

RHI
PROJECT ID: 6685-04-70
WITH:
COUNTY: MARATHON

NOVEMBER 2025
ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 94



DESIGN DESIGNATION

A.A.D.T.	2026	=	1500
A.A.D.T.	2046	=	1830
D.H.V.		=	
D.D.		=	50/50
T.		=	10.0%
DESIGN SPEED		=	25 MPH
ESALS		=	440,000

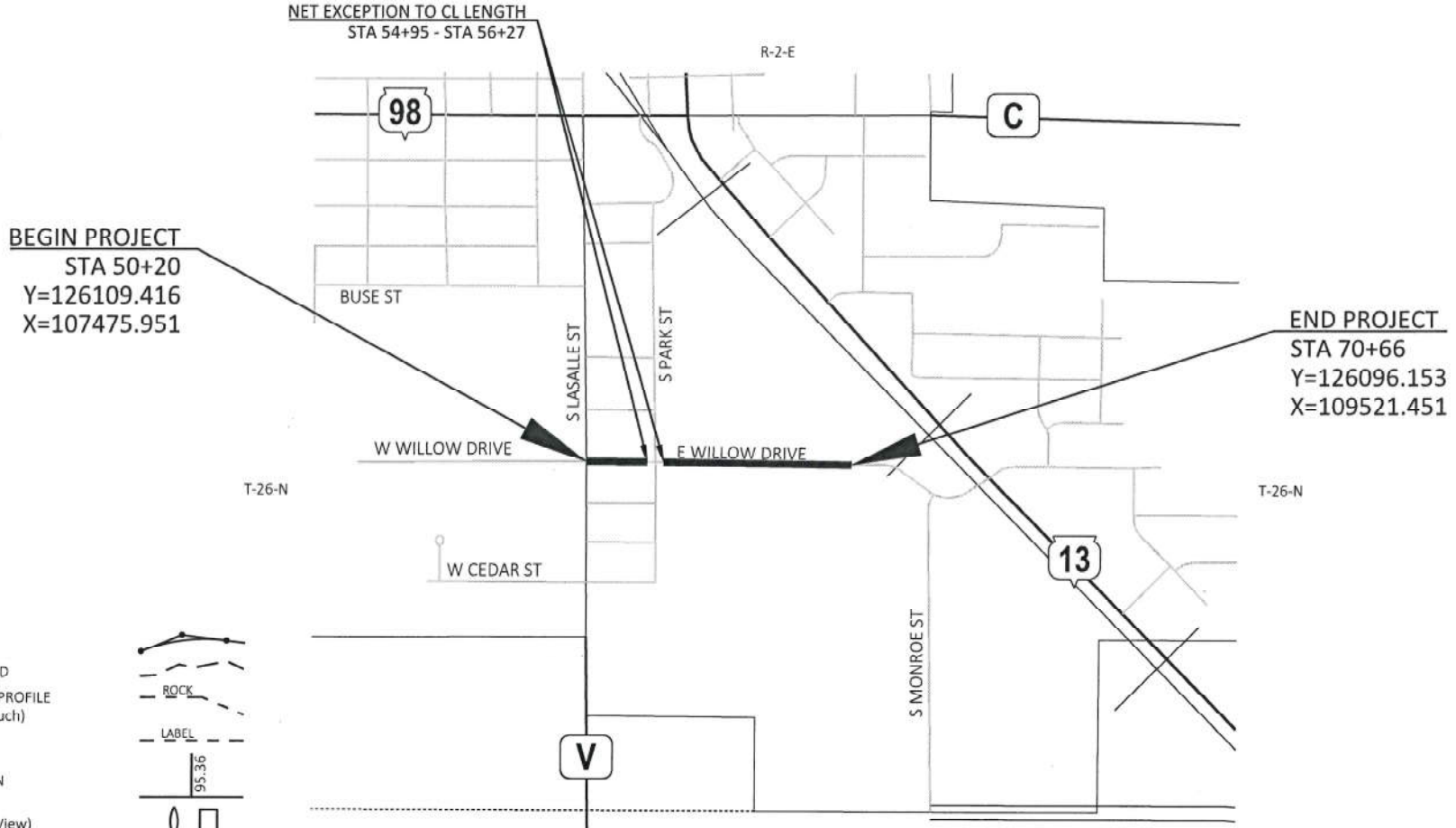
CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
V SPENCER, EAST WILLOW DRIVE
S LASALLE ST TO S MONROE ST
LOCAL STREET
MARATHON COUNTY

STATE PROJECT NUMBER
6685-04-70



TOTAL NET LENGTH OF CENTERLINE = 0.3625 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MARATHON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.
ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6685-04-70	WISC 2026058	1

ACCEPTED FOR
VILLAGE OF SPENCER
Chris Helgestad
Date: 7/25/2025 08:25:43 CDT
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
QUEST
Civil Engineers, LLC
JAMES G. WENDELS
E-38037
WISCONSIN RAPIDS, WI
7/22/25
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	QUEST CIVIL ENGINEERS
Designer	QUEST CIVIL ENGINEERS
Project Manager	MICHAEL GRAGE
Regional Examiner	N/A
Regional Supervisor	DAN ERVA

APPROVED FOR THE DEPARTMENT
DATE: 7/25/2025
(Signature)

GENERAL NOTES

THE ALIGNMENT IN THIS PLAN IS BASED ON FIELD SURVEY SHOTS TAKEN ON THE EXISTING CENTERLINE.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF ALL LANDMARKS, BENCHMARKS, AND OTHER CONTROL POINTS IN ALL AREAS WHERE SUCH LANDMARKS, BENCHMARKS, OR OTHER CONTROL POINTS MAY EXIST.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. SURVEY MARKERS SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

NO TREES AND/OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER

ALL WASTE MATERIAL RESULTING FROM THE VARIOUS CONSTRUCTION OPERATIONS SHALL BE ENTIRELY REMOVED AND PROPERLY DISPOSED OF IMMEDIATELY OR AS DIRECTED BY THE ENGINEER.

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.

EROSION CONTROL ITEMS ARE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

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

LOCATIONS OF CURB & GUTTER REPLACEMENTS WILL BE VERIFIED BY THE ENGINEER IN THE FIELD.

A REPORT OF GEOTECHNICAL EXPLORATION IS AVAILABLE UPON REQUEST FROM THE VILLAGE OF SPENCER FOR THIS PROJECT.

HMA PAVEMENT AND ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN.

TACK COAT QUANTITIES WERE CALCULATED USING A TACK COAT APPLICATION RATE OF 0.065 GAL/SY BETWEEN LAYERS OF HMA.

RUNOFF COEFFICENT TABLE

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

TOTAL PROJECT AREA = 2.01 ac
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.17 ac

EAST WILLOW DRIVE SOIL BORING INFORMATION

BORING NO	STATION	EXISTING ASPHALTIC PAVEMENT THICKNESS	EXISTING BASE THICKNESS	SUBGRADE MATERIAL
B-1	51+00	4.75"	14.75"	SILTY SAND
B-2	54+10	3.75"	9.75"	SILTY SAND
B-3	56+45	3.5"	12.5"	SILTY SAND
B-4	59+87	3.5"	16"	SILTY SAND
B-5	64+00	3.25"	14.75"	CLAYEY SAND
B-6	69+19	3.5"	14"	SILTY SAND

MUNICIPAL CONTACTS

VILLAGE OF SPENCER
CHRIS HELGESTAD – VILLAGE ADMINISTRATOR
105 PARK STREET, PO BOX 360
SPENCER, WI 54479
TELEPHONE: 715-659-5423
clerk@vil.spencer.wi.us

MARATHON COUNTY HIGHWAY DEPARTMENT
JAMES GRIESBACH – HIGHWAY COMMISSIONER
1430 WEST STREET
WAUSAU, WI 54401
TELEPHONE: 715-261-1800
james.griesbach@co.marathon.wi.us

WisDOT CONTACT

WisDOT
MICHAEL GRAGE – LOCAL PROGRAM PROJECT MANAGER
510 HANSON LAKE ROAD
RHINELANDER, WI 54501
TELEPHONE: 715-365-5705
michael.grage@dot.wi.gov

DESIGN CONTACT

QUEST CIVIL ENGINEERS
JIM WENDELS
320 W GRAND AVE, SUITE 302
WISCONSIN RAPIDS, WI 54495
TELEPHONE: 715-323-0321
jim.wendels@questllc.biz

DNR CONTACTS

WISCONSIN DEPARTMENT OF
NATURAL RESOURCES
JAY SCHIEFELBEIN
DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVE
GREEN BAY, WI 54313
TELEPHONE: 920-360-3784
jeremiah.schiefelbein@wisconsin.gov

UTILITY CONTACTS

FRONTIER COMMUNICATIONS OF WI, LLC - COMMUNICATIONS
CHRIS POLLACK
421 4TH STREET
WAUSAU, WI 54403
TELEPHONE: 715-847-1240
CELL: 715-297-4773
christopher.pollack@ftr.com

SPECTRUM - COMMUNICATIONS
JESSE GRUNY
606 N. DIVISION ST
COLBY, WI 54421
TELEPHONE: 715-651-5605
jesse.gruny@charter.com

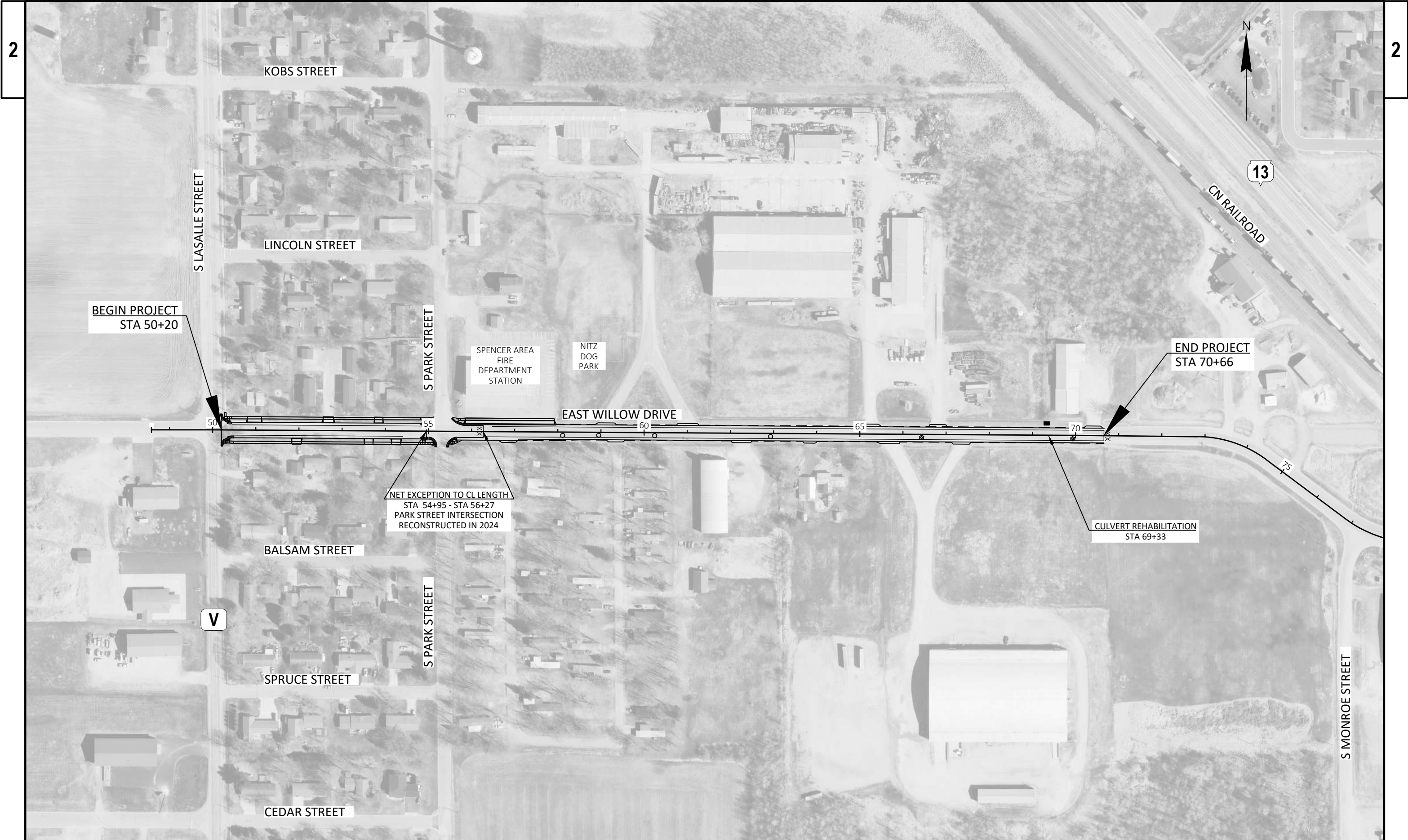
VILLAGE OF SPENCER - SANITARY SEWER
JERRY KOBBS
105 PARK STREET, PO BOX 360
SPENCER, WI 54479
TELEPHONE: 715-659-5423
clerk@vil.spencer.wi.us

VILLAGE OF SPENCER - WATER
JERRY KOBBS
105 PARK STREET, PO BOX 360
SPENCER, WI 54479
TELEPHONE: 715-659-5423
clerk@vil.spencer.wi.us

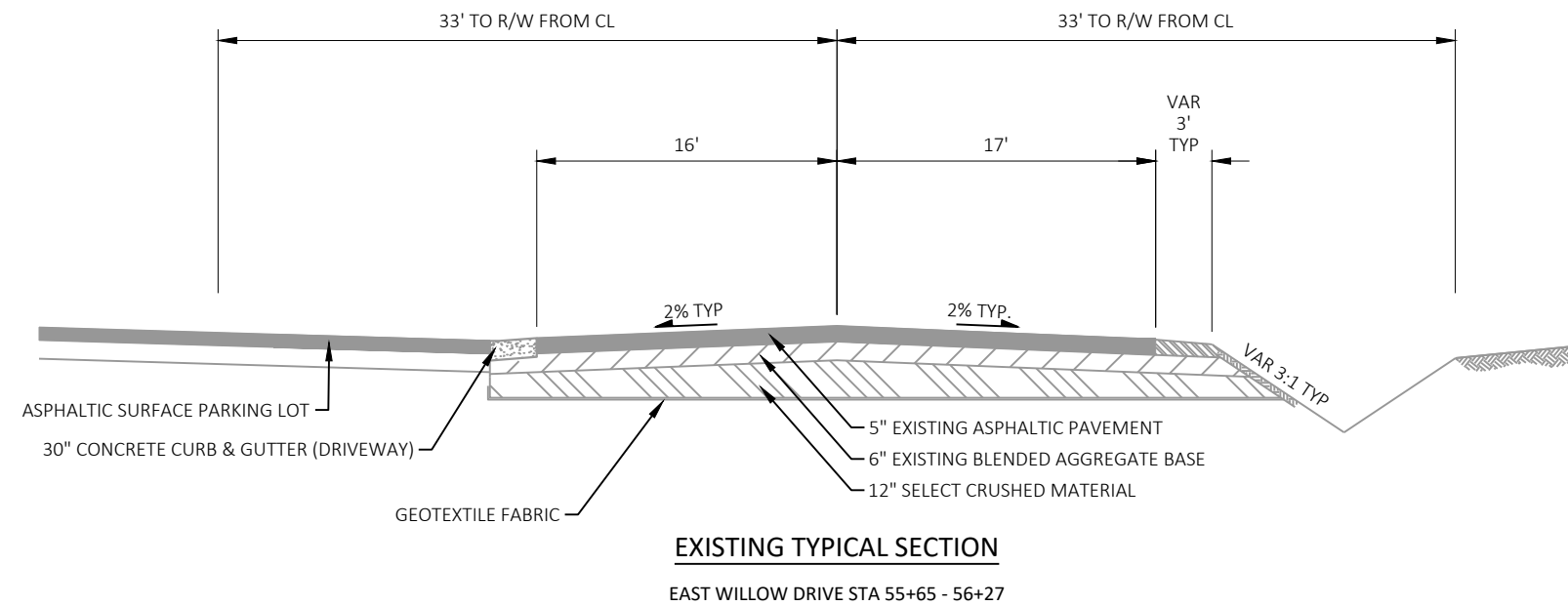
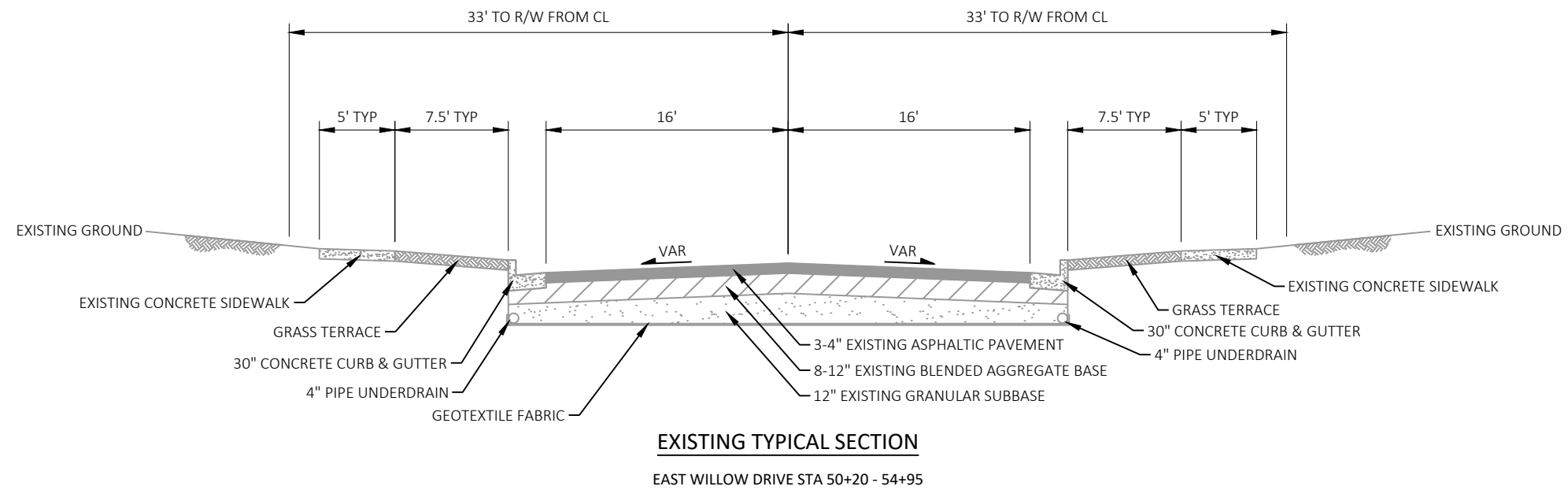
WE ENERGIES – GAS
SANDY BEHLEN
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
TELEPHONE: 715-421-7277
CELL: 715-213-5189
sandra.behlen@we-energies.com

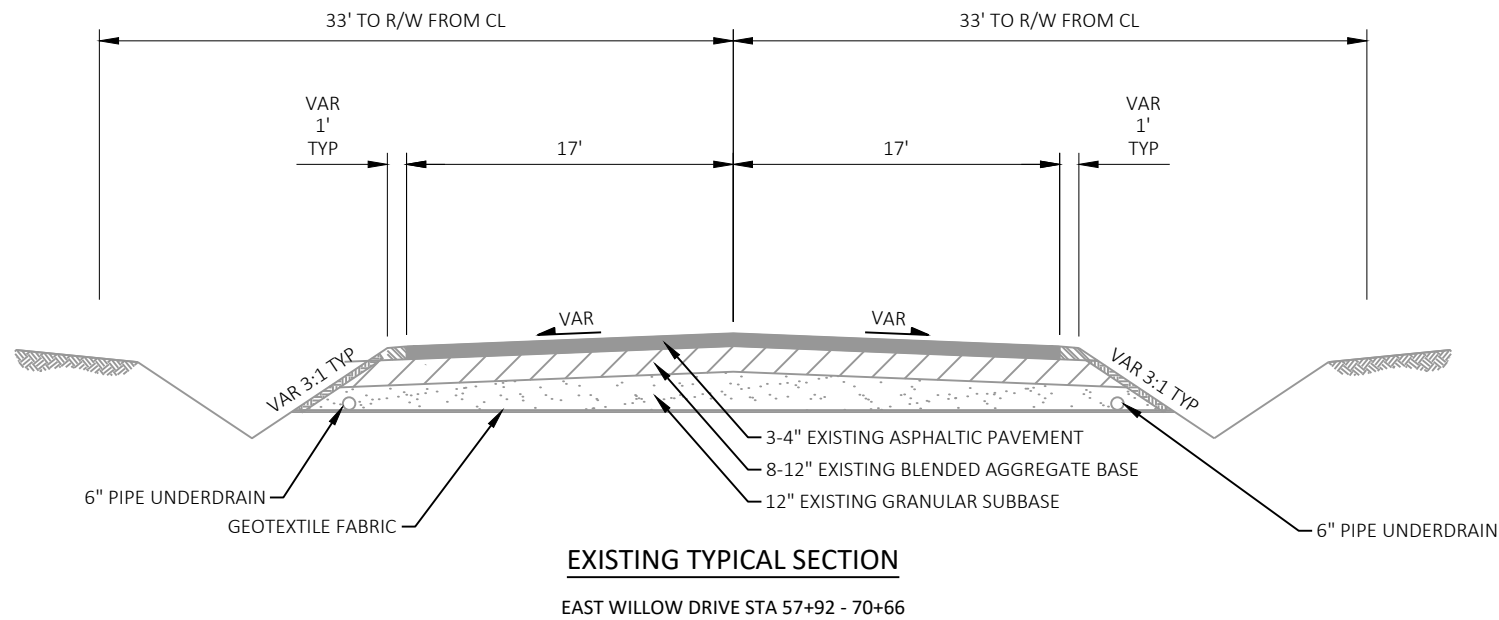
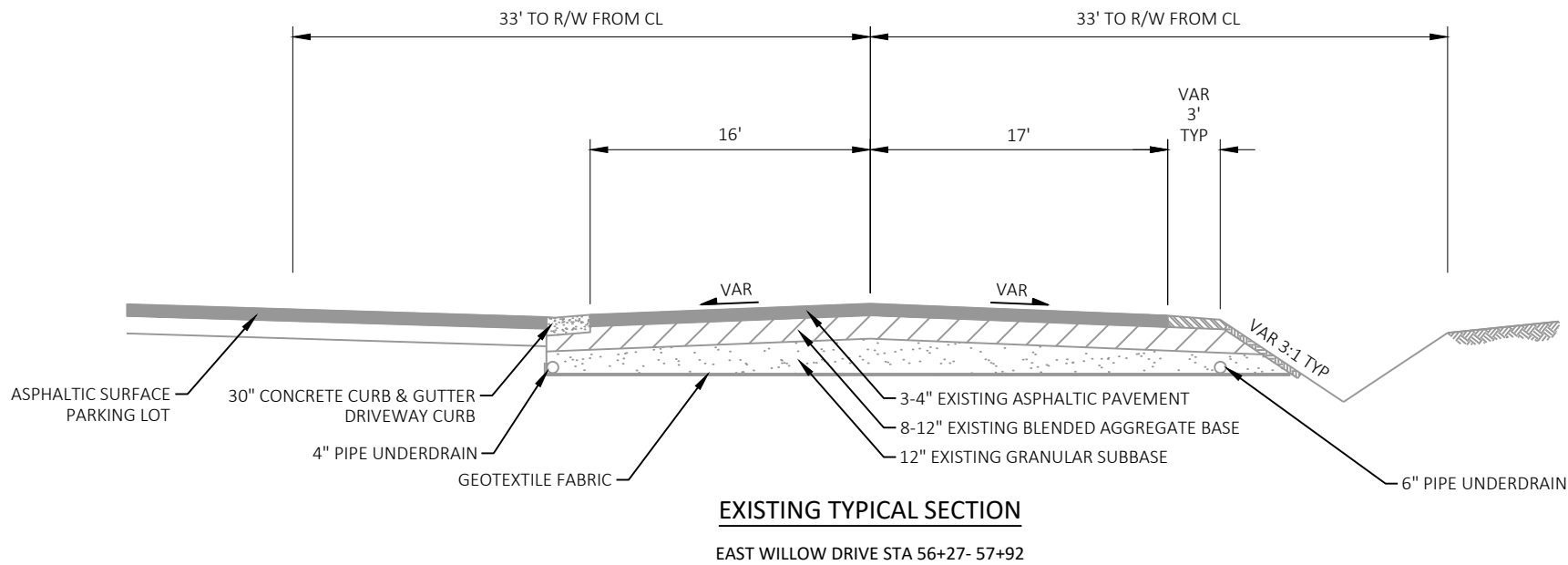
XCEL ENERGY–ELECTRICITY
JOHN KELSER
1400 WESTERN AVE
EAU CLAIRE, WI 54701
TELEPHONE: 715-737-6020
john.kelser@xcelenergy.com

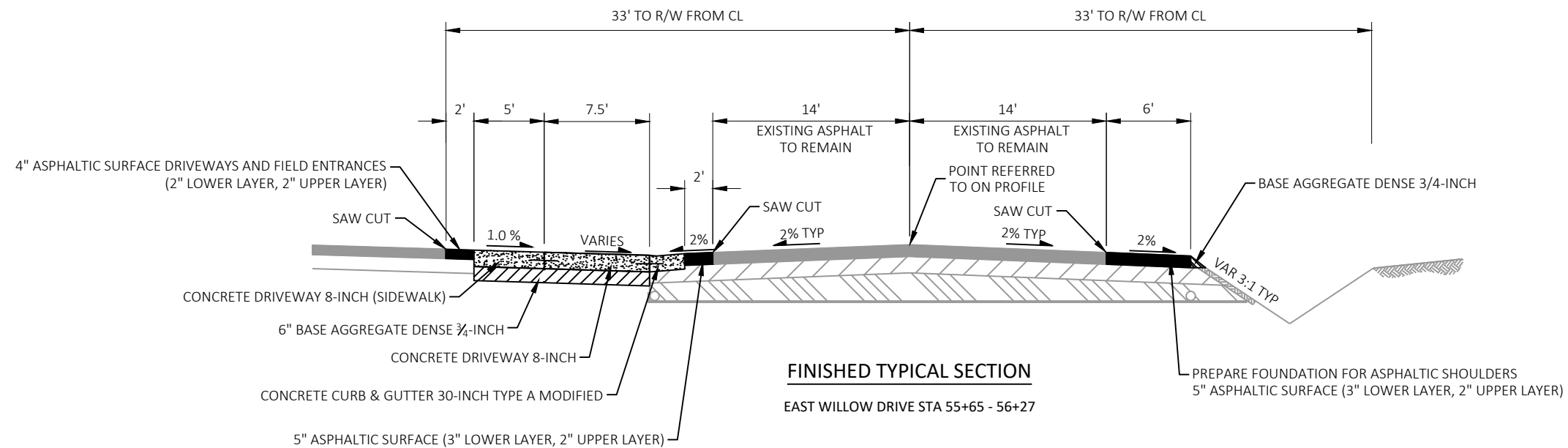
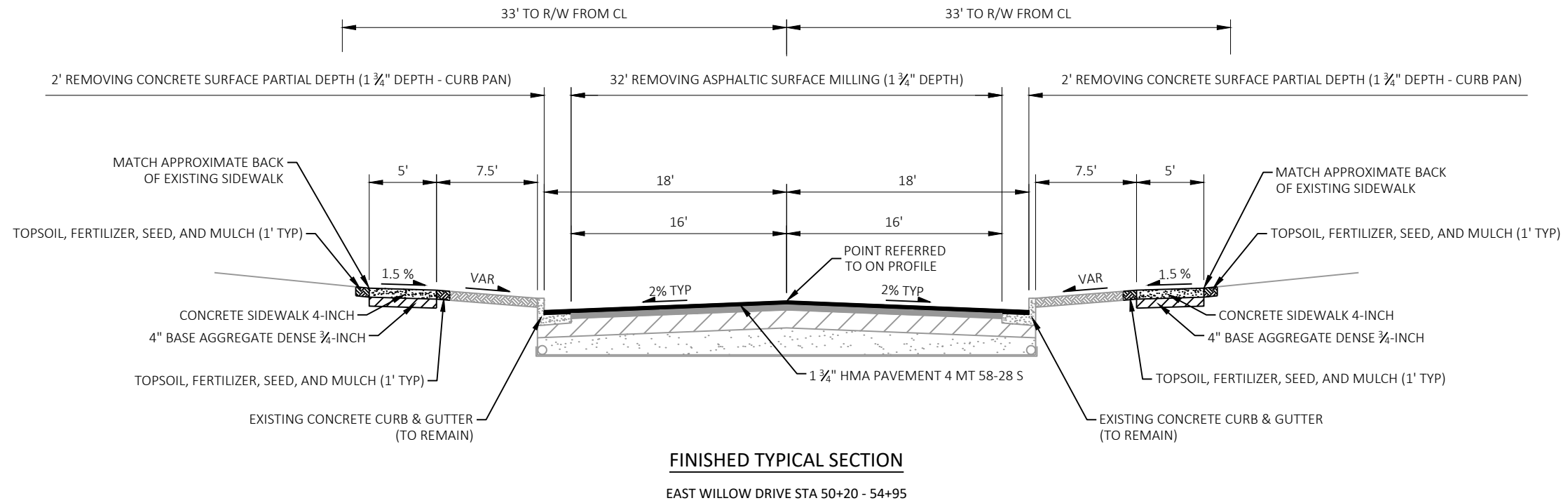


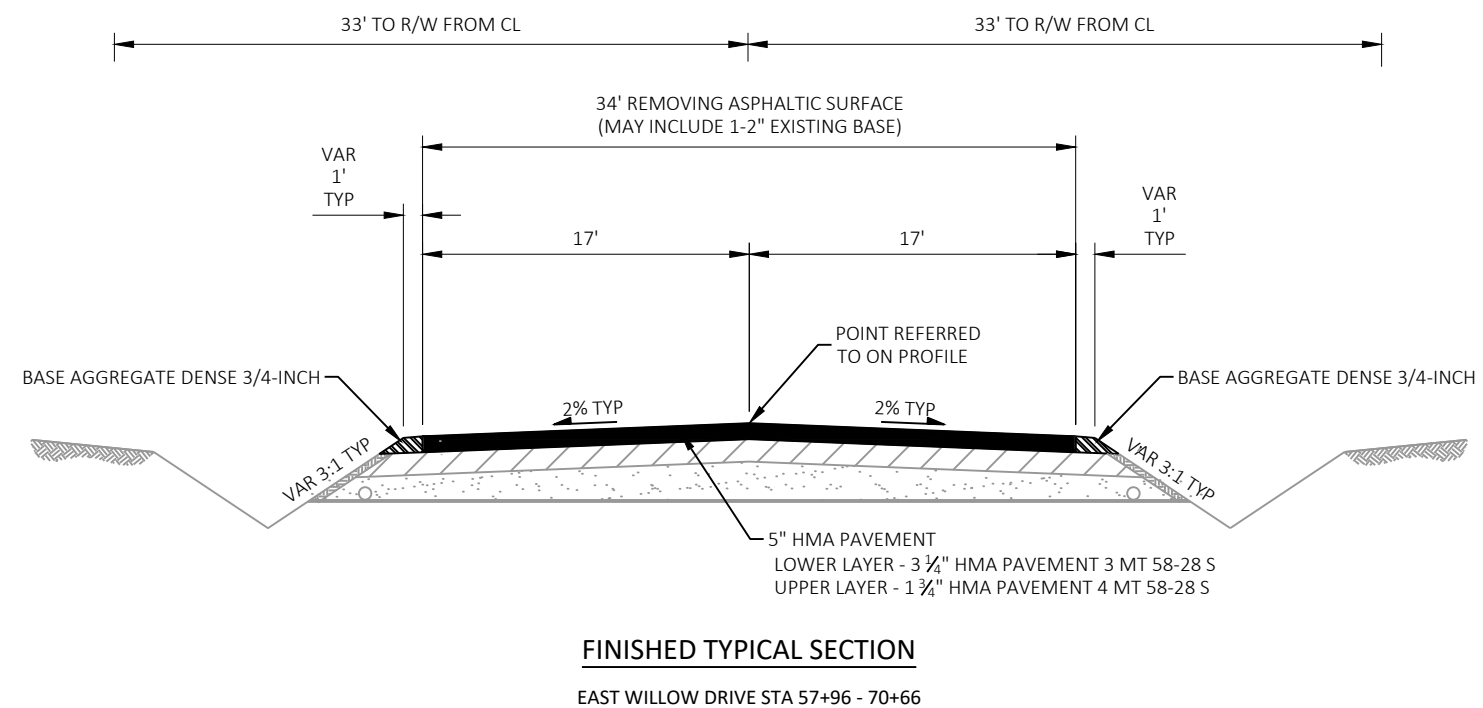


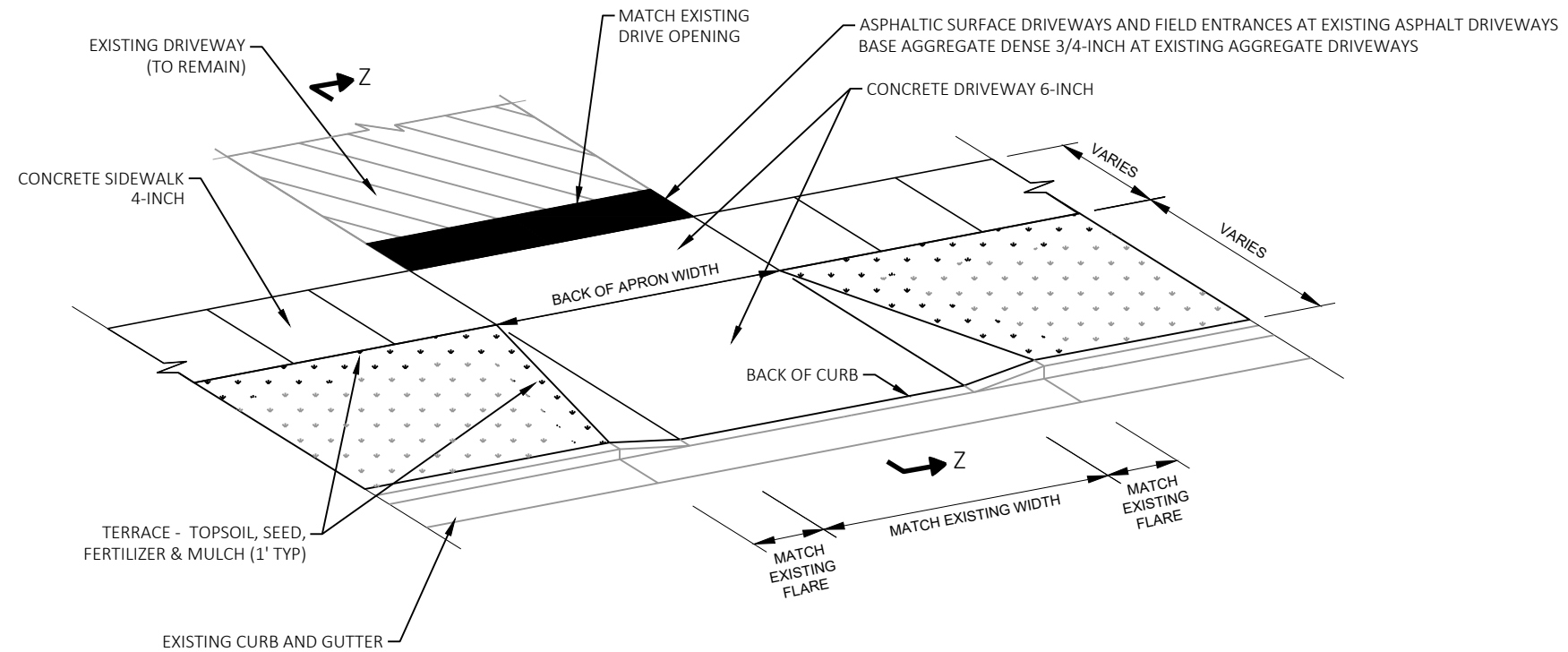
PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET	E
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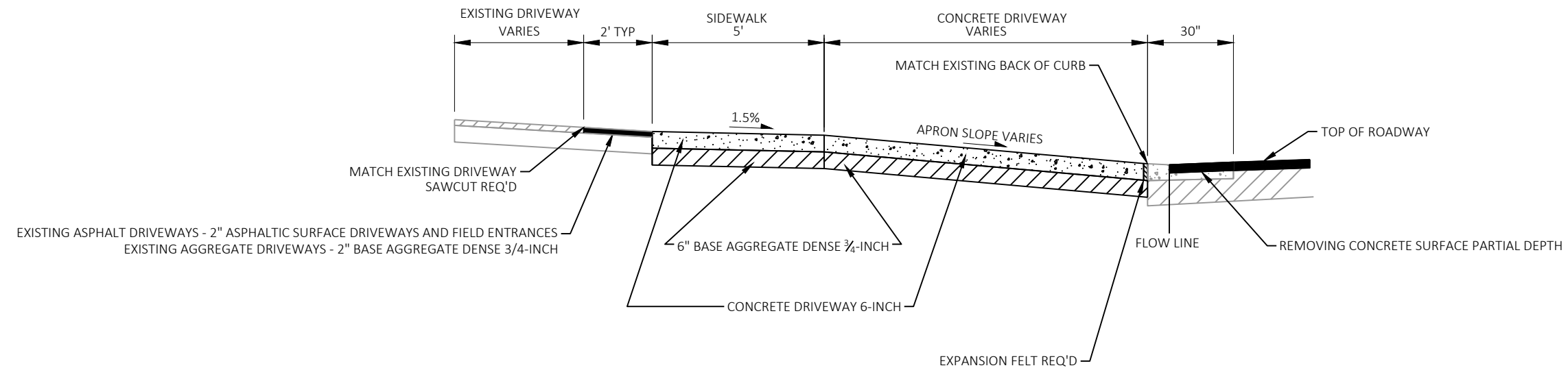




NOTES

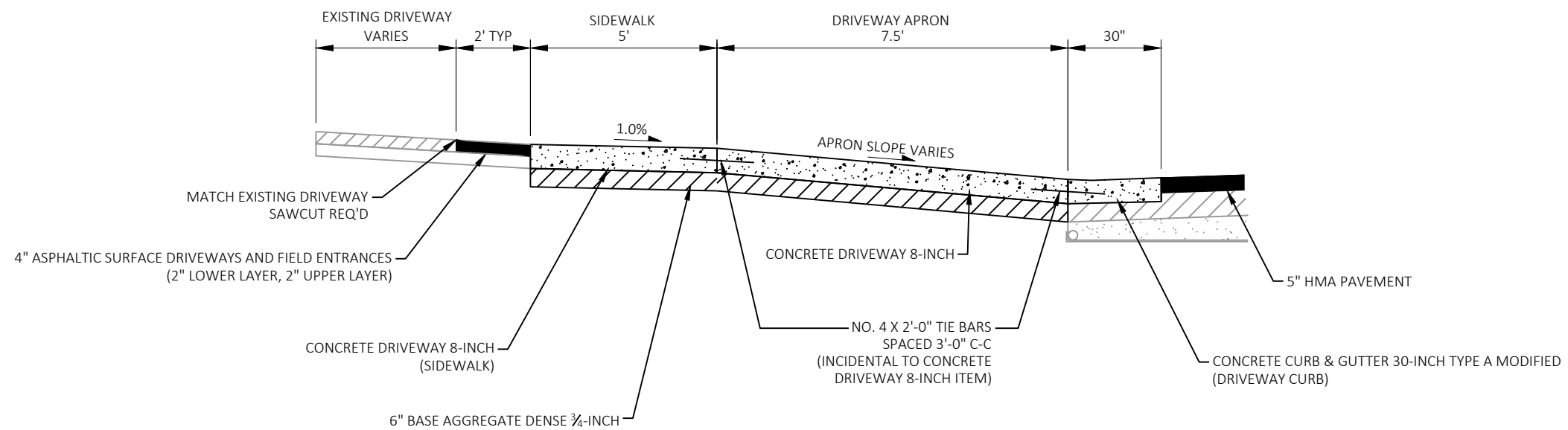
PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20-FEET IN WIDTH AND THE THIRD POINTS OVER 20-FEET IN WIDTH.

PLACE TOPSOIL, SEED, FERTILIZER, & MULCH ONE FOOT FROM EDGE OF NEW CONCRETE PLACEMENT TYPICALLY, UNLESS NOTED OTHERWISE.



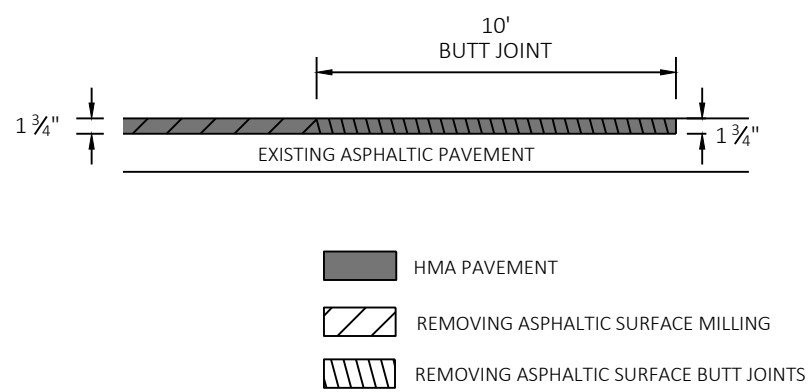
DRIVEWAY ENTRANCE DETAIL WITH CURB & GUTTER

LASALLE ST TO PARK STREET



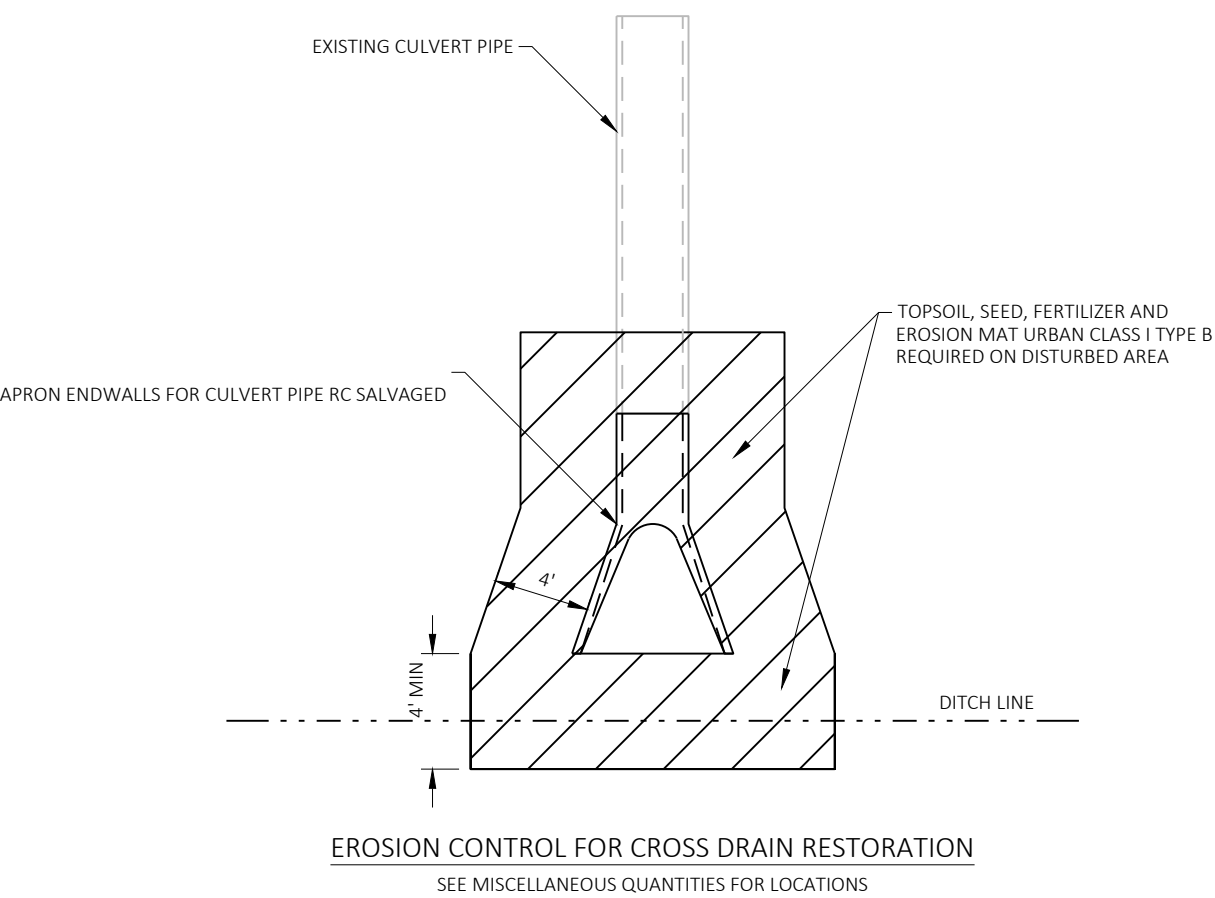
DRIVEWAY ENTRANCE DETAIL WITH CURB & GUTTER

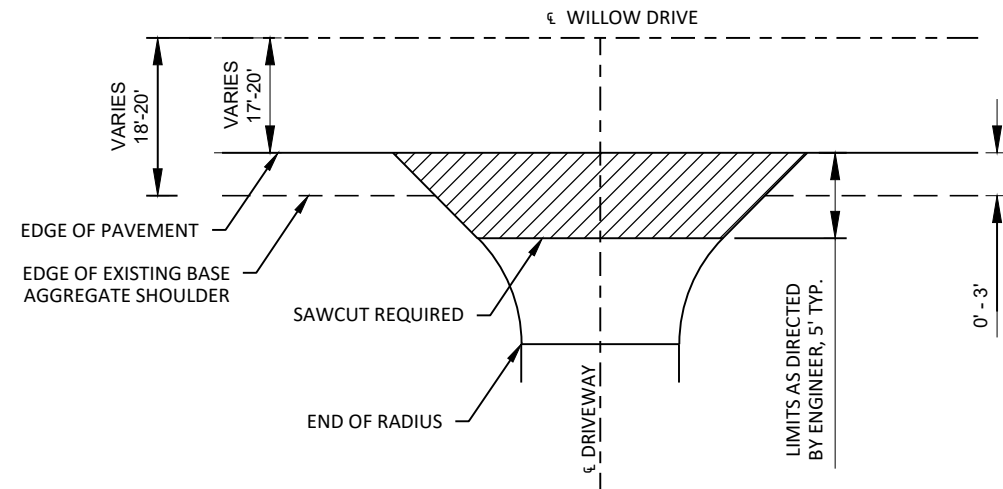
STA 55+81 TO STA 57+96 LT



BUTT JOINT (NO MAINLINE PROFILE CHANGE)

STA 50+20
STA 54+75





 REMOVING ASPHALTIC SURFACE (FULL DEPTH), REPLACE WITH MINIMUM 2" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES.

MATCH EXISTING PAVED SURFACE WIDTH, RADII AND TAPERS.

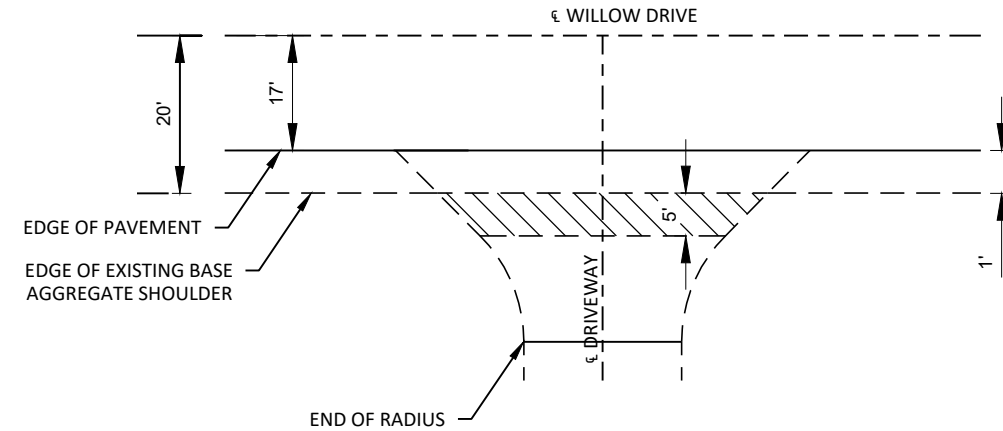
MATCH EXISTING PAVEMENT THICKNESS.

ANY ADDITIONAL BASE AGG. DENSE REQUIRED SHALL BE PAID UNDER ITEM - "BASE AGGREGATE DENSE 3/4-INCH"

SAWCUT PAID FOR UNDER ITEM "SAWING ASPHALT"

PAVED RURAL DRIVEWAY RESTORATION DETAIL

56+85 RT	62+25 RT
59+12 LT	63+84 RT
59+35 RT	65+72 RT
61+01 LT	67+35 RT
	70+40 LT

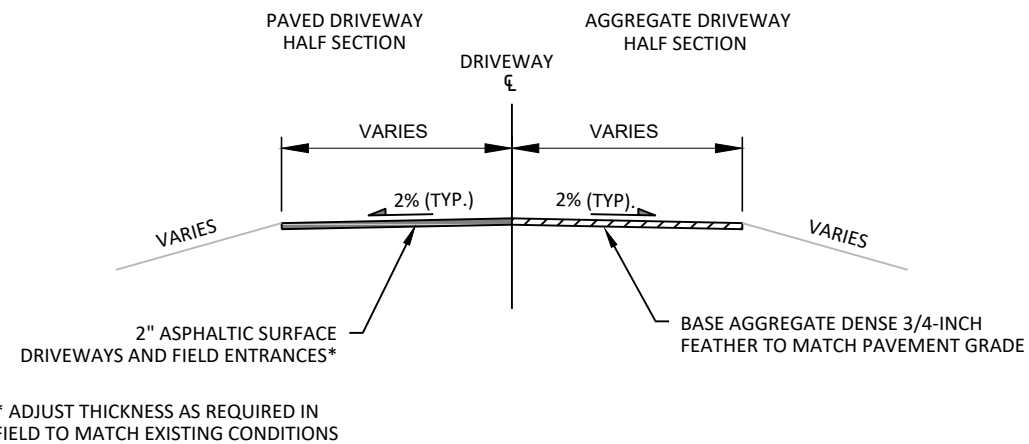


 EACH ENTRANCE SHALL RECEIVE ADEQUATE 3/4-INCH BASE AGGREGATE DENSE AFTER MAINLINE PAVING AND GRADING SHOULDERS TO BRING ENTRANCE UP TO SHOULDER PAVEMENT GRADE.

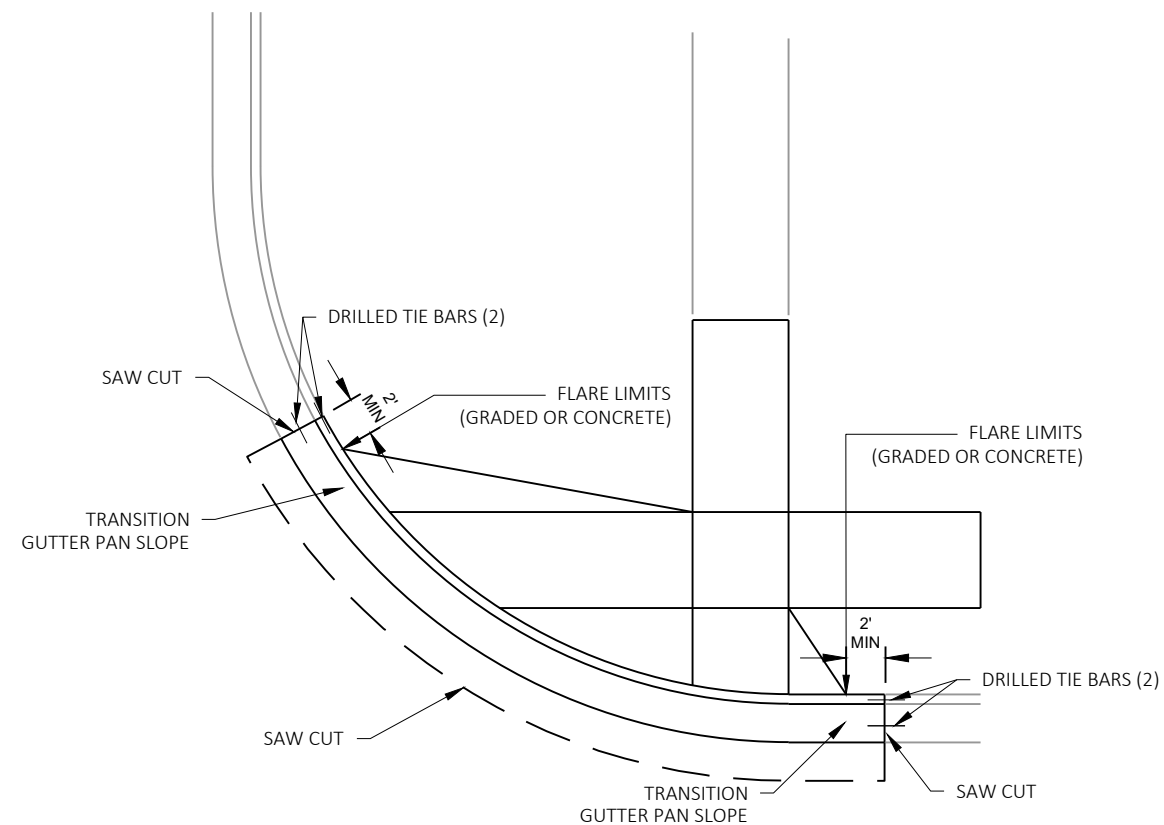
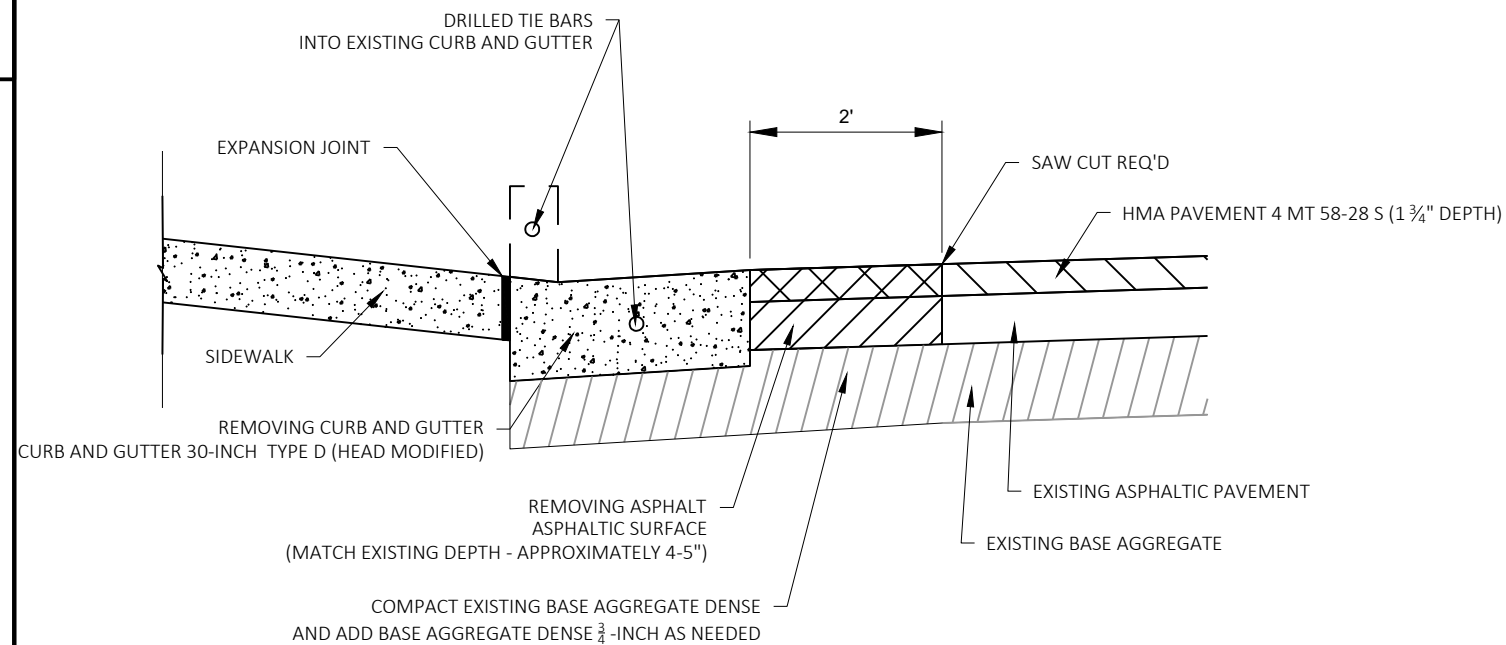
MATCH EXISTING DRIVEWAY WIDTH AND RADII.

