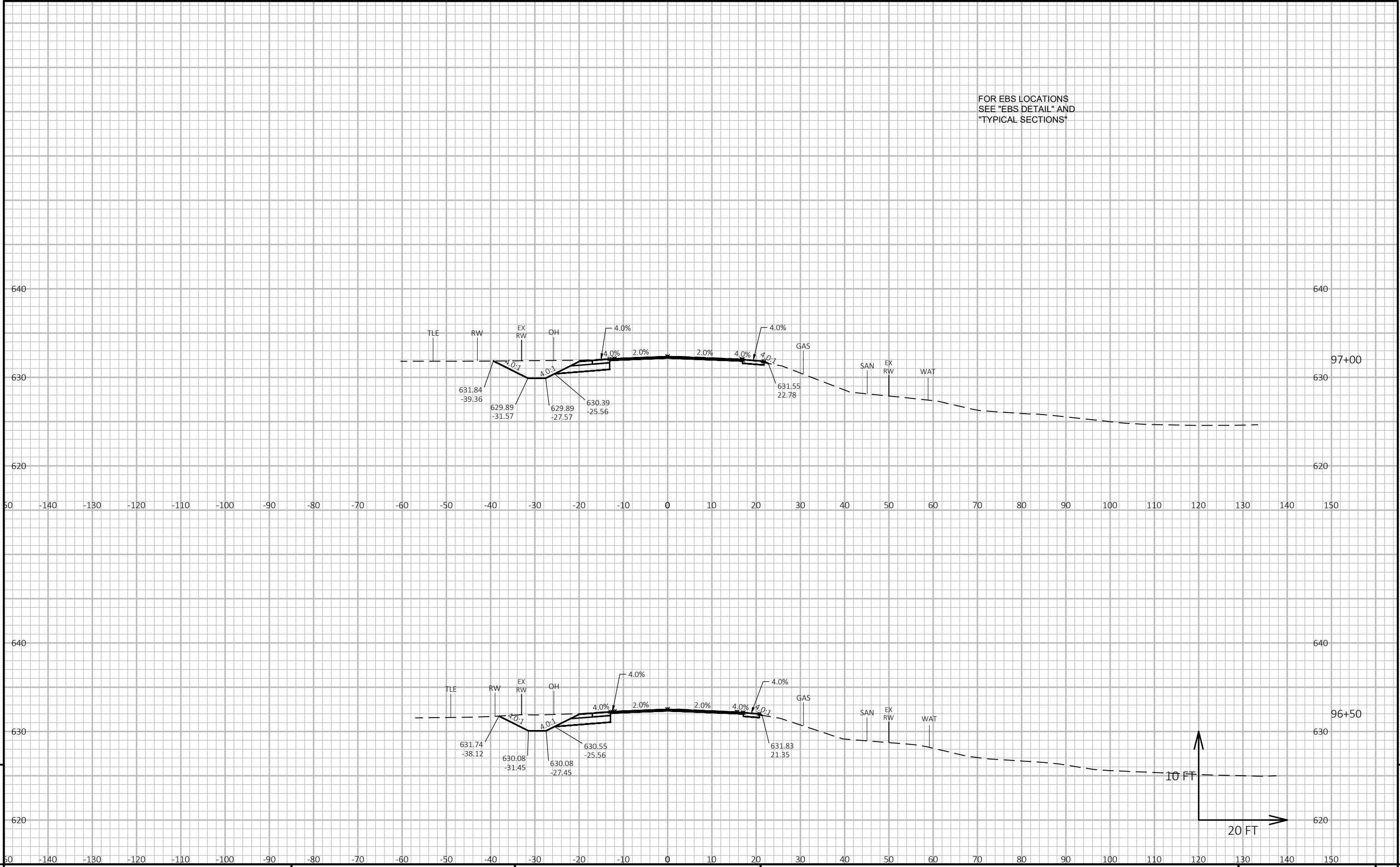


FOR EBS LOCATIONS
SEE "EBS DETAIL" AND
"TYPICAL SECTIONS"

9

9

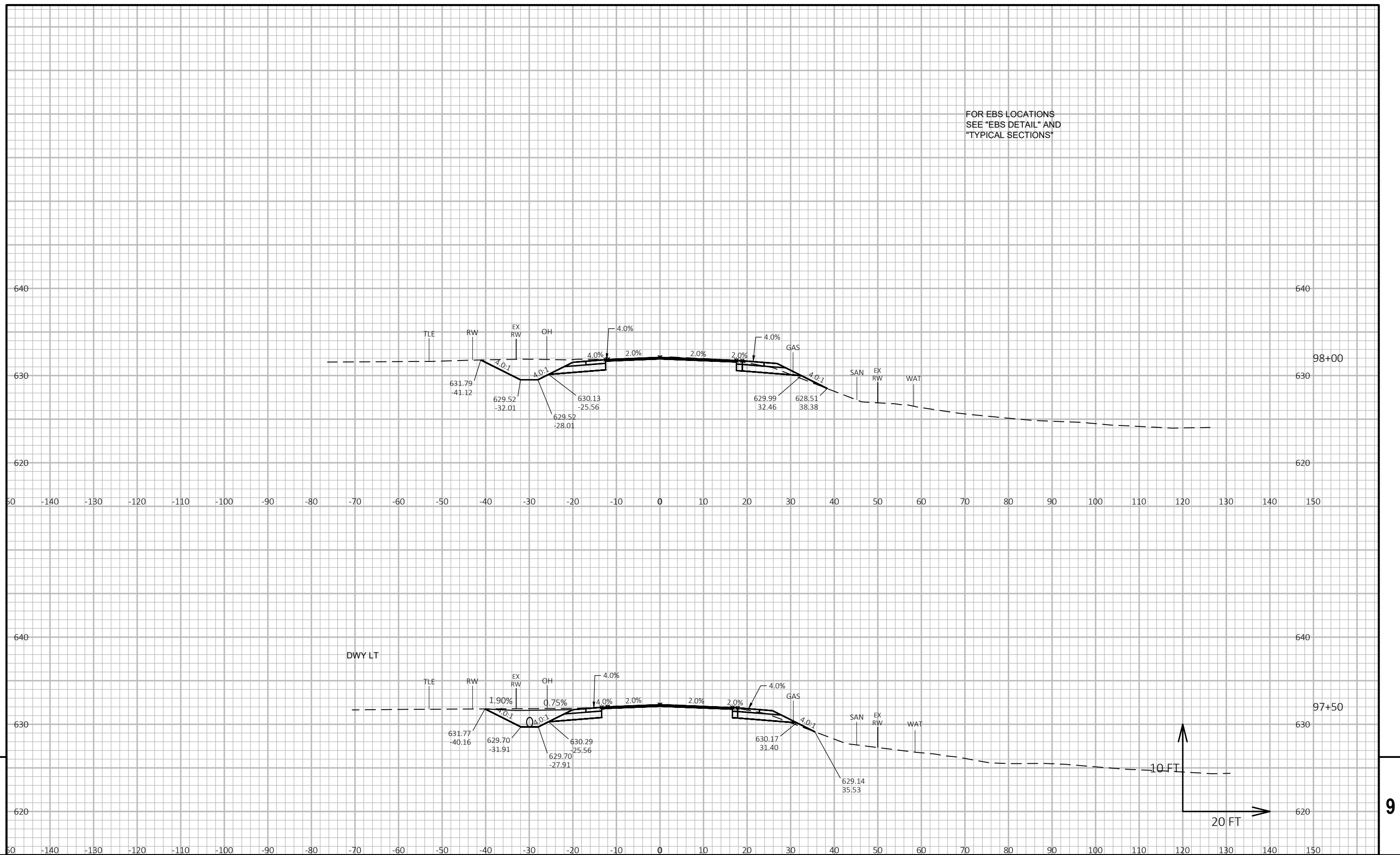
PROJECT NO: 3240-11-70	HWY: STH 32	COUNTY: KENOSHA	CROSS SECTIONS: STH 32	SHEET 175	E
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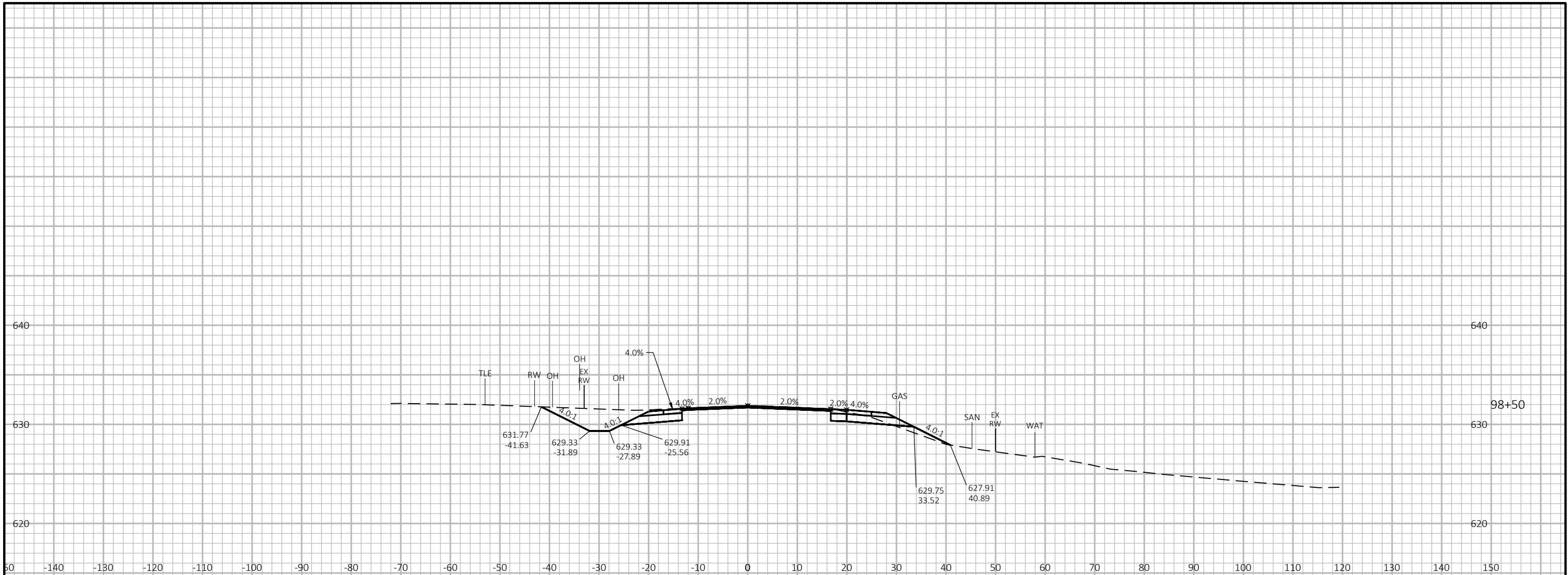


FOR EBS LOCATIONS
SEE "EBS DETAIL" AND
"TYPICAL SECTIONS"

