

RHI

MARCH 2019

PROJECT ID:
WITH: N/A

6155-00-70

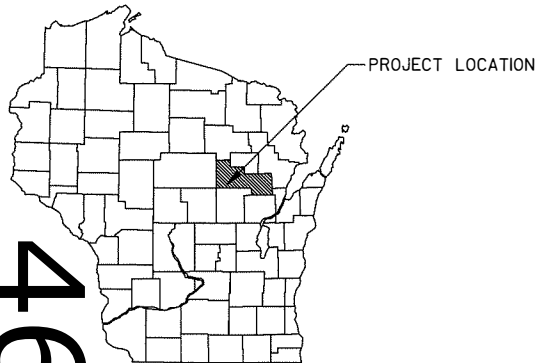
COUNTY:

SHAWANO

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details (Includes Erosion Control Plan)
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 = 98



DESIGN DESIGNATION

A.A.D.T. 2019	=	700
A.A.D.T. 2039	=	940
D.H.V. 2039	=	150
D.D.	=	60/40
T.	=	7.6%
DESIGN SPEED	=	55 MPH
ESALS	=	180,000

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
MEISNER ROAD - SCHERTZ LANE
S BR EMBARRASS RIVER BRIDGE B-58-0132
CTH M
SHAWANO COUNTY

STATE PROJECT NUMBER

6155-00-70

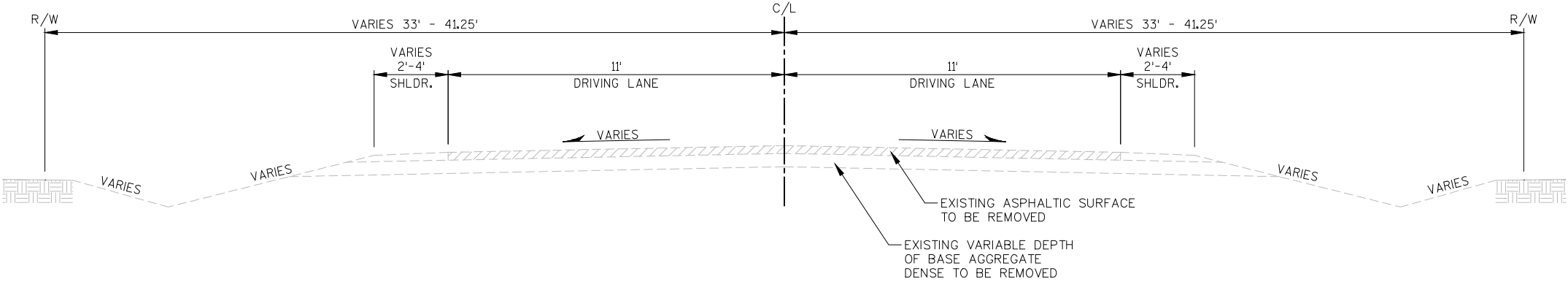
BEGIN PROJECT

STA. 11+50

Y = 25

LIST OF STANDARD ABBREVIATIONS

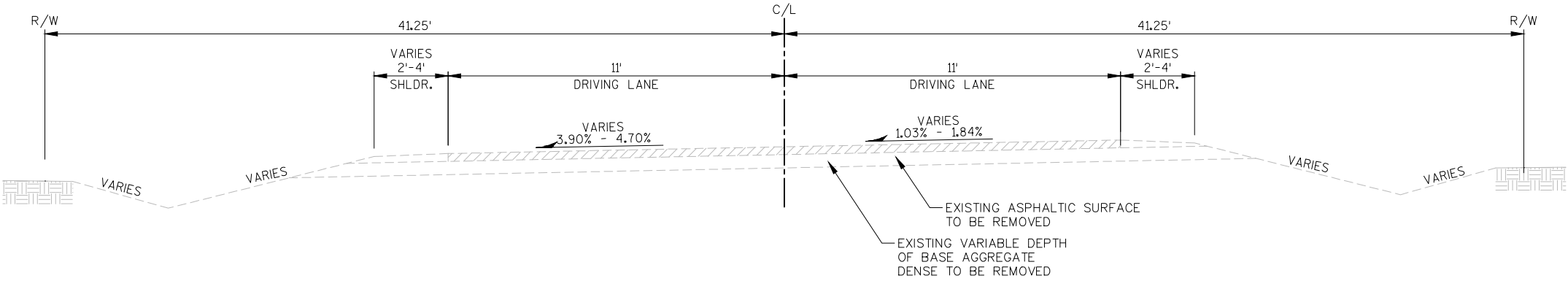
ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left—Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		Ton
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Town
ELEC	Electric (al)	LB	Pound	T or TN	Transition
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transit Line
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Trucks (percent of)
		R	Radius	T	Typical
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Unclassified
FF	Face to Face	R	Range	UNCL	Underground Cable
FE	Field Entrance	RL or R/L	Reference Line	UG	United States Highway
F	Fill	RP	Reference Point	USH	Variable
FG	Finished Grade	RCCP			



TYPICAL EXISTING SECTION

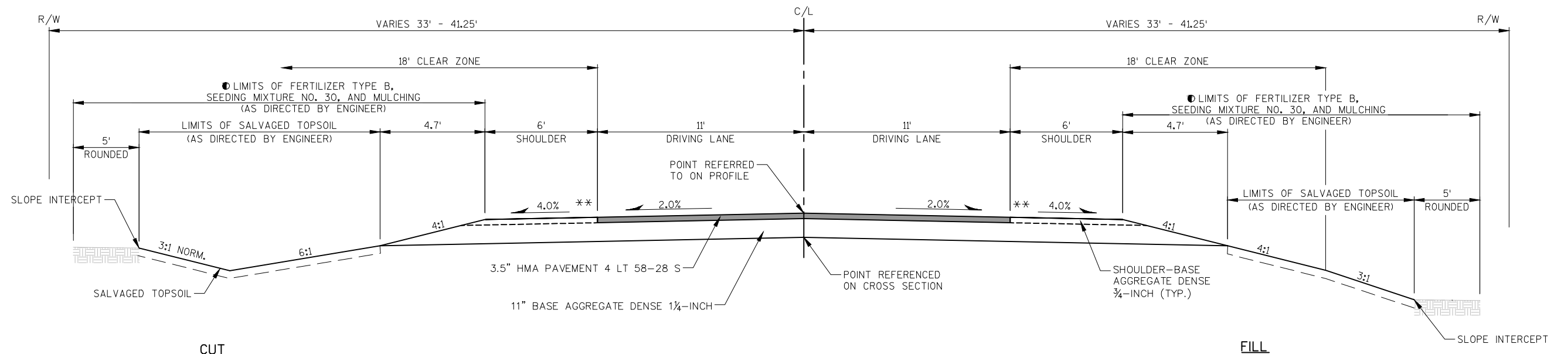
CTH M
STA. 11+50 - STA. 14+60
STA. 16+15 - STA. 26+50

