SUP JUN 11

PROJECT ID: 1190-44-71

WITH:

COUNTY: DOUGLAS

33

ORDER OF SHEETS

TOTAL SHEETS = 158

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CITY OF SUPERIOR, BELKNAP STREET

HILL AVENUE - EAST 2ND STREET

USH 2

DOUGLAS COUNTY

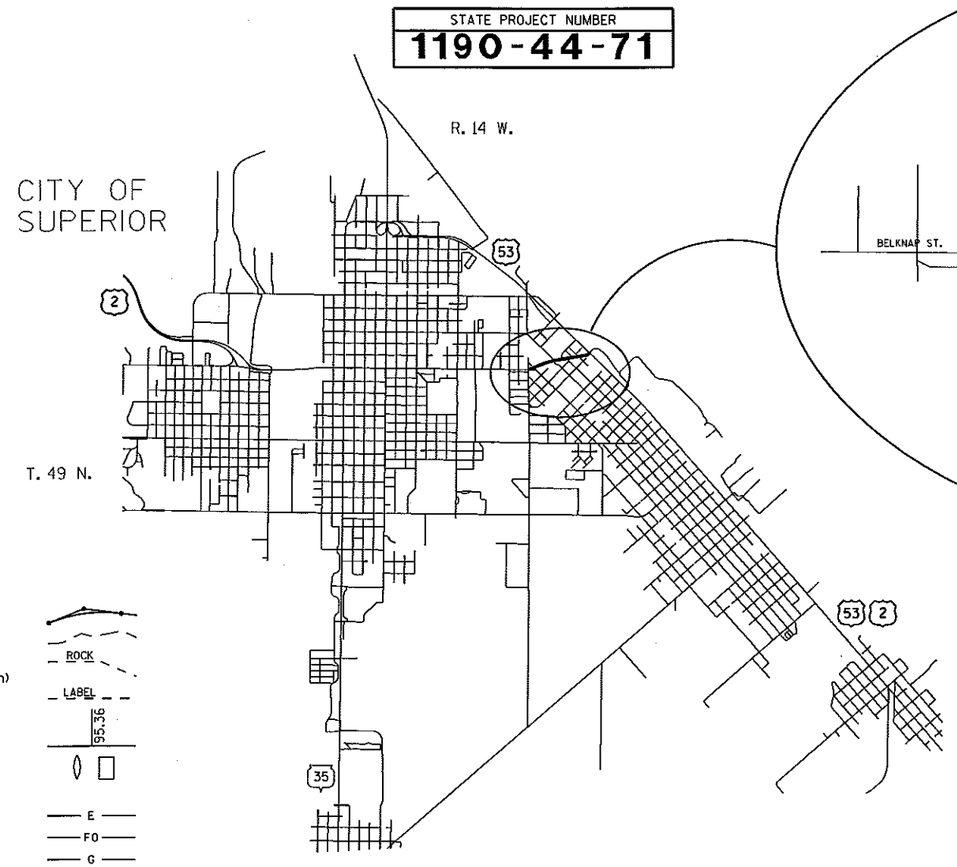
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1190-44-71	———	—

AS-BUILT PLAN

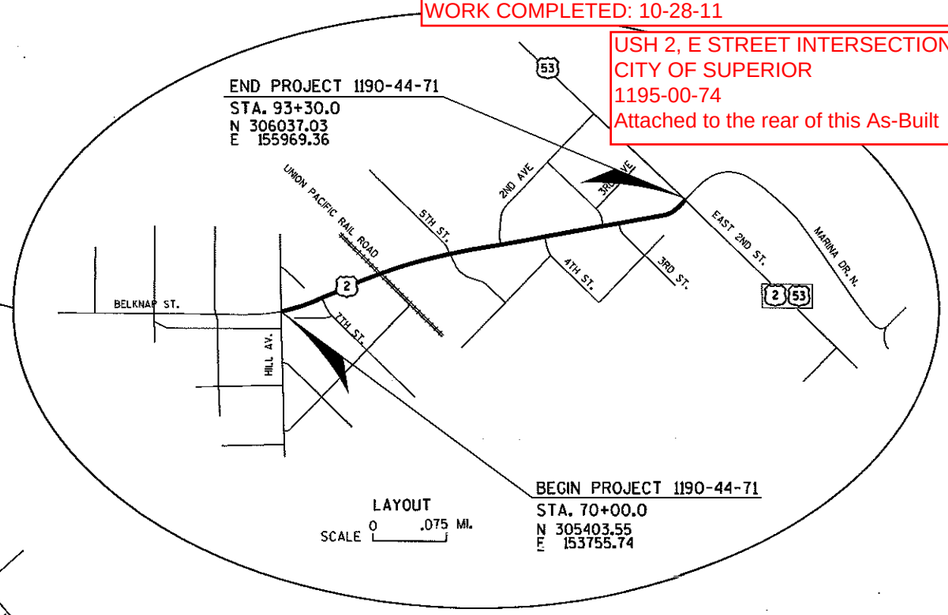
SUPERVISOR : David Ostrowski
PROJECT MANAGER: Phil Keppers
PROJECT LEADER: Brian Mattson
CONTRACTOR: Chippewa Concrete Service
WORK STARTED: 8-2-11
WORK COMPLETED: 10-28-11

USH 2, E STREET INTERSECTION
CITY OF SUPERIOR
1195-00-74
Attached to the rear of this As-Built

STATE PROJECT NUMBER
1190-44-71



LAYOUT
SCALE 0 .45 MI.



LAYOUT
SCALE 0 .075 MI.

BEGIN PROJECT 1190-44-71
STA. 70+00.0
N 305403.55
E 153755.74

DESIGN DESIGNATION

A.A.D.T. (2005)	=	8950
A.A.D.T. (2030)	=	11200
D.H.V.	=	1288
D.D.	=	58/42
T.	=	4.3
DESIGN SPEED	=	30 MPH
ESALS	=	1,435,753

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 (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

TOTAL NET LENGTH OF CENTERLINE = MI.

-"Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), DOUGLAS County."

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WIDOT NW REGION
Designer	BRIAN MATTSON
Project Manager	BRENDAN DIRKES PE
Regional Examiner	DONALD DAHLE
Regional Supervisor	ROBERT ANDERSON PE
C.O. Examiner	JANE ENGLEBRETSEN

APPROVED FOR THE DEPARTMENT
DATE: 11/1/10 (Signature)

E

SURVEY POINTS

CP459
N305660.06
E154637.44
Z626.960

MON2015
SURVEY NAIL E 4TH ST / F STREET
306463.59
154410.06
Z620.488

MON2016
SPIKE E 4TH ST / 7TH AVE
N304678.16
E156247.35
Z628.154

MON2017
BRASS CAP 9TH ST / 3RD AVE
N304420.99
E153955.87
Z631.276

MON2022
SURVEY NAIL WINTER ST / HILL AVE
N308023.40
E153695.32
616.428

CP1502
N300885.92
E158969.85
Z692.624

CP1694
N309179.71
E155183.92
Z606.256

CP1512
N310013.34
154359.50
Z604.651

CP100
N305556.17
E154870.11
Z719.781

CITY OF SUPERIOR CONTACT

TODD JANIGO
CITY OF SUPERIOR STREET DEPARTMENT
7417 HILL AVENUE
SUPERIOR, WI 54880
PHONE: (715) 394-2575

DOUGLAS COUNTY CONTACT

PAUL HALVERSON
DOUGLAS COUNTY HIGHWAY DEPTARTMENT
7417 COUNTY ROAD E
PO BOX 174
HAWTHORNE, WI 54842
PHONE: (715) 374-2575

DNR CONTACT

AMY CRONK
WDNR - NORTHWEST DISTRICT
HEADQUARTERS
810 WEST MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 635-4229

DIGGERS HOTLINE

Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

UTILITIES

CENTURYLINK
135 N 21ST STREET.
SUPERIOR, WI 54880
ATTN: STEVE HAUGE
PHONE: (715) 566-3879

SUPERIOR WATER LIGHT AND POWER
2915 HILL AVENUE
SUPERIOR, WI 54880
ATTN: AARON ANDERSON
PHONE: (715) 395-6317

CITY OF SUPERIOR SEWER DEPARTMENT
(SANITARY AND STORM SEWER)
51 E 1ST STREET.
SUPERIOR, WI 54880
ATTN: CHRIS CARLSON
PHONE: (715) 394-0392

CHARTER COMMUNICATIONS
640 GARFIELD AVENUE
DULUTH, MN 55802
ATTN: JOHN QUADE
PHONE: (218) 529-8042

GENERAL NOTES

THE STREET LIGHTING ALONG BELKNAP HAS LIGHT BASES VARING FROM 7" TO 24" BEHIND THE CURB HEAD. SPECIAL PAVING METHODS MAY BE NEEDED AT THESE LOCATIONS.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

CONTROL POINTS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM DOUGLAS COUNTY. BENCHMARK ELEVATIONS ARE REFERENCED TO NGVD 29.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE IMPERVIOUS AREAS, GRAVEL SURFACES, AND SODDED AREAS SHALL BE FERTILIZED, SEEDED AND EMATED.

NO TREE SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

THE EXACT LOCATION OF DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

INLET ELEVATIONS SHOWN ON THE STORM SEWER SHEETS ARE DEPRESSED 0.1 FT FROM GUTTER FLOW LINE ELEVATIONS.

CURB AND GUTTER RADII ARE SHOWN TO THE FLAG OF THE CURB.

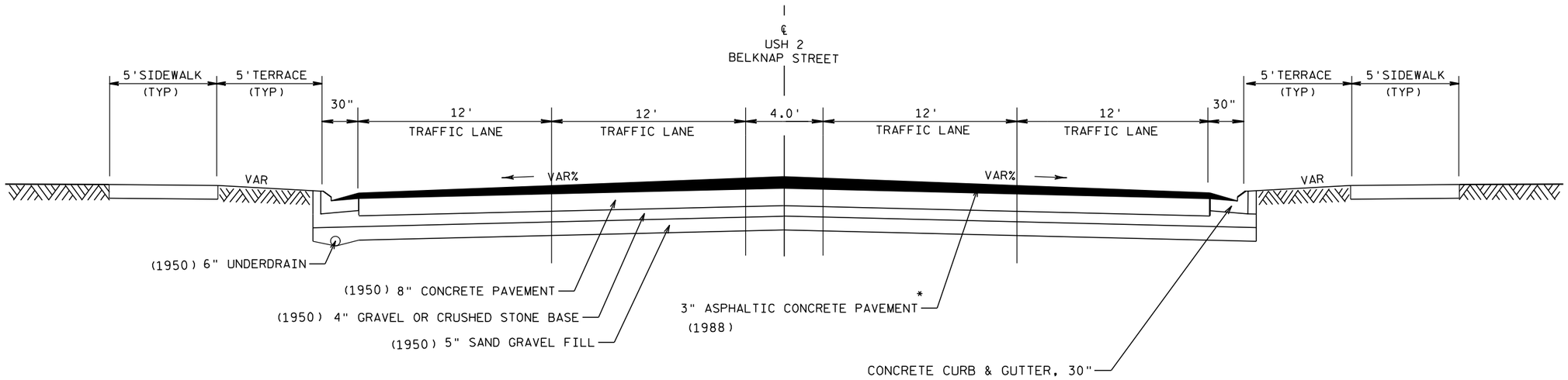
DOT CONTACTS

TRAFFIC: MORRIS LUKE 715-392-7886
RAILS: ANNA DAVEY 715-392-7960
UTILITIES: SUSAN HELLER 715-392-7933
DESIGN: BRIAN MATTSON 715-395-3035
1701 NORTH FOURTH STREET
SUPERIOR, WI 54880

RAIL ROAD CONTACT

UNION PACIFIC RAIL ROAD
ROOM 103
301 WEST LAKE STREET
NORTHLAKE, IL 60164
ATTN: RICHARD ELLISON
PHONE: (708) 649-5214

2

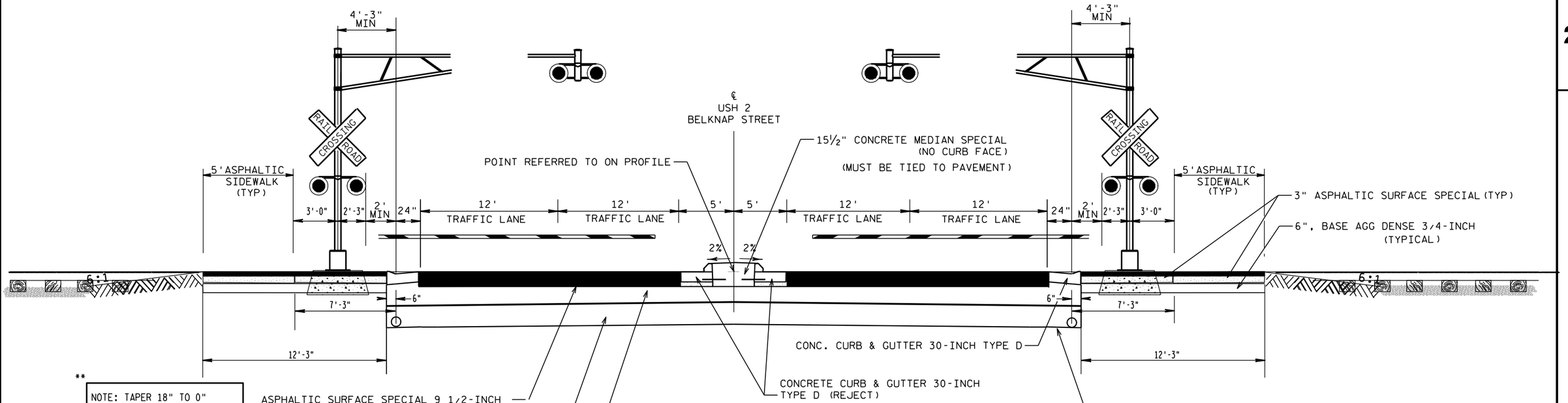


TYPICAL EXISTING SECTION

STATIONS 70+00 - 93+00

* STATION 71+50 - 91+50

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	TYPICAL SECTIONS	SHEET 3	E

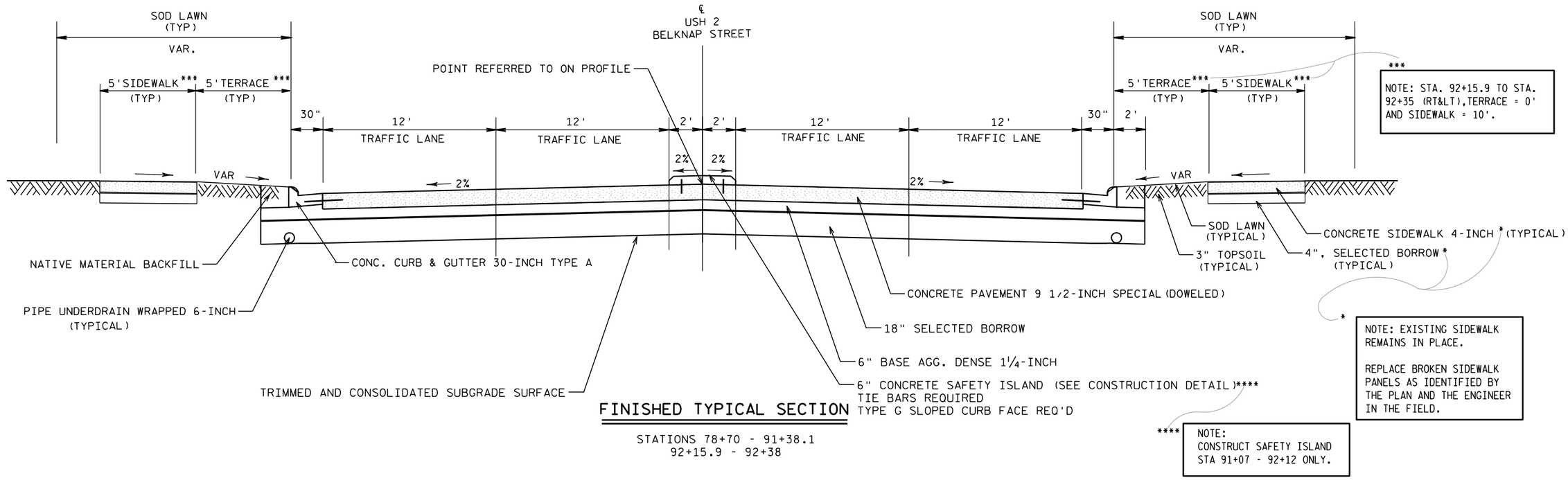


**

NOTE: TAPER 18" TO 0" AT A 10:1 SLOPE APPROACHING RR CROSSING.SIMILARLY,TAPER BACK TO 18" DEPTH AFTER RAIL CROSSING.

FINISHED TYPICAL SECTION

STATIONS 75+24.4 - 75+86.5



FINISHED TYPICAL SECTION

STATIONS 78+70 - 91+38.1
92+15.9 - 92+38

***

NOTE: STA. 92+15.9 TO STA. 92+35 (RT&LT),TERRACE = 0' AND SIDEWALK = 10'.

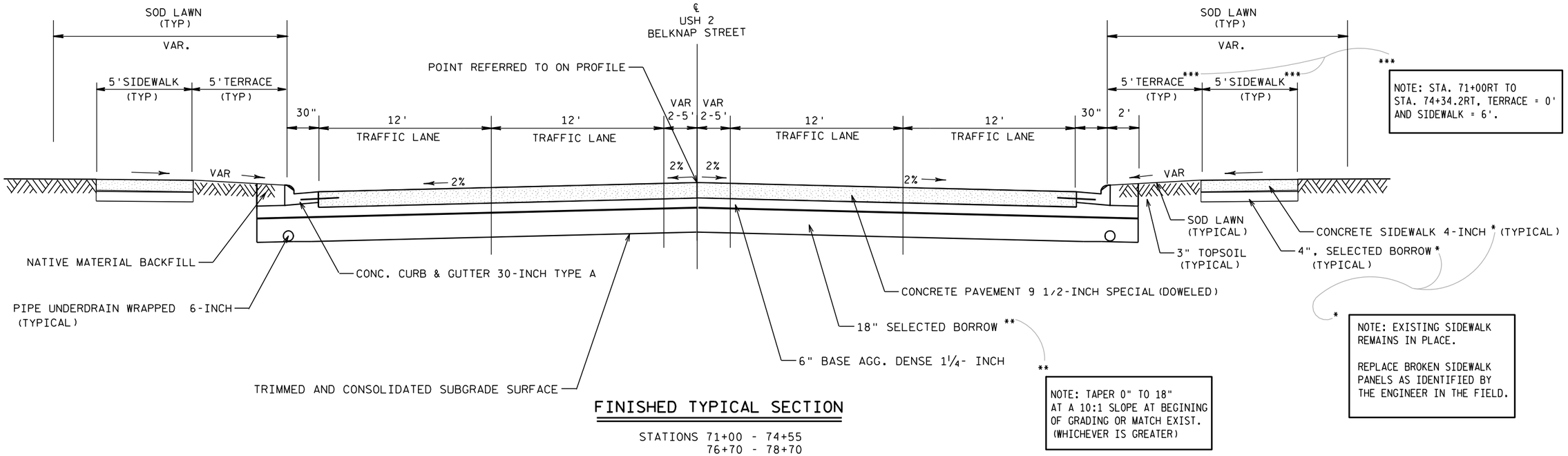
*

NOTE: EXISTING SIDEWALK REMAINS IN PLACE.

REPLACE BROKEN SIDEWALK PANELS AS IDENTIFIED BY THE PLAN AND THE ENGINEER IN THE FIELD.

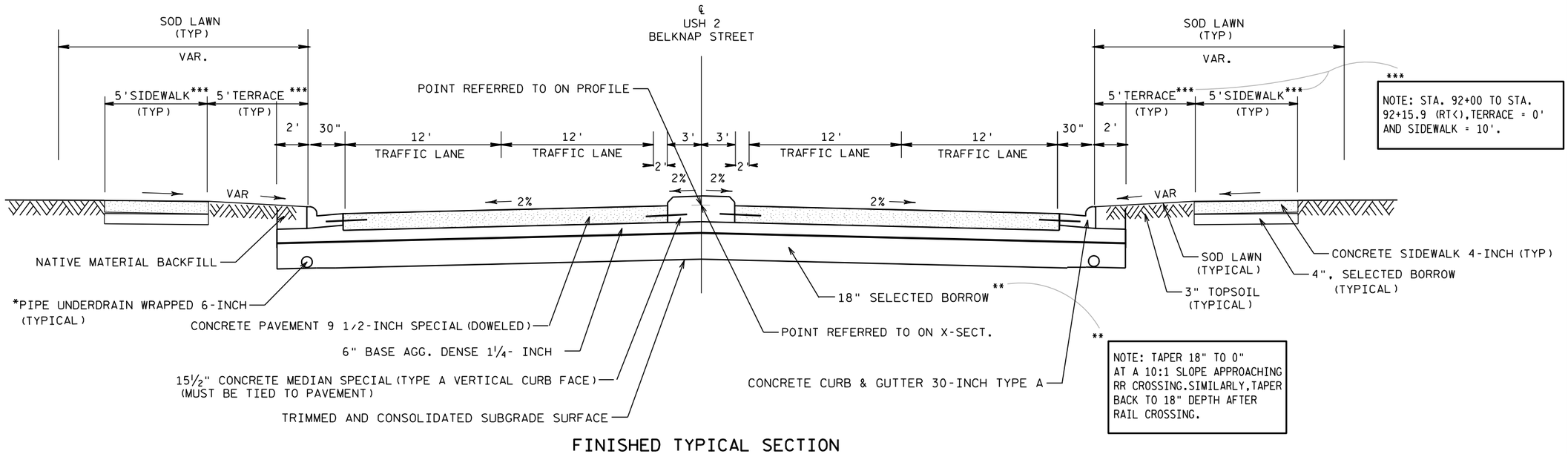
****

NOTE:
CONSTRUCT SAFETY ISLAND STA 91+07 - 92+12 ONLY.



FINISHED TYPICAL SECTION

STATIONS 71+00 - 74+55
76+70 - 78+70

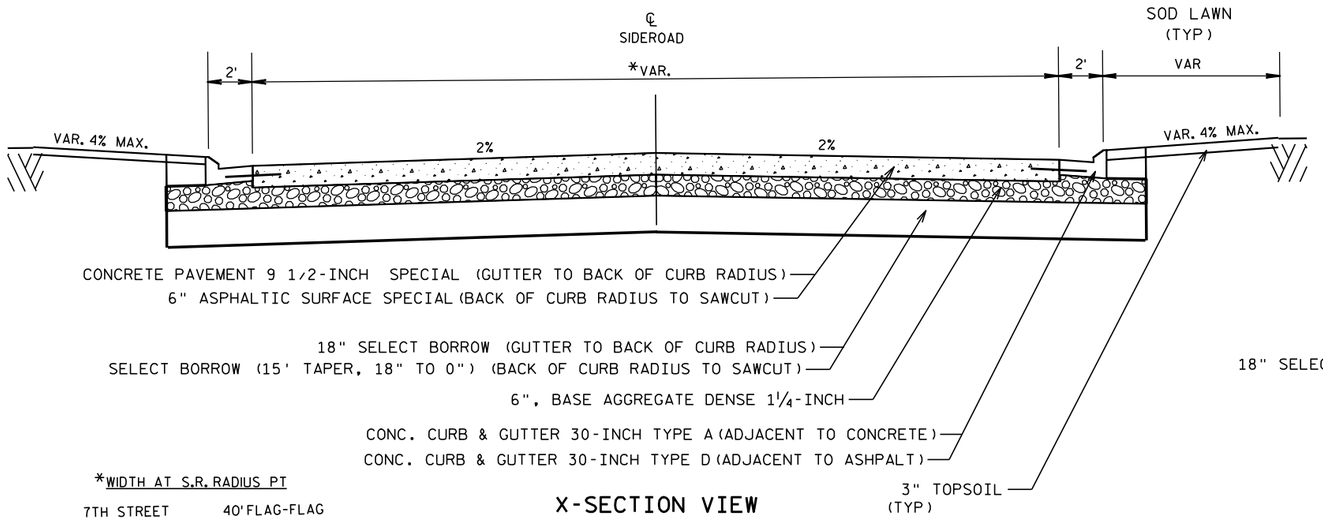


FINISHED TYPICAL SECTION

STATIONS 74+55 - 75+24.4
75+86.5 - 76+70
91+38.1 - 92+15.9

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	TYPICAL SECTIONS	SHEET 5	E

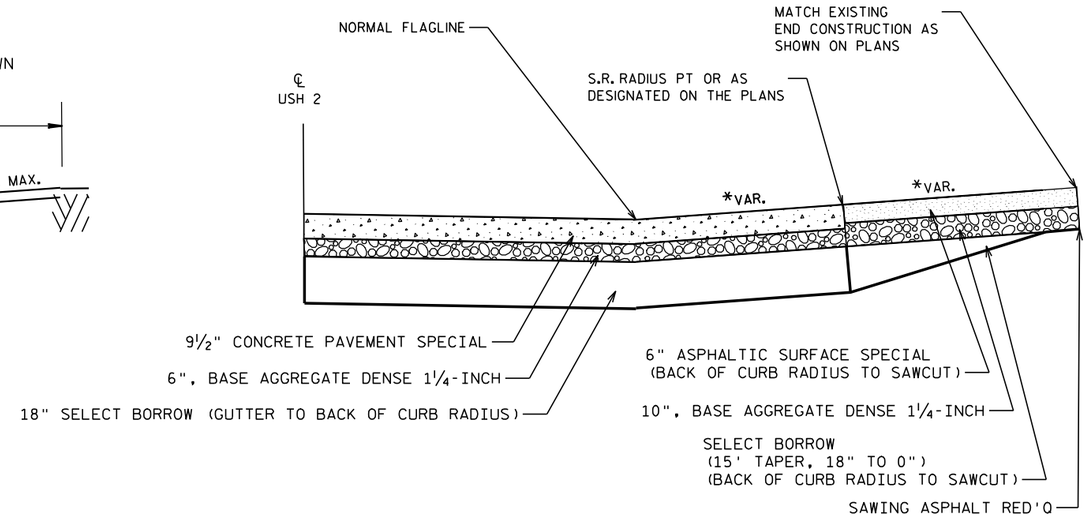
2



X-SECTION VIEW

*WIDTH AT S.R. RADIUS PT

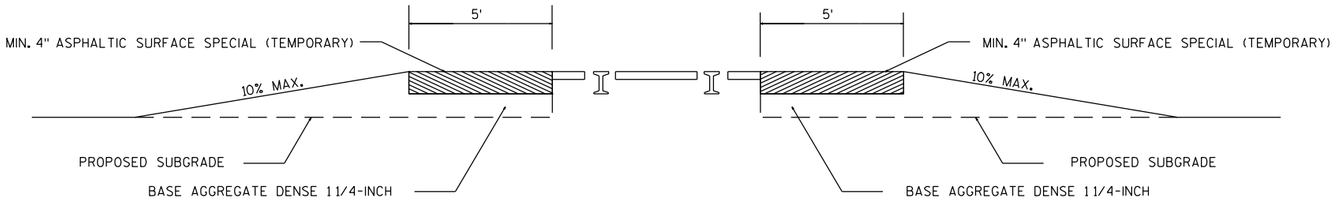
7TH STREET	40'FLAG-FLAG
5TH STREET LT	28'FLAG-FLAG
5TH STREET RT	40'FLAG-FLAG
2ND AVENUE	32'FLAG-FLAG
4TH STREET	32'FLAG-FLAG
3RD STREET LT	32'FLAG-FLAG
3RD STREET RT	20'FLAG-FLAG



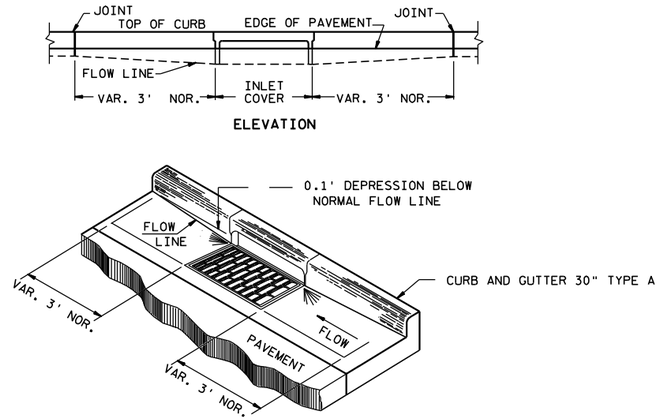
*SEE INTERSECTION DETAILS FOR SLOPES

PROFILE VIEW

TYPICAL SIDE ROAD FINISHED SECTION

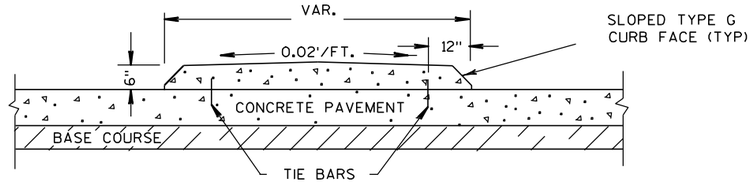


TEMPORARY RAILROAD CROSSING

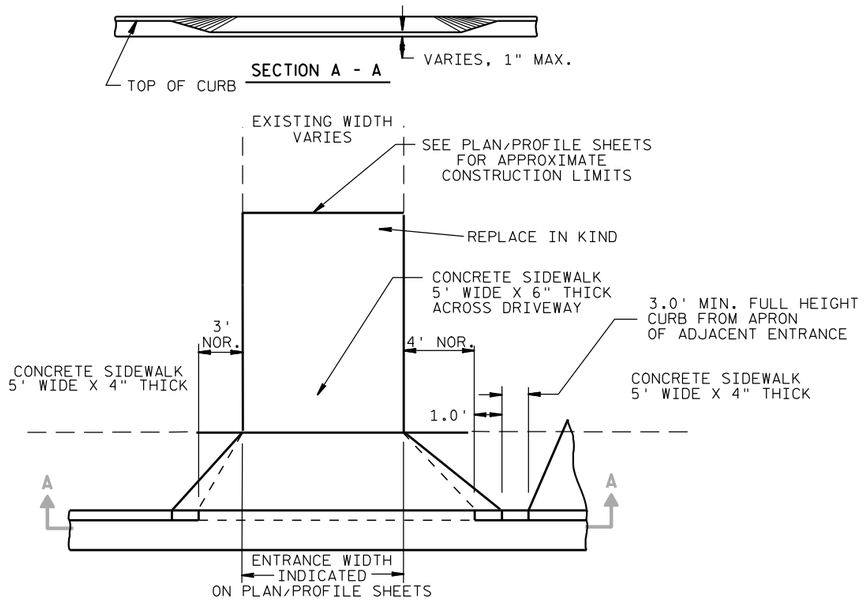


INLETS AT CURB AND GUTTER

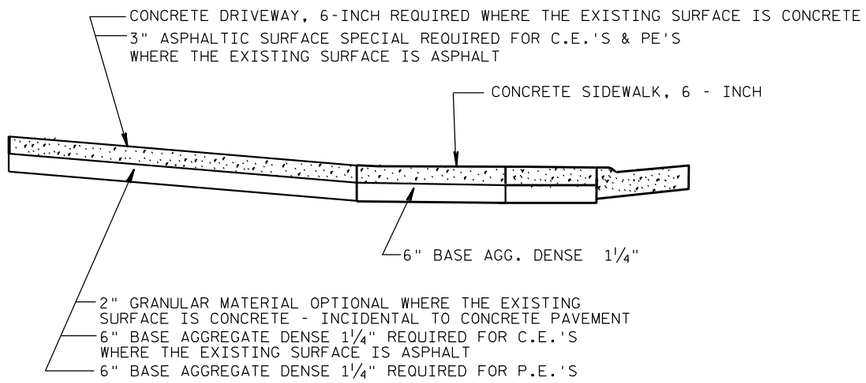
NOTE: ISLAND TIED TO CONCRETE BASE WITH NO. 5 X 10" EPOXY COATED REINF. BARS 6" INTO BASE & 24" C-C



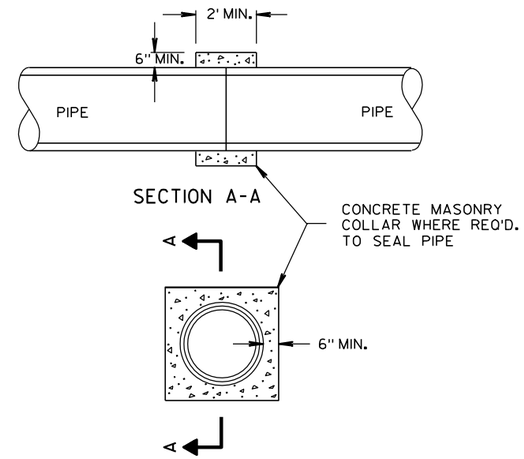
CONCRETE SAFETY ISLAND



PLAN VIEW

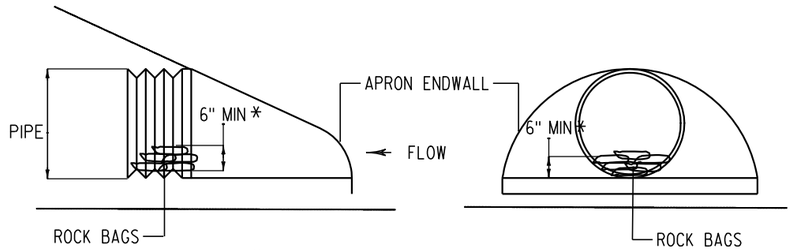


DETAIL FOR C.E.'S, ALLEY'S & P.E.'S



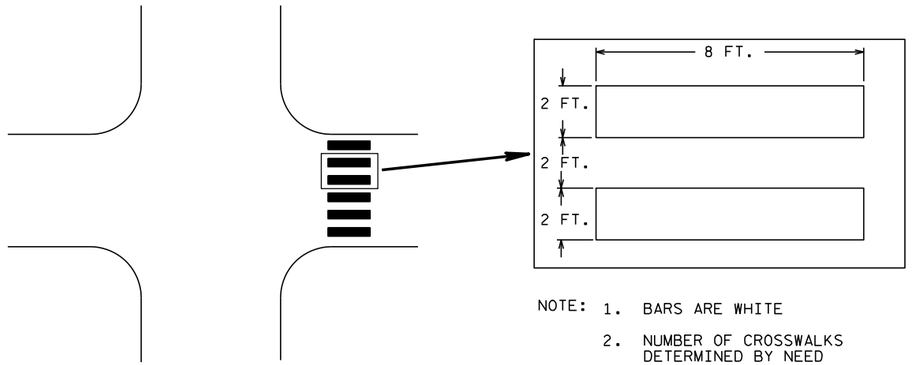
CONCRETE COLLAR DETAIL

2



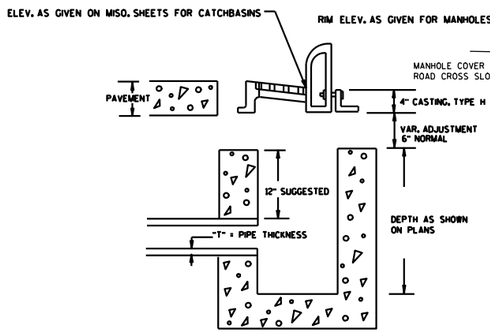
* OR AS DIRECTED BY THE ENGINEER

CULVERT PIPE CHECK

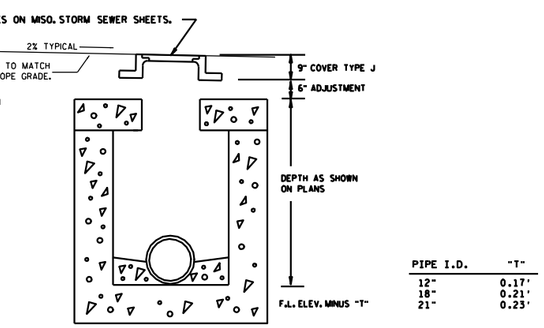


NOTE:
1. BARS ARE WHITE
2. NUMBER OF CROSSWALKS DETERMINED BY NEED
3. NUMBER OF BARS IS DETERMINED BY HIGHWAY WIDTH

DETAIL FOR PAVEMENT MARKING, CROSSWALK, EPOXY SPECIAL

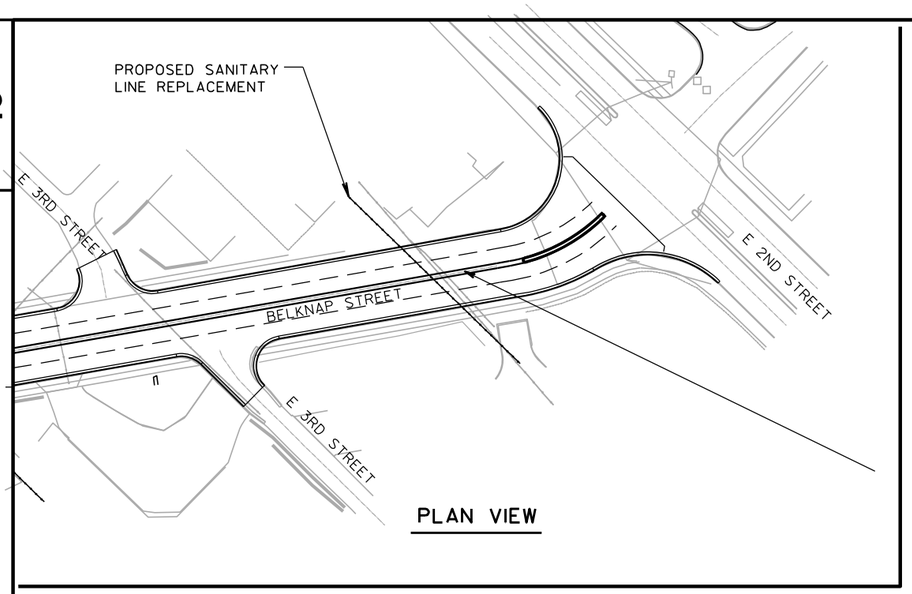


CATCH BASIN DETAIL

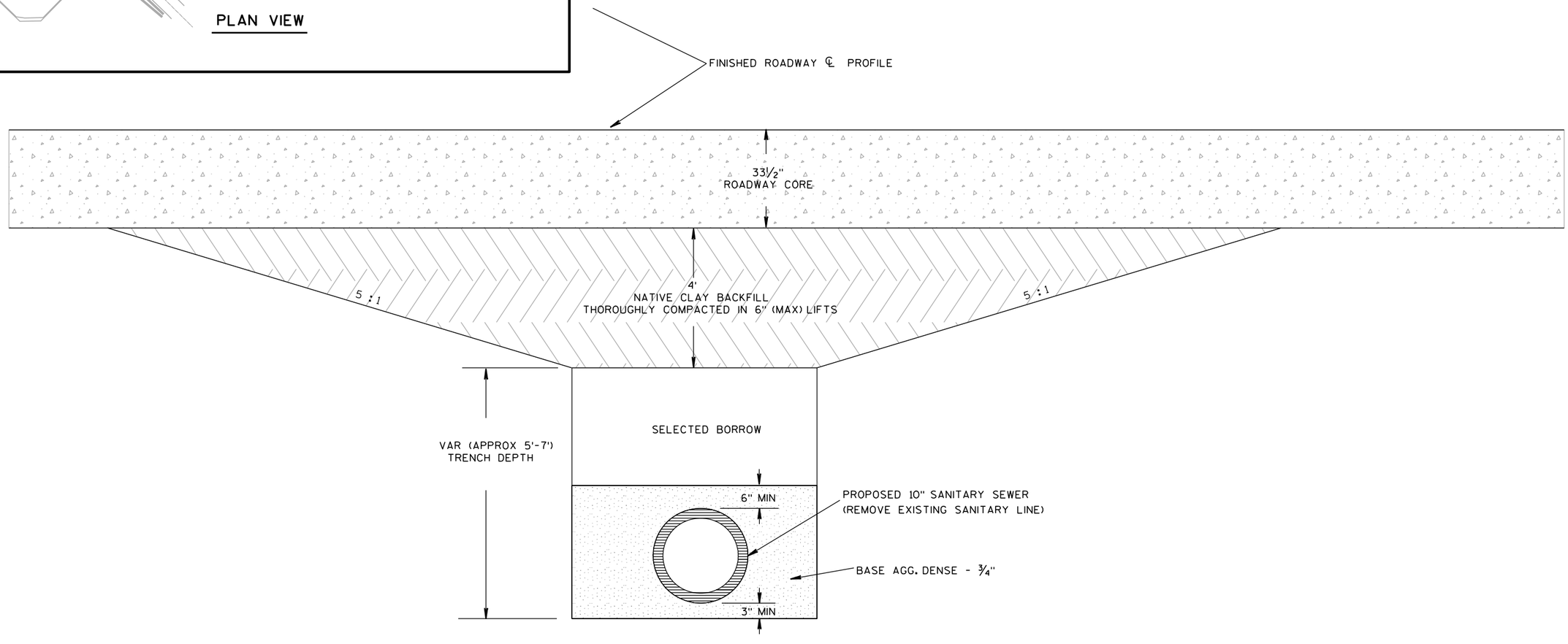


PIPE I.D.	"T"
12"	0.17'
18"	0.21'
21"	0.23'

MANHOLE DETAIL



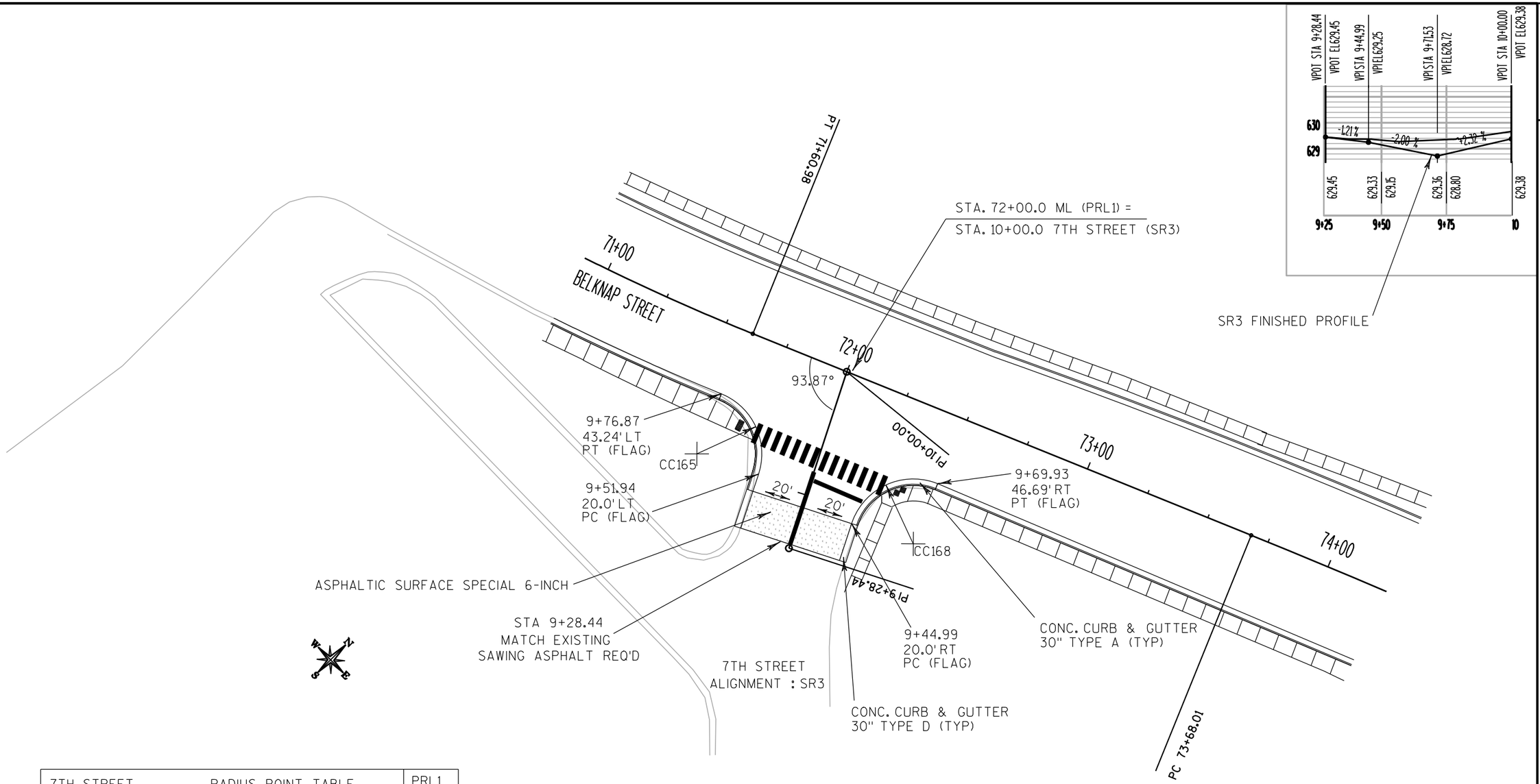
PLAN VIEW



SANITARY SEWER REPLACEMENT
CROSS SECTIONAL VIEW

STATION 90+60

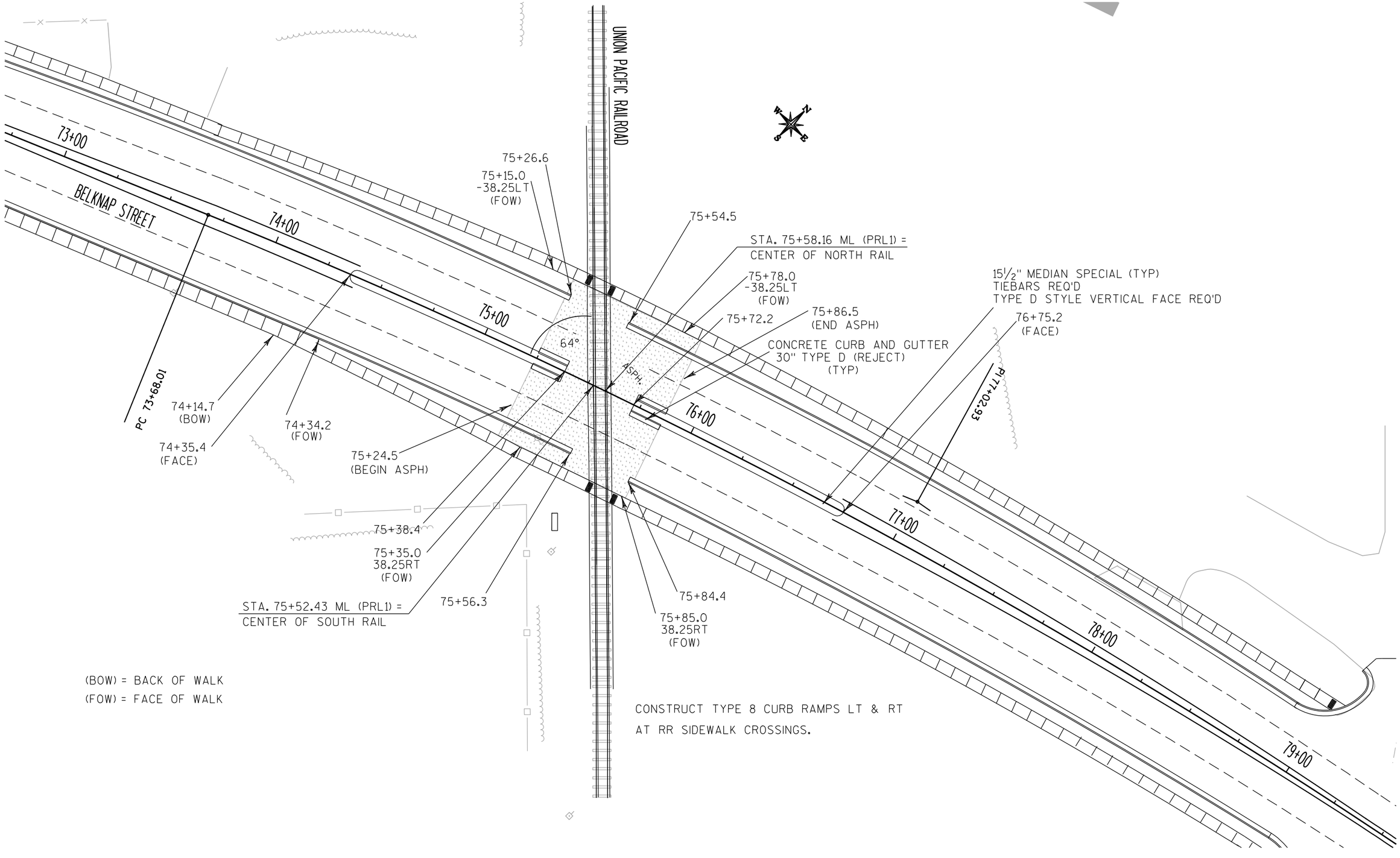
PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST.)	COUNTY: DOUGLAS	CONSTRUCTION DETAILS	SHEET 10	E



7TH STREET RADIUS POINT TABLE				PRL1 / SR3	
POINT	STATION	OFFSET	RADIUS	COORDINATES	
CC165	71+58.49	51.0 RT	25.0'	N 305406.05	
	9+51.94	45.0 LT		E 153926.18	
CC168	72+48.61	51.85 RT	25.0'	N 305440.97	
	9+44.99	45.0 RT		E 154009.42	

CONSTRUCT TYPE 2 CURB RAMPS LT AND RT
AT 7TH ST SIDEWALK CROSSING.

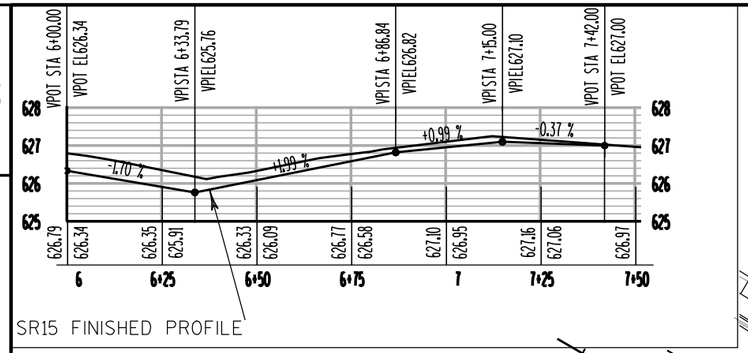
2



(BOW) = BACK OF WALK
(FOW) = FACE OF WALK

CONSTRUCT TYPE 8 CURB RAMPS LT & RT
AT RR SIDEWALK CROSSINGS.

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	INTERSECTION DETAILS	SHEET 12	E



5TH STREET (LT)
ALIGNMENT : SR15

STA 7+42.0
MATCH EXISTING
SAWING ASPHALT REQ'D

PI 7+71.98

ASPHALTIC SURFACE SPECIAL 6-INCH

11' 11'

6+86.84
14.0' LT
PT (FLAG)
(IF EXTENDED)

6+65.79
52.48' LT
PC (FLAG)

10:1

14' 14'

CC153

R=6.7'
(BOC)

78+00

BELKNAP STREET

79+00

STA. 79+59.33 ML (PRL1) =
STA. 10+00.0 5TH STREET (SR5)

56.17°

6+35.12
14.0' RT
PT (FLAG)

CC156

6+14.51
24.85' RT
PC (FLAG)

STA. 79+67.38 ML (PRL1) =
STA. 6+00.0 5TH STREET (SR15)

PI 6+00.00

9+74.22
50.13' LT
PT (FLAG)

90.51°

80+00

CC162

9+73.03
45.73' RT
PT (FLAG)

9+44.22
20.0' LT
PC (FLAG)

20' 20' 20' 20'

PI 10+00.00

CC159

PT 9+41.83

ASPHALTIC SURFACE SPECIAL 6-INCH

STA 8+70
MATCH EXISTING
SAWING ASPHALT REQ'D

PI 8+91.87

9+48.04
20.0' RT
PC (FLAG)

PT 80+34.81

81+00

PC 8+30.55

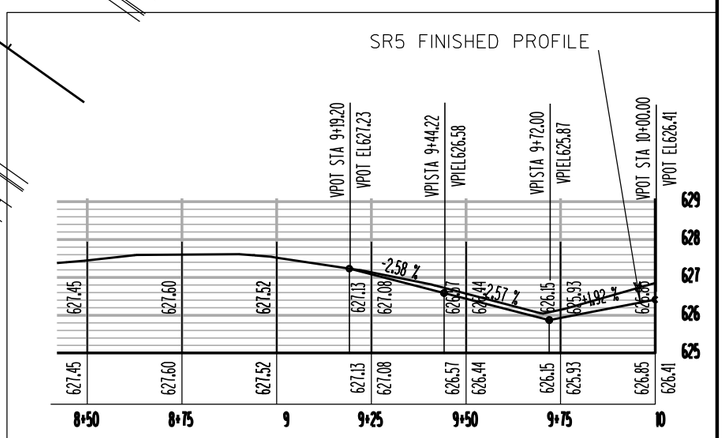
PI 8+01.82

5TH STREET (RT)
ALIGNMENT : SR5

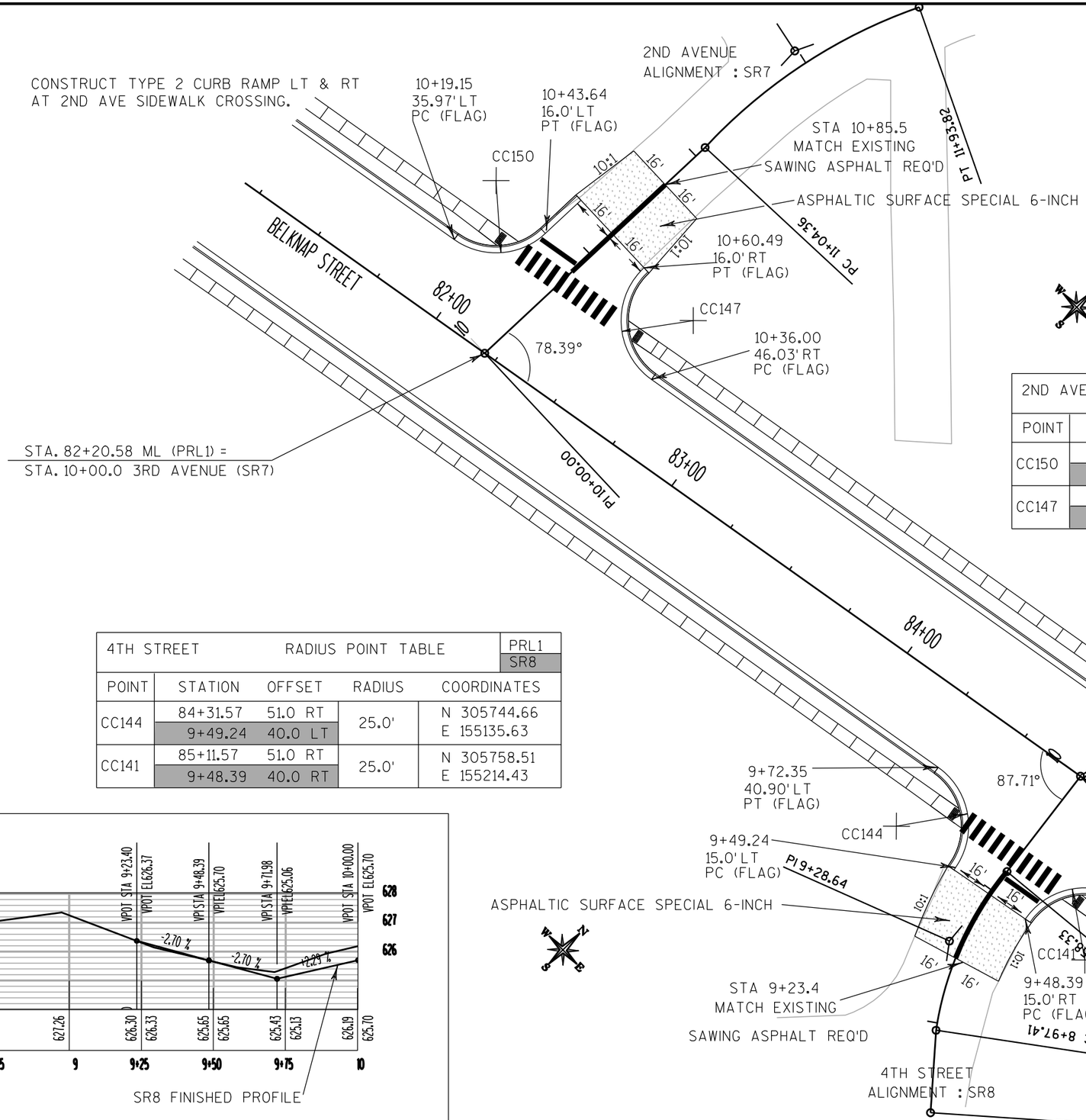
CONSTRUCT TYPE 2 CURB RAMPS LT & RT
AT 5TH ST SIDEWALK CROSSINGS.
CONSTRUCT TYPE 2 CURB RAMPS RT
AT USH 2 SIDEWALK CROSSING.

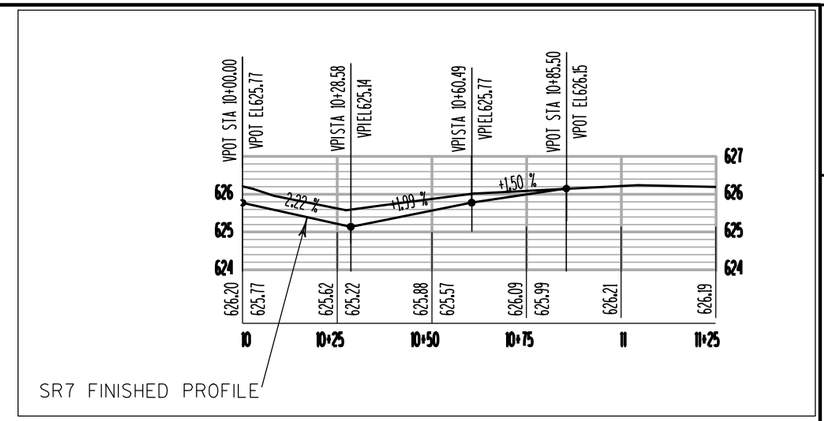
5TH STREET (LT) RADIUS POINT TABLE				PRL1 SR15
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC153	78+87.70	51.0 LT	25.0'	N 305746.79
	6+86.84	39.0 LT		E 154580.47
CC156	79+79.66	51.0 LT	25.0'	N 305766.23
	6+35.12	39.0 RT		E 154672.02

5TH STREET (RT) RADIUS POINT TABLE				PRL1 SR5
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC162	79+09.08	56.0 RT	30.0'	N 305647.10
	9+44.22	50.0 LT		E 154624.81
CC159	80+05.84	51.0 RT	25.0'	N 305670.95
	9+48.04	45.0 RT		E 154716.85



PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	INTERSECTION DETAILS	SHEET 13	E

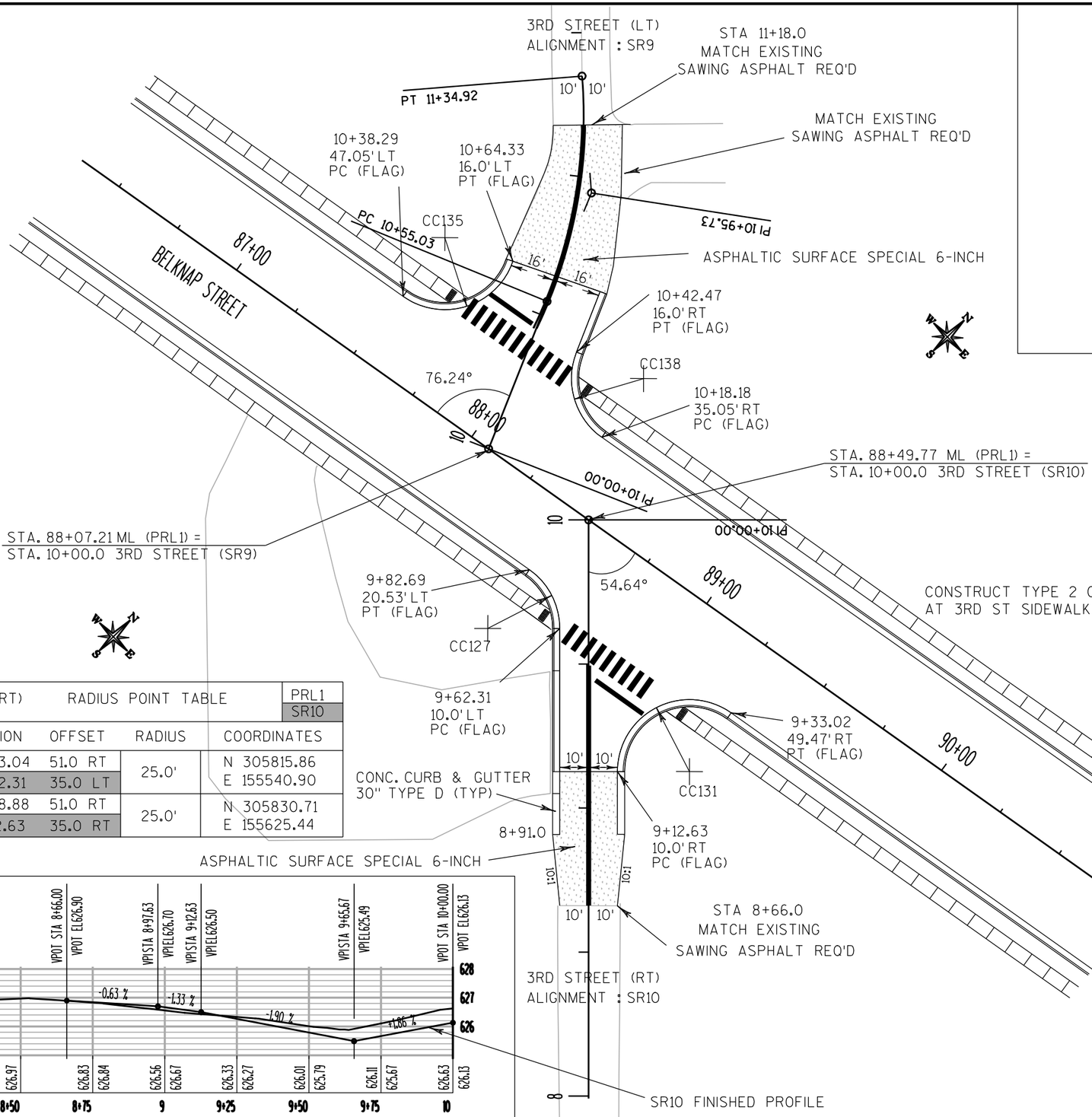


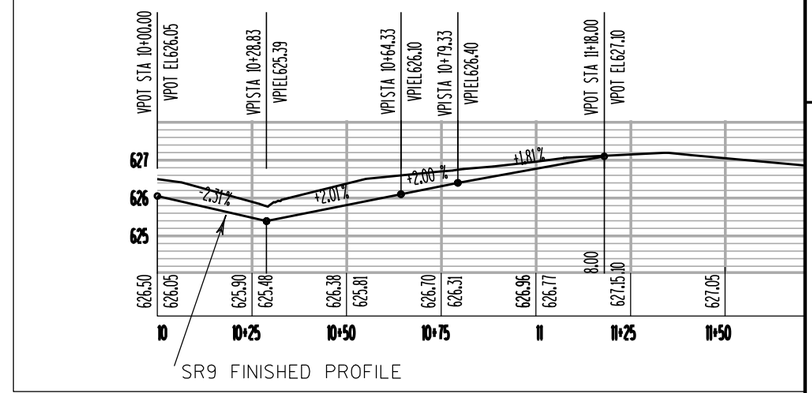


2ND AVENUE RADIUS POINT TABLE				PRL1 SR7
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC150	81+89.21	51.0 LT	25.0'	N 305803.19
	10+43.64	41.0 LT		E 154879.27
CC147	82+72.92	51.0 LT	25.0'	N 305817.67
	10+60.49	41.0 RT		E 154961.73

4TH STREET RADIUS POINT TABLE				PRL1 SR8
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC144	84+31.57	51.0 RT	25.0'	N 305744.66
	9+49.24	40.0 LT		E 155135.63
CC141	85+11.57	51.0 RT	25.0'	N 305758.51
	9+48.39	40.0 RT		E 155214.43

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	INTERSECTION DETAILS	SHEET 14	E

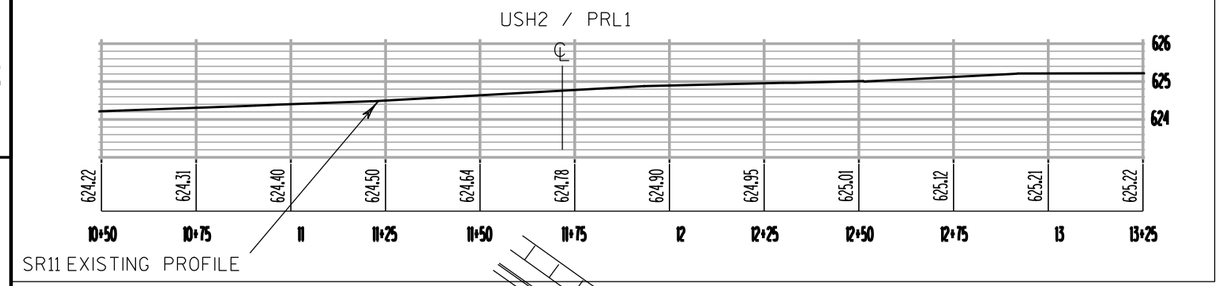




3RD STREET (LT) RADIUS POINT TABLE				PRL1 SR9
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC135	87+52.40	51.0 LT	25.0'	N 305900.64 E 155433.97
	10+64.33	41.0 LT		
CC138	88+36.93	51.0 LT	25.0'	N 305915.26 E 155517.23
	10+42.47	41.0 RT		

3RD STREET (RT) RADIUS POINT TABLE				PRL1 SR10
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC127	88+43.04	51.0 RT	25.0'	N 305815.86 E 155540.90
	9+62.31	35.0 LT		
CC131	89+28.88	51.0 RT	25.0'	N 305830.71 E 155625.44
	9+12.63	35.0 RT		

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	INTERSECTION DETAILS	SHEET 15	E



CONCRETE PAVEMENT
9½- INCH SPECIAL

2

2

CONSTRUCT TYPE 2
CURB RAMPS SW QUAD.

92+42.66
100.34' LT
PT (FLAG)

13+07.3

EAST 2ND STREET

PI 13+41.79

PI 13+36.50

13+07.3
MEDIAN
(SEE SAFETY
ISLAND DETAIL)
TIE BARS REQ'D
SLOPED TYPE G
CURB FACE REQ'D
MATCH EXISTING

BONG MEMORIAL DRIVE

PI 11+65.64

CONSTRUCT TYPE 2
CURB RAMPS NW QUAD.

90+00

BELKNAP STREET

91+24.49
27.0' LT
PC (FLAG)

PC 91+27.09

CC171

CC177

12+61.4

PT 11+09.02

12+53.4

PI 10+73.64

PT 92+16.60

12+20.4

12+18.3

PC 10+37.22

CONCRETE MEIAN
BLUNT NOSE REQ'D

PI 10+83.38

91+00

92+00

93+00

10

PI 91+16.39

91+27.00
26.00' RT
PC (FLAG)

91+38

PI 91+73.29

91+84.05
29.00' RT
PT/PC (FLAG)

92+16

CC174

MEDIAN
(SEE SAFETY
ISLAND DETAIL)
TIE BARS REQ'D
SLOPED TYPE G
CURB FACE REQ'D
PAID AS SIDEWALK 6"

92+43.88
106.98' RT
PT (FLAG)

CONSTRUCT TYPE 1
CURB RAMP SE QUAD.

MARINA DRIVE N.

PI 10+00.00

PT 11+22.80

PI 10+00.00

PI 93+54.19

PC 10+43.91

CONSTRUCT TYPE 2
CURB RAMPS NE QUAD.

STA. 92+55.25 ML (PRL1) =
STA. 11+71.71 2ND STREET SB (SR11)

2ND STREET
ALIGNMENT : SR11 (SB)
ALIGNMENT : SR12 (NB)

PI 10+00.00

PI 10+00.00

2ND STREET RADIUS POINT TABLE				PRL1 / SR11
POINT	STATION	OFFSET	RADIUS	COORDINATES
CC171	91+24.49	88.0 LT	61.0	N 306001.46
	12+72.12	73.0 LT		E 155794.05
CC174	91+84.05	114.0 RT	85.0	N 305839.69
	10+64.80	97.0 LT		E 155925.92
CC177	92+27.09	148.51 LT	180.0	N 306067.88
	13+20.39	27.28 LT		E 155791.33

STA 71+17.91 27.5' LT
CB 3-H
EL GRATE FL 629.120
EL 12" DISCH 626.40
EL SUMP 624.90
EL UNDERDRAIN E&W INVERT 626.45
(REMOVE EXISTING CB)

STA 72+33.91 27.9 'LT
CB 3-H
EL GRATE FL 628.535
EL 12" DISCH 625.71
EL SUMP 624.21
EL UNDERDRAIN E&W INVERT 625.88
8' - SS PIPE REINF. CONC.
CL IV 12-INCH REQ'D
(REMOVE EXISTING CB)

STA 73+66.18 30.63' LT
CB 3-H
EL GRATE FL 628.336
EL 12" DISCH 625.30
EL SUMP 623.80
EL UNDERDRAIN E&W INVERT 625.68
4' - SS PIPE REINF. CONC.
CL IV12-INCH REQ'D
(REMOVE EXISTING CB)

HILL AVENUE

USH 2 / BELKNAP STREET

70+00 71+00 72+00 73+00 74+00 75+00

ADD 1- TYPE 3 Inlet and H-casting. Connect to 8X with 12" SS Conc. Pipe

STA 71+64.51 28.267 RT
CB 1-H
EL GRATE FL 628.802
EL 12" INVERT NW 625.95
EL 12" INVERT S 628.18
EL 12" DISCH 625.55
EL SUMP 624.05
EL UNDERDRAIN E&W INVERT 626.15
(REMOVE EXISTING CB)

STA 72+20.78 32.63' RT
EXISTING MH (4')

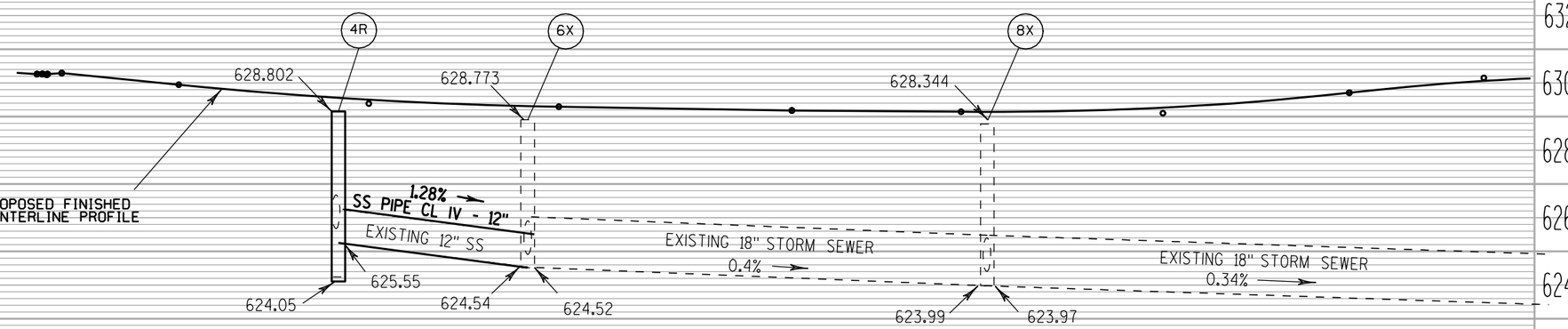
STA 71+65.78 87.57' RT
EXISTING CB (TYPE 3)
(CLEANING CB REQ'D)

EAST 7TH STREET

STA 73+57.88 27.88' RT
(REMOVE EXISTING CB)
(TYPE 3)

STA 73+57.43 31.6' RT
EXISTING CB I ~~-H~~ (RECONSTRUCT REQ'D)
Adjust existing Type J cover
EL 12" INVERT N 624.54
EL 18" INVERT W 623.99
EL 18" DISCH 623.97
EL SUMP 623.98
EL UNDERDRAIN E&W INVERT 625.69

NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CLIV.



PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET 17	E

2

NWS

UNION PACIFIC RAIL ROAD

EAST 5TH STREET

9X STA 75+25.84 35.244' RT
MH 1-J
EL GRATE FL 630.414
EL 12" INVERT N 625.2
EL 18" INVERT W 623.40
EL 18" DISCH 623.42
EL SUMP 623.414

9D STA 75+25.84 60.41' RT
14' - SS CL IV - 12"
12" AEW REQ'D
1 - PIPE GRATE REQ'D

STA 76+42.91 32.03' RT
EXISTING MH (4')
ADJUSTMENT REQ'D
10X

NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CL IV.

STA 78+94.50 28.47' LT
CB 3-H
11L
EL GRATE FL 626.306
EL 12" DISCH 623.73
EL SUMP 622.23
EL UNDERDRAIN E&W INVERT 623.65
8' - SS PIPE REINF. CONC.
CL IV 12-INCH REQ'D
(REMOVE EXISTING CB)

12D STA 79+19.5 62.5 RT
AEW W/ PIPE GRATE REQ'D

STA 80+00 62.5' RT
AEW W/ PIPE GRATE REQ'D
14D

14Z STA 80+11.6 33.63' RT
MH 1-J
EL GRATE 626.065
EL 12" INVERT S 623.4
EL 21" INVERT W 622.01
EL 21" DISCH 622.03
EL SUMP 622.02
EL UNDERDRAIN E&W INVERT 622.59

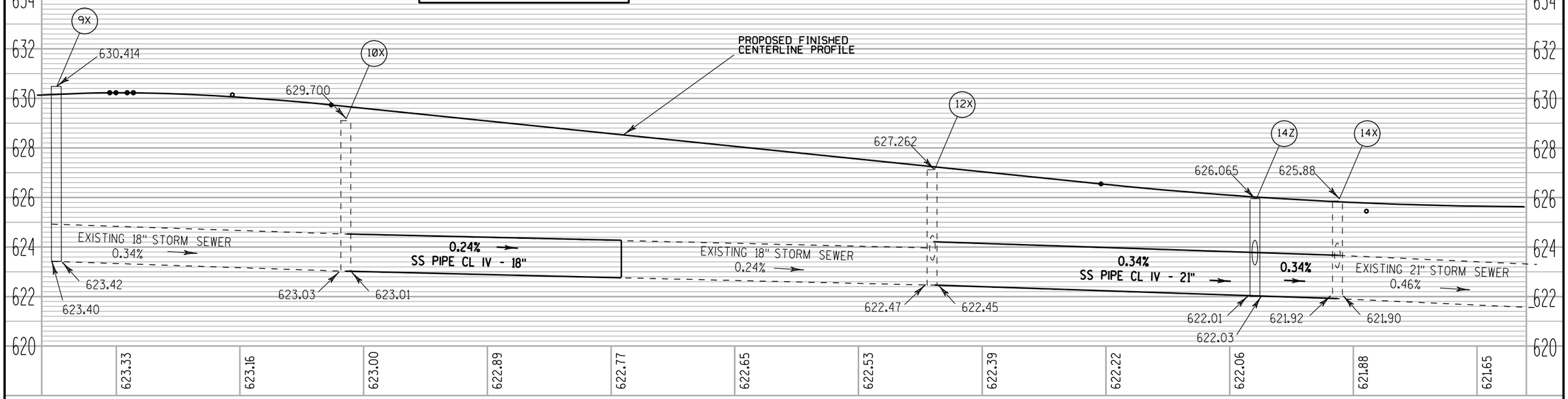
SSMH6289
SSMH6287
SSMH6322

STA 78+82.54 27.89' RT
CB 1 - H
12R
EL GRATE FL 626.44
EL INVERT N 622.97
EL 12" DISCH 622.52
EL SUMP 621.02
EL UNDERDRAIN E&W INVERT 623.78
(REMOVE EXISTING CB)

12X STA 78+79.82 33.13' RT
MH ADJUSTMENT REQ'D
EX.MH REQUIRES HOLE KNOCKOUT TO ACCEPT 12" SE PIPE (INCIDENTAL TO SS PIPE)

STA 80+41.16 27.5' RT
CB1 - E
14R
EL GRATE FL 625.081
EL 12" DISCH 622.30
EL SUMP 620.80
EL UNDERDRAIN E&W INVERT 622.421
(REMOVE EXISTING CB)

14X STA 80+43.66 32.86' RT
EXISTING MH (4')
ADJUSTMENT REQ'D



PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET 18	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\022502X_ss.dgn
PLOT DATE : 24-NOV-2010 15:10
PLOT BY : dotbxm
PLOT NAME :
PLOT SCALE : 40:1
WISDOT/CADDS SHEET 41a

STA 81+30.75 63.23' LT
EXISTING 12" YARD DRAIN

13Y

13L

STA 81+26.18 27.5' LT
CB 3-H
EL GRATE FL 624.876
EL 12" INVERT N 623.17
EL 12" DISCH 622.20
EL SUMP 621.08
EL UNDERDRAIN E&W INVERT 622.22
(REMOVE EXISTING CB)

STA 85+53.74 27.5' LT
CB 3-H
EL GRATE FL 624.863
EL 12" DISCH 621.22
EL SUMP 619.72
EL UNDERDRAIN E&W INVERT 622.21
(REMOVE EXISTING CB)

15L

STA 86+29.91 33.27' RT
EXISTING MH (4')

22X

CAUTION

STA 81+24.84 33.16' RT
EXISTING MH (4')

16X

16R

STA 81+26.12 27.5' RT
CB 3-H
EL GRATE FL 624.876
EL 12" INVERT N 621.8
EL 12" DISCH 621.8
EL SUMP 619.68
EL UNDERDRAIN E&W INVERT 622.22
(REMOVE EXISTING CB)

STA 83+95.54 27.5' RT
CB 3-H
EL GRATE FL 625.047
EL 12" DISCH 621.86
EL SUMP 620.36
EL UNDERDRAIN E&W INVERT 622.39
(REMOVE EXISTING CB)

18R

18X

STA 83+95.75 33.10' RT
EXISTING MH (4')

STA 85+16.80 33.14' RT
EXISTING MH (4')

20X

20R

STA 85+14.65 27.5' RT
CB 1-H
EL GRATE FL 624.908
EL 12" INVERT NE 620.75
EL 12" DISCH 620.40
EL SUMP 618.90
EL UNDERDRAIN E&W INVERT 622.25
(REMOVE EXISTING CB)

STA 86+32.65 27.5' RT
CB 1-H
EL GRATE FL 624.786
EL 12" DISCH 621.12
EL SUMP 619.62
EL UNDERDRAIN E&W INVERT 622.13
(REMOVE EXISTING CB)

22R

NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CL IV.

PROPOSED FINISHED CENTERLINE PROFILE

EXISTING 21" SS
0.46%

EXISTING 21" STORM SEWER
0.41%

EXISTING 21" STORM SEWER
0.74%

EXISTING 21" STORM SEWER
0.12%

EXISTING 21" SS
0.46%

625.68 621.55 621.53

625.85 622.45 622.43

625.70 619.55 619.53

625.59 619.41 619.39

621.65 621.44 621.23 621.03 620.83 620.63 620.41 620.04 619.66 619.50 619.44 619.35

81 81+50 82 82+50 83 83+50 84 84+50 85 85+50 86 86+50

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET 19	E

STA 87+31.62 49.30' LT
EXISTING YARD DRAIN
17Y

17L
STA 87+50.10 27.5' LT
CB 3-H
EL GRATE FL 625.107
EL 12" INVERT NW 621.39
EL 12" DISCH 620.75
EL SUMP 619.25
EL UNDERDRAIN E&W INVERT 622.45
(REMOVE EXISTING CB)

STA 92+12.20 49.5' LT
CB 3-H
19L
EL GRATE FL 624.377
EL 12" DISCH 620.03
EL SUMP 618.53
EL UNDERDRAIN E&W INVERT 621.78
(REMOVE EXISTING CB)

26R installed @ 30.88' RT

STA 91+56.11 28.88 RT
CB 3-H REU'D
26R
EL GRATE FL 624.466
EL 12" DISCH 621.46
EL SUMP 619.96
EL UNDERDRAIN E&W INVERT 621.83
(REMOVE EXISTING CB)

STA 87+51.65 34.58' RT
EXISTING MH (4')
24X

STA 91+57.06 38.48' RT
EXISTING MH (4')
26X

26C

26B

CAUTION

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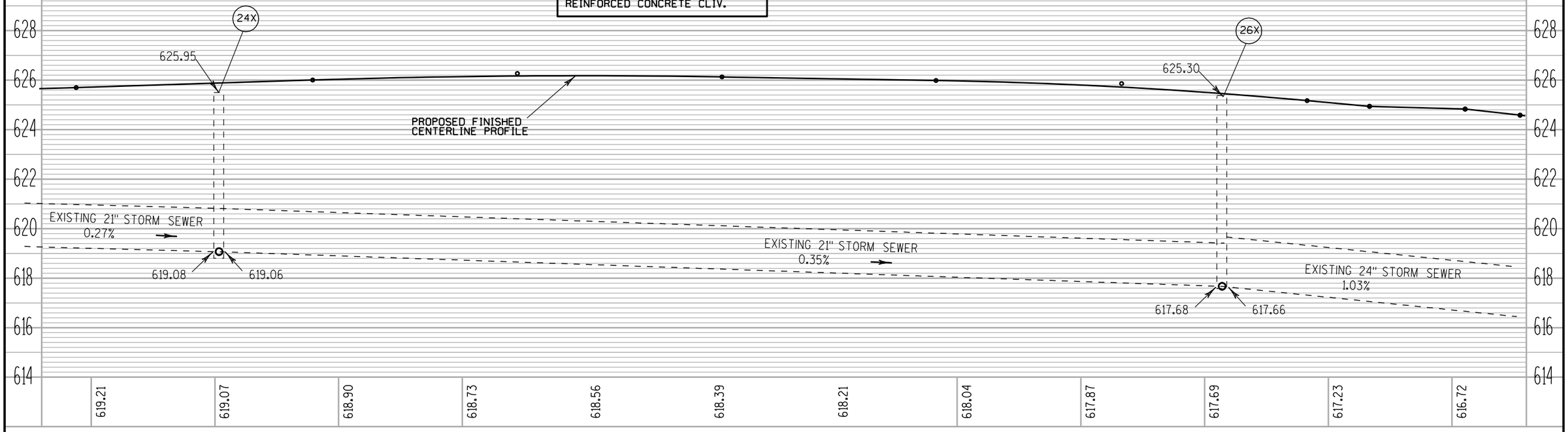

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET 20	E

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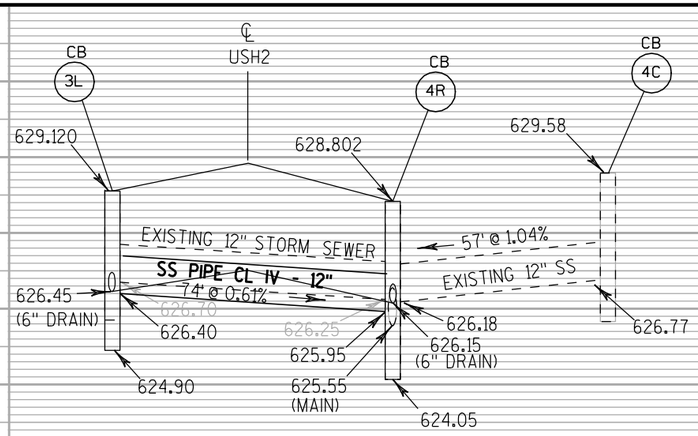
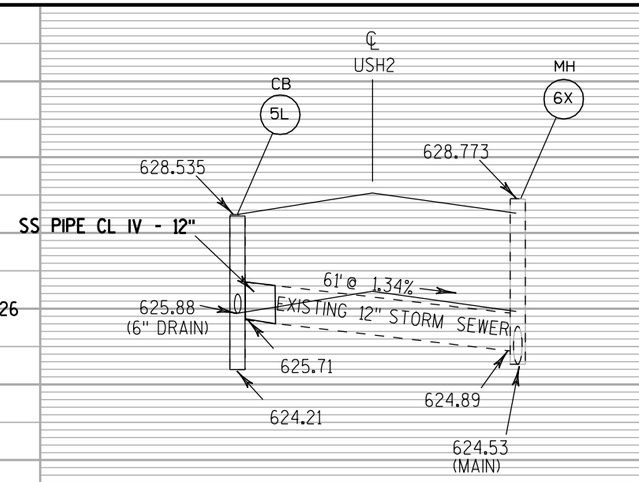
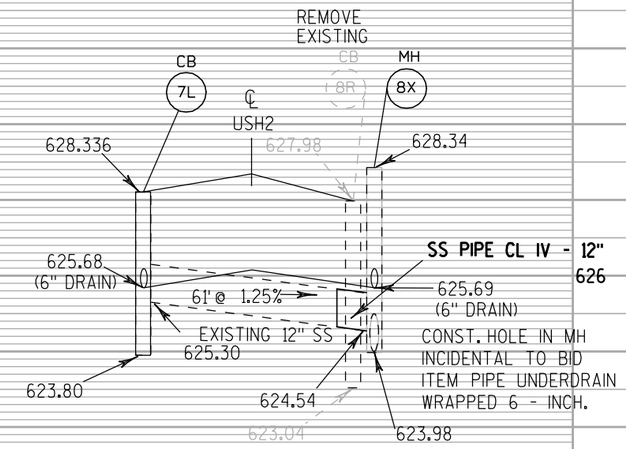
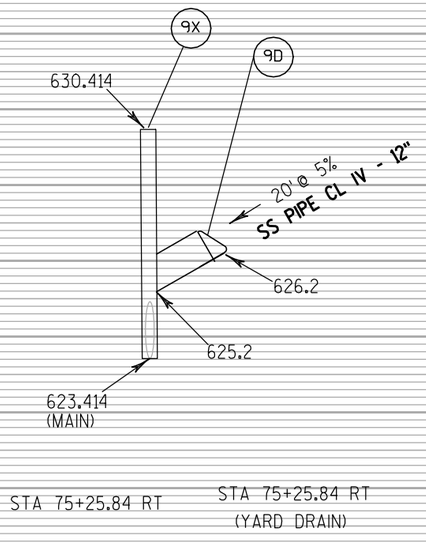
PLOT BY : dotbxm
PLOT NAME :
PLOT SCALE : 40:1
WISDOT/CADDS SHEET 41a

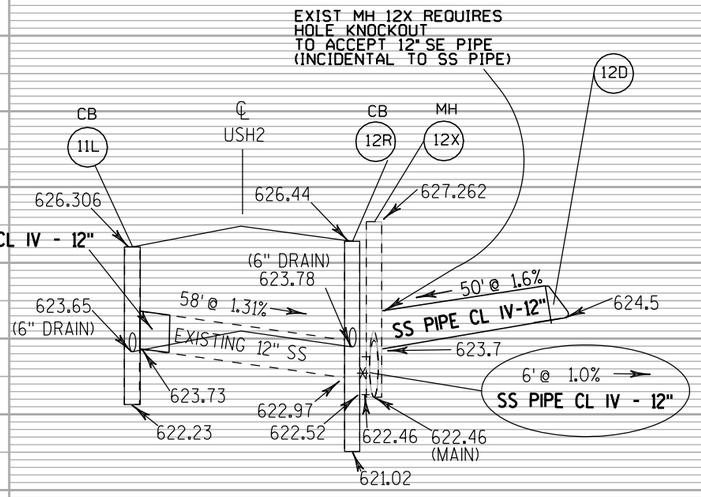




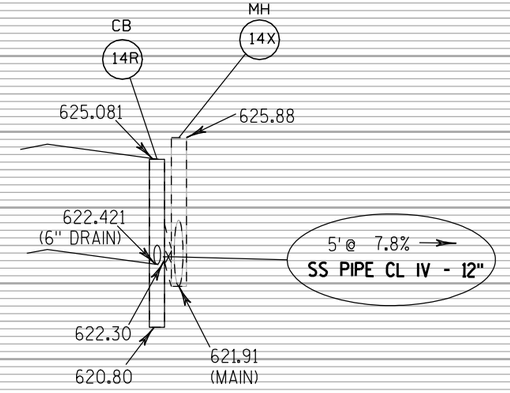


NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CLIV.

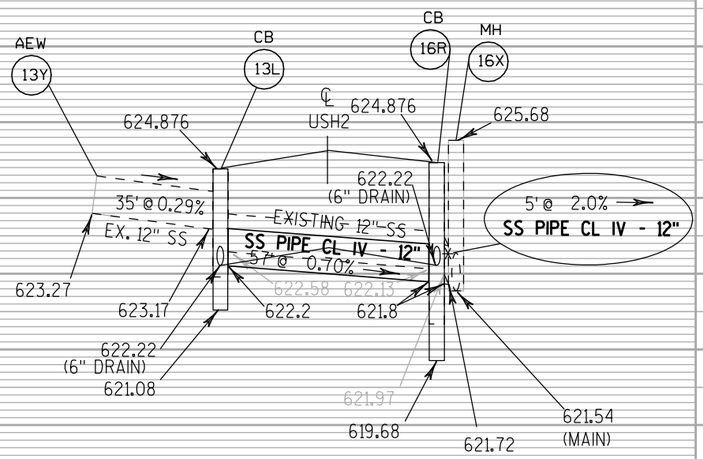




NOTE:
STRUCTURE DETAILS FOR
14Z AND 14D ARE LOCATED
AT THE END. (OUT OF ORDER)

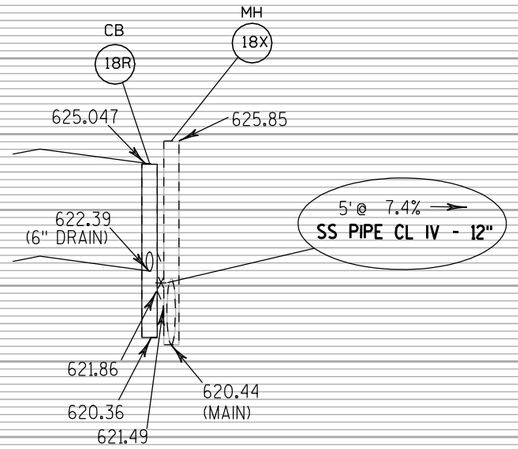


PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET 21	E

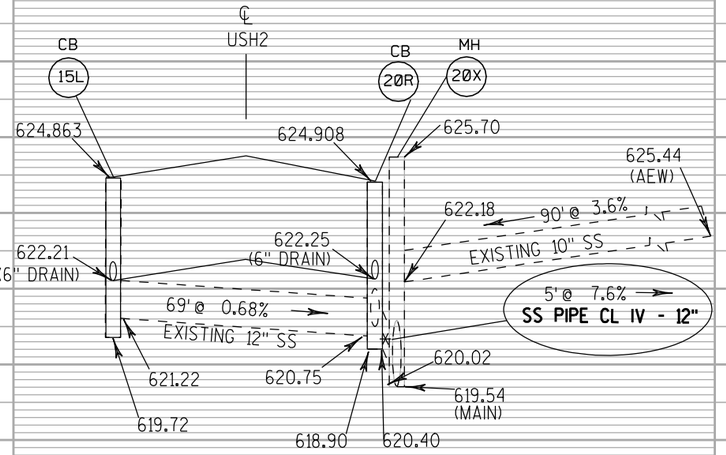


STA 81+30.75 LT

STA 81+26.18 LT STA 81+26.12 RT STA 81+24.84 RT

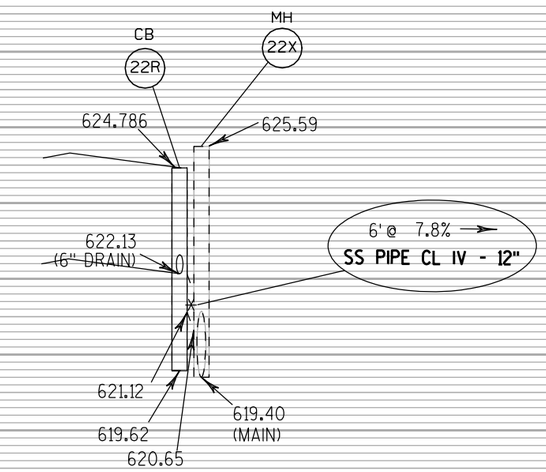


STA 83+95.54 RT STA 83+95.75 RT

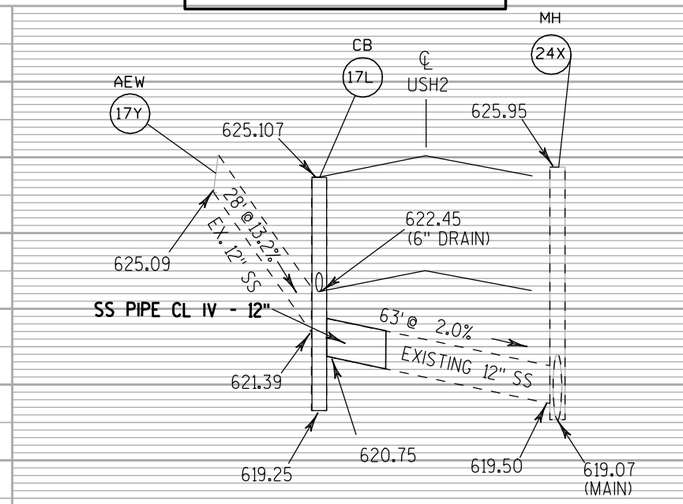


STA 85+53.74 LT STA 85+14.65 RT STA 85+16.80 RT STA 85+15.55 RT

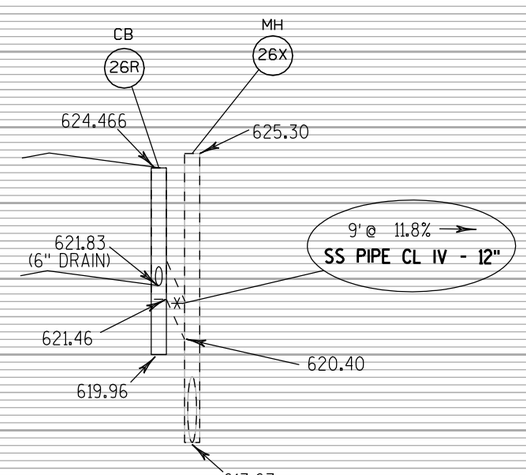
NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CLIV.



STA 86+32.65 RT STA 86+29.91 RT

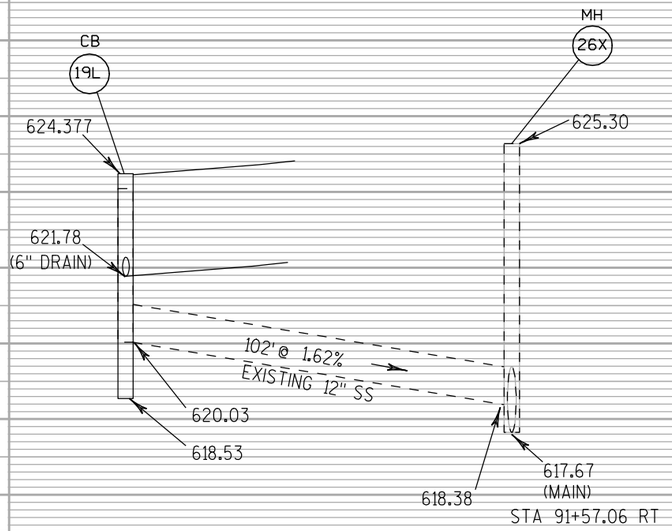


STA 87+31.62 LT STA 87+50.10 LT STA 87+51.65 RT



STA 91+56.11 RT STA 91+57.06 RT

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET 22	E



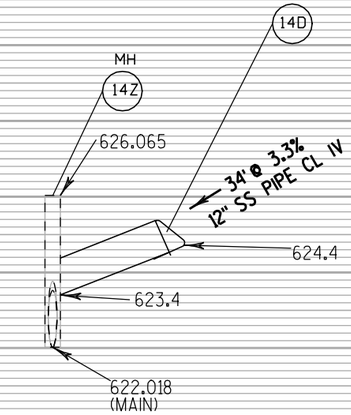
622

STA 92+12.20 LT

622

STA 91+57.06 RT

626



STA 80+11.6 RT

626

STA 80+00 RT

2

NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CLIV.

2

2

HILL AVENUE

USH 2 / BELKNAP STREET

70+00 71+00 72+00 73+00 74+00 75+00

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
W3-3 36" X 36"
R7-1D 18" X 24"
NO PARKING ANY TIME

R4-7 24" X 30"

LIGHT POLE MOUNTED
BONG WW II HERITAGE CENTER AHEAD AT LIGHTS
R7-1D 18" X 24"
NO PARKING ANY TIME

EAST 7TH STREET

STOP
R1-1 30" X 30"

W10-1 36" X 36"
R R
REMOVE AND REINSTALL NO HORN

LIGHT POLE MOUNTED
SIGNS ARE GREEN
M3-2 24" X 12"
EAST EAST
MG3-2 24" X 12"
M1-4 24" X 24"
2
LIVE RIVERVIEW
M1-91 24" X 24"
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
W10-1 36" X 36"
R R
NO HORN

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

EAST 5TH STREET

STOP
R1-1 30" X 30"

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

75+00 76+00 77+00 78+00 79+00 80+00 81+00

R4-7 24" X 30"

LIGHT POLE MOUNTED
R2-1 24" X 30"
SPEED LIMIT 30
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

EAST 5TH STREET

STOP
R1-1 30" X 30"

LIGHT POLE MOUNTED
TOURIST INFORMATION CENTER AHEAD AT LIGHTS
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST.)	COUNTY: DOUGLAS	PERMANENT SIGNING PLAN	SHEET 24	E

2

W5-56 18" X 18" W5-56 18" X 18" W5-56 18" X 18"

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

STOP
R1-1 30" X 30"

2ND AVENUE

LIGHT POLE MOUNTED
M3-2 24" X 12"
WEST WEST
MG3-4 24" X 12"
M1-4 24" X 24"
2
LAKE SUPERIOR
M1-91 24" X 24"
NO PARKING ANY TIME
R7-1D 18" X 24"
SIGNS ARE GREEN

W5-56 18" X 18" W5-56 18" X 18" W5-56 18" X 18"

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

OH

81+00 82+00 83+00 84+00 85+00 86+00

LIGHT POLE MOUNTED
M2-1 21" X 15"
JCT
M1-4 24" X 24"
53
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

EAST 4TH STREET

STOP
R1-1 30" X 30"

BARKER'S ISLAND
CHARTER FISHING DOCK

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

ONLY
R3-50R 30" X 36"

W5-56 18" X 18" W5-56 18" X 18" W5-56 18" X 18"

LIGHT POLE MOUNTED
M3-2 24" X 12"
WEST
M1-4 24" X 24"
2
R7-1D 18" X 24"
NO PARKING ANY TIME

W5-56 18" X 18" W5-56 18" X 18" W5-56 18" X 18"

LIGHT POLE MOUNTED
R2-1 24" X 30"
SPEED LIMIT 30
R7-1D 18" X 24"
NO PARKING ANY TIME

LIGHT POLE MOUNTED
R7-1D 18" X 24"
NO PARKING ANY TIME

STOP
R1-1 30" X 30"

EAST 3RD STREET

OH

87+00 88+00 89+00 90+00 91+00 92+00

R4-7
24" X 30"

R4-7
24" X 30"

STOP
R1-1 30" X 30"

LIGHT POLE MOUNTED
W3-3 36" X 36"
R7-1D 18" X 24"
NO PARKING ANY TIME

EAST 3RD STREET

M1-4 24" X 24"
EAST
53
2
M3-2 24" X 12"
M1-4 24" X 24"
M6-4 21" X 21"
M6-1 21" X 21"

ONLY
R3-8 36" X 30"

LIGHT POLE MOUNTED
MG3-2 24" X 12"
EAST
M1-91 24" X 24"
MG6-1 21" X 21"
R7-1D 18" X 24"
NO PARKING ANY TIME
SIGNS ARE GREEN

DULUTH
ASHLAND
SPOONER
D1-3 66" X 36"

W5-56 18" X 18" W5-56 18" X 18" W5-56 18" X 18"

PROJECT NO: 1190-44-71	HWY: USH2 (BELKNAP ST)	COUNTY: DOUGLAS	PERMANENT SIGNING PLAN	SHEET 25	E

2

2

SIGNAL POLE MOUNTED
STOP
R1-1F
30" X 30"

SIGNAL POLE MOUNTED
STOP
R1-1F
30" X 30"

R4-7
24" X 30"

93+00

92+00

90+00

91+00

BELKNAP STREET

SIGNAL POLE MOUNTED
STOP
R1-1F
30" X 30"

SIGNAL POLE MOUNTED
STOP
R1-1F
30" X 30"

EAST 2ND STREET

PROJECT NO: 1190-44-71	HWY: USH2 (BELKNAP ST)	COUNTY: DOUGLAS	PERMANENT SIGNING PLAN	SHEET 26	E

2

2

CABINET

LP41

LP42

STA 70+91.0 30.9 LT
I- X - X - X - 4 - 42
SALVAGE AND RESET LIGHT POLE

LP43

STA 72+60.1 39.6 LT
I- X - X - X - 4 - 43
SALVAGE AND RESET LIGHT POLE

LP44

STA 74+47.1 34.4 LT
I- X - X - 5 - 4 - 44
SALVAGE AND RESET LIGHT POLE
REMOVE EXISTING BASE

7+00
70+00
71+00
72+00
73+00
74+00
75+00

NOTE:
EXISTING LIGHT POLE BASES
VARY FROM 7" TO 24" BEHIND
BACK OF CURB.

LP11

LP12

STA 71+58.2 31.9 RT
I- X - X - X - 1 - 12
SALVAGE AND RESET LIGHT POLE

LP13

7TH STREET

LP14

STA 73+52.7 37.9 RT
I- X - X - 5 - 1 - 14
SALVAGE AND RESET LIGHT POLE
REMOVE EXISTING BASE

LP15

NOTE:
SALVAGE AND RESET LIGHT POLE
IS PAID FOR AS
REMOVE, SALVAGE, AND RELOCATE EXISTING LIGHT EQUIPMENT

STA 76+05.9 43.9 LT
I- X - X - 5 - 5 - 51
SALVAGE AND RESET LIGHT POLE
REMOVE EXISTING BASE

STA 77+81.8 32.4 LT
I- X - X - X - 5 - 52
SALVAGE AND RESET LIGHT POLE

STA 79+81.1 31.4 LT
I- X - X - X - 5 - 53
SALVAGE AND RESET LIGHT POLE

6TH STREET

LP51

LP52

LP53

75+00
76+00
77+00
78+00
79+00
80+00
81+00

LP15

STA 75+24.0 42.9 RT
I- X - X - 5 - 1 - 15
SALVAGE AND RESET LIGHT POLE
REMOVE EXISTING BASE

LP21

STA 76+98.0 35.9 RT
I- X - X - 5 - 2 - 21
SALVAGE AND RESET LIGHT POLE
REMOVE EXISTING BASE

LP22

5TH STREET

STA 78+86.6 31.7 RT
I- X - X - X - 2 - 22
SALVAGE AND RESET LIGHT POLE

MH

LP23

STA 80+72.9 30.4 RT
I- X - X - X - 2 - 23
SALVAGE AND RESET LIGHT POLE

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST.)	COUNTY: DOUGLAS	LIGHTING PLAN	SHEET 27	E

2

STA 81+67.6 31.3 RT
I- X - X - X - 5 - 54
SALVAGE AND RESET LIGHT POLE

STA 83+34.3 31.2 LT
I- X - X - X - 5 - 55
SALVAGE AND RESET LIGHT POLE

2ND AVENUE

NOTE:
EXISTING LIGHT POLE BASES
VARY FROM 7" TO 24" BEHIND
BACK OF CURB.

