MAD

AUG 2018

PROJECT ID: 1204-04-77

COUNTY: IOWA COUNTY

ORDER OF SHEETS

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

TOTAL SHEETS = 588

01

N

DESIGN DESIGNATION 1204-04-07

A.A.D.T.	2014	=	9,900
A.A.D.T.	2034	=	13,000
D.H.V.		=	15.2
D.D.		=	60/40
T.		=	18.1%
DESIGN SPEED		=	70 MPH
ESALS		=	6,862,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PLATTEVILLE - MADISON

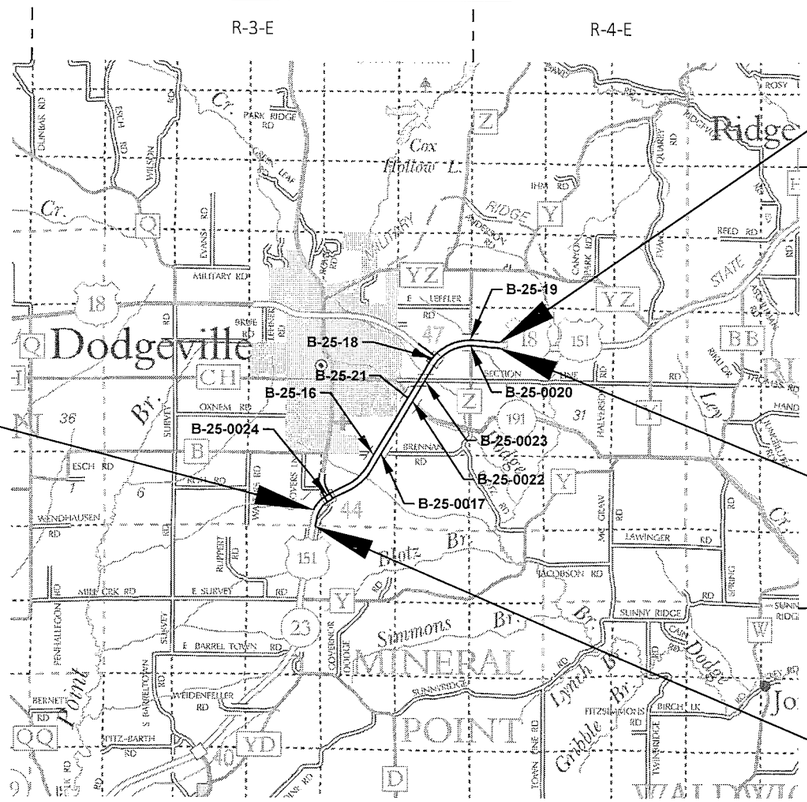
STH 23 - USH 18/B-25-16 THRU -24

USH 151

IOWA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1204-04-77	WISC 2018363	1

STATE PROJECT NUMBER
1204-04-77



BEGIN CONSTRUCTION
STA 63+48"SB"
Y: 144,904.20
X: 378,807.36

LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 3.844 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, IOWA COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF NAVD 88 (2007)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	DAVID SCHMIDT, P.E.
Project Manager	CHRIS HAZARD, P.E.
Regional Examiner	SW REGION
Regional Supervisor	KURT JOHNSON, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 5/11/18 (Signature)

E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\010101_TI.DWG PLOT DATE : 4/24/2018 8:36 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE SEEDED, FERTILIZED, AND MULCHED AS DIRECTED BY THE ENGINEER. ALL THE OTHER DISTURBED AREAS ARE TO BE SEEDED, FERTILIZED AND MULCHED AT THE CONTRACTORS EXPENSE.

WHEN THE QUANTITY OF THE ITEM OF BASE OR SURFACE COURSE IS MEASURED FOR PAVEMENT BY THE TON THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

ALL CURB AND GUTTER RADII ARE MEASURE TO THE FLAG OF CURB UNLESS OTHERWISE NOTED.

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

SAWCUTS AS SHOWN ON THE PLAN ARE AT SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS

PLACE 4" ASPHALTIC SURFACE/PAVEMENT FOR CROSSOVERS IN ONE LAYER. PLACE THE 3.5" HMA PAVEMENT FOR SHOULDERS IN ONE LAYER

BACKFILL ALL HOLES REMAINING DUE TO GUARDRAIL POST REMOVAL WITH BASE AGGREGATE DENSE 1-1/4-INCH.

HMA PAVEMENT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

NUMBER, LOCATION, AND SPACING OF SIGNS AND DEVICES, AS SHOWN IN THE PLANS, SHALL BE ADJUSTED TO FIT FIELD CONDITIONS, LOCATIONS TO BE DETERMINED BY THE FIELD ENGINEER.

PRIOR TO PLACEMENT OF MGS BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

EROSION CONTROL FEATURES, AS SHOWN IN THE PLANS, ARE AT SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL ACCESS ONTO AND OFF OF THE PROJECT LIMITS IS THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE AT THE CONTRACTORS EXPENSE.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS SUPERELEVATION RATE WHEN THE SUPERELEVATION RATE IS GREATER THAN 4.0%. IF THE SUPERELEVATION RATE IS LESS THAN OR EQUAL TO 4.0% THE LOW SIDE SHOULDER SLOPE IS 4.0%. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS THE EQUALS SUPERELEVATIONS RATE.

PRIOR TO LANE CLOSURES THE CONTRACTOR SHALL PROVIDE THE ENGINEER, THE IOWA COUNTY SHERIFF, AND THE STATE HIGHWAY PATROL WITH THE NAME AND TELEPHONE NUMBER OF A LOCAL PERSON TO CONTACT IN CASE OF EMERGENCY.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

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

UTILITY CONTACTS

ALLIANT ENERGY CORP: ELECTRIC & GAS/PETROLEUM
JASON HEMING
761 ENTERPRISE DR
PLATTEVILLE, WI 53818
(608) 458-4242 (OFFICE)
(608) 295-9730 (MOBILE)
Jasonheming@alliantenergy.com

ATC MANAGEMENT, INC.: ELECTRIC
DOUG VOSBERG
2489 RINDEN RD
COTTAGE GROVE, WI 53527
(608) 877-7650 (OFFICE)
(608) 438-7650 (MOBILE)
dvosberg@atcllc.com

WISCONSIN DOT RWIS PROGRAM - COMMUNICATION TOWER
MIKE ADAMS
WisDOT/BHM
Attn: Mike Adams
PO BOX 7986
MADISON, WI 53707
(608) 266-5004
Michael.Adams@dot.wi.gov

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
DANA GILLETT
100 COMMUNICATIONS DR
SUN PRARIE, WI 53590
(608) 837-1605 (OFFICE)
(608) 512-2389 (MOBILE)
dana.gillett@frt.com

PACKERLAND BROADBAND - COMMUNICATION LINE
WAYNE CRETTON
PO BOX 190
105 KENT ST
IRON MOUNTAIN, MI 49801
(906) 282-3768
wayne.cretton@packerlandbroadband.com

WINDSTREAM KDL INC.
KEVIN PARRIS
1858 WRIGHT ST
MADISON, WI 53704
(608) 819-5016
kevin.j.parris@windstream.com

CONTACTS

WDNR CONTACT
ANDY BARTA
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3308

WISDOT MAINTENANCE
IOWA - LAFAYETTE COUNTIES
BRIAN RICE
WISCONSIN DEPARTMENT OF TRANSPORTATION
SW REGION, MADISON OFFICE
2101 WRIGHT STREET
MADISON, WI 53704
(608) 246-3872

IOWA COUNTY HIGHWAY DEPARTMENT
CRAIG HARDY
HIGHWAY COMMISSIONER
1215 N BEQUETTE ST
DODGEVILLE, WI 53533
(608) 935-3381 EXT. 605

WISDOT PROJECT DEVELOPMENTSECTION
CHRIS HAZARD
PROJECT MANAGER
2101 WRIGHT ST
MADISON, WI 53704
(608) 245-2652

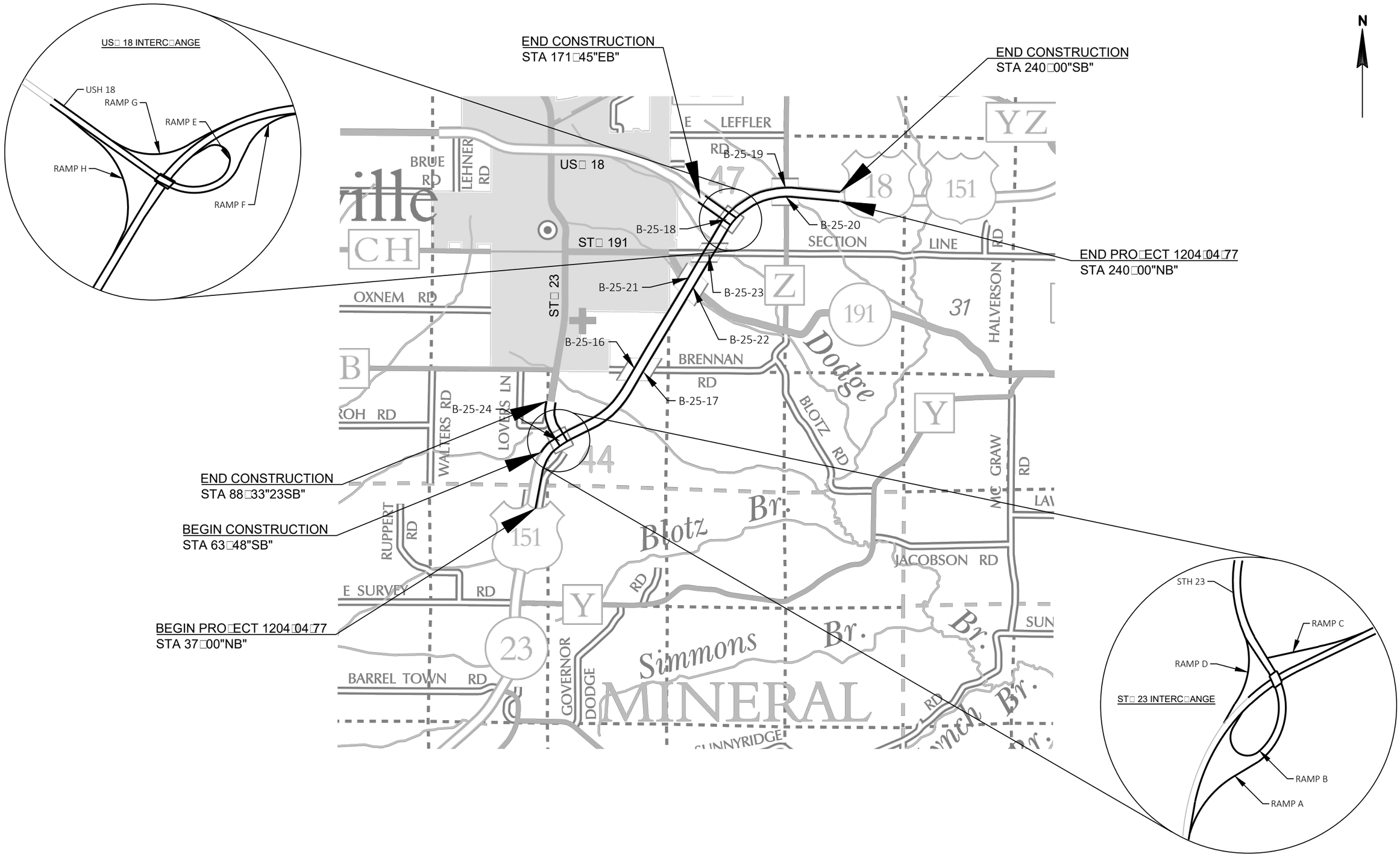
DAVID SCHMIDT
PROJECT DEVELOPMENT ENGINEER
2101 WRIGHT ST
MADISON, WI 53704
(608) 246-3867

TABLE OF CONTENTS OF TYPICAL SECTION AND DETAIL S□EETS

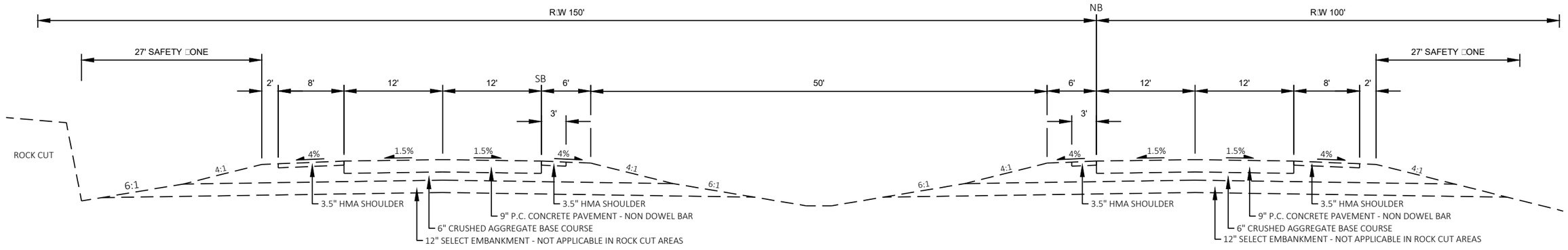
-PROJECT OVERVIEW
-TYPICAL SECTIONS
-CONSTRUCTION DETAILS
-CONSTRUCTION SURFACE DRAIN DETAIL - ADJACENT TO STRUCTURES
-BRIDGE B-25-18 - APPROACH SLAB DETAIL
-BRIDGE B-25-16 & B-25-17 - APPROACH SLAB DETAIL
-BRIDGE B-25-21 & B-25-22 - APPROACH SLAB DETAIL
-BRIDGE B-25-19 & B-25-20 - APPROACH SLAB DETAIL
-STORM SEWER AT USH 18 DETAIL
-CROSSOVER V DETAIL
-CROSSOVER W DETAIL
-CROSSOVER X DETAIL
-CROSSOVER Y DETAIL
-CROSSOVER Z DETAIL
-PAVING DETAILS
-EROSION CONTROL DETAILS
-TRAFFIC CONTROL DETAILS
-ALIGNMENT DETAILS

STANDARD ABBREVIATIONS

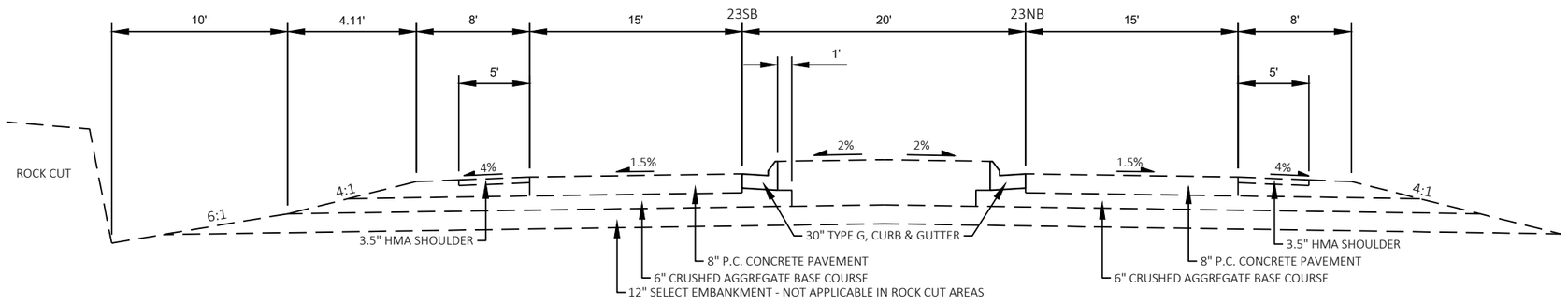
AP	Access Point
AC	Acre
AGG	Aggregate
ASPH	Asphaltic
BAD	Base Aggregate Dense
BL	Baseline
BM	Bench Mark
CB	Catch Basin
CE	Commercial Entrance
CL	Center Line
CONC	Concrete
CO	County
CABC	Crushed Aggregate Base Course
CY	Cubic Yard
CULV	Culvert
CP	Culvert Pipe
C&G	Curb and Gutter
DIA	Diameter
DWY	Driveway
EB	Eastbound
EXC	Excavation
EBS	Excavation Below Subgrade
ELEV	Elevation
ESALS	Equivalent Single Axle Loads
EW	Endwall
ENT	Entrance
EXC	Excavation
FP	Fence Post
FERT	Fertilizer
F	Fill
FG	Finished Grade
FL	Flow Line
FO	Fiber Optic
FT	Foot
HYD	Hydrant
INL	Inlet
INTERS	Intersection
INV	Invert
JT	Joint
LT	Left
LF	Linear Foot
MH	Manhole
MP	Marker Post
MB	Message Board
NOM	Nominal
NB	Northbound
PAVT	Pavement
PC	Point of Curvature
PI	Point of Intersection
PT	Point of Tangency
PVC	Point of Vertical Curve
PVI	Point of Vertical Intersection
PVT	Point of Vertical Tangency
PERM	Permanent
PU	Pipe Underdrain
PCC	Portland Cement Concrete
PE	Private Entrance
PROJ	Project
PL	Property Line
RL	Reference Line
RT	Right
R/W	Right of Way
RDWY	Roadway
SHLDR	Shoulder
SB	Southbound
SI	Slope Intercept
SS	Storm Sewer
SW	Sidewalk
TEL	Telephone
TEMP	Temporary
TER	Terrace
TLE	Temporary Limited Easement
TV	Television
UG	Underground
VOL	Volume
W	Water
WB	Westbound



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION
USH 151



EXISTING TYPICAL SECTION
STH 23 INTERCHANGE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EXISTING TYPICAL SECTIONS	SHEET 4	E

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PLOT BY : SCHMIDT, DAVID B
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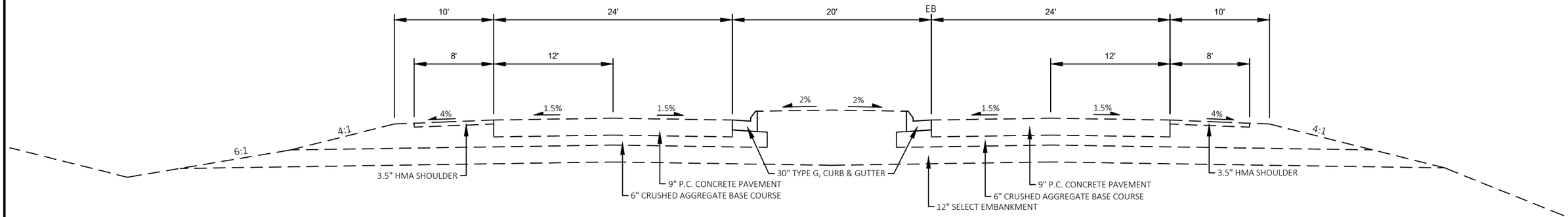
PLOT SCALE : ##########



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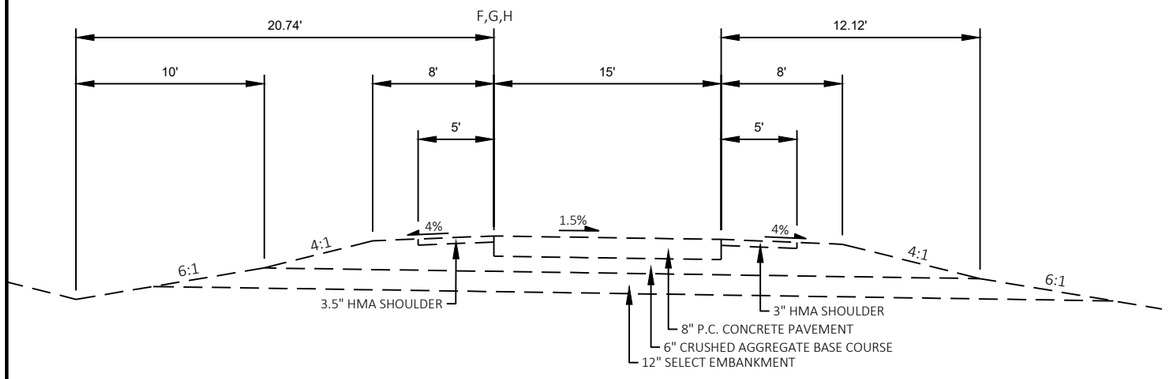
USH 18 INTERCHANGE



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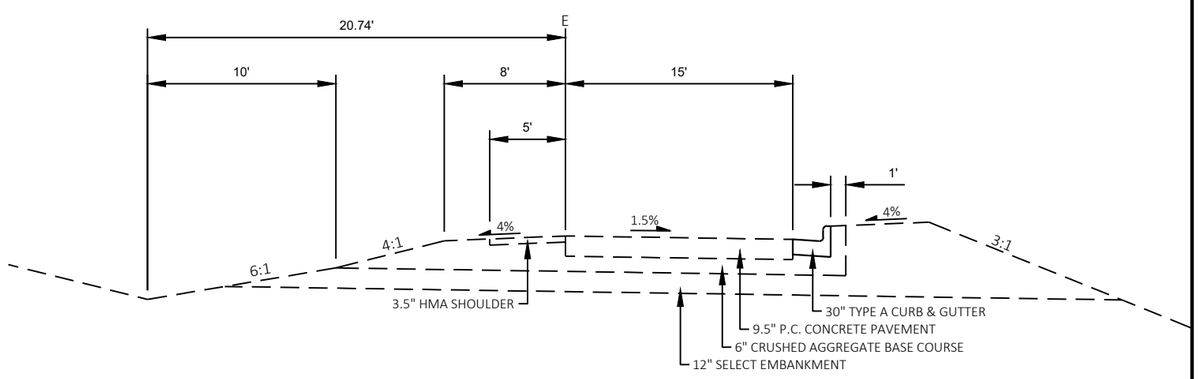
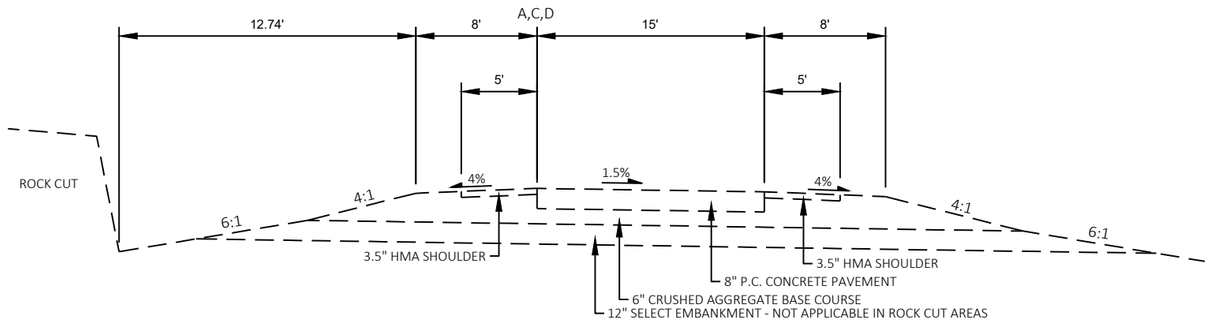
USH 18 RAMP INTERCHANGE



EXISTING TYPICAL SECTION
USH 18 RAMP INTERCHANGE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EXISTING TYPICAL SECTIONS	SHEET 5	E



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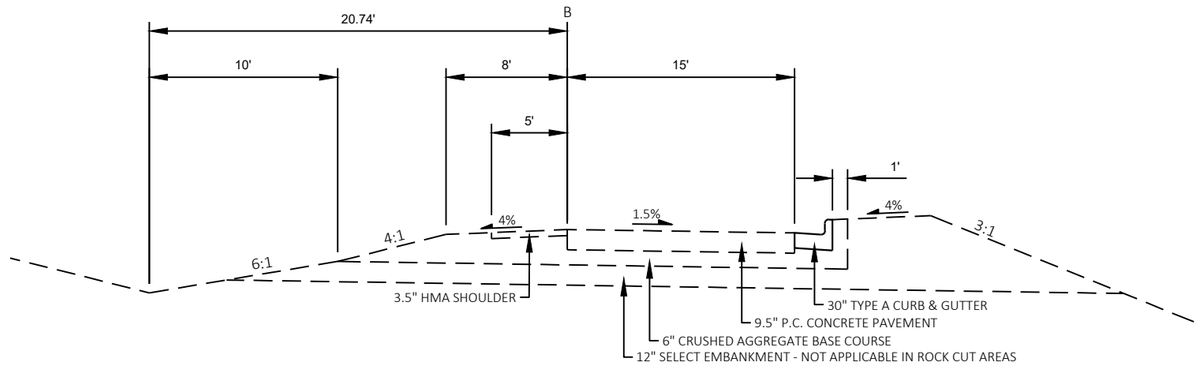

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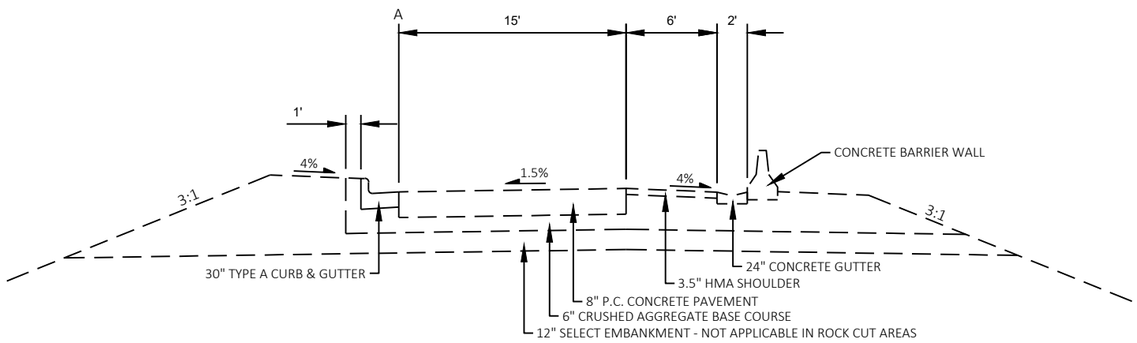

EXISTING TYPICAL SECTION
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PROJECT NO: 1204-04-77	HWY: USH51	COUNTY: IOWA	EXISTING TYPICAL SECTIONS	SHEET 6	E

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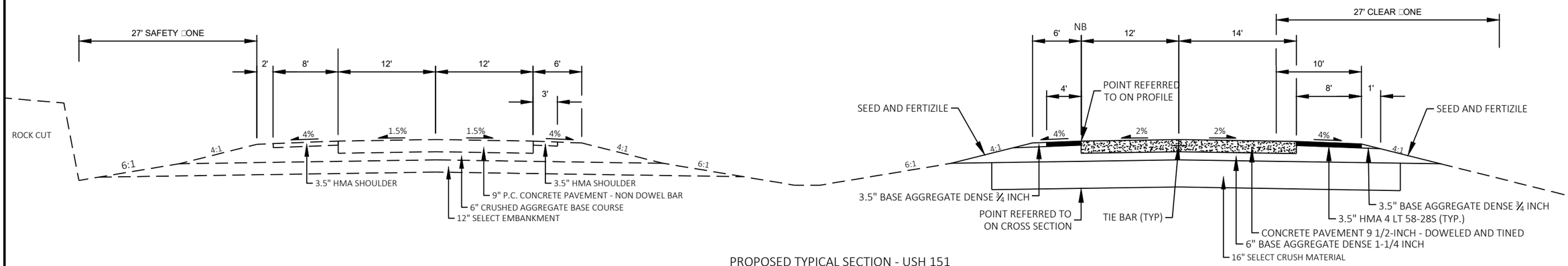
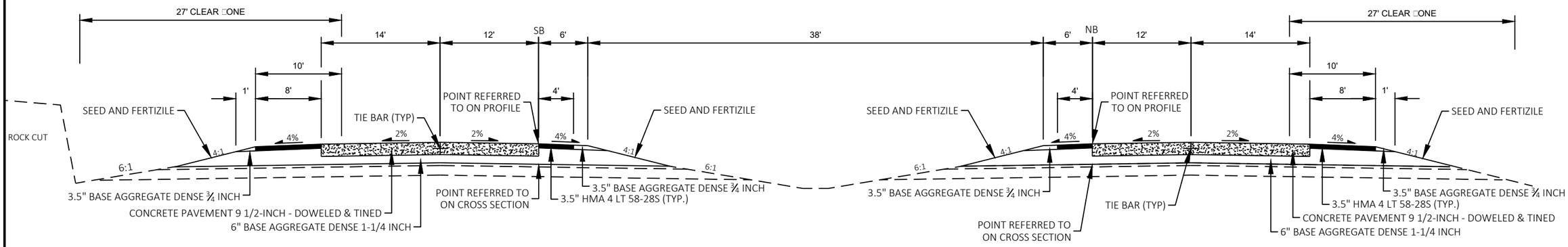


PROPOSED TYPICAL SECTION - USH 151
STA 37+00"NB" - STA 52+00"NB"



PROPOSED TYPICAL SECTION - USH 151
STA 52+00"NB" - STA 113+32"NB"
STA 115+52"NB" - STA 158+55"NB"
STA 160+37"NB" - STA 221+85"NB"
STA 223+35"NB" - STA 240+00"NB"
STA 63+48"SB" - STA 113+20"SB"
STA 115+18"SB" - STA 159+05"SB"
STA 160+79"SB" - STA 222+91"SB"
STA 224+15"SB" - STA 240+00"SB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PROPOSED TYPICAL SECTIONS	SHEET 7	E

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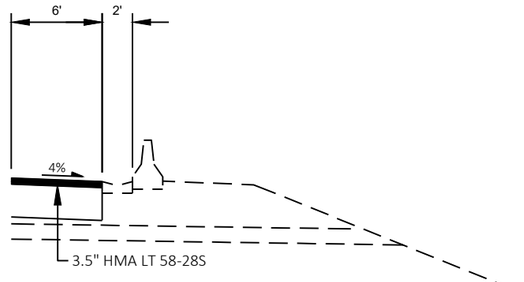
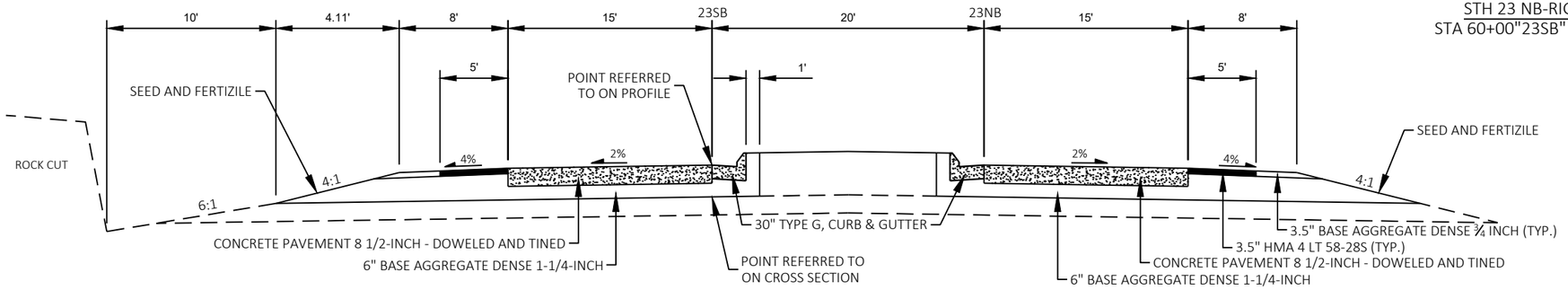
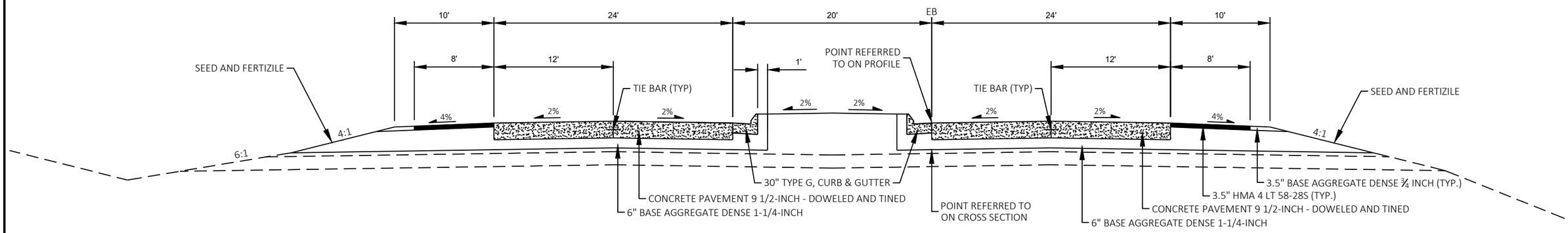


STH 23 NB-RIGHT SHOULDER
STA 60+00"23SB" - STA 65+59"23SB"

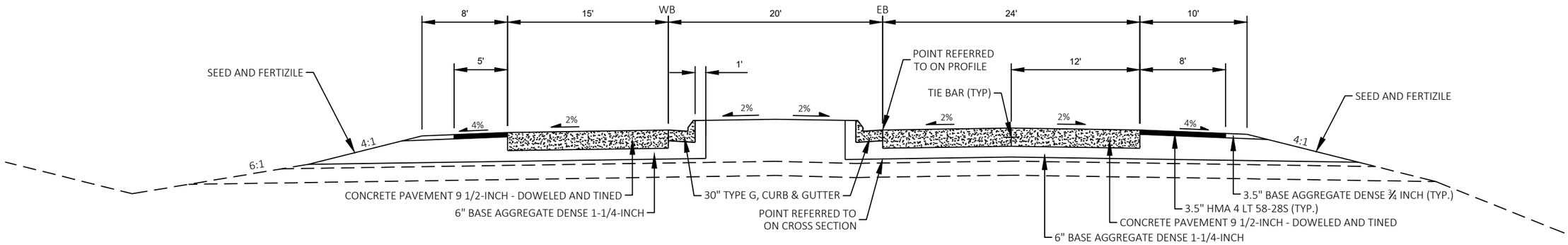


PROPOSED TYPICAL SECTION - STH 23 INTERCHANGE
STA 60+00"23 SB" - STA 65+59"23 SB"
STA 68+40"23 SB" - STA 85+37"23 SB"



PROPOSED TYPICAL SECTION - USH 18 INTERCHANGE
STA 171+45"EB" - STA 182+93"EB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PROPOSED TYPICAL SECTIONS	SHEET 8	E



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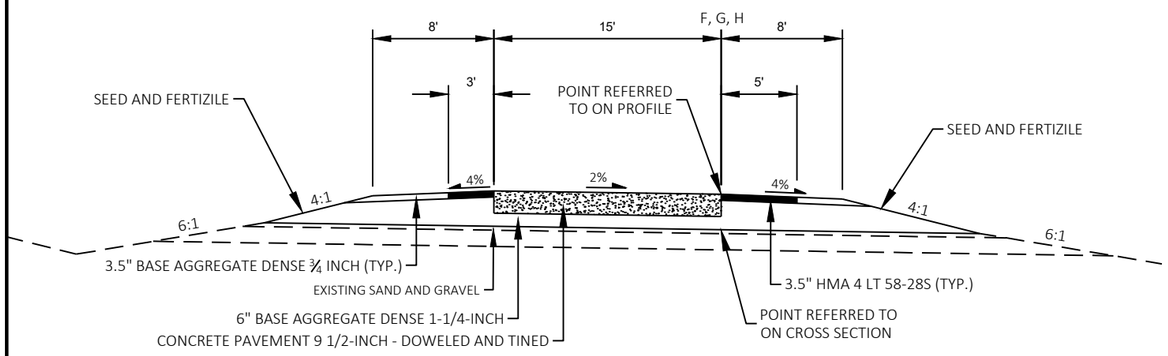
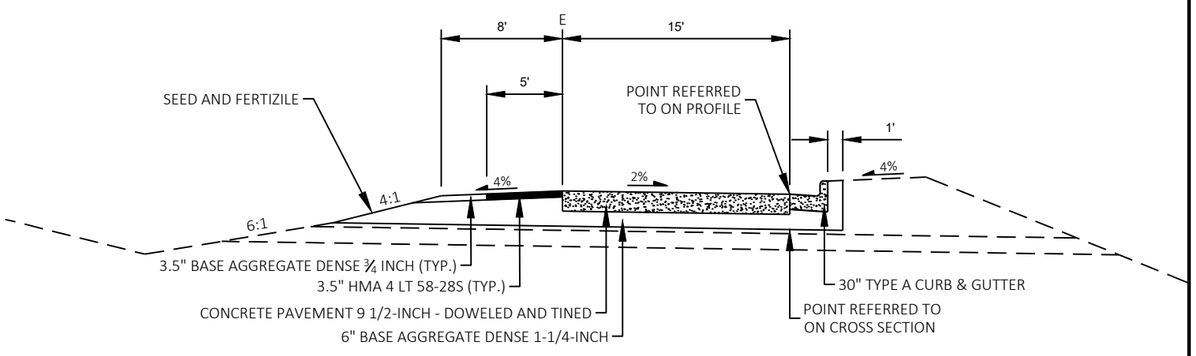
STA 192+96"EB" - STA 205+58"EB"

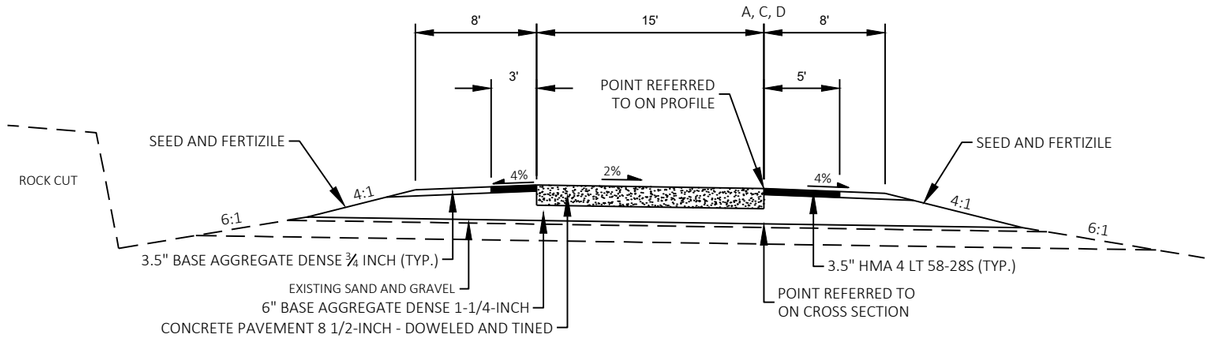


PROPOSED TYPICAL SECTION - USH 18 RAMP INTERCHANGE
STA 209+41"F" - STA 215+18"F"
STA 183+93"G" - STA 195+12"G"
STA 181+04"H" - STA 198+79 "H"

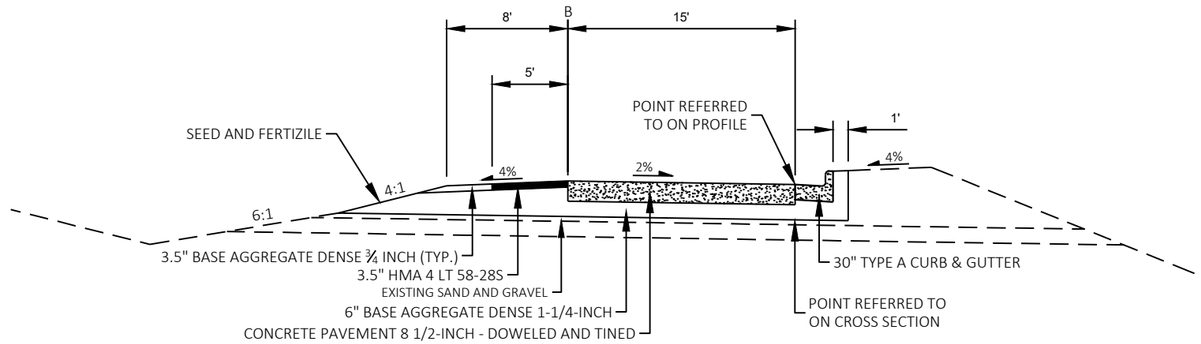


PROPOSED TYPICAL SECTION - USH 18 RAMP INTERCHANGE
STA 203+81"E" - STA 209+90"E"

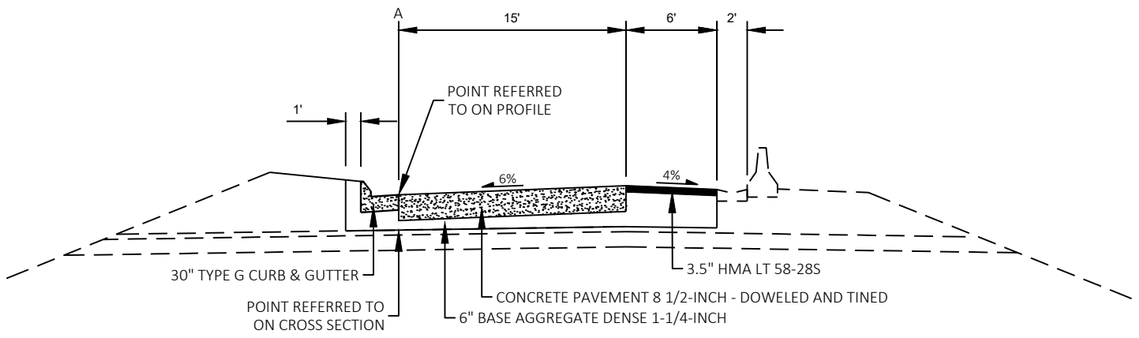
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PROPOSED TYPICAL SECTIONS	SHEET 9	E



PROPOSED TYPICAL SECTION - STH 23 RAMP INTERCHANGE
STA 46+82"A" - STA 54+37"A"
STA 71+18"C" - STA 80+24"C"
STA 65+35"D" - STA 74+22"D"



PROPOSED TYPICAL SECTION - STH 23 RAMP INTERCHANGE
STA 51+70"B" - STA 58+15"B"



PROPOSED TYPICAL SECTION STH 23 RAMP INTERCHANGE
STA 57+21"A" - STA 60+00"A"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN: PROPOSED TYPICAL SECTIONS	SHEET 10	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\020302_TS.DWG
LAYOUT NAME - 04
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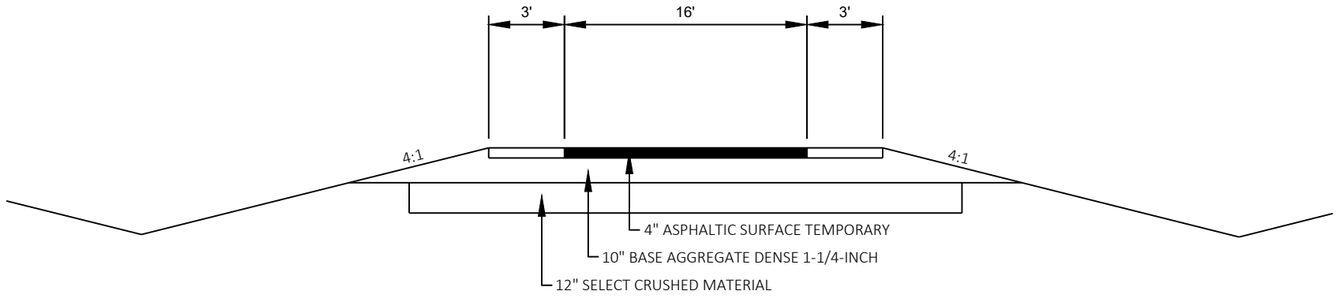
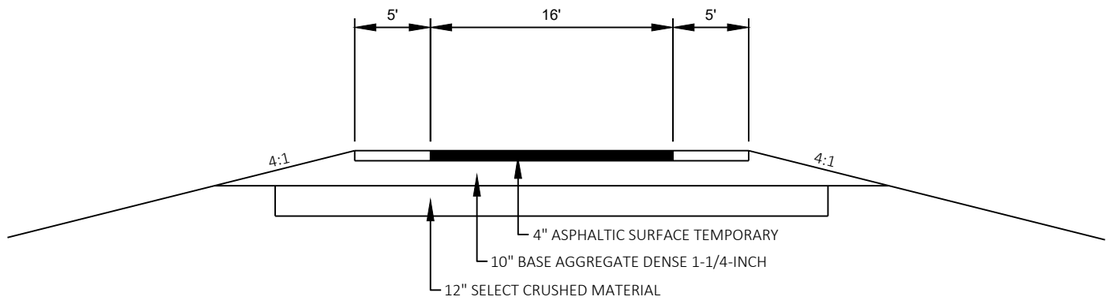
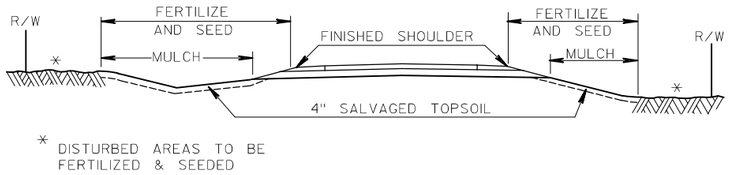
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



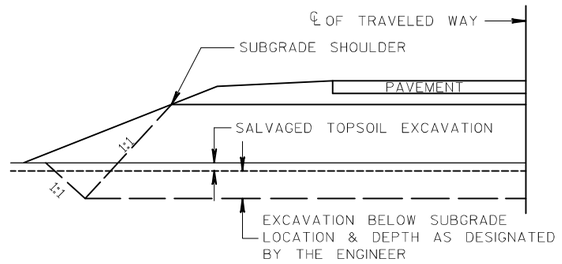
PROPOSED TYPICAL SECTION
TEMPORARY V, W, X CROSSOVERS



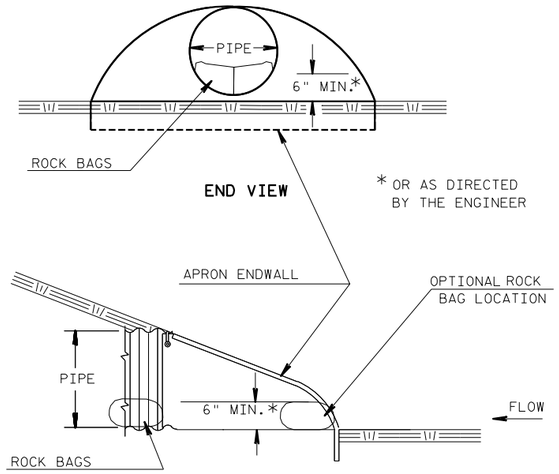
PROPOSED TYPICAL SECTION
TEMPORARY Y & Z CROSSOVERS



DETAIL FOR FINISHING ITEMS

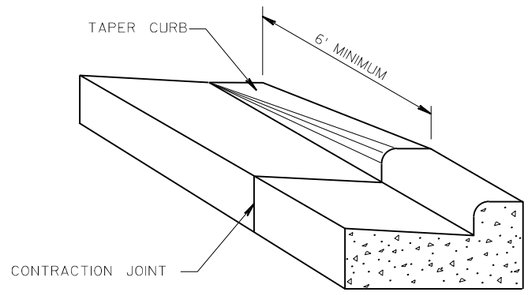


DETAIL FOR EXCAVATION BELOW SUBGRADE



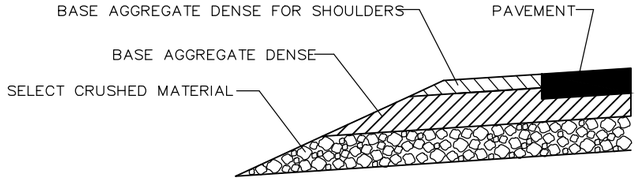
ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
21"	3
14" X 23"	3
24"	3
27"	4
30"	5
19" X 30"	5
36"	7
24" X 38"	8
42"	8
29" X 45"	10
48"	10
34" X 53"	10
38" X 60"	13
60"	13
66"	15
53" X 83"	19

CULVERT PIPE CHECKS

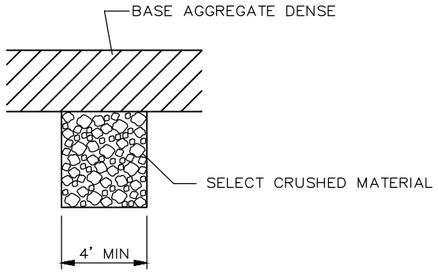


DETAIL OF CURB & GUTTER TERMINI

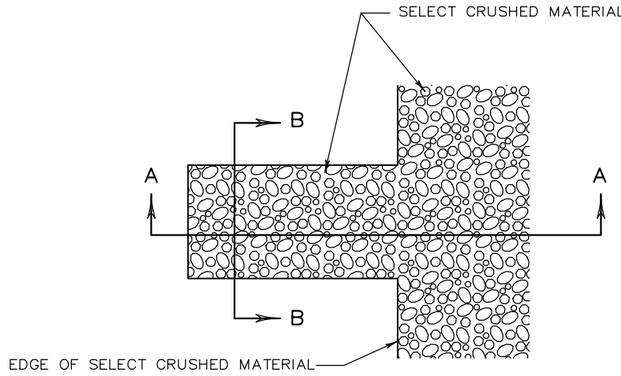
2



SECTION A–A



SECTION B–B



DETAIL FOR FRENCH DRAINS

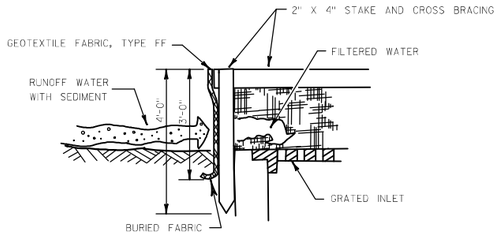
DRAINS ARE TO BE CONSTRUCTED AT LEAST EVERY 250'
AND AT EACH SAG VERTICLE CURVE IN THE PROFILE.