* STRUCTURE B-58-0012
STA. 19+95 - STA. 20+53



TYPICAL EXISTING SECTION

CTH M
STA. 14+60 - STA. 16+15



CUT

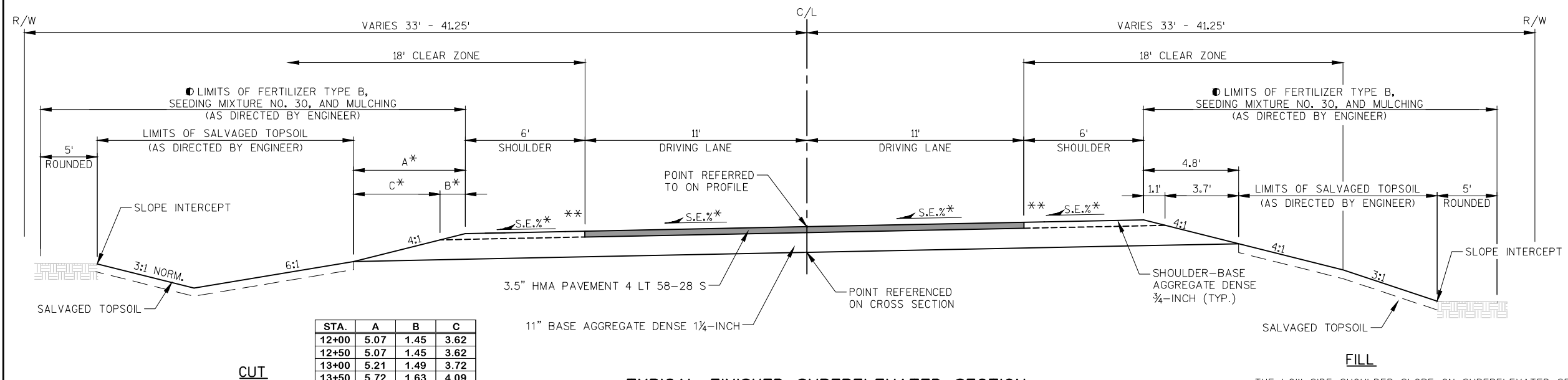
FILL

TYPICAL FINISHED SECTION

CTH M
STA. 11+50.00 - STA. 11+81.80
STA. 16+70.21 - STA. 26+50.00

* STRUCTURE B-58-0132
STA. 19+78.81 - STA. 20+77.29

** SAFETY EDGE
● PLACE EROSION MAT URBAN CLASS I TYPE B ON SLOPES STEEPER THAN 4:1 IN LIEU OF MULCHING.



CUT

FILL

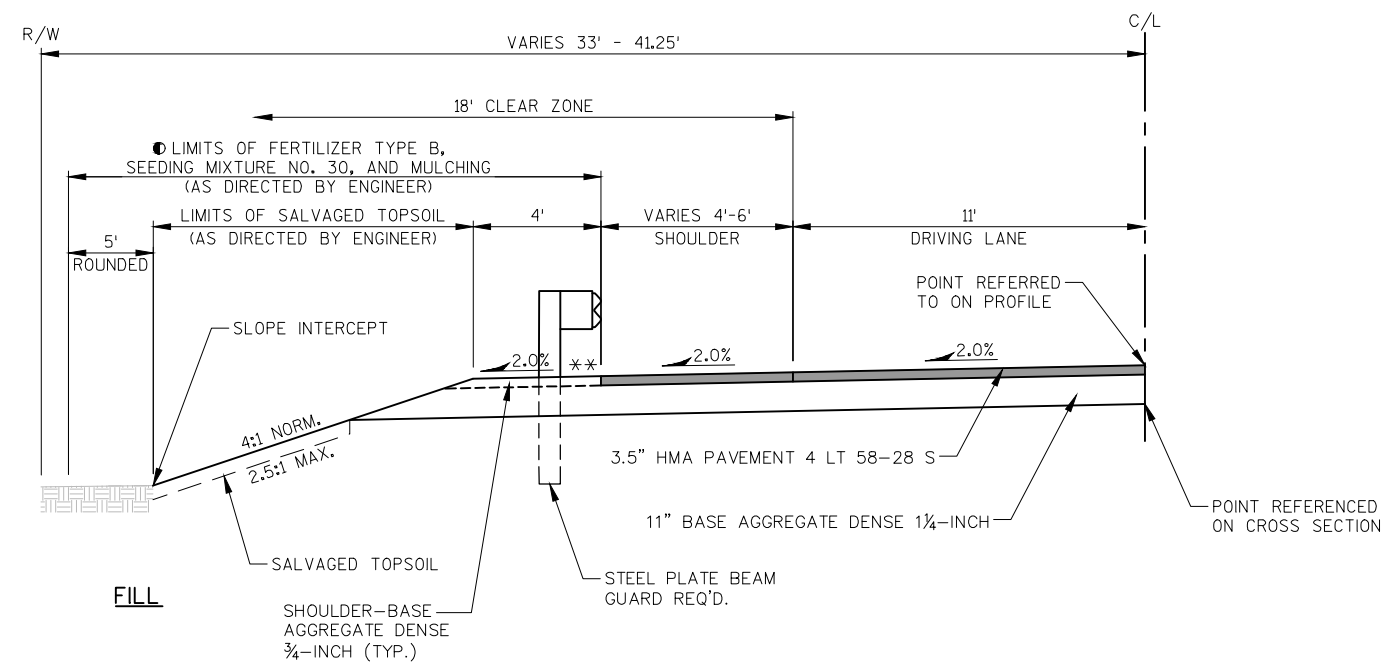
TYPICAL FINISHED SUPERELEVATED SECTION

CTH M
STA. 11+81.80 - STA. 16+70.21

STA.	A	B	C
12+00	5.07	1.45	3.62
12+50	5.07	1.45	3.62
13+00	5.21	1.49	3.72
13+50	5.72	1.63	4.09
14+00	6.14	1.75	4.39
14+50	6.14	1.75	4.39
15+00	5.74	1.64	4.10
15+50	5.23	1.49	3.74
16+00	5.07	1.45	3.62
16+50	5.07	1.45	3.62

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.

* SEE SUPERELEVATION TABLE
** SAFETY EDGE
● PLACE EROSION MAT URBAN CLASS I TYPE B ON SLOPES STEEPER THAN 4:1 IN LIEU OF MULCHING.

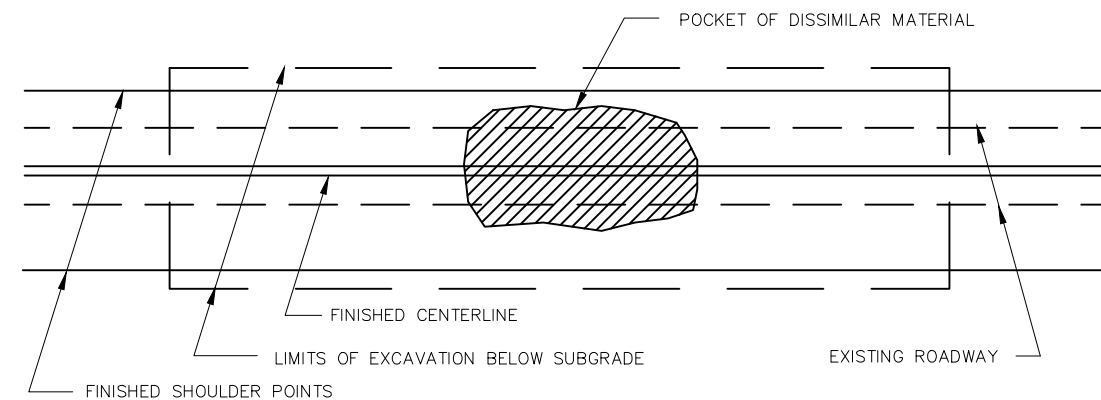


* STRUCTURE B-58-0132
STA. 19+78.81 - STA. 20+77.29

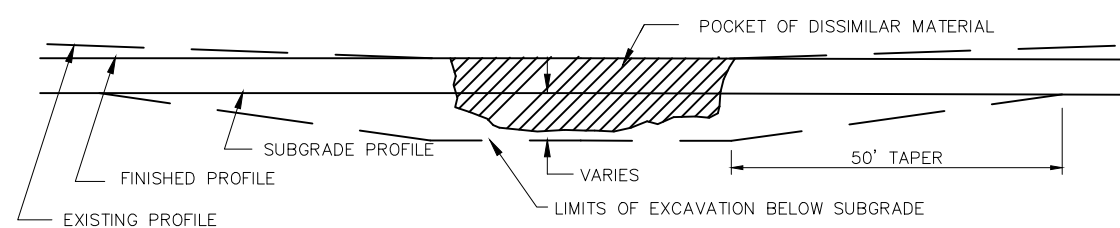
** SAFETY EDGE
● PLACE EROSION MAT URBAN CLASS I TYPE B ON
SLOPES STEEPER THAN 4:1 IN LIEU OF MULCHING.

