

PROJECT ID: 1517-07-71
WITH:

COUNTY: WINNEBAGO

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1517-07-71		

PLAN OF PROPOSED IMPROVEMENT

USH 10 - USH 10/STH 441

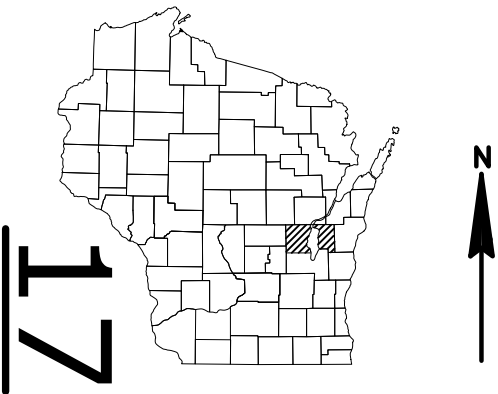
COUNTY CB - ONEIDA STREET

USH 10

WINNEBAGO COUNTY

SYSTEM INTERCHANGE HAUL ROAD REPAIR










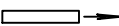


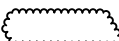
STATE PROJECT NUMBER
1517-07-71


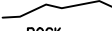
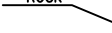
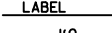
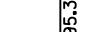
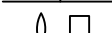
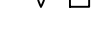
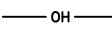
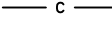
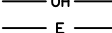
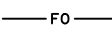
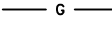
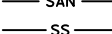
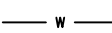
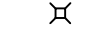
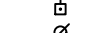






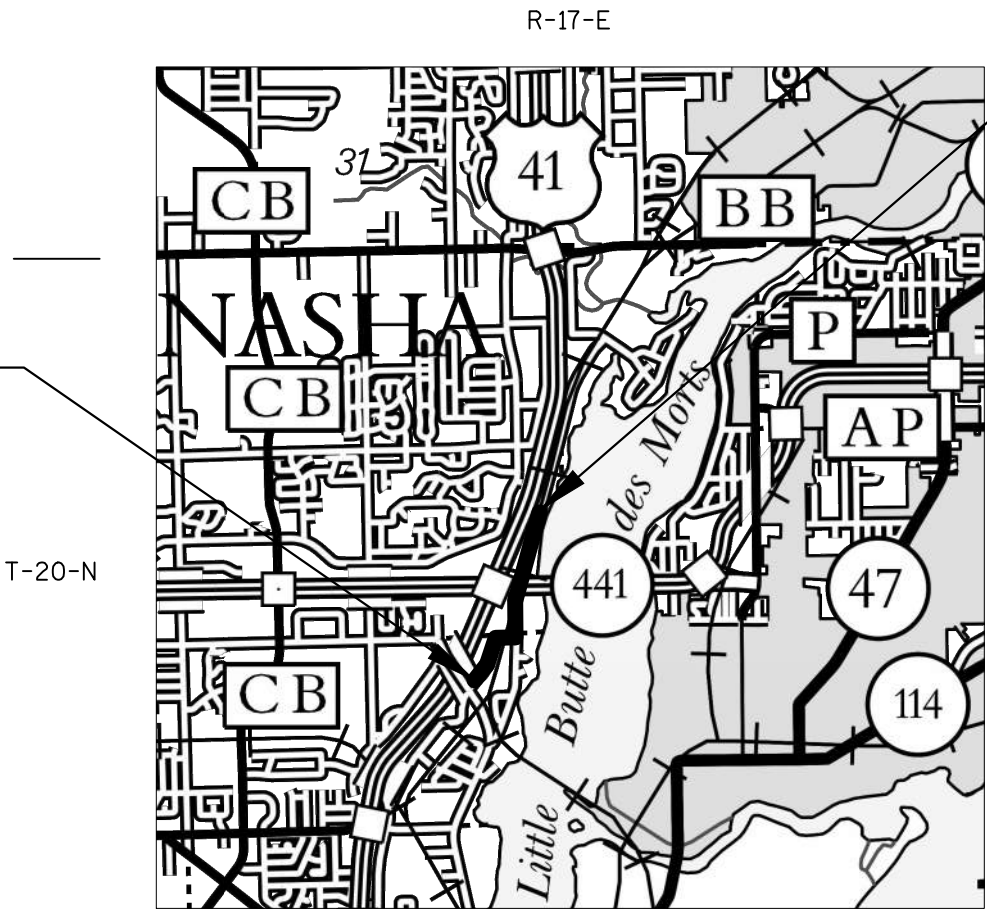
DESIGN DESIGNATION

A.A.D.T.	2020	=	N/A
A.A.D.T.	2038	=	N/A
D.H.V.	2038	=	N/A
D.D.		=	N/A
T.		=	N/A
DESIGN SPEED		=	N/A
ESALS		=	N/A

CONVENTIONAL SYMBOLS

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

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



END PROJECT 1517-07-71

STA 31NLS+14.00
Y=547907.203
X=811402.669

BEGIN PROJECT 1517-07-71

STA 20EHL+00.00
Y=543633.583
X=809473.777

T-20-N


LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 1.002

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY
COORDINATE SYSTEM (WCCS). WINNEBAGO COUNTY NAD83 (1991).

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL
GEODETIC VERTICAL DATUM OF 1929, NGVD 29.

STATE OF MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	KAPUR
Designer	M. COHEN
Project Manager	S. EBEL
Regional Examiner	
Regional Supervisor	C. DEGRAVE
APPROVED FOR THE DEPARTMENT	
DATE: 7/31/2018	 (Signature)

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

DIGGERSHOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

UTILITY CONTACTS

CHARTER COMMUNICATION - COMMUNICATION LINE

VINCE ALBIN
3520 DESTINATION DRIVE
APPLETON, WI 54915
920-831-9249
vince.albin@charter.com

FOX CROSSING UTILITIES - SEWER

DAVID TRACEY
2340 AMERICAN DRIVE
NEENAH, WI 54956
920-720-7175
DTRACEY@FOXCROSSINGWI.GOV

FOX CROSSING UTILITIES - WATER

DAVID TRACEY
2340 AMERICAN DRIVE
NEENAH, WI 54956
920-720-7175
DTRACEY@FOXCROSSINGWI.GOV

WE ENERGIES - ELECTRICITY

CHRIS SCHULTZ
500 S 116TH STREET
WEST ALLIS, WI 53214
414-994-5553
SCHULTZ.CHRIS@we-energies.com

WE ENERGIES - GAS

CODY BECKMANN
PO BOX 1699
APPLETON, WI 54912
920-380-3422
cody.beckmann@we-energies.com

WISCONSIN CENTRAL LTD CONTACTS

RAILROAD FLAGGING CONTACT

MARY ELLEN CARMODY
2800 LIVERNOIS ROAD, STE 330
TROY, MI 48083
OFFICE: 248-740-6227
FAX: 248-740-6036
maryellen.carmody@cn.ca

MAIN RAILROAD CONTACT

JACKIE MACEWICZ
MANAGER PUBLIC WORKS
1625 DEPOT STREET
STEVENS POINT, WI 54481
OFFICE: 715-345-2503
FAX: 715-345-2507
JACKIE.MACEWICZ@cn.ca

24 HOUR EMERGENCY RAILROAD SIGNAL

1-800-616-3432

CALL BEFORE YOU DIG

WISCONSIN CENTRAL LTD IS NOT PART OF DIGGER HOTLINE
CALL CHRISTINE GRZESIAK, 715-345-2506
WHEN DIGGING ON RAILROAD R/W

COUNTY SURVEYOR CONTACT

JERRY BOUGIE
WINNEBAGO COUNTY COURT HOUSE
445 ALGOMA BLVD
OSHKOSH, WI 54903
920-236-4839

DNR AREA LIASON

JAY SCHIEFELBEIN
DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
920-360-3784; CELL: 920-662-5472
jeremiah.schiefelbein@wisconsin.gov

US ARMY CORP OF ENGINEERS

NICK DOMER
OLD FORT SQUARE
211 N. BROADWAY, STE 221
GREEN BAY, WI 54303
651-290-5855
T.Dormer@usace.army.mil

WINNEBAGO COUNTY
HIGHWAY COMMISSIONER

RAY PALONEN
901 WEST COUNTY ROAD Y
P.O. BOX 2764
OSHKOSH, WI 54903
920-232-1700

EMERGENCY CONTACT NUMBERS
FOR WE ENERGIES

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-662-4797
GAS 24 HOUR EMERGENCY SERVICE: 1-800-261-5325

VILLAGE OF FOX CROSSING
STREET SUPERINTENDENT

RANDY GALLOW
2000 MUNICIPAL DRIVE
NEENAH, WI 54956
920-720-7110

ORDER OF PLAN SHEETS

TITLE SHEET
UTILITIES
GENERAL NOTES
ABBREVIATIONS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
ESTIMATE OF QUANTITIES
MISCELLANEOUS QUANTITIES

GENERAL NOTES

THE CONTRACTOR SHALL CONTACT THE UTILITIES AND DIGGERS HOTLINE TO LOCATE AND FIELD VERIFY UTILITIES. 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.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

THE EXACT LOCATIONS OF PRIVATE ENTRANCES ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER. ALL DRIVEWAYS ARE TO BE REPLACED IN KIND UNLESS OTHERWISE DIRECTED BY THE ENGINEER, OR AS SHOWN ON THE PLANS. BASE AGGREGATE DENSE ¾ -INCH SHALL BE USED UNDER ALL DRIVEWAYS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY ANY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT THE CONTRACTORS EXPENSE.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WATERWAY.

THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.

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

A VERTICAL FACE IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

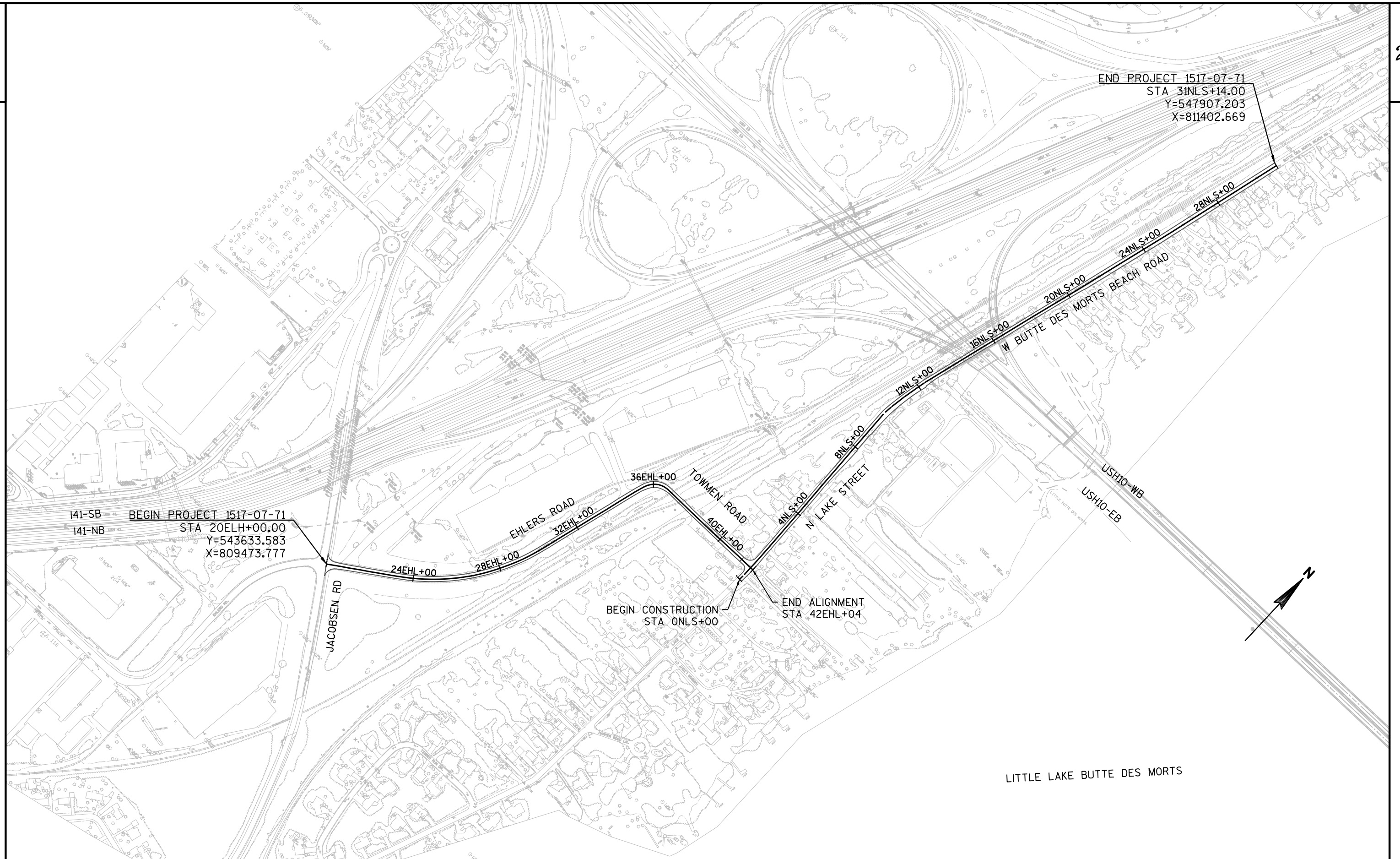
FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.

SAWCUT ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PAVING DETAILS OR AS DIRECTED BY THE ENGINEER.

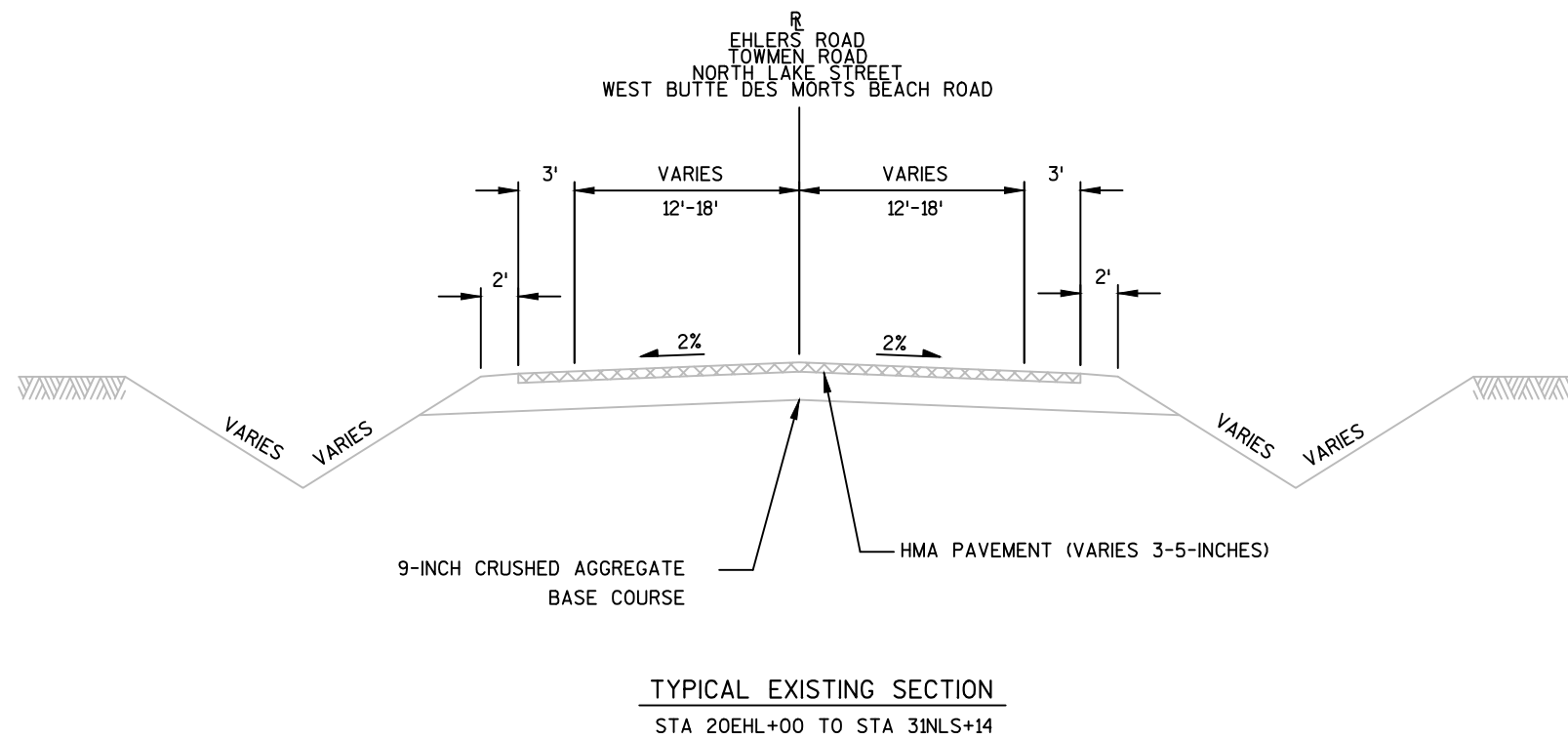
ALIGNMENT IDENTIFIERS	
EHL	EHLERS ROAD/TOWMEN ROAD
NLS	NORTH LAKE STREET/WEST BUTTE DES MORTS BEACH ROAD