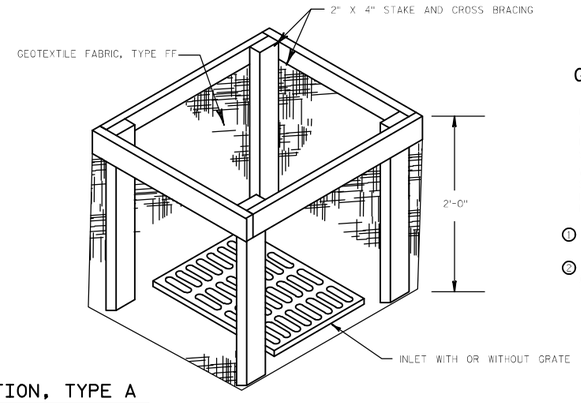
(LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER)

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL
BE CONSIDERED INCIDENTAL TO THE ITEM SELECT CRUSHED MATERIAL.

2

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





GENERAL NOTES:

FABRIC SHALL BE REPLACED AT THE ENGINEERS DISCRETION.

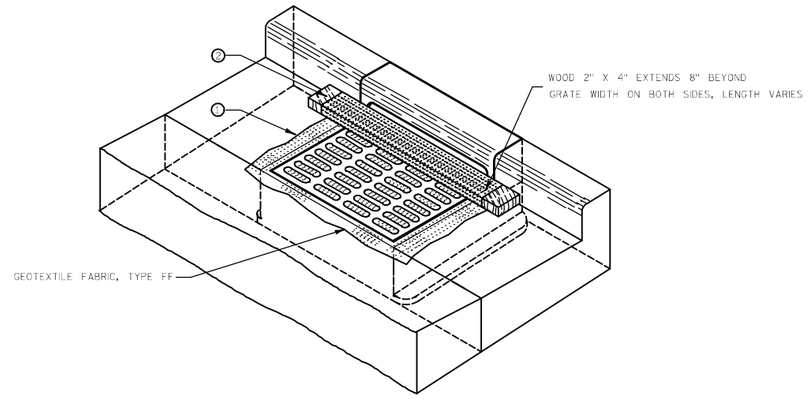
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTIBILITY LIST MAY BE SUBSTITUTED FOR THE INLET PROTECTION TYPE SPECIFIED.

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.

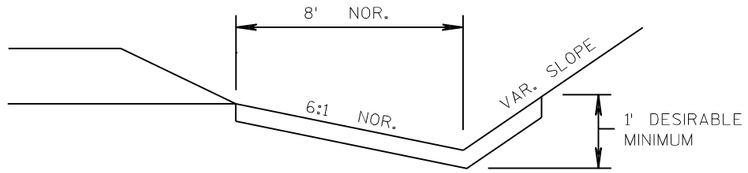
(1) FABRIC SIZE SHALL BE 8" (MIN) GREATER ON ALL SIDES OF THE INLET COVER TO PROVIDE A HAND HOLD WHEN MAINTENANCE OR REMOVAL IS REQUIRED.

(2) FOR INLET PROTECTION, TYPE C, WITH A CURB BOX, AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX.

INLET PROTECTION, TYPE A

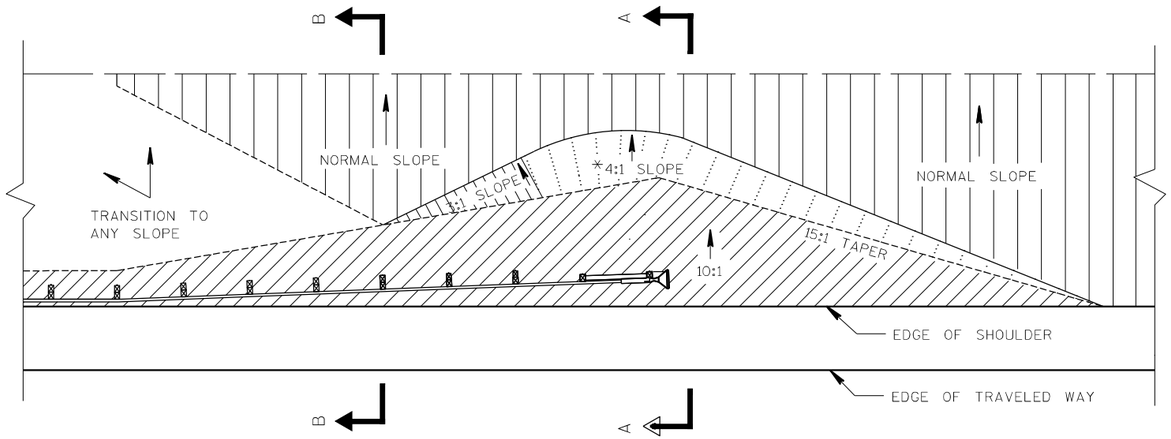


INLET PROTECTION, TYPE C (WITH CURB BOX)



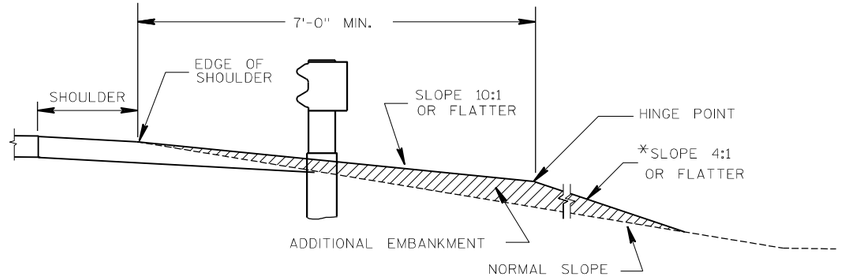
EROSION MAT DETAIL FOR DITCHES

2

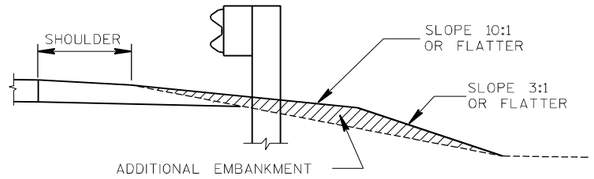


PLAN VIEW

*A 3:1 MAXIMUM SLOPE MAY BE USED FOR INSTALLATIONS ON EXISTING HIGHWAYS.

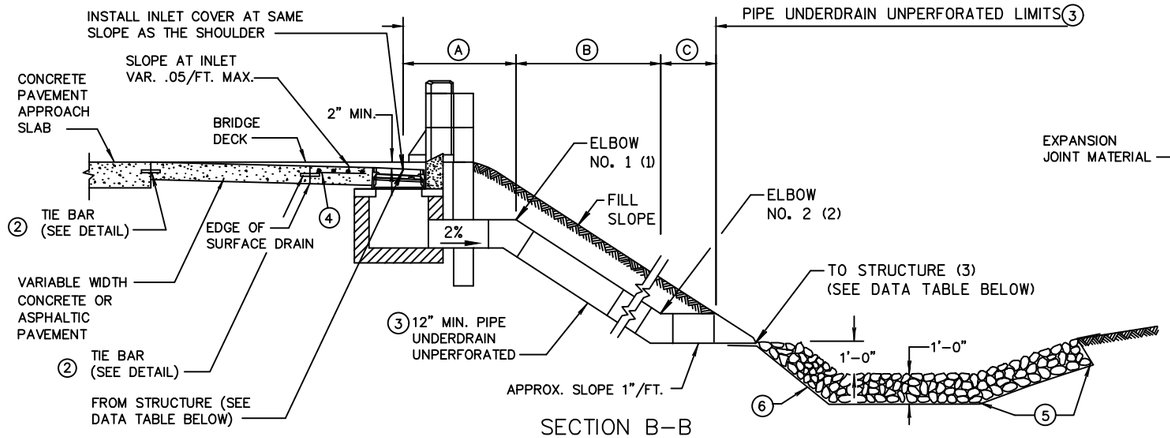


SECTION A-A

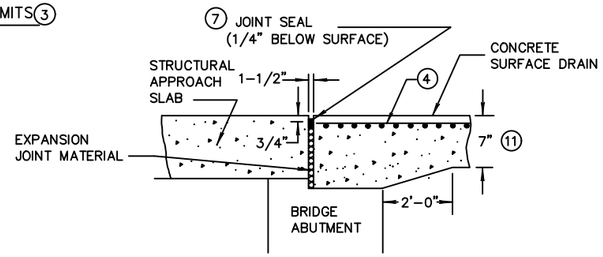


SECTION B-B

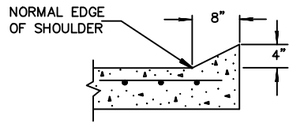
FILL AREA AT BEAM GUARD



SECTION B–B

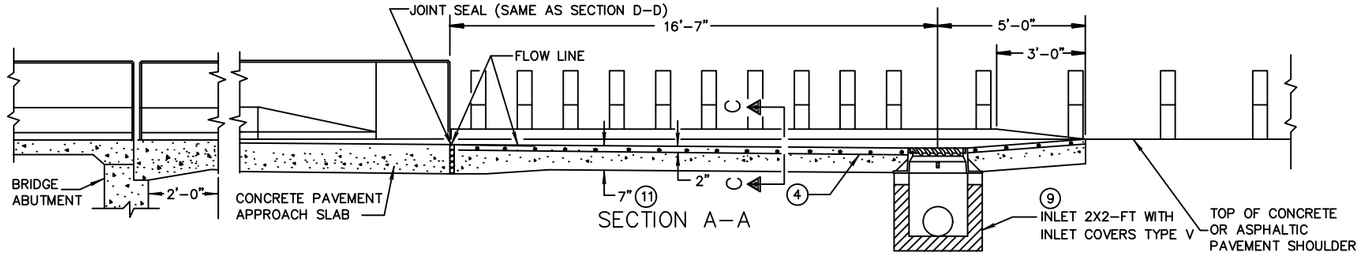


SECTION D–D

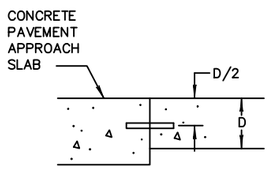


SECTION C–C

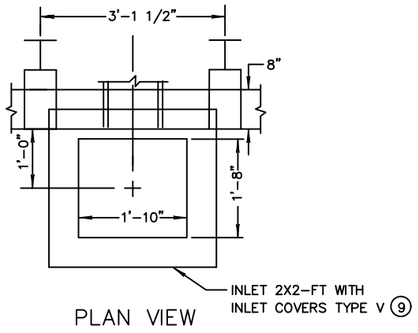
FROM STRUCTURE	TO STRUCTURE	A (1)				B (2)				C (3)		
		STATION	OFFSET	INVERT ELEVATION	DOWNSTREAM SLOPE	STATION	OFFSET	INVERT ELEVATION	DOWNSTREAM SLOPE	STATION	OFFSET	INVERT ELEVATION
17A	17B	113+37.6"NB"	37.46' RT	1172.025'	35.00%	113.37.6"NB"	76.14' RT	1158.488'	1.00%	113+37.5"NB"	81.86' RT	1158.430'
22A	22B	158+43.4"NB"	37.31' RT	1109.070'	35.74%	158+43.4"NB"	134.77' RT	1074.233'	1.00%	158+43.4"NB"	139.50' RT	1074.186'
16A	16B	113+034.4"SB"	40.84' LT	1170.843	25.00%	113+03.4"SB"	55.30' LT	1167.228'	1.00%	113+03.4"SB"	64.21' LT	1167.139'
21A	21B	159+06.1"SB"	41.31' LT	1107.834'	40.00%	159+06.1"SB"	103.5' LT	1083.000	1.00%	159+06.1"SB"	111.50'LT	1082.900'



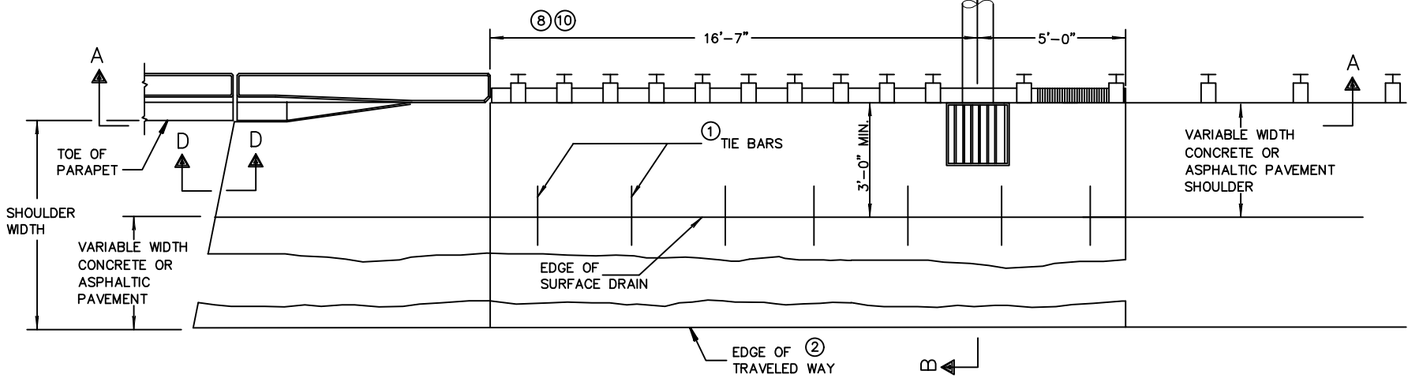
SECTION A–A



TIE BAR DETAIL



PLAN VIEW



PLAN VIEW

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.

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

(1) NO. 4 X 2'–0" TIE BARS SPACED AT 3'–0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) STANDARD LONGITUDINAL JOINT WITH TIE BARS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE. SEE SDD 'CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES'.

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE SUBSECTION 612.2 OF STANDARD SPECIFICATIONS.

(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" – W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C–C.

(5) LIMITS OF ADDITIONAL RIPRAP MEDIUM WHEN SPECIAL DITCH IS REQUIRED.

(6) GEOTEXTILE TYPE HR

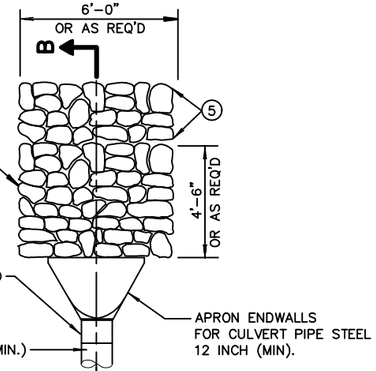
(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE MGS THRIE BEAM TRANSITION. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING IS 3'–1 1/2".

(9) SEE SDD 'INLET AND MANHOLE COVERS' AND 'INLETS 2X2–FT, 2X2.5–FT, 2X3–FT, & 2.5X3–FT' FOR DETAILS.

(10) SEE SDD 'MGS THRIE BEAM TRANSITION' FOR MGS POST SPACING DETAILS.

(11) WHEN CONCRETE SHOULDERS ARE PROPOSED, THICKNESS OF CONCRETE SURFACE DRAIN SHALL MATCH THICKNESS OF CONCRETE SHOULDER.



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CONSTRUCTION SURFACE DRAIN DETAIL - ADJACENT TO MGS GUARDRAIL	SHEET 16	E

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE PAVEMENT SHOULDERS

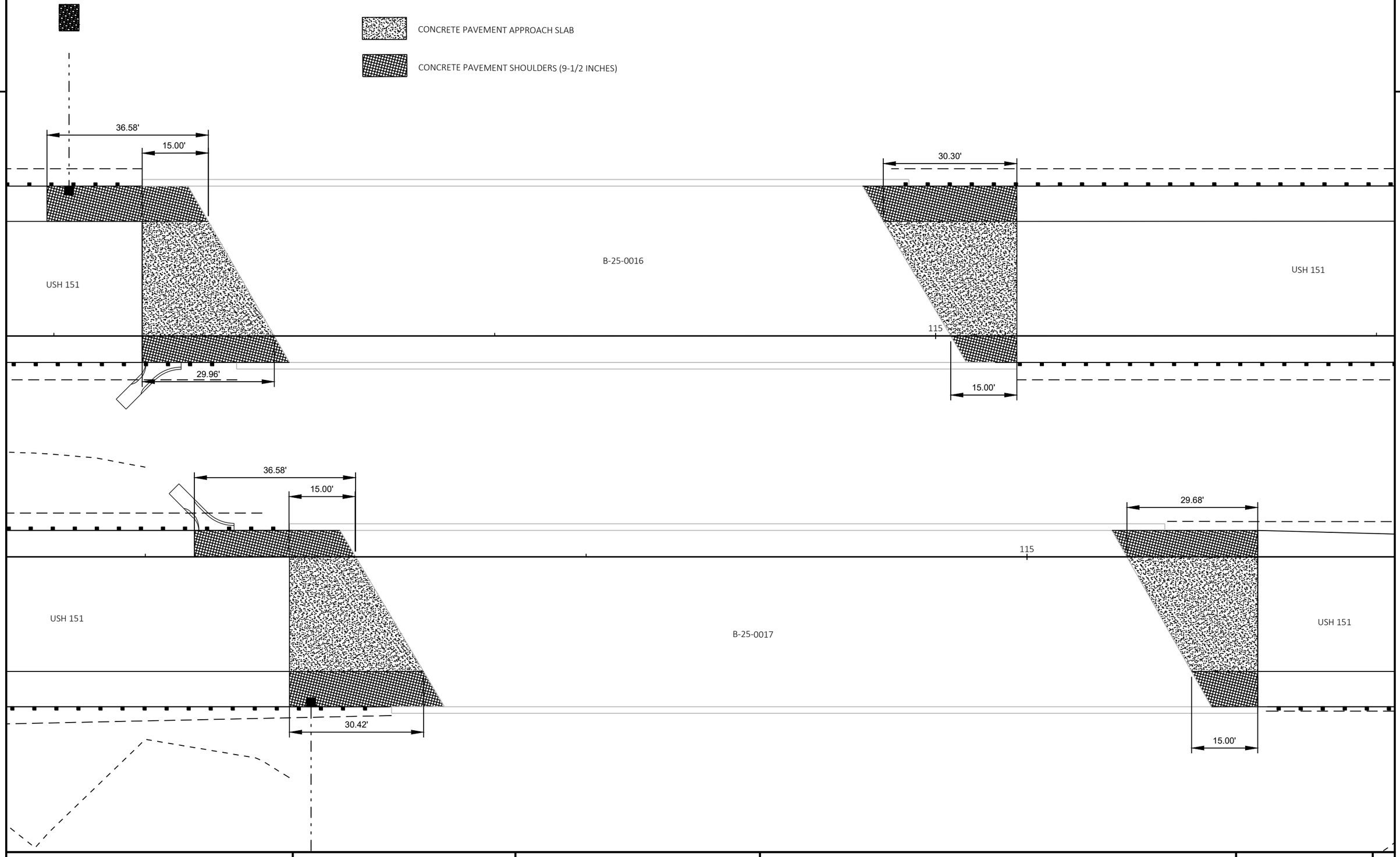
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	B-25-18 - APPROACH SLAB DETAIL	SHEET 17	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021003_CD.DWG
LAYOUT NAME - 021003_cd_2

PLOT DATE : 5/1/2018 8:06 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT

CONCRETE PAVEMENT APPROACH SLAB

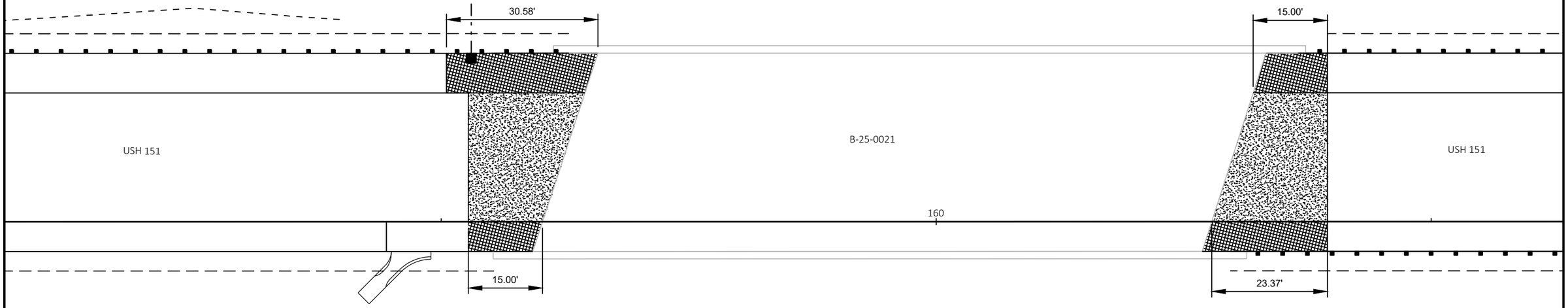
CONCRETE PAVEMENT SHOULDERS (9-1/2 INCHES)



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	B-25-16 & B-25-17 - APPROACH SLAB DETAIL	SHEET 18	E

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE PAVEMENT SHOULDERS (9-1/2 INCHES)



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	B-25-21 & B-25-22 - APPROACH SLAB DETAIL	SHEET 19	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021002_CD_2

PLOT DATE : 5/1/2018 8:07 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE PAVEMENT SHOULDERS (9-1/2 INCHES)

USH 151

B-25-0019

USH 151

15.00'

15.00'

29.75'

15.00'

15.00'

USH 151

B-25-0020

USH 151

21.92'

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	B-25-19 & B-25-20 - APPROACH SLAB DETAIL	SHEET 20	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021002_CD_3

PLOT DATE : 5/1/2018 8:07 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT

21.03'

15.00'

STH 23

15.00'

66"23 NB"

STH 23

B-25-24

15.00'

STH 23

PT: 68+71.19, NB"

68"23 NB"

STH 23

15.00'

CONCRETE PAVEMENT APPROACH SLAB

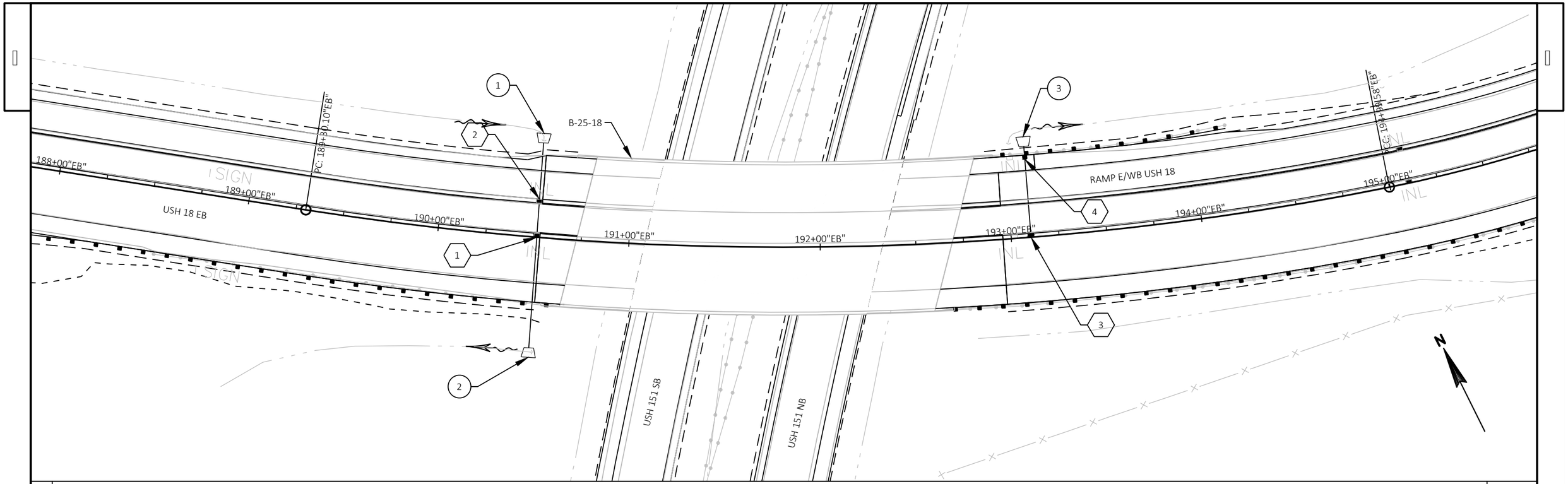
CONCRETE PAVEMENT SHOULDERS

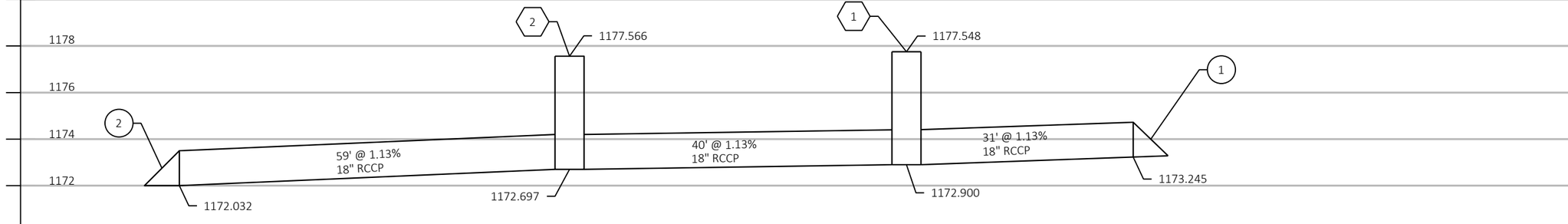
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	B-25-24 - APPROACH SLAB DETAIL	SHEET 21	E

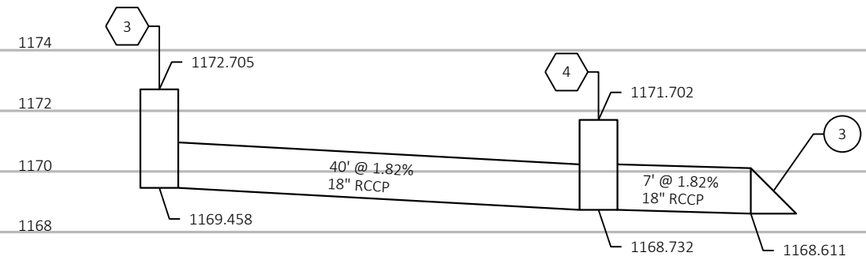
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021003_CD.DWG
LAYOUT NAME - 021003_cd_1

PLOT DATE : 5/1/2018 8:07 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT

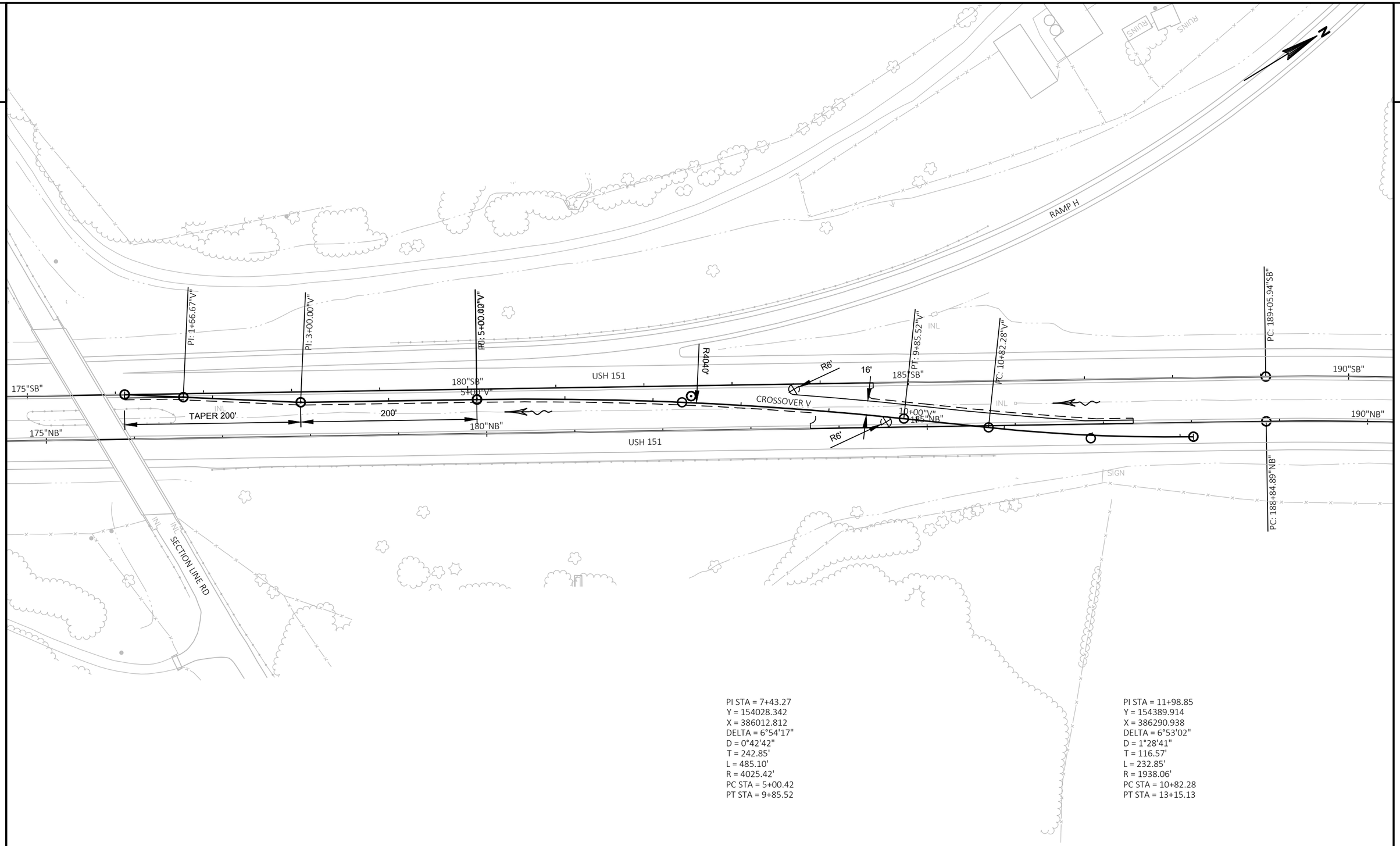
WISDOT/CADDS SHEET 42







PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	STORM SEWER DETAIL - USH 18	SHEET 22	E



PI STA = 7+43.27
Y = 154028.342
X = 386012.812
DELTA = 6°54'17"
D = 0°42'42"
T = 242.85'
L = 485.10'
R = 4025.42'
PC STA = 5+00.42
PT STA = 9+85.52

PI STA = 11+98.85
Y = 154389.914
X = 386290.938
DELTA = 6°53'02"
D = 1°28'41"
T = 116.57'
L = 232.85'
R = 1938.06'
PC STA = 10+82.28
PT STA = 13+15.13

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER V	SHEET 23	E

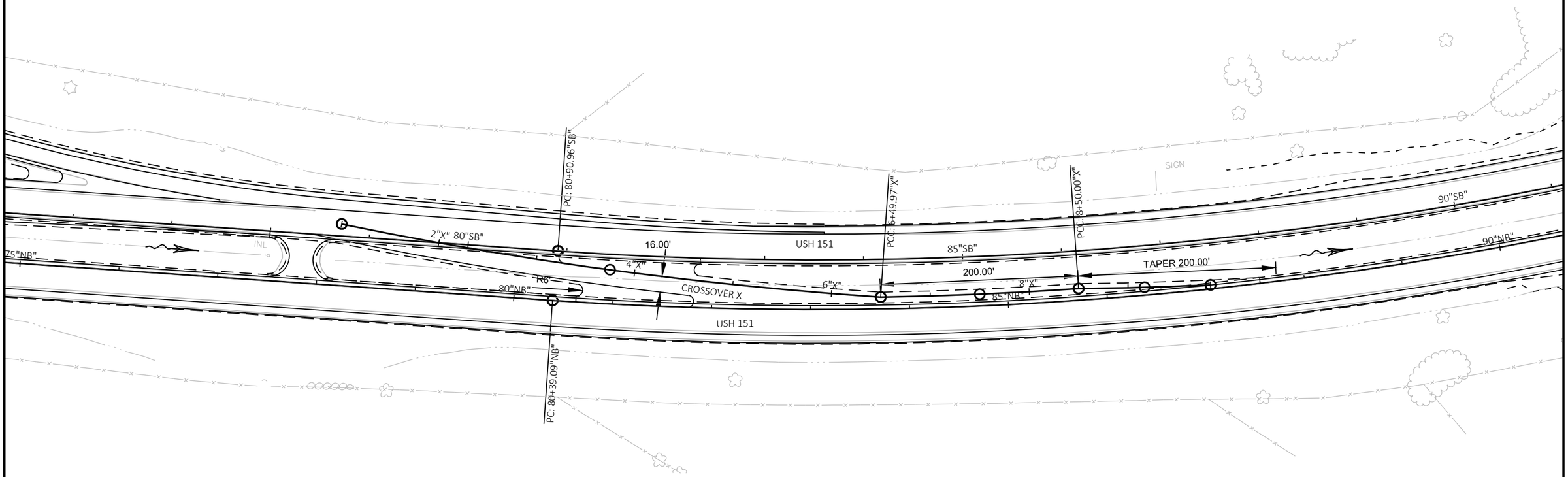
STH 23
STH 23
INL
INL
INL
W
W
RAMP C
PT: 68+69.72"SB"
PRC: 3+86.48
16.00'
PT: 6+04.51
PI: 11+66.26
PC: 80+90.96"SB"
70"SB"
USH 151
USH 151
80"SB"
75"SB"
INL
INL
6+00
7+00
8+00
9+00
10+00
11+00
12+00
4+00
CROSSOVER W 5+00
3+00
2+00
70"NB"
75"NB"
80"NB"
65"NB"
R6'
USH 151
USH 151
PT: 68+16.01"NB"
PC: 80+39.09"NB"
R4040'
INL
INL
INL
INL
W
W
W
BIKE PATH

PI STA = 2+43.30
Y = 145115.497
X = 379251.577
DELTA = 4°02'49"
D = 0°42'23"
T = 143.30'
L = 286.48'
R = 4056.00'
PC STA = 1+00.00
PT STA = 3+86.48

PI STA = 4+95.52
Y = 145257.113
X = 379460.431
DELTA = 3°05'32"
D = 0°42'33"
T = 109.04'
L = 218.03'
R = 4040.00'
PC STA = 3+86.48
PT STA = 6+04.51

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER W	SHEET 24	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021009_CD.DWG
LAYOUT NAME - 021009_CD
PLOT DATE : 5/1/2018 8:09 AM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



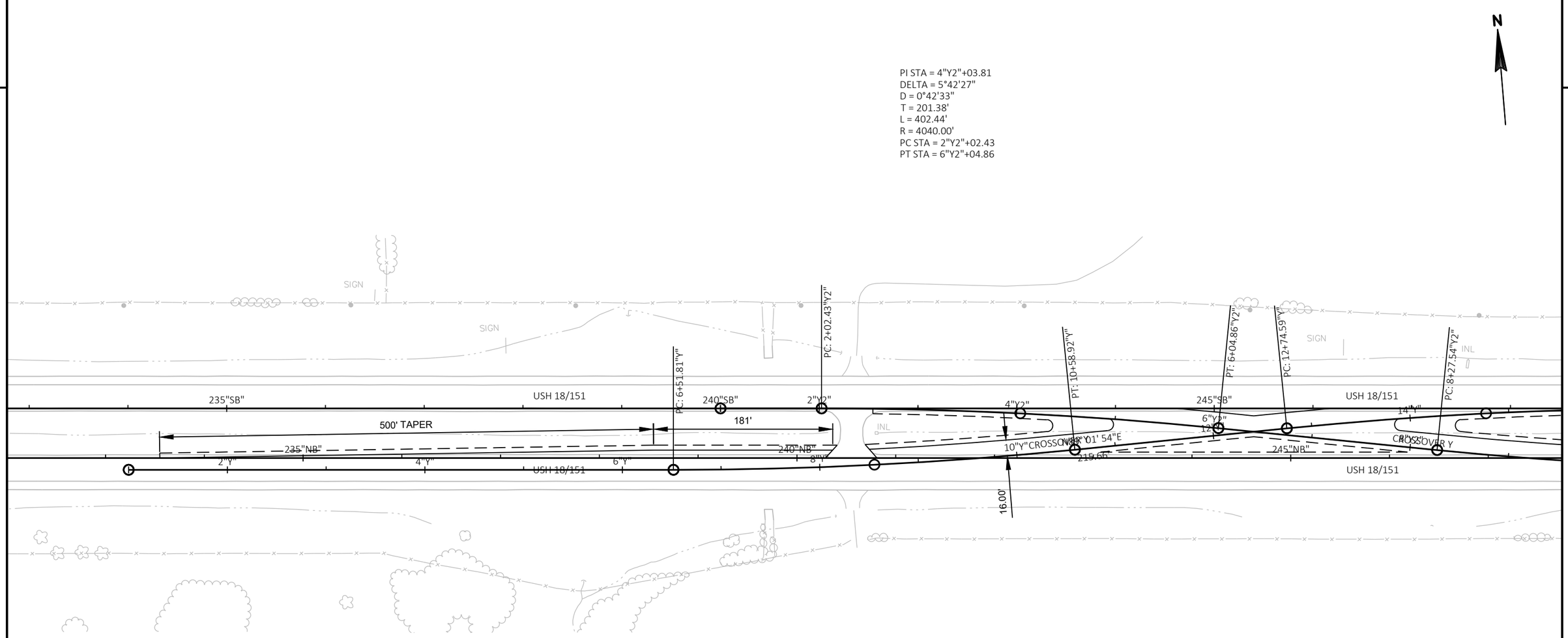
PI STA = 3+75.41
Y = 145717.648
X = 380404.324
DELTA = 7°47'59"
D = 0°42'33"
T = 275.41'
L = 549.97'
R = 4040.00'
PC STA = 1+00.00
PT STA = 6+49.97

PI STA = 7+50.01
Y = 145890.217
X = 380737.471
DELTA = 2°59'54"
D = 0°44'58"
T = 100.03'
L = 200.02'
R = 3822.10'
PC STA = 6+49.97
PT STA = 8+50.00

PI STA = 9+16.65
Y = 145979.808
X = 380877.953
DELTA = 1°59'58"
D = 0°45'00"
T = 66.66'
L = 133.30'
R = 3819.77'
PC STA = 8+50.00
PT STA = 9+83.30

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER X	SHEET 25	E

PI STA = 4"Y2"+03.81
DELTA = 5°42'27"
D = 0°42'33"
T = 201.38'
L = 402.44'
R = 4040.00'
PC STA = 2"Y2"+02.43
PT STA = 6"Y2"+04.86



PI STA = 8"Y"+55.54
DELTA = 5°44'23"
D = 0°42'18"
T = 203.73'
L = 407.12'
R = 4064.00'
PC STA = 6"Y"+51.81
PT STA = 10"Y"+58.92

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER Y	SHEET 26	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021012_CD.DWG
LAYOUT NAME - 021012_cd_1
PLOT DATE : 5/1/2018 8:10 AM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

PI STA = 14"Y"+77.08
DELTA = 5°44'20"
D = 0°42'33"
T = 202.50'
L = 404.66'
R = 4040.00'
PC STA = 12"Y"+74.59
PT STA = 16"Y"+79.24

N

SIGN
SIGN
SIGN
INL
INL
INL

PC: 12+74.59"Y"
PC: 8+27.54"Y2"
PT: 16+79.24"Y"
INVERT: 1151.56'
PT: 12+29.92"Y2"

USH 18/151
USH 18/151
USH 18/151
USH 18/151

14"Y"
16"Y"
250"SB"
18"Y"
255"SB"
260"SB"

500' TAPER

CROSSOVER Y

245"NB"
10"Y2"
250"NB"
12"Y2"
255"NB"
14"Y2"
16"Y2"
260"NB"

INVERT: 1152.21'

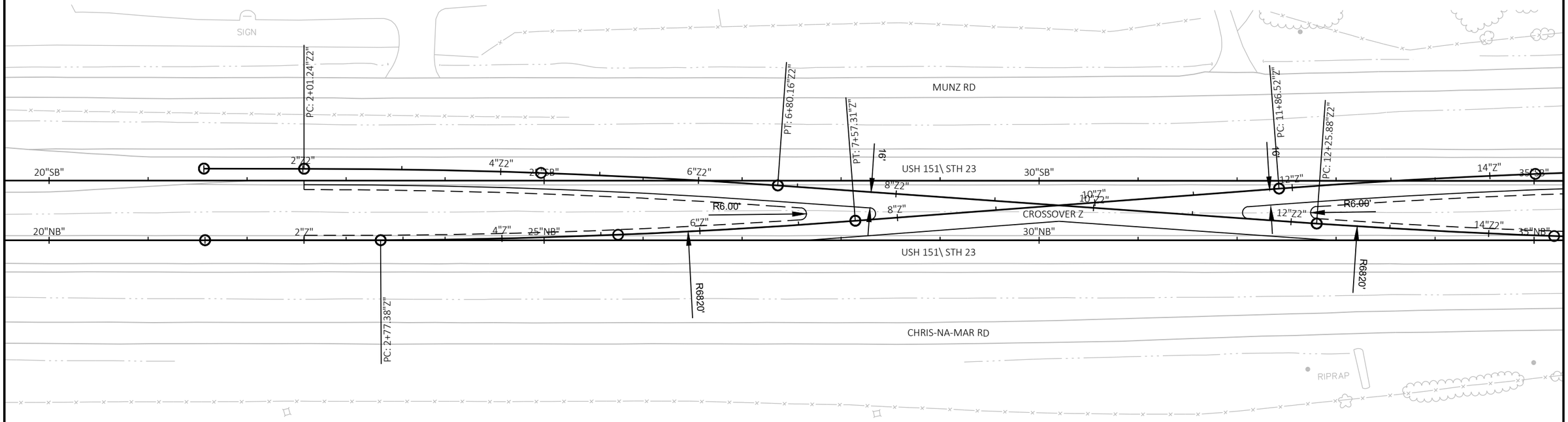
CULVERT PIPE CLASS III-A 12-INCH
-SAW CUT REQUIRED
-USE ASPHALTIC SURFACE TEMPORARY TO PATCH ASPHALT

PI STA = 10"Y2"+28.89
DELTA = 5°42'24"
D = 0°42'33"
T = 201.36'
L = 402.38'
R = 4040.00'
PC STA = 8"Y2"+27.54
PT STA = 12"Y2"+29.92