STA 85+25.8 31.4 LT
I- X - X - X - 5 - 56
SALVAGE AND RESET LIGHT POLE

LP54 LP55 LP56

81+00 82+00 83+00 84+00 85+00 86+00

LP23 LP24 LP25 LP26

4TH STREET

STA 82+58.8 30.3 RT
I- X - X - X - 2 - 24
SALVAGE AND RESET LIGHT POLE

STA 84+25.9 29.8 RT
I- X - X - X - 2 - 25
SALVAGE AND RESET LIGHT POLE

STA 86+18.2 30.6 RT
I- X - X - X - 2 - 26
SALVAGE AND RESET LIGHT POLE

NOTE:
SALVAGE AND RESET LIGHT POLE
IS PAID FOR AS
REMOVE, SALVAGE, AND RELOCATE EXISTING LIGHT EQUIPMENT

STA 87+35.3 31.3 LT
I- X - X - X - 5 - 57
SALVAGE AND RESET LIGHT POLE

8RD STREET

STA 89+10.4 31.4 LT
I- X - X - X - 6 - 61
SALVAGE AND RESET LIGHT POLE

STA 91+04.9 32.3 LT
I- X - X - X - 6 - 62
SALVAGE AND RESET LIGHT POLE

LP57 LIGHTING CABINET LP61 LP62

87+00 88+00 89+00 90+00 91+00 92+00

LP26 LP31 LP32 LP34

3RD STREET

STA 88+11.4 30.4 RT
I- X - X - X - 3 - 31
SALVAGE AND RESET LIGHT POLE

STA 90+07.4 30.7 RT
I- X - X - X - 3 - 32
SALVAGE AND RESET LIGHT POLE

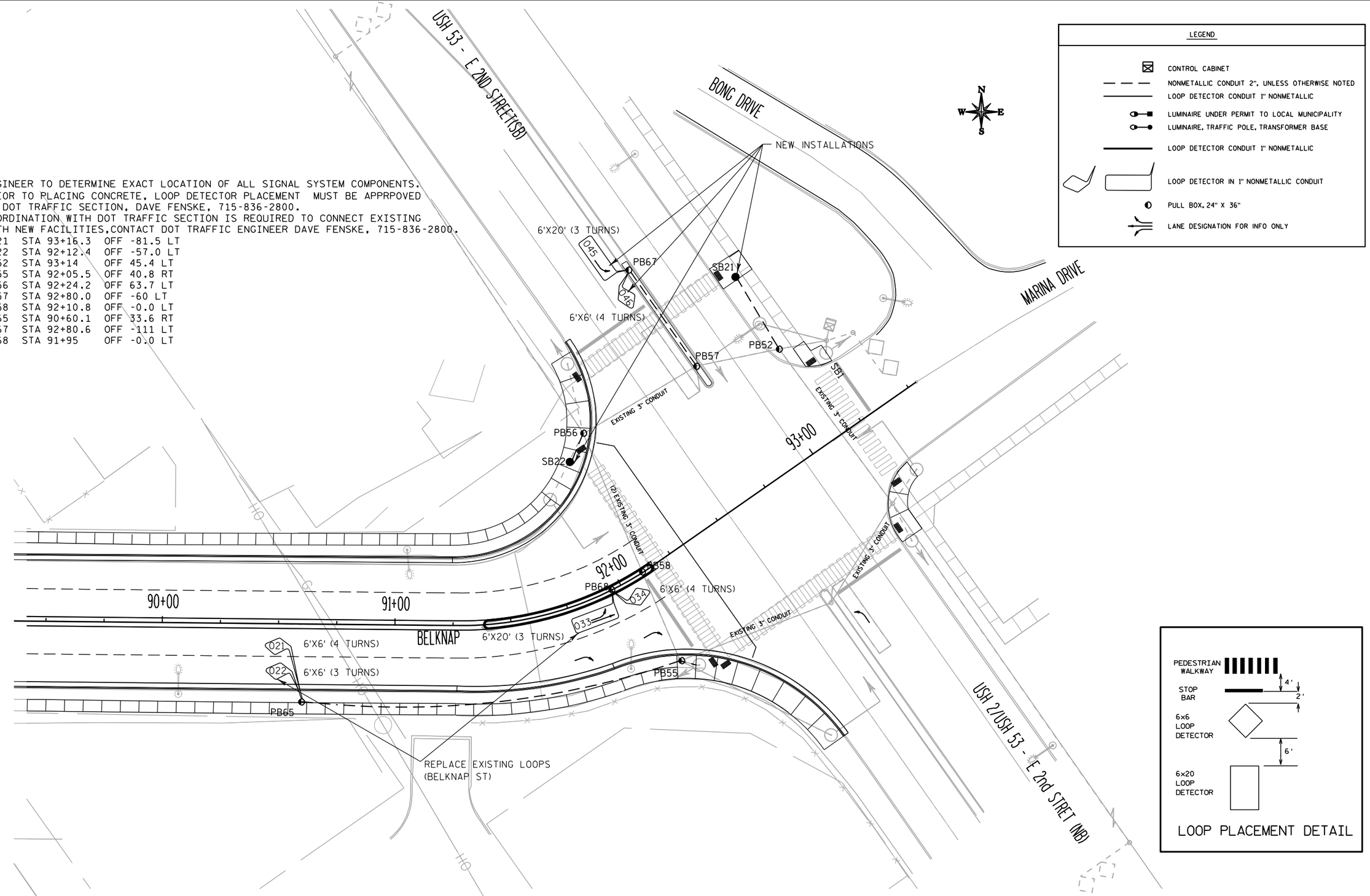
STA 91+89.3 34.3 RT
I- X - X - X - 3 - 34
SALVAGE AND RESET LIGHT POLE

PROJECT NO: 1190-44-71	HWY: USH2 (BELKNAP ST)	COUNTY: DOUGLAS	LIGHTING PLAN	SHEET 28	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\023502_lp.dgn PLOT DATE : 24-NOV-2010 14:42 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1

NOTES:

1) ENGINEER TO DETERMINE EXACT LOCATION OF ALL SIGNAL SYSTEM COMPONENTS.
2) PRIOR TO PLACING CONCRETE, LOOP DETECTOR PLACEMENT MUST BE APPRPOVED BY DOT TRAFFIC SECTION, DAVE FENSKE, 715-836-2800.
3) COORDINATION WITH DOT TRAFFIC SECTION IS REQUIRED TO CONNECT EXISTING WITH NEW FACILITIES,CONTACT DOT TRAFFIC ENGINEER DAVE FENSKE, 715-836-2800.
4) SB21 STA 93+16.3 OFF -81.5 LT
5) SB22 STA 92+12.4 OFF -57.0 LT
6) PB52 STA 93+14 OFF 45.4 LT
7) PB55 STA 92+05.5 OFF 40.8 RT
8) PB56 STA 92+24.2 OFF 63.7 LT
9) PB57 STA 92+80.0 OFF -60 LT
10) PB58 STA 92+10.8 OFF -0.0 LT
11) PB65 STA 90+60.1 OFF 33.6 RT
12) PB67 STA 92+80.6 OFF -111 LT
13) PB68 STA 91+95 OFF -0.0 LT



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- LANE DESIGNATION FOR INFO ONLY

LOOP PLACEMENT DETAIL

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	TRAFFIC SIGNAL PLAN	SHEET 29	E

2

PAVEMENT MARKING CROSSWALK EPOXY 6-IN.

4" WHITE EDGELINE (TYP)

12" DIAGONAL-25' SPACING (TYP)

CURB EPOXY (TYP)

HILL AVENUE

USH 2 / BELKNAP STREET

70+00 71+00 72+00 73+00 74+00 75+00

RR

X-WALK EPOXY SPECIAL (TYP)

EAST 7TH STREET

18" STOP LINE (TYP)

4" DOUBLE YELLOW (TYP)

4" DOUBLE YELLOW (TYP)

EAST 5TH STREET

4" YELLOW EDGELINE (TYP)

4" YELLOW EDGELINE (TYP)

CURB EPOXY (TYP)

75+00 76+00 77+00 78+00 79+00 80+00 81+00

MH

EAST 5TH STREET

4" DOUBLE YELLOW EPOXY (TYP)

2

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST.)	COUNTY: DOUGLAS	PAVEMENT MARKING	SHEET 30	E

2

2ND AVE.

18" STOP LINE (TYP)

4" DOUBLE YELLOW (TYP)

X-WALK EPOXY SPECIAL (TYP)

N
W E
S

81+00 82+00 83+00 84+00 85+00 86+00

4" WHITE CENTERLINE (TYP)

E. 4TH STREET

E. 3RD STREET

4" YELLOW EDGELINE (TYP)

4" WHITE EDGELINE (TYP)

CURB EPOXY (TYP)

87+00 88+00 89+00 90+00 91+00 92+00

ARROWS (TYPE 3)

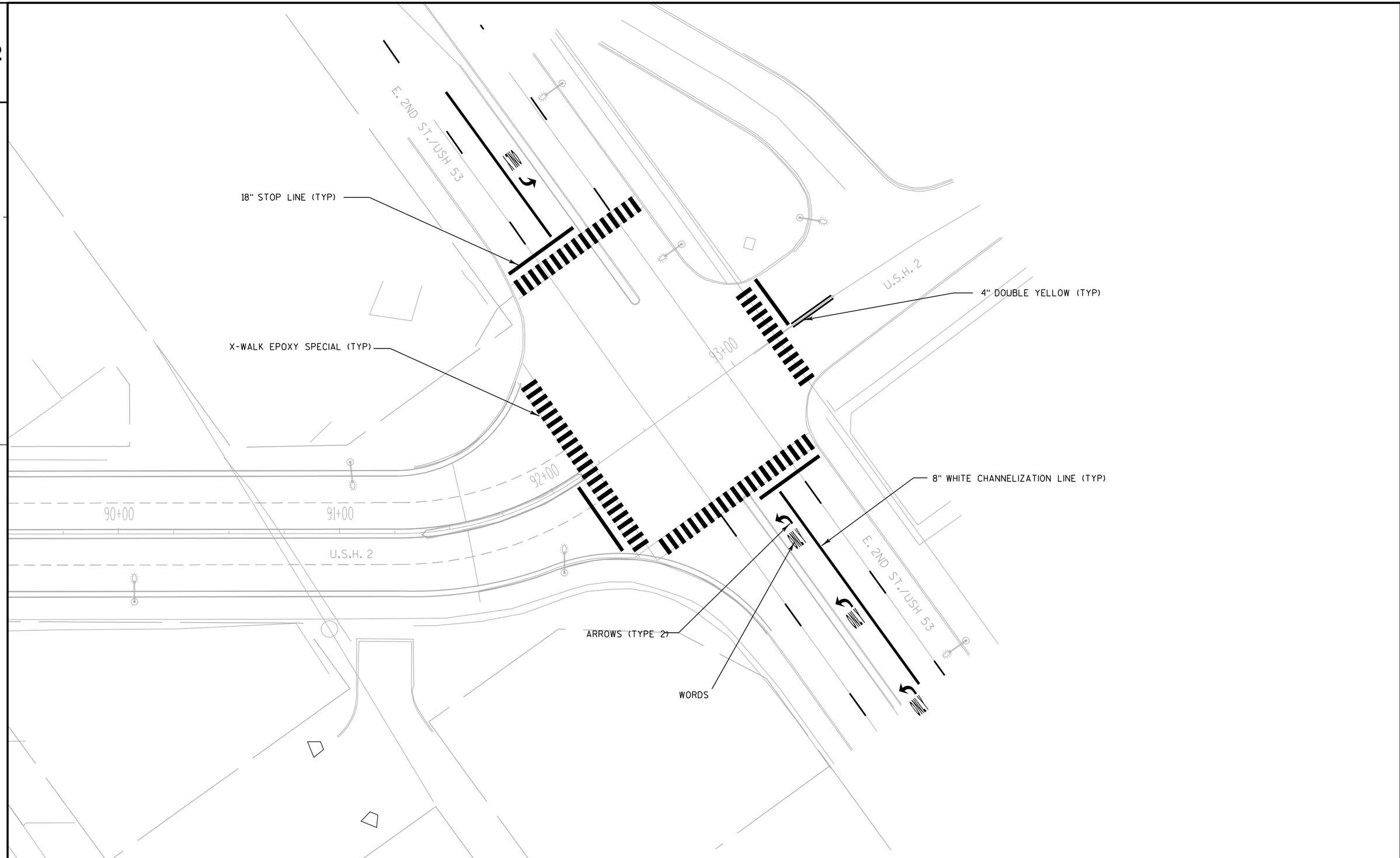
WORDS

ARROWS (TYPE 2)

E. 3RD STREET

PROJECT NO: 1190-44-71	HWY: USH2 (BELKNAP ST)	COUNTY: DOUGLAS	PAVEMENT MARKING	SHEET 31	E

2



PROJECT NO: 1190-44-71	HWY: USH2 (BELKNAP ST)	COUNTY: DOUGLAS	PERMANENT SIGNING PLAN	SHEET 32	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\024503_pm.dgn PLOT DATE : 24-NOV-2010 14:43 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1

2

2

N

W E

S

MINNESOTA
INTERSTATE 35

BLATNIK
BRIDGE

TOWER AVENUE/ STH 35

TRAFFIC FLOW
PROPOSED DETOUR ROUTE

E 2ND STREET / USH 53

BELKNAP EXTENSION
PROJECT ID 1190-44-71

BONG
BRIDGE

BELKNAP STREET/USH 2

E 2ND STREET

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	DETOUR ROUTE OVERVIEW	SHEET 33

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\027001_dt.dgn PLOT DATE : 24-NOV-2010 14:43 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 1064.79787:1

2

MINNESOTA
INTERSTATE 35

BLATNIK
BRIDGE

BONG
BRIDGE

TOWER AVENUE/ STH 35

HAMMOND AVE

CATLIN AVE

E 2ND STREET / USH 53

BELKNAP STREET/USH 2

BELKNAP EXTENSION
PROJECT ID 1190-44-71

N
W E
S

DETOUR EAST 2 JCT 535 JCT 53 END 35

DETOUR WEST SOUTH 2 35

DETOUR EAST NORTH 2 35

DETOUR TO EAST SOUTH NORTH NORTH 2 53 535 53

COVER

DETOUR NORTH NORTH SOUTH WEST 53 535 35 2

DETOUR EAST SOUTH 2 53

DETOUR WEST NORTH JCT JCT 2 53 535 35

DETOUR JCT SOUTH 2 53

DETOUR WEST NORTH 2 53

DETOUR EAST WEST 2 2

DETOUR EAST 2 35

DETOUR 1500 FT W20-2

DETOUR 1000 FT W20-2

DETOUR 500 FT W20-2

ROAD CLOSED
1 MILE AHEAD
LOCAL TRAFFIC ONLY

TYPE III BARRICADE

ROAD CLOSED
TO
THRU TRAFFIC
R11-4
60" X 30"

TYPE III BARRICADE

END DETOUR EAST 2

DETOUR EAST 2

DETOUR WEST 2

DETOUR EAST 2

COVER

TURN

END DETOUR EAST 2 SOUTH 53

DETOUR WEST NORTH 2 53

COVER

TRAFFIC CONTROL FIXED MESSAGE SIGN, 96"X54"

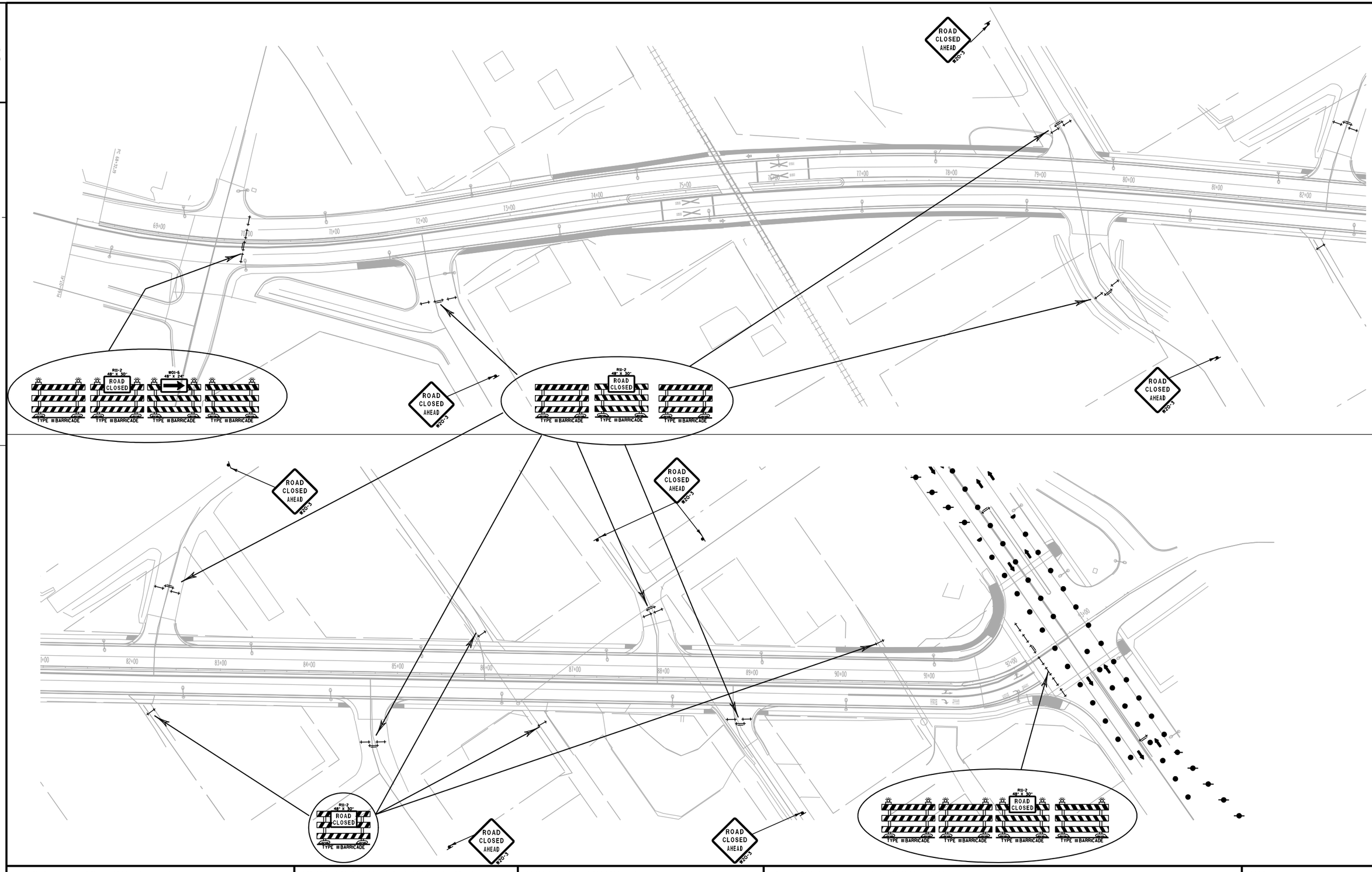
HWY 2 DETOUR
TRUCKS MUST USE
TRUCK ROUTE
WHITE BACKGROUND
NO THRU TRAFFIC

1 2 3 4 5 6 7 8 9 10 11 20 21 22 23 24 25 30 31 32 33 34 35 36 37 40 41 42 43 44 45 46 47 48

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	DETOUR TRAFFIC CONTROL	SHEET 34	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\027002_dt.dgn PLOT DATE : 24-NOV-2010 14:43 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 1064.79787:1

2



PROJECT NO: 1199-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	DETOUR TRAFFIC CONTROL	SHEET 35	E

DATE 04APR11 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1190-44-71 QUANTITY
0010	201.0120	CLEARING	ID	44.000	44.000
0020	201.0220	GRUBBING	ID	44.000	44.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	3.000	3.000
0040	204.0100	REMOVING PAVEMENT	SY	13,734.000	13,734.000
0050	204.0110	REMOVING ASPHALTIC SURFACE	SY	808.000	808.000
0060	204.0150	REMOVING CURB & GUTTER	LF	872.000	872.000
0070	204.0155	REMOVING CONCRETE SIDEWALK	SY	1,900.000	1,900.000
0080	204.0195	REMOVING CONCRETE BASES	EACH	5.000	5.000
0090	204.0215	REMOVING CATCH BASINS	EACH	17.000	17.000
0100	204.0245	REMOVING STORM SEWER (SIZE) 01.12-INCH	LF	196.000	196.000
0110	204.0245	REMOVING STORM SEWER (SIZE) 01.18-INCH	LF	113.000	113.000
0120	204.0245	REMOVING STORM SEWER (SIZE) 01.21-INCH	LF	164.000	164.000
0130	204.9165.S	REMOVING (ITEM DESCRIPTION) 01.MEDIAN E 2ND STREET	SF	65.000	65.000
0140	205.0100	EXCAVATION COMMON	CY	18,171.000	18,171.000
0150	208.1100	SELECT BORROW	CY	11,322.000	11,322.000
0160	211.0200	PREPARE FOUNDATION FOR CONCRETE PAVEMENT (PROJECT) 01.1190-44-71	LS	1.000	1.000
0170	213.0100	FINISHING ROADWAY (PROJECT) 01. 1190-44-71	EACH	1.000	1.000
0180	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	64.000	64.000
0190	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	16,213.000	16,213.000
0200	415.2000.S	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	14,073.000	14,073.000
0210	416.0160	CONCRETE DRIVEWAY 6-INCH	SY	87.000	87.000
0220	416.0310	CONCRETE ALLEY	SY	28.000	28.000
0230	416.0610	DRILLED TIE BARS	EACH	89.000	89.000
0240	416.0620	DRILLED DOWEL BARS	EACH	100.000	100.000
0250	520.8000.S	CULVERT PIPE CONCRETE COLLAR	EACH	5.000	5.000
0260	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	3.000	3.000
0270	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	4,303.000	4,303.000
0280	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	198.000	198.000
0290	602.0405	CONCRETE SIDEWALK 4-INCH	SF	17,093.000	17,093.000
0300	602.0415	CONCRETE SIDEWALK 6-INCH	SF	965.000	965.000
0310	602.0510	CURB RAMP DETECTABLE WARNING FIELD WHITE	SF	224.000	224.000
0320	602.2400	CONCRETE SAFETY ISLANDS	SF	736.000	736.000
0330	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	316.000	316.000
0340	608.0418	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	113.000	113.000
0350	608.0421	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 21-INCH	LF	164.000	164.000
0360	611.0101	CATCH BASINS TYPE 1	EACH	5.000	5.000
0370	611.0105	CATCH BASINS TYPE 3	EACH	10.000	10.000
0380	611.0201	MANHOLES TYPE 1	EACH	2.000	2.000
0390	611.0420	RECONSTRUCTING MANHOLES	EACH	1.000	1.000
0400	611.0530	MANHOLE COVERS TYPE J	EACH	2.000	2.000
0410	611.0600	INLET COVERS TYPE A	EACH	1.000	1.000
0420	611.0624	INLET COVERS TYPE H	EACH	16.000	16.000
0430	611.8110	ADJUSTING MANHOLE COVERS	EACH	10.000	10.000
0440	611.9800.S	PIPE GRATES	EACH	3.000	3.000
0450	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	4,057.000	4,057.000
0460	616.0700.S	FENCE SAFETY	LF	250.000	250.000
0470	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01.1190-44-71	EACH	1.000	1.000

3

DATE 04APR11 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1190-44-71 QUANTITY
0480	619.1000	MOBILIZATION	EACH	1.000	1.000
0490	620.0200	CONCRETE MEDIAN BLUNT NOSE	SF	94.000	94.000
0500	625.0100	TOPSOIL	SY	2,854.000	2,854.000
0510	628.1504	SILT FENCE	LF	165.000	165.000
0520	628.1520	SILT FENCE MAINTENANCE	LF	165.000	165.000
0530	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0540	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0550	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	831.000	831.000
0560	628.7005	INLET PROTECTION TYPE A	EACH	17.000	17.000
0570	628.7015	INLET PROTECTION TYPE C	EACH	17.000	17.000
0580	628.7555	CULVERT PIPE CHECKS	EACH	3.000	3.000
0590	629.0210	FERTILIZER TYPE B	CWT	0.520	0.520
0600	630.0110	SEEDING MIXTURE NO. 10	LB	2.000	2.000
0610	630.0200	SEEDING TEMPORARY	LB	2.000	2.000
0620	631.0300	SOD WATER	MGAL	0.170	0.170
0630	631.1000	SOD LAWN	SY	2,023.000	2,023.000
0640	634.0801	POSTS TUBULAR STEEL 2X2-INCH X 1.5-FT	EACH	36.000	36.000
0650	634.0803	POSTS TUBULAR STEEL 2X2-INCH X 3-FT	EACH	36.000	36.000
0660	634.0808	POSTS TUBULAR STEEL 2X2-INCH X 8-FT	EACH	22.000	22.000
0670	634.0812	POSTS TUBULAR STEEL 2X2-INCH X 12-FT	EACH	14.000	14.000
0680	637.0202	SIGNS REFLECTIVE TYPE II	SF	329.000	329.000
0690	637.0402	SIGNS REFLECTIVE FOLDING TYPE II	SF	25.000	25.000
0700	638.2102	MOVING SIGNS TYPE II	EACH	4.000	4.000
0710	638.2602	REMOVING SIGNS TYPE II	EACH	62.000	62.000
0720	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	8.000	8.000
0730	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0740	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01.1190-44-71	DAY	60.000	60.000
0750	643.0300	TRAFFIC CONTROL DRUMS	DAY	5,040.000	5,040.000
0760	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,820.000	2,820.000
0770	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,320.000	1,320.000
0780	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,200.000	1,200.000
0790	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	120.000	120.000
0800	643.0900	TRAFFIC CONTROL SIGNS	DAY	2,760.000	2,760.000
0810	643.0905.S	TRAFFIC CONTROL COVERING SIGNS	EACH	8.000	8.000
0820	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	36.000	36.000
0830	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1190-44-71	EACH	1.000	1.000
0840	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	4,140.000	4,140.000
0850	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	11,326.000	11,326.000
0860	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	185.000	185.000
0870	647.0110	PAVEMENT MARKING RAILROAD CROSSINGS EPOXY	EACH	4.000	4.000
0880	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	7.000	7.000
0890	647.0176	PAVEMENT MARKING ARROWS EPOXY TYPE 3	EACH	2.000	2.000
0900	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	6.000	6.000
0910	647.0456	PAVEMENT MARKING CURB EPOXY	LF	568.000	568.000
0920	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	258.000	258.000
0930	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	120.000	120.000
0940	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	115.000	115.000
0950	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	100.000	100.000
0960	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	32.000	32.000
0970	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	5,291.000	5,291.000

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DATE 04APR11 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1190-44-71 QUANTITY
0980	650.5000	CONSTRUCTION STAKING BASE	LF	513.000	513.000
0990	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	2,325.000	2,325.000
1000	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	2,313.000	2,313.000
1010	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01.1190-44-71	LS	1.000	1.000
1020	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01.1190-44-71	LS	1.000	1.000
1030	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	2,645.000	2,645.000
1040	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	497.000	497.000
1050	652.0800	CONDUIT LOOP DETECTOR	LF	450.000	450.000
1060	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	4.000	4.000
1070	654.0101	CONCRETE BASES TYPE 1	EACH	1.000	1.000
1080	654.0102	CONCRETE BASES TYPE 2	EACH	1.000	1.000
1090	654.0105	CONCRETE BASES TYPE 5	EACH	5.000	5.000
1100	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	1,171.000	1,171.000
1110	655.0800	LOOP DETECTOR WIRE	LF	1,566.000	1,566.000
1120	690.0150	SAWING ASPHALT	LF	378.000	378.000
1130	690.0250	SAWING CONCRETE	LF	387.000	387.000
1140	999.1500.S	CRACK AND DAMAGE SURVEY	LS	1.000	1.000
1150	SPV.0035	SPECIAL 01.QMP, SELECT BORROW	CY	11,322.000	11,322.000
1160	SPV.0060	SPECIAL 01. REMOVE, SALVAGE, AND RELOCATE EXISTING LIGHT EQUIPMENT	EACH	25.000	25.000
1170	SPV.0060	SPECIAL 02. CLEANING CATCH BASINS	EACH	4.000	4.000
1180	SPV.0060	SPECIAL 03. CONNECT EXISTING SANITARY SEWER	EACH	2.000	2.000
1190	SPV.0090	SPECIAL 01.CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT	LF	4,501.000	4,501.000
1200	SPV.0090	SPECIAL 02. REMOVING SANITARY SEWER	LF	110.000	110.000
1210	SPV.0090	SPECIAL 03. SANITARY SEWER 10-INCH	LF	110.000	110.000
1220	SPV.0105	SPECIAL 01.CONSTRUCTION STAKING CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000
1230	SPV.0105	SPECIAL 02. PROJECT CRACK MITIGATION AND REPAIR SPECIAL	LS	1.000	1.000
1240	SPV.0165	SPECIAL 01.PAVEMENT MARKING CROSSWALK EPOXY SPECIAL	SF	2,683.000	2,683.000
1250	SPV.0165	SPECIAL 02. CONCRETE SIDEWALK CURE AND SEAL TREATMENT	SF	20,018.000	20,018.000
1260	SPV.0165	SPECIAL 03. CONCRETE 15 1/2-INCH MEDIAN SPECIAL	SF	1,224.000	1,224.000
1270	SPV.0180	SPECIAL 01.CONCRETE PAVEMENT 9 1/2-INCH SPECIAL	SY	14,073.000	14,073.000
1280	SPV.0195	SPECIAL 01.ASPHALTIC SURFACE SPECIAL	TON	196.000	196.000

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CLEARING AND GRUBBING

STATION	LOCATION	201.0120 ID	201.0220 ID	REMARKS
91+10	50' LT	26.0	26.0	
91+25	60' LT	10.0	10.0	
93+14	86' LT	8	8	
	TOTAL 0010	44	44	

REMOVING ASPHALTIC SURFACE

STATION	LOCATION	204.0110 SY	REMARKS
		71	E 7TH ST
78+06	LT	28	CE
	E 5TH ST	93	CE
		71	E 5TH ST SE
		51	E 5TH ST NW
82+15	RT	40	ALLEY
		58	2ND AVE
		54	E 4TH ST SE
86+01	LT	47	ALLEY
86+50	RT	43	ALLEY
		38	E 3RD ST SE
87+48	RT	31	CE
	E 3RD ST	109	CE
		58	E 3RD ST NW
75+55	ML	17	TEMP RAIL CROSSING
	TOTAL 0010	808	

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
75+25	RT	1	12" PVC PIPE
79+25	RT	1	12" PVC PIPE
79+90	RT	1	12" PVC PIPE
	TOTAL 0010	3	

REMOVING PAVEMENT

STATION TO	STATION	LOCATION	204.0100 SY	REMARKS
71+00 -	92+32		12318	M/L
			157	E 7TH ST
			231	E 5TH ST SE
			167	E 5TH ST NW
			153	2ND AVE
			115	E 4TH ST SE
			185	E 3RD ST SE
			168	E 3RD ST NW
			211	E 2ND ST RADIUS
			29	E 2ND ST LT TURN
TOTAL 0010			13734	

REMOVING CURB & GUTTER

LOCATION	204.0150 LF	REMARKS
RT	86	7TH ST RADIUS
RT	91	5TH ST RADIUS
RT	80	4TH ST RADIUS
RT	129	3RD ST RADIUS
RT	61	2ND ST RADIUS
LT	40	CE
LT	91	5TH ST RADIUS
LT	80	2ND AVE RADIUS
LT	129	3RD ST RADIUS
LT	85	2ND ST RADIUS
TOTAL 0010	872	

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOCATION	204.0155 SY	REMARKS
71+00 - 71+74	RT	49	6 FT WIDTH
72+31 - 79+30	RT	388	5 FT WIDTH
79+92	RT	6	CURB RAMP
84+43	RT	6	CURB RAMP
84+99	RT	6	CURB RAMP
86+60 - 86+72	RT	7	5 FT WIDTH
87+24 - 87+63	RT	22	5 FT WIDTH
88+57	RT	6	CURB RAMP
89+15	RT	8	CURB RAMP
92+05 - 92+38	RT	86	E 2ND RADIUS
93+23	RT	8	CURB RAMP
UNDISTRIBUTED	RT	475	
73+50 - 79+08	LT	310	5 FT WIDTH
79+69	LT	6	CURB RAMP
82+04	LT	6	CURB RAMP
82+60	LT	6	CURB RAMP
85+90 - 86+15	LT	14	5 FT WIDTH
87+65	LT	6	CURB RAMP
88+23	LT	6	CURB RAMP
93+23	LT	8	CURB RAMP
UNDISTRIBUTED	LT	475	
TOTAL 0010		1900	

REMOVING MEDIAN E 2ND STREET

TATION TO	STATION	LOCATION	204.9165.S SF	REMARKS
12+18	12+91		65	E 2ND ST LT TURN
TOTAL 0010			65	

REMOVING CONCRETE BASES

STATION	LOCATION	204.0195 EACH	REMARKS
73+53	RT	1	LP14
74+47	LT	1	LP44
75+24	RT	1	LP15
76+05	LT	1	LP51
76+98	RT	1	LP21
TOTAL 0010		5	

REMOVING SS ITEMS

CATEGORY	STRUCT NO.	STATION	TO	STATION	LOCATION	CATCH BASINS 204.0215 EACH	SS 12-INCH 204.0245 LF	SS 18-INCH 204.0245 LF	SS 21-INCH 204.0245 LF	REMARKS
0010	3L	71+17.9		-27.5	LT	1				
0010	4R	71+64.51		30.3	RT	1	54			
	4C				RT					
0010	5L	72+33.91		-27.5	LT	1	8			
0010	6X	72+20.78		32.6	RT					
0010	7L	73+66.18		-28.3	LT	1	4			
0010	8X	73+57.43		31.6	RT		4			
0010	9X				RT					
0010	9D				RT		14			
0010	10X	76+42.91		32.0	RT			113		
0010	11L	78+94.5		-28.4	LT	1	8			
0010	12R	78+82.54		28.3	LT	1	4			
0010	12X	78+79.82		33.1	RT				164	
0010	12D	79+19.5		62.5	RT		20			
0010	14R	80+41.16		28.1	RT	1	4			
0010	14X	80+43.66		32.9	RT					
0010	14D	80+00		57.6	RT		20			
0010	14Z	80+11.6		33.7	RT					
0010	13L	81+26.18		-28.2	LT	1	16			
0010	16R	81+26.12		28.4	RT	1	6			
0010	16X	81+26.12		28.4	RT					
0010	18R	83+95.54		28.2	RT	1				
0010	18X	83+95.75		33.1	RT		6			
0010	15L	85+53.74		-28.4	LT	1				
0010	20R	85+14.65		28.1	RT	1				
0010	20X	85+16.8		33.1	RT		6			
0010	22R	86+32.65		28.2	RT	1				
0010	22X	86+29.91		33.3	RT		6			
0010	17L	87+50.1		-28.2	LT	1	16			
0010	24R	87+51.65		34.6	RT	1				
0010	19L	92+12.2		-50.4	LT	1				
0010	26R	91+56.11		29.8	RT	1				
0010	26X	91+57.06		38.5	RT					
TOTAL 0010						17	196	113	164	

EARTHWORK SUMMARY

Division	From / To Station	Location	Common Excavation (1)	(item # 205.0100)	Available Material (5)	Reduced Marsh in Fill (8)	Reduced EBS in Fill (9)	Expanded Marsh Backfill (10)	Expanded EBS Backfill (11)	Expanded Rock (12)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + / - (14)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)		Factor 0.60	Factor 0.80	Factor 1.50	Factor 1.30	Factor 1.10		Factor 1.25				
1			10,707	7,464	10,707	0	5,971	0	9,703	0	162	203	10,504	10,504	0	
					0	0	0	0	0	0			0	0	0	
					0	0	0	0	0	0			0	0	0	
					0	0	0	0	0	0			0	0	0	
Division 1 Subtotal			10,707	7,464	10,707	0	5,971	0	9,703	0	162	203	10,504	10,504		
			0	0	0	0	0	0	0	0	0	0	0			
Grand Total			10,707.19	7,464.03	10,707.19	0.00	5,971.23	0.00	9,703.24	0.00	162.42	203.02	10,504.17	10,504.17	0.00	
			Total Common Exc	18,171												

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable 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 20505
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 = 0.6
9) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.1100
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.1100
12) Expanded Rock - Factor = 1.1
13) Expanded Fill. Factor = 1.25

Depending on selections:

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * 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) Use 111,764 CY of material from Division 1. Borrow Excavation item number 208.0100

SELECT BORROW SUMMARY

STATION TO	STATION	LOCATION	SELECT BORROW 208.1100 CY	QMP SELECT BORROW SPV.0035.01 CY		REMARKS
71+00 -	92+32		9703 *	9703	ROAD BASE	M/L
			146	146	ROAD BASE	E 7TH ST
			153	153	ROAD BASE	E 5TH ST SE
			195	195	ROAD BASE	E 5TH ST NW
	82+15		43	43	ROAD BASE	ALLEY
			141	141	ROAD BASE	2ND AVE
			110	110	ROAD BASE	E 4TH ST SE
	86+01		43	43	ROAD BASE	ALLEY
	86+50		43	43	ROAD BASE	ALLEY
			158	158	ROAD BASE	E 3RD ST SE
			152	152	ROAD BASE	E 3RD ST NW
			137	137	ROAD BASE	E 2ND ST
			37	37	SIDEWALK	6" SW
			260	260	SIDEWALK	4" SW
		TOTAL 0010	11322	11322		

* ALSO SHOWN ON EARTHWORK SUMMARY.

CONCRETE SAFETY ISLAND SUMMARY

STATION TO	STATION	LOCATION	SAFETY ISLAND 602.2400 SF	SIDEWALK CURE & SEAL SPV.0165(02) SF	REMARKS
91+07 -	92+12	CL	420	420	4 FT WIDTH
12+20 -	12+53	CL	132	132	4 FT WIDTH
12+61 -	13+07	CL	184	184	4 FT WIDTH
		TOTAL 0010	736	736 **	

** ADDITIONAL QUANTITY SHOWN WITH CAT 0010 SIDEWALK, CAT 0020 SIDEWALK, AND 15 1/2" MEDIAN SPECIAL.

SPECIAL (01.CONCRETE PAVEMENT 9 1/2- INCH SPECIAL)

STATION TO	STATION	LOCATION	SPV.0180(01) SY	REMARKS
71+00 -	92+32		12318	M/L
72+00	79+25		242	MEDIAN FLARE AREA
			157	E 7TH ST
			231	E 5TH ST SE
			167	E 5TH ST NW
			153	2ND AVE
			115	E 4TH ST SE
			185	E 3RD ST SE
			168	E 3RD ST NW
			211	E 2ND ST RADIUS
			126	E 2ND ST LT TURN/MEDIAN
		TOTAL 0010	14073	

BASE AGGREGATE DENSE 3/4-INCH

STATION	LOCATION	305.0110 TON	REMARKS
86+01	LT	8	ALLEY
75+55	LT & RT	56	RR TERRACE ASPH & SIDEWALK
	TOTAL 0010	64	

FINISHING ROADWAY (1190-44-71)

LOCATION	213.0100 EACH	REMARKS
	1	
TOTAL 0010	1	

BASE AGGREGATE DENSE 1 1/4-INCH

STATION TO	STATION	LOCATION	305.0120 TON	REMARKS
71+00 -	92+32		14089	M/L
72+00	79+25		236	MEDIAN FLARE AREA
			220	E 7TH ST
			229	E 5TH ST SE
			293	E 5TH ST NW
	82+15		33	ALLEY
			211	2ND AVE
			165	E 4TH ST SE
	86+01		33	ALLEY
	86+50		33	ALLEY
			237	E 3RD ST SE
			228	E 3RD ST NW
			206	E 2ND ST
		TOTAL 0010	16213	

CONCRETE ALLEY

STATION	LOCATION	416.0310 SY	REMARKS
82+15	RT	9	ALLEY
86+01	LT	9	ALLEY
86+50	RT	9	ALLEY
	TOTAL 0010	28	

CONCRETE DRIVEWAY 6-INCH

STATION	LOCATION	416.0160 SY	REMARKS
73+17	LT	16	
73+40	LT	16	
76+90	LT	19	
78+06	LT	18	
87+48	RT	18	
	TOTAL 0010	87	

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DRILLED TIE BARS

STATION	LOCATION	416.0610 EACH	REMARKS
93+00	LT	60	E 2ND ST LT TURN/MEDIAN
		29	2ND ST CURB RAMPS
	TOTAL 0010	89	

DRILLED DOWEL BARS

STATION	LOCATION	416.0620 EACH	REMARKS
71+00		29	
92+32		53	
12+18		4	
12+63		5	
12+91		9	
	TOTAL 0010	100	

PIPE UNDERDRAIN WRAPPED 6-INCH

STATION TO	STATION	LOCATION	612.0406 LF	REMARKS
71+17.9 -	75+25	LT	407	3L TO RR
71+17.9 -	75+50	RT	432	START TO RR
75+60 -	92+12	LT	1652	RR TO 19L
75+90 -	91+56	RT	1566	RR O 26R
	TOTAL 0010		4057	

CULVERT PIPE CONCRETE COLLAR

STATION	LOCATION	520.8000.S EACH	REMARKS
77+56	RT	1	
72+30	LT	1	
73+57	RT	1	
78+94	LT	1	
87+50	LT	1	
	TOTAL 0010	5	

CONCRETE CURB AND GUTTER SUMMARY

STATION TO	STATION	LOCATION	C&G TYPE A 601.0409 LF	C&G TYPE D 601.0411 LF	CURE & SEAL TREATMENT SPV.0090.01 LF	REMARKS
71+00 -	71+59	RT	59		59	
9+28	9+45	SR		34	34	7TH STREET ASPH.
		RT	86		86	7TH ST RADIUS
72+49 -	75+25	RT	276		276	
		RT	91		91	5TH ST RADIUS
75+25 -	75+56	RT		32	32	C&G IN ASPHALT
75+87 -	79+09	RT	323		323	
80+06 -	84+32	RT	426		426	
		RT	80		80	4TH ST RADIUS
85+12 -	88+43	RT	331		331	
8+91	9+13	SR		44	44	3RD STREET ASPH.
		RT	129		129	3RD ST RADIUS
89+29 -	91+84	RT	255		255	
		RT	61		61	2ND ST RADIUS
71+00 -	75+25	LT	425		425	
75+55	75+87	LT		32	32	C&G IN ASPHALT
75+87	78+88	LT	302		302	
		LT	40		40	CE
		LT	91		91	5TH ST RADIUS
79+80 -	81+89	LT	209		209	
		LT	80		80	2ND AVE RADIUS
82+73 -	87+52	LT	479		479	
		LT	129		129	3RD ST RADIUS
88+37 -	91+25	LT	288		288	
		LT	85		85	2ND ST RADIUS
			60		60	2ND ST CURB RAMPS
75+25 -	75+38	MEDIAN		28	28	MEDIAN IN ASPHALT
75+72 -	75+87	MEDIAN		29	29	MEDIAN IN ASPHALT
	TOTAL 0010		4303	198	4501	

CONCRETE SIDEWALK

STATION	TO	STATION	LOCATION	SIDEWALK 4-INCH 602.0405 SF	SIDEWALK 6-INCH 602.0415 SF	SIDEWALK CURE & SEAL SPV.0165(02) SF		REMARKS
71+00	-	71+74	RT	444		444	6	FT WIDTH
72+31	-	79+30	RT	3495		3495	5	FT WIDTH
79+92			RT	50		50		CURB RAMP
79+75	-	82+07	RT	1160		1160	5	FT WIDTH
82+07	-	82+23	RT		80	80		ALLEY
84+43			RT	50		50		CURB RAMP
84+99			RT	50		50		CURB RAMP
86+60	-	86+72	RT		60	60		ALLEY
87+24	-	87+63	RT		195	195		CE
88+57			RT	50		50		CURB RAMP
89+15			RT	75		75		CURB RAMP
92+05	-	92+38	RT	86		86		E 2ND RADIUS
93+23			RT	75		75		CURB RAMP
UNDISTRIBUTED			RT	2000		2000		
73+05	-	73+52	LT		235	235		PE
76+72	-	77+07	LT		175	175		FE
77+92	-	78+20	LT		140	140		CE
73+50	-	79+08	LT	2615		2615	5	FT WIDTH
79+69			LT	50		50		CURB RAMP
79+75		82+00	LT	1125		1125	5	FT WIDTH
82+04			LT	50		50		CURB RAMP
82+60			LT	50		50		CURB RAMP
85+93	-	86+09	LT		80	80		ALLEY
85+90	-	91+25	LT	2595		2595	5	FT WIDTH
87+65			LT	50		50		CURB RAMP
88+23			LT	50		50		CURB RAMP
93+23			LT	75		75		CURB RAMP
UNDISTRIBUTED			LT	2000		2000		
TOTAL 0010				16195**	965	17160 *		

*ADDITIONAL QUANTITY SHOWN WITH 15 1/2" MEDIAN SPECIAL, SAFETY ISLAND, AND CATEGORY 0020 SIDEWALK

**ADDITIONAL QUANTITY IN CATEGORY 0020

CURB RAMP DETECTABLE WARNING FIELD WHITE

STATION	LOCATION	602.0510 SF	REMARKS
71+71	RT	8	7TH ST
72+32	RT	8	7TH ST
75+30	LT	8	RR
75+44	LT	8	RR
75+70	RT	8	RR
75+82	RT	8	RR
79+00	LT	8	5TH ST
79+70	LT	8	5TH ST
79+26	RT	8	5TH ST
79+89	RT	8	5TH ST
79+79	LT	8	SW
80+00	RT	8	SW
82+03	LT	8	2ND AVE
82+61	LT	8	2ND AVE
84+45	RT	8	4TH ST
84+97	RT	8	4TH ST
87+65	LT	8	3RD ST
88+24	LT	8	3RD ST
88+57	RT	8	3RD ST
89+16	RT	8	3RD ST
92+16	LT & RT	24	2ND ST
92+35	LT	8	2ND ST
93+10	LT & RT	16	2ND ST
93+21	LT & RT	16	2ND ST
TOTAL 0010		224	

CONCRETE SIDEWALK

STATION	TO	STATION	LOCATION	SIDEWALK 4-INCH 602.0405 SF	SIDEWALK CURE & SEAL SPV.0165(02) SF		REMARKS
91+25	-	92+44	LT	898	898		
TOTAL 0020				898	898	***	

***ADDITIONAL QUANTITY SHOWN WITH 15 1/2" MEDIAN SPECIAL, SAFETY ISLAND, AND CATEGORY 0010 SIDEWALK

FENCE SAFETY

LOCATION	616.0700.S LF	REMARKS
SIDEWALK	250	UNDISTRIBUTED LOCATIONS
TOTAL 0010	250	

GARDENING ITEMS

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING NO. 10 630.0110 LB	SEEDING TEMP 630.0200 LB	EMAT URBAN CL 1 TYPE A 628.2006 SY	REMARKS
74+50	-	75+60	RT	61.11	0.04	0.83	0.83	61.11	
90+00	-	92+32	LT	769.67	0.48	0.83	0.83	769.67	
			TOTAL 0010	831 *	0.52	2	2	831	

* ADDITIONAL QUANTITY SHOWN WITH SOD ITEMS.

SPECIAL (03.CONCRETE 15 1/2 - INCH MEDIAN SPECIAL)

STATION	TO	STATION	LOCATION	SPV.0165(03) SF	SIDEWALK CURE & SEAL SPV.0165(02) SF	REMARKS
74+37	-	75+38		606	606	RR CROSSING
75+72	-	76+75		618	618	RR CROSSING
			TOTAL 0010	1224	1224 **	

** ADDITIONAL QUANTITY SHOWN WITH CAT 0010 SIDEWALK, CAT 0020 SIDEWALK, AND SAFETY ISLANDS.

MOBILIZATION

LOCATION	619.1000 EACH	REMARKS
PROJECT	1	
TOTAL 0010	1	

CONCRETE MEDIAN BLUNT NOSE

STATION	LOCATION	620.0200 SF	REMARKS
74+35		28	
76+75		28	
91+38		13	
92+16		13	
12+91		13	E 2ND ST
	TOTAL 0010	94	

TRAFFIC CONTROL DETOUR (PROJECT)

LOCATION	643.2000 EACH	REMARKS
	1	
TOTAL 0010	1	

TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT)

LOCATION	643.0200 DAYS	REMARKS
	60	
TOTAL 0010	60	

MAINTENANCE AND REPAIR OF HAUL ROADS (1190-44-71)

LOCATION	618.0100 EACH	REMARKS
PROJECT	1	
TOTAL 0010	1	

EROSION CONTROL DEVICES

CAT.	STRUCTURE NUMBER	STATION	OFFSET	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINT. 628.1504 LF	CULVERT PIPE CHECK 628.7555 EACH	INLET PROTECTION TYPE A 628.7005 EACH	INLET PROTECTION TYPE C 628.7015 EACH	CLEANING CATCH BASINS SPV.0060.02 EACH	REMARKS
0010	3L	71+17.9	-27.5	LT				1	1		
0010	4R	71+64.51	30.3	RT				1	1		
0010	4C	71+65.78	87.6	RT						1	
0010	4B	71+66.47	120.8	RT						1	
0010	5L	72+33.91	-27.5	LT				1	1		
0010	6X	72+20.78	32.6	RT							
0010	7L	73+66.18	-28.3	LT				1	1		
0010	8X	73+57.43	31.6	RT							
0010	9X			RT							
0010	9D			RT	65	65	1				TOE OF SLOPE
0010	10X	76+42.91	32.0	RT							
0010		77+50	150.0	RT	100	100					WETLAND
0010	11L	78+94.5	-28.4	LT				1	1		
0010	12R	78+82.54	28.3	LT				1	1		
0010	12X	78+79.82	33.1	RT							
0010	12D	79+19.5	62.5	RT			1				
0010	14R	80+41.16	28.1	RT				1	1		
0010	14X	80+43.66	32.9	RT							
0010	14D	80+00	57.6	RT			1				
0010	14Z	80+11.6	33.7	RT							
0010	13L	81+26.18	-28.2	LT				1	1		
0010	16R	81+26.12	28.4	RT				1	1		
0010	16X	81+26.12	28.4	RT							
0010	18R	83+95.54	28.2	RT				1	1		
0010	18X	83+95.75	33.1	RT							
0010	15L	85+53.74	-28.4	LT				1	1		
0010	20R	85+14.65	28.1	RT				1	1		
0010	20X	85+16.8	33.1	RT							
0010	22R	86+32.65	28.2	RT				1	1		
0010	22X	86+29.91	33.3	RT							
0010	17L	87+50.1	-28.2	LT				1	1		
0010	24R	87+51.65	34.6	RT				1	1		
0010	19L	92+12.2	-50.4	LT				1	1		
0010	26B	91+34.37	85.9	RT						1	
0010	26C	91+29.01	48.7	RT						1	
0010	26R	91+56.11	29.8	RT				1	1		
0010	26X	91+57.06	38.5	RT							
TOTAL 0010					165	165	3	17	17	4	

SOD ITEMS

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	SOD LAWN 631.1000 SY	SOD WATER 631.0300 MGAL	REMARKS
71+00	-	73+05	LT	114	114	0.00958	
73+57	-	75+25	LT	93	93	0.00785	
75+56	-	76+77	LT	67	67	0.00566	
77+10	-	77+88	LT	43	43	0.00365	
78+27	-	79+00	LT	41	41	0.00341	
			LT	63	63	0.00526	5TH ST
79+81	-	82+00	LT	122	122	0.01024	
			LT	28	28	0.00234	2ND AVE
82+64	-	85+86	LT	179	179	0.01505	
86+20	-	87+60	LT	78	78	0.00655	
			LT	28	28	0.00234	3RD ST
88+27	-	92+00	LT	207	207	0.01744	
			RT	56	56	0.00468	E7TH
74+35	-	75+54	RT	66	66	0.00556	
			RT	56	56	0.00468	5TH ST
75+92	-	79+22	RT	183	183	0.01543	
80+02	-	81+97	RT	108	108	0.00912	
82+25	-	84+41	RT	120	120	0.01010	
			RT	56	56	0.00468	4TH ST
85+03	-	86+44	RT	78	78	0.00659	
86+69	-	87+26	RT	32	32	0.00266	
87+62	-	88+53	RT	51	51	0.00425	
89+19	-	92+00	RT	156	156	0.01314	
TOTAL 0010				2023 *	2023	0.17	

* ADDITIONAL QUANTITY SHOWN ON GARDENING SUMMARY

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 EACH	REMARKS
	2	
TOTAL 0010	2	

MOBILIZATIONS EMERGENCY EROSION CONTROL

LOCATION	628.1910 EACH	REMARKS
	2	
TOTAL 0010	2	

STORM SEWER SUMMARY

CAT.	STRUCTU NUMBER	RIM FEET	SUMP FEET	DEPTH FEET	STATION	OFFSET	LOCATION	RCP CLASS IV 12" SS 608.0412 LF	AEW FOR RCP 12" 522.1012 EACH	PIPE GRATES 611.9800.S EACH	RCP CLASS IV 18" SS 608.0418 LF	RCP CLASS IV 21" SS 608.0421 LF	ADJUST MH COVERS 611.8110 EACH	RECONST. MANHOLES 611.0420 EACH	MH COVER TYPE J 611.0530 EACH	CATCH BASIN TYPE 1 611.0101 EACH	CATCH BASIN TYPE 3 611.0105 EACH	MANHOLE TYPE 1 611.0201 EACH	INLET COVER TYPE A 611.0600 EACH	INLET COVER TYPE H 611.0624 EACH	CONST. STAKING SS 650.4000 EACH	REMARKS
0010	3L	629.12	624.9	3.39	71+17.9	-27.5	LT										1			1	1	
0010	4R	628.8	624.05	3.92	71+64.51	28.3	RT	74								1				1	1	
0010	4C	629.58	UNKNOWN	-	71+65.78	87.6	RT															
0010	5L	628.535	624.21	3.49	72+33.91	-27.9	LT	8									1			1	1	
0010	6X	628.773	624.53	4.24	72+20.78	32.6	RT						1								1	
0010	7L	628.336	623.8	3.70	73+66.18	-30.6	LT	4									1			1	1	
0010	8X	628.444	623.98	4.46	73+57.43	31.6	RT	4						1					1		1	REALIGN LID OFFSET
0010	9X	630.414	623.414	5.96	75+25.84	35.2	RT								1			1			1	
0010	9D	626.2	-	-	75+25.84	60.4	RT	20	1	1											1	
0010	10X	629.7	623.02	6.68	76+42.91	32.0	RT				113		1								1	
0010	11L	626.306	622.23	3.24	78+94.5	-28.5	LT	8									1			1	1	
0010	12R	626.44	621.02	4.59	78+82.54	27.9	RT	6								1				1	1	
0010	12X	627.262	622.46	4.80	78+79.82	33.1	RT					164	1								1	
0010	12D	624.5	-	-	79+19.5	62.5	RT	50	1	1											1	
0010	14R	625.081	620.8	3.45	80+41.16	27.5	RT	5								1				1	1	
0010	14X	625.88	621.91	3.97	80+43.66	32.9	RT						1								1	
0010	14D	624.4	-		80+00	62.5	RT	34	1	1											1	
0010	14Z	626.065	622.02	3.04	80+11.6	33.6	RT								1			1			1	
0010	13L	624.876	621.08	2.96	81+26.18	-27.5	LT													1	1	
0010	16R	624.876	619.68	4.36	81+26.12	27.5	RT	57									1			1	1	
0010	16X	625.68	621.54	4.14	81+24.84	33.2	RT	5					1								1	
0010	18R	625.047	620.36	3.85	83+95.54	27.5	RT										1			1	1	
0010	18X	625.85	620.44	5.41	83+95.75	33.1	RT	5					1								1	
0010	15L	624.863	619.72	4.31	85+53.74	-27.5	LT										1			1	1	
0010	20R	624.908	618.9	5.18	85+14.65	27.5	RT									1				1	1	
0010	20X	625.7	619.54	6.16	85+16.8	33.1	RT	5					1								1	
0010	22R	624.786	619.62	4.33	86+32.65	27.5	RT									1				1	1	
0010	22X	625.59	619.4	6.19	86+29.91	33.3	RT	6					1								1	
0010	17L	625.107	619.25	5.02	87+50.1	-27.5	LT	16									1			1	1	
0010	24X	625.95	619.07	6.88	87+51.65	34.6	RT						1								1	
0010	19L	624.377	618.53	5.01	92+12.2	-49.5	LT										1			1	1	
0010	26R	624.466	619.96	3.67	91+56.11	28.9	RT										1			1	1	
0010	26X	625.3	617.67	7.63	91+57.06	38.5	RT	9					1								1	
							TOTAL	316	3	3	113	164	10	1	2	5	10	2	1	16	32	

PERMANENT SIGNING SUMMARY

STATION	LOCATION	POSTS TUBULAR STEEL 2X2-INCH X 1.5-FT 634.0801 EACH	POSTS TUBULAR STEEL 2X2-INCH X 3-FT 634.0803 EACH	POSTS TUBULAR STEEL 2X2-INCH X 8-FT 634.0808 EACH	POSTS TUBULAR STEEL 2X2-INCH X 12-FT 634.0812 EACH	MOVING SIGNS TYPE II 638.2102 EACH	SIGNS REFLECTIVE TYPE II 637.0202 SIGN CODE	SIZE	MESSAGE	AREA S.F.	REMARKS
73+25	RT	1	1		1		W10-1	36"X36"	RR CROSSING	7.07	
73+25	RT				-	1		24"X30"	NO HORN	5.00	(REUSE EXISTING SIGN)
71+60	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
71+60	RT				-	1		30"X36"	BONG HERTITAGE CENTER	7.50	(REUSE EXISTING SIGN)
72+25	E 7TH ST	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 7TH STREET (RT)
72+60	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
73+50	RT				-		MG3-2	24"X12"	EAST	2.00	ON LIGHT POLE
73+50	RT				-		M1-93	24"X24"	LK SUPERIOR CIRCLE TOUR	4.00	ON LIGHT POLE
73+50	RT				-		M3-2	24"X12"	EAST	2.00	ON LIGHT POLE
73+50	RT				-		M1-4	24"X24"	USH 2	4.00	ON LIGHT POLE
73+50	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
74+35	MEDIAN	1	1	1			R4-7	24"X30"	KEEP RIGHT	5.00	ON LIGHT POLE
74+50	LT				-		W3-3	36"X36"	(STOP LIGHT)	9.00	ON LIGHT POLE
74+50	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
75+25	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
76+10	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
76+70	MEDIAN	1	1	1			R4-7	24"X30"	KEEP RIGHT	5.00	
77+00	RT				-		R2-1	24"X30"	SPEED LIMIT 30	5.00	ON LIGHT POLE
77+00	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
78+85	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
79+00	LT	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 5TH STREET (LT)
79+80	RT	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 5TH STREET (RT)
77+85	LT				-		W10-1	36"X36"	RR CROSSING	7.07	ON LIGHT POLE
77+85	LT				-	1		24"X30"	NO HORN	5.00	(REUSE EXISTING SIGN)
79+80	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
80+70	RT				-	1			TOURIST INFO CENTER	6.25	(REUSE EXISTING SIGN)
80+70	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
81+00	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
81+00	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
81+00	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
81+70	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
82+00	LT	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 2ND AVE (LT)
82+60	RT				-		M2-1	21"X15"	JCT	3.00	ON LIGHT POLE
82+60	RT				-		M1-4	24"X24"	USH 53	3.00	ON LIGHT POLE
82+60	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
83+30	LT				-		MG3-2	24"X12"	WEST	2.00	ON LIGHT POLE
83+30	LT				-		M1-93	24"X24"	LK SUPERIOR CIRCLE TOUR	4.00	ON LIGHT POLE
83+30	LT				-		M3-2	24"X12"	WEST	2.00	ON LIGHT POLE
83+30	LT				-		M1-4	24"X24"	USH 2	4.00	ON LIGHT POLE
83+30	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
83+70	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
83+70	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
83+70	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
84+25	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
85+00	RT	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 4TH STREET (RT)
85+15	RT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
85+15	RT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
85+15	RT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	

CONTINUED ON FOLLOWING PAGE

PERMANENT SIGNING SUMMARY

STATION	LOCATION	POSTS TUBULAR STEEL 2X2-INCH X 1.5-FT 634.0801 EACH	POSTS TUBULAR STEEL 2X2-INCH X 3-FT 634.0803 EACH	POSTS TUBULAR STEEL 2X2-INCH X 8-FT 634.0808 EACH	POSTS TUBULAR STEEL 2X2-INCH X 12-FT 634.0812 EACH	MOVING SIGNS TYPE II 638.2102 EACH	SIGNS REFLECTIVE TYPE II 637.0202 SIGN CODE	SIZE	MESSAGE	AREA S.F.	REMARKS
85+25	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
86+20	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
86+30	RT	1	1		1		R3-50R	30"X36"	ARROW RT - ONLY	7.50	
87+30	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
87+55	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
87+55	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
87+55	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
87+70	LT	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 3RD STREET (LT)
88+10	RT				-		W3-3	36"X36"	(STOP LIGHT)	9.00	ON LIGHT POLE
88+10	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
89+10	LT						R2-1	24"X30"	SPEED LIMIT 30	5.00	ON LIGHT POLE
89+10	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
89+10	RT	1	1		1		R1-1	30"X30"	STOP	6.25	EAST 3RD STREET (RT)
89+40	RT	2	2		2		M1-4	24"X24"	USH 53	4.00	
89+40	RT						M3-2	24"X12"	EAST		
89+40	RT				-		M6-4	21"X21"	DOUBLE ARROW	3.06	
89+40	RT				-		M1-4	24"X24"	USH 2	4.00	
89+40	RT				-		M6-1	21"X21"	ARROW	3.06	
89+80	RT	1	1		1		R3-8	36"X30"	LANE ARROWS	7.50	
90+10	RT				-		MG3-2	24"X12"	EAST	2.00	ON LIGHT POLE
90+10	RT				-		M1-93	24"X24"	LK SUPERIOR CIRCLE TOUR	4.00	ON LIGHT POLE
90+10	RT				-		MG6-1	21"X21"	ARROW	3.06	ON LIGHT POLE
90+10	RT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
90+25	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
90+25	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
90+25	LT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
91+10	LT				-		M3-2	24"X12"	WEST	2.00	ON LIGHT POLE
91+10	LT				-		M1-4	24"X24"	USH 2	4.00	ON LIGHT POLE
91+10	LT				-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
91+15	RT	2	2		2		D1-3	66"X36"	DULUTH /ASHLAND SPOONER	16.50	
91+20	RT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
91+20	RT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
91+20	RT	1	1	1			W5-56	18"X18"	(DOTS)	2.25	
91+40	MEDIAN	1	1	1			R4-7	24"X30"	KEEP RIGHT	5.00	
92+10	MEDIAN	1	1	1			R4-7	24"X30"	KEEP RIGHT	5.00	
12+24	MEDIAN	1	1	1			R4-7	24"X30"	KEEP RIGHT	5.00	EAST 2ND STREET
	TOTALS	36	36	22	14	4				329	

SIGN REMOVAL SUMMARY

STATION	LOCATION	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMOVING SIGNS TYPE II 638.2602 EACH	MESSAGE	REMARKS
71+60	RT		1	RR CROSSING	ON LIGHT POLE
71+60	RT		1	NO PARKING	ON LIGHT POLE
72+60	LT		1	NO PARKING	ON LIGHT POLE
73+50	RT		1	EAST	ON LIGHT POLE
73+50	RT		1	LK SUPERIOR CIRCLE TOUR	ON LIGHT POLE
73+50	RT		1	EAST	ON LIGHT POLE
73+50	RT		1	USH 2	ON LIGHT POLE
73+50	RT		1	NO PARKING	ON LIGHT POLE
74+35	MEDIAN	1	1	KEEP RIGHT	ON LIGHT POLE
74+50	LT		1	(STOP LIGHT)	ON LIGHT POLE
74+50	LT		1	NO PARKING	ON LIGHT POLE
75+25	RT		1	NO PARKING	ON LIGHT POLE
76+10	LT		1	NO PARKING	ON LIGHT POLE
76+70	MEDIAN	1	1	KEEP RIGHT	
77+00	RT		1	SPEED LIMIT 30	ON LIGHT POLE
77+00	RT		1	NO PARKING	ON LIGHT POLE
77+85	LT		1	NO PARKING	ON LIGHT POLE
78+85	RT		1	NO PARKING	ON LIGHT POLE
79+00	LT		1	STOP	EAST 5TH STREET (LT)
79+80	RT	1	1	STOP	EAST 5TH STREET (RT)
79+80	LT		1	RR CROSSING	ON LIGHT POLE
79+80	LT		1	NO PARKING	ON LIGHT POLE
80+70	RT		1	NO PARKING	ON LIGHT POLE
81+70	LT		1	NO PARKING	ON LIGHT POLE
82+00	LT		1	STOP	EAST 2ND AVE (LT)
82+60	RT		1	NO PARKING	ON LIGHT POLE
83+30	LT		1	WEST	ON LIGHT POLE
83+30	LT		1	LK SUPERIOR CIRCLE TOUR	ON LIGHT POLE
83+30	LT		1	WEST	ON LIGHT POLE
83+30	LT		1	USH 2	ON LIGHT POLE
83+30	LT		1	NO PARKING	ON LIGHT POLE
84+25	RT		1	NO PARKING	ON LIGHT POLE
85+00	RT		1	STOP	EAST 4TH STREET (RT)
85+25	LT		1	NO PARKING	ON LIGHT POLE
86+20	RT		1	NO PARKING	ON LIGHT POLE
86+75	RT		1	STOP	
87+30	LT		1	NO PARKING	ON LIGHT POLE
87+70	LT	1	1	STOP	EAST 3RD STREET (LT)
88+10	RT		1	(STOP LIGHT)	ON LIGHT POLE
88+10	RT		1	NO PARKING	ON LIGHT POLE
89+10	LT		1	SPEED LIMIT 30	ON LIGHT POLE
89+10	LT		1	NO PARKING	ON LIGHT POLE
89+10	RT	1	1	STOP	EAST 3RD STREET (RT)
89+40	RT		1	USH 53	
89+40	RT		1	DOUBLE ARROW	
89+40	RT		1	USH 2	
89+40	RT		1	ARROW	
89+80	RT		1	LANE ARROWS	
90+10	RT		1	EAST	ON LIGHT POLE
90+10	RT		1	LK SUPERIOR CIRCLE TOUR	ON LIGHT POLE
90+10	RT		1	ARROW	ON LIGHT POLE
90+10	RT		1	NO PARKING	ON LIGHT POLE
91+10	LT		1	WEST	ON LIGHT POLE
91+10	LT		1	USH 2	ON LIGHT POLE
91+10	LT		1	NO PARKING	ON LIGHT POLE
91+15	RT	1	1	DULUTH /ASHLAND SPOONER	
91+40	MEDIAN	1	1	KEEP RIGHT	
91+90	LT		1	FOLDING STOP	EAST 2ND ST (SIGNAL LT)
92+10	MEDIAN	1	1	KEEP RIGHT	
92+25	RT		1	FOLDING STOP	EAST 2ND ST (SIGNAL RT)
93+15	RT		1	FOLDING STOP	EAST 2ND ST (SIGNAL LT)
93+30	LT		1	FOLDING STOP	EAST 2ND ST (SIGNAL RT)
	TOTALS	8	62		

SIGNS REFLECTIVE FOLDING TYPE II

STATION	LOCATION	637.0402 SF	REMARKS
91+90	LT	6.25	EAST 2ND ST (SIGNAL LT)
92+25	RT	6.25	EAST 2ND ST (SIGNAL RT)
93+15	RT	6.25	EAST 2ND ST (SIGNAL LT)
93+30	LT	6.25	EAST 2ND ST (SIGNAL RT)
	TOTAL 0010	25	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

LOCATION	SIZE	643.2000 SF	MESSAGE	REMARKS
DETOUR PLAN	96" X 54"	36	HWY 2 DETOUR TRUCKS MUST USE TRUCK ROUTE NO THRU TRAFFIC	SIGN # 1
TOTAL 0010		36		

LOOP DETECTOR SUMMARY

CATEGORY	STATION		CONDUIT LOOP DETCT. 652.0800 LF	24" X 36" PULL BOX 653.0135 EACH	LOOP DETCT. WIRE 655.0800 LF	REMARKS
0010	90+50	ADVANCE	70	1	280	021 4TURN
0010	90+50	ADVANCE	50		150	022 3TURN
0010	91+75	LT/THRU	122	1	366	033 3TURN
0010	92+00	LT/THRU	112		448	034 4TURN
0010	12+75	LT TURN	62	1	186	045 3TURN
0010	12+75	LT TURN	34		136	046 4TURN
		TOTAL	450	3 *	1566	

* ADDITIONAL QUANTITY SHOWN WITH TRAFFIC SIGNAL ITEMS.

TRAFFIC SIGNAL SUMMARY

CATEGORY	UNIT NUMBER	STATION	LOCATION	CONC BASES TYPE 1 654.0101 EACH	CONC BASES TYPE 2 654.0102 EACH	24" X 36" PULL BOX 653.0135 EACH	CONDUIT NON-MET. SCH 40 2 INCH 652.0225 LF
0010	PB52	93+30	32' LT				36
0010	PB55	93+32	31' RT				165
0010	PB56	93+14	55' RT				14
0010	PB57	92+37	104' RT				51
0010	PB58	92+10	47' RT			1	16
0010	SB21	93+17	82' LT		1		
0010	SB22	92+13	57' LT	1			
			TOTAL	1	1	1 **	246 ***

NOTE: STATIONING & LOCATION APPROXIMATE.

**ADDITIONAL QUANTITY SHOWN WITH LOOP DETECTOR ITEMS.

*** ADDITIONAL QUANTITY SHOWN WITH LIGHTING ITEMS.

LIGHTING ITEMS

LIGHTING UNIT NO.	STATION	LOCATION	BASES TYPE 5 654.0105 EACH	ELECTRICAL WIRE LTG 12AWG 655.0610 LF	REM. SALV. & RELOCATE EX. LIGHTING EQUIP. SPV.0060.01 EACH	CONDUIT NON-MET. SCH 40 2 INCH 652.0225 LF	REMARKS
LP12	71+58	RT		40	1		REPLACE WIRE IN POLE
LP13		RT		40	1		REPLACE WIRE IN POLE
LP14	73+53	RT	1	40	1	20	TIE INTO EXISTIG
LP15	75+24	RT	1	211	1	171	LP14-LP15 CONDUIT/WIRE
LP21	76+98	RT	1	40	1	20	TIE INTO EXISTIG
LP22	78+87	RT		40	1		REPLACE WIRE IN POLE
LP23	80+73	RT		40	1		REPLACE WIRE IN POLE
LP24	82+59	RT		40	1		REPLACE WIRE IN POLE
LP25	84+26	RT		40	1		REPLACE WIRE IN POLE
LP26	86+18	RT		40	1		REPLACE WIRE IN POLE
LP31	88+11	RT		40	1		REPLACE WIRE IN POLE
LP32	90+07	RT		40	1		REPLACE WIRE IN POLE
LP33	91+89	RT		40	1		REPLACE WIRE IN POLE
LP42	70+91	LT		40	1		REPLACE WIRE IN POLE
LP43	72+60	LT		40	1		REPLACE WIRE IN POLE
LP44	74+47	LT	1	40	1	20	TIE INTO EXISTIG
LP51	76+06	LT	1	40	1	20	TIE INTO EXISTIG
LP52	77+82	LT		40	1		REPLACE WIRE IN POLE
LP53	79+81	LT		40	1		REPLACE WIRE IN POLE
LP54	81+68	LT		40	1		REPLACE WIRE IN POLE
LP55	83+34	LT		40	1		REPLACE WIRE IN POLE
LP56	85+26	LT		40	1		REPLACE WIRE IN POLE
LP57	87+35	LT		40	1		REPLACE WIRE IN POLE
LP61	89+10	LT		40	1		REPLACE WIRE IN POLE
LP62	91+05	LT		40	1		REPLACE WIRE IN POLE
		TOTAL 0010	5	1171	25	251****	

**** ADDITIONAL QUANTITY SHOWN WITH SIGNAL ITEMS.

FIELD OFFICE TYPE B (1190-44-71)

LOCATION	642.5001 EACH	REMARKS
	1	
TOTAL 0010	1	

TRAFFIC CONTROL ITEMS

DETOUR SIGN GROUP	ARROW BOARDS 643.0800 EACH	ARROW BOARDS 643.0800 DAYS	DRUMS 643.0300 EACH	DRUMS 643.0300 DAYS	LIGHTS TYPE C 643.0715 EACH	LIGHTS TYPE C 643.0715 DAYS	BARRICADES TYPE III 643.0420 EACH	BARRICADES TYPE III 643.0420 DAYS	LIGHTS TYPE A 643.0705 EACH	LIGHTS TYPE A 643.0705 DAYS	COVERING SIGNS 643.0905.S EACH	SIGNS: DETOUR 643.3000 EACH	SIGNS: DETOUR 643.3000 DAYS	SIGNS: TRAFFIC CONTROL 643.0900 EACH	SIGNS: TRAFFIC CONTROL 643.0900 DAYS	SIGN CODE	SIZE	MESSAGE
1												0	0					TRUCKS MUST USE T-ROUTE
2												1	60			W20-2	48"X48"	DETOUR 1500 FT
3												1	60			W20-2	48"X48"	DETOUR 1000 FT
4												1	60			W20-2	48"X48"	DETOUR 500 FT
5												1	60			M4-8	24"X12"	DETOUR
5												1	60			M3-2	24"X12"	EAST
5												1	60			M14	24"X24"	USH 2
5												1	60			MO5-1L	21"X21"	ADVANCED LEFT ARROW
6												1	60			M4-8A	24"X18"	END DETOUR
6												1	60			M14	24"X24"	USH 2
7												1	60			M4-8	24"X12"	DETOUR
7												1	60			M3-2	24"X12"	EAST
7												1	60			M14	24"X24"	USH 2
7												1	60			MO6-1	21"X21"	ARROW
8											1	1	60			M4-8	24"X12"	DETOUR
8												1	60			M3-4	24"X12"	WEST
8												1	60			MO6-1	21"X21"	ARROW
9							1	60				1	60			R11-3	60"X30"	ROAD CLOSED X MILE AHEAD
10							1	60				1	60			R11-4	60"X30"	ROAD CLOSED TO THRU TRAFFIC
11							1	60				1	60			R11-4	60"X30"	ROAD CLOSED TO THRU TRAFFIC
20												1	60			M4-8	24"X12"	DETOUR
20												1	60			M3-2	24"X12"	EAST
20												1	60			M14	24"X24"	USH 2
21												1	60			M4-8	24"X12"	DETOUR
21												1	60			M3-4	24"X12"	WEST
21												1	60			M14	24"X24"	USH 2
22												1	60			M4-8	24"X12"	DETOUR
22												1	60			M3-2	24"X12"	EAST
22												1	60			M14	24"X24"	USH 2
23												1	60			M4-8	24"X12"	DETOUR
23												1	60			M3-2	24"X12"	EAST
23												1	60			M14	24"X24"	USH 2
24												1	60			M4-8	24"X12"	DETOUR
24												1	60			M3-4	24"X12"	WEST
24												1	60			M14	24"X24"	USH 2
25												1	60			M4-8	24"X12"	DETOUR
25												1	60			M3-2	24"X12"	EAST
25												1	60			M14	24"X24"	USH 2
30												1	60			M4-8	24"X12"	DETOUR
30												1	60			M3-2	24"X12"	EAST
30												1	60			M14	24"X24"	USH 2
31												1	60			M4-8	24"X12"	DETOUR
31												1	60			M3-4	24"X12"	WEST
31												1	60			M14	24"X24"	USH 2
32											1	1	60			M4-8	24"X12"	DETOUR
33											1	1	60			M4-8	24"X12"	DETOUR

CONTINUED ON FOLLOWING PAGE

TRAFFIC CONTROL ITEMS

DETOUR SIGN GROUP	ARROW BOARDS 643.0800 EACH	ARROW BOARDS 643.0800 DAYS	DRUMS 643.0300 EACH	DRUMS 643.0300 DAYS	LIGHTS TYPE C 643.0715 EACH	LIGHTS TYPE C 643.0715 DAYS	BARRICADES TYPE III 643.0420 EACH	BARRICADES TYPE III 643.0420 DAYS	LIGHTS TYPE A 643.0705 EACH	LIGHTS TYPE A 643.0705 DAYS	COVERING SIGNS 643.0905.S EACH	SIGNS: DETOUR 643.3000 EACH	SIGNS: DETOUR 643.3000 DAYS	SIGNS: TRAFFIC CONTROL 643.0900 EACH	SIGNS: TRAFFIC CONTROL 643.0900 DAYS	SIGN CODE	SIZE	MESSAGE
34												1	60			M4-8	24"X12"	DETOUR
34												1	60			M3-4	24"X12"	WEST
34												1	60			M14	24"X24"	USH 2
34												1	60			MO6-2	21"X21"	TILTED ARROW
35											1	1	60			M4-8	24"X12"	DETOUR
36												1	60			M4-8	24"X12"	DETOUR
36												1	60			M3-2	24"X12"	EAST
36												1	60			M14	24"X24"	USH 2
37												1	60			M4-8	24"X12"	DETOUR
37												1	60			M3-4	24"X12"	WEST
37												1	60			M14	24"X24"	USH 2
40												1	60			M4-8	24"X12"	DETOUR
40												1	60			M3-4	24"X12"	WEST
40												1	60			M14	24"X24"	USH 2
41											1	1	60			M4-8	24"X12"	DETOUR
42											1	1	60			M4-8	24"X12"	DETOUR
43											1	1	60			M4-8	24"X12"	DETOUR
43												1	60			MO6-1	21"X21"	ARROW
44												1	60			M4-8A	24"X18"	END DETOUR
45												1	60			W20-2	48"X48"	DETOUR 500 FT
46												1	60			W20-2	48"X48"	DETOUR 1000 FT
47												1	60			W20-2	48"X48"	DETOUR 1500 FT
48											1	1	60			M4-8	24"X12"	DETOUR
48												1	60			MO6-1	21"X21"	ARROW
							2	120	4	240				1	60	R11-2	48"X30"	ROAD CLOSED
							2	120	4	240				1	60	W01-6	48"X24"	ARROW
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 7TH ST
														1	60	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 7TH ST
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 5TH ST (LT)
														1	60	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 5TH ST (LT)
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 5TH ST (RT)
														1	60	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 5TH ST (RT)
							1	60						1	60	R11-2	48"X30"	ROAD CLOSED ALLEY
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 2ND AVE (LT)
														1	60	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 2ND AVE (LT)
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 4TH ST (RT)
														1	60	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 4TH ST (RT)
							1	60						1	60	R11-2	48"X30"	ROAD CLOSED ALLEY
							1	60						1	60	R11-2	48"X30"	ROAD CLOSED ALLEY
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 3RD ST (LT)
														2	120	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 3RD ST (LT)
							3	180						1	60	R11-2	48"X30"	ROAD CLOSED EAST 3RD ST (RT)
														1	60	W20-3	48"X48"	ROAD CLOSED AHEAD EAST 3RD ST (RT)
							1	60						1	60	R11-2	48"X30"	ROAD CLOSED ALLEY
							7	420	14	840				1	60	R11-2	48"X30"	ROAD CLOSED

CONTINUED ON FOLLOWING PAGE

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TRAFFIC CONTROL ITEMS

DETOUR SIGN GROUP	ARROW BOARDS 643.0800 EACH	ARROW BOARDS 643.0800 DAYS	DRUMS 643.0300 EACH	DRUMS 643.0300 DAYS	LIGHTS TYPE C 643.0715 EACH	LIGHTS TYPE C 643.0715 DAYS	BARRICADES TYPE III 643.0420 EACH	BARRICADES TYPE III 643.0420 DAYS	LIGHTS TYPE A 643.0705 EACH	LIGHTS TYPE A 643.0705 DAYS	COVERING SIGNS 643.0905.S EACH	SIGNS: DETOUR 643.3000 EACH	SIGNS: DETOUR 643.3000 DAYS	SIGNS: TRAFFIC CONTROL 643.0900 EACH	SIGNS: TRAFFIC CONTROL 643.0900 DAYS	SIGN CODE	SIZE	MESSAGE	REMARKS
-														4	240	W20-1	48"X48"	ROAD WORK AHEAD	LANE CLOSURE (E2ND ST)
-														4	120	W20-5L	48"X48"	LEFT LANE CLOSED AHEAD	LANE CLOSURE (E2ND ST)
-														4	120	W20-5R	48"X48"	RIGHT LANE CLOSED AHEAD	LANE CLOSURE (E2ND ST)
-														4	120	W04-2L	48"X48"	SYMBOL LT LANE CLOSURE	LANE CLOSURE (E2ND ST)
-														4	120	W04-2R	48"X48"	SYMBOL LT LANE CLOSURE	LANE CLOSURE (E2ND ST)
-	2	120	10	600															LANE CLOSURE (E2ND ST)
-			20	1,200	20	1,200													LANE CLOSURE (E2ND ST)
-			28	1,680			2	120						2	120	R11-2(MOD)	48"X30"	LANE CLOSED	LANE CLOSURE (E2ND ST)
-			10	600															LANE CLOSURE (E2ND ST)
-														4	240	G20-2A	48"X24"	END ROAD WORK	LANE CLOSURE (E2ND ST)
-							4	240						4	240	R9-9	24"X12"	SIDEWALK CLOSED	UNDIST. SW CLOSURE
-			16	960			2	120						2	120	R11-2(MOD)	48"X30"	LANE CLOSED	TURN LANE CLOSURES
	2	120	84	5,040	20	1,200	47	2,820	22	1,320	8		69	4,140	54	2,760			

PAVEMENT MARKING SUMMARY

STATION	TO	STATION	LOCATION	PAVEMENT MARKING 4 INCH EPOXY 646.0106 LF	CHANNELIZING 8 INCH EPOXY 646.0126 LF	CURB EPOXY 647.0456 LF	STOP LINE 18 INCH EPOXY 647.0566 LF	DIAGONAL 12 INCH EPOXY 647.0726 LF	CROSSWALK 6 INCH EPOXY 647.0766 LF	CROSSWALK EPOXY SPECIAL SPV.0165.01 SF	ARROWS TYPE 2 EPOXY 647.0166 EACH	ARROWS TYPE 3 EPOXY 647.0176 EACH	WORDS EPOXY 647.0356 EACH	RR CROSSING EPOXY 647.0110 EACH	TEMPORARY REM. TAPE 4-INCH 649.0400 LF	REMARKS
		70+05	ML						115							
70+00	-	92+15	ML	1175												C.L. WHITE DASH
70+00	-	92+15	LT & RT	3880												WHITE EDGELINE
70+00	-	92+15	C.L	4430												YELLOW EDGELINE
		72+00	RT	95			23			224						E. 7TH ST.
		73+78	RT											2		
72+15	-	74+17	C.L.	440				60								
		74+37	C.L.													
74+35	-	75+38	MEDIAN L&R			206										
75+38	-	75+72	MEDIAN L&R	70												
75+72	-	76+75	MEDIAN L&R			206										
		76+75	C.L.													
76+85	-	79+00	C.L.	440				60								
		77+43	LT											2		
		79+30	LT	130			17			192						E. 5TH ST.
		79+50	RT	130			22			208						E. 5TH ST.
		79+90	ML							208						USH 2/BELKNAP
		82+30	LT	70			15			160						2ND AVE.
		84+70	RT	95			15			160						E. 4TH ST.
		88+00	LT	110			20			176						E. 3RD ST.
		88+80	RT	80			16			144						E. 3RD ST.
		91+15	RT								1		1			
		91+32	RT								1	1	1			
91+38	-	92+16	MEDIAN L&R			156										
		92+04	RT								1	1				
		92+20	ML				35			368						U.S.H. 2
		92+67	LT		80		35			272						E. 2ND. ST. /USH 53
		92+72	LT								1		1		50	E. 2ND. ST. /USH 53
		92+80	RT		105		35			363	3		3		50	E. 2ND. ST. /USH 53
		93+23	ML	44			25			208						U.S.H. 2
		92+55	LT & RT	75												E. 2ND. ST. /USH 53
		92+95	LT & RT	62												E. 2ND. ST. /USH 53
			TOTALS =	11326	185	568	258	120	115	2683	7	2	6	4	100	

CONSTRUCTION STAKING ITEMS

STATION	TO	STATION	LOCATION	SUBGRADE 650.4500 LF	BASE 650.5000 LF	CURB & GUTTER 650.5500 LF	CONC. PAVEMENT 650.7000 LF	SLOPE STAKES 650.9920 LF	REMARKS
71+00	-	92+32		4264	-	2132	2132	2132	
9+28	-	9+60		63	32	32	16	32	7TH STREET
9+19	-	9+70		102	51	-	25	51	5TH STREET SE
6+35	-	7+42		214	107	51	51	107	5TH STREET NW
10+20	-	10+86		131	66	17	17	66	2ND AVENUE
9+23	-	9+70		93	47	-	-	47	4TH STREET
8+66	-	9+80		228	114	71	50	114	3RD STREET SE
10+20	-	11+18		196	98	22	22	98	3RD STREET NW
			TOTAL 0010	5291	* 513	2325	2313	2645	

* INCLUDES SETTING STAKES FOR SELECT BORROW SUBBASE.

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT)

LOCATION	650.8500 LS	REMARKS
	1	LIGHTING AND SIGNAL ITEMS
TOTAL 0010	1	

SAWING ASPHALT

STATION	LOCATION	690.0150 LF	REMARKS
		40	E 7TH ST
78+06	LT	31	CE
	E 5TH ST	45	CE
		40	E 5TH ST SE
		22	E 5TH ST NW
82+15	RT	13	ALLEY
		32	2ND AVE
		32	E 4TH ST SE
86+50	RT	13	ALLEY
		20	E 3RD ST SE
87+48	RT	35	CE
	E 3RD ST	35	CE
		20	E 3RD ST NW
	TOTAL 0010	378	

SPECIAL (01.ASPHALTIC SURFACE SPECIAL)

STATION	LOCATION	SPV.0195(01) TON	REMARKS
		16	E 7TH ST
		15	RR
78+06	LT	6	CE
	E 5TH ST	21	CE
		16	E 5TH ST SE
		11	E 5TH ST NW
82+15	RT	9	ALLEY
		13	2ND AVE
		12	E 4TH ST SE
86+01	LT	10	ALLEY
86+50	RT	10	ALLEY
		8	E 3RD ST SE
87+48	RT	7	CE
	E 3RD ST	24	CE
		13	E 3RD ST NW
75+55	ML	4	30' WIDE TEMP RAIL X-ING
	TOTAL 0010	196	

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (05. 1190-44-71)

LOCATION	650.9910 LS	REMARKS
	1	PROJECT
TOTAL 0010	1	

SAWING CONCRETE

STATION	TO	STATION	LOCATION	690.0250 LF	REMARKS
		71+00	ML	52	BEGIN GRADING
12+18	-	12+91		182	E 2ND ST LT TURN/MEDIAN
		93+08	LT	17	CURB RAMP
		93+08	RT	17	CURB RAMP
		92+32	ML	102	END GRADING
		92+40	LT	17	CURB RAMP
			TOTAL 0010	387	

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SANITARY SEWER SUMMARY

STATION	LOCATION	REMOVING SAN. SEWER SPV.0090(02) LF	SAN. SEWER 10 INCH SPV.0090(03) LF	CONNECT EX. SAN. SEWER SPV.0060(03) EA	REMARKS
90+60		110.0	110.0	2.0	LOCATED IN ALLEY APPROX 14' DEPTH
	TOTAL 0030	110.0	110.0	2.0	

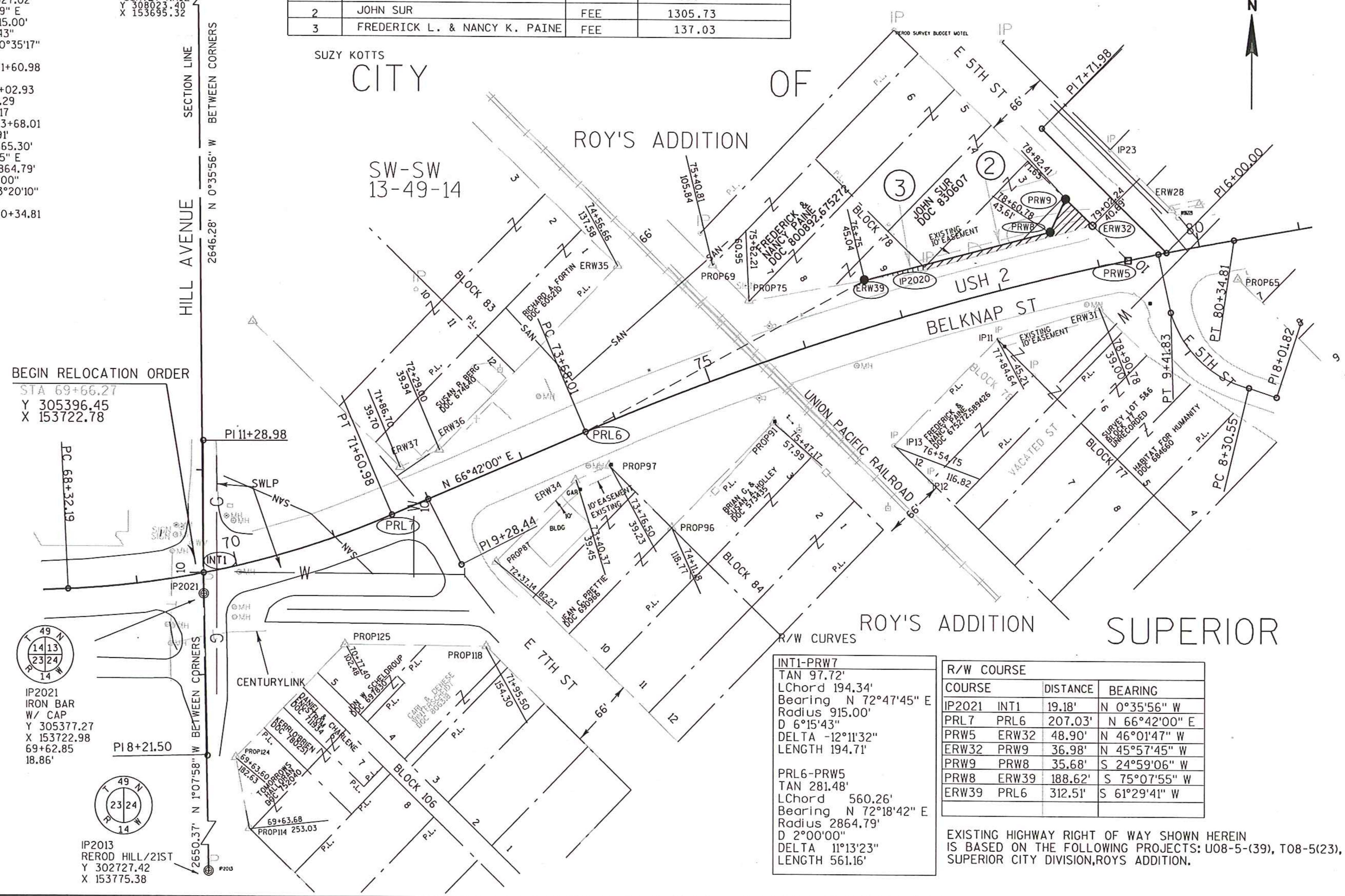
CURVE DATA USH 2
PI STA 69+98.37
Y 305388.19
X 153755.78
PC STA 68+32.19
TAN 166.19'
LChord 327.02'
N 76°59'39" E
Radius 915.00'
D 6°15'43"
DELTA -20°35'17"
L 328.79'
PT STA 71+60.98

PI STA 77+02.93
Y 305668.29
X 154406.17
PC STA 73+68.01
TAN 334.91'
LChord 665.30'
N 73°22'05" E
Radius 2864.79'
D 2°00'00"
DELTA 13°20'10"
L 666.80'
PT STA 80+34.81

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W REQUIRED NEW SQ. FT
2	JOHN SUR	FEE	1305.73
3	FREDERICK L. & NANCY K. PAINE	FEE	137.03



SUZY KOTTS
CITY OF SUPERIOR
ROY'S ADDITION
SW-SW 13-49-14
HILL AVENUE
SECTION LINE
2646.28' N 0°35'56" W BETWEEN CORNERS
2650.37' N 1°07'58" W BETWEEN CORNERS
MON2022 SURVEY NAIL Y 308023.40 X 153695.32
BEGIN RELOCATION ORDER
STA 69+66.27
Y 305396.45
X 153722.78
PI 11+28.98
PI 8+21.50
PI 9+28.44
PC 68+32.19
PT 71+60.98
PC 73+68.01
N 66°42'00" E
BELKNAP ST
USH 2
UNION PACIFIC RAILROAD
E 5TH ST
E 7TH ST
VACATED ST
BLOCK 83
BLOCK 84
BLOCK 78
BLOCK 77
BLOCK 106
JOHN SUR DOC 830607
FREDERICK & NANCY PAINE DOC 800892,675272
RICHARD A. FORTIN DOC 605220
SUSAN B. BERG DOC 67440
BRIAN G. & SUSAN WOLLEY DOC 573435
JEAN C. PRETTIE DOC 690966
HABITAT FOR HUMANITY DOC 684660
SURVEY LOT 5&6 BLOCK 77 UNRECORDED
CENTURYLINK
SWLP
EXISTING 10' EASEMENT
PRL6
PRL7
PRW5
PRW8
PRW9
ERW32
ERW39
INT1
IP2020
IP2021
IP2013
IP2021 IRON BAR W/ CAP Y 305377.27 X 153722.98 69+62.85 18.86'
IP2013 REROD HILL/21ST Y 302727.42 X 153775.38
PI 7+71.98
PI 6+00.00
PT 80+34.81
PI 8+01.82
PT 9+41.83
PC 8+30.55
N

HILL AVE
PI 8+21.50
Y 305218.06
X 153727.08
178.50'
N 1°16'37" W
10+00.00=69+66.60 USH 2
Y 305396.51
X 153723.10
128.98'
N 0°14'10" W
11+28.98
Y 305525.49
X 153722.57

E 7TH ST
PI 9+28.44
Y 305405.70
X 153976.94
71.56'
PI 10+00.00=72+00 USH 2
N 27°10'26" W
Y 305469.36
X 153944.26

E 5TH ST EAST
8+01.82
Y 305573.16
X 154778.52
28.73' N 71°48'06" W
PC 8+30.55
Y 305582.13
X 154751.23
TAN 61.32'
LChord 106.28
N 46°27'46" W
R 106.49'
DEG 53°48'13"
DELTA 59°52'16"
L 111.28'
PT 9+41.83
Y 305655.34
X 154674.18
58.17'
N 12°13'15.4" W
PI 10+00.00=79+59.33 USH 2
Y 305712.20
X 154661.87

E 5TH ST WEST
PI 6+00.00 = 79+67.38
Y 305713.79
X 154669.76
171.98' N 45°32'05" W
PI 7+71.98
Y 305834.26
X 154547.02

R/W CURVES

INT1-PRW7
TAN 97.72'
LChord 194.34'
Bearing N 72°47'45" E
Radius 915.00'
D 6°15'43"
DELTA -12°11'32"
LENGTH 194.71'

PRL6-PRW5
TAN 281.48'
LChord 560.26'
Bearing N 72°18'42" E
Radius 2864.79'
D 2°00'00"
DELTA 11°13'23"
LENGTH 561.16'

R/W COURSE

COURSE		DISTANCE	BEARING
IP2021	INT1	19.18'	N 0°35'56" W
PRL7	PRL6	207.03'	N 66°42'00" E
PRW5	ERW32	48.90'	N 46°01'47" W
ERW32	PRW9	36.98'	N 45°57'45" W
PRW9	PRW8	35.68'	S 24°59'06" W
PRW8	ERW39	188.62'	S 75°07'55" W
ERW39	PRL6	312.51'	S 61°29'41" W

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING PROJECTS: U08-5-(39), T08-5(23), SUPERIOR CITY DIVISION,ROYS ADDITION.

REVISION DATE	DATE 07-07-2010	SCALE, FEET 0 100	HWY: USH 2	STATE R/W PROJECT NUMBER 1190-44-20	PLAT SHEET 4. 02
	GRID FACTOR N/A		COUNTY: DOUGLAS	CONSTRUCTION PROJECT NUMBER 1190-44-71	PS&E SHEET 58 E

FILE NAME:±PDS±Design±Projects±11904400±PLAT±040402_rp.dgn PLOT DATE : 23-JUL-2010 11:14 PLOT BY: datsej PLOT NAME : PLOT SCALE : WISDOT/CADDS SHEET 75

BEGIN PROJECT
STA 70+00

NOTE:
EXISTING LIGHT POLE BASES VARY FROM 7" TO 24" BEHIND BACK OF CURB.

STA 73+17.0
CONSTRUCT 23' PCC PE LT

STA 73+40.1
CONSTRUCT 23' PCC PE LT

BEGIN RAILROAD SUPERELEVATION TRANSITION
STA 74+16LT. FULL SUPER AT STA 75+36LT.

CONST 5' SIDEWALK STA 73+50 - 75+25 LT

HILL AVENUE

USH 2 / BELKNAP STREET

CONC. MEDIAN BLUNT NOSE REQ'D (TYP)
R=3' (CURB FACE)

12" SIGN BOX OUT REQ'D

BEGIN GRADING
STA 71+00
BEGIN AT EXISTING CONSTRUCTION JOINT
SAWING CONCRETE REQ'D

EAST 7TH STREET

CONST 6' SIDEWALK STA 71+00 - 74+35 RT (TYP)

BEGIN RAILROAD SUPERELEVATION TRANSITION
STA 74+29.9RT. FULL SUPER AT STA 75+49.9RT.

CONST CENTER MEDIAN STA 74+35.4 - 75+38.4

CONST 5' SIDEWALK STA 74+35 - 75+25 RT

PC 73+68.01

PI 69+98.37

PT 71+69.98

R=25'

Profile shown is different than Let plan.

EXISTING ℄ PROFILE

FINISHED ℄ PROFILE

Field revised profile

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050101_pp.DGN PLOT DATE : 15-SEP-2011 11:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 30

STA 76+90.0
CONSTRUCT 35'LE LT

STA 78+06.3
CONSTRUCT 28'CE LT
SAWING ASPHALT REQ'D

NOTE:
EXISTING LIGHT POLE BASES
VARY FROM 7" TO 24" BEHIND
BACK OF CURB.

BEGIN NORMAL CROWN SUPERELEVATION TRANSITION
STA 75+60.7LT. NORMAL CROWN AT STA 76+80.7LT.

CONST 5'SIDEWALK STA 75+25 - 79+15 LT

PI 77+02.93

PROPOSED R/W

UNION PACIFIC RR

BELKNAP

5th STREET

CONC. MEDIAN BLUNT NOSE REQ'D (TYP) R=3'(CURB FACE)

12" SIGN BOX OUT REQ'D

CONST ASPHALT RAILROAD APPROACH STA 75+24.5 - 75+86.5

BEGIN NORMAL CROWN SUPERELEVATION TRANSITION
STA 75+76RT. NORMAL CROWN AT STA 76+96RT.

CONST CENTER MEDIAN STA 75+72.2 - 76+75.2

CONST 5'SIDEWALK STA 75+25 - 79+30 RT

EROSION LEGEND
CULVERT
DITCH CHECK
SILT FENCE

CP459
N 305660.06
E 154637.44
Z 626.960

PT 80+34.81

Profile shown is different than Let plan.

Field revised profile

EXISTING ℄ PROFILE

FINISHED ℄ PROFILE

K = 98.05
VCL 74.00

K = 147.25
VCL 214.53

-1.00 %

-1.00 %

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050102_pp.dgn
PLOT DATE : 15-SEP-2011 11:37
PLOT BY : dotbxm
PLOT NAME :
PLOT SCALE : 40:1

NOTE:
EXISTING LIGHT POLE BASES VARY FROM 7" TO 24" BEHIND BACK OF CURB.

STA 82+15.4
CONST. 13' ALLEY RT
SAWING ASPHALT REQ'D

STA 86+01
CONST. 14' ALLEY LT

STA 86+50
CONST. 13' ALLEY RT
SAWING ASPHALT REQ'D

Profile shown is different than Let plan.

Field revised profile

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050103_pp.dgn
PLOT DATE : 15-SEP-2011 11:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 30

NOTE:
EXISTING LIGHT POLE BASES VARY FROM 7" TO 24" BEHIND BACK OF CURB.

CONST. 5' SIDEWALK STA 90+00 - 92+35 LT
CONST. SIDEWALK TERRACE STA 92+00 - 92+35 LT
CONST CENTER MEDIAN STA 91+38.1 - 92+15.9

3rd STREET
2nd STREET
BELKNAP
87+00
88+00
89+00
90+00
91+00
92+00
R=25'
R/W
SAN
SS
W
PC 91+27.99
PT 92+16.60
12" SIGN BOX OUT REQ'D
PI 91+16.39
Inlet installed @ 26' RT.
Pavement is 2' wider than plan.
END MAINLINE GRADING
STA 92+32
END AT EXISTING CONSTRUCTION JOINT
ASPH.
STA 86+50
CONST. 13' ALLEY RT
STA 87+47.5
CONST. 30' CE RT
SAWING ASPHALT REQ'D
PLE
SIGN

EXISTING ℄ PROFILE
FINISHED ℄ PROFILE
Profile shown is different than Let plan.
Field revised profile
VPC STA 87+17.29 EL 626.07
VPI STA 88+00.00 EL 626.40
VPT STA 88+02.71 EL 626.09
VPT STA 86+93.89 EL 625.63
88+02.81 626.24
-0.37 %
K = 339.40
VCL 165.42
VCL 150.00
K = 6287.73
-0.35 %
-0.29 %
-1.11 %
VPI STA 92+55.25 EL 624.76
VPT STA 92+77.45
VPI STA 92+16.60
VPI EL 624.87
628
626
624
622
620

86+75	87+00	87+25	87+50	87+75	88+00	88+25	88+50	88+75	89+00	89+25	89+50	89+75	90+00	90+25	90+50	90+75	91+00	91+25	91+50	91+75	92+00	92+25	92+50	92+75
626.13	626.20	626.26	626.32	626.38	626.41	626.58	626.63	626.63	626.62	626.47	626.34	626.26	626.18	626.09	625.96	625.90	625.83	625.78	625.91	625.78	624.93	624.85	624.78	624.54
625.90	626.00	626.10	626.17	626.22	626.23	626.23	626.19	626.12	626.03	625.93	625.84	625.75	625.65	625.56	625.47	625.38	625.28	625.19	625.10	625.02	624.93	624.87	624.77	624.54

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050104_pp.dgn
PLOT DATE : 15-SEP-2011 11:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 30

BEGIN PROJECT
STA 70+00

HILL AVENUE

USH 2 / BELKNAP STREET

NOTE:
EXISTING LIGHT POLE BASES VARY FROM 7" TO 24" BEHIND BACK OF CURB.

PI 71+60.98

STA 73+17.0
CONSTRUCT 23' PCC PE LT

STA 73+40.1
CONSTRUCT 23' PCC PE LT

BEGIN RAILROAD SUPERELEVATION TRANSITION
STA 74+16LT. FULL SUPER AT STA 75+36LT.

CONST 5' SIDEWALK STA 73+50 - 75+25 LT

CONC. MEDIAN BLUNT NOSE REQ'D (TYP)
R=3' (CURB FACE)

12" SIGN BOX OUT REQ'D

BEGIN GRADING
STA 71+00
BEGIN AT EXISTING CONSTRUCTION JOINT
SAWING CONCRETE REQ'D

PI 69+98.37

EAST 7TH STREET

CONST 6' SIDEWALK STA 71+00 - 74+35 RT (TYP)

PC 73+68.01

BEGIN RAILROAD SUPERELEVATION TRANSITION
STA 74+29.9RT. FULL SUPER AT STA 75+49.9RT.

CONST CENTER MEDIAN STA 74+35.4 - 75+38.4

CONST 5' SIDEWALK STA 74+35 - 75+25 RT

EXISTING ℄ PROFILE

FINISHED ℄ PROFILE

-0.63 %
-0.89 %
-0.16 %
-0.07 %
+1.10 %

VCL 112.97
K = 136.68

VCL 115.39
K = 98.36

K = 87.61
VCL 80.00

VPC STA 71+17.49
VPC EL629.95

VPI STA 71+73.97
VPI EL629.39

VPT STA 72+30.45
VPT EL629.29

VPI STA 72+99.72
VPI EL629.18

VPC STA 73+50.00
VPC EL629.14

73+51.73
629.14

VPI STA 74+10.00
VPI EL629.10

VPC STA 74+63.40
VPC EL629.71

VPT STA 74+65.39
VPT EL629.71

VPI STA 75+05.40
VPI EL630.15

	69+25	69+50	69+75	70+00	70+25	70+50	70+75	71+00	71+25	71+50	71+75	72+00	72+25	72+50	72+75	73+00	73+25	73+50	73+75	74+00	74+25	74+50	74+75	75+00
EXISTING	630.89	630.91	630.80	630.69	630.58	630.42	630.27	630.13	630.01	629.86	629.77	629.66	629.48	629.60	629.58	629.56	629.55	629.54	629.53	629.57	629.68	629.84	630.00	630.14
FINISHED	630.89	630.91	630.80	630.69	630.58	630.42	630.27	630.12	629.87	629.66	629.50	629.38	629.30	629.26	629.22	629.18	629.16	629.14	629.15	629.22	629.35	629.55	629.81	630.02

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET 59	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050101_pp.DGN PLOT DATE : 24-NOV-2010 15:36 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 30

STA 76+90.0
CONSTRUCT 35'FE LT

STA 78+06.3
CONSTRUCT 28'CE LT
SAWING ASPHALT REQ'D

BEGIN NORMAL CROWN SUPERELEVATION TRANSITION
STA 75+60.7LT. NORMAL CROWN AT STA 76+80.7LT.

