

AS BUILT

MUNICIPALITY

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

### S.T.H. 33 - C.T.H. I (S.T.H. 33 NORTHERLY 1.3 MILES) C.T.H. M LA CROSSE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5436-06-71	STP 2003199	1

Feb 03  
INDEX OF SHEETS

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73	Structure Plans
81	Computer Earthwork Data
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TOTAL SHEETS = 106

Prime Contractor: Mathy Construction  
 Subcontractors: Central State Signing  
 Century Fence Co.  
 Edward Kraemer & Sons, Inc.  
 Hegg Contractors, Inc.  
 Mattison Contractors, Inc.  
 Steiger Construction, Inc.  
 The Kraemer Co.  
 Westbrook Assoc. Engineers, Inc.

PROJECT ID: 5436-01-71

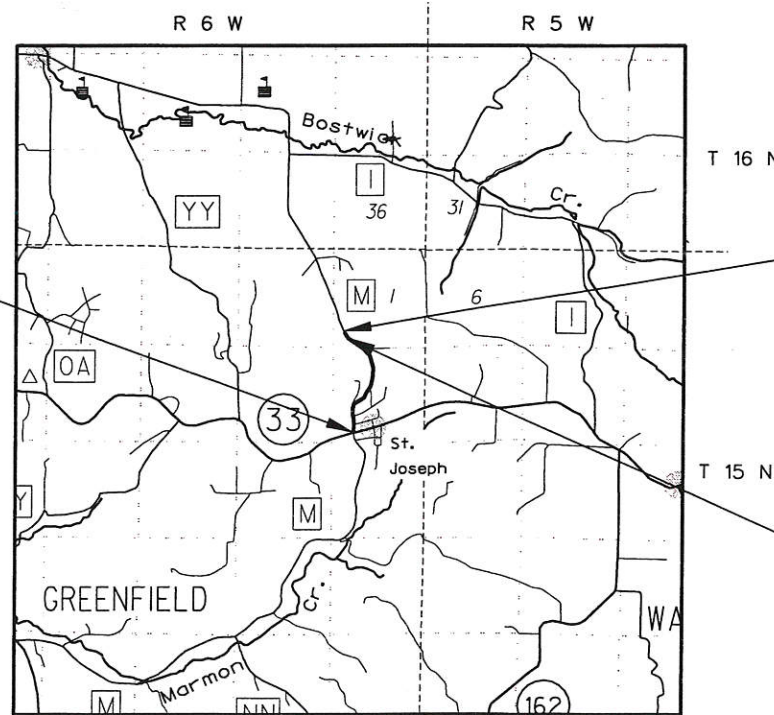
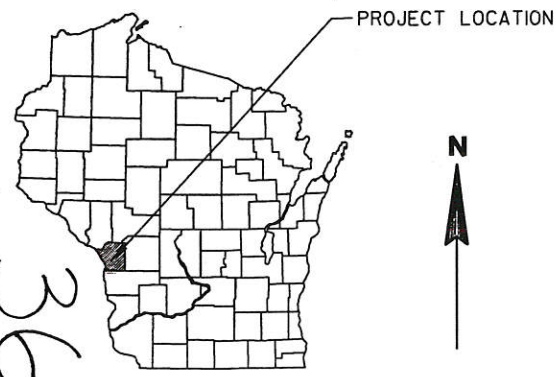
7215-011+

COUNTY: LA CROSSE

5436-06-00

Date Started: June 9, 2003  
 Date Completed: Sept. 9, 2003

STATE PROJECT NUMBER  
**5436-06-71**



BEGIN PROJECT  
 STA 100+70.00  
 Y = 121876.707  
 X = 499428.384

END PROJECT  
 STA 170+00.00  
 Y = 127563.307  
 X = 498631.054

STRUCTURE B-32-206  
 STA 163+25.00

#### DESIGN DESIGNATION

A.D.T. (2000)	=	1000
A.D.T. (2023)	=	1375
D.H.V. (2023)	=	175
D.	=	58/42
T.	=	6.0
DESIGN SPEED	=	55 MPH
ESALS	=	131400

#### CONVENTIONAL SYMBOLS

COUNTY LINE		COMBUSTIBLE FLUIDS	
CORPORATE LIMITS		UNDERGROUND UTILITIES	
PROPERTY LINE		GAS	
LOT LINE		ELECTRIC	
LIMITED EASEMENT		TELEPHONE OR TELEGRAPH	
EXISTING RIGHT OF WAY		COMMUNICATIONS LINE	
PROPOSED OR NEW R/W LINE		SERVICE PEDESTAL	
SURVEY LINE		POWER POLE	
SLOPE INTERCEPT		TELEPHONE POLE	
ORIGINAL GROUND		RAILROAD	
MARSH OR ROCK PROFILE (To be noted as such)		SANITARY SEWER	
MARSH AREA		STORM SEWER	
WOODED OR SHRUB AREA		WATER	
		EXISTING CULVERT	
		PROPOSED CULVERT (Box or Pipe)	
		CULVERT (Profile View)	

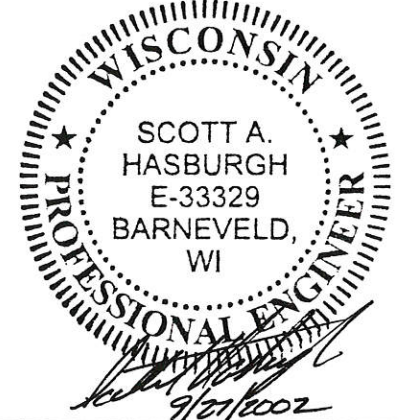
LAYOUT  
 SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.313 MI. (RURAL)

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), La Crosse County.

ACCEPTED FOR  
 COUNTY of LA CROSSE  
 9-30-02 *Dennis Orzol*  
 DATE: HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY:



STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

PREPARED BY  
 Surveyor: SEH  
 Designer: SEH  
 District Examiner: \_\_\_\_\_  
 District Supervisor: \_\_\_\_\_  
 Proj. Dev. Engineer: \_\_\_\_\_  
 C.O. Examiner: *Jane E. Englebretsen*

APPROVED FOR DISTRICT OFFICE  
 DATE: 10/2/02 *Randy Byrum*  
 (Signature)

E

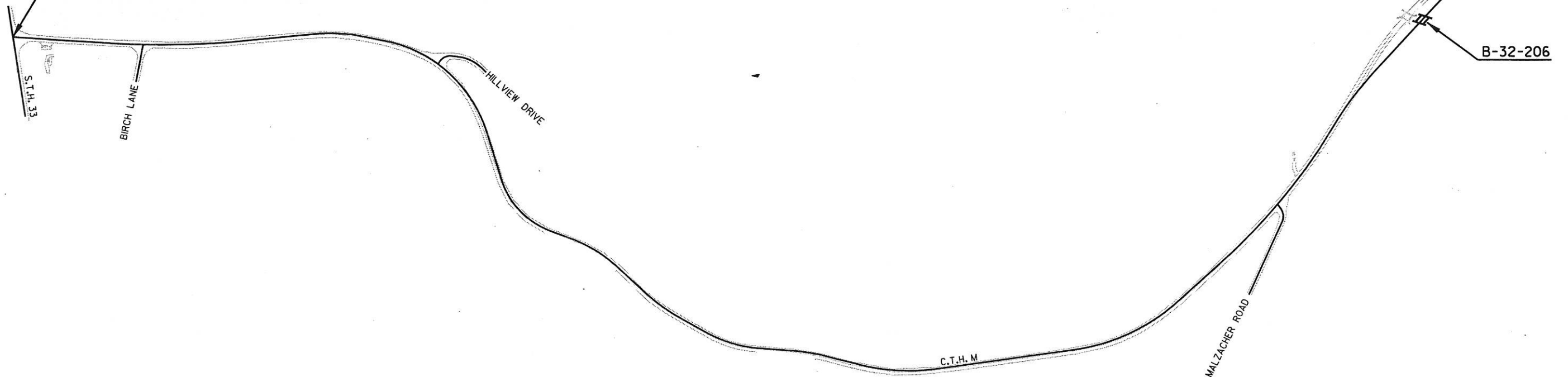
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END PROJECT  
STA 170+00.00

BEGIN PROJECT  
STA 100+70.00

B-32-206



STATE PROJECT NUMBER: 5436-06-71

HWY: C.T.H. M

COUNTY: LA CROSSE

PROJECT OVERVIEW

SCALE, FEET

SHEET NO: 2

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGC	AGGREGATE
ASP	ASPHALTIC
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
CONC	CONCRETE
CR	CREEK
CY	CUBIC YARD
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
D	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DG	DITCH GRADE
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EL	ELEVATION
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FF	FACE TO FACE
FERT	FERTILIZE
FE	FIELD ENTRANCE
FL	FLOW LINE
FO	FIBER OPTIC
FT	FOOT
CWT	HUNDREDEIGHT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE OR PIN
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LS	LUMP SUM
ABUTMENT	MANHOLE
ACRE	NORMAL CROWN
AGGREGATE	NORTH
ASPHALTIC	NUMBER
AVERAGE	OBLITERATE
AVERAGE DAILY TRAFFIC	PAVEMENT
BACK FACE	POINT OF CURVATURE
BENCH MARK	POINT OF INTERSECTION
BRIDGE	POINT OF TANGENCY
CENTER LINE	POUND
CENTRAL ANGLE OR DELTA	PRIVATE ENTRANCE
CONCRETE	RADIUS
CREEK	REINFORCED CONCRETE CULVERT PIPE
CUBIC YARD	RESIDENCE OR RESIDENTIAL
CURB AND GUTTER	RIGHT-HAND FORWARD
DEGREE OF CURVE	RIGHT-OF-WAY
DESIGN HOUR VOLUME	RIVER
DIRECTIONAL DISTRIBUTION	ROAD
DISCHARGE	ROADWAY
DITCH GRADE	SALVAGED
DRIVEWAY	SANITARY SEWER
EAST	SOUTH
EAST GRID COORDINATE	SQUARE
ELEVATION	SQUARE FEET
ENTRANCE	SQUARE YARD
EQUIVALENT SINGLE AXLE LOADS	STANDARD DETAIL DRAWINGS
EXCAVATION	STATE TRUNK HIGHWAYS
EXCAVATION BELOW SUBGRADE	STATION
EXISTING	STORM SEWER
FACE TO FACE	SUPERELEVATION
FERTILIZE	TOP OF CURB
FIELD ENTRANCE	TOWN
FLOW LINE	TRUCKSPERCENT (OF)
FIBER OPTIC	TYPICAL
FOOT	UNCLASSIFIED
HUNDREDEIGHT	VARIABLE
HYDRANT	VERTICAL CURVE
INSIDE DIAMETER	WEST
INVERT	NORTH GRID COORDINATE
IRON PIPE OR PIN	YARD

STANDARD DETAIL DRAWINGS

8A5-160	INLET COVERS TYPE A, H, A-S & H-S
801-5	NORTH
801-13	CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES
804-3	CONCRETE SURFACE DRAIN & ASPHALTIC FLUME
8013-1	SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS
8E8-3	TYPICAL INSTALLATIONS OF EROSION BALES/TEMPORARY CHECKS
8E9-5	SILT FENCE
8E10-1	INLET PROTECTION TYPE A, B AND C
8E11-2	TURBIDITY BARRIER
8F1-11	APRON ENDWALLS FOR CULVERT PIPE
9A1-110	AT-GRADE SIDE ROAD INTERSECTIONS, TYPES "B1", "B2", "C", AND "D"
12A3-7	NAME PLATE (STRUCTURES)
14B15-40, b	STEEL PLATE BEAM GUARD, CLASS A, INSTALLATION AND ELEMENTS
14B18-40	STEEL PLATE BEAM GUARD, CLASS A (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-50	STEEL THREE BEAM STRUCTURE APPROACH
14B20-5d	STEEL THREE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B24-30, b & c	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15A3-1	MARKER POSTS, FLEXIBLE, FOR CULVERT END
15C6-4	SIGNING AND MARKING FOR TWO LANE BRIDGES
15C8-90	PAVEMENT MARKING (MAINLINE)
15C8-9b	PAVEMENT MARKING (INTERSECTIONS)
15C8-9e	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C12-2	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
UNCL	UNCLASSIFIED
VAR	VARIABLE
VC	VERTICAL CURVE
W	WEST
Y	NORTH GRID COORDINATE

UTILITIES

\* CENTURY TELEPHONE OF WISCONSIN, INC.  
 2615 EAST AVENUE SOUTH  
 P.O. BOX 4800  
 LA CROSSE, WI 54601  
 ATTN: ED FEYEN  
 608.796.5143

\* XCEL ENERGY  
 3215 COMMERCE STREET  
 P.O. BOX 727  
 LA CROSSE, WI 54601  
 ATTN: BRAD NELSON  
 608.789.3623

\* MIDWEST NATURAL GAS COMPANY  
 106 W. STATE ST.  
 WESTBY, WI 54667  
 ATTN: STEVE BLUCER  
 608.634.4617

\* CHARTER COMMUNICATIONS  
 314 MAIN ST.  
 P.O. BOX 279  
 ONALASKA, WI 54650  
 ATTN: TIM FISCHER  
 608.783.5255

\* INDICATES DIGGER'S HOTLINE MEMBER



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

FOR FIELD LOCATES  
 CALL: 1.800.242.8511  
 WWW.DiggerHotline.com

WISCONSIN STATUTE 182.0175 (1974)  
 REQUIRES MINIMUM OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

GENERAL NOTES

THE LOCATION 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.

BEARINGS ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND. ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE. CURVE DATA SHOWN ON THE PLANS IS "ARC DEFINITION".

CURB AND GUTTER RADIARE SHOWN TO THE EDGE OF PAVEMENT. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL IN THE FIELD.

SILT FENCE

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES SHALL BE DETERMINED IN THE FIELD.

FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENT CONSTRUCTED FROM BORROW EXCAVATION OR COMMON EXCAVATION. THE ALLOWANCE USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 1.3 FOR BORROW EXCAVATION.

WHEN THE QUANTITY OF CRUSHED AGGREGATE BASE COURSE IS MEASURED FOR PAVEMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE. THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY EXCEPT AREAS WITHIN THE SUBGRADE SHOULD BE FERTILIZED, SEEDDED AND MULCHED UNLESS OTHERWISE PROVIDED FOR.

ASPHALTIC CONCRETE PAVEMENT SHALL BE CONSTRUCTED WITH A 1.75 INCH UPPER LAYER, AND A 1.75 INCH LOWER LAYER. TASK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.025 GALLONS PER SQUARE YARD AND SHALL BE PLACED BETWEEN LAYERS OF ASPHALTIC PAVEMENT.

EROSION CONTROL FEATURES AS SHOWN ON THE PLAN ARE SUGGESTED LOCATIONS. THEIR EXACT LOCATION WILL BE DETERMINED IN THE FIELD.

SIGN PLATE DETAILS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" UNLESS OTHERWISE PROVIDED FOR IN THE PLAN.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENT AT REMOVAL LIMITS.

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

WISDOT MONUMENTS WILL BE SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

VARIATIONS IN THE EXISTING PAVEMENT THICKNESS FROM DATA SHOWN IN THE BORING LOG MAY OCCUR. ADDITIONAL COMPENSATION WILL NOT BE ALLOWED FOR THOSE VARIATIONS. ELEVATIONS ON THE PLAN ARE REFERENCED TO THE USGS DATUM (NAVD 88).

BORING LOG

BORING	STATION	OFFSET	ASPHALTIC SURFACE THICKNESS (IN)
B1	101+86	10' RT	5.5
B2	107+03	13' RT	3.5
B3	114+26	4' LT	3
B4	119+15	1' LT	4
B5	122+92	14' RT	4
B6	126+40	9' LT	3
B7	130+20	12' RT	9
B8	137+34	17' RT	5
B9	146+82	17' RT	6
B10	154+83	18' RT	4
B11	168+28	10' LT	4
B14	143+94	5' LT	5

FOR INFORMATION ONLY

COUNTY: LA CROSSE

HWY: C.T.H. M

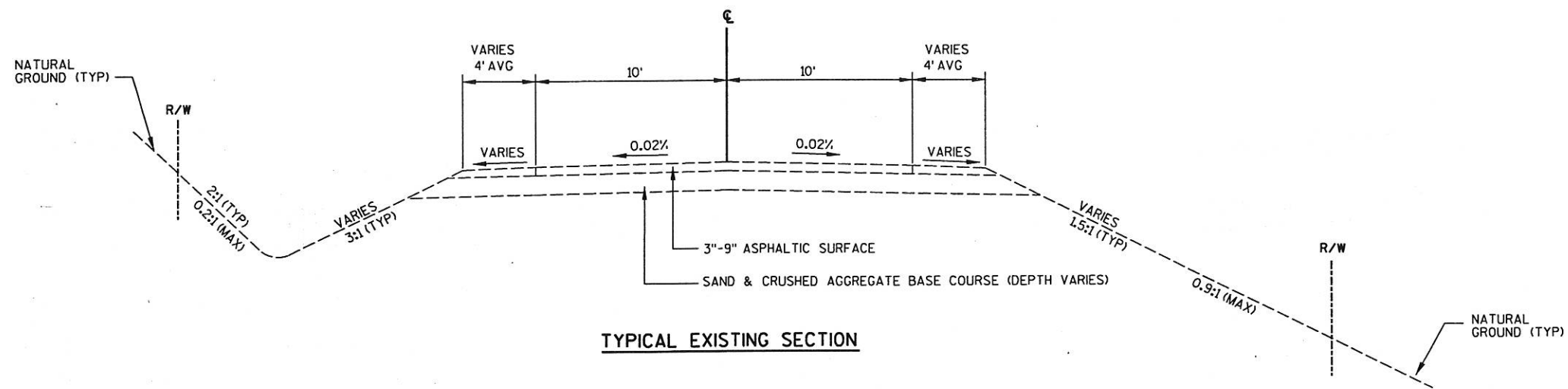
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GENERAL NOTES

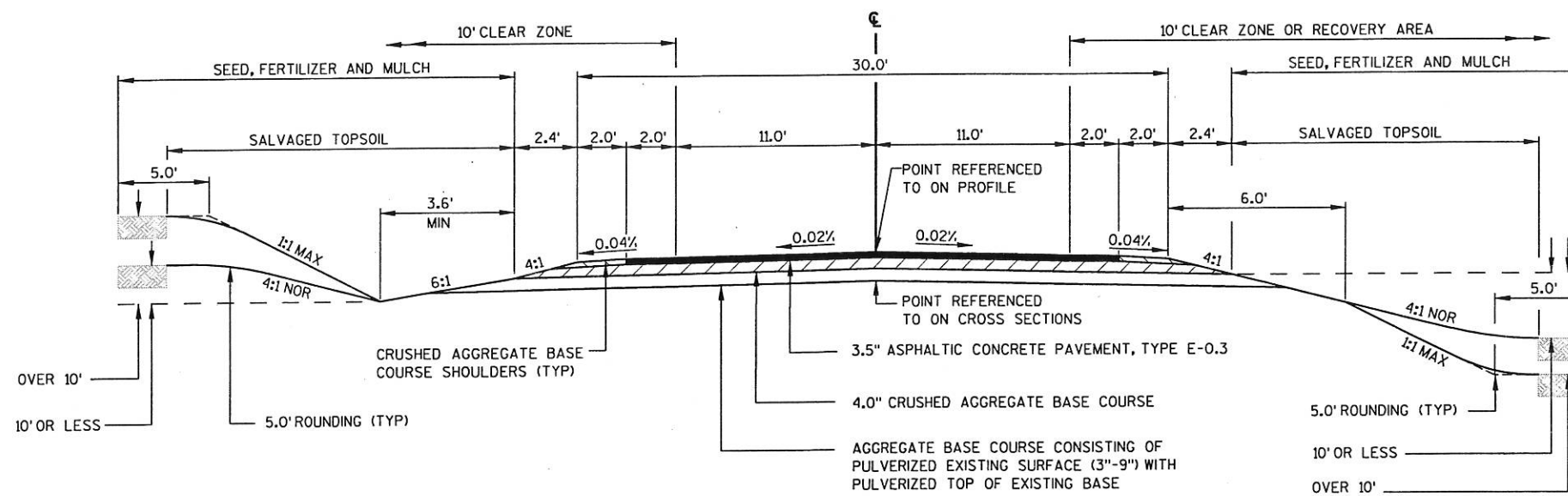
SCALE, FEET

SHEET NO: 3

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TYPICAL EXISTING SECTION



TYPICAL FINISHED SECTION  
C.T.H.M

STA 100+70.00 TO STA 116+50.00  
STA 119+50.00 TO STA 126+25.00  
STA 127+50.00 TO STA 157+75.00

LETIENS ON 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

FILE NAME : e:\trans\acv\0002.00 cth m\cod\tycthm01.dgn

PLOT DATE: 12/05/02

PLOT TIME: 02:18:57 PM

ORG DATE :

PLOT NAME :

Originator : Dist

PLOT SCALE : N/A

WISDOT/CADD SHEET 42

STATE PROJECT NUMBER: 5436-06-71

HWY: C.T.H. M

COUNTY: LA CROSSE

TYPICAL SECTIONS

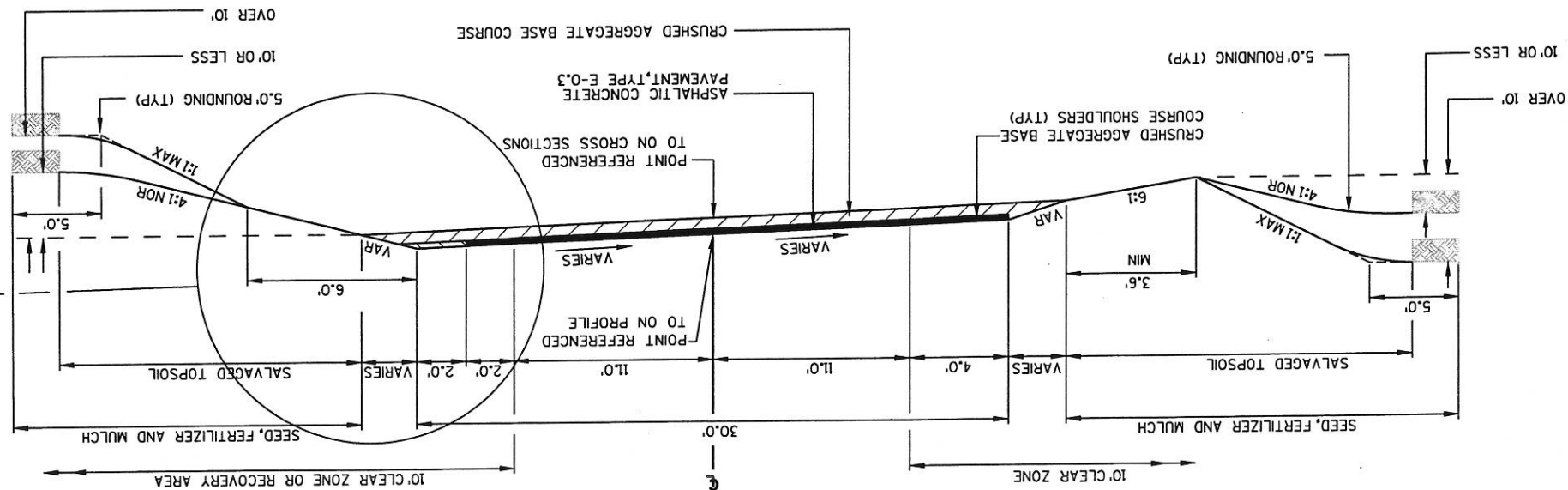
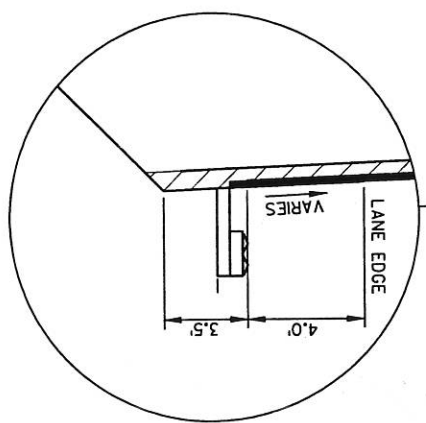
SHEET NO: 5

E

### TYPICAL FINISHED SECTION - SUPERELEVATION C.T.H. M

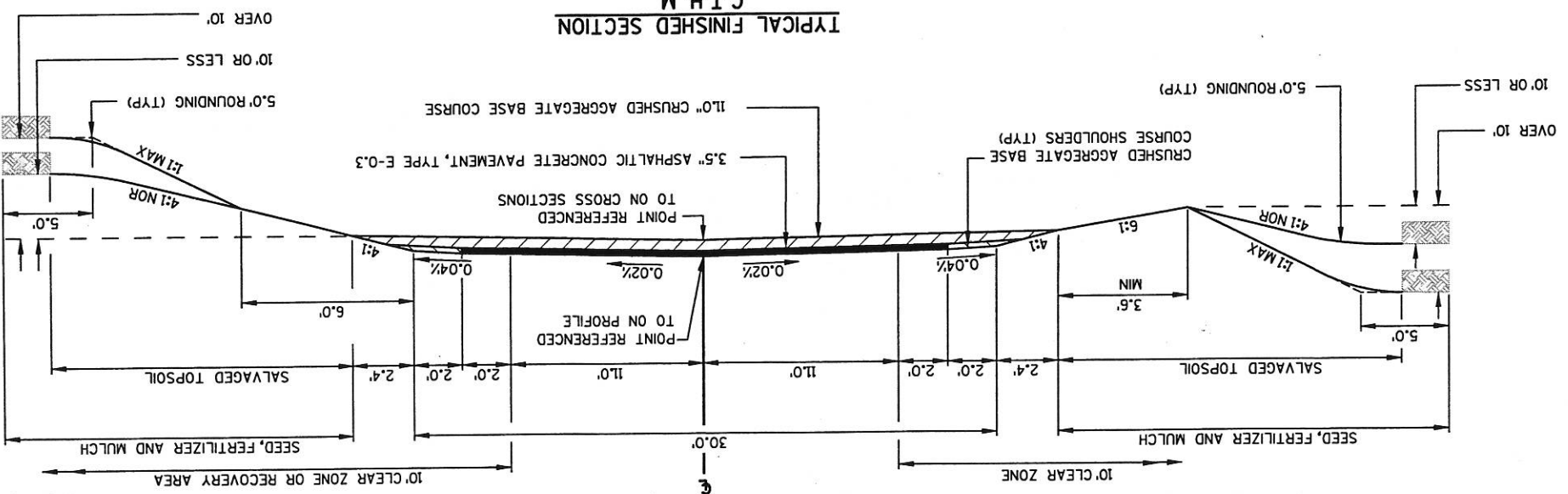
SEE SUPER ELEVATION TABLE

BEAM GUARD WITHOUT CONCRETE CURB AND GUTTER  
STA 109+00.00 TO STA 109+53.91 RT  
STA 120+33.54 TO STA 124+39.99 RT  
STA 127+59.29 TO STA 133+68.06 RT

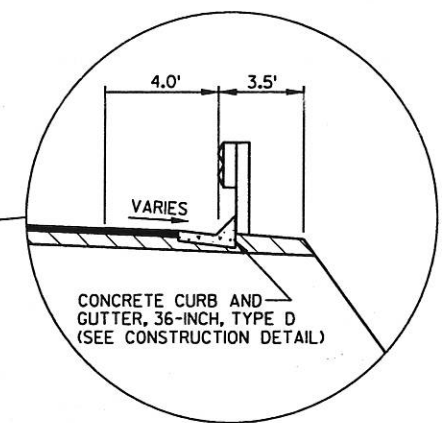
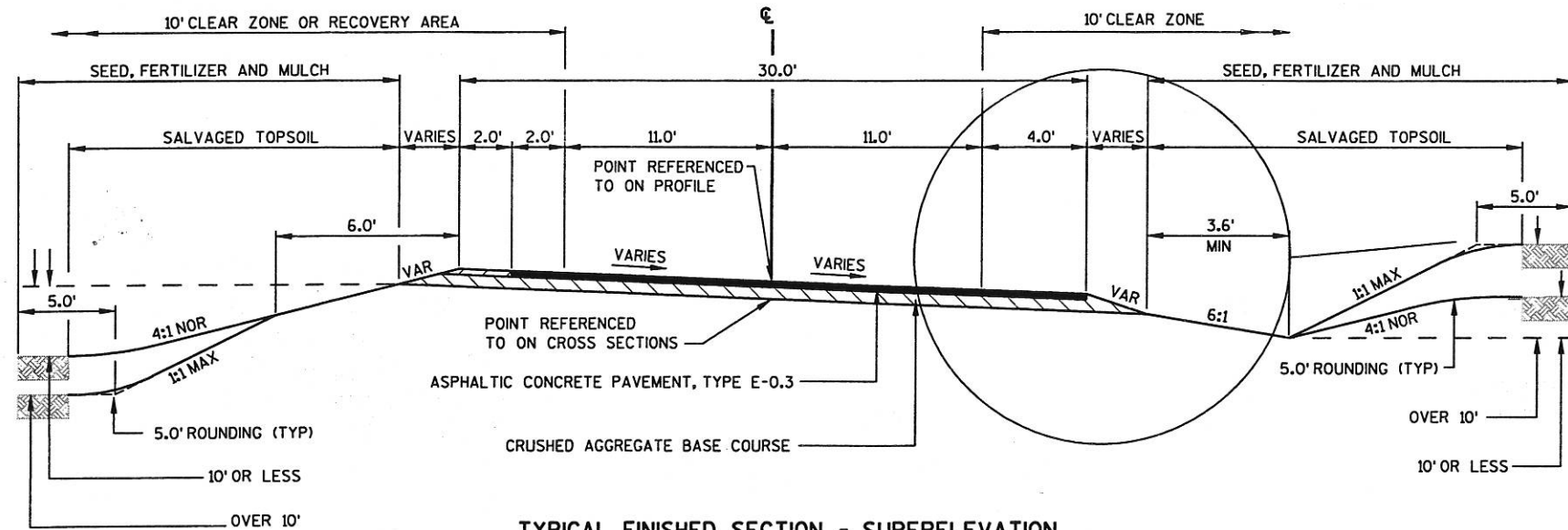


STA 116+50.00 TO STA 119+50.00  
STA 126+25.00 TO STA 127+50.00  
STA 157+75.00 TO STA 170+00.00

### TYPICAL FINISHED SECTION C.T.H. M



LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

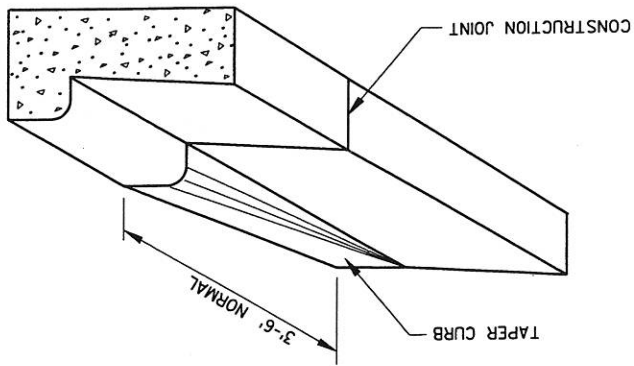


**BEAM GUARD WITH CONCRETE CURB AND GUTTER**  
 STA 109+53.91 TO STA 120+23.00 RT  
 STA 124+40.00 TO STA 127+47.00 RT  
 STA 133+68.06 TO STA 136+08.00 RT

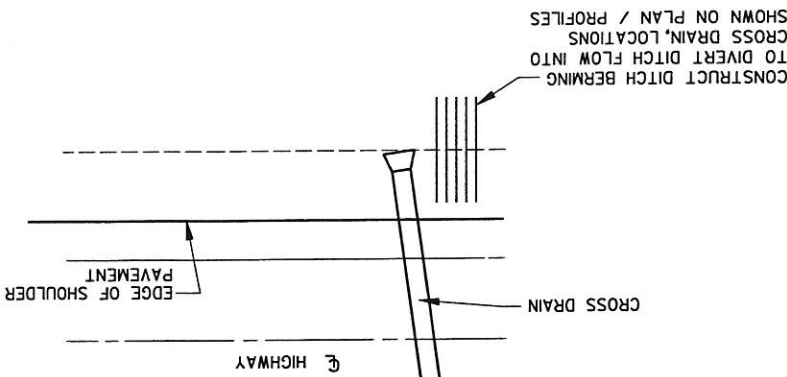
**TYPICAL FINISHED SECTION - SUPERELEVATION**  
**C.T.H.M**  
 SEE SUPER ELEVATION TABLE

SUPERELEVATION TABLE			
STATION	TYPE	LEFT	RIGHT
100+97.44	SH END NC	-0.020	-0.020
101+77.44	END NC	-0.020	-0.020
102+57.44	ZERO SUPER	-0.020	0.000
103+37.44	REV CROWN	-0.020	0.020
104+17.44	BEGIN FS	-0.040	0.040
108+03.03	END FS	-0.040	0.040
111+80.03	BEGIN FS	0.060	-0.060
112+55.94	END FS	0.060	-0.060
113+09.28	SH TRANS	0.040	-0.040
113+96.08	SH TRANS	0.040	-0.040
114+49.41	BEGIN FS	0.060	-0.060
118+89.77	END FS	0.060	-0.060
121+77.31	BEGIN FS	-0.060	0.060
123+44.11	END FS	-0.060	0.060
125+35.87	BEGIN FS	0.060	-0.060
126+33.38	END FS	0.060	-0.060
128+85.20	BEGIN FS	-0.060	0.060
129+35.03	END FS	-0.060	0.060
129+88.37	SH TRANS	-0.040	0.040
130+84.42	SH TRANS	-0.040	0.040
131+37.75	BEGIN FS	-0.060	0.060
132+54.98	END FS	-0.060	0.060
134+81.14	BEGIN FS	0.060	-0.060
135+01.71	END FS	0.060	-0.060
137+38.99	BEGIN FS	-0.060	0.060
139+27.58	END FS	-0.060	0.060
139+80.92	SH TRANS	-0.040	0.040
140+34.25	REV CROWN	-0.020	0.020
140+87.58	ZERO SUPER	-0.020	0.000
141+40.92	BEGIN NC	-0.020	-0.020
141+94.25	SH BEGIN NC	-0.020	-0.020
142+90.38	SH END NC	-0.020	-0.020
143+43.71	END NC	-0.020	-0.020
143+97.04	ZERO SUPER	-0.020	0.000
144+50.38	REV CROWN	-0.020	0.020
145+03.71	SH TRANS	-0.040	0.040
145+57.04	BEGIN FS	-0.060	0.060
148+72.93	END FS	-0.060	0.060
149+26.26	SH TRANS	-0.040	0.040
149+79.59	REV CROWN	-0.020	0.020
151+21.50	REV CROWN	-0.020	0.020
151+85.50	SH TRANS	-0.040	0.040
152+17.50	BEGIN FS	-0.050	0.050
157+02.76	END FS	-0.050	0.050
158+81.75	BEGIN FS	0.060	-0.060
160+02.45	END FS	0.060	-0.060
160+55.78	SH TRANS	0.040	-0.040
161+09.11	REV CROWN	0.020	-0.020
161+35.79	ZERO SUPER	0.000	-0.020
161+62.46	BEGIN NC	-0.020	-0.020
163+54.07	END NC	-0.020	-0.020
163+80.74	ZERO SUPER	0.000	-0.020
164+07.40	REV CROWN	0.020	-0.020
164+60.73	SH TRANS	0.040	-0.040
165+14.07	BEGIN FS	0.060	-0.060
168+88.92	END FS	0.060	-0.060

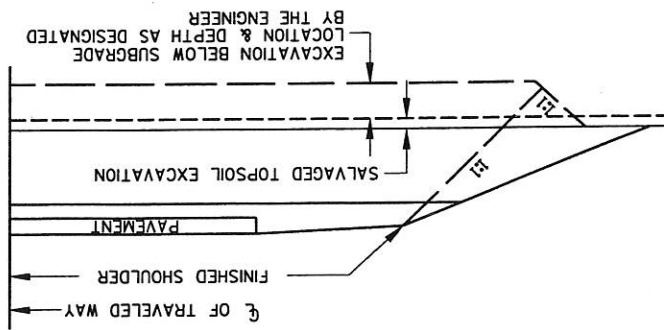
DETAIL OF CURB & GUTTER TERMINI



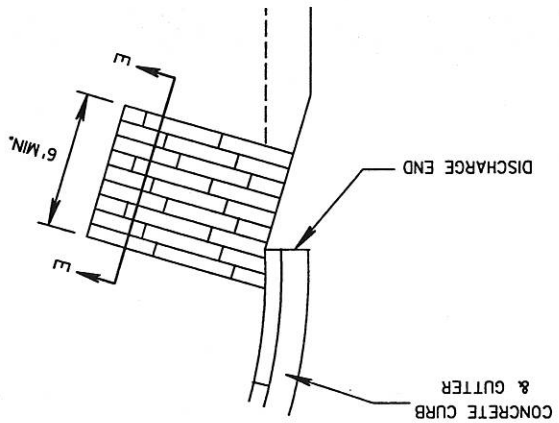
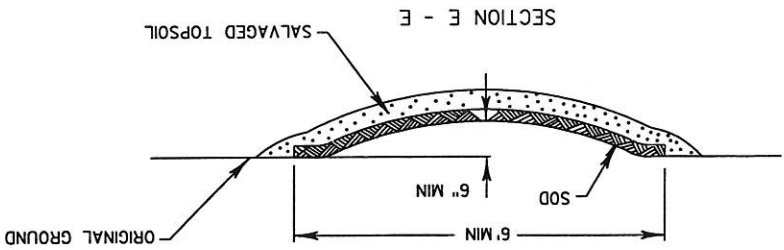
DETAIL OF DITCH BERMING AT CROSS DRAINS



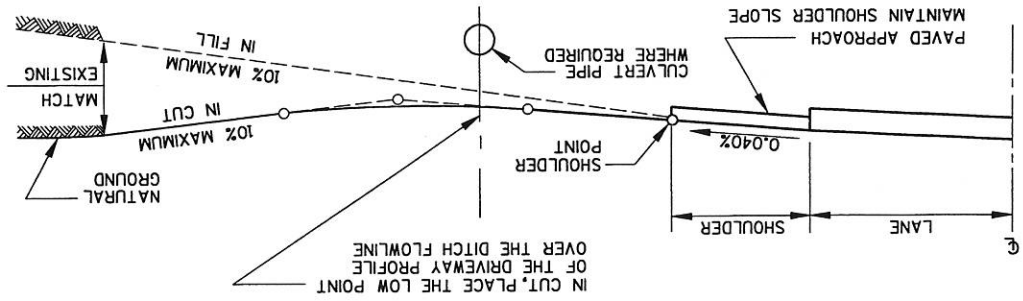
DETAIL FOR EXCAVATION BELOW SUBGRADE



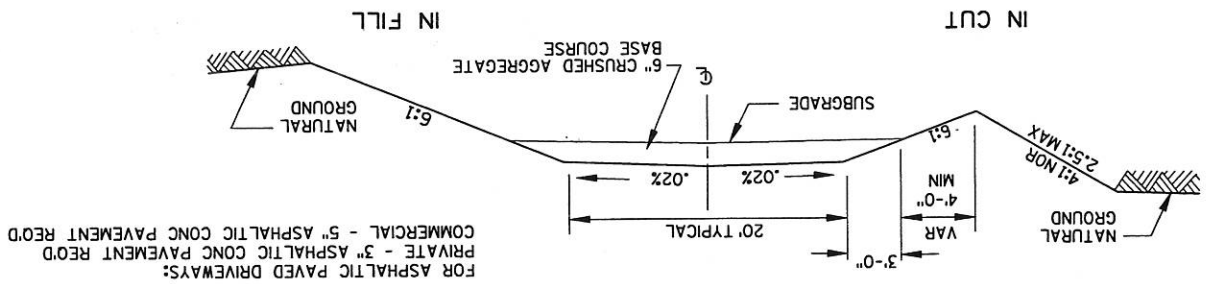
SOD FLUME DETAIL AT CURB ENDS



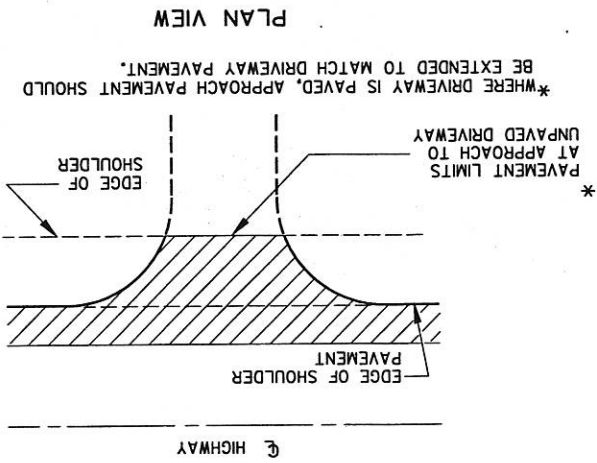
TYPICAL DRIVEWAY PROFILES

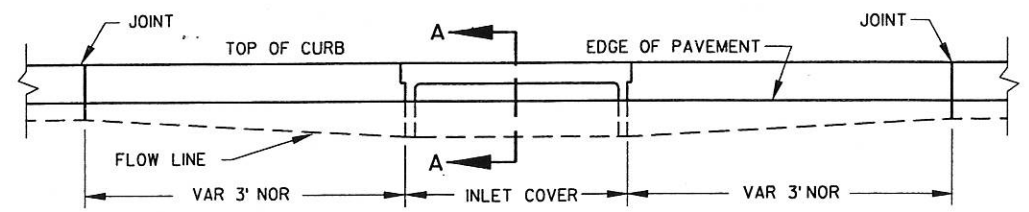


TYPICAL CROSS SECTION FOR PRIVATE AND COMMERCIAL DRIVE OR FIELD ENTRANCE

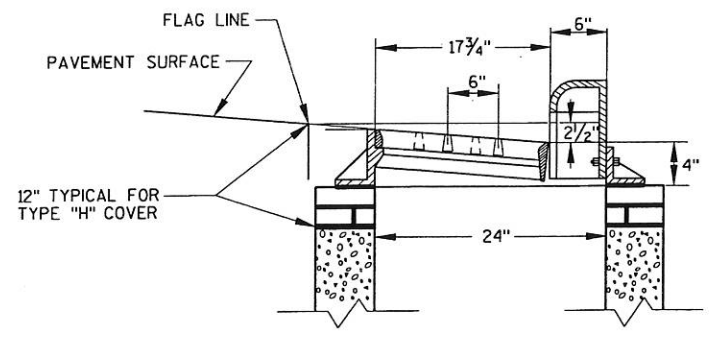
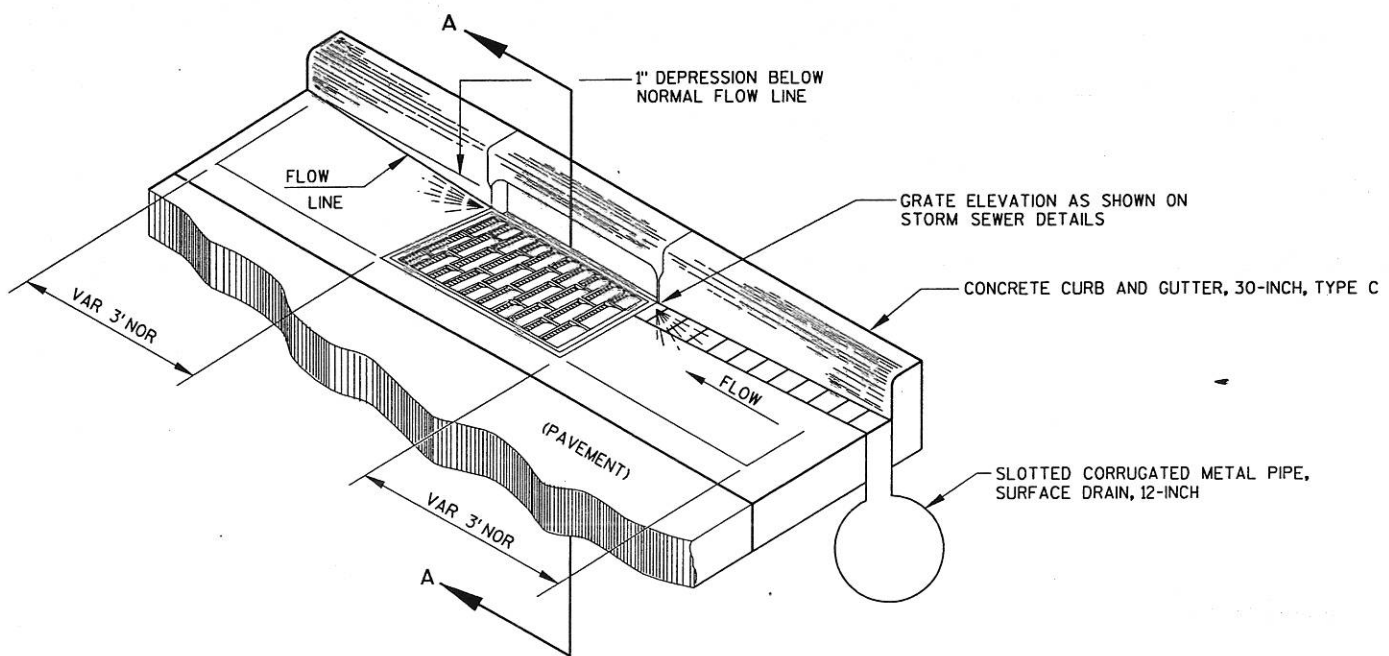


RURAL DRIVEWAY INTERSECTION DETAIL

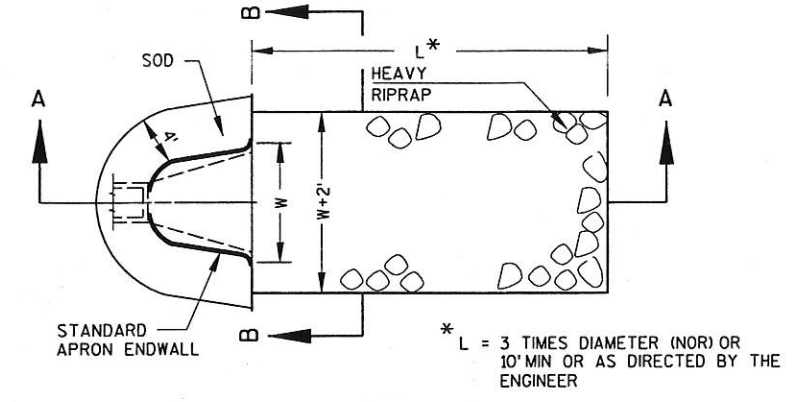




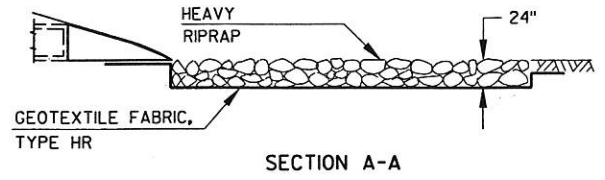
ELEVATION



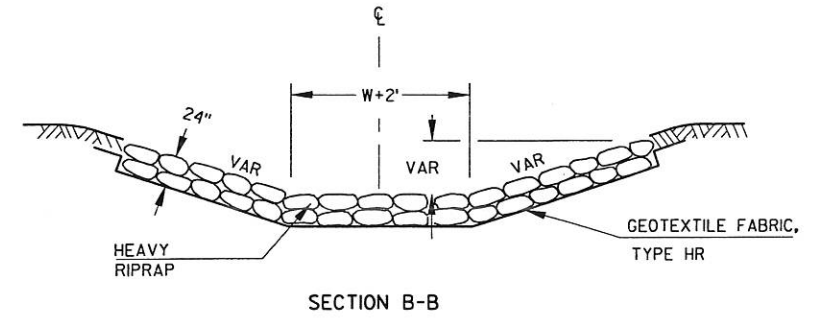
DETAIL OF CURB AND GUTTER AT INLETS  
(TYPE 3-H INLET SHOWN)



\* L = 3 TIMES DIAMETER (NOR) OR 10' MIN OR AS DIRECTED BY THE ENGINEER

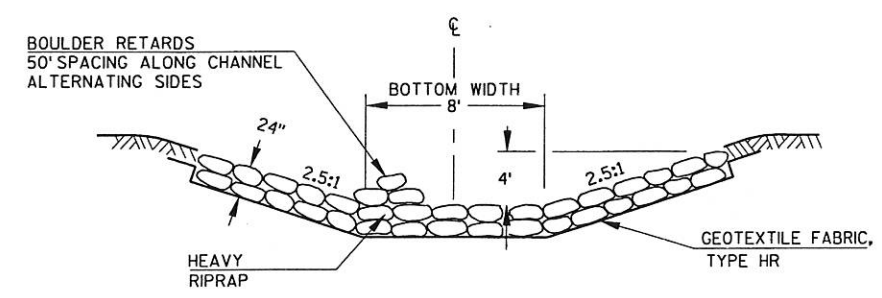


SECTION A-A



SECTION B-B

SOD, HEAVY RIPRAP AND GEOTEXTILE FABRIC  
DETAIL AT APRON ENDWALLS



CHANNEL REALIGNMENT  
SEE CROSS SECTIONS

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

STATE PROJECT NUMBER: 5436-06-71

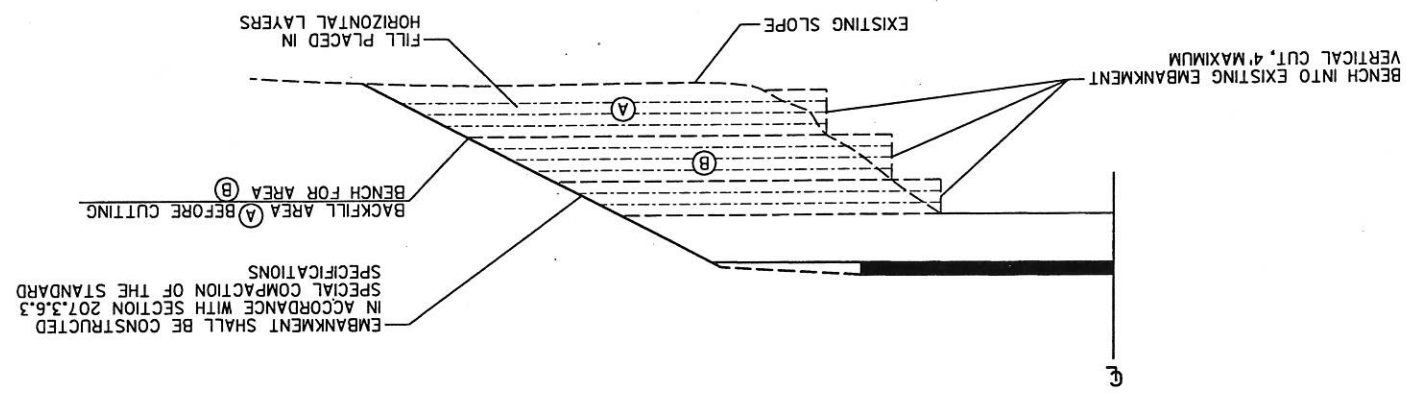
HWY: C.T.H. M

COUNTRY: LA CROSSE

CONSTRUCTION DETAILS

SCALE, FEET 0' 1" = 10' N.T.S. SHEET NO: 9

DETAIL SHOWING METHOD FOR BENCHING  
FILL INTO EXISTING EMBANKMENT

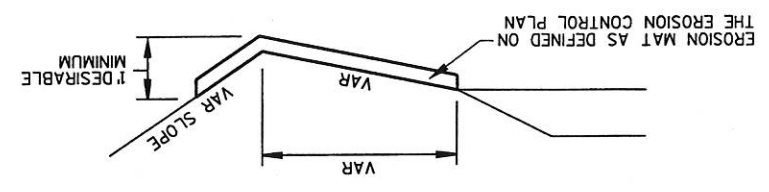


TOTAL PROJECT AREA = 14.50 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.50 ACRES

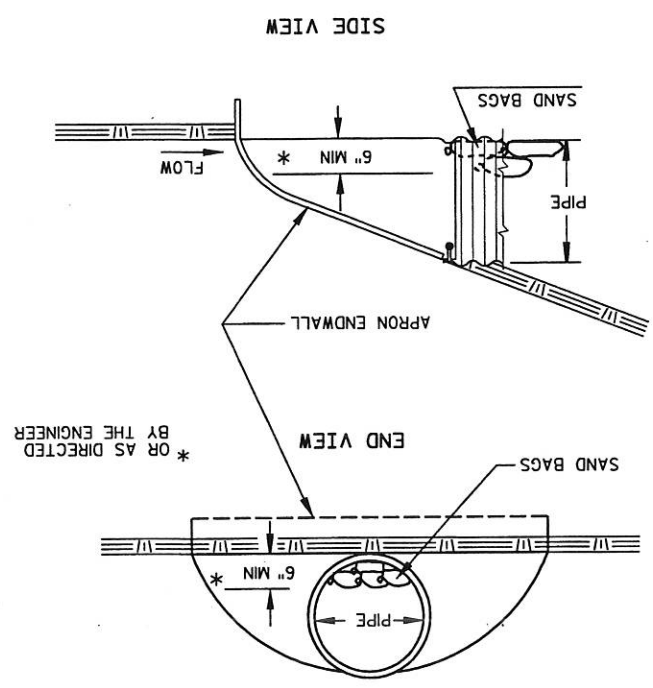
HYDROLOGIC SOIL GROUP	SLOPE RANGE (PERCENT)				SLOPE RANGE (PERCENT)				SLOPE RANGE (PERCENT)				SLOPE RANGE (PERCENT)			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2
ROW CROPS	.08	.16	.22	.30	.16	.22	.30	.38	.44	.50	.56	.62	.15	.24	.33	.41
MEDIAN STRIP-TURF	.19	.20	.24	.26	.19	.22	.26	.30	.33	.37	.40	.44	.20	.23	.27	.30
SIDE SLOPE-TURF	.25	.26	.30	.32	.25	.28	.33	.36	.39	.44	.48	.52	.28	.30	.32	.34
PAVEMENT:																
ASPHALT	.70 - .95				.80 - .95				.70 - .80				.75 - .85			
CONCRETE	.70 - .95				.80 - .95				.70 - .80				.75 - .85			
BRICK	.70 - .95				.80 - .95				.70 - .80				.75 - .85			
DRIVES, WALKS	.70 - .95				.80 - .95				.70 - .80				.75 - .85			
ROOFS	.70 - .95				.80 - .95				.70 - .80				.75 - .85			
GRAVEL ROADS, SHOULDERS	.40 - .60				.40 - .60				.40 - .60				.40 - .60			

RUNOFF COEFFICIENT TABLE

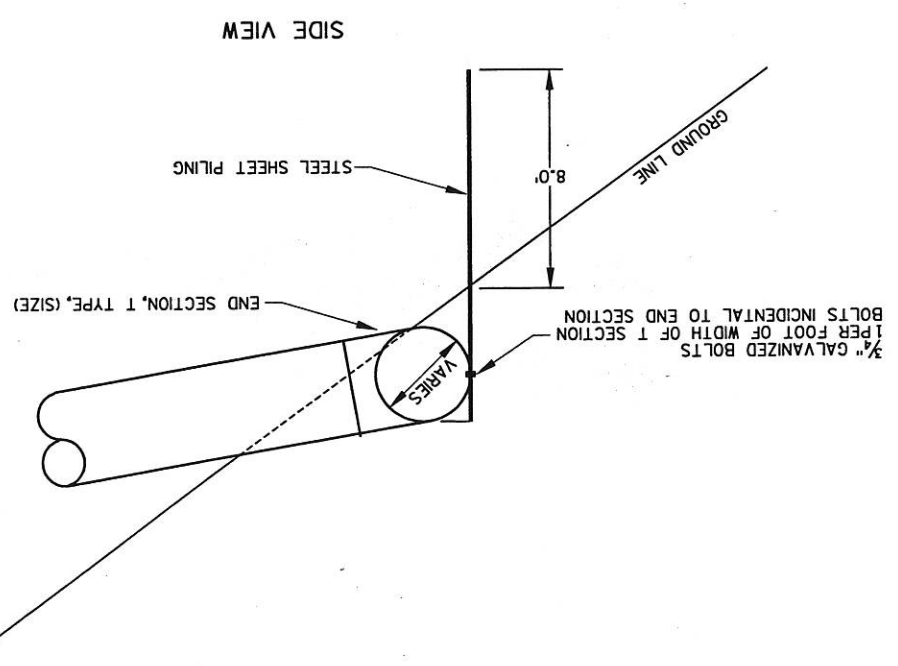
EROSION MAT DETAIL FOR DITCHES



CULVERT PIPE DITCH CHECK

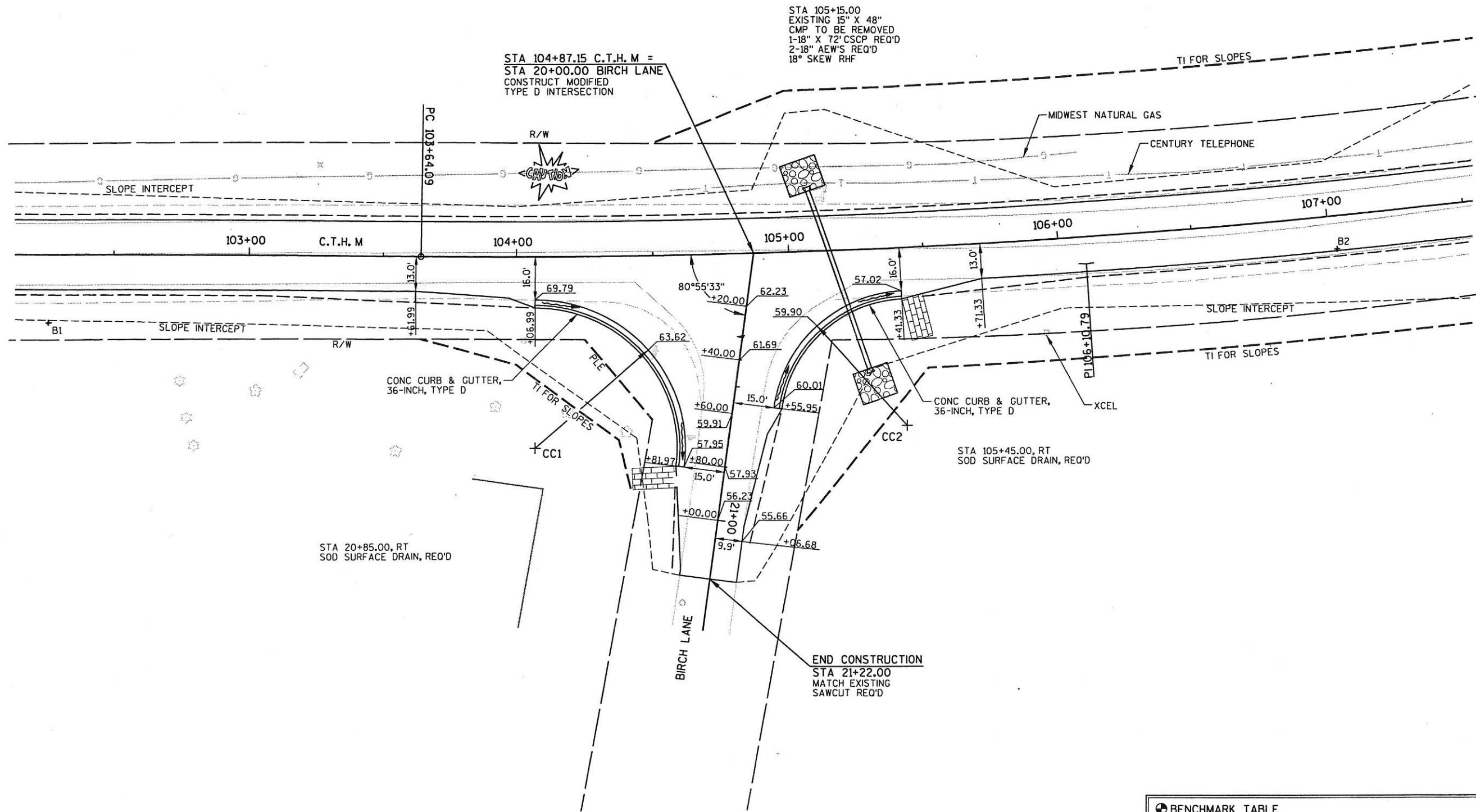


CULVERT PIPE END SECTIONS, "T" TYPE WITH STEEL SHEET PILING ANCHOR



RADIUS POINT TABLE

POINT	STATION	OFFSET	RADIUS	COORDINATES
CC1	104+06.99 C.T.H. M 20+81.97 BIRCH LANE	71.0' RT 70.0' RT	55.0'	X = 499503.823 Y = 122213.678
CC2	105+41.33 C.T.H. M 20+55.95 BIRCH LANE	66.0' RT 65.0' LT	50.0'	X = 499495.720 Y = 122350.924



BENCHMARK TABLE			
NO	STATION	DESCRIPTION	ELEV
1	100+42.28	TOP OF FIRE HYDRANT, 45.4' RT	1299.72

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

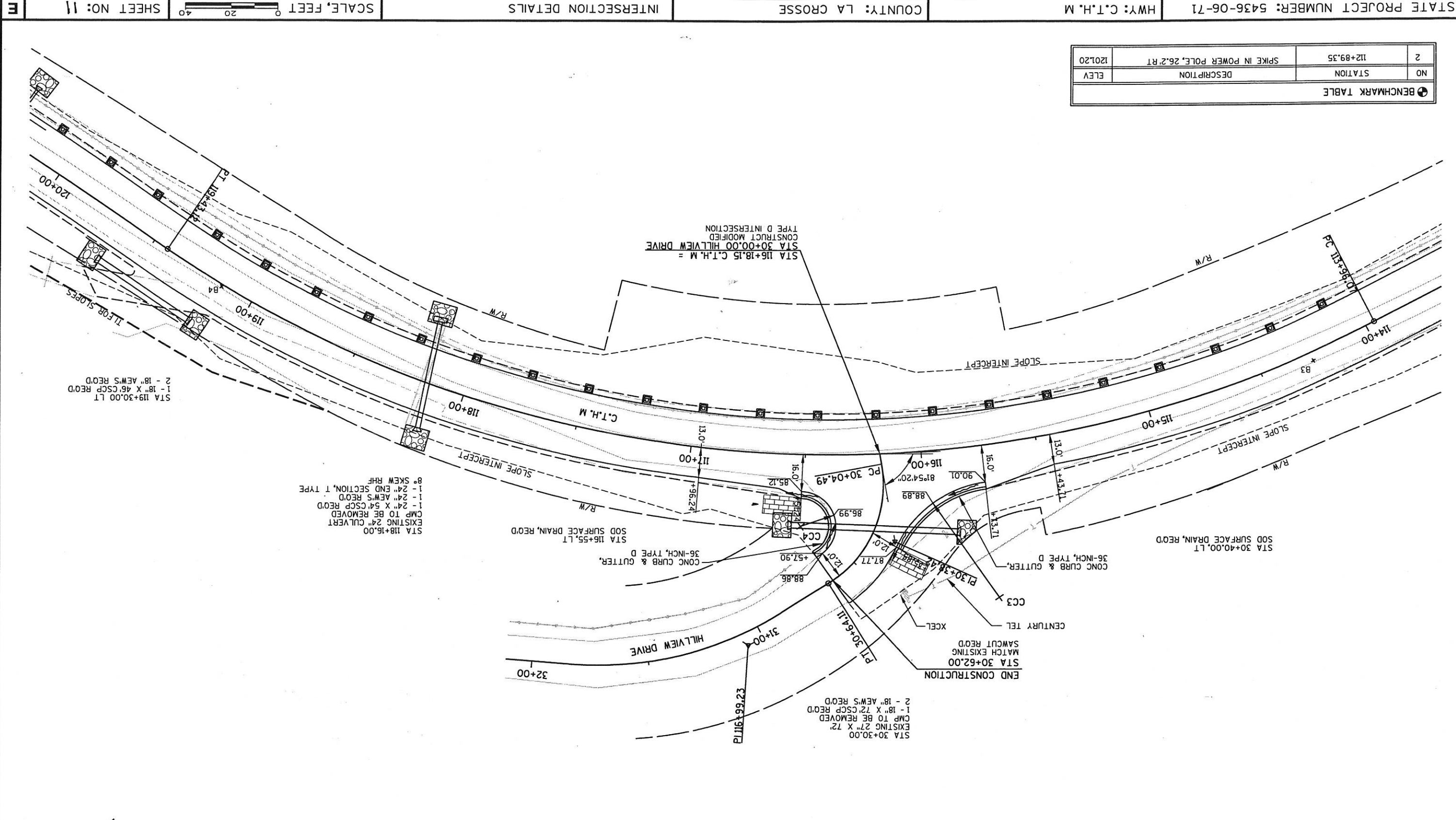
ELEVATIONS: 0.00, 1.23, 5.67, 8.91, 10.11, 12.13, 14.15, 16.17, 18.19, 20.21, 22.23, 24.25, 26.27, 28.29, 30.31, 32.33, 34.35, 36.37, 38.39, 40.41, 42.43, 44.45, 46.47, 48.49, 50.51, 52.53, 54.55, 56.57, 58.59, 60.61, 62.63