AGGREGATE RURAL DRIVEWAY RESTORATION DETAIL

65+25 RT
67+35 RT

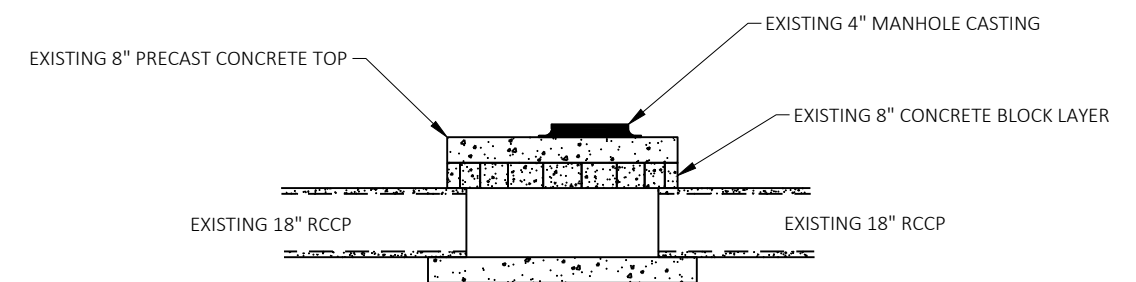


TYPICAL DRIVEWAY RESTORATION SECTION



CURB AND GUTTER REPLACEMENT AT CURB RAMPS

NOTE: PATCH EXISTING ASPHALT PRIOR TO MILLING ASPHALTIC PAVEMENT FULL WIDTH



- MANHOLE INCLUDES MULTIPLE ADDITIONAL PIPES INCLUDING A 12" RCCP, TWO 8" PVC PIPES, & A 4" UNDERDRAIN PIPE
- DESIGN INTENT IS TO REMOVE THE 8" CONCRETE BLOCK LAYER, RESET THE 8" PRECAST CONCRETE TOP ON A MORTAR LAYER OR SMALL BRICK LAYER, AND USE ADJUSTING RINGS TO RESET THE MANHOLE CASTING TO THE HEIGHT AND SLOPE NEEDED TO MATCH THE NEW CONCRETE DRIVEWAY APRON.

RECONSTRUCTING MANHOLES - STA 53+85 LT

PROJECT NO: 6685-04-70

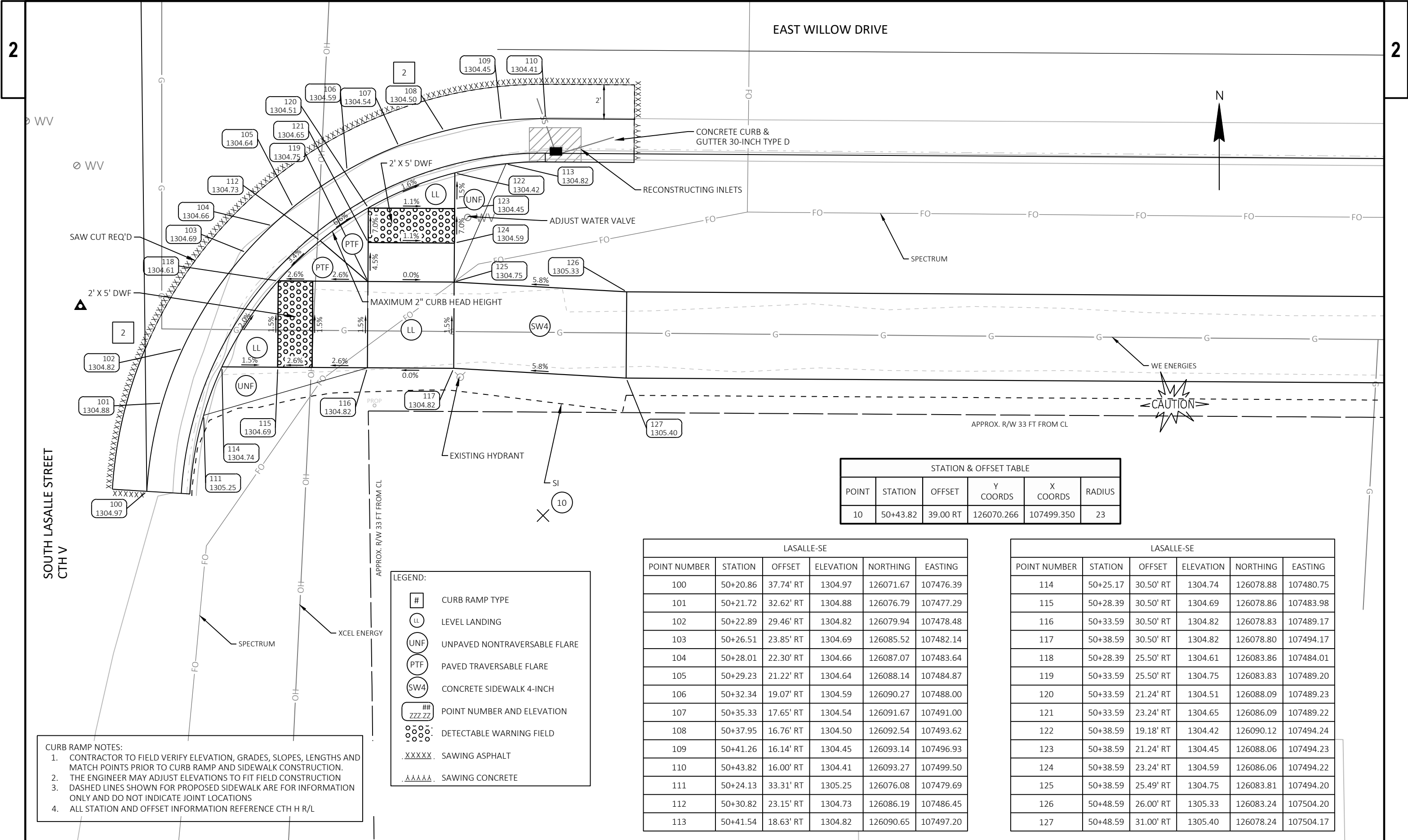
HWY: EAST WILLOW DRIVE

COUNTY: MARATHON

CONSTRUCTION DETAILS

SHEET

E



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
10	50+43.82	39.00 RT	126070.266	107499.350	23

LASALLE-SE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
100	50+20.86	37.74' RT	1304.97	126071.67	107476.39
101	50+21.72	32.62' RT	1304.88	126076.79	107477.29
102	50+22.89	29.46' RT	1304.82	126079.94	107478.48
103	50+26.51	23.85' RT	1304.69	126085.52	107482.14
104	50+28.01	22.30' RT	1304.66	126087.07	107483.64
105	50+29.23	21.22' RT	1304.64	126088.14	107484.87
106	50+32.34	19.07' RT	1304.59	126090.27	107488.00
107	50+35.33	17.65' RT	1304.54	126091.67	107491.00
108	50+37.95	16.76' RT	1304.50	126092.54	107493.62
109	50+41.26	16.14' RT	1304.45	126093.14	107496.93
110	50+43.82	16.00' RT	1304.41	126093.27	107499.50
111	50+24.13	33.31' RT	1305.25	126076.08	107479.69
112	50+30.82	23.15' RT	1304.73	126086.19	107486.45
113	50+41.54	18.63' RT	1304.82	126090.65	107497.20

LASALLE-SE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
114	50+25.17	30.50' RT	1304.74	126078.88	107480.75
115	50+28.39	30.50' RT	1304.69	126078.86	107483.98
116	50+33.59	30.50' RT	1304.82	126078.83	107489.17
117	50+38.59	30.50' RT	1304.82	126078.80	107494.17
118	50+28.39	25.50' RT	1304.61	126083.86	107484.01
119	50+33.59	25.50' RT	1304.75	126083.83	107489.20
120	50+33.59	21.24' RT	1304.51	126088.09	107489.23
121	50+33.59	23.24' RT	1304.65	126086.09	107489.22
122	50+38.59	19.18' RT	1304.42	126090.12	107494.24
123	50+38.59	21.24' RT	1304.45	126088.06	107494.23
124	50+38.59	23.24' RT	1304.59	126086.06	107494.22
125	50+38.59	25.49' RT	1304.75	126083.81	107494.20
126	50+48.59	26.00' RT	1305.33	126083.24	107504.20
127	50+48.59	31.00' RT	1305.40	126078.24	107504.17

- CURB RAMP NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION ONLY AND DO NOT INDICATE JOINT LOCATIONS
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
 4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH H R/L

LEGEND:

#

CURB RAMP TYPE

LL

LEVEL LANDING

UNF

UNPAVED NONTRAVERSABLE FLARE

PTF

PAVED TRAVERSABLE FLARE

SW4

CONCRETE SIDEWALK 4-INCH

ZZZ.ZZ

POINT NUMBER AND ELEVATION

XXXXXX

SAWING ASPHALT

AAAAAA

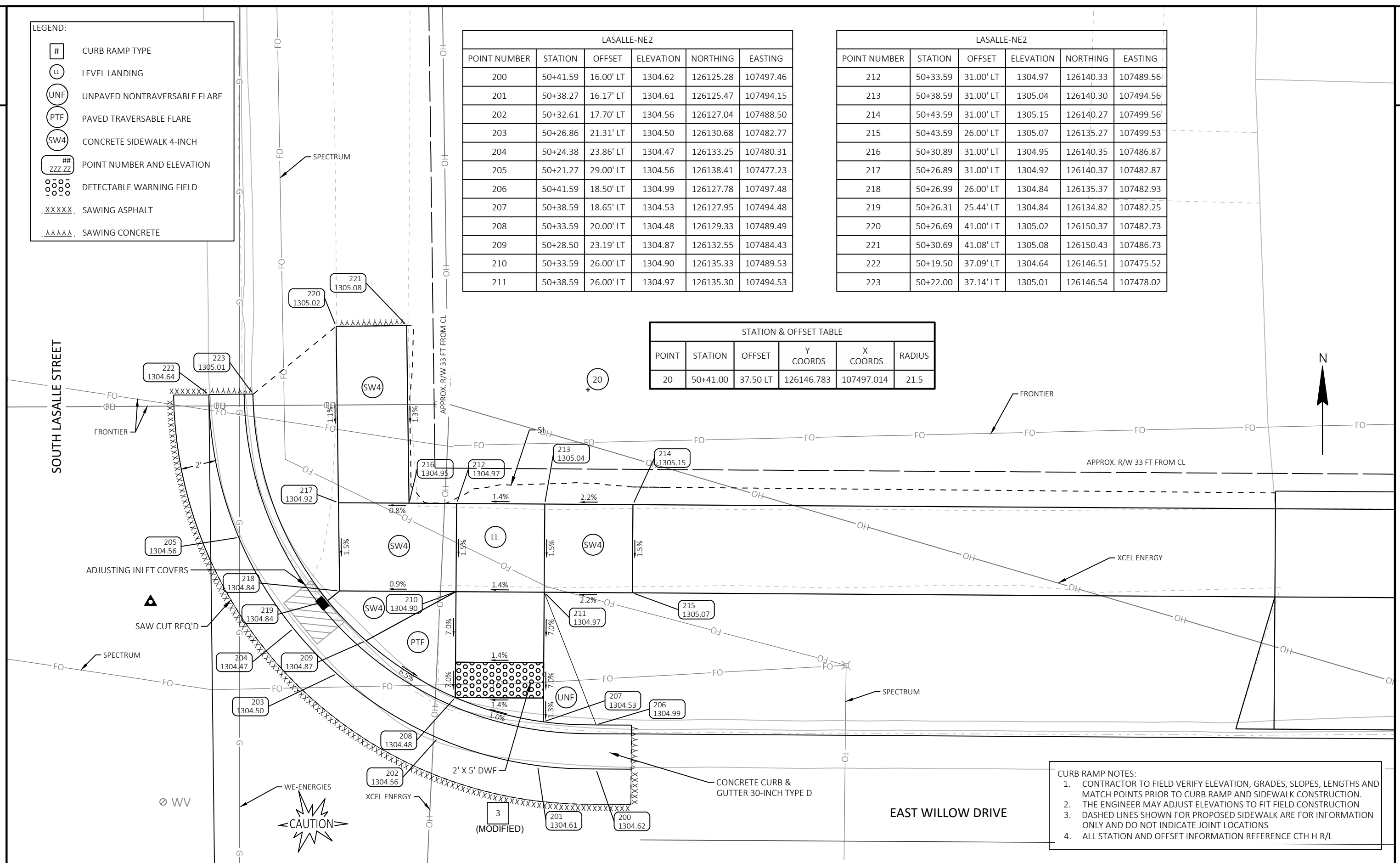
SAWING CONCRETE

LEGEND:	
	CURB RAMP TYPE
	LEVEL LANDING
	UNPAVED NONTRAVERSABLE FLARE
	PAVED TRAVERSABLE FLARE
	CONCRETE SIDEWALK 4-INCH
	POINT NUMBER AND ELEVATION
	DETECTABLE WARNING FIELD
	SAWING ASPHALT
	SAWING CONCRETE

LASALLE-NE2					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
200	50+41.59	16.00' LT	1304.62	126125.28	107497.46
201	50+38.27	16.17' LT	1304.61	126125.47	107494.15
202	50+32.61	17.70' LT	1304.56	126127.04	107488.50
203	50+26.86	21.31' LT	1304.50	126130.68	107482.77
204	50+24.38	23.86' LT	1304.47	126133.25	107480.31
205	50+21.27	29.00' LT	1304.56	126138.41	107477.23
206	50+41.59	18.50' LT	1304.99	126127.78	107497.48
207	50+38.59	18.65' LT	1304.53	126127.95	107494.48
208	50+33.59	20.00' LT	1304.48	126129.33	107489.49
209	50+28.50	23.19' LT	1304.87	126132.55	107484.43
210	50+33.59	26.00' LT	1304.90	126135.33	107489.53
211	50+38.59	26.00' LT	1304.97	126135.30	107494.53

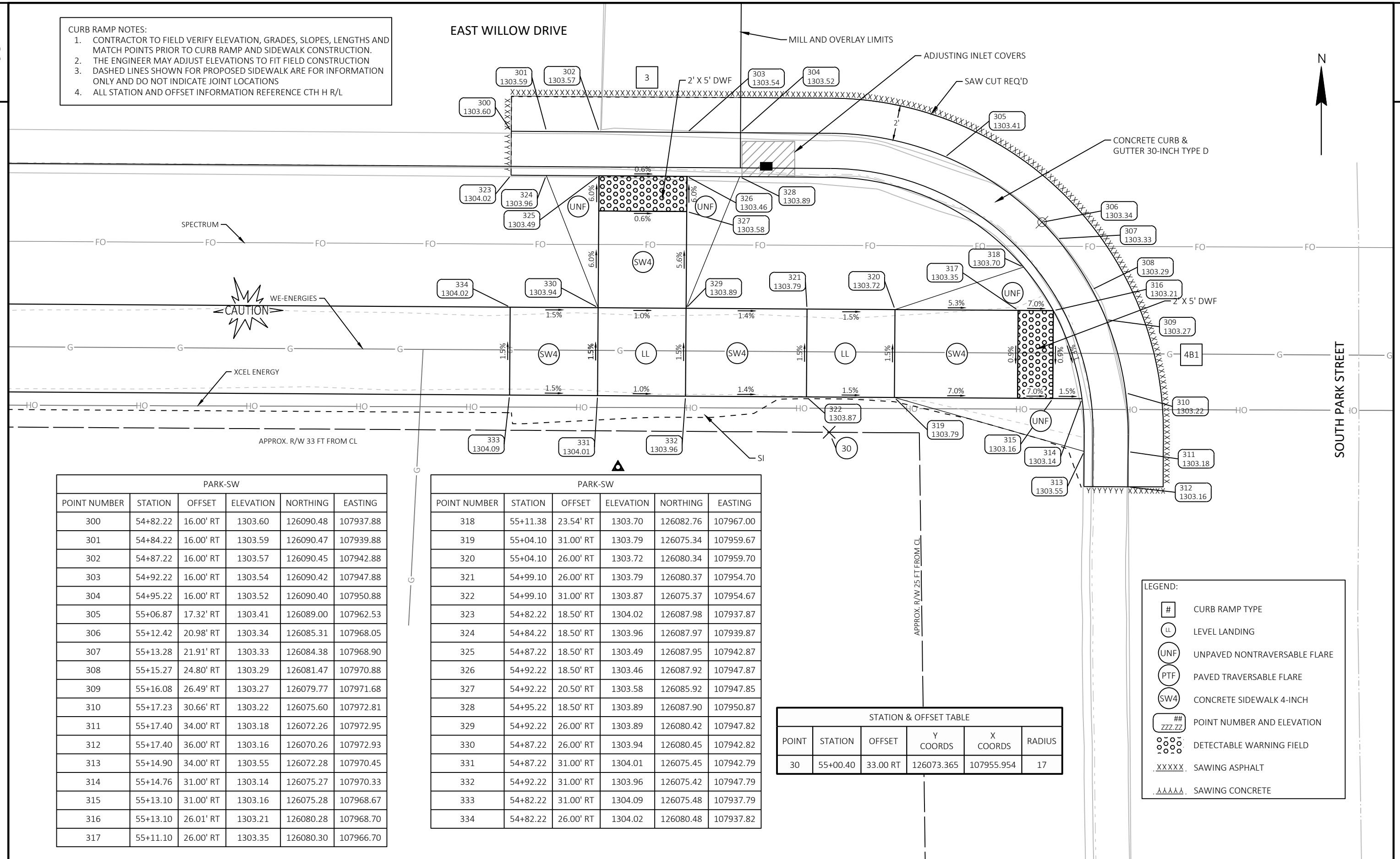
LASALLE-NE2					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
212	50+33.59	31.00' LT	1304.97	126140.33	107489.56
213	50+38.59	31.00' LT	1305.04	126140.30	107494.56
214	50+43.59	31.00' LT	1305.15	126140.27	107499.56
215	50+43.59	26.00' LT	1305.07	126135.27	107499.53
216	50+30.89	31.00' LT	1304.95	126140.35	107486.87
217	50+26.89	31.00' LT	1304.92	126140.37	107482.87
218	50+26.99	26.00' LT	1304.84	126135.37	107482.93
219	50+26.31	25.44' LT	1304.84	126134.82	107482.25
220	50+26.69	41.00' LT	1305.02	126150.37	107482.73
221	50+30.69	41.08' LT	1305.08	126150.43	107486.73
222	50+19.50	37.09' LT	1304.64	126146.51	107475.52
223	50+22.00	37.14' LT	1305.01	126146.54	107478.02

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
20	50+41.00	37.50 LT	126146.783	107497.014	21.5



- CURB RAMP NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
 4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH H R/L

EAST WILLOW DRIVE



PARK-SW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
300	54+82.22	16.00' RT	1303.60	126090.48	107937.88
301	54+84.22	16.00' RT	1303.59	126090.47	107939.88
302	54+87.22	16.00' RT	1303.57	126090.45	107942.88
303	54+92.22	16.00' RT	1303.54	126090.42	107947.88
304	54+95.22	16.00' RT	1303.52	126090.40	107950.88
305	55+06.87	17.32' RT	1303.41	126089.00	107962.53
306	55+12.42	20.98' RT	1303.34	126085.31	107968.05
307	55+13.28	21.91' RT	1303.33	126084.38	107968.90
308	55+15.27	24.80' RT	1303.29	126081.47	107970.88
309	55+16.08	26.49' RT	1303.27	126079.77	107971.68
310	55+17.23	30.66' RT	1303.22	126075.60	107972.81
311	55+17.40	34.00' RT	1303.18	126072.26	107972.95
312	55+17.40	36.00' RT	1303.16	126070.26	107972.93
313	55+14.90	34.00' RT	1303.55	126072.28	107970.45
314	55+14.76	31.00' RT	1303.14	126075.27	107970.33
315	55+13.10	31.00' RT	1303.16	126075.28	107968.67
316	55+13.10	26.01' RT	1303.21	126080.28	107968.70
317	55+11.10	26.00' RT	1303.35	126080.30	107966.70

PARK-SW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
318	55+11.38	23.54' RT	1303.70	126082.76	107967.00
319	55+04.10	31.00' RT	1303.79	126075.34	107959.67
320	55+04.10	26.00' RT	1303.72	126080.34	107959.70
321	54+99.10	26.00' RT	1303.79	126080.37	107954.70
322	54+99.10	31.00' RT	1303.87	126075.37	107954.67
323	54+82.22	18.50' RT	1304.02	126087.98	107937.87
324	54+84.22	18.50' RT	1303.96	126087.97	107939.87
325	54+87.22	18.50' RT	1303.49	126087.95	107942.87
326	54+92.22	18.50' RT	1303.46	126087.92	107947.87
327	54+92.22	20.50' RT	1303.58	126085.92	107947.85
328	54+95.22	18.50' RT	1303.89	126087.90	107950.87
329	54+92.22	26.00' RT	1303.89	126080.42	107947.82
330	54+87.22	26.00' RT	1303.94	126080.45	107942.82
331	54+87.22	31.00' RT	1304.01	126075.45	107942.79
332	54+92.22	31.00' RT	1303.96	126075.42	107947.79
333	54+82.22	31.00' RT	1304.09	126075.48	107937.79
334	54+82.22	26.00' RT	1304.02	126080.48	107937.82

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
30	55+00.40	33.00 RT	126073.365	107955.954	17

- LEGEND:
- # CURB RAMP TYPE
 - LL LEVEL LANDING
 - UNF UNPAVED NONTRAVERSABLE FLARE
 - PTF PAVED TRAVERSABLE FLARE
 - SW4 CONCRETE SIDEWALK 4-INCH
 - ## POINT NUMBER AND ELEVATION
zzz.zzz
 - DETECTABLE WARNING FIELD
 - .XXXXX. SAWING ASPHALT
 - .AAAAA. SAWING CONCRETE

PARK-NW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
400	54+82.22	16.04' LT	1303.60	126122.52	107938.09
401	54+84.22	16.04' LT	1303.60	126122.50	107940.09
402	54+87.22	16.04' LT	1303.59	126122.48	107943.09
403	54+92.34	16.07' LT	1303.52	126122.48	107948.21
404	54+94.45	16.28' LT	1303.49	126122.68	107950.32
405	54+95.63	16.43' LT	1303.47	126122.83	107951.50
406	55+00.85	17.92' LT	1303.41	126124.29	107956.73
407	54+95.20	18.89' LT	1303.89	126125.29	107951.09
408	54+92.22	18.56' LT	1303.44	126124.98	107948.10
409	54+87.22	18.54' LT	1303.51	126124.98	107943.10
410	54+84.22	18.54' LT	1304.02	126125.00	107940.10
411	54+87.22	20.56' LT	1303.62	126127.01	107943.12
412	54+92.22	20.56' LT	1303.55	126126.98	107948.12
413	54+92.22	26.00' LT	1303.84	126132.42	107948.15
414	54+87.22	26.00' LT	1303.86	126132.45	107943.15
415	54+92.22	31.00' LT	1303.91	126137.42	107948.18
416	54+87.22	31.00' LT	1303.93	126137.45	107943.18
417	54+82.22	26.00' LT	1303.92	126132.48	107938.15

PARK-NW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
418	54+82.22	31.00' LT	1303.99	126137.48	107938.18
419	55+06.18	23.98' LT	1303.76	126130.30	107962.10
420	55+08.45	26.00' LT	1303.21	126132.31	107964.39
421	55+12.11	31.00' LT	1303.09	126137.29	107968.07
422	55+13.38	33.72' LT	1303.56	126140.00	107969.36
423	55+08.45	31.00' LT	1303.15	126137.31	107964.42
424	55+06.45	26.00' LT	1303.35	126132.33	107962.39
425	54+98.45	26.00' LT	1303.77	126132.38	107954.39
426	54+98.45	30.99' LT	1303.85	126137.36	107954.42

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
40	54+91.06	42.53 LT	126148.957	107947.096	26

40

LEGEND:

#

CURB RAMP TYPE

LL

LEVEL LANDING

UNF

UNPAVED NONTRAVERSABLE FLARE

PTF

PAVED TRAVERSABLE FLARE

SW4

CONCRETE SIDEWALK 4-INCH

ZZZ.ZZ

POINT NUMBER AND ELEVATION

XXXXX

DETECTABLE WARNING FIELD

.XXXXX.

SAWING ASPHALT

.AAAAA.

SAWING CONCRETE

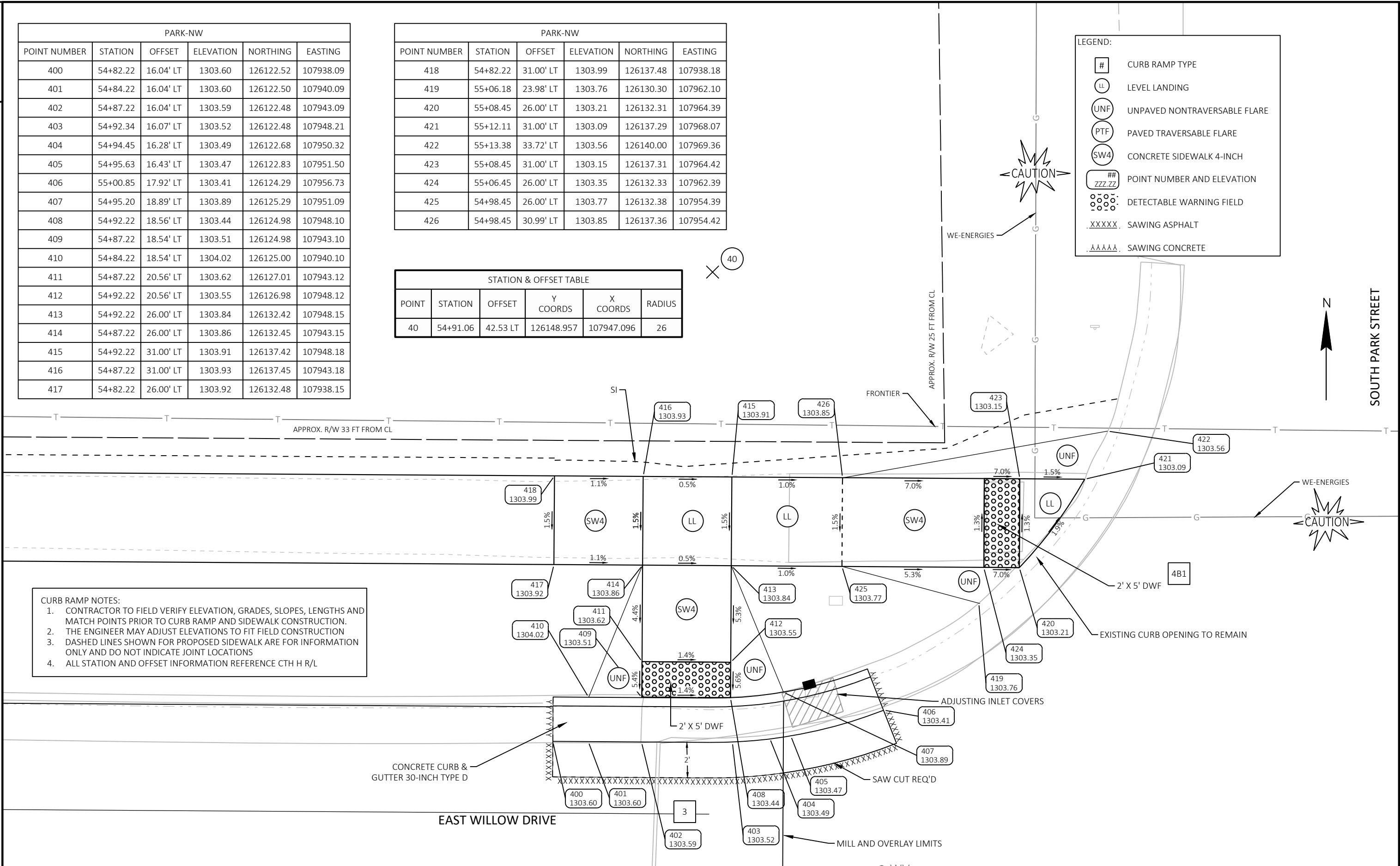
- CURB RAMP NOTES:
1.

CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.

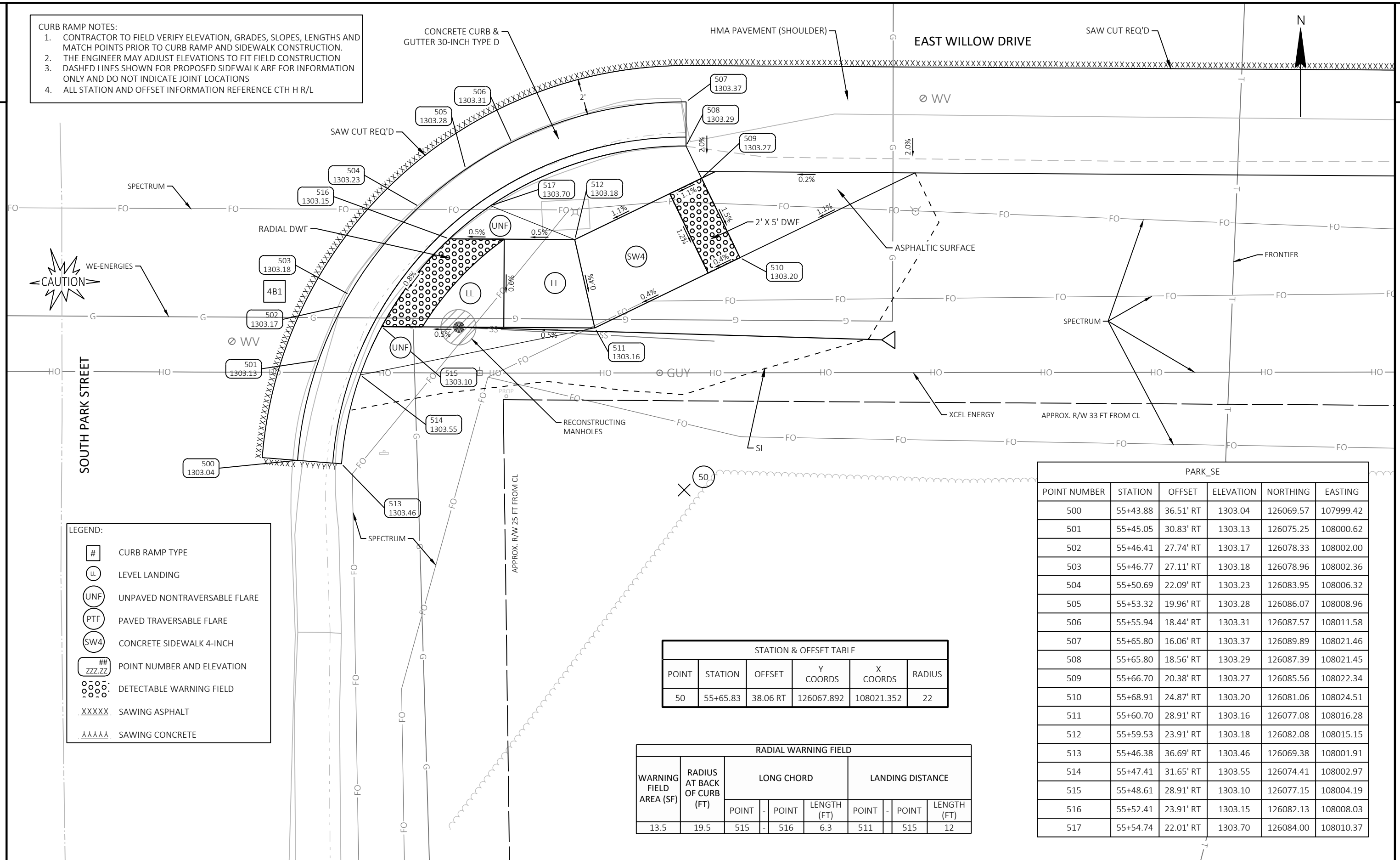
THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION
3.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
4.

ALL STATION AND OFFSET INFORMATION REFERENCE CTH H R/L



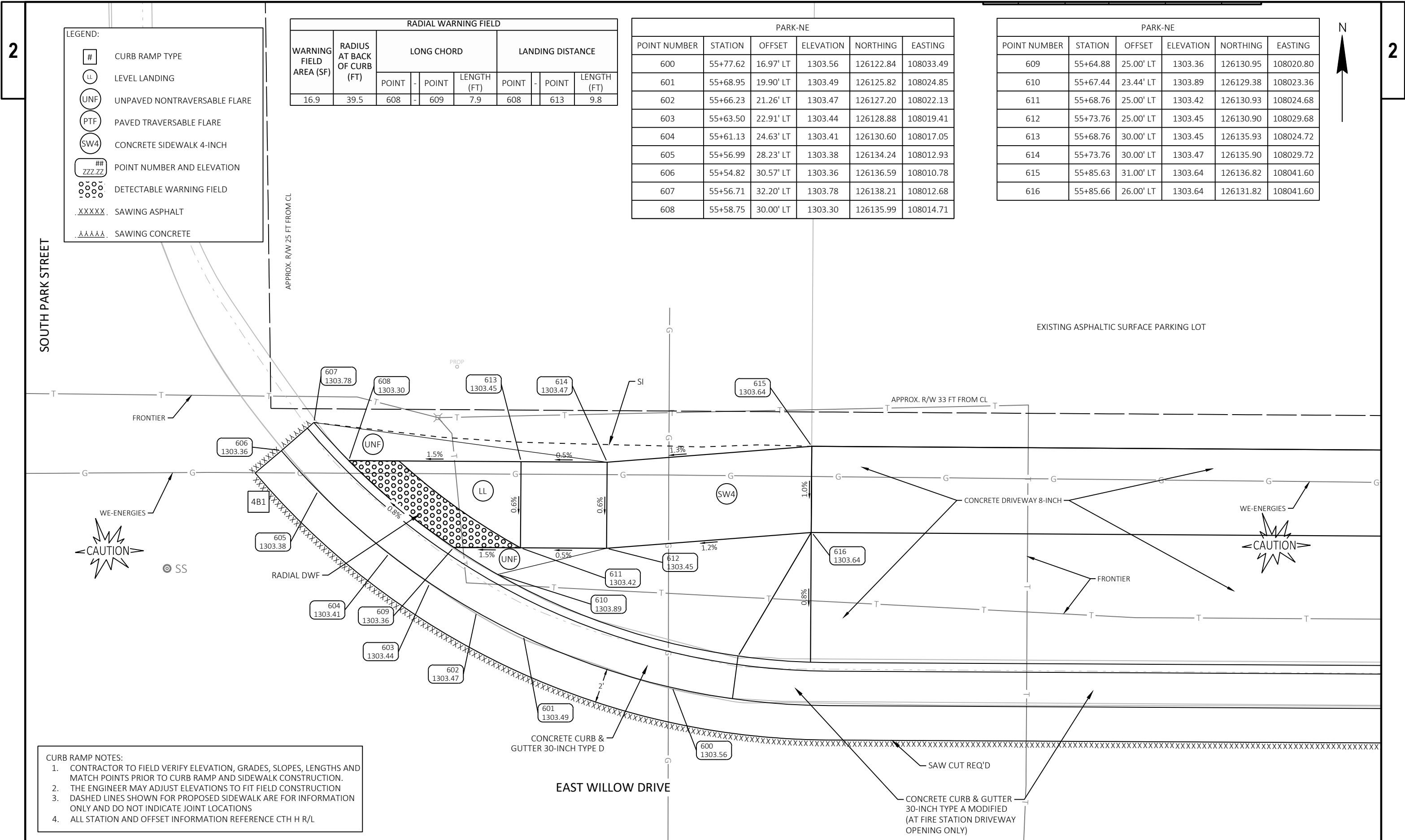
- CURB RAMP NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
 4. ALL STATION AND OFFSET INFORMATION REFERENCE CTH H R/L

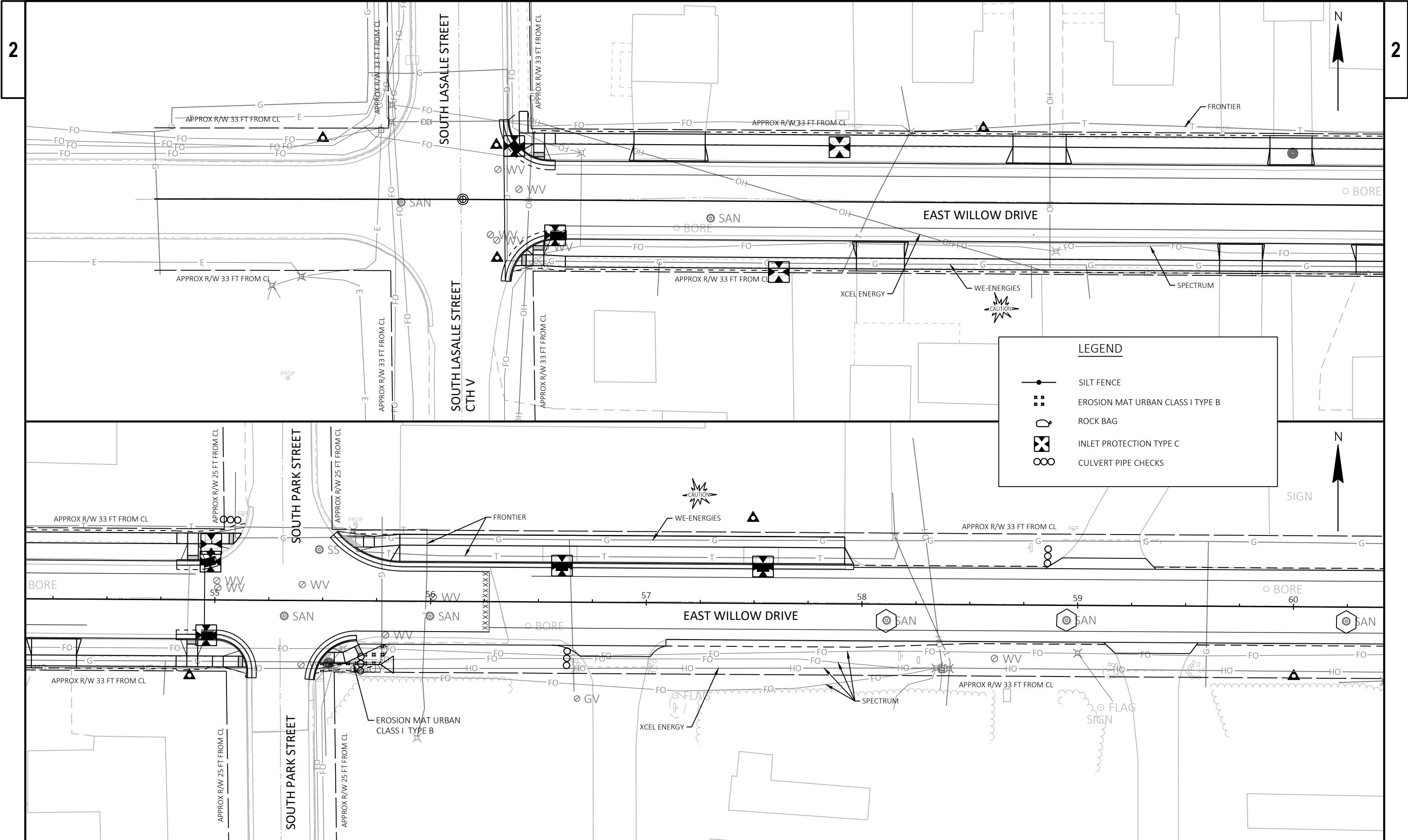


PARK_SE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
500	55+43.88	36.51' RT	1303.04	126069.57	107999.42
501	55+45.05	30.83' RT	1303.13	126075.25	108000.62
502	55+46.41	27.74' RT	1303.17	126078.33	108002.00
503	55+46.77	27.11' RT	1303.18	126078.96	108002.36
504	55+50.69	22.09' RT	1303.23	126083.95	108006.32
505	55+53.32	19.96' RT	1303.28	126086.07	108008.96
506	55+55.94	18.44' RT	1303.31	126087.57	108011.58
507	55+65.80	16.06' RT	1303.37	126089.89	108021.46
508	55+65.80	18.56' RT	1303.29	126087.39	108021.45
509	55+66.70	20.38' RT	1303.27	126085.56	108022.34
510	55+68.91	24.87' RT	1303.20	126081.06	108024.51
511	55+60.70	28.91' RT	1303.16	126077.08	108016.28
512	55+59.53	23.91' RT	1303.18	126082.08	108015.15
513	55+46.38	36.69' RT	1303.46	126069.38	108001.91
514	55+47.41	31.65' RT	1303.55	126074.41	108002.97
515	55+48.61	28.91' RT	1303.10	126077.15	108004.19
516	55+52.41	23.91' RT	1303.15	126082.13	108008.03
517	55+54.74	22.01' RT	1303.70	126084.00	108010.37

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
50	55+65.83	38.06 RT	126067.892	108021.352	22

RADIAL WARNING FIELD									
WARNING FIELD AREA (SF)	RADIUS AT BACK OF CURB (FT)	LONG CHORD			LANDING DISTANCE				
		POINT	-	POINT	LENGTH (FT)	POINT	-	POINT	LENGTH (FT)
13.5	19.5	515	-	516	6.3	511	-	515	12

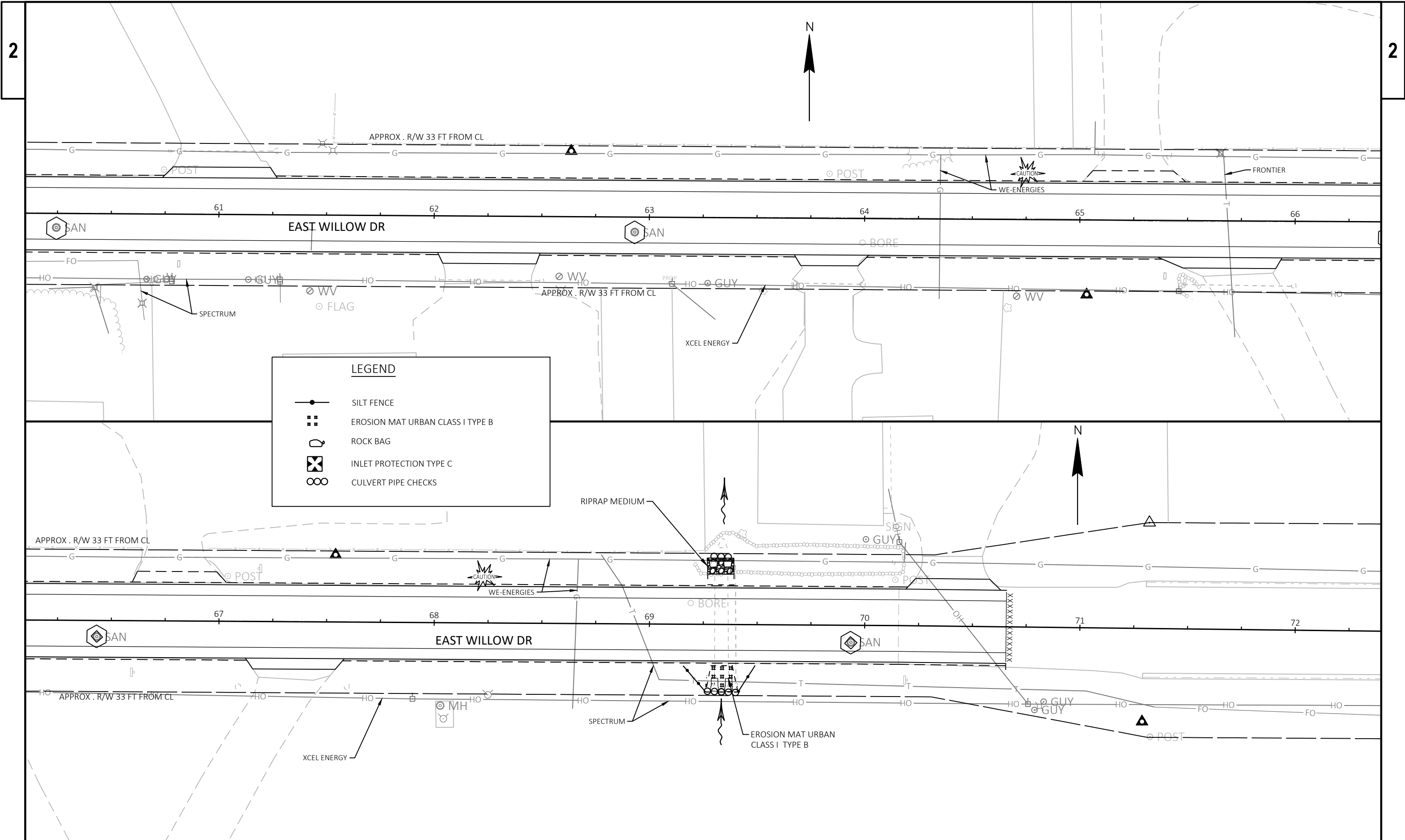


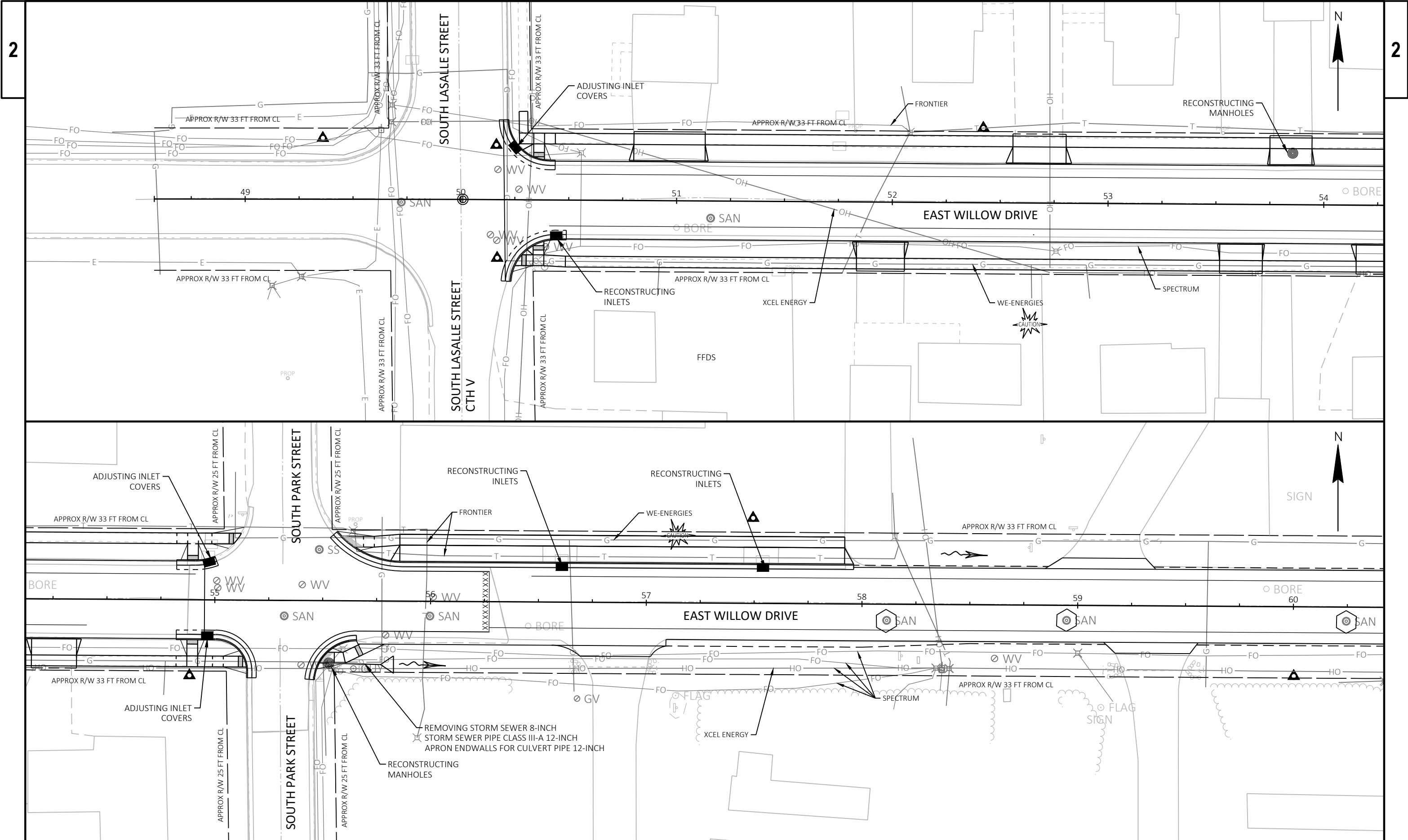


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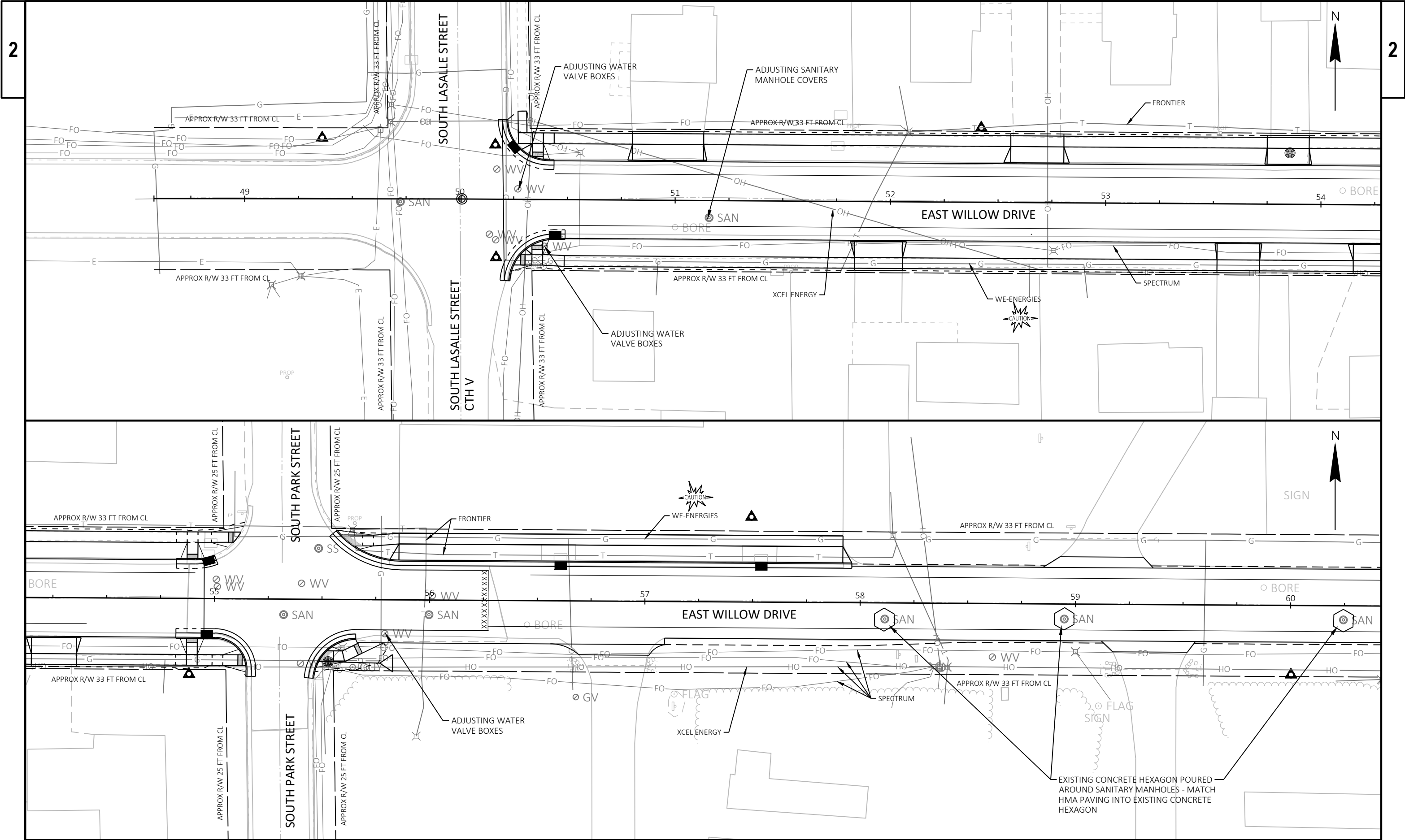
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PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	EROSION CONTROL	SHEET	E
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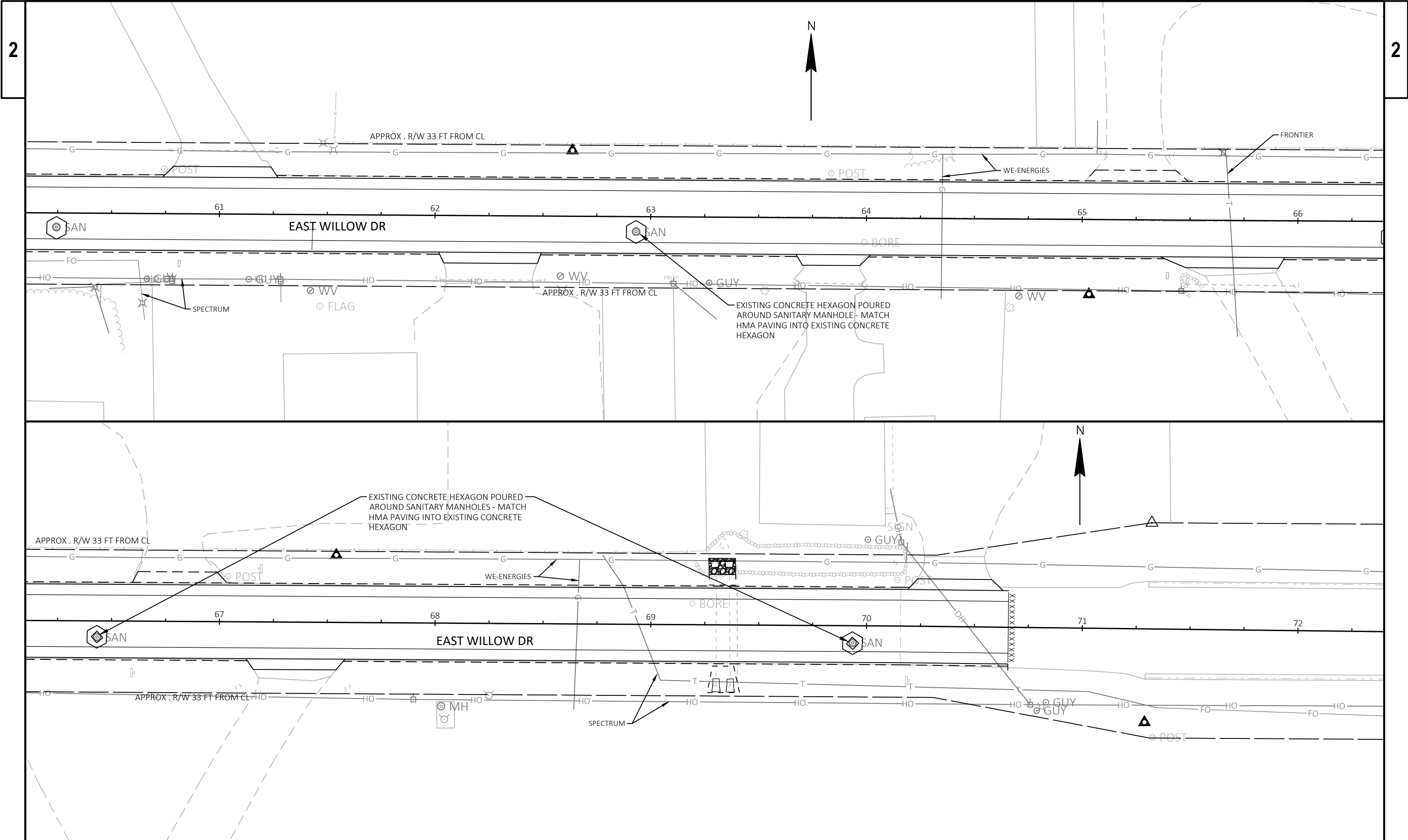