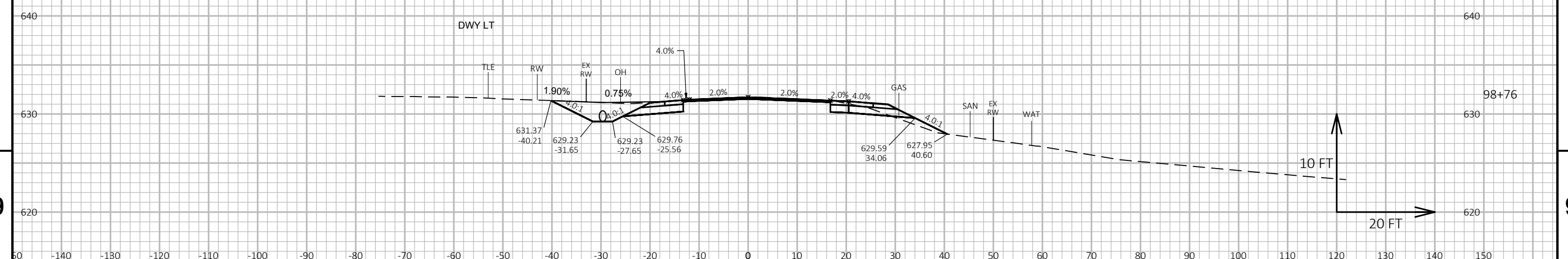
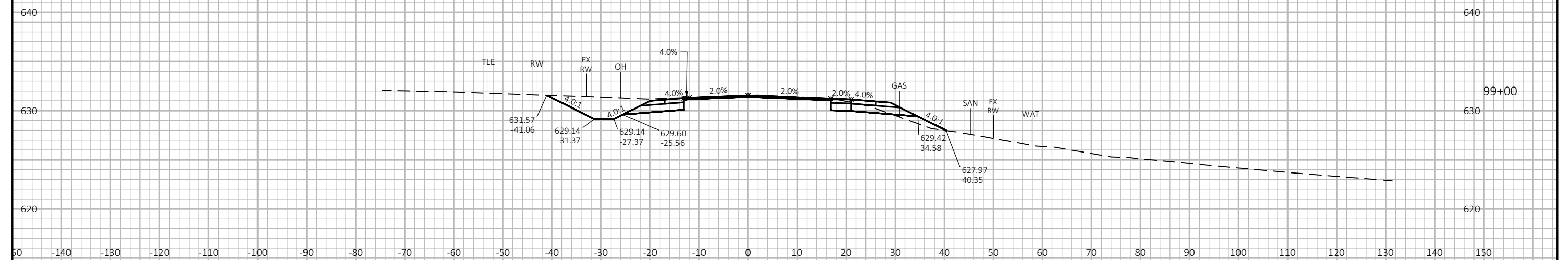
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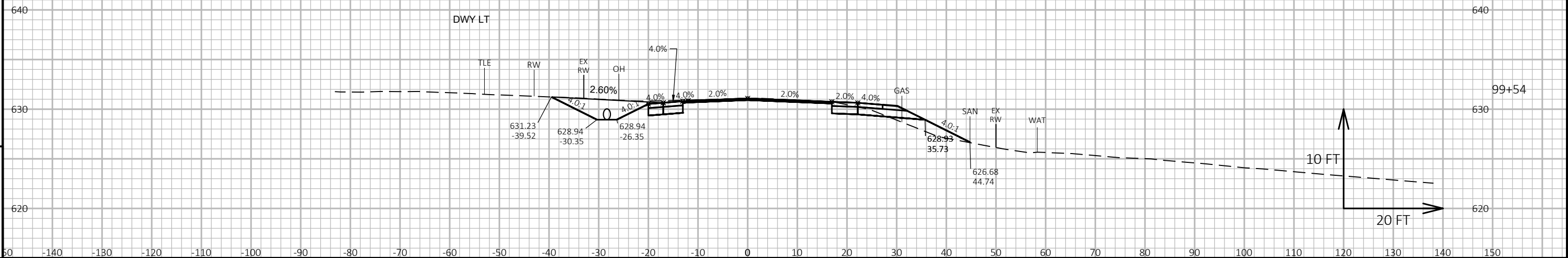
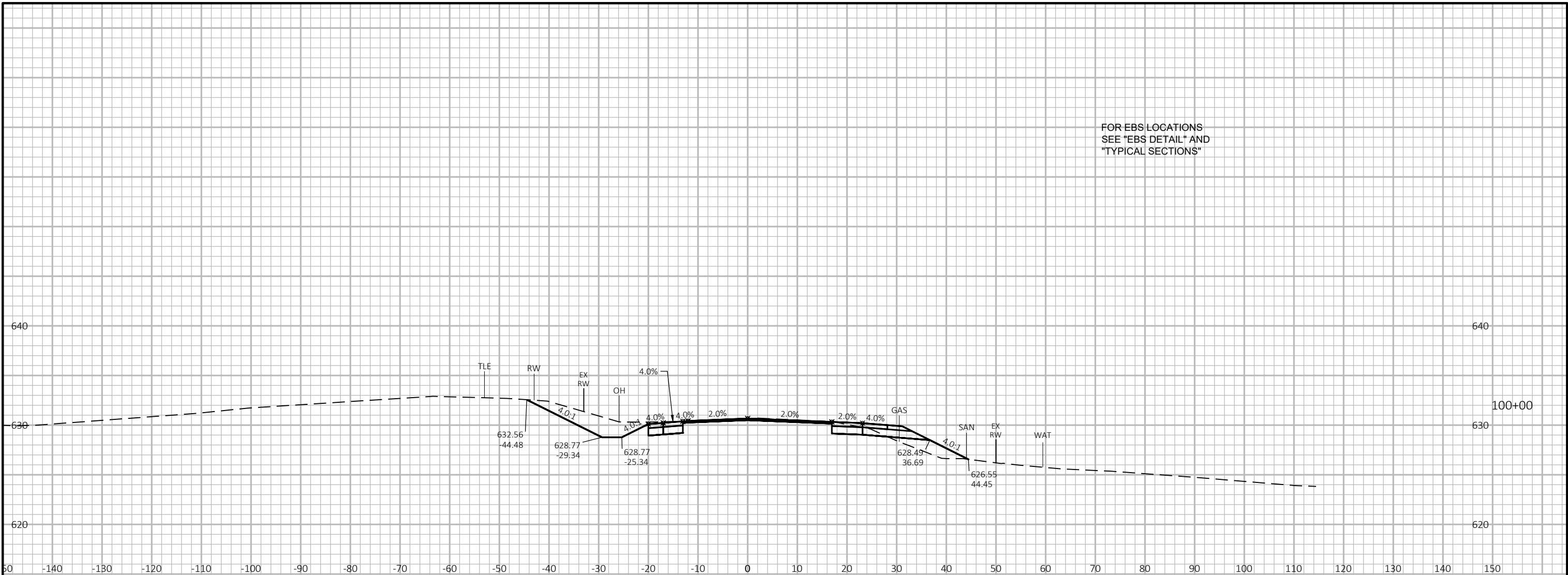
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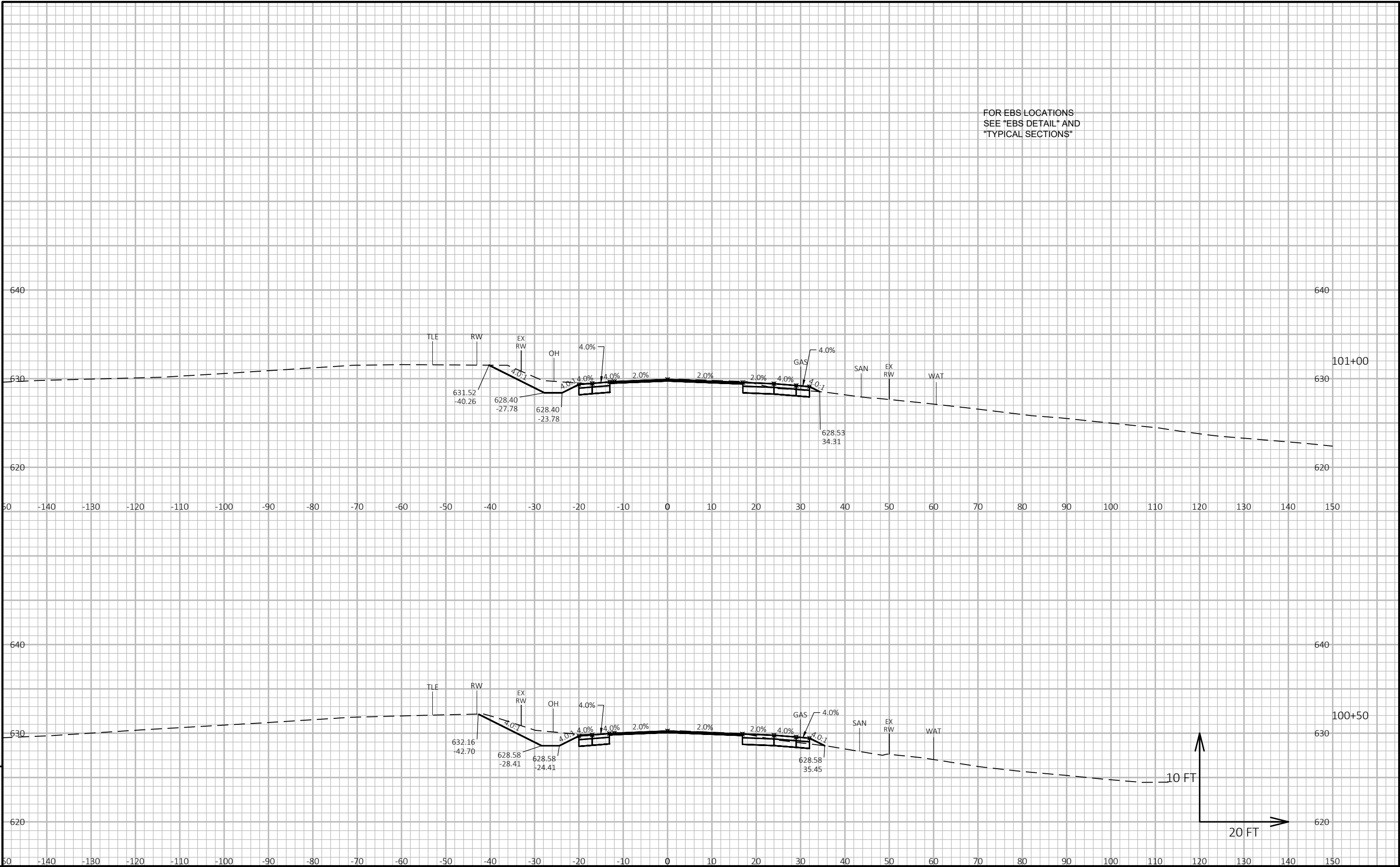


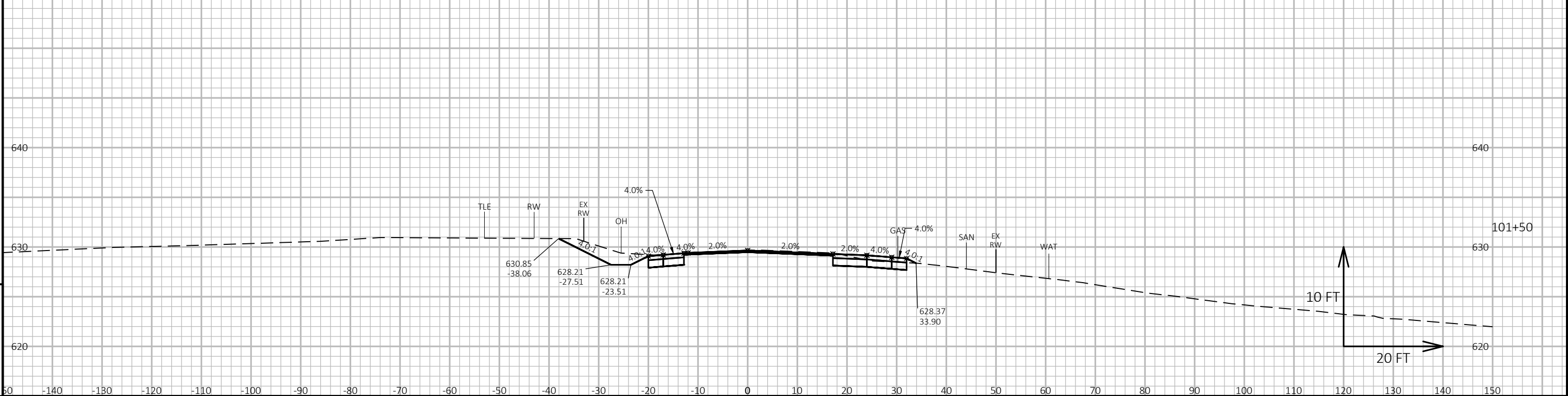
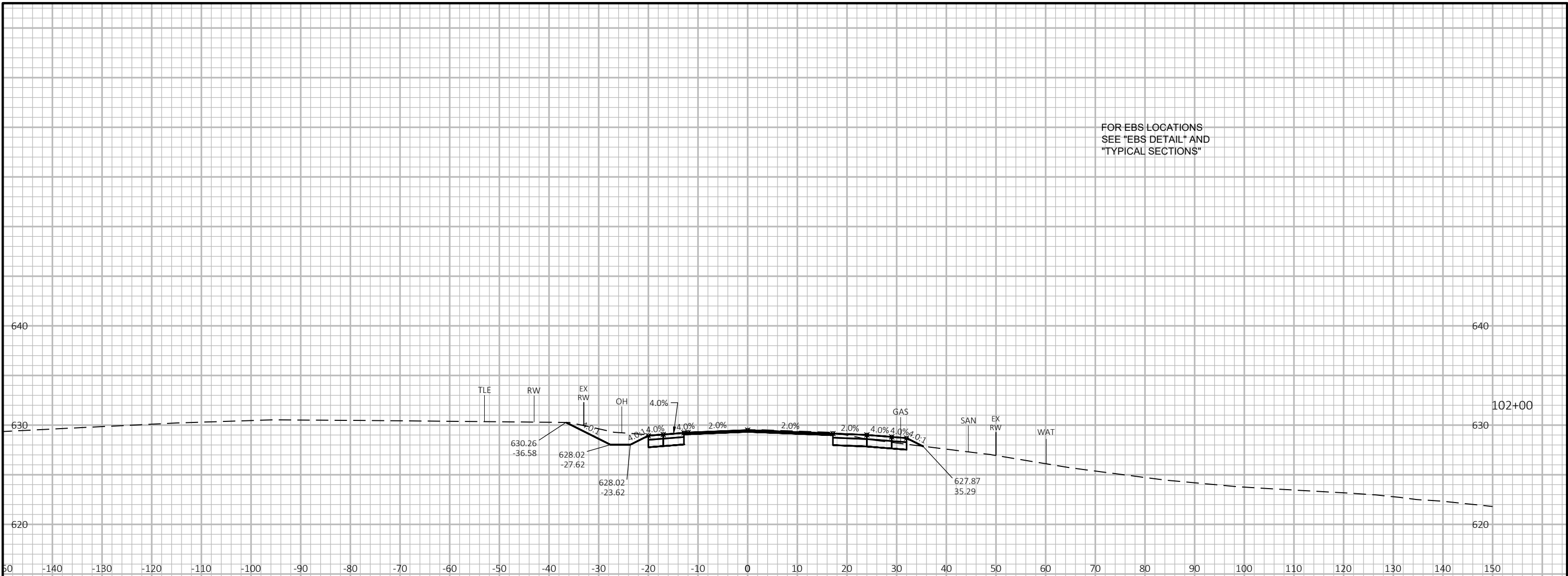


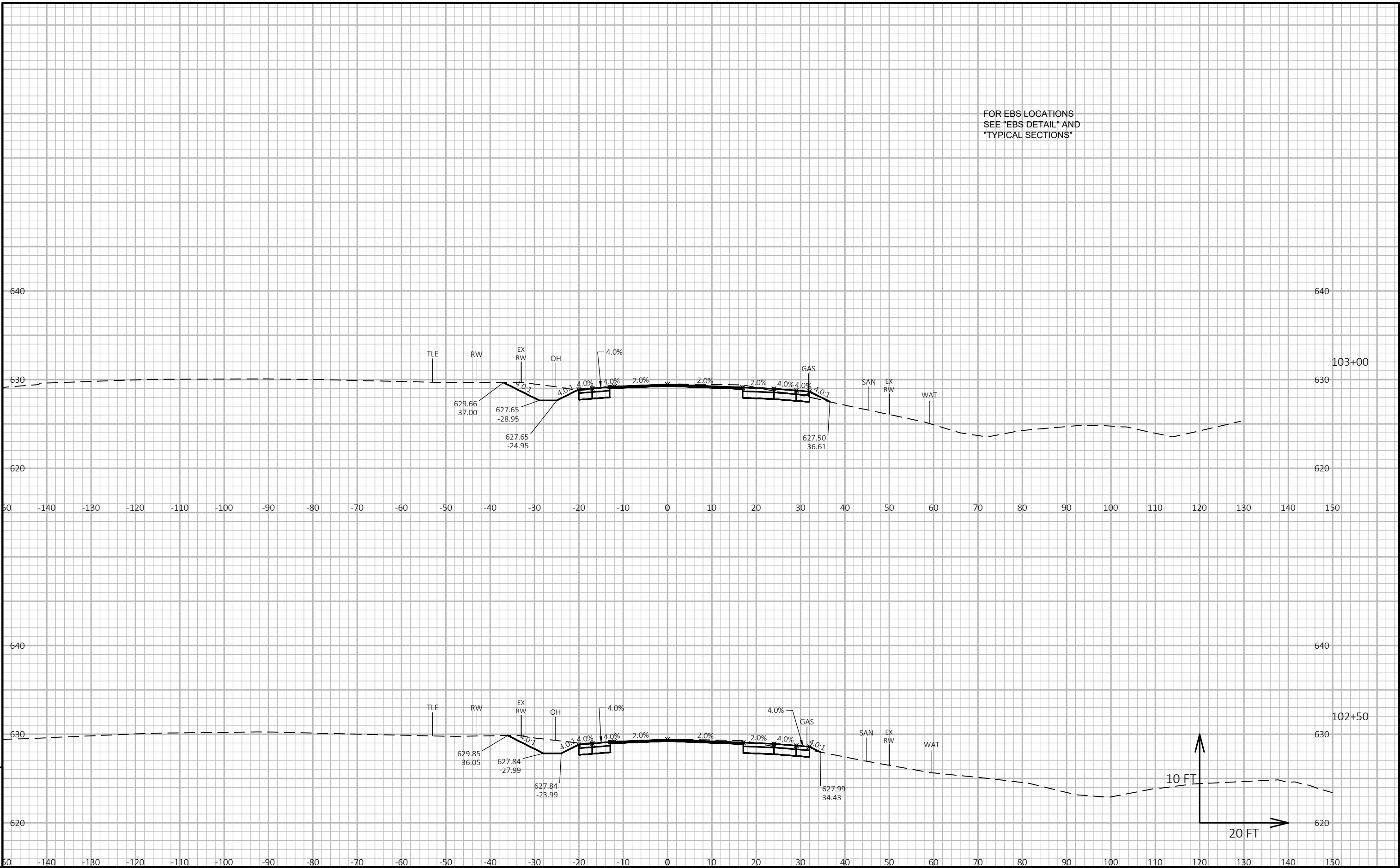
FOR EBS LOCATIONS
SEE "EBS DETAIL" AND
"TYPICAL SECTIONS"