TYPICAL FINISHED HALF SECTION

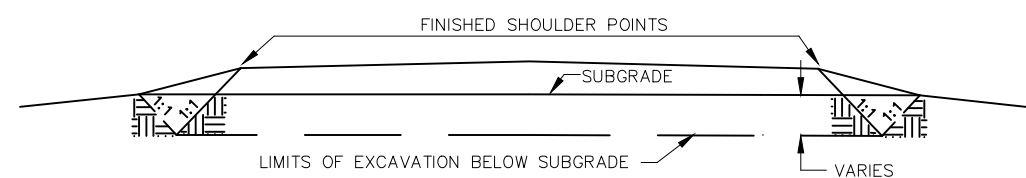
CTH M
STA. 18+13.17 - STA. 21+42.44, LT.
STA. 18+21.56 - STA. 22+42.81, RT.



PLAN VIEW



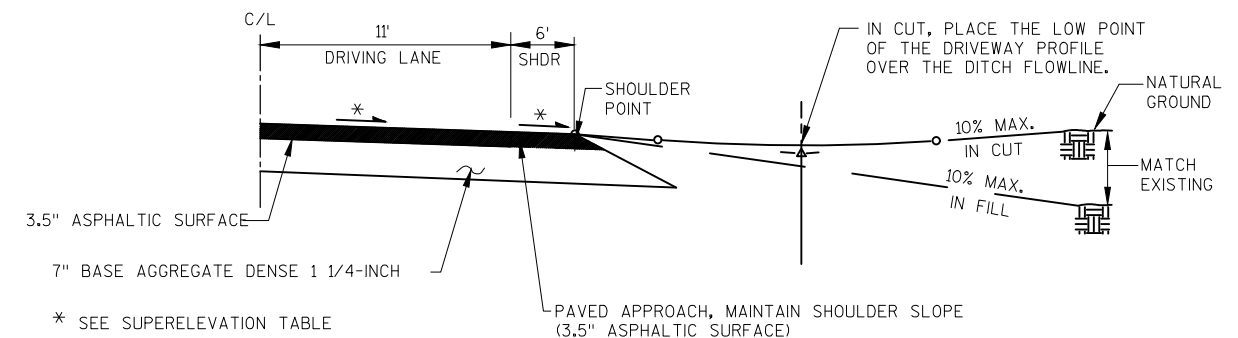
PROFILE VIEW



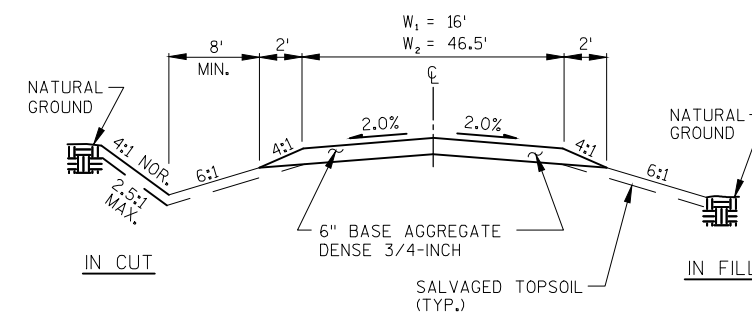
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

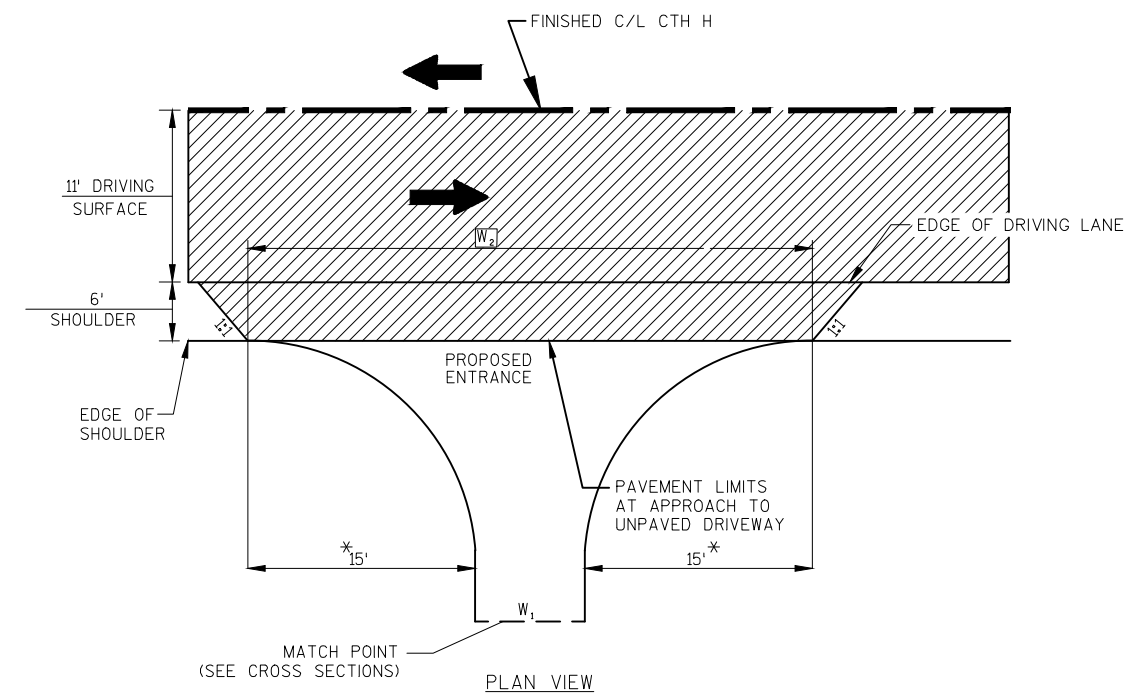
EXCAVATION BELOW SUBGRADE (E.B.S.)