CONST 5'SIDEWALK STA 75+25 - 79+15 LT

PI 77+02.93

PROPOSED R/W

PLE

ASPH.

5th STREET

NOTE:
EXISTING LIGHT POLE BASES VARY FROM 7" TO 24" BEHIND BACK OF CURB.

UNION PACIFIC RR

R/W

CONC. MEDIAN BLUNT NOSE REQ'D (TYP)
R=3' (CURB FACE)

12" SIGN BOX OUT REQ'D

BELKNAP

76+00 77+00 78+00 79+00 80+00 81+00

CONST ASPHALT RAILROAD APPROACH STA 75+24.5 - 75+86.5

BEGIN NORMAL CROWN SUPERELEVATION TRANSITION
STA 75+76RT. NORMAL CROWN AT STA 76+96RT.

CONST CENTER MEDIAN STA 75+72.2 - 76+75.2

CONST 5'SIDEWALK STA 75+25 - 79+30 RT

EROSION LEGEND
CULVERT DITCH CHECK
SILT FENCE

CP459
N 305660.06
E 154637.44
Z 626.960

PT 80+34.81

VPI STA 75+94.93
VPI ELEV 630.14

VPT STA 76+34.93
VPT ELEV 629.73

+0.30 %

K = 98.51
VCL 80.00

-1.02 %

EXISTING ℄ PROFILE

FINISHED ℄ PROFILE

VPC STA 79+46.03
VPC ELEV 626.54

VPI STA 80+53.30
VPI ELEV 625.44

VCL 214.53
K = 175.66

81+26.01

634 632 630 628 626 624 622 620

630.20 630.16 630.22 630.23 630.17 630.16 630.00 630.03 629.82 629.83 629.64 629.58 629.44 629.32 629.21 629.06 628.97 628.81 628.70 628.55 628.44 628.30 628.26 628.04 628.09 627.78 627.83 627.53 627.57 627.27 627.34 627.01 627.13 626.76 626.33 626.50 626.13 626.27 626.56 626.07 626.38 625.91 626.26 625.79 626.19 625.69 626.13 625.64 626.10 625.62

75+25 75+50 75+75 76+00 76+25 76+50 76+75 77+00 77+25 77+50 77+75 78+00 78+25 78+50 78+75 79+00 79+25 79+50 79+75 80+00 80+25 80+50 80+75 81+00 81+25

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET 60	E

FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050102_pp.dgn PLOT DATE : 24-NOV-2010 15:36 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1

NOTE:
EXISTING LIGHT POLE BASES
VARY FROM 7" TO 24" BEHIND
BACK OF CURB.

2ND AVENUE

BELKNAP

4th STREET

STA 82+15.4
CONST. 13' ALLEY RT
SAWING ASPHALT REQ'D

STA 86+01
CONST. 14' ALLEY LT

STA 86+50
CONST. 13' ALLEY RT
SAWING ASPHALT REQ'D

81+26.01
625.62

VPT STA 81+60.57
VPT EL625.65

VPC STA 82+55.50
VPC EL625.84

VPI STA 82+91.88
VPI EL625.91

VPT STA 83+26.26
VPT EL625.87

83+01.20
625.89

K = 232.35
VCL 72.76

+0.20 %

-0.12 %

EXISTING ℄ PROFILE

FINISHED ℄ PROFILE

VCL 83.77
K = 191.97

86+32.47
625.53

VPC STA 86+10.11
VPC EL625.54

VPI STA 86+52.00
VPI EL625.49

80+75	81+00	81+25	81+50	81+75	82+00	82+25	82+50	82+75	83+00	83+25	83+50	83+75	84+00	84+25	84+50	84+75	85+00	85+25	85+50	85+75	86+00	86+25	86+50	86+75
626.19	626.13	626.10	626.09	626.12	626.17	626.21	626.26	626.31	626.29	626.28	626.24	626.20	626.18	626.18	626.18	626.19	626.15	626.09	626.05	626.05	626.05	626.06	626.09	626.13
625.69	625.64	625.62	625.64	625.68	625.73	625.78	625.83	625.87	625.89	625.87	625.85	625.82	625.79	625.76	625.73	625.70	625.67	625.64	625.61	625.58	625.55	625.53	625.54	625.58

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET 61	E

NOTE:
EXISTING LIGHT POLE BASES VARY FROM 7" TO 24" BEHIND BACK OF CURB.

CONST. 5' SIDEWALK STA 90+00 - 92+35 LT
CONST. SIDEWALK TERRACE STA 92+00 - 92+35 LT
CONST CENTER MEDIAN STA 91+38.1 - 92+15.9

3rd STREET
2nd STREET
BELKNAP
87+00
88+00
89+00
90+00
91+00
92+00
R/W
SAN
SS
R=25'
PC 91+27.00
PT 92+16.60
PI 91+16.39
PI 92+32.6
12" SIGN BOX OUT REQ'D
STA 86+50 CONST. 13' ALLEY RT
STA 87+47.5 CONST. 30' CE RT
SAWING ASPHALT REQ'D
ASPH.
PLE
END MAINLINE GRADING
STA 92+32
END AT EXISTING CONSTRUCTION JOINT

VPT STA 86+93.89
VPT EL625.63
VPC STA 87+89.47
VPC EL625.93
VPI STA 88+72.18
VPI EL626.20
VPT STA 89+54.89
VPT EL626.06
VPC STA 90+41.39
VPC EL625.91
VPI STA 91+16.39
VPI EL625.79
VPT STA 91+91.39
VPT EL625.10
VPI STA 92+55.25
VPI EL624.76
VPI STA 92+77.45
VPI STA 92+16.60
VPI EL624.87

EXISTING ℄ PROFILE
FINISHED ℄ PROFILE
+0.32 %
-0.17 %
-0.92 %
-0.29 %
-1.11 %
K = 339.40
VCL 165.42
K = 200.32
VCL 150.00
88+98.05
626.11

628 626 624 622 620

626.13	626.20	626.26	626.32	626.38	626.47	626.58	626.63	626.63	626.62	626.47	626.34	626.26	626.18	626.09	625.98	625.90	625.83	625.80	625.91	625.78	625.53	624.85	624.78	624.54
625.58	625.65	625.73	625.81	625.89	625.97	626.03	626.07	626.10	626.11	626.10	626.07	626.03	625.98	625.94	625.90	625.83	625.73	625.60	625.44	625.25	625.02	624.85	624.77	624.54

86+75 87+00 87+25 87+50 87+75 88+00 88+25 88+50 88+75 89+00 89+25 89+50 89+75 90+00 90+25 90+50 90+75 91+00 91+25 91+50 91+75 92+00 92+25 92+50 92+75

PROJECT NO: 1190-44-71	HWY: USH 2	COUNTY: DOUGLAS	PLAN & PROFILE	SHEET 62	E

NOTE:
EXISTING LIGHT POLE BASES
VARY FROM 7" TO 24" BEHIND
BACK OF CURB.

REMOVING PAVEMENT
SAWING CONCRETE REQ'D

REMOVING (MEDIAN E 2ND)

BONG DRIVE

USH 53 - E 2ND STREET (SB)

CONSTRUCT 4" SIDEWALK
CURB RAMP (TYP)

CLEAR AND GRUB
(APPROX 23" CIRCUMFRENCE TREE = 7.7 INCH OF DIAMETER)

MARINA DRIVE

CLEAR AND GRUB
(APPROX 30" CIRCUMFRENCE TREE = 10.0 INCH OF DIAMETER)

CLEAR AND GRUB
(APPROX 78" CIRCUMFRENCE TREE = 26.0 INCH OF DIAMETER)

SLOPE INTERCEPT

12" SIGN
BOX OUT REQ'D

EXISTING CONSTRUCTION JOINTS

CONSTRUCT SIDEWALK
W/CURB RAMP (TYP)

PC 91+27.00

PT 92+16.60

PI 91+16.39

PI 91+13.29

PI 93+54.19

90+00

91+00

92+00

93+00.10

BELKNAP

CONC. MEDIAN BLUNT
NOSE REQ'D
R=2'(CURB FACE)

REMOVE ABANDONED BASE

END PROJECT
STA 93+30

END MAINLINE GRADING
STA 92+32
END AT EXISTING CONSTRUCTION JOINT
SAWING CONCRETE REQ'D

USH 2/USH 53 - E 2nd STREET (NB)

PROJECT NO: N90-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	PLAN	SHEET 63	E

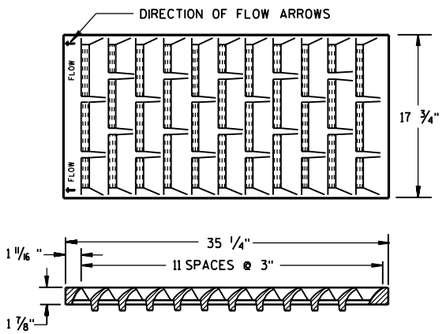
FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\050105_pp.dgn PLOT DATE : 24-NOV-2010 15:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1

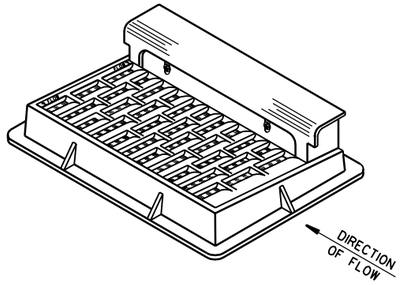
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

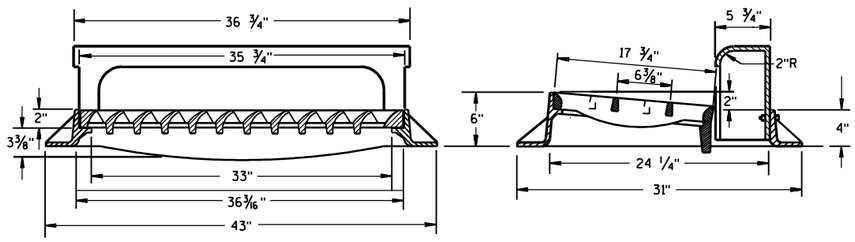
08A5-16A	INLET COVERS TYPE A, H, A-S, & H-S
08A5-17D	INLET COVER, TYPE Z MANHOLE COVERS, TYPE K, J, J-S, J-H, J-H-S, L & M
08A6-4	CATCH BASINS TYPE 1 & 2
08A7-3	CATCH BASINS TYPE 3 & 5
08B6-4	MANHOLES TYPE 1
08D1-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D5-14A	CURB RAMPS TYPES 1 AND 1-A
08D5-14B	CURB RAMPS TYPES 2 AND 3
08D5-14C	CURB RAMPS TYPE 4A
08D5-14D	CURB RAMPS TYPE 4B
08D5-14E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E9-6	SILT FENCE
08E10-2	INLET PROTECTION TYPE A, B, C AND D
08F1-11	APRON ENDWALLS FOR CULVERT PIPE
09B2-7	CONDUIT
09B4-9	PULL BOX
09C2-6	CONCRETE BASES, TYPES 1, 2 & 5
09F15-3A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
11B2-2	CONCRETE MEDIAN NOSE
13B1-10	PAVEMENT DETAILS FOR RAILROAD APPROACH
13C1-14	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-7	URBAN DOWELED CONCRETE PAVEMENT
15C2-4A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-4B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-4C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C3-1	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C5-1	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C7-11B	PAVEMENT MARKING WORDS
15C7-11D	PAVEMENT MARKING ARROWS
15C8-13A	PAVEMENT MARKING (MAINLINE)
15C8-13B	PAVEMENT MARKING (INTERSECTIONS)
15C8-13E	PAVEMENT MARKING (LEFT TURN LANE)
15C8-13F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C9-8A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C18-3	MEDIAN ISLAND MARKING
15C26-1	END-OF-ROADWAY SIGNING
15D20-1	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

NOTE:
GRATE IS REVERSIBLE.





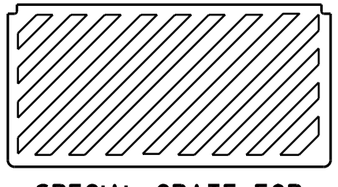
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

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

1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

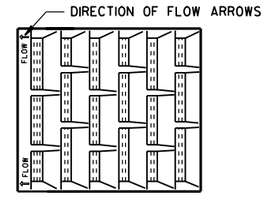
GENERAL NOTES

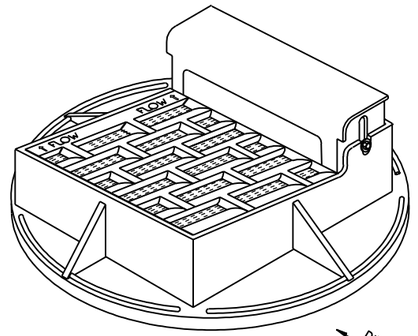
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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

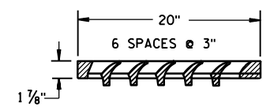
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

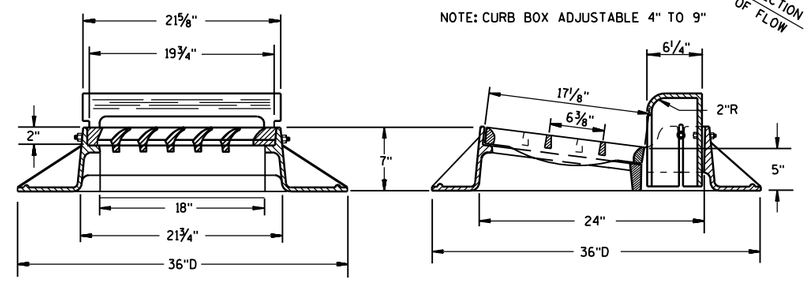




NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.

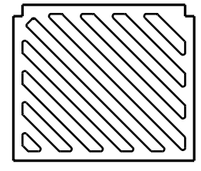




TYPE "A"

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

1" DIAGONAL BARS WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8"
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

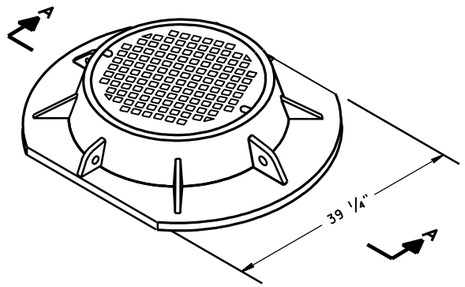
INLET COVERS
TYPE A, H, A-S, & H-S

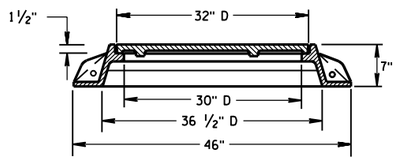
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/4/99
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 A 5-16a



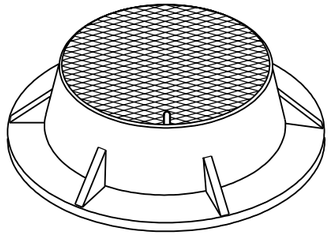


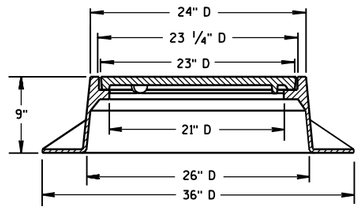
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 415 LBS.)

FRAME.....210 LBS.
LID.....205 LBS.

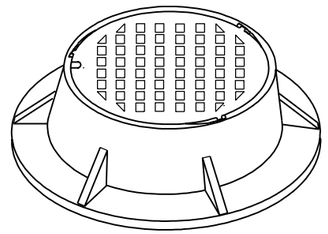


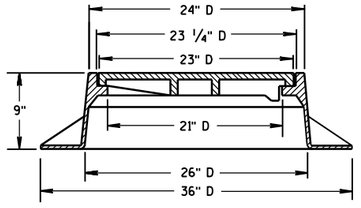


TYPE "J"

(APPROXIMATE WEIGHT 250 LBS.)

FRAME.....135 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 245 LBS.)

FRAME.....145 LBS.
LID.....100 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

GENERAL NOTES

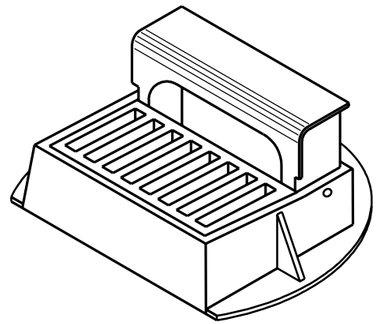
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

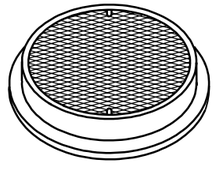
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

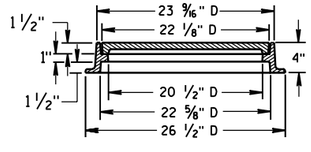
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

(1) MANUFACTURER MAY PROVIDE ADDITIONAL SEALS OR GASKETS.



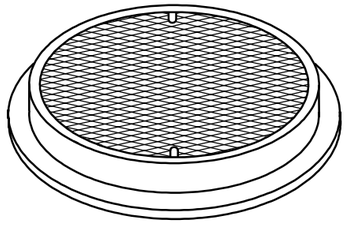


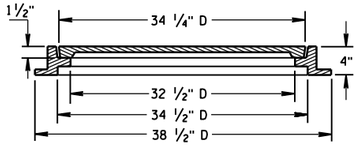


TYPE "L"

(APPROXIMATE WEIGHT 145 LBS.)

FRAME.....75"
LID.....70"

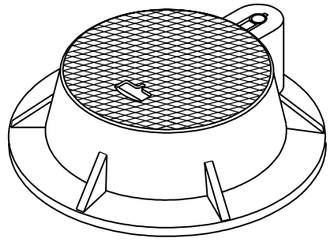


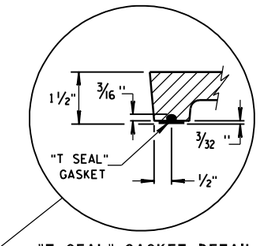


TYPE "M"

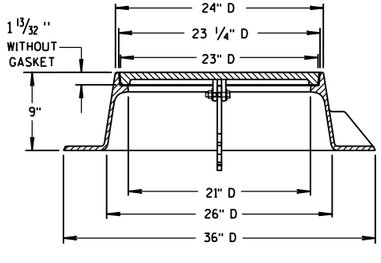
(APPROXIMATE WEIGHT 385 LBS.)

FRAME..... 125"
LID..... 260"





"T SEAL" GASKET DETAIL



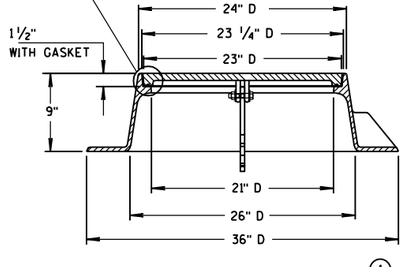
TYPE "J" HINGED

LID WITHOUT "T SEAL" GASKET

(APPROXIMATE WEIGHT 310 LBS.)

FRAME.....190 LBS.
LID.....120 LBS.

(NOTED AS TYPE J-H ON THE DRAINAGE TABLE)



TYPE "J" HINGED-SPECIAL (1)

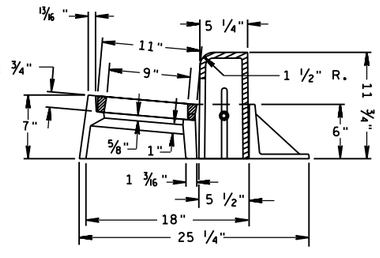
LID WITH "T SEAL" GASKET

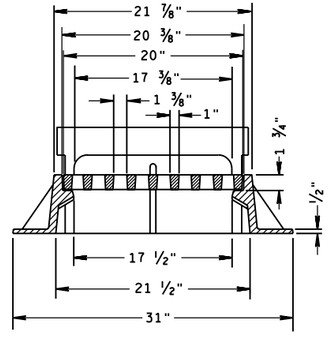
(APPROXIMATE WEIGHT 310 LBS.)

FRAME.....190 LBS.
LID.....120 LBS.

(NOTED AS TYPE J-S-H ON THE DRAINAGE TABLE)

CURB BOX ADJUSTABLE 4" TO 10"





INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME..... 198 LBS.
GRATE..... 50 LBS.
CURB BOX..... 92 LBS.

INLET COVER, TYPE Z
MANHOLE COVERS, TYPE
K, J, J-S, J-H, J-H-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE
FHWA

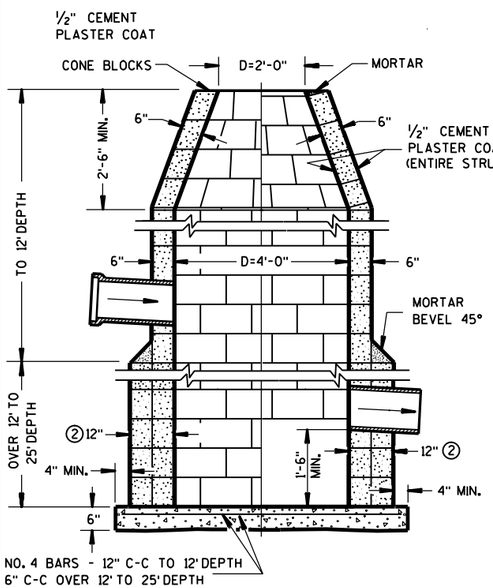
CHIEF ROADWAY DEVELOPMENT ENGINEER

6

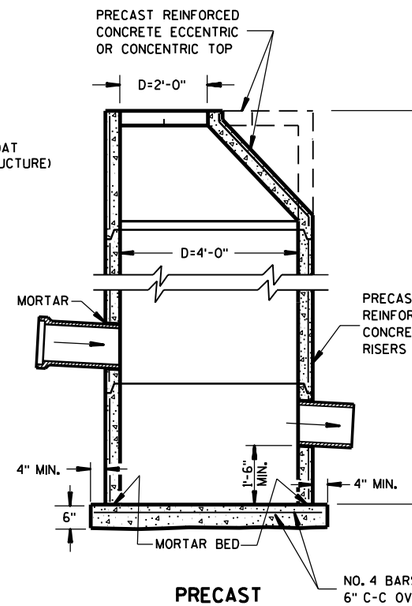
S.D.D. 8 A 5-17d

6

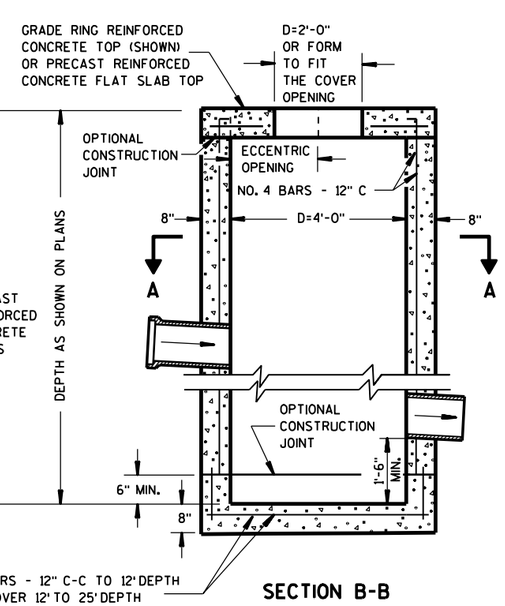
S.D.D. 8 A 5-17d



CONCRETE BLOCK

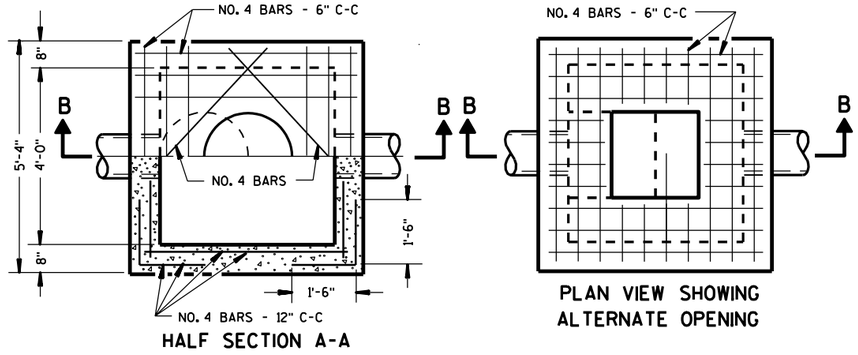


PRECAST REINFORCED CONCRETE



SECTION B-B
REINFORCED CONCRETE

CATCH BASINS, TYPE 1



HALF SECTION A-A

PLAN VIEW SHOWING ALTERNATE OPENING

GENERAL NOTES

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

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

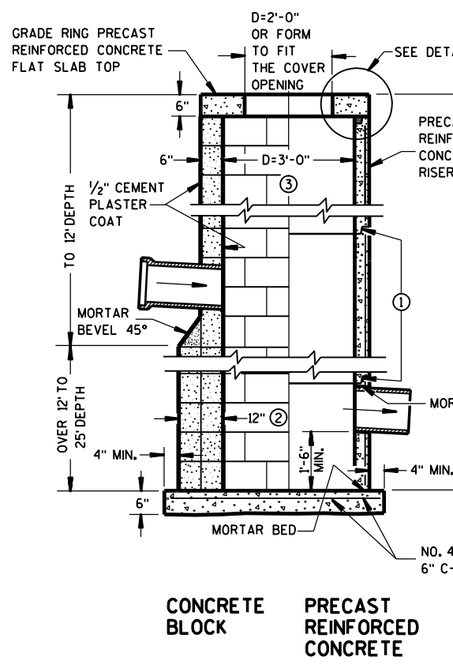
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

THE "PRECAST REINFORCED CONCRETE FLAT SLAB TOP" OPTION IS REQUIRED ON CATCH BASINS, TYPE 1 WHEN 2' X 3' OPENING INLET COVERS ARE REQUIRED.

① PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH THE TONGUE DOWN WHEN GRADE RINGS ARE USED FOR THE SLAB TOP.

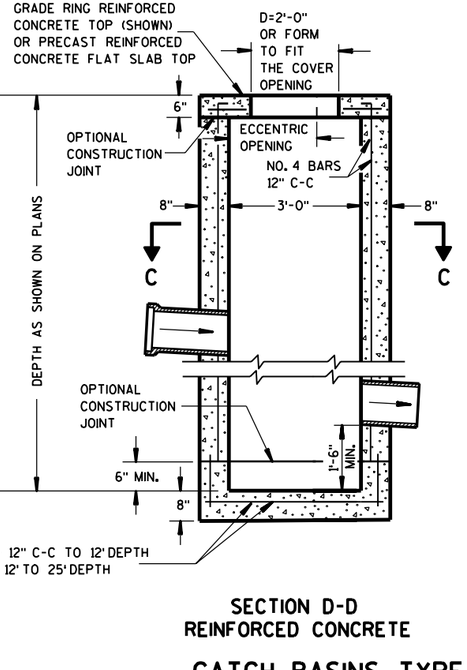
② 2 COURSES 6" BLOCK.

③ WHEN THE CONNECTING PIPES ARE 24" OR LARGER THE PRECAST CATCH BASIN MAY BE INCREASED TO 42" DIA.

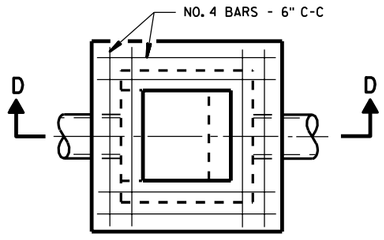


CONCRETE BLOCK

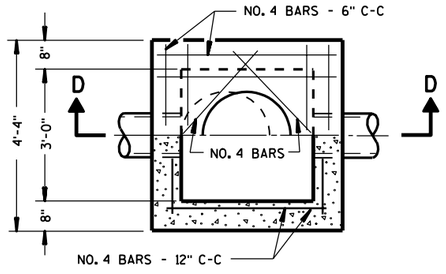
PRECAST REINFORCED CONCRETE



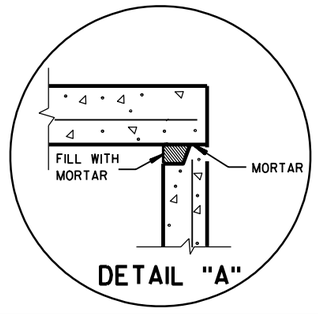
SECTION D-D
REINFORCED CONCRETE



PLAN VIEW SHOWING ALTERNATE OPENING



HALF SECTION C-C



DETAIL "A"

CATCH BASINS, TYPE 2

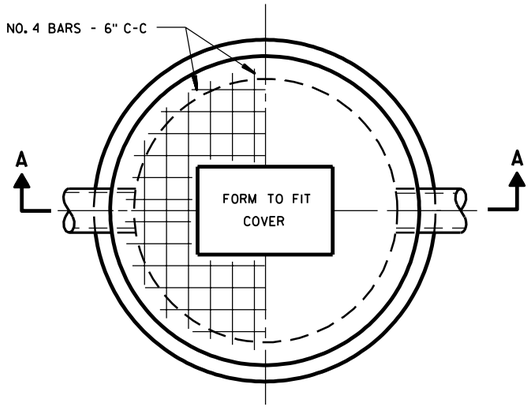
CATCH BASINS TYPE 1 & 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

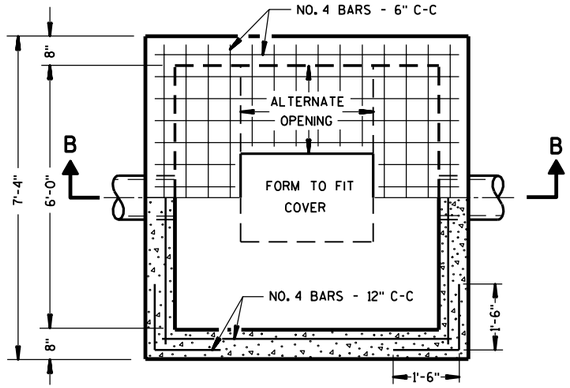
APPROVED
6/9/99
DATE

CHIEF ROADWAY DEVELOPMENT ENGINEER

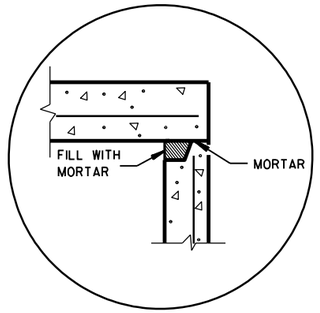
FHWA



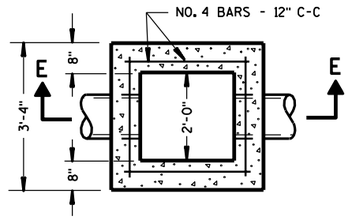
PLAN VIEW



HALF SECTION C-C



DETAIL "A"



SECTION D-D

GENERAL NOTES

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

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLE 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

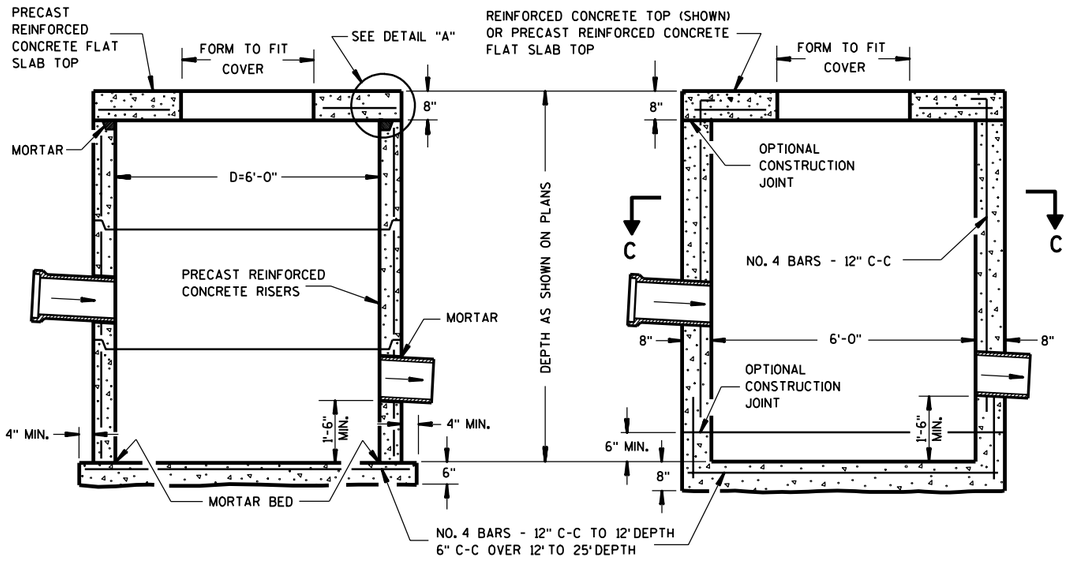
STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES; AND BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A CROSS SECTIONAL DIMENSION OF 1 INCH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR WILL BE ACCEPTABLE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

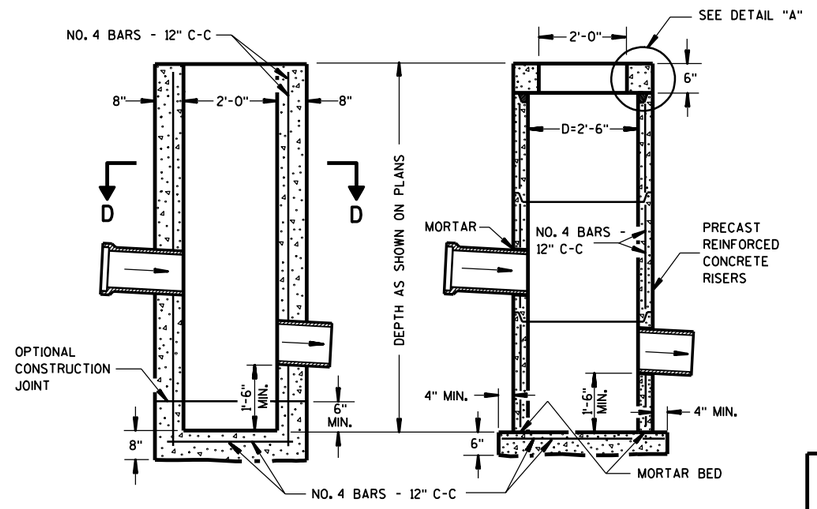
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.



PRECAST REINFORCED CONCRETE
SECTION A-A

REINFORCED CONCRETE
SECTION B-B

CATCH BASINS TYPE 5



REINFORCED CONCRETE
SECTION E-E

PRECAST REINFORCED CONCRETE

CATCH BASINS TYPE 3

CATCH BASINS TYPE 3 & 5

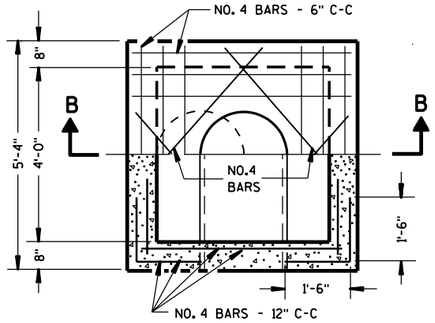
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/13/82
DATE
FHWA

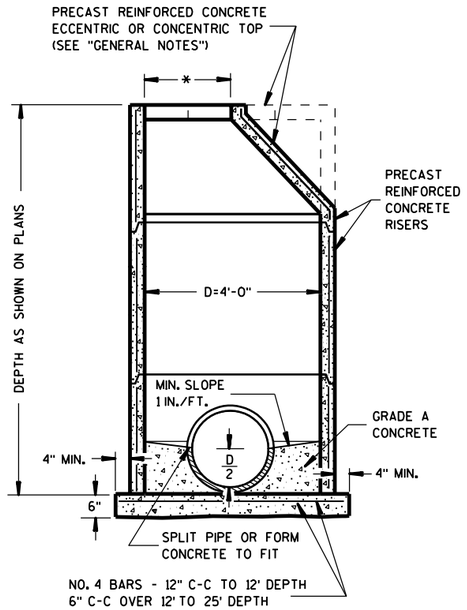
CHIEF DESIGN ENGINEER

6

S.D.D. 8 A 7-3



HALF SECTION A-A



PRECAST REINFORCED CONCRETE

GENERAL NOTES

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

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS CONFORMING TO AASHTO M 199 SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT.

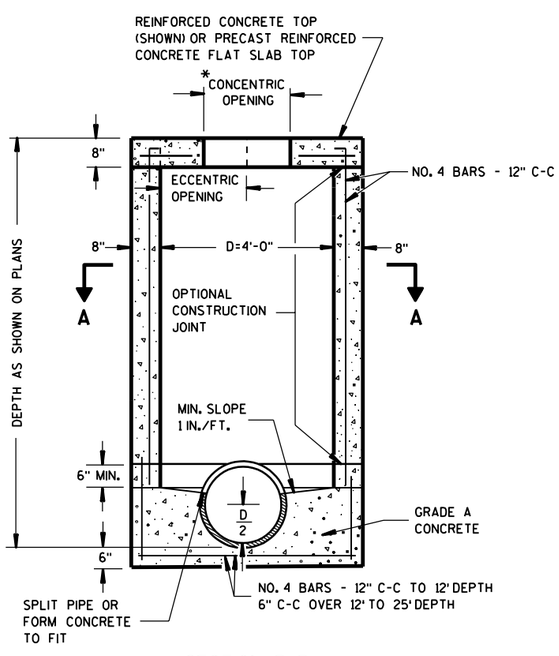
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED CONCRETE RISERS MAY BE PLACED WITH TONGUE UP OR DOWN.

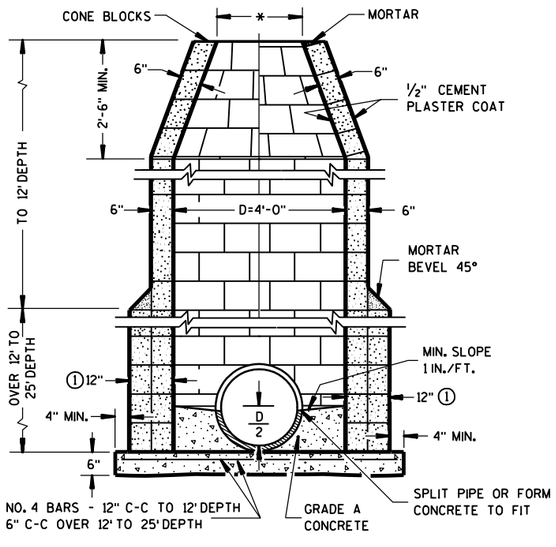
ALL PRECAST INLET UNITS AND MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

* USE 2'-0" DIAMETER OPENING WITH TYPE "C", "L" AND "J" COVERS, OR 3'-0" DIAMETER WITH TYPE "K" AND "M" COVERS.

① 2 COURSES 6" BLOCK.



SECTION B-B
REINFORCED CONCRETE



CONCRETE BLOCK

MANHOLES TYPE 1

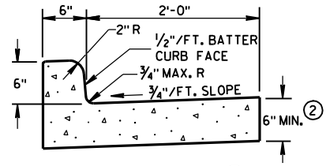
MANHOLES TYPE 1	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 9/9/05 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

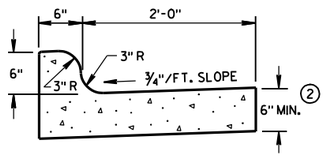
S.D.D. 8 B 6-4

6

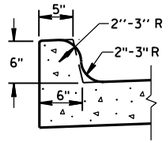
S.D.D. 8 B 6-4



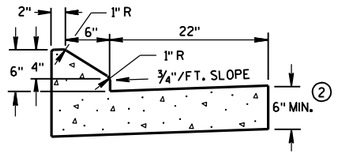
TYPES A & D ①



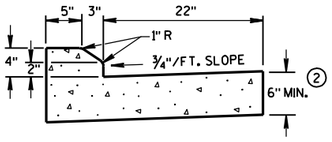
TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

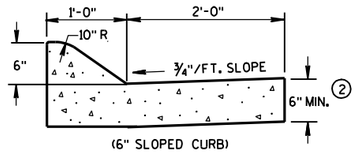


6" SLOPED CURB TYPES G & J ①

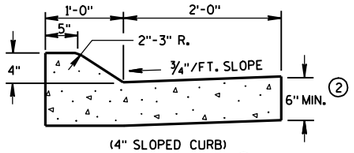


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

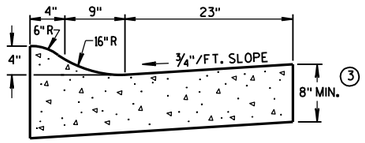


(6" SLOPED CURB)



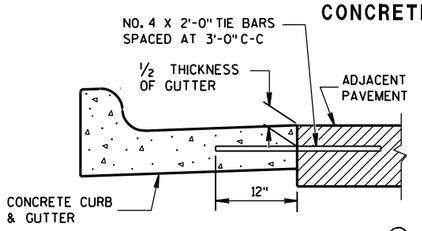
(4" SLOPED CURB)

TYPES A & D ①

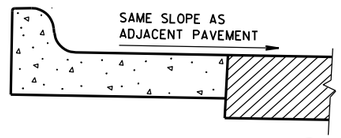


4" SLOPED CURB TYPES R & T ①④

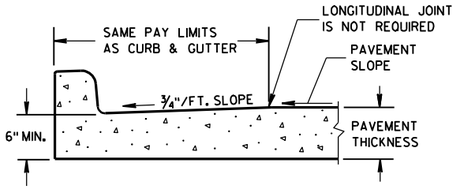
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

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

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

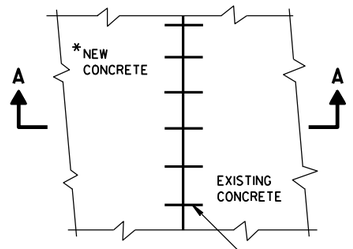
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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 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.

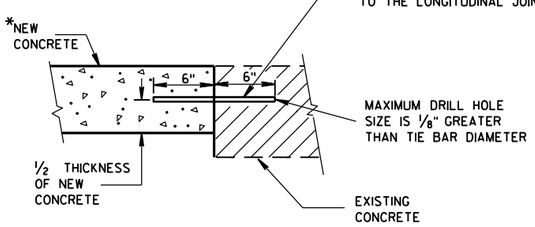
④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



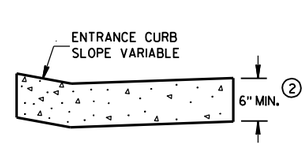
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

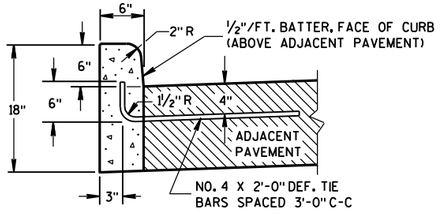


SECTION A-A

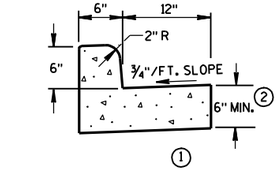
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

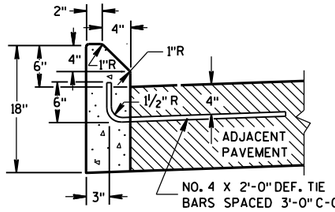


① TYPES A & D

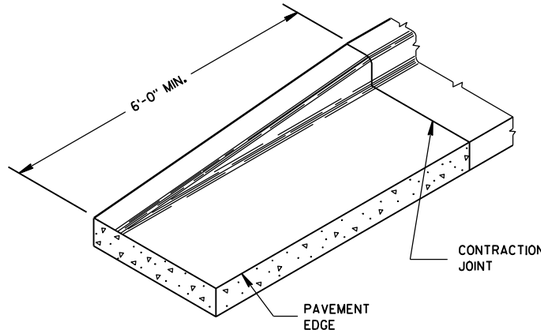


① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

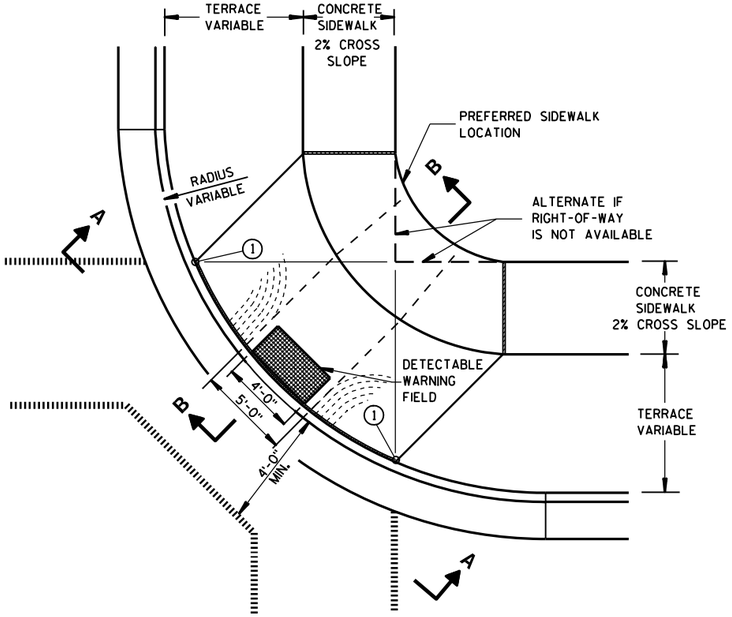
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

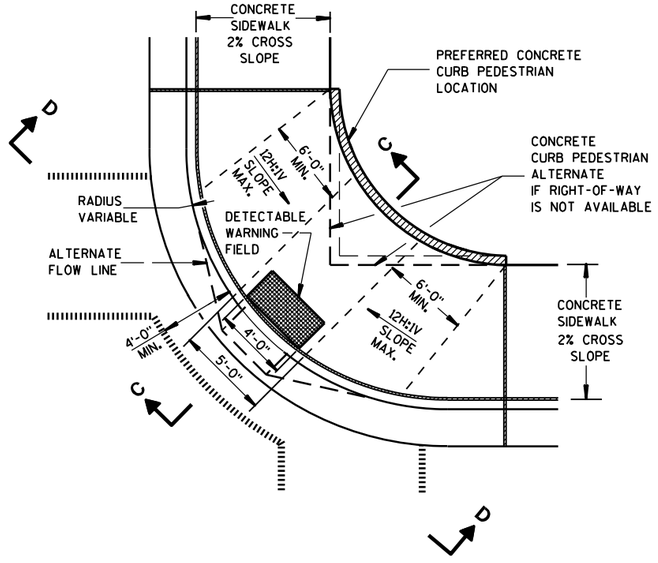
S.D.D. 8 D 1-17



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

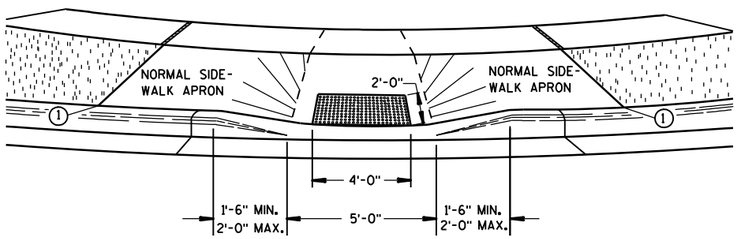
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

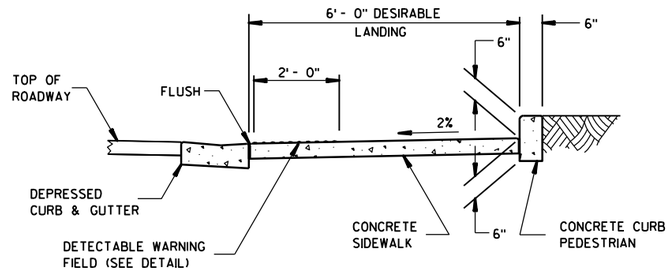
(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

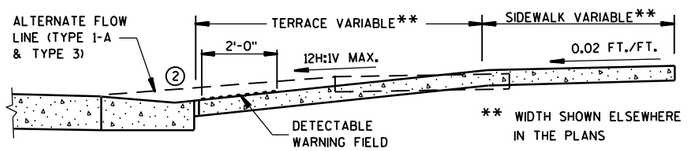
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



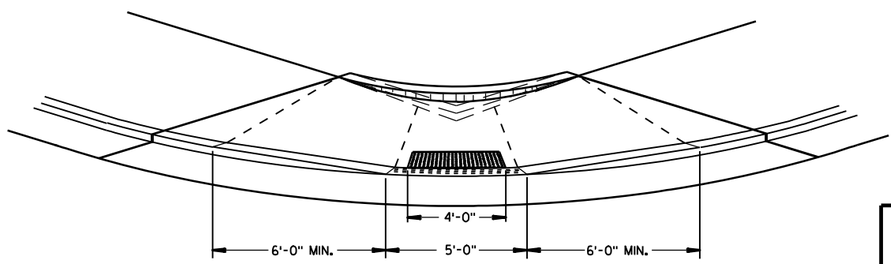
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS
TYPES 1 AND 1-A

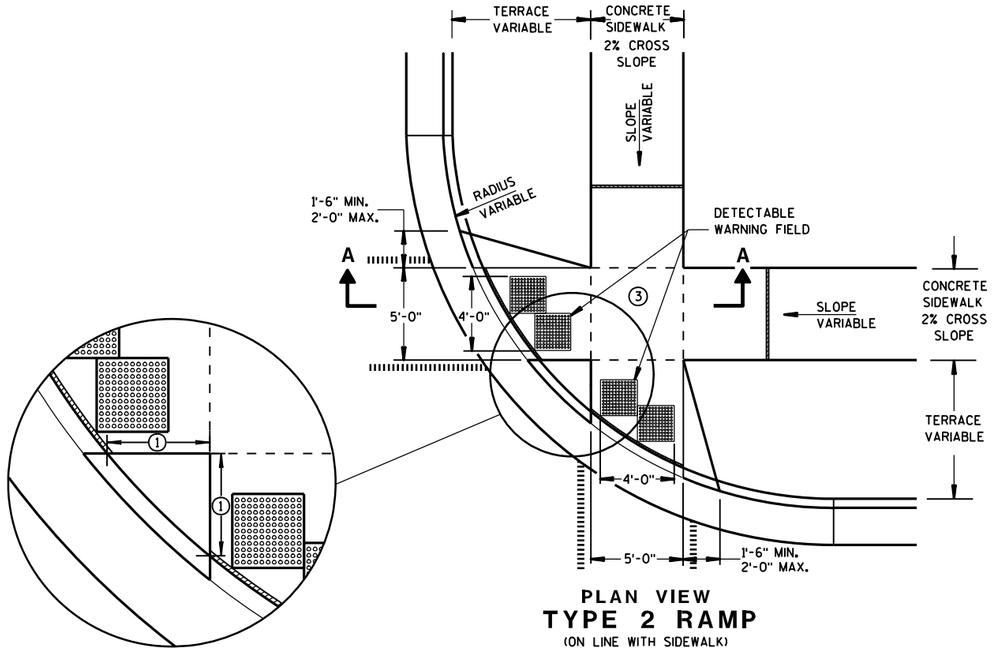
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

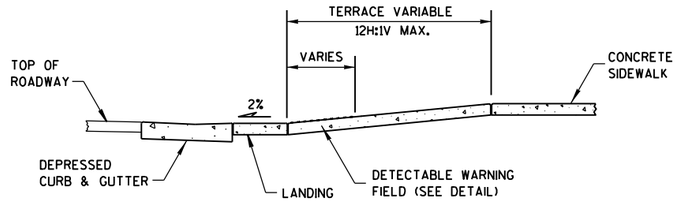
S.D.D. 8 D 5-14a

6

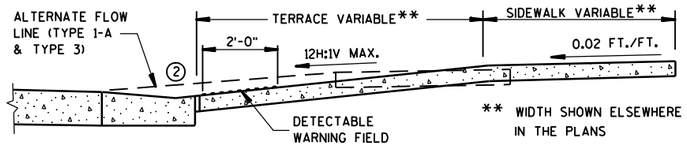
S.D.D. 8 D 5-14a



PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

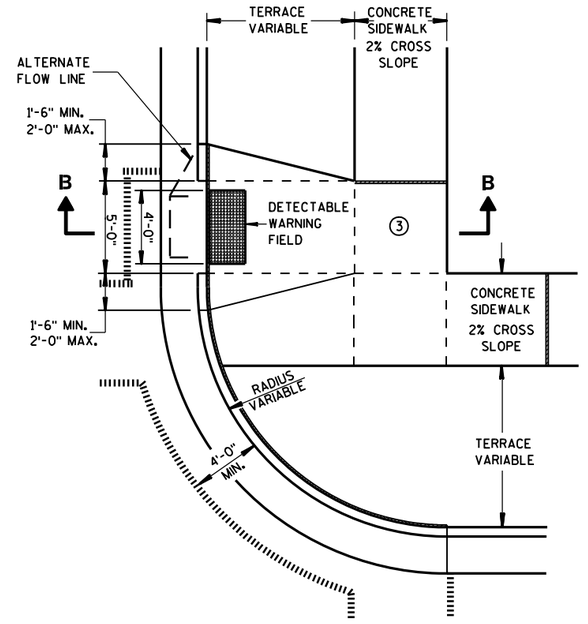
(1) WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

(3) PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

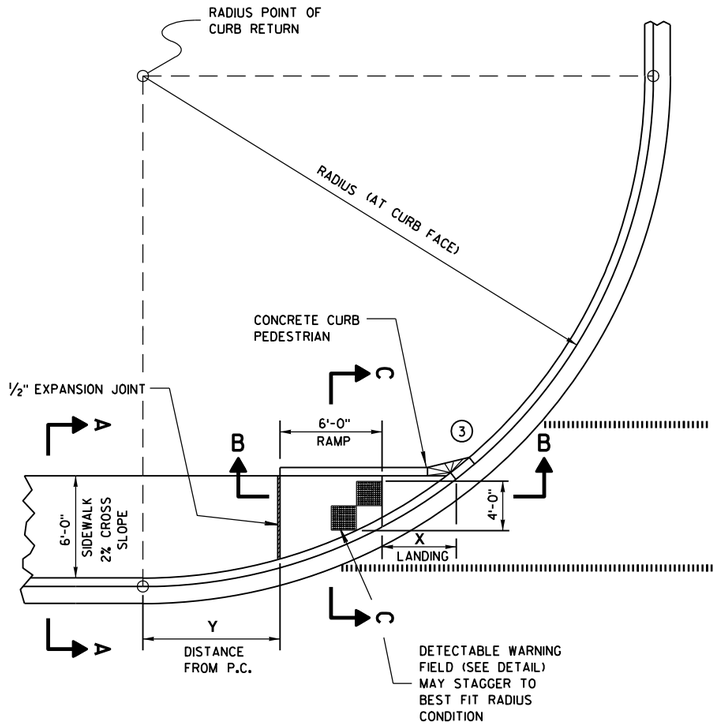
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 5-14b

6

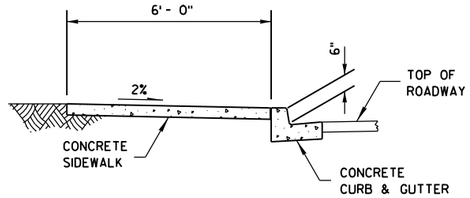
S.D.D. 8 D 5-14b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A

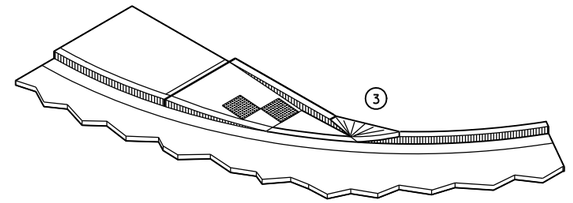
GENERAL NOTES

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

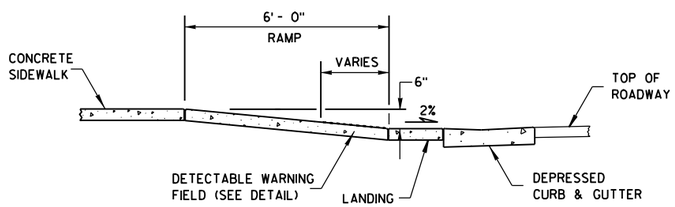
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

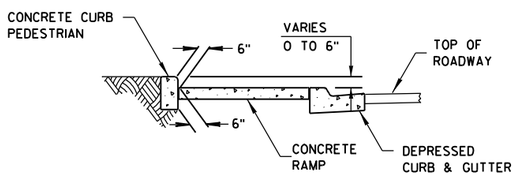
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW



SECTION B-B



SECTION C-C

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4A

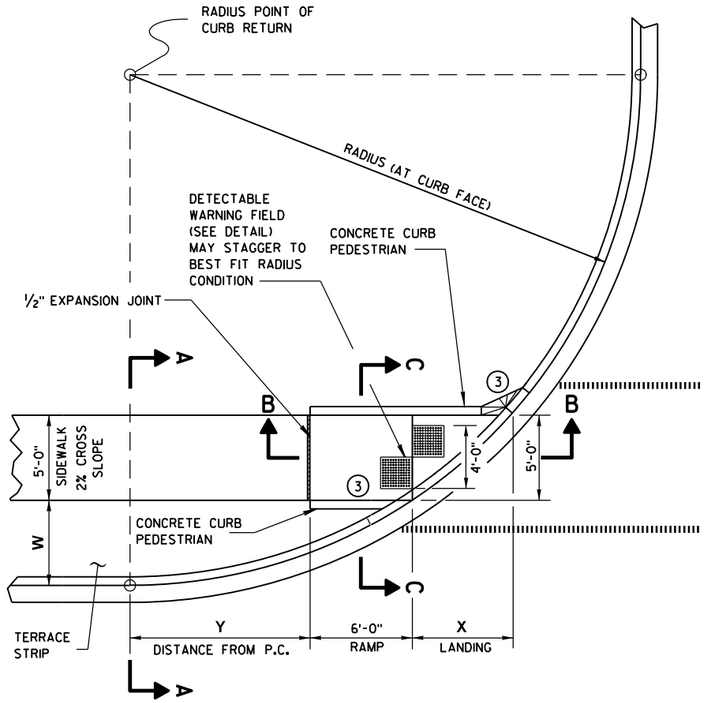
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

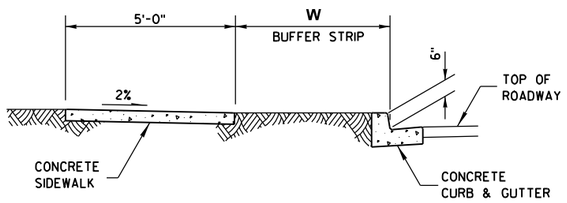
S.D.D. 8 D 5-14c

6

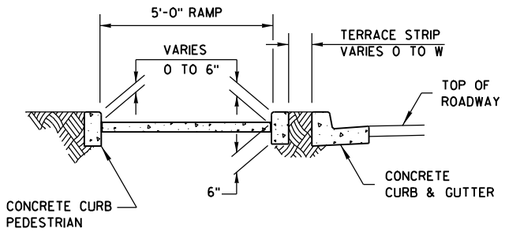
S.D.D. 8 D 5-14c



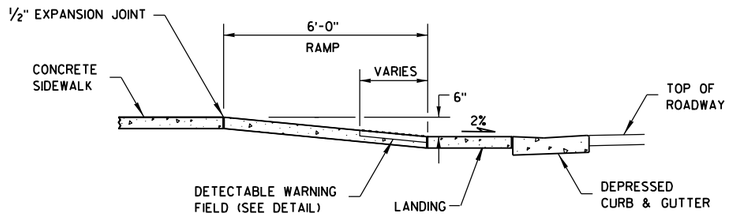
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A



SECTION C-C



SECTION B-B

GENERAL NOTES

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

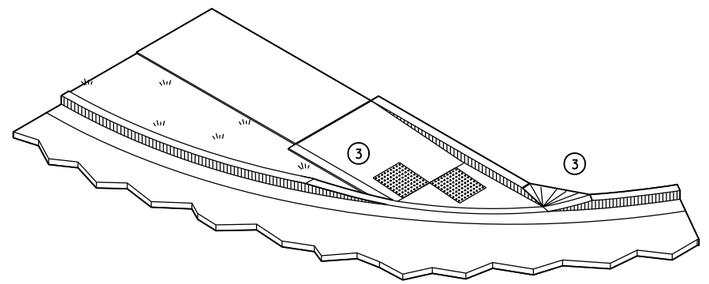
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"
70 FEET	12'-2¾"	14'-3¼"	11'-¼"	17'-4"	10'-1"	19'-11¾"	9'-3¾"	22'-4¼"	8'-8¼"	24'-6¼"
80 FEET	13'-2"	15'-8½"	11'-10½"	18'-11¾"	10'-10¾"	21'-10"	10'-1"	24'-4¾"	9'-5"	26'-8¾"
90 FEET	14'- ½"	17'-½"	12'-8¼"	20'-6½"	11'-7¾"	23'-7"	10'-9¾"	26'-3¾"	10'-1¼"	28'-9½"
100 FEET	14'-10½"	18'-3¾"	13'-5½"	22'-0"	12'-4¼"	25'-2¾"	11'-5¾"	28'-1½"	10'-9"	30'-9"

INTERMEDIATE RADII CAN BE INTERPOLATED



ISOMETRIC VIEW

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B

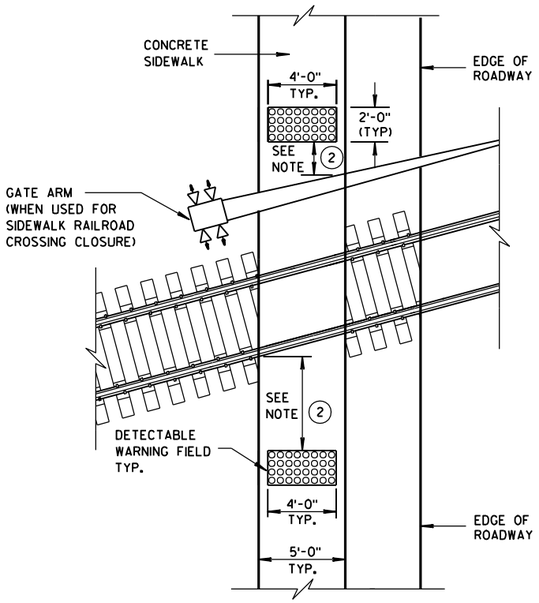
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

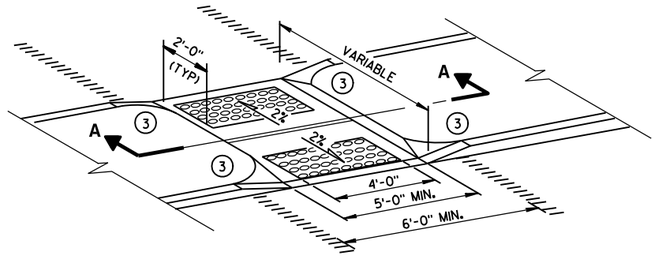
S.D.D. 8 D 5-14d

6

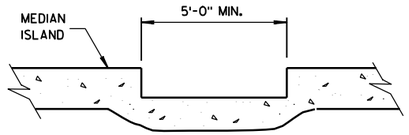
S.D.D. 8 D 5-14d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



SECTION A-A

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(2) 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. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

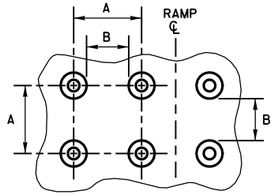
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

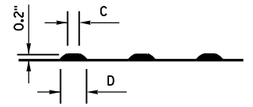
PAVEMENT MARKING CROSSWALK (WHITE)



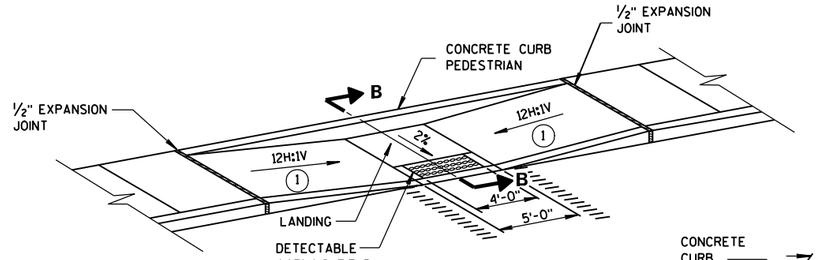
PLAN VIEW

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

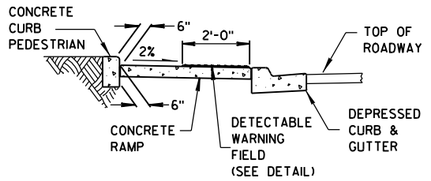
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

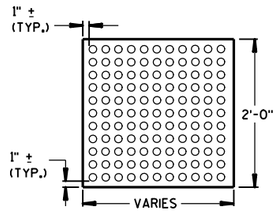


MID-BLOCK CROSSING
TYPE 7A



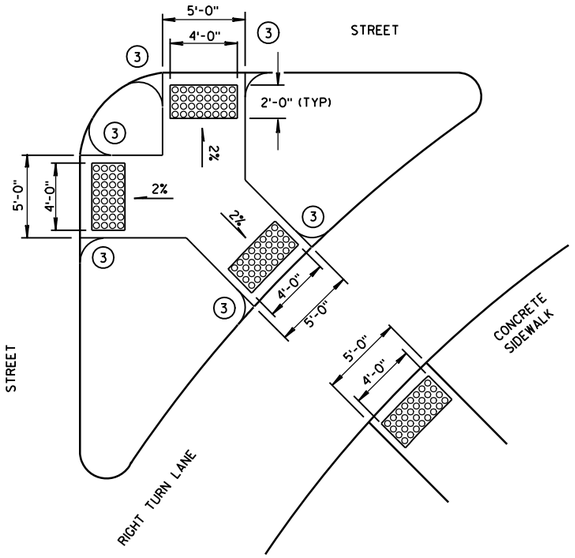
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

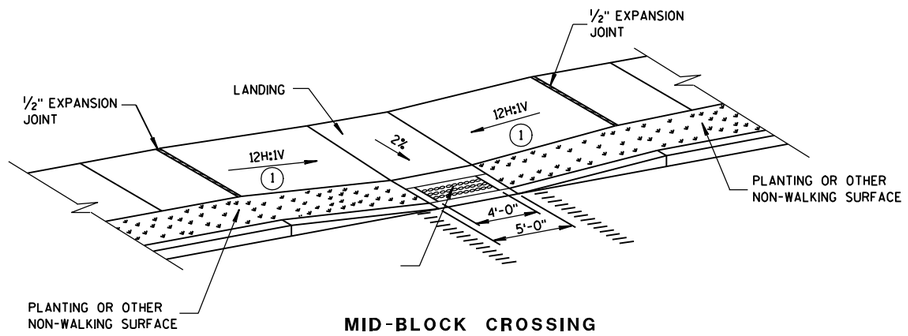


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-9-10 — DATE — FHWA

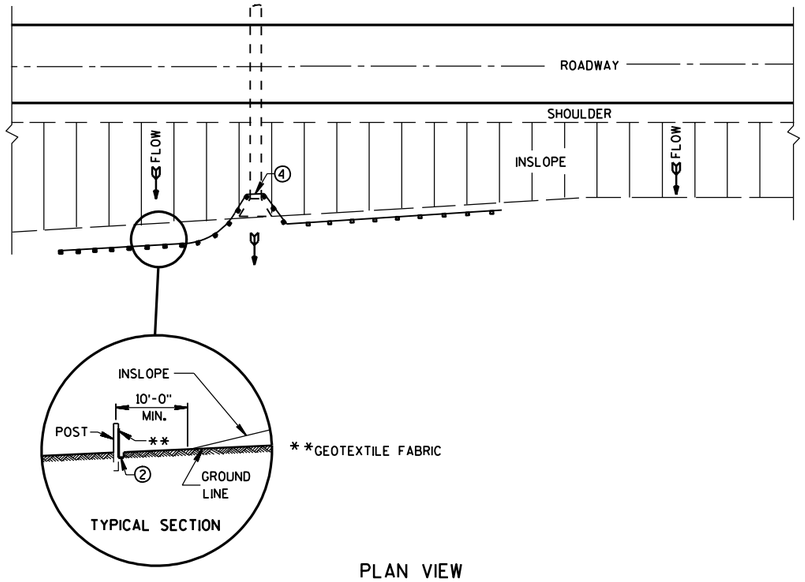
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

S.D.D. 8 D 5-14e

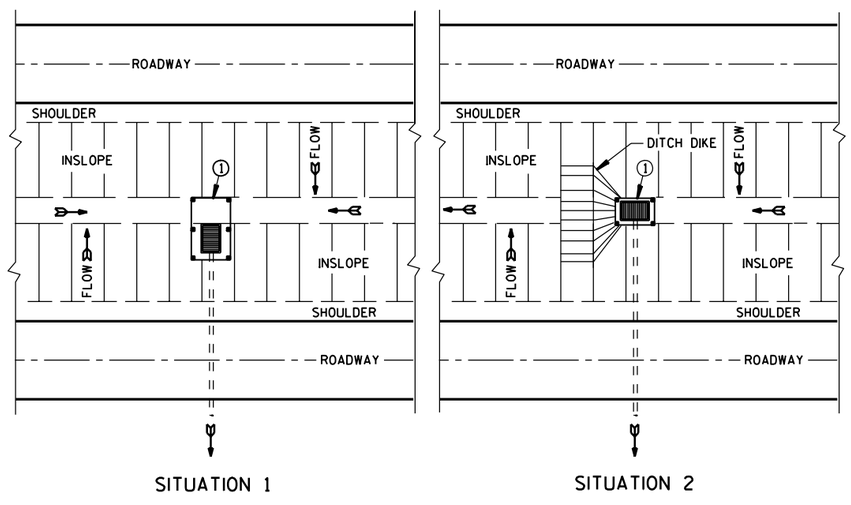
6

S.D.D. 8 D 5-14e



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



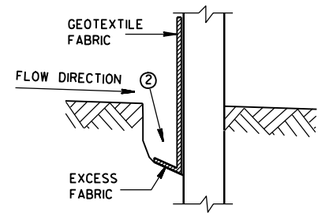
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

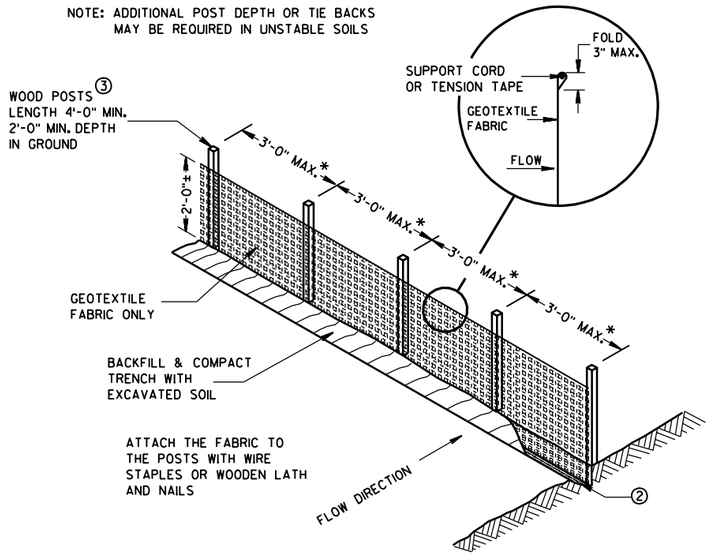
GENERAL NOTES

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

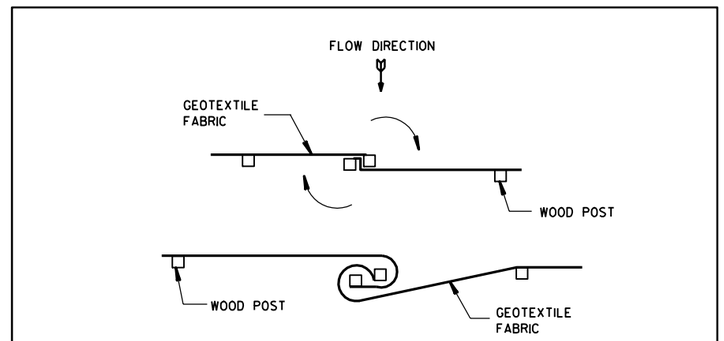
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" 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.



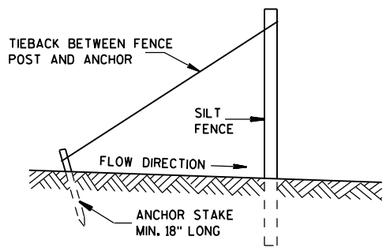
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

6

SILT FENCE

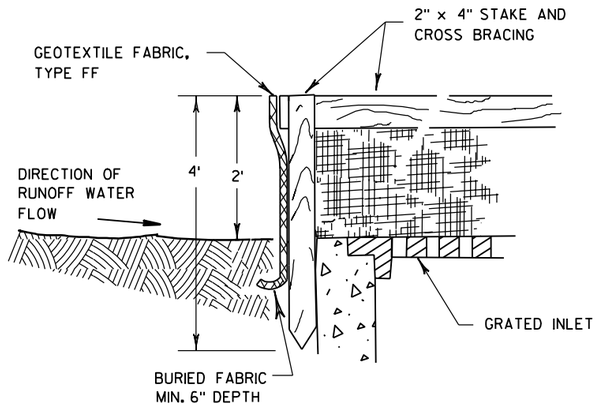
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

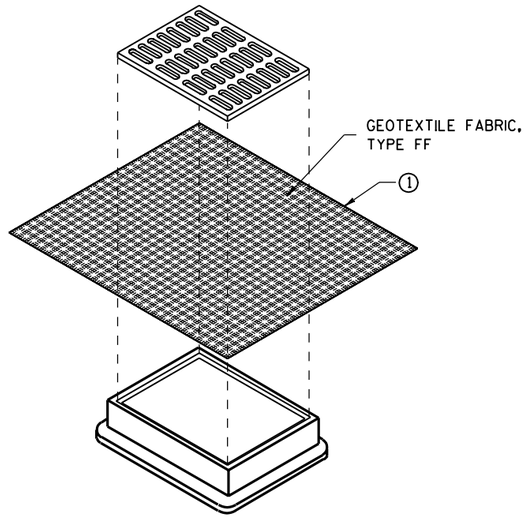
APPROVED
4-29-05
DATE
FHWA

CHIEF ROADWAY DEVELOPMENT ENGINEER

S.D.D. 8 E 9-6

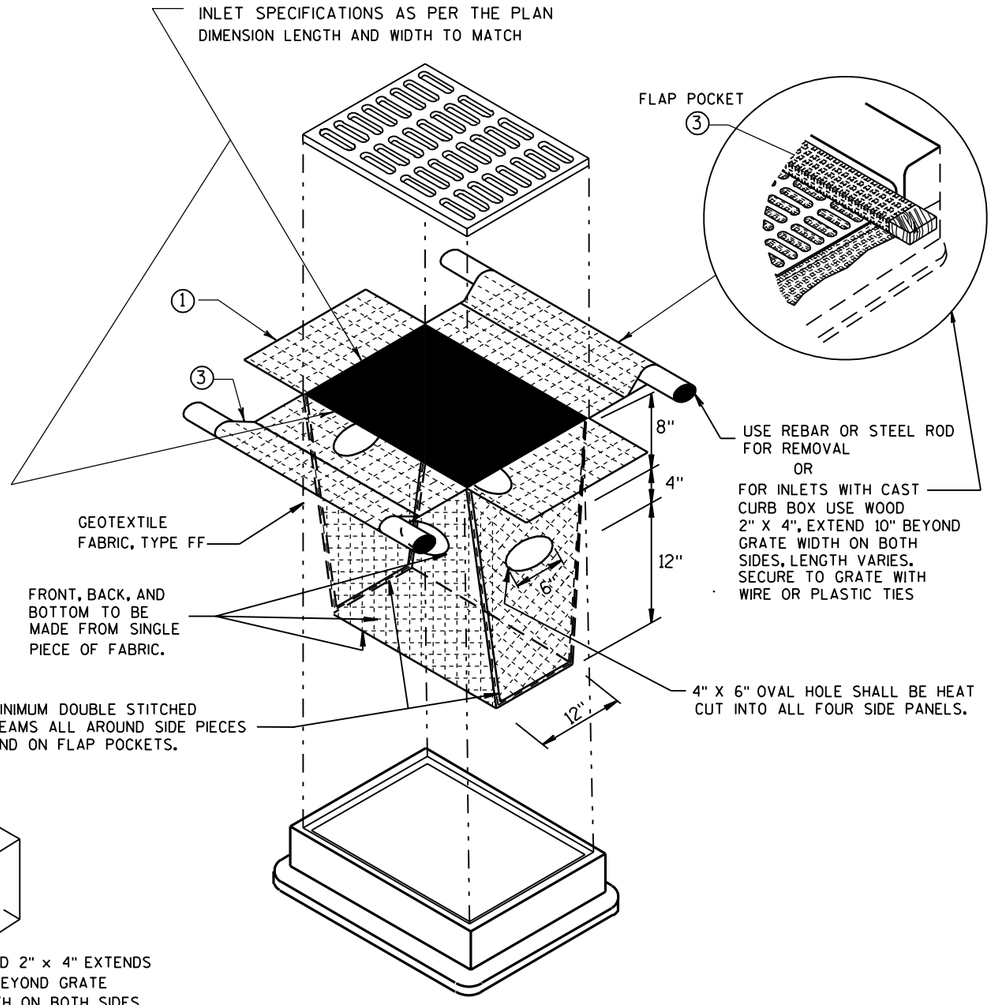
S.D.D. 8 E 9-6





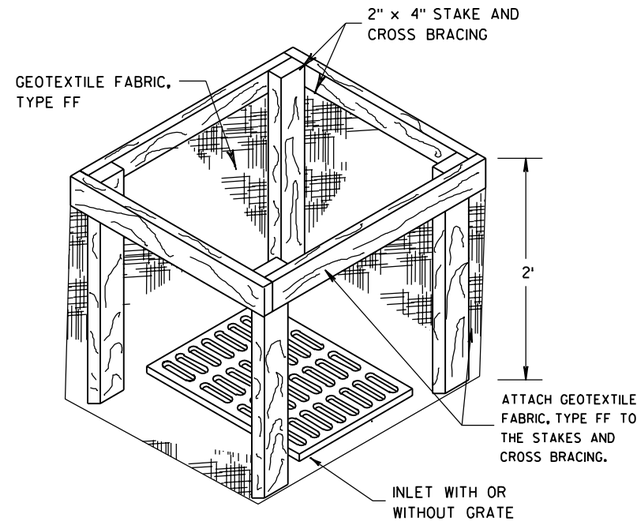
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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

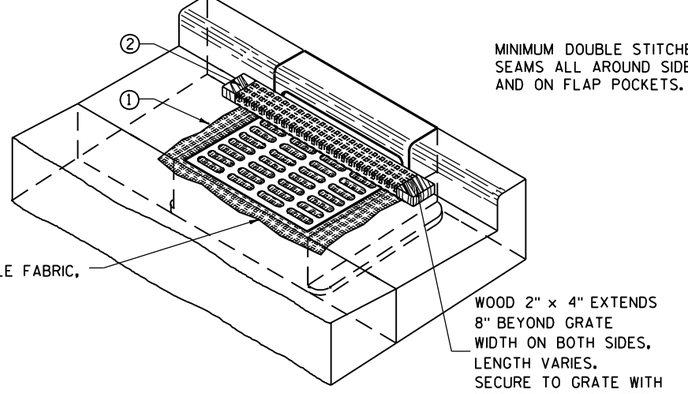


INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.

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 A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
FHWA

CHIEF ROADWAY DEVELOPMENT ENGINEER

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

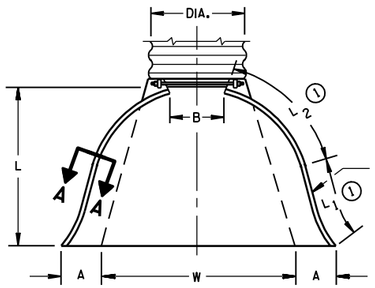
PIPE DIA. (IN.)	MIN. THICK. (inches) STEEL	MIN. THICK. (inches) ALUM.	DIMENSIONS (inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

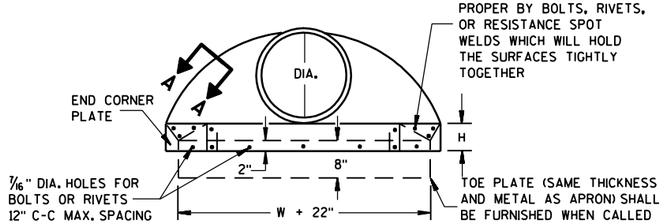
REINFORCED CONCRETE APRON ENDWALLS

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

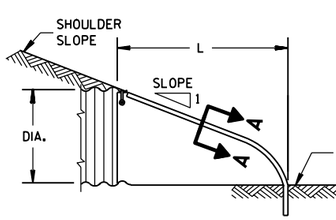
*MINIMUM
**MAXIMUM



PLAN VIEW

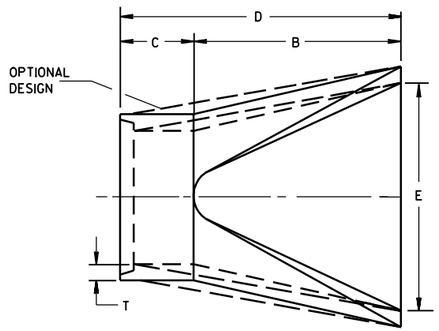


END VIEW

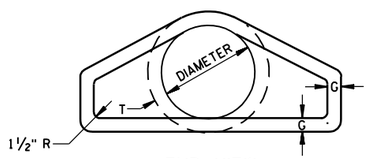


SIDE ELEVATION

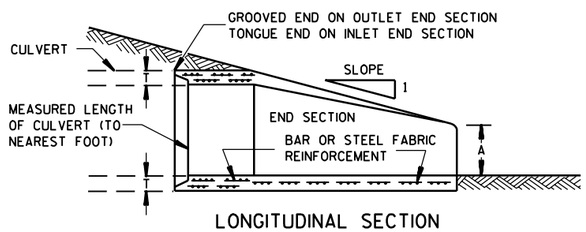
METAL ENDWALLS



PLAN

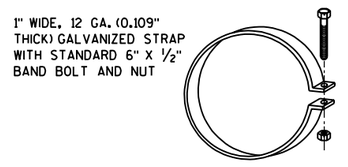


END VIEW



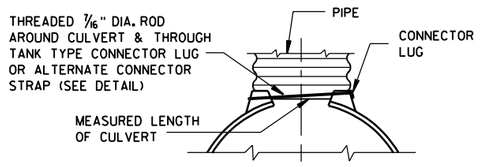
LONGITUDINAL SECTION

CONCRETE ENDWALLS

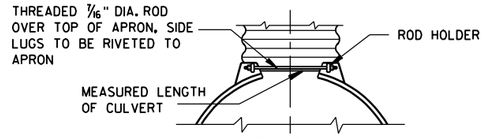


ALTERNATE FOR TYPE 1 CONNECTION

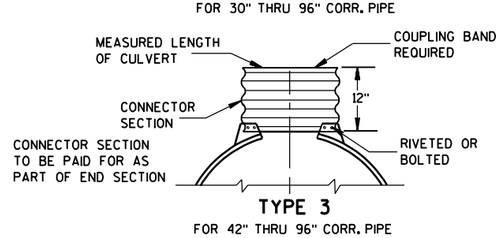
END SECTION CONNECTOR STRAP



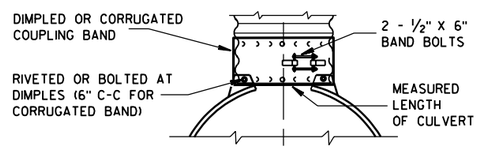
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

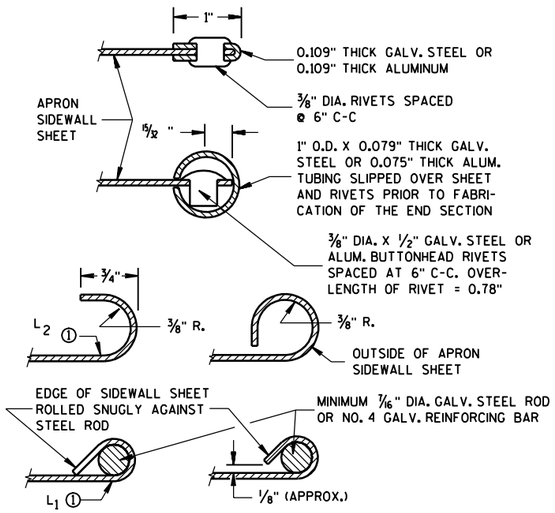
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

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

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

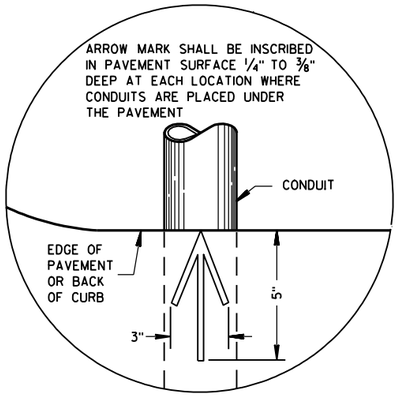
APPROVED
11/30/94
DATE

CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

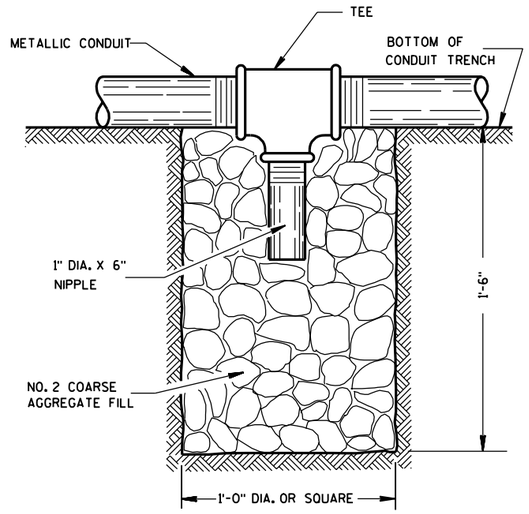
6

S.D.D. 8 F 1-11



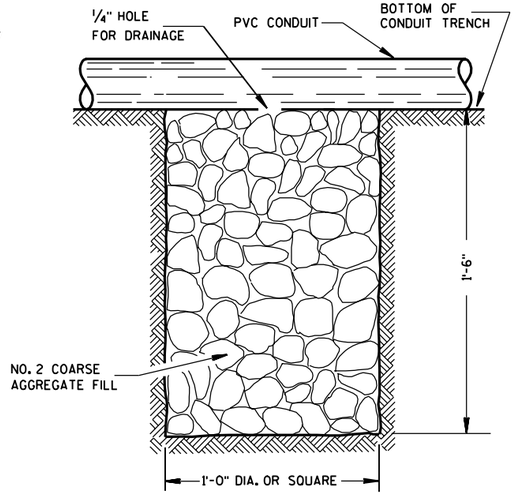
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

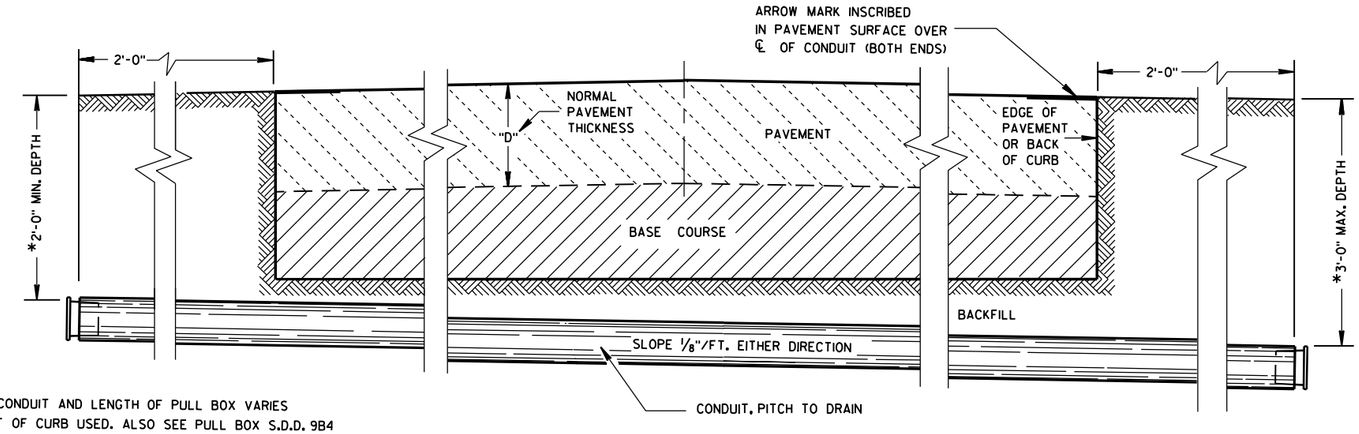
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/23/03
DATE
FHWA

STATE ELECTRICAL ENGINEER FOR HIGHWAYS

6

S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

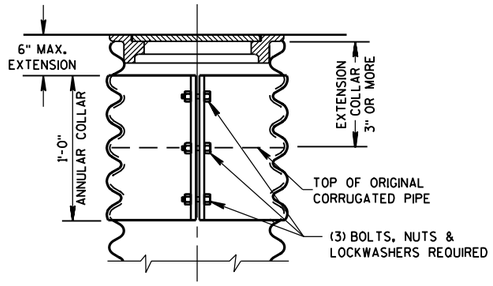
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

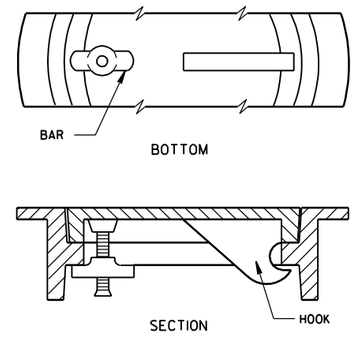
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

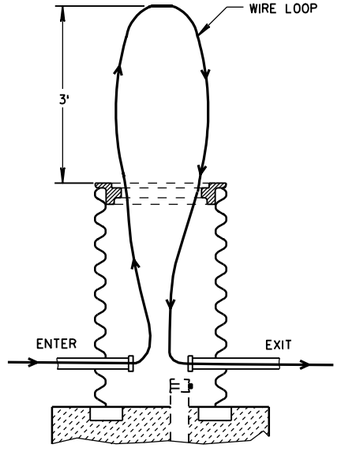


CORRUGATED PIPE EXTENDER

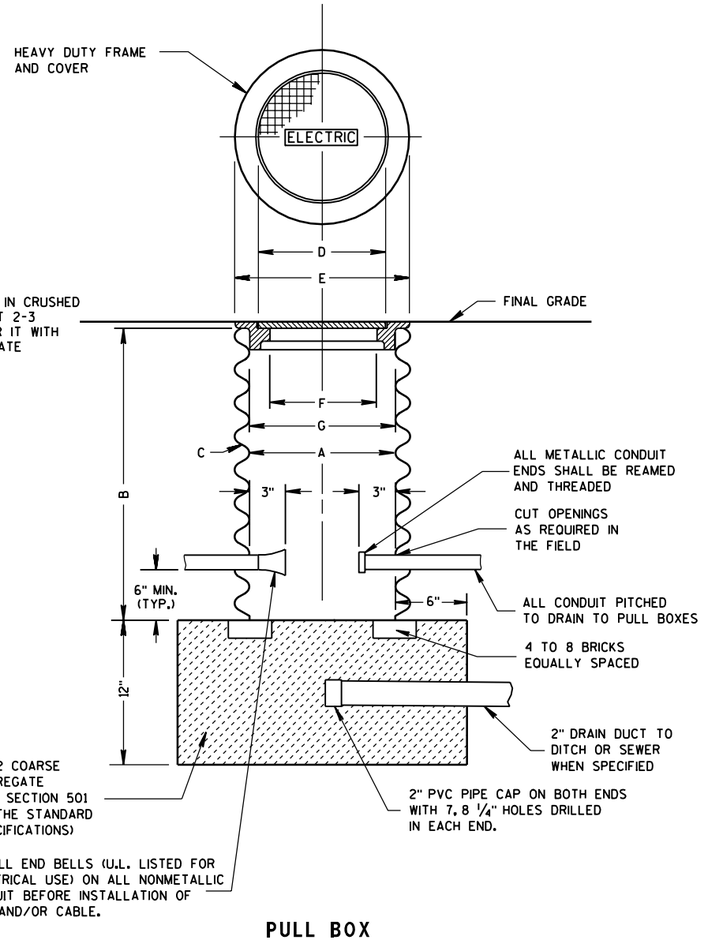


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

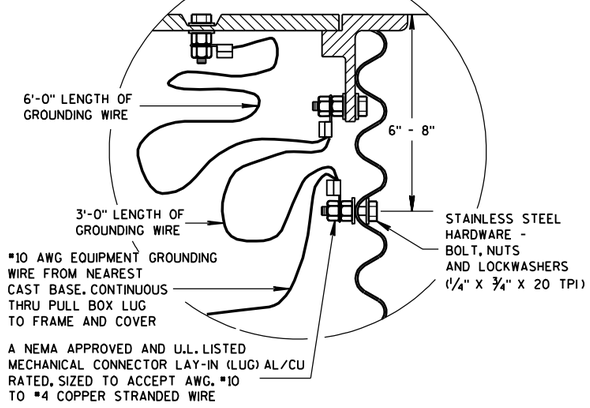


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

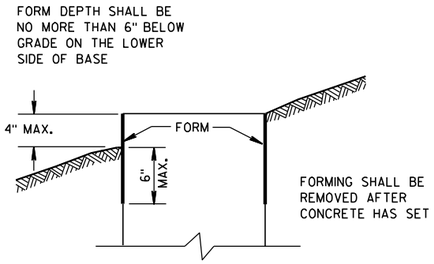
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/27/06 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGINEER FOR HIGHWAYS
FHWA

6

S.D.D. 9 B 4-9



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

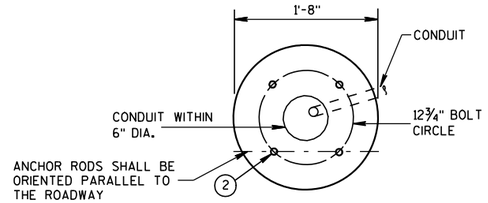
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

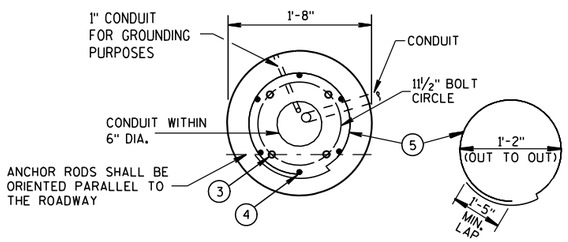
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

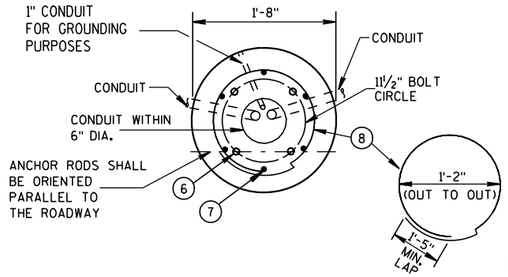
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

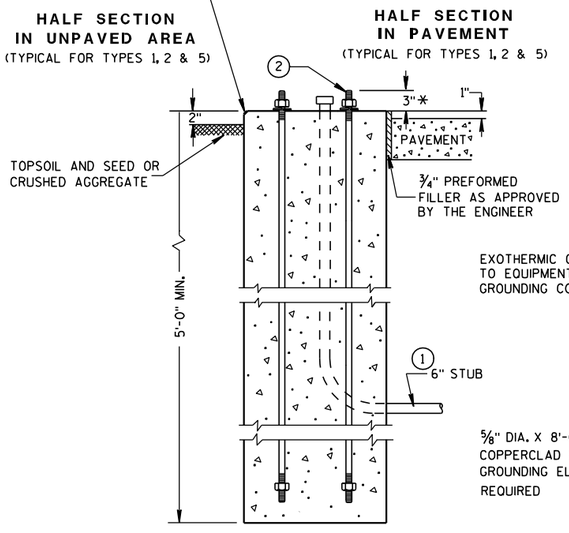
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

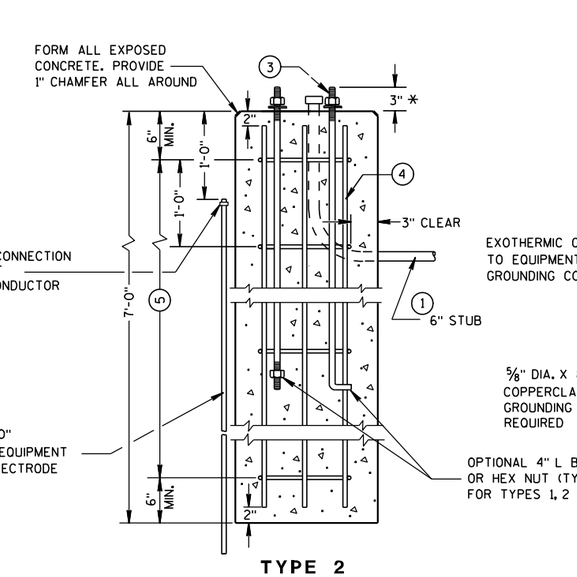
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

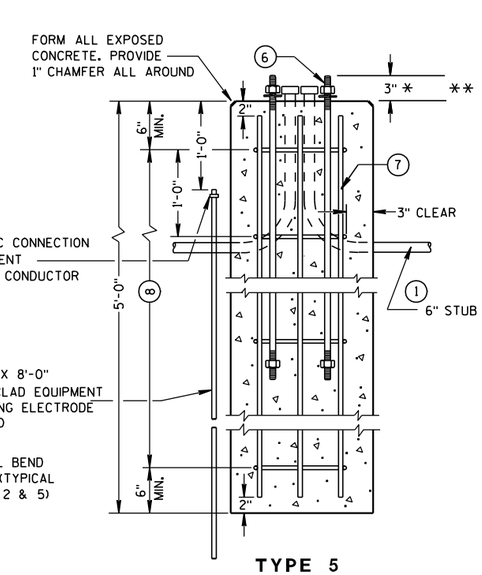












CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10	/S/ Joanna L. Bush
DATE	STATE ELECTRICAL ENGINEER FOR HIGHWAYS

FHWA

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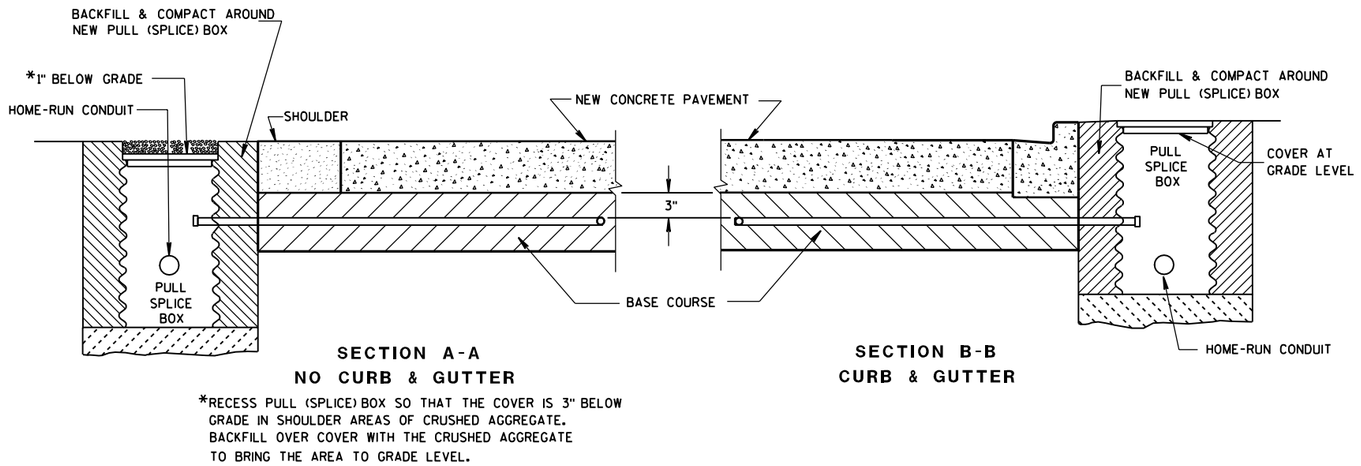


SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

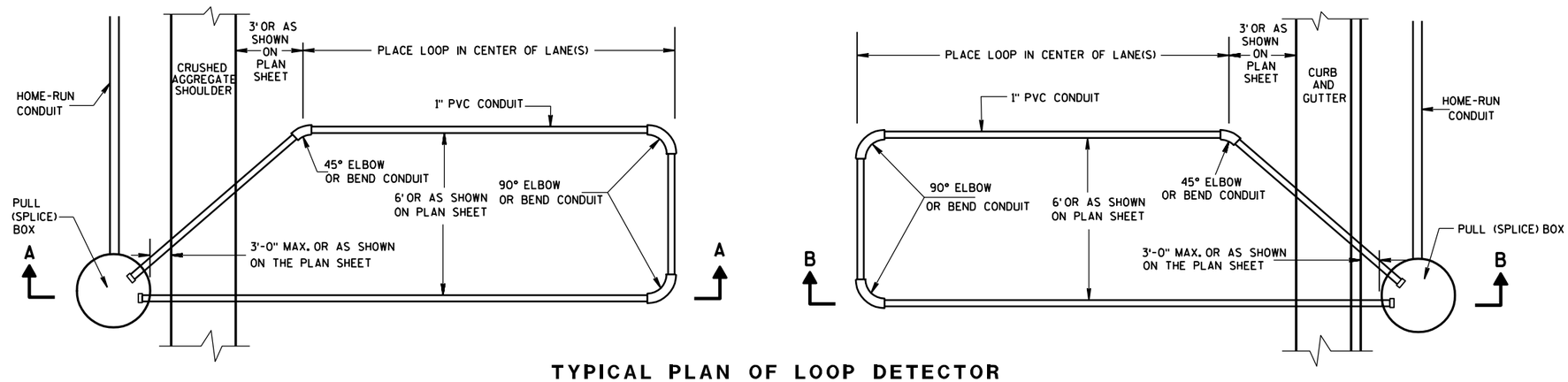
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION I)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/7/06 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGINEER FOR HIGHWAYS

FHWA

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S.D.D. 9 F 15-3a

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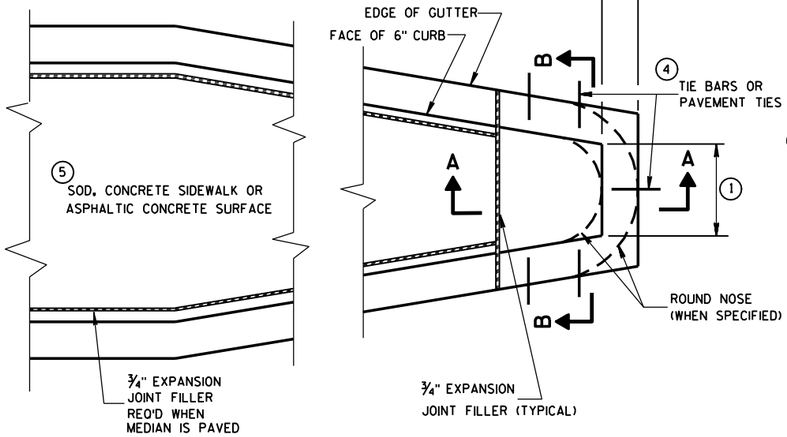
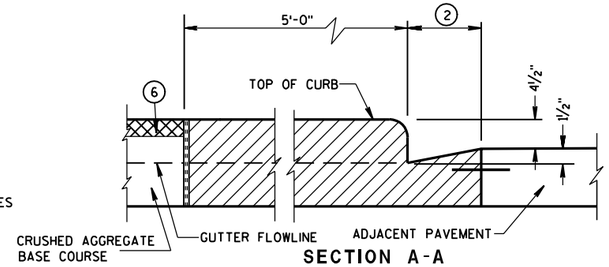
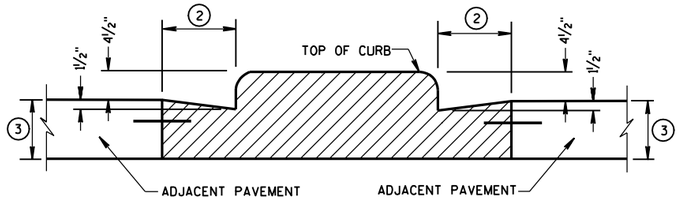
S.D.D. 9 F 15-3a





SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

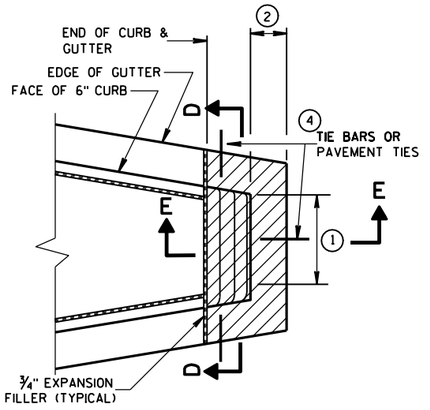
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

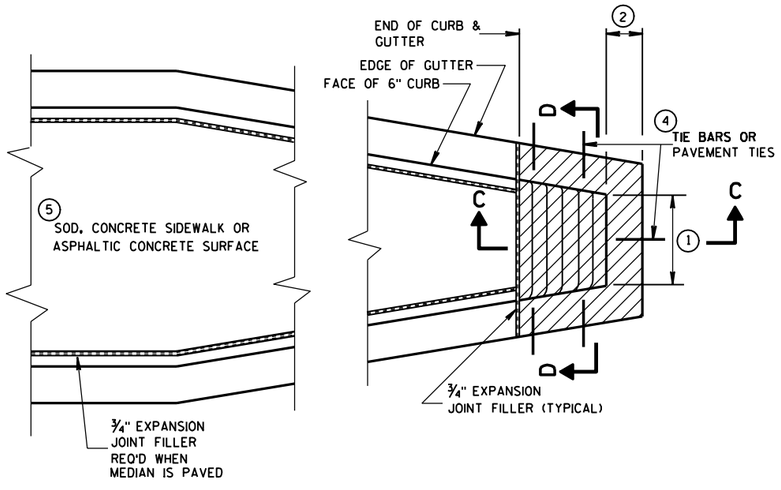
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

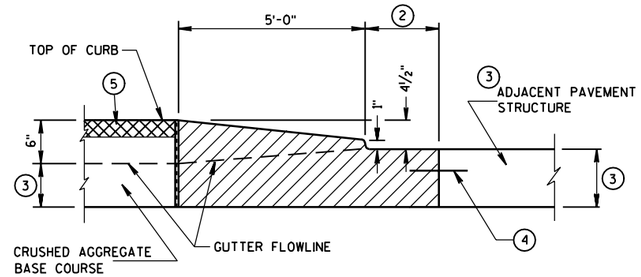
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

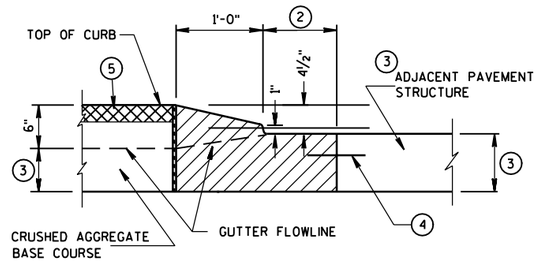




CONCRETE MEDIAN SLOPED NOSE TYPE 1

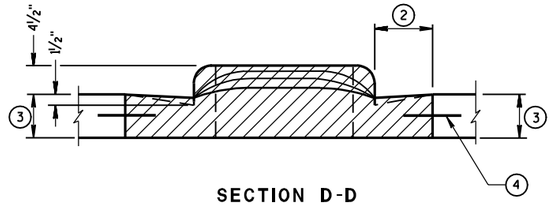


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/06 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

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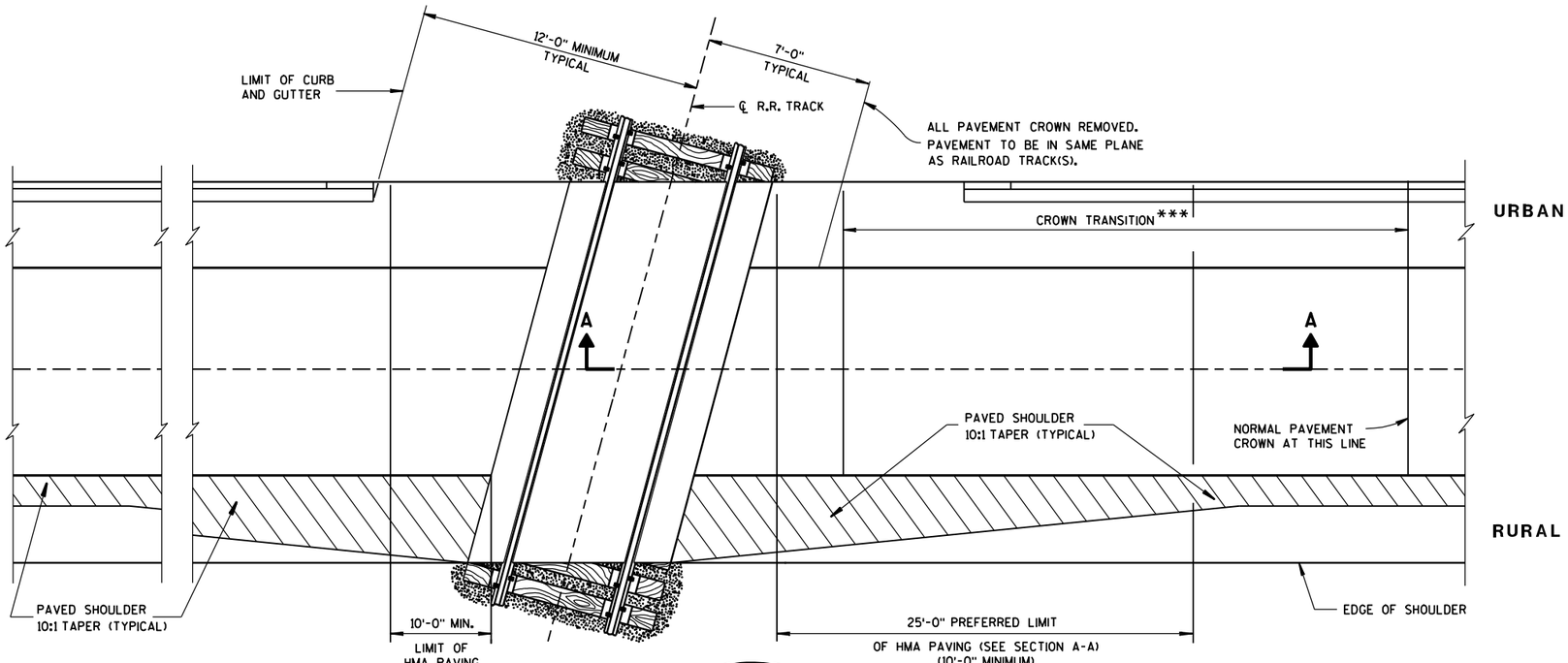
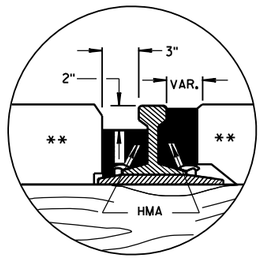
S.D.D. 11B 2-2





DETAIL B

HMA FLANGEWAY AND FIELD FILLERS

GENERAL NOTES

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

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

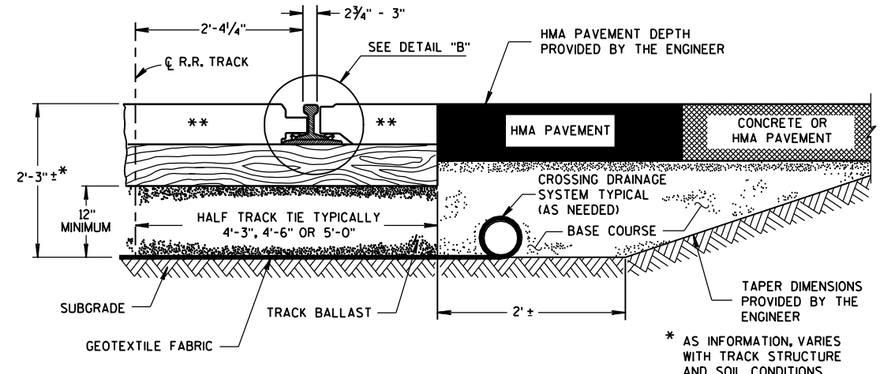
HMA PAVEMENT APPROACHES AND HMA PAVEMET CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

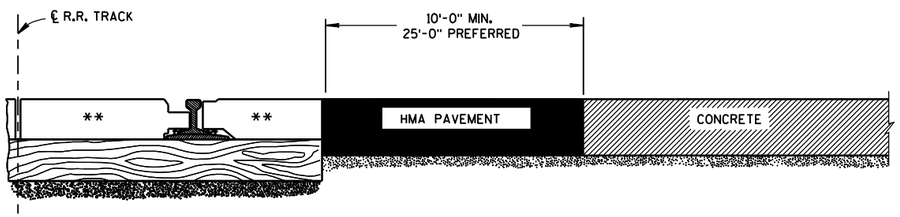
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

** CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

*** CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.



TYPICAL HALF SECTION



SECTION A-A

CONCRETE PAVEMENT APPROACH

SECTION A-A

HMA PAVEMENT APPROACH

EXAMPLES OF PAVEMENT APPROACHES

PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-28-09 DATE
/S/ Ronald E. Adams
CHIEF, RAILROADS & HARBORS SECTION
FHWA

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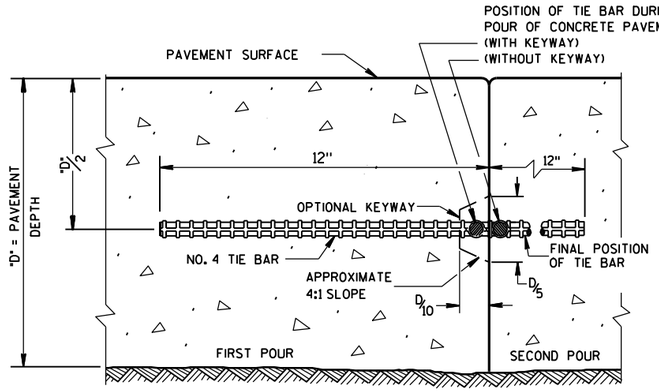
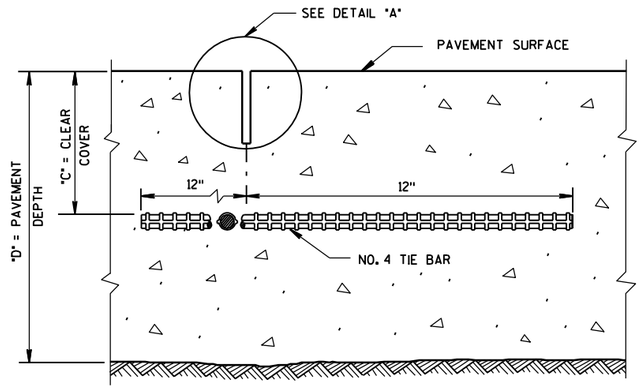
S.D.D. 13 B 1-10



CONSTRUCTION JOINT

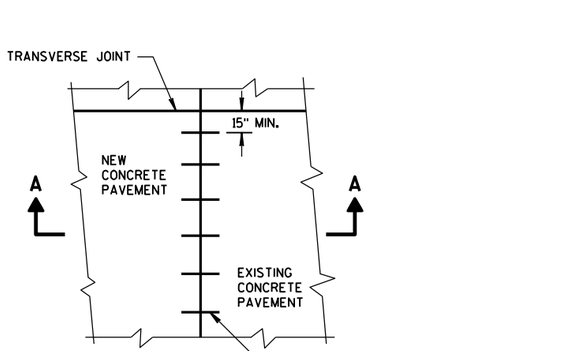


SAWED JOINT

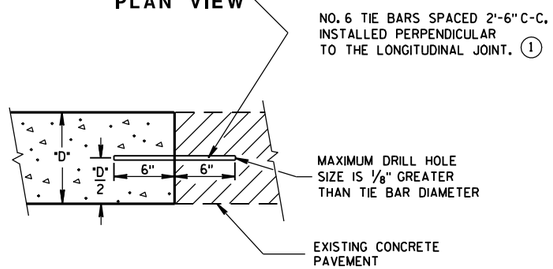
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

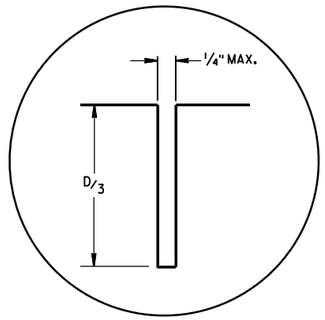


PLAN VIEW



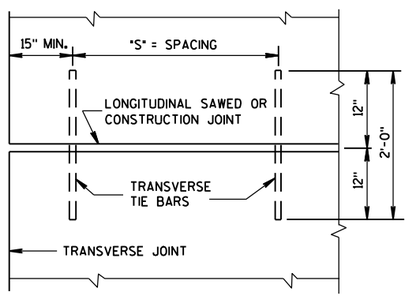
SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥30'
6, 6 ½"	3"±½"	48"	42"
7, 7 ½"	3 ¼"±1"	45"	36"
8, 8 ½"	3 ¾"±1"	39"	30"
9, 9 ½"	4 ¼"±1"	33"	27"
10, 10 ½"	4 ¾"±1"	30"	24"
11, 11 ½"	5 ¼"±1"	27"	21"
12"	5 ¾"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/11/2009
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

FHWA

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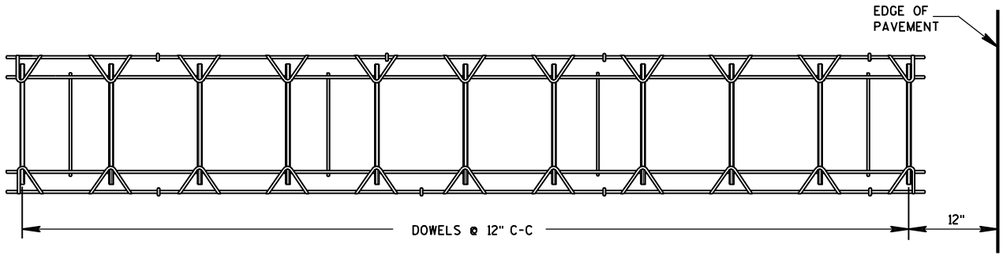
S.D.D. 13 C 1-14



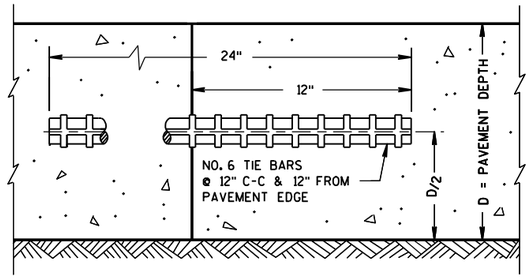
PLAN VIEW

SIDE VIEW

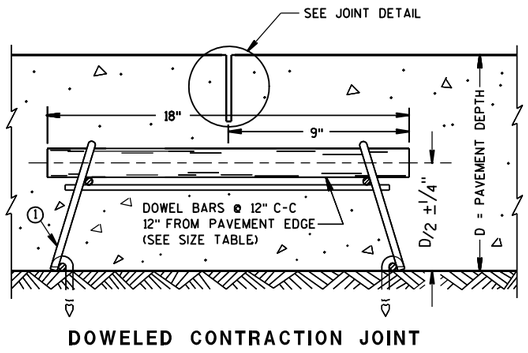
CONTRACTION JOINT DOWEL ASSEMBLY ①

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.