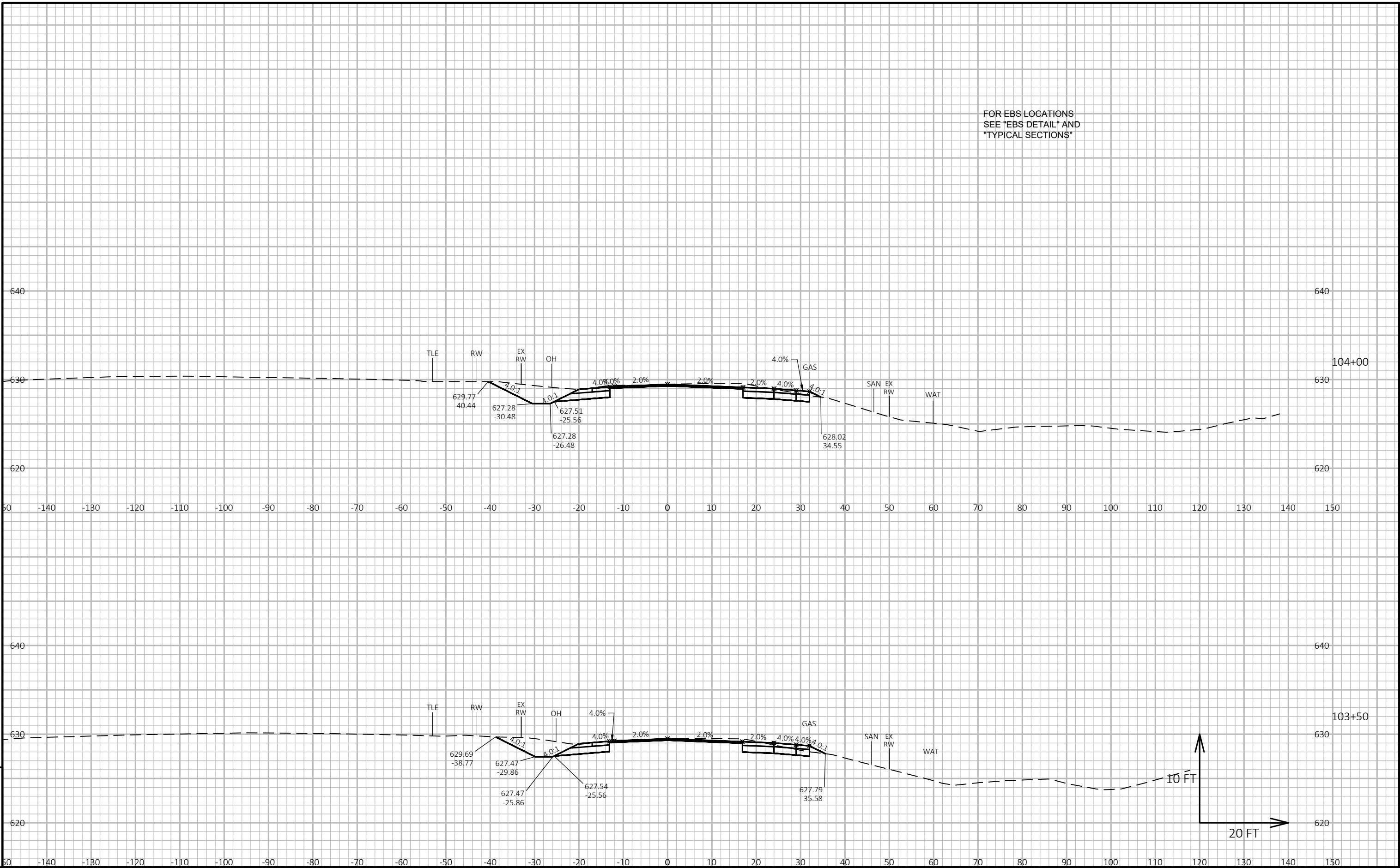










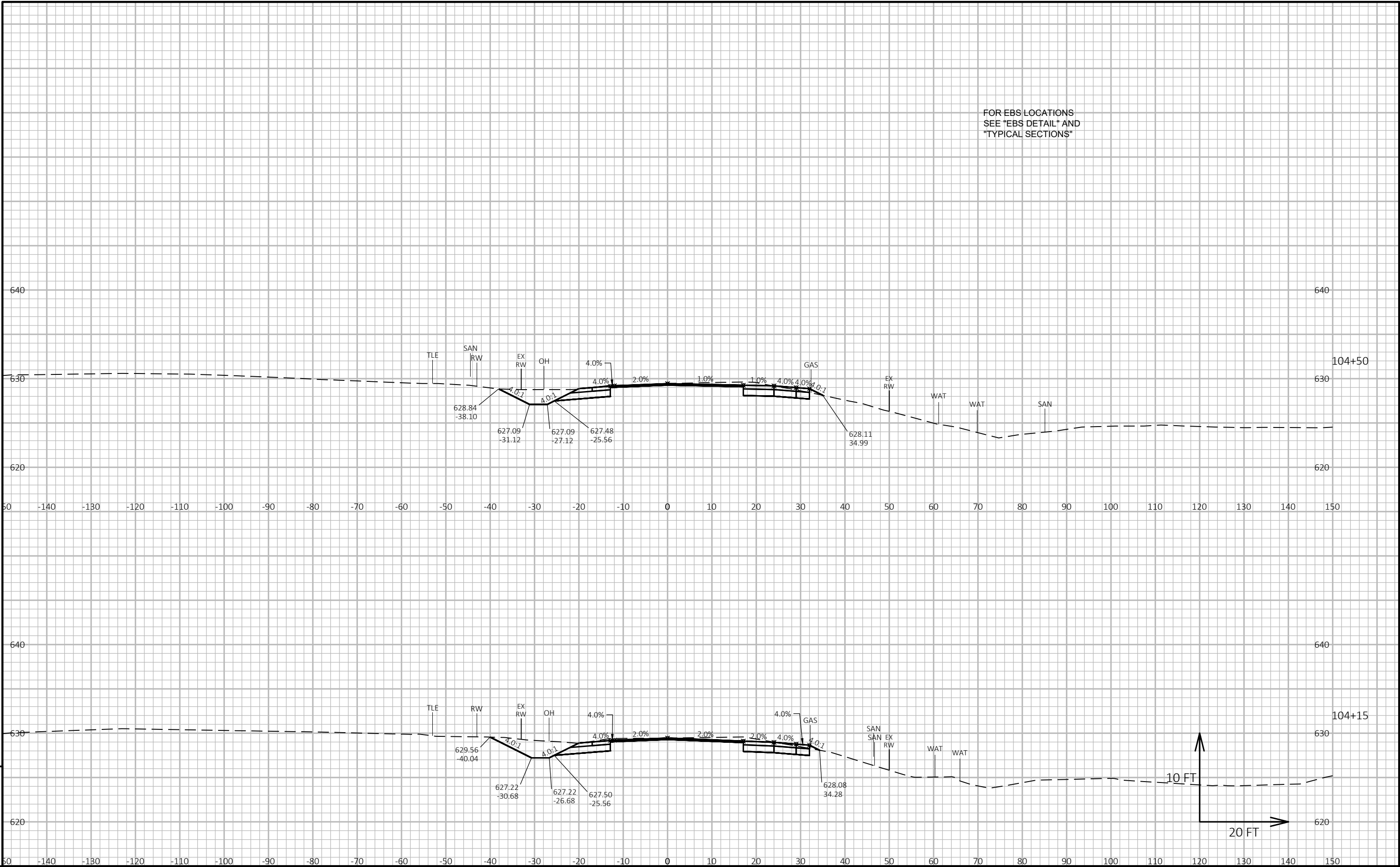


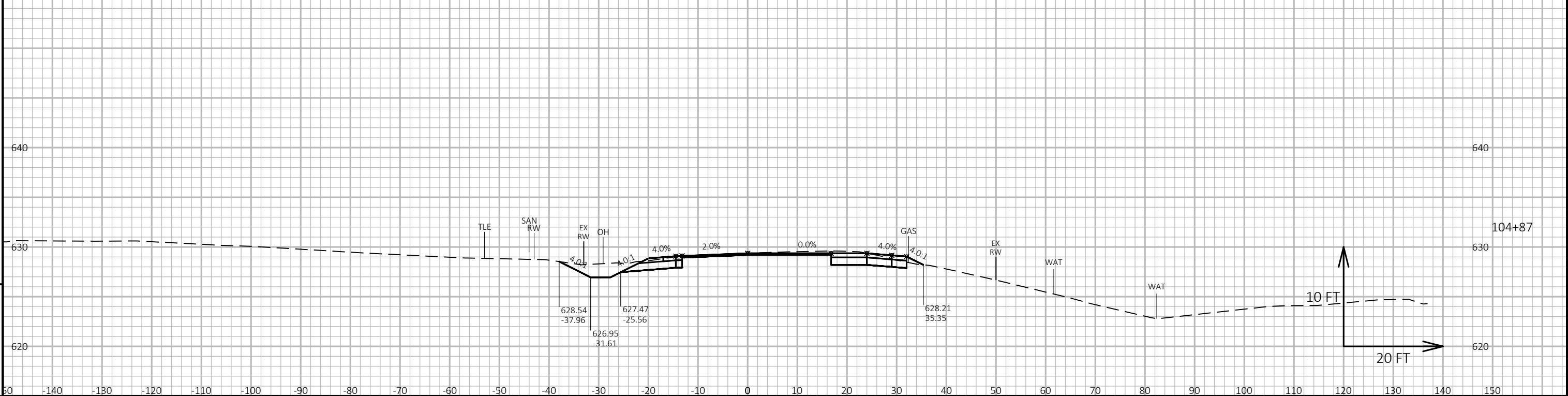
FOR EBS LOCATIONS
SEE "EBS DETAIL" AND
"TYPICAL SECTIONS"