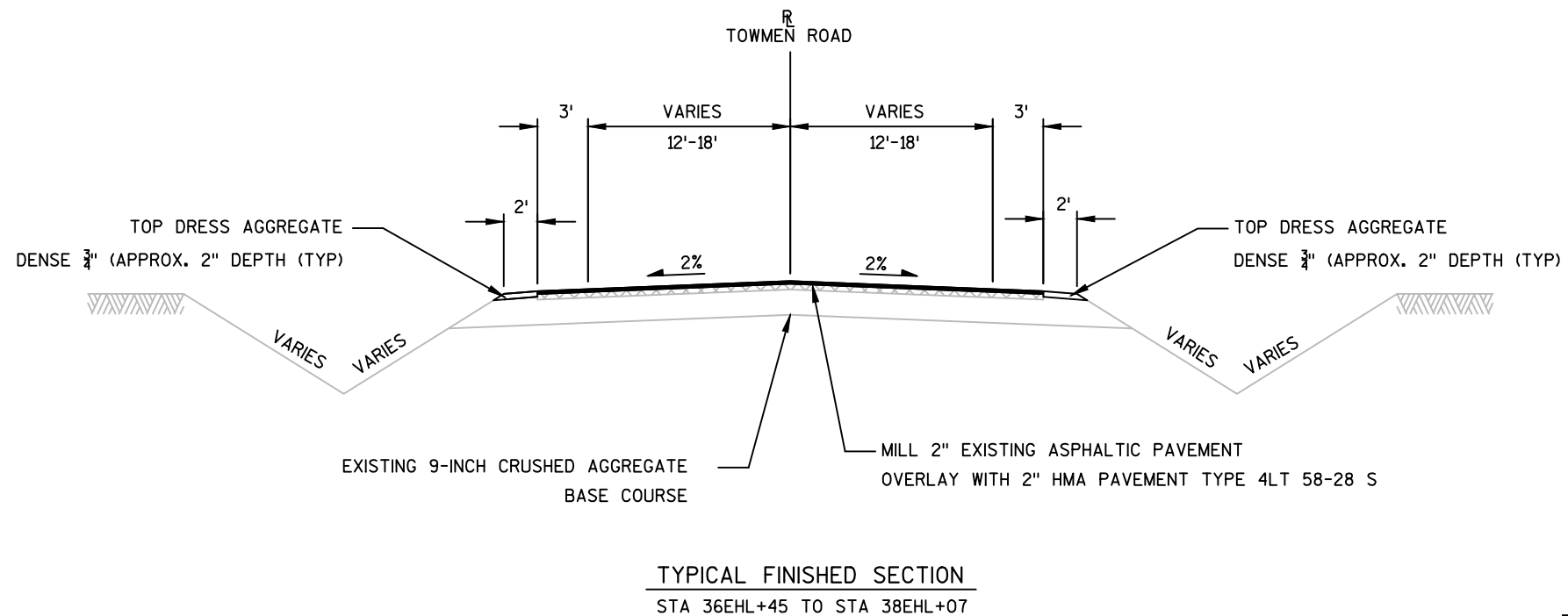
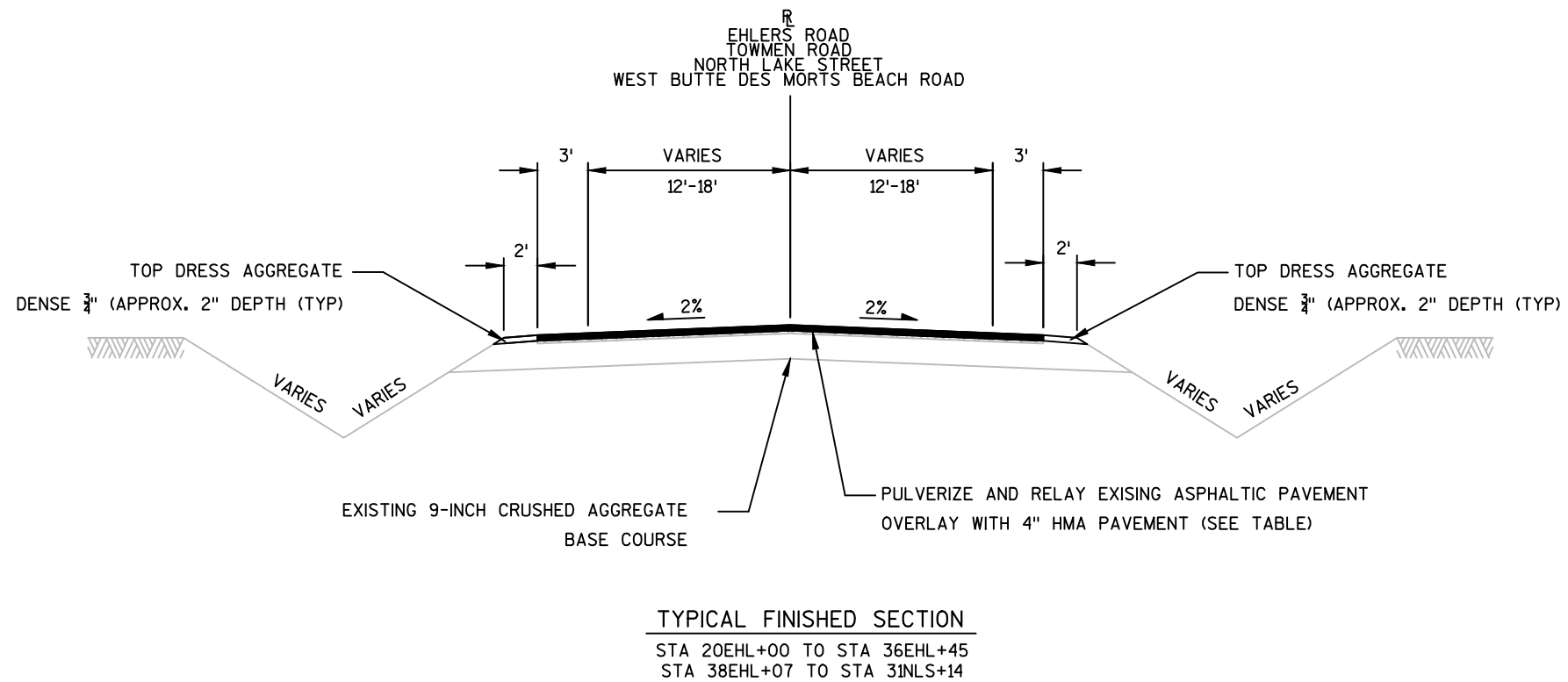
ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CORRUGATED METAL CULVERT PIPE
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EAST BOUND
EL OR ELEV	ELEVATION
EAT	ENERGY ABSORBING TERMINAL
EXIST	EXISTING
FE	FIELD ENTRANCE
FT	FOOT
HMA	HOT MIX ASPHALT
INL	INLET
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
LF	LINEAR FOOT
MIN	MINIMUM
MH	MANHOLE
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
RC	REVERSE CROWN
RCAEW	REINFORCED CONCRETE APRON ENDWALL FOR CULVERT PIPE
REQ'D	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAIL ROAD SPIKE
RT	RIGHT
RW OR R/W	RIGHT OF WAY
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND
YD	YARD



PROJECT NO:1517-07-71	HWY:STH 441/USH 10	COUNTY:WINNEBAGO	PROJECT OVERVIEW	SHEET	E
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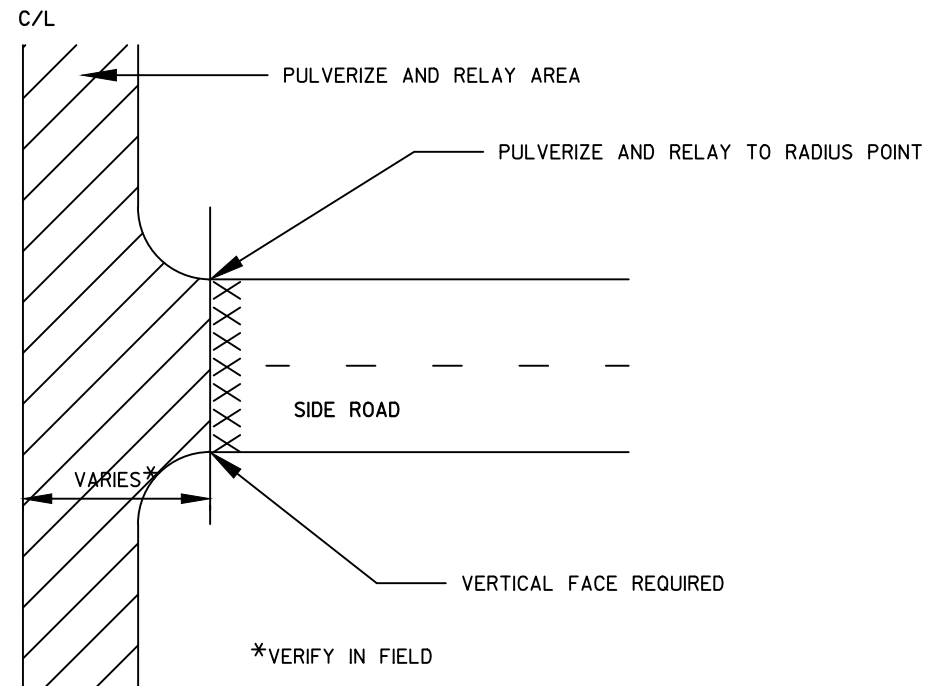




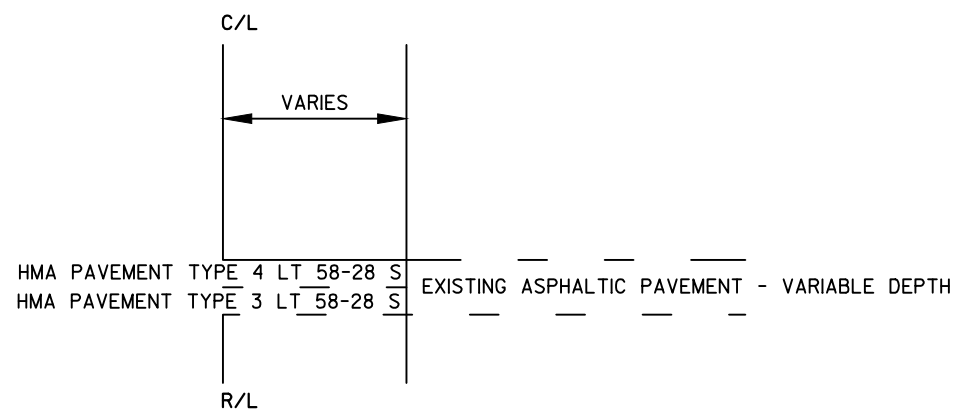
CONSTRUCT HMA PAVEMENT WITH THE
FOLLOWING LAYERS AND GRADATIONS:

LAYERS	TOTAL LAYER PAVEMENT THICKNESS	PAVEMENT TYPE
1 3/4" UPPER LAYER	4"	4LT 58-28 S
2 1/4" LOWER LAYER		3LT-58-28 S

SIDE ROAD DETAIL - NO CURB & GUTTER
NOT TO SCALE

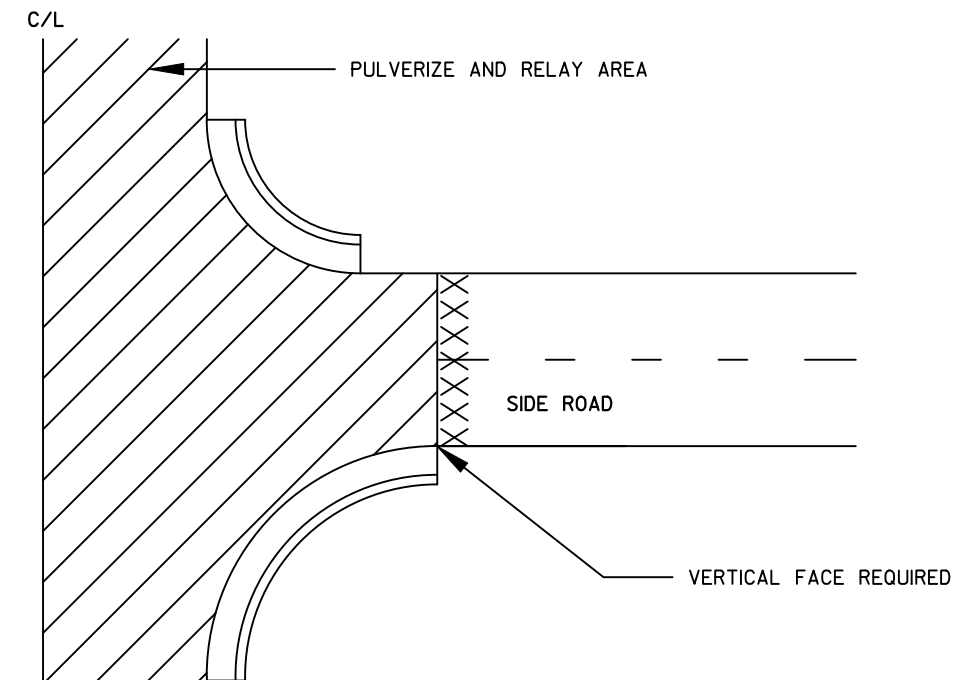


PLAN VIEW

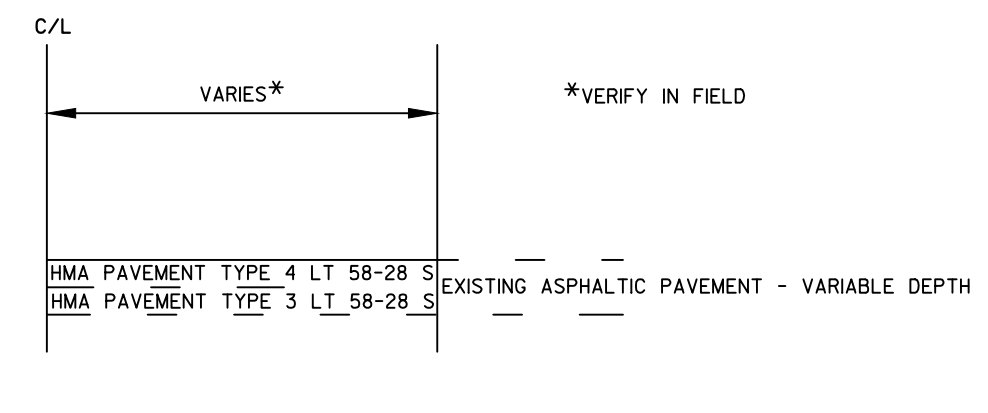


ELEVATIONS

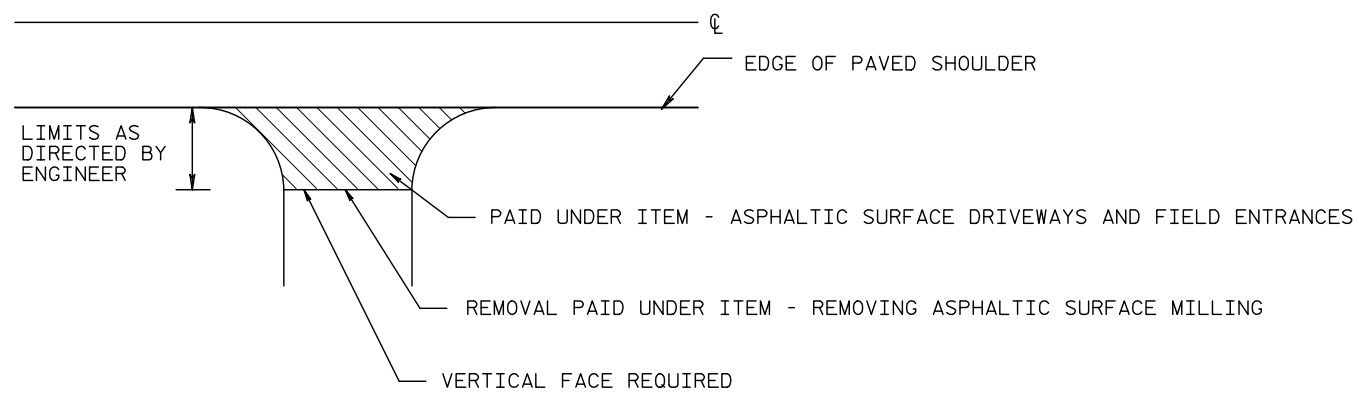
SIDE ROAD DETAIL - CURB & GUTTER
NOT TO SCALE

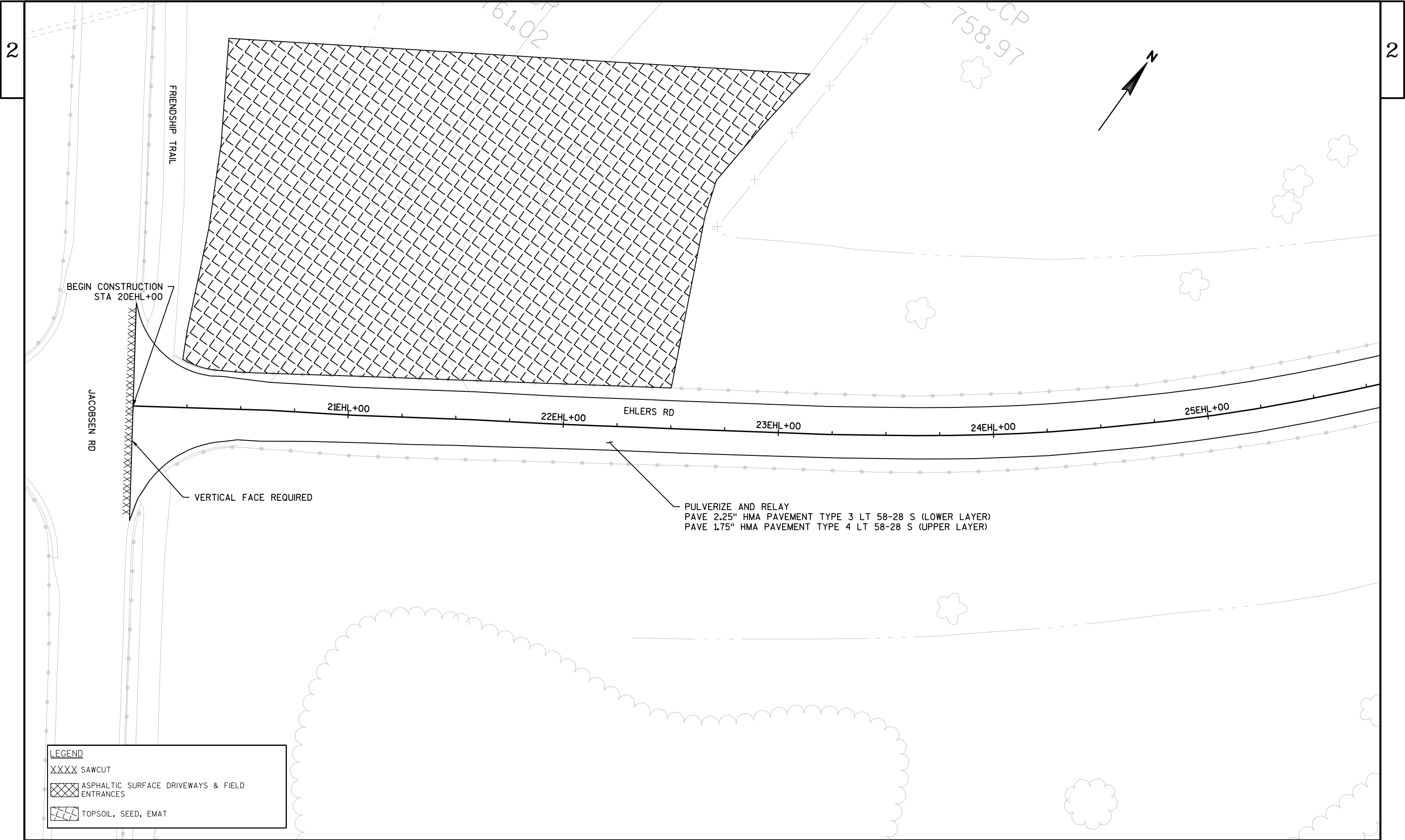


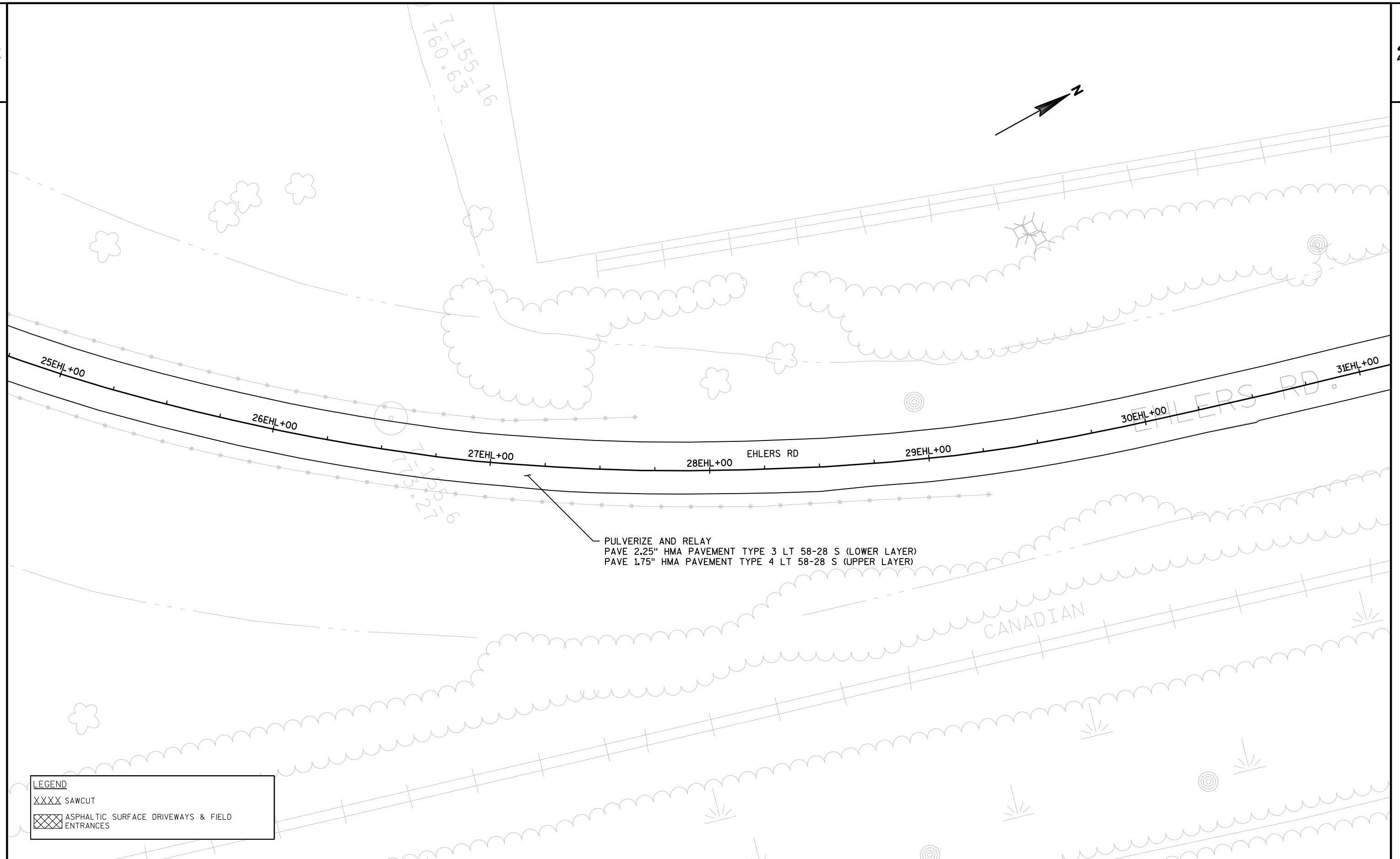
PLAN VIEW



ELEVATIONS

RURAL DRIVEWAY DETAIL - ASPHALT

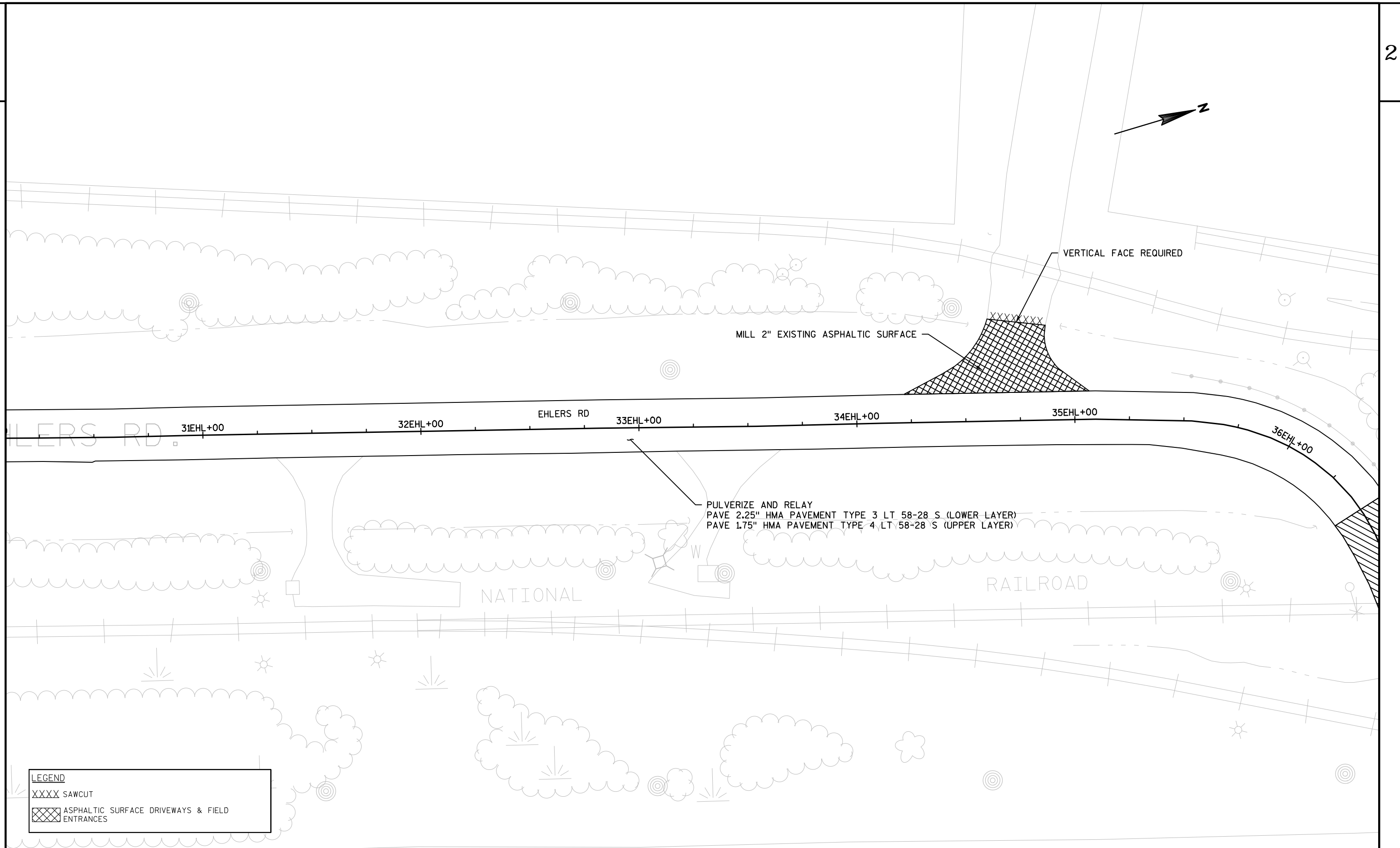


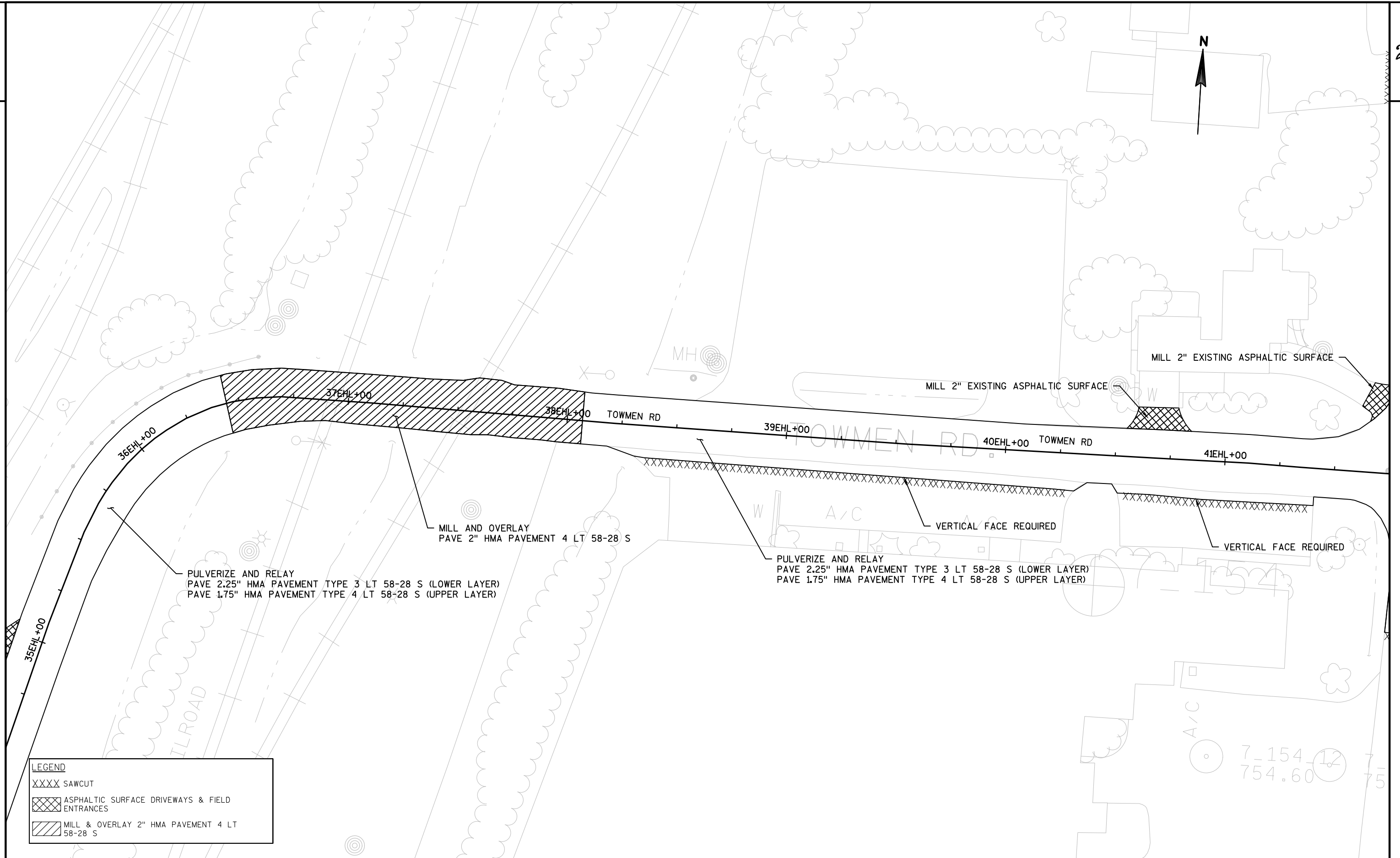


LEGEND

XXXX SAWCUT

