MAD APR 2017

PROJECT ID: 1400-00-72

WITH: N/A

COUNTY: COLUMBIA

ORDER OF SHEETS

TOTAL SHEETS = 118

DESIGN DESIGNATION 1400-00-72

A.A.D.T.	=	9,400
A.A.D.T.	=	11,500
D.H.V.	=	1,485
D.D.	=	59/41
T.	=	11.4%
DESIGN SPEED	=	50 MPH
ESALS **(CTH P)**	=	310,000

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			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'EBF	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

DEFOREST - PORTAGE

CTH P INTERSECTION

USH 51

COLUMBIA COUNTY

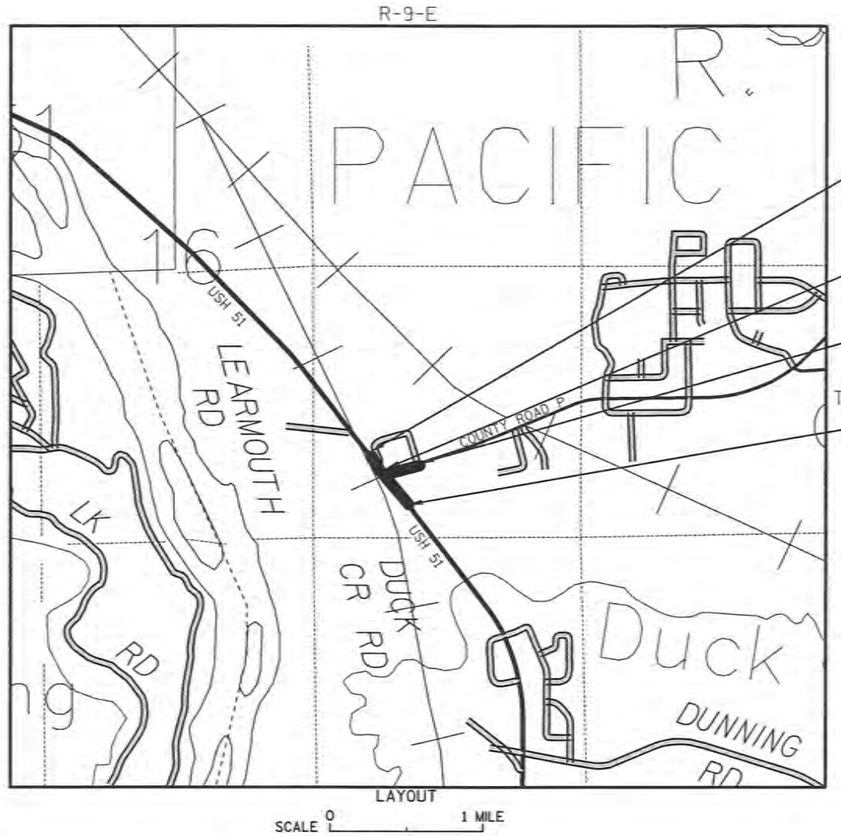
STATE PROJECT NUMBER
1400-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1400-00-72	WISC 2017159	1

AS-BUILT PLAN

SUPERVISOR: JIM OETTINGER
PROJECT MANAGER: BRANDAN HAGER
PROJECT LEADER: JASON ISAACSON
CONTRACTOR: MCGUIRE, INC
WORK STARTED: 7/5/17
WORK COMPLETED 9/25/17

SUBCONTRACTOR LIST
AUGELLI CONCRETE & EXCAVATING
GUIDE LINES PAVEMENT MARKING, LLC
ASTI SAWING
PAYNE & DOLAN, INC.
MID-STATE TRAFFIC CONTROL, INC.
MOORE SURVEYING, LLC
WEST-LAND RESTORATION, INC.



TOTAL NET LENGTH OF CENTERLINE = 0.182 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, COLUMBIA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ORIGINAL PLANS PREPARED BY
MSA PROFESSIONAL SERVICES
TRANSPORTATION · MUNICIPAL · REDEVELOPMENT · DEVELOPMENT · ENVIRONMENTAL
2901 International Lane, Suite 300 Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
BRIAN G. HUIBREGTSE
E-40465
MADISON
WI
PROFESSIONAL ENGINEER

DATE: 10/17/16 (Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	MSA Professional Services, Inc.
Project Manager	Chris Hodges
Regional Examiner	Karla Knorr
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 10/20/16 Christopher A. Hodges (Signature)

E

GENERAL NOTES

THE LIMITS OF PAVEMENT REMOVAL ON SIDE STREETS IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.

ALL CURB & GUTTER RADII ARE MEASURED TO THE FACE OF CURB.

CURB & GUTTER PLAN GRADES ARE AT THE FLAG LINE UNLESS OTHERWISE NOTED.

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

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

EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL SHEETS ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE DEVICE IS NO LONGER NECESSARY.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS AND MAINTAINED AS DETERMINED BY THE ENGINEER.

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

SEE SUBSURFACE EXPLORATION REPORT FOR SOIL BORING INFORMATION. REPORTS ARE AVAILABLE FROM WISDOT SW PROJECT DEVELOPMENT SECTION, CHRIS HODGES, PHONE (608) 246-7911.

SALVAGED TOPSOIL, SEEDING, EMAT AND FERTILIZER HAVE BEEN COMPUTED BY A DIRECT MEASUREMENT ON THE CROSS SLOPES PLUS WHERE R/W AND TLE PERMIT OR FIVE (5) FEET BEYOND THE SLOPE OF TOE.

THE EXACT WIDTH AND LOCATION OF PRIVATE ENTRANCES AND DRIVEWAYS IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

UNLESS OTHERWISE SHOWN ON THE PLAN, ALL MATCHING DRIVEWAYS AND STREETS SHALL BE SAWCUT. COST OF CUTTING IS TO BE PAID UNDER "SAWING ASPHALT" FOR ASPHALT PAVEMENT OR "SAWING CONCRETE" FOR CONCRETE PAVEMENT.

RESTORATION OF EXPOSED SLOPES AND DITCHES SHALL TAKE PLACE NOT MORE THAN 7 DAYS AFTER FINISHED GRADING IS COMPLETE.

HMA PAVEMENT AND ASPHALTIC SURFACE WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.

5" HMA PAVEMENT TO BE PLACED IN 2 LAYERS, A 3" LOWER LAYER AND A 2" UPPER LAYER.

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

RIM ELEVATION SHOWN FOR STORM SEWER STRUCTURE IS TO FLANGE OF CURB FOR INLETS AND CENTER OF STRUCTURE FOR MANHOLES.

STORM SEWER PIPE LENGTHS ARE TO CENTER OF STRUCTURES.

UTILITY CONTACTS

ELECTRIC:
ALLIANT ENERGY
ATTN: JASON HOGAN
SUITE 1000
4902 N. BILTMORE LANE
MADISON, WI 53718
PHONE: (608) 458-4871
EMAIL: JASONHOGAN@ALLIANTENERGY.COM

ATTN: STEVE KOHLHAGEN
2777 COLUMBIA DRIVE
PORTAGE, WI 53901
PHONE: (608) 742-0830
EMAIL: STEVEKOHLHAGEN@ALLIANTENERGY.COM

ELECTRIC:
ATC MANAGEMENT, INC.
ATTN: TONY MARCINIAK
W234 N2000 RIDGEVIEW PARKWAY COURT
PO BOX 47
WAUKESHA, WI 53187-0047
PHONE: (262) 506-6814
EMAIL: TMARCINIAK@ATCLLC.COM

GAS:
ALLIANT ENERGY
ATTN: JASON HOGAN
SUITE 1000
4902 N. BILTMORE LANE
MADISON, WI 53718
PHONE: (608) 458-4871
EMAIL: JASONHOGAN@ALLIANTNERGY.COM

TELECOMMUNICATIONS:
FRONTIER COMMUNICATIONS OF WI LLC
ATTN: JERALD R. MOORE
2222 WEST WISCONSIN STREET
PORTAGE, WI 53901
PHONE; (608) 742-9507
EMAIL: JERALD.R.MOORE@FTR.COM

ORDER OF SECTION 2-TYPICAL SECTION AND DETAIL SHEETS

1. GENERAL NOTES
2. TYPICAL SECTIONS
3. CONSTRUCTION DETAILS
4. NEW HMA PAVEMENT PAVING AREA DETAIL
5. PAVING AND MEDIAN DETAILS
6. EROSION CONTROL
7. PERMANENT SIGNING AND PAVEMENT MARKINGS
8. TRAFFIC CONTROL
9. CONTROL POINT TIES
10. ALIGNMENT OVERVIEW

DESIGN CONTACTS

WISCONSIN DEPARTMENT OF TRANSPORTATION
ATTN: CHRIS HODGES, P.E., R.L.S.
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: (608) 246-7911
EMAIL: CHRIS.HODGES@DOT.WI.GOV

MSA PROFESSIONAL SERVICES, INC.
ATTN: BRIAN HUIBREGTSE, P.E.
2901 INTERNATIONAL LANE, SUITE 300
MADISON, WI 53704-3133
PHONE: (608) 242-6650
EMAIL: BHUIBREGTSE@MSA-PS.COM

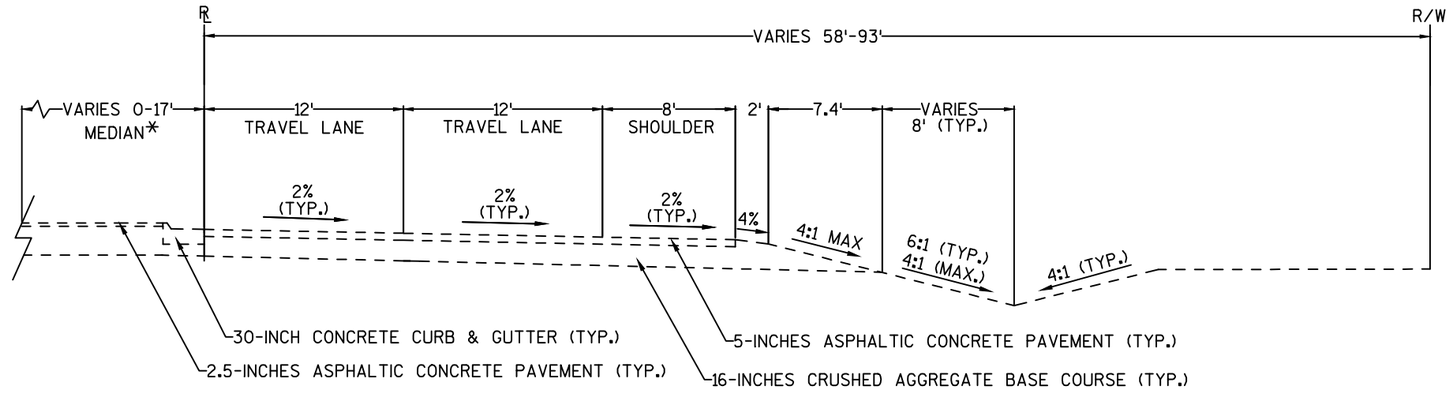
DEPARTMENT OF NATURAL RESOURCES
ATTN: ERIC HEGGELUND
SOUTH CENTRAL REGION HEADQUARTERS
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 275-3301
EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

STANDARD ABBREVIATIONS

AC	ACRES
AEW	APRON ENDWALL
AH	AHEAD
ALUM.	ALUMNIMUM
AP	ACCESS POINT
ASPH	ASPHALT
BAD	BASE AGGREGATE DENSE
BK	BACK
BM	BENCHMARK
BOC	BACK OF CURB
BOW	BACK OF SIDEWALK
BP	BEGIN PROJECT
CL or C/L	CENTERLINE
Δ	CENTRAL ANGLE or DELTA
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSM	CERTIFIED SURVEY MAP
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
D	DEGREE OF CURVE
DIA	DIAMETER
DW	DRIVEWAY
E	EAST
EB	EASTBOUND
EBS	EXCAVATION BELOW SUBGRADE
EL	ELEVATION
EOP	EDGE OF PAVEMENT
EOC	END OF CONSTRUCTION
EP	END PROJECT
ET AL	AND OTHERS
EW	END WALL
EXIST or EX.	EXISTING
FOC	FACE OF CURB
FT	FOOT
FT2	SQUARE FEET
GV	GAS VALVE
HERCP	HORIZONTAL ELLIPTICAL CONCRETE PIPE
I.E.	INVERT ELEVATION
IN	INCH
INV	INVERT
IP	IRON PIPE
L	LENGTH
L	LENGTH OF CURVE
LF	LINEAR FEET
LS	LUMP SUM
LT	LEFT
MH	MANHOLE
MI	MILE
N	NORTH
NB	NORTHBOUND
NO	NUMBER
OH	OVERHEAD
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PT	POINT
PT	POINT OF TANGENCY
R	RADIUS
R	RANGE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D	REQUIRED
RL or R/L	REFERENCE LINE
RP	RADIUS POINT
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH
SB	SOUTHBOUND
SEC	SECTION
SQ	SQUARE
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
STA	STATION
STD	STANDARD
STH	STATE TRUNK HIGHWAY
SS	STORM SEWER
STR	STRUCTURE
SY	SQUARE YARD
T	TANGENT
TAN	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
T or TN	TOWN
W	WEST
WB	WESTBOUND
WM	WATERMAIN
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

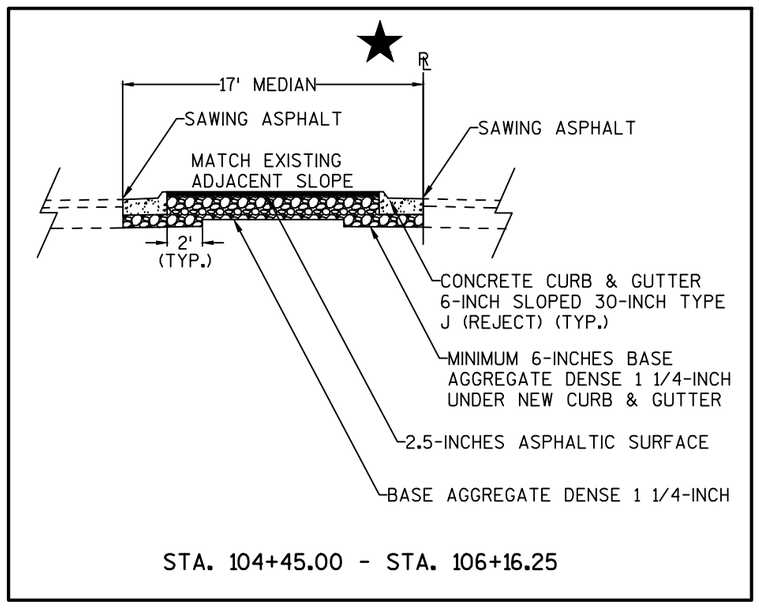
2



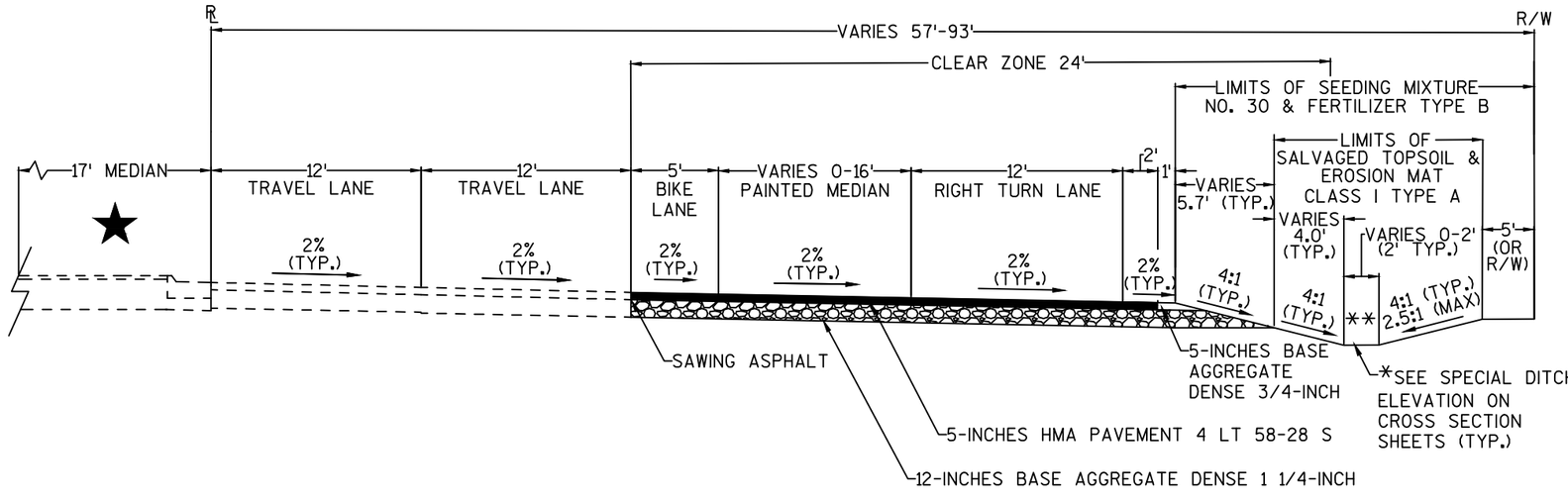
*NO CURB AND GUTTER FROM STA 100+50 TO STA 105+73

EXISTING USH 51 N.B. TYPICAL SECTION

STA. 100+50.00 - STA. 110+10.00



STA. 104+45.00 - STA. 106+16.25

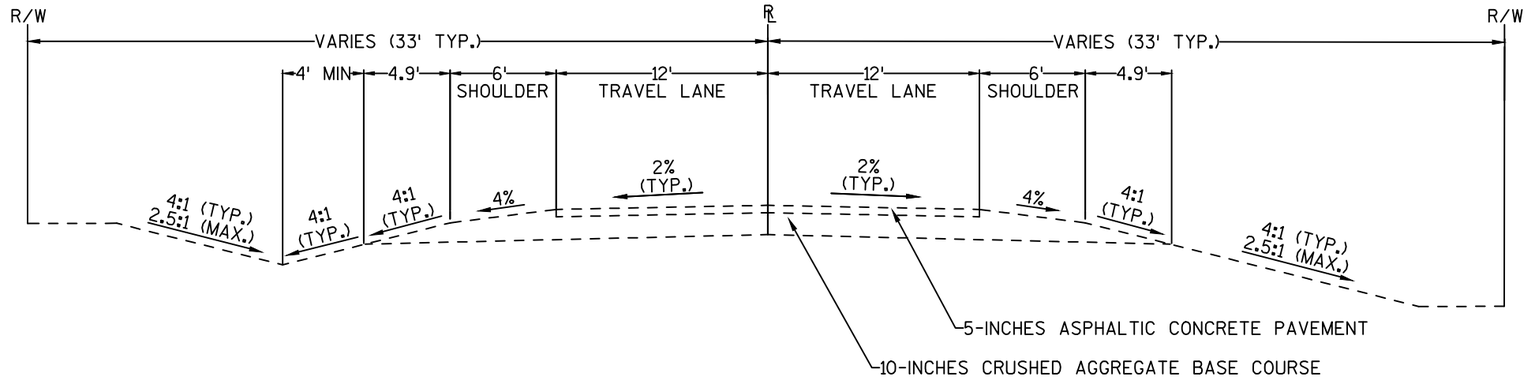


**2' BOTTOM FROM STA.
102+30 TO STA. 106+78

FINISHED USH 51 N.B. TYPICAL SECTION

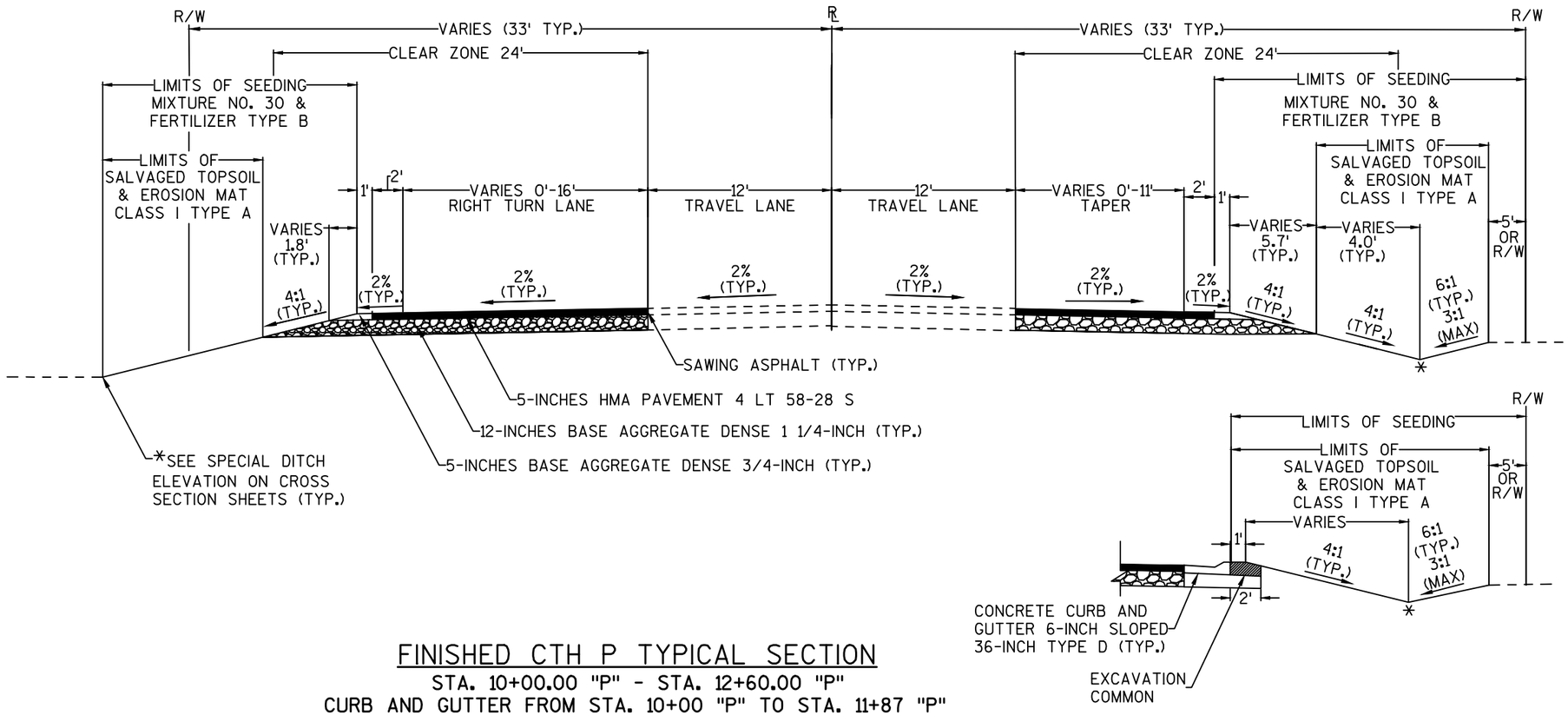
STA. 100+50.00 - STA. 110+10.00

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TYPICAL SECTIONS	SHEET 3	E



EXISTING CTH P TYPICAL SECTION

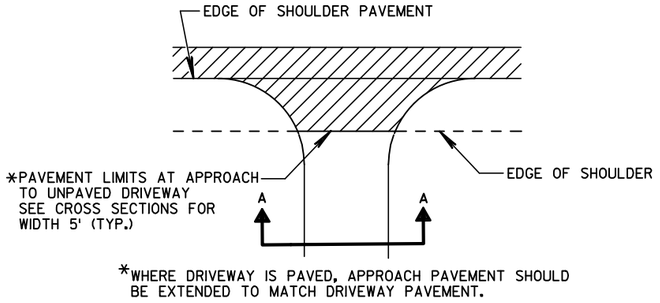
STA. 10+00.00 "P" - STA. 12+60.00 "P"



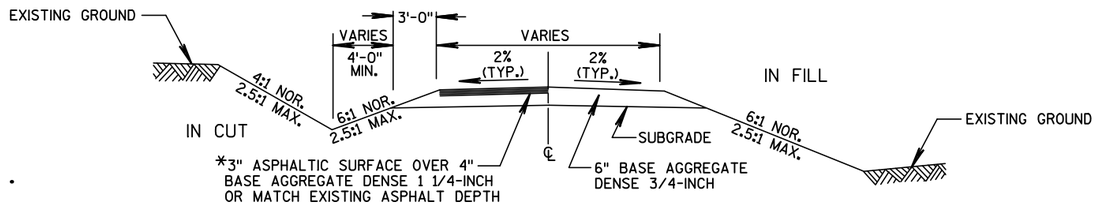
FINISHED CTH P TYPICAL SECTION

STA. 10+00.00 "P" - STA. 12+60.00 "P"
CURB AND GUTTER FROM STA. 10+00 "P" TO STA. 11+87 "P"

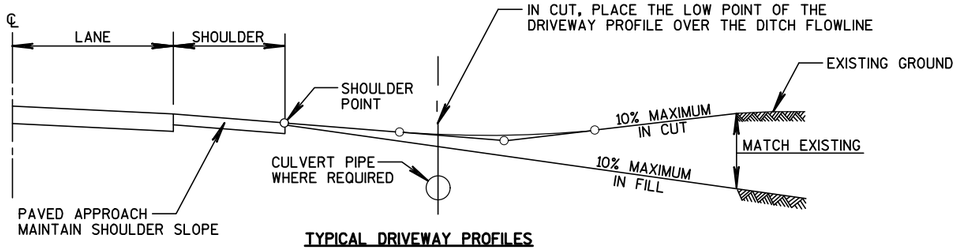
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TYPICAL SECTIONS	SHEET 4	E



RURAL DRIVEWAY INTERSECTION DETAIL
PLAN VIEW

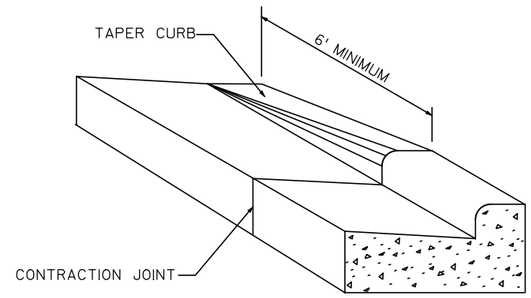


TYPICAL CROSS SECTION FOR PRIVATE DRIVE
SECTION A-A

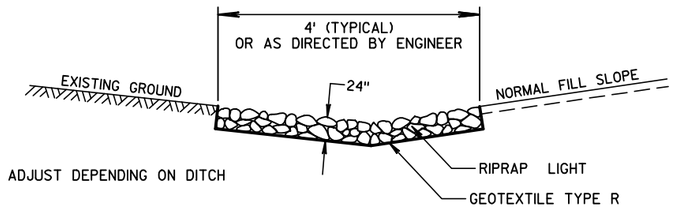


TYPICAL DRIVEWAY PROFILES

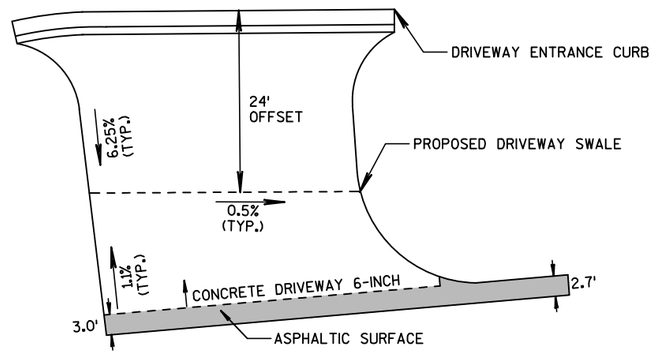
DRIVEWAY DETAIL
SCALE: NONE



DETAIL OF CURB & GUTTER TERMINI
SCALE: NONE

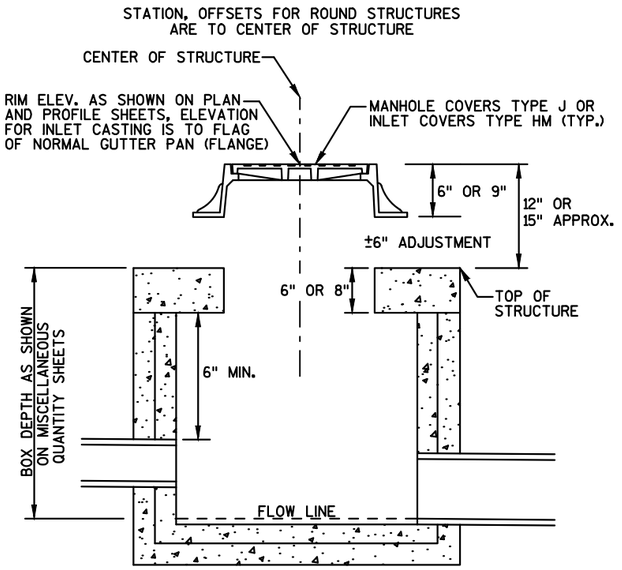


DETAIL FOR RIPRAP IN DITCHES
SCALE: NONE

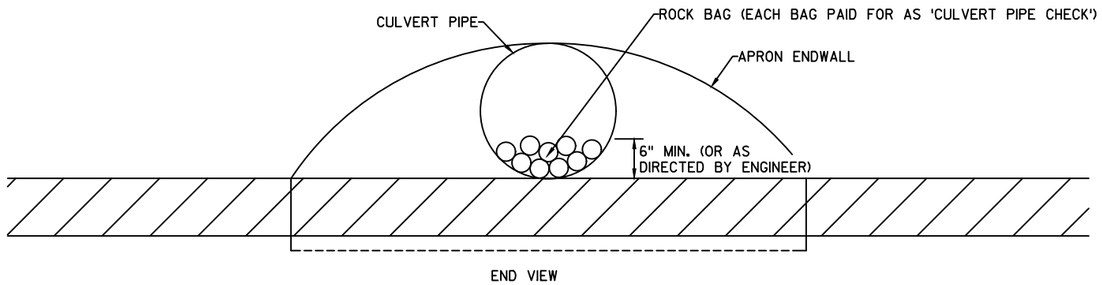


DRIVEWAY SWALE DETAIL STA. 11+64
SCALE: NONE

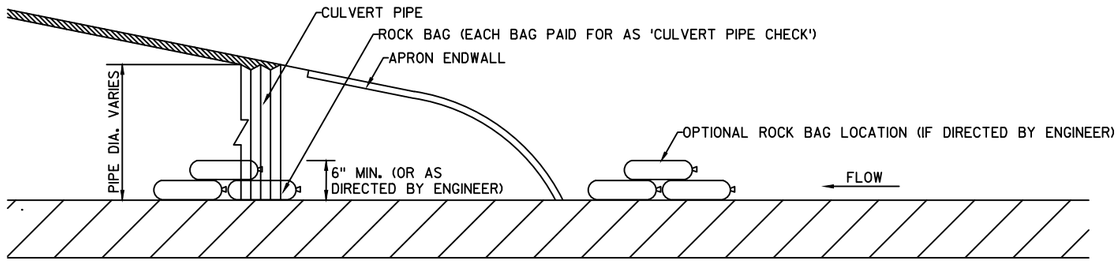
PROJECT NO:1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CONSTRUCTION DETAILS	SHEET 5	E



DETAIL FOR COMPUTING ROUND STRUCTURE ELEVATIONS
SCALE: NONE



END VIEW

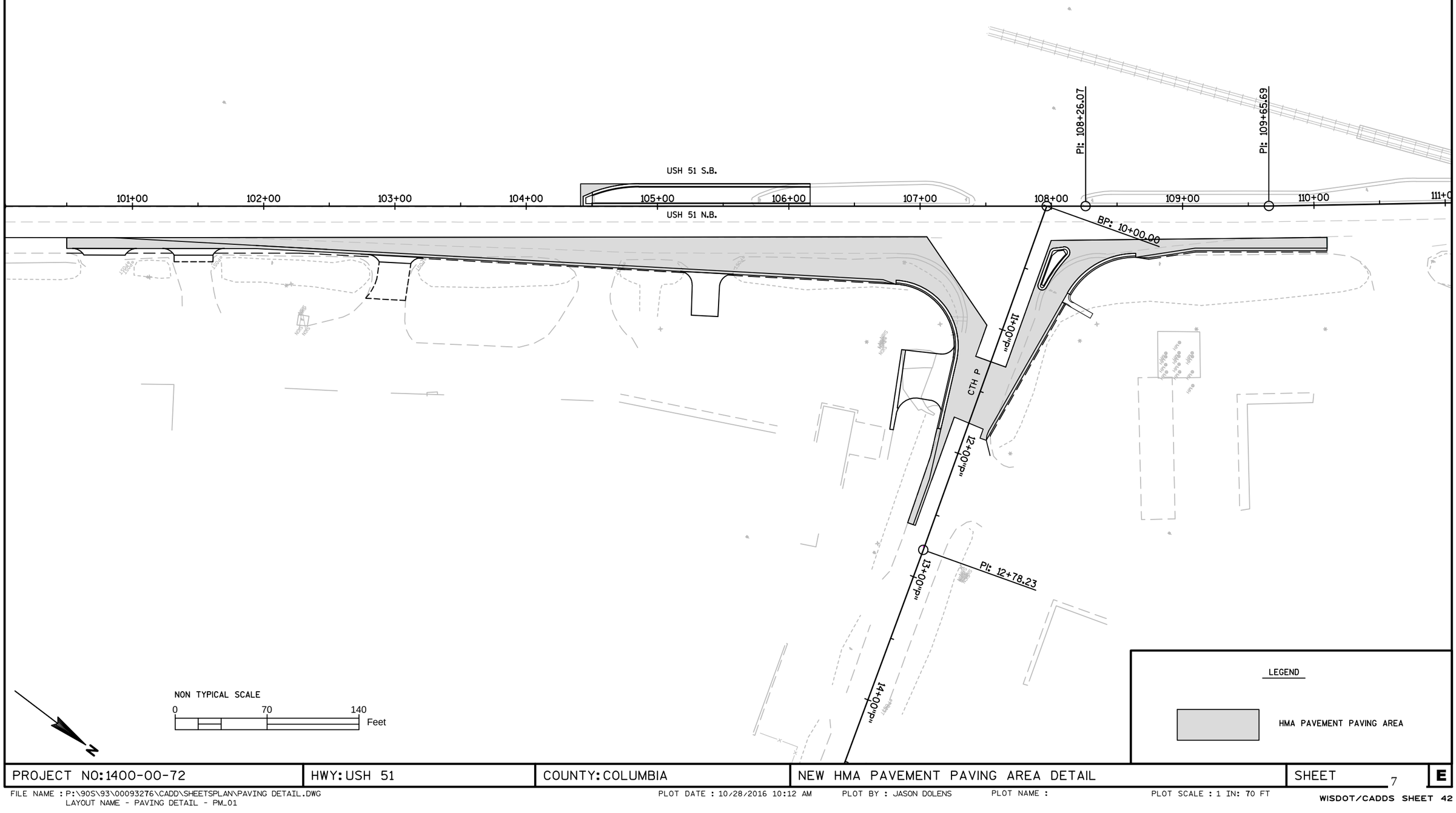


SIDE VIEW
SEE EROSION CONTROL SHEETS FOR LOCATIONS

ESTIMATED BAG SIZE = 24" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	2
15"	2
18"	2
24"	3
30"	5
48"	10
54"	10
60"	13

CULVERT PIPE CHECK DETAIL
SCALE: NONE

2



PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	NEW HMA PAVEMENT PAVING AREA DETAIL	SHEET 7	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\PAVING DETAIL.DWG
LAYOUT NAME - PAVING DETAIL - PM_01
PLOT DATE : 10/28/2016 10:12 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN: 70 FT
WISDOT/CADDS SHEET 42

2

N

STA. 104+40.34, 17.00' LT
STA. 104+43.35, 7.52' LT
790.68
STA. 104+50.35, 10.49' LT
PT/PC 790.75
STA. 104+67.80, 15.35' LT
MID PT. 790.83
STA. 104+85.84, 17.00' LT
PT

USH 51 S.B.

J-30
(REJECT)

SAWING ASPHALT REQ'D.

STA. 106+16.25, 17.00' LT

CONCRETE MEDIAN
SLOPED NOSE

3-INCHES ASPHALTIC SURFACE OVER
4-INCHES BASE AGGREGATE DENSE 1 1/4-INCH

REMOVE CURB & GUTTER
SAWING ASPHALT REQ'D.

SAWING CONCRETE REQ'D.

105+00

106+00

107+00

STA. 104+43.35, 0.00'

SAWING ASPHALT REQ'D. (TYP.)

J-30
(REJECT)

STA. 106+16.25, 0.00'

USH 51 N.B.

SAWING ASPHALT REQ'D.

STA. 104+40.35, 0.05' LT

STA. 104+85.84, 83.00' RT
98.0' RAD.

PROJECT NO:1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	PAVING AND MEDIAN DETAIL	SHEET 8	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\PAVING AND MEDIAN DETAIL.DWG
LAYOUT NAME - PAVING AND MEDIAN DETAIL - PAVING_02

PLOT DATE : 10/10/2016 11:05 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

107+00

108+00

109+00

BP: 10+00.00

USH 51 N.B.

STA. 108+01.09, 23.55' RT

STA. 108+02.40, 31.95' RT
PT 790.28

STA. 108+00.23, 32.87' RT
MID PT. 790.22

STA. 107+98.86, 34.79' RT
PC 790.04

STA. 108+09.29, 31.08' RT
PC 790.36

STA. 108+13.70, 33.43' RT
MID PT. 790.34

STA. 108+64.27, 36.00' RT
PT 790.33

STA. 109+09.56, 32.01' RT

STA. 108+12.97, 38.37' RT
PT/PC 790.25

STA. 107+05.17, 23.36' RT

SAWING ASPHALT REQ'D. (TYP.)

CONCRETE SIDEWALK 5-INCH

STA. 107+89.99, 59.49' RT
PC 789.63

D-36

STA. 108+34.15, 44.08' RT
MID PT. 789.70

STA. 106+81.79, 56.47' RT
PC 789.73

D-36

SAWING ASPHALT REQ'D.

J-30
(REJECT)

STA. 108+05.33, 47.44' RT
MID PT. 790.04

STA. 107+18.63, 75.67' RT
MID PT. 788.93

STA. 11+00.72, 12.29' RT

STA. 108+12.21, 66.20' RT
PC 789.12

ASPHALTIC FLUME

STA. 107+96.02, 62.27' RT
PT/PC 789.58

STA. 108+64.22, 96.00' RT
58.0' RAD.

STA. 108+83.97, 106.12' RT
100.0' RAD.

INLET COVER
TYPE HM

STA. 107+28.23, 116.09' RT
PT 788.56

STA. 107+91.74, 63.65' RT
MID PT. 789.67

STA. 11+26.01, 12.18' RT

STA. 11+25.96, 12.09' LT

STA. 106+79.18, 106.40' RT
48.0' RAD.

CONCRETE DRIVEWAY
6-INCH

STA. 11+70.71, 42.14' RT

MANHOLE COVER
TYPE J

STA. 11+85.47, 39.46' RT
15.0' RAD.

STA. 11+75.02, 14.21' RT

STA. 11+87.03, 18.47' RT
788.76

STA. 11+76.09, 16.25' LT

CTH P

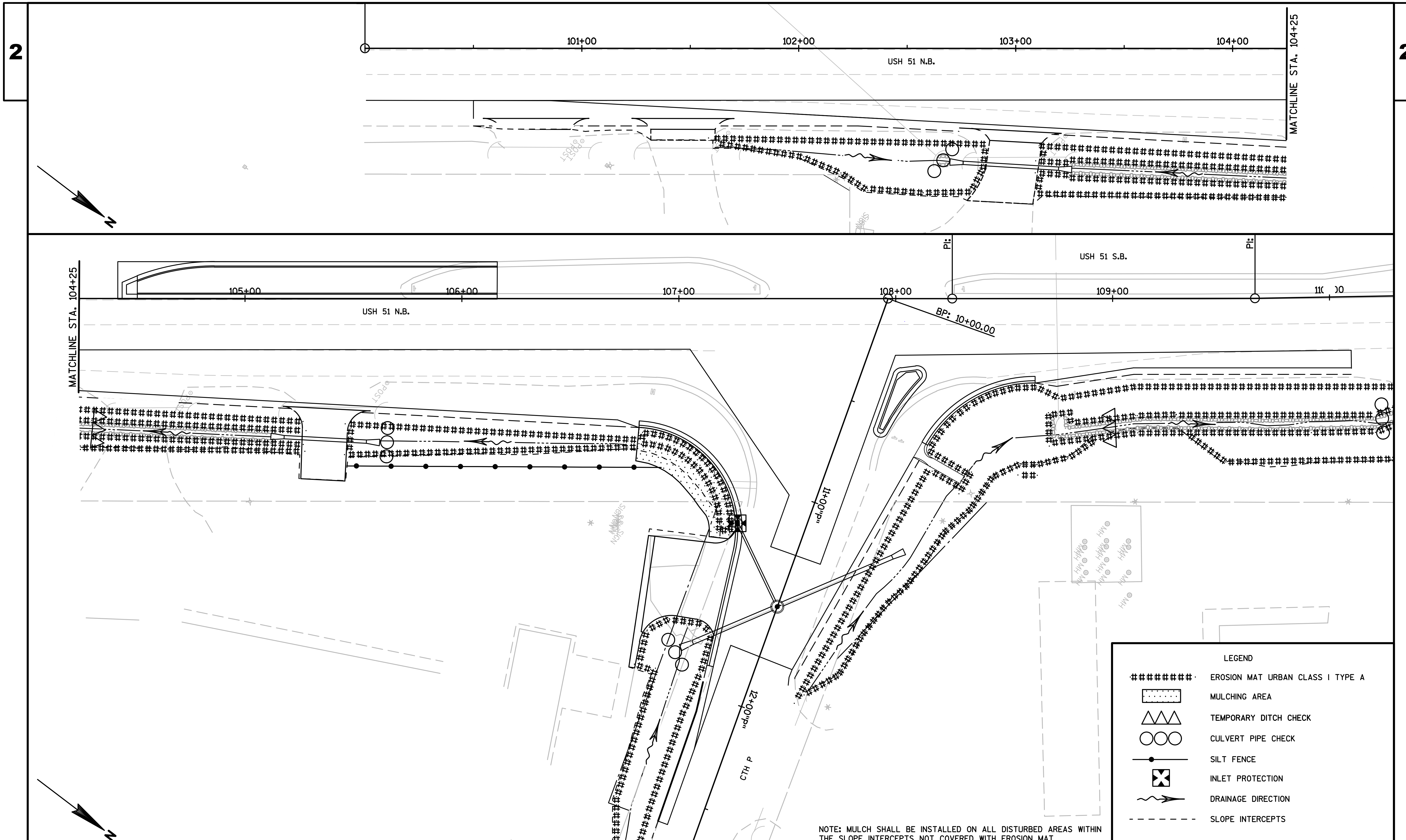
ISLAND CURB & GUTTER RADIUS POINT TABLE

POINT	STATION	OFFSET	RADIUS
A	108+02.94	36.25' RT.	2.5'
B	108+09.84	35.38' RT.	2.5'
C	107+93.13	60.62' RT.	1.5'

PROJECT NO:1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	PAVING AND MEDIAN DETAIL	SHEET	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\PAVING AND MEDIAN DETAIL.DWG
LAYOUT NAME - PAVING AND MEDIAN DETAIL - PAVING_01

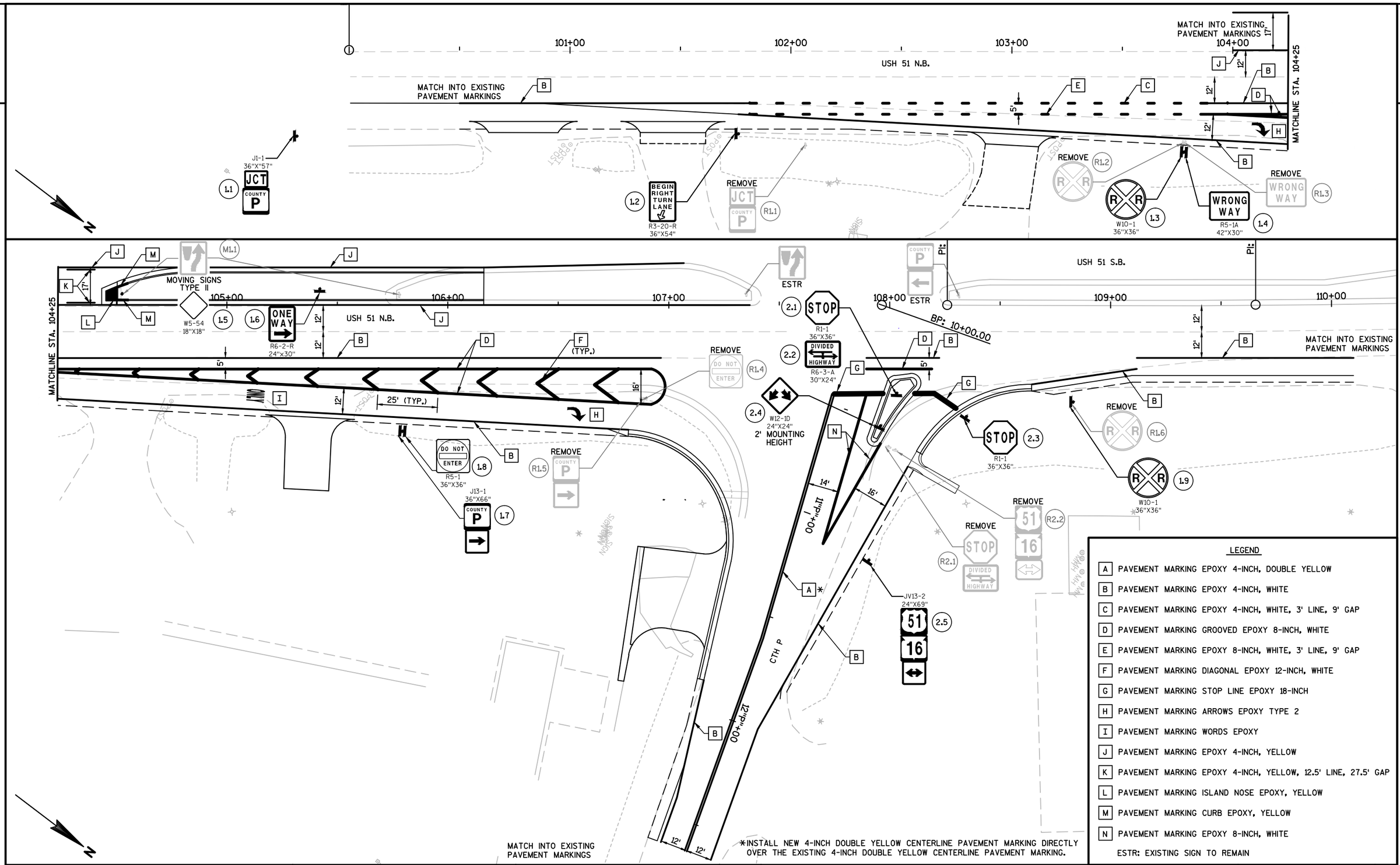
PLOT DATE : 10/10/2016 11:05 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:20 FT



NOTE: MULCH SHALL BE INSTALLED ON ALL DISTURBED AREAS WITHIN THE SLOPE INTERCEPTS NOT COVERED WITH EROSION MAT

PROJECT NO:1400-00-72	HWY:USH 51	COUNTY:COLUMBIA	EROSION CONTROL	SHEET 10	E

2



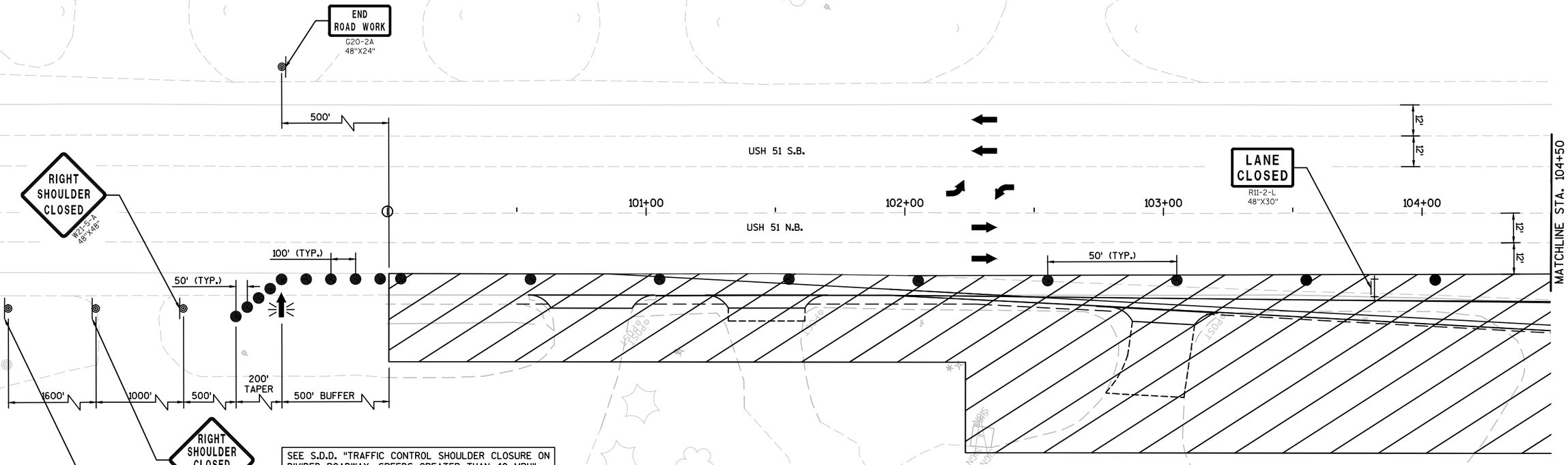
LEGEND

- A PAVEMENT MARKING EPOXY 4-INCH, DOUBLE YELLOW
- B PAVEMENT MARKING EPOXY 4-INCH, WHITE
- C PAVEMENT MARKING EPOXY 4-INCH, WHITE, 3' LINE, 9' GAP
- D PAVEMENT MARKING GROOVED EPOXY 8-INCH, WHITE
- E PAVEMENT MARKING EPOXY 8-INCH, WHITE, 3' LINE, 9' GAP
- F PAVEMENT MARKING DIAGONAL EPOXY 12-INCH, WHITE
- G PAVEMENT MARKING STOP LINE EPOXY 18-INCH
- H PAVEMENT MARKING ARROWS EPOXY TYPE 2
- I PAVEMENT MARKING WORDS EPOXY
- J PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- K PAVEMENT MARKING EPOXY 4-INCH, YELLOW, 12.5' LINE, 27.5' GAP
- L PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW
- M PAVEMENT MARKING CURB EPOXY, YELLOW
- N PAVEMENT MARKING EPOXY 8-INCH, WHITE

ESTR: EXISTING SIGN TO REMAIN

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 11	E

2



SEE S.D.D. "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH"

GENERAL TRAFFIC CONTROL NOTES

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

TRAFFIC CONTROL DRUMS SHALL BE INSTALLED TO MAINTAIN DRIVEWAY ACCESS.

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

TEMPORARY STOP SIGNS SHALL BE SUPPORTED ON WOOD POSTS, OR AS DIRECTED BY ENGINEER.

ARROW BOARD SHOULD BE FLASHING IN CAUTION MODE FOR SHOULDER CLOSURE.

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM WITH/WITHOUT WARNING LIGHTS TYPE C
- TRAFFIC CONTROL SIGN ON PERMANENT/TEMPORARY SUPPORT
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLASHING ARROW BOARD
- TRAFFIC FLOW ARROW

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 1A	SHEET 12	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\TRAFFIC CONTROL.DWG
LAYOUT NAME - TRAFFIC CONTROL - TC_01

PLOT DATE : 11/9/2016 11:00 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : **********

2

MATCHLINE STA. 104+50

LANE CLOSED
R11-2-L
48"X30"

105+00 106+00 107+00

12' 12' 12' 12'

50' (TYP.)

USH 51 N.B.

A A

NOTE: TRAFFIC CONTROL DRUMS SHALL BE INSTALLED TO MAINTAIN DRIVEWAY ACCESS.

USH 51 S.B.

INSTALL SIGNS ON USH 51 S.B. 700' NORTH OF THE CTH P INTERSECTION

ROAD WORK AHEAD
W20-1-A
48"X48"

108+00 109+00 110+00

BP: 10+00.00

STOP
R1-1
36"X36"

DIVIDED HIGHWAY
R6-3-A
30"X24"

50' (TYP.)

500'

END ROAD WORK
G20-2A
48"X24"

11+00 "p"

11' 11'

ROAD CLOSED
R11-2
48"X30"

50' (TYP.)

12+00 "p"

LANE CLOSED
R11-2-L
48"X30"

CTH P

PI: 12+78.23

13+00 "p"

500' 500' 500'

ROAD WORK 500 FT
W20-1-D
48"X48"

ROAD WORK AHEAD
W20-1-A
48"X48"

END ROAD WORK
G20-2A
48"X24"

12.0' TRAVEL LANE | 12.0' TRAVEL LANE | 12.0' MEDIAN (TYP.) | 12.0' TRAVEL LANE | 12.0' TRAVEL LANE | CONSTRUCTION ZONE

TRAFFIC CONTROL DRUMS
NOTE: INCLUDE 1' SHY DISTANCE BETWEEN TRAVEL LANE AND DRUM

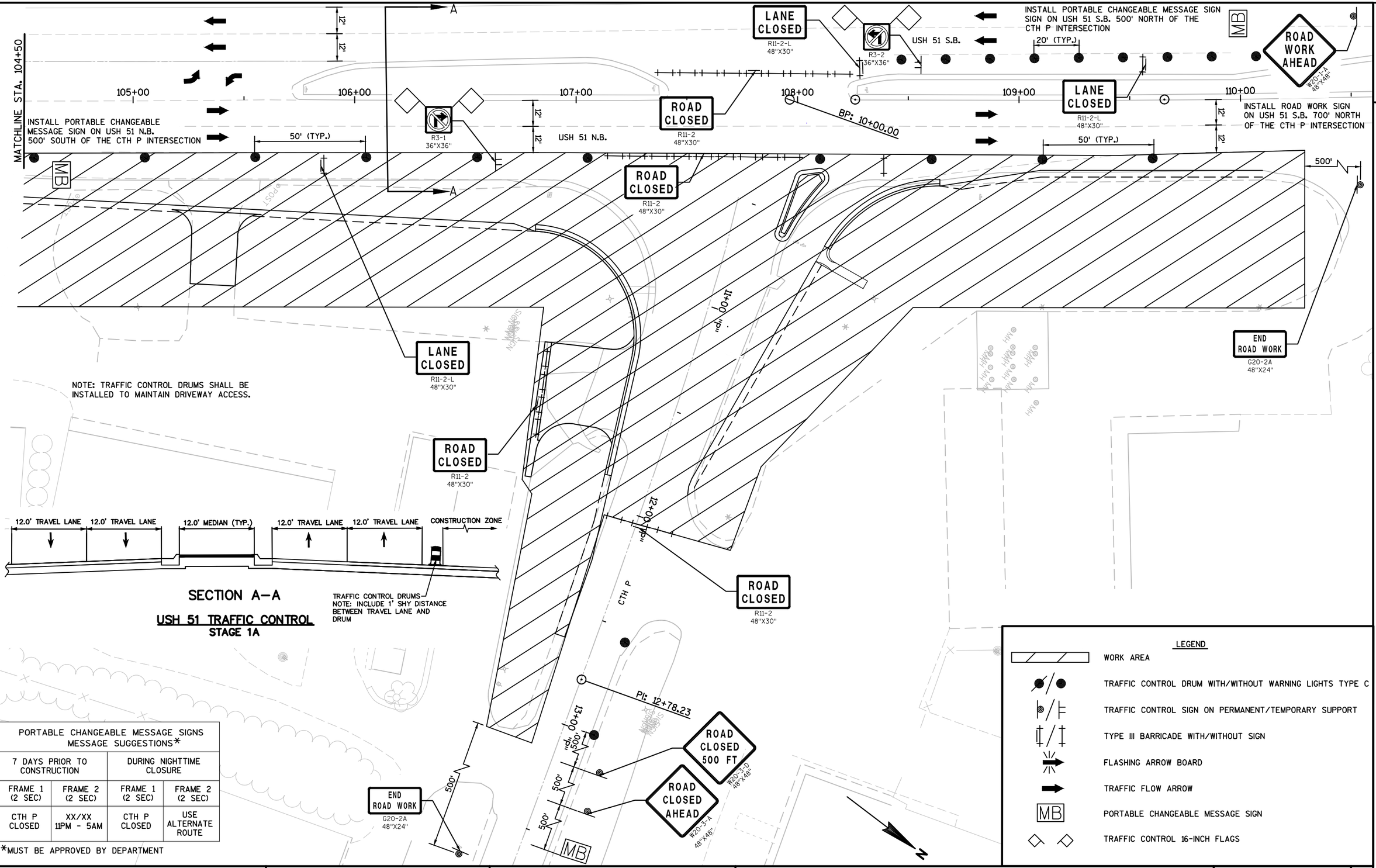
SECTION A–A

USH 51 TRAFFIC CONTROL
STAGE 1A

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM WITH/WITHOUT WARNING LIGHTS TYPE C
- TRAFFIC CONTROL SIGN ON PERMANENT/TEMPORARY SUPPORT
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLASHING ARROW BOARD
- TRAFFIC FLOW ARROW

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 1A	SHEET 13	E



PORTABLE CHANGEABLE MESSAGE SIGNS MESSAGE SUGGESTIONS*			
7 DAYS PRIOR TO CONSTRUCTION		DURING NIGHTTIME CLOSURE	
FRAME 1 (2 SEC)	FRAME 2 (2 SEC)	FRAME 1 (2 SEC)	FRAME 2 (2 SEC)
CTH P CLOSED	XX/XX 11PM - 5AM	CTH P CLOSED	USE ALTERNATE ROUTE

*MUST BE APPROVED BY DEPARTMENT

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 1A (CTH P NIGHT CLOSURE)	SHEET 14	E

2

END ROAD WORK
G20-2A
48"X24"

500'

W4-2-R
48"X48"

50' (TYP.)

50' (TYP.)

1000' 1000' 500' 540' TAPER 220' BUFFER

(5) DRUMS SPACED @ 10' INTERVALS
AS NEEDED IN FRONT OF ARROW BOARD

LANE CLOSED
R11-2-L
48"X30"

RIGHT LANE CLOSED AHEAD
W20-5-A
48"X48"

ROAD WORK AHEAD
W20-1-A
48"X48"

SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY"

USH 51 S.B.

USH 51 N.B.

101+00 102+00 103+00 104+00

50' (TYP.)

12' 12' 12'

MATCHLINE STA. 104+50

MH

GENERAL TRAFFIC CONTROL NOTES

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

TRAFFIC CONTROL DRUMS SHALL BE INSTALLED TO MAINTAIN DRIVEWAY ACCESS.

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

TEMPORARY STOP SIGNS SHALL BE SUPPORTED ON WOOD POSTS, OR AS DIRECTED BY ENGINEER.

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM WITH/WITHOUT WARNING LIGHTS TYPE C
- TRAFFIC CONTROL SIGN ON PERMANENT/TEMPORARY SUPPORT
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLASHING ARROW BOARD
- TRAFFIC FLOW ARROW

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 1B	SHEET 15	E

MATCHLINE STA. 104+50

105+00 106+00 107+00 108+00 109+00 110+00

50' (TYP.)

12' 12' 12'

USH 51 N.B.

USH 51 S.B.

A A

LANE CLOSED
R11-2-L
48"X30"

INSTALL SIGNS ON USH 51 S.B.
700' NORTH OF THE CTH P
INTERSECTION

ROAD WORK AHEAD
W20-1-A
48"X48"

BP: 10+00.00

100' TAPER

500'

STOP
R1-1
36"X36"

DIVIDED HIGHWAY
R6-3-A
30"X24"

NOTE: TRAFFIC CONTROL DRUMS SHALL BE INSTALLED TO MAINTAIN DRIVEWAY ACCESS.

20' (TYP.)

11+00 "P"

END ROAD WORK
G20-2A
48"X24"

ROAD CLOSED
R11-2
48"X30"

LANE CLOSED
R11-2-L
48"X30"

50' (TYP.)

12+00 "P"

CTH P

SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY"

16.0' ROADWAY WIDTH

12.0' TRAVEL LANE 12.0' TRAVEL LANE 12.0' MEDIAN (TYP.) 12.0' TRAVEL LANE 2.0' CONSTRUCTION ZONE

TRAFFIC CONTROL DRUMS

SECTION A–A

USH 51 TRAFFIC CONTROL
STAGE 1B

* 11' * 11'

*MAINTAIN 22' OF PAVEMENT FOR TRAVEL LANES. ADJUST TRAFFIC CONTROL DRUMS AS NECESSARY TO SHIFT TRAFFIC TO COMPLETE PAVING OPERATIONS.