**BENCHMARK TABLE**

NO	STATION	DESCRIPTION	ELEV
2	112+89.35	SPIKE IN POWER POLE, 26.2' RT	1201.20

**RADIUS POINT TABLE**

POINT	STATION	OFFSET	RADIUS	COORDINATES
CC3	115+73.71 C.T.H. M	66.0' LT	50.0'	X = 123395.640 Y = 499364.499
CC4	116+51.24 C.T.H. M	31.0' LT	15.0'	X = 123449.003 Y = 499439.108



- 8° SKEW RHF
- 1 - 24" END SECTION, T TYPE
- 1 - 24" AEWS REOD
- 1 - 24" X 54" CSCP REOD
- CMP TO BE REMOVED
- EXISTING 24" CULVERT
- STA 118+16.00

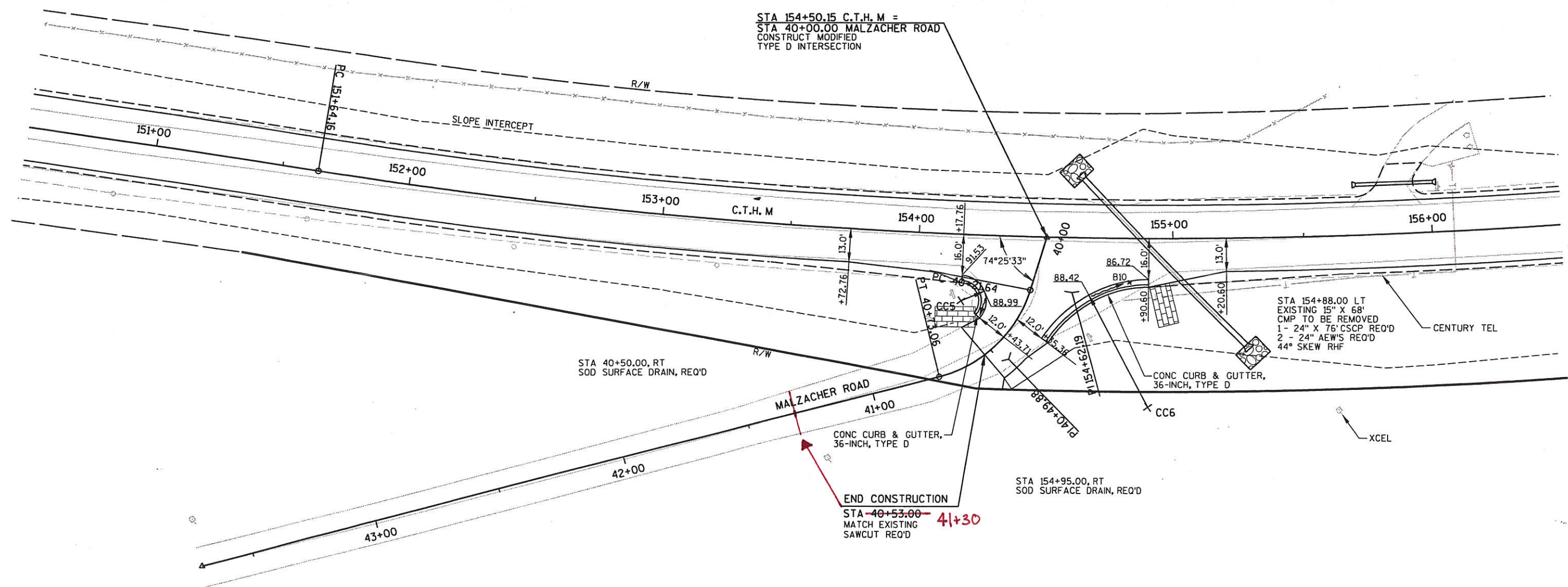
- 2 - 18" AEWS REOD
- 1 - 18" X 72" CSCP REOD
- CMP TO BE REMOVED
- EXISTING 27" X 72"
- STA 30+30.00

- 1 - 18" X 46" CSCP REOD
- 2 - 18" AEWS REOD
- STA 119+30.00 LT



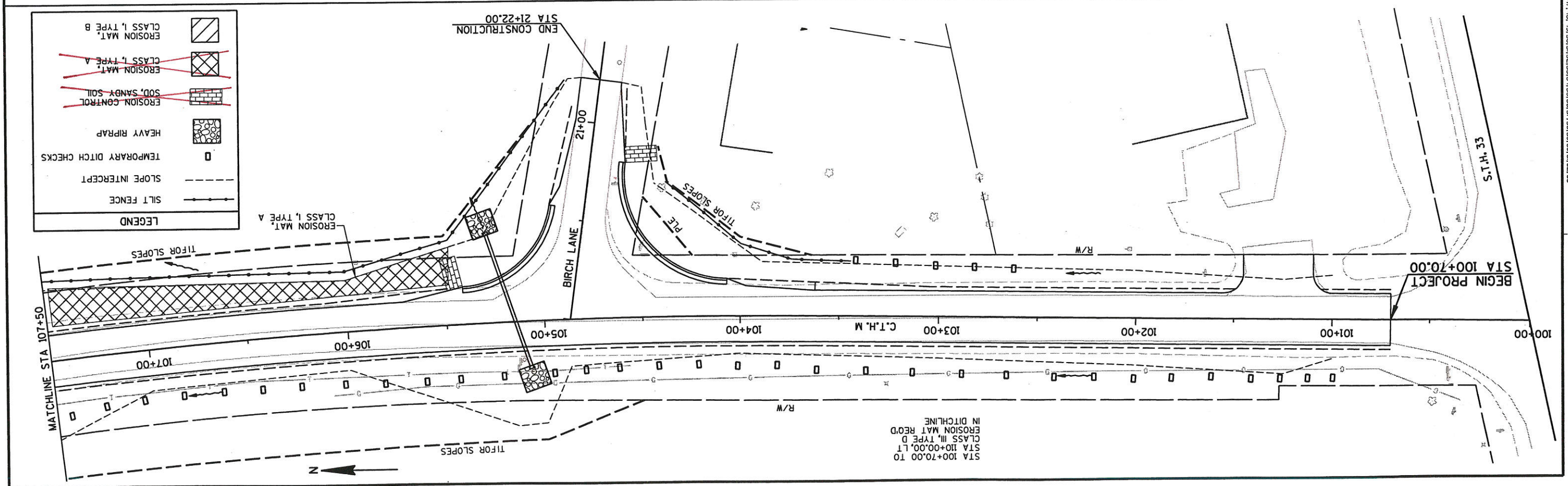
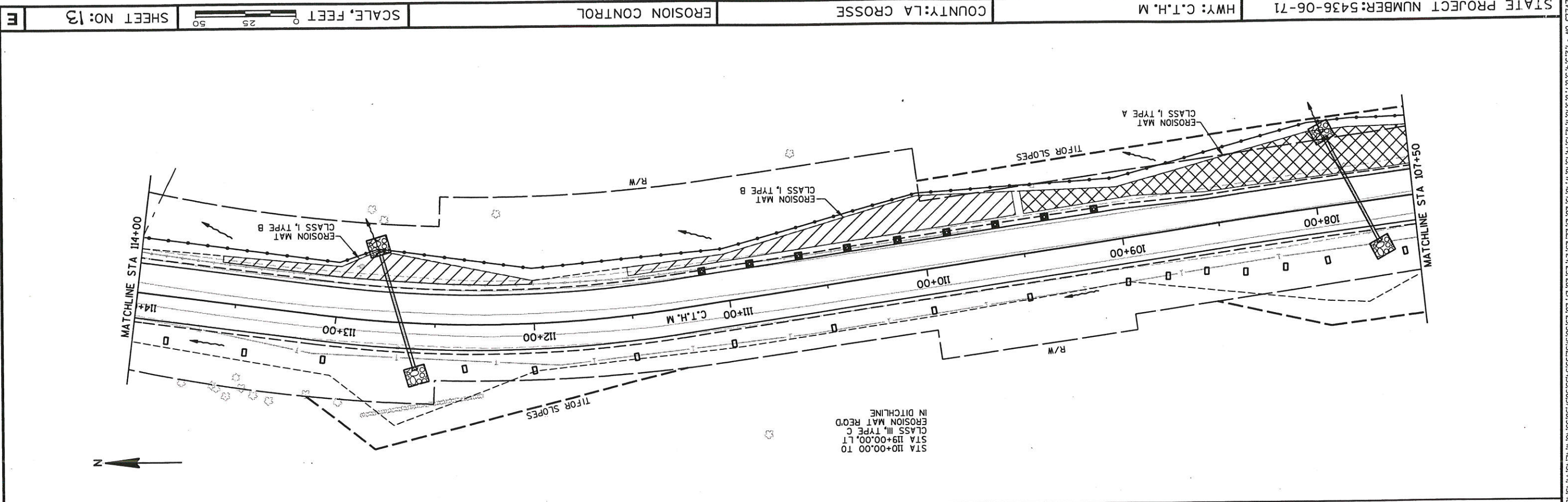
E

RADIUS POINT TABLE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC5	154+17.76 C.T.H. M	26.0' RT	10.0'	X = 126563.170 Y = 499825.161
	40+43.71 MALZACHER ROAD	22.0' RT		
CC6	154+90.60 C.T.H. M	66.0' RT	50.0'	X = 126639.337 Y = 499788.530
	40+35.36 MALZACHER ROAD	62.0' LT		



BENCHMARK TABLE			
NO	STATION	DESCRIPTION	ELEV
7	162+91.69	CHISLED SQUARE CENTERED ON BRIDGE, 63.0' LT	840.58

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

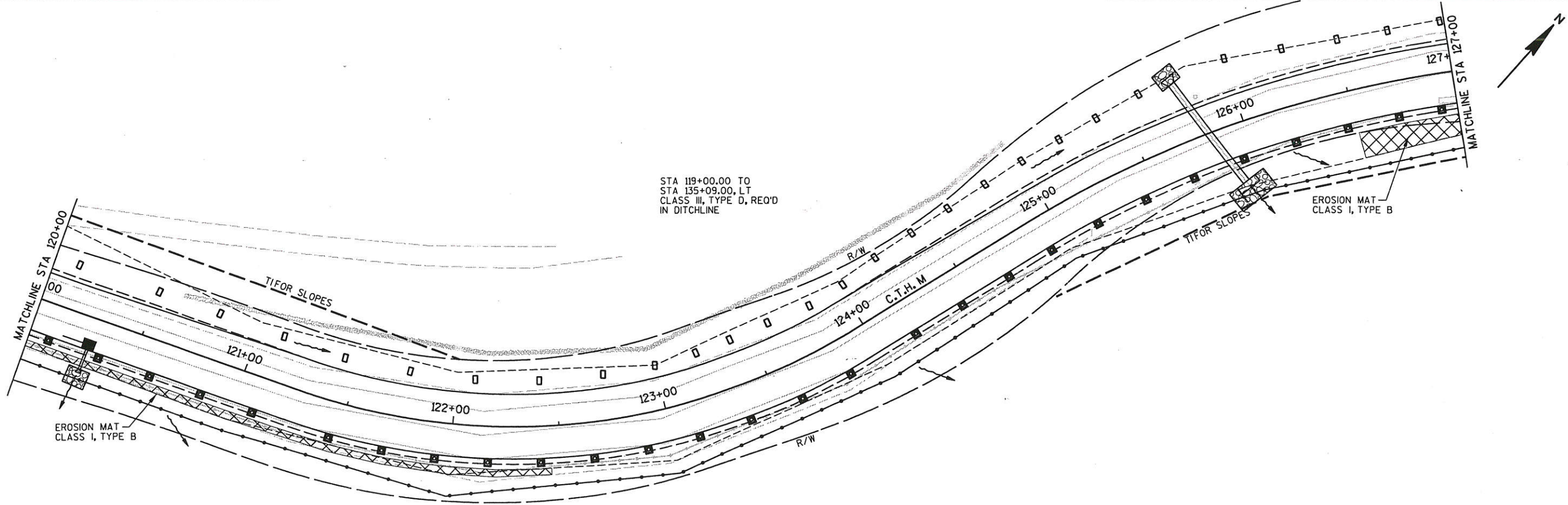
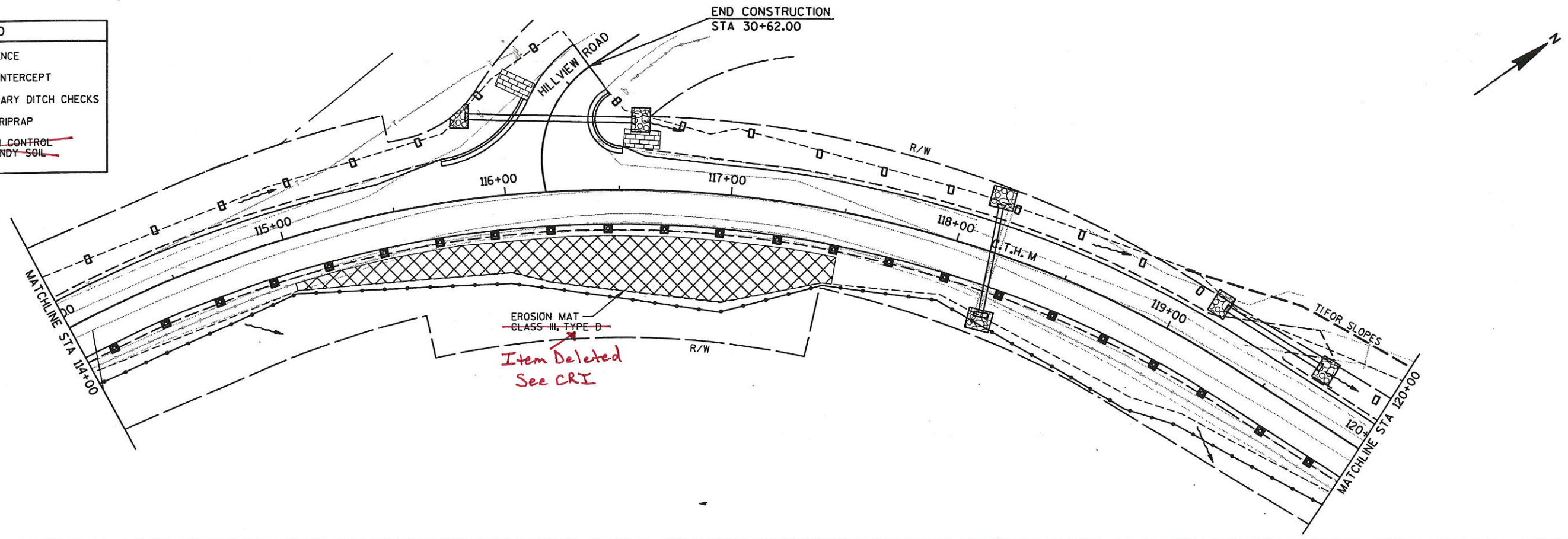


**LEGEND**

	EROSION MAT, CLASS I, TYPE A
	EROSION MAT, CLASS I, TYPE B
	HEAVY RIPRAP
	SOD, SANDY SOIL
	SILT FENCE
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECKS

LEVELS ON : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

LEGEND	
	SILT FENCE
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECKS
	HEAVY RIPRAP
	EROSION CONTROL SOD, SANDY SOIL



LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

LEVELS: 0W - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

STATE PROJECT NUMBER: 5436-06-71

HWY: C.T.H. M

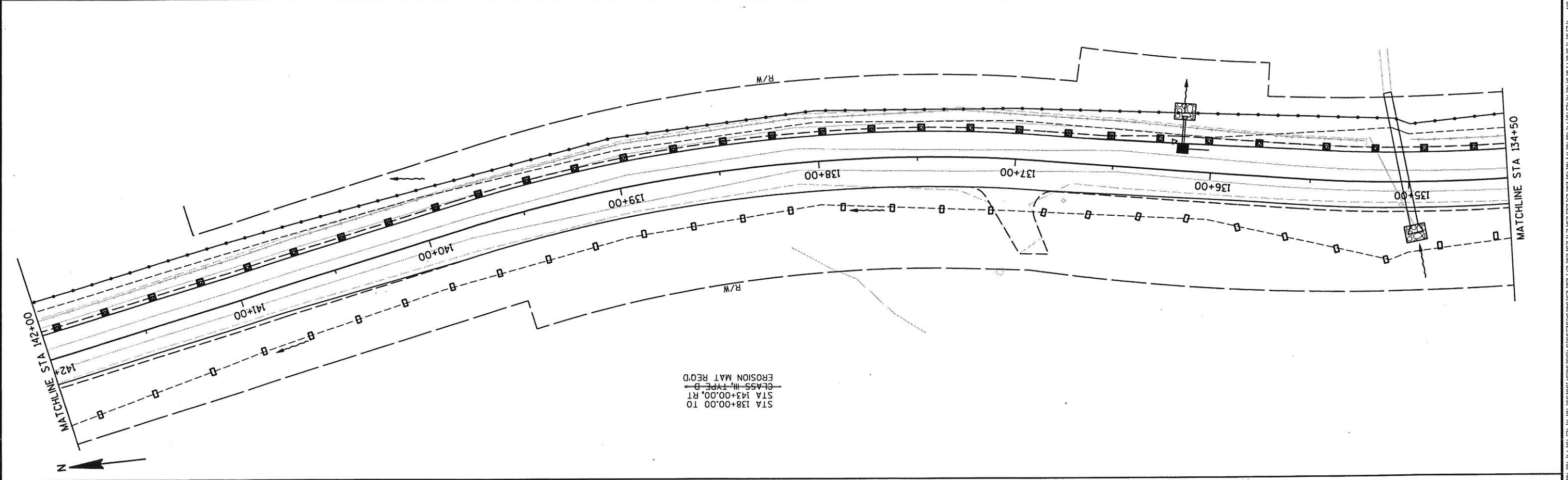
COUNTY: LA CROSSE

EROSION CONTROL

SCALE, FEET

SHEET NO: 15

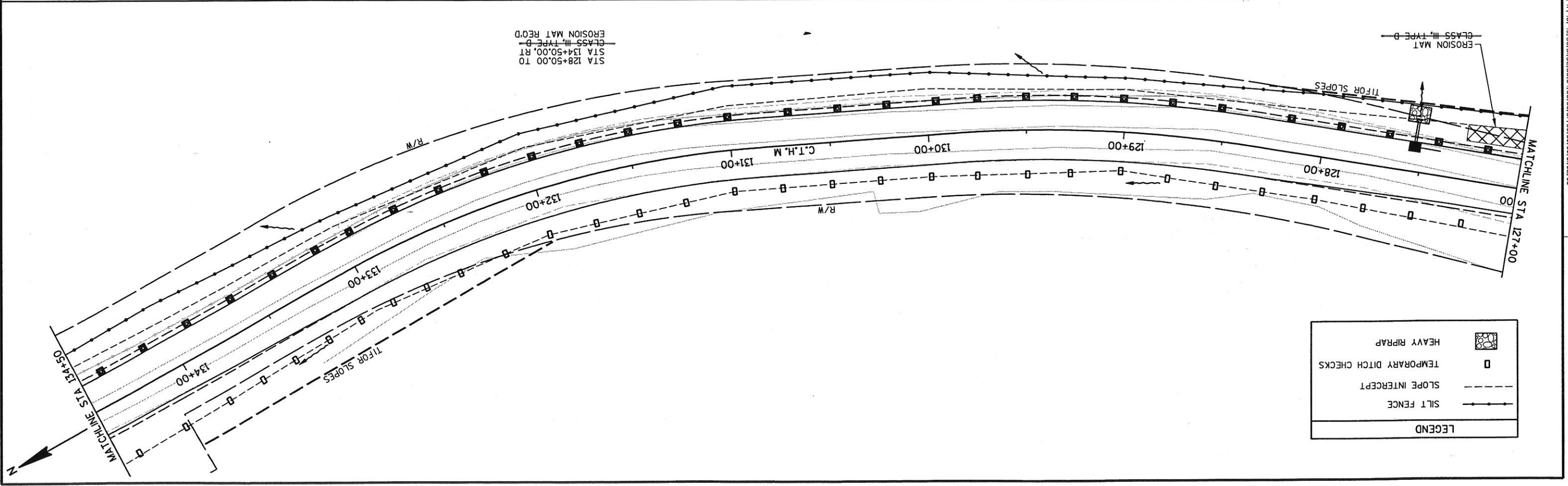
E



STA 138+00.00 TO  
STA 143+00.00, RT  
CLASS III, TYPE D  
EROSION MAT REQ'D

STA 128+50.00 TO  
STA 134+50.00, RT  
CLASS III, TYPE D  
EROSION MAT REQ'D

LEGEND	
	HEAVY RIPRAP
	TEMPORARY DITCH CHECKS
	SLOPE INTERCEPT
	SILT FENCE



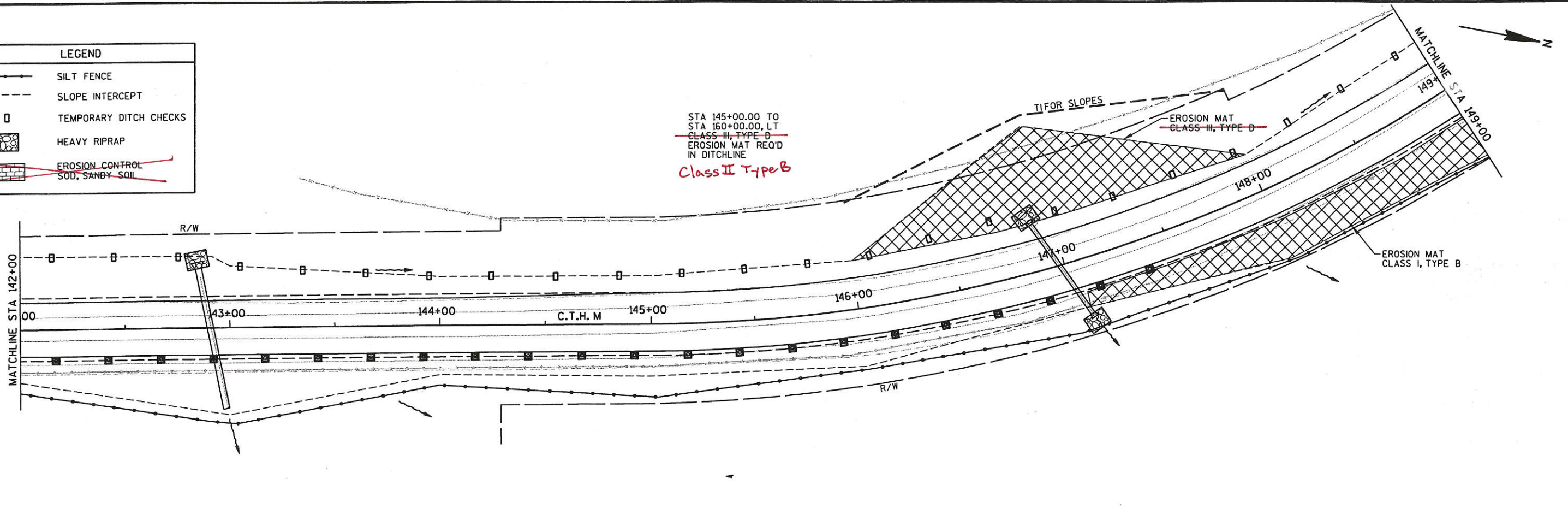
CLASS III, TYPE D  
EROSION MAT

TYPOR SLOPES

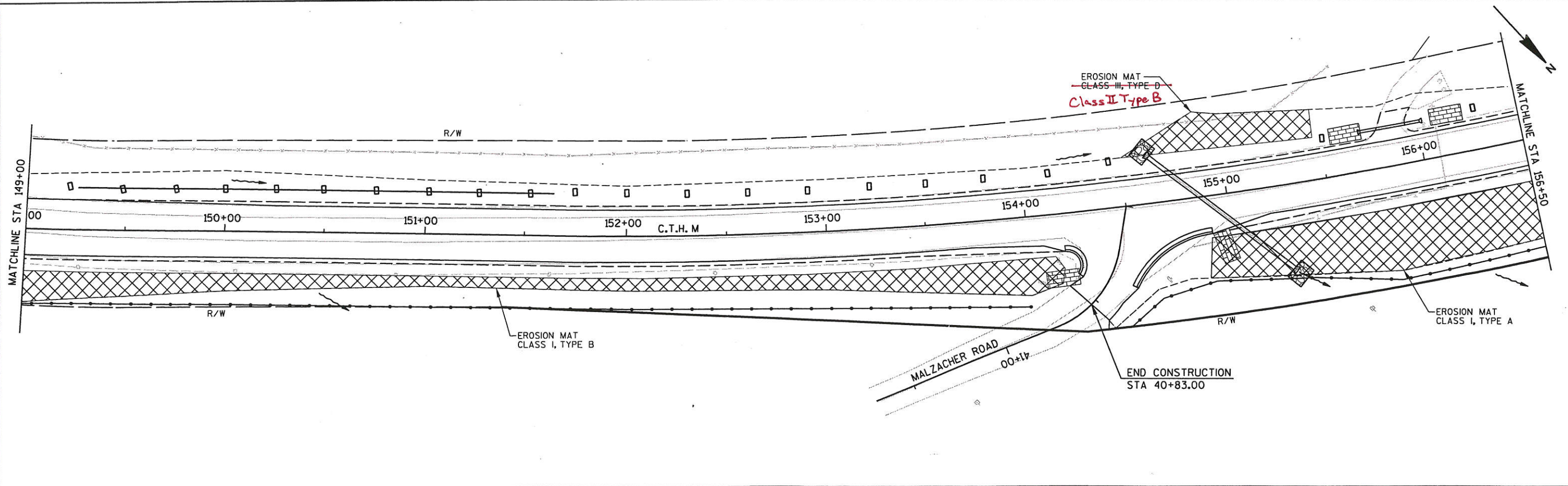
C.T.H. M

LEGEND	
	SILT FENCE
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECKS
	HEAVY RIPRAP
	EROSION CONTROL SOD, SANDY SOIL

STA 145+00.00 TO  
STA 160+00.00, LT  
~~CLASS III, TYPE D~~  
EROSION MAT REQ'D  
IN DITCHLINE  
**Class II Type B**



EROSION MAT  
~~CLASS III, TYPE D~~  
**Class II Type B**



LEVELS ON \* 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

FILE NAME : e:\trans\lacre\0002.00 cth m\cad\vec\ec\thm05.dgn

PLOT DATE: 12/05/02

PLOT TIME: 02:19:17 PM

ORG DATE :

PLOT NAME :

Originator : Dist

PLOT SCALE : N/A

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER: 5436-06-71

HWY: C.T.H. M

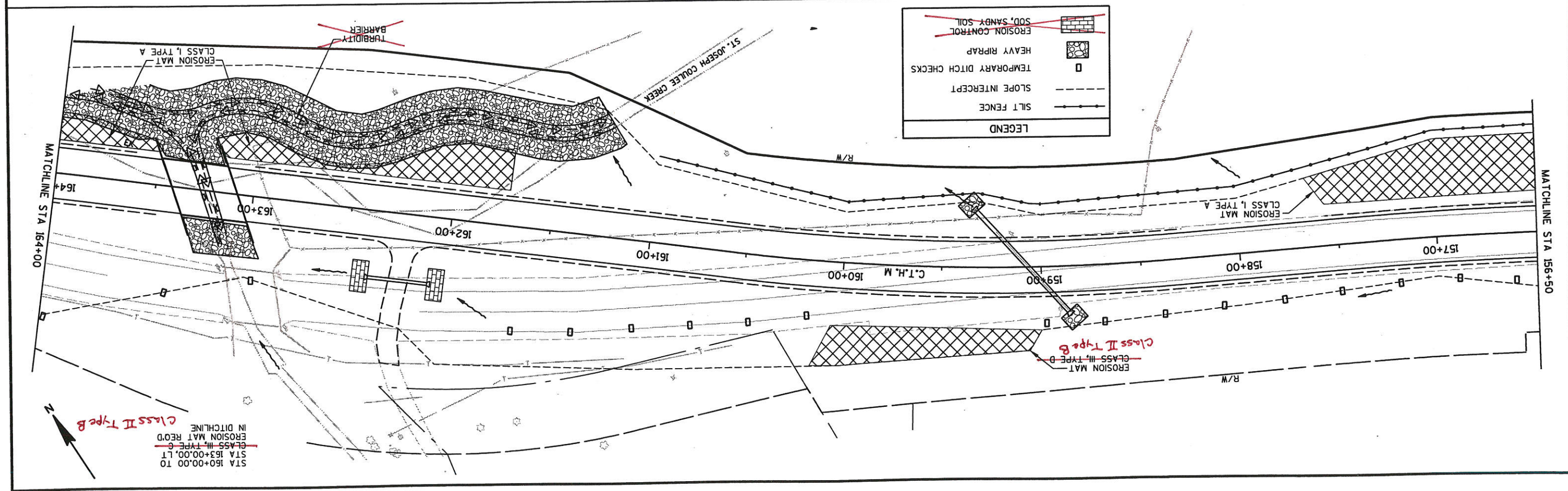
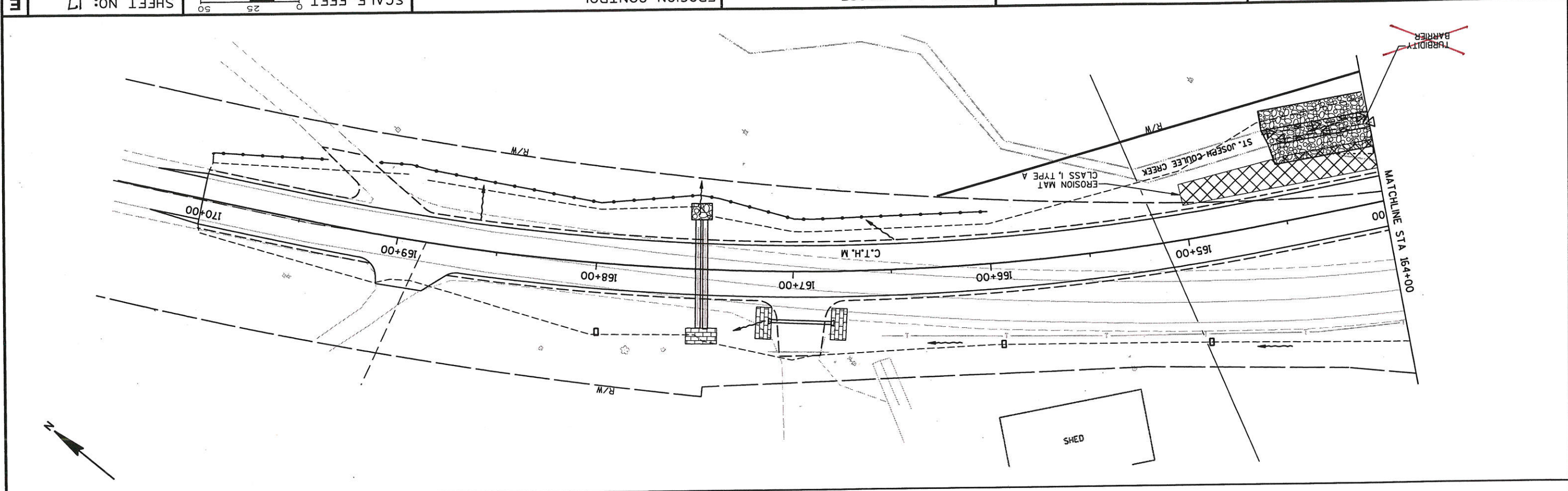
COUNTY: LA CROSSE

EROSION CONTROL

SCALE, FEET

SHEET NO: 17

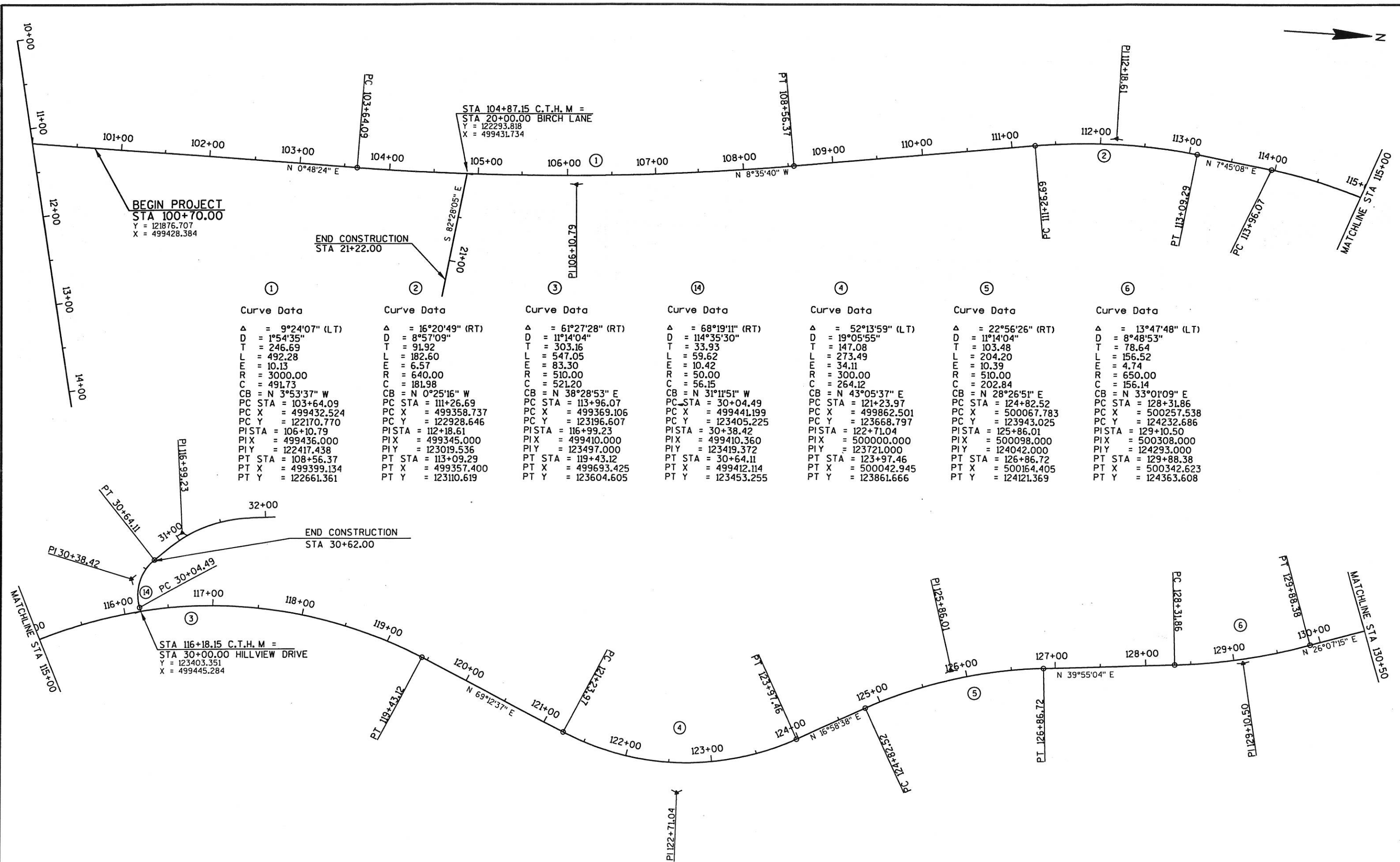
E



LEGEND	
	SOD, SANDY SOIL
	EROSION CONTROL
	HEAVY RIPRAP
	TEMPORARY DITCH CHECKS
	SLOPE INTERCEPT
	SILT FENCE

~~CLASS III, TYPE C~~  
~~EROSION MAT REOD~~  
 IN DITCHLINE  
 STA 160+00.00 TO  
 STA 163+00.00, LT

Class II Type B



Curve Data	Curve Data	Curve Data	Curve Data	Curve Data	Curve Data	Curve Data
1	2	3	4	5	6	7
Δ = 9°24'07" (LT)	Δ = 16°20'49" (RT)	Δ = 61°27'28" (RT)	Δ = 68°19'11" (RT)	Δ = 52°13'59" (LT)	Δ = 22°56'26" (RT)	Δ = 13°47'48" (LT)
D = 1°54'35"	D = 8°57'09"	D = 11°14'04"	D = 114°35'30"	D = 19°05'55"	D = 11°14'04"	D = 8°48'53"
T = 246.69	T = 91.92	T = 303.16	T = 33.93	T = 147.08	T = 103.48	T = 78.64
L = 492.28	L = 182.60	L = 547.05	L = 59.62	L = 273.49	L = 204.20	L = 156.52
E = 10.13	E = 6.57	E = 83.30	E = 10.42	E = 34.11	E = 10.39	E = 4.74
R = 3000.00	R = 640.00	R = 510.00	R = 50.00	R = 300.00	R = 510.00	R = 650.00
C = 491.73	C = 181.98	C = 521.20	C = 56.15	C = 264.12	C = 202.84	C = 156.14
CB = N 3°53'37" W	CB = N 0°25'16" W	CB = N 38°28'53" E	CB = N 31°11'51" W	CB = N 43°05'37" E	CB = N 28°26'51" E	CB = N 33°01'09" E
PC STA = 103+64.09	PC STA = 111+26.69	PC STA = 113+96.07	PC STA = 30+04.49	PC STA = 121+23.97	PC STA = 124+82.52	PC STA = 128+31.86
PC X = 499432.524	PC X = 499358.737	PC X = 499369.106	PC X = 499441.199	PC X = 499862.501	PC X = 500067.783	PC X = 500257.538
PC Y = 122170.770	PC Y = 122928.646	PC Y = 123196.607	PC Y = 123405.225	PC Y = 123668.797	PC Y = 123943.025	PC Y = 124232.686
PISTA = 106+10.79	PISTA = 112+18.61	PISTA = 116+99.23	PISTA = 30+38.42	PISTA = 122+71.04	PISTA = 125+86.01	PISTA = 129+10.50
PIX = 499436.000	PIX = 499345.000	PIX = 499410.000	PIX = 499410.360	PIX = 500000.000	PIX = 500098.000	PIX = 500308.000
PIY = 122417.438	PIY = 123019.536	PIY = 123497.000	PIY = 123419.372	PIY = 123721.000	PIY = 124042.000	PIY = 124293.000
PT STA = 108+56.37	PT STA = 113+09.29	PT STA = 119+43.12	PT STA = 30+64.11	PT STA = 123+97.46	PT STA = 126+86.72	PT STA = 129+88.38
PT X = 499399.134	PT X = 499357.400	PT X = 499693.425	PT X = 499412.114	PT X = 500042.945	PT X = 500164.405	PT X = 500342.623
PT Y = 122661.361	PT Y = 123110.619	PT Y = 123604.605	PT Y = 123453.255	PT Y = 123861.666	PT Y = 124121.369	PT Y = 124363.608

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

FILE NAME : e:\trans\acrc\0002.00 cth m\cadd\delim01.dgn

PLOT DATE: 09/24/02

PLOT TIME: 03:09:20 PM

ORG DATE :

PLOT NAME :

Originator : Dist

PLOT SCALE : N/A

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER: 5436-06-71

HWY: C.T.H. M

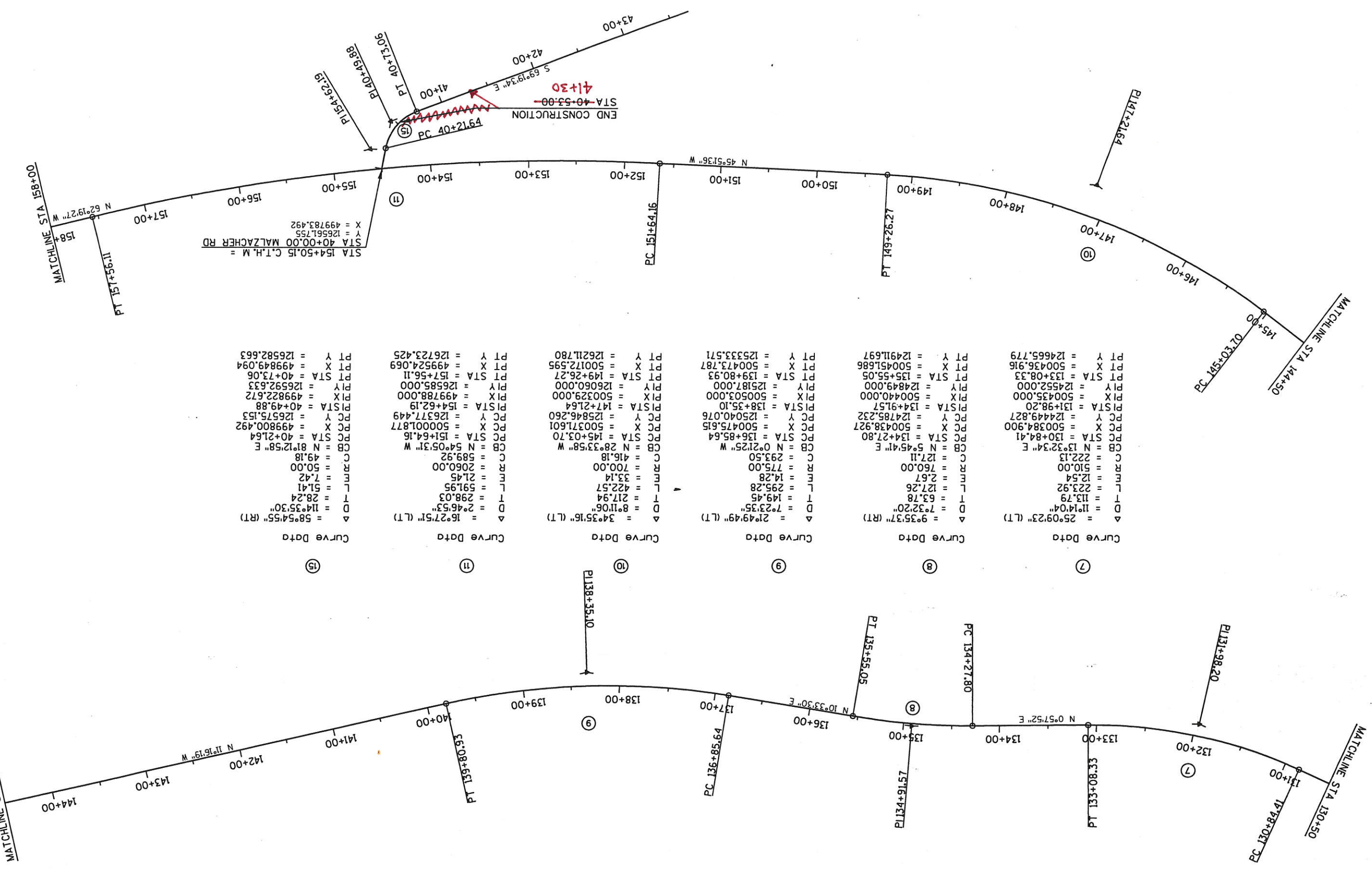
COUNTY: LA CROSSE

ALIGNMENT DIAGRAM

SCALE, FEET

SHEET NO: 23

E



Curve Data

Δ	= 25°09'23" (LT)
D	= 11°14'04"
T	= 113.79
L	= 223.92
E	= 12.54
R	= 510.00
C	= 222.13
CB	= N 13°32'34" E
PC STA	= 130+84.41
PC X	= 500384.900
PC Y	= 124449.827
PSTA	= 131+98.20
PI X	= 500435.000
PI Y	= 124552.000
PT STA	= 133+08.33
PT X	= 500436.916
PT Y	= 124665.719

Curve Data

Δ	= 9°35'37" (RT)
D	= 7°32'20"
T	= 7°32'20"
L	= 127.26
E	= 2.67
R	= 760.00
C	= 127.11
CB	= N 5°45'41" E
PC STA	= 134+27.80
PC X	= 500438.927
PC Y	= 124785.232
PSTA	= 134+91.57
PI X	= 500440.000
PI Y	= 124849.000
PT STA	= 135+55.05
PT X	= 500451.686
PT Y	= 124911.697

Curve Data

Δ	= 21°49'49" (LT)
D	= 7°23'35"
T	= 149.45
L	= 295.28
E	= 14.28
R	= 775.00
C	= 293.50
CB	= N 0°21'25" W
PC STA	= 136+85.64
PC X	= 500475.615
PC Y	= 125040.076
PSTA	= 138+35.10
PI X	= 500503.000
PI Y	= 125187.000
PT STA	= 139+80.93
PT X	= 500473.787
PT Y	= 125333.571

Curve Data

Δ	= 34°35'16" (LT)
D	= 8°11'06"
T	= 217.94
L	= 422.57
E	= 33.14
R	= 700.00
C	= 416.18
CB	= N 28°33'58" W
PC STA	= 145+03.70
PC X	= 500371.601
PC Y	= 125846.260
PSTA	= 147+21.64
PI X	= 500329.000
PI Y	= 126060.000
PT STA	= 149+26.27
PT X	= 500172.595
PT Y	= 126211.780

Curve Data

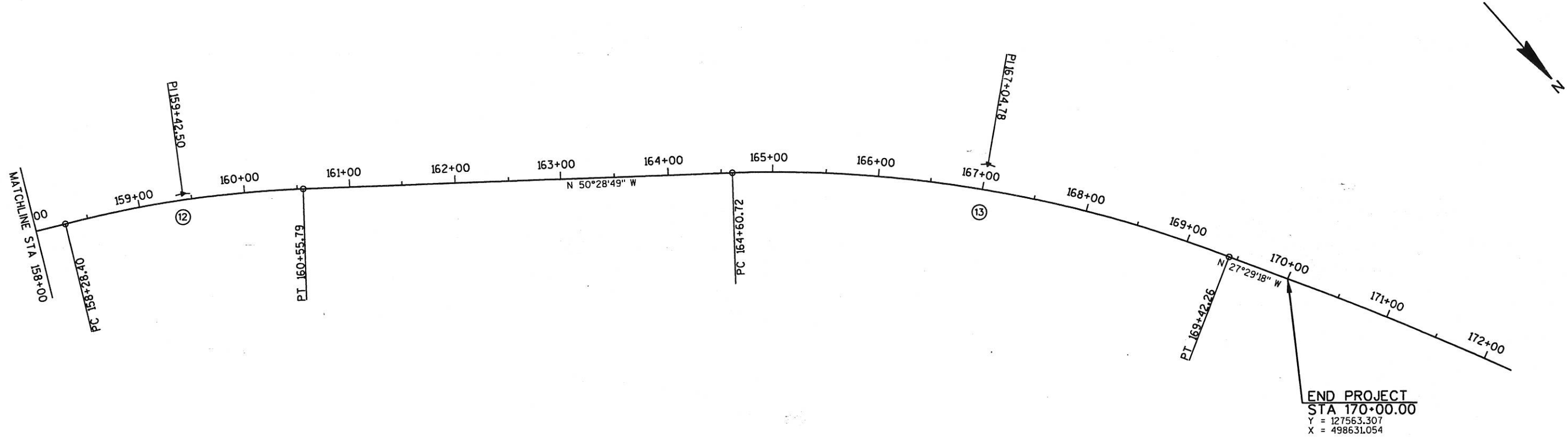
Δ	= 16°27'51" (LT)
D	= 2°46'53"
T	= 298.03
L	= 591.95
E	= 21.45
R	= 2060.00
C	= 589.92
CB	= N 54°05'31" W
PC STA	= 151+64.16
PC X	= 500001.877
PC Y	= 126377.449
PSTA	= 154+62.19
PI X	= 499788.000
PI Y	= 126585.000
PT STA	= 157+56.11
PT X	= 499524.069
PT Y	= 126723.425

Curve Data

Δ	= 58°54'55" (RT)
D	= 114°35'30"
T	= 28.24
L	= 51.41
E	= 7.42
R	= 50.00
C	= 49.18
CB	= N 81°12'58" E
PC STA	= 40+21.64
PC X	= 499800.492
PC Y	= 126575.153
PSTA	= 40+49.88
PI X	= 499822.672
PI Y	= 126592.633
PT STA	= 40+73.06
PT X	= 499849.094
PT Y	= 126582.663

STA 154+50.15 C.T.H. M =  
 STA 40+00.00 MALZACHER RD =  
 X = 499783.492  
 Y = 126561.755

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



⑫	⑬
Curve Data	Curve Data
Δ = 11°50'38" (RT)	Δ = 22°59'31" (RT)
D = 5°12'31"	D = 4°46'29"
T = 114.10	T = 244.05
L = 227.39	L = 481.54
E = 5.90	E = 24.57
R = 1100.00	R = 1200.00
C = 226.98	C = 478.32
CB = N 56°24'08" W	CB = N 38°59'03" W
PC STA = 158+28.40	PC STA = 164+60.72
PC X = 499460.045	PC X = 498958.616
PC Y = 126757.004	PC Y = 127140.283
PI STA = 159+42.50	PI STA = 167+04.78
PIX = 499359.000	PIX = 498770.351
PIY = 126810.000	PIY = 127295.586
PT STA = 160+55.79	PT STA = 169+42.26
PT X = 499270.983	PT X = 498657.703
PT Y = 126882.607	PT Y = 127512.089

LINE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL	5436-06-71 QUANTITY
0010	20101 CLEARING	STA.	13.00	13.00
0020	20104 GRUBBING	STA.	13.00	13.00
0030	20335 REMOVING SMALL PIPE CULVERTS	EACH	16.00	16.00
0040	20371 REMOVING OLD STRUCTURE, STATION 163+00, 60' LT	LS	1.00	1.00
0050	20411 REMOVING GUARDRAIL	L.F.	3,800.00	3,800.00
0060	<del>20412 REMOVING FENCE</del>	<del>L.F.</del>	<del>665.00</del>	<del>665.00 Deleted</del>
0070	20501 COMMON EXCAVATION	C.Y.	7,170.00	7,170.00
0080	20502 ROCK EXCAVATION	C.Y.	550.00	550.00
0090	20610 EXCAVATION FOR STRUCTURES, BRIDGES B-32-206	LS	1.00	1.00
0100	20801 BORROW EXCAVATION	C.Y.	7,000.00	7,000.00
0110	21001 STRUCTURE BACKFILL	C.Y.	280.00	280.00
0120	21301 FINISHING ROADWAY	LS	1.00	1.00
0130	30404 CRUSHED AGGREGATE BASE COURSE	TON	10,030.00	10,030.00
0140	30426 BREAKER RUN STONE	TON	1,000.00	1,000.00
0150	40204 ASPHALTIC MATERIAL FOR TACK COAT	GAL.	600.00	600.00
0160	40301 GMP, ASPHALTIC MIXTURE	TON	4,675.00	<del>4,675.00</del> 4,434.48
0170	40501 ASPHALTIC MATERIAL FOR PLANT MIXES	TON	280.00	<del>280.00</del> 241.04
0180	40721 ASPHALTIC CONCRETE PAVEMENT, TYPE E-0.3	TON	4,675.00	<del>4,675.00</del> 4,434.48
0190	40728 DENSITY INCENTIVE, ASPHALTIC CONCRETE PAVEMENT	DOL	3,000.00	<del>3,000.00</del> 0
0200	50201 CONCRETE MASONRY, BRIDGES	C.Y.	123.00	123.00
0210	50265 PROTECTIVE SURFACE TREATMENT	S.Y.	123.00	123.00
0220	50504 HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	3,620.00	3,620.00
0230	50511 COATED HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	11,600.00	11,600.00
0240	51121 STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	525.00	525.00
0250	51205 PERMANENT STEEL SHEET PILING, DELIVERED	S.F.	170.00	170.00
0260	51206 PERMANENT STEEL SHEET PILING, DRIVEN	S.F.	170.00	170.00
0270	51340 TUBULAR RAILING, TYPE F, STRUCTURE B-32-206	LS	1.00	1.00
0280	51605 RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	14.00	14.00
0290	52103 CORRUGATED STEEL CULVERT PIPE, 12-INCH	L.F.	34.00	34.00
0300	52104 CORRUGATED STEEL CULVERT PIPE, 15-INCH	L.F.	30.00	30.00
0310	52105 CORRUGATED STEEL CULVERT PIPE, 18-INCH	L.F.	374.00	374.00

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5436-06-71 QUANTITY
0320	52107	CORRUGATED STEEL CULVERT PIPE, 24-INCH	L.F.	252.00	252.00
0330	52109	CORRUGATED STEEL CULVERT PIPE, 30-INCH	L.F.	104.00	104.00
0340	52111	CORRUGATED STEEL CULVERT PIPE, 36-INCH	L.F.	66.00	66.00
0350	52112	CORRUGATED STEEL CULVERT PIPE, 42-INCH	L.F.	56.00	56.00
0360	52113	CORRUGATED STEEL CULVERT PIPE, 48-INCH	L.F.	68.00	68.00
0370	52147	STEEL APRON ENDWALLS FOR CULVERT PIPE, 12-INCH	EACH	3.00	3.00
0380	52148	STEEL APRON ENDWALLS FOR CULVERT PIPE, 15-INCH	EACH	2.00	2.00
0390	52149	STEEL APRON ENDWALLS FOR CULVERT PIPE, 18-INCH	EACH	13.00	13.00
0400	52151	STEEL APRON ENDWALLS FOR CULVERT PIPE, 24-INCH	EACH	7.00	7.00
0410	52152	STEEL APRON ENDWALLS FOR CULVERT PIPE, 30-INCH	EACH	4.00	4.00
0420	52153	STEEL APRON ENDWALLS FOR CULVERT PIPE, 36-INCH	EACH	1.00	1.00
0430	52154	STEEL APRON ENDWALLS FOR CULVERT PIPE, 42-INCH	EACH	1.00	1.00
0440	52155	STEEL APRON ENDWALLS FOR CULVERT PIPE, 48-INCH	EACH	1.00	1.00
0450	60170	CONCRETE CURB AND GUTTER, 36-INCH, TYPE D	L.F.	1,939.00	1,939.00
0460	60602	HEAVY RIPRAP	C.Y.	1,384.00	1,384.00
0470	61122	INLETS, TYPE 3	EACH	3.00	3.00
0480	<del>61167</del>	<del>INLET COVERS, TYPE H</del>	<del>EACH</del>	<del>3.00</del>	<del>3.00</del>
0490	61407	STEEL THRIE BEAM STRUCTURE APPROACH	L.F.	132.00	132.00
0500	61408	STEEL PLATE BEAM GUARD, CLASS A	L.F.	4,200.00	4,200.00
0510	61435	STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL	EACH	8.00	8.00
0520	61910	MOBILIZATION	LS	1.00	1.00
0530	<del>62203</del>	<del>ASPHALTIC FLUMES</del>	<del>S.Y.</del>	<del>45.00</del>	<del>45.00</del>
0540	<del>62302</del>	<del>DUST CONTROL SURFACE TREATMENT</del>	<del>S.Y.</del>	<del>23,100.00</del>	<del>23,100.00</del>
0550	62401	WATER	MGAL	40.00	40.00
0560	62502	TOPSOIL	C.Y.	800.00	800.00
0570	62505	SALVAGED TOPSOIL	S.Y.	19,000.00	19,000.00
0580	62702	MULCHING	S.Y.	23,000.00	23,000.00
0590	62815	SILT FENCE, DELIVERED	L.F.	7,670.00	7,670.00
0600	62816	SILT FENCE, INSTALLED	L.F.	7,670.00	7,670.00
0610	62817	SILT FENCE MAINTENANCE	L.F.	15,340.00	15,340.00

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Add Item 61180 Inlet Covers, Type HM

EACH

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5436-06-71

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0620	62819	MOBILIZATIONS, EROSION CONTROL	EACH	3.00	3.00
0630	62821	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	3.00	3.00
0640	62822	EROSION MAT, DELIVERED, CLASS I, TYPE A	S.Y.	2,370.00	2,370.00
0650	62823	EROSION MAT, INSTALLED, CLASS I, TYPE A	S.Y.	2,370.00	2,370.00
0660	62824	EROSION MAT, DELIVERED, CLASS I, TYPE B	S.Y.	1,760.00	1,760.00
0670	62825	EROSION MAT, INSTALLED, CLASS I, TYPE B	S.Y.	1,760.00	1,760.00
0680	62844	EROSION MAT, DELIVERED, CLASS III, TYPE C	S.Y.	1,625.00	1,625.00
0690	62845	EROSION MAT, INSTALLED, CLASS III, TYPE C	S.Y.	1,625.00	1,625.00
0700	62846	EROSION MAT, DELIVERED, CLASS III, TYPE D	S.Y.	8,825.00	8,825.00
0710	62847	EROSION MAT, INSTALLED, CLASS III, TYPE D	S.Y.	8,825.00	8,825.00
0720	62860	TURBIDITY BARRIERS	S.Y.	780.00	780.00
0730	62870	INLET PROTECTION, TYPE A	EACH	3.00	3.00
0740	62872	INLET PROTECTION, TYPE C	EACH	3.00	3.00
0750	62875	TEMPORARY DITCH CHECKS, DELIVERED	L.F.	2,560.00	2,560.00
0760	62876	TEMPORARY DITCH CHECKS, INSTALLED	L.F.	2,560.00	2,560.00
0770	62880	CULVERT PIPE DITCH CHECKS	EACH	17.00	17.00
0780	62905	FERTILIZER, TYPE B	CWT.	15.00	15.00
0790	63003	SEEDING, TEMPORARY	LB.	210.00	210.00
0800	63010	SEEDING, MIXTURE NO. 30	LB.	420.00	420.00
0810	63011	SEEDING, MIXTURE NO. 40	LB.	50.00	50.00
0820	63112	EROSION CONTROL SOB, SANDY SOIL	S.Y.	300.00	300.00
0830	63403	WOOD POSTS, 4X4-INCH X 14-FT.	EACH	4.00	4.00
0840	63702	SIGNS, TYPE II, REFLECTIVE	S.F.	12.00	12.00
0850	63822	MOVING SIGNS, TYPE II	EACH	12.00	12.00
0860	63827	REMOVING SIGNS, TYPE II	EACH	2.00	2.00
0870	63830	REMOVING SMALL SIGN SUPPORTS	EACH	2.00	2.00
0880	63840	MOVING SMALL SIGN SUPPORTS	EACH	10.00	10.00
0890	64202	FIELD OFFICE, TYPE B	LS	1.00	1.00
0900	64301	TRAFFIC CONTROL	LS	1.00	1.00
0910	64313	TRAFFIC CONTROL, DRUMS	DAYS	5,000.00	5,000.00
0920	64318	TRAFFIC CONTROL, BARRICADES, TYPE III	DAYS	1,200.00	1,200.00
0930	64321	TRAFFIC CONTROL, WARNING LIGHTS, TYPE A	DAYS	4,800.00	4,800.00

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Add Item

Add Item

62832 Erosion Mat, Delivered, class II Type B SY 9,548.8

62833 Erosion Mat, Installed, class II Type B SY 9,548.8

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5436-06-71 QUANTITY
0940	64323	TRAFFIC CONTROL, WARNING LIGHTS, TYPE C	DAYS	5,000.00	5,000.00
0950	64326	TRAFFIC CONTROL, SIGNS	DAYS	2,650.00	2,650.00
0960	64506	GEOTEXTILE FABRIC, TYPE HR	S.Y.	2,135.00	2,135.00
0970	64602	PAVEMENT MARKING, 4-INCH, EPOXY	L.F.	14,260.00	14,260.00
0980	<del>64626</del>	<del>PAVEMENT MARKING, SAME DAY, 4-INCH, EPOXY</del>	<del>L.F.</del>	<del>13,860.00</del>	<del>13,860.00</del>
0990	64710	PAVEMENT MARKING, STOP LINE, 18-INCH, EPOXY	L.F.	50.00	50.00
1000	64901	TEMPORARY PAVEMENT MARKING, 4-INCH	L.F.	600.00	600.00
1010	<del>65045</del>	<del>CONSTRUCTION STAKING, SUBGRADE</del>	<del>L.F.</del>	<del>1,625.00</del>	<del>1,625.00</del>
1020	65050	CONSTRUCTION STAKING, CRUSHED AGGREGATE BASE COURSE	L.F.	6,930.00	6,930.00
1030	65055	CONSTRUCTION STAKING, CURB, GUTTER, AND CURB AND GUTTER	L.F.	1,981.00	1,981.00
1040	66501	SAWING EXISTING PAVEMENT	L.F.	171.00	171.00
1050	90005	MISC 90005A PIPE BANDS, 36-INCH	EACH	1.00	1.00
1060	90005	MISC 90005B PIPE BANDS, 48-INCH	EACH	1.00	1.00
1070	90005	MISC 90005C CULVERT PIPE END SECTIONS, "T" TYPE, 18-INCH	EACH	1.00	1.00
1080	90005	MISC 90005D CULVERT PIPE END SECTIONS, "T" TYPE, 24-INCH	EACH	1.00	1.00
1090	90005	MISC 90005E CULVERT PIPE END SECTIONS, "T" TYPE, 42-INCH	EACH	1.00	1.00
1100	<del>90030</del>	<del>MISC 90030A CONCRETE CURB AND GUTTER, 30-INCH, TYPE C</del>	<del>L.F.</del>	<del>42.00</del>	<del>42.00</del>
1110	90357	PULVERIZE AND RELAY EXISTING BASE AND SURFACE	S.Y.	18,500.00	18,500.00
1120	90365	QMP, BASE COURSES	TON	10,030.00	10,030.00
1130	90546	SLOTTED CORRUGATED METAL PIPE SURFACE DRAIN, 12-INCH	L.F.	30.00	30.00
1140	90616	MARKER POSTS, FLEXIBLE, FOR CULVERT END	EACH	33.00	33.00

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Add Items	90004	Misc Beamguard Posts, 7' Long	LS	1	1
	90004	Misc Additional Improvements to Malzacher Int	LS	1	1
	90004	Misc Price Adjustment for Piling Under Run	LS	1	1
	90004	Misc Price Adjustment for Borrow Excavation Under Run	LS	1	1
	90004	Misc Erosion Mat CRI	LS	1	1
	90005	Misc Deduction from Erosion Mat CRI	EACH	1	1
	90030	Misc B Modified Type C Curb & Gutter	LF	42	42



166+00 - 168+00	2	C.T.H. M	II
155+00 - 165+50	II	C.T.H. M	13
STATION	CLEARING	LOCATION	STA
ITEM TOTALS	13		13

109+50 - 117+50	RT		3800
STATION	LOCATION		LF
ITEM TOTALS			3800

158+50 - 163+00	RT		665
STATION	LOCATION		LF
ITEM TOTALS			665

157+50 - 165+50	C.T.H. M	II	13
155+00 - 167+75	C.T.H. M	II	13
157+50 - 170+00	C.T.H. M	II	13
STATION	LOCATION		LF
ITEM TOTALS			3800

161+25 - 164+50	RT		780
STATION	LOCATION		LF
ITEM TOTALS			780

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

116+50 - 119+50	C.T.H. M	300
126+50 - 127+50	C.T.H. M	100
157+75 - 170+00	C.T.H. M	1225
STATION	LOCATION	LF
ITEM TOTALS		1625

109+50 - 117+50	C.T.H. M	RT	3800
STATION	LOCATION		LF
ITEM TOTALS			3800

100+70 - 170+00	C.T.H. M	UNDIST	17900
100+70 - 170+00	C.T.H. M	UNDIST	600
STATION	LOCATION	SY	18500
ITEM TOTALS			18500

100+70 - 170+00	C.T.H. M	UNDIST	23,100
100+70 - 170+00	C.T.H. M	UNDIST	40
STATION	LOCATION	SY	23,100
ITEM TOTALS			23,100

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	17900
100+70 - 170+00	C.T.H. M	UNDIST	600
STATION	LOCATION	SY	18500
ITEM TOTALS			18500

100+70 - 170+00	C.T.H. M	UNDIST	23,100
100+70 - 170+00	C.T.H. M	UNDIST	40
STATION	LOCATION	SY	23,100
ITEM TOTALS			23,100

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	17900
100+70 - 170+00	C.T.H. M	UNDIST	600
STATION	LOCATION	SY	18500
ITEM TOTALS			18500

100+70 - 170+00	C.T.H. M	UNDIST	23,100
100+70 - 170+00	C.T.H. M	UNDIST	40
STATION	LOCATION	SY	23,100
ITEM TOTALS			23,100

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	17900
100+70 - 170+00	C.T.H. M	UNDIST	600
STATION	LOCATION	SY	18500
ITEM TOTALS			18500

100+70 - 170+00	C.T.H. M	UNDIST	23,100
100+70 - 170+00	C.T.H. M	UNDIST	40
STATION	LOCATION	SY	23,100
ITEM TOTALS			23,100

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

100+70 - 170+00	C.T.H. M	UNDIST	4450
100+70 - 170+00	C.T.H. M	UNDIST	225
STATION	LOCATION	TON	4575
ITEM TOTALS			4675

12/25/02 01:12:33 51.67.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30.31.32.33.34.35.36.37.38.39.40.41.42.43.44.45.46.47.48.49.50.51.52.53.54.55.56.57.58.59.60.61.62.63

LEVELS ON - I, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60.

