

LAX

NOVEMBER 2022

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.	8	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 74



20

PROJECT ID:

5991-02-75

COUNTY:

LA CROSSE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF ONALASKA, CTH ZM

CTH Z TO CTH OT

CTH ZM

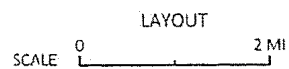
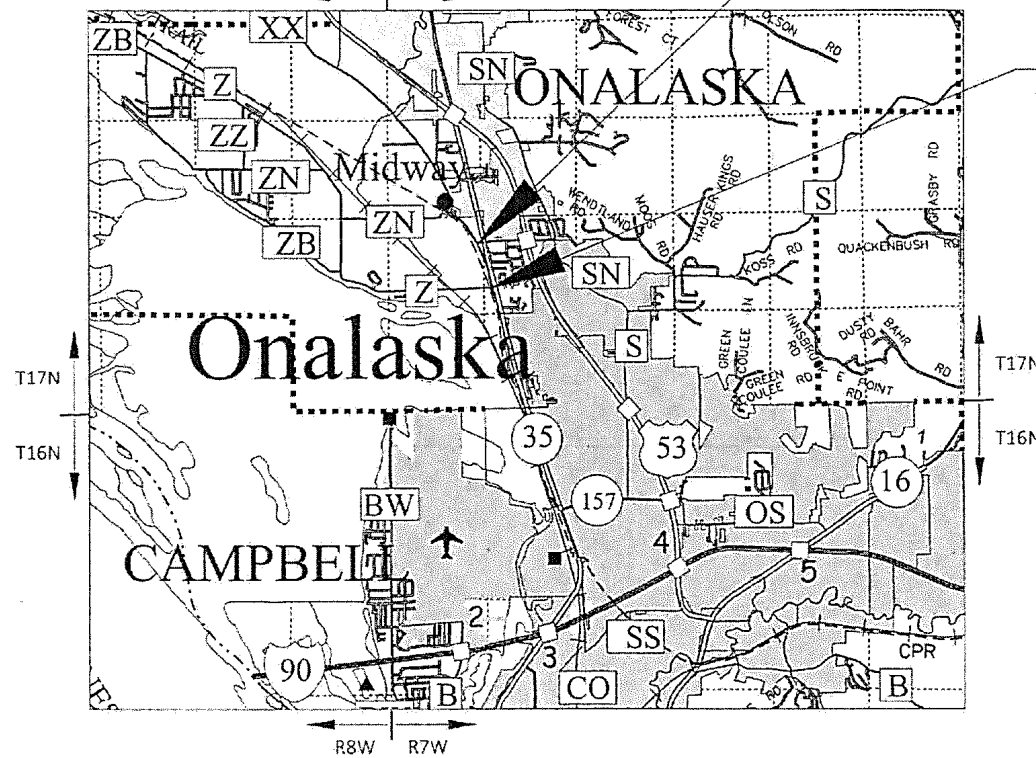
LA CROSSE COUNTY

STATE PROJECT NUMBER

5991-02-75

END PROJECT
STA 35+97.84

BEGIN PROJECT
STA 10+17.55
Y=169,594.790
X=445,842.296



TOTAL NET LENGTH OF CENTERLINE = 0.49

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), LA CROSSE COUNTY, NAD83 (2011), 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 NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

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

ACCEPTED FOR

LA CROSSE COUNTY

Date 7-26-22

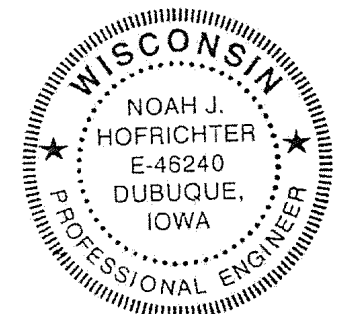
[Signature]
County Highway Commissioner

ORIGINAL PLANS PREPARED BY

origin
design®

WORKING ON TOMORROW.

800 556-4491
origindesign.com



DATE: 7/25/2022 *[Signature]*
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	ORIGIN DESIGN
Surveyor	ORIGIN DESIGN
Designer	ORIGIN DESIGN
Project Manager	BRANDAN BURGER, P.E.
Regional Examiner	SW REGION
Regional Supervisor	KYLE HEMP, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 7/26/2022 *[Signature]*
(Signature)

E

GENERAL NOTES

SEE TITLE SHEET FOR COORDINATE AND ELEVATION REFERENCES.

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 COORDINATE ALL UTILITY ADJUSTMENTS WITH THE UTILITY.

DETAILS OF CONSTRUCTION NOT SHOWN IN THE PLANS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ACCESS SHALL BE MAINTAINED TO ALL ADJACENT PROPERTIES.

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 115 LB/SY/IN.

THE 4" HMA PAVEMENT ITEMS SHALL BE PLACED WITH A 1 3/4 -INCH UPPER LAYER AND A 2 1/4 -INCH LOWER LAYER.

APPLY TACK COAT BETWEEN LAYERS OF HMA PAVEMENT AT A RATE OF 0.05 GAL/SY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY OUTSIDE OF THE FINISHED SHOULDER POINT OR REVETMENT SHALL BE SEEDED AND STABILIZED WITH MULCH OR EROSION MAT AS DIRECTED BY THE ENGINEER.

THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKERS IS TO BE WITH THE APPROVAL OF THE ENGINEER.

ALL REMOVED SIGNS WILL BE PICKED UP BY THE COUNTY. CONTRACTOR SHALL COORDINATE WITH COUNTY STAFF FOR SIGN PICKUP.

NO TREES OR SHRUBS EXCEPT THOSE INDICATED ON THE PLANS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) FOR REMOVAL OF UNSUITABLE MATERIAL AS SHOWN ON THE PLANS IS NOT USED TO BALANCE YARDAGE, BUT IS MEASURED AND MATERIAL WILL BE DETERMINED BY THE ENGINEER.

PAVEMENT REMOVAL TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

WHEN PORTION OF EXISTING ASPHALTIC SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. SAWCUT SHALL BE INCIDENTAL TO ASPHALT REMOVAL.

DESIGN CONSULTANT

ORIGIN DESIGN CO.
NOAH J. HOFRICHTER, P.E.
PROJECT ENGINEER
137 MAIN STREET, SUITE 100
DUBUQUE, IA 52001
563-556-2464
NOAH.HOFRICHTER@ORIGINDESIGN.COM

COUNTY CONTACT

LA CROSSE COUNTY
JOSEPH LANGE BERG, P.E.
HIGHWAY ENGINEER
301 CARLSON ROAD
WEST SALEM, WI 54669-9332
608-786-3810
JLANGE BERG@LACROSSE COUNTY.ORG

WISCONSIN DNR LIASON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS, REVIEW, AND SUSTAINABILITY
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9115
KAREN.KALVELAGE@WISCONSIN.GOV

WISDOT CONTACT

SOUTHWEST REGION
BRANDAN BURGER, P.E.
2101 WRIGHT ST
MADISON, WI 53704
608-267-4019
BRANDAN.BURGER@DOT.WI.GOV

PROTECTING AND RESTORING PROPERTY

THE CONTRACTOR SHALL NOTIFY, IN WRITING, ALL PUBLIC AND PRIVATE PROPERTY OWNERS WHOSE PROPERTY IS ADJACENT TO THE WORK. PERMISSION SHALL BE OBTAINED BEFORE CROSSING THE PROPERTY WITH ANY EQUIPMENT OR MATERIALS. USE EVERY REASONABLE PRECAUTION TO PREVENT DAMAGE TO ALL PROPERTY INCLUDING POLES, TREES, SHRUBBERY, AND FENCES ADJACENT TO THE WORK. THE CONTRACTOR SHALL ASSUME LIABILITY FOR ALL DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONTRACTOR OPERATIONS, DEFECTIVE WORK OR MATERIALS, OR NON-EXECUTION OF THE CONTRACT. RESTORE PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THE EXISTING BEFORE CAUSING THE DAMAGE AS THE ENGINEER DIRECTS OR IN A MANNER ACCEPTABLE TO THE PROPERTY OWNER.

THE FOLLOWING ENCUMBRANCES OR RESTRICTIONS ARE REQUIREMENTS AS A RESULT OF DISCUSSIONS WITH PROPERTY OWNERS ALONG THE PROJECT CORRIDOR:

- 1. THE CONTRACTOR SHALL COORDINATE WITH THE BUSINESS OWNERS OF THE BUSINESSES AT THE NORTH END OF THE PROJECT AT N5550 COUNTY ROAD ZM AND N5560 COUNTY ROAD ZM. CONTRACTOR TO PROVIDE AT LEAST 3 WEEKS NOTICE WITH DIRECTIONS AS TO HOW PROPERTY ACCESS WILL BE MAINTAINED AND FROM WHAT DIRECTION. CONTACT KRISTINE AT BREIDENBACH FAMILY AND SPORTS CHIROPRACTIC AT 608-779-5323 OR KRISTINE@MYSPIEDOCTORS.NET
2. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AND HILLTOPPER 608-783-6727 FOR GARBAGE COLLECTION FOR THE LOCAL RESIDENTS AND, DEPENDING ON STAGE OF CONSTRUCTION, MAY BE REQUIRED TO HAUL GARBAGE TO A COMMON SPOT FOR COLLECTION IF GARBAGE COLLECTION COMPANY IS NOT ABLE TO ACCESS SITE.
3. MAIL DELIVERY: CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AND THE POSTAL SERVICE TO ALLOW FOR MAIL DELIVERY. NOTIFY LOCAL POST OFFICE OF CONSTRUCTION SCHEDULE PRIOR TO BEGINNING CONSTRUCTION. CONTACT: US POST OFFICE - ONALASKA, 304 11TH AVENUE NORTH, ONALASKA, WI 54650. PHONE: 608-781-8777.

ABBREVIATIONS

Table with 4 columns: Abbreviation, Description, Abbreviation, Description. Includes terms like AC (ACRE), AADT (ANNUAL AVERAGE DAILY TRAFFIC), ASPH (ASPHALTIC), etc.

UTILITIES

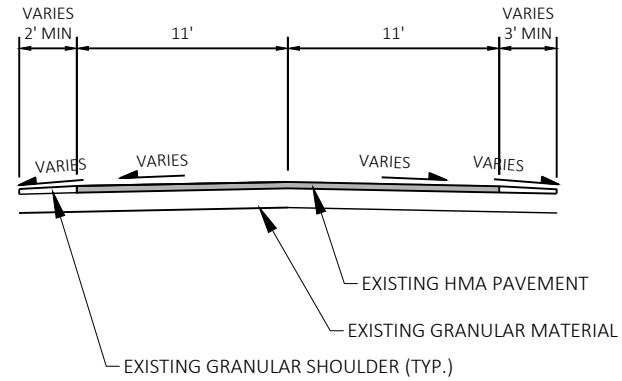
COMMUNICATIONS
CENTURYLINK - COMMUNICATION LINE
333 N FRONT ST
LA CROSSE, WI 54601
TELEPHONE: 608-615-4136
CELL: 608-780-1238
ATTENTION: BRIAN STELPLUGH
EMAIL: BRIAN.STELPLUGH@LUMEN.COM
EMAIL: RELOCATIONS@CENTURYLINK.COM

CHARTER COMMUNICATIONS
1228 12TH AVE S
ONALASKA, WI 54650
TELEPHONE: 608-317-6213
ATTENTION: PERRY McCLELLAN
EMAIL: PERRY.MCCLELLAN@CHARTER.COM

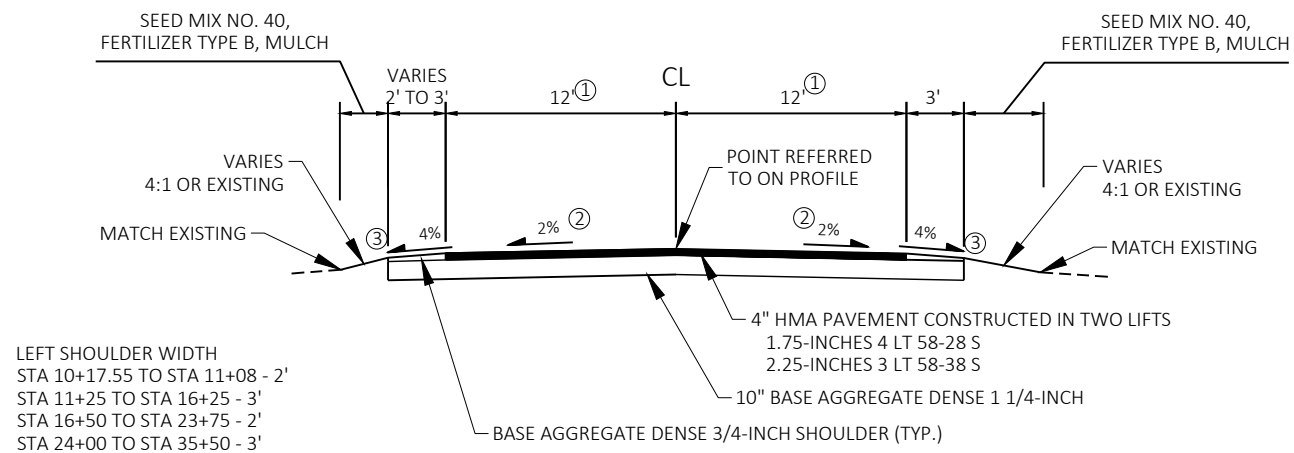
ELECTRICAL
RIVERLAND ENERGY COOPERATIVE
N28988 STATE ROAD 93
ARCADIA, WI 54612
TELEPHONE: 608-409-7056
ATTENTION: SHARON SLUGA, OPERATIONS COORDINATOR
ATTENTION: BILL MASON, ASSISTANT LINE SUPERINTENDENT
EMAIL: SSLUGA@RIVERLANDENERGY.COM

OVERHEAD ELECTRIC AND GAS
XCEL ENERGY
JAKE ENDRES
3215 COMMERCE STREET
LA CROSSE, WI 54603
JACOB.T.ENDRES@XCELENERGY.COM

DIGGERS HOTLINE logo with phone number Dial 811 or (800)242-8511 and website www.DiggersHotline.com

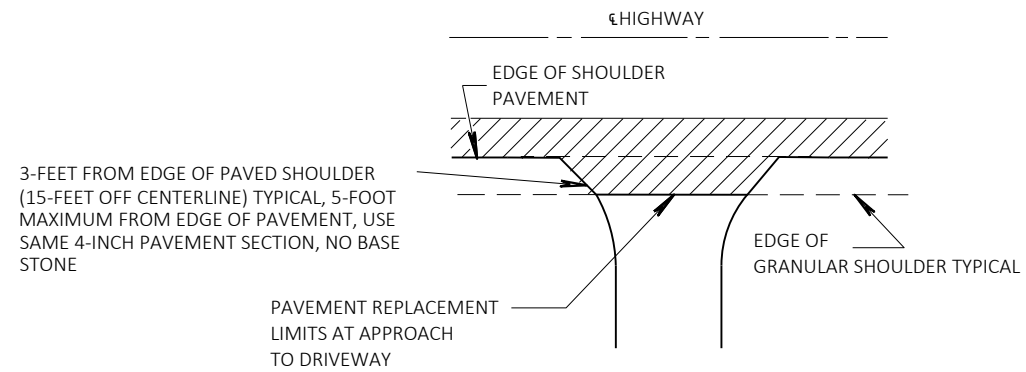


EXISTING TYPICAL SECTION - CTH ZM
 STA 10+17.55 - 35+97.84



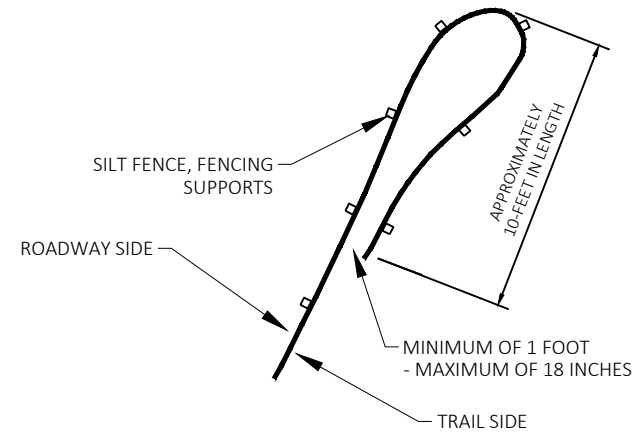
FINISHED TYPICAL SECTION - CTH ZM
 STA 10+17.55 - 35+97.84

- ① LANE WIDTHS VARY AT INTERSECTIONS. SEE PLAN AND PROFILE SHEETS & INTERSECTION DETAIL SHEETS.
- ② LANE SLOPES VARY AT LOCATION OF MATCH TO EXISTING/INTERSECTIONS AT BEGIN AND END OF PROJECT AND AT CURVE SUPERELEVATION. SEE PLAN AND PROFILE SHEETS FOR SUPERELEVATION INFORMATION.
- ③ USE BASE AGGREGATE TO MATCH EDGE OF GRANULAR SURFACING AS NEEDED



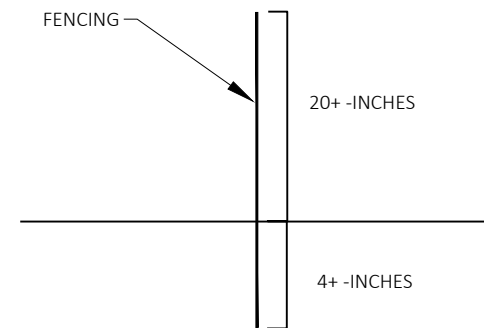
DRIVEWAY PAVED SHOULDER BUMP OUT DETAIL

DETAIL APPLIES AT BOTH PAVED AND UNPAVED DRIVEWAYS.
ALL DRIVEWAYS TO BE REPLACED WITH ASPHALT SURFACE
REGARDLESS OF EXISTING SURFACING TYPE.

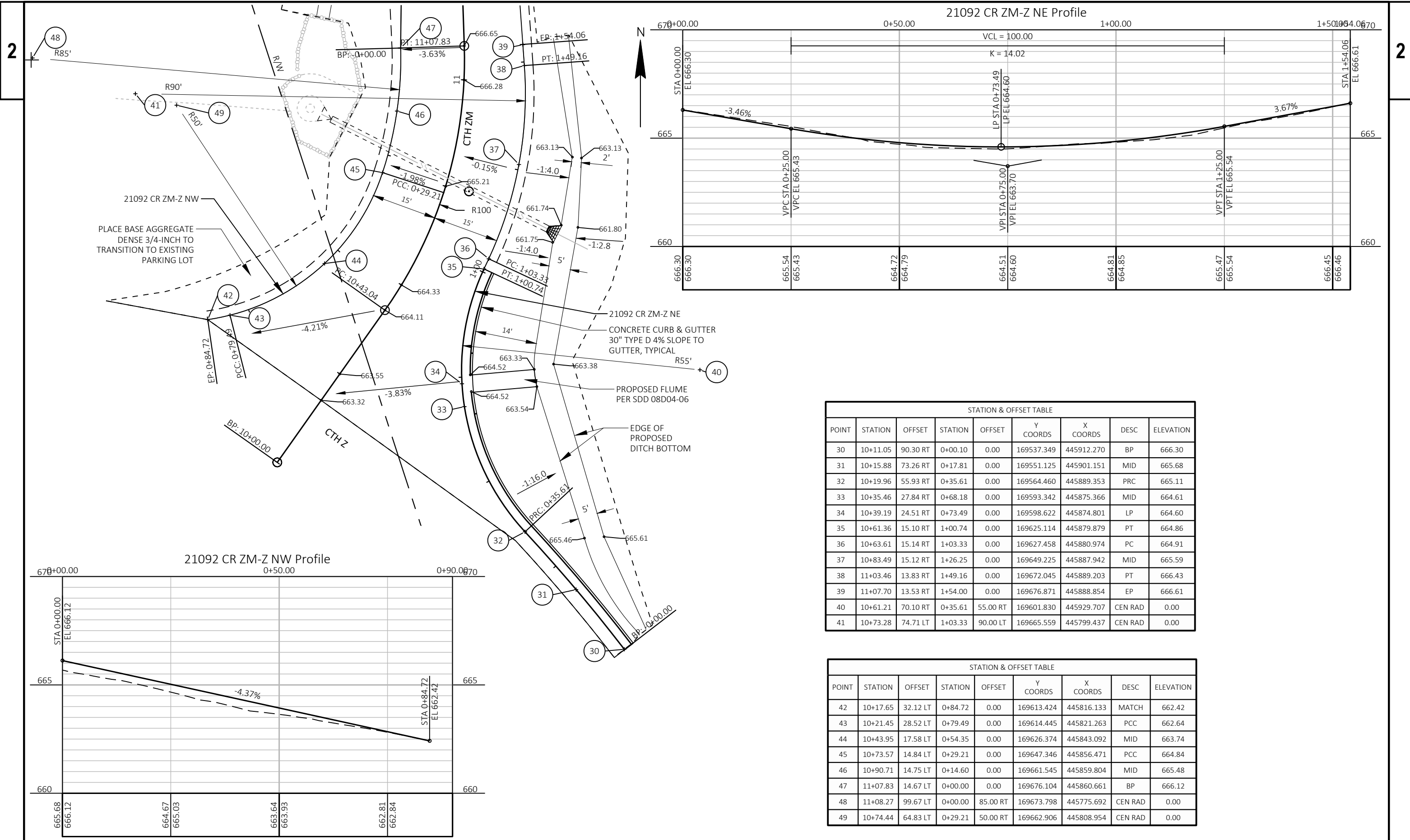


ITEM PAID FOR UNDER SILT FENCE BID ITEM. SEE PLAN FOR LOCATIONS.
NO MATERIAL MAY BE SUBSTITUTED FOR SILT FENCING MATERIAL.

EXCLUSION FENCING FOR BLANDIN'S TURTLE



SIDE VIEW OF EXCLUSION FENCING



STATION & OFFSET TABLE

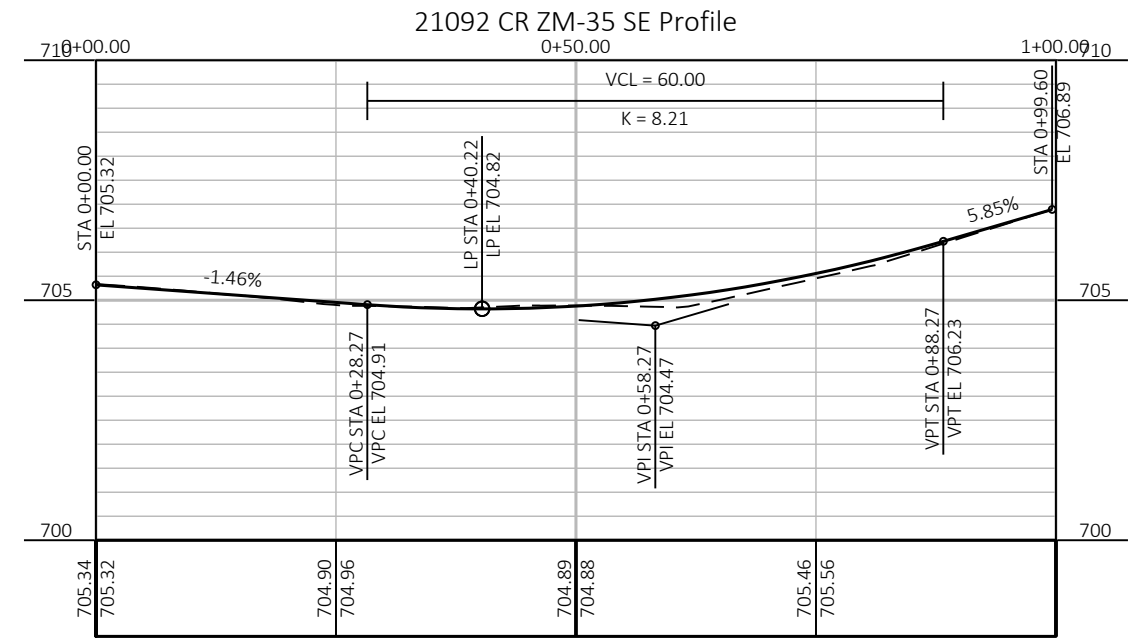
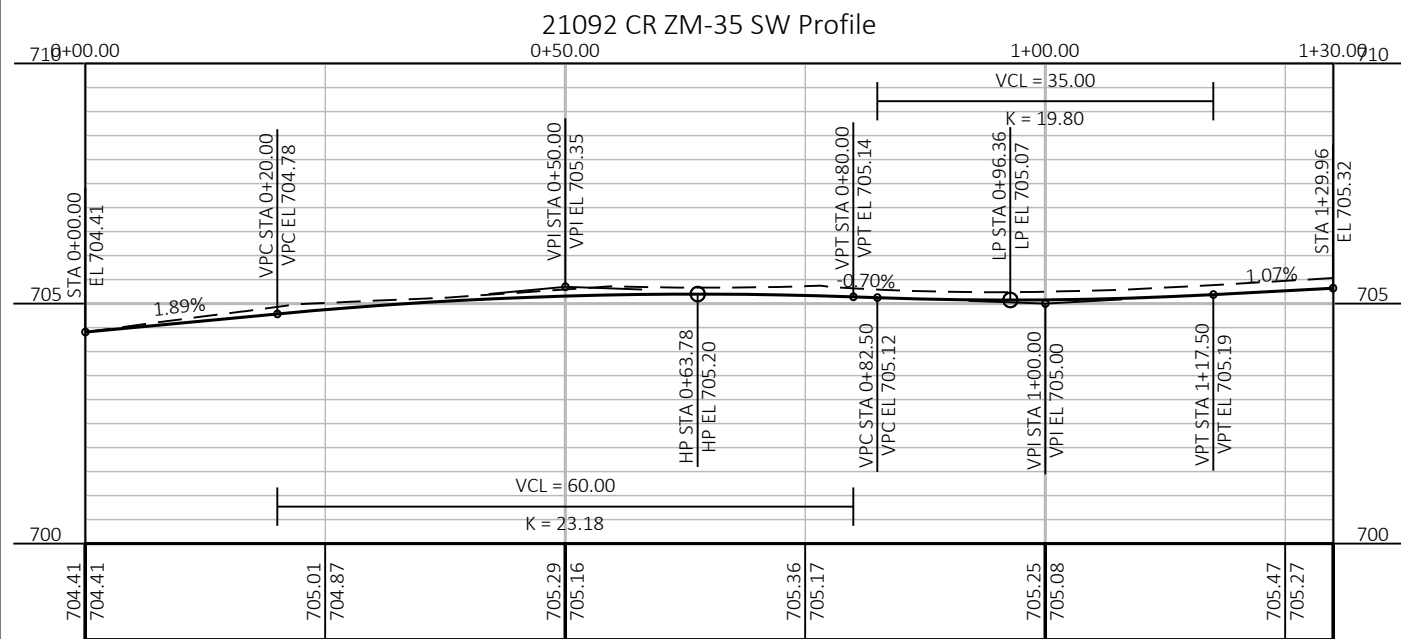
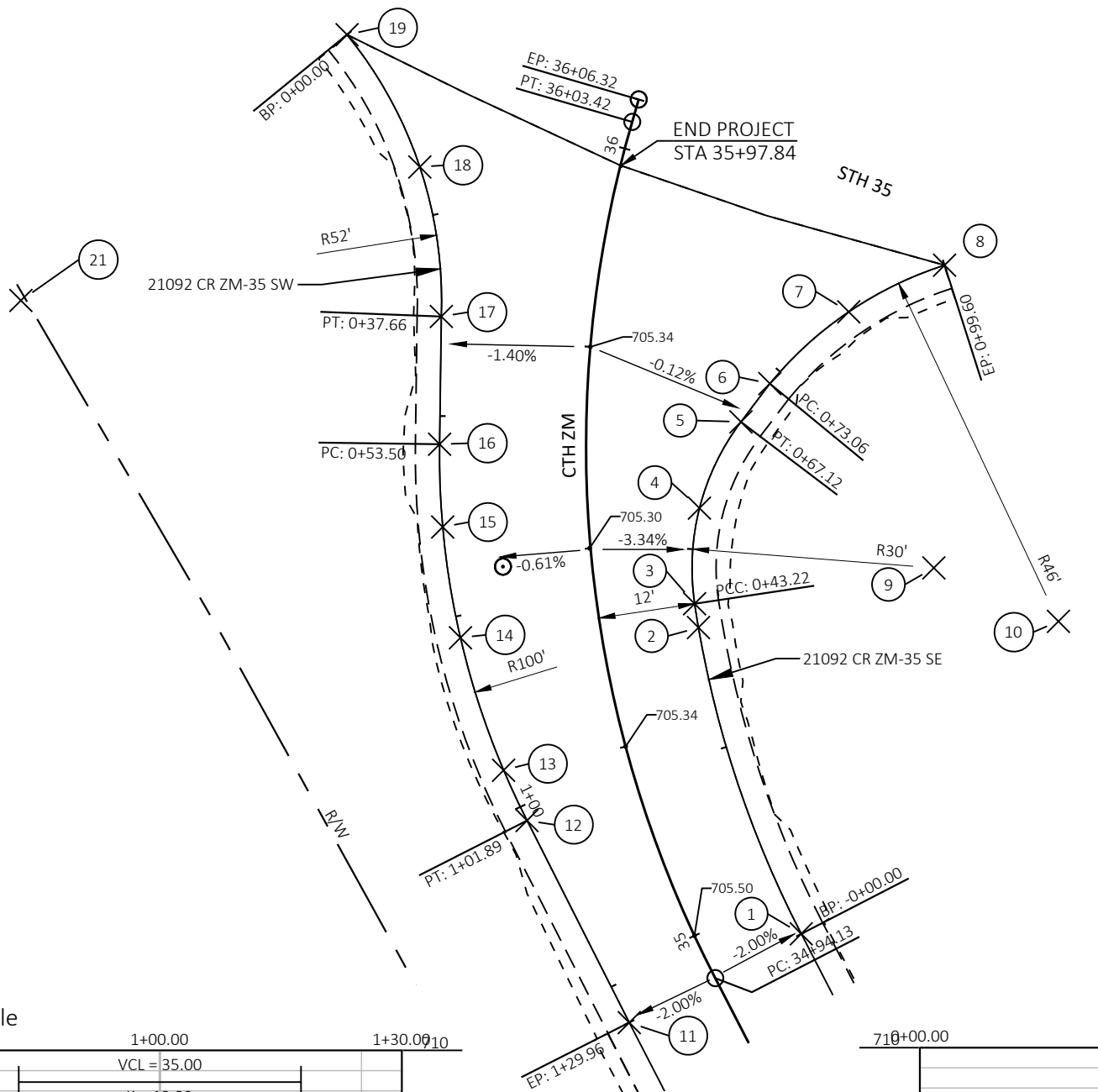
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	DESC	ELEVATION
30	10+11.05	90.30 RT	0+00.10	0.00	169537.349	445912.270	BP	666.30
31	10+15.88	73.26 RT	0+17.81	0.00	169551.125	445901.151	MID	665.68
32	10+19.96	55.93 RT	0+35.61	0.00	169564.460	445889.353	PRC	665.11
33	10+35.46	27.84 RT	0+68.18	0.00	169593.342	445875.366	MID	664.61
34	10+39.19	24.51 RT	0+73.49	0.00	169598.622	445874.801	LP	664.60
35	10+61.36	15.10 RT	1+00.74	0.00	169625.114	445879.879	PT	664.86
36	10+63.61	15.14 RT	1+03.33	0.00	169627.458	445880.974	PC	664.91
37	10+83.49	15.12 RT	1+26.25	0.00	169649.225	445887.942	MID	665.59
38	11+03.46	13.83 RT	1+49.16	0.00	169672.045	445889.203	PT	666.43
39	11+07.70	13.53 RT	1+54.00	0.00	169676.871	445888.854	EP	666.61
40	10+61.21	70.10 RT	0+35.61	55.00 RT	169601.830	445929.707	CEN RAD	0.00
41	10+73.28	74.71 LT	1+03.33	90.00 LT	169665.559	445799.437	CEN RAD	0.00

STATION & OFFSET TABLE

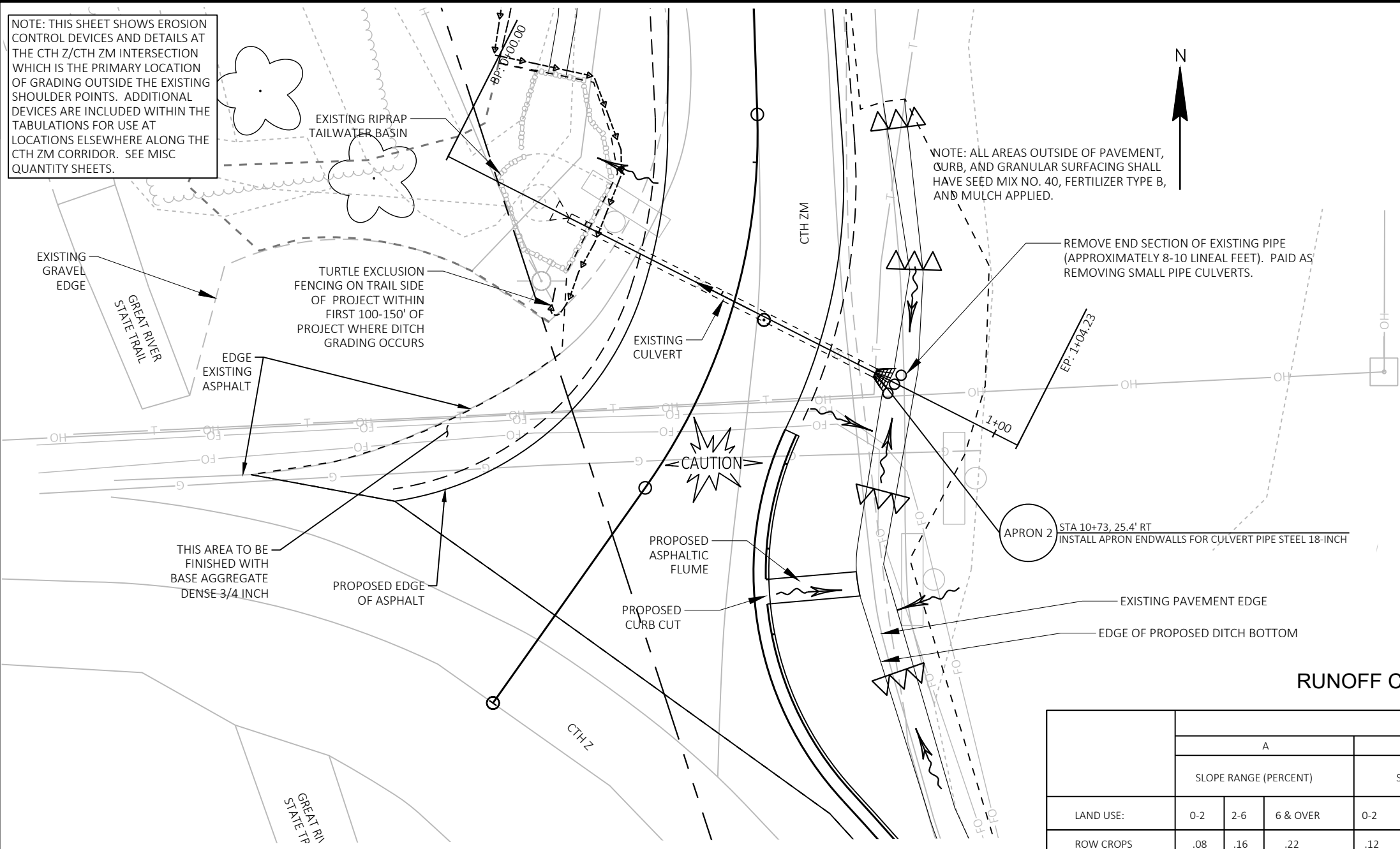
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	DESC	ELEVATION
42	10+17.65	32.12 LT	0+84.72	0.00	169613.424	445816.133	MATCH	662.42
43	10+21.45	28.52 LT	0+79.49	0.00	169614.445	445821.263	PCC	662.64
44	10+43.95	17.58 LT	0+54.35	0.00	169626.374	445843.092	MID	663.74
45	10+73.57	14.84 LT	0+29.21	0.00	169647.346	445856.471	PCC	664.84
46	10+90.71	14.75 LT	0+14.60	0.00	169661.545	445859.804	MID	665.48
47	11+07.83	14.67 LT	0+00.00	0.00	169676.104	445860.661	BP	666.12
48	11+08.27	99.67 LT	0+00.00	85.00 RT	169673.798	445775.692	CEN RAD	0.00
49	10+74.44	64.83 LT	0+29.21	50.00 RT	169662.906	445808.954	CEN RAD	0.00

STATION & OFFSET TABLE								
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	DESC	ELEVATION
1	34+94.13	12.00 RT	0+00.00	0.00	171927.913	445139.081	BP	705.32
2	35+38.01	12.00 RT	0+40.22	0.00	171965.894	445126.332	LP	704.82
3	35+41.28	12.00 RT	0+43.22	0.00	171968.853	445125.855	PCC	704.83
4	35+54.17	13.83 RT	0+55.17	0.00	171980.709	445126.452	MID	704.96
5	35+66.15	19.17 RT	0+67.12	0.00	171991.405	445131.602	PT	705.26
6	35+71.87	22.55 RT	0+73.06	0.00	171996.146	445135.191	PC	705.48
7	35+84.04	31.34 RT	0+86.33	0.00	172005.049	445144.968	MID	706.12
8	35+94.59	41.97 RT	0+99.60	0.00	172010.829	445156.860	MATCH	706.89
9	35+41.28	42.00 RT	0+43.22	30.00 RT	171973.300	445155.523	CEN RAD	0.00
10	35+26.80	55.85 RT	0+29.95	43.85 RT	171966.671	445170.973	CEN RAD	0.00

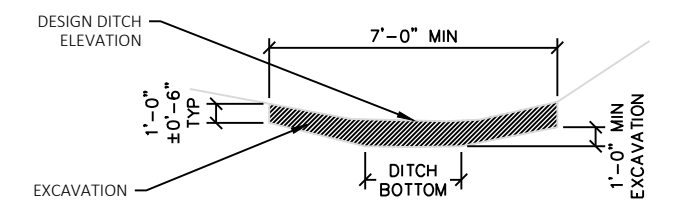
STATION & OFFSET TABLE								
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	DESC	ELEVATION
11	34+94.13	12.00 LT	1+29.96	0.00	171916.911	445117.751	EP	705.32
12	35+19.81	14.29 LT	1+01.89	0.00	171941.963	445105.079	PT	705.08
13	35+25.97	15.38 LT	0+95.00	0.00	171948.203	445102.173	LP	705.07
14	35+41.40	17.34 LT	0+77.69	0.00	171964.639	445096.820	mid	705.16
15	35+53.77	18.09 LT	0+63.78	0.00	171978.370	445094.622	HP	705.20
16	35+62.89	18.16 LT	0+53.50	0.00	171988.633	445094.234	PC	705.17
17	35+76.93	18.74 LT	0+37.66	0.00	172004.473	445094.449	PT	705.05
18	35+92.53	24.20 LT	0+18.83	0.00	172023.011	445091.791	MID	704.76
19	36+03.95	36.97 LT	0+00.00	0.00	172039.416	445082.758	MATCH	704.41
20	35+60.05	81.82 RT	0+53.50	100.00 LT	171987.274	445194.224	CEN RAD	0.00
21	35+74.81	70.84 LT	0+00.00	52.17 RT	172006.458	445042.316	CEN RAD	0.00
30	10+11.05	90.30 RT	0+00.10	0.00	169537.349	445912.270	BP	666.30



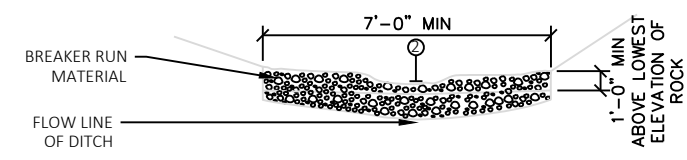
NOTE: THIS SHEET SHOWS EROSION CONTROL DEVICES AND DETAILS AT THE CTH Z/CTH ZM INTERSECTION WHICH IS THE PRIMARY LOCATION OF GRADING OUTSIDE THE EXISTING SHOULDER POINTS. ADDITIONAL DEVICES ARE INCLUDED WITHIN THE TABULATIONS FOR USE AT LOCATIONS ELSEWHERE ALONG THE CTH ZM CORRIDOR. SEE MISC QUANTITY SHEETS.



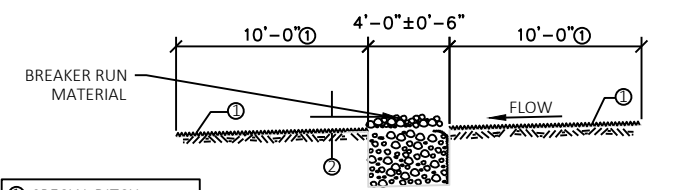
NOTE: ALL AREAS OUTSIDE OF PAVEMENT, CURB, AND GRANULAR SURFACING SHALL HAVE SEED MIX NO. 40, FERTILIZER TYPE B, AND MULCH APPLIED.