PI: 12+78.23

13+00 "P"

500' 500' 500'

END ROAD WORK
G20-2A
48"X24"

ROAD WORK 500 FT
W20-1-D
48"X48"

ROAD WORK AHEAD
W20-1-A
48"X48"

N

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM WITH/WITHOUT WARNING LIGHTS TYPE C
- TRAFFIC CONTROL SIGN ON PERMANENT/TEMPORARY SUPPORT
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLASHING ARROW BOARD
- TRAFFIC FLOW ARROW

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 1B	SHEET 16	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\TRAFFIC CONTROL_1B.DWG
LAYOUT NAME - TRAFFIC CONTROL_1B - TC_02

PLOT DATE : 11/9/2016 11:00 AM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

END ROAD WORK
G20-2A
48"X24"

(5) DRUMS SPACED @ 10' INTERVALS
AS NEEDED IN FRONT OF ARROW BOARD

500'

W04-2-L
48"X48"

50' (TYP.)

50' (TYP.)

USH 51 S.B.

12'

50' (TYP.)

101+00

102+00

103+00

104+00

MATCHLINE STA. 104+50

USH 51 N.B.

50' (TYP.)

12'

5'

1000'

1000'

500'

540' TAPER

220'
BUFFER

LANE
CLOSED
R11-2-L
48"X30"

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

LEFT LANE
CLOSED
AHEAD
W20-5S-A
48"X48"

ROAD
WORK
AHEAD
W20-1-A
48"X48"

SEE S.D.D. "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY"

MH

N

GENERAL TRAFFIC CONTROL NOTES

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

TRAFFIC CONTROL DRUMS SHALL BE INSTALLED TO MAINTAIN DRIVEWAY ACCESS.

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

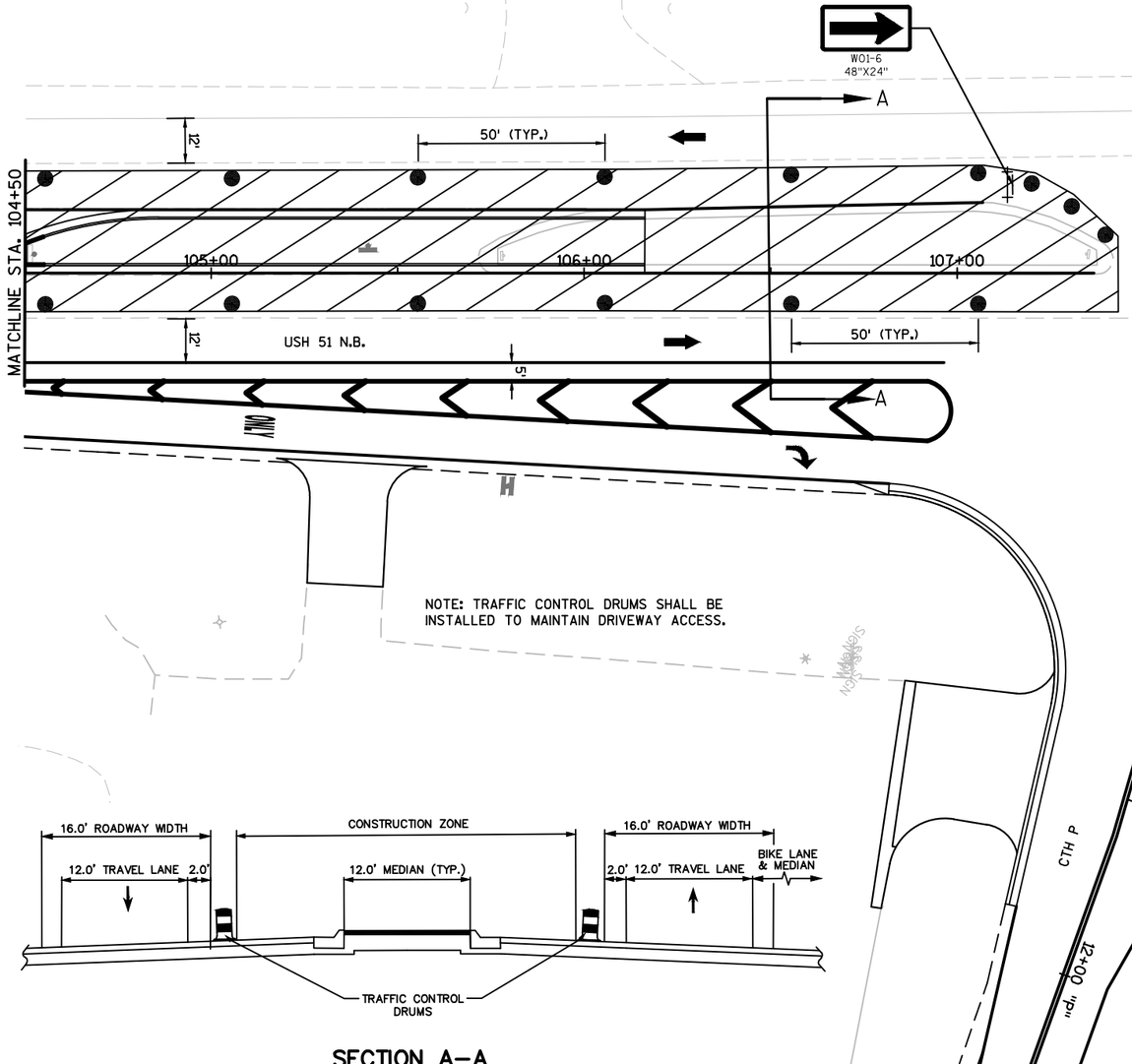
TEMPORARY STOP SIGNS SHALL BE SUPPORTED ON WOOD POSTS, OR AS DIRECTED BY ENGINEER.

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM WITH/WITHOUT WARNING LIGHTS TYPE C
- TRAFFIC CONTROL SIGN ON PERMANENT/TEMPORARY SUPPORT
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLASHING ARROW BOARD
- TRAFFIC FLOW ARROW

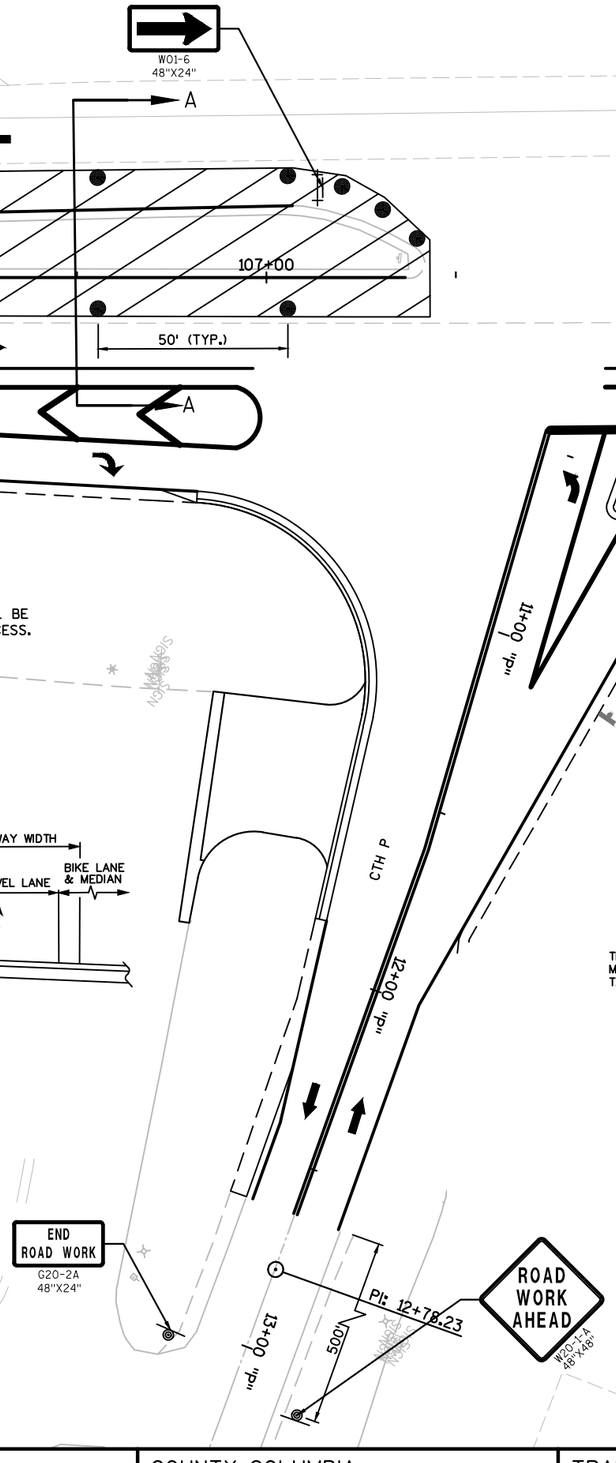
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 2	SHEET 17	E

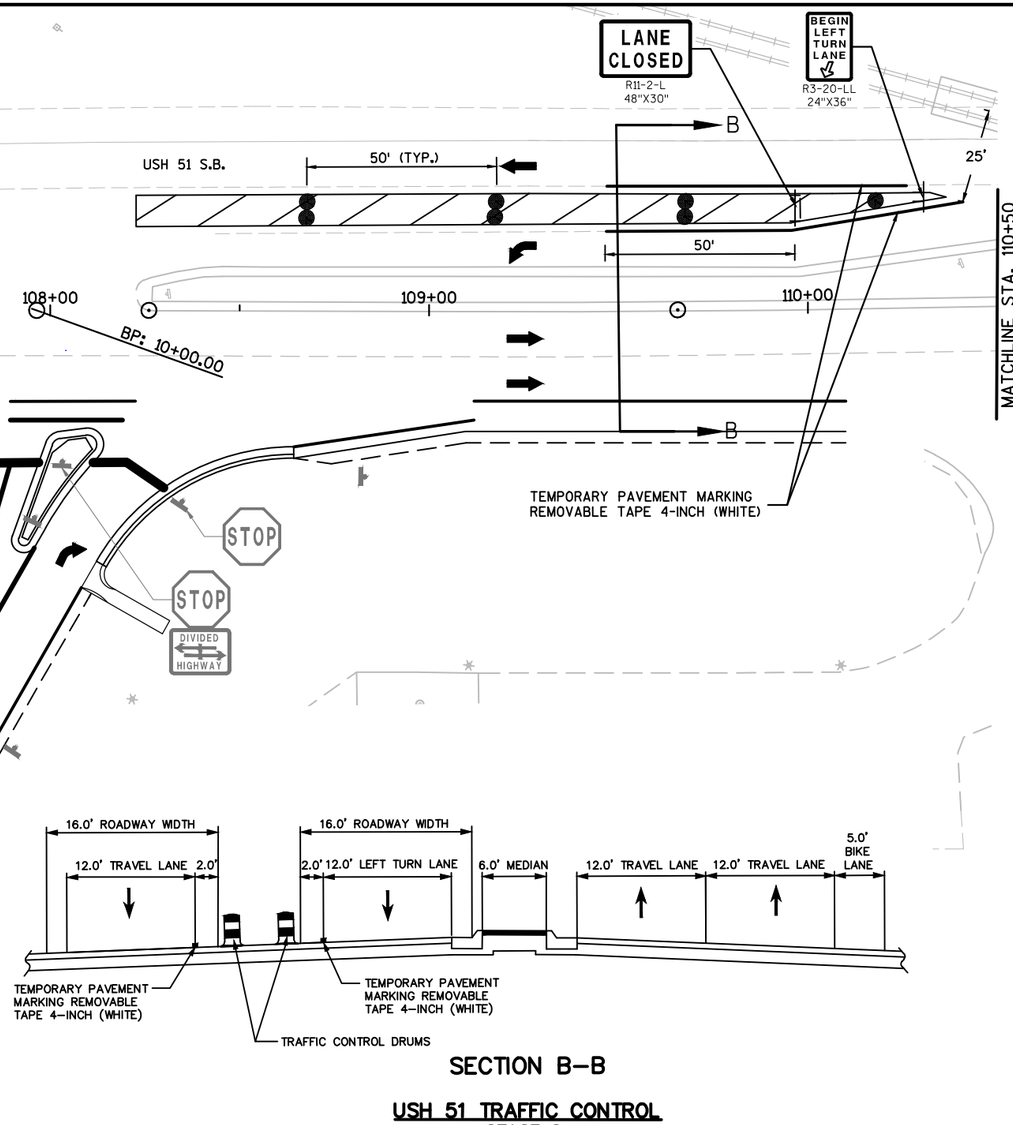
2



SECTION A–A

USH 51 TRAFFIC CONTROL
STAGE 2





SECTION B–B

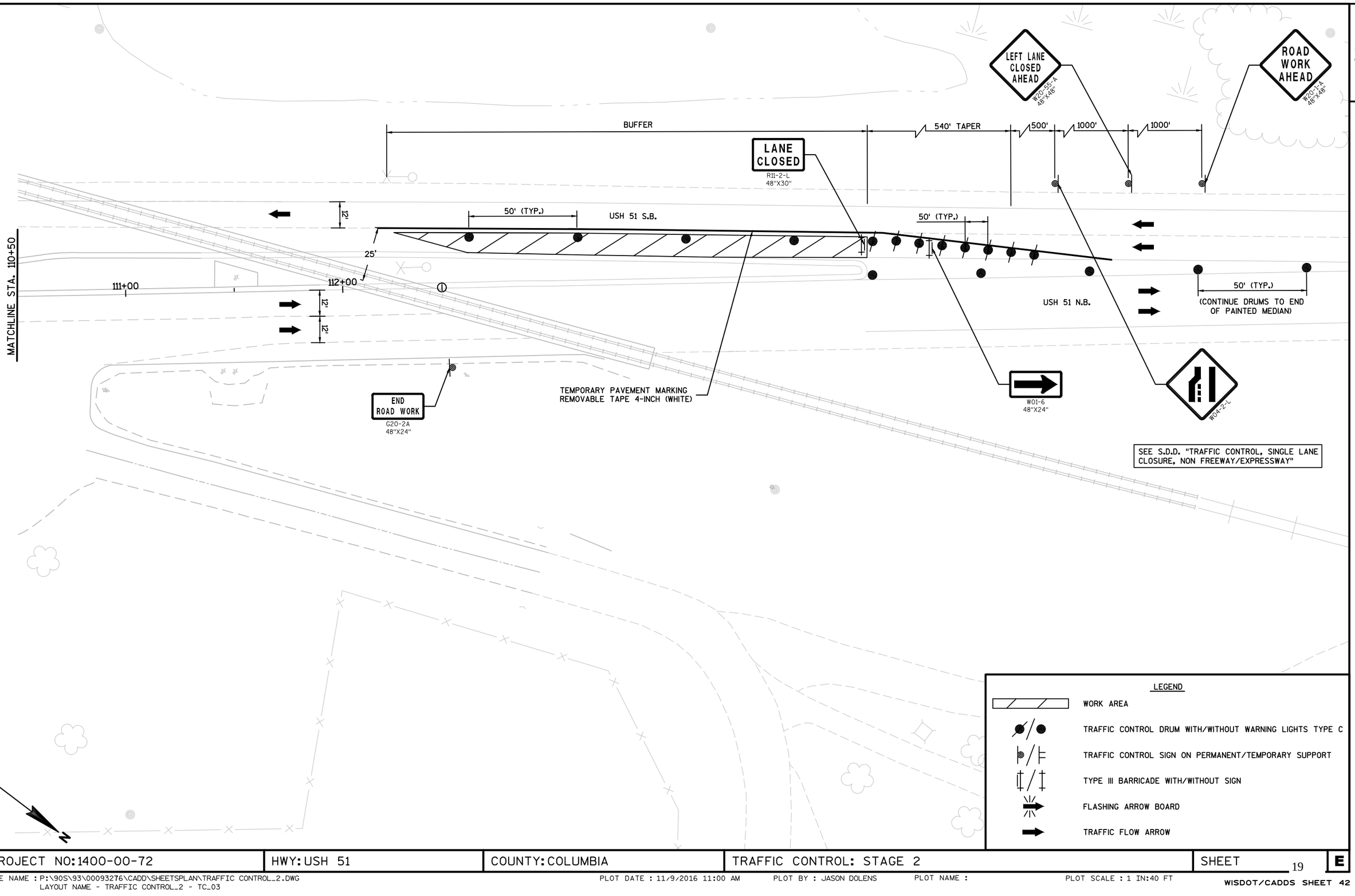
USH 51 TRAFFIC CONTROL
STAGE 2

LEGEND

- WORK AREA
- TRAFFIC CONTROL DRUM WITH/WITHOUT WARNING LIGHTS TYPE C
- TRAFFIC CONTROL SIGN ON PERMANENT/TEMPORARY SUPPORT
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLASHING ARROW BOARD
- TRAFFIC FLOW ARROW

PROJECT NO:1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 2	SHEET 18	E

2



PROJECT NO:1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	TRAFFIC CONTROL: STAGE 2	SHEET 19	E

2

BP: 100+00.0

USH 51 S.B.

101+00 102+00 103+00 104+00

USH 51 N.B.

EDGE OF PAVEMENT
5.74'
CP 1
PK NAIL
Y = 384,485.88
X = 549,046.16
41.25'
58.54'
UTILITY POLE
UTILITY POLE

EDGE OF PAVEMENT
6.87'
CP 2
PK NAIL
Y = 384,648.64
X = 548,923.15
8.61'
NORTHERN MAILBOX POST
24.33'
UTILITY POLE

CP 3
6" NAIL
Y = 384,837.42
X = 548,779.73
6.50'
MARKER POST
48.61'
SIGN POST
12.18'
END OF CULVERT PIPE

USH 51 S.B.

CP 4
PK NAIL
Y = 385,131.97
X = 548,500.67
BACK OF CURB
4.91'
SIGN POST
1.54'
BACK OF CURB
2.34'

107+00 108+00 109+00 110+00 111+00 112+00

PI: 108+26.07

PI: 109+65.69

EP: 112+45.75

CP 5
PK NAIL
Y = 385,444.98
X = 548,248.68
BACK OF CURB
4.46'
9.05'
16.99'
RAILROAD GATE
BACK OF CURB

BP: 10+00.00

USH 51 N.B.

CTH P

11+00 "P"

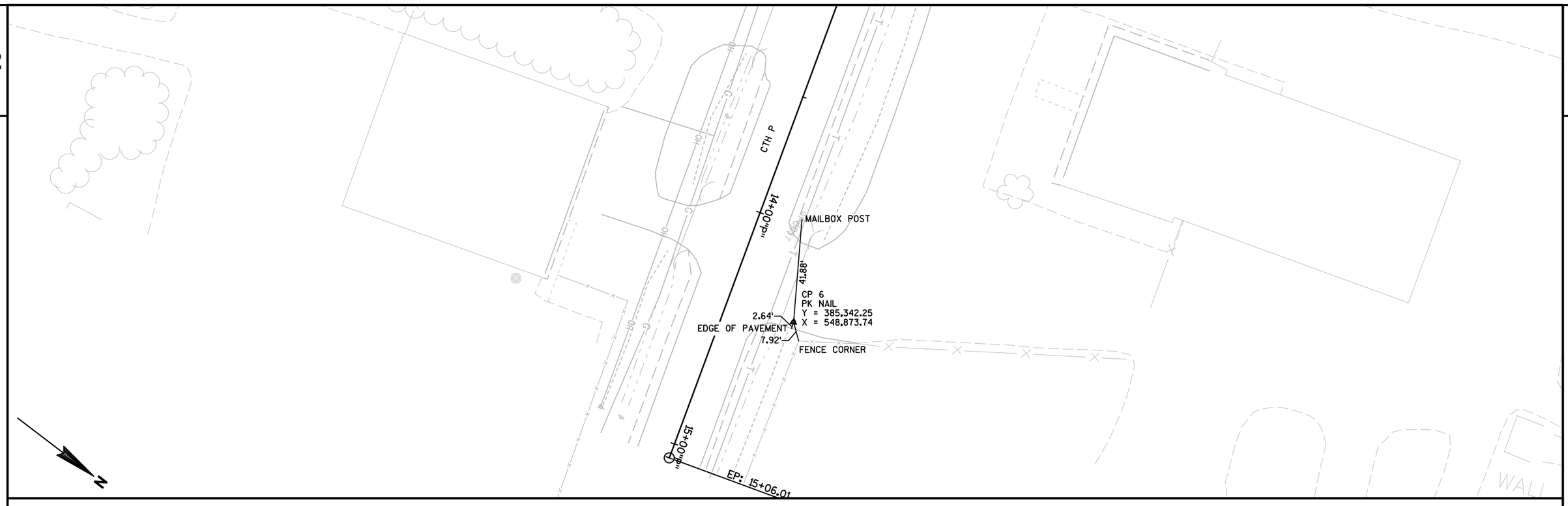
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CONTROL POINT TIES	SHEET 20	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\CONTROL POINT TIES.DWG
LAYOUT NAME - CONTROL POINT TIES - CP_01

PLOT DATE : 10/10/2016 11:08 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

2



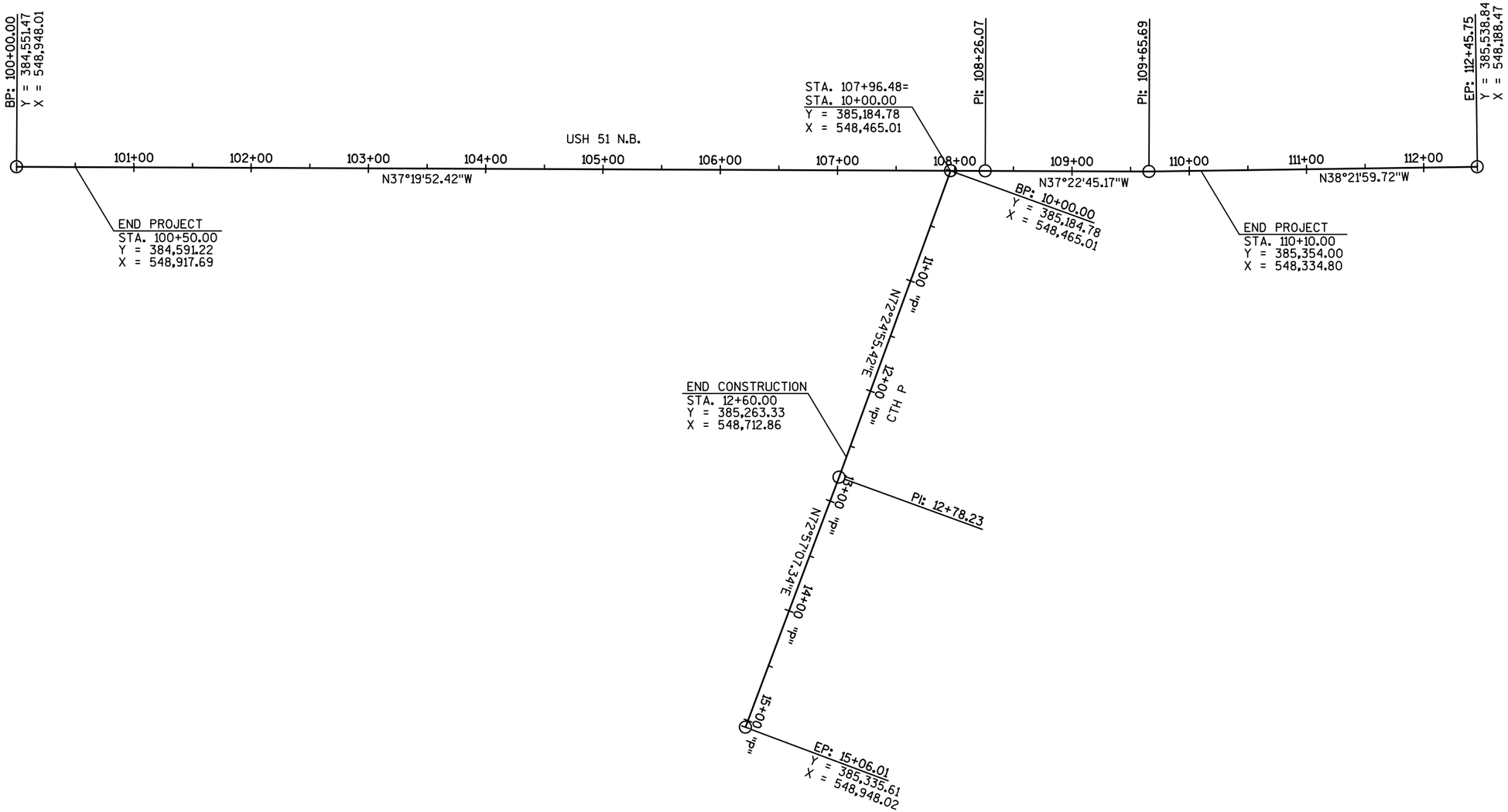
PROJECT NO:1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CONTROL POINT TIES	SHEET 21	E

2

USH 51 NORTHBOUND P.I. DATA

P.I. = STA. 108+26.07
Y = 385,208.31
X = 548,447.06
Δ = 00°02'52.75"

P.I. = STA. 109+65.69
Y = 385,319.26
X = 548,362.31
Δ = 00°59'14.55"



CTH P P.I. DATA

P.I. = STA. 12+78.23
Y = 385,268.83
X = 548,730.24
Δ = 00°32'11.92"

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	ALIGNMENT OVERVIEW	SHEET 22	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\ALIGNMENT OVERVIEW.DWG
VFG - ALIGNMENT - P & 51 - (1) - ALIGNMENT OVERVIEW - ALIGN_01

PLOT DATE : 10/10/2016 11:08 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:100 FT

1400-00-72

Line	Item	Item Description	Unit	Total	Qty
0010	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0020	204.0100	Removing Pavement	SY	91.000	91.000
0030	204.0110	Removing Asphaltic Surface	SY	68.000	68.000
0040	204.0150	Removing Curb & Gutter	LF	244.000	244.000
0050	204.0195	Removing Concrete Bases	EACH	1.000	1.000
0060	205.0100	Excavation Common	CY	1,954.000	1,954.000
0070	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	1.000	1.000
0080	213.0100	Finishing Roadway (project) 01. 1400-00-72	EACH	1.000	1.000
0090	305.0110	Base Aggregate Dense 3/4-Inch	TON	90.000	90.000
0100	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,063.000	2,063.000
0110	416.0160	Concrete Driveway 6-Inch	SY	150.000	150.000
0120	455.0605	Tack Coat	GAL	134.000	134.000
0130	460.2000	Incentive Density HMA Pavement	DOL	420.000	420.000
0140	460.5224	HMA Pavement 4 LT 58-28 S	TON	650.000	650.000
0150	465.0105	Asphaltic Surface	TON	56.000	56.000
0160	465.0310	Asphaltic Curb	LF	17.000	17.000
0170	465.0315	Asphaltic Flumes	SY	12.000	12.000
0180	520.8700	Cleaning Culvert Pipes	EACH	6.000	6.000
0190	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	82.000	82.000
0200	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	4.000	4.000
0210	523.0514	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 14x23-Inch	EACH	2.000	2.000
0220	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	402.000	402.000
0230	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	198.000	198.000
0240	602.0410	Concrete Sidewalk 5-Inch	SF	144.000	144.000
0250	606.0100	Riprap Light	CY	109.000	109.000
0260	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	43.000	43.000
0270	610.0414	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 14x23-Inch	LF	100.000	100.000
0280	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0290	611.0627	Inlet Covers Type HM	EACH	1.000	1.000
0300	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0310	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000
0320	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1400-00-72	EACH	1.000	1.000
0330	619.1000	Mobilization	EACH	1.000	1.000
0340	620.0300	Concrete Median Sloped Nose	SF	63.000	63.000
0350	624.0100	Water	MGAL	81.000	81.000
0360	625.0500	Salvaged Topsoil	SY	2,400.000	2,400.000
0370	627.0200	Mulching	SY	325.000	325.000

1400-00-72

Line	Item	Item Description	Unit	Total	Qty
0380	628.1504	Silt Fence	LF	175.000	175.000
0390	628.1520	Silt Fence Maintenance	LF	175.000	175.000
0400	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0410	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0420	628.2006	Erosion Mat Urban Class I Type A	SY	2,400.000	2,400.000
0430	628.7005	Inlet Protection Type A	EACH	1.000	1.000
0440	628.7020	Inlet Protection Type D	EACH	1.000	1.000
0450	628.7504	Temporary Ditch Checks	LF	47.000	47.000
0460	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0470	629.0210	Fertilizer Type B	CWT	2.400	2.400
0480	630.0130	Seeding Mixture No. 30	LB	68.000	68.000
0490	630.0200	Seeding Temporary	LB	51.000	51.000
0500	633.5200	Markers Culvert End	EACH	4.000	4.000
0510	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	1.000	1.000
0520	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000	6.000
0530	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000
0540	634.0805	Posts Tubular Steel 2x2-Inch X 5-FT	EACH	1.000	1.000
0550	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	1.000	1.000
0560	637.2210	Signs Type II Reflective H	SF	100.670	100.670
0570	637.2230	Signs Type II Reflective F	SF	18.130	18.130
0580	638.2102	Moving Signs Type II	EACH	1.000	1.000
0590	638.2602	Removing Signs Type II	EACH	8.000	8.000
0600	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0610	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0620	642.5001	Field Office Type B	EACH	1.000	1.000
0630	643.0100	Traffic Control (project) 01. 1400-00-72	EACH	1.000	1.000
0640	643.0300	Traffic Control Drums	DAY	1,835.000	1,835.000
0650	643.0420	Traffic Control Barricades Type III	DAY	281.000	281.000
0660	643.0715	Traffic Control Warning Lights Type C	DAY	224.000	224.000
0670	643.0800	Traffic Control Arrow Boards	DAY	37.000	37.000
0680	643.0900	Traffic Control Signs	DAY	574.000	574.000
0690	643.1050	Traffic Control Signs PCMS	DAY	42.000	42.000
0700	645.0130	Geotextile Type R	SY	327.000	327.000
0710	646.0106	Pavement Marking Epoxy 4-Inch	LF	2,494.000	2,494.000
0720	646.0126	Pavement Marking Epoxy 8-Inch	LF	180.000	180.000
0730	646.0127.S	Pavement Marking Grooved Epoxy 8-Inch	LF	660.000	660.000
0740	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	2.000	2.000
0750	647.0356	Pavement Marking Words Epoxy	EACH	1.000	1.000
0760	647.0456	Pavement Marking Curb Epoxy	LF	20.000	20.000
0770	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	45.000	45.000

1400-00-72

Line	Item	Item Description	Unit	Total	Qty
0780	647.0606	Pavement Marking Island Nose Epoxy	EACH	1.000	1.000
0790	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	150.000	150.000
0800	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	591.000	591.000
0810	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0820	650.4500	Construction Staking Subgrade	LF	1,220.000	1,220.000
0830	650.5000	Construction Staking Base	LF	1,220.000	1,220.000
0840	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	600.000	600.000
0850	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0860	650.9910	Construction Staking Supplemental Control (project) 01. 1400-00-72	LS	1.000	1.000
0870	650.9920	Construction Staking Slope Stakes	LF	1,015.000	1,015.000
0880	690.0150	Sawing Asphalt	LF	1,610.000	1,610.000
0890	690.0250	Sawing Concrete	LF	5.000	5.000

3

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	TO STATION	LOCATION	TYPE	PIPE DIAMETER (IN)	LENGTH	(203.0100) EACH
0010	102+77	103+23	RT	CMP	18	46	1
	104+36	104+74	RT	CMP	18	38	1
	105+18	105+56	RT	CMP	18	38	1
		PROJECT TOTAL					**3**

REMOVALS

CATEGORY	STATION	TO STATION	LOCATION	(204.0150) REMOVING CURB & GUTTER LF	(204.0100) REMOVING PAVEMENT SY	(204.0110) REMOVING ASPHALTIC SURFACE SY	(204.0195) REMOVING CONCRETE BASES EACH
0010	102+97	-	RT	-	-	-	-
	104+52	-	RT	-	-	-	-
	105+38	-	RT	-	-	-	-
	105+72	106+16	LT	85	-	68	-
	106+83	107+67	RT	87	-	-	-
	108+18	108+50	RT	72	-	-	-
	10+88 "P"	-	LT				1
	11+64 "P"	-	RT	-	91	-	-
		PROJECT TOTALS		**244**	**91**	**68**	**1**

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY	STATION	TO STATION	(211.0400) STA
0010	100+00	101+00	1
		PROJECT TOTAL	**1**

BASE AGGREGATE DENSE

CATEGORY	STATION	TO STATION	LOCATION	(305.0110) 3/4-INCH TON	(305.0120) 1 1/4-INCH TON	* (624.0100) WATER MGAL
0010	101+50	12+60 "P"	RT & LT	47	1,352	19
	110+10	12+60 "P"	RT & LT	14	543	8
	100+79	-	RT	-	4	-
	101+47	-	RT	-	4	-
	102+97	-	RT	-	4	-
	105+38	-	RT	-	18	-
	11+64 "P"	-	RT	-	38	-
	MEDIAN	-	LT	-	100	-
	UNDISTRIBUTED (FOR DRIVEWAYS)			29	-	-
	PROJECT TOTALS			**90**	**2,063**	**27**

*ADDITIONAL QUANTITY FOUND ELSEWHERE

NOTE: WATER BID ITEM TO BE USED FOR BASE AGGREGATE DUST CONTROL AND COMPACTION

Earthwork Summary

Division	From/To Station	Location	Common Excavation (1)	(item # 205.0100)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/-	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation				1.25			(item #208.0100)	
1400-00-72	100+00 TO 107+70	USH 51	1,212	0	226	986	103	128	857	857	0	
	108+00 TO 110+00	USH 51	400	0	73	326	61	76	250	250	0	
	11+00 TO 12+50	CTH P	343	0	60	283	35	44	240	240	0	
Project Total			1,954	0	359	1,595	198	248	1,347	1,347	0	

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.
4) Existing pavement and curb and gutter
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Expanded Fill. Factor = 1.25

FILE NAME : P:\90s\93\00093276\CADD\SheetsPlan\1400-00-72 MQ Sheet Border.dgn PLOT DATE : 7/27/2016 PLOT BY : jdolens PLOT NAME : PLOT SCALE : 1:200
WISDOT/CADDS SHEET 43

3

HMA PAVEMENT

CATEGORY	STATION	TO STATION	LOCATION	(455.0605) TACK COAT GAL	(460.5224) HMA PAVEMENT 4 LT 58-28 S TON	(465.0105) ASPHALTIC SURFACE TON	NOTES
0010	100+79	-	RT	1	-	3	DRIVEWAY
	101+47	-	RT	1	-	3	DRIVEWAY
	102+97	-	RT	1	-	3	DRIVEWAY
	105+38	-	RT	4	-	14	DRIVEWAY
	11+53	-	RT	1	-	3	DRIVEWAY
	104+50	106+16	LT	10	-	30	MEDIAN
	104+40	104+86	LT	1	5	-	AROUND MEDIAN END
	101+50	12+60 "P"	RT	86	484	-	ROADWAY
	110+10	12+60 "P"	RT & LT	29	161	-	ROADWAY
	PROJECT TOTALS			**134**	**650**	**56**	

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	(465.0315) ASPHALTIC FLUMES SY	(465.0310) ASPHALTIC CURB LF
0010	10+62 "P"	LT	12	17
	PROJECT TOTALS		**12**	**17**

CONCRETE CURB & GUTTER

CATEGORY	STATION	TO STATION	LOCATION	(601.0415) 6-INCH SLOPED 30-INCH TYPE J LF	(601.0557) 6-INCH SLOPED 36-INCH TYPE D LF	(650.5500) CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	104+50	106+16	LT	333	-	333
	106+81	107+16	RT	-	137	137
	107+90	108+14	RT	69	-	69
	108+12	108+64	RT	-	61	61
	PROJECT TOTALS			**402**	**198**	**600**

CONCRETE ITEMS

CATEGORY	STATION	TO STATION	LOCATION	(602.0410) CONCRETE SIDEWALK 5-INCH SF	(620.0300) CONCRETE MEDIAN SLOPED NOSE (TYPE 1) SF	(416.0160) CONCRETE DRIVEWAY 6-INCH SY
0010	107+90	108+14	LT	144	-	-
	104+43	104+50	LT	-	63	-
	11+21 "P"	11+75 "P"	RT	-	-	150
	PROJECT TOTALS			**144**	**63**	**150**

SAWING ASPHALT AND CONCRETE

CATEGORY	STATION	TO STATION	LOCATION	(690.0150) SAWING ASPHALT LF	(690.0250) SAWING CONCRETE LF	NOTES
0010	100+50	107+05	RT	664	-	ROADWAY
	107+05	11+01 "P"	RT	82	-	ROADWAY
	11+01 "P"	11+26 "P"	RT	26	-	ROADWAY
	11+26 "P"	-	RT & LT	25	-	ROADWAY
	10+24 "P"	11+26 "P"	LT	103	-	ROADWAY
	108+00	110+10	RT	210	-	ROADWAY
	110+10	-	RT	8	-	ROADWAY
	104+41	106+16	LT	350	-	MEDIAN/ROADWAY
	104+41	-	LT	17	-	MEDIAN NOSE (END OF EXTENSION)
	106+16	-	LT	13	-	MEDIAN
	100+63	100+95	RT	31	-	DW 100+79
	105+26	105+46	RT	20	-	DW 105+38
	106+16	-	LT	-	5	MEDIAN CURB
	11+40 "P"	12+00 "P"	RT	61	-	DW 11+53 "P"
	PROJECT TOTALS			**1,610**	**5**	

CONSTRUCTION STAKING

CATEGORY	STATION	TO STATION	(650.9910) SUPPLEMENTAL CONTROL LS	(650.9920) SLOPE STAKES LF	(650.4500) SUBGRADE LF	(650.5000) BASE LF
0010	100+50	110+10	-	842	960	960
	10+00 "P"	12+60 "P"	-	173	260	260
	PROJECT 1400-00-72		1	-	-	-
	PROJECT TOTALS		**1**	**1,015**	**1,220**	**1,220**

CULVERT PIPES

CATEGORY	STATION	TO STATION	LOCATION	(521.0118) CULVERT PIPE CORRUGATED STEEL 18-INCH LF	MINIMUM THICKNESS STEEL IN	(521.1018) APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	(520.8700) CLEANING CULVERT PIPES EACH	(633.5200) MARKERS CULVERT END EACH
0010	100+58	101+05	45.5' RT	-	-	-	1	-
	101+25	101+74	46.0' RT	-	-	-	1	-
	102+64	-	49.5' RT	-	-	-	-	1
	102+75	103+19	53.0' RT	44	0.064	2	-	-
	105+18	105+56	64.0' RT	38	0.064	2	-	-
	108+75	-	56.0' RT	-	-	-	1	1
	110+35	110+94	54.0' RT	-	-	-	1	-
	11+11.5 "P'		42.0' LT	-	-	-	-	1
	11+79.5 "P"	-	31.0' RT	-	-	-	-	1
	11+84 "P"	12+53 "P"	25.5' LT	-	-	-	1	-
	13+08 "P"	13+41 "P"	23.5' RT	-	-	-	1	-
	PROJECT TOTALS			**82**		**4**	**6**	**4**

STORM SEWER PIPE

CATEGORY	FROM STRUCTURE ID	TO STRUCTURE ID	(610.0414) STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 14x23-INCH LF	(608.0412) STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF
0010	EW.1A	1.0	58	-
	EW.1B	1.0	42	-
	1.0	1.1	-	43
	PROJECT TOTALS		**100**	**43**

STORM SEWER STRUCTURES

CATEGORY	STRUCTURE ID	STATION	LOCATION	(523.0514) APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 14x23-INCH EACH	(611.0530) MANHOLE COVERS TYPE J EACH	(611.0627) INLET COVERS TYPE HM EACH	(611.2005) MANHOLES 5-FT DIAMETER EACH	(611.3004) INLETS 4-FT DIAMETER EACH	(650.4000) CONSTRUCTION STAKING STORM SEWER EACH	TOP OF STRUCTURE ELEVATION	BOX DEPTH FEET	RIM ELEVATION	INVERT
0010	EW.1A	11+11.5 "P"	42.0, LT	1	-	-	-	-	1	-	-	-	785.03
	EW.1B	11+79.5 "P"	31.0, LT	1	-	-	-	-	1	-	-	-	785.23
	1.0	11+51.0 "P"	ON LINE	-	1	-	1	-	1	787.92	2.78	789.17	785.14
	1.1	11+21 "P"	30.3, RT	-	-	1	-	1	1	787.44	1.92	788.44	785.52
	PROJECT TOTALS			**2**	**1**	**1**	**1**	**1**	**4**				

RIPRAP ITEMS

CATEGORY	STATION	TO STATION	LOCATION	(606.0100) RIPRAP LIGHT CY	(645.0130) GEOTEXTILE TYPE R SY
0010	102+64	102+69	RT	1	4
	103+27	105+14	RT	56	167
	108+72	110+34	RT	52	156
	PROJECT TOTALS			**109**	**327**

MOBILIZATIONS EROSION CONTROL

CATEGORY	DESCRIPTION	(628.1905) EACH	(628.1910) EMERGENCY EROSION CONTROL EACH
0010	PROJECT 1400-00-72	4	2
	PROJECT TOTALS	**4**	**2**

INLET PROTECTION

CATEGORY	STATION	LOCATION	(628.7005) TYPE A EACH	(628.7020) TYPE D EACH
0010	11+21 "P"	RT	1	1
	PROJECT TOTALS		**1**	**1**

FINISHING ITEMS

CATEGORY	STATION	TO STATION	APPROX. LENGTH (LF)	LOCATION	(625.0500) SALVAGED TOPSOIL SY	(627.0200) MULCHING SY	(629.0210) FERTILIZER TYPE B CWT	(630.0130) SEEDING MIXTURE NO. 30 LB	(630.0200) SEEDING TEMPORARY LB	* (624.0100) WATER MGAL	(628.1504) SILT FENCE EACH	(628.1520) SILT FENCE MAINTENANCE LF	(628.7504) TEMPORARY DITCH CHECKS LF	(628.2006) EROSION MAT URBAN CLASS I TYPE A SY	(628.7555) CULVERT PIPE CHECKS EACH
0010	101+64	102+76	112	RT	210	-	0.21	6	5	5	-	-	-	210	-
	102+67	-	-	RT	-	-	-	-	-	-	-	-	-	-	3
	103+10	105+29	219	RT	340	-	0.38	11	8	8	-	-	19	340	-
	105+50	106+82	132	RT	180	-	0.21	6	5	4	146	146	-	180	-
	105+65	-	-	RT	-	-	-	-	-	-	-	-	-	-	1
	106+82	107+26	70	RT	40	108	0.05	1	1	1	-	-	-	40	-
	108+32	110+41	209	RT	660	-	0.57	16	12	15	-	-	18	660	-
	110+24	-	-	RT	-	-	-	-	-	-	-	-	-	-	1
	11+84 "P"	-	-	RT	-	-	-	-	-	-	-	-	-	-	1
	11+70 "P"	13+00 "P"	130	RT	270	-	0.27	8	6	6	-	-	-	270	-
	10+30 "P"	11+86 "P"	156	LT	300	-	0.31	9	7	7	-	-	-	300	-
	UNDISTRIBUTED				400	217	0	11	9	9	29	29	10	400	-
	PROJECT TOTALS				**2,400**	**325**	**2.40**	**68**	**51**	**54**	**175**	**175**	**47**	**2,400**	**6**

*ADDITIONAL QUANTITY FOUND ELSEWHERE

EXISTING SIGNING

CATEGORY	SIGN NO.	STATION	LOCATION	(638.2602) REMOVING SIGNS TYPE II EACH	(638.3000) REMOVING SMALL SIGN SUPPORTS EACH	(638.2102) MOVING SIGNS TYPE II EACH	(638.4000) MOVING SMALL SIGN SUPPORTS EACH
0010	R1.1	102+06	RT	1	1	-	-
	R1.2	103+78	RT	1	1	-	-
	R1.3	103+79	RT	1	1	-	-
	M1.1	105+78	LT	-	-	1	1
	R1.4	106+89	RT	1	1	-	-
	R1.5	106+87	RT	1	1	-	-
	R1.6	108+82	RT	1	1	-	-
	R2.1	10+59 "P"	LT	1	1	-	-
	R2.2	10+59 "P"	LT	1	1	-	-
	PROJECT TOTALS			**8**	**8**	**1**	**1**

PERMANENT SIGNING

CATEGORY	SIGN NO.	STATION	LOCATION	SIGN CODE	WIDTH (IN.)	HT. (IN.)	(637.2210) SIGNS TYPE II REFLECTIVE H SF	(637.2230) SIGNS TYPE II REFLECTIVE F SF	(634.0612) POSTS WOOD 4x6-INCH x 12 FT EACH	(634.0616) POSTS WOOD 4x6-INCH x 16 FT EACH	(634.0618) POSTS WOOD 4x6-INCH x 18 FT EACH	(634.0805) POSTS TUBULAR STEEL 2X2-INCH X 5-FT EACH	(634.0816) POSTS TUBULAR STEEL 2X2-INCH X 16-FT EACH
0010	1.1	99+79	RT	J1-1	36	57	14.25	-	-	1	-	-	-
	1.2	101+74	RT	R3-20-R	36	54	13.50	-	-	1	-	-	-
	1.3	103+76	RT	W10-1	36	36	-	7.07	-	1	-	-	-
	1.4	103+76	RT	R5-1A	42	30	8.75	-	-	-	-	-	-
	1.5	104+52	LT	W5-54	18	18	2.25	-	-	-	-	-	-
	1.6	105+41	LT	R6-2-R	24	30	5.00	-	-	1	-	-	-
	1.7	105+76	RT	J13-1	36	66	16.50	-	-	-	1	-	-
	1.8	105+76	RT	R5-1	36	36	9.00	-	-	-	-	-	-
	1.9	108+81	RT	W10-1	36	36	-	7.07	-	1	-	-	-
	2.1	10+34 "P"	LT	R1-1	36	36	7.46	-	-	-	-	-	1
	2.2	10+34 "P"	LT	R6-3A	30	24	5.00	-	-	-	-	-	-
	2.3	10+34 "P"	LT	R1-1	36	36	7.46	-	-	1	-	-	-
	2.4	10+51 "P"	LT	W12-1D	24	24	-	4.00	1	-	-	1	-
	2.5	11+12 "P"	LT	JV13-2	24	69	11.50	-	-	-	1	-	-
				PROJECT TOTALS			**100.67**	**18.13**	**1**	**6**	**2**	**1**	**1**

PAVEMENT MARKINGS

CATEGORY	LOCATION	(646.0106) EPOXY 4-INCH (YELLOW) LF	(646.0106) EPOXY 4-INCH (WHITE) LF	(646.0126) EPOXY 8-INCH (WHITE) LF	(646.0127.S) GROOVED EPOXY 8-INCH (WHITE) LF	(647.0166) ARROWS EPOXY TYPE 2 (WHITE) EACH	(647.0356) WORDS EPOXY (WHITE) EACH	(647.0456) CURB EPOXY LF	(647.0566) STOP LINE EPOXY 18-INCH LF	(647.0606) ISLAND NOSE EPOXY EACH	(647.0726) DIAGONAL EPOXY 12-INCH LF	(649.0400) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF
0010	USH 51 (BOP TO CTH P)	633	980	55	630	2	1	20	-	1	150	80
	USH 51 (CTH P TO EOP)	-	179	-	30	-	-	-	-	-	-	511
	CTH P (USH 51 TO EOC)	434	268	125	-	-	-	-	45	-	-	-
	PROJECT TOTALS	**1,067**	**1,427**	**180**	**660**	**2**	**1**	**20**	**45**	**1**	**150**	**591**
		2,494										

TRAFFIC CONTROL

CATEGORY	LOCATION	STAGE DURATION DAYS	NUMBER OF DRUMS	(643.0300) DRUMS DAYS	NUMBER OF BARRICADES	(643.0420) BARRICADES TYPE III DAYS	NUMBER OF LIGHTS	(643.0715) WARNING LIGHTS TYPE C DAYS	NUMBER OF BOARDS	(643.0800) ARROW BOARDS DAYS	NUMBER OF SIGNS	(643.0900) SIGNS DAYS
0010	STAGE 1A											
	USH 51 (BP TO CTH P)	19	24	456	2	38	0	0	1	19	6	114
	CTH P (USH 51 TO EOC)	19	14	266	5	95	0	0	0	0	7	133
	USH 51 (CTH P TO EP)	19	5	95	1	19	0	0	0	0	2	38
	CTH P NIGHT CLOSURE											
	USH 51 (BP TO CTH P)	1	0	0	0	0	0	0	0	0	0	0
	CTH P (USH 51 TO EOC)	1	0	0	21	21	0	0	0	0	6	6
	USH 51 (CTH P TO EP)	1	4	4	2	2	0	0	0	0	3	3
	STAGE 1A SUBTOTALS		43	**821**		**175**		**0**		**19**		**294**
0010	STAGE 1B											
	USH 51 (BP TO CTH P)	8	33	264	1	8	8	64	1	8	5	40
	CTH P (USH 51 TO EOC)	8	16	128	5	40	0	0	0	0	7	56
	USH 51 (CTH P TO EP)	8	9	72	1	8	0	0	0	0	3	24
	STAGE 1B SUBTOTALS		58	**464**		**56**		**64**		**8**		**120**
0010	STAGE 2											
	USH 51 (BP TO CTH P)	10	51	510	2	20	8	80	1	10	6	60
	CTH P (USH 51 TO EOC)	10	0	0	0	0	0	0	0	0	2	20
	USH 51 (CTH P TO EP)	10	4	40	3	30	8	80	0	0	8	80
	STAGES 2 SUBTOTALS		156	**550**		**50**		**160**		**10**		**160**
	PROJECT TOTALS			**1,835**		**281**		**224**		**37**		**574**

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	DESCRIPTION	NUMBER OF SIGNS	(643.1050) SIGNS DAY
0010	500' SOUTH OF CTH P INTERSECTION - START OF CONSTRUCTION	1	7
	500' SOUTH OF CTH P INTERSECTION - CTH P NIGHT CLOSURE	1	7
	500' NORTH OF CTH P INTERSECTION - START OF CONSTRUCTION	1	7
	500' NORTH OF CTH P INTERSECTION - CTH P NIGHT CLOSURE	1	7
	1500' EAST OF BEGINNING OF WORK ZONE - START OF CONSTRUCTION	1	7
	1500' EAST OF BEGINNING OF WORK ZONE - CTH P NIGHT CLOSURE	1	7
	PROJECT TOTAL		**42**

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 51 ESTABLISHED FROM PREVIOUS PROJECT 6022-00-21, DIVISION JOB NO. 1528, CSM #472, CSM #536, CSM #2342 AND CSM #4011. EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH P ESTABLISHED FROM CSM #472, CSM #976 AND CSM #2342.

EXISTING ACCESS CONTROL ALONG USH 51 ESTABLISHED FROM PREVIOUS PROJECT - CA 05-2(1).

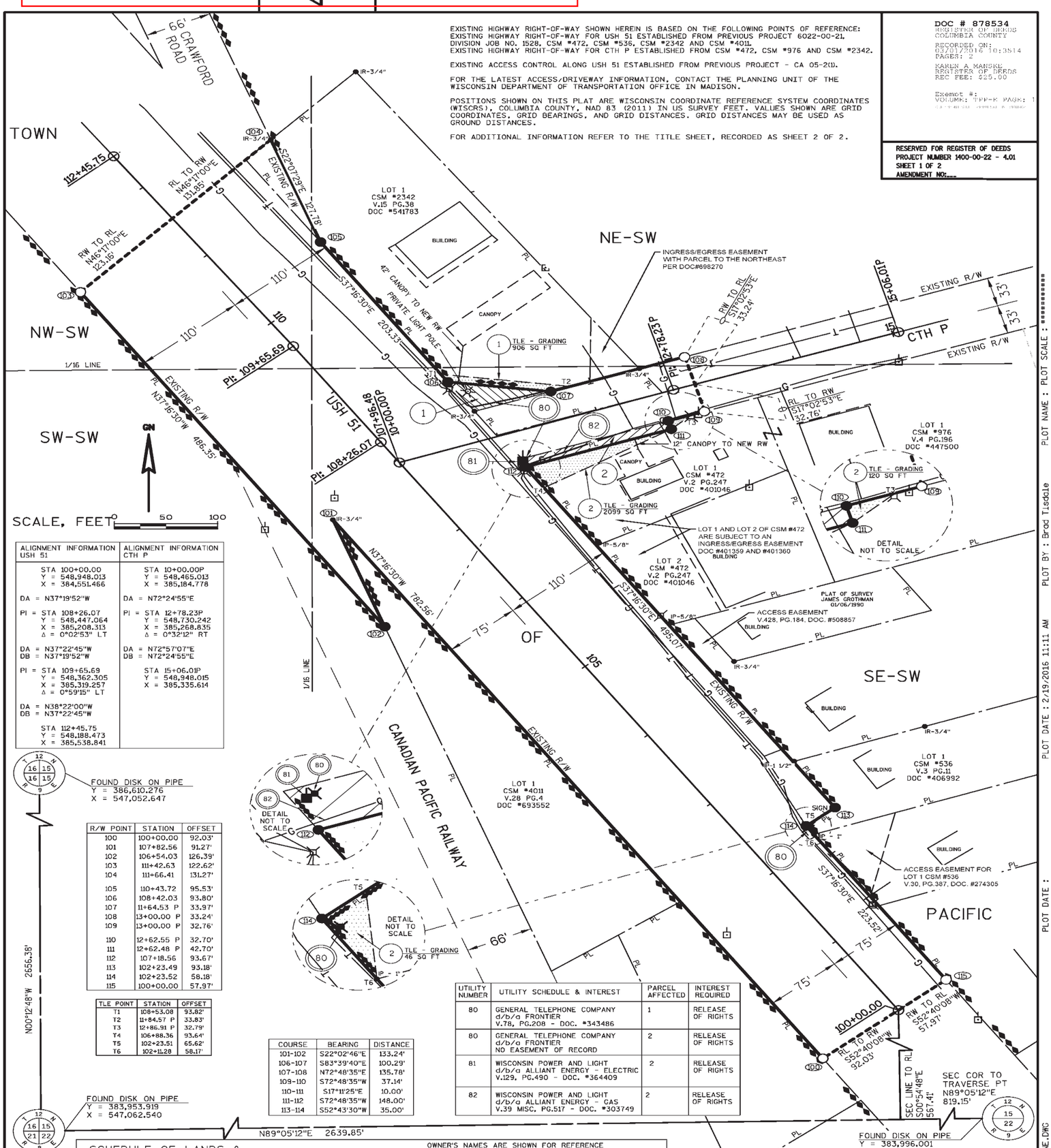
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), COLUMBIA COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2.

DOC # 878534
REGISTER OF DEEDS
COLUMBIA COUNTY
RECORDED ON:
03/01/2016 10:35:14
PAGES: 2
KAREN A. MARSKE
REGISTER OF DEEDS
REC FEE: 525.00
Exempt #:
VOLUME: TYPE-K PAGE: 1

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1400-00-22 - 4.01
SHEET 1 OF 2
AMENDMENT NO:___



ALIGNMENT INFORMATION USH 51	ALIGNMENT INFORMATION CTH P
STA 100+00.00 Y = 548,948.013 X = 384,551.466	STA 10+00.00P Y = 548,465.013 X = 385,184.778
DA = N37°19'52"W	DA = N72°24'55"E
PI = STA 108+26.07 Y = 548,447.064 X = 385,208.313 Δ = 0°02'53" LT	PI = STA 12+78.23P Y = 548,730.242 X = 385,268.835 Δ = 0°32'12" RT
DA = N37°22'45"W DB = N37°19'52"W	DA = N72°57'07"E DB = N72°24'55"E
PI = STA 109+65.69 Y = 548,362.305 X = 385,319.257 Δ = 0°59'15" LT	STA 15+06.01P Y = 548,948.015 X = 385,335.614
DA = N38°22'00"W DB = N37°22'45"W	
STA 112+45.75 Y = 548,188.473 X = 385,538.841	

R/W POINT	STATION	OFFSET
100	100+00.00	92.03'
101	107+82.56	91.27'
102	106+54.03	126.39'
103	111+42.63	122.62'
104	111+66.41	131.27'
105	110+43.72	95.53'
106	108+42.03	93.80'
107	11+64.53 P	33.97'
108	13+00.00 P	33.24'
109	13+00.00 P	32.76'
110	12+62.55 P	32.70'
111	12+62.48 P	42.70'
112	107+18.56	93.67'
113	102+23.49	93.18'
114	102+23.52	58.18'
115	100+00.00	57.97'

TLE POINT	STATION	OFFSET
T1	108+53.08	93.82'
T2	11+84.57 P	33.83'
T3	12+86.91 P	32.79'
T4	106+88.36	93.64'
T5	102+23.51	65.62'
T6	102+11.28	58.17'

COURSE	BEARING	DISTANCE
101-102	S22°02'46"E	133.24'
106-107	S83°39'40"E	100.29'
107-108	N72°48'35"E	135.78'
109-110	S72°48'35"W	37.14'
110-111	S17°11'25"E	10.00'
111-112	S72°48'35"W	148.00'
113-114	S52°43'30"W	35.00'

UTILITY NUMBER	UTILITY SCHEDULE & INTEREST	PARCEL AFFECTED	INTEREST REQUIRED
80	GENERAL TELEPHONE COMPANY d/b/a FRONTIER V.78, PG.208 - DOC. #343486	1	RELEASE OF RIGHTS
80	GENERAL TELEPHONE COMPANY d/b/a FRONTIER NO EASEMENT OF RECORD	2	RELEASE OF RIGHTS
81	WISCONSIN POWER AND LIGHT d/b/a ALLIANT ENERGY - ELECTRIC V.129, PG.490 - DOC. #364409	2	RELEASE OF RIGHTS
82	WISCONSIN POWER AND LIGHT d/b/a ALLIANT ENERGY - GAS V.39 MISC, PG.517 - DOC. #303749	2	RELEASE OF RIGHTS

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S 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 SQ FT REQUIRED NEW	EXISTING	TOTAL	TLE SQ FT
1	J&R INVESTMENTS OF WIS. LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE/TLE	1548	7522	9070	906
2	DAVID E. LICHTFELD AND JOAN A. LICHTFELD, VENDORS AND L&D PROPERTIES, LLP, VENDEE	FEE/TLE	1498	--	1498	2265

TRANSPORTATION PROJECT PLAT NO: 1400-00-22 - 4.01

PART OF LOT 1 OF CSM #472, LOT 1 OF CSM #536 AND LOT 1 OF CSM #2342 ALL LOCATED IN THE SE 1/4 OF THE SW 1/4 IN SECTION 15, T12N, R9E, TOWN OF PACIFIC, COLUMBIA COUNTY, WISCONSIN.