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER Y	SHEET 27	E

PI STA = 4+40.80
Y = 141359.163
X = 377576.102
DELTA = 4°01'24"
D = 0°25'12"
T = 239.56'
L = 478.92'
R = 6820.00'
PC STA = 2+01.24
PT STA = 6+80.16

PI STA = 14+45.93
Y = 142348.569
X = 377745.843
DELTA = 4°21'24"
D = 0°25'12"
T = 259.41'
L = 518.57'
R = 6820.00'
PC STA = 11+86.52
PT STA = 17+05.09



PI STA = 5+17.44
Y = 141423.954
X = 377659.039
DELTA = 4°01'55"
D = 0°25'12"
T = 240.06'
L = 479.93'
R = 6820.00'
PC STA = 2+77.38
PT STA = 7+57.31

PI STA = 14+66.14
Y = 142355.288
X = 377819.948
DELTA = 4°02'07"
D = 0°25'12"
T = 240.26'
L = 480.32'
R = 6820.00'
PC STA = 12+25.88
PT STA = 17+06.20

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER Z	SHEET 28	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021011_CD.DWG
LAYOUT NAME - 021011_CD_01
PLOT DATE : 5/1/2018 8:10 AM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

PI STA = 14+45.93
Y = 142348.569
X = 377745.843
DELTA = 4°21'24"
D = 0°25'12"
T = 259.41'
L = 518.57'
R = 6820.00'
PC STA = 11+86.52
PT STA = 17+05.09

PC: 11+86.52"Z"
PC: 12+25.88"Z"
PT: 17+05.09"Z"
PC: 46+18.76"SB"
12"Z"
14"Z"
35"SB"
16"Z"
18"Z"
20"Z"
40"SB"
45"SB"
200'
400' TAPER
R6.00'
12"Z2"
14"Z2"
35"NB"
16"Z2"
40"NB"
45"NB"
INL
R6820'
PT: 17+06.20"Z2"
RIPRAP

PI STA = 14+66.14
Y = 142355.288
X = 377819.948
DELTA = 4°02'07"
D = 0°25'12"
T = 240.26'
L = 480.32'
R = 6820.00'
PC STA = 12+25.88
PT STA = 17+06.20

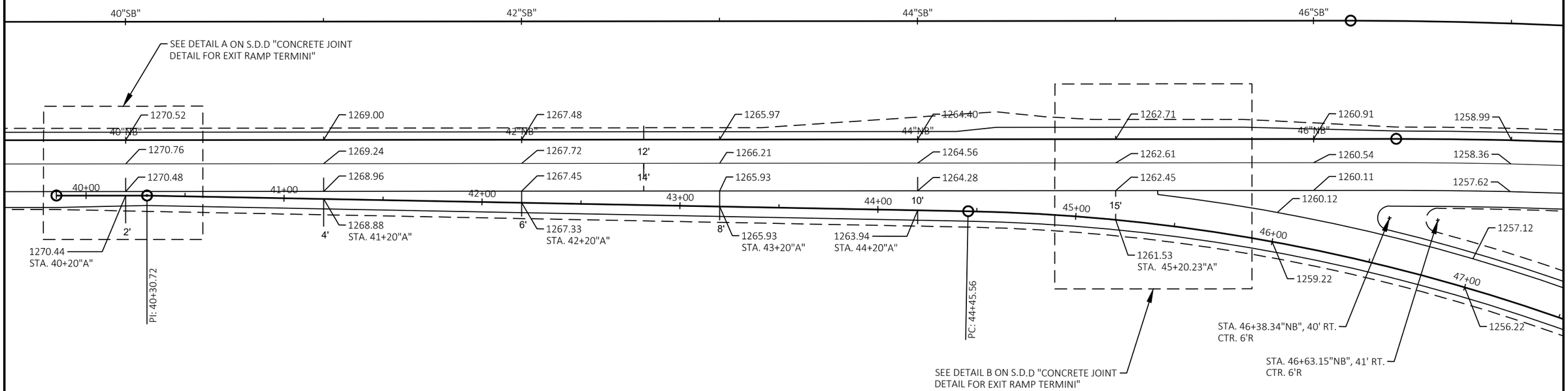
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSSOVER Z	SHEET 29	E

2

N

NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

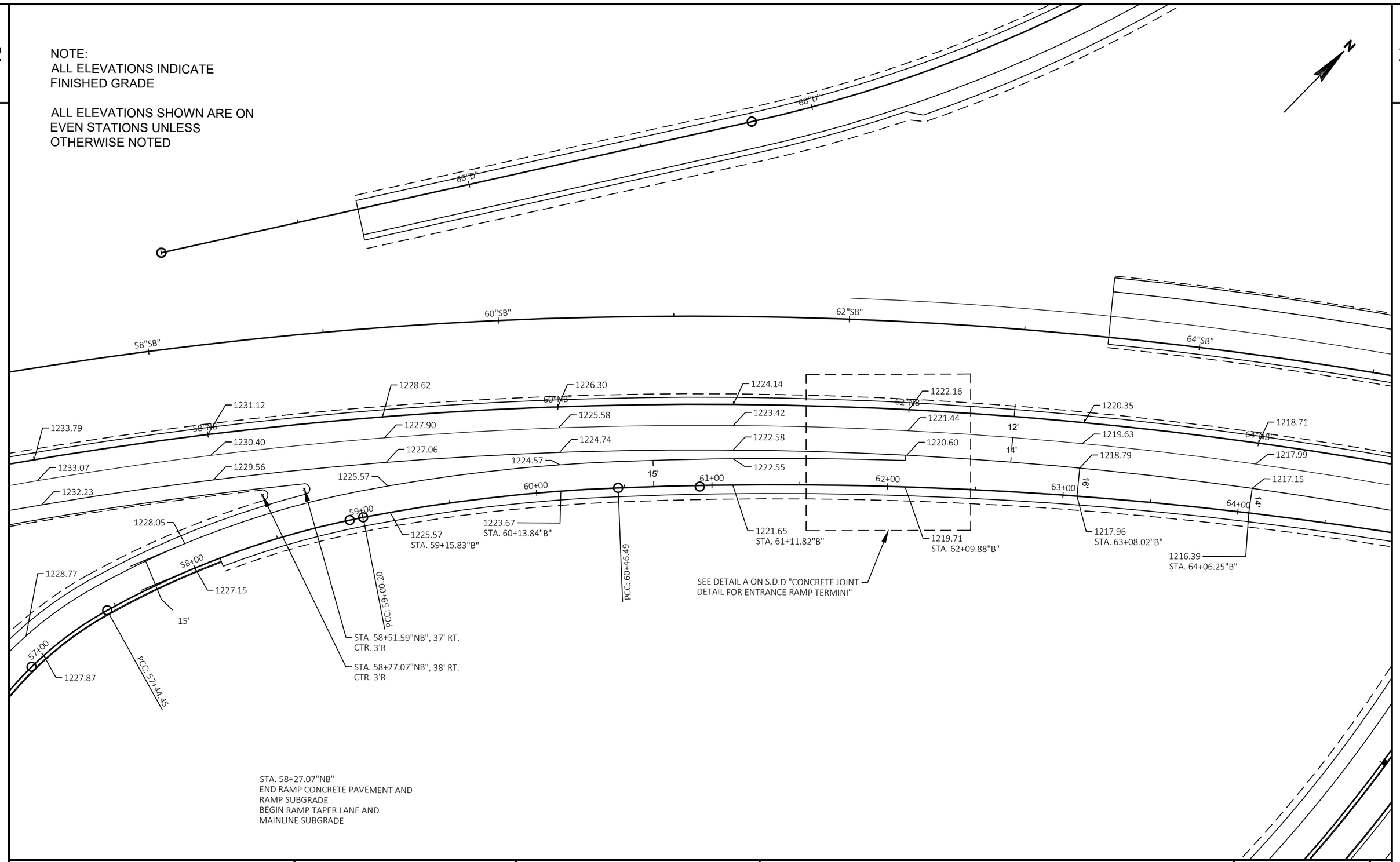


STA. 46+63.15"NB"
BEGIN RAMP CONCRETE PAVEMENT
AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE
SUBGRADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP A	SHEET 30	E

NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

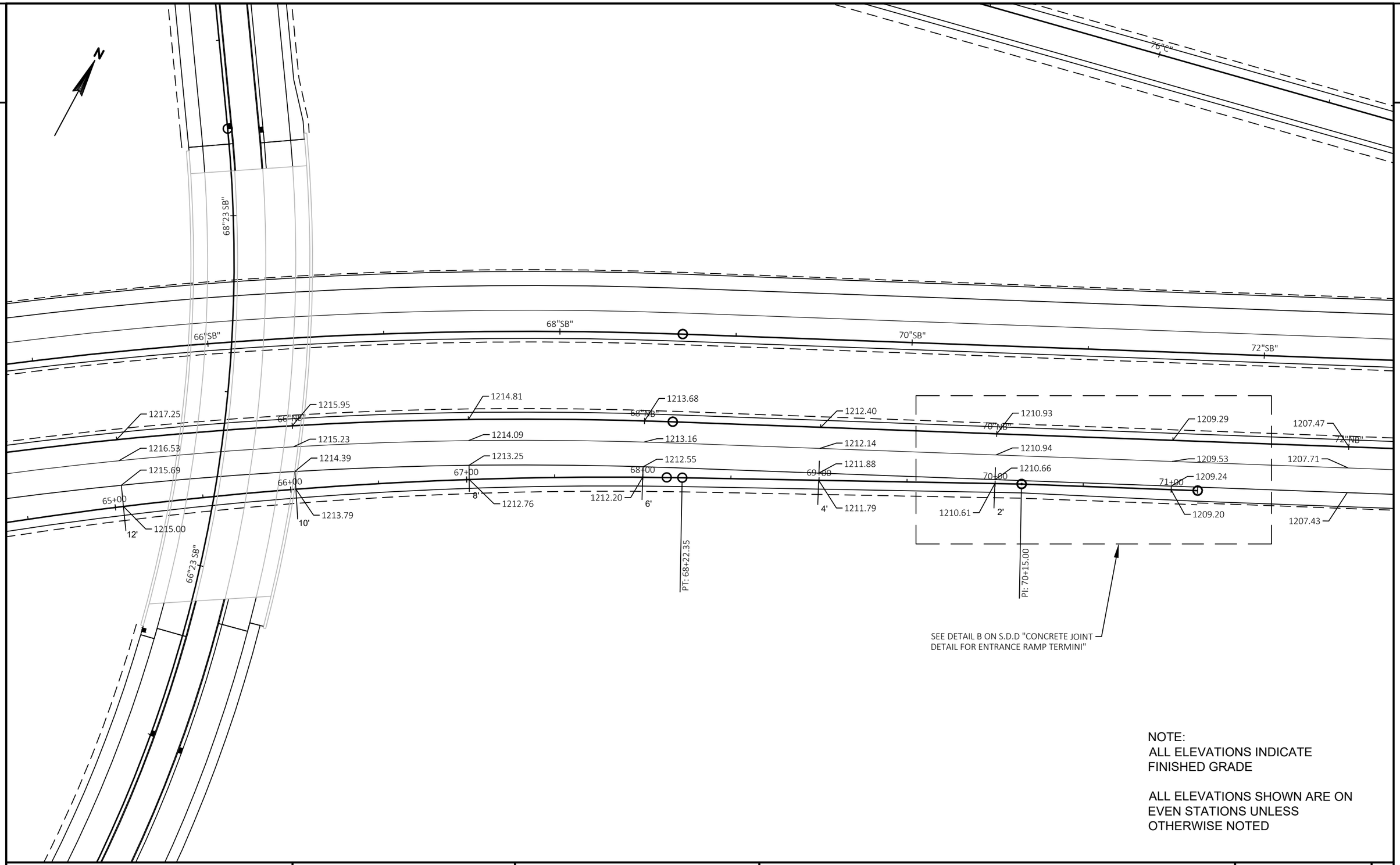


STA. 58+27.07"NB"
END RAMP CONCRETE PAVEMENT AND
RAMP SUBGRADE
BEGIN RAMP TAPER LANE AND
MAINLINE SUBGRADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP B	SHEET 31	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021301_jd_02
PLOT DATE : 5/23/2018 12:44 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



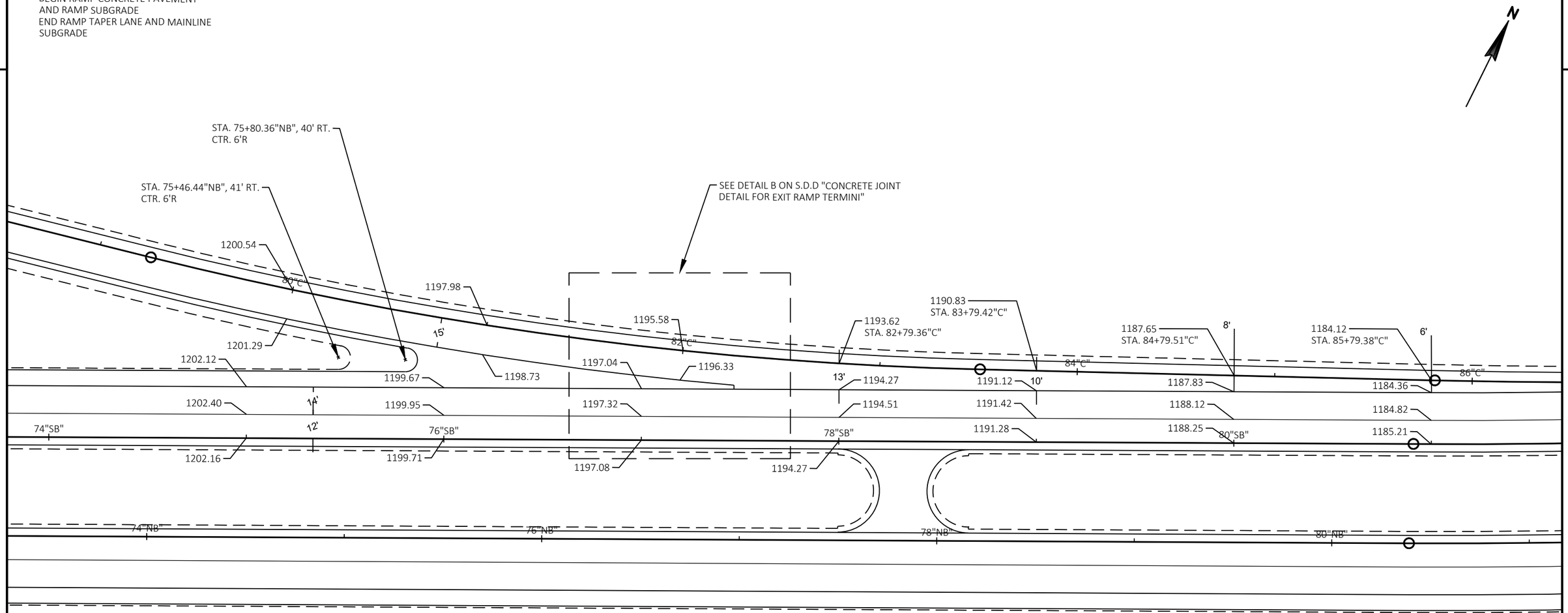
NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP B	SHEET 32	E

2

STA. 75+46.44"NB"
BEGIN RAMP CONCRETE PAVEMENT
AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE
SUBGRADE

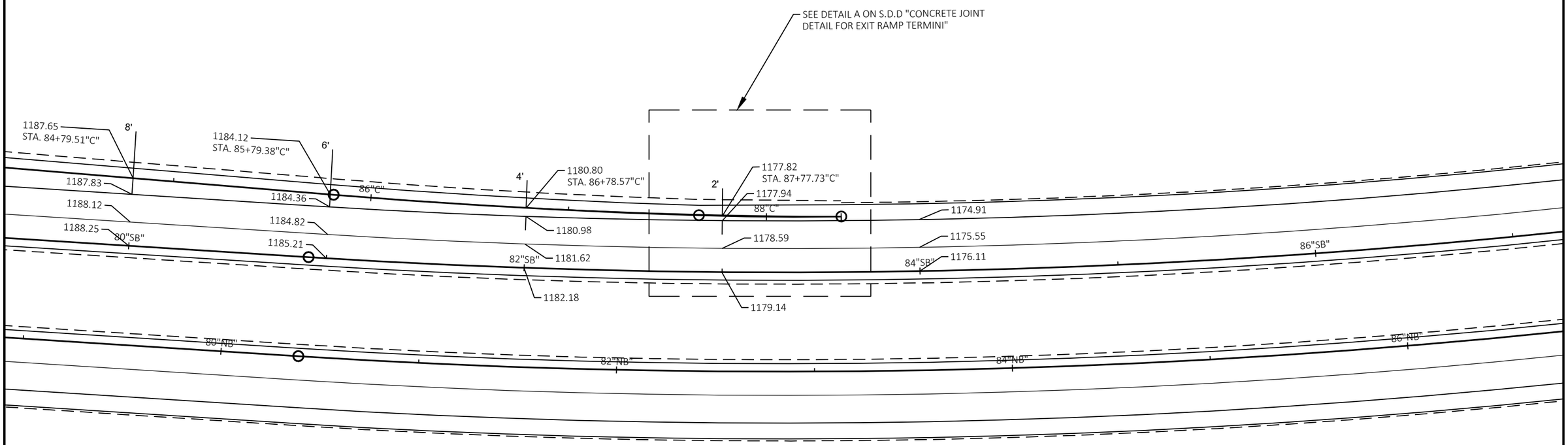


NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP C	SHEET 33	E

2

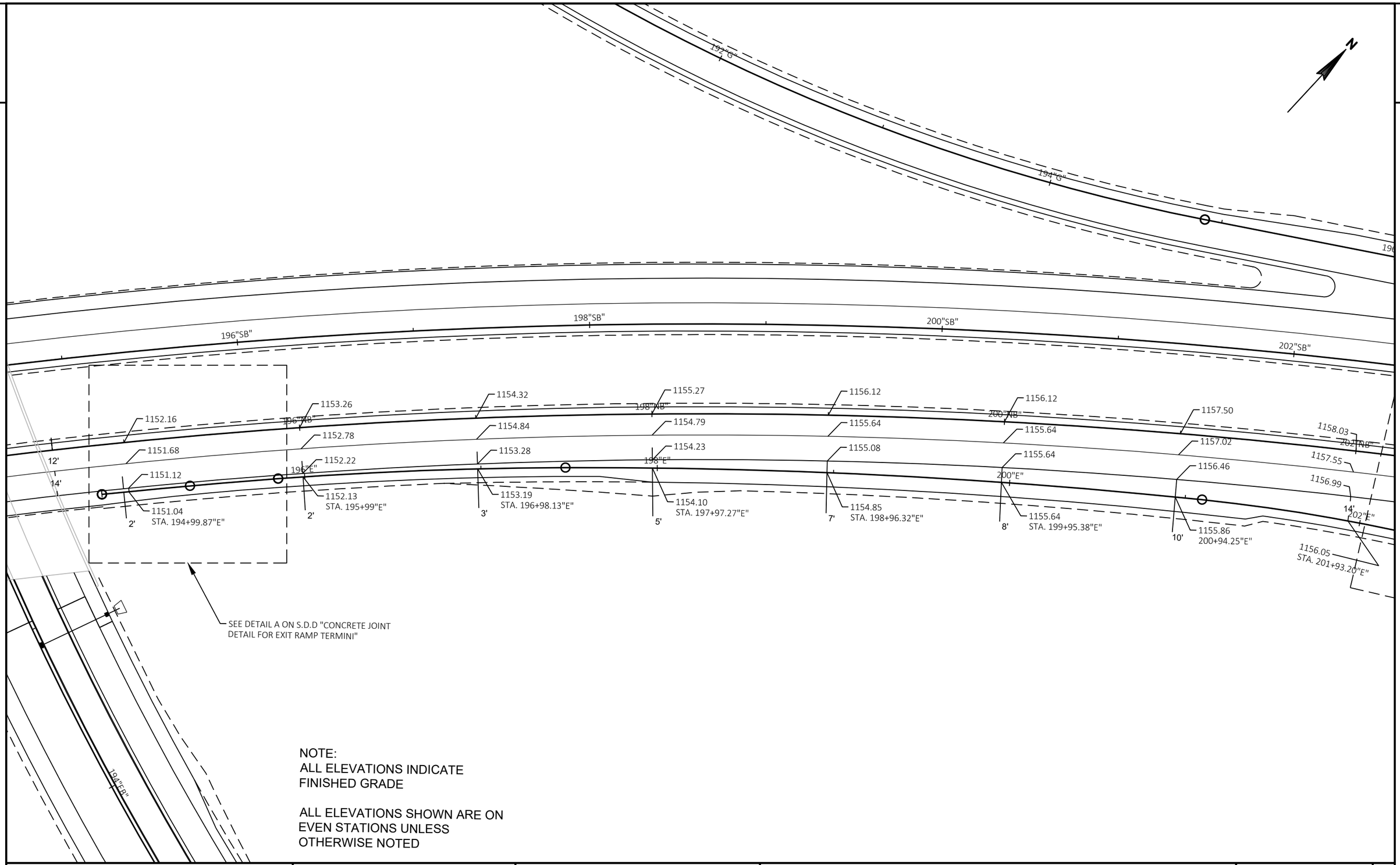


NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP C	SHEET 34	E

2



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP E	SHEET 35	E

2

2

N

196"G"
198"G"
200"G"
202"G"
204"SB"
206"SB"
208"SB"
210"SB"
202"NB"
204"NB"
206"NB"
208"NB"
202"E"
204"E"
206"E"

1158.03
1158.45
1158.77
1158.98
1157.55
1157.97
1158.29
1158.50
1156.99
1157.41
1157.73
1157.94
1156.05
STA. 201+93.20"E"
0.00
1155.99
1156.69
1155.79
1156.65
1155.75
12'
14'
15'

STA. 203+94.00"NB"
BEGIN RAMP CONCRETE PAVEMENT
AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE
SUBGRADE

STA. 203+80.00"NB", 40' RT.
CTR. 6'R

STA. 203+94.00"NB", 41' RT.
CTR. 6'R

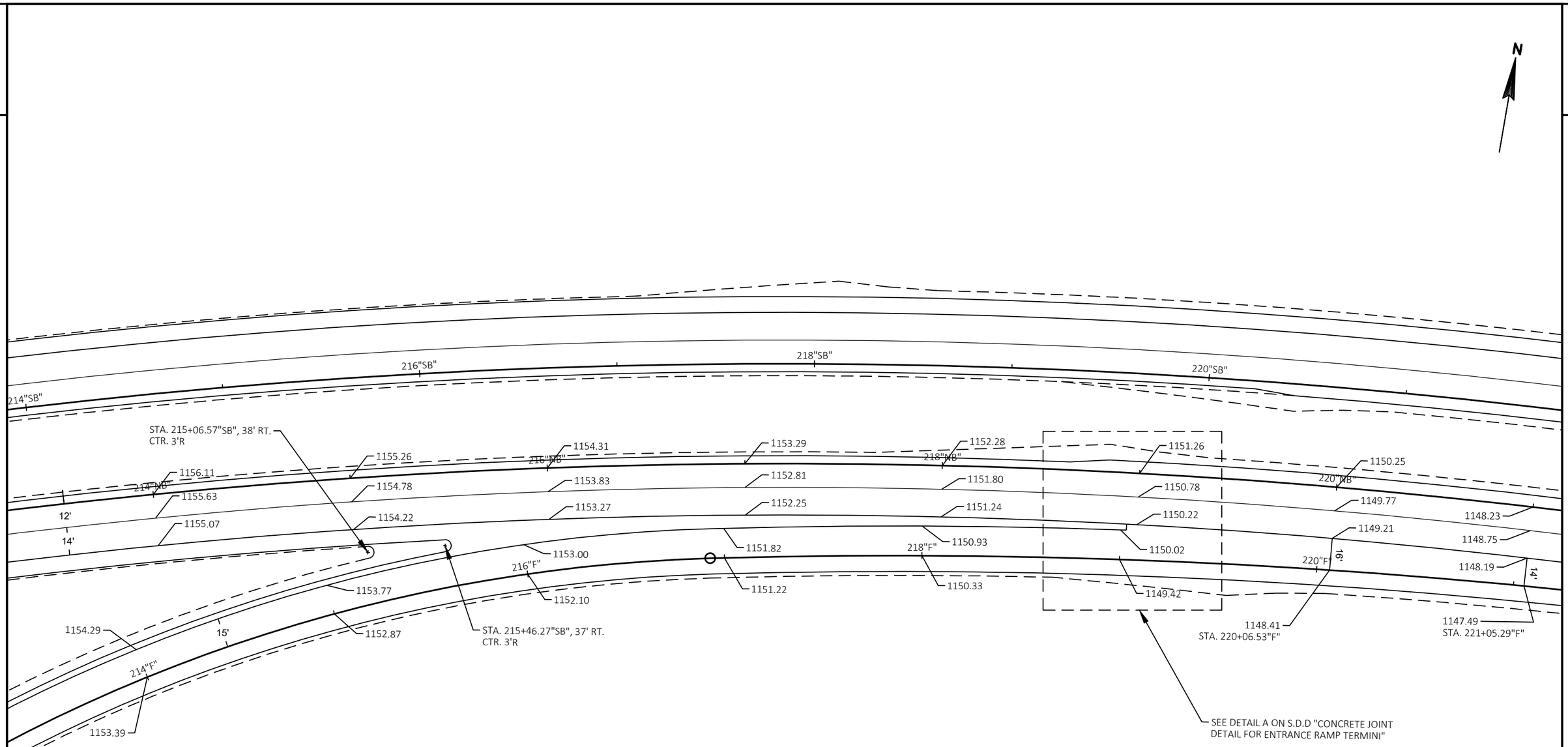
SEE DETAIL B ON S.D.D "CONCRETE JOINT
DETAIL FOR EXIT RAMP TERMINI"

NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP E	SHEET 36	E

2



NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

STA. 215+06.57"NB"
END RAMP CONCRETE PAVEMENT AND
RAMP SUBGRADE
BEGIN RAMP TAPER LANE AND
MAINLINE SUBGRADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP F	SHEET 37	E

2

N

222"SB"

224"SB"

226"SB"

228"SB"

222"NB"

222"F"

224"NB"

224"F"

226"NB"

226"F"

228"NB"

1148.23

1148.75

1148.19

14'

1147.49
STA. 221+05.29"F"

1146.18

1145.70

1145.14

8'

1144.72
STA. 224+01.94"F"

1145.17

1144.69

1144.13

9'

1143.81
STA. 225+00.94"F"

1144.16

1143.88

1143.46

4'

1143.37
STA. 226+00.46"F"

1143.30

1143.29

1143.11

2'

1143.07
STA. 227+00.49"F"

1142.64

1142.88

1142.60

SEE DETAIL B ON S.D.D "CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI"

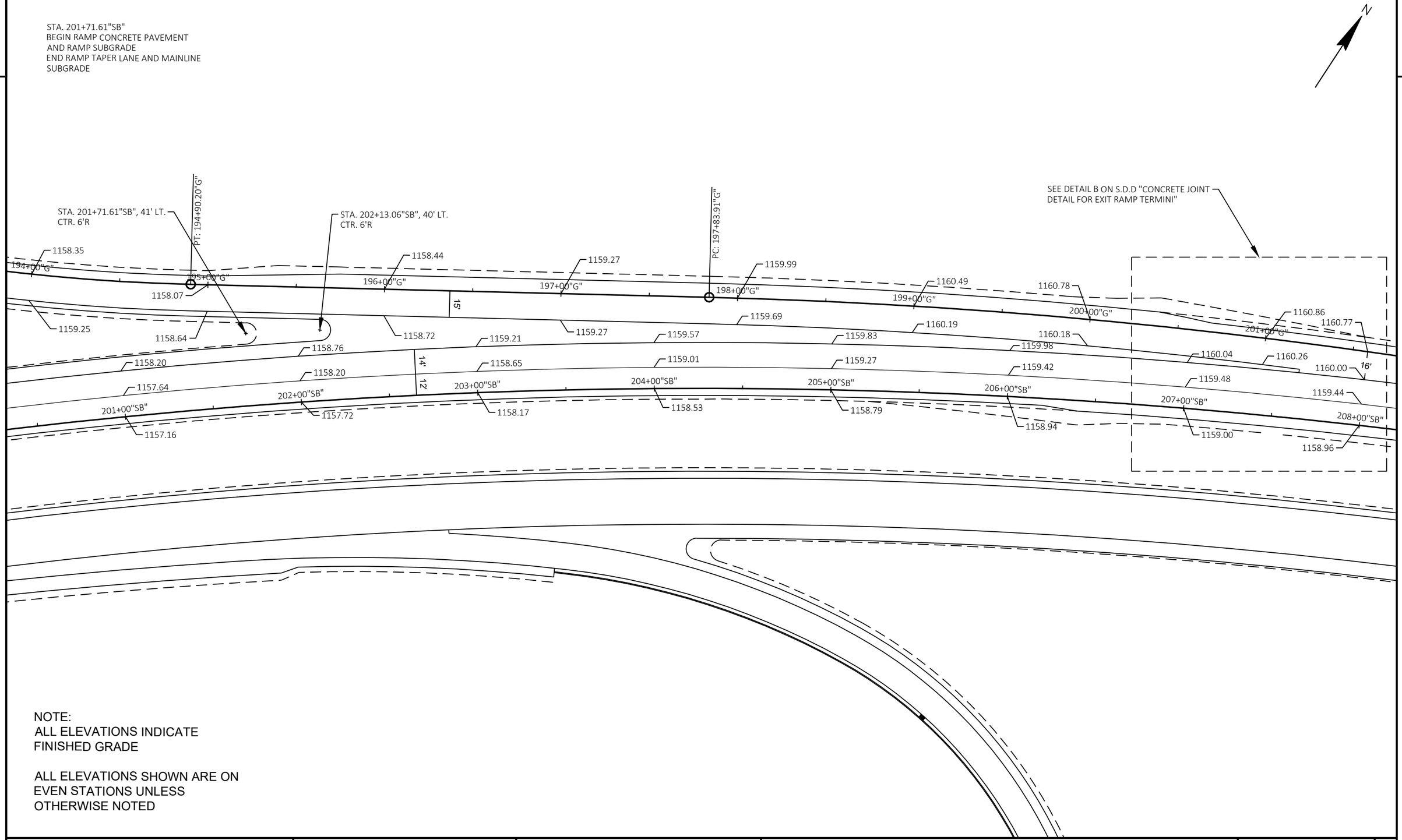
NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP F	SHEET 38	E

2

STA. 201+71.61"SB"
BEGIN RAMP CONCRETE PAVEMENT
AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE
SUBGRADE



NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP G	SHEET 39	E

2

2

N

SEE DETAIL A ON S.D.D "CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI"

PCC: 206+26.43"G"

1160.86
1160.77
"G"
202+00"G"
1160.38
STA. 202+59.50"G"
1160.26
1160.00
16'
1159.86
13'
1159.44
1159.30
208+00"SB"
209+00"SB"
1158.96
1158.82
203+00"G"
1160.02
STA. 203+60.67"G"
1159.62
10'
1159.06
1158.58
210+00"SB"
204+00"G"
1159.56
204+61.76"G"
7'
1158.72
1158.24
211+00"SB"
205+00"G"
1159.00
STA. 205+62.76"G"
1159.28
1158.28
1157.80
212+00"SB"
4'
1158.84
206+00"G"
1158.30
1158.38
STA. 206+63.65"G"
1157.74
1157.26
213+00"SB"
1157.66
1157.10
1156.62
214+00"SB"
14'
12'
215+00"SB"

212+00"F"
213+00"F"
214+00"F"

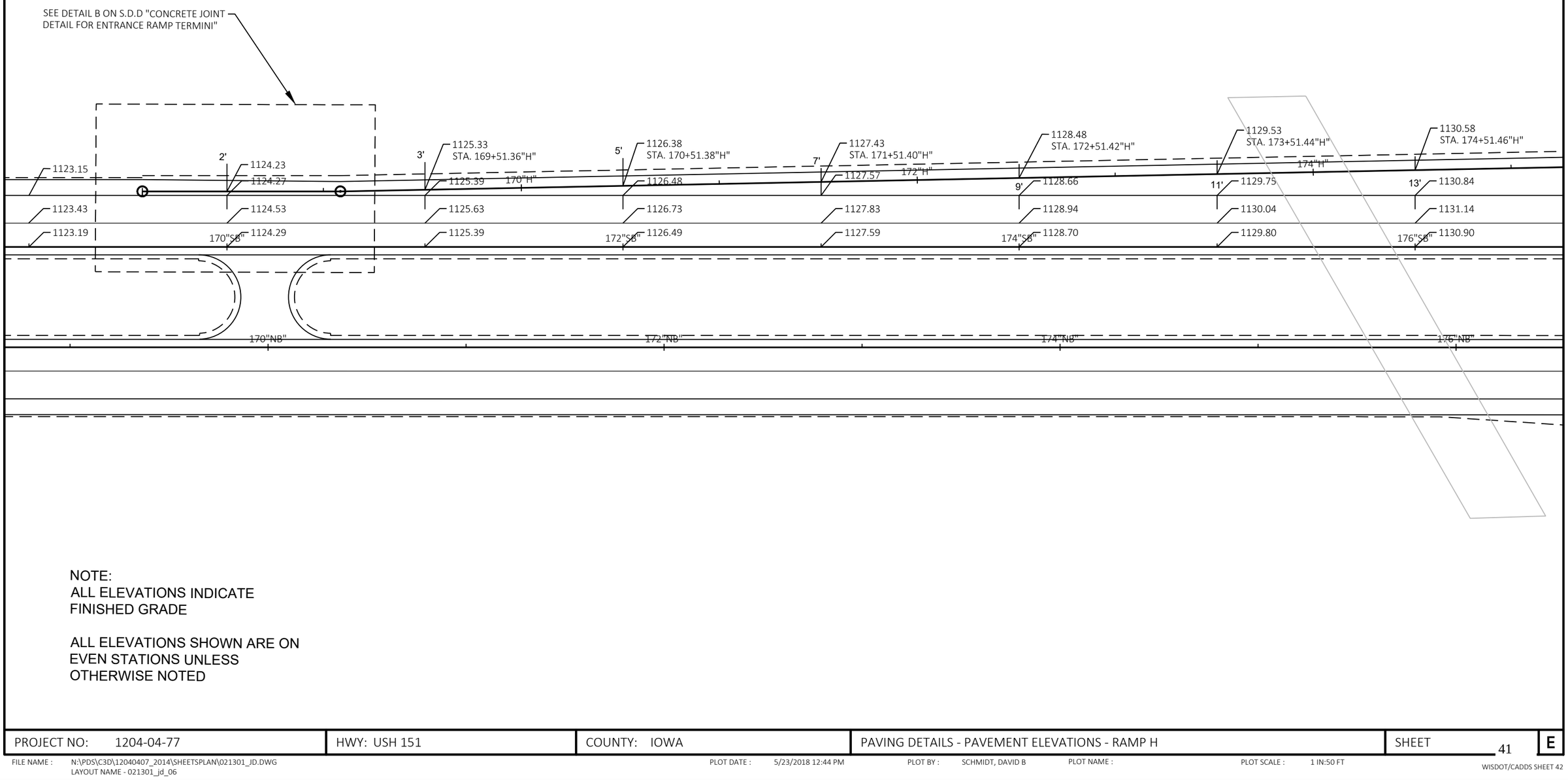
NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP G	SHEET 40	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021302_JD.DWG
LAYOUT NAME - 021302_jd_08
PLOT DATE : 5/23/2018 12:44 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP H	SHEET 41	E

2

2

STA. 182+49.46"NB"
END RAMP CONCRETE PAVEMENT AND
RAMP SUBGRADE
BEGIN RAMP TAPER LANE AND
MAINLINE SUBGRADE

SEE DETAIL A ON S.D.D "CONCRETE JOINT
DETAIL FOR ENTRANCE RAMP TERMINI"

STA. 182+04.94"SB", 37' RT.
CTR. 3'R

STA. 182+49.46"SB", 38' RT.
CTR. 3'R

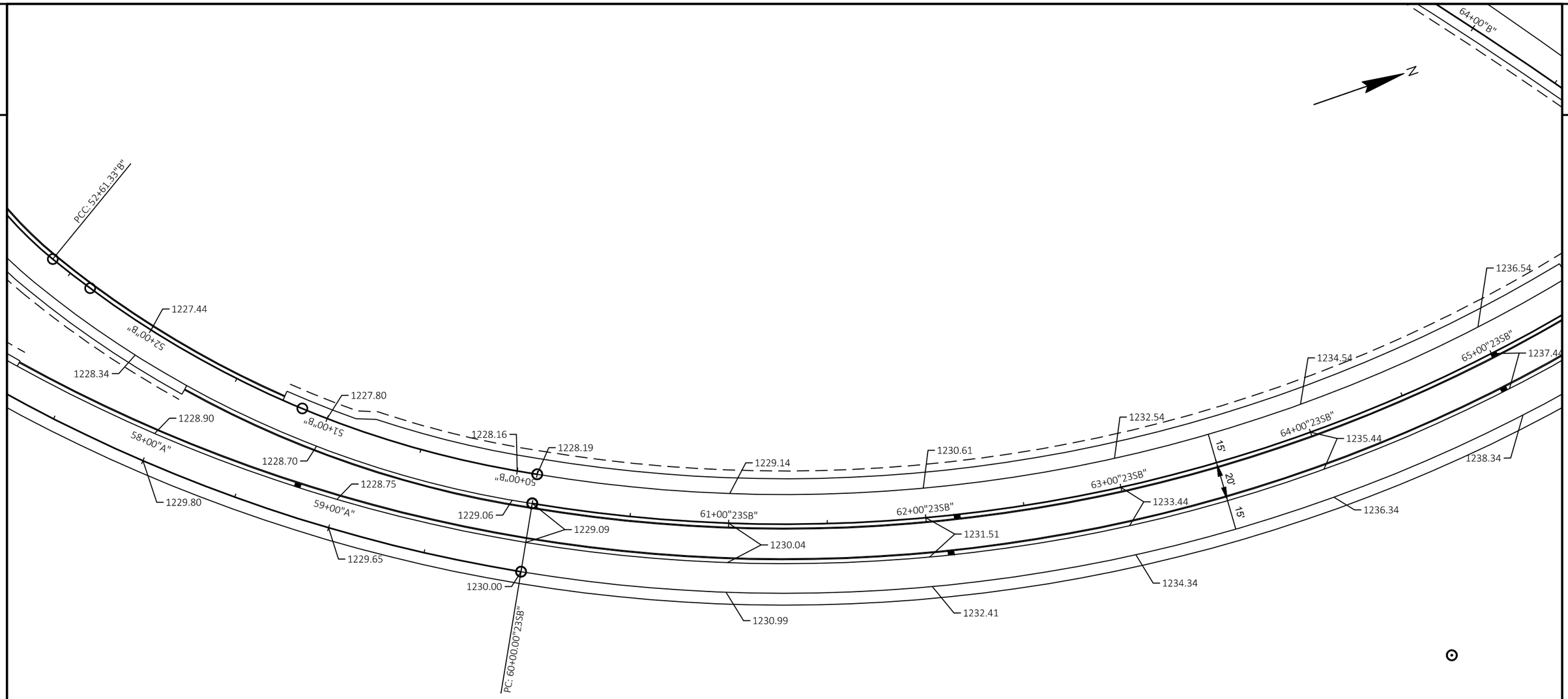
1.46"H"
1131.63
STA. 175+51.48"H"
1132.68
STA. 176+51.50"H"
176"H"
1133.19
1134.24
178"H"
1135.04
1135.50
180"H"
1135.90
182"H"
1136.30
1136.80
1137.20
15'
17'
15'
1131.93
1133.01
1134.16
1134.54
1135.26
1135.60
1136.36
1136.40
1137.46
1138.56
1132.24
1133.34
1134.44
1135.54
1136.64
1137.74
14'
1138.84
1132.00
178"SB"
1133.10
1134.20
180"SB"
1135.30
1136.40
182"SB"
1137.50
12'
1138.60
184"SB"
178"NB"
180"NB"
182"NB"
184"N

NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - RAMP H	SHEET 42	E

2



NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

2

N

72+00"D"

73+00"D"

74+00"D"

75+00"D"

76+00"D"

77+00"D"

STA. 72+81.36"23SB", 26' LT.
CTR. 6'R

STA. 72+54.90"23SB", 29' LT.
CTR. 6'R

PT: 74+97.25"D"

SEE DETAIL B ON S.D.D "CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI"

PI: 76+90.32"D"

PI: 77+12.85"D"

SEE DETAIL A ON S.D.D "CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI"

1242.86

1243.76

1244.45

1245.35

1245.00

1245.10

1245.79

1244.63

1245.15

1245.21

1244.05

1243.81

1242.67

1241.23

STA. 72+54.90"23SB"
BEGIN RAMP CONCRETE PAVEMENT
AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE
SUBGRADE

PC: 71+97.74"23SB"

3'

13'

15'

20'

72+00"23SB"

73+00"23SB"

74+00"23SB"

75+00"23SB"

76+00"23SB"

77+00"23SB"

1244.63

1245.43

1243.91

1243.09

1241.95

1240.51

71+00"23SB"

70+00"23SB"

1244.53

1244.12

1243.81

1244.71

1243.19

1242.31

1241.23

1239.79

1244.03

1244.18

1244.17

1244.20

1244.22

1244.10

1244.24
STA. 70+67.9
RT. 35'

1244.12

1244.14

1244.11
STA. 70+67.9
RT. 43.4'

1244.15

1243.77

STA. 71+17.91"C", 60' RT.
CTR. 60'R

1242.32

1242.02

NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - STH 23	SHEET 44	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\021302_JD.DWG
LAYOUT NAME - 021302_jd_04

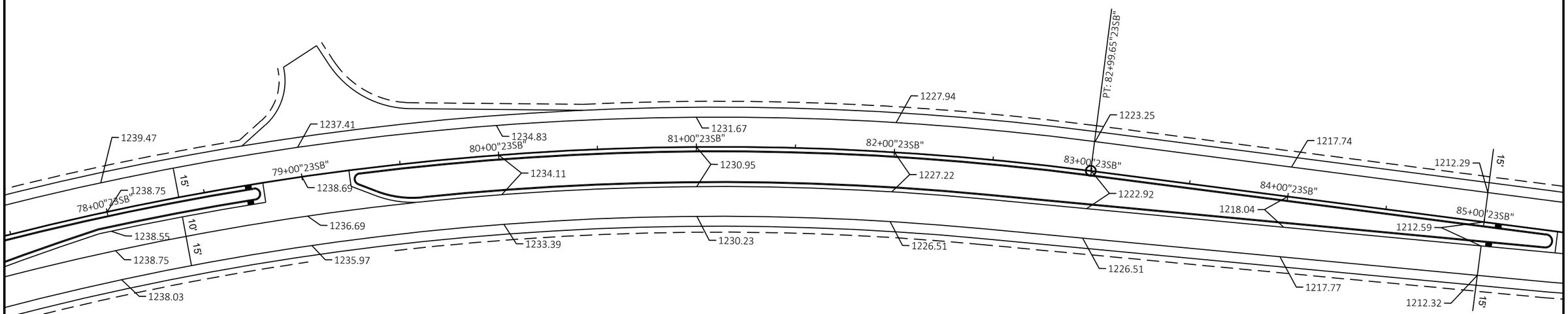
PLOT DATE : 5/23/2018 12:45 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

NOTE:
ALL ELEVATIONS INDICATE
FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON
EVEN STATIONS UNLESS
OTHERWISE NOTED

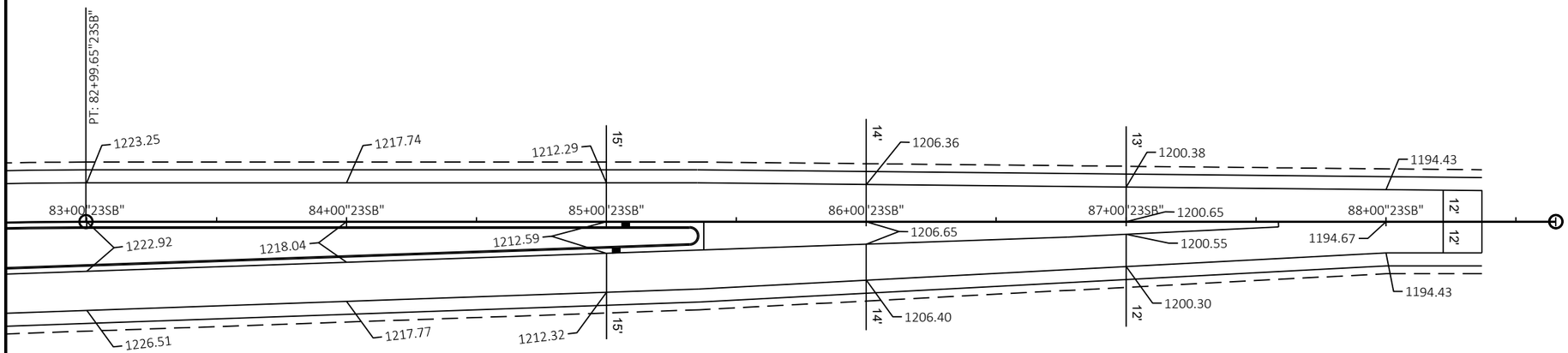
N



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - STH 23	SHEET 45	E

2

N

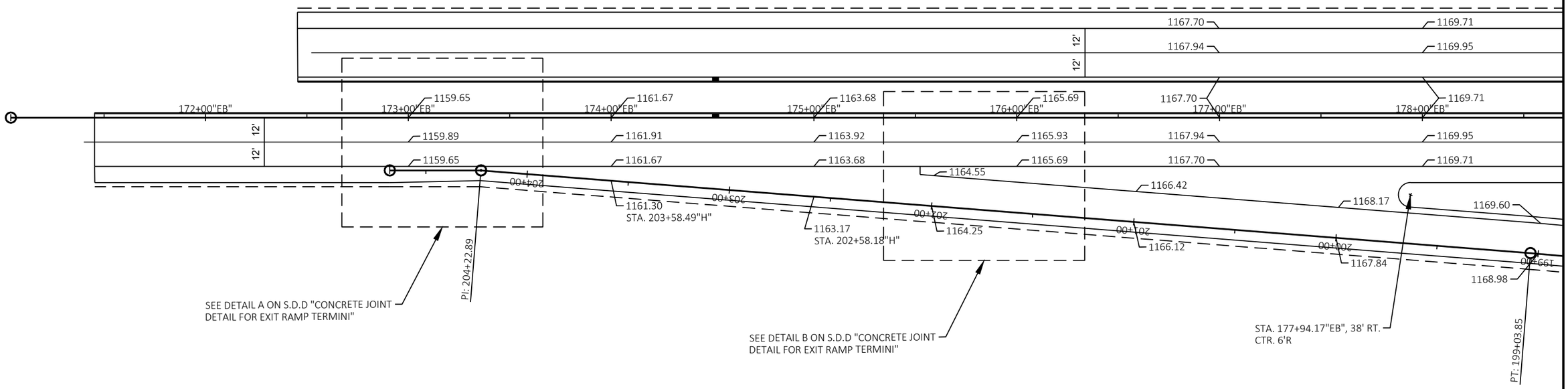


NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - STH 23	SHEET 46	E

2



NOTE:
ALL ELEVATIONS INDICATE FINISHED GRADE

ALL ELEVATIONS SHOWN ARE ON EVEN STATIONS UNLESS OTHERWISE NOTED

STA. 178+80.56"EB"
BEGIN RAMP CONCRETE PAVEMENT
AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE
SUBGRADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - USH 18	SHEET 47	E