EROSION CONTROL		SILT FENCE DELIVERED LF	SILT FENCE INSTALLED LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS, EROSION CONTROL EACH	MOBILIZATIONS, EMERGENCY EROSION CONTROL EACH	EROSION MAT. DELIVERED, CLASS I, TYPE A SY	EROSION MAT. INSTALLED, CLASS I, TYPE A SY	EROSION MAT. DELIVERED, CLASS I, TYPE B SY	EROSION MAT. INSTALLED, CLASS I, TYPE B SY	EROSION MAT. DELIVERED, CLASS II, TYPE C SY	EROSION MAT. INSTALLED, CLASS II, TYPE C SY	EROSION MAT. DELIVERED, CLASS III, TYPE D SY	EROSION MAT. INSTALLED, CLASS III, TYPE D SY	TEMPORARY DITCH CHECKS, DELIVERED LF	TEMPORARY DITCH CHECKS, INSTALLED LF	INLET PROTECTION, TYPE A EACH	INLET PROTECTION, TYPE C EACH	EROSION CONTROL SOD, SANDY SOIL SY
103+50 - 104+50	RT	107	107	214															
105+00 - 154+00	RT	4992	4992	9984															
154+50 - 161+00	RT	670	670	1340															
166+00 - 169+00	RT	310	310	620															
169+25 - 170+00	RT	59	59	118															
105+50 - 109+50	RT						640	640											
155+00 - 157+50	RT						820	820											
161+75 - 163+25	RT						210	210											
163+50 - 165+00	RT						220	220											
109+50 - 111+50	RT								220	220									
112+00 - 113+50	RT								130	130									
120+00 - 122+50	RT								100	100									
126+50 - 127+25	RT								90	90									
147+00 - 154+00	RT								870	870									
110+00 - 119+00	LT										1000	1000							
128+50 - 134+50	RT											670	670						
138+00 - 143+00	RT											560	560						
100+70 - 110+00	LT											1050	1050						
119+00 - 135+09	LT											1800	1800						
115+00 - 117+00	RT											450	450						
146+50 - 148+00	LT											500	500						
154+50 - 155+50	LT											150	150						
159+00 - 160+00	LT											200	200						
145+00 - 160+00	LT											1680	1680						
100+70 - 170+00	LT													2060	2060				
120+35	RT															1	1		
127+59	RT															1	1		
136+20	RT															1	1		
160+00 - 163+00	LT																	300	
UNDIST		1532	1532	3064	3	3	480	480	350	350	300	325	1765	1765	500	500			
ITEM TOTALS		7670	7670	15340	3	3	2370	2370	1760	1760	1625	1625	8825	8825	2560	2560	3	3	300

STATION	LOCATION	SKEW	TYPE	SIZE IN	CORRUGATED STEEL CULVERT PIPE								THICKNESS IN	STEEL APRON ENDWALLS FOR CULVERT PIPE								CULVERT PIPE DITCH CHECKS EACH	COMMENT	REMOVING SMALL PIPE CULVERTS EACH	MARKER POSTS, * FLEXIBLE FOR CULVERT ENDS EACH	
					15-INCH LF	18-INCH LF	24-INCH LF	30-INCH LF	36-INCH LF	42-INCH LF	48-INCH LF	15-INCH EACH		18-INCH EACH	24-INCH EACH	30-INCH EACH	36-INCH EACH	42-INCH EACH	48-INCH EACH							
105+13	C.T.H.M	18 RHF	CSCP	18		72						0.064								1			15" X 48' CMP	2		
107+79	C.T.H.M	21 RHF	CSCP	18		64						0.064								1			15" X 46' CMP	2		
112+67	C.T.H.M	23 RHF	CSCP	18		60						0.064								1			18" X 52' CMP	2		
30+30	HILLSIDE		CSCP	18		72						0.064								1			27" X 72' CMP	2		
118+16	C.T.H.M	8 RHF	CSCP	24			54					0.064								1			EXACT LENGTH AND LOCATION NOT KNOWN	24" X UNKNOWN CMP	2	
119+30	LT		CSCP	18		46						0.064								1					2	
125+83	C.T.H.M	18 RHF	CSCP	42						56		0.109								1			CONNECT TO EXIST ELBOW W/ PIPE BAND*	39" X 60' CMP	1	
135+09	C.T.H.M	12 RHF	CSCP	48						68		0.109								1			CONNECT TO EXIST ELBOW W/ PIPE BAND*	48" X 62' CMP	1	
142+91	C.T.H.M	12 RHF	CSCP	36						66		0.079								1			CONNECT TO EXIST ELBOW W/ PIPE BAND*	36" X 46' CMP	1	
146+98	C.T.H.M	19 RHF	CSCP	24			52					0.064								1					2	
154+88	C.T.H.M	44 RHF	CSCP	24			76					0.064								1					2	
155+80	LT		CSCP	15		30						0.064								1					2	
159+06	C.T.H.M	42 RHF	CSCP	24			70					0.064								1					2	
162+20	LT		CSCP	18		30						0.064								1					2	
166+90	LT		CSCP	18		30						0.064								1					2	
167+47	C.T.H.M		CSCP	30					104			0.079								2			TWIN PIPES	2 - 30" X 52' RCCP	2	
ITEM TOTALS					30	374	252	104	66	56	68		2	13	7	4	1	1	1	17				16	33	TOTAL

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE  
 \* PIPE BANDS (36-INCH, 48-INCH) ARE A SPECIFIC BID ITEM FOR USE IN CONNECTION TO EXISTING PIPE ELBOWS

PERMANENT STEEL SHEET PILING, DELIVERED, DRIVEN CULVERT PIPE END SECTIONS, "T" TYPE					
STATION	LOCATION	18-INCH EACH	24-INCH EACH	42-INCH EACH	STEEL SHEET PILING SF
112+67	C.T.H.M, RT	1			30
118+16	C.T.H.M, RT		1		45
125+83	C.T.H.M, RT			1	95
ITEM TOTALS		1	1	1	170

STATE PROJECT NUMBER: 5436-06-71

HWY: C.T.H. M

COUNTY: LA CROSSE

MISCELLANEOUS QUANTITIES

SHEET NO: 31



ASPHALTIC FLUMES		
STATION	LOCATION	SY
163+39	LT	15
163+53	RT	10
UNDIST	C.T.H. M	20
ITEM TOTALS		
		45

ROCK EXCAVATION		
STATION	LOCATION	CY
118+50 - 119+50	C.T.H. M	50
120+50 - 125+00	C.T.H. M	200
127+50 - 133+00	C.T.H. M	250
139+00 - 140+00	C.T.H. M	50
ITEM TOTALS		
		550

THE POTENTIAL EXISTS FOR ROCK EXCAVATION. ROCK EXCAVATION HAS NOT BEEN USED TO BALANCE EXCAVATION QUANTITIES BECAUSE ROCK EXCAVATION MAY OR MAY NOT BE REQUIRED.

YARDAGE SUMMARY						
STATION	LOCATION	COMMON EXCAVATION	EBS	30% EXPANDED FILL	BORROW	WASTE
100+70 - 159+00	C.T.H. M	3350				0
159+00 - 170+00	C.T.H. M	3320				0
UNDIST	C.T.H. M		500			0
ITEM TOTALS						
		6670	500	13670	7000	0

EXPANSION = 1.30

STATION	LOCATION	SIGN	WOOD POSTS	REMOVING SIGNS	SMALL SIGN SUPPORTS	REMOVING SIGNS	MOVING SIGNS	MOVING SMALL SIGN SUPPORTS
104+51	RT	1						
104+52	RT	3						
105+13	LT	1						
105+15	LT	1						
115+92	LT	1						
125+70	RT	1						
154+05	RT	1						
154+14	RT	1						
154+68	RT	1						
156+05	RT	1						
159+14	RT	1						
170+92	LT	1						
163+02	LT	1						
163+14	RT	1						
163+56	LT	1						
163+56	RT	1						
163+48	RT	1						
ITEM TOTALS								
		12.0	4	2	2	2	2	10

TRAFFIC CONTROL, WARNING LIGHTS, TYPE C			
STATION	LIGHTS	DAYS	DESCRIPTION
159+00 - 168+00	20	2200	STAGE 1A
166+00 - 168+00	10	1100	STAGE 1B
158+00 - 160+00	10	1100	STAGE 1B
UNDIST		600	
ITEM TOTALS			
		5000	

TRAFFIC CONTROL, WARNING LIGHTS, TYPE A			
STATION	LIGHTS	DAYS	DESCRIPTION
159+00 - 168+00	22	2420	STAGE 1A
166+00 - 168+00	10	1100	STAGE 1B
158+00 - 160+00	10	1100	STAGE 1B
UNDIST		180	
ITEM TOTALS			
		4800	

TRAFFIC CONTROL, BARRICADES			
STATION	BARRICADES	DAYS	DESCRIPTION
159+00 - 168+00	6	660	STAGE 1A
166+00 - 168+00	2	220	STAGE 1B
158+00 - 160+00	2	220	STAGE 1B
UNDIST		100	
ITEM TOTALS			
		1200	

TRAFFIC CONTROL, SIGNS				
LOCATION	SIGN	# OF SIGNS	DAYS	DESCRIPTION
STH 33	W20-1	2	220	ROAD WORK AHEAD
CTH M	W20-1	3	360	ROAD WORK AHEAD
BIRCH LANE	W20-1	1	110	ROAD WORK AHEAD
HILLVIEW DRIVE	W20-1	1	110	ROAD WORK AHEAD
MALZACHER ROAD	W20-1	1	110	ROAD WORK AHEAD
CTH M	W20-1	2	220	ROAD WORK 1000 FT
CTH M	W20-1	2	220	ROAD WORK 500 FT
CTH M	G20-2	2	220	END ROAD WORK
CTH M	G20-2	2	220	END ROAD WORK
STH 33	G20-2	2	220	END ROAD WORK
CTH M	W20-4	2	220	ONE LANE ROAD AHEAD
CTH M	W20-7A	2	220	FLAGGER AHEAD
UNDIST			400	
ITEM TOTALS				
			2650	

STORM SEWER											
STATION	OFFSET	INLETS, COVERS, TYPE 3	RIM	SUMP	DEPTH	INLET	DISCHARGE	SLOPE	CULVERT PIPE	STEEL AEW	MARKER POSTS, **
120+34	15' RT	1	1159.51	3.0	1155.51	1095.90	1.0%	12	12-INCH FLEXIBLE		1
127+59	15' RT	1	1100.00	3.0	1096.00	1095.90	1.0%	10	12-INCH FLEXIBLE		1
136+20	15' RT	1	1026.37	3.0	1022.37	1022.25	1.0%	12	12-INCH FLEXIBLE		1
ITEM TOTALS											
		3						34			3

TRAFFIC CONTROL, DRUMS			
STATION	DRUMS	DAYS	DESCRIPTION
159+00 - 168+00	20	2200	STAGE 1A
166+00 - 168+00	10	1100	STAGE 1B
158+00 - 160+00	10	1100	STAGE 1B
UNDIST		600	
ITEM TOTALS			
		5000	

\* CSCP SHALL HAVE A WALL THICKNESS OF 0.064"

\*\* ADDITIONAL QUANTITIES AND TOTAL SHOWN ELSEWHERE

**CONVENTIONAL SIGNS AND ABBREVIATIONS**

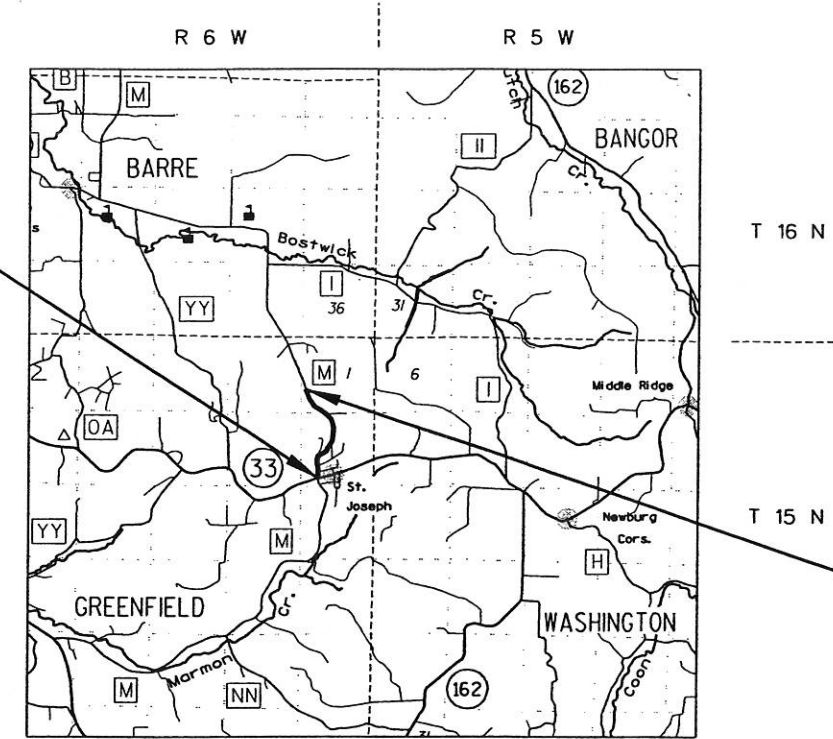
A.P.	ACCESS POINT	---	STATE LINE
AC.	ACRES	---	COUNTY LINE
AG.	AGRICULTURAL	---	TOWN OR RANGE LINE
A.H.	AHEAD	---	SECTION LINE
ALUM.	ALUMINUM	---	QUARTER LINE
ET.AL.	AND OTHERS	---	SIXTEENTH LINE
BK.	BACK	---	PROPOSED OR NEW R/W LINE
ASPH.	ASPHALT	---	EXISTING R/W LINE
C.E.	COMMERCIAL ENTRANCE	---	LOT LINE
C.M.	CABLE MARKER	---	PROPERTY LINE
C.	CENTERLINE	P.L. 58.1	PROPERTY LINE
C.T.H.	COUNTY TRUNK HIGHWAY	◆◆◆◆	NO ACCESS (By Previous Acquisition)
C.S.M.	CERTIFIED SURVEY MAP		NO ACCESS (By Acquisition)
CONC.	CONCRETE	.....	NO ACCESS (By Statutory Authority)
COR.	CORNER	-----	LIMITED EASEMENT (Temporary or Permanent)
CULV.	CULVERT	////	CORPORATE LIMITS
d/b/a	DOING BUSINESS AS		
FDN.	FOUNDATION		
F.E.	FIELD ENTRANCE		
FRL.	FRACTIONAL		
G.	GARAGE		
G.M.	GAS MARKER		
G.P.	GAS PUMPS		
GRAV.	GRAVEL		
HSE.	HOUSE		
ha	HECTARES		
I.P.	IRON PIPE OR PIN		
km	KILOMETER		
LT.	LEFT		
L	LENGTH OF CURVE		
L.C.	LONG CHORD OR LAND CONTRACT		
L.C.B.	LONG CHORD BEARING		
M.H.	MANHOLE		
m	METERS		
MON.	MONUMENT		
O.L.	OUTLOT		
P.	PAGE		
P.D.	PRIVATE DRIVEWAY		
P.E.	PRIVATE ENTRANCE		
P.K.	PARKER-KALON		
P.L.E.	PERMANENT LIMITED EASEMENT		
P.C.	POINT OF CURVATURE		
P.I.	POINT OF INTERSECTION		
P.T.	POINT OF TANGENCY		
P.L.	PROPERTY LINE		
R	RADIUS OR RANGE		
R.R.	RAILROAD		
R	REFERENCE LINE		
R.D.E.	RESTRICTED DEVELOPMENT EASEMENT		
RT.	RIGHT		
R/W	RIGHT OF WAY		
SEC.	SECTION		
S	SHED		
m2	SQUARE METER		
S.T.H.	STATE TRUNK HIGHWAY		
STA.	STATION		
T	TANGENT LENGTH OF CURVE OR TOWN		
TAV.	TAVERN		
T.I.	TEMPORARY INTEREST		
USH	UNITED STATES HIGHWAY		
VOL.	VOLUME		
X	EAST COORDINATE (GRID)		
Y	NORTH COORDINATE (GRID)		
N	NORTH COORDINATE (GROUND) OR NORTH		
E	EAST COORDINATE (GROUND), EAST OR EXTERNAL		
Δ	CENTRAL ANGLE OR DELTA		

	SECTION CORNER	(Size) W	WATER		RAILROAD
	RIGHT OF WAY POINT (NOT MONUMENTED)	(Size) G	GAS		BRIDGE
	RIGHT OF WAY POINT (MONUMENTED)	T	TELEPHONE OR TELEGRAPH		BUILDING
● (Type)	RECOVERED IRON PIN/PIPE	E	ELECTRIC	(Label)	FOUNDATION OR RUINS
	TRIANGULATION POINT OR HORIZONTAL CONTROL STATION	TV	CABLE TELEVISION	(Label)	FENCE
	INLET	FO	FIBER OPTIC	X-X	MARSH AREA
	HYDRANT	(Size) SAN	SANITARY SEWER		LAKE OR POND
	TELEPHONE POLE	(Size) SS	STORM SEWER		WOODED OR SHRUB AREA
	POWER POLE		NOTATION FOR COMBUSTIBLE FLUIDS		TREE
	RIGHT OF WAY POINT NUMBER		SERVICE PEDESTAL		
		(Label)	SILLO, MANHOLE OR WELL, ETC.		

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT NUMBER	4.1	9
PLAT OF RIGHT OF WAY REQUIRED FOR <b>S.T.H. 33- C.T.H. 1</b>		
C.T.H. M	LA CROSSE CO.	
<b>5436-06-71</b>		<b>32</b>

**BEGIN RELOCATION ORDER  
STA. 100+70.00**

Y= 121876.71  
X= 499428.38  
717.29' NORTH OF AND 1129.87' EAST  
OF THE SOUTHWEST CORNER OF  
SECTION 12, T15N, R6W



**END RELOCATION ORDER  
STA. 170+00.00**

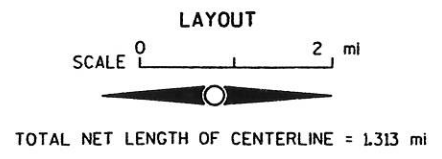
Y= 127563.31  
X= 498631.05  
1136.25' NORTH OF AND 553.30' EAST  
OF THE SOUTHWEST CORNER OF  
SECTION 1, T15N, R6W

**NOTES**

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (LA CROSSE COUNTY).

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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



ACCEPTED FOR

8-5-02 *Devin Orndorff*  
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

**SEH**  
ENGINEERS ARCHITECTS PLANNERS

**WISCONSIN**  
DUANE A. HOLMAN  
S-1294  
BLOOMER, WIS.  
LAND SURVEYOR

2-25-1002 *Devin Orndorff*  
(Date) (Signature)

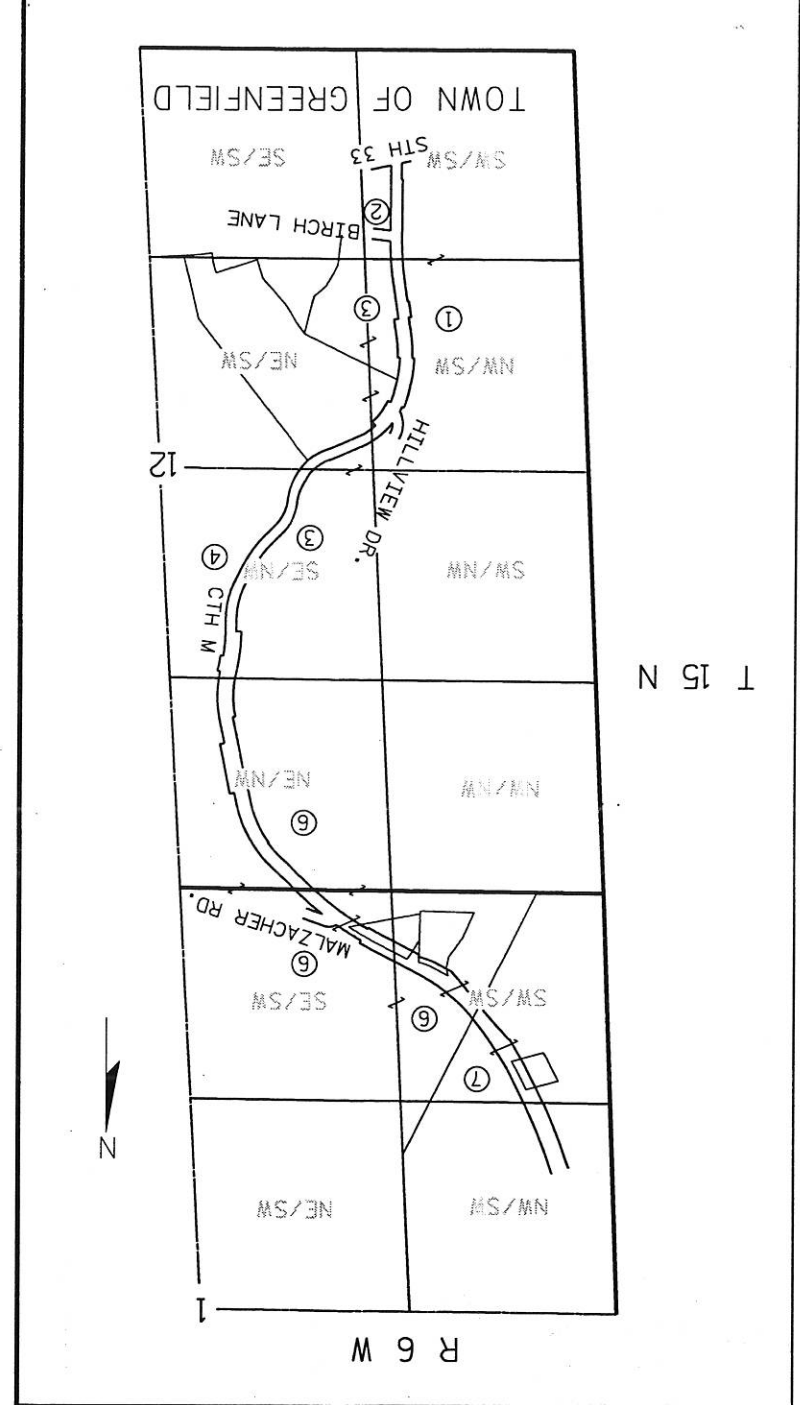
REVISION DATE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED FOR DISTRICT OFFICE:

DATE: \_\_\_\_\_

REVISION DATE	DATE	SCALE, FEET	Hwy: C.T.H.M	CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 33
		0 NTS	COUNTY: LACROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.2



STATION	PT*	OFFSET	X	Y
151.39.18	411	RT	35.87	126385.7929
154.25.00	433	RT	60.00	126594.7726
157.00.00	432	RT	60.00	126749.0480
158.28.40	431	RT	50.00	126801.2837
160.55.79	430	RT	50.00	126921.1768
161.50.00	470	RT	80.00	127004.2695
162.50.00	469	RT	80.00	127067.9039
164.60.72	429	RT	60.81	127187.1955
166.25.00	428	RT	35.45	127271.1657
170.00.00	427	RT	50.27	127586.5099
151.39.18	411	RT	35.87	126385.7929
154.25.00	433	RT	60.00	126594.7726
157.00.00	432	RT	60.00	126749.0480
158.28.40	431	RT	50.00	126801.2837
160.55.79	430	RT	50.00	126921.1768
161.50.00	470	RT	80.00	127004.2695
162.50.00	469	RT	80.00	127067.9039
164.60.72	429	RT	60.81	127187.1955
166.25.00	428	RT	35.45	127271.1657
170.00.00	427	RT	50.27	127586.5099

R/W POINT NUMBER AND COORDINATE TABLE	
151.39.18	411
154.25.00	433
157.00.00	432
158.28.40	431
160.55.79	430
161.50.00	470
162.50.00	469
164.60.72	429
166.25.00	428
170.00.00	427

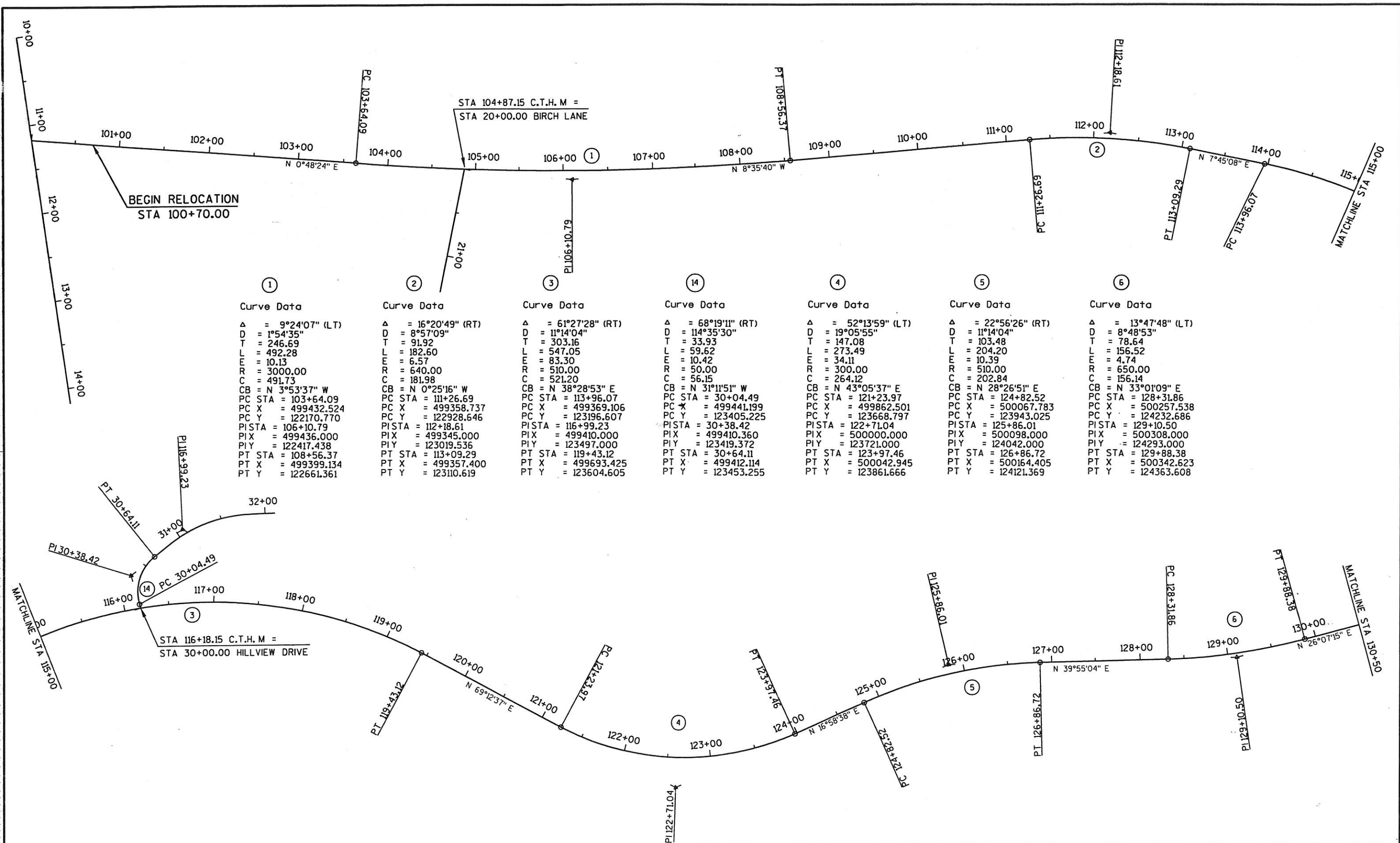
PROPOSED & EXISTING R/W POINT NUMBER AND COORDINATE TABLE	
151.39.18	411
154.25.00	433
157.00.00	432
158.28.40	431
160.55.79	430
161.50.00	470
162.50.00	469
164.60.72	429
166.25.00	428
170.00.00	427

PARCEL NUMBER	SHEET	OWNER(S)	INTEREST REQUIRED	TOTAL AC.	R/W AC. REQUIRED	NEW	EXISTING	TOTAL	AC.REM.	T.I.	P.L.E. AC.
1	4.6	ARLAN M. ROESLER & KAY M. ROESLER	T.I.	31.27 AC.	-	-	-	31.27 AC.	0.23 AC.	-	-
2	4.6	GREGG M. FUCHS & KAREN A. FUCHS	P.L.E. & T.I.	0.45 AC.	-	-	-	0.45 AC.	0.03 AC.	-	0.01 AC.
3	4.6, 4.7	WILLIAM C. SCHAMS, JR. & SHIRLEE M. SCHAMS	T.I.	68.44 AC.	-	-	-	68.44 AC.	0.25 AC.	-	-
4	4.7	TRUSTEES OF THE WILLIAM AND SHIRLEE SCHAMS REVOCABLE TRUST DATED JUNE 28, 1993 f/b/o WILLIAM G. SCHAMS & SHIRLEE M. SCHAMS ST. ROSE DE VITERBO CONVENT OF FRANCISCAN	T.I.	14.36 AC.	-	-	-	14.36 AC.	0.08 AC.	-	-
6	4.8, 4.9	LAWRENCE MALZACHER & ROSE MARY MALZACHER	FEE & T.I.	87.48 AC.	0.92 AC.	-	-	87.48 AC.	86.56 AC.	0.05 AC.	-
7	4.9	KENNETH W. STEIGER & KATHRYN K. STEIGER	FEE	21.15 AC.	0.04 AC.	-	-	21.15 AC.	21.11 AC.	0.04 AC.	-
20	4.9	XCEL ENERGY	RELEASE OF RIGHTS	-	-	-	-	-	-	-	-

**SCHEDULE OF LANDS & INTERESTS REQUIRED**

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

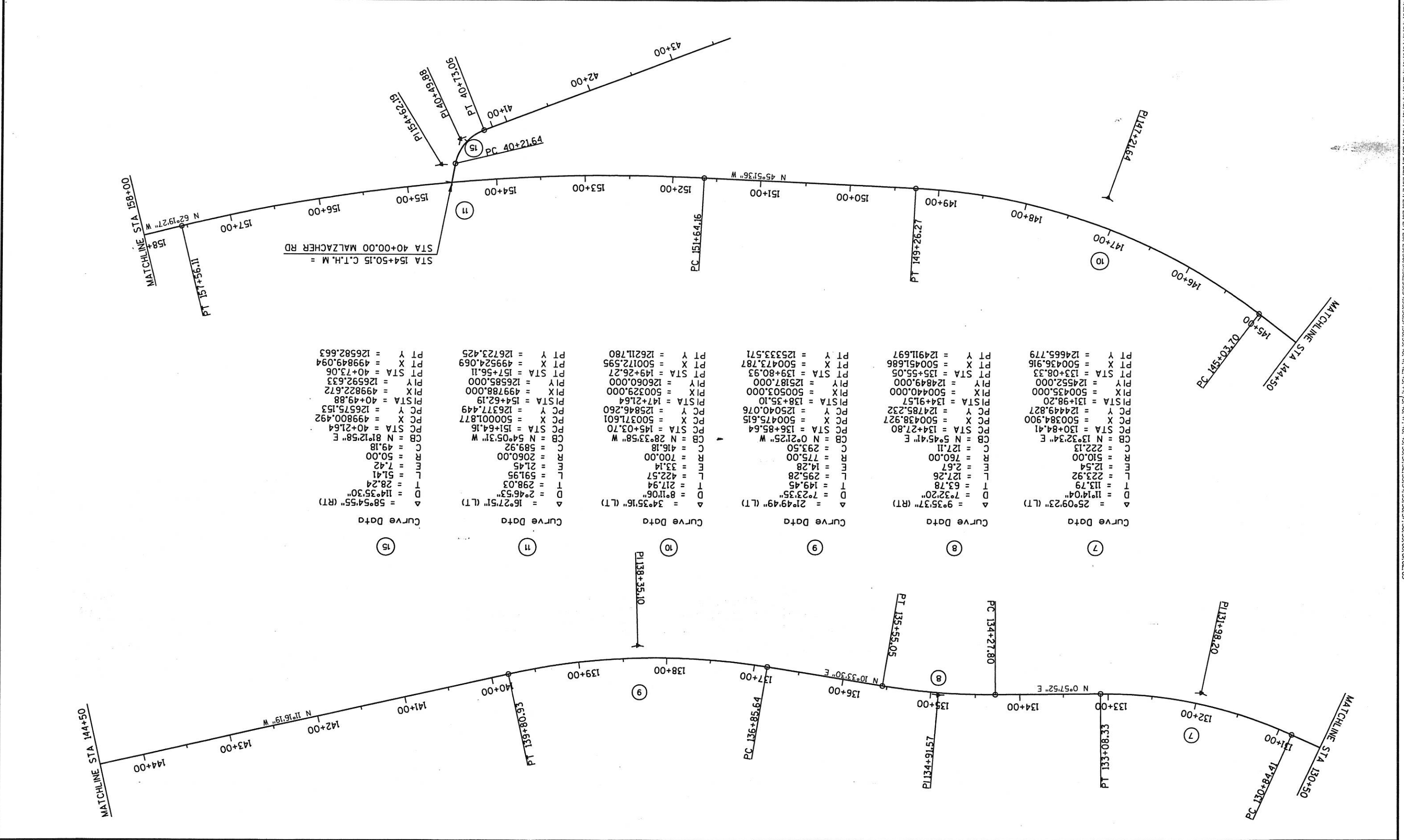
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



Curve Data	Curve Data	Curve Data	Curve Data	Curve Data	Curve Data	Curve Data
①	②	③	④	⑤	⑥	⑦
Δ = 9°24'07" (LT)	Δ = 16°20'49" (RT)	Δ = 61°27'28" (RT)	Δ = 68°19'11" (RT)	Δ = 52°13'59" (LT)	Δ = 22°56'26" (RT)	Δ = 13°47'48" (LT)
D = 1°54'35"	D = 8°57'09"	D = 11°14'04"	D = 114°35'30"	D = 19°05'55"	D = 11°14'04"	D = 8°48'53"
T = 246.69	T = 91.92	T = 303.16	T = 33.93	T = 147.08	T = 103.48	T = 78.64
L = 492.28	L = 182.60	L = 547.05	L = 59.62	L = 273.49	L = 204.20	L = 156.52
E = 10.13	E = 6.57	E = 83.30	E = 10.42	E = 34.11	E = 10.39	E = 4.74
R = 3000.00	R = 640.00	R = 510.00	R = 50.00	R = 300.00	R = 510.00	R = 650.00
C = 491.73	C = 181.98	C = 521.20	C = 56.15	C = 264.12	C = 202.84	C = 156.14
CB = N 3°53'37" W	CB = N 0°25'16" W	CB = N 38°28'53" E	CB = N 31°11'51" W	CB = N 43°05'37" E	CB = N 28°26'51" E	CB = N 33°01'09" E
PC STA = 103+64.09	PC STA = 111+26.69	PC STA = 113+96.07	PC STA = 30+04.49	PC STA = 121+23.97	PC STA = 124+82.52	PC STA = 128+31.86
PC X = 499432.524	PC X = 499358.737	PC X = 499369.106	PC X = 499441.199	PC X = 499862.501	PC X = 500067.783	PC X = 500257.538
PC Y = 122170.770	PC Y = 122928.646	PC Y = 123196.607	PC Y = 123405.225	PC Y = 123668.797	PC Y = 123943.025	PC Y = 124232.686
PISTA = 106+10.79	PISTA = 112+18.61	PISTA = 116+99.23	PISTA = 30+38.42	PISTA = 122+71.04	PISTA = 125+86.01	PISTA = 129+10.50
PIX = 499436.000	PIX = 499345.000	PIX = 499410.000	PIX = 499410.360	PIX = 500000.000	PIX = 500098.000	PIX = 500308.000
PIY = 122417.438	PIY = 123019.536	PIY = 123497.000	PIY = 123419.372	PIY = 123721.000	PIY = 124042.000	PIY = 124293.000
PT STA = 108+56.37	PT STA = 113+09.29	PT STA = 119+43.12	PT STA = 30+64.11	PT STA = 123+97.46	PT STA = 126+86.72	PT STA = 129+88.38
PT X = 499399.134	PT X = 499357.400	PT X = 499693.425	PT X = 499412.114	PT X = 500042.945	PT X = 500164.405	PT X = 500342.623
PT Y = 122661.361	PT Y = 123110.619	PT Y = 123604.605	PT Y = 123453.255	PT Y = 123861.666	PT Y = 124121.369	PT Y = 124363.608

REVISION DATE	DATE	NOT TO SCALE	HWY: C.T.H.M	CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 34
			COUNTY: LA CROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.3

REVISION DATE	DATE	HWY: C.T.H.M	COUNTY: LA CROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.4
		NOT TO SCALE		CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 35



Curve Data

Δ	= 25°09'23" (LT)
D	= 11°14'04"
T	= 113.79
L	= 223.92
E	= 12.54
R	= 510.00
C	= 222.13
CB	= N 13°32'34" E
PC STA	= 130+84.41
PC X	= 500384.900
PC Y	= 124449.827
PSTA	= 131+98.20
PI X	= 500435.000
PI Y	= 124552.000
PI STA	= 133+08.33
PT STA	= 133+08.33
PT X	= 500436.916
PT Y	= 124665.779

Curve Data

Δ	= 9°35'37" (RT)
D	= 7°32'20"
T	= 63.78
L	= 127.26
E	= 2.67
R	= 760.00
C	= 127.11
CB	= N 5°45'41" E
PC STA	= 134+27.80
PC X	= 500438.927
PC Y	= 124785.232
PSTA	= 134+91.57
PI X	= 500440.000
PI Y	= 124849.000
PI STA	= 135+55.05
PT STA	= 135+55.05
PT X	= 500451.686
PT Y	= 124911.697

Curve Data

Δ	= 21°49'49" (LT)
D	= 8°11'06"
T	= 217.94
L	= 422.57
E	= 14.28
R	= 775.00
C	= 293.50
CB	= N 0°21'25" W
PC STA	= 136+85.64
PC X	= 500475.615
PC Y	= 125040.076
PSTA	= 138+35.10
PI X	= 500503.000
PI Y	= 125187.000
PI STA	= 139+80.93
PT STA	= 139+80.93
PT X	= 500473.787
PT Y	= 125333.571

Curve Data

Δ	= 34°35'16" (LT)
D	= 8°11'06"
T	= 217.94
L	= 422.57
E	= 33.14
R	= 700.00
C	= 416.18
CB	= N 28°33'58" W
PC STA	= 145+03.70
PC X	= 500371.601
PC Y	= 125846.260
PSTA	= 147+21.64
PI X	= 500329.000
PI Y	= 126060.000
PI STA	= 149+26.27
PT STA	= 149+26.27
PT X	= 500172.595
PT Y	= 126211.780

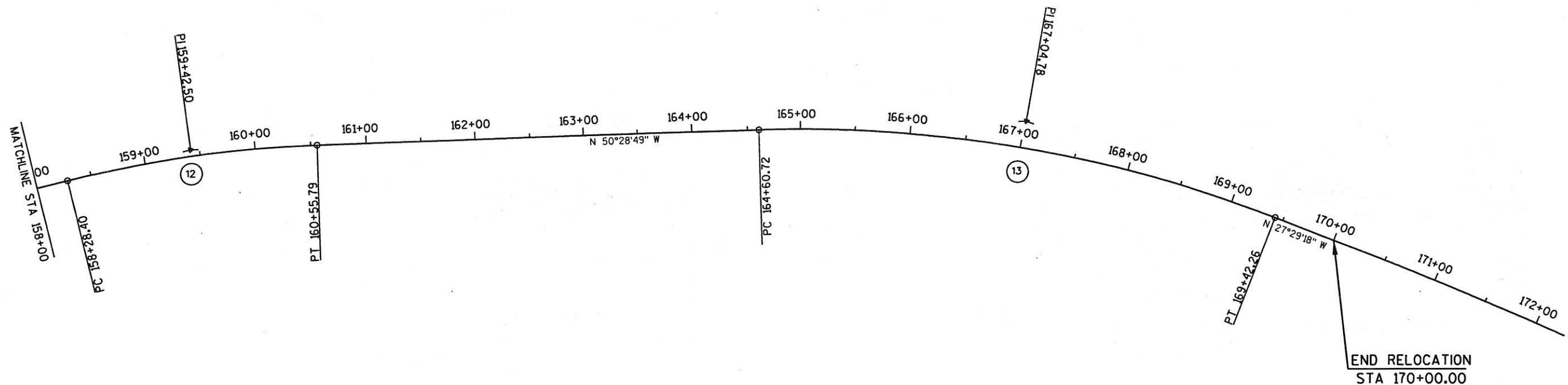
Curve Data

Δ	= 16°27'51" (LT)
D	= 2°46'53"
T	= 298.03
L	= 591.95
E	= 21.45
R	= 2060.00
C	= 589.92
CB	= N 54°05'31" W
PC STA	= 151+64.16
PC X	= 500001.877
PC Y	= 126377.449
PSTA	= 154+62.19
PI X	= 499788.000
PI Y	= 126585.000
PI STA	= 157+56.11
PT STA	= 157+56.11
PT X	= 499524.069
PT Y	= 126723.425

Curve Data

Δ	= 58°54'55" (RT)
D	= 114°35'30"
T	= 28.24
L	= 51.41
E	= 7.42
R	= 50.00
C	= 49.18
CB	= N 81°12'58" E
PC STA	= 40+21.64
PC X	= 499800.492
PC Y	= 126575.153
PSTA	= 40+49.88
PI X	= 499822.672
PI Y	= 126592.633
PI STA	= 40+73.06
PT STA	= 40+73.06
PT X	= 499849.094
PT Y	= 126582.663

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

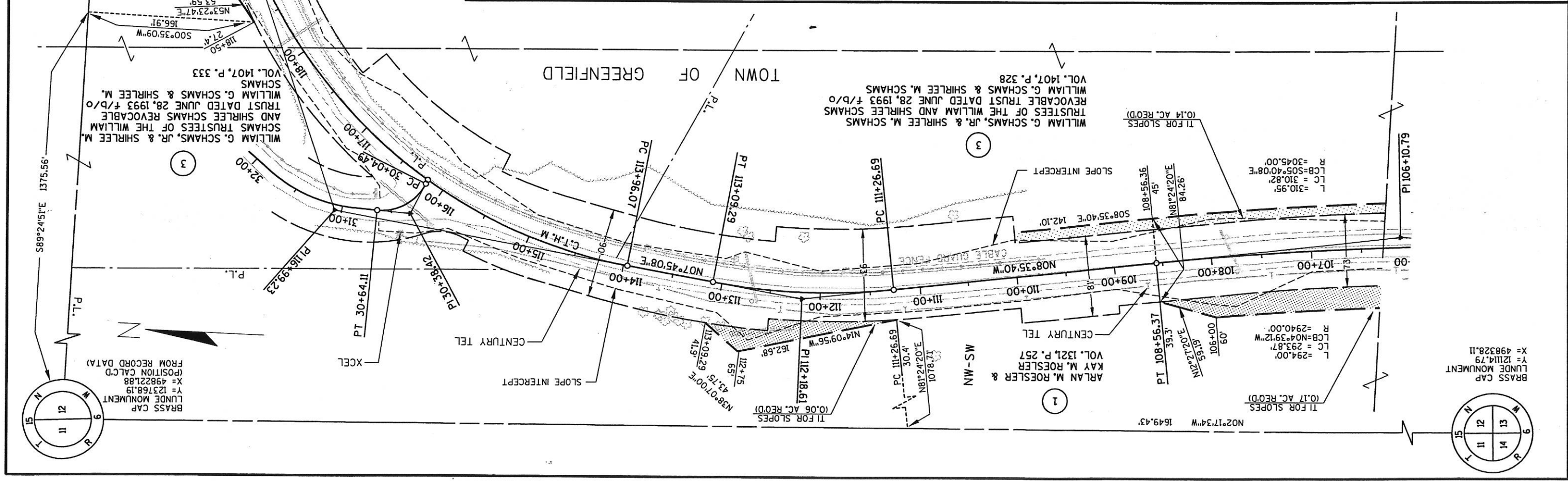
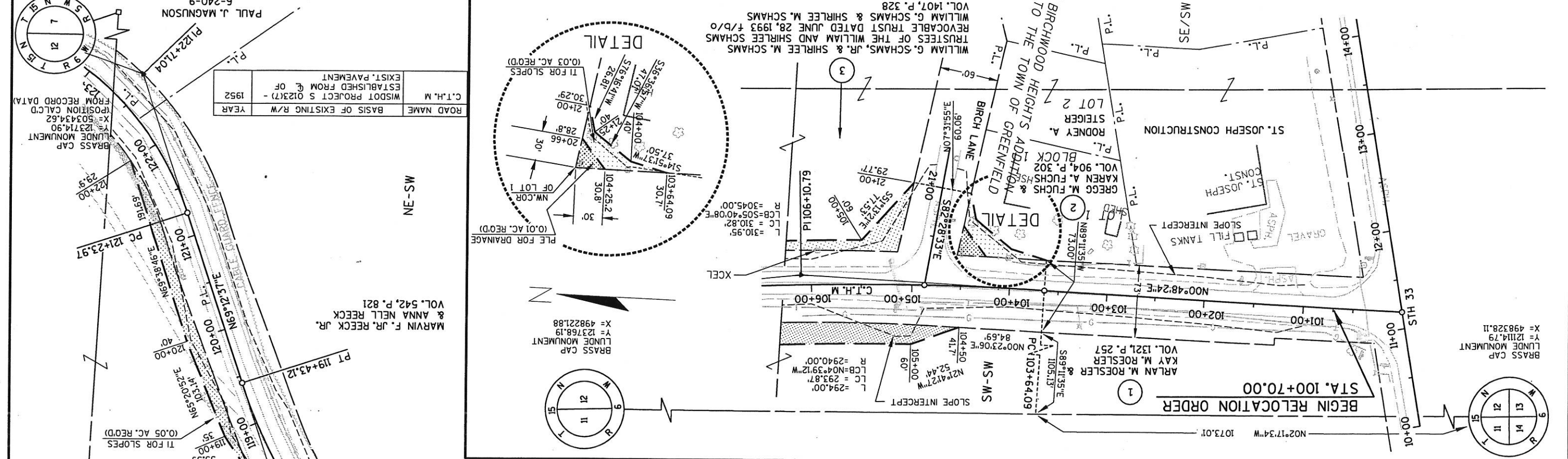


⑫	⑬
Curve Data	Curve Data
Δ = 11°50'38" (RT)	Δ = 22°59'31" (RT)
D = 5°12'31"	D = 4°46'29"
T = 114.10	T = 244.05
L = 227.39	L = 481.54
E = 5.90	E = 24.57
R = 1100.00	R = 1200.00
C = 226.98	C = 478.32
CB = N 56°24'08" W	CB = N 38°59'03" W
PC STA = 158+28.40	PC STA = 164+60.72
PC X = 499460.045	PC X = 498958.616
PC Y = 126757.004	PC Y = 127140.283
PI STA = 159+42.50	PI STA = 167+04.78
PIX = 499359.000	PIX = 498770.351
PIY = 126810.000	PIY = 127295.586
PT STA = 160+55.79	PT STA = 169+42.26
PT X = 499270.983	PT X = 498657.703
PT Y = 126882.607	PT Y = 127512.089

REVISION DATE	DATE	NOT TO SCALE	HWY: C.T.H. M	CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 36
			COUNTY: LA CROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.5
<b>E</b>					

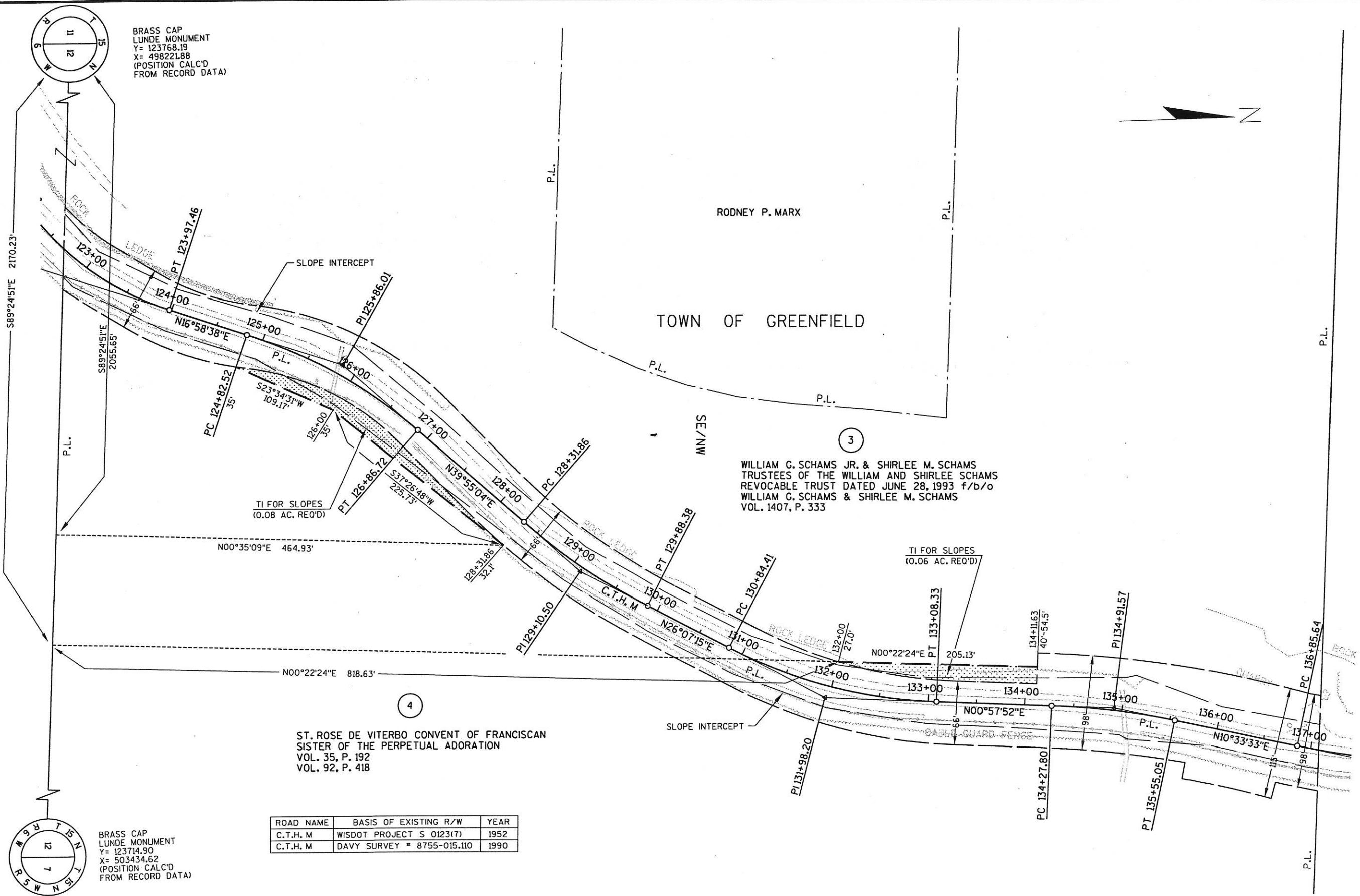


REVISION DATE	DATE	GRID FACTOR	N/A	SCALE, FEET	0 50 100	COUNTRY: LA CROSSE	HWY: C.T.H.M	CONSTRUCTION PROJECT NUMBER 5436-06-71	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.6	PS&E SHEET NO: 37
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BRASS CAP LUNDE MONUMENT X = 498328.11 Y = 12114.79	BRASS CAP LUNDE MONUMENT X = 498328.11 Y = 12114.79	BRASS CAP LUNDE MONUMENT X = 498328.11 Y = 12114.79	BRASS CAP LUNDE MONUMENT X = 498328.11 Y = 12114.79
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LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



BRASS CAP  
LUNDE MONUMENT  
Y= 123768.19  
X= 498221.88  
(POSITION CALC'D  
FROM RECORD DATA)

RODNEY P. MARX

TOWN OF GREENFIELD

3  
WILLIAM G. SCHAMS JR. & SHIRLEE M. SCHAMS  
TRUSTEES OF THE WILLIAM AND SHIRLEE SCHAMS  
REVOCABLE TRUST DATED JUNE 28, 1993 f/b/o  
WILLIAM G. SCHAMS & SHIRLEE M. SCHAMS  
VOL. 1407, P. 333

4  
ST. ROSE DE VITERBO CONVENT OF FRANCISCAN  
SISTER OF THE PERPETUAL ADORATION  
VOL. 35, P. 192  
VOL. 92, P. 418

ROAD NAME	BASIS OF EXISTING R/W	YEAR
C.T.H. M	WISDOT PROJECT S 0123(7)	1952
C.T.H. M	DAVY SURVEY # 8755-015.110	1990

BRASS CAP  
LUNDE MONUMENT  
Y= 123714.90  
X= 503434.62  
(POSITION CALC'D  
FROM RECORD DATA)

REVISION DATE	DATE	SCALE, FEET 0 50 100	HWY: C.T.H. M	CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 38
	GRID FACTOR N/A		COUNTY: LA CROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.7

LEVELS: 0W - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

FILE NAME : e:\trans\acore\0002.00 cth m\cod\rdctm03.dgn

PLOT DATE: 09/24/02

PLOT TIME: 03:10:09 PM

ORG DATE :

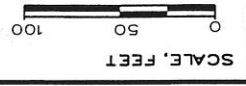
PLOT NAME :

Originator : Dis+

PLOT SCALE : N/A

WISDOT/CADDS SHEET 75

REVISION DATE	DATE	GRID FACTOR	N/A	COUNTY: LA CROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.8
				HWY: C.T.H.M	CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 39
						E

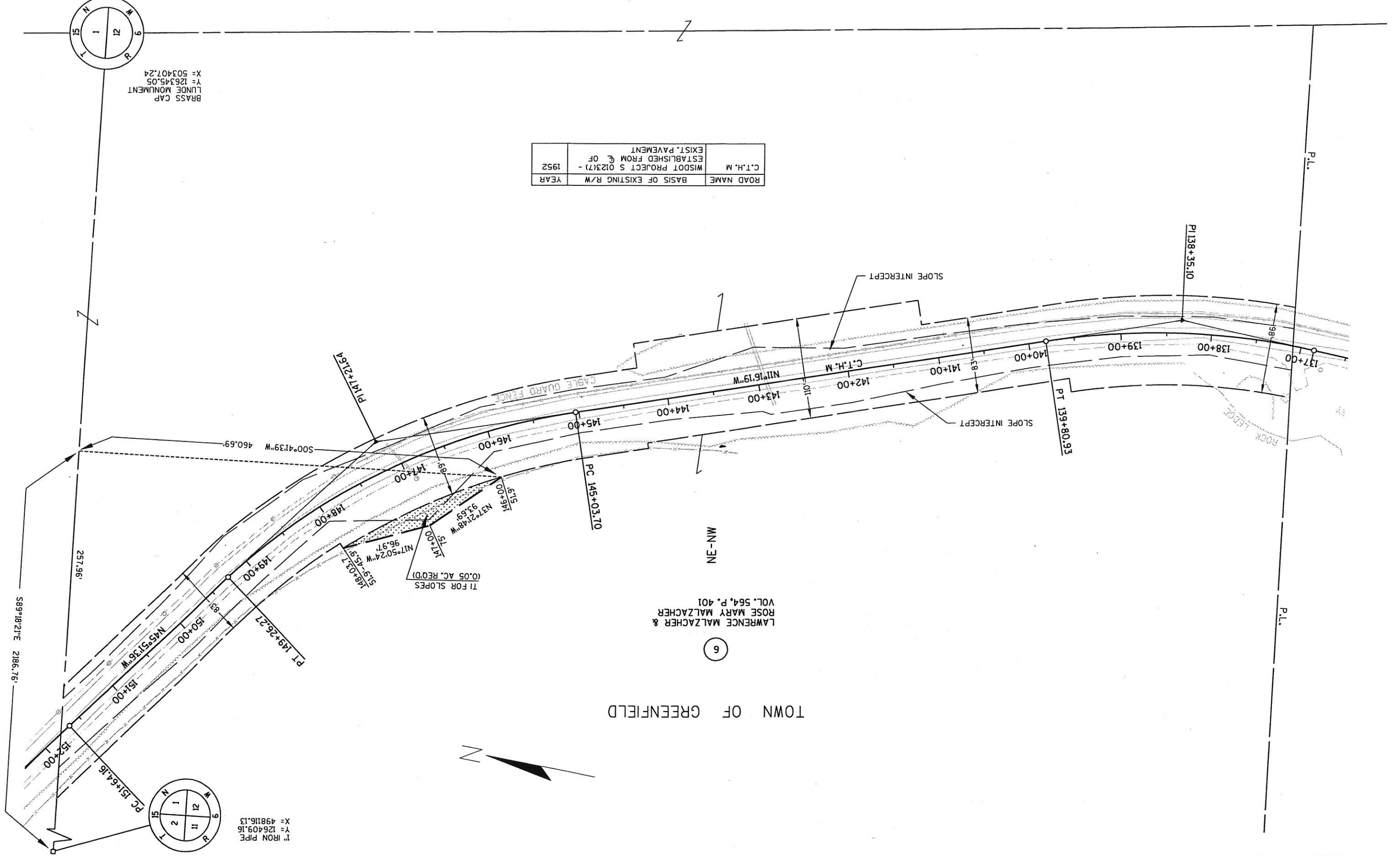


ROAD NAME	BASIS OF EXISTING R/W	YEAR
C.T.H.M	WISDOT PROJECT S 0123(7) -	1952
	ESTABLISHED FROM E OF	
	EXIST. PAVEMENT	

TOWN OF GREENFIELD

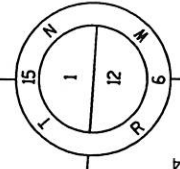
LAWRENCE MALZACHER &  
ROSE MARY MALZACHER  
VOL. 564, P. 401

6

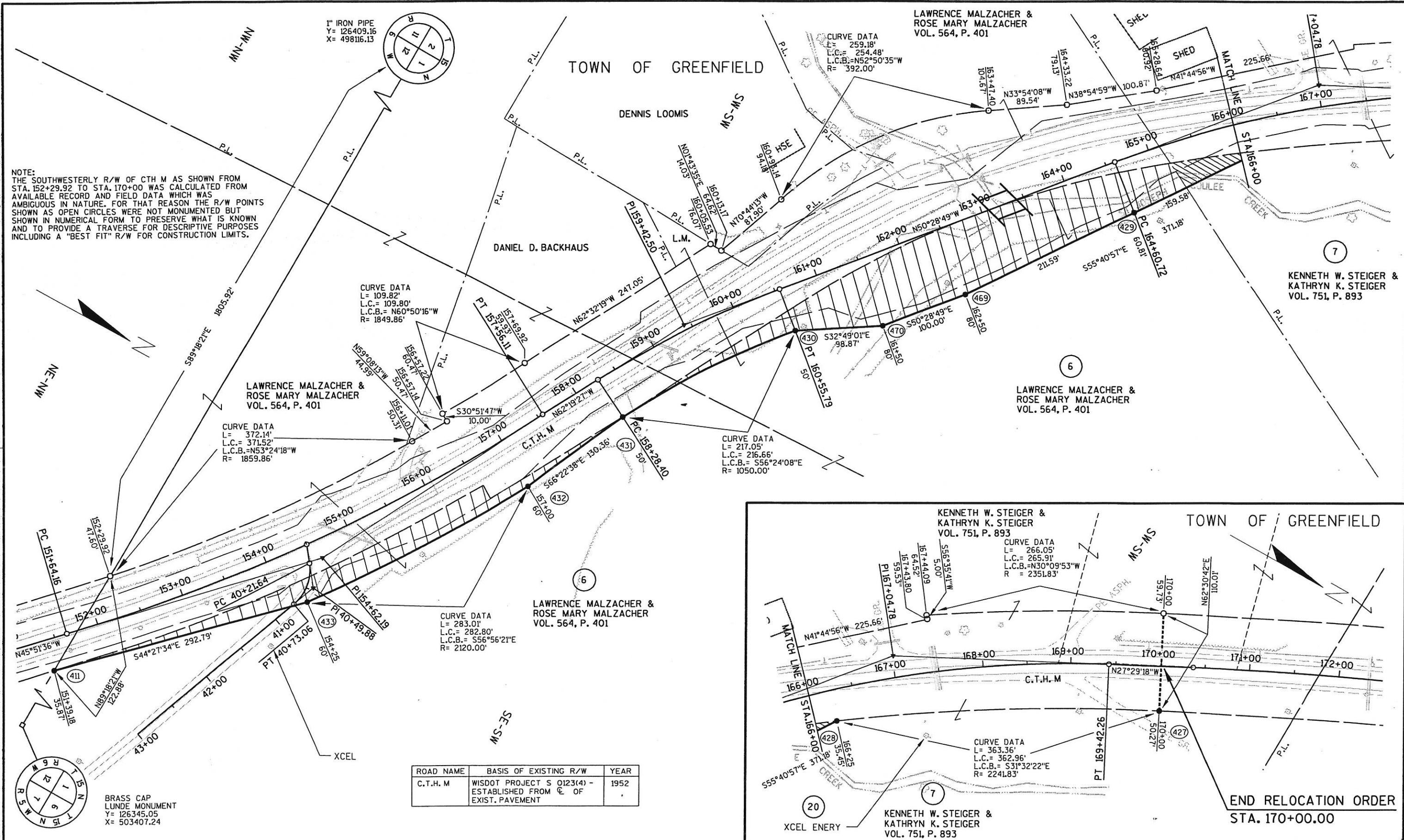


BRASS CAP  
LUNDE MONUMENT  
Y = 126345.05  
X = 503407.24

1" IRON PIPE  
Y = 126409.16  
X = 498116.13

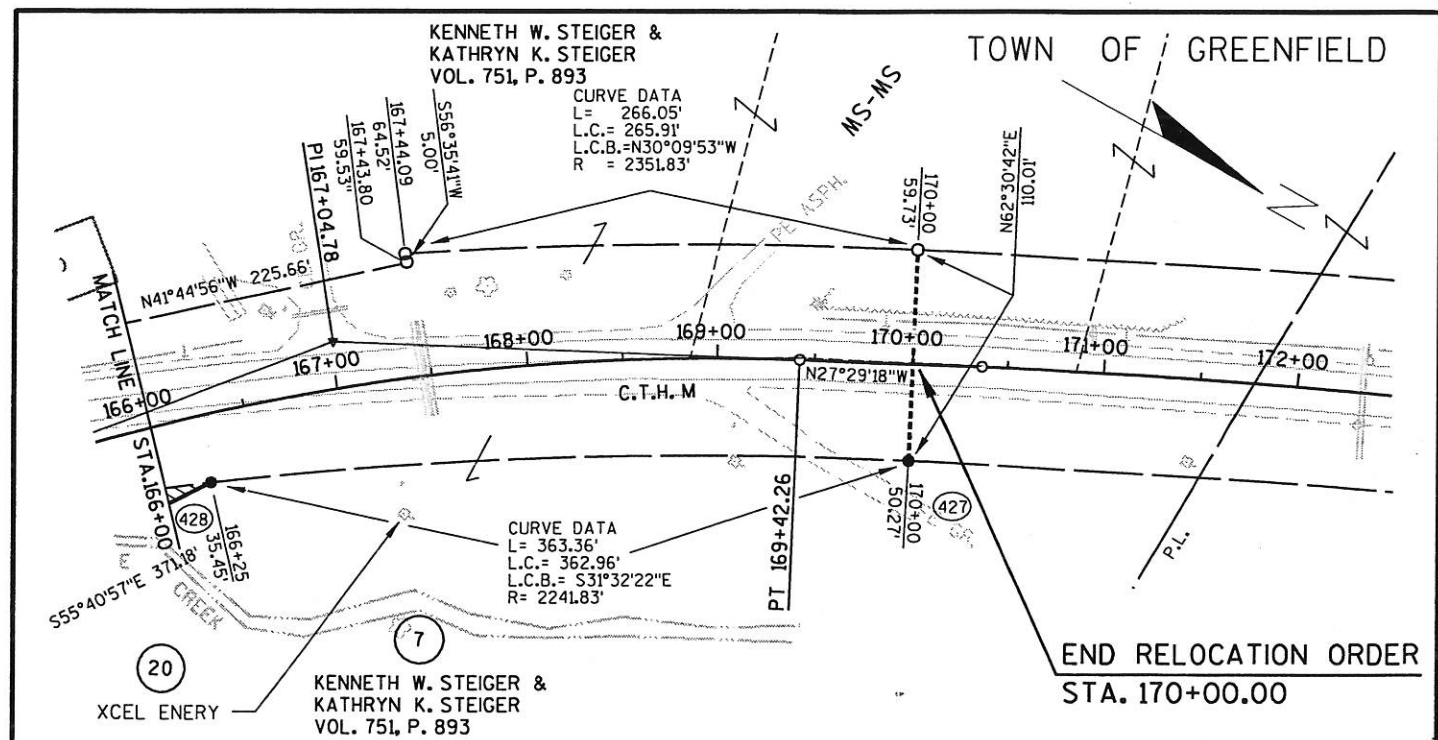


LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



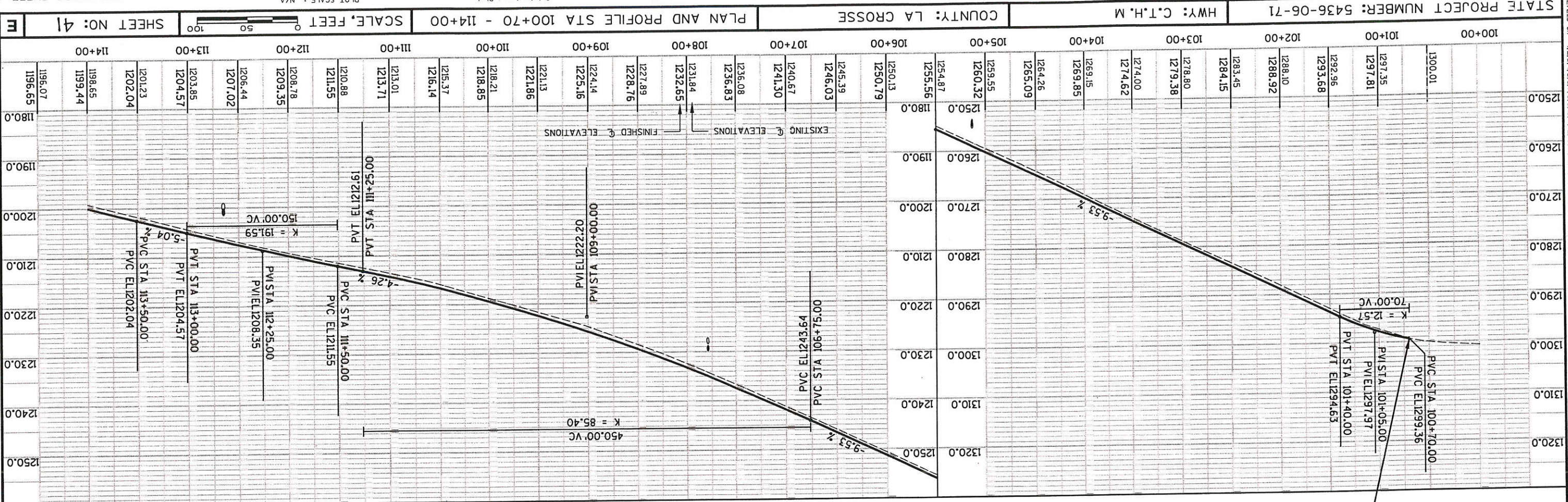
NOTE:  
 THE SOUTHWESTERLY R/W OF CTH M AS SHOWN FROM STA. 152+29.92 TO STA. 170+00 WAS CALCULATED FROM AVAILABLE RECORD AND FIELD DATA WHICH WAS AMBIGUOUS IN NATURE. FOR THAT REASON THE R/W POINTS SHOWN AS OPEN CIRCLES WERE NOT MONUMENTED BUT SHOWN IN NUMERICAL FORM TO PRESERVE WHAT IS KNOWN AND TO PROVIDE A TRAVERSE FOR DESCRIPTIVE PURPOSES INCLUDING A "BEST FIT" R/W FOR CONSTRUCTION LIMITS.