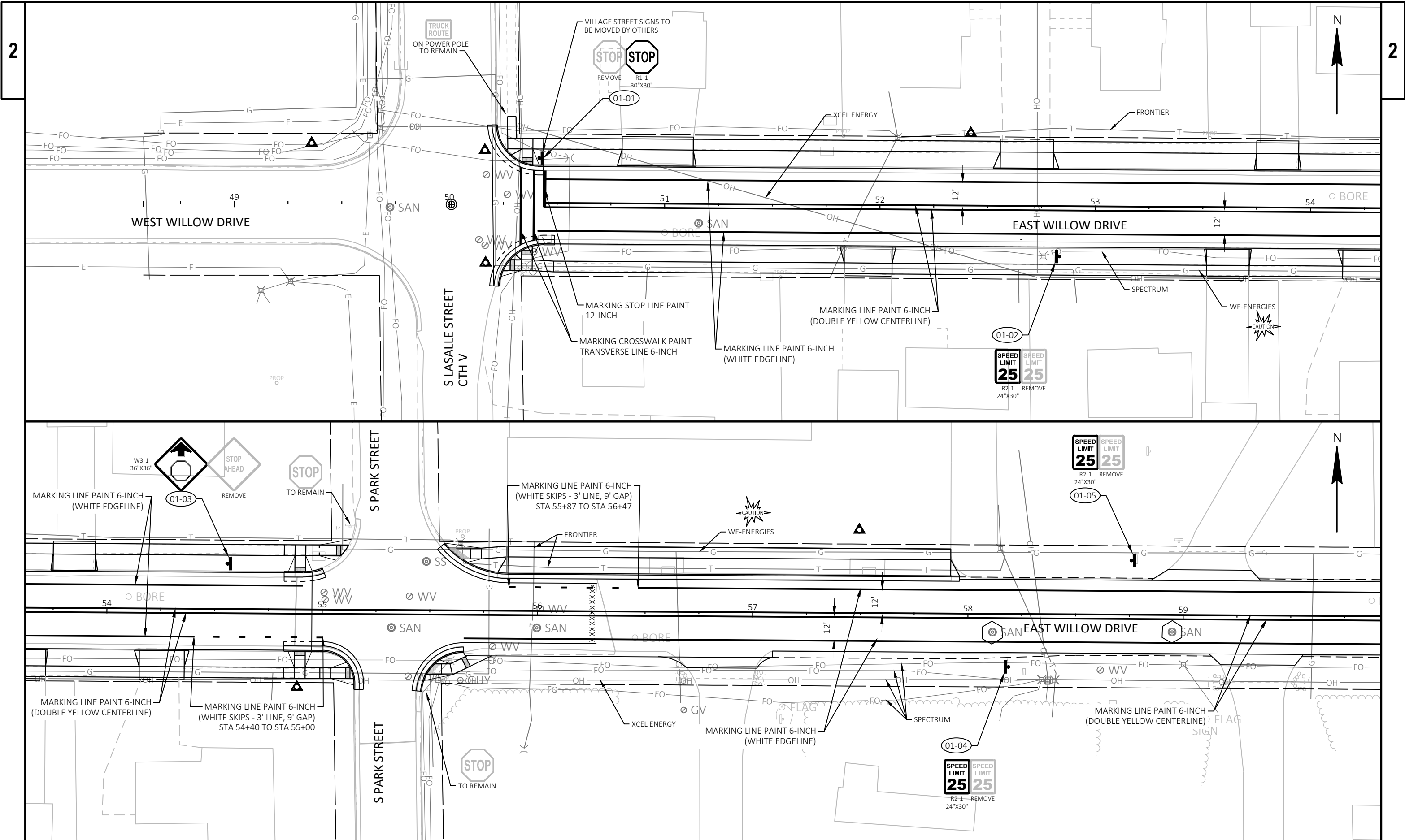
PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	STORM SEWER PLAN	SHEET	E
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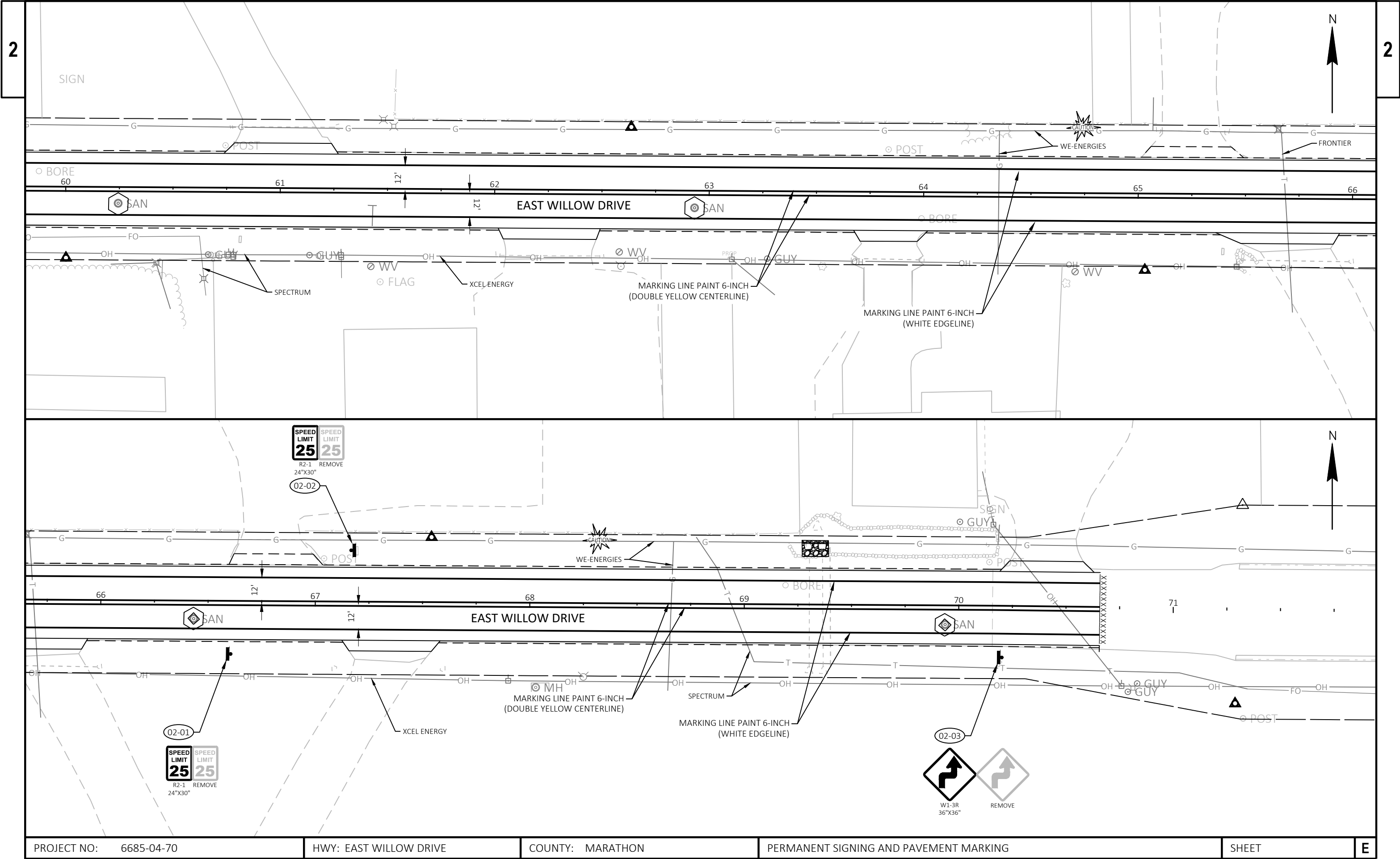
PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	SANITARY SEWER AND WATER VALVE ADJUSTMENTS	SHEET	E
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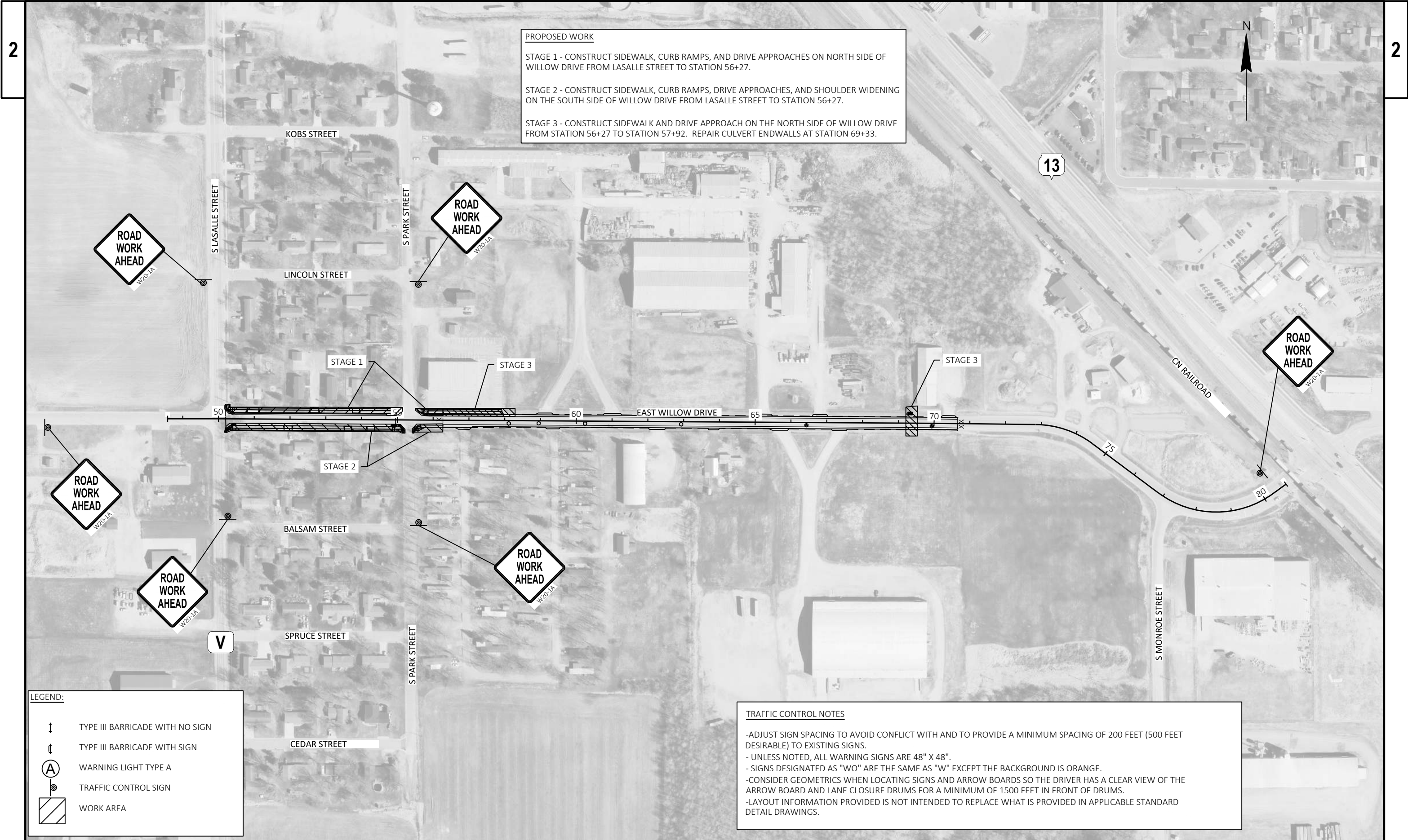
PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	SANITARY SEWER AND WATER VALVE ADJUSTMENTS	SHEET E
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PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET	E
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PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET	E
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PROPOSED WORK

STAGE 1 - CONSTRUCT SIDEWALK, CURB RAMPS, AND DRIVE APPROACHES ON NORTH SIDE OF WILLOW DRIVE FROM LASALLE STREET TO STATION 56+27.

STAGE 2 - CONSTRUCT SIDEWALK, CURB RAMPS, DRIVE APPROACHES, AND SHOULDER WIDENING ON THE SOUTH SIDE OF WILLOW DRIVE FROM LASALLE STREET TO STATION 56+27.

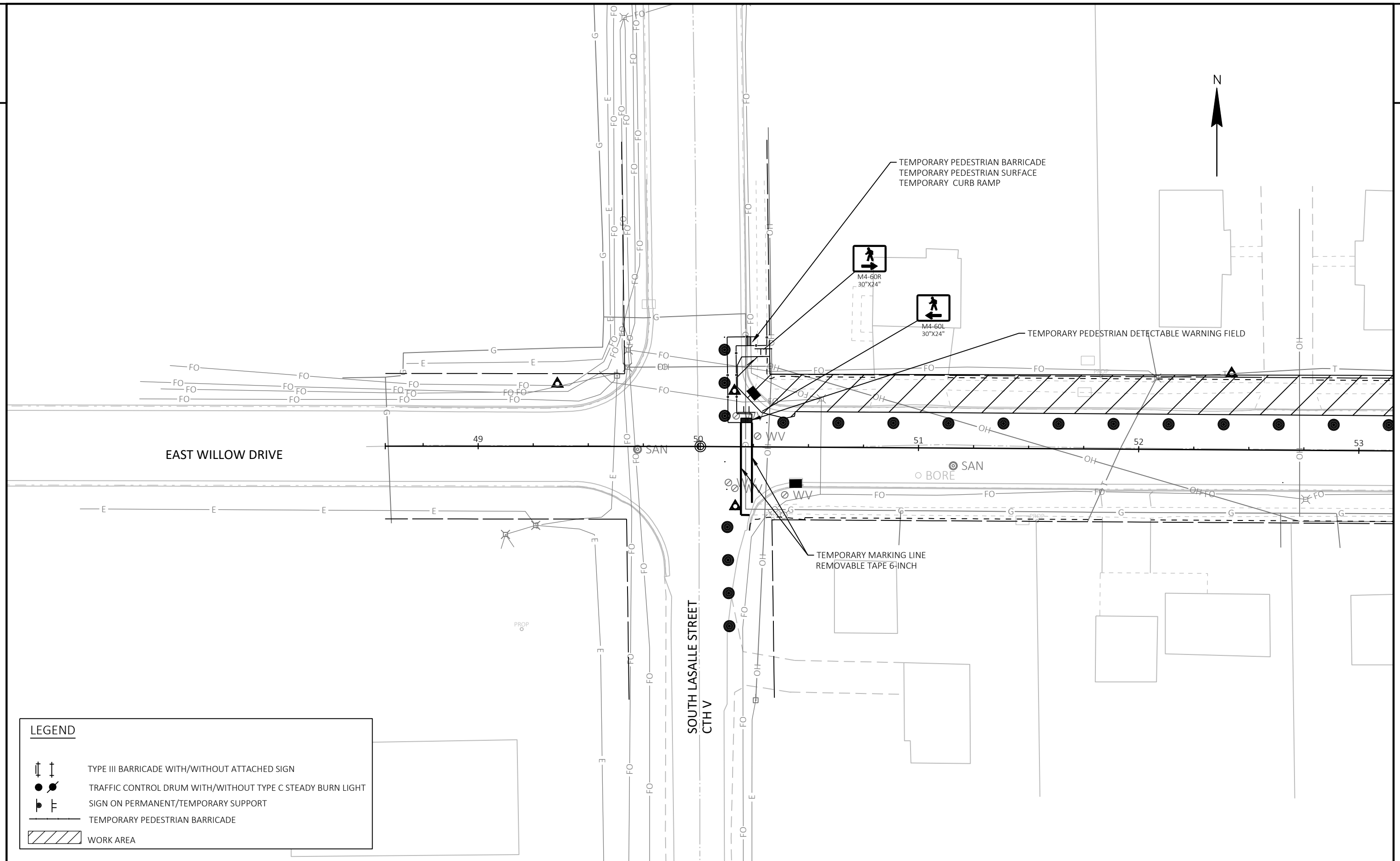
STAGE 3 - CONSTRUCT SIDEWALK AND DRIVE APPROACH ON THE NORTH SIDE OF WILLOW DRIVE FROM STATION 56+27 TO STATION 57+92. REPAIR CULVERT ENDWALLS AT STATION 69+33.

LEGEND:

- TYPE III BARRICADE WITH NO SIGN
- TYPE III BARRICADE WITH SIGN
- WARNING LIGHT TYPE A
- TRAFFIC CONTROL SIGN
- WORK AREA

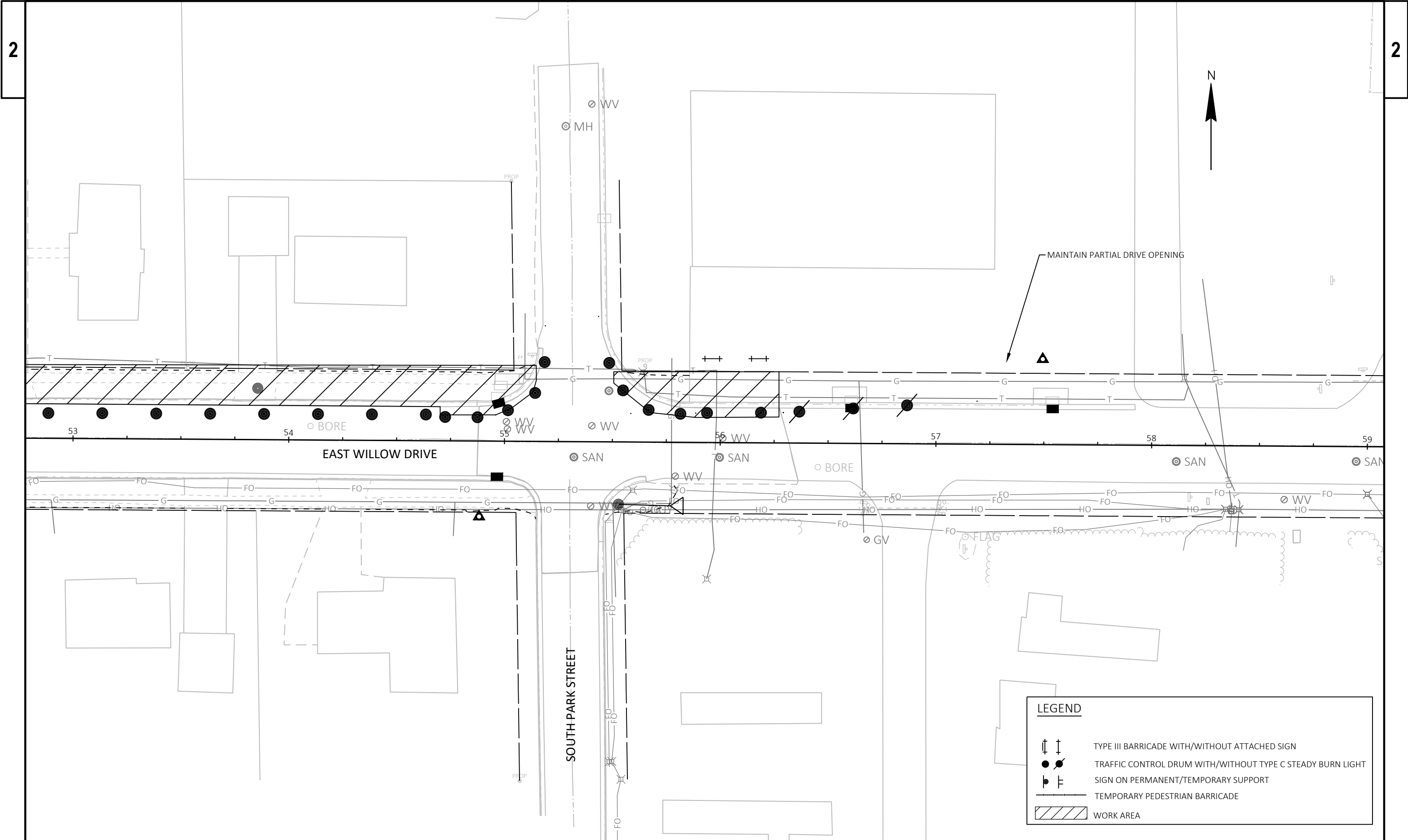
TRAFFIC CONTROL NOTES

- ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.
- UNLESS NOTED, ALL WARNING SIGNS ARE 48" X 48".
- SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM OF 1500 FEET IN FRONT OF DRUMS.
- LAYOUT INFORMATION PROVIDED IS NOT INTENDED TO REPLACE WHAT IS PROVIDED IN APPLICABLE STANDARD DETAIL DRAWINGS.



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- TEMPORARY PEDESTRIAN BARRICADE
- WORK AREA



LEGEND

TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT

SIGN ON PERMANENT/TEMPORARY SUPPORT

TEMPORARY PEDESTRIAN BARRICADE

WORK AREA

PROJECT NO: 6685-04-70

HWY: EAST WILLOW DRIVE

COUNTY: MARATHON

TRAFFIC CONTROL - STAGE 1 -PEDESTRIAN

SHEET

E

FILE NAME : S:\DESIGN\DESIGN PROJECTS\LOCAL PROJECTS\2023 PROJECTS\6685-04-00_WILLOW DR\C3D\SHEETS\025110_TC-S1-PED.DWG
LAYOUT NAME - PARK

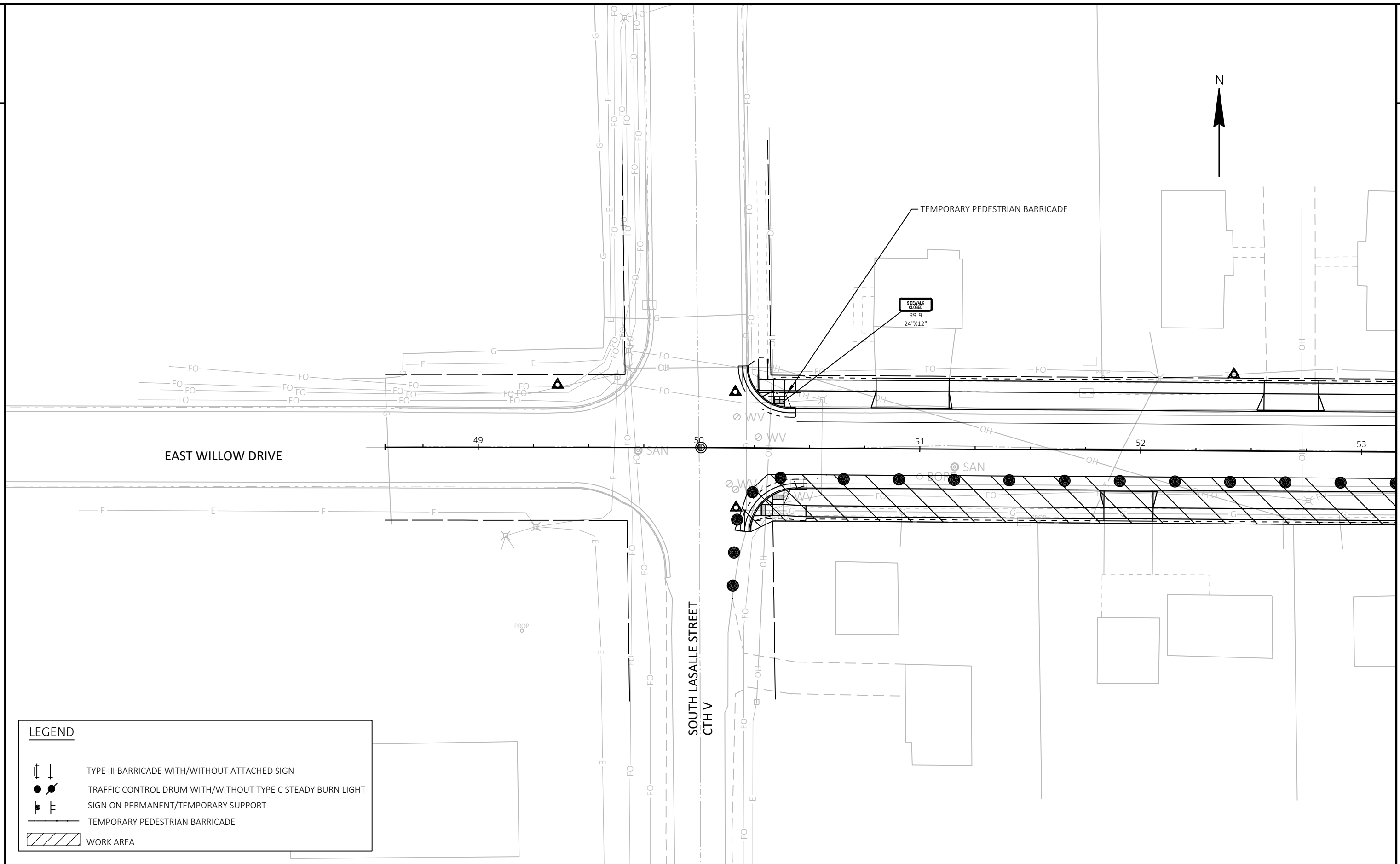
PLOT DATE : 3/19/2025 10:03 AM

PLOT BY : TIM SCHOENHERR

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDs SHEET 42



LEGEND

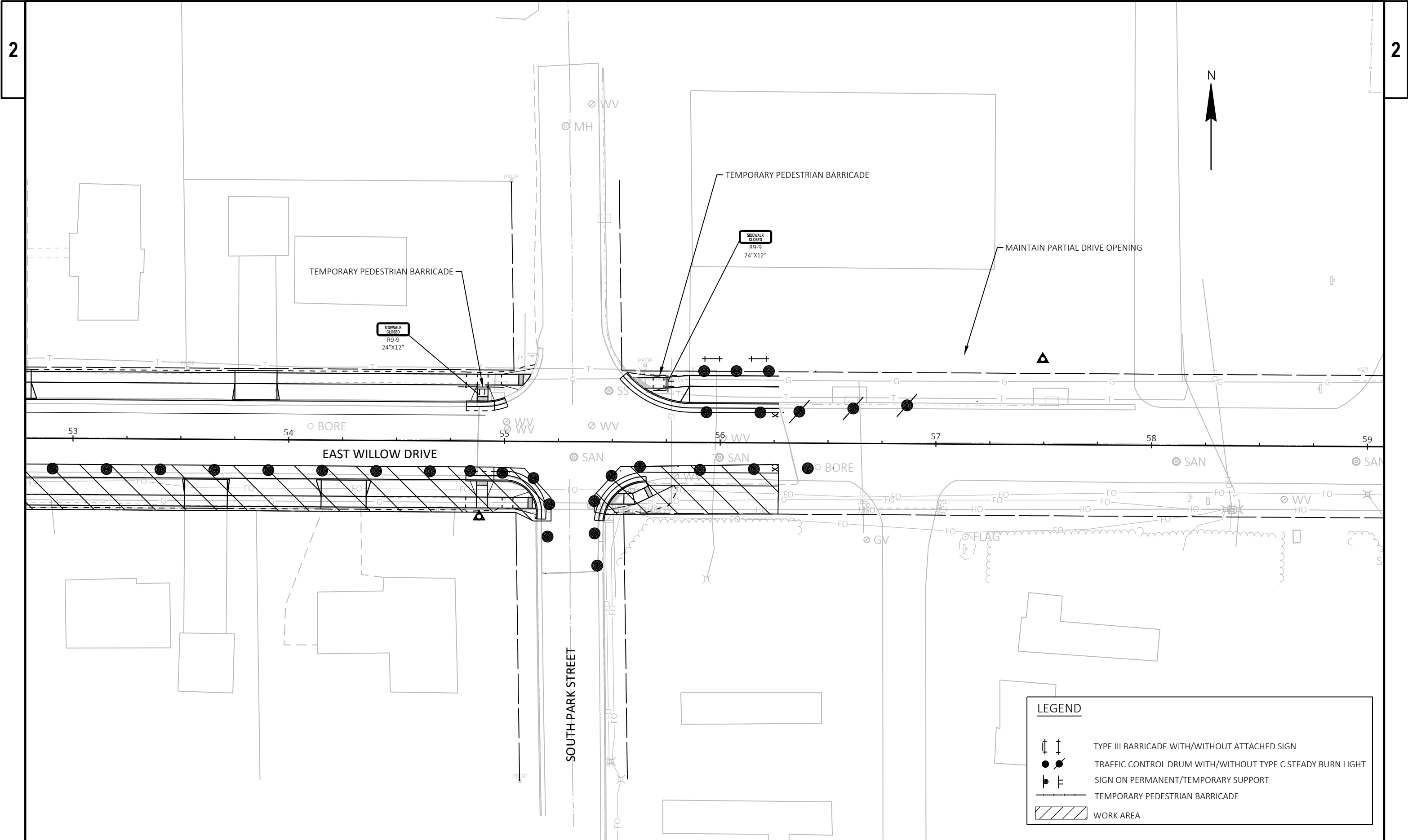
TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN

TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT

SIGN ON PERMANENT/TEMPORARY SUPPORT

TEMPORARY PEDESTRIAN BARRICADE

WORK AREA



NO ADDITIONAL TRAFFIC CONTROL DEVICES
ON THIS SHEET

N

EAST WILLOW DRIVE

SOUTH LASALLE STREET
CTH V

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- TEMPORARY PEDESTRIAN BARRICADE
- WORK AREA

PROJECT NO: 6685-04-70

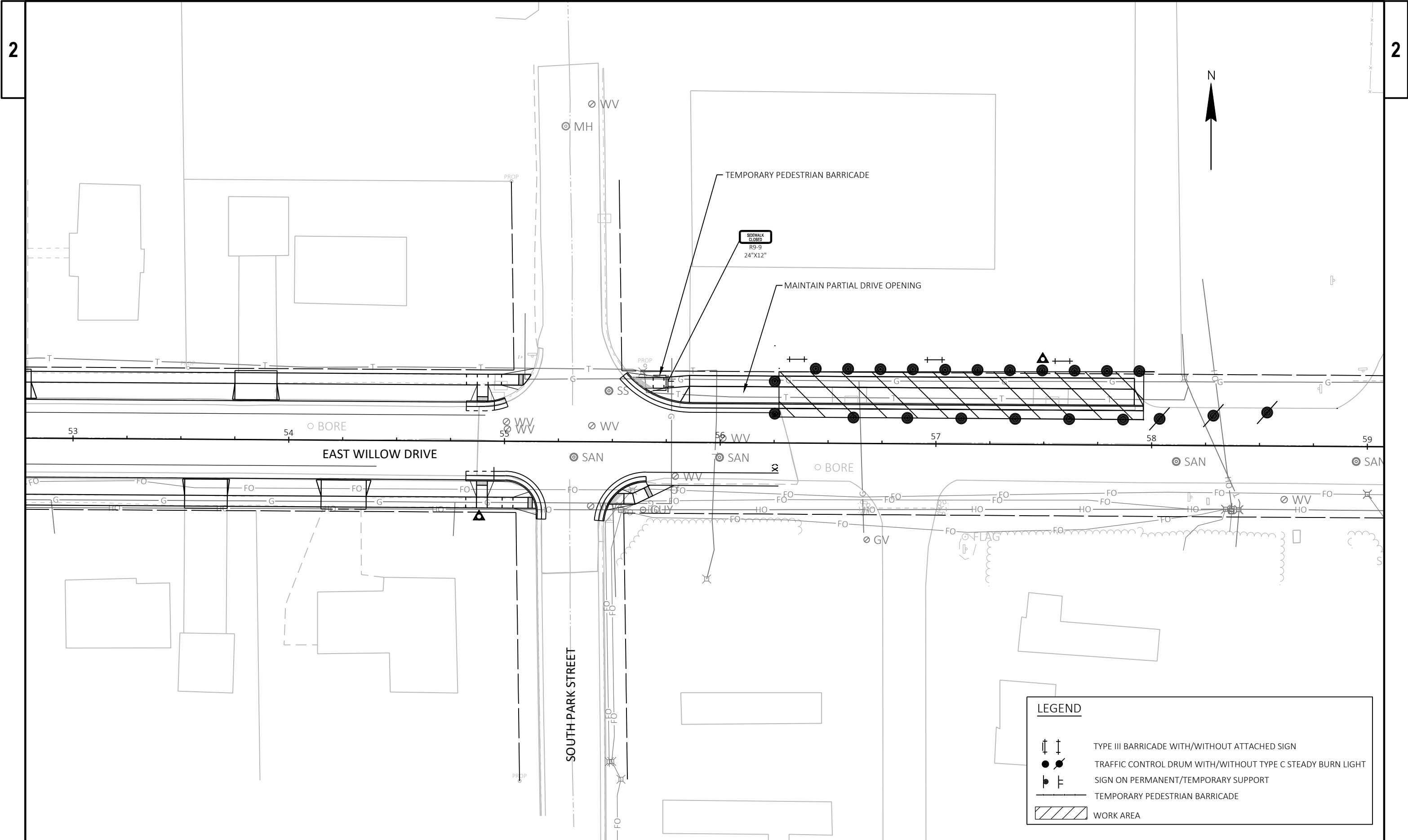
HWY: EAST WILLOW DRIVE

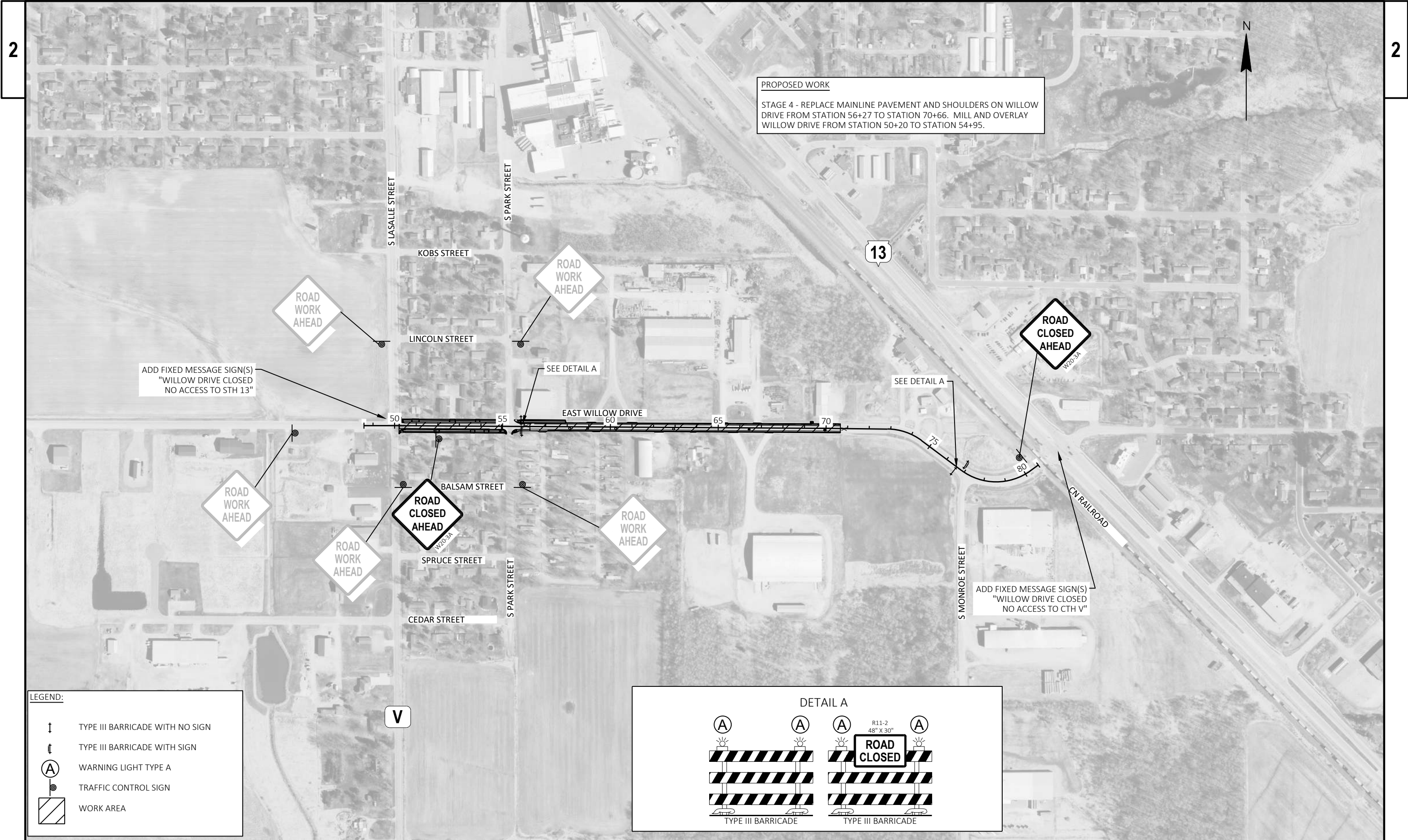
COUNTY: MARATHON

TRAFFIC CONTROL - STAGE 3 -PEDESTRIAN

SHEET

E





Estimate Of Quantities

6685-04-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0109.S	Removing Concrete Surface Partial Depth	SF	1,744.000	1,744.000
0004	204.0110	Removing Asphaltic Surface	SY	6,228.000	6,228.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	92.000	92.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	1,621.000	1,621.000
0010	204.0150	Removing Curb & Gutter	LF	403.000	403.000
0012	204.0155	Removing Concrete Sidewalk	SY	658.000	658.000
0014	204.0245	Removing Storm Sewer (size) 01. 8-Inch	LF	15.000	15.000
0016	205.0100	Excavation Common	CY	120.000	120.000
0018	211.0101	Prepare Foundation for Asphaltic Paving (project) 01.6685-04-70	EACH	1.000	1.000
0020	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	2.000	2.000
0022	213.0100	Finishing Roadway (project) 01. 6685-04-70	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	449.000	449.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	100.000	100.000
0028	416.0610	Drilled Tie Bars	EACH	18.000	18.000
0030	455.0605	Tack Coat	GAL	488.000	488.000
0032	460.2000	Incentive Density HMA Pavement	DOL	1,125.000	1,125.000
0034	460.6223	HMA Pavement 3 MT 58-28 S	TON	1,020.000	1,020.000
0036	460.6224	HMA Pavement 4 MT 58-28 S	TON	740.000	740.000
0038	465.0105	Asphaltic Surface	TON	35.000	35.000
0040	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	52.000	52.000
0042	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	1.000	1.000
0044	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	192.000	192.000
0046	602.0405	Concrete Sidewalk 4-Inch	SF	4,582.000	4,582.000
0048	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	80.000	80.000
0050	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	30.000	30.000
0052	602.0810	Concrete Driveway 6-Inch	SY	204.000	204.000
0054	602.0820	Concrete Driveway 8-Inch	SY	290.000	290.000
0056	606.0200	Riprap Medium	CY	5.000	5.000
0058	608.3012	Storm Sewer Pipe Class III-A 12-Inch	LF	24.000	24.000
0060	611.0420	Reconstructing Manholes	EACH	2.000	2.000
0062	611.0430	Reconstructing Inlets	EACH	3.000	3.000
0064	611.8115	Adjusting Inlet Covers	EACH	3.000	3.000
0066	618.0100	Maintenance and Repair of Haul Roads (project) 01. 6685-04-70	EACH	1.000	1.000
0068	619.1000	Mobilization	EACH	1.000	1.000
0070	624.0100	Water	MGAL	1.500	1.500
0072	625.0100	Topsoil	SY	320.000	320.000
0074	627.0200	Mulching	SY	285.000	285.000
0076	628.1504	Silt Fence	LF	50.000	50.000
0078	628.1520	Silt Fence Maintenance	LF	50.000	50.000
0080	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0082	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0084	628.2008	Erosion Mat Urban Class I Type B	SY	35.000	35.000
0086	628.7015	Inlet Protection Type C	EACH	9.000	9.000
0088	628.7555	Culvert Pipe Checks	EACH	22.000	22.000
0090	628.7570	Rock Bags	EACH	5.000	5.000
0092	630.0140	Seeding Mixture No. 40	LB	16.000	16.000
0094	630.0500	Seed Water	MGAL	6.000	6.000
0096	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
0098	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	5.000	5.000

Estimate Of Quantities

6685-04-70

Line	Item	Item Description	Unit	Total	Qty
0100	637.2210	Signs Type II Reflective H	SF	30.180	30.180
0102	637.2230	Signs Type II Reflective F	SF	18.000	18.000
0104	638.2602	Removing Signs Type II	EACH	8.000	8.000
0106	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0108	642.5201	Field Office Type C	EACH	1.000	1.000
0110	643.0300	Traffic Control Drums	DAY	2,215.000	2,215.000
0112	643.0420	Traffic Control Barricades Type III	DAY	304.000	304.000
0114	643.0705	Traffic Control Warning Lights Type A	DAY	608.000	608.000
0116	643.0715	Traffic Control Warning Lights Type C	DAY	153.000	153.000
0118	643.0900	Traffic Control Signs	DAY	536.000	536.000
0120	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	82.000	82.000
0122	643.5000	Traffic Control	EACH	1.000	1.000
0124	644.1440	Temporary Pedestrian Surface Matting	SF	25.000	25.000
0126	644.1601	Temporary Pedestrian Curb Ramp	DAY	17.000	17.000
0128	644.1605	Temporary Pedestrian Detectable Warning Field	SF	10.000	10.000
0130	644.1810	Temporary Pedestrian Barricade	LF	208.000	208.000
0132	645.0120	Geotextile Type HR	SY	17.000	17.000
0134	646.2005	Marking Line Paint 6-Inch	LF	7,840.000	7,840.000
0136	646.6005	Marking Stop Line Paint 12-Inch	LF	17.000	17.000
0138	646.7405	Marking Crosswalk Paint Transverse Line 6-Inch	LF	68.000	68.000
0140	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	407.000	407.000
0142	650.8000	Construction Staking Resurfacing Reference	LF	2,046.000	2,046.000
0144	650.9000	Construction Staking Curb Ramps	EACH	10.000	10.000
0146	650.9500	Construction Staking Sidewalk (project) 01. 6685-04-70	EACH	1.000	1.000
0148	650.9911	Construction Staking Supplemental Control (project) 01.6685-04-70	EACH	1.000	1.000
0150	690.0150	Sawing Asphalt	LF	1,068.000	1,068.000
0152	690.0250	Sawing Concrete	LF	32.000	32.000
0154	740.0440	Incentive IRI Ride	DOL	1,440.000	1,440.000
0156	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0158	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0160	SPV.0030	Special 01. Fertilizer for Lawn Type Turf	CWT	0.600	0.600
0162	SPV.0060	Special 01. Adjusting Water Main Valve Box	EACH	3.000	3.000
0164	SPV.0060	Special 02. Adjusting Sanitary Manhole Covers	EACH	1.000	1.000
0166	SPV.0060	Special 03. Apron Endwalls for Culvert Pipe Salvaged Horizontal Elliptical 19x30-Inch	EACH	4.000	4.000
0168	SPV.0090	Special 01. Concrete Curb & Gutter 30-Inch Type A Modified	LF	215.000	215.000
0170	SPV.0180	Special 01. Preparing Topsoil for Lawn Type Turf	SY	320.000	320.000

REMOVING CONCRETE SURFACE PARTIAL DEPTH

204.0109.S						
Removing Concrete						
STA	-	STA	Location	SF	Removal Depth Inches	Remark
PROJECT 6685-04-70 CATEGORY 0010						
50+43	-	54+82	Willow Drive, LT	878	1-3/4	Existing Curb & Gutter Pan
50+49	-	54+82	Willow Drive, RT	866	1-3/4	Existing Curb & Gutter Pan
PROJECT 6685-04-70 CATEGORY 0010 TOTALS				1,744		

REMOVING ASPHALTIC SURFACE MILLING

204.0120						
Removing Asphaltic						
STA	-	STA	Location	SY	Mill Depth Inches	Remark
PROJECT 6685-04-70 CATEGORY 0010						
50+30	-	54+85	BOP - Park Street	1,621	1-3/4	16' Lanes
PROJECT 6685-04-70 CATEGORY 0010 TOTALS				1,621		

REMOVING ASPHALTIC SURFACE BUTT JOINTS

204.0115				
Removing Asphaltic				
STA	-	STA	Location	SY
PROJECT 6685-04-70 CATEGORY 0010				
50+20	-	50+30	Willow Drive, BOP	56
54+85	-	54+95	Park Street Intersection, West	36
PROJECT 6685-04-70 CATEGORY 0010 TOTALS				92

REMOVING ASPHALTIC SURFACE

204.0110			
Removing Asphaltic			
STA / Location		SY	690.0150 Sawing Asphalt LF
PROJECT 6685-04-70 CATEGORY 0010			
56+27 - 57+96	Pavement Replacement (33' wide)	641	28
57+96 - 70+66	Pavement Replacement (34' wide)	4,971	38
Roadway - Curb Replacement/Shoulder Widening			
La Salle Street	NE	9	43
La Salle Street	SE	11	47
Park Street	NW	4	23
Park Street	SW	12	55
Park Street	NE	18	81
Park Street	SE	8	38
Shoulder Widening	Park St SE	20	62
Driveways			
50+97	Willow Drive LT	7	33
51+95	Willow Drive RT	24	22
53+62	Willow Drive RT	22	20
53+85	Willow Drive LT	4	18
56+85	Willow Drive LT (Fire Station)	304	206
56+85	Willow Drive RT	20	32
59+12	Willow Drive LT	19	39
59+35	Willow Drive RT	19	35
61+01	Willow Drive LT	20	45
62+25	Willow Drive RT	22	44
63+84	Willow Drive RT	14	27
65+71	Willow Drive RT	23	43
67+35	Willow Drive RT	20	38
70+40	Willow Drive LT	16	35
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		6,228	1,052
			**

** See Sawing Summary for Project Total

REMOVING CURB & GUTTER AND SIDEWALK

Location	Curb Ramp ID	204.0150	204.0155	690.0250	690.0250
		Removing Curb & Gutter	Removing Concrete Sidewalk	Sawing Concrete (Curb & Gutter)	Sawing Concrete (Sidewalk)
		LF	SY	LF	LF
PROJECT 6685-04-70 CATEGORY 0010					
La Salle Street	NE	33	16	5	5
La Salle Street	SE	37	11	3	---
Park Street	NW	18	15	5	---
Park Street	SW	45	18	5	---
Park Street	NE	240	---	3	---
Park Street	SE	30	---	3	---
Willow Drive Sidewalk, STA 50+44 - 54+82 LT		---	243	---	---
Willow Drive Sidewalk, STA 50+49 - 54+82 RT		---	241	---	---
Driveway Aprons		---	114	---	---
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		403	658	24**	5**

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** See Sawing Summary for Project Total

ASPHALTIC SHOULDER PREP

STA	-	STA	Location	211.0400 Prepare Foundation for Asphaltic Shoulders
PROJECT 6685-04-70 CATEGORY 0010				
55+65	-	57+09	Willow Drive RT Shoulder Widening	2
PROJECT 6685-04-70 CATEGORY 0010 TOTALS				2

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION (3)				FACTOR 1.25				
DIVISION 1												
	57+10 to 70+66 RT	RT	37	0	0	37	0	0	37			
	57+96 to 70+66	LT	33	0	0	33	0	0	33			
	Undistributed		50	0	0	50	0	0	50			
DIVISION 1 SUBTOTAL			120	0	0	120	0	0	120			
GRAND TOTAL			120	0	0	120	0	0	120	0	0	
TOTAL COMMON EXC			120									

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) MARSH EXCAVATION - TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL. ITEM NUMBER 205.0500
- (7) ROCK EXCAVATION ITEM NUMBER 205.0200
- (8) REDUCED MARSH IN FILL - EXCAVATED MARSH MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. MARSH IN FILL REDUCTION FACTOR = X.1X
- (9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = X.2X
- (10) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL. MARSH BACKFILL FACTOR = X.3X. ITEM NUMBER 208.1100
- (11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL. EBS BACKFILL FACTOR = X.4X. ITEM NUMBER 208.1100
- (12) EXPANDED ROCK FACTOR = X.5X
- (13) EXPANDED FILL FACTOR = X.6X
- DEPENDING ON SELECTIONS:
- EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR <-- (Scenario Used In This Example)

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

BASE AGGREGATE

				305.0110	305.0120	624.0100 Water MGAL
				Base Aggregate	Base Aggregate	
				Dense	Dense	
				3/4-Inch	1 1/4-Inch	
STA	-	STA	Location	TON	TON	
PROJECT 6685-04-70 CATEGORY 0010						
57+96	-	70+66	Willow Dr LT Shoulder	66	---	0.7
57+10	-	70+66	Willow Dr RT Shoulder	74	---	0.7
Aggregate Driveways				5	---	0.1
Undistributed (EBS)				---	100	---
PROJECT 6685-04-70 CATEGORY 0010 TOTALS				145	100	1.5

ASPHALTIC DRIVEWAYS

		465.0120
		Asphaltic Surface
		Driveways and
		Field Entrances
STA	Location	TON
PROJECT 6685-04-70 CATEGORY 0010		
50+98	Willow Drive LT	1
51+95	Willow Drive RT	1
53+62	Willow Drive RT	1
53+85	Willow Drive LT	1
56+85	Willow Drive LT	11
56+85	Willow Drive RT	4
59+12	Willow Drive LT	4
59+35	Willow Drive RT	4
61+01	Willow Drive LT	5
62+25	Willow Drive RT	4
63+84	Willow Drive RT	3
65+71	Willow Drive RT	5
67+35	Willow Drive RT	4
70+40	Willow Drive LT	4
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		52

HMA PAVEMENT

				455.0605	460.6223	460.6224	Remark
				Tack	HMA Pavement	HMA Pavement	
				Coat	3 MT 58-28 S	4 MT 58-28 S	
STA	-	STA	Location	GAL	TON	TON	
PROJECT 6685-04-70 CATEGORY 0010							
50+20	-	50+44	Willow Dr	7	---	10	La Salle Street Intersection East Radii
50+44	-	54+95	Willow Dr	117	---	180	2-16' Lanes plus curb pan
56+27	-	57+92	Willow Dr	39	115	60	17' EB Lane, 16' WB Lane
56+27	-	57+09	Willow Dr	2	5	5	EB Shoulder Widening
57+92	-	70+66	Willow Dr	313	900	485	2-17' Lanes
50+20	-	56+27	Willow Dr	10	---	---	Asphaltic Surface
PROJECT 6685-04-70 CATEGORY 0010 TOTALS				488	1,020	740	

ASPHALTIC SURFACE

		455.0605	465.0105	Remark
		Tack	Asphaltic	
		Coat	Surface	
STA / Location	Location	GAL	TON	
PROJECT 6685-04-70 CATEGORY 0010				
La Salle Street	NE Curb Ramp	1	3	2' in front of C&G; 3" Lower Layer, 2" Upper Layer
La Salle Street	SE Curb Ramp	1	4	2' in front of C&G; 3" Lower Layer, 2" Upper Layer
Park Street	NW Curb Ramp	1	2	2' in front of C&G; 3" Lower Layer, 2" Upper Layer
Park Street	SW Curb Ramp	1	4	2' in front of C&G; 3" Lower Layer, 2" Upper Layer
Park Street	NE Curb Ramp	2	6	2' in front of C&G; 3" Lower Layer, 2" Upper Layer
Park Street	SE Curb Ramp	1	3	2' in front of C&G; 3" Lower Layer, 2" Upper Layer
55+65 - 56+27	Willow Dr	3	12	EB Shoulder Widening; 3" Lower Layer, 2" Upper Layer
55+65 - 55+72	Curb Ramp Connection RT	---	1	2" Depth
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		10**	35	

** See HMA Pavement Summary for Project Total

CONCRETE CURB & GUTTER, SIDEWALK, AND DRIVEWAYS

		SPV.0090.01								
		**	416.0610	601.0411	Concrete	602.0405	602.0810	602.0820	602.0505	602.0605
		Base	Drilled	Concrete	Curb & Gutter	Concrete	Concrete	Concrete	Curb Ramp	Detectable
		Aggregate	Tie	Curb & Gutter	30-Inch Type A	Sidewalk	Driveway	Driveway	Warning Field	
		Dense 3/4-Inch	Bars	30-Inch Type D	Modified	4-Inch	6-Inch	8-Inch	Yellow	Radial Yellow
Location	Curb Ramp ID	TON	EACH	LF	LF	SF	SY	SY	SF	SF
PROJECT 6685-04-70 CATEGORY 0010										
La Salle Street	NE	7	4	33	---	184	---	---	10	---
La Salle Street	SE	6	2	37	---	149	---	---	20	---
Park Street	NW	6	4	18	---	179	---	---	20	---
Park Street	SW	8	4	45	---	197	---	---	20	---
Park Street	NE	5	2	29	---	120	---	---	---	17
Park Street	SE	4	2	30	---	92	---	---	10	13
Willow Drive Sidewalk, STA 50+48 - 54+82 LT		82	---	---	---	1,807	112	---	---	---
Willow Drive Sidewalk, STA 50+49 - 54+82 RT		76	---	---	---	1,854	92	---	---	---
STA 55+81 - 57+96 LT		110	---	---	215	---	---	290	---	---
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		304	18	192	215	4,582	204	290	80	30
		**								

** See Base Aggregate for Project Totals

SALVAGED CULVERTS

		SPV.0060.03		
		Apron Endwalls for		
		Culvert Pipe Salvaged		

		Horizontal Elliptical		
		Joint Ties		
		19x30-Inch		
		Required		
STA	Location	EACH	EACH	
PROJECT 6685-04-70 CATEGORY 0010				
69+33	LT Willow Drive Pipe 1	1	2	
69+33	LT Willow Drive Pipe 2	1	2	
69+33	RT Willow Drive Pipe 1	1	2	
69+33	RT Willow Drive Pipe 2	1	2	
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		4	8	

*** For Information Only

RIPRAP

		606.0200	645.0120
		Riprap	Geotextile
		Medium	Type HR
		CY	SY
STATION	LOCATION		
PROJECT 6685-04-70 CATEGORY 0010			
69+33	Willow Dr LT	5	17
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		5	17