RELOCATION ORDER USH 51, DEFOREST - PORTAGE (CTH P INTERSECTION), COLUMBIA COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL
2901 International Lane Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664
Web Address: www.msa-ps.com

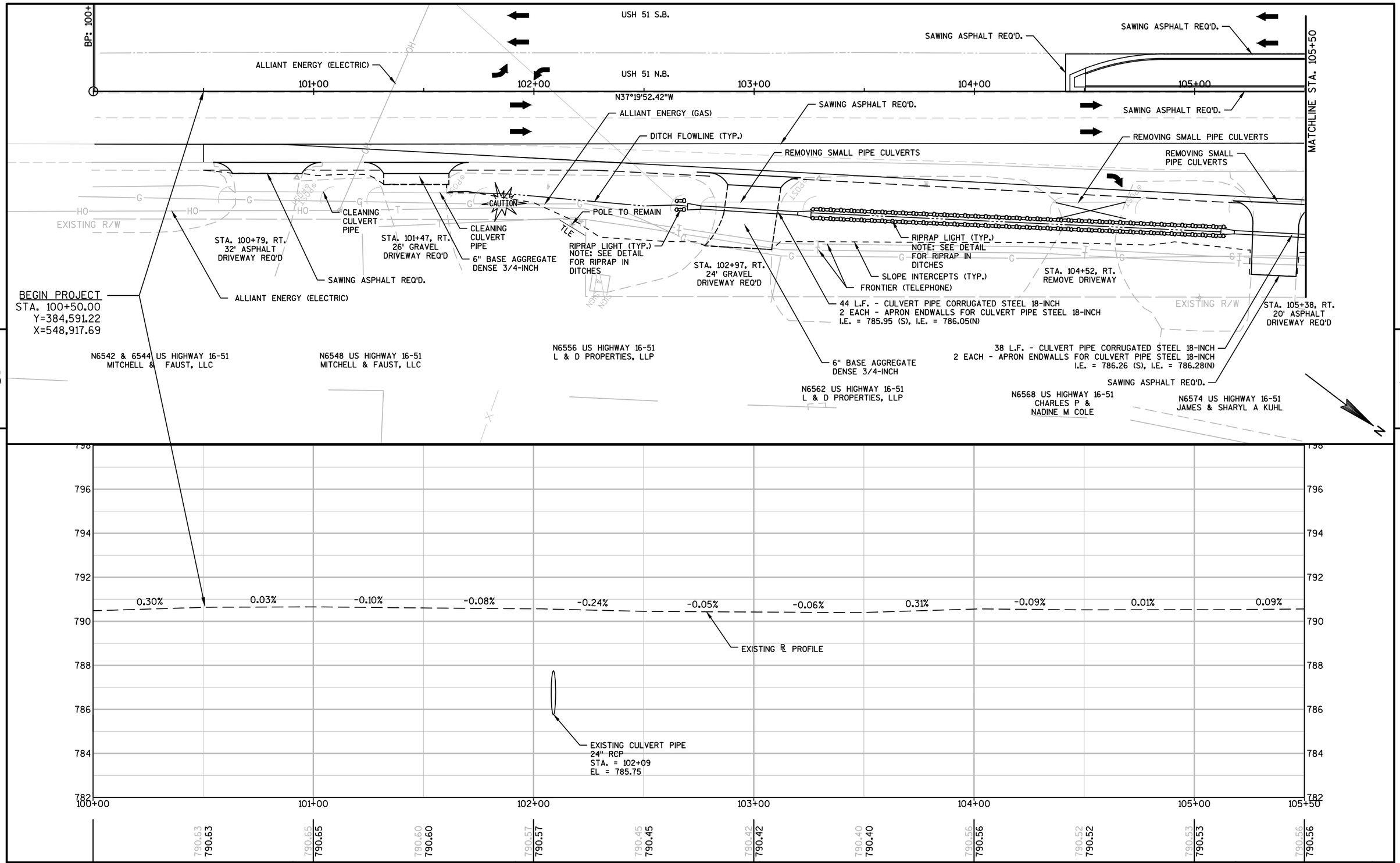
I, BRADLEY L. TISDALE, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: Bradley L Tisdale DATE: 02/17/2016
PRINT NAME: BRADLEY L TISDALE
REGISTRATION NUMBER: S-2824

BRADLEY L. TISDALE S-2824 WAUNAKEE WI WISCONSIN LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION
SIGNATURE: Cory Schlagel DATE: 2/25/2016
PRINT NAME: CORY SCHLAGEL

FILE NAME : P:\905\93\0093276\CADD\RW\93276_PLNE.DWG
APPRAISAL PLAT DATE : 2/17/2016
PLOT DATE : 2/19/2016 11:11 AM
PLOT BY : Brad Tisdale
PLOT NAME : PLOT SCALE : **********
PLOT DATE :
1400-00-22 - 4.01



PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	PLAN AND PROFILE: USH 51	SHEET 33	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\PLAN AND PROFILE.DWG
LAYOUT NAME - PLAN AND PROFILE - USH 51 P&P (1)
PLOT DATE : 1/23/2017 10:20 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

SAWING ASPHALT REQ'D.
REMOVING CURB & GUTTER
SAWING CONCRETE REQ'D.
SAWING ASPHALT REQ'D.
SAWING CONCRETE REQ'D.
REMOVING ASPHALTIC SURFACE
SAWING ASPHALT REQ'D.
SAWING ASPHALT REQ'D.
REMOVING CURB & GUTTER
DITCH FLOWLINE (TYP.)
ALLIANT ENERGY (GAS)
SLOPE INTERCEPTS (TYP.)
FRONTIER (TELEPHONE)
EXISTING R/W
TLE
CAUTION
CAUTION
CTH P
NEW R/W
EXISTING R/W
NEW R/W
TLE
FRONTIER (TELEPHONE)
ASPHALTIC FLUME
REMOVING CONCRETE BASES
RIPRAP LIGHT
CAUTION
DITCH FLOWLINE (TYP.)
GAS MAIN IS STUBBED ACROSS DITCH AND CAPPED
ALLIANT ENERGY (GAS)
RIPRAP LIGHT (TYP.)
NOTE: SEE DETAIL FOR RIPRAP IN DITCHES
CLEANING CULVERT PIPE
EXISTING R/W
CLEANING CULVERT PIPE
END PROJECT
STA. 110+10.00
Y=385,354.00
X=548,334.80
ATC (ELECTRIC)
USH 51 S.B.
USH 51 N.B.
ALLIANT ENERGY (ELECTRIC)
MATCHLINE STA. 105+50
P.I. = STA. 108+26.05
Y = 385,208.31
X = 548,447.06
Δ = 00°02'52.75"
P.I. = STA. 109+65.68
Y = 385,319.26
X = 548,362.31
Δ = 00°59'14.55"
N37°19'52.42"W
N37°22'45.17"W
N38°21'59.72"W
STA. 107+96.48=
STA. 10+00.00
Y = 385,184.78
X = 548,465.01
790.85
BP: 10+00.00
105+50
106+00
107+00
108+00
109+00
110+00
111+00
N6574 US HIGHWAY 16-51
JAMES & SHARYL A KUHL
W8371 COUNTY ROAD P
L & D PROPERTIES, LLP
W8425 CRAWFORD ROAD
J&R INVESTMENTS OF WIS LLC
5
5
N

796
794
792
790
788
786
784
782
-0.05% 0.13% 0.35% 0.05% -0.00% -0.47% 0.27% 0.10% -0.56% 0.99% 0.43% -0.05% -0.05% -0.09% -0.19% -0.16% -0.28% -0.30% -0.35% -0.16% -0.05%
EXISTING ℄ PROFILE
EXISTING CULVERT PIPE
36" RCP
STA. = 108+74
EL = 785.03
105+50 106+00 107+00 108+00 109+00 110+00 111+00
790.56 790.63 790.78 790.80 790.76 790.85 791.03 791.01 790.96 790.85 790.70 790.68

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	PLAN AND PROFILE: USH 51	SHEET 34	E

DITCH FLOWLINE (TYP.)
REMOVING CONCRETE BASES
SLOPE INTERCEPTS (TYP.)
EW.1A STA. 11+11.5"P", 42.0' LT.
APRON ENDWALLS FOR CPRCHE 14x23-INCH REQ'D.
58 L.F. - STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 14x23-INCH @ 0.20%
(EW.1A I.E. = 785.03, 1.0 I.E. = 785.14)
1.0 STA. 11+51.0"P", ON LINE
MANHOLES 5-J REQ'D.
RIM=789.17
STA. 12+19, LT.
43' ASPHALT
(TO REMAIN)
W8425 CRAWFORD ROAD
J&R INVESTMENTS OF WIS LLC
P.I. = STA. 12+78.23
Y = 385,268.83
X = 548,730.24
Δ = 00°32'11.92"
ALLIANT ENERGY (GAS)
W8380 COUNTY HIGHWAY P
JAMES E. PREUSS
ASPHALTIC FLUME
USH 51 S.B.
USH 51 N.B.
TLE
NEW R/W
EXISTING R/W
SAWING ASPHALT REQ'D.
ALLIANT ENGERY (GAS)
FRONTIER (TELEPHONE)
CAUTION
CLEANING CULVERT PIPE
PI: 12+78.23
EP: 15+06.01
CULVERT PIPE WAS REPLACED BY PROPERTY OWNER
10+00 "P"
11+00 "P"
12+00 "P"
13+00 "P"
14+00 "P"
15+00 "P"
N72°24'55.42"E
N72°57'07.34"E
CTH P
STA. 10+00.00=
STA. 107+96.48
Y = 385,184.78
X = 548,465.01
STA. 11+21.0"P", 30.3' RT.
1.1 INLETS 4-HM REQ'D.
FLANGE=788.44
ALLIANT ENGERY (ELECTRIC)
ALLIANT ENERGY (ELECTRIC)
ALLIANT ENGERY (GAS)
REMOVING PAVEMENT
STA. 11+53, RT.
35' CONCRETE DRIVEWAY 6-INCH REQ'D
NOTE: EXCAVATE TO PROVIDE DRAINAGE FROM CULVERT PIPE (INCIDENTAL TO CLEANING CULVERT PIPE)
EW.1B STA. 11+79.5"P", 31.0' RT.
APRON ENDWALLS FOR CPRCHE 14x23-INCH REQ'D.
42 L.F. - STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 14x23-INCH @ 0.20%
(1.0 I.E. = 785.14, EW.1B I.E. = 785.23)
43 L.F. - STORM 12-INCH SEWER PIPE REINFORCED . CONCRETE CLASS IV @ 0.51%
(1.0 I.E. = 785.30, 1.1 I.E. = 785.52)
BEGIN CONSTRUCTION
STA. 10+00.00
Y=385,184.78
X=548,465.01
END CONSTRUCTION
STA. 12+60.00
Y=385,263.33
X=548,712.86
N
5
5

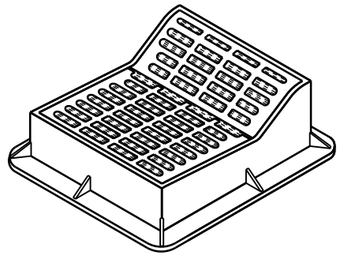
-1.91% -1.12% -1.46% -1.09% -0.69% 0.17% 0.14% 0.10% -0.21% -0.28% -0.19% 0.18% 0.16%
EXISTING ℄ PROFILE
PROPOSED STORM SEWER PIPE
REINFORCED CONCRETE HORIZONTAL
ELLIPTICAL CLASS HE-IV 14"x23"
780 782 784 786 788 790 792 794
10+00 11+00 12+00 13+00 14+00 14+93
790.81 790.81 790.10 790.10 789.42 789.42 789.17 789.17 789.25 789.25 789.26 789.26 789.14 789.14 789.00 789.00 788.91 788.91 788.99 788.99 789.06 789.06

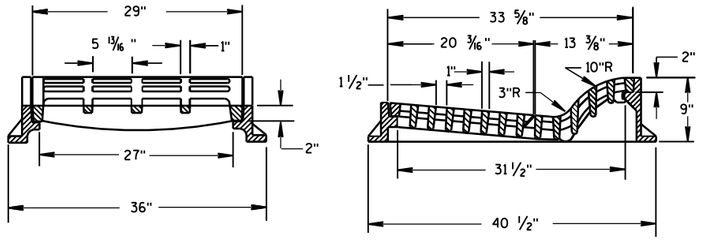
PROJECT NO: 1400-00-72	HWY: CTH P	COUNTY: COLUMBIA	PLAN AND PROFILE: CTH P	SHEET 35	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\PLAN AND PROFILE.DWG
LAYOUT NAME - PLAN AND PROFILE - CTP P P&P (1)
PLOT DATE : 1/23/2017 10:20 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:40 FT

Standard Detail Drawing List

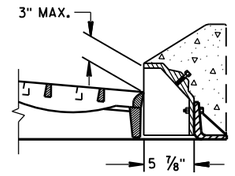
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
11B02-02	CONCRETE MEDIAN NOSE
14B29-01	SAFETY EDGE
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C18-03	MEDIAN ISLAND MARKING
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C29-04A	BICYCLE LANE MARKING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

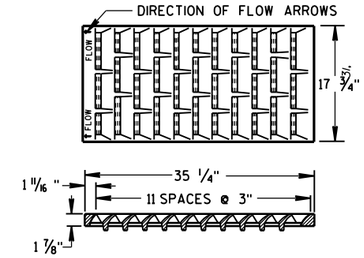
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

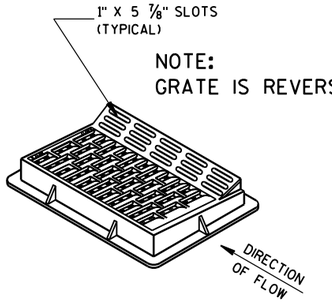
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

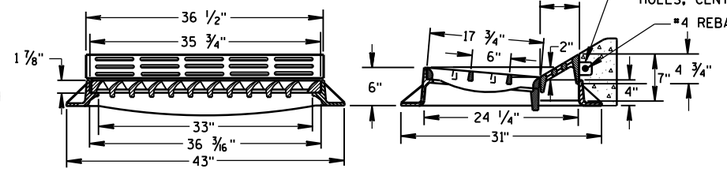
GENERAL NOTES

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



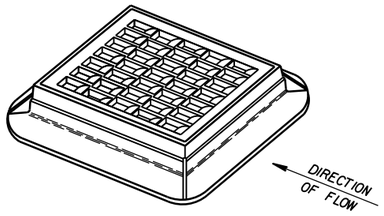


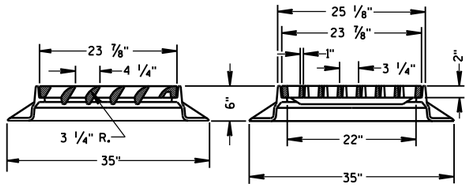


TYPE "HM"

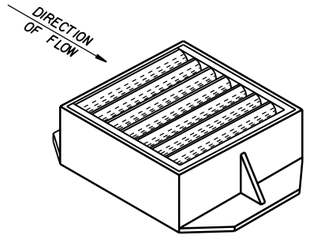
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

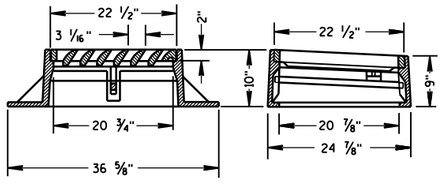
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



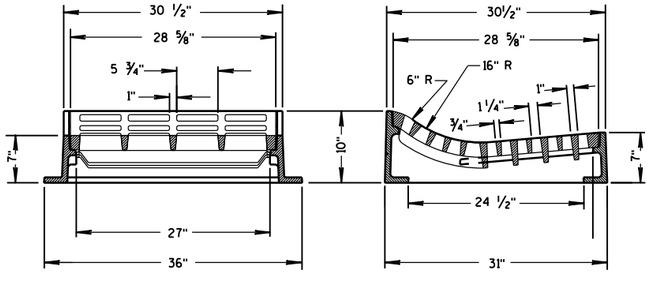


TYPE "S"



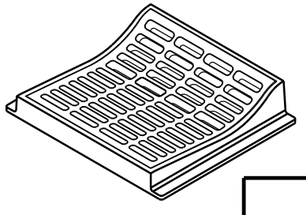


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

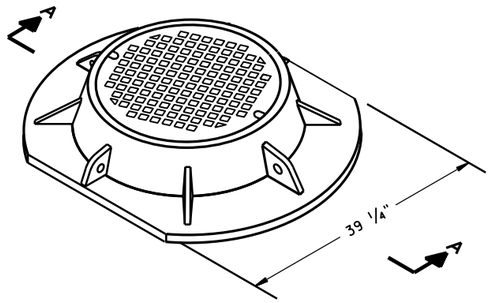
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

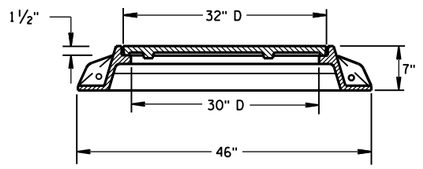
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

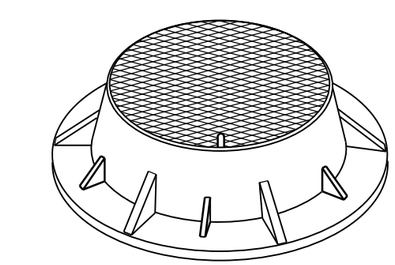
FHWA

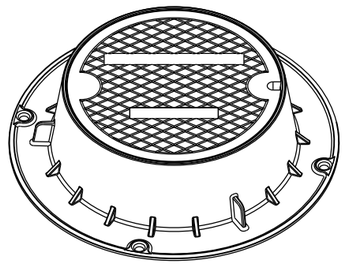
6
S.D.D. 8 A 5-19c

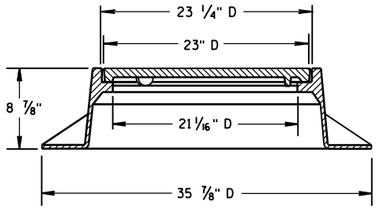


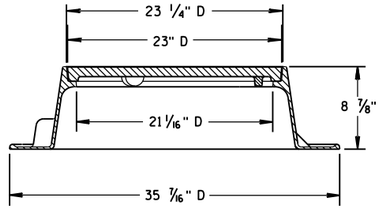


SECTION A-A
TYPE "K"









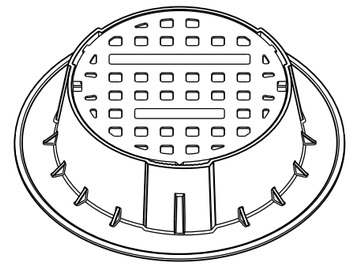
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

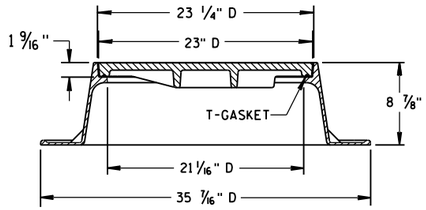
GENERAL NOTES

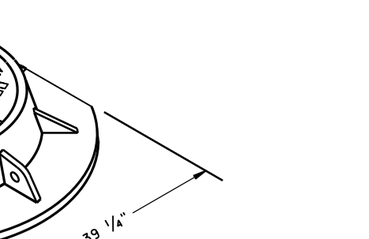
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

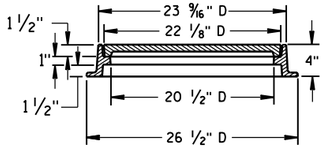
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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









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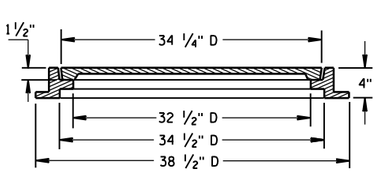

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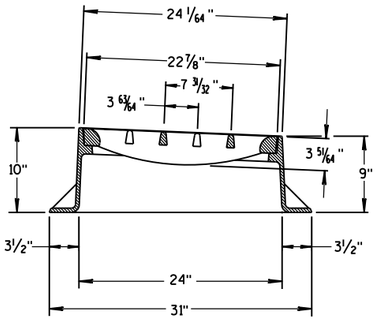
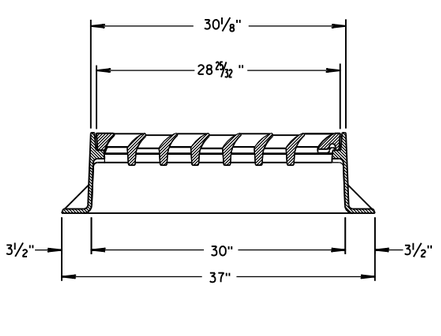
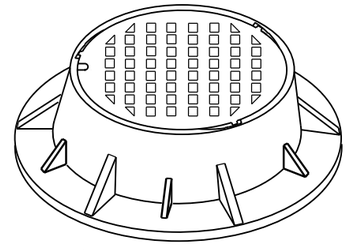
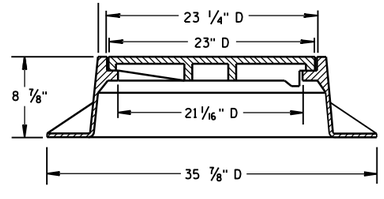




INLET COVER TYPE "BW"





TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE

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

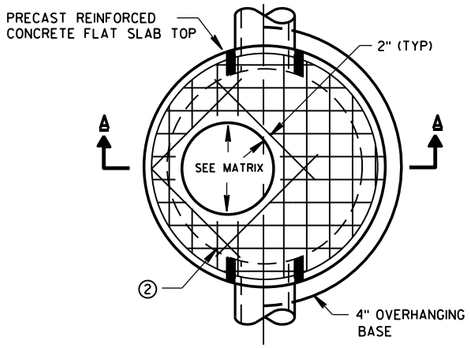
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

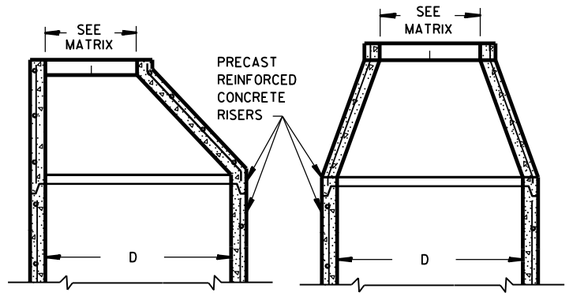
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

S.D.D. 8 A 5-19d

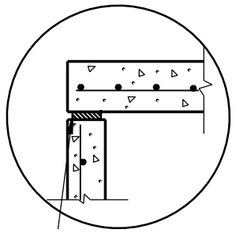


PLAN VIEW CIRCULAR OPENING

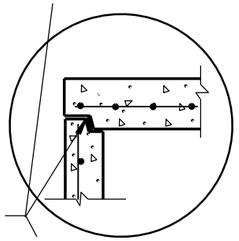


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

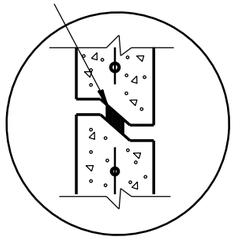


TOP WITH PLAIN END JOINT



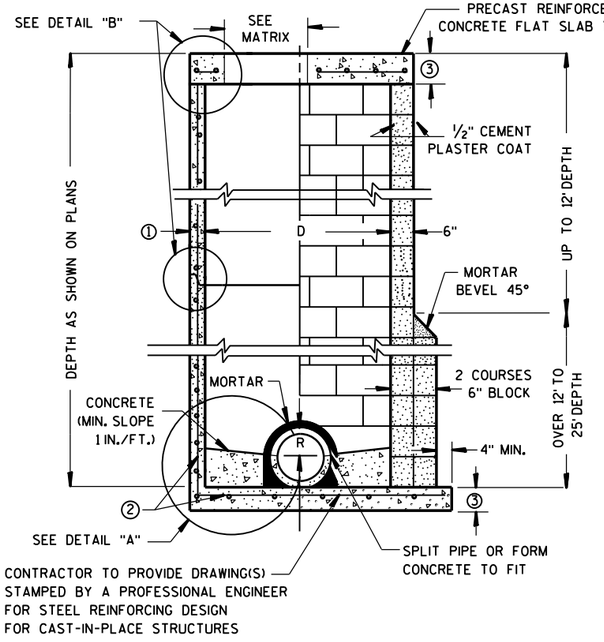
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



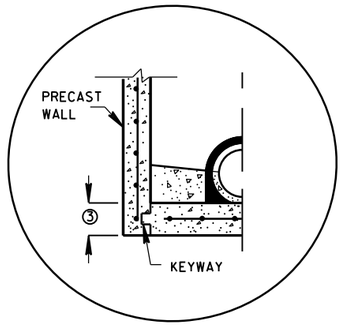
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

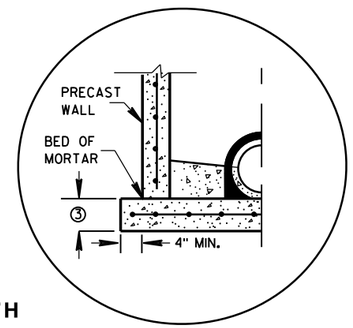


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

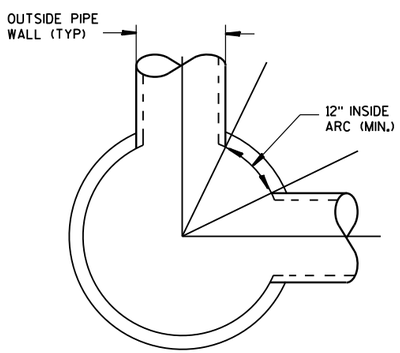


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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) OR PRECAST REINFORCED 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 AASHTO M199 AND 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. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

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.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

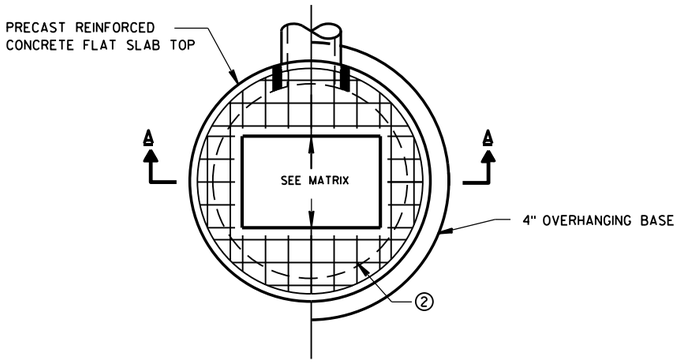
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

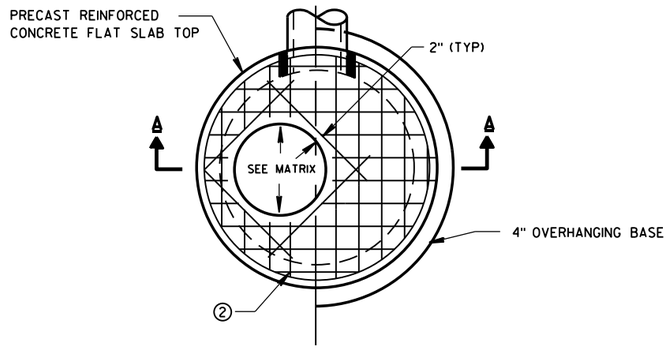
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

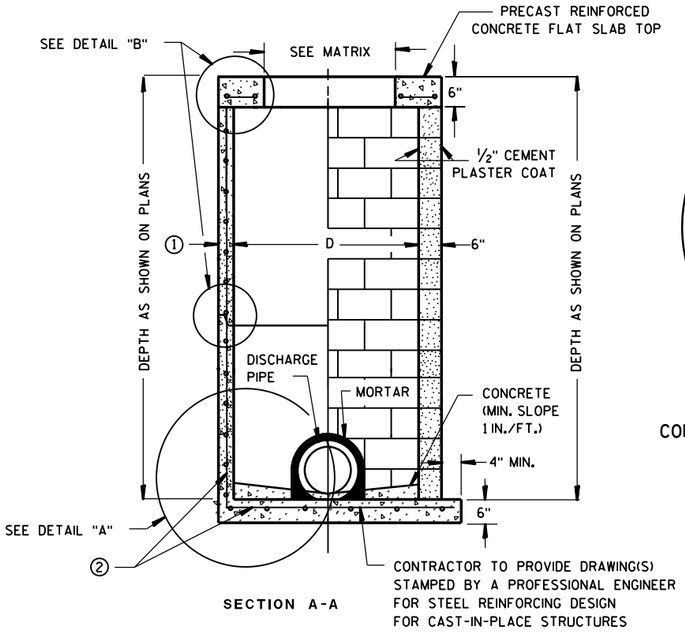
6
S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

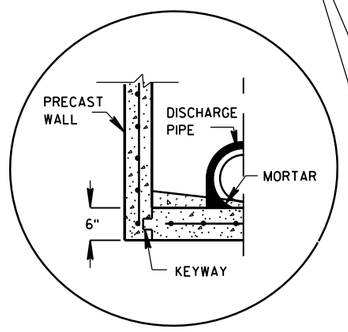


SECTION A-A

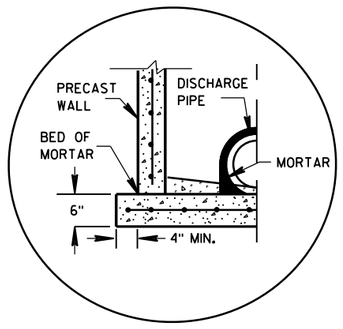
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

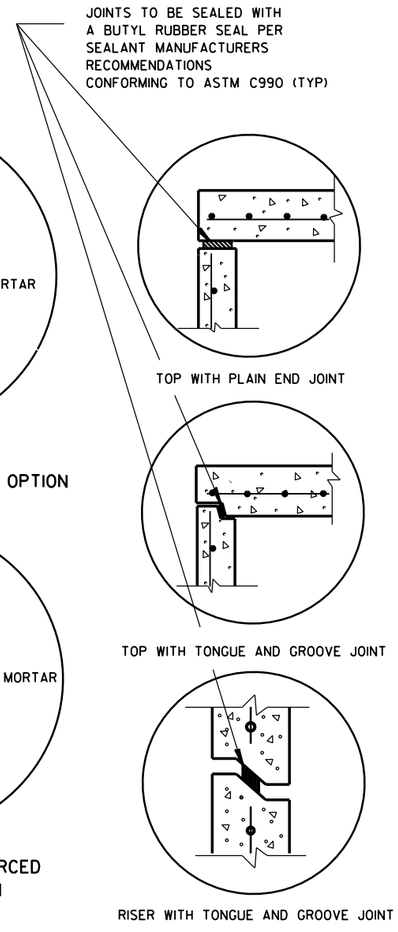


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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.

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.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

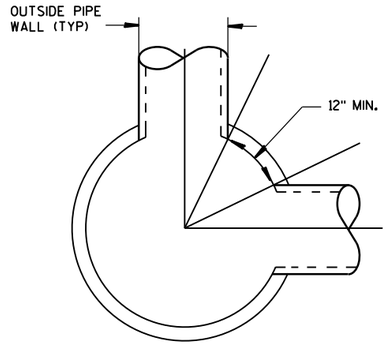
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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6

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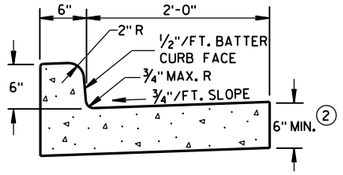
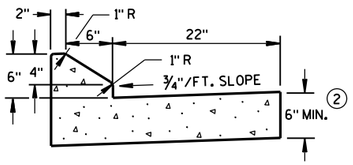
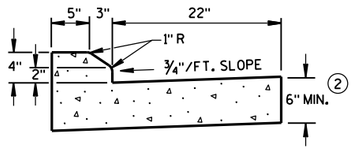
INLETS 3-FT AND 4-FT DIAMETER



TYPES A & D ①

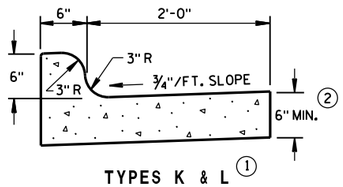


6" SLOPED CURB TYPES G & J ①

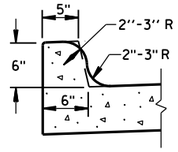


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

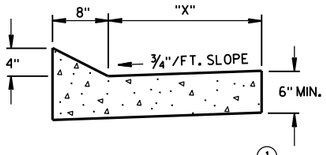


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

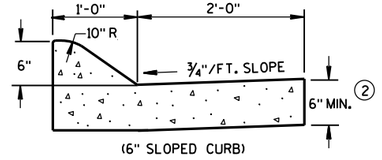
CONCRETE CURB & GUTTER 30"



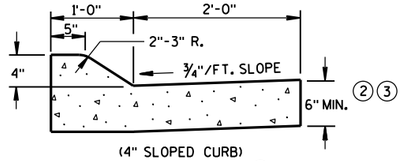
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

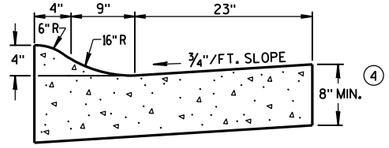


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

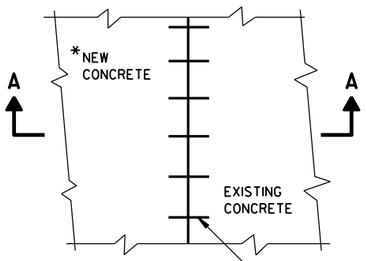
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

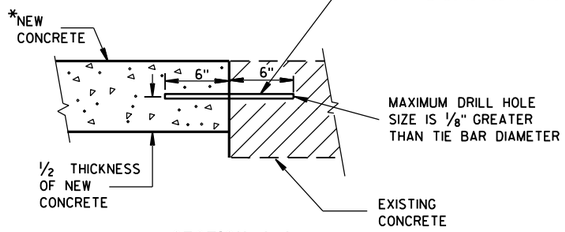
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



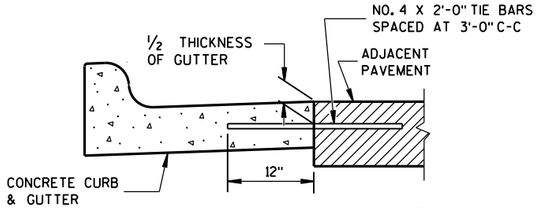
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

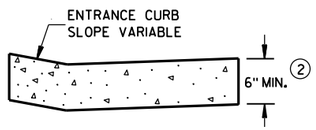


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

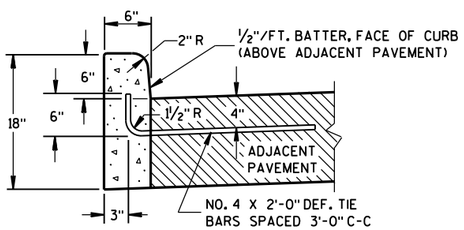


TYPICAL TIE BAR LOCATION ①

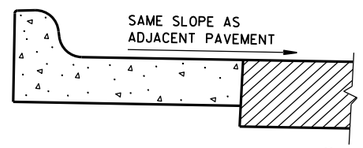


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

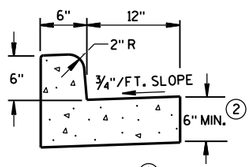


① TYPES A & D



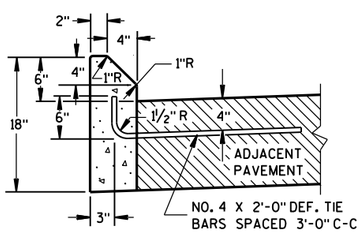
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



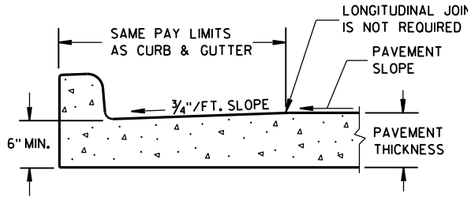
① TYPES A & D

CONCRETE CURB & GUTTER 18"

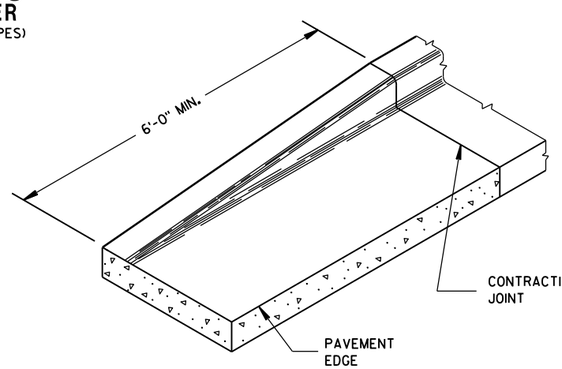


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2016 — DATE

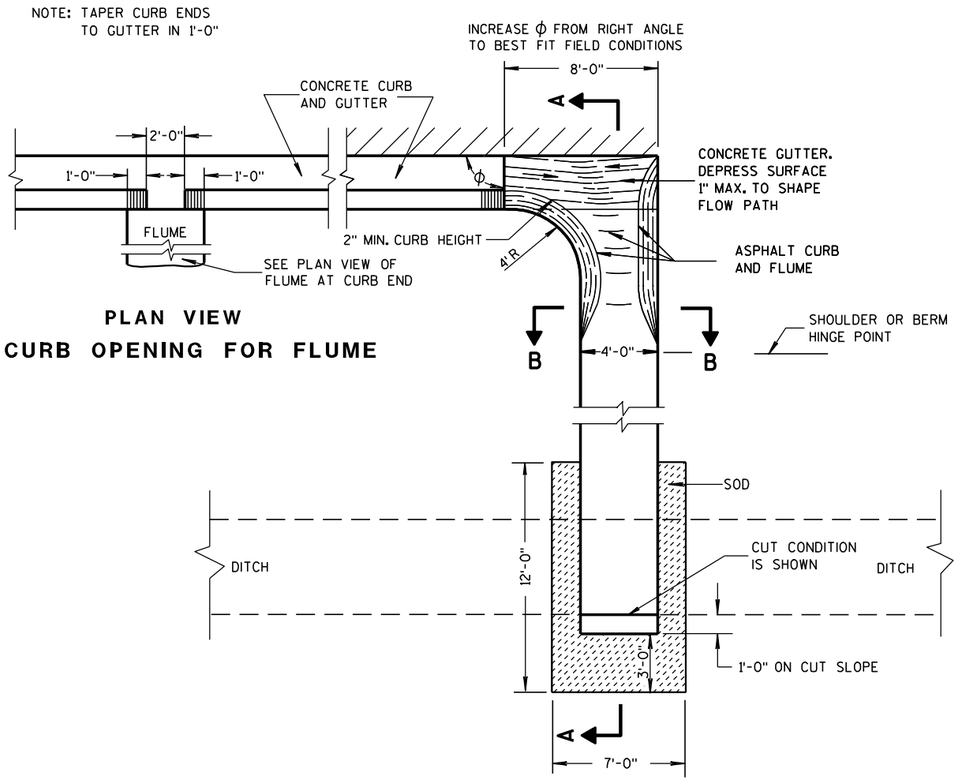
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

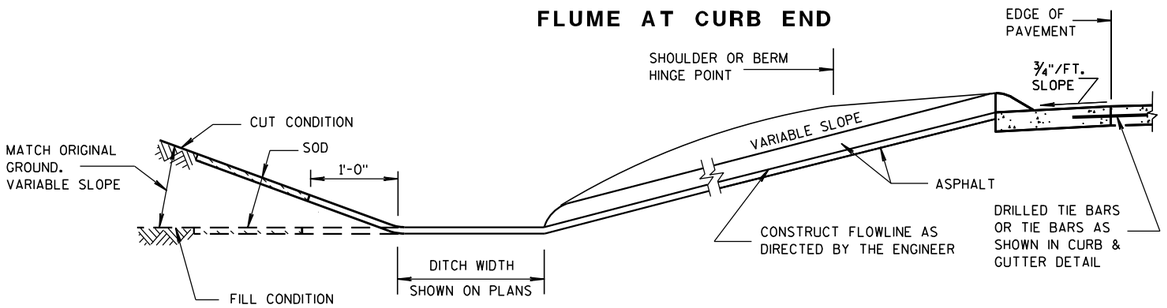
S.D.D. 8 D 1-19

ASPHALTIC FLUME

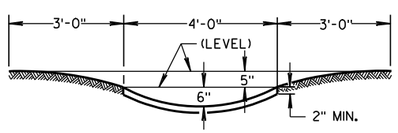


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

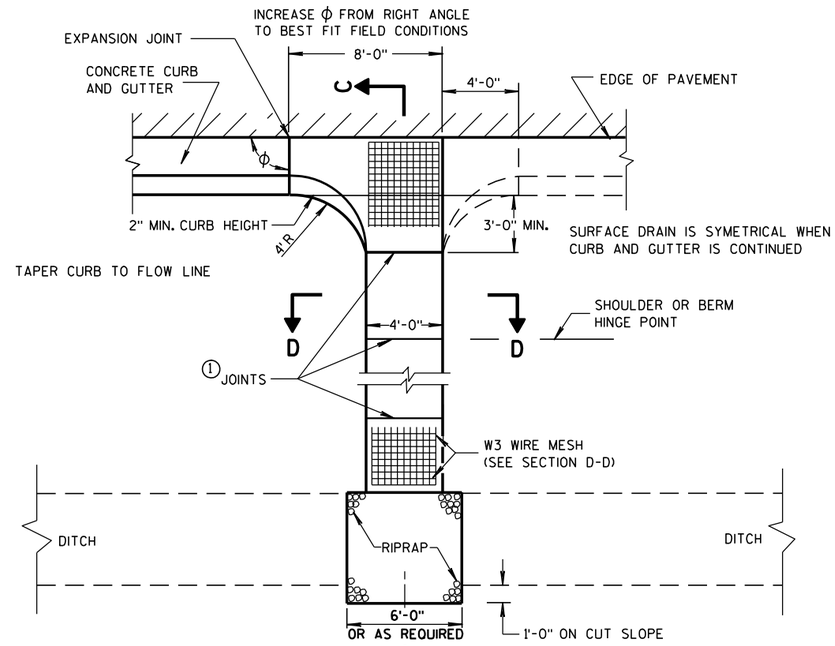
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

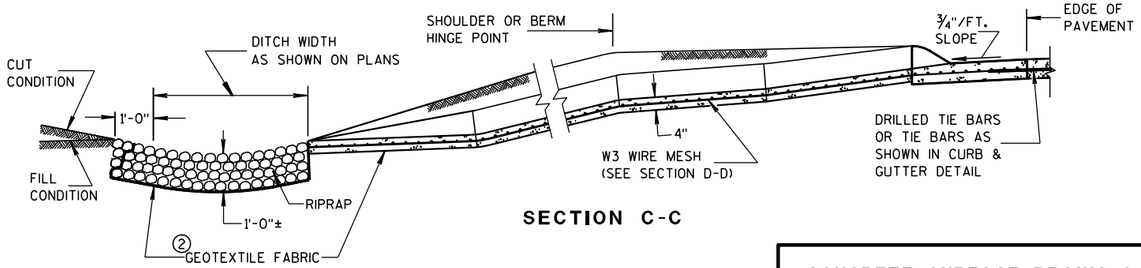
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

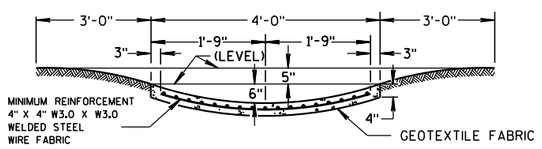
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

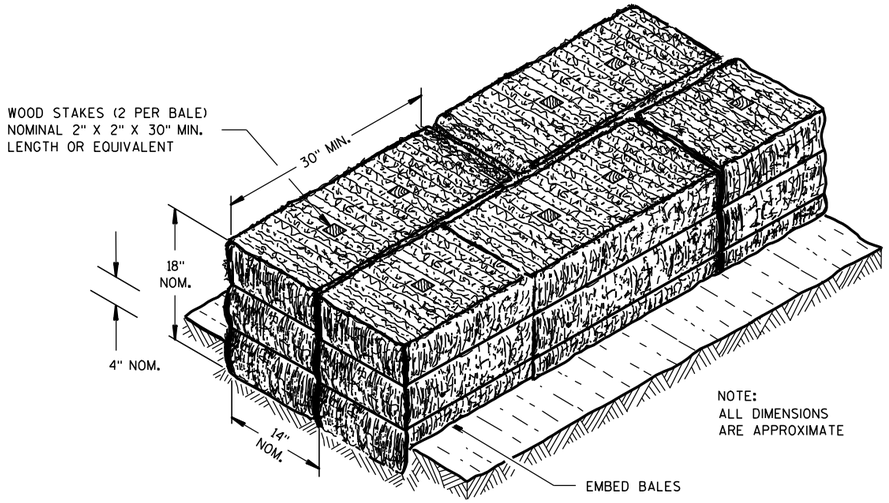
CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

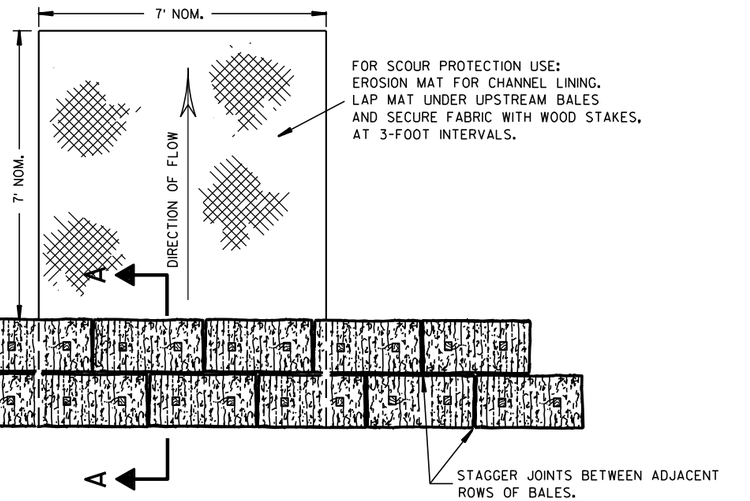
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

S.D.D. 8 D 4-5

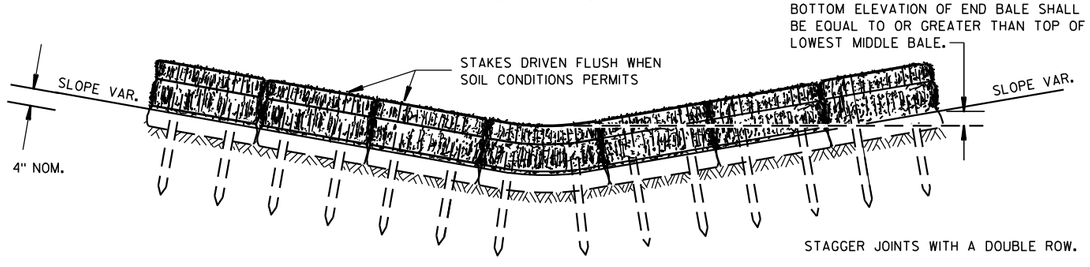
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



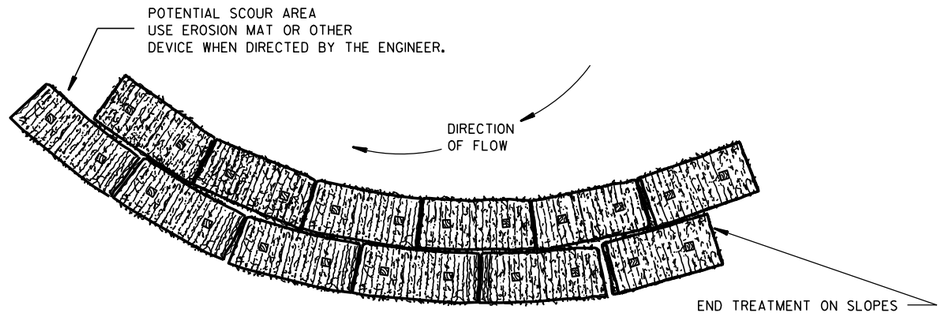
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

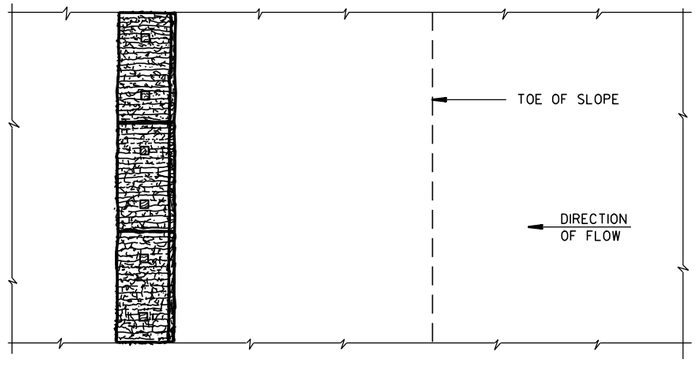
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

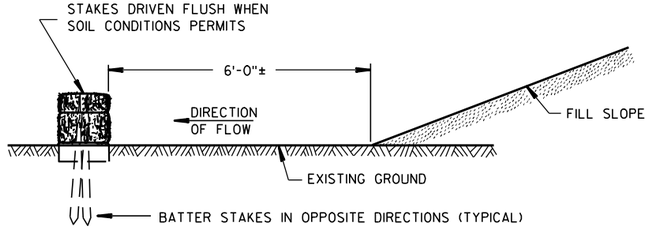


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

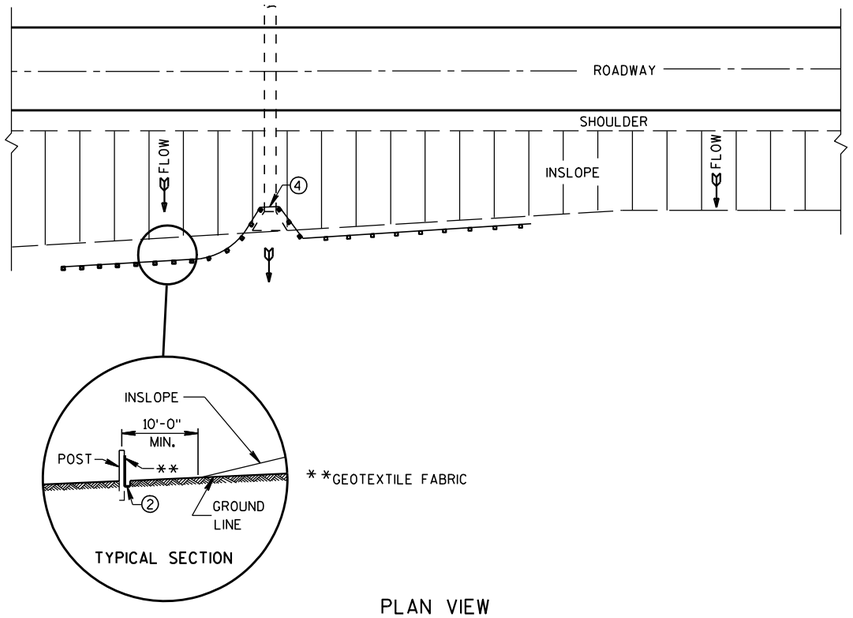
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

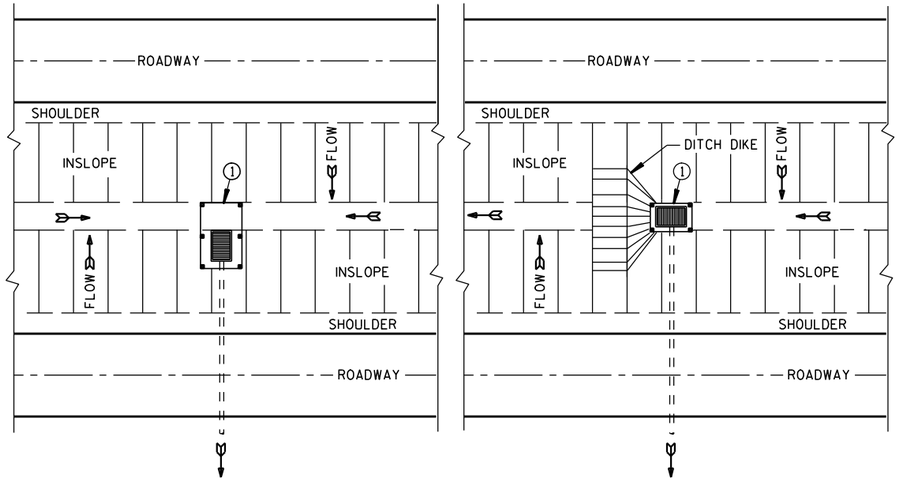
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



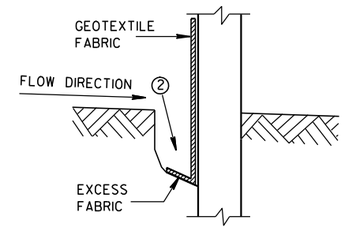
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

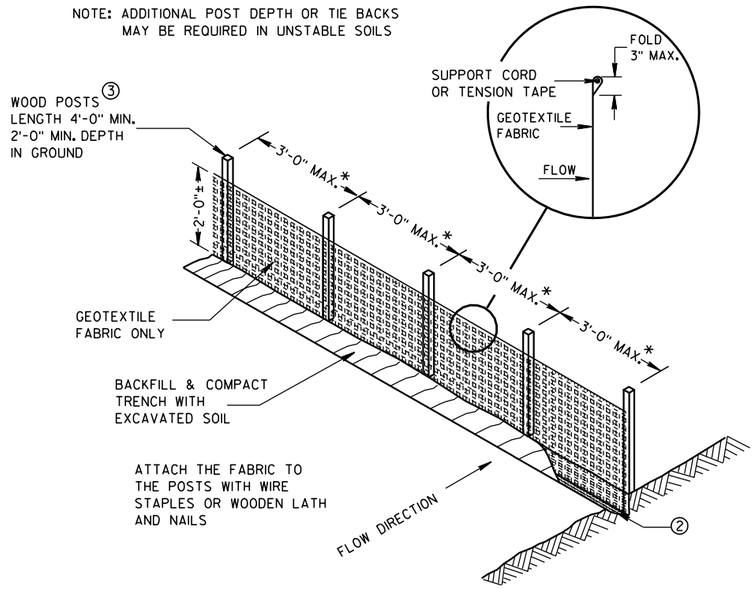
GENERAL NOTES

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.