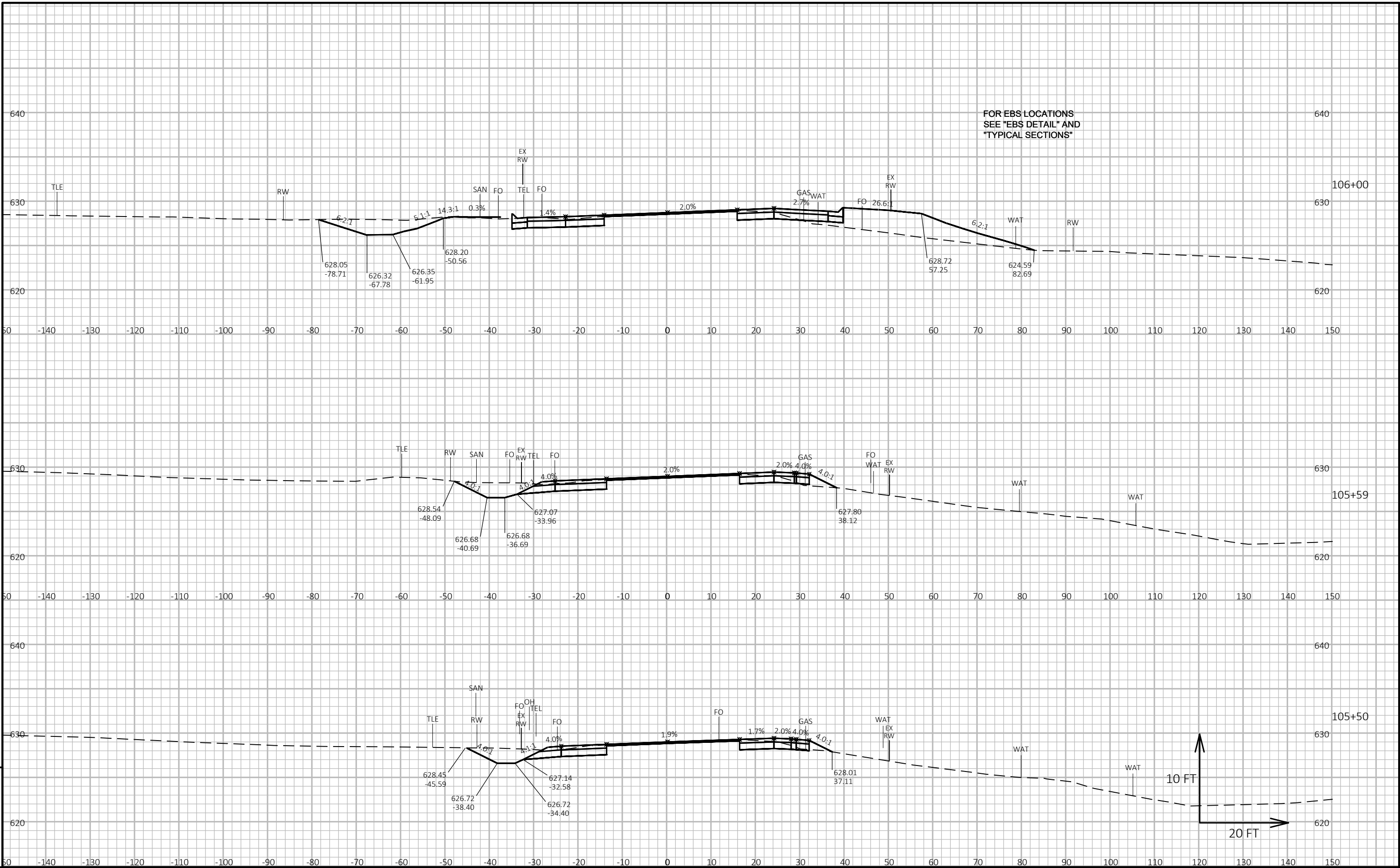
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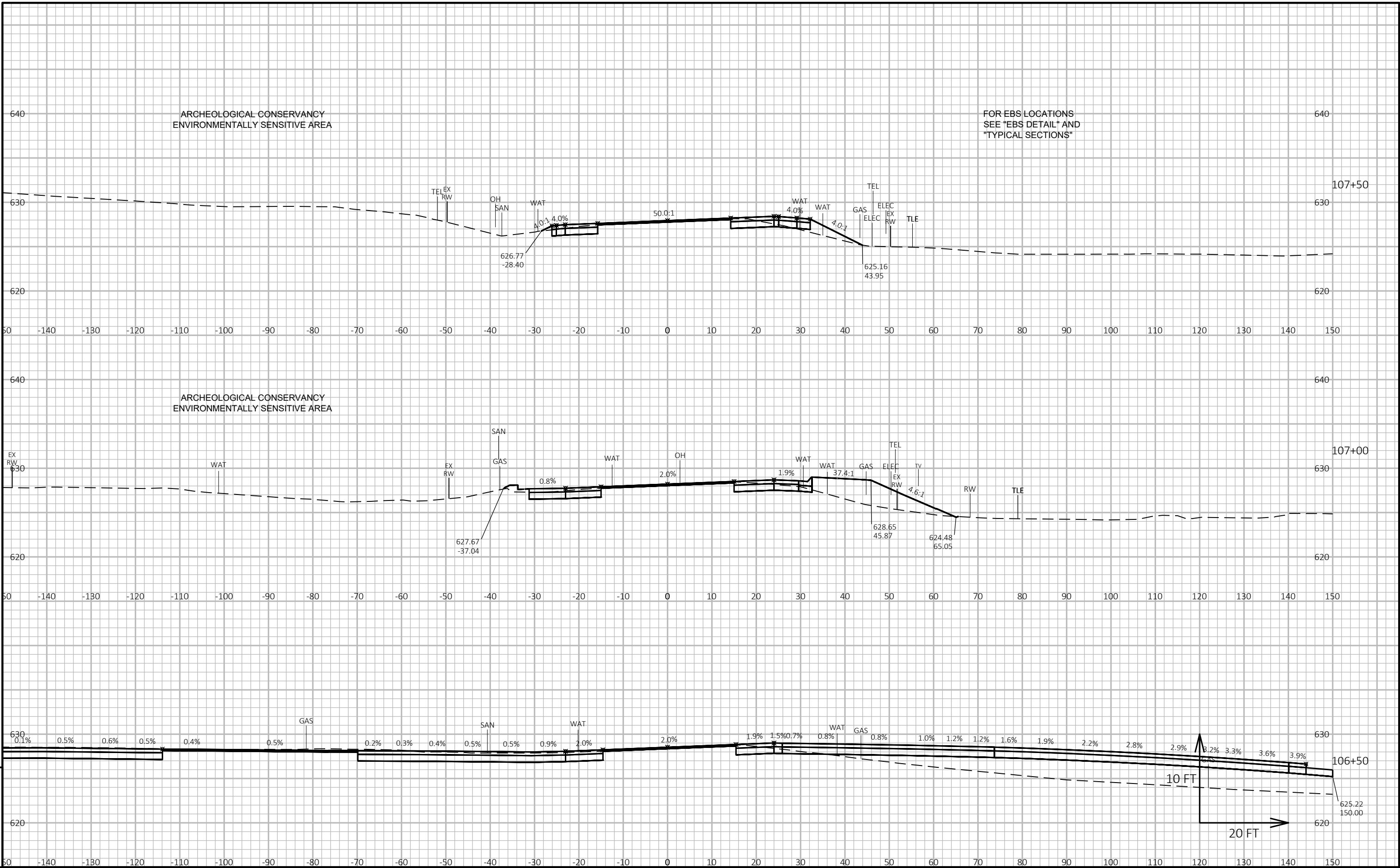
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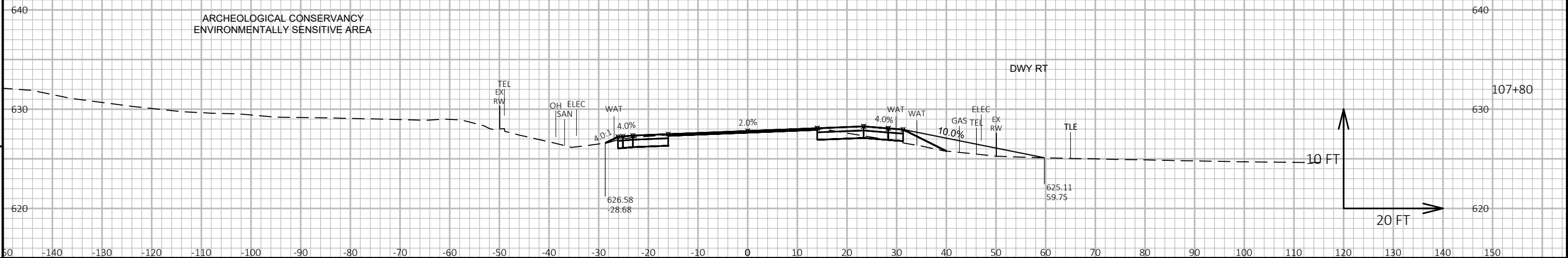
PROJECT NO: 3240-11-70	HWY: STH 32	COUNTY: KENOSHA	CROSS SECTIONS: STH 32	SHEET 185	E
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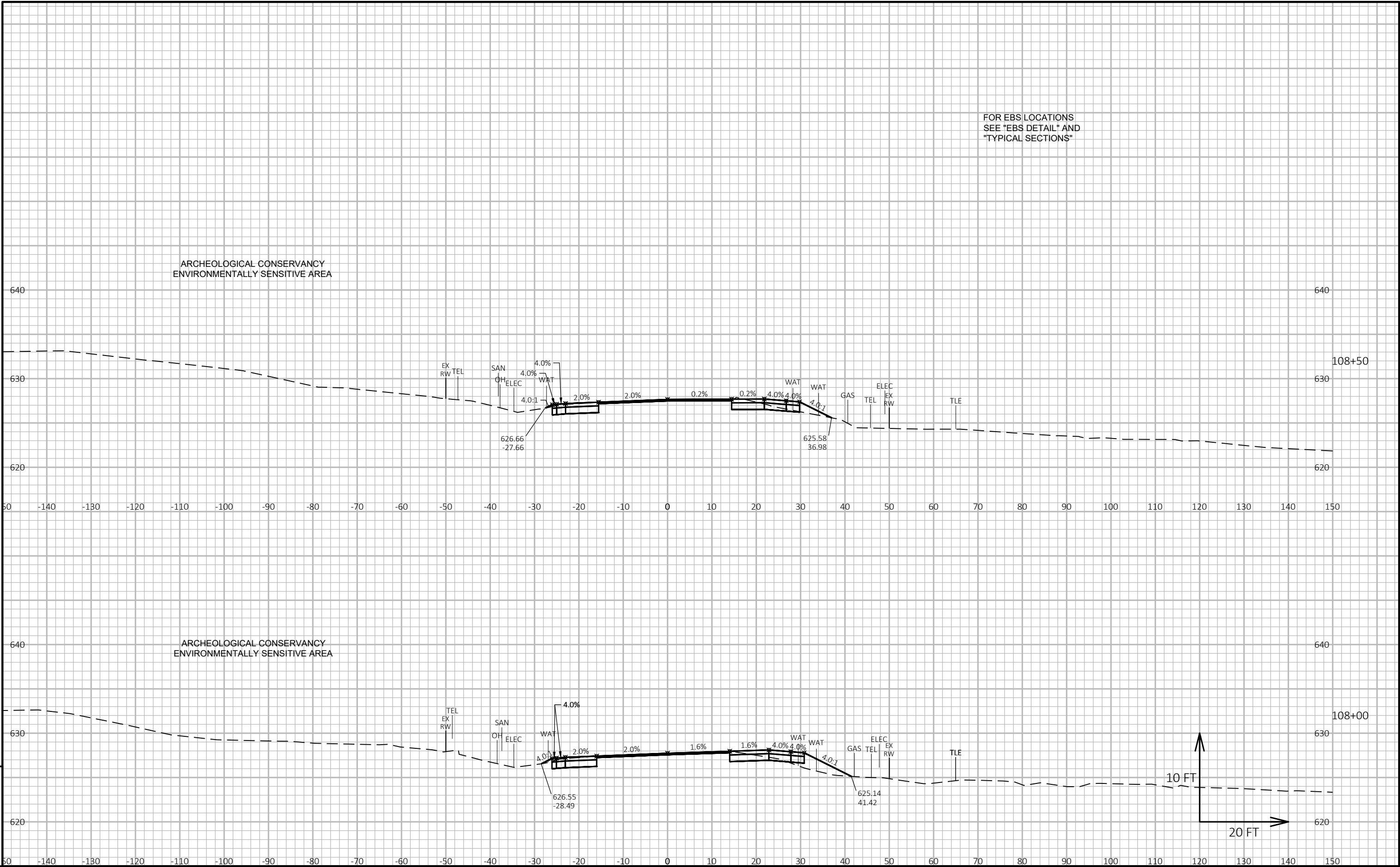