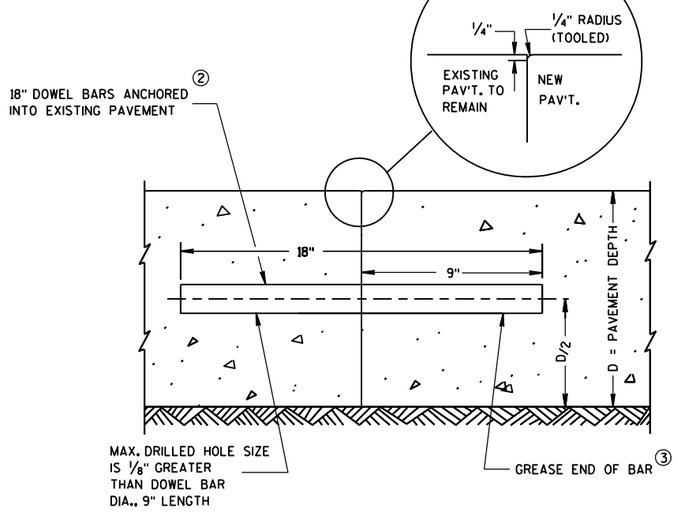
② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

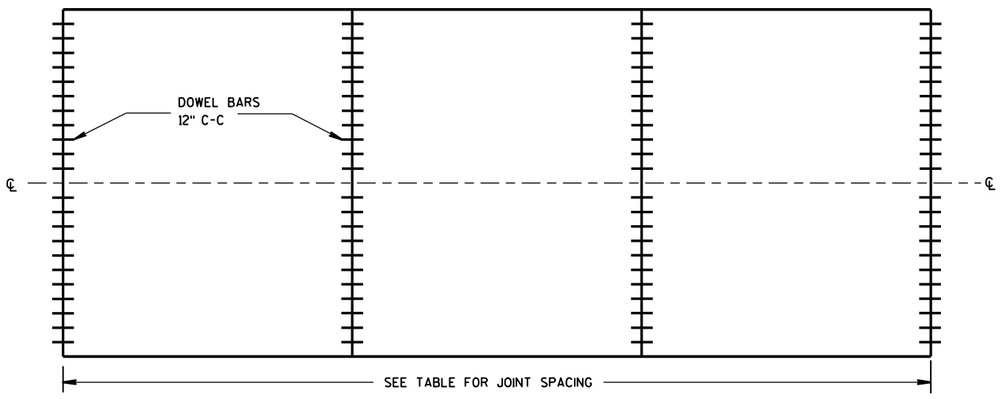
BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR
BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR
BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

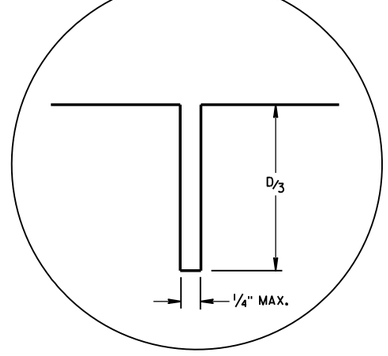


TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DESIGN ENGINEER
FHWA

6

S.D.D. 13 C 13-7

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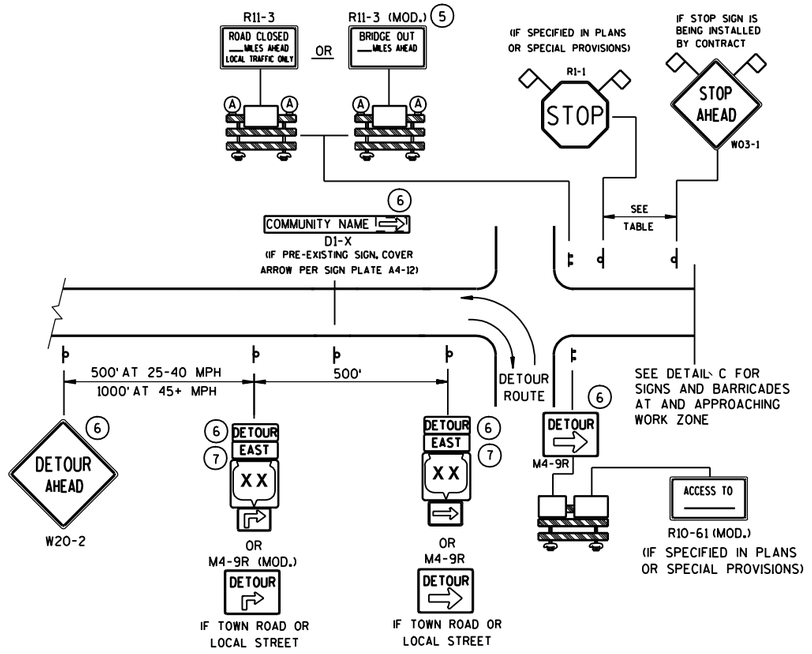
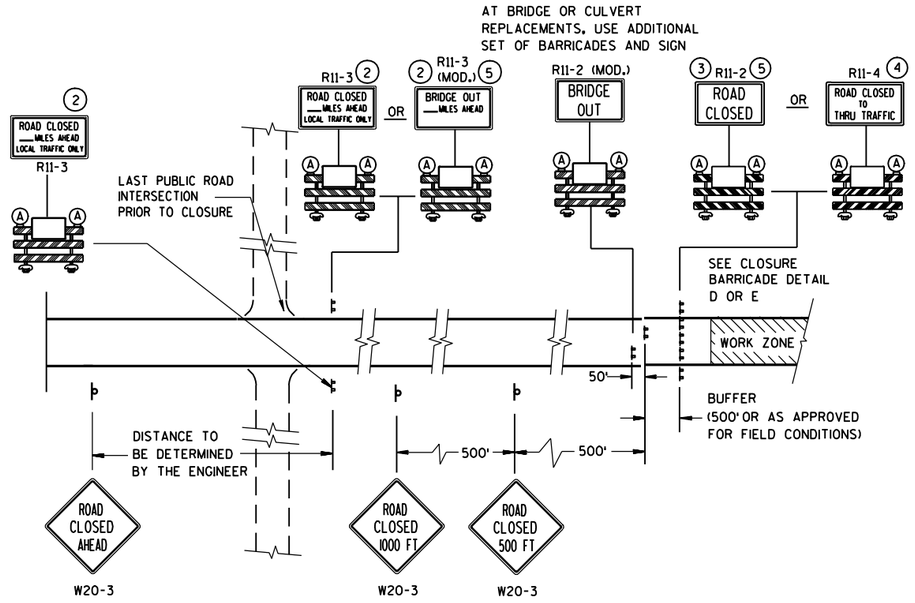
S.D.D. 13 C 13-7



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

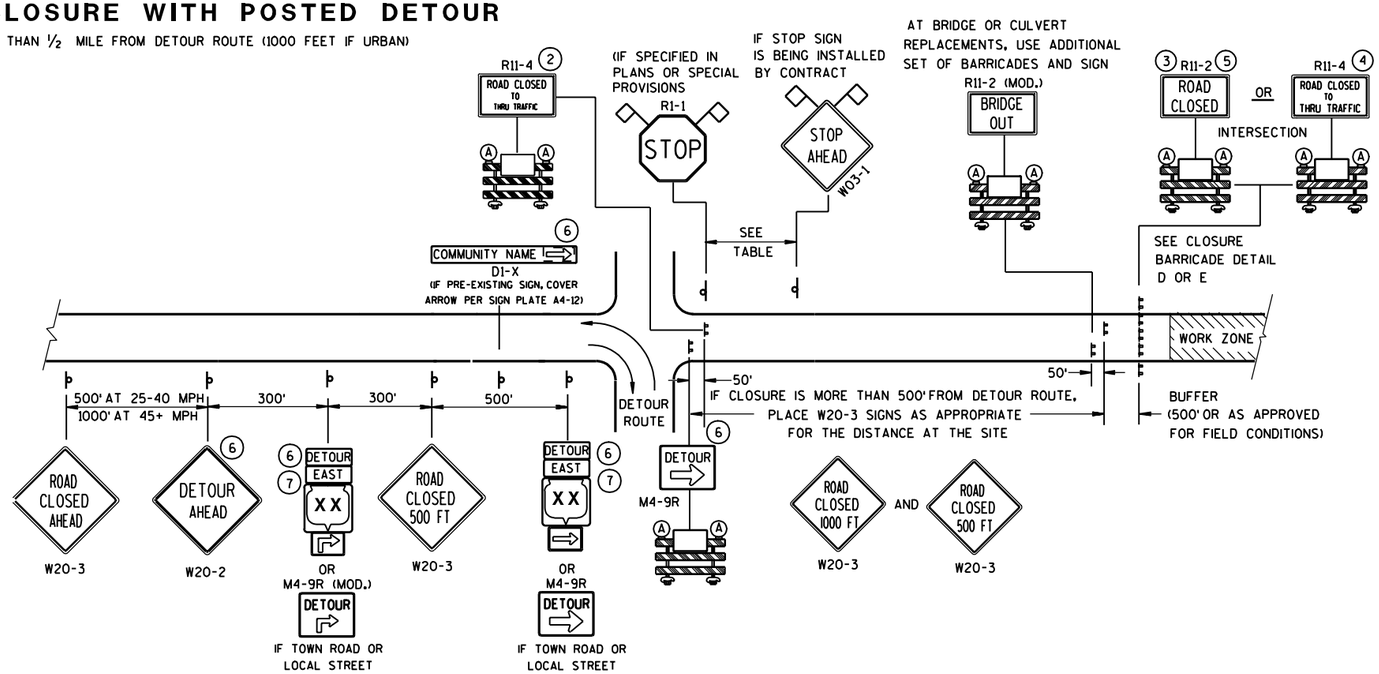


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

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 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

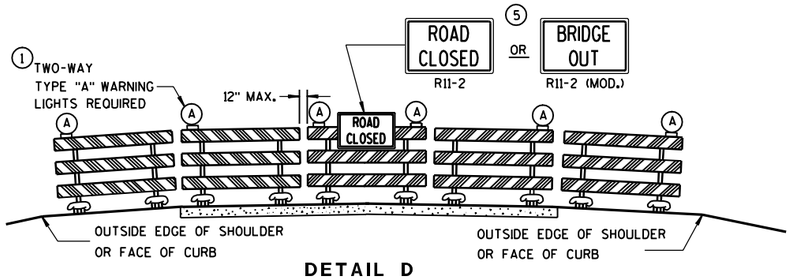
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 2-4a

6

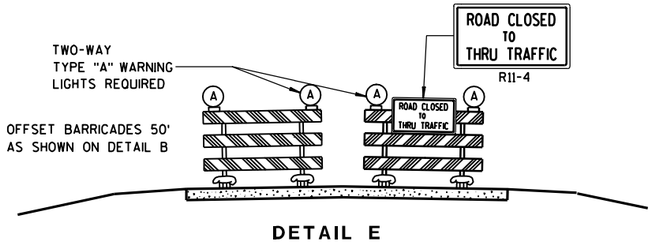
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a 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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

"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, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/16/03
DATE

Thomas N. Nottbohm for
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 2-4b

6

S.D.D. 15 C 2-4b

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

GENERAL NOTES

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

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

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

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

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

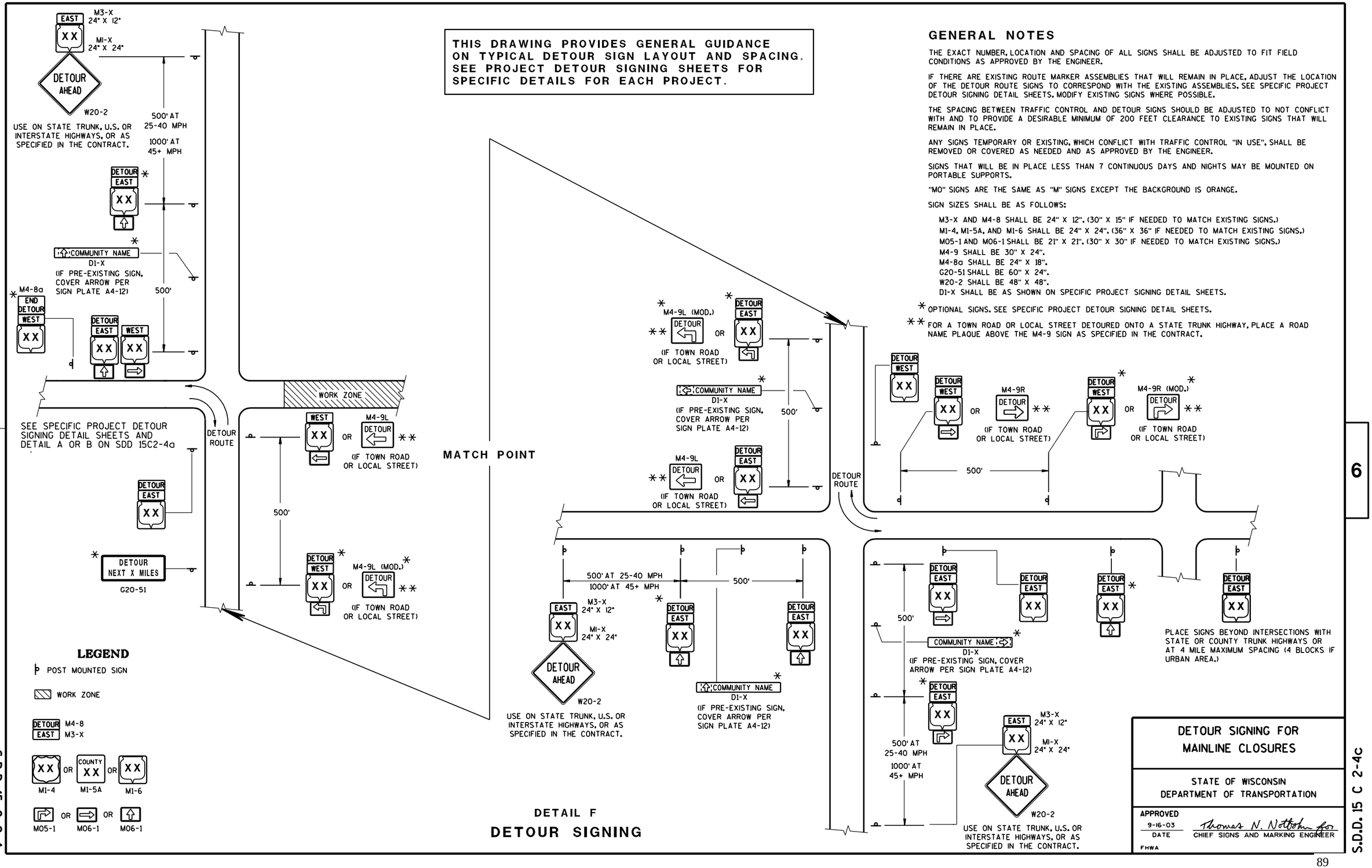
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

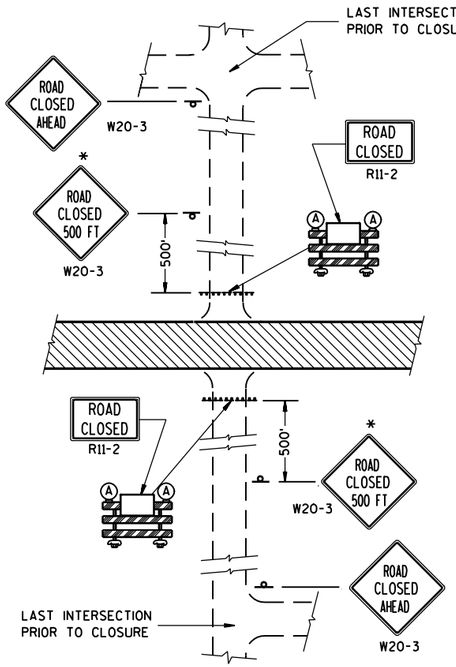
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

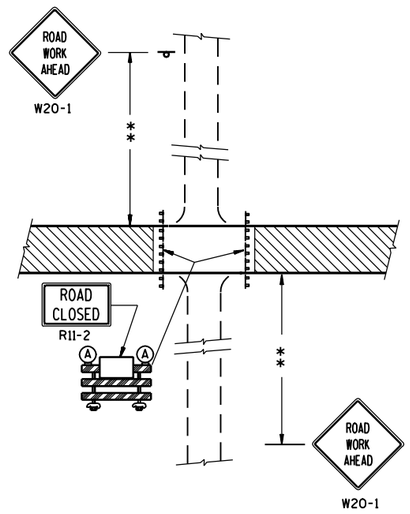
APPROVED
9-16-03 DATE
Thomas N. Notbohm for
CHIEF SIGNS AND MARKING ENGINEER
FHWA

S.D.D. 15 C 2-4c



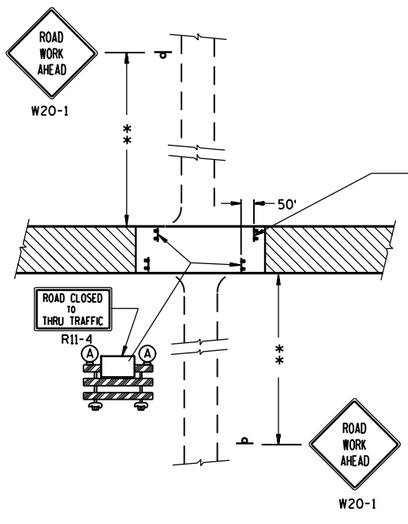
DETAIL 1

(NO ACCESS TO PROJECT)



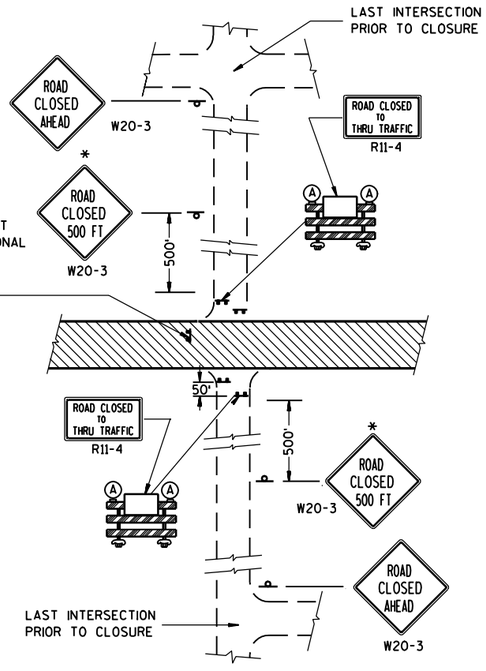
DETAIL 2

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



DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

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

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

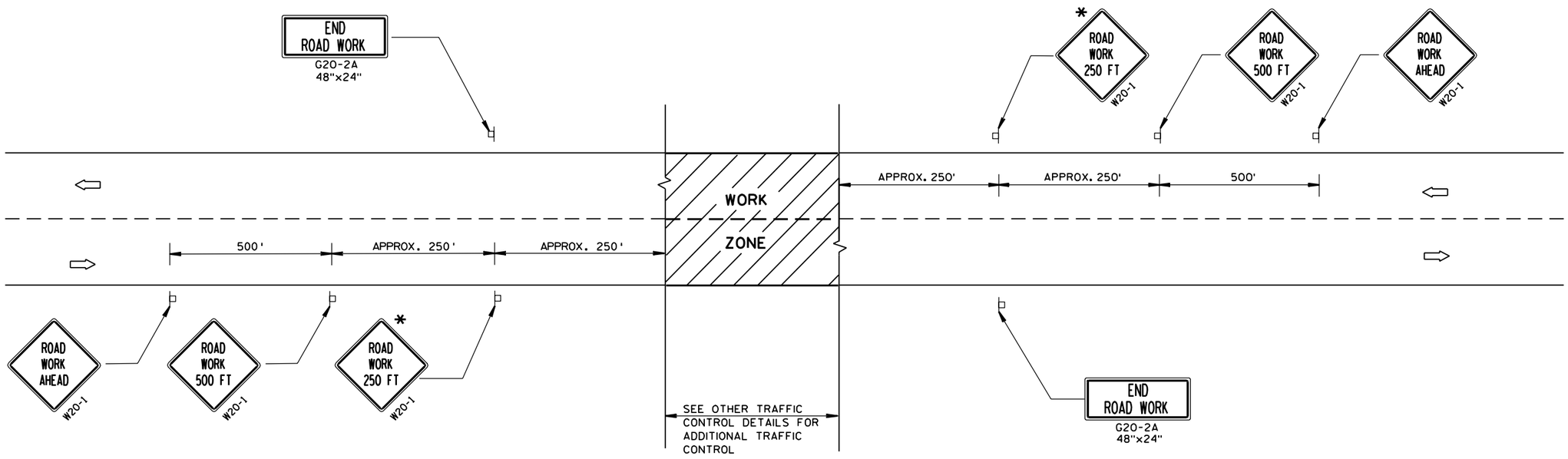
APPROVED
9-16-03
DATE

Thomas N. Notbohm for
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 3-1



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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

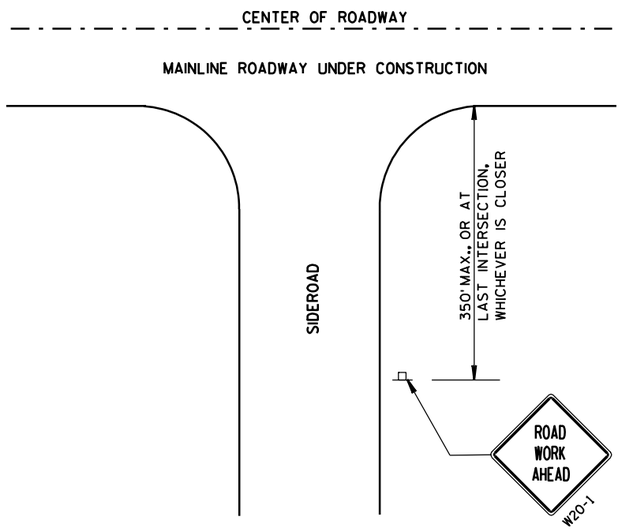
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

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

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL.
ADVANCE WARNING SIGNS
40 M.P.H. OR LESS
TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00
DATE

Chester J. Sprang
CHIEF SIGNS AND MARKING ENGINEER

FHWA

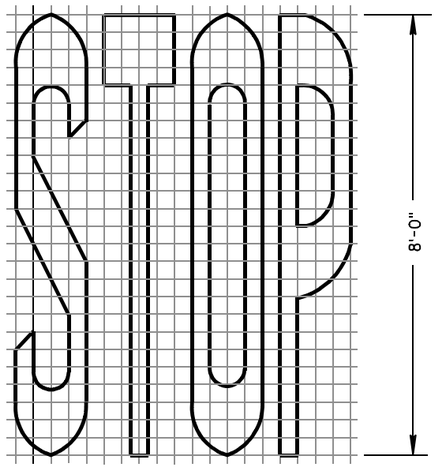
6

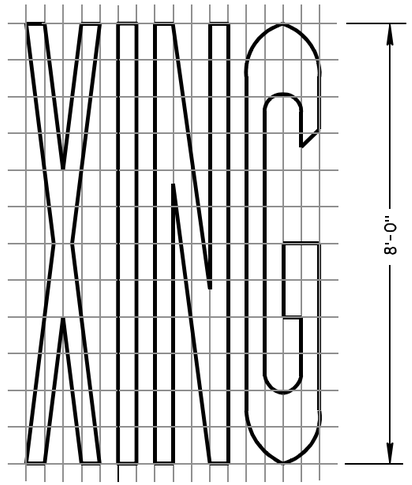
S.D.D. 15 C 5-1

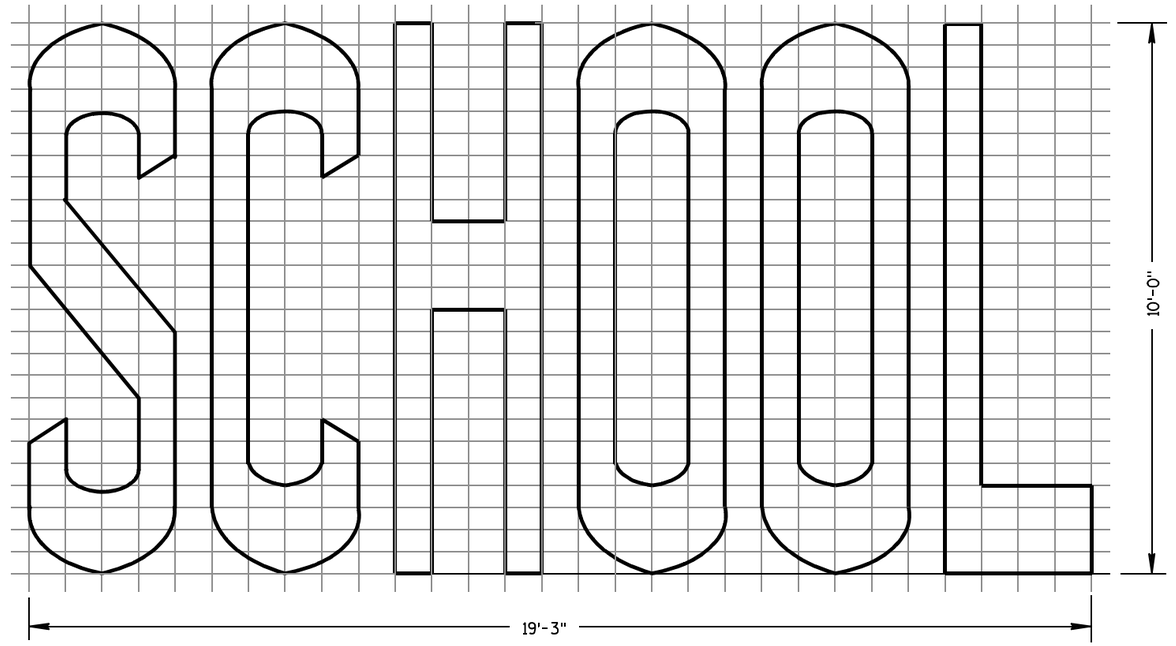
GENERAL NOTES

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

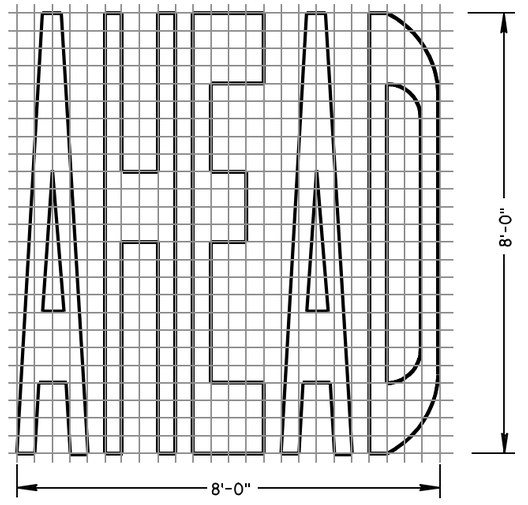
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

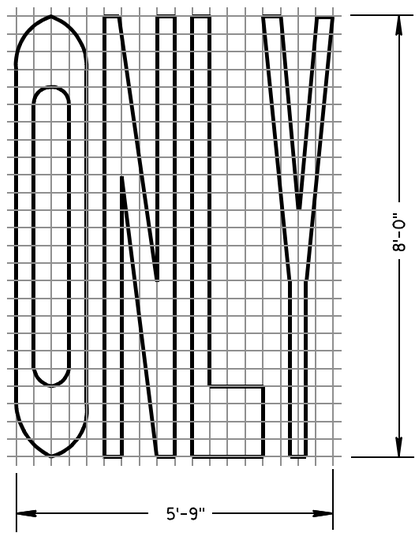


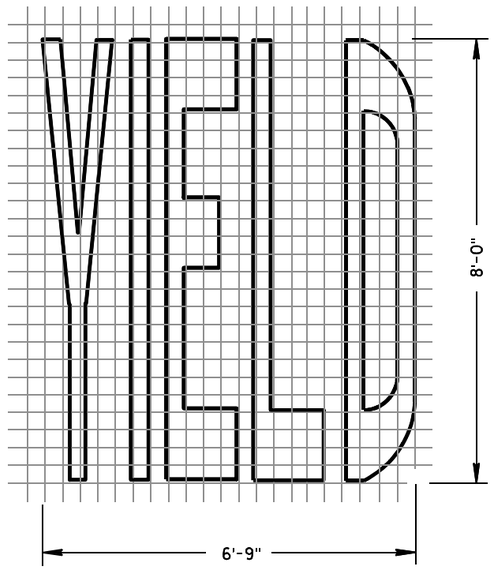


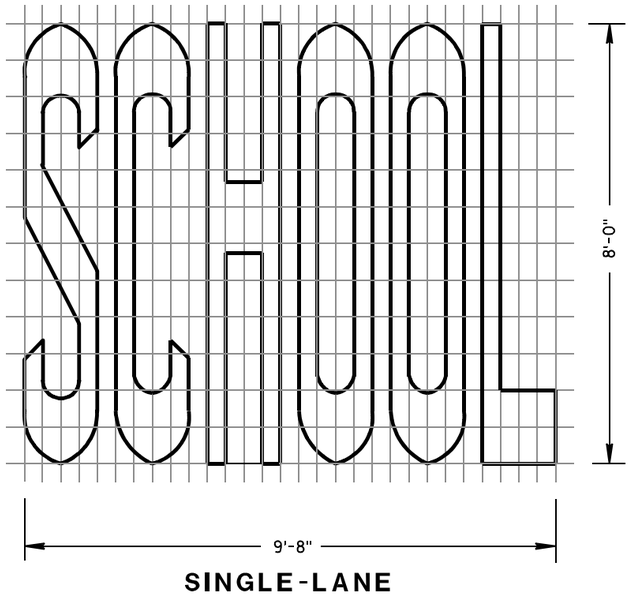


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

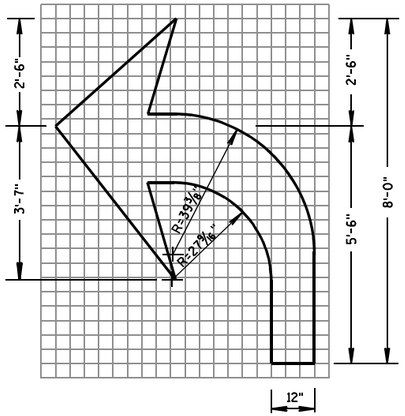
APPROVED
5-13-10 — DATE
/S/ Thomas N. Notbohm — STATE TRAFFIC ENGINEER OF DESIGN
FHWA

6

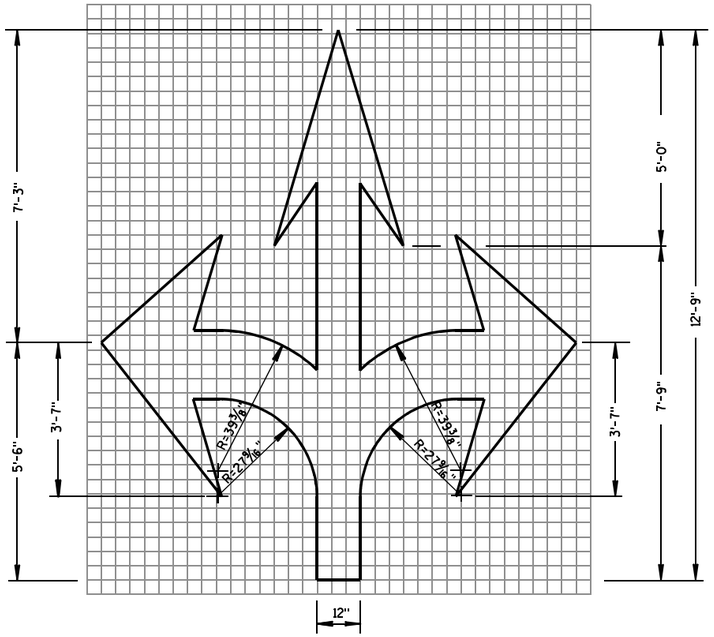
S.D.D. 15 C 7-11b

6

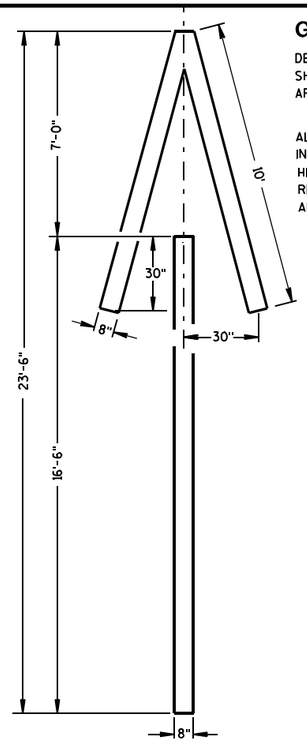
S.D.D. 15 C 7-11b



TYPE 2



TYPE 6

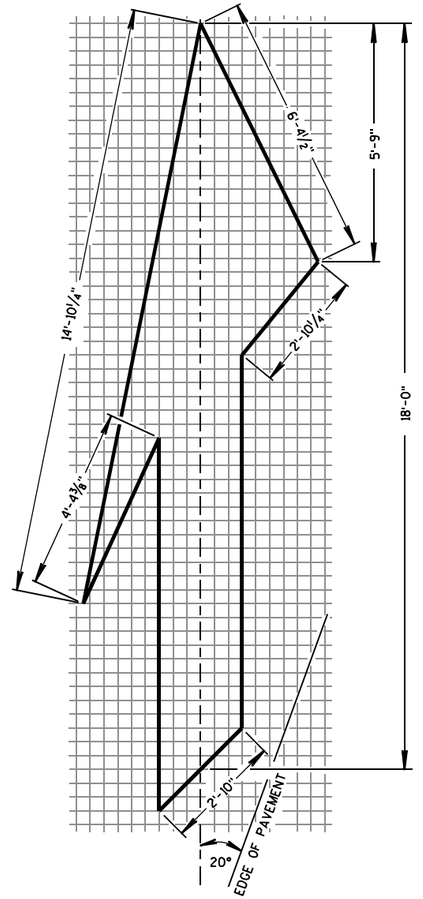


TYPE 4

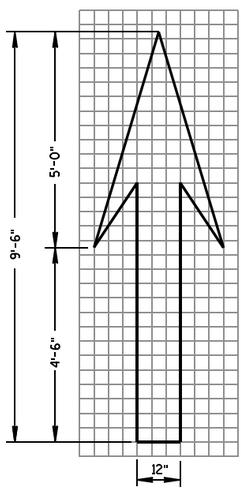
GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW



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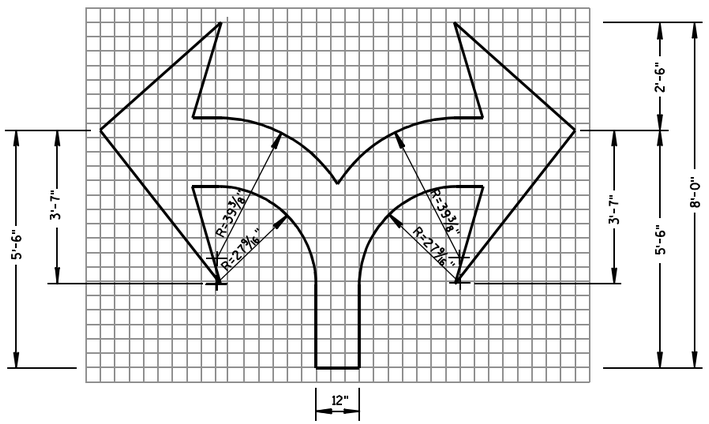

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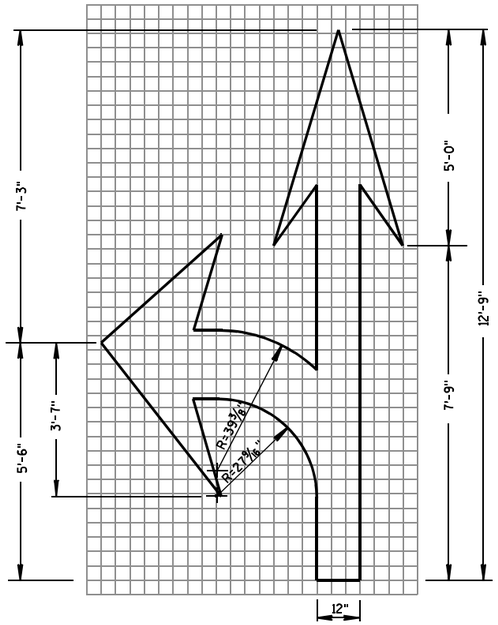


TYPE 3

PAVEMENT MARKING ARROWS

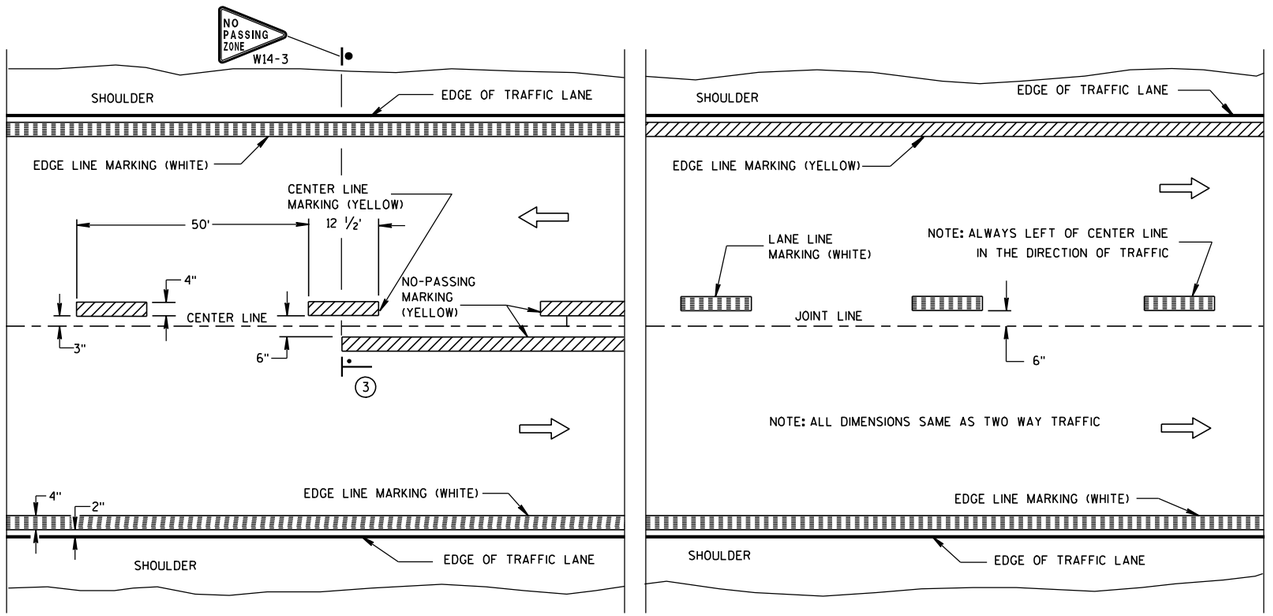
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/13/10 — DATE
/S/ Thomas N. Notbohm — STATE TRAFFIC ENGINEER OF DESIGN
FHWA

S.D.D. 15 C 7-11d

6

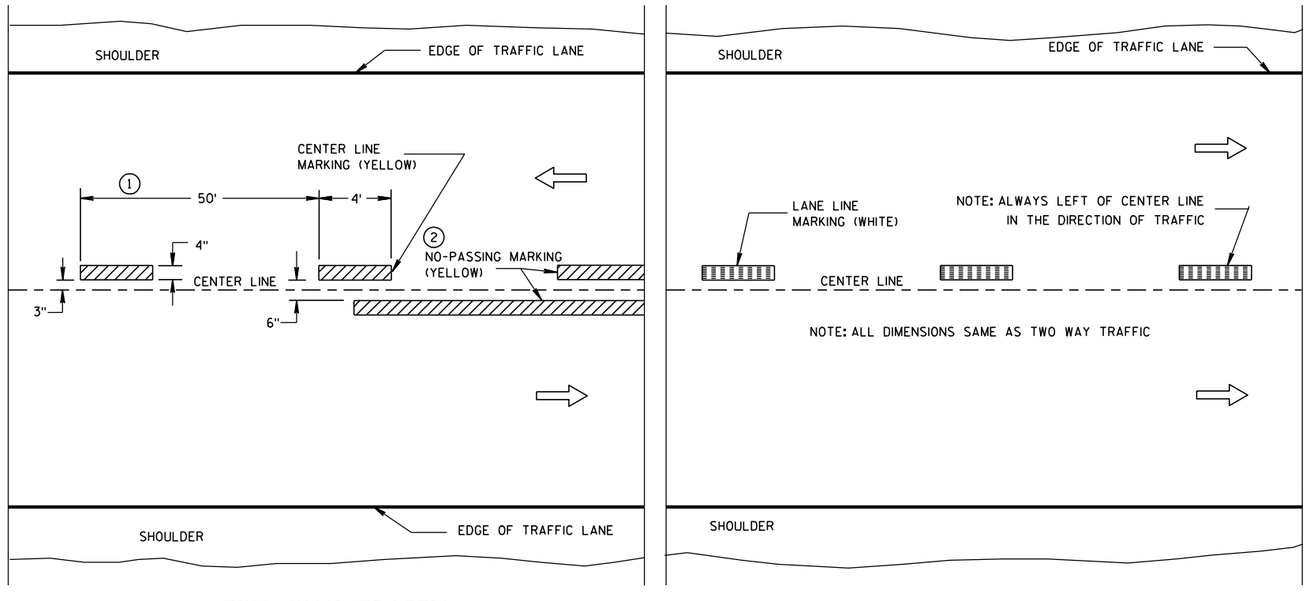
S.D.D. 15 C 7-11d



TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC

ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

GENERAL NOTES

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

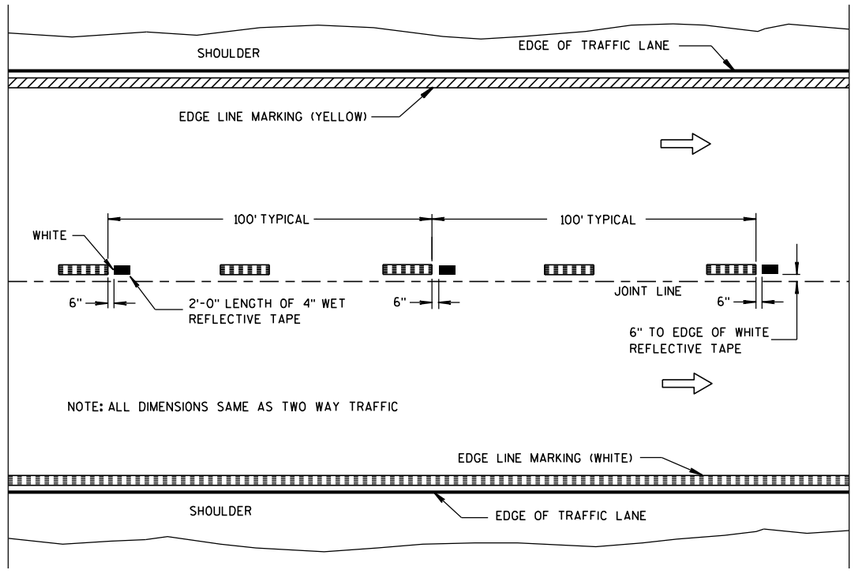
① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.

② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-10
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

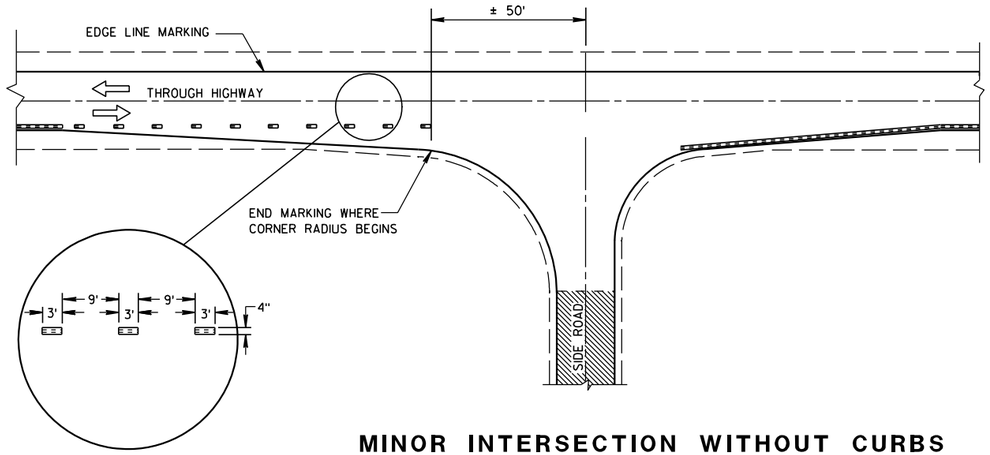
FHWA

6

S.D.D. 15 C 8-13a

6

S.D.D. 15 C 8-13a



MINOR INTERSECTION WITHOUT CURBS

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET) ⑦
25 - 30	528
35 - 40	528
45 - 50	686
55	792

GENERAL NOTES

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

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

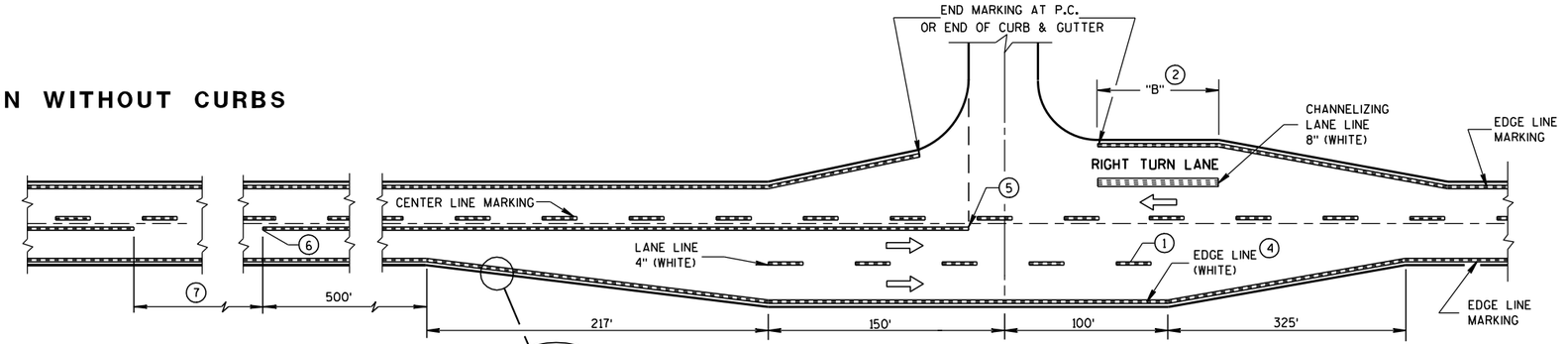
(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

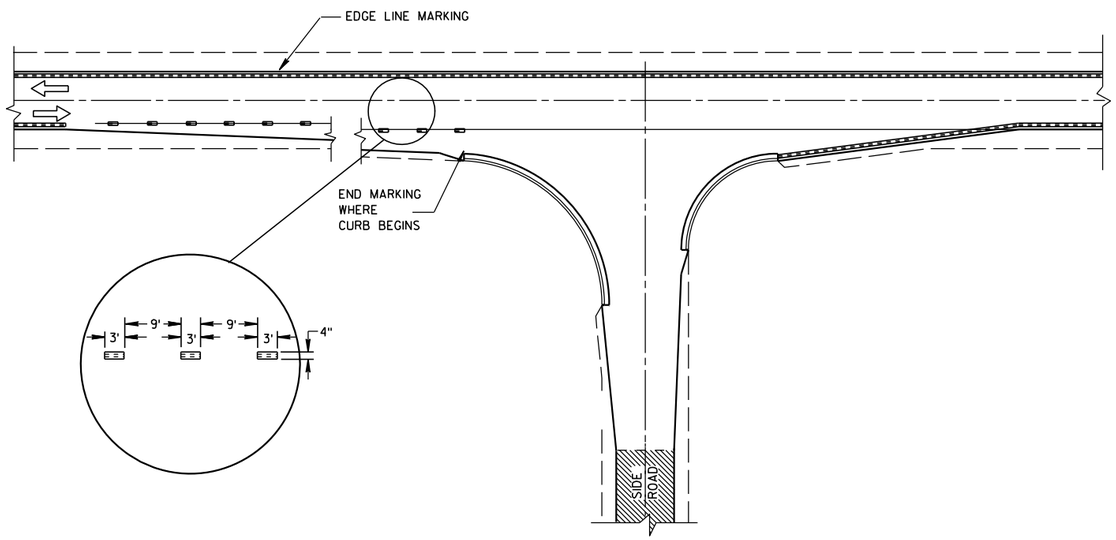
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

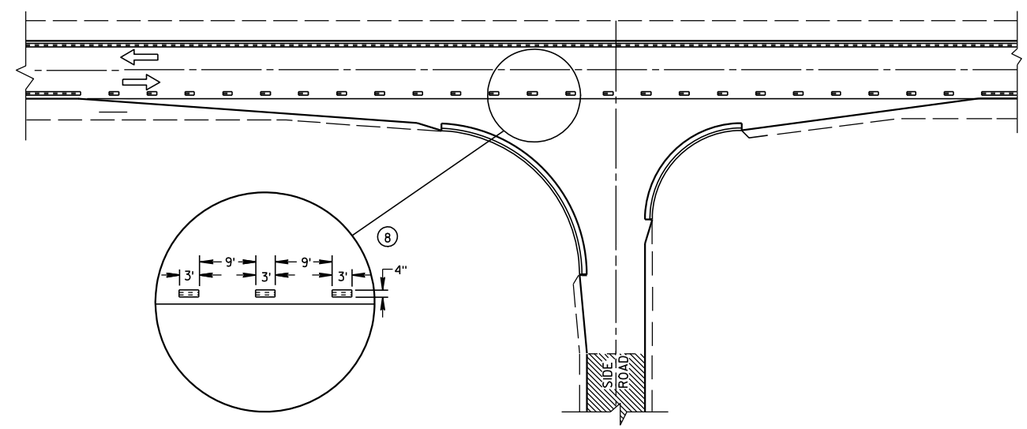
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



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

PAVEMENT MARKING
(INTERSECTIONS)

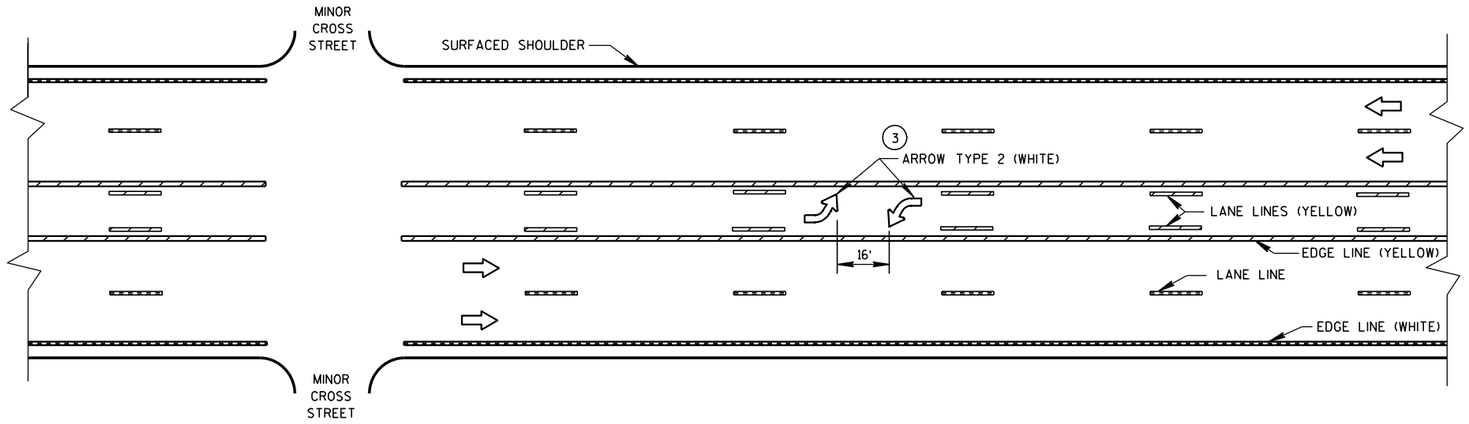
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-13b

6

S.D.D. 15 C 8-13b

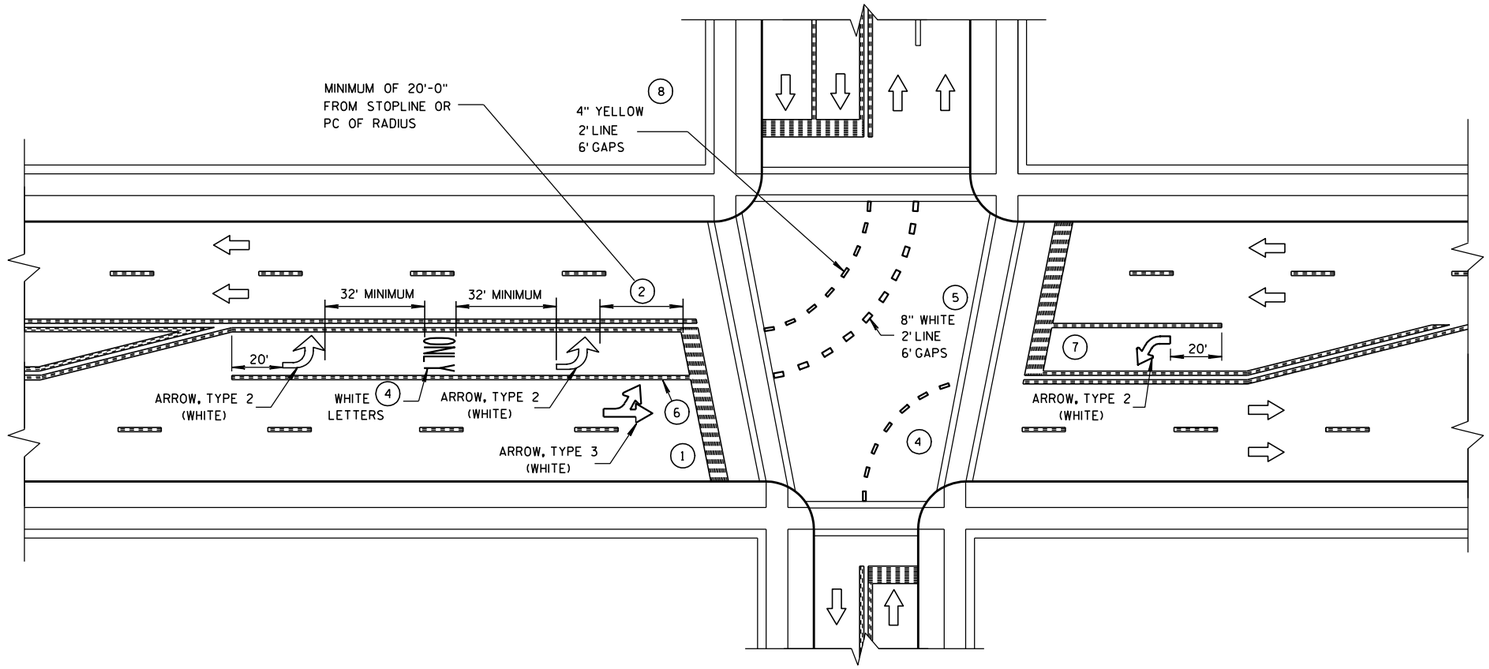


TWO WAY LEFT TURN LANE

GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA ARROW AND ONLY PER 160' OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108'.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



PAVEMENT MARKING
(LEFT TURN LANE)

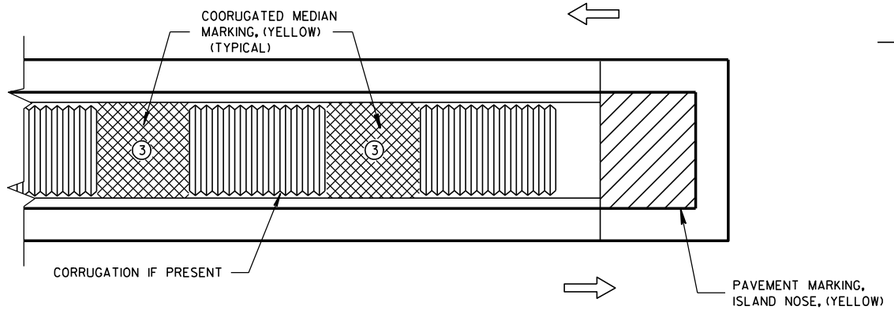
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

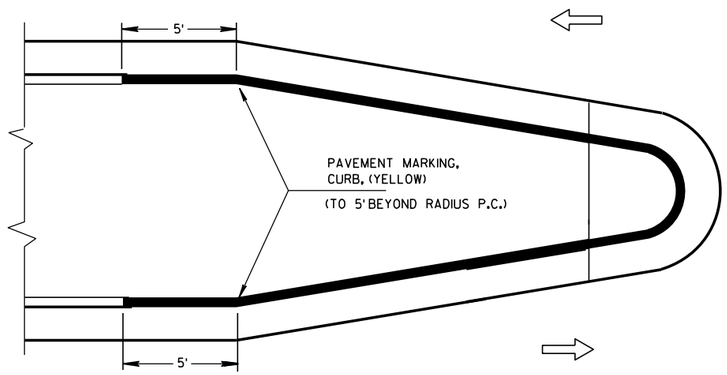
S.D.D. 15 C 8-13e

6

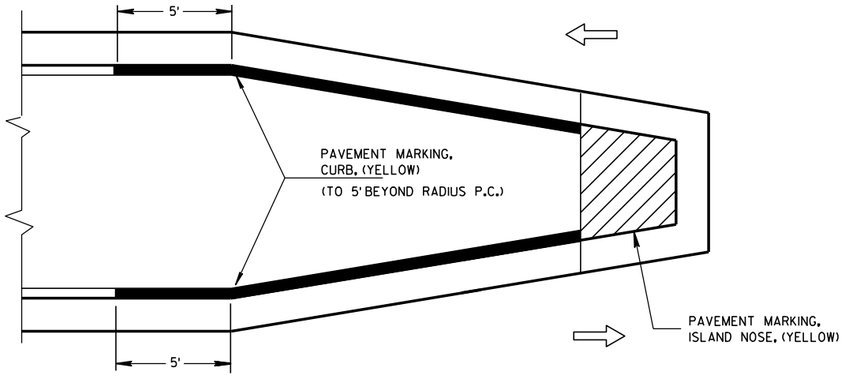
S.D.D. 15 C 8-13e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

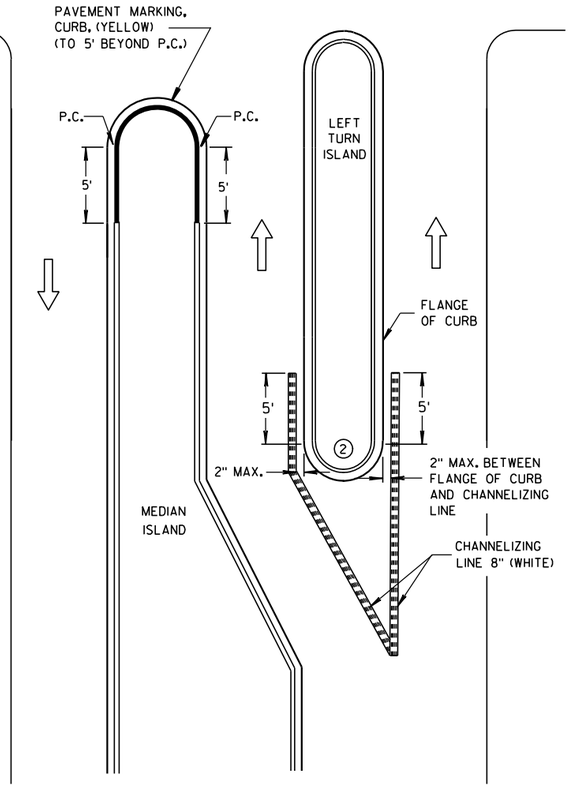


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

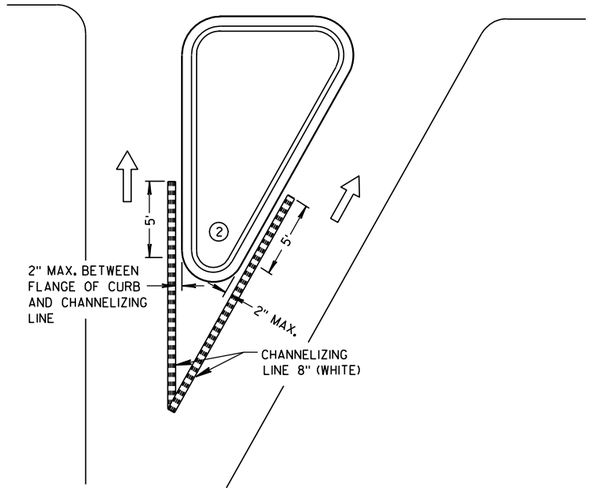
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



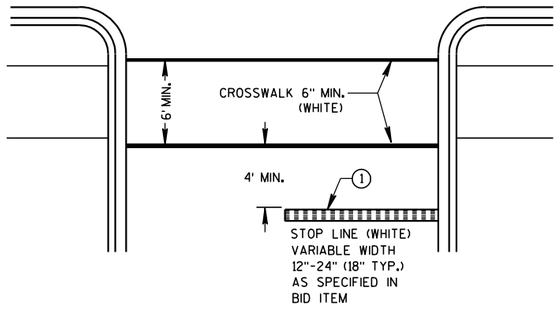
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND



STOP LINE AND CROSSWALK

LEGEND

- ISLAND NOSE MARKING
- CURB MAKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

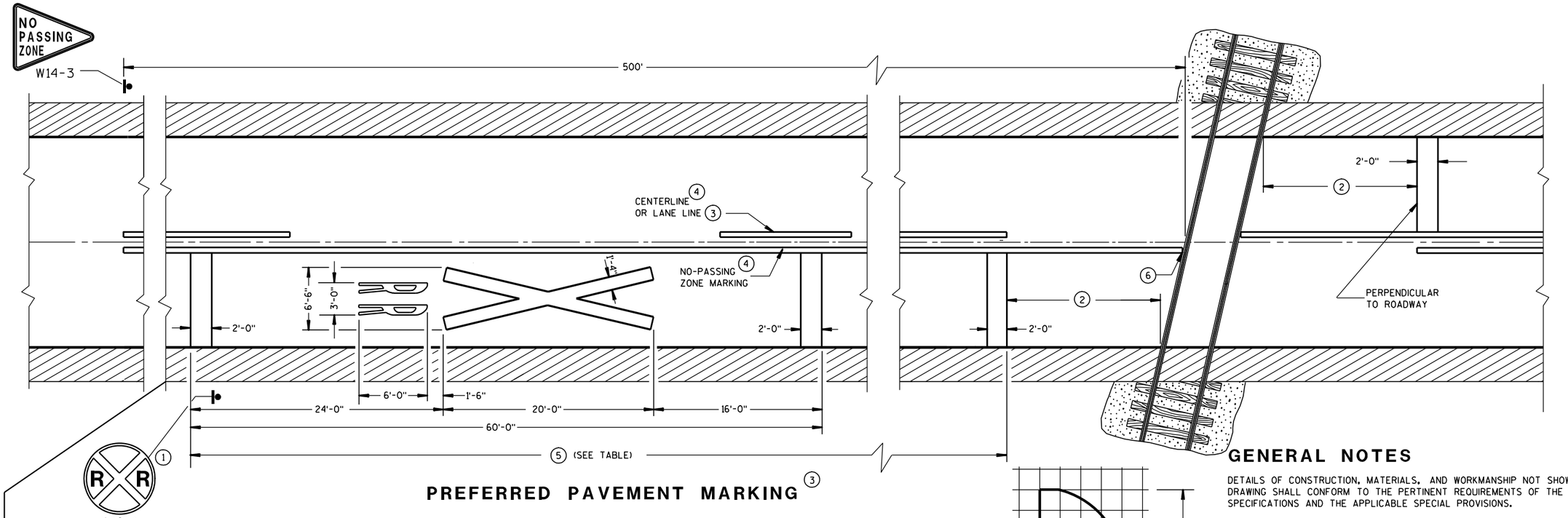
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-13f

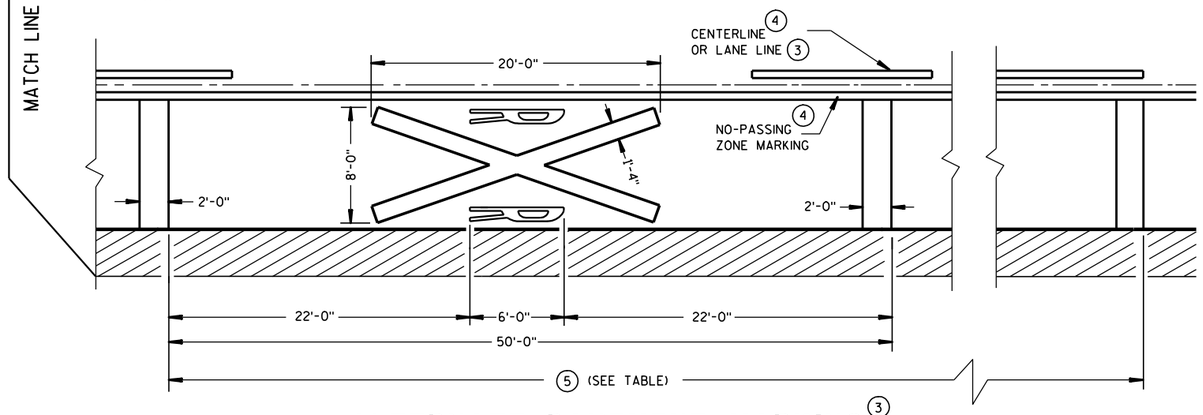
6

S.D.D. 15 C 8-13f



PREFERRED PAVEMENT MARKING 3

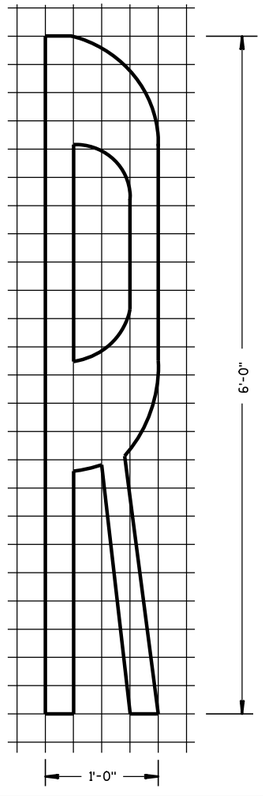
MATCH LINE



ALTERNATE PAVEMENT MARKING 3

5

Posted Speed (M.P.H.)	Minimum Dimension (Feet)
25	150
30	200
35	250
40	300
45	400
50	550
55	750
60	1000
65	1000



GENERAL NOTES

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

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

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

1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
2. MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
3. REFLECTIVE WHITE.
4. REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
5. TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
6. FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-10 DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

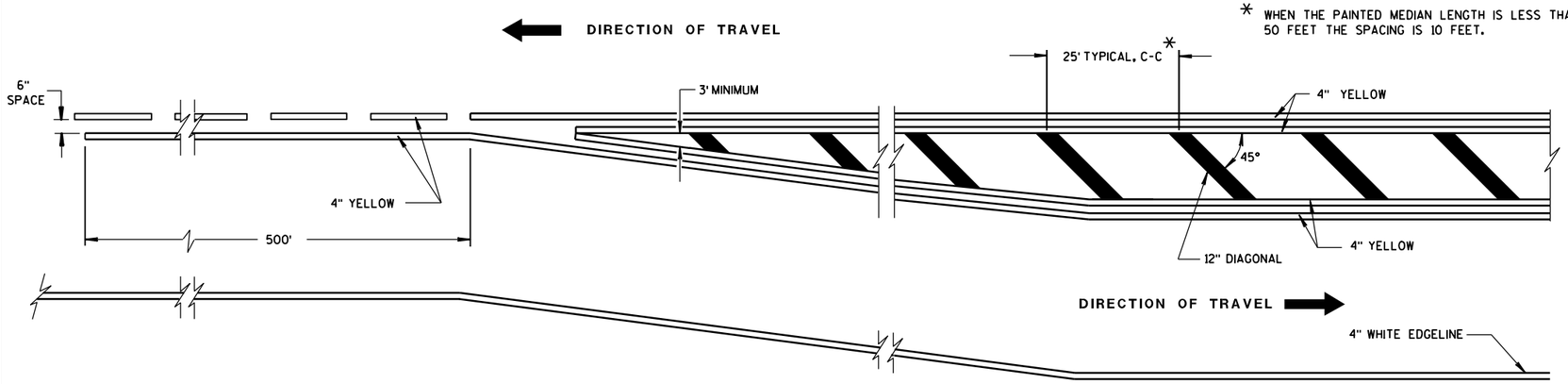
FHWA

6

S.D.D. 15 C 9-8a

6

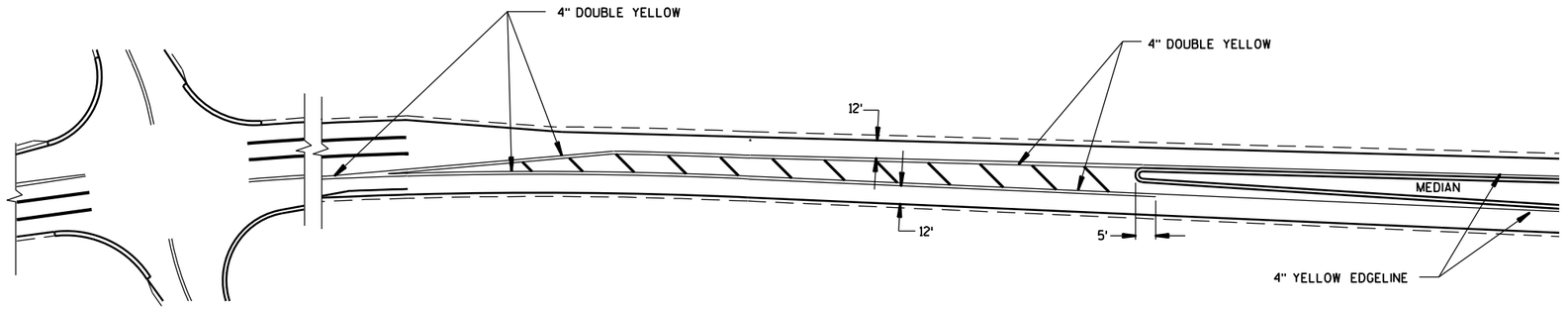
S.D.D. 15 C 9-8a



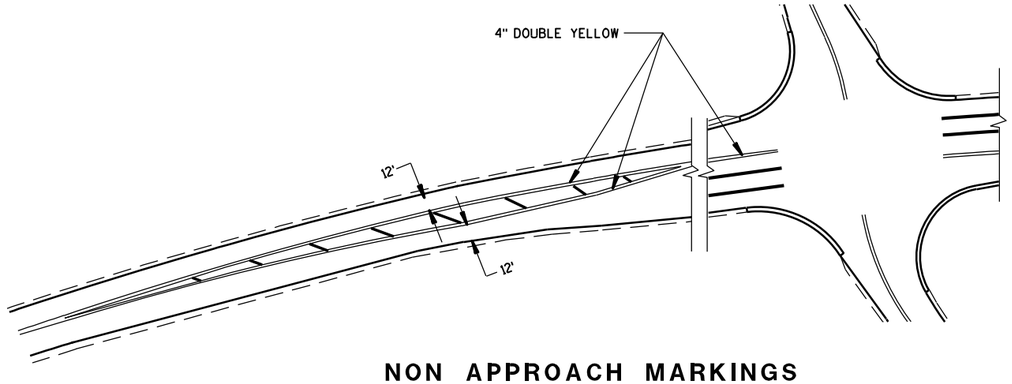
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

6

S.D.D. 15 C 18-3

6

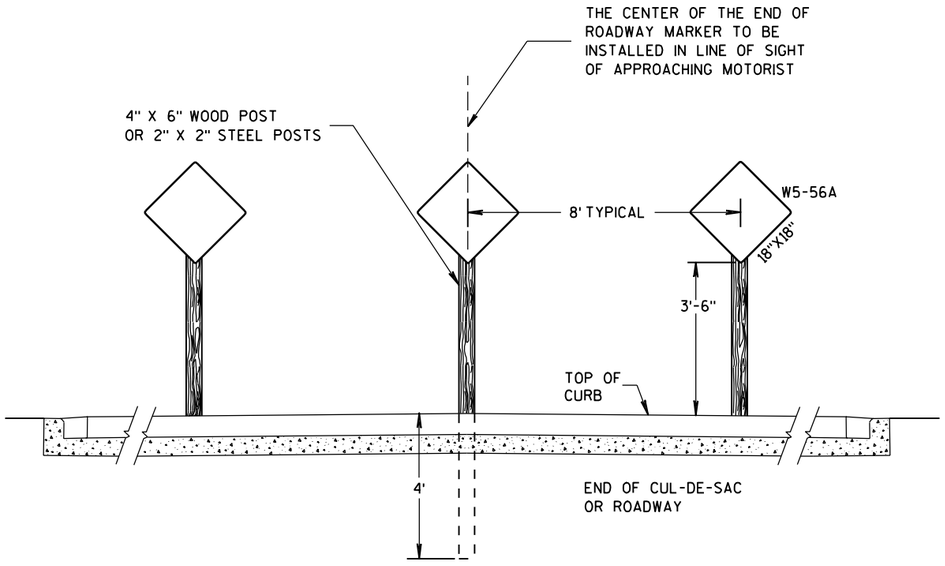
S.D.D. 15 C 18-3

GENERAL NOTES

SIGN LOCATIONS SHOWN ARE TYPICAL PLACEMENT AND MAY BE ADJUSTED BY THE ENGINEER AS FIELD CONDITIONS DICTATE.

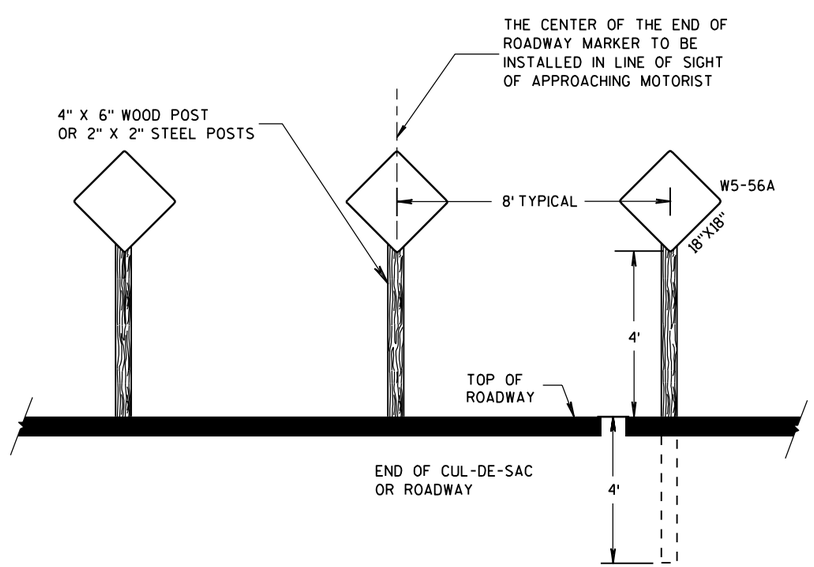
THE MINIMUM NUMBER OF END-OF-ROADWAY SIGNS ARE THREE (AS SHOWN). ADDITIONAL END-OF-ROADWAY SIGNS MAY BE INSTALLED AS FIELD CONDITIONS DICTATE. (SEE SIGNING PLAN).

WHEN BEAMGUARD IS REQUIRED, PLACE END-OF-ROADWAY SIGNING BEHIND BEAMGUARD.



TYPICAL URBAN SIGN INSTALLATION

(WITH CURB & GUTTER)



TYPICAL RURAL SIGN INSTALLATION

(WITHOUT CURB & GUTTER)

6

6

S.D.D. 15 C 26-1

S.D.D. 15 C 26-1

END-OF-ROADWAY SIGNING

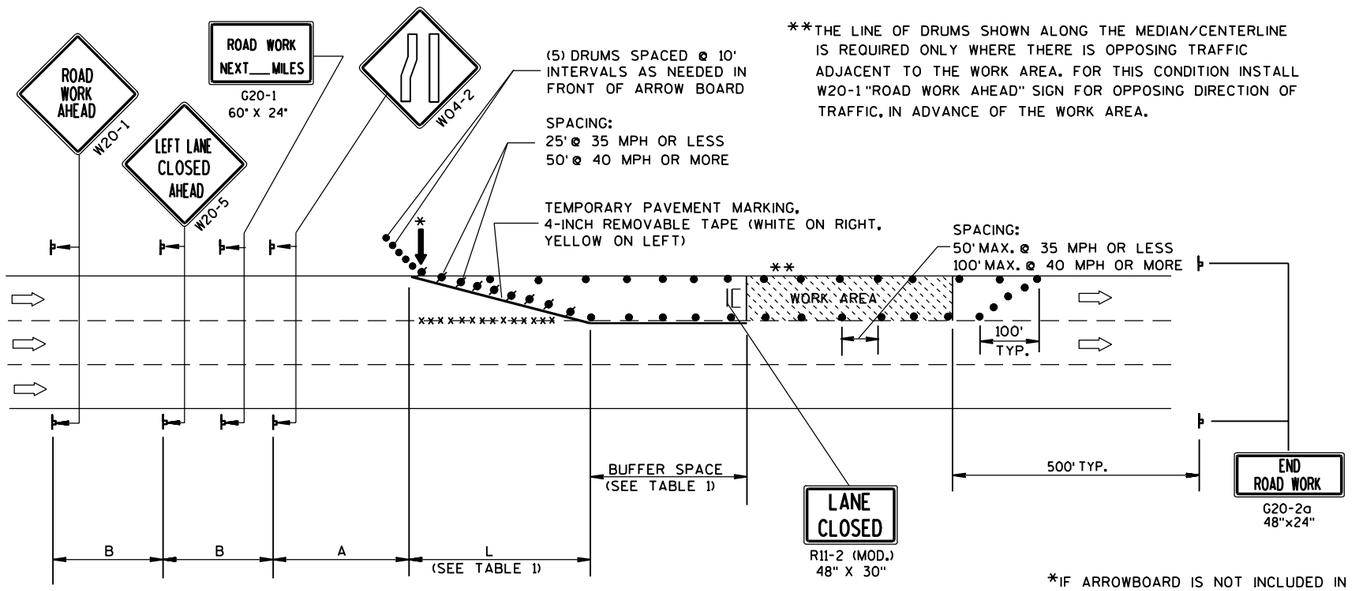
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-5-07
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

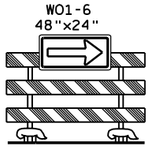


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00
DATE

Chester J. Sgany
CHIEF SIGNS AND MARKING ENGINEER

FHWA

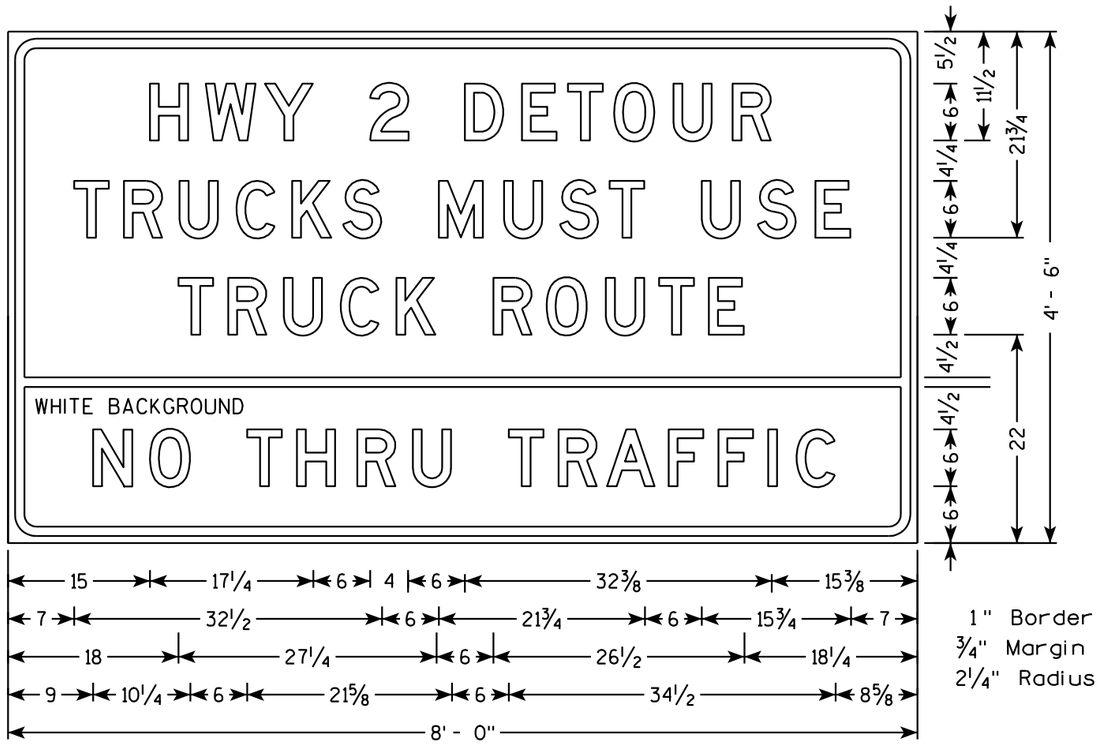
S.D.D. 15 D 20-1

6

S.D.D. 15 D 20-1

NOTES

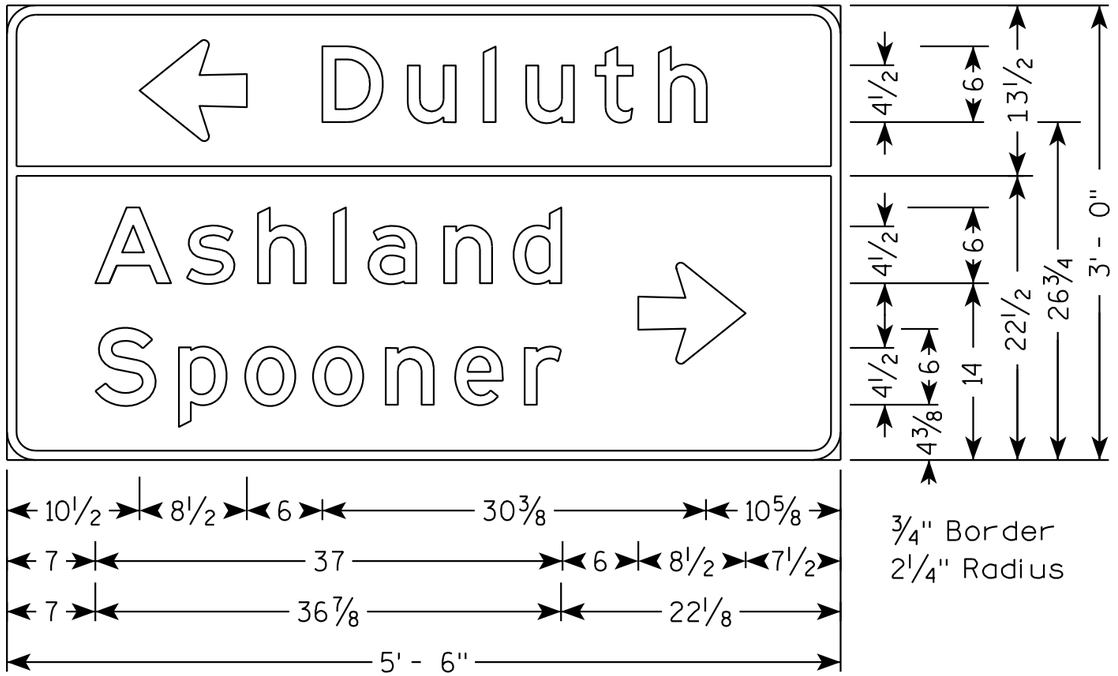
1. All Sign Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE except as NOTED
   Message - BLACK
3. Message Series - D



7

7

PROJECT NO: 1190-44-71	HWY: USH 2 (BELNAP ST)	COUNTY: DOUGLAS	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SHEET NO: 102	E



D1-3

NOTES

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

7

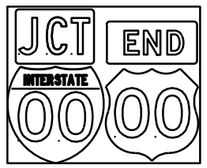
7

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	PERMANENT SIGNING	SHEET NO: 103	E

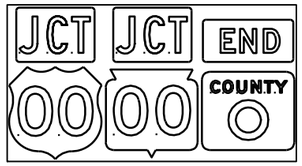
FILE NAME : n:\PDS\Design\Projects\11904400\dgn\plan\SIGN PLATES2.dgn PLOT DATE : 24-NOV-2010 14:44 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 11.9925:1
WISDOT/CADDS SHEET 42

TYPICAL ASSEMBLIES

J1-1

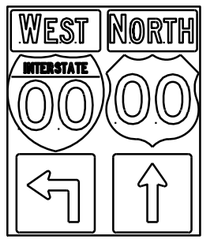


J1-2

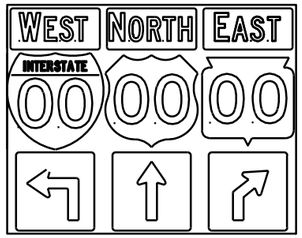


J1-3

J2-1

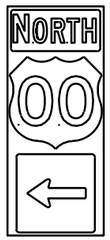


J2-2

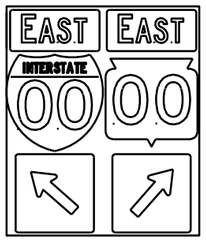


J2-3

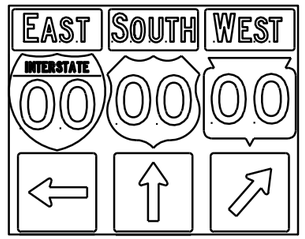
JV



J3-1

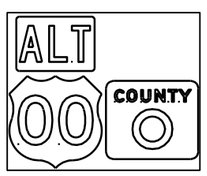


J3-2

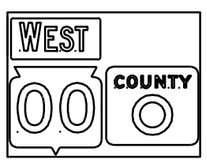


J3-3

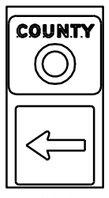
J4-1



J4-2



J4-2



J13-1

J12-1

J32-1

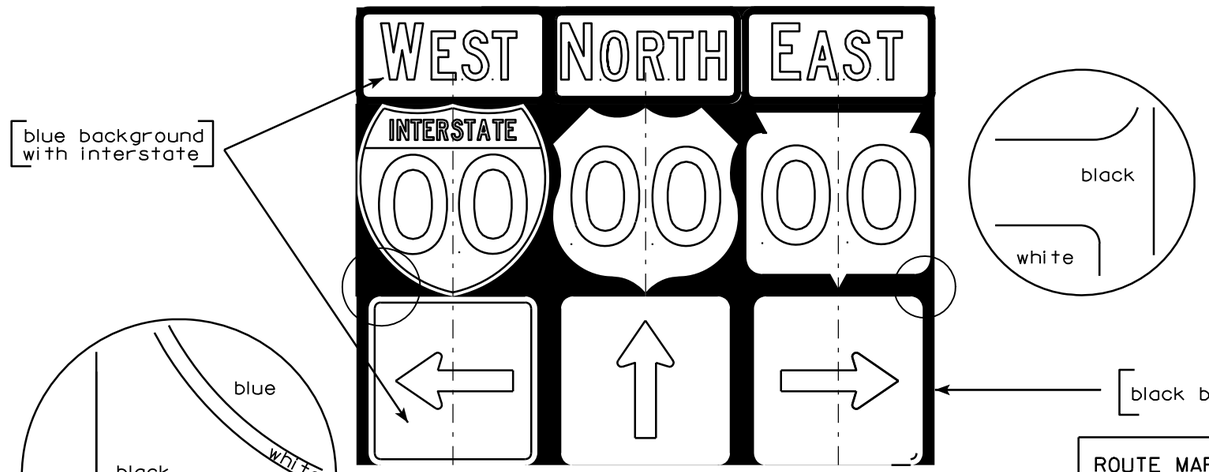
J33-1

J23-1

J22-1

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square since base material is plywood.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/21/09 PLATE NO. A2-1S.6

PROJECT NO:

SHEET NO: 104 E

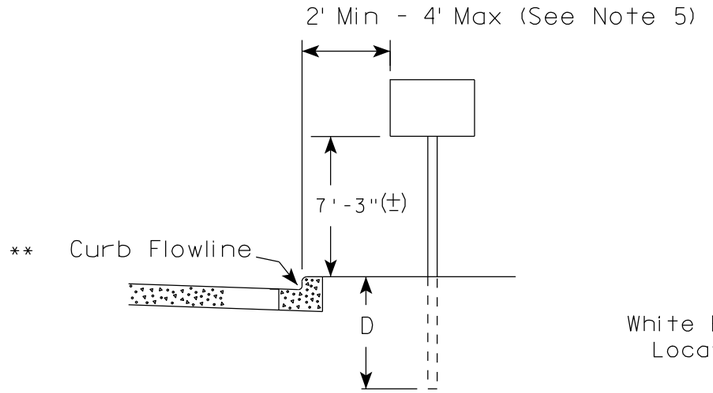
FILE NAME : C:\Users\PROJECTS\tr_stdplate\A21S.DGN PLOT DATE : 21-OCT-2009 09:27 PLOT BY : ditjph PLOT NAME :

WISDOT/CADDS SHEET 42

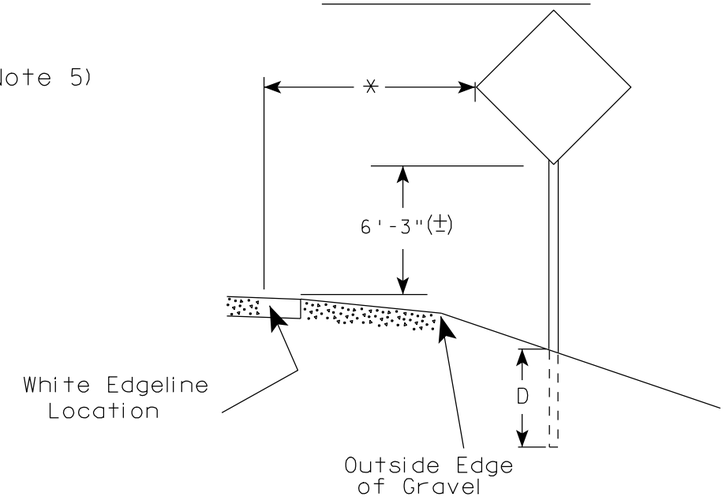
7

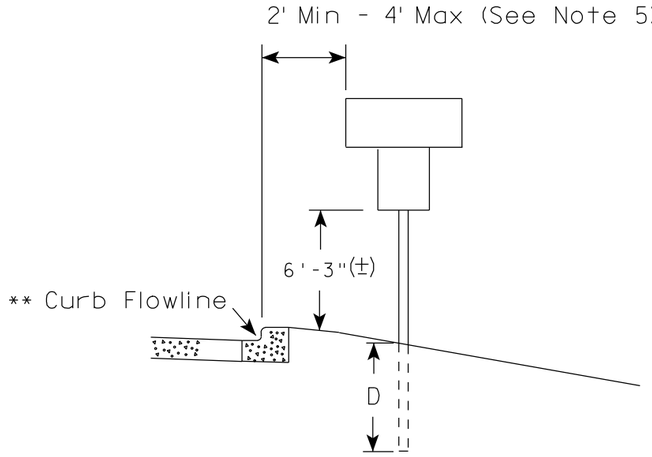
7

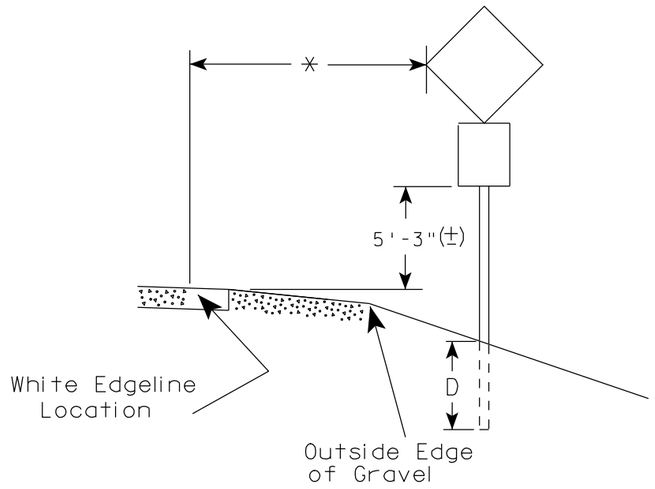
URBAN AREA



RURAL AREA (See Note 2)







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

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (W1-8A), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

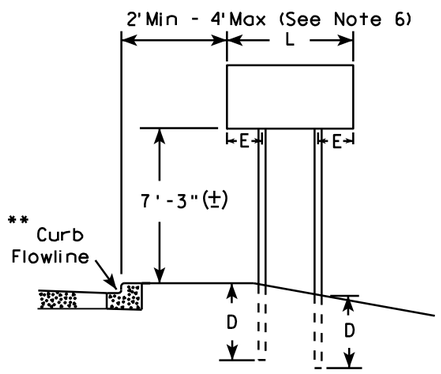
DATE 9/30/09 PLATE NO. A4-3.15

7

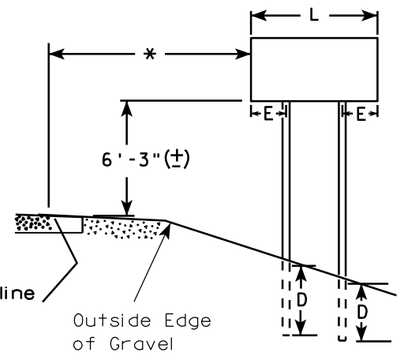
7

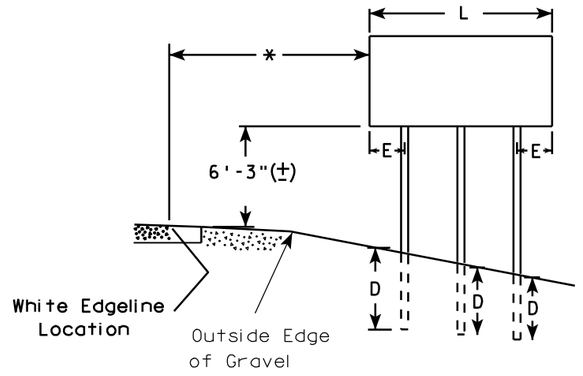
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 105 | E

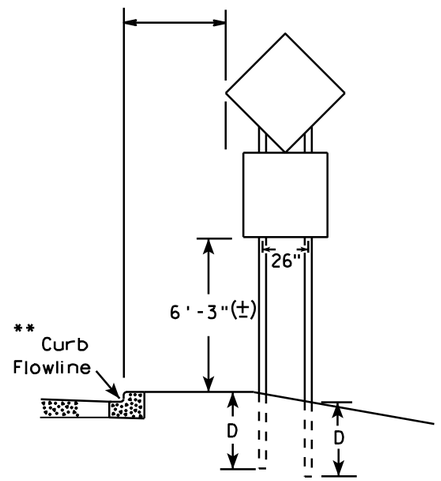
URBAN AREA



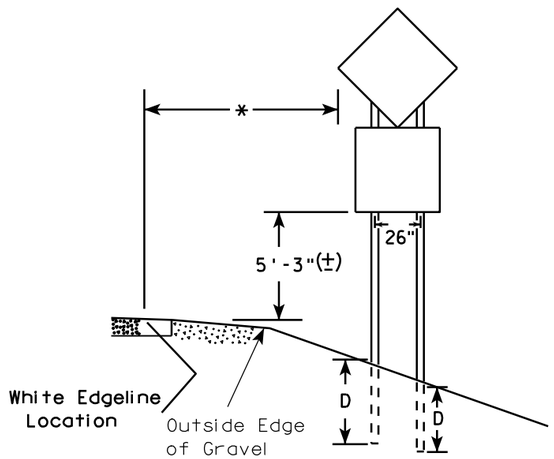
RURAL AREA (See Note 3)







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 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. For multiple post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (W1-8A), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-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 or 20 S.F. or less in area.