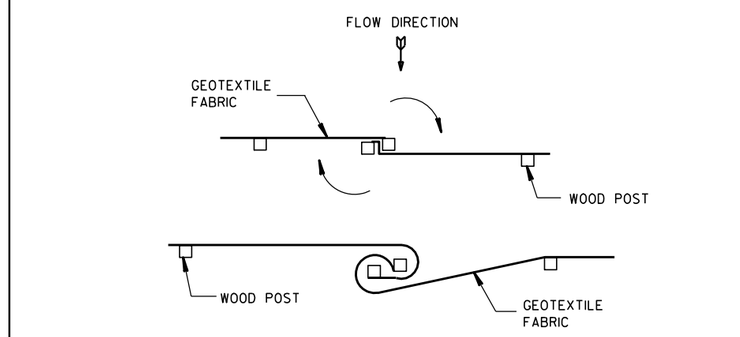


TRENCH DETAIL

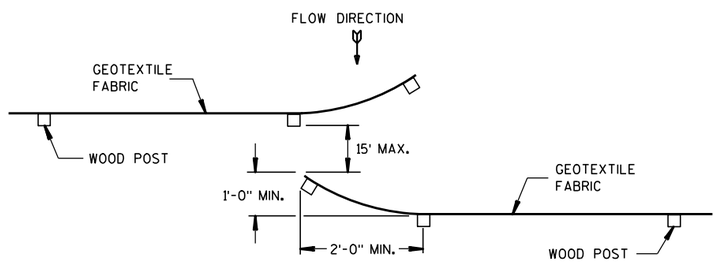


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

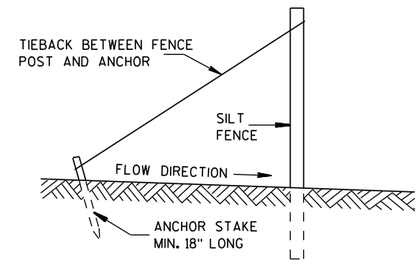


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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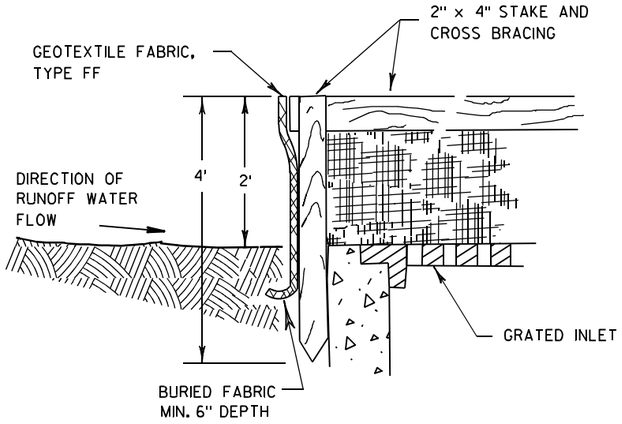
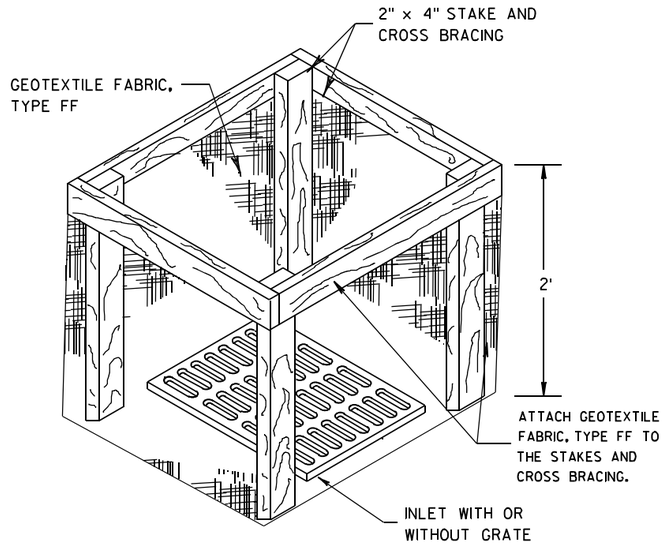
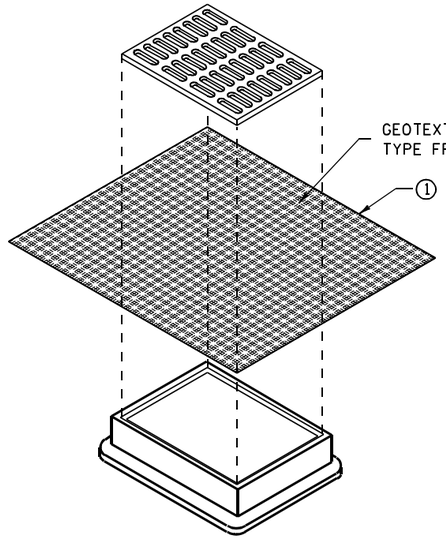
S.D.D. 8 E 9-6



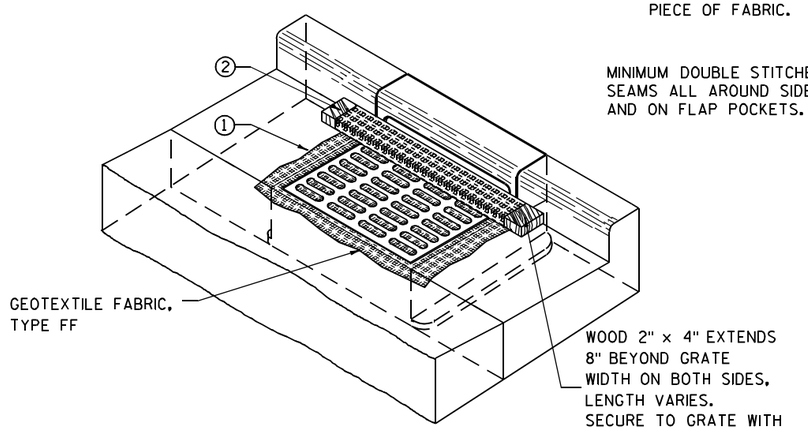


INLET PROTECTION, TYPE A

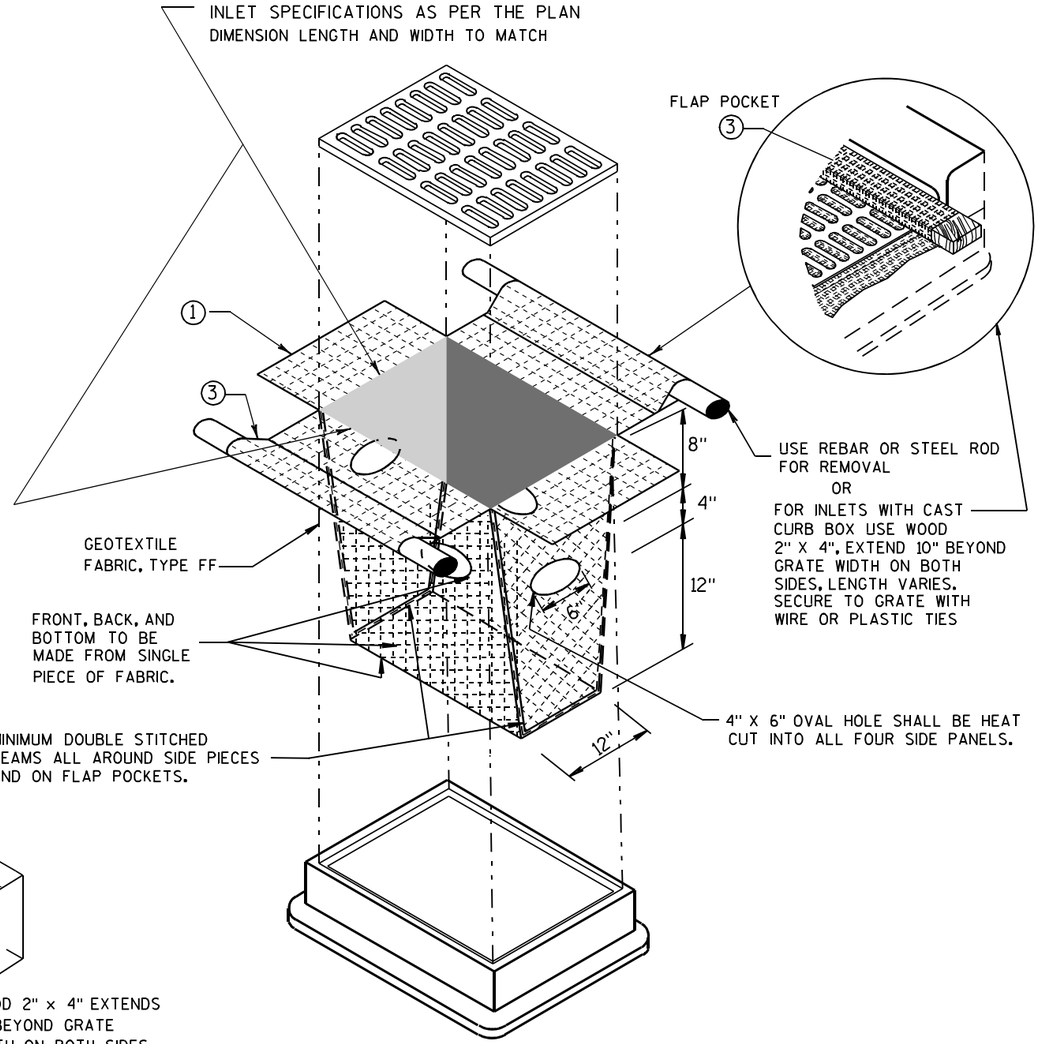


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

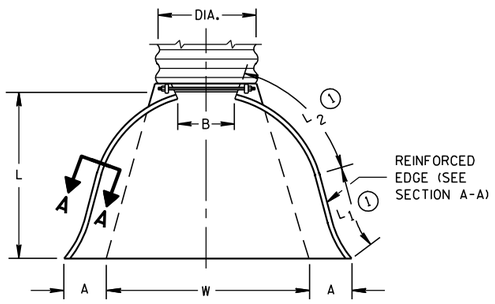
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

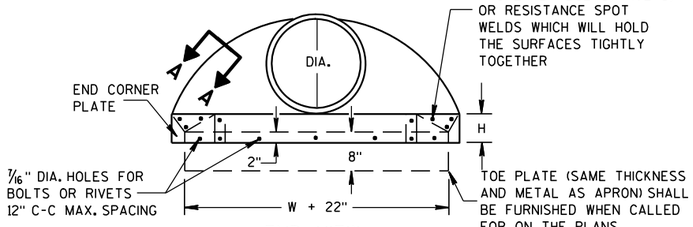
REINFORCED CONCRETE APRON ENDWALLS

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

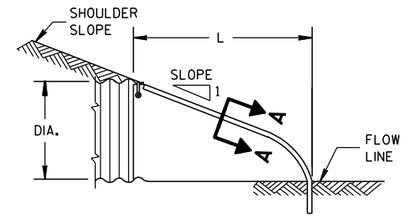
*MINIMUM
**MAXIMUM



PLAN VIEW

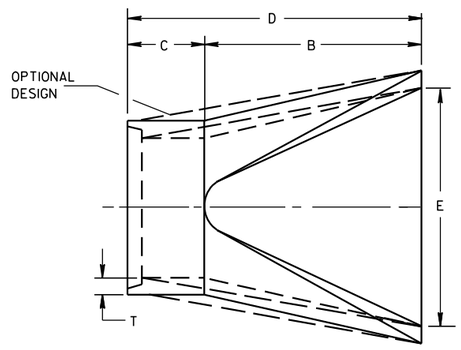


END VIEW

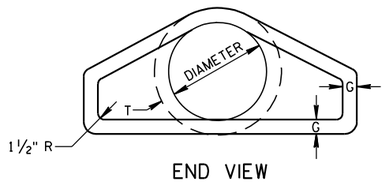


SIDE ELEVATION

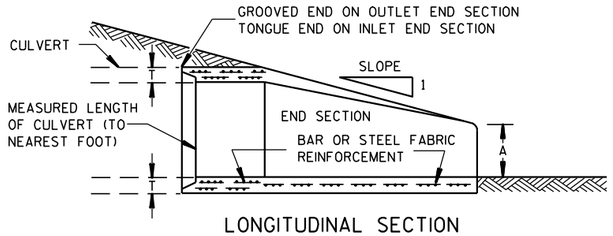
METAL ENDWALLS



PLAN

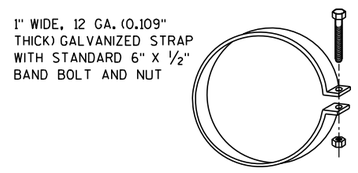


END VIEW



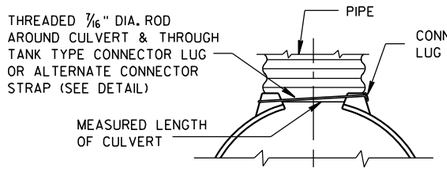
LONGITUDINAL SECTION

CONCRETE ENDWALLS

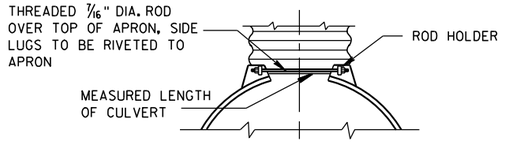


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

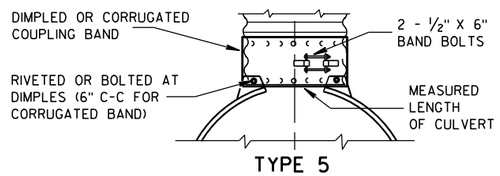


TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

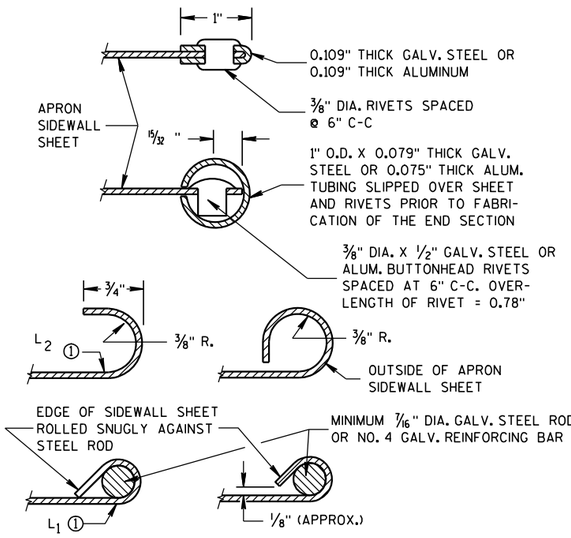
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

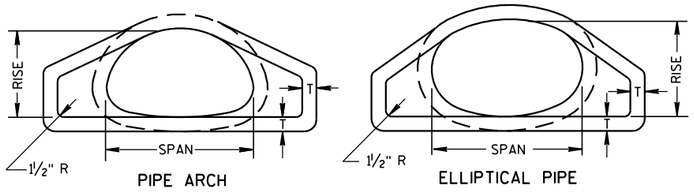
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

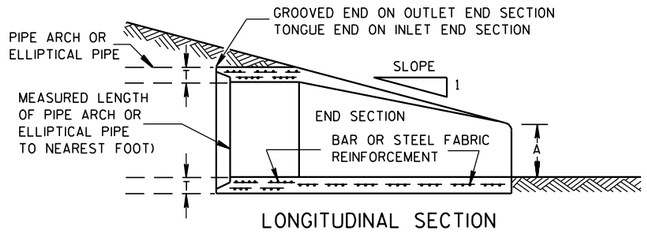
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

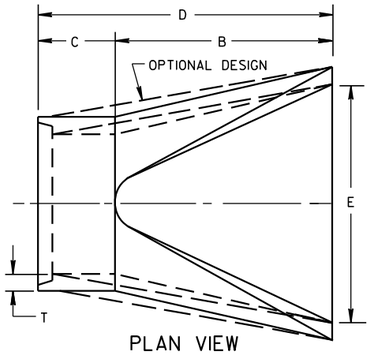
6
S.D.D. 8 F 1-11



END VIEW

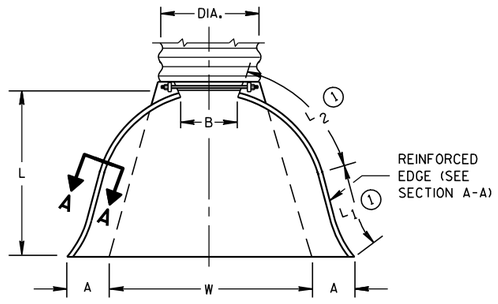


LONGITUDINAL SECTION

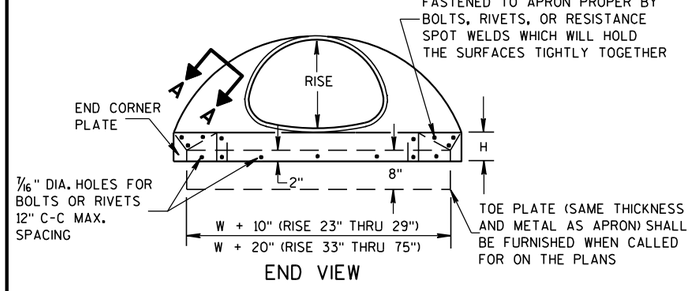


PLAN VIEW

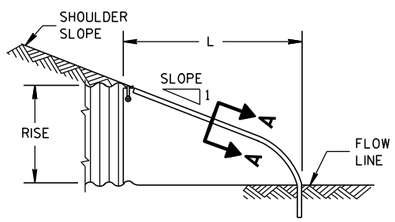
CONCRETE ENDWALLS



PLAN VIEW

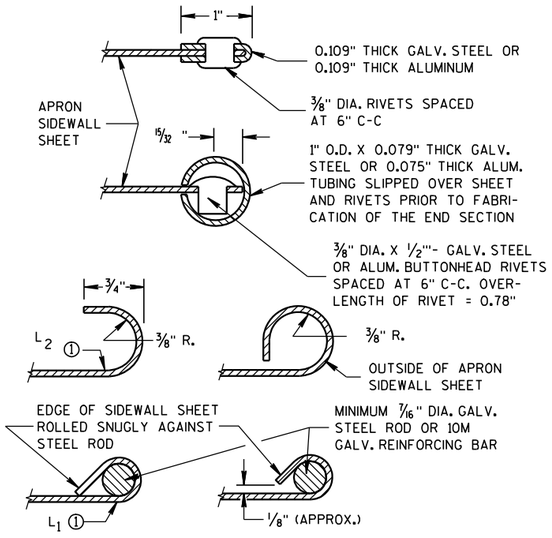


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

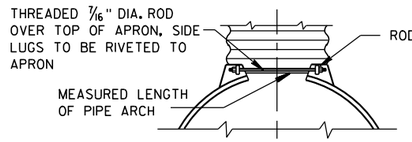
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

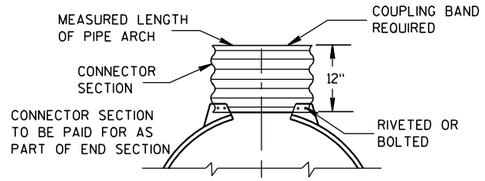
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



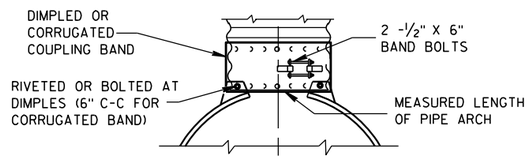
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

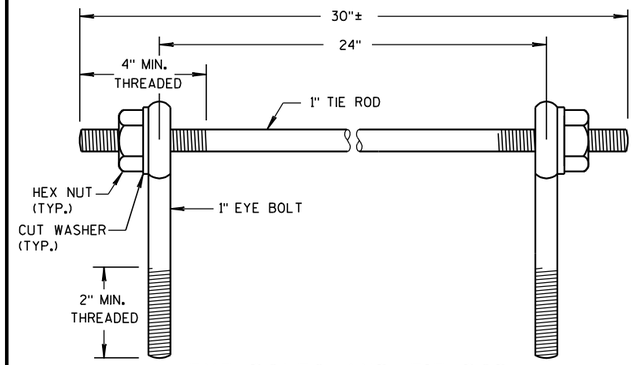
FHWA

6

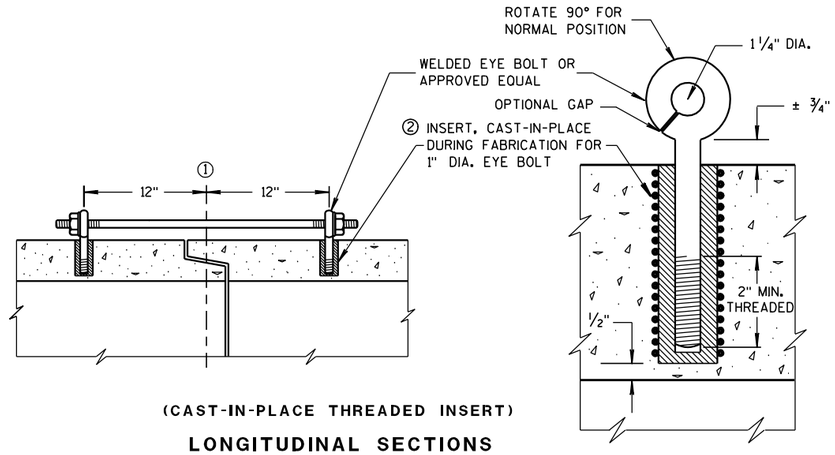
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

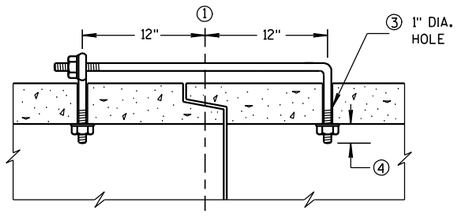
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

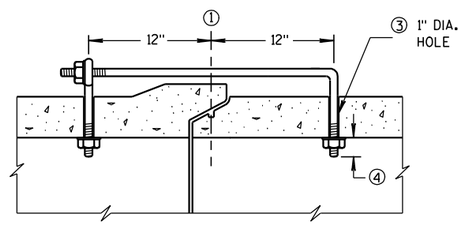
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

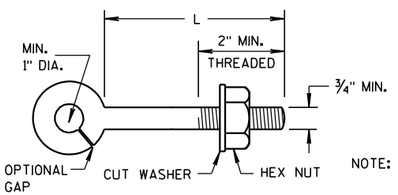


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

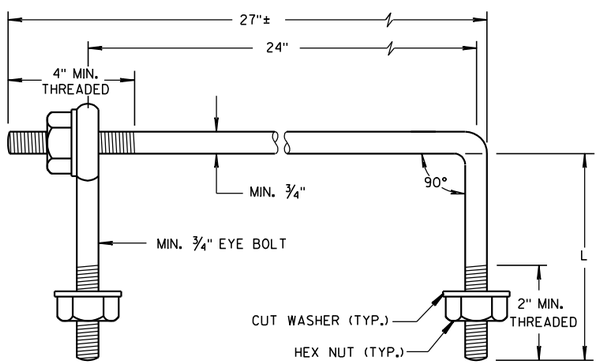
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

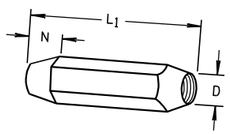
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

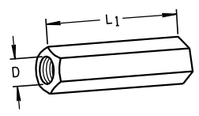
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



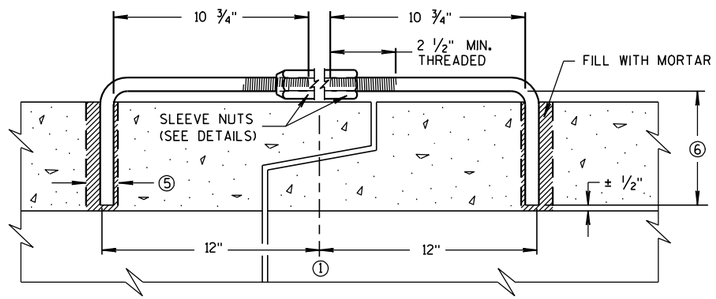
TAPERED



PLAIN

RIGHT AND LEFT THREADS

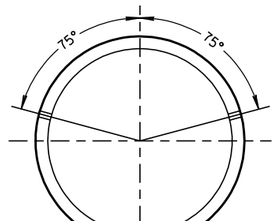
SLEEVE NUTS



LONGITUDINAL SECTION

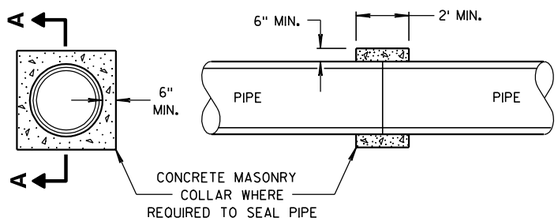
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
48
FHWA

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S.D.D. 8 F 4-7

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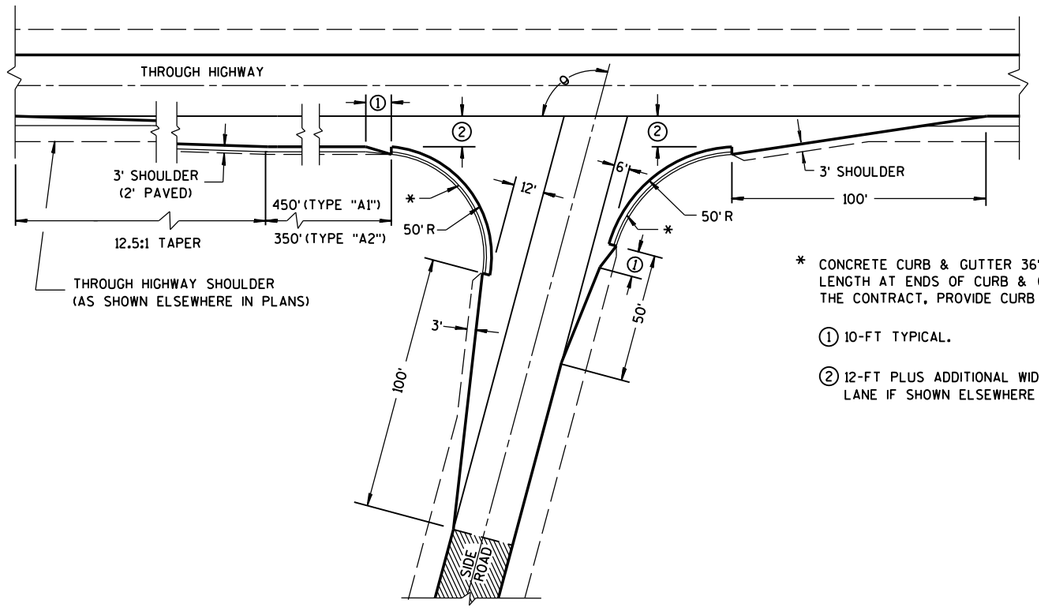
S.D.D. 8 F 4-7



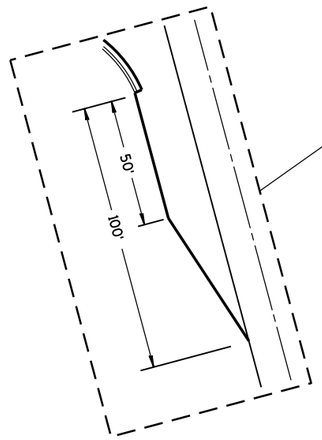
θ = MORE THAN 80°

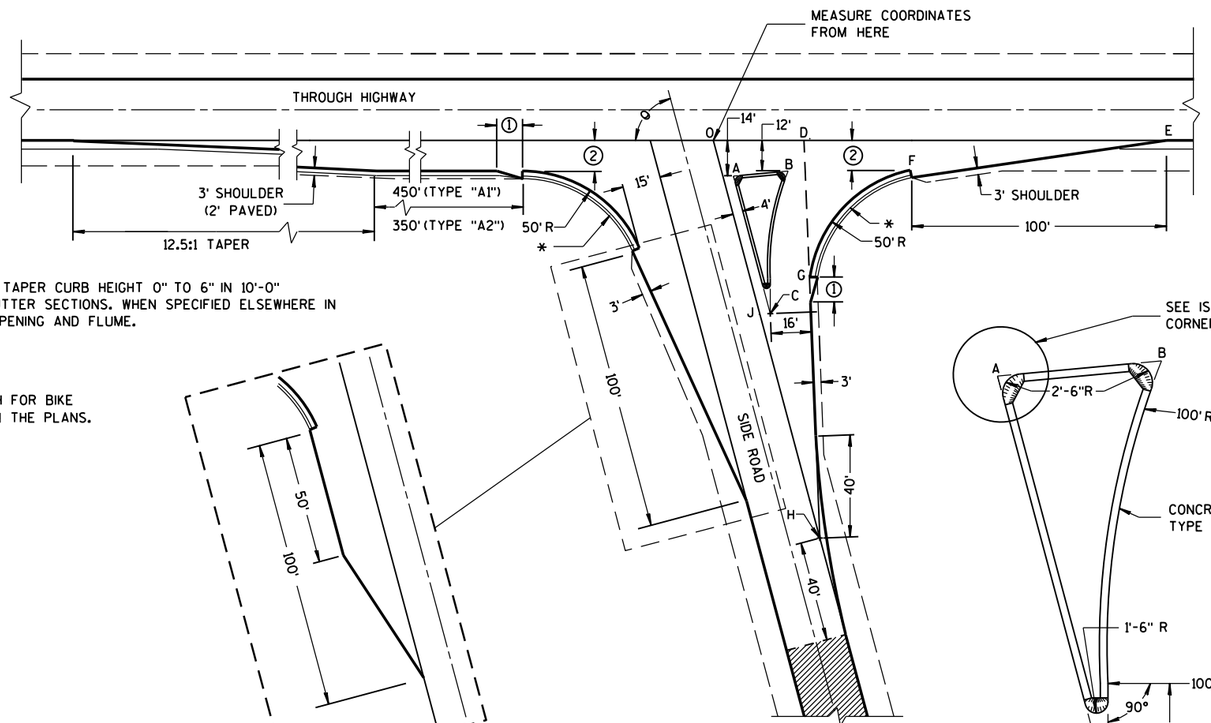
* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

① 10-FT TYPICAL.

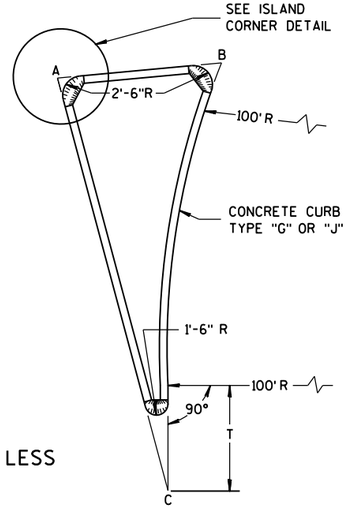
② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.

EXISTING PAVED SURFACE

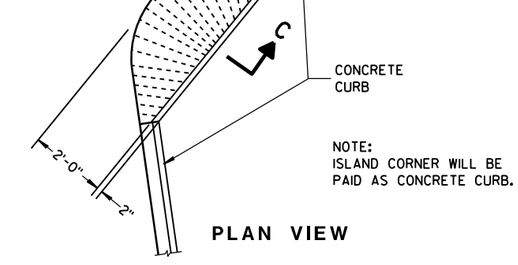




θ = ACUTE ANGLES 80° OR LESS

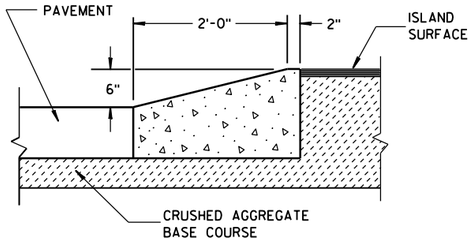


SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS



NOTE:
ISLAND CORNER WILL BE PAID AS CONCRETE CURB.

PLAN VIEW



SECTION C-C

ISLAND CORNER DETAIL

(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O") X / Y								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 / -14.0	44.9 / -12.0	46.4 / -72.4	41.9 / 0.0	205.0 / 0.0	104.6 / -12.0	64.0 / -75.5	85.0 / -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 / -14.0	39.0 / -12.0	37.8 / -71.6	39.4 / 0.0	196.1 / 0.0	95.7 / -12.0	54.1 / -71.5	70.5 / -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 / -14.0	33.9 / -12.0	29.8 / -70.1	37.4 / 0.0	188.3 / 0.0	87.8 / -12.0	45.6 / -67.5	56.1 / -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 / -14.0	29.3 / -12.0	22.3 / -67.9	35.7 / 0.0	181.2 / 0.0	80.7 / -12.0	38.2 / -63.4	41.8 / -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 / -14.0	25.4 / -12.0	15.6 / -65.2	34.4 / 0.0	174.8 / 0.0	74.4 / -12.0	31.8 / -59.3	27.6 / -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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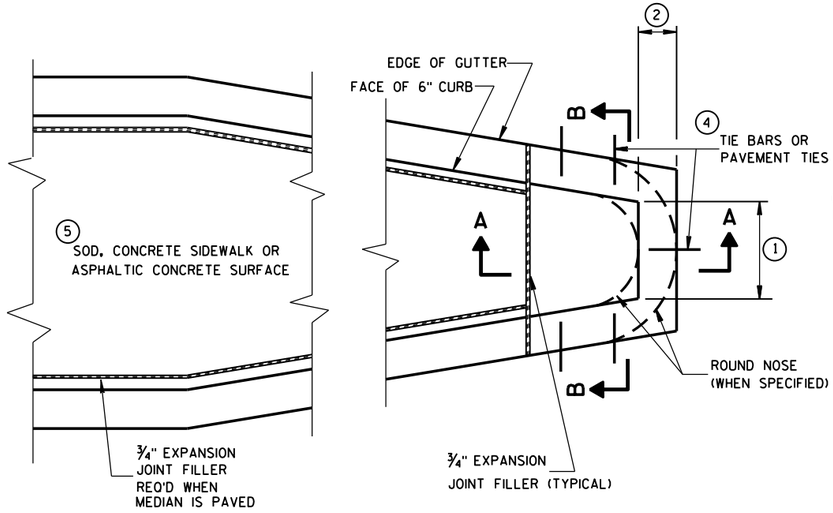
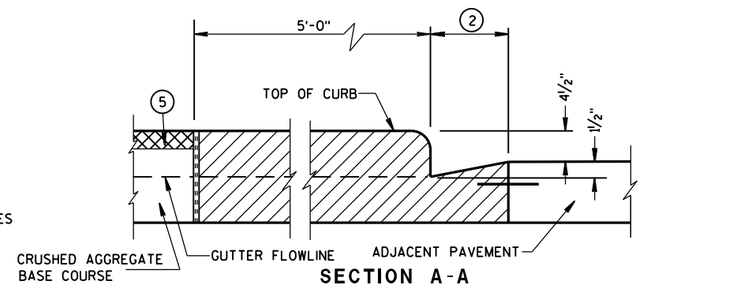
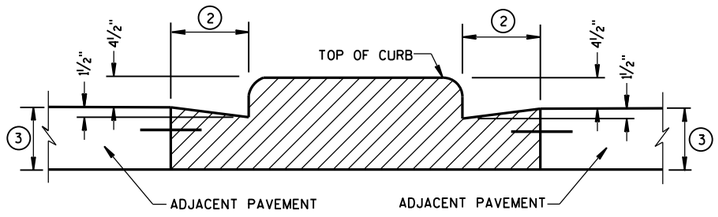






CONCRETE MEDIAN BLUNT NOSE DETAIL

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.

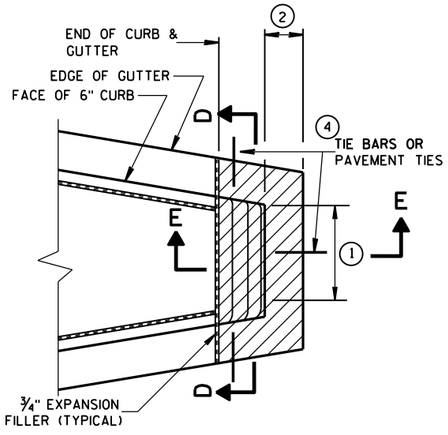
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

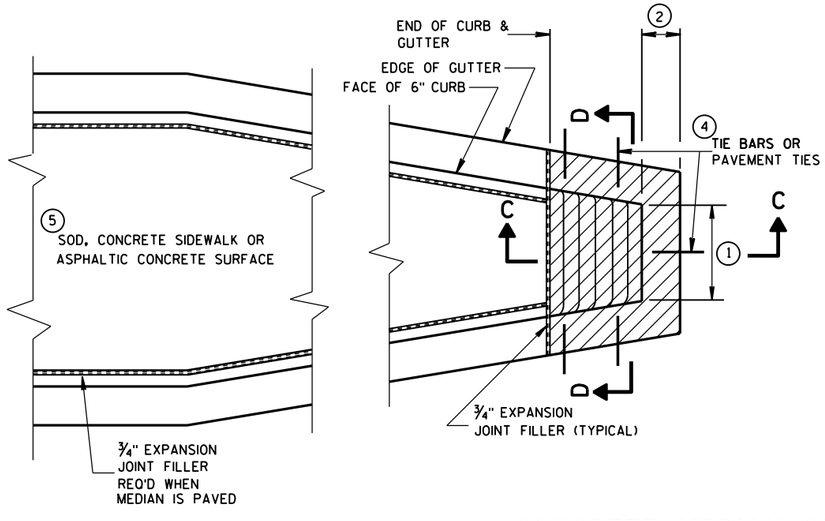
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

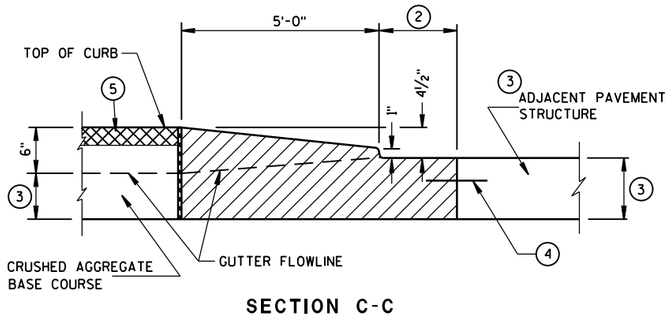
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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.

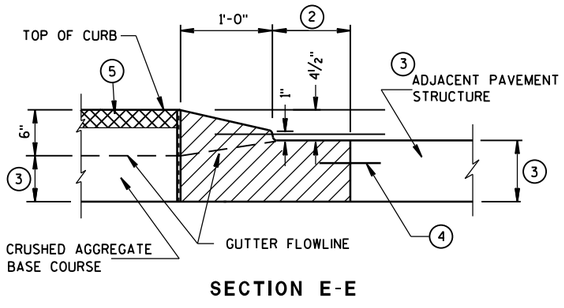
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



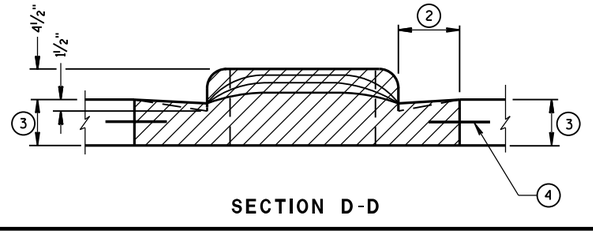




CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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S.D.D. 11 B 2-2

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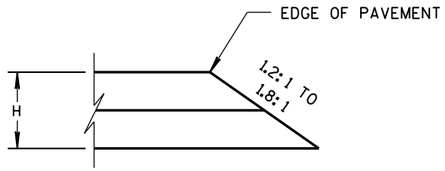
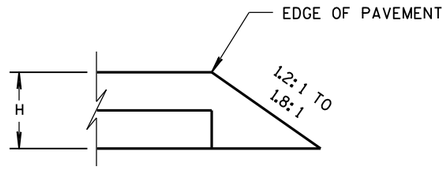
S.D.D. 11 B 2-2



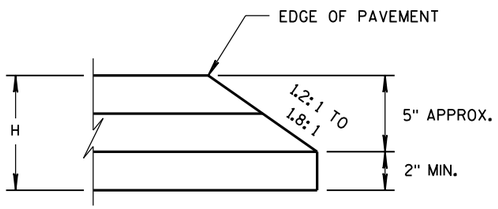
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



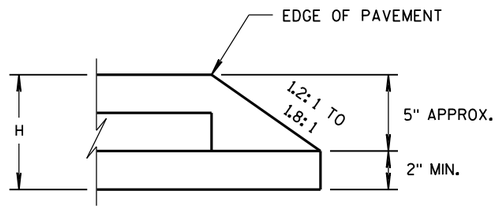
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

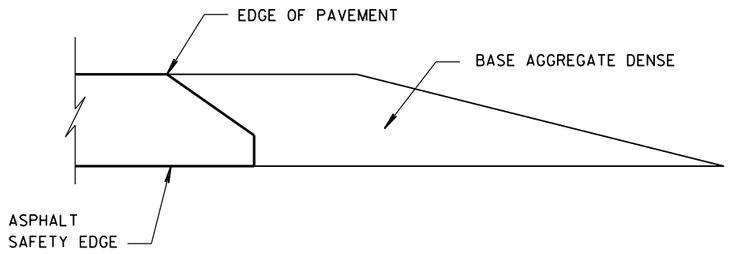
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

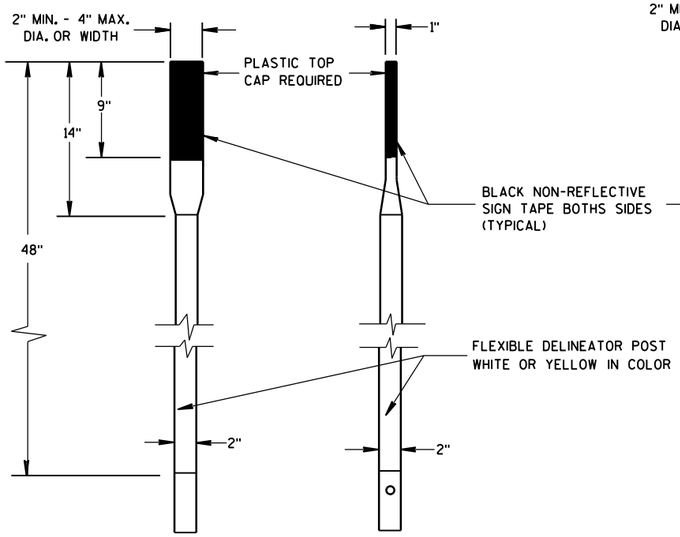
11/30/2012
DATE

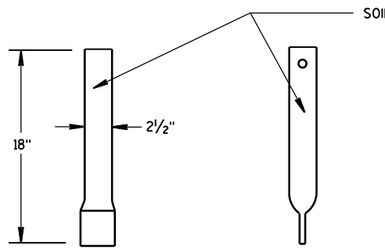
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 14 B 29-1

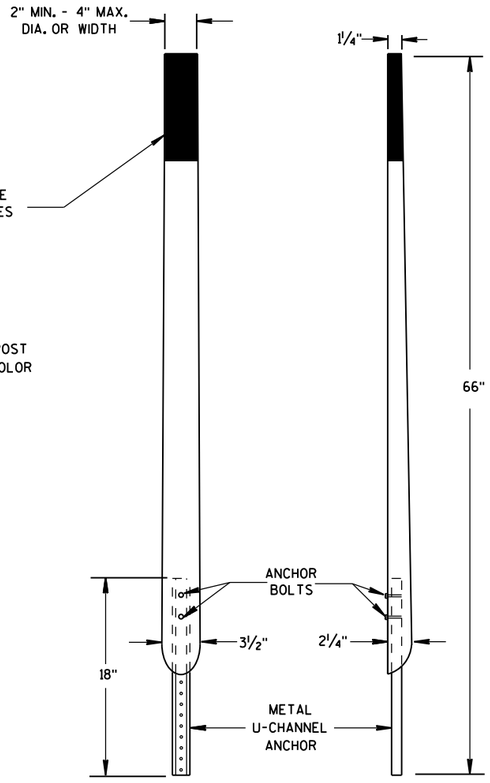
S.D.D. 14 B 29-1





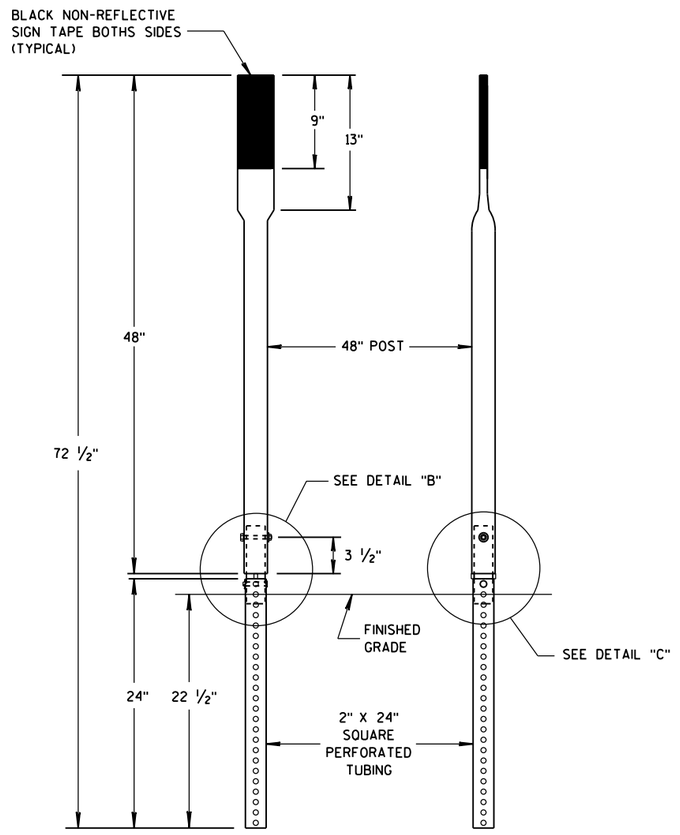
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

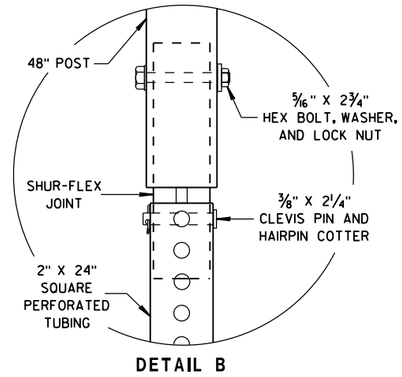
ALTERNATE 2



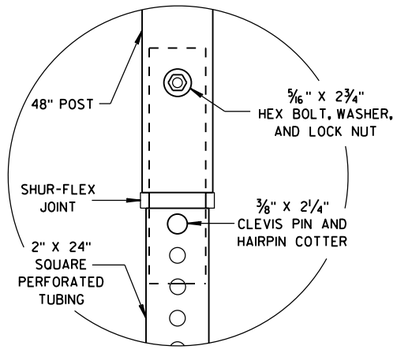
FRONT VIEW SIDE VIEW

ALTERNATE 3

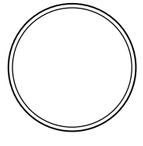
FLEXIBLE MARKER POSTS



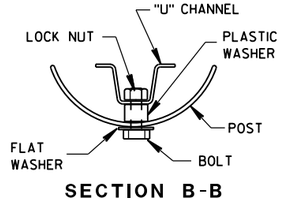
DETAIL B



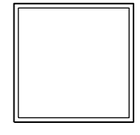
DETAIL C



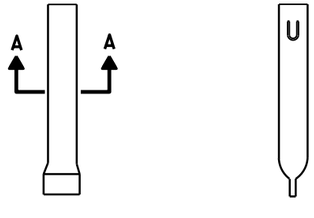
SECTION A-A



SECTION B-B

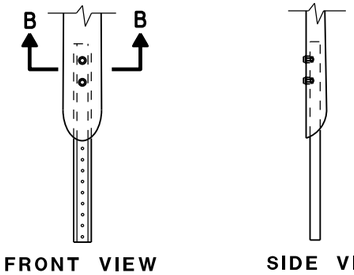


SECTION C-C



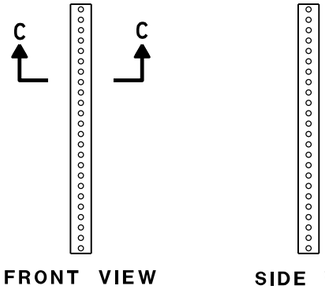
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 A 3-2b

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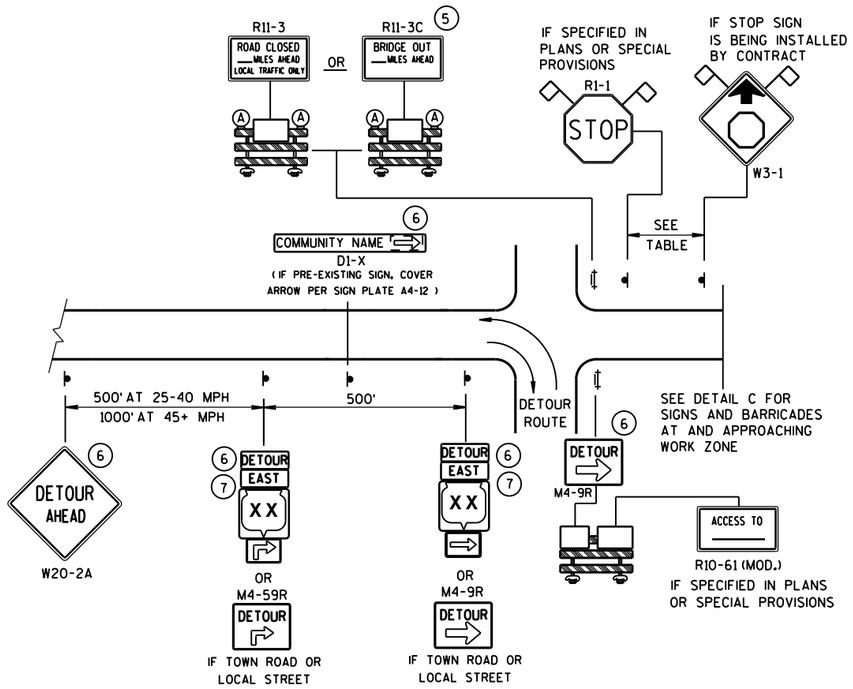
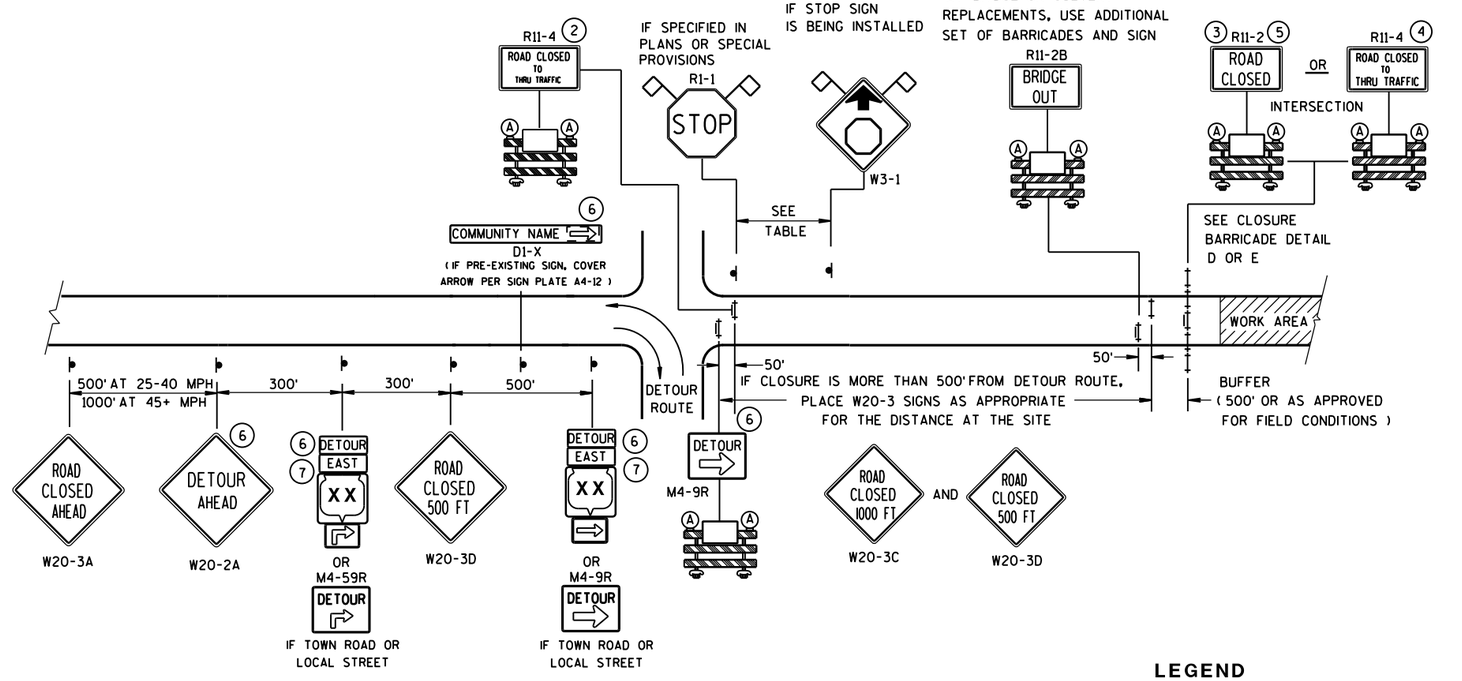
S.D.D. 15 A 3-2b



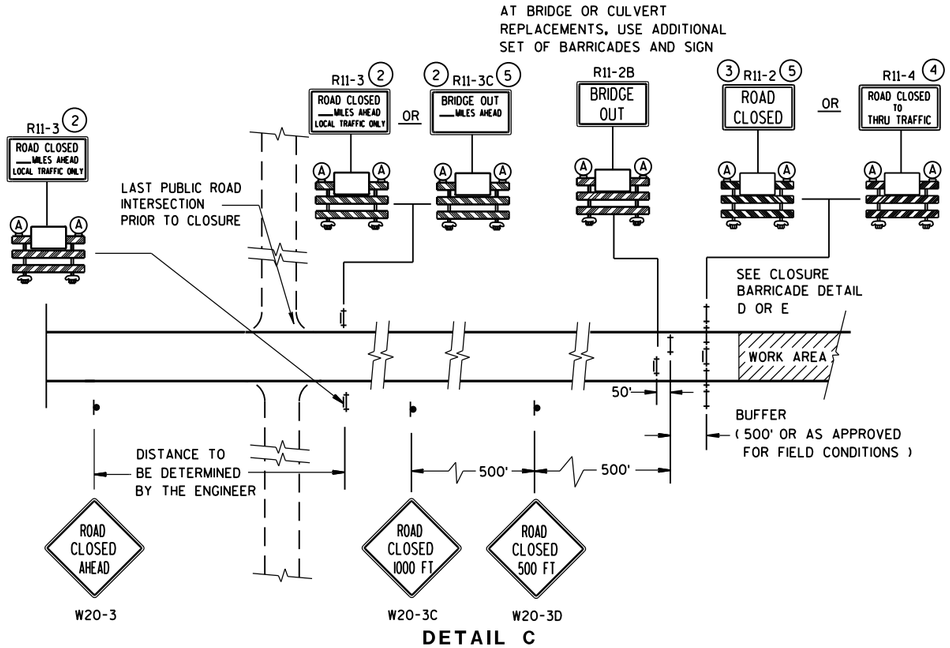
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



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-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

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

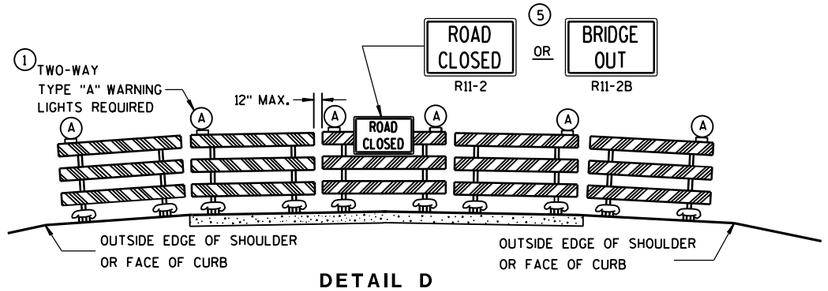
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

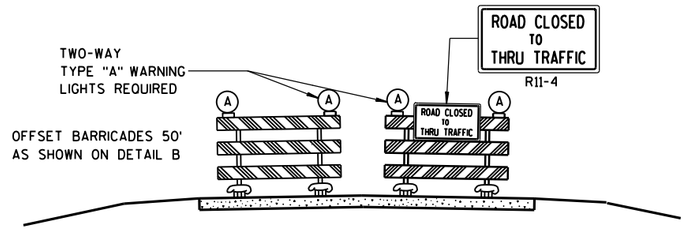
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (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

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

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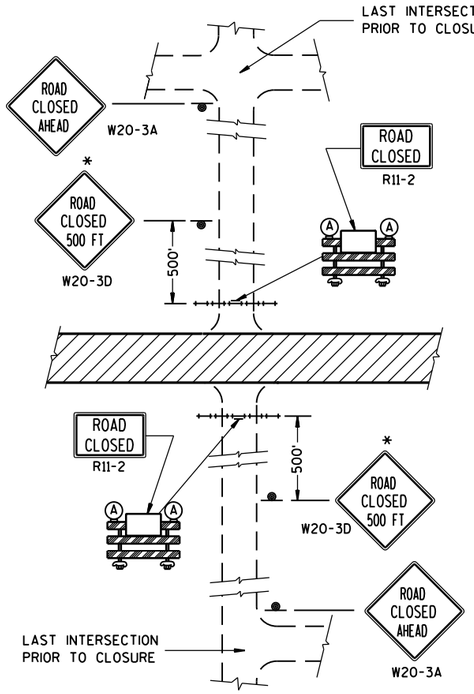
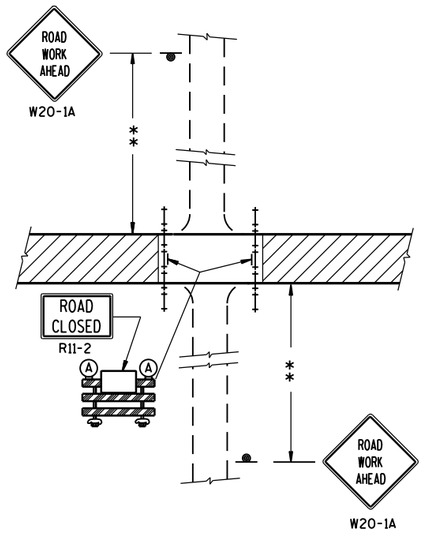
S.D.D. 15 C 2-6b



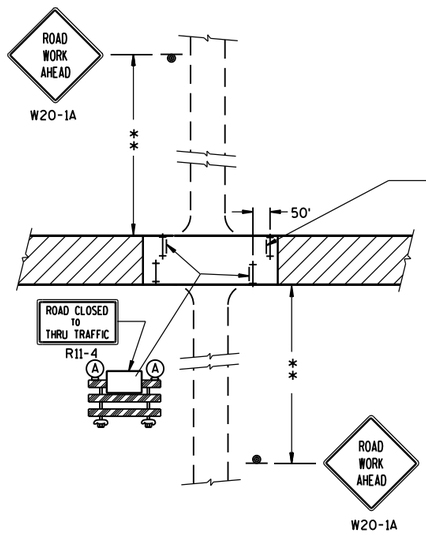
DETAIL 1

(NO ACCESS TO PROJECT)



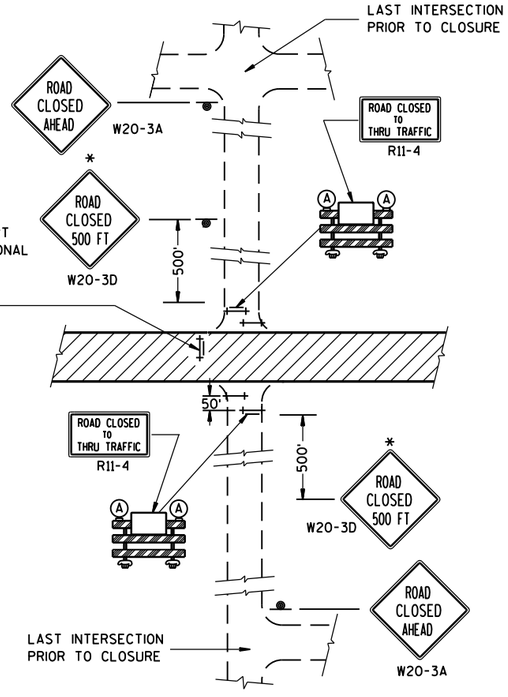
DETAIL 2

(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.