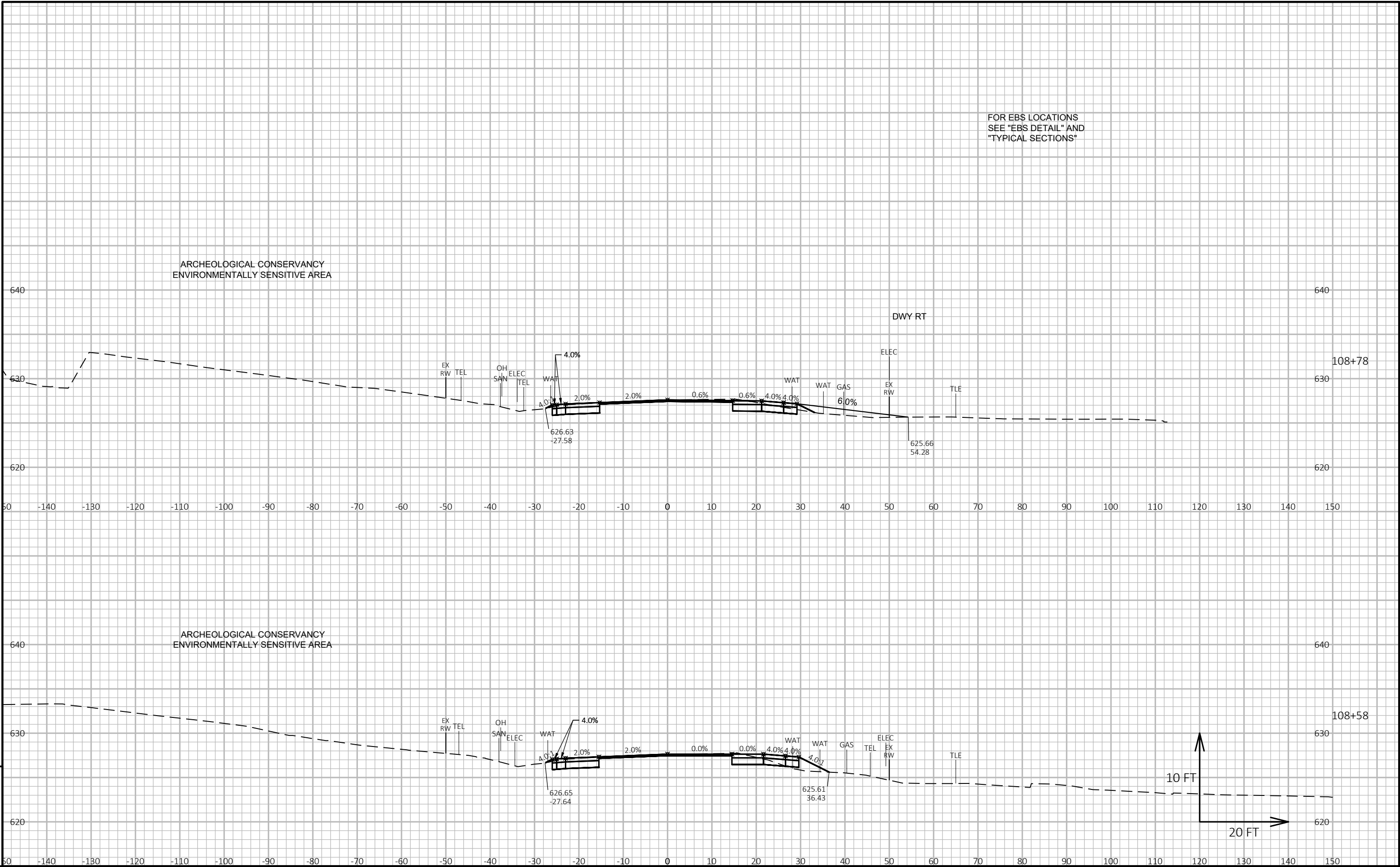


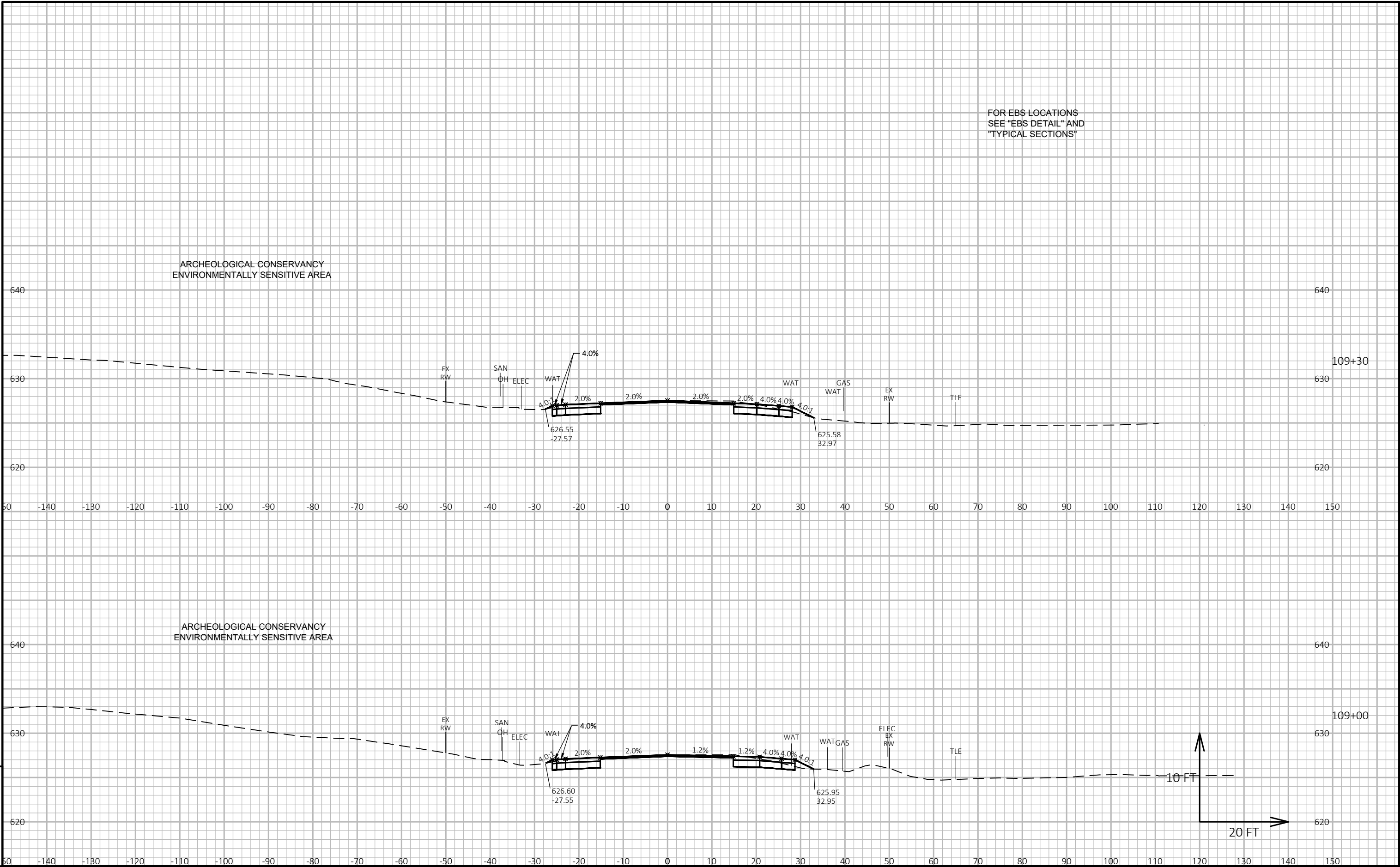


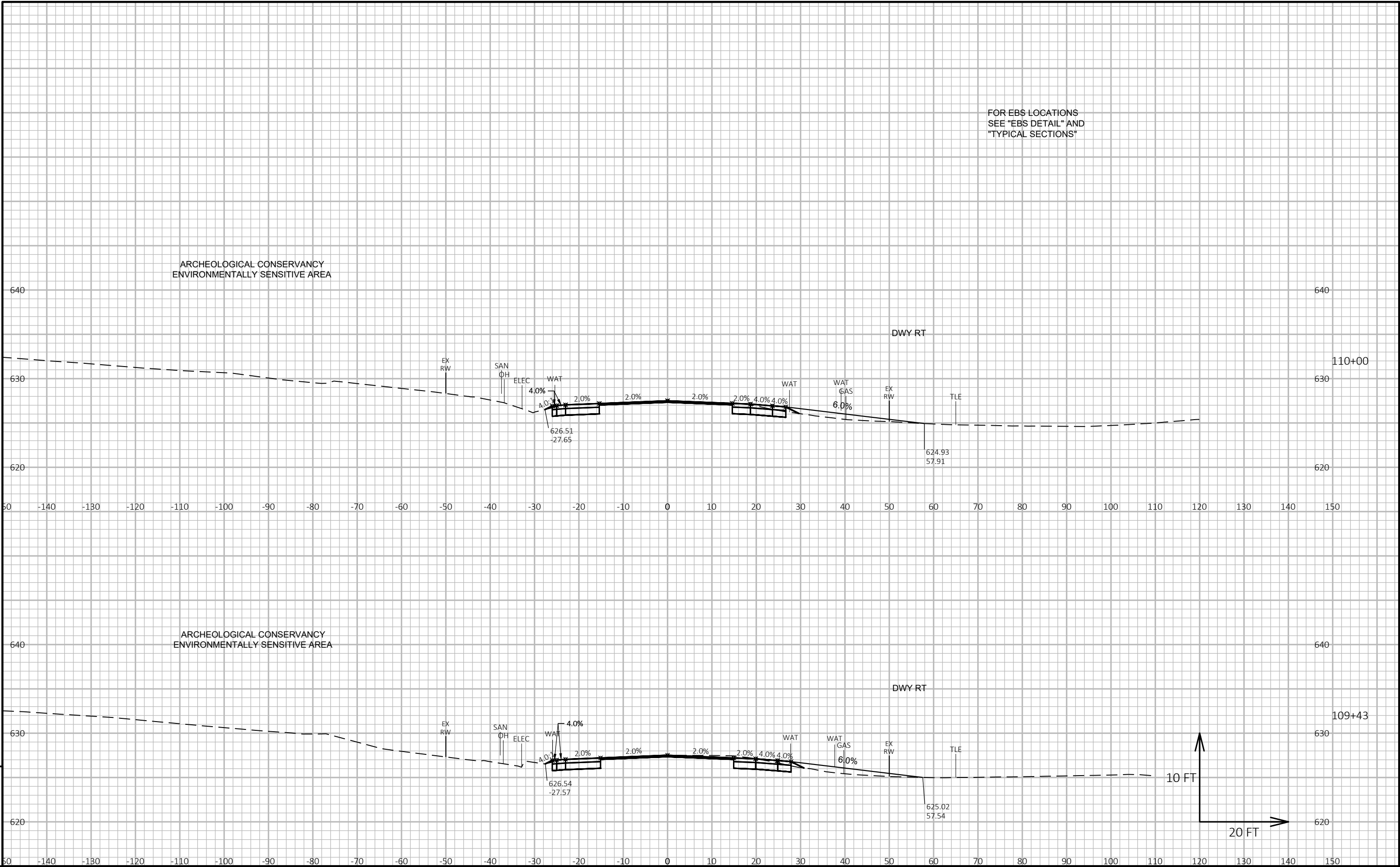
FOR EBS LOCATIONS
SEE "EBS DETAIL" AND
"TYPICAL SECTIONS"