2

2

N

SEE DETAIL A ON S.D.D "CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI"

PC: 181+61.63"G"

STA. 183+96.14"EB", 46' LT. CTR. 3'R

STA. 183+65.59"EB", 43' LT. CTR. 3'R

1175.80
1177.06
1177.53
1177.70
1178.60
1178.43
1179.15
1180.16
1175.97
1177.73
1175.73
1177.47
1178.85
1179.86

12'
13'
15'
15'

181+00"G"
182+00"G"
183+00"G"
184+00"G"

1169.71 1171.72 1173.73
1169.95 1171.96 1173.97
1169.71 1171.72 1173.73

178+00"EB" 179+00"EB" 180+00"EB" 181+00"EB" 182+00"EB" 183+00"EB" 184+00"EB"

1169.71 1171.72 1173.73
1169.95 1171.96 1173.97
1169.71 1171.72 1173.73

1168.17
1169.60
1170.40
1167.84
1168.98
1169.50

15'

00+00Z
00+66T
00+36T
197+00
196+00
195+00
194+00

STA. 177+94.17"EB", 38' RT. CTR. 6'R

PT: 199+03.85

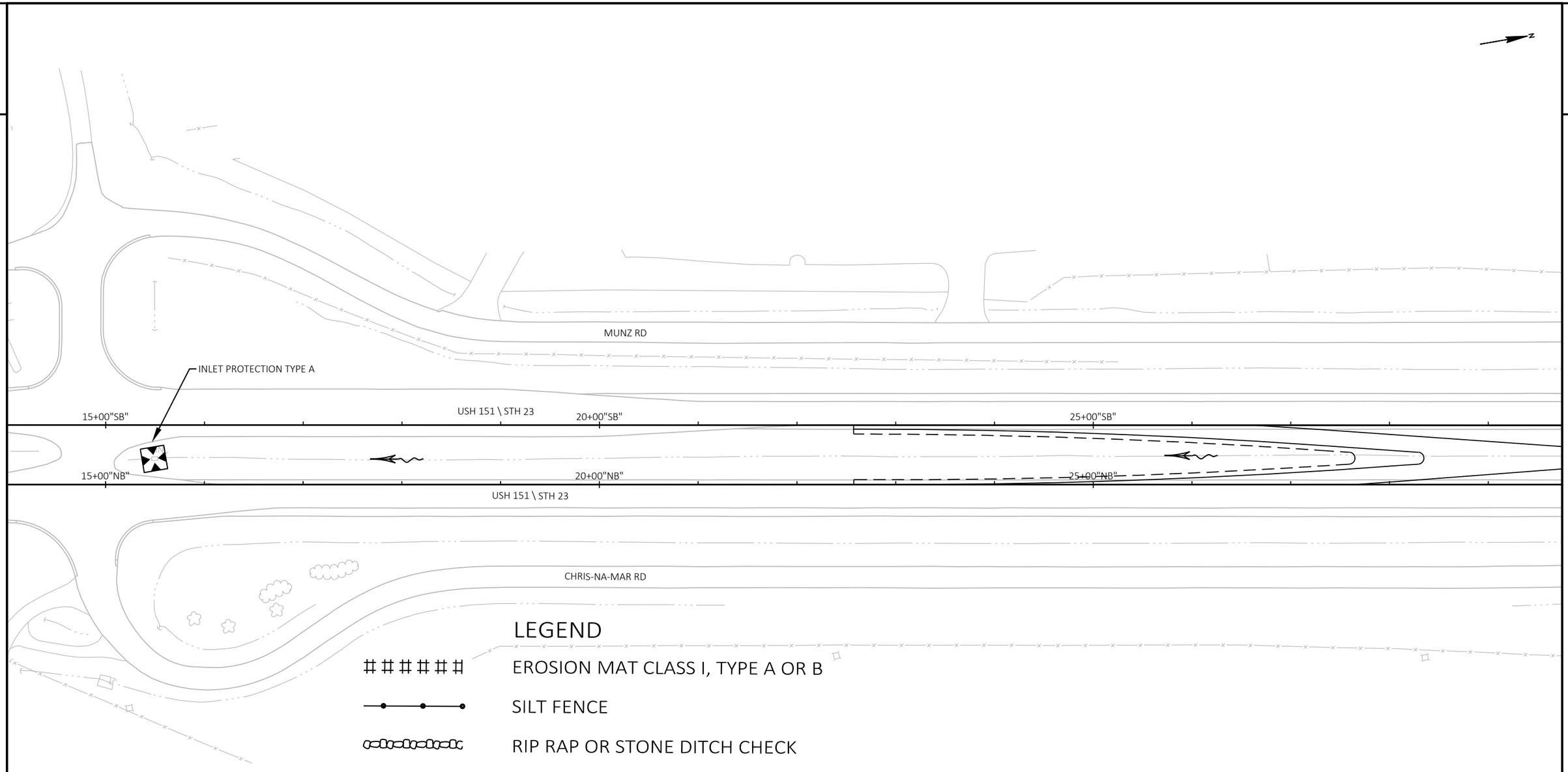
STA. 178+80.56"EB", 40' RT. CTR. 6'R

STA. 183+96.14"EB"
END RAMP CONCRETE PAVEMENT AND RAMP SUBGRADE
BEGIN RAMP TAPER LANE AND MAINLINE SUBGRADE

STA. 178+80.56"EB"
BEGIN RAMP CONCRETE PAVEMENT AND RAMP SUBGRADE
END RAMP TAPER LANE AND MAINLINE SUBGRADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVING DETAILS - PAVEMENT ELEVATIONS - USH 18	SHEET 48	E

2

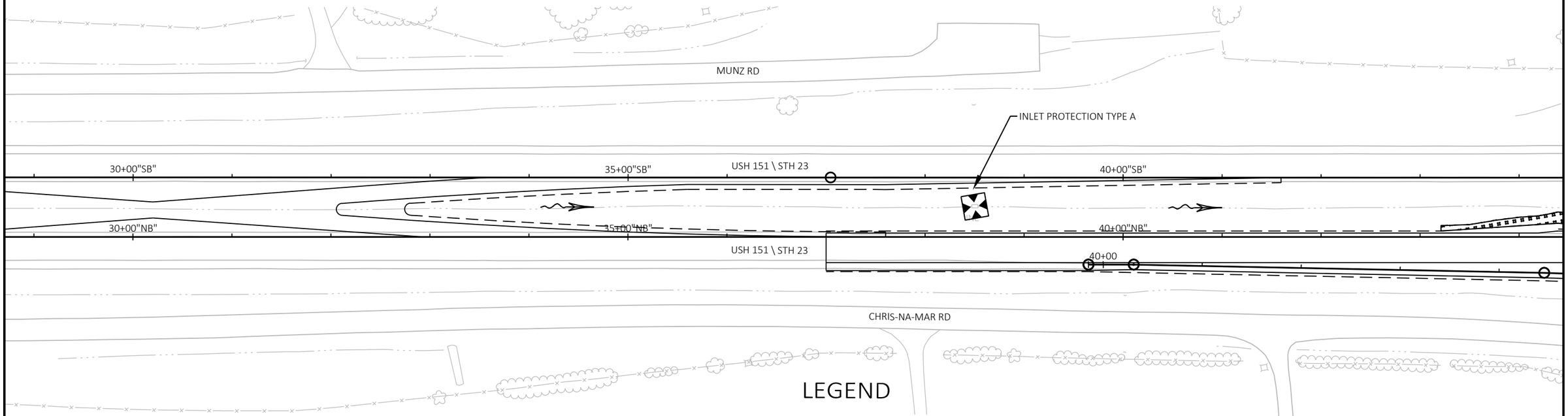


LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 49	E

2



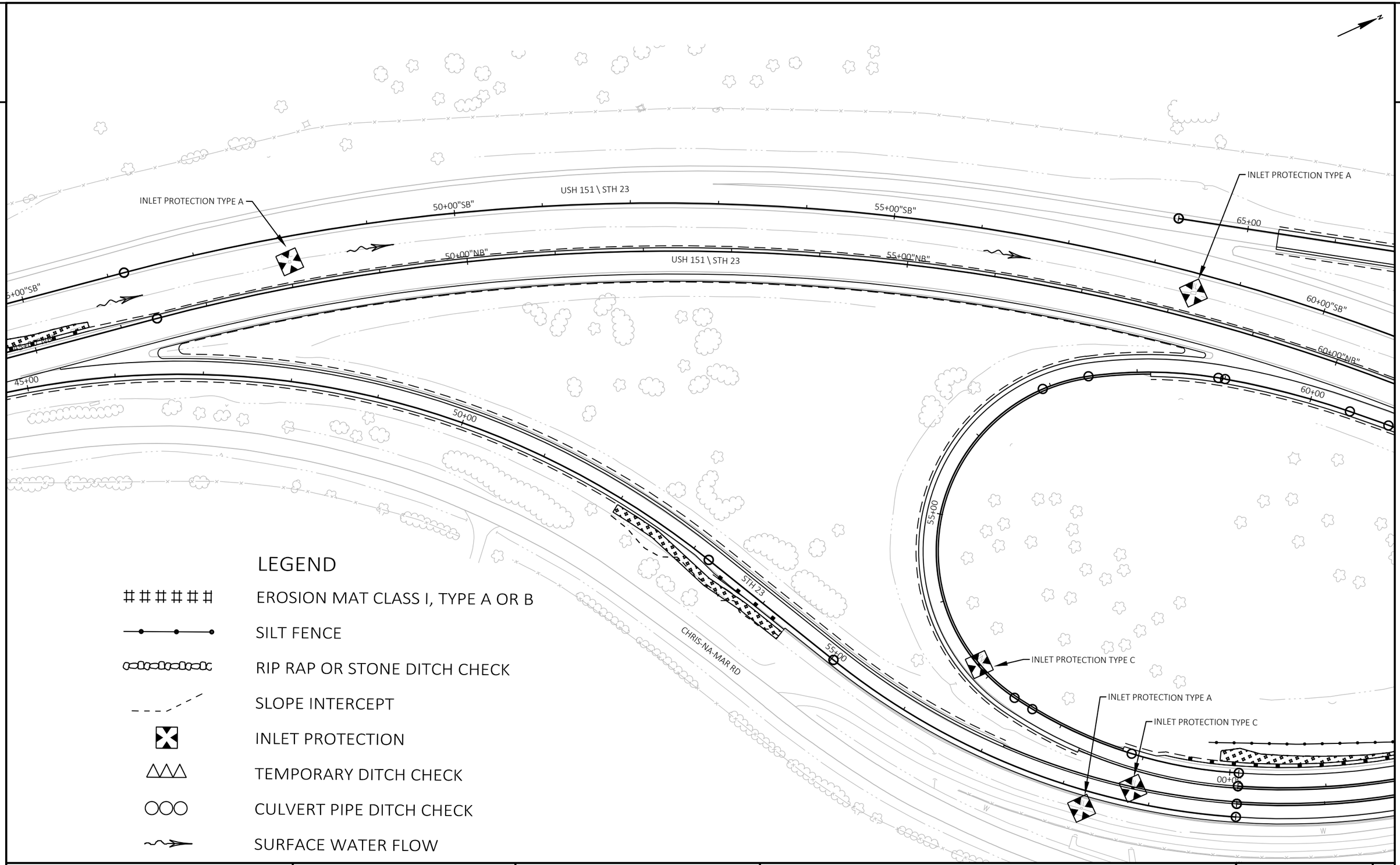
LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 50	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_02
PLOT DATE : 5/23/2018 2:23 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

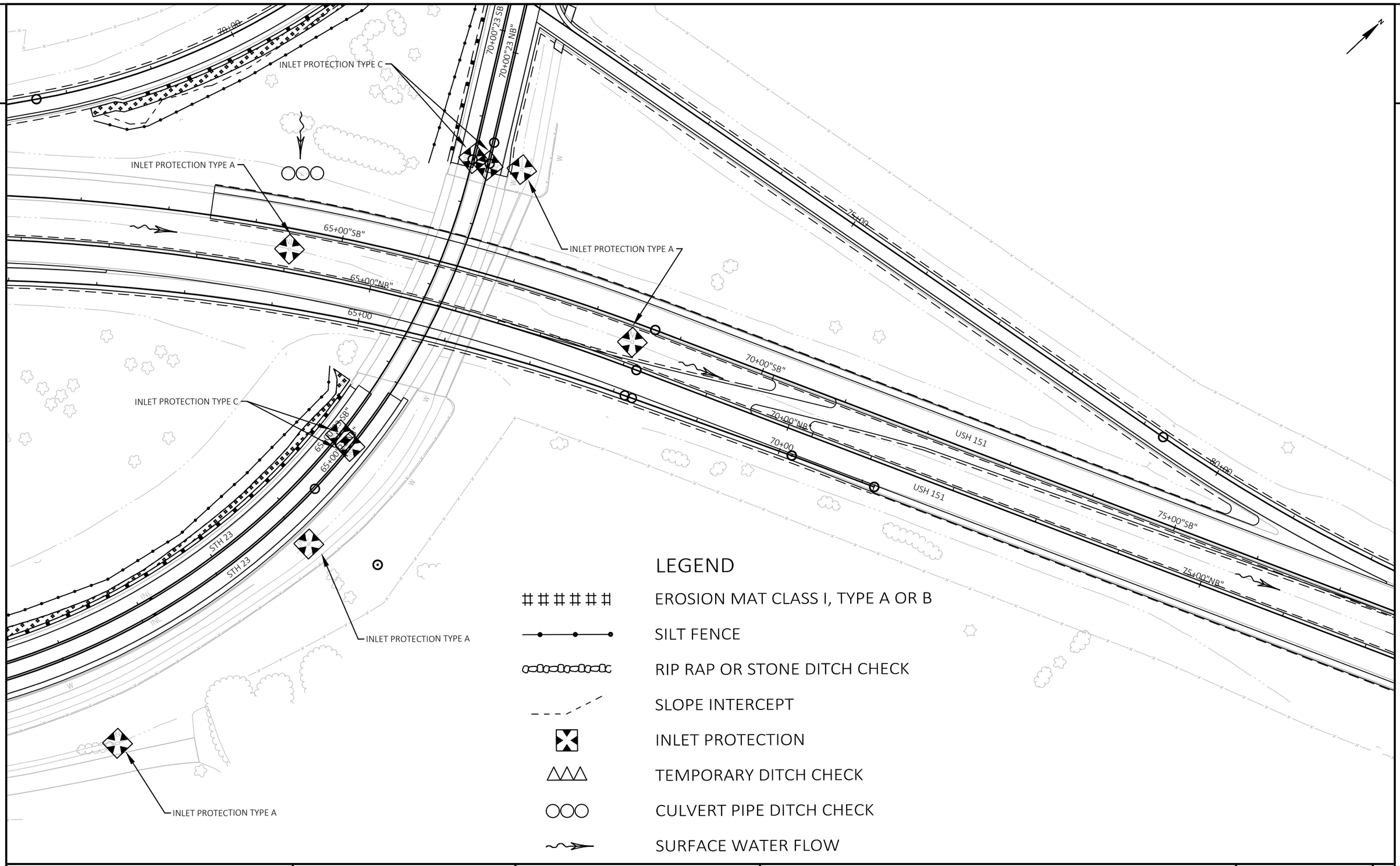
2



LEGEND

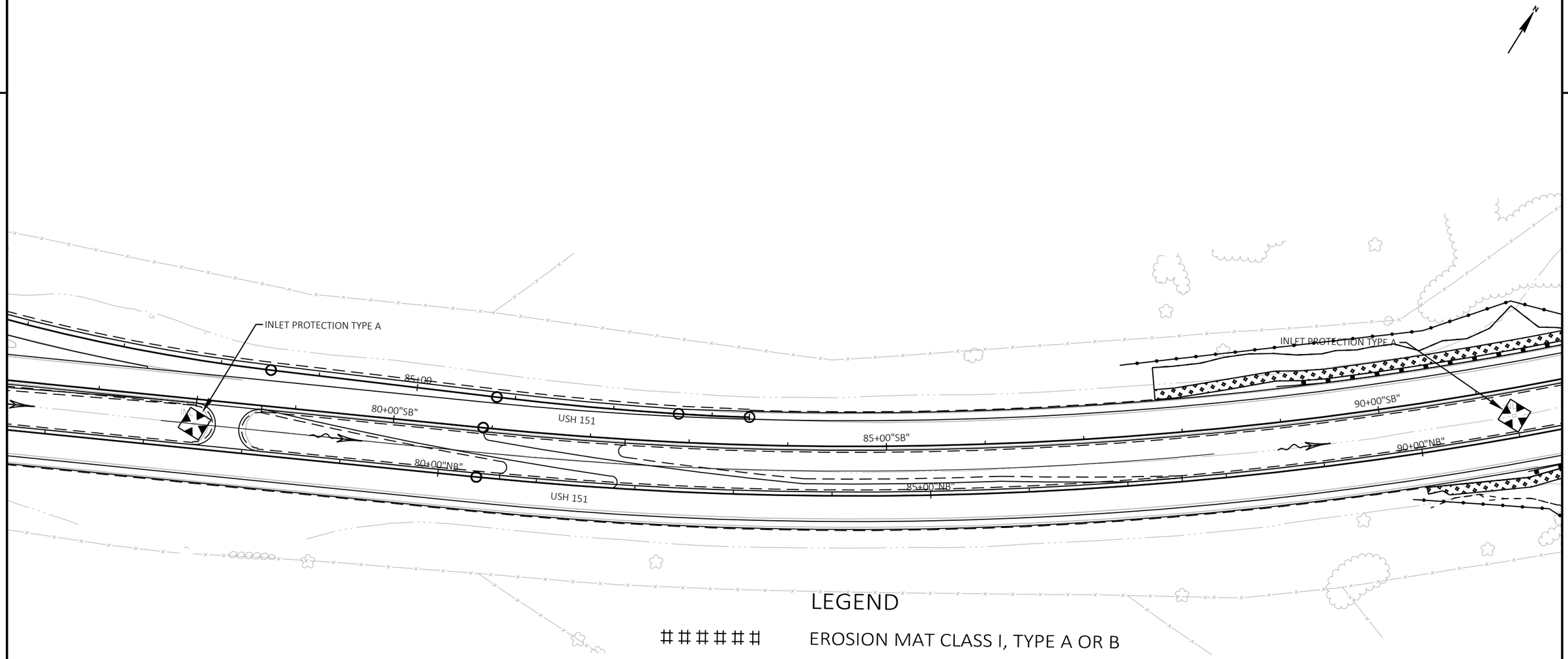
- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 51	E



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 52	E

2



LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 53	E

2

2

INLET PROTECTION TYPE A

INLET PROTECTION TYPE A

USH 151

95+00"SB"

100+00"SB"

USH 151

105+00"SB"

USH 151

95+00"NB"

100+00"NB"

105+00"NB"

USH 151

LEGEND

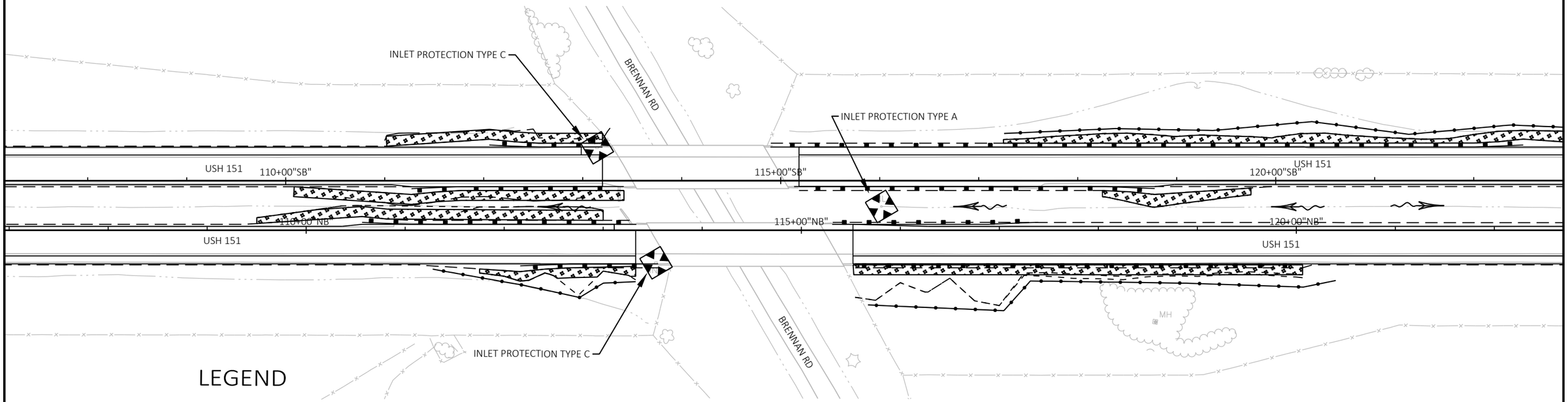
- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 54	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_06

PLOT DATE : 5/23/2018 2:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

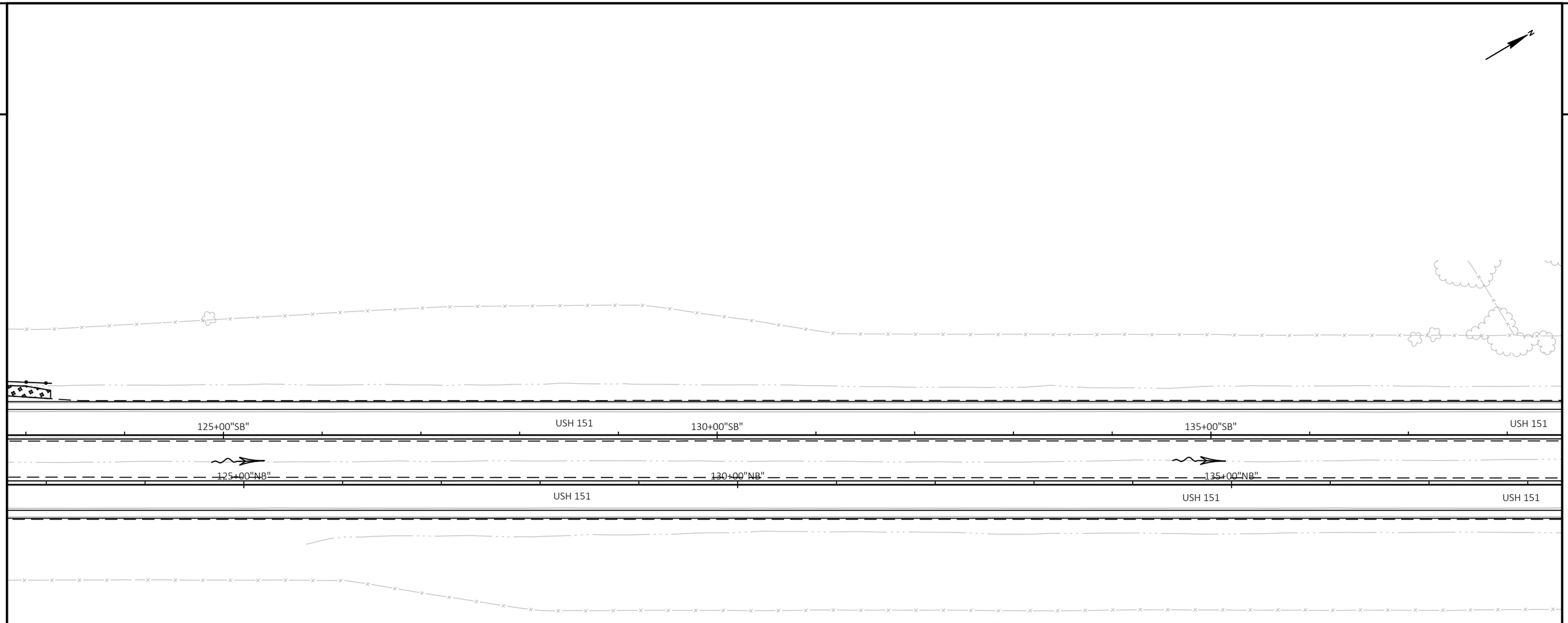
- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 55	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_07
PLOT DATE : 5/23/2018 2:23 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2



LEGEND

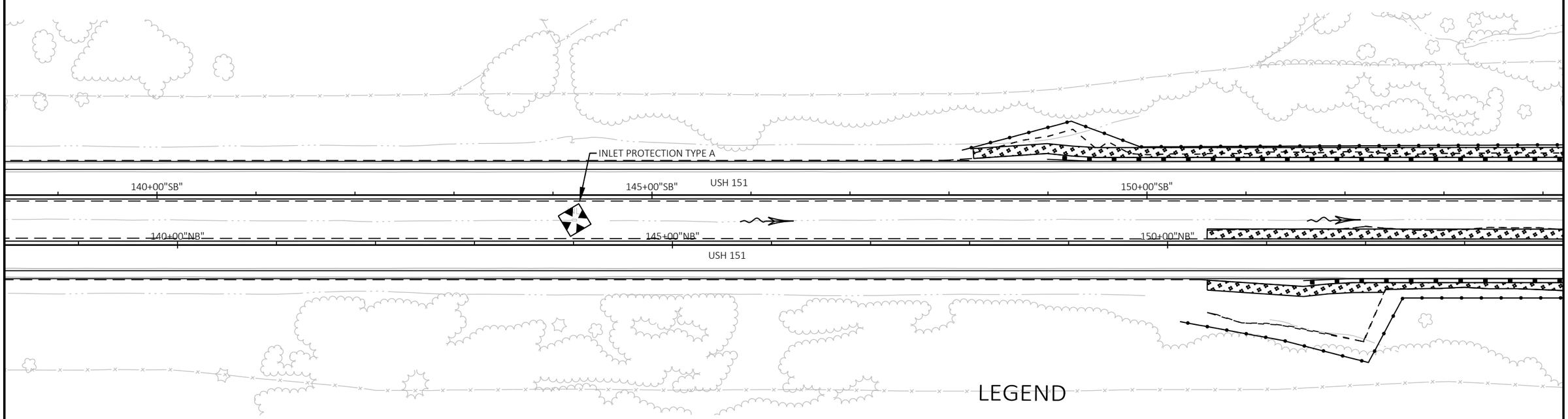
- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 56	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_08

PLOT DATE : 5/23/2018 2:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

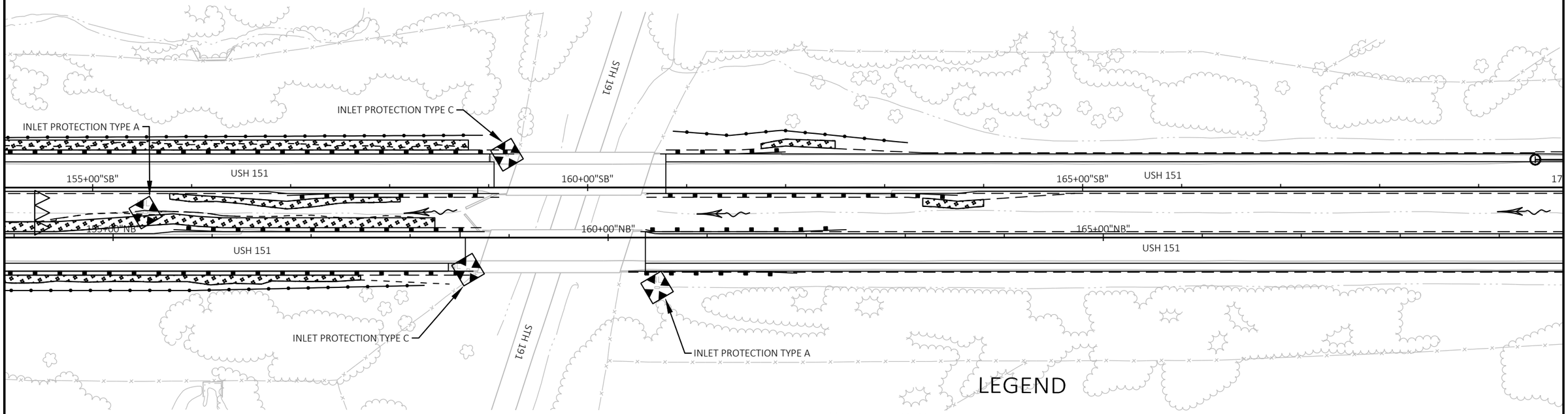


LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 57	E

2



LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 58	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_10
PLOT DATE : 5/23/2018 2:24 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

SECTION LINE RD

INLET PROTECTION TYPE A

INLET PROTECTION TYPE A

SEPTIC

170+00

175+00

180+00

170+00"SB"

175+00"SB"

180+00"SB"

185+00"SB"

USH 151

USH 151

170+00"NB"

175+00"NB"

180+00"NB"

185+00"NB"

USH 151

USH 151

SECTION LINE RD

LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 59	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_11

PLOT DATE : 5/23/2018 2:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

INLET PROTECTION TYPE A

185+00

185+00"SB"

185+00"NB"

190+00"SB"

190+00"NB"

190+00

195+00"SB" USH 151

195+00"NB"

195+00 USH 151

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C

INLET PROTECTION TYPE A

INLET PROTECTION TYPE C

INLET PROTECTION TYPE C

200+00

LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

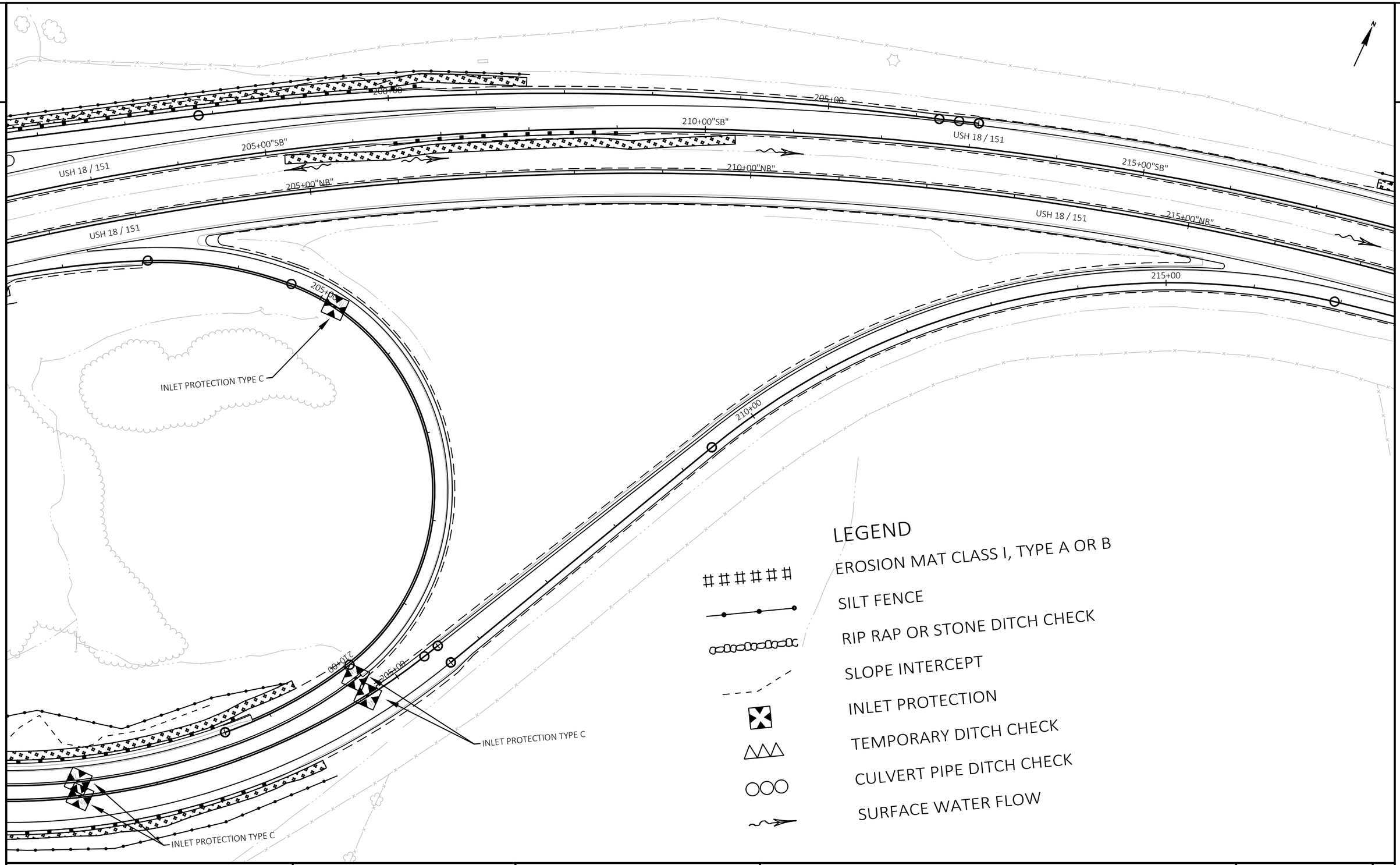
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 60	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_12

PLOT DATE : 5/23/2018 2:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 61	E

2

N

INLET PROTECTION TYPE A

CTH Z

220+00"SB"

220+00"NB"

220+00

225+00"SB"

225+00"NB"

225+00

USH 18 / 151

230+00"SB"

230+00"NB"

INL

INLET PROTECTION TYPE C

CTH Z

INLET PROTECTION TYPE A

LEGEND

######	EROSION MAT CLASS I, TYPE A OR B
	SILT FENCE
	RIP RAP OR STONE DITCH CHECK
	SLOPE INTERCEPT
	INLET PROTECTION
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE DITCH CHECK
	SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 62	E

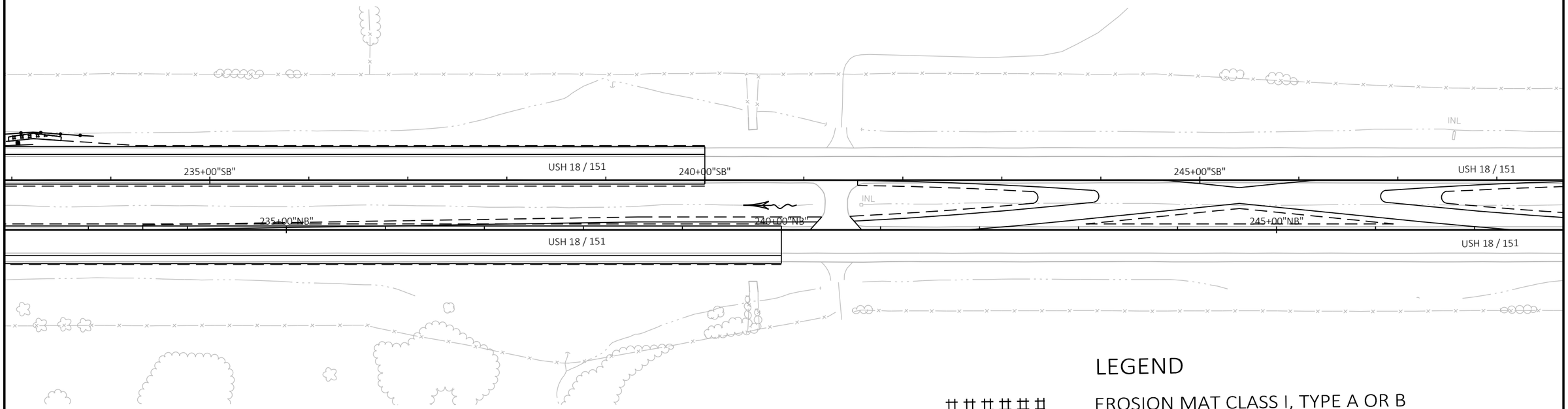
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_14

PLOT DATE : 5/23/2018 2:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2



LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 63	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_15

PLOT DATE : 5/23/2018 2:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

INL

USH 18 / 151

250+00"SB"

255+00"SB"

260+00"SB"

250+00"NB"

255+00"NB"

260+00"NB"

USH 18 / 151

INLET PROTECTION TYPE A

INL

LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

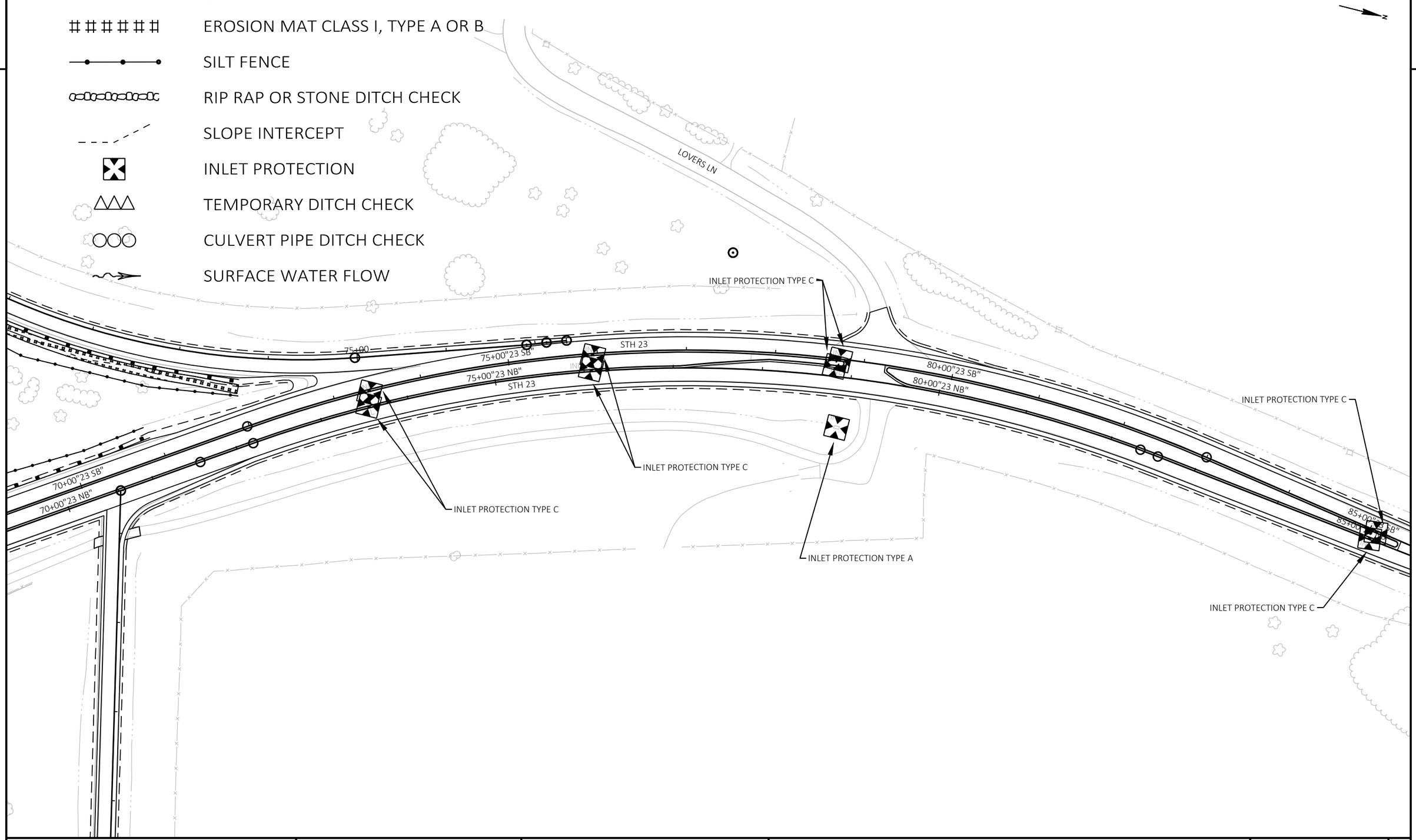
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 64	E

2

2

LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 65	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_17

PLOT DATE : 5/23/2018 2:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

INLET PROTECTION TYPE C

INLET PROTECTION TYPE C

INLET PROTECTION TYPE C

USH 18

USH 18

USH 18

USH 18

175+00

180+00

185+00

190+00

195+00

200+00

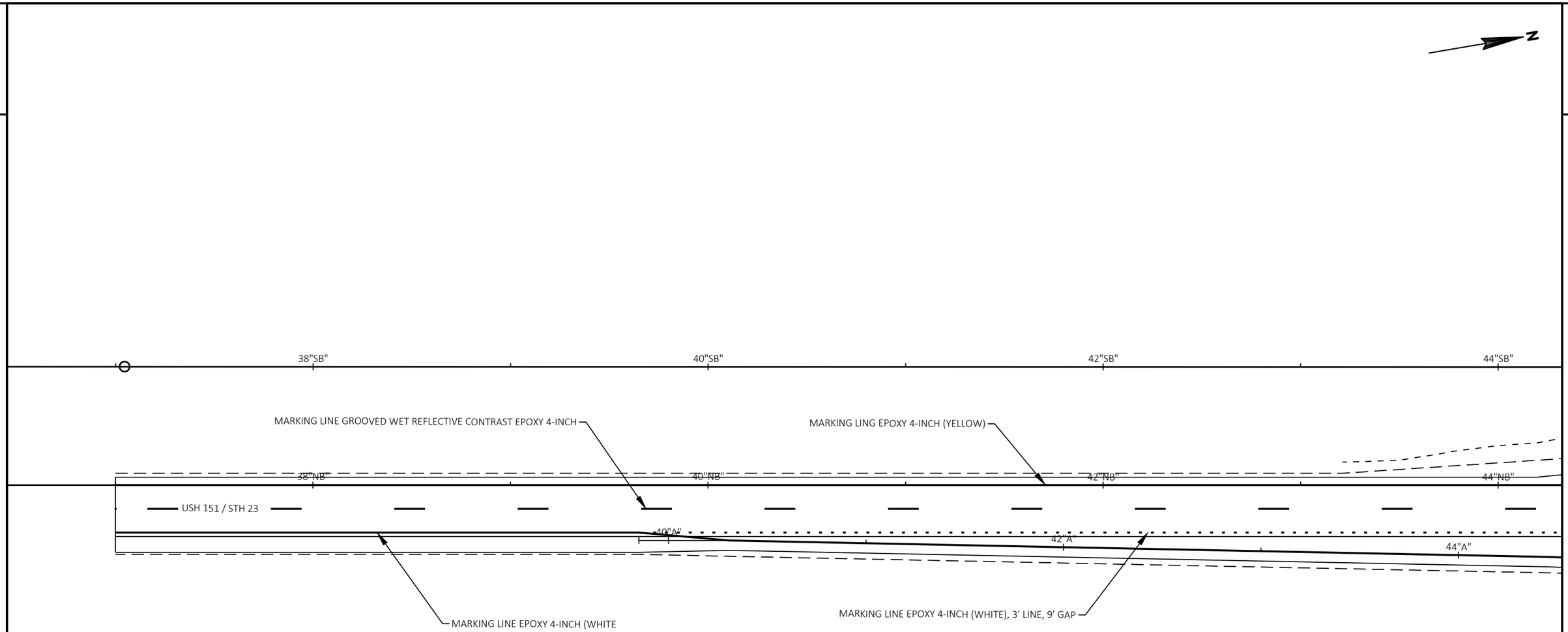
LEGEND

- EROSION MAT CLASS I, TYPE A OR B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EROSION CONTROL	SHEET 66	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC_18

PLOT DATE : 5/23/2018 2:25 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 67	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_01

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

46"SB"

48"SB"

50"SB"

52"SB"

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (YELLOW)

46"NB"

48"NB"

50"NB"

52"NB"

USH 151

46"A"

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING LINE EPOXY 4-INCH (WHITE), 3' LINE, 9' GAP

48"A"

MARKING CHEVRON EPOXY 24-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (WHITE)

50"A"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 68	E

N

66"D"

54"SB"

56"SB"

58"SB"

60"SB"

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH

54"NB"

56"NB"

58"NB"

USH 151

NB"

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

58"B"

60"B"

MARKING LINE 4-INCH EPOXY (YELLOW)

56"B"

MARKING LINE 4-INCH EPOXY (WHITE)

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 69	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_03

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

USH 151

USH 151

68"D"

62"SB"

64"SB"

66"SB"

68"SB

60"NB"

62"NB"

64"NB"

66"NB"

60"B"

62"B"

64"B"

66"B"

68"23 SB"

68"23 NB"

66"23 SB"

66"23 NB"

N

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 70	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_04

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

N

76"C"

78"C"

80"C"

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

USH 151

"

70"SB"