STORM SEWER PIPES

		204.0245.01	608.3012	520.1012			
		Removing Storm	Pipe Class III-A	Apron Endwalls			
		Sewer 8-Inch	12-Inch	for Culvert Pipe			
		LF	LF	12-Inch	INLET	DISCHARGE	SLOPE
				Each	ELEVATION	ELEVATION	FT/FT
FROM	TO						
PROJECT 6685-04-70 CATEGORY 0010							
55+53, 29' RT - 55+77, 29.5' RT		15	24	1	1300.89	1300.80	0.0038
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		15	24	1			

STORM SEWER STRUCTURES

		611.0420	611.0430	611.8115
		Reconstructing	Reconstructing	Adjusting
		Manholes	Inlets	Inlet Covers
		EACH	EACH	EACH
STA	Location			
PROJECT 6685-04-70 CATEGORY 0010				
50+26	LT La Salle Street Intersection	---	---	1
50+45	RT La Salle Street Intersection	---	1	---
53+85	LT Park Street Intersection	1	---	---
54+96	RT Park Street Intersection	---	---	1
54+98	LT Park Street Intersection	---	---	1
55+53	RT Park Street Intersection	1	---	---
56+60	LT Park Street Intersection	---	1	---
57+54	LT Park Street Intersection	---	1	---
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		2	3	3

ADJUSTING LOCAL UTILITY

STA		Location	SPV.0060.01 Adjusting Water Main Valve Box EACH	SPV.0060.02 Adjusting Sanitary Manhole Covers EACH
PROJECT 6685-04-70 CATEGORY 0020				
50+26	LT	Willow Drive	1	---
50+45	RT	La Salle Street SE Curb Ramp	1	---
51+12	RT	Willow Drive	---	1
55+79	RT	Willow Drive	1	---
PROJECT 6685-04-70 CATEGORY 0020 TOTALS			3	1

EROSION CONTROL

LOCATION		628.1504 Silt Fence LF	628.1520 Silt Fence Maintenance LF	628.7555 Culvert Pipe Checks Each	628.7570 Rock Bags Each
PROJECT 6685-04-70 CATEGORY 0010					
STA 55+05	LT	---	---	2	---
STA 55+67	RT	---	---	2	---
STA 56+63	RT	---	---	2	---
STA 58+85	LT	---	---	2	---
STA 69+33	RT	50	50	7	---
STA 69+33	LT	---	---	7	---
Undistributed		---	---	---	5
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		50	50	22	5

MOBILIZATION EROSION CONTROL

Project	628.1905 Mobilization Erosion Control EACH	628.1910 Mobilization Emergency Erosion Control EACH
PROJECT 6685-04-70 CATEGORY 0010		
Willow Drive	2	2
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		
	2	2

TOPSOIL, EROSION MAT, FERTILIZER, AND SEEDING

LOCATION	625.0100 Topsoil SY	SPV.0030.01 Fertilizer For Lawn Type Turf CWT	SPV.0180.01 Preparing Topsoil For Lawn Type Turf SY	630.0140 Seeding Mixture No. 40 LB	627.0200 Mulching SY	630.0500 Seed Water MGAL	628.2008 Erosion Mat Urban Class I Type B SY
PROJECT 6685-04-70 CATEGORY 0010							
Terrace/Behind Walk LaSalle - Park LT	90	0.1	90	4	90	2	---
Terrace/Behind Walk LaSalle - Park RT	90	0.1	90	4	90	2	---
Curb Ramp Areas	100	0.1	100	5	100	2	---
Park St SE Curb Ramp	20	0.1	20	1	---	0	20
Pipe Endwalls STA 69+33 RT	15	0.1	15	1	---	0	15
Restoration of Temporary Walks & Ramps	5	0.1	5	1	5	0	---
PROJECT 6685-04-70 CATEGORY 0010 TOTALS							
	320	0.6	320	16	285	6	35

INLET PROTECTION

STA	Location	628.7015 Inlet Protection Type C EACH
PROJECT 6685-04-70 CATEGORY 0010		
50+25	LT	1
50+45	RT	1
51+48	RT	1
51+75	LT	1
54+96	LT	2
54+96	RT	1
56+60	LT	1
57+55	LT	1
PROJECT 6685-04-70 CATEGORY 0010 TOTA		9

TYPE II SIGNING

										638.3000	637.2210	637.2230	634.0616	634.0618	
										638.2602	Removing	Signs	Signs	Posts Wood	
										Removing	Small Sign	Type II	Type II	4X6 Inch	4X6 Inch
										Signs Type II	Supports	Reflective H	Reflective F	16 FT	18 FT
Sign #	Sign	Shape	Sign Size			Sign Message	EACH	EACH	SF	SF	EACH	EACH			
	Code	T,O,R,D	IN	X	IN										
PROJECT 6685-04-70 CATEGORY 0010															
01	-	01	R1-1	O	30	x	30	Stop	1	1	5.18	---	1	---	
01	-	02	R2-1	R	24	x	30	Speed Limit 25	1	1	5.00	---	1	---	
01	-	03	W3-1	D	36	x	36	Stop Ahead	1	1	---	9.00	1	---	
01	-	04	R2-1	R	24	x	30	Speed Limit 25	1	1	5.00	---	---	1	
01	-	05	R2-1	R	24	x	30	Speed Limit 25	1	1	5.00	---	---	1	
02	-	01	R2-1	R	24	x	30	Speed Limit 25	1	1	5.00	---	---	1	
02	-	02	R2-1	R	24	x	30	Speed Limit 25	1	1	5.00	---	---	1	
02	-	03	W1-3R	D	36	x	36	Reverse Turn Right	1	1	---	9.00	---	1	
PROJECT 6685-04-70 CATEGORY 0010 TOTALS									8	8	30.18	18.00	3	5	

TRAFFIC CONTROL

Stage	Duration Days	643.0300 Traffic Control Drums		643.0420 Traffic Control Barricades Type III		643.0705 Traffic Control Warning Lights Type A		643.0715 Traffic Control Warning Lights Type C		643.0900 Traffic Control Signs		643.3180 Temporary Marking Line Removable Tape 6-Inch (White Crosswalk) LF	644.1440 Temporary Pedestrian Surface Matting SF	644.1601 Temporary Pedestrian Curb Ramp		644.1605 Temporary Pedestrian Detectable Warning Field SF	644.1810 Temporary Pedestrian Barricade LF
		# REQ'D	DAYS	# REQ'D	DAYS	# REQ'D	DAYS	# REQ'D	DAYS	# REQ'D	DAYS			# REQ'D	DAYS		
PROJECT 6685-04-70 CATEGORY 0010																	
Advanced Warning/Closure 1-3	51	---	---	---	---	---	---	---	---	6	306	---	---	---	---	---	---
Stage 1	17	40	680	2	34	4	68	3	51	2	34	82	25	1	17	10	130
Stage 2	18	45	810	2	36	4	72	3	54	3	54	---	---	---	---	---	60
Stage 3	16	25	400	3	48	6	96	3	48	1	16	---	---	---	---	---	18
Advanced Warning/Closure 4	14	---	---	4	56	8	112	---	---	9	126	---	---	---	---	---	---
Stage 4	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Undistributed	65	5	325	2	130	4	260	---	---	---	---	---	---	---	---	---	---
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		2,215		304		608		153		536		82	25	17		10	208

PAVEMENT MARKING

		646.2005 Marking Line Paint 6-Inch	
		(White) Edge LF	(Yellow) Centerline LF
From	To		
PROJECT 6685-04-70 CATEGORY 0010			
STA 50+41	STA 55+30/PARK ST	865	970
STA 55+30/PARK ST	STA 70+65	2,935	3,070
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		3,800	4,040
		7,840	

PAVEMENT MARKING (TRANSVERSE)

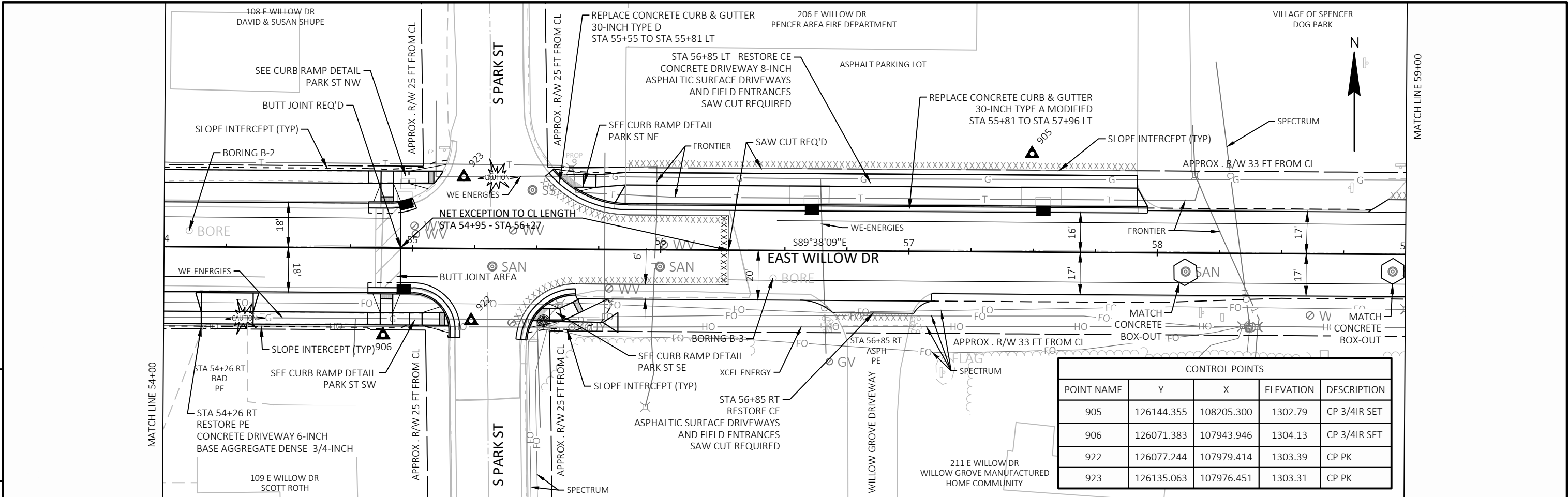
		646.6005 Marking Stop Line Paint 12-Inch (White) LF	646.7405 Marking Crosswalk Paint Transverse Line 6-Inch (White) LF
Location			
PROJECT 6685-04-70 CATEGORY 0010			
Willow/LaSalle		17	68
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		17	68

CONSTRUCTION STAKING

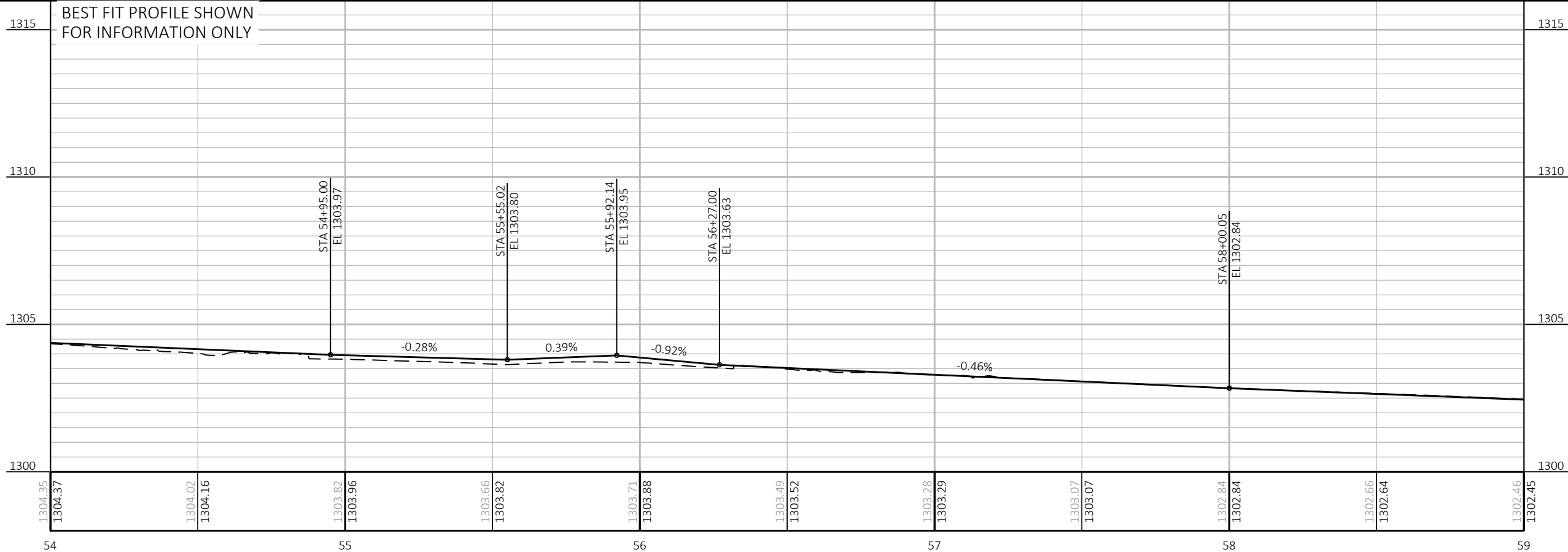
		650.5500 Construction Staking Curb Gutter and Curb and Gutter LF	650.9500 Construction Staking Sidewalk (project) 01. 6685-04-70 EACH	650.8000 Construction Staking Resurfacing Reference LF	650.9000 Construction Staking Curb Ramps Each	650.9911 Construction Staking Supplemental Control 01. 6685-04-70 Each
STA	STA	Location				
PROJECT 6685-04-70 CATEGORY 0010						
50+20	70+66	Willow Dr	407	1	2,046	10
PROJECT 6685-04-70 CATEGORY 0010 TOTALS			407	1	2,046	10

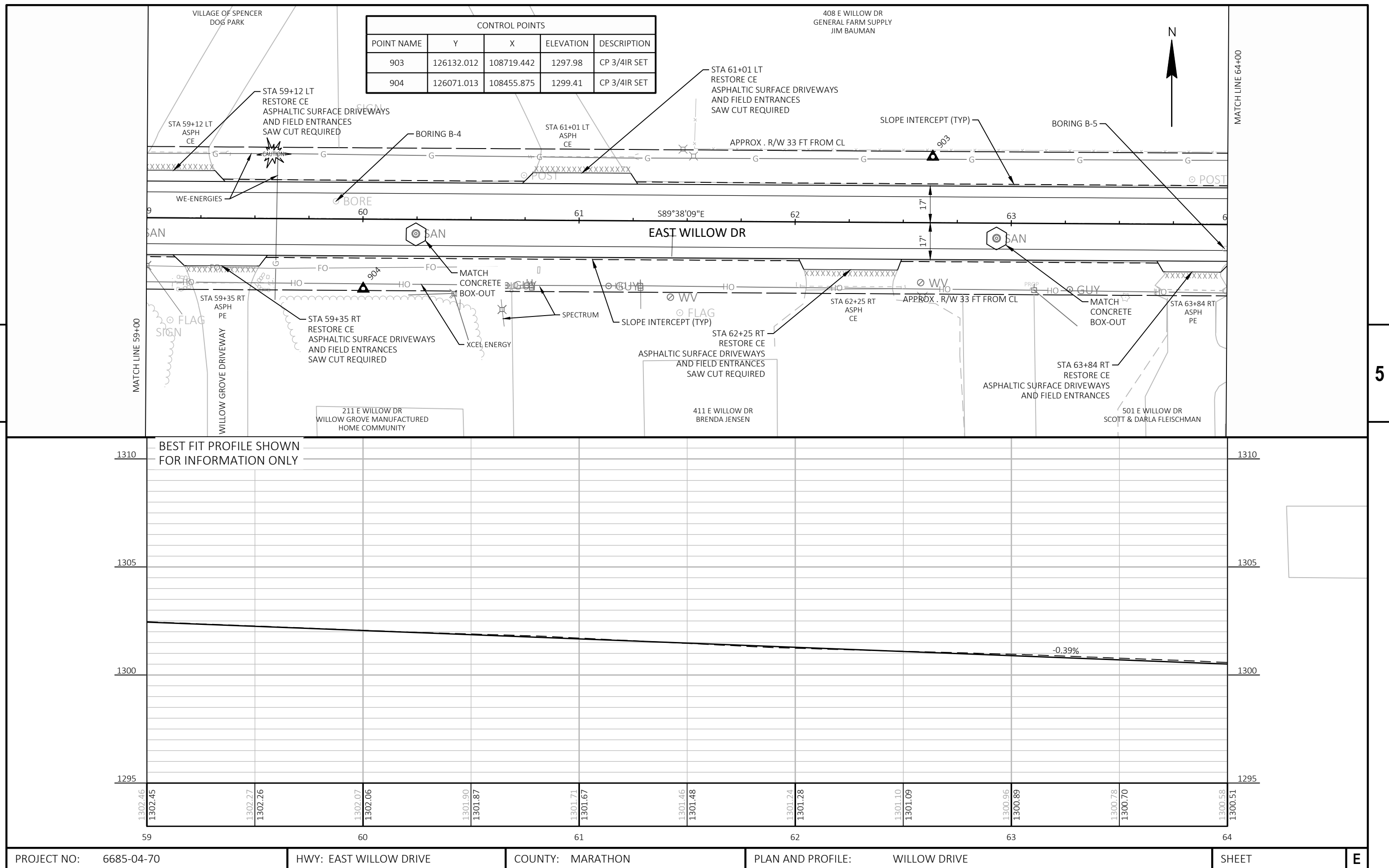
SAWCUTS

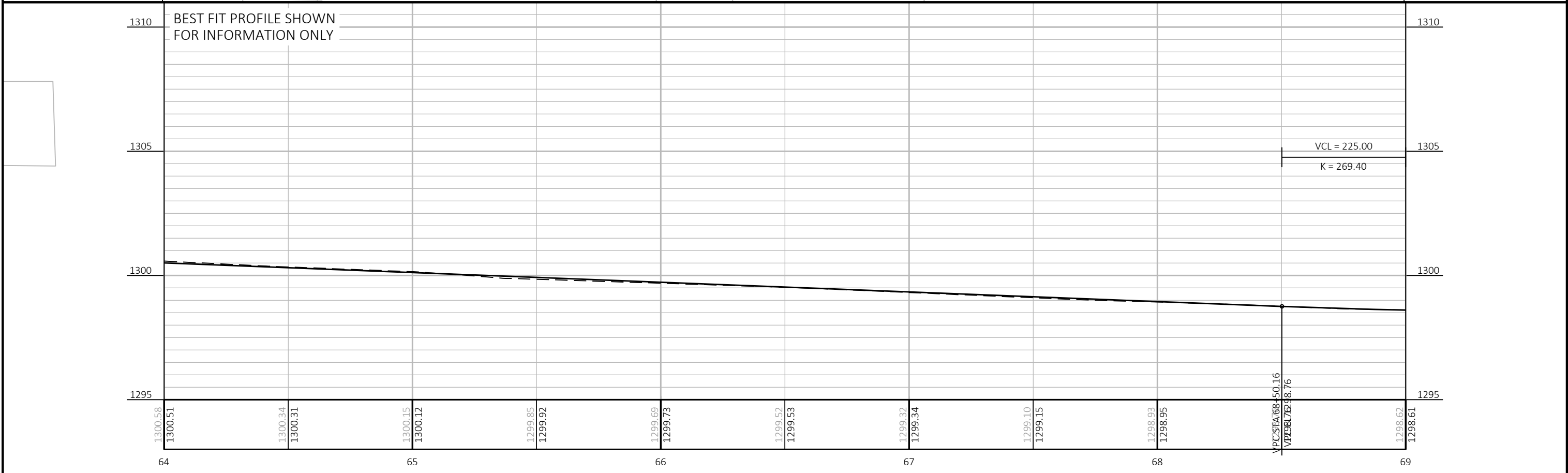
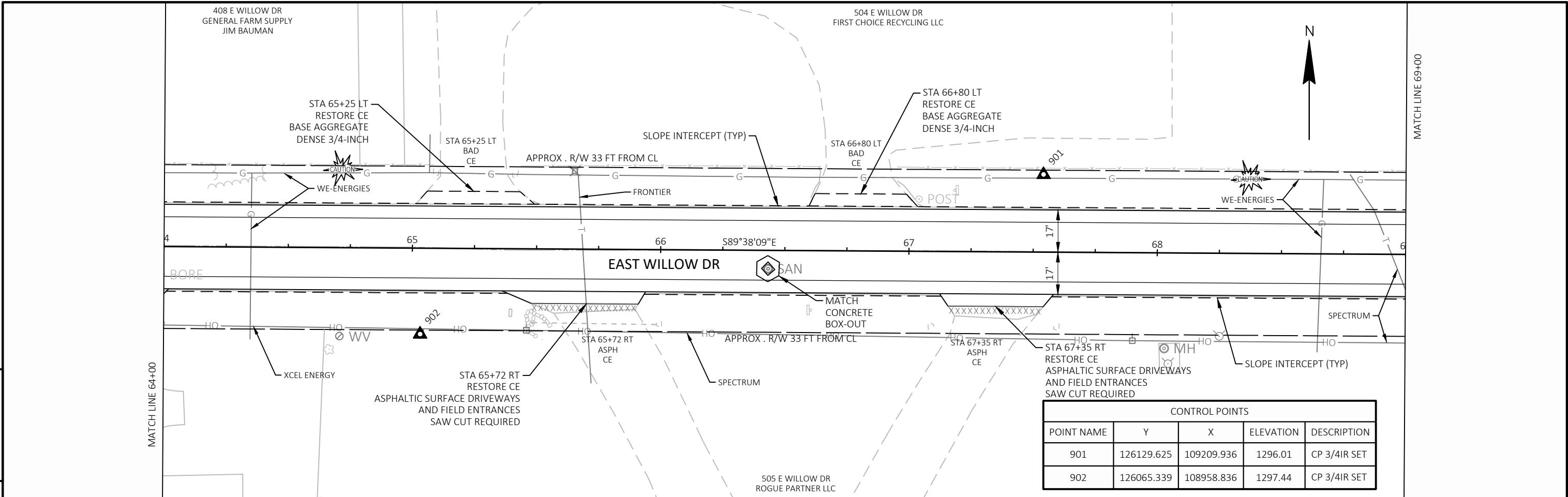
		690.0150 Sawing Asphalt LF	690.0250 Sawing Concrete LF
STA	Location		
PROJECT 6685-04-70 CATEGORY 0010			
From Removing Curb and Sidewalk		---	29
From Removing Asphalt Surface		1052	---
Stage 1	Fire Station Parking Lot Staging	16	3
PROJECT 6685-04-70 CATEGORY 0010 TOTALS		1068	32

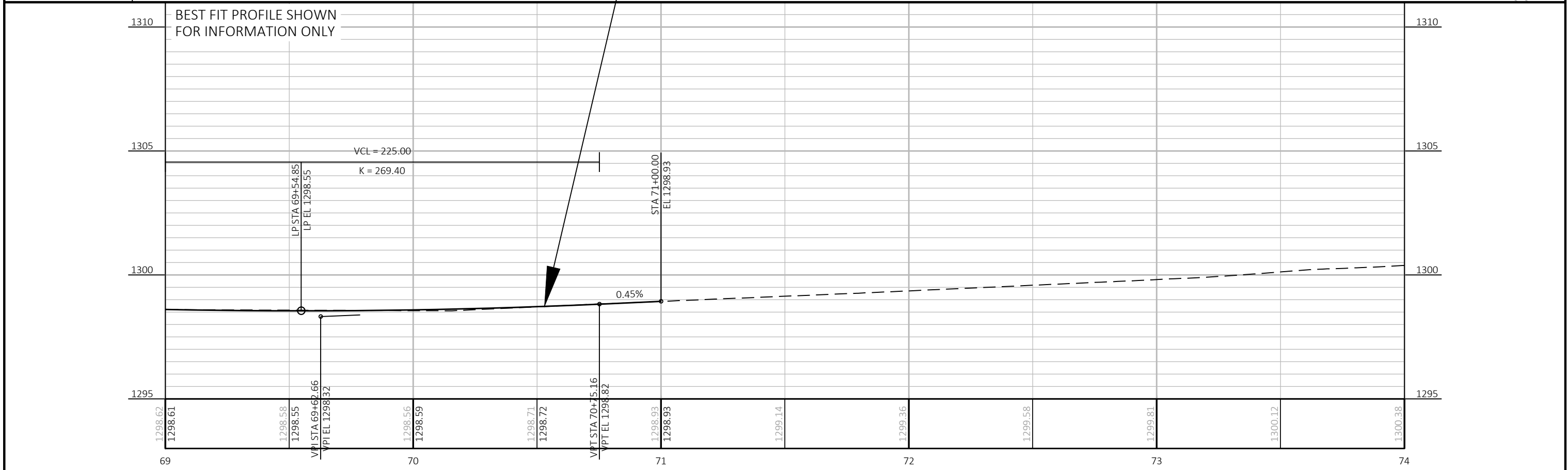
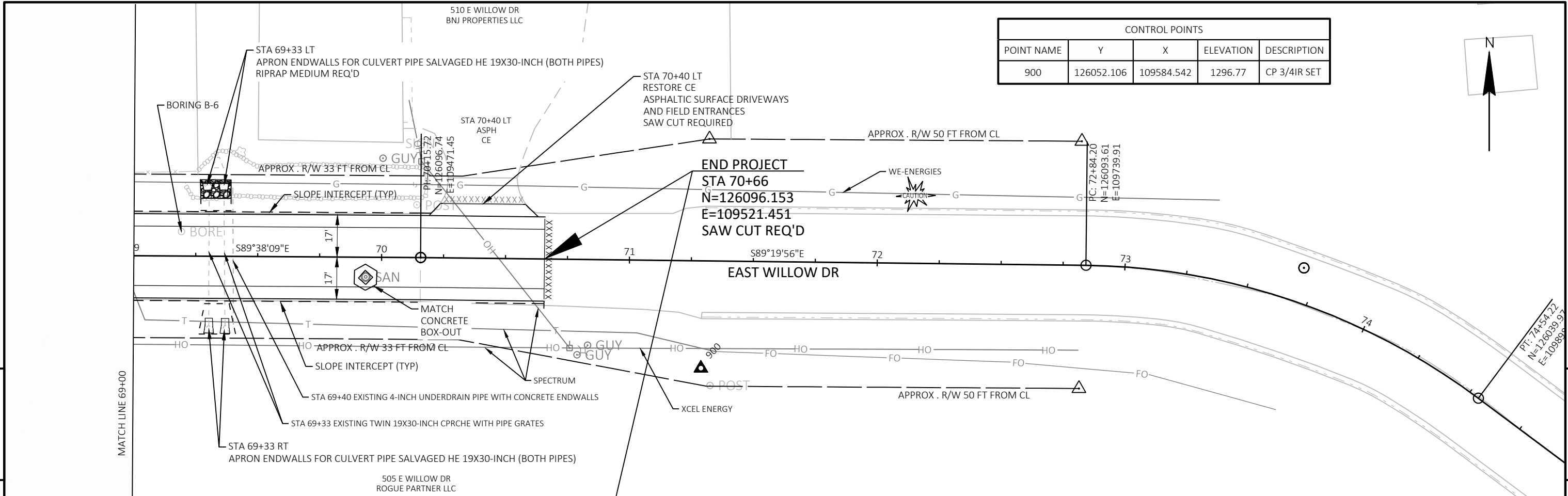


CONTROL POINTS				
POINT NAME	Y	X	ELEVATION	DESCRIPTION
905	126144.355	108205.300	1302.79	CP 3/4IR SET
906	126071.383	107943.946	1304.13	CP 3/4IR SET
922	126077.244	107979.414	1303.39	CP PK
923	126135.063	107976.451	1303.31	CP PK





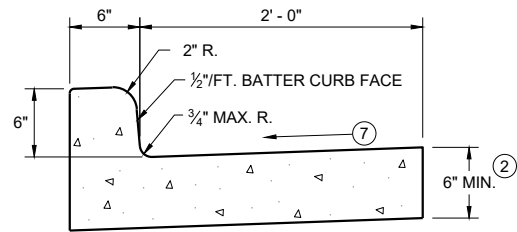




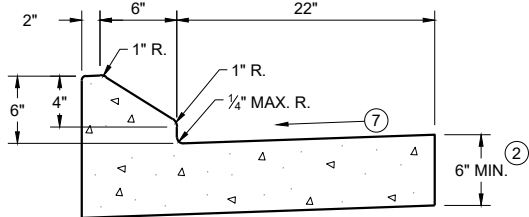
PROJECT NO: 6685-04-70	HWY: EAST WILLOW DRIVE	COUNTY: MARATHON	PLAN AND PROFILE: WILLOW DRIVE	SHEET E
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Standard Detail Drawing List

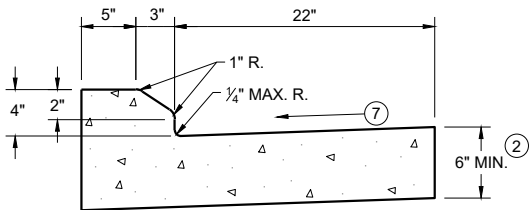
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPE 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



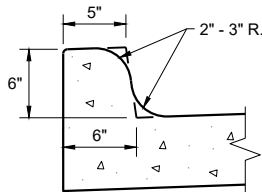
TYPES A^① & D



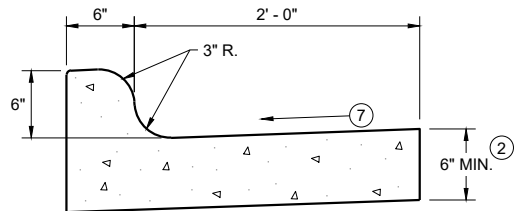
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

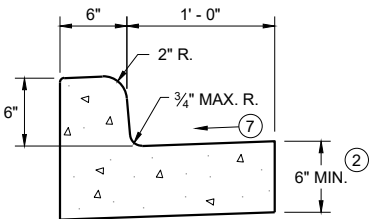


TYPES K^① & L
(OPTIONAL CURB SHAPE)



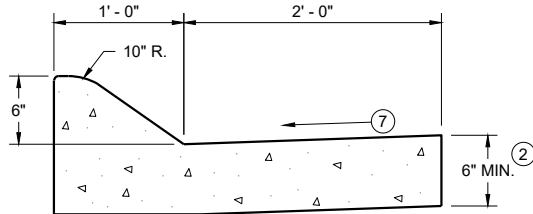
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

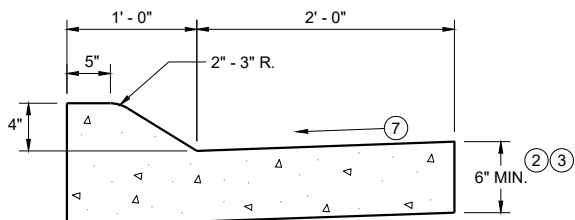


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

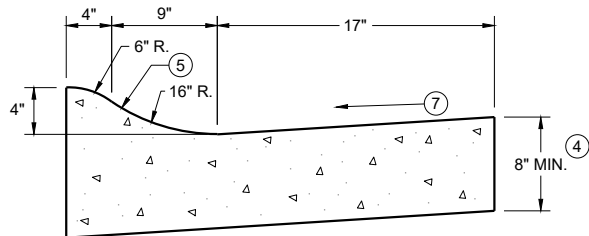


6" SLOPED CURB TYPES A^① & D



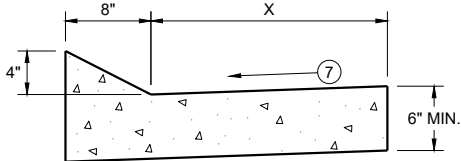
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

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

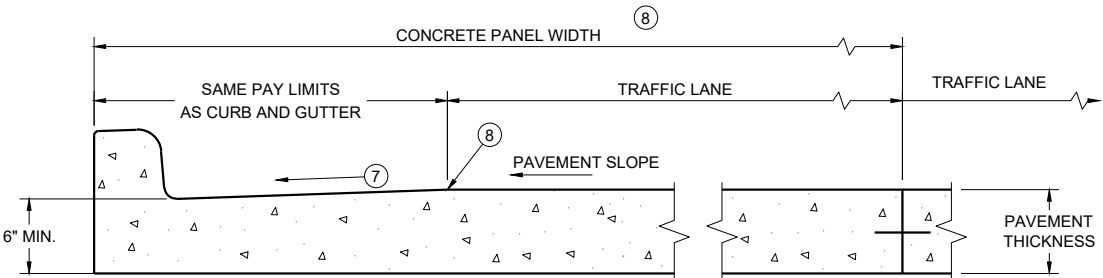


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

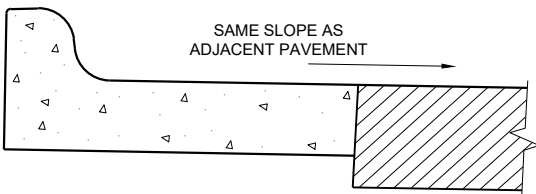
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

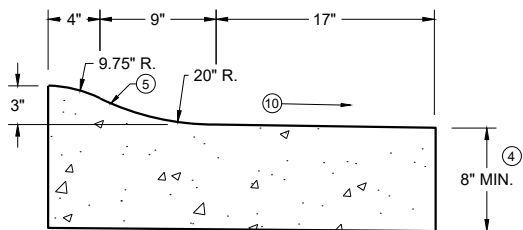


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

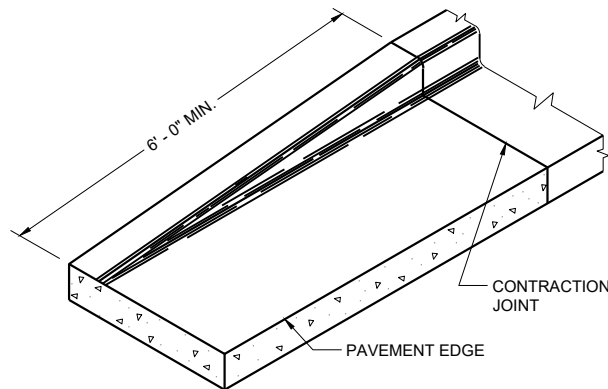
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

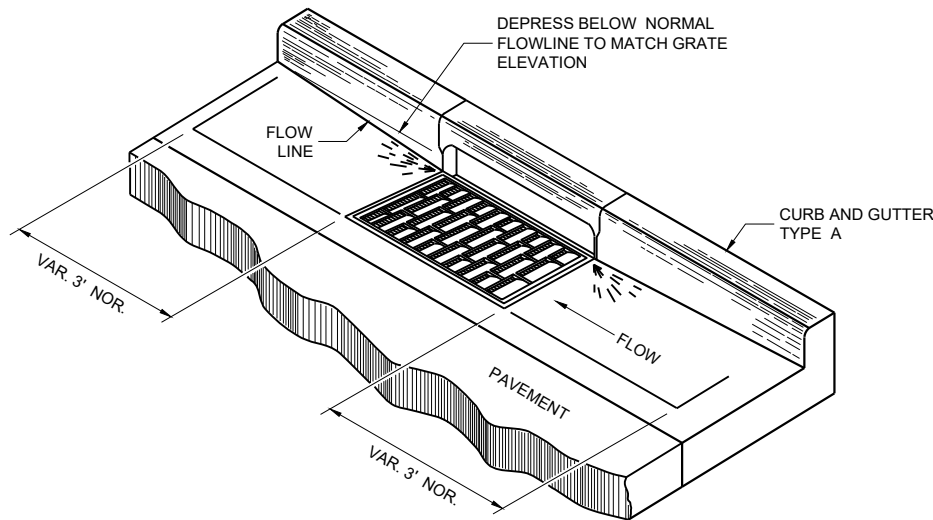
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

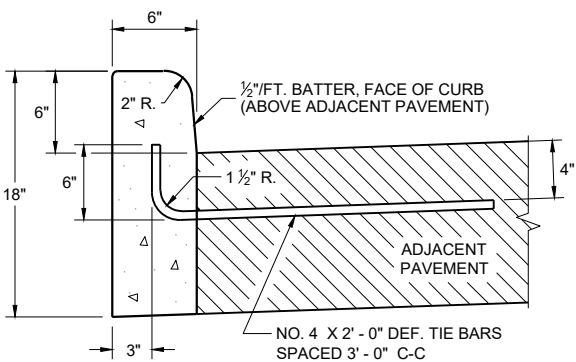


END SECTION CURB AND GUTTER

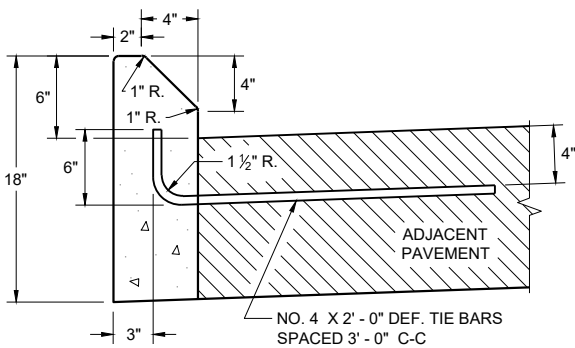


DETAIL OF CURB AND GUTTER AT INLETS

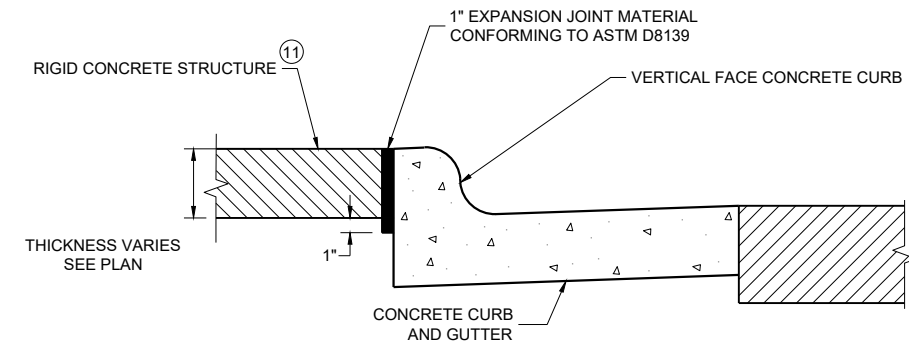
(TYPICAL H INLET COVER SHOWN)



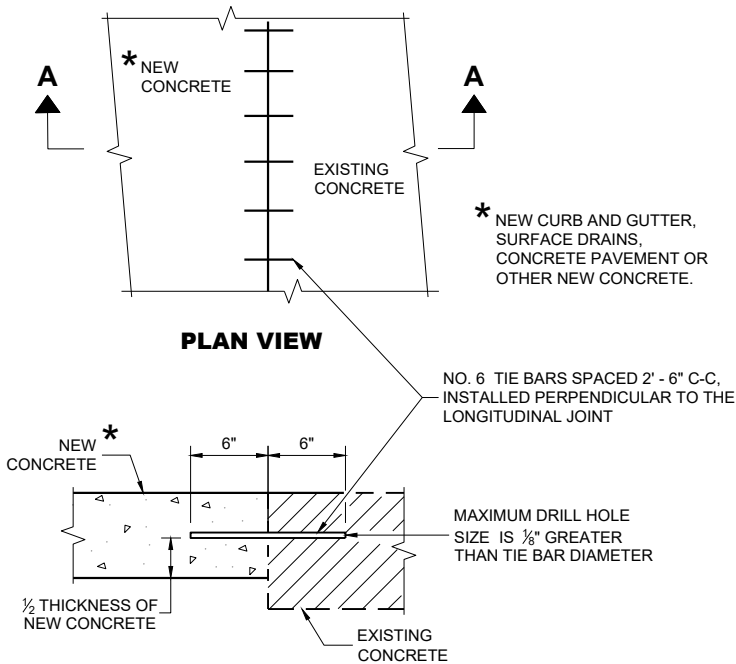
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

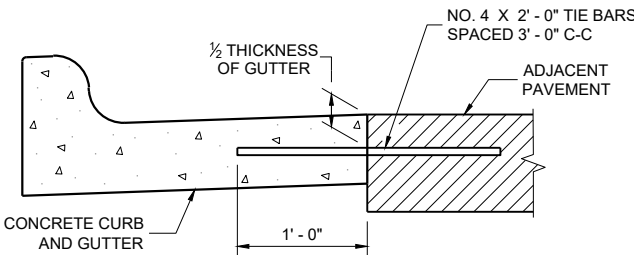
GENERAL NOTES

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

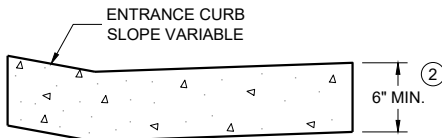
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



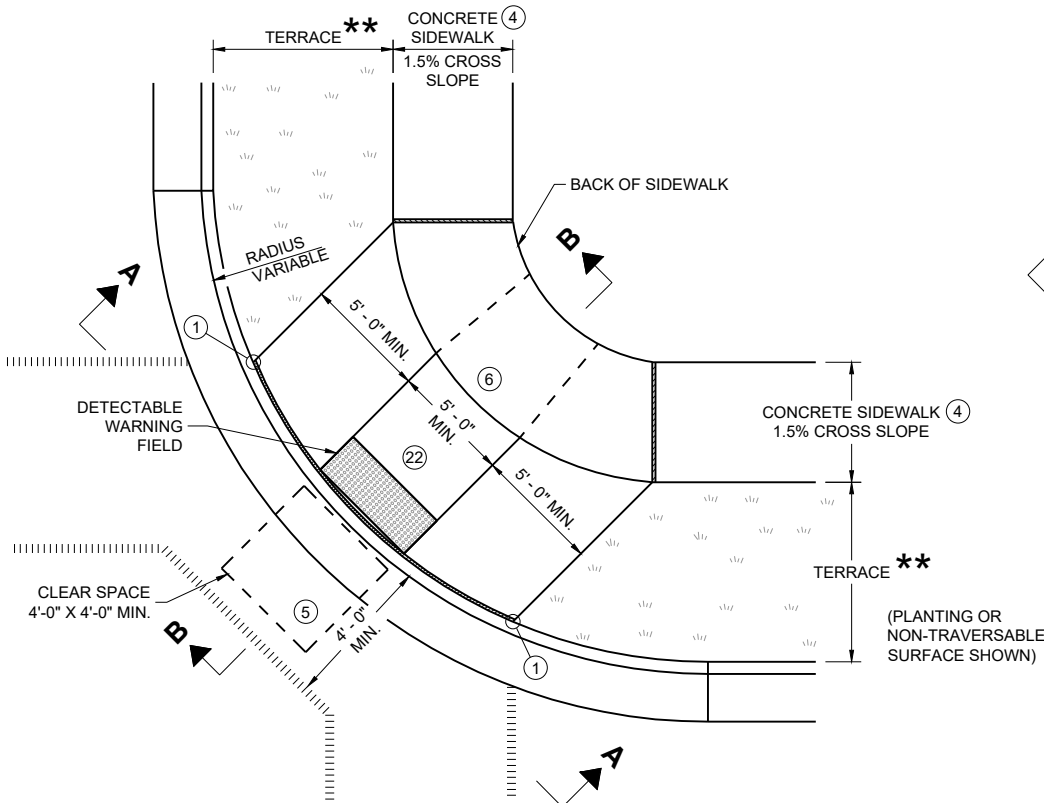
DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

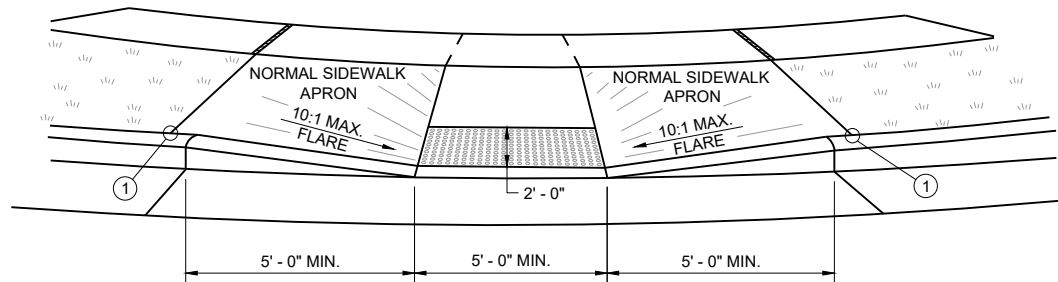
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

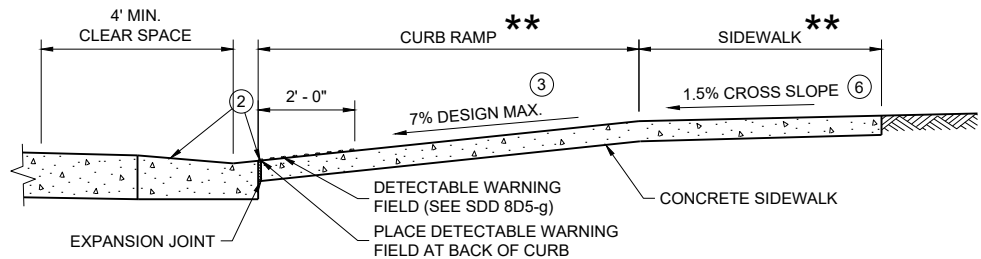
FHWA



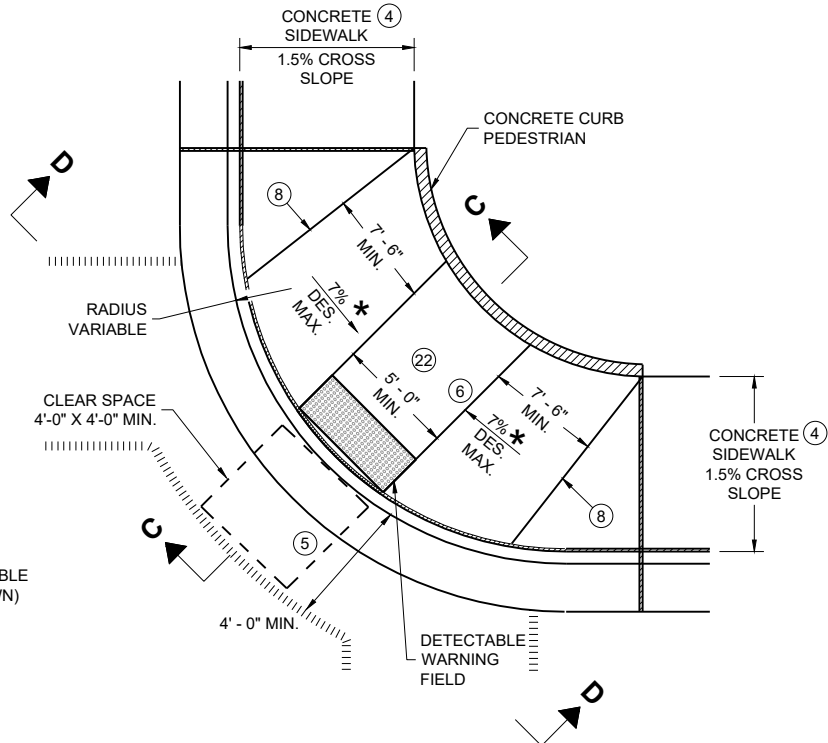
PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)



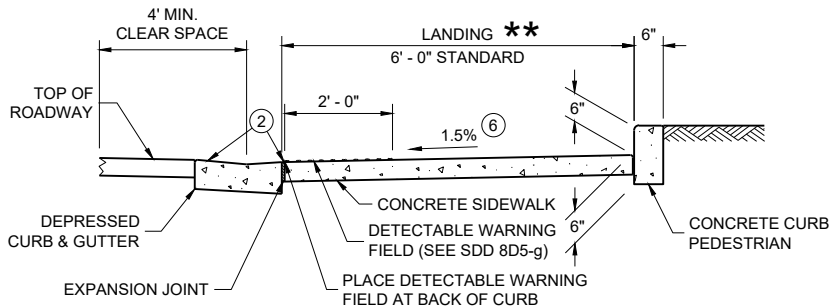
VIEW A - A FOR TYPE 1



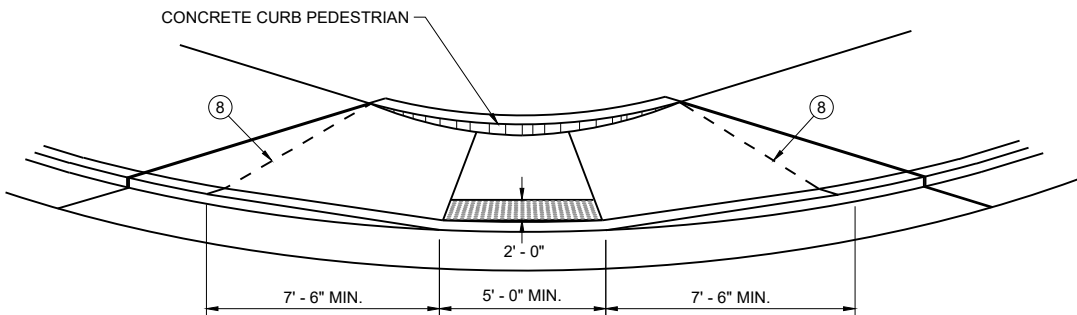
SECTION B - B FOR TYPE 1



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



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

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

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

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

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

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

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

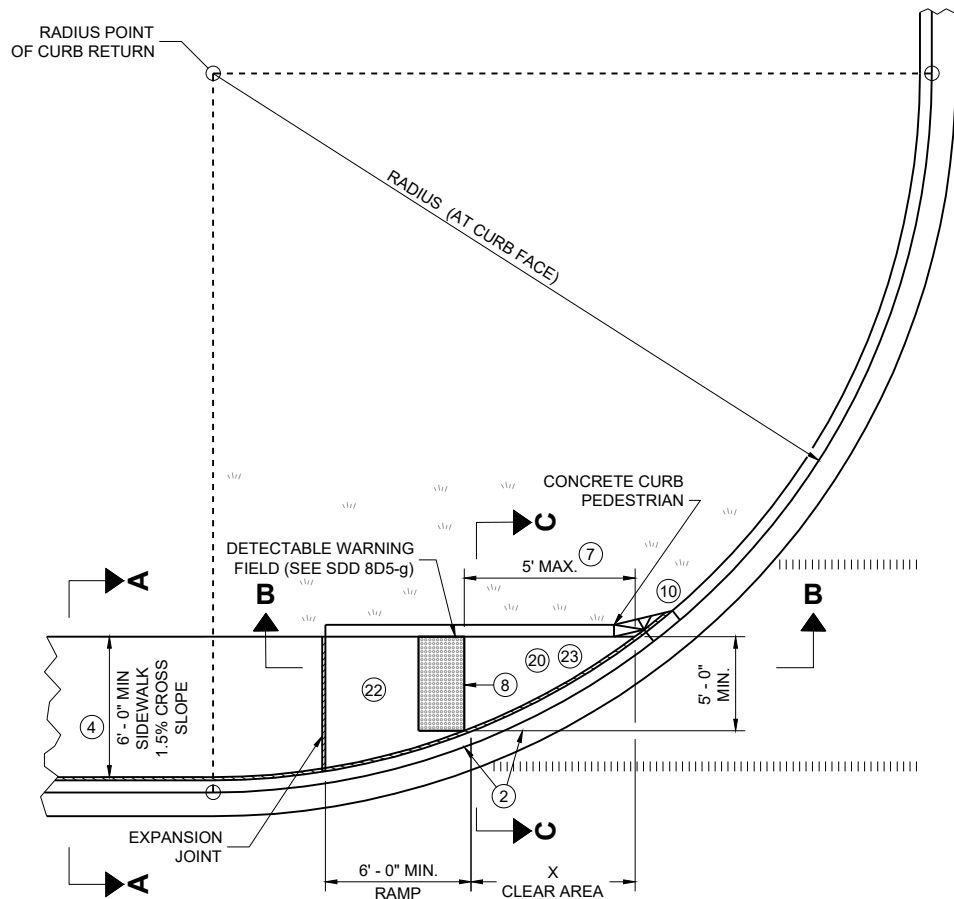
- 1 THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- 2 GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 5 PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).
- 6 PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 17 A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- 22 THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

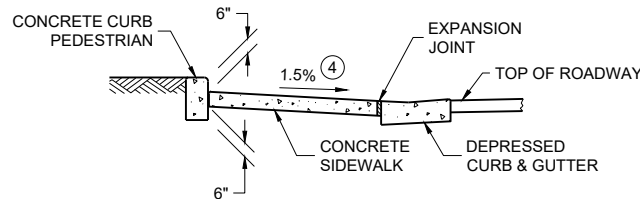
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS
TYPE 1 AND 1-A

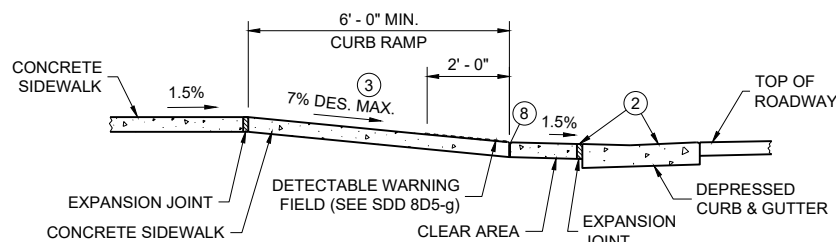
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A

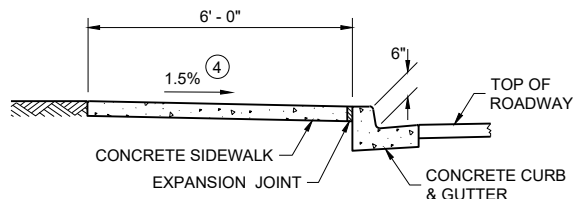


SECTION B - B FOR
TYPE 4A AND TYPE 4A1

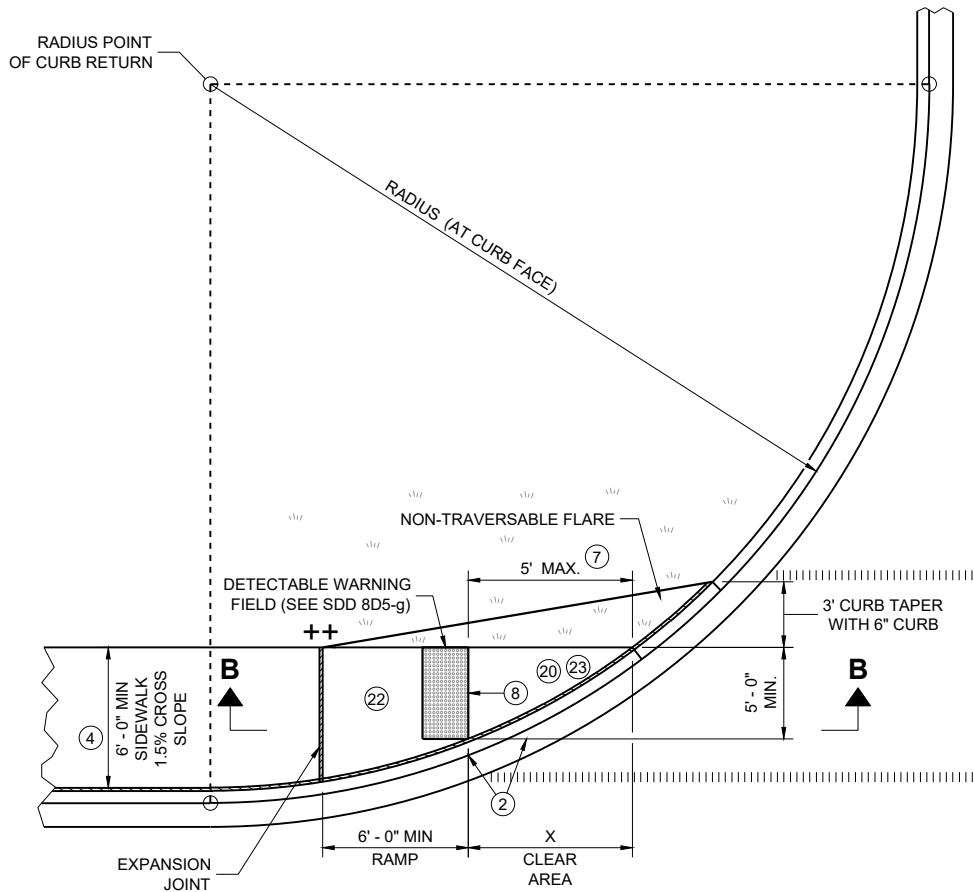
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