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

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

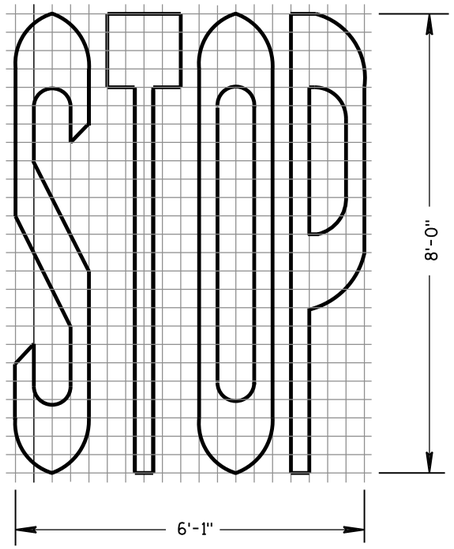
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

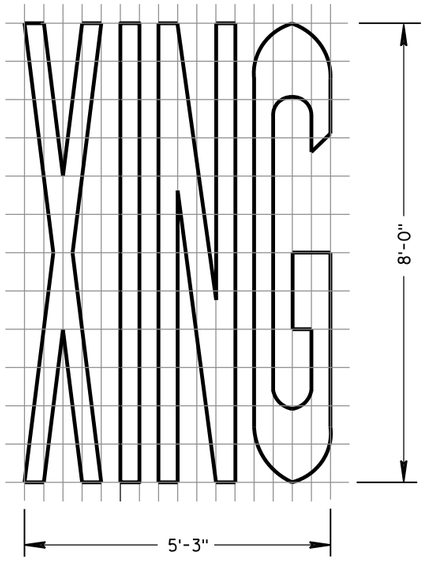
6

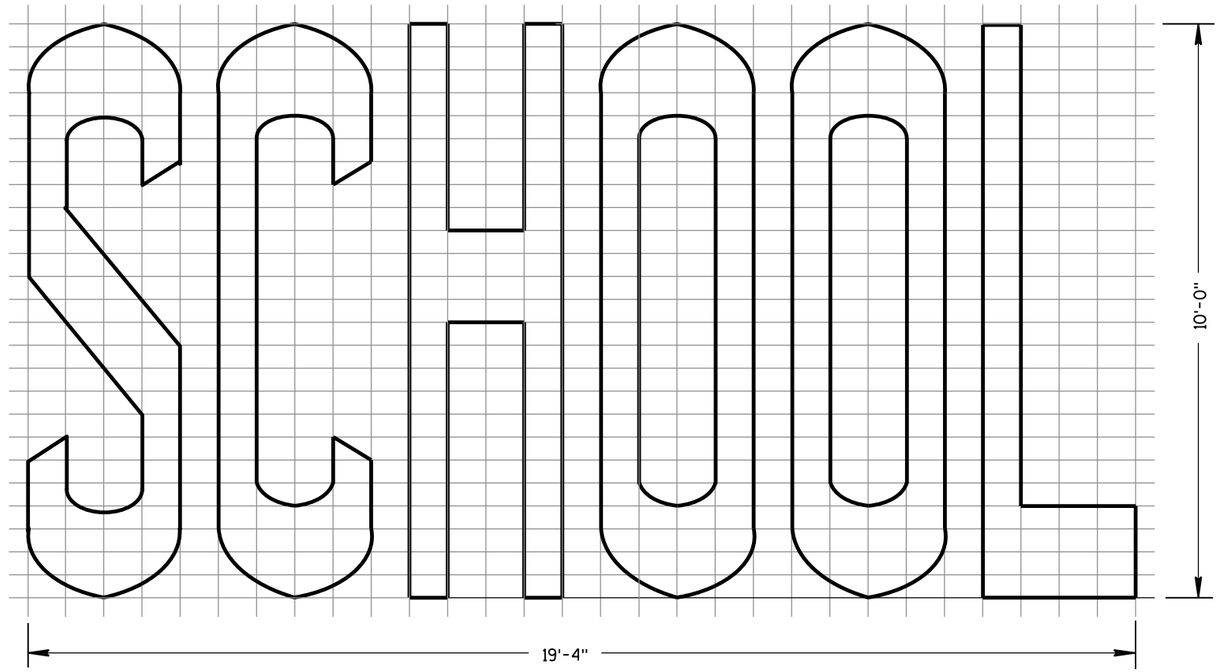
S.D.D. 15 C 3-3

GENERAL NOTES

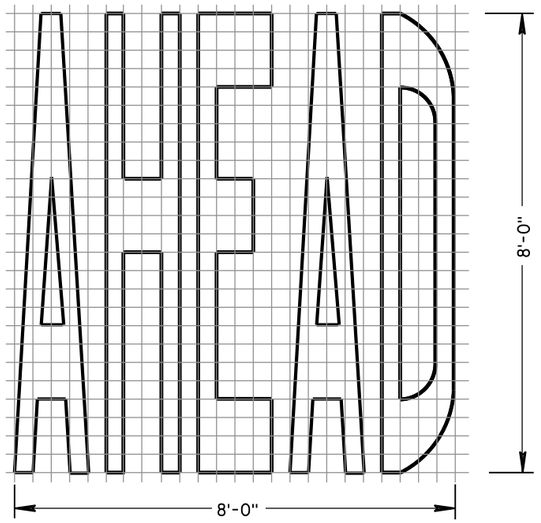
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

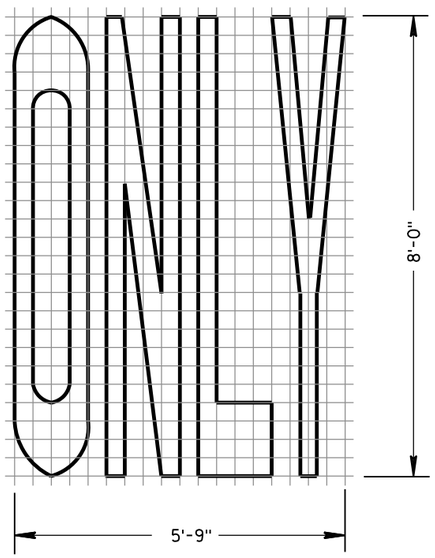


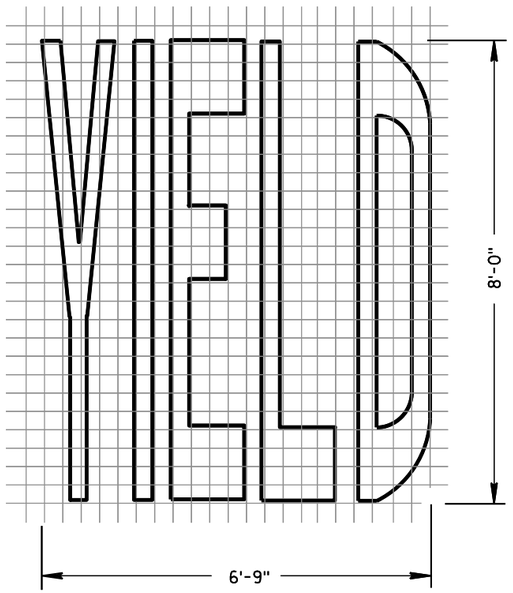


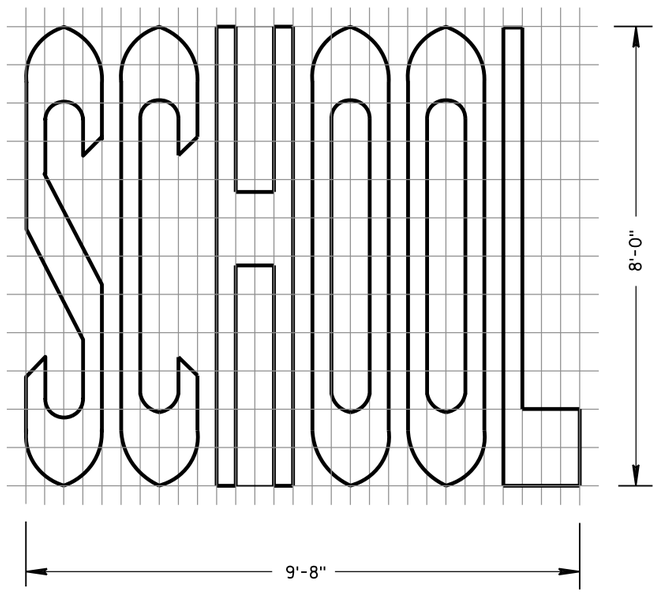


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

6

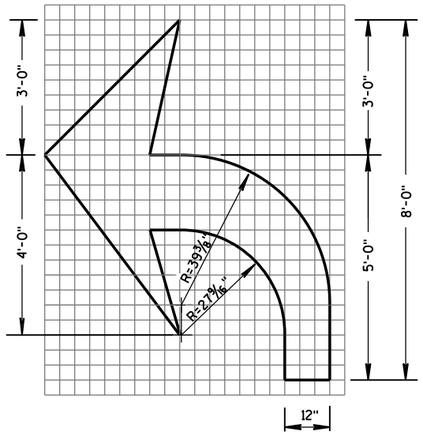
S.D.D. 15 C 7-13b

6

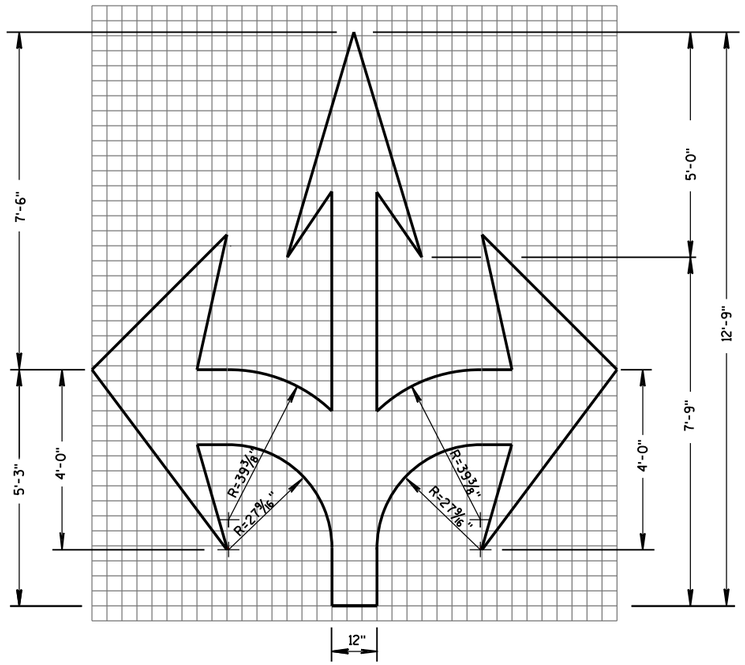
S.D.D. 15 C 7-13b

GENERAL NOTES

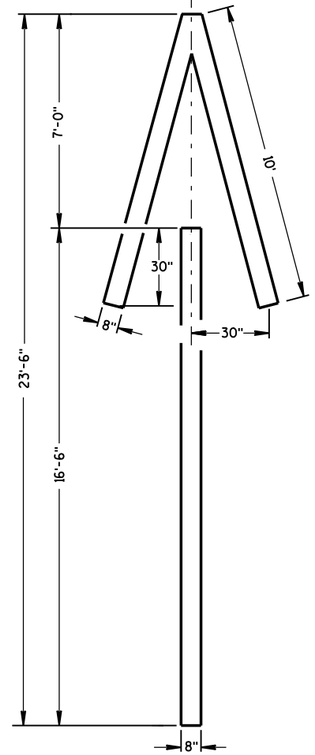
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



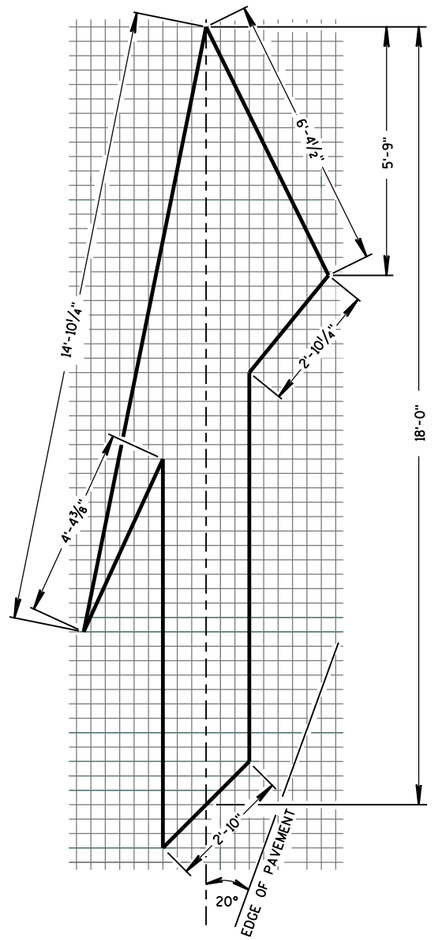
TYPE 2



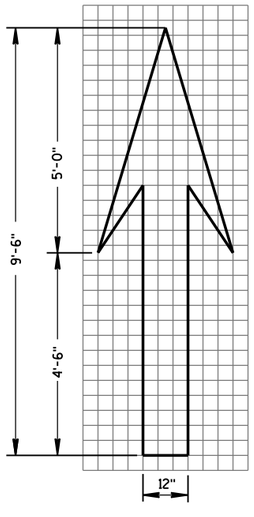
TYPE 6



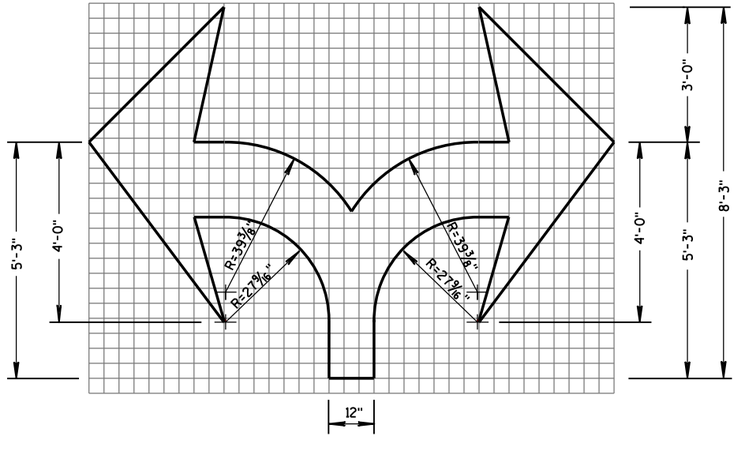
TYPE 4



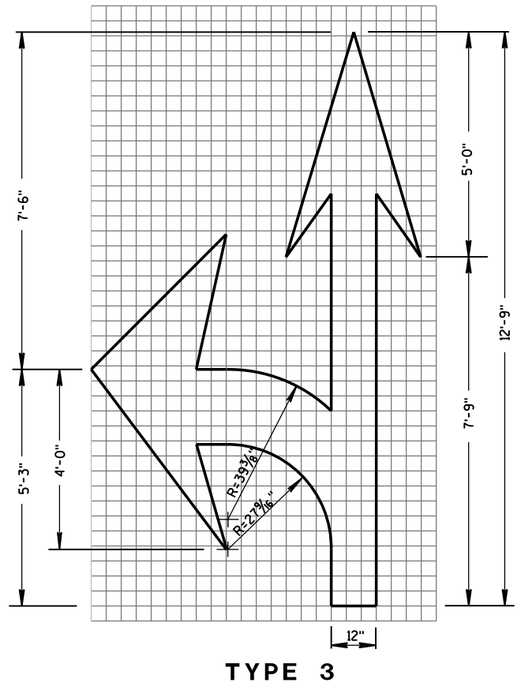
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR
ENGINEER
FHWA

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S.D.D. 15 C 7-13c

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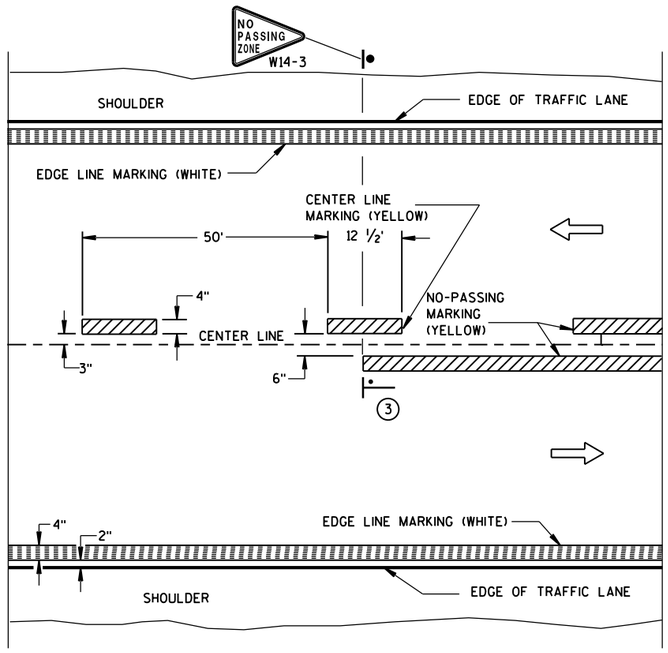
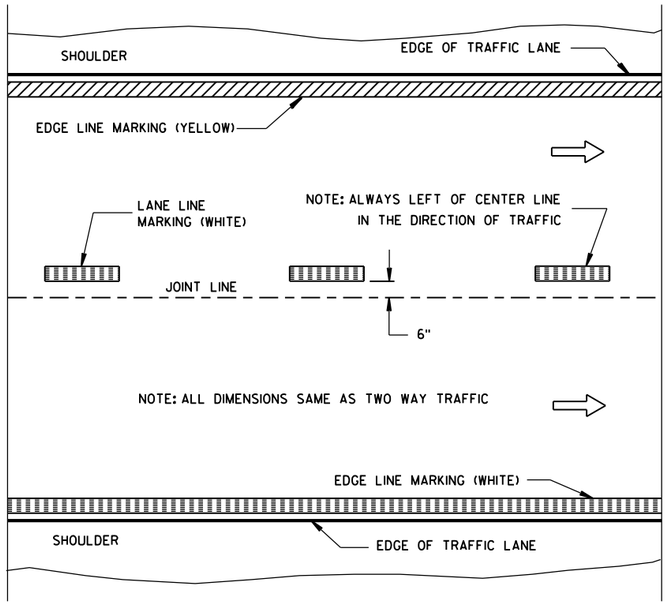
S.D.D. 15 C 7-13c

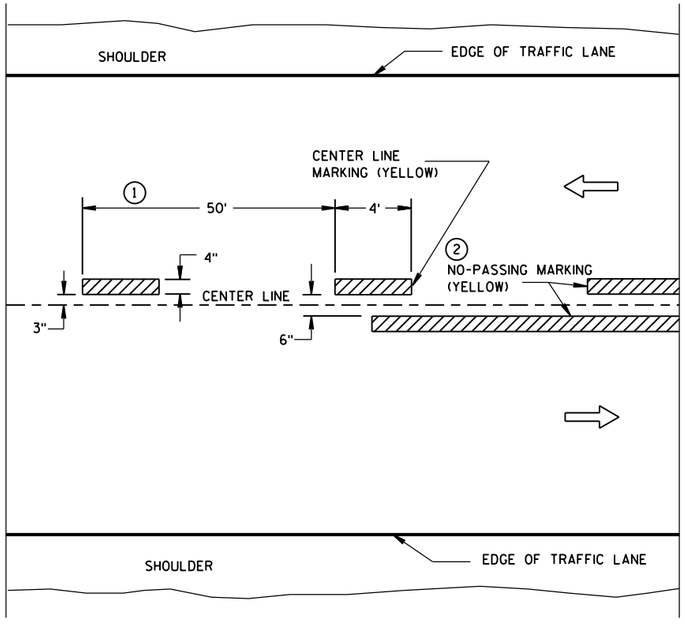


TWO WAY TRAFFIC

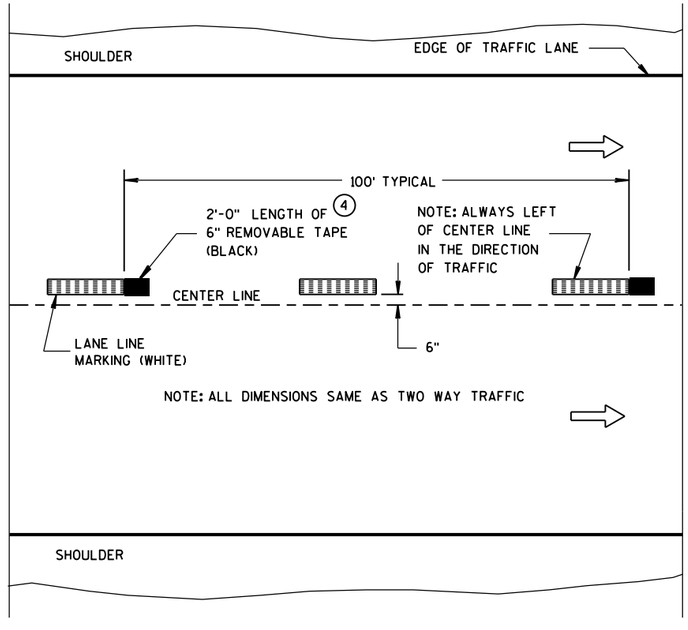


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

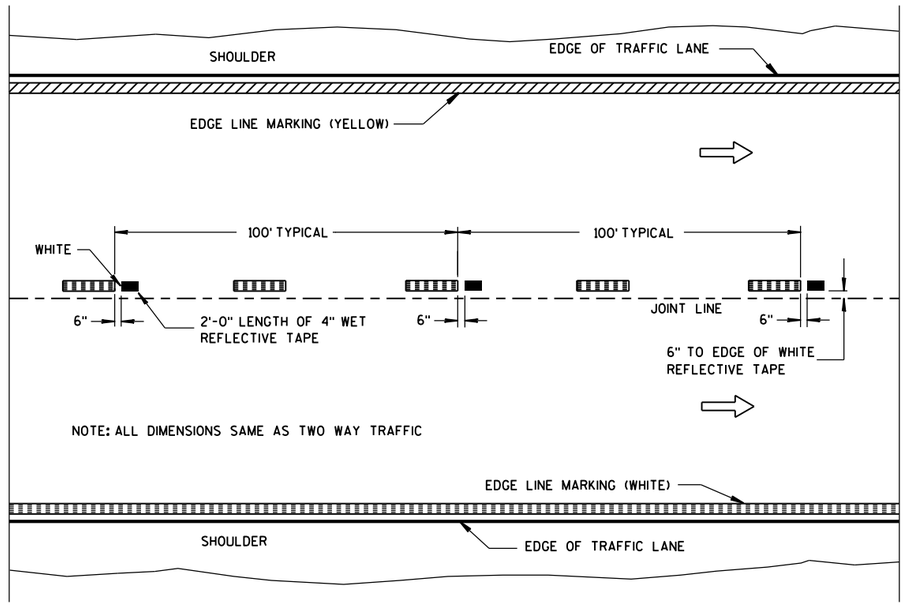
GENERAL NOTES

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.
4. CONCRETE ONLY.

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

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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S.D.D. 15 C 8-16a

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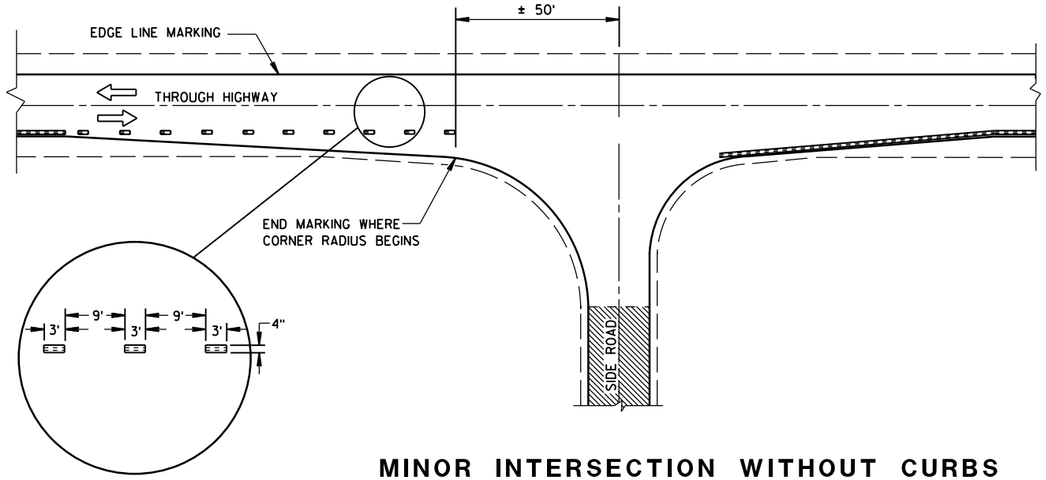
S.D.D. 15 C 8-16a



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.

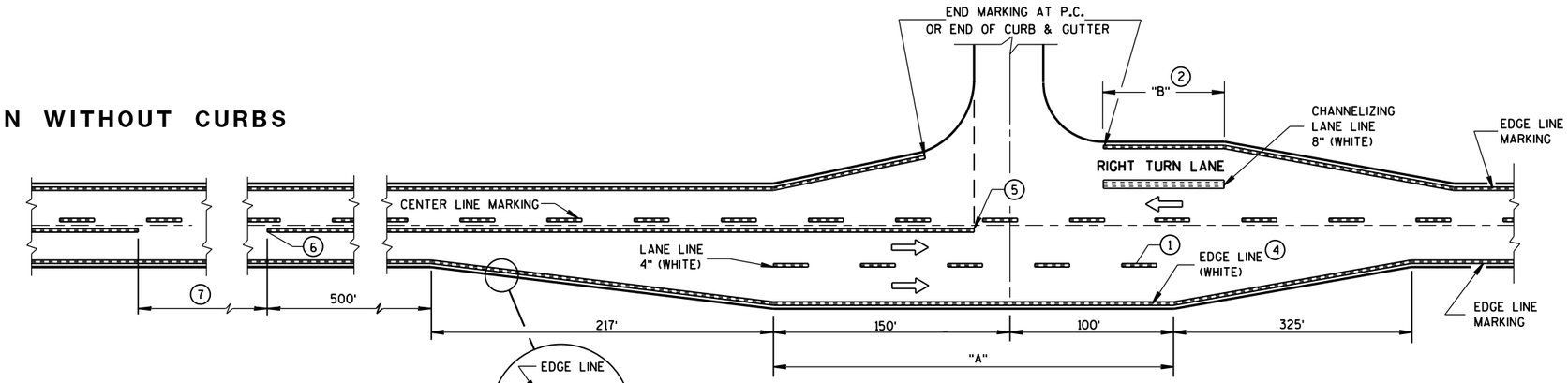
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

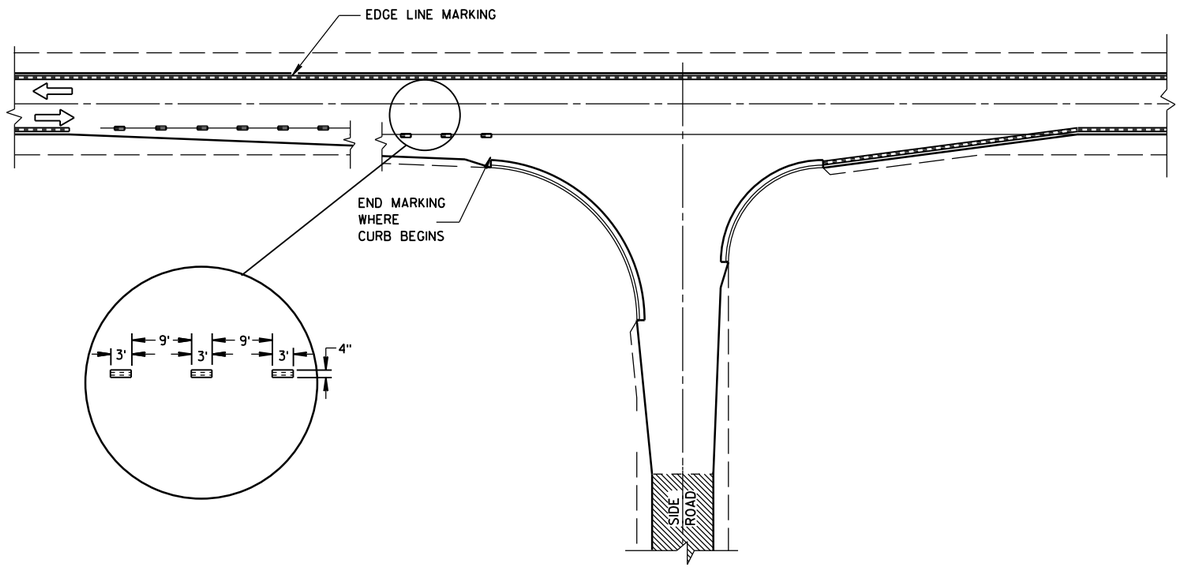
(7)

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



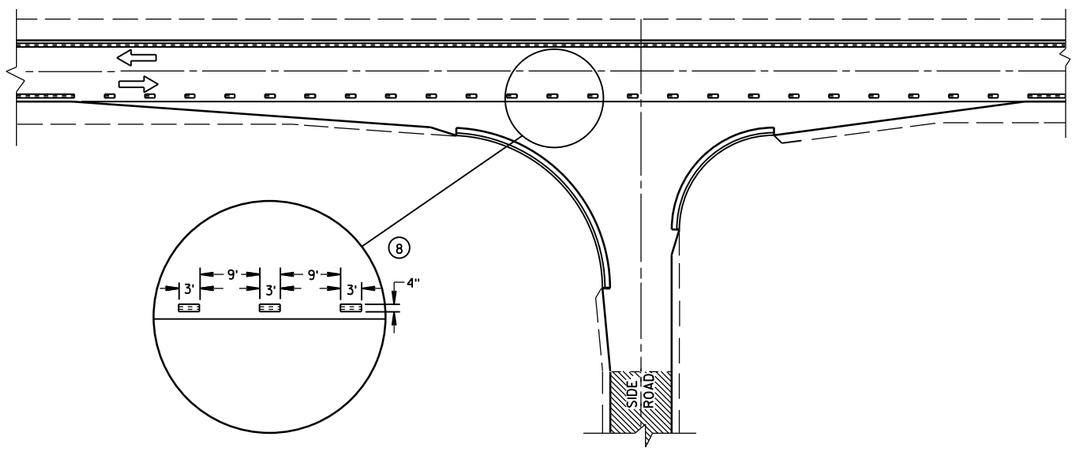
MAJOR INTERSECTIONS

(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 TRANSPOR

6

S.D.D. 15 C 8-16b

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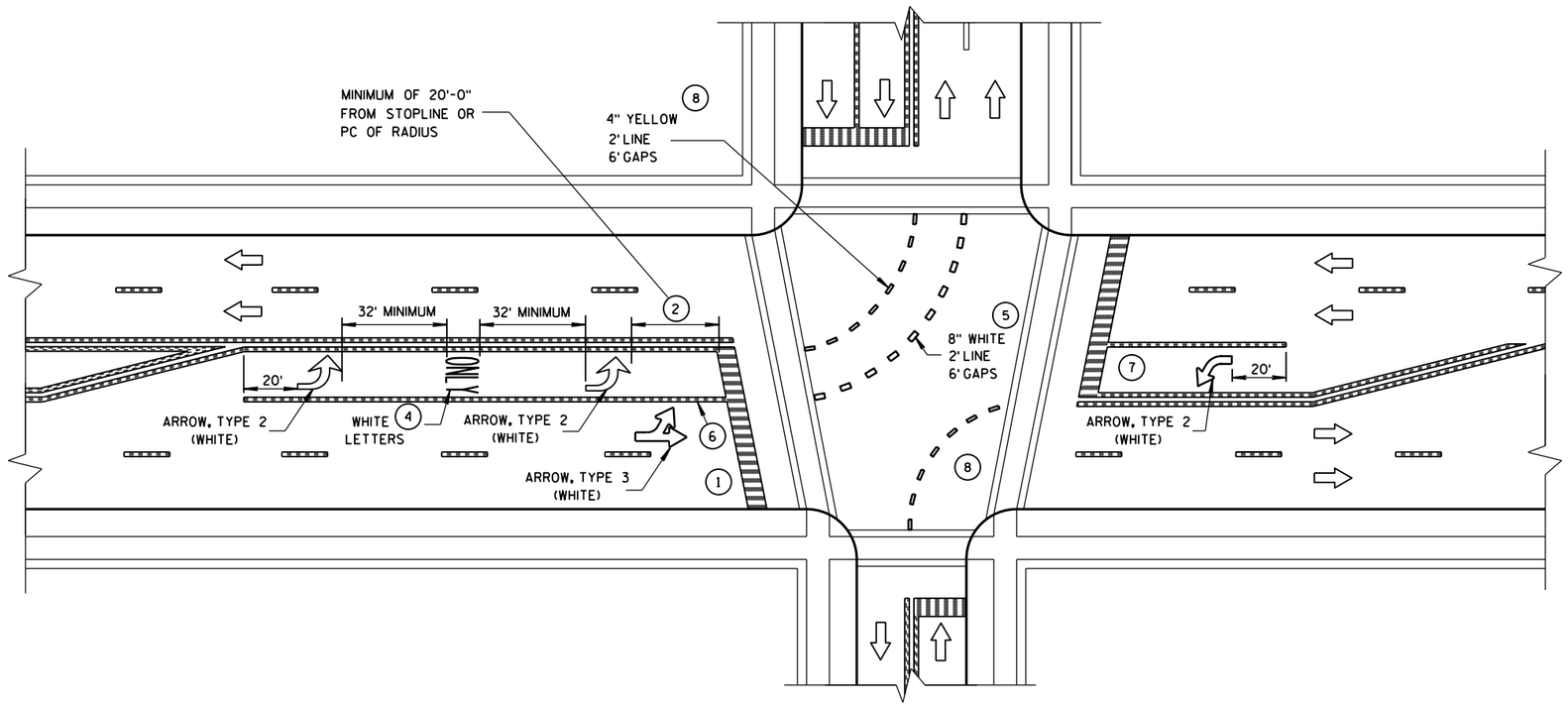
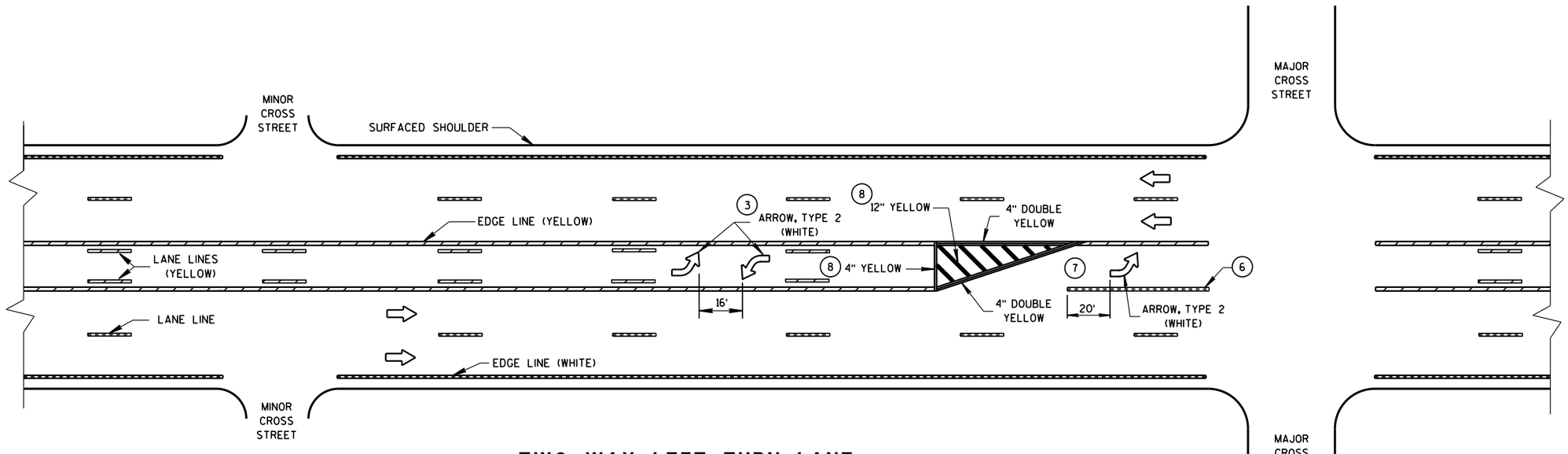
S.D.D. 15 C 8-16b



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 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET 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 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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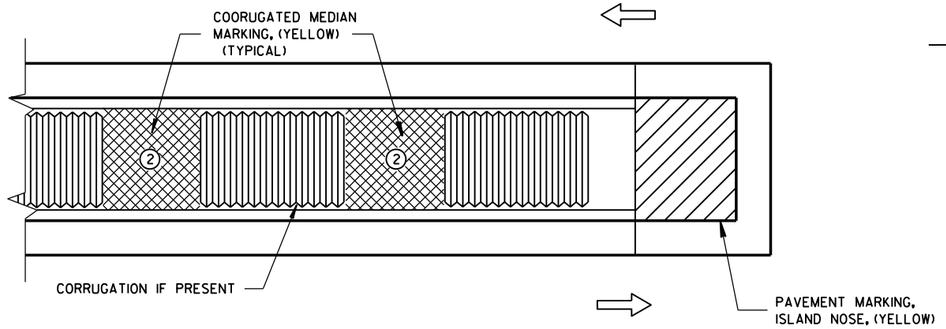
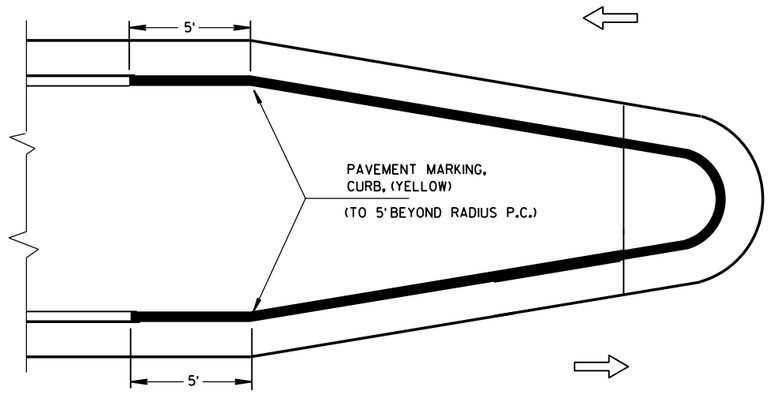
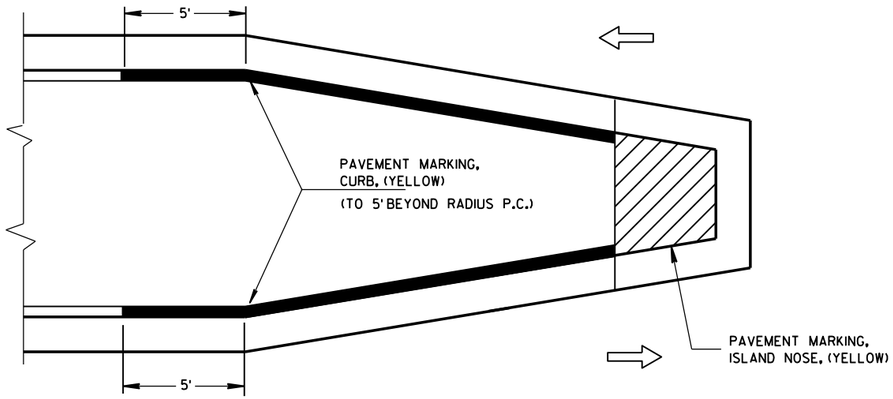


MEDIAN ISLAND WITH SQUARE BLUNT NOSE

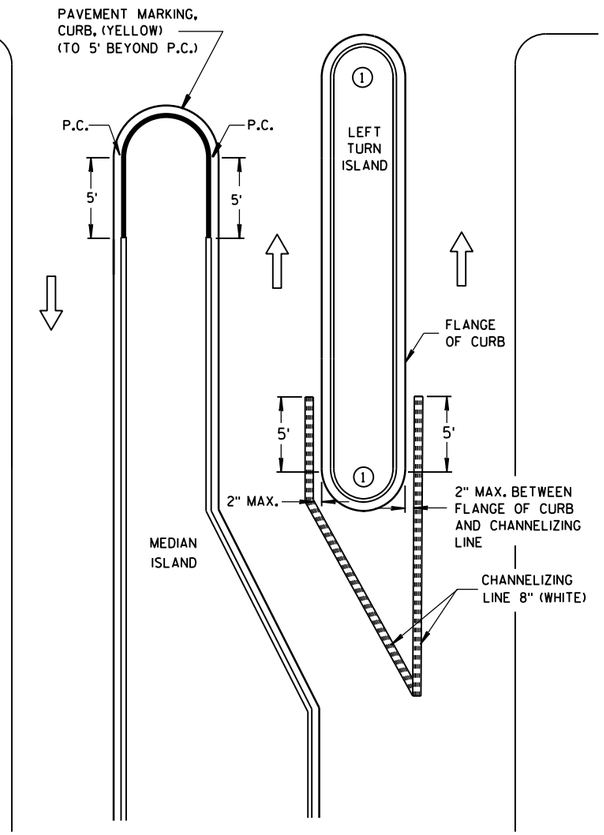


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

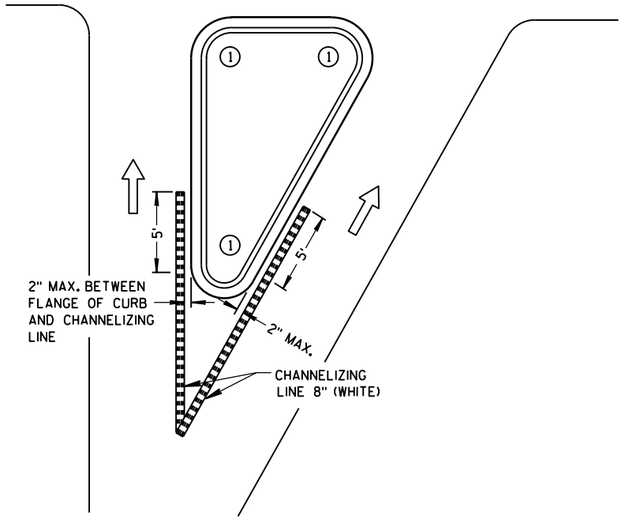


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. 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

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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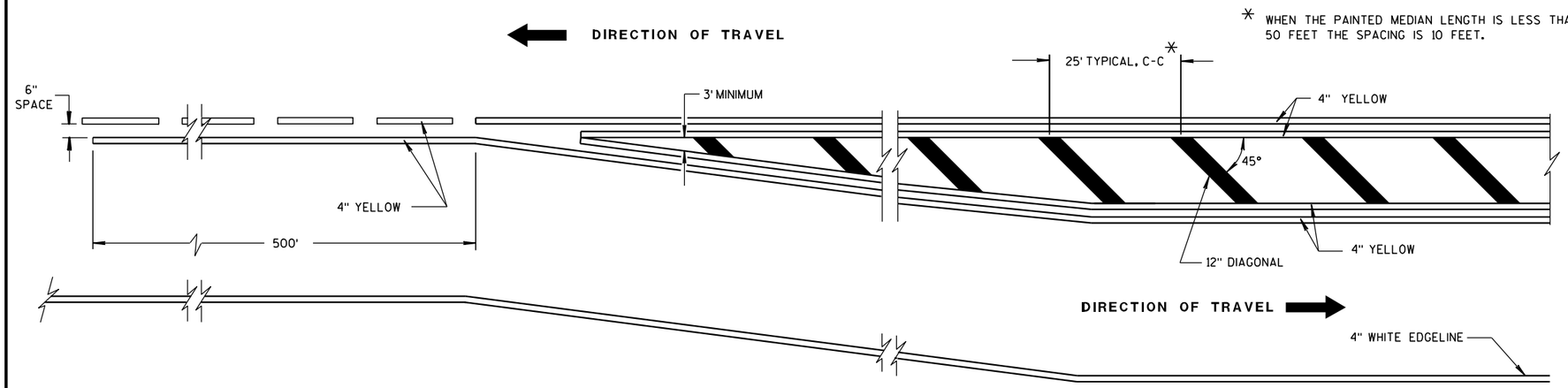
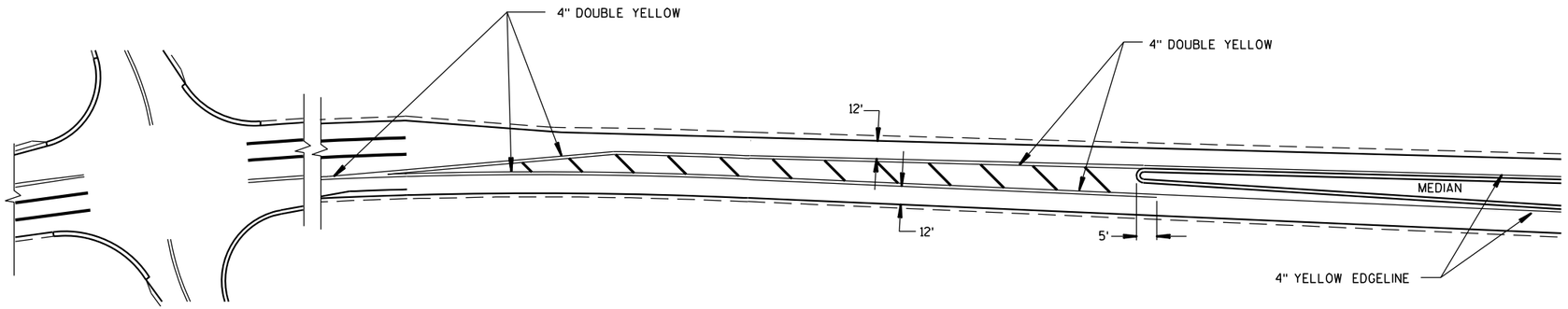


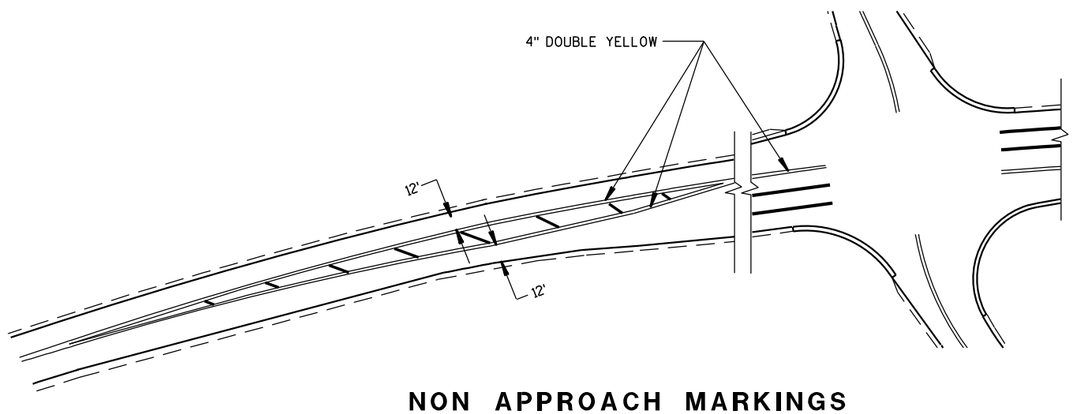
MEDIAN ISLAND DETAIL

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. Nothohm STATE TRAFFIC ENGINEER
FHWA	

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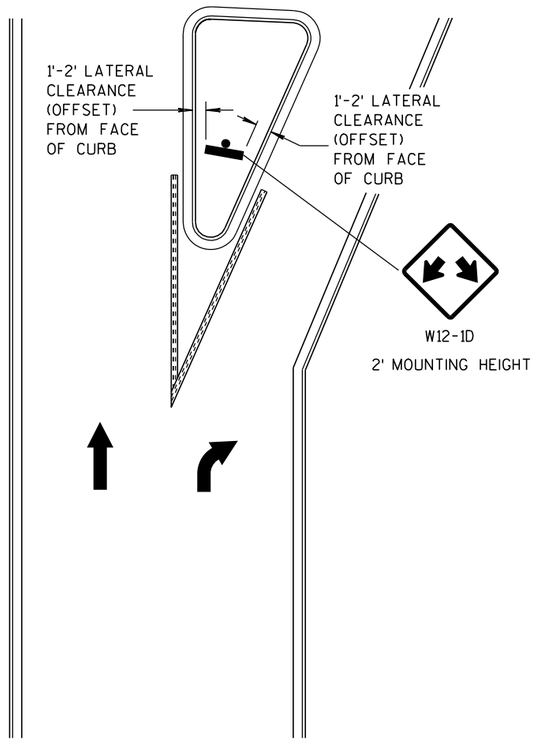
S.D.D. 15 C 18-3

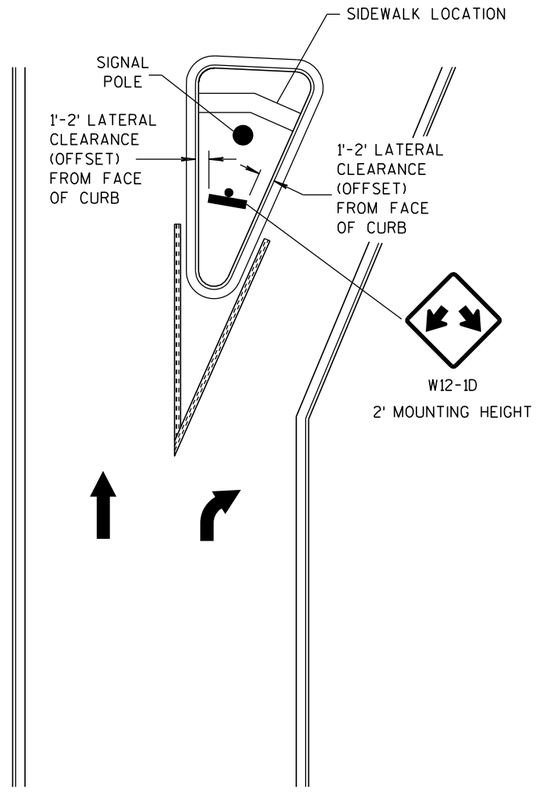
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

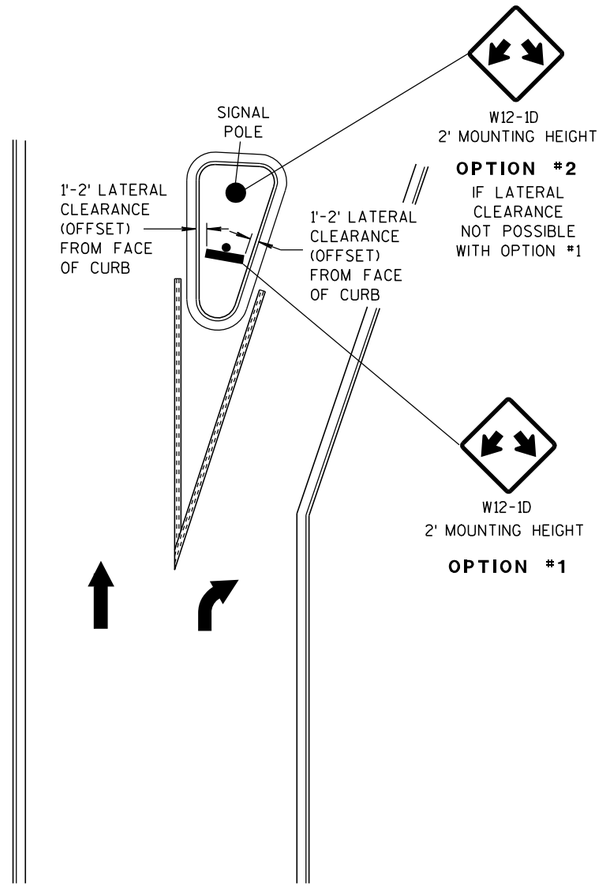
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



LARGE RIGHT TURN ISLAND



LARGE RIGHT TURN ISLAND
WITH SIGNAL POLE



SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10-22-08 DATE	/S/ Thomas N. Nothem STATE TRAFFIC ENGINEER
FHWA	IGN

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S.D.D. 15 C 27-1

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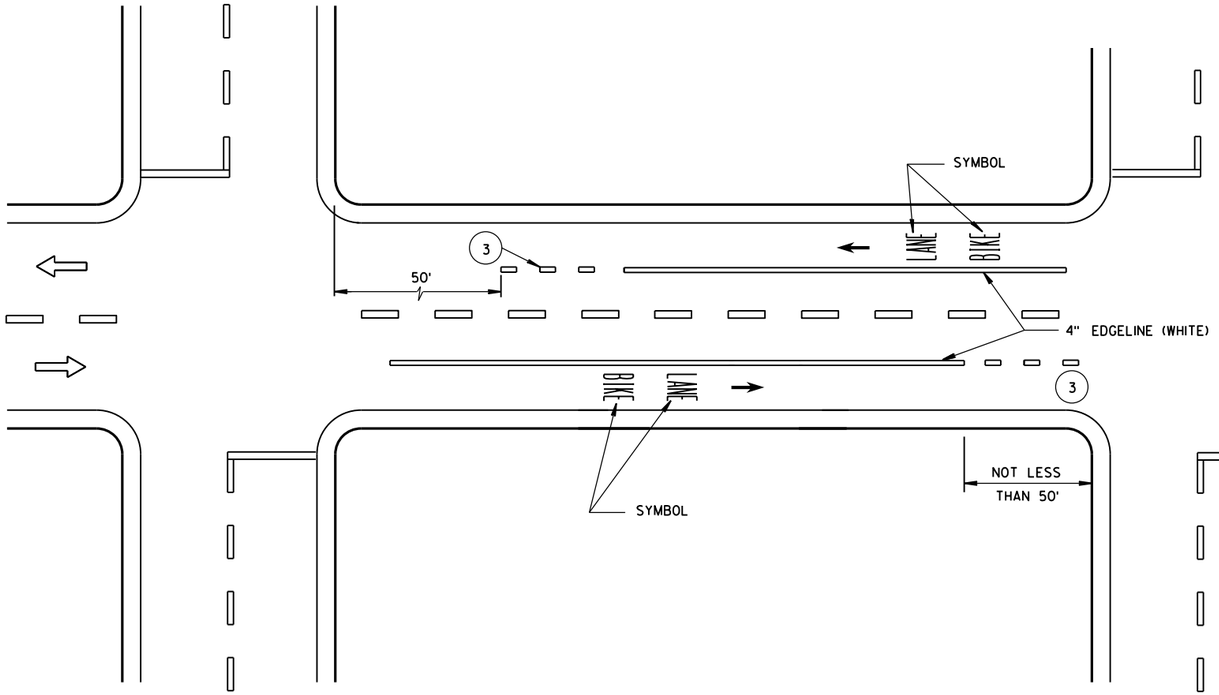
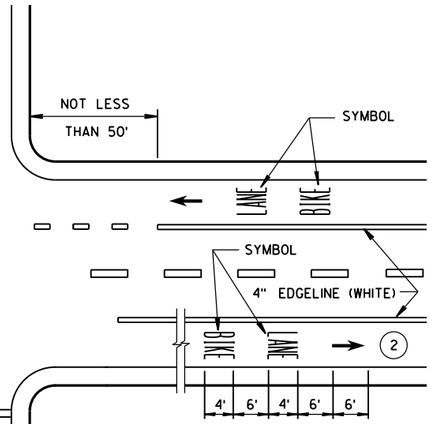
S.D.D. 15 C 27-1



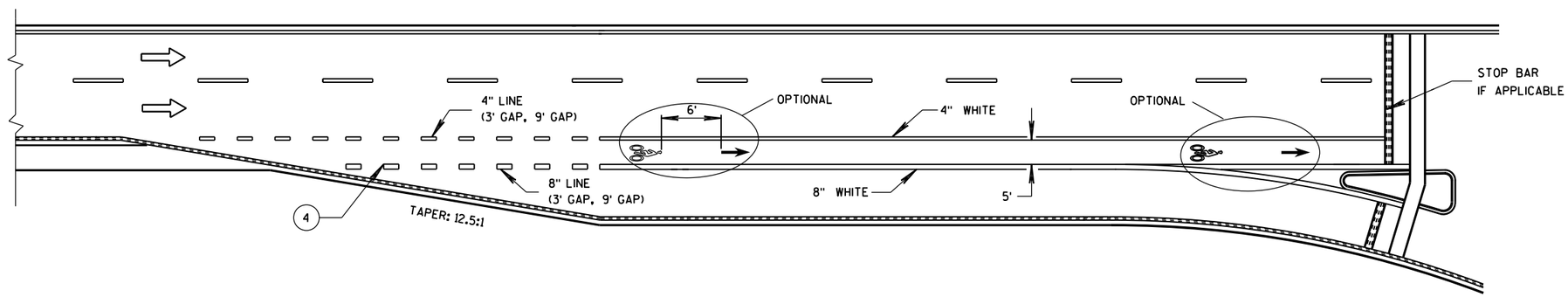


DESIGNATED BICYCLE LANE
NO PARKING

GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3'LINE, 9'GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.

DIRECTION OF TRAVEL



BIKE LANE - 4-LANE DIVIDED WITH RIGHT TURN LANE

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-2016 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAF NEER
FHWA

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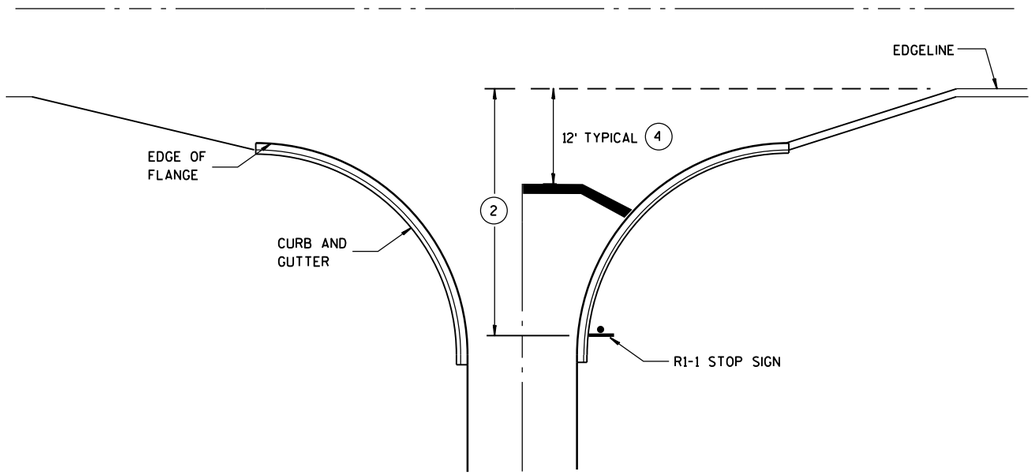
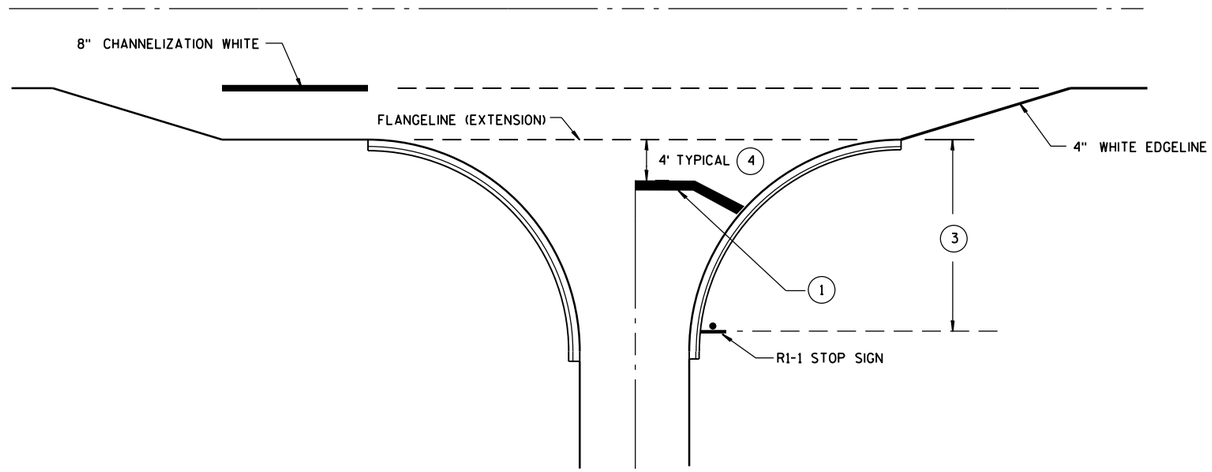
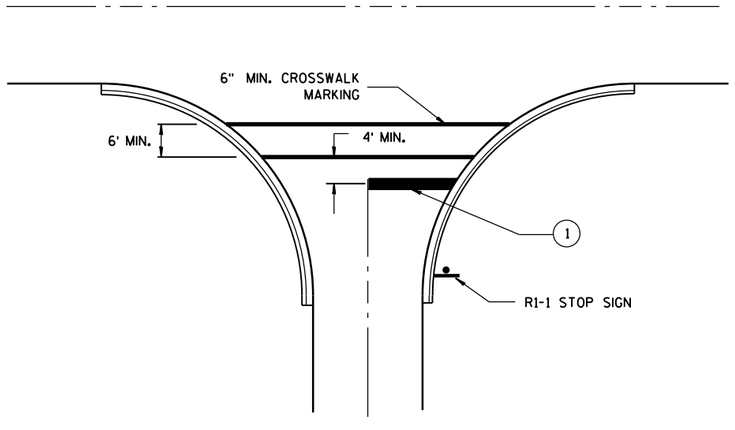


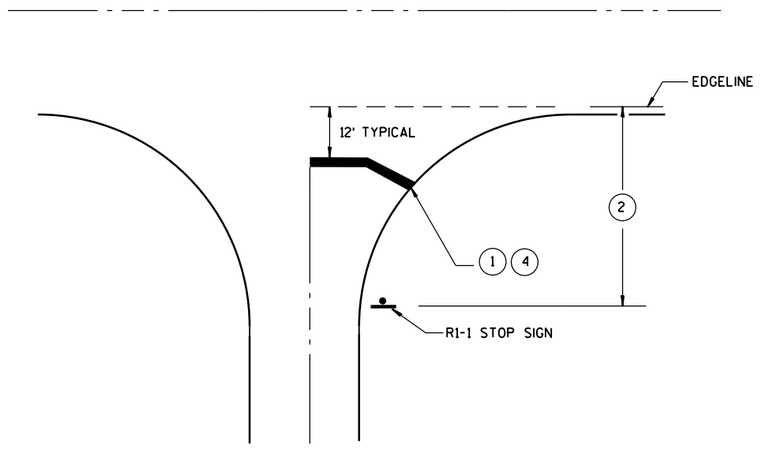
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR

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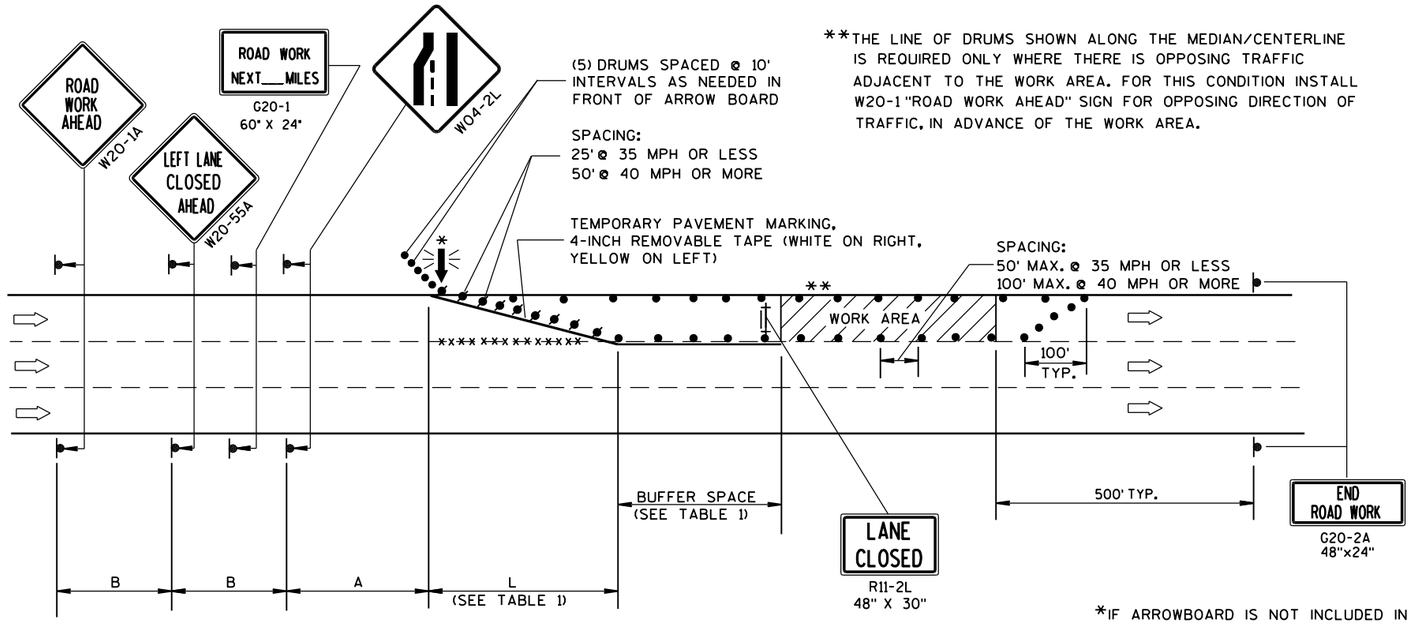

**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

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.

W01-6
48"x24"

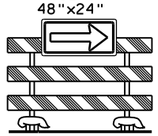

TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

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 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

W20-1A, 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
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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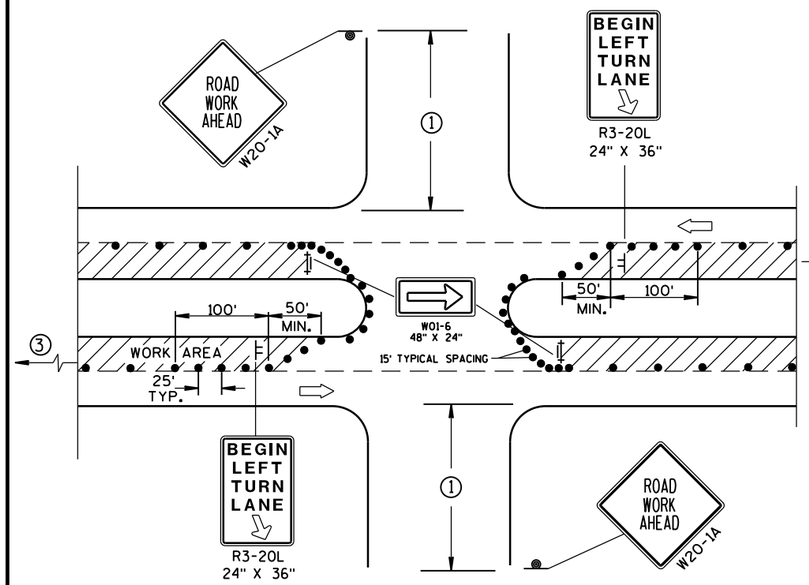
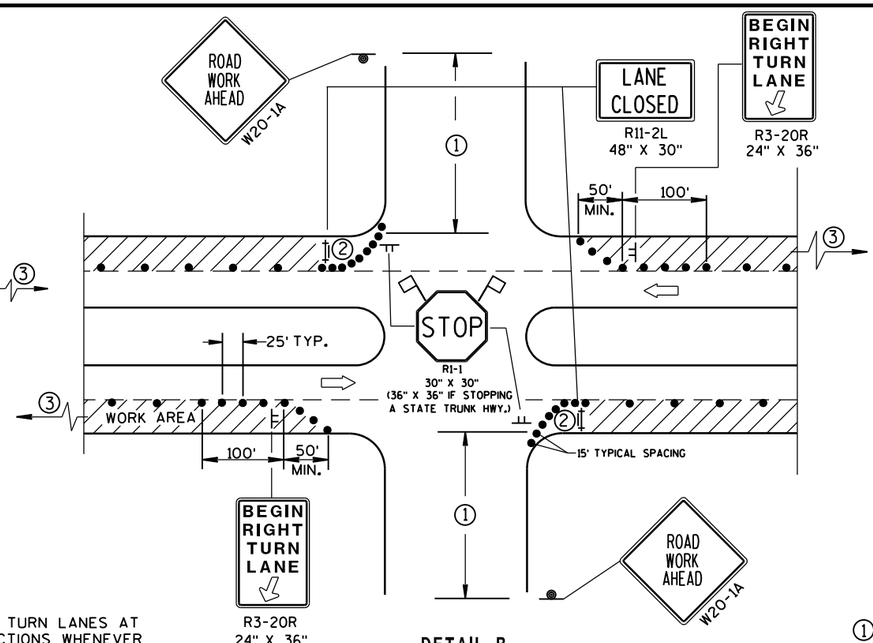


DETAIL A

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"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.