72"SB"

74"SB"

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH

68"NB"

70"NB"

72"NB"

74"NB"

USH 151

70"B"

68"B"

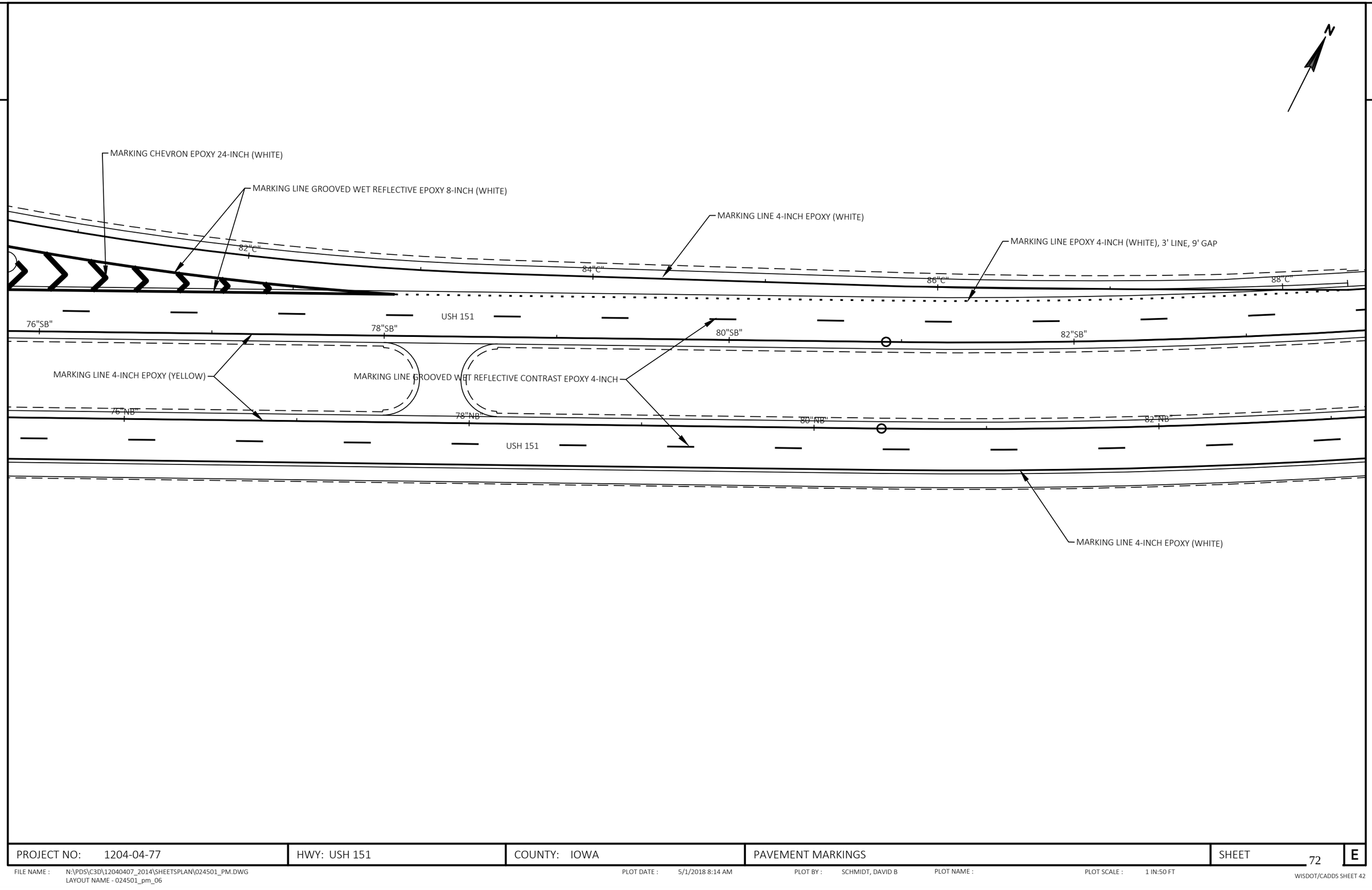
MARKING LINE 4-INCH EPOXY (WHITE)

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 71	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_05

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

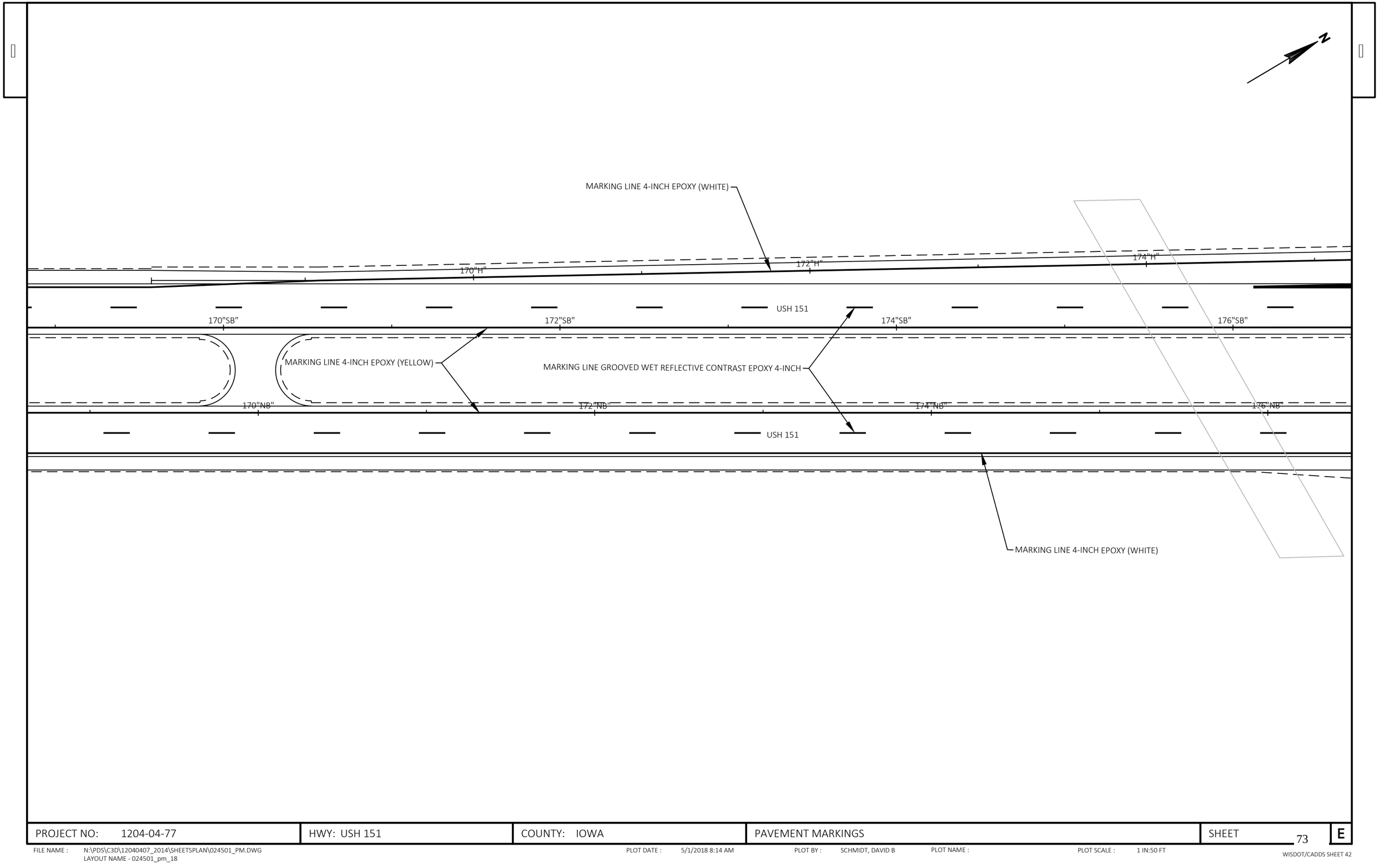
WISDOT/CADDS SHEET 42



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 72	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_06

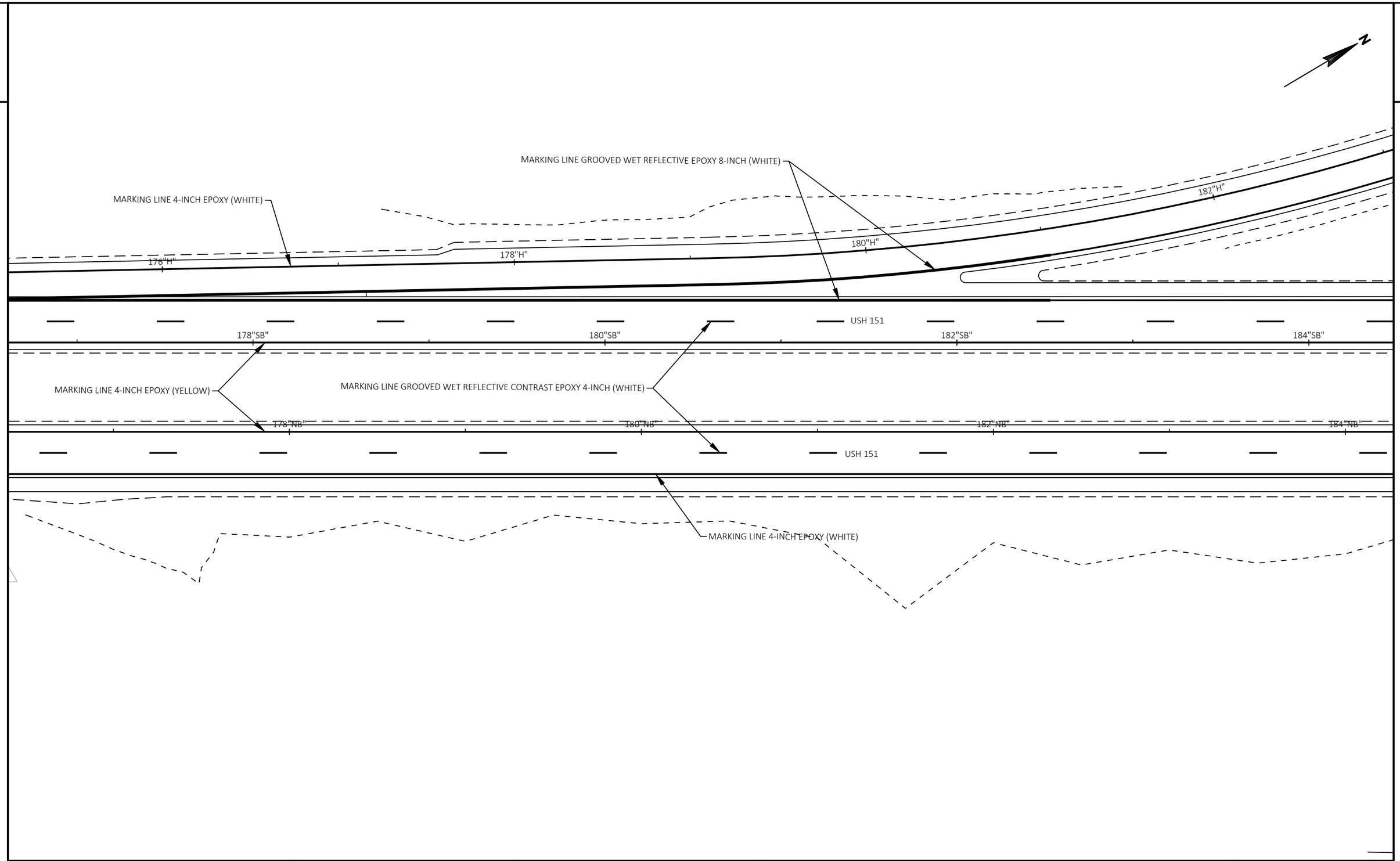
PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 73	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_18

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

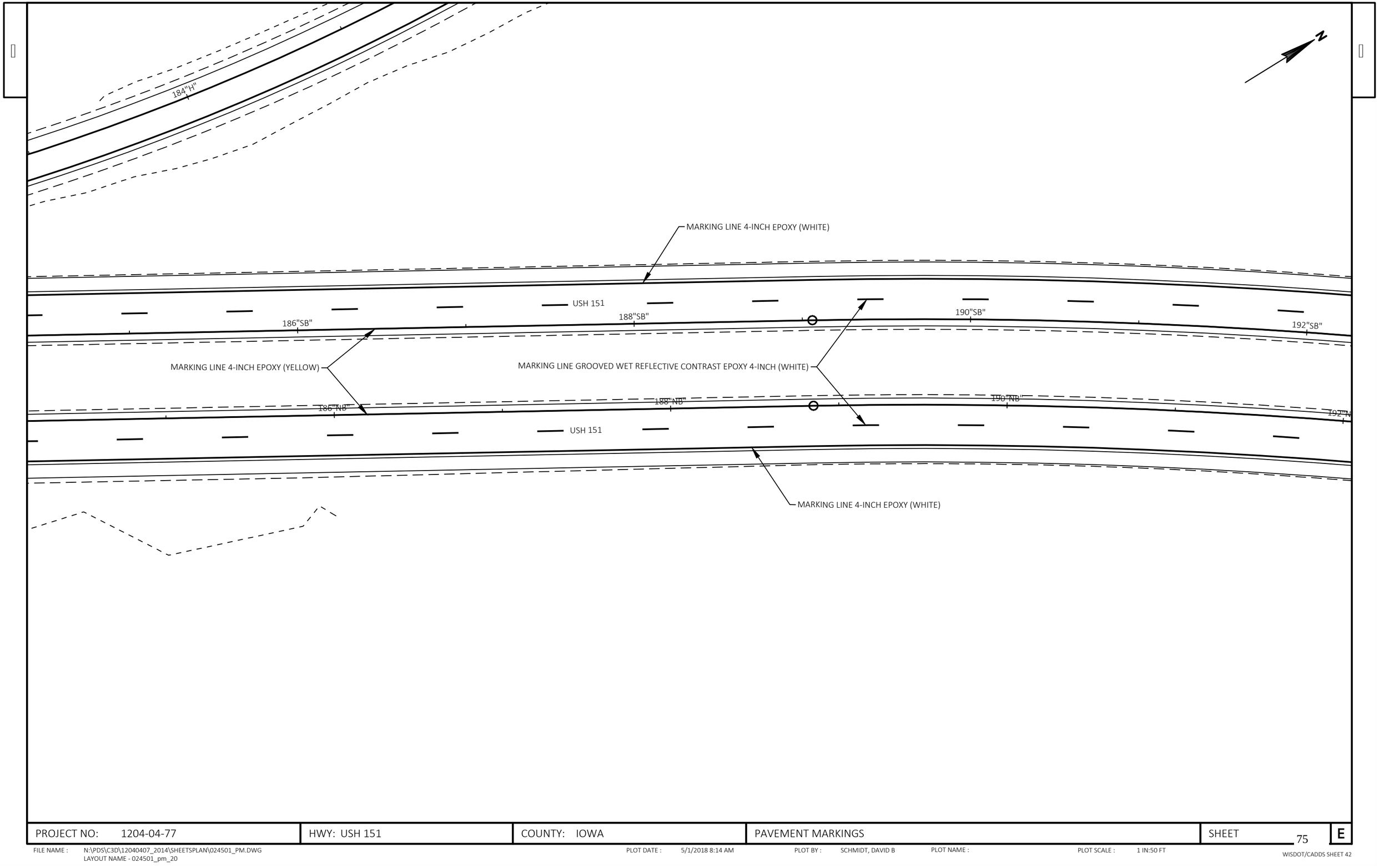


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 74	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_19

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 75	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_20

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

190"EB"

192"G"

MARKING LINE 4-INCH EPOXY (WHITE)

USH 151

196"SB"

194"SB"

198"SB"

200"SB"

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (YELLOW)

196"NB"

194"NB"

194"EB"

198"NB"

2"NB"

USH 151

196"E"

198"E"

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE EPOXY 4-INCH (WHITE), 3' LINE, 9' GAP

194"EB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 76	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_21

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

MARKING CHEVRON EPOXY 24-INCH (WHITE)

194"G"

196"G"

198"G"

200"G"

USH 151

202"SB"

204"SB"

206"SB"

208"S

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (YELLOW)

202"NB"

204"NB"

206"NB"

200"NB"

USH 151

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

202"E"

200"E"

MARKING LINE EPOXY 4-INCH (WHITE), 3' LINE, 9' GAP

204"E"

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING CHEVRON EPOXY 24-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (WHITE)

206"E"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 77	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_22

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE EPOXY 4-INCH (WHITE), 3' LINE, 9' GAP

202"G"

204"G"

206"G"

USH 151

210"SB"

212"SB"

214"SB"

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (WHITE)

208"NB"

210"NB"

212"NB"

214"NB"

USH 151

MARKING LINE 4-INCH EPOXY (WHITE)

214"F"

212"F"

MARKING LINE 4-INCH EPOXY (YELLOW)

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 78	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_23

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

MARKING LINE 4-INCH EPOXY (WHITE)

USH 151

216"SB"

218"SB"

220"SB"

222"SB"

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (YELLOW)

216"NB"

218"NB"

220"NB"

USH 151

222"NB"

218"F"

220"F"

216"F"

222"F"

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (WHITE)

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 79	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_24

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

MARKING LINE 4-INCH EPOXY (WHITE)

USH 151

224"SB"

226"SB"

228"SB"

230"SB"

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (YELLOW)

224"NB"

226"NB"

228"NB"

222"NB"

USH 151

226"F"

224"F"

222"F"

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 80	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_25

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

MARKING LINE 4-INCH EPOXY (WHITE)

72"D"

MARKING LINE 4-INCH EPOXY (YELLOW)

74"D"

MARKING CHEVRON EPOXY 24-INCH (WHITE)

76"D"

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

MARKING LINE 4-INCH EPOXY (WHITE)

STH 23

70"23 SB"

72"23 SB"

74"23 SB"

76"23 SB"

MARKING LINE 4-INCH EPOXY (YELLOW)

70"23 NB"

72"23 NB"

74"23 NB"

76"23 NB"

STH 23

MARKING LINE 4-INCH EPOXY (WHITE)

MARKING STOP LINE EPOXY 18-INCH

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 81	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_28

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

MARKING ISLAND NOSE EPOXY (YELLOW)

MARKING LINE 4-INCH EPOXY (WHITE)

80"23 SB"

82"23 SB"

MARKING LINE 4-INCH EPOXY (YELLOW)

78"23 SB"

80"23 NB"

82"23 NB"

STH 23

84"23 SB"

78"23 NB"

STH 23

84"23 NB"

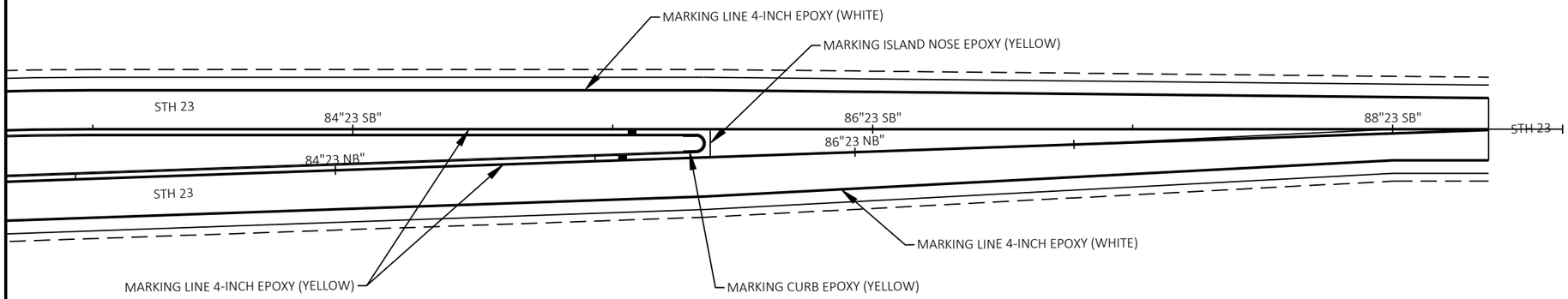
MARKING LINE 4-INCH EPOXY (WHITE)

MARKING LINE 8-INCH EPOXY (WHITE)

MARKING CURB EPOXY (YELLOW)

MARKING LINE 4-INCH EPOXY (YELLOW)

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 82	E

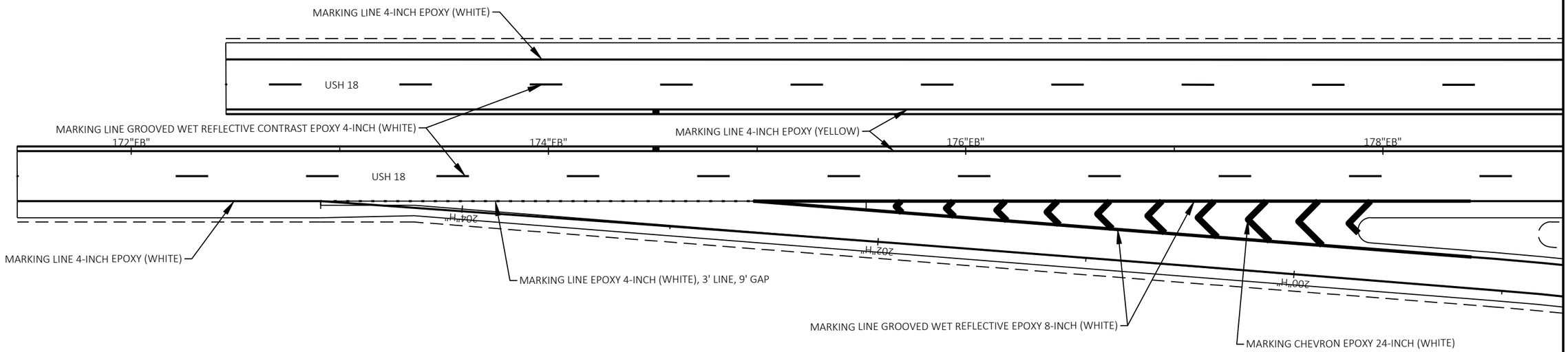


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 83	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_30

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 84	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_31

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

N

MARKING LINE 4-INCH EPOXY (WHITE)

186"G"

MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)

184"G"

MARKING LINE 4-INCH EPOXY (YELLOW)

MARKING LINE 4-INCH EPOXY (WHITE)

182"G"

USH 18

MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (WHITE)

180"EB"

182"EB"

MARKING LINE 4-INCH EPOXY (YELLOW)

184"EB"

186"EB"

USH 18

MARKING LINE 4-INCH EPOXY (WHITE)

186"G"

MARKING LINE 4-INCH EPOXY (WHITE)

184"G"

MARKING LINE 4-INCH EPOXY (YELLOW)

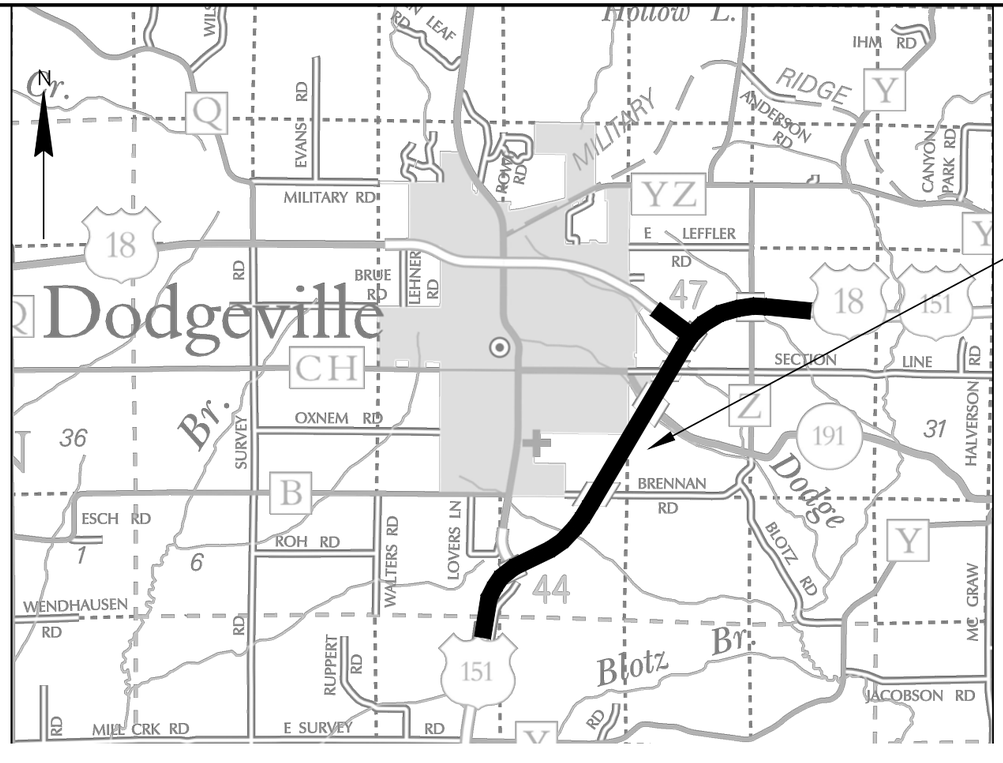
182"G"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PAVEMENT MARKINGS	SHEET 85	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_pm_32

PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

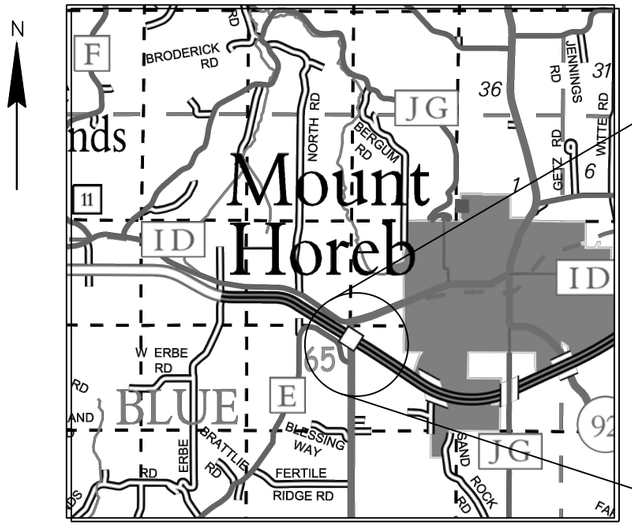


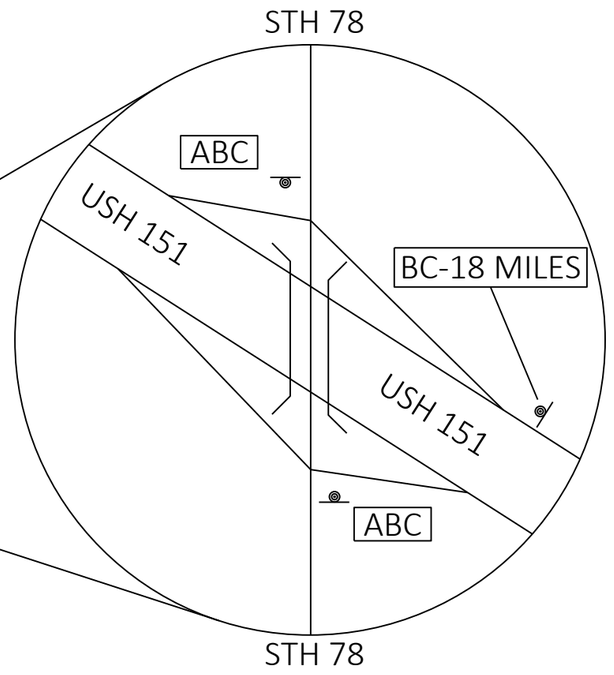
PROJECT LOCATION

A — SOUTH 151 — M3-3 24"X12" / M1-4 24"X24"

B — MAX. 14' WIDTH — W12-52 48"X48"

C — 1 MILES AHEAD — W57-52 36"X24"





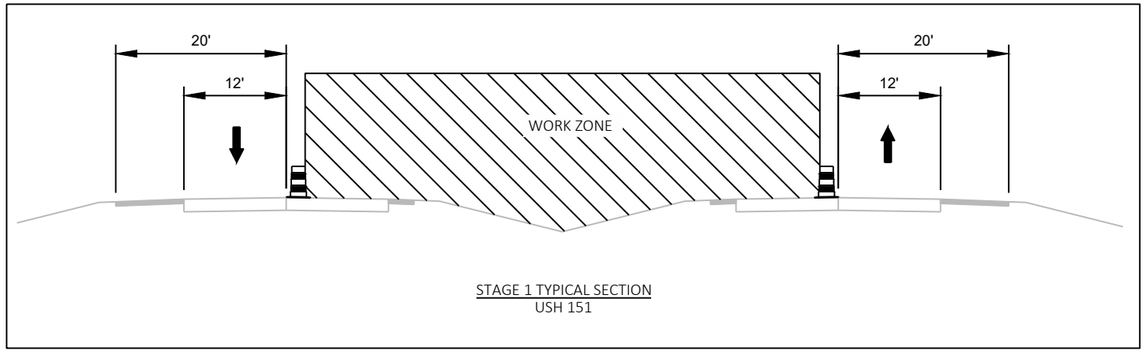
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ADVANCED WARNING SIGNING - STAGE 2 AND 3	SHEET 86	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\025008_TC.DWG
LAYOUT NAME - STAGE 2 AND 3

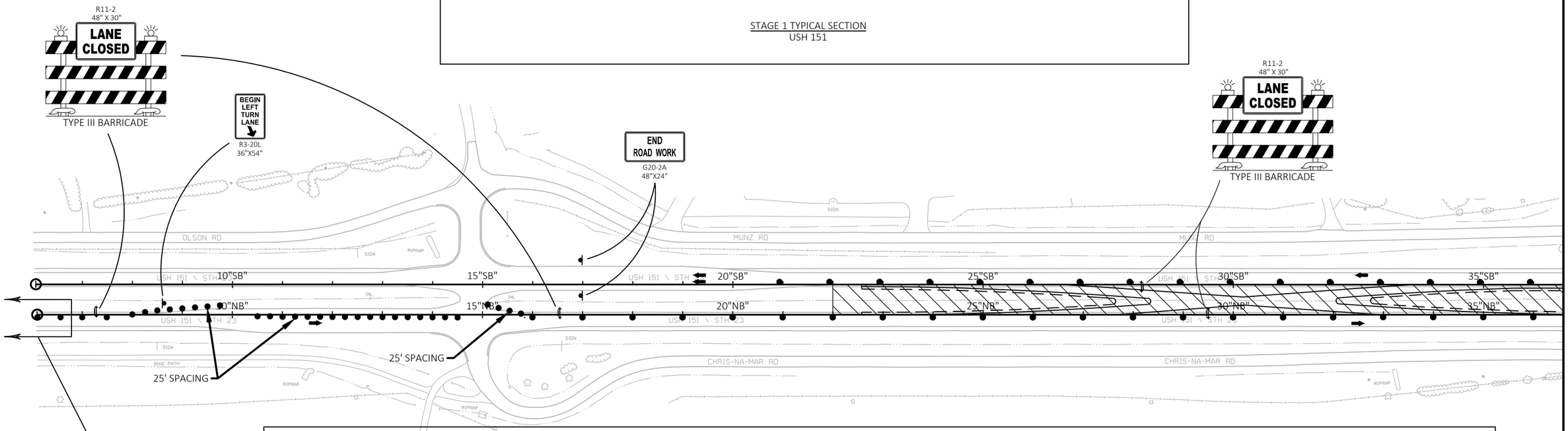
PLOT DATE : 5/1/2018 8:14 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : ######

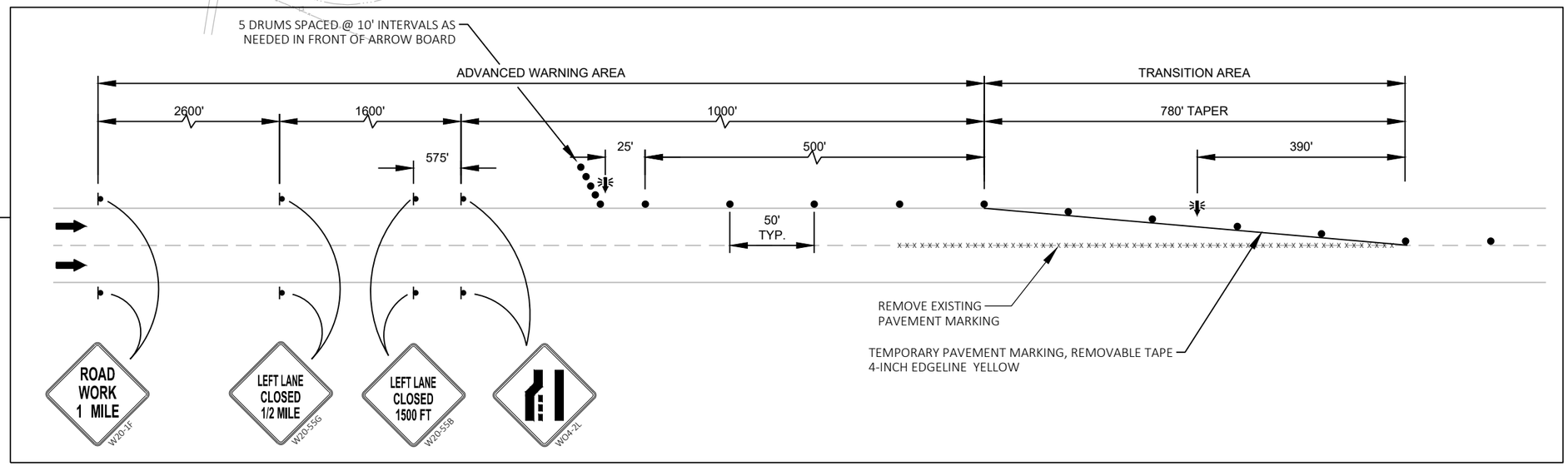
WISDOT/CADDS SHEET 42

SEE
SDD 15D12-6A, TRAFFIC CONTROL, LANE CLOSURE
AND
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION
WITHIN SINGLE LANE CLOSURE
FOR MORE DETAILS



STAGE 1 TYPICAL SECTION
USH 151





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 87	E

2

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

50"SB"
50"NB"
100' TYP.
55"SB"
55"NB"
65"D"
70"D"
60"SB"
60"NB"
60"B"
65"SB"
65"NB"
65"B"
65"STH 23 SB"
65"STH 23 NB"
55"B"
55"A"
45"SB"
45"NB"
45"A"
40"SB"
40"NB"
40"A"
35"SB"
35"NB"
50"A"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

MUNZ RD
CHRIS-NA-MAR RD
USH 151 \ STH 23
BIKE PATH
RIPRAP

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 88 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_02

PLOT DATE : 5/4/2018 9:32 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING

N

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

100'
TYP.

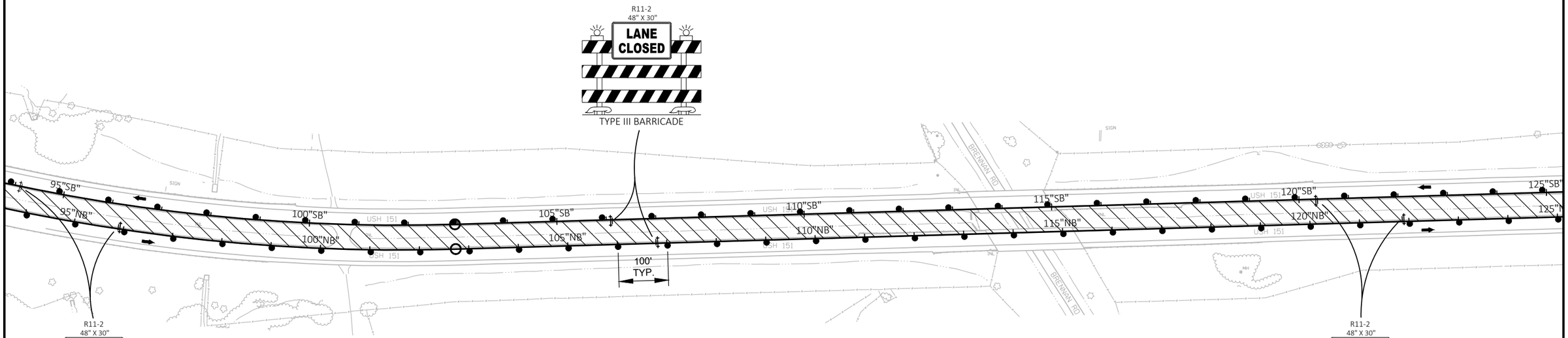
75"D"
75"STH 23 NB"
75"STH 23 SB"
70"STH 23 SB"
70"STH 23 NB"
65"STH 23 SB"
65"STH 23 NB"
75"C"
80"C"
85"C"
65"SB"
65"NB"
65"B"
70"SB"
70"NB"
70"B"
75"SB"
75"NB"
80"SB"
80"NB"
85"SB"
85"NB"
90"SB"
90"NB"
95"SB"
95"NB"
USH 151
BIKE PATH
SIGN

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 89 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_03

PLOT DATE : 5/4/2018 9:32 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 90	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_04

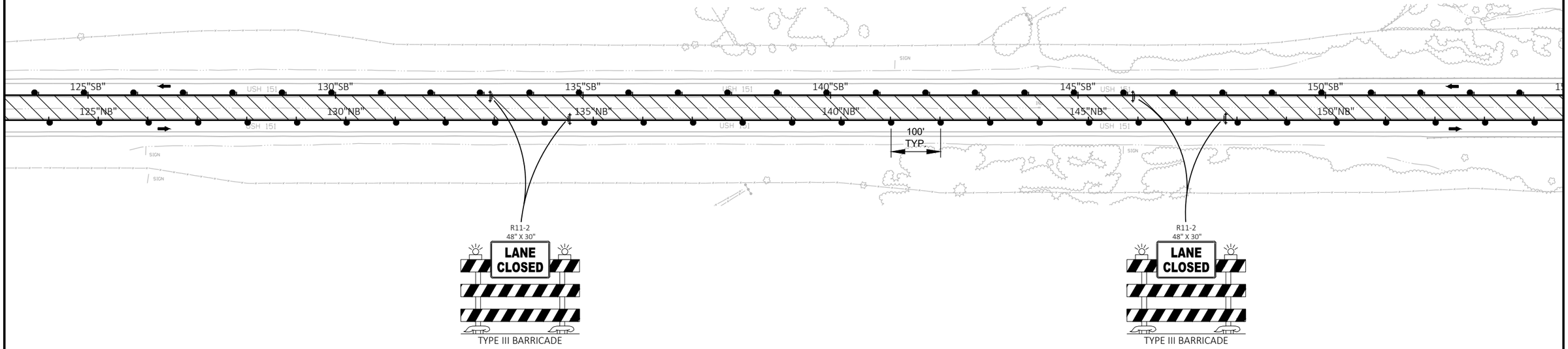
PLOT DATE : 5/4/2018 9:32 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 91	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_05

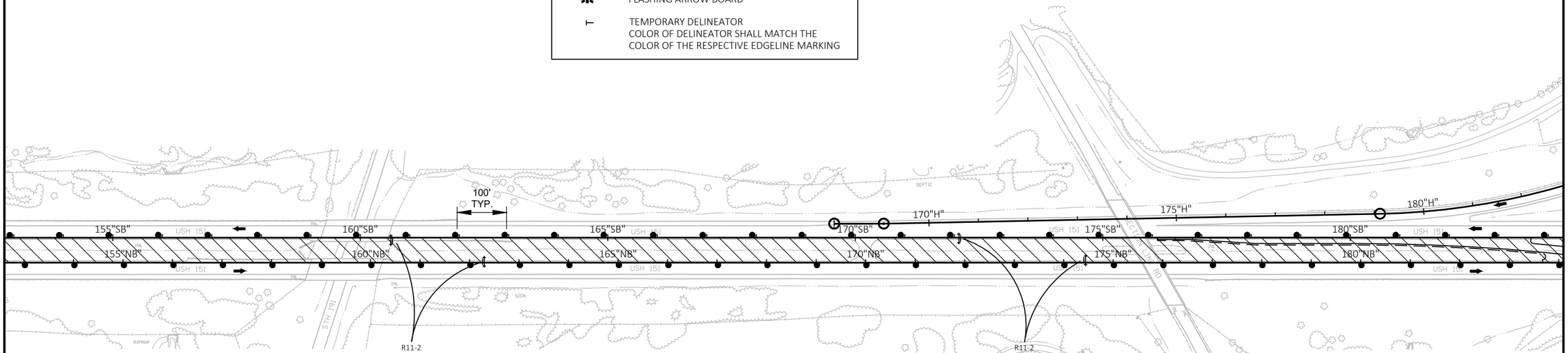
PLOT DATE : 5/4/2018 9:32 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING



R11-2
48" X 30"

LANE CLOSED

TYPE III BARRICADE

R11-2
48" X 30"

LANE CLOSED

TYPE III BARRICADE

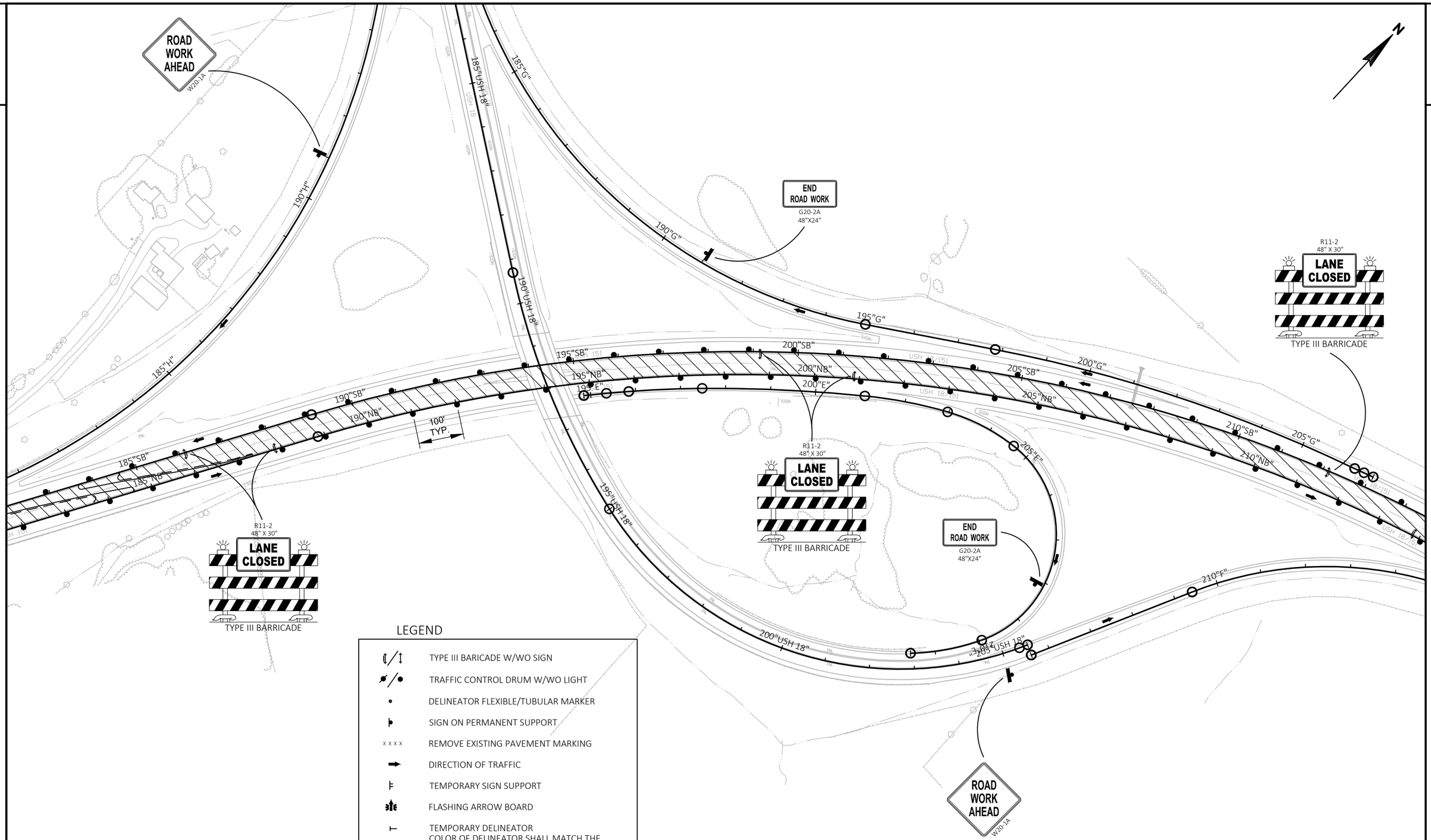
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 92	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_06

PLOT DATE : 5/4/2018 9:33 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 93	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_07

PLOT DATE : 5/4/2018 9:33 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

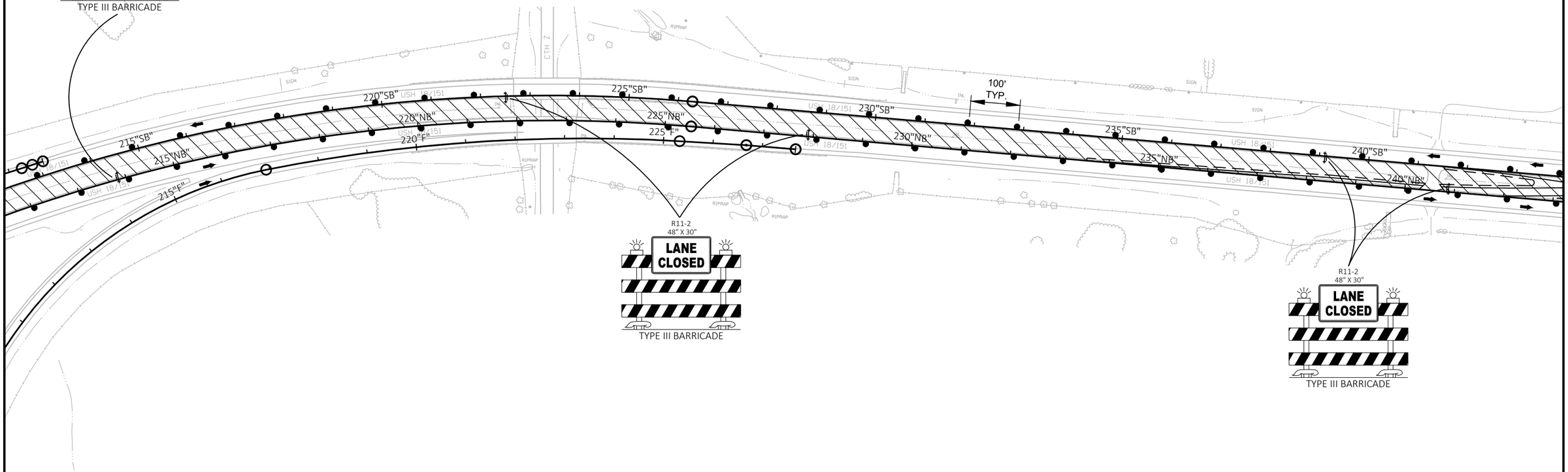
2

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE



R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 94	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_08

PLOT DATE : 5/4/2018 9:33 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

SEE
SDD 15D12-6A, TRAFFIC CONTROL, LANE CLOSURE
AND
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION
WITHIN SINGLE LANE CLOSURE
FOR MORE DETAILS

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

BUFFER SPACE, 800'

TRANSITION AREA, 780' TAPER

390'

50'
TYP.