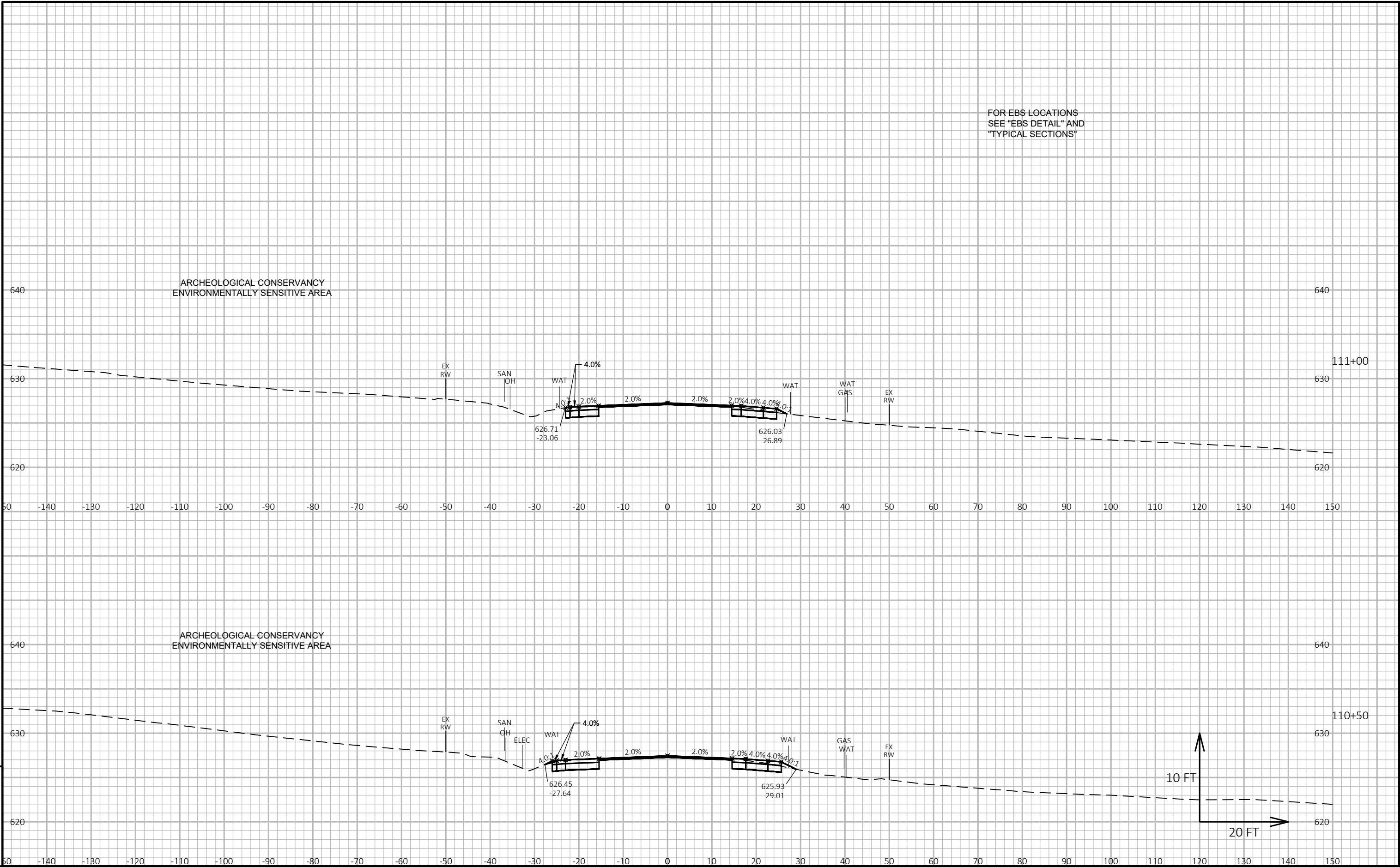
ARCHEOLOGICAL CONSERVANCY
ENVIRONMENTALLY SENSITIVE AREA

ARCHEOLOGICAL CONSERVANCY
ENVIRONMENTALLY SENSITIVE AREA









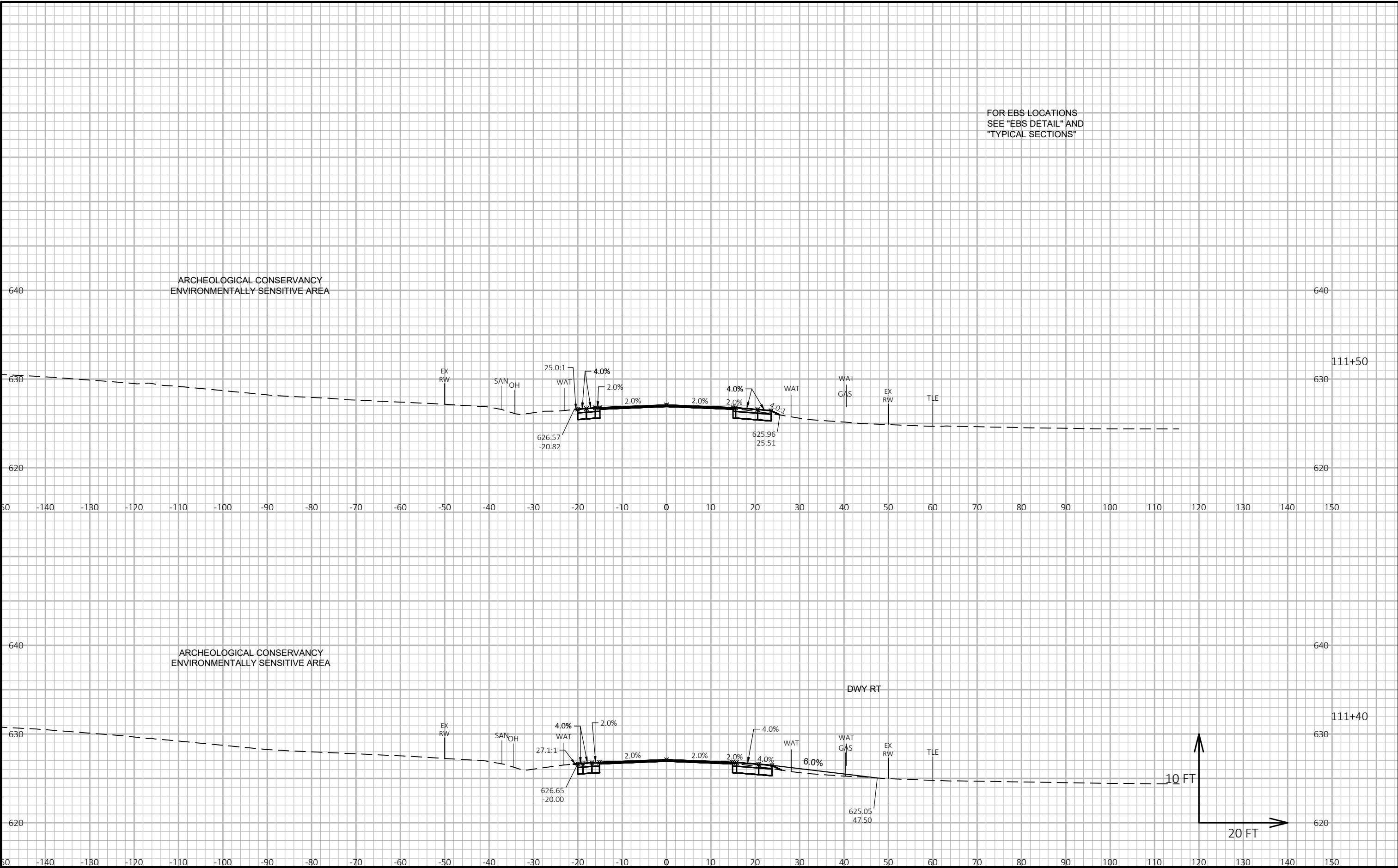
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SEE "EBS DETAIL" AND
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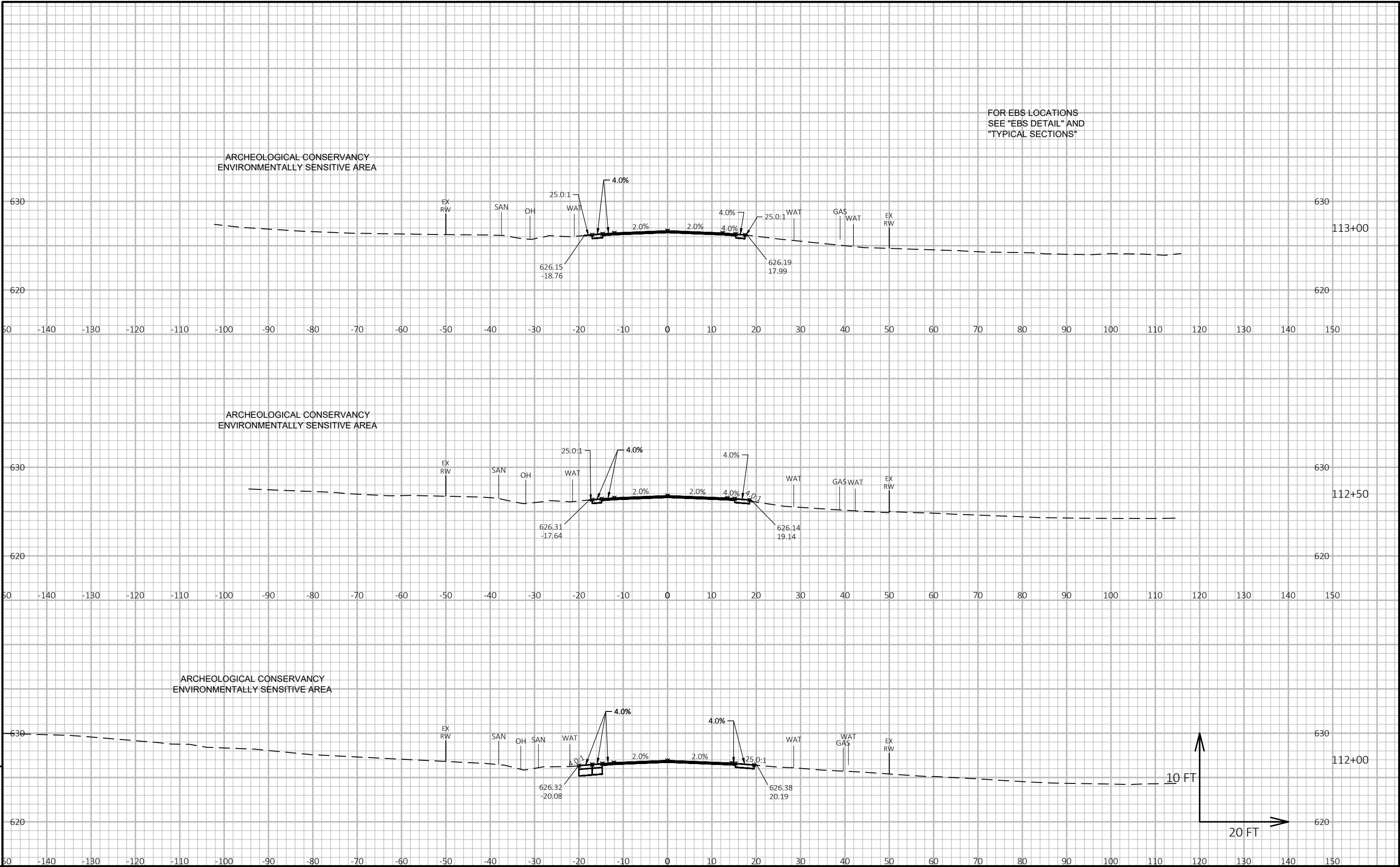
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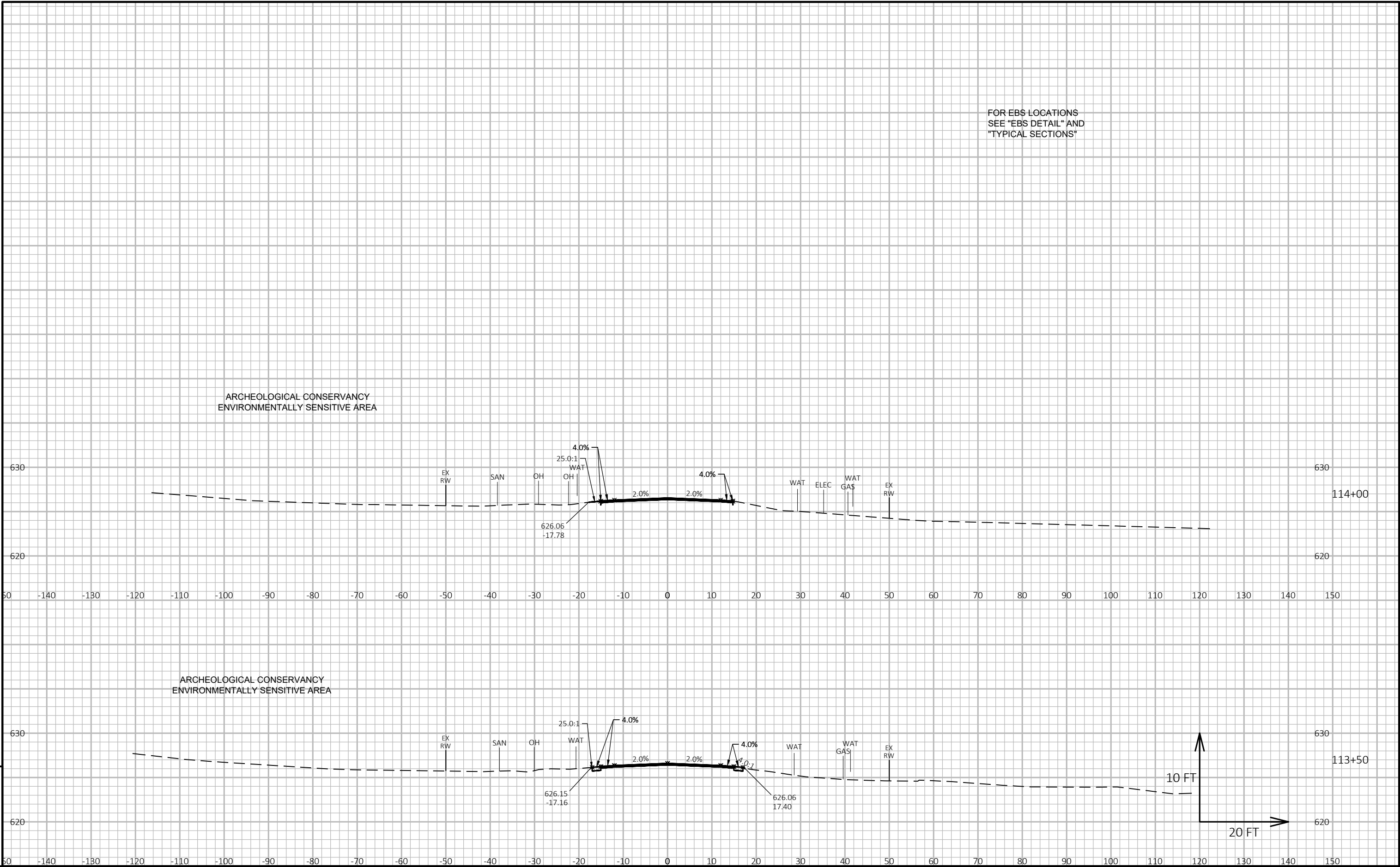
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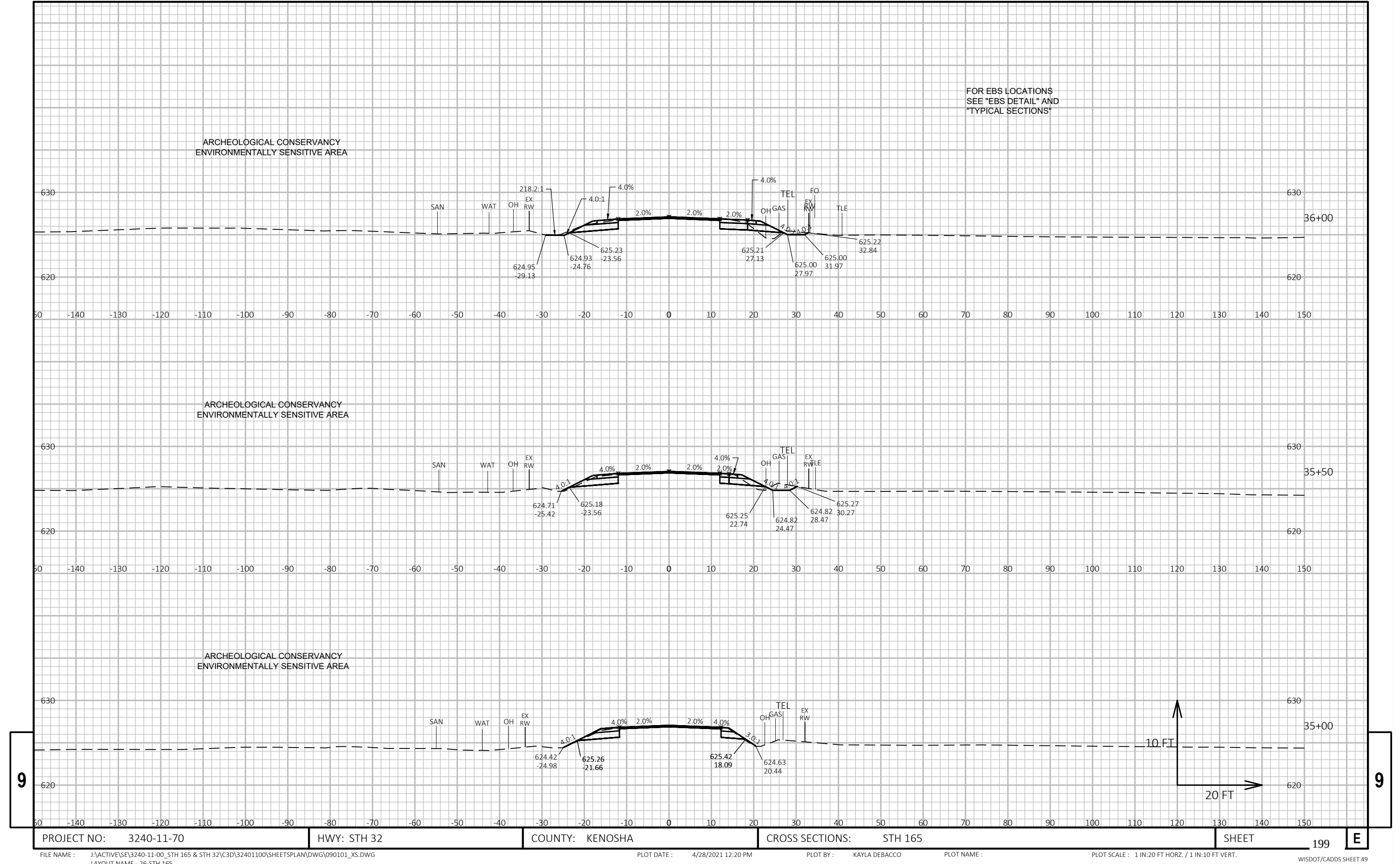
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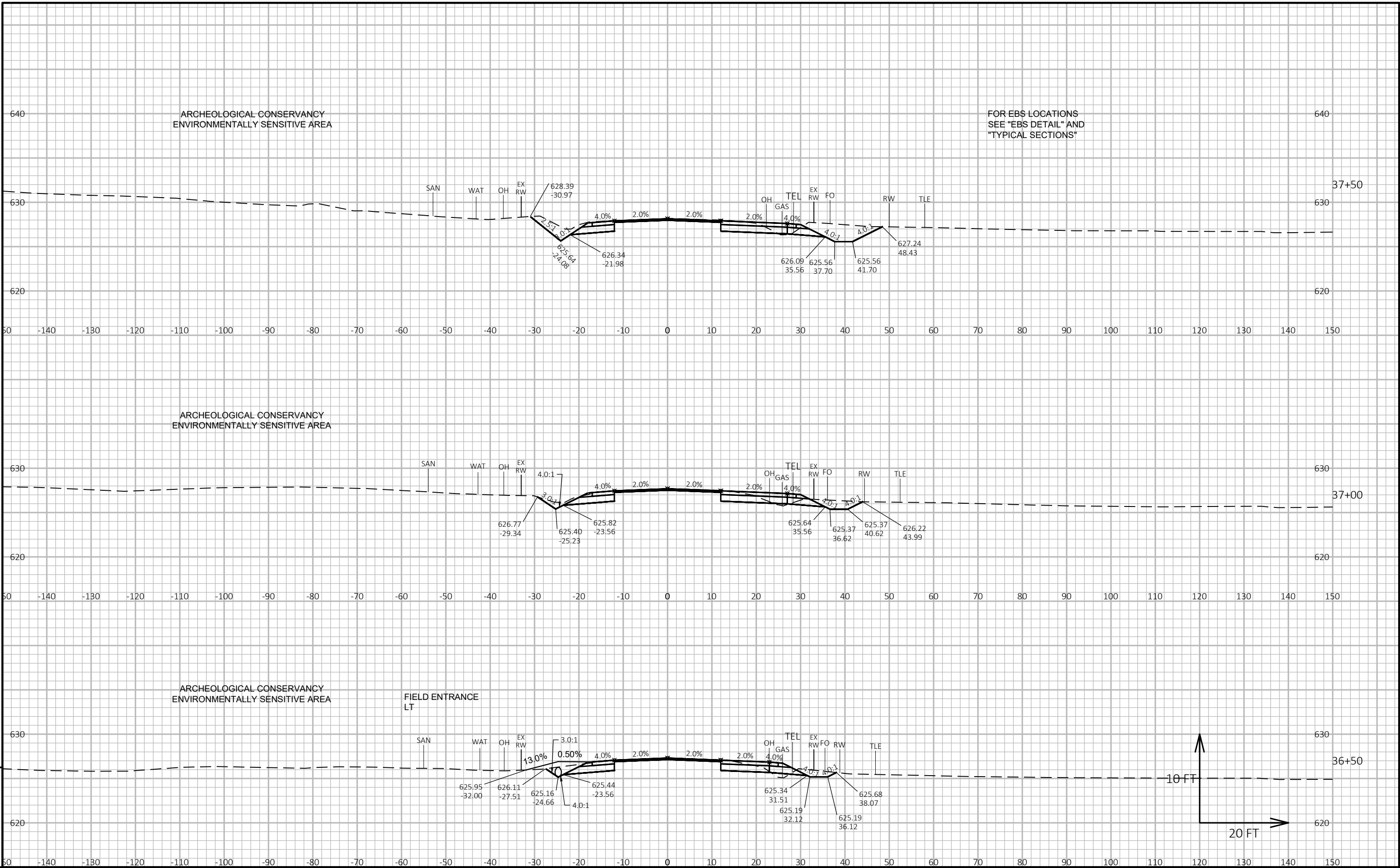
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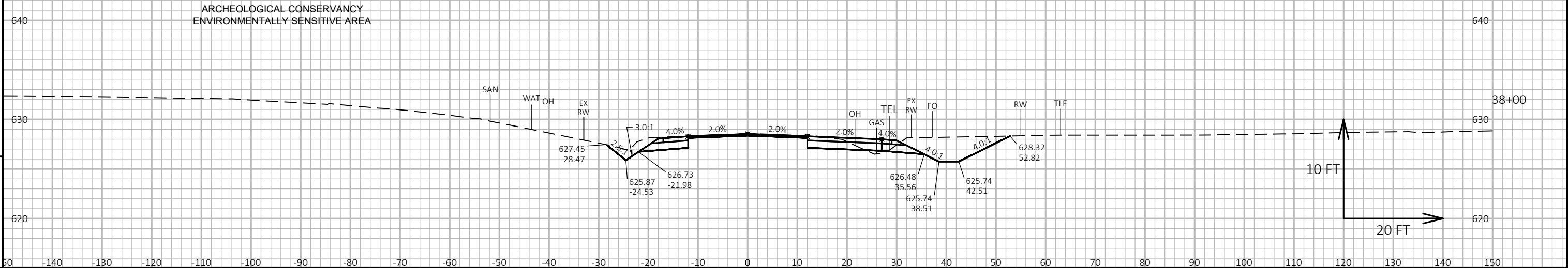
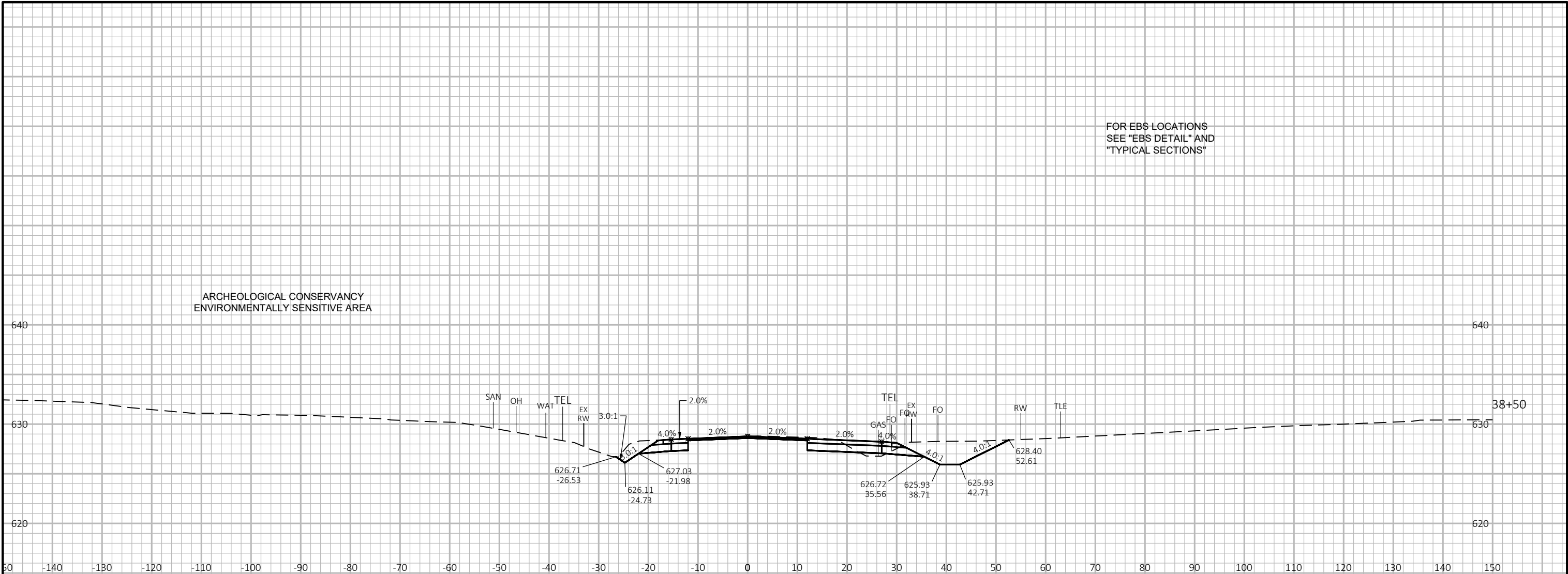