TYPICAL SECTION EXCAVATION



TYPICAL SECTION AT STONE DITCH CHECK



LONG SECTION AT DITCH

STONE DITCH CHECK

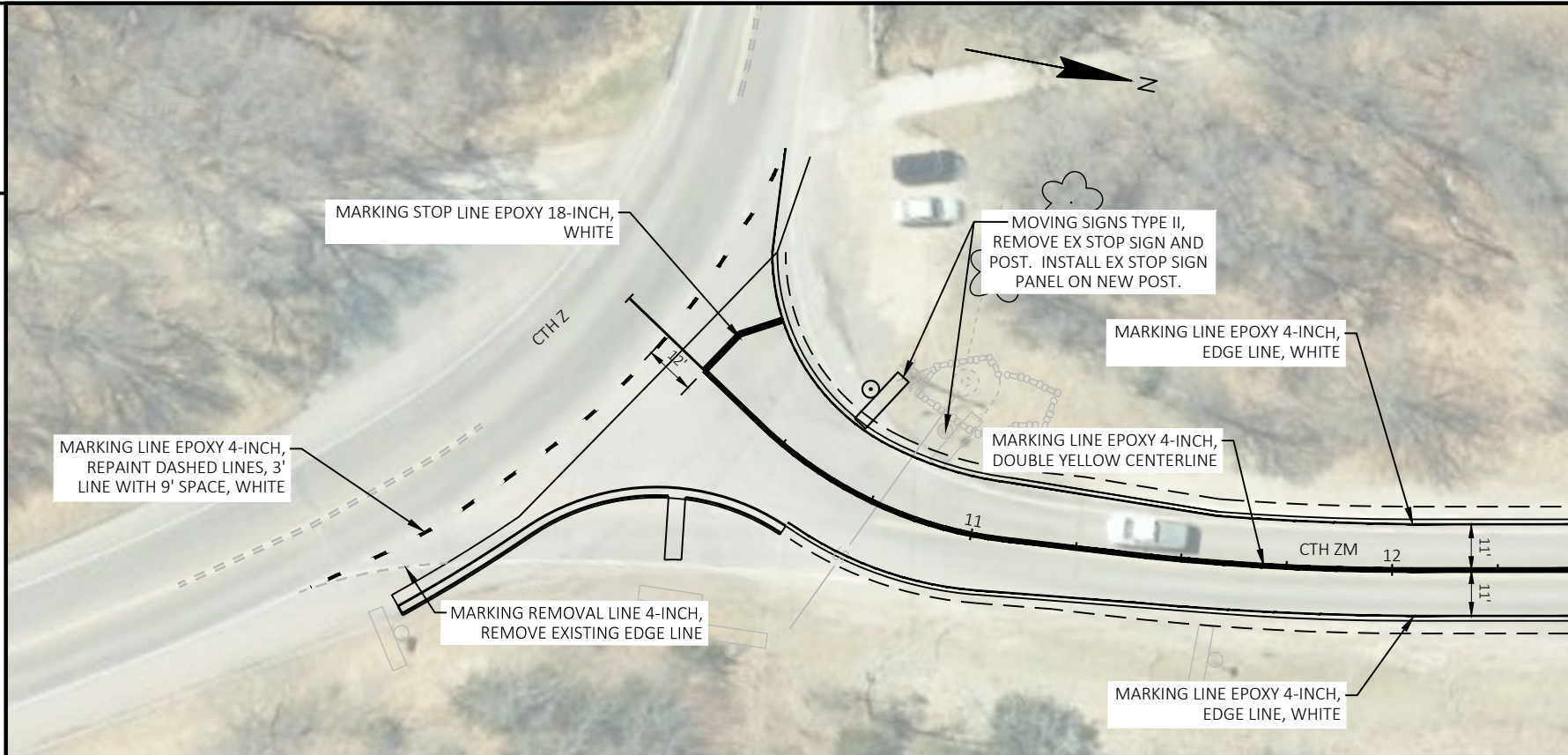
RUNOFF COEFFICIENT TABLE

	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 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.05 ACRES (OUTSIDE EXISTING ROADWAY PAVEMENT AND SHOULDER AGGREGATE LIMITS)

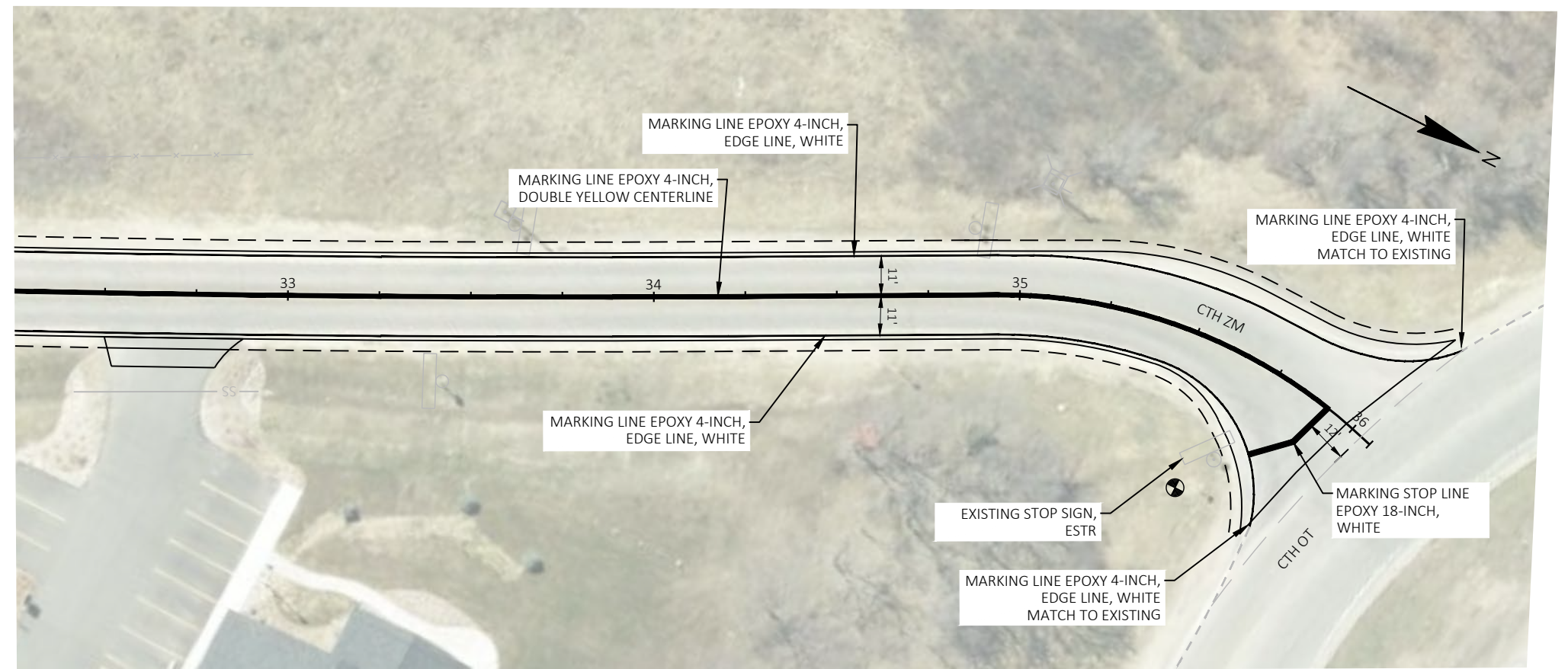
LEGEND

- SILT FENCE
- SLOPE INTERCEPT
- STONE DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

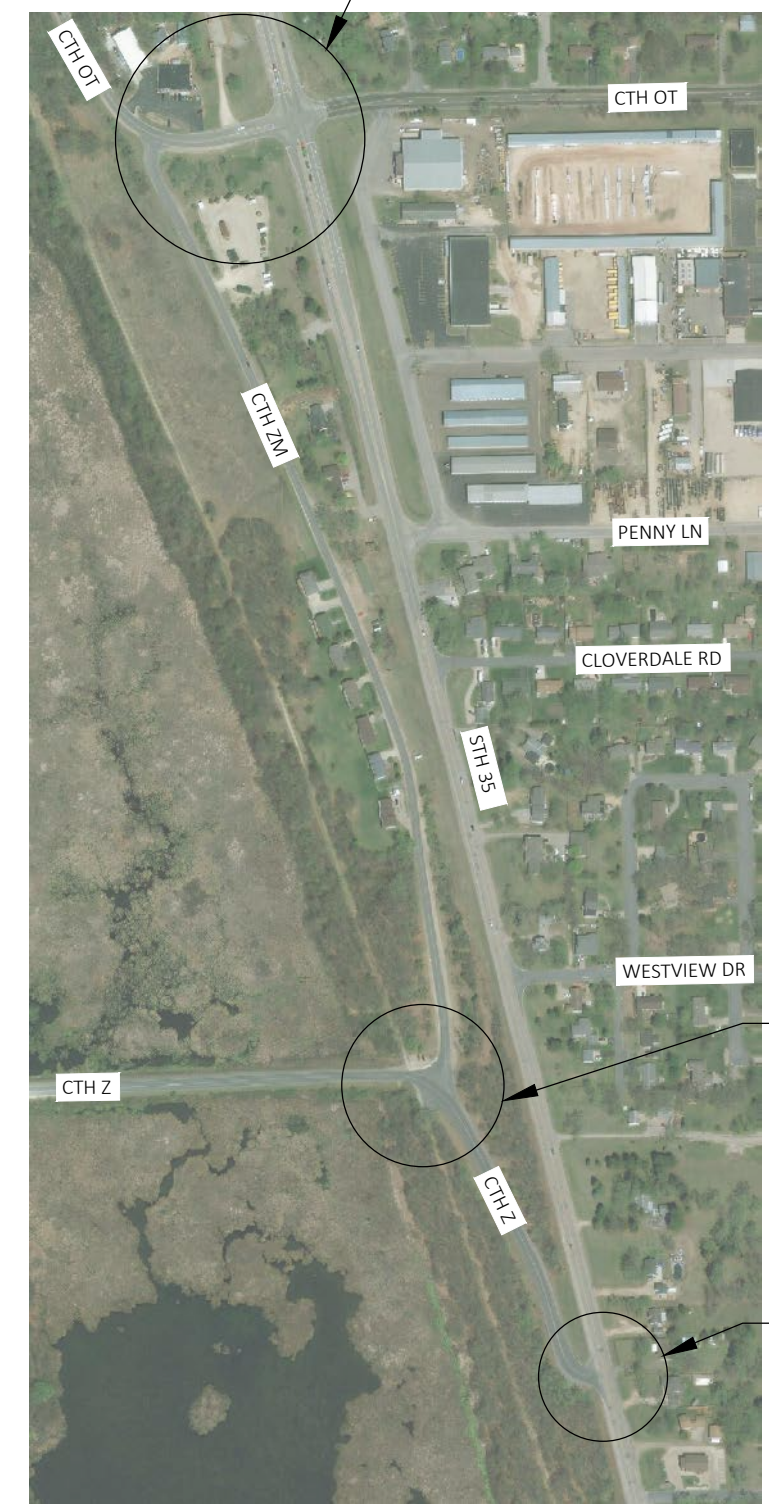
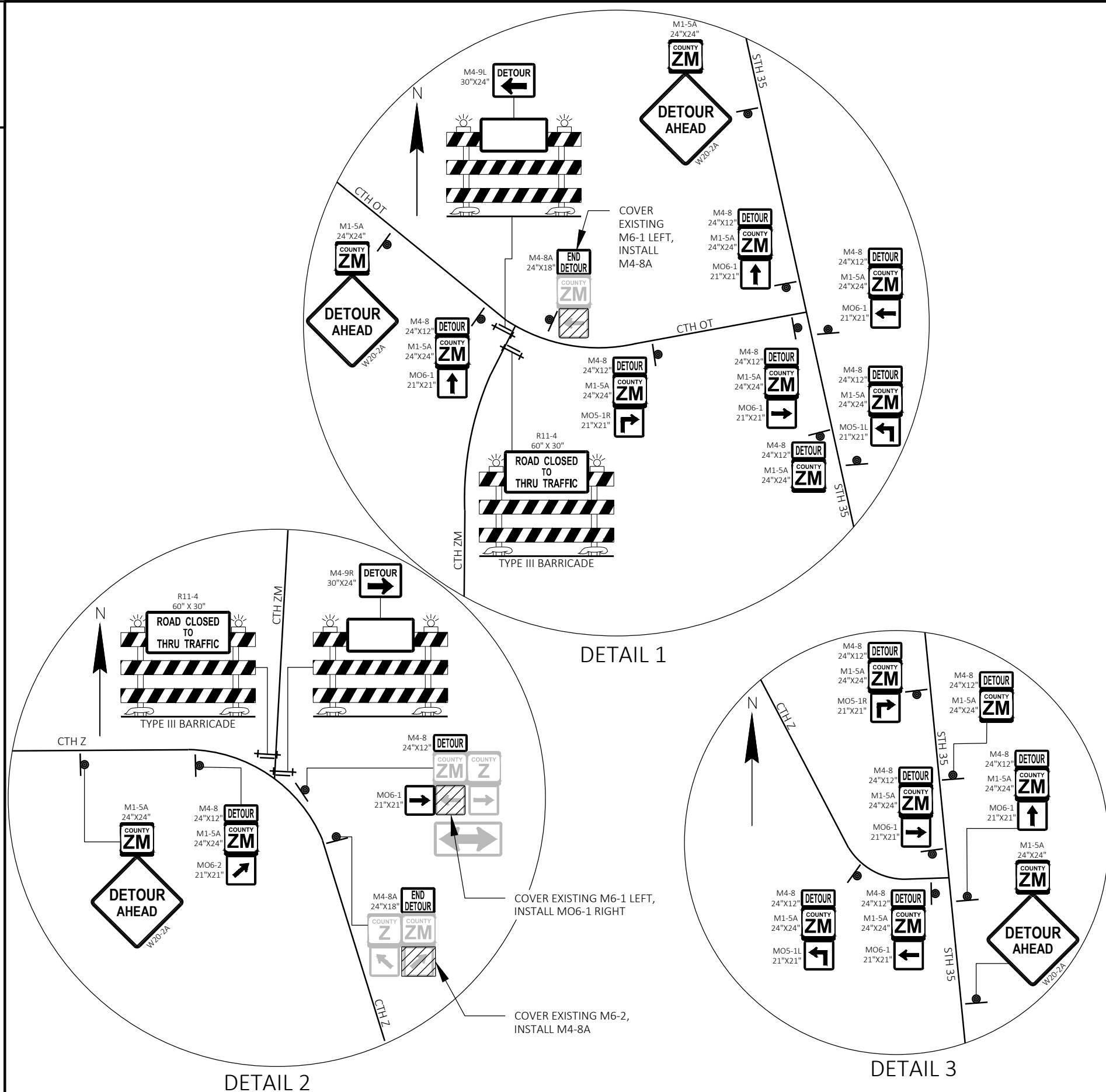


CTH Z & CTH ZM PAVEMENT MARKING DETAIL

NOTE: THIS SHEET INCLUDES DETAIL VIEWS FOR PAVEMENT MARKINGS AT INTERSECTIONS ONLY. REFER TO MISCELLANEOUS QUANTITY SHEET TABULATIONS FOR ADDITIONAL INFORMATION ON LOCATIONS OF PAVEMENT MARKINGS FOR THE PROJECT.

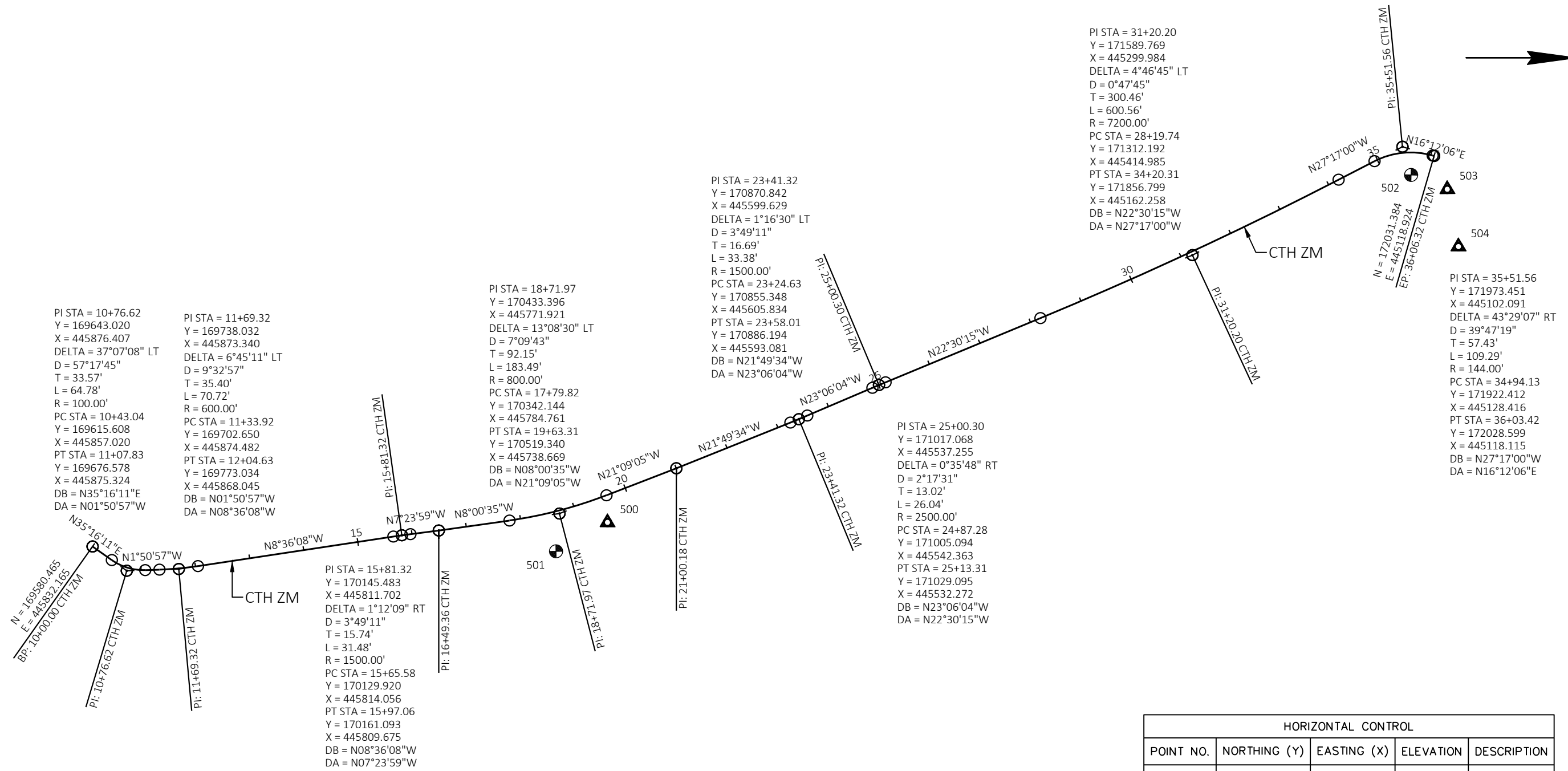
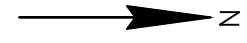


CTH OT & CTH ZM PAVEMENT MARKING DETAIL



NOTE: REFER TO SDD 15C2 FOR LEGEND, GENERAL NOTES AND SIGN SPACING.



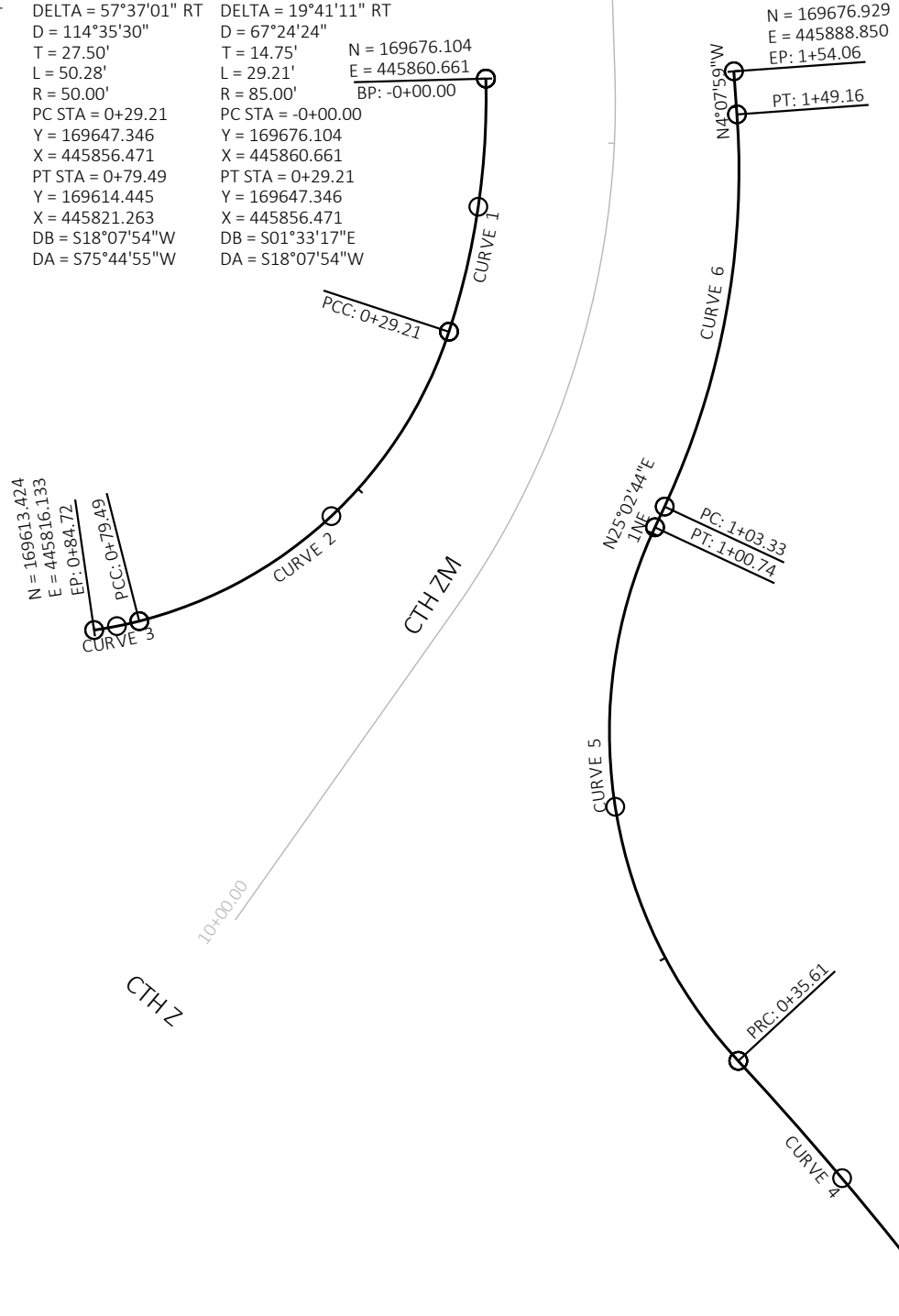


HORIZONTAL CONTROL				
POINT NO.	NORTHING (Y)	EASTING (X)	ELEVATION	DESCRIPTION
500	170521.13	445788.22	716.68	5/8" REBAR
503	172055.31	445179.64	707.29	5/8" REBAR
504	172075.72	445284.37	713.87	5/8" REBAR

BENCH MARKS		
BENCHMARK NO.	ELEVATION	DESCRIPTION
501	714.23	MAGNAIL IN TOP OF 24" RCP
502	705.71	MAGNAIL IN TOP OF 24" RCP

NW EDGE OF PAVEMENT

CURVE 3	CURVE 2	CURVE 1
PI STA = 0+82.10	PI STA = 0+56.70	PI STA = 0+14.75
Y = 169613.800	Y = 169621.214	Y = 169661.362
X = 445818.725	X = 445847.914	X = 445861.061
DELTA = 5°59'47" RT	DELTA = 57°37'01" RT	DELTA = 19°41'11" RT
D = 114°35'30"	D = 114°35'30"	D = 67°24'24"
T = 2.62'	T = 27.50'	T = 14.75'
L = 5.23'	L = 50.28'	L = 29.21'
R = 50.00'	R = 50.00'	R = 85.00'
PC STA = 0+79.49	PC STA = 0+29.21	PC STA = -0+00.00
Y = 169614.445	Y = 169647.346	Y = 169676.104
X = 445821.263	X = 445856.471	X = 445860.661
PT STA = 0+84.72	PT STA = 0+79.49	PT STA = 0+29.21
Y = 169613.424	Y = 169614.445	Y = 169647.346
X = 445816.133	X = 445821.263	X = 445856.471
DB = S75°44'55"W	DB = S18°07'54"W	DB = S01°33'17"E
DA = S81°44'42"W	DA = S75°44'55"W	DA = S18°07'54"W



NE EDGE OF PAVEMENT

CURVE 6
PI STA = 1+26.75
Y = 169648.681
X = 445890.891
DELTA = 29°10'43" LT
D = 63°39'43"
T = 23.43'
L = 45.83'
R = 90.00'
PC STA = 1+03.33
Y = 169627.458
X = 445880.974
PT STA = 1+49.16
Y = 169672.045
X = 445889.203
DB = N25°02'44"E
DA = N04°07'59"W

CURVE 5
PI STA = 0+72.60
Y = 169591.601
X = 445864.219
DELTA = 67°50'50" RT
D = 104°10'27"
T = 36.99'
L = 65.13'
R = 55.00'
PC STA = 0+35.61
Y = 169564.460
X = 445889.353
PT STA = 1+00.74
Y = 169625.114
X = 445879.879
DB = N42°48'06"W
DA = N25°02'44"E

CURVE 4
PI STA = 0+17.82
Y = 169551.387
X = 445901.460
DELTA = 5°12'08" LT
D = 14°36'28"
T = 17.82'
L = 35.61'
R = 392.23'
PC STA = -0+00.00
Y = 169537.269
X = 445912.332
PT STA = 0+35.61
Y = 169564.460
X = 445889.353
DB = N37°35'59"W
DA = N42°48'06"W

BP: -0+00.00
N = 169537.269
E = 445912.332



SE EDGE OF PAVEMENT

CURVE 11
PI STA = 0+86.71
Y = 172006.676
X = 445143.865
DELTA = 32°47'47" RT
D = 123°35'32"
T = 13.64'
L = 26.54'
R = 46.36'
PC STA = 0+73.06
Y = 171996.146
X = 445135.191
PT STA = 0+99.60
Y = 172010.829
X = 445156.860
DB = N39°28'49"E
DA = N72°16'36"E

CURVE 10
PI STA = 0+55.84
Y = 171981.338
X = 445123.983
DELTA = 45°38'44" RT
D = 190°59'09"
T = 12.62'
L = 23.90'
R = 30.00'
PC STA = 0+43.22
Y = 171968.853
X = 445125.855
PT STA = 0+67.12
Y = 171991.405
X = 445131.602
DB = N08°31'30"W
DA = N37°07'14"E

CURVE 9
PI STA = 0+21.80
Y = 171947.290
X = 445129.087
DELTA = 18°45'30" RT
D = 43°24'21"
T = 21.80'
L = 43.22'
R = 132.00'
PC STA = -0+00.00
Y = 171927.913
X = 445139.081
PT STA = 0+43.22
Y = 171968.853
X = 445125.855
DB = N27°17'00"W
DA = N08°31'30"W

SW EDGE OF PAVEMENT

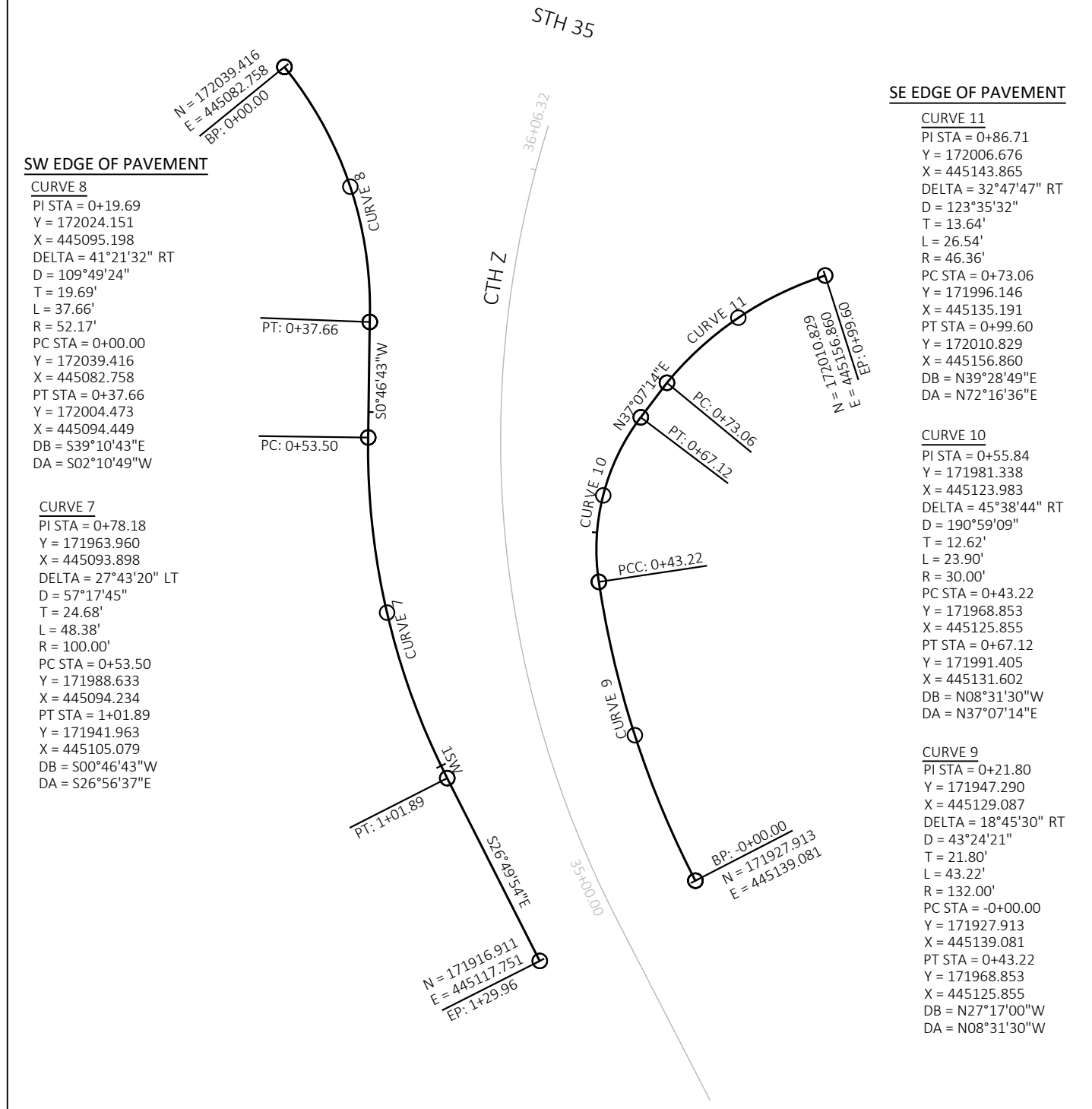
CURVE 8
PI STA = 0+19.69
Y = 172024.151
X = 445095.198
DELTA = 41°21'32" RT
D = 109°49'24"
T = 19.69'
L = 37.66'
R = 52.17'
PC STA = 0+00.00
Y = 172039.416
X = 445082.758
PT STA = 0+37.66
Y = 172004.473
X = 445094.449
DB = S39°10'43"E
DA = S02°10'49"W

CURVE 7
PI STA = 0+78.18
Y = 171963.960
X = 445093.898
DELTA = 27°43'20" LT
D = 57°17'45"
T = 24.68'
L = 48.38'
R = 100.00'
PC STA = 0+53.50
Y = 171988.633
X = 445094.234
PT STA = 1+01.89
Y = 171941.963
X = 445105.079
DB = S00°46'43"W
DA = S26°56'37"E

N = 172039.416
E = 445082.758
BP: 0+00.00

PT: 0+37.66
PC: 0+53.50

N = 171916.911
E = 445117.751
EP: 1+29.96



Estimate Of Quantities

5991-02-75

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0004	204.0100	Removing Concrete Pavement	SY	30.000	30.000
0006	204.0150	Removing Curb & Gutter	LF	26.000	26.000
0008	205.0100	Excavation Common	CY	3,664.000	3,664.000
0010	213.0100	Finishing Roadway (project) 01. 5991-02-75	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	450.000	450.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,960.000	4,960.000
0016	455.0605	Tack Coat	GAL	360.000	360.000
0018	460.2000	Incentive Density HMA Pavement	DOL	1,050.000	1,050.000
0020	460.5223	HMA Pavement 3 LT 58-28 S	TON	920.000	920.000
0022	460.5224	HMA Pavement 4 LT 58-28 S	TON	720.000	720.000
0024	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	60.000	60.000
0026	465.0315	Asphaltic Flumes	SY	7.000	7.000
0028	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	1.000	1.000
0030	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	101.000	101.000
0032	619.1000	Mobilization	EACH	1.000	1.000
0034	624.0100	Water	MGAL	80.000	80.000
0036	625.0500	Salvaged Topsoil	SY	540.000	540.000
0038	627.0200	Mulching	SY	1,130.000	1,130.000
0040	628.1504	Silt Fence	LF	250.000	250.000
0042	628.1520	Silt Fence Maintenance	LF	50.000	50.000
0044	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0046	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0048	628.2027	Erosion Mat Class II Type C	SY	320.000	320.000
0050	628.7010	Inlet Protection Type B	EACH	1.000	1.000
0052	628.7555	Culvert Pipe Checks	EACH	11.000	11.000
0054	628.7560	Tracking Pads	EACH	2.000	2.000
0056	629.0210	Fertilizer Type B	CWT	0.700	0.700
0058	630.0140	Seeding Mixture No. 40	LB	25.000	25.000
0060	630.0200	Seeding Temporary	LB	35.000	35.000
0062	630.0500	Seed Water	MGAL	20.000	20.000
0064	634.0811	Posts Tubular Steel 2x2-Inch X 11-FT	EACH	1.000	1.000
0066	638.2102	Moving Signs Type II	EACH	1.000	1.000
0068	638.2602	Removing Signs Type II	EACH	1.000	1.000
0070	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0072	642.5001	Field Office Type B	EACH	1.000	1.000
0074	643.0300	Traffic Control Drums	DAY	1,580.000	1,580.000
0076	643.0420	Traffic Control Barricades Type III	DAY	300.000	300.000
0078	643.0705	Traffic Control Warning Lights Type A	DAY	600.000	600.000
0080	643.0900	Traffic Control Signs	DAY	4,550.000	4,550.000
0082	643.0920	Traffic Control Covering Signs Type II	EACH	3.000	3.000
0084	643.5000	Traffic Control	EACH	1.000	1.000
0086	646.1020	Marking Line Epoxy 4-Inch	LF	8,667.000	8,667.000
0088	646.6120	Marking Stop Line Epoxy 18-Inch	LF	51.000	51.000
0090	646.9000	Marking Removal Line 4-Inch	LF	36.000	36.000
0092	648.0100	Locating No-Passing Zones	MI	0.480	0.480
0094	650.4500	Construction Staking Subgrade	LF	2,581.000	2,581.000
0096	650.5000	Construction Staking Base	LF	2,581.000	2,581.000
0098	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	101.000	101.000

Estimate Of Quantities

5991-02-75

Line	Item	Item Description	Unit	Total	Qty
0100	650.9911	Construction Staking Supplemental Control (project) 01. 5991-02-75	EACH	1.000	1.000
0102	650.9920	Construction Staking Slope Stakes	LF	2,581.000	2,581.000
0104	690.0150	Sawing Asphalt	LF	213.000	213.000
0106	690.0250	Sawing Concrete	LF	160.000	160.000
0108	740.0440	Incentive IRI Ride	DOL	980.000	980.000
0110	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0112	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	250.000	250.000
0114	SPV.0195	Special 01. Select Crushed Material for Subgrade Stabilization	TON	550.000	550.000
0116	SPV.0195	Special 02. Stone Ditch Check Special	TON	30.000	30.000

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							REMOVALS			
STATION	-	STATION	LOCATION	203.0100	204.0100	204.0150				
				REMOVING SMALL PIPE CULVERTS EACH	REMOVING CONCRETE PAVEMENT SY	REMOVING CURB AND GUTTER LF	REMARKS			
10+11		10+37	RT			26				
10+73		-	RT	1			FOR REMOVAL OF 8-10 LF OF EXISTING 18" CPCS AT INLET END ONLY. KNOWN TO BE A SEPARATE PIECE OF CULVERT THAT CAN BE UNBANDED FROM THE REMAINING SEGMENTS OF THE CULVERT PIPE.			
16+83		17+02	LT		8.0		PCC DRIVE			
20+75		21+00	LT		10.3		PCC DRIVE			
22+92		23+13	LT		3.4		PCC DRIVE			
23+41		23+65	LT		8.1		PCC DRIVE			
PROJECT TOTALS				1	30	26				

QMP BASE AGGREGATE, BASE AGREGATE DENSE, SELECT CRUSHED MATERIAL										
STATION	-	STATION	SIDE SHOULDER STONE IS NEEDED	305.0110	305.0120	SPV.0195.01		624.0100		REMARKS
				BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4 INCH TON	SELECT CRUSHED MATERIAL FOR SUBGRADE STABILIZATION	TON	WATER	MGAL	
10+07		10+91	LT	17	-	-	-	-	-	FOR SURFACING OF GRAVEL TRANSITION TO EXISTING PARKING LOT WITHIN PREVIOUSLY PAVED ROAD AREA. DOES NOT INCLUDE SHOULDER.
10+17		11+58	-	-	354	-	-	-	-	INTERSECTION OF CTH Z & CTH ZM
11+58		34+94	-	-	4292	-	-	-	-	INCLUDES BASE AGGREGATE UNDER SHOULDERS
10+17		11+08	RT	7	-	-	-	-	-	
10+17		11+08	LT	5	-	-	-	-	-	
11+08		16+25	RT<	79	-	-	-	-	-	
16+25		23+75	RT	58	-	-	-	-	-	
16+50		23+75	LT	37	-	-	-	-	-	
23+75		34+94	RT<	171	-	-	-	-	-	
34+94		35+98	-	16	271	-	-	-	-	INTERSECTION OF CTH ZM & CTH OT
UNDISTRIBUTED				-	-	-	-	80	-	QUANTITY BASED ON TOTAL AGGREGATE QUANTITIES AND 15 GAL/TON
UNDISTRIBUTED				60	43	-	-	-	-	FOR USE AS DIRECTED BY ENGINEER AT BASE AGGREGATE DRIVEWAYS OR WHERE SHOULDER MAY NEED TO BE BLENDED TO EXISTING AGGREGATE SHOULDERS.
UNDISTRIBUTED				-	-	550	-	-	-	FOR USE AS DIRECTED BY ENGINEER IF UNSTABLE SUBGRADE LOCATIONS ARE ENCOUNTERED.
PROJECT TOTAL				450	4960	550	80			

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		NEW HMA PAVEMENT						
		455.0605 TACK COAT	460.5223 HMA PAVEMENT 3 LT 58-28 S	460.5224 HMA PAVEMENT 4 LT 58-28 S	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	465.0315 ASPHALTIC FLUME		
STATION	-	STATION	GAL	TON	TON	TON	SY	REMARKS
10+17	-	11+58		79	64	-		INTERSECTION ON CTHZ & CTH ZM
10+41	-	-		-	-	-	7	FLUME
11+58	-	17+06		184	143	-		CTH ZM
16+65	-	17+06		-	-	5		EXISTING PCC DRIVE LT
17+06	-	18+98		65	50	-		CTH ZM
18+68	-	18+98		-	-	3		EXISTING GRANULAR/PCC DRIVE LT
18+98	-	19+92		32	25	-		CTH ZM
19+72	-	19+92		-	-	2		EXISTING GRANULAR/ASPHALTIC DRIVE LT
19+92	-	21+00		36	28	-		CTH ZM
20+75	-	21+00		-	-	3		EXISTING PCC DRIVE LT
21+00	-	21+99		33	26	-		CTH ZM
21+80	-	21+99		-	-	2		EXISTING GRANULAR/PCC DRIVE LT
21+99	-	23+89		64	50	-		CTH ZM
22+40	-	23+89		-	-	18		EXISTING GRANULAR DRIVE RT
22+90	-	23+15		-	-	2		EXISTING PCC DRIVE LT
23+40	-	23+68		-	-	2		EXISTING PCC DRIVE LT
23+89	-	25+76		63	49	-		CTH ZM
25+24	-	25+76		-	-	7		EXISTING GRANULAR DRIVE RT
25+76	-	32+88		239	186	-		CTH ZM
28+60	-	29+02		-	-	5		EXISTING GRANULAR DRIVE RT
31+27	-	31+70		-	-	5		EXISTING ASPHALTIC DRIVE RT
32+50	-	32+88		-	-	6		EXISTING ASPHALTIC DRIVE RT
32+88	-	34+94		69	54	-		CTH ZM
34+94	-	35+98		56	45	-		INTERSECTION OF CTH ZM & CTH OT
			360					TACK COAT ON BINDER LAYER
PROJECT TOTALS			360	920	720	60	7	

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.25	WASTE	COMMENT
			CUT (2)	EBS EXCAVATION (3)						
DIVISION 1	10+17.55 TO 35+97.84									
			3,664	0	925	2,739	3	4	3,660	
GRAND TOTAL			3,664	0	925	2,739	3	4	3,660	
TOTAL COMMON EXC			3,664							

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) NOTE: SPECIAL ITEM SPV.0195.01 SELECT CRUSHED FOR SUBGRADE STABILIZATION INCLUDES EXCAVATION WHERE THAT ITEM IS USED FOR CORE OUT. SEE SPECIAL PROVISIONS.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) EXPANDED FILL FACTOR - 1.25

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STORM SEWER STRUCTURES: CONCRETE CURB & GUTTER

STRUCTURE	STATION	STATION	OFFSET	521.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	601.0409 CONCRETE CURB & GUTTER, 30- INCH TYPE A LF	INVERT ELEVATION	REMARKS
	10+11	10+62			101		
APRON 2	10+73		25.4 RT	1		MATCH EXISTING PIPE	18-INCH STEEL. TO BE INSTALLED ON INLET END OF EXISTING CPCS
PROJECT TOTALS				1	101		

FINISHING ITEMS

STATION	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER LB	NOTES
10+14	12+50	RT	173	347	0.22	7	10	-	
10+70	11+72	LT	79	157	0.10	3	5	-	
16+25	16+71	LT	5	9	0.01	1	1	-	
16+98	21+75	RT	111	221	0.14	4	6	-	
18+01	18+50	LT	9	17	0.01	1	1	-	
22+25	22+75	LT	12	24	0.02	1	1	-	
22+75	28+60	RT	40	81	0.05	2	3	-	
28+98	30+25	RT	16	32	0.02	1	1	-	
31+67	34+75	RT	67	133	0.08	3	4	-	
UNDISTRIBUTED								20	SEED WATER ESTIMATED FOR ALL AREAS BASED ON TOTAL MULCH AREA
UNDISTRIBUTED			30	109	0.06	2	3		SMALL AREAS BETWEEN SHOULDER AND SLOPE LIMITS AT SPOT LOCATIONS
PROJECT TOTALS			540	1130	0.70	25	35	20	

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
10+17 TO 34+98	4	1
PROJECT TOTALS	4	1

EROSION CONTROL

STA	-	STA	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.7010 INLET PROTECTION TYPE B EACH	628.7560 TRACKING PAD EACH	628.7555 CULVERT PIPE CHECKS EACH	SPV.0195.02 STONE DITCH CHECK SPECIAL TON	REMARKS
10+27	-	-	-	-	-	-	-	1	-	-	
10+27	-	11+10	LT	-	-	158	-	-	-	-	
10+42	-	-	RT	-	-	-	-	-	-	7	
10+50	-	11+75	LT	150	-	-	-	-	-	-	
10+60	-	-	RT	-	-	-	-	-	-	7	
10+72	-	-	RT	-	-	-	1	-	2	-	
10+87	-	-	RT	-	-	-	-	-	-	7	
11+05	-	-	RT	-	-	-	-	-	-	7	
28+60	-	-	RT	-	-	-	-	-	3	-	
31+20	-	-	RT	-	-	-	-	-	3	-	
32+45	-	-	RT	-	-	-	-	-	3	-	
35+87	-	-	-	-	-	-	-	1	-	-	
UNDISTRIBUTED				100	50	162	0	0	0	2	
PROJECT TOTALS				250	50	320	1	2	11	30	

PAVEMENT MARKINGS

STATION -	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	REMARKS
10+00 -	10+00	CTH Z	42		WHITE, MINI DASH 3' LINE 9' SKIP ON CTH OT
10+25	10+25	CTH ZM		25	18" WHITE STOP LINE
10+61 -	35+95	RT	2546		WHITE, EDGE LINE
10+03 -	36+07	LT	2625		WHITE, EDGE LINE
10+25 -	17+83	CENTER	1516		DOUBLE YELLOW*
17+83 -	23+15	CENTER	665		YELLOW, SOLID/SKIP*
23+15 -	28+51	CENTER	134		YELLOW, SKIP*
28+51 -	33+09	CENTER	573		YELLOW, SOLID/SKIP*
33+09 -	35+92	CENTER	566		DOUBLE YELLOW*
35+92	35+92	CTH ZM		26	18" WHITE STOP LINE

PROJECT TOTAL 8667 51 *Estimated. Final quantity based on location of No Passing zones.

PERMANENT SIGNING

ALL QUANTITIES ARE CATEGORY 10

SIGN NO.	STATION	SIDE	SIGN CODE	FACE DIR	634.0811 POSTS TUBULAR STEEL 2X2-INCH X 11-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1	10+86	LT	R1-1	N	1	1		1	RELOCATE EXISTING SIGN "STOP" ON NEW POST, EX. POST IS WOOD
2	19+19	RT		S			1	1	REMOVE EXISTING "NO LITTERING" SIGN AND SUPPORT

PROJECT TOTALS 1 1 1 2

TRAFFIC CONTROL AND DETOUR SIGNS

DETAIL	LOCATION	DURATION DAYS	SIGN CODE	SIZE W X H	MESSAGE	NO.	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II * EACH	REMARKS
1	CTH ZM	75						150	300	150		Barricades and signs at the EOP
1	CTH OT, STH 35	75	M1-5A	24 X 24	CTH ZM	9				675		
1	CTH OT, STH 35	75	W20-2A	36 X 36	DETOUR AHEAD	2				150		
1	CTH OT, STH 35	75	M4-8	24 X 12	DETOUR	6				450		
1	CTH OT, STH 35	75	MO6-1	21 X 21	STRAIGHT ARROW	2				150		
1	CTH OT	75	MO6-1	21 X 21	RIGHT ARROW	1				75		
1	STH 35	75	MO6-1	21 X 21	LEFT ARROW	1				75		
1	CTH OT	75	MO5-1R	21 X 21	ADVANCE RIGHT ARROW	1				75		
1	STH 35	75	MO5-1L	21 X 21	ADVANCE LEFT ARROW	1				75		
1	CTH OT	75	M4-8A	24 X 18	END DETOUR	1				75	1	Mount sign on existing assembly, cover arrow
2	CTH ZM	75						150	300	150		Barricades and signs at the BOP
2	CTH Z	75	M1-5A	24 X 24	CTH ZM	3				225		
2	CTH Z	75	W20-2A	36 X 36	DETOUR AHEAD	1				75		
2	CTH Z	75	M4-8	24 X 12	DETOUR	2				150		Mount (1) sign on existing assembly
2	CTH Z	75	MO6-2	21 X 21	DIAGONAL ARROW	1				75		
2	CTH Z	75	MO6-1	21 X 21	RIGHT ARROW	1				75	1	Mount sign on existing assembly, cover left arrow
2	CTH Z	75	M4-8A	24 X 18	END DETOUR	1				75	1	Mount sign on existing assembly, cover diagonal arrow
3	CTH Z, STH 35	75	M1-5A	24 X 24	CTH ZM	6				450		
3	STH 35	75	W20-2A	36 X 36	DETOUR AHEAD	1				75		
3	CTH Z, STH 35	75	M4-8	24 X 12	DETOUR	5				375		
3	STH 35	75	MO6-1	21 X 21	STRAIGHT ARROW	1				75		
3	STH 35	75	MO6-1	21 X 21	RIGHT ARROW	1				75		
3	CTH Z	75	MO6-1	21 X 21	LEFT ARROW	1				75		
3	STH 35	75	MO5-1R	21 X 21	ADVANCE RIGHT ARROW	1				75		
3	CTH Z	75	MO5-1L	21 X 21	ADVANCE LEFT ARROW	1				75		
SDD 15 C05		75								450		Advance warning signs
SDD 15 D28		75					80			50		For work on shoulder
Undistributed		75					1500					For channelization of local traffic during construction
PROJECT TOTAL							1580	300	600	4550	3	

* NOTE: FOR COVERING SIGNS, TYPE II THERE IS ONLY ONE CYCLE FOR THIS PROJECT.