ROAD NAME	BASIS OF EXISTING R/W	YEAR
C.T.H. M	WISDOT PROJECT S Q123(4) - ESTABLISHED FROM C OF EXIST. PAVEMENT	1952



BRASS CAP  
 LUNDE MONUMENT  
 Y= 126345.05  
 X= 503407.24

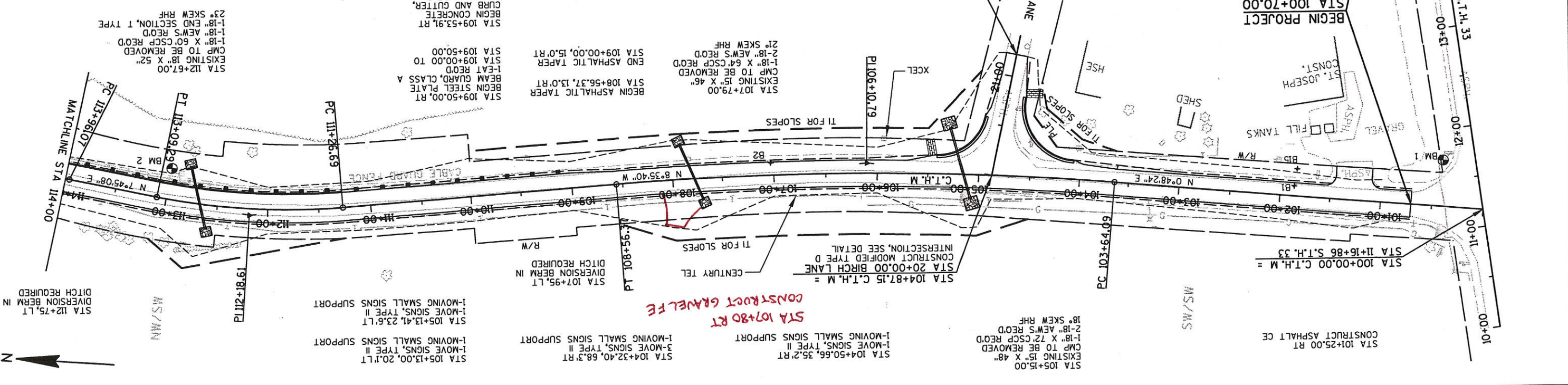
REVISION DATE	DATE	SCALE, FEET 0 50 100	HWY: C.T.H. M	CONSTRUCTION PROJECT NUMBER 5436-06-71	PS&E SHEET NO: 40
	GRID FACTOR N/A		COUNTY: LA CROSSE	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.9



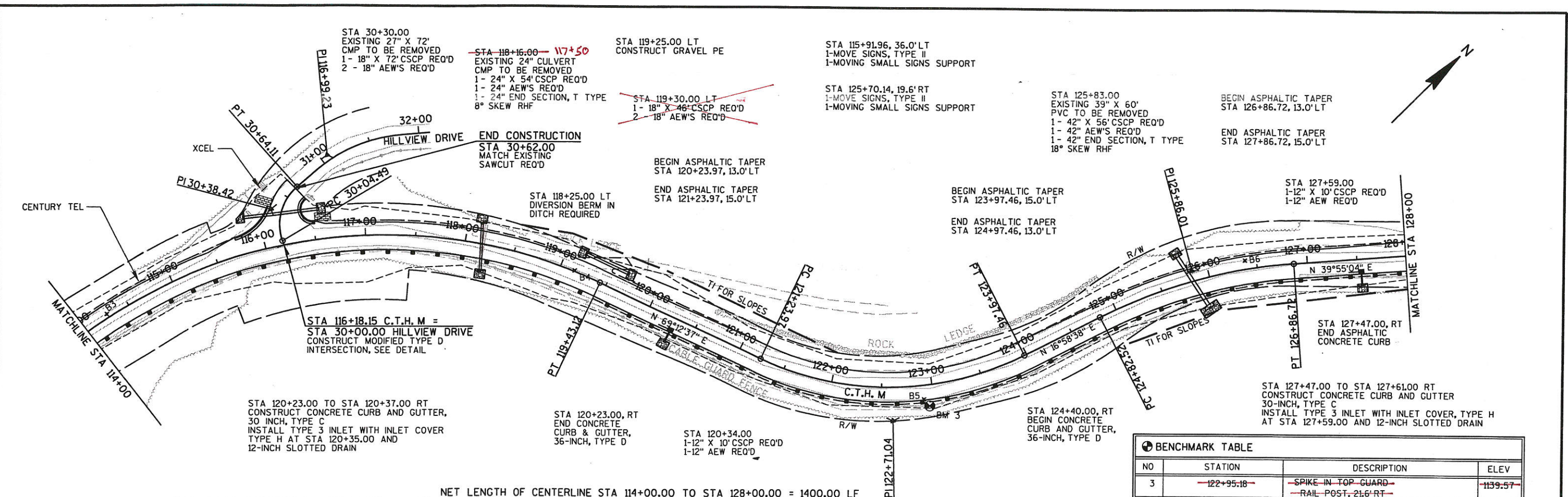
NET LENGTH OF CENTERLINE STA 100+70.00 TO STA 114+00.00 = 1330.00 LF

NO	STATION	DESCRIPTION	ELEV
1	100+42.28	TOP OF FIRE HYDRANT, 45.4' RT	1299.72
2	112+89.35	SPIKE IN POWER POLE, 26.2' RT	1201.20

BENCHMARK TABLE

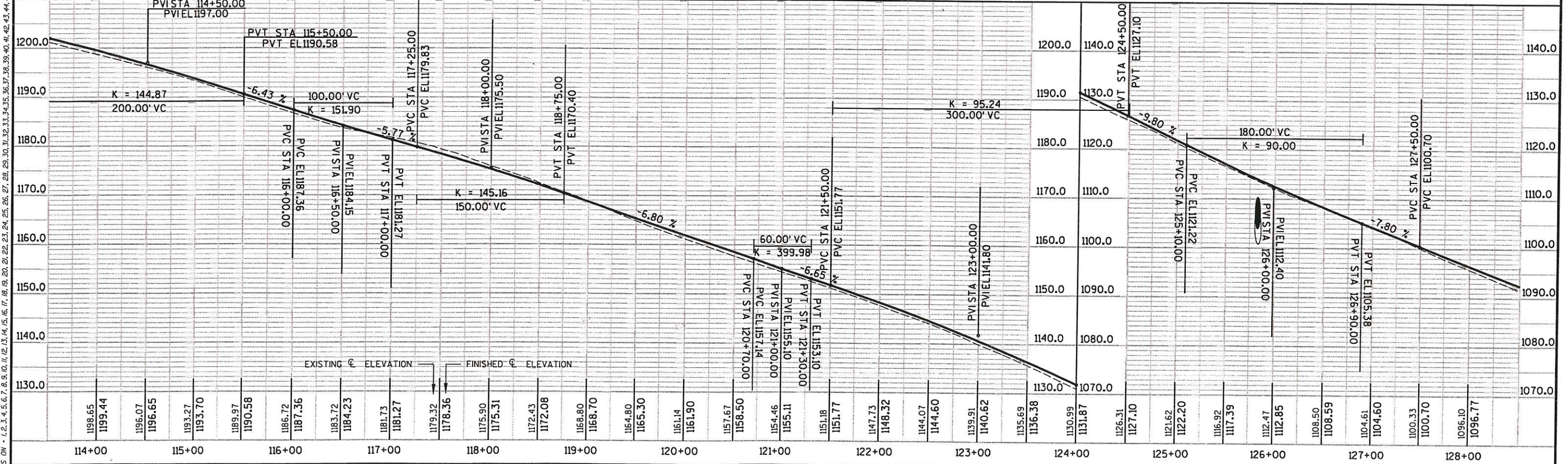


LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

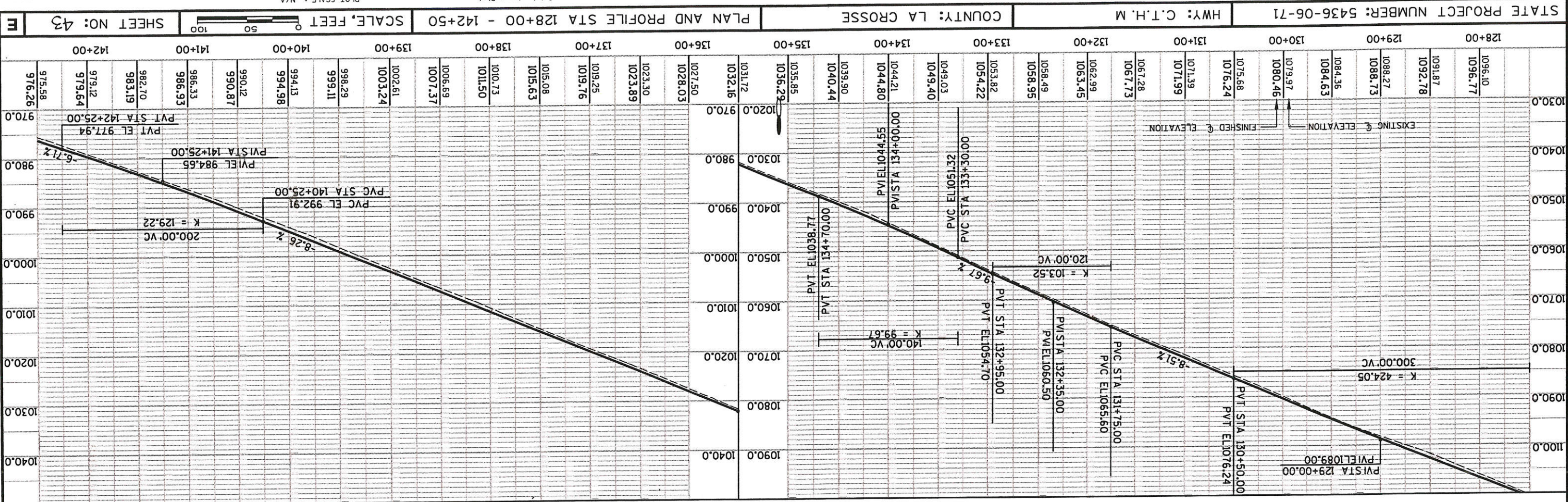


NET LENGTH OF CENTERLINE STA 114+00.00 TO STA 128+00.00 = 1400.00 LF

BENCHMARK TABLE			
NO	STATION	DESCRIPTION	ELEV
3	-122+95.18-	-SPIKE IN TOP GUARD -RAIL POST, 21.6' RT-	1139.57

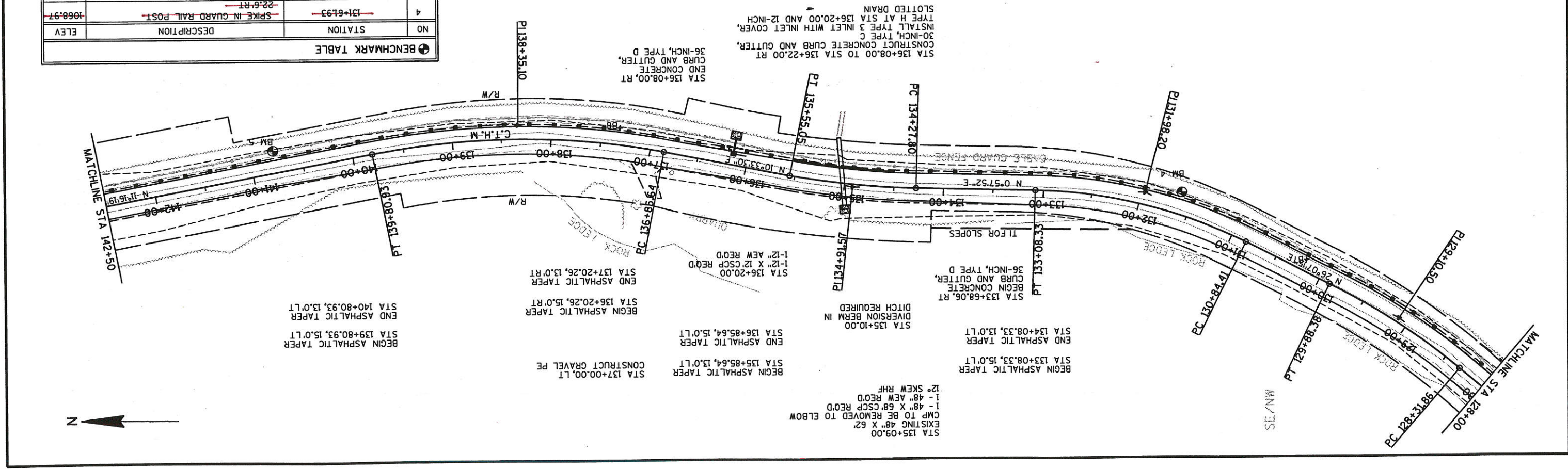


STATE PROJECT NUMBER: 5436-06-71    HWY: C.T.H.M    COUNTY: LA CROSSE    PLAN AND PROFILE STA 114+00 - 128+00    SCALE, FEET 0 50 100    SHEET NO: 42    E



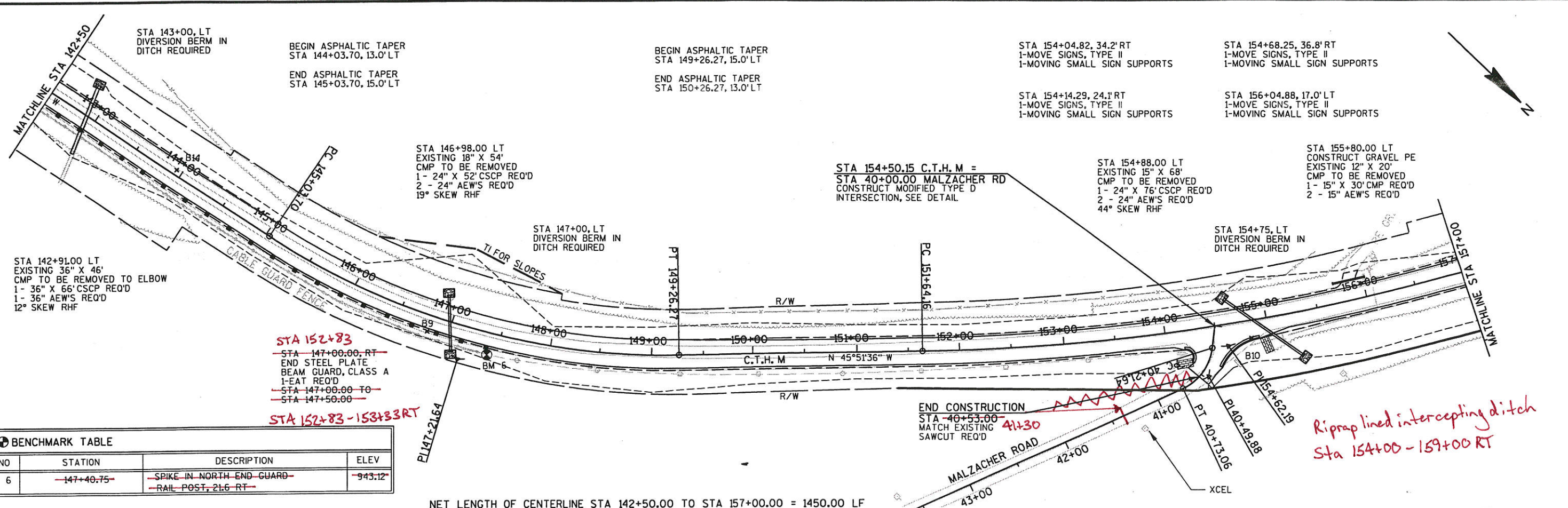
NET LENGTH OF CENTERLINE STA 128+00.00 TO STA 142+50.00 = 1450.00'

NO	STATION	DESCRIPTION	ELEV
5	140+76.57	SPIKE IN GUARD RAIL POST	990.59
4	131+61.93	SPIKE IN GUARD RAIL POST	1068.97
		BENCHMARK TABLE	



LEVELS ON: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

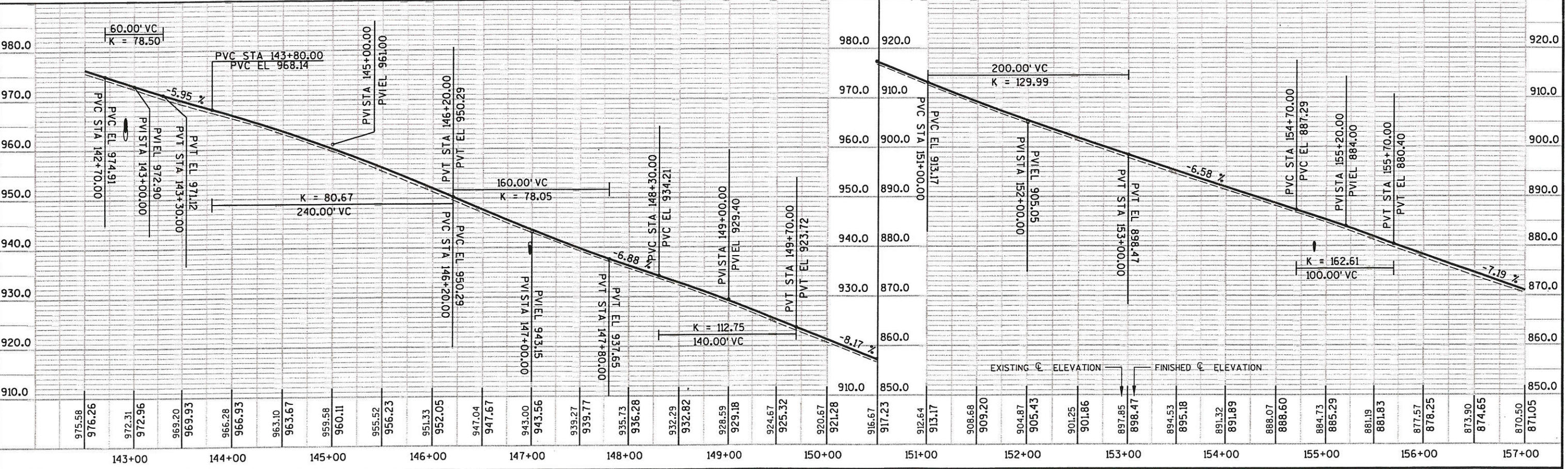
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



**BENCHMARK TABLE**

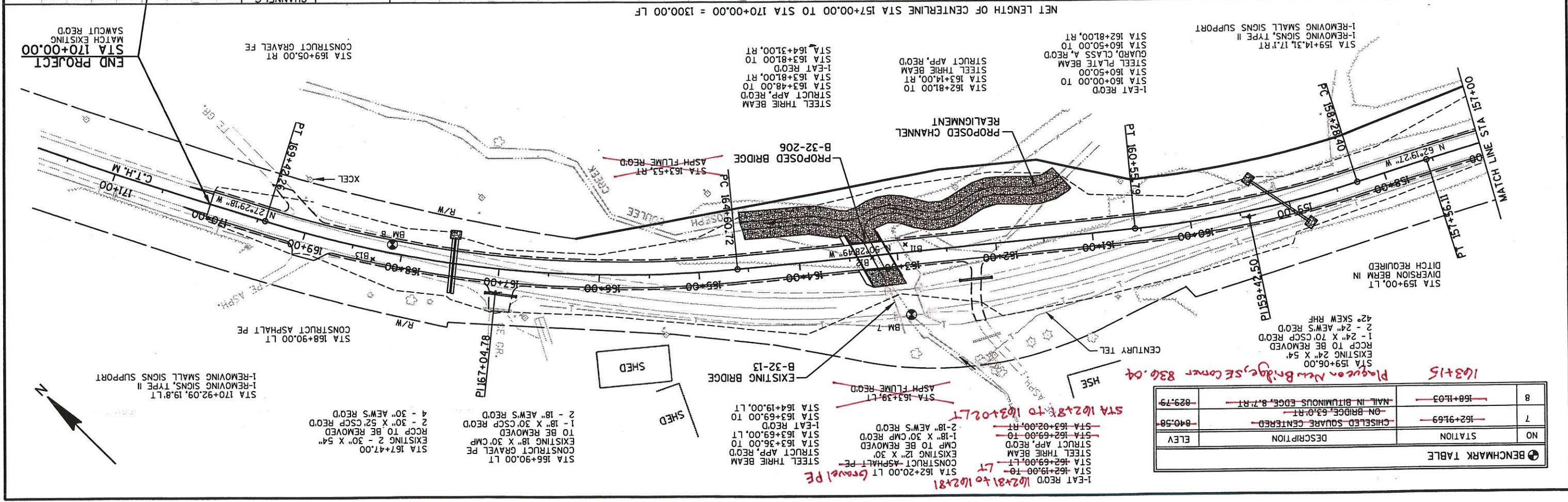
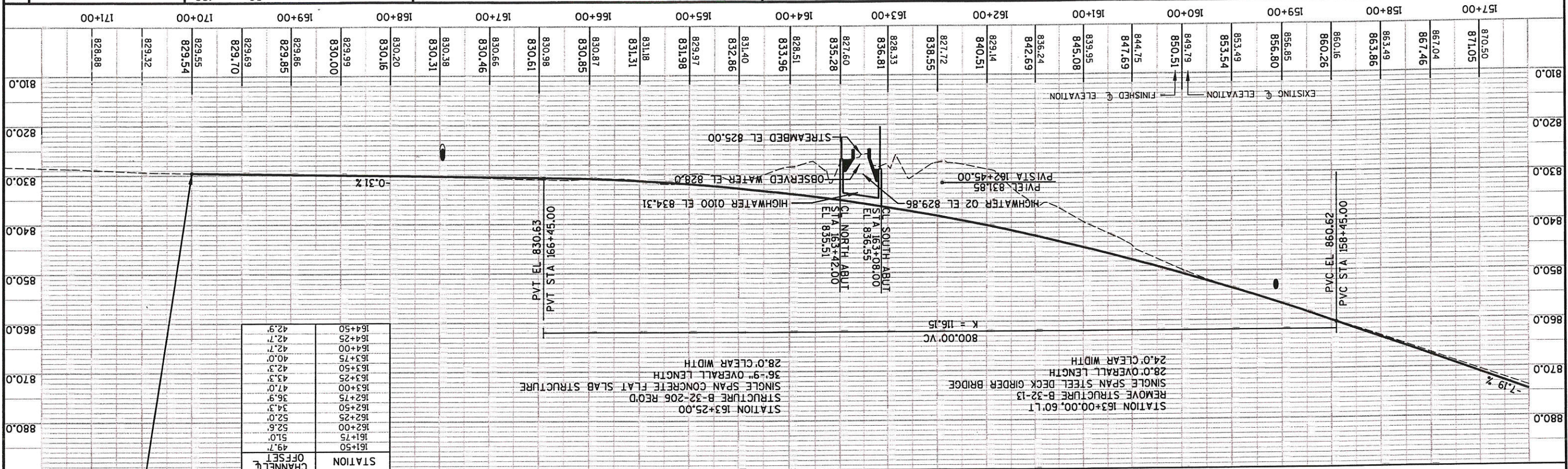
NO	STATION	DESCRIPTION	ELEV
6	147+40.75	SPIKE IN NORTH END GUARD RAIL POST, 21.6 RT	943.12

NET LENGTH OF CENTERLINE STA 142+50.00 TO STA 157+00.00 = 1450.00 LF





STATE PROJECT NUMBER: 5436-06-71 HWY: C.T.H. M COUNTY: LA CROSSE PLAN AND PROFILE STA 157+00 - 171+00 SCALE, FEET SHEET NO: 45

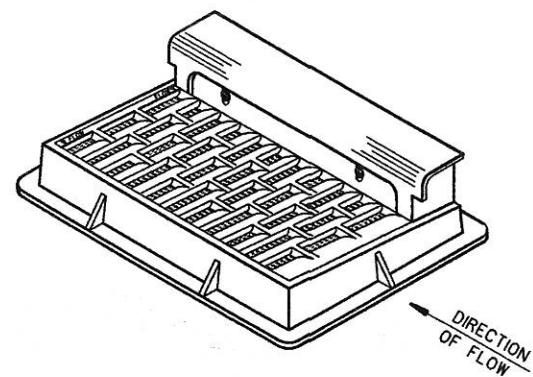
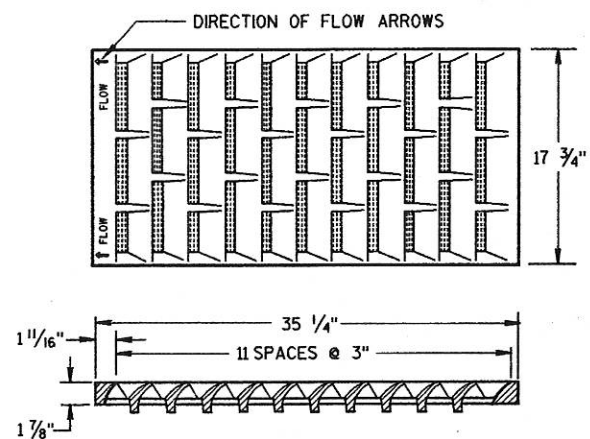


163+15  
Place on New Bridge center 836.04

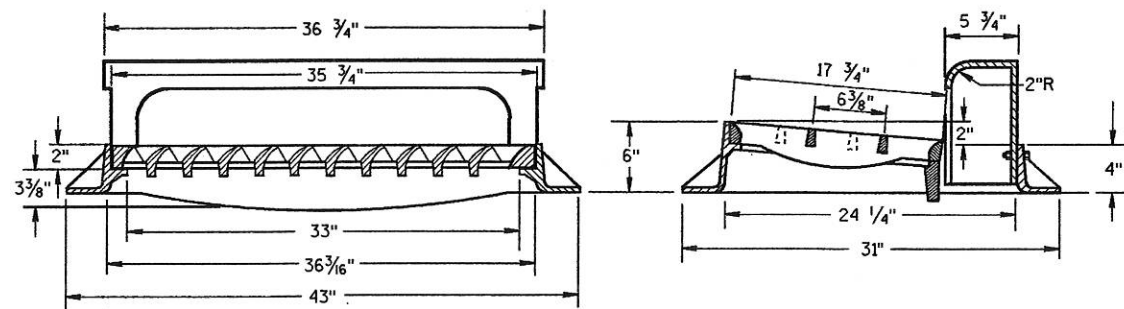
NO	STATION	DESCRIPTION	ELEV
7	162+91.69	CHISELED SQUARE CENTERED	840.58
8	168+11.03	NAIL IN BITUMINOUS EDGE, 8" RT	829.79

LEVELS ON : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

NOTE:  
GRATE IS REVERSIBLE.

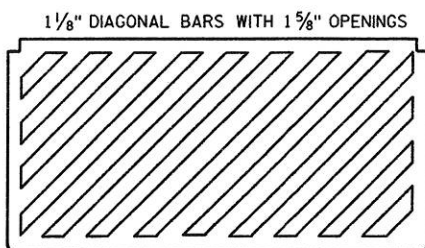


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



**TYPE "H"**

(APPROXIMATE WEIGHT 422 LBS.)  
 FRAME..... 175 LBS.  
 GRATE..... 138 LBS.  
 CURB BOX..... 109 LBS.



**SPECIAL GRATE FOR  
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")  
 (APPROXIMATE WEIGHT 172 LBS.)  
 GRATE..... 172 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

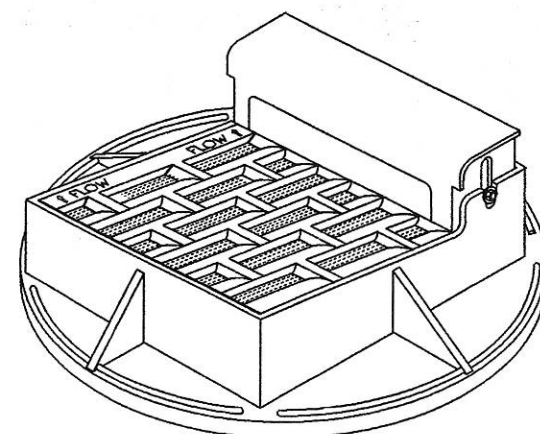
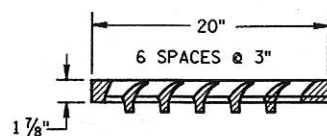
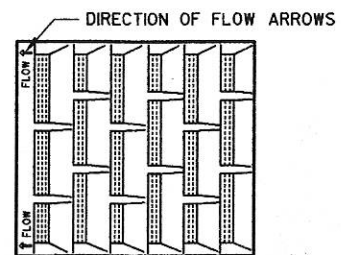
**GENERAL NOTES**

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.

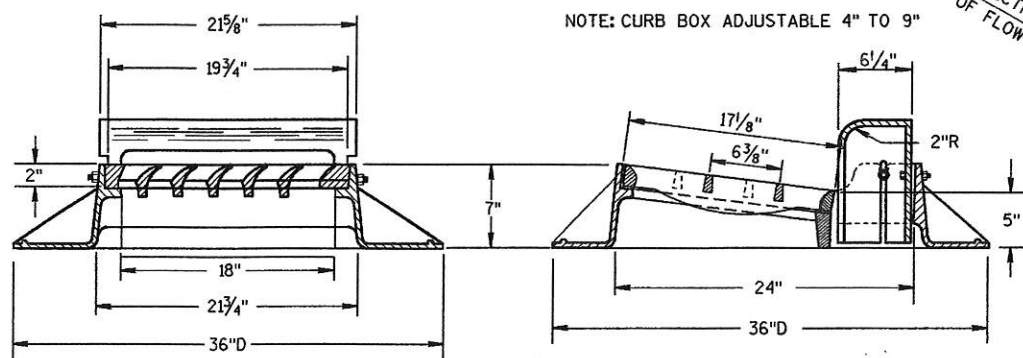
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

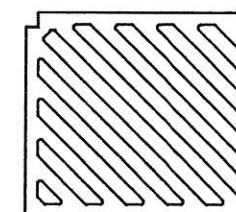


**TYPE "A"**

(APPROXIMATE WEIGHT 325 LBS.)  
 FRAME..... 157 LBS.  
 GRATE..... 84 LBS.  
 CURB BOX..... 84 LBS.

NOTE:  
GRATE IS REVERSIBLE.

1" DIAGONAL BARS  
WITH 1/2" OPENINGS



**SPECIAL GRATE FOR  
TYPE "A" COVER**

(MEASURES 19 3/4" X 17" X 1 7/8")

GRATE..... 84 LBS.

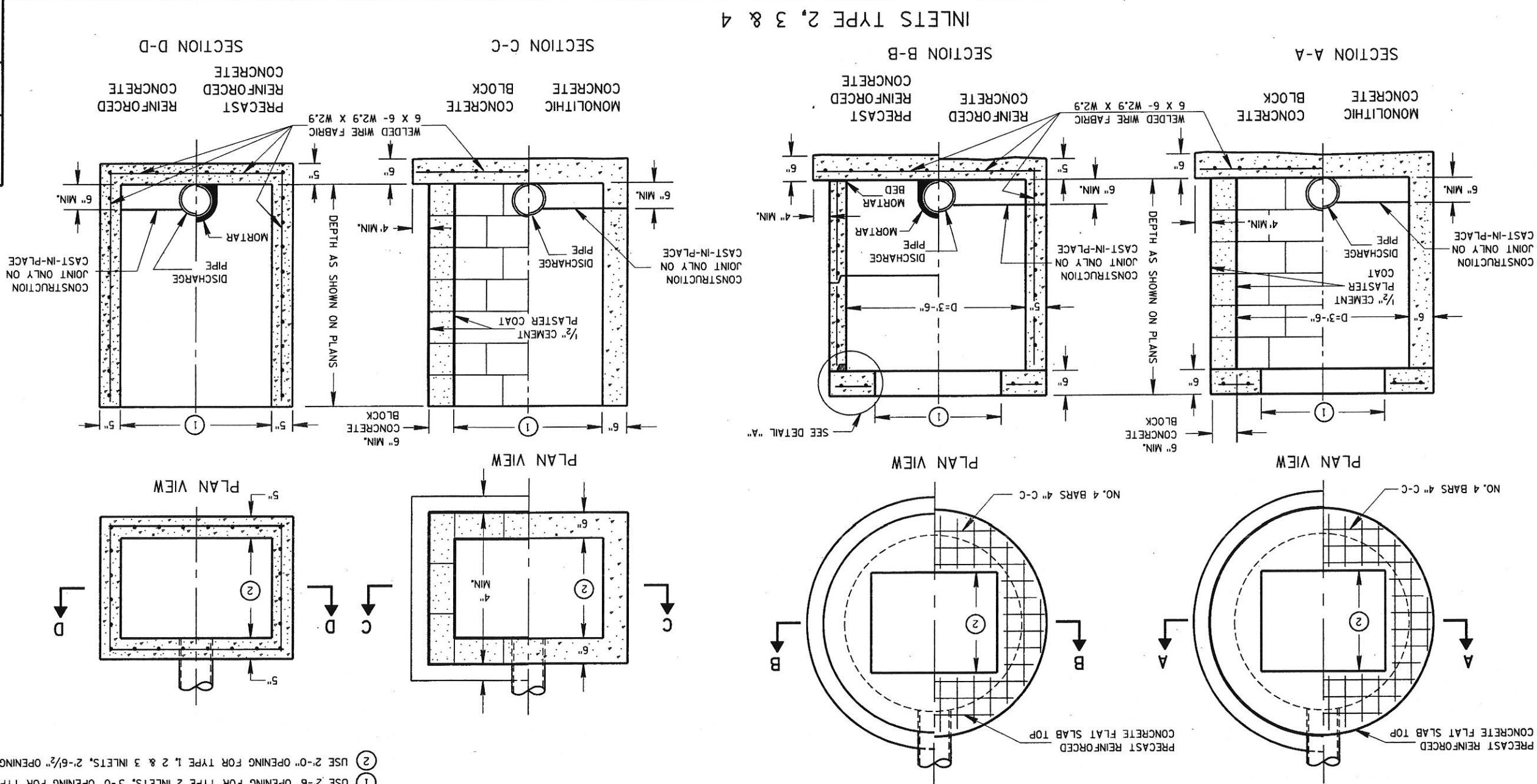
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

**INLET COVERS  
TYPE A, H, A-S, & H-S**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/04/99  
DATE  
FHW  
  
 CHIEF ROADWAY DEVELOPMENT ENGINEER

INLETS TYPE 1, 2, 3 & 4  
 STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 APPROVED  
 DATE 8/26/94  
 CHIEF ROADWAY DEVELOPMENT ENGINEER  
 FHWA



**GENERAL NOTES**

\*SELECTION OF SQUARE OR CIRCULAR SIZES AND THE INLET COVER BEING UTILIZED

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.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES I-C", "CATCH BASINS I-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

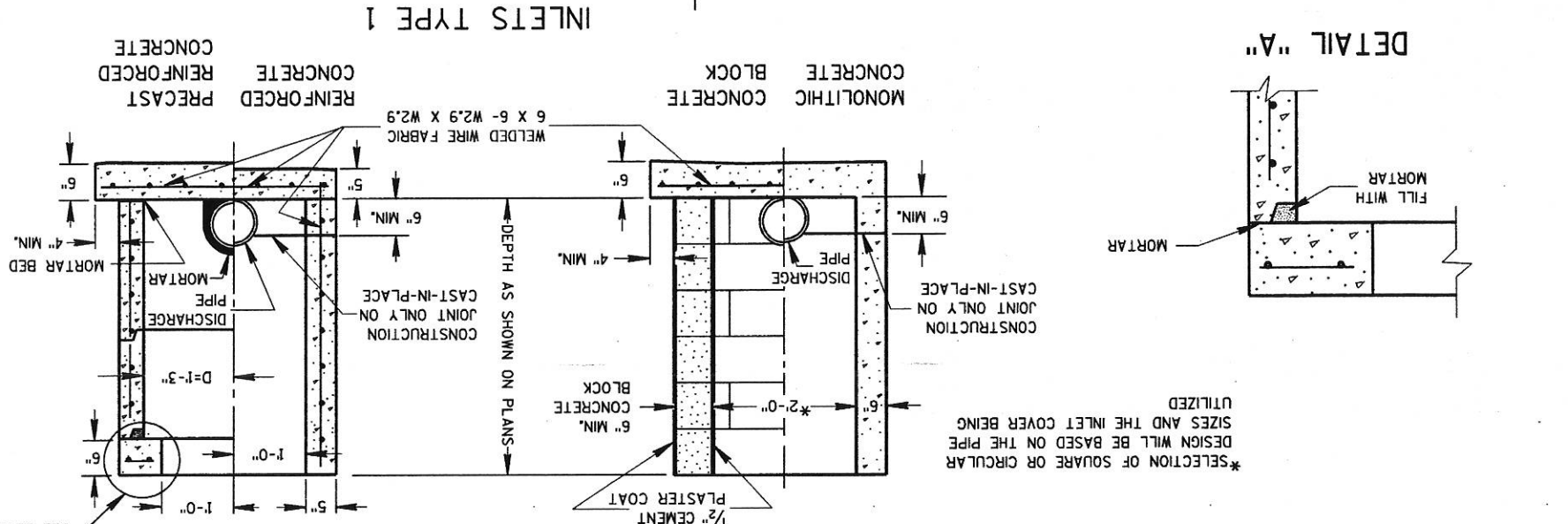
PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

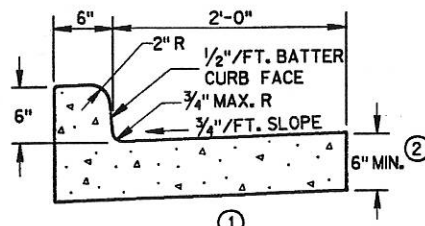
PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

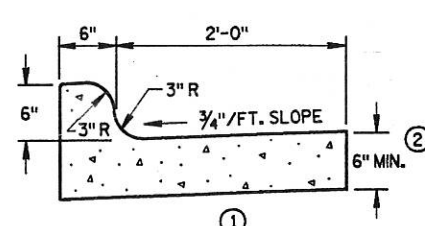
① USE 2'-6" OPENING FOR TYPE 2 INLETS, 3'-0" OPENING FOR TYPE 3 INLETS, AND 2'-11" FOR TYPE 4 INLETS.

② USE 2'-0" OPENING FOR TYPE 1, 2 & 3 INLETS, 2'-6"/2" OPENING FOR TYPE 4 INLETS.

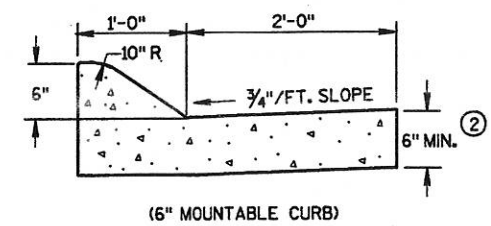




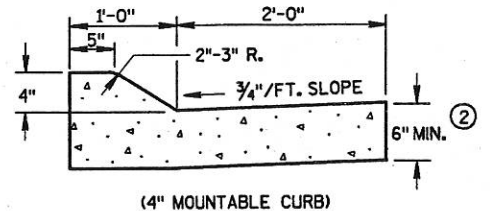
TYPES A & D



TYPES K & L

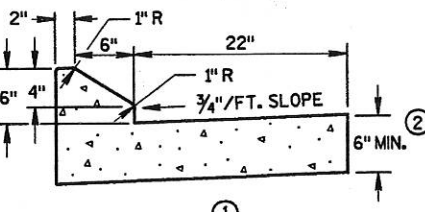


(6" MOUNTABLE CURB)

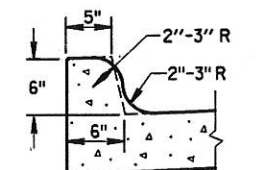


(4" MOUNTABLE CURB)

TYPES A & D  
CONCRETE CURB & GUTTER 36"

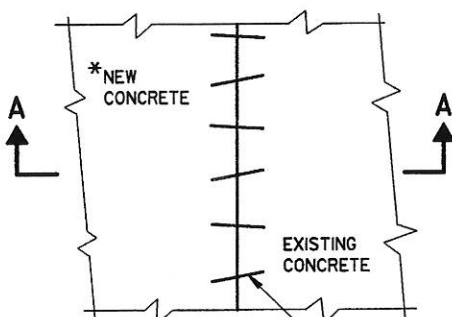


TYPES G & J



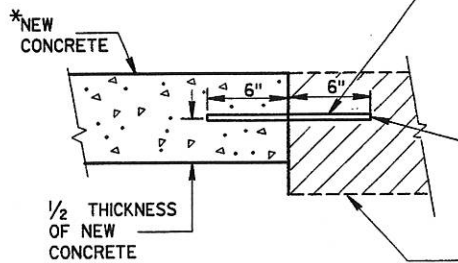
OPTIONAL CURB SHAPE  
FOR TYPES K & L

CONCRETE CURB & GUTTER 30"



PLAN VIEW

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

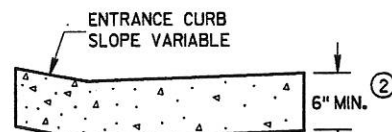


SECTION A-A  
PAVEMENT TIES

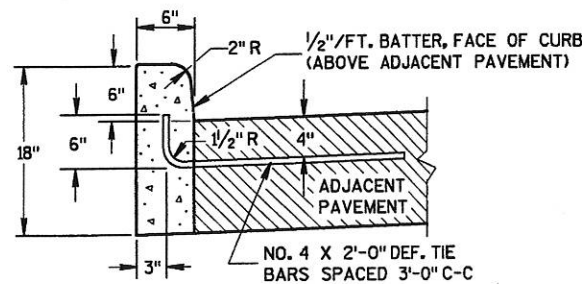
NO. 6 X 12" DEF. BARS  
SPACED 3'-0" C-C,  
INSTALLED ON 6:1 SKEW  
HORIZONTALLY. DIRECTION  
OF SKEW ALTERNATING AFTER  
EVERY ONE OR TWO BARS.

THE HOLE FOR THE BAR SHALL  
BE DRILLED TO A DEPTH OF  
7" AND TO SUCH A DIAMETER  
AS TO PROVIDE A TIGHT  
DRIVEN FIT

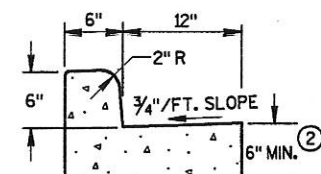
EXISTING  
CONCRETE



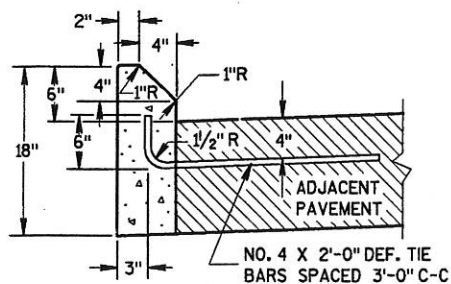
DRIVEWAY ENTRANCE CURB  
(WHEN DIRECTED BY THE ENGINEER)



TYPES A & D



TYPES A & D  
CONCRETE CURB & GUTTER 18"



TYPES G & J

CONCRETE CURB

**GENERAL NOTES**

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

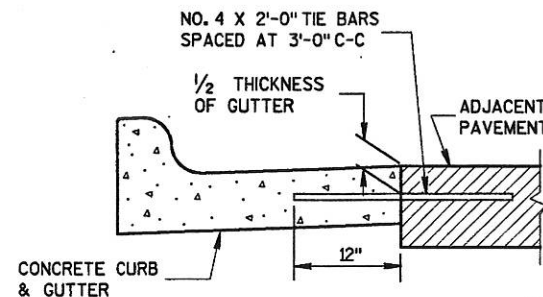
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

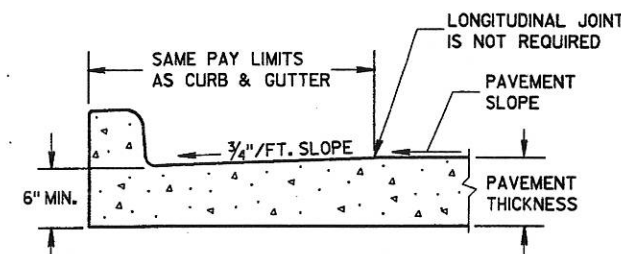
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

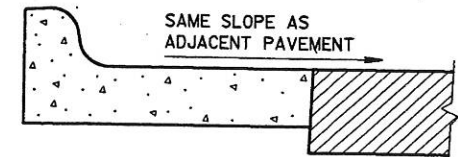
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



TYPICAL TIE BAR LOCATION



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB & GUTTER



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

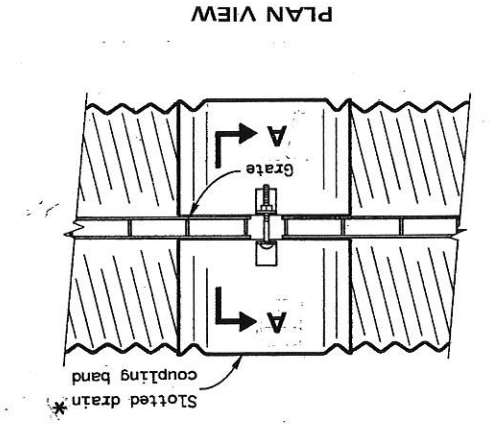
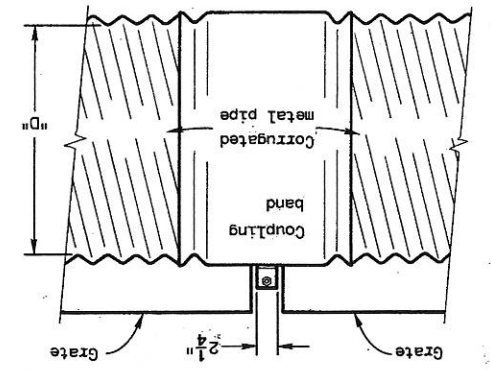
CONCRETE CURB, CONCRETE  
CURB & GUTTER AND  
PAVEMENT TIES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

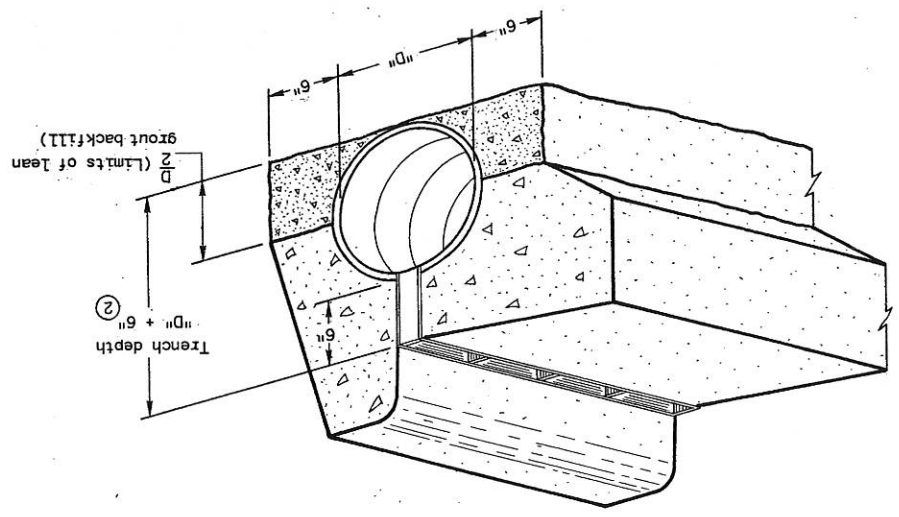
APPROVED  
04/16/99  
DATE  
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

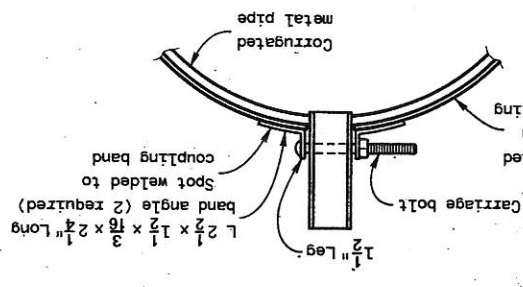
**\* TYPICAL COUPLING BAND FOR SLOTTED DRAIN**  
(Alternates permitted as approved by the Engineer)



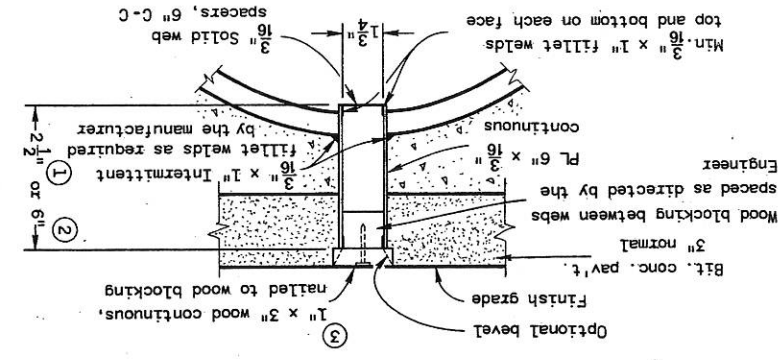
**SLOTTED DRAIN INSTALLATION IN FLOW LINE OF CURB & GUTTER TYPE "C"**



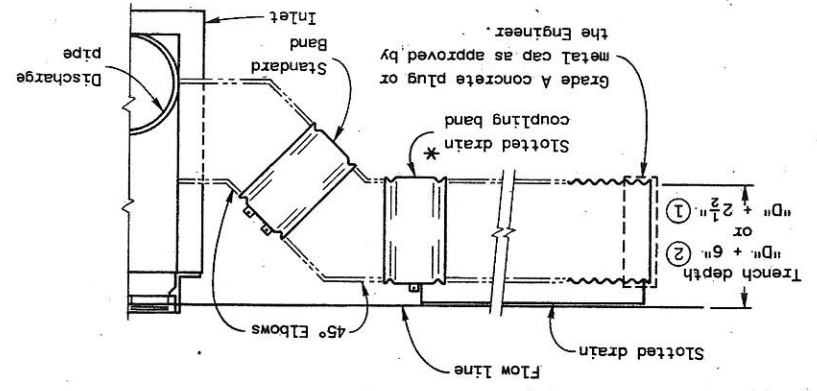
**SECTION A-A**



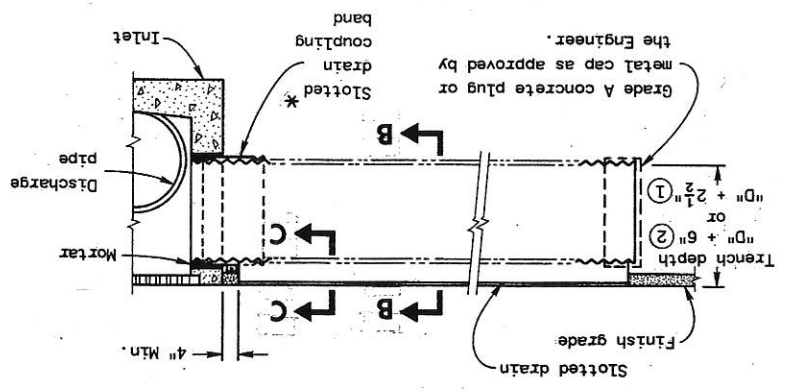
**SECTION C-C**



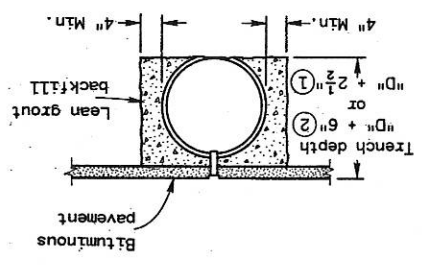
**SLOTTED DRAIN INSTALLATION TYPE "B"**



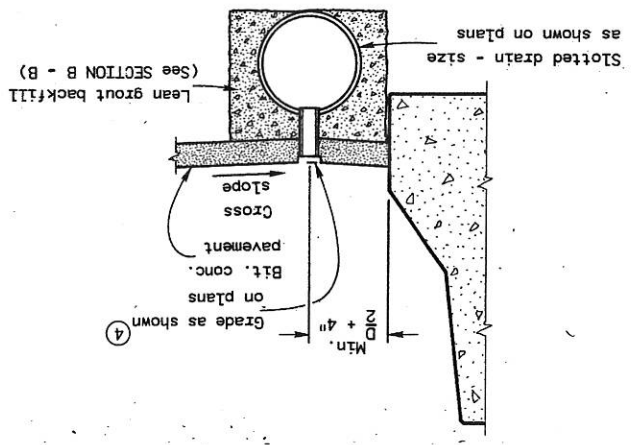
**SLOTTED DRAIN INSTALLATION TYPE "A"**



**SECTION B-B**



**SLOTTED DRAIN INSTALLATION AT MEDIAN BARRIER TYPE "D"**



- ① Normal grate depth
- ② Special grate depth, when specified on the plans
- ③ For screeding directly over the slotted drain with bituminous paver. For concrete surface use 3" wide tape over the slot to keep material out of the pipe.
- ④ When the surface is concrete pavement the grade as shown on plans will be flush with the top of the slotted drain.

**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. The lean grout backfill material shall be a fine aggregate, in accordance with Subsection 501.3.6.3.6 of the Standard Specifications, mixed with 150 pounds of cement and approximately 30 gallons of water for each 3000 pounds of fine aggregate.

The pipe for the slotted drain shall meet AASHTO Designation M-36, and the grate assemblies shall be made from structural steel suitably welded to form the open slot and hot-dip galvanized to meet the provisions of AASHTO Designation M-11.

Normal pipe sizes are 12-inch through 24-inch diameter in 0.064 inch thickness, and 30-inch diameter pipe in 0.079 inch thickness.

The pipe for the slotted drain shall meet AASHTO Designation M-11, and the grate assemblies shall be made from structural steel suitably welded to form the open slot and hot-dip galvanized to meet the provisions of AASHTO Designation M-11.

The lean grout backfill material shall be a fine aggregate, in accordance with Subsection 501.3.6.3.6 of the Standard Specifications, mixed with 150 pounds of cement and approximately 30 gallons of water for each 3000 pounds of fine aggregate.

The pipe for the slotted drain shall meet AASHTO Designation M-36, and the grate assemblies shall be made from structural steel suitably welded to form the open slot and hot-dip galvanized to meet the provisions of AASHTO Designation M-11.

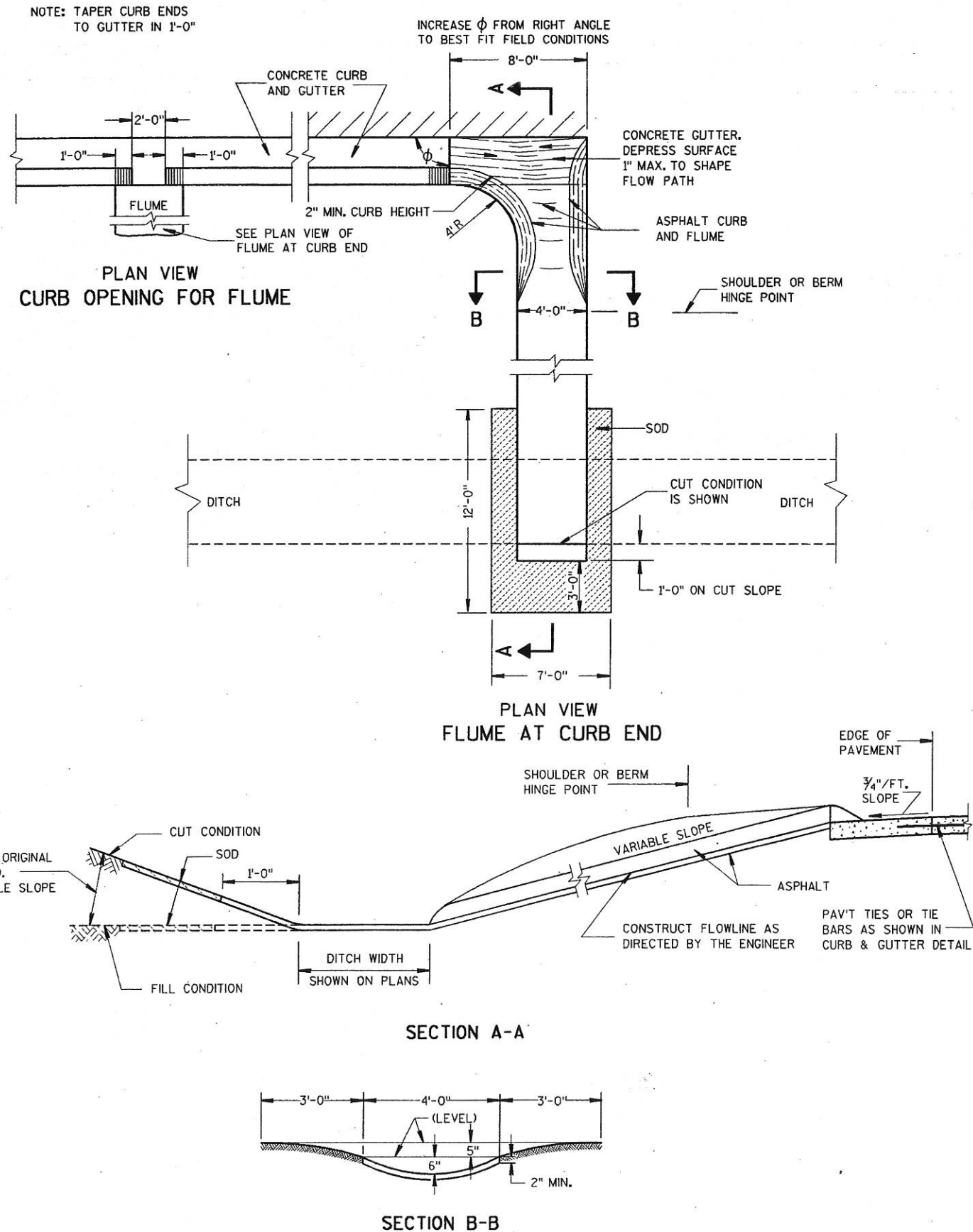
Normal pipe sizes are 12-inch through 24-inch diameter in 0.064 inch thickness, and 30-inch diameter pipe in 0.079 inch thickness.

**SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS**

State of Wisconsin  
Department of Transportation  
Division of Transportation Facilities

APPROVED  
DATE 8-30-79  
CHIEF DESIGN ENGINEER

### ASPHALTIC FLUME



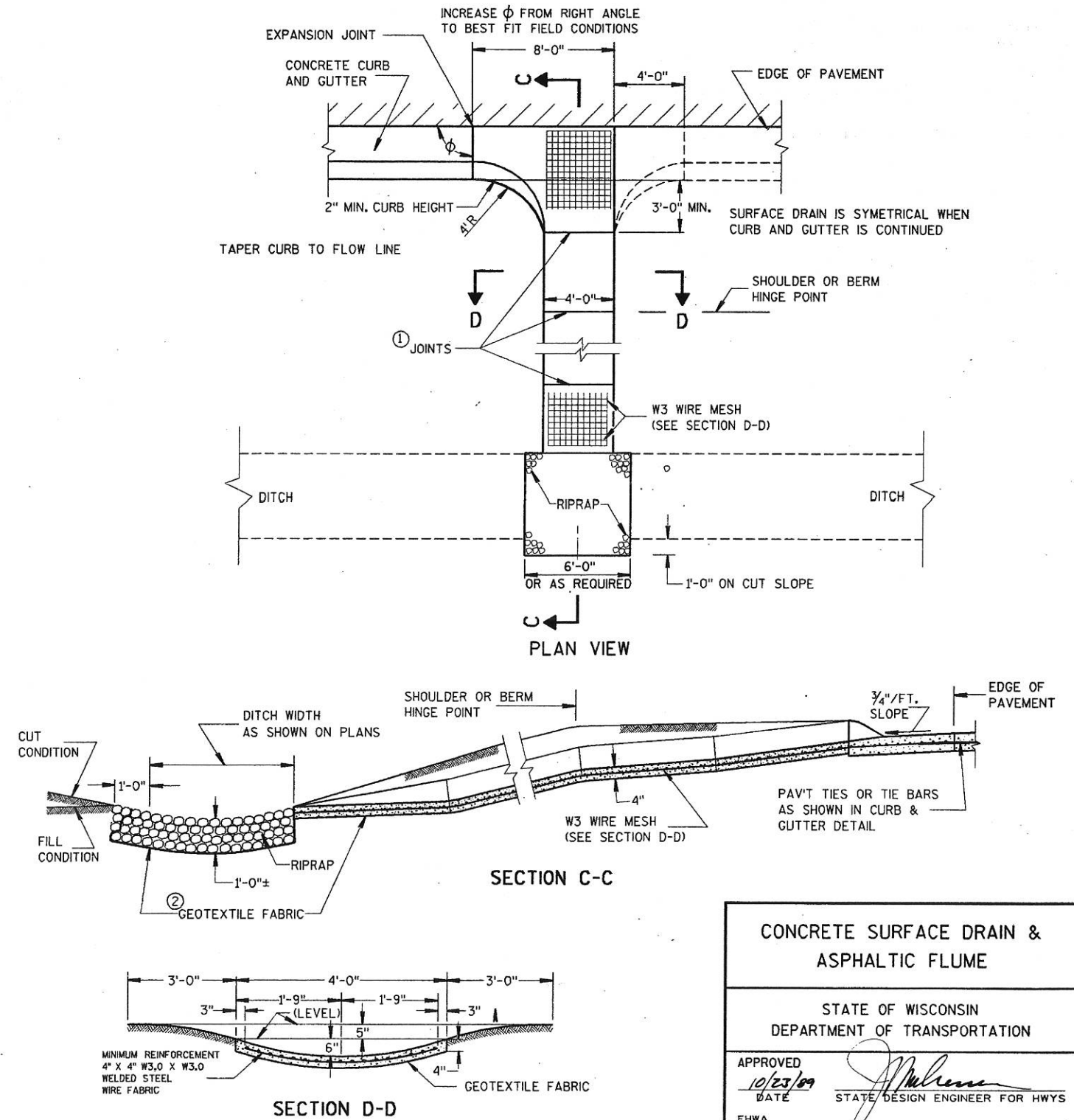
### GENERAL NOTES

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

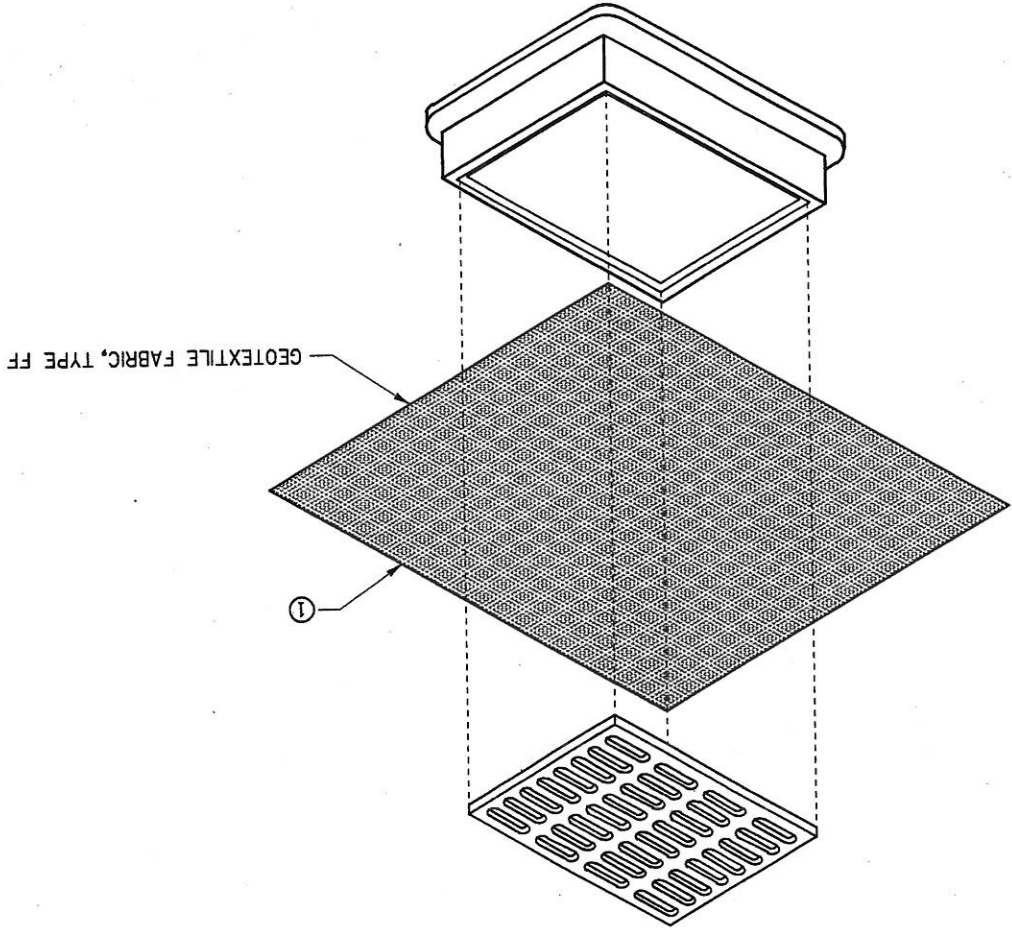
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

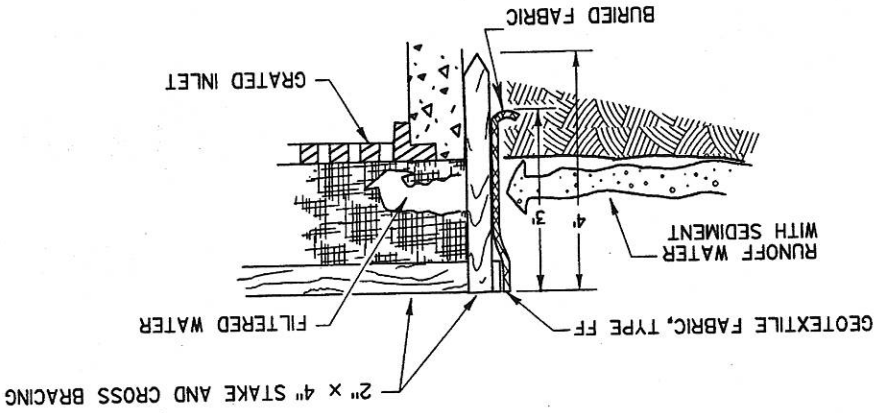
### ③ CONCRETE SURFACE DRAIN



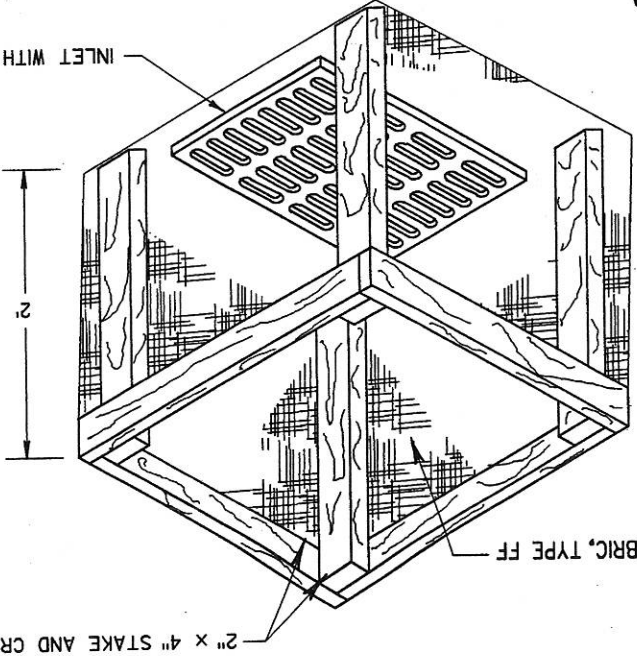
INLET PROTECTION, TYPE B (WITHOUT CURB BOX)  
(CAN BE INSTALLED ON ANY INLET TYPE)



INLET PROTECTION, TYPE A

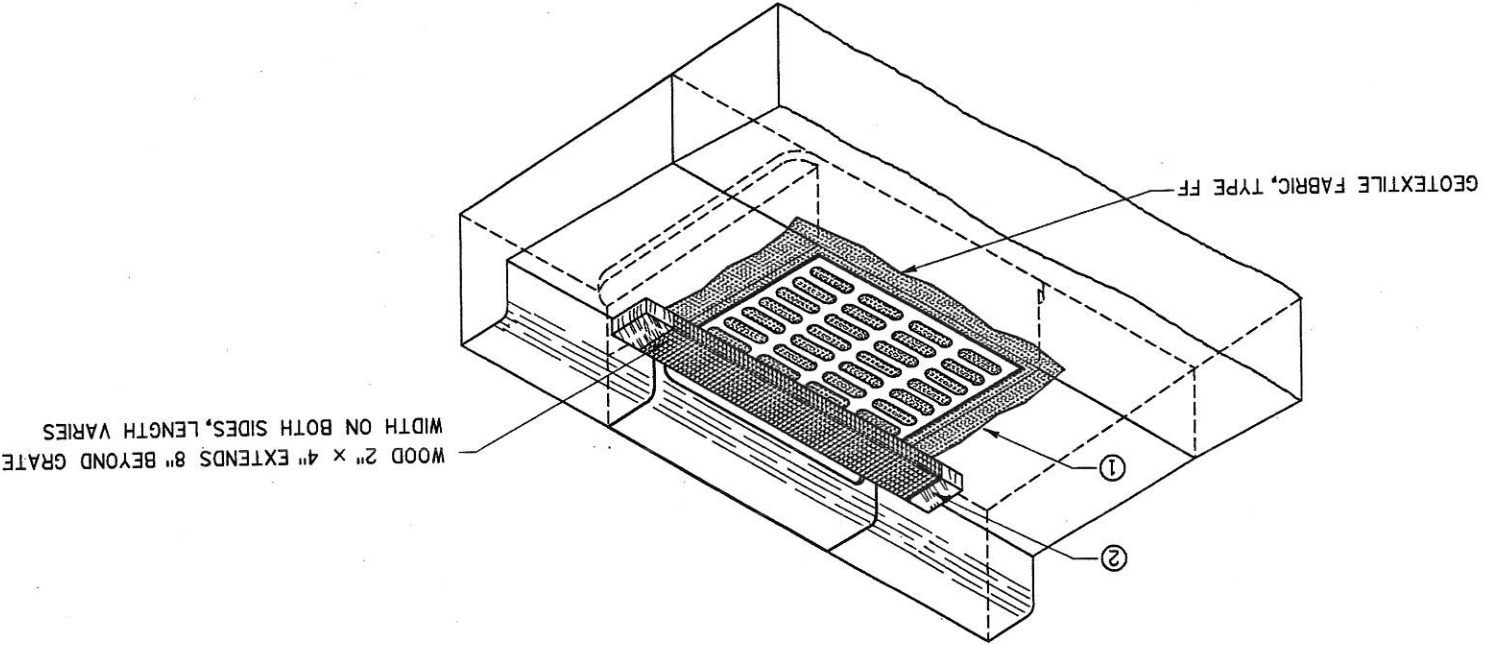


NOTE: ATTACH GEOTEXTILE FABRIC, TYPE FF TO THE TOP OF STAKES AND CROSS BRACINGS.



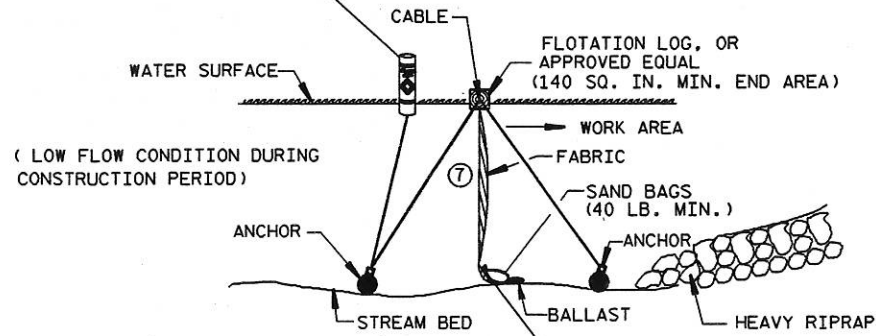
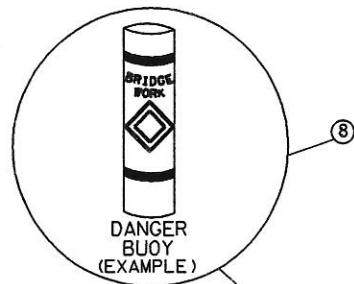
INLET WITH OR WITHOUT GRATE

INLET PROTECTION, TYPE C (WITH CURB BOX)



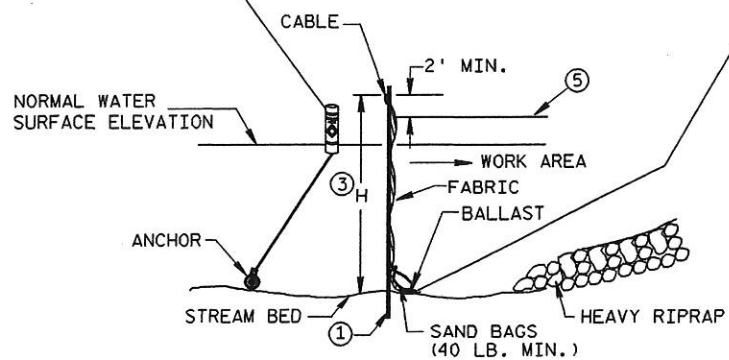
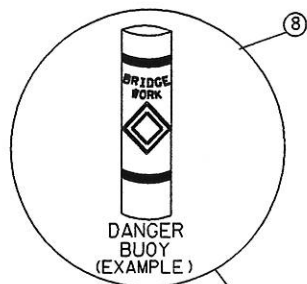
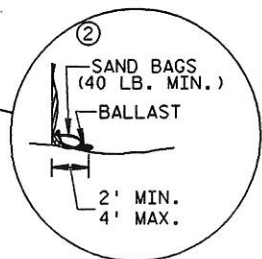
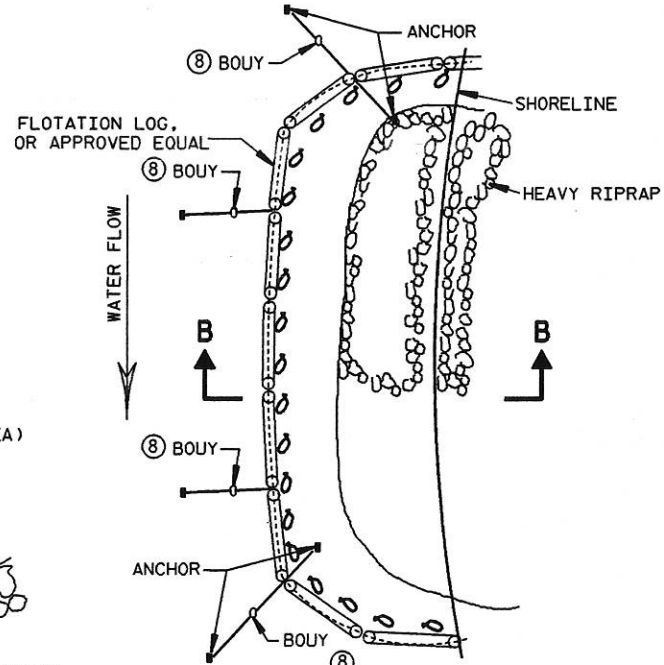
- GENERAL NOTES:**
- ① FABRIC SHALL BE 8" (MIN) GREATER ON ALL SIDES OF THE INLET COVER TO PROVIDE A HAND HOLD WHEN MAINTENANCE OR REMOVAL IS REQUIRED.
  - ② FOR INLET PROTECTION, TYPE C, WITH A CURB BOX, AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES.
- WHEN REMOVING 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.
- FABRIC SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
- FABRIC SHALL BE REPLACED AT THE ENGINEERS DISCRETION.

INLET PROTECTION TYPE A, B AND C
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED <i>[Signature]</i> DATE 03/04/00 CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



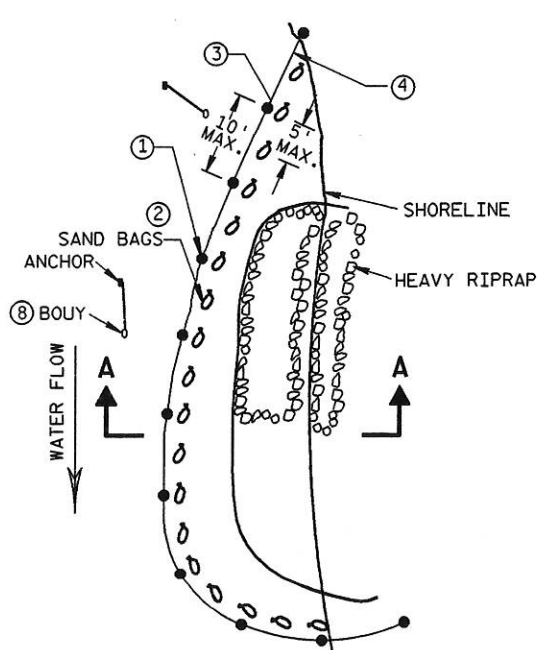
SECTION B-B

TURBIDITY BARRIER FLOAT ALTERNATIVE  
CAUTION - SEE NOTE 6



SECTION A-A

TURBIDITY BARRIER STANDARD POST INSTALLATION



PLAN VIEW

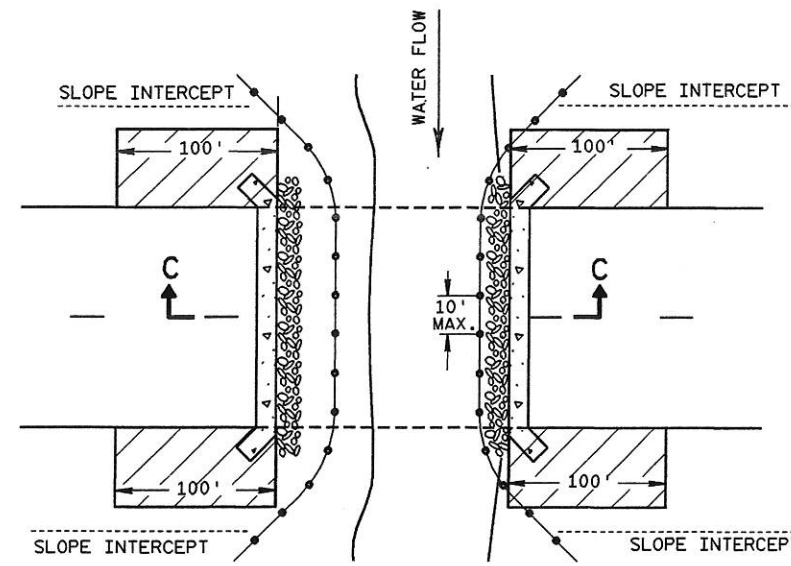
TURBIDITY BARRIER PLACEMENT DETAILS

**GENERAL NOTES**

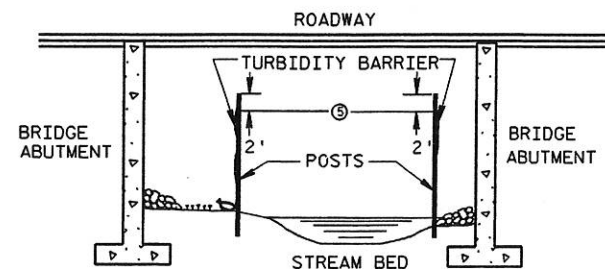
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

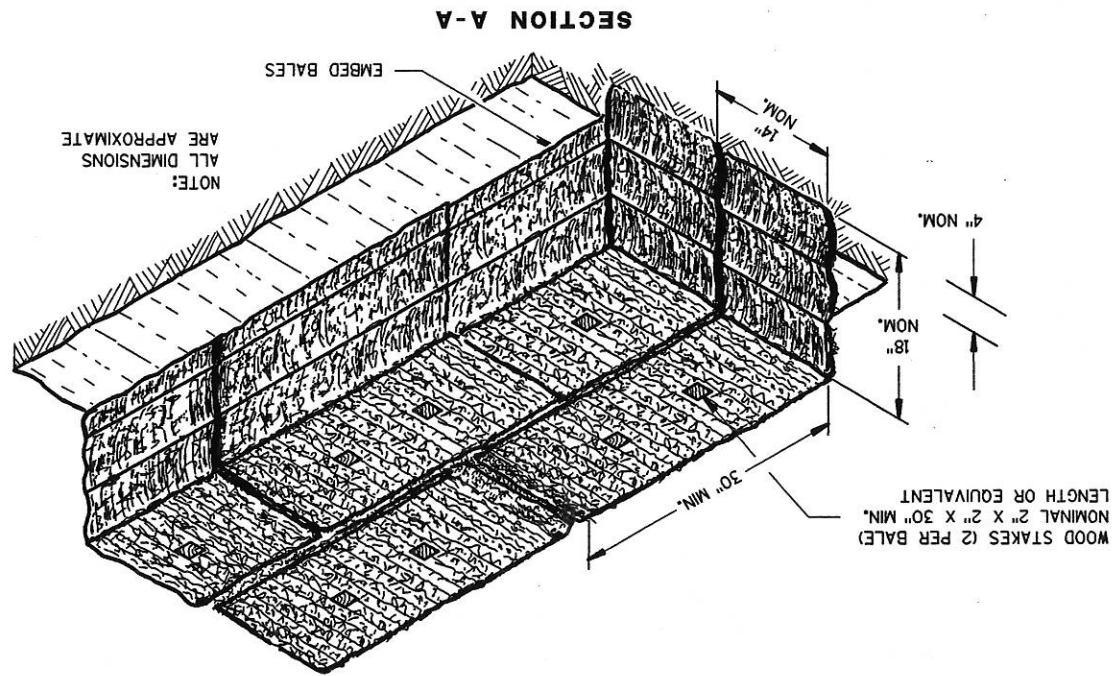
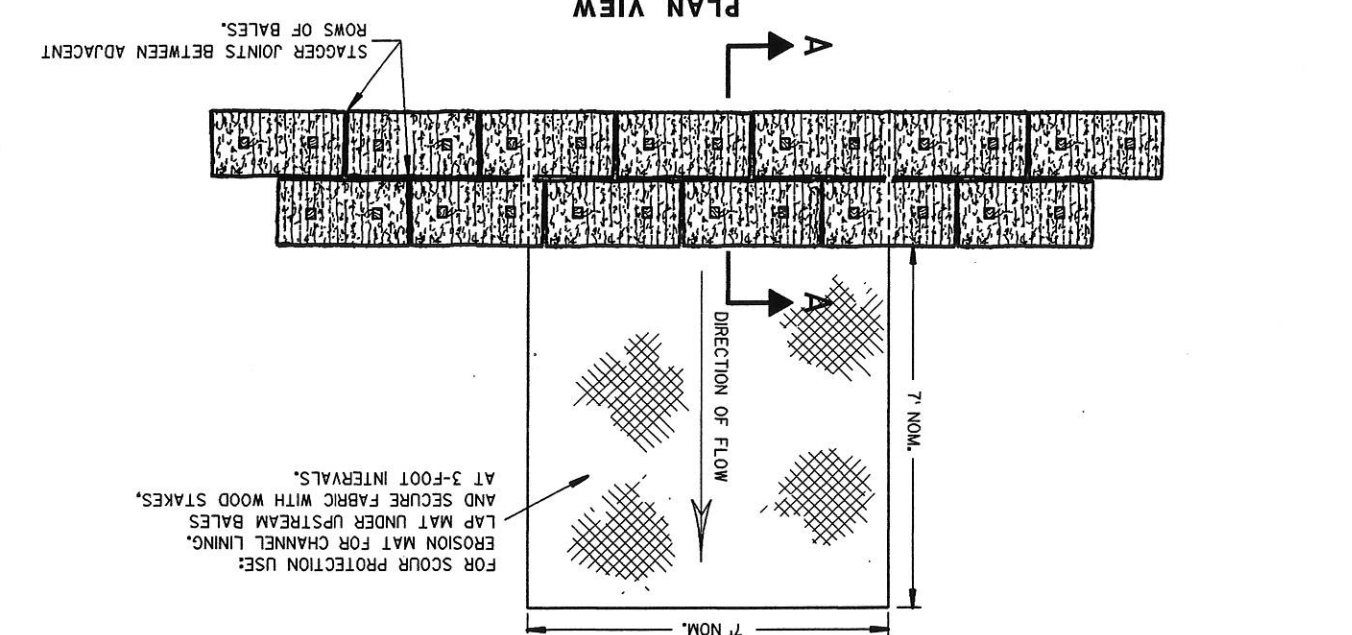
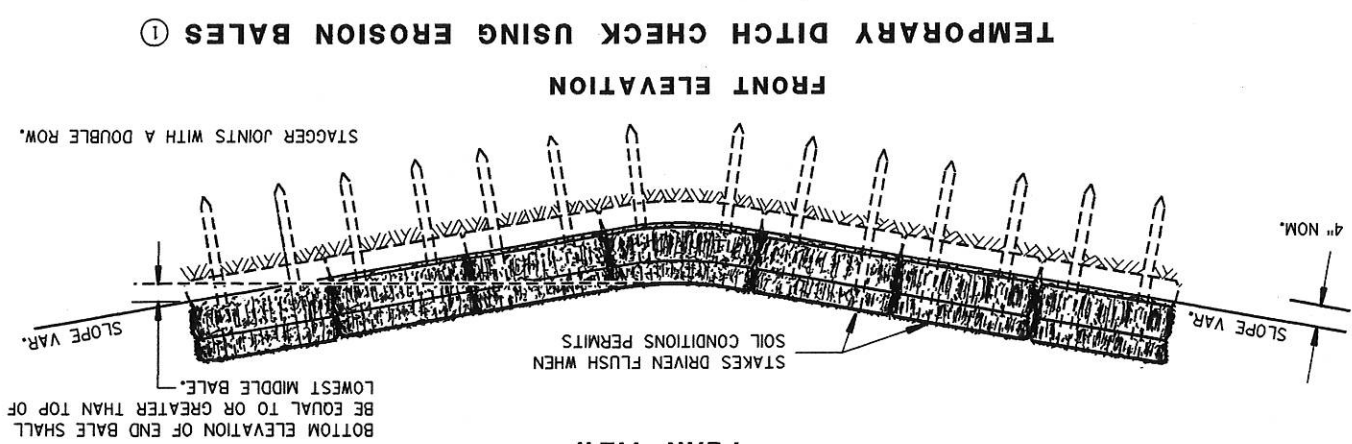
TURBIDITY BARRIER DETAIL SHOWING  
TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
6/4/02  
DATE  
CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA



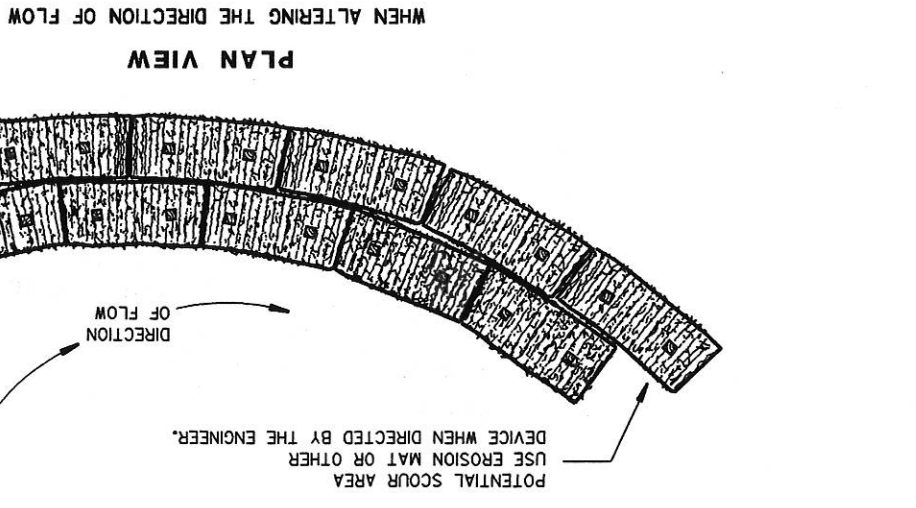
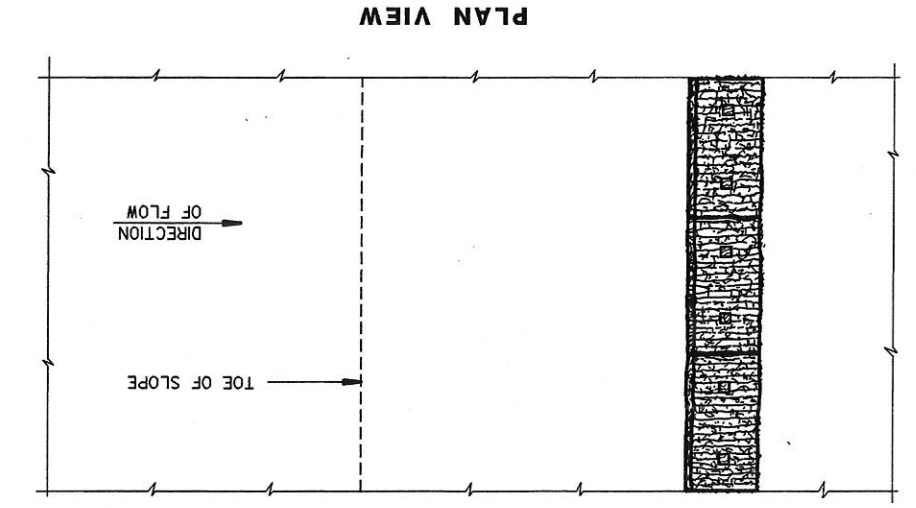
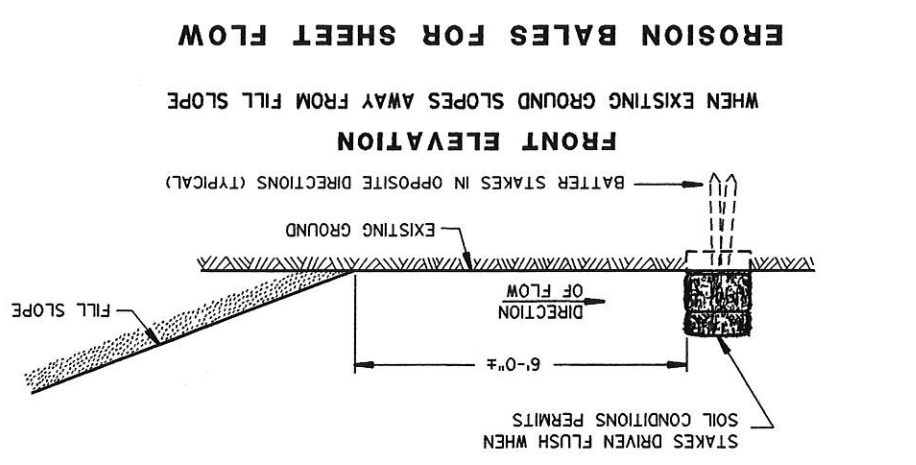


FOR SCOUR PROTECTION USE:  
EROSION MAT FOR CHANNEL LINING,  
LAP MAT UNDER UPSTREAM BALES  
AND SECURE FABRIC WITH WOOD STAKES,  
AT 3-FOOT INTERVALS.

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

STAGGER JOINTS WITH A DOUBLE ROW.

TEMPORARY DITCH CHECK USING EROSION BALES ①



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

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.

GENERAL NOTES

FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

BATTER STAKES IN OPPOSITE DIRECTIONS (TYPICAL)

EXISTING GROUND

DIRECTION OF FLOW

6'-0"±

SOIL CONDITIONS PERMITS

STAKES DRIVEN FLUSH WHEN

PLAN VIEW

DIRECTION OF FLOW

TOE OF SLOPE

WHEN ALTERING THE DIRECTION OF FLOW

PLAN VIEW

DIRECTION OF FLOW

POTENTIAL SCOUR AREA  
USE EROSION MAT OR OTHER  
DEVICE WHEN DIRECTED BY THE ENGINEER.

END TREATMENT ON SLOPES  
TO BE SIMILAR TO CHANNEL  
FLOW DETAIL.

TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

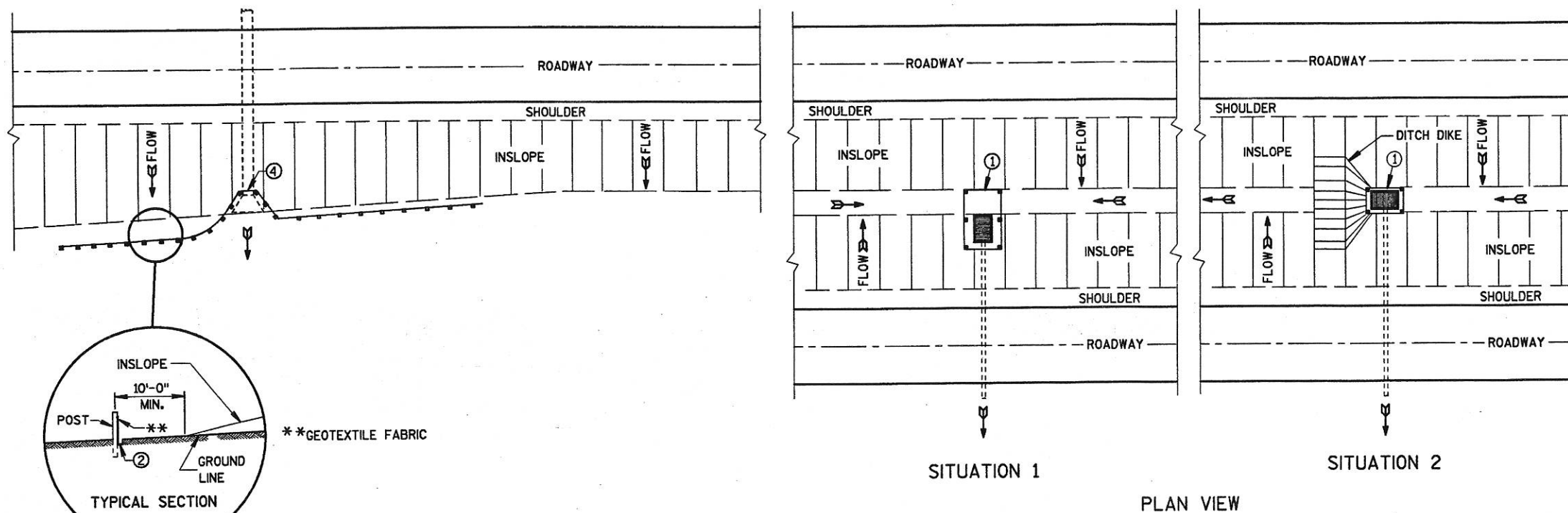
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE 1/4/02

CHIEF ROADWAY DEVELOPMENT ENGINEER

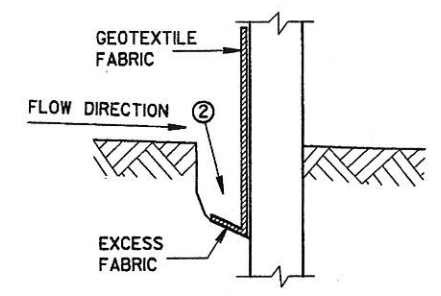
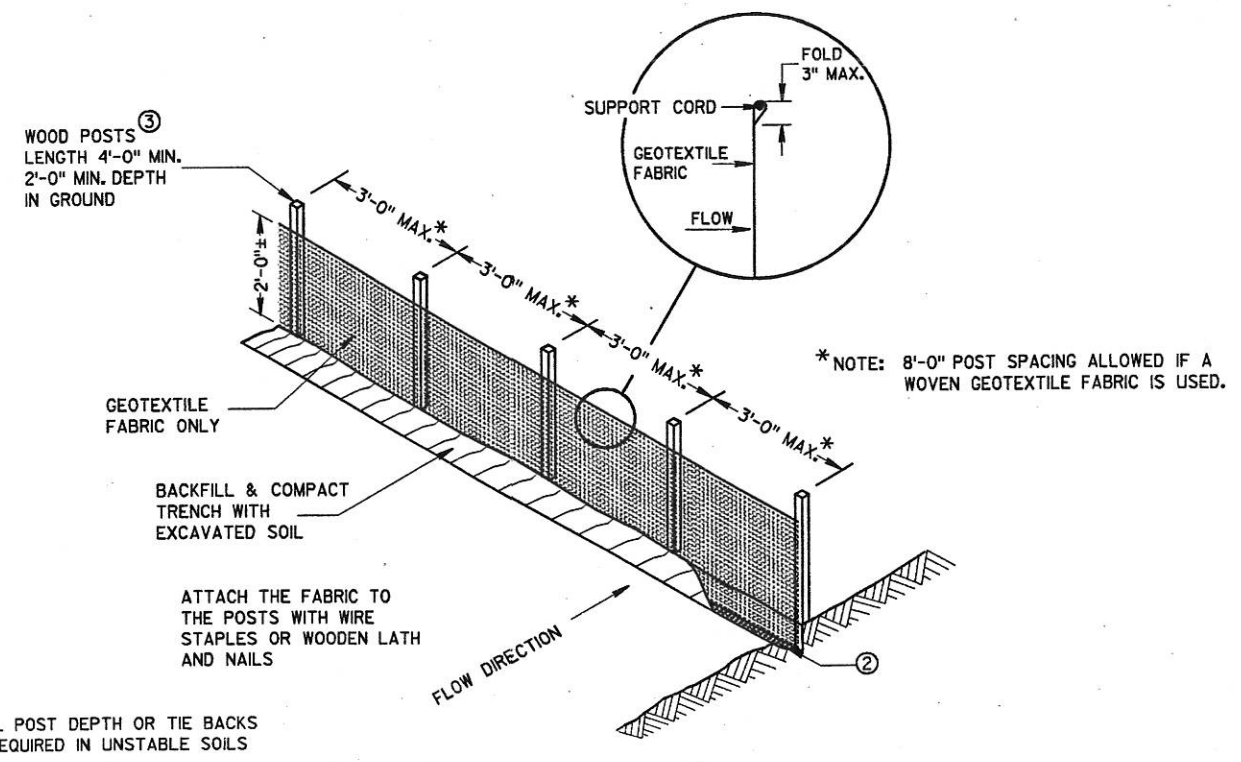
FHWA



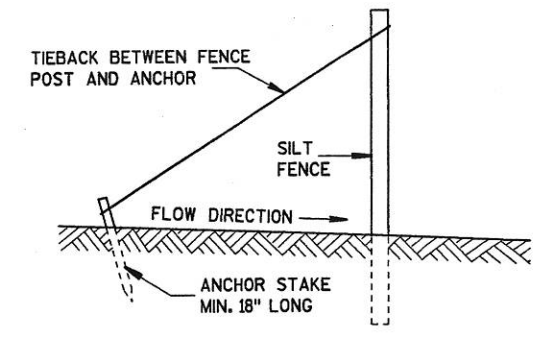
- GENERAL NOTES**
- DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
  - ② TRENCH SHALL BE A MINIMUM OF 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.

PLAN VIEW  
**TYPICAL APPLICATION OF SILT FENCE**

**SILT FENCE AT MEDIAN SURFACE DRAINS**



**TRENCH DETAIL**



**SILT FENCE TIE BACK**  
(WHEN REQUIRED BY THE ENGINEER)

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

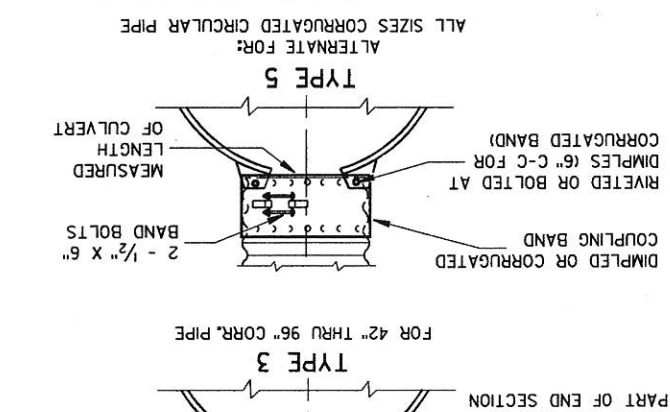
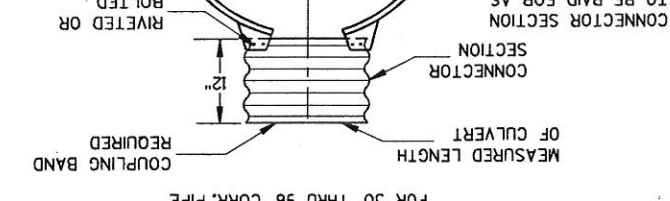
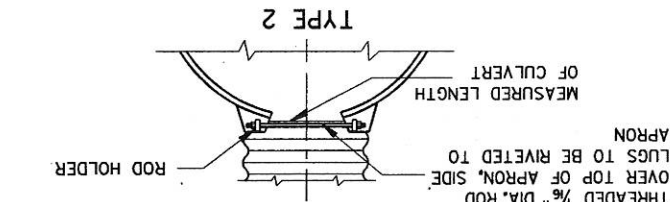
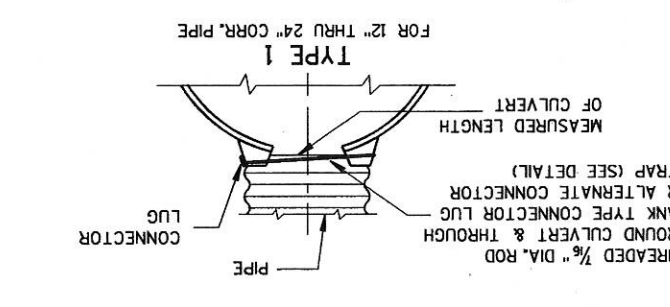
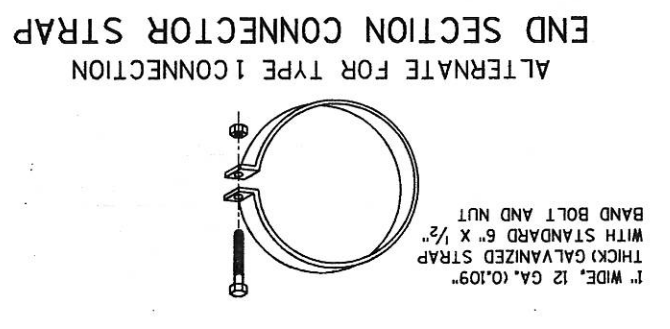
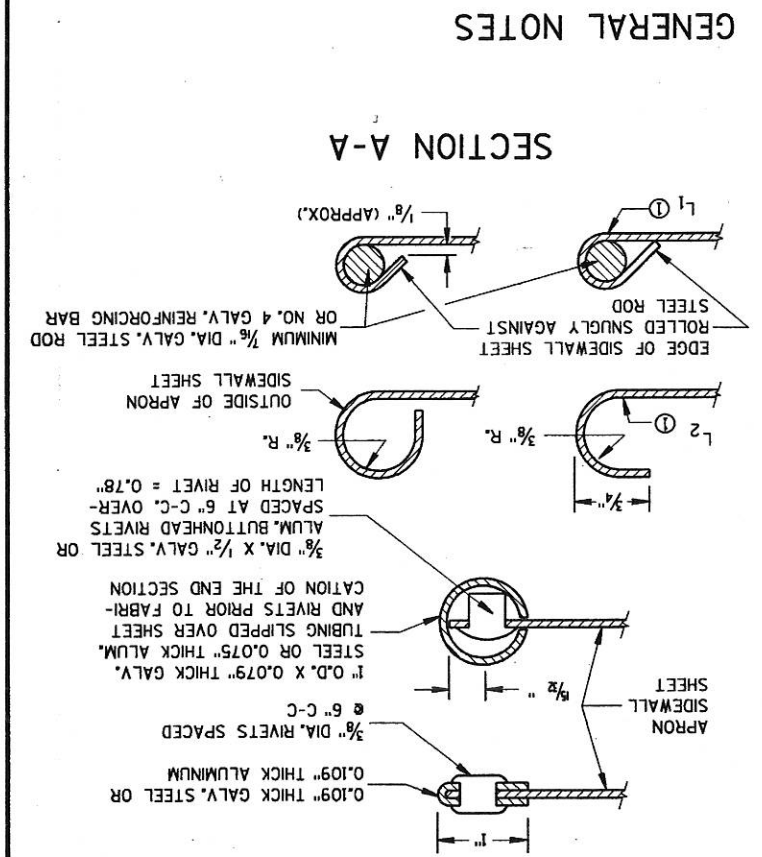
**SILT FENCE**

<b>SILT FENCE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 03/06/00 DATE	<i>Roy A. [Signature]</i> CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

APPROVED  
 DATE 11/30/11  
 CHIEF ROADWAY DEVELOPMENT ENGINEER  
 STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 CULVERT PIPE  
 APRON ENDWALLS FOR

**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 VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE 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 PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS. FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



**CONNECTION DETAILS**

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

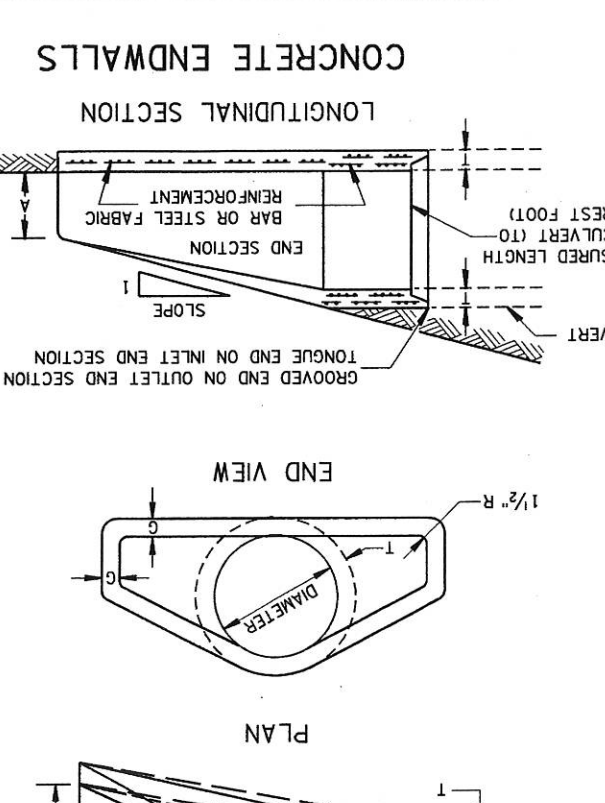
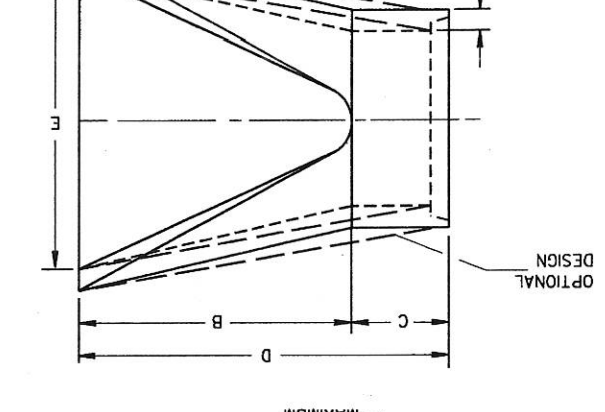
FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

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.

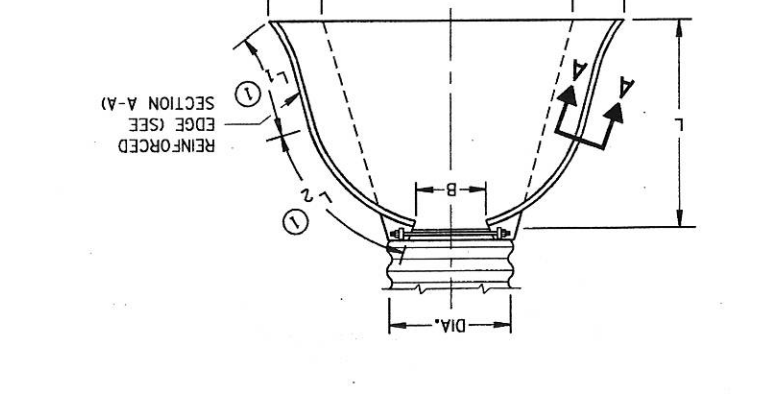
**REINFORCED CONCRETE APRON ENDWALLS**

PIPE DIA. (IN.) APPROX.	DIMENSIONS (inches)						
	T	A	B	C	D	E	G
12	4	24	48 1/2	72 1/2	24	2	3 to 1
15	6	27	54	81	27	2 1/2	3 to 1
18	9	30	63	94 1/2	30	3	3 to 1
21	12	33	72	108	33	3 1/2	3 to 1
24	15	36	81	126	36	4	3 to 1
27	18	39	90	144	39	4 1/2	3 to 1
30	21	42	99	162	42	5	3 to 1
33	24	45	108	180	45	5 1/2	3 to 1
36	27	48	117	198	48	6	3 to 1
39	30	51	126	216	51	6 1/2	3 to 1
42	33	54	135	234	54	7	3 to 1
45	36	57	144	252	57	7 1/2	3 to 1
48	39	60	153	270	60	8	3 to 1
51	42	63	162	288	63	8 1/2	3 to 1
54	45	66	171	306	66	9	3 to 1
57	48	69	180	324	69	9 1/2	3 to 1
60	51	72	189	342	72	10	3 to 1
63	54	75	198	360	75	10 1/2	3 to 1
66	57	78	207	378	78	11	3 to 1
69	60	81	216	396	81	11 1/2	3 to 1
72	63	84	225	414	84	12	3 to 1
75	66	87	234	432	87	12 1/2	3 to 1
78	69	90	243	450	90	13	3 to 1
81	72	93	252	468	93	13 1/2	3 to 1
84	75	96	261	486	96	14	3 to 1
87	78	99	270	504	99	14 1/2	3 to 1
90	81	102	279	522	102	15	3 to 1



**METAL APRON ENDWALLS**

PIPE DIA. (IN.) STEEL THICK.	DIMENSIONS (inches)						
	A	B	H	L	L <sub>1</sub>	L <sub>2</sub>	W
12	6	6	6	6	6	6	24
15	7	7	7	7	7	7	30
18	8	8	8	8	8	8	36
21	9	9	9	9	9	9	42
24	10	10	10	10	10	10	48
27	11	11	11	11	11	11	54
30	12	12	12	12	12	12	60
33	13	13	13	13	13	13	66
36	14	14	14	14	14	14	72
39	15	15	15	15	15	15	78
42	16	16	16	16	16	16	84
45	17	17	17	17	17	17	90
48	18	18	18	18	18	18	96
51	19	19	19	19	19	19	102
54	20	20	20	20	20	20	108
57	21	21	21	21	21	21	114
60	22	22	22	22	22	22	120
63	23	23	23	23	23	23	126
66	24	24	24	24	24	24	132
69	25	25	25	25	25	25	138
72	26	26	26	26	26	26	144
75	27	27	27	27	27	27	150
78	28	28	28	28	28	28	156
81	29	29	29	29	29	29	162
84	30	30	30	30	30	30	168
87	31	31	31	31	31	31	174
90	32	32	32	32	32	32	180
93	33	33	33	33	33	33	186
96	34	34	34	34	34	34	192

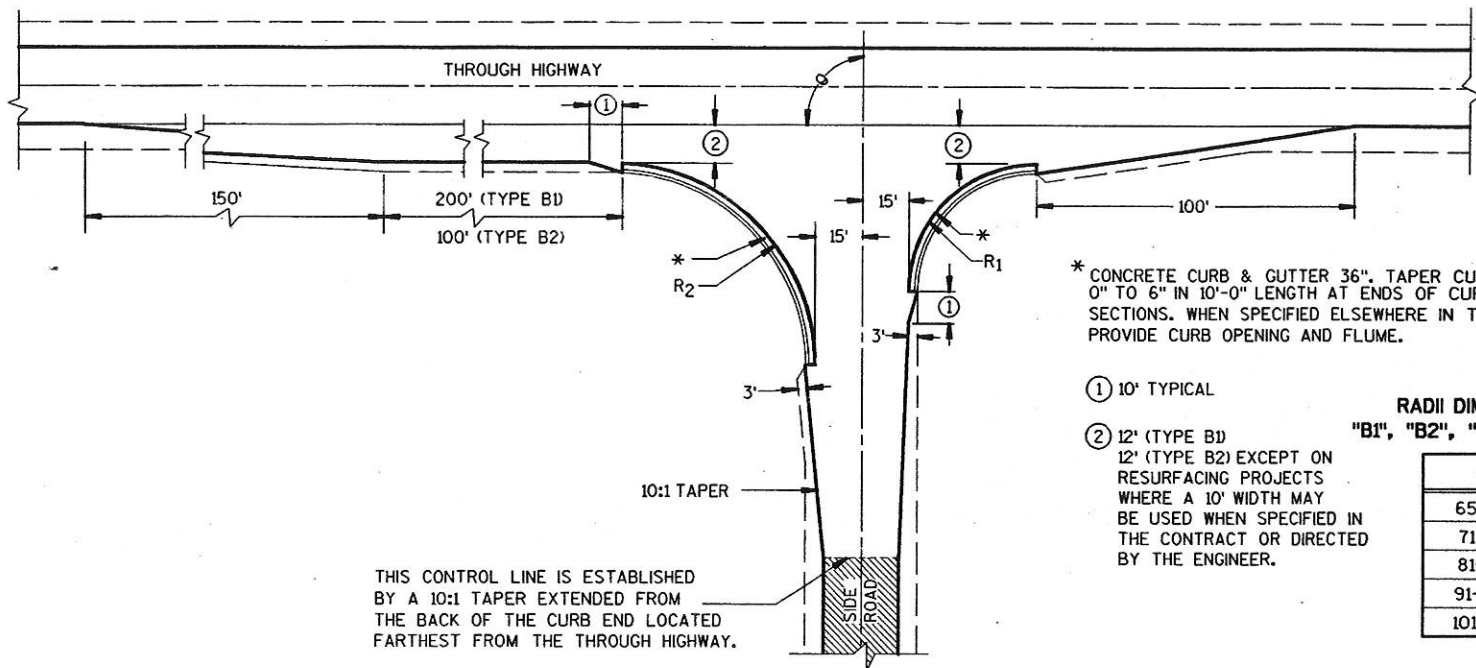


**METAL APRON ENDWALLS**

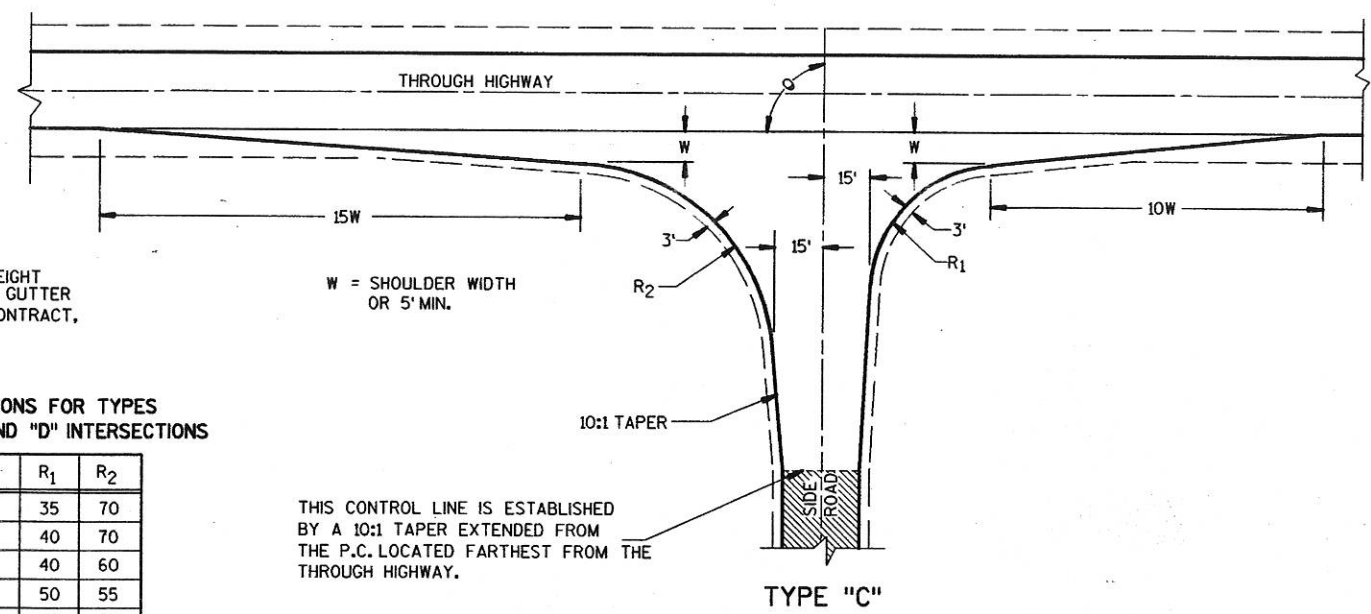
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER.

TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS.

1/2" DIA. HOLES FOR BOLTS OR RIVETS SHALL BE C-C MAX. SPACING 12" FOR ON THE PLANS.



TYPE "B1" AND "B2"



TYPE "C"

\* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

- ① 10' TYPICAL
- ② 12' (TYPE B1)  
12' (TYPE B2) EXCEPT ON RESURFACING PROJECTS WHERE A 10' WIDTH MAY BE USED WHEN SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R <sub>1</sub>	R <sub>2</sub>
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45

THIS CONTROL LINE IS ESTABLISHED BY A 10:1 TAPER EXTENDED FROM THE P.C. LOCATED FARTHEST FROM THE THROUGH HIGHWAY.

**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.

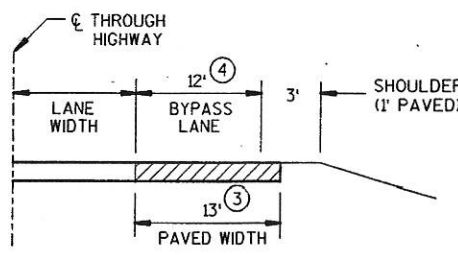
**SIDE ROAD SURFACING NOTE**

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.

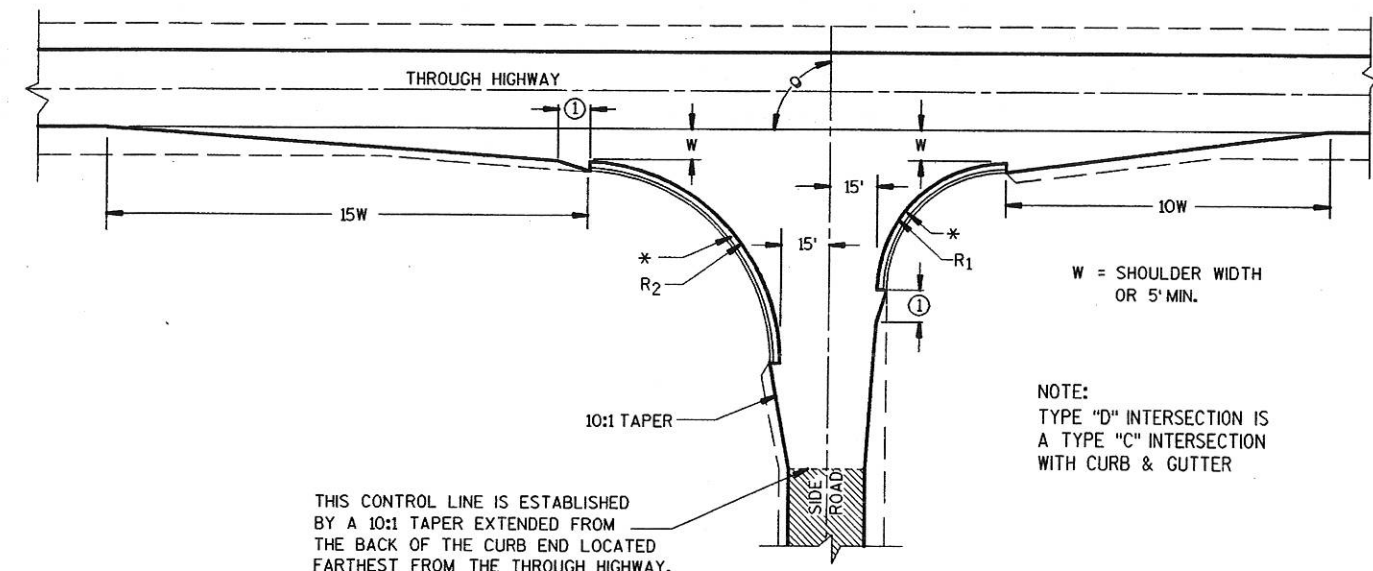
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

EXISTING SURFACE

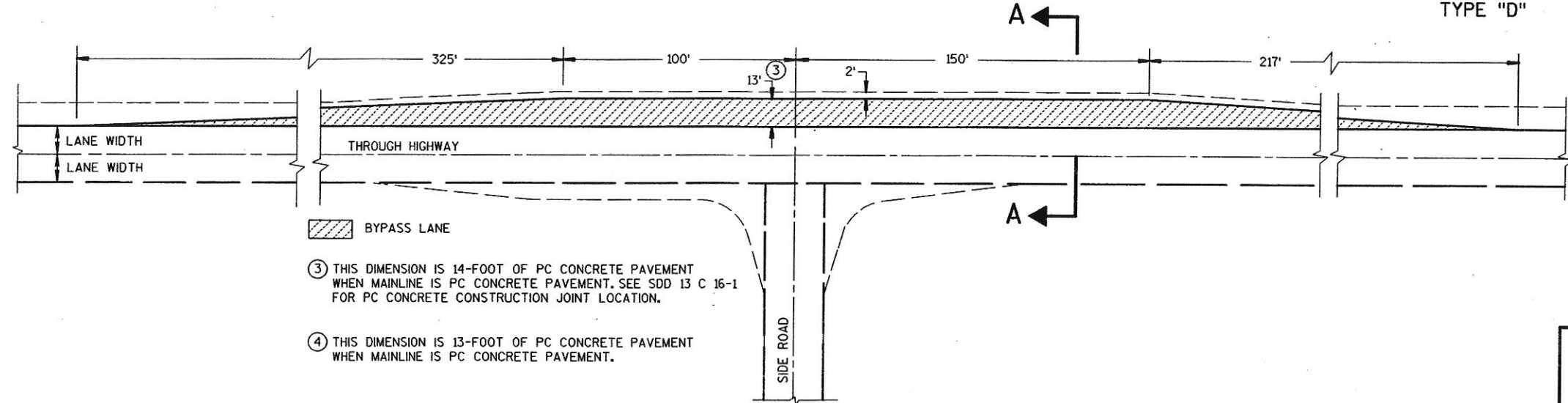


SECTION A-A  
(SHOWING BYPASS LANE AND SHOULDER)



TYPE "D"

NOTE:  
TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB & GUTTER

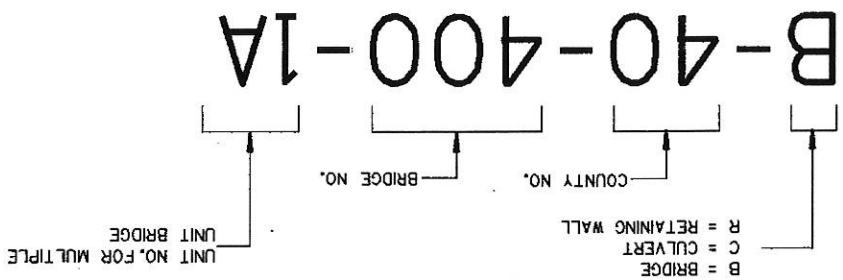


TEE INTERSECTION BYPASS LANE DETAIL

- ③ THIS DIMENSION IS 14-FOOT OF PC CONCRETE PAVEMENT WHEN MAINLINE IS PC CONCRETE PAVEMENT. SEE SDD 13 C 16-1 FOR PC CONCRETE CONSTRUCTION JOINT LOCATION.
- ④ THIS DIMENSION IS 13-FOOT OF PC CONCRETE PAVEMENT WHEN MAINLINE IS PC CONCRETE PAVEMENT.