TYPICAL P.E. PROFILE



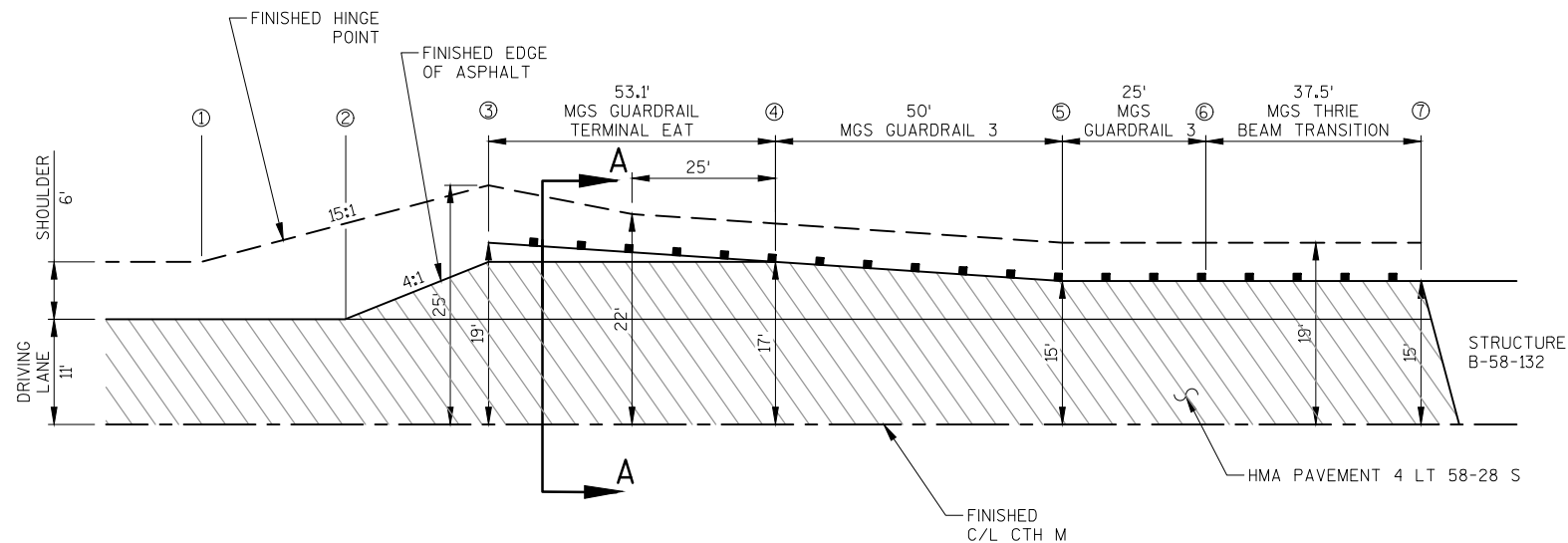
TYPICAL CROSS-SECTION FOR P.E.



APPROACH AT P.E.
TYPICAL PRIVATE ENTRANCE (P.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE

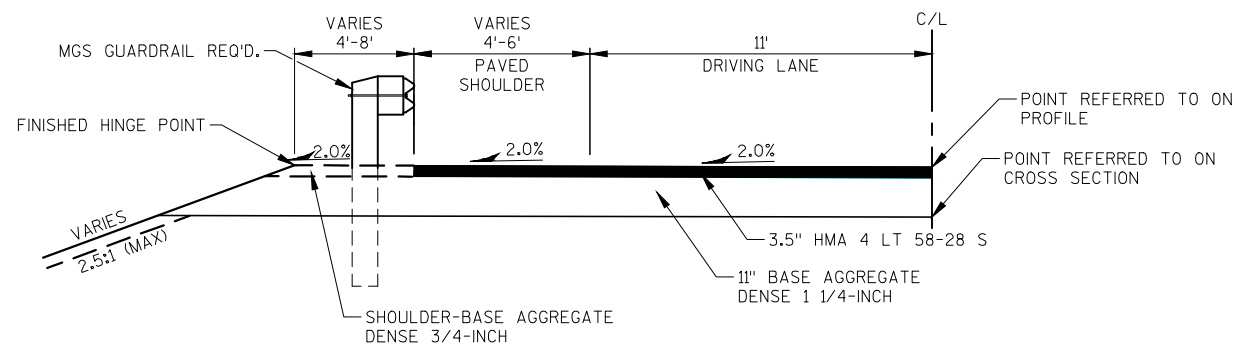
*RADIUS = 15' $W_1 = 16'$
 $W_2 = 46.5'$



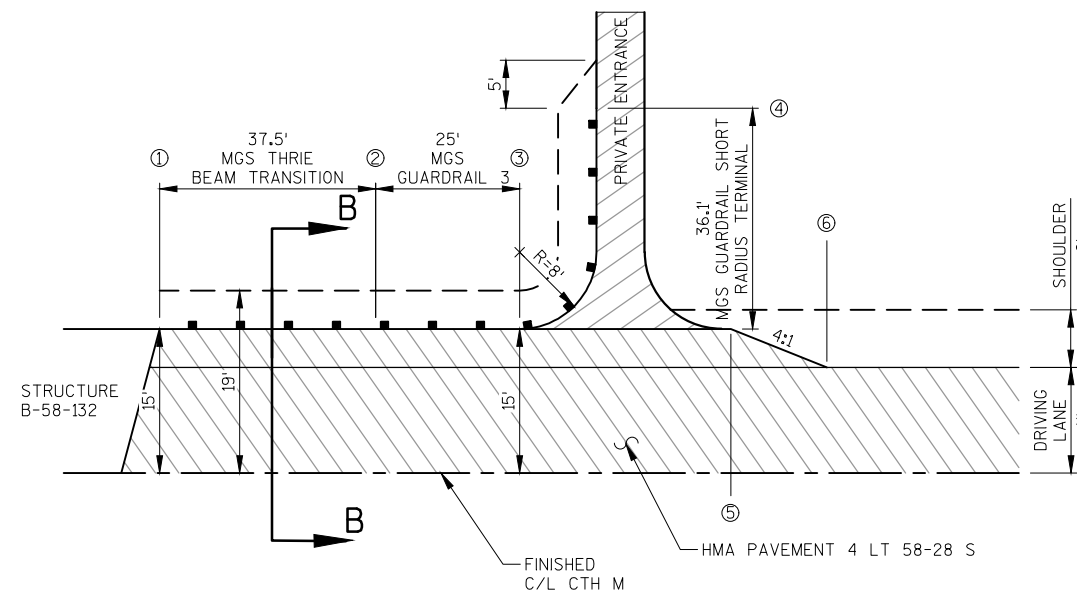
BEAMGUARD LAYOUT TABLE

QUADRANT	LOCATION	STATION						
		①	②	③	④	⑤	⑥	⑦
NORTHWEST	CTH M, LT.	16+90	17+86	18+10	18+63	19+13	19+38	19+76
SOUTHWEST	CTH M, RT.	16+98	17+94	18+18	18+72	19+22	19+47	19+84
SOUTHEAST	CTH M, RT.	23+81	22+70	22+46	21+93	21+43	21+18	20+80