MARKING REMOVAL LINE 4-INCH

LOCATING NO-PASSING ZONE

646.9000 MARKING REMOVAL LINE 4-INCH			
STA	- STA	LOCATION	LF
10+00	- 10+13	CTH Z	36
PROJECT TOTAL			36

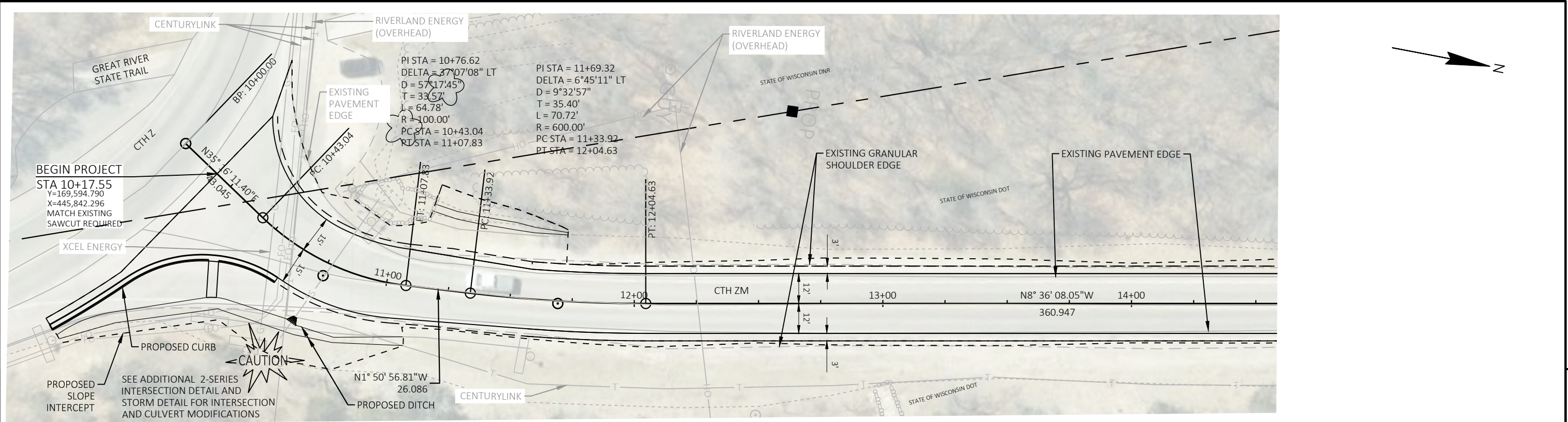
648.0100 LOCATING NO-PASSING ZONES				
STA	- STA	LOCATION	FEET	MILES
10+25	- 35+78	MAINLINE	2553	0.48
PROJECT TOTAL				0.48

CONSTRUCTION STAKING

STATION	TO STATION	LOCATION	650.4500	650.5000	650.5500	650.9911	650.9920	NOTES
			SUBGRADE LF	BASE LF	CURB GUTTER & CURB & GUTER LF	SUPPLEMENTAL CONTROL EACH	SLOPE STAKES LF	
10+11	10+62	RT			101			
10+17	35+98	RT<	2,581	2,581		1		
10+17	35+98	RT<					2,581	ONLY REQUIRED WHERE SLOPES ARE SIGNIFICANTLY OUTSIDE THE SHOULDER POINTS. INCLUDED FOR THE ENTIRE PROJECT LENGTH FOR QUANTITY PURPOSES SINCE LOCATIONS VARY. SEE CROSS SECTIONS. INCLUDES ANY STAKING TO CONSTRUCT DITCH GRADING WITHIN CTH Z/CTH ZM INTERSECTION.
PROJECT TOTALS			2,581	2,581	101	1	2,581	

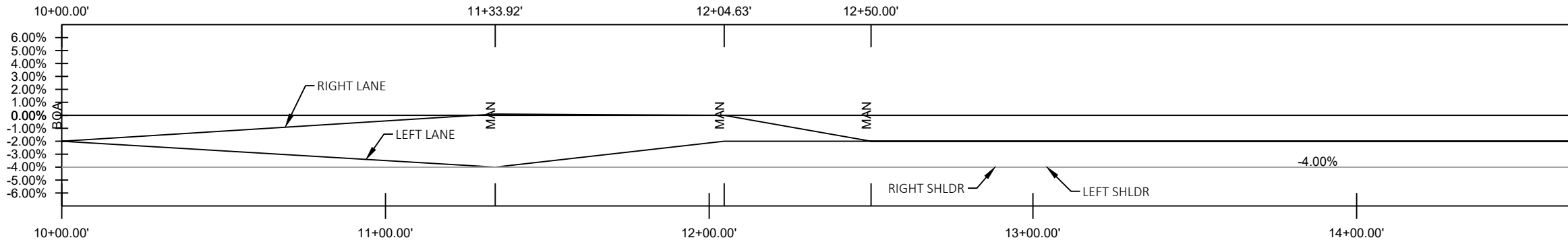
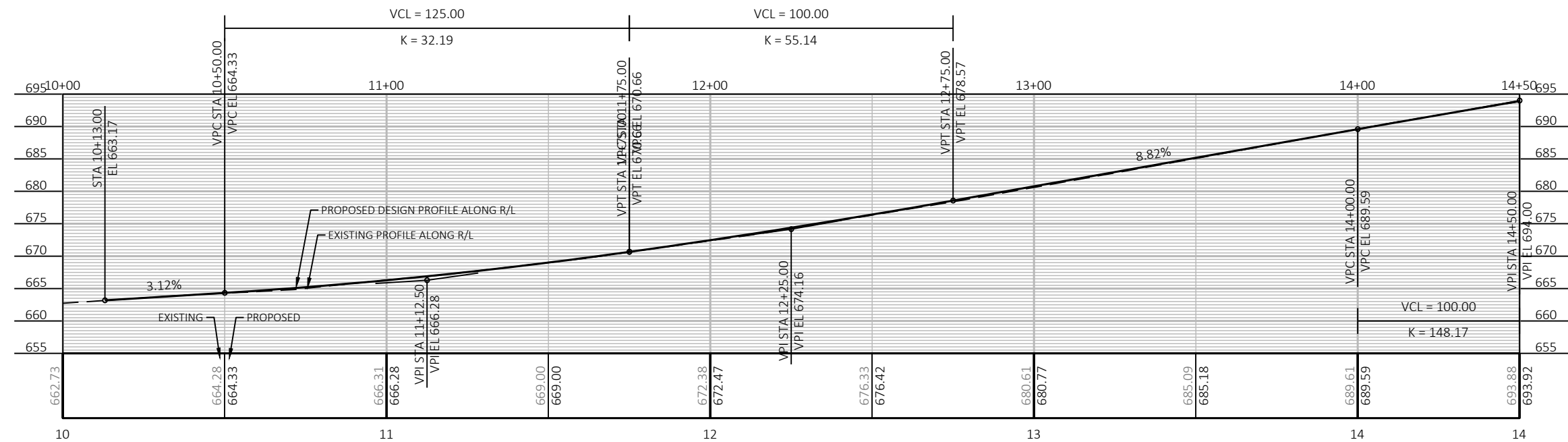
SAWCUT ASPHALT & CONCRETE

STATION	- STATION	LOCATION	690.0150	690.0250	REMARKS
			SAWING ASPHALT LF	SAWING CONCRETE LF	
10+17			134		BEGINNING OF PROJECT
16+83	17+02			19	PCC DRIVE LT
20+75	21+00			25	PCC DRIVE LT
22+92	23+14			22	PCC DRIVE LT
23+41	2366			25	PCC DRIVE LT
31+30	31+68			38	ASPHALTIC DRIVE RT
32+51	32+82			31	ASPHALTIC DRIVE RT
35+98			79		END OF PROJECT
UNDISTRIBUTED					
PROJECT TOTALS			213	160	

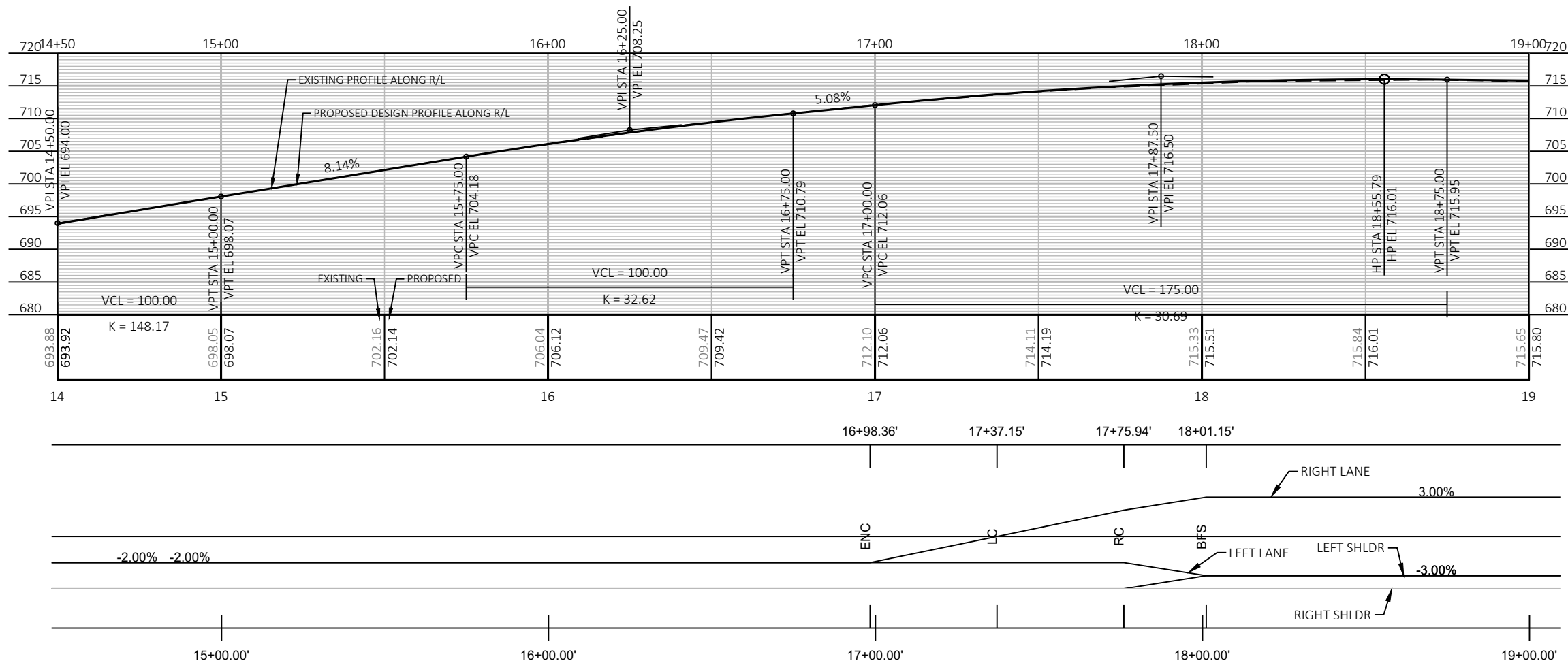
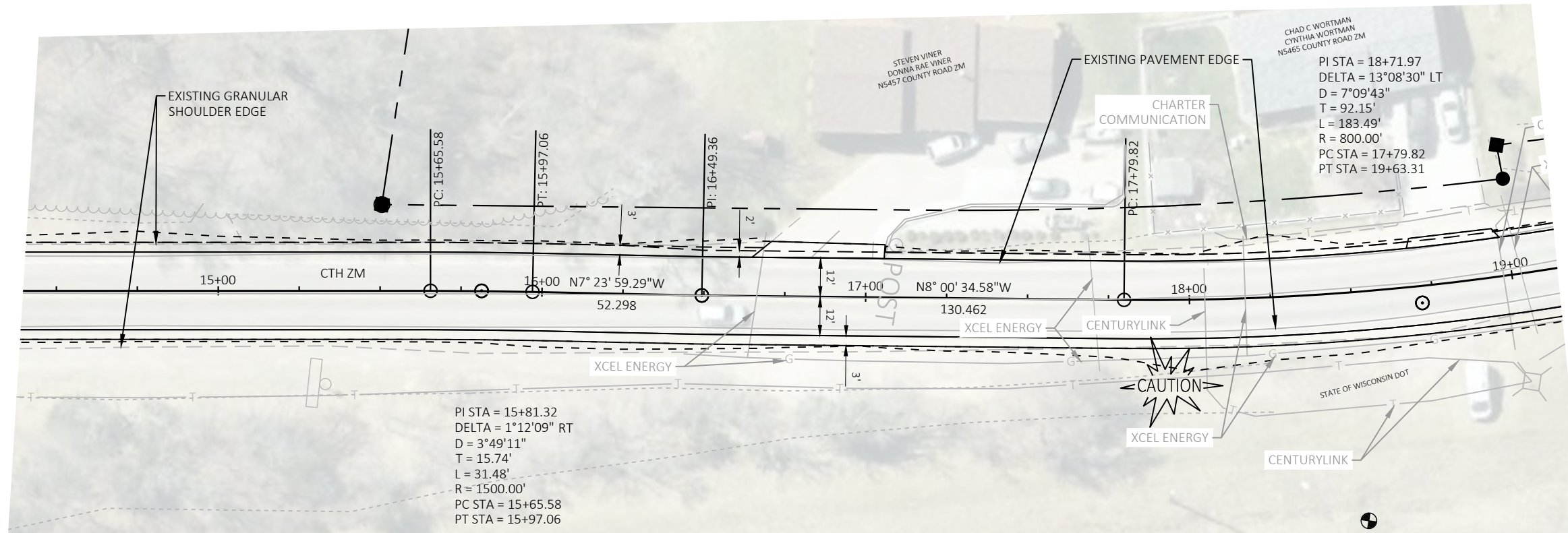


5

5



PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CTH ZM SHEET E



PROJECT NO: 5991-02-75

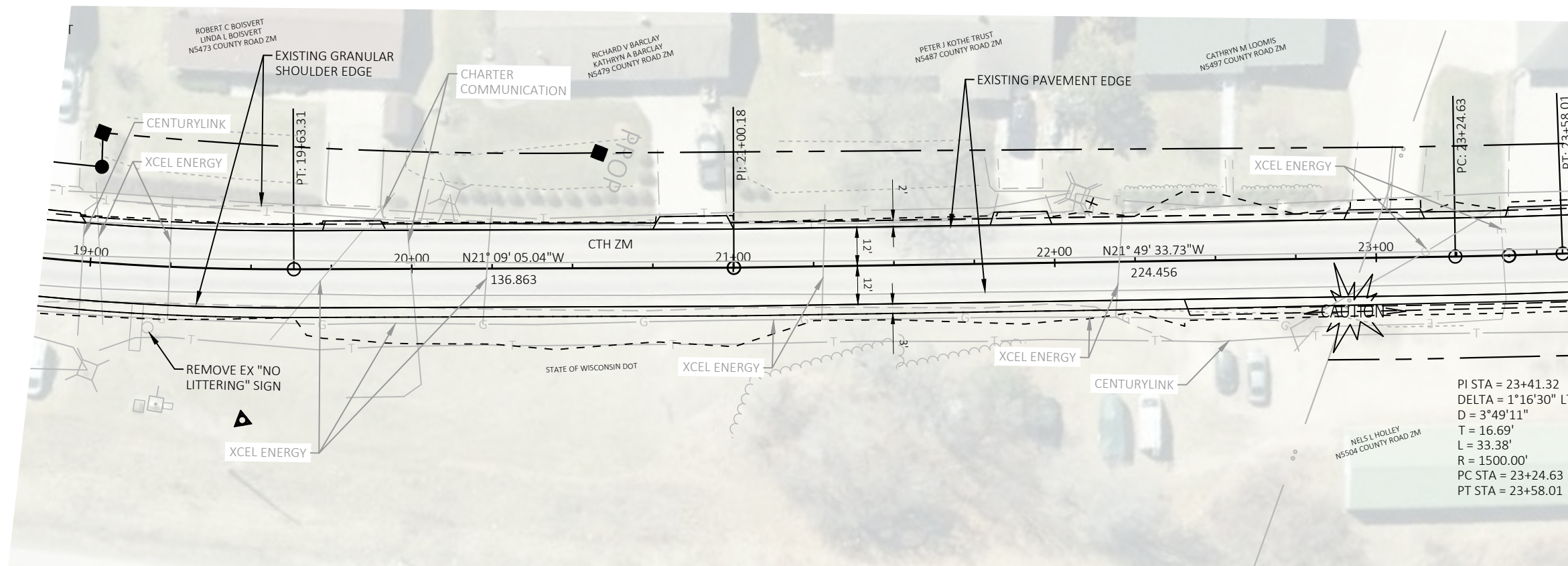
HWY: CTH ZM

COUNTY: LA CROSSE COUNTY

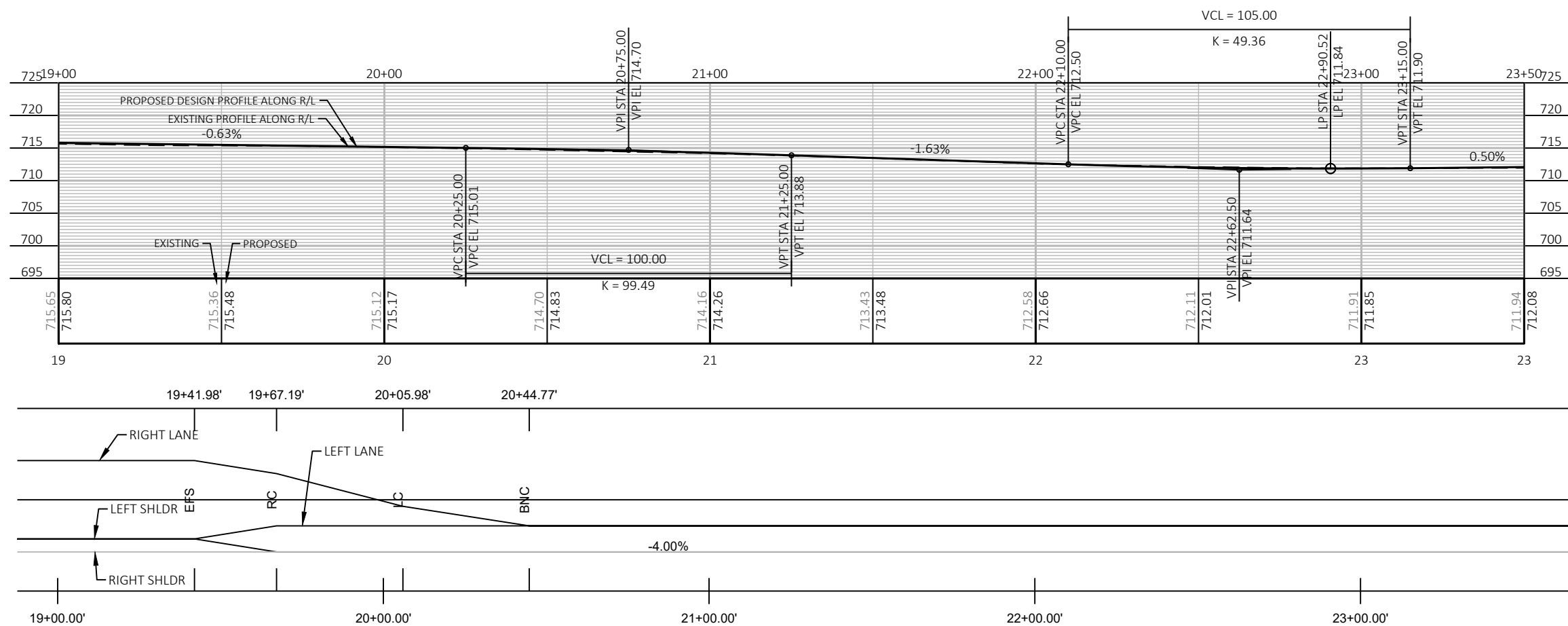
CTH ZM

SHEET

E



PI STA = 23+41.32
 DELTA = 1°16'30" LT
 D = 3°49'11"
 T = 16.69'
 L = 33.38'
 R = 1500.00'
 PC STA = 23+24.63
 PT STA = 23+58.01



PROJECT NO: 5991-02-75

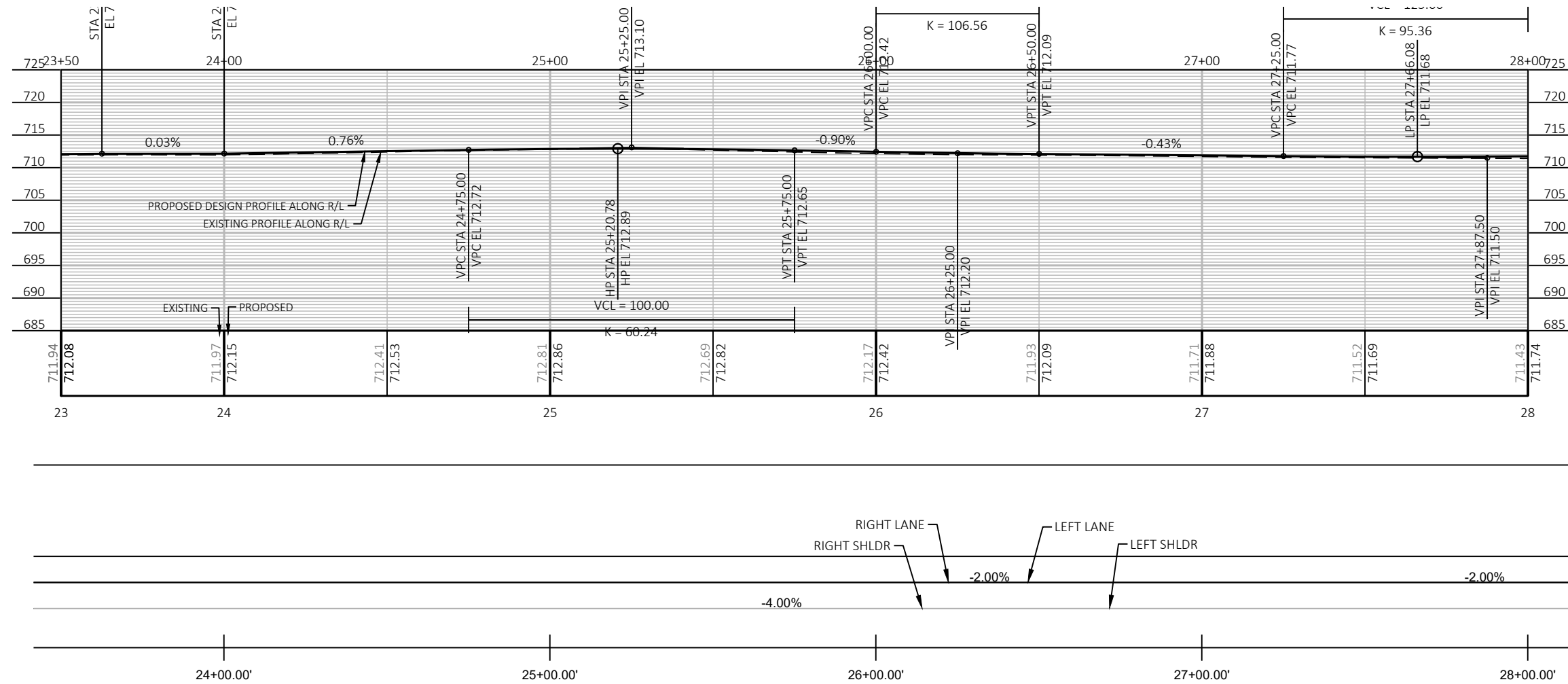
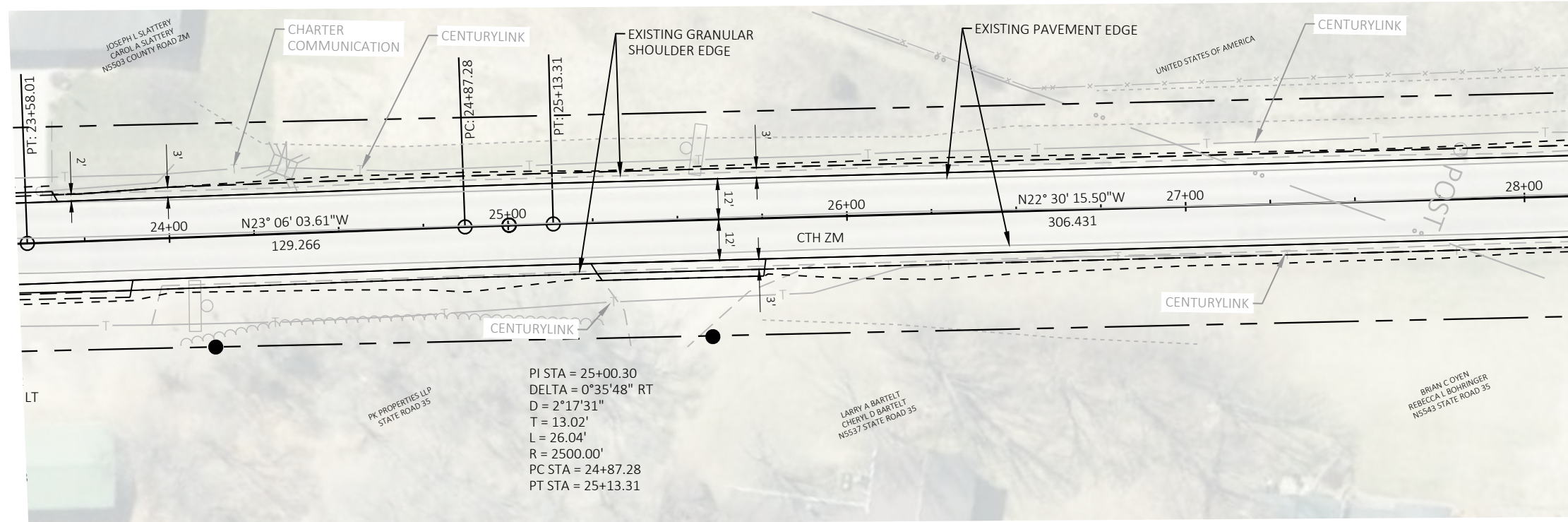
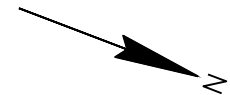
HWY: CTH ZM

COUNTY: LA CROSSE COUNTY

CTH ZM

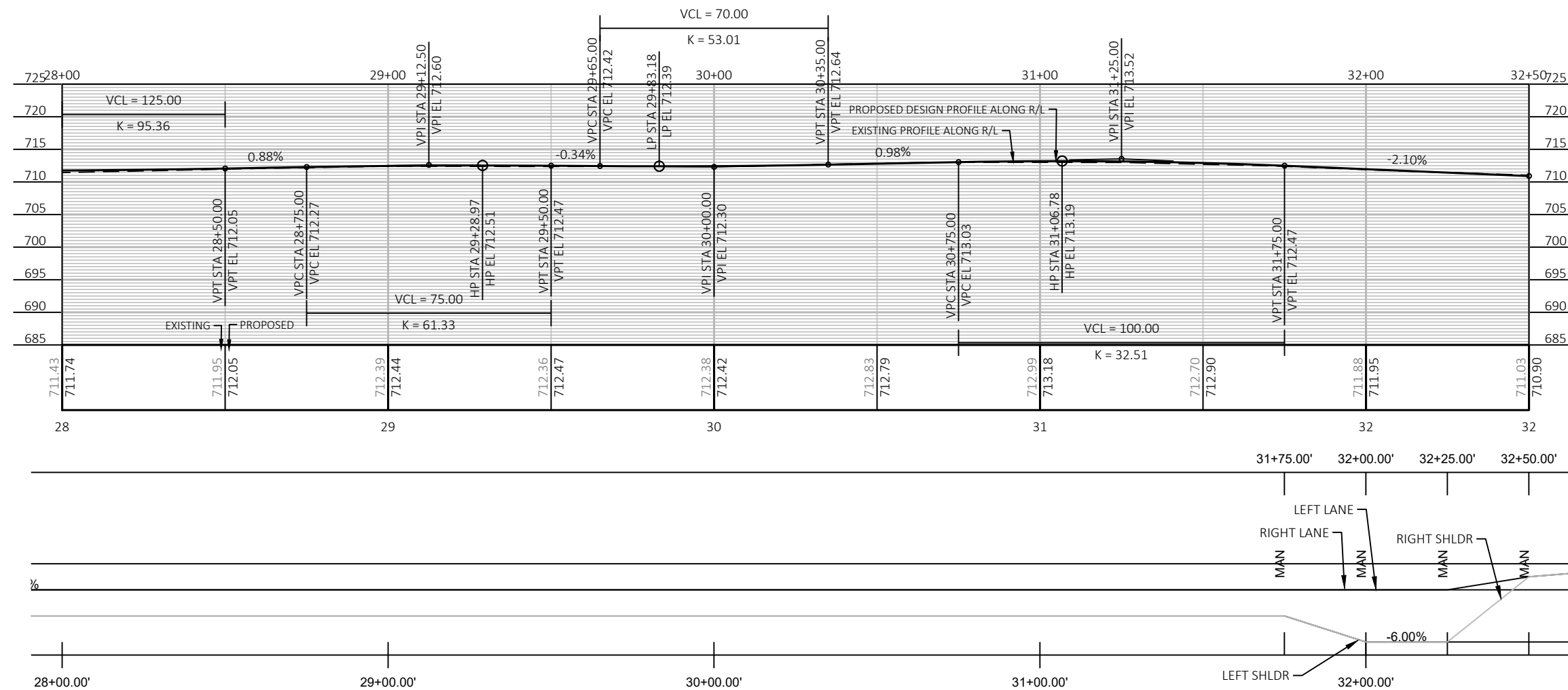
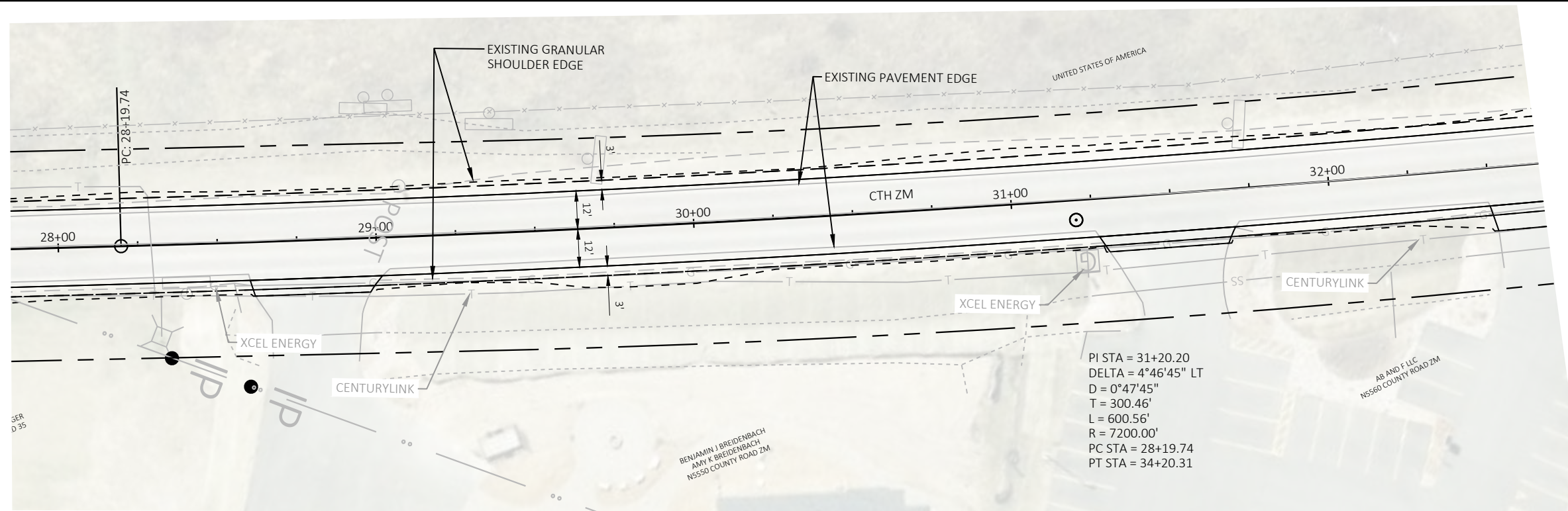
SHEET

5



5

5



PROJECT NO: 5991-02-75

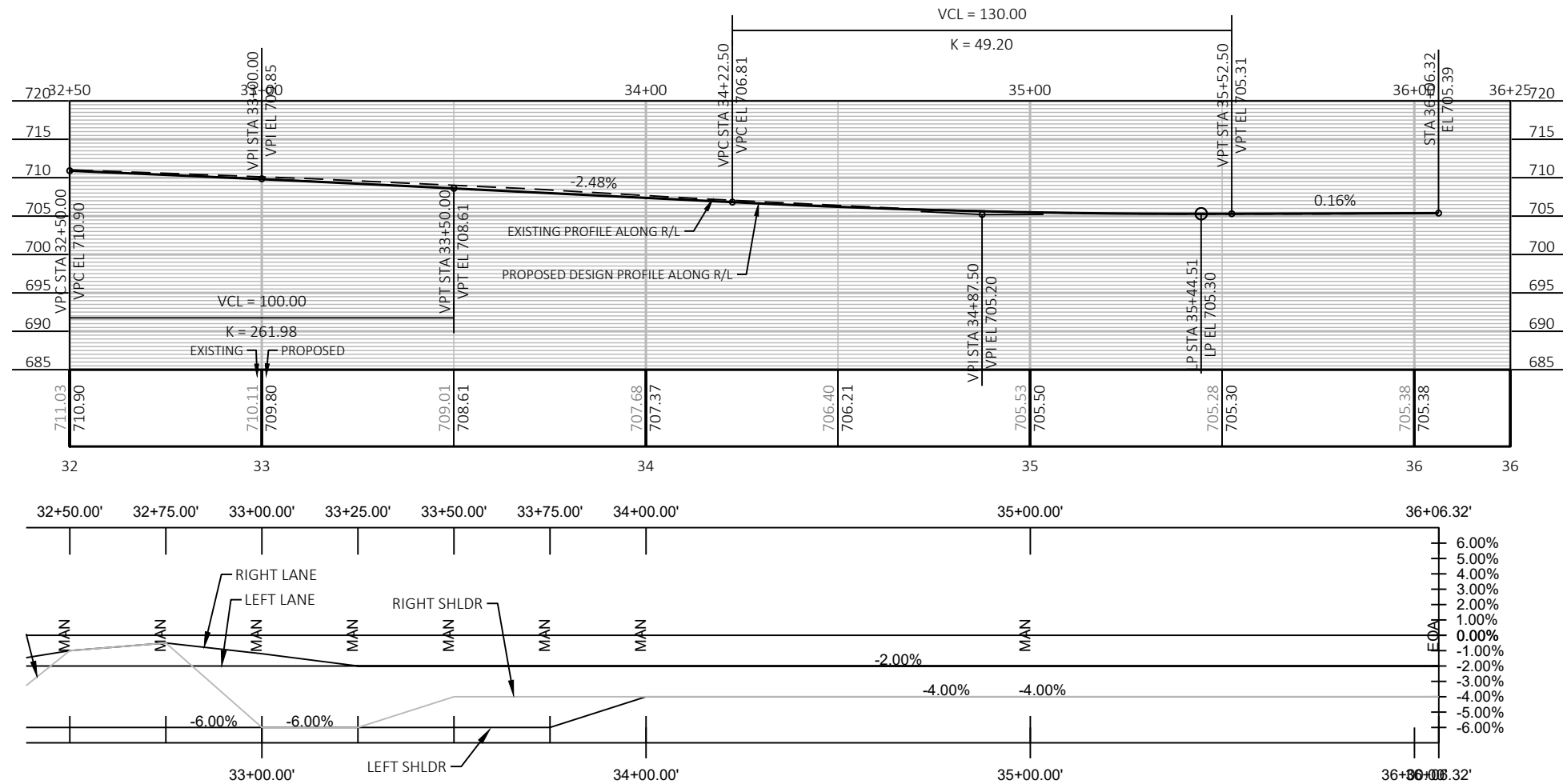
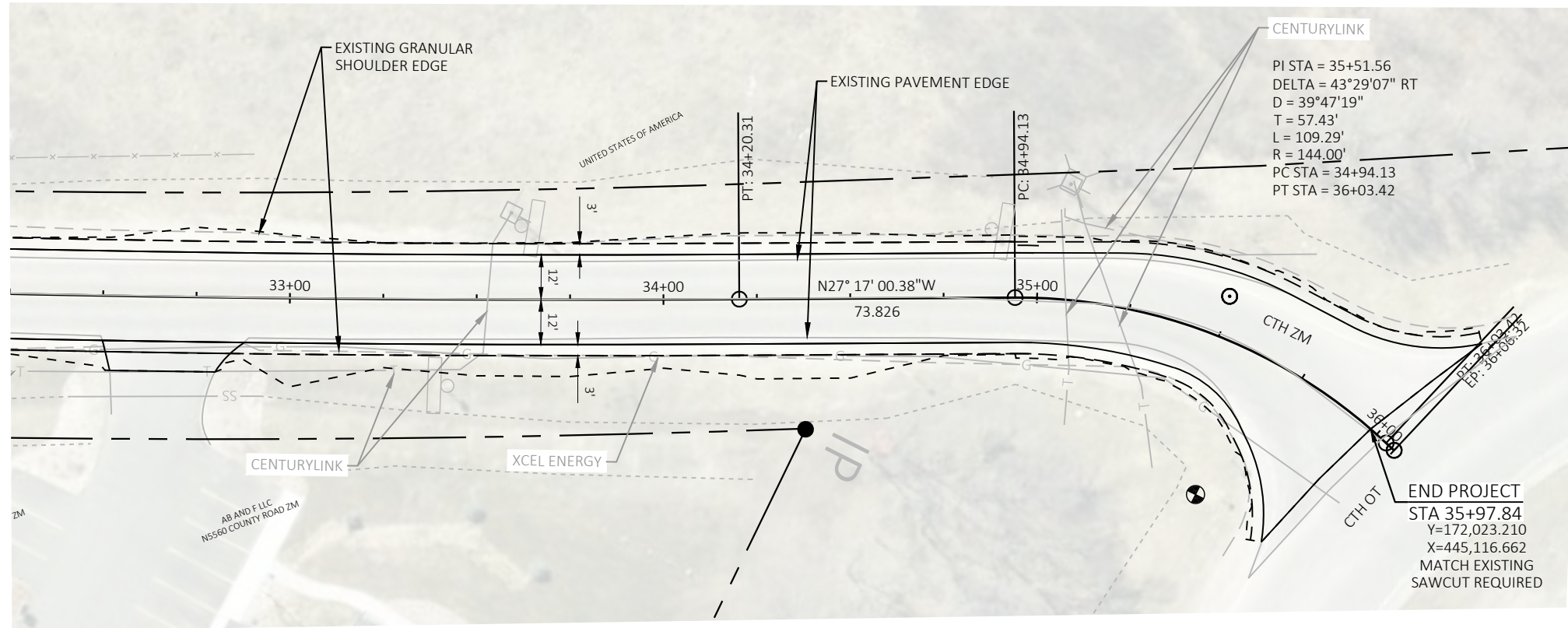
HWY: CTH ZM

COUNTY: LA CROSSE COUNTY

CTH ZM

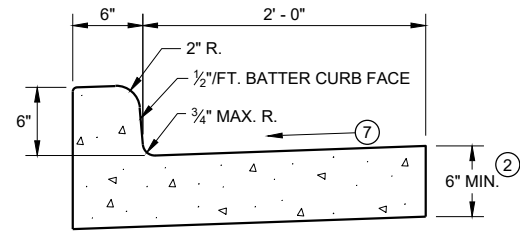
SHEET

5

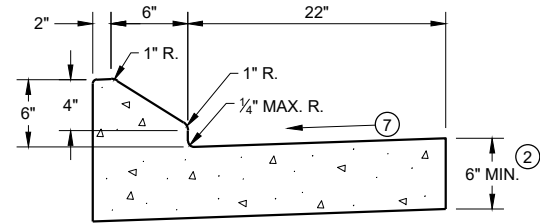


Standard Detail Drawing List

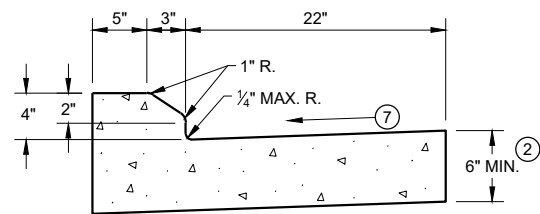
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)



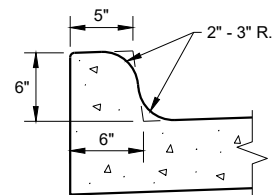
TYPES A¹ & D



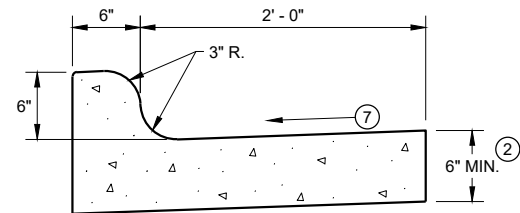
6" SLOPED CURB TYPES G¹ & J



4" SLOPED CURB TYPES G¹ & J

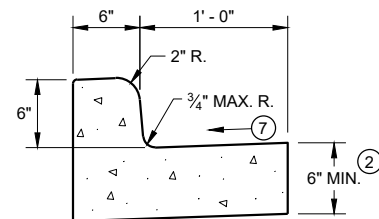


TYPES K¹ & L
(OPTIONAL CURB SHAPE)



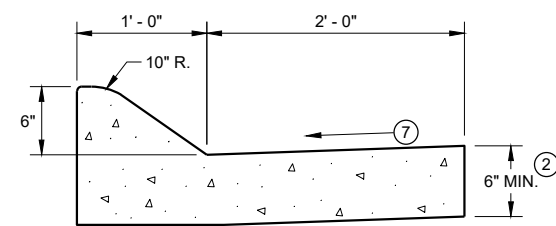
TYPES K¹ & L

CONCRETE CURB AND GUTTER 30"

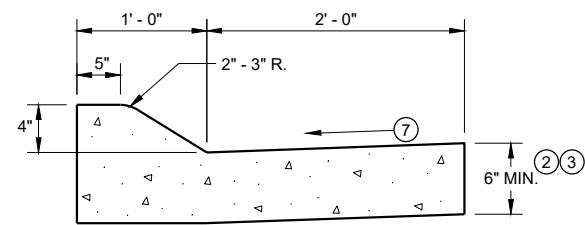


TYPES A¹ & D

CONCRETE CURB AND GUTTER 18"

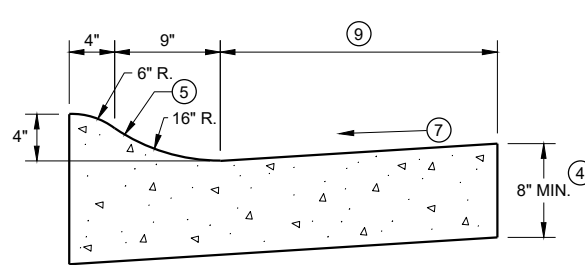


6" SLOPED CURB TYPES A¹ & D



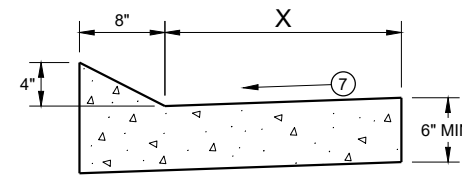
4" SLOPED CURB TYPES A¹ & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R¹ & T

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

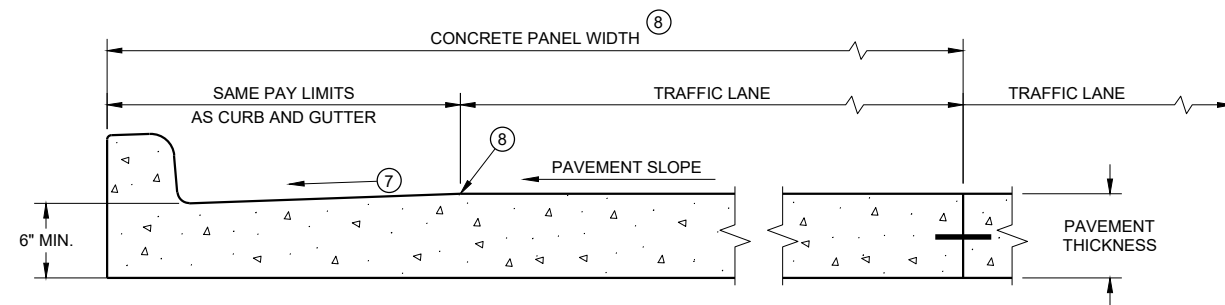


TYPES TBT & TBTT¹

CONCRETE CURB AND GUTTER

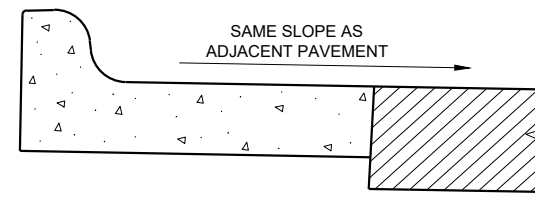
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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 GUTTER⁶
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

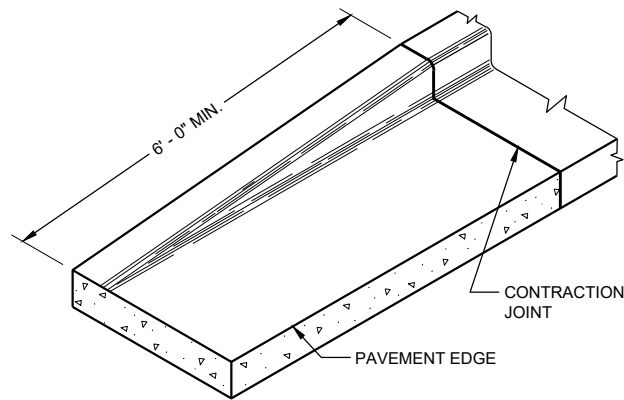
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

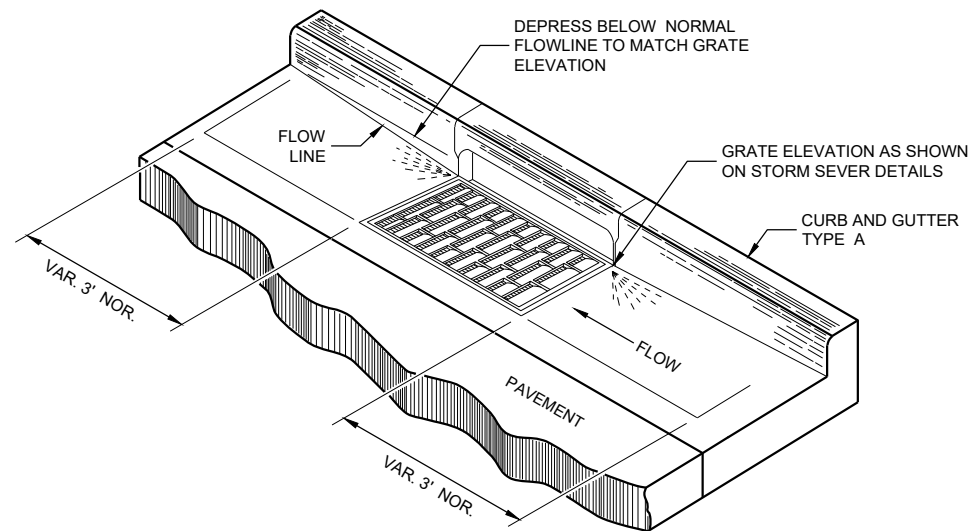
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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



END SECTION CURB AND GUTTER



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

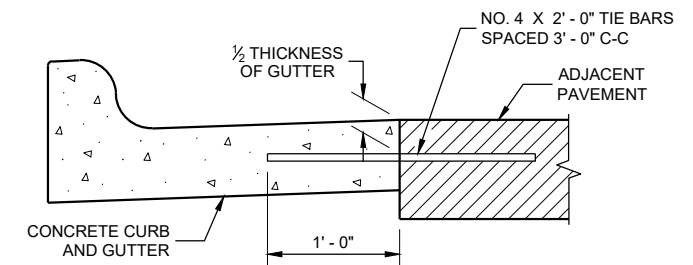
GENERAL NOTES

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

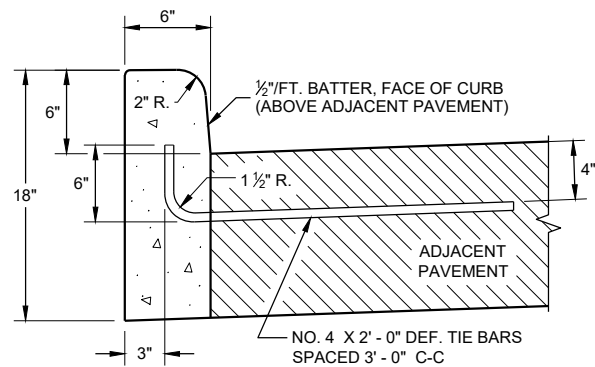
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