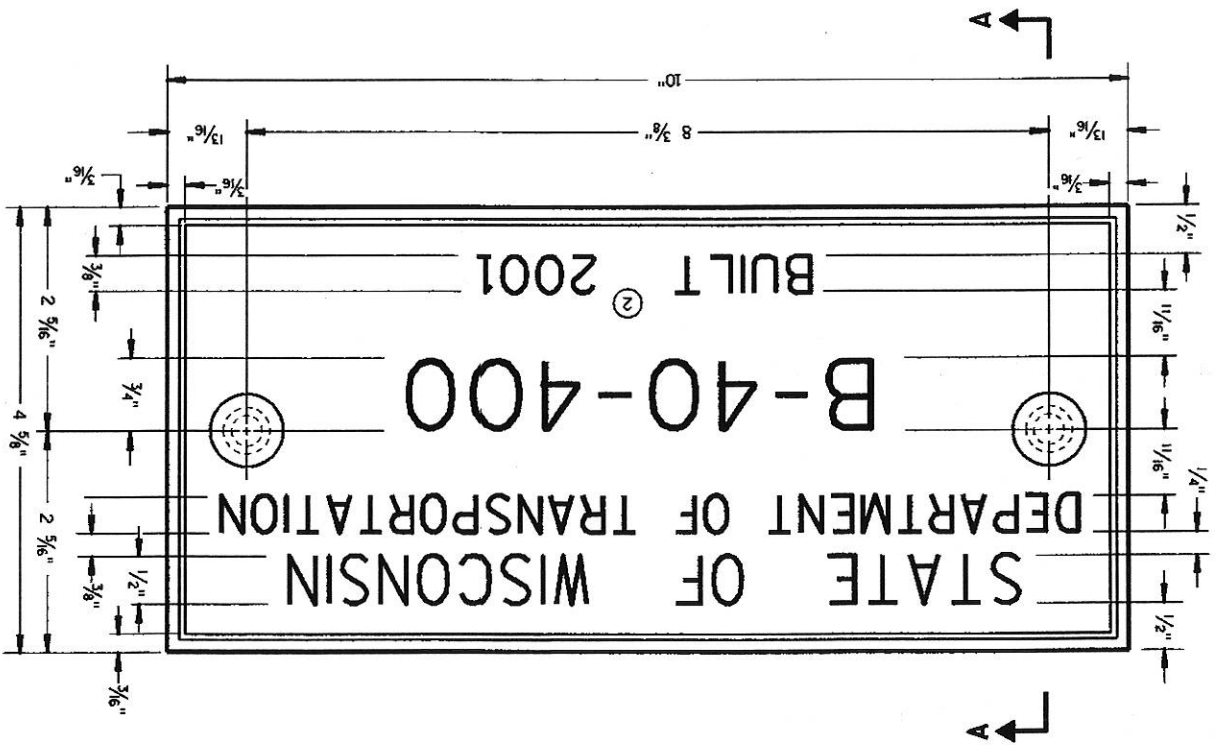
AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE  
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES

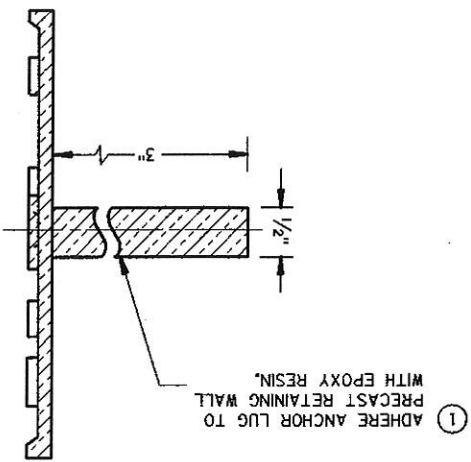


FOR MULTI-UNIT STRUCTURES  
LINE 3 ABOVE SHALL READ

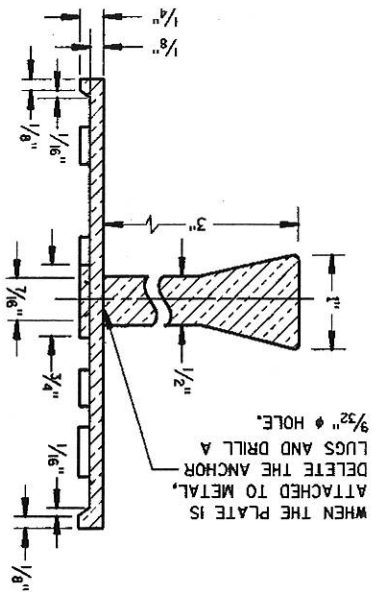
TYPICAL NAME PLATE  
(BRIDGES, CULVERTS, AND RETAINING WALLS)



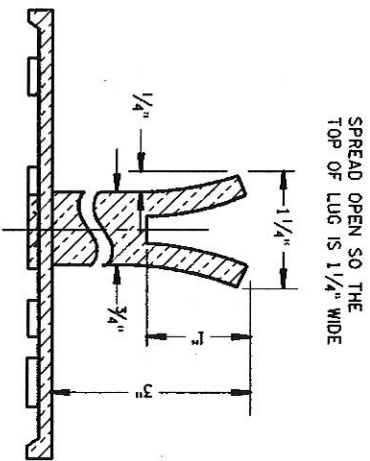
ALTERNATE LUG  
(FOR ATTACHMENT TO PRECAST STRUCTURES)



SECTION A-A



ALTERNATE LUG



GENERAL NOTES

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  - ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.
- NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 506.2.4 OF THE STANDARD SPECIFICATIONS. THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

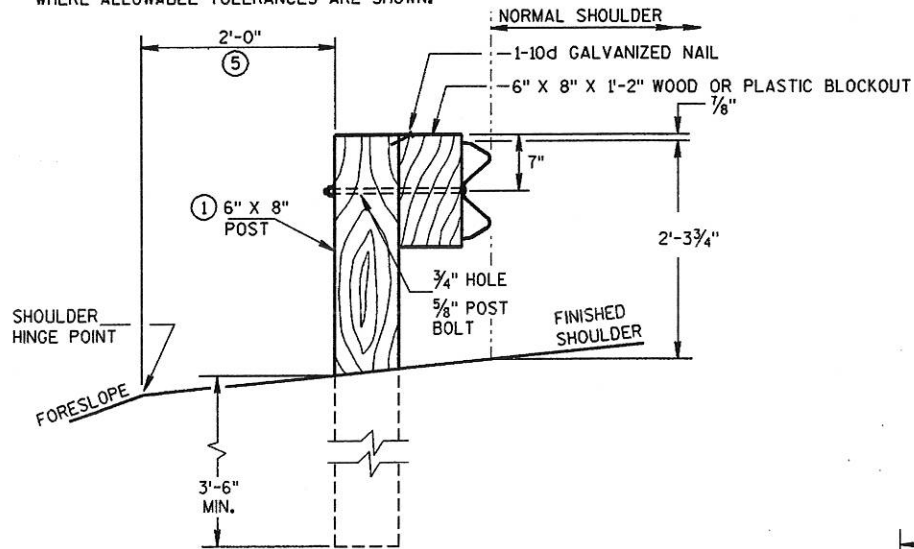
NAME PLATE  
 (STRUCTURES)  
 STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 APPROVED  
 DATE *11/28/00*  
 CHIEF STRUCTURAL DEVELOPMENT ENGINEER  
 FHWAA

**GENERAL NOTES**

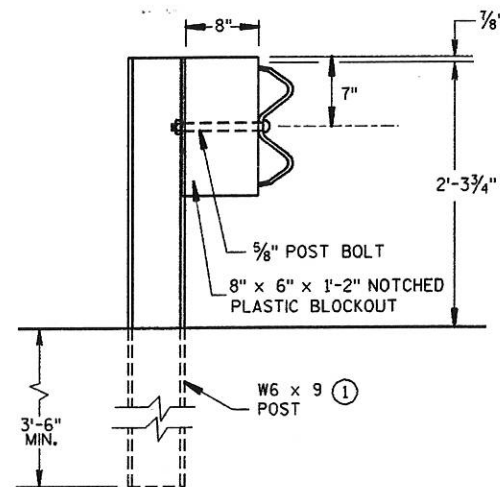
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO AASHTO M183. GALVANIZE ACCORDING TO AASHTO M 11L EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ WHEN SPECIFIED IN THE PLANS, THE 2-FOOT MINIMUM TO HINGE POINT MAY BE REDUCED OR ELIMINATED IF EXISTING CONDITIONS DO NOT PERMIT THE DESIRABLE EARTHWORK.  
INCREASE POST LENGTH TO PROVIDE A MINIMUM EMBEDMENT OF 3'-6" IF THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.

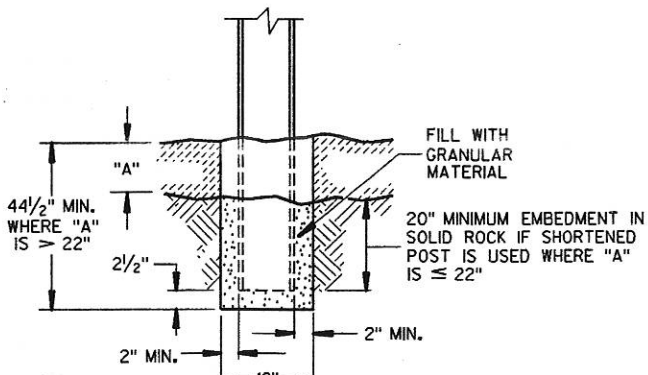
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



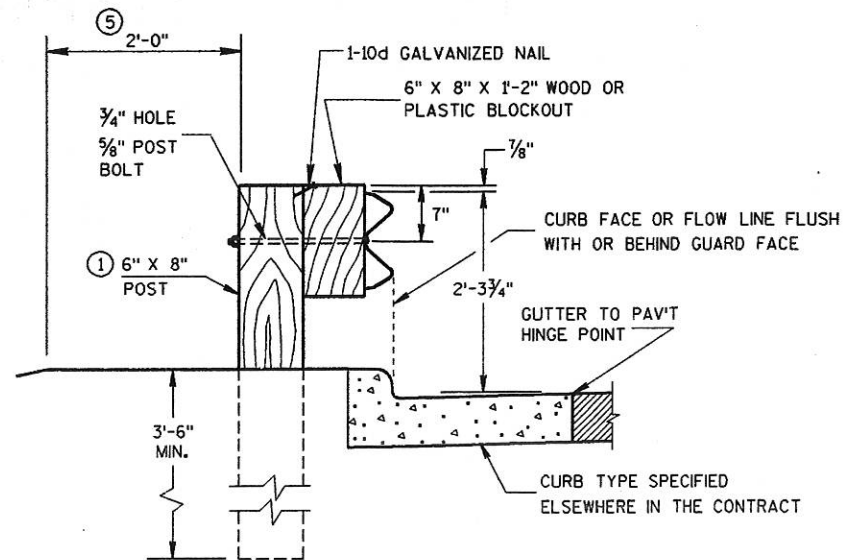
**END VIEW LOCATED ALONG A ROADWAY SHOULDER**



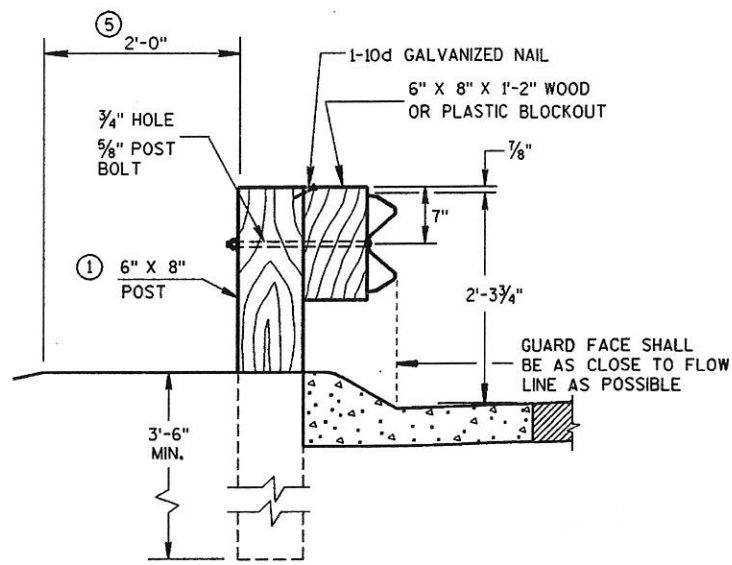
**END VIEW STEEL POST & NOTCHED PLASTIC BLOCKOUT ALTERNATIVE**



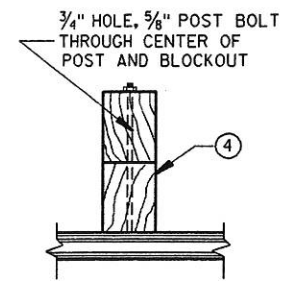
**END VIEW SETTING STEEL OR WOOD POST IN ROCK ⑥**



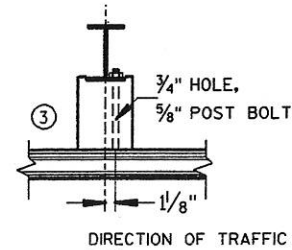
**END VIEW LOCATED ALONG A CURBED ROADWAY**



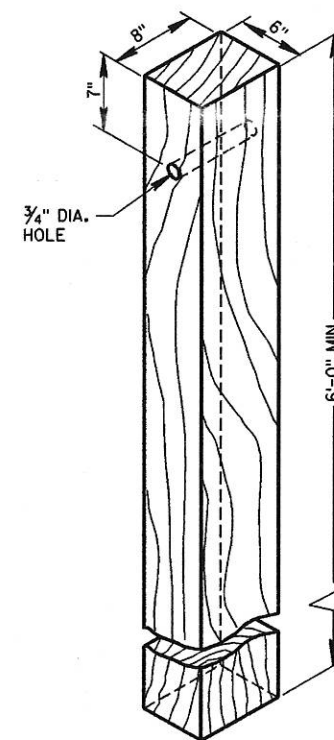
**END VIEW LOCATED ALONG A MOUNTABLE CURBED ROADWAY**



**PLAN VIEW WOOD POST, BLOCKOUT & BEAM**

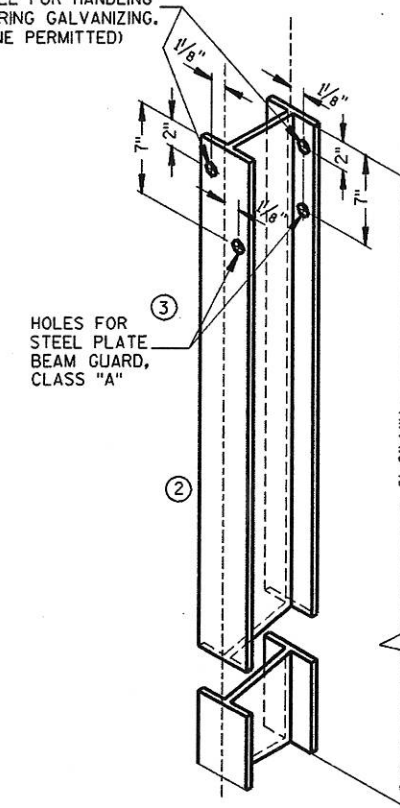


**PLAN VIEW STEEL POST, NOTCHED PLASTIC BLOCKOUT & BEAM**



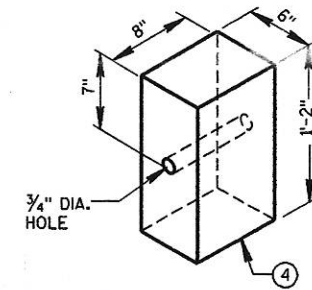
**WOOD POST (6"X8") NOMINAL**

OPTIONAL 1 3/16" DIA. HOLE FOR HANDLING DURING GALVANIZING. (ONE PERMITTED)

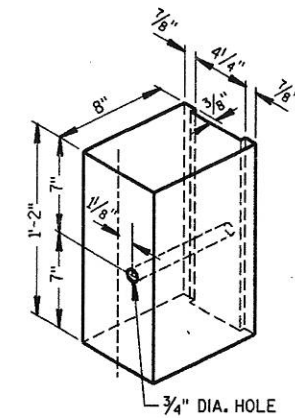


**STEEL POST & HOLE PUNCHING DETAIL (W6 X 9) ①**

ALL HOLES 1 3/16" DIAMETER EXCEPT AS NOTED



**WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS**

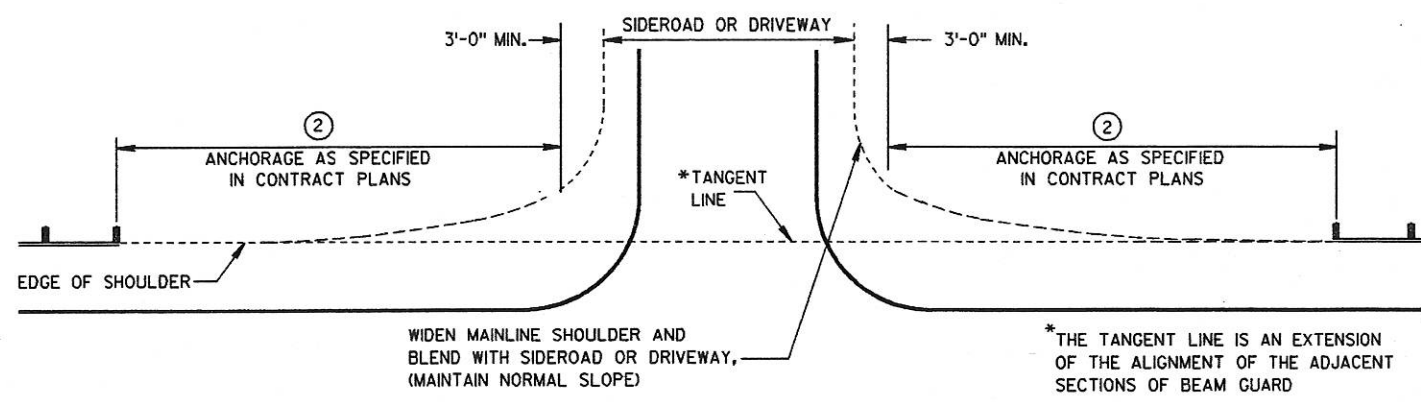


**NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS**

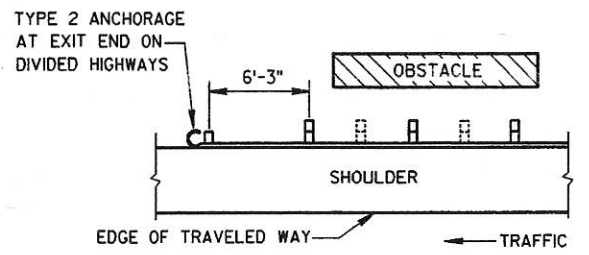
**STEEL PLATE BEAM GUARD, CLASS 'A' INSTALLATION & ELEMENTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION





**BEAM GUARD AT SIDEROADS OR DRIVEWAYS**



**BEAM GUARD AT OBSTACLES  
EXIT END - ONE WAY TRAFFIC**

**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.

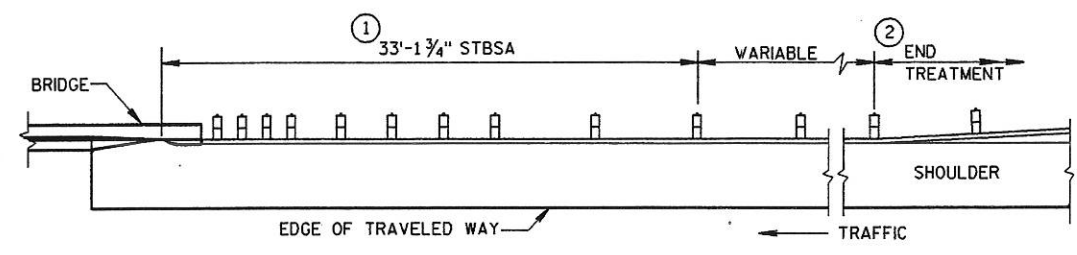
W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

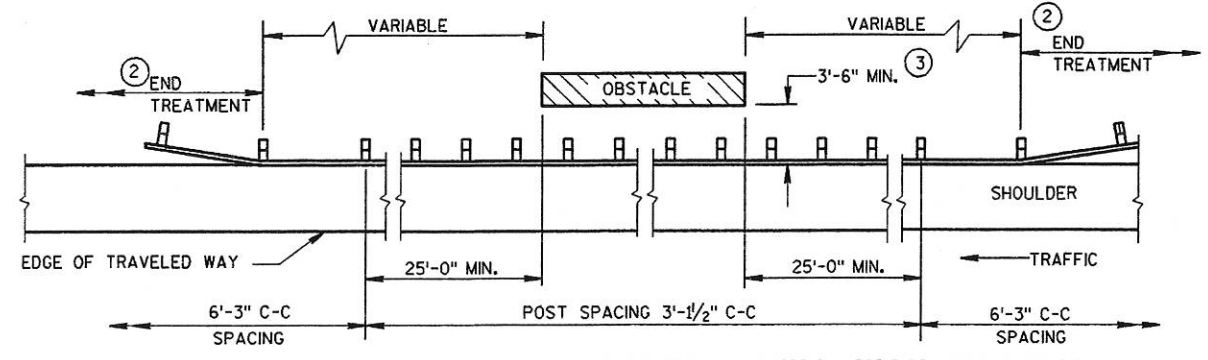
- ① USE STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA).
- ② USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

**③ DESIGN DEFLECTION OF  
W-BEAM BARRIER SYSTEM**

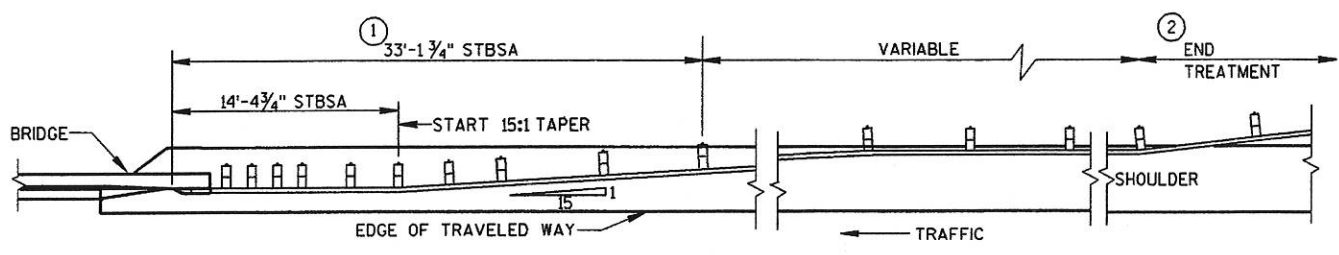
LATERAL DISTANCE TO FIXED OBJECT	POST SPACING
3'-6" TO 4'-6"	3' - 1/2"
4'-6" AND OVER	6' - 3"



**BEAM GUARD AT FULL WIDTH BRIDGES**



**BEAM GUARD AT OSBSTACLES - TWO WAY TRAFFIC**  
(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



**BEAM GUARD AT NARROW BRIDGES  
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)**

**STEEL PLATE BEAM GUARD,  
CLASS "A"  
(AT BRIDGES, OBSTACLES  
AND SIDEROADS/DRIVEWAYS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
12/08/00  
DATE

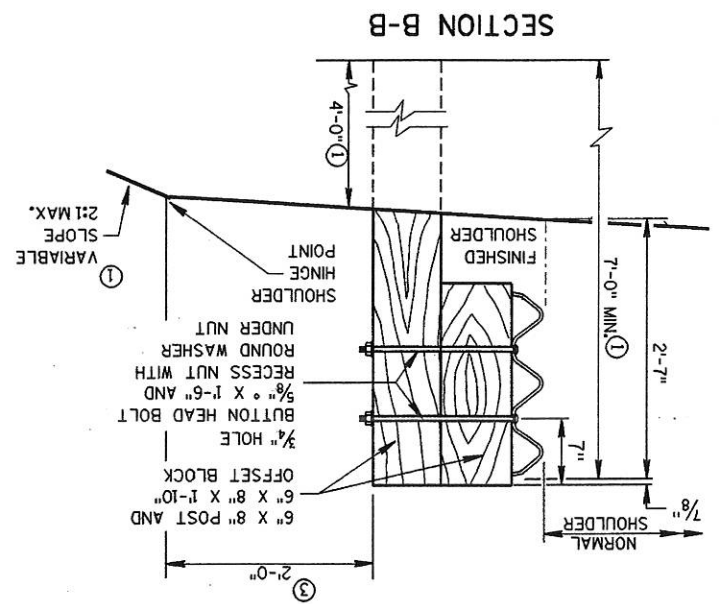
*John Haverberg*  
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

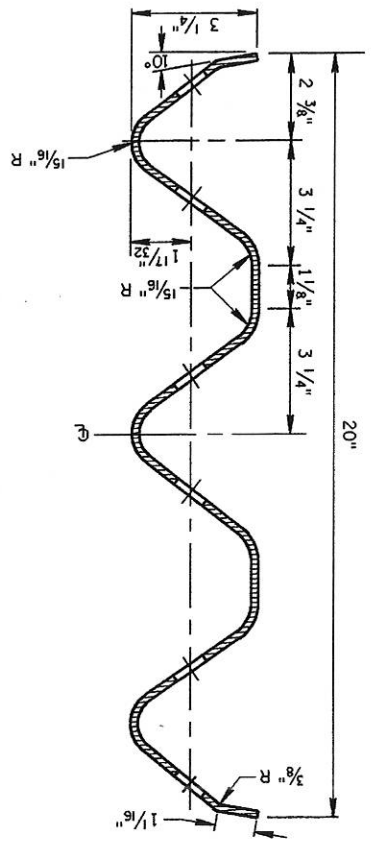
S.D.D. 14 B 18-40



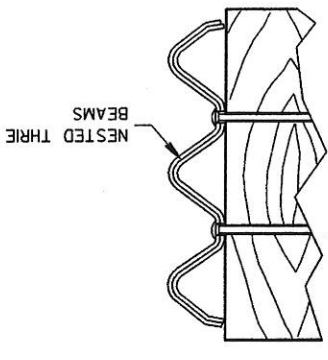
STEEL THREE BEAM  
STRUCTURE APPROACH



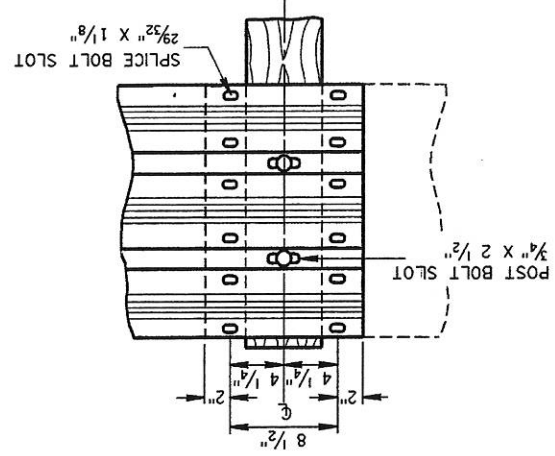
SECTION THRU THREE  
BEAM RAIL ELEMENT



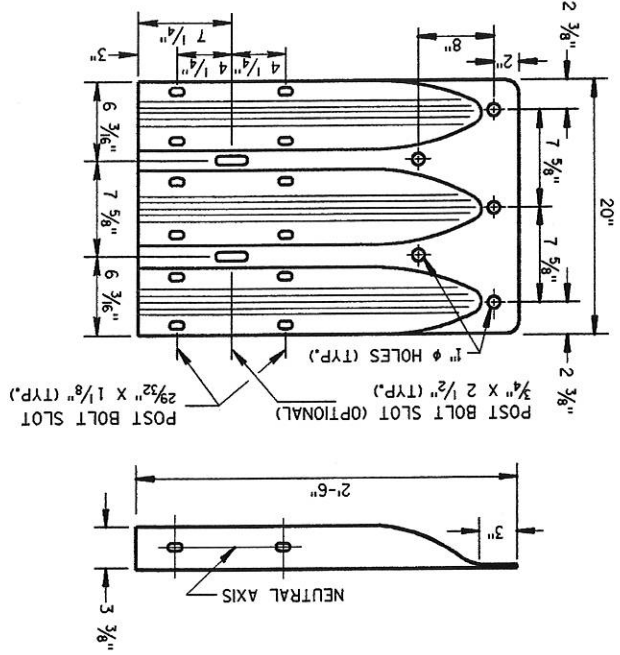
PARTIAL SECTION A-A



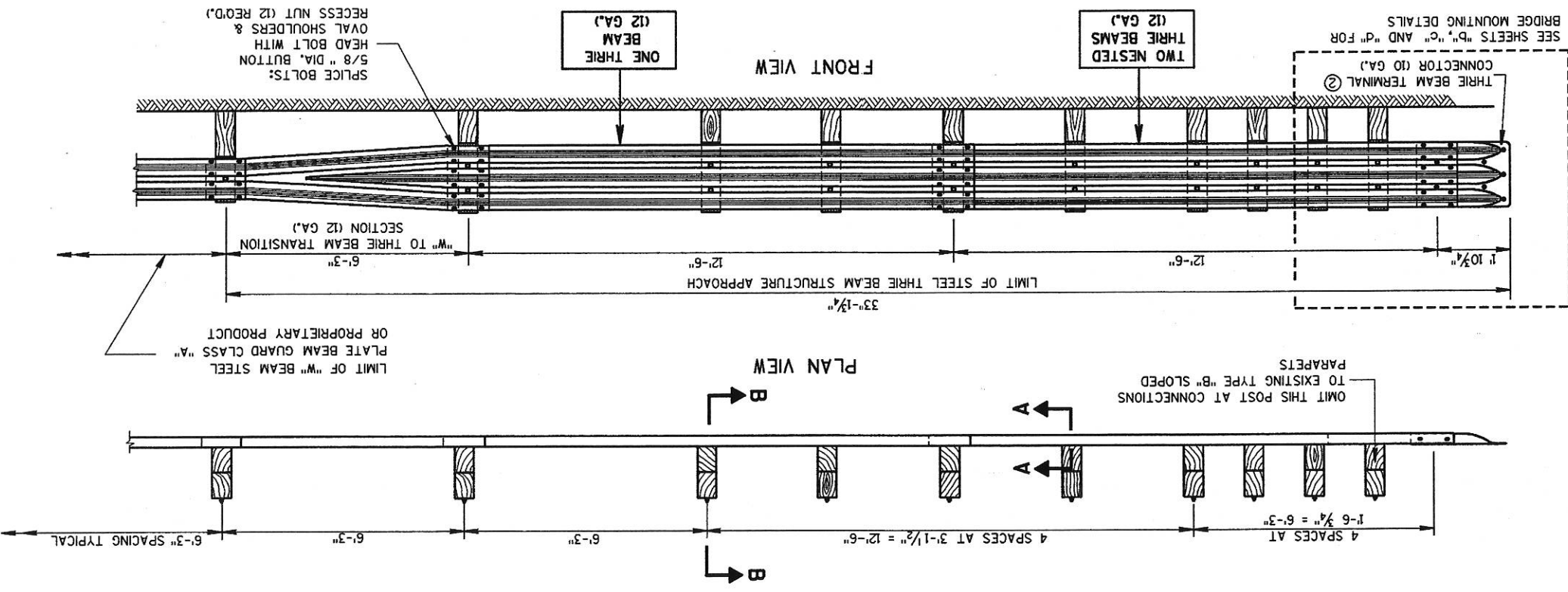
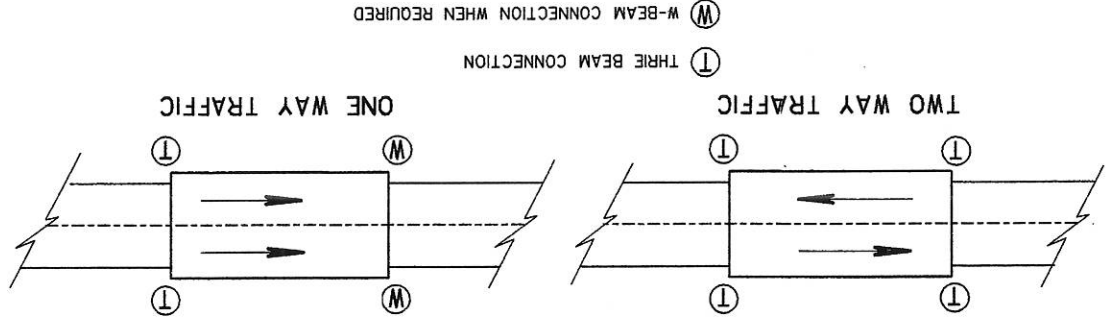
THREE BEAM SPLICE



THREE BEAM TERMINAL CONNECTOR

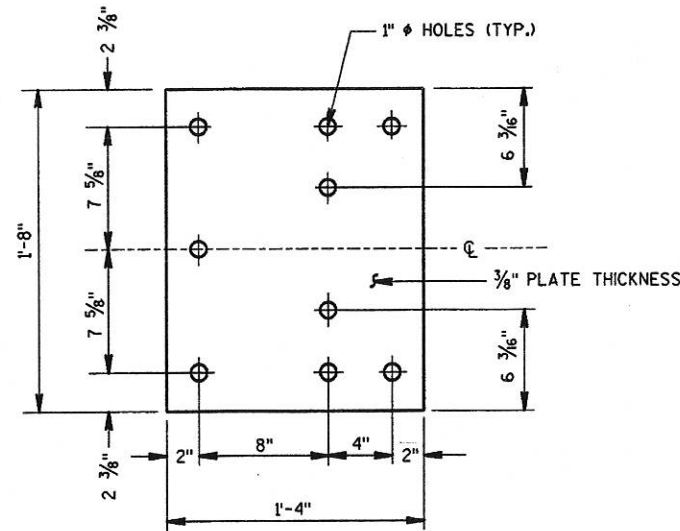


TYPICAL LOCATIONS OF THREE BEAM  
AND W-BEAM CONNECTIONS TO BRIDGE

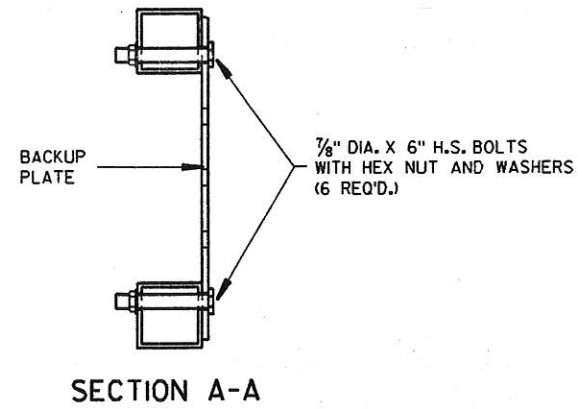


GENERAL NOTES

- 1 INCREASE POST LENGTH TO PROVIDE A MINIMUM EMBEDMENT OF 4'-0" IF THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.
  - 2 BRIDGE RAILING TYPE "W" DO NOT REQUIRE A TERMINAL CONNECTOR.
  - 3 WHEN SPECIFIED IN THE PLANS, THE CONTRACTOR MAY REDUCE OR ELIMINATE THE 2 FOOT MINIMUM TO HINGE POINT IF EXISTING CONDITIONS DO NOT PERMIT THE DESIRABLE EARTHWORK.
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE, BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.
- DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKS IN THE STEEL THREE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A", TYPE 2.
- BOLT THE THREE BEAM TO ALL POSTS AND BLOCKS, DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".
- FURNISH AND CONSTRUCT THREE BEAM STRUCTURAL APPROACH ACCORDING TO THE REQUIREMENTS OF SECTION 614 OF THE STANDARD SPECIFICATIONS, THREE BEAM SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M180, CLASS "A", TYPE 2.
- SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



BACK-UP PLATE DETAIL

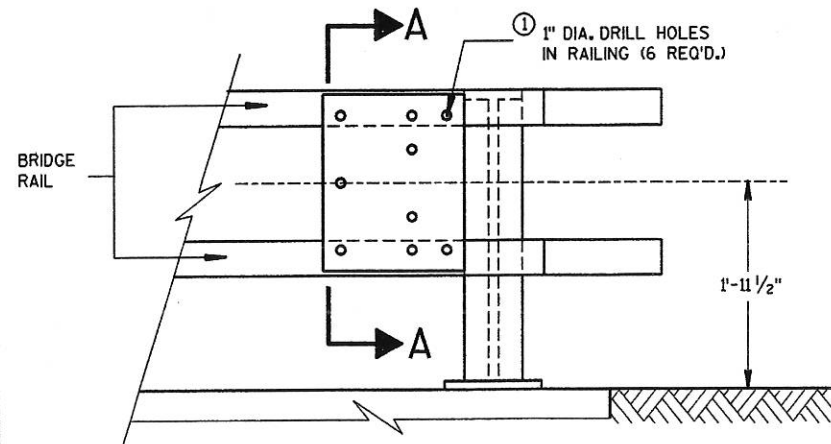


SECTION A-A

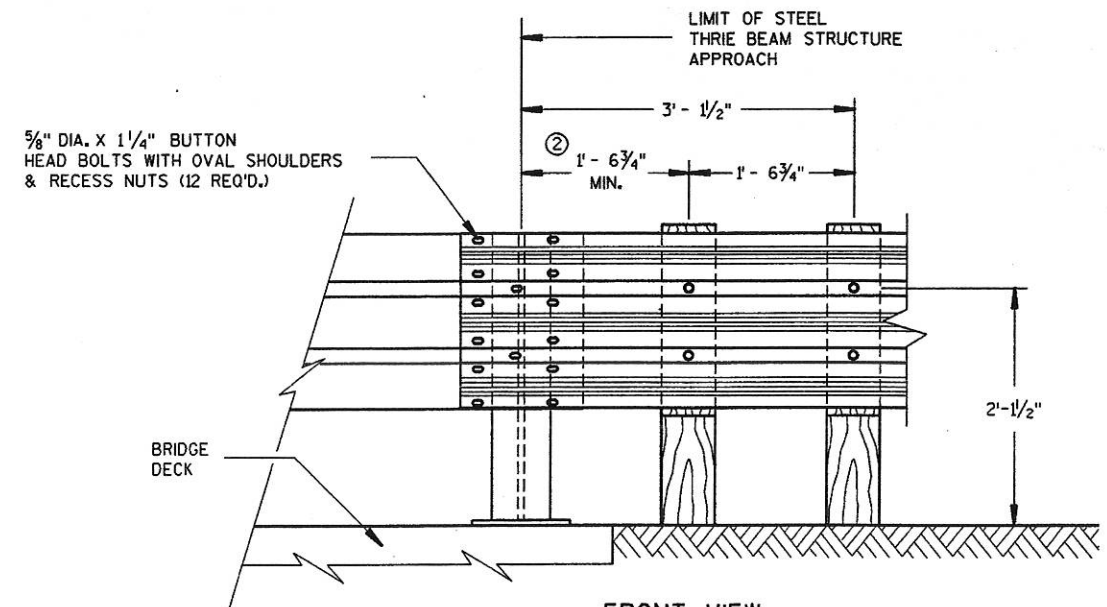
**GENERAL NOTES**

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

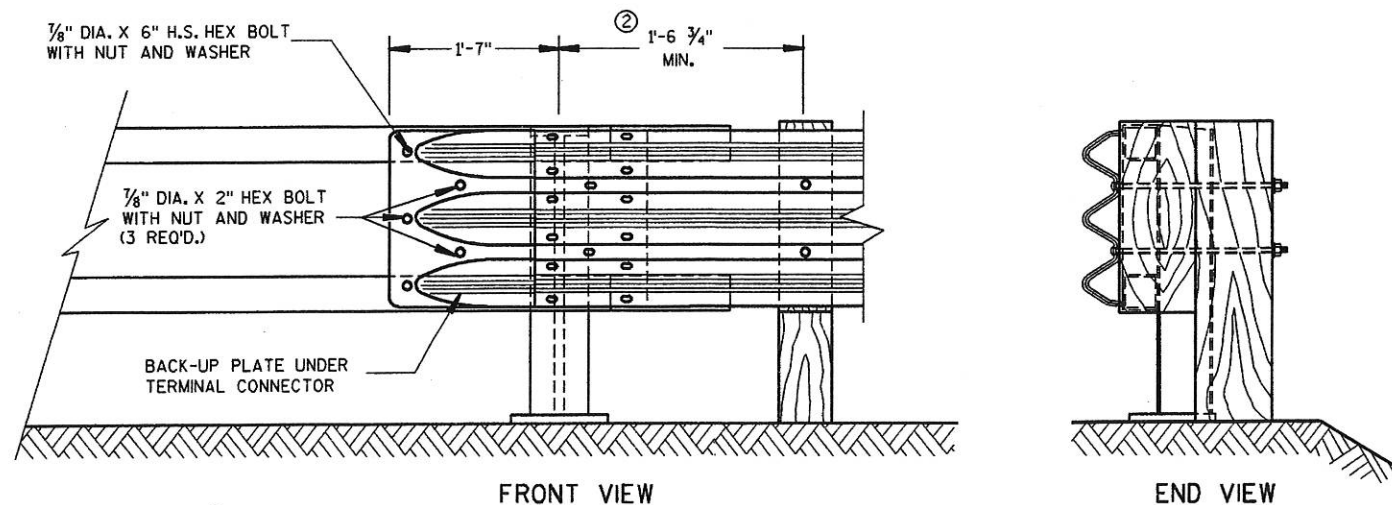
- ① INCLUDE THE PAYMENT FOR DRILLING HOLES IN RAILING IN THE ITEM "STEEL THRIE BEAM STRUCTURE APPROACH".
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW  
THRIE BEAM CONNECTION TO  
STEEL RAILING TYPE "W"



FRONT VIEW

END VIEW

THRIE BEAM CONNECTION TO  
TUBULAR RAILING TYPE "F"

STEEL THRIE BEAM STRUCTURE  
APPROACH, CONNECTION TO BRIDGE  
RAILING TYPES "F" AND "W"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
12/08/00 DATE *John Hansberg*  
CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

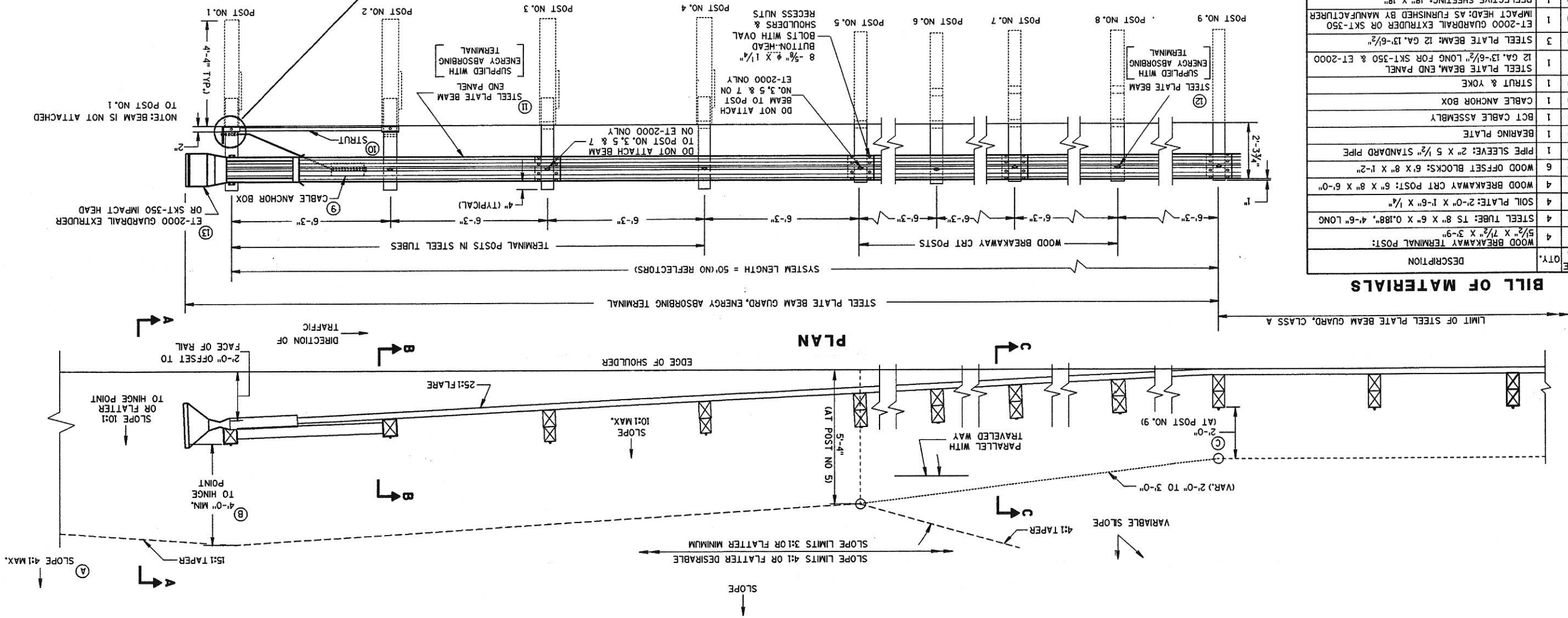
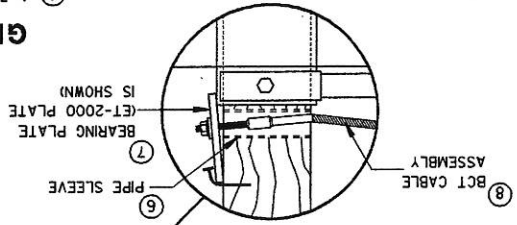
**GENERAL NOTES**

A 3:1 OR FLATTER SLOPE MAY BE USED FOR INSTALLATION ON EXISTING HIGHWAYS.

B WHEN SPECIFIED ELSEWHERE IN THE CONTRACT THE 4-FOOT MINIMUM TO HINGE POINT, MAY BE REDUCED OR ELIMINATED WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE EARTHWORK. SIMILARLY THE 15:1 TAPER MAY BE REDUCED TO 4:1.

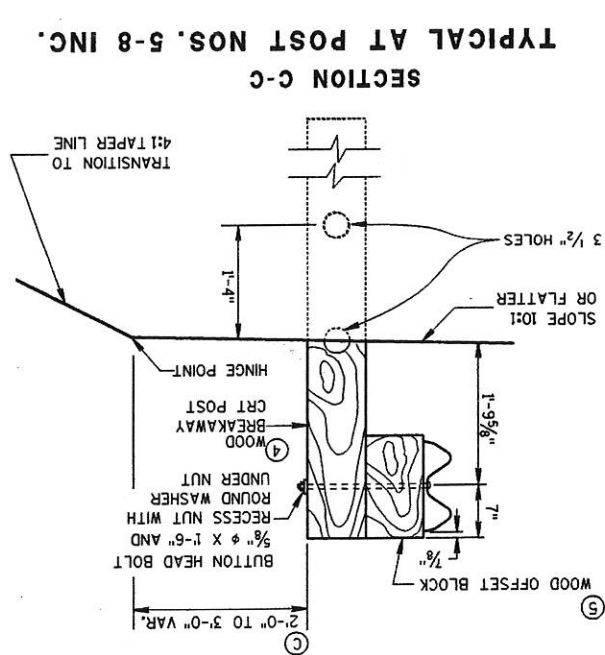
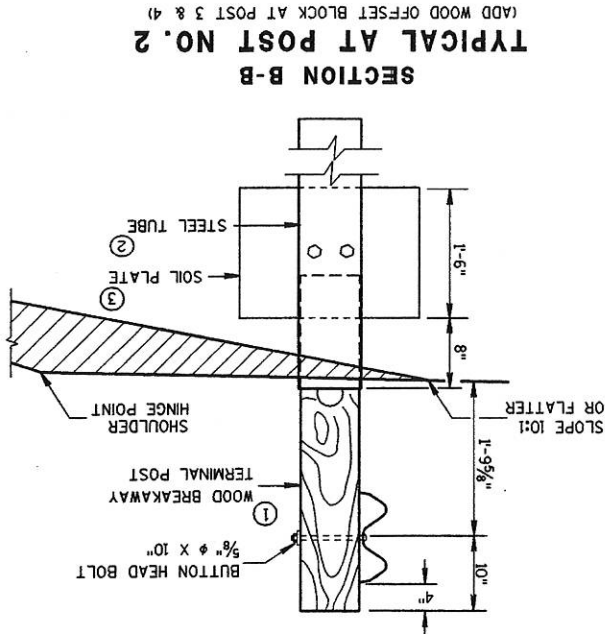
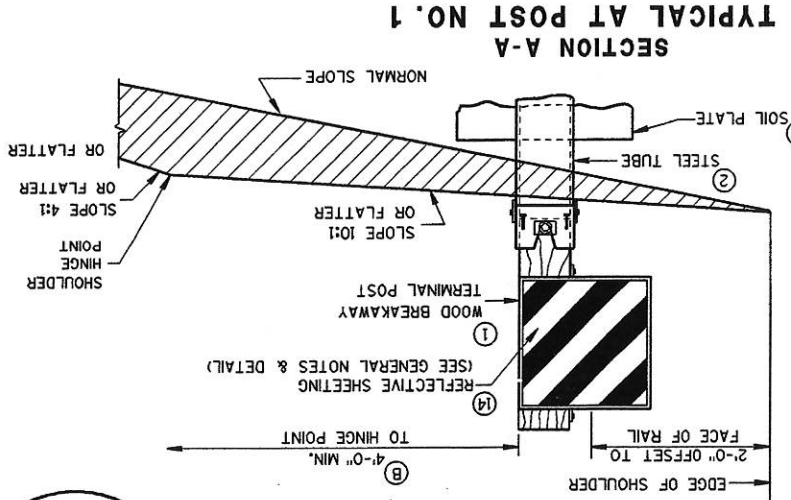
C WHEN SPECIFIED ELSEWHERE IN THE CONTRACT THE 2-FOOT MINIMUM TO HINGE POINT, MAY BE REDUCED OR ELIMINATED WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE EARTHWORK. SIMILARLY STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

**GENERAL NOTES**

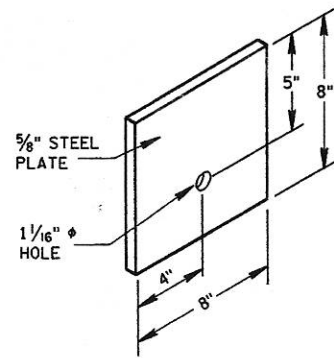


**BILL OF MATERIALS**

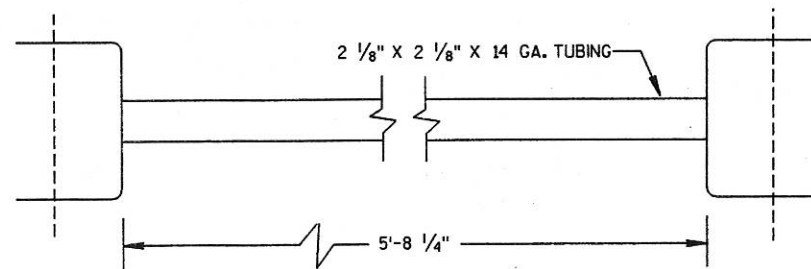
NOTE NO.	QTY.	DESCRIPTION
1	4	WOOD BREAKAWAY TERMINAL POST: 5/2" X 7 1/2" X 3'-9"
2	4	STEEL TUBE: 1 5/8" X 6" X 0.188", 4'-6" LONG
3	4	SOIL PLATE: 2'-0" X 1'-6" X 1/4"
4	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
5	6	WOOD OFFSET BLOCKS: 6" X 8" X 1'-2"
6	1	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
7	1	BEARING PLATE
8	1	BCT CABLE ASSEMBLY
9	1	CABLE ANCHOR BOX
10	1	STRUT & YOKE
11	1	STEEL PLATE BEAM END PANEL
12	3	STEEL PLATE BEAM: 12 GA. 13'-6 1/2"
13	1	ET-2000 GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
14	1	REFLECTIVE SHEETING: 18" X 18"



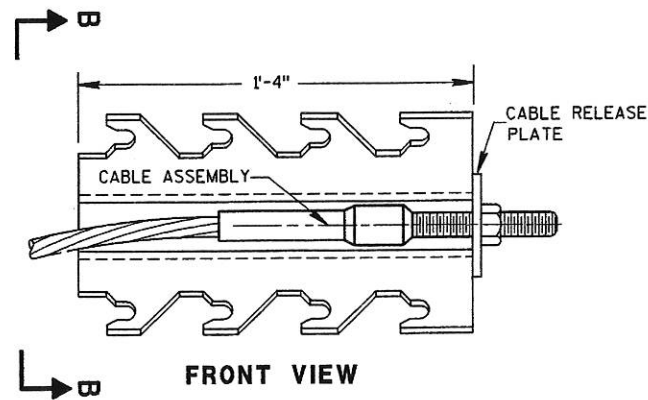
**ELEVATION**



**STEEL BEARING PLATE (SKT-350)**



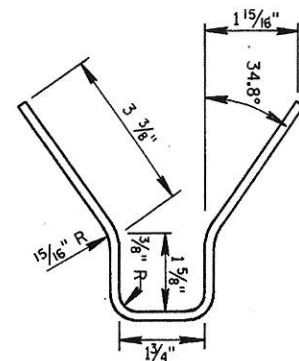
**STRUT DETAIL (SKT-350)**



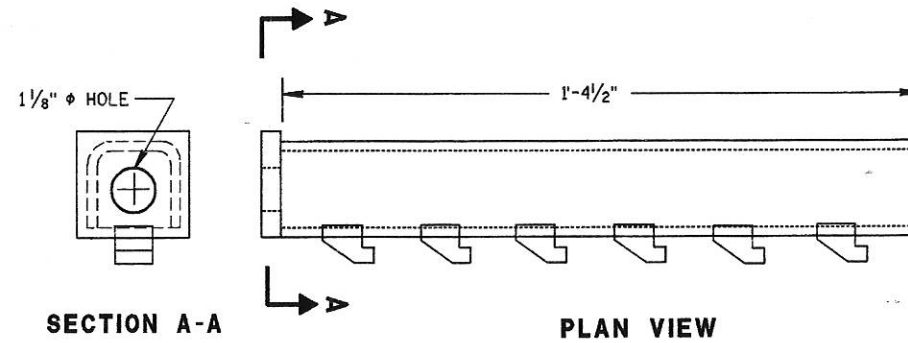
**FRONT VIEW**

**CABLE ANCHOR BOX (SKT-350)**

**(SKT-350)**



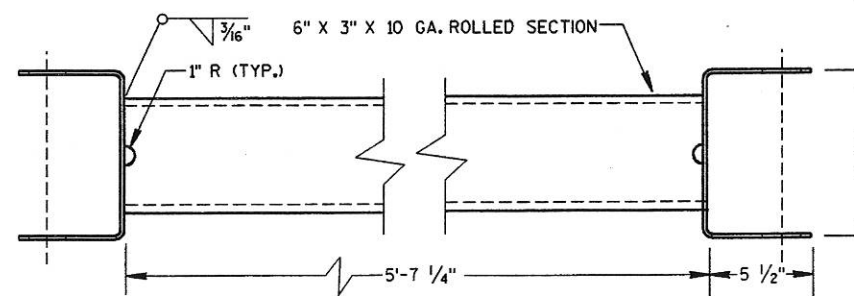
**SECTION B-B**



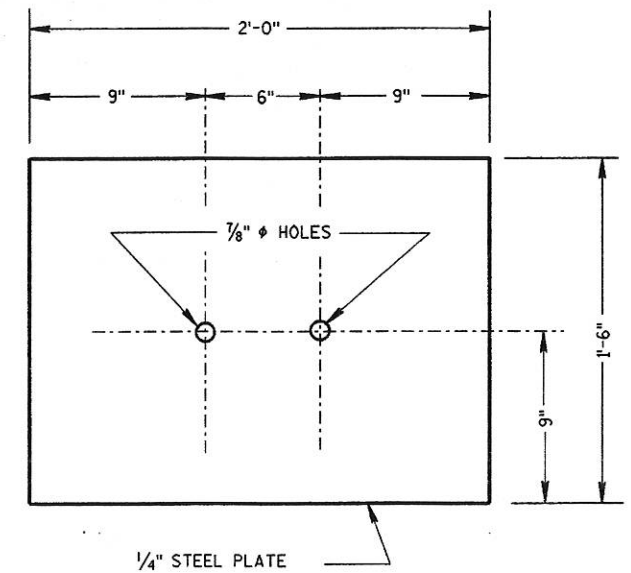
**SECTION A-A**

**PLAN VIEW**

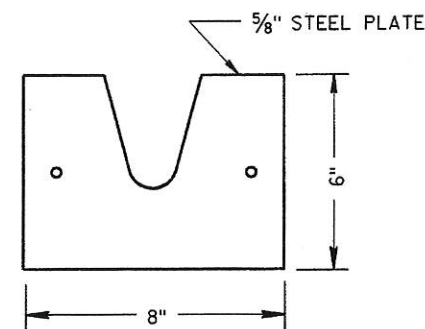
**CABLE ANCHOR BOX (ET-2000)**



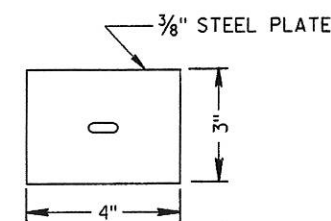
**STRUT DETAIL (ET-2000)**



**SOIL PLATE (SKT-350 & ET-2000)**



**STEEL BEARING PLATE (ET-2000)**



**BEARING PLATE WASHER (ET-2000)**

STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

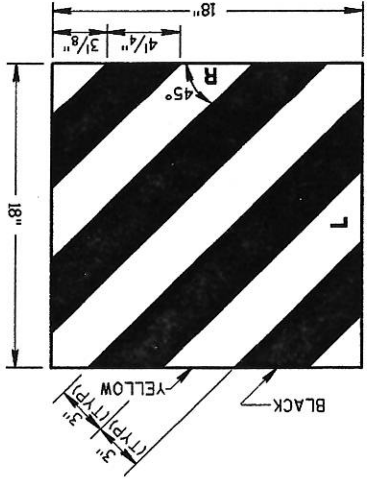
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

APPROVED  
DATE 12/08/00  
CHIEF ROADWAY DEVELOPMENT ENGINEER  
*John Hawbury*

FHWA

REFLECTIVE SHEETING DETAIL



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

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL SHALL BE EITHER THE EXTRUDER TERMINAL (ET-2000), OR THE SEQUENTIAL KINKING TERMINAL (SKT-350). THE CONTRACTOR SHALL NOT INTERMIX PROPRIETARY PRODUCT MATERIALS.

THE "ET-2000" IS AVAILABLE FROM SYRO, INC., 2524 N. STEMMONS FREEWAY, DALLAS TEXAS 75207, TELEPHONE 1-800-835-6086 OR 1-800-644-7976. THE "SKT-350" IS AVAILABLE FROM ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORD, ILLINOIS 60423, TELEPHONE (815) 464-5917

THE ET-2000, AND SKT-350 END TERMINALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

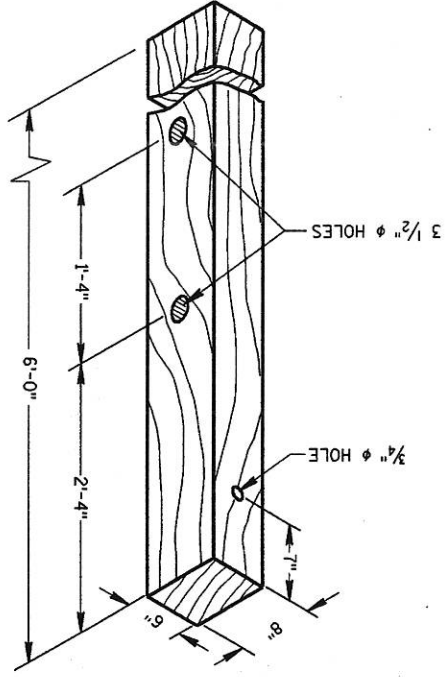
REFLECTIVE SHEETING - SHALL CONFORM TO ASTM SPECIFICATION D4956-93B, REFLECTIVE SHEETING TYPE III, BACKING CLASS 4, PERFORMANCE REQUIREMENT TYPE III. THE MESSAGE AND LINES SHALL BE APPLIED TO THE SIGNS BY THE SILK SCREEN STENCIL PROCESS USING A BLACK OR DARK STENCIL PASTE AS A TYPE APPROVED BY THE MANUFACTURER OF THE FACE MATERIAL TO WHICH IT IS TO BE APPLIED. MESSAGE UNITS CUT FROM NONREFLECTIVE SHEETING AND APPLIED TO THE SIGN FACE ARE NOT ACCEPTABLE. AFTER THE APPROACH END OF THE STEEL PLATE BEAM GUARD INSTALLATION IS COMPLETE, CLEAN THE AREA WHERE THE REFLECTIVE SHEETING WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. ONCE CLEAN, APPLY REFLECTIVE SHEETING DIRECTLY TO THE STEEL PLATE BEAM GUARD AS SHOWN. THE CONTRACTOR SHALL TURN OVER THE MANUFACTURERS WARRANTY FOR THE REFLECTIVE SHEETING TO THE DEPARTMENT FOR POTENTIAL DEALING WITH THE MANUFACTURER. PAYMENT OF REFLECTIVE SHEETING IS INCIDENTAL TO STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL.