PLAN VIEW
CURB RAMP TYPE 4A1

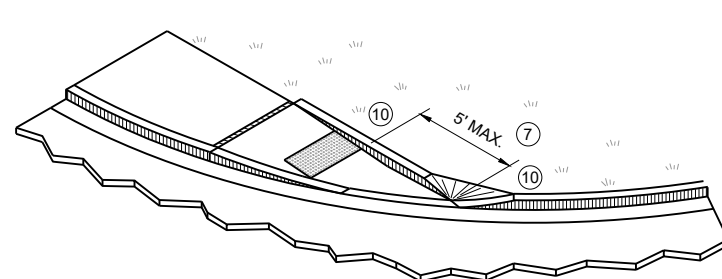
GENERAL NOTES

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

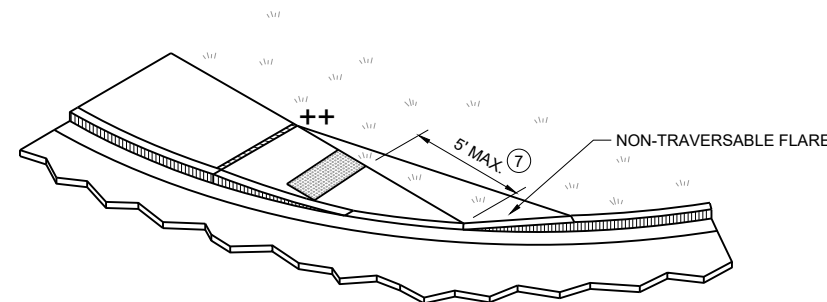
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- 2 GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- 17 A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- 20 MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- 22 THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- 23 THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



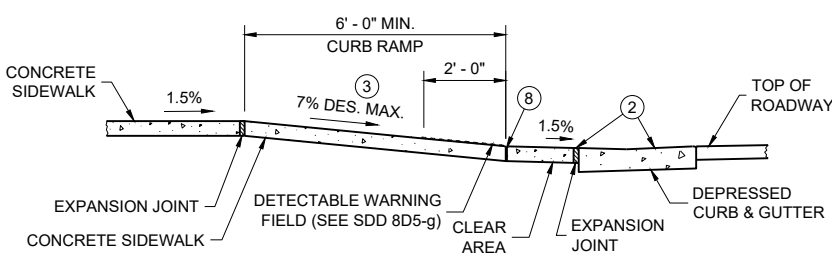
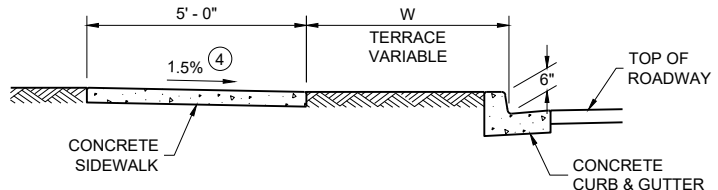
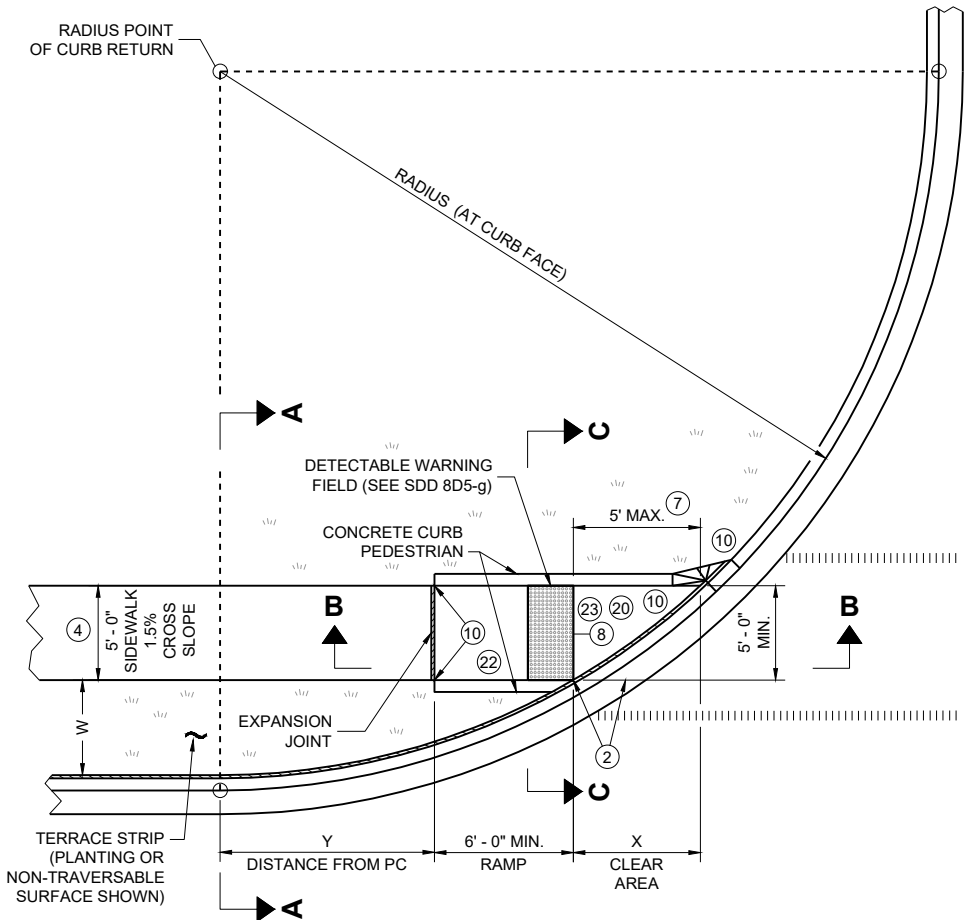
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

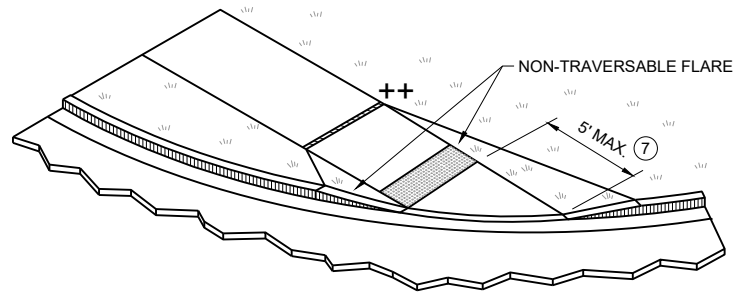
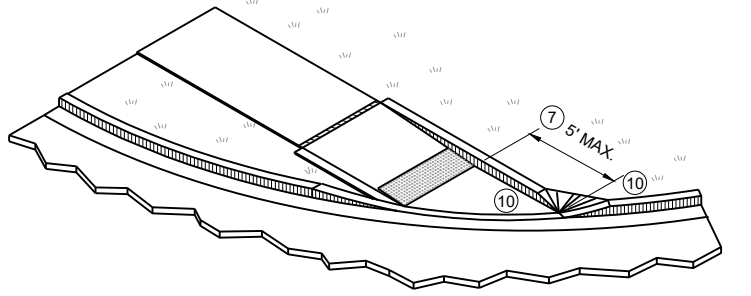
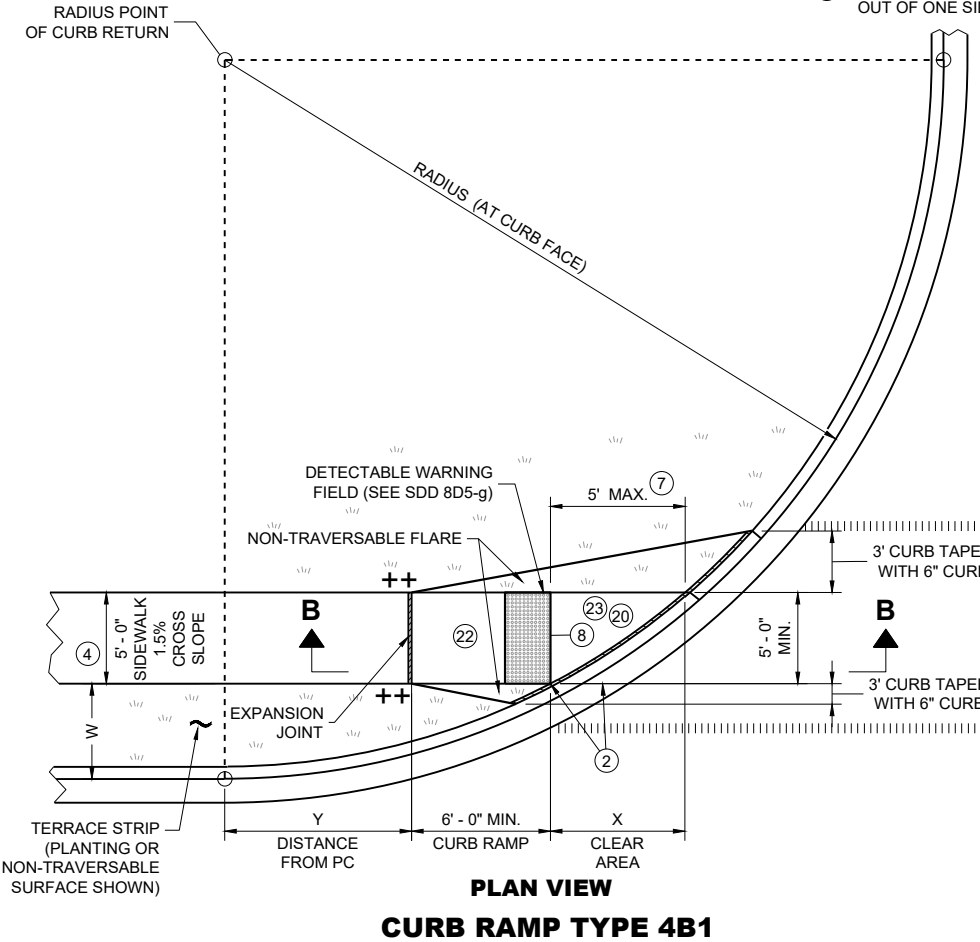
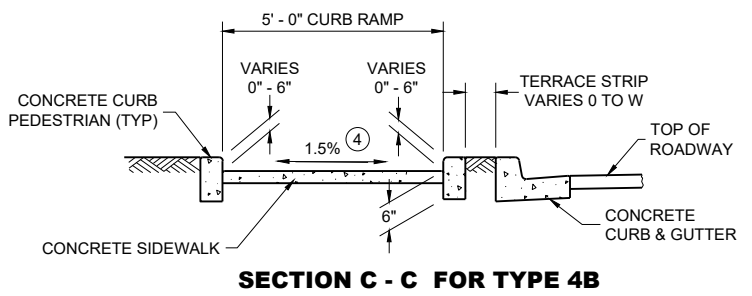
**CURB RAMPS
TYPE 4A AND 4A1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

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



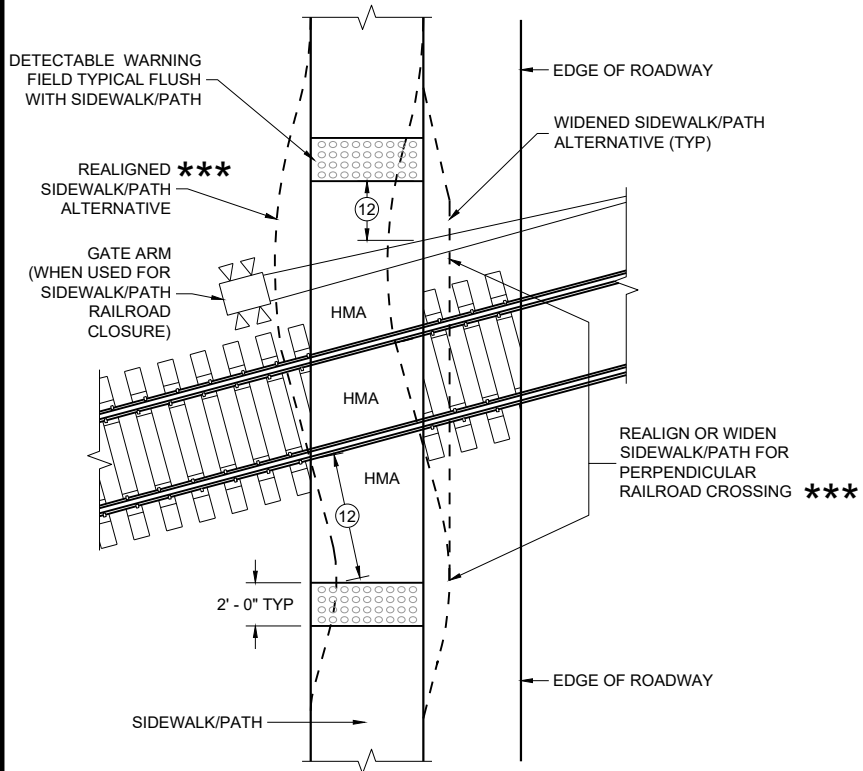
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

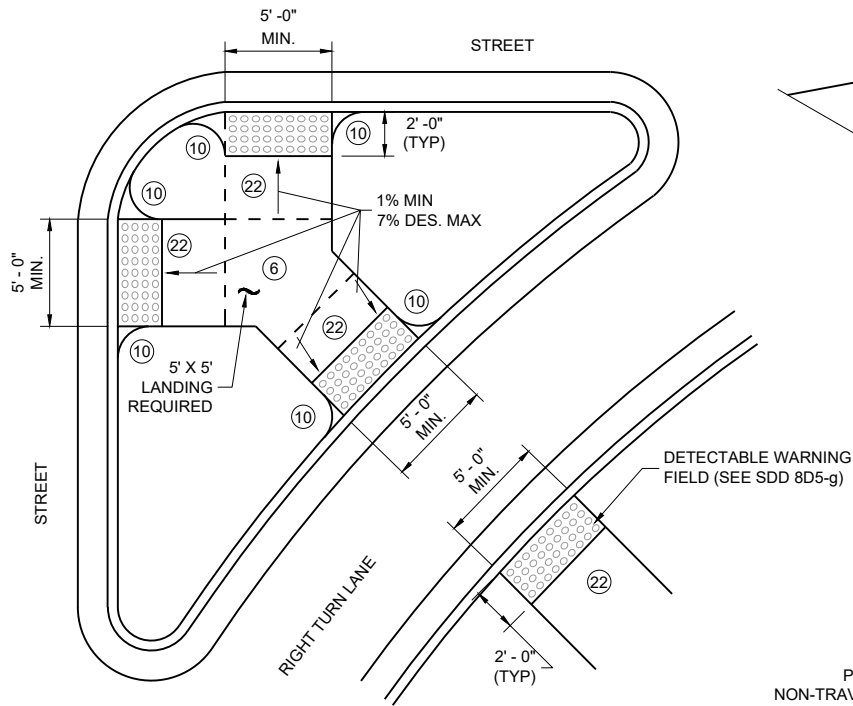
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

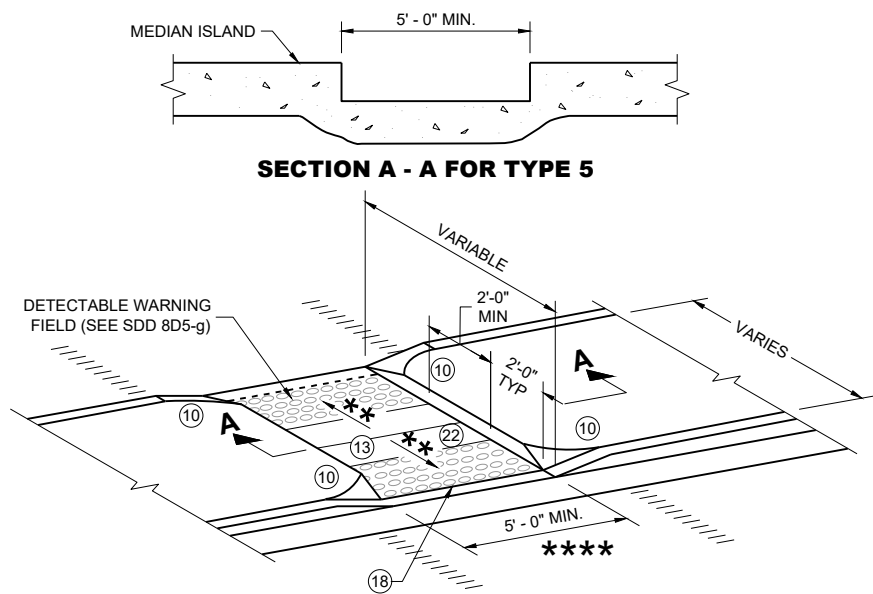


CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS

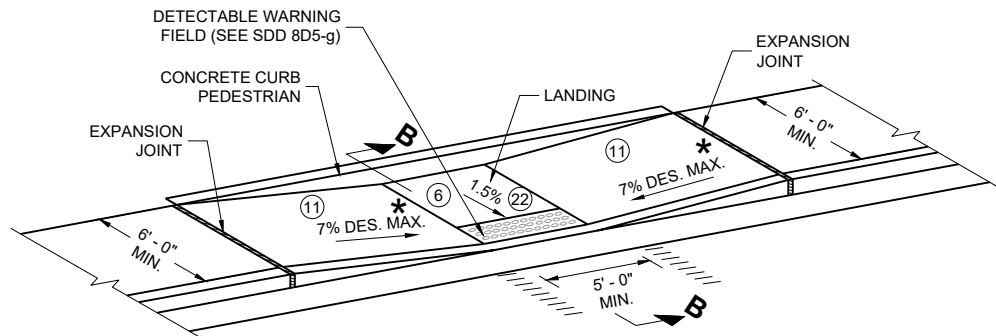


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

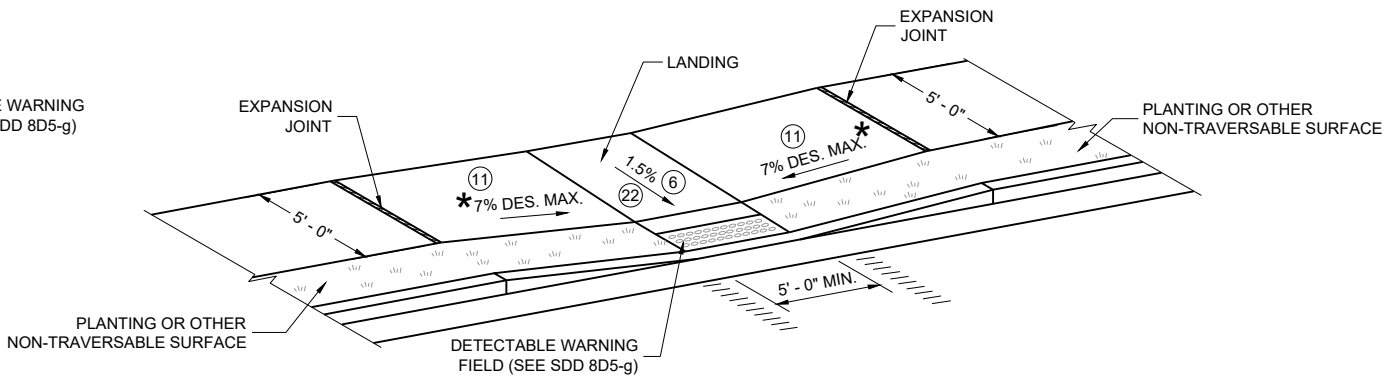
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS



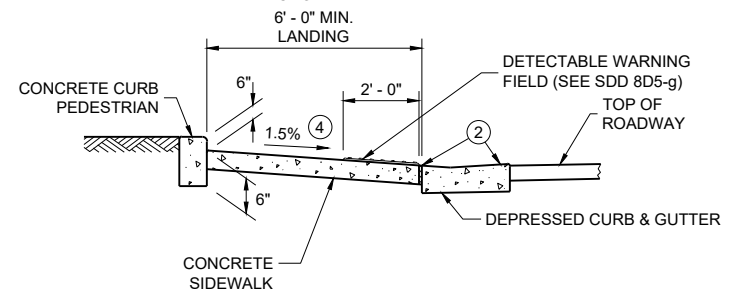
CURB RAMP TYPE 7B
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑱ WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.
- ⑳ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** 1% MINIMUM (PROVIDE DRAINAGE)
- *** DETAILS TO BE DETERMINED BY ENGINEER
- **** FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

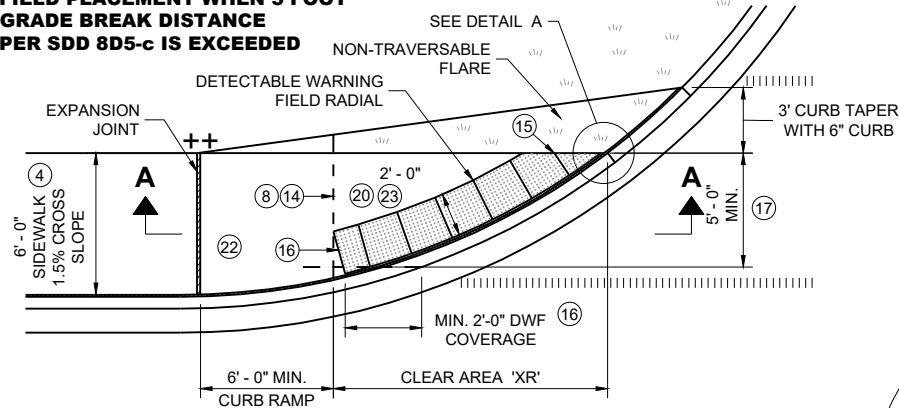


SECTION B - B FOR TYPE 7A

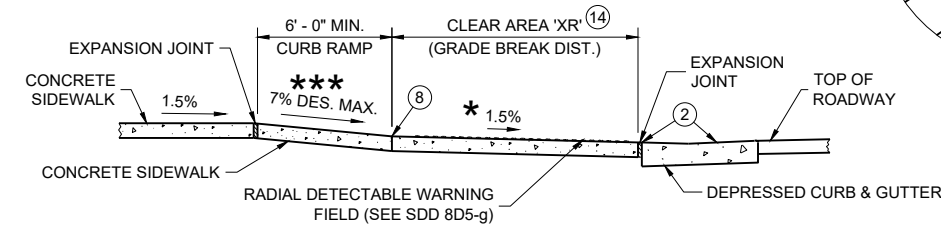
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

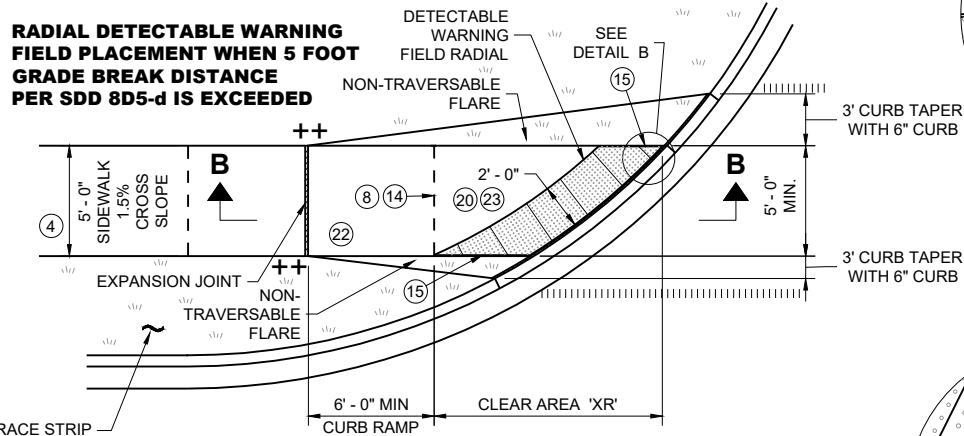


**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

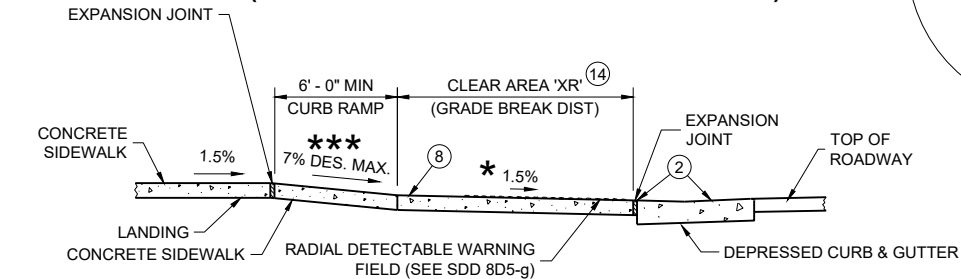


SECTION A - A FOR TYPE 4A1

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



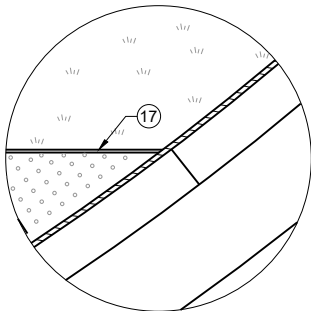
**PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



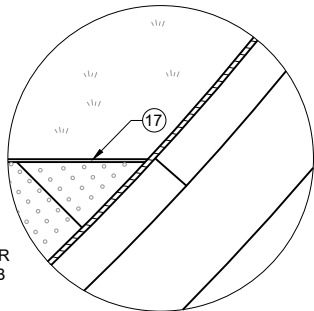
SECTION B - B FOR TYPE 4B1

LEGEND

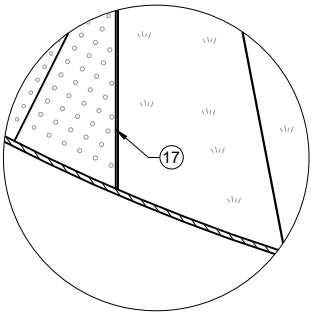
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- *** MAXIMUM 8.3%
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



DETAIL A



DETAIL B



DETAIL C

GENERAL NOTES

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

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

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

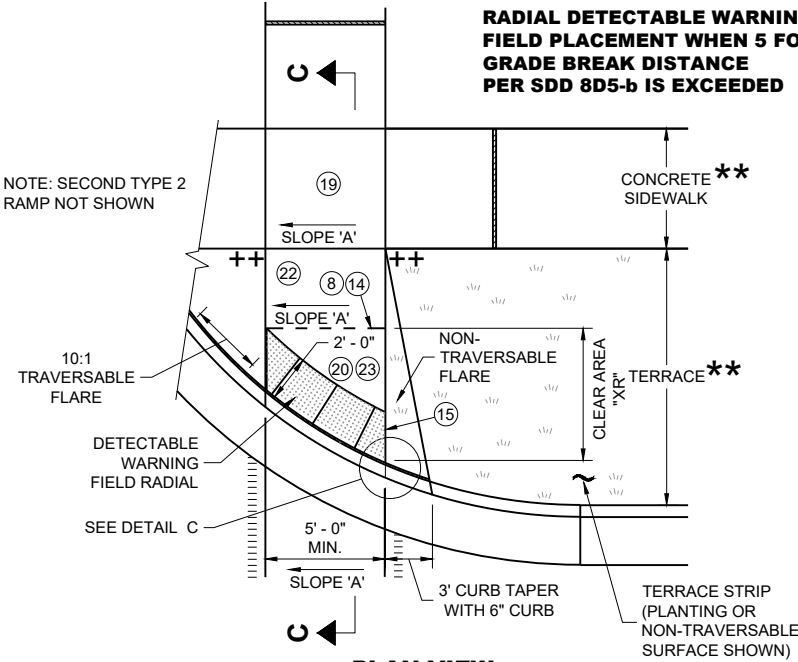
APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMP AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMP. TYPE 4A AND 4B CURB RAMP ARE NOT SHOWN.

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

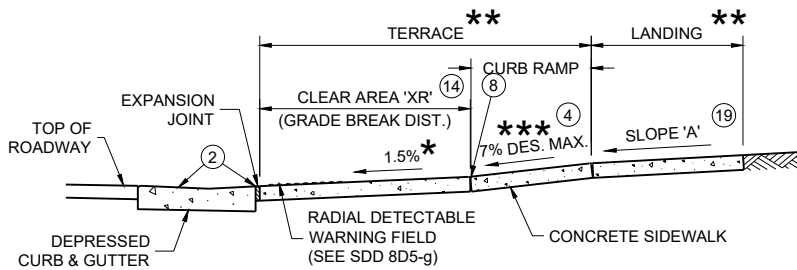
FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

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

- 2 GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- 19 WHERE A LANDING SERVES TWO CURB RAMP, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- 20 MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- 22 THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- 23 THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



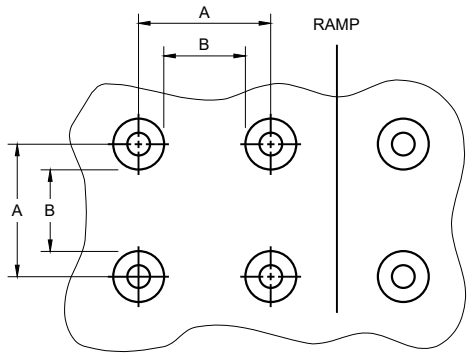
**PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)**



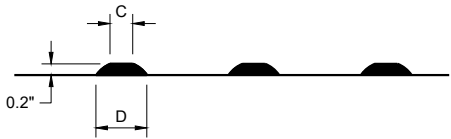
SECTION C - C FOR TYPE 2

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

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

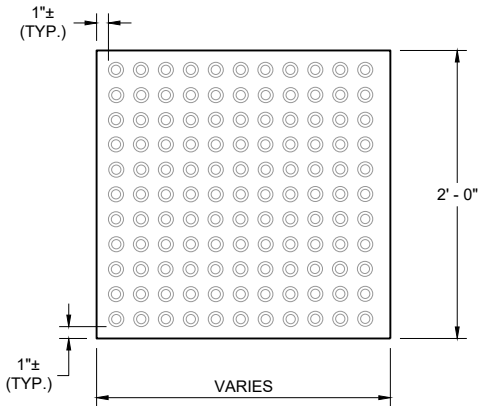


PLAN VIEW

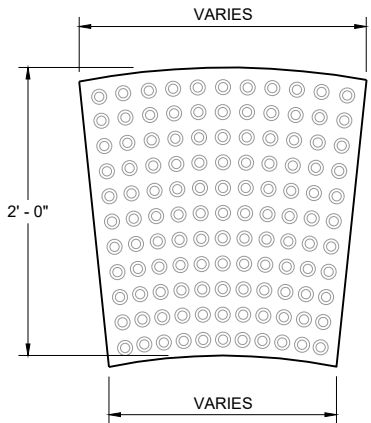


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

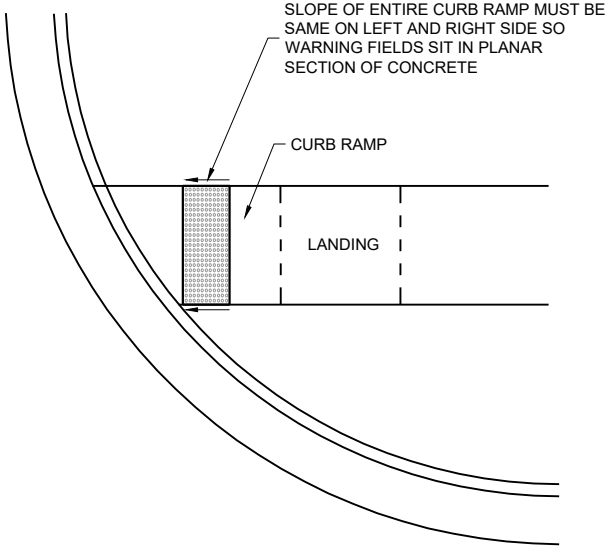


RECTANGULAR
PLATES

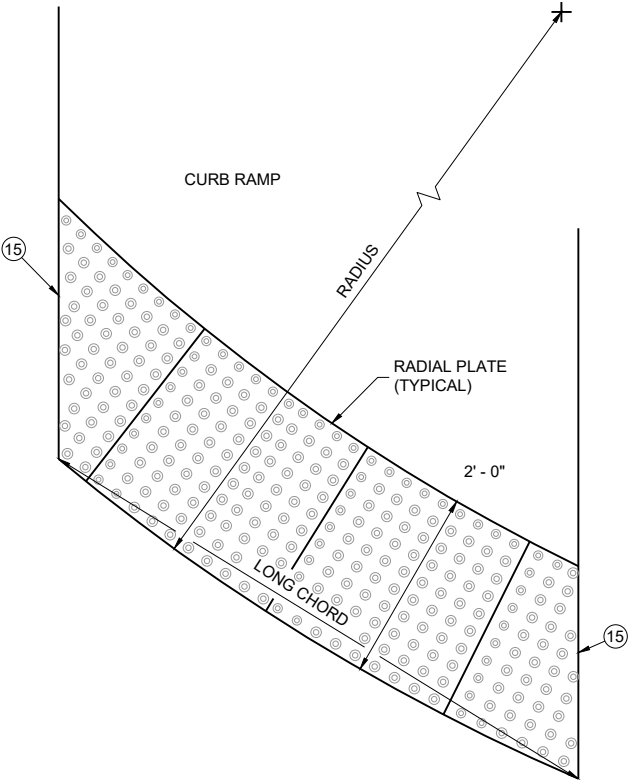


RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD
PLANAR INSTALLATION



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

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

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

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

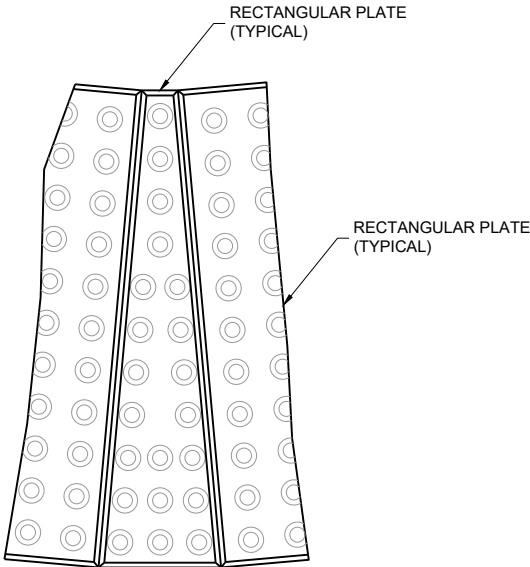
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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



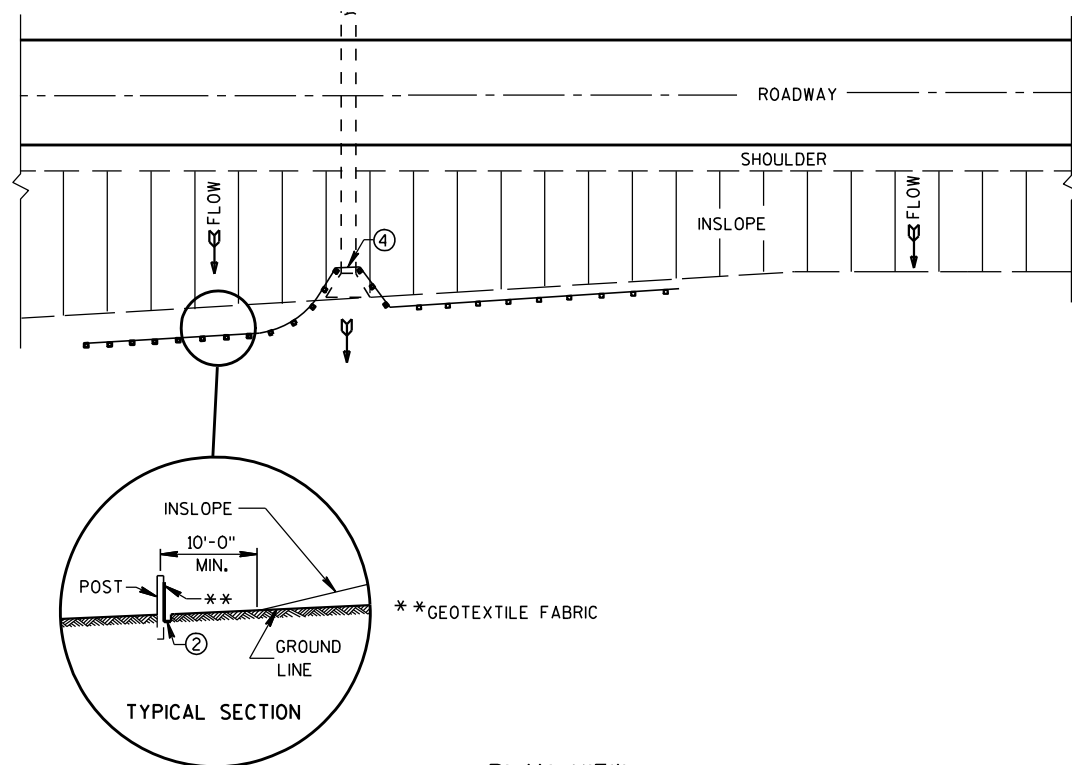
PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

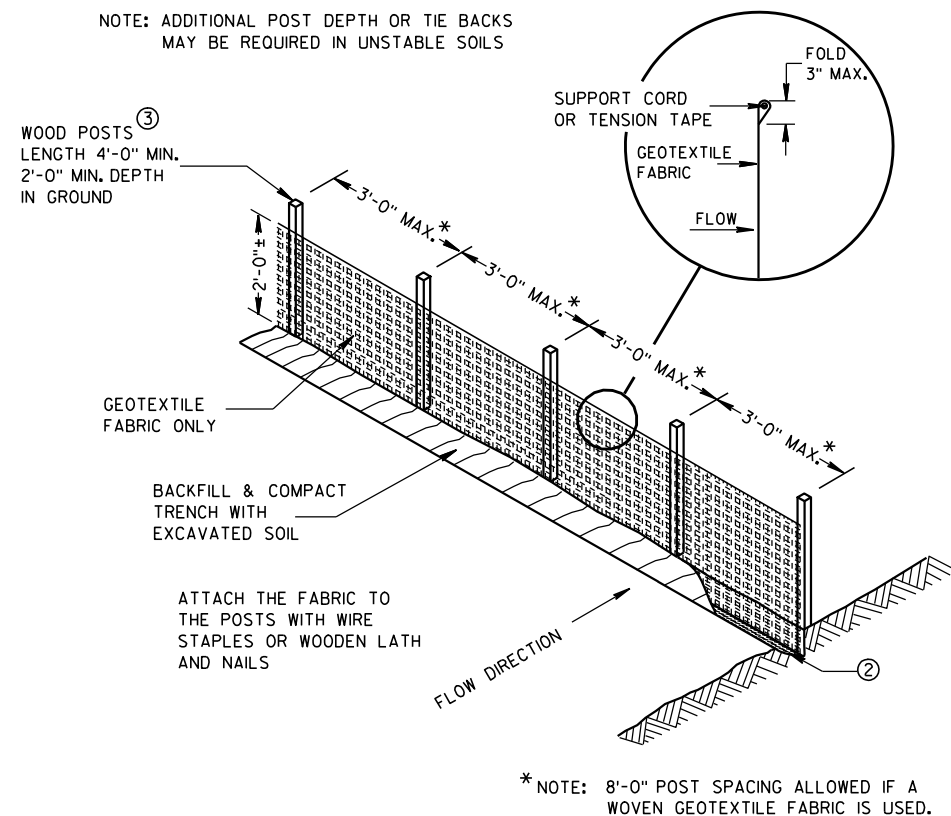
APPROVED
February 2025 /S/ Rodney Taylor
DATE <position>

FHWA

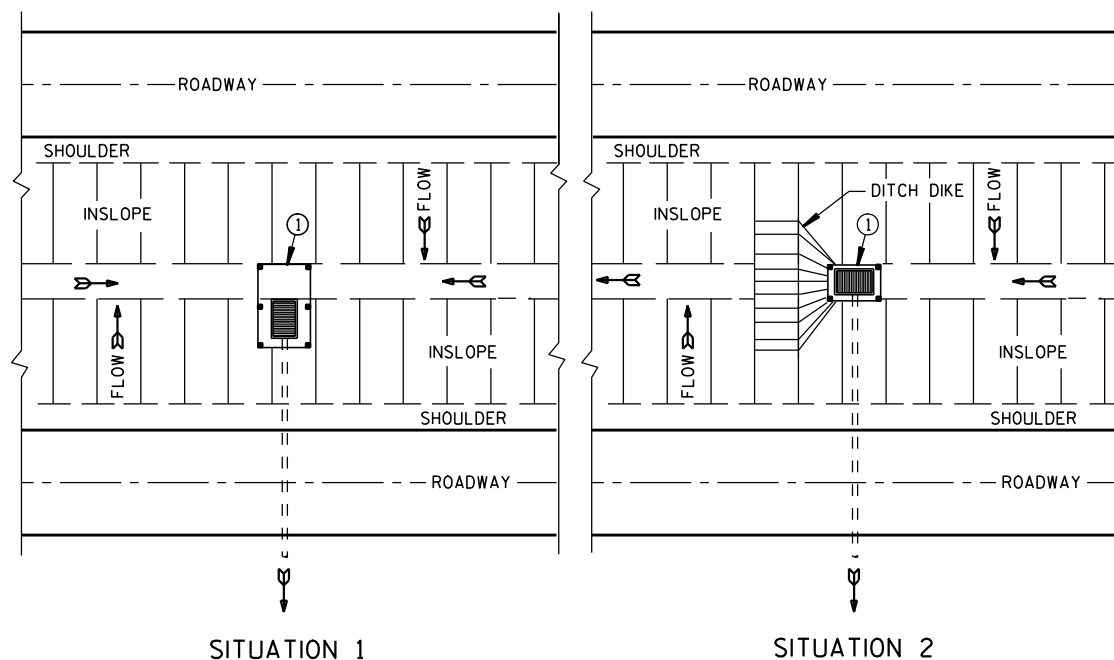


TYPICAL APPLICATION OF SILT FENCE

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

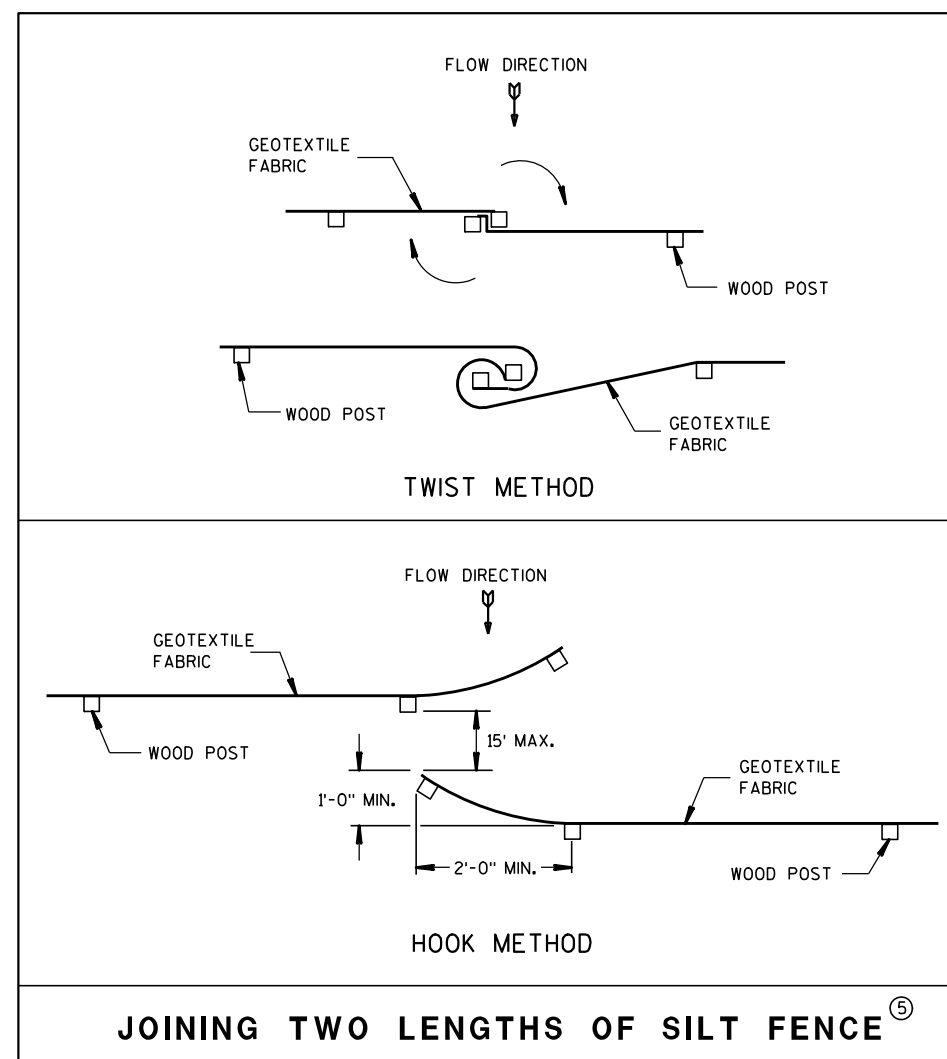


SILT FENCE



PLAN VIEW

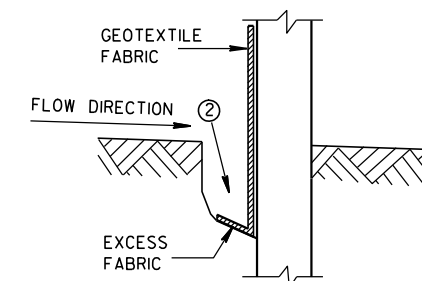
SILT FENCE AT MEDIAN SURFACE DRAINS



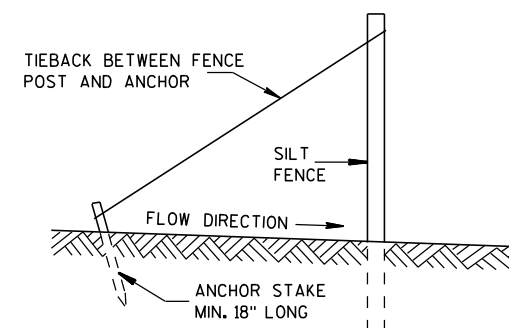
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

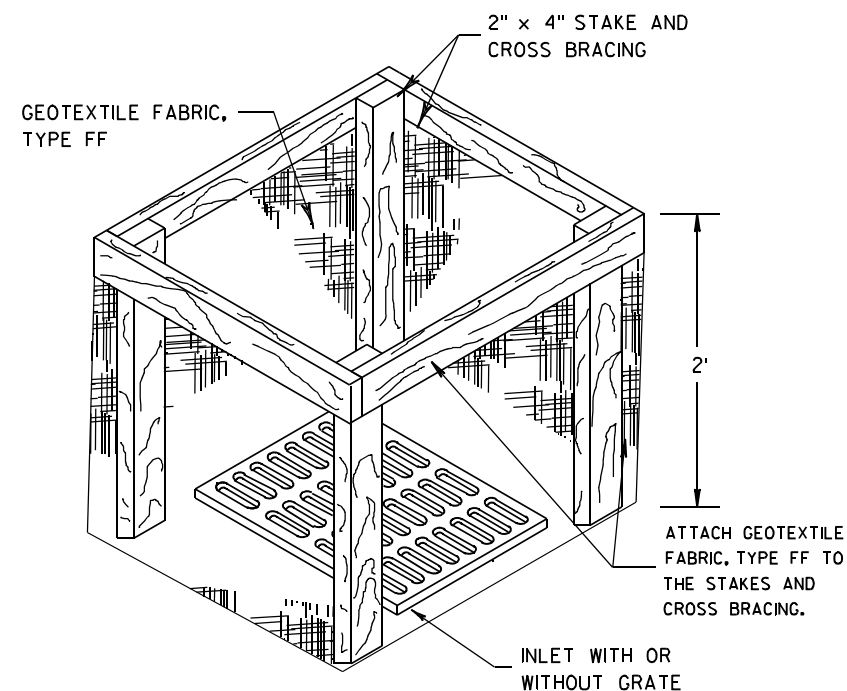
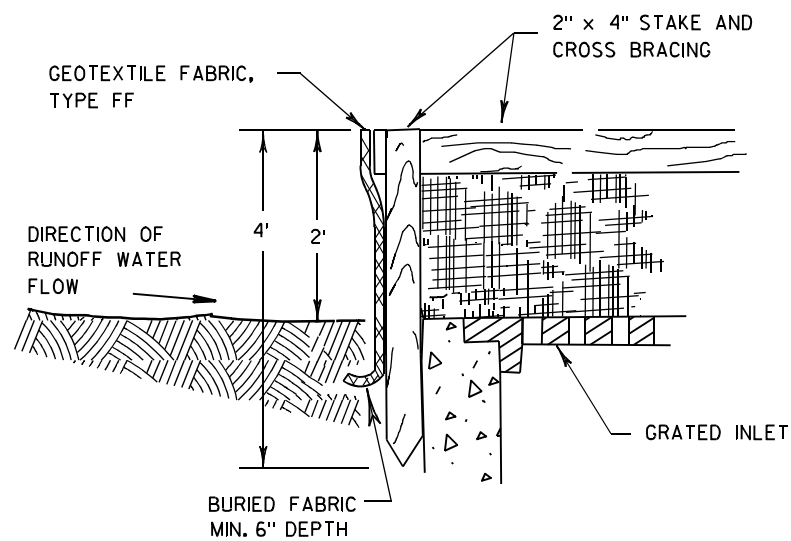
APPROVED

4-29-05

DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

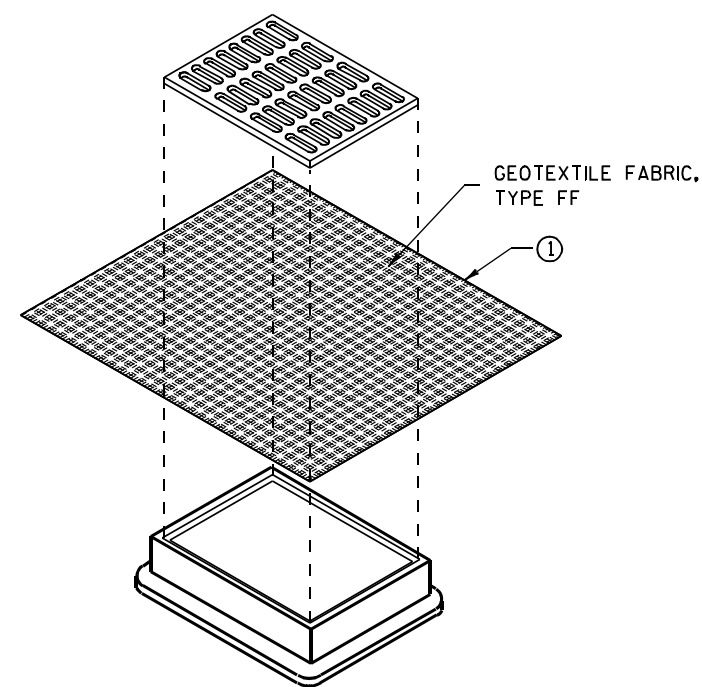
GENERAL NOTES

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

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

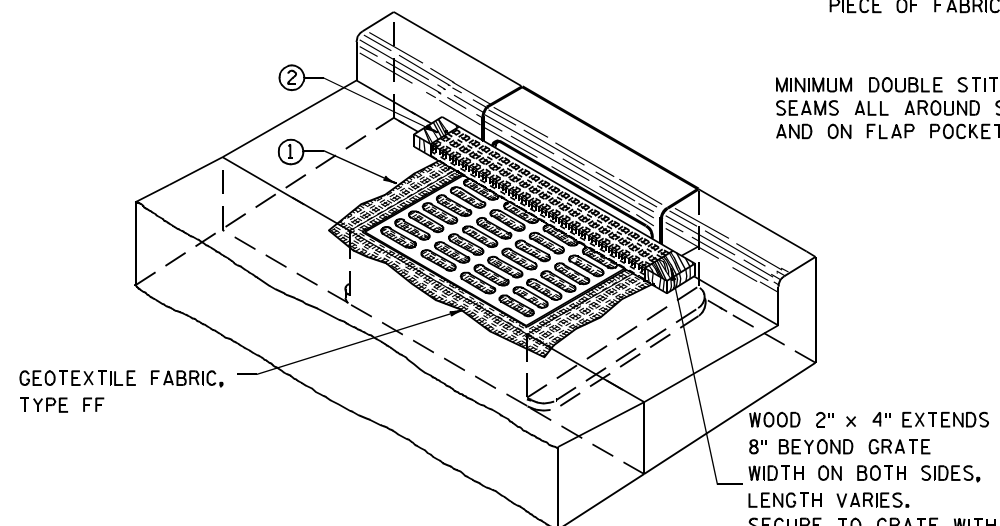
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

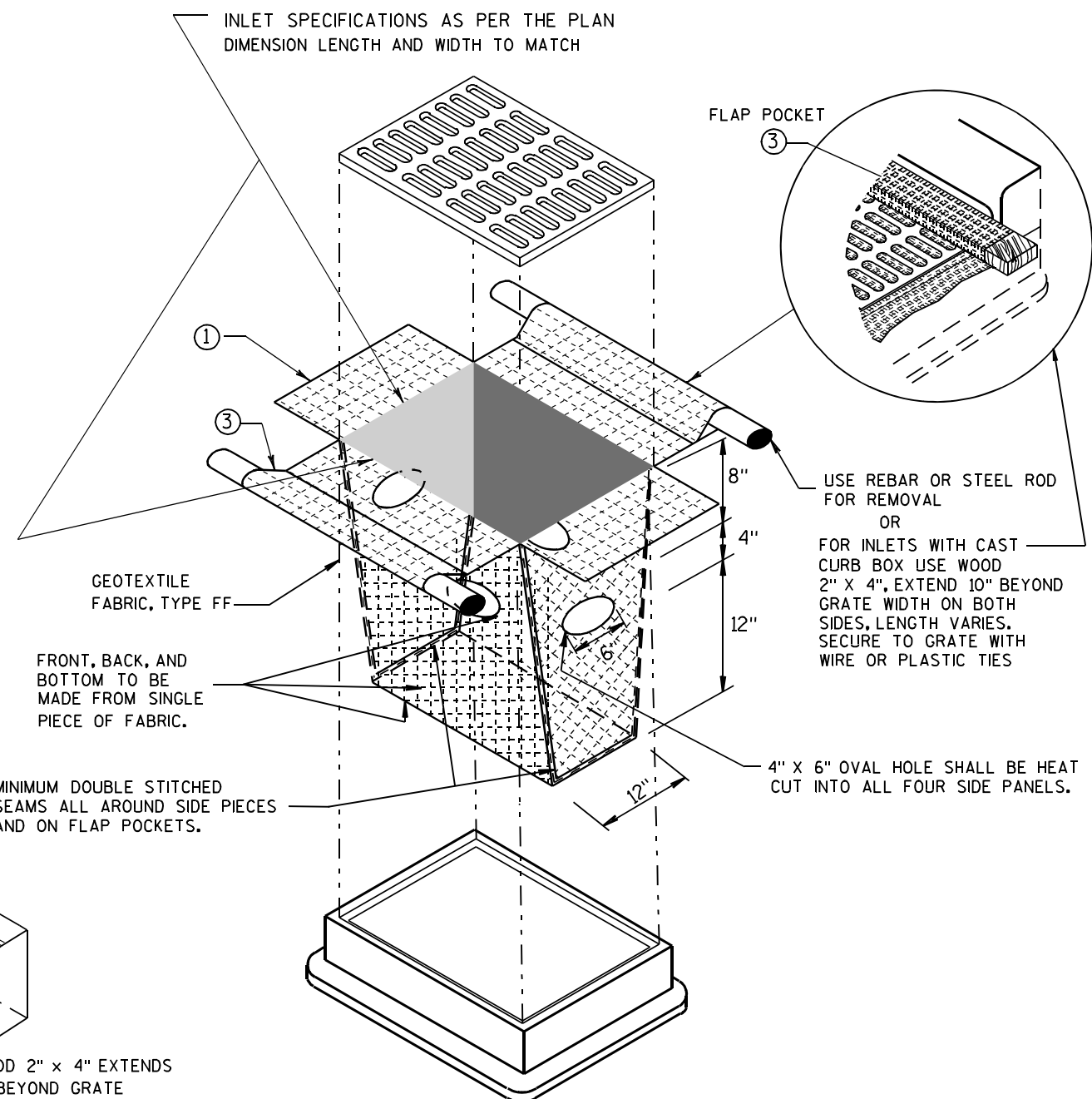
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