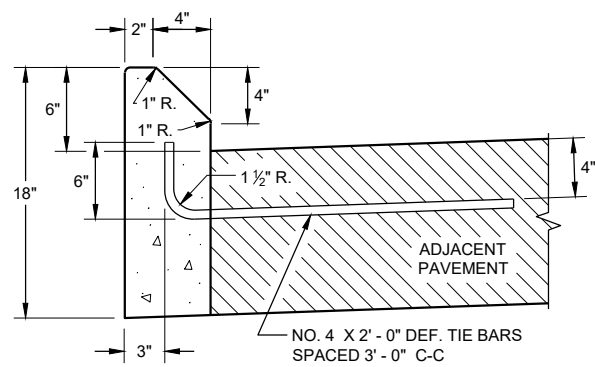
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL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



TYPICAL TIE BAR LOCATION ①

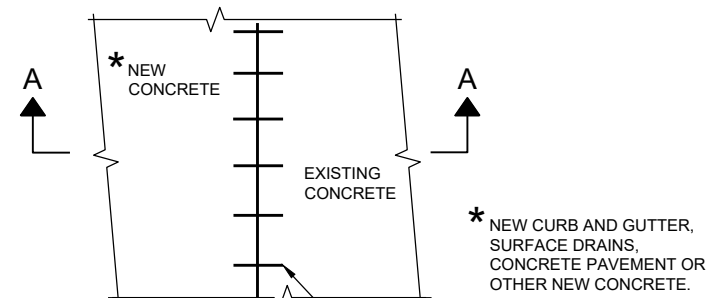


TYPES A ① & D

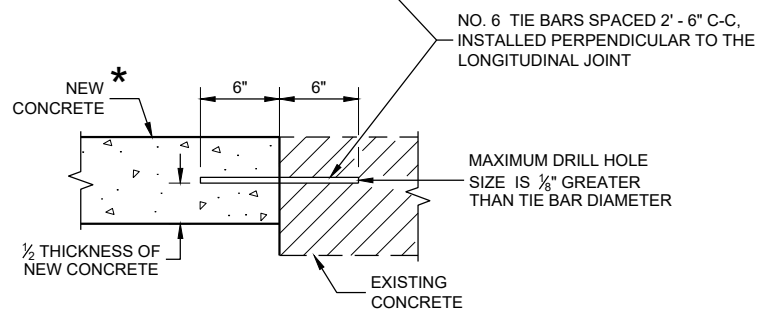


TYPES G ① & J

CONCRETE CURB

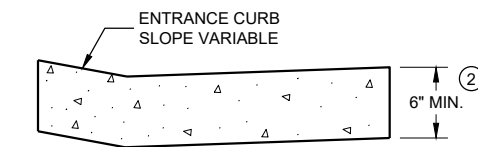


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

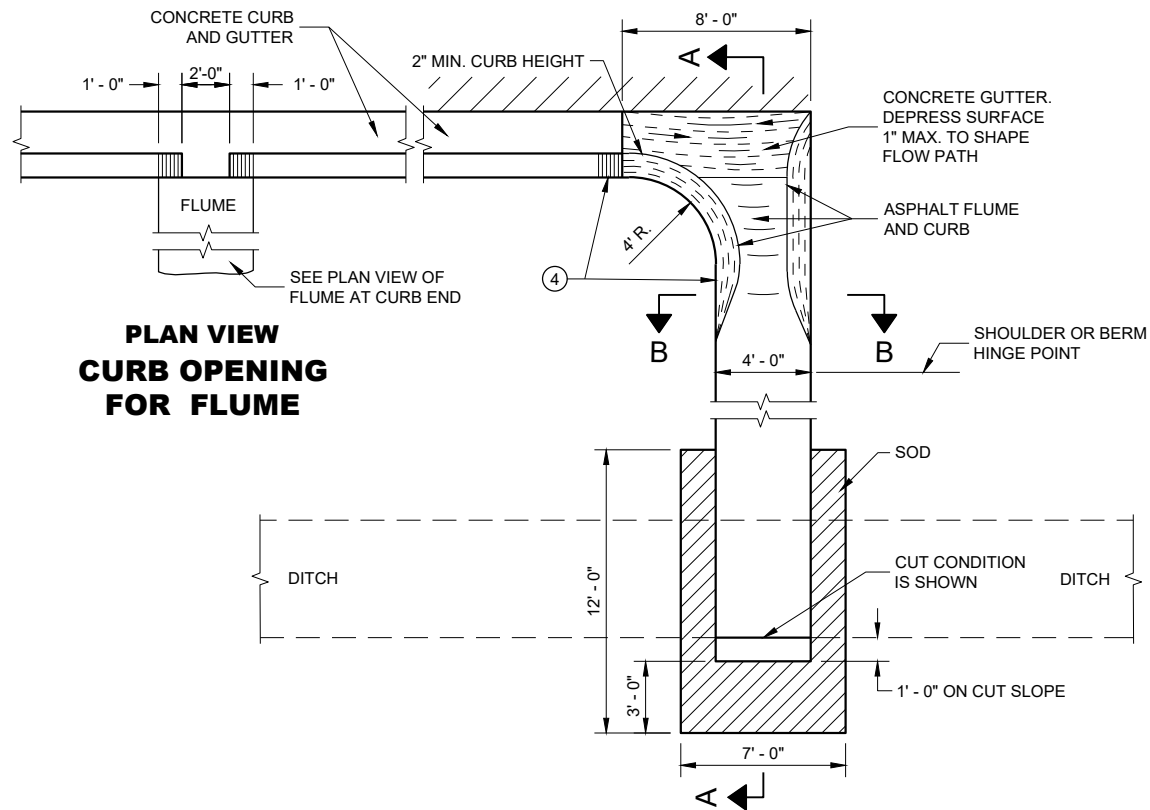
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

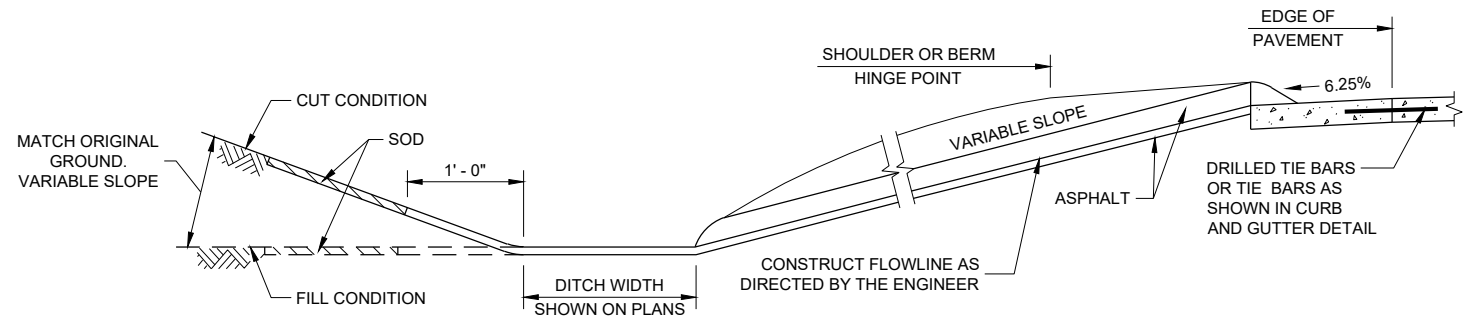
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

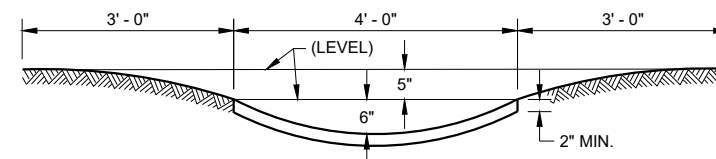
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

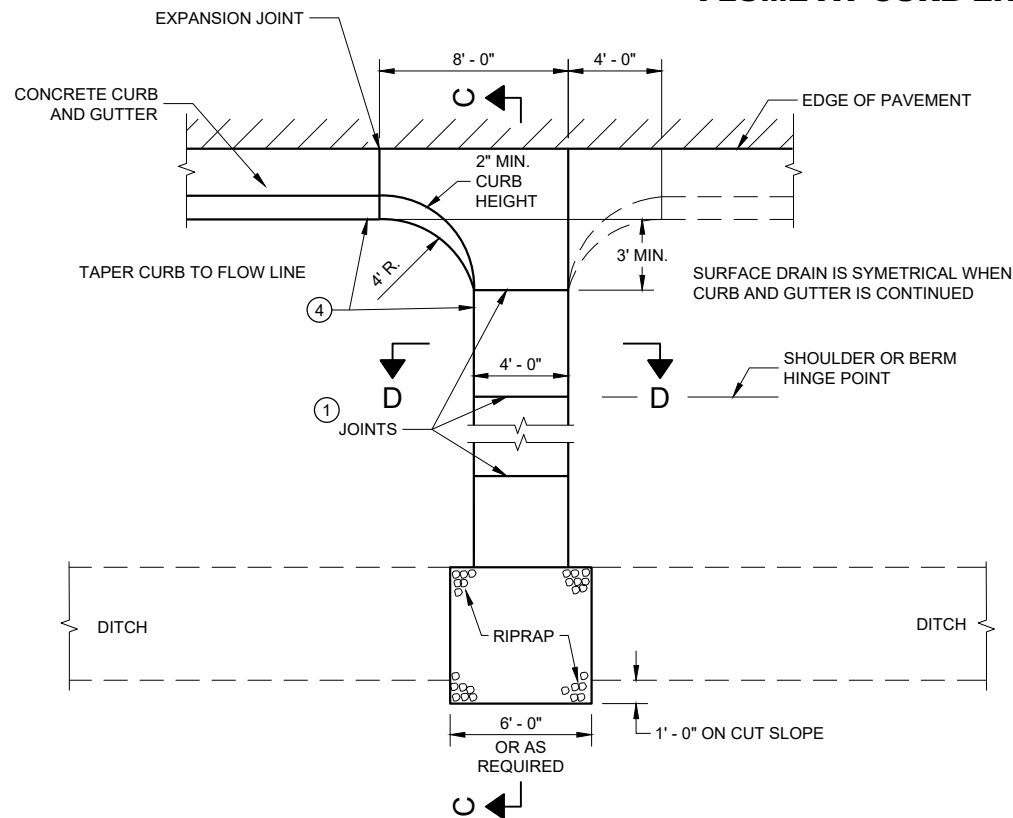
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



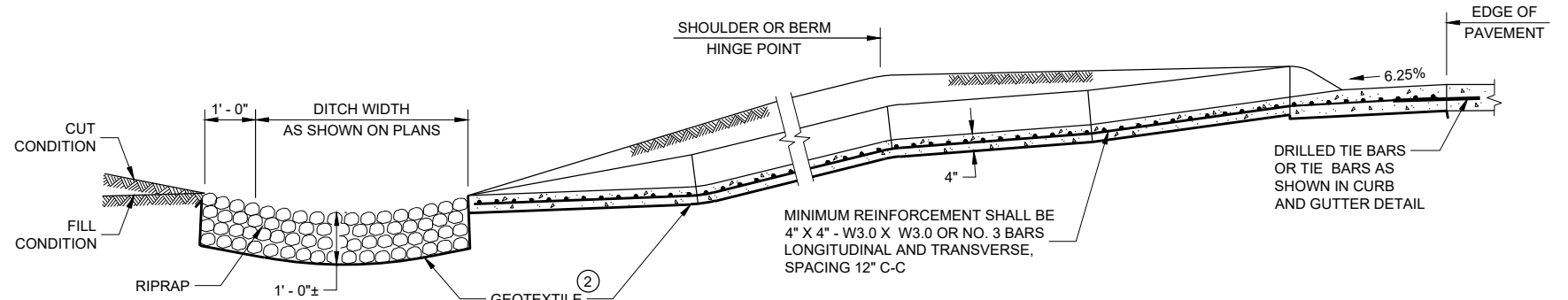
SECTION A - A



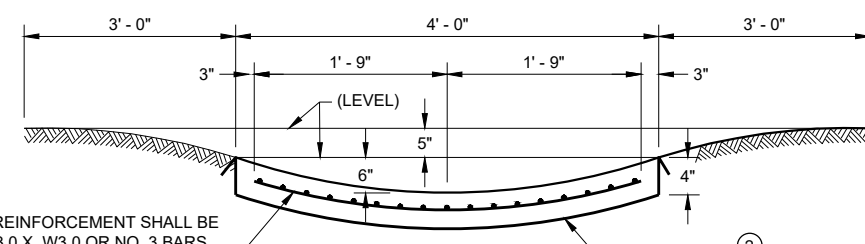
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

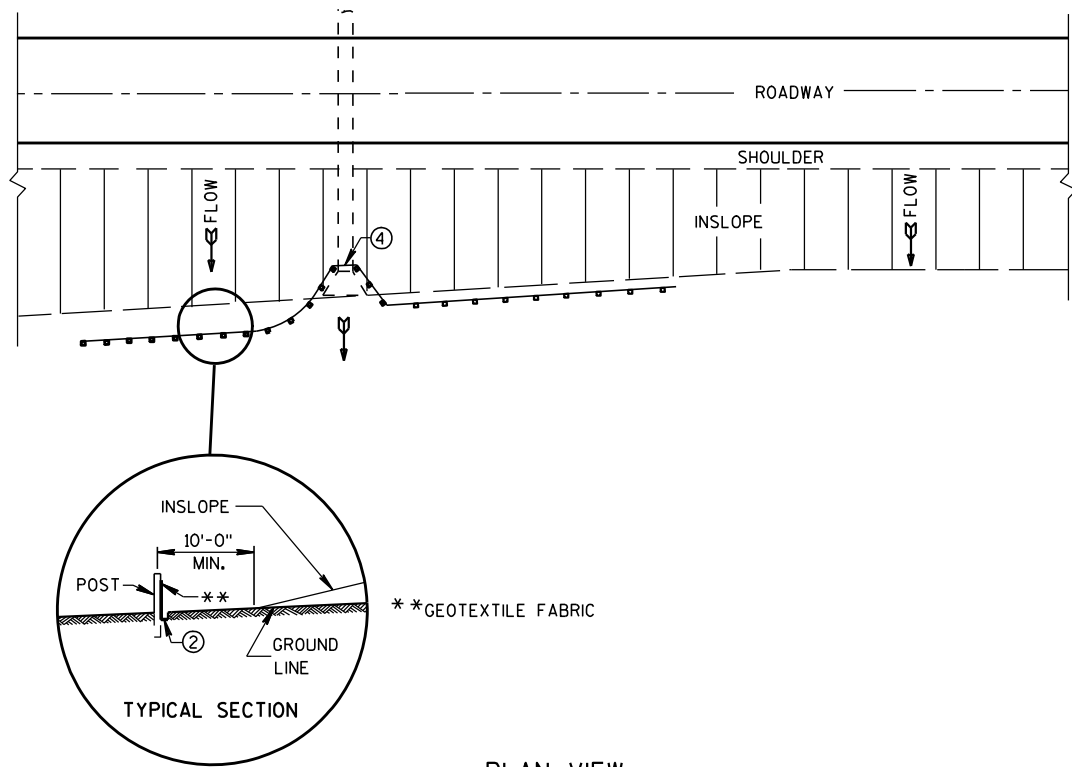
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

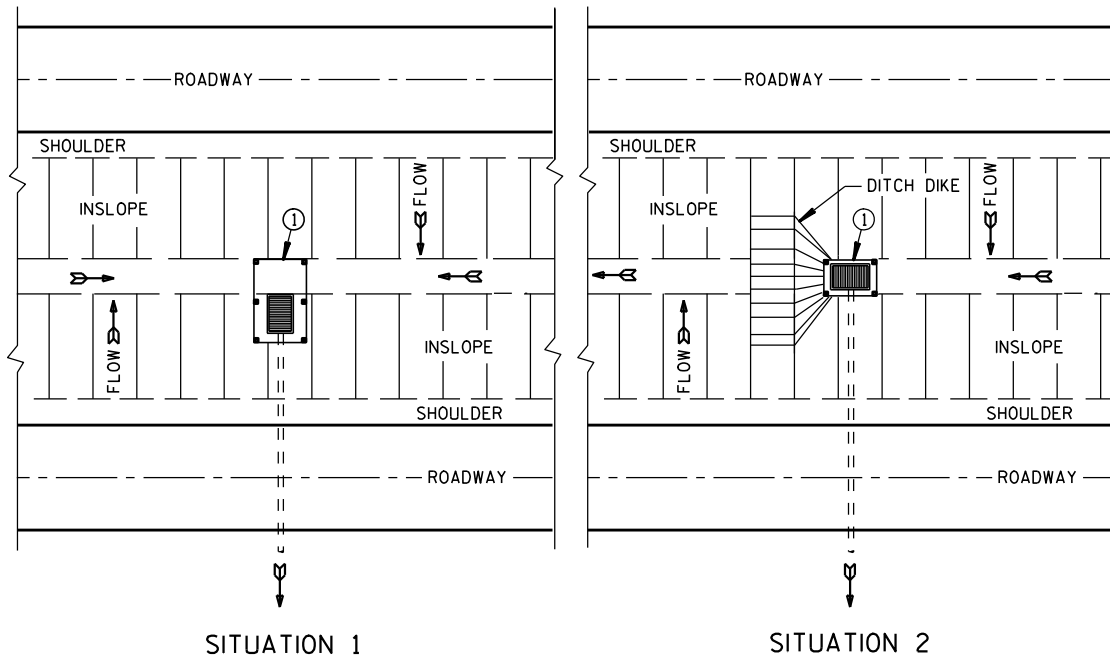
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

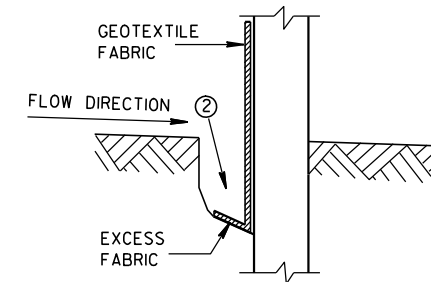


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

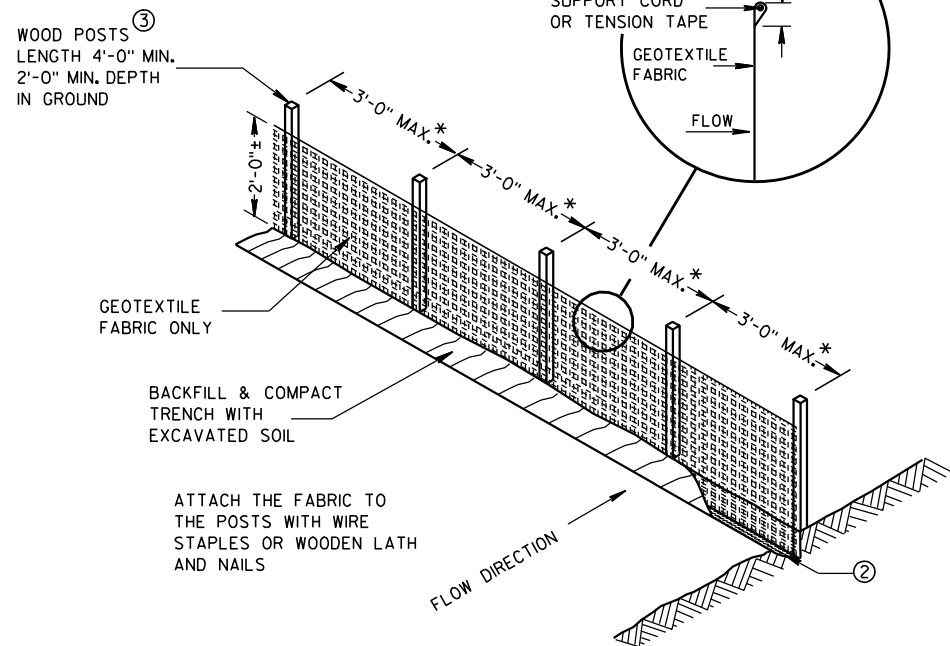
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

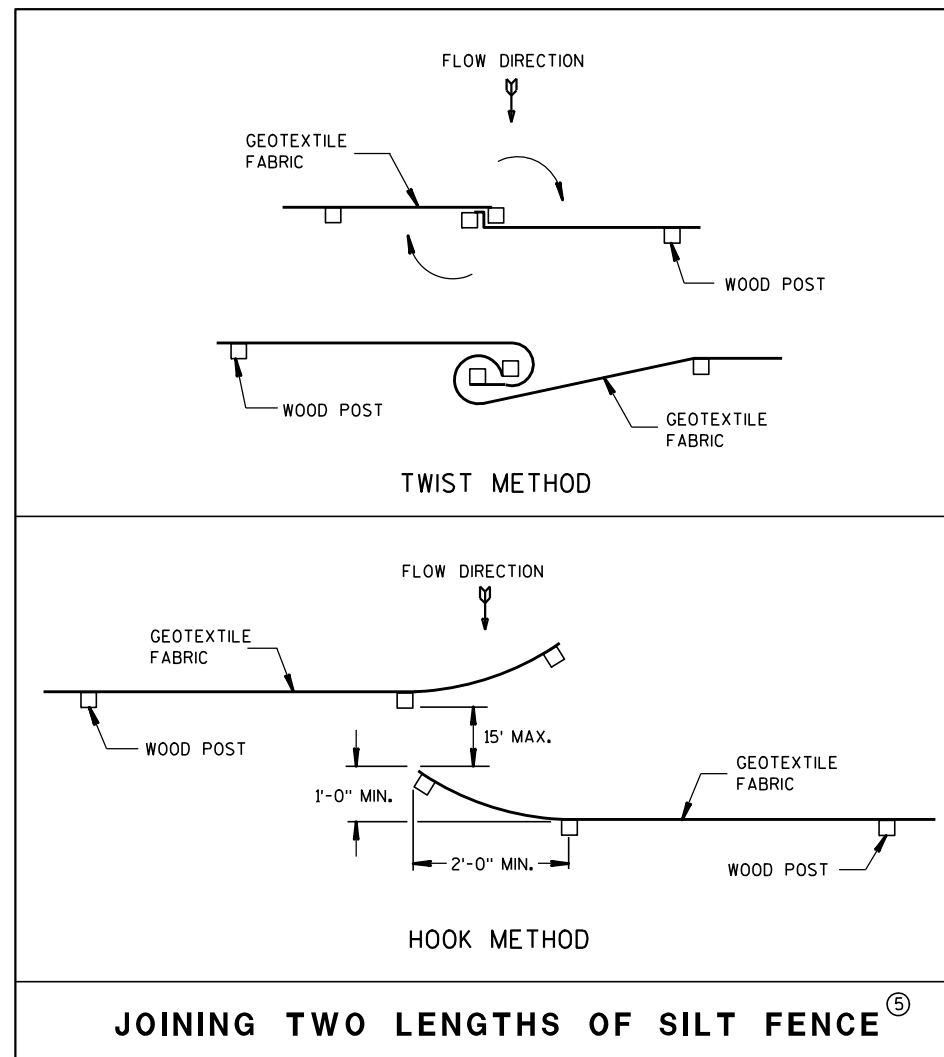


TRENCH DETAIL

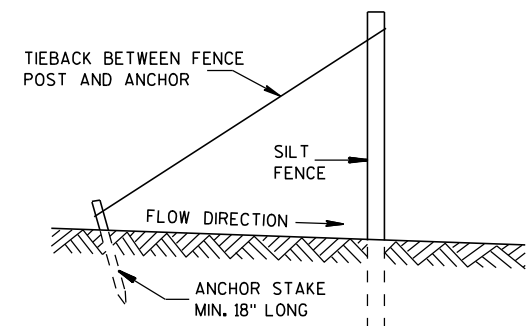
NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

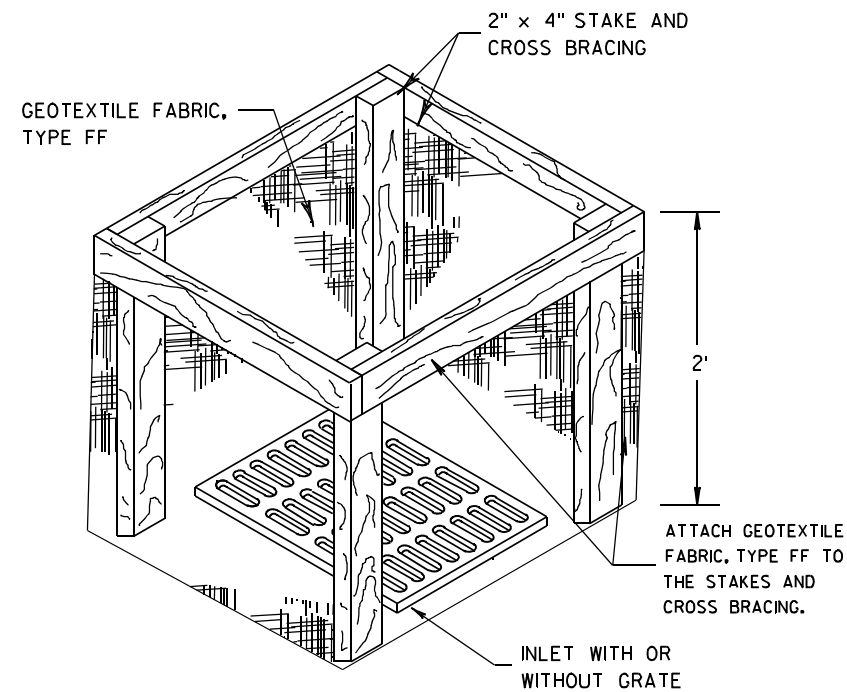
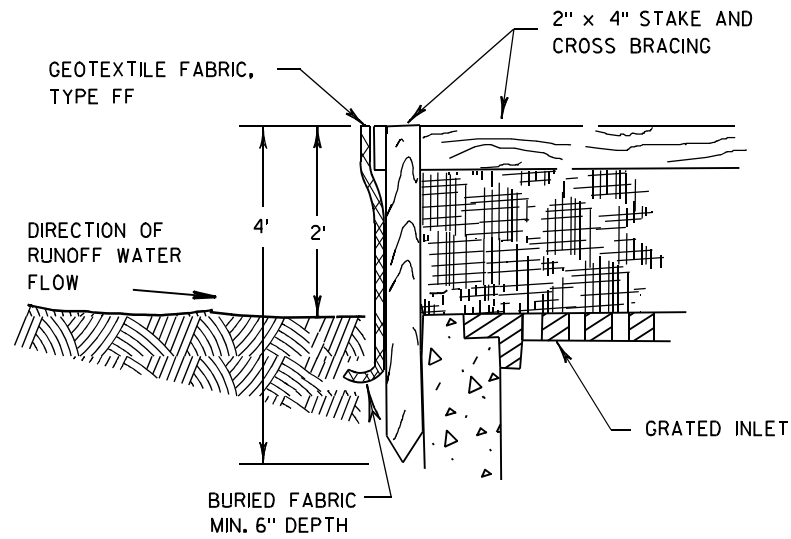


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



INLET PROTECTION, TYPE A

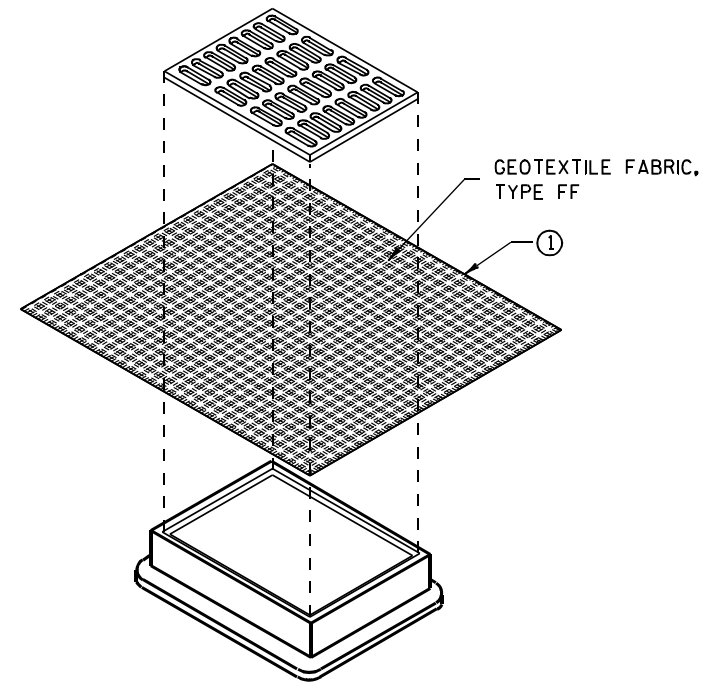
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

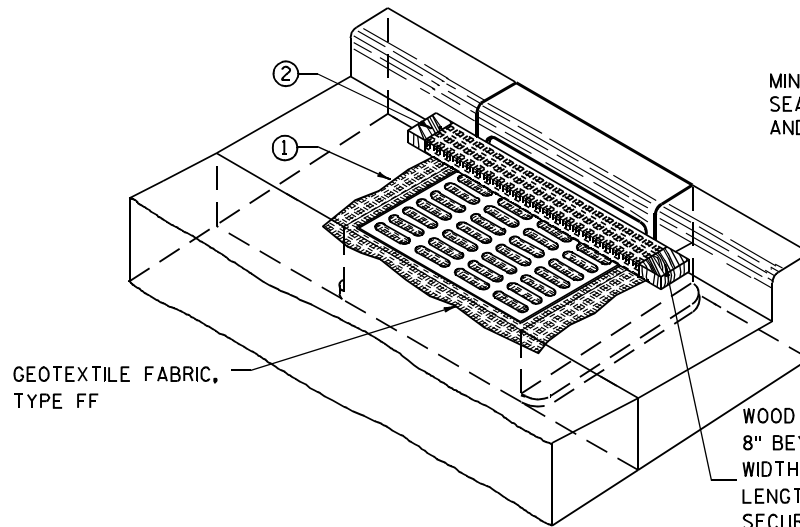
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

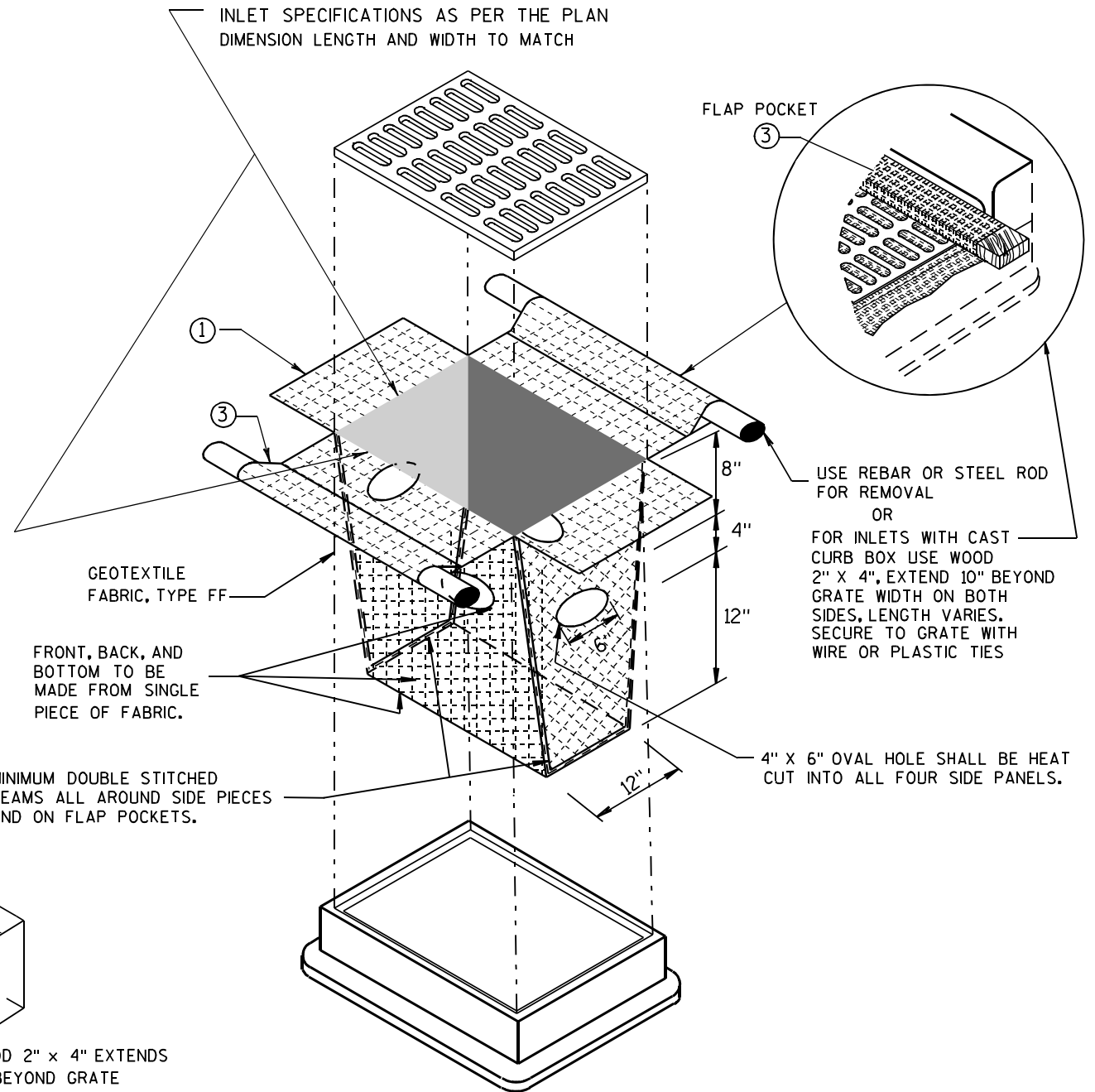
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Connestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

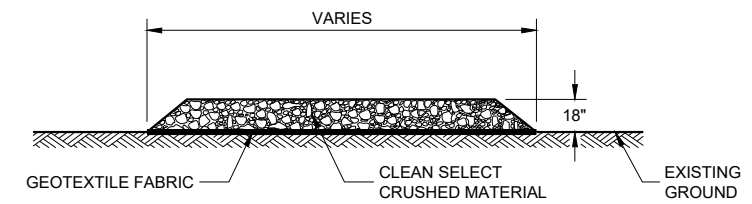
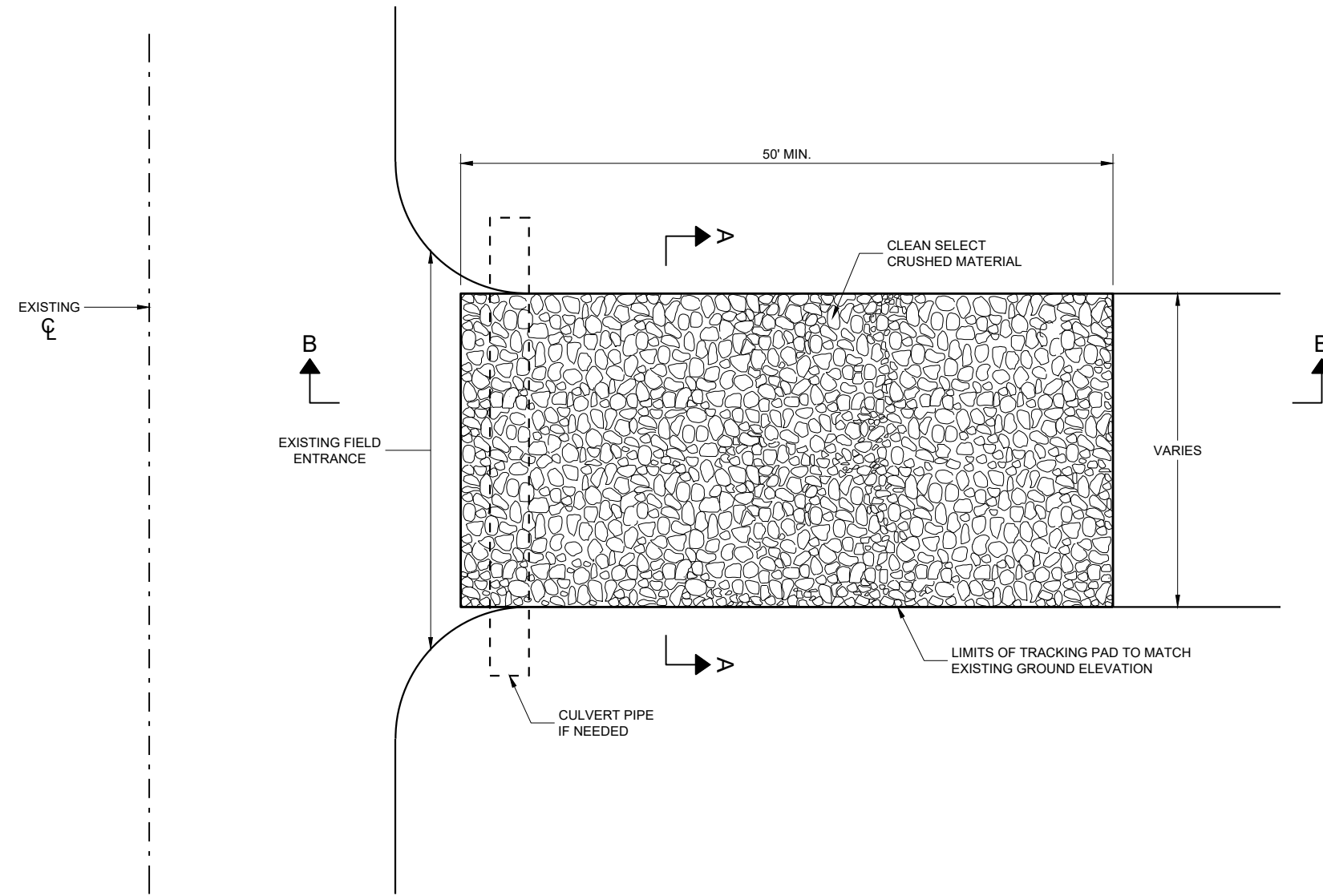
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

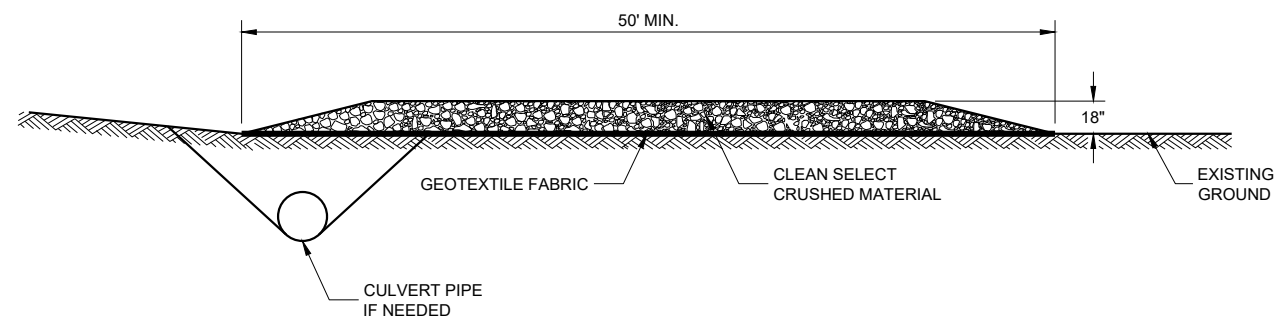
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A



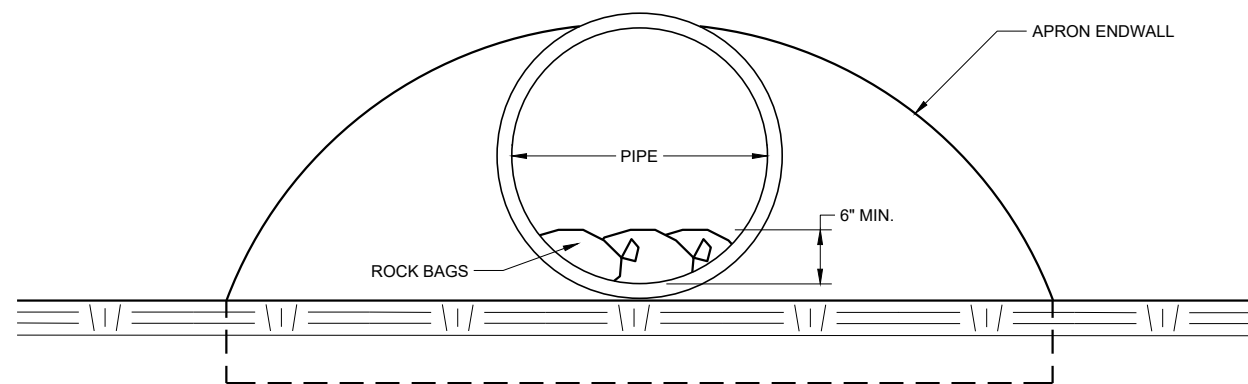
SECTION B - B

TRACKING PAD

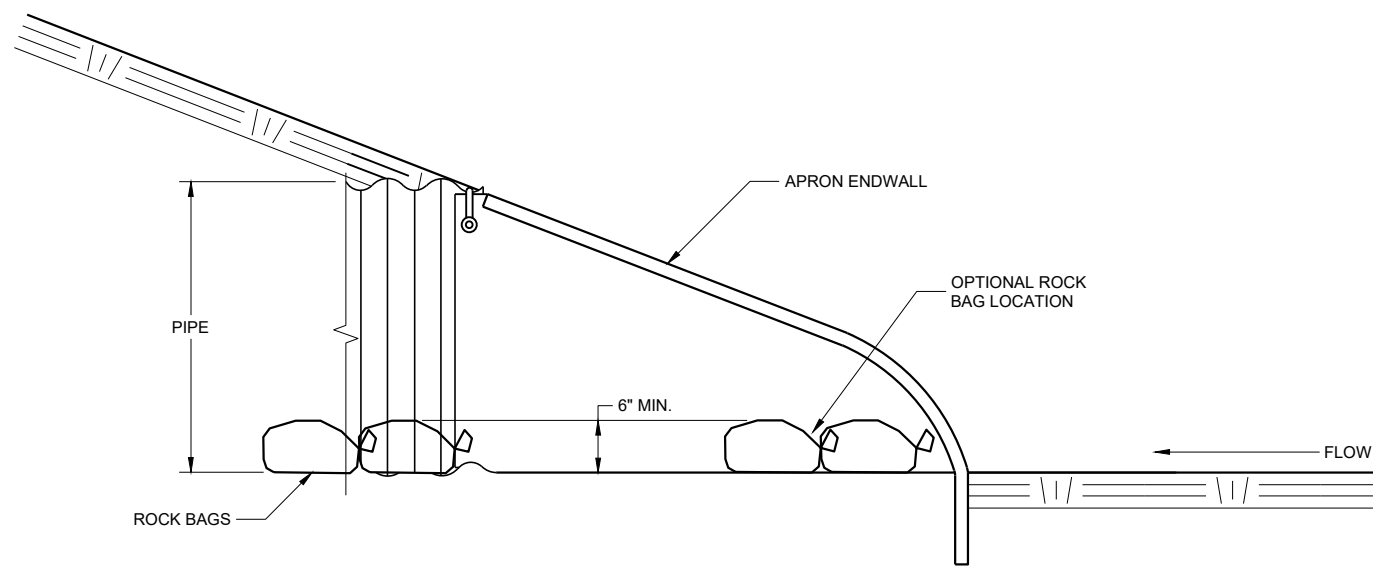
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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 /S/ Daniel Schave
 DATE EROSION CONTROL ENGINEER

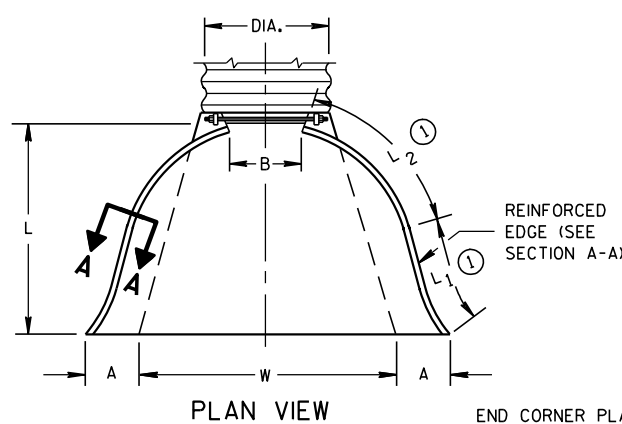
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

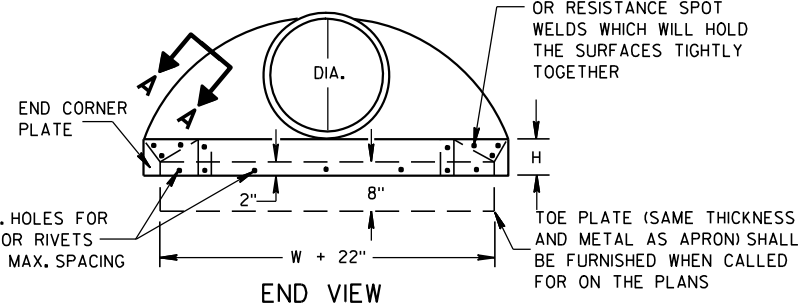
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	30-35	78	21	99	108	6	2 to 1	
78	7 1/2	30-35	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

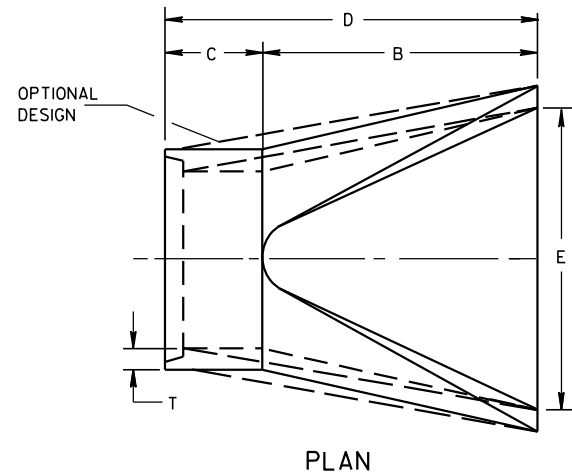
* MINIMUM
** MAXIMUM



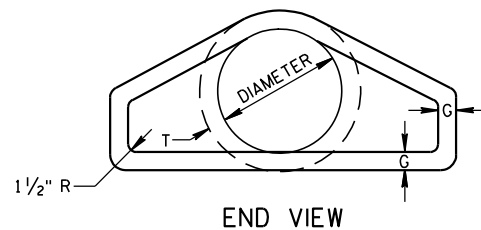
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



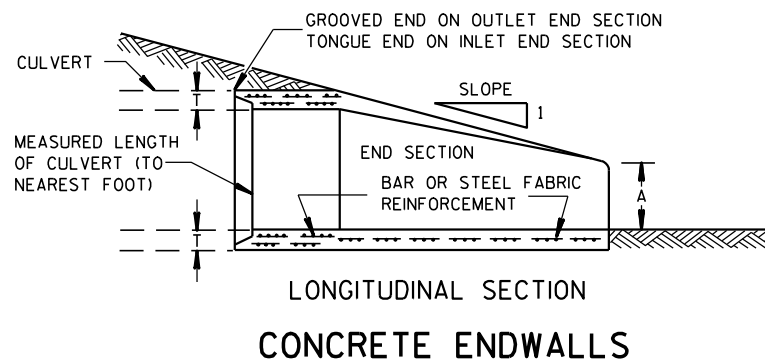
SIDE ELEVATION
METAL ENDWALLS



PLAN

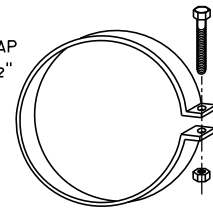


END VIEW

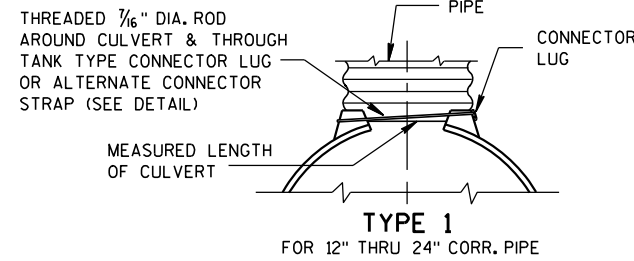


LONGITUDINAL SECTION
CONCRETE ENDWALLS

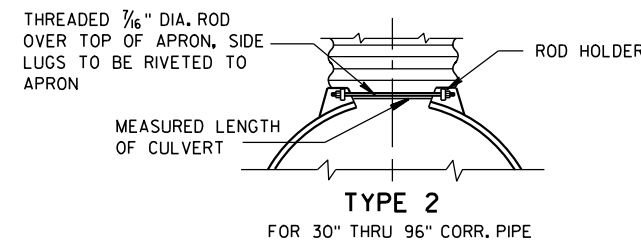
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



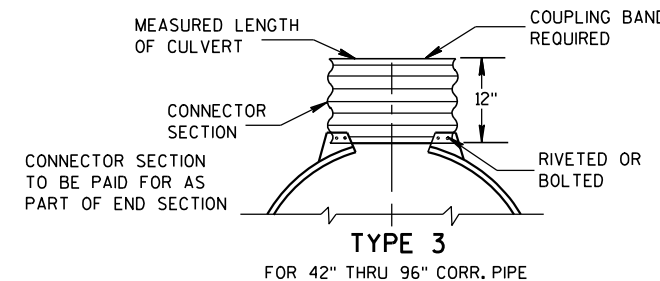
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



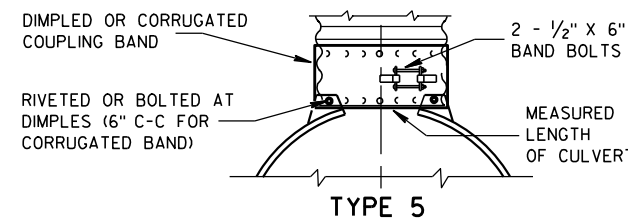
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

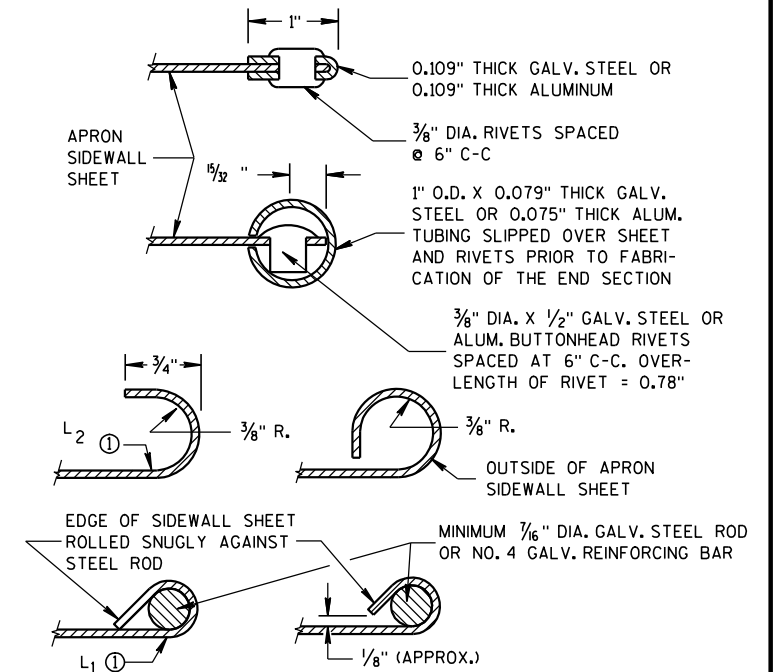
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE 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 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 60" THROUGH 96" DIAMETER 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.