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

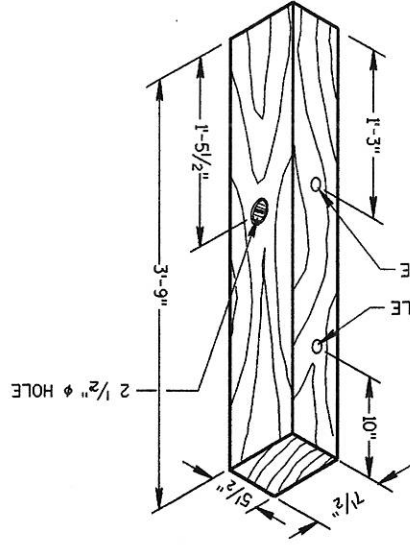
GENERAL NOTES

WOOD BREAKAWAY POSTS

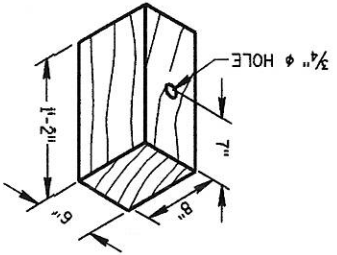
CR1 POST  
(POSTS NO'S 5-8)



TERMINAL POST  
(POSTS NO. 1-4)

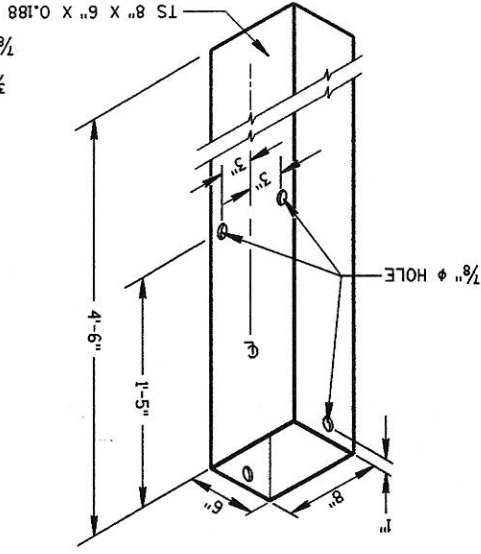


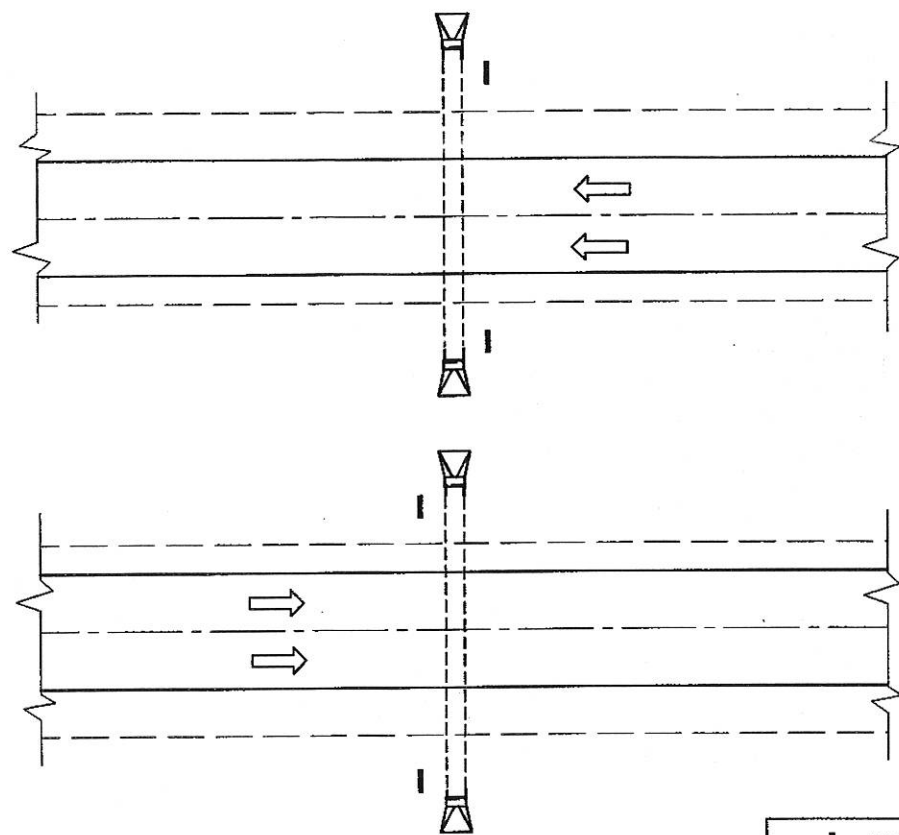
WOOD OFFSET BLOCK  
REQD. AT ALL POSTS EXCEPT POST NO'S 1 & 2



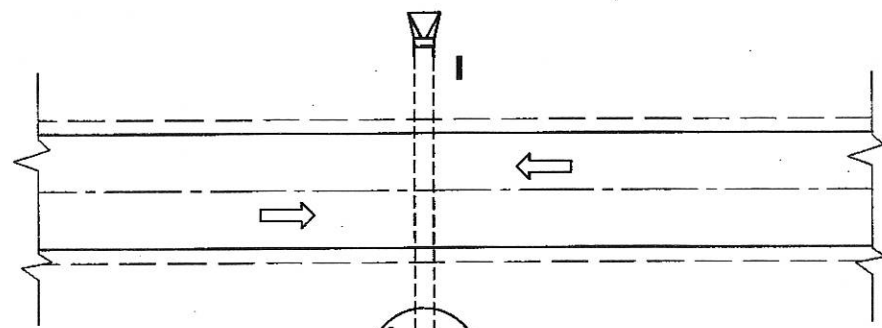
STEEL TUBE  
(POSTS NO. 1-4)

THE STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A500

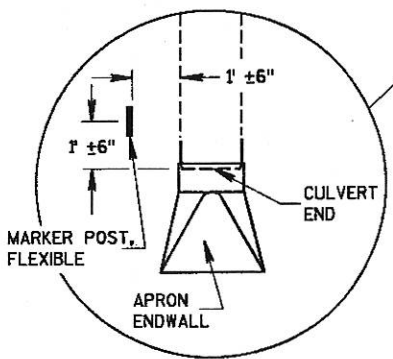




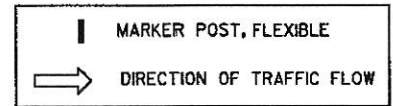
PLAN VIEW  
DIVIDED HIGHWAY



PLAN VIEW  
UNDIVIDED HIGHWAY



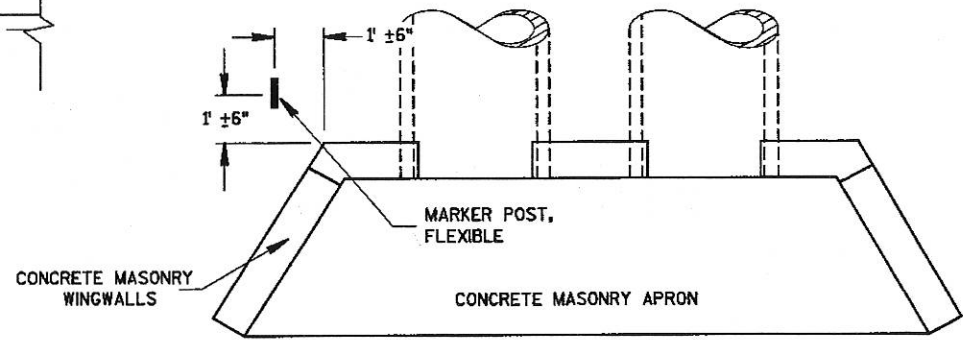
DETAIL A  
(TYPICAL)



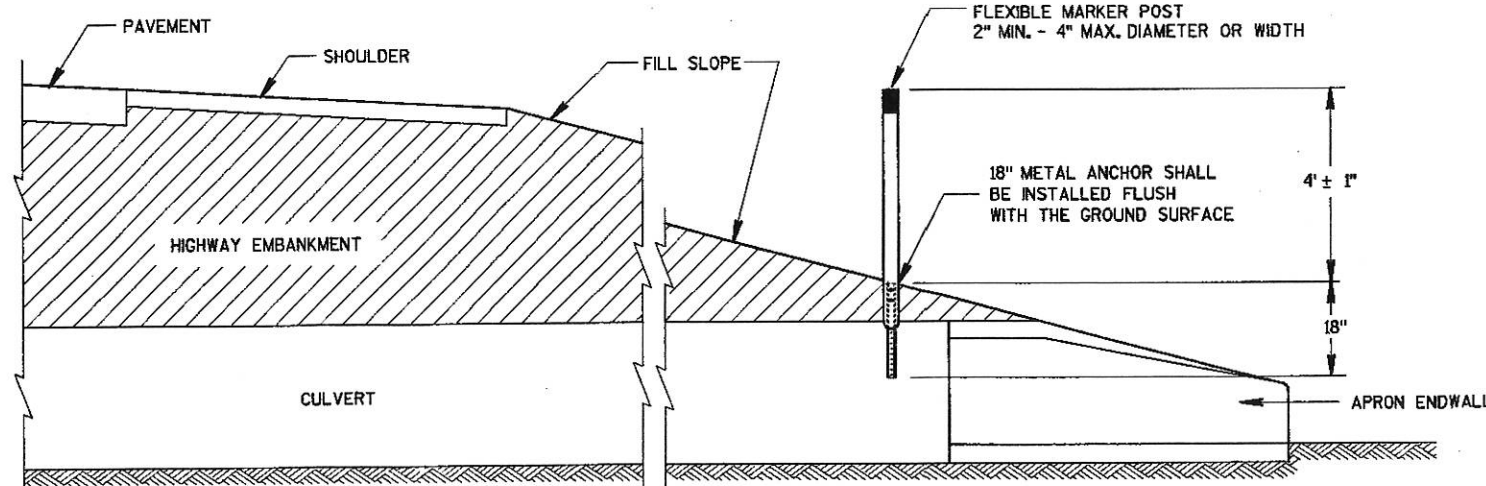
FLEXIBLE MARKER POST LOCATION

**GENERAL NOTES**

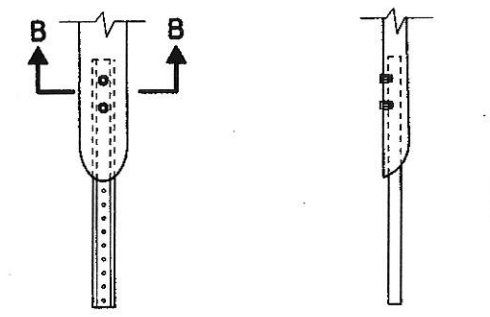
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



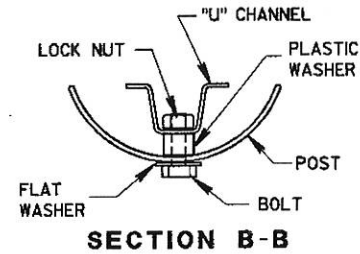
PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH



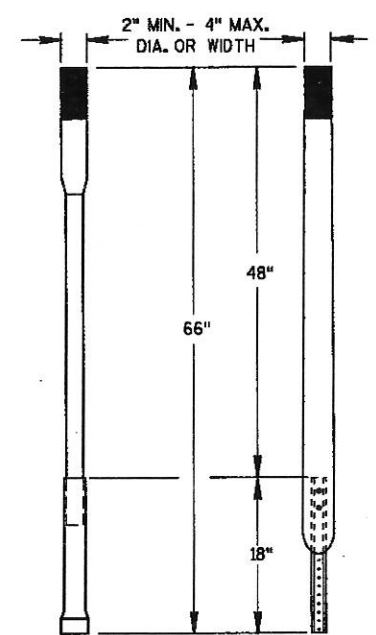
CROSS SECTION  
FLEXIBLE MARKER POST



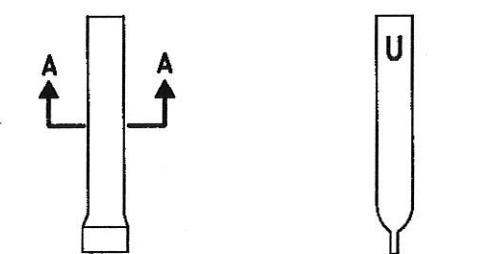
FRONT VIEW SIDE VIEW  
CURVED MARKER



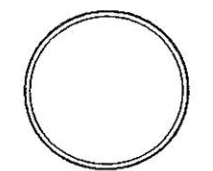
SECTION B-B



ALTERNATE 1 ALTERNATE 2  
FLEXIBLE MARKER POST



FRONT VIEW SIDE VIEW  
ROUND MARKER



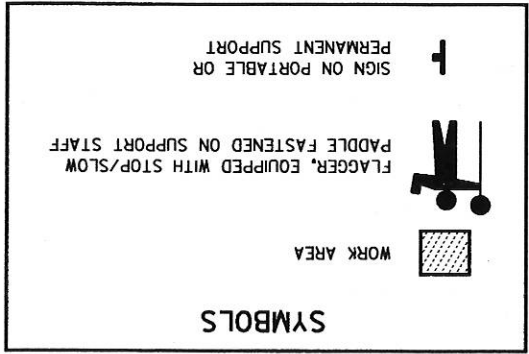
SECTION A-A

FLEXIBLE MARKER POST ANCHORS

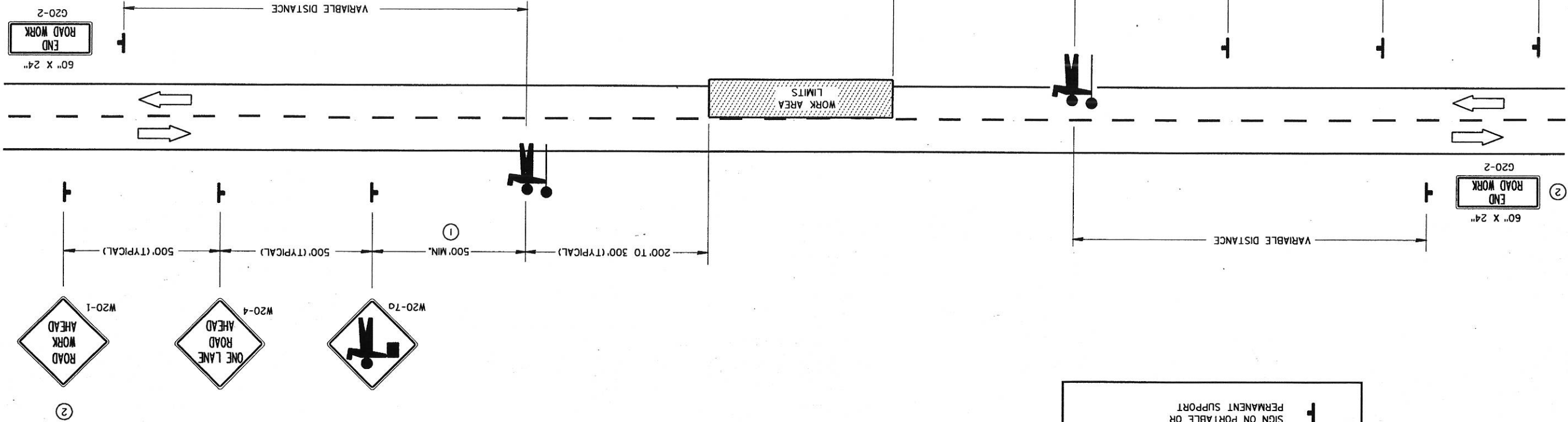
MARKER POST, FLEXIBLE, FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/01/98 DATE	<i>[Signature]</i> CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

S.D.D. 15 A 3-1

TWO-LANE ROADWAY



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL, WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS, A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED AS SIMULTANEOUSLY AS PRACTICAL AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS DIRECTED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

**GENERAL NOTES**

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

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

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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED *Robert F. Rasmussen* DATE 2/17/94  
STATE TRAFFIC ENGINEER FOR HWYS

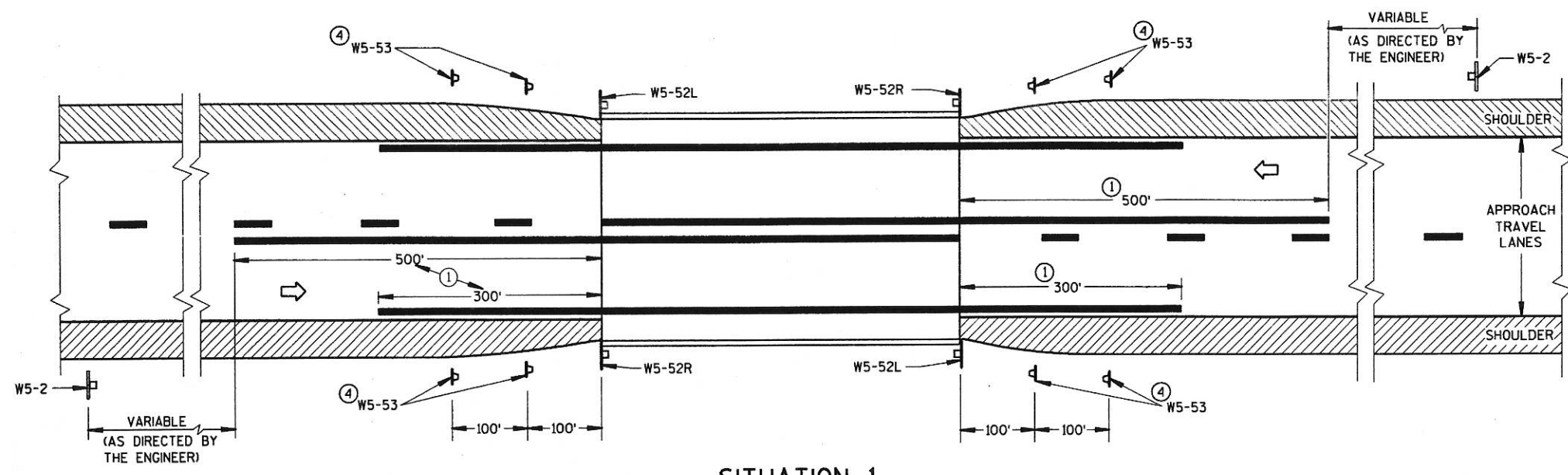
FHWA

**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.

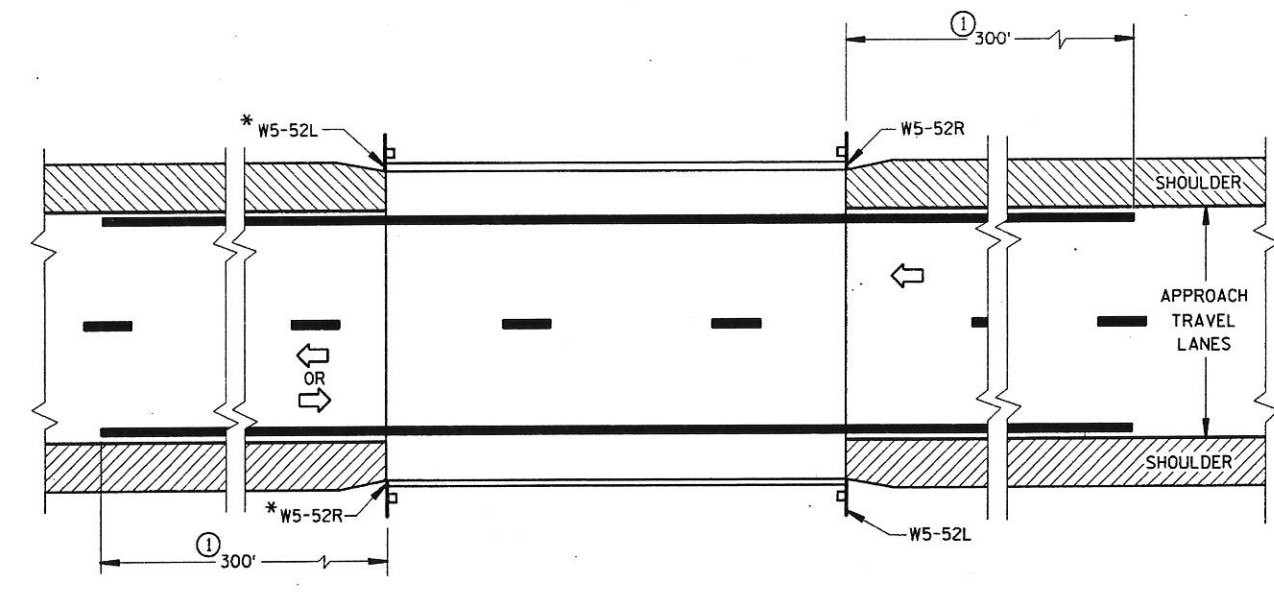
PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

- ① MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.
- ② FACE OF OBJECT MARKERS W5-52R AND W5-52L SHALL BE COVERED WITH TYPE H REFLECTIVE SHEETING.
- ③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ④ OBJECT MARKERS (W5-53) SHALL BE LOCATED ALONG A LINE FLARED AWAY FROM THE BRIDGE CORNER TO DELINEATE THE NARROWING OF THE SHOULDER OR BERM.
- ⑤ A 10 FOOT DELINEATOR POST MAY BE USED INSTEAD OF A WOOD POST.
- ⑥ NON-BID ITEM. INCIDENTAL TO OTHER ITEMS.



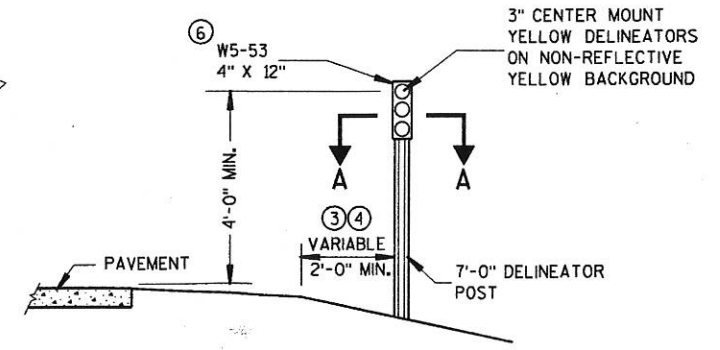
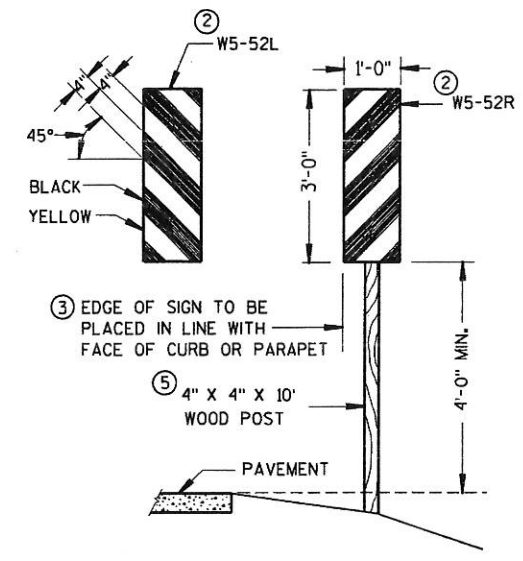
**SITUATION 1**

WARRANTING CRITERION:  
BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET

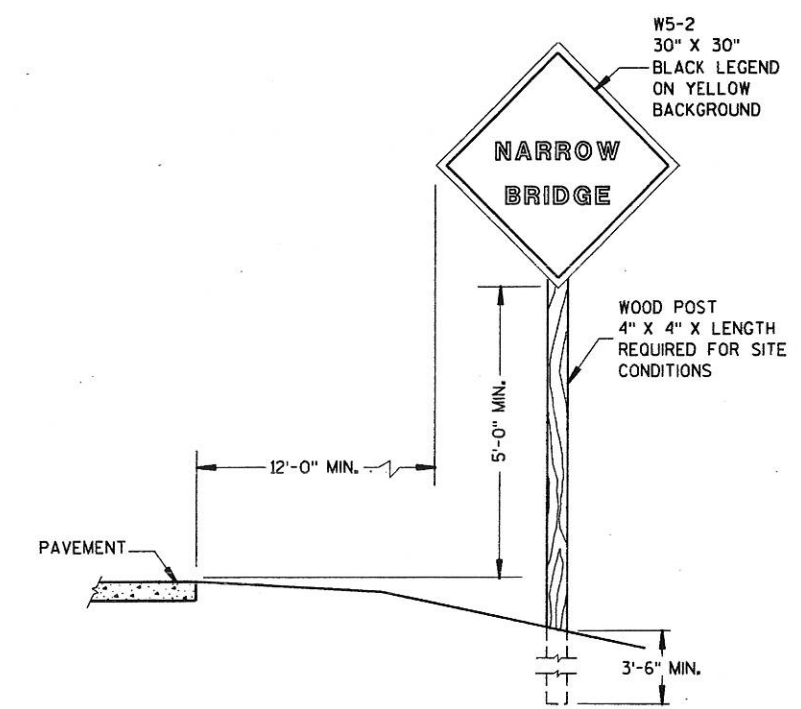


**SITUATION 2**

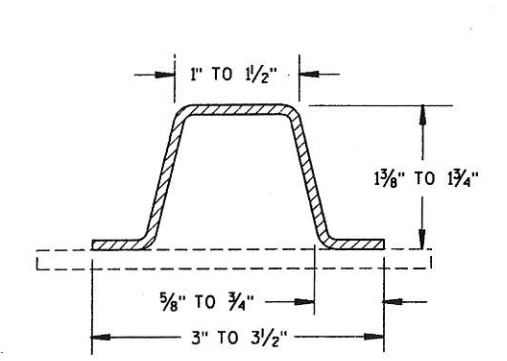
- WARRANTING CRITERIA:
- 1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
  - 2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.



**OBJECT MARKER PLACEMENT**



**SIGN PLACEMENT**



**SECTION A-A**  
(MINIMUM WEIGHT 1.9 LBS. PER FT. AFTER GALVANIZING)

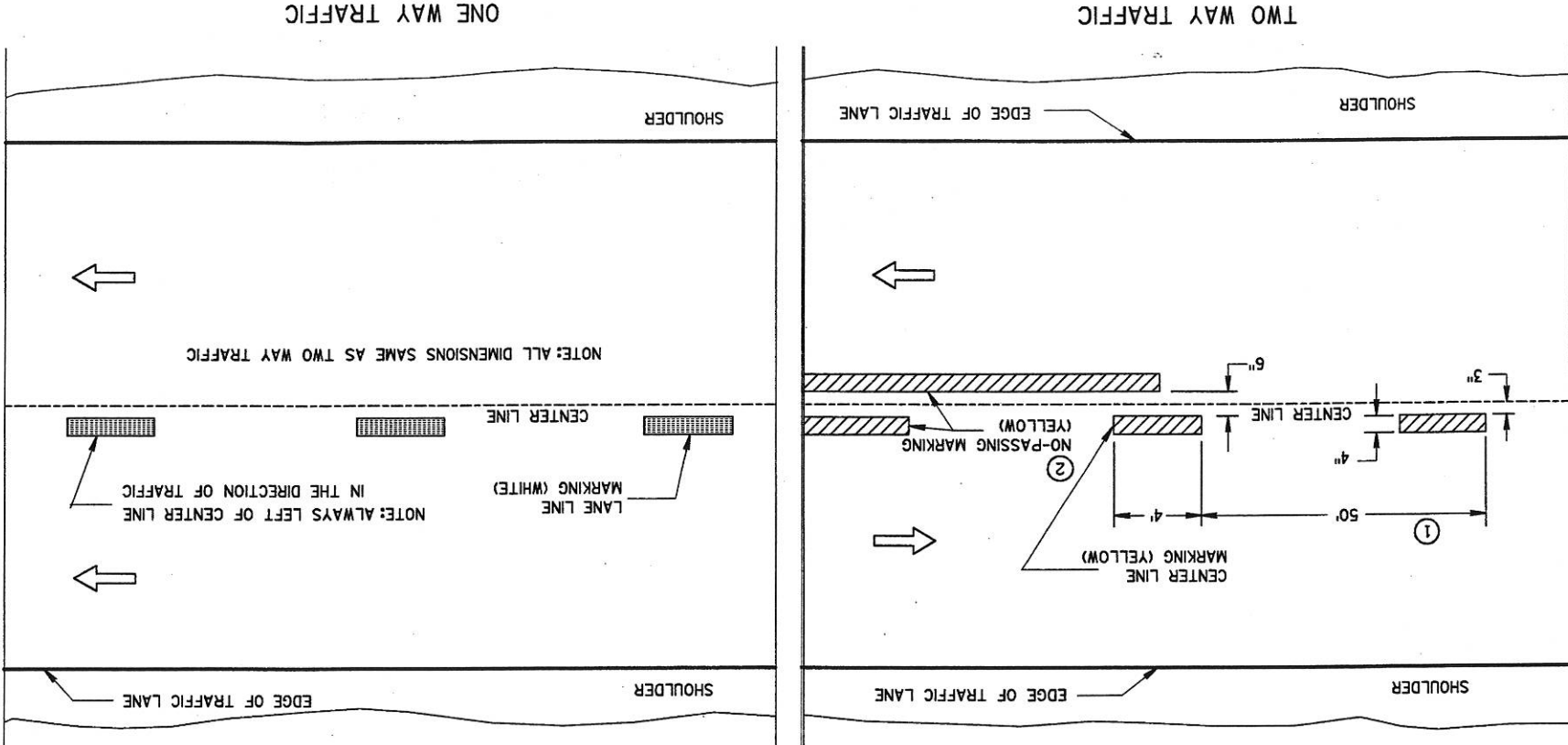
<b>SIGNING &amp; MARKING FOR TWO LANE BRIDGES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8-7-95 DATE	<i>Charles J. Spang</i> DIRECTOR, OFFICE OF TRAFFIC
FHWA	

S.D.D. 15 C 6-4

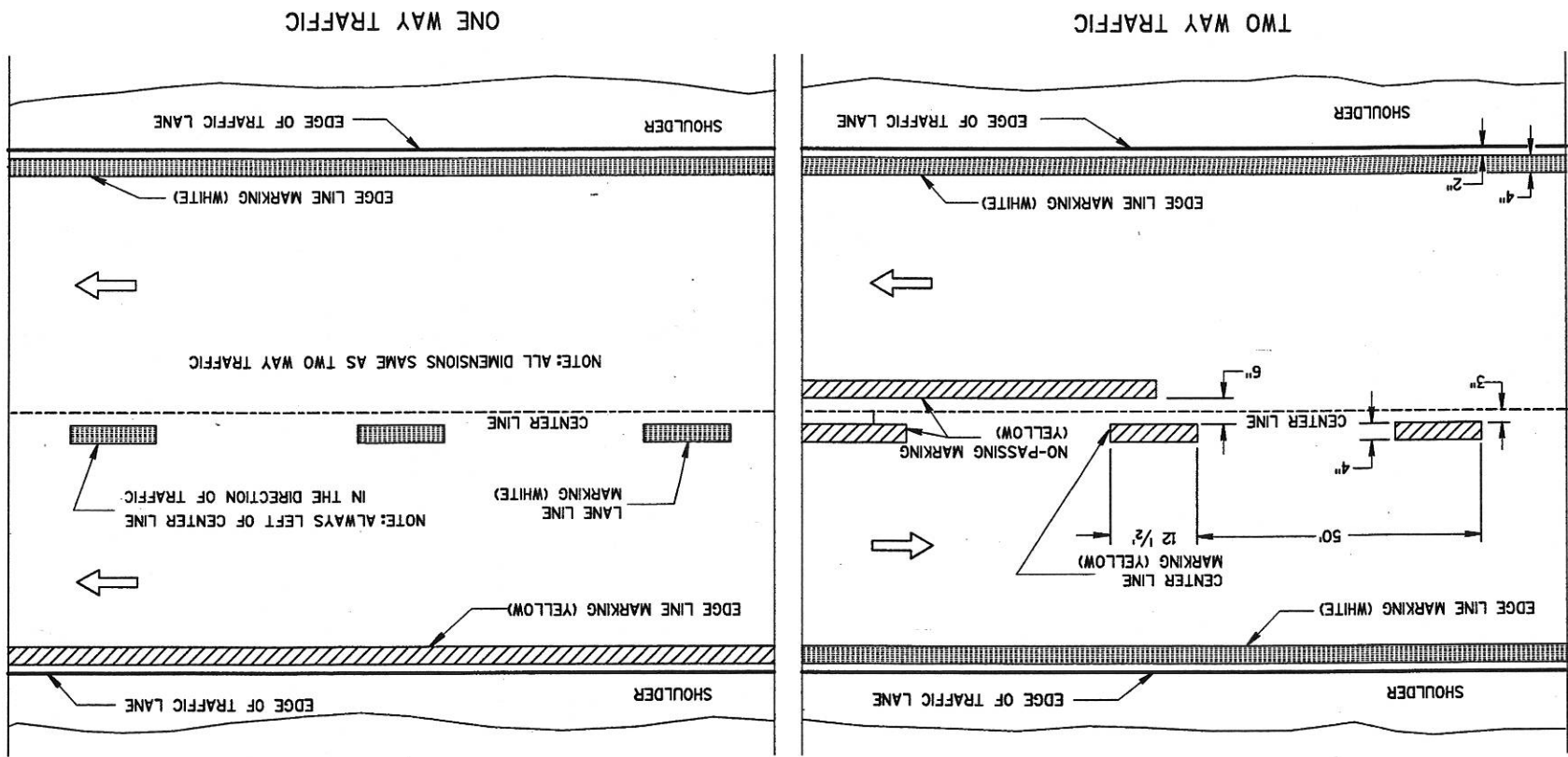


PAVEMENT MARKING (MAINLINE)	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	APPROVED <i>Mark I Sporn</i> DATE 2-17-00 CHIEF SIGNS AND MARKING ENGINEER FHWA

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING  
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)



PERMANENT PAVEMENT MARKING



NOTE  
ARROW SYMBOL ( ) SHOWS DIRECTION OF TRAVEL

GENERAL NOTES

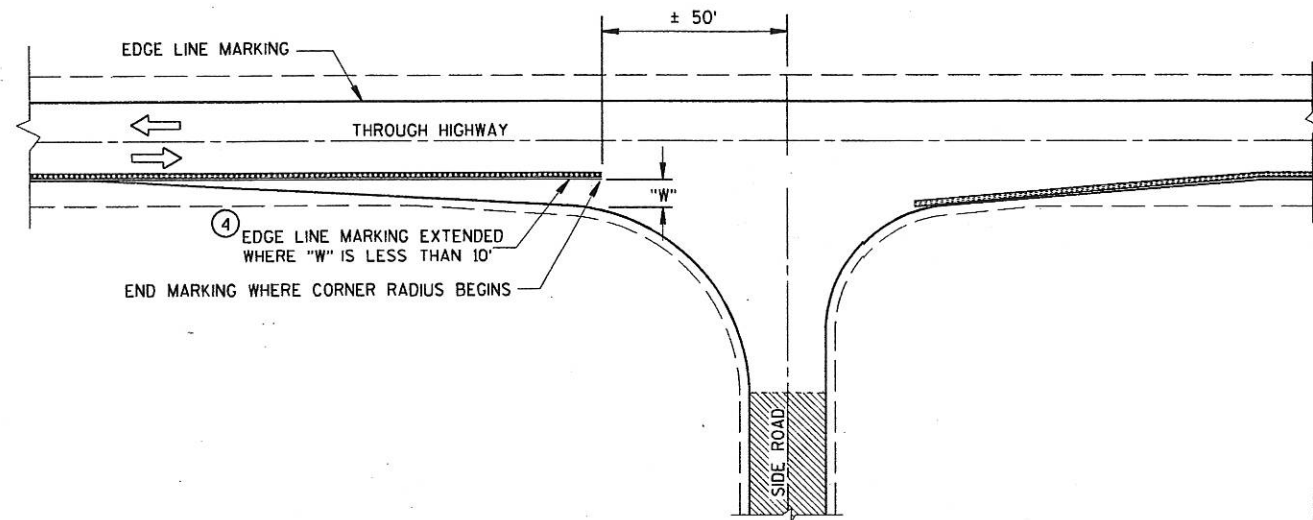
- ① HALF CYCLE LENGTHS (25') WITH 2" MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

**NOTES**

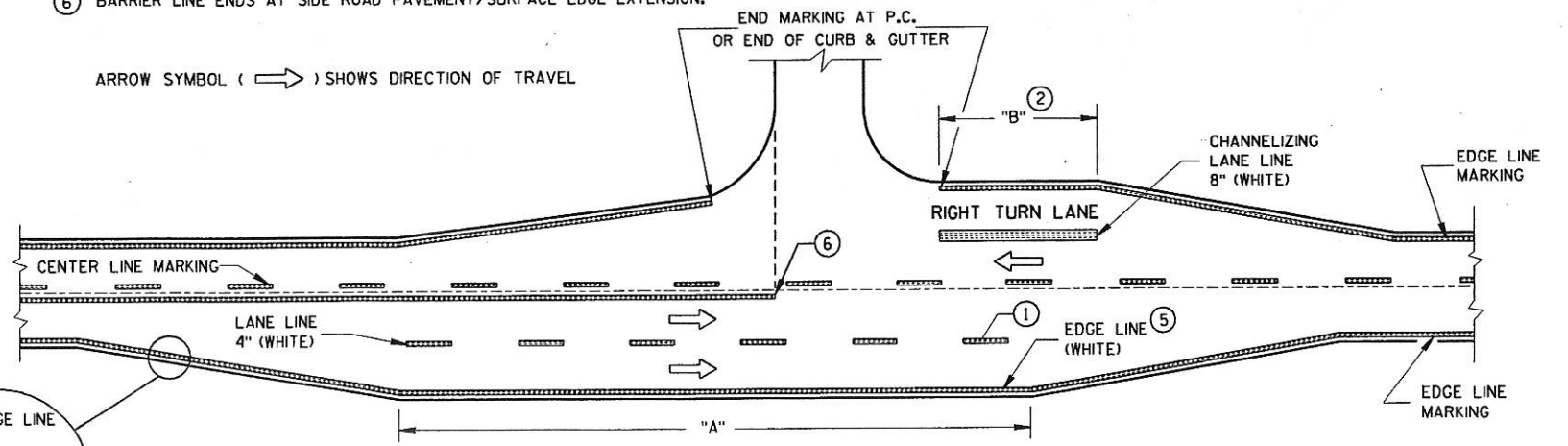
EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

- 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 ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
- ④ LOCATE THE EDGE LINE ALONG THE TAPER WHERE "W" IS 10' OR MORE.
- ⑤ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
- ⑥ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

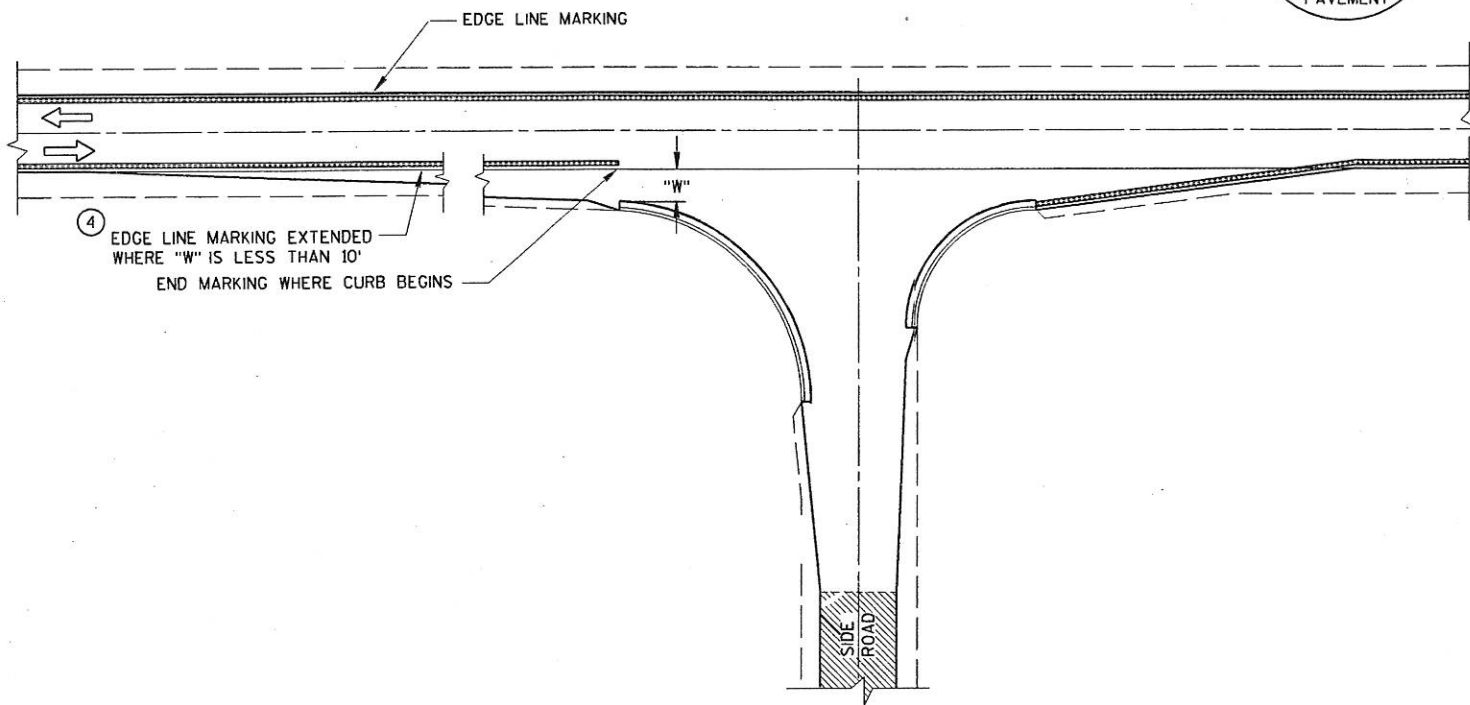
ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL



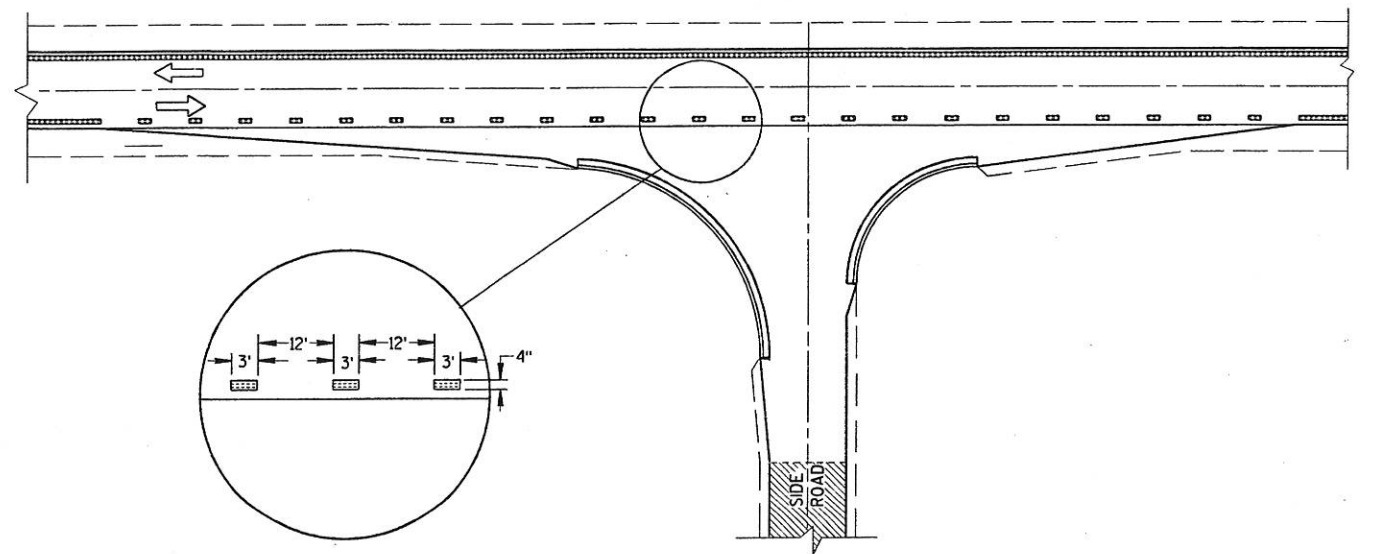
MINOR INTERSECTION WITHOUT CURBS



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



MINOR INTERSECTION WITH CURBS  
(TYPICAL MARKING)

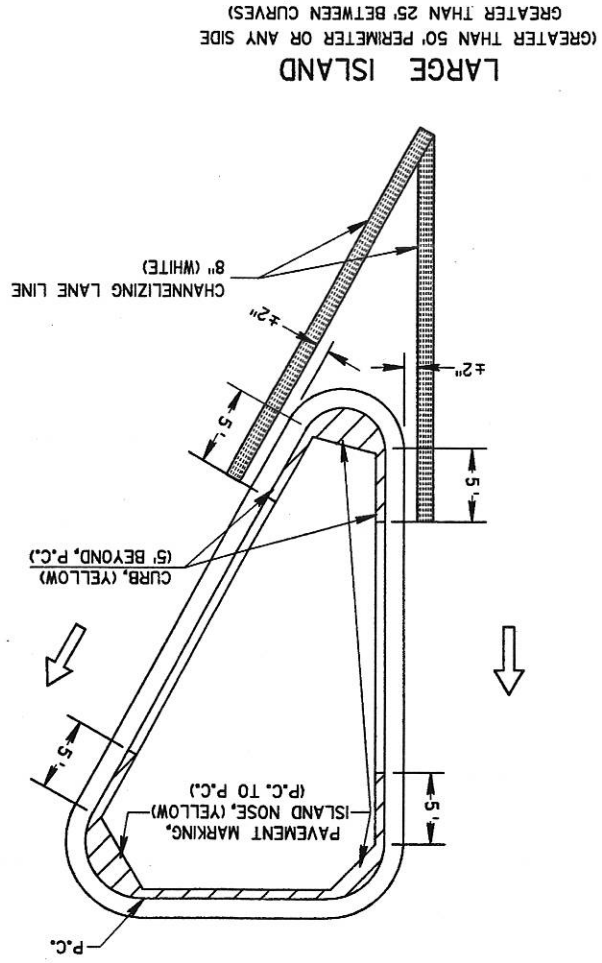
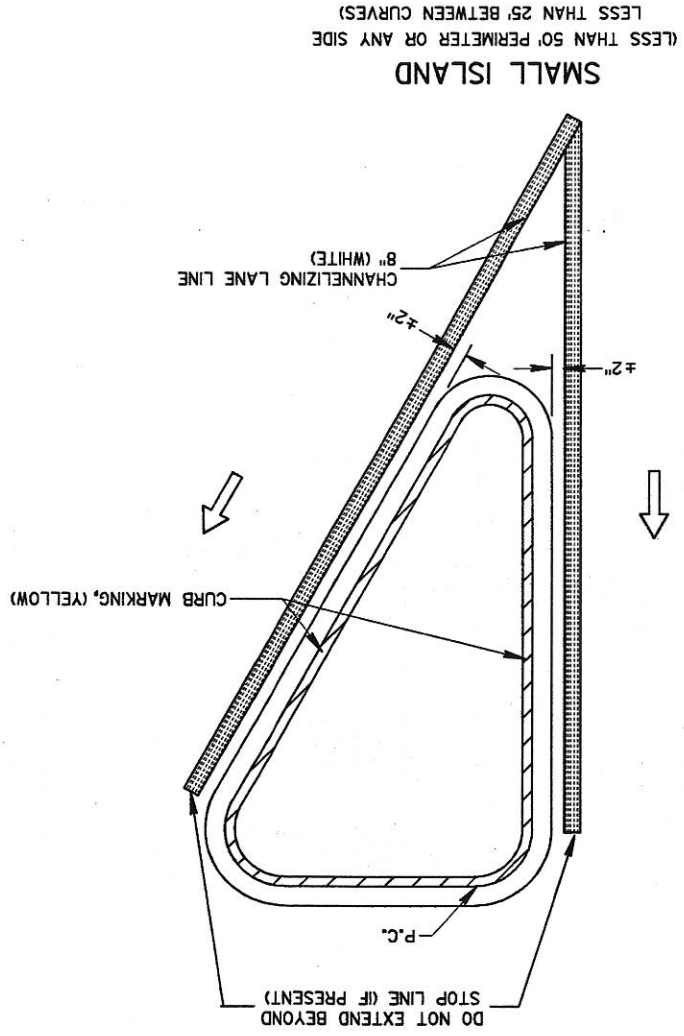


MINOR INTERSECTION WITH CURBS  
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

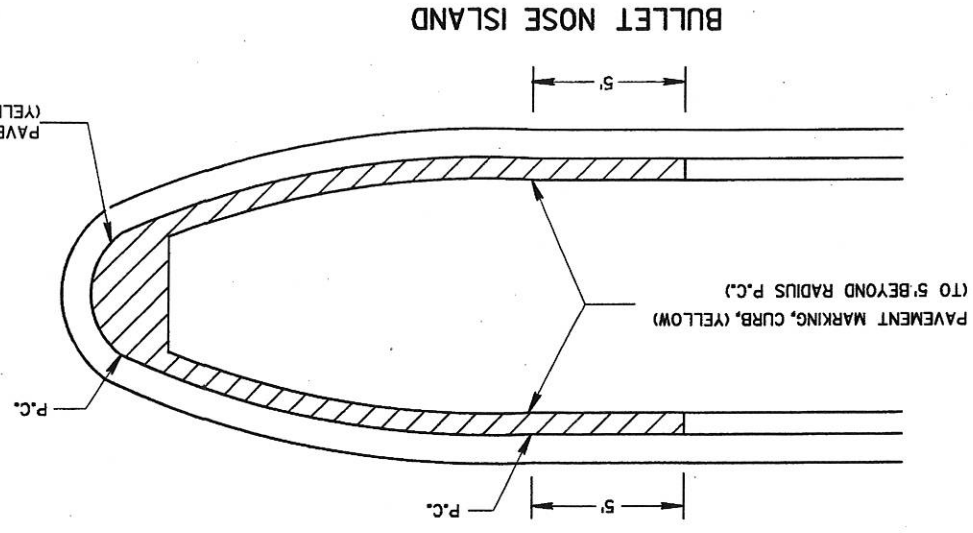
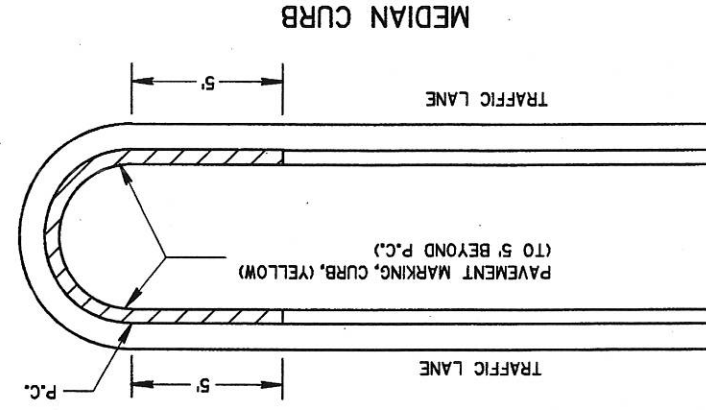
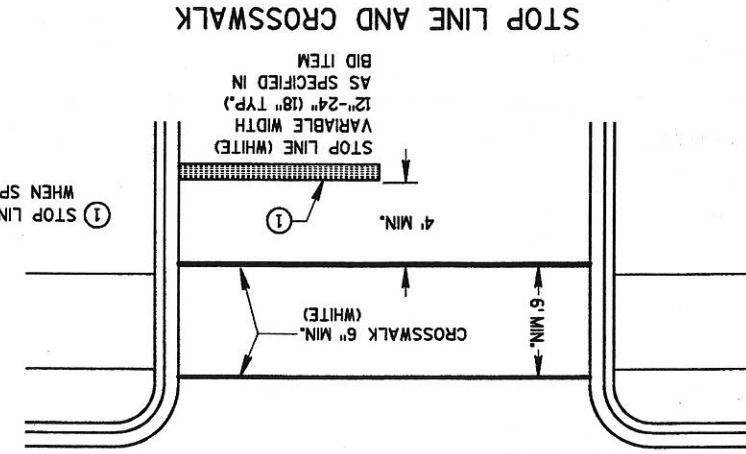
PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

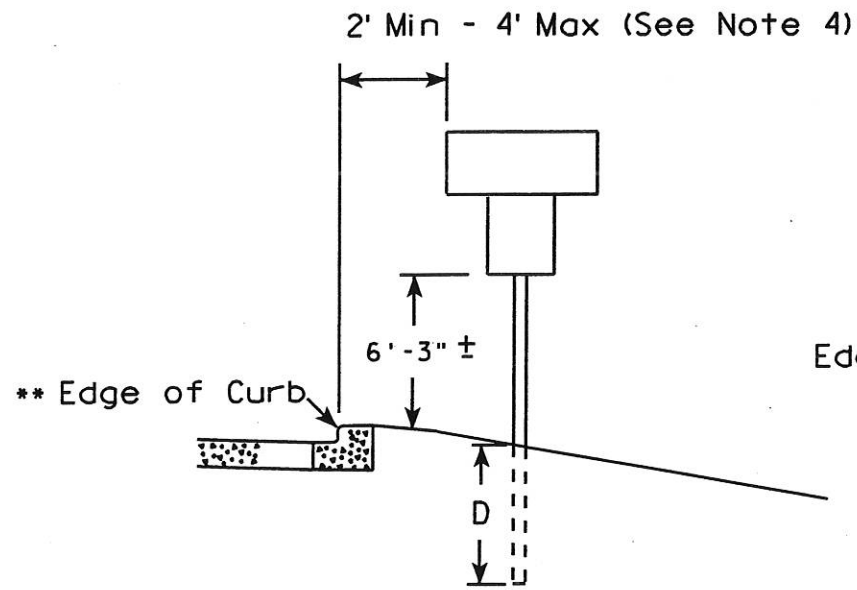
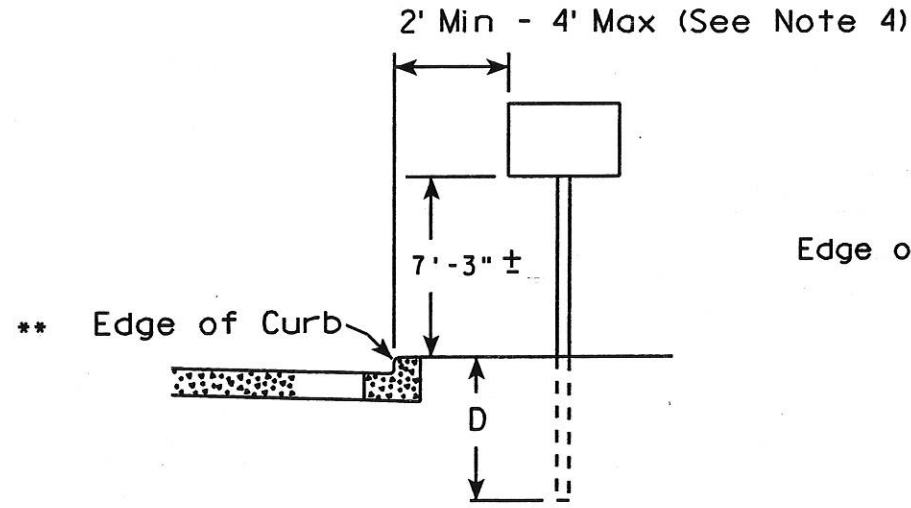
PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	APPROVED	DATE _____ CHIEF SIGNS AND MARKING ENGINEER	FHWA
--	--	----------	--	------



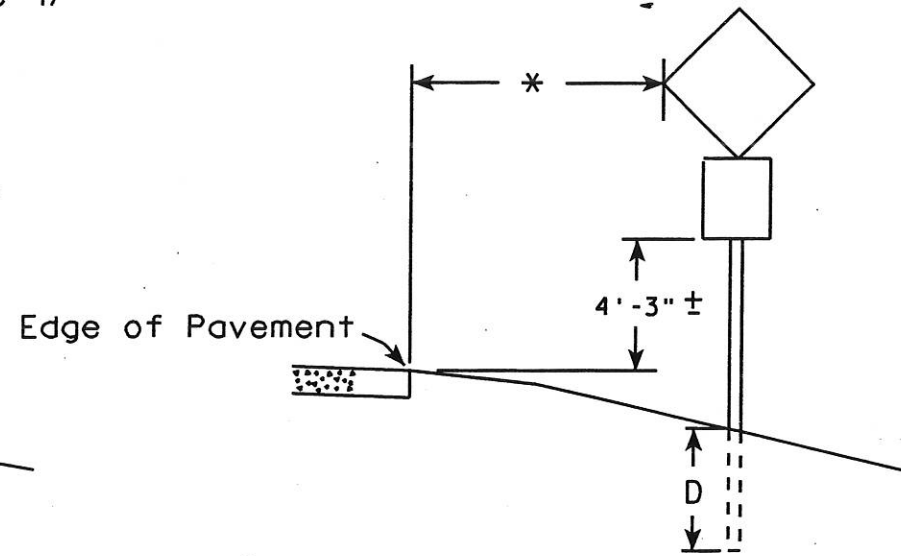
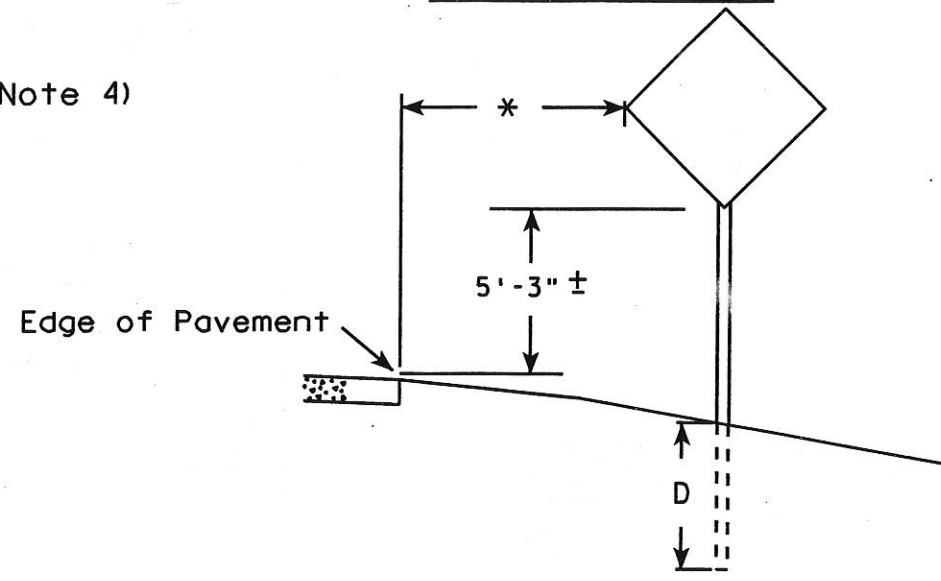
NOTE:  
ARROW SYMBOL ( )  
SHOWS DIRECTION OF TRAVEL



URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. For expressways and freeways, mounting height is 7'-3" ± or 6'-3" ± depending upon existence of a sub-sign.
3. Minimum mounting height for J assemblies (A4-5) is 7'-3" ± or 5'-3" ± per urban or rural detail respectively.
4. Offset distance shall be consistent with existing signs or consistent throughout length of project.
5. The (±) tolerance for mounting height is 3 inches.

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 where there is sidewalk adjacent to the roadway or parking is permitted.

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from 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 *Chester J Spang*  
for State Traffic Engineer

DATE 07/23/01 PLATE NO. A4-3.11

58, 59, 60, 61, 62, 63  
10, 11, 12, 13, 14, 15, 16  
5, 6  
LEVELS ON - 2

LEVELS: 0W - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

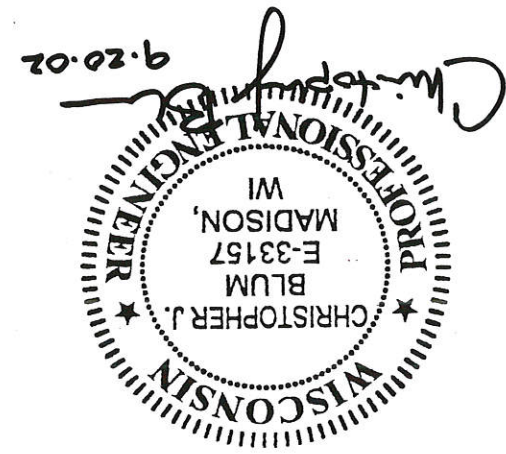
FILE NAME: E:\TRANS\LACR0\0202.00 CTH M\CAD\STRUCT\BRIDGE\B322061.BCMT DATE: 09/20/02 PLOT TIME: 2:24:55 PM

163+15 Plaque on New Bridge, SE corner B36.04

PLANS RECEIVED	
SHEET 1 OF 8	
GENERAL PLAN	
APPROVED: <i>[Signature]</i> 11-11-02 DATE: 11-11-02 CHIEF BRIDGE DESIGN ENGINEER	
DESIGNED	BY
DESIGN SPEC.	DESIGN CUB
CONSTR.	DRWN
LA CROSSE	JAV
GREENFIELD	BY
C.T.H. M OVER ST JOSEPH COULEE CREEK	CKD.
STRUCTURE B-32-206	JWG
DIVISION OF HIGHWAYS	CJB
STATE OF WISCONSIN	
REVISION	NO. DATE
6418 NORMANDY LANE, #100, MADISON, WIS3719	
SEH INC CONTACT: CHRIS BLUM (608) 274-2020	
BRIDGE OFFICE CONTACT: GERRY ANDERSON (608) 266-8488	

NO	STATION	DESCRIPTION	ELEV
8	168+11.03, 8.7-RT	PAVE IN BITUMINOUS EDGE	829.79
7	162+91.69, 63.0-LT	CHISELED SQUARE CENTER ON BRIDGE	840.58

- BENCH MARK**
- GENERAL PLAN
  - CROSS SECTION AND QUANTITIES
  - SUBSURFACE EXPLORATION
  - SOUTH ABUTMENT DETAILS
  - NORTH ABUTMENT DETAILS
  - SOUTH AND NORTH ABUTMENT DETAILS
  - SUPERSTRUCTURE DETAILS
  - TUBULAR RAILING TYPE "F"
- LIST OF DRAWINGS**
- GENERAL PLAN
  - CROSS SECTION AND QUANTITIES
  - SUBSURFACE EXPLORATION
  - SOUTH ABUTMENT DETAILS
  - NORTH ABUTMENT DETAILS
  - SOUTH AND NORTH ABUTMENT DETAILS
  - SUPERSTRUCTURE DETAILS
  - TUBULAR RAILING TYPE "F"



**TRAFFIC DATA**

ADT (2000) = 1000  
ADT (2023) = 175  
DHW = 175  
= 58/42  
= 6%  
= 55 MPH

**HYDRAULIC DATA**

990 CFS  
11.34 FPS  
834.31 FT  
88.9 SO FT  
1.28 SO MI

**SCOUR CRITICAL CODE** 8

**FOUNDATION DATA**

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A MIN BEARING VALUE OF 55 TONS PER PILE. ESTIMATED 35-FT LONG AT THE NORTH ABUTMENT AND 40-FT LONG AT THE SOUTH ABUTMENT.

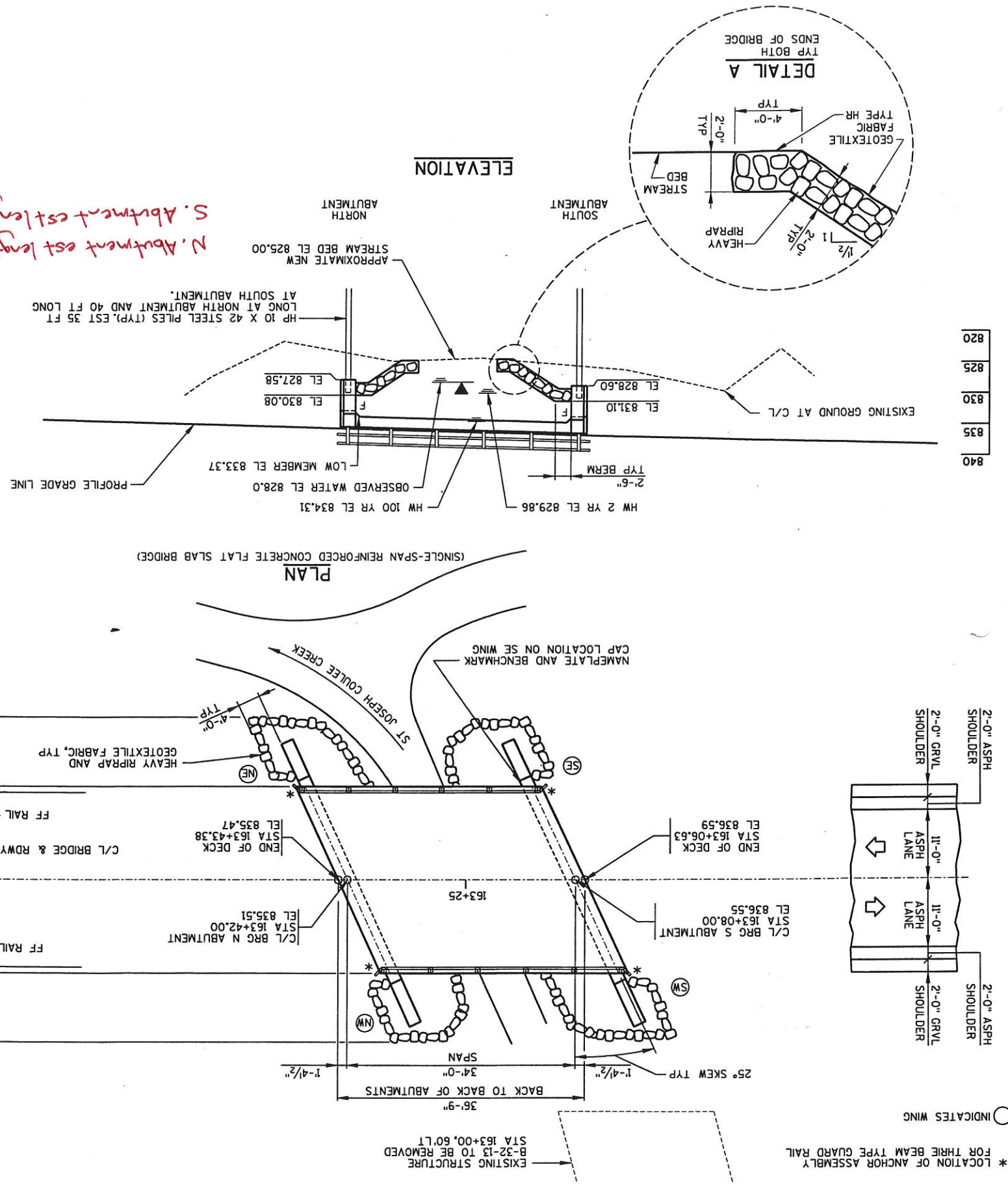
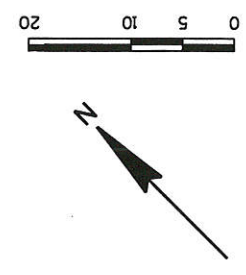
FOR PILE SPLICE, SEE SHIT 6.

**DESIGN DATA**

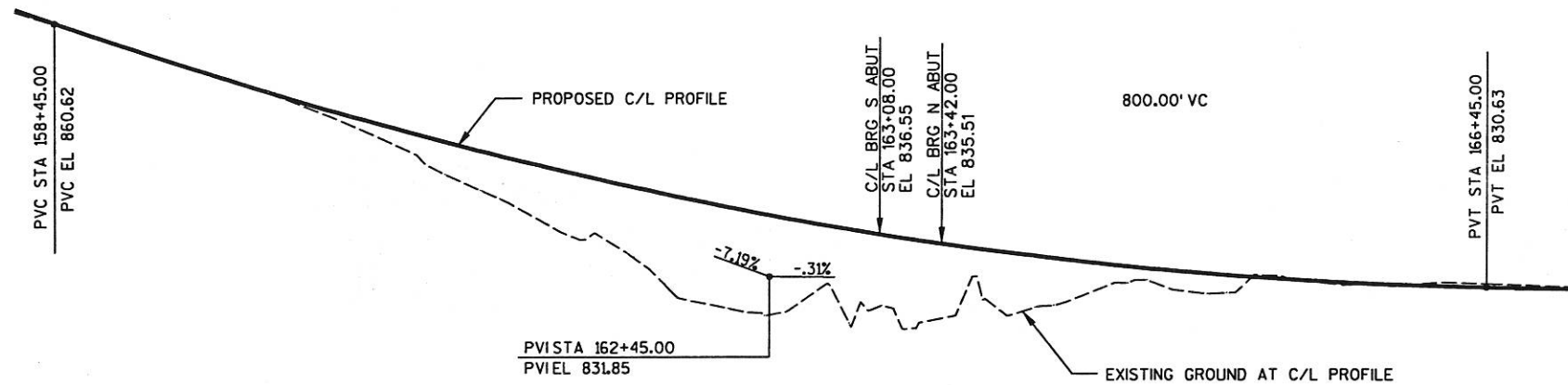
LIVE LOAD: HS20  
INVENTORY RATING = HS24  
OPERATING RATING = HS40  
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 220 KIPS  
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF  
INVENTORY, OPERATIONAL AND PERMIT VEHICLE RATINGS DO NOT INCLUDE FUTURE WEARING SURFACE.

**ULTIMATE DESIGN STRESSES:**  
CONCRETE MASONRY - SLAB  
f'c = 4,000 psi  
f'c = 3,500 psi  
- ALL OTHER (GRADE A)  
f'c = 60,000 psi

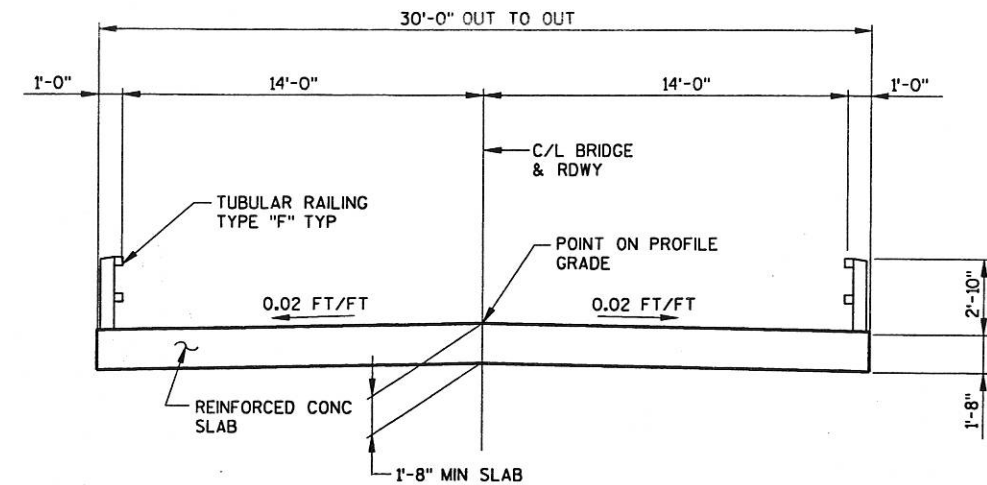
**AASHTO GRADE 60**  
HIGH STRENGTH BAR STEEL REINFORCEMENT  
ty = 60,000 psi



STATE PROJECT NUMBER	5436-06-71
SHEET NO.	73



PROFILE GRADE LINE



CROSS SECTION THRU BRIDGE  
(LOOKING NORTH)

**GENERAL NOTES**

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- SEE ROADWAY PLANS FOR EXISTING & PROPOSED UTILITY LOCATIONS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENTS DETAILS.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.
- AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL UNLESS OTHERWISE NOTED.
- FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION :M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION :M213
- EXISTING STRUCTURE IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE 28' LONG BY 24' CLEAR WIDTH (B-32-13).