BEAMGUARD LAYOUT DETAIL



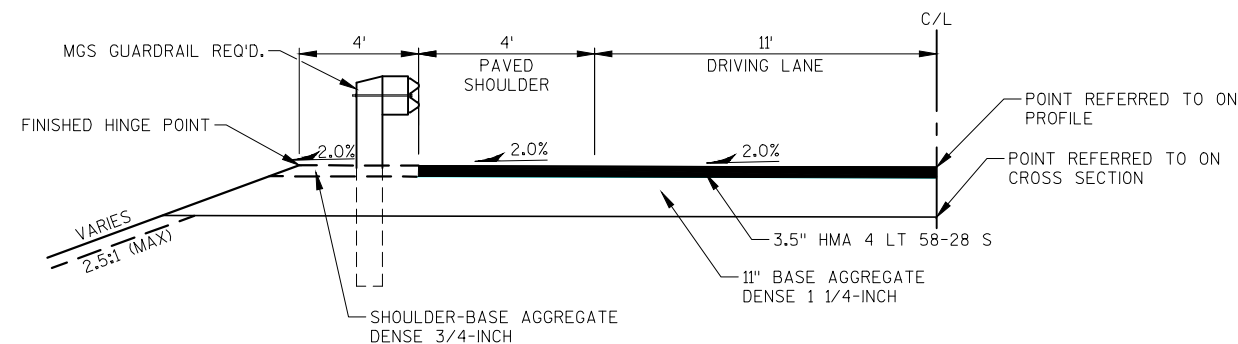
SECTION A-A



BEAMGUARD LAYOUT TABLE

QUADRANT	LOCATION	STATION					
		①	②	③	④	⑤	⑥
NORTHEAST	CTH M, LT.	20+72	21+09	21+34	21+42	21+65	21+81

BEAMGUARD LAYOUT DETAIL



LEGEND

RIPRAP HEAVY OVER
GEOTEXTILE TYPE HR

DIRECTION OF FLOW

WETLAND BOUNDARY

TEMPORARY DITCH CHECK

CULVERT PIPE CHECKS

SILT FENCE

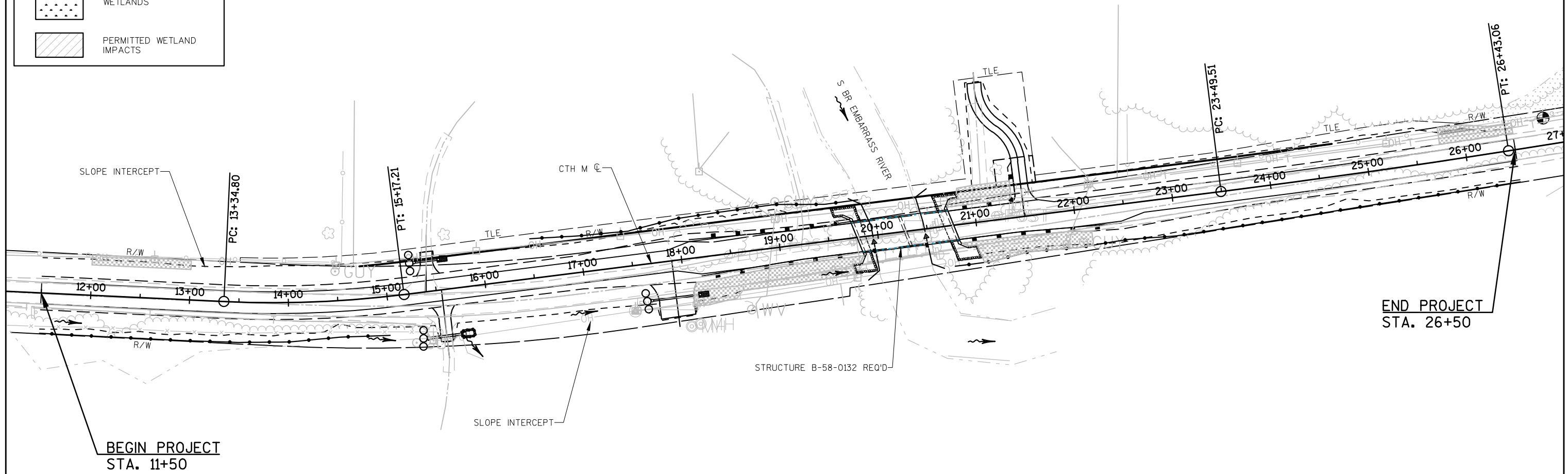
TURBIDITY BARRIER

EROSION MAT URBAN
CLASS I TYPE B

EROSION MAT
CLASS II TYPE C

WETLANDS

PERMITTED WETLAND
IMPACTS



LEGEND

①

-

MARKING LINE EPOXY 4-INCH (SOLID, WHITE)

②

-

MARKING LINE EPOXY 4-INCH (SOLID, YELLOW)

-

EXISTING SIGN MOUNTED ON POST(S)

-

PROPOSED SIGN MOUNTED ON POST(S)

XXX

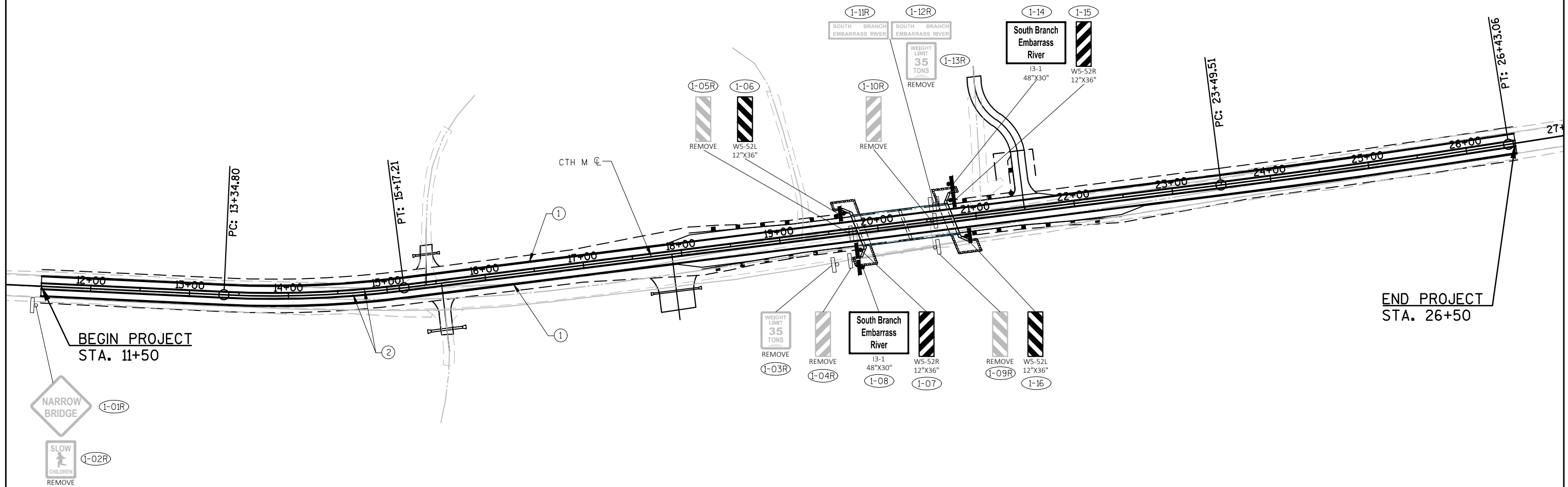
-

DENOTES SIGN NUMBER

ESTR

-

EXISTING SIGN TO REMAIN



LEGEND

WORK ZONE



COVER SIGN



DETOUR ROUTE



(A)



(B)



(C)



(D)



(E)



(F)



(G)



(H)



(I)



(J)



(K)



(L)



(M)



(N)