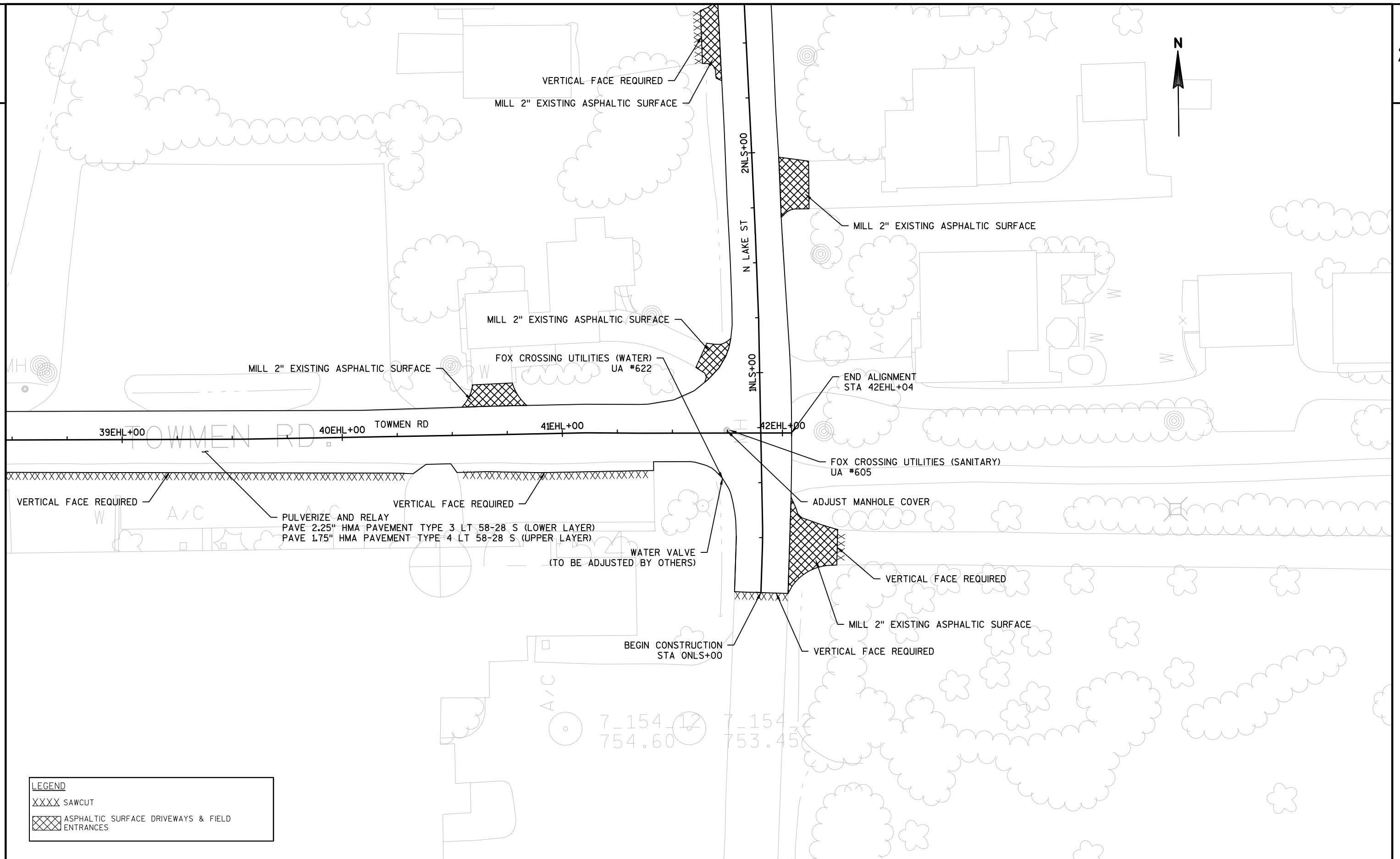
ASPHALTIC SURFACE DRIVEWAYS & FIELD
ENTRANCES

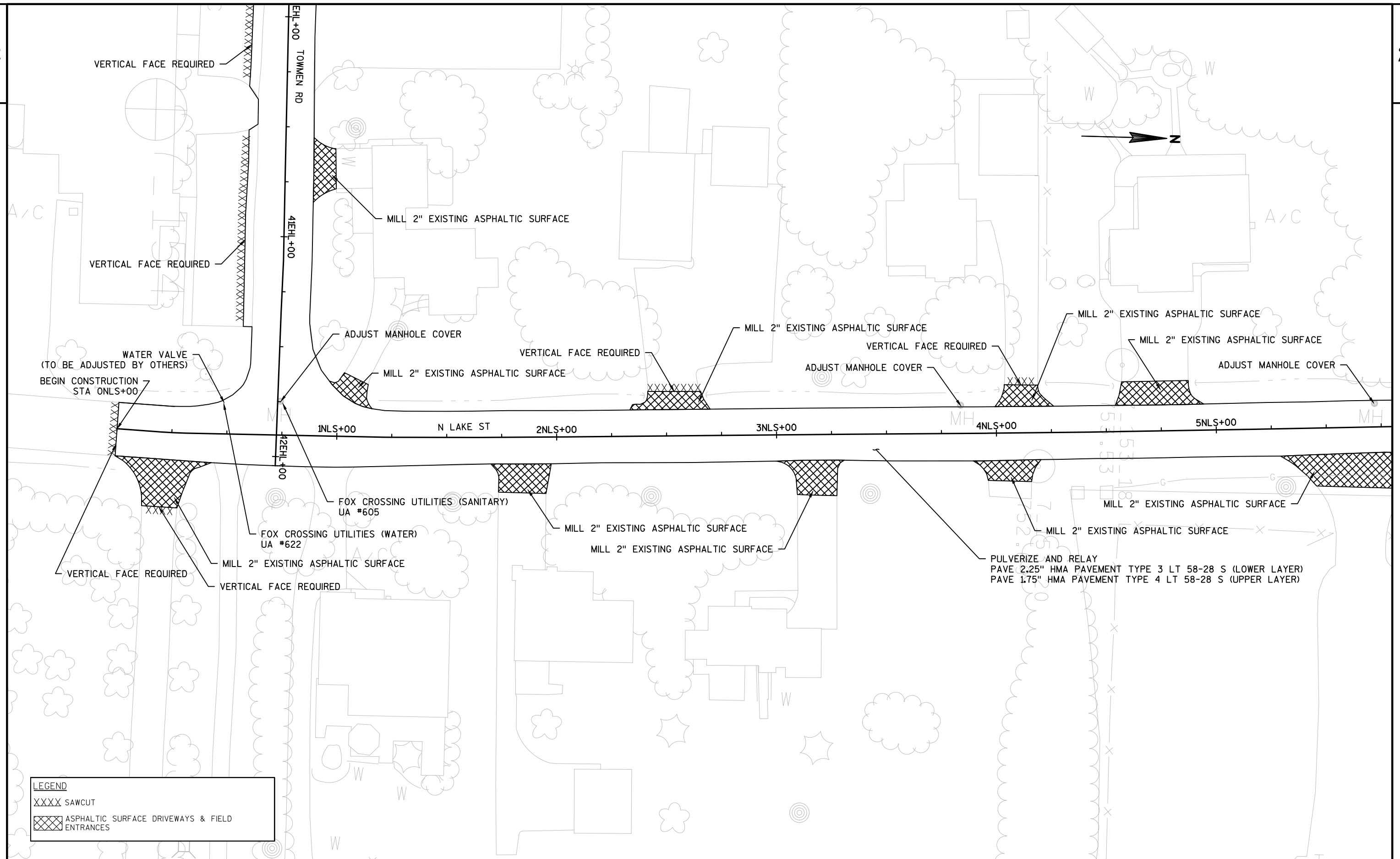


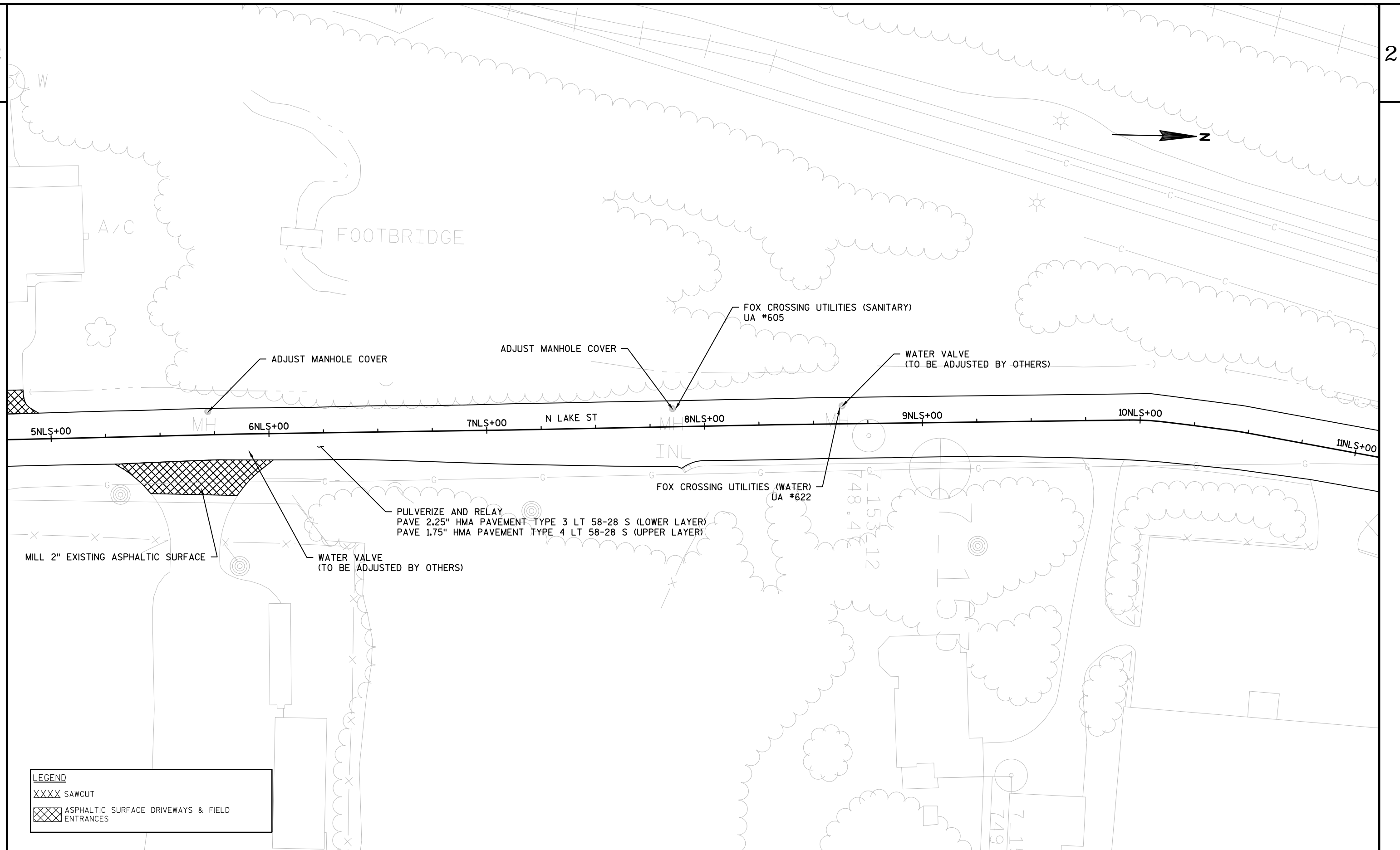


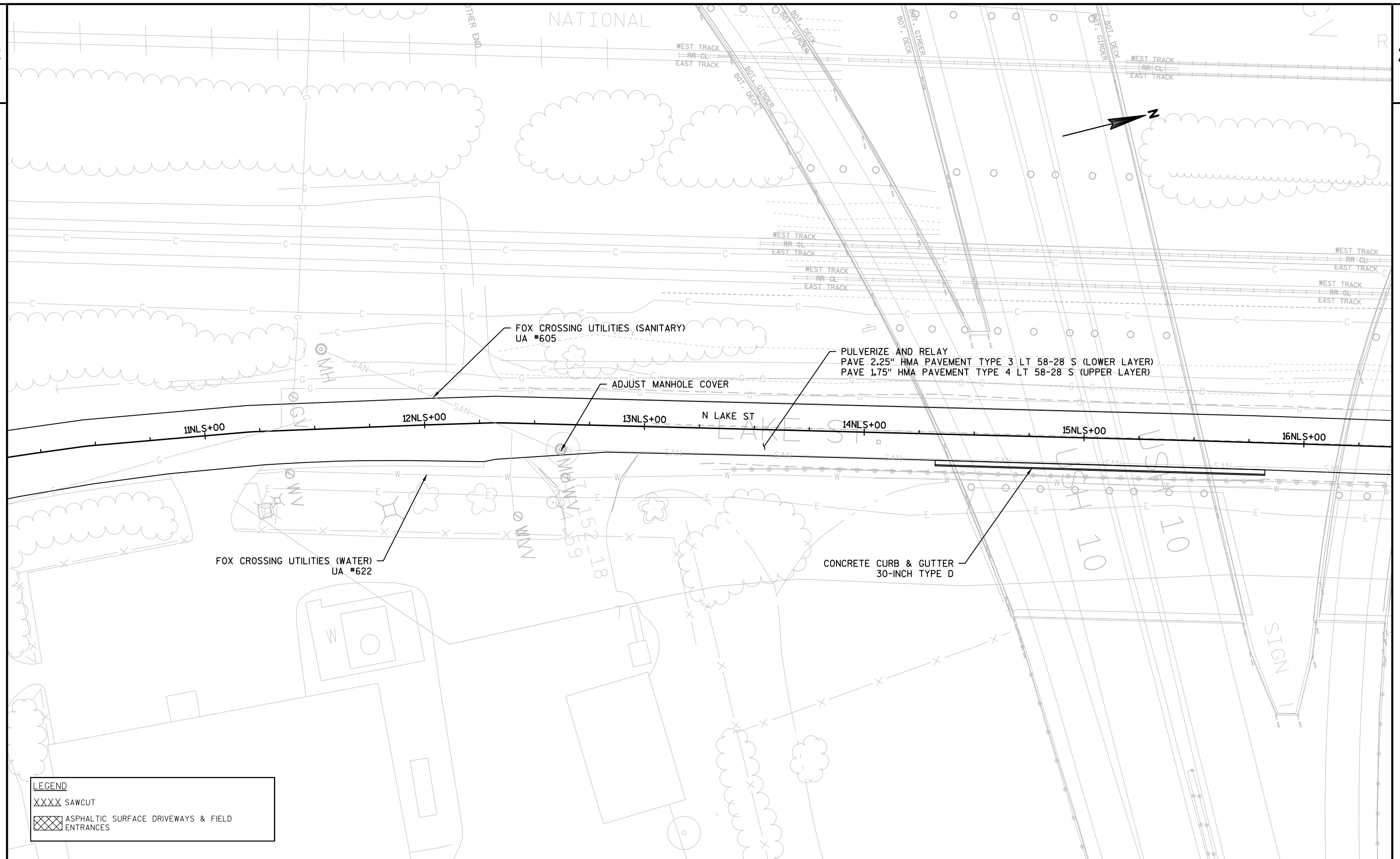
LEGEND

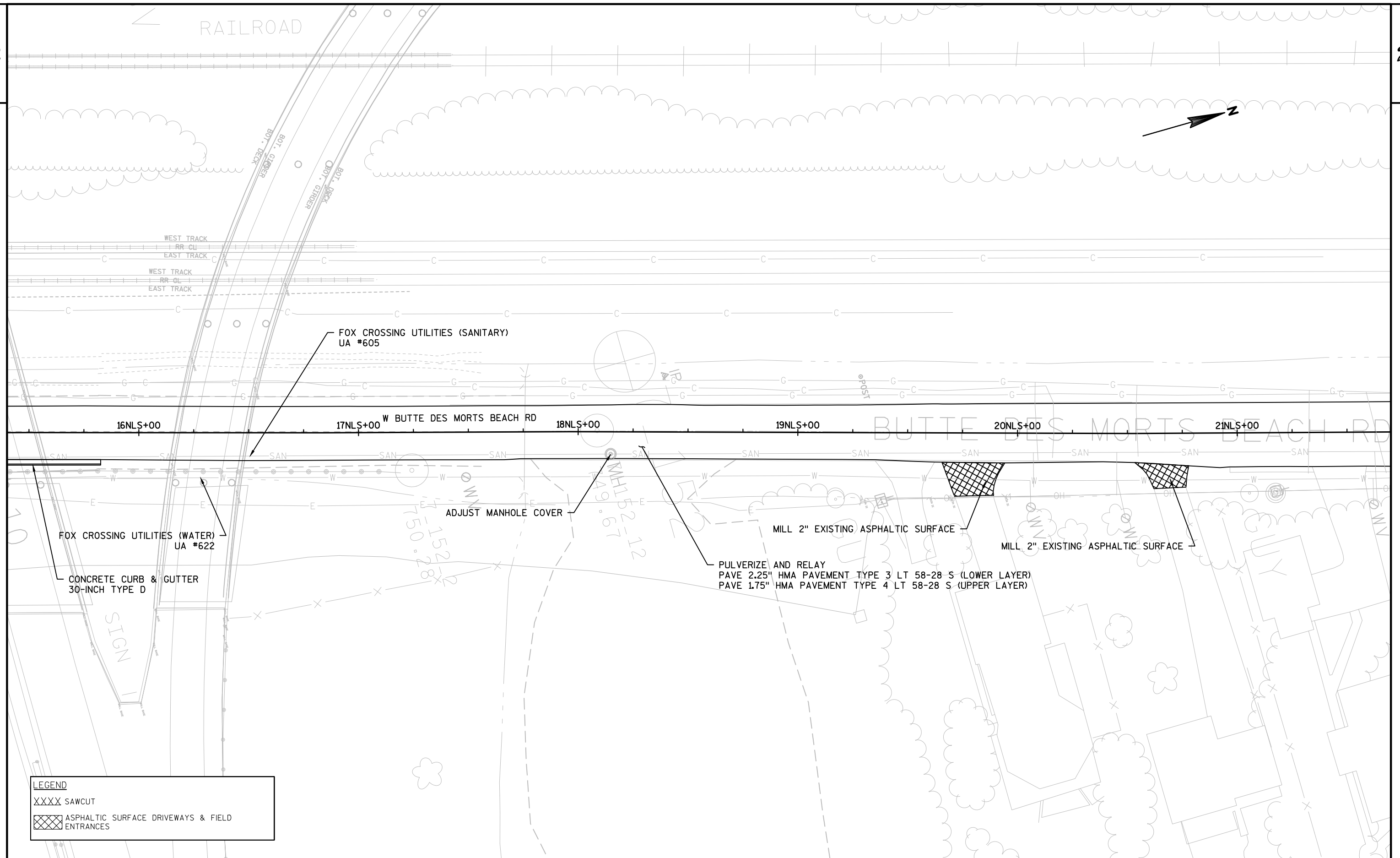
- XXXX SAWCUT
- ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES
- MILL & OVERLAY 2" HMA PAVEMENT 4 LT 58-28 S

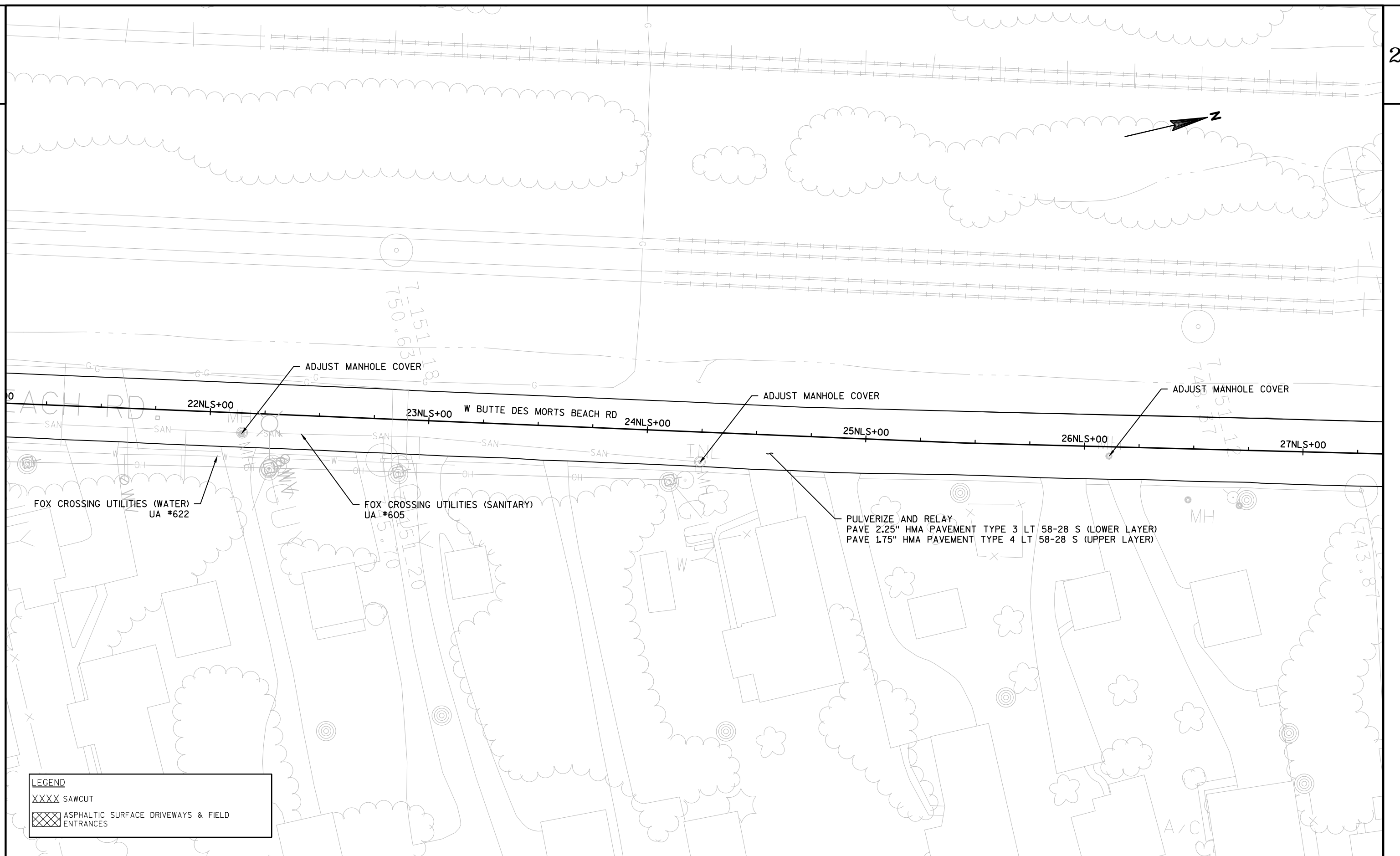






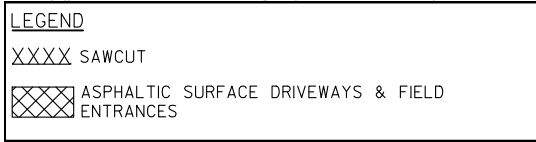






PROJECT NO:1517-07-71	HWY:STH 441/USH 10	COUNTY:WINNEBAGO	PLAN DETAILS: N LAKE ST/ W BUTTE DES MORTS BEACH RD	SHEET	E
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2