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.

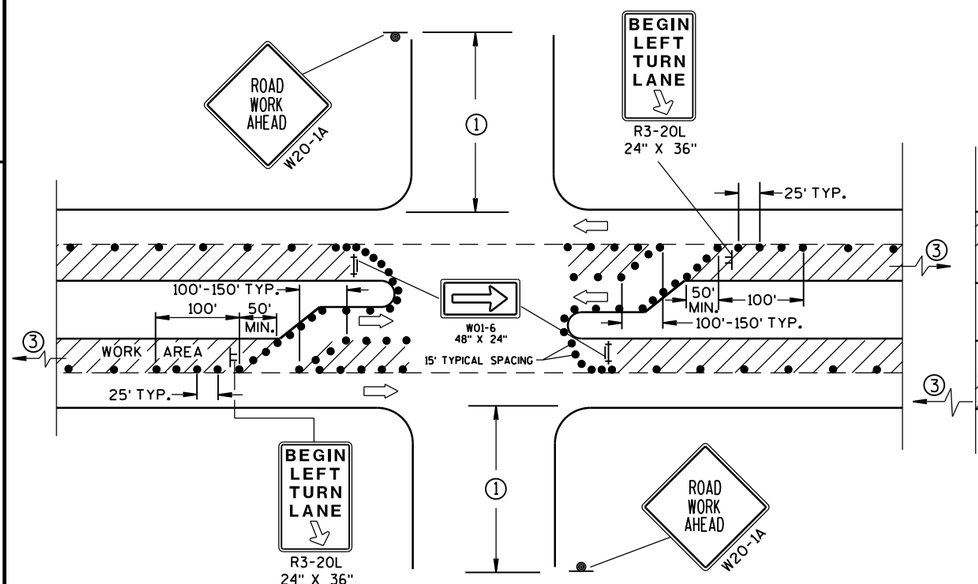
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

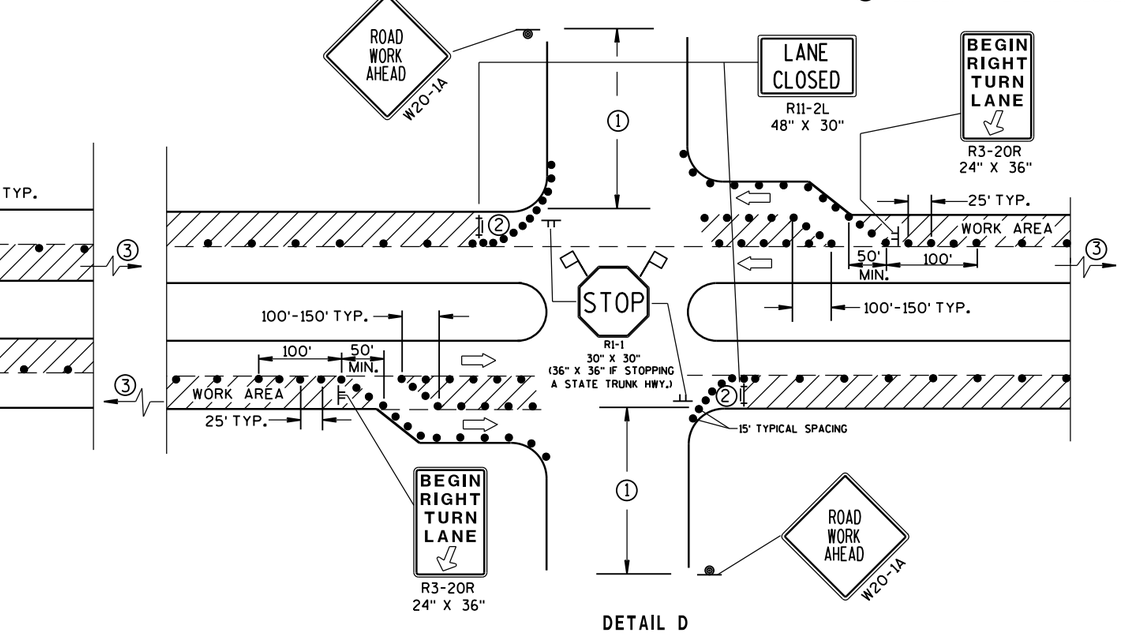
(2) ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

(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

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Anakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

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S.D.D. 15 D 21-4
S.D.D. 15 D 21-4

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

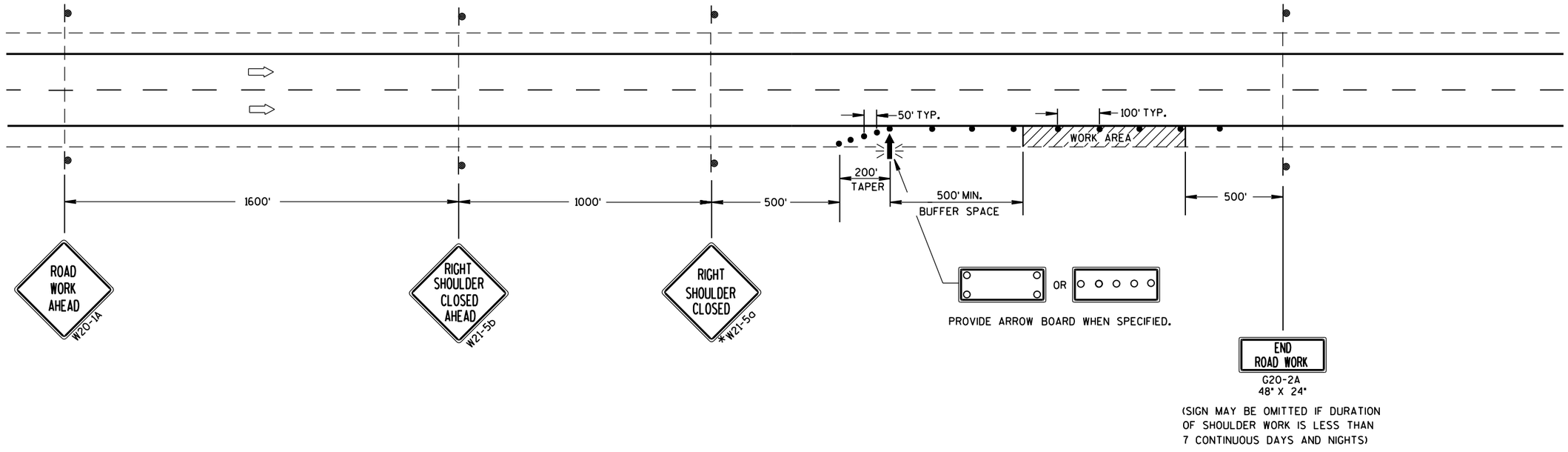
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

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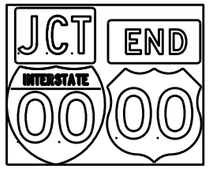
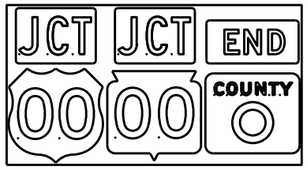
TYPICAL ASSEMBLIES

J1-1

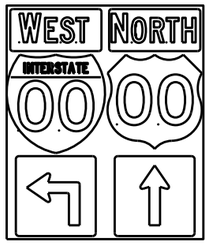


J1-2

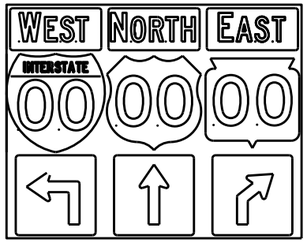


J1-3

J2-1



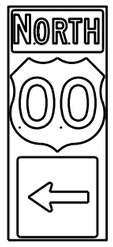
J2-2



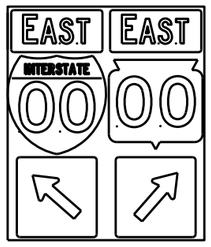
J2-3

JV

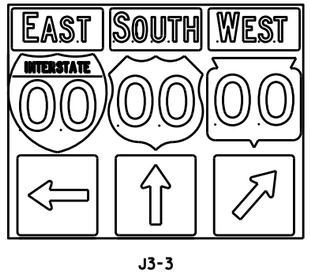
(Typical Vertical J-Assembly
See Note 10 and 11)



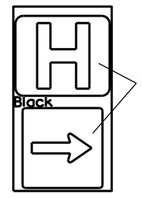
J3-1



J3-2



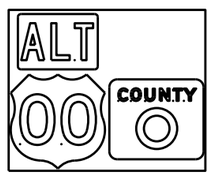
J3-3



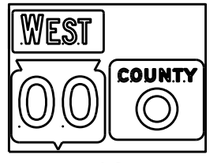
Blue Background

JH-1

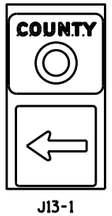
J4-1



J4-2



J4-2



J13-1

J12-1

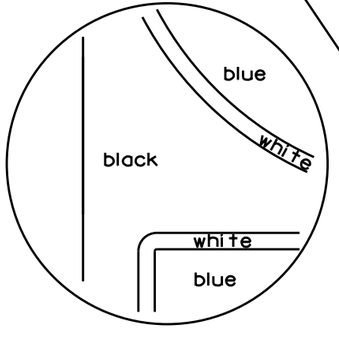
J32-1

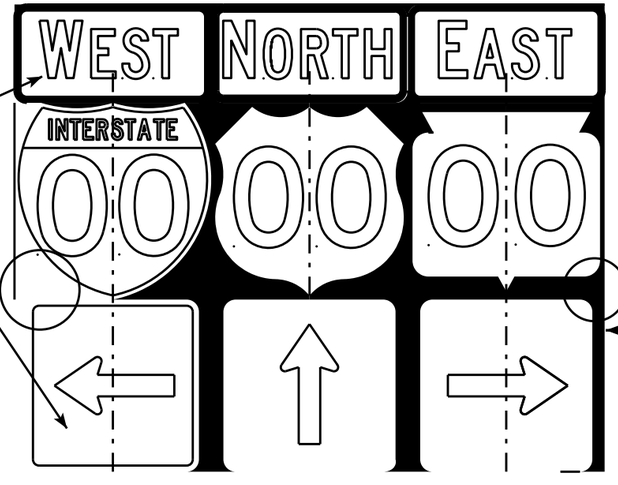
J33-1

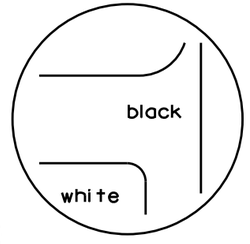
J23-1

J22-1

[blue background with interstate]







[black background]

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 or rounded if base material is plywood. If base material is metal the corners shall be rounded.
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.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

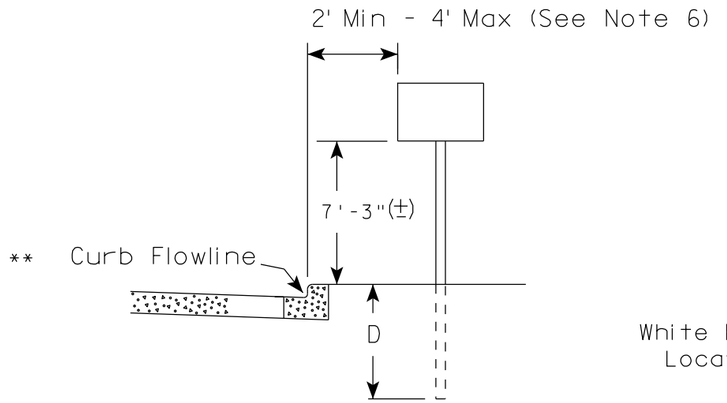
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

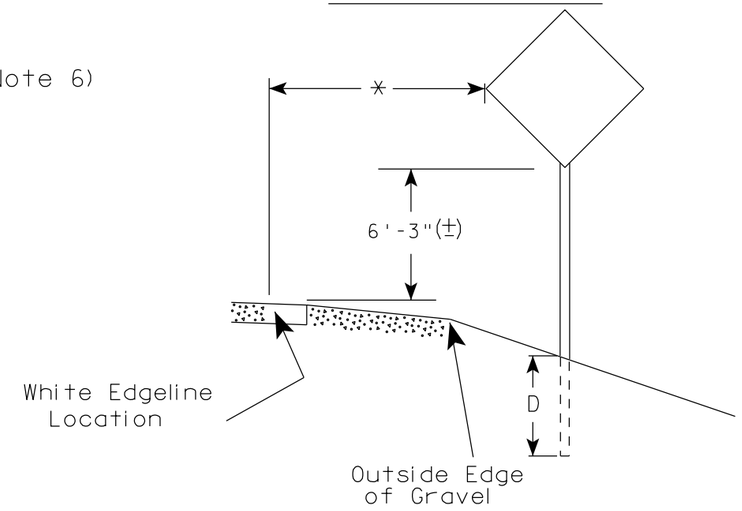
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

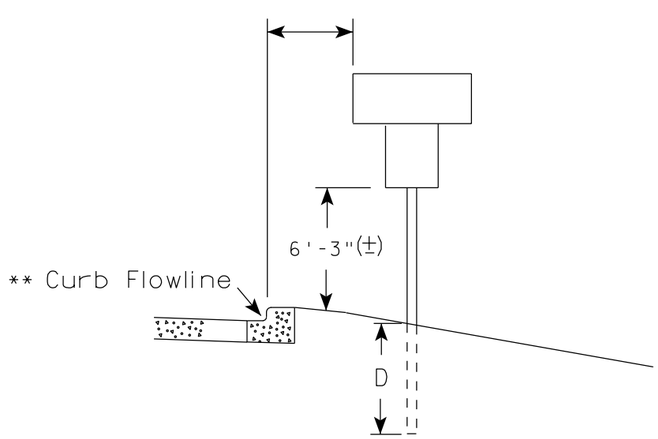
WISDOT/CADDS SHEET 42

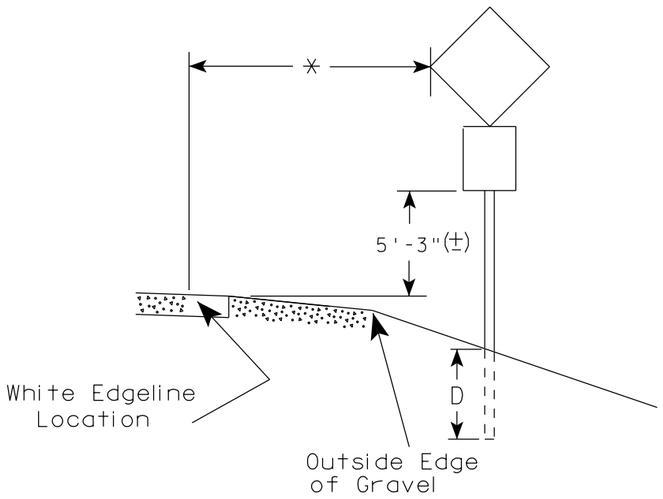
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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 (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directd 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 (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

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

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

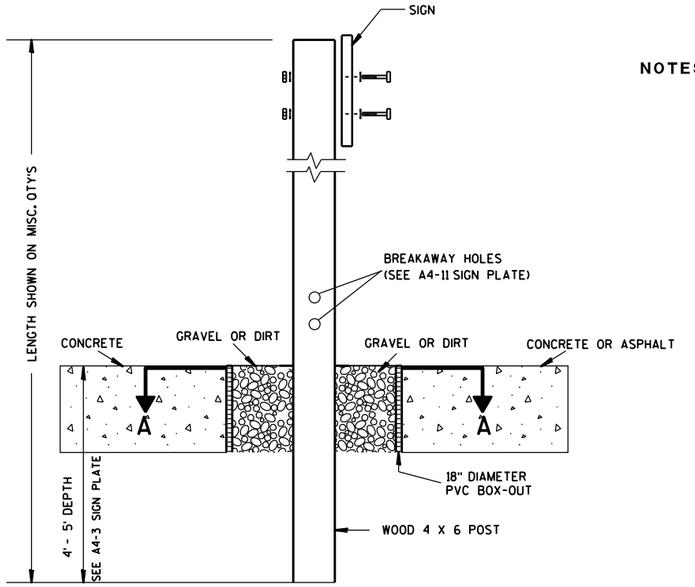
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

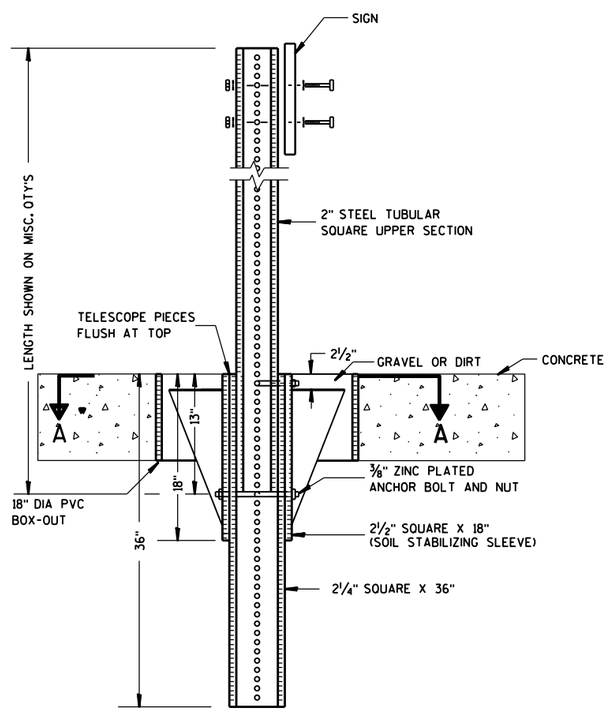
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

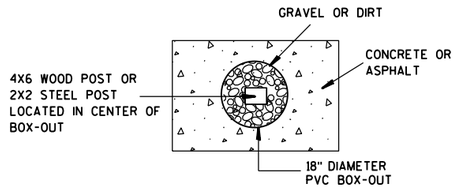
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

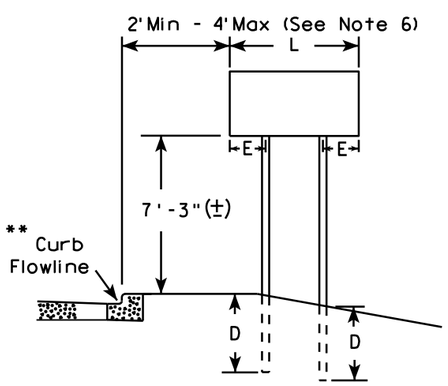
APPROVED Matthew R Rauch
for State Traffic Engineer

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

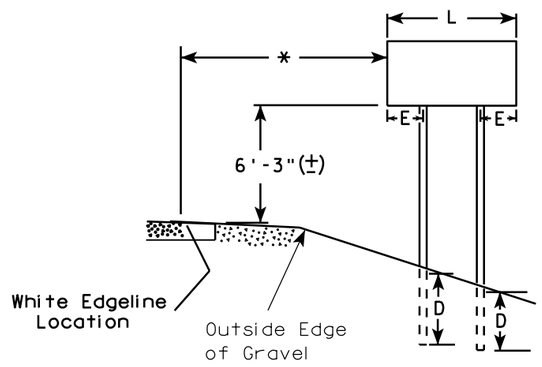
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

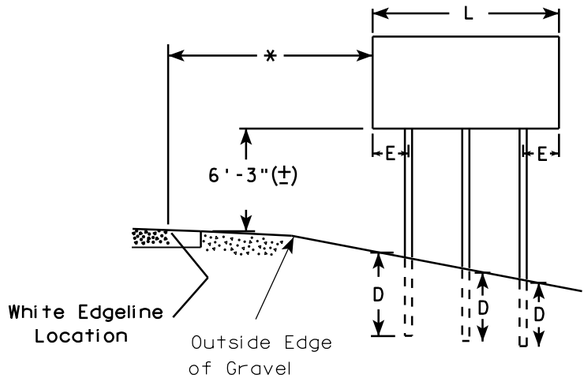
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

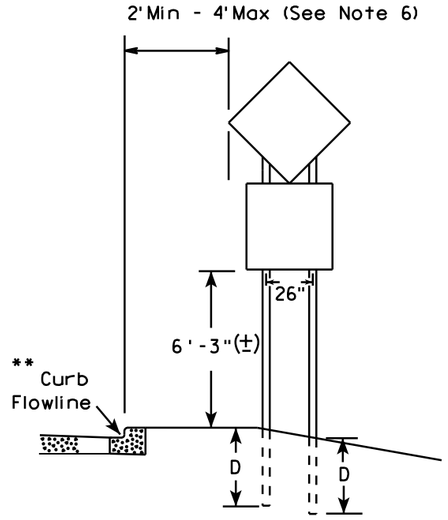
URBAN AREA



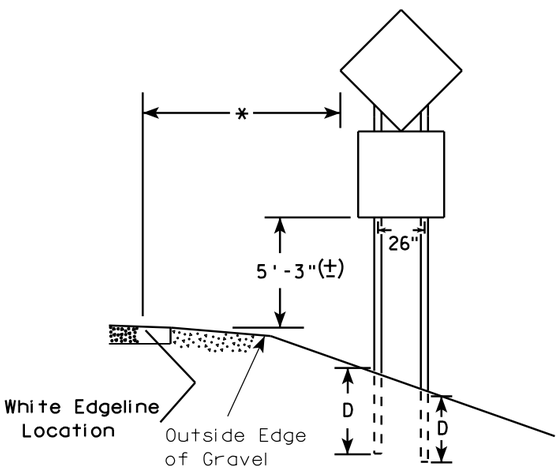
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

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

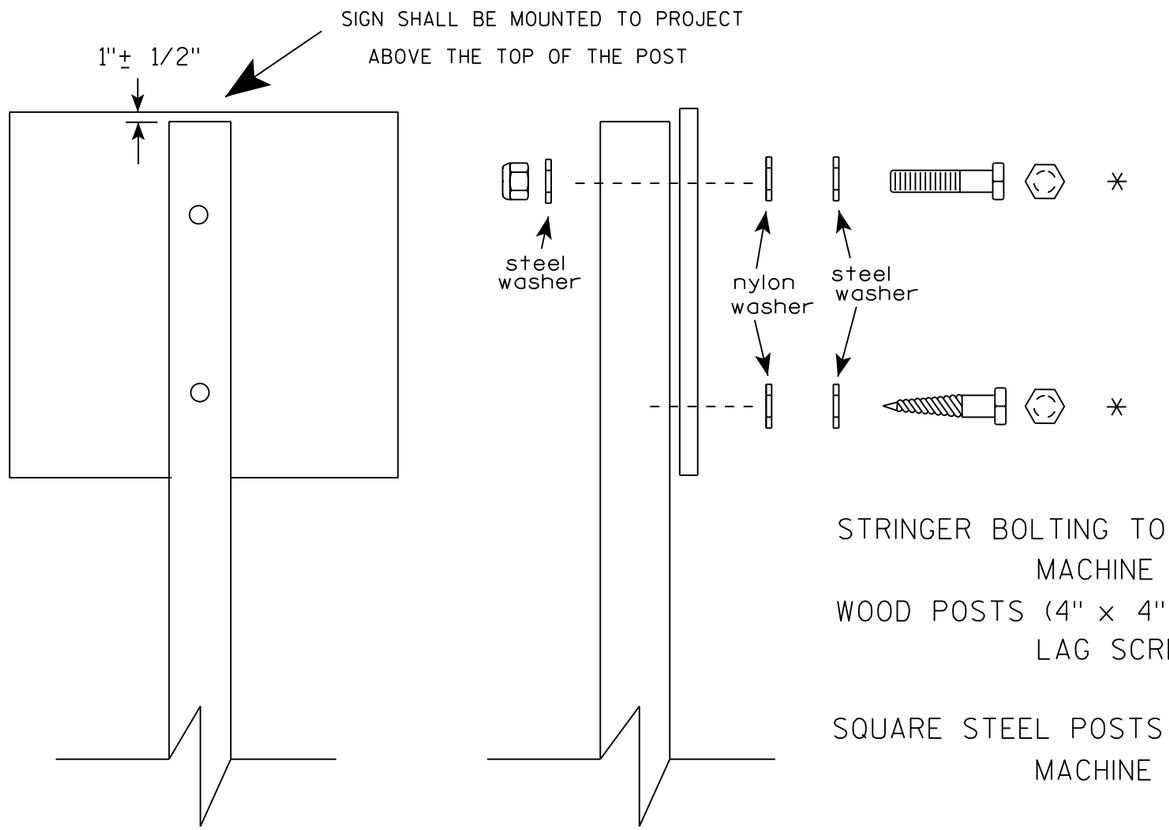
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 72 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

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

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

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

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

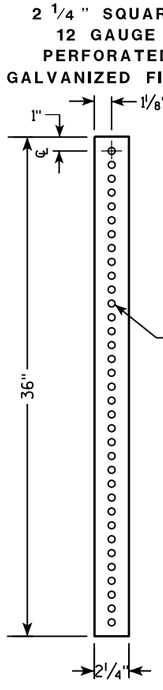
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

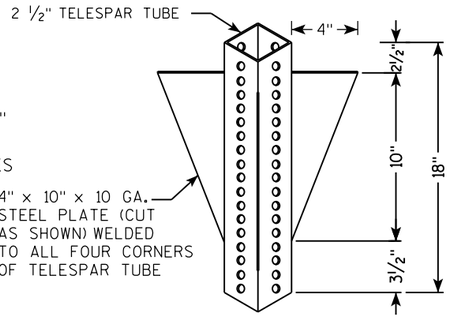
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

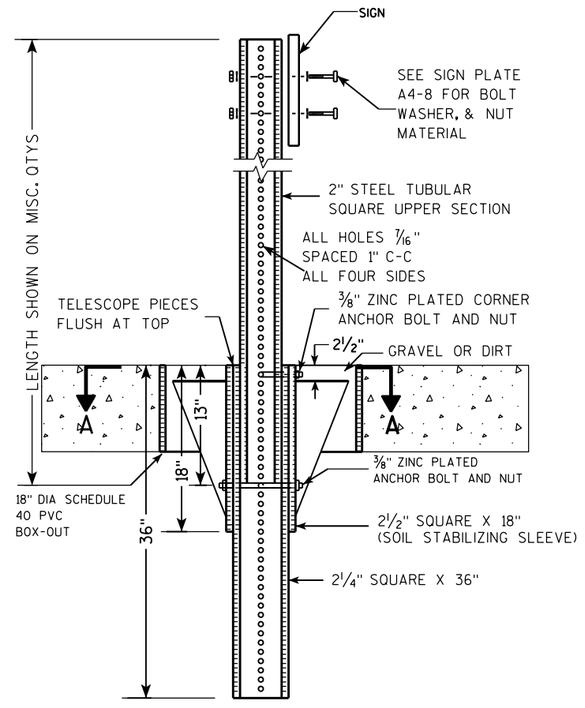
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



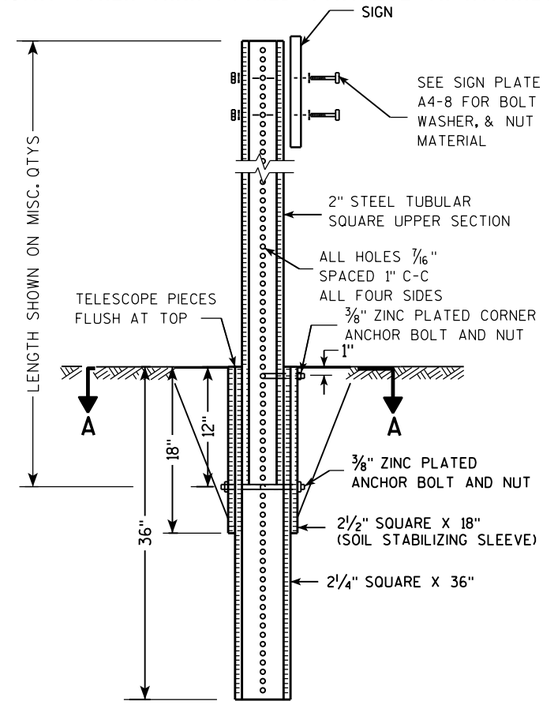
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

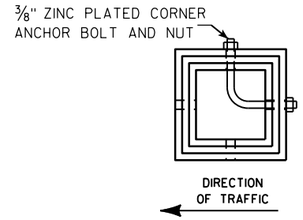


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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).

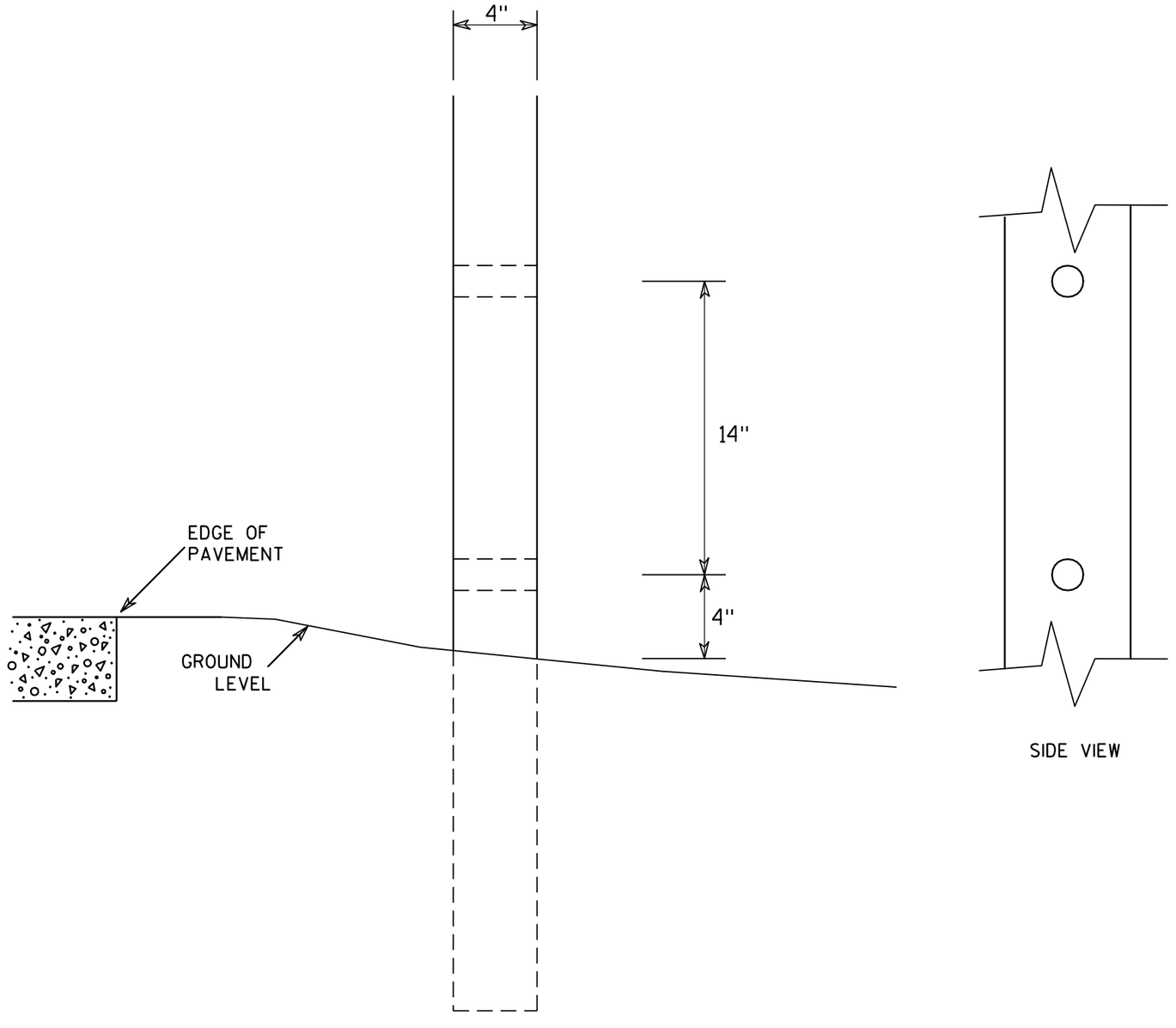
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 74 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

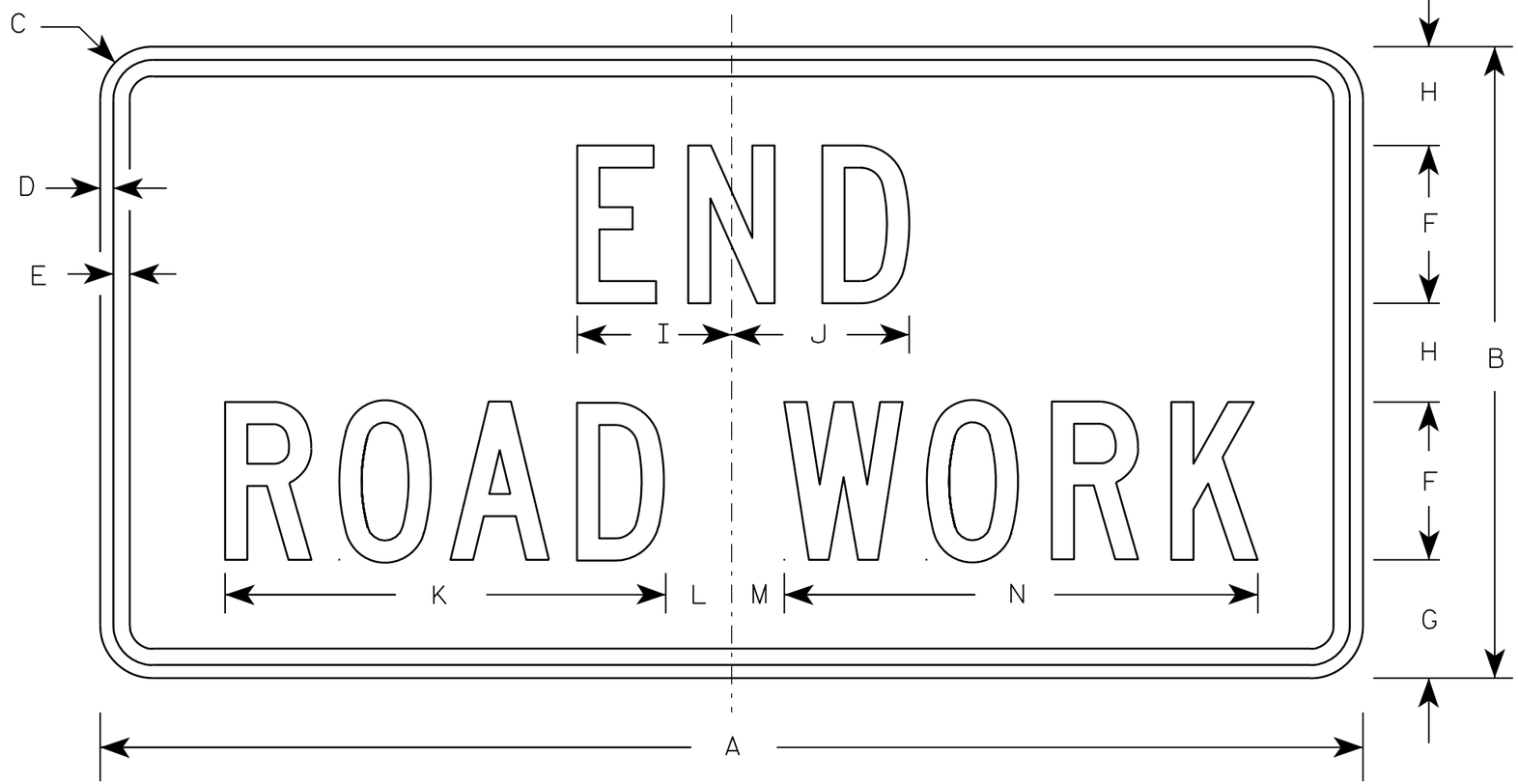
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 75	E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 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	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

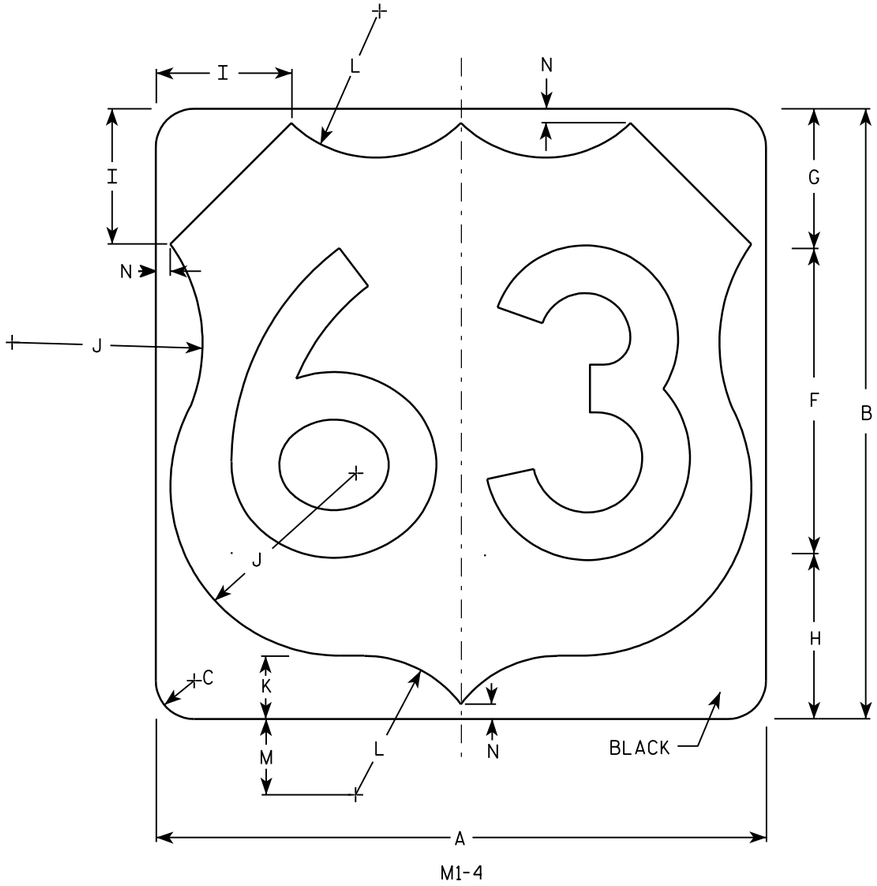
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 76	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\G202A.DGN PLOT DATE : 30-SEP-2009 09:31 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.561773:1.000000

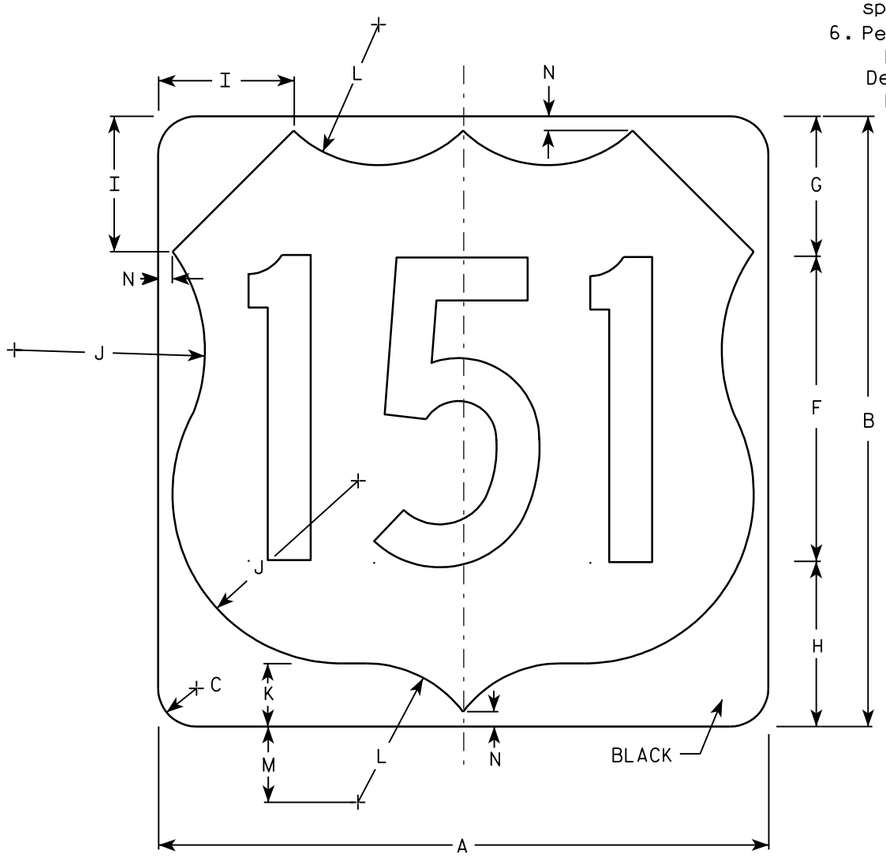
7

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

7

7

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 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

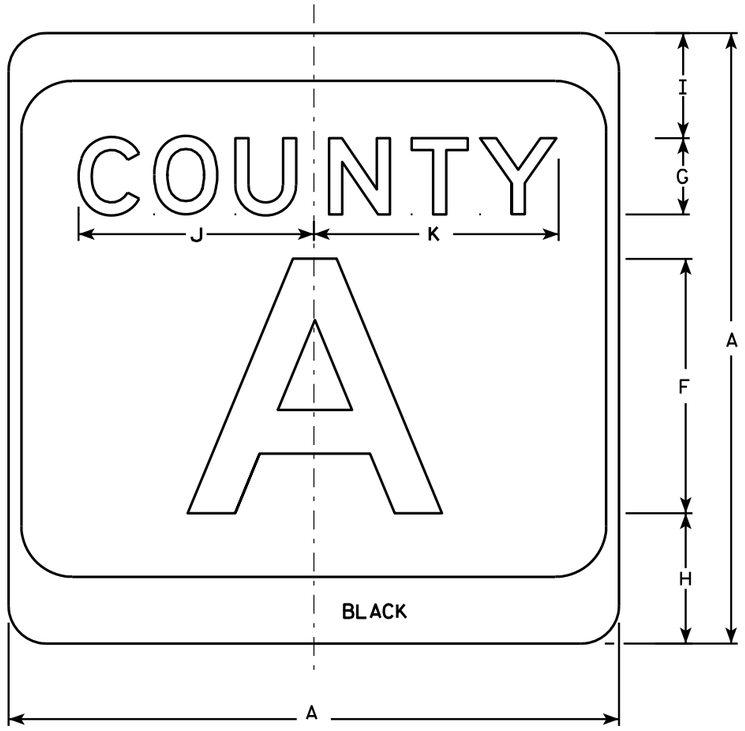
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

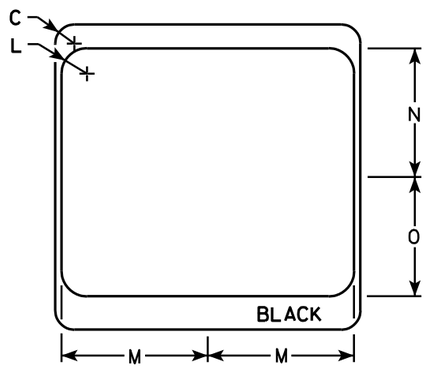
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 77	E

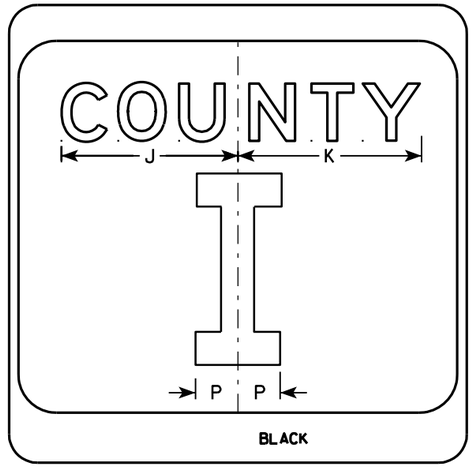


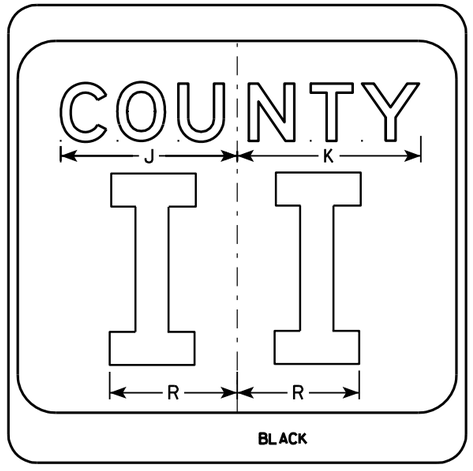
M1-5A



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective





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

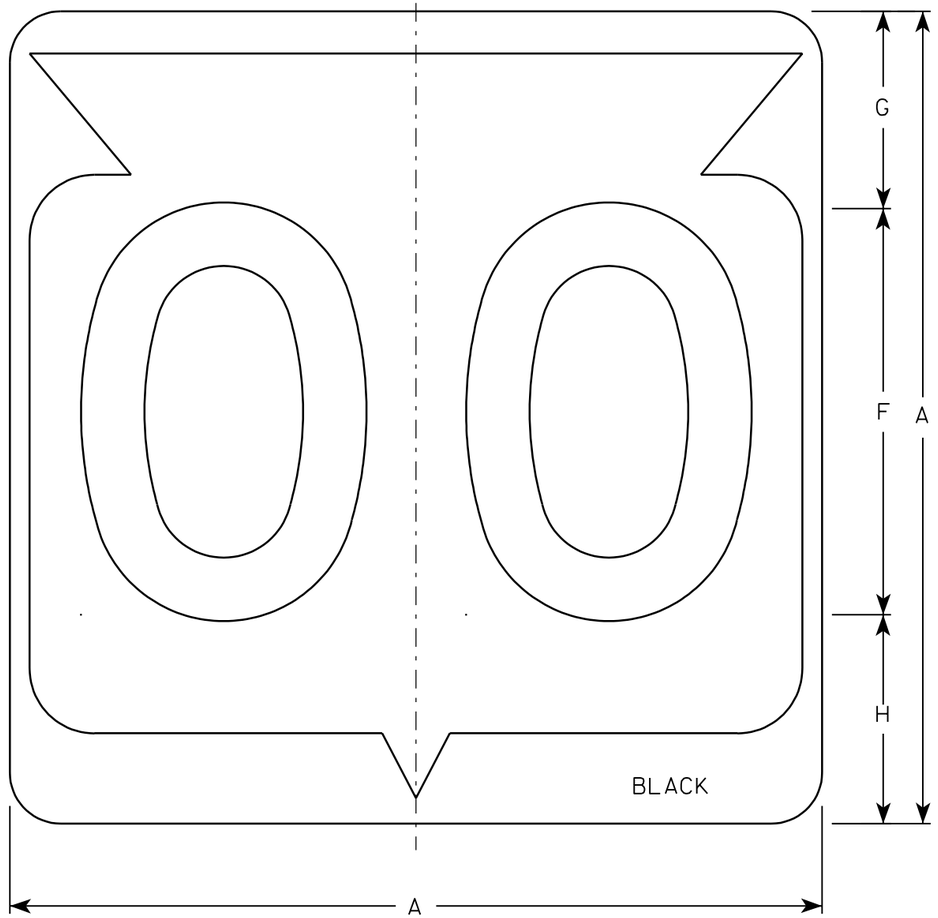
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

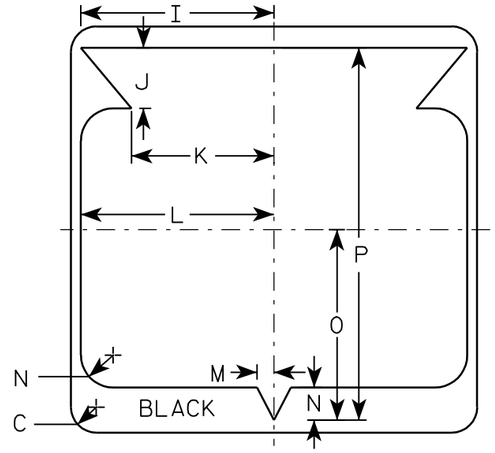
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 78	E



M1-6

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 Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



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		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

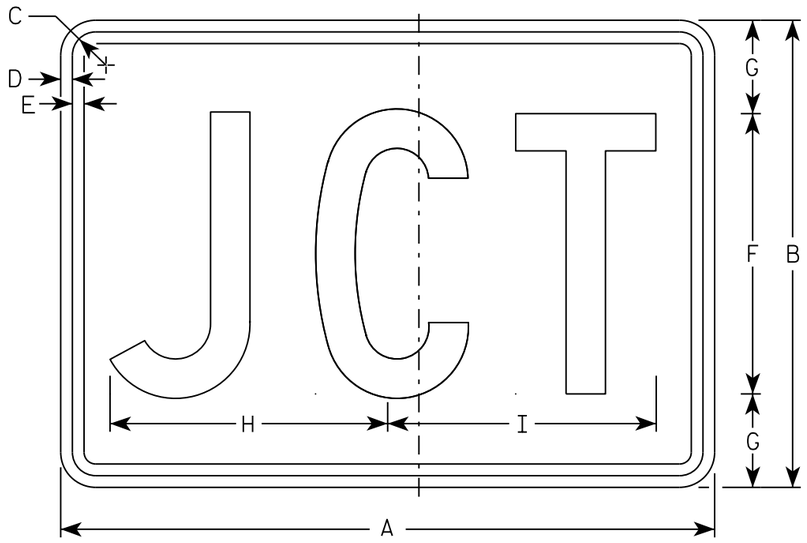
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

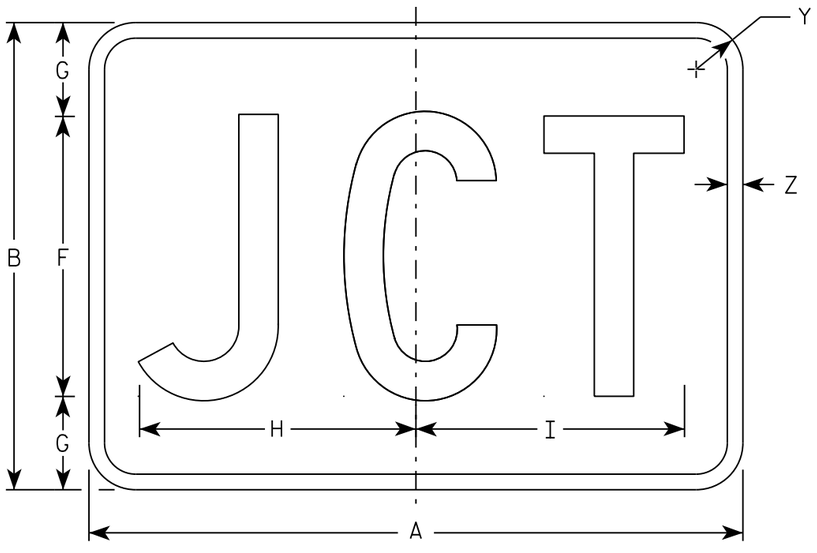
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 79	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
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
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
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
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
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

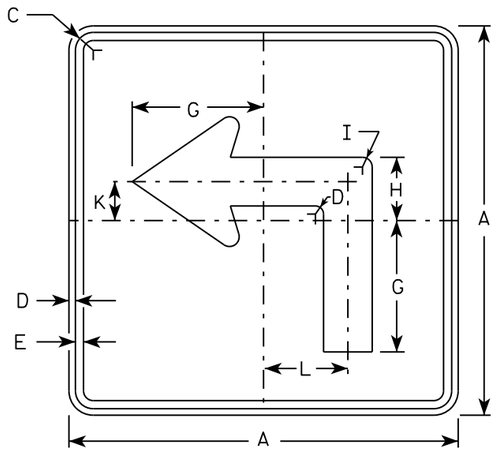
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

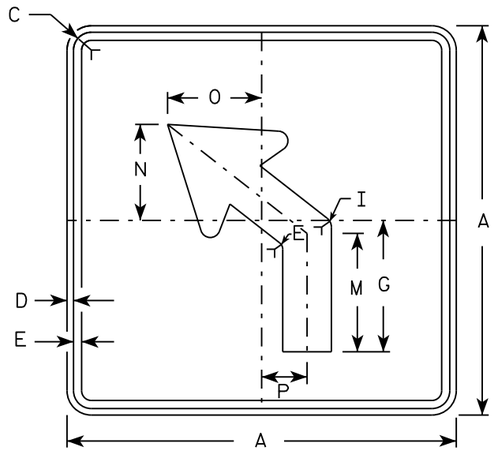
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 80 M2-1.12

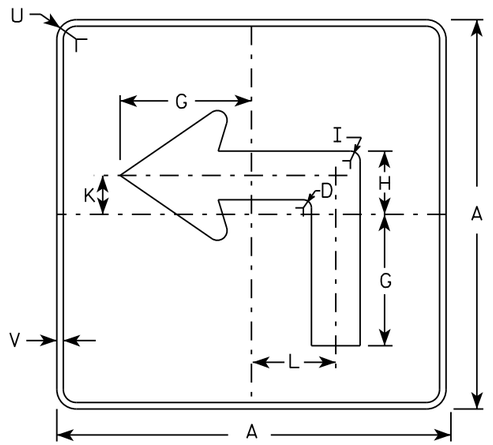
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



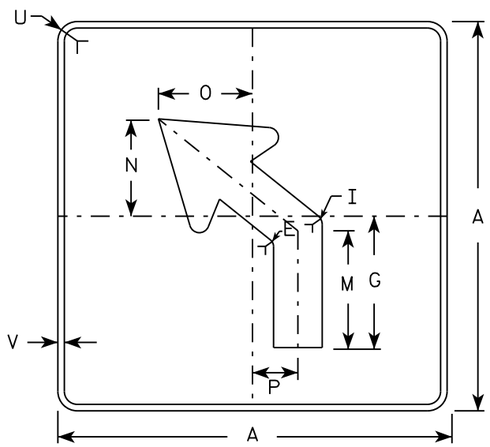
M5-1L
MM5-1L
MO5-1L
MP5-1L



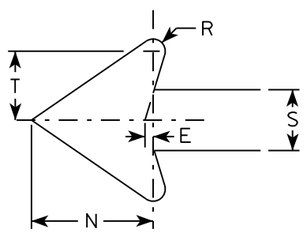
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

1. Signs are Type II - Type H reflective except as shown
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
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

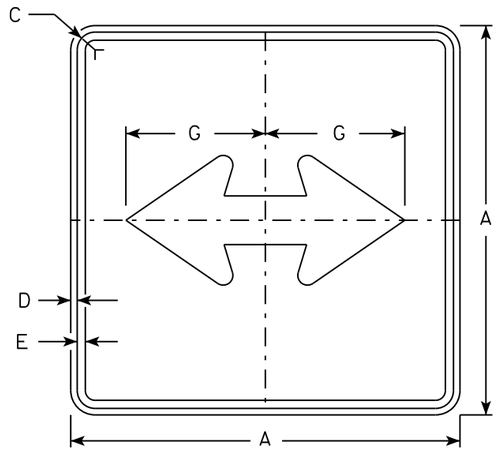
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

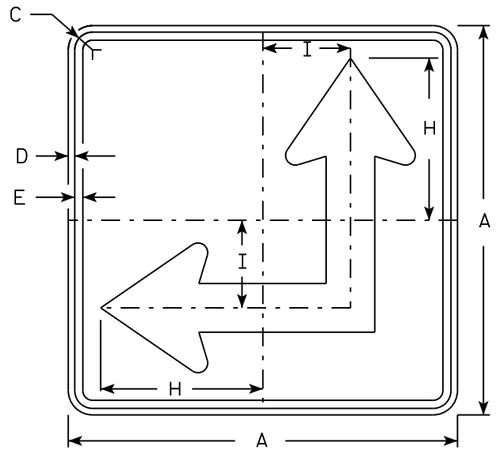
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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



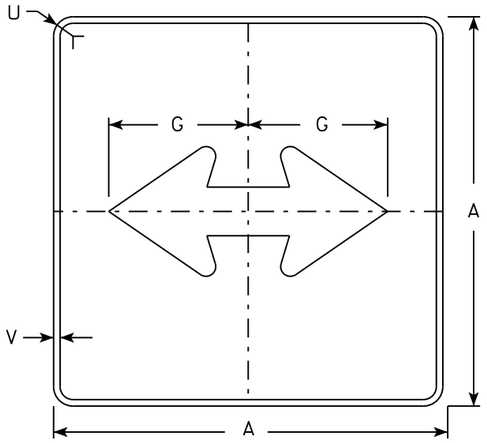
M6-4
MM6-4
MO6-4
MP6-4



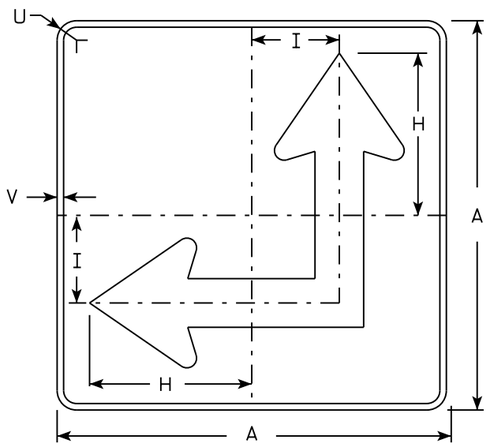
M6-6
MM6-6
MO6-6
MP6-6

NOTES

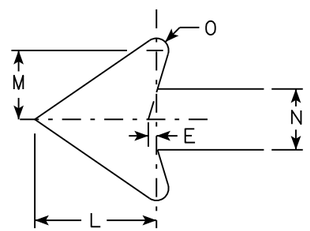
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

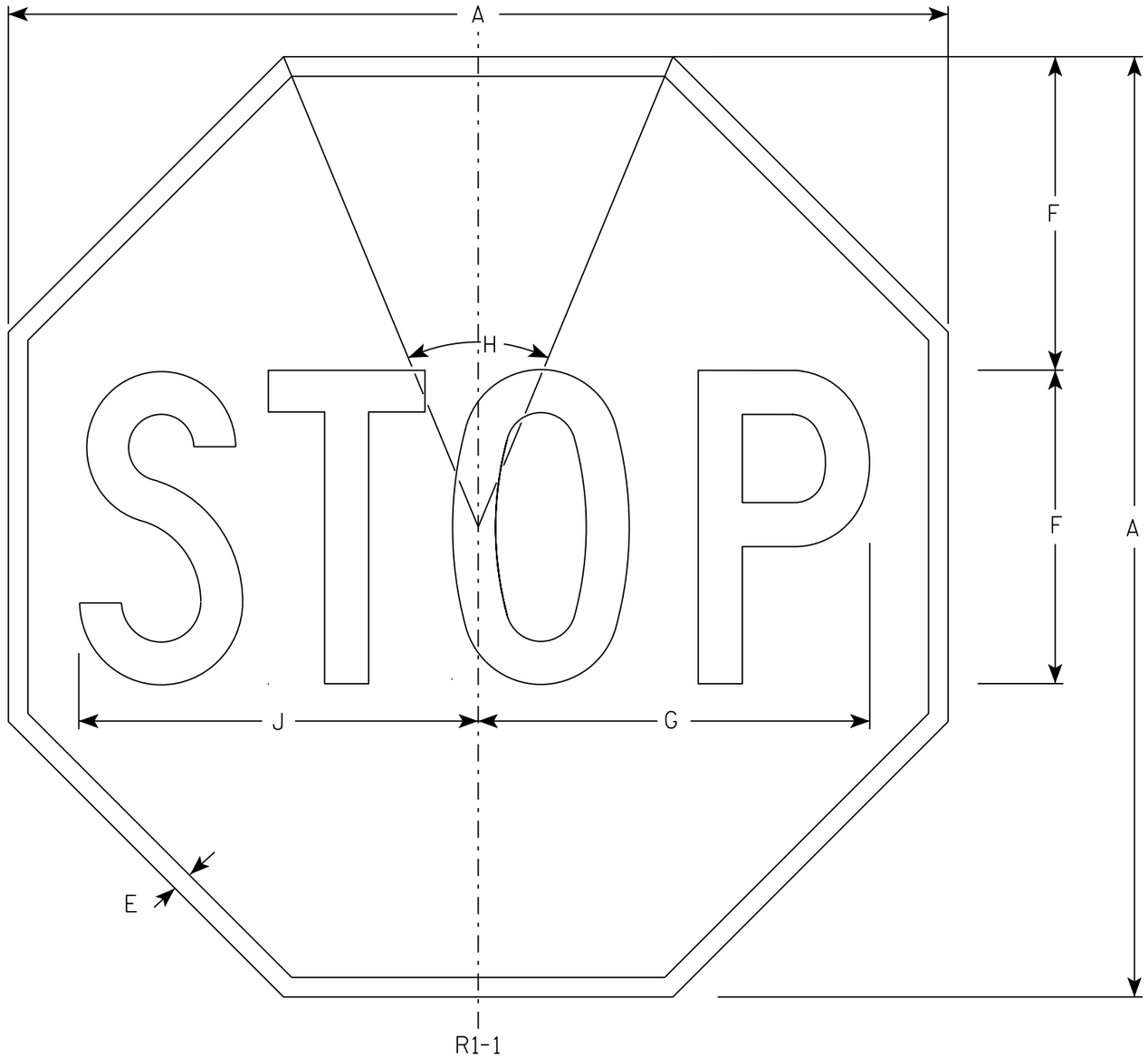
STANDARD SIGN
M6-4 & M6-6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 82 M6-4.10