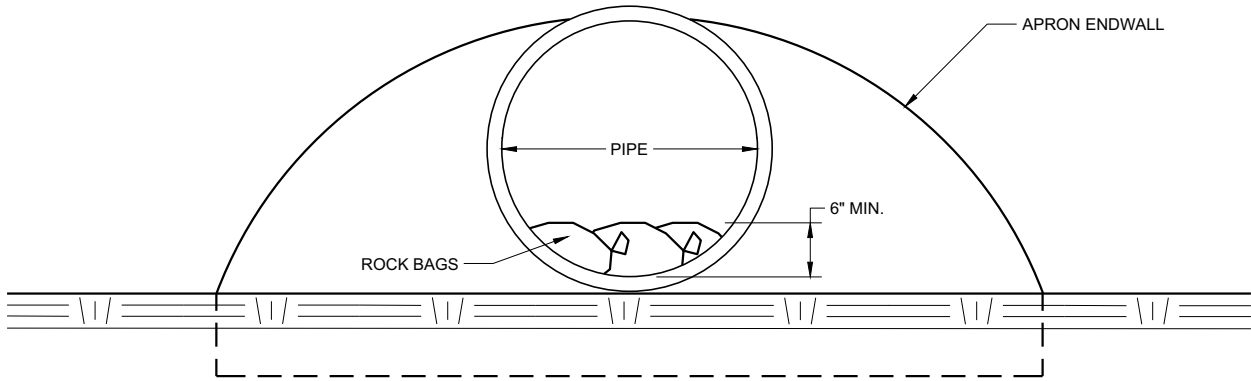
INLET PROTECTION, TYPE D

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

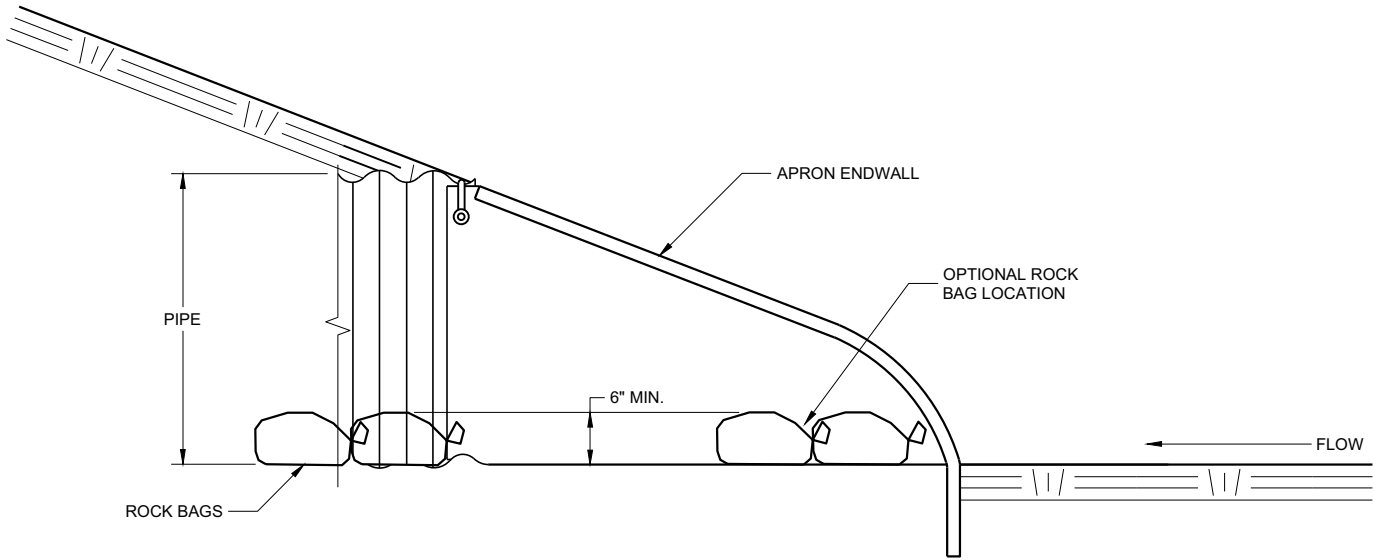
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



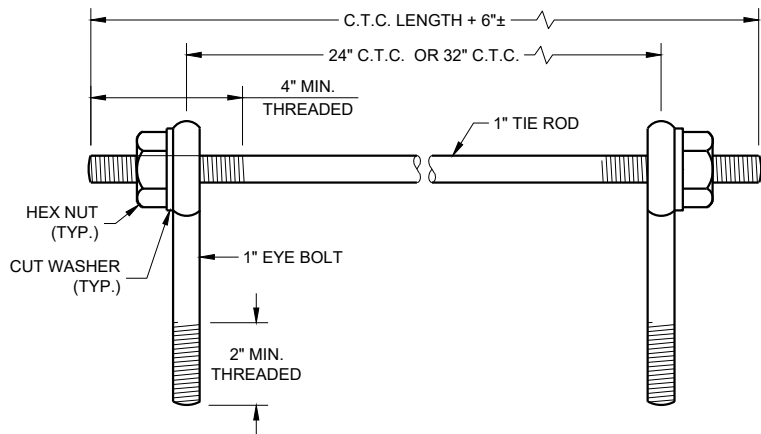
END VIEW



SIDE VIEW

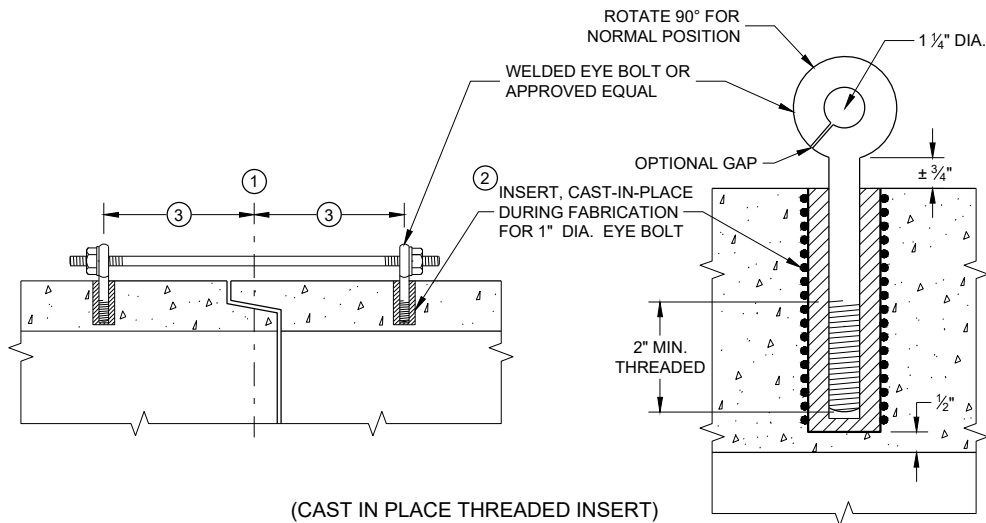
CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

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



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

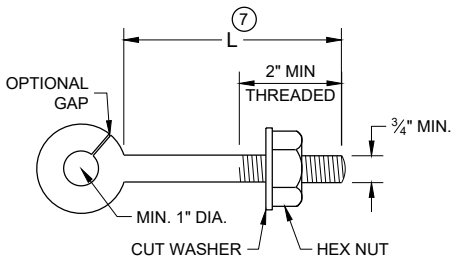
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

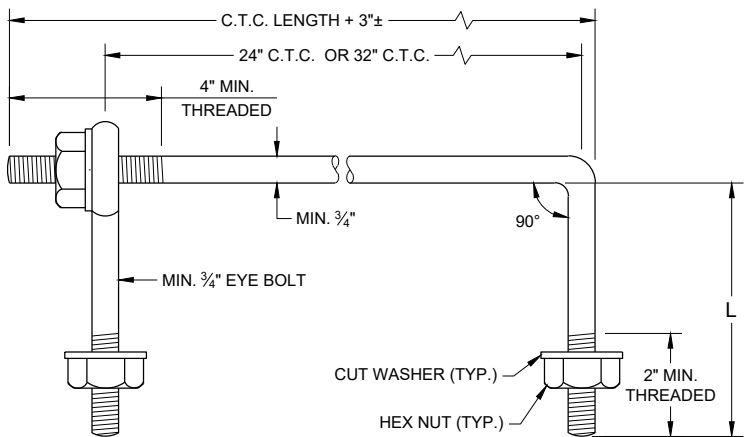
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

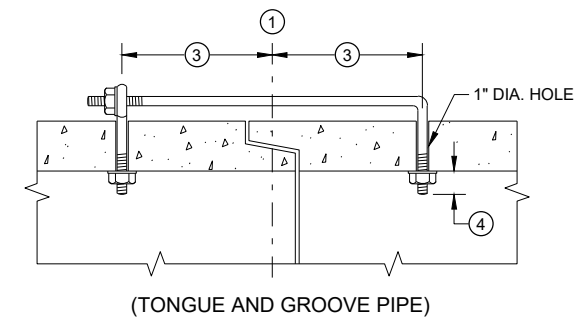


EYE BOLT 7

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

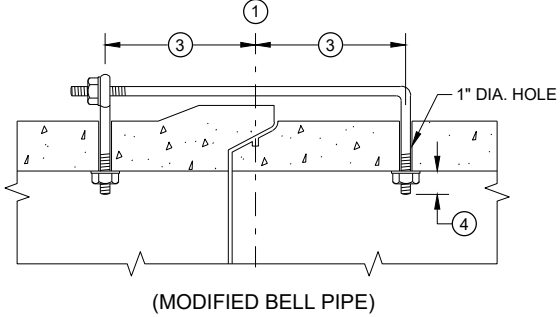


(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

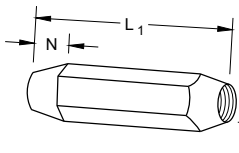


(MODIFIED BELL PIPE)

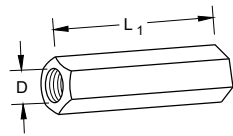
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

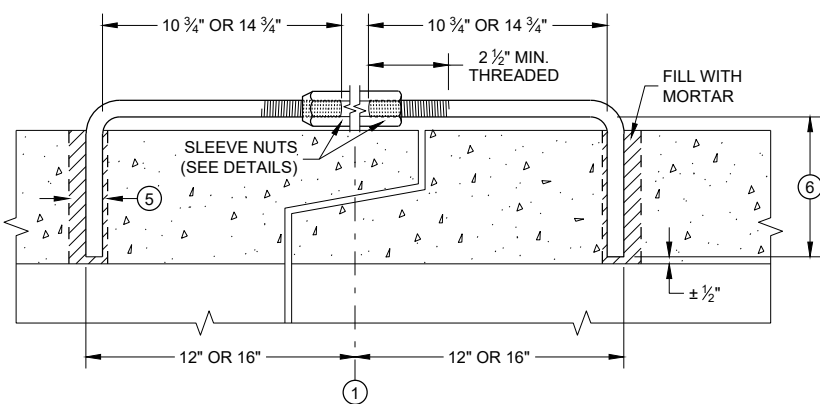


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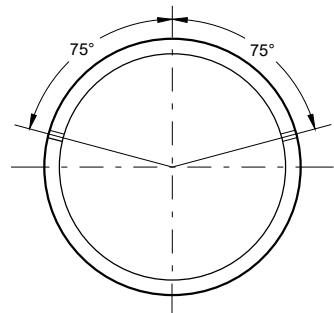
PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS



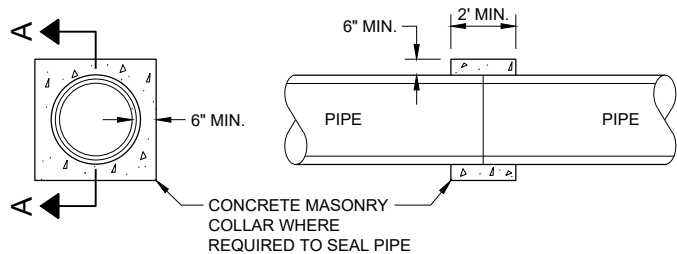
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



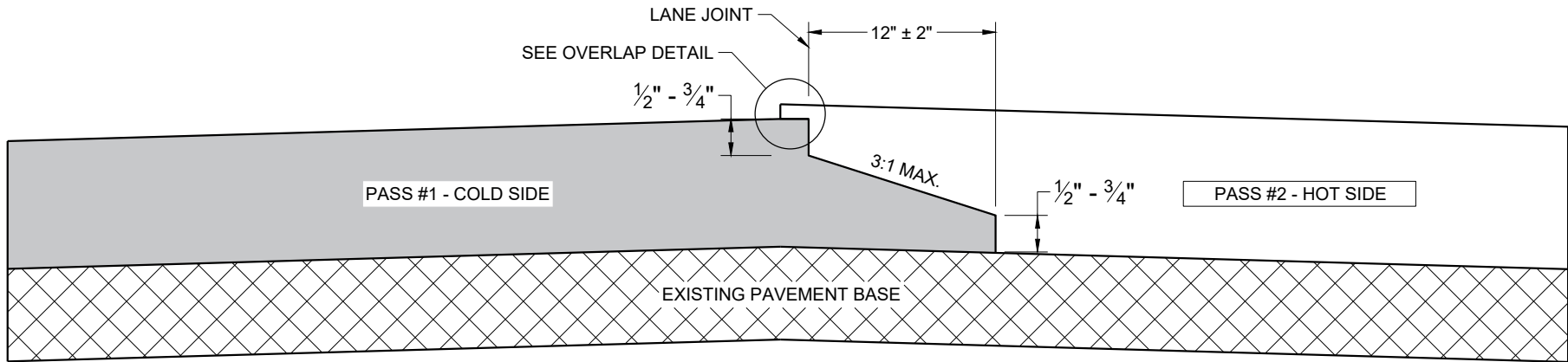
SECTION A - A

CONCRETE COLLAR DETAIL

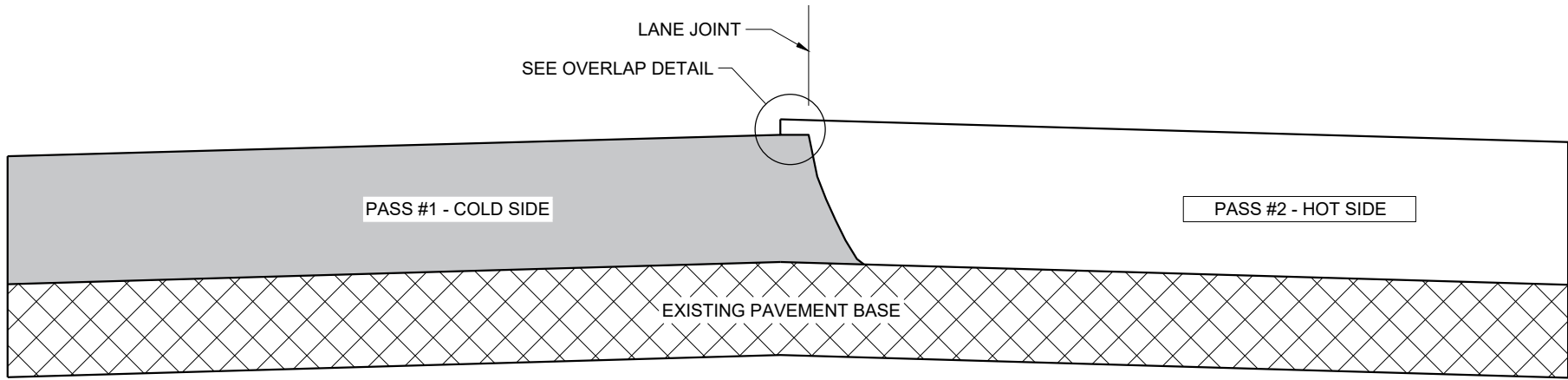
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

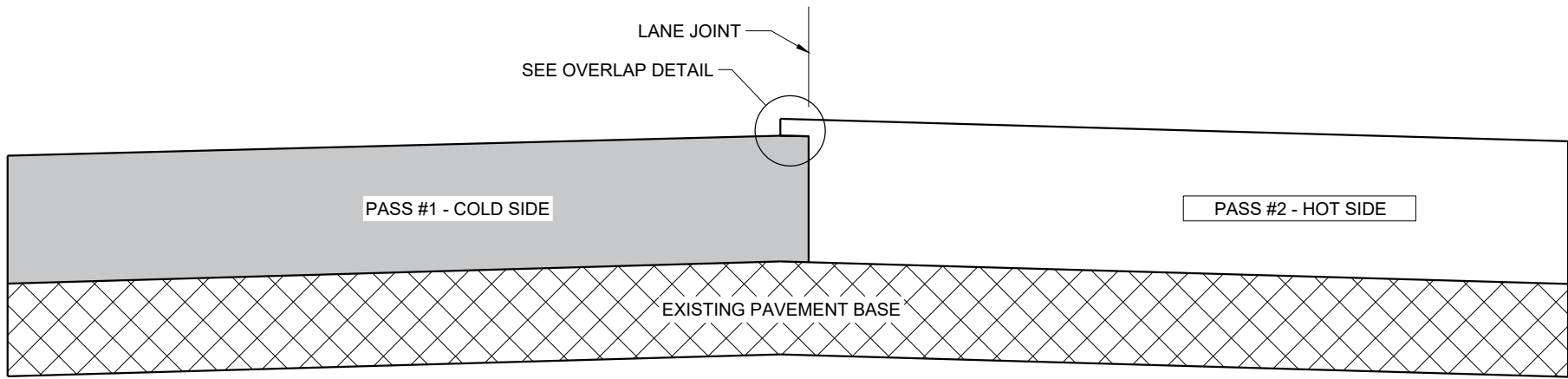
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

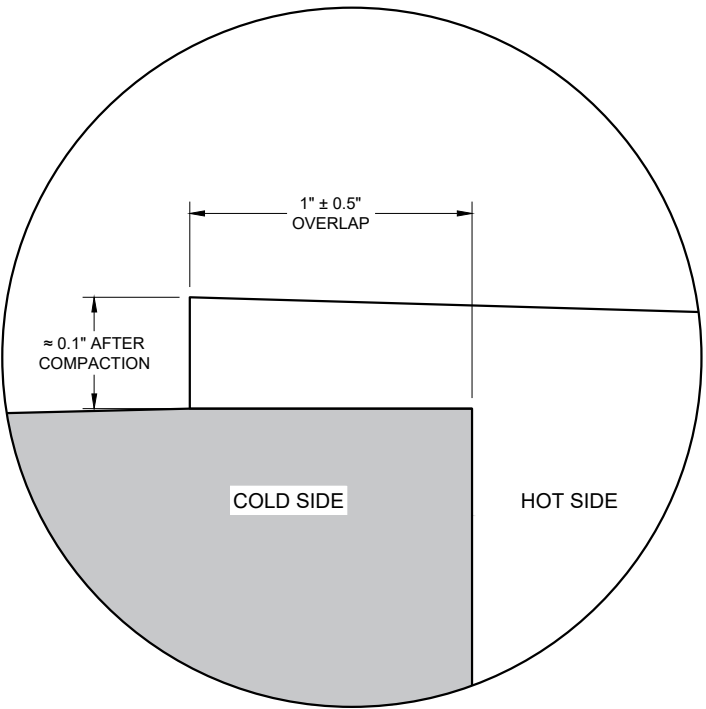
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.

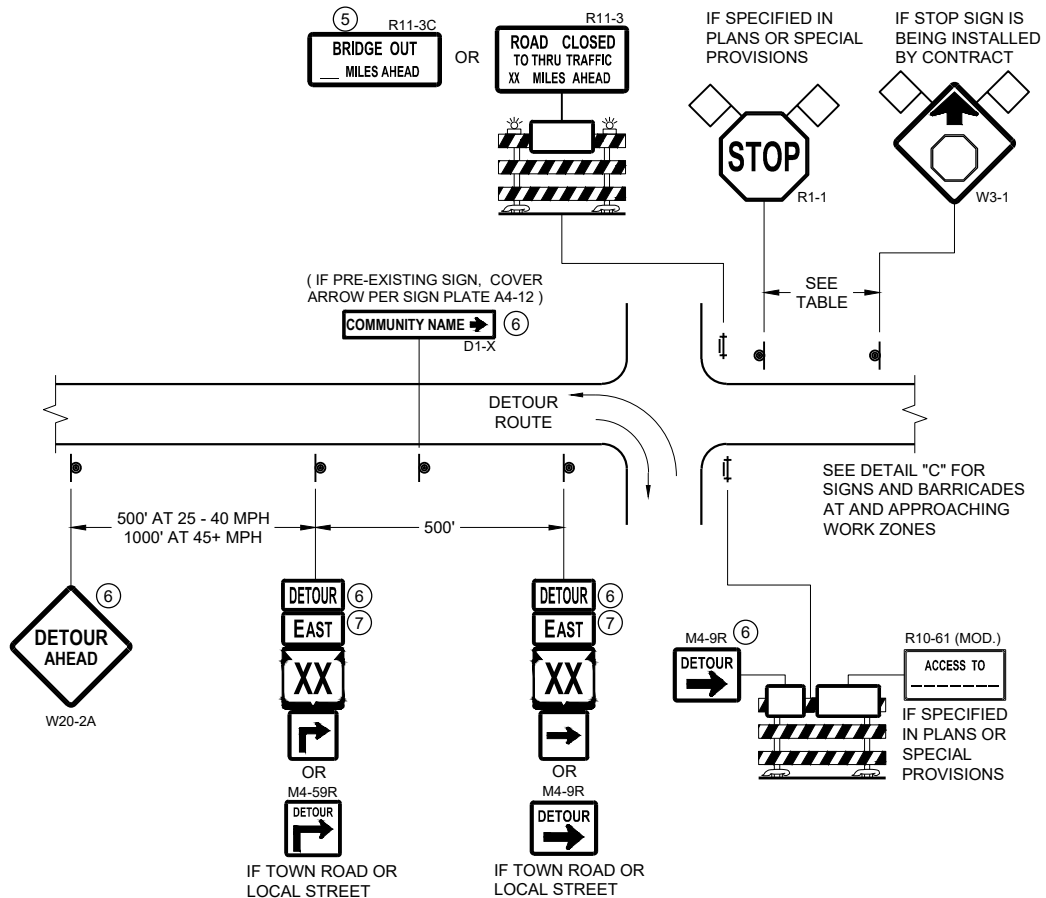


OVERLAP DETAIL (TYPICAL)

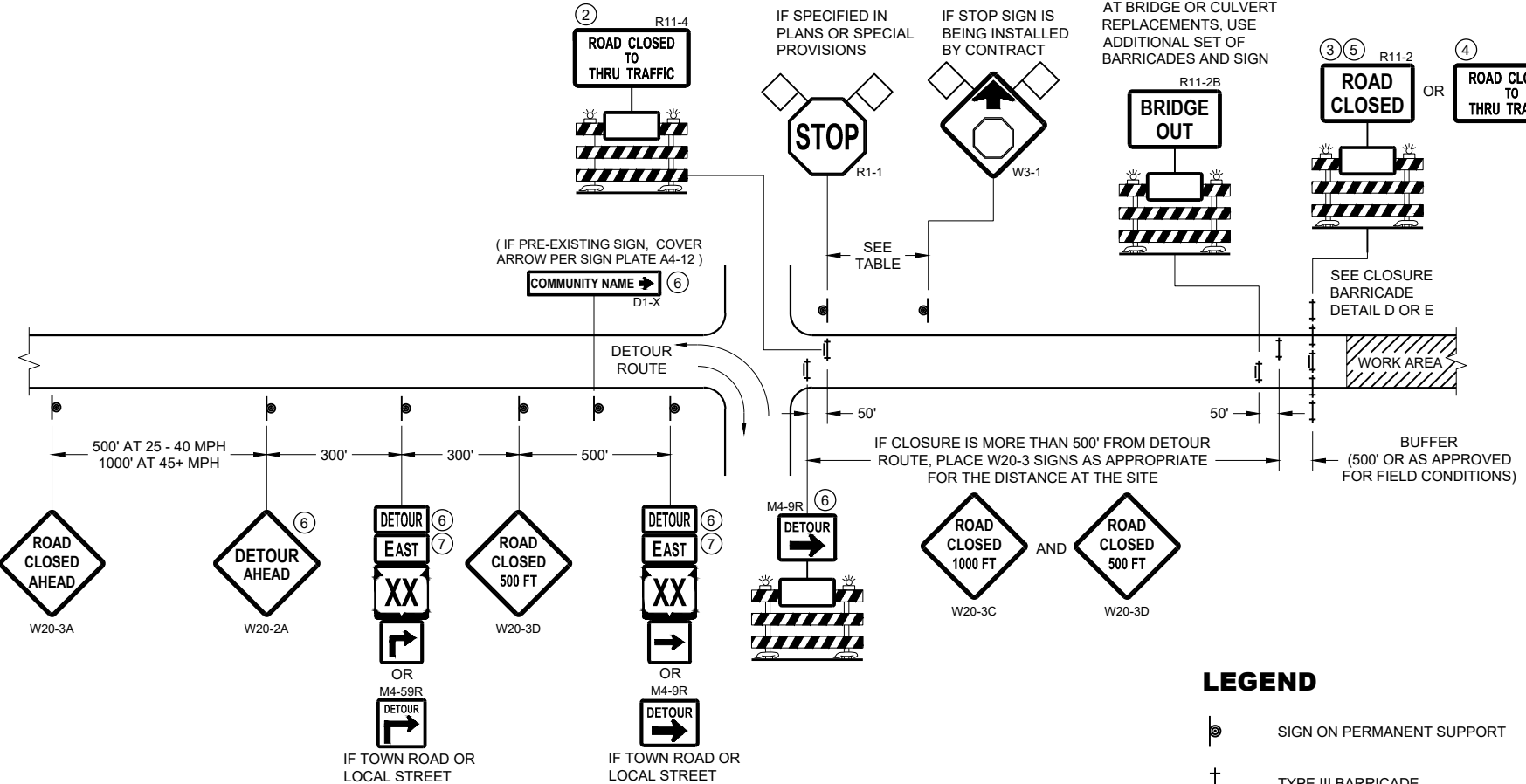
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



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



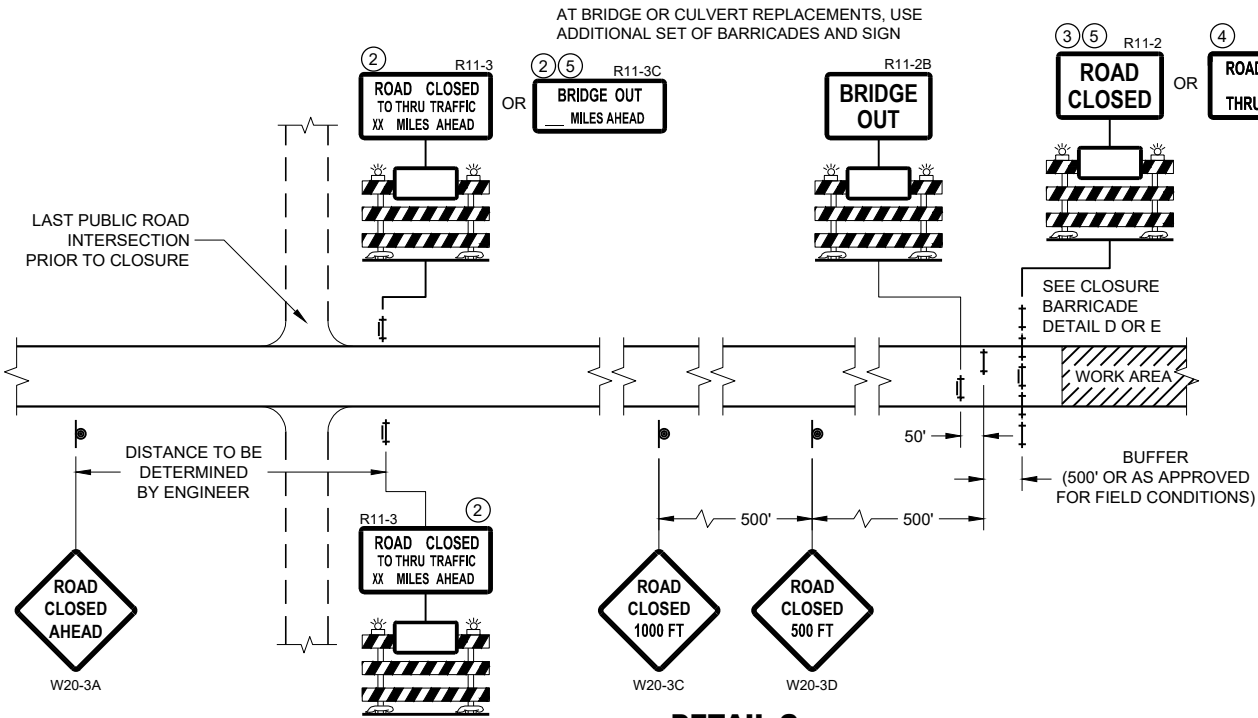
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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

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

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

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

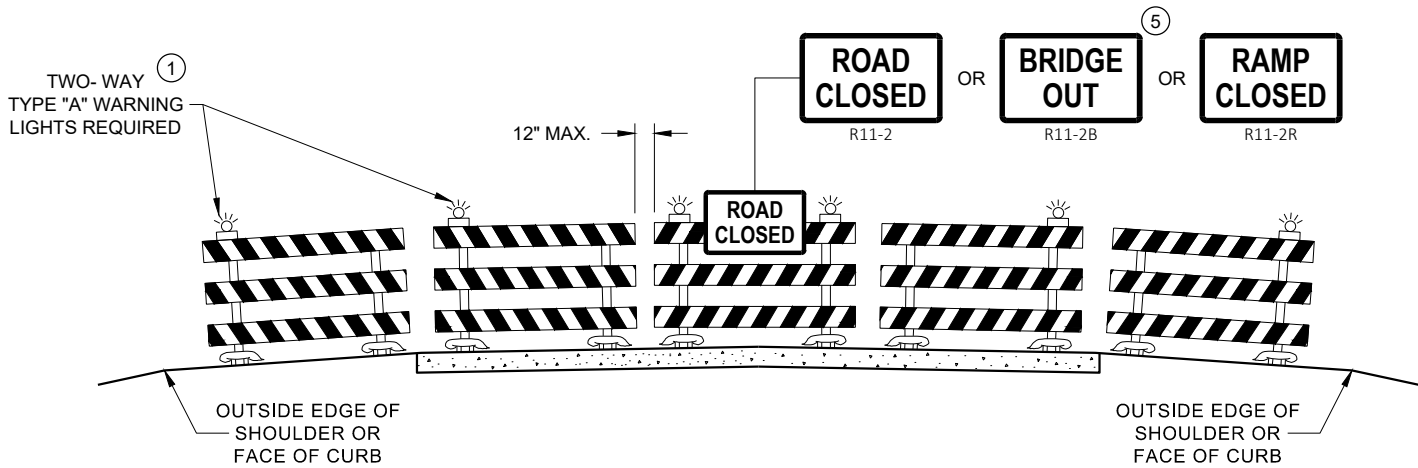


DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

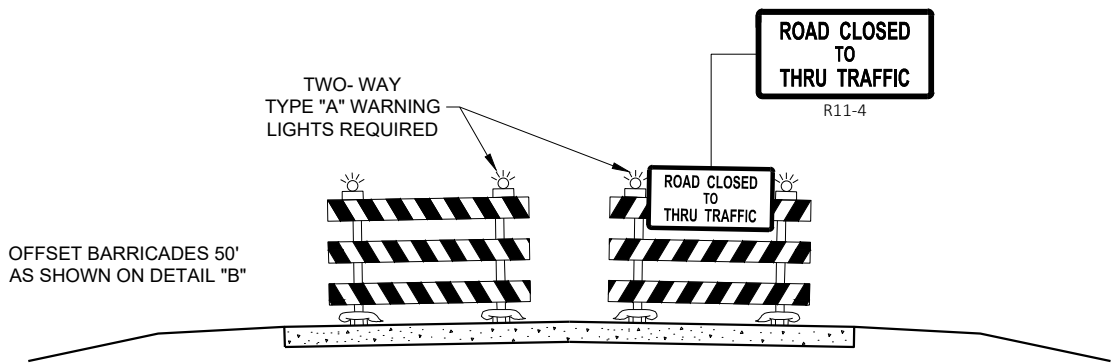
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

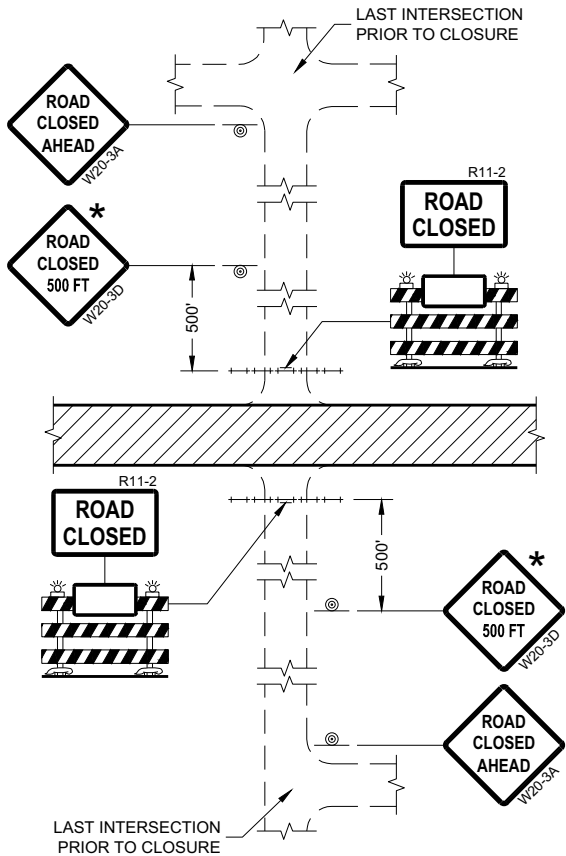
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

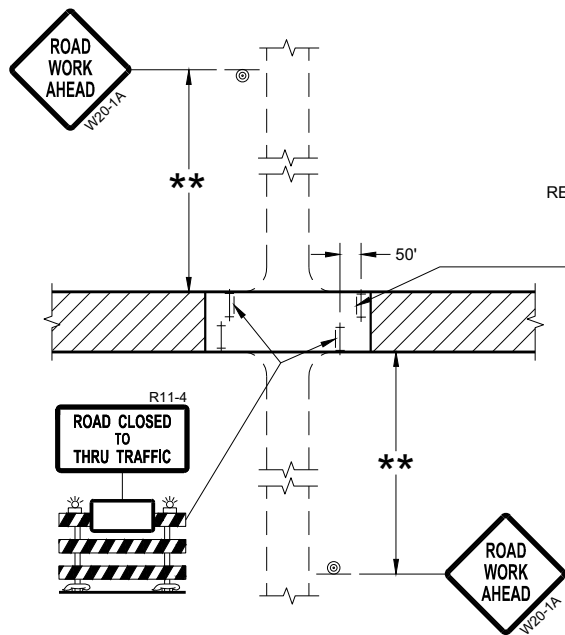
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

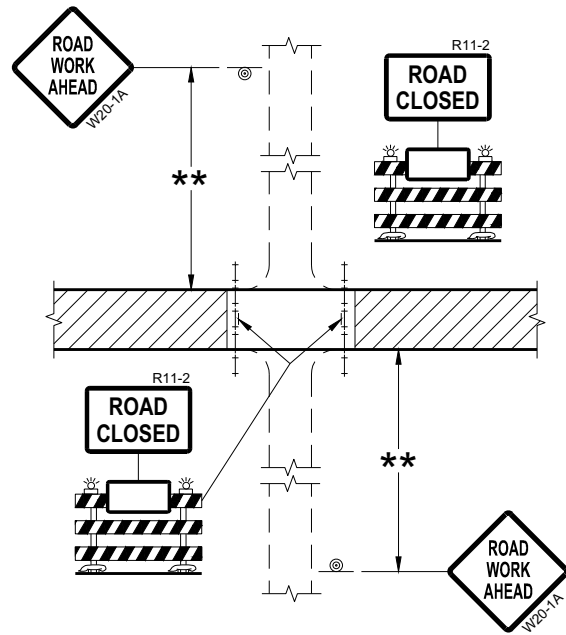
FHWA



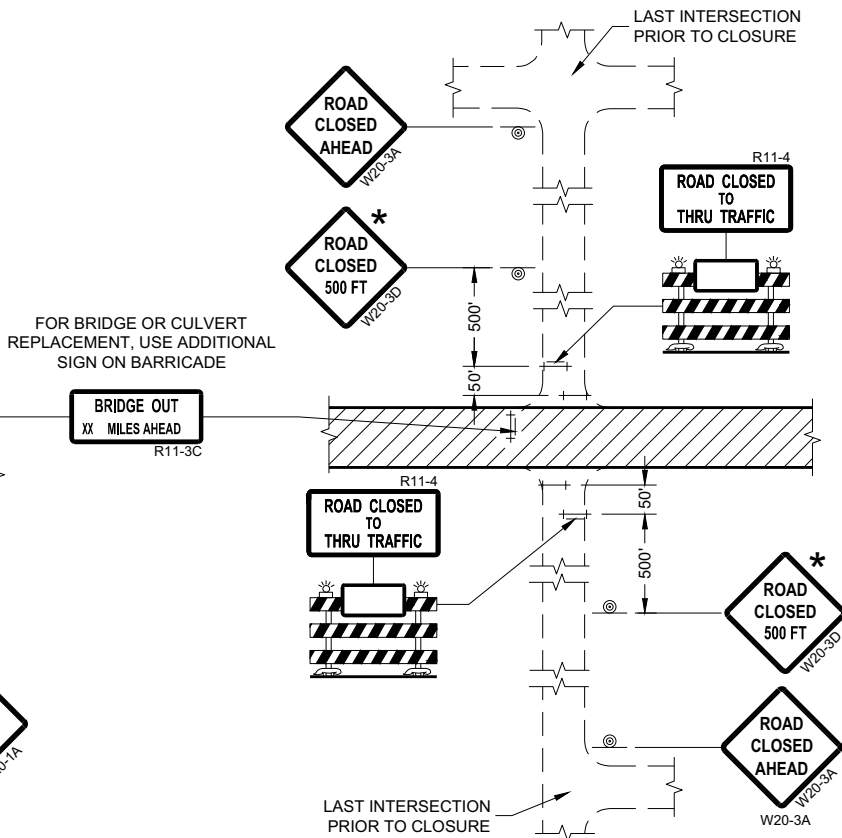
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

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

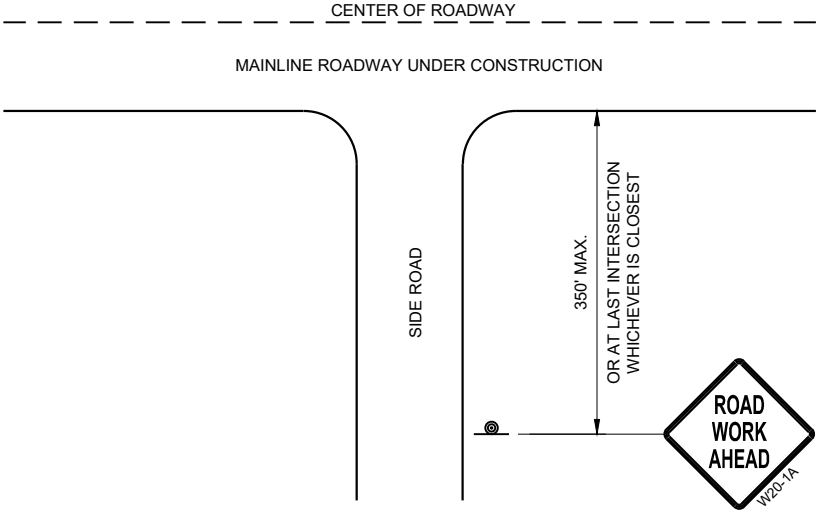
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

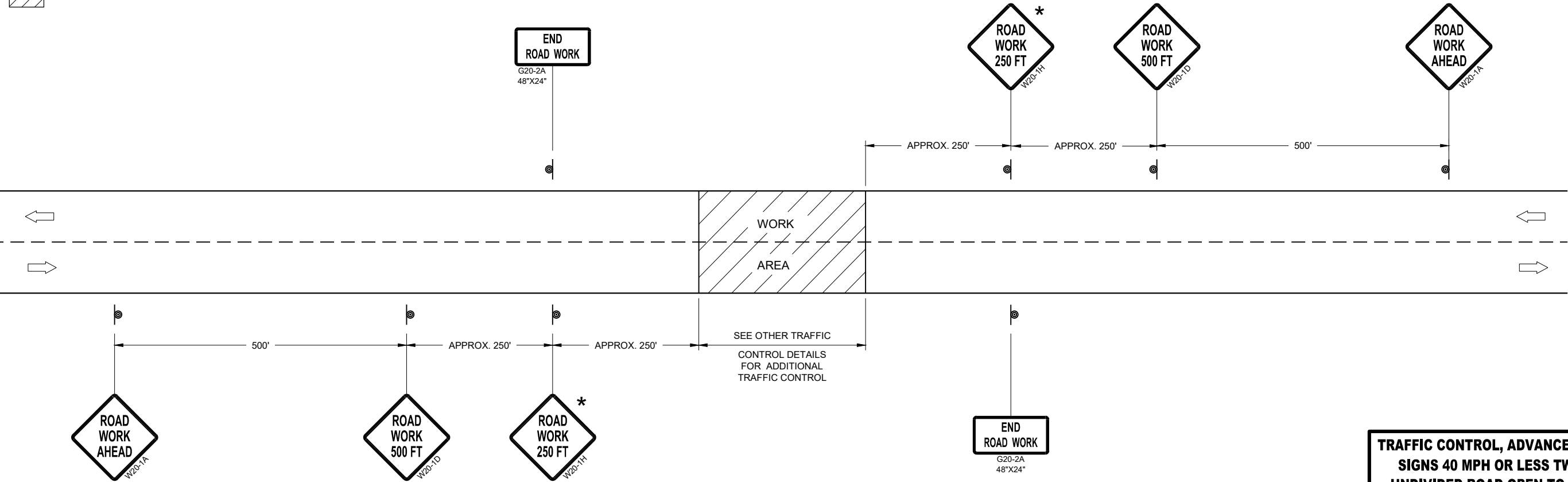
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



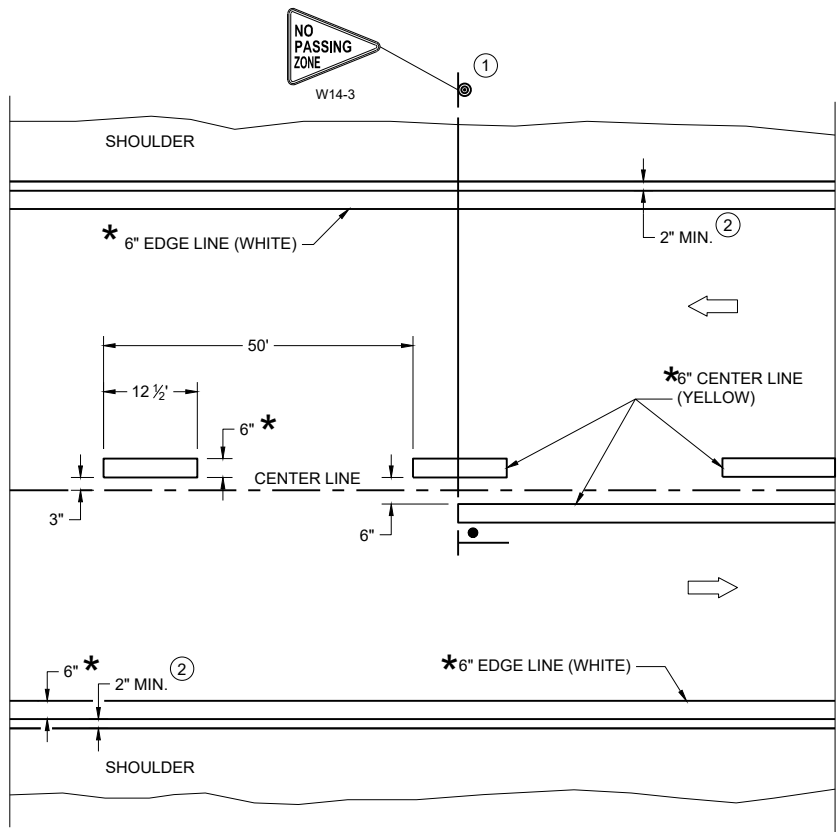
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

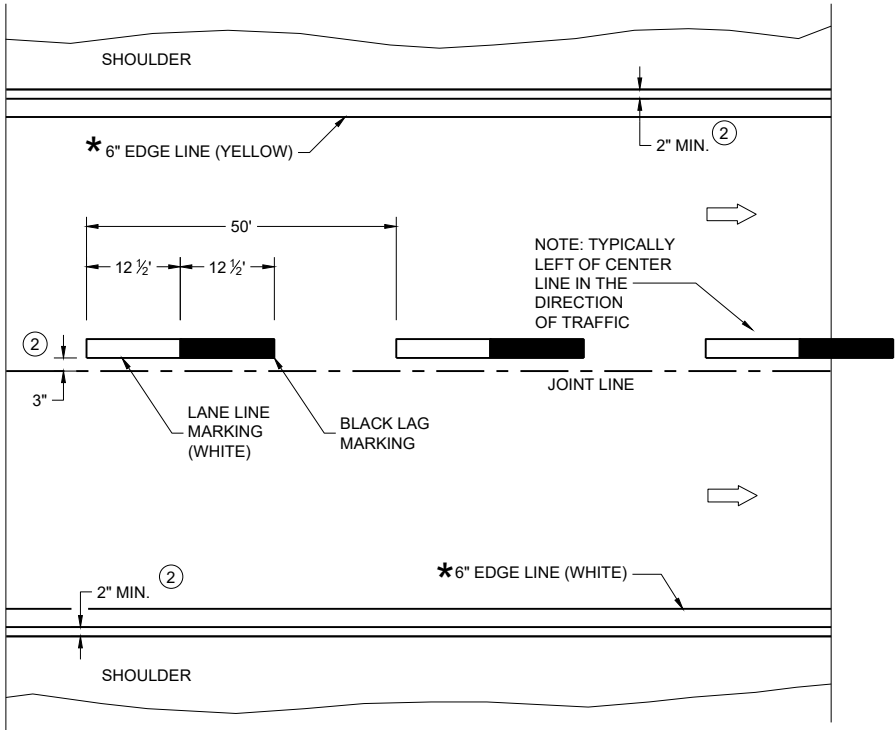
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

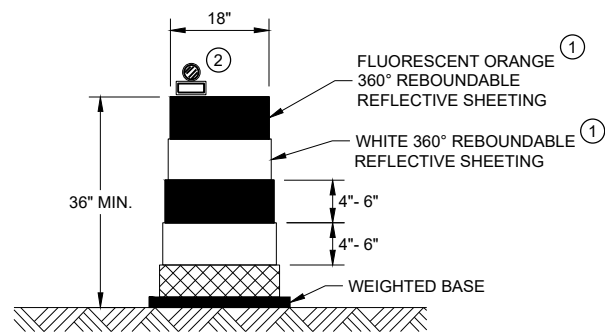
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

LEGEND

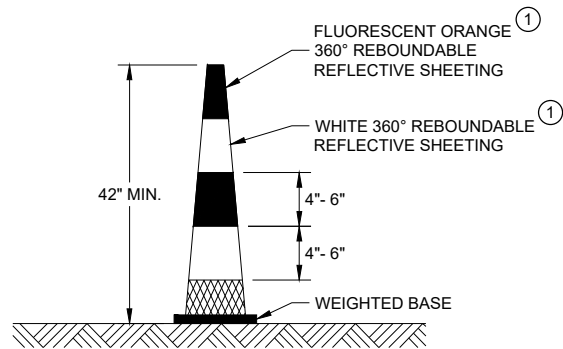
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	



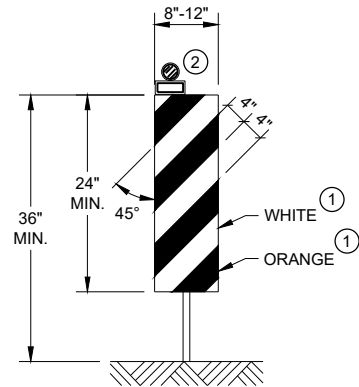
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



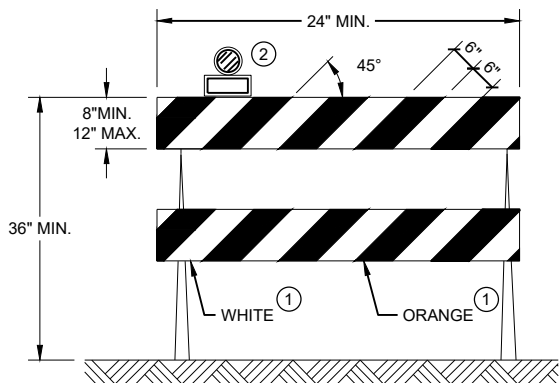
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



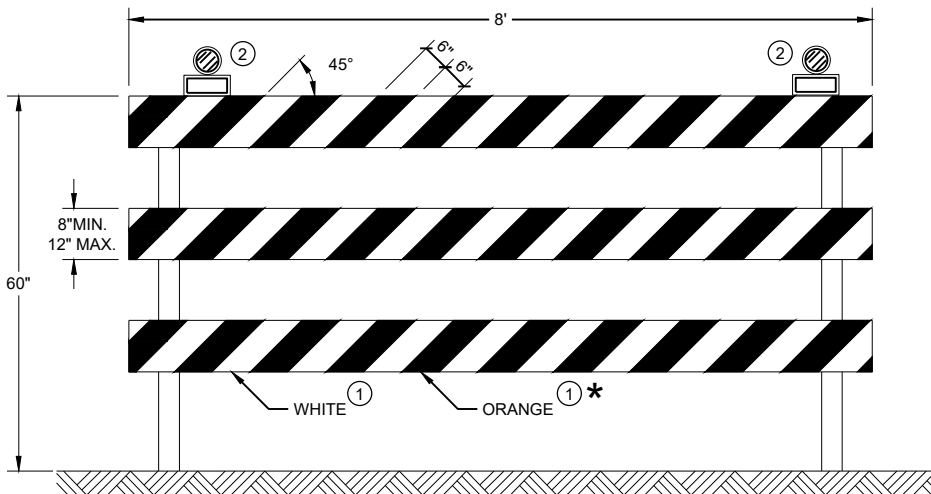
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

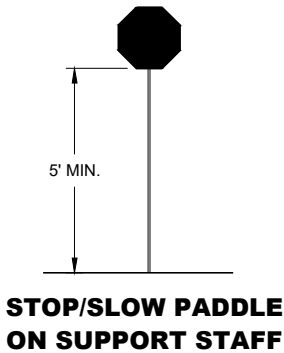
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

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

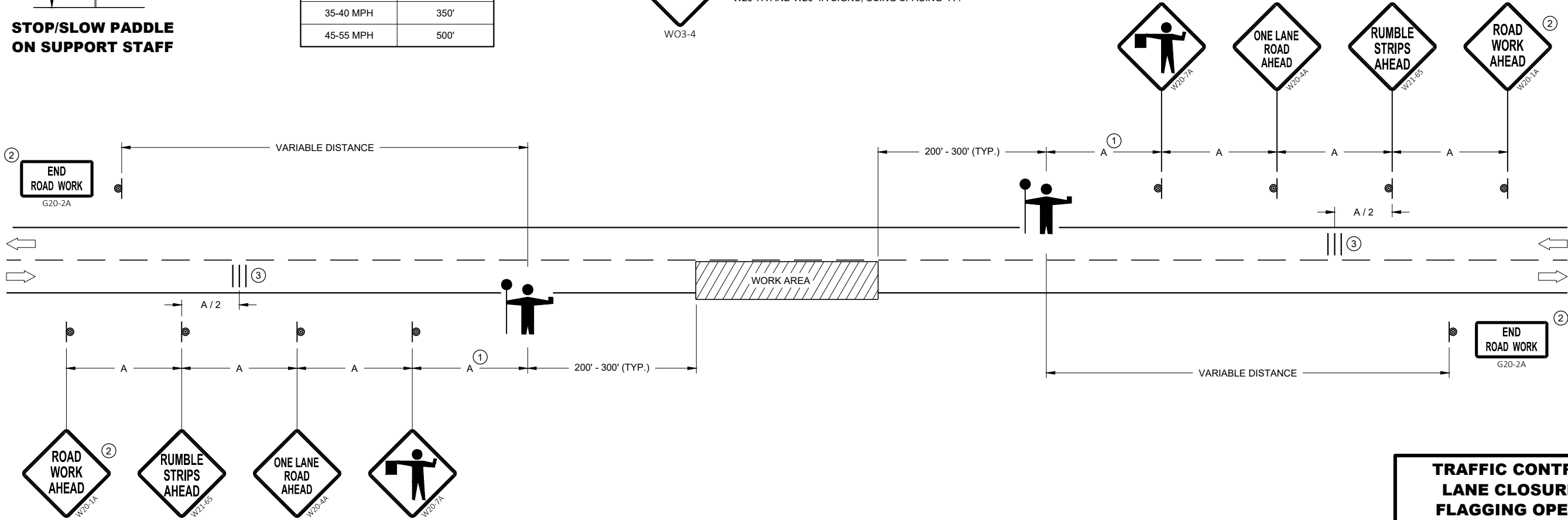


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

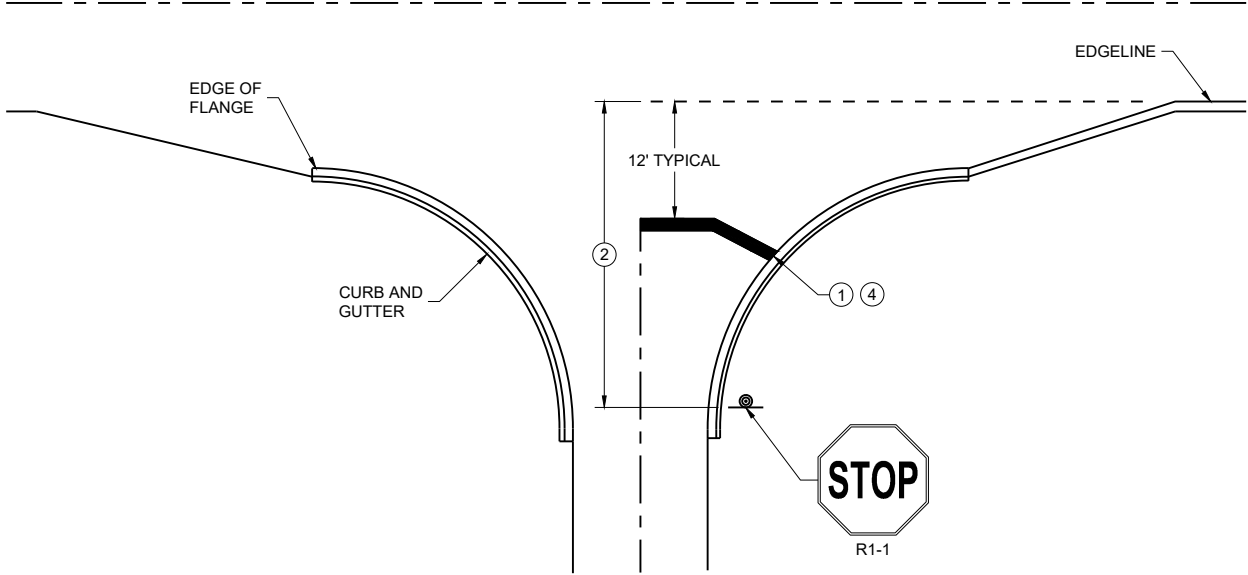
SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