Estimate Of Quantities

1517-07-71					
Line	Item	Item Description	Unit	Total	Qty
0002	204.0120	Removing Asphaltic Surface Milling	SY	1,035.000	1,035.000
0004	205.0100	Excavation Common	CY	600.000	600.000
0006	211.0100	Prepare Foundation for Asphaltic Paving (project) 001. 1517-07-71	LS	1.000	1.000
0008	213.0100	Finishing Roadway (project) 001. 1517-07-71	EACH	1.000	1.000
0010	305.0110	Base Aggregate Dense 3/4-Inch	TON	610.000	610.000
0012	305.0500	Shaping Shoulders	STA	81.000	81.000
0014	311.0110	Breaker Run	TON	1,080.000	1,080.000
0016	325.0100	Pulverize and Relay	SY	15,065.000	15,065.000
0018	455.0605	Tack Coat	GAL	930.000	930.000
0020	460.2000	Incentive Density HMA Pavement	DOL	2,935.000	2,935.000
0022	460.5223	HMA Pavement 3 LT 58-28 S	TON	2,015.000	2,015.000
0024	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,653.000	1,653.000
0026	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	88.000	88.000
0028	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	150.000	150.000
0030	618.0100	Maintenance And Repair of Haul Roads (project) 001. 1517-07-71	EACH	1.000	1.000
0032	619.1000	Mobilization	EACH	1.000	1.000
0034	624.0100	Water	MGAL	100.000	100.000
0036	625.0100	Topsoil	SY	7,482.000	7,482.000
0038	628.2006	Erosion Mat Urban Class I Type A	SY	7,482.000	7,482.000
0040	629.0210	Fertilizer Type B	CWT	5.000	5.000
0042	630.0140	Seeding Mixture No. 40	LB	135.000	135.000
0044	643.0300	Traffic Control Drums	DAY	1,200.000	1,200.000
0046	643.0420	Traffic Control Barricades Type III	DAY	750.000	750.000
0048	643.0705	Traffic Control Warning Lights Type A	DAY	1,500.000	1,500.000
0050	643.0900	Traffic Control Signs	DAY	900.000	900.000
0052	643.5000	Traffic Control	EACH	1.000	1.000
0054	646.1020	Marking Line Epoxy 4-Inch	LF	10,528.000	10,528.000
0056	646.5320	Marking Railroad Crossings Epoxy	EACH	2.000	2.000
0058	646.6120	Marking Stop Line Epoxy 18-Inch	LF	30.000	30.000
0060	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	126.000	126.000
0062	690.0150	Sawing Asphalt	LF	527.000	527.000
0064	740.0440	Incentive IRI Ride	DOL	2,000.000	2,000.000
0066	SPV.0060	Special 001. Adjusting Sanitary Manhole Covers	EACH	10.000	10.000
0068	SPV.0075	Special 001. Street Sweeping	HRS	20.000	20.000
0070	SPV.0105	Special 001. Survey Project 1517-07-71	LS	1.000	1.000
0072	SPV.0120	Special 100. Water for Seeded Areas	MGAL	84.000	84.000

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY				OFFSET	204. 0120 REMOVING ASPHALTIC SURFACE MILLING	REMARKS
	STATION	TO	STATION		SY	
1000	34EHL+22	-	35EHL+06	LT	163	DRI VEWAY
	36EHL+45	-	38EHL+07	LT/RT	438	RAI LROAD APPROACHES
	40EHL+55	-	40EHL+85	LT	25	DRI VEWAY
	0NLS+00	-	0NLS+45	RT	57	DRI VEWAY
	0NLS+96	-	1NLS+15	LT	17	DRI VEWAY
	1NLS+70	-	1NLS+98	RT	34	DRI VEWAY
	2NLS+33	-	2NLS+70	LT	26	DRI VEWAY
	3NLS+00	-	3NLS+30	RT	36	DRI VEWAY
	3NLS+90	-	4NLS+20	RT	25	DRI VEWAY
	4NLS+00	-	4NLS+26	LT	21	DRI VEWAY
	4NLS+55	-	4NLS+95	LT	40	DRI VEWAY
	5NLS+30	-	6NLS+00	RT	93	DRI VEWAY
	19NLS+65	-	19NLS+95	RT	38	DRI VEWAY
	20NLS+50	-	20NLS+80	RT	22	DRI VEWAY

PROJECT 1517-07-71 TOTAL 1,035

EXCAVATION

CATEGORY				OFFSET	LOCATION	205. 0100 EXCAVATION COMMON	REMARKS
	STATION	TO	STATION			CY	
1000	20EHL+00	-	41EHL+50	LT/RT	EHLERS RD/TOWMEN RD	290	EBS
	0NLS+00	-	31NLS+14	LT/RT	N LAKE ST/W BUTTE DES MORTS BEACH RD	310	EBS

PROJECT 1517-07-71 TOTAL 600

PREPARATION FOUNDATION FOR ASPHALTIC PAVEMENT

CATEGORY	STATION TO STATION	LOCATION	211. 0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) LS	REMARKS
1000	1517-07-71	PROJECT	1	
PROJECT 1517-07-71 TOTAL			1	

FINISHING ROADWAY (PROJECT) 1517-07-71

CATEGORY	STATION TO STATION	LOCATION	213. 0100 FINI SHING ROADWAY (PROJECT) EACH	REMARKS
1000	1517-07-71	PROJECT	1	
PROJECT 1517-07-71 TOTAL			1	

BASE AGGREGATE DENSE, BREAKER RUN, SHAPING SHOULDERS

CATEGORY	STATION TO STATION	OFFSET	LOCATION	305. 0110 BASE AGGREGATE DENSE 3/4-INCH TON	305. 0500 SHAPI NG SHOULDERS STA	311. 0110 BREAKER RUN TON	REMARKS
1000	20EHL+00 - 41EHL+50	LT/RT	EHLERS RD/TOWMEN RD	294	38	522	
	ONLS+00 - 31NLS+14	LT/RT	N LAKE ST/ W BUTTE DES MORTS BEACH RD	316	43	558	
PROJECT 1517-07-71 TOTAL				610	81	1,080	

* AVERAGE DEPTH COMPUTED IS 4-INCHES

PULVERIZE AND RELAY

CATEGORY	STATION TO STATION	OFFSET	LOCATION	325. 0100 PULVERI ZE AND RELAY SY	REMARKS
1000	20EHL+00 - 36EHL+45	LT/RT	EHLERS RD	4,544	
	38EHL+07 - 41EHL+50	LT/RT	TOWMEN RD	1,082	
	ONLS+00 - 31NLS+14	LT/RT	N LAKE ST/ W BUTTE DES MORTS BEACH RD	9,439	
PROJECT 1517-07-71 TOTAL				15,065	

TACK COAT

CATEGORY	STATION	TO	STATION	LOCATION	455. 0605 TACK COAT GAL	REMARKS
1000	20EHL+00	-	36EHL+45	EHLERS RD	273	
	36EHL+45	-	41EHL+50	TOWMEN RD	91	
	ONLS+00	-	31NLS+14	N LAKE ST/W BUTTE DES MORTS BEACH RD	566	
PROJECT 1517-07-71 TOTAL					930	

HMA PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATI ON	460. 5223 HMA PAVEMENT 3 LT 58-28 S TON	460. 5224 HMA PAVEMENT 4 LT 58-28 S TON	REMARKS
1000	20EHL+00	-	36EHL+45	EHLERS RD	608	483	
	36EHL+45	-	38EHL+07	TOWMEN RD	0	53	
	38EHL+07	-	41EHL+50	TOWMEN RD	145	115	
	ONLS+00	-	31NLS+14	N LAKE ST	1263	1003	
PROJECT 1517-07-71 TOTAL					2, 015	1, 653	

DRIVEWAY SUMMARY

CATEGORY	STATION	TO	STATION	OFFSET	465. 0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	REMARKS
1000	34EHL+22	-	35EHL+06	LT	24	
	40EHL+55	-	40EHL+85	LT	4	
	ONLS+00	-	ONLS+45	RT	8	
	ONLS+96	-	1NLS+15	LT	2	
	1NLS+70	-	1NLS+98	RT	5	
	2NLS+33	-	2NLS+70	LT	4	
	3NLS+00	-	3NLS+30	RT	5	
	3NLS+90	-	4NLS+20	RT	4	
	4NLS+00	-	4NLS+26	LT	3	
	4NLS+55	-	4NLS+95	LT	6	
	5NLS+30	-	6NLS+00	RT	14	
	19NLS+65	-	19NLS+95	RT	6	
	20NLS+50	-	20NLS+80	RT	3	
PROJECT 1517-07-71 TOTAL					88	

CURB & GUTTER

CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	601. 0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF
1000	14NLS+32	-	15NLS+82	RT	N LAKE ST	150
PROJECT 1517-07-71 TOTAL						150

MOBILIZATION

CATEGORY	STATION TO STATION	LOCATION	619. 1000 MOBILIZATION EACH	REMARKS
1000	1517-07-71	PROJECT	1	
PROJECT 1517-07-71 TOTAL			1	

MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 1517-07-71

CATEGORY	LOCATION	618. 0100 EACH	REMARKS
1000	PROJECT	1	
PROJECT 1517-07-71 TOTAL		1	

WATER

CATEGORY	STATION TO STATION	LOCATION	624. 0100 WATER MGAL	REMARKS
1000	1517-07-71	PROJECT	20	DUST CONTROL
	1517-07-71	PROJECT	80	COMPACTION
PROJECT 1517-07-71 TOTAL			100	

LANDSCAPING SUMMARY

CATEGORY	STATION TO STATION	OFFSET	LOCATION	625. 0100 TOPSOIL SY	628. 2006 EROSION MAT URBAN CLASS I TYPE A SY	629. 0210 FERTILIZER TYPE B CWT	630. 0140 SEED MIXTURE NO. 40 LB	SPV. 0120. 100 WATER FOR SEEDED AREAS MGAL	REMARKS
1000	20EHL+25 - 23EHL+00	LT	EHLERS RD	3, 982	3, 982	2. 5	72	45	
	VARI ES	NA	UNDI STRI BUTED	3, 500	3, 500	2. 2	63	39	
PROJECT 1517-07-71 TOTAL				7, 482	7, 482	5	135	84	

TRAFFIC CONTROL SUMMARY

		643. 0300 TRAFFIC CONTROL DRUMS		643. 0420 TRAFFIC CONTROL BARRICADES TYPE III		643. 0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643. 0900 TRAFFIC CONTROL SIGNS		REMARKS
STATION	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	
PROJECT	30	40	1, 200	25	750	50	1, 500	30	900	
PROJECT 1517-07-71 TOTAL			1, 200	750		1, 500		900		

PAVEMENT MARKING EPOXY 4-INCH

CATEGORY	STATION TO STATION			LOCATION	646. 1020 MARKING LINE EPOXY 4-INCH	REMARKS
					YELLOW LF	
1000	20EHL+00	-	41EHL+50	EHLERS RD/TOWMEN RD	4,300	
	0NLS+00	-	31NLS+14	N LAKE ST/W BUTTE DES MORTS BEACH RD	6,228	
PROJECT 1517-07-71 TOTAL					10,528	

PAVEMENT MARKING RAILROAD CROSSING EPOXY

CATEGORY	STATION	OFFSET	LOCATION	646. 5320 MARKING RAILROAD CROSSING EPOXY	REMARKS
				EACH	
1000	36EHL+00	RT	EHLERS RD	1	
	39EHL+00	LT	TOWMEN RD	1	
PROJECT 1517-07-71 TOTAL				2	

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH

CATEGORY	STATION	OFFSET	LOCATION	646. 7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	REMARKS
				LF	
1000	20EHL+05	LT/RT	EHLERS RD	78	
	20EHL+17	LT/RT	EHLERS RD	48	
PROJECT 1517-07-71 TOTAL				126	

PAVEMENT MARKING STOP LINE EPOXY 18-INCH

CATEGORY	STATION	OFFSET	LOCATION	646. 6120 MARKING STOP LINE EPOXY 18-INCH	REMARKS
				LF	
1000	20EHL+28	LT	EHLERS RD	17	
	41EHL+50	RT	TOWMEN RD	13	
PROJECT 1517-07-71 TOTAL				30	

STREET SWEEPING

CATEGORY	LOCATION	SPV. 0075. 001
		STREET SWEEPING HRS
1000	PROJECT	20
PROJECT 1517-07-71 TOTAL		20

SURVEY PROJECT

CATEGORY	LOCATION	SPV. 0105. 001 SURVEY PROJECT 1517-07-71
		LS
1000	PROJECT	1
PROJECT 1517-07-71 TOTAL		1

SAWING PAVEMENT SUMMARY

CATEGORY	STATION	TO	STATION	OFFSET	LOCATI ON	690. 0150 SAWI NG ASPHALT LF	REMARKS
1000	20EHL+00	-	20EHL+00	LT/RT	EHLERS RD	102	
	34EHL+60	-	34EHL+87	LT	EHLERS RD	27	DRI VEWAY
	38EHL+20	-	40EHL+38	RT	TOWMEN RD	200	DRI VEWAY
	40EHL+50	-	41EHL+40	RT	TOWMEN RD	90	DRI VEWAY
	ONLS+00	-	ONLS+00	LT/RT	N LAKE ST	24	
	ONLS+14	-	ONLS+28	RT	N LAKE ST	16	DRI VEWAY
	2NLS+41	-	2NLS+65	LT	N LAKE ST	24	DRI VEWAY
	4NLS+04	-	4NLS+20	LT	N LAKE ST	15	DRI VEWAY
	31NLS+14	-	31NLS+14	LT/RT	W BUTTE DES MORTS BEACH RD	29	
	PROJECT 1517-07-71 TOTAL					527	

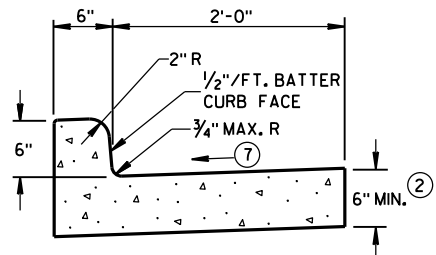
UTILITY ADJUSTMENTS

CATEGORY	STATION	OFFSET	LOCATI ON	SPV. 0060. 001 ADJUSTI NG SANI TARY MANHOLE COVERS EACH	REMARKS
1700	ONLS+74	LT	N LAKE ST	1	
	3NLS+83	LT	N LAKE ST	1	
	5NLS+73	LT	N LAKE ST	1	
	7NLS+85	LT	N LAKE ST	1	
	12NLS+62	RT	N LAKE ST	1	
	18NLS+15	RT	W BUTTE DES MORTS BEACH RD	1	
	22NLS+15	RT	W BUTTE DES MORTS BEACH RD	1	
	24NLS+25	RT	W BUTTE DES MORTS BEACH RD	1	
	26NLS+10	RT	W BUTTE DES MORTS BEACH RD	1	
	30NLS+10	RT	W BUTTE DES MORTS BEACH RD	1	

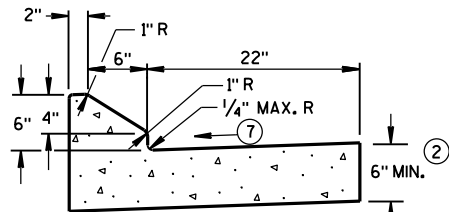
PROJECT 1517-07-71 TOTAL 10

Standard Detail Drawing List

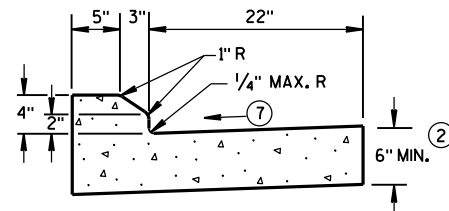
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C09-11A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



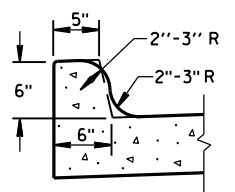
TYPES A^① & D



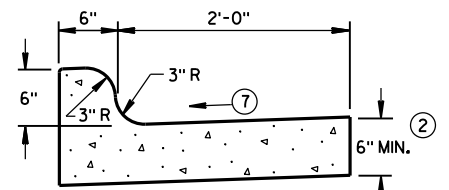
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

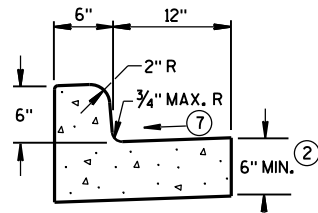


TYPES K^① & L
(OPTIONAL CURB SHAPE)



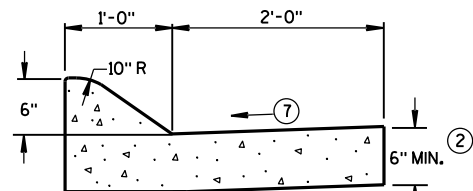
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

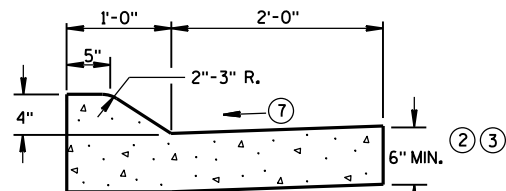


TYPES A^① & D

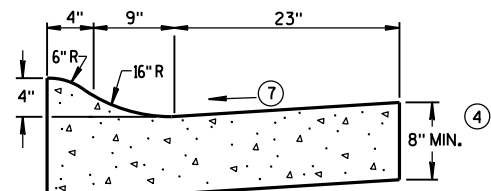
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

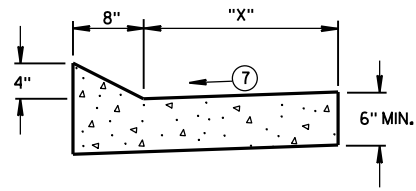


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

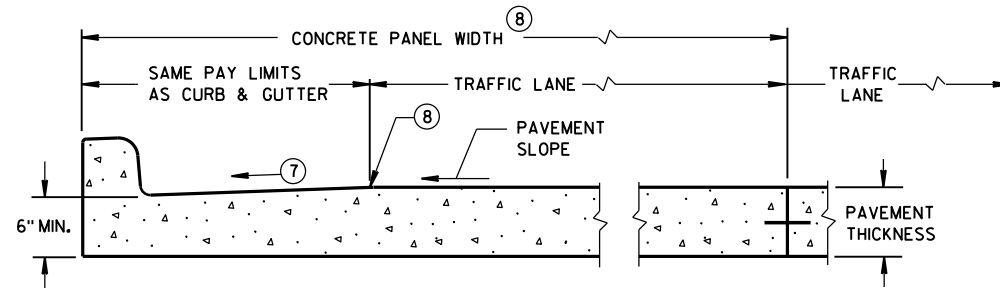
CONCRETE CURB & GUTTER 36"



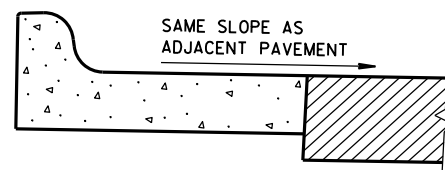
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 GUTTER 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 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.