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

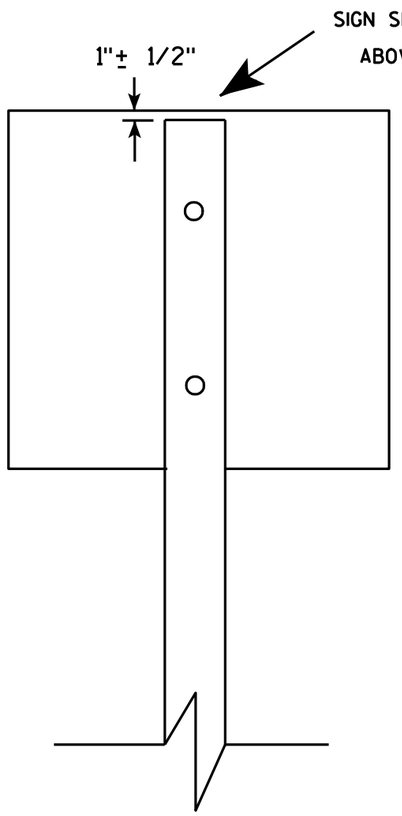
WISCONSIN DEPT OF TRANSPORTATION

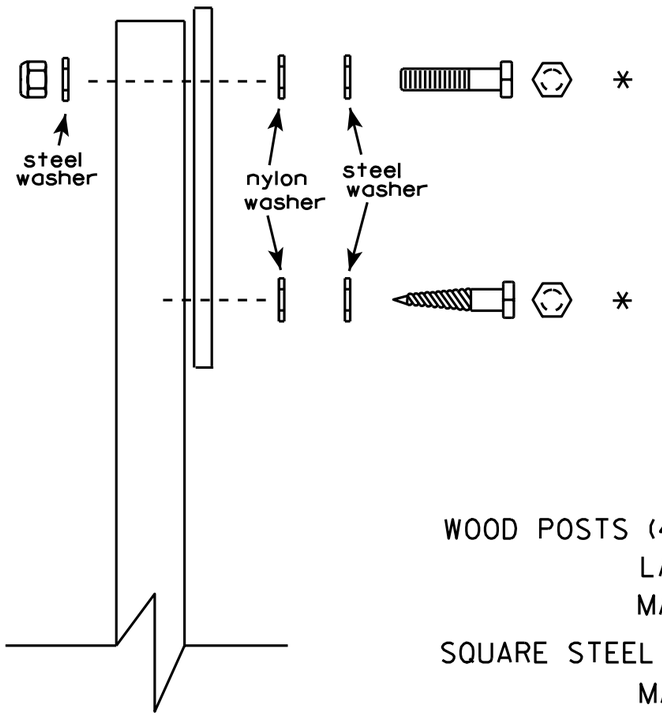
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. A4-4.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 106	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A44.DGN PLOT DATE : 30-SEP-2009 10:08 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 109.249131:1.000000
WISDOT/CADDS SHEET 42





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

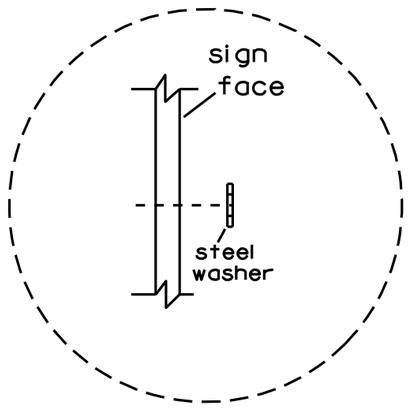
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

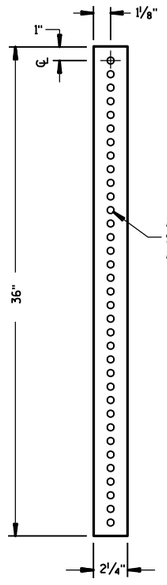
7

PROJECT NO:

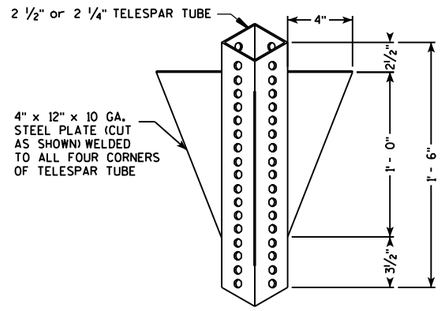
SHEET NO: 107 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

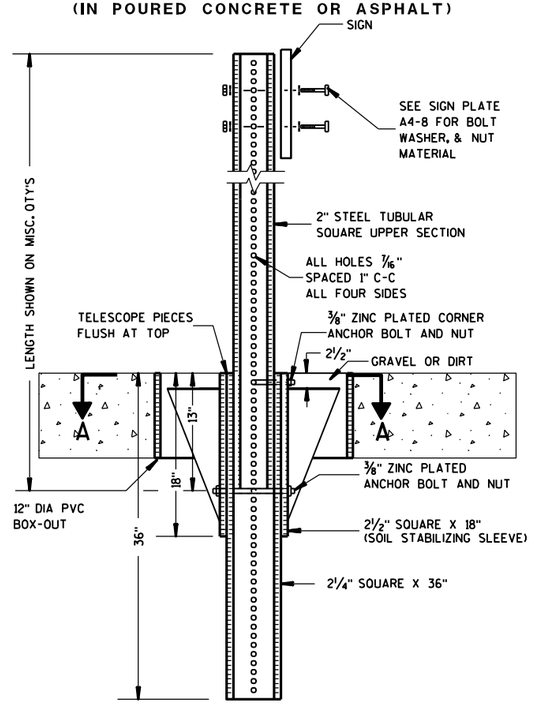
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



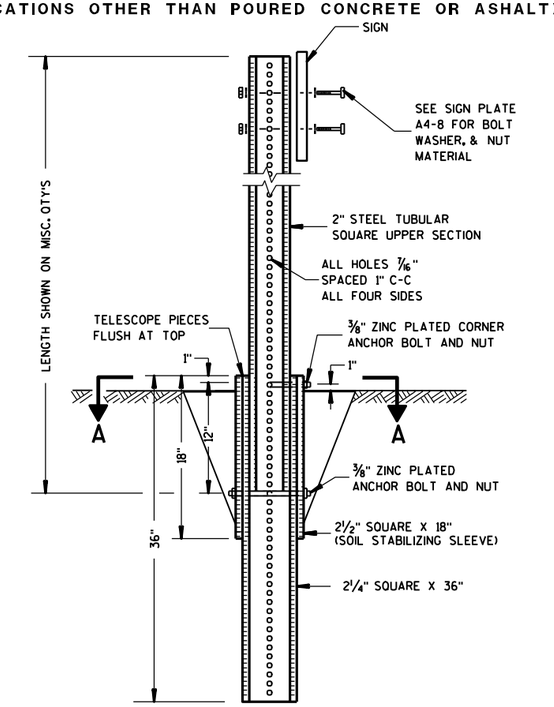
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

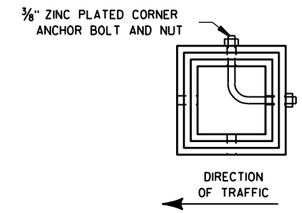


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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

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

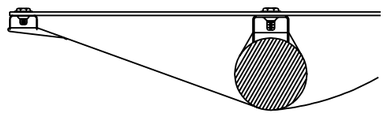
TUBULAR STEEL SIGN POST A4-9

WISCONSIN DEPT OF TRANSPORTATION

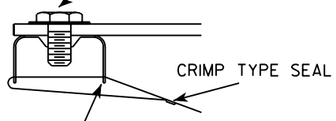
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/9/11 PLATE NO. A4-9.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E

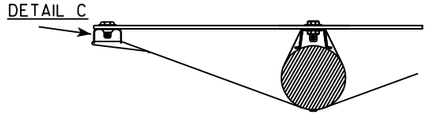
BRACE BANDING

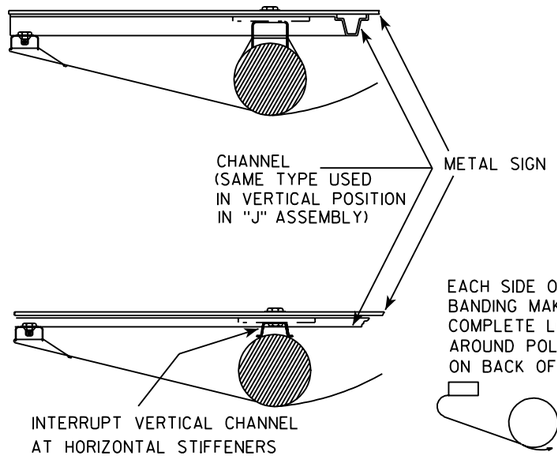


DETAIL C
CADMIUM PLATED STEEL BOLT
THROUGH BLACK BORDER



DETAIL C

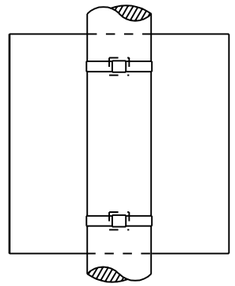


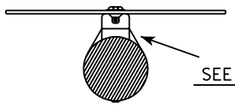


EACH SIDE OF BRACE
BANDING MAKES ONE
COMPLETE LOOP
AROUND POLE-SEAL
ON BACK OF POLE

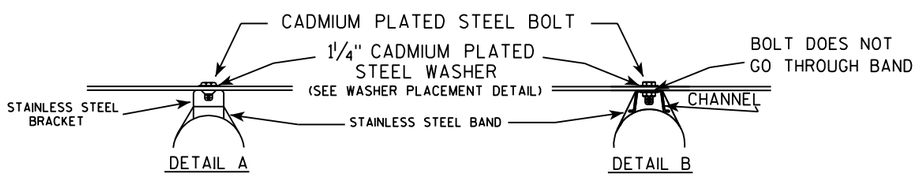
BRACKET BANDING

SINGLE SIGN





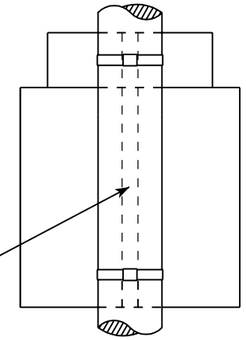
SEE DETAIL A



DETAIL A

DETAIL B

"J" ASSEMBLY

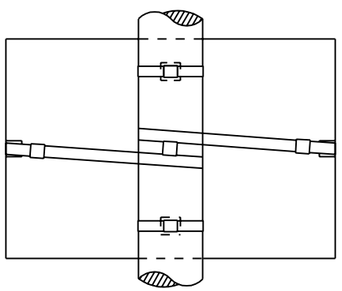


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

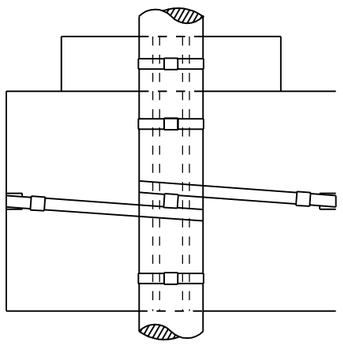
GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

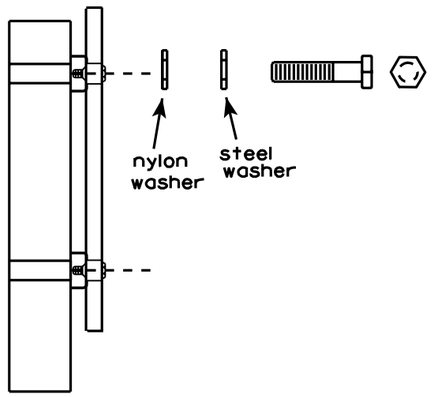


BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF 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

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

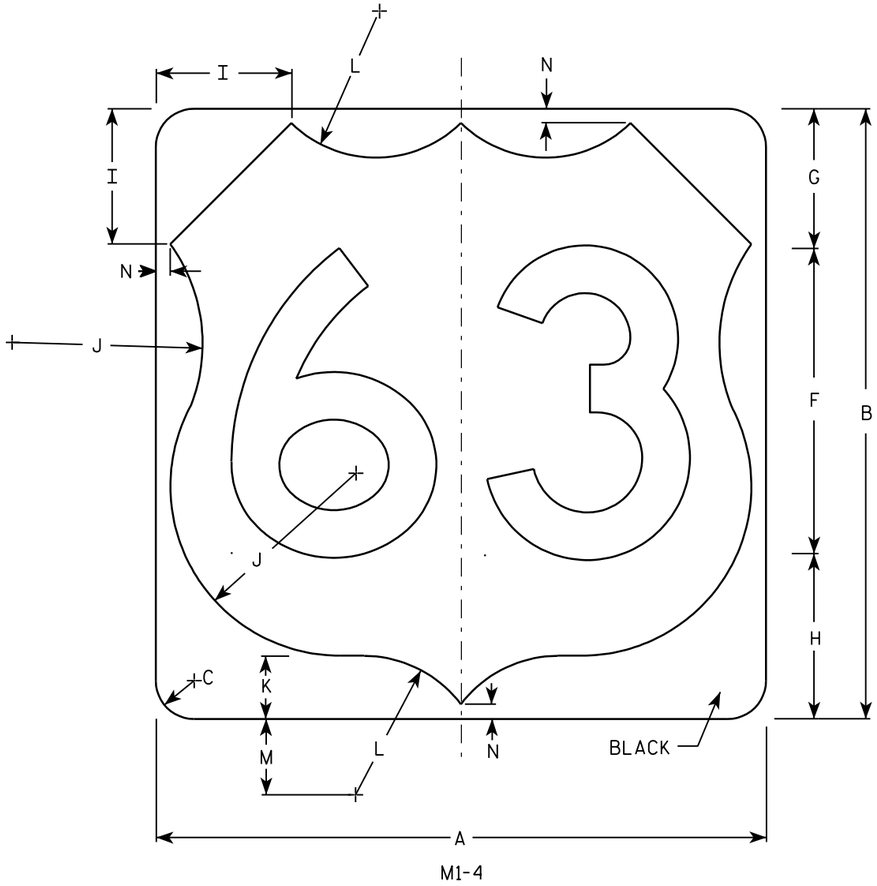
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

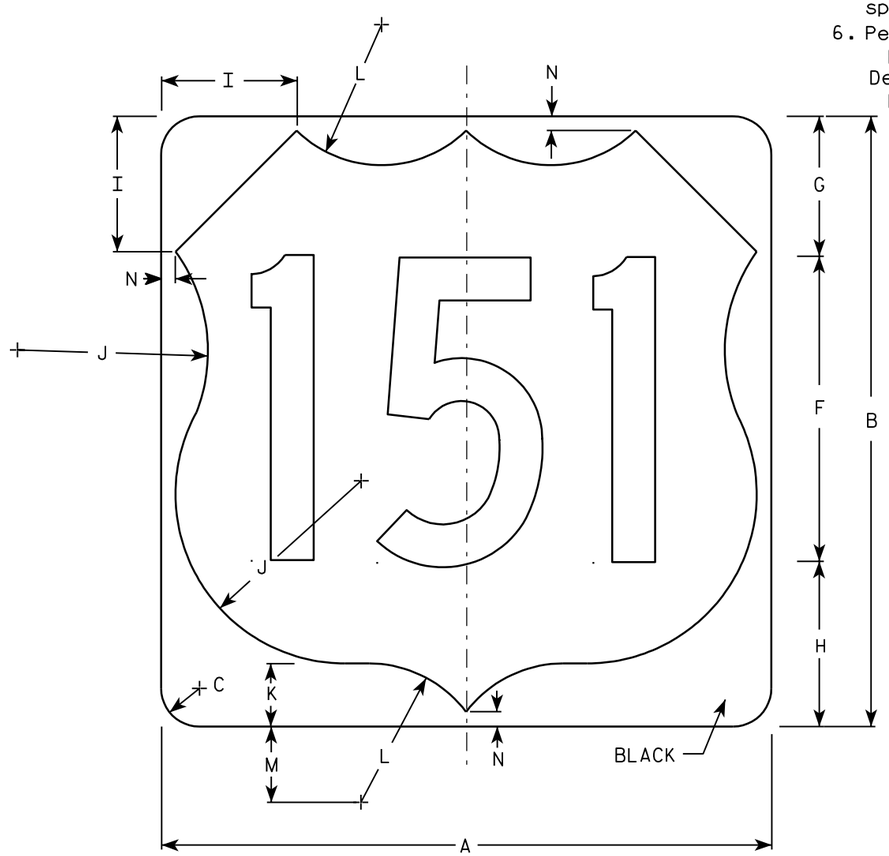
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 109	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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.	Area m2
1																												
2	24	24	1 ½			12	5 ½	6 ½	5	7 ½	2 ½	5 ½	3	½													4.0	.36
3	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0	.81
4	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0	.81
5	36	36	2 ¼			18	8 ¼	9 ¼	7 ¼	11 ¼	3 ¾	8 ¼	4 ½	¾													9.0	.81

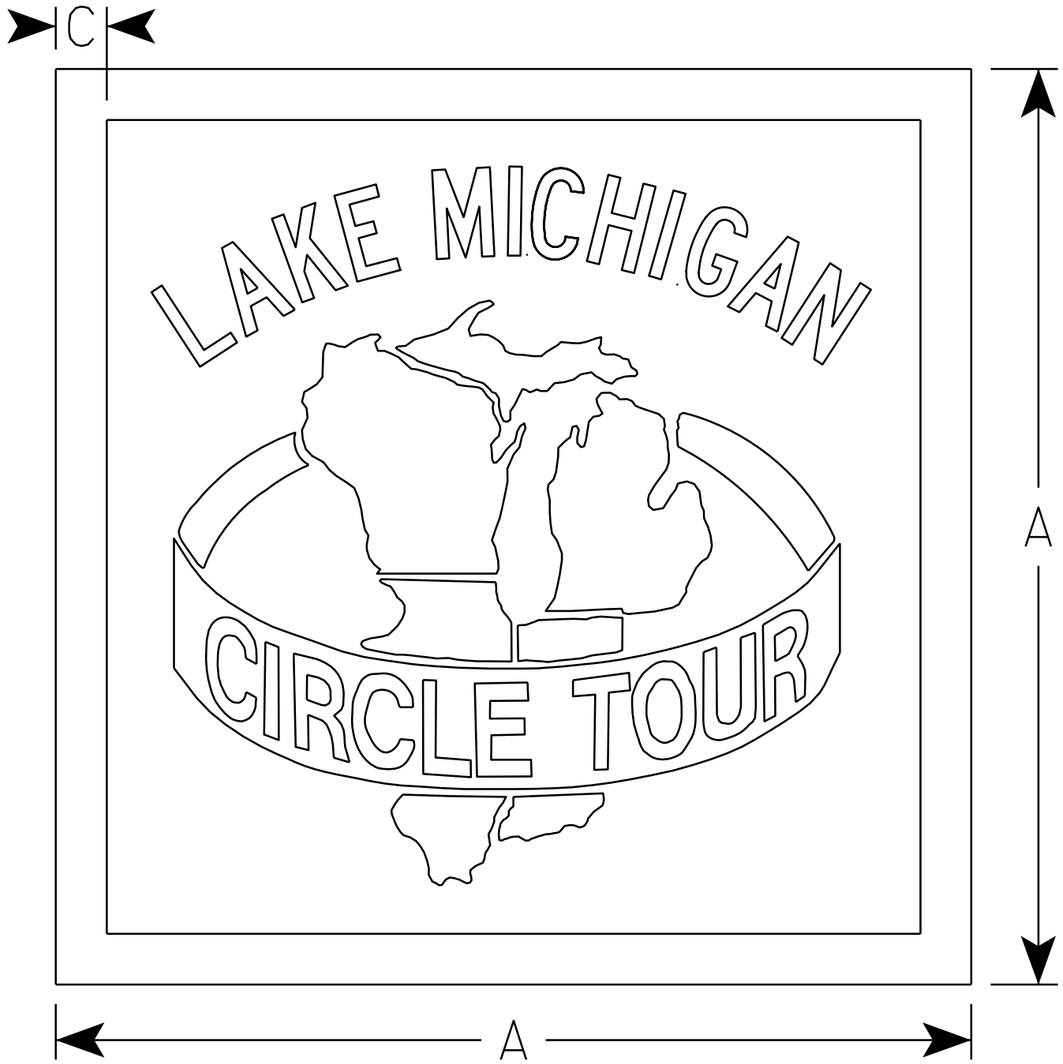
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 110 | E



NOTES

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

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.	Area m2
1																												
2	24		1 ½																								4.0	.36
3																												
4	36		2																								9.0	.81
5																												

STANDARD SIGN
M1-93

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/05/09 PLATE NO. M1-93.1

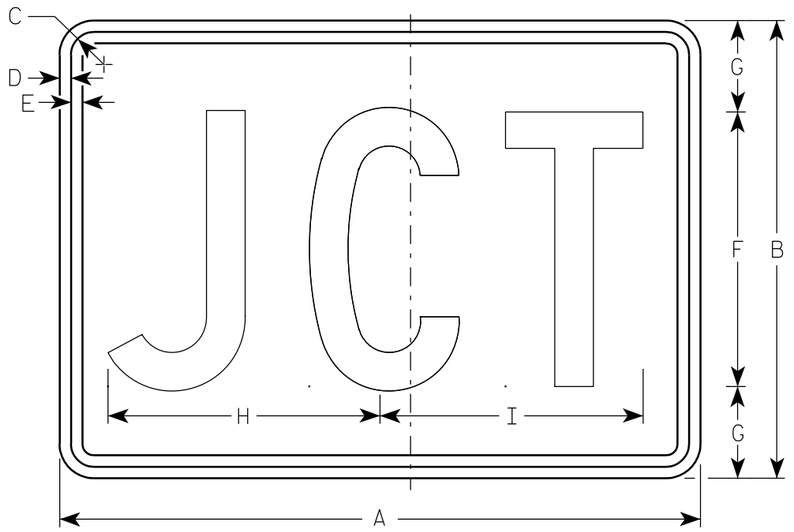
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M193.DGN PLOT DATE : 05-OCT-2009 13:39 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.959043:1.000000

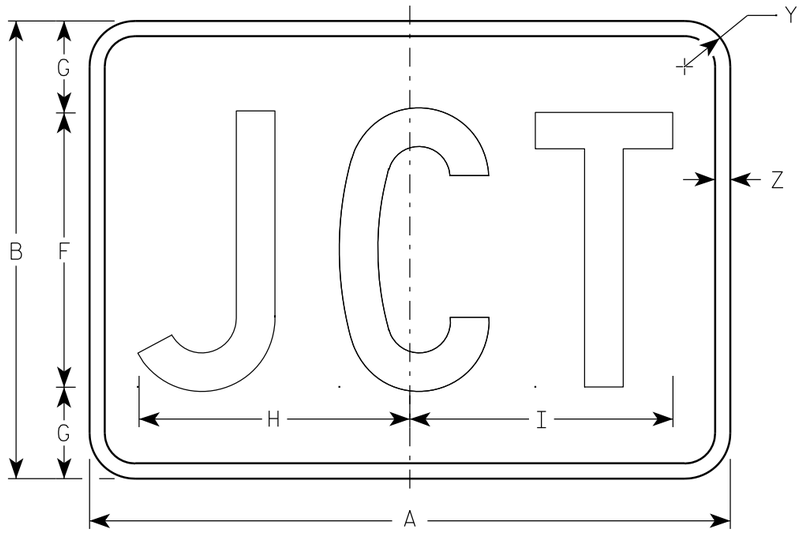
WISDOT/CADDS SHEET 42

7

7



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
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.
5. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

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.	Area m2
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

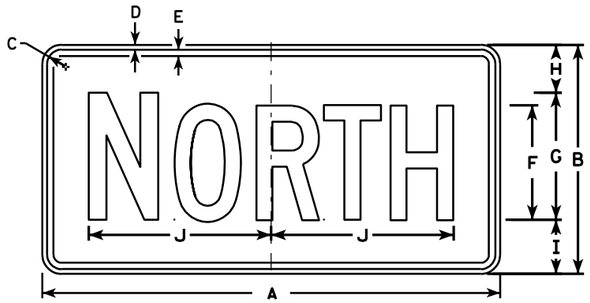
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

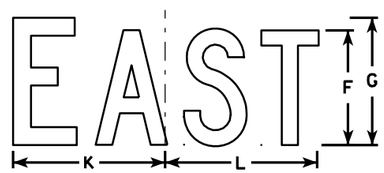
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

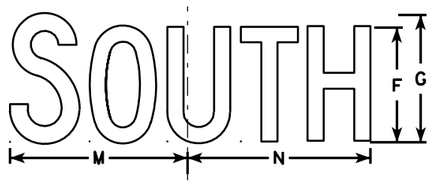
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 112	E



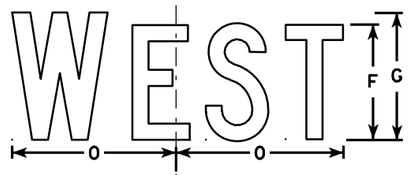
M3-1
MK3-1
MO3-1



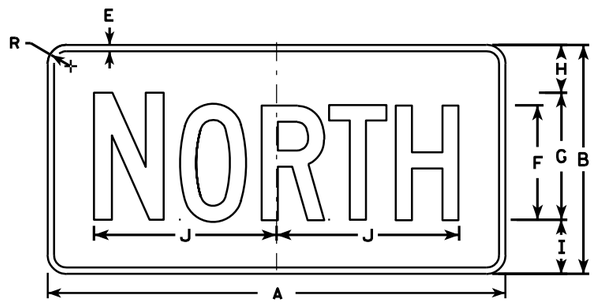
M3-2
MK3-2
MO3-2



M3-3
MK3-3
MO3-3

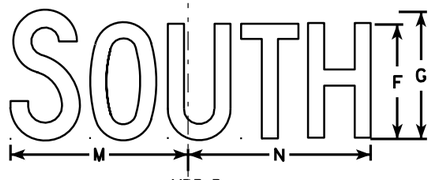


M3-4
MK3-4
MO3-4

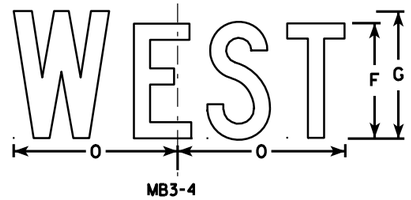


MB3-1
MG3-1
MM3-1
MN3-1

MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
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.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

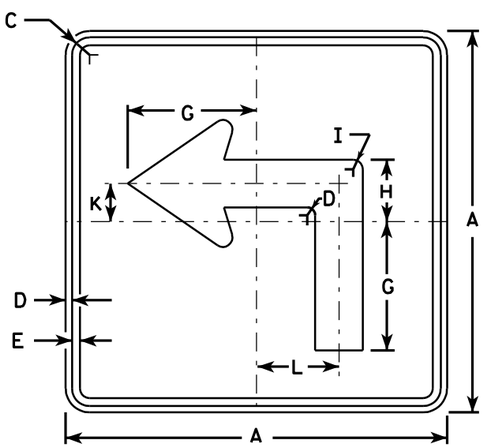
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

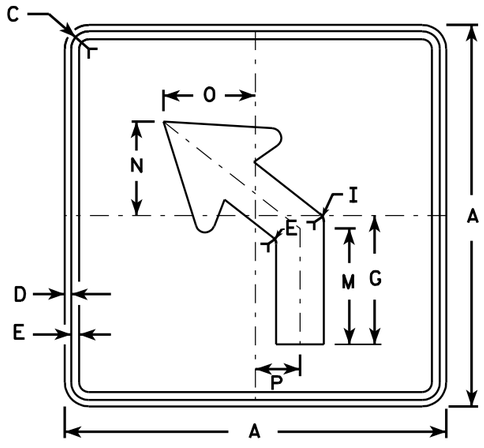
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

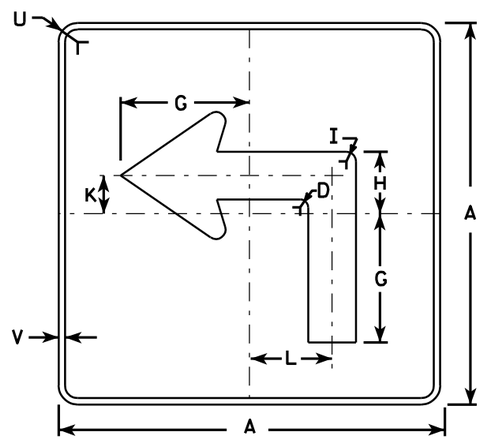
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 113	E



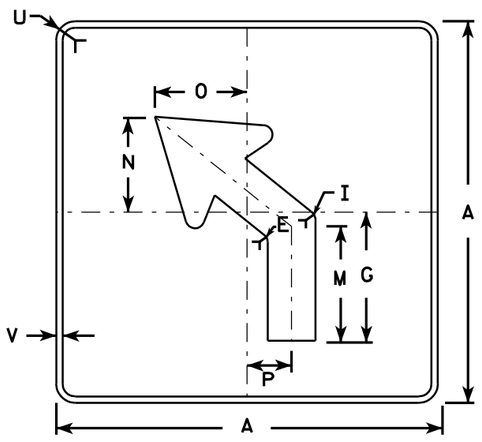
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



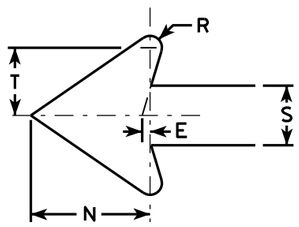
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
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. M5-1 and M5-2 Background - White - Type H Reflective (Detour or temporary Signs - Reflective) Message - Black
   MB5-1 and MB5-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG5-1 and MG5-2 Background - Green Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective Message - Green
   MN5-1 and MN5-2 Background - Brown Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Reflective Message - Black
   MR5-1 and MR5-2 Background - Brown Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

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.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56

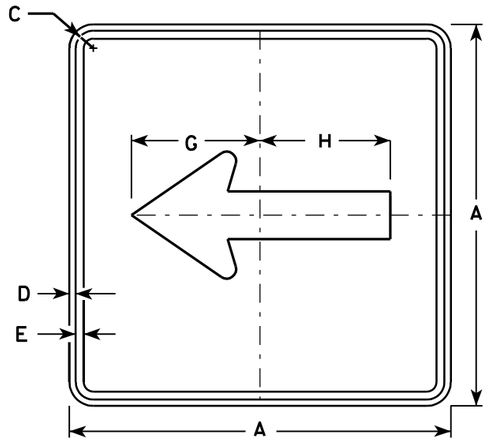
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

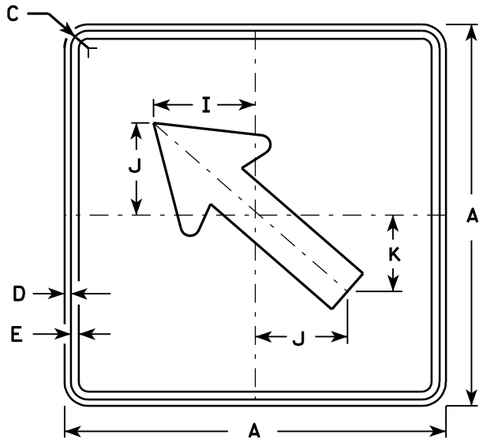
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M5-1.11

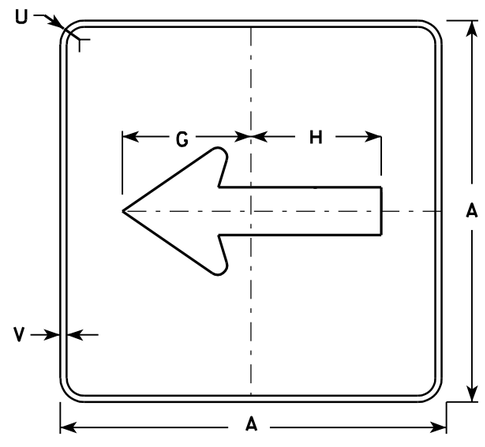
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 114	E



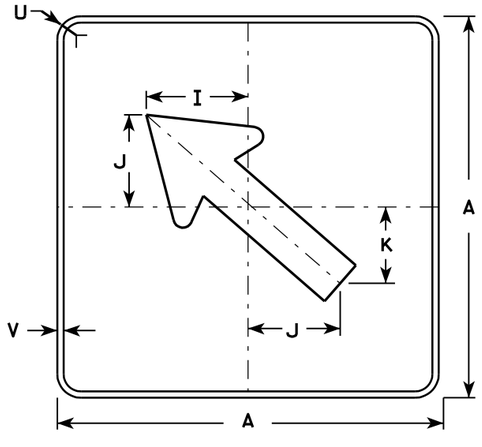
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



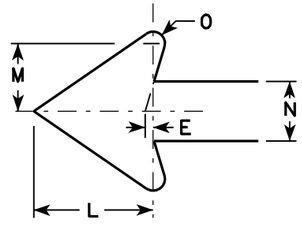
MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
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. M6-1 and M6-2 Background - White - Type H Reflective (Detour or temporary Signs - Reflective) Message - Black
   MB6-1 and MB6-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG6-1 and MG6-2 Background - Green Message - White - Type H Reflective
   MK6-1 and MK6-2 Background - Green Message - White - Type H Reflective
   MM6-1 and MM6-2 Background - White - Type H Reflective Message - Green
   MN6-1 and MN6-2 Background - Brown Message - White - Type H Reflective
   MO6-1 and MO6-2 Background - Orange - Reflective Message - Black
   MR6-1 and MR6-2 Background - Brown Message - Yellow - Type H Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

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.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56

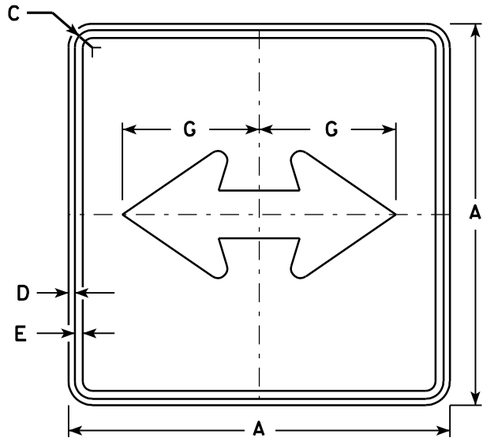
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

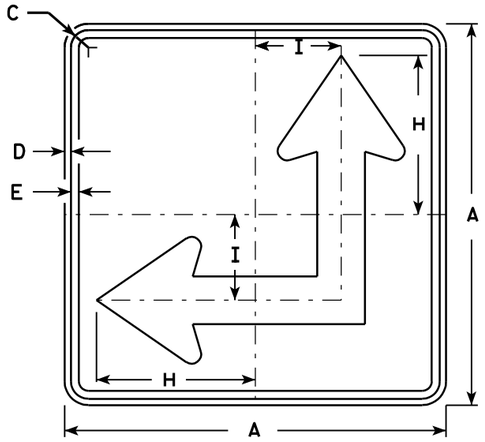
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-1.12

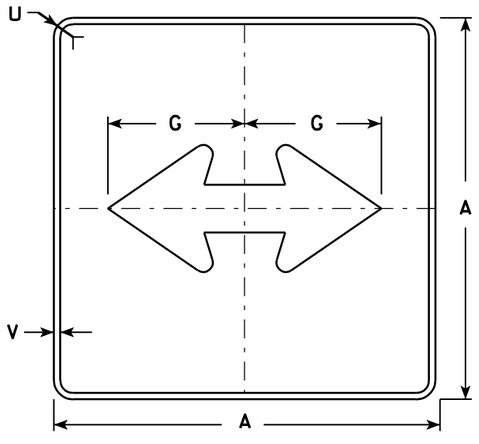
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	E



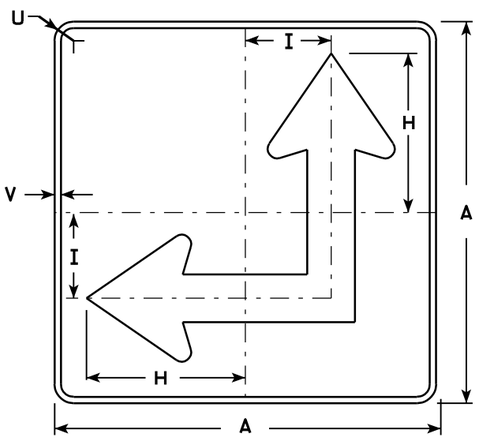
M6-4
MK6-4
MM6-4
MO6-4
MR6-4



M6-6
MK6-6
MM6-6
MO6-6
MR6-6



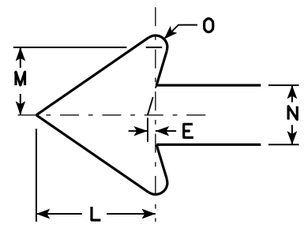
MB6-4
MG6-4
MN6-4



MB6-6
MG6-6
MN6-6

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 4
   Message - See Note 4
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. M6-4 and M6-6 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG6-4 and MG6-6 Background - Green
   Message - White - Type H Reflective
   MK6-4 and MK6-6 Background - Green
   Message - White - Type H Reflective
   MM6-4 and MM6-6 Background - White - Type H Reflective
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White - Type H Reflective
   MO6-4 and MO6-6 Background - Orange - Reflective
   Message - Black
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow - Type H Reflective
5. M6-6R same as M6-6L except arrow points ahead and right.



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

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.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56

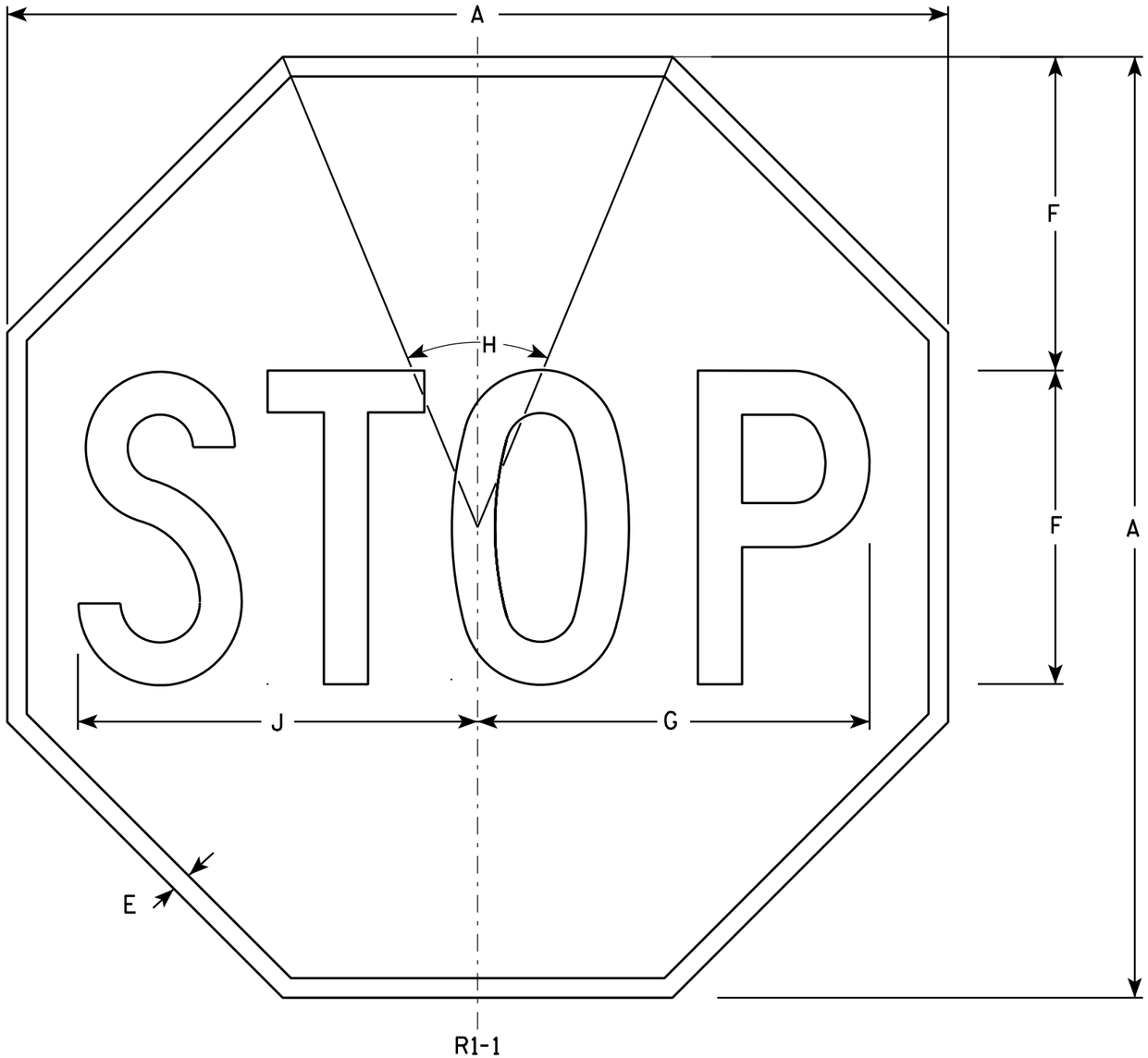
STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-4.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 116	E



NOTES

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

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				3/8	8	10	45°		10 1/4																	3.31
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

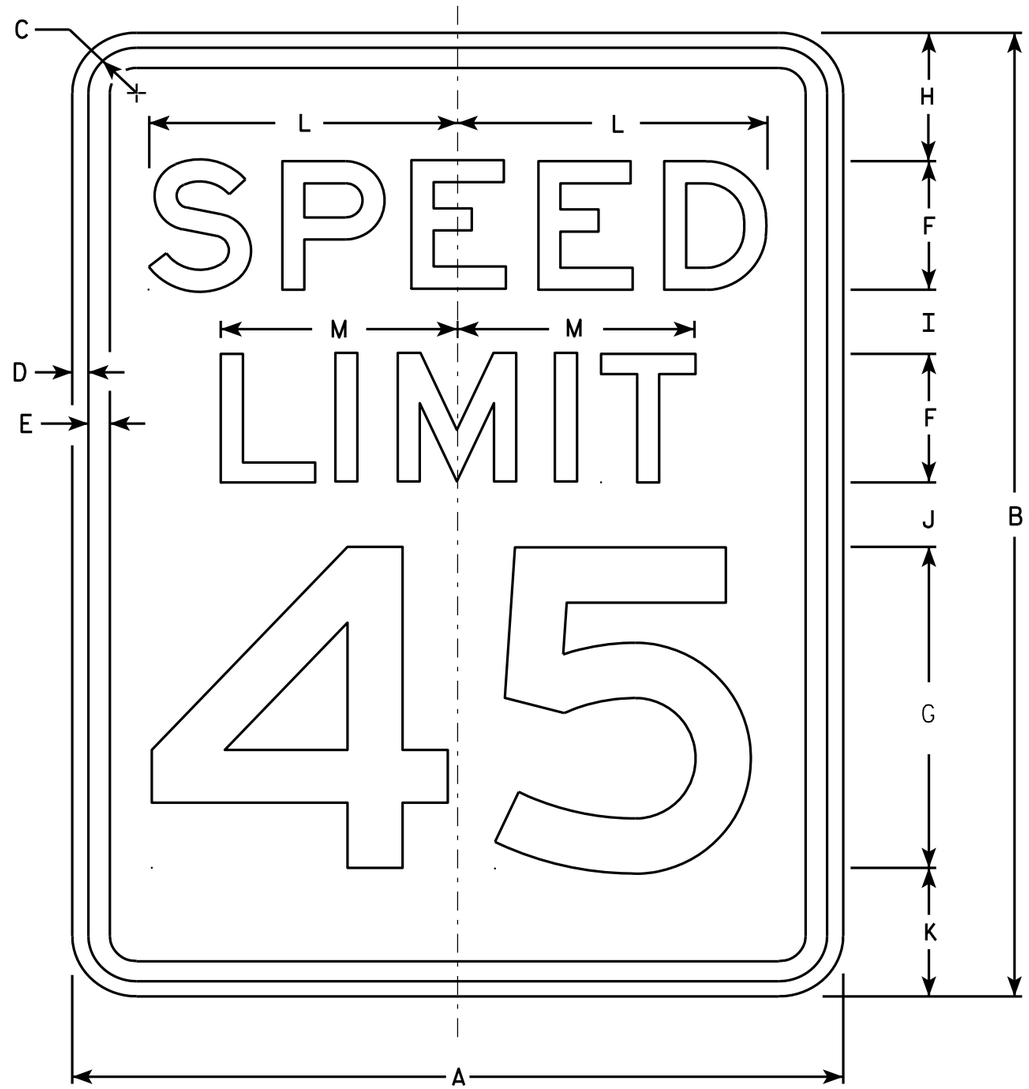
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 117	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
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. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	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 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

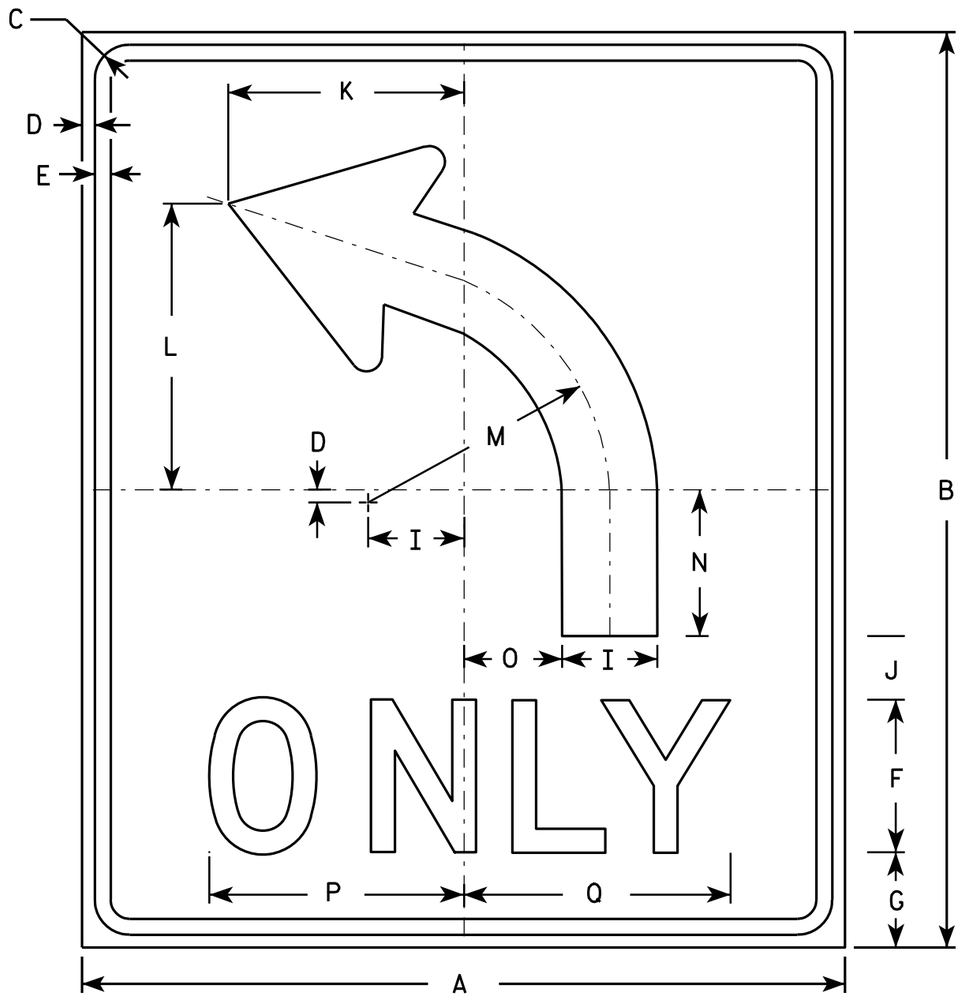
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

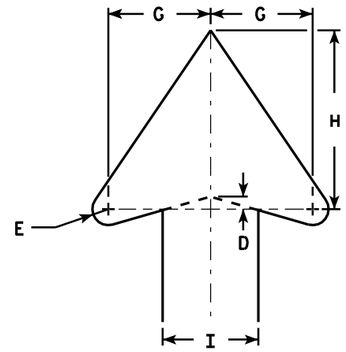
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 118 | E



R3-50L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - 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. R3-50R is the same as R3-50L except curved portion of arrow points right.



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	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
2M	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
3																											
4																											
5																											

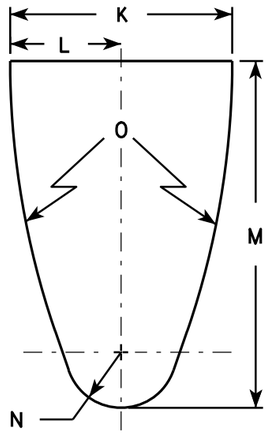
STANDARD SIGN
R3-50

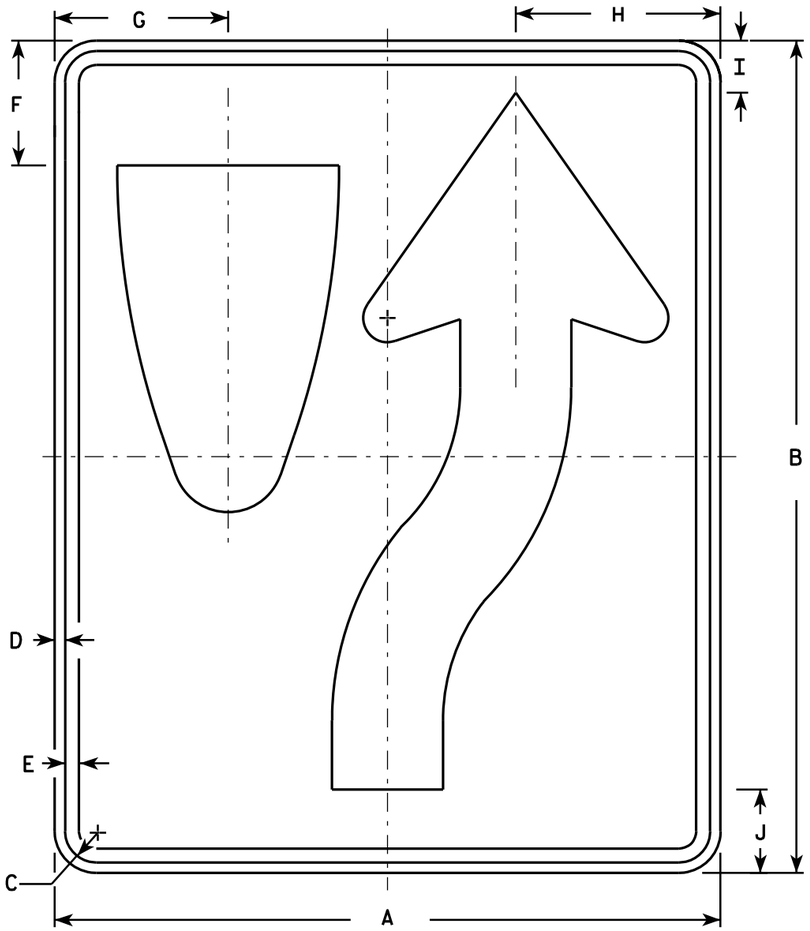
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-50.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 119 | E

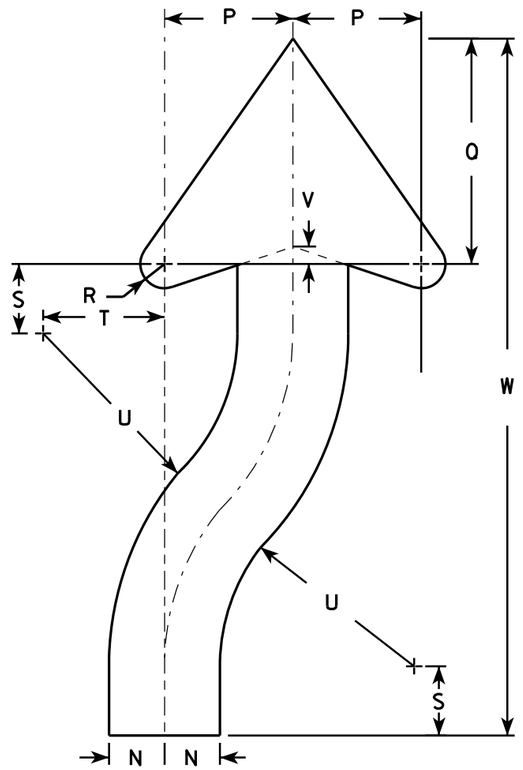




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend 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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

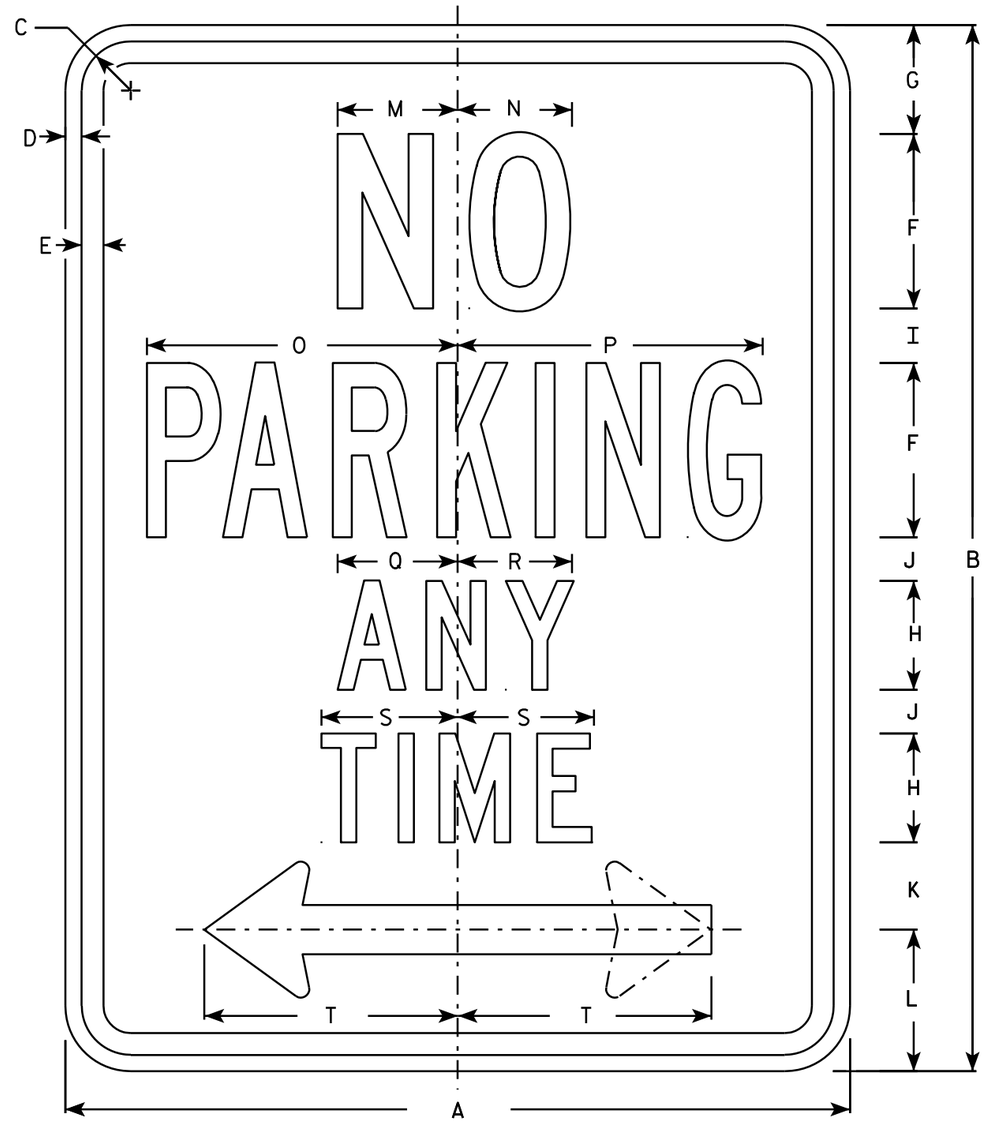
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

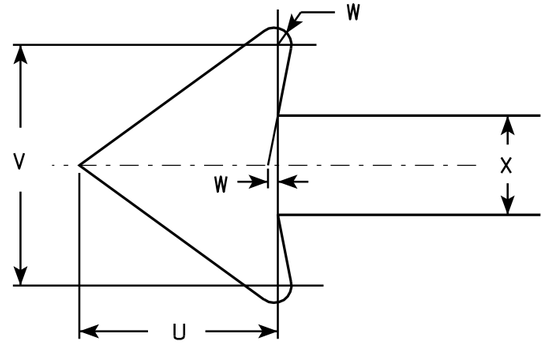
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 120	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
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, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

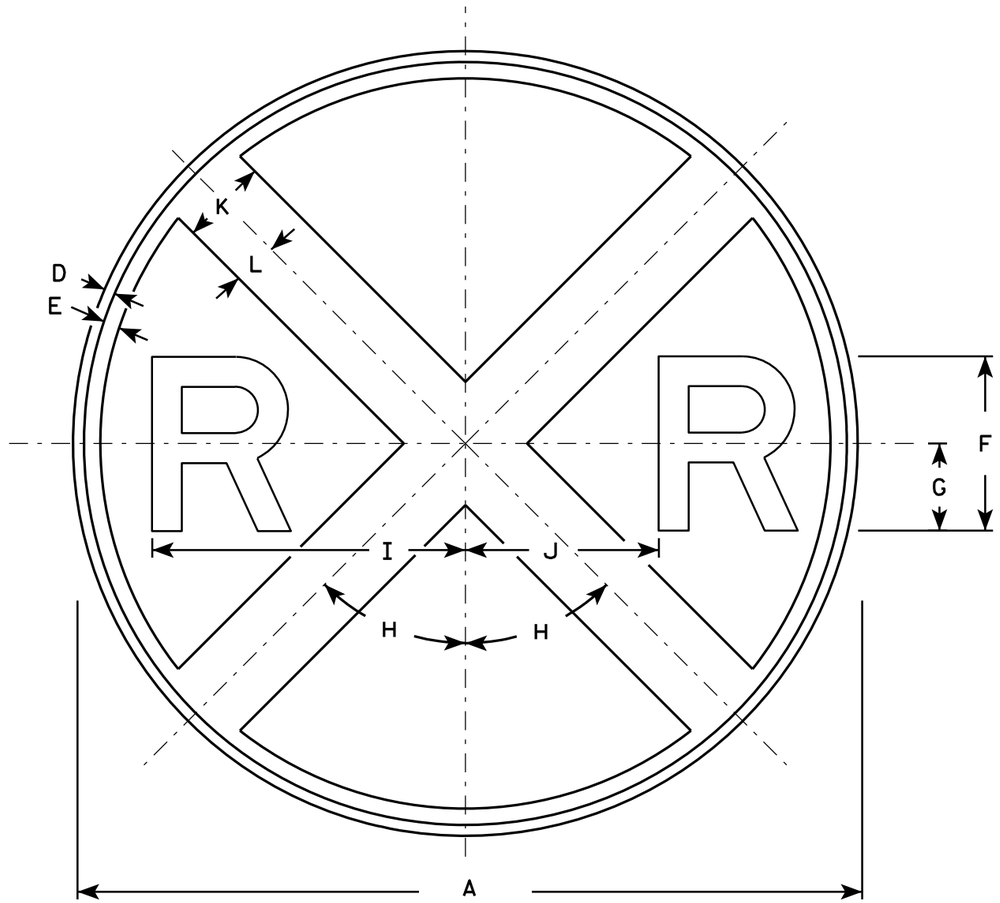
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 121 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



W10-1

NOTES

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

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			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

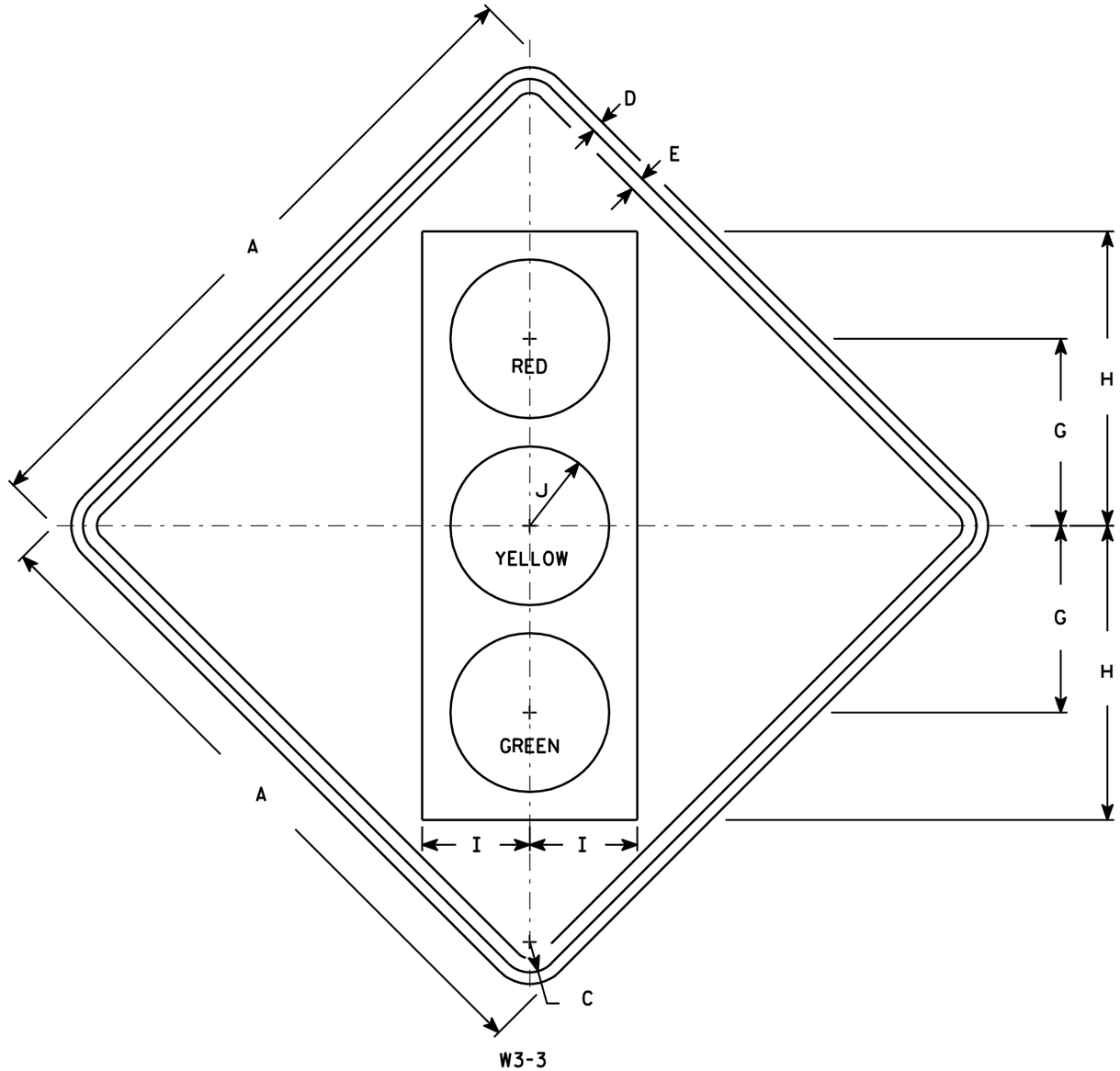
STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/15/11 PLATE NO. W10-1.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 122	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

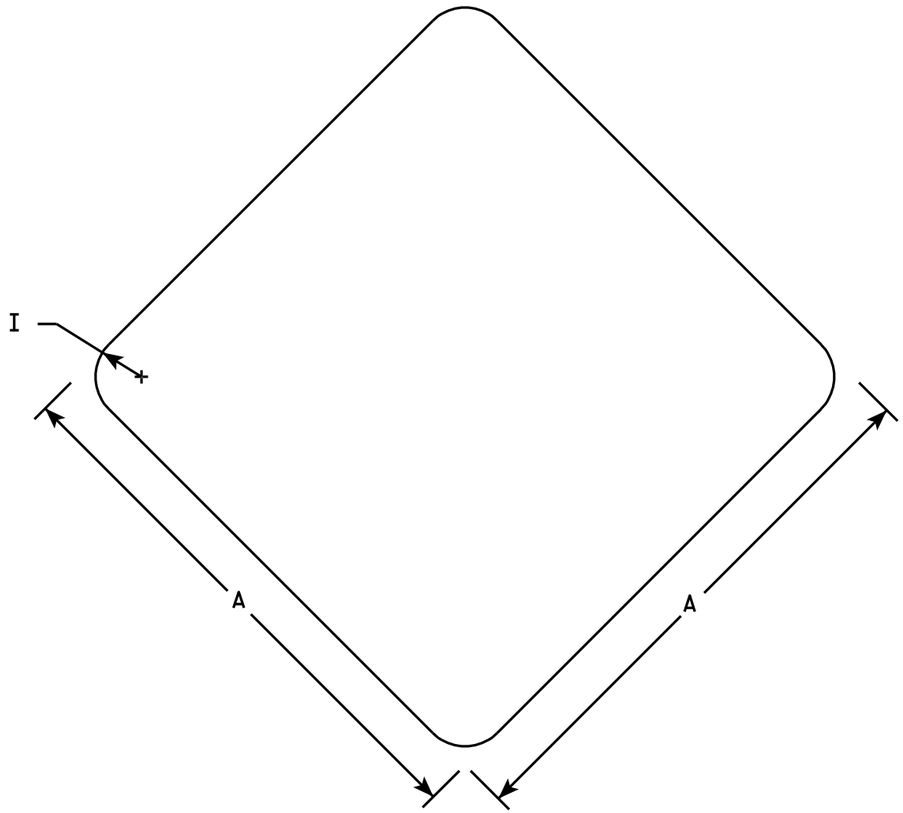
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 123 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000
WISDOT/CADDS SHEET 42



W5-56

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

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	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

STANDARD SIGN
W5-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

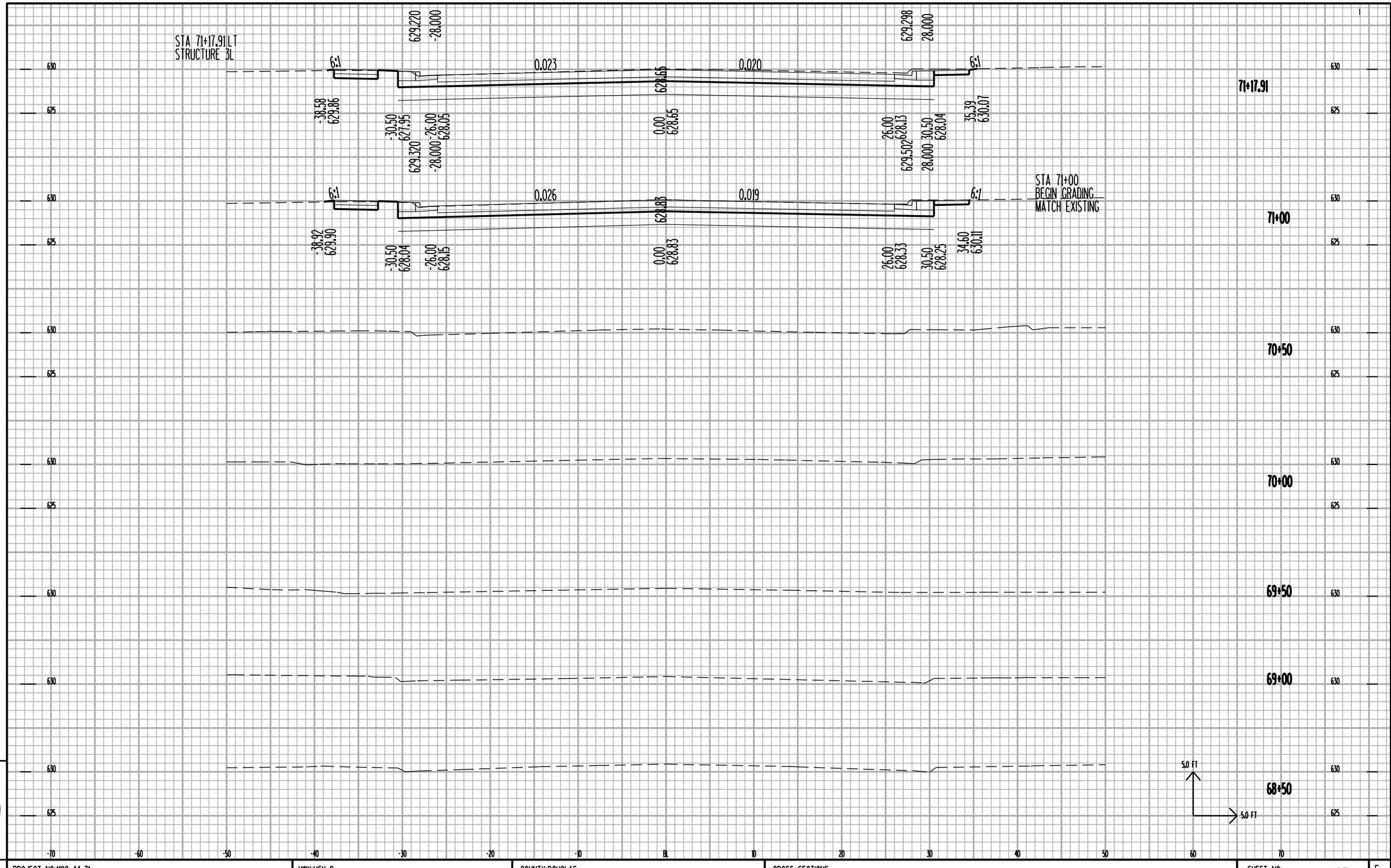
DATE 11/2/10 PLATE NO. W5-56.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 124	E

STATION	Distance	AREA (SF)			Inc. Vol (CY) (Unadjusted)			Cumulative Vol (CY)				Mass Ordinate
		Cut	Fill	EBS	Cut	Fill	EBS	Cut 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 1.00	
71+00.00		88	0	92								
71+17.91	18	94	0	92	60	0	61	60	0	79	60.70	60.25
71+50.00	32	103	0	92	117	0	109	177	0	220	169.45	177.14
71+58.49	8	103	0	92	32	0	29	210	0	258	198.23	209.52
71+64.51	6	104	0	93	23	0	21	233	0	284	218.76	232.56
72+00.00	35	102	0	89	135	0	119	368	0	439	337.94	367.62
72+20.78	21	95	0	89	76	0	68	444	0	528	406.36	443.58
72+33.91	13	94	0	89	46	0	43	490	0	585	449.78	489.68
72+48.61	15	89	0	94	50	0	50	540	0	649	499.58	539.61
72+50.00	1	89	0	94	5	0	5	544	0	656	504.40	544.20
73+00.00	50	110	0	97	185	0	177	729	1	886	681.21	728.37
73+28.30	28	108	0	99	114	0	103	843	1	1,019	784.11	842.42
73+45.79	17	104	0	100	69	0	64	912	1	1,103	848.44	911.10
73+50.00	4	105	0	100	16	0	16	928	1	1,123	863.99	927.37
73+57.88	8	98	0	100	30	0	29	958	1	1,161	893.15	956.90
73+66.18	8	101	0	100	31	0	31	989	1	1,201	923.94	987.33
74+00.00	34	108	0	101	131	0	126	1,119	2	1,365	1,049.84	1,117.56
74+16.00	16	112	0	101	65	0	60	1,184	2	1,442	1,109.55	1,182.74
74+29.90	14	109	0	101	57	0	52	1,241	2	1,510	1,161.39	1,239.52
74+35.40	6	109	0	101	22	0	20	1,264	2	1,536	1,181.88	1,261.68
74+50.00	15	106	2	101	58	1	54	1,322	3	1,607	1,236.24	1,319.27
75+00.00	50	86	22	101	178	22	186	1,500	30	1,849	1,422.36	1,469.12
75+25.84	26	78	32	101	78	26	96	1,578	63	1,974	1,518.55	1,515.14
75+36.00	10	75	27	101	29	11	38	1,607	76	2,023	1,556.37	1,530.22
75+47.90	12	74	26	101	33	12	44	1,639	91	2,081	1,600.66	1,548.59
75+49.90	2	75	17	101	5	2	7	1,645	93	2,091	1,608.11	1,552.10
75+50.00	0	75	17	101	0	0	0	1,645	93	2,091	1,608.48	1,552.30
75+55.30	5	76	15	101	15	3	20	1,660	97	2,117	1,628.21	1,563.16
75+60.70	5	75	18	101	15	3	20	1,675	101	2,143	1,648.31	1,574.12
75+76.00	15	75	21	101	43	11	57	1,718	115	2,217	1,705.26	1,602.88
76+00.00	24	77	16	101	67	17	89	1,785	135	2,333	1,794.60	1,649.62
76+42.91	43	89	7	101	131	18	160	1,917	158	2,541	1,954.33	1,758.20
76+50.00	7	91	7	101	24	2	26	1,940	161	2,575	1,980.72	1,779.60
76+75.20	25	100	3	100	89	5	94	2,029	166	2,697	2,074.49	1,862.75
76+80.70	6	101	2	100	20	1	20	2,050	167	2,723	2,094.92	1,882.47
76+96.00	15	103	2	100	58	1	57	2,107	169	2,797	2,151.59	1,938.78
77+00.00	4	103	2	100	15	0	15	2,123	169	2,816	2,166.36	1,953.69
77+50.00	50	101	1	98	188	2	183	2,311	172	3,054	2,349.26	2,139.03
78+00.00	50	108	1	96	193	1	179	2,504	174	3,287	2,528.75	2,330.27
78+50.00	50	101	1	94	193	1	176	2,697	175	3,516	2,704.43	2,521.83
78+79.82	30	97	1	92	109	1	103	2,806	176	3,649	2,807.23	2,629.78
78+82.54	3	98	1	92	10	0	9	2,816	176	3,661	2,816.53	2,639.47
78+87.70	5	101	1	92	19	0	18	2,835	176	3,684	2,834.14	2,658.19
78+94.50	7	100	1	93	25	0	23	2,860	177	3,715	2,857.47	2,683.11
79+00.00	6	89	1	88	19	0	18	2,879	177	3,739	2,875.92	2,702.18
79+09.08	9	89	1	88	30	0	30	2,909	177	3,777	2,905.47	2,731.95
79+19.50	10	84	0	84	33	0	33	2,943	177	3,820	2,938.61	2,765.18
79+50.00	31	94	0	84	101	0	95	3,043	177	3,944	3,033.50	2,865.75
79+59.33	9	92	0	84	32	0	29	3,075	177	3,981	3,062.53	2,897.99
79+67.38	8	94	0	84	28	0	25	3,103	177	4,014	3,087.58	2,925.79
79+79.66	12	104	0	88	45	0	39	3,148	178	4,065	3,126.63	2,970.82
80+00.00	20	108	0	88	80	0	66	3,228	178	4,151	3,192.74	3,050.37
80+05.84	6	116	0	92	24	0	19	3,252	178	4,176	3,212.13	3,074.51
80+11.60	6	116	0	92	25	0	20	3,277	178	4,201	3,231.65	3,099.18
80+41.16	30	115	0	92	126	0	100	3,403	178	4,331	3,331.83	3,225.17
80+43.66	3	116	0	92	11	0	8	3,414	178	4,342	3,340.30	3,235.85
80+50.00	6	114	0	92	27	0	21	3,441	178	4,370	3,361.78	3,262.85
81+00.00	50	109	1	92	206	1	169	3,647	179	4,591	3,531.23	3,468.05
81+24.84	25	106	2	92	99	1	84	3,746	181	4,700	3,615.41	3,565.48
81+26.15	1	105	2	92	5	0	4	3,751	181	4,706	3,619.85	3,570.48
81+29.13	3	104	2	92	12	0	10	3,763	181	4,719	3,629.95	3,581.73
81+30.75	2	105	2	92	6	0	5	3,769	181	4,726	3,635.44	3,587.85
81+50.00	19	104	2	92	75	1	65	3,844	183	4,811	3,700.68	3,660.57
81+89.21	39	108	1	92	154	2	133	3,997	186	4,984	3,833.57	3,811.52

STATION	Distance	AREA (SF) Cut	Fill	EBS	Inc. Vol (CY) (Unadjusted) Cut	Fill	EBS	Cumulative Vol (CY) Cut 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 1.00	Mass Ordinate
82+00.00	11	100	0	88	41	0	36	4,039	186	5,030	3,869.38	3,852.76
82+15.40	15	105	0	88	59	0	50	4,097	186	5,095	3,919.43	3,911.33
82+20.58	5	101	0	88	20	0	17	4,117	186	5,117	3,936.27	3,931.10
82+50.00	29	102	0	88	111	0	96	4,228	186	5,241	4,031.89	4,041.80
82+72.92	23	112	0	92	91	0	76	4,319	186	5,340	4,107.98	4,132.81
82+98.87	26	112	0	92	108	0	88	4,427	186	5,455	4,195.93	4,240.25
83+00.00	1	112	0	92	5	0	4	4,431	186	5,460	4,199.76	4,244.92
83+50.00	50	112	0	92	207	0	169	4,639	187	5,680	4,369.21	4,451.50
83+95.54	46	109	0	92	186	0	154	4,825	188	5,881	4,523.54	4,637.19
84+00.00	4	109	0	92	18	0	15	4,843	188	5,900	4,538.65	4,655.12
84+31.57	32	109	0	92	127	0	107	4,970	188	6,039	4,645.64	4,782.21
84+50.00	18	102	0	88	72	0	61	5,042	188	6,119	4,706.82	4,854.33
84+73.54	24	104	0	88	90	0	77	5,132	188	6,218	4,783.33	4,944.19
85+00.00	26	98	0	88	99	0	86	5,231	188	6,330	4,869.34	5,042.97
85+11.57	12	102	1	92	43	0	38	5,274	189	6,380	4,907.74	5,085.44
85+14.65	3	102	1	92	12	0	10	5,286	189	6,394	4,918.18	5,096.89
85+16.80	2	101	1	92	8	0	7	5,294	189	6,403	4,925.47	5,104.82
85+50.00	33	109	1	92	129	1	113	5,423	191	6,549	5,037.99	5,232.02
85+53.74	4	109	1	92	15	0	13	5,438	191	6,566	5,050.66	5,246.99
85+82.57	29	111	1	92	117	1	98	5,555	192	6,693	5,148.37	5,363.38
86+00.00	17	117	0	92	73	0	59	5,629	192	6,770	5,207.44	5,436.43
86+29.91	30	116	0	92	129	0	101	5,757	192	6,901	5,308.81	5,564.82
86+32.65	3	116	0	92	12	0	9	5,769	192	6,914	5,318.10	5,576.54
86+50.00	17	121	0	92	76	0	59	5,845	193	6,990	5,376.90	5,652.42
87+00.00	50	121	0	92	224	0	169	6,069	193	7,210	5,546.35	5,875.83
87+31.62	32	120	0	92	141	0	107	6,209	193	7,350	5,653.51	6,016.64
87+50.00	18	117	0	92	81	0	62	6,290	193	7,431	5,715.80	6,097.21
87+50.10	0	114	1	92	0	0	0	6,291	193	7,431	5,716.14	6,097.64
87+51.65	2	112	1	92	6	0	5	6,297	193	7,438	5,721.39	6,104.08
87+52.40	1	113	1	92	3	0	3	6,300	193	7,441	5,723.93	6,107.19
88+00.00	48	104	0	88	192	1	158	6,492	194	7,647	5,881.94	6,298.10
88+07.21	7	105	0	88	28	0	23	6,520	194	7,677	5,905.37	6,326.00
88+36.93	30	120	0	92	124	0	99	6,644	194	7,805	6,004.03	6,449.80
88+43.04	6	120	0	92	27	0	21	6,671	194	7,832	6,024.74	6,476.94
88+50.00	7	110	0	88	30	0	23	6,701	194	7,862	6,047.86	6,506.58
88+55.49	5	109	0	88	22	0	18	6,723	194	7,885	6,065.72	6,528.86
89+00.00	45	108	0	88	179	0	145	6,902	194	8,074	6,210.73	6,707.89
89+28.88	29	109	1	92	116	1	96	7,018	195	8,199	6,307.03	6,823.00
89+50.00	21	110	1	92	86	1	72	7,104	196	8,293	6,379.03	6,907.45
90+00.00	50	112	1	92	206	2	171	7,309	199	8,515	6,549.82	7,110.84
90+50.00	50	117	1	93	212	2	171	7,522	201	8,737	6,721.08	7,320.85
91+00.00	50	139	0	93	237	1	172	7,758	202	8,961	6,892.82	7,555.94
91+38.10	38	131	0	95	190	0	132	7,948	203	9,133	7,025.26	7,745.48
91+50.00	12	129	0	98	57	0	42	8,005	203	9,188	7,067.73	7,802.58
91+56.11	6	124	0	100	29	0	22	8,034	203	9,217	7,090.11	7,831.17
91+57.06	1	123	0	100	4	0	4	8,038	203	9,222	7,093.63	7,835.51
92+00.00	43	148	0	126	215	0	180	8,254	203	9,456	7,273.85	8,050.69
92+12.20	12	161	0	146	70	0	62	8,324	203	9,536	7,335.42	8,120.61
92+15.90	4	169	0	154	23	0	21	8,346	203	9,563	7,356.01	8,143.24
92+32.00	16	190	0	208	107	0	108	8,453	203	9,703	7,464.03	8,250.17
					250			8,703				
					261			8,964				
					334			9,298				
82+15					72			9,370				
					241			9,611				
					188			9,799				
86+01					72			9,871				
86+50					72			9,943				
					270			10,213				
					260			10,473				
					234			10,707				
					10,707	162	7,464					

STA 71+17.91 LT
STRUCTURE 3L



9

9

PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 127	E

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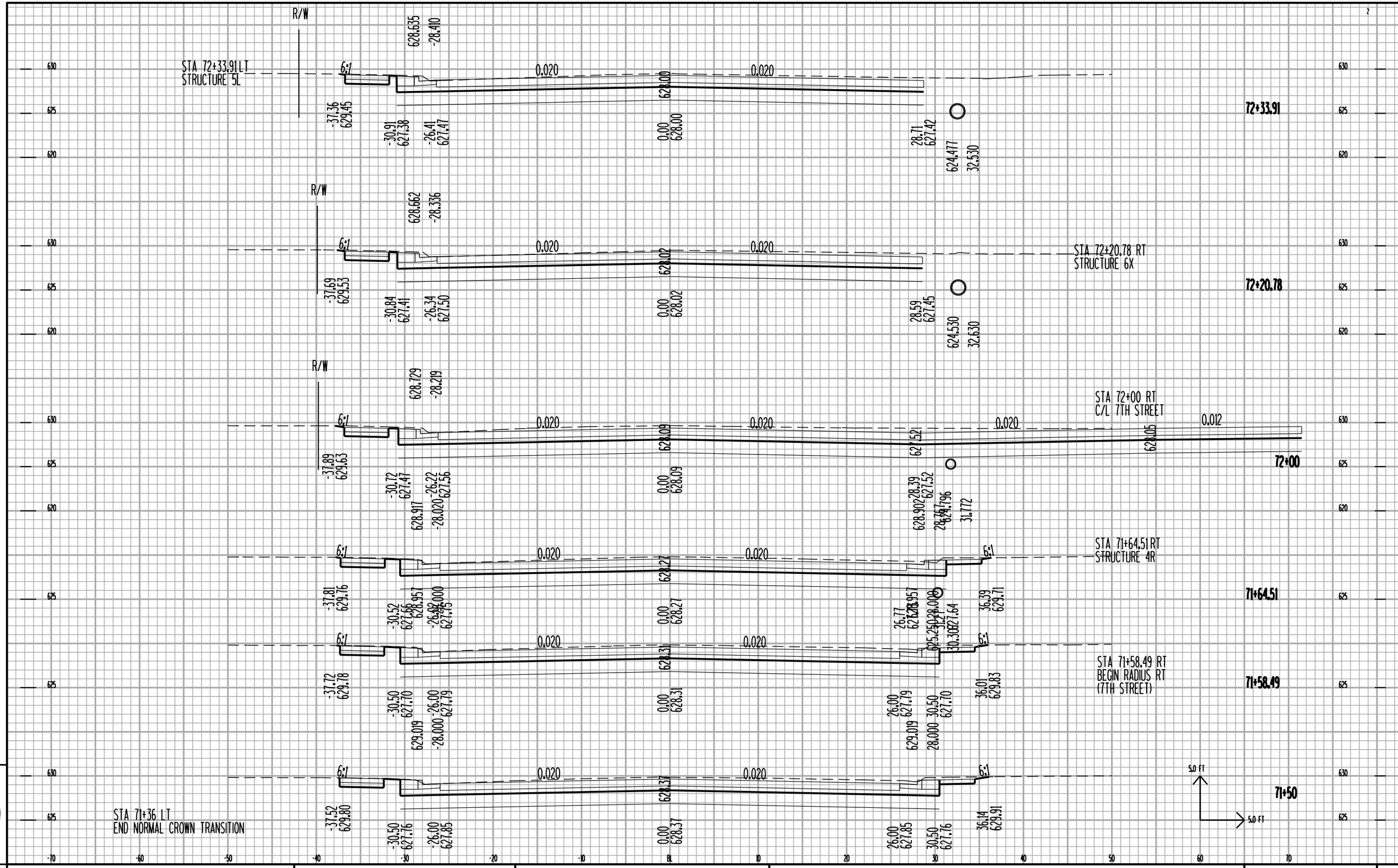

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PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 128	E

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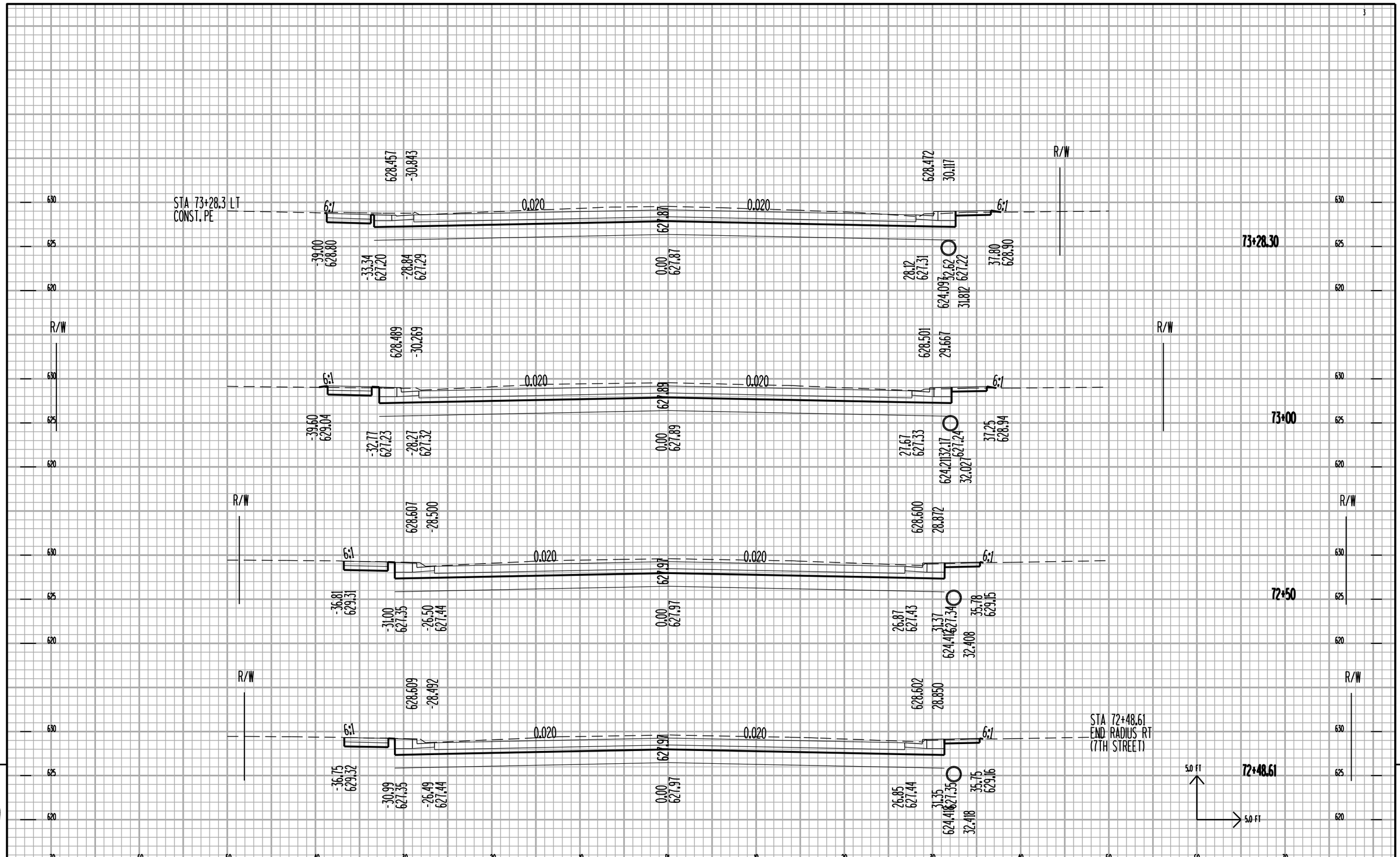

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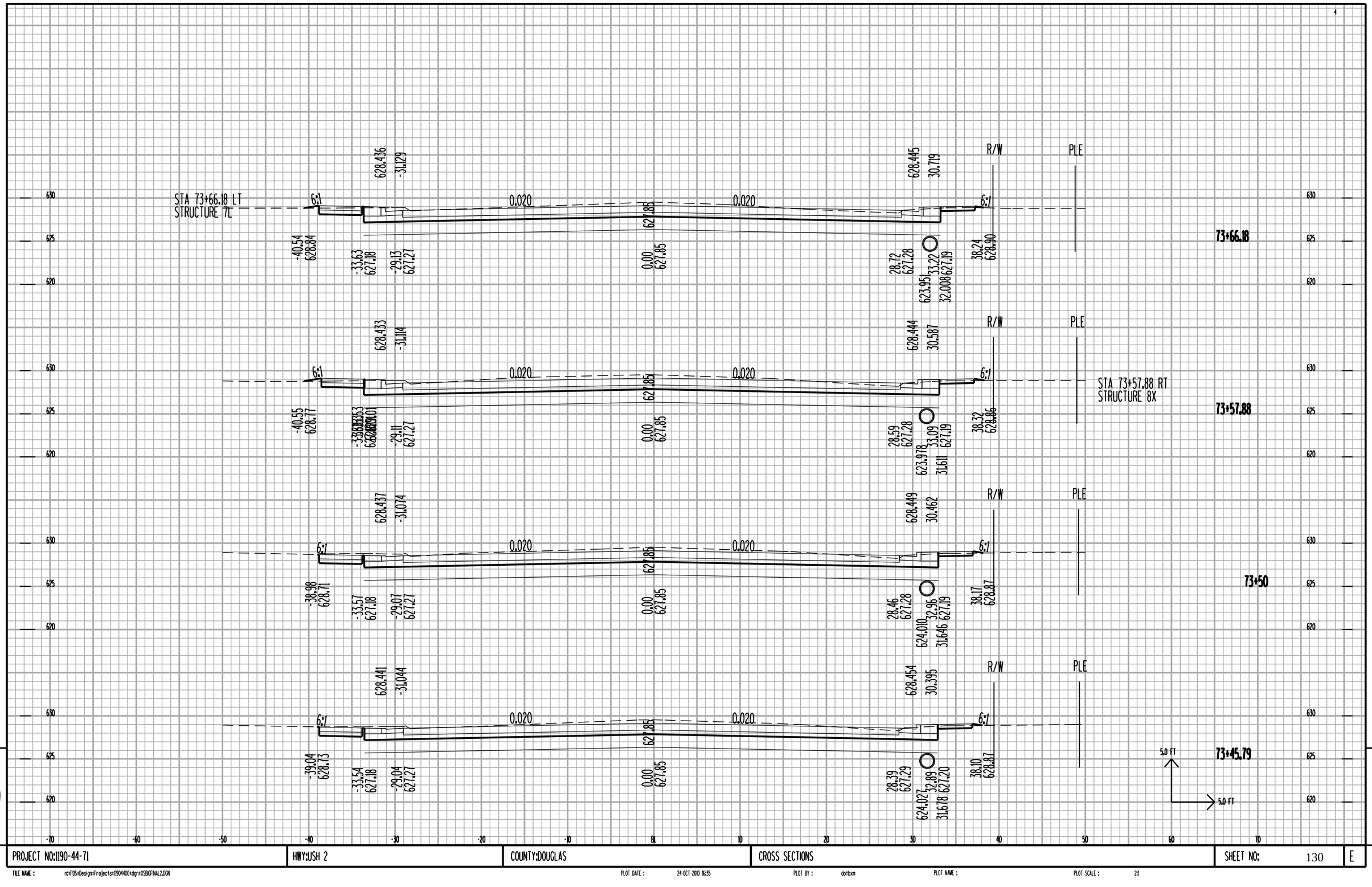

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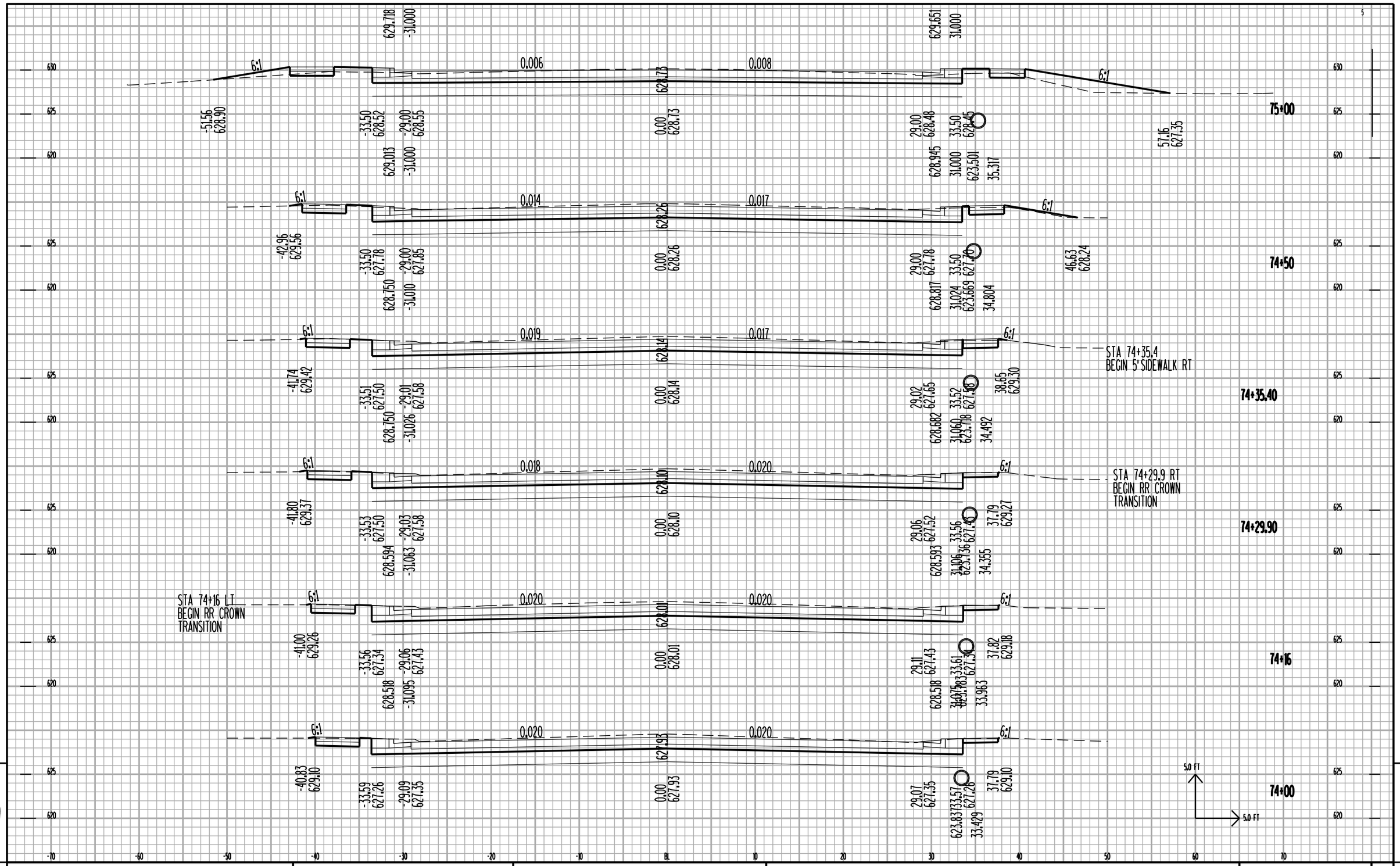