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



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

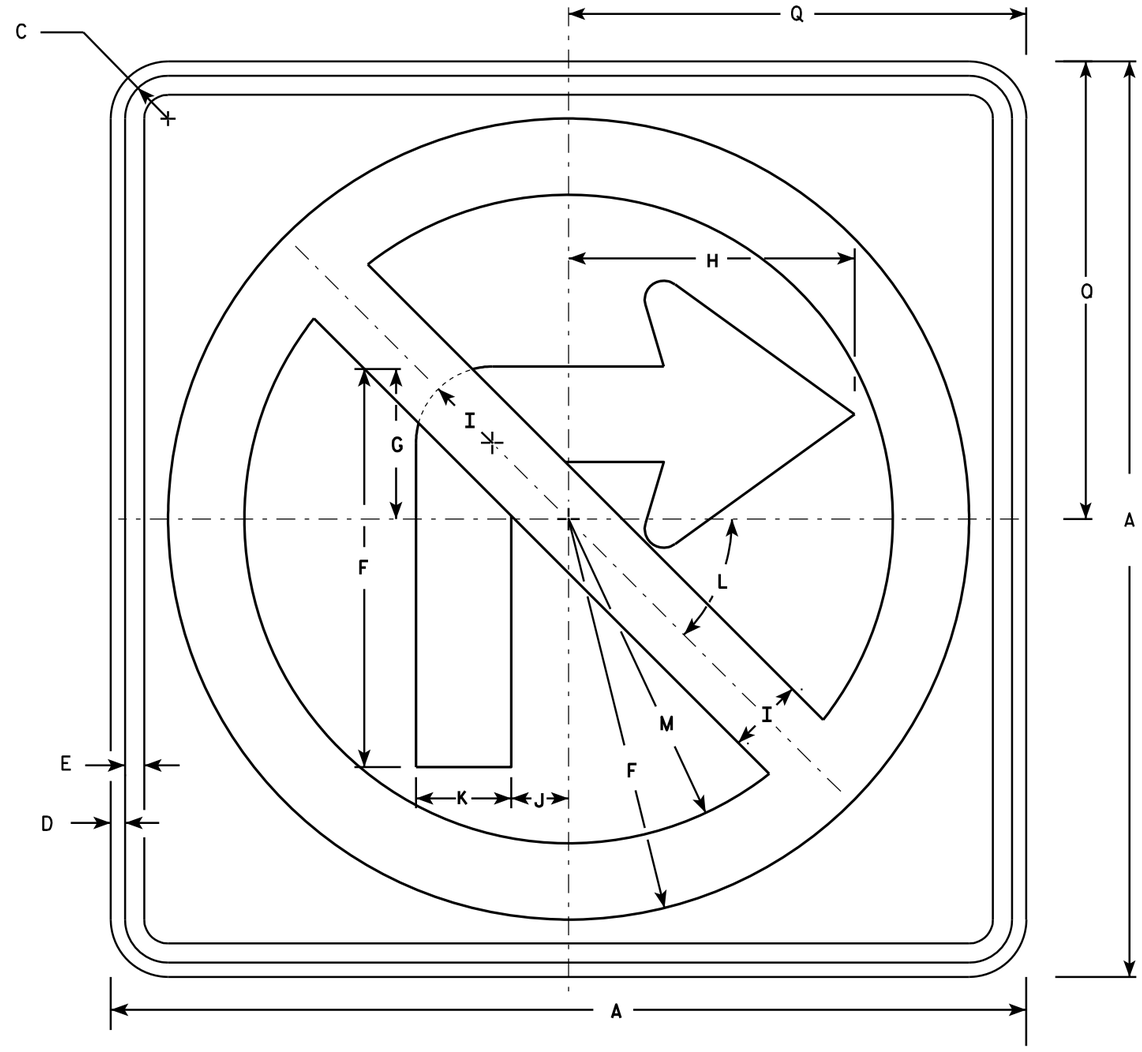
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE 83 R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

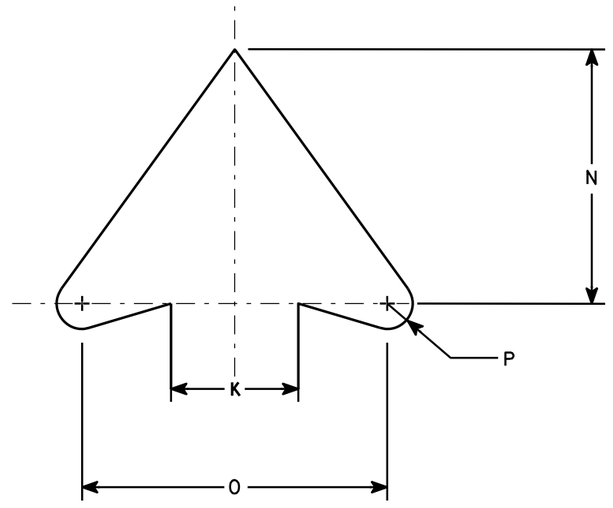
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R11.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.378143:1.000000



R3-1

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

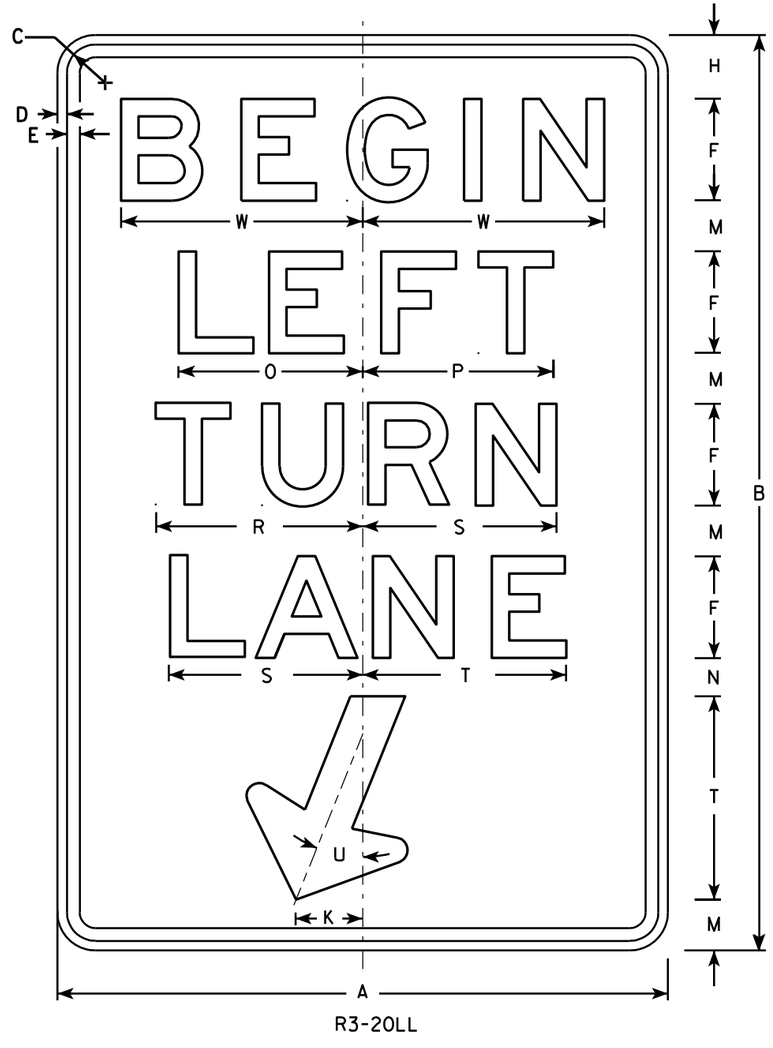
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

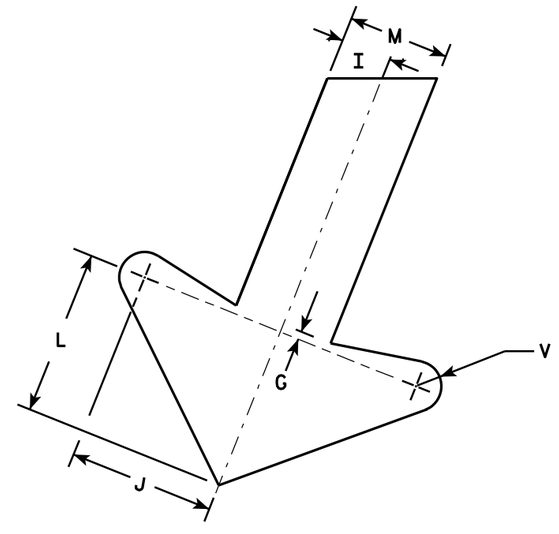
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 84	E



R3-20LL

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.



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	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN
R3-20LL

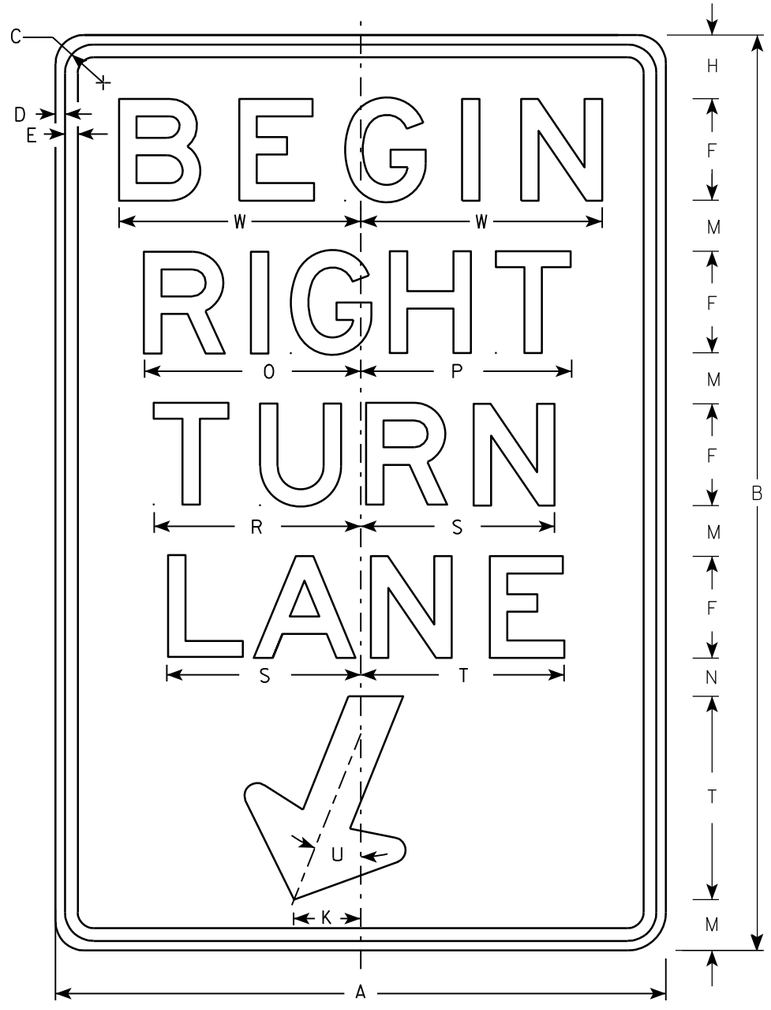
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20LL.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 85	E

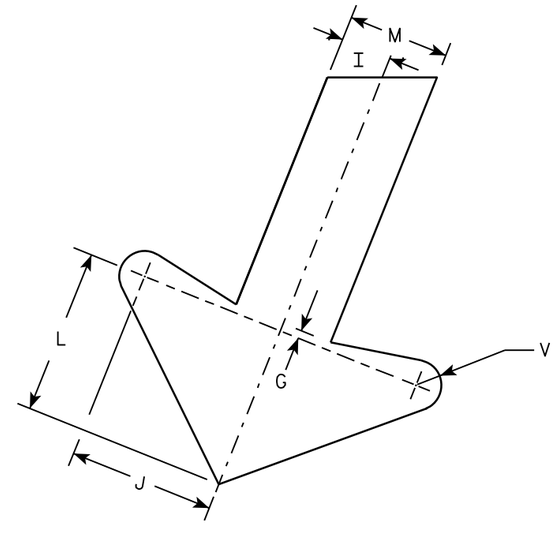
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R320LL.DGN PLOT DATE : 15-OCT-2010 14:38 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000
WISDOT/CADDS SHEET 42



R3-20R

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.



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	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

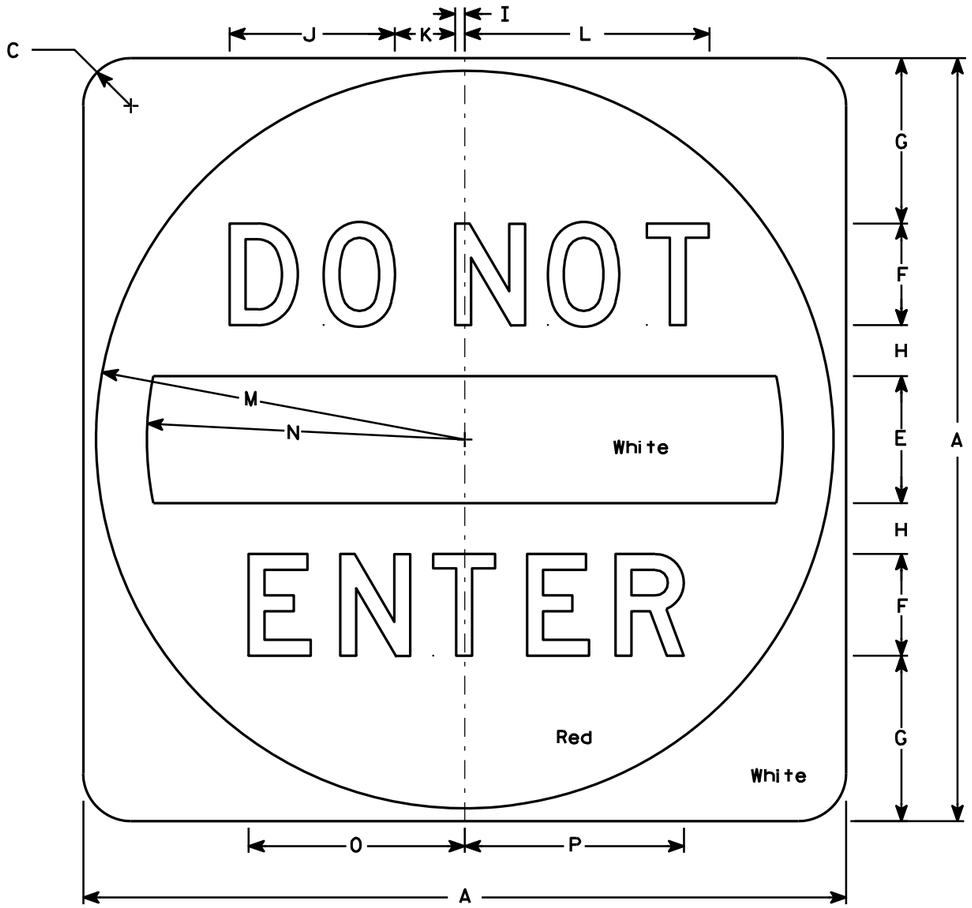
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 86 | E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

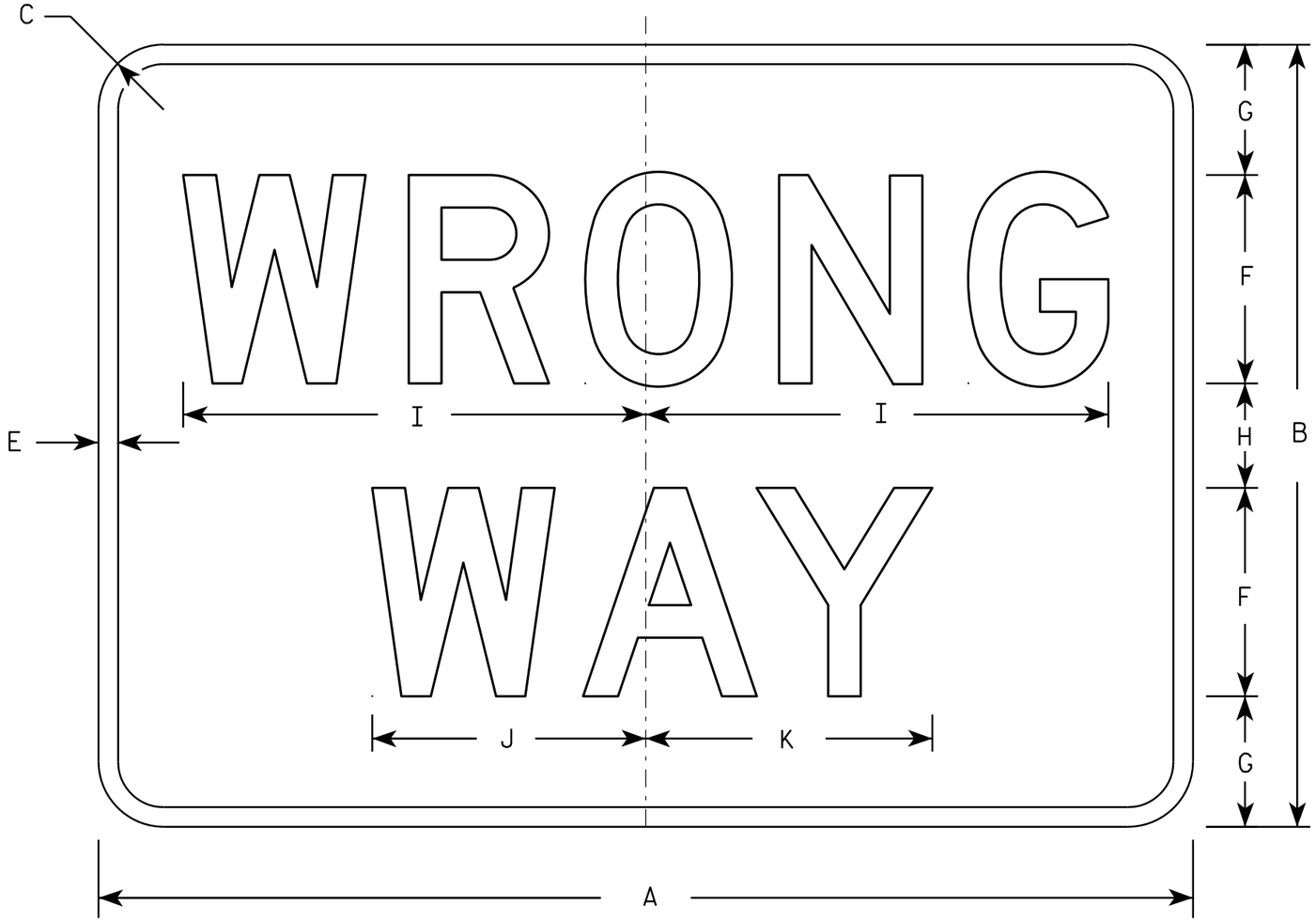
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 87 | E



R5-1A

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 - 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.

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	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

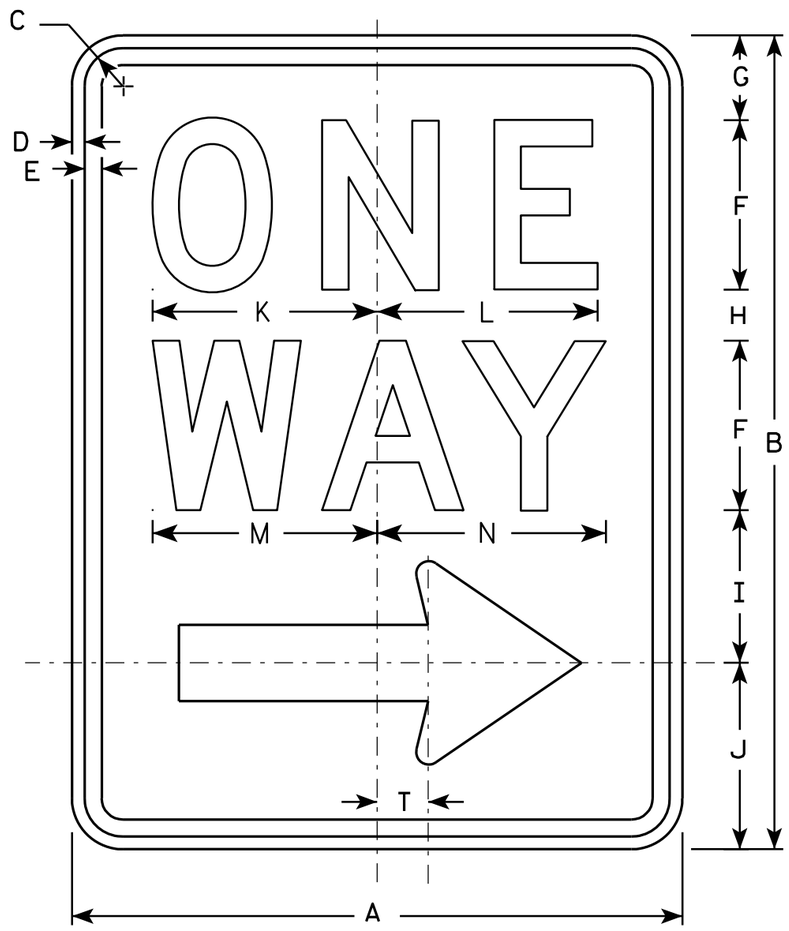
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

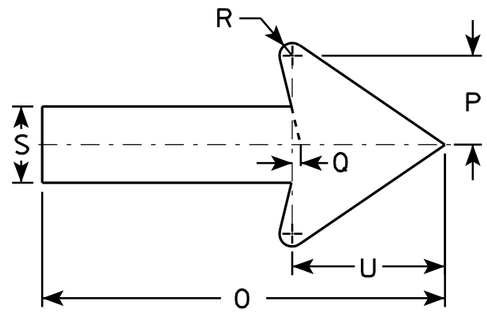
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 88 | E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

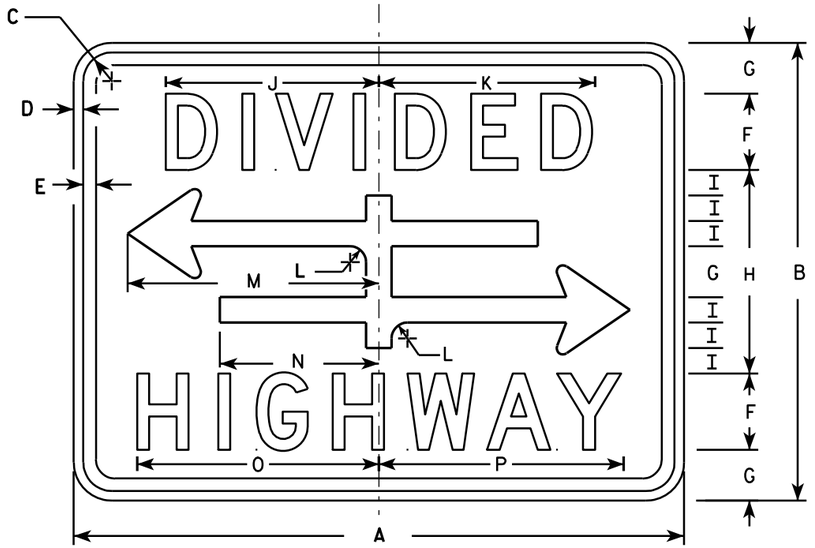
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

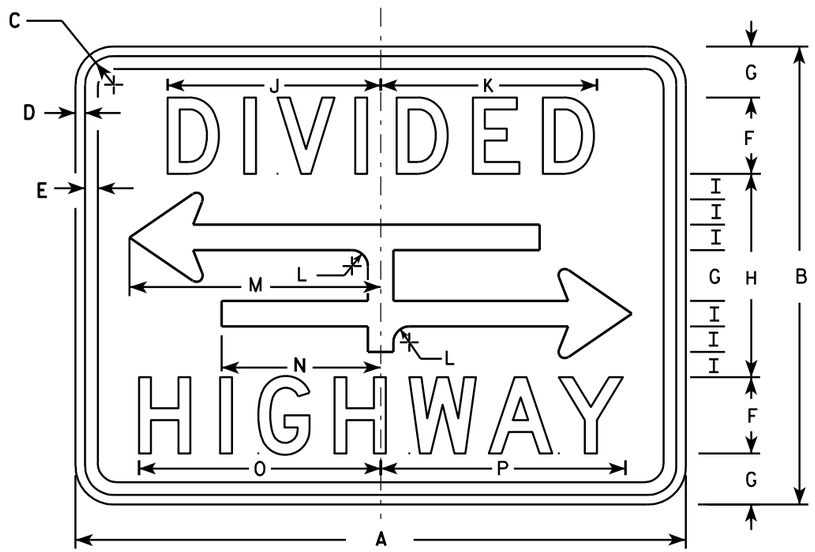
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 89	E



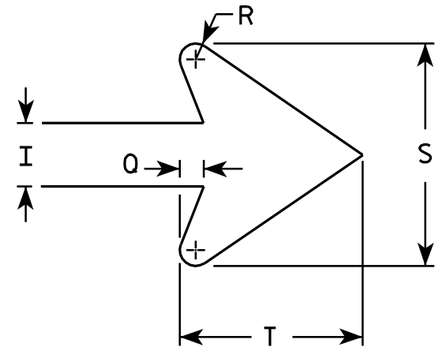
R6-3

NOTES

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



R6-3A



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	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

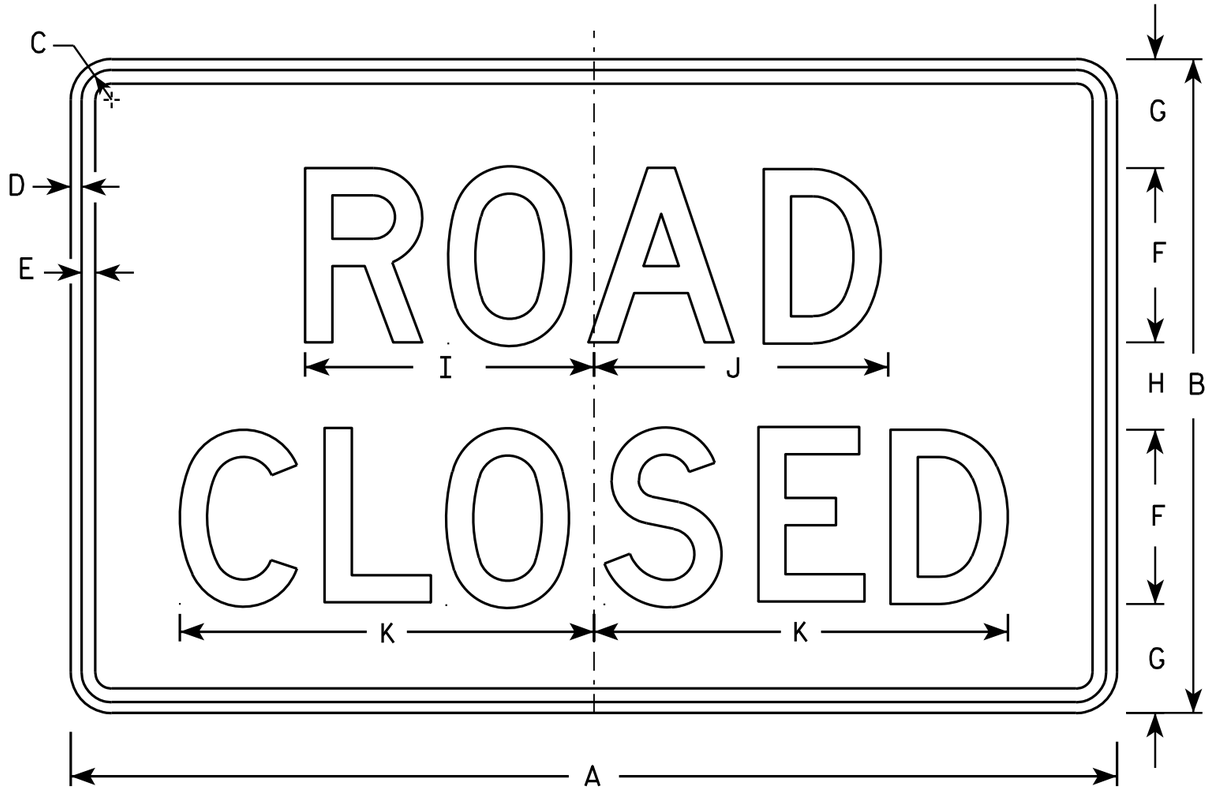
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

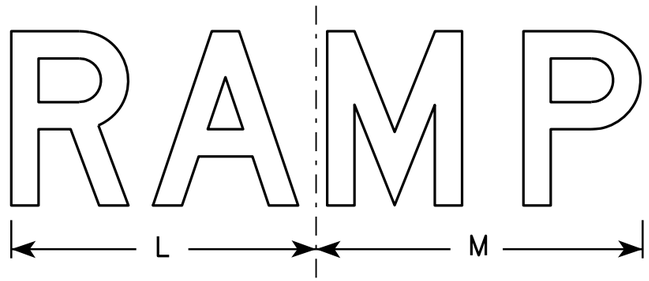
SHEET NO: 90 E



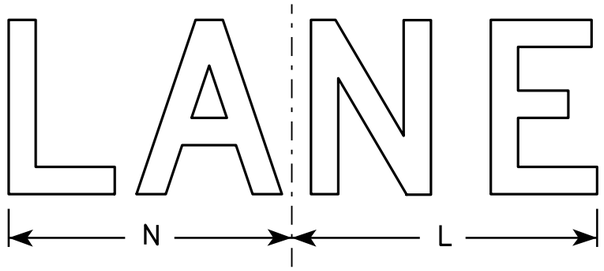
R11-2

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. Modify the message as required.



R11-2R



R11-2L

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

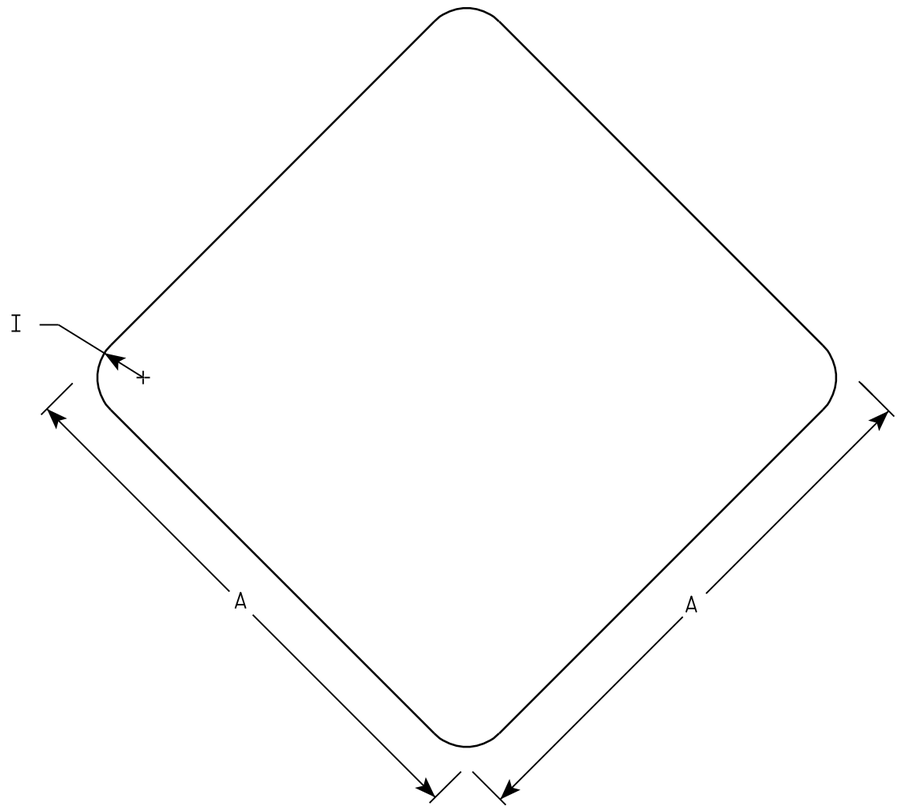
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 91	E



W5-54

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
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																											

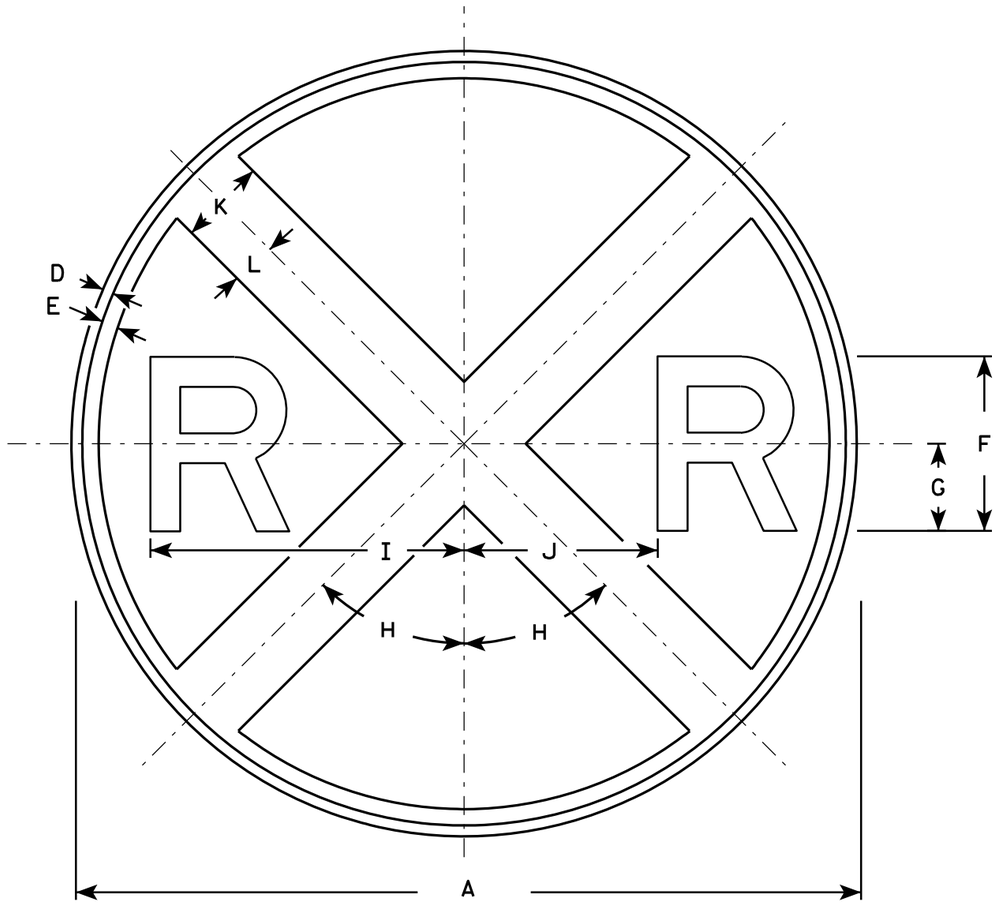
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 92 | E



W10-1

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 - 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																											

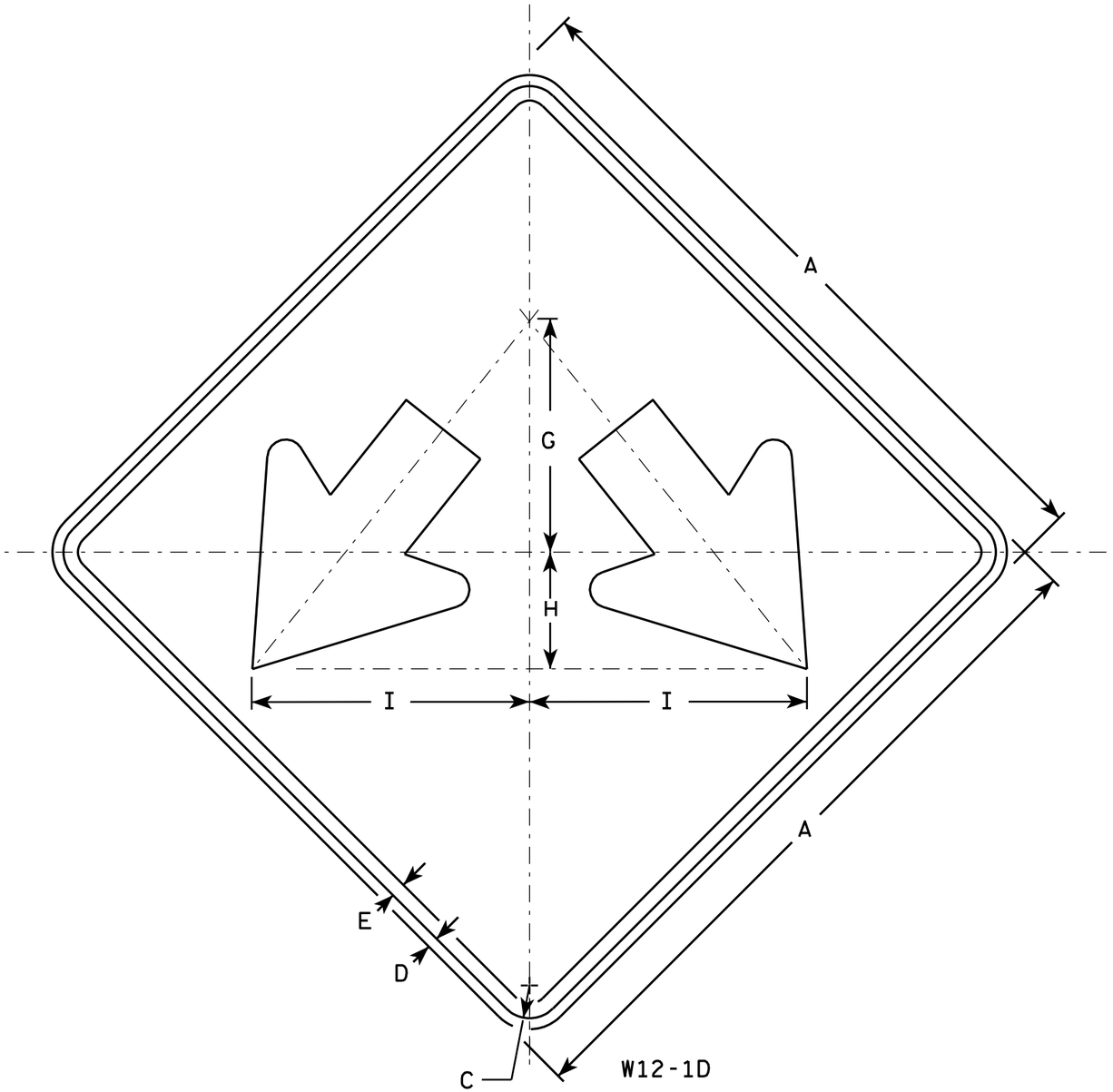
STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

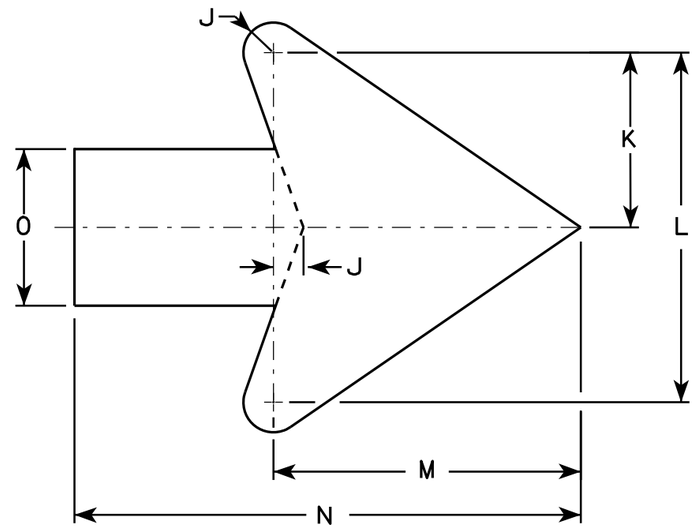
DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 93	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 - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

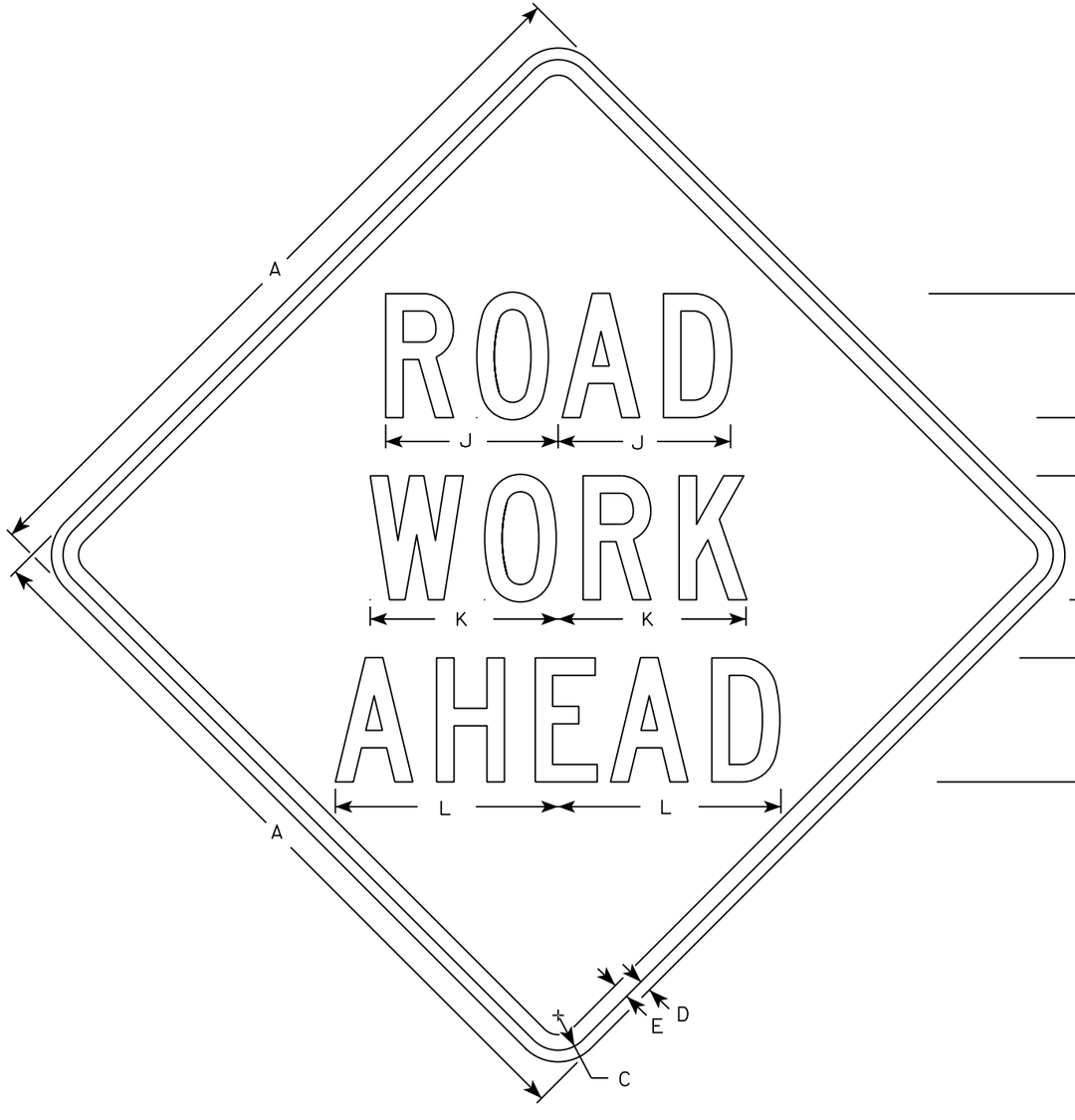
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

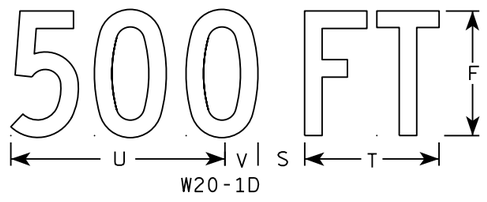
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

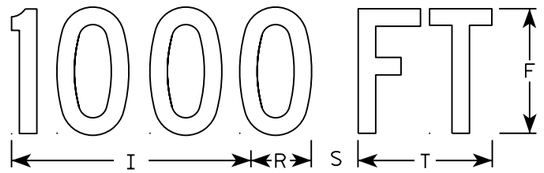
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 94	E



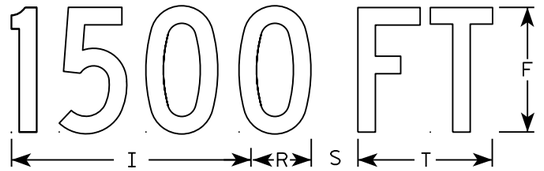
W20-1A



W20-1D

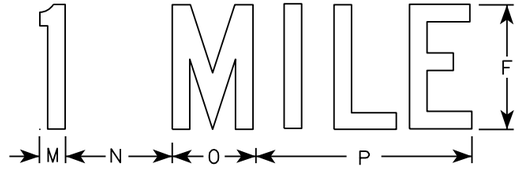


W20-1C

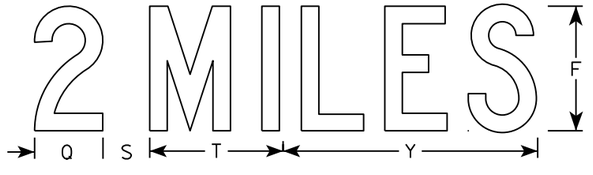


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

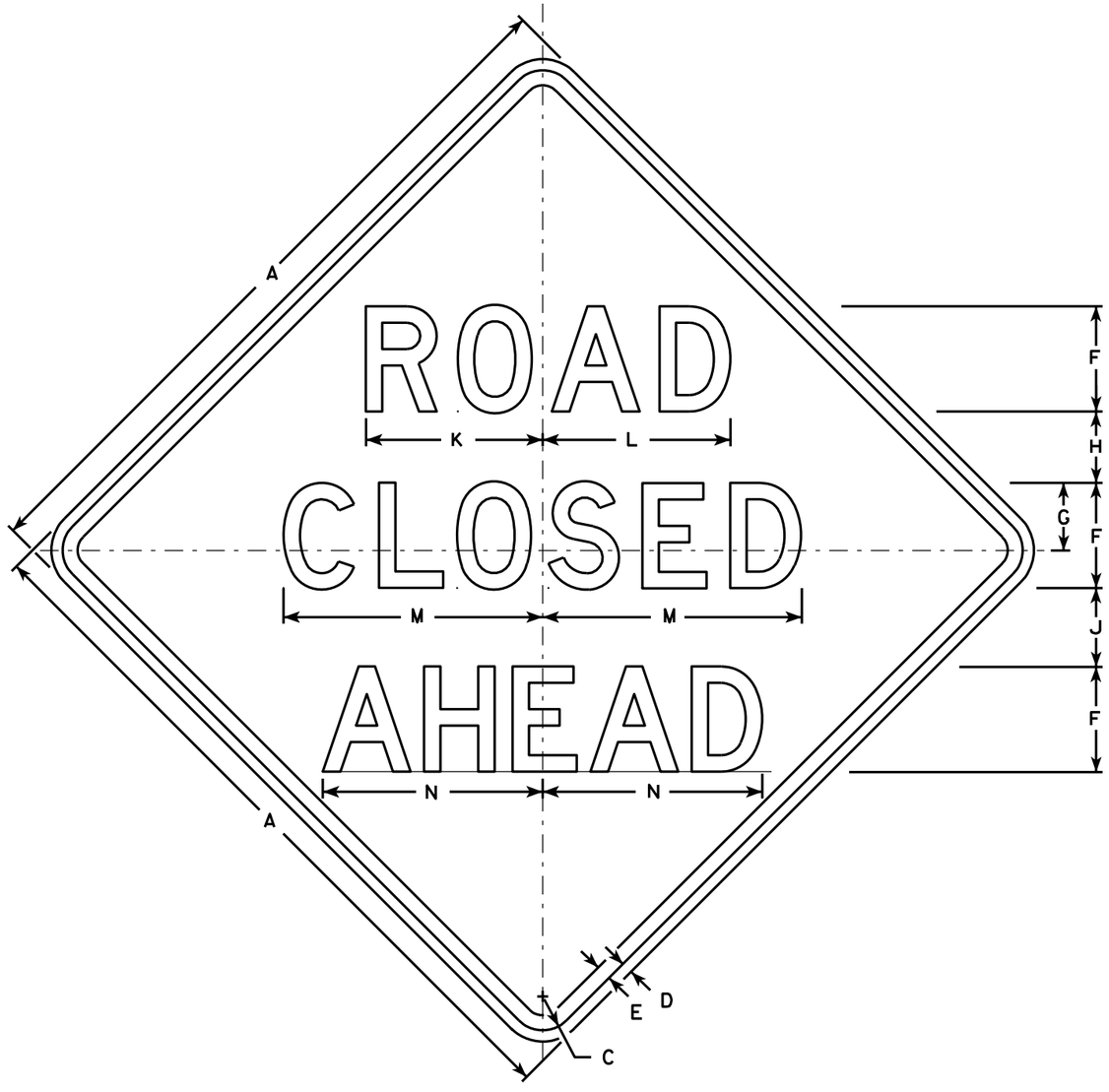
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

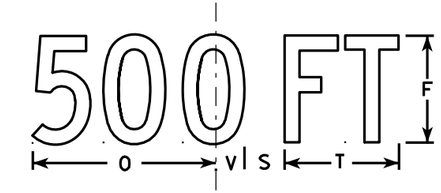
PROJECT NO:

SHEET NO: E

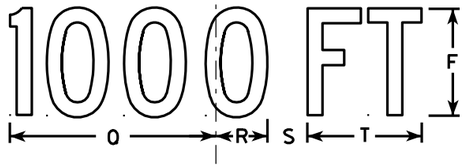
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



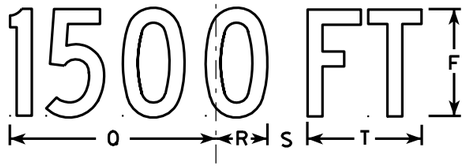
W20-3A



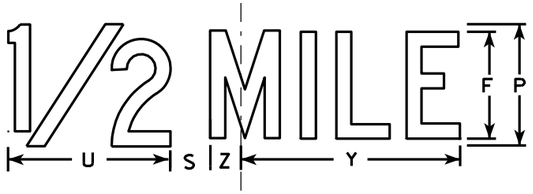
W20-3D



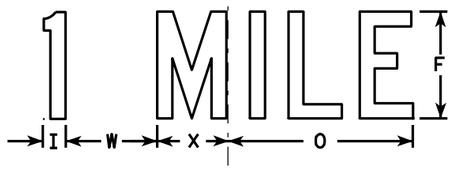
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

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

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

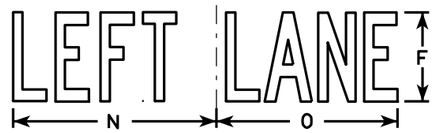
STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

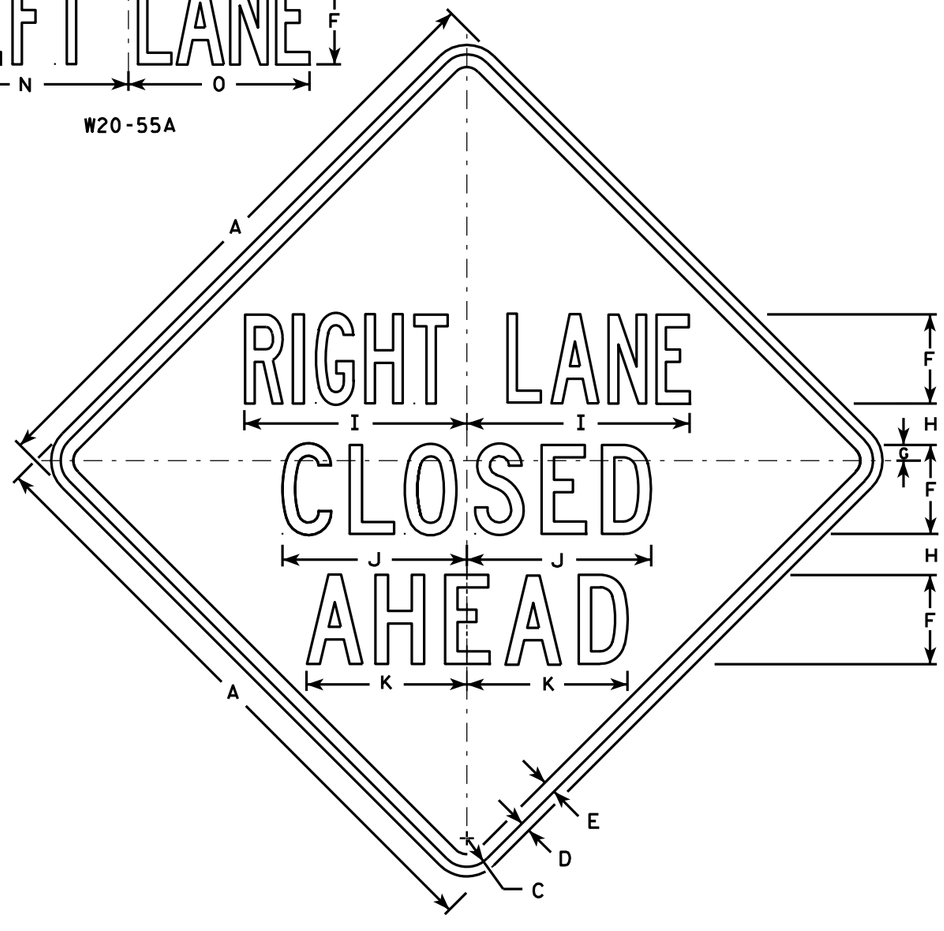
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 96 | E

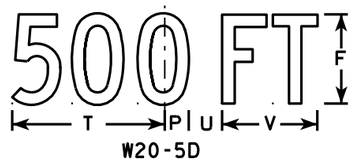
W20-56A



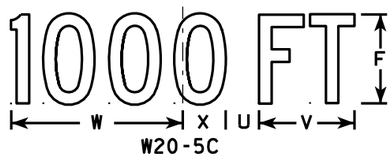
W20-55A



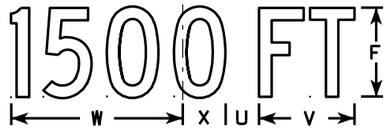
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is 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	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

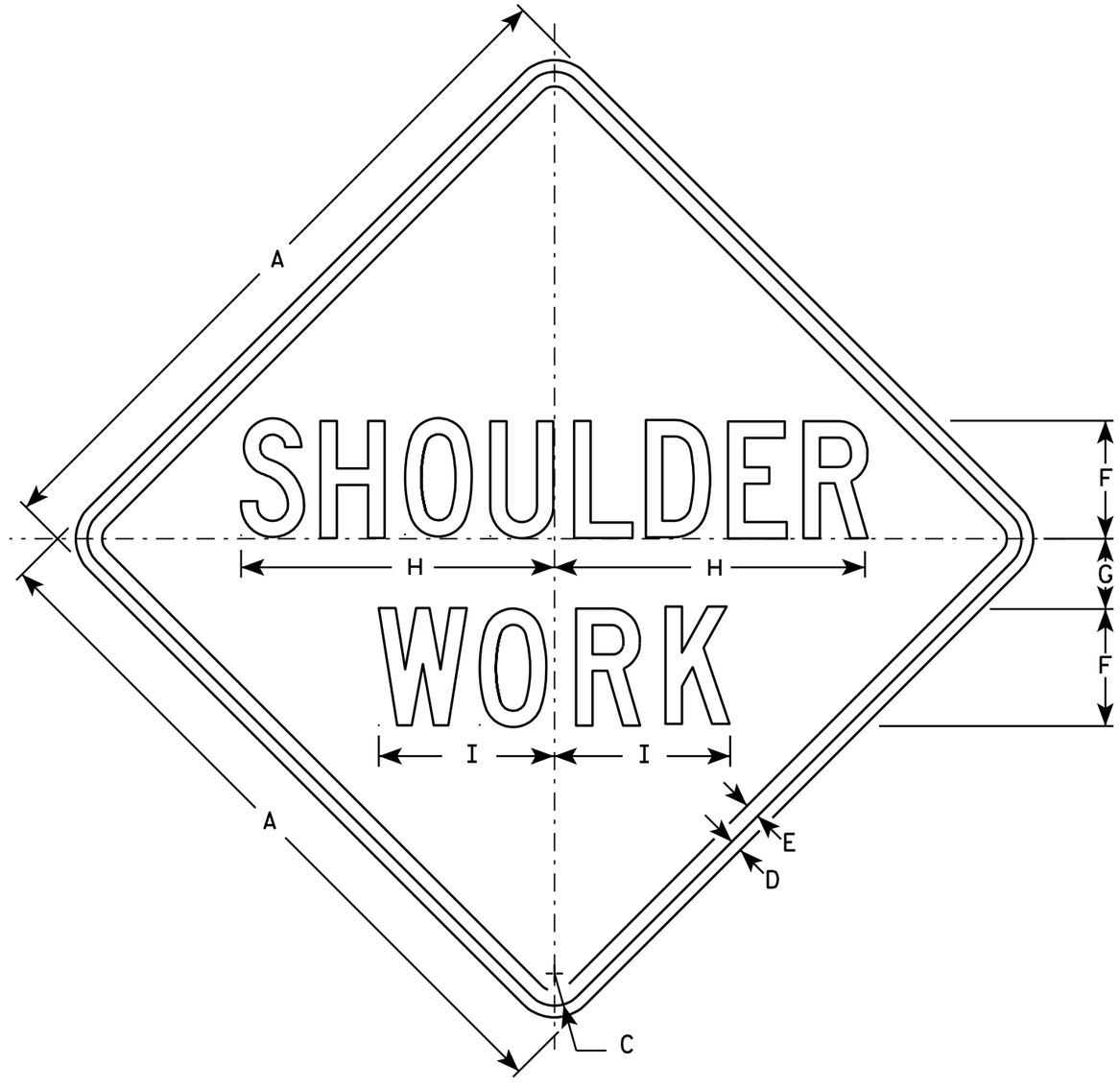
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 97 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