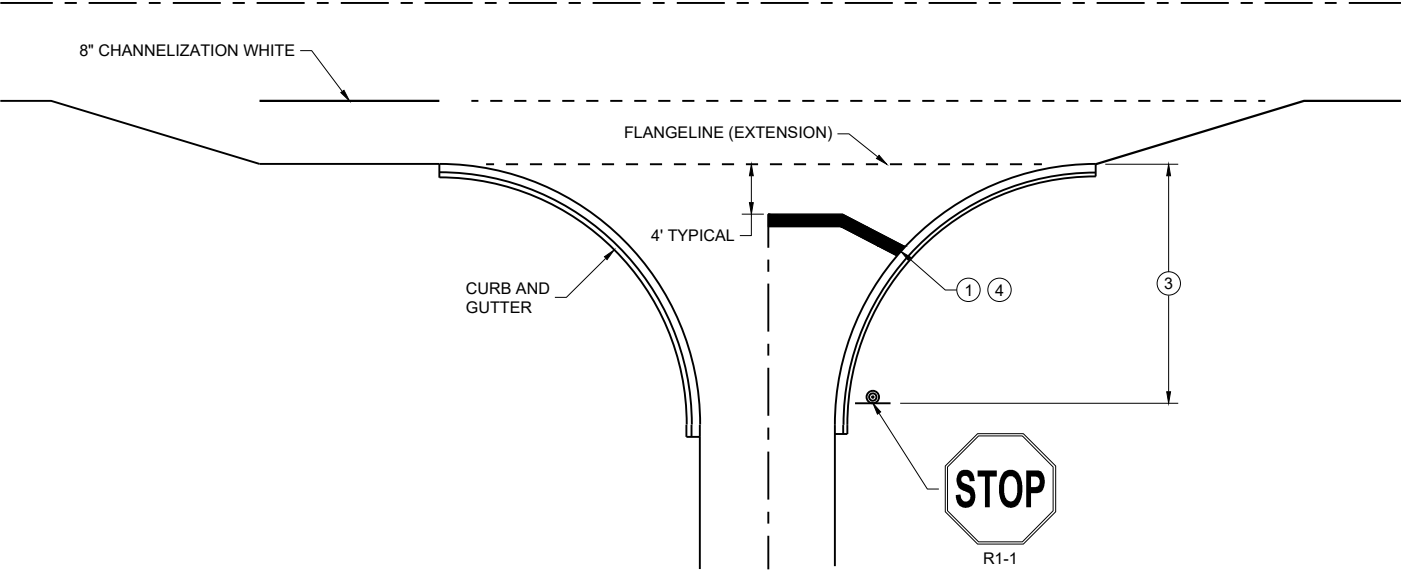
USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



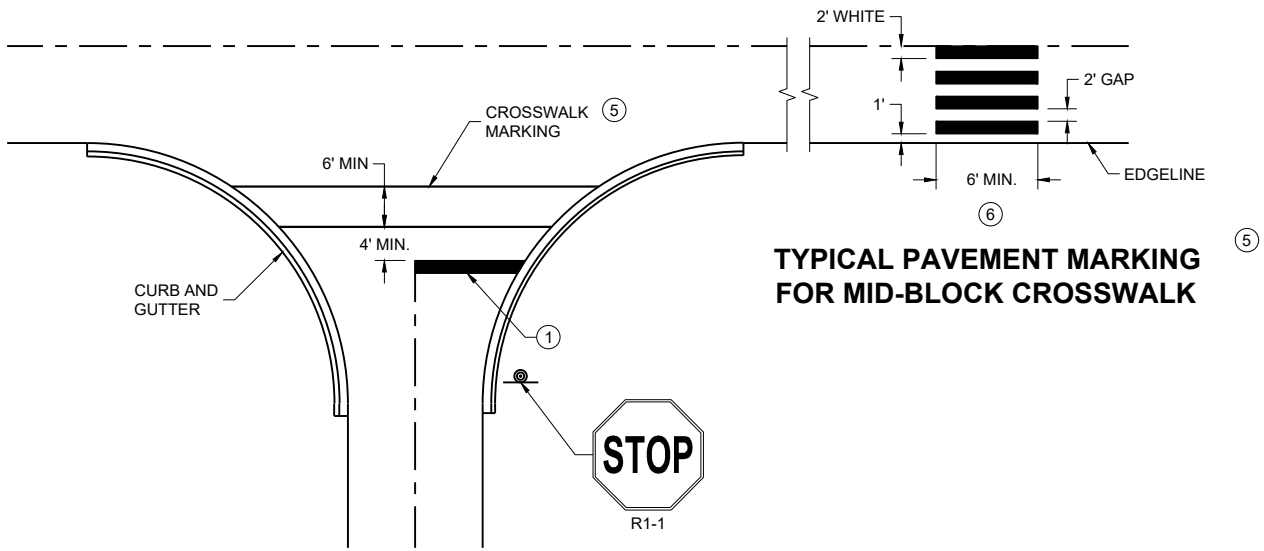
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



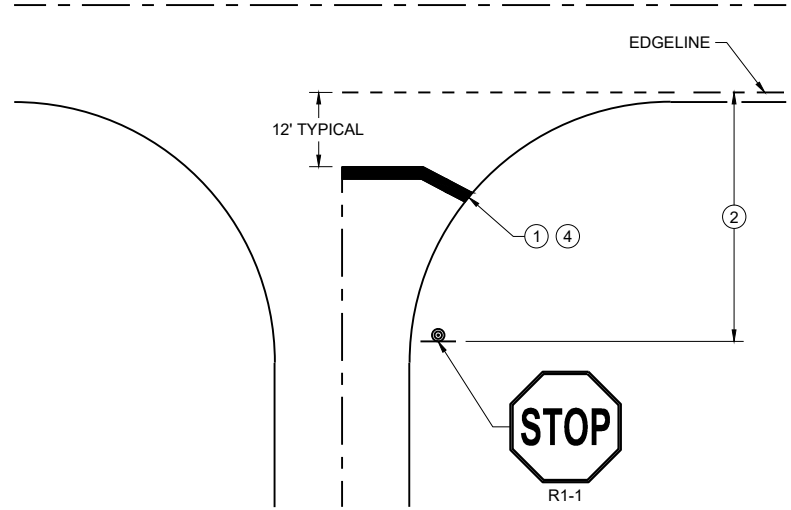
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

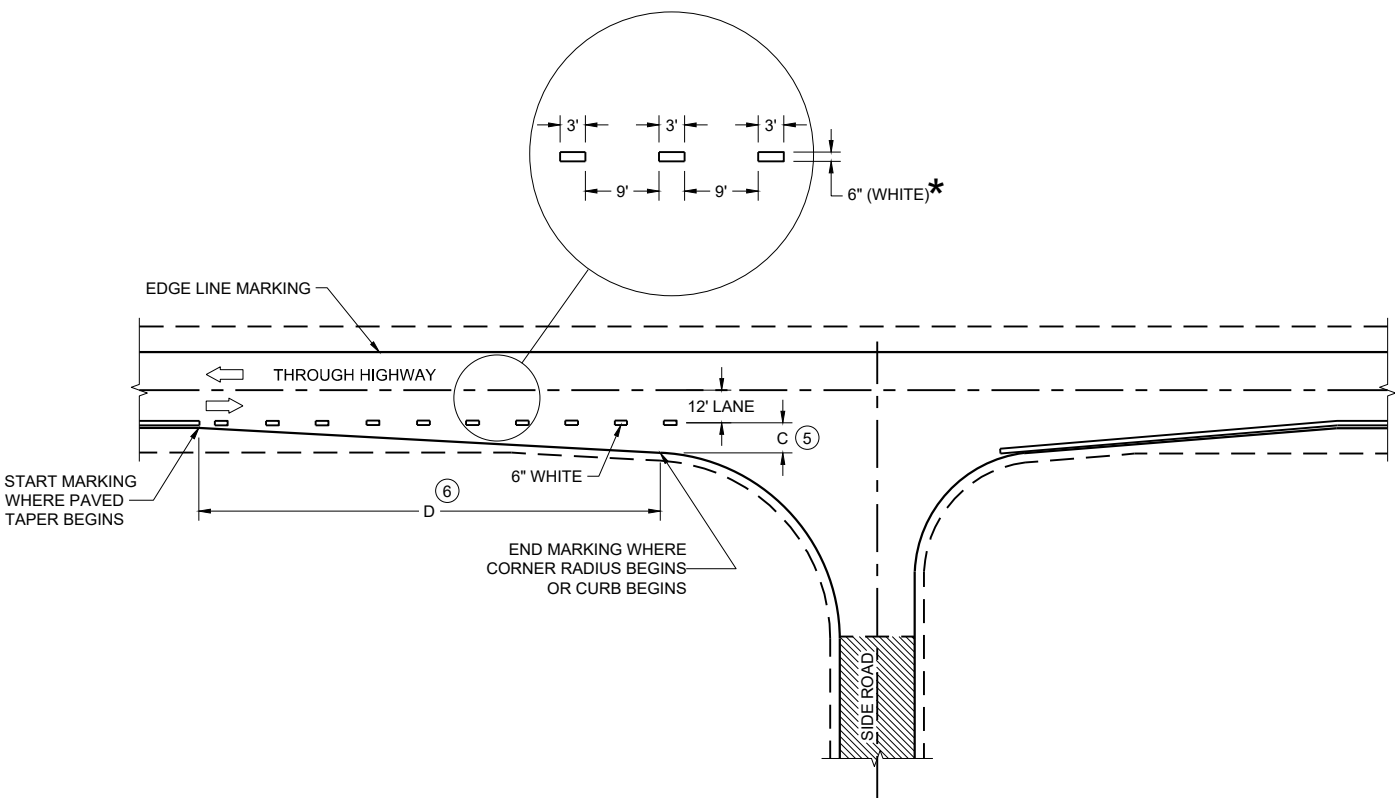
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- ⑥ POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

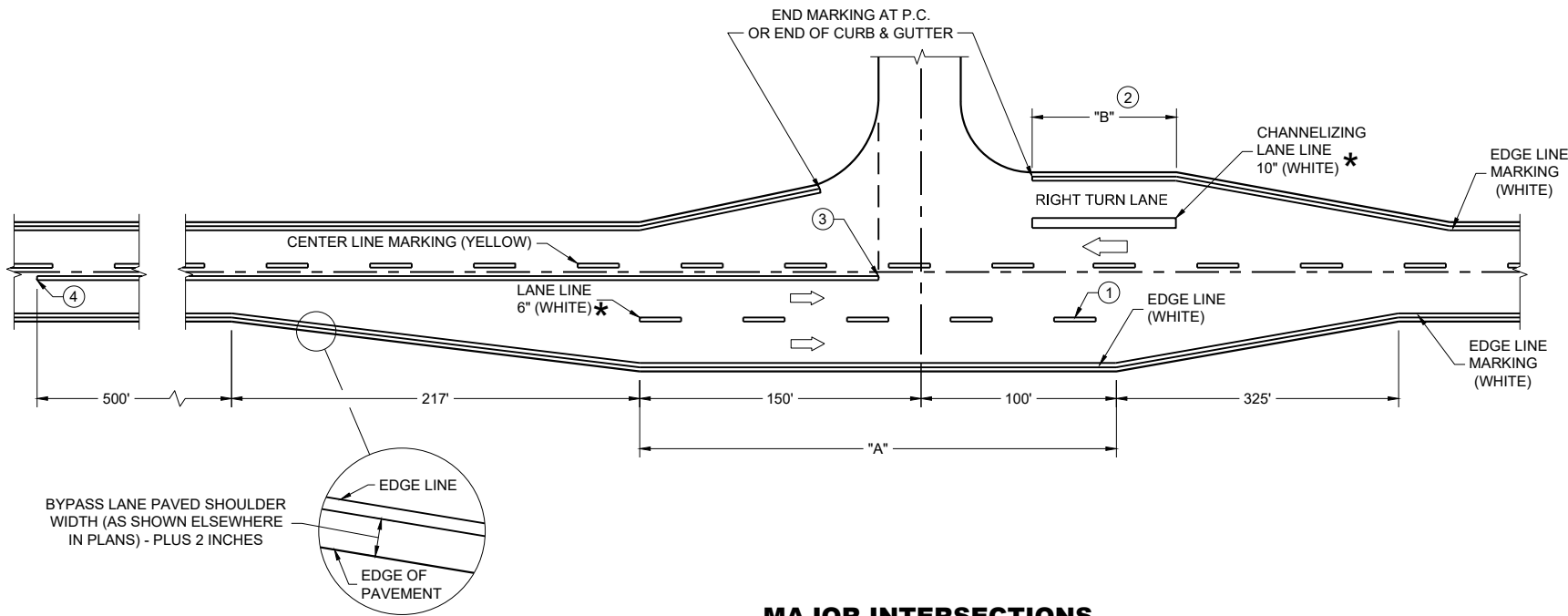
STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER
FHWA



MINOR INTERSECTION



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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

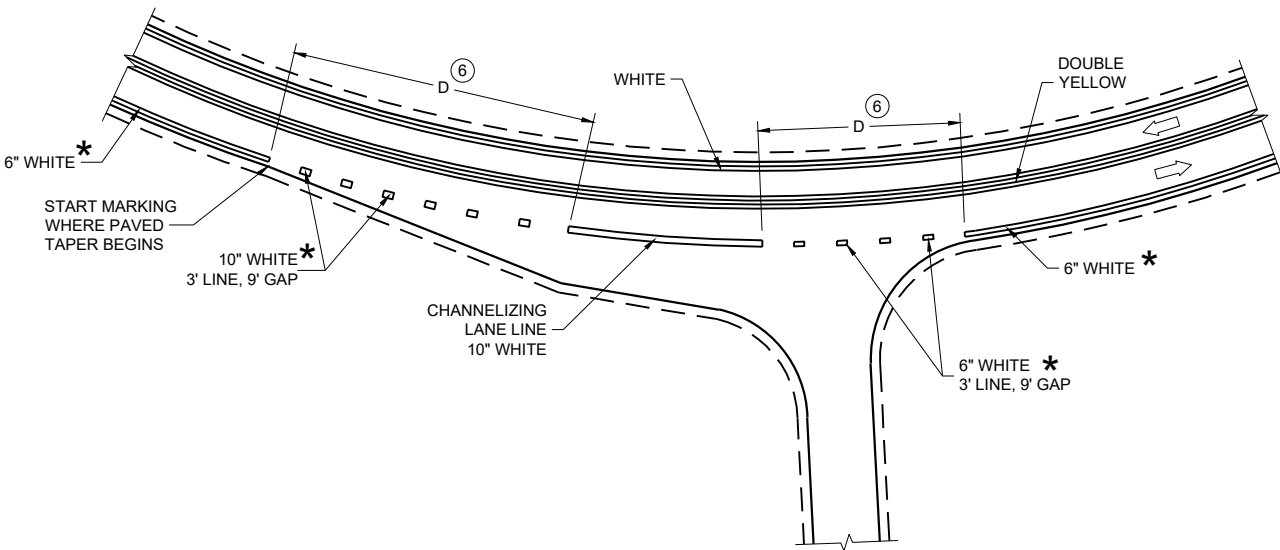
GENERAL NOTES

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

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

LEGEND

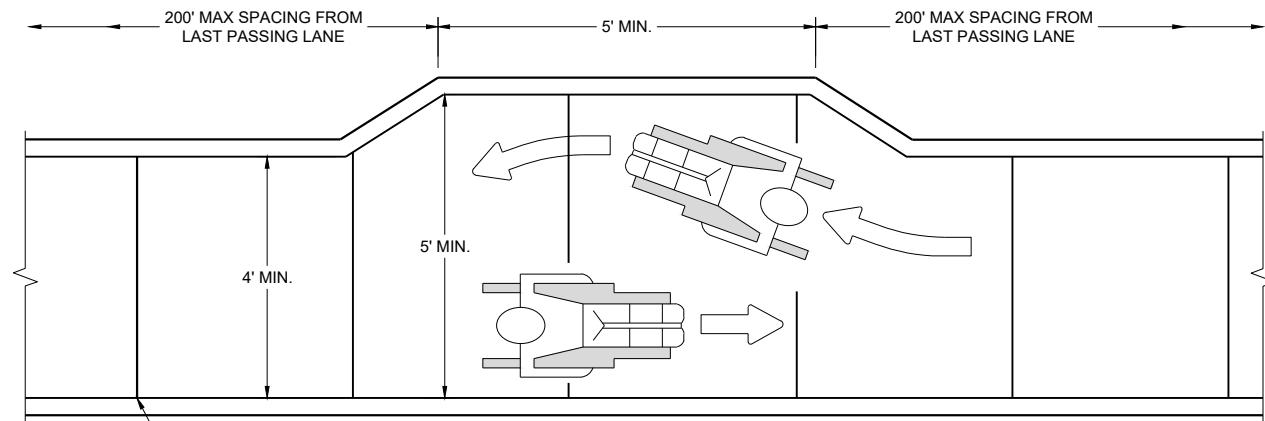
➡ DIRECTION OF TRAVEL



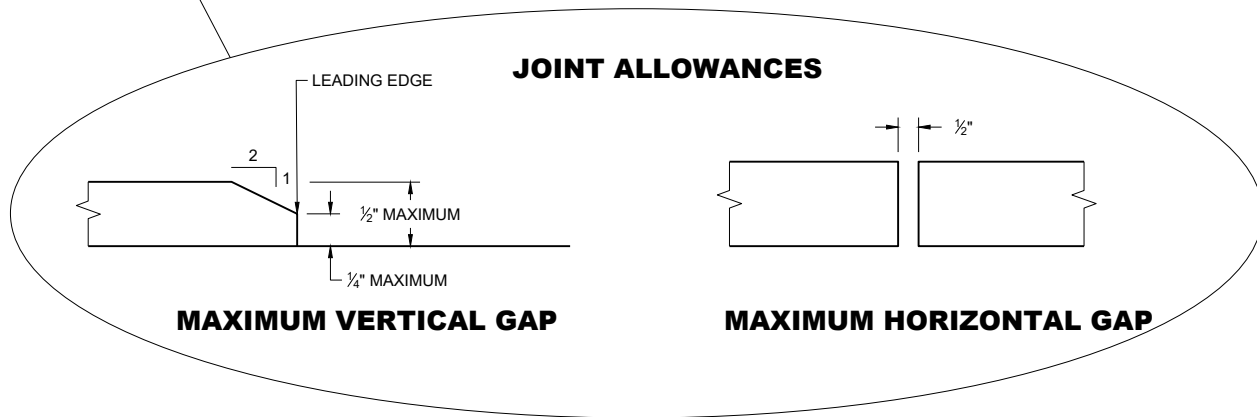
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NARROW SIDEWALK PASSING DETAIL

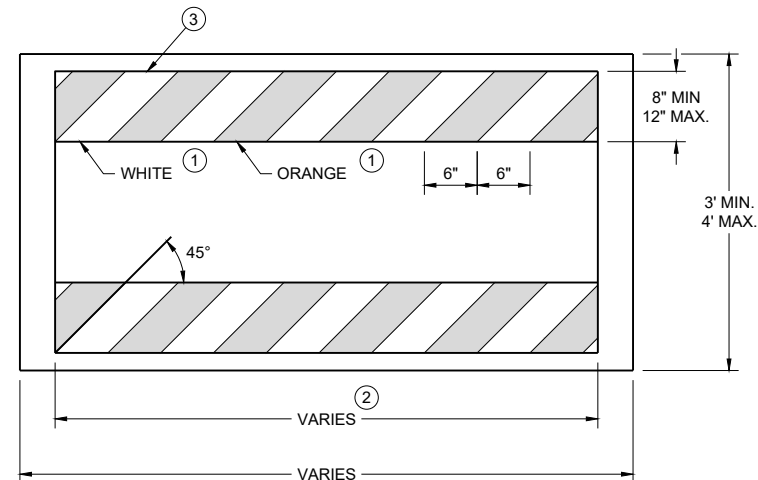


MAXIMUM VERTICAL GAP

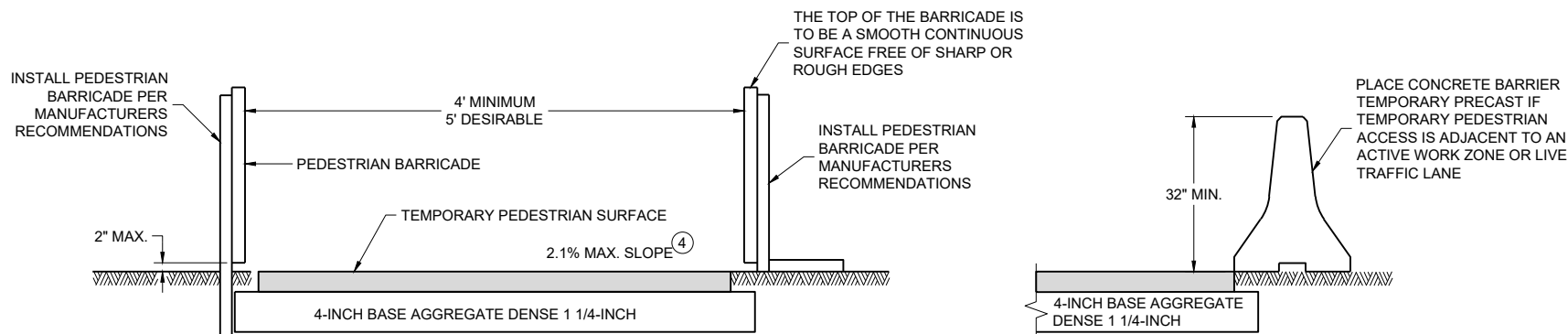
MAXIMUM HORIZONTAL GAP

JOINT ALLOWANCES

- GENERAL NOTES**
- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
 - REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
 - SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
 - PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
 - USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.
 - WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



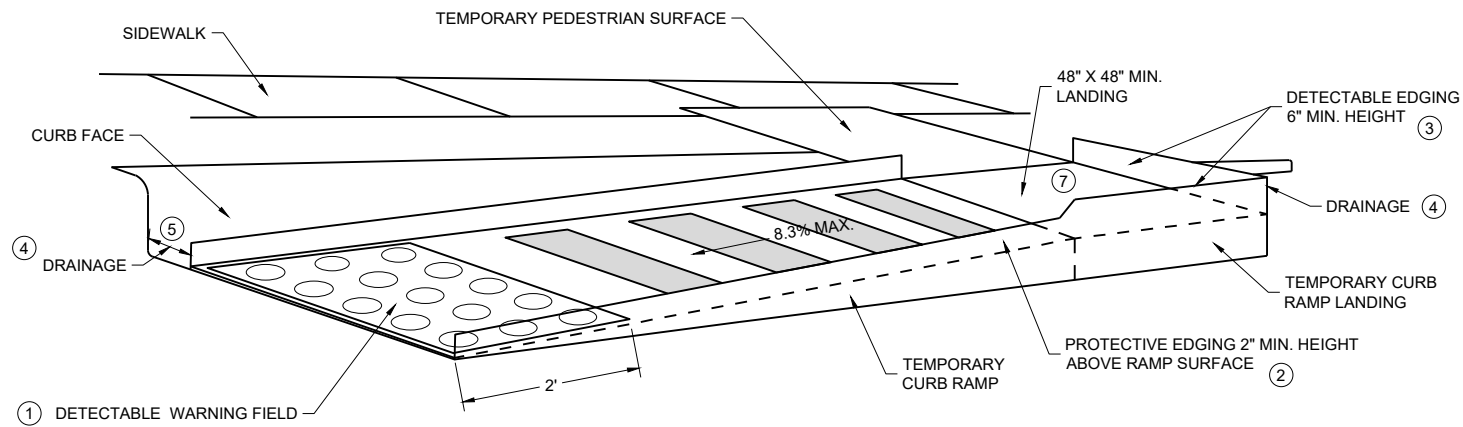
TEMPORARY PEDESTRIAN BARRICADE *



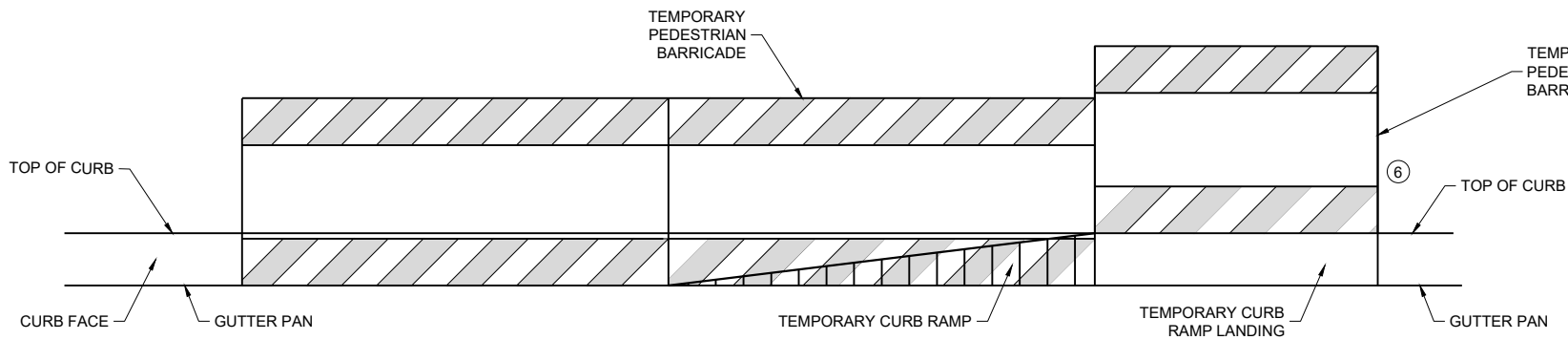
TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL,
PEDESTRIAN
ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

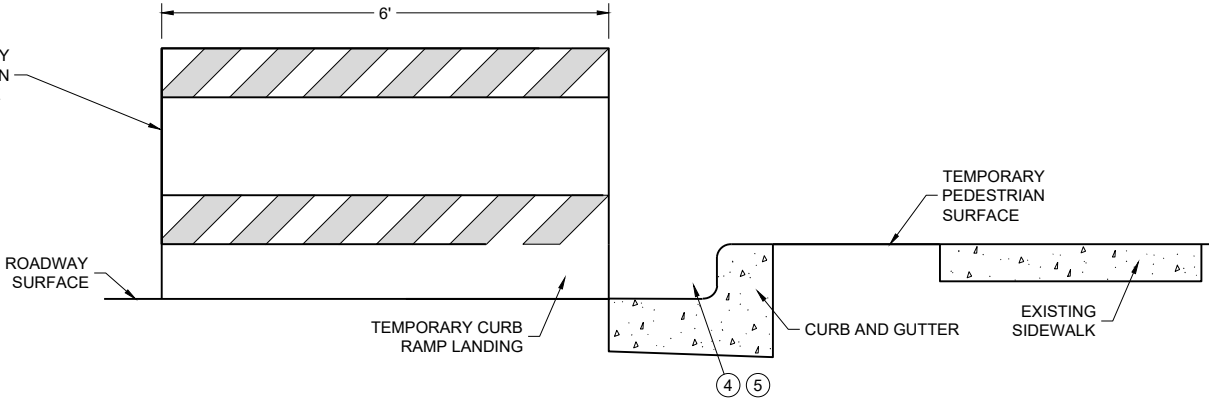


PERSPECTIVE VIEW



FRONT VIEW

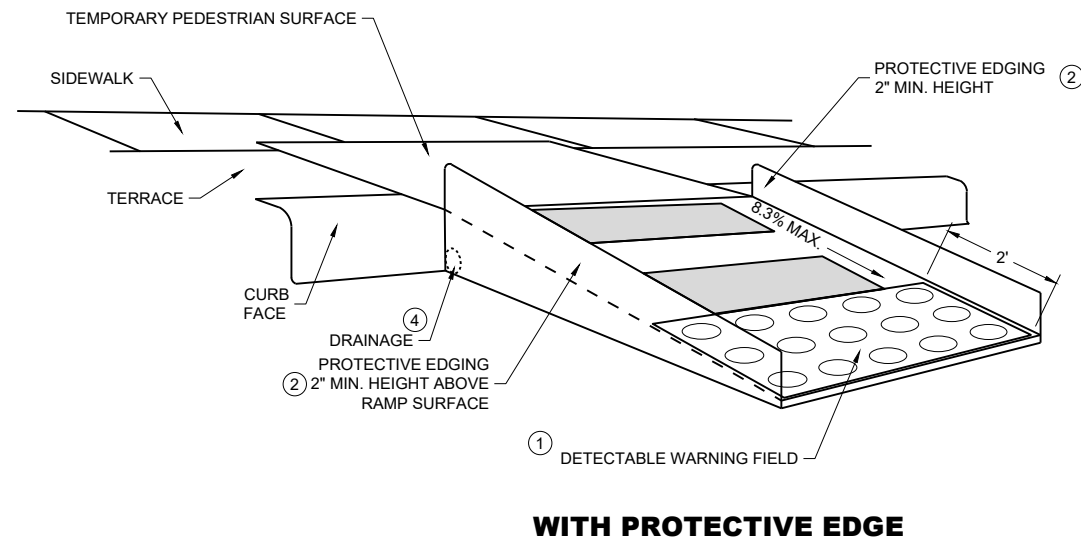
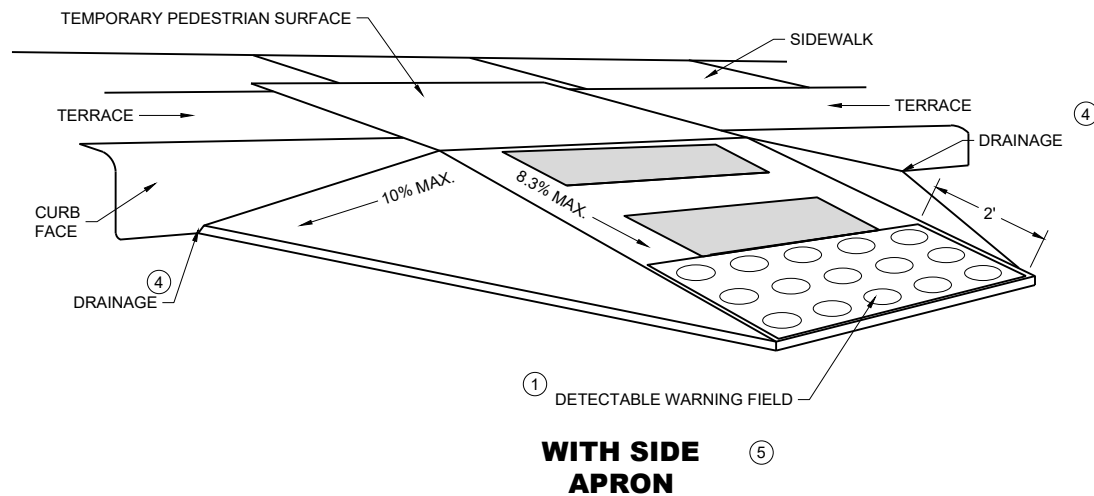
TEMPORARY CURB RAMP PARALLEL TO CURB



SIDE VIEW

GENERAL NOTES

- CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
- CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.
- CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- (1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
 - (2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
 - (3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
 - (4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
 - (5) ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
 - (6) IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
 - (7) LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

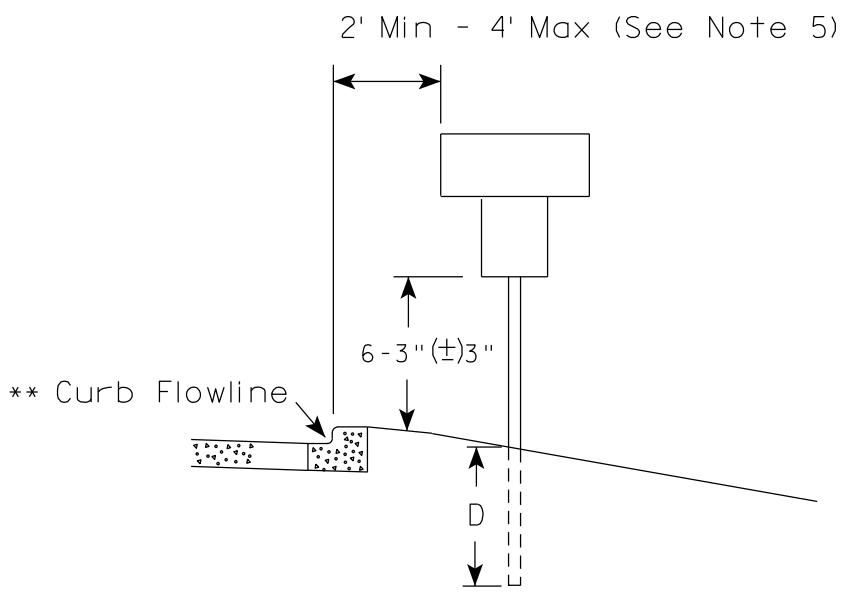
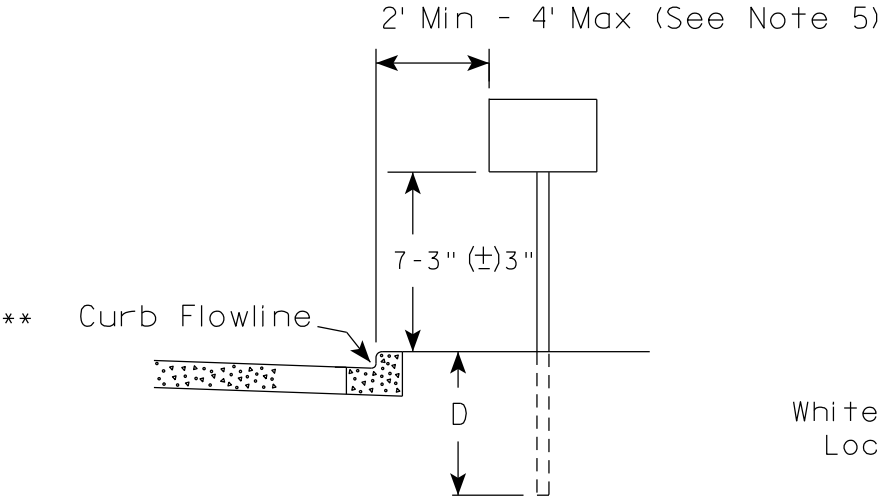
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

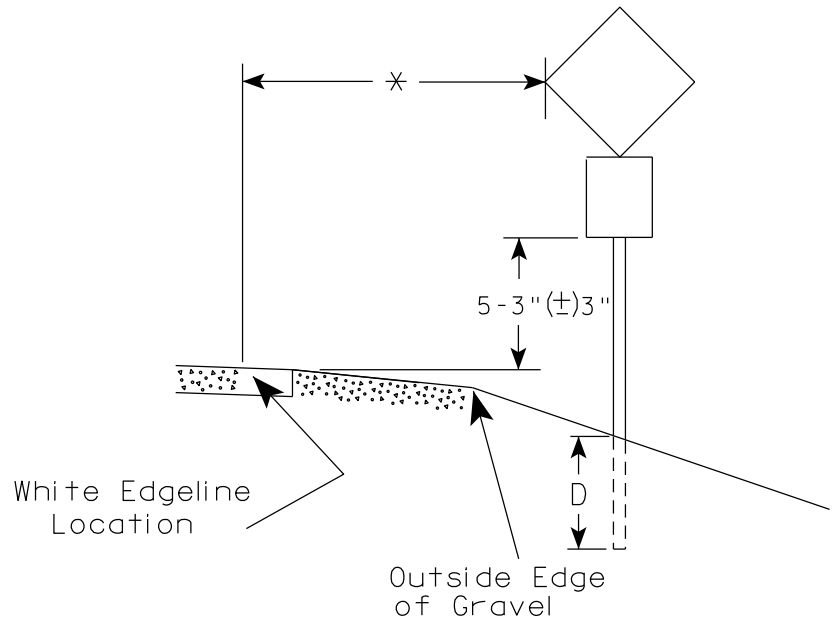
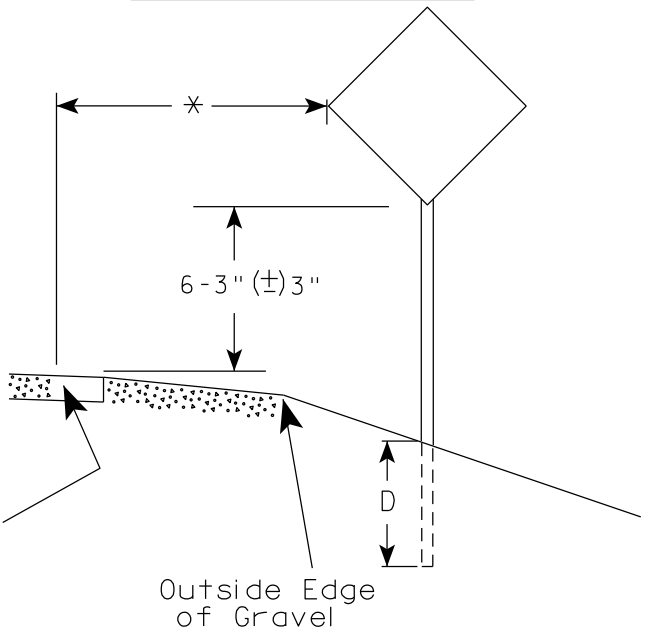
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

URBAN AREA



RURAL AREA (See Note 2)



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

GENERAL NOTES

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

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

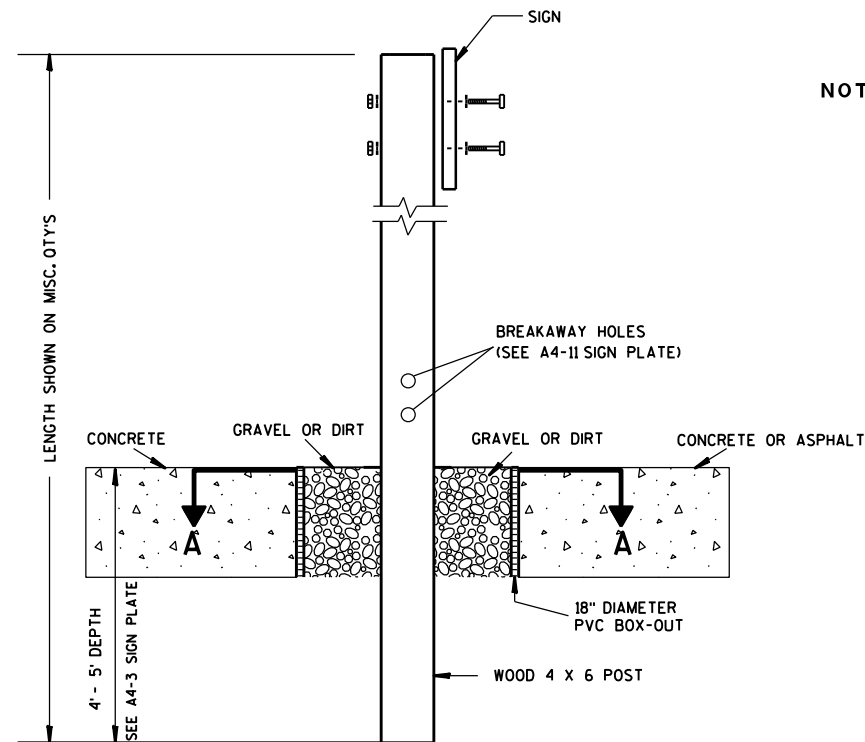
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

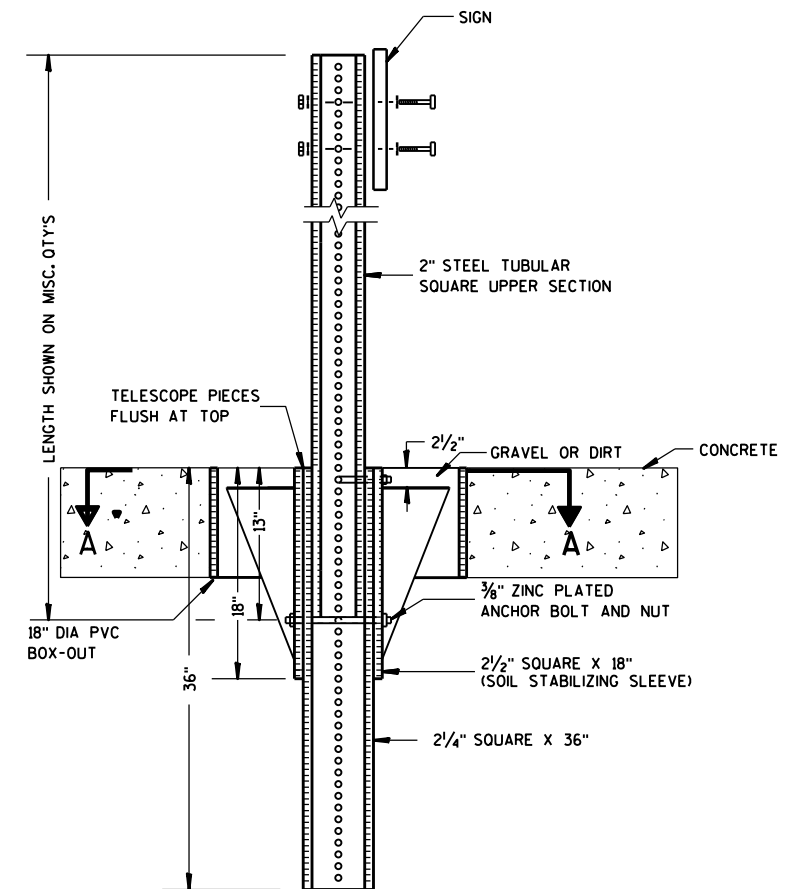
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

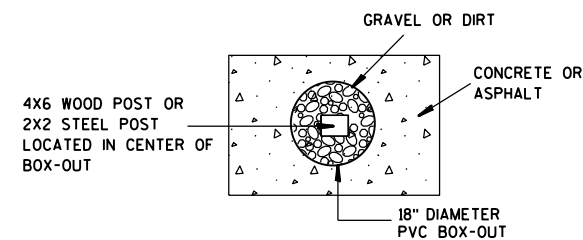
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

GENERAL NOTES

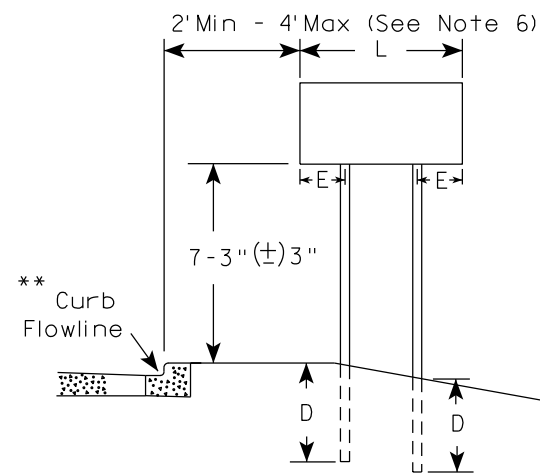
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3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

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

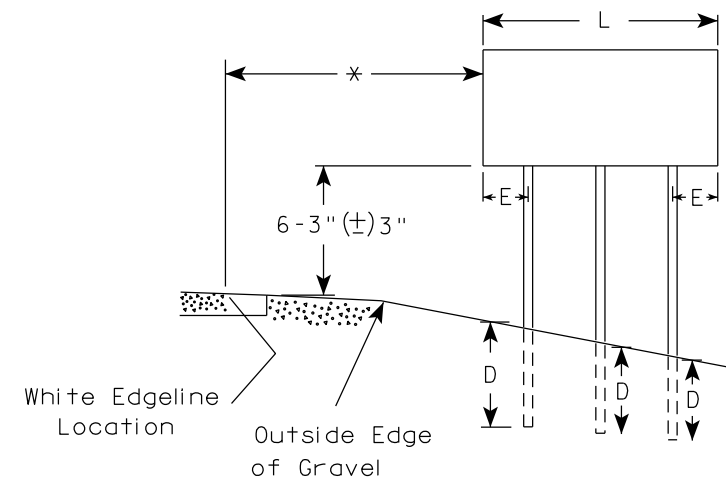
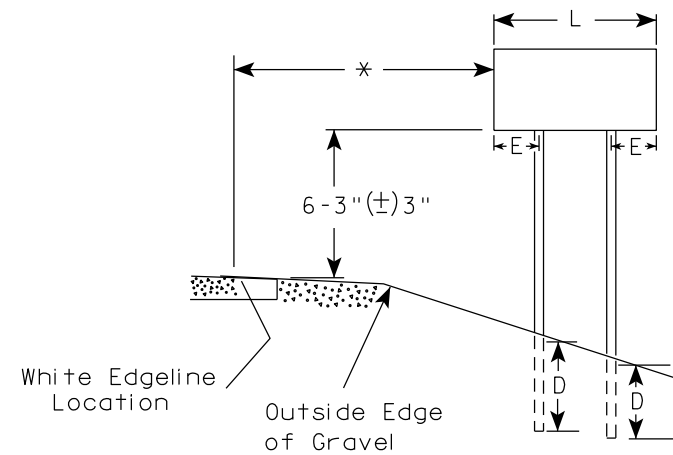
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

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

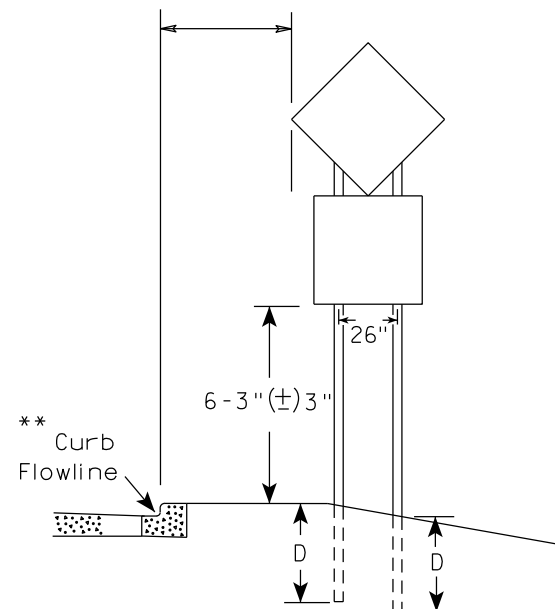
URBAN AREA



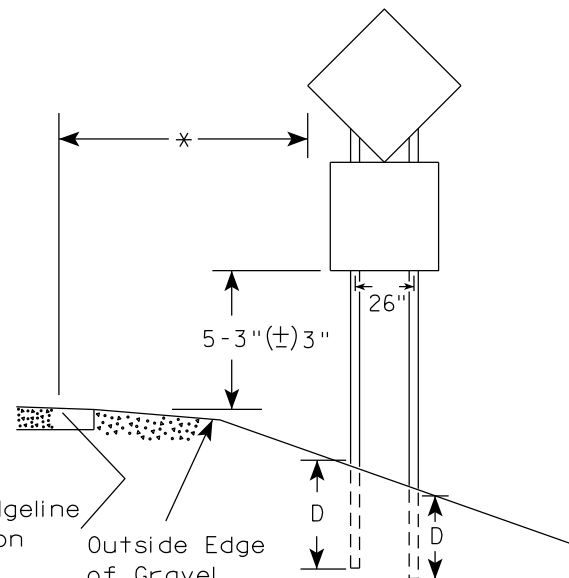
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-4.16

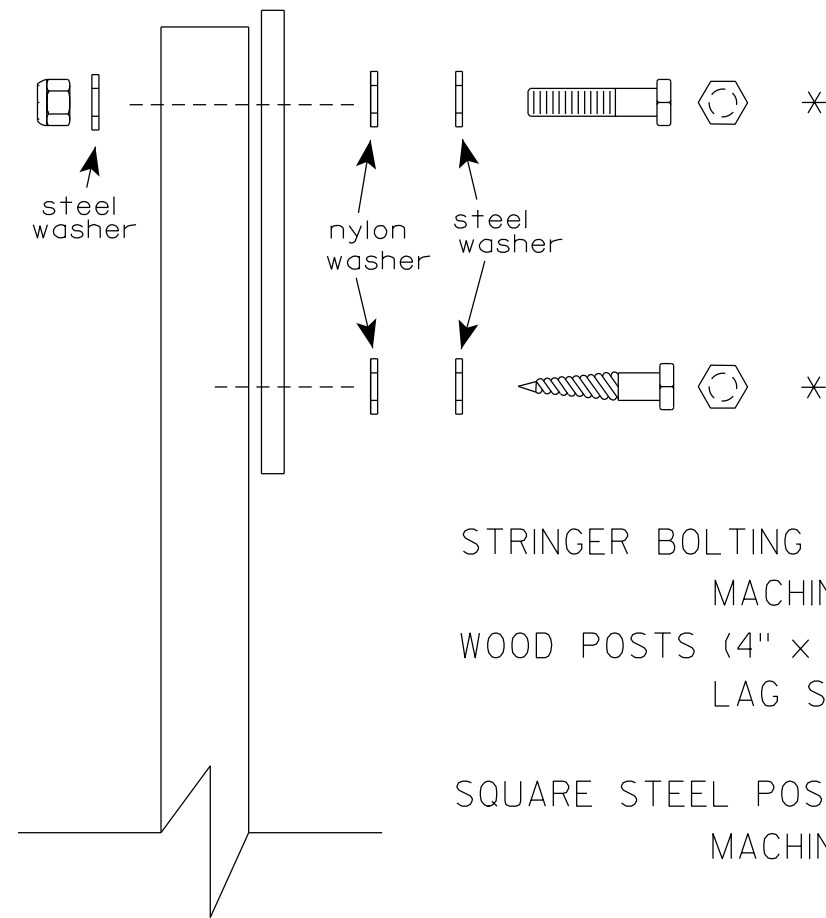
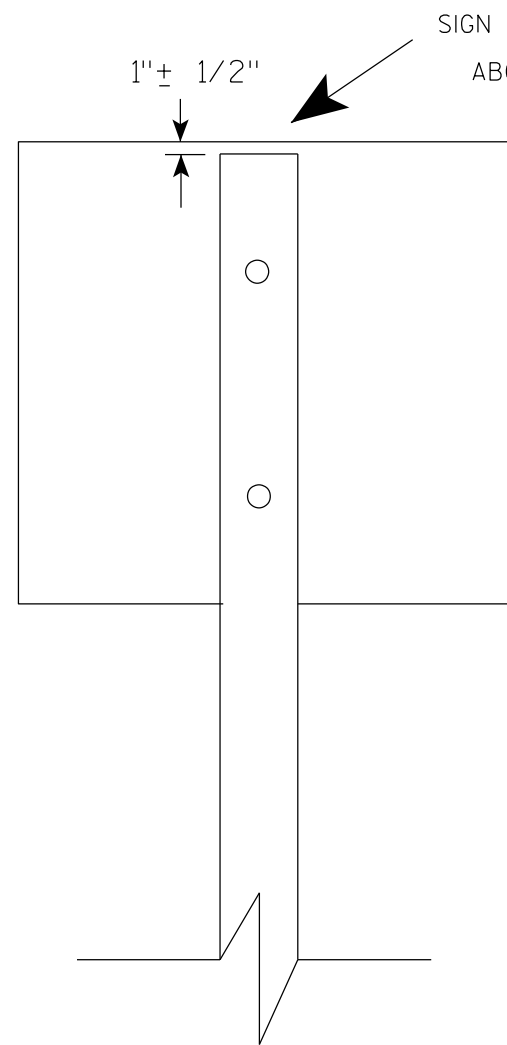
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

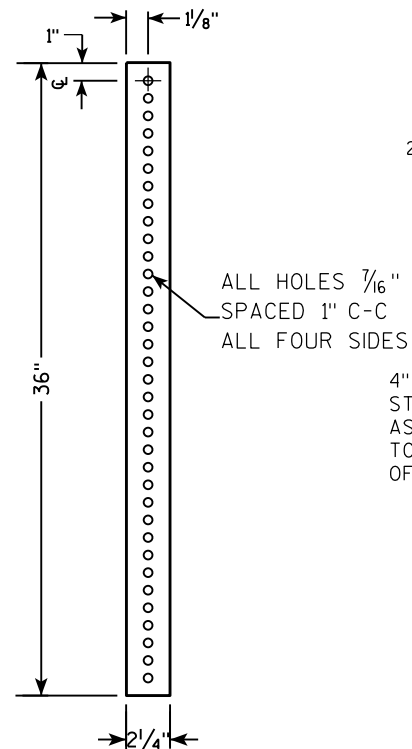
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

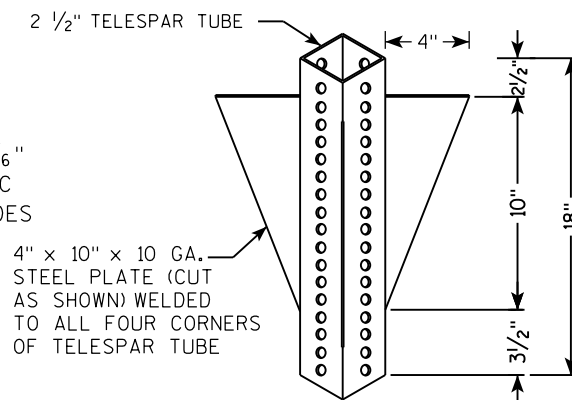
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



SIGN
 SEE SIGN PLATE
 A4-8 FOR BOLT
 WASHER, & NUT
 MATERIAL
 2" STEEL TUBULAR
 SQUARE UPPER SECTION
 ALL HOLES $\frac{7}{16}$ "
 SPACED 1" C-C
 ALL FOUR SIDES
 $\frac{3}{8}$ " ZINC PLATED CORNER
 ANCHOR BOLT AND NUT
 2 1/2" GRAVEL OR DIRT
 TELESCOPE PIECES
 FLUSH AT TOP
 18" DIA SCHEDULE
 40 PVC
 BOX-OUT
 36"
 18"
 13"
 2 1/2" SQUARE X 18"
 (SOIL STABILIZING SLEEVE)
 2 1/4" SQUARE X 36"
 3/8" ZINC PLATED
 ANCHOR BOLT AND NUT