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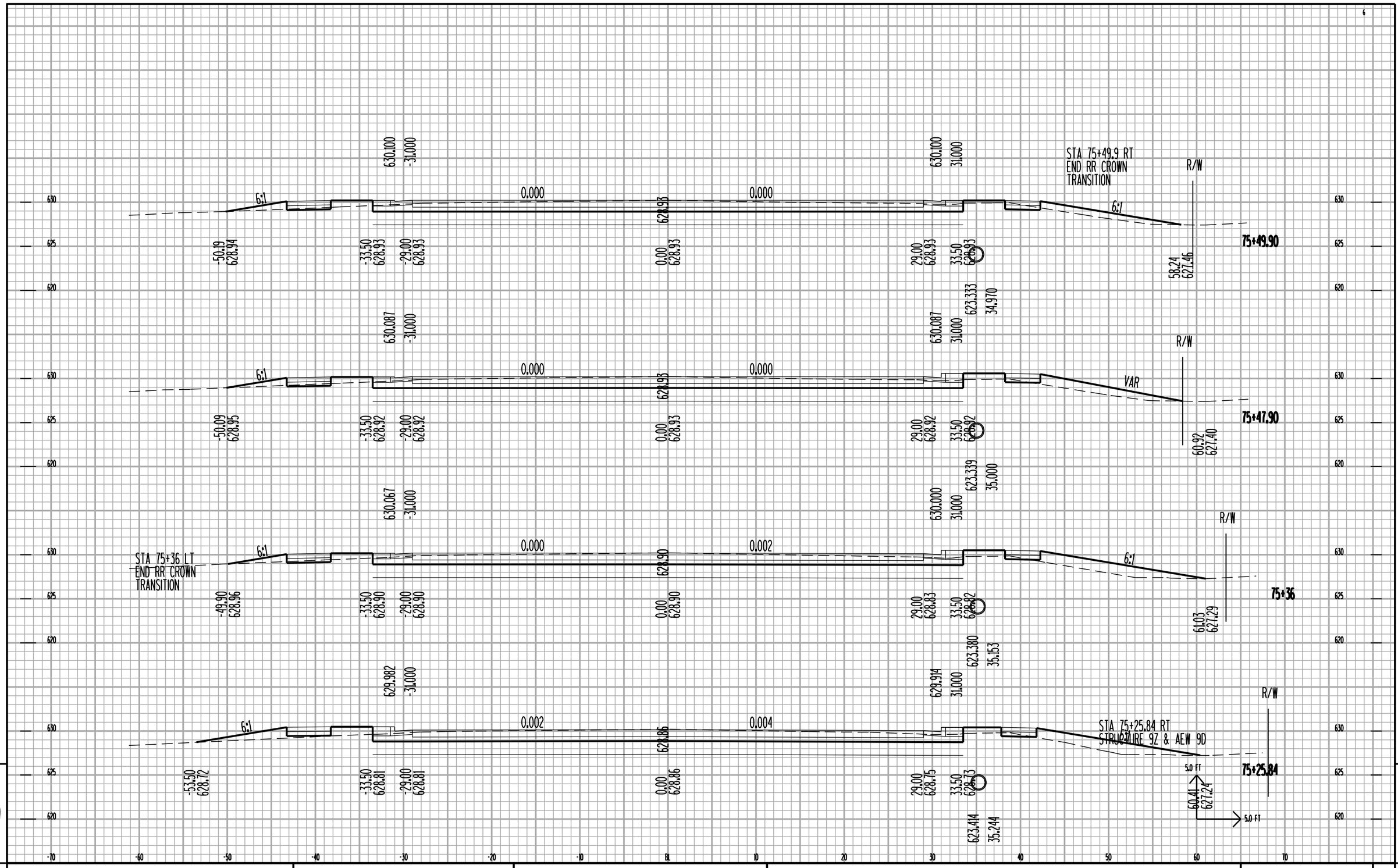

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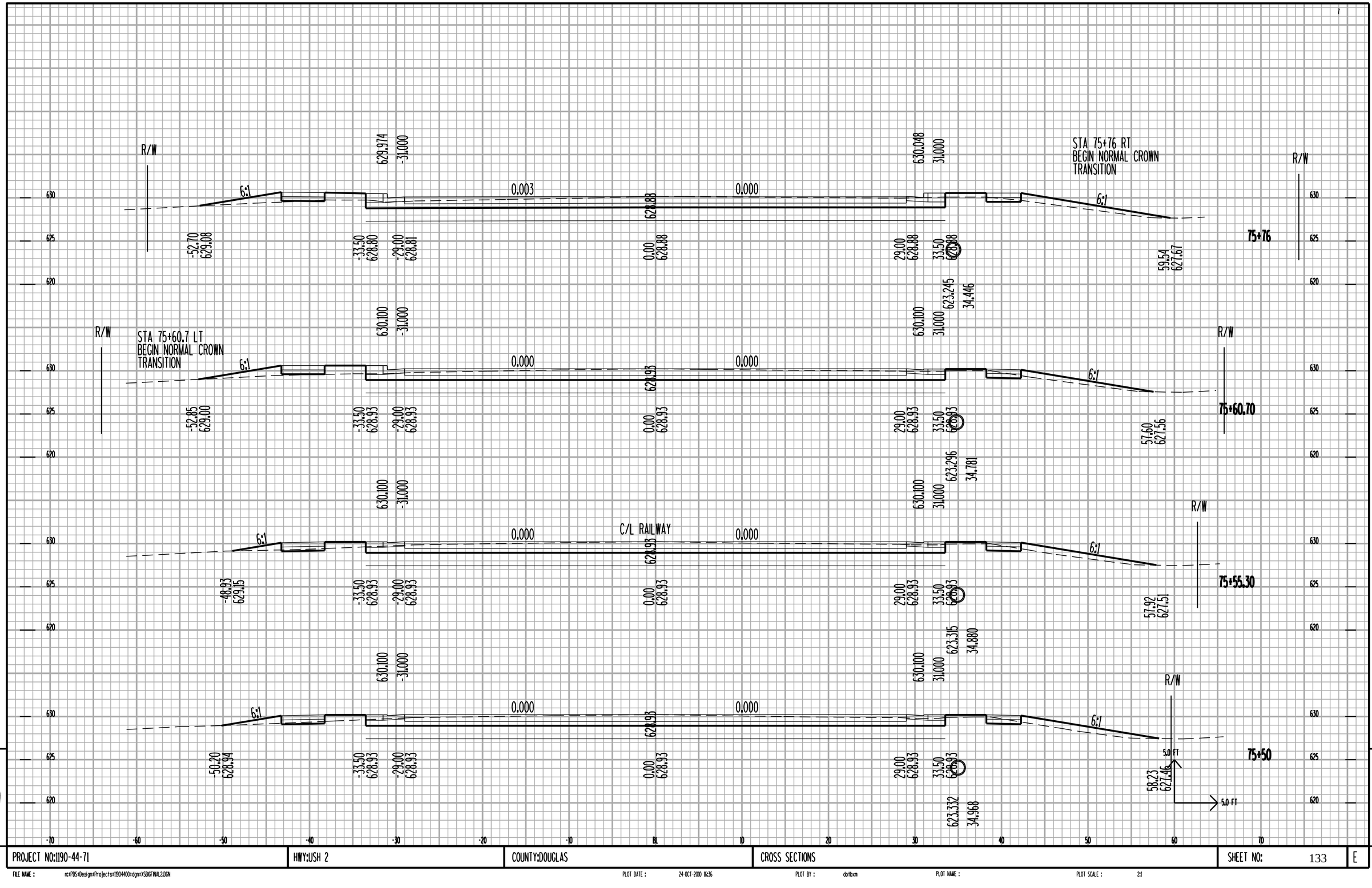

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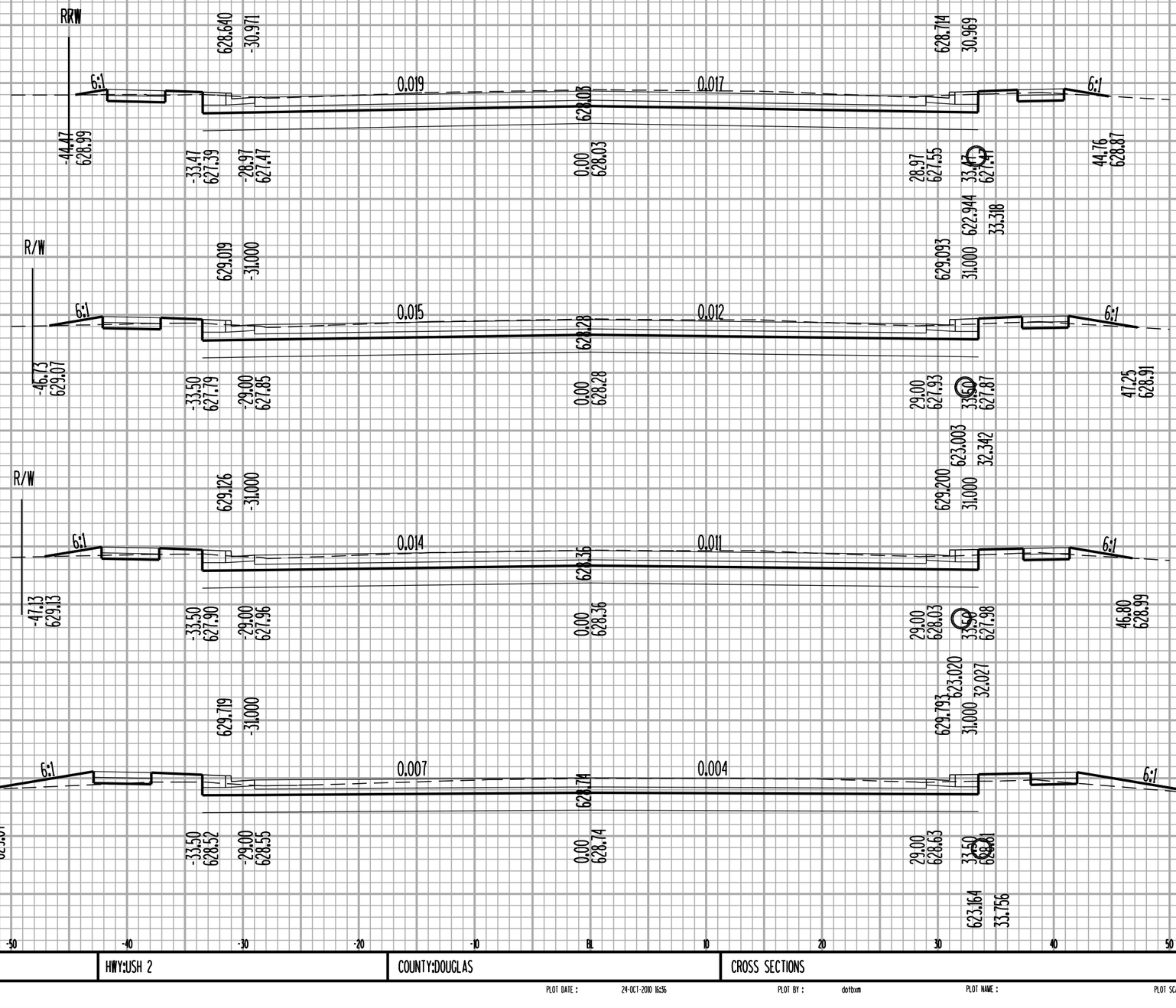

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PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 134	E

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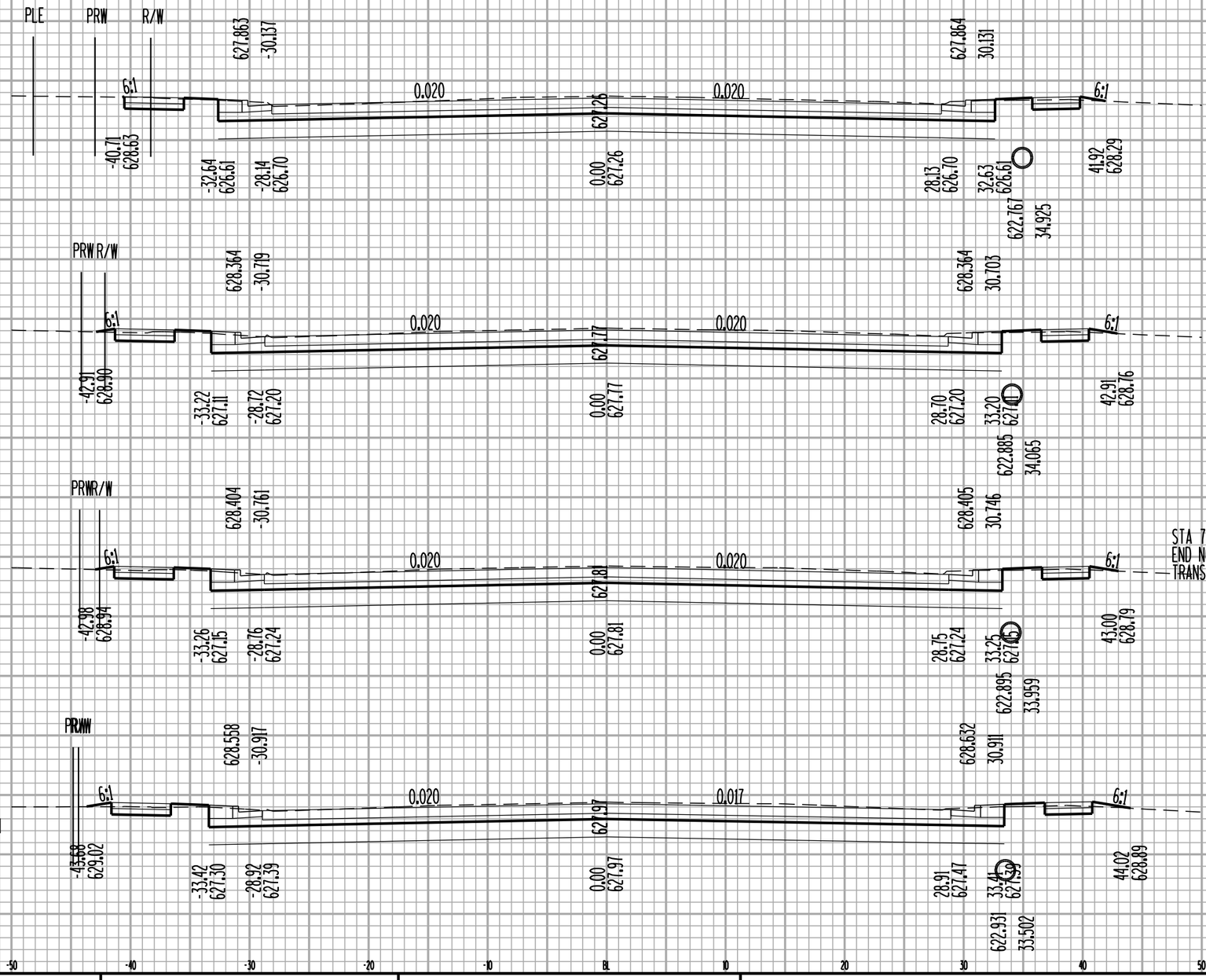

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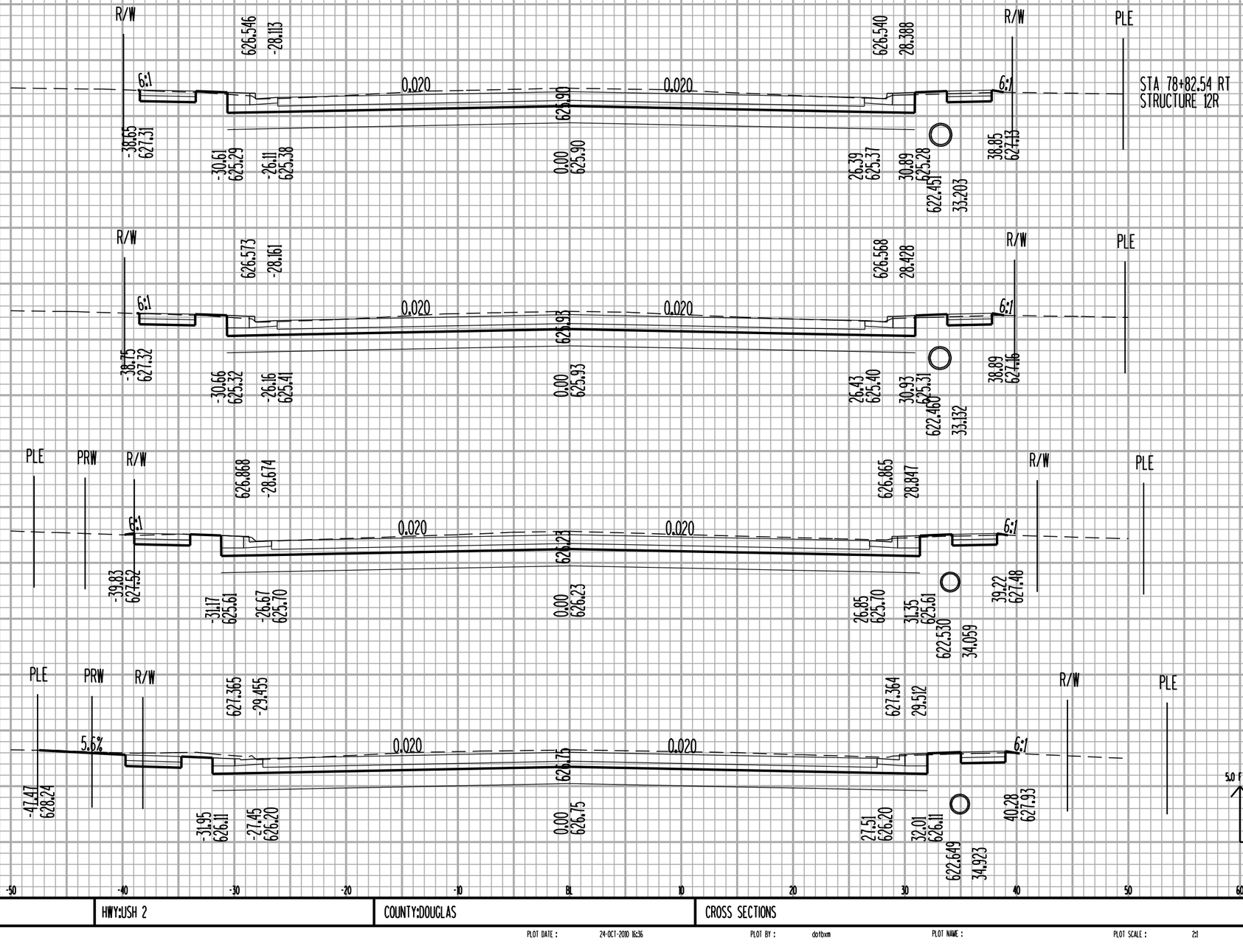

PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 136	E

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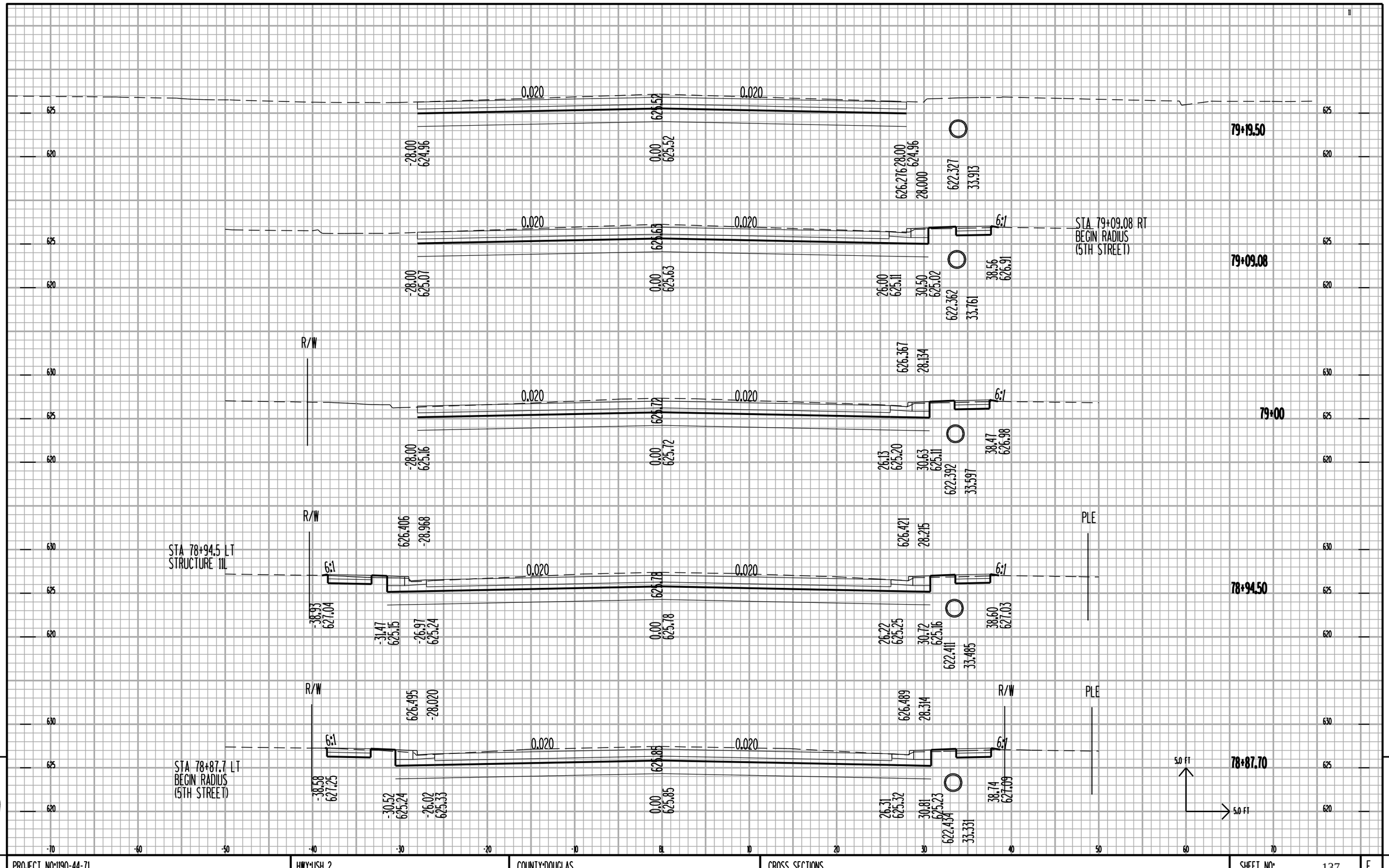
9



PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 137	E

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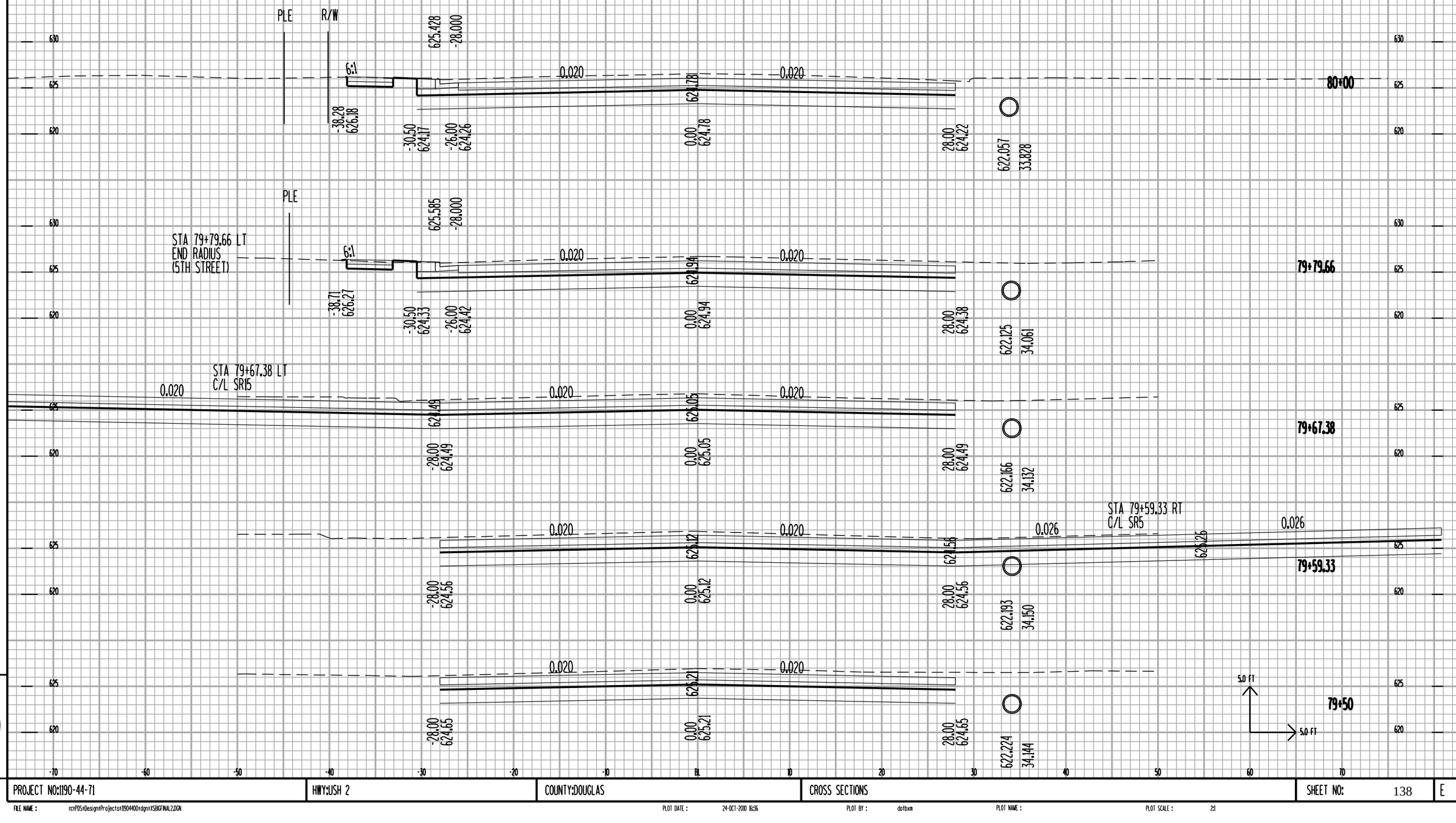
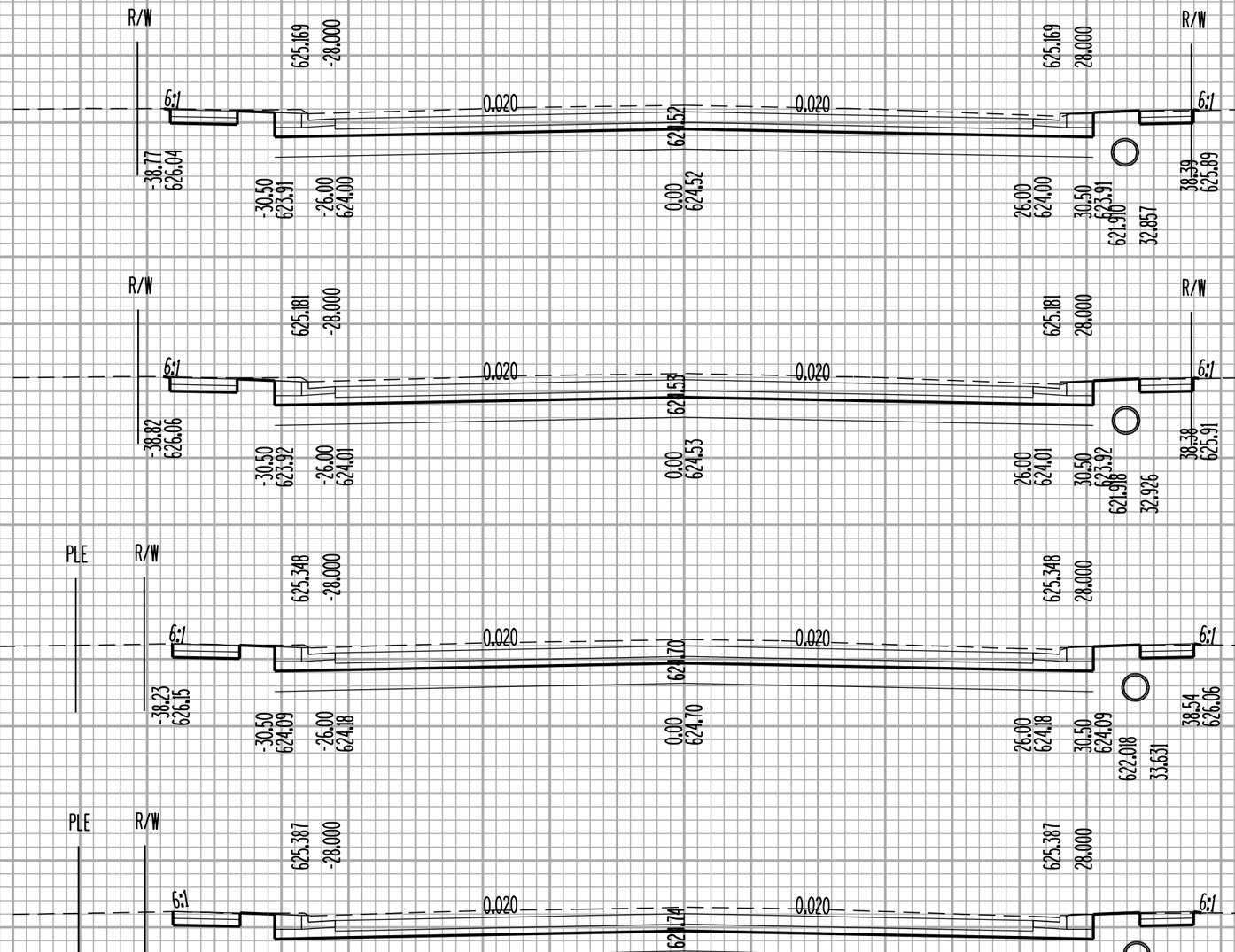


PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 138	E

FILE NAME : nc:\PDS\Designs\Projects\1190440\dgn\XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:36 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

9

9



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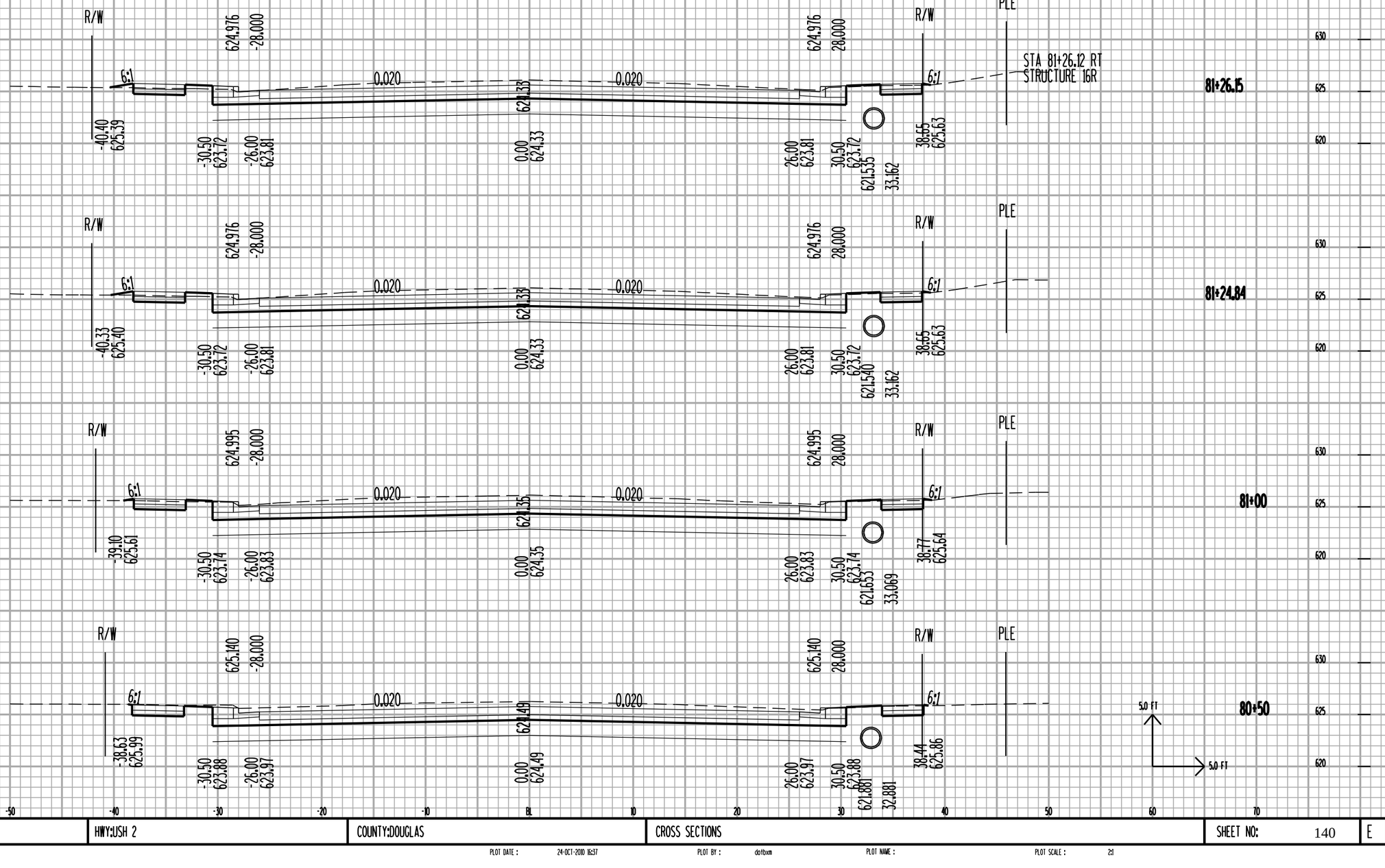
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 139	E

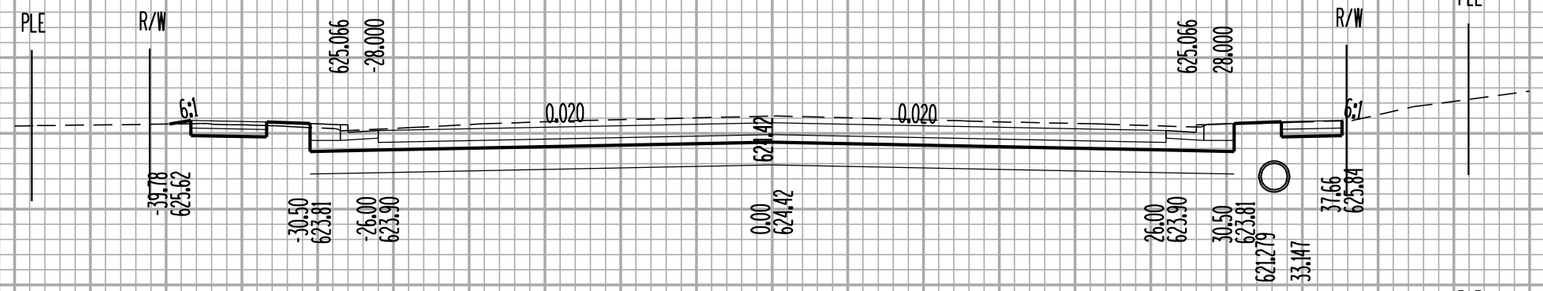
FILE NAME : nc:\PDS\Designs\Projects\t1190400\dgn\XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:36 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



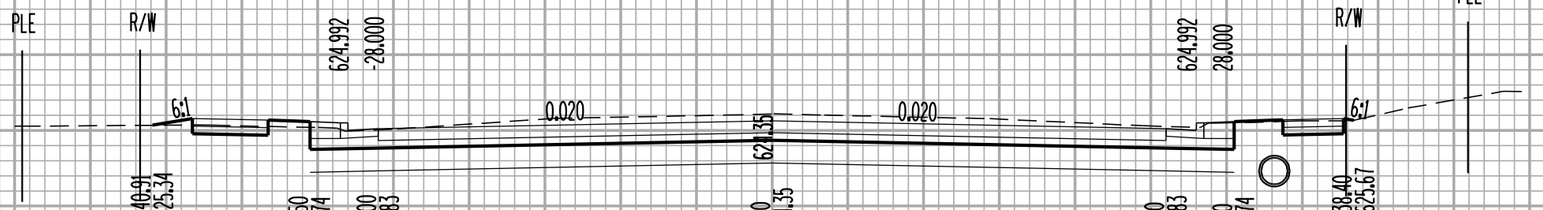
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 140	E

FILE NAME : nc:\PDS\Design\Project\s1190400\dgn\XSBGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

STA 81+89.21 LT
BEGIN RADIUS
(2ND AVENUE)

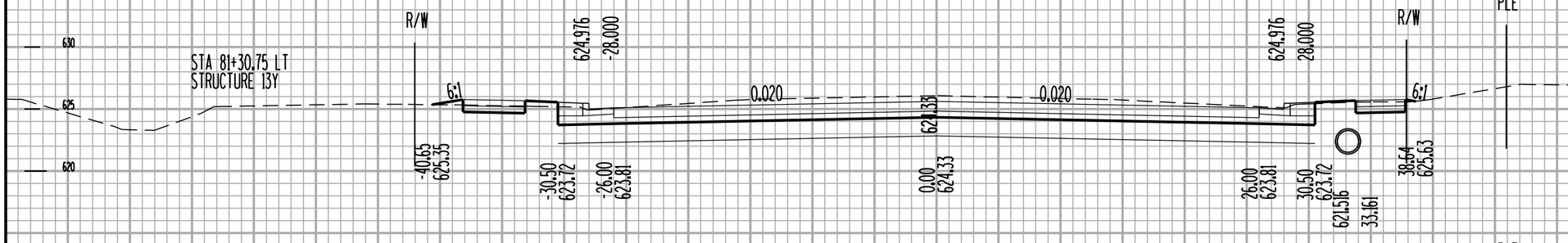


81+89.21

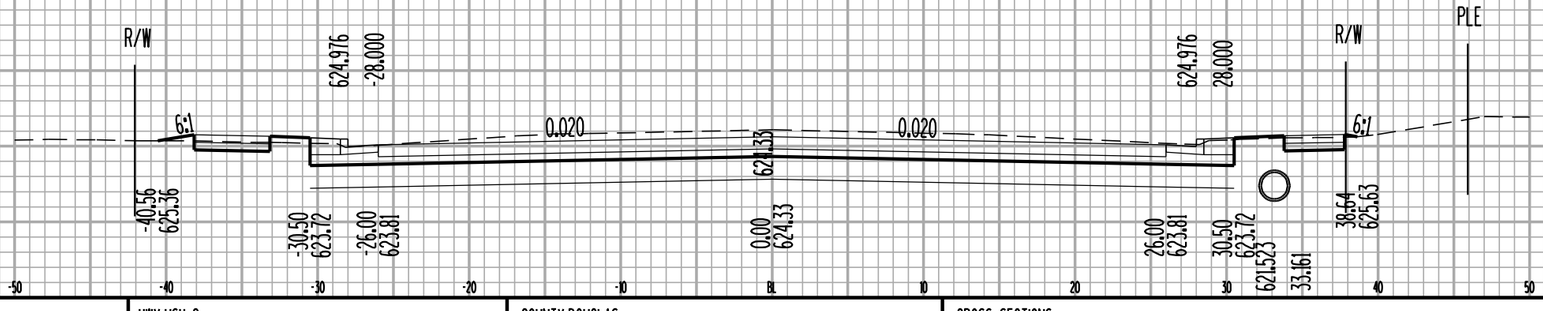


81+50

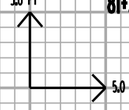
STA 81+30.75 LT
STRUCTURE 13Y



81+30.75



81+29.13



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PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 141	E

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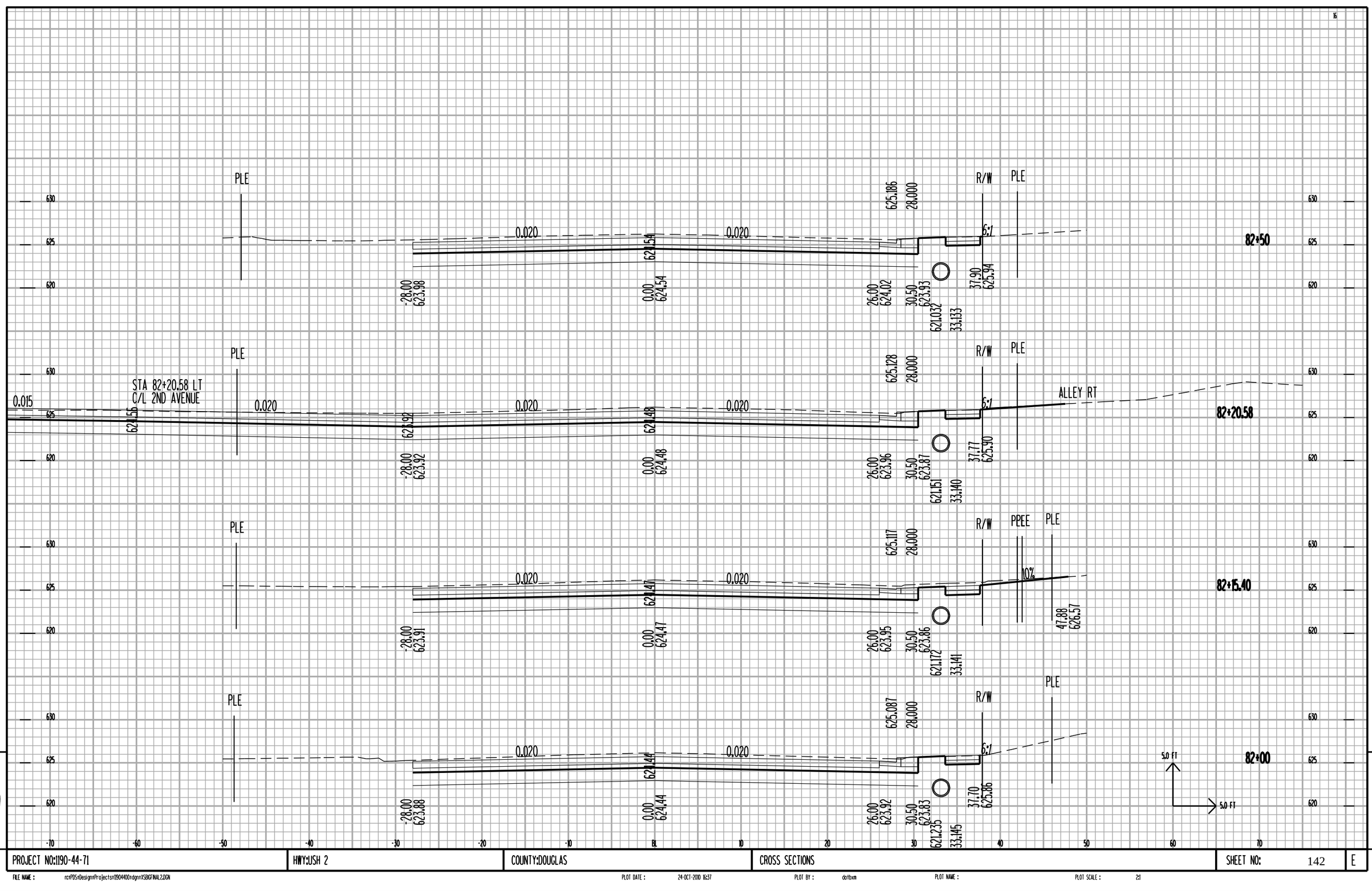

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PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 142	E

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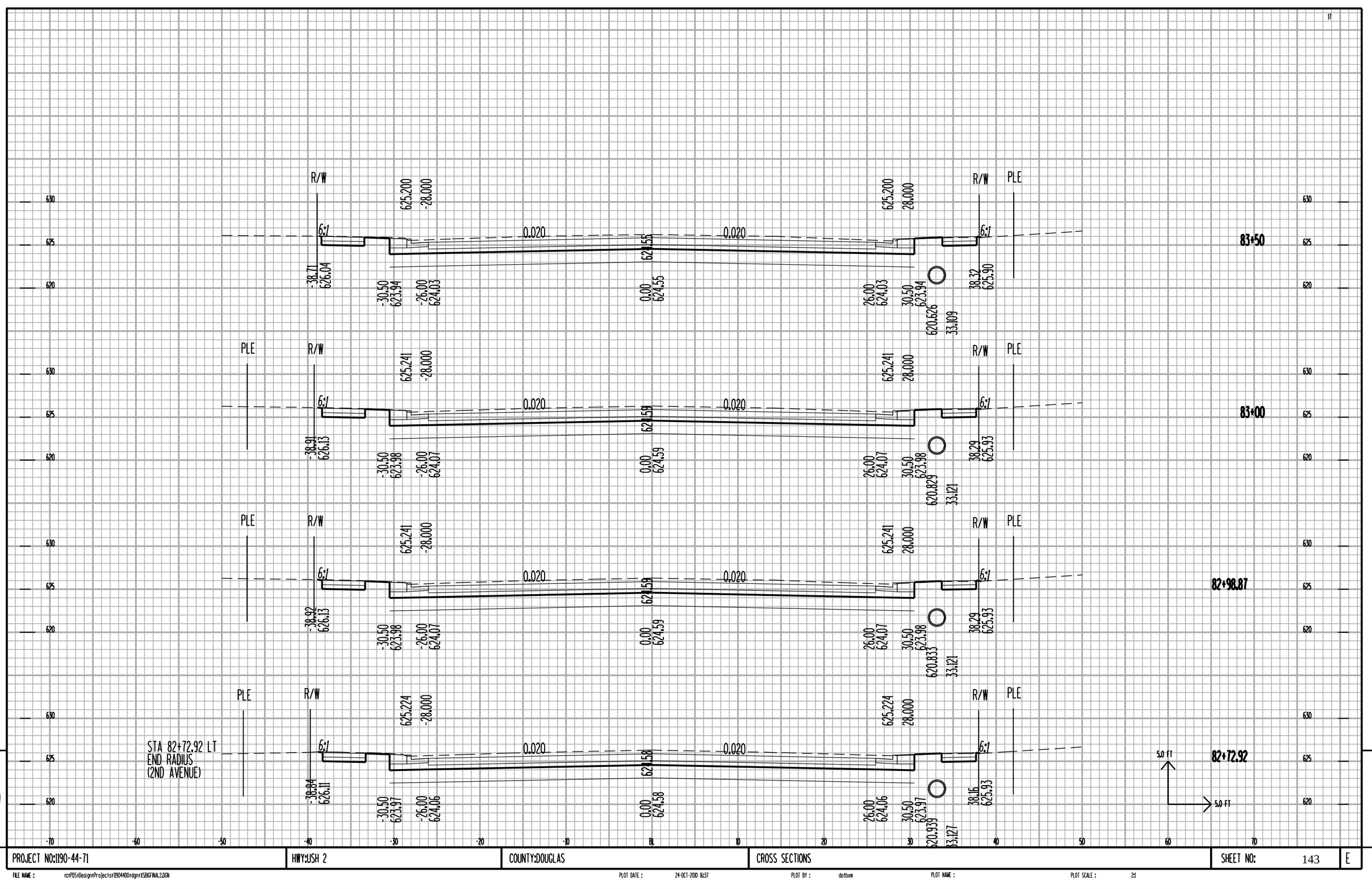
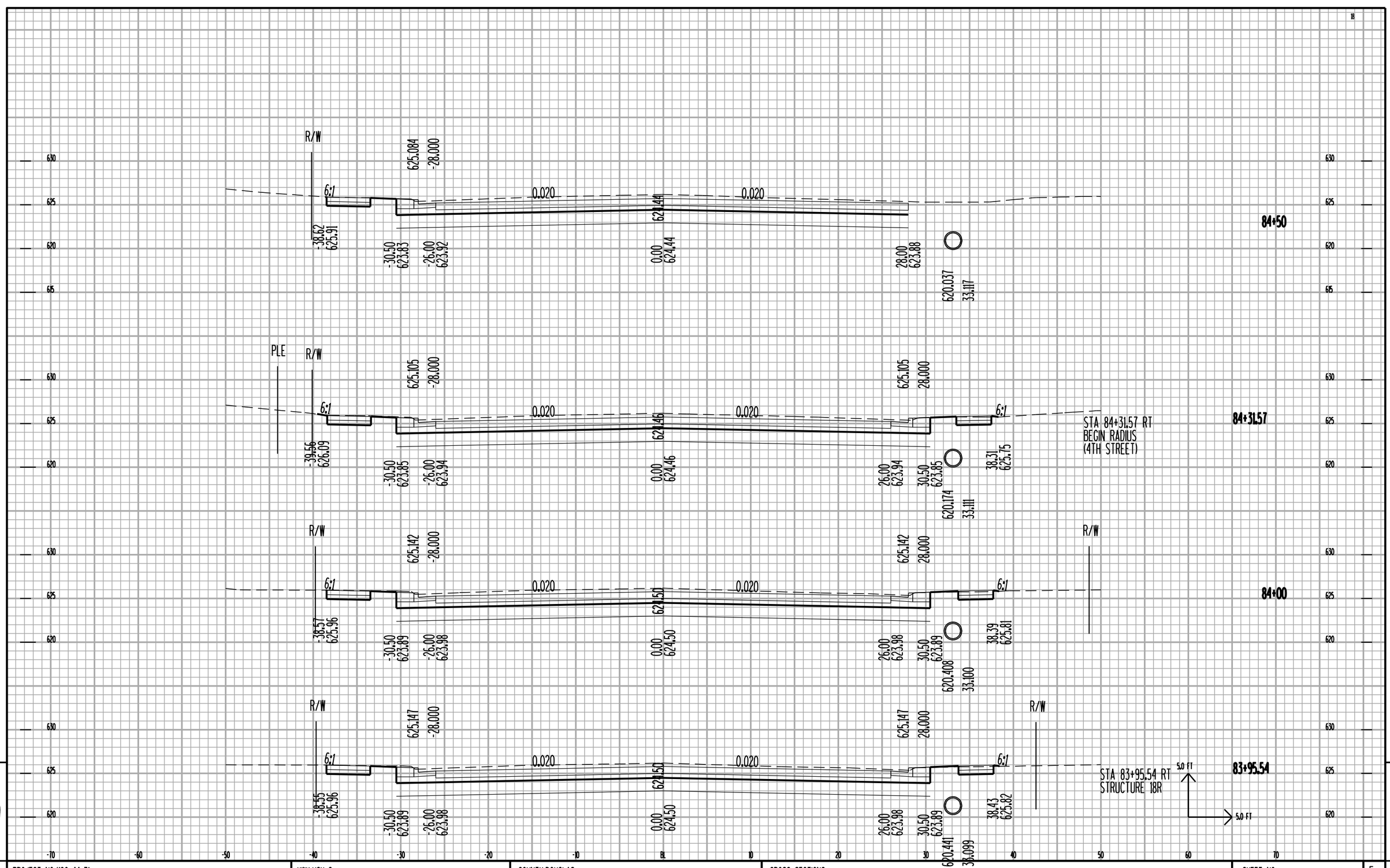


PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 143	E

FILE NAME : nc:\PDS\Designs\Projects\1190400\dgn\XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



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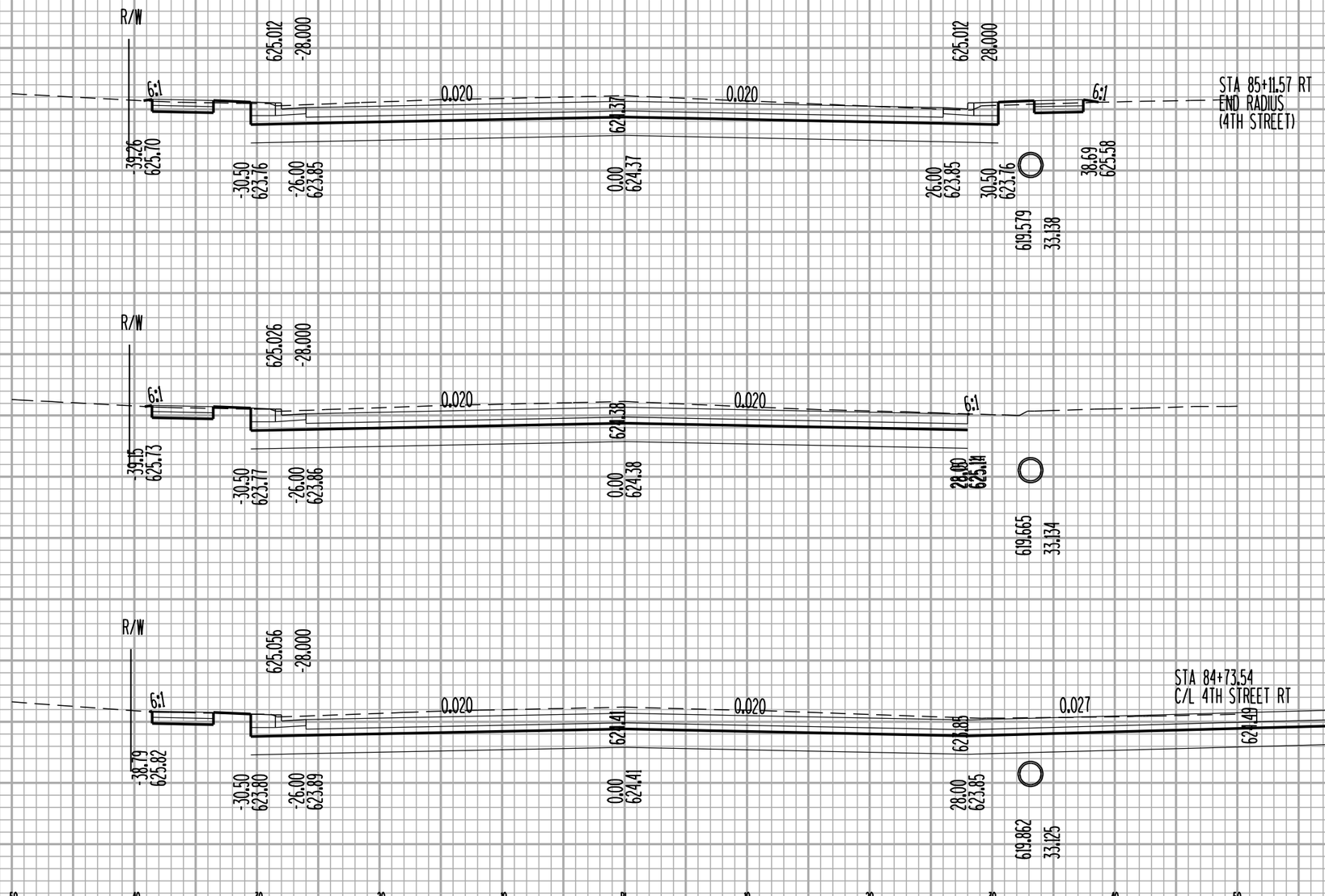
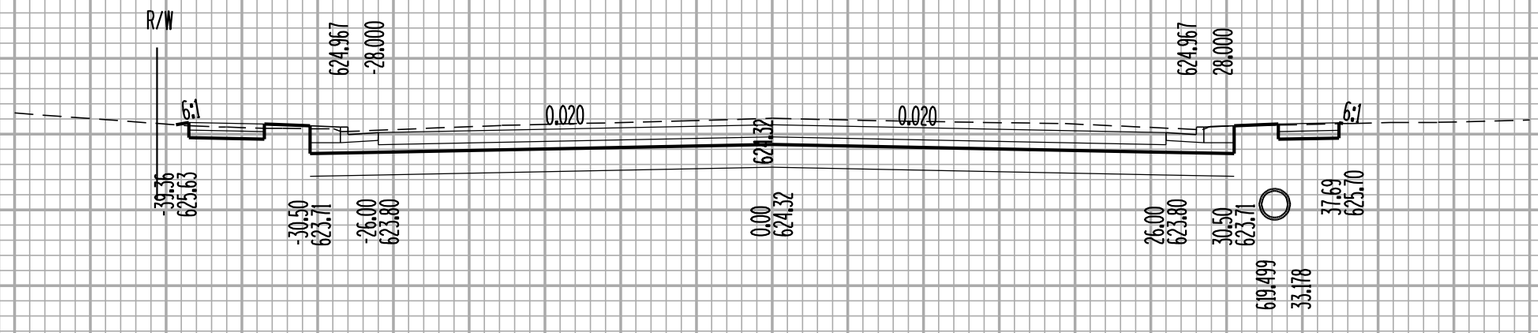
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 144	E

FILE NAME : nc:\PDS\Designs\Projects\1190440\dgn\XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

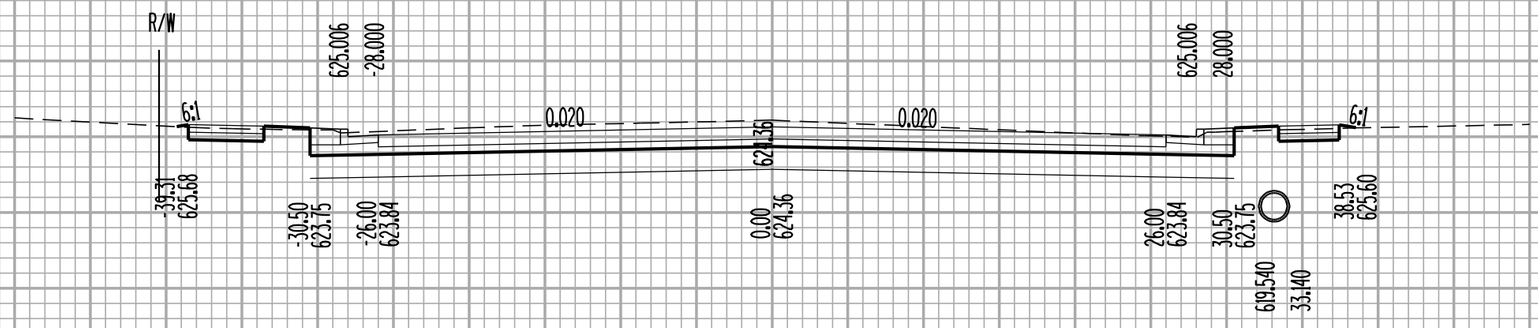


PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 145	E

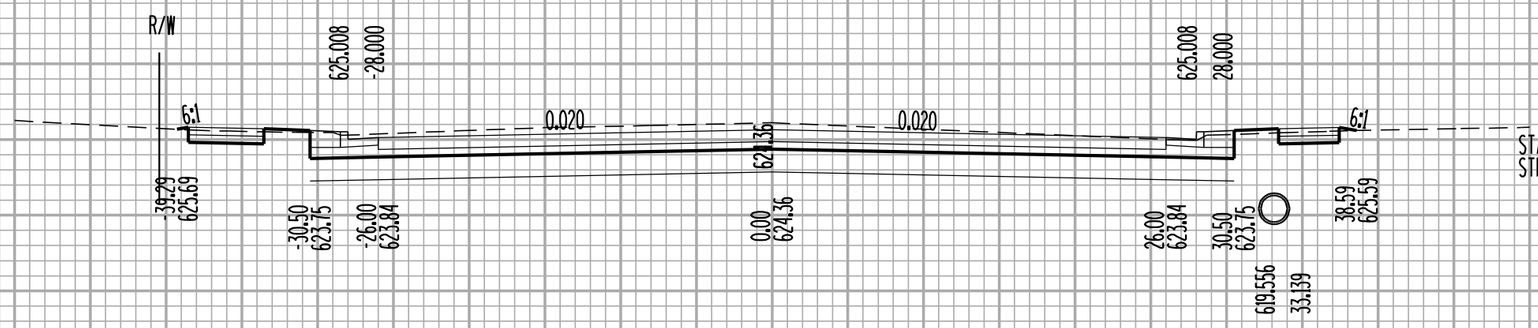
FILE NAME : nc=P0S=Designs=Projects=1190400=dgn=XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



85+50



85+16.80



STA 85+14.65 RT
STRUCTURE 20R

85+14.65

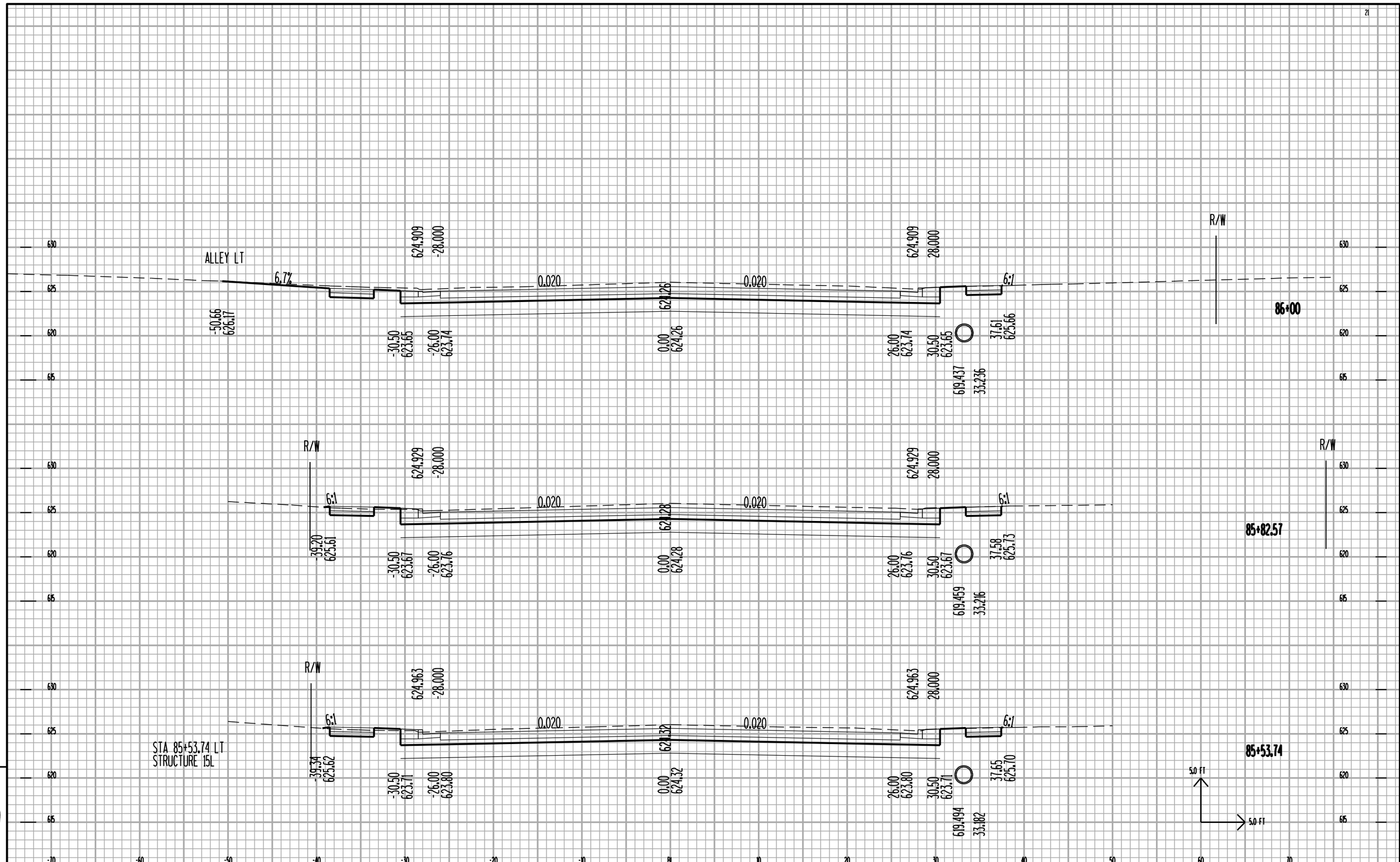
5.0 FT
5.0 FT

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

9 9

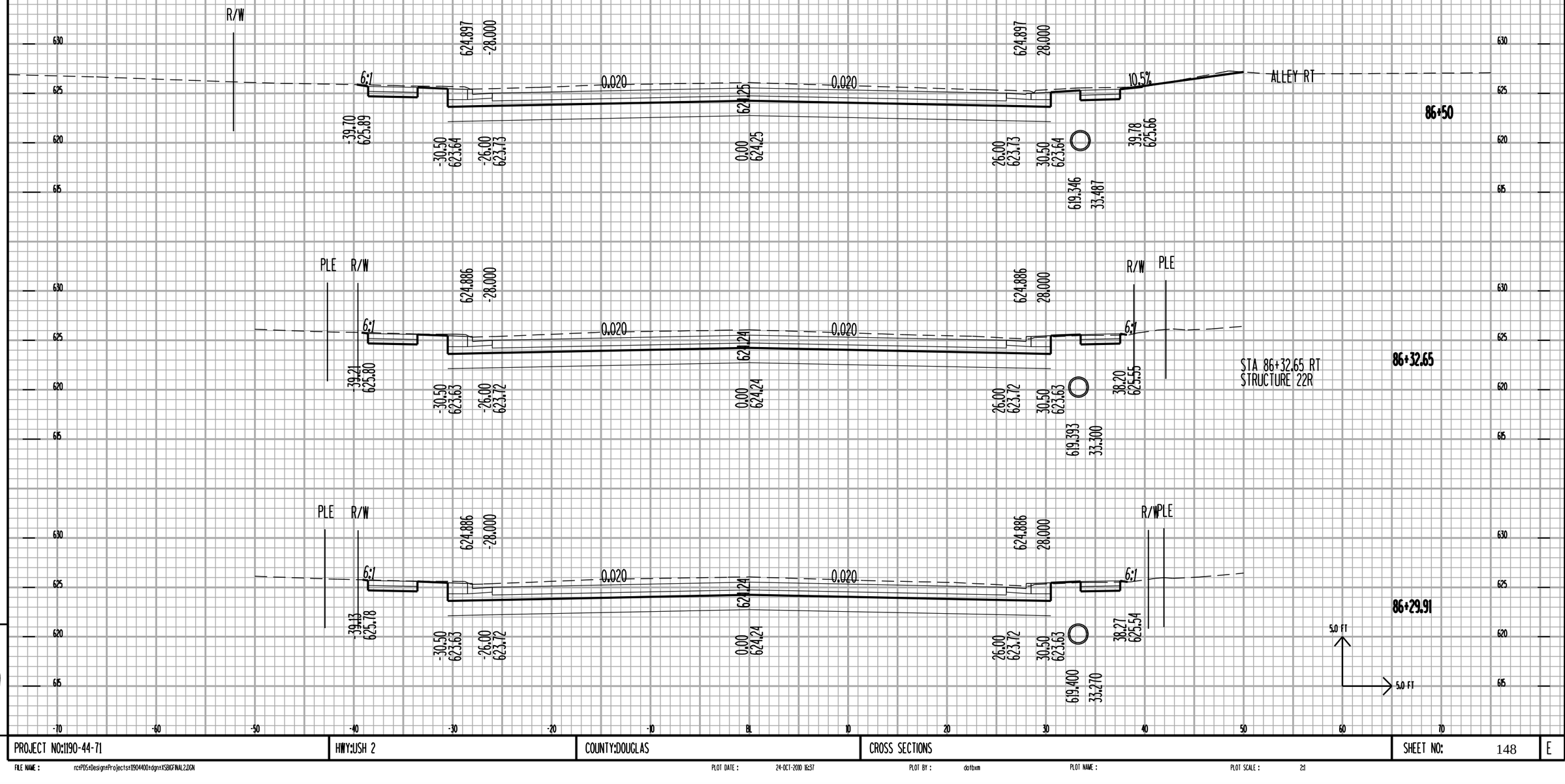
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 146	E

FILE NAME : nc=P0S=Designs=Projects=1190440D=dgn=XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 147	E

FILE NAME : nc=PDS=Designs=Projects=1190400=dgn=XSBGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:37 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



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PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 148	E

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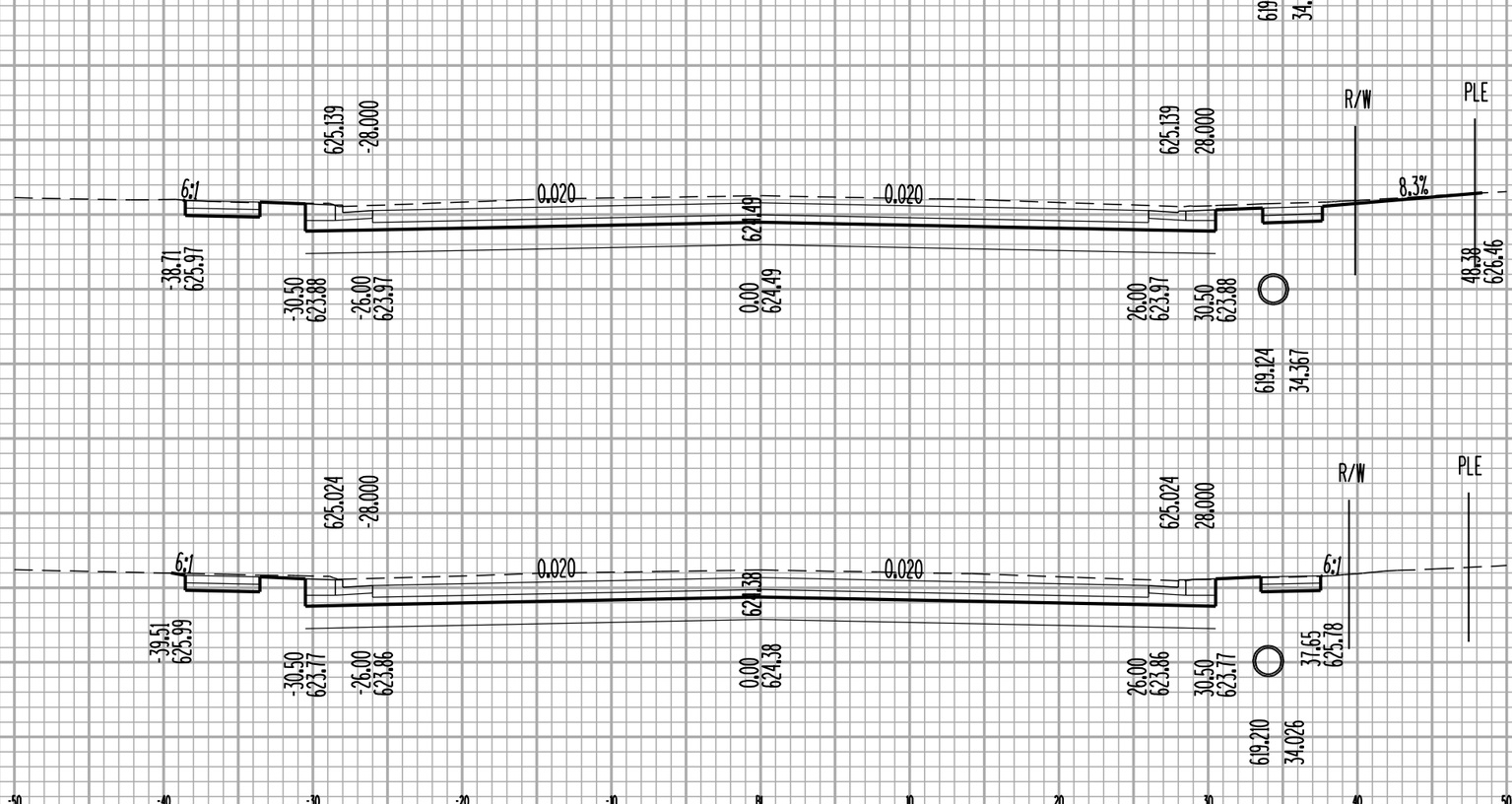

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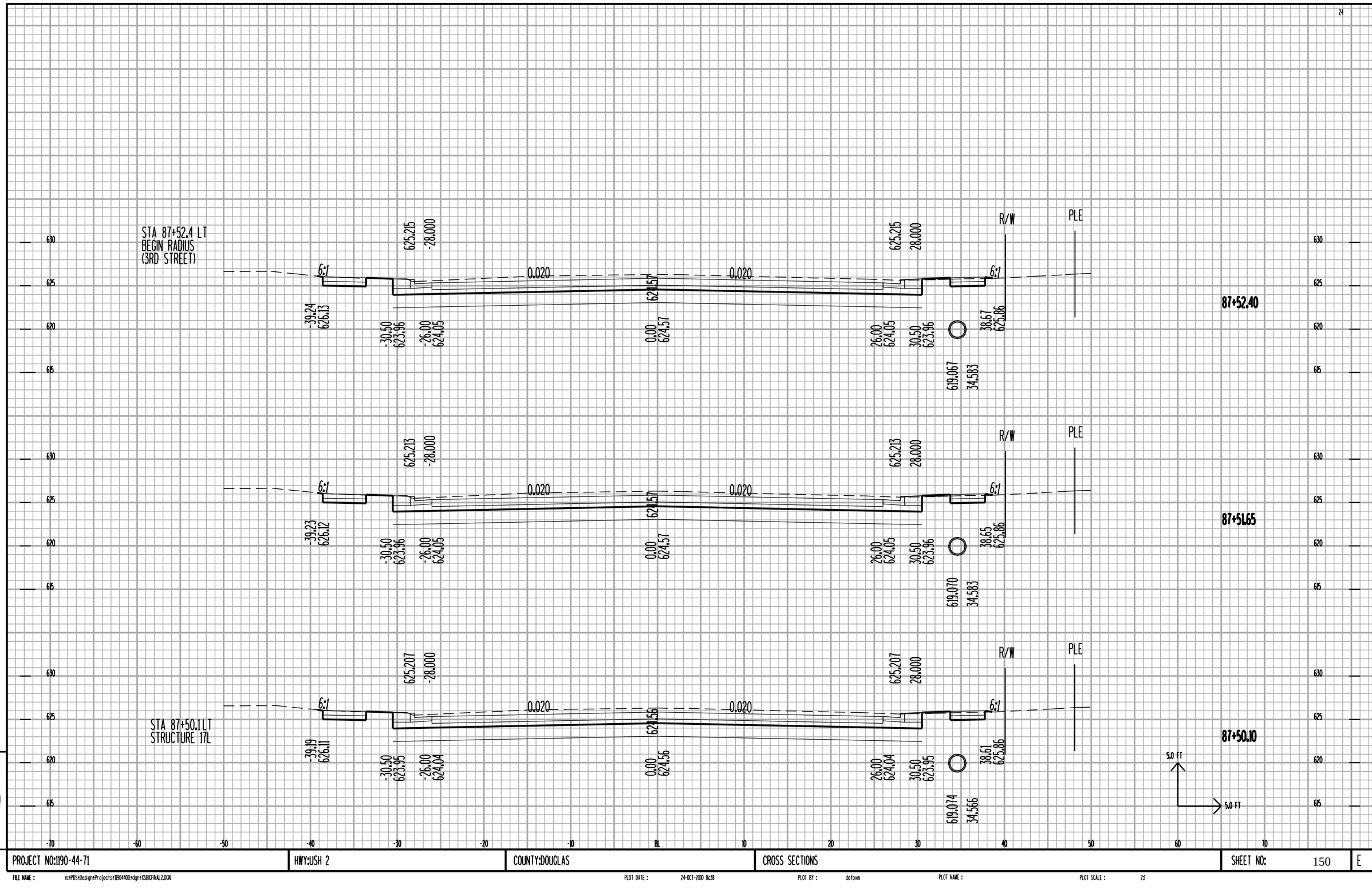
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 149	E

FILE NAME : nc=PDS=Designs=Projects=1190400=dgn=XSBGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



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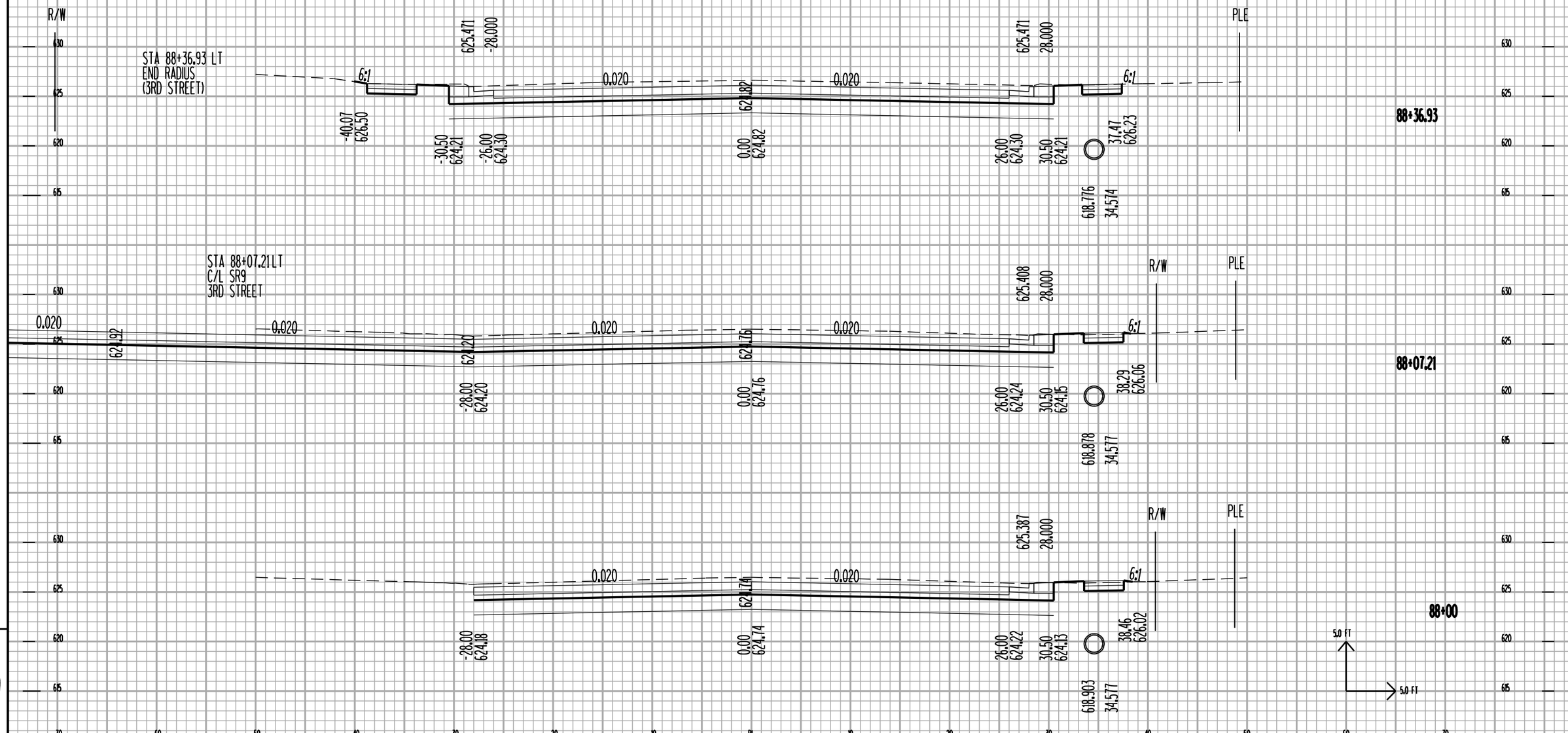
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 150	E

FILE NAME : nc=PDS=Design=Projects=1190400=dgn=XSBGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



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PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 151	E

FILE NAME : nc=PDS=Designs=Projects=1190400=dgn=XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

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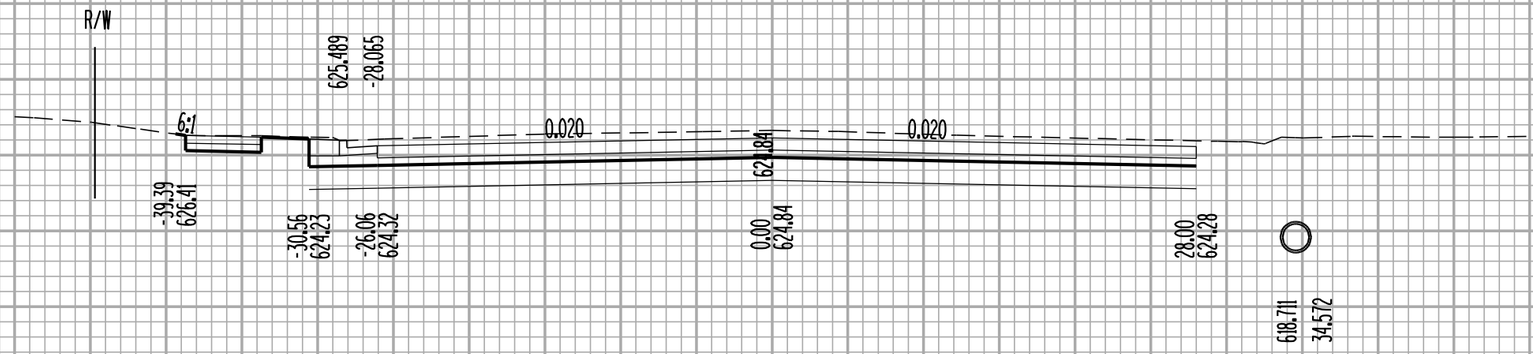
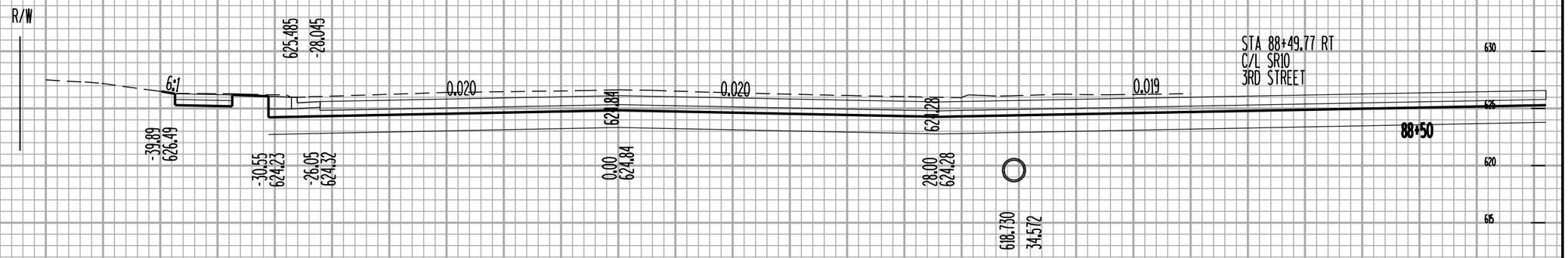
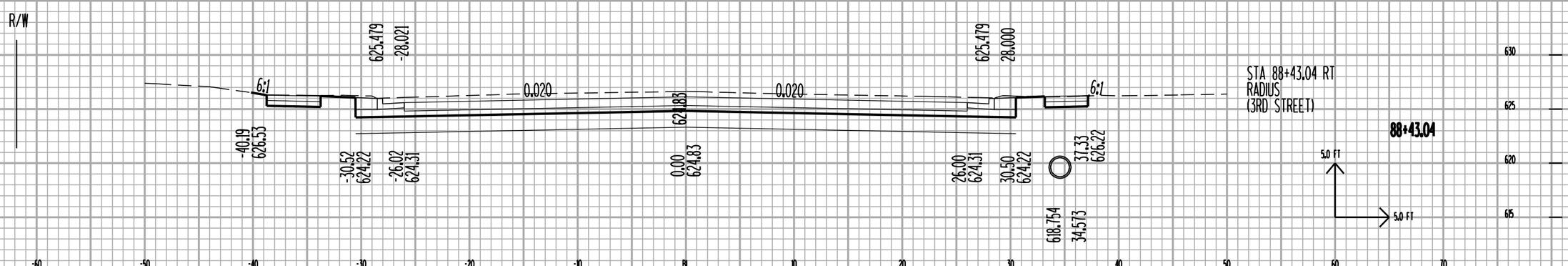


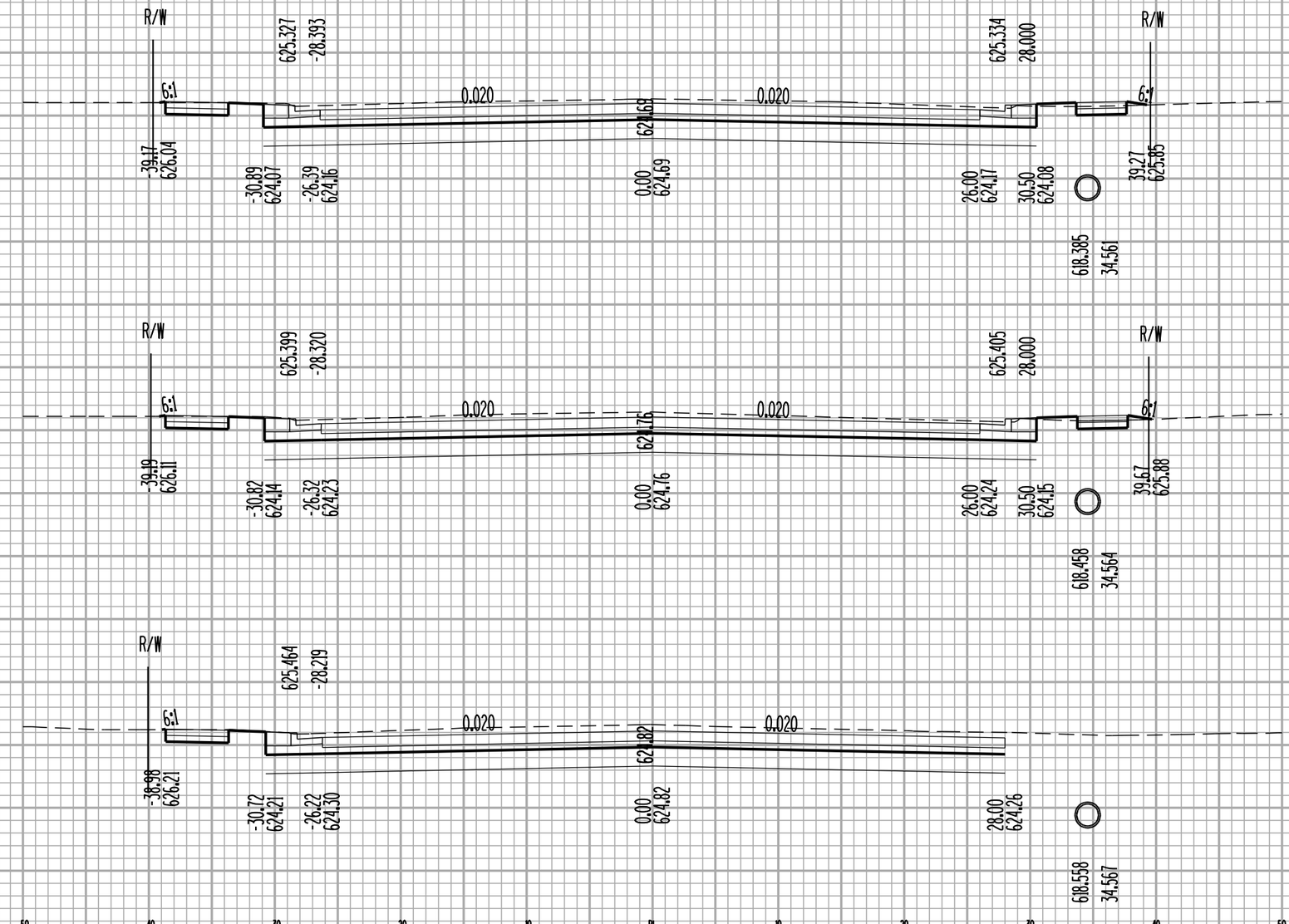




-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 152	E

FILE NAME : nc=PDS=Design=Projects=1190440D=dgn=XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



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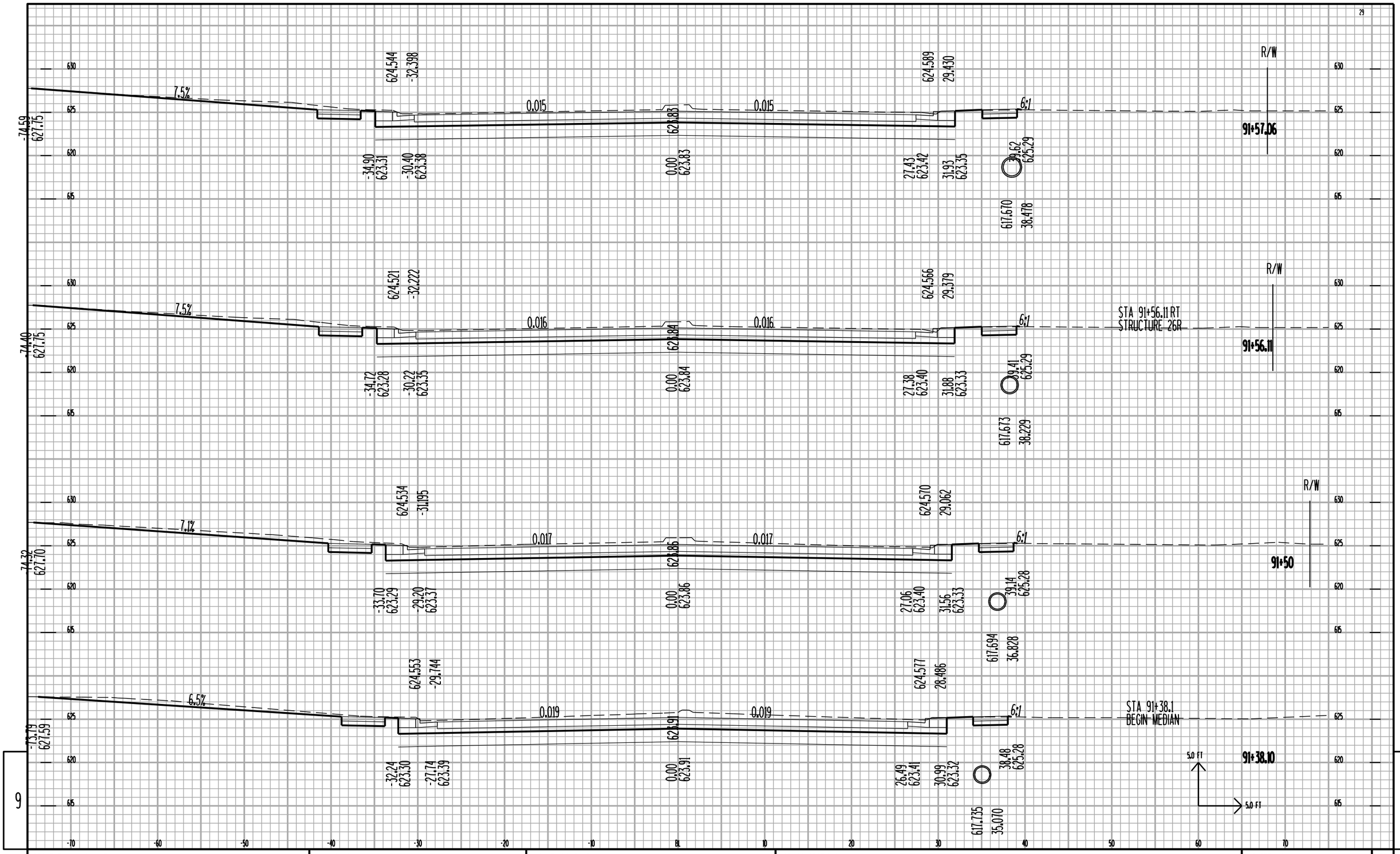
PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 153	E

9

FILE NAME : nc=P0S=0Designs0Projects=1190400=dgn=XSBGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2=1

PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 154	E

FILE NAME : nc:#P05#Design#Projects#1190440#dgn#XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 15:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1



PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 155	E

FILE NAME : nc:\PDS\Designs\Projects\1190400\dgn\XSBGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

STA 92+32
END GRADING
MATCH EXISTING

92+50

624.505
-67.524

624.509
66.128

0.003

0.003

6:1

621.53

92+32

-70.02
623.32

-65.52
623.34

0.00
623.53

64.13
623.34

68.63
623.33

624.451
-51.657

624.483
46.246

0.006

0.006

6:1

621.58

92+15.90

-54.16
623.26

-49.66
623.28

0.00
623.58

44.25
623.32

48.75
623.29

56.97
625.22

STA 92+12.2 LT
STRUCTURE 19L

624.477
-50.001

624.522
42.394

0.006

0.006

6:1

623.60

-74.50
627.45

-52.50
623.28

-48.00
623.31

0.00
623.60

40.39
623.36

44.89
623.33

53.16
625.27

92+12.20

617.104
63.427

624.473
-44.932

624.558
34.337

0.008

0.008

6:1

623.65

R/W

92+00

627.42

-47.43
623.27

-42.93
623.31

0.00
623.65

32.34
623.39

36.84
623.36

46.21
625.49

5.0 FT

5.0 FT

617.229
59.045

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

9

9

PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 156	E

FILE NAME : nc:#P05#Designs#Projects#1190400#dgn#XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2010 16:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

9

9

PROJECT NO:1190-44-71	HWY:USH 2	COUNTY:DOUGLAS	CROSS SECTIONS	SHEET NO: 157	E

FILE NAME : nc:\PDS\Designs\Projects\1190400\dgn\XSBIGFINAL2.DGN PLOT DATE : 24-OCT-2000 16:38 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 2:1

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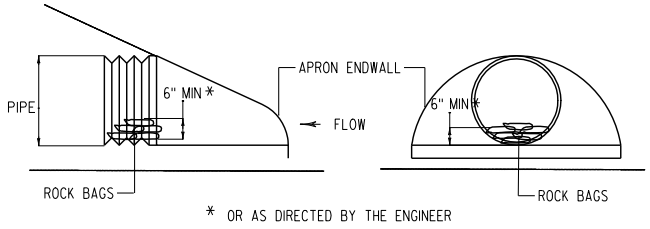
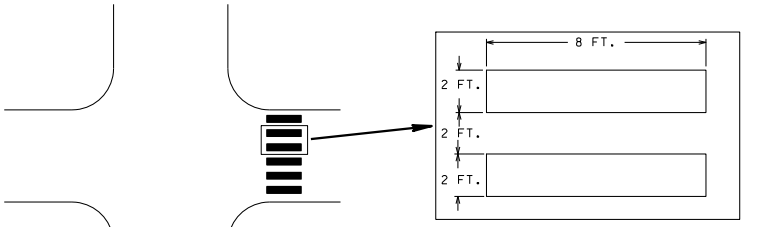
2

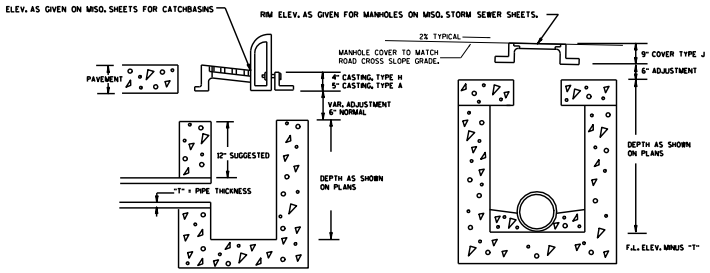


CULVERT PIPE CHECK



NOTE:
1. BARS ARE WHITE
2. NUMBER OF CROSSWALKS DETERMINED BY NEED
3. NUMBER OF BARS IS DETERMINED BY HIGHWAY WIDTH

DETAIL FOR PAVEMENT MARKING, CROSSWALK, EPOXY SPECIAL

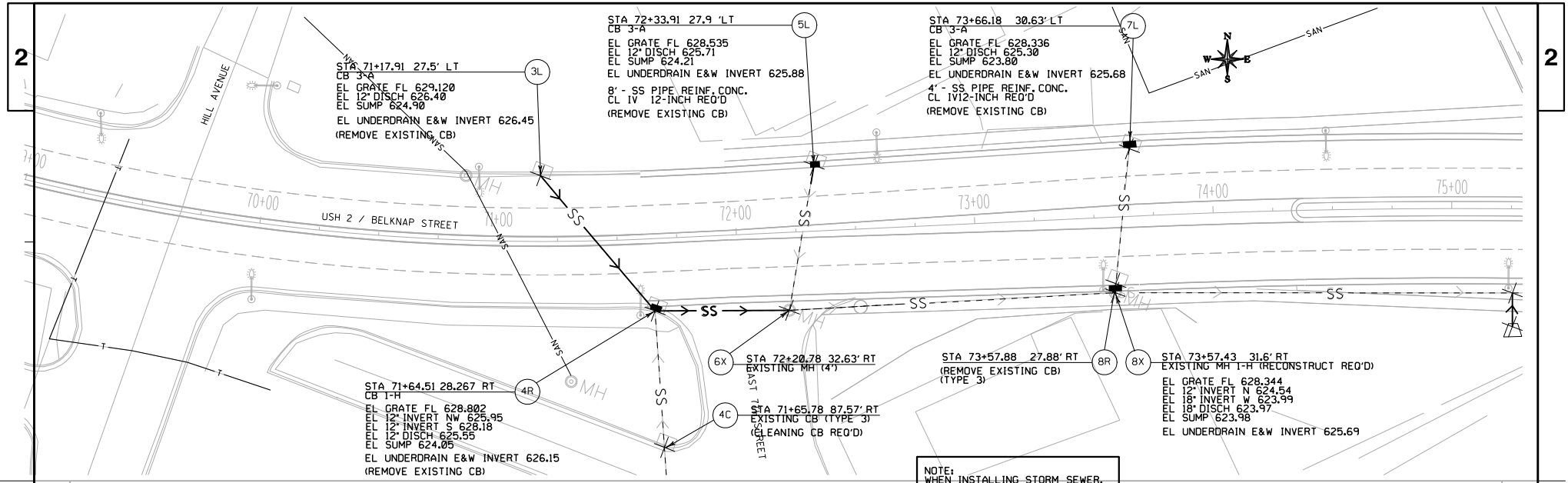


CATCH BASIN DETAIL

MANHOLE DETAIL

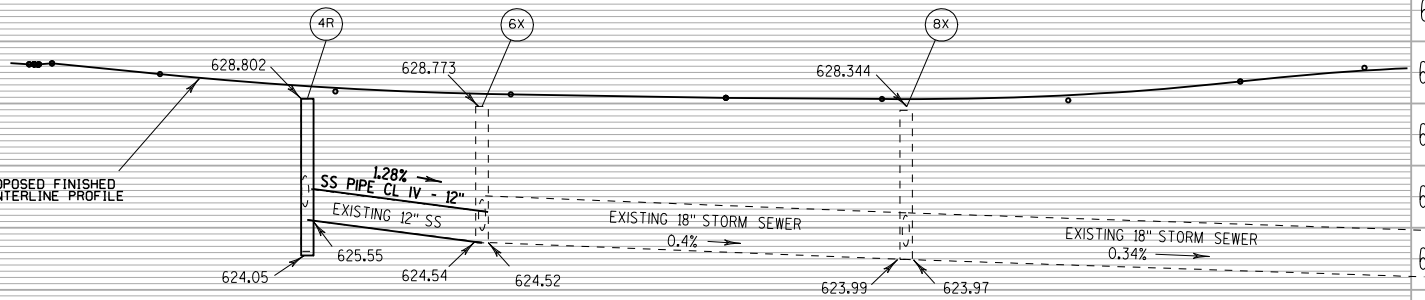
1190-44-71
Addendum #1
Revised Sheet 9
6/6/2011

PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST.)	COUNTY: DOUGLAS	CONSTRUCTION DETAILS	SHEET	E

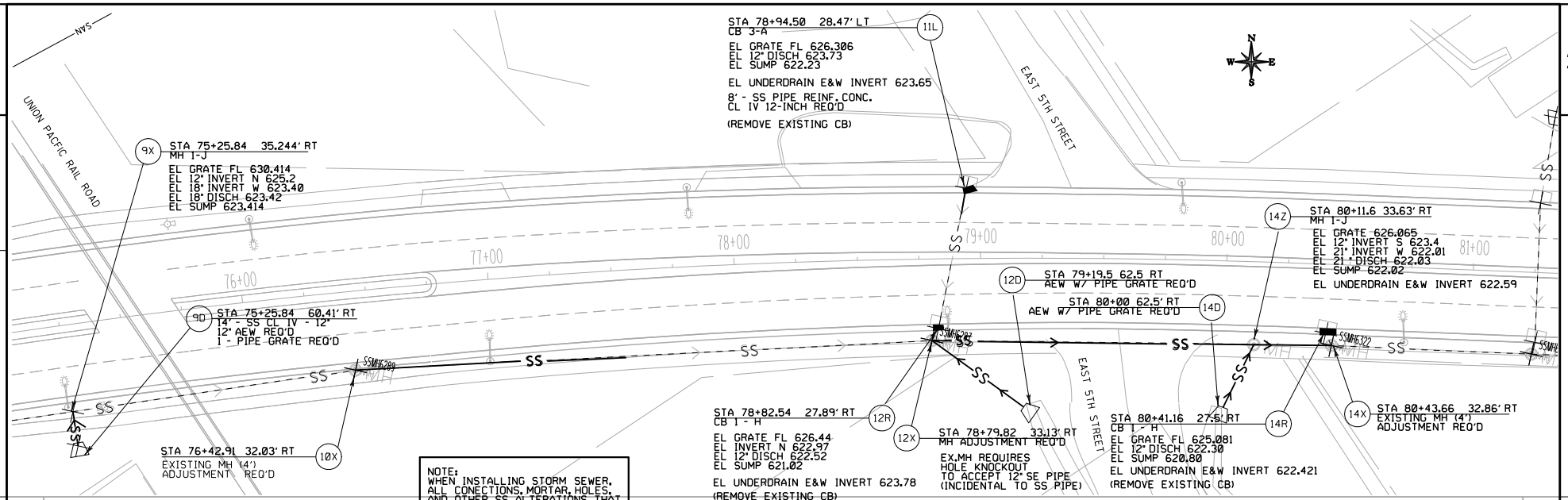


NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CL IV.

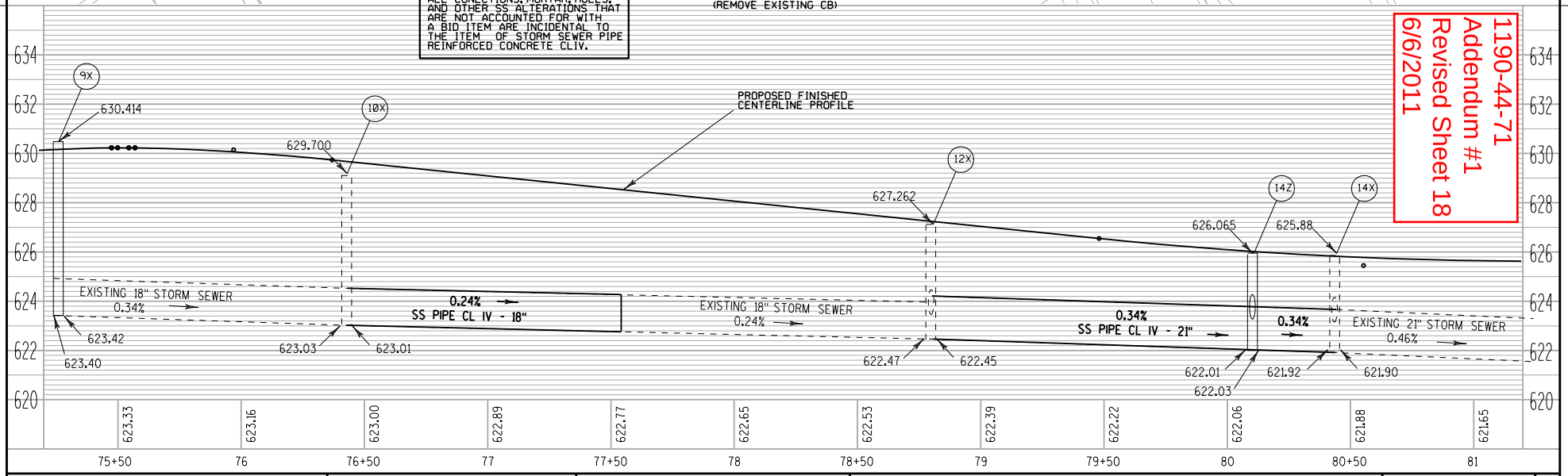
1190-44-71
Addendum #1
Revised Sheet 17
6/6/2011



PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET	E



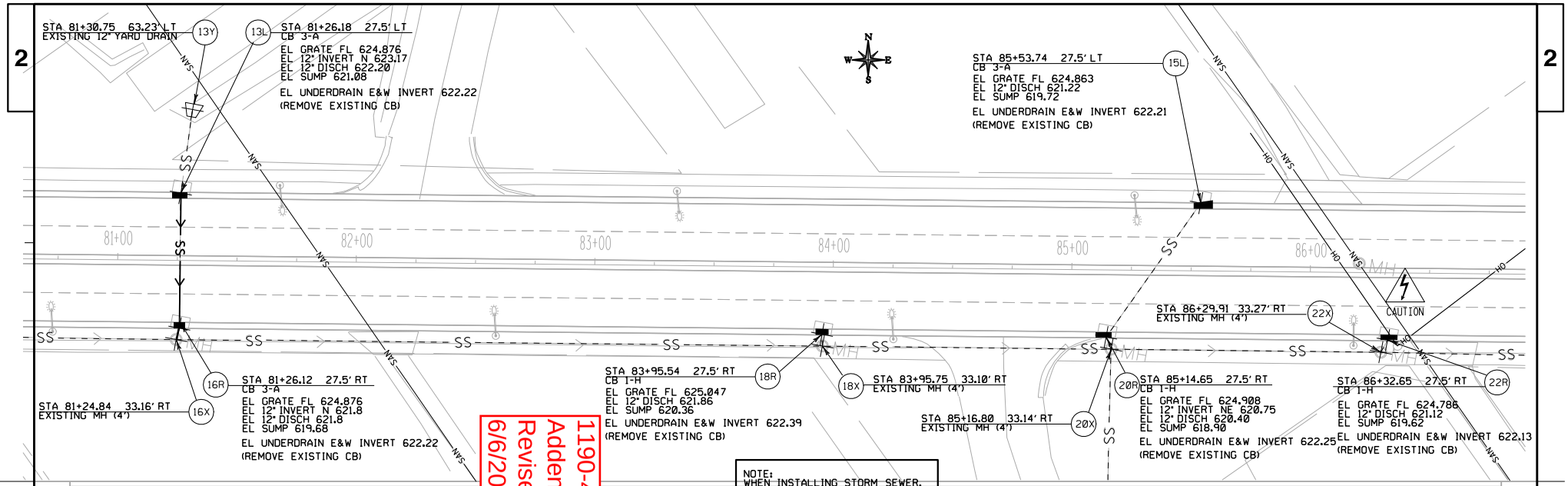
NOTE:
WHEN INSTALLING STORM SEWER, ALL CONECTIONS, MORTAR, HOLES, AND OTHER SS ALTERATIONS THAT ARE NOT ACCOUNTED FOR WITH A BID ITEM ARE INCIDENTAL TO THE ITEM OF STORM SEWER PIPE REINFORCED CONCRETE CL IV.