245"SB"
245"NB"
250"SB"
250"NB"
255"SB"
255"NB"
260"SB"
260"NB"
265"NB"
270"NB"

USH 18/151

100'
TYP.

REMOVE EXISTING
PAVEMENT MARKING

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE
4-INCH EDGELINE YELLOW

END
ROAD WORK
G20-2A
48"X24"

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 95	E

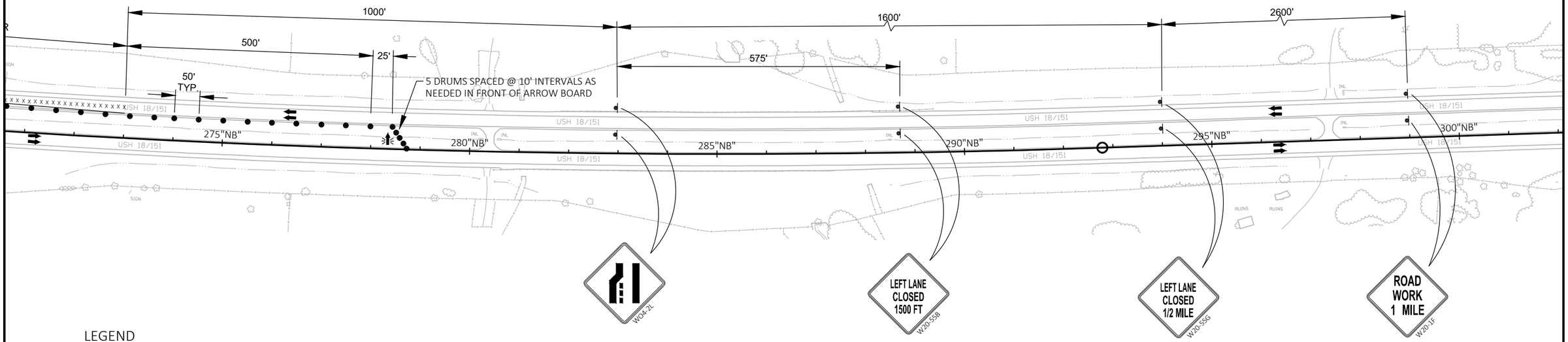
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_09

PLOT DATE : 5/4/2018 9:33 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

SEE
SDD 15D12-6A, TRAFFIC CONTROL, LANE CLOSURE
AND
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION
WITHIN SINGLE LANE CLOSURE
FOR MORE DETAILS

N



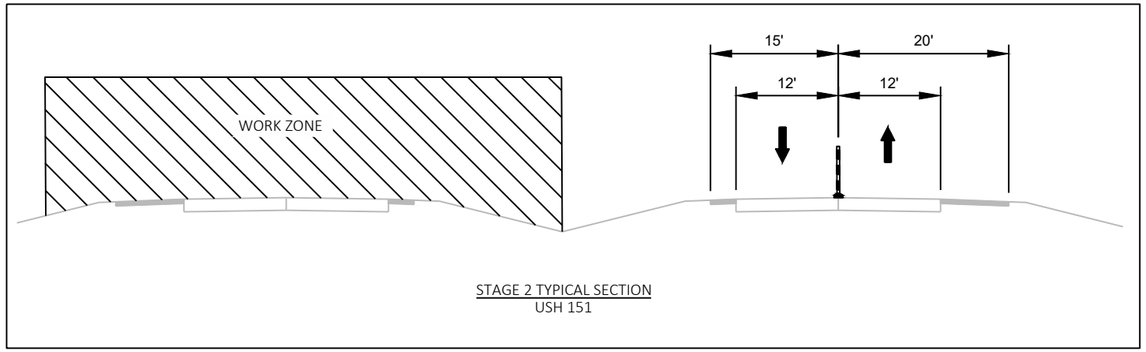
LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING

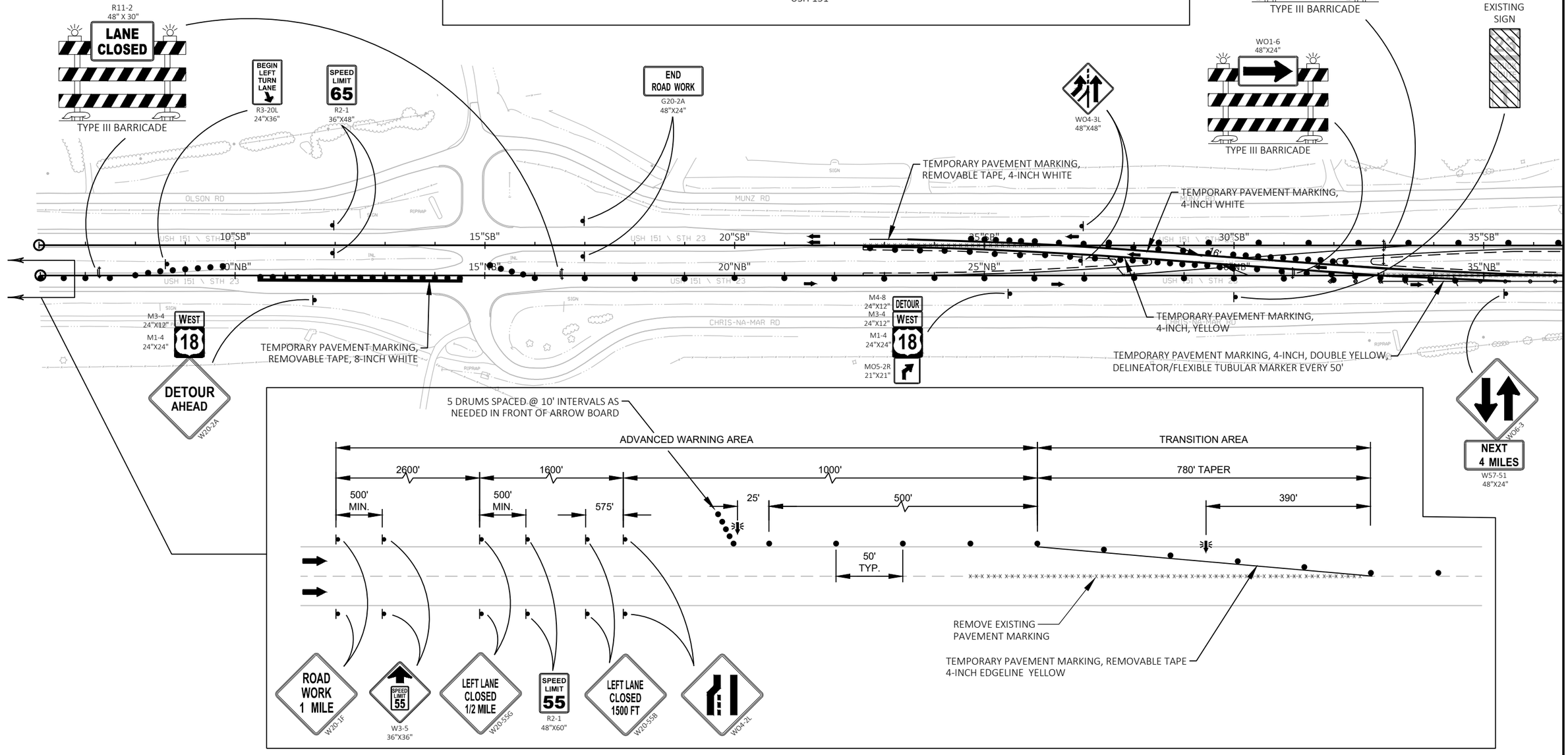
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 1	SHEET 96	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S1.DWG
LAYOUT NAME - 026001_s1_10
PLOT DATE : 5/4/2018 9:33 AM
PLOT BY : JOHNSON, JOHN R
PLOT NAME :
PLOT SCALE : 1 IN:200 FT

SEE
SDD 15D12-6B, TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION WITHIN SINGLE LANE CLOSURE
SDD 15D11-7, TRAFFIC CONTROL, SINGLE LANE CROSSOVER
SDD 15D6-3, TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
SDD 15D15, TRAFFIC CONTROL, RAMPS WITHIN LAN CLOSURES



STAGE 2 TYPICAL SECTION
USH 151



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 97	E

2

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW,
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

100'
TYP.

50'
TYP.

50"SB"
50"NB"
45"SB"
45"NB"
45"A"
40"SB"
40"NB"
40"A"
35"SB"
35"NB"
50"A"
55"SB"
55"NB"
55"B"
55"A"
65"D"
70"D"
60"SB"
60"NB"
60"B"
65"SB"
65"NB"
65"B"
65"STH 23 SB"

TEMPORARY PAINT
REMOVABLE TAPE

MUNZ RD
CHRIS-NA-MAR RD
USH 151
STH 23
BIKE PATH
RIPRAP

DETOUR
WEST
18
M4-8
24"X12"
M3-4
24"X12"
M1-4
24"X24"
MO6-2
21"X21"

WO1-4R

DO
NOT
PASS
WO6-3
R4-1
36"X48"

END
ROAD WORK
G20-2A
48"X24"

ROAD
WORK
AHEAD
W20-1A

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 98	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S2.DWG
LAYOUT NAME - 026001_s2_02

PLOT DATE : 5/4/2018 10:05 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

ROAD WORK AHEAD
W20-1A

75"D"

75"STH 23 SB"

70"STH 23 SB"

65"STH 23 SB"

75"C"

80"C"

85"C"

65"SB"
65"NB"
65"B"

70"SB"
70"NB"
70"B"

75"SB"
75"NB"

80"SB"
80"NB"

85"SB"
85"NB"

90"SB"
90"NB"

95"SB"
95"NB"

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW.
DELINEATOR\FLEXIBLE TUBULAR MARKER EVERY 50'.

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

DETOUR
WEST
18
M4-8 24"X12"
M3-4 24"X12"
M1-4 24"X24"
PLACE NEAR EXISTING USH 18 NORTH REASSURANCE SIGN

NEXT 3 MILES
W6-3 48"X48"
WO57-51 48"X24"

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARICADE

R11-2 48" X 30"
RAMP CLOSED
TYPE III BARICADE

DO NOT PASS
W6-3 48"X48"
R4-1 36"X48"

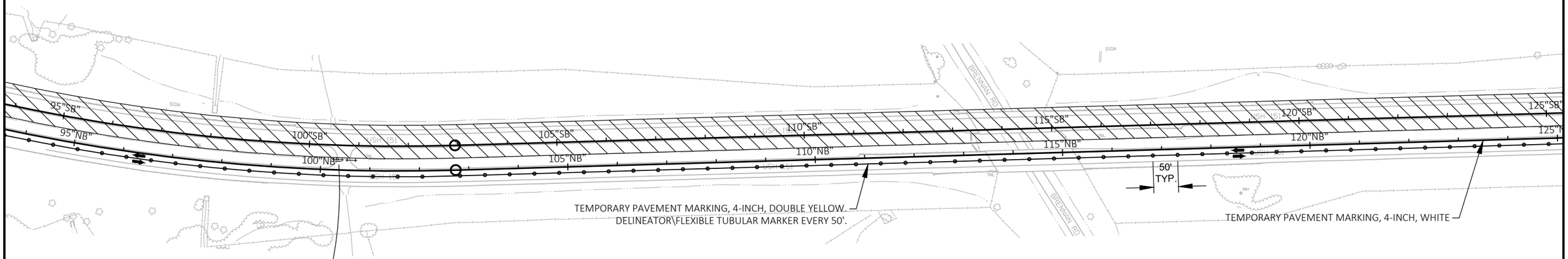
COVER EXISTING SPEED LIMIT SIGN(S) WITH
SPEED LIMIT 55
R2-1 48"X60"

COVER EXISTING SIGNS

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 99	E

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



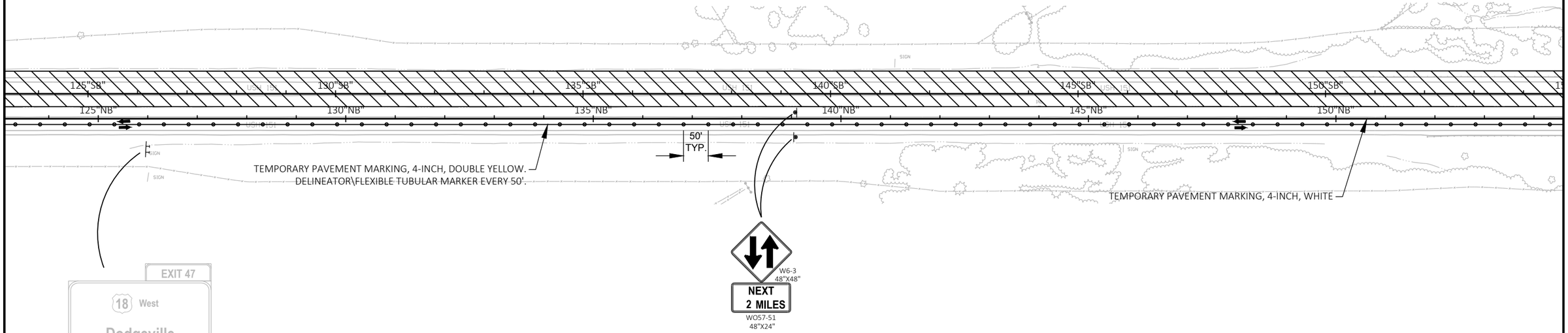
TYPE III BARRICADE

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

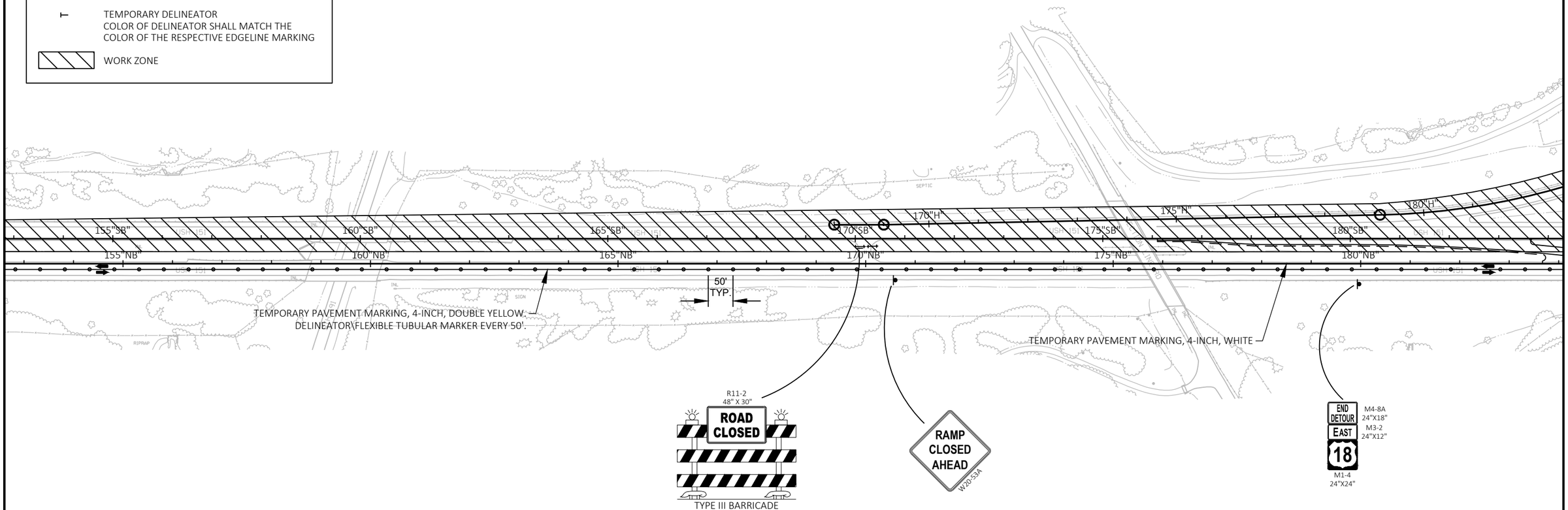


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 101	E

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 102	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S2.DWG
LAYOUT NAME - 026001_s2_06

PLOT DATE : 5/4/2018 10:05 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

END ROAD WORK
G20-2A
48"X24"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW.
DELINEATOR\FLEXIBLE TUBULAR MARKER EVERY 50'.

COVER EXISTING
EXIT SIGN

M3-1
24"X12"
NORTH
M4-8
24"X12"
DETOUR
M1-6
24"X24"
23
H
D9-2
24"X24"
MO6-2
21"X21"
MO6-2
21"X21"

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

185"H"
190"H"
185"USH 18"
190"USH 18"
185"G"
190"G"
195"G"
200"SB"
200"NB"
205"SB"
205"NB"
200"G"
205"G"
210"SB"
210"NB"
210"G"
205"E"
195"SB"
195"NB"
195"E"
195"USH 18"
200"USH 18"
205"USH 18"
185"SB"
185 NB
190"SB"
190"NB"
50'
TYP.
25'
TYP.
100'
TYP.

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

RAMP
CLOSED
1000 FT
W20-53C

W06-3
DO
NOT
PASS
R4-1
36"X48"

COVER
EXISTING
SIGNS

EXIT 47
18 West
Dodgeville
CLOSED
G20-61
120"X30"

COVER ARROW ON
EXISTING SIGN
(COVERING SIGNS TYPE 1)

R11-2
48" X 30"
RAMP
CLOSED
TYPE III BARRICADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 103	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S2.DWG
LAYOUT NAME - 026001_s2_07

PLOT DATE : 5/4/2018 10:05 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

WO6-3
NEXT 4 MILES
WO57-51
48"X24"

M3-4
24"X12"
WEST
M1-4
24"X24"
18
M4-8
24"X12"
DETOUR
M3-1
24"X12"
NORTH
23
M1-6
24"X24"

H
D9-2
24"X24"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW.
DELINEATOR\FLEXIBLE TUBULAR MARKER EVERY 50'.

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

100'
TYP.

50'
TYP.

50'
TYP.

25'
TYP

TEMPORARY PAINT

REMOVABLE TAPE

215"SB"
215"NB"
215"F"
220"SB"
220"NB"
220"F"
225"SB"
225"NB"
225"F"
230"SB"
230"NB"
235"SB"
235"NB"
240"SB"
240"NB"

CTH Z
RIPRAP
SIGN

WO6-3
DO NOT PASS
R4-1
36"X48"

SPEED LIMIT
55
R2-1
24"X30"

M3-3
24"X12"
SOUTH
M1-4
24"X24"
151

WO6-1

COVER EXISTING
SPEED LIMIT
SIGN(S) WITH

SPEED LIMIT
55
R2-1
48"X60"

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 104	E

2

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

WO1-6
48" X 24"
TYPE III BARRICADE

TEMPORARY MARKING TAPE
4" WHITE

EXIT
E5-1
72"X60"

50' SPACING

245"SB"
250"SB"
255"SB"
260"SB"
250"NB"
255"NB"
260"NB"
265"NB"
270"NB"

BUFFER SPACE, 800'
100'
TRANSITION AREA, 780'
50'
390'
500'
50'

USH 18/151

25' SPACING

TEMPORARY MARKING TAPE
4" YELLOW

WO1-4L
45
MPH
WO13-1
36"X36"

M3-3 24"X12" | M3-4 24"X12" | DETOUR M4-8 24"X12"
SOUTH | WEST | NORTH M3-1 24"X12"
M1-4 24"X24" | 151 | 18 | 23 | M1-6 24"X24"
MO6-2 21"X21" | M1-4 24"X24" MO6-2 21"X21" | MO6-2 21"X21"

M3-3 24"X12" | M3-4 24"X12" | DETOUR M4-8 24"X12"
SOUTH | WEST | NORTH M3-1 24"X12"
M1-4 24"X24" | 151 | 18 | 23 | M1-6 24"X24"
MO5-2L 21"X21" | M1-4 24"X24" MO5-2R 21"X21" | MO5-2R 21"X21"

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x — REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 105	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S2.DWG
LAYOUT NAME - 026001_s2_09

PLOT DATE : 5/4/2018 10:06 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

M3-1
24"X12"
M1-6
24"X24"
NORTH
23
DETOUR AHEAD
W20-2A

1000'
500'
25'
1600'
2600'
575'
500' MIN.
500' MIN.

"NB"
275"NB"
280"NB"
285"NB"
290"NB"
295"NB"
300"NB"

USH 18/151

M4-8
24"X12"
M3-1
24"X12"
M1-6
24"X24"
DETOUR
NORTH
23
WEST
18
M3-4
24"X12"
M1-4
24"X24"
M05-2R
21"X21"
M05-2R
21"X21"

W04-2R

RIGHT LANE CLOSED 500 FT
W20-5D

SPEED LIMIT 55
R2-1
48"X60"
(BLACK & WHITE)

RIGHT LANE CLOSED 1/2 MILE
W20-5G

SPEED LIMIT 55
W03-5

ROAD WORK 1 MILE
W20-1F

LEGEND

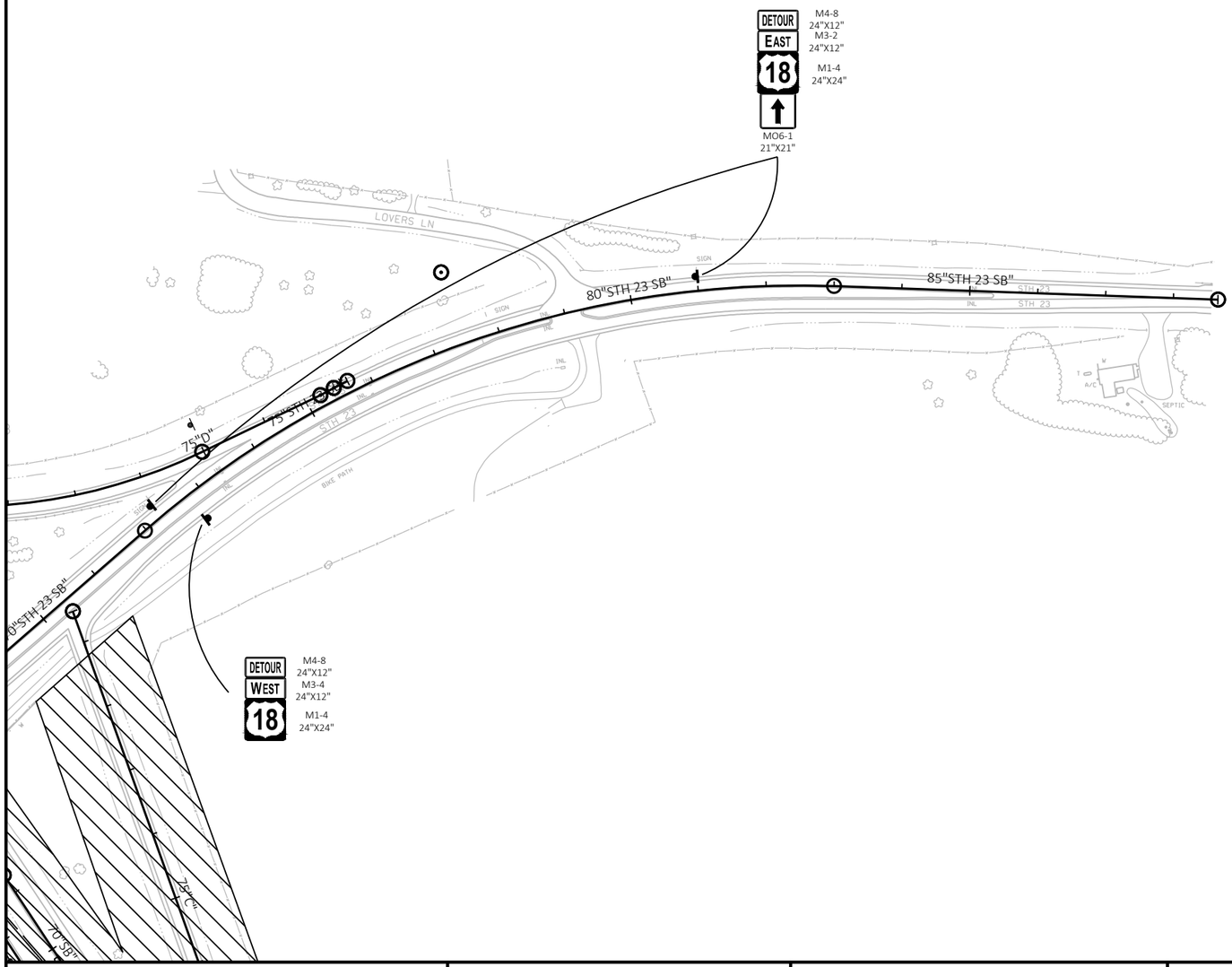
- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 106	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S2.DWG
LAYOUT NAME - 026001_s2_10

PLOT DATE : 5/4/2018 10:06 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 107	E

2

2

Bennett Rd

EAST 18

WEST 18

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
DETOUR
NORTH
23 H
D9-2 24"X24"

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
DETOUR
NORTH
23 H
D9-2 24"X24"
MO6-1 21"X21"
MO6-1 21"X21"

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
DETOUR
NORTH
23 H
D9-2 24"X24"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

Bennett Rd

WEST 18

EAST 18

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
DETOUR
NORTH
23 H
D9-2 24"X24"

WEST 18

EAST 18

USH 18

175'USH 18"

180'USH 18"

185'USH 18"

185'G"

H.002'

H.561'

H.061'

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

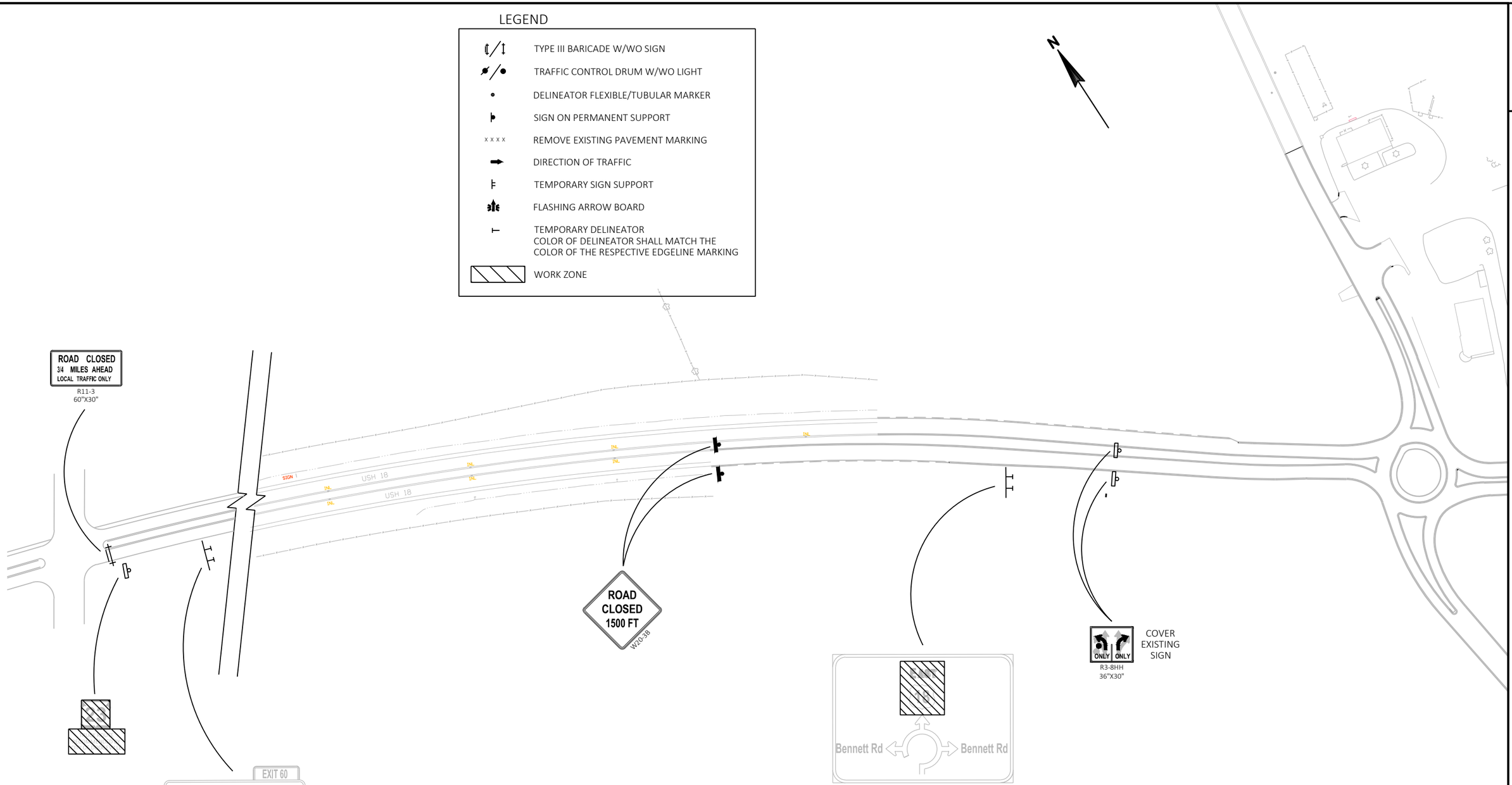
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 108	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S2.DWG
LAYOUT NAME - 026001_s2_13

PLOT DATE : 5/4/2018 10:06 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

LEGEND

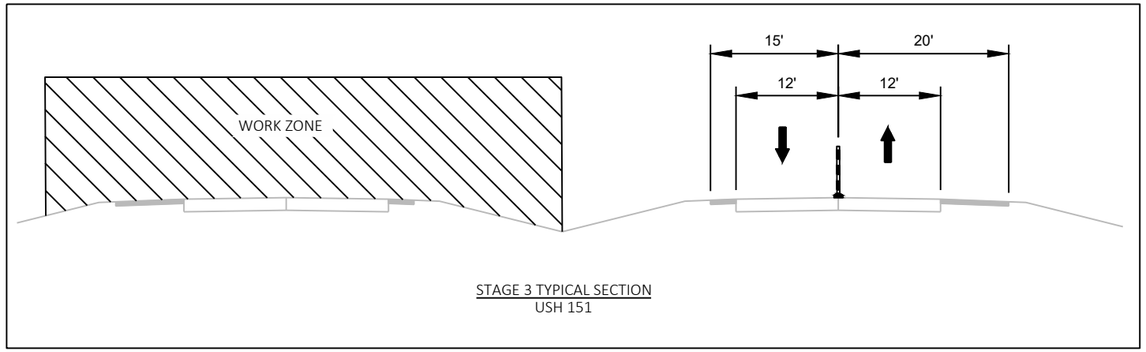
- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



2

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 2	SHEET 109 E

SEE
SDD 15D12-6B, TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION WITHIN SINGLE LANE CLOSURE
SDD 15D11-7, TRAFFIC CONTROL, SINGLE LANE CROSSOVER
SDD 15D6-3, TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
SDD 15D15, TRAFFIC CONTROL, RAMPS WITHIN LAN CLOSURES



STAGE 3 TYPICAL SECTION
USH 151

COVER EXISTING SPEED LIMIT SIGNS WITH
SPEED LIMIT 55
R2-1
48"X60"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

BEGIN LEFT TURN LANE
R3-20L
24"X36"

SPEED LIMIT 65
R2-1
36"X48"

END ROAD WORK
G20-2A
48"X24"

WO4-3L
48"X48"

WO1-6
48"X24"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

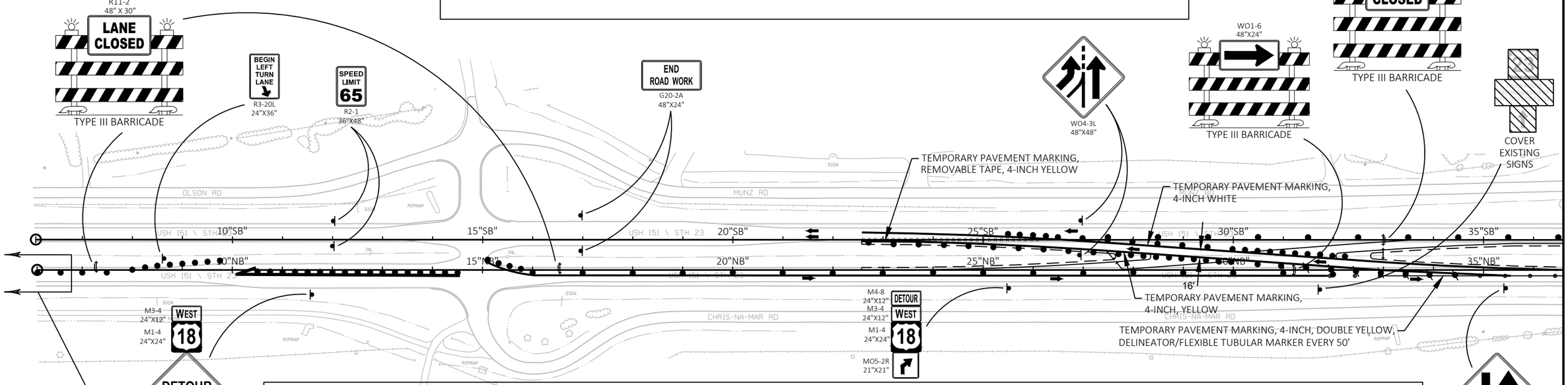
COVER EXISTING SIGNS

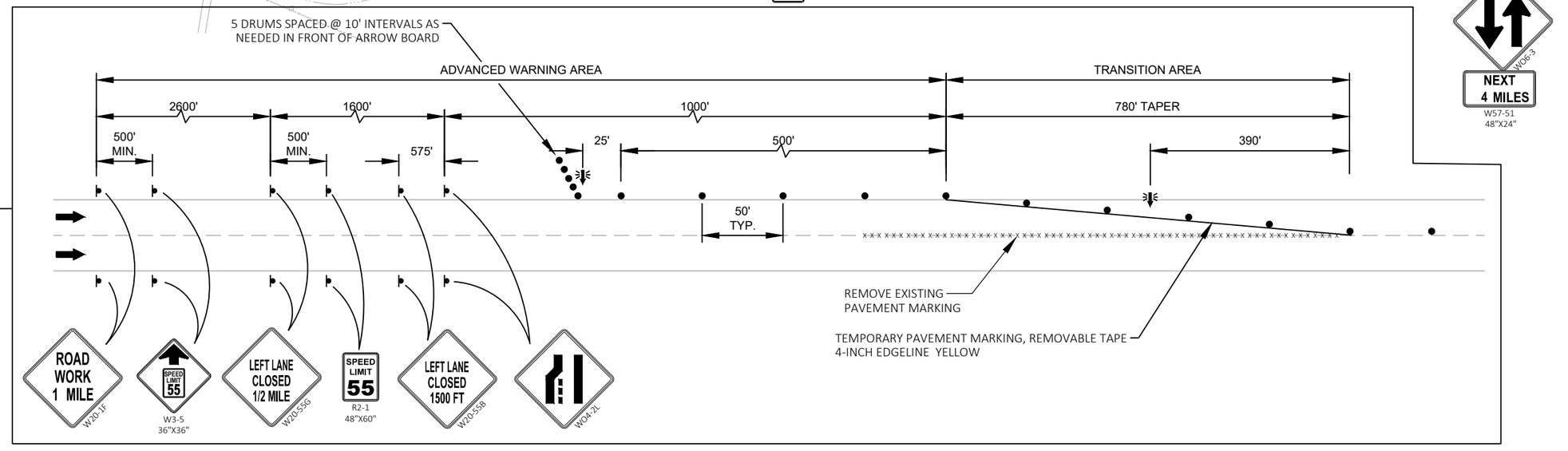
TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH YELLOW

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE

TEMPORARY PAVEMENT MARKING, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW, DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 110	E

2

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW,
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

100'
TYP.

50'
TYP.

50"SB"
50"NB"
45"SB"
45"NB"
45"A"
40"SB"
40"NB"
40"A"
35"SB"
35"NB"
50"A"
55"SB"
55"NB"
55"B"
55"A"
65"D"
70"D"
60"SB"
60"NB"
60"B"
65"SB"
65"NB"
65"B"
65"STH 23 SB"
65"STH 23 NB"

TEMPORARY PAINT
REMOVABLE TAPE

MUNZ RD
CHRIS-NA-MAR RD
USH 151
STH 23
BIKE PATH
RIPRAP

DETOUR
WEST
18
M4-8
24"X12"
M3-4
24"X12"
M1-4
24"X24"
MO6-2
21"X21"

WO1-4R

WO6-3
DO NOT PASS
R4-1
36"X48"

END
ROAD WORK
G20-2A
48"X24"

ROAD
WORK
AHEAD
W20-1A

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 111	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_02
PLOT DATE : 5/7/2018 6:55 AM
PLOT BY : JOHNSON, JOHN R
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

ROAD WORK AHEAD
W20-1A

DETOUR WEST 18
M4-8 24"X12"
M3-4 24"X12"
M1-4 24"X24"
MO6-1 21"X21"

END ROAD WORK
G20-2A 48"X24"

H
D9-2 24"X24"
MB6-2 21"X21"

H
D9-2 24"X24"
MB5-2R 21"X21"

25' SPACING

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW, DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

75"D" 75"STH 23 NB" 75"STH 23 NB"
70"STH 23 SB" 70"STH 23 NB"
65"STH 23 SB" 65"STH 23 NB"
75"C" 80"C" 85"C"
65"SB" 65"NB" 65"B"
70"SB" 70"NB" 70"B"
75"SB" 75"NB"
80"SB" 80"NB"
85"SB" 85"NB"
90"SB" 90"NB"
95"SB" 95"NB"

M4-8 24"X12"
M3-2 24"X12"
M1-4 24"X24"
DETOUR EAST 18

WO6-3
NEXT 3 MILES
WO57-51 48"X24"

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARRICADE

COVER EXISTING SIGNS

E5-1 72"X60"

M4-8 24"X12"
M3-4 24"X12"
M1-4 24"X24"
DETOUR WEST 18 NORTH 23
M3-1 24"X12"
M1-6 24"X24"
MO6-2 21"X21"
MO6-2 21"X21"

WO6-3
DO NOT PASS
R4-1 24"X30"

M4-8 24"X12"
M3-4 24"X12"
M1-4 24"X24"
DETOUR WEST 18 NORTH 23
M3-1 24"X12"
M1-6 24"X24"
MO5-2R 21"X21"
MO5-2R 21"X21"

COVER EXISTING SPEED LIMIT SIGNS WITH
SPEED LIMIT 55
R2-1 48"X60"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 112	E

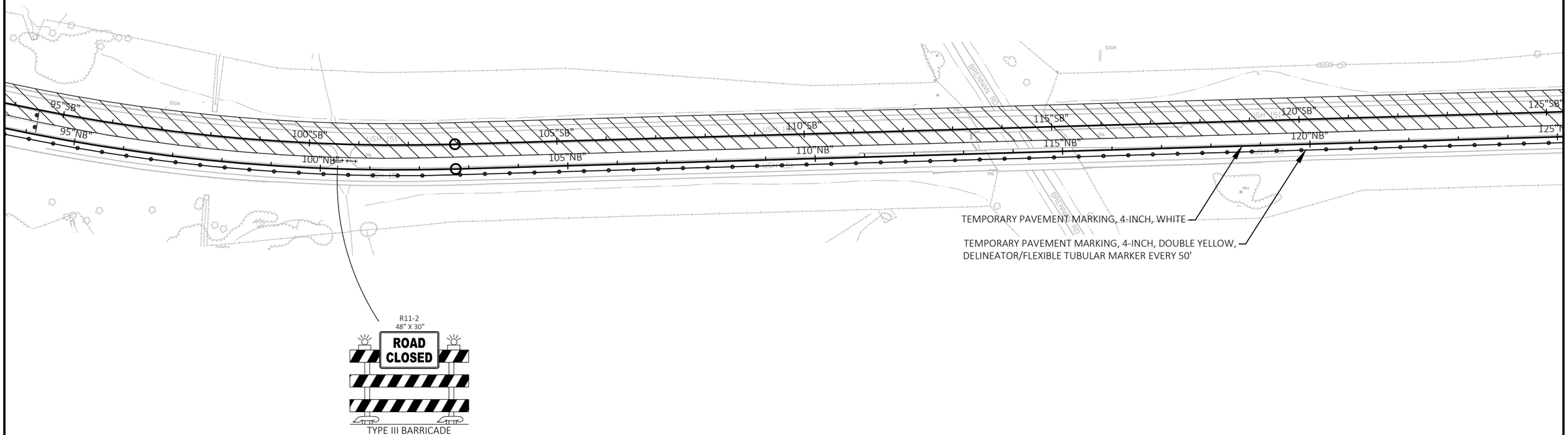
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_03

PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 113	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_04

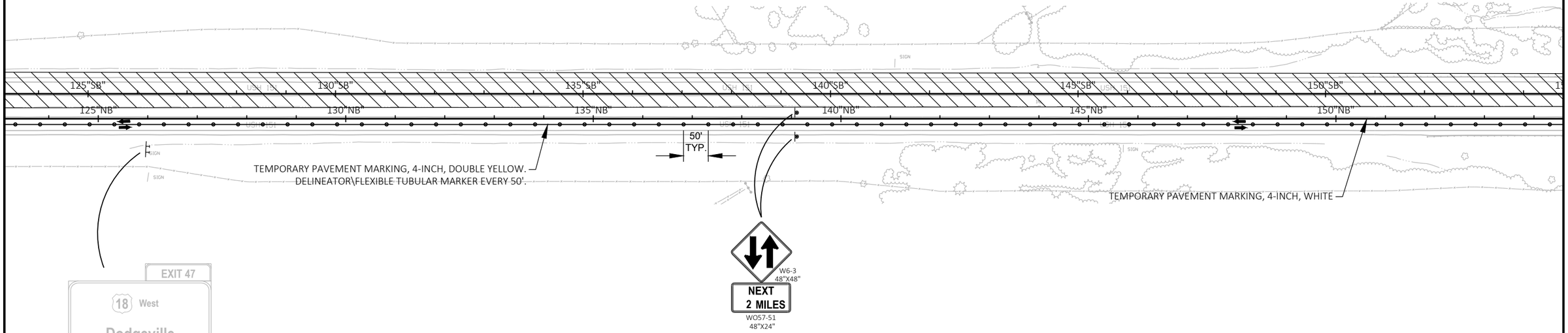
PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



PLACE SIGN G20-60
OVER MILEAGE ON
EXISTING SIGN

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 114	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_05

PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

155"SB" 160"SB" 165"SB" 170"SB" 175"SB" 180"SB"
155"NB" 160"NB" 165"NB" 170"NB" 175"NB" 180"NB"
170"H" 175"H" 180"H"
USH 151

50' TYP.

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW.
DELINEATOR\FLEXIBLE TUBULAR MARKER EVERY 50'.

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

RAMP CLOSED AHEAD
W20-53A

END DETOUR
EAST
18
M4-8A 24"X18"
M3-2 24"X12"
M1-4 24"X24"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 115	E

2

N

190"H"

185"H"

185"USH 18"

190"USH 18"

195"USH 18"

200"USH 18"

205"USH 18"

190"G"

195"G"

200"G"

205"G"

210"G"

185"SB"

185" NB

190"SB"

190"NB"

195"SB"

195"NB"

200"SB"

200"NB"

205"SB"

205"NB"

210"SB"

210"NB"

205"E"

210"E"

25'
TYP.

50'
TYP.

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW.
DELINEATOR\FLEXIBLE TUBULAR MARKER EVERY 50'.