LENGTH SHOWN ON MISC. QTY'S

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

TELESCOPE PIECES FLUSH AT TOP

18"

12"

36"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

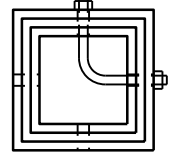
2 1/4" SQUARE X 36"

A

B

C

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthieu R. Rauch

for State Traffic Engineer

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

PROJECT NO:

HWY:

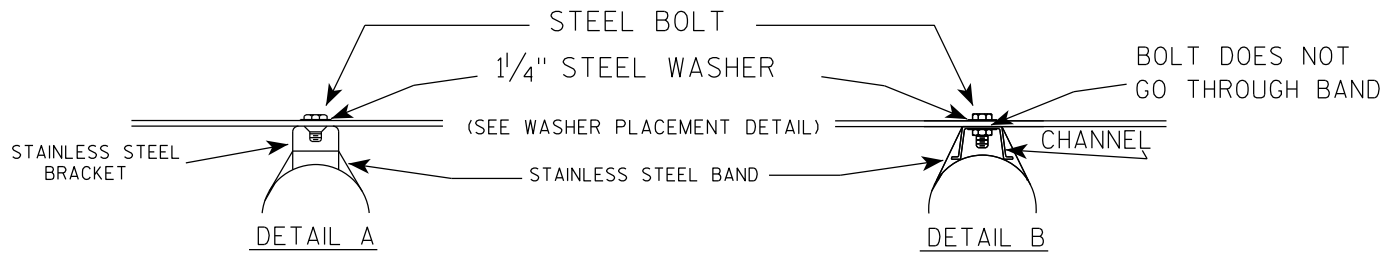
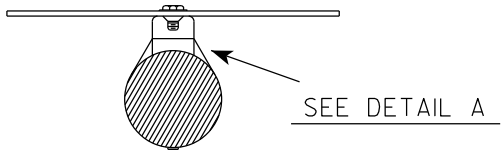
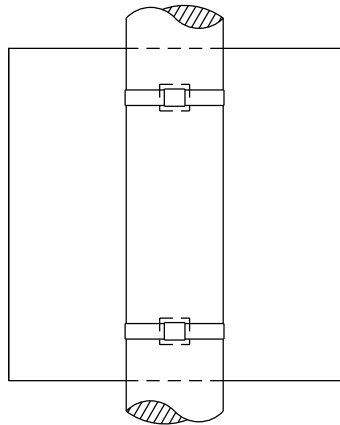
COUNTY:

SHEET NO:

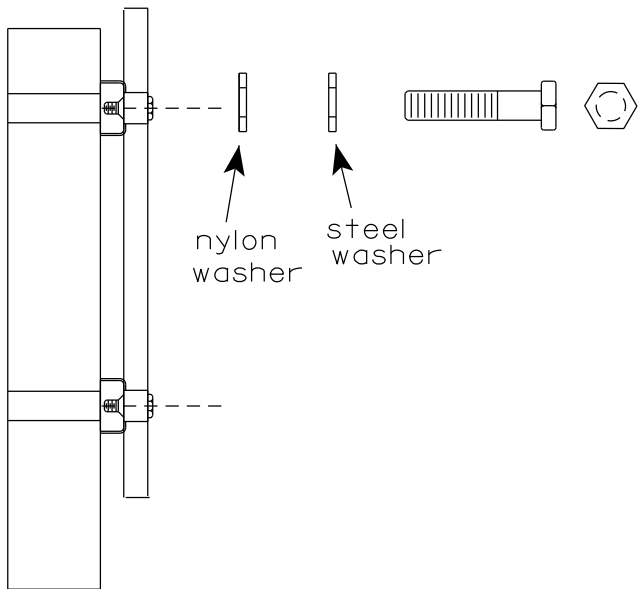
11

BANDING

SINGLE SIGN



WASHER PLACEMENT

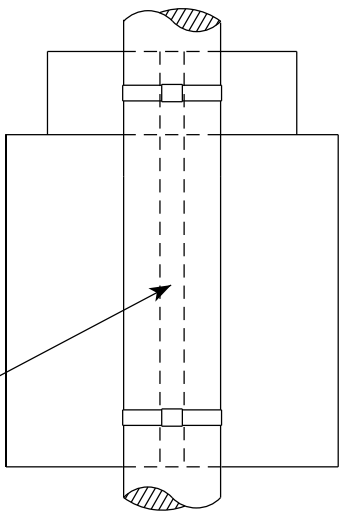


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

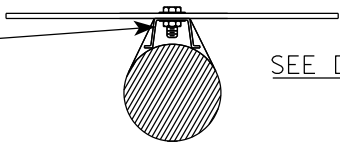
GENERAL NOTES

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

"J" ASSEMBLY



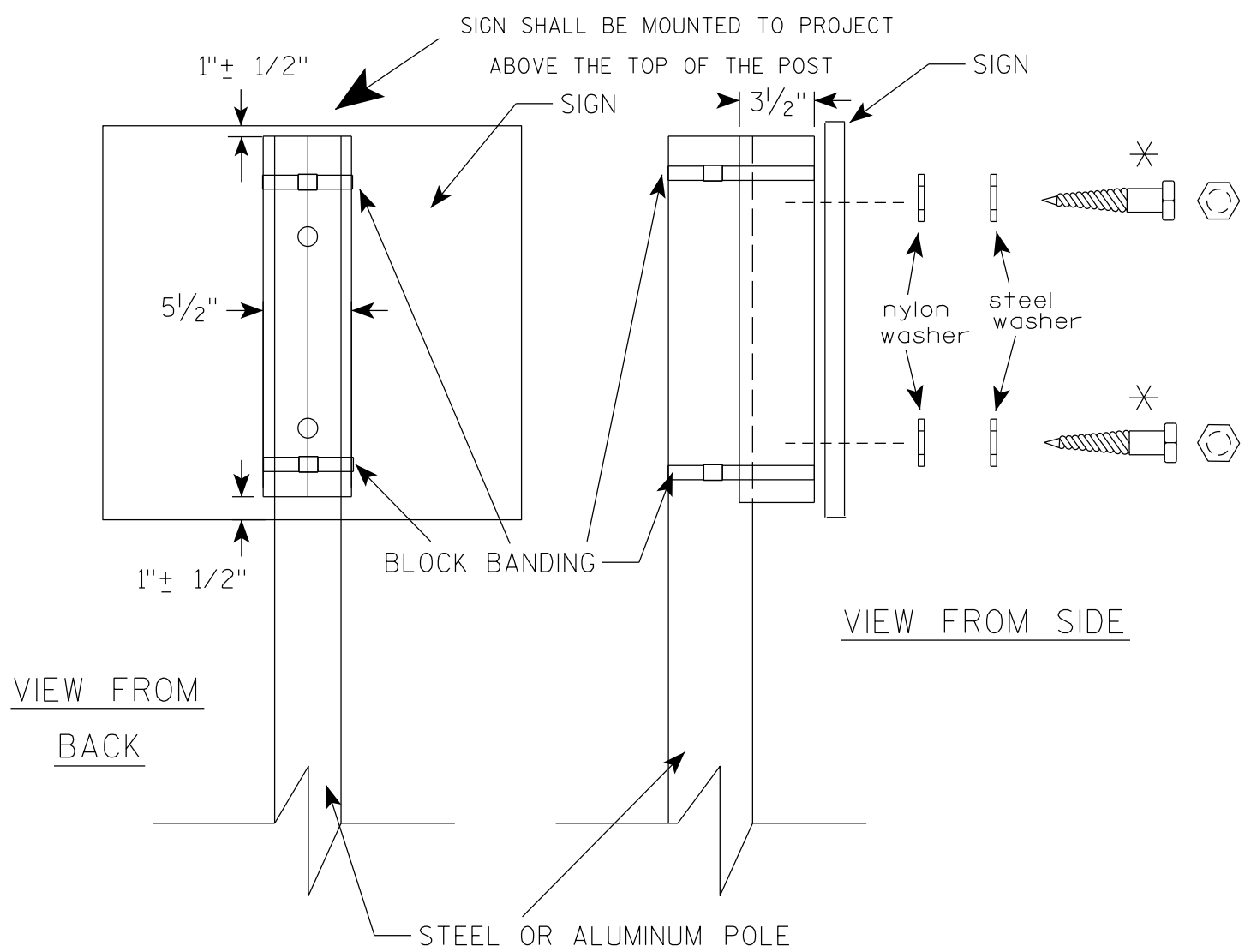
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

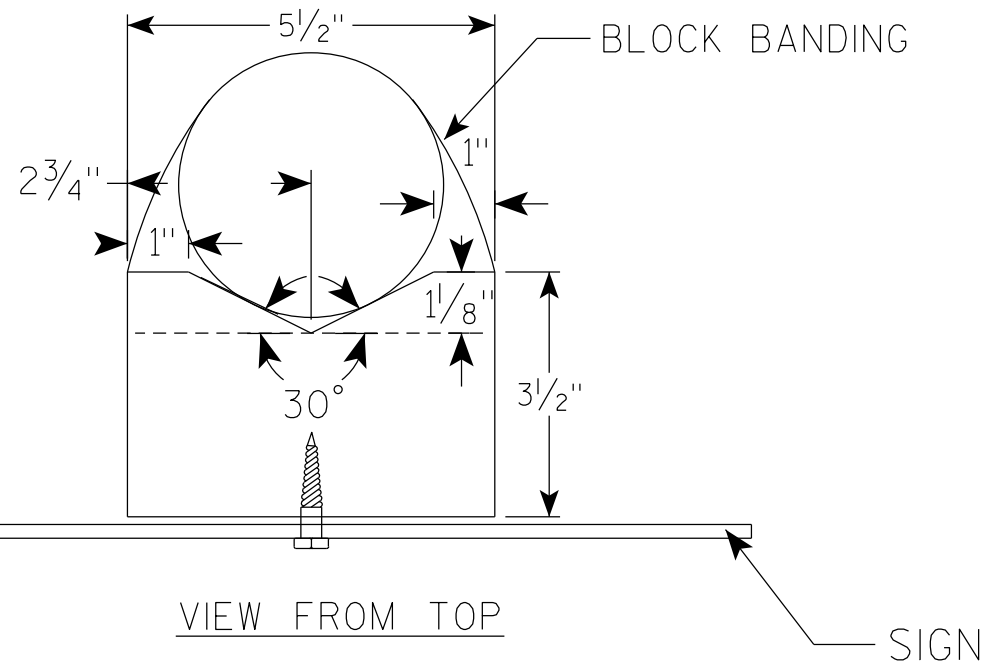
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

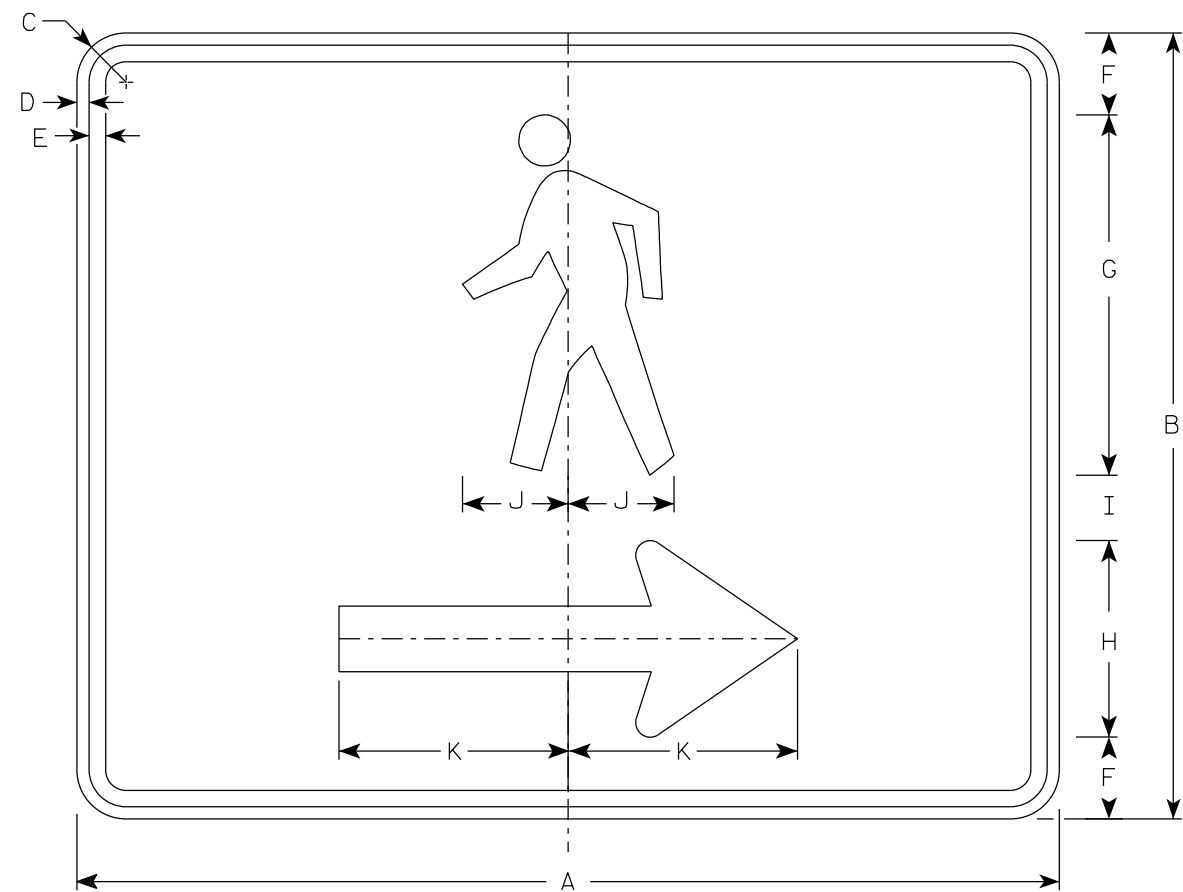
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO:

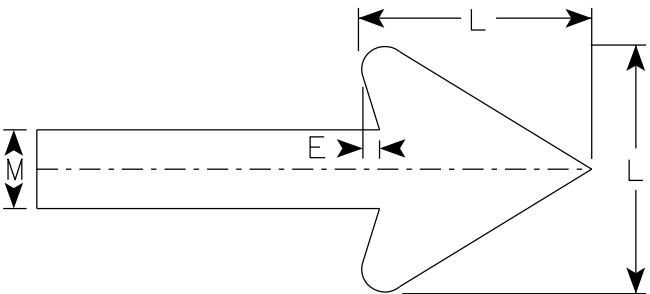
E



M4-60R

NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M4-60L is the same as M4-60R except the arrow is reversed.



Arrow Detail

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

PROJECT NO:

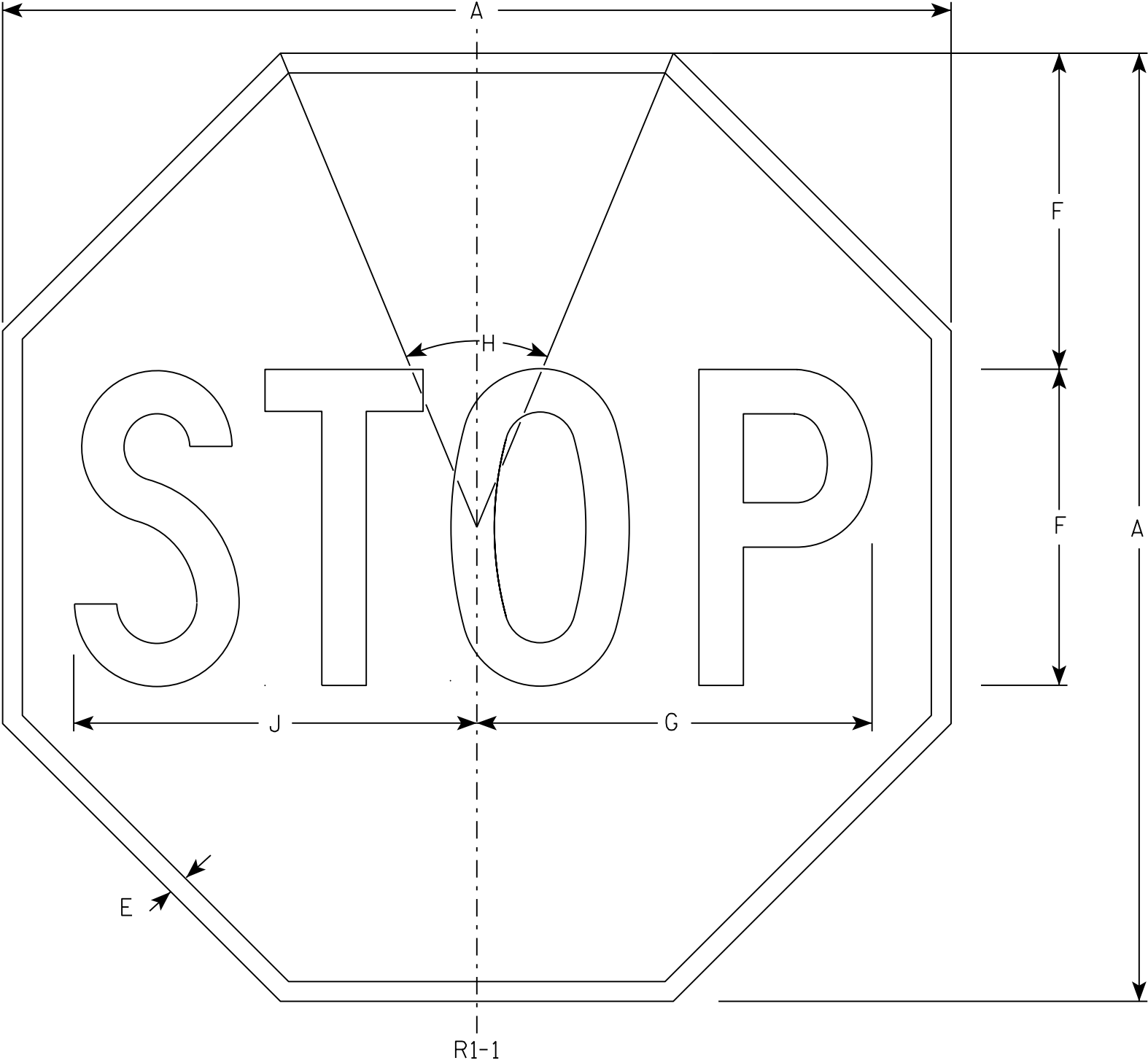
HWY:

COUNTY:

SHEET NO:

E

7



NOTES

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

7

R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

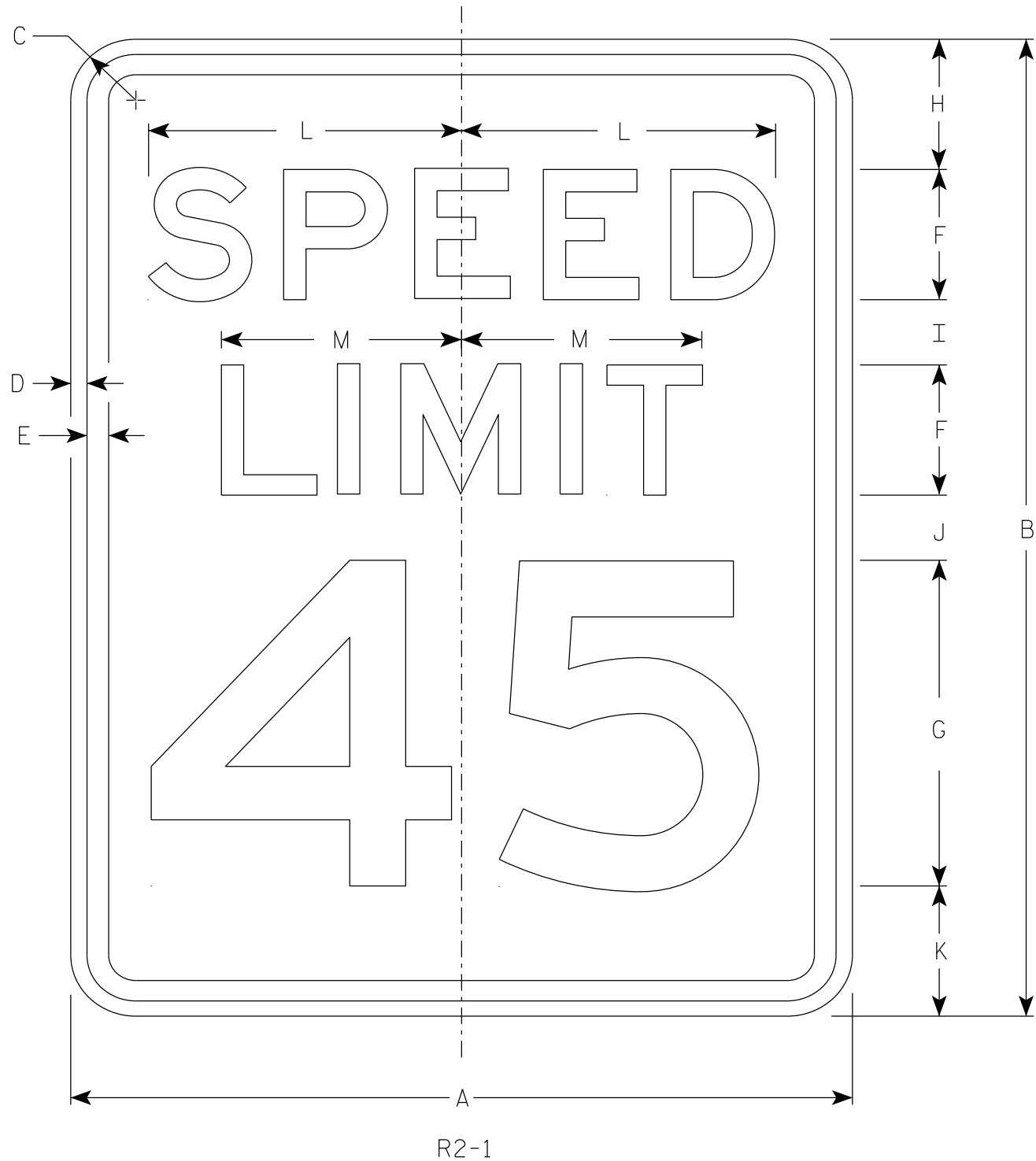
STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN

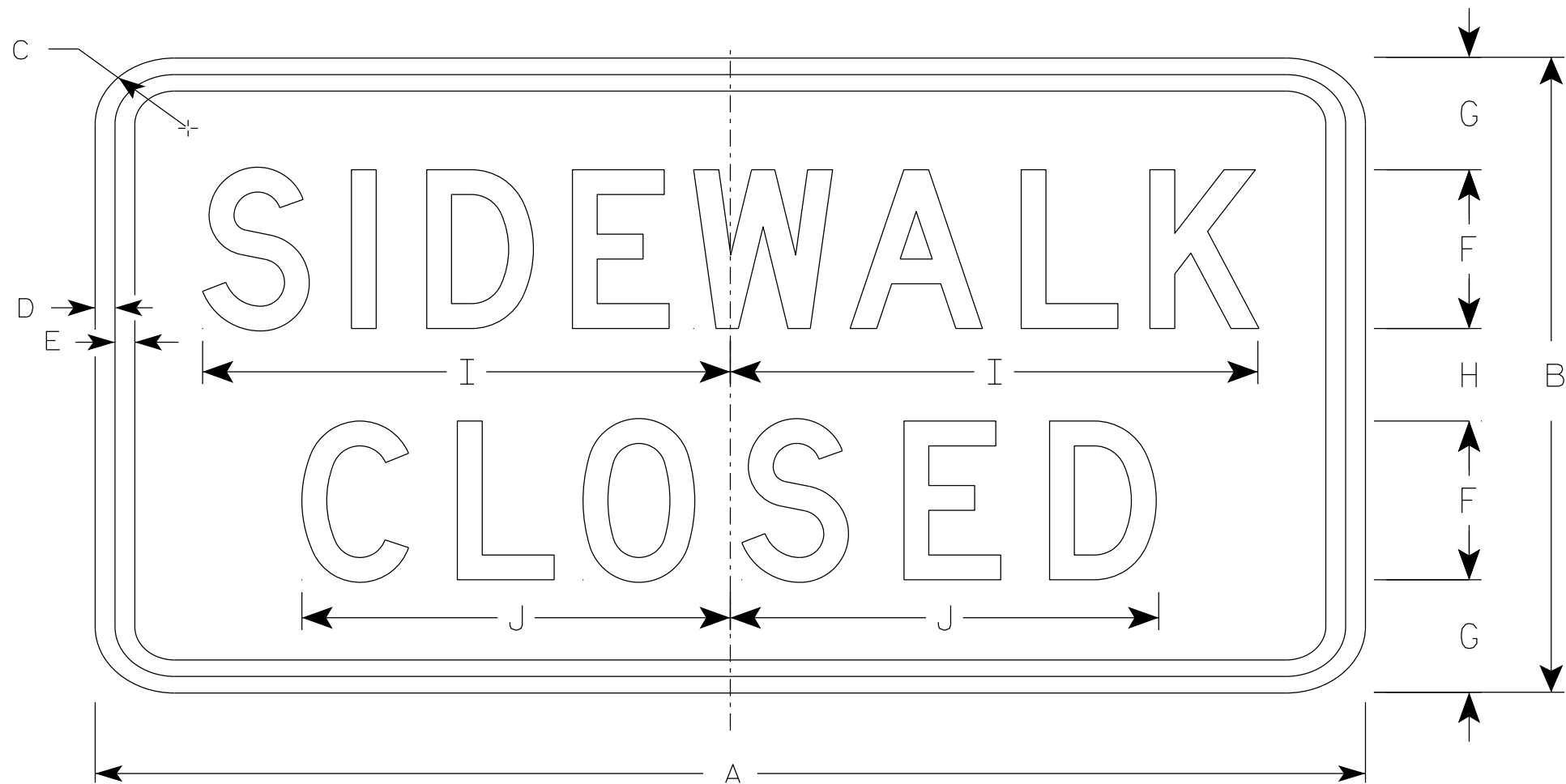
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

7



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 1/2	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

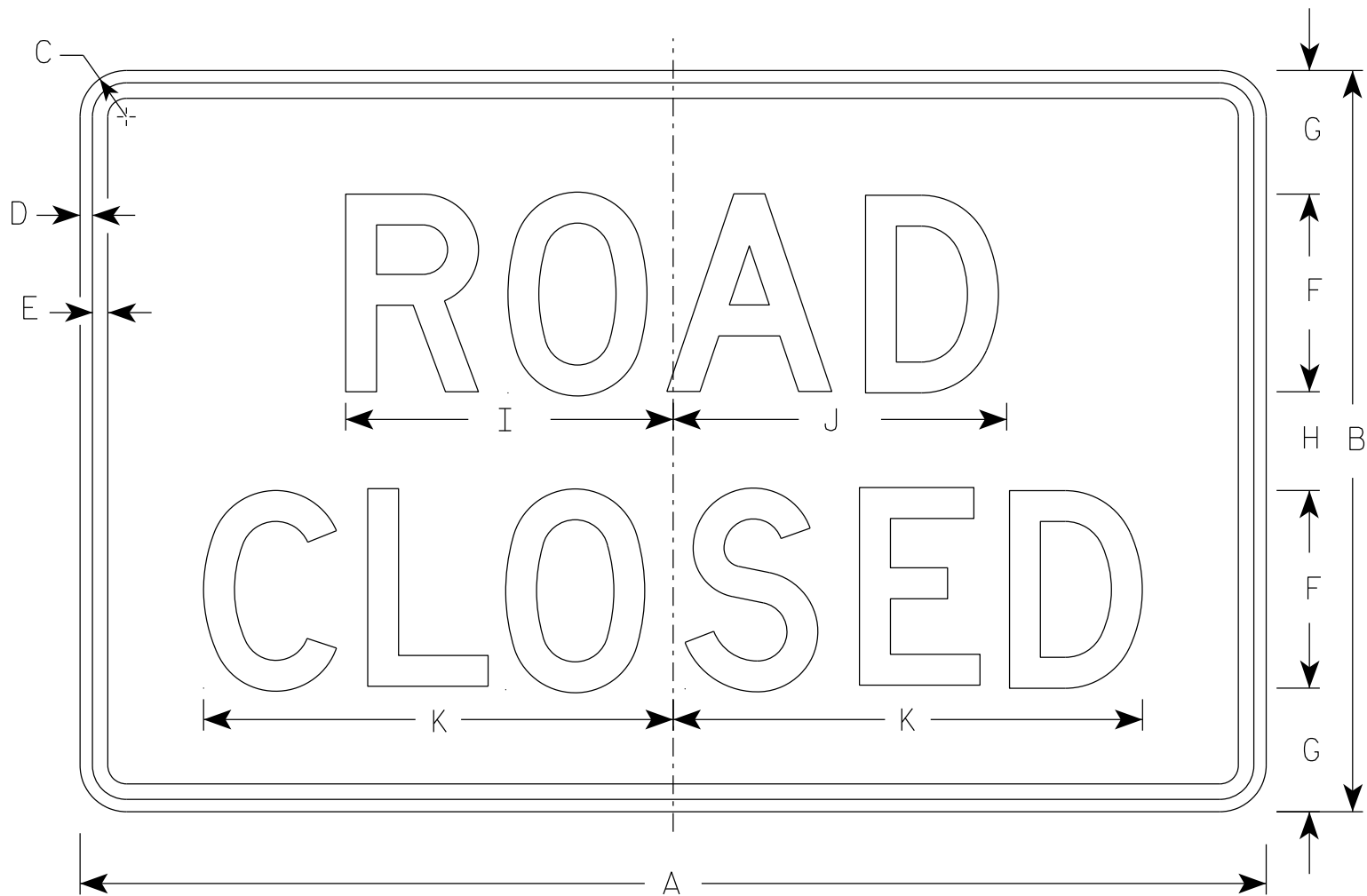
E

STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

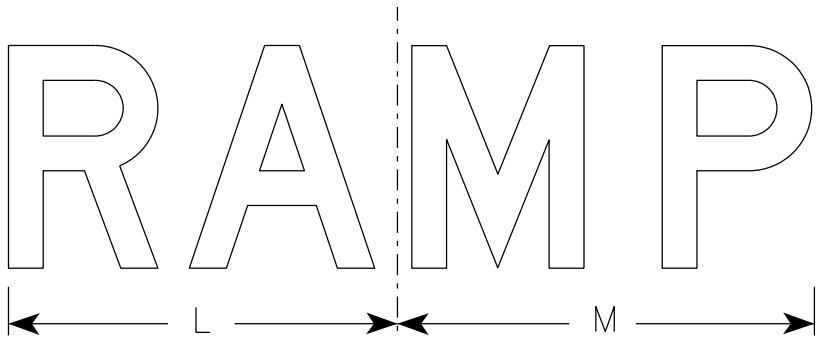
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

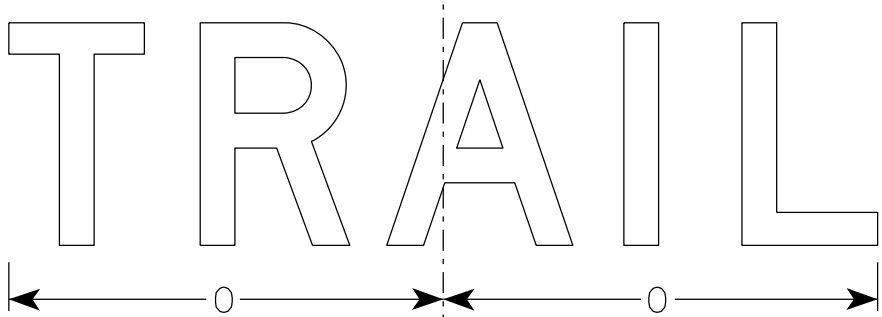


R11-2

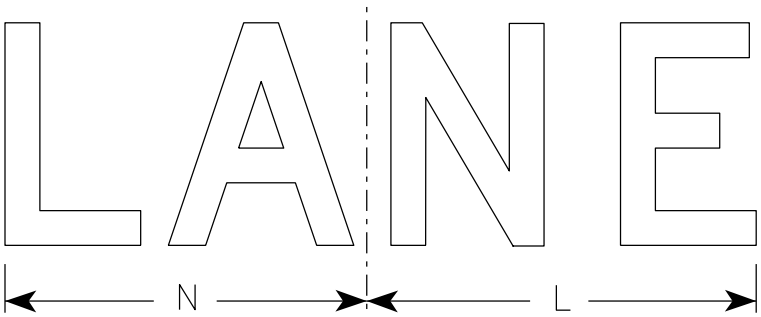
- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



R11-2R



R11-2T

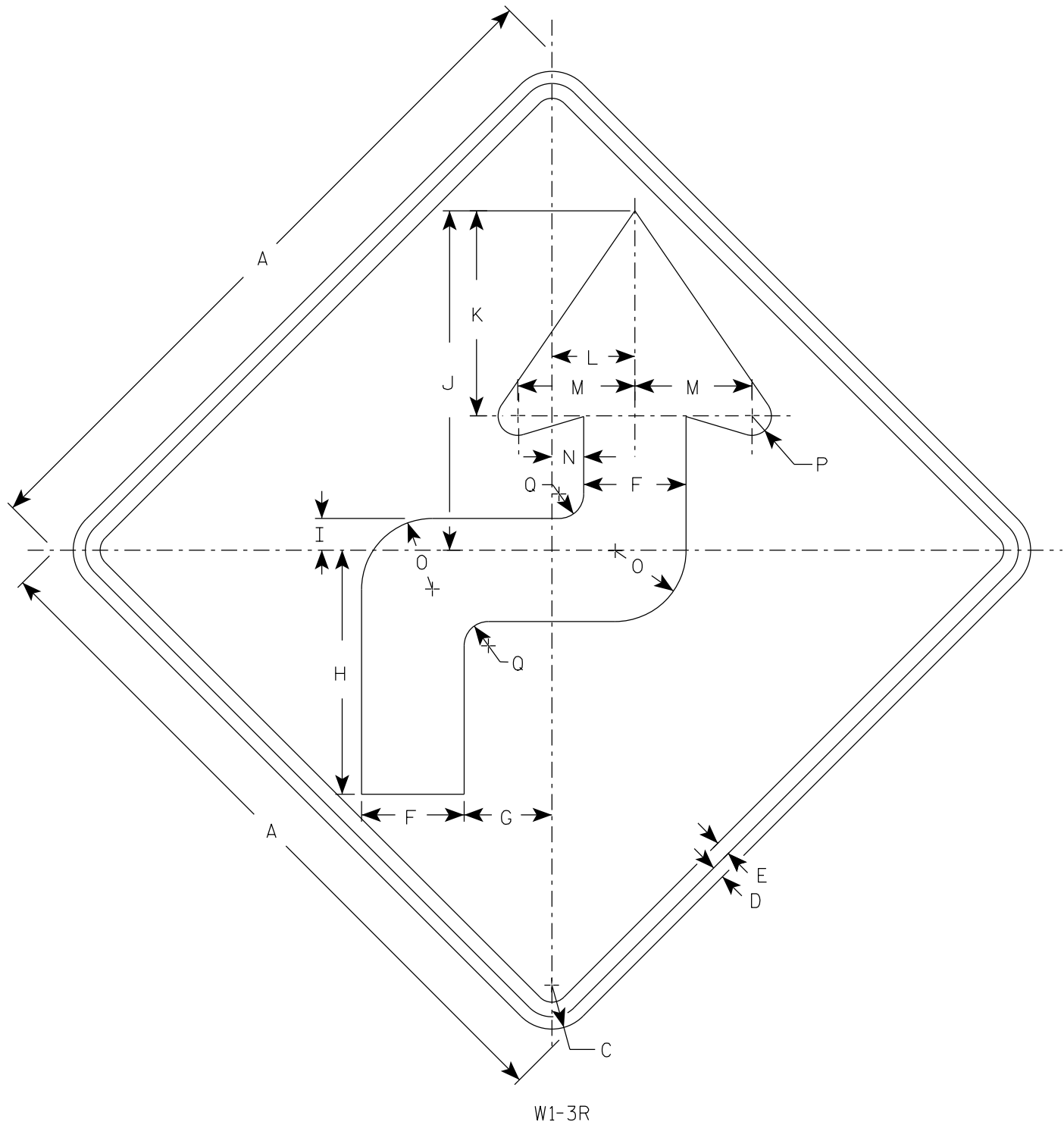


R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/5/24	PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W1-3L is the same as W1-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		2 1/4	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		2 1/4	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		2 1/4	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		2 1/4	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		3	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

W1-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

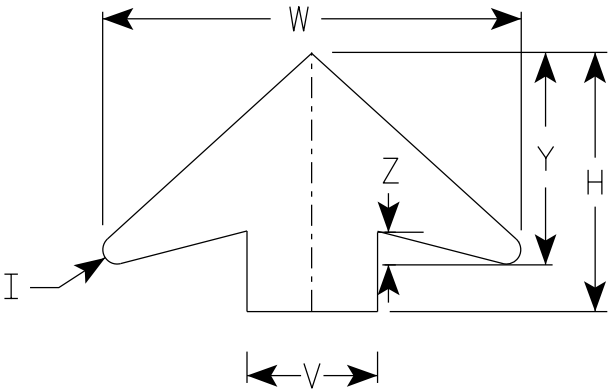
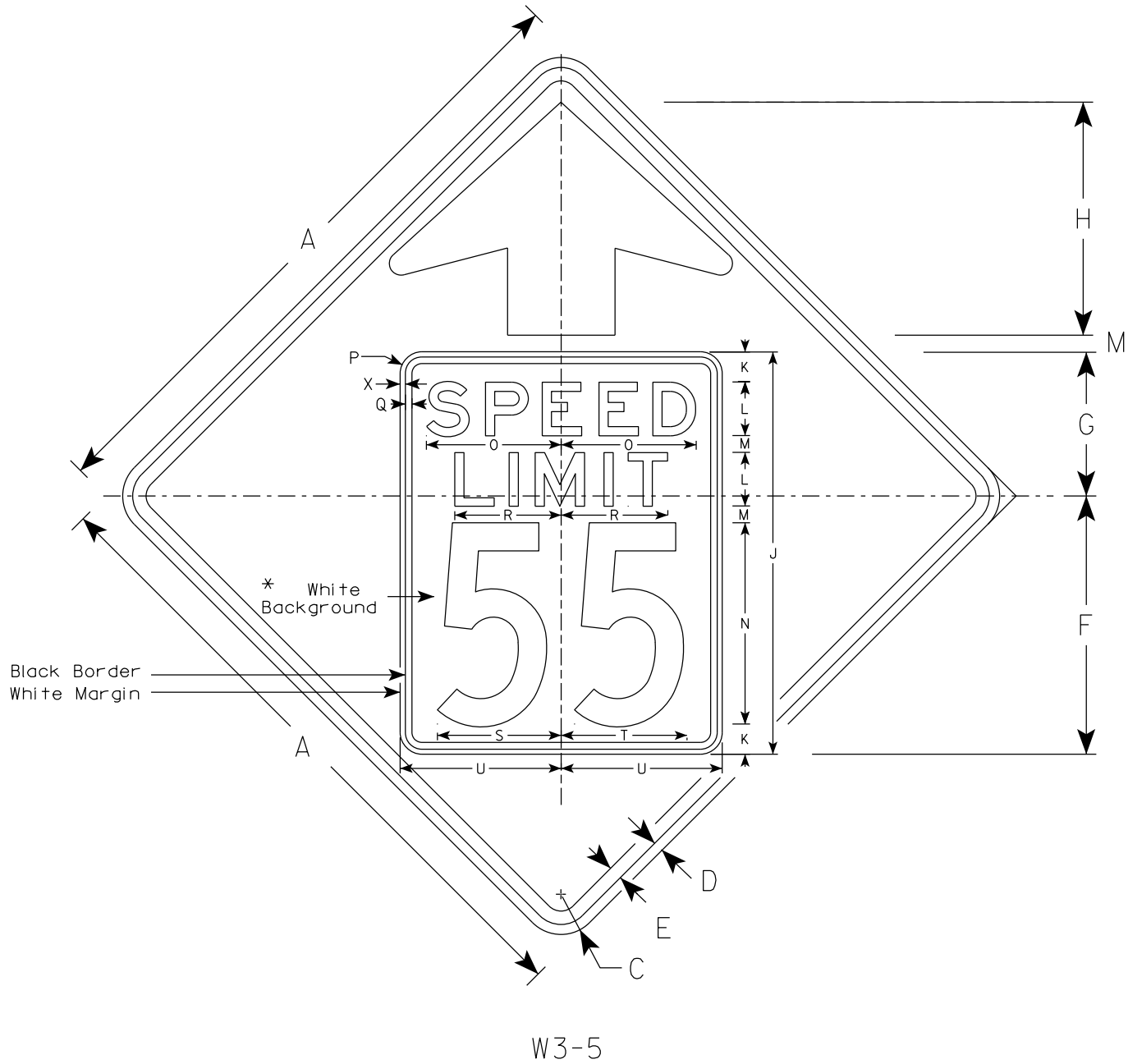
for State Traffic Engineer

DATE 3/23/2023 PLATE NO. W1-3.9

NOTES

- 1. Sign is Type II - See Note 2 for Sheeting Type
- 2. Color: *
Background - Yellow* (Type F Reflective)
Message - Black
- 3. Message Series - C for numbers Series E for wording
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		2 1/4	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		2 1/4	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		2 1/4	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		3	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		3	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

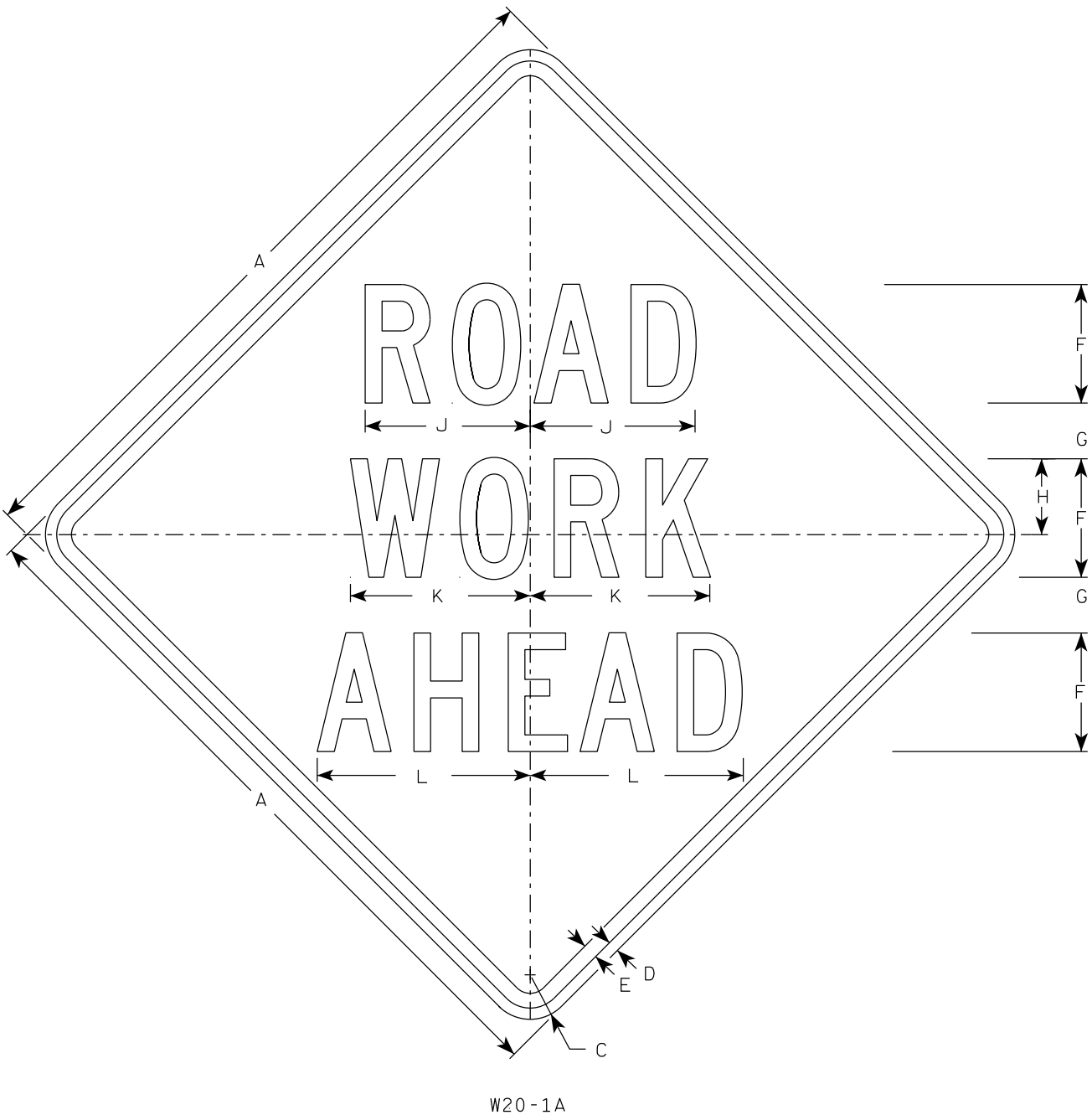
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/30/2023 PLATE NO. W3-5.7

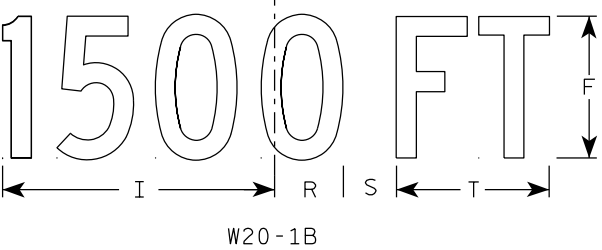
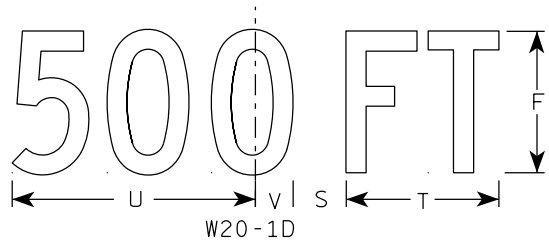
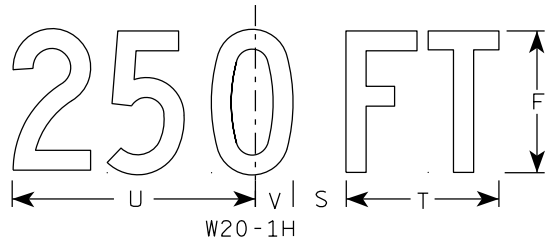
PROJECT NO:

SHEET NO:

E

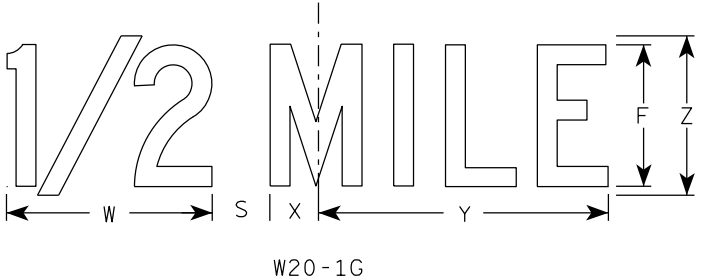


W20-1A

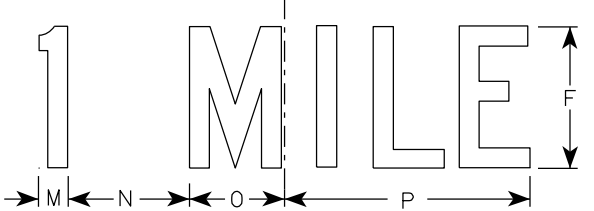


W20-1B

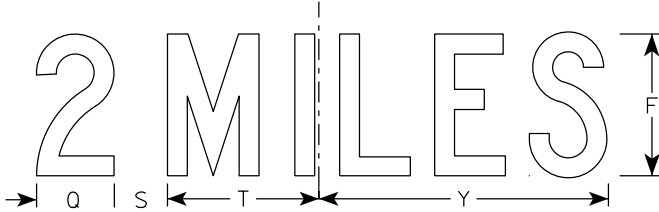
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

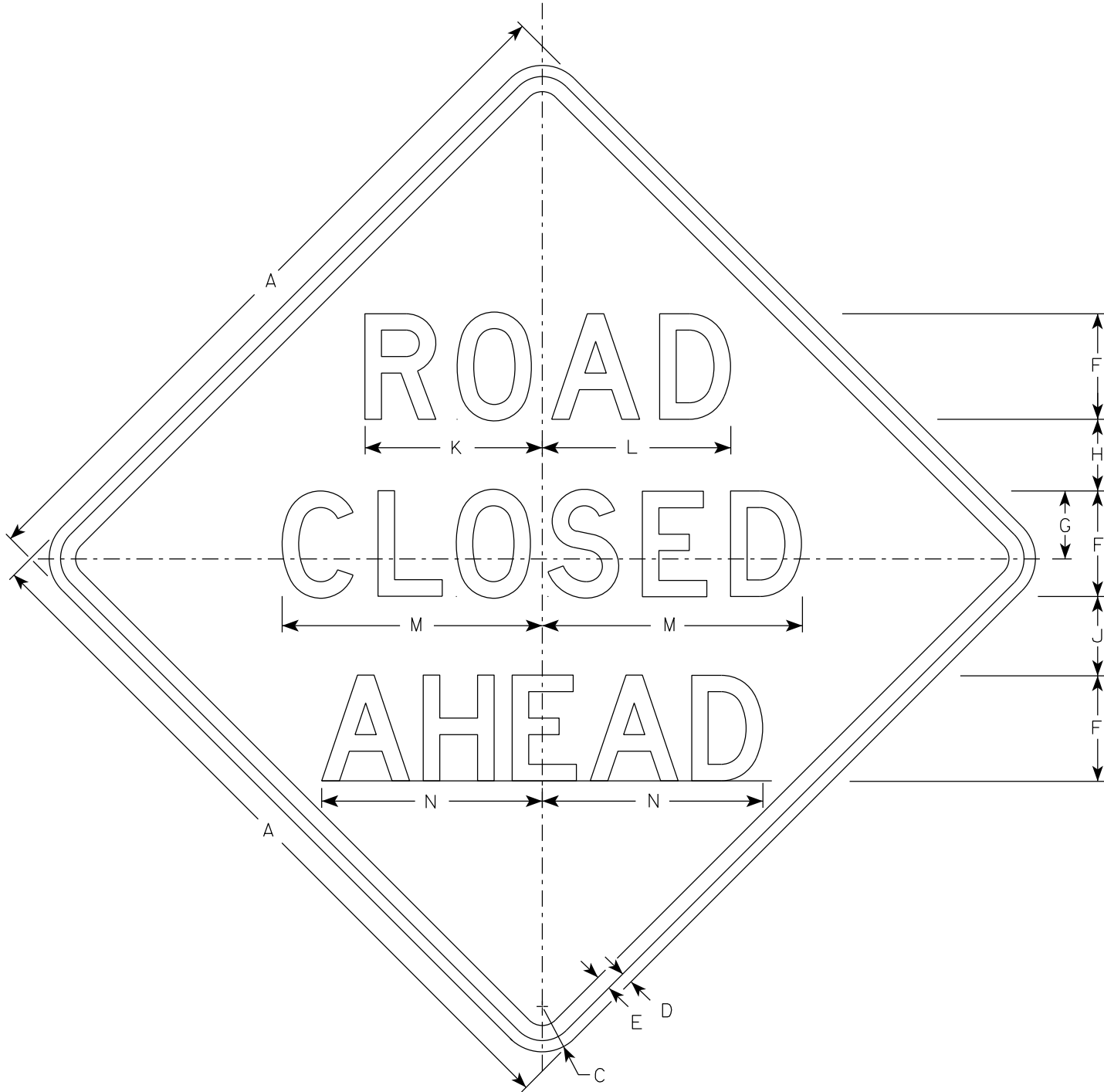
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

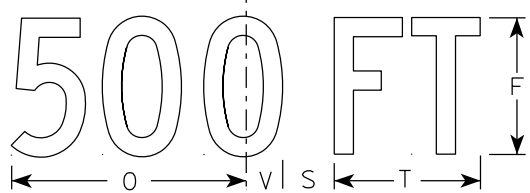
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

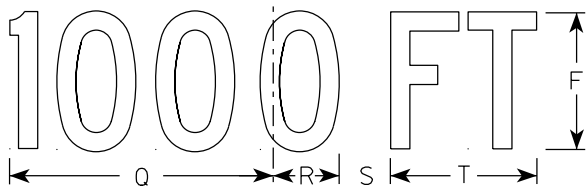
DATE 1/10/2024 PLATE NO. W20-1.12



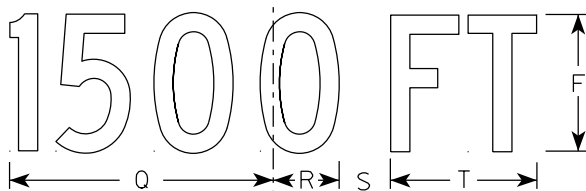
W20-3A



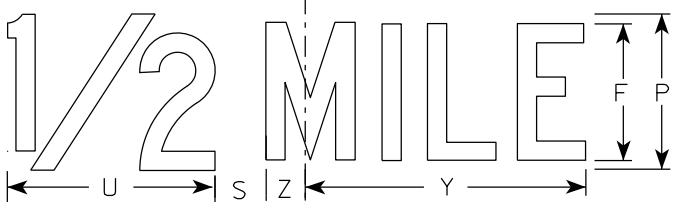
W20-3D



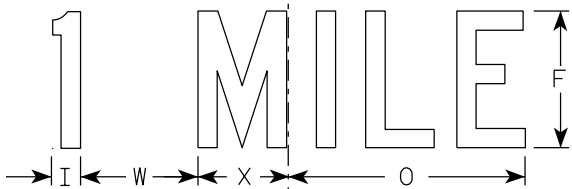
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1 and 2 are Series D.
 - Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

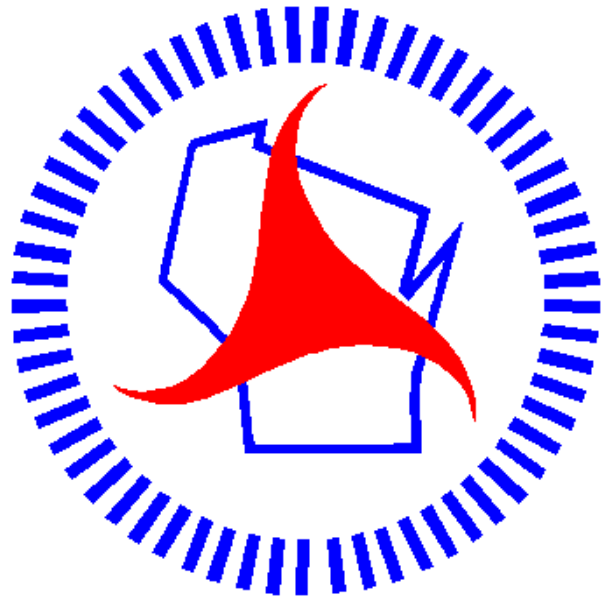
STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

Notes



Wisconsin Department of Transportation

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