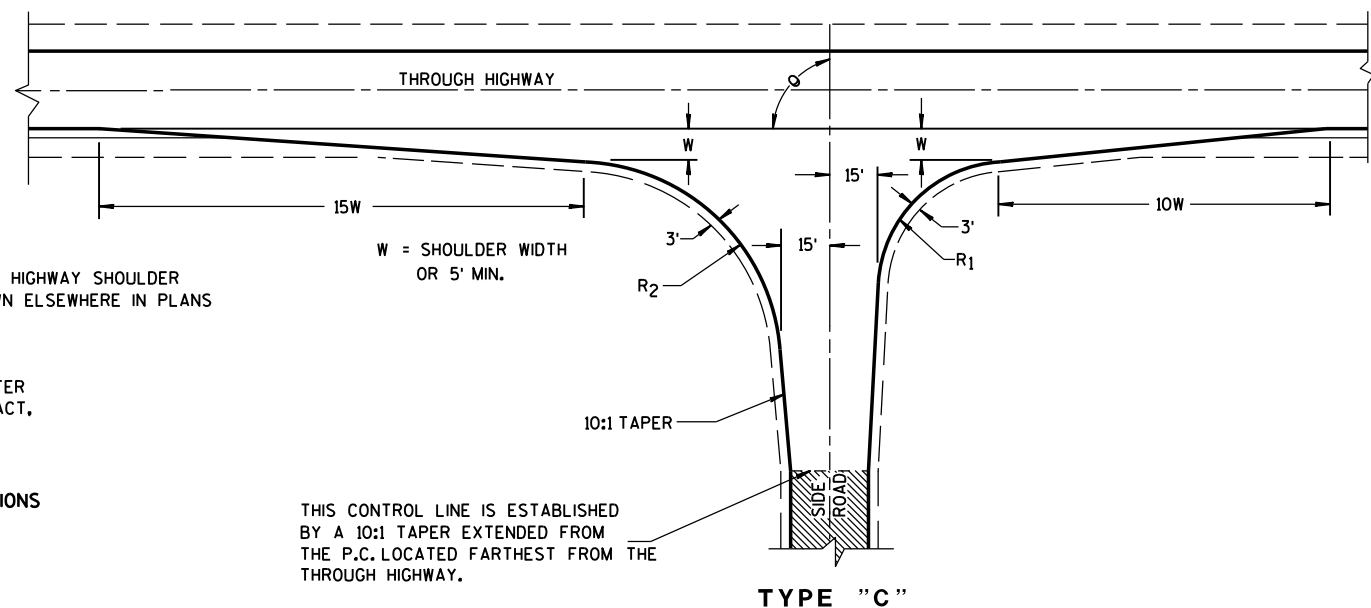
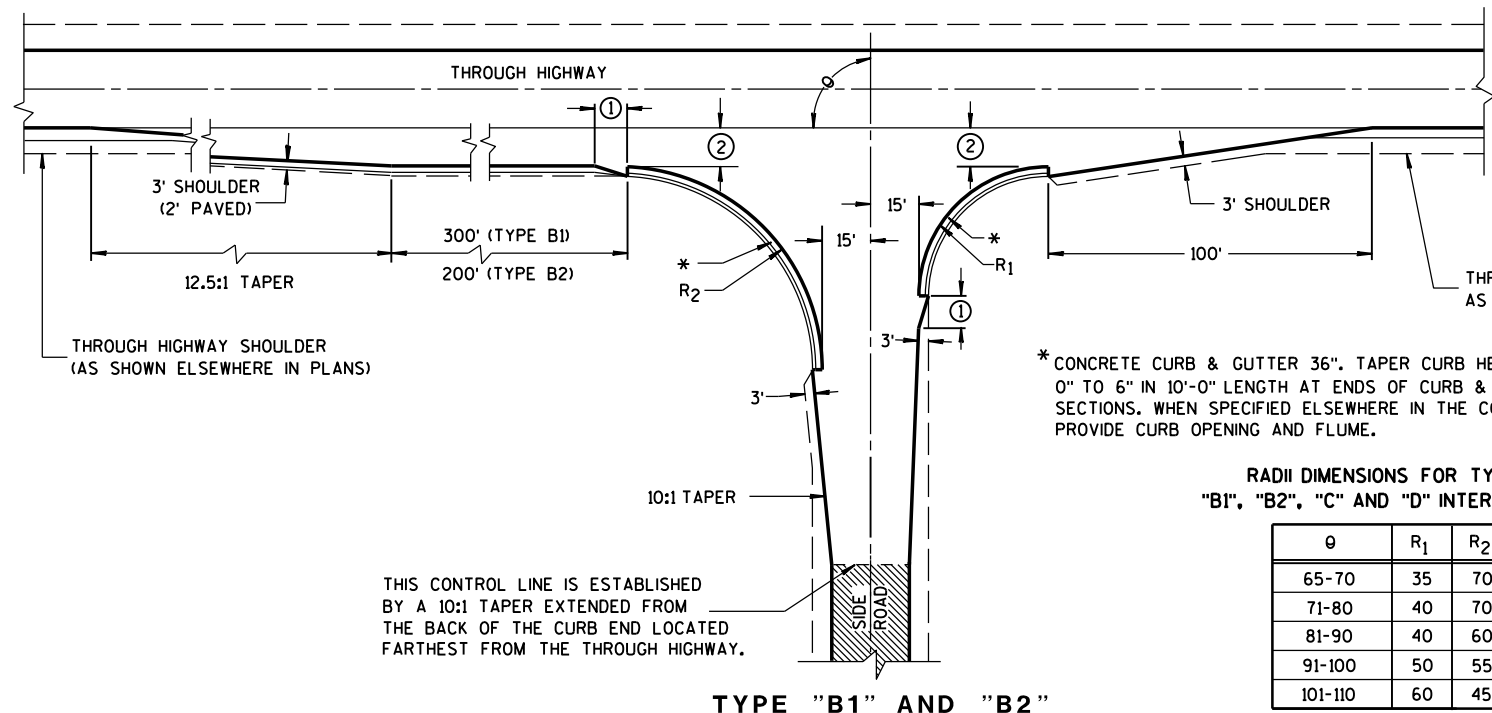
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

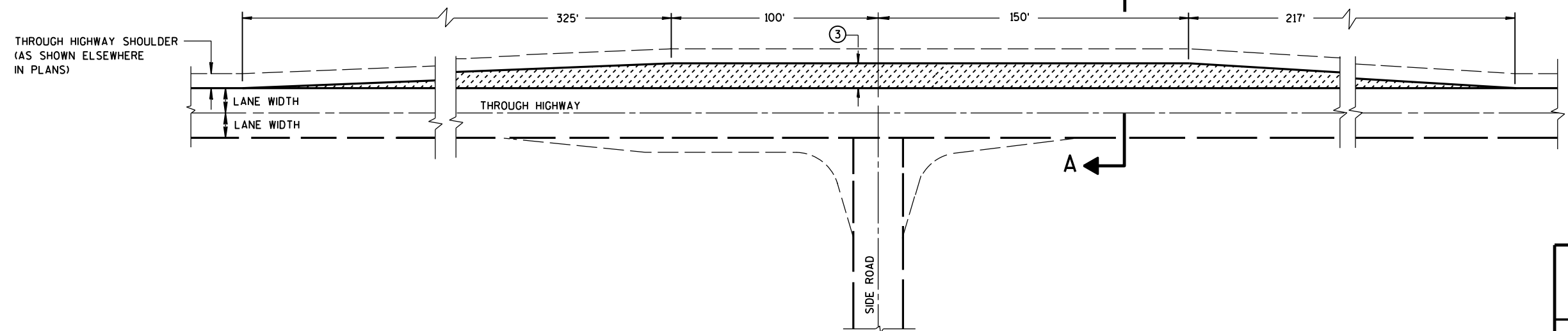
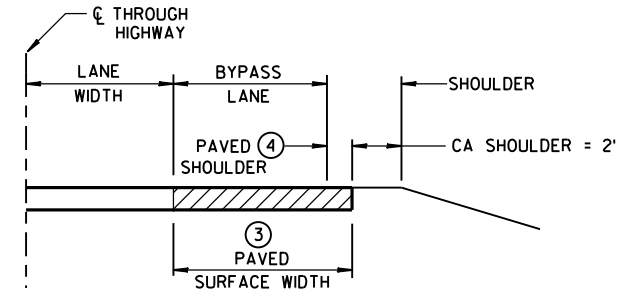
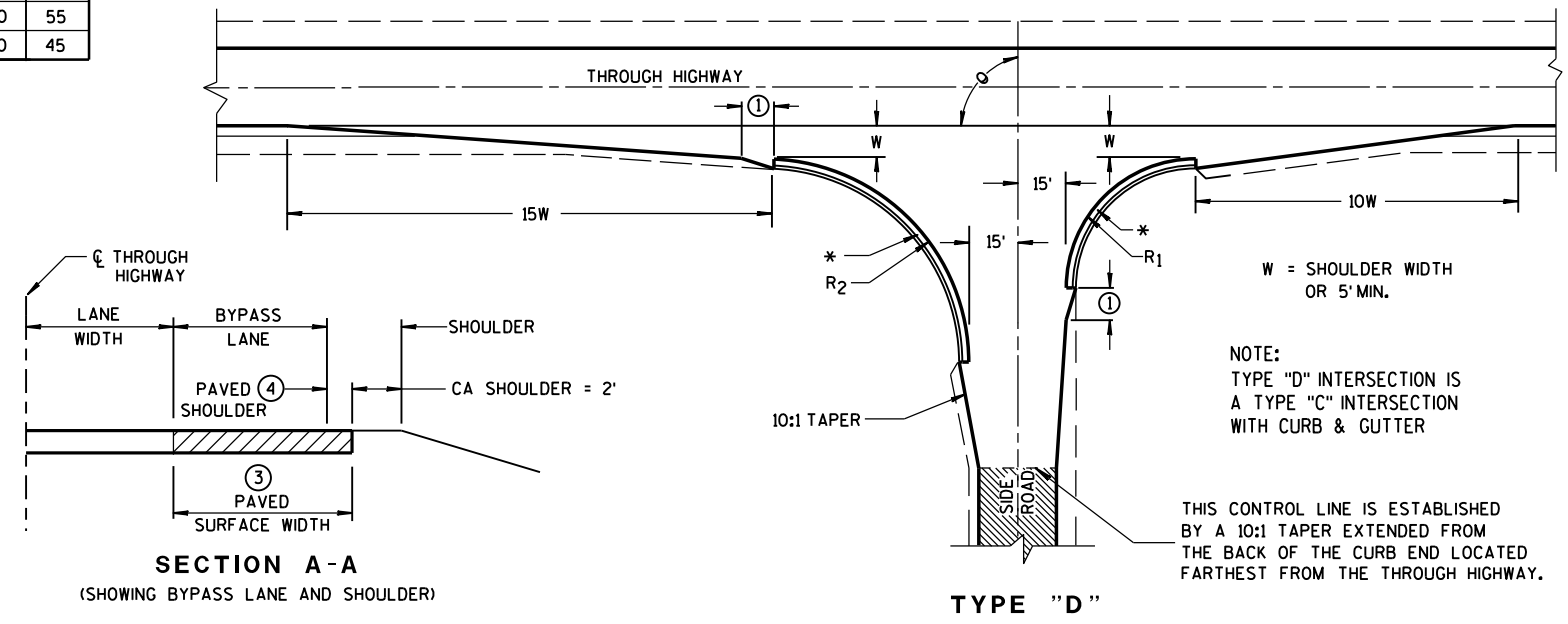
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

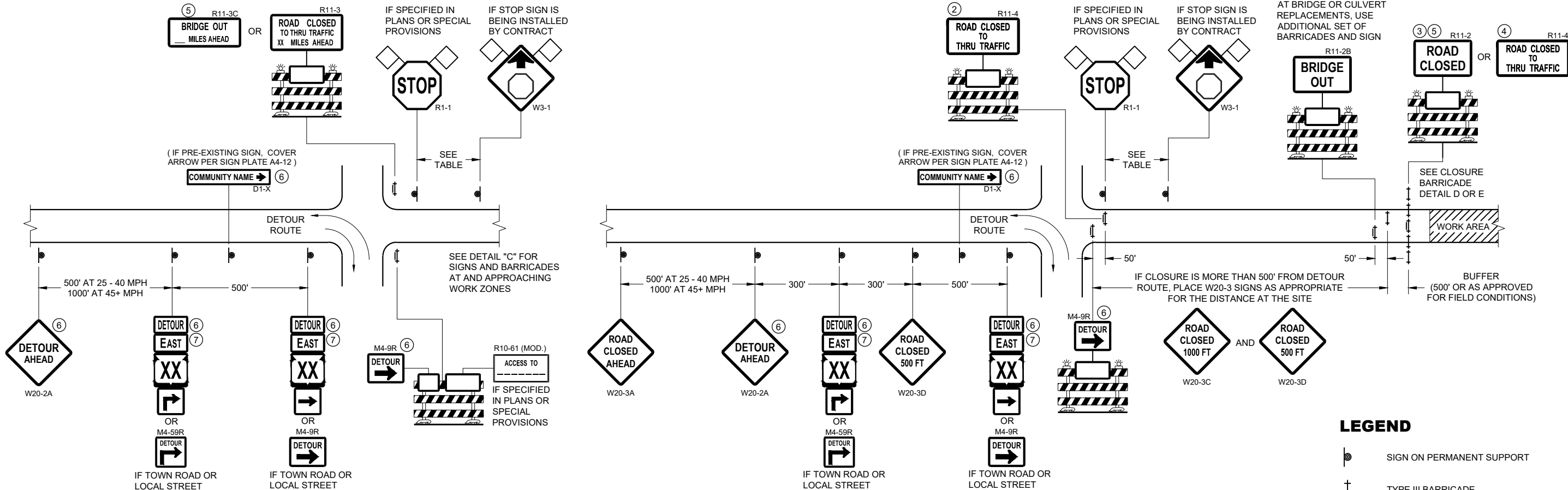
BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

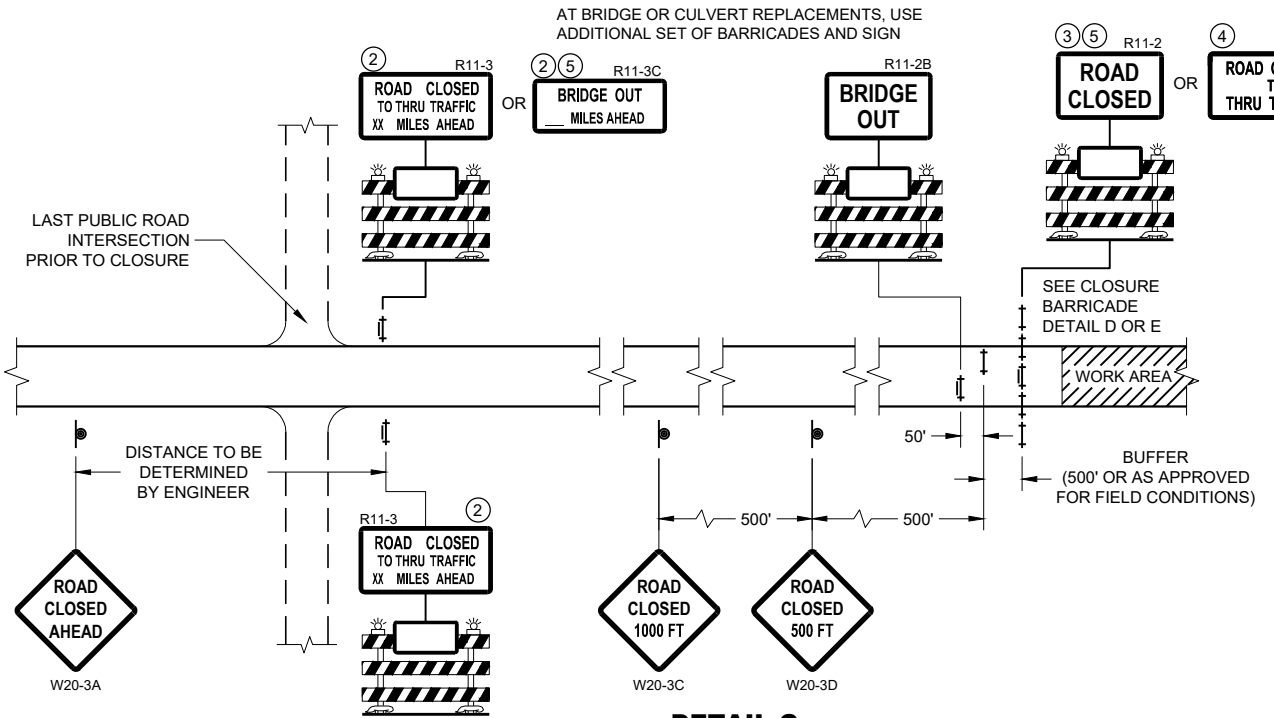
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

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

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



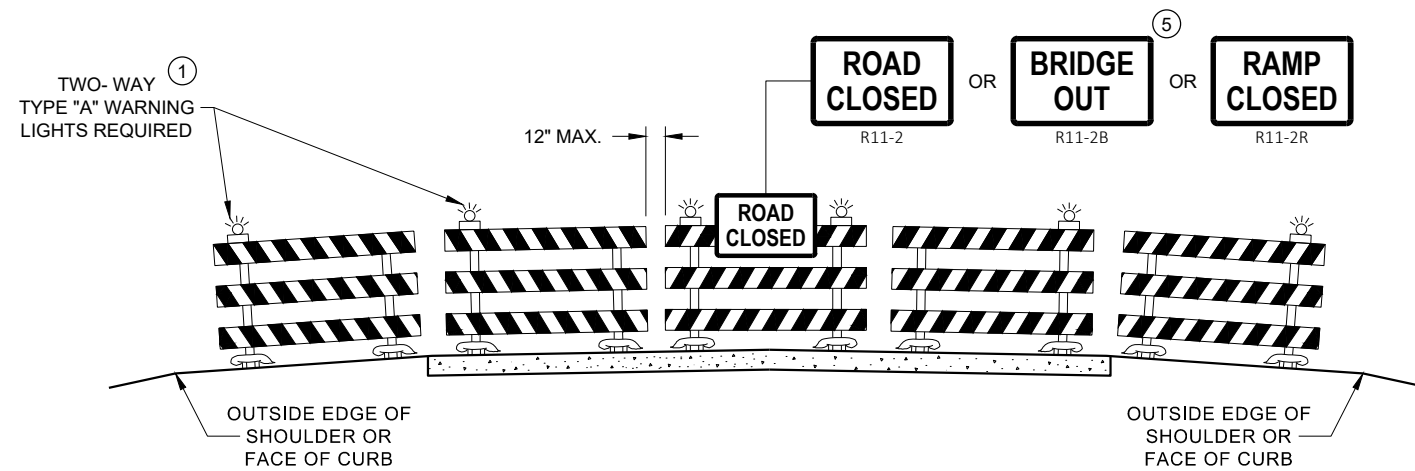
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

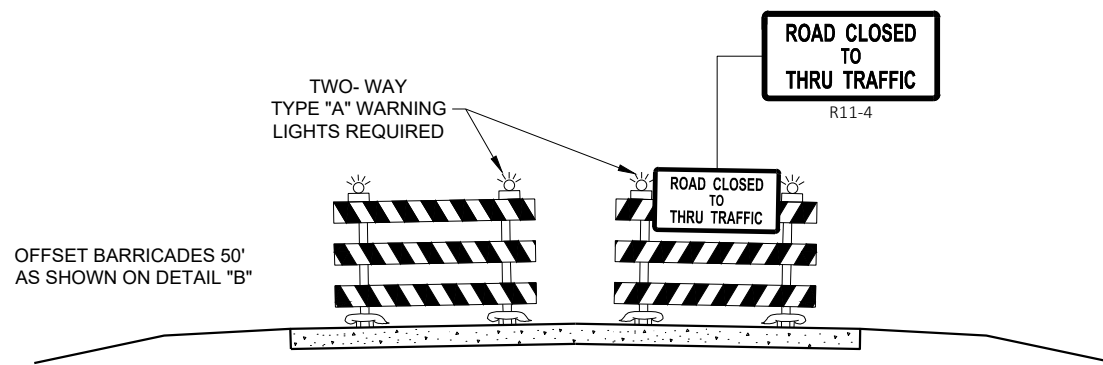
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 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:

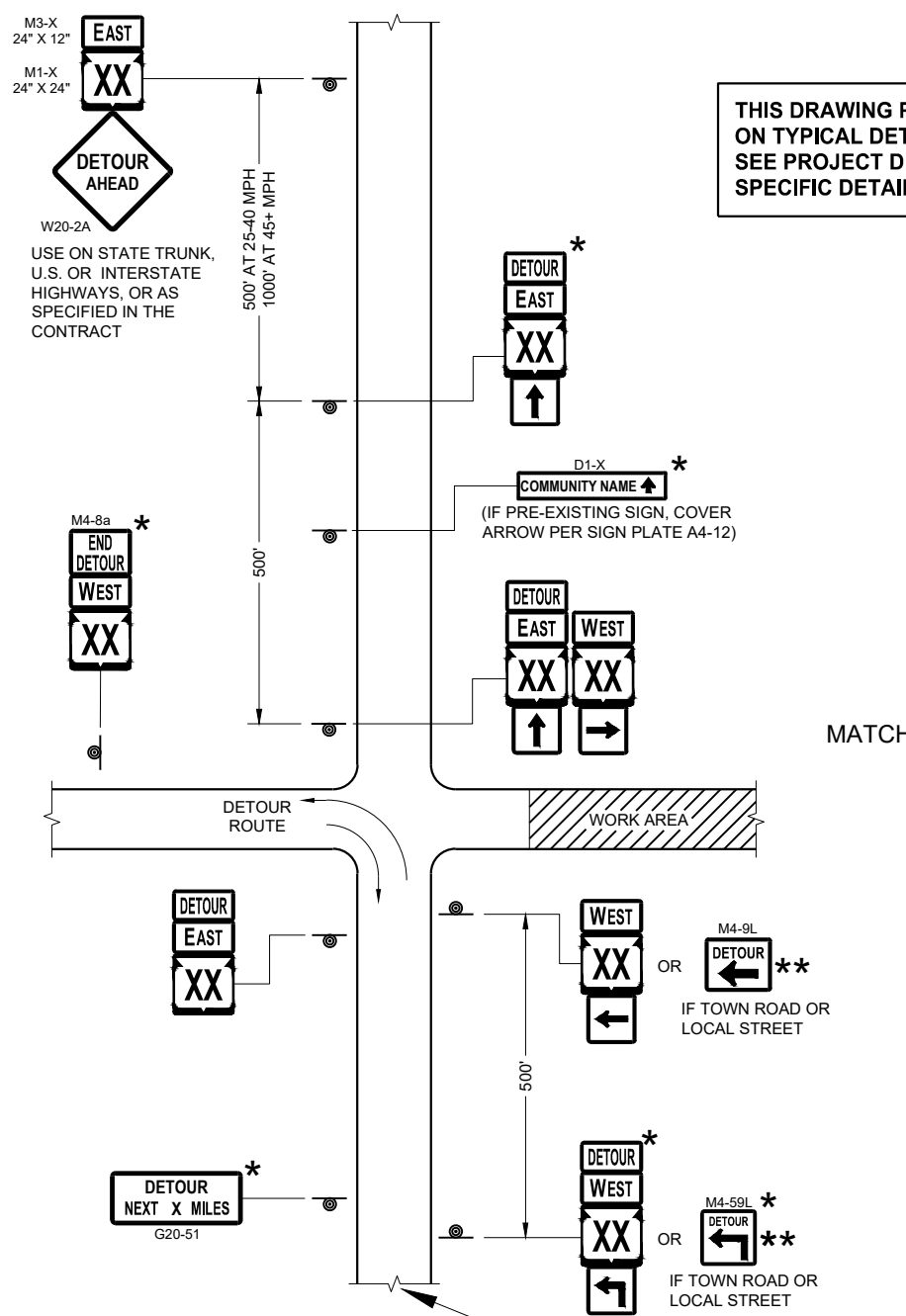
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" 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
FHWA



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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

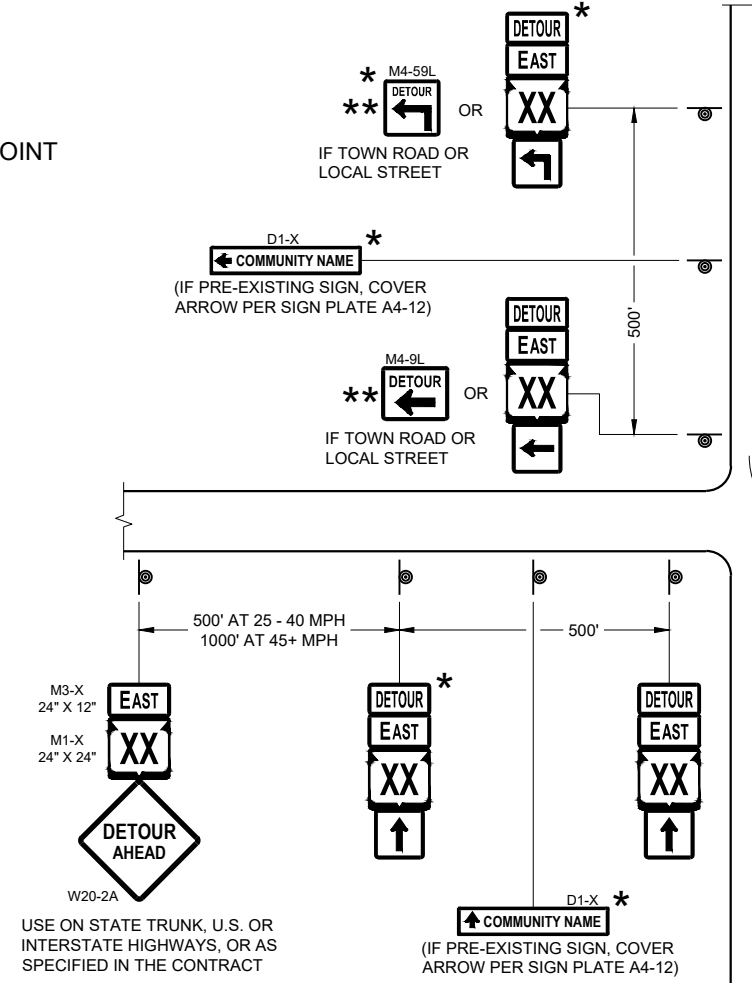
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

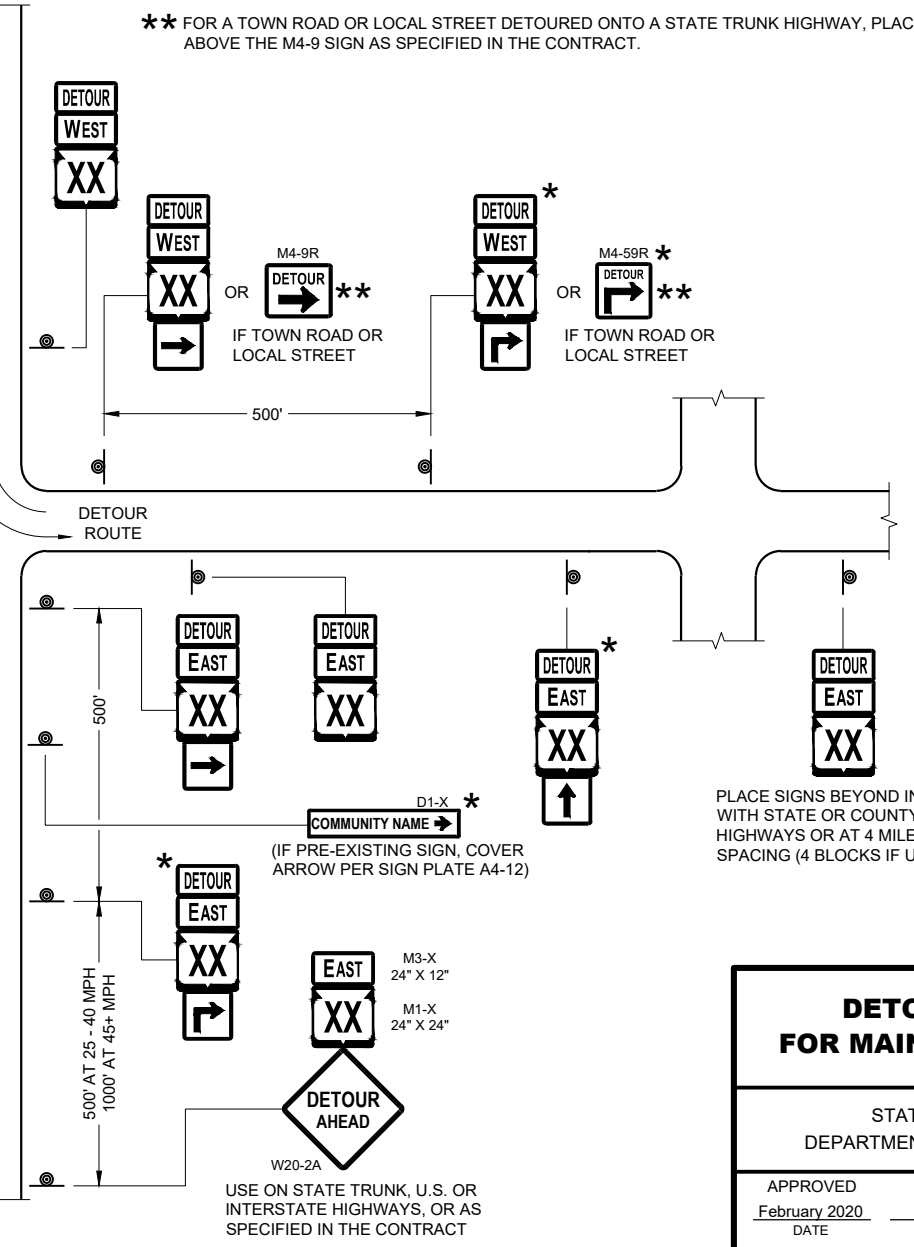
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 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.

MATCH POINT



**DETAIL F
DETOUR SIGNING**



**DETOUR SIGNING
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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

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

GENERAL NOTES

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

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




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

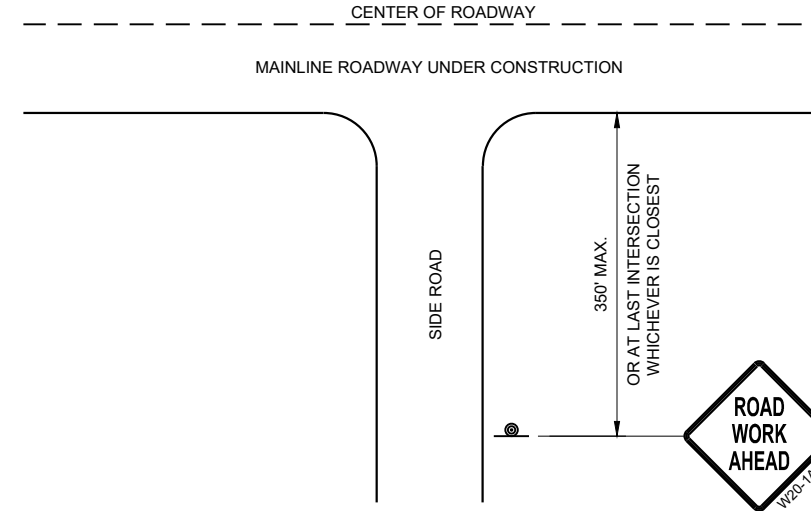
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

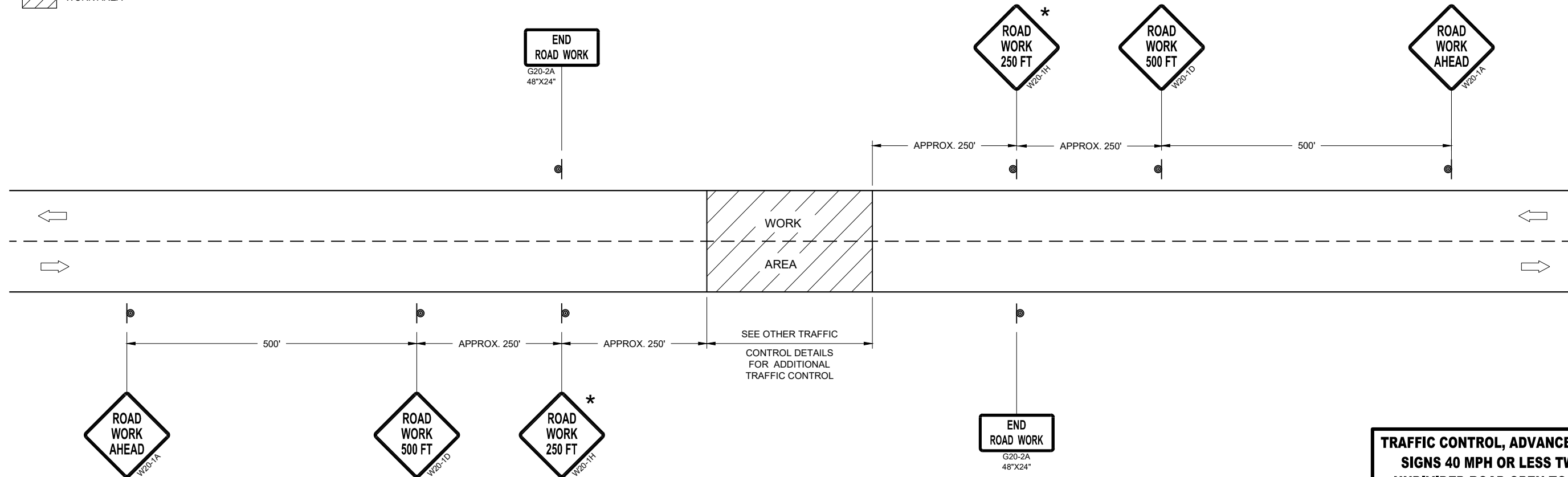
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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




FHWA

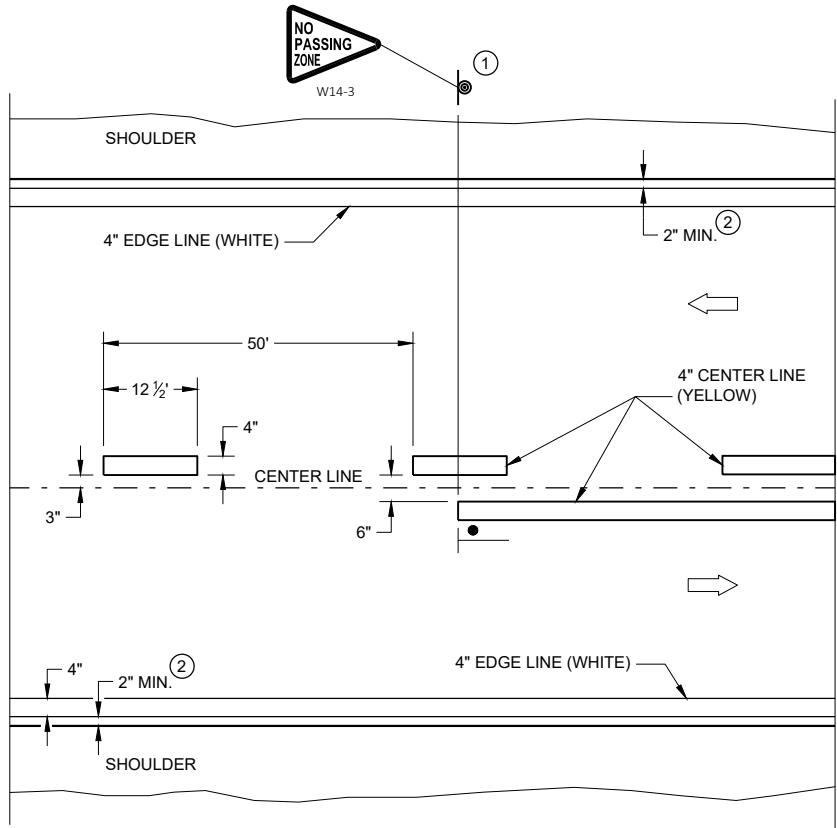
GENERAL NOTES

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

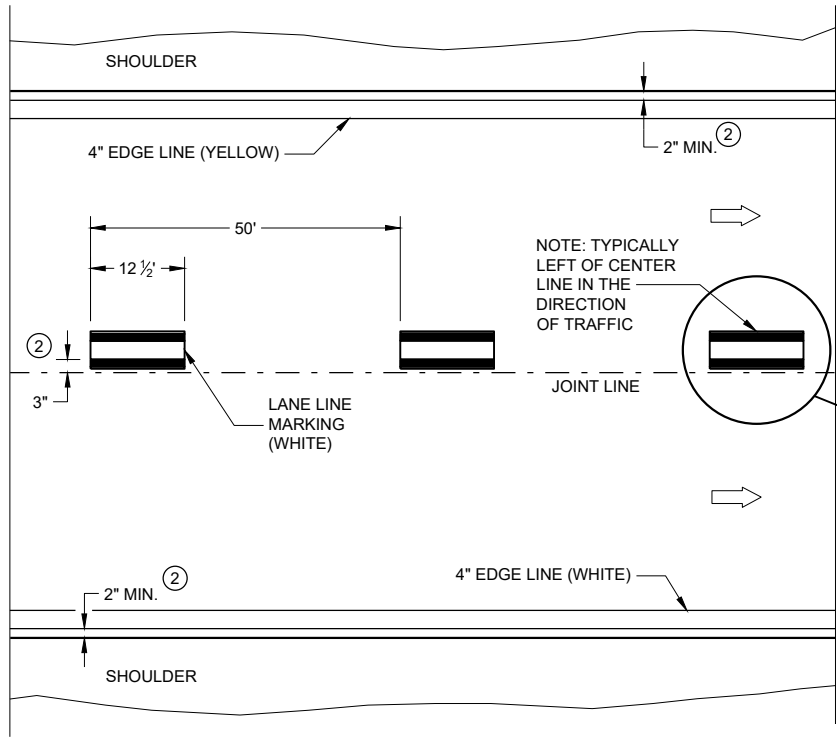
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

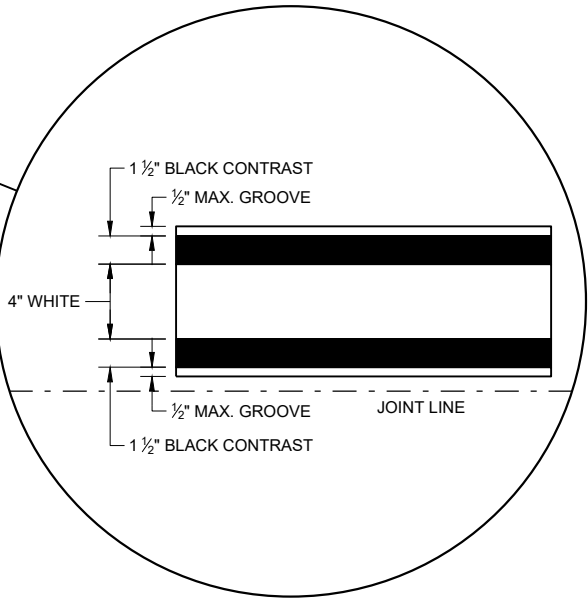


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



6

6

SDD 15C08 - 21a

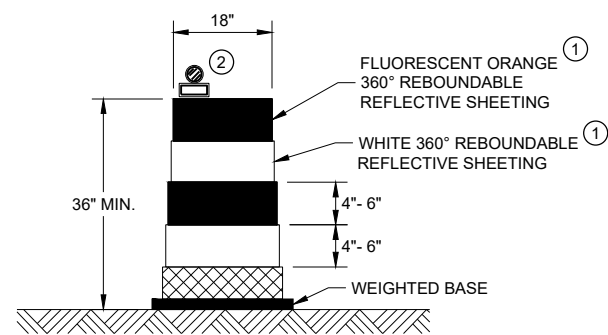
SDD 15C08 - 21a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

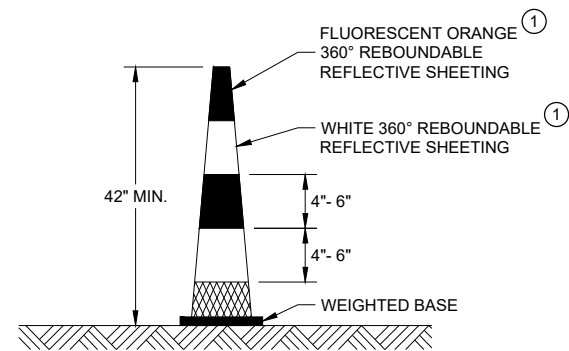
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

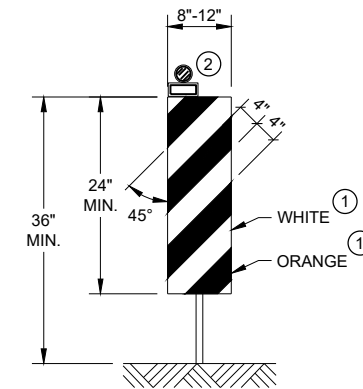


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

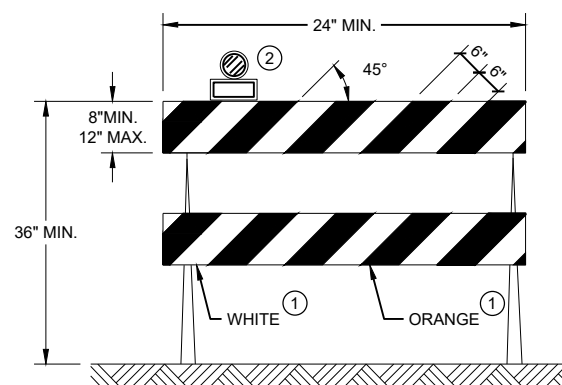


VERTICAL PANEL

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

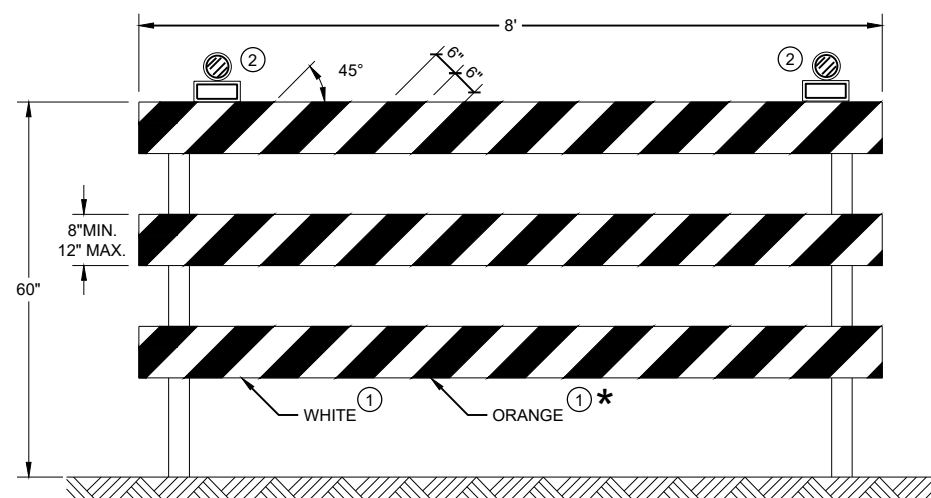
GENERAL NOTES

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



TYPE II BARRICADE

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








TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

LEGEND

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

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.