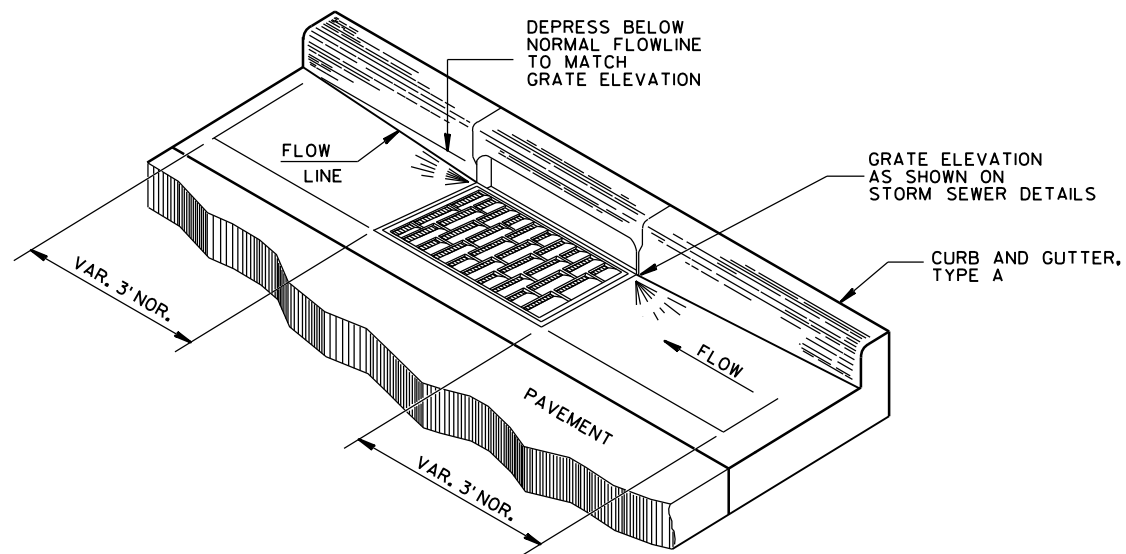
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

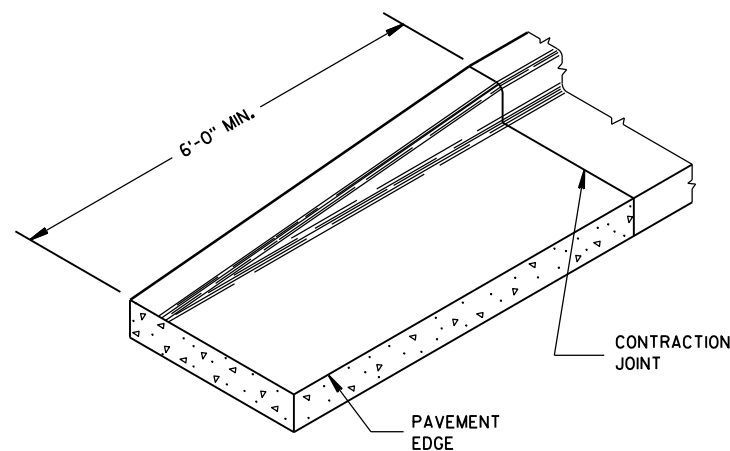
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

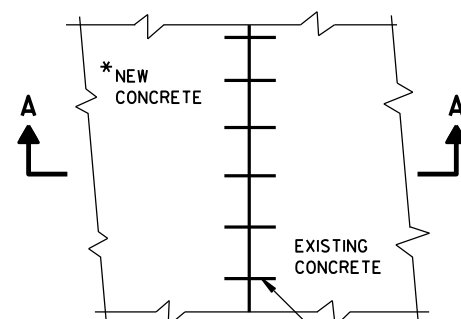


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

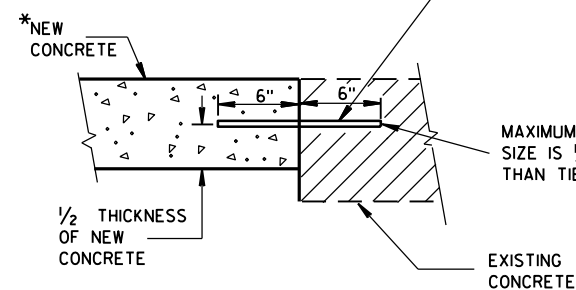


END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



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

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

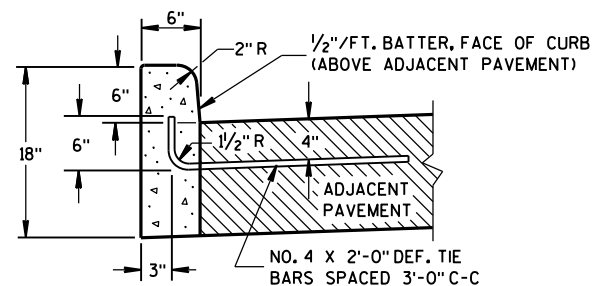
GENERAL NOTES

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

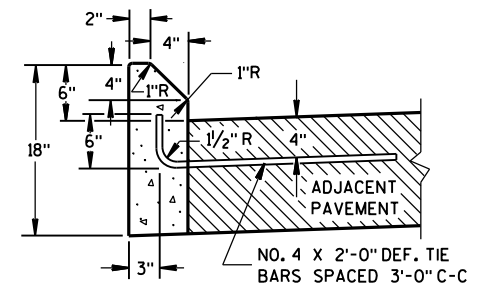
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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 GUTTER 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 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

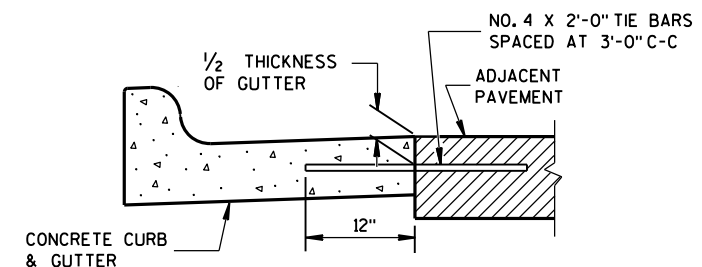


TYPES A^① & D

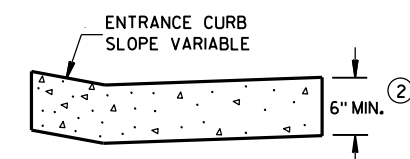


TYPES G^① & J

CONCRETE CURB



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

June, 2017

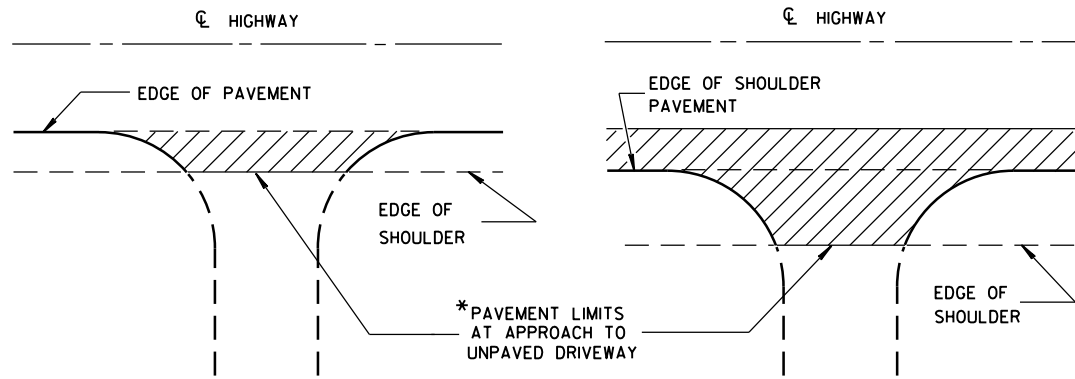
DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

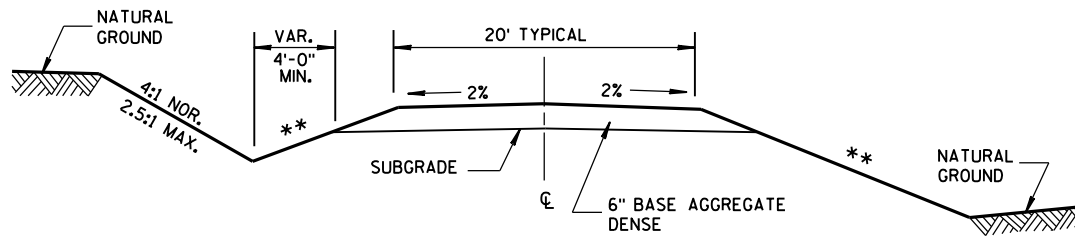


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

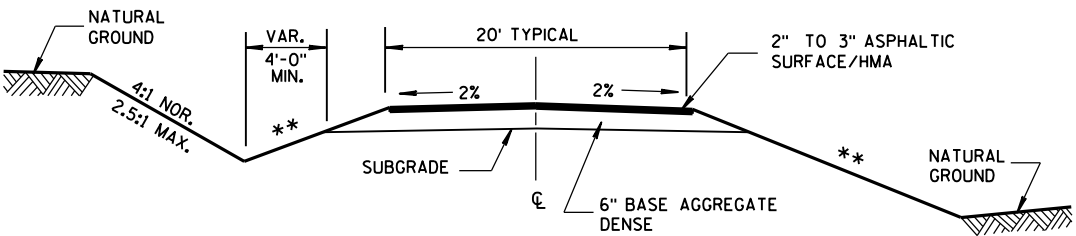
RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)



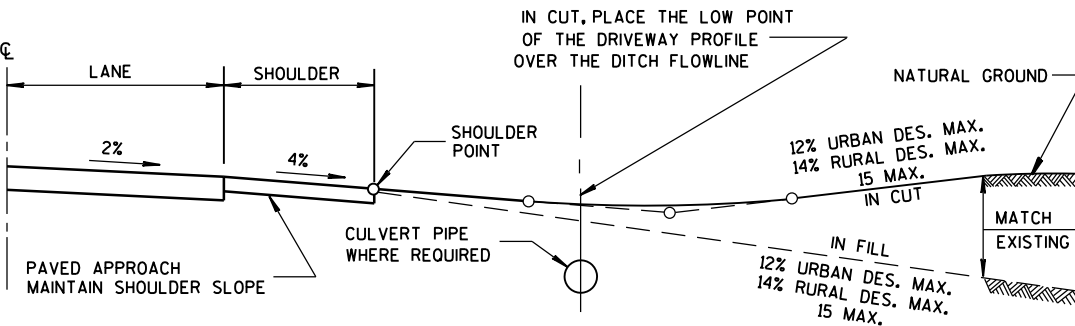
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

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

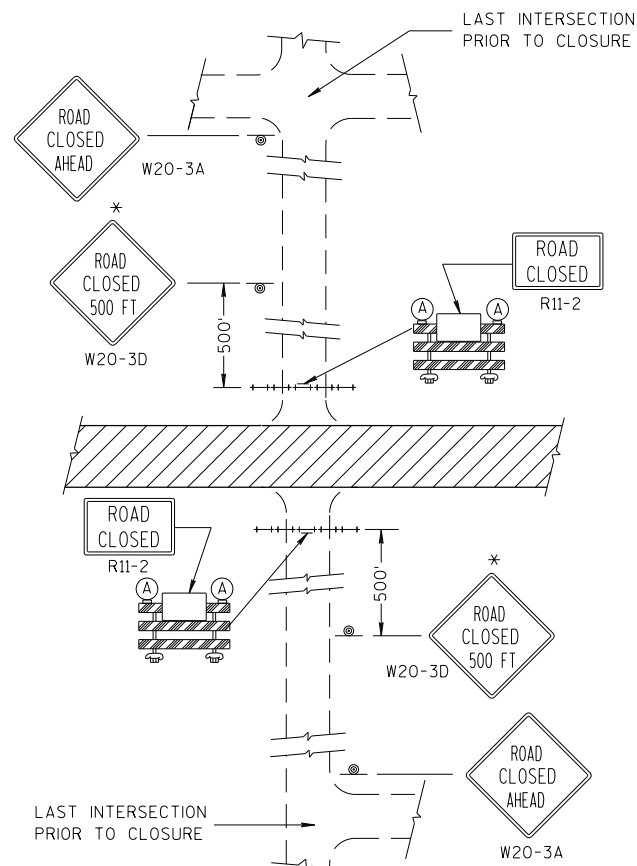


TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE

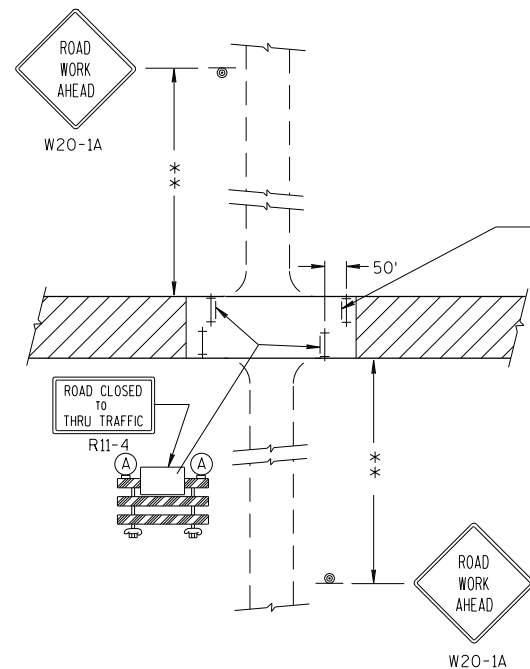


TYPICAL DRIVEWAY PROFILES

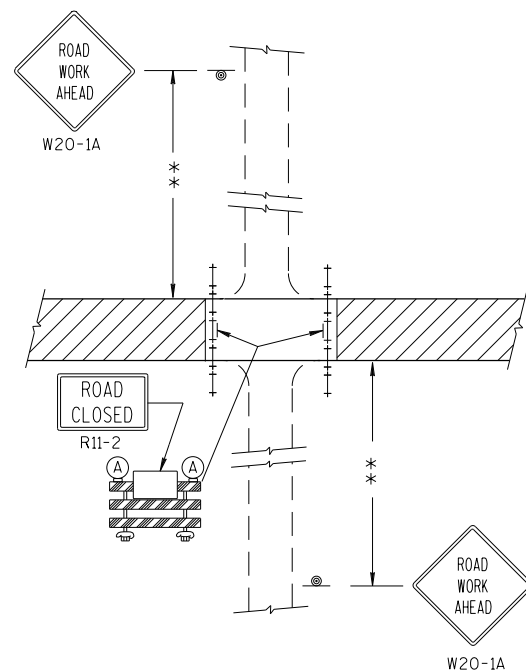
DRIVEWAYS WITHOUT CURB & GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December, 2016 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



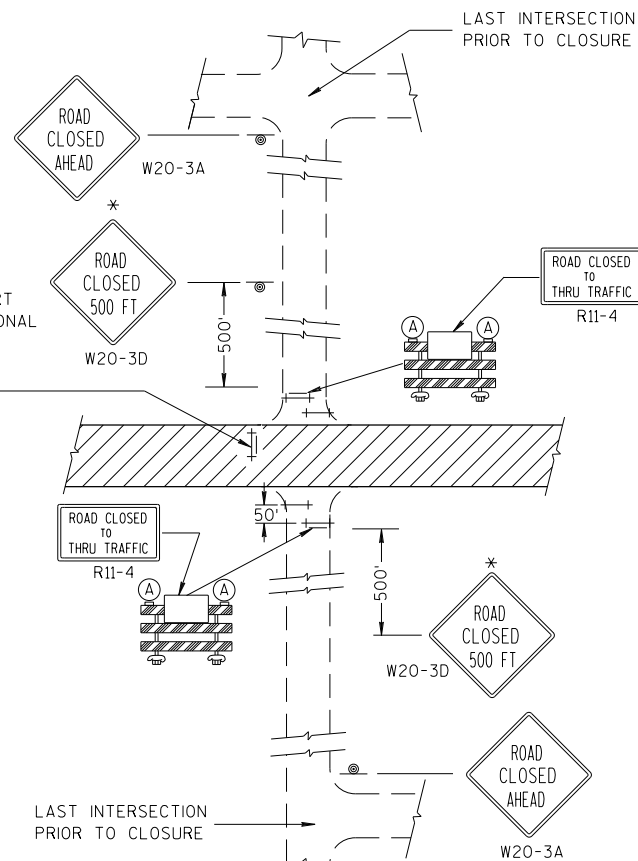
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