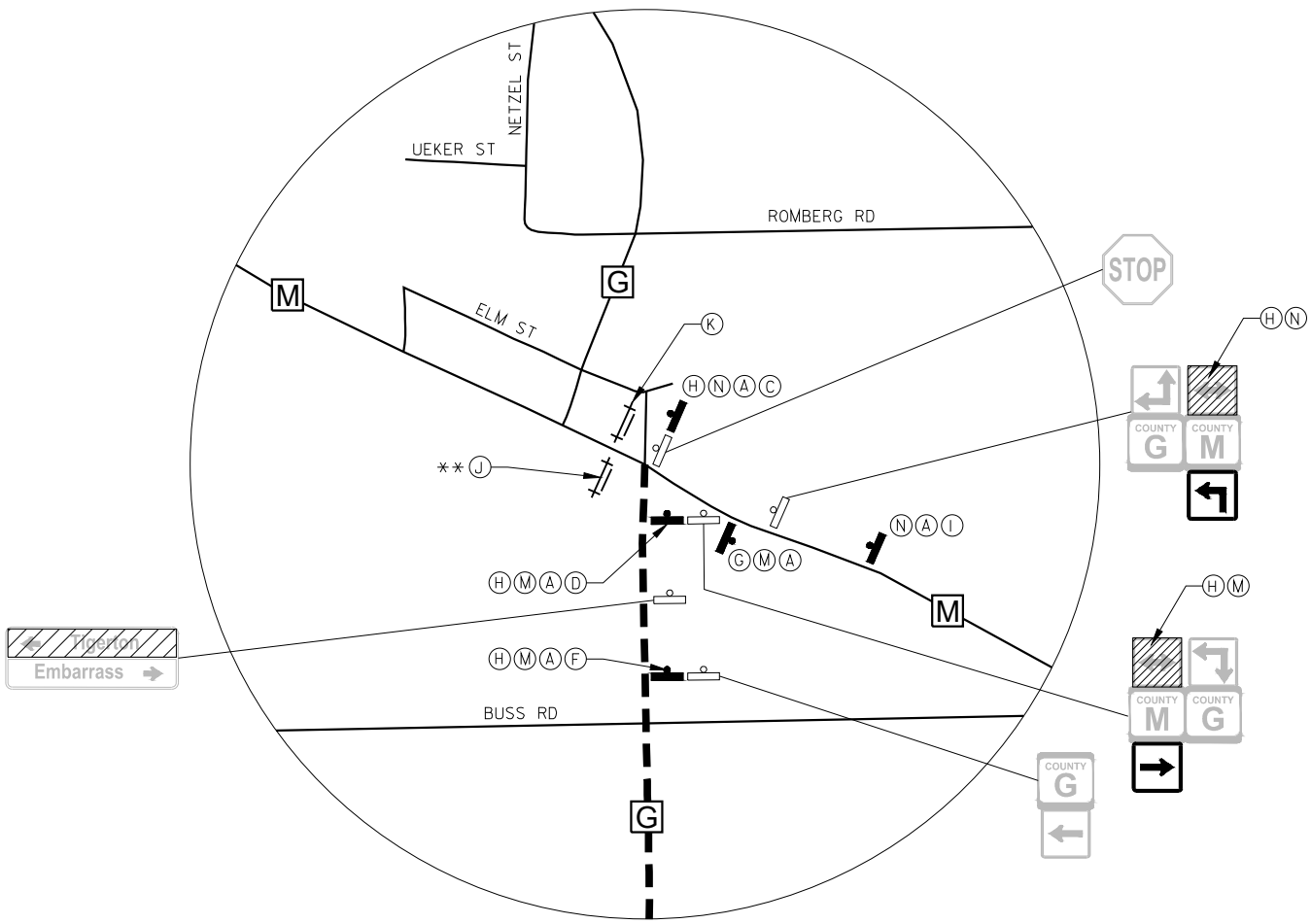
SIGN ON PERMANENT SUPPORT



EXISTING SIGN ON SINGLE POST

LEGEND

WORK ZONE		SIGN ON PERMANENT SUPPORT	
COVER SIGN		EXISTING SIGN ON SINGLE POST	
DETOUR ROUTE		EXISTING SIGN ON DOUBLE POST	
(A)		TYPE III BARRICADE WITH ATTACHED SIGN AND WITH TRAFFIC CONTROL LIGHTS TYPE A	
(B)		CHANGEABLE PORTABLE MESSAGE BOARD	
(C)		* SIGN READS "BRIDGE OUT 1 MILE AHEAD"	
(D)		** SIGN READS "BRIDGE OUT 7 MILES AHEAD"	
(E)		GENERAL NOTES:	
(F)		THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.	
(G)		ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.	
(H)		"W0" AND "M0" SERIES SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.	
(I)		ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.	
(J)		THE EXACT LOCATION OF CHANGEABLE PORTABLE MESSAGE BOARD SHALL BE DETERMINED IN FIELD AND APPROVED BY THE ENGINEER.	
(K)			
(L)			
(M)			
(N)			

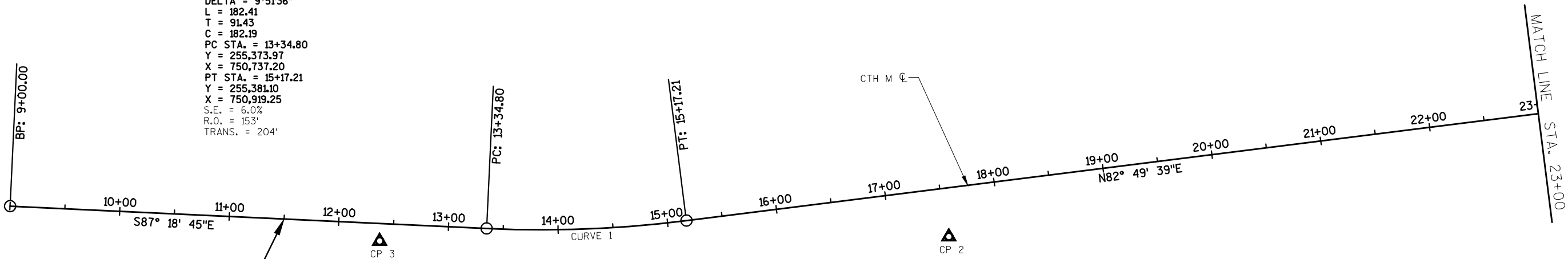


DETAIL C
CAROLINE



CURVE #1 DATA

PI STA. = 14+26.23
Y = 255,369.69
X = 750,828.54
R = 1060.00
D = 5°24'19"
DELTA = 9°51'36"
L = 182.41
T = 91.43
C = 182.19
PC STA. = 13+34.80
Y = 255,373.97
X = 750,737.20
PT STA. = 15+17.21
Y = 255,381.10
X = 750,919.25
S.E. = 6.0%
R.O. = 153'
TRANS. = 204'