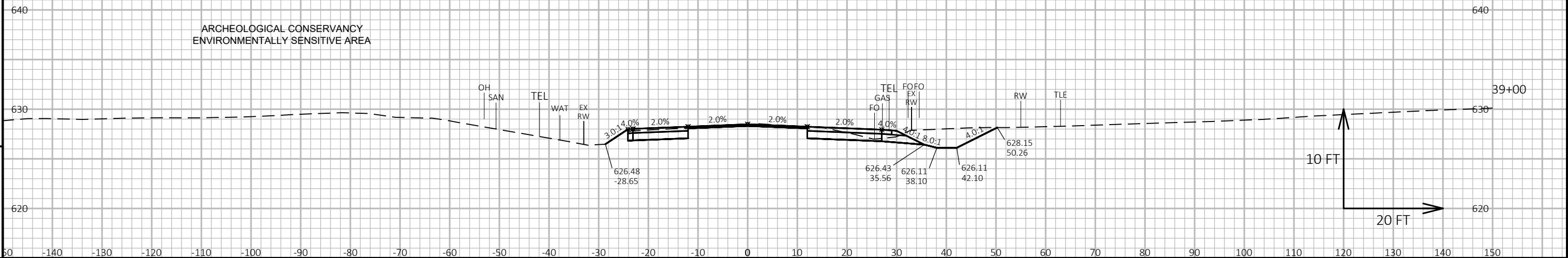
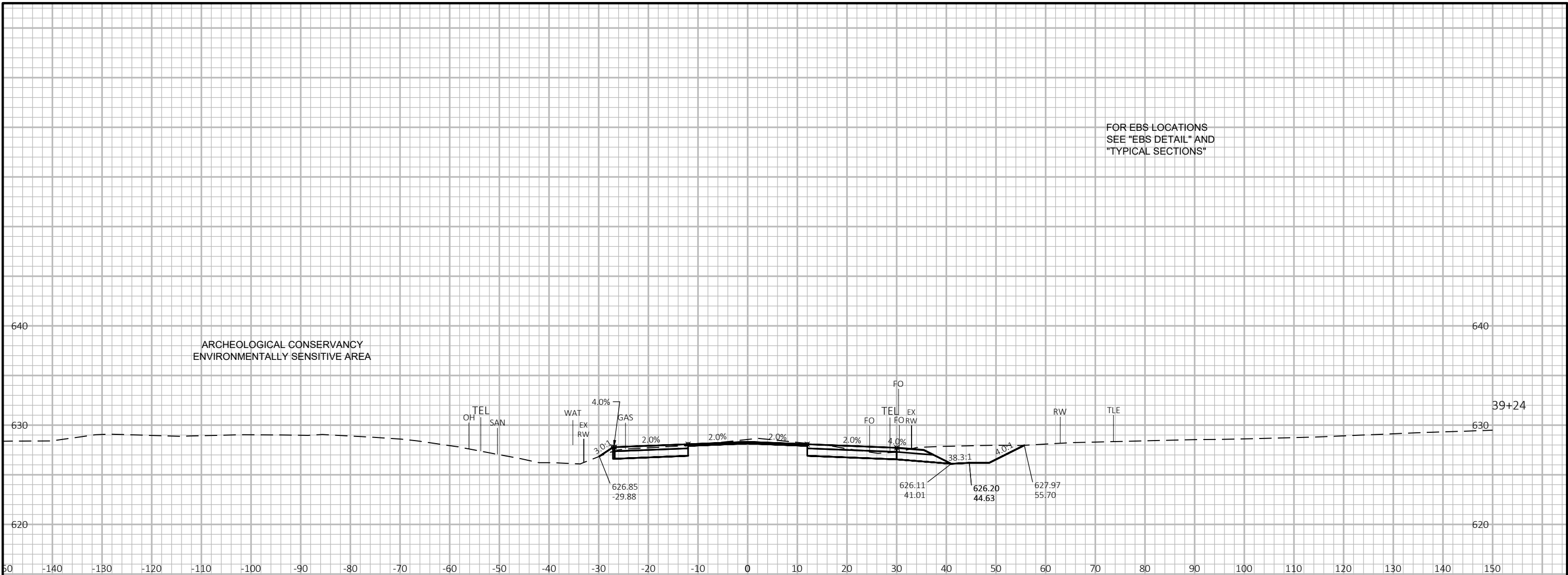