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

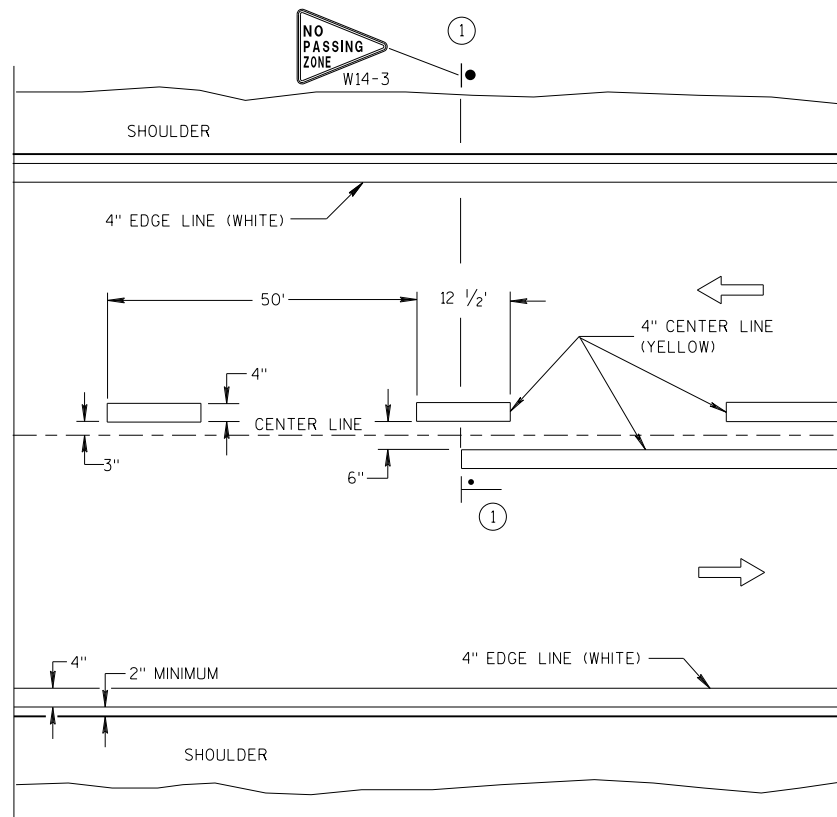
LEGEND

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

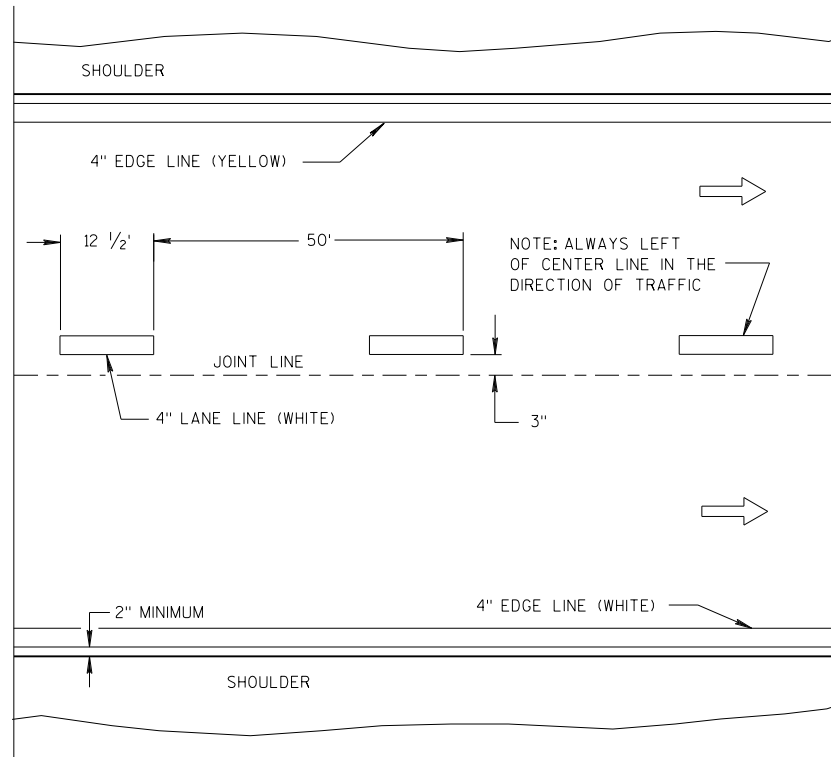
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

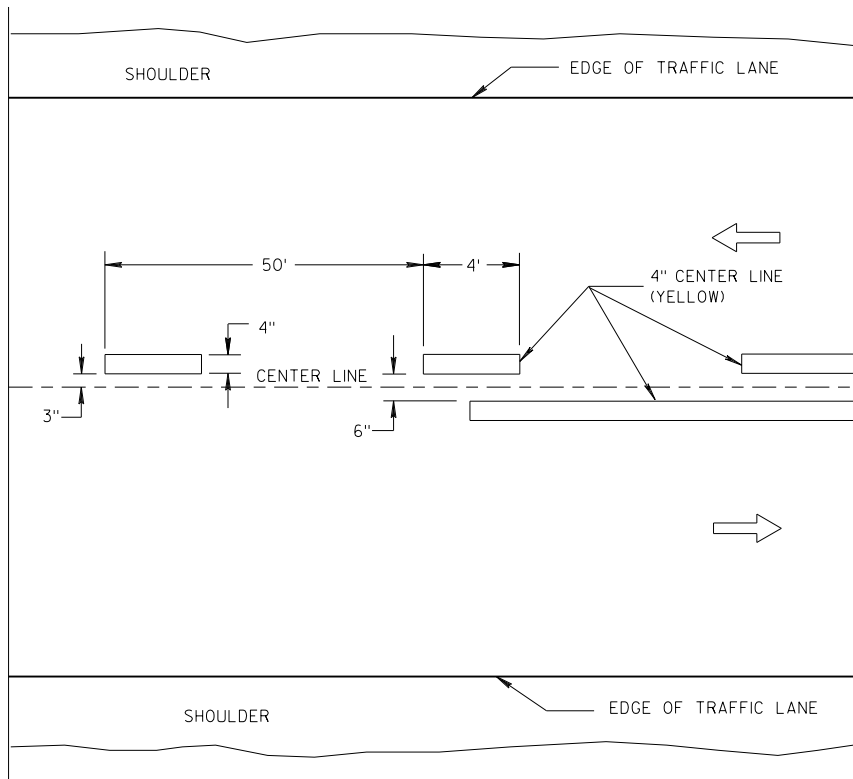


TWO WAY TRAFFIC

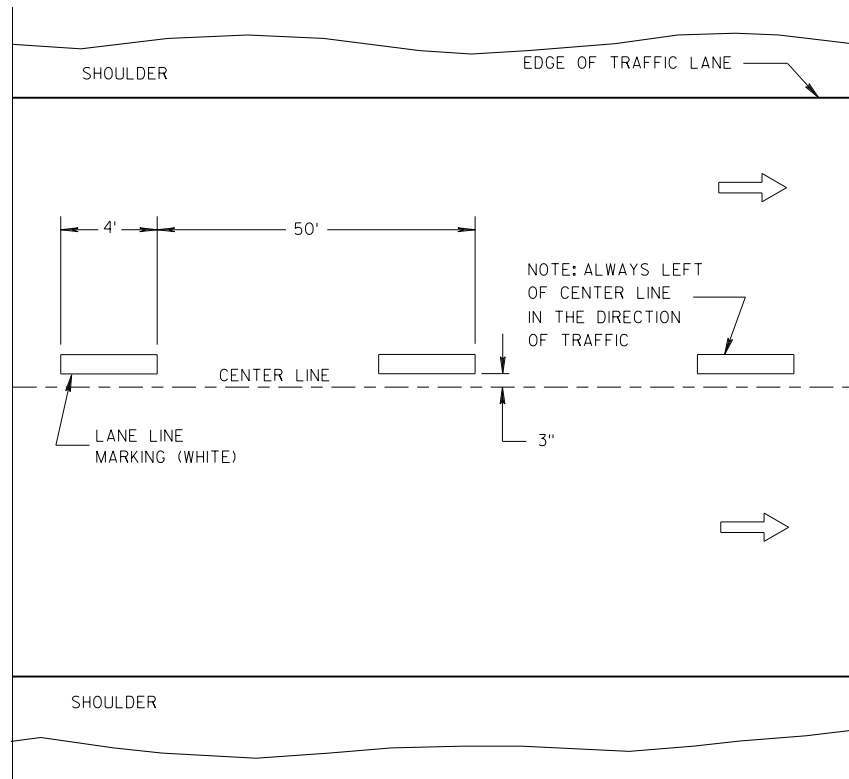


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

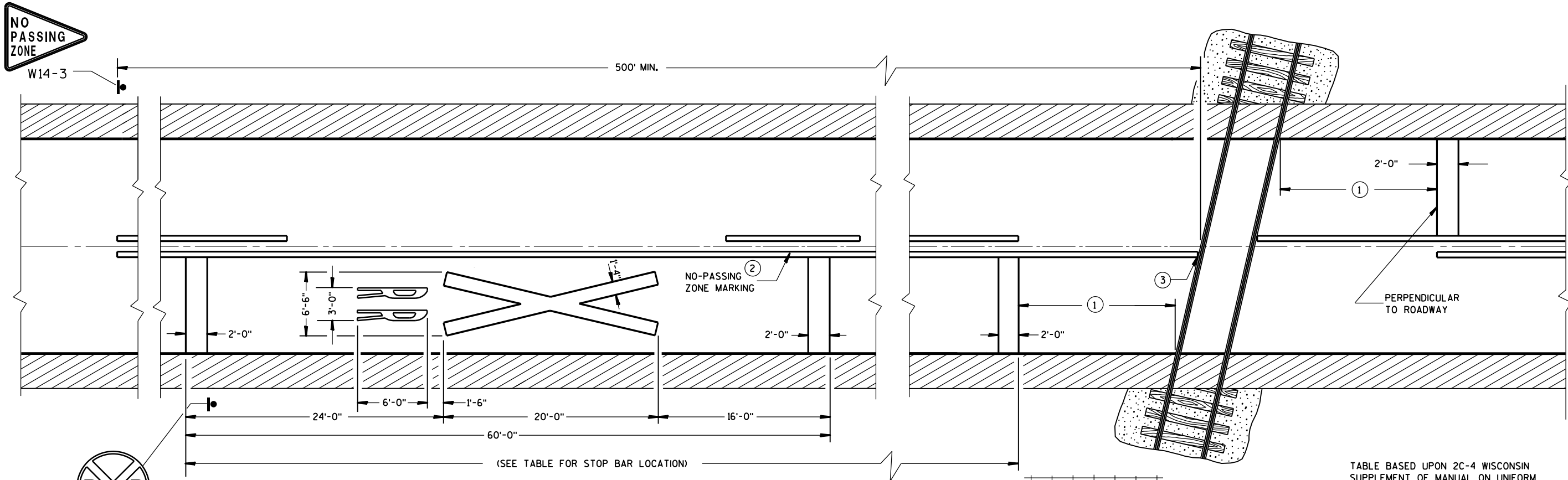
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

RETRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

- ① MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

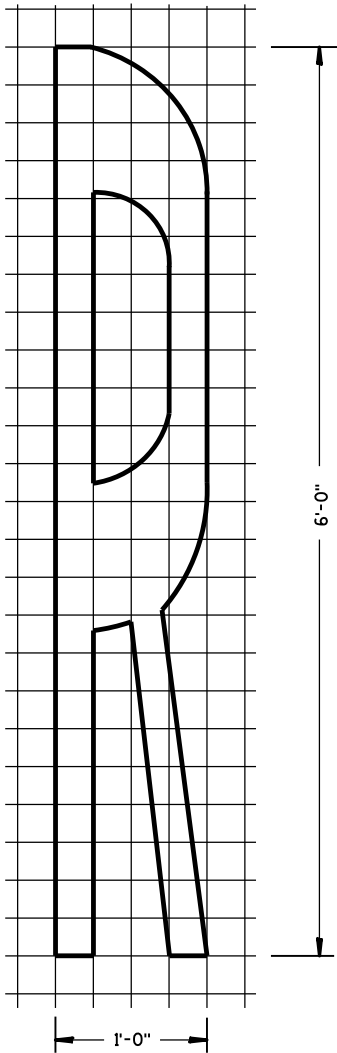


TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

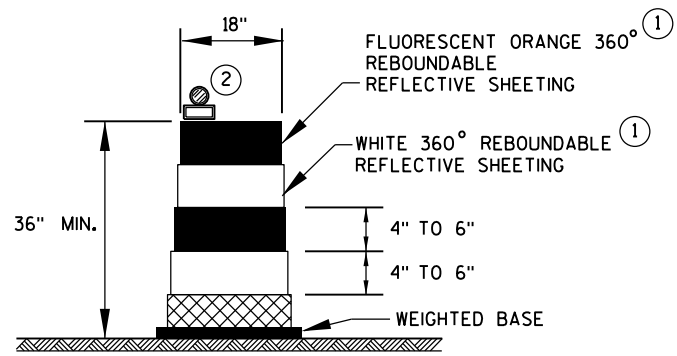
Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

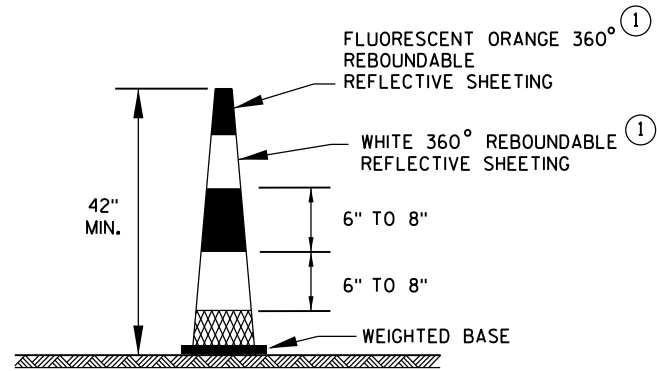
SIGNING AND PAVEMENT MARKING
DETAILS FOR RAILROAD-HIGHWAY
GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



DRUM

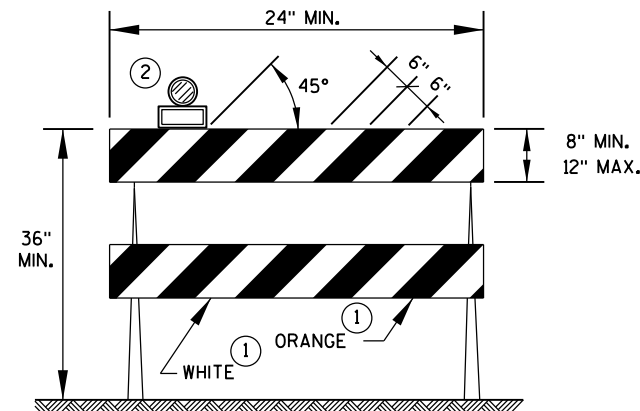


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

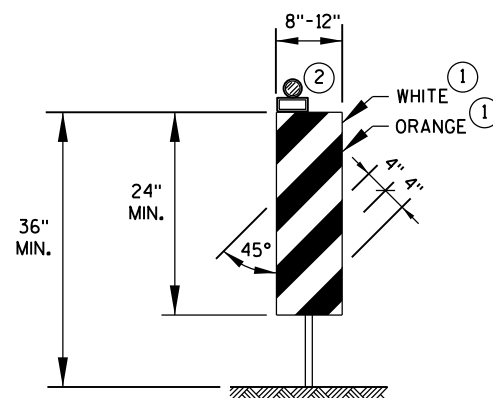
GENERAL NOTES

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



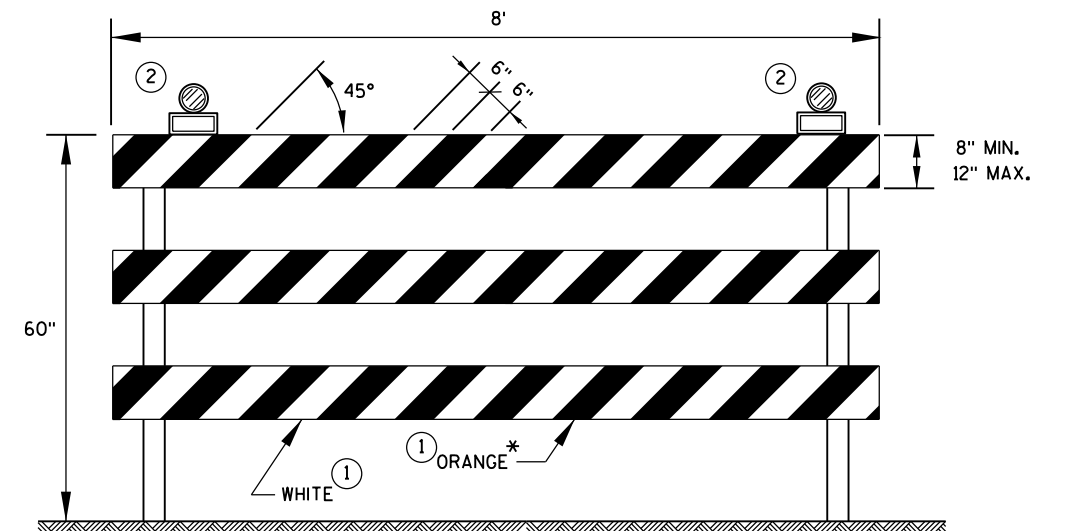
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

FHWA

/S/ Andrew Heidtke
WORK ZONE ENGINEER

LEGEND

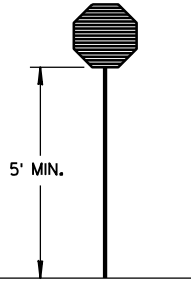
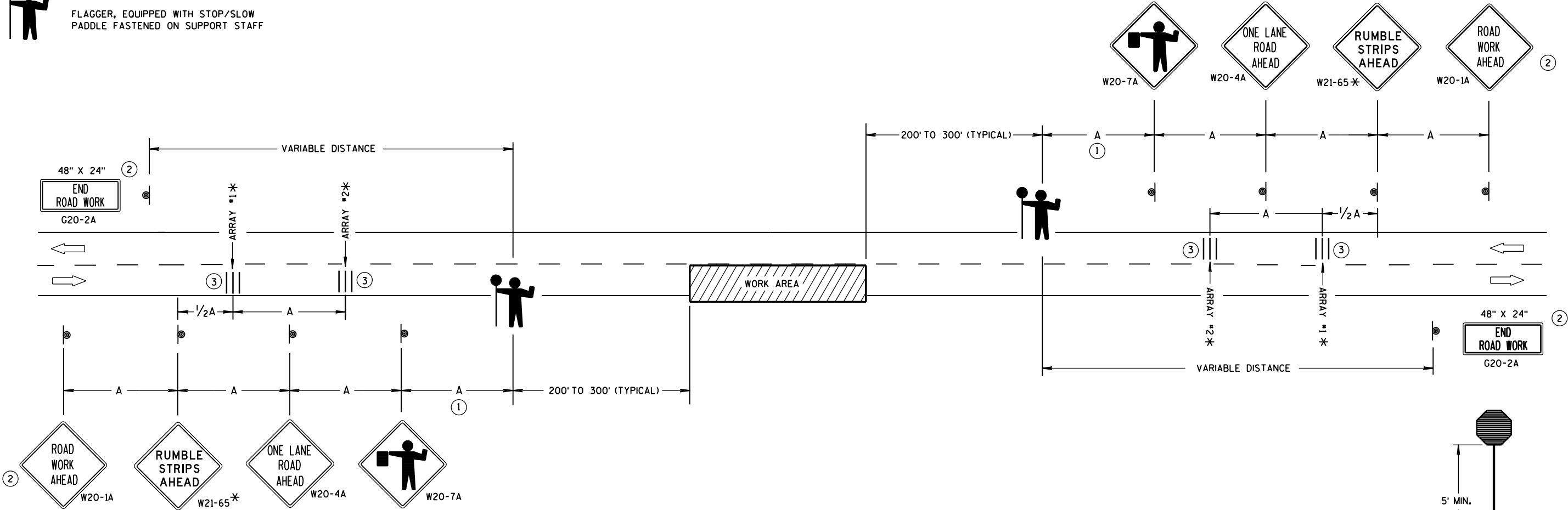
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