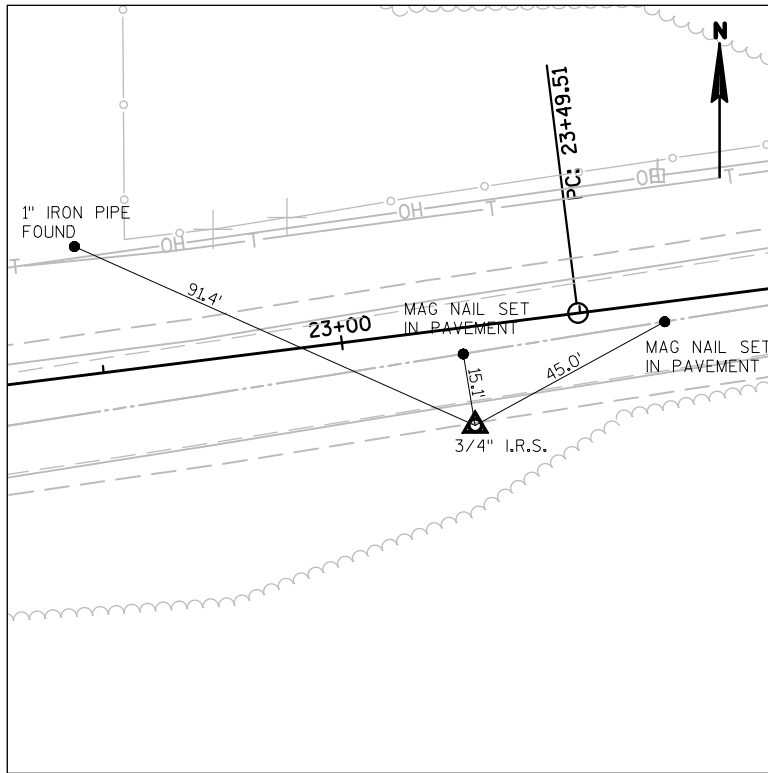


BEGIN PROJECT
STA. 11+50
Y = 255,382.64
X = 750,552.61

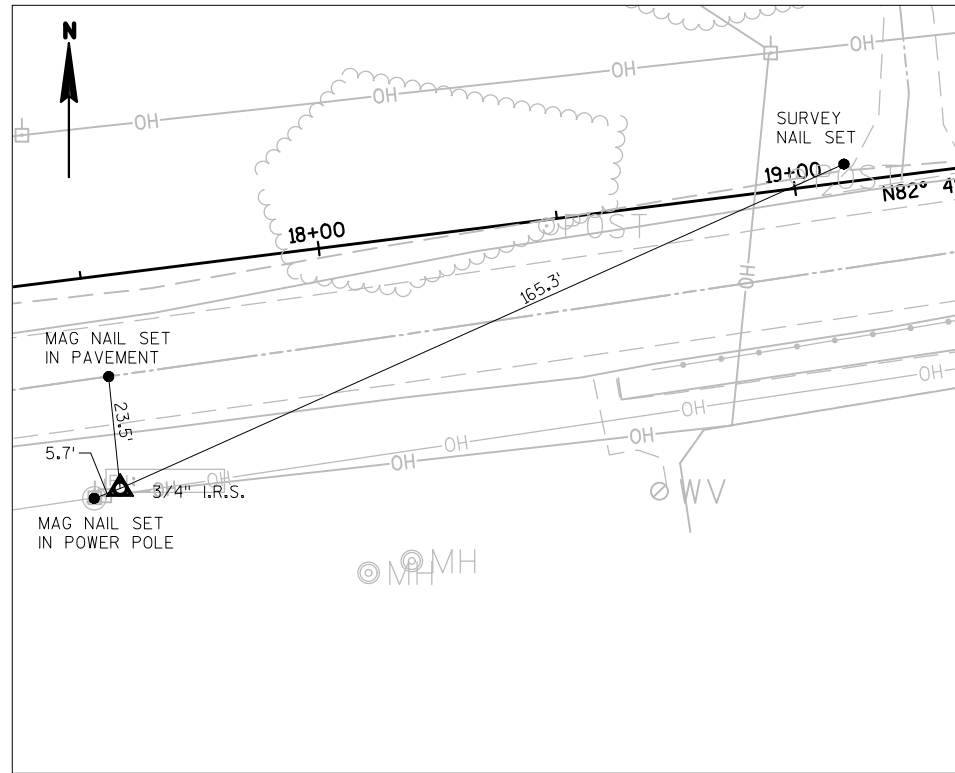
CURVE 1

STATION	LEFT	RIGHT	COMMENT
11+81.80	2.00% <-	2.00% ->	MATCH EXISTING
12+00	2.00% <-	1.29% ->	
12+32.80	2.00% <-	0.00% -	
12+50	2.00% <-	0.67% <-	
12+83.80	2.00% <-	2.00% <-	R.C.
13+00	2.64% <-	2.64% <-	
13+34.80	4.00% <-	4.00% <-	P.C. STATION
13+50	4.60% <-	4.60% <-	
13+85.80	6.00% <-	6.00% <-	BEGIN FULL SUPER
14+00	6.00% <-	6.00% <-	
14+50	6.00% <-	6.00% <-	
14+66.21	6.00% <-	6.00% <-	END FULL SUPER
15+00	4.67% <-	4.67% <-	
15+17.21	4.00% <-	4.00% <-	P.T. STATION
15+50	2.71% <-	2.71% <-	
15+68.21	2.00% <-	2.00% <-	R.C.
16+00	2.00% <-	0.75% <-	
16+19.21	2.00% <-	0.00% -	
16+50	2.00% <-	1.21% ->	
16+70.21	2.00% <-	2.00% ->	BEGIN NORMAL CROWN

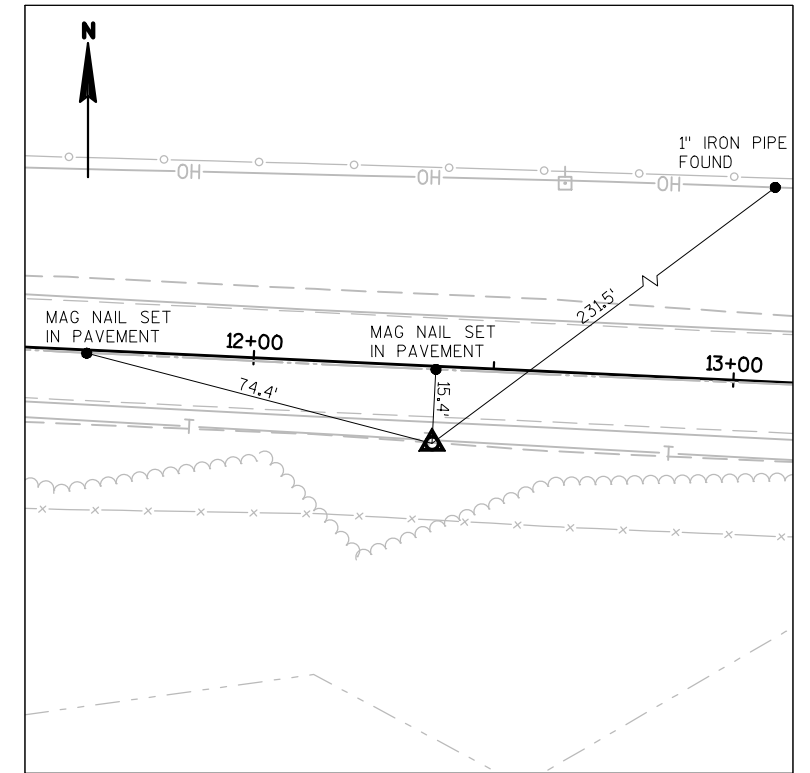
CTH M



TIES TO CP 1
STA. 23+25.39, 20.5' RT.
Y = 255,461.54
X = 751,723.67



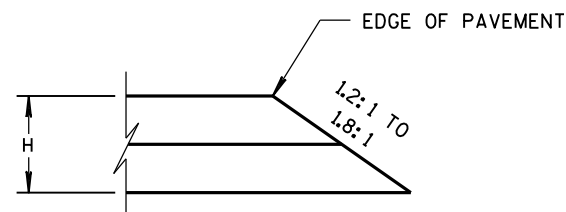
TIES TO CP 2
STA. 17+52.67, 44.4' RT.
Y = 255,366.42
X = 751,158.42



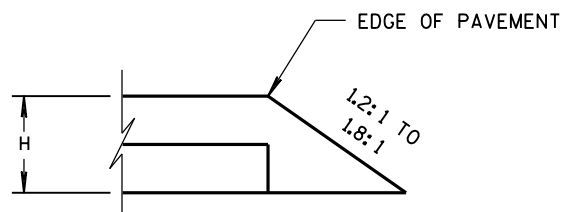
TIES TO CP 3
STA. 12+37.90, 16.1' RT.
Y = 255,362.47
X = 750,639.66

3

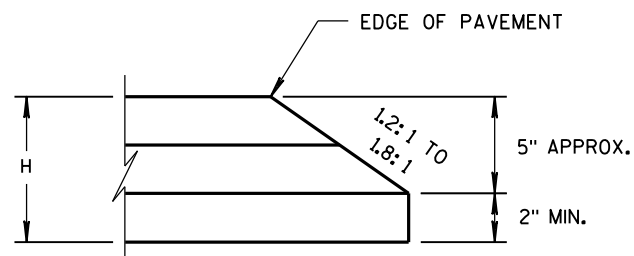
TRAFFIC CONTROL					MARKING LINE EPOXY 4-INCH				CONSTRUCTION STAKING						SAWING ASPHALT		