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

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

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND 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.

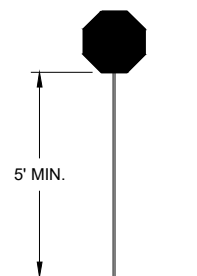
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- 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 PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



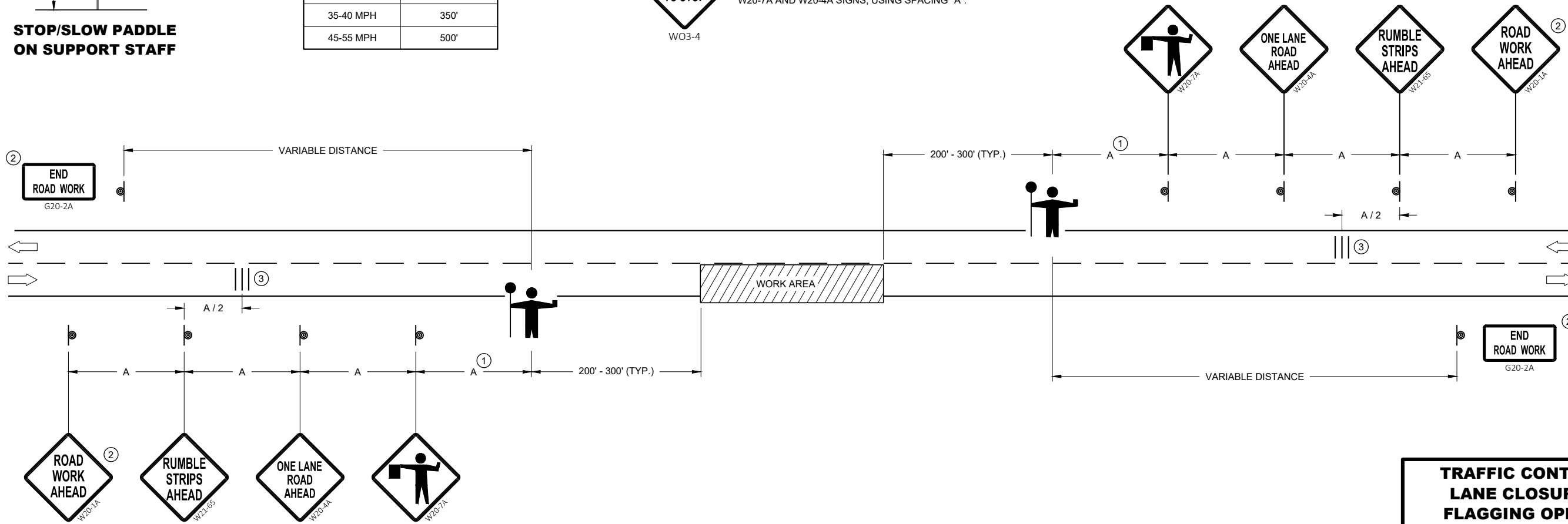
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

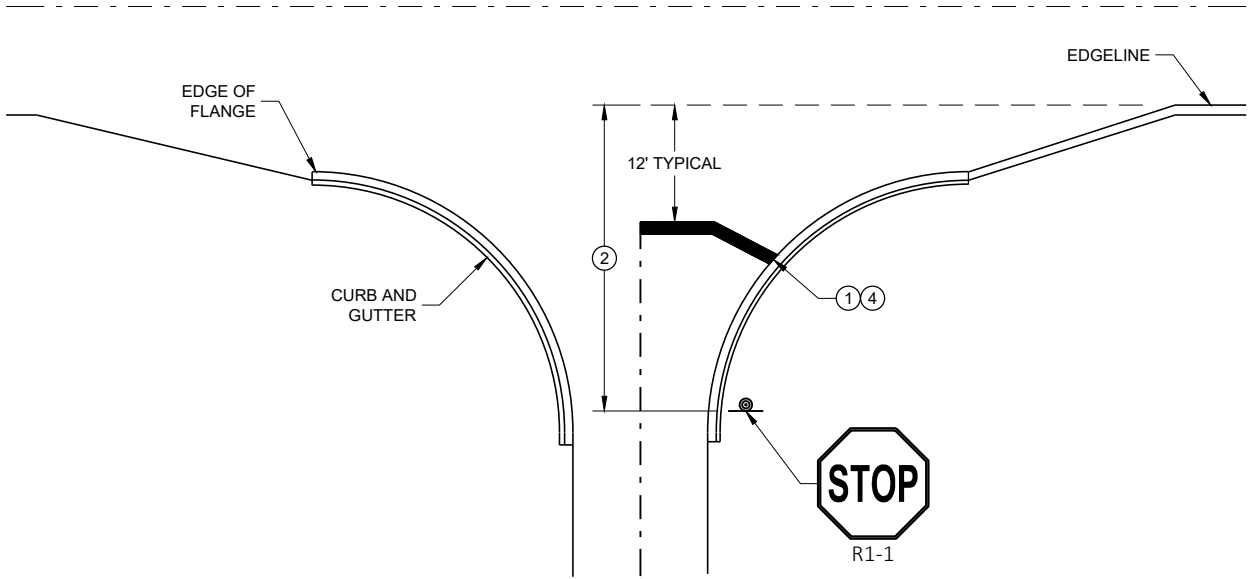
APPROVED
DATE: May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

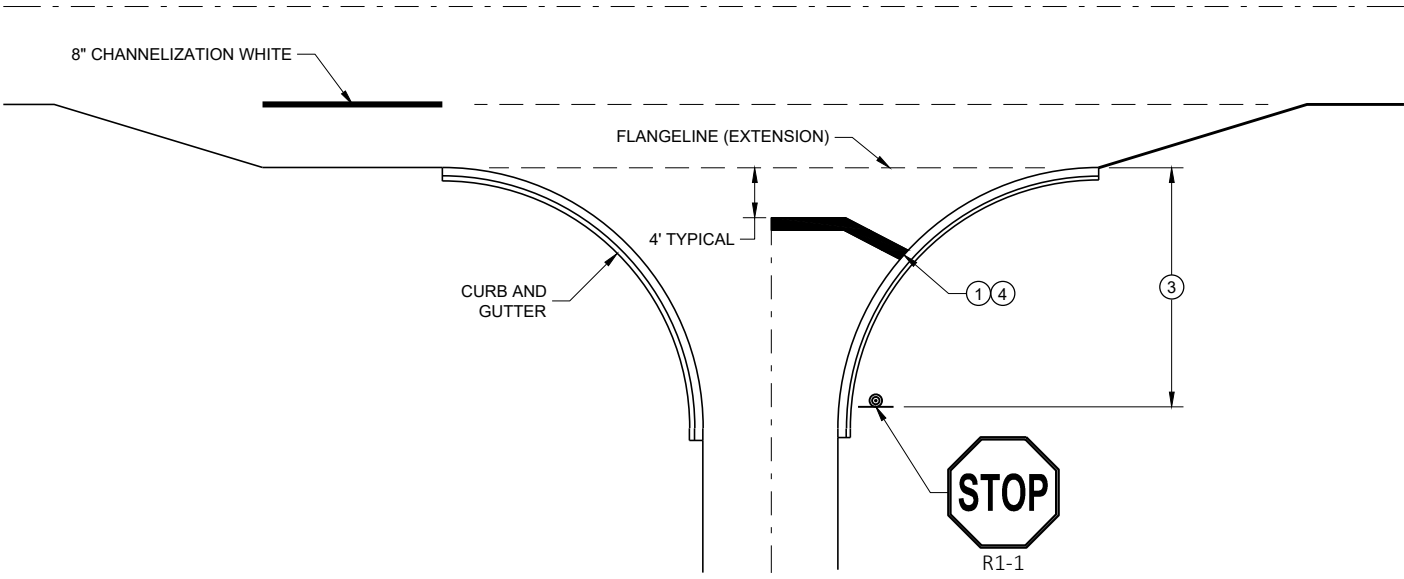
GENERAL NOTES

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

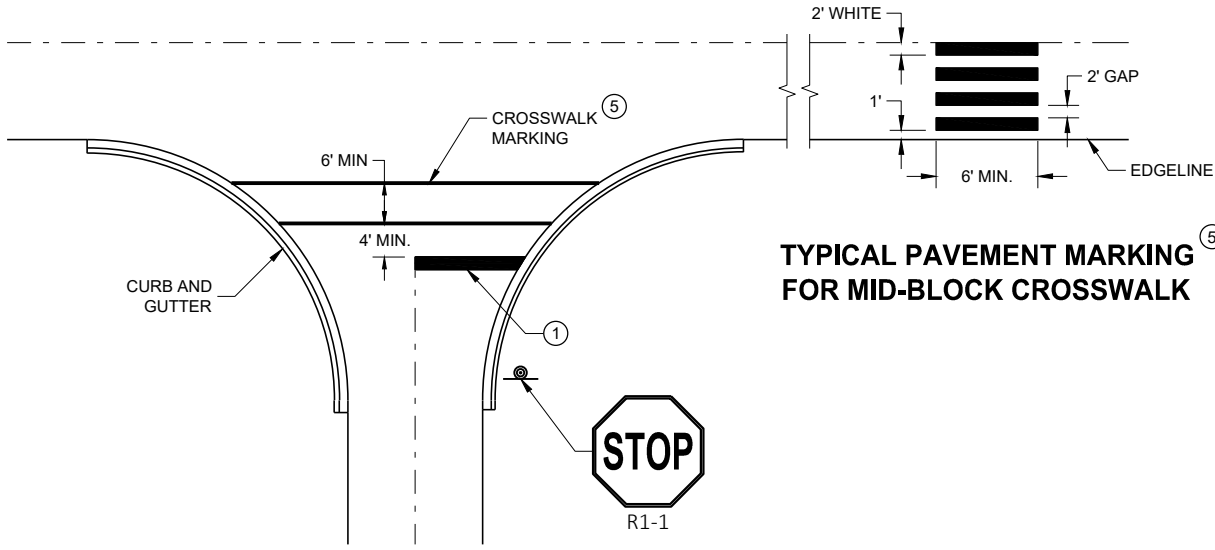
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

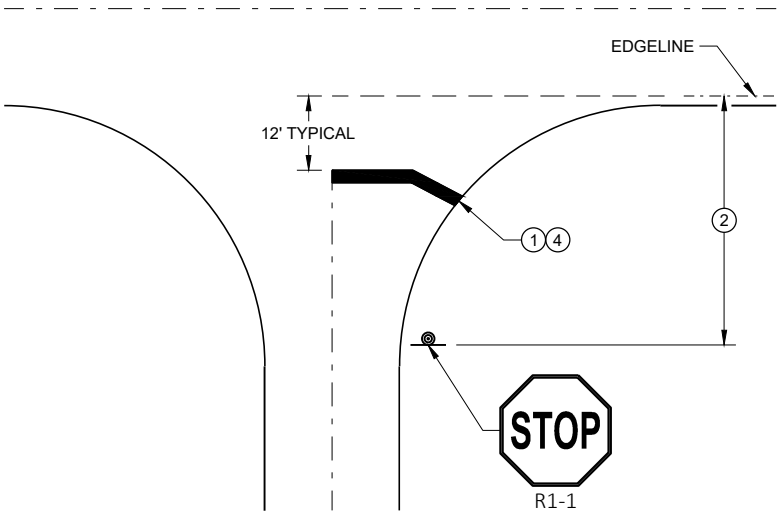


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

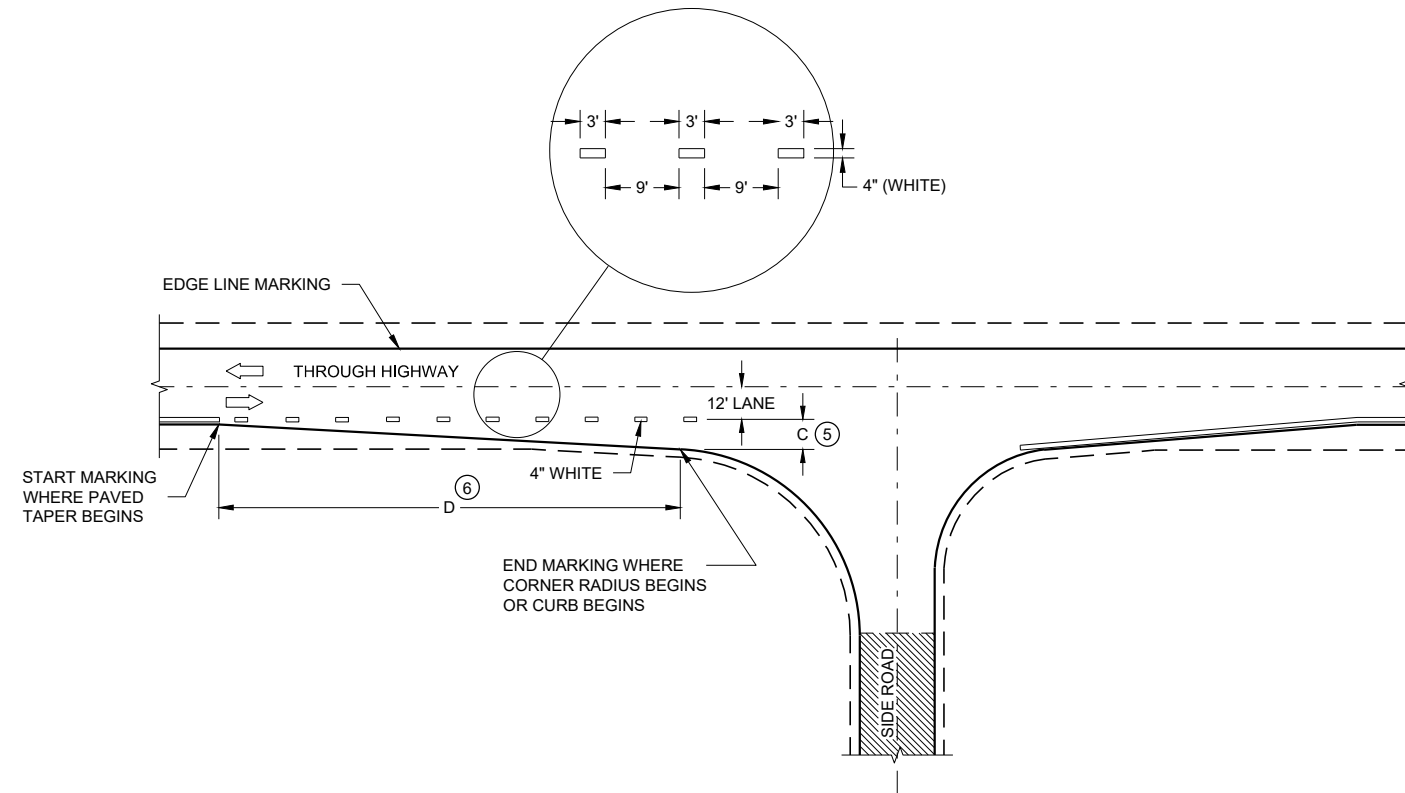
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

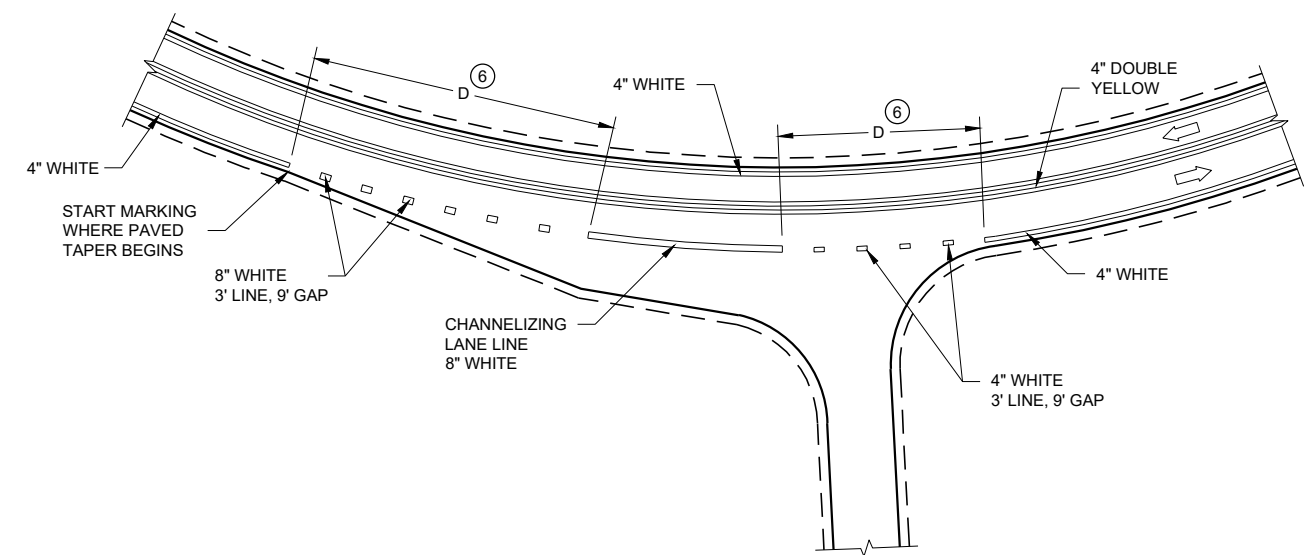
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

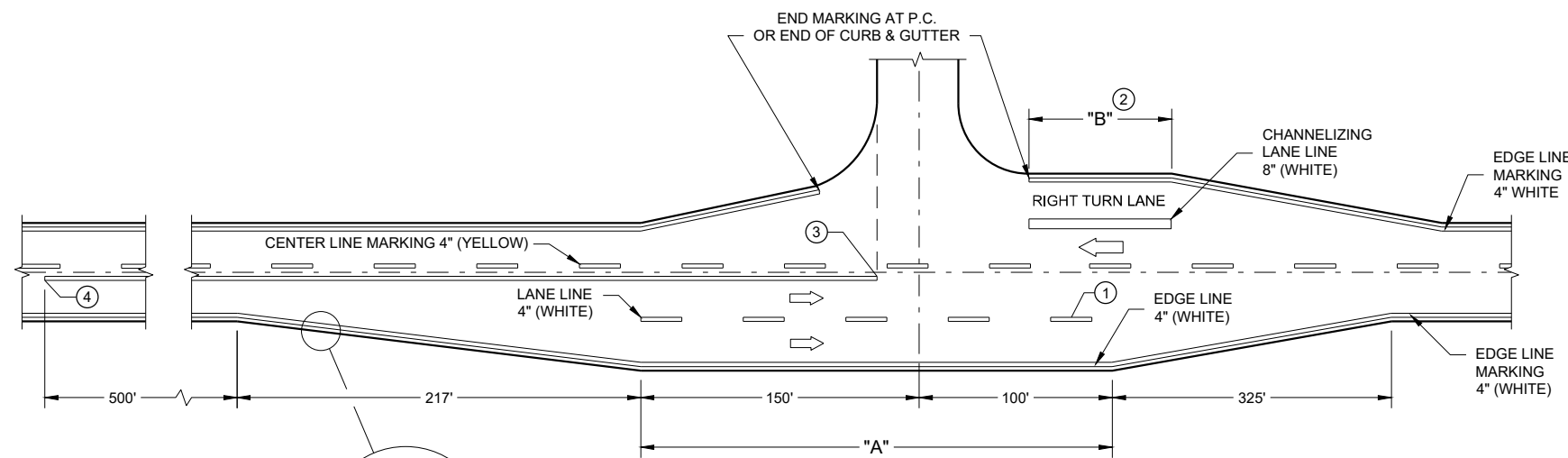
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION

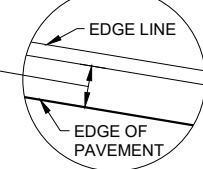


INTERSECTION ON OUTSIDE OF CURVE



**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

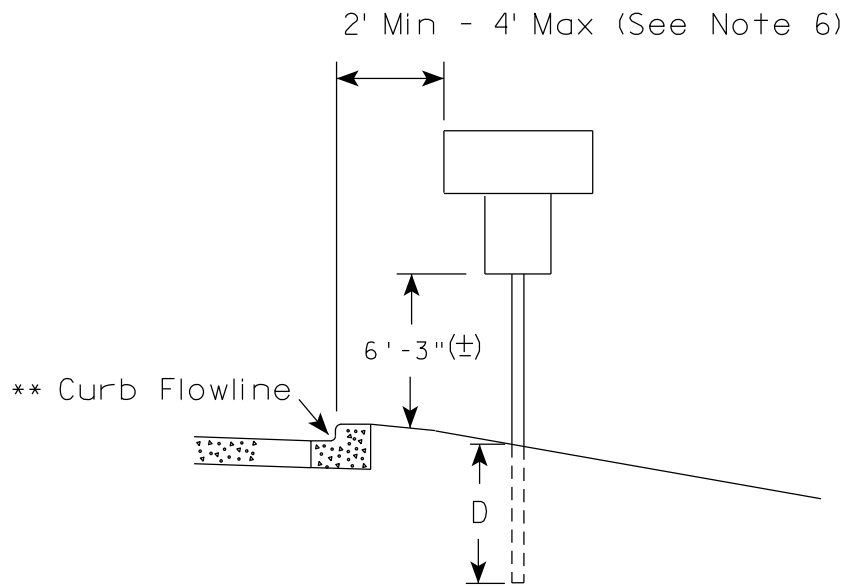
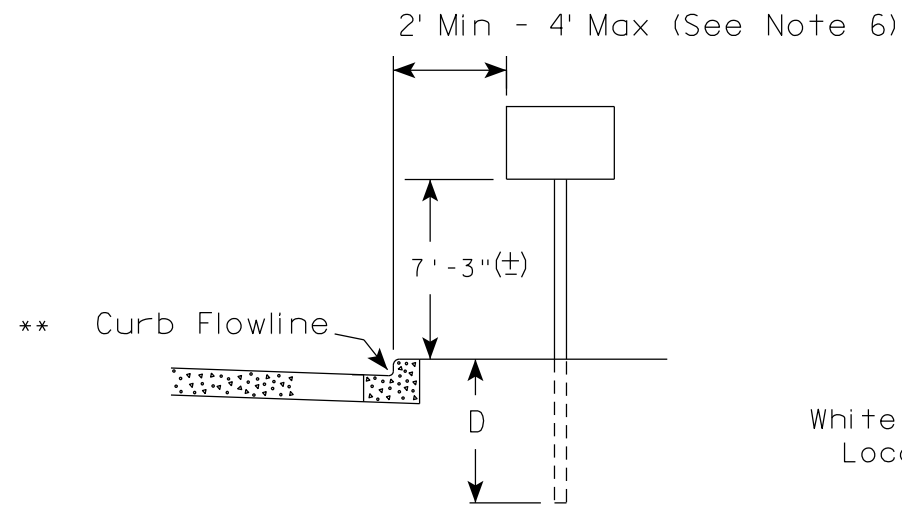
BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



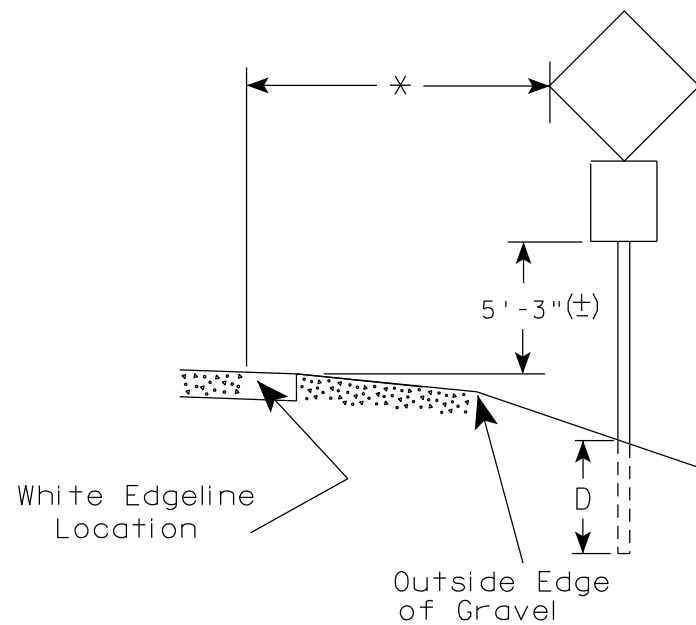
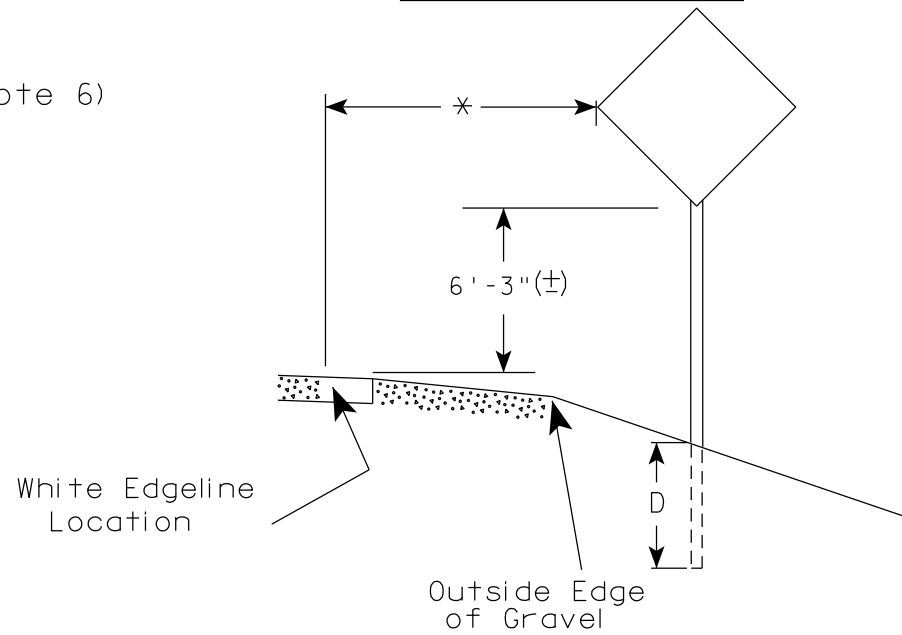
**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

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

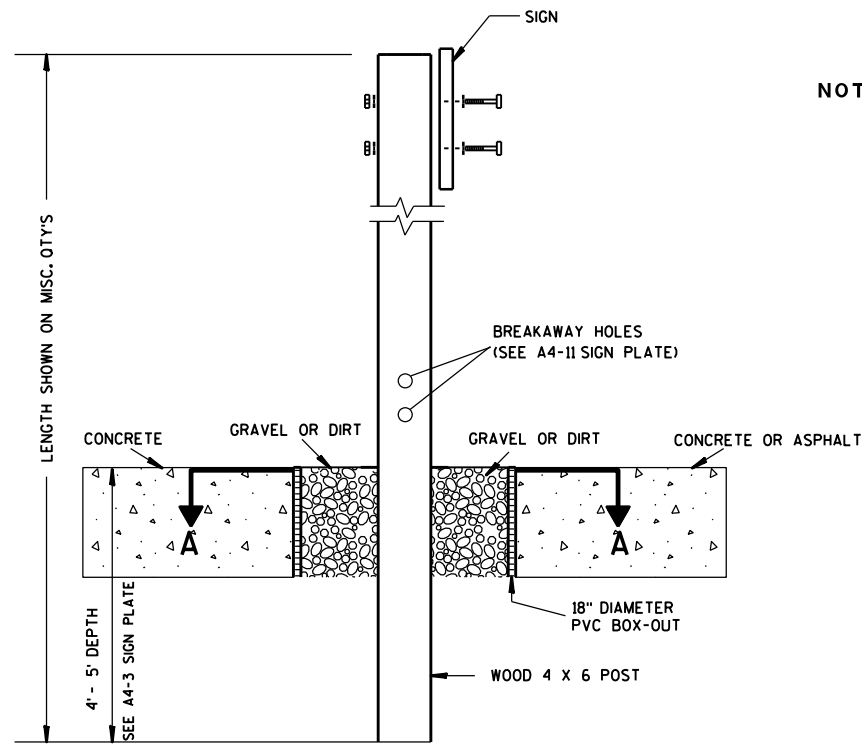
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

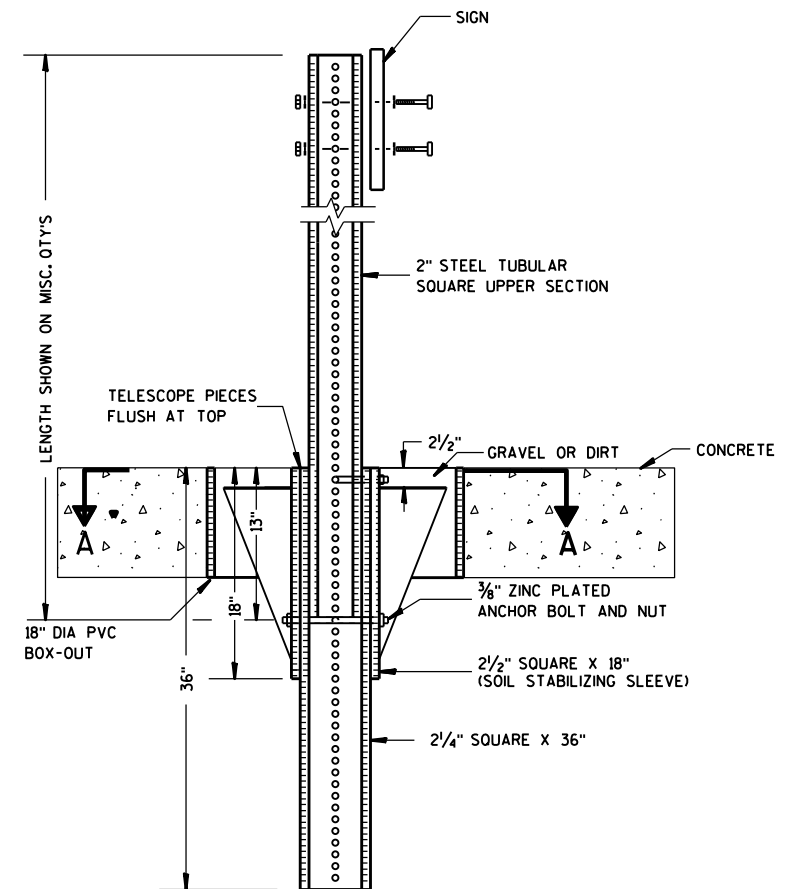
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

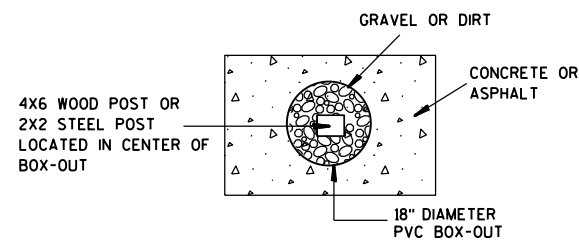
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLATE NO. A4-3B.1

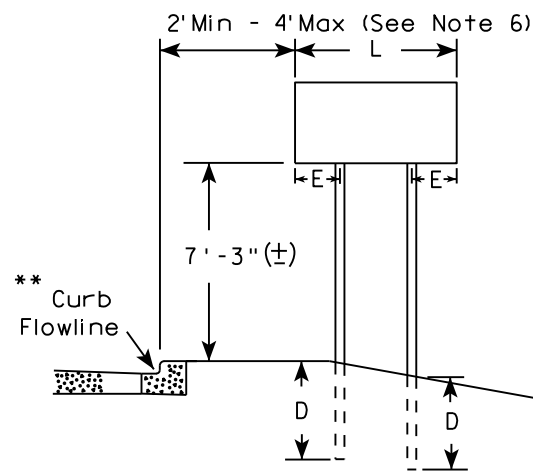
7

7

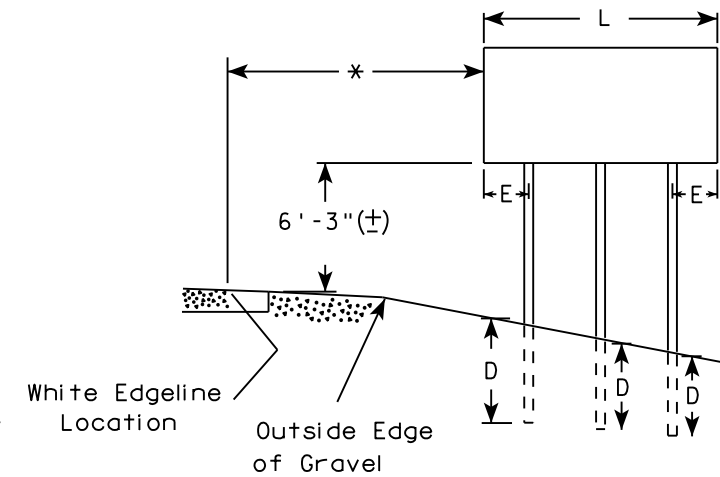
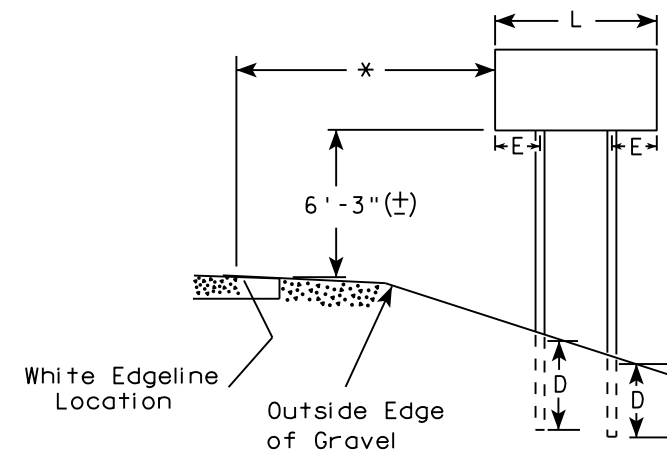
GENERAL NOTES

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

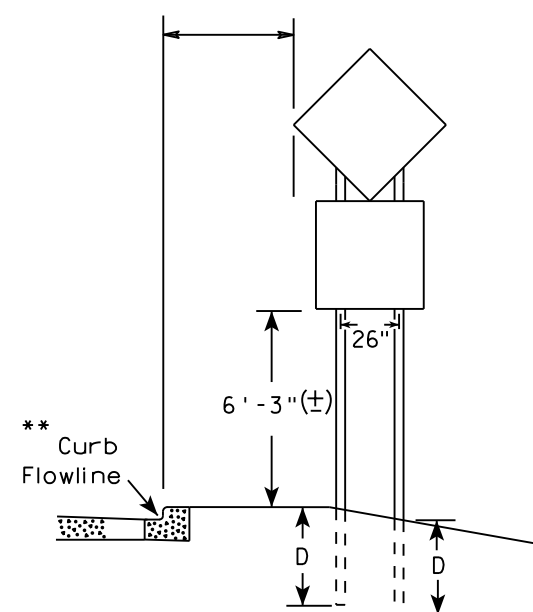
URBAN AREA



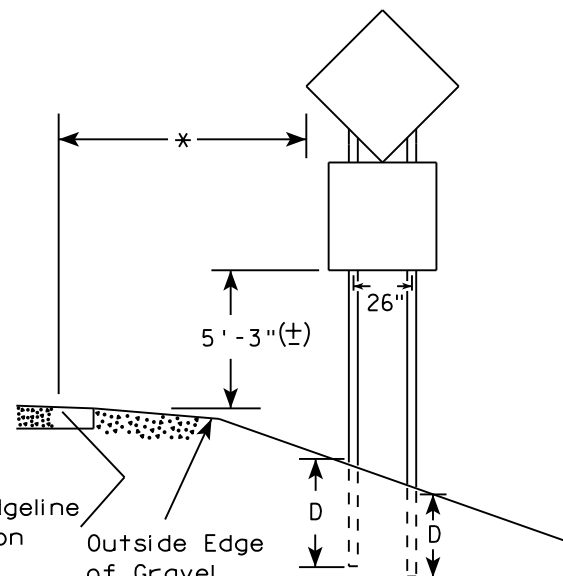
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

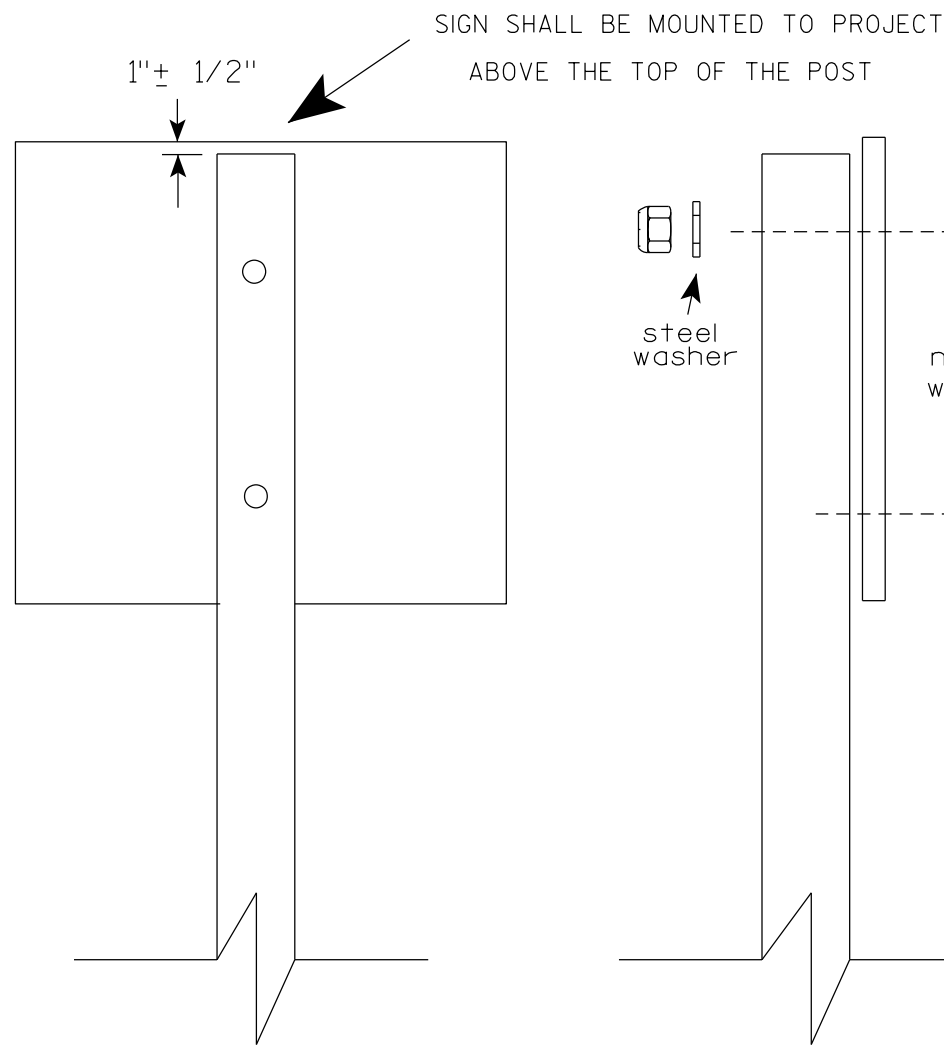
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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



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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS
TO POSTS

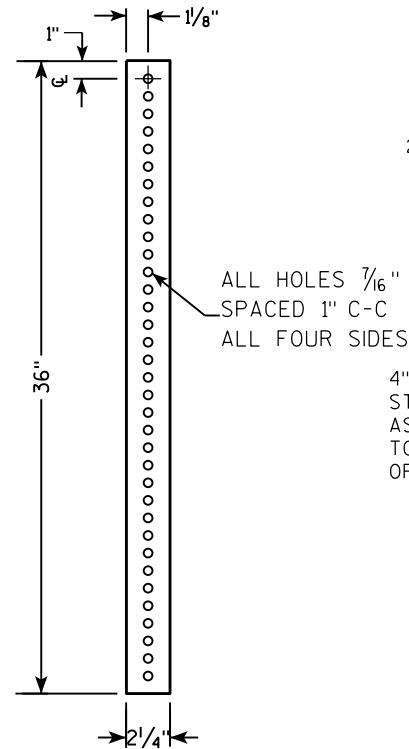
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

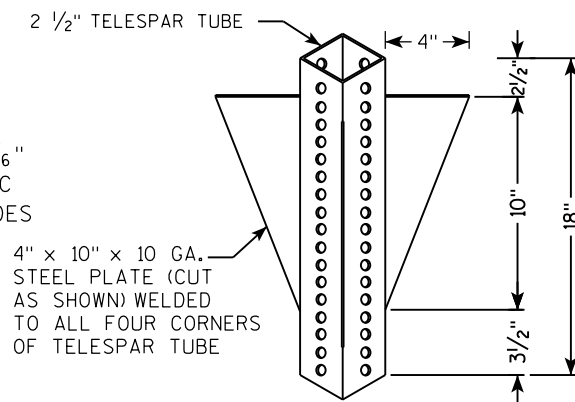
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

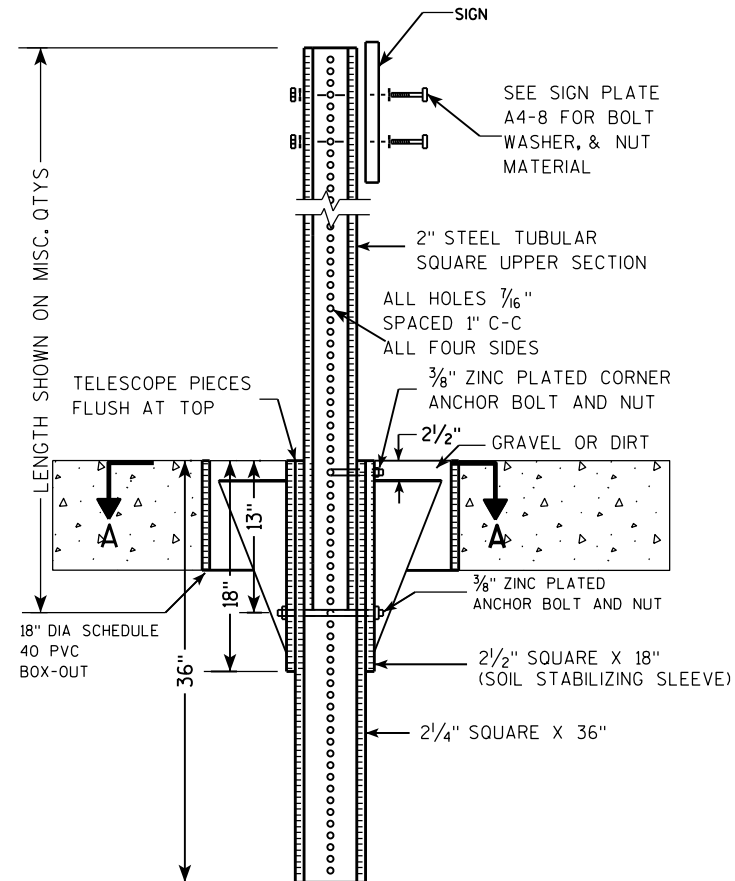
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



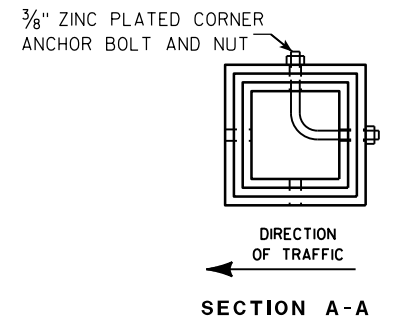
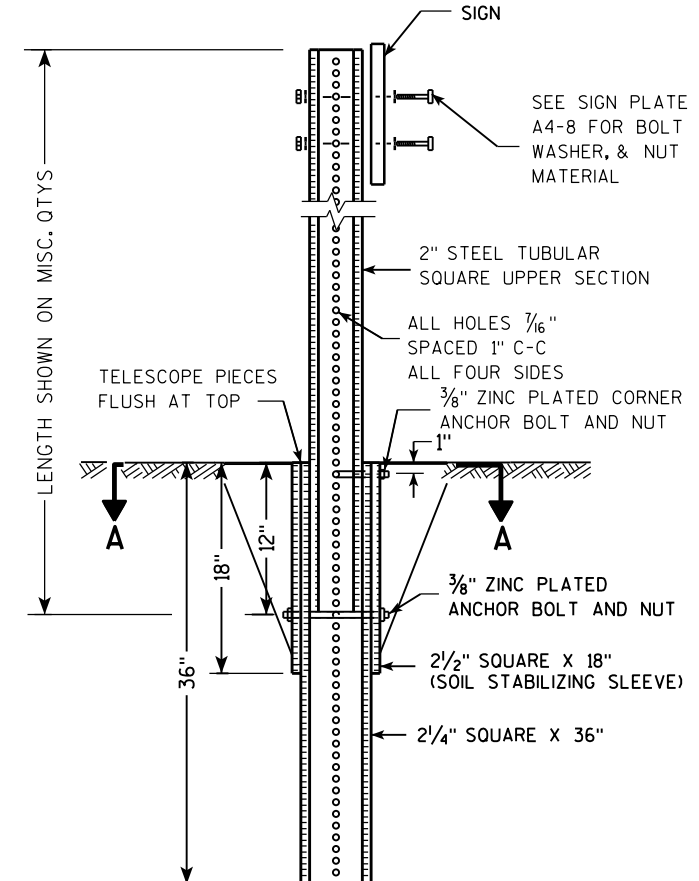
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