1190-44-71
Addendum #1
Revised Sheet 18
6/6/2011

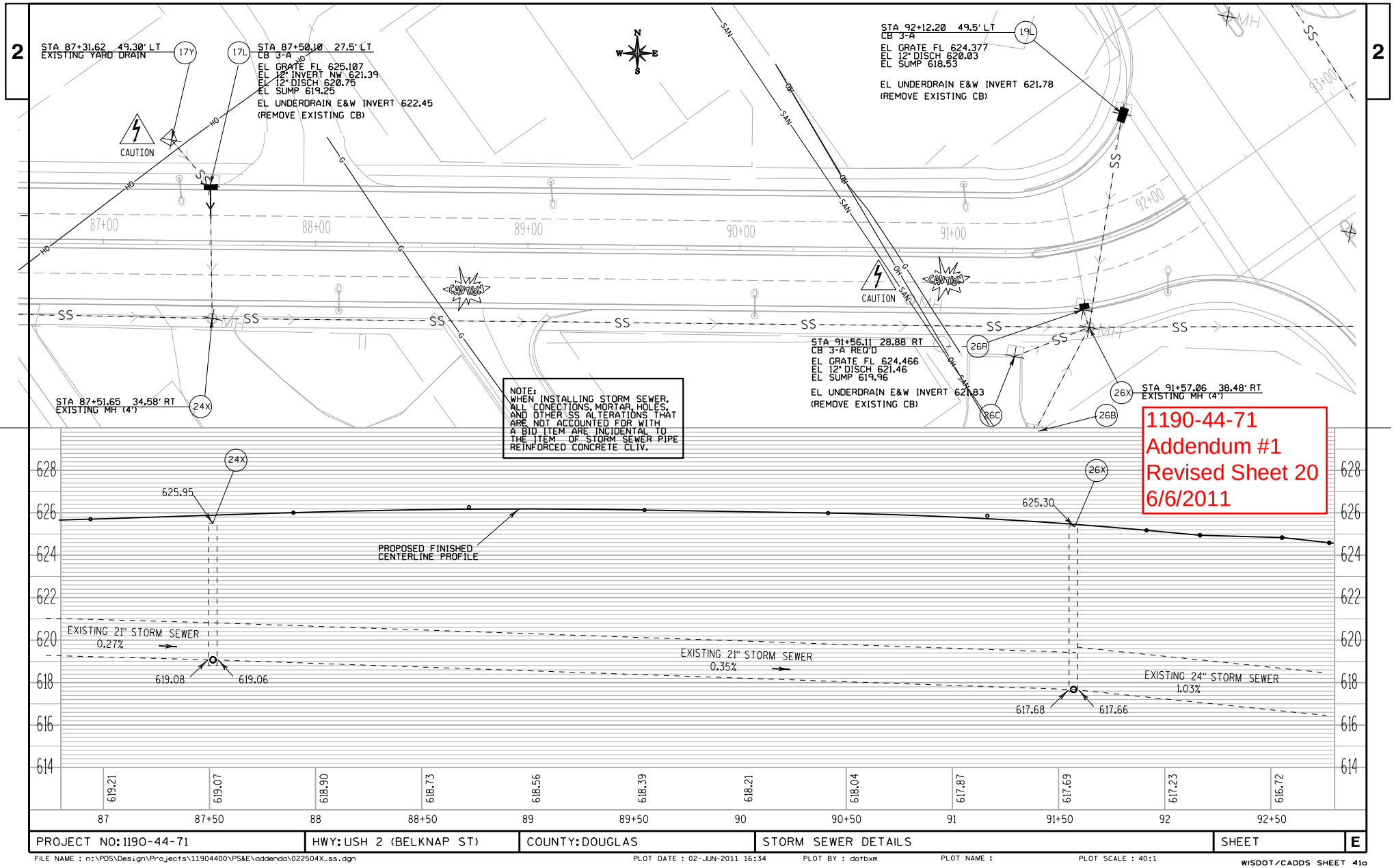
PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET	E

FILE NAME : n:\PDS\Design\Projects\11904400\PS&E\addenda\022502X_ss.dgn PLOT DATE : 02-JUN-2011 16:34 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 41o



PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET	E

FILE NAME : n:\PDS\Design\Projects\11904400\PS&E\addenda\022503x_ss.dgn PLOT DATE : 02-JUN-2011 16:34 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1
WISDOT/CADDS SHEET 41a



PROJECT NO: 1190-44-71	HWY: USH 2 (BELKNAP ST)	COUNTY: DOUGLAS	STORM SEWER DETAILS	SHEET	E

FILE NAME : n:\PDS\Design\Projects\11904400\PS&E\addenda\022504X_ss.dgn PLOT DATE : 02-JUN-2011 16:34 PLOT BY : dotbxm PLOT NAME : PLOT SCALE : 40:1 WISDOT/CADDS SHEET 41o

3

CONCRETE SIDEWALK

STATION TO STATION	LOCATION	SIDEWALK 4-INCH 602.0405 SF	SIDEWALK 6-INCH 602.0415 SF	SIDEWALK CURE & SEAL SPV.0165(02) SF		REMARKS
71+00 - 71+74	RT	444		444	6	FT WIDTH
72+31 - 79+30	RT	3495		3495	5	FT WIDTH
79+92	RT	50		50		CURB RAMP
79+75 - 82+07	RT	1160		1160	5	FT WIDTH
82+07 - 82+23	RT		80	80		ALLEY
84+43	RT	50		50		CURB RAMP
84+99	RT	50		50		CURB RAMP
86+60 - 86+72	RT		60	60		ALLEY
87+24 - 87+63	RT		195	195		CE
88+57	RT	50		50		CURB RAMP
89+15	RT	75		75		CURB RAMP
92+05 - 92+38	RT	86		86		E 2ND RADIUS
93+23	RT	75		75		CURB RAMP
UNDISTRIBUTED	RT	2000		2000		
73+05 - 73+52	LT		235	235		PE
76+72 - 77+07	LT		175	175		FE
77+92 - 78+20	LT		140	140		CE
73+50 - 79+08	LT	2615		2615	5	FT WIDTH
79+69	LT	50		50		CURB RAMP
79+75 82+00	LT	1125		1125	5	FT WIDTH
82+04	LT	50		50		CURB RAMP
82+60	LT	50		50		CURB RAMP
85+93 - 86+09	LT		80	80		ALLEY
85+90 - 91+25	LT	2595		2595	5	FT WIDTH
87+65	LT	50		50		CURB RAMP
88+23	LT	50		50		CURB RAMP
93+23	LT	75		75		CURB RAMP
UNDISTRIBUTED	LT	2000		2000		
TOTAL 0010		16195**	965	17160 *		

*ADDITIONAL QUANTITY SHOWN WITH 15 1/2" MEDIAN SPECIAL, SAFETY ISLAND, AND CATEGORY 0020 SIDEWALK
**ADDITIONAL QUANTITY IN CATEGORY 0020

CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

STATION	LOCATION	602.0515 SF	REMARKS
71+71	RT	8	7TH ST
72+32	RT	8	7TH ST
75+30	LT	8	RR
75+44	LT	8	RR
75+70	RT	8	RR
75+82	RT	8	RR
79+00	LT	8	5TH ST
79+70	LT	8	5TH ST
79+26	RT	8	5TH ST
79+89	RT	8	5TH ST
79+79	LT	8	SW
80+00	RT	8	SW
82+03	LT	8	2ND AVE
82+61	LT	8	2ND AVE
84+45	RT	8	4TH ST
84+97	RT	8	4TH ST
87+65	LT	8	3RD ST
88+24	LT	8	3RD ST
88+57	RT	8	3RD ST
89+16	RT	8	3RD ST
92+16	LT & RT	24	2ND ST
92+35	LT	8	2ND ST
93+10	LT & RT	16	2ND ST
93+21	LT & RT	16	2ND ST
TOTAL 0010		224	

1190-44-71
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6/6/2011

CONCRETE SIDEWALK

STATION TO STATION	LOCATION	SIDEWALK 4-INCH 602.0405 SF	SIDEWALK CURE & SEAL SPV.0165(02) SF	REMARKS
91+25 - 92+44	LT	898	898	
TOTAL 0020		898	898 ***	

***ADDITIONAL QUANTITY SHOWN WITH 15 1/2" MEDIAN SPECIAL, SAFETY ISLAND, AND CATEGORY 0010 SIDEWALK

1190-44-71
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STORM SEWER SUMMARY

CAT.	STRUCTU NUMBER	RIM FEET	SUMP FEET	DEPTH FEET	STATION	OFFSET	LOCATION	RCP CLASS IV 12" SS 608.0412 LF	AEW FOR RCP 12" 522.1012 EACH	PIPE GRATES 611.9800.S EACH	RCP CLASS IV 18" SS 608.0418 LF	RCP CLASS IV 21" SS 608.0421 LF	ADJUST MH COVERS 611.8110 EACH	RECONST. MANHOLES 611.0420 EACH	MH COVER TYPE J 611.0530 EACH	CATCH BASIN TYPE 1 611.0101 EACH	CATCH BASIN TYPE 3 611.0105 EACH	MANHOLE TYPE 1 611.0201 EACH	INLET COVER TYPE A 611.0600 EACH	INLET COVER TYPE H 611.0624 EACH	CONST. STAKING SS 650.4000 EACH	REMARKS
0010	3L	629.12	624.9	3.30	71+17.9	-27.5	LT										1		1			1	
0010	4R	628.8	624.05	3.92	71+64.51	28.3	RT	74								1				1		1	
0010	4C	629.58	UNKNOWN	-	71+65.78	87.6	RT																
0010	5L	628.535	624.21	3.41	72+33.91	-27.9	LT	8									1		1			1	
0010	6X	628.773	624.53	-	72+20.78	32.6	RT						1									1	
0010	7L	628.336	623.8	3.62	73+66.18	-30.6	LT	4									1		1			1	
0010	8X	628.444	623.98	-	73+57.43	31.6	RT	4						1							1	1	REALIGN LID OFFSET
0010	9X	630.414	623.414	5.96	75+25.84	35.2	RT								1			1				1	
0010	9D	626.2	-	-	75+25.84	60.4	RT	20	1	1												1	
0010	10X	629.7	623.02	-	76+42.91	32.0	RT				113		1									1	
0010	11L	626.306	622.23	3.16	78+94.5	-28.5	LT	8									1		1			1	
0010	12R	626.44	621.02	4.59	78+82.54	27.9	RT	6								1				1		1	
0010	12X	627.262	622.46	-	78+79.82	33.1	RT					164	1									1	
0010	12D	624.5	-	-	79+19.5	62.5	RT	50	1	1												1	
0010	14R	625.081	620.8	3.45	80+41.16	27.5	RT	5								1				1		1	
0010	14X	625.88	621.91	-	80+43.66	32.9	RT						1									1	
0010	14D	624.4	-	-	80+00	62.5	RT	34	1	1												1	
0010	14Z	626.065	622.02	3.04	80+11.6	33.6	RT								1			1				1	
0010	13L	624.876	621.08	2.88	81+26.18	-27.5	LT										1		1			1	
0010	16R	624.876	619.68	4.28	81+26.12	27.5	RT	57									1		1			1	
0010	16X	625.68	621.54	-	81+24.84	33.2	RT	5					1									1	
0010	18R	625.047	620.36	3.85	83+95.54	27.5	RT									1				1		1	
0010	18X	625.85	620.44	-	83+95.75	33.1	RT	5					1									1	
0010	15L	624.863	619.72	4.23	85+53.74	-27.5	LT										1		1			1	
0010	20R	624.908	618.9	5.17	85+14.65	27.5	RT									1				1		1	
0010	20X	625.7	619.54	-	85+16.8	33.1	RT	5					1									1	
0010	22R	624.786	619.62	4.33	86+32.65	27.5	RT									1				1		1	
0010	22X	625.59	619.4	-	86+29.91	33.3	RT	6					1									1	
0010	17L	625.107	619.25	4.94	87+50.1	-27.5	LT	16									1		1			1	
0010	24X	625.95	619.07	-	87+51.65	34.6	RT						1									1	
0010	19L	624.377	618.53	4.93	92+12.2	-49.5	LT										1		1			1	
0010	26R	624.466	619.96	3.59	91+56.11	28.9	RT										1		1			1	
0010	26X	625.3	617.67	-	91+57.06	38.5	RT	9					1									1	
							TOTAL	316	3	3	113	164	10	1	2	6	10	2	10	7	32		

PROJECT NO:	1190-44-71	HWY:	USH 2	COUNTY:	DOUGLAS	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

PERMANENT SIGNING SUMMARY

STATION	LOCATION	POSTS TUBULAR STEEL 2X2-INCH X 8-FT 634.0808 EACH	POSTS TUBULAR STEEL 2X2-INCH X 12-FT 634.0812 EACH	MOVING SIGNS TYPE II 638.2102 EACH	SIGNS REFLECTIVE TYPE II 637.0202 SIGN CODE	SIZE	MESSAGE	AREA S.F.	REMARKS
73+25	RT		1		W10-1	36"X36"	RR CROSSING	7.07	
73+25	RT		-	1		24"X30"	NO HORN	5.00	(REUSE EXISTING SIGN)
71+60	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
71+60	RT		-	1		30"X36"	BONG HERTITAGE CENTER	7.50	(REUSE EXISTING SIGN)
72+25	E 7TH ST		1		R1-1	30"X30"	STOP	6.25	EAST 7TH STREET (RT)
72+60	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
73+50	RT		-		MG3-2	24"X12"	EAST	2.00	ON LIGHT POLE
73+50	RT		-		M1-93	24"X24"	LK SUPERIOR CIRCLE TOUR	4.00	ON LIGHT POLE
73+50	RT		-		M3-2	24"X12"	EAST	2.00	ON LIGHT POLE
73+50	RT		-		M1-4	24"X24"	USH 2	4.00	ON LIGHT POLE
73+50	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
74+35	MEDIAN	1			R4-7	24"X30"	KEEP RIGHT	5.00	ON LIGHT POLE
74+50	LT		-		W3-3	36"X36"	(STOP LIGHT)	9.00	ON LIGHT POLE
74+50	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
75+25	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
76+10	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
76+70	MEDIAN	1			R4-7	24"X30"	KEEP RIGHT	5.00	
77+00	RT		-		R2-1	24"X30"	SPEED LIMIT 30	5.00	ON LIGHT POLE
77+00	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
78+85	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
79+00	LT		1		R1-1	30"X30"	STOP	6.25	EAST 5TH STREET (LT)
79+80	RT		1		R1-1	30"X30"	STOP	6.25	EAST 5TH STREET (RT)
77+85	LT		-		W10-1	36"X36"	RR CROSSING	7.07	ON LIGHT POLE
77+85	LT		-	1		24"X30"	NO HORN	5.00	(REUSE EXISTING SIGN)
79+80	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
80+70	RT		-	1			TOURIST INFO CENTER	6.25	(REUSE EXISTING SIGN)
80+70	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
81+00	LT	1			W5-56	18"X18"	(DOTS)	2.25	
81+00	LT	1			W5-56	18"X18"	(DOTS)	2.25	
81+00	LT	1			W5-56	18"X18"	(DOTS)	2.25	
81+70	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
82+00	LT		1		R1-1	30"X30"	STOP	6.25	EAST 2ND AVE (LT)
82+60	RT		-		M2-1	21"X15"	JCT	3.00	ON LIGHT POLE
82+60	RT		-		M1-4	24"X24"	USH 53	3.00	ON LIGHT POLE
82+60	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
83+30	LT		-		MG3-2	24"X12"	WEST	2.00	ON LIGHT POLE
83+30	LT		-		M1-93	24"X24"	LK SUPERIOR CIRCLE TOUR	4.00	ON LIGHT POLE
83+30	LT		-		M3-2	24"X12"	WEST	2.00	ON LIGHT POLE
83+30	LT		-		M1-4	24"X24"	USH 2	4.00	ON LIGHT POLE
83+30	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
83+70	LT	1			W5-56	18"X18"	(DOTS)	2.25	
83+70	LT	1			W5-56	18"X18"	(DOTS)	2.25	
83+70	LT	1			W5-56	18"X18"	(DOTS)	2.25	
84+25	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
85+00	RT		1		R1-1	30"X30"	STOP	6.25	EAST 4TH STREET (RT)
85+15	RT	1			W5-56	18"X18"	(DOTS)	2.25	
85+15	RT	1			W5-56	18"X18"	(DOTS)	2.25	
85+15	RT	1			W5-56	18"X18"	(DOTS)	2.25	

CONTINUED ON FOLLOWING PAGE

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Addendum #1
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PERMANENT SIGNING SUMMARY

STATION	LOCATION	POSTS TUBULAR STEEL 2X2-INCH X 8-FT 634.0808 EACH	POSTS TUBULAR STEEL 2X2-INCH X 12-FT 634.0812 EACH	MOVING SIGNS TYPE II 638.2102 EACH	SIGNS REFLECTIVE TYPE II 637.0202 SIGN CODE	SIZE	MESSAGE	AREA S.F.	REMARKS
85+25	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
86+20	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
86+30	RT		1		R3-50R	30"X36"	ARROW RT - ONLY	7.50	
87+30	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
87+55	LT	1			W5-56	18"X18"	(DOTS)	2.25	
87+55	LT	1			W5-56	18"X18"	(DOTS)	2.25	
87+55	LT	1			W5-56	18"X18"	(DOTS)	2.25	
87+70	LT		1		R1-1	30"X30"	STOP	6.25	EAST 3RD STREET (LT)
88+10	RT		-		W3-3	36"X36"	(STOP LIGHT)	9.00	ON LIGHT POLE
88+10	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
89+10	LT				R2-1	24"X30"	SPEED LIMIT 30	5.00	ON LIGHT POLE
89+10	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
89+10	RT		1		R1-1	30"X30"	STOP	6.25	EAST 3RD STREET (RT)
89+40	RT		2		M1-4	24"X24"	USH 53	4.00	
89+40	RT				M3-2	24"X12"	EAST		
89+40	RT		-		M6-4	21"X21"	DOUBLE ARROW	3.06	
89+40	RT		-		M1-4	24"X24"	USH 2	4.00	
89+40	RT		-		M6-1	21"X21"	ARROW	3.06	
89+80	RT		1		R3-8	36"X30"	LANE ARROWS	7.50	
90+10	RT		-		MG3-2	24"X12"	EAST	2.00	ON LIGHT POLE
90+10	RT		-		M1-93	24"X24"	LK SUPERIOR CIRCLE TOUR	4.00	ON LIGHT POLE
90+10	RT		-		MG6-1	21"X21"	ARROW	3.06	ON LIGHT POLE
90+10	RT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
90+25	LT	1			W5-56	18"X18"	(DOTS)	2.25	
90+25	LT	1			W5-56	18"X18"	(DOTS)	2.25	
90+25	LT	1			W5-56	18"X18"	(DOTS)	2.25	
91+10	LT		-		M3-2	24"X12"	WEST	2.00	ON LIGHT POLE
91+10	LT		-		M1-4	24"X24"	USH 2	4.00	ON LIGHT POLE
91+10	LT		-		R7-1D	18"X24"	NO PARKING	3.00	ON LIGHT POLE
91+15	RT		2		D1-3	66"X36"	DULUTH /ASHLAND SPOONER	16.50	
91+20	RT	1			W5-56	18"X18"	(DOTS)	2.25	
91+20	RT	1			W5-56	18"X18"	(DOTS)	2.25	
91+20	RT	1			W5-56	18"X18"	(DOTS)	2.25	
91+40	MEDIAN	1			R4-7	24"X30"	KEEP RIGHT	5.00	
92+10	MEDIAN	1			R4-7	24"X30"	KEEP RIGHT	5.00	
12+24	MEDIAN	1			R4-7	24"X30"	KEEP RIGHT	5.00	EAST 2ND STREET
	TOTALS	22	14	4				329	

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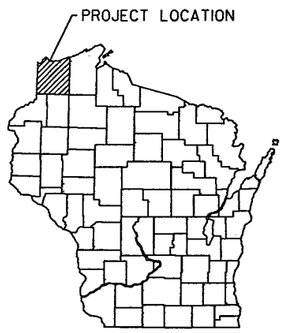
PROJECT ID: 1195-00-74
WITH: K.SINGH & ASSOC., INC.

COUNTY: DOUGLAS

ORDER OF SHEETS

TOTAL SHEETS =

PROJECT LOCATION



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CITY OF SUPERIOR, EAST SECOND STREET

(E STREET INTERSECTION)

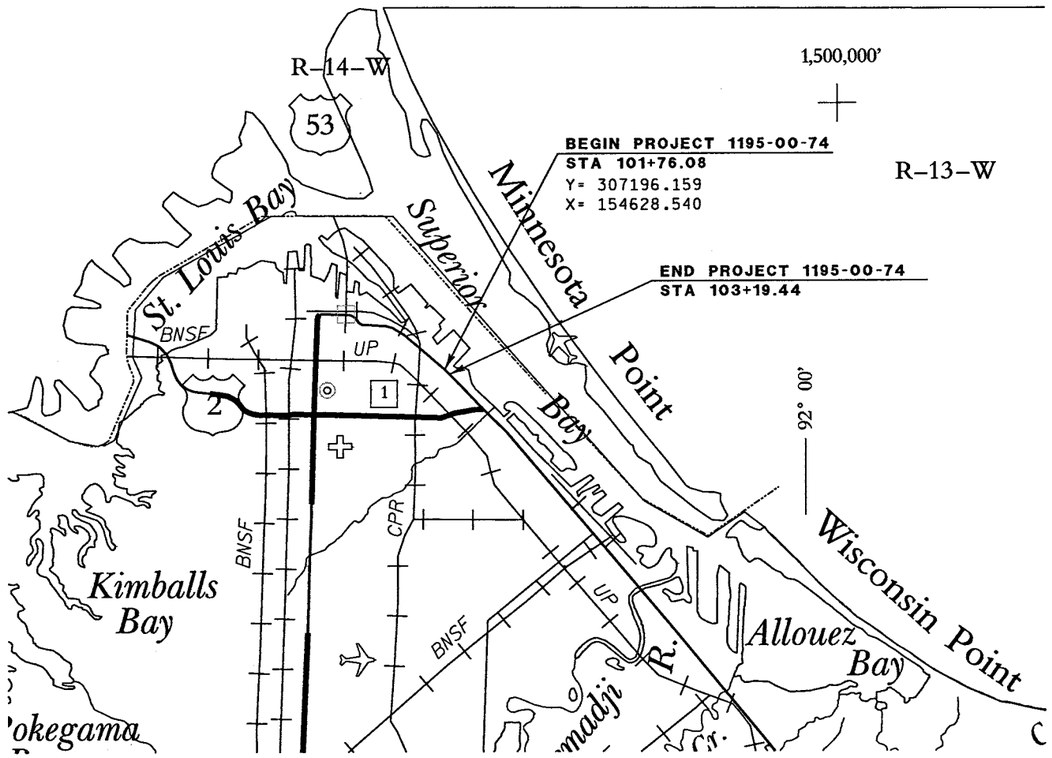
U.S.H. 53

DOUGLAS COUNTY

STATE PROJECT NUMBER
1195-00-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1195-00-74		

CHANGE ORDER WORK



LAYOUT
SCALE 0 12.45 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.027 MI.

-"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DOUGLAS COUNTY."

DESIGN DESIGNATION

A.A.D.T. (2010)	=	16,400
A.A.D.T. (2030)	=	18,800
D.H.V.	=	6.7
D.D.	=	---
T.	=	8.4
DESIGN SPEED	=	45 mph
ESALS	=	---

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
		TELEPHONE	T
		WATER	W
WOODED OR SHRUB AREA		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

ORIGINAL PLANS PREPARED BY:

SEH

WISCONSIN
JARROD S. STARREN
38465
EAU CLAIRE, WI
8/18/11
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor
Designer
Project Manager
Regional Examiner
Regional Supervisor
C.O. Examiner

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
ASPH	ASPHALTIC
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
CE	COMMERCIAL ENTRANCE
CL OR C/L OR ℄	CENTER LINE
	CENTRAL ANGLE OR DELTA
CONC	CONCRETE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CR	CREEK
CY	CUBIC YARD
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DISCH	DISCHARGE
DG	DITCH GRADE
DWY	DRIVEWAY
X	EAST GRID COORDINATE
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
EOR	END POINT OF RADIUS
EL	ELEVATION
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FC	FACE OF CURB
FF	FACE TO FACE
FERT	FERTILIZE
FE	FIELD ENTRANCE
FL	FLOW LINE
FO	FIBER OPTIC
CWT	HUNDREDWEIGHT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE ON PIN
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LS	LUMP SUM
MH	MANHOLE
MOR	MID POINT OF RADIUS
NC	NORMAL CROWN
NO	NUMBER
OBLIT	OBLITERATE
PAVT	PAVEMENT
PE	PRIVATE ENTRANCE
PVRC	POINT OF VERTICAL REVERSE CURVE
QOR	QUARTER POINT OF RADIUS
R	RADIUS
REQ'D	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
R	RIVER
RDWY	ROADWAY
R/L OR ℄	REFERENCE LINE
SALV	SALVAGED
SAN	SANITARY SEWER
SF	SQUARE FEET
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STA	STATION
SS	STORM SEWER
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SE	SUPERELEVATION RATE
TC	TOP OF CURB
T OR TN	TOWN
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
Y	NORTH GRID COORDINATE
YD	YARD

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE APPROXIMATE USGS DATUM.

WHEN THE QUANTITY OF THE ITEMS OF BASE OR SURFACE COURSE IS MEASURED FOR PAYMENT BY THE TON THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL 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.

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

ALIGNMENT DATA AND COORDINATE DATA ON THIS PLAN ARE BASED ON AERIAL PHOTOGRAPHY, A SURVEY WAS NOT COMPLETED FOR THIS PROJECT.

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

BEARINGS SHOWN ON THE PLANS ARE GRID BEARINGS TO THE NEAREST SECOND.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

CONSTRUCT INSIDE EDGE OF SIDEWALK 1/4INCH HIGHER THAN THE TOP OF CURB, WHEN THEY ARE ADJACENT TO EACH OTHER.

ALL CURB AND GUTTER RADII ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

TOP OF CASTING ELEVATIONS SHOWN FOR INLETS REFER TO THE CASTING ELEVATION AT THE EDGE OF PAVEMENT.

ALL STORM SEWER INVERTS, ELEVATIONS, PIPE LENGTHS, AND GRADES ARE COMPUTED CENTER-TO-CENTER OF STRUCTURES.

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

ASPHALTIC SURFACE TO BE PLACED IN THREE OR MORE LAYERS.

ORDER OF DETAIL SHEETS

- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- STORM SEWER AND EROSION CONTROL
- SIGNING AND PAVEMENT MARKING
- TRAFFIC CONTROL

DESIGN CONTACT

SEH INC.
1409 HAMMOND AVENUE SUITE 315
SUPERIOR, WI 54880
TELEPHONE: 218.969.9992
ATTENTION: SCOTT WEYANDT
EMAIL: SWEYANDT@SEHINC.COM

DNR LIAISON

STATE OF WISCONSIN
NORTHWEST DISTRICT
HWY 70 WEST
P.O. BOX 309
SPOONER, WI 54801
TELEPHONE: 715.635.4229
ATTENTION: AMY CRONK
EMAIL: AMY.CRONK@WISCONSIN.GOV

UTILITY CONTACTS

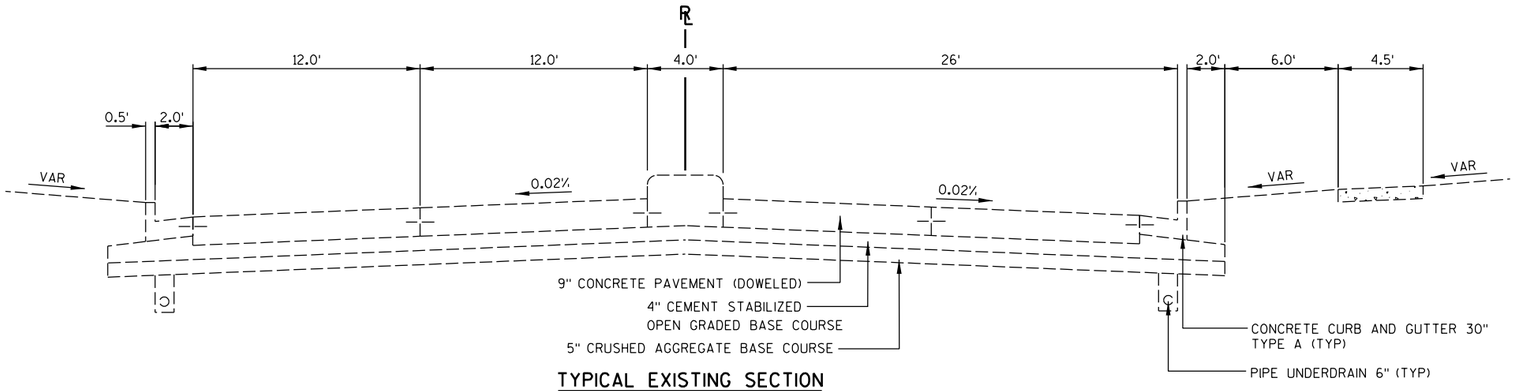
SUPERIOR WATER, LIGHT & POWER CO.
2915 HILL AVENUE
P.O. BOX 519
SUPERIOR, WISCONSIN 54880
TELEPHONE: 715.395.6315
ATTENTION: KEVIN HABERMAN
EMAIL: KHABERMAN@SWLP.COM

TELEPHONE: 218.355.5949
ATTENTION: TIM MELBY (WATER & GAS)
EMAIL: TMELBY@SWLP.COM

CITY OF SUPERIOR
PUBLIC WORKS
1316 N 14TH STREET
SUPERIOR, WISCONSIN 54880
TELEPHONE: 715.395.7539
ATTENTION: JEFF GOETZMAN
EMAIL: GOETZMANJ@CI.SUPERIOR.WI.US

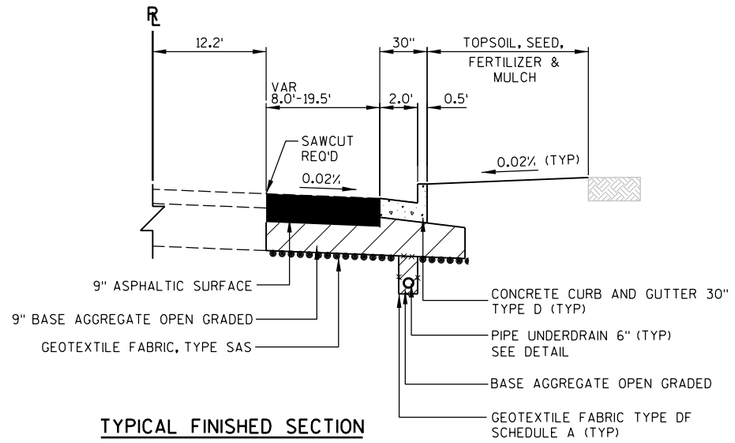
811 DIGGERS HOTLINE

CALL 811 OR (800)242.8511
(877)500.9592 (EMERGENCY ONLY)
www.DiggersHotline.com



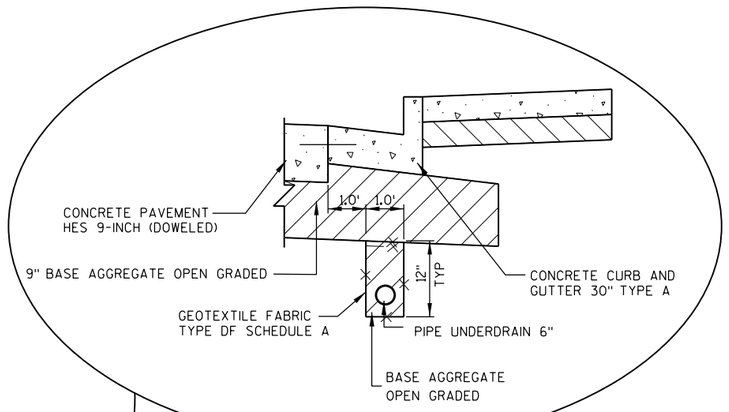
TYPICAL EXISTING SECTION

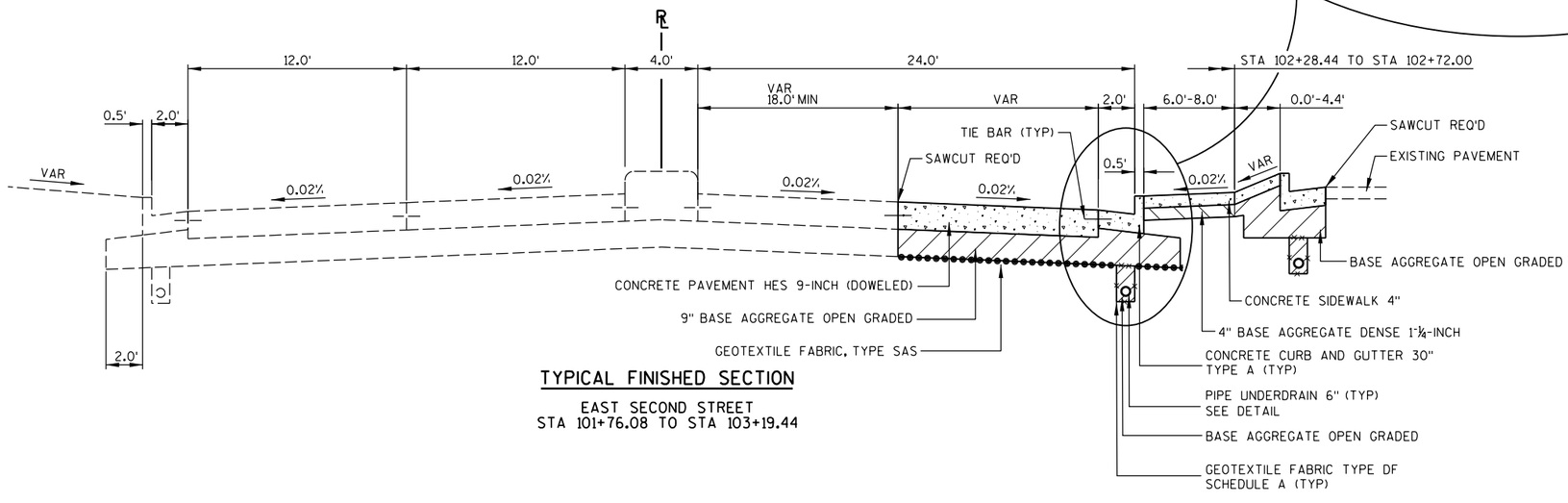
EAST SECOND STREET
STA 101+76 TO STA 103+19



TYPICAL FINISHED SECTION

E STREET
STA 49+20.45 TO STA 49+47.00





TYPICAL FINISHED SECTION

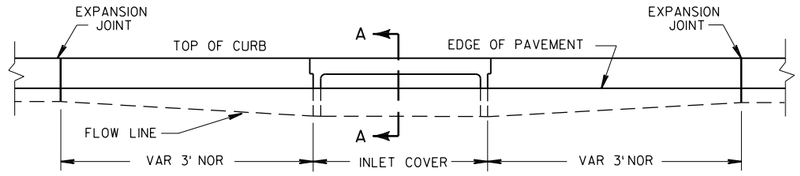
EAST SECOND STREET
STA 101+76.08 TO STA 103+19.44

(1) PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

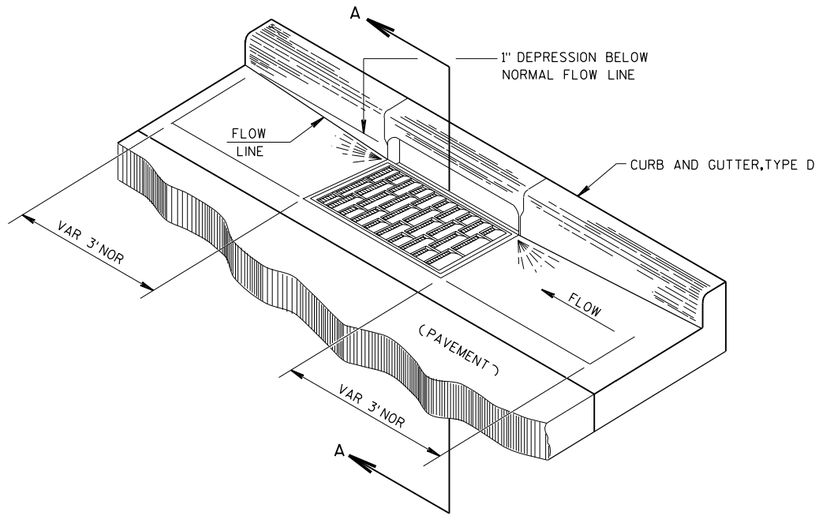
IF THERE IS A CONFLICT WITH THE STORM SEWER, THE PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE STORM SEWER TOWARDS THE CENTER OF THE ROAD.

TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.

PROJECT NO: 1195-00-74	HWY: EAST SECOND STREET	COUNTY: DOUGLAS	TYPICAL SECTIONS	SHEET	E



ELEVATION

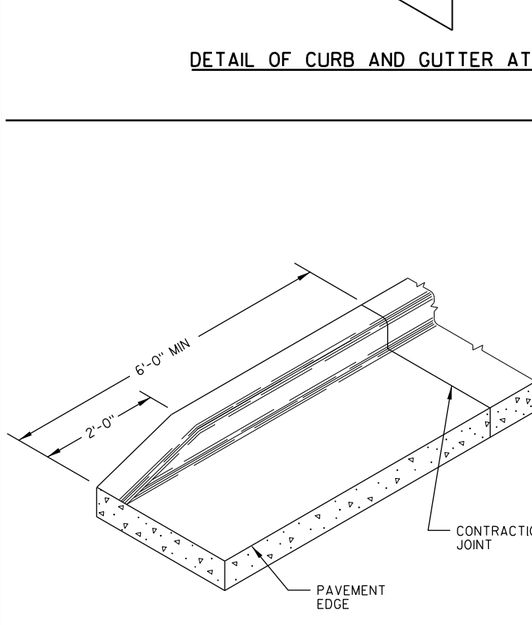


DETAIL OF CURB AND GUTTER AT CATCH BASINS

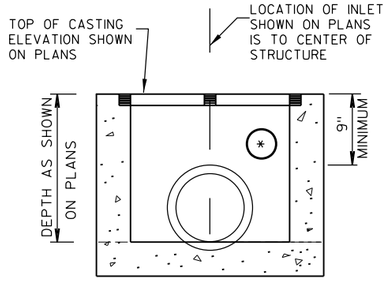
RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .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 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 0.21 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.08 ACRES



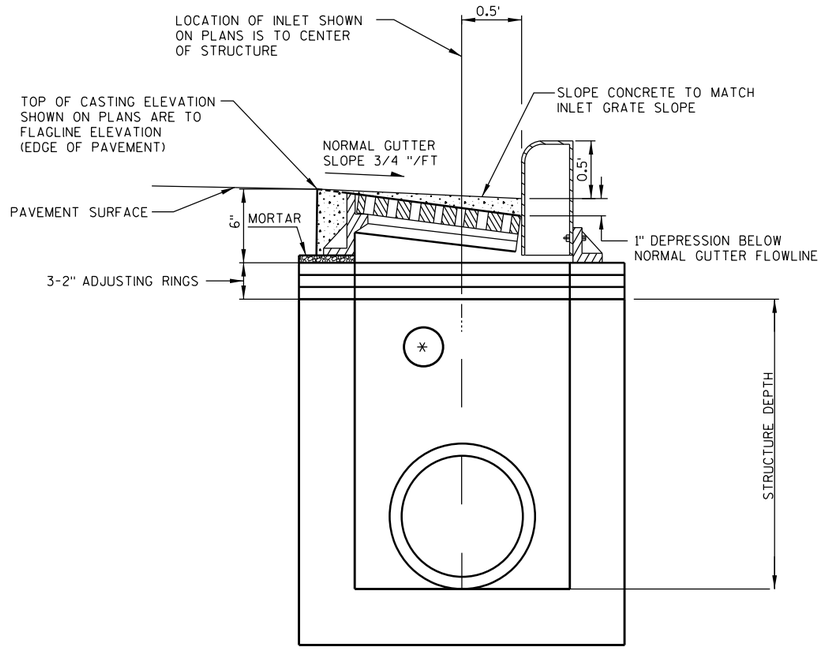
CURB END TREATMENT



INLET, TYPE 8 MODIFIED

FOR ADDITIONAL DETAILS SEE S.D.D.

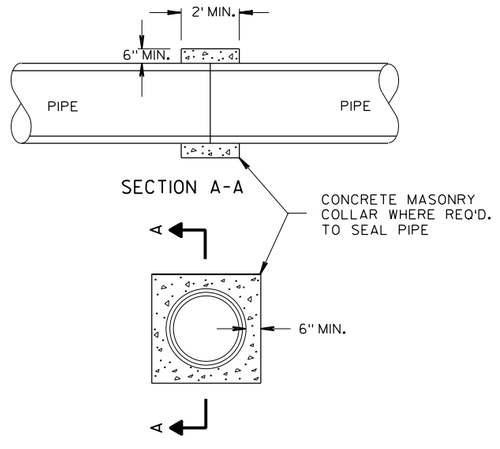
✳ CUT IN PIPE UNDERDRAIN. CUTTING AND CONNECTING INTO THE INLET IS CONSIDERED INCIDENTAL TO THE INLET ITEM



INLET LOCATION

TYPE H-S INLET COVER

✳ CUT IN PIPE UNDERDRAIN. CUTTING AND CONNECTING INTO THE INLET IS CONSIDERED INCIDENTAL TO THE INLET ITEM



CONCRETE COLLAR DETAIL

101+00 | 102+00 | 103+00 | 50+00 | 49+00

USH 53 WB

USH 53 EB

S 45°46'48" E

N 43°31'46" E

E STREET

STA 102+13.7, 23.5' RT
1 - CULVERT PIPE CONCRETE COLLAR
INV = 612.10

STA 102+08.8, 44.7' RT
INL 3-H-S
TC = 614.55
INV = 612.19

END PROJECT
STA 103+19.44
MATCH EXISTING
SAWCUT REQ'D

SWL&P

SWL&P AND
CHARTER

BEGIN CONCRETE PAVEMENT
END ASPHALTIC SURFACE
STA 49+47.00

BEGIN CONSTRUCTION
STA 49+20.45

Concrete Sidewalk

Pedestrian Curb

SPV Retaining wall
C&G

Sawcut

Curb & Gutter 30" Type D

Asphaltic Surface

Concrete Terrace

SLOPE INTERCEPTS

R/W

PEDESTRIAN CURB

46.0' R
(CENTER IS CC1)

STA 102+08.1, 62.7' RT
INL 8-MS
TC = 614.50
INV = 612.31

CC1

CC2

20.00'

26.00'

21.73'

12.23'

12.23'

5.0'

+04.95

+18.62

+39.44

+75.00

+89.57

+28.44

0.9

8.0'

4.4'

+39.44

+50.00

+72.00

614.95 614.91 614.76 614.77 614.79 614.81 614.84 614.85 614.93

614.86 614.83 614.63 614.67 614.75 614.81

614.94 615.01 615.17 614.60 615.50 615.71 615.42 615.30

615.10 615.15 615.23 615.42 615.00

1 SALVAGE BLUE STONE BETWEEN PARKING LOT AND E STREET AND MOVE TO LOCATION (1A), THE SOUTH SIDE OF THE PARKING LOT, AS DIRECTED BY THE ENGINEER.

2 MOVE BOULDERS FROM NORTH SIDE OF PARKING LOT, TO EAST SIDE OF PARKING LOT BETWEEN OTHER EXISTING BOULDERS (2A) AS DIRECTED BY THE ENGINEER.

3 MATCH NEW CONCRETE JOINTS WITH EXISTING CONCRETE JOINTS.

RADIUS POINT TABLE

POINT	STATION	OFFSET	RADIUS	COORDINATES
CC1	102+39.44 USH 53 48+08.09 E STREET	91.0' RT 75.0' RT	57.0'	Y = 307117.087 X = 154640.005
CC2	101+88.84 USH 53 49+24.46 E STREET	75.2' RT 24.6' RT	4.0'	Y = 307163.673 X = 154614.732

PROJECT NO: 1195-00-74	HWY: EAST SECOND STREET	COUNTY: DOUGLAS	INTERSECTION DETAILS	SHEET	E

2

GENERAL TRAFFIC CONTROL NOTES:

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

DURING HOURS OF DARKNESS ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE A.

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

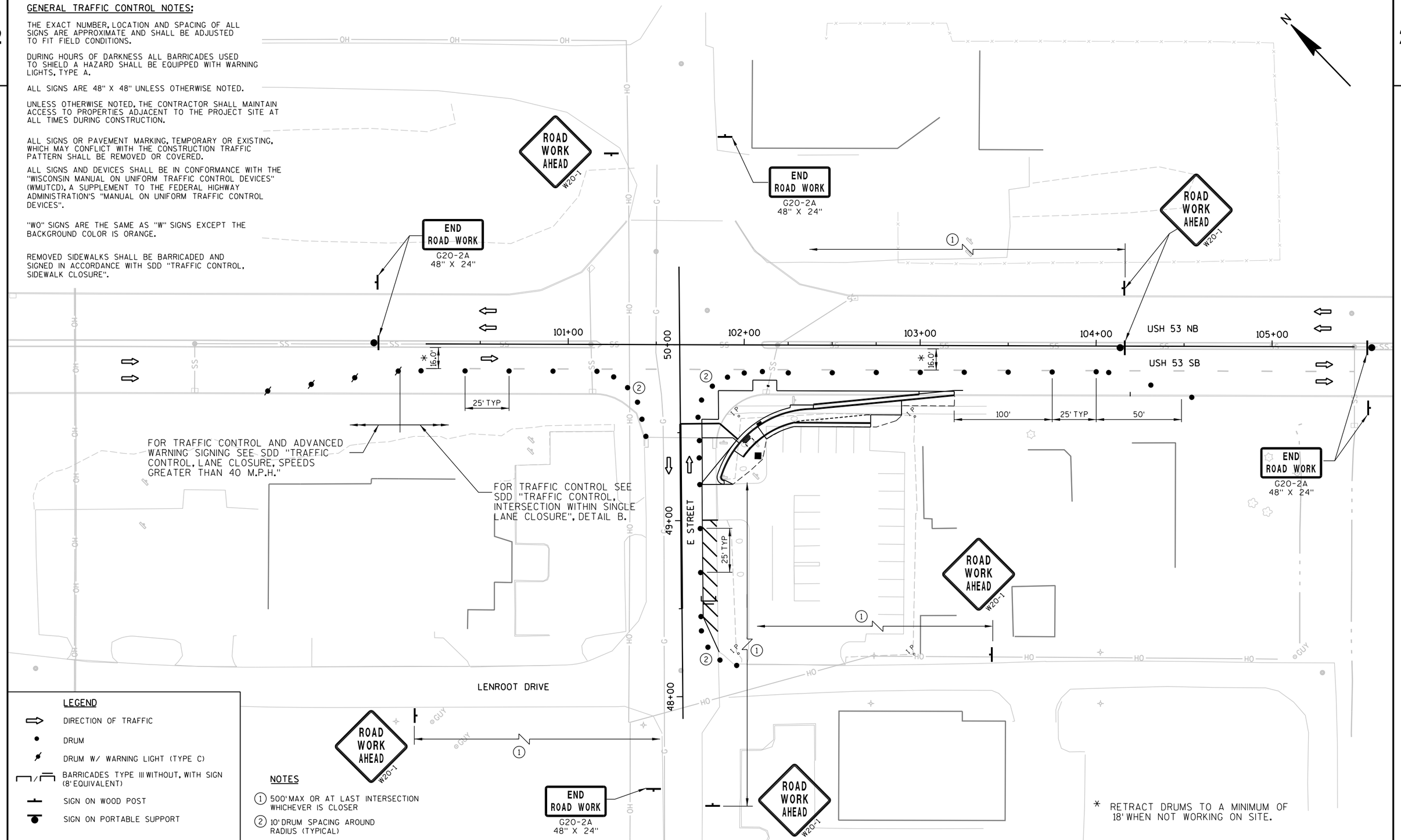
UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTIES ADJACENT TO THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

ALL SIGNS OR PAVEMENT MARKING, TEMPORARY OR EXISTING, WHICH MAY CONFLICT WITH THE CONSTRUCTION TRAFFIC PATTERN SHALL BE REMOVED OR COVERED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), A SUPPLEMENT TO THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

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

REMOVED SIDEWALKS SHALL BE BARRICADED AND SIGNED IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, SIDEWALK CLOSURE".



LEGEND

- DIRECTION OF TRAFFIC
- DRUM
- DRUM W/ WARNING LIGHT (TYPE C)
- BARRICADES TYPE III WITHOUT, WITH SIGN (8' EQUIVALENT)
- SIGN ON WOOD POST
- SIGN ON PORTABLE SUPPORT

NOTES

(1) 500' MAX OR AT LAST INTERSECTION WHICHEVER IS CLOSER

(2) 10' DRUM SPACING AROUND RADIUS (TYPICAL)

* RETRACT DRUMS TO A MINIMUM OF 18' WHEN NOT WORKING ON SITE.

PROJECT NO: 1195-00-74	HWY: EAST SECOND STREET	COUNTY: DOUGLAS	TRAFFIC CONTROL	SHEET	E

3

REMOVING PAVEMENT 204.0100

STATION	LOCATION	SY
EAST SECOND STREET		
101+76.1 - 103+19.4	RT	33
TOTAL		33

REMOVING CURB AND GUTTER 204.0150

STATION	LOCATION	LF
EAST SECOND STREET		
101+82.4 - 102+14.5	RADIUS - R	50
102+14.5 - 103+19.4	TAPER - RT	105
TOTAL		155

REMOVING CONCRETE SIDEWALK 204.0155

STATION	LOCATION	SY
EAST SECOND STREET		
101+82.4 - 102+14.5	RT	50
TOTAL		50

REMOVING INLETS 204.0220

STATION	LOCATION	LF
EAST SECOND STREET		
102+12.6	RADIUS - RT	1
TOTAL		1

BASE AGGREGATE 305.0125 310.0115

STATION	LOCATION	DENSE GRADED 1 1/4-INCH CY	OPEN GRADED CY
EAST SECOND STREET			
101+76.1 - 103+19.4	RT- UNDER PAV'T AND C&G		75
101+76.1 - 103+19.4	UNDERDRAIN TRENCH		10
101+94.6 - 102+89.6	UNDER SIDEWALK	15	
102+11.7 - 102+72.0	UNDERDRAIN TRENCH		5
TOTAL		15	90

CONCRETE PAVEMENT HES 415.1090

STATION	LOCATION	9-INCH SY
EAST SECOND STREET		
101+76.1 - 103+19.4	RT	160
TOTAL		160

DRILLED TIE BARS 416.0610

STATION	LOCATION	EACH
EAST SECOND STREET		
101+76.1 - 101+85.6	RT	4
101+85.6 - 102+05.0	RT	8
102+05.0 - 102+18.6	RT	5
102+18.6 - 103+19.4	RT	40
TOTAL		57

DRILLED DOWEL BARS 416.0620

STATION	LOCATION	EACH
EAST SECOND STREET		
101+76.1	RT	9
101+85.6	RT	16
102+05.0	RT	5
102+18.6	RT	5
TOTAL		35

ASPHALTIC ITEMS 465.0105 455.0605

STATION	LOCATION	ASPHALTIC SURFACE TON	TACK COAT GAL
E STREET			
49+20 - 49+47	RT	20	3
TOTAL		20	3

CULVERT PIPE CONCRETE COLLAR 520.8000.S

STATION	LOCATION	EACH
EAST SECOND STREET		
102+13.7	23.5' RT	1
TOTAL		1

CONCRETE CURB & GUTTER 601.0409 601.0411

STATION	LOCATION	30-INCH TYPE A LF	30-INCH TYPE D LF
EAST SECOND STREET			
49+20.4 - 49+43.9	RADIUS - RT		27
101+97.3 - 102+39.4	RADIUS - RT	49	
102+39.4 - 103+19.4	TAPER - RT	81	
102+11.7 - 102+72.0	PARKING LOT - RT		63
TOTAL		130	90

CONCRETE CURB PEDESTRIAN 601.0600

STATION	LOCATION	LF
EAST SECOND STREET		
101+99.5 - 102+11.7	BACK OF SIDEWALK - RT	17
TOTAL		17

CONCRETE SIDEWALK 4-INCH 602.0405

STATION	LOCATION	SF
EAST SECOND STREET		
101+94.6 - 102+89.6	RT	730
TOTAL		730

COMMON EXCAVATION 205.0100

STATION	LOCATION	COMMON EXCAVATION (1) CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	WASTE	BORROW	COMMENT
EAST SECOND STREET										
23+00 - 29+20	RT	125	33	92	0.0	0.0	92	92	0	PAVEMENT & BASE REMOVAL
E STREET										
49+20 - 49+79	RT	60	2	58	1.5	2.0	56	56	0	PAVEMENT & BASE REMOVAL
UNDISTRIBUTED	RT	10	0	10	0.0	0.0	10	10	0	PAVEMENT & BASE REMOVAL
TOTALS		195	35	160	1.5	2.0	158	158	0	

1) Common Excavation is the sum of the Cut and EBS Excavation columns.
4) Salvaged/Unusable Pavement Curb & Gutter, Sidewalk and Asphalt Material
5) Available Material = Cut - Salvaged/Unusable Pavement Material
13) Expanded Fill. Factor = 1.3
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.

CURB RAMP DETECTABLE WARNING FIELD YELLOW — 602.0505

STATION	LOCATION	SF
EAST SECOND STREET		
101+01.8	RT	8
TOTAL		8

INLET PROTECTION — 628.7005 TYPE A EACH; 628.7015 TYPE C EACH

STATION	LOCATION	TYPE A EACH	TYPE C EACH
EAST SECOND STREET			
102+08.1	62.7' RT	1	1
102+08.8	44.7' RT	1	
TOTALS		2	1

* AS DIRECTED BY THE ENGINEER.

PIPE UNDERDRAIN — 612.0106 6-INCH LF

STATION	LOCATION	6-INCH LF
EAST SECOND STREET		
101+82.0 - 102+08.8	RT - FROM NORTH SIDE E STREET	40
101+84.8 - 102+39.4	RADIUS - RT	74
102+39.4 - 103+19.4	TAPER - RT	81
102+11.7 - 102+72.0	PARKING LOT - RT	65
TOTAL		260

* TEES/WYES NEEDED FOR CONNECTION TO EXISTING UNDERDRAIN ARE CONSIDERED INCIDENTAL TO THE ITEM PIPE UNDERDRAIN. CONNECT PIPE UNDERDRAIN INTO NEW TYPE 3 AND TYPE 8 INLETS. LOCATE BELOW CURB AND GUTTER (SEE TYPICAL)

STORM SEWER — 608.0315 SSPRC CLASS III 15-INCH LF; 608.0415 SSPRC CLASS IV 15-INCH LF; 611.0303 INLETS TYPE 3 EACH; 611.0305 INLETS TYPE 8 EACH; 611.0639 INLET COVERS TYPE H-S EACH; 611.0642 INLET COVERS TYPE MS EACH; TOP OF CASTING ELEV; INVERT ELEV; BOX DEPTH LF

STATION	LOCATION	SSPRC CLASS III 15-INCH LF	SSPRC CLASS IV 15-INCH LF	INLETS TYPE 3 EACH	INLETS TYPE 8 EACH	INLET COVERS TYPE H-S EACH	INLET COVERS TYPE MS EACH	TOP OF CASTING ELEV	INVERT ELEV	BOX DEPTH LF	COMMENTS
EAST SECOND STREET											
102+08.1	62.7' RT	18			1		1	614.50	612.31	2.19	GRADE AREA BEHIND CURB TO INLET
102+08.8	44.7' RT		22	1		1		614.55	612.19	2.05	REMOVE EXISTING INLET,TIE INTO EXISTING PIPE WITH CONCRETE COLLAR
TOTALS		18	22	1	1	1	1				

SIGNING ITEMS — 637.0202 SIGNS REFLECTIVE TYPE II SF; 634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH; 634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH; 638.2602 REMOVING SIGNS TYPE II EACH; 638.3000 REMOVING SMALL SIGN SUPPORTS EACH

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIGN SIZE W X H (INCHES)	SIGNS REFLECTIVE TYPE II SF	POSTS WOOD 4X6-INCH X 14-FT EACH	POSTS WOOD 4X6-INCH X 16-FT EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
1-1	J2-2	JCT	48 X 60	20.00		1	1	1
		53					1	
		ARROW - LEFT/RIGHT						
		TO						
		2					1	
		ARROW - RIGHT						
1-2	R1-1	STOP	36 X 36	7.46	1		1	1
1-3	R4-5L	TRUCKS USE LEFT LANE	24 X 30	5.00	1		1	2
TOTALS				32.46	2	1	5	4

TURF ESTABLISHMENT — 625.0100 TOPSOIL SY; 627.0200 MULCHING SY; 629.0210 FERTILIZER TYPE B CWT; 630.0140 SEEDING MIXTURE NO. 40 LBS; 630.0200 SEEDING TEMPORARY LBS

STATION	LOCATION	TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 40 LBS	SEEDING TEMPORARY LBS
EAST SECOND STREET						
101+84.8 - 103+19.4	RT	113	113	0.1	2.0	3.0
UNDISTRIBUTED		7	27	0.1	1.0	1.0
TOTALS		120	140	0.2	3	4

TRAFFIC CONTROL — 643.0300 DRUMS DAYS; 643.0410 BARRICADES TYPE II DAYS; 643.0420 BARRICADES TYPE III DAYS; 643.0705 WARNING LIGHTS TYPE A DAYS; 643.0715 WARNING LIGHTS TYPE C DAYS; 643.0800 ARROW BOARDS DAYS; 643.0900 SIGNS DAYS

STATION	DRUMS DAYS	BARRICADES TYPE II DAYS	BARRICADES TYPE III DAYS	WARNING LIGHTS TYPE A DAYS	WARNING LIGHTS TYPE C DAYS	ARROW BOARDS DAYS	SIGNS DAYS
EAST SECOND STREET							
147+86 - 152+48	1000	75	75	225	350	50	300
E STREET							
72+74 - 86+85	500	0	50	100	125	0	175
TOTALS	1500	75	125	325	475	50	475

MOBILIZATIONS — 628.1905 EROSION CONTROL EACH; 628.1910 EMERGENCY EROSION CONTROL EACH

STATION	LOCATION	EROSION CONTROL EACH	EMERGENCY EROSION CONTROL EACH
EAST SECOND STREET			
101+76.3 - 103+19.4	RT	1	1
TOTALS		1	1

GEOTEXTILE FABRIC — 645.0111 TYPE DF SCHEDULE A SY; 645.0140 TYPE SAS SY

STATION	LOCATION	TYPE DF SCHEDULE A SY	TYPE SAS SY
EAST SECOND STREET			
101+76.1 - 103+19.4	UNDER PAV'T & CURB - RT		270
101+76.1 - 103+19.4	UNDERDRAIN TRENCH	109	
102+11.7 - 102+72.0	UNDERDRAIN TRENCH	36	
TOTALS		145	270

PROJECT NO:1195-00-74	HWY:EAST SECOND STREET	COUNTY:DOUGLAS	MISCELLANEOUS QUANTITIES	SHEET	E

3

PAVEMENT MARKING

STATION	LOCATION	646.0106 EPOXY 4-INCH LF	647.0566 STOP LINE EPOXY 18-INCH LF	647.0716 DIAGONAL EPOXY 8-INCH LF	REMARKS
EAST SECOND STREET					
101+76.1 - 103+19.4	SB ℄	50			SKIP WHITE
102+39.0 - 103+19.4	RT	85			WHITE EDGELINE
E STREET					
48+25.0 - 49+25.0	RT	130			WHITE EDGELINE
48+25.0 - 49+00.0				100	12' LANE - SHLDR
48+50.0 - 49+55.0	℄	210			DOUBLE YELLOW ℄
49+55.0	RT		36		℄ TO CURB WITH ANGLE
TOTALS		475	36	100	

CONSTRUCTION STAKING

STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER CURB AND GUTTER LF	650.7000 CONCRETE PAVEMENT LF	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
EAST SECOND STREET							
49+20.4 - 49+43.9	RT			27			
101+76.1 - 103+19.4	RT		160		144	1	160
101+99.5 - 102+11.7	RT			17			
102+11.7 - 102+72.0	RT			63			
102+08.1	62.7' RT	1					
102+08.8	44.7' RT	1					
102+13.7	23.5' RT	1					
TOTALS		3	160	107	144	1	160

SAWING

STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF	COMMENT
EAST SECOND STREET				
101+76.1 - 103+19.4	RT		192.5	BEGIN CONSTRUCTION, ALONG JOINTS,INCLUDES CURB & GUTTER
102+11.7 - 102+72	RT	63		PARKING LOT EDGE
102+89.6	RT		5.0	SIDEWALK
103+19.4	RT		2.5	END CONSTRUCTION - C&G
E STREET				
49+20.4 - 49+47.0	RT	37		12' RT TO SHLDR
TOTALS		100	200	

MOVING BOULDERS SPV.0060.01

STATION	LOCATION	EACH
EAST SECOND STREET		
102+00.5	57' RT	1
102+05.7	47' RT	1
102+28.6	42' RT	1
102+42.8	43' RT	1
TOTAL		4

CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT SPV.0090.01

STATION	LOCATION	LF
EAST SECOND STREET		
49+20.4 - 49+43.9	RADIUS - RT	27
101+97.3 - 102+39.4	RADIUS - RT	49
101+99.5 - 102+11.7	BACK OF SIDEWALK - RT	17
102+39.4 - 103+19.4	TAPER - RT	81
102+11.7 - 102+72.0	PARKING LOT - RT	63
TOTAL		237

CONSTRUCTION STAKING CONCRETE PAVEMENT JOINT LAYOUT SPV.0105.01

STATION	LOCATION	LS
EAST SECOND STREET		
101+76 - 103+19	RT	1
TOTAL		1

SALVAGING BLUE STONE SPV.0105.02

STATION	LOCATION	LS
EAST SECOND STREET		
102+00	RT	1
TOTAL		1

CONCRETE SIDEWALK 4-INCH PROTECTIVE SURFACE TREATMENT SPV.0165.01

STATION	LOCATION	SF
EAST SECOND STREET		
101+94.6 - 102+89.6	RT	730
TOTAL		730

2

N

BEGIN PROJECT
STA 101+76.08
Y=307196.159
X=154628.540
MATCH EXISTING
SAWCUT REQ'D

END PROJECT
STA 103+19.44
MATCH EXISTING
SAWCUT REQ'D

STA 101+63.34 EAST SECOND STREET =
STA 50+00.00 E STREET

PI 50+44.35
Y = 307267.536
X = 154679.478

SWL&P

PI 100+19.00
Y = 307336.043
X = 154545.487

PI 105+46.80
Y = 306967.950
X = 154923.740

101+00 | 102+00 | 103+00 | 104+00 | 105+00 | 50+00

S 45°46'48" E

USH 53 NB

USH 53 SB

R/W

N 43°31'46" E

49+00 | 48+00

E STREET

BEGIN CONCRETE PAVEMENT
END ASPHALTIC SURFACE
STA 49+47.00

BEGIN CONSTRUCTION
STA 49+20.45

PI 47+87.38
Y = 307081.226
X = 154502.495

REPLACE 1-2 STOP
R1-1
36" X 36"

SLOPE INTERCEPTS

REPLACE 1-3 TRUCKS USE LEFT LANE
R4-5L
24" X 30"

JCT TO 53 2 REPLACE 1-1
J2-2
48" X 60"

PAVEMENT MARKING LEGEND

- (A) PAVEMENT MARKING EPOXY 4" (DOUBLE YELLOW)
- (B) PAVEMENT MARKING EPOXY 4" (WHITE)
- (C) PAVEMENT MARKING STOP LINE EPOXY 18" (WHITE)
- (D) PAVEMENT MARKING DIAGONAL EPOXY 8" (WHITE)

SIGN LEGEND

- T — SIGN(S) ON ONE WOOD POST
- (000) — SIGN GROUP NUMBER

SIGNING GENERAL NOTES

SIGN LOCATIONS SHOWN ARE APPROXIMATE, FINAL LOCATIONS SHALL BE DETERMINED IN THE FIELD.

REMOVE = REMOVING SIGNS TYPE II AND REMOVIMG SMALL SIGN SUPPORTS

MOVE = MOVING SIGNS TYPE II, REMOVING SMALL SIGN SUPPORTS, AND POSTS WOOD (SIZE)

REPLACE = REMOVING SIGNS TYPE II, REMOVING SMALL SIGN SUPPORTS, SIGNS REFLECTIVE TYPE II, AND POSTS WOOD (SIZE)

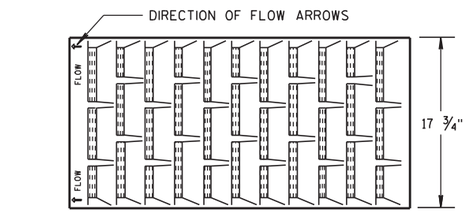
INSTALL = SIGNS REFLECTIVE TYPE II, AND POSTS WOOD (SIZE)

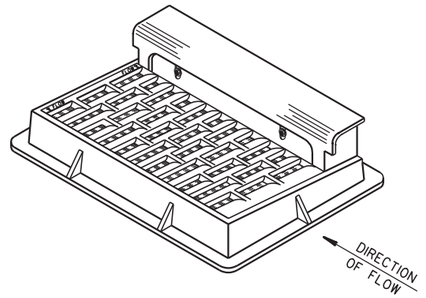
PROJECT NO: 1195-00-74	HWY: EAST SECOND STREET	COUNTY: DOUGLAS	PLAN - PERMANENT SIGNING AND PAVEMENT MARKING	SHEET	E

FILE NAME : P:\AE\B\Besco\113989\CAD\PPEST01.DGN PLOT TIME : 9:36:11 PM PLOT DATE : 8/18/2011 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

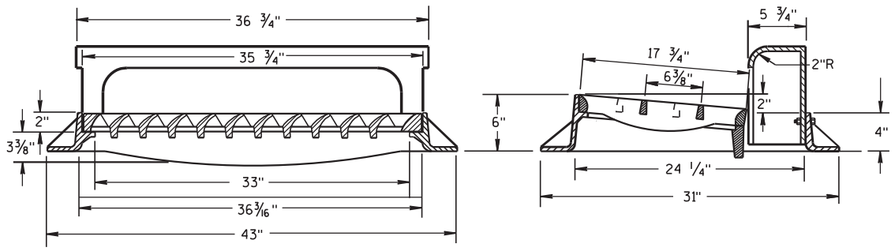
8A5 sheet a: Inlet Covers Type A, H, A-S, & H-S

NOTE:
GRATE IS REVERSIBLE.





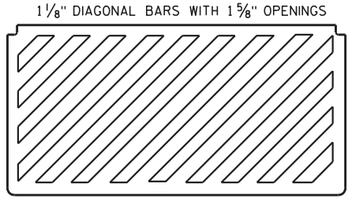
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

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

1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 ¾" X 2")
(APPROXIMATE WEIGHT 172 LBS.)
GRATE..... 172 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

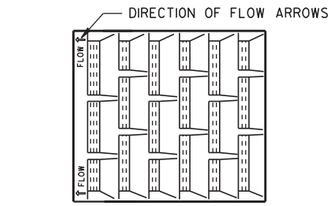
GENERAL NOTES

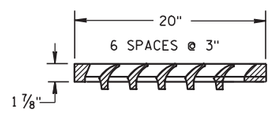
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

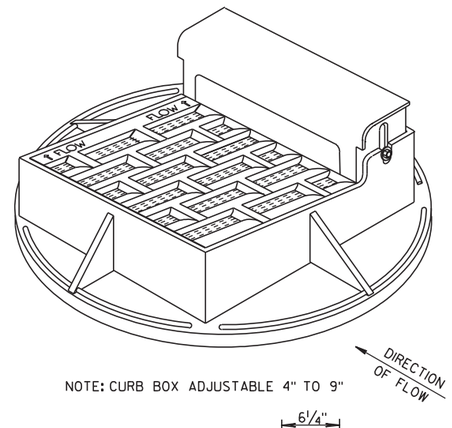
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

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

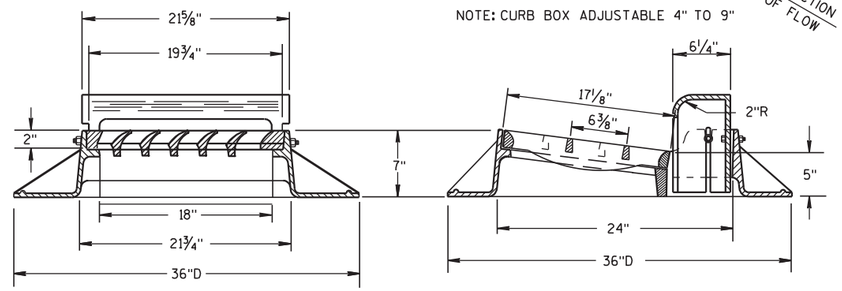






NOTE: CURB BOX ADJUSTABLE 4" TO 9"

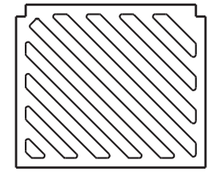
NOTE:
GRATE IS REVERSIBLE.



TYPE "A"

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

1" DIAGONAL BARS WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 ¾" X 17" X 1 7/8"
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/4/1999 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

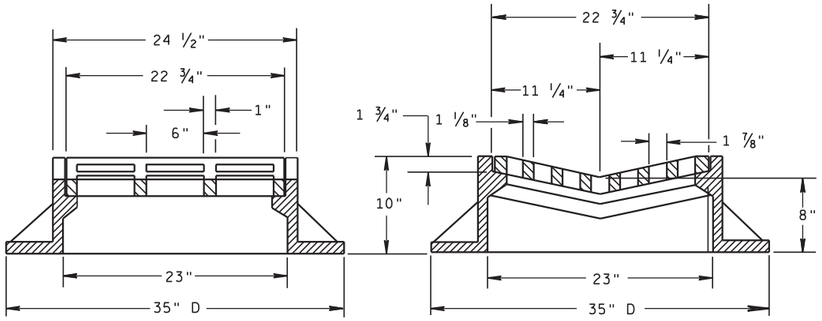
6

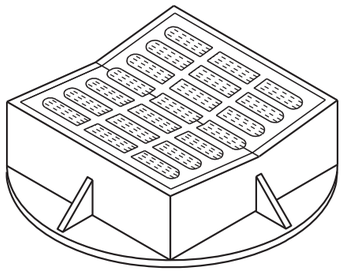
S.D.D. 8 A 5-16a

6

S.D.D. 8 A 5-16a

8A5 sheet b: Inlet Covers Type B, B-A, C, MS, MS-A, & WM

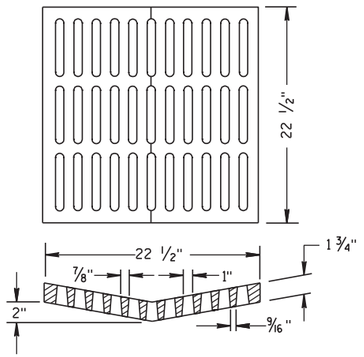




TYPE "B"

(APPROXIMATE WEIGHT 395 LBS.)

FRAME..... 285 LBS.
GRATE..... 110 LBS.

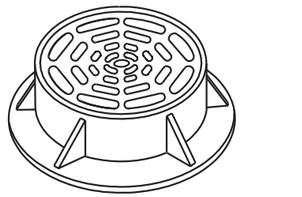


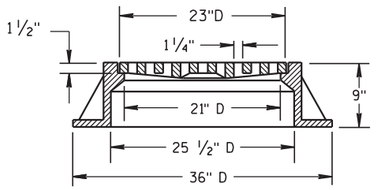
ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 125 LBS.)
GRATE.....125 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE





TYPE "C"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME..... 235 LBS.
GRATE..... 105 LBS.

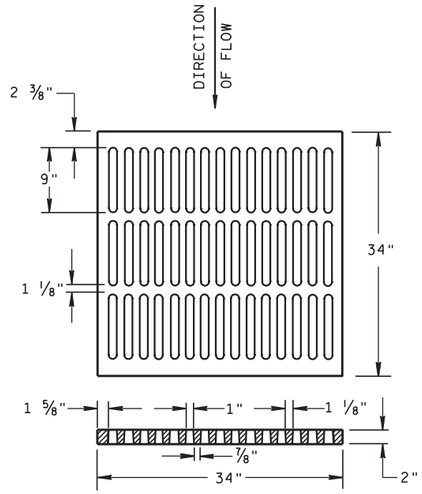
GENERAL NOTES

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

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

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

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

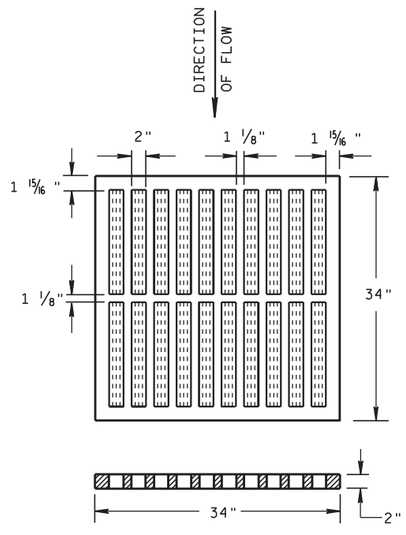


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE.....365 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

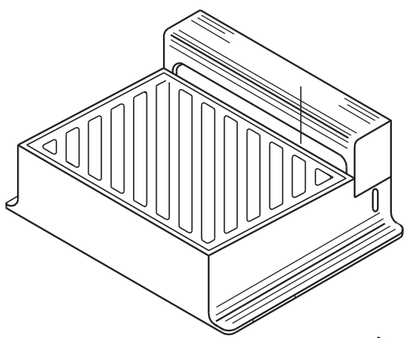


TYPE "MS"

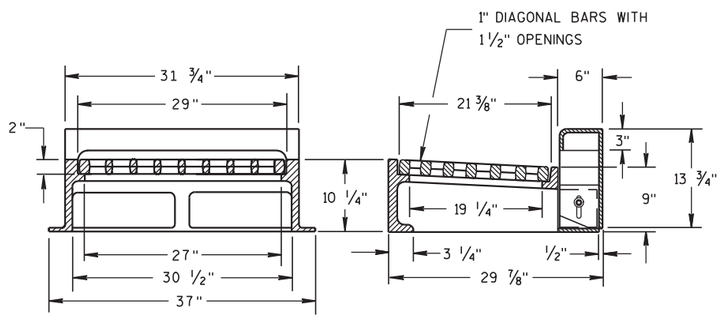
(APPROXIMATE GRATE WEIGHT 270 LBS.)
GRATE.....270 LBS.

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

(APPROXIMATE WEIGHT 670 LBS.)

FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/4/1999 — DATE
/S/ Rory L. Rhinesmith — CHEIF ROADWAY DEVELOPMENT ENGINEER
FHWA

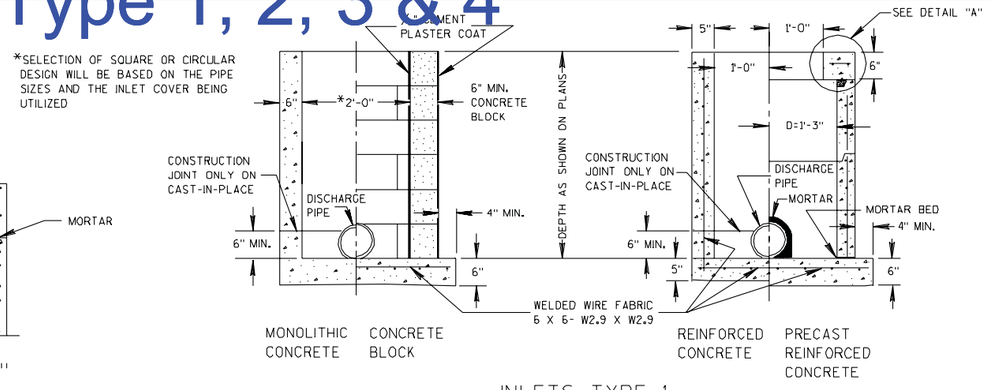
6

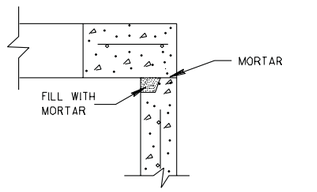
S.D.D. 8 A 5-16b

6

S.D.D. 8 A 5-16b

8C1: Inlets Type 1, 2, 3 & 4





DETAIL "A"

INLETS TYPE 1

GENERAL NOTES

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

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

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

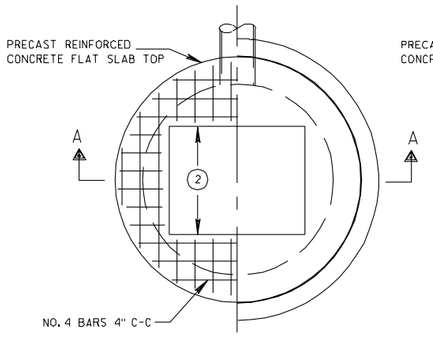
PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

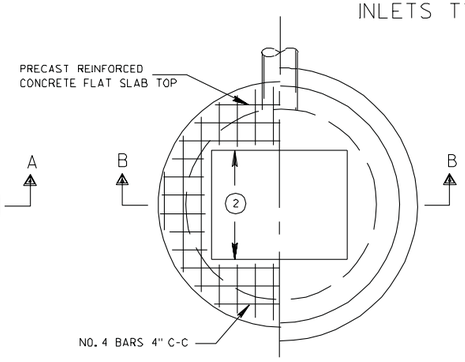
PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

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

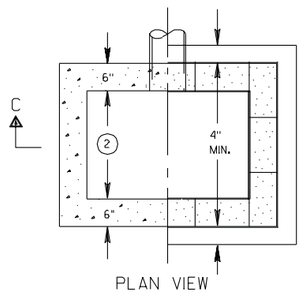
(2) USE 2'-0" OPENING FOR TYPE 1, 2 & 3 INLETS, 2'-6½" OPENING FOR TYPE 4 INLETS.



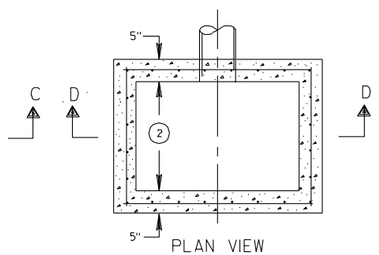
PLAN VIEW



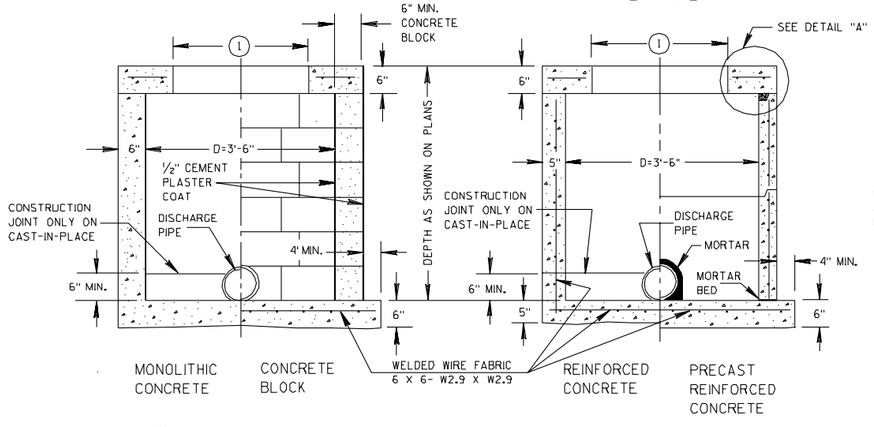
PLAN VIEW



PLAN VIEW

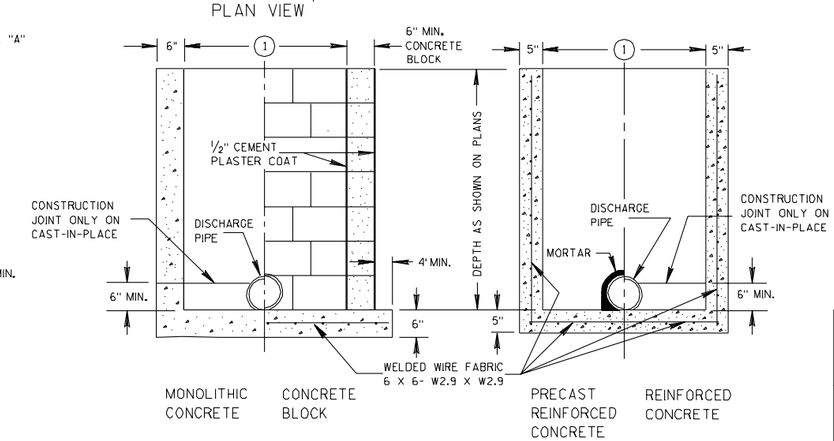


PLAN VIEW



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

INLETS TYPE 2, 3 & 4

INLETS TYPE 1, 2, 3 & 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

APPROVED
DATE — STATE MAT'L'S ENGINEER FOR HWYS

APPROVED
DATE — STATE CONST. ENGINEER FOR HWYS

APPROVED
DATE — STATE DESIGN ENGINEER FOR HWYS

REVISION DATE:

PLOT NAME:

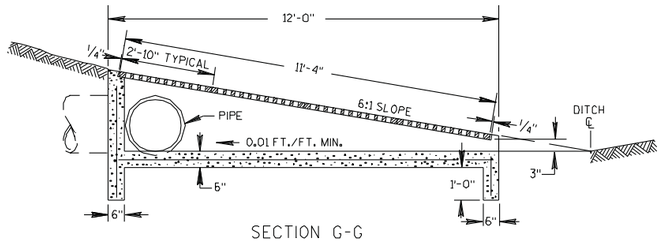
PLOT SCALE: 14

FILE NAME:

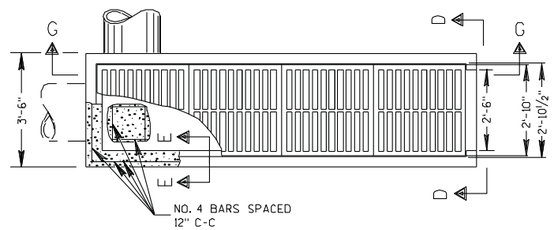
ORIGINATOR:

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

8C5: Inlets Type 8, 9, 10 and 11

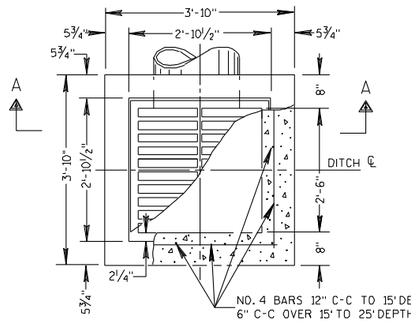


SECTION G-G

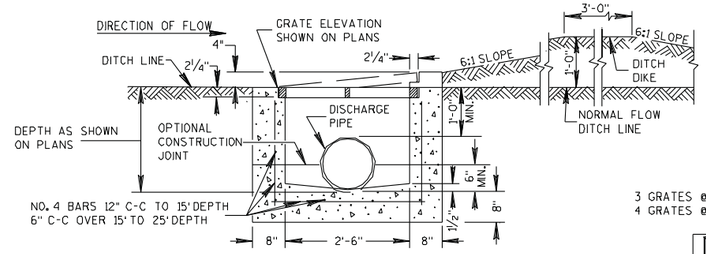


PLAN VIEW

REINFORCED CONCRETE INLET TYPE 11

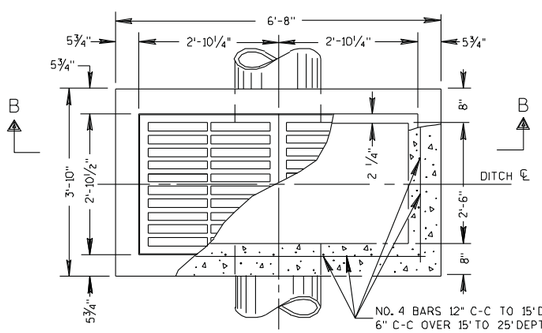


PLAN VIEW

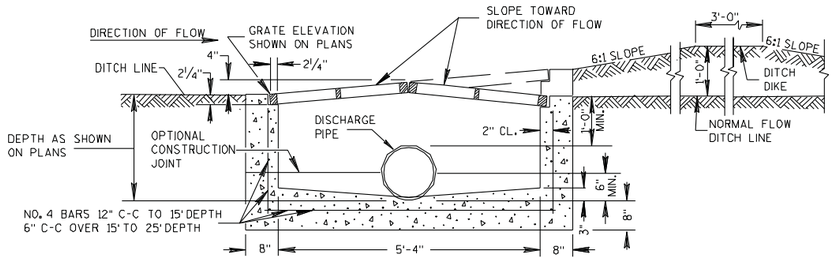


SECTION A-A

REINFORCED CONCRETE INLET TYPE 8

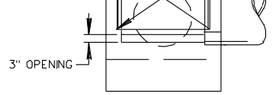


PLAN VIEW



SECTION B-B

REINFORCED CONCRETE INLET TYPE 9



SECTION D-D

GENERAL NOTES

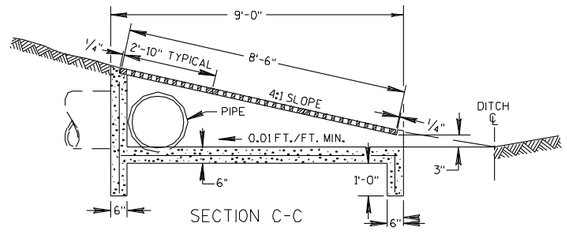
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

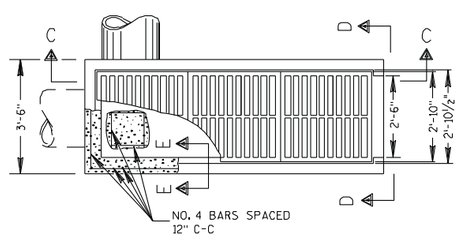
PRECAST REINFORCED CONCRETE INLET UNITS, IF USED, SHALL CONFORM TO THE REQUIREMENTS OF THE CATCH BASINS, MANHOLES AND INLETS SECTION OF THE STANDARD SPECIFICATIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A CORRECTED LIST OF SIZES IS FURNISHED BY THE ENGINEER.

ALL INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 8-MS", ETC. THIS DESIGNATION IS INTERPRETED TO MEAN THAT THE NUMBER, OR FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER OR IRON CASTING TO BE USED THEREWITH TO COMPRISE THE COMPLETE UNIT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

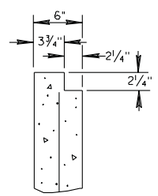


SECTION C-C



PLAN VIEW

REINFORCED CONCRETE INLET TYPE 10



SECTION E-E

INLETS TYPE 8, 9, 10 AND 11

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

S.D.D. 8 C 5-2

APPROVED

DATE STATE CONST. ENGINEER FOR HWYS

REVISION DATE: 4/11/91

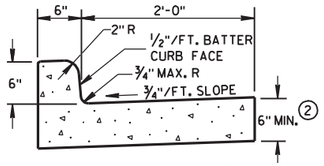
PLOT SCALE: .24 PLOT NAME:

FILE NAME:

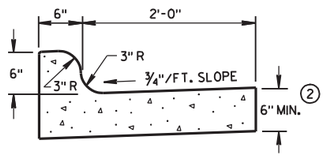
ORIGINATOR: MEL ZEMLICKA 6-2782

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

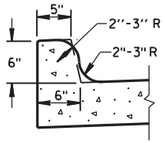
S.D.D. 8 C 5-2



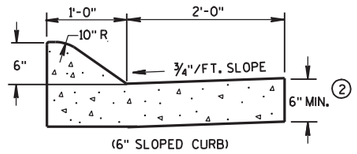
TYPES A & D (1)

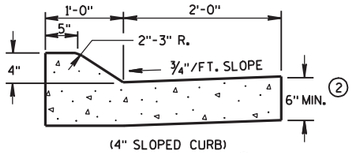


TYPES K & L (1)

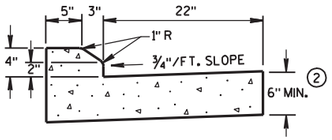


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

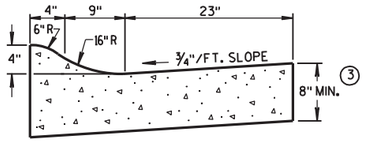




TYPES A & D (1)



6" SLOPED CURB TYPES G & J (1)

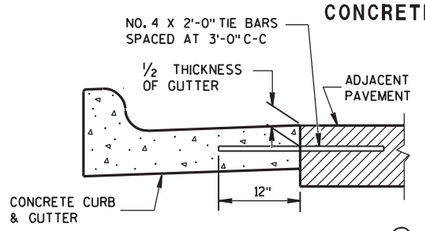


4" SLOPED CURB TYPES R & T (1) (4)

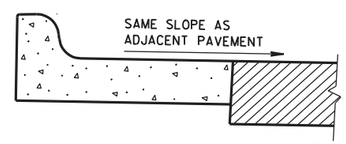
CONCRETE CURB & GUTTER 36"

4" SLOPED CURB TYPES G & J (1)

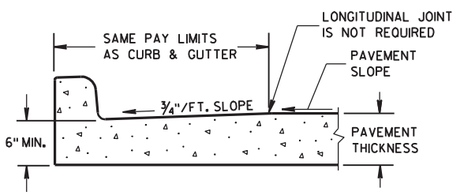
CONCRETE CURB & GUTTER 30"



TYPICAL TIE BAR LOCATION (1)



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

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

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

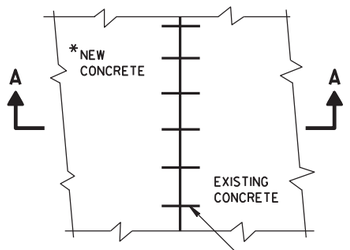
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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) 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.

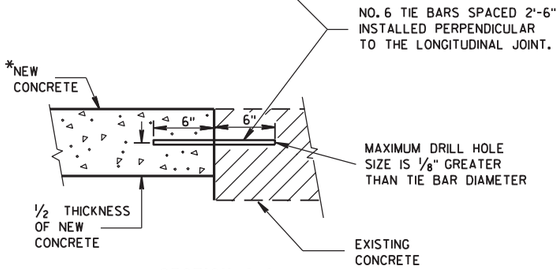
(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



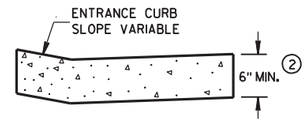
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

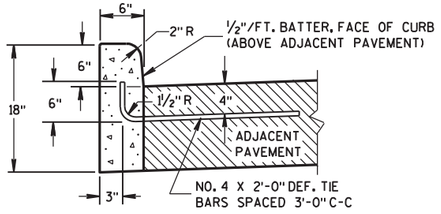


SECTION A-A

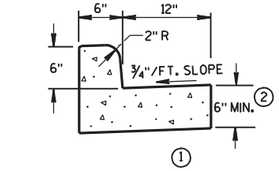
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

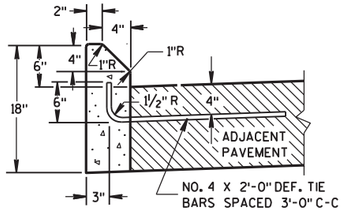


(1) TYPES A & D

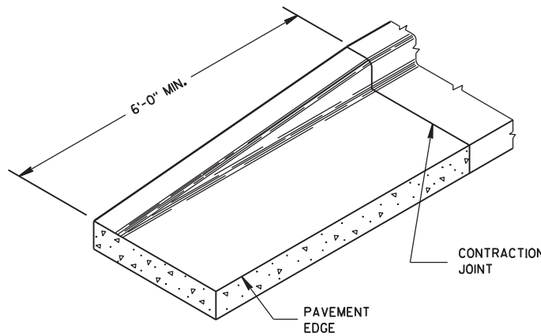


(1) TYPES A & D

CONCRETE CURB & GUTTER 18"



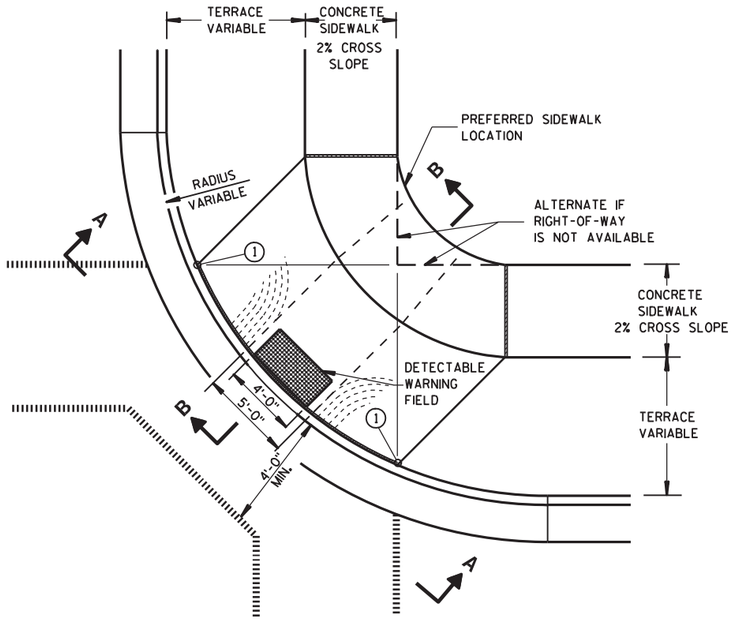
(1) TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

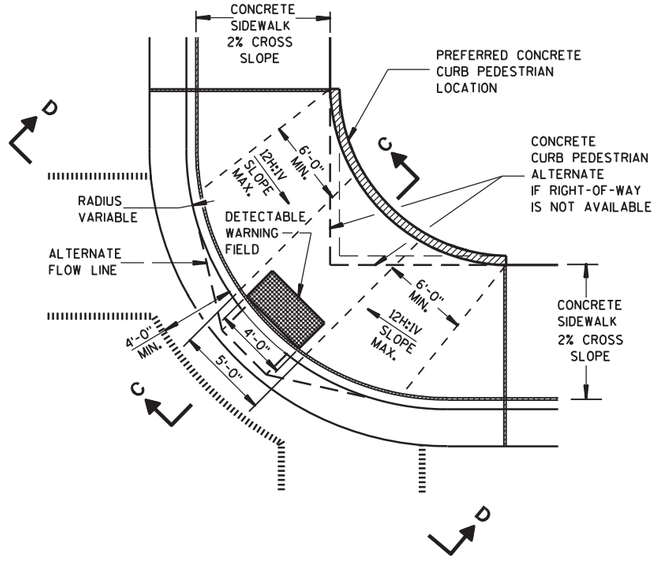
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
9/4/08 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

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

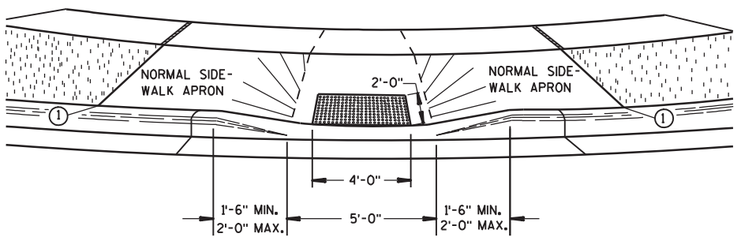
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

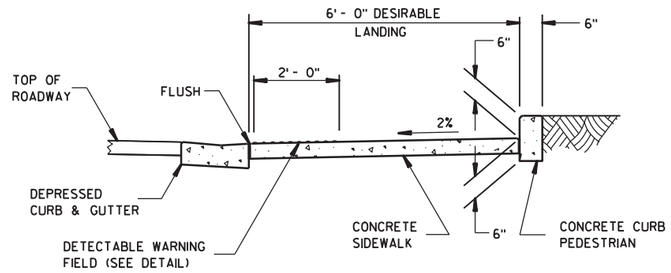
(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

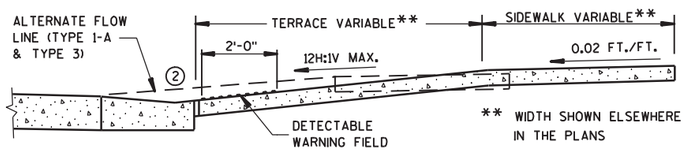
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



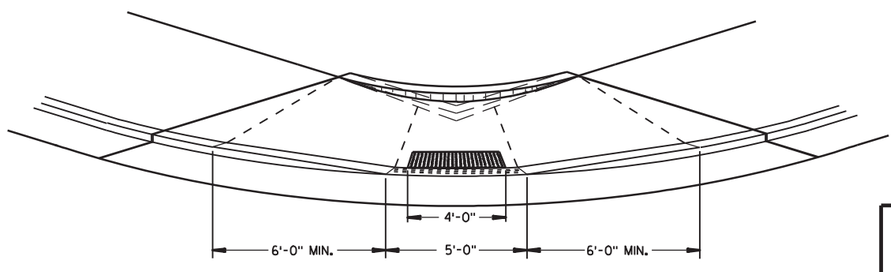
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

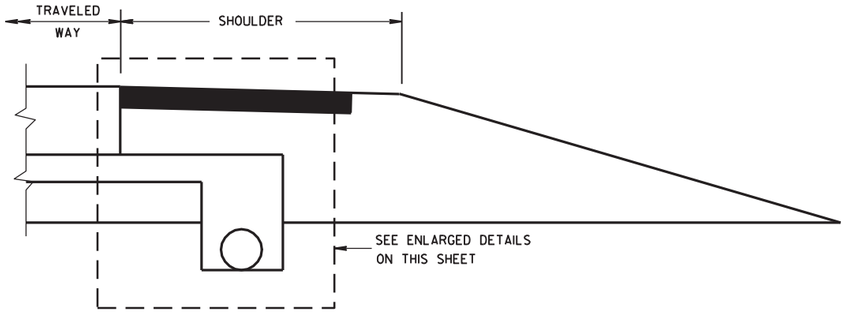
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 5-14a

6

S.D.D. 8 D 5-14a



RURAL CROSS SECTION

GENERAL NOTES

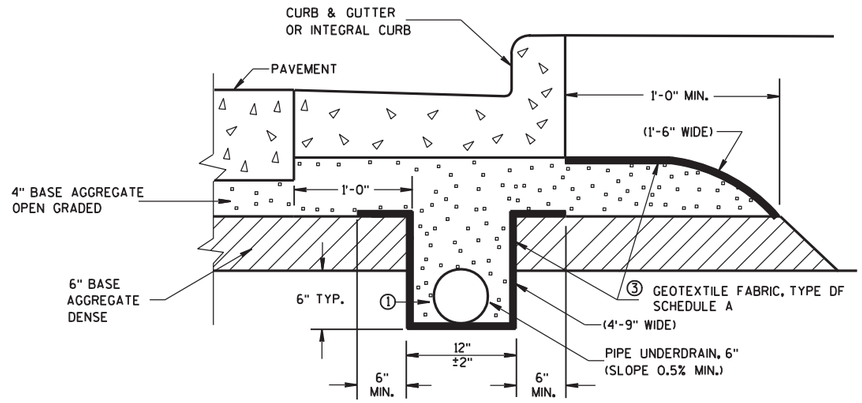
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

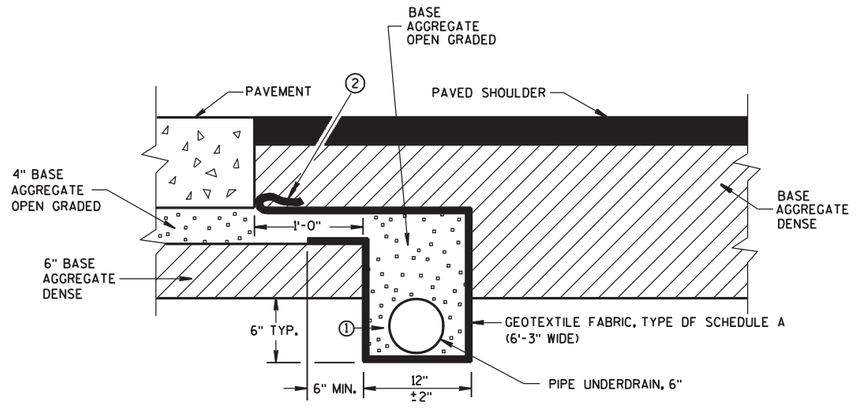
① TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.

② FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

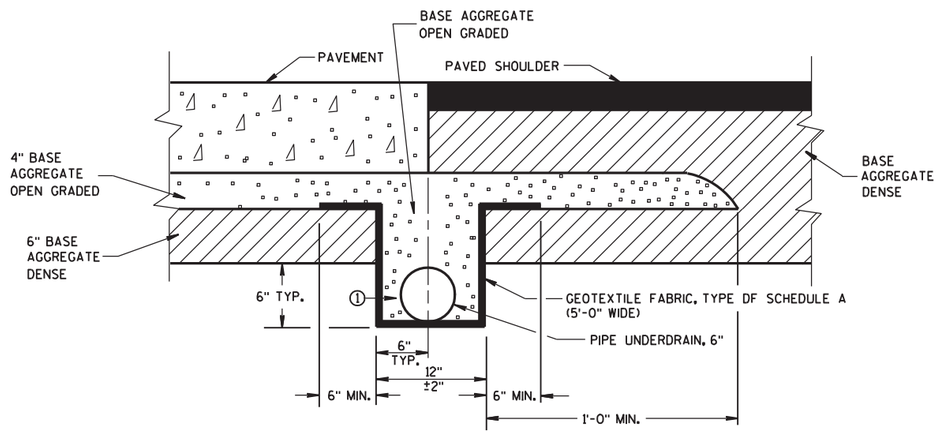
③ TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

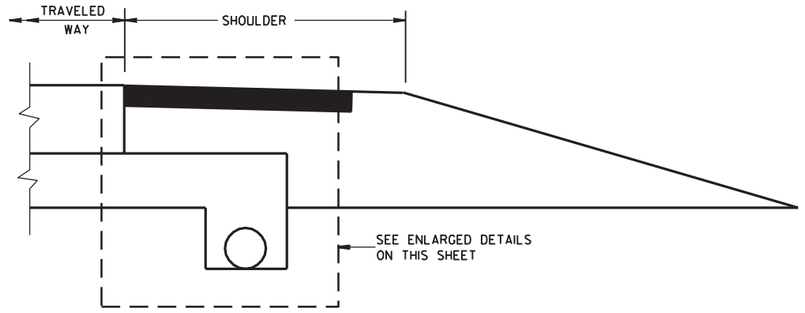
APPROVED
3/21/07 DATE
/S/ Steven W. Krebs
CHIEF MATERIALS MANAGEMENT ENGINEER
FHWA

6

S.D.D. 8 D 15-4b

6

S.D.D. 8 D 15-4b



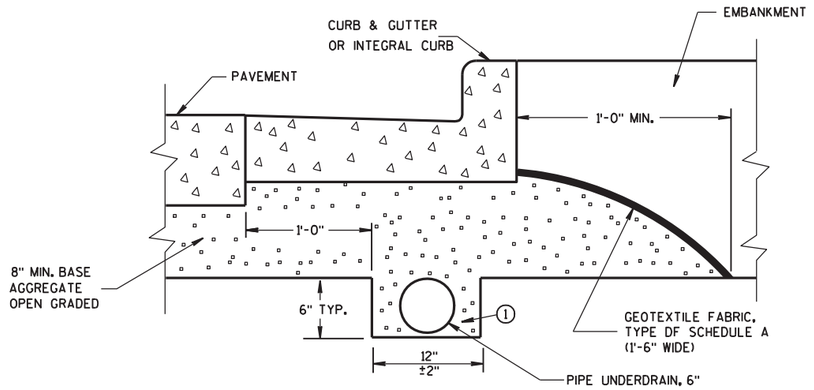
RURAL CROSS SECTION

GENERAL NOTES

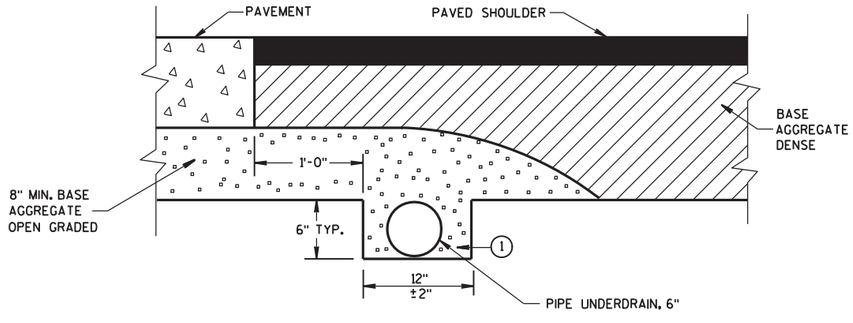
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

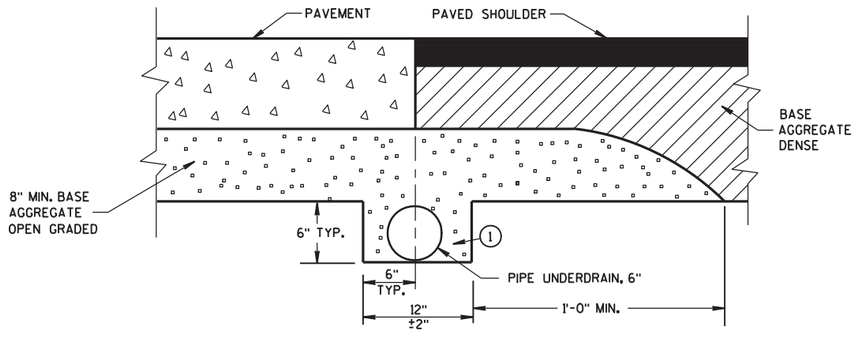
(1) TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/21/07 DATE	/S/ Steven W. Krebs CHIEF MATERIALS MANAGEMENT ENGINEER
FHWA	

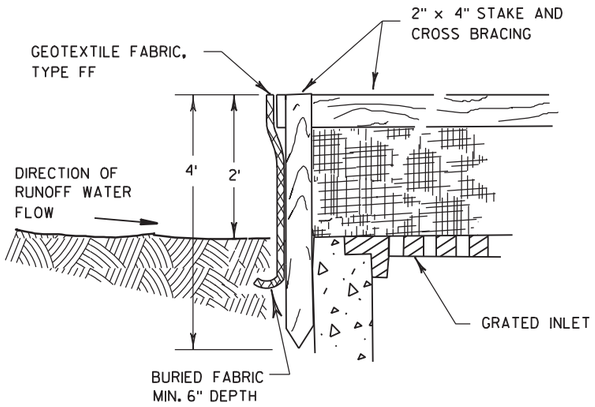
6

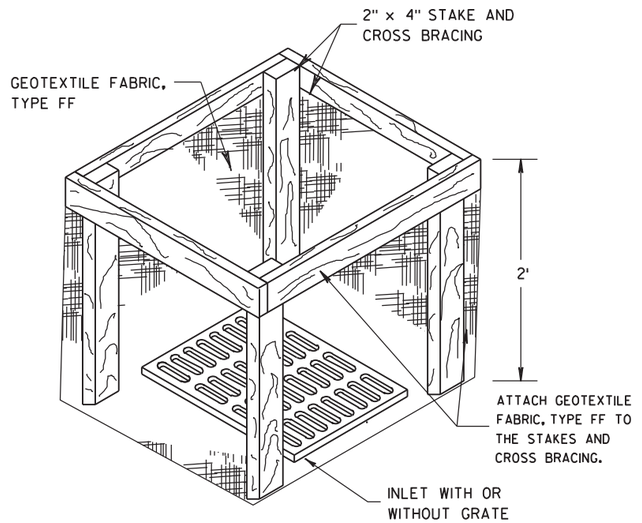
S.D.D. 8 D 15-4c

6

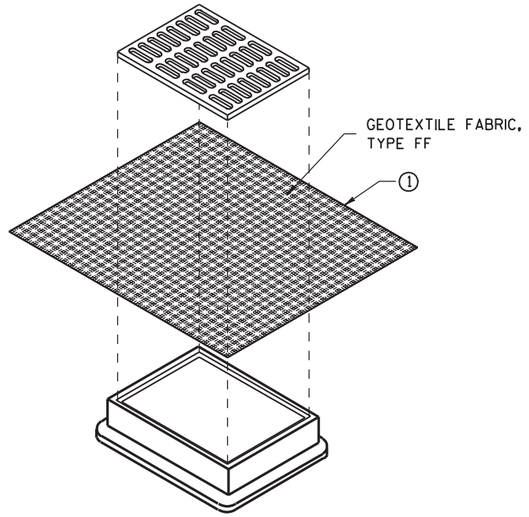
S.D.D. 8 D 15-4c

8E10: Inlet Protection Type A, B, C and D



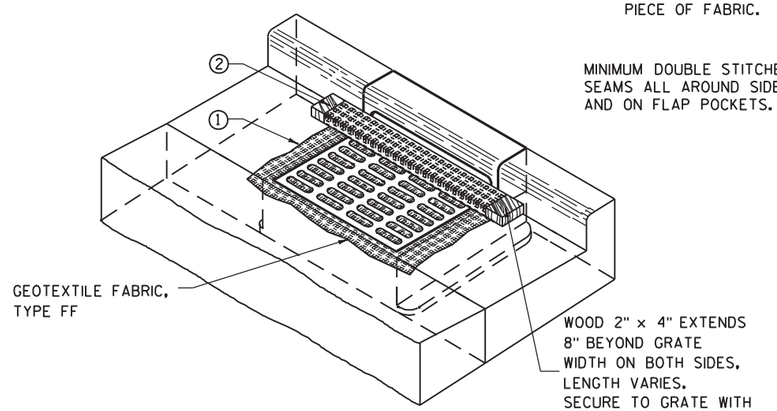


INLET PROTECTION, TYPE A

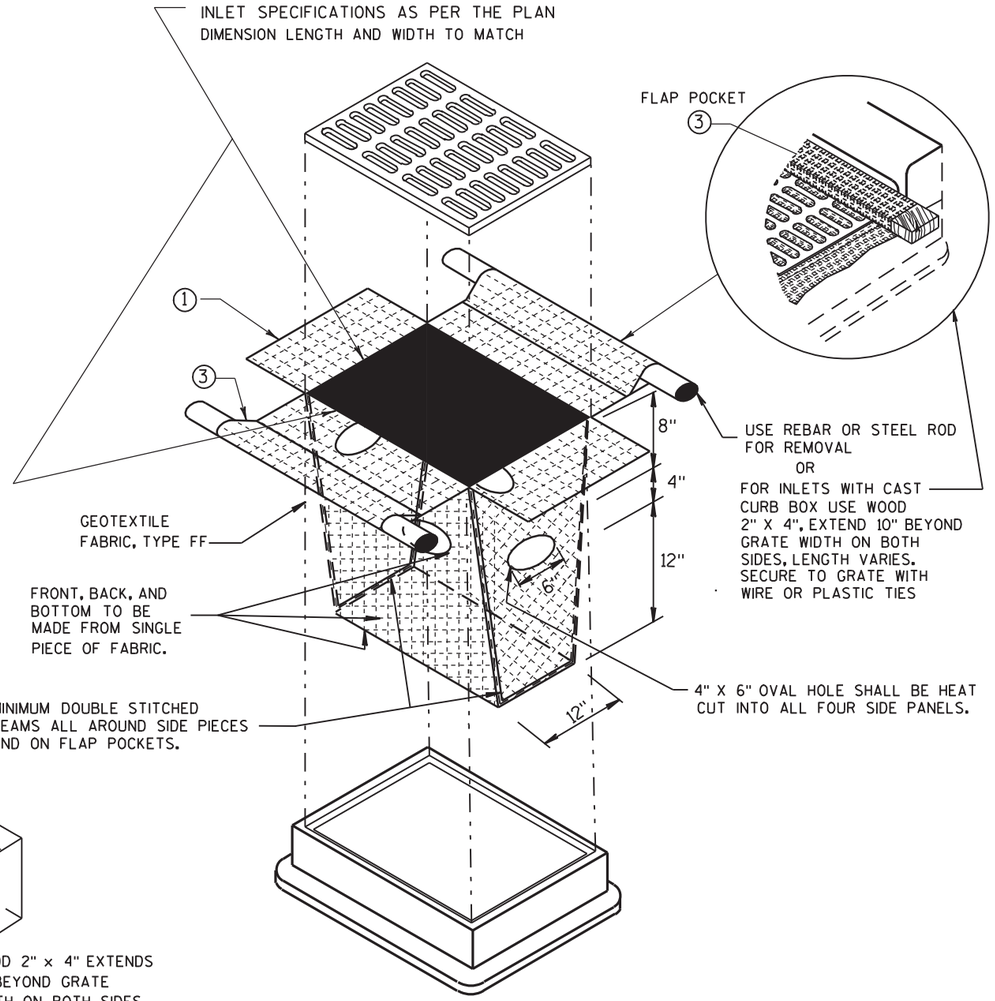


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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.

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 A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE — CHIEF ROADWAY DEVELOPMENT ENGINEER

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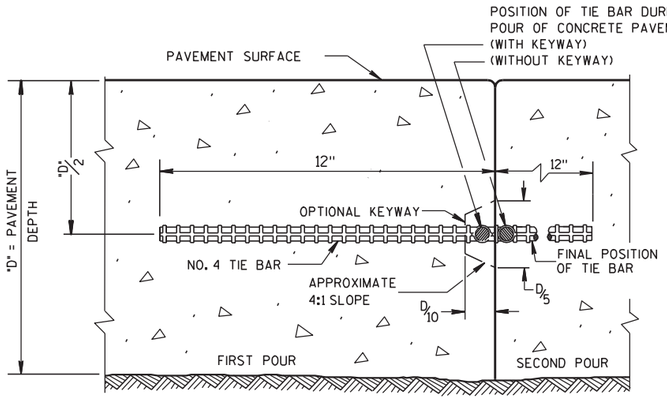
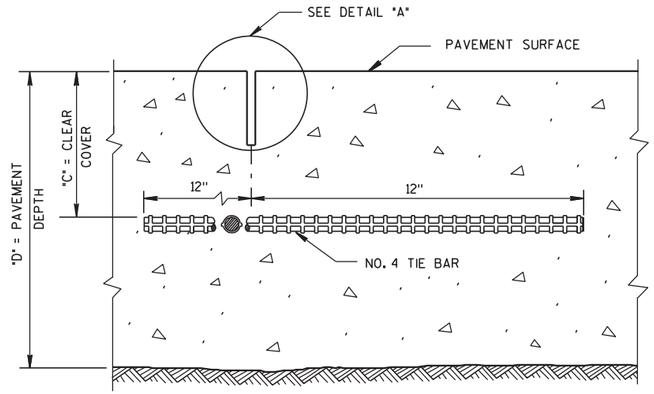
S.D.D. 8 E 10-2

S.D.D. 8 E 10-2

13C1: Concrete Pavement Longitudinal Joints and Ties



CONSTRUCTION JOINT



SAWED JOINT

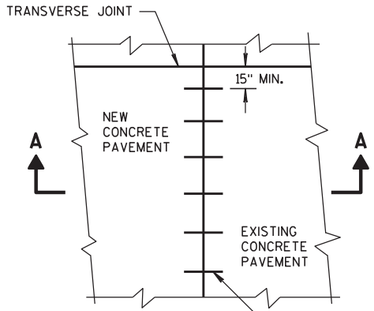
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

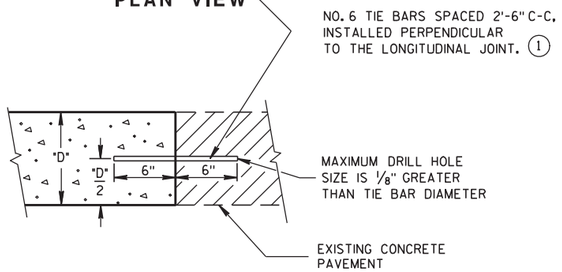
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

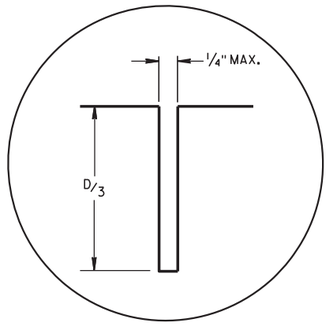


PLAN VIEW



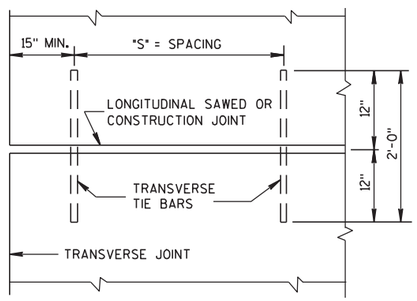
SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 ½"	3" ± ½"	48"	42"
7, 7 ½"	3 ¼" ± 1"	45"	36"
8, 8 ½"	3 ¾" ± 1"	39"	30"
9, 9 ½"	4 ¼" ± 1"	33"	27"
10, 10 ½"	4 ¾" ± 1"	30"	24"
11, 11 ½"	5 ¼" ± 1"	27"	21"
12"	5 ¾" ± 1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10-5-2010
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

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S.D.D. 13 C 1-15

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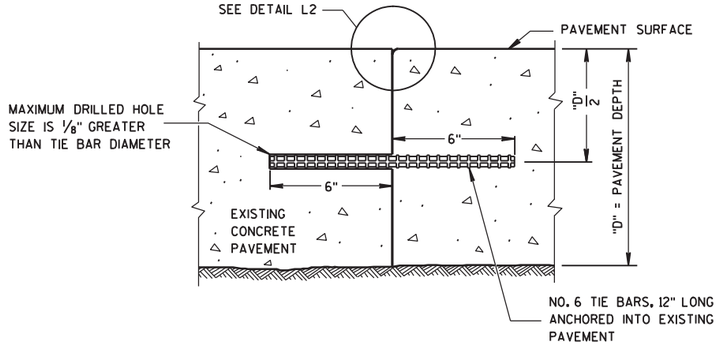
S.D.D. 13 C 1-15



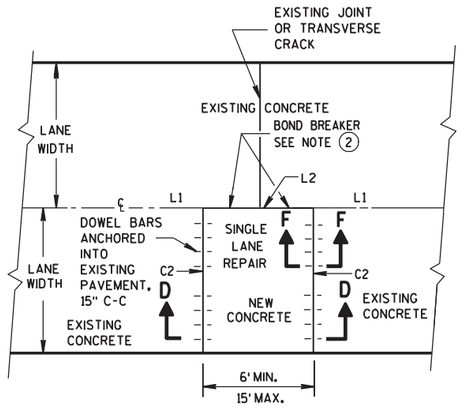
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

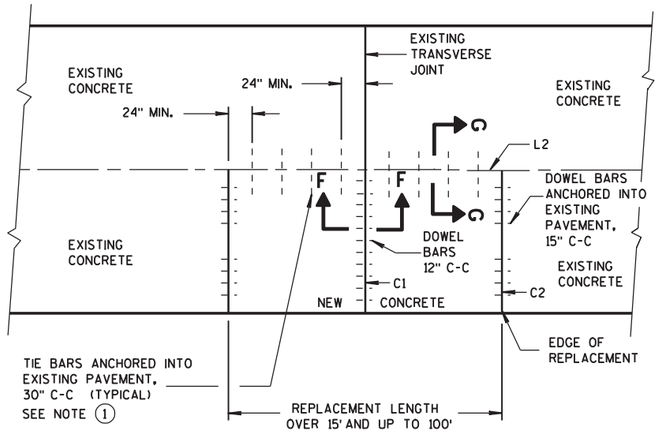
1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

2. USE AN ENGINEER-APPROVED BOND BREAKER FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12-11-09
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

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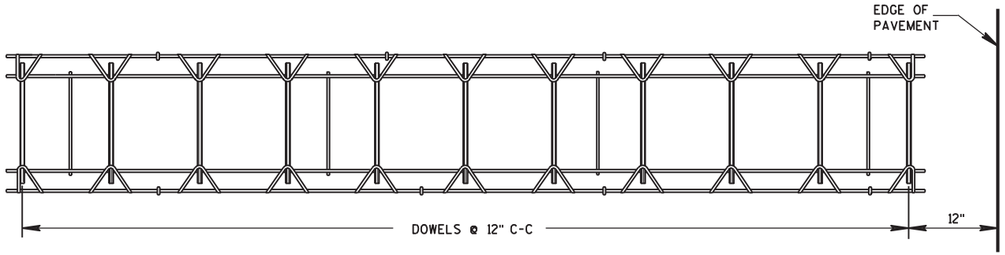


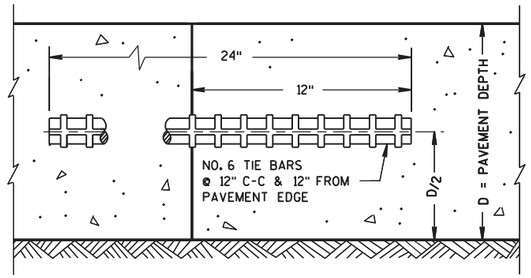
PLAN VIEW

SIDE VIEW

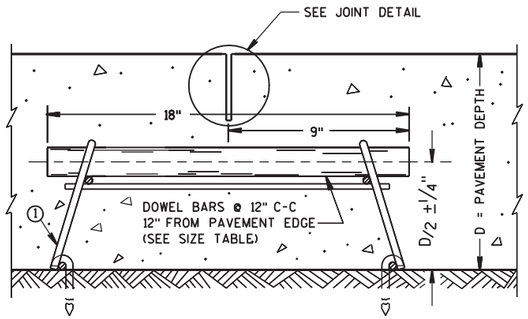
CONTRACTION JOINT DOWEL ASSEMBLY ①

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

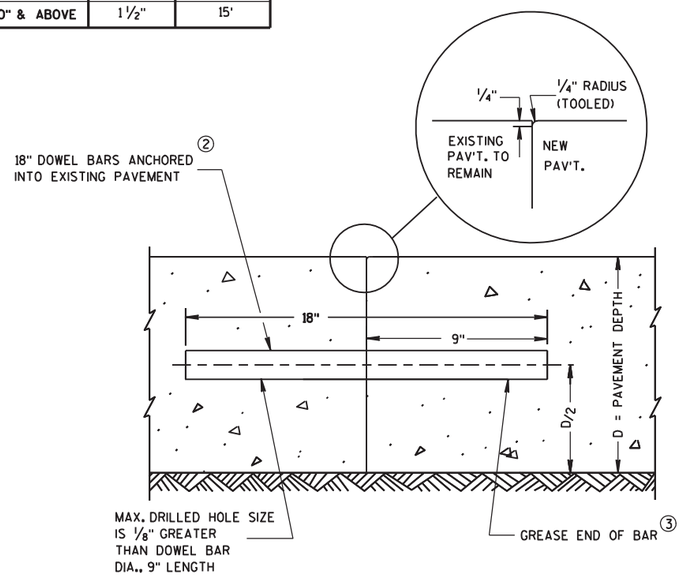
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



TRANSVERSE CONSTRUCTION JOINT

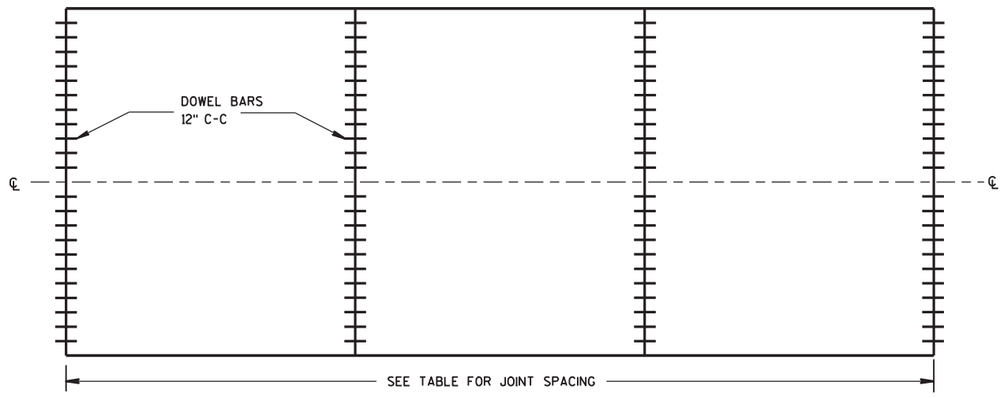


DOWELED CONTRACTION JOINT



TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.

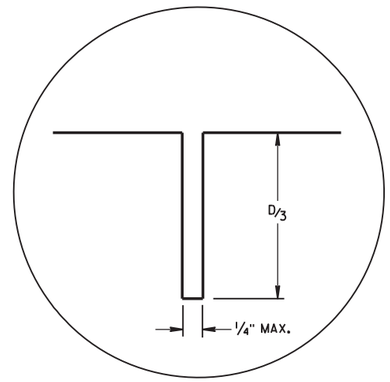
② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR
BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR
BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.



JOINT DETAIL

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S.D.D. 13 C 13-7

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DESIGN ENGINEER
FHWA

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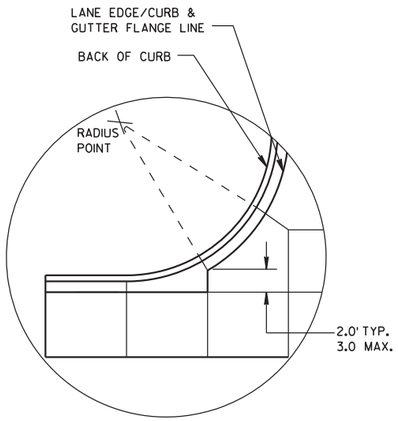
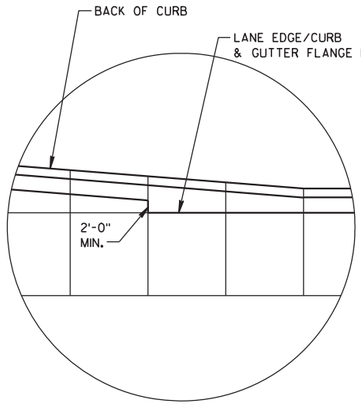
S.D.D. 13 C 13-7

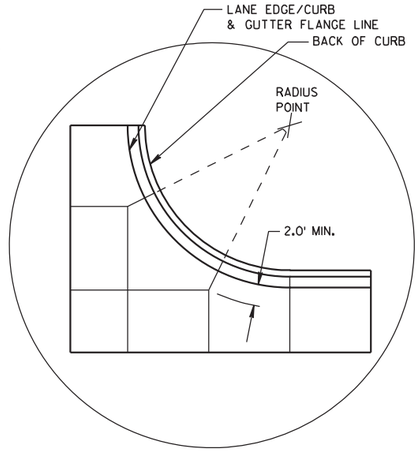
13C18 sheet a: Concrete Pavement Jointing



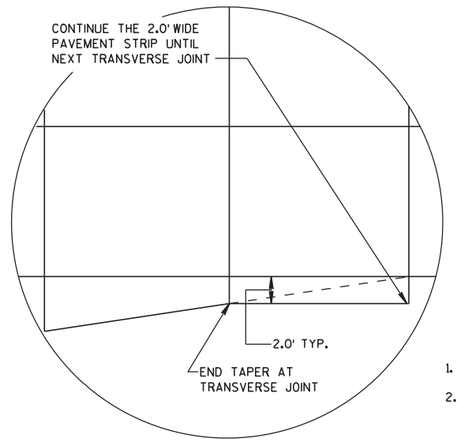
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

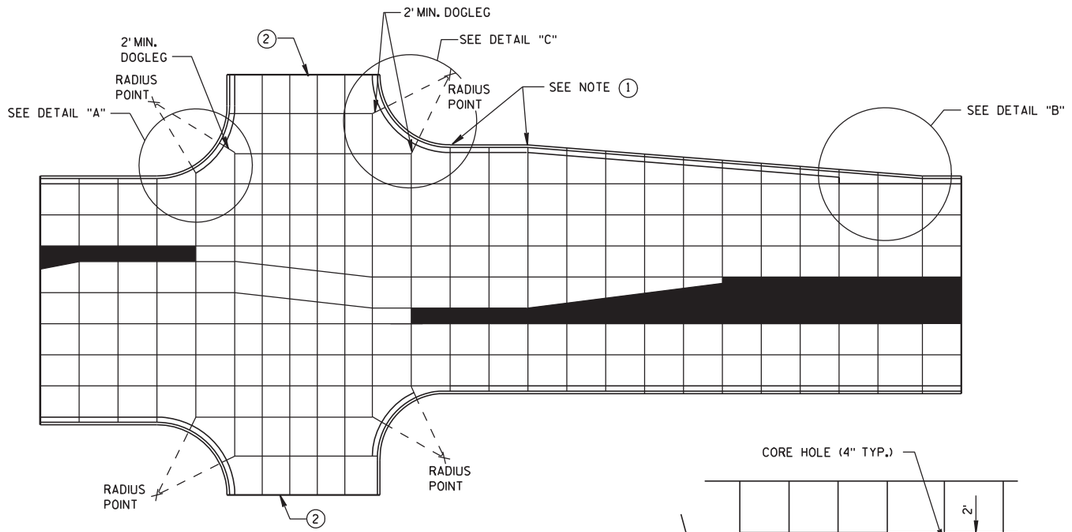
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

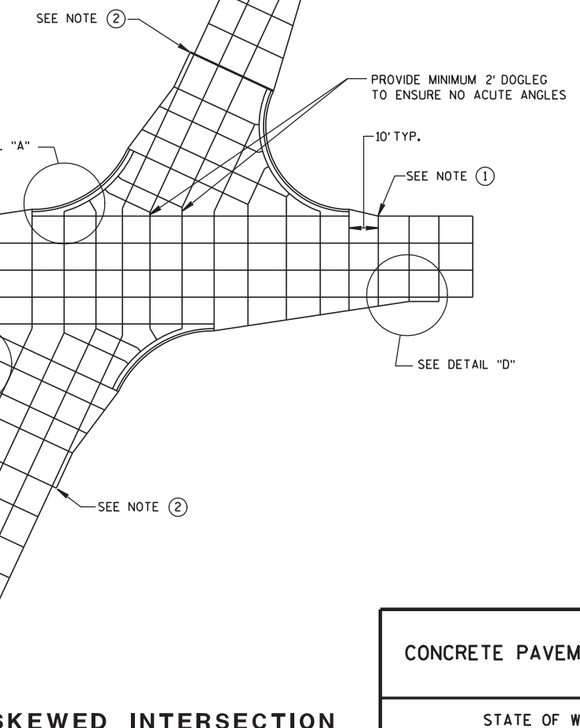
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



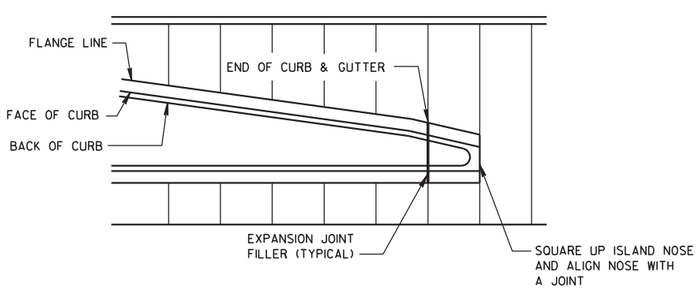
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

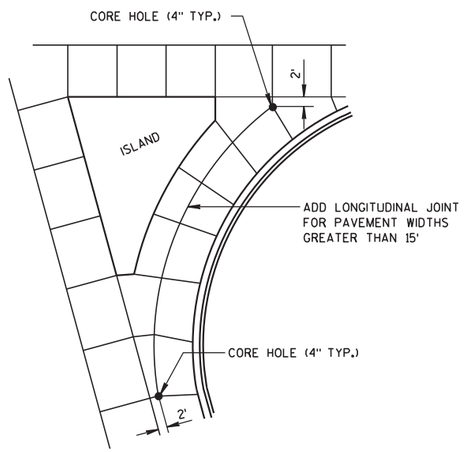
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13C18-1a

6

S.D.D. 13C18-1a

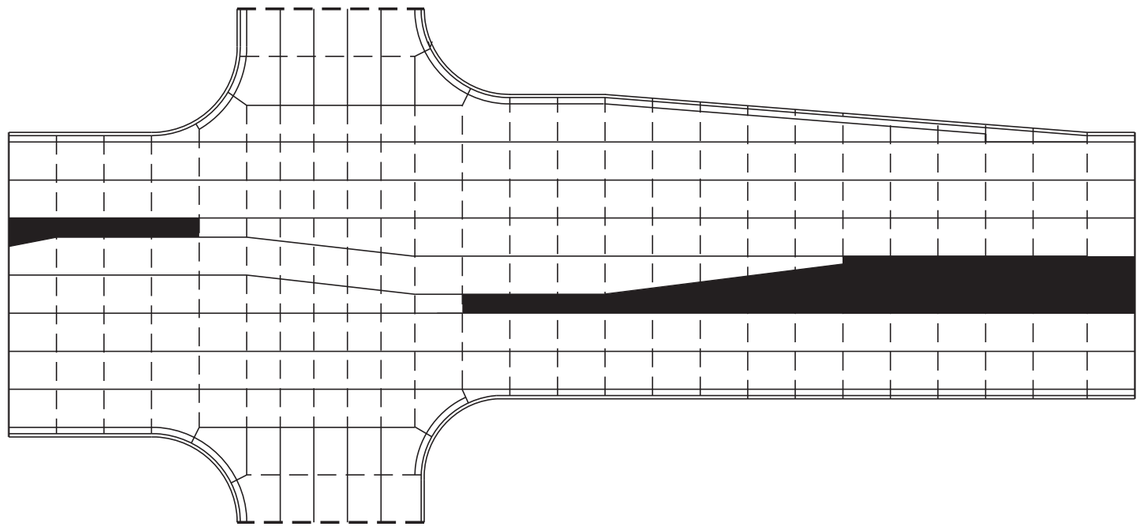
13C18 sheet b: Concrete Placement Steel Reinforcement

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

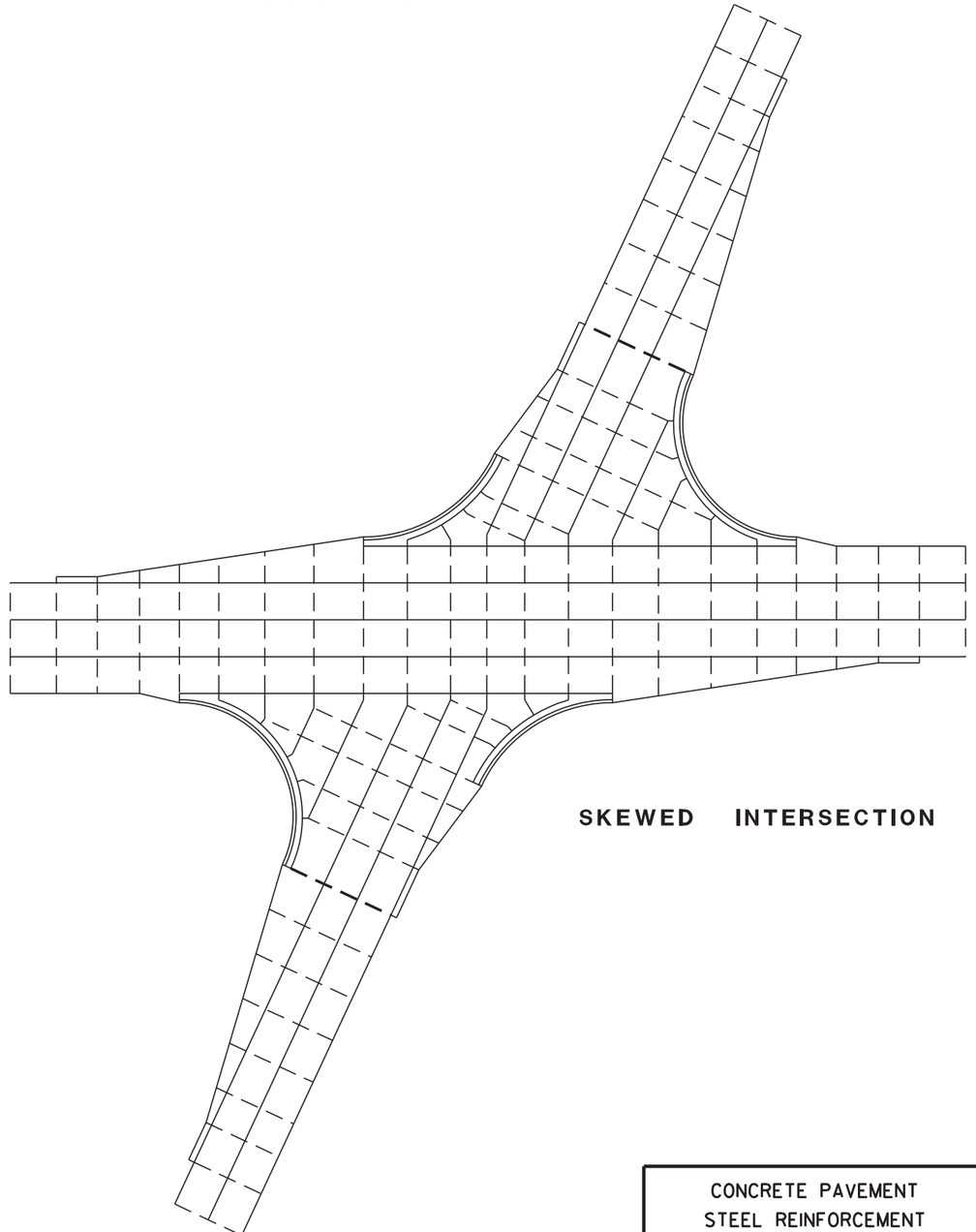
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

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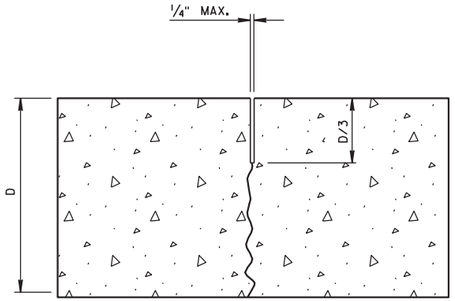
CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

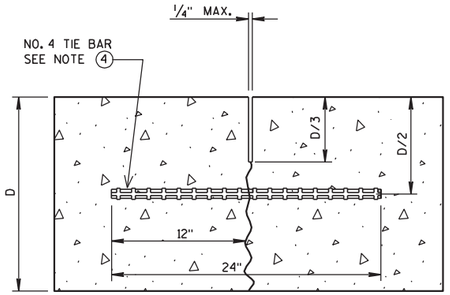
S.D.D. 13C18-1b

S.D.D. 13C18-1b

13C18 sheet c: Concrete Pavement Joint Types



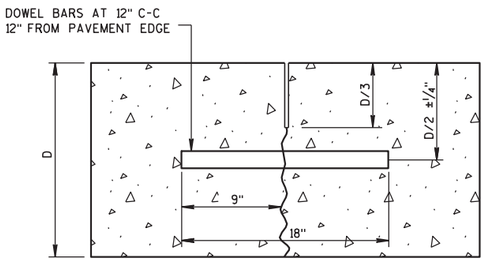
UNDOWELED-TRANSVERSE



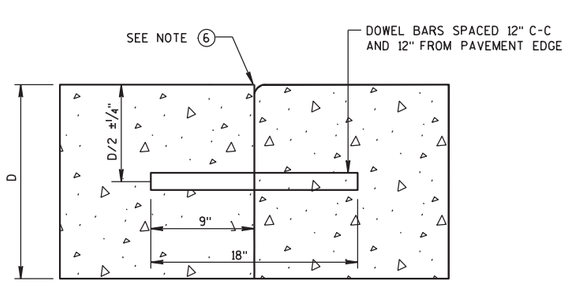
TIED LONGITUDINAL

GENERAL NOTES

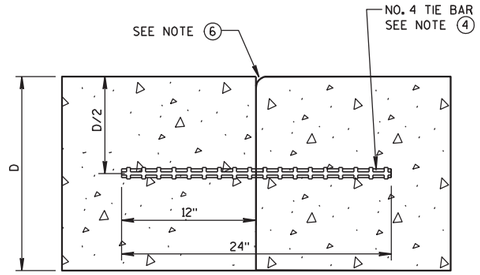
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



DOWELED-TRANSVERSE



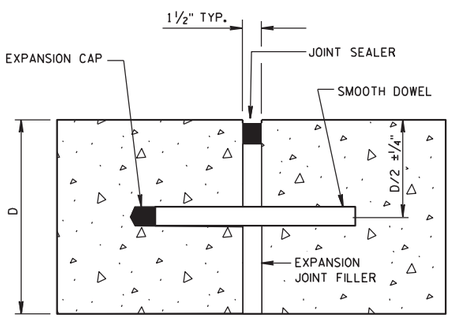
DOWELED TRANSVERSE



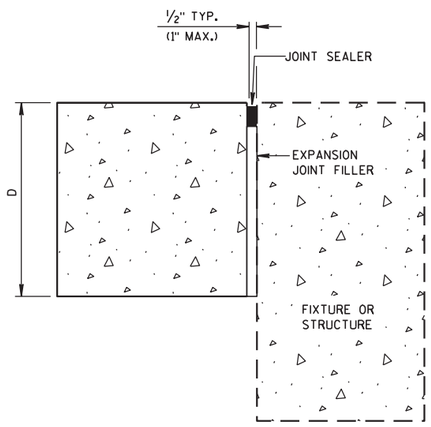
TIED LONGITUDINAL

CONTRACTION JOINTS

SEE NOTE (2)

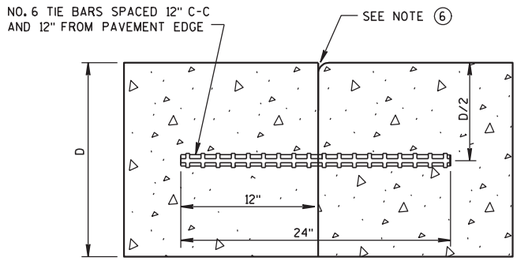


DOWELED-TRANSVERSE
SEE NOTE (1)

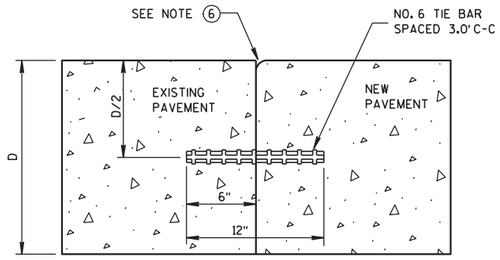


UNTIED-LONGITUDINAL

EXPANSION JOINTS



TIED TRANSVERSE
SEE NOTE (3)



TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE (5)

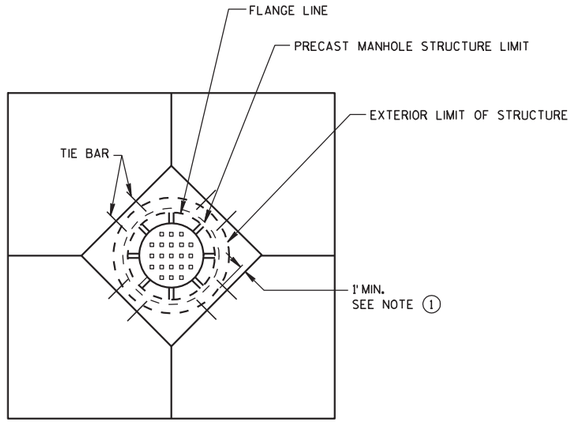
CONCRETE PAVEMENT
JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

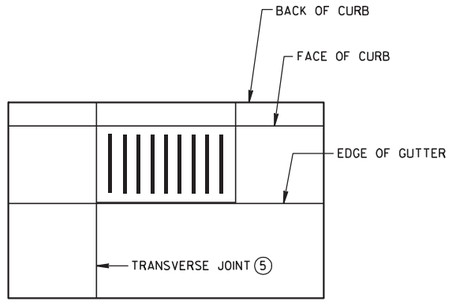
6

S.D.D. 13 C 18-1c

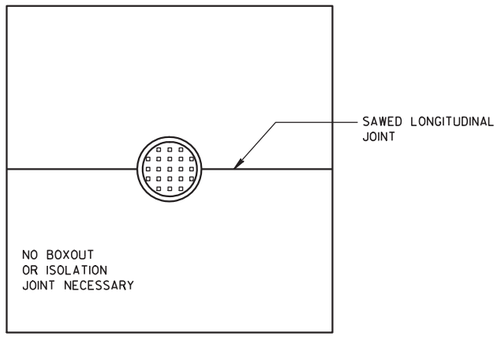
13C18 sheet d: Concrete Pavement Jointing at Utility Fixtures



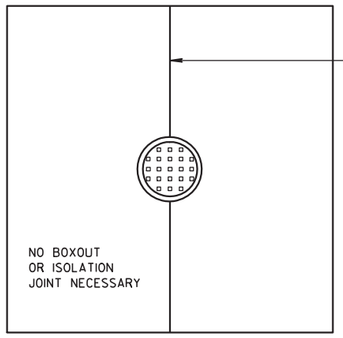
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



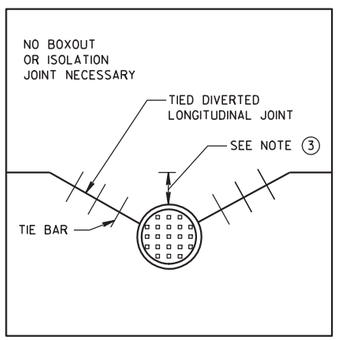
INLET WITH TRANSVERSE JOINT



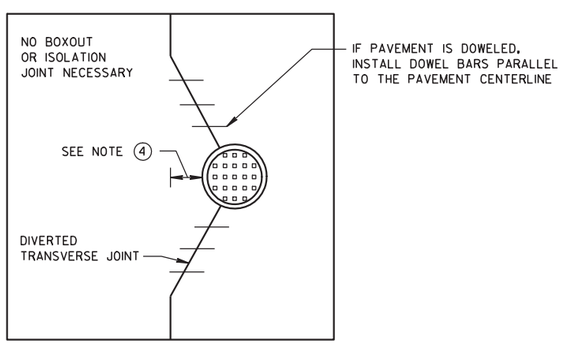
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS GREATER THAN 2 FEET, DO NOT DIVERT JOINT AND SAW LONGITUDINAL JOINT AS NORMAL. IF DISTANCE IS 2 FEET OR LESS, DIVERT LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE.
4. IF DISTANCE FROM THE EDGE OF MANHOLE TO THE NEAREST TRANSVERSE JOINT IS GREATER THAN 4 FEET, REDIRECT JOINT TO INTERSECT MANHOLE. IF DISTANCE IS 4 FEET OR LESS, PLACE REBAR REINFORCEMENT AROUND MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-5-2010
DATE

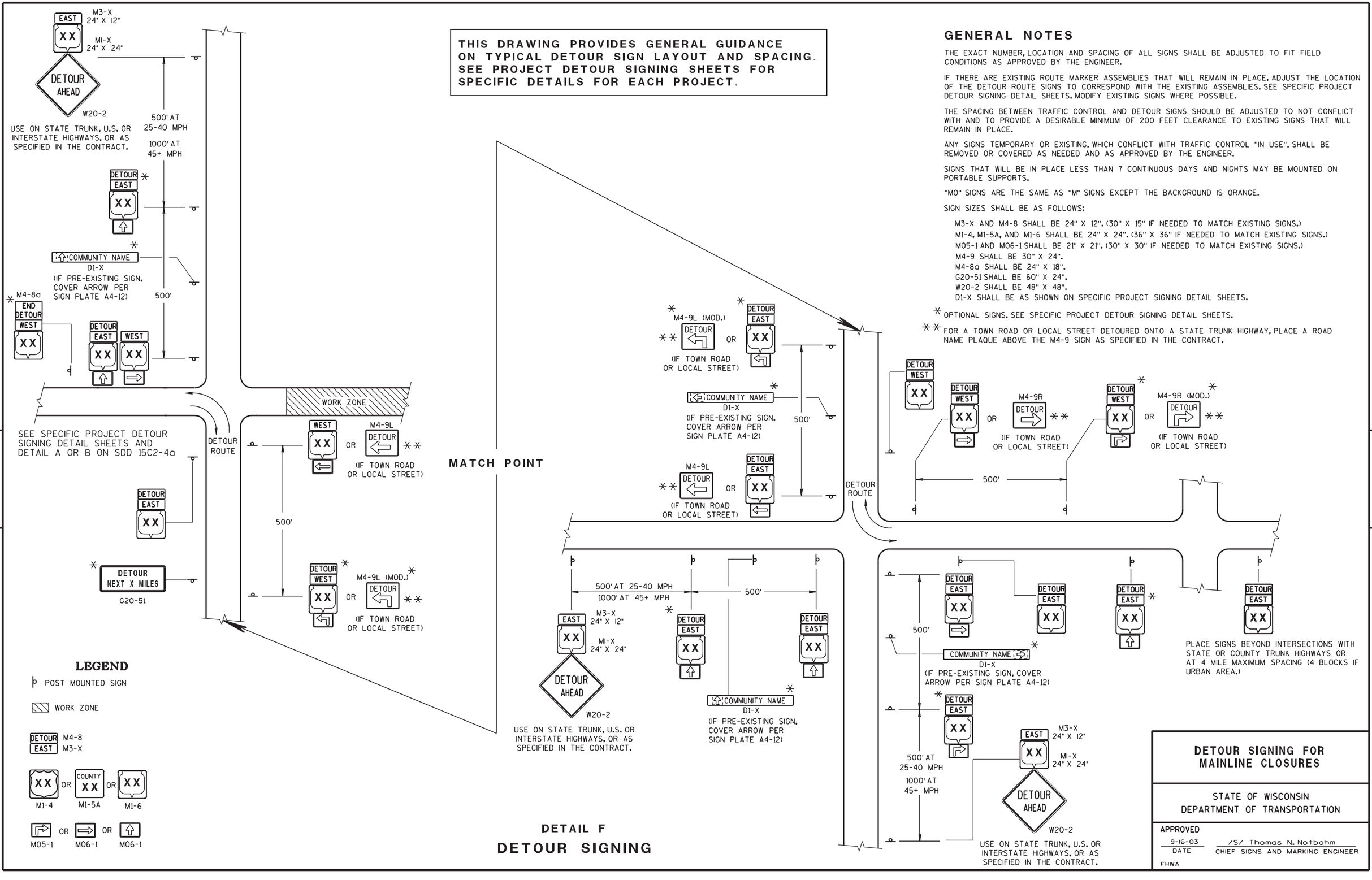
/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

FHWA

6
S.D.D. 13C18-1d

15C2 sheet c: Detour Signing for Mainline Closures

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



GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-03 DATE

/S/ Thomas N. Notbohm
CHIEF SIGNS AND MARKING ENGINEER

FHWA

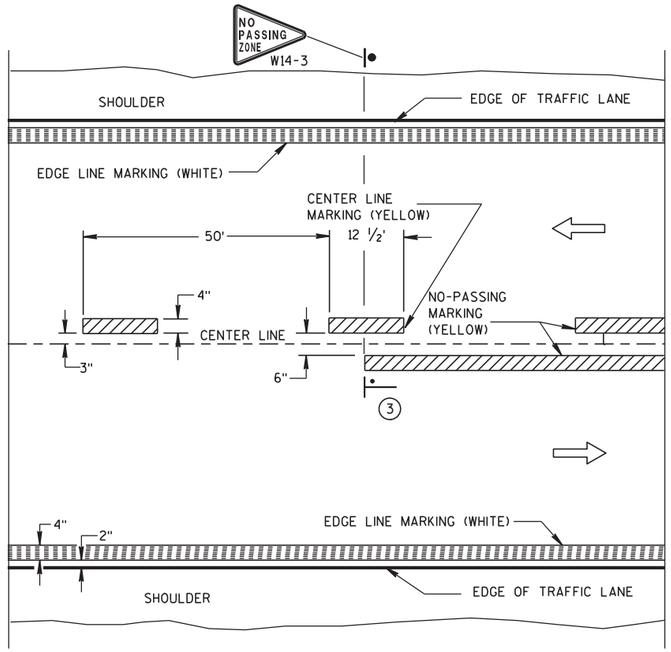
6

S.D.D. 15 C 2-4c

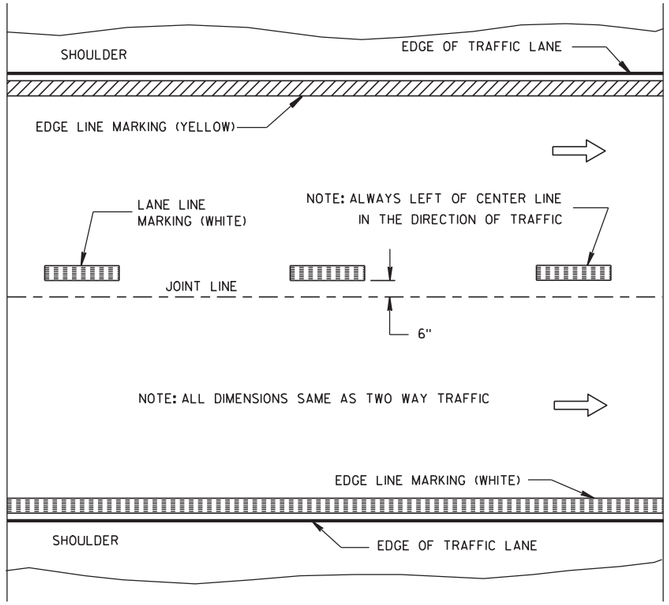
6

S.D.D. 15 C 2-4c

15C8 sheet a: Pavement Marking (Mainline)



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

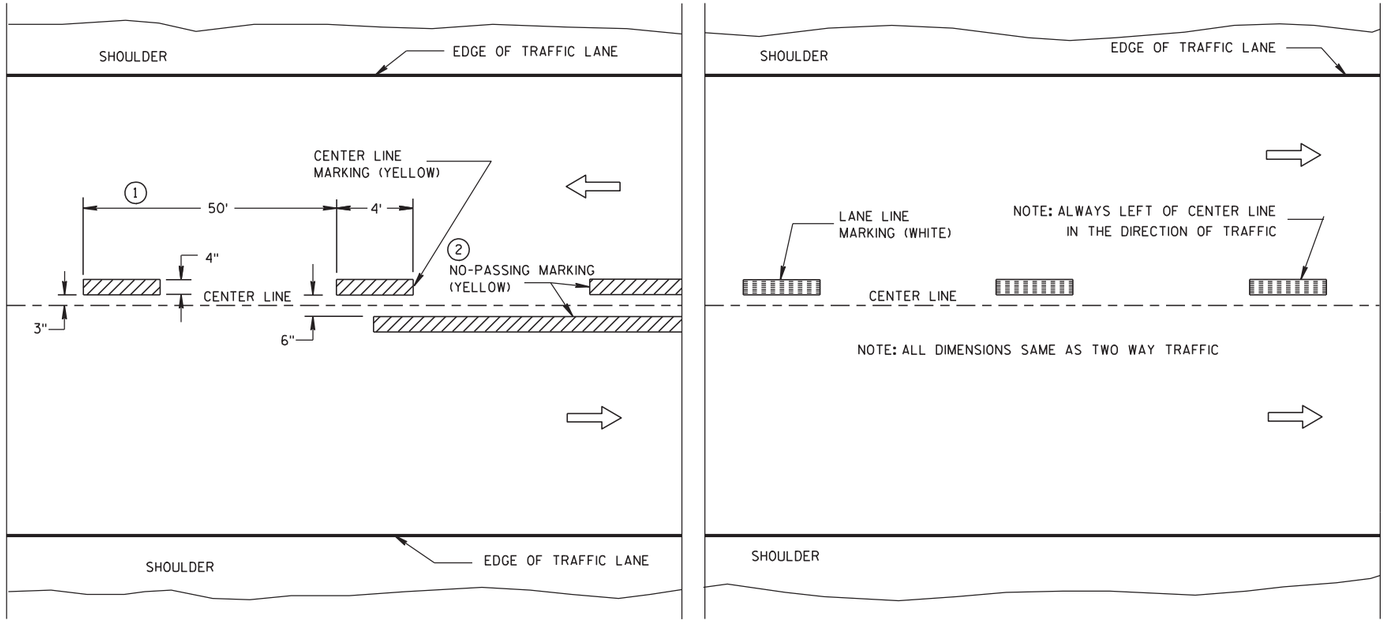
(1) HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.

(2) NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

(3) NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

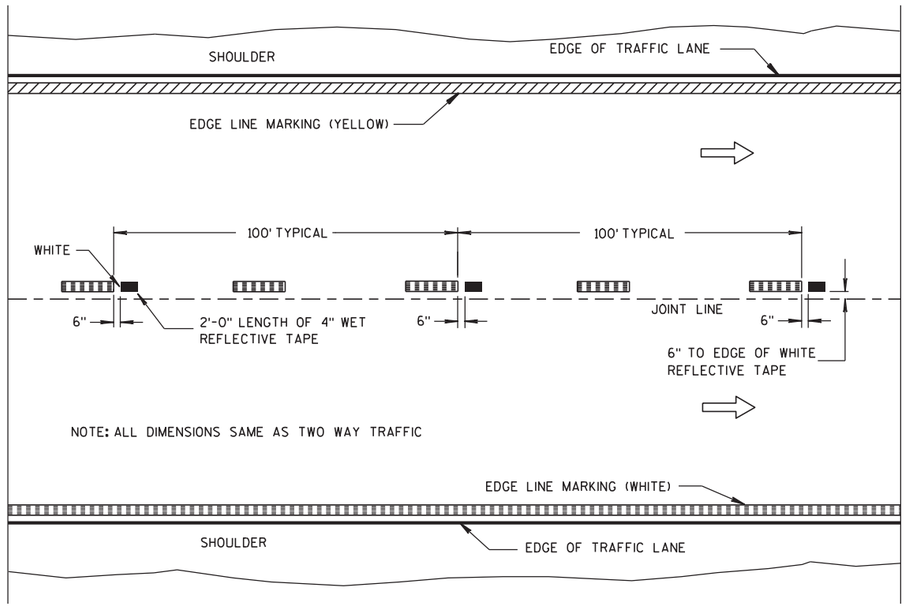


TWO WAY TRAFFIC

ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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



WET REFLECTIVE TAPE SUPPLEMENT TO SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-23-11 DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN
FHWA

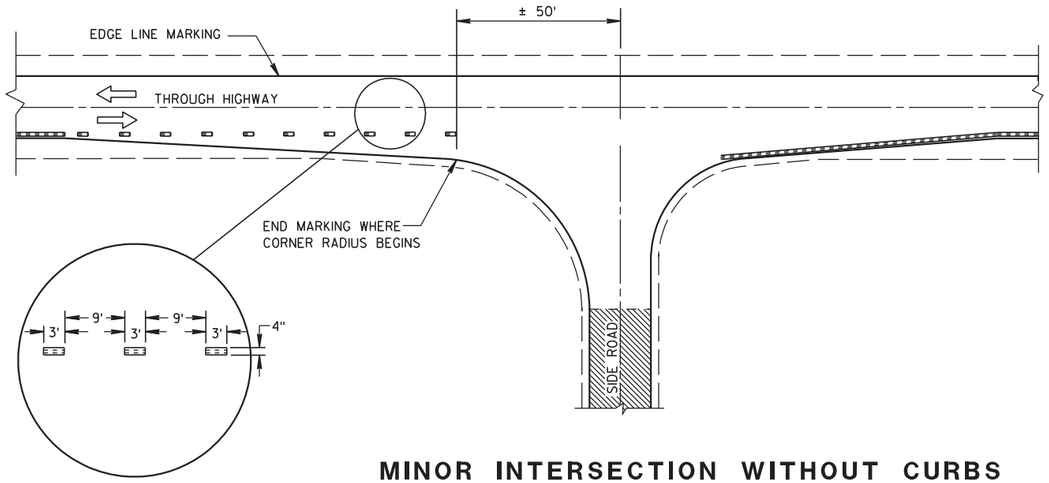
6

S.D.D. 15 C 8-14a

6

S.D.D. 15 C 8-14a

15C8 sheet b: Pavement Marking (Intersections)



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

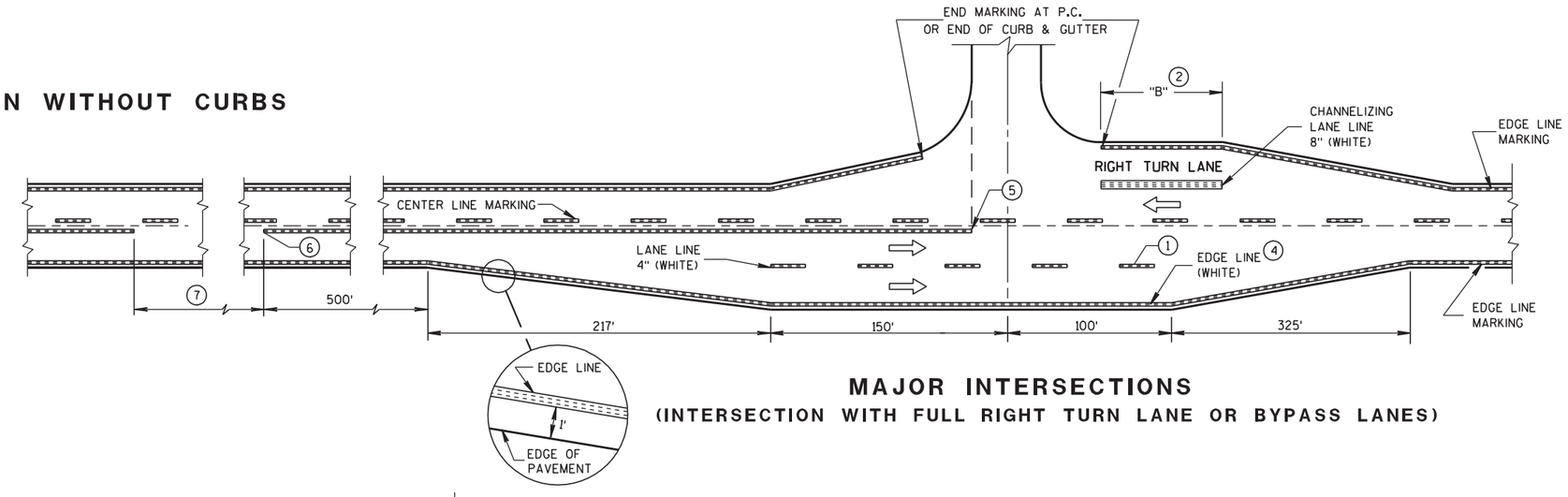
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

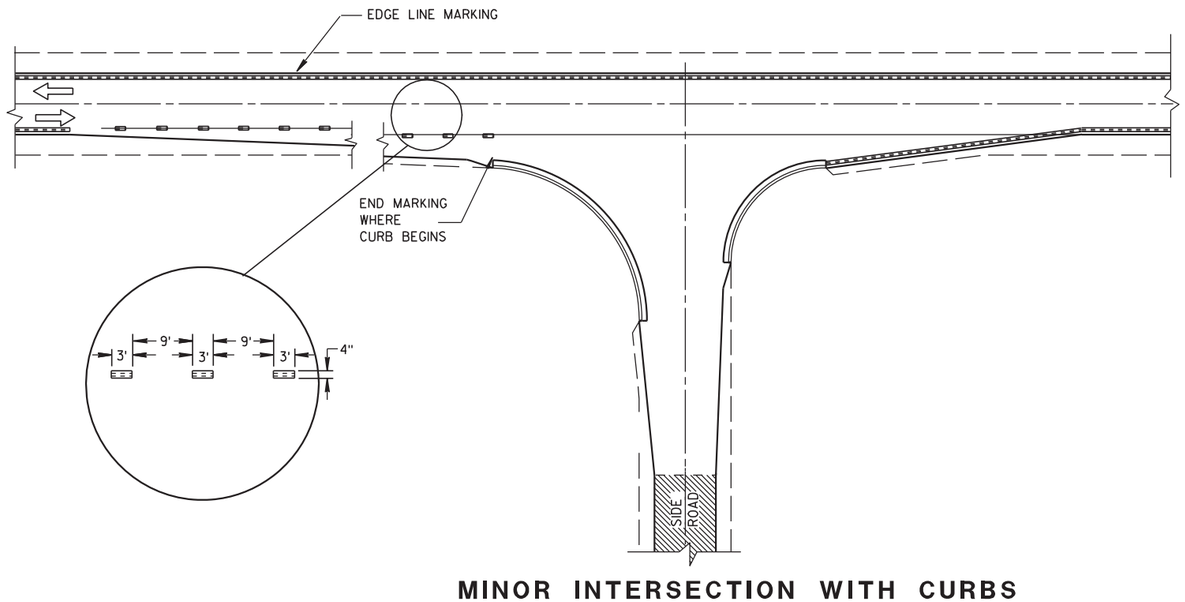
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

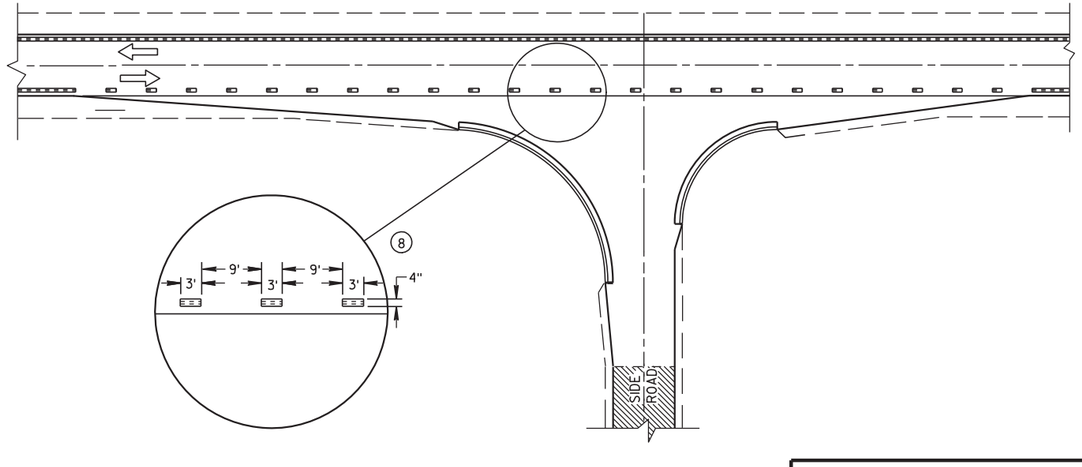
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



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

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

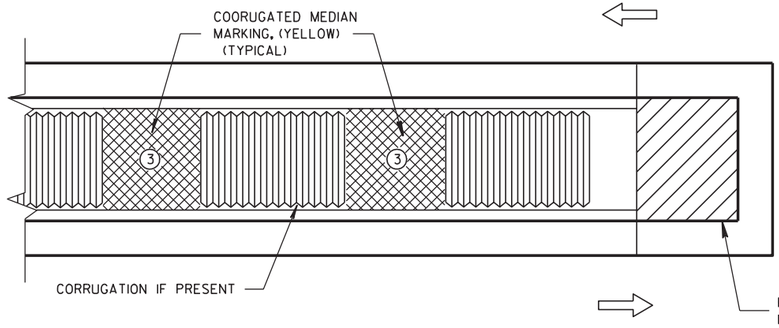
6

S.D.D. 15 C 8-14b

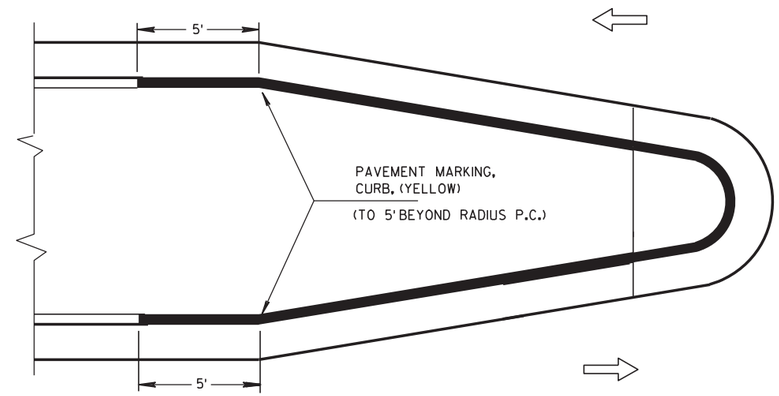
6

S.D.D. 15 C 8-14b

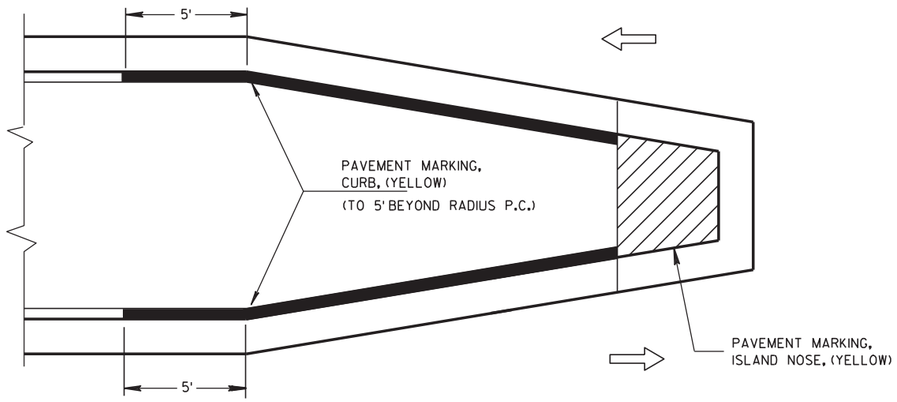
15C8 sheet f: Pavement Marking (Islands, Stop Line & Cross Walk)



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

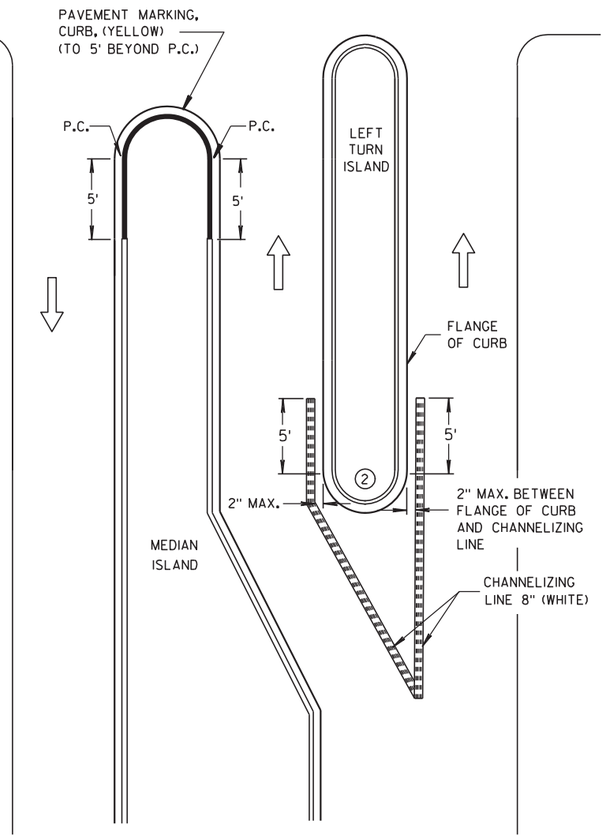


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

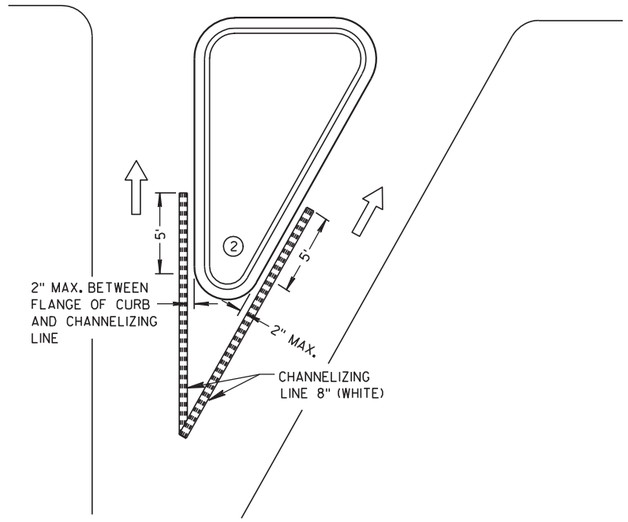
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



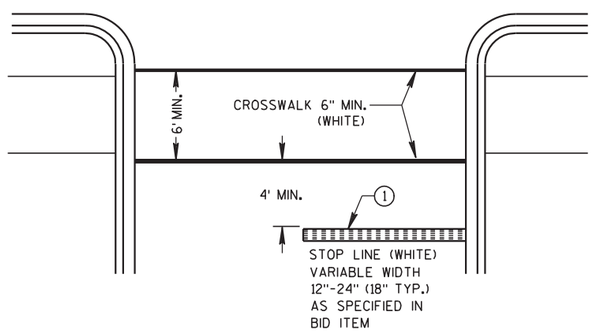
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND



STOP LINE AND CROSSWALK

LEGEND

- ISLAND NOSE MARKING
- CURB MAKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 8-14f

6

S.D.D. 15 C 8-14f

15C12: Traffic Control for Lane Closure (Suitable for Moving Operations)

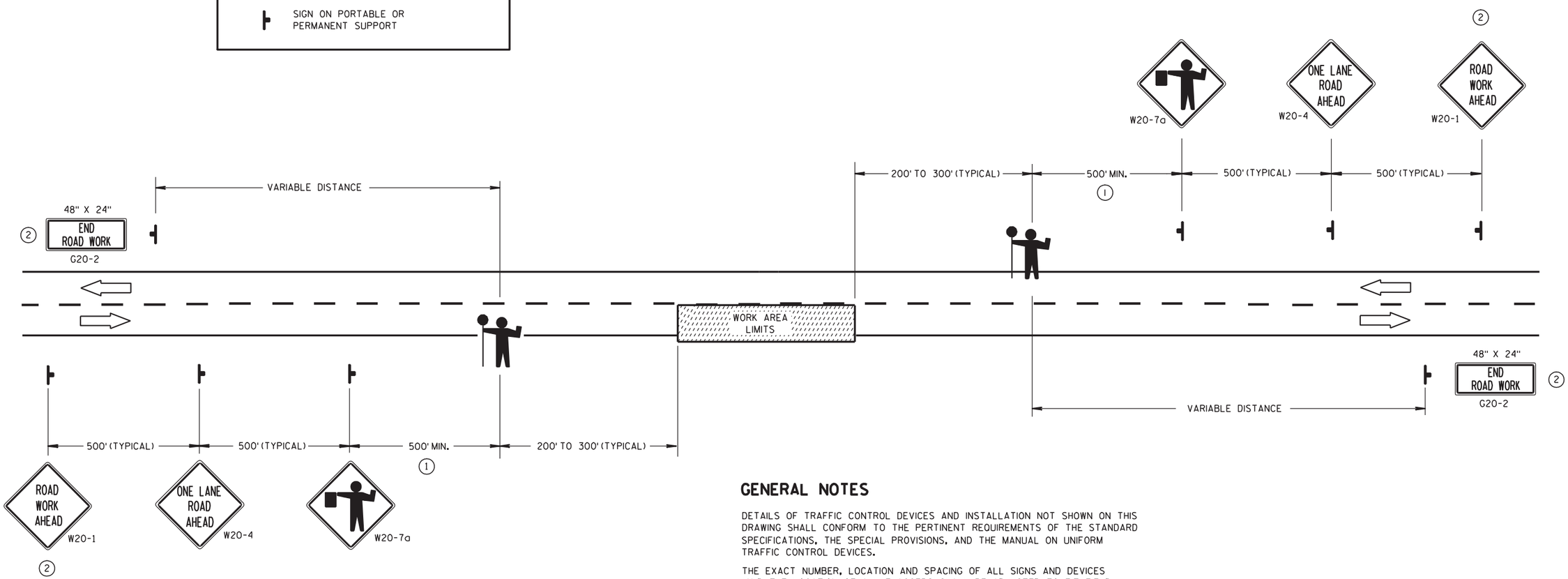
TWO-LANE ROADWAY

SYMBOLS

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

BE PREPARED TO STOP
W3-4

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



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/5/06 — DATE

/S/ Thomas N. Notbohm — STATE TRAFFIC ENGINEER OF DESIGN

FHWA

15D12: Traffic Control, Lane Closure, Speeds Greater than 40 M.P.H.

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

(1) CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

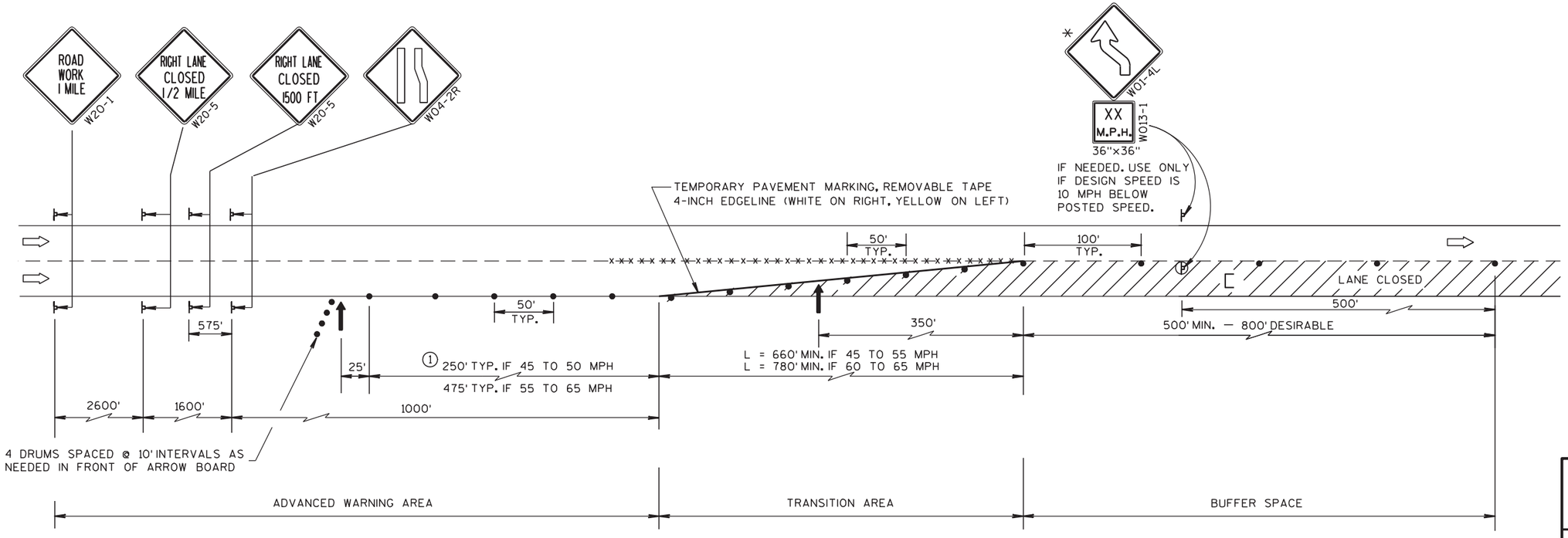
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-7-95 DATE
/S/ Chester J. Spang
DIRECTOR, OFFICE OF TRAFFIC
FHWA

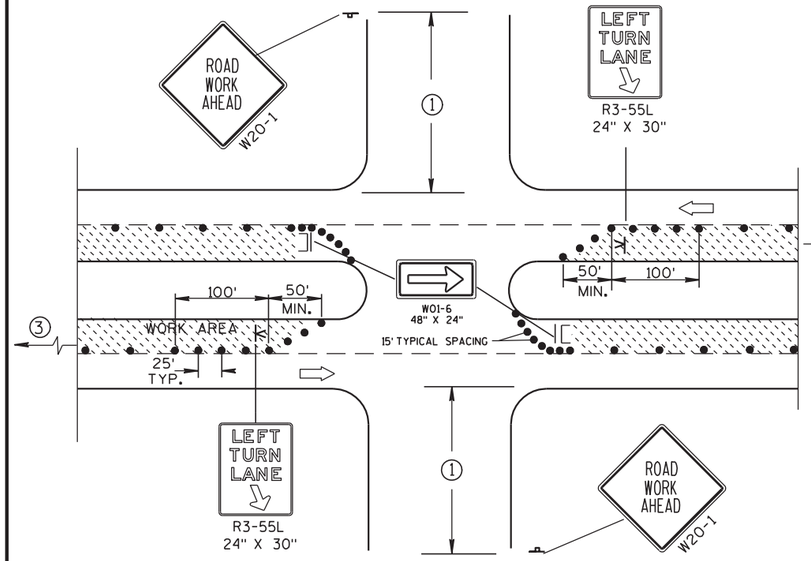
6

S.D.D. 15 D 12-2

6

S.D.D. 15 D 12-2

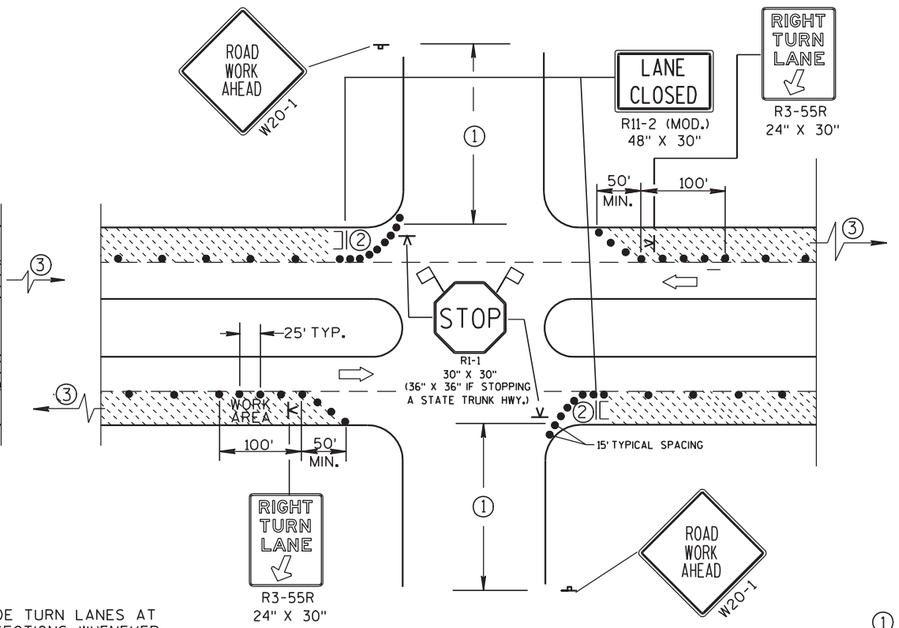
15D21: Traffic Control, Intersection Within Single Lane Closure



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

THE SPACING BETWEEN 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.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

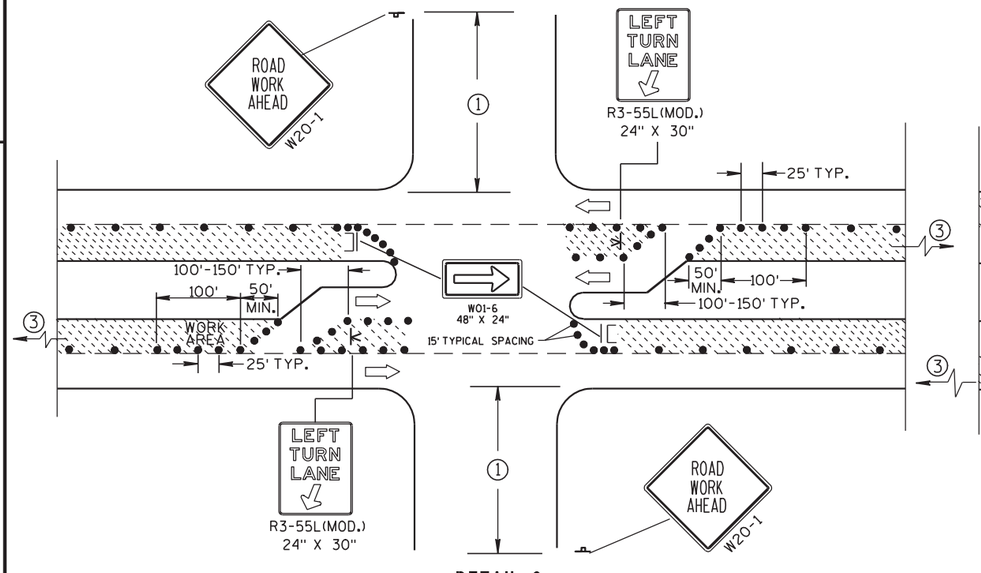
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

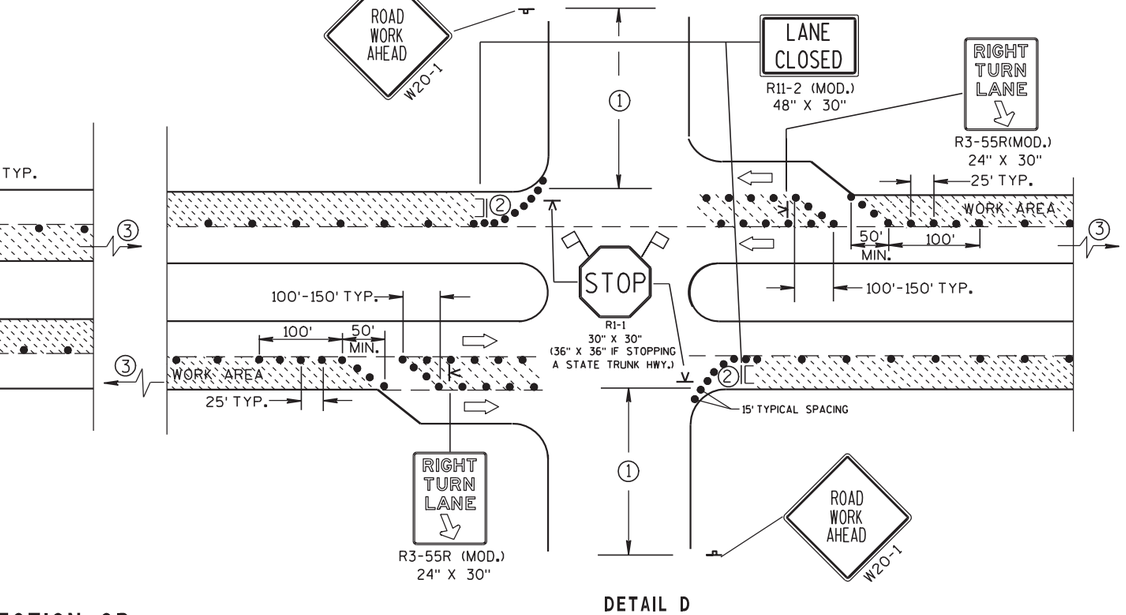
② ALSO USE BARRICADE AND 15' TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- DRUM
- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHT, TYPE A (FLASHING) WITH SIGN
- DIRECTION OF TRAFFIC FLOW
- FLAGS, 16" X 16" MIN., ORANGE

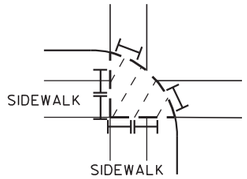
TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

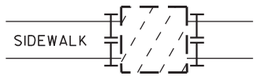
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

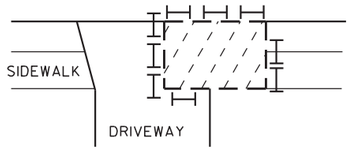
APPROVED
5/23/00 — DATE
/S/ Chester J. Spang — CHIEF SIGNS AND MARKING ENGINEER
FHWA

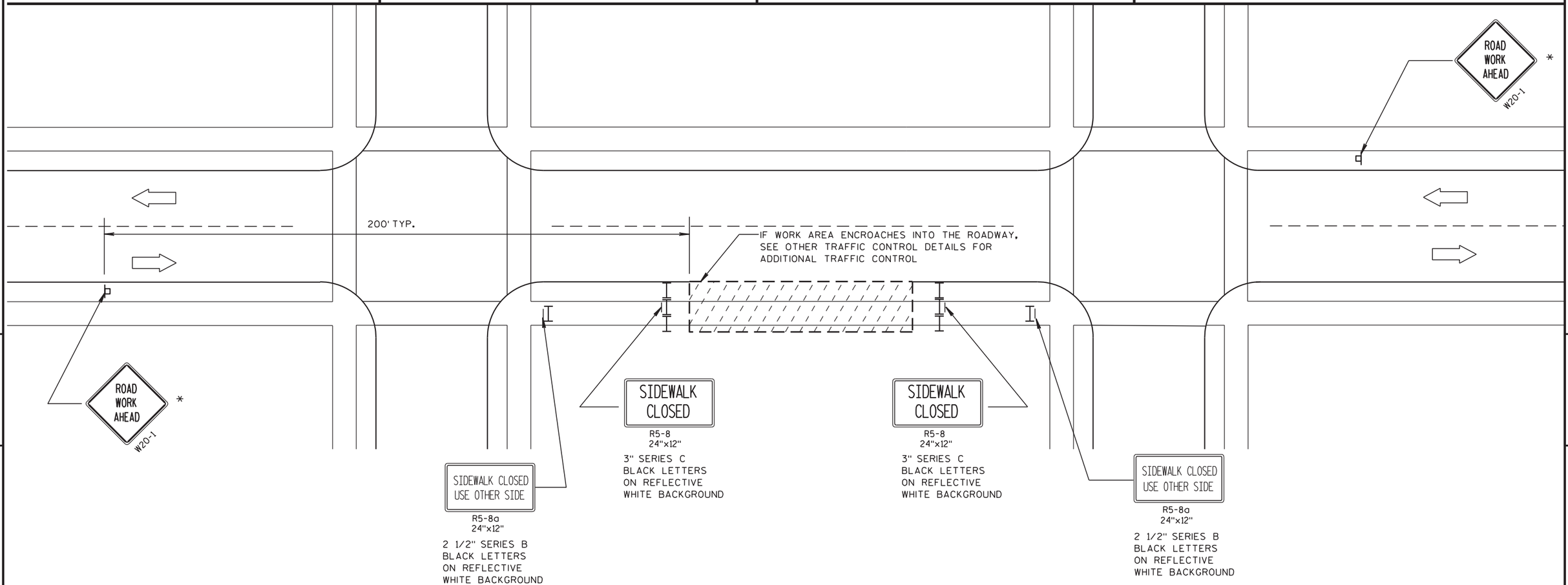
15D30: Traffic Control, Sidewalk Closure

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. Spang
CHIEF SIGNS AND MARKING ENGINEER
FHWA

6

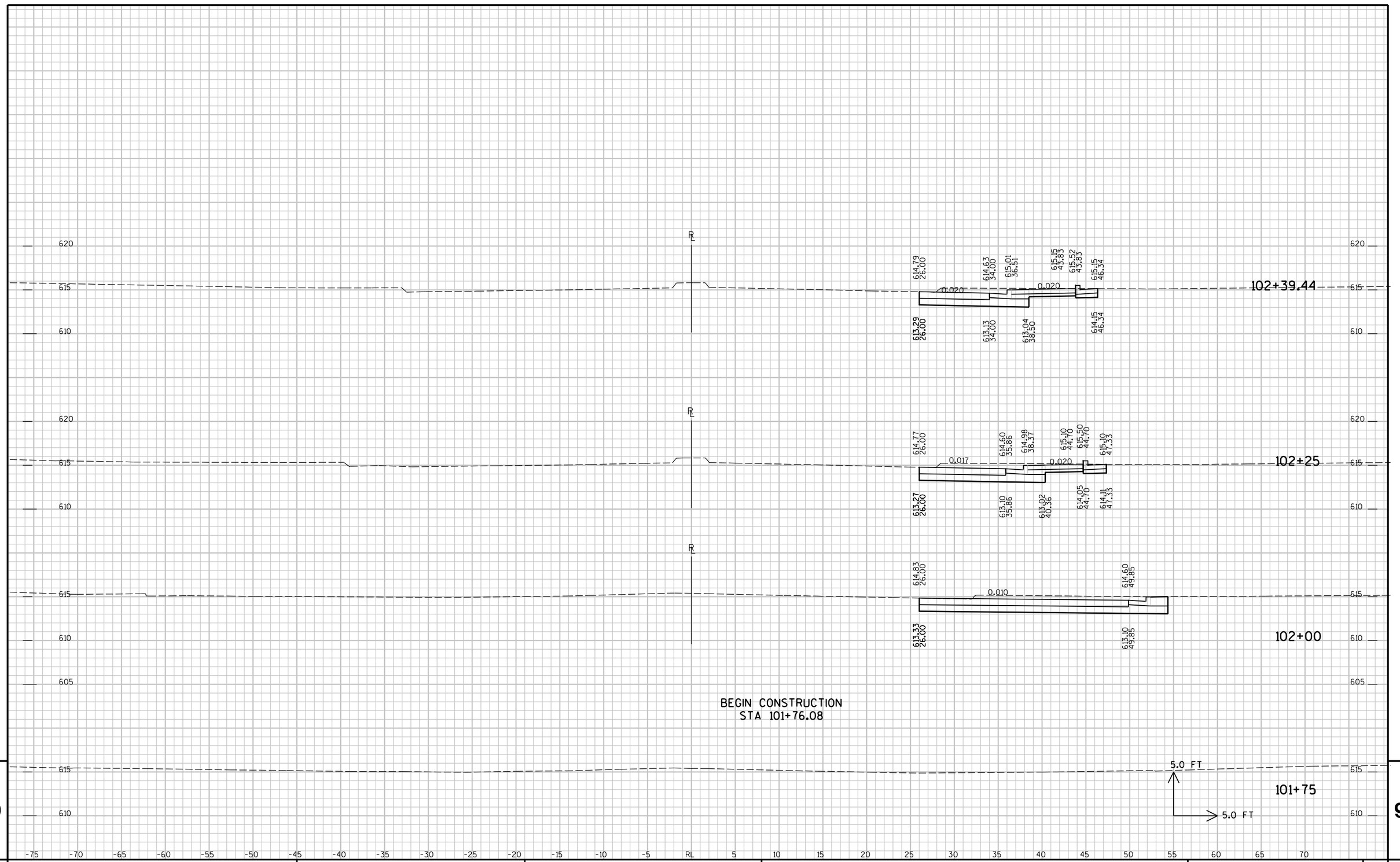
S.D.D. 15 D 30-1

E STREET: STA 49+20 - STA 49+79 EXP Fact= 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	VOLUME CUT (CY)	VOLUME FILL (CY)	CUMULATIVE VOLUME CUT (CY)	CUMULATIVE VOLUME FILL (CY)	MASS HAUL (CY)
49+20.5	6.5	0.6					
49+25.0	11.3	3.0	2	0	2	0	2
49+50.0	42.6	0.4	25	2	27	2	25
49+57.5	43.5	0.0	12	0	39	2	37
49+73.7	27.0	0.0	21	0	60	2	58

EAST SECOND STREET: STA 102+00 - STA 103+19 EXP Fact= 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	VOLUME CUT (CY)	VOLUME FILL (CY)	CUMULATIVE VOLUME CUT (CY)	CUMULATIVE VOLUME FILL (CY)	MASS HAUL (CY)
102+00.0	65.2	0.0					
102+25.0	40.2	0.0	49	0	49	0	49
102+39.4	28.0	0.0	18	0	67	0	67
102+50.0	25.3	0.0	10	0	77	0	77
102+75.0	23.8	0.0	23	0	100	0	100
103+00.0	12.4	0.0	17	0	117	0	117
103+19.4	8.5	0.0	8	0	125	0	125



9

PROJECT NO : 1195-00-74	HWY : EAST SECOND STREET	COUNTY : DOUGLAS	CROSS SECTIONS - EAST SECOND STREET	SHEET NO:	E

9

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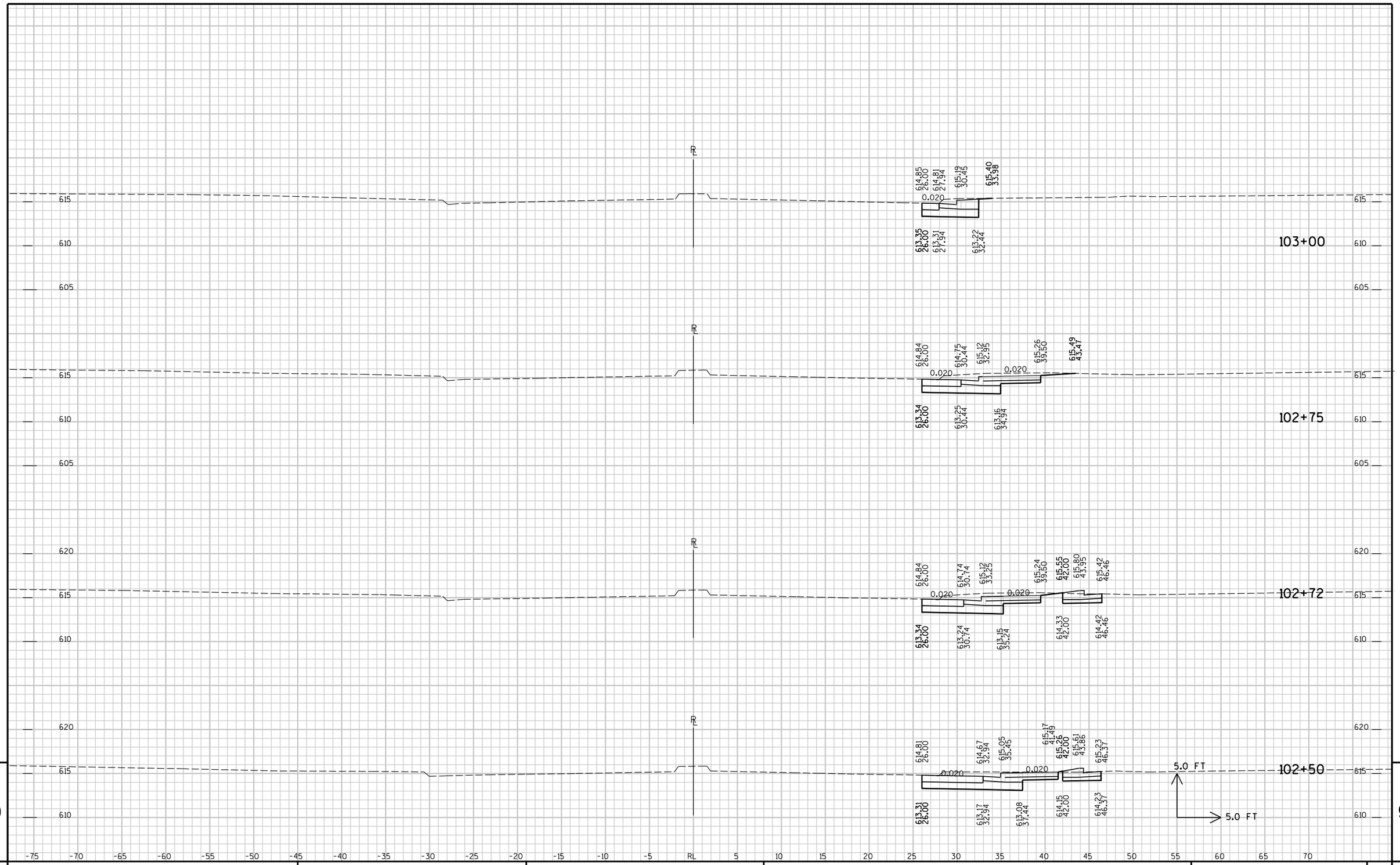

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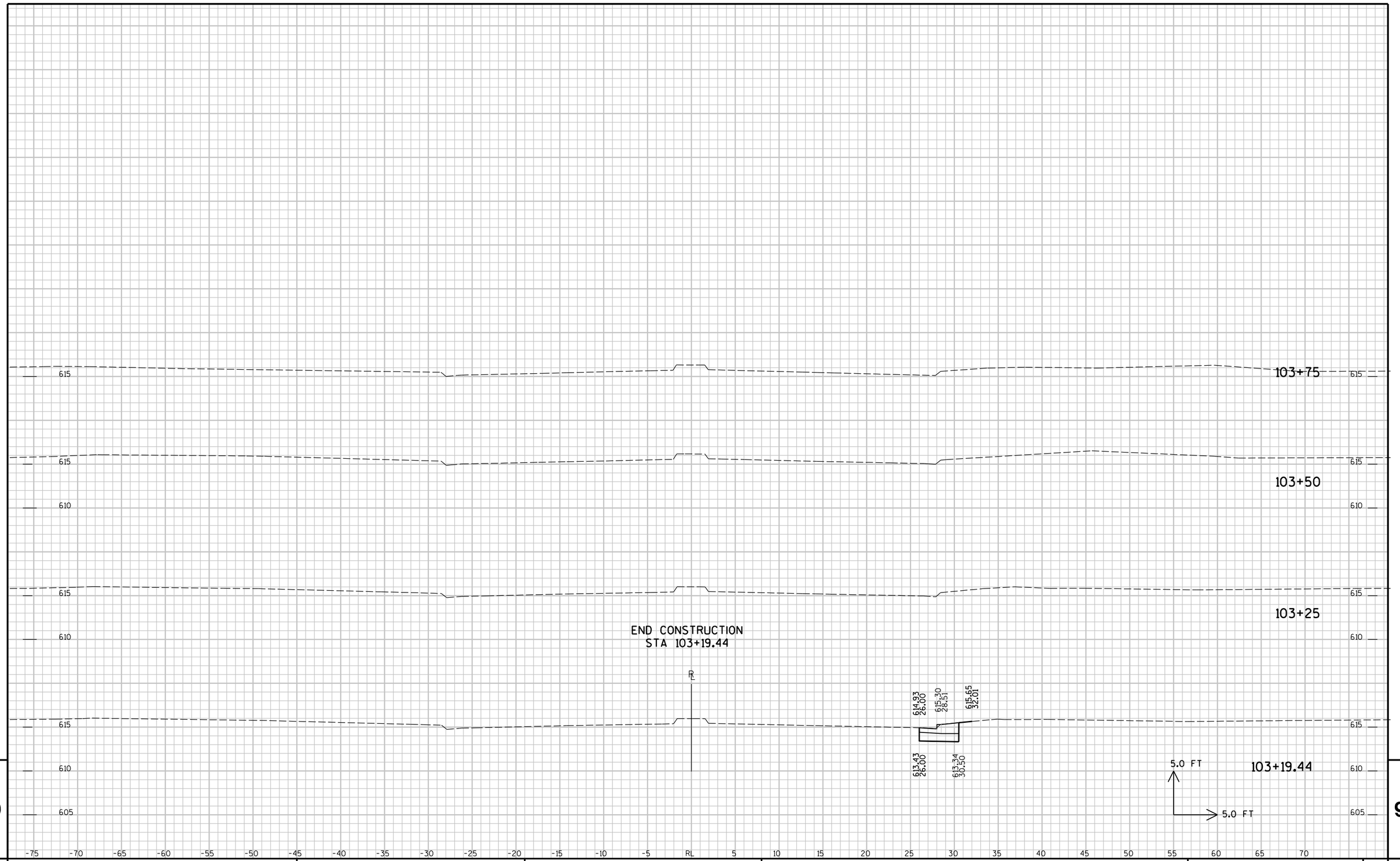
PROJECT NO : 1195-00-74	HWY : EAST SECOND STREET	COUNTY : DOUGLAS	CROSS SECTIONS - EAST SECOND STREET	SHEET NO:	E

9

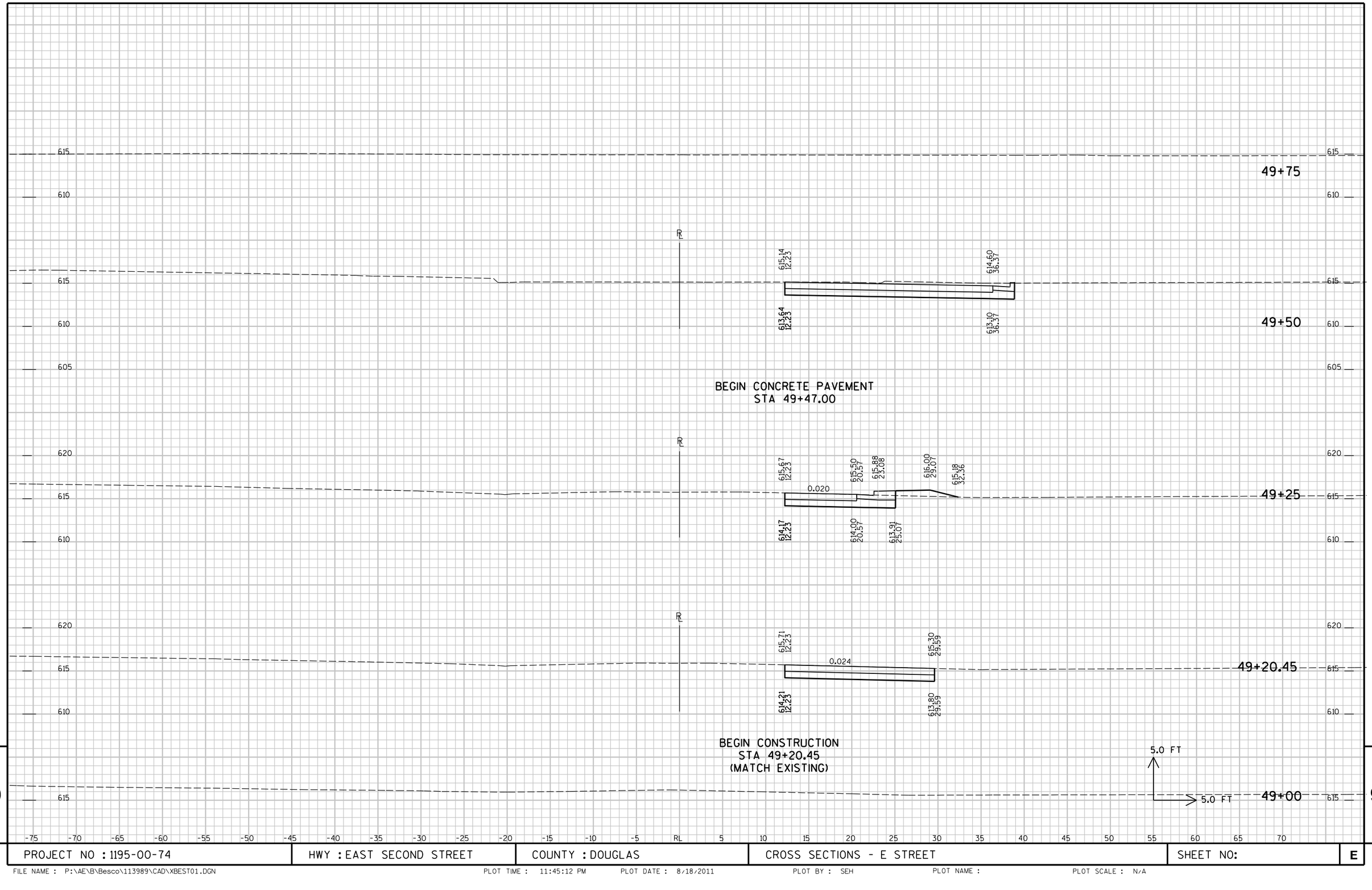
FILE NAME : P:\AE\B\Besco\113989\CAD\XBEST00.DGN PLOT TIME : 11:29:57 PM PLOT DATE : 8/18/2011 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A



9

PROJECT NO : 1195-00-74	HWY : EAST SECOND STREET	COUNTY : DOUGLAS	CROSS SECTIONS - EAST SECOND STREET	SHEET NO:	E

FILE NAME : P:\AE\B\Besco\113989\CAD\XBEST00.DGN PLOT TIME : 11:29:57 PM PLOT DATE : 8/18/2011 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A



9 9

PROJECT NO : 1195-00-74	HWY : EAST SECOND STREET	COUNTY : DOUGLAS	CROSS SECTIONS - E STREET	SHEET NO:	E

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