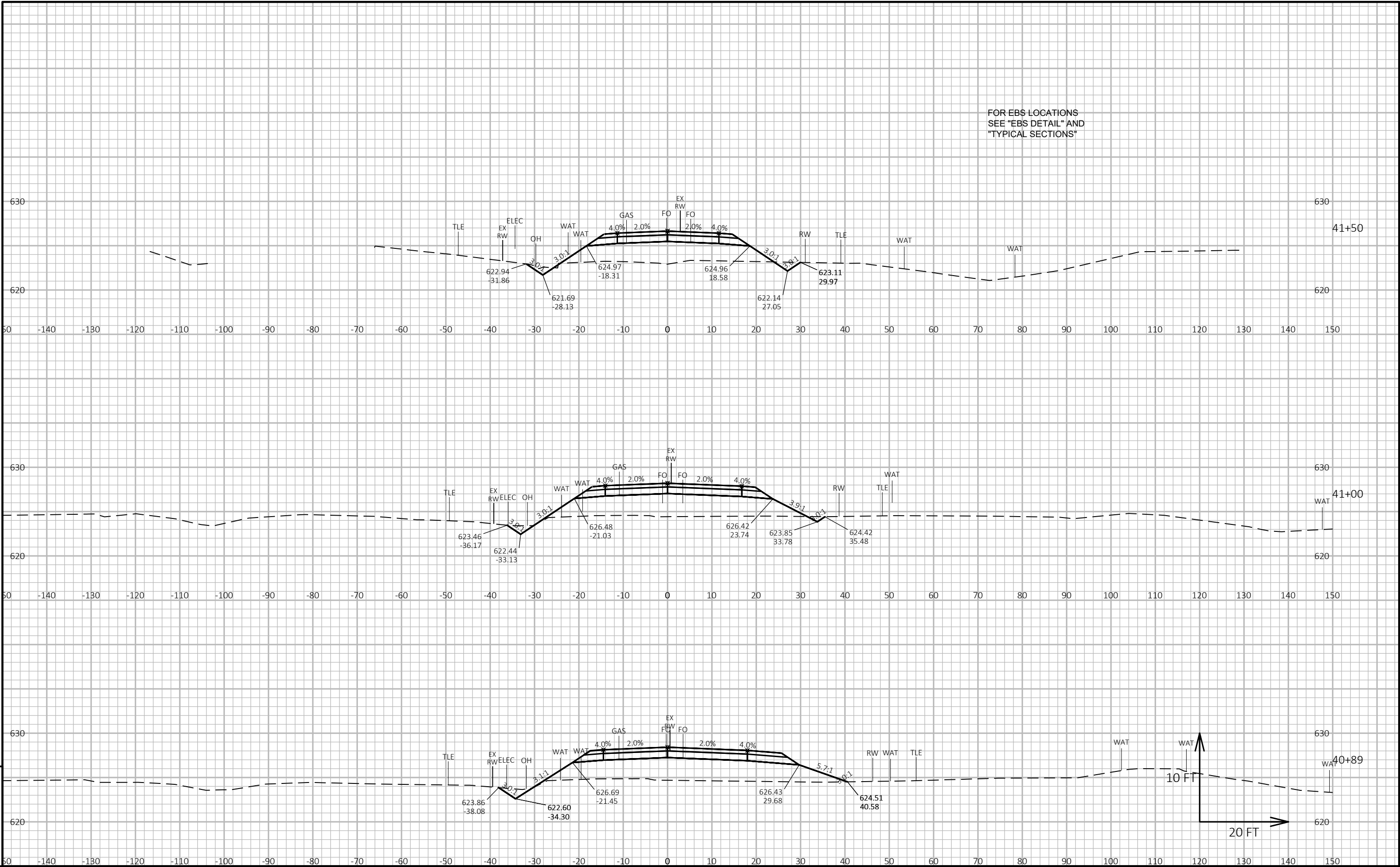


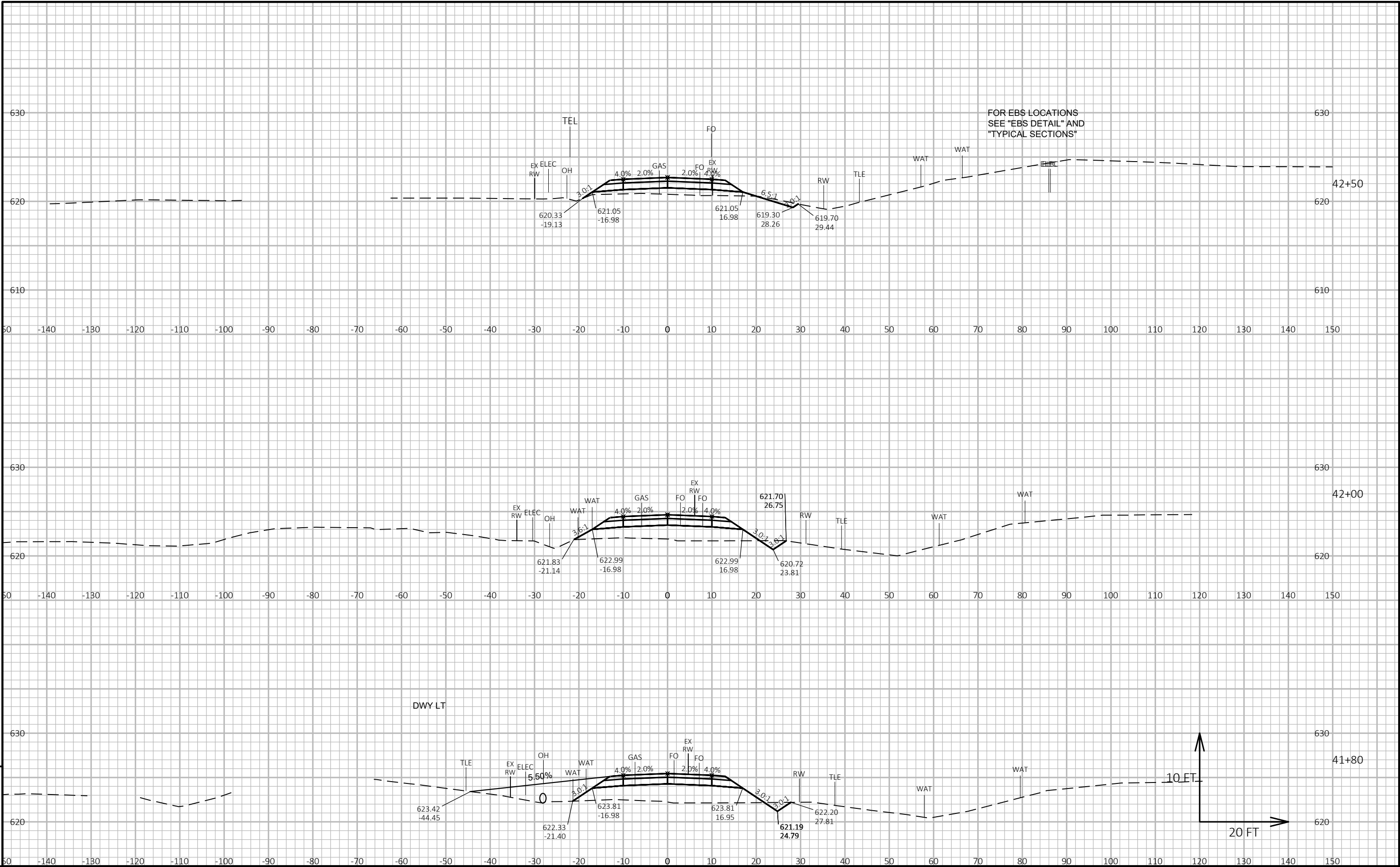


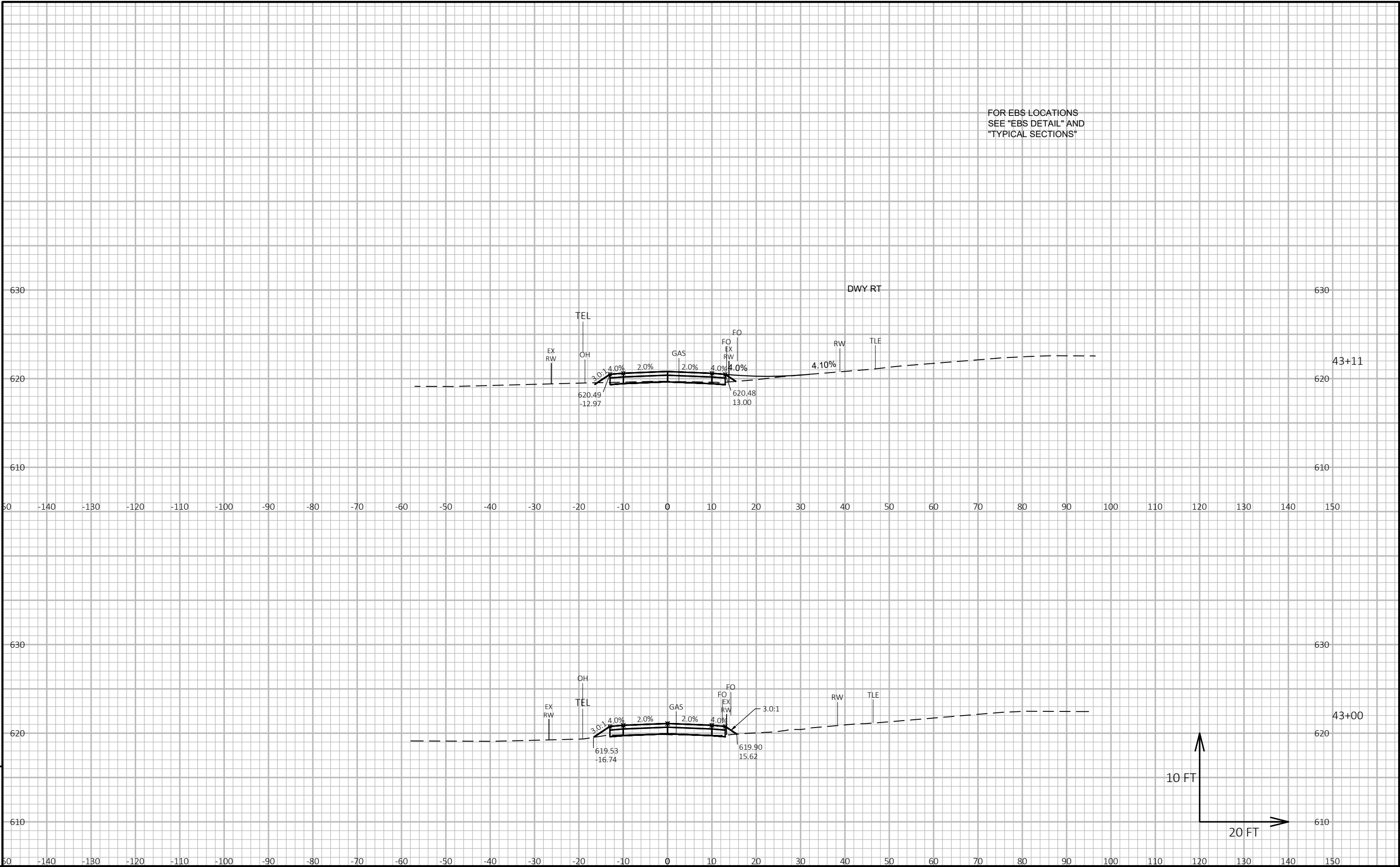


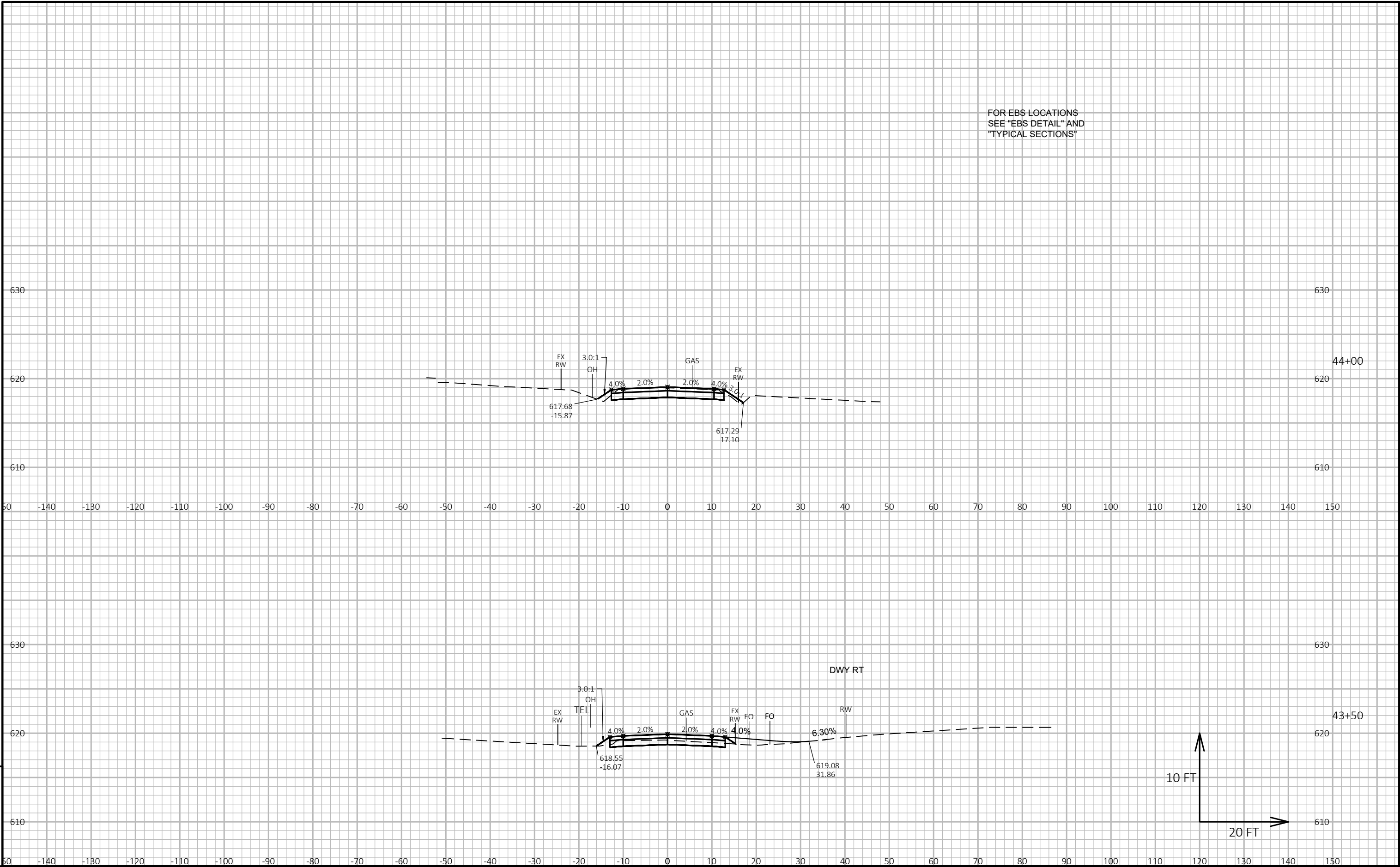


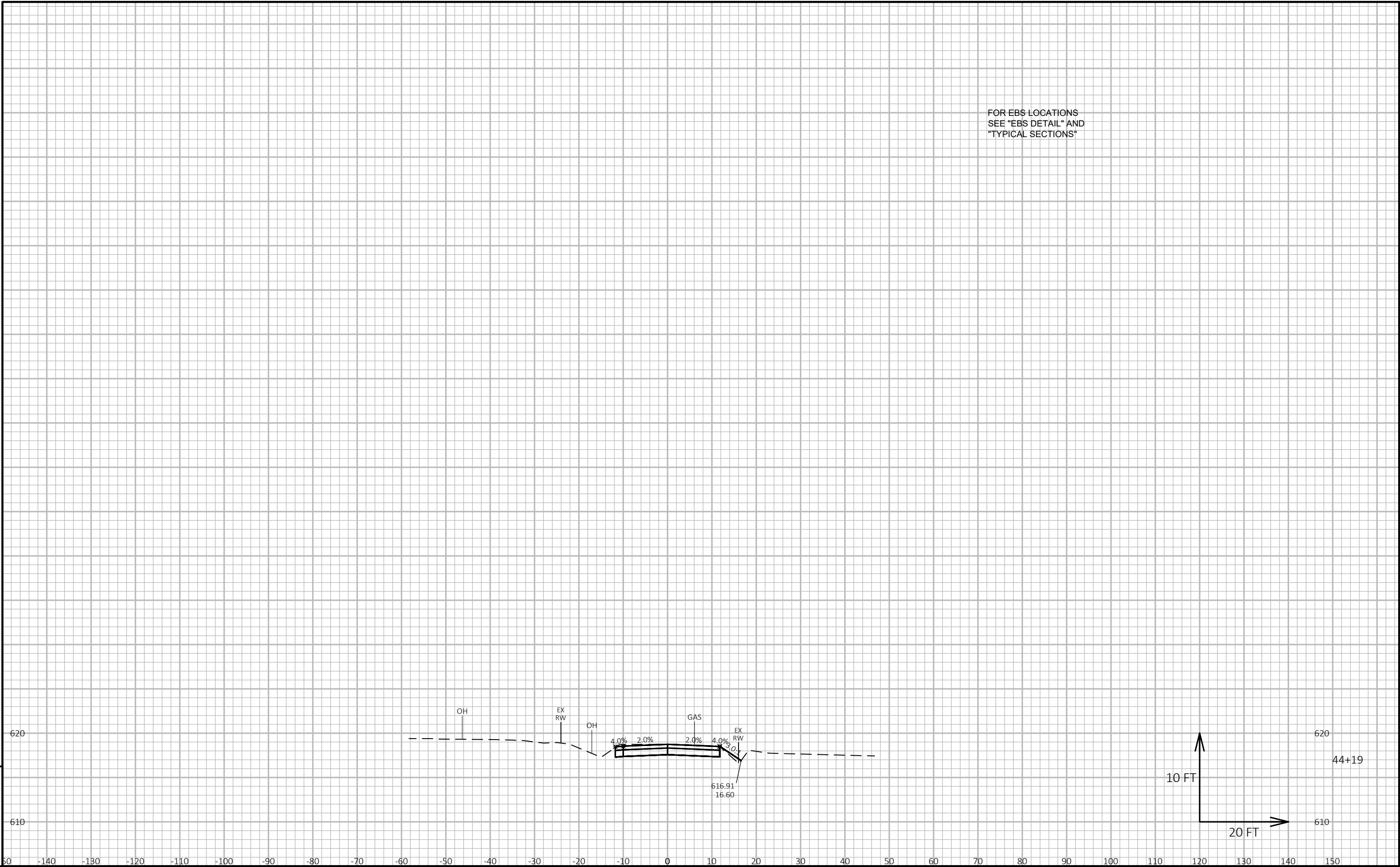




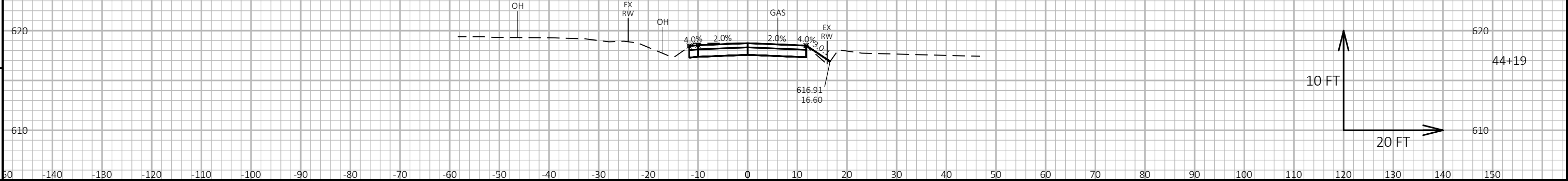






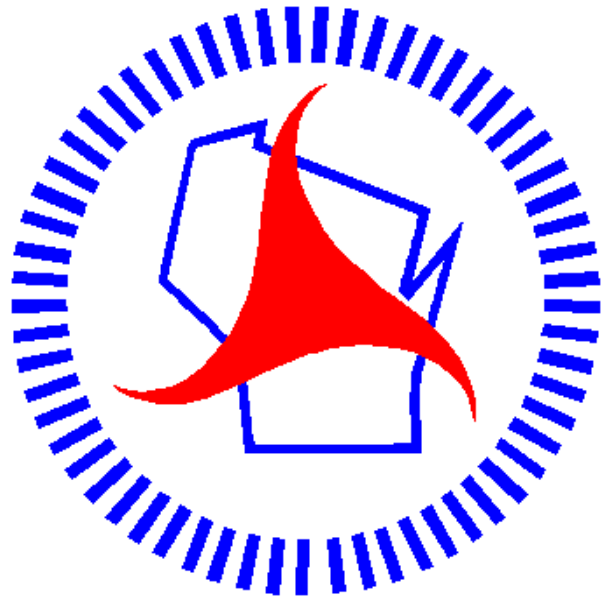


FOR EBS LOCATIONS
SEE "EBS DETAIL" AND
"TYPICAL SECTIONS"



PROJECT NO: 3240-11-70	HWY: STH 32	COUNTY: KENOSHA	CROSS SECTIONS: 104TH STREET	SHEET 207	E
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FILE NAME : J:\ACTIVE\SE\3240-11-00_STH 165 & STH 32\C3D\32401100\SHEETS\PLAN\DWG\090101_XS.DWG	PLOT DATE : 4/28/2021 12:21 PM	PLOT BY : KAYLA DEBACCO	PLOT NAME :	PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.	WISDOT/CADDs SHEET 49
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Wisconsin Department of Transportation

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