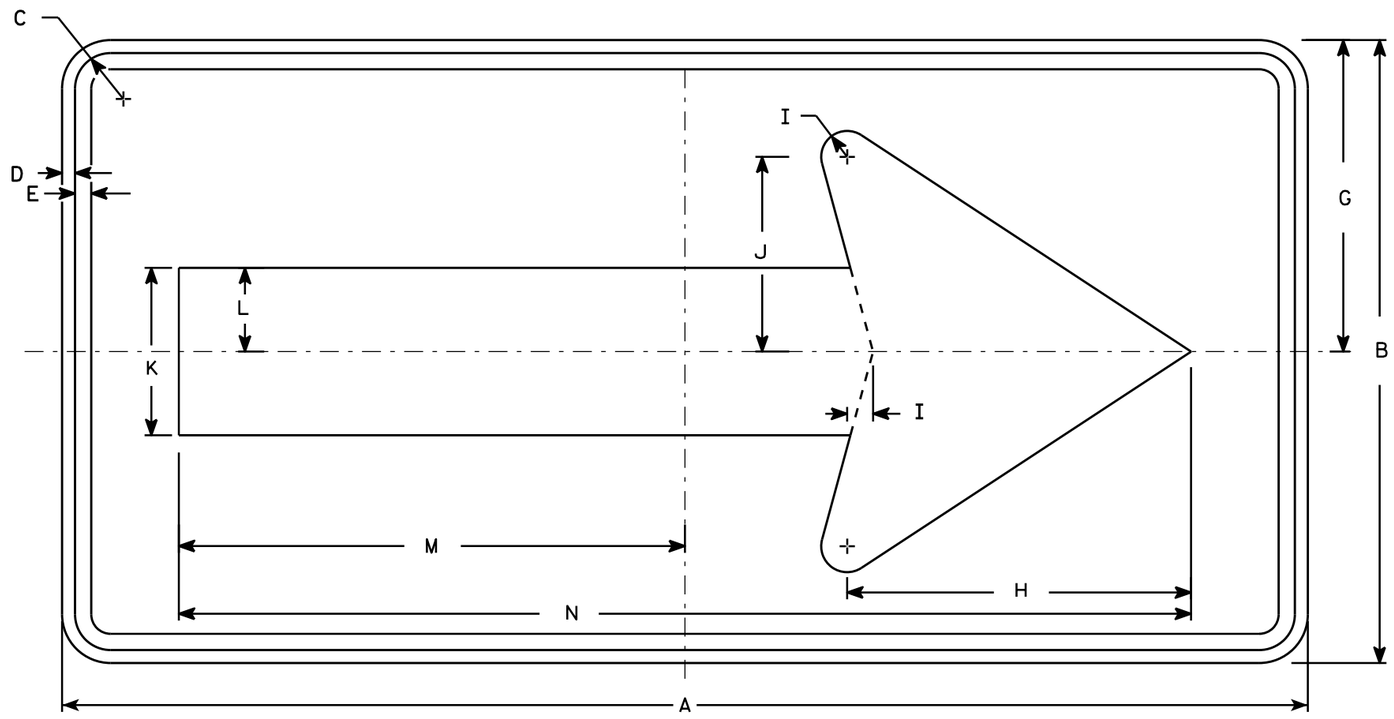
STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 98	E



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. 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.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

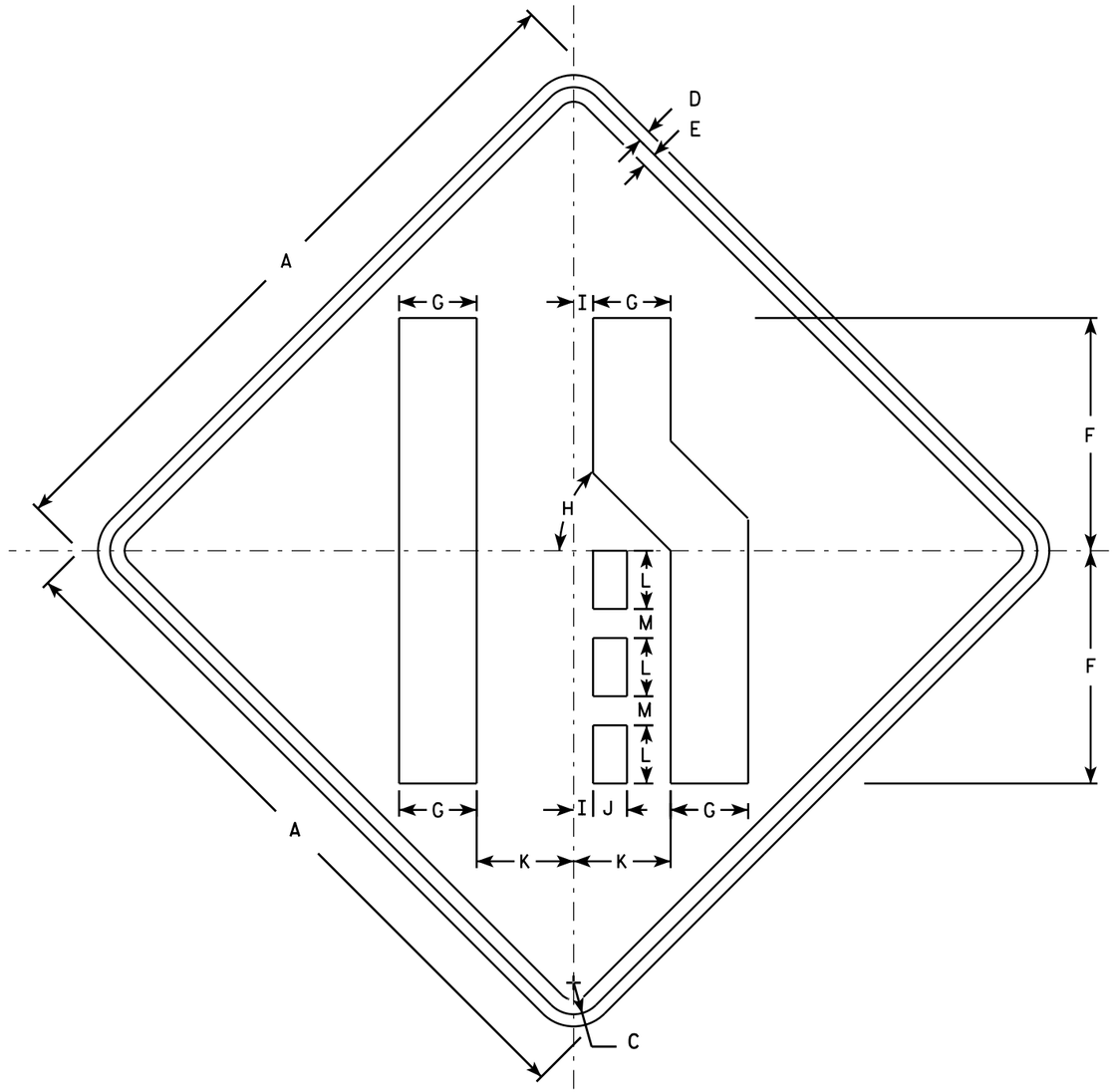
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. 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. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 100 W04-2.1

PROJECT NO: | SHEET NO: E

EARTHWORK PROJECT I.D. 1400-00-72: USH 51 - STA. 100+00 TO STA. 107+70

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
100+00.000	10000.00	0.00	0	0	0	0	0	0	0	0	0
100+50.000	10050.00	50.00	0	0	0	0	0	0	0	0	0
100+79.000	10079.00	29.00	6	0	0	3	0	0	3	0	3
101+00.000	10100.00	21.00	4	1	0	4	0	0	7	0	7
101+47.000	10147.00	47.00	13	3	0	15	4	0	22	0	18
101+50.000	10150.00	3.00	13	3	0	1	0	0	23	0	19
102+00.000	10200.00	50.00	27	8	0	37	10	0	60	0	46
102+50.000	10250.00	50.00	46	8	0	68	15	0	129	0	99
102+97.000	10297.00	47.00	77	8	0	107	14	0	236	0	192
103+00.000	10300.00	3.00	78	8	0	9	1	0	244	0	200
103+50.000	10350.00	50.00	42	8	7	111	15	6	355	8	288
104+00.000	10400.00	50.00	41	9	11	77	16	16	432	29	328
104+50.000	10450.00	50.00	62	11	0	95	19	10	528	41	391
105+00.000	10500.00	50.00	44	13	9	98	22	9	625	52	456
105+38.000	10538.00	38.00	77	13	0	85	18	7	710	60	515
105+50.000	10550.00	12.00	68	13	0	32	6	0	742	60	541
106+00.000	10600.00	50.00	48	13	8	108	24	7	850	70	616
106+50.000	10650.00	50.00	29	13	8	72	24	15	922	88	645
107+00.000	10700.00	50.00	44	14	13	68	25	20	990	113	663
107+50.000	10750.00	50.00	90	0	0	125	13	12	1,114	128	760
107+70.000	10770.00	20.00	19	0	0	41	0	0	1,155	128	800
SPECIAL RIPRAP DITCHES			-	-	-	57	-	-	1,212	-	-
						1,212	**226**	**103**			
				Cum. Net Vol. (Cu. Yd.)			**1,109**				

EARTHWORK PROJECT I.D. 1400-00-72: USH 51 - STA. 108+00 TO STA. 110+00

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
108+00.000	10800.00	0.00	62	9	24	45	0	13	0	0	0
108+50.000	10850.00	50.00	40	14	13	95	22	34	95	43	31
109+00.000	10900.00	50.00	23	9	1	58	21	13	153	59	51
109+50.000	10950.00	50.00	46	8	0	63	16	1	217	60	98
110+00.000	11000.00	50.00	47	8	0	86	14	0	302	60	169
SPECIAL RIPRAP DITCHES			-	-	-	52	-	-	354	-	-
						400	**73**	**61**			
				Cum. Net Vol. (Cu. Yd.)			**339**				

EARTHWORK PROJECT I.D. 1400-00-72: CTH P

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
11+00	1100.00	0.00	86	23	11	0	0	0	0	0	0
11+50	1150.00	50.00	96	16	11	168	36	20	168	25	107
11+53	1153.00	3.00	83	16	7	10	2	1	178	27	114
12+00	1200.00	47.00	34	5	4	101	18	9	279	38	186
12+50	1250.00	50.00	35	0	0	64	4	4	343	44	240
						343	**60**	**35**			
				Cum. Net Vol. (Cu. Yd.)		**308**					

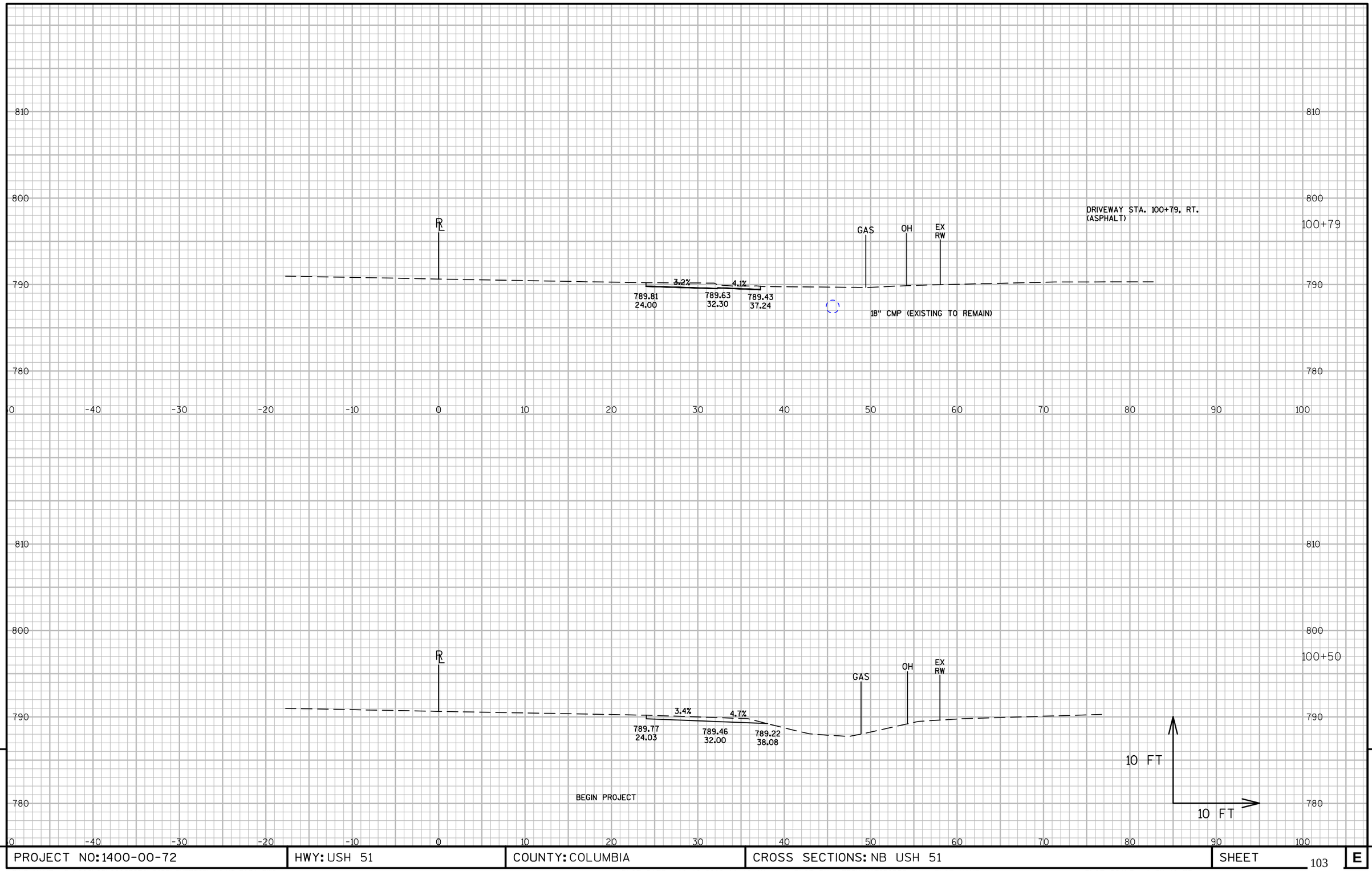
9

9

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	EARTHWORK	SHEET 102	E

FILE NAME : P:\90s\93\00093276\CADD\SheetsPlan\1400-00-72 Earthwork Border.dgn PLOT DATE : 7/29/2016 PLOT BY : jdolens PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 49



9

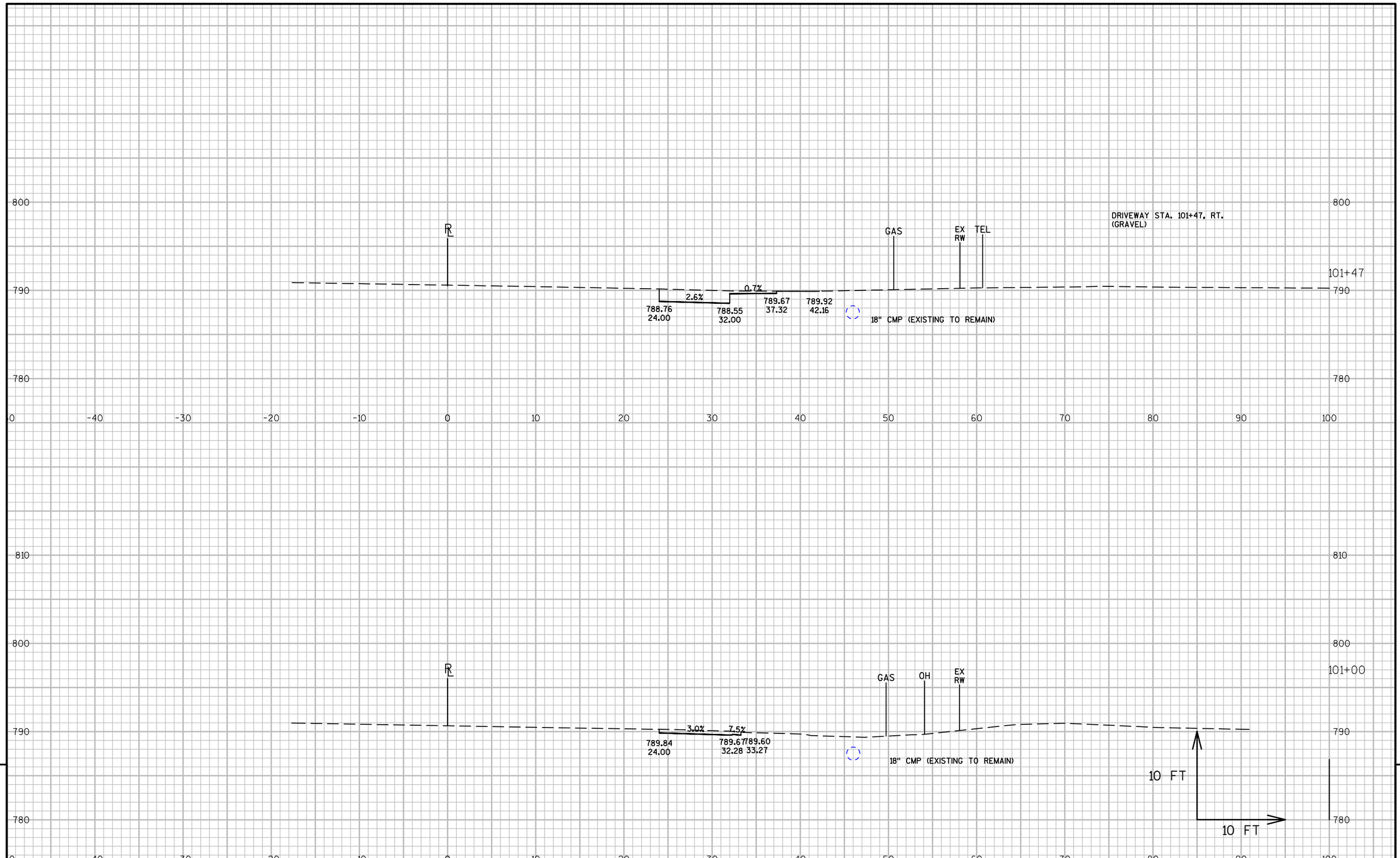
9

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 103	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090101

PLOT DATE : 10/10/2016 11:10 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

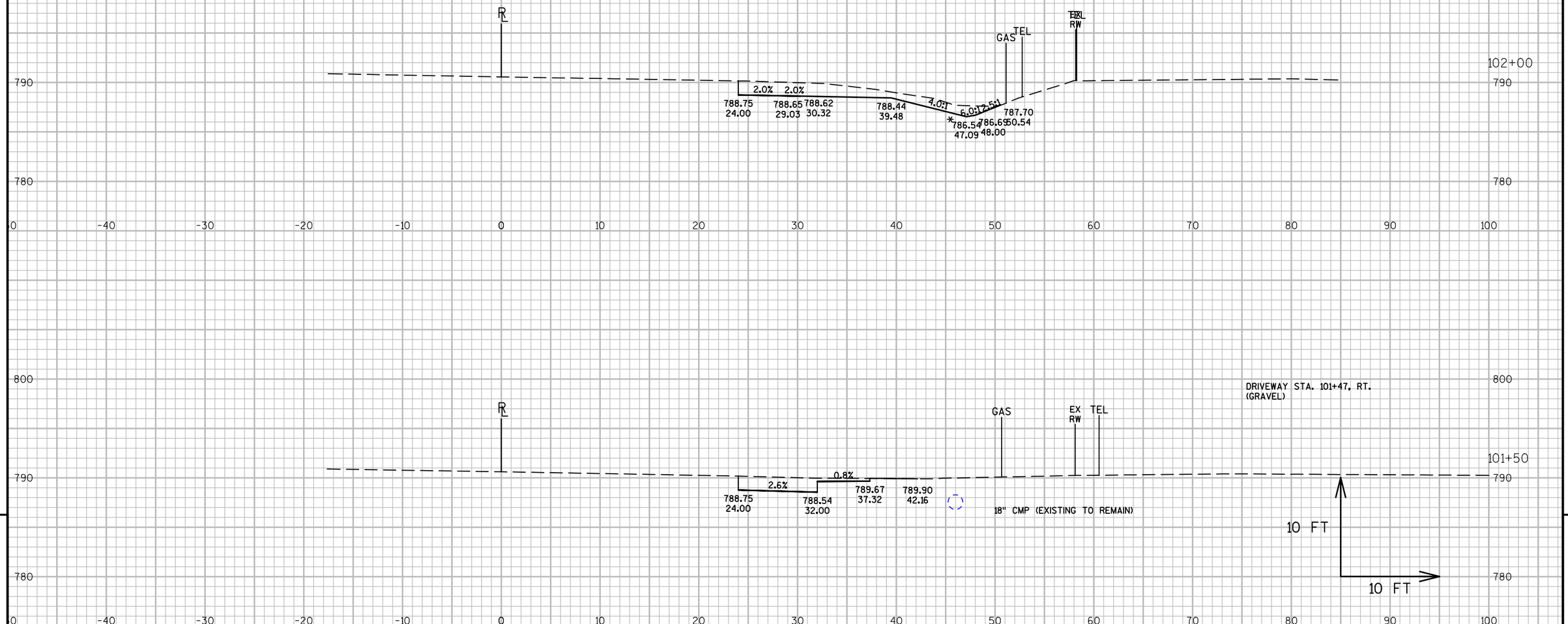
9

PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 104	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090102

PLOT DATE : 10/10/2016 11:10 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

*SPECIAL DITCH ELEVATION



9

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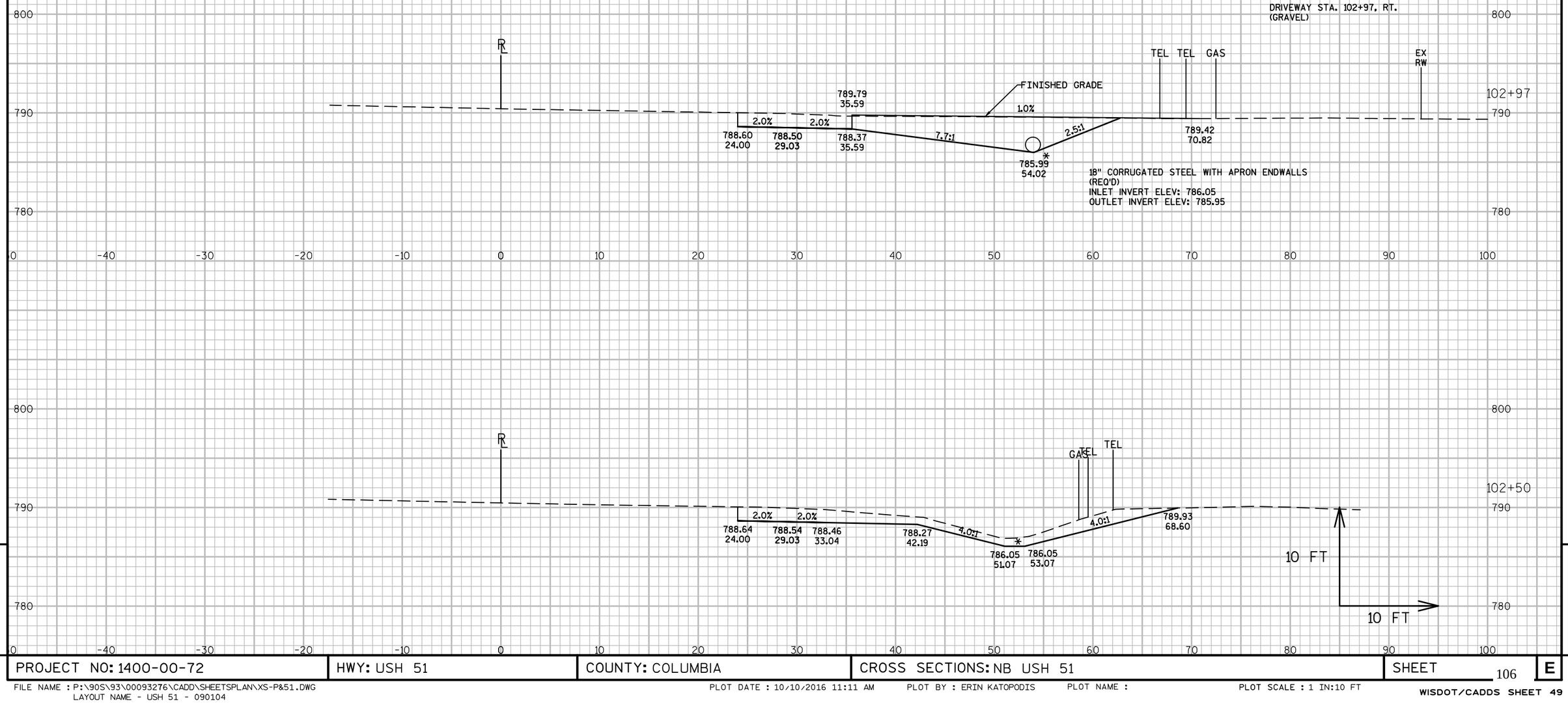
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 105	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090103

PLOT DATE : 10/10/2016 11:10 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

*SPECIAL DITCH ELEVATION



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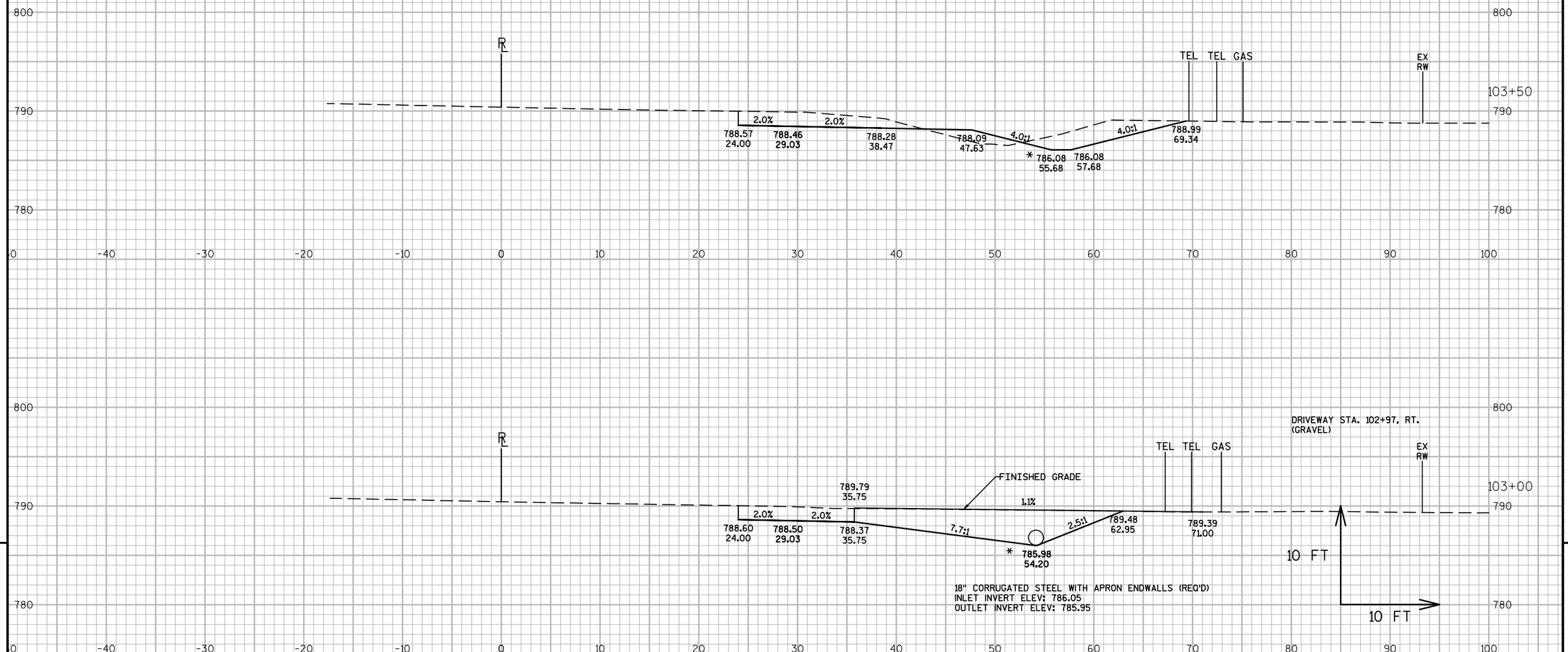
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 106	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090104

PLOT DATE : 10/10/2016 11:11 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

*SPECIAL DITCH ELEVATION



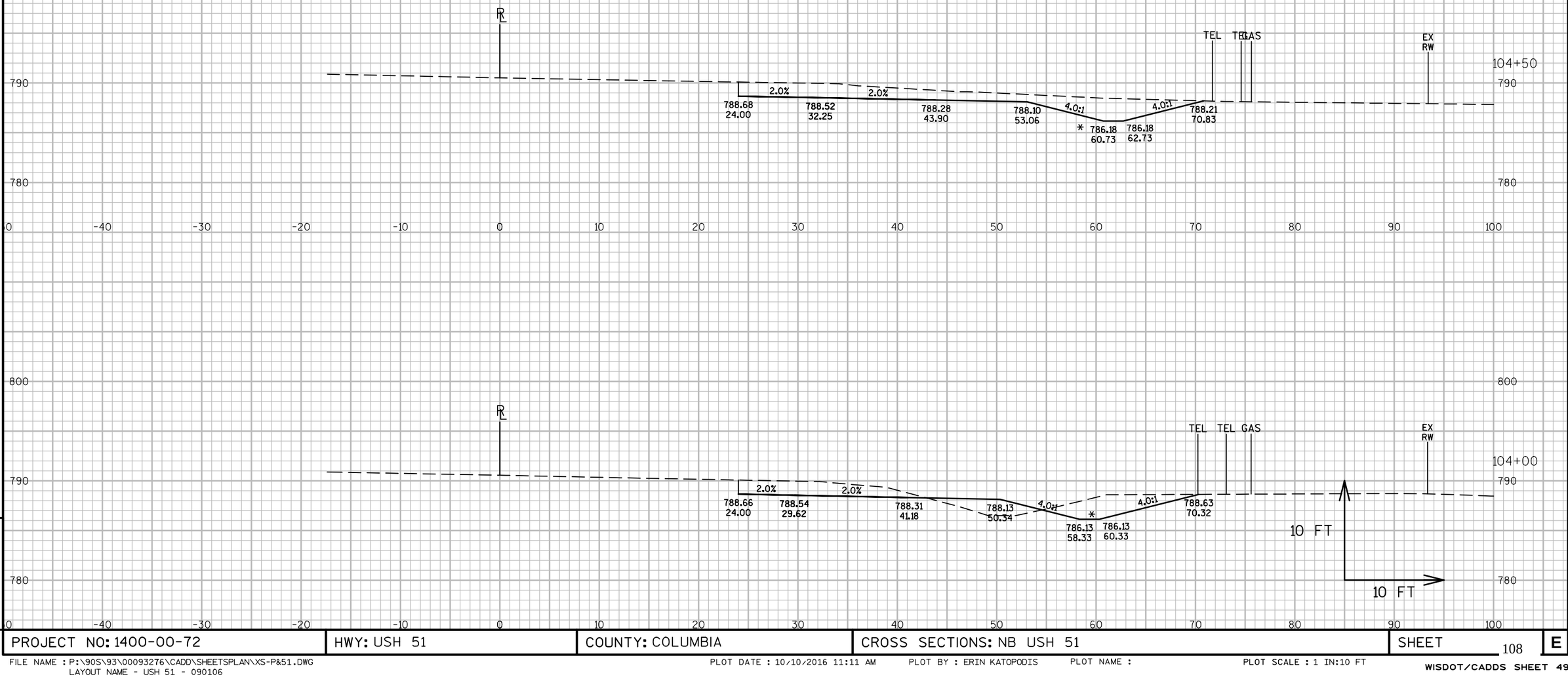
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 107	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090105

PLOT DATE : 10/10/2016 11:11 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

*SPECIAL DITCH ELEVATION



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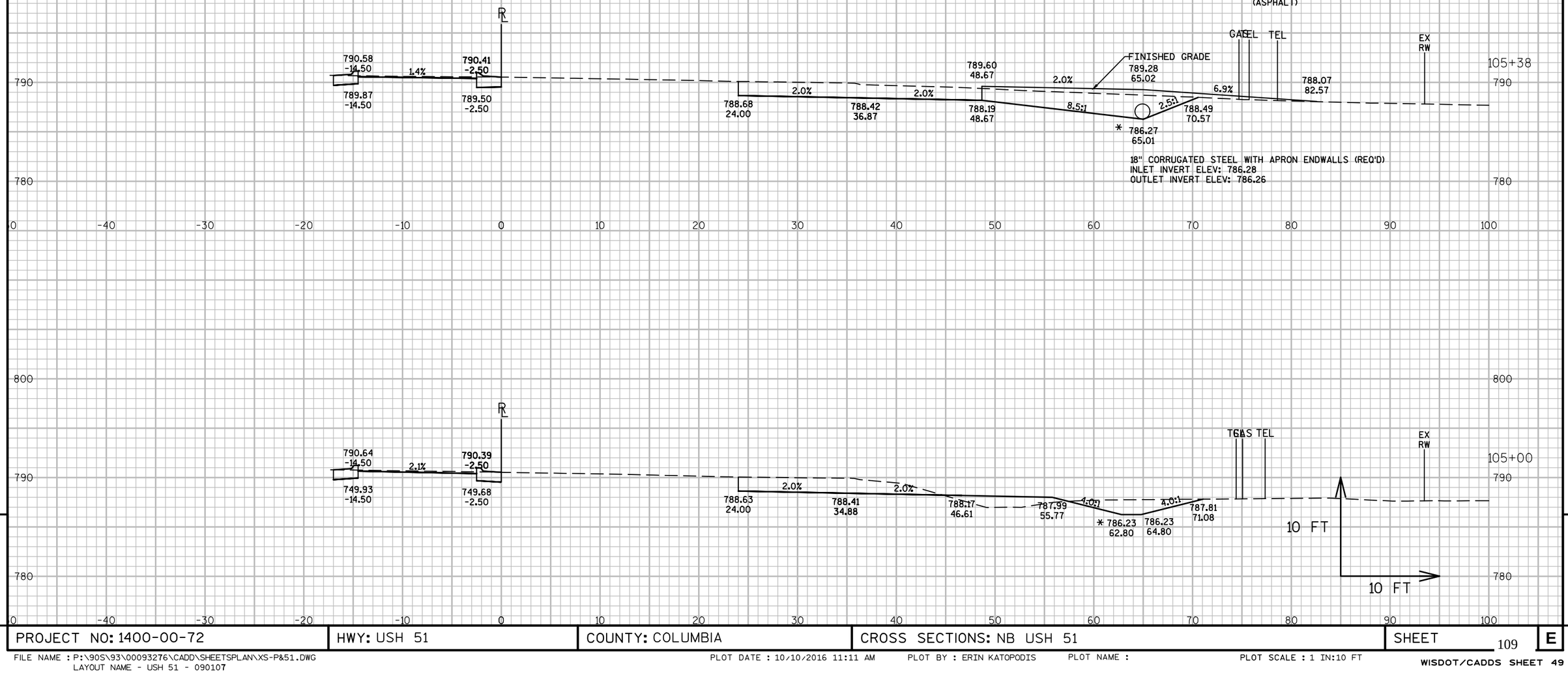
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 108	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090106

PLOT DATE : 10/10/2016 11:11 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

*SPECIAL DITCH ELEVATION



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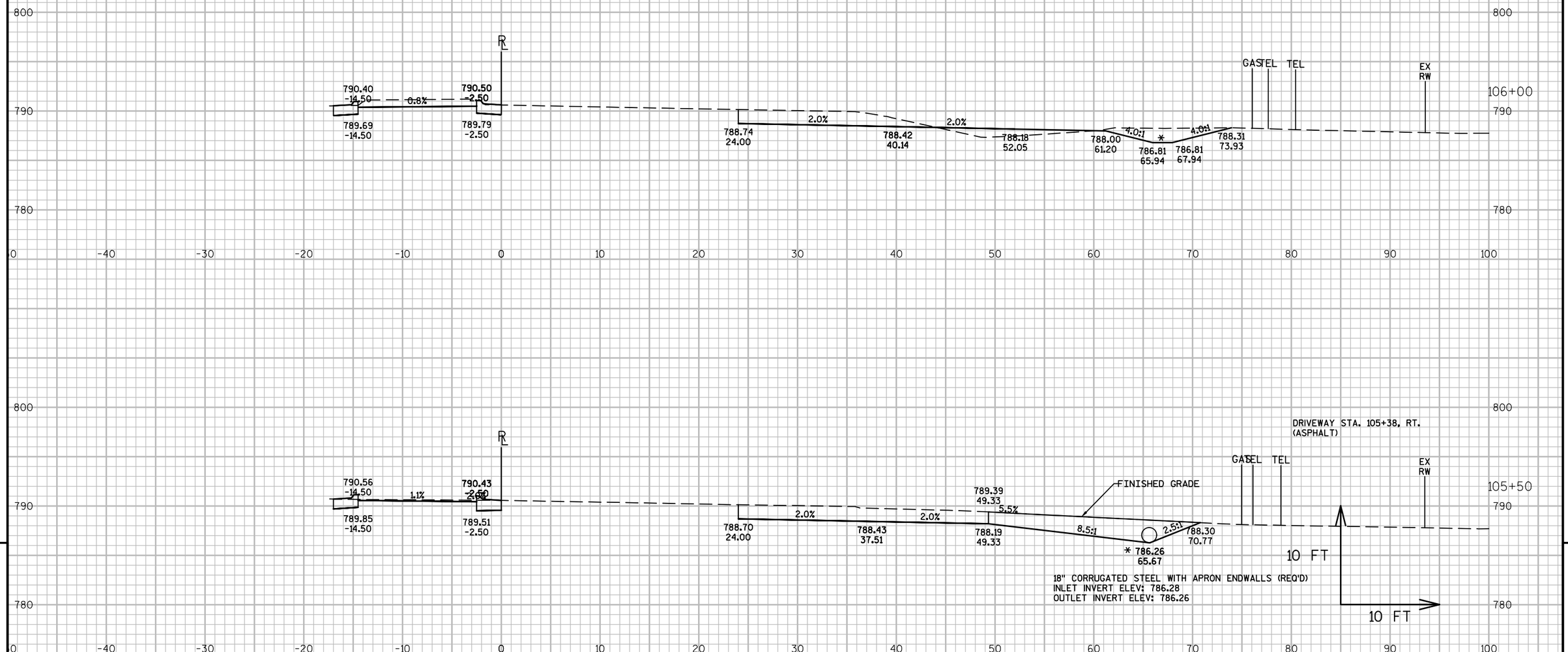
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 109	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090107

PLOT DATE : 10/10/2016 11:11 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

*SPECIAL DITCH ELEVATION



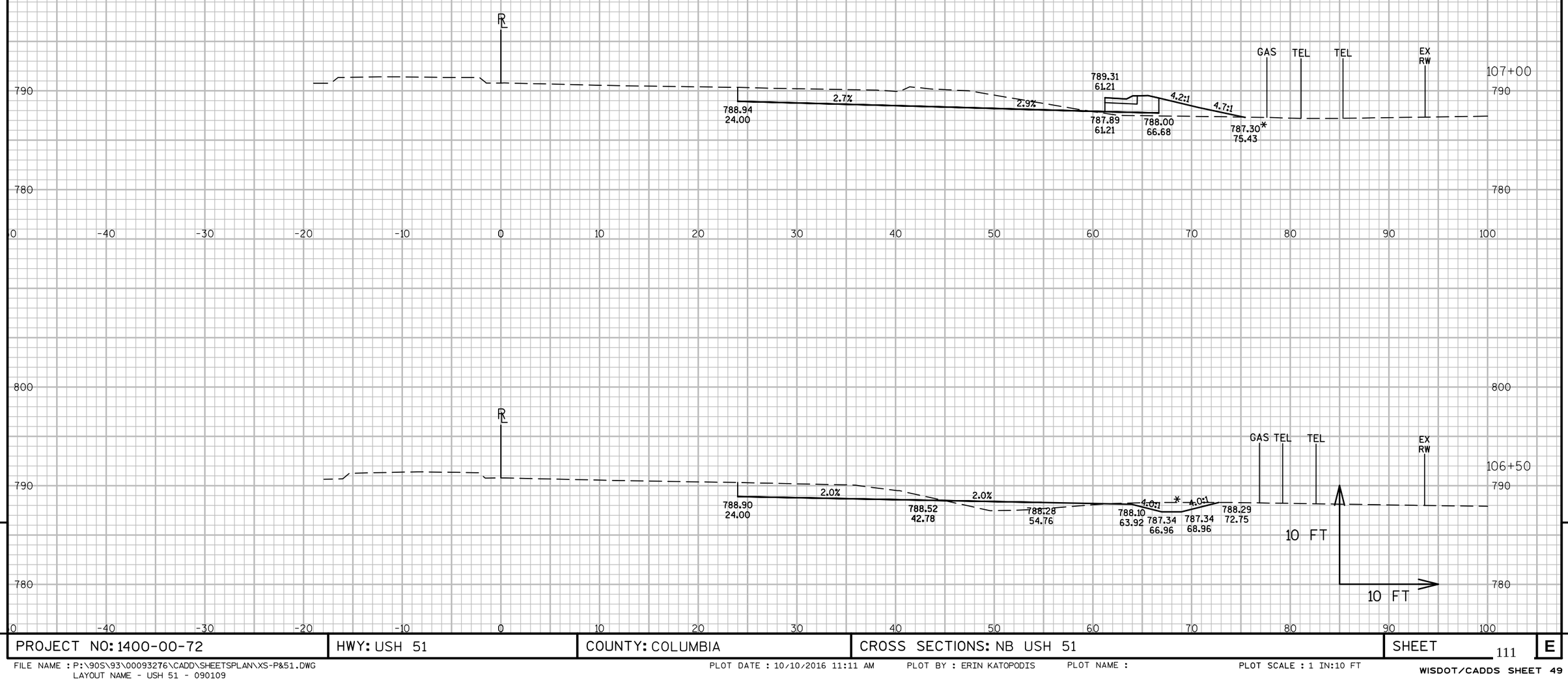
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 110	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090108

PLOT DATE : 10/10/2016 11:11 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

*SPECIAL DITCH ELEVATION



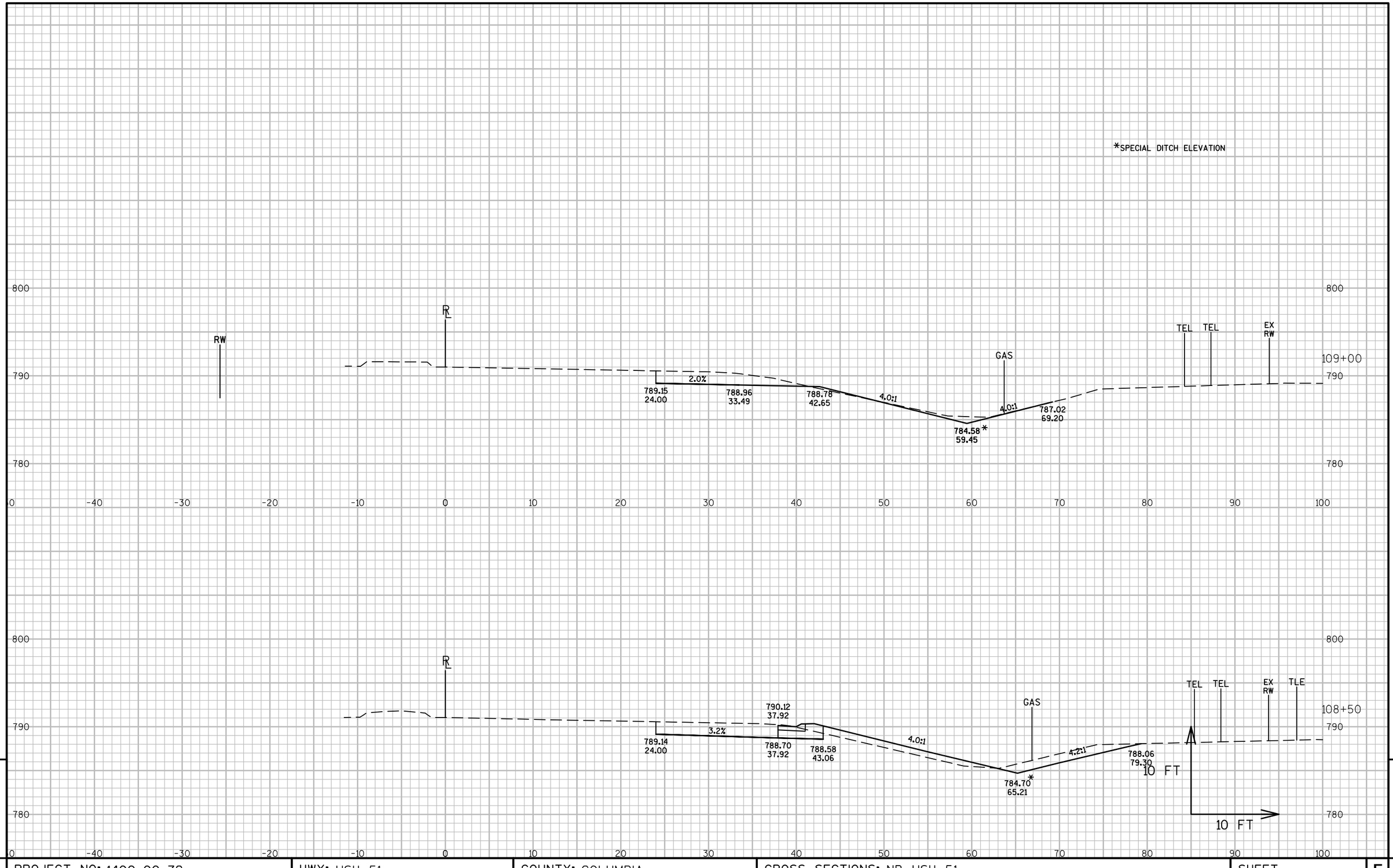
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 111	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090109

PLOT DATE : 10/10/2016 11:11 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

*SPECIAL DITCH ELEVATION



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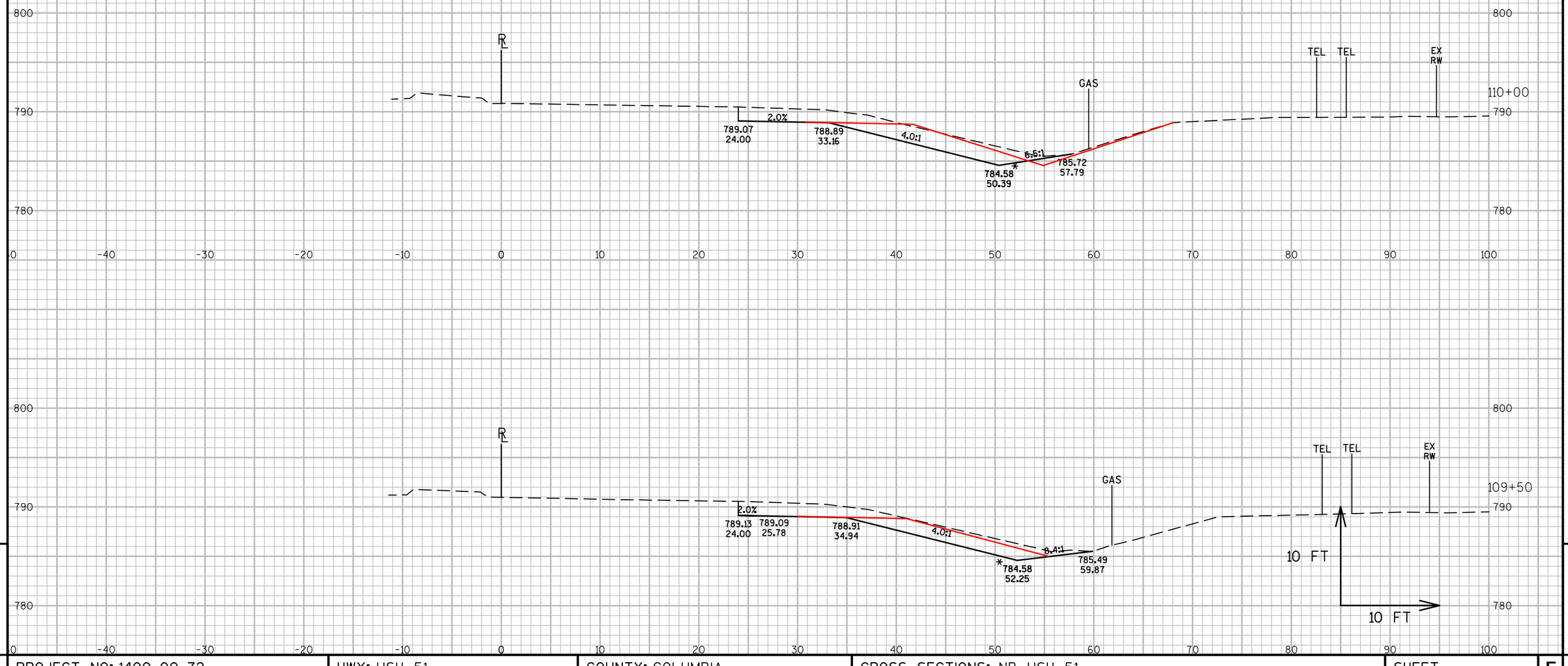
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 112	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090110

PLOT DATE : 10/10/2016 11:12 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

*SPECIAL DITCH ELEVATION

END PROJECT



9

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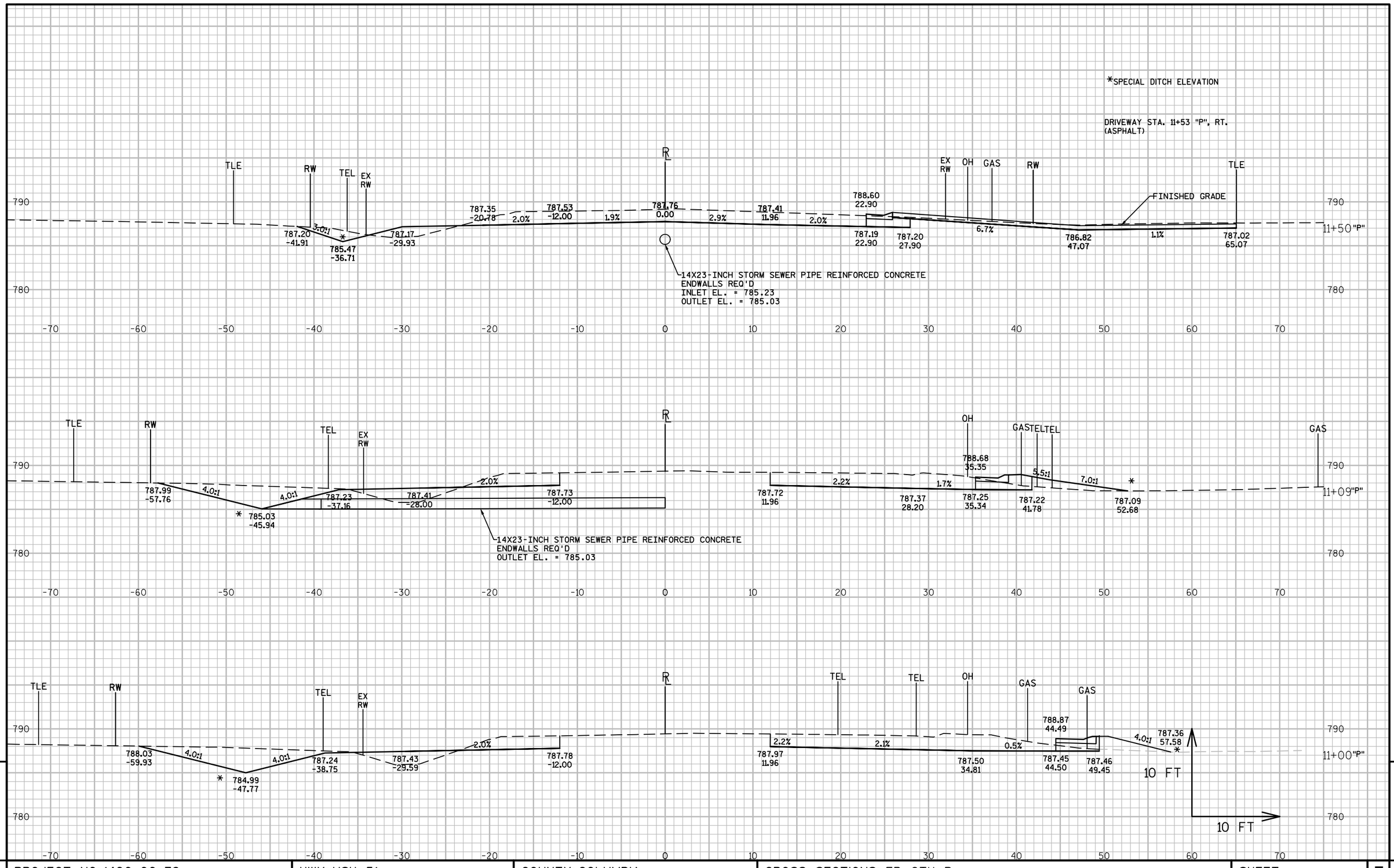
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: NB USH 51	SHEET 113	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - USH 51 - 090111

PLOT DATE : 10/10/2016 11:12 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

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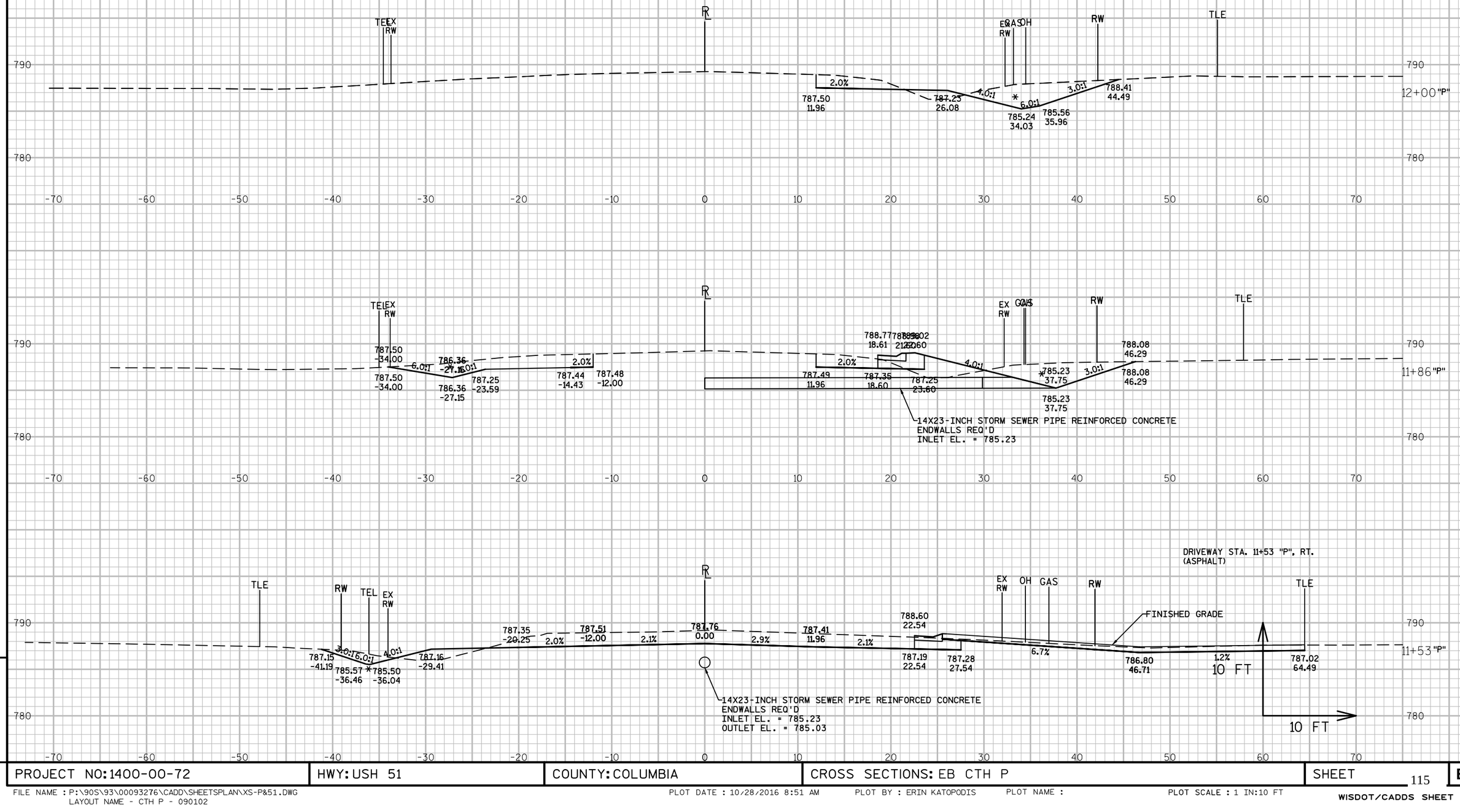
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: EB CTH P	SHEET 114	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - CTH P - 090101

PLOT DATE : 10/10/2016 11:09 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

*SPECIAL DITCH ELEVATION



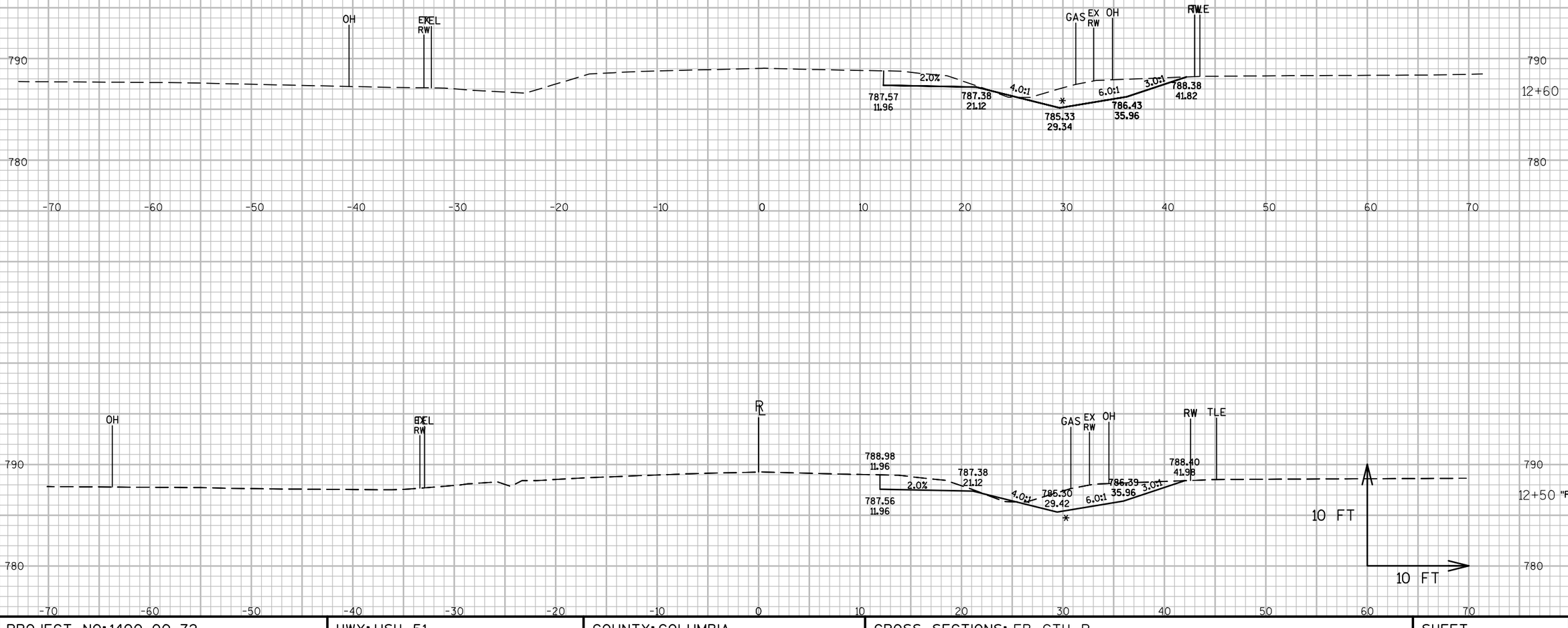
PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: EB CTH P	SHEET 115	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - CTH P - 090102

PLOT DATE : 10/28/2016 8:51 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

END CONSTRUCTION
12+60

*SPECIAL DITCH ELEVATION



PROJECT NO: 1400-00-72	HWY: USH 51	COUNTY: COLUMBIA	CROSS SECTIONS: EB CTH P	SHEET 116	E

FILE NAME : P:\90S\93\00093276\CADD\SHEETSPLAN\XS-P&51.DWG
LAYOUT NAME - CTH P - 090103

PLOT DATE : 10/10/2016 11:10 AM PLOT BY : ERIN KATOPODIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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through innovation and exceptional service.

http://www.dot.wisconsin.gov