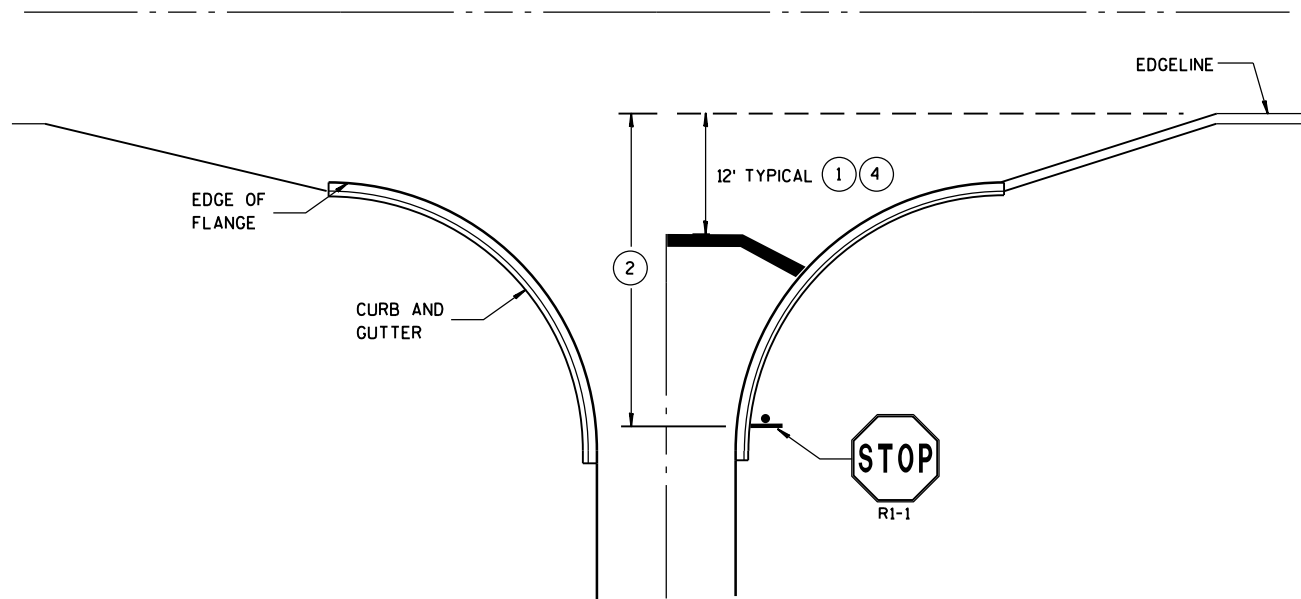
* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

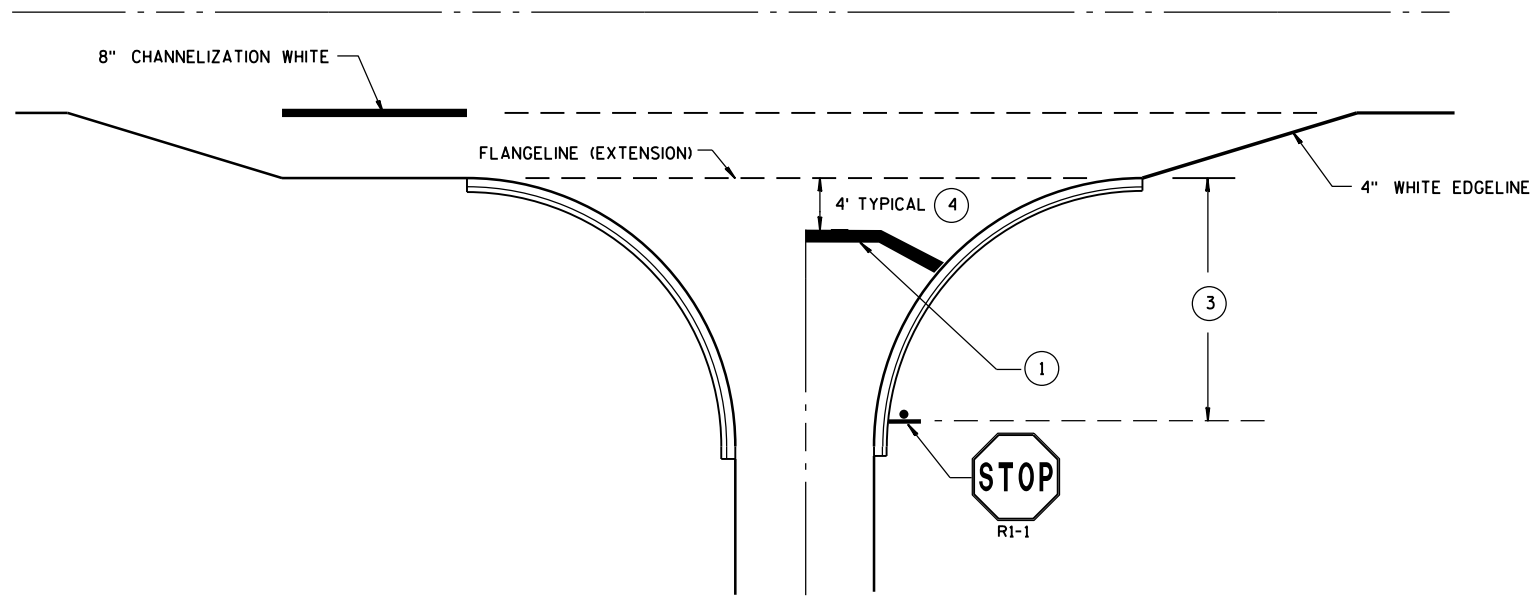
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
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TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER

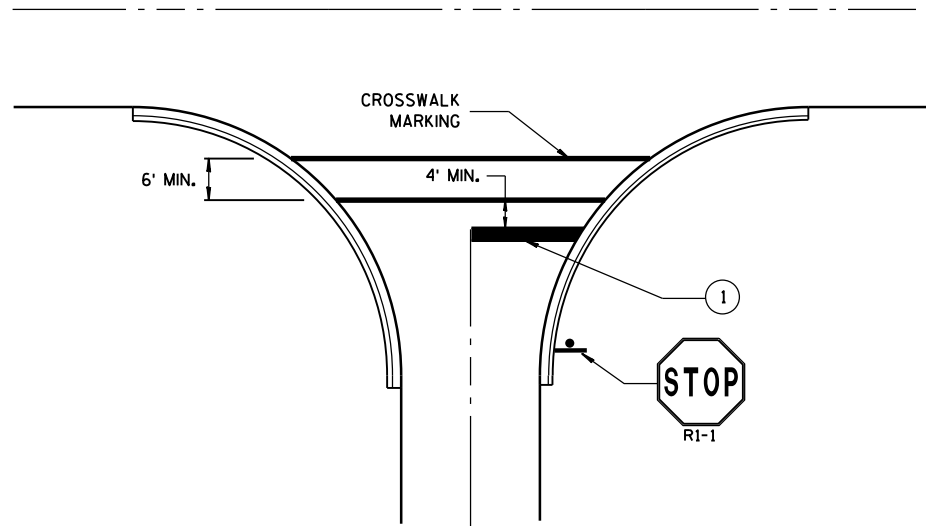


TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE

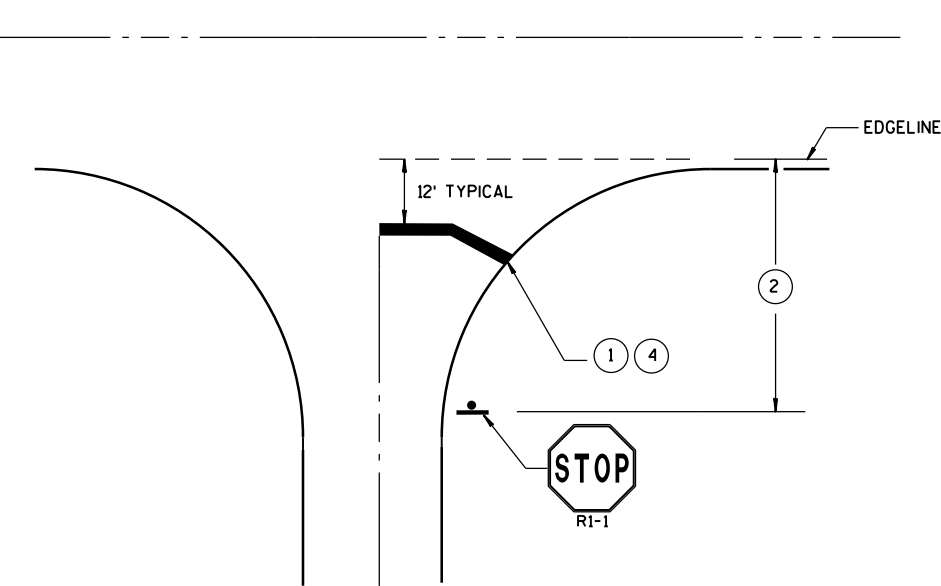
GENERAL NOTES

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 PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

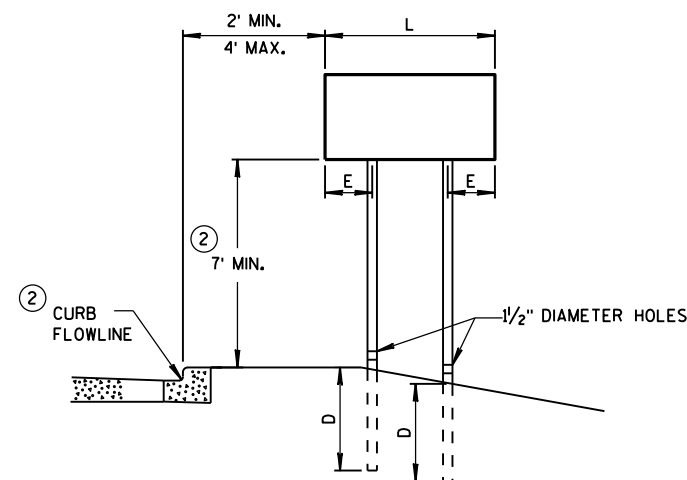
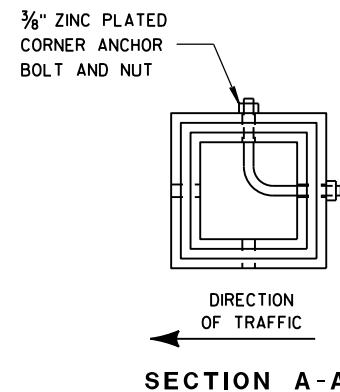
STOP LINE AND CROSSWALK PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE Sept., 2017	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



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

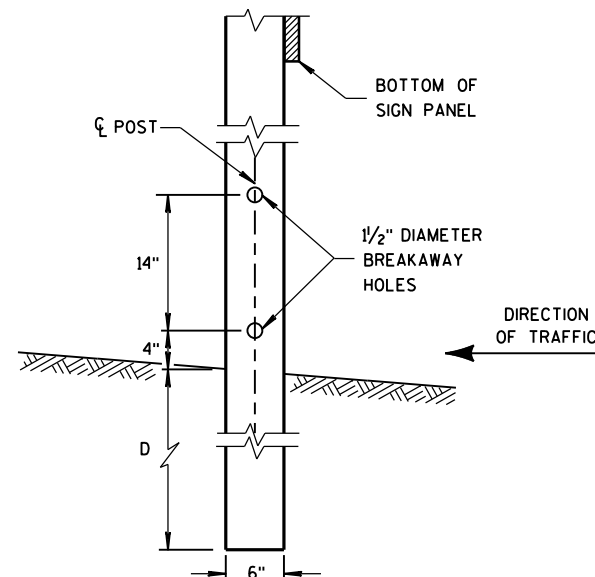


URBAN AREA

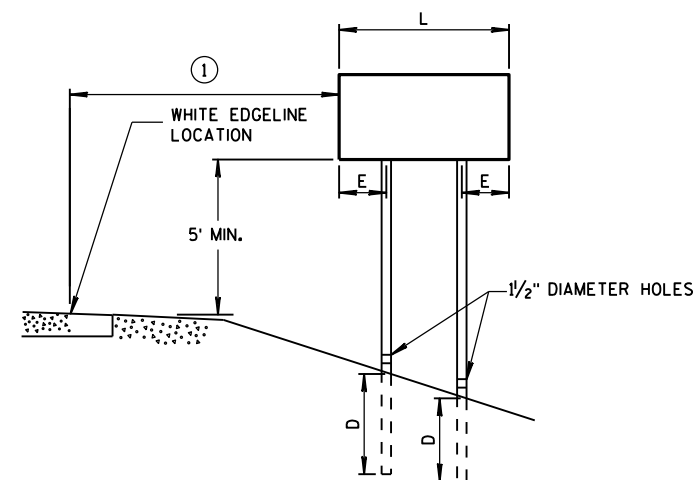
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

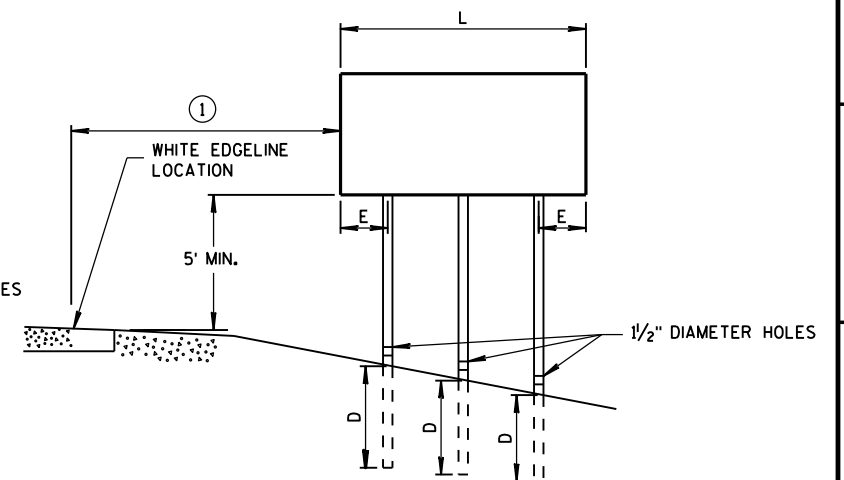
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA



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.

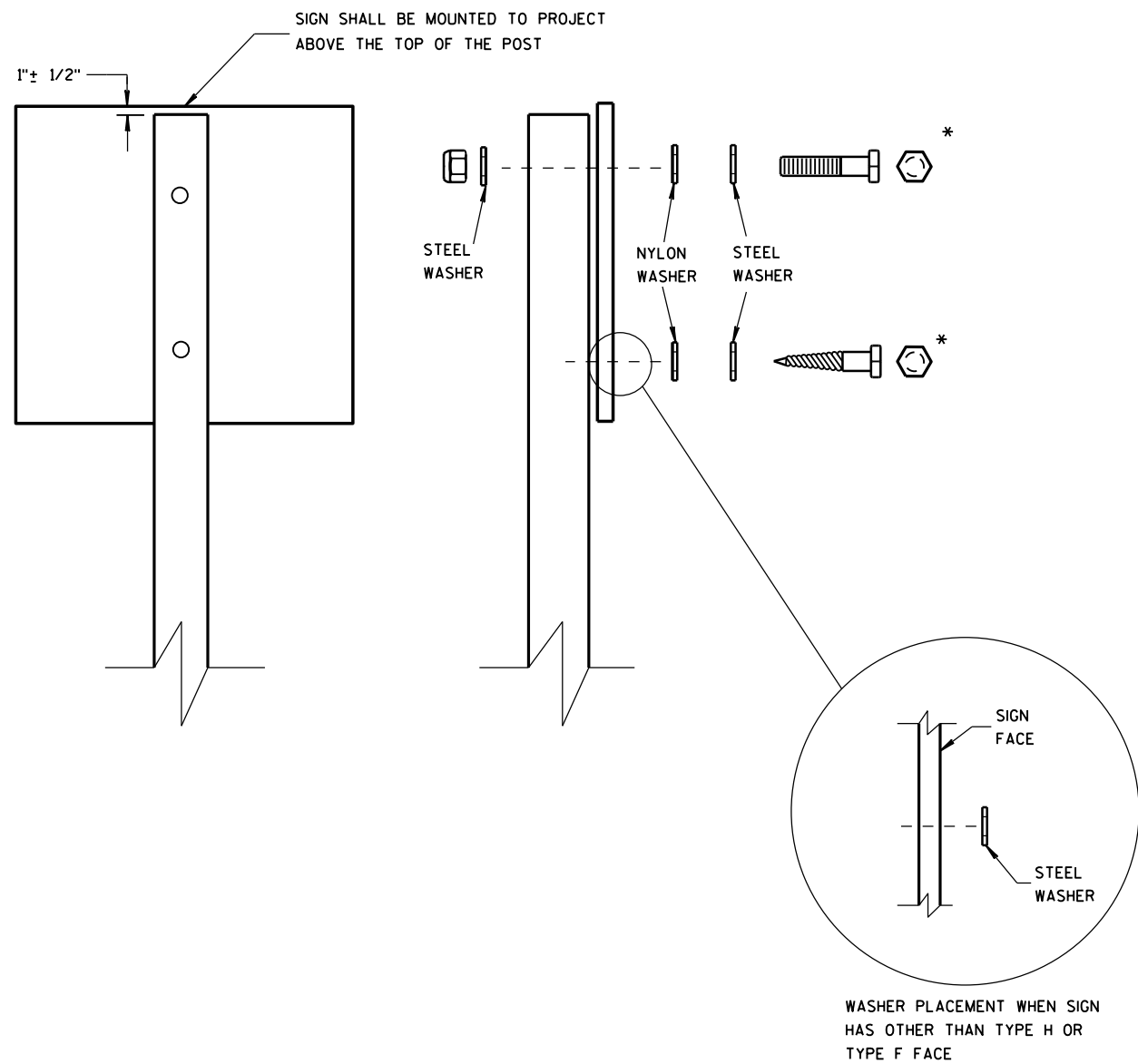
4" X 6" WOOD POST

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)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

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

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