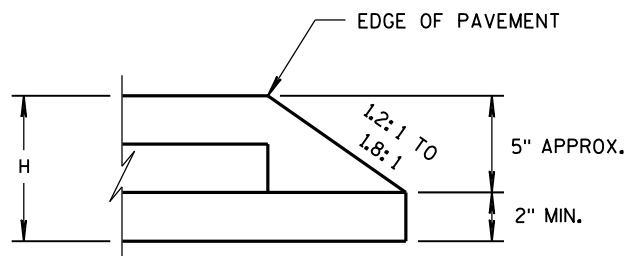
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

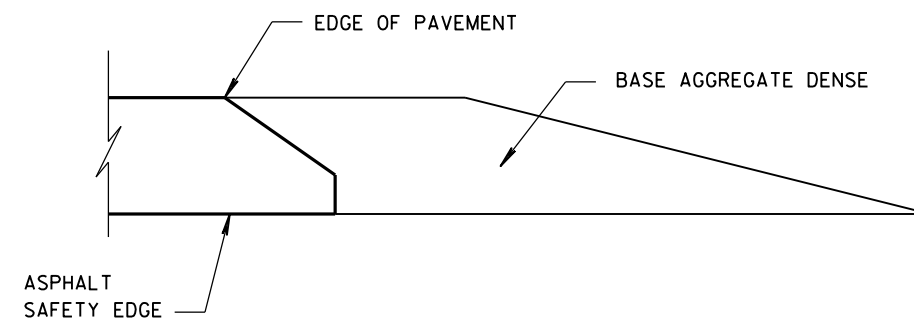


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



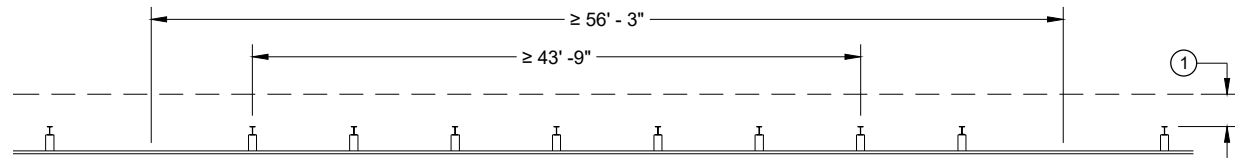
FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

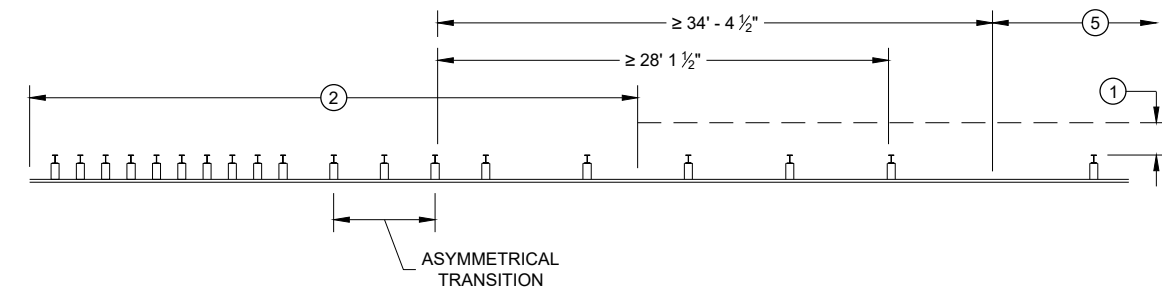
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

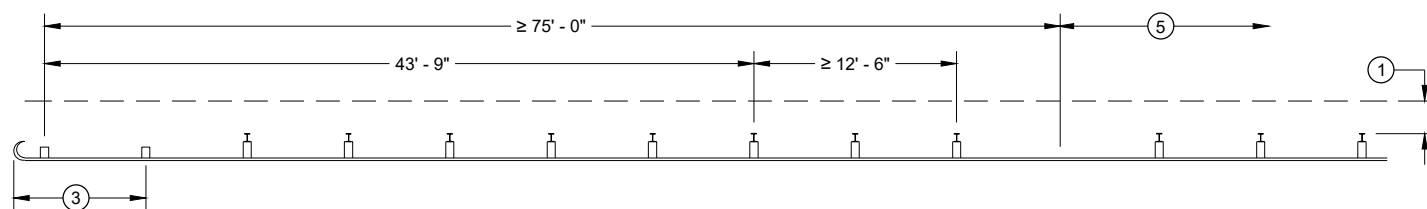
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



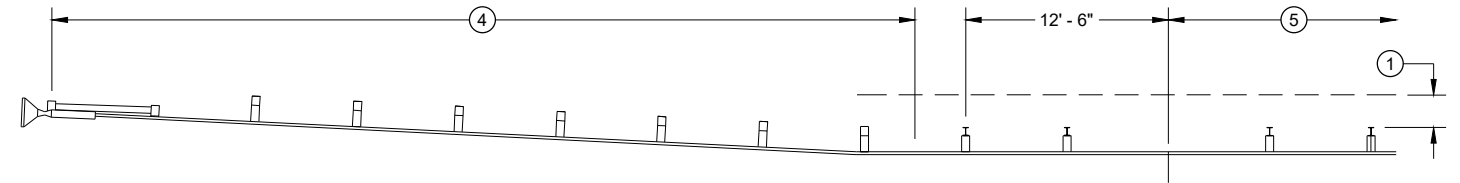
MISSING POST IN NORMAL BEAM GUARD RUN



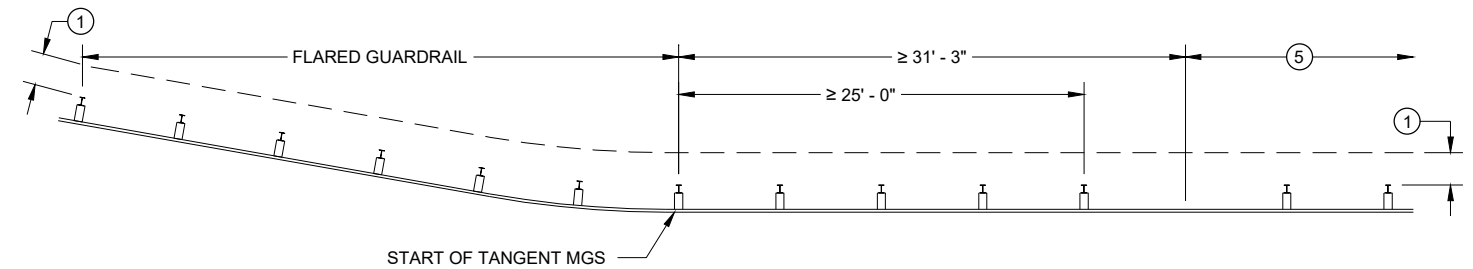
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



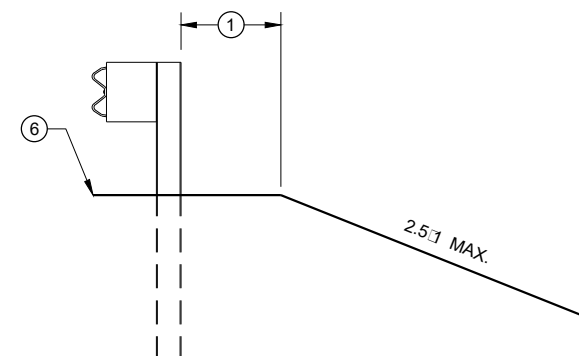
MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



CROSS SECTION VIEW

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

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