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

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

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

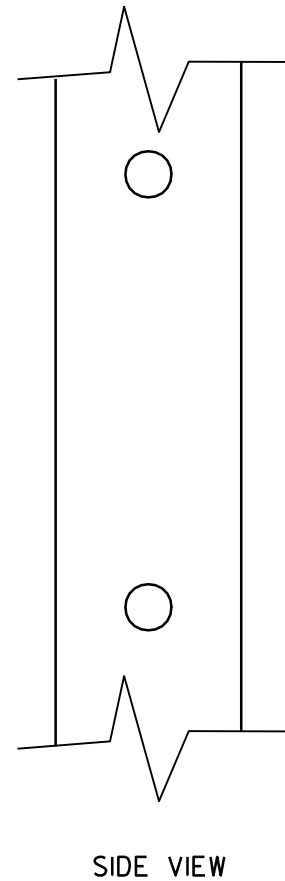
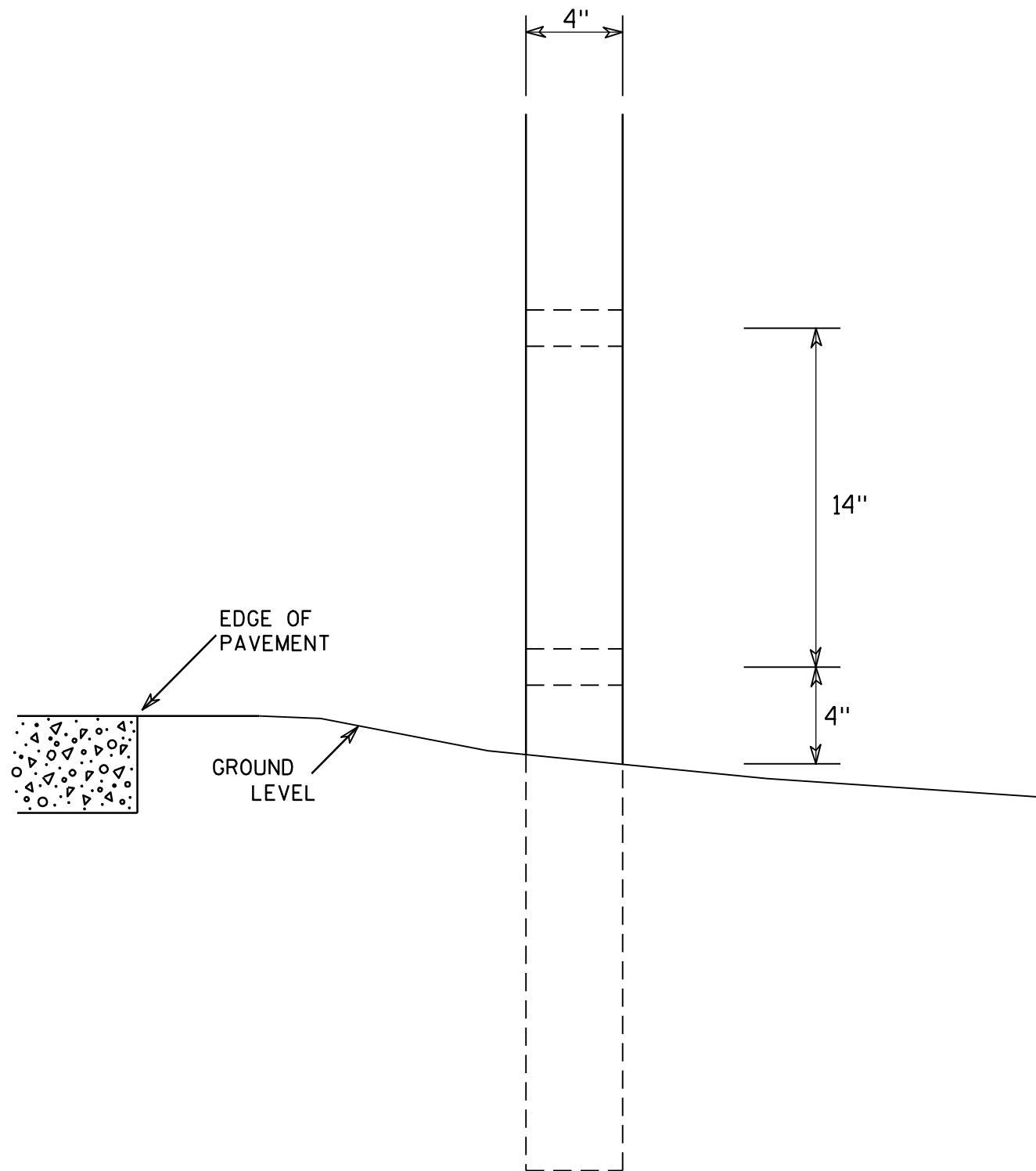
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

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

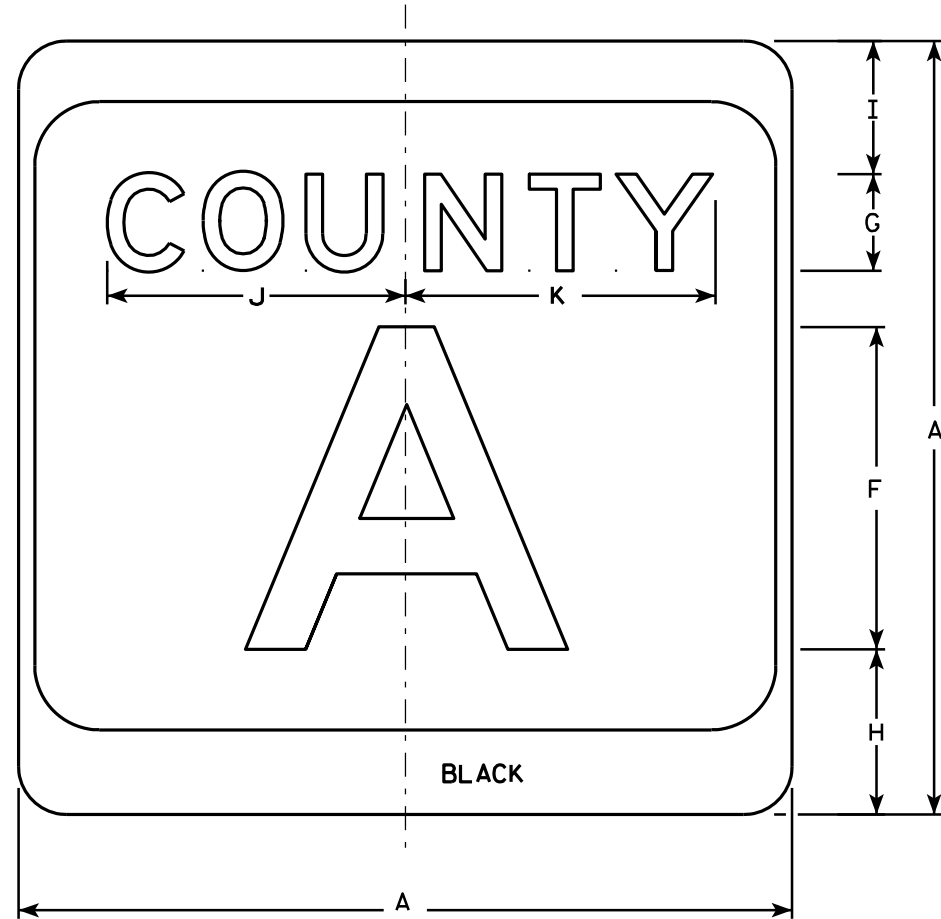
7

7

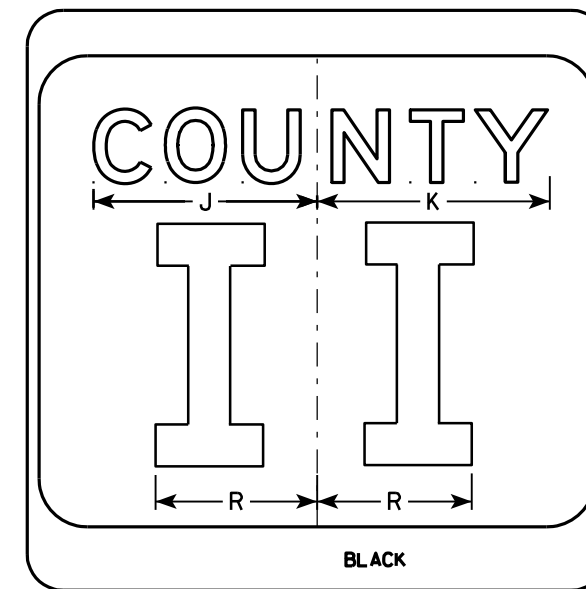
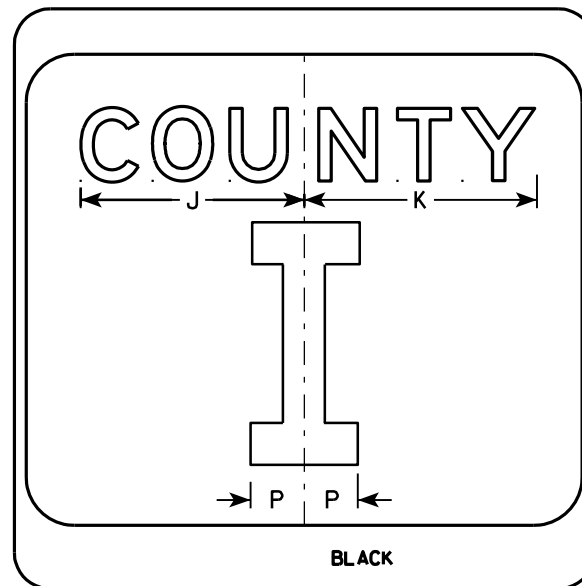
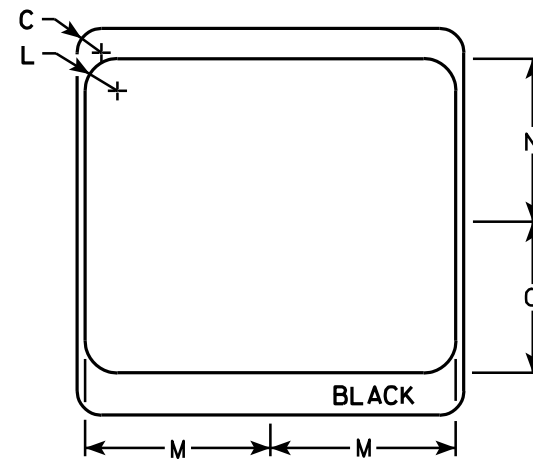
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
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. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



M1-5A



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

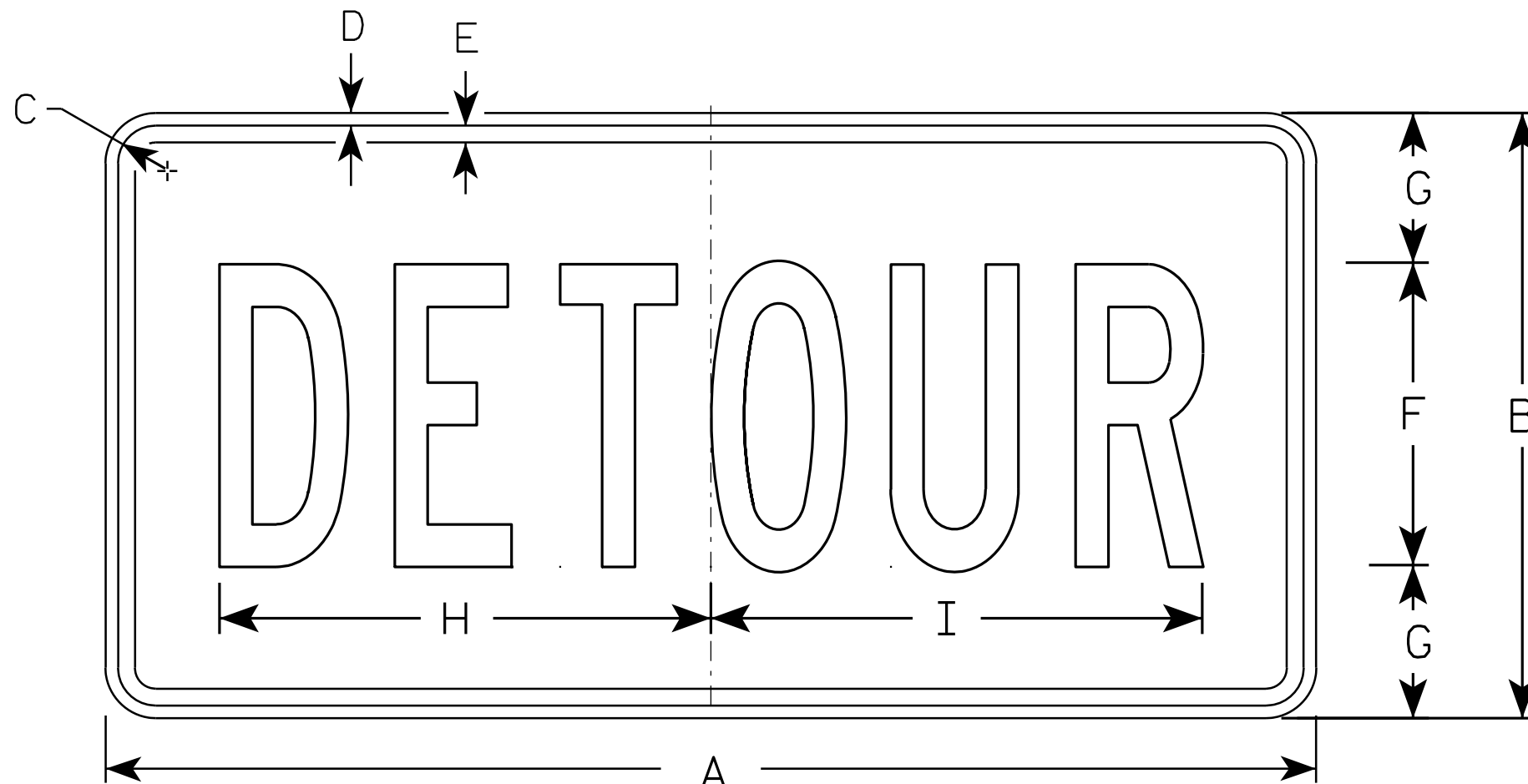
APPROVED *Matthew R. Raub*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. MI-5A.8

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

NOTES

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



M4-8

7

7

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

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

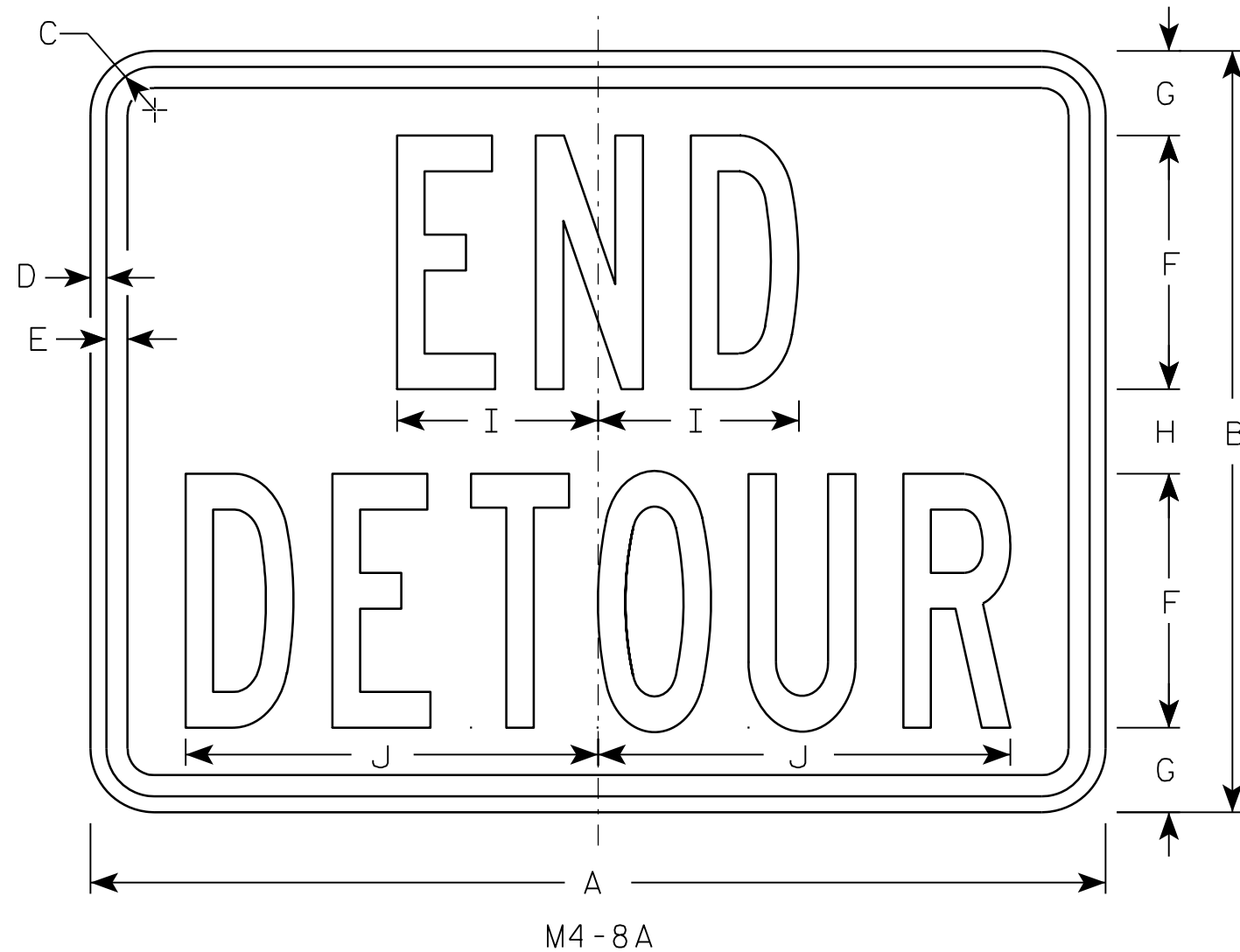
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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

NOTES

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



7

7

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

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

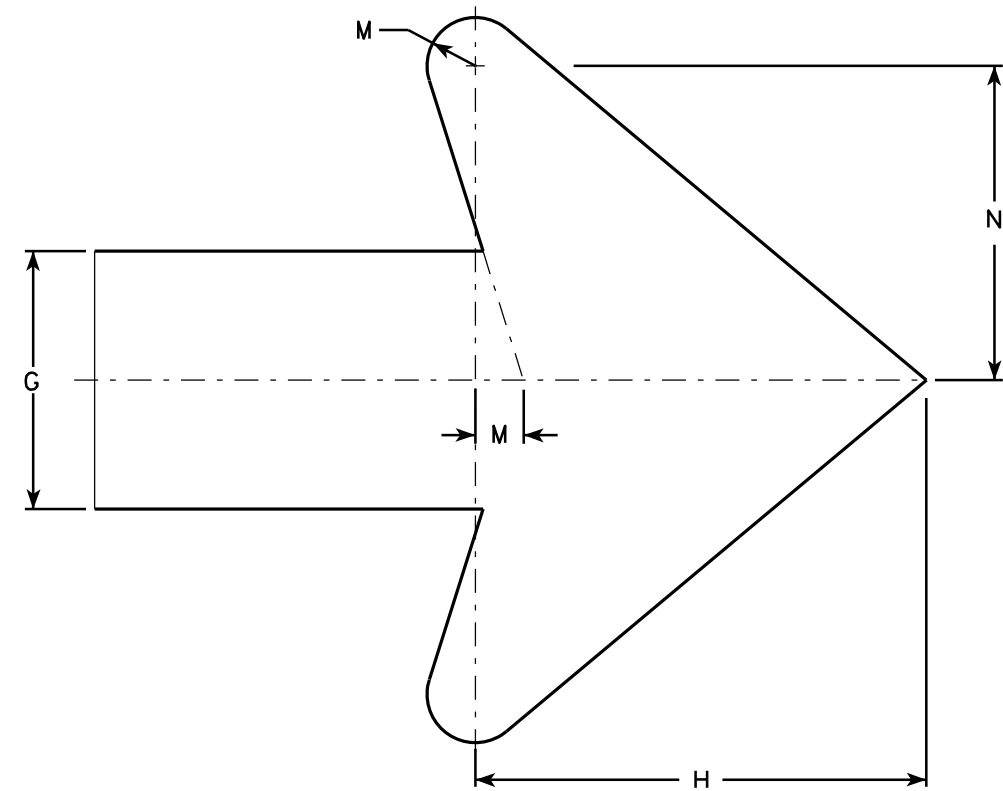
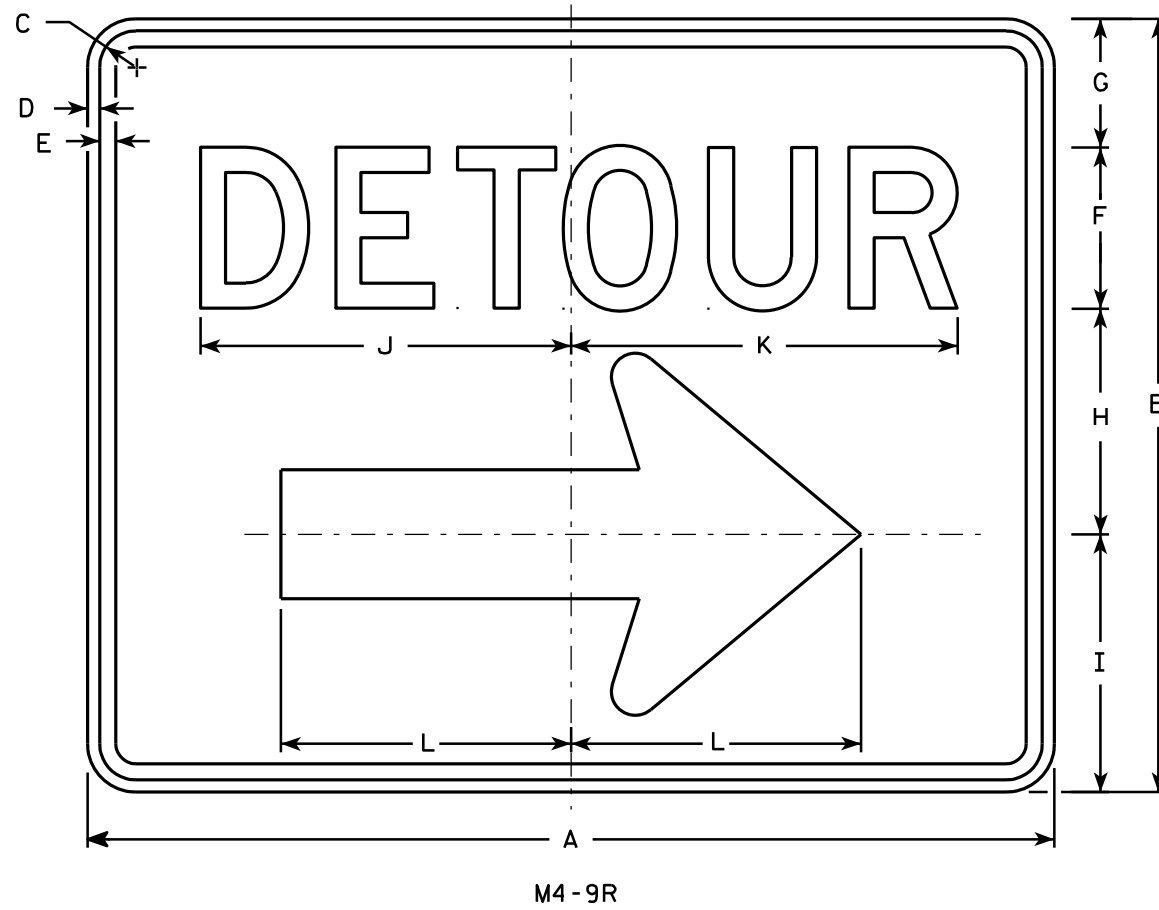
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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

NOTES

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



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

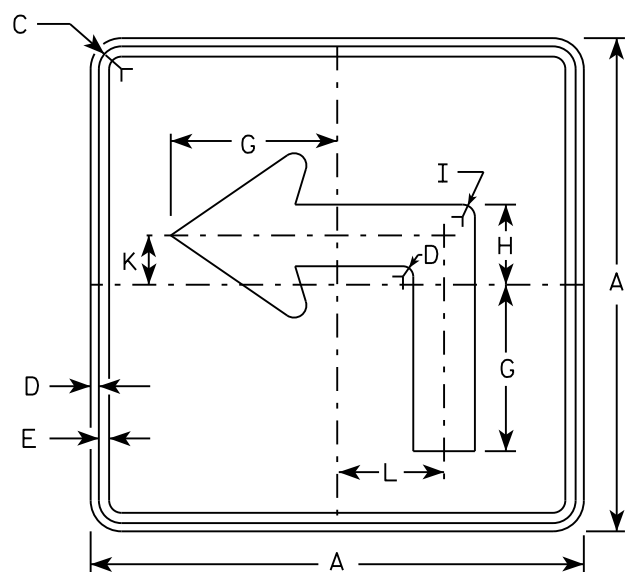
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

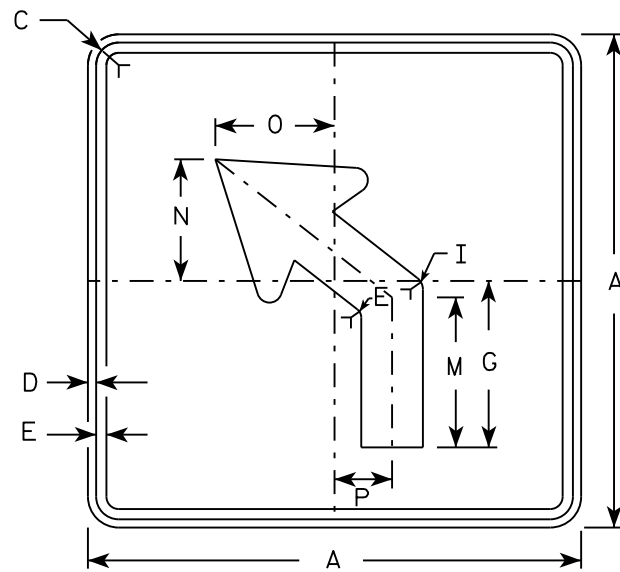
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

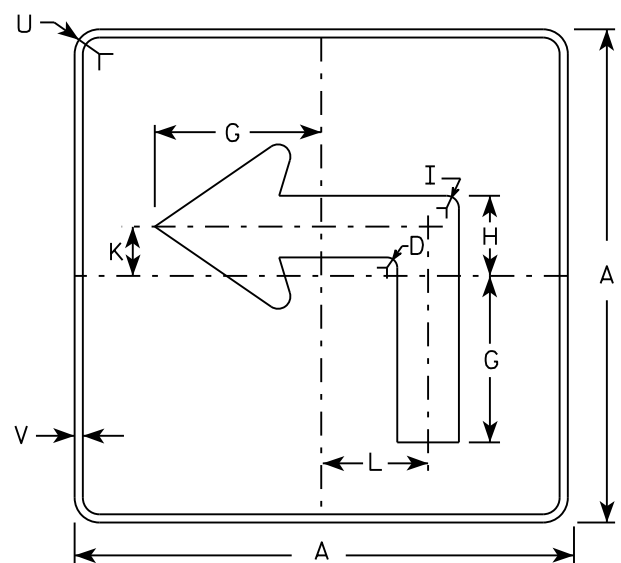
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



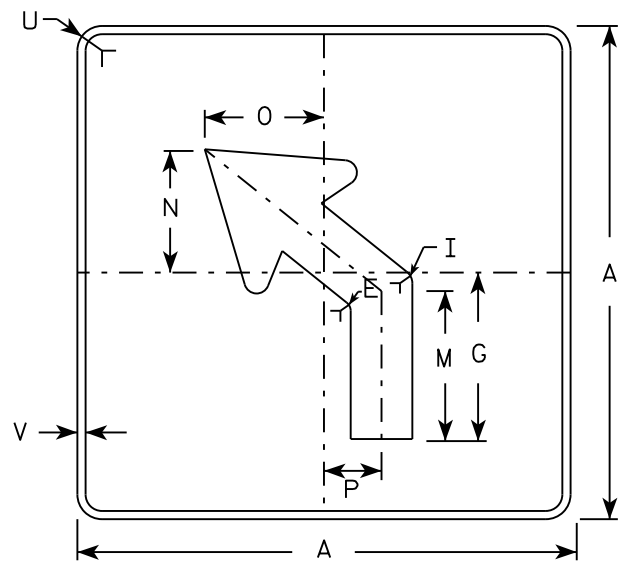
M5-1L
MM5-1L
M05-1L
MP5-1L



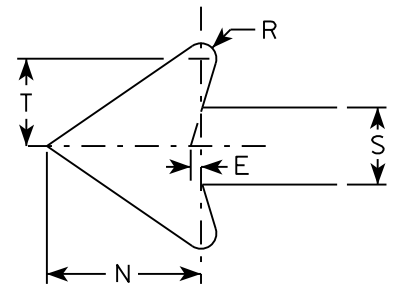
M5-2L
MM5-2L
M05-2L
MP5-2L



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



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



NOTES

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

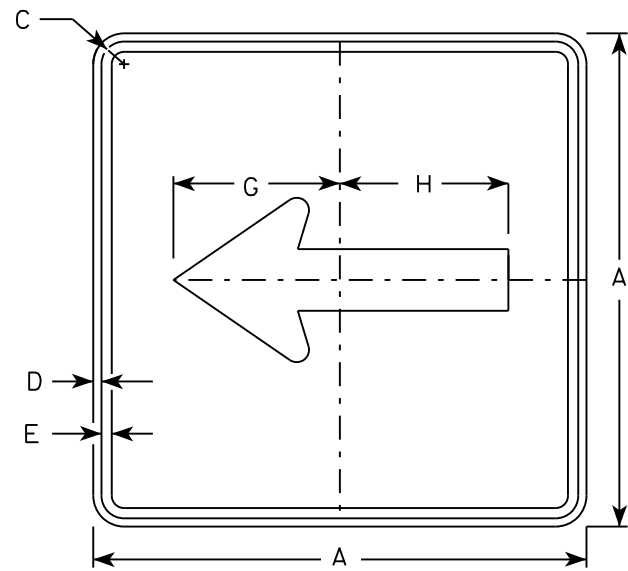
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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

STANDARD SIGN
M5-1 & M5-2

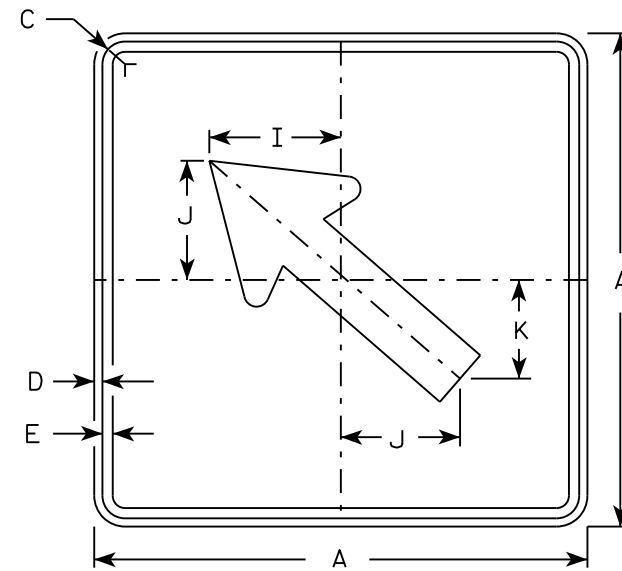
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

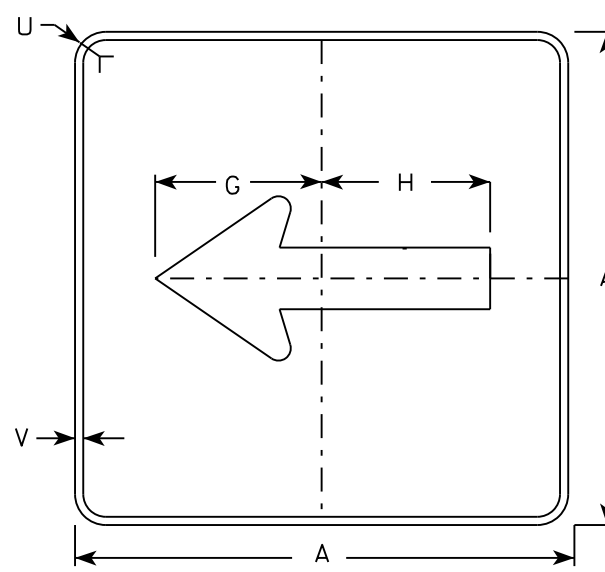
DATE 10/15/15 PLATE NO. M5-1.13



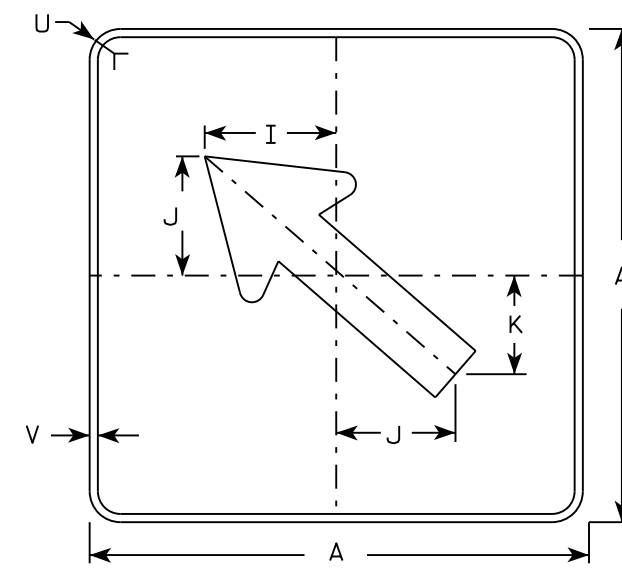
M6-1
MM6-1
M06-1
MP6-1



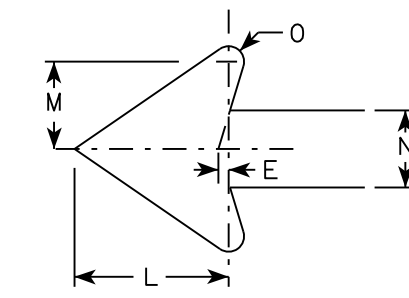
M6-2
MM6-2
M06-2
MP6-2



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



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



NOTES

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

7

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

STANDARD SIGN
M6-1 & M6-2
SERIES

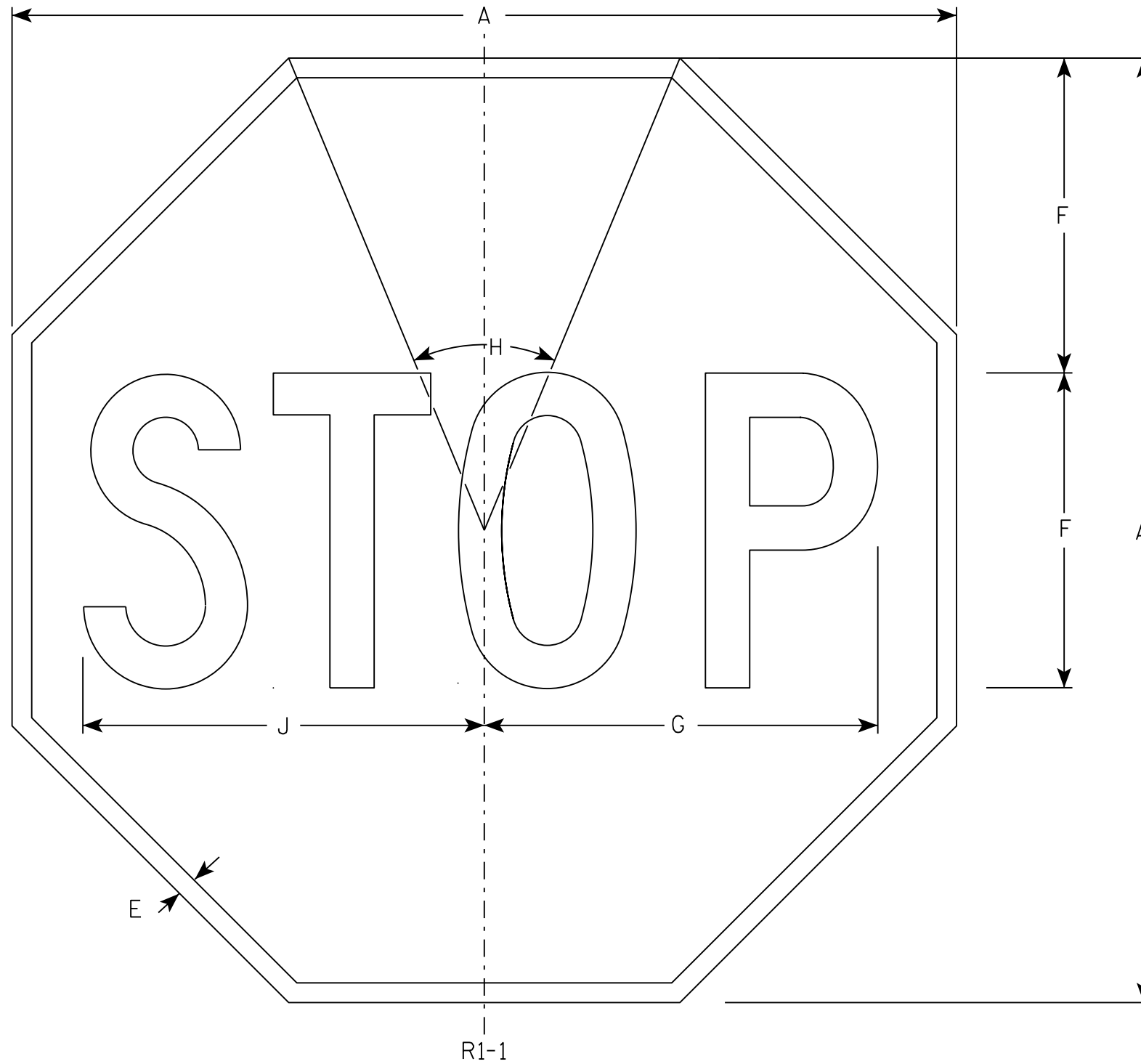
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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



R1-1

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				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

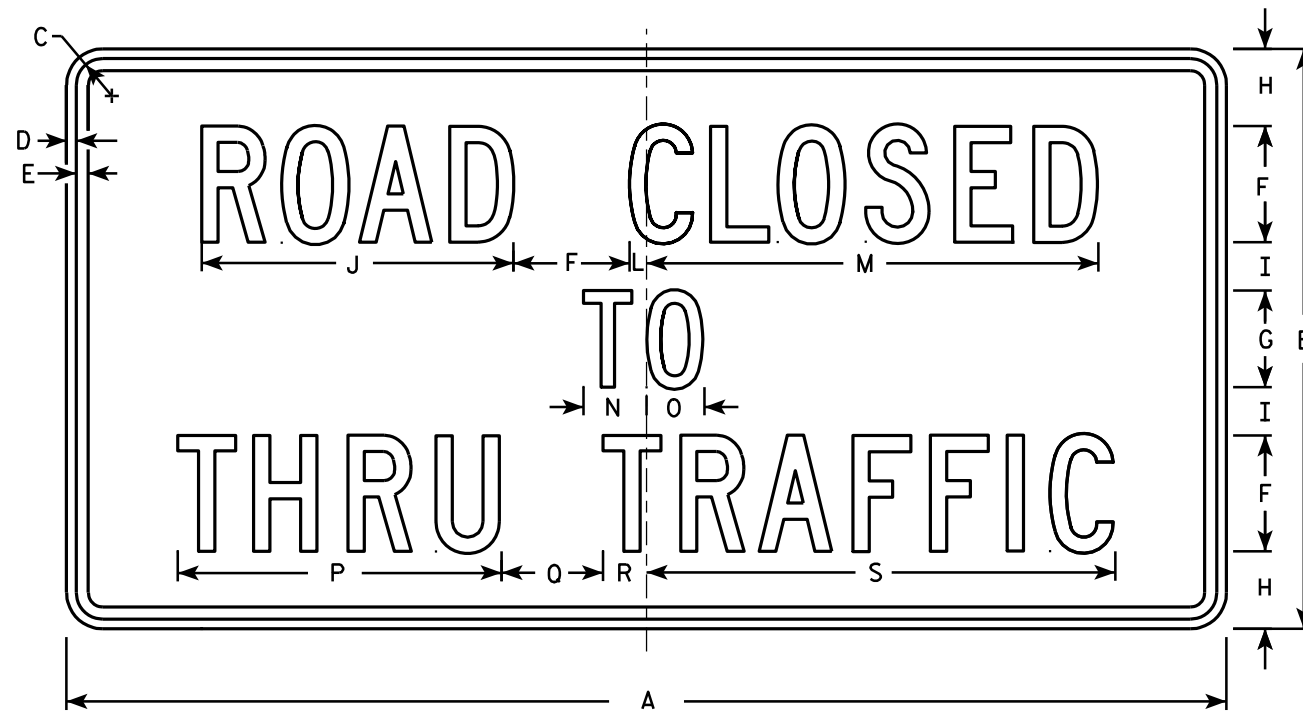
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

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

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.