COVER EXISTING
EXIT SIGN

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

COVER
EXISTING
SIGNS

RAMP
CLOSED
1000 FT
W20-53C

W06-3

DO
NOT
PASS
R4-1
36"X48"

EXIT 47
18 West
Dodgeville
CLOSED
G20-61
120"X30"

COVER ARROW ON
EXISTING SIGN
(COVERING SIGNS TYPE 1)

R11-2
48" X 30"
RAMP
CLOSED
TYPE III BARRICADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 116	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_07

PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

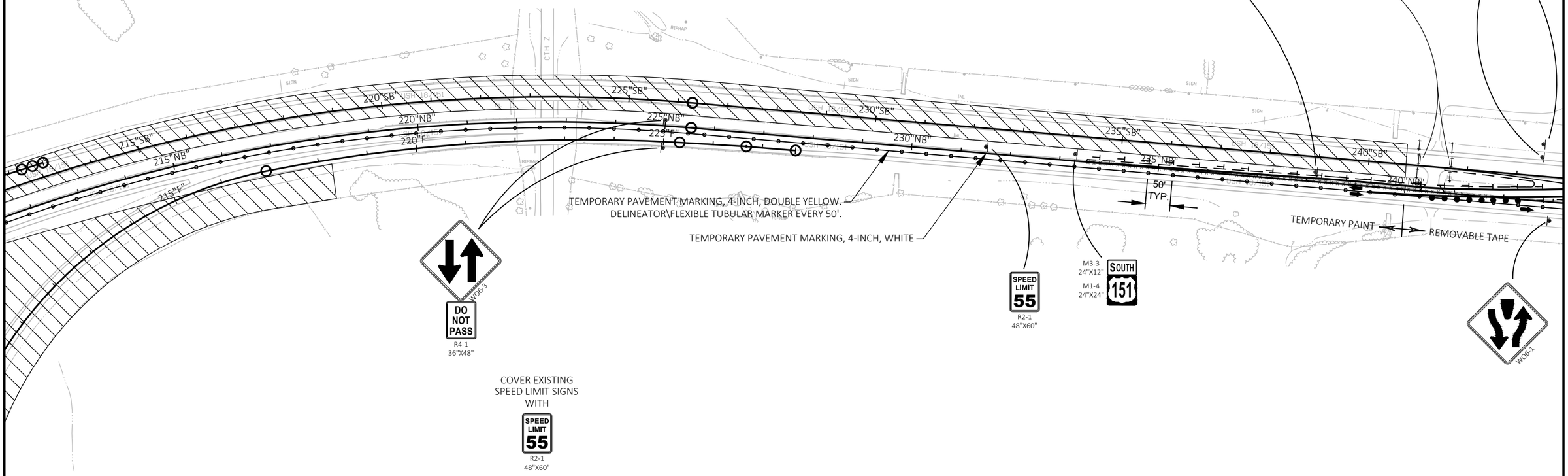
2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N



W06-3
NEXT
4 MILES
WO57-51
48"X24"

R11-2
48" X 30"
ROAD
CLOSED
TYPE III BARRICADE

M3-4
24"X12"
WEST
M1-4
24"X24"
18
M4-8
24"X12"
DETOUR
M3-1
24"X12"
NORTH
23
M1-6
24"X24"

H
D9-2
24"X24"

W06-3
DO
NOT
PASS
R4-1
36"X48"

COVER EXISTING
SPEED LIMIT SIGNS
WITH

SPEED
LIMIT
55
R2-1
48"X60"

SPEED
LIMIT
55
R2-1
48"X60"

M3-3
24"X12"
SOUTH
M1-4
24"X24"
151

W06-1

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 117	E

2

N

WO6-3
NEXT
4 MILES
WO57-51
48"X24"

R11-2
48" X 30"
ROAD
CLOSED
TYPE III BARRICADE

WO1-6
48" X 24"
TYPE III BARRICADE

FIXED MESSAGE SIGN
Next Exit
Governor Dodge
State Park
The House on the Rock

R11-2
48" X 30"
LANE
CLOSED
TYPE III BARRICADE

EXIT 47
18 West
Dodgeville
Info

COVER EXISTING SIGN
CLOSED
G20-60
108"X24"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE,
8-INCH, WHITE, CHANNELIZING

TEMPORARY PAVEMENT MARKING, 4-INCH, WHITE

BUFFER SPACE, 800'

100'
TYP.

500'

245"SB"
250"SB"
255"SB"
260"SB"
250"NB"
255"NB"
260"NB"
265"NB"
270"NB"
16'
USH 18/151

25' DRUM SPACING TYP.

TEMPORARY PAVEMENT MARKING, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING, 4-INCH, DOUBLE YELLOW.
DELINEATOR\FLEXIBLE TUBULAR MARKER EVERY 50'.

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE,
4-INCH, WHITE

WO1-4L
45
MPH
WO13-1
36"X36"

END
ROAD WORK
G20-2A
48"X24"

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 118	E

2

N

1000'

1600'

2600'

500'

25'

575'

500' MIN.

500' MIN.

275"NB"

280"NB"

285"NB"

290"NB"

295"NB"

300"NB"

USH 18/151

SIGN

RUINS

W04-2R

RIGHT LANE CLOSED 500 FT

W20-5D

SPEED LIMIT 55

R2-1
48"X60"
(BLACK & WHITE)

RIGHT LANE CLOSED 1/2 MILE

W20-5G

SPEED LIMIT 55

W03-5

ROAD WORK 1 MILE

W20-1F

LEGEND

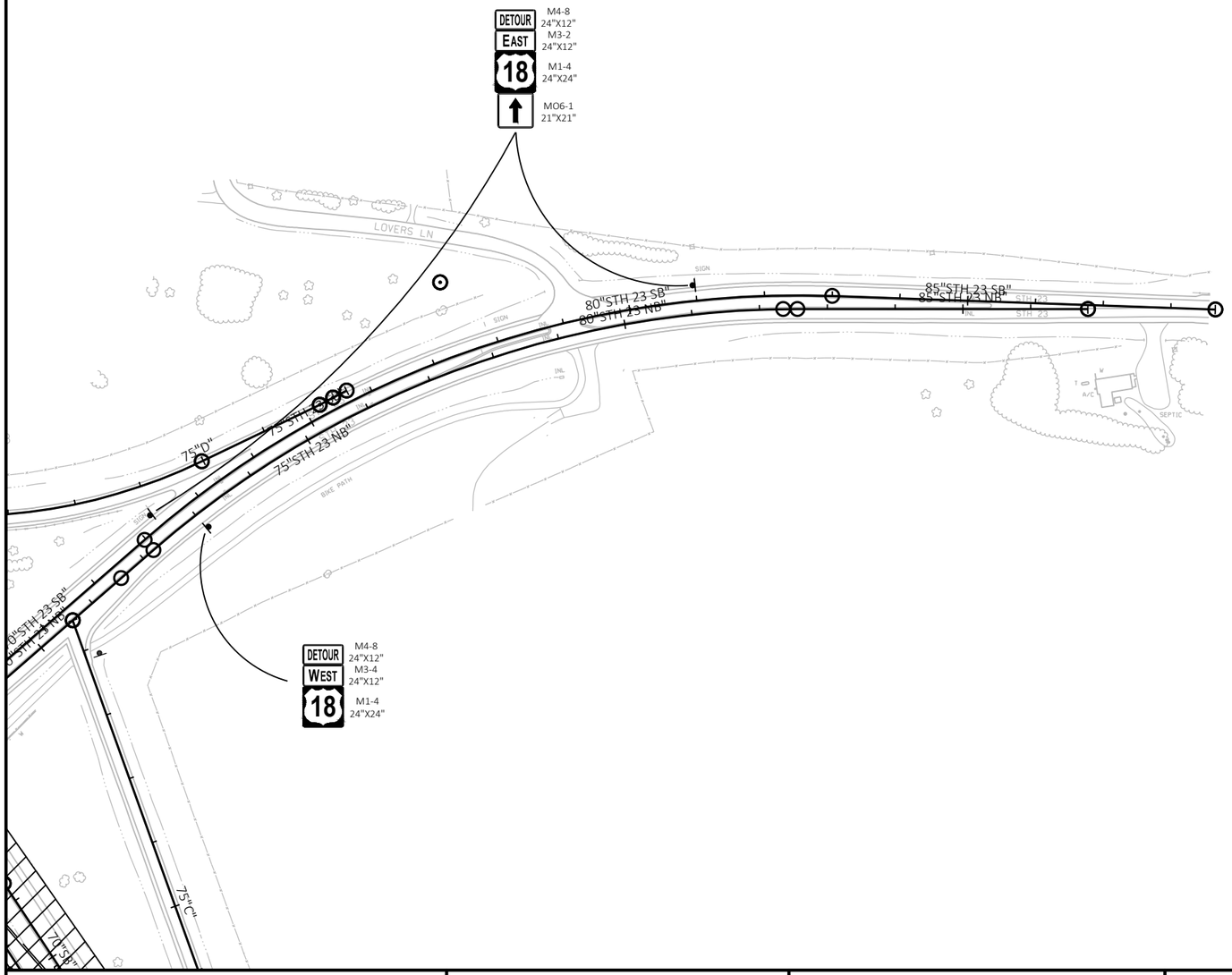
- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 119	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_10

PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 120	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_12

PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

175"USH 18"
180"USH 18"
185"G"
185"USH 18"
200"H"
150"H"

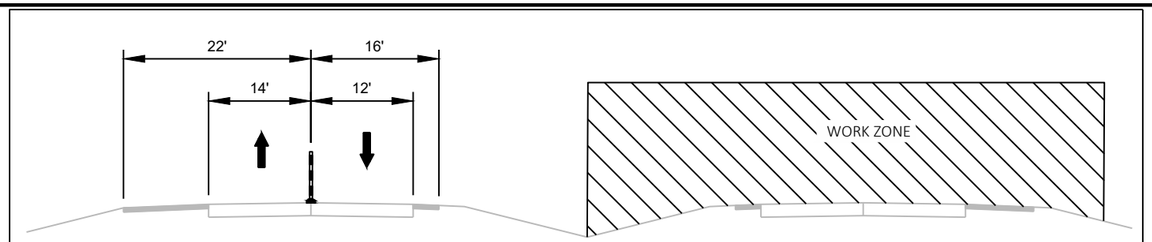
BENNETT RD.

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 3	SHEET 121	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S3.DWG
LAYOUT NAME - 026001_s3_13

PLOT DATE : 5/7/2018 6:55 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

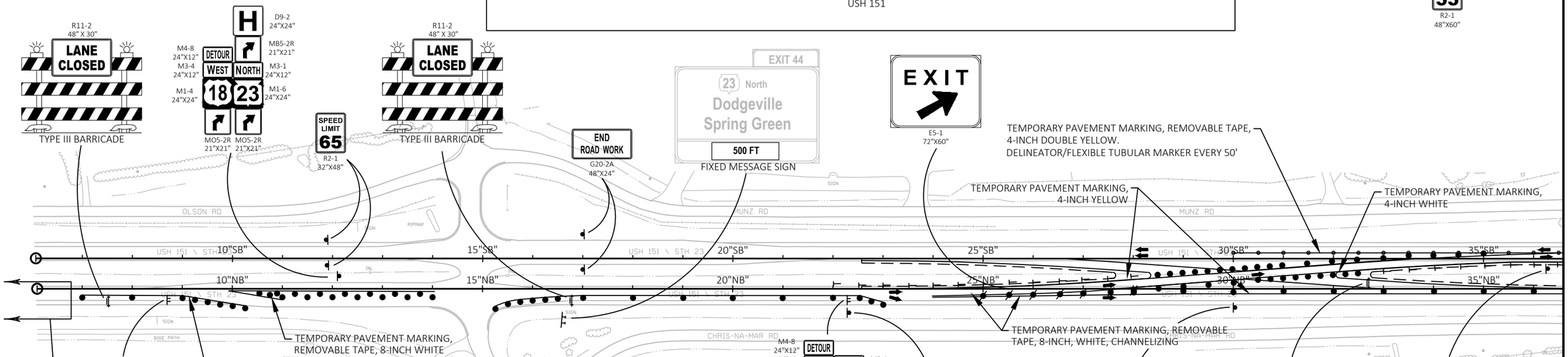
SEE
SDD 15D12-6B, TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION WITHIN SINGLE LANE CLOSURE
SDD 15D11-7, TRAFFIC CONTROL, SINGLE LANE CROSSOVER
SDD 15D6-3, TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
SDD 15D15, TRAFFIC CONTROL, RAMPS WITHIN LANE CLOSURES



STAGE 4 TYPICAL SECTION
USH 151

COVER EXISTING SPEED LIMIT SIGNS WITH

R2-1
48"X60"



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 122	E

REMOVABLE TAPE ON ALL NEW AND EXISTING (NOT TO BE REPLACED) CONCRETE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

W06-3
DO NOT PASS
R4-1
48"X60"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

W06-1

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW.
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, YELLOW

END
ROAD WORK
G20-2A
48"X24"

DETOUR
WEST
18
MO6-2
21"X21"
M4-8
24"X12"
M3-4
24"X12"
M1-4
24"X24"

W20-1A
ROAD
WORK
AHEAD

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 123	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S4.DWG
LAYOUT NAME - 026001_s4_02

PLOT DATE : 5/7/2018 7:06 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

NEXT 3 MILES
WO57-51
48"X24"
W06-3

75"STH 23 NB"
75"STH 23 SB"
70"STH 23 SB"
70"STH 23 NB"
65"STH 23 SB"
65"STH 23 NB"

75"D"
75"C"
80"C"
85"C"

65"SB"
65"NB"
65"B"
70"SB"
70"NB"
70"B"
75"SB"
75"NB"
80"SB"
80"NB"
85"SB"
85"NB"
90"SB"
90"NB"
95"SB"
95"NB"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 8-INCH, WHITE

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH DOUBLE YELLOW. DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH, WHITE

W04-1R

W03-2

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R1-2
36"X31"

M4-8
24"X12"
DETOUR
EAST NORTH
18 151
M3-2 24"X12"
M3-1 24"X12"
M1-4 24"X24"
M1-4 24"X24"

SPEED LIMIT 55
R2-1
24"X30"

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

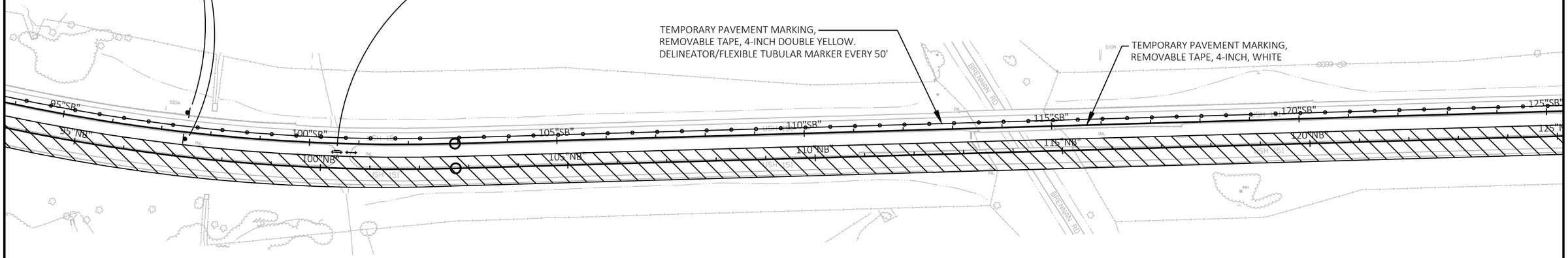
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 124	E

2

TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH DOUBLE YELLOW.
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, WHITE



LEGEND

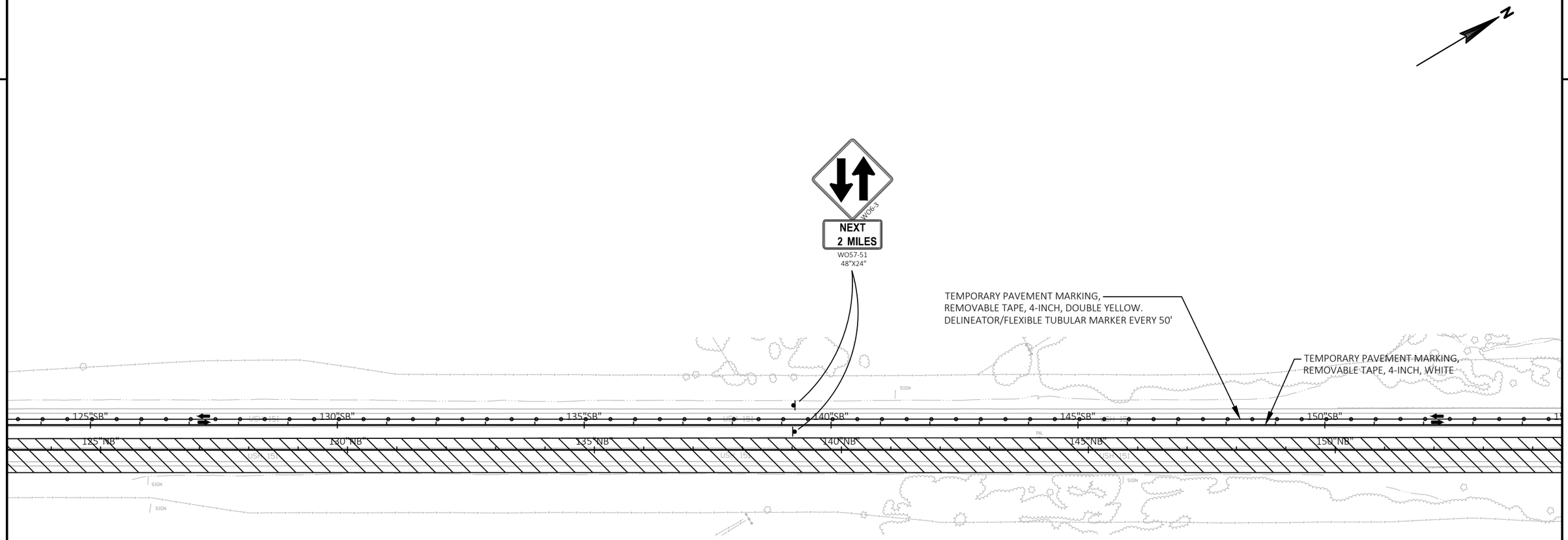
- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x — REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 125	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S4.DWG
LAYOUT NAME - 026001_s4_04

PLOT DATE : 5/7/2018 7:06 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 126	E

2

2

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, WHITE

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW.
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

SPEED LIMIT 55
R2-1
24"X30"

W06-3
NEXT 2.5 MILES
WO57-51
48"X24"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

155"SB" 160"SB" 165"SB" 170"SB" 170"H" 175"H" 175"SB" 180"SB" 180"H"

155"NB" 160"NB" 165"NB" 170"NB" 175"NB" 180"NB"

END DETOUR
EAST
18
M1-4
24"X24"

M4-8A
24"X18"
M3-2
24"X12"

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

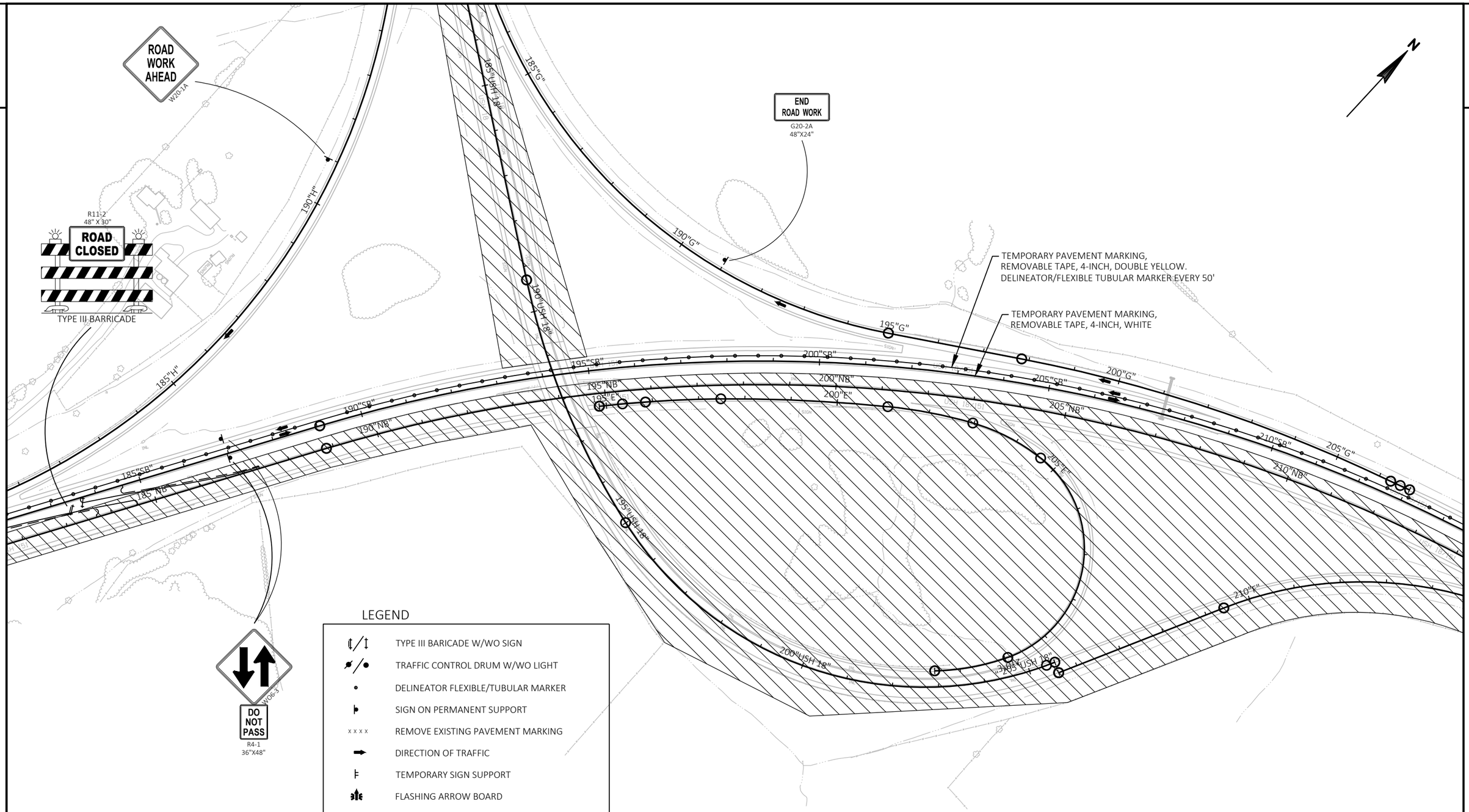
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 127	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S4.DWG
LAYOUT NAME - 026001_s4_06

PLOT DATE : 5/7/2018 7:07 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x — REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 128	E

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

M3-2
24"X12"
EAST 18
NORTH 151
M3-1
24"X12"
M1-4
24"X24"
M1-4
24"X24"

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW.
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, WHITE

W01-4R

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

CTH Z

RIPRAP

SIGN

INL

USH 151

215"SB"
215"NB"
215"F"
220"SB"
220"NB"
220"F"
225"SB"
225"NB"
225"F"
230"SB"
230"NB"
235"SB"
235"NB"
240"SB"
240"NB"

SPEED LIMIT 55
R2-1
24"X30"

W06-3

DO NOT PASS
R4-1
36"X48"

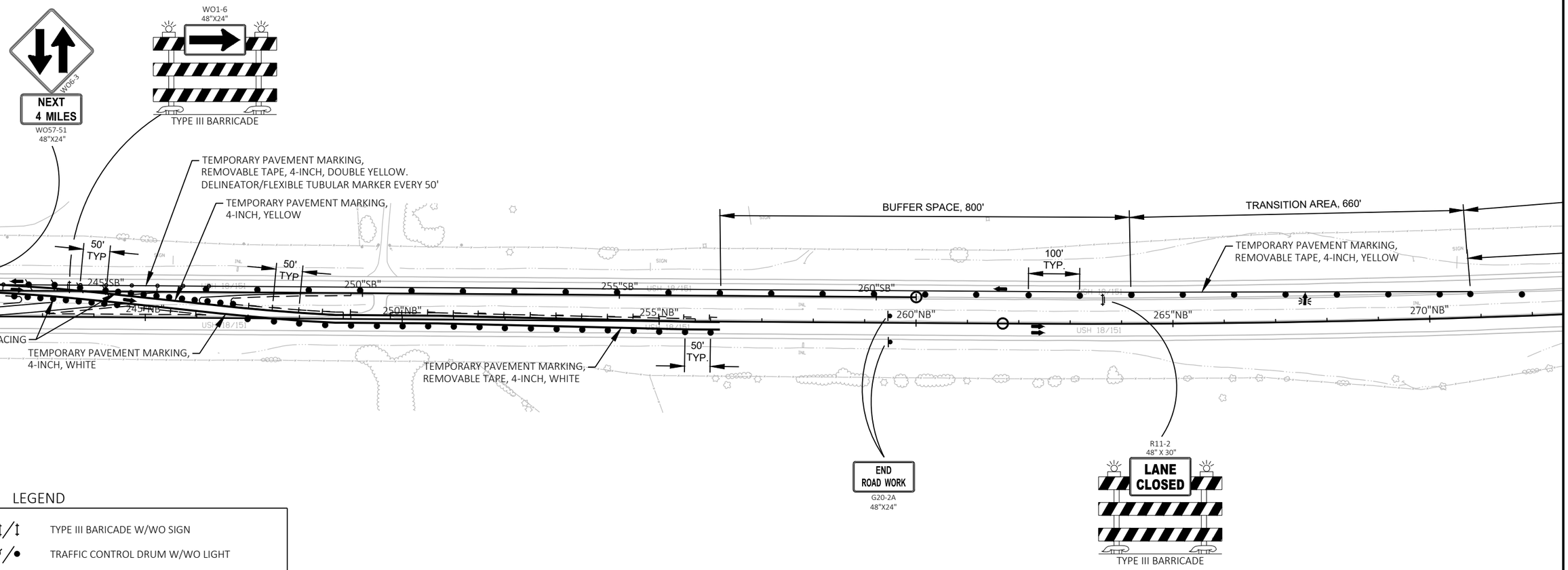
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 129	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S4.DWG
LAYOUT NAME - 026001_s4_08

PLOT DATE : 5/7/2018 7:07 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

REMOVABLE TAPE ON ALL NEW AND EXISTING
(NOT TO BE REPLACED) CONCRETE

N



LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 130	E

2

2

N

1000'

1600'

2600'

500'

25'

575'

500'
MIN.

500'
MIN.

275"NB"

280"NB"

285"NB"

290"NB"

295"NB"

300"NB"

USH 18/151

W04-2L

LEFT LANE
CLOSED
500 FT

W20-5D

SPEED
LIMIT
55

R2-1
48"X60"
(BLACK
AND
WHITE)

LEFT LANE
CLOSED
1/2 MILE

W20-5G

SPEED
LIMIT
55

W03-5

ROAD
WORK
1 MILE

W20-1F

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 131	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S4.DWG
LAYOUT NAME - 026001_s4_10

PLOT DATE : 5/7/2018 7:07 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

ROAD CLOSED
3/4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60"X30"

SIGN 1

USH 18

USH 18

INL

ROAD
CLOSED
1500 FT
W20-3B

COVER
EXISTING
SIGNS

EXIT 60
151
18
Madison
Dubuque
RAMP CLOSED
G20-60
108"X24"

Bennett Rd
EAST
18
WEST
18

Bennett Rd
EAST
18
Bennett Rd
Bennett Rd

ROAD
CLOSED
R11-2
48"X30"

ONLY ONLY
R3-8HH
36"X30"

COVER
EXISTING
SIGN

EAST
18

Bennett Rd
WEST
18
EAST
18

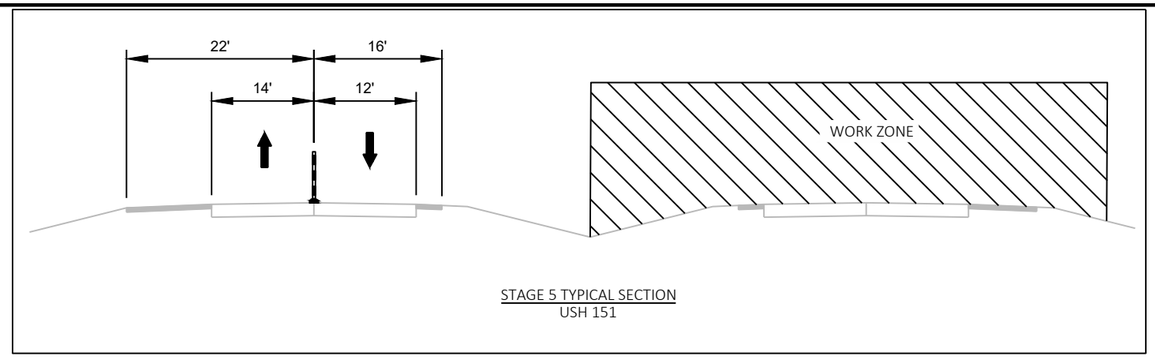
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 4	SHEET 132	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S4.DWG
LAYOUT NAME - 026001_s4_11

PLOT DATE : 5/7/2018 7:07 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

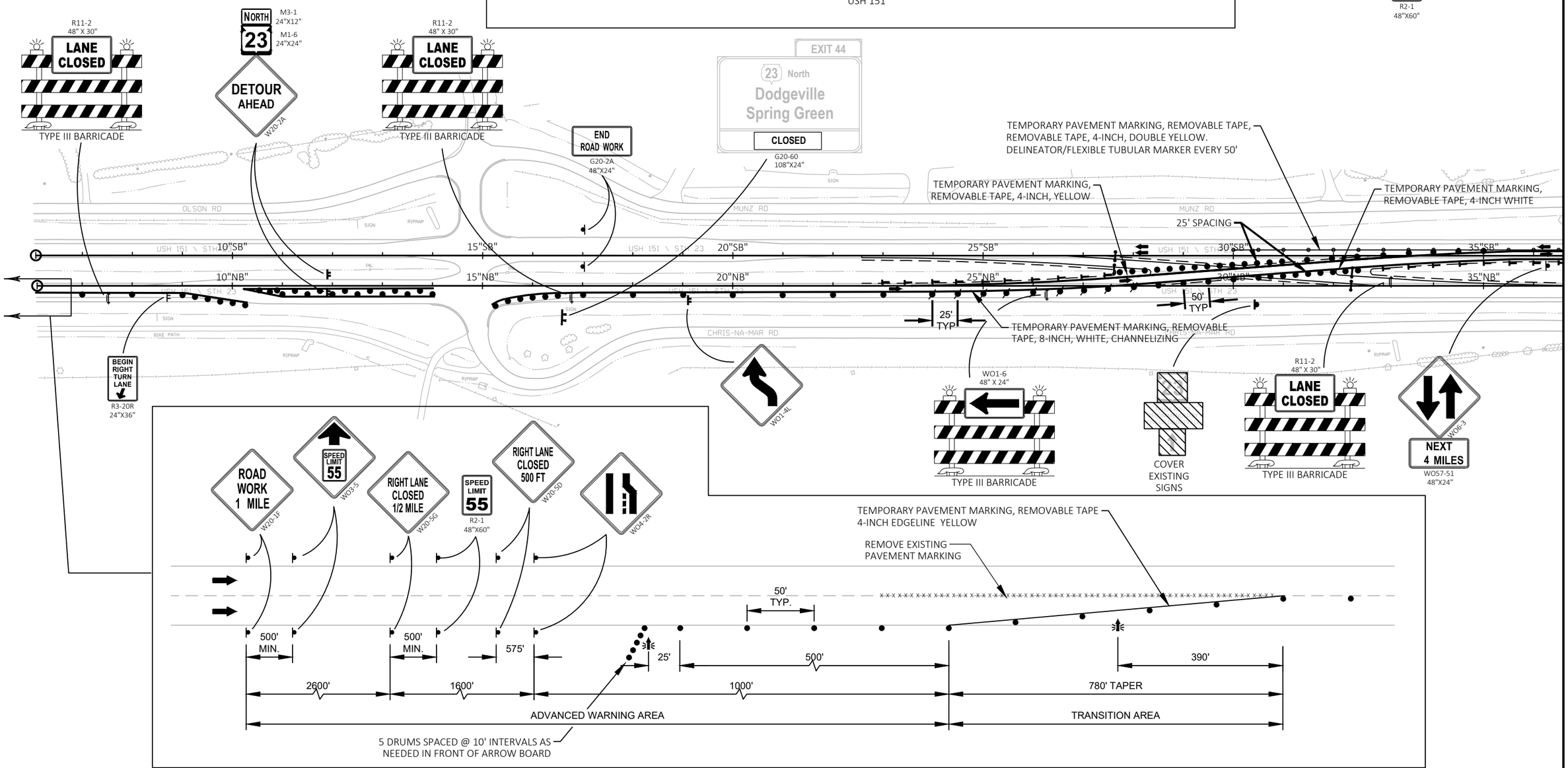
SEE
SDD 15D12-6B, TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION WITHIN SINGLE LANE CLOSURE
SDD 15D11-7, TRAFFIC CONTROL, SINGLE LANE CROSSOVER
SDD 15D6-3, TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
SDD 15D15, TRAFFIC CONTROL, RAMPS WITHIN LANE CLOSURES
SDD 15D9-3, TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT



STAGE 5 TYPICAL SECTION
USH 151

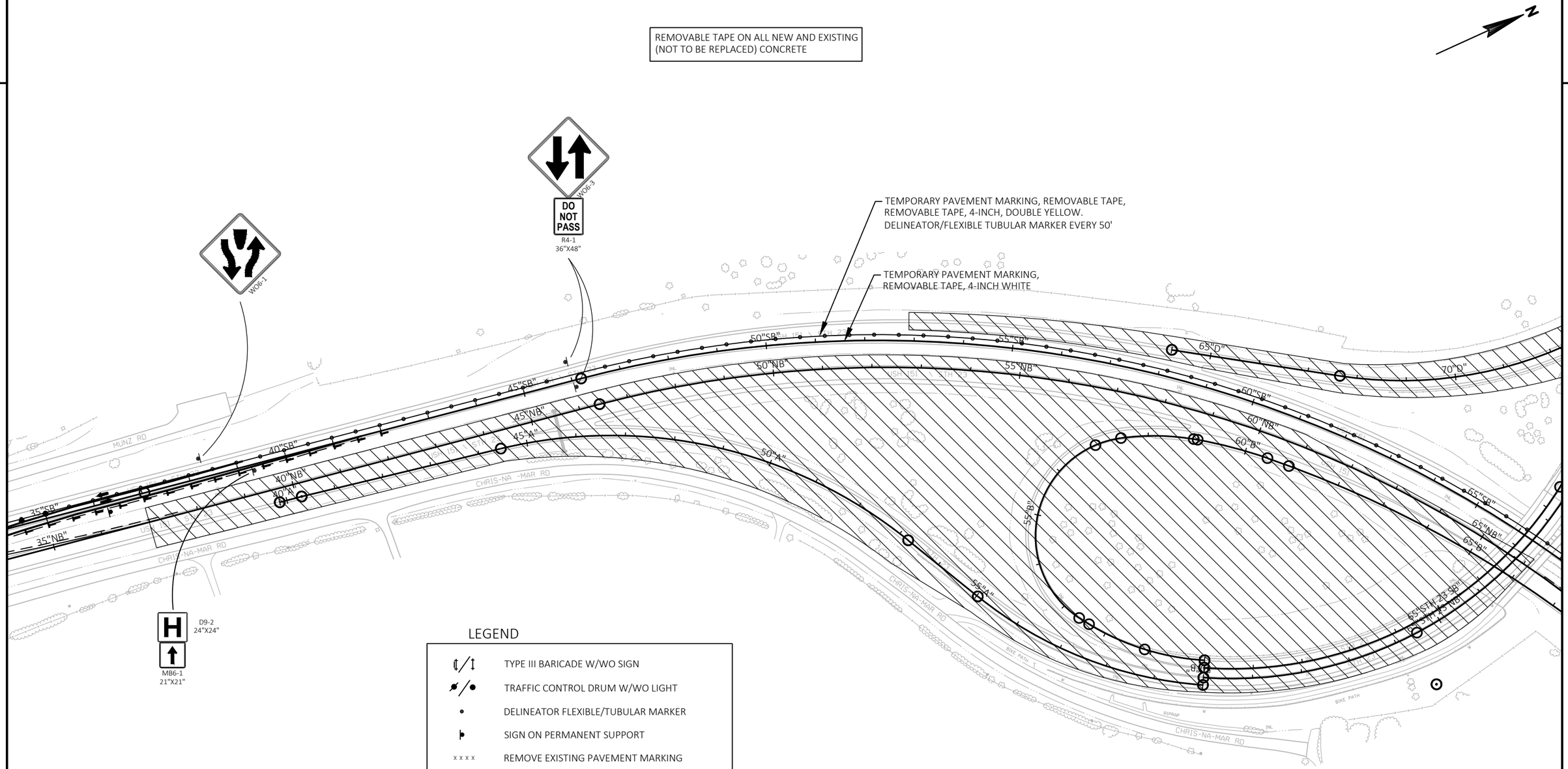
N

COVER EXISTING SPEED LIMIT SIGNS WITH
SPEED LIMIT 55
R2-1
48"X60"



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 133	E

REMOVABLE TAPE ON ALL NEW AND EXISTING
(NOT TO BE REPLACED) CONCRETE



LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 134	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_02

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

EXIT 44
23 North
Dodgeville
CLOSED G20-61 120"X30"

COVER ARROW ON EXISTING SIGN (TYPE I)

END DETOUR M4-8A 24"X18"
SOUTH M3-3 24"X12"
23 M1-6 24"X24"

R11-2 48" X 30"
RAMP CLOSED
TYPE III BARRICADE

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARRICADE

COVER EXISTING EXIT SIGN

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH WHITE

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW, DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH WHITE

75"D" 75"STH 23 NB"
70"STH 23 SB" 70"STH 23 NB"
65"STH 23 SB" 65"STH 23 NB"
BIKE PATH

75"C" 80"C" 85"C"
65"SB" 65"NB" 65"B"
70"SB" 70"NB" 70"B"
75"SB" 75"NB"
80"SB" 80"NB"
85"SB" 85"NB"
90"SB" 90"NB"
95"SB" 95"NB"
USH 151

RAMP CLOSED 1000 FT W20-53C

SPEED LIMIT 55 R2-1 24"X30"

W06-3
DO NOT PASS R4-1 36"X48"

M3-1 24"X12" NORTH 151 M1-4 24"X24"
DETOUR NORTH 23 M1-6 24"X24"
M4-8 24"X12"
M3-1 24"X12"

LEGEND

	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

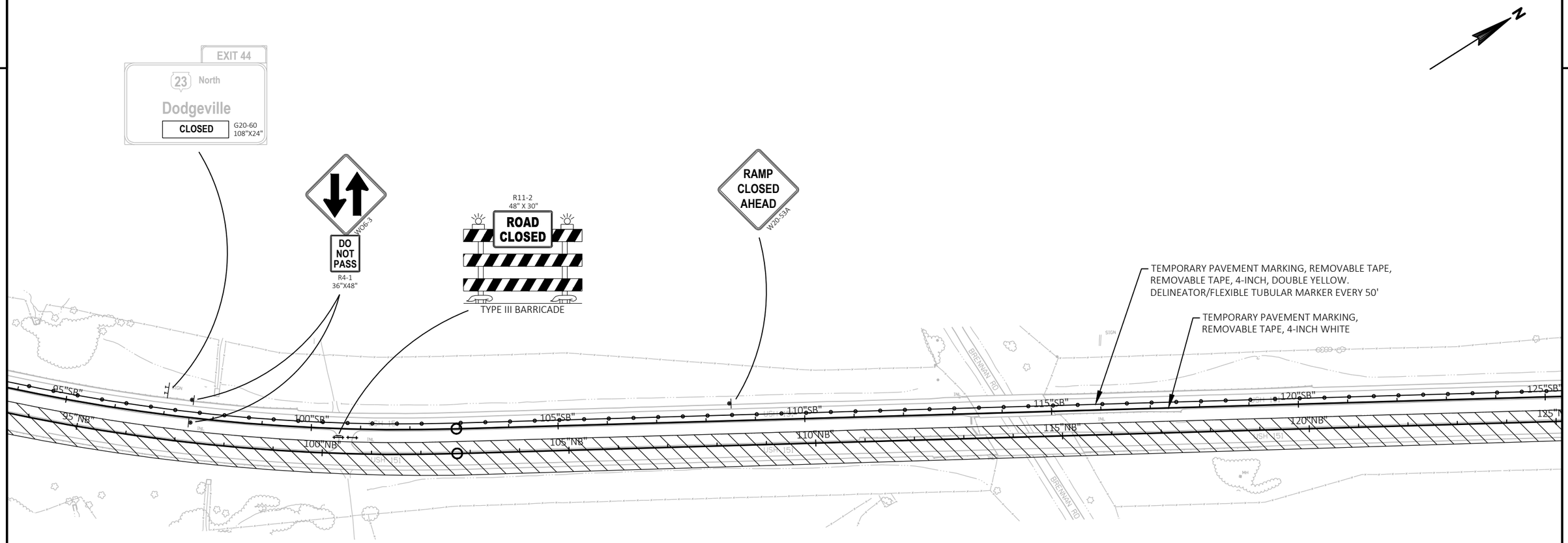
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 135	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_03

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



LEGEND

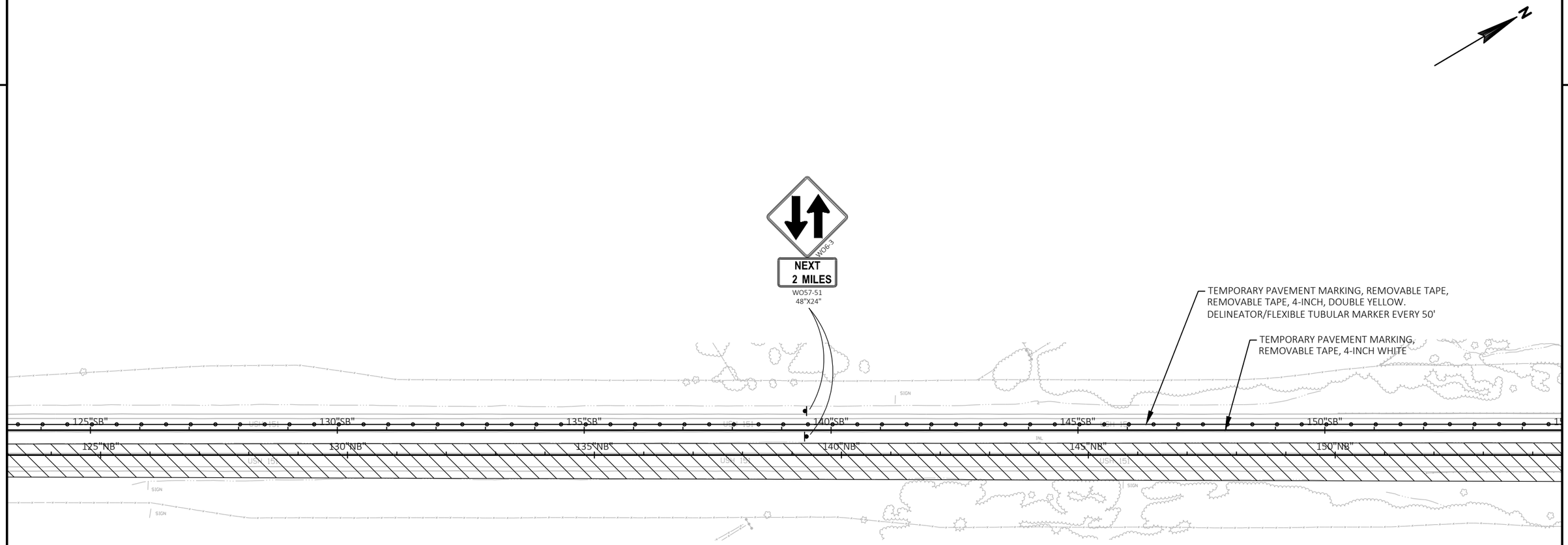
	TYPE III BARICADE W/WO SIGN
	TRAFFIC CONTROL DRUM W/WO LIGHT
	DELINEATOR FLEXIBLE/TUBULAR MARKER
	SIGN ON PERMANENT SUPPORT
x x x x	REMOVE EXISTING PAVEMENT MARKING
	DIRECTION OF TRAFFIC
	TEMPORARY SIGN SUPPORT
	FLASHING ARROW BOARD
	TEMPORARY DELINEATOR COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
	WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 136	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_04

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

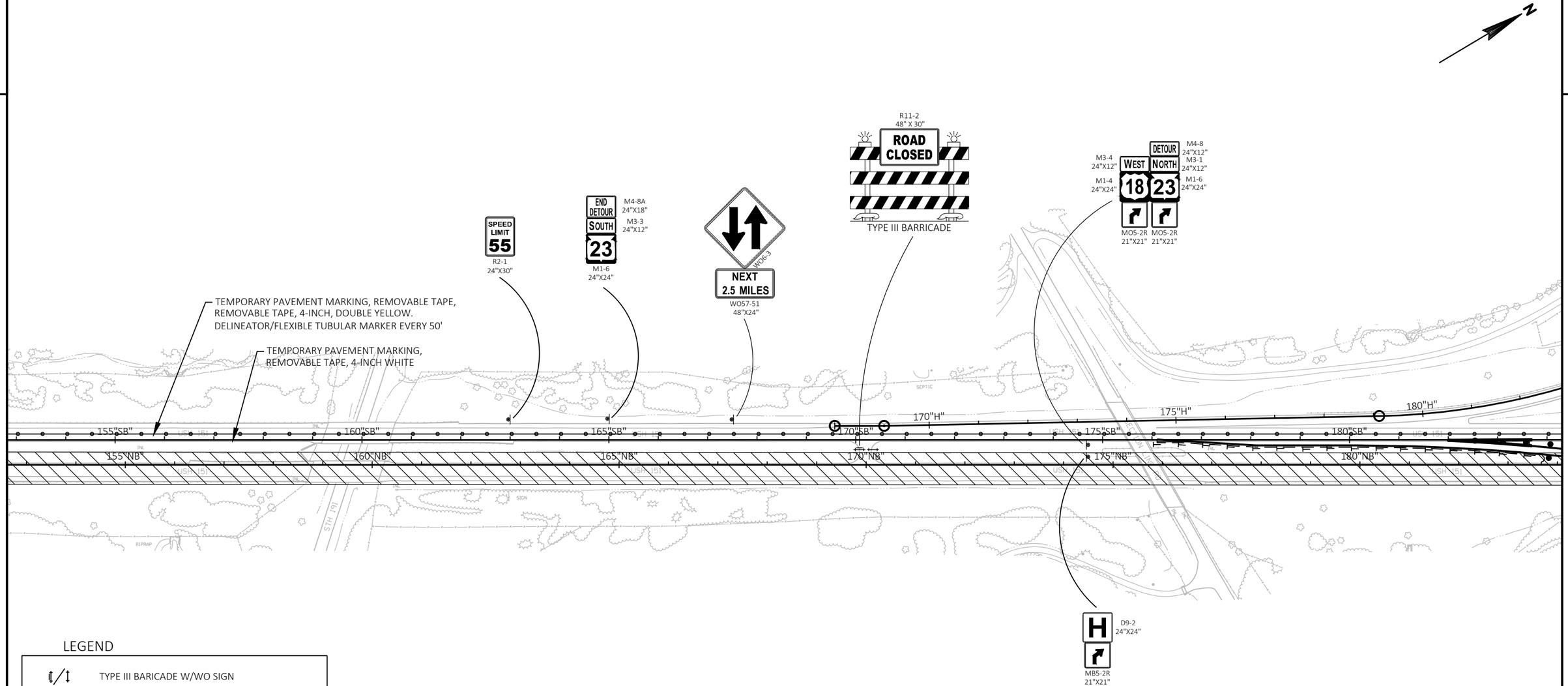
- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 137	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_05

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 138	E

2

ROAD WORK AHEAD
W20-1A

EXIT
E5-1
72"X60"

DO NOT PASS
R4-1
36"X48"
W06-3

END ROAD WORK
G20-2A
48"X24"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW. DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH WHITE

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"
DETOUR NORTH 23
MO6-2 21"X21"
H
MB6-2 21"X21"
D9-2 24"X24"

TEMPORARY PAVEMENT MARKING, 4-INCH YELLOW

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH YELLOW

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH WHITE

50' TYP

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE

TEMPORARY PAVEMENT MARKING, 8-INCH WHITE

M3-4 24"X12"
M4-8 24"X12"
M3-1 24"X12"
M1-4 24"X24"
M1-6 24"X24"
WEST 18
NORTH 23
MO6-2 21"X21"
MO6-2 21"X21"
H
MB6-2 21"X21"
D9-2 24"X24"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 139	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_07

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

2

D9-2 24"X24"

M4-8 24"X12"
M3-1 24"X12"
M1-6 24"X24"

M3-2 24"X12"
M3-1 24"X12"

MB5-2R 21"X21"
MO5-2R 21"X21"

M1-4 24"X24"
M1-4 24"X24"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW. DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH WHITE

W06-3

DO NOT PASS
R4-1
36"X48"

W01-4R

220"SB"
220"NB"
215"SB"
215"NB"
225"SB"
225"NB"
230"SB"
230"NB"
235"SB"
235"NB"
240"SB"
240"NB"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH YELLOW

SPEED LIMIT 55
R2-1
24"X30"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 140	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_08

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

WO1-6
48"X24"

TYPE III BARRICADE

WO6-3

NEXT
4 MILES

WO57-51
48"X24"

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, DOUBLE YELLOW.
DELINEATOR/FLEXIBLE TUBULAR MARKER EVERY 50'

TEMPORARY PAVEMENT MARKING,
4-INCH, YELLOW

25' SPACING

245"SB"

245"NB"

250"SB"

250"NB"

255"SB"

255"NB"

260"SB"

260"NB"

265"NB"

270"NB"

BUFFER SPACE, 800'

TRANSITION AREA, 660'

100'
TYP.