**TOTAL ESTIMATED QUANTITIES - B-32-206**

BID ITEMS	UNIT	SOUTH ABUT	NORTH ABUT	SUPER	TOTALS
REMOVING OLD BRIDGE STATION 163+00, 60' LT	LS	---	---	---	1
EXCAVATION FOR STRUCTURES, BRIDGES B-32-206	LS	---	---	---	1
STRUCTURE BACKFILL	CY	140	140	---	280
CONCRETE MASONRY, BRIDGES	CY	25	25	73	123
PROTECTIVE SURFACE TREATMENT	SY	---	---	123	123
HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB	1810	1810	---	3620
COATED HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB	65	65	11,470	11,600
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	LF	280	245	---	525
TUBULAR RAILING, TYPE F, STRUCTURE B-32-206	LS	---	---	---	1
RUBBERIZED MEMBRANE WATERPROOFING	SY	7	7	---	14
HEAVY RIPRAP	CY	90	90	---	180
GEOTEXTILE FABRIC TYPE HR	SY	150	150	---	300
NON-BID ITEMS					
FILLER	SIZE	---	---	---	1/2 & 3/4

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-32-206</b>			
CONST. SPEC.	1996	DRAWN BY	JWG
PLANS CK'D.	CJB		
<b>CROSS SECTION AND QUANTITIES</b>			SHEET 2 OF 8
PLANS RECEIVED			

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

LEVELS 0W - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

FILE NAME: E:\TRANS\ACR\0022.00 CTH M\CAD\STRUCT\BRIDGE\B32206B1.DWG DATE: 09/20/02

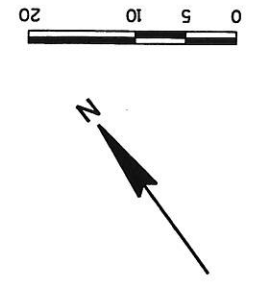
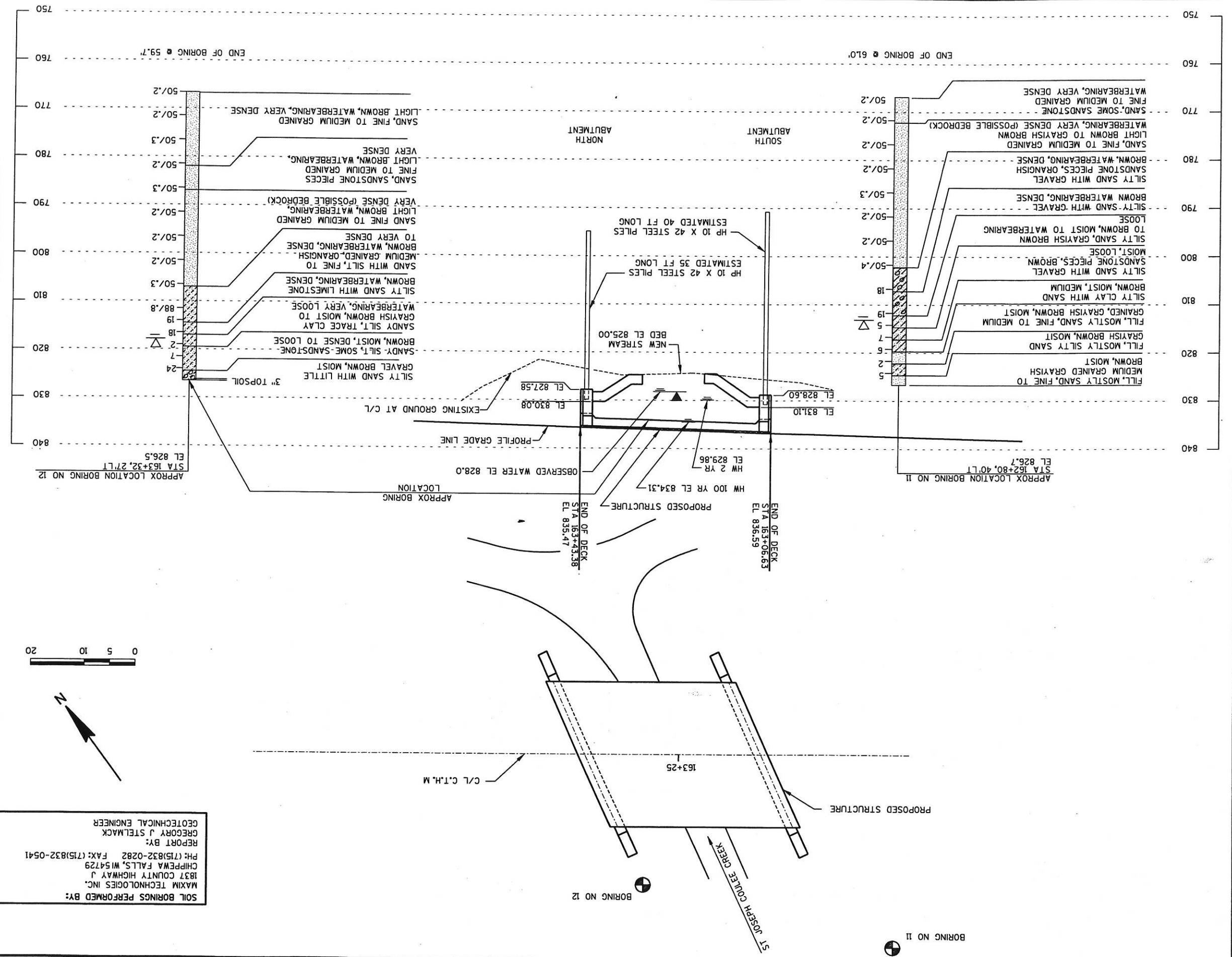
PLOT TIME: 21:25:02 PM

PLANS RECEIVED	
SHEET 3 OF 8	EXPLOURATION
PLANS CJB	CONSTR. 1996
BY JWC	DRAWN JWC
STRUCTURE B-32-206	
DIVISION OF HIGHWAYS	
STATE OF WISCONSIN	
NO. DATE	REVISION

DESIGN AND BIDDERS INFORMATION  
 SUBSURFACE EXPLORATION FOR FOUNDATION  
 To obtain relative data concerning the character of material in and upon which the foundation might be built borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

LEGEND OF BORING  
 Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 0.1x1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.  
 SOIL BORINGS PERFORMED BY:  
 MAXIM TECHNOLOGIES INC.  
 1837 COUNTY HIGHWAY J  
 CHIPPEWA FALLS, WI 54729  
 PH: (715) 832-0282 FAX: (715) 832-0541  
 REPORT BY:  
 GREGORY J. STELMACK  
 GEOTECHNICAL ENGINEER

STATE PROJECT NUMBER	5436-06-71
SHEET NO.	75



SOIL BORINGS PERFORMED BY:  
 MAXIM TECHNOLOGIES INC.  
 1837 COUNTY HIGHWAY J  
 CHIPPEWA FALLS, WI 54729  
 PH: (715) 832-0282 FAX: (715) 832-0541  
 REPORT BY:  
 GREGORY J. STELMACK  
 GEOTECHNICAL ENGINEER

ABBREVIATIONS  
 F—Fine M—Medium C—Coarse  
 Ms—Weathered So—Sound

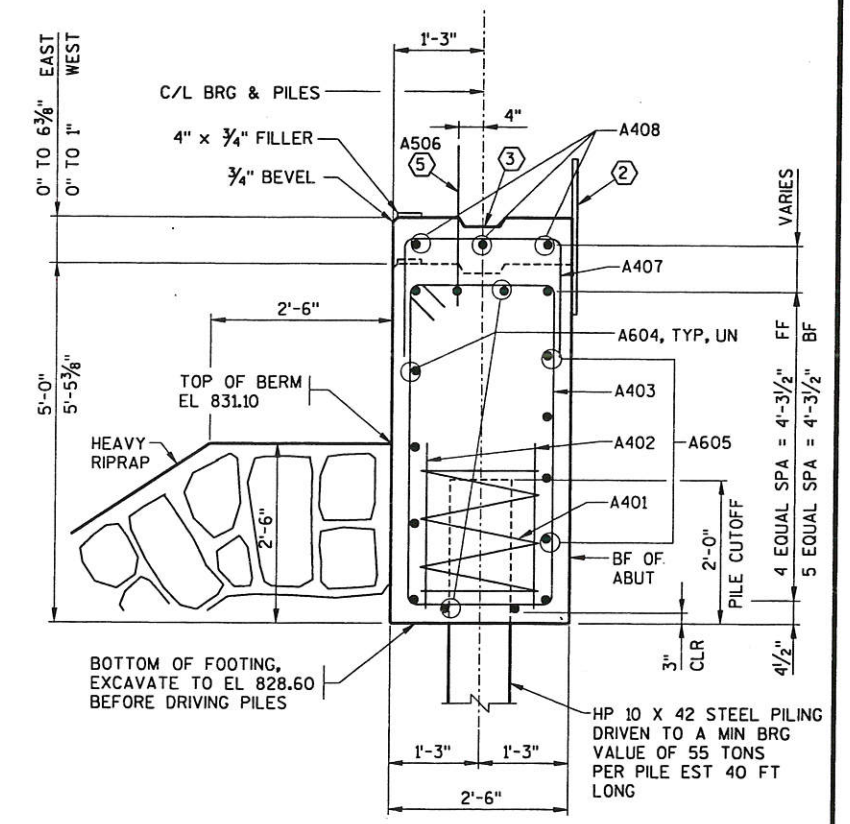
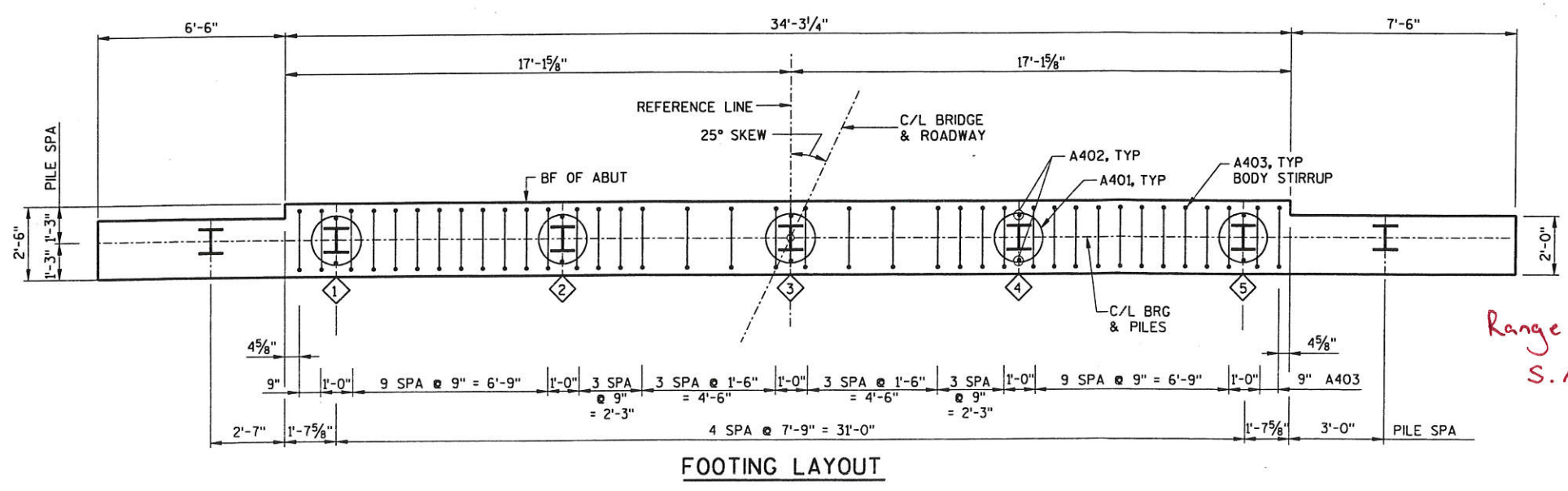
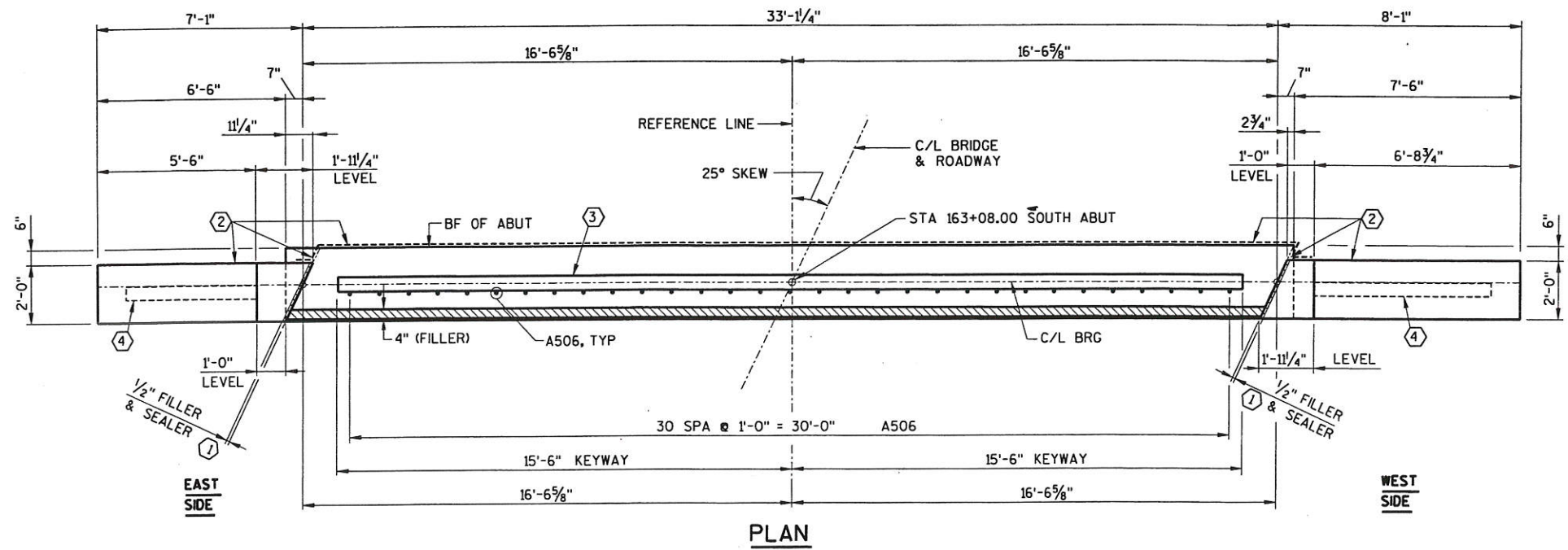
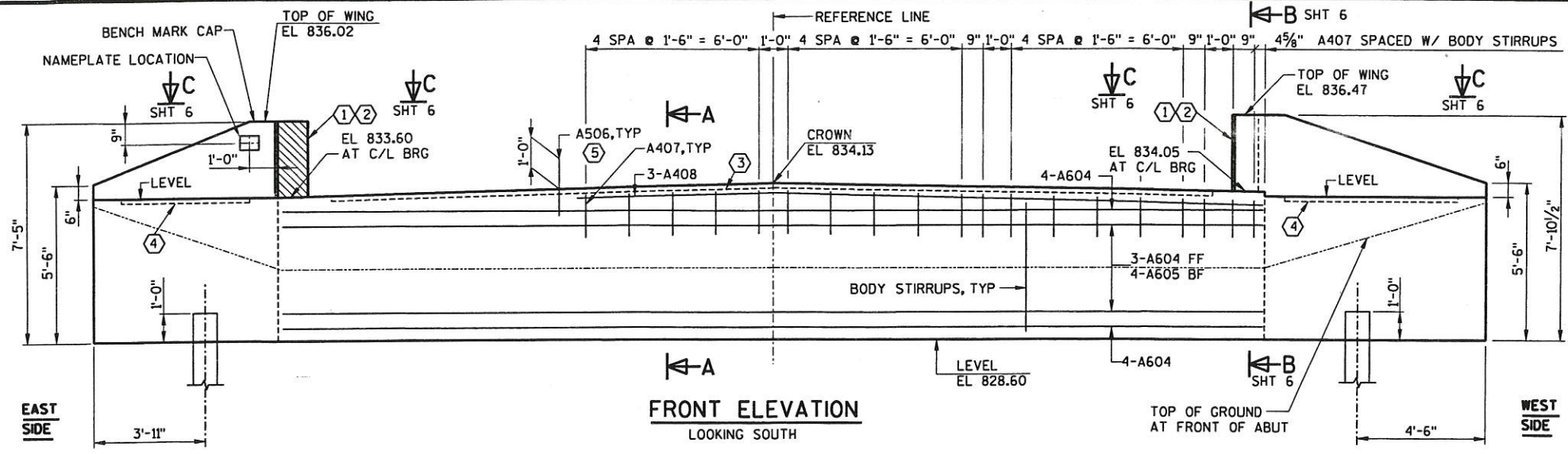
Gravel	Clay	Sand	Silt	Topsoil
Igneous Rock	Peat	Sandstone	Silt	Sandstone
Clay	Limestone	Sandstone	Silt	Sandstone

LEGEND OF PROBING  
 95/6-95 Blows for 6"  
 Sta. Elevation  
 Penetration  
 Probing taken with a  
 350# wt.  
 Falling 18" on a 2"  
 O.D. Point.  
 Refusal 95/6

**ABUTMENT NOTES**

- ① FILLER INCLUDED IN WING LENGTH SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONC.)
- ② 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ & VERT JOINTS ON BACKFACE. VERTICAL WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
- ③ KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6"
- ④ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6"
- ⑤ A506 BARS MAY BE PLACED AFTER CONC HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

FF = FRONT FACE  
 BF = BACK FACE  
 EF = EACH FACE  
 UN = UNLESS NOTED



**TYPICAL SECTION THRU BODY SECTION A-A**

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-32-206</b>			
CONST. SPEC.	1996	DRAWN BY JWG	PLANS CK'D. CJB
<b>SOUTH ABUTMENT DETAILS</b>			SHEET 4 OF 8
PLANS RECEIVED			

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

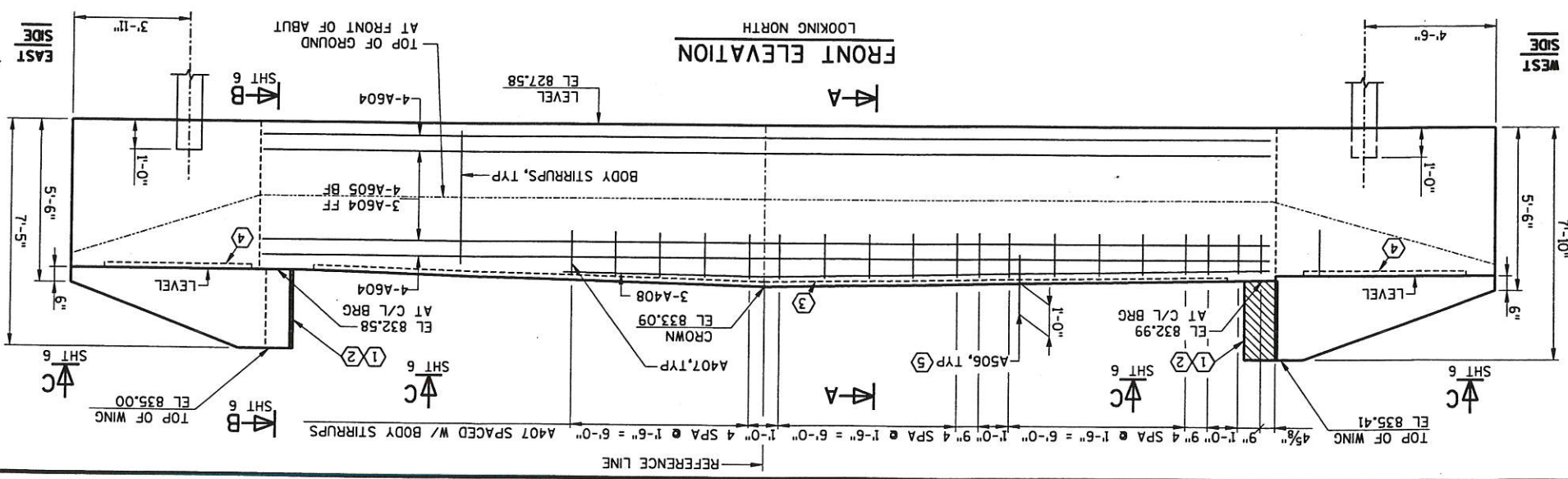
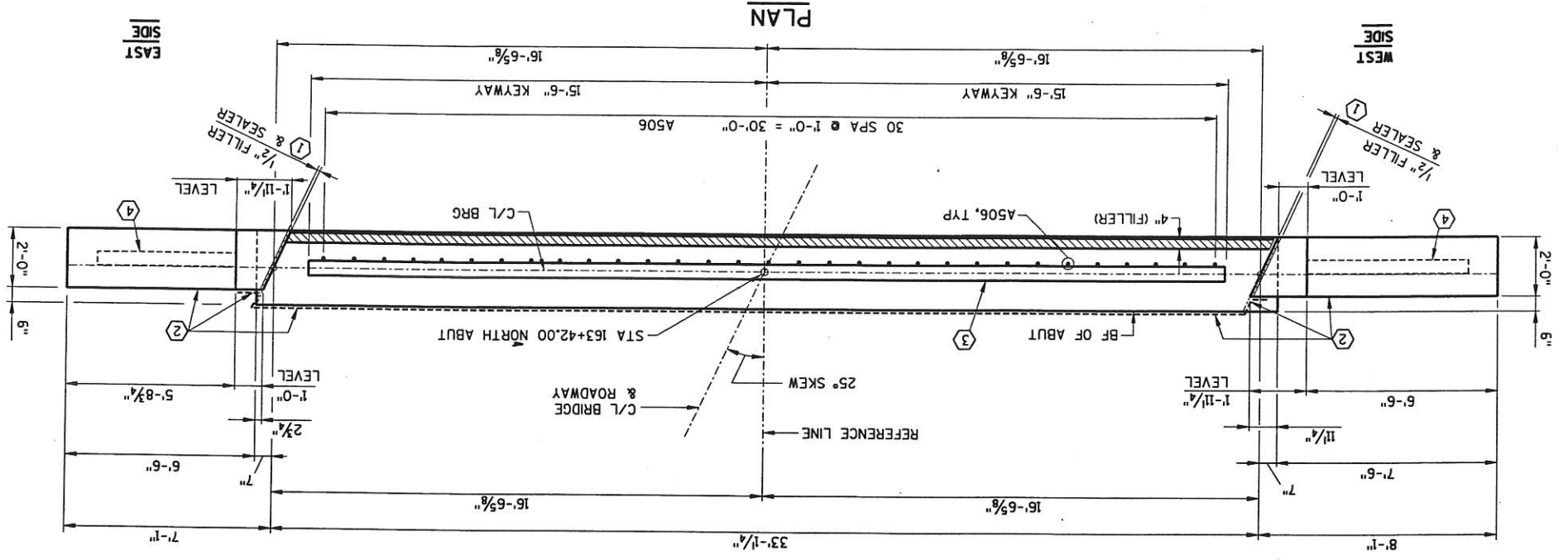
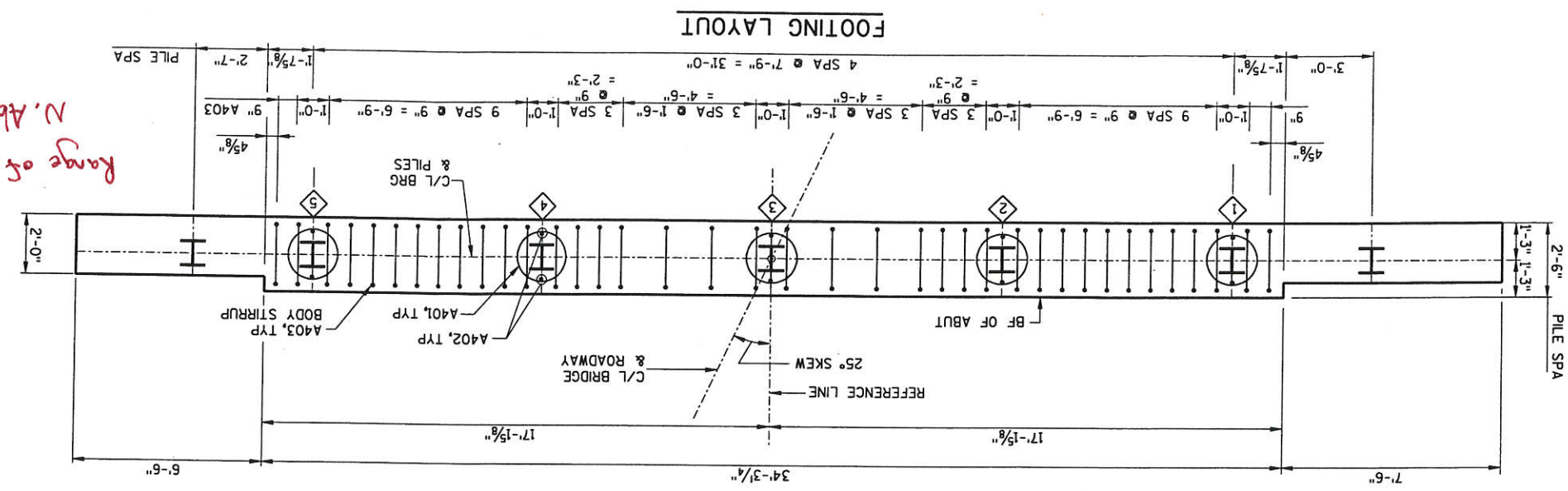


LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

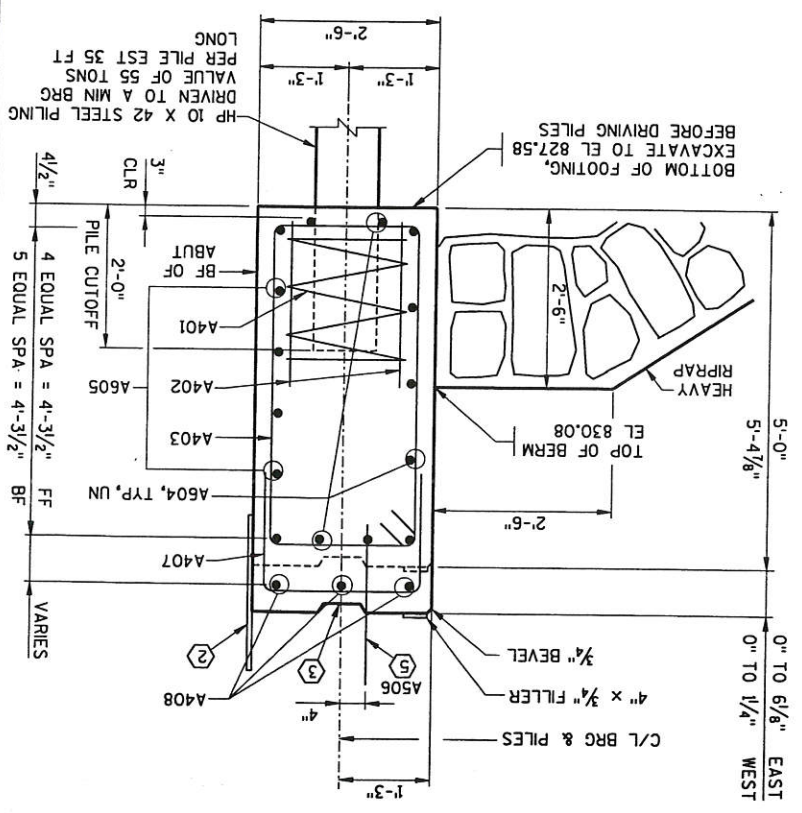
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PLANS RECEIVED	
SHEET 5 OF 8	
NORTH ABUTMENT DETAILS	
CONSTR. SPEC.	1996
BY	JWG
DRWN	CJB
STRUCTURE B-32-206	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
NO.	DATE
REVISION	BY

*Range of Piling Length = 16.1 - 17.0 LF*



TYPICAL SECTION THRU BODY SECTION A-A



FF = FRONT FACE  
 BF = BACK FACE  
 EF = EACH FACE  
 UN = UNLESS NOTED

- ABUTMENT NOTES**
- 1 FILLER INCLUDED IN WING LENGTH
  - 2 RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZ & VERT JOINTS ON BACKFACE, VERTICAL WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
  - 3 KEVED CONSTRUCTION JOINT FORMED BY A BEVELD 2" X 6"
  - 4 OPTIONAL KEVED CONSTRUCTION JOINT FORMED BY A BEVELD 2" X 6"
  - 5 A506 BARS MAY BE PLACED AFTER CONC HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

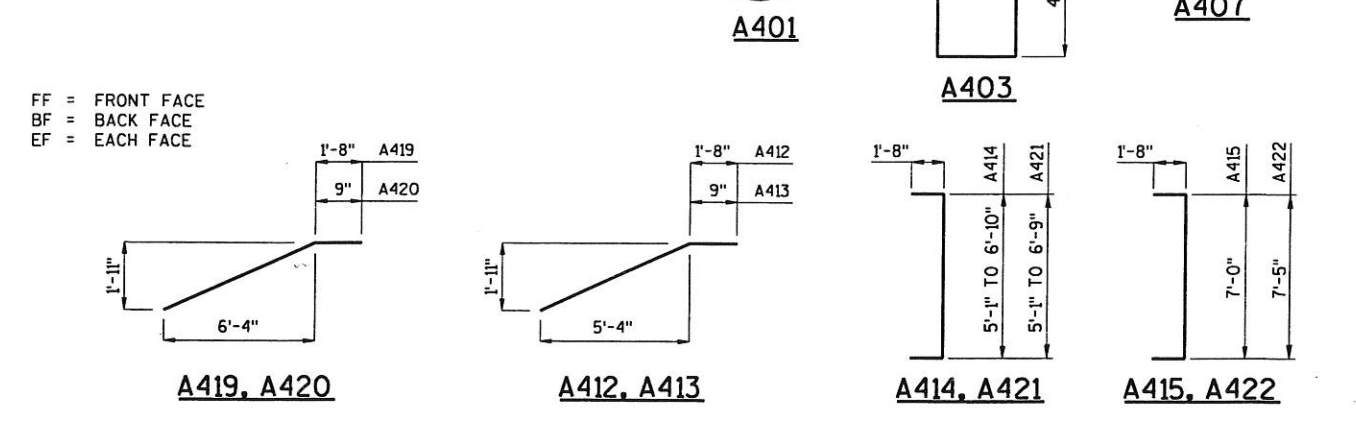
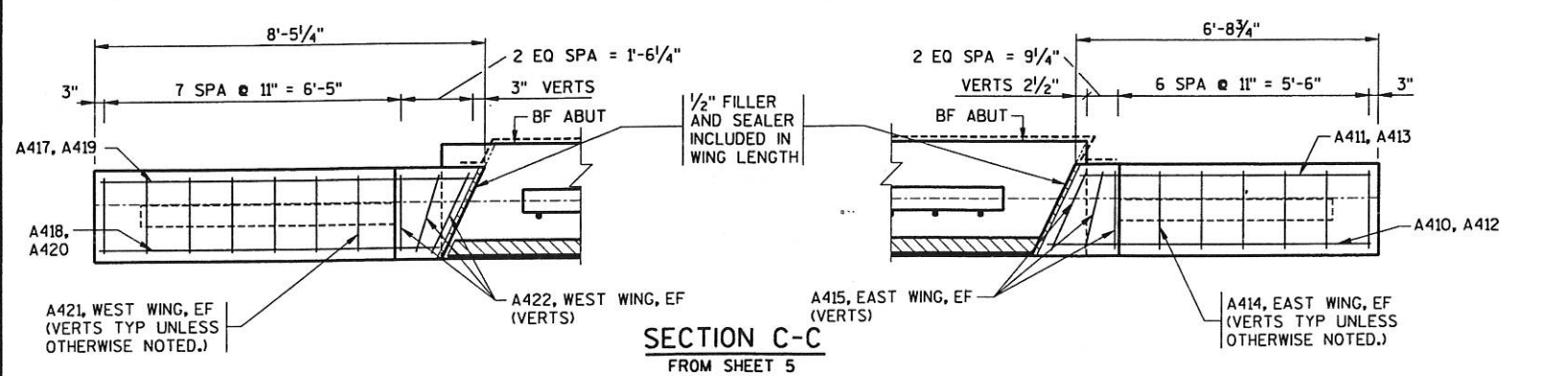
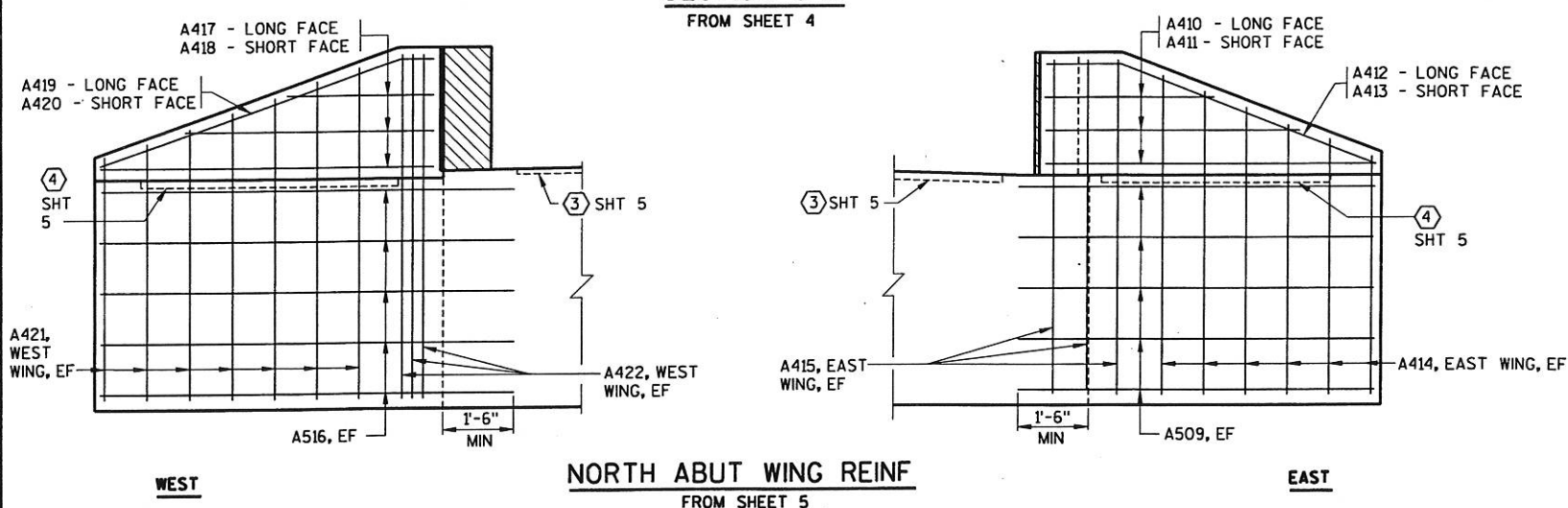
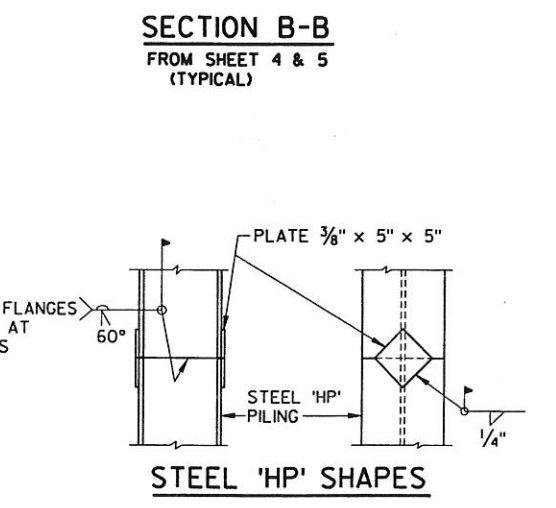
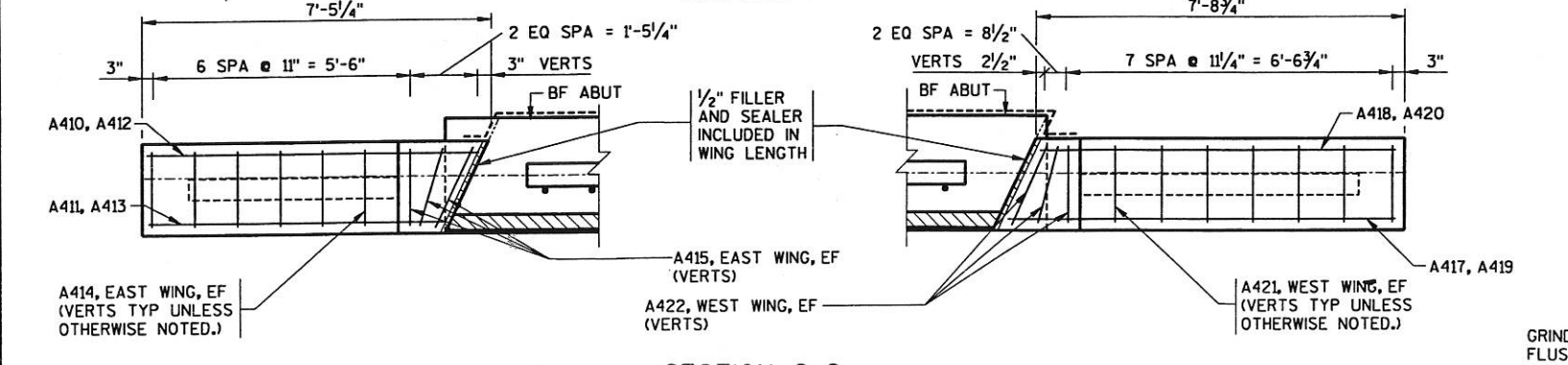
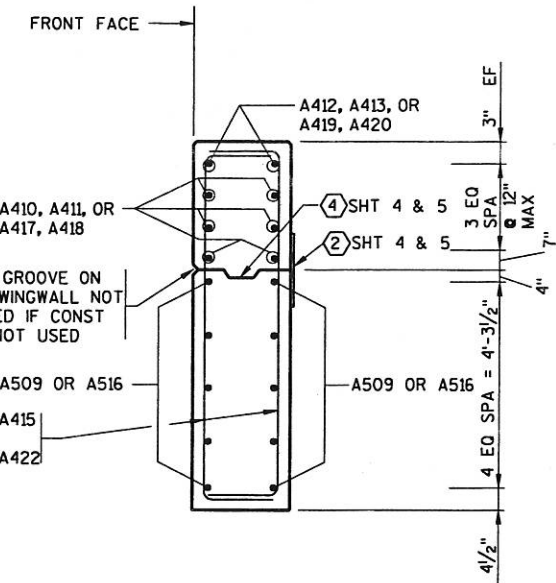
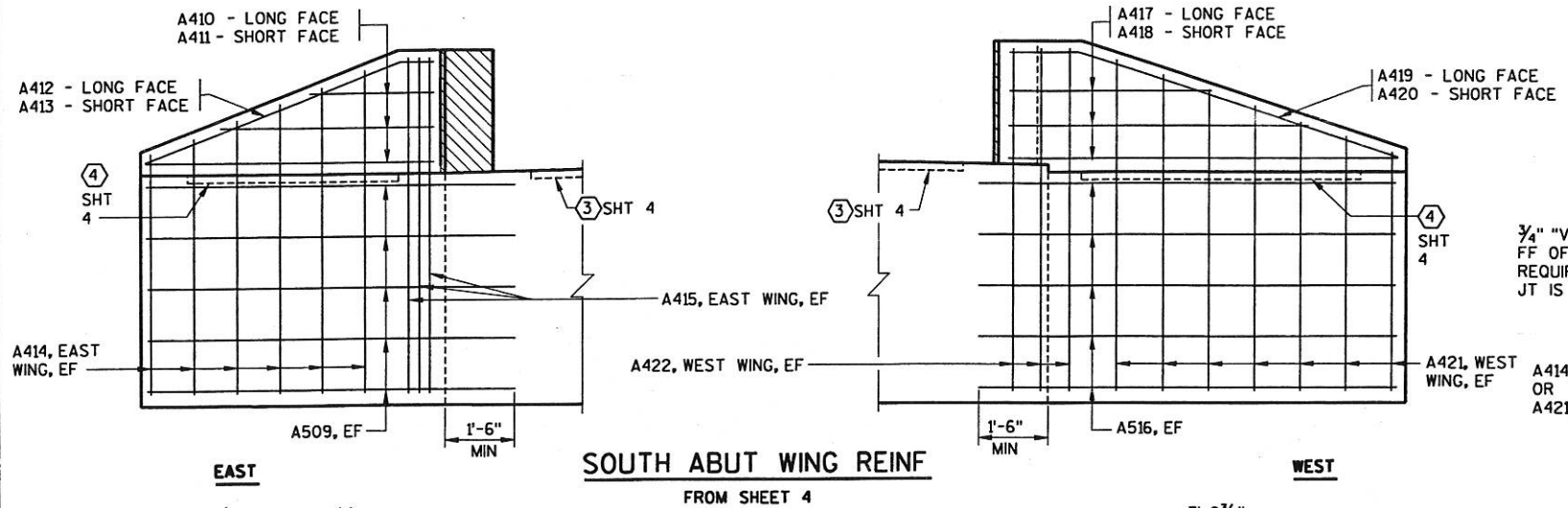
SHEET NO.	5436-06-71
STATE PROJECT NUMBER	

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

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

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

BILL OF BARS		BOTH ABUTMENTS				
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
A401		10	28 - 0		X	BODY AT PILES
A402		20	2 - 3			BODY AT PILES
A403		76	13 - 8		X	BODY STIRRUPS
A604		22	33 - 11			BODY HORIZ
A605		8	33 - 11			BODY HORIZ
A506	X	62	2 - 0			BODY DOWELS
A407		38	5 - 2			SEAT TIE
A408		6	23 - 7			SEAT LONG
A509		20	7 - 10			WING HORIZ EF, SE, NE
A410		6	5 - 4	▲		WING HORIZ LONG, SE, NE
A411		6	4 - 5	▲		WING HORIZ SHORT, SE, NE
A412		2	7 - 4		X	WING HORIZ LONG, SE, NE
A413		2	6 - 5		X	WING HORIZ SHORT, SE, NE
A414		24	9 - 2	▲	X	WING VERT, SE, NE
A415		12	10 - 2		X	WING VERT, SE, NE
A516		20	8 - 10			WING HORIZ, EF, SW, NW
A417		6	6 - 0	▲		WING HORIZ LONG, SW, NW
A418		6	5 - 1	▲		WING HORIZ SHORT, SW, NW
A419		2	8 - 3		X	WING HORIZ LONG, SW, NW
A420		2	7 - 4		X	WING HORIZ SHORT, SW, NW
A421		28	9 - 1	▲	X	WING VERT, SW, NW
A422		12	10 - 7		X	WING VERT, SW, NW



BAR SERIES TABLE		BOTH ABUTMENTS	
BAR MARK	BENT	NO. REQ'D.	LENGTH
A410		2 SERIES OF 3	3'-7\"/>

BUNDLE AND TAG EACH SERIES SEPARATELY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-32-206</b>			
CONST. SPEC.	1996	DRAWN BY JWG	PLANS CKD. CJB
<b>SOUTH AND NORTH ABUTMENT DETAILS</b>			SHEET 6 OF 8
PLANS RECEIVED			

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

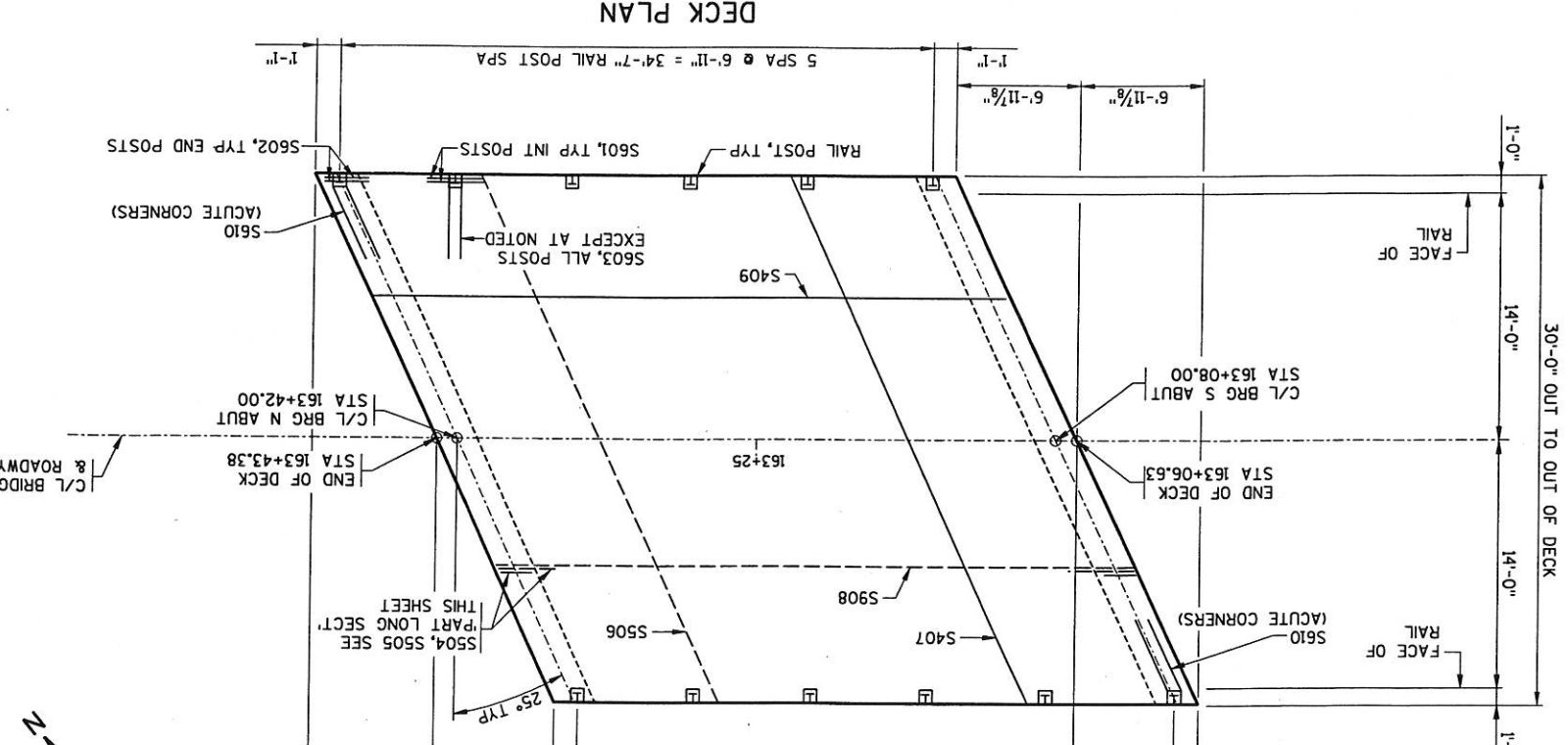
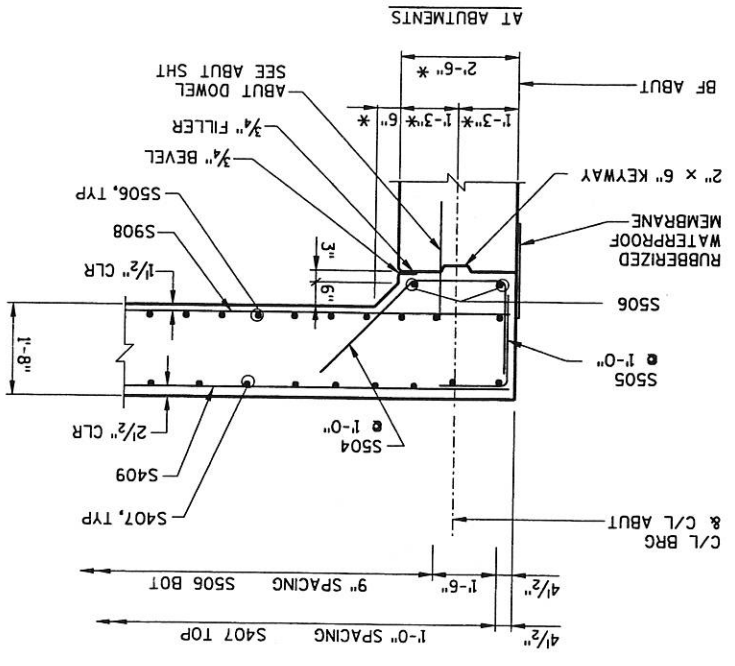
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

SUPERSTRUCTURE DETAILS			PLANS RECEIVED
SHEET 7 OF 8			
CONST. 1996		BY JWG	PLANS CJB
STRUCTURE B-32-206			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
NO. DATE	REVISION	BY	

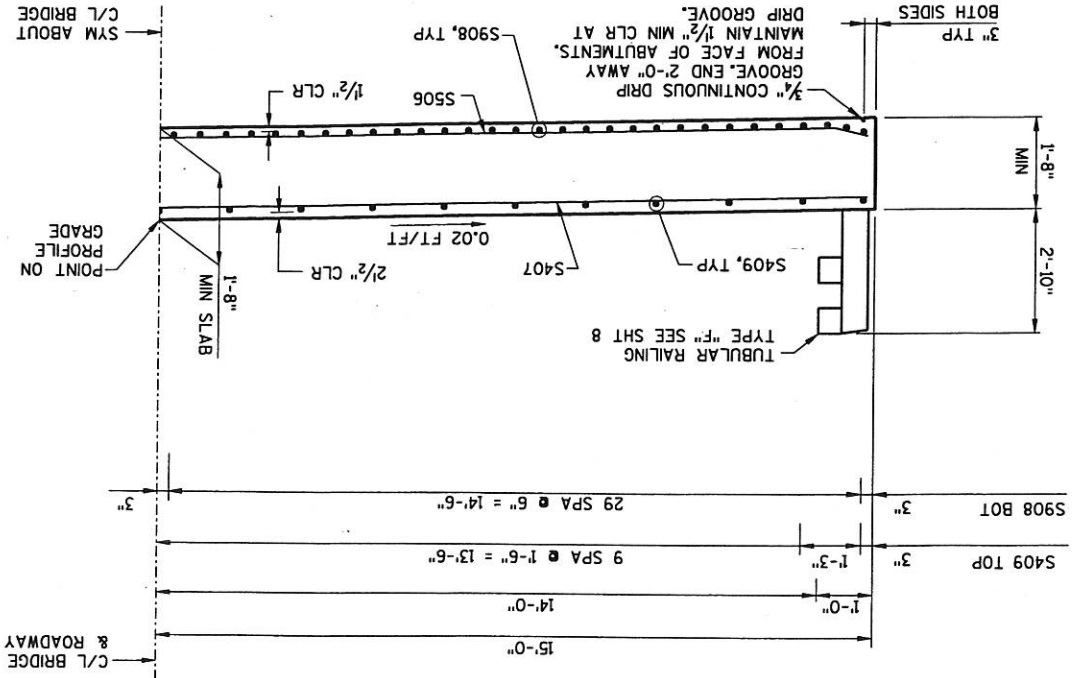
FF = FRONT FACE  
 BF = BACK FACE  
 EF = EACH FACE

**SUPERSTRUCTURE NOTES:**  
 ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).  
 TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.  
 ALTERNATE TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED ON CONTINUOUS BAR CHAIRS APPROXIMATELY 4'-0" CENTERS.

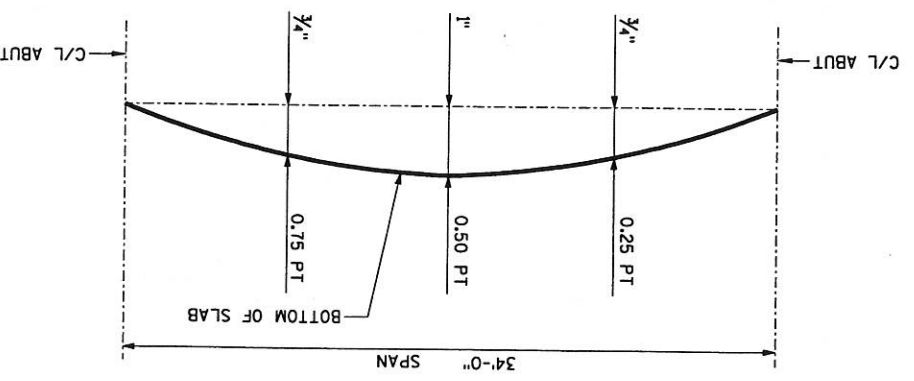
**PARTIAL LONGITUDINAL SECTION**  
 \* MEASURED PERPENDICULAR TO SUBSTRUCTURE UNITS.



**HALF TRANSVERSE SECTION**



**CAMBER DIAGRAM**



CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE VERTICAL ROADWAY PROFILE OR ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION ONLY EQUALS APPROXIMATELY 1/4 OF CAMBER VALUES SHOWN.

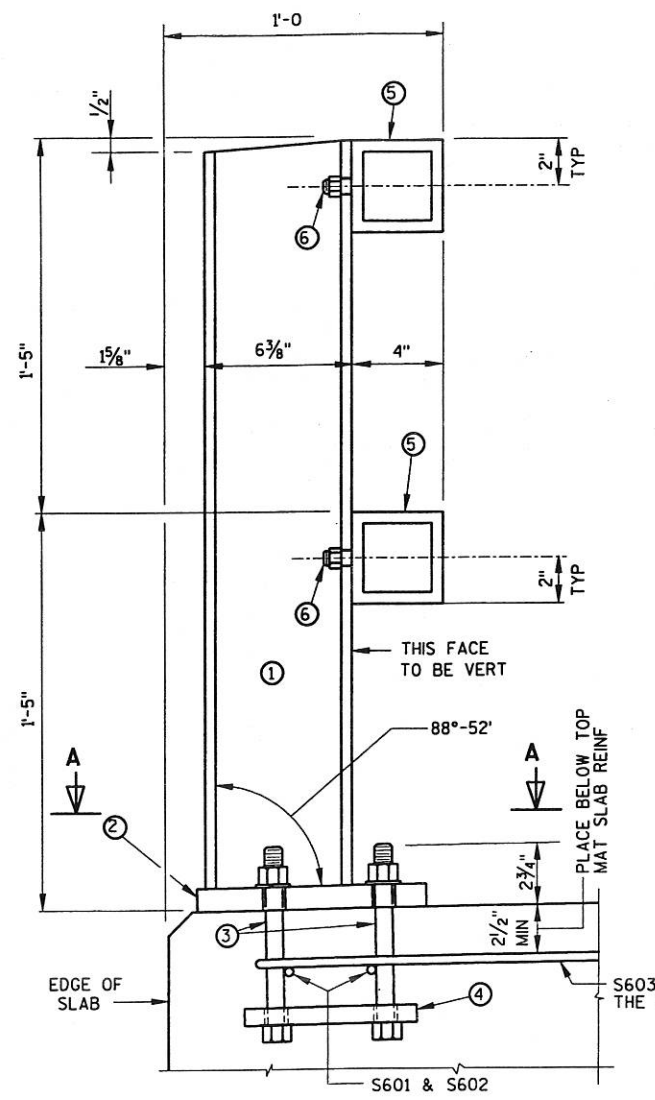
INDICATES TOP BAR STEEL REINFORCEMENT

INDICATES BOT BAR STEEL REINFORCEMENT

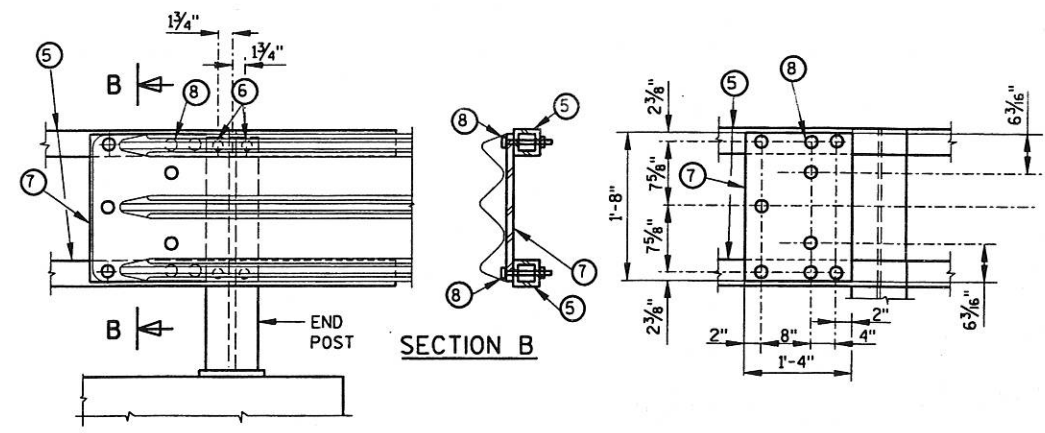
BAR MARK	COAT	NO.	REOD.	LENTH	BAR SERIES	BENT	LOCATION
S601	X	16	4 - 0				RAIL POST
S602	X	8	3 - 10				RAIL POST
S603	X	10	12 - 0				RAIL POST
S504	X	62	6 - 9			X	END OF DECK
S505	X	62	2 - 11			X	END OF DECK
S506	X	51	32 - 8				BOT TRANS
S407	X	37	32 - 8				TOP TRANS
S908	X	60	36 - 5				BOT LONG
S409	X	21	36 - 5				TOP LONG
S610	X	2	12 - 2			X	RAIL POST

NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.  
 DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

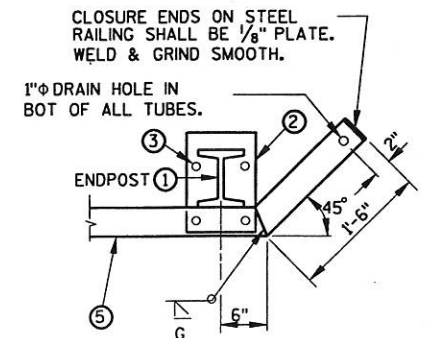
SHEET NO.	STATE PROJECT NUMBER
79	5436-06-71



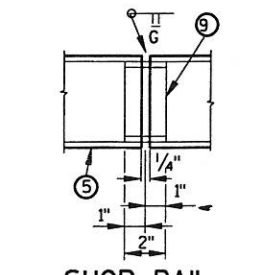
SECTION THRU RAILING ON DECK



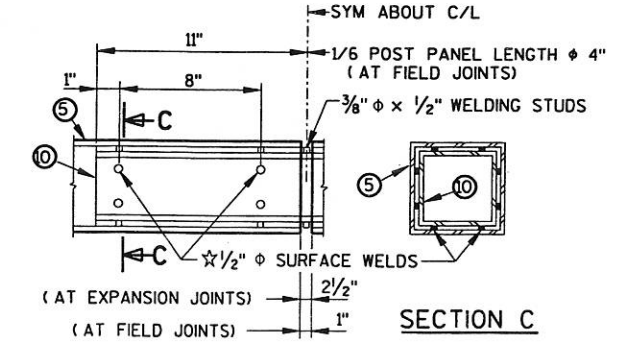
DETAIL AT END POST  
(THREE BEAM RAIL ATTACHMENT)



DETAIL FOR END POSTS  
(THREE BEAM RAIL ATTACHMENT)

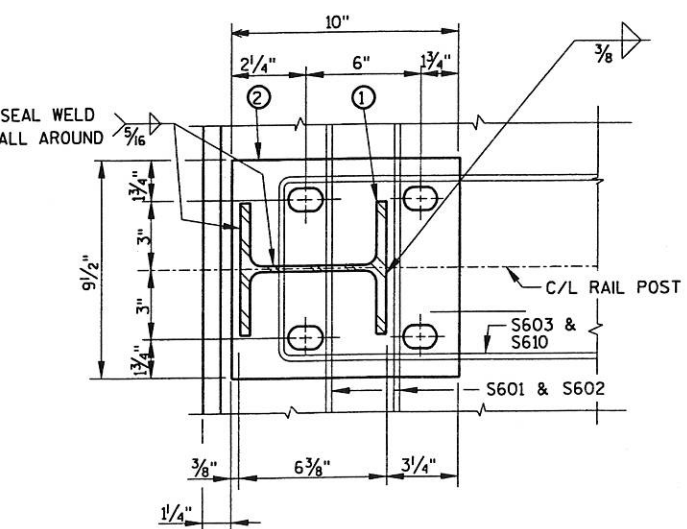


SHOP RAIL SPLICE DETAIL  
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

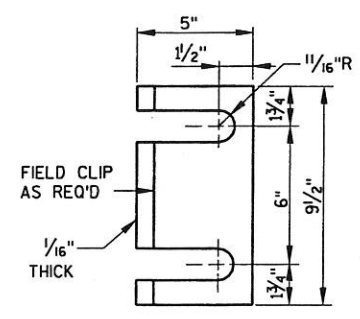


FIELD ERECTION JOINT DETAIL

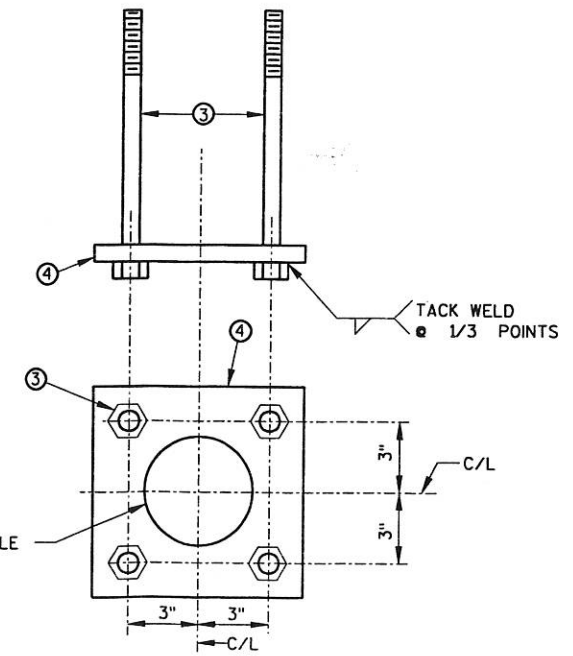
★ MIN 5/8" FLAT SURFACE DIA PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



SECTION A



POST SHIM DETAIL  
(4 PER POST)



ANCHORAGE DETAIL

**LEGEND**

- ① W6x25 WITH 1/4" DIA HOLES ON EACH SIDE OF POST FOR STUD NO 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL AND NORMAL TO GRADE LINE.
- ② PLATE 1" x 9 1/2" x 10", WITH 1/16" x 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO 3. WELD TO NO 1 AS SHOWN.
- ③ A325-7/8" DIA X 1'-2" LONG HEX BOLTS (GALVANIZED) WITH A325 NUT AND WASHER. 4 REQ'D PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO 2. CHAMFER TOP OF BOLTS BEFORE THREADING.
- ④ 1/4" X 8" X 8" FLAT BAR, WITH 15/16" DIA HOLES FOR ANCHOR BOLTS NO 3.
- ⑤ TS 4" X 4" X 1/4" STRUCTURAL TUBING, CONFORMING TO A.S.T.M. DESIGNATION A501 OR A500 GRADE B. ATTACH TO NO 1 WITH TWO STUDS NO 6.
- ⑥ 5/8" DIA X 1/2" LONG SHOP WELDED STUDS, WITH HEX NUT AND 2" WASHERS. (2 REQ'D AT EACH RAIL TO POST LOCATION)
- ⑦ PLATE 3/8" X 1'-4" X 1'-8", BOLT TO RAIL AS SHOWN IN DETAIL. PLACED SYM ABOUT TUBES NO 5.
- ⑧ 1" DIA HOLES IN PLATE NO 7 & TUBES NO 5 FOR 7/8" DIA A325 BOLTS W/ HEX NUTS AND WASHERS.
- ⑨ SQUARE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 3 3/32".
- ⑩ TS 3" X 3" X 1/4" X 1'-10" LONG. PROVIDE 1/2" DIA SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO ID OF NO 5. PROVIDE 3/8" DIA X 1/2" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

**GENERAL NOTES**

- BID ITEM SHALL BE "TUBULAR RAILING TYPE 'F'", WHICH INCLUDES ALL ITEMS SHOWN.
- RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.
- POSTS BASE PLATES, NO 2, SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
- ALL MATERIAL, EXCEPT ANCHORAGE DETAIL (NO 4) SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING OF NO 4 IS NOT REQ'D. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
- FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
- ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.
- STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D FOR ALIGNMENT.
- TIE THE S603 & S610 REINFORCEMENT BAR BELOW THE TOP MAT OF STEEL.
- SEE SHEET 7 FOR RAIL POST SPACING.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-206			
CONST. SPEC.	1996	DRAWN BY JWG	PLANS CK'D. CJB
TUBULAR RAILING TYPE "F"			SHEET 8 OF 8
PLANS RECEIVED			

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63