R11-4

7

7

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

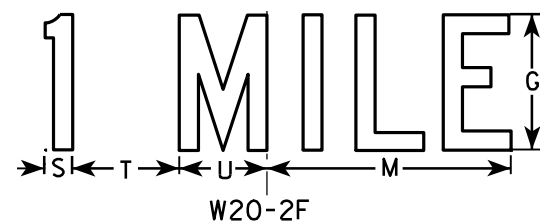
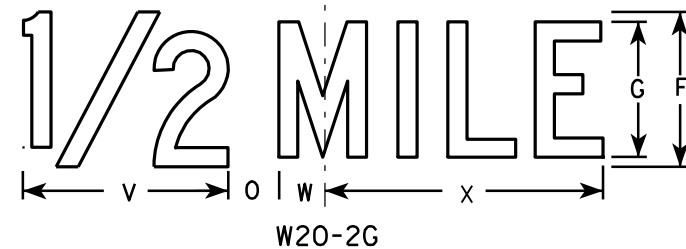
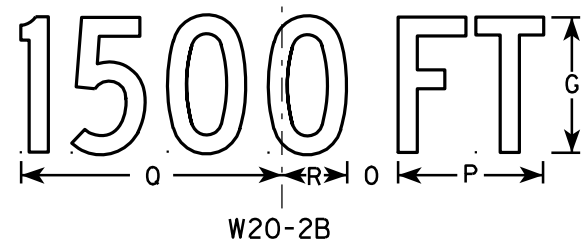
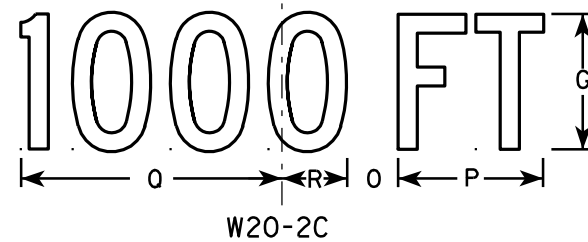
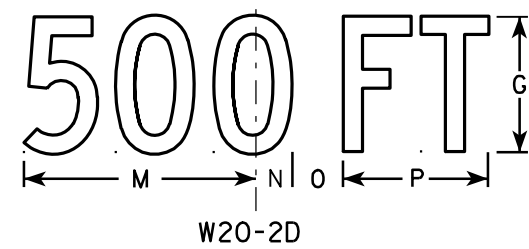
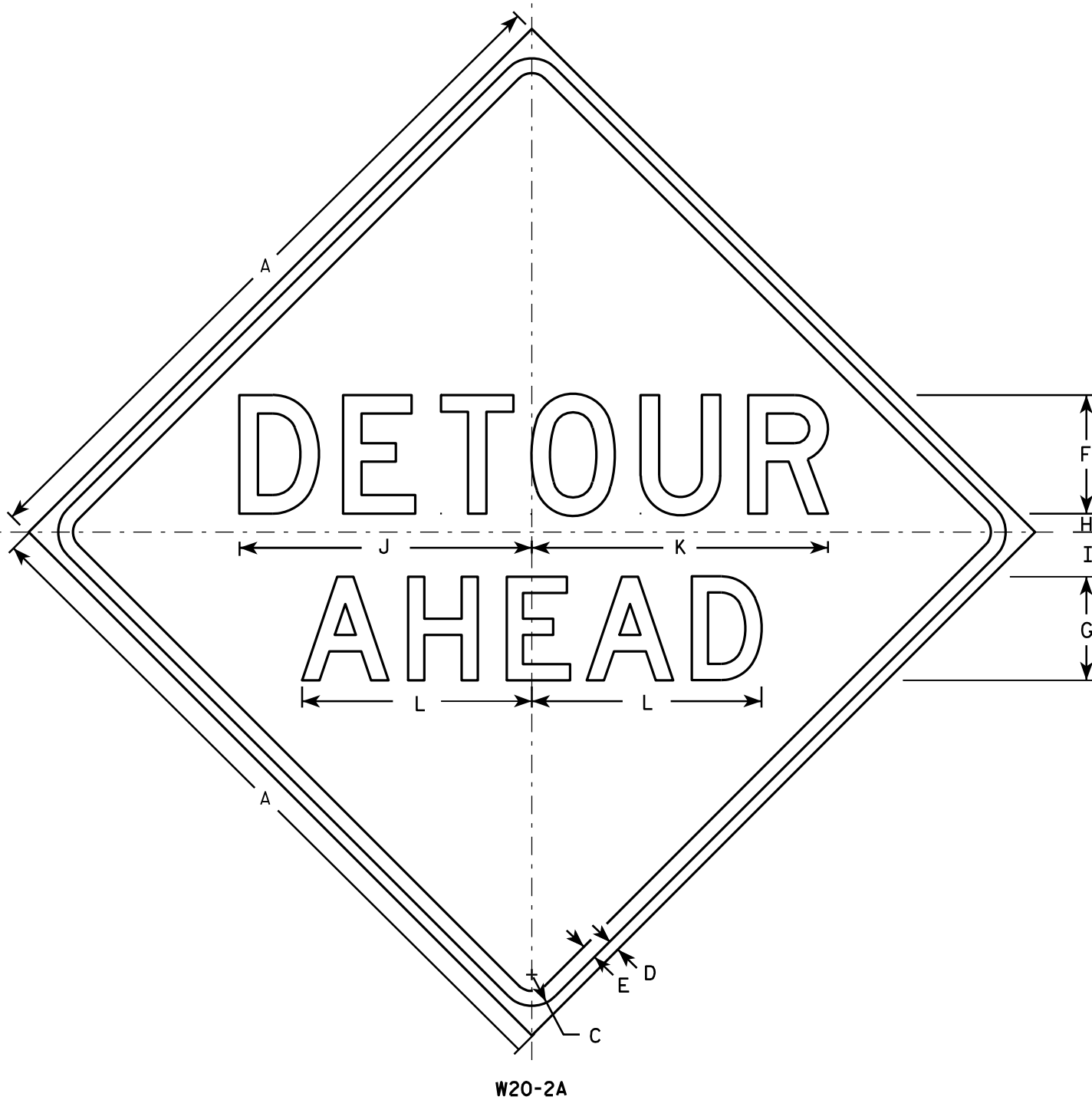
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

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

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



NOTES

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

7

7

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

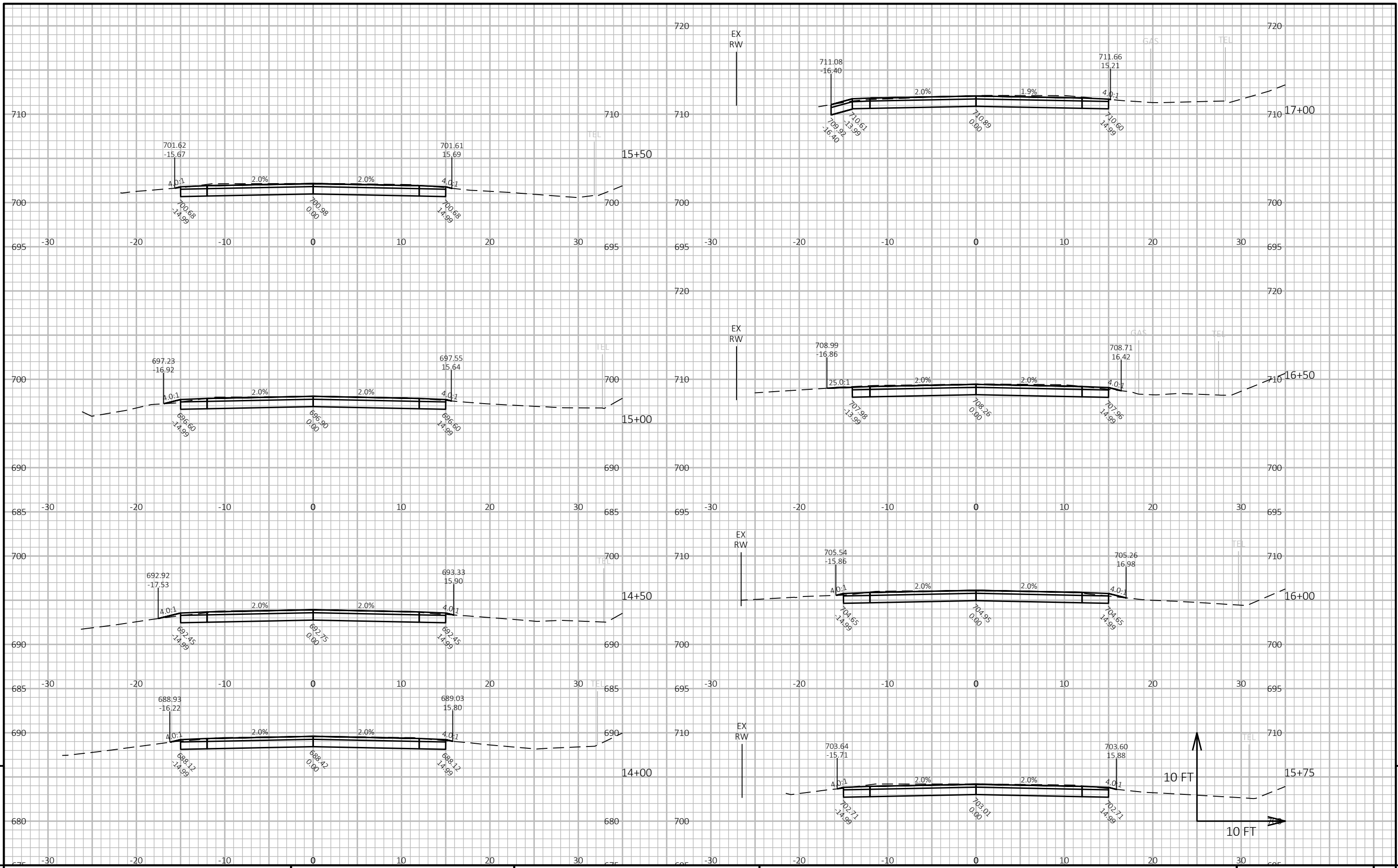
STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

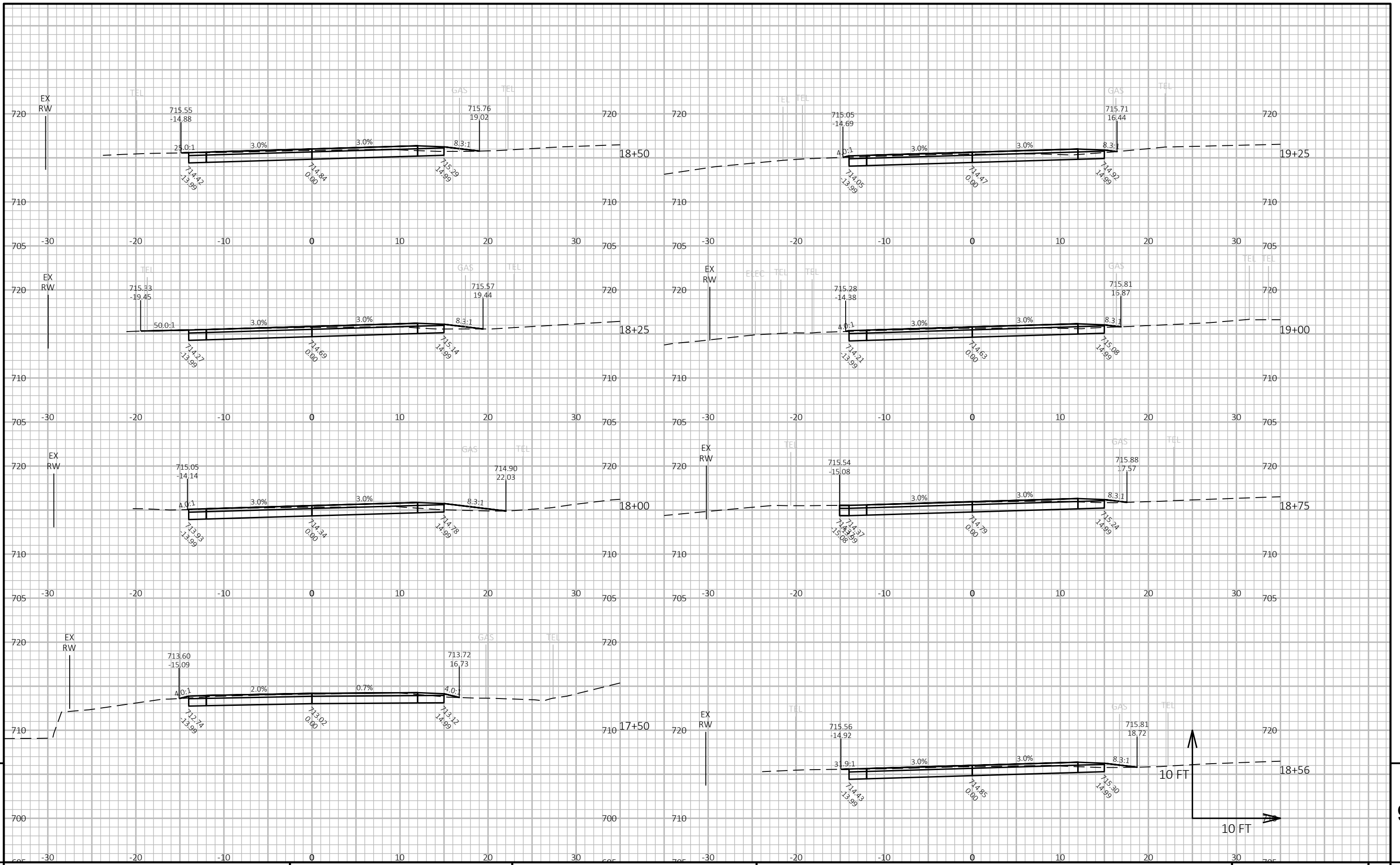
APPROVED *Matthew R. Raub*
for State Traffic Engineer

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

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



PROJECT NO: 5991-02-75	HWY: CTH ZM	COUNTY: LA CROSSE COUNTY	CROSS SECTIONS: CTH ZM
SHEET			E

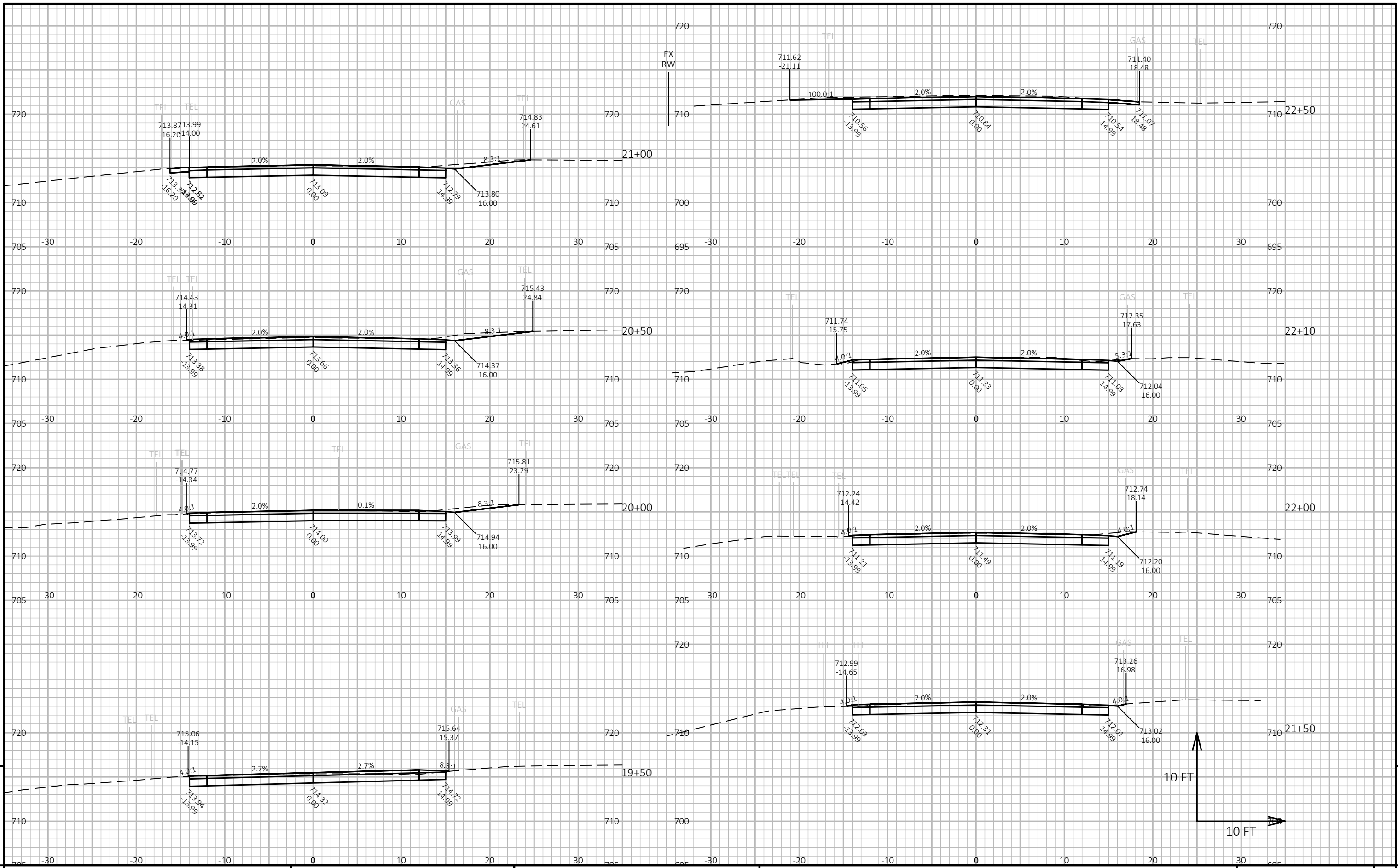


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PROJECT NO: 5991-02-75	HWY: CTH ZM	COUNTY: LA CROSSE COUNTY	CROSS SECTIONS: CTH ZM	SHEET	E
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FILE NAME : P:\21\092\DRAWINGS\CTH ZM\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/8/2022 3:50 PM PLOT BY : NOAH HOFRICHTER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 5991-02-75

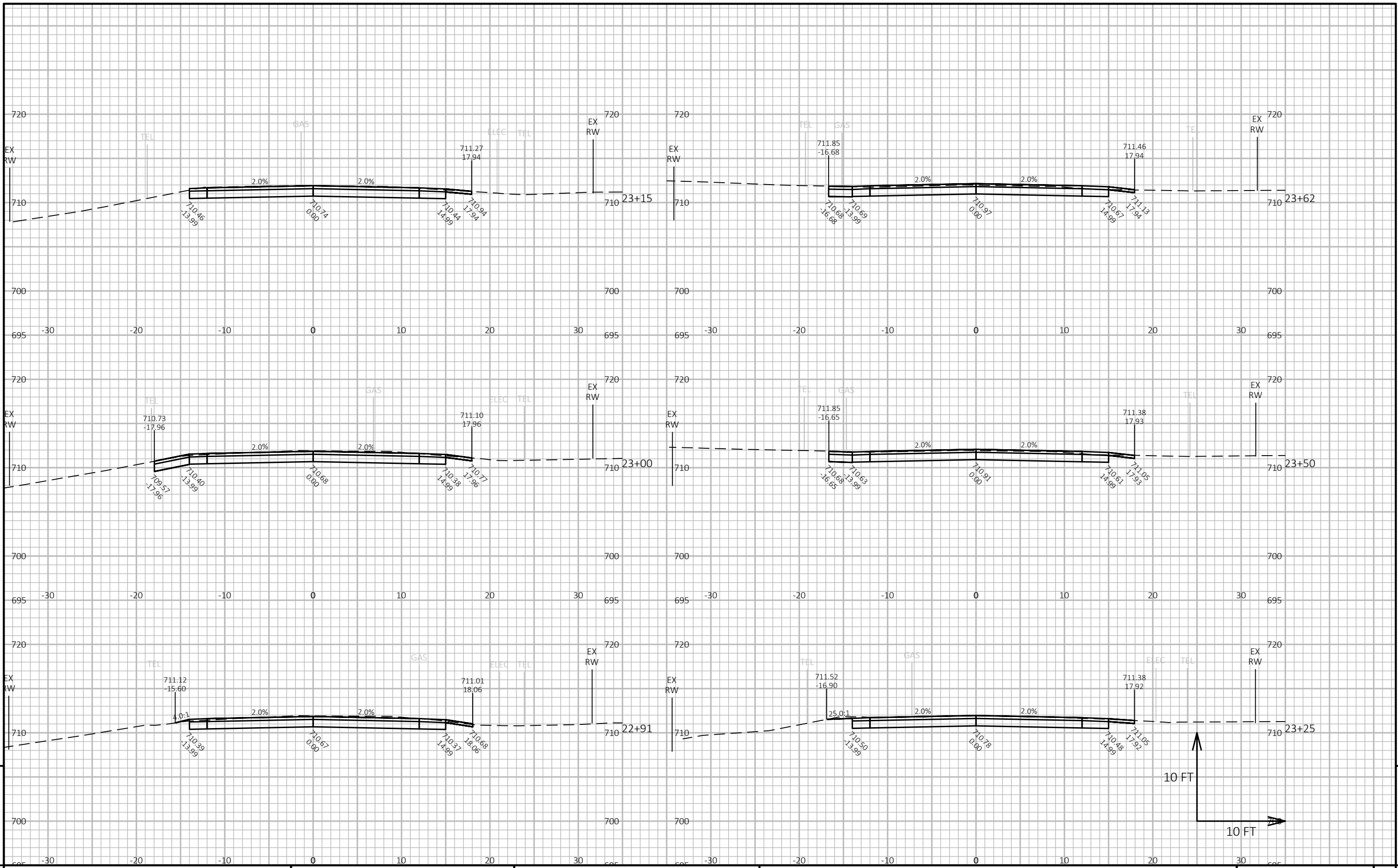
HWY: CTH ZM

COUNTY: LA CROSSE COUNTY

CROSS SECTIONS: CTH ZM

SHEET

E

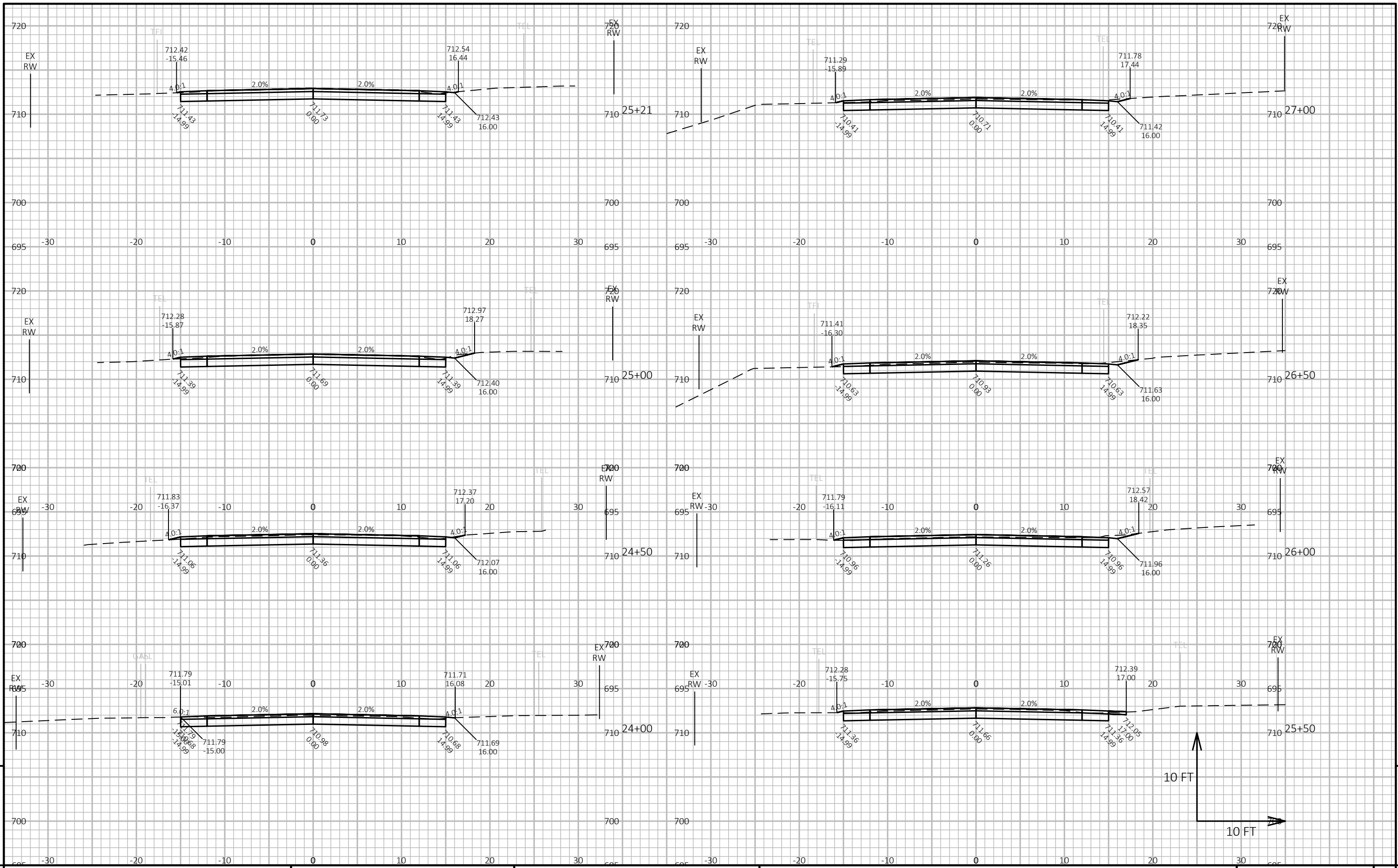


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9

PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CROSS SECTIONS: CTH ZM SHEET E

FILE NAME : P:\21\092\DRAWINGS\CTH ZM\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/8/2022 3:50 PM PLOT BY : NOAH HOFRICHTER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



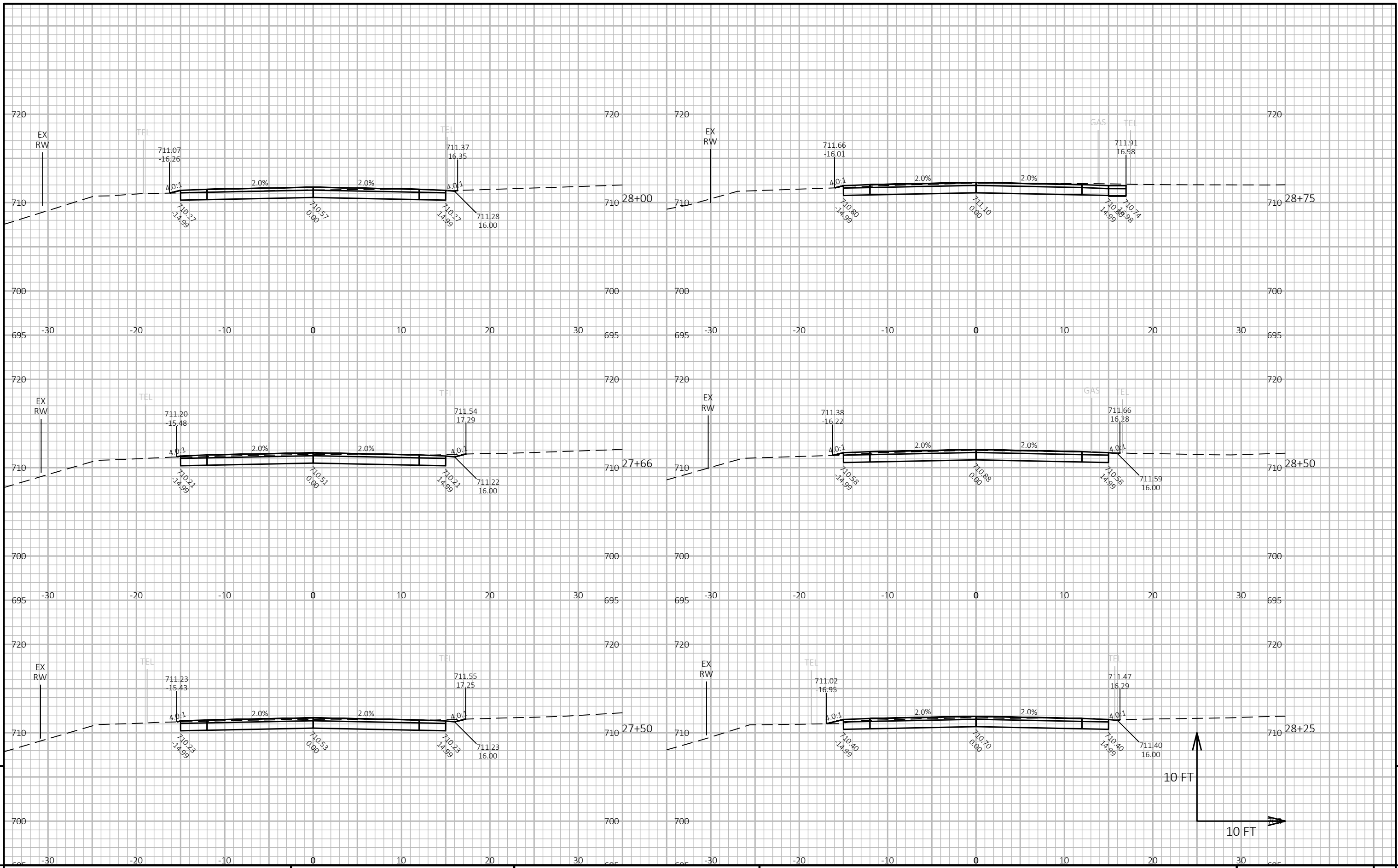
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9

PROJECT NO: 5991-02-75	HWY: CTH ZM	COUNTY: LA CROSSE COUNTY	CROSS SECTIONS: CTH ZM	SHEET E
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FILE NAME : P:\21\092\DRAWINGS\CTH ZM\SHEETSPLAN\090201-XS.DWG PLOT DATE : 7/8/2022 3:50 PM PLOT BY : NOAH HOFRICHTER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 06



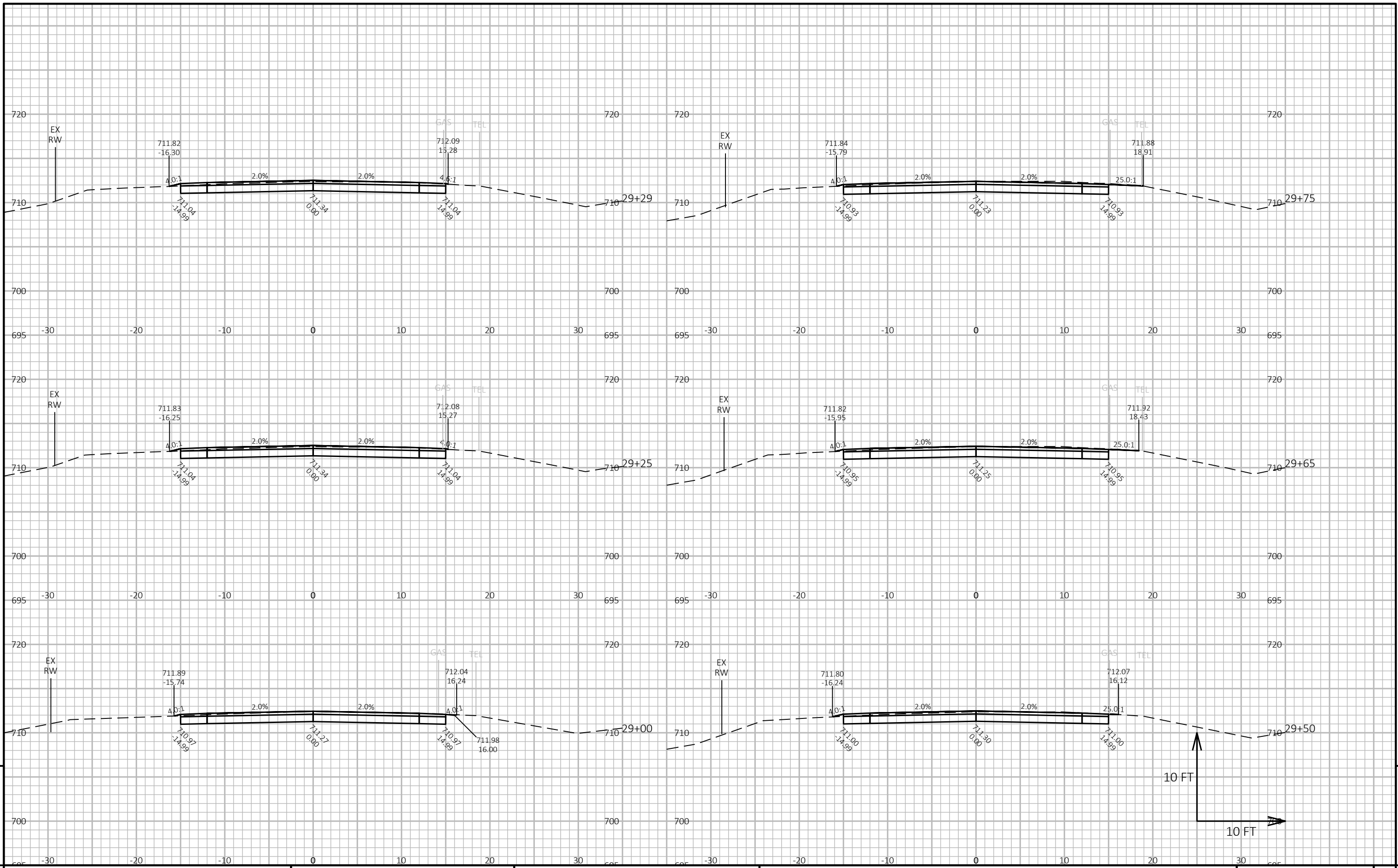
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PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CROSS SECTIONS: CTH ZM SHEET E

FILE NAME: P:\21\092\DRAWINGS\CTH ZM\SHEETSP\090201-XS.DWG PLOT DATE: 7/8/2022 3:50 PM PLOT BY: NOAH HOFRICHTER PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 07

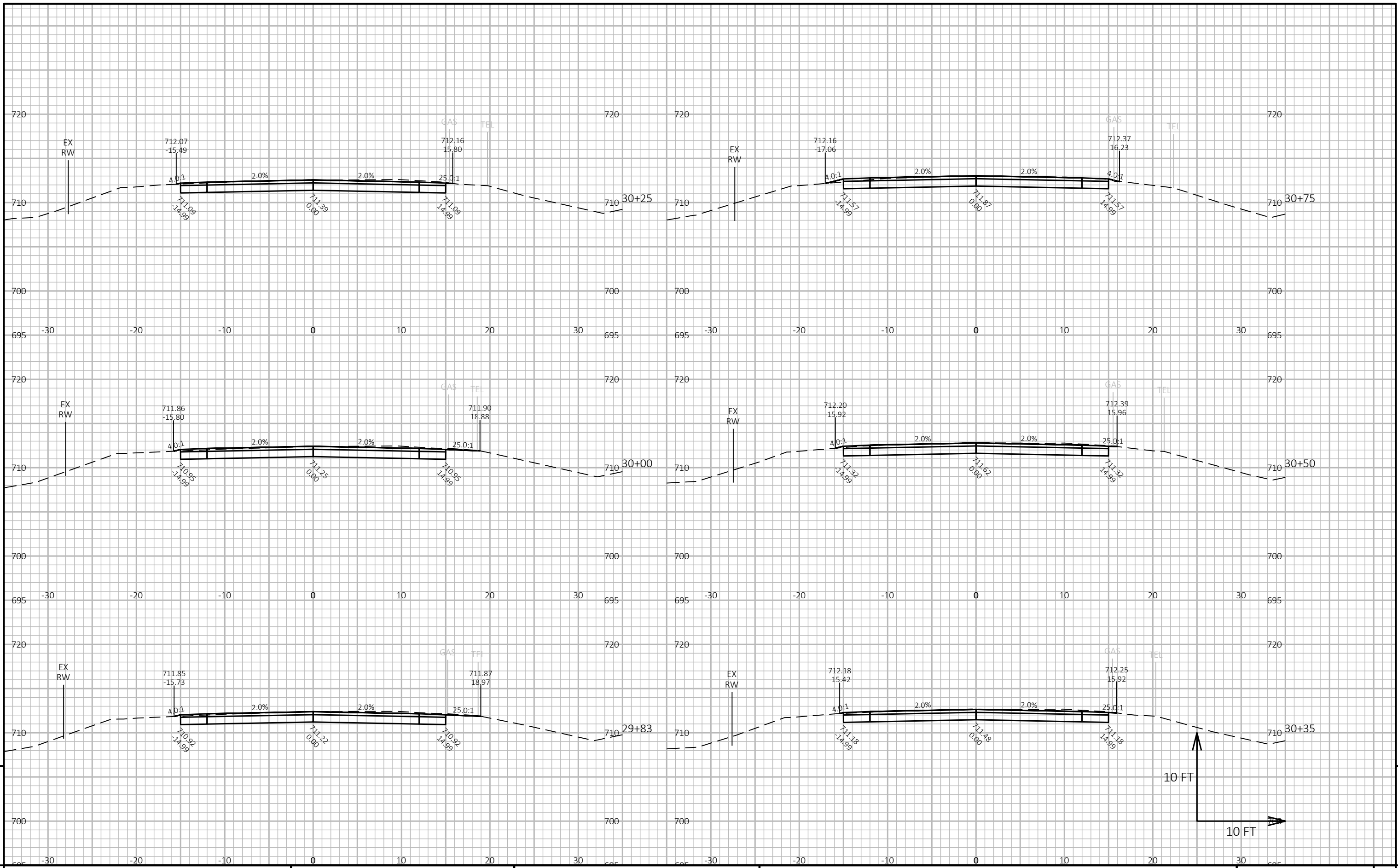


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PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CROSS SECTIONS: CTH ZM SHEET E

FILE NAME: P:\21\092\DRAWINGS\CTH ZM\SHEETSPLAN\090201-XS.DWG PLOT DATE: 7/8/2022 3:50 PM PLOT BY: NOAH HOFRICHTER PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



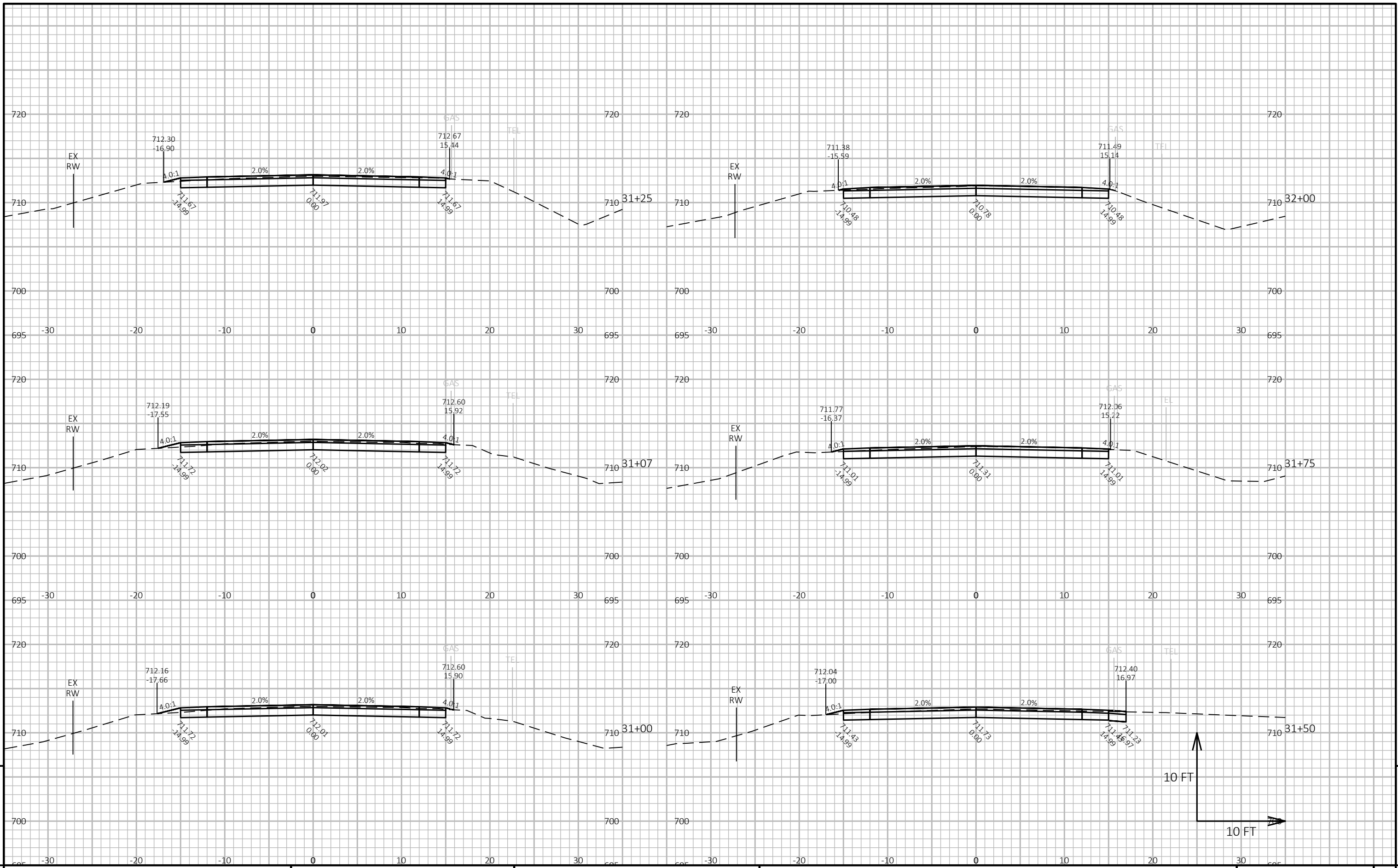
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PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CROSS SECTIONS: CTH ZM SHEET E

FILE NAME: P:\21\092\DRAWINGS\CTH ZM\SHEETSPLAN\090201-XS.DWG PLOT DATE: 7/8/2022 3:50 PM PLOT BY: NOAH HOFRICHTER PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 09



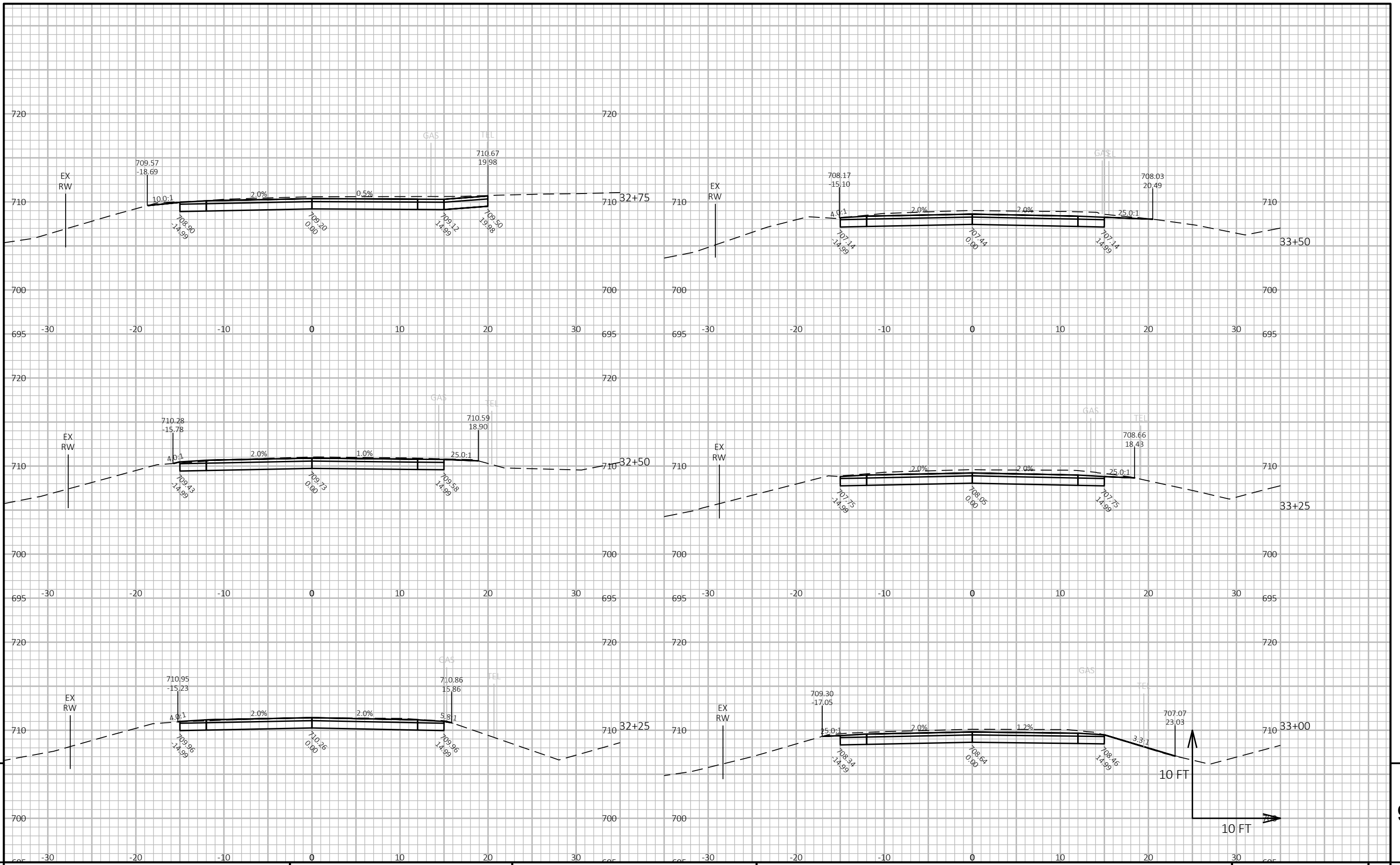
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PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CROSS SECTIONS: CTH ZM SHEET E

FILE NAME: P:\21\092\DRAWINGS\CTH ZM\SHEETSPLAN\090201-XS.DWG PLOT DATE: 7/8/2022 3:50 PM PLOT BY: NOAH HOFRICHTER PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

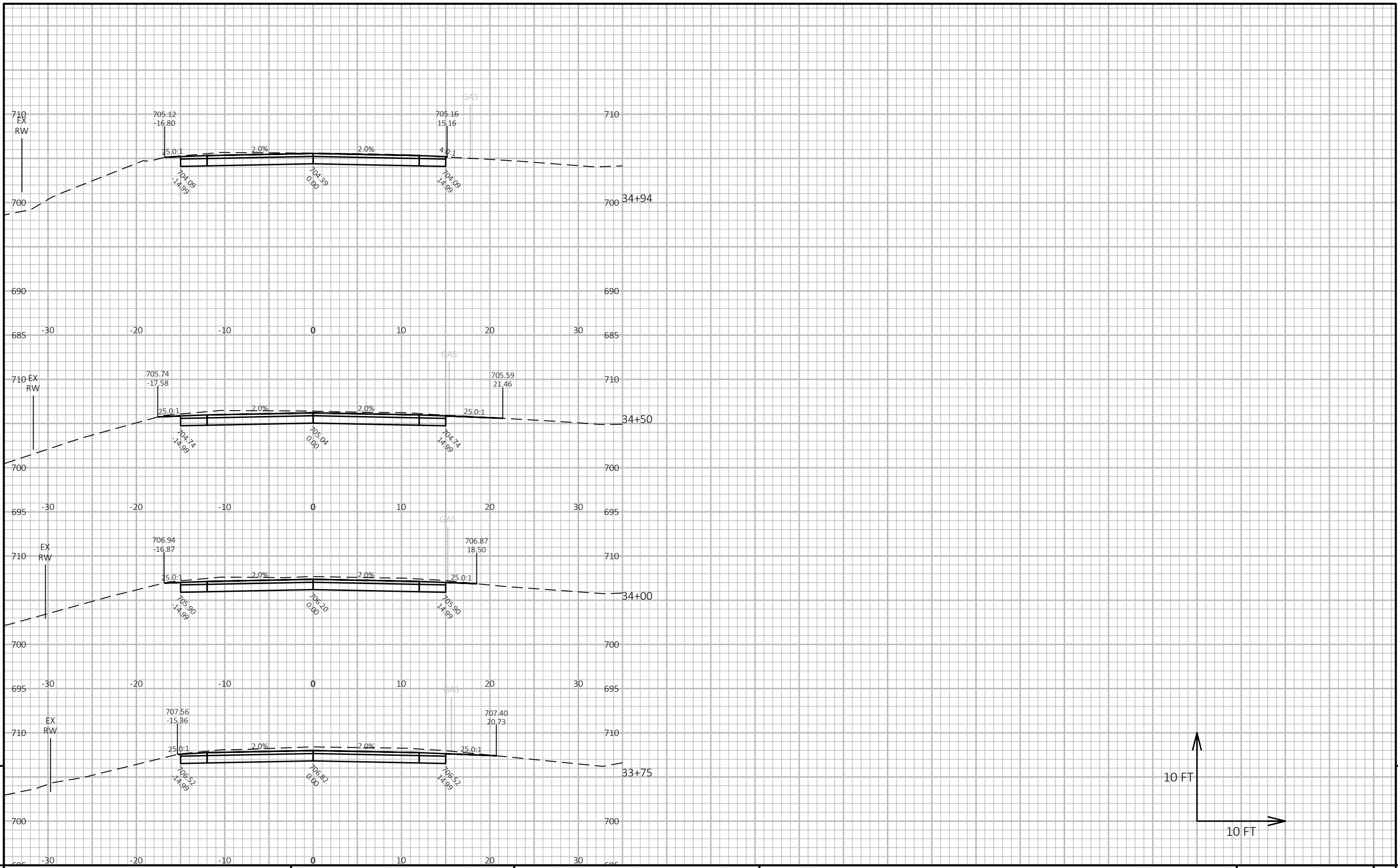
LAYOUT NAME - 10



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PROJECT NO: 5991-02-75	HWY: CTH ZM	COUNTY: LA CROSSE COUNTY	CROSS SECTIONS: CTH ZM	SHEET	E
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9

9

PROJECT NO: 5991-02-75 HWY: CTH ZM COUNTY: LA CROSSE COUNTY CROSS SECTIONS: CTH ZM SHEET E

FILE NAME: P:\21\092\DRAWINGS\CTH ZM\SHEETSP\090201-XS.DWG PLOT DATE: 7/8/2022 3:50 PM PLOT BY: NOAH HOFRICHTER PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 12



Wisconsin Department of Transportation

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<http://www.dot.wisconsin.gov>