50'
TYP.

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, YELLOW

TEMPORARY PAVEMENT MARKING,
4-INCH, WHITE

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 8-INCH, WHITE

USH 18/151

SIGN

INL

END
ROAD WORK

G20-2A
48"X24"

R11-2
48" X 30"

LANE
CLOSED

TYPE III BARRICADE

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 141	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_09

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

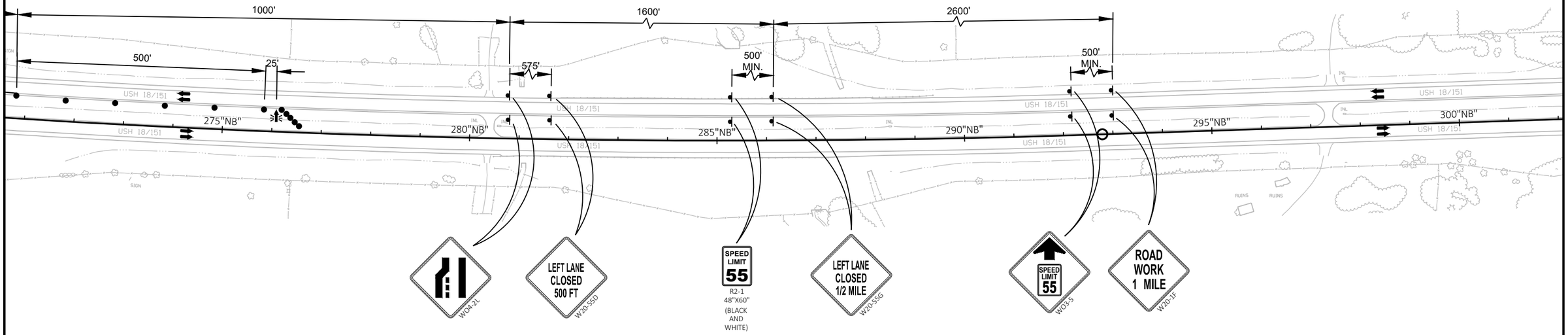
2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N

2



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 142	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_10

PLOT DATE : 5/7/2018 7:16 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

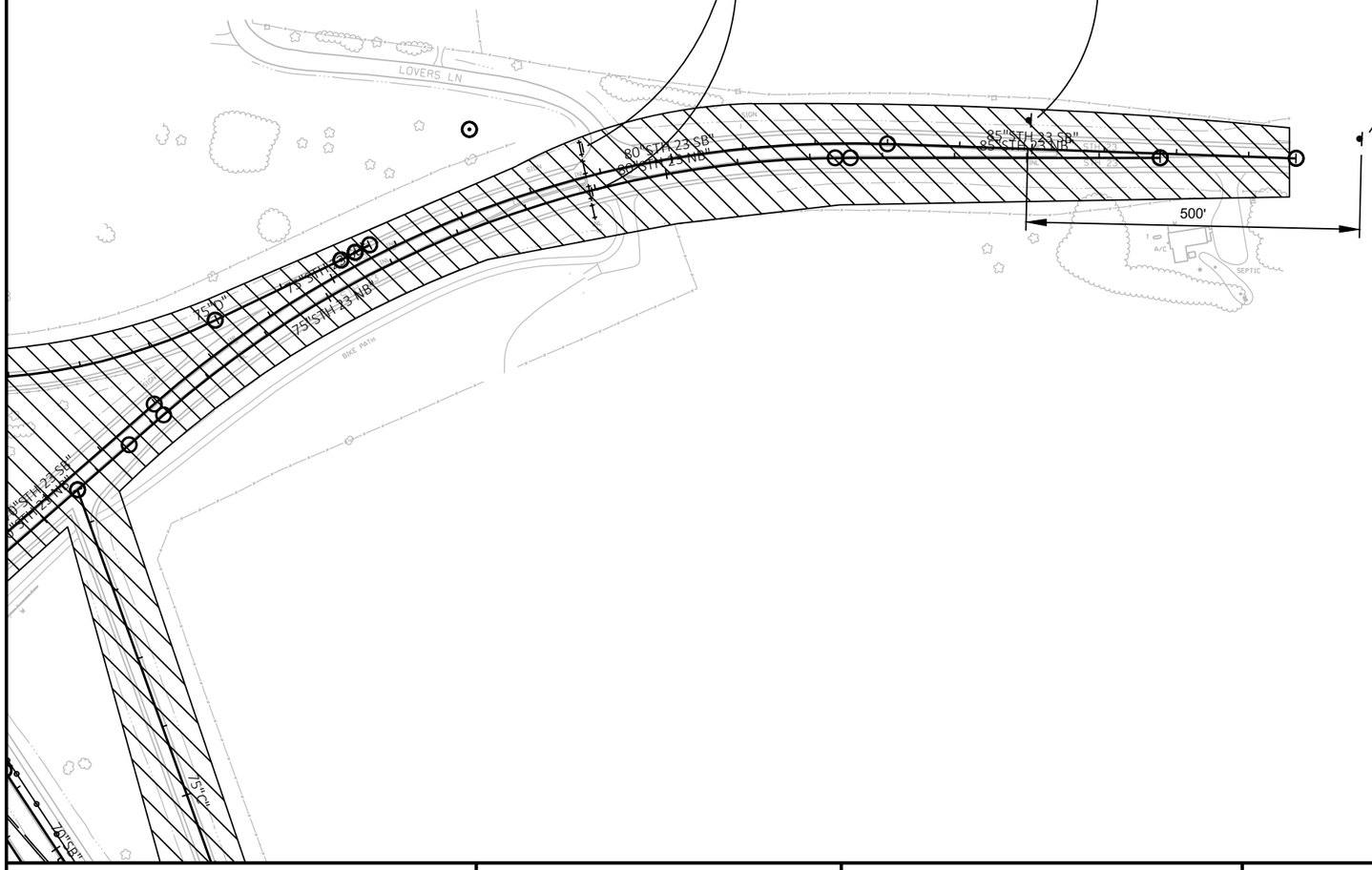
N

R11-2
48" X 30"

TYPE III BARRICADE

W20-3D

W20-3C



LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 143	E

2

2

M4-8 24"X12" DETOUR
M3-1 24"X12" NORTH
M1-6 24"X24" 23 H
D9-2 24"X24"

WEST
23

M4-8 24"X12" DETOUR
M3-1 24"X12" NORTH
M1-6 24"X24" 23 H
D9-2 24"X24"
MO6-1 21"X21"
MO6-1 21"X21"

M4-8 24"X12" DETOUR
M3-1 24"X12" NORTH
M1-6 24"X24" 23 H
D9-2 24"X24"

M4-8 24"X12" DETOUR
M3-3 24"X12" SOUTH
M1-6 24"X24" 23
MO5-2R 21"X21"

M4-8 24"X12" DETOUR
M3-3 24"X12" SOUTH
M1-6 24"X24" 23
MO6-2 21"X21"

M4-8 24"X12" DETOUR
M3-3 24"X12" SOUTH
M1-6 24"X24" 23
MO6-1 21"X21"

M4-8 24"X12" DETOUR
M3-3 24"X12" SOUTH
M1-6 24"X24" 23
EAST
23

USH 18
175"USH 18"
180"USH 18"
200"H"
SIGN

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

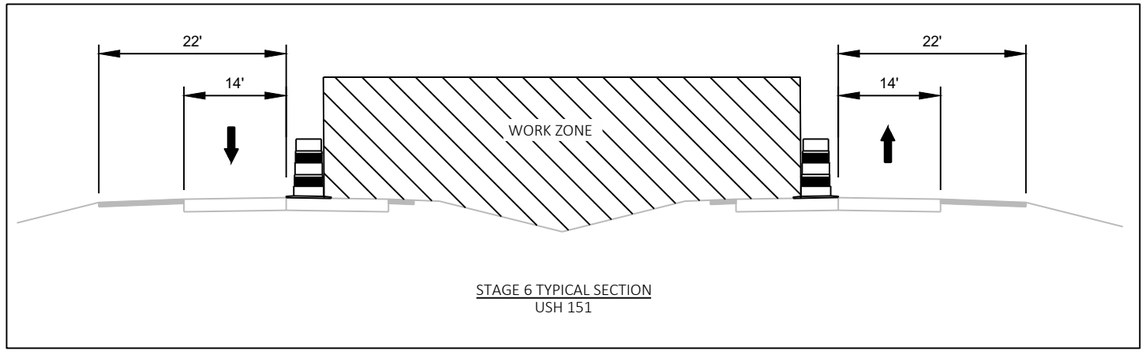
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 5	SHEET 144	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S5.DWG
LAYOUT NAME - 026001_s5_12

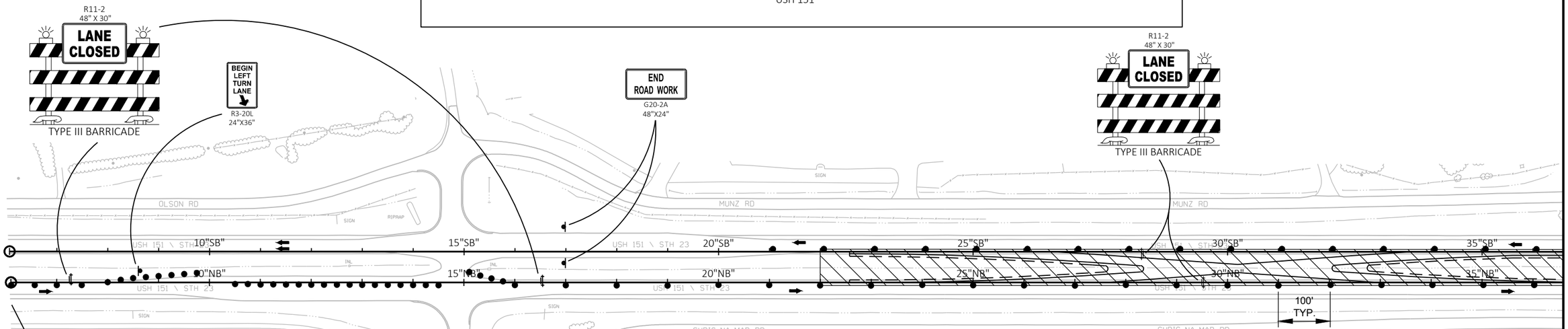
PLOT DATE : 5/7/2018 7:17 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

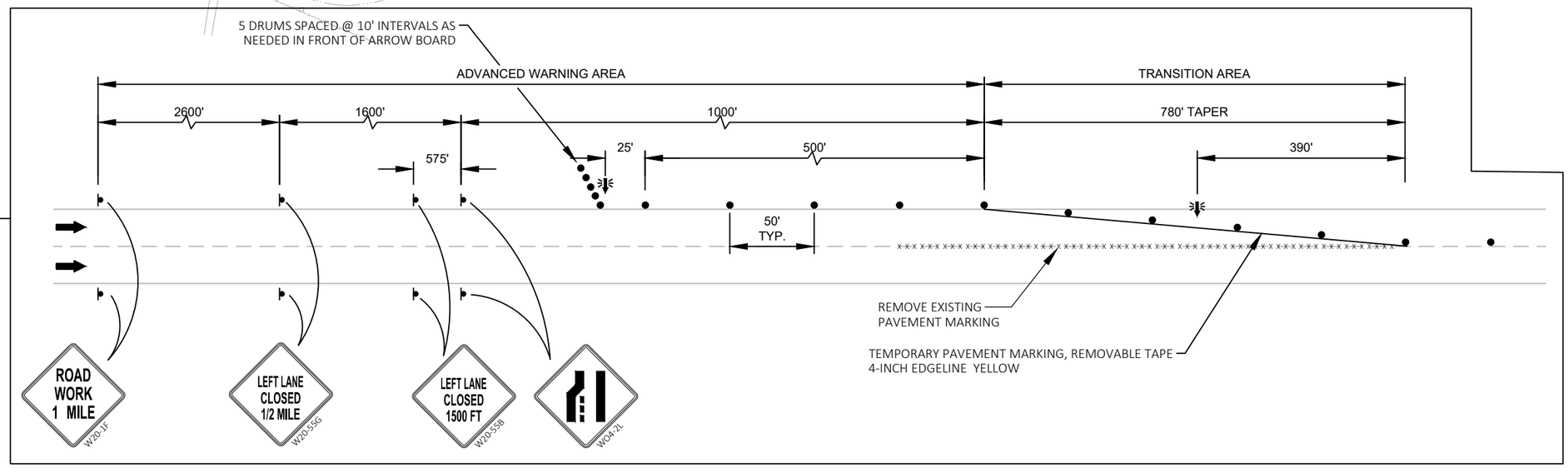
WISDOT/CADDS SHEET 42

SEE
SDD 15D12-6A, TRAFFIC CONTROL, LANE CLOSURE,
AND
SDD 15D21-5, TRAFFIC CONTROL INTERSECTION
WITHIN SINGLE LANE CLOSURE



STAGE 6 TYPICAL SECTION
USH 151



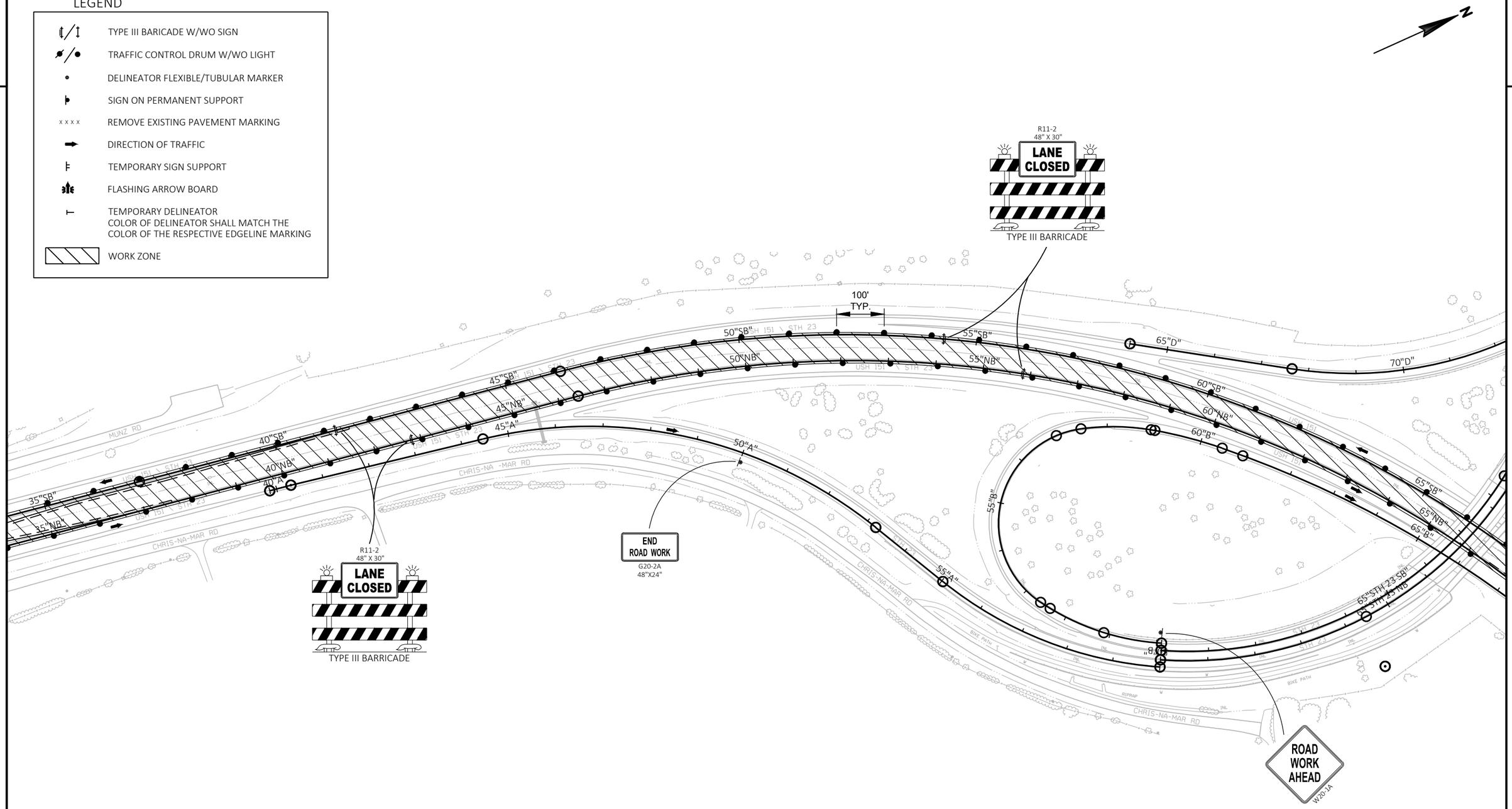


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 145	E

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 146	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_02

PLOT DATE : 5/7/2018 7:46 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

N

100' TYP.

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 147	E

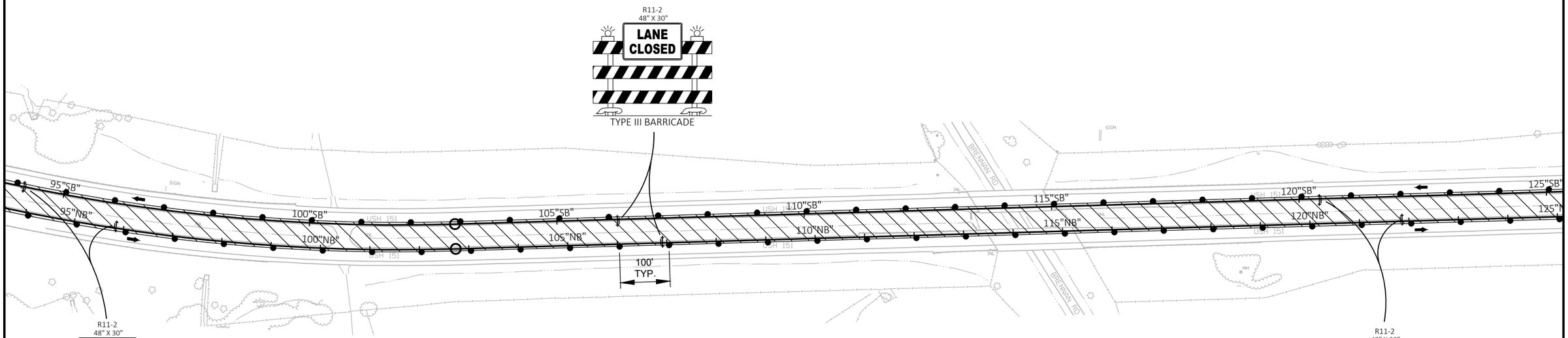
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_03

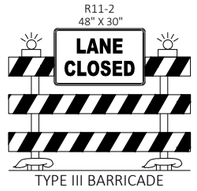
PLOT DATE : 5/7/2018 7:46 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2





LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 148	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_04

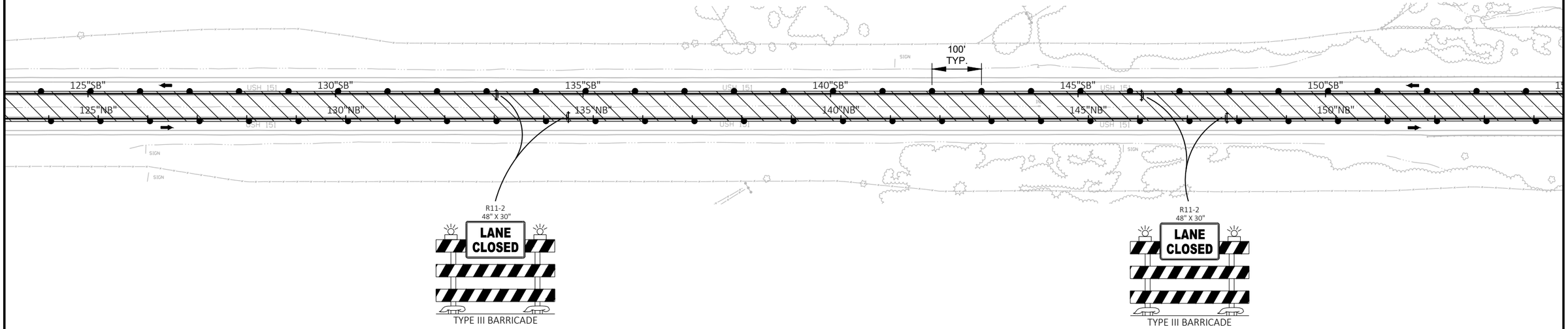
PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 149	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_05

PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

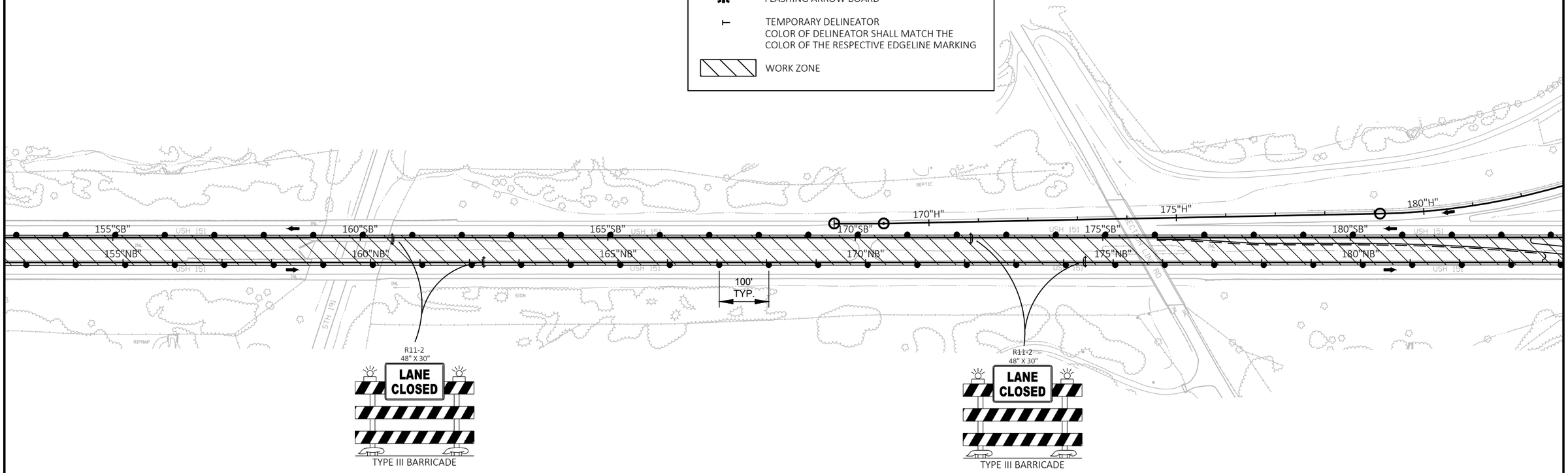
2

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 150	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_06

PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

ROAD WORK AHEAD
W20-1A

185"H"

190"H"

185"USH 18"

185"G"

190"USH 18"

190"G"

END ROAD WORK
G20-2A
48"X24"

195"G"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

100' TYP.

195"SB"

195"NB"

200"SB"

200"NB"

200"E"

200"G"

205"SB"

205"NB"

205"E"

210"SB"

210"NB"

205"G"

185"SB"

185"NB"

190"SB"

190"NB"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

195"USH 18"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

END ROAD WORK
G20-2A
48"X24"

210"E"

200"USH 18"

210"E"

205"USH 18"

ROAD WORK AHEAD
W20-1A

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 151	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_07

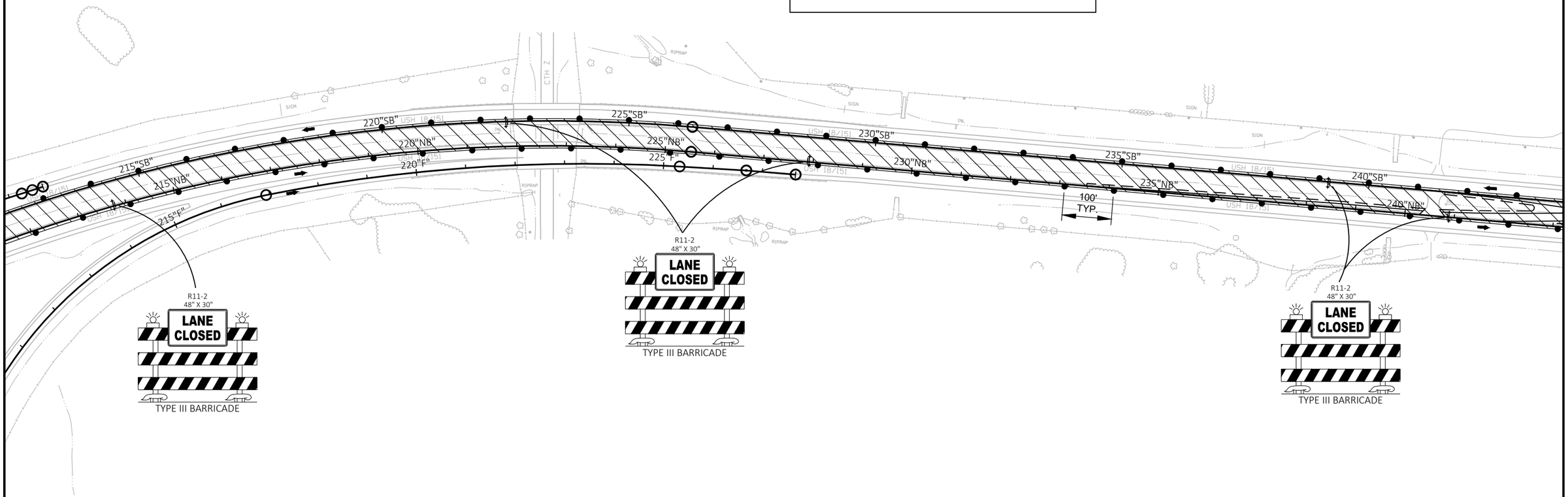
PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

N



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 152	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_08

PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

BUFFER SPACE, 800'

TRANSITION AREA, 780'

100'
TYP.

TEMPORARY PAVEMENT MARKING,
REMOVABLE TAPE, 4-INCH, YELLOW

245"SB"
245"NB"
250"SB"
250"NB"
255"SB"
255"NB"
260"SB"
260"NB"
265"NB"
270"NB"

USH 18/151

END
ROAD WORK
G20-2A
48"X24"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 153	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_09

PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

1000'

1600'

2600'

500'

25'

575'

275"NB"

280"NB"

285"NB"

290"NB"

295"NB"

300"NB"

USH 18/151

W04-2L

LEFT LANE CLOSED 500 FT W20-55D

LEFT LANE CLOSED 1/2 MILE W20-55G

ROAD WORK 1 MILE W20-1F

(BLACK AND WHITE)

LEGEND

- TYPE III BARICADE W/WO SIGN
- TRAFFIC CONTROL DRUM W/WO LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- SIGN ON PERMANENT SUPPORT
- x x x x REMOVE EXISTING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY SIGN SUPPORT
- FLASHING ARROW BOARD
- TEMPORARY DELINEATOR
  COLOR OF DELINEATOR SHALL MATCH THE
  COLOR OF THE RESPECTIVE EDGELINE MARKING
- WORK ZONE

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	TRAFFIC CONTROL STAGE 6	SHEET 154	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\026001_S6.DWG
LAYOUT NAME - 026001_s6_10

PLOT DATE : 5/7/2018 7:47 AM PLOT BY : JOHNSON, JOHN R PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

Dodgeville

M4-8 24"X12" DETOUR EAST 18 WEST 18 MO6-1 21"X21"

ROAD CLOSED AHEAD W20-3A

M3-2 24"X12" EAST 18 M1-4 24"X24"

DETOUR AHEAD W20-2A

M4-8 24"X12" DETOUR NORTH 23 EAST 18 SOUTH 23 MO5-1R 21"X21"

M4-8 24"X12" DETOUR EAST 18 WEST 18 MO6-1 21"X21"

D9-2 24"X24" H M5-1L 21"X21"

M4-8 24"X12" DETOUR NORTH 23 M3-1 24"X12"

ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY R11-3 60"X30"

M4-8 24"X12" DETOUR EAST M3-2 24"X12" 18 M1-4 24"X24" MO6-1 21"X21"

M4-8 24"X12" DETOUR EAST M3-2 24"X12" 18 M1-4 24"X24"

M4-8 24"X12" DETOUR WEST M3-4 24"X12" 18 M1-4 24"X24"

END DETOUR WEST M4-8A 24"X18" M3-4 24"X12" 18

MILITARY RD

EVANS

ROWE RD

BRUE RD

LEHNER RD

LEFFLER RD

CANYON PARK RD

SECTION LINE RD

OXNEM RD

SURVEY RD

ESCH RD

WENDHAUSEN RD

MILL CRK RD

E SURVEY RD

ROHN RD

LOVERS LN

WALTER RD

RUPPERT RD

BRENNAN RD

BLOTZ RD

JACOBSON RD

MC GRAW

HALVERSON

Br.

Blotz Br.

Dodge

18 151 191 Y Z CH B

36 1 6 44 47 31

N

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	DETOUR - STAGE 2	SHEET 155	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027001_dt

PLOT DATE : 5/23/2018 2:34 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

N

Dodgeville

M4-8
24"X12"
DETOUR
EAST 18 | WEST 18
MO6-1
21"X21"

ROAD CLOSED AHEAD
W20-3A

M3-2
24"X12"
M1-4
24"X24"
EAST 18
DETOUR AHEAD
W20-2A

M4-8
24"X12"
DETOUR
NORTH | EAST 18 | SOUTH 23
MO5-1R
21"X21"

M4-8
24"X12"
DETOUR
EAST 18
MO6-1
21"X21"

M4-8
24"X12"
M3-2
24"X12"
M1-4
24"X24"
DETOUR
EAST 18
MO6-1
21"X21"

M4-8
24"X12"
M3-2
24"X12"
DETOUR
EAST 18
M1-4
24"X24"

M4-8
24"X12"
M3-4
24"X12"
DETOUR
WEST 18
M1-4
24"X24"

WEST 18

WEST 18

ROAD CLOSED
1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60"X30"

END DETOUR
WEST 18
M4-8A
24"X18"
M3-4
24"X12"

MILITARY RD
EVANS
ROWE RD
E LEFFLER RD
CANYON PARK RD
BRUE RD
LEHNER RD
CH
OXNEM RD
SURVEY RD
SECTION LINE RD
HALVERSON RD
BRENNAN RD
BLOTZ RD
LOVERS LN
WALLACE RD
ESCH RD
WENDHAUSEN RD
RUPPERT RD
MILL CRK RD
E SURVEY RD
MC GRAW RD
JACOBSON RD
Br.
Blotz Br.

18 | 151 | 191 | 23 | 36 | 1 | 6 | 44 | 47 | 31

Q | B | Z | Y | YZ

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	DETOUR - STAGE 3	SHEET 156	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027002_dt

PLOT DATE : 5/23/2018 2:34 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : Custom

2

M4-8
24"X12"
DETOUR
EAST 18 | WEST 18
MO6-1
21"X21"

M4-8
24"X12"
DETOUR
EAST 18 | WEST 18
MO6-1
21"X21"

ROAD CLOSED AHEAD
W20-3A

M3-2
24"X12"
M1-4
24"X24"
EAST 18
DETOUR AHEAD
W20-2A

M4-8
24"X12"
DETOUR
NORTH 23 | EAST 18 | SOUTH 23
MO5-1R
21"X21"

M4-8
24"X12"
DETOUR
EAST 18
M3-2
24"X12"
M1-4
24"X24"
MO6-1
21"X21"

M4-8
24"X12"
DETOUR
EAST 18
M3-2
24"X12"
M1-4
24"X24"

M4-8
24"X12"
DETOUR
WEST 18
M3-4
24"X12"
M1-4
24"X24"

WEST 18

WEST 18

END DETOUR
WEST 18
M4-8A
24"X18"
M3-4
24"X12"

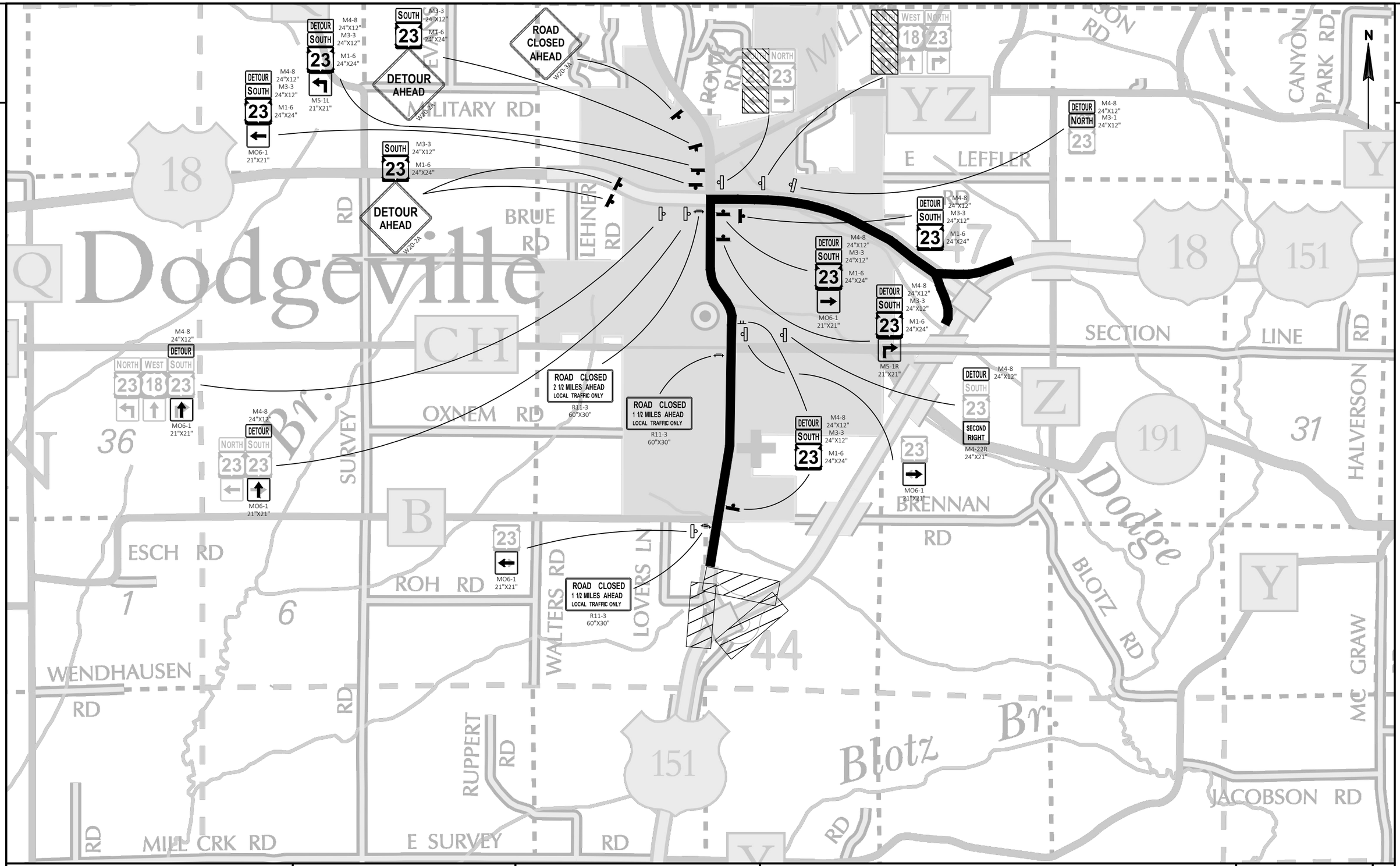
ROAD CLOSED
1 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60"X30"

N

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	DETOUR - STAGE 4	SHEET 157	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027003_dt

PLOT DATE : 5/23/2018 2:34 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : Custom



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	DETOUR - STAGE 5	SHEET 158	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027004_dt

PLOT DATE : 5/23/2018 2:34 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : Custom

WISDOT/CADDS SHEET 42

2

N

2

20+00"SB"

25+00"SB"

30+00"SB"

N9° 43' 12"E

20+00"NB"

25+00"NB"

30+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 159	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_01

PLOT DATE : 5/23/2018 3:11 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

35+00"SB"

40+00"SB"

45+00"SB"

PC: 46+18.76"SB"

N9° 43' 12"E

35+00"NB"

40+00"NB"

45+00"NB"

40+00"A"

N10° 52' 25"E

45+00"A"

PI: 40+30.72"A"

PC: 44+45.56"A"

PC: 46+41.70"NB"

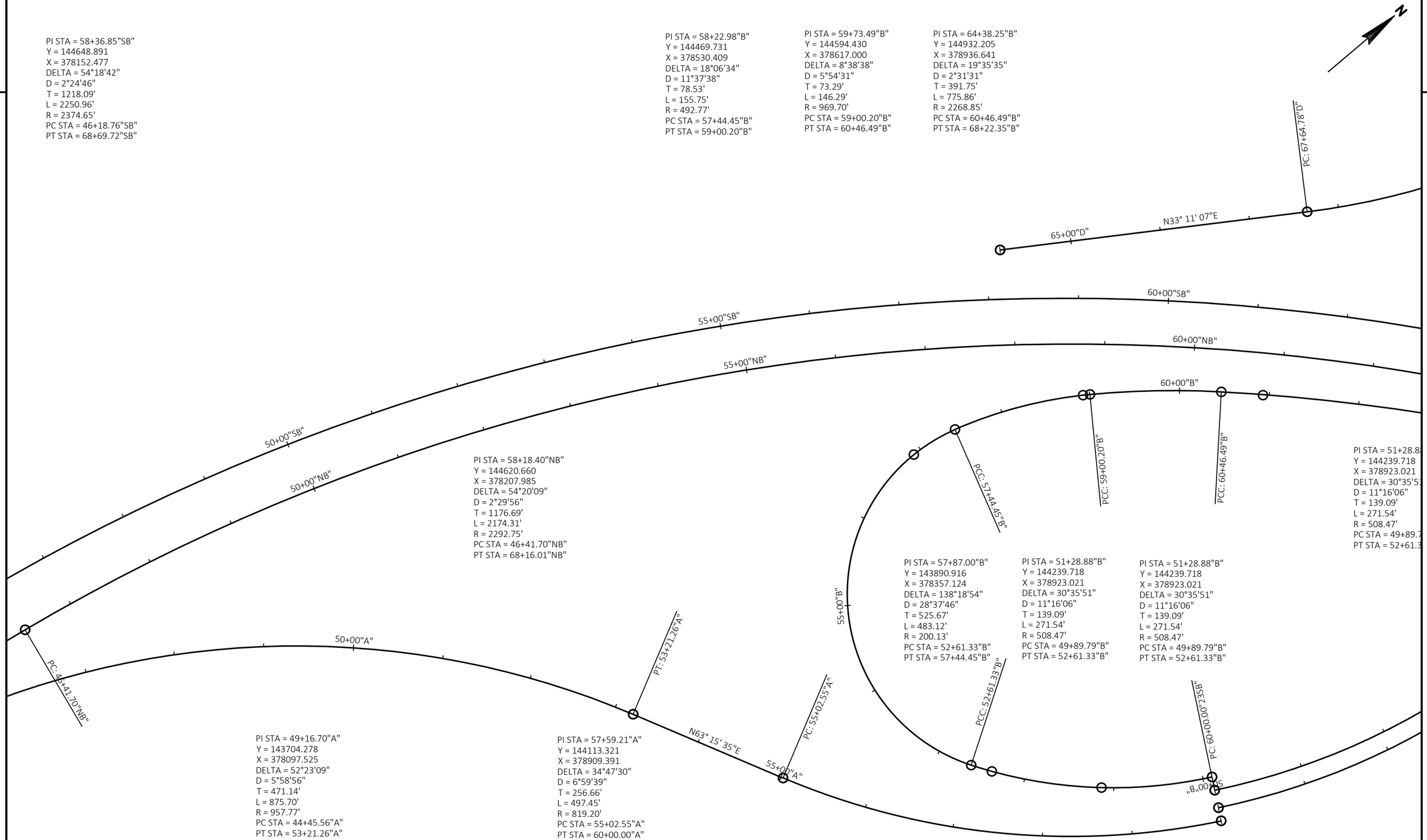
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 160	E

PI STA = 58+36.85"SB"
Y = 144648.891
X = 378152.477
DELTA = 54°18'42"
D = 2°24'46"
T = 1218.09'
L = 2250.96'
R = 2374.65'
PC STA = 46+18.76"SB"
PT STA = 68+69.72"SB"

PI STA = 58+22.98"B"
Y = 144469.731
X = 378530.409
DELTA = 18°06'34"
D = 11°37'38"
T = 78.53'
L = 155.75'
R = 492.77'
PC STA = 57+44.45"B"
PT STA = 59+00.20"B"

PI STA = 59+73.49"B"
Y = 144594.430
X = 378617.000
DELTA = 8°38'38"
D = 5°54'31"
T = 73.29'
L = 146.29'
R = 969.70'
PC STA = 59+00.20"B"
PT STA = 60+46.49"B"

PI STA = 64+38.25"B"
Y = 144932.205
X = 378936.641
DELTA = 19°35'35"
D = 2°31'31"
T = 391.75'
L = 775.86'
R = 2268.85'
PC STA = 60+46.49"B"
PT STA = 68+22.35"B"



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 161	E

2

2

PI STA = 71+57.71"D"
Y = 145178.848
X = 378791.270
DELTA = 51°23'00"
D = 7°00'54"
T = 392.93'
L = 732.47'
R = 816.76'
PC STA = 67+64.78"D"
PT STA = 74+97.25"D"

70+00"D"

N33° 34' 54"W

70+00"23SB"

70+00"23NB"

N77° 45' 28"E

75+00"C"

N77° 45' 28"E

PI STA = 81+39.35"C"
Y = 145563.754
X = 379938.857
DELTA = 12°37'42"
D = 2°58'30"
T = 213.10'
L = 424.48'
R = 1925.91'
PC STA = 79+26.24"C"
PT STA = 83+50.72"C"

PC: 79+26.24"C"

80+00"C"

PT: 68+49.53"23SB"

PT: 68+71.19"23NB"

N33° 34' 54"W

PT: 68+69.72"SB"

65+00"SB"

70+00"SB"

N64° 02' 36"E

75+00"SB"

65+00"NB"

70+00"NB"

N64° 03' 21"E

75+00"NB"

65+00"B"

N63° 00' 47"E

70+00"B"

N64° 03' 21"E

PI STA = 64+38.25"B"
Y = 144932.205
X = 378936.641
DELTA = 19°35'35"
D = 2°31'31"
T = 391.75'
L = 775.86'
R = 2268.85'
PC STA = 60+46.49"B"
PT STA = 68+22.35"B"

PT: 68+22.35"B"

PI: 70+15.00"B"

PI STA = 51+28.88"B"
Y = 144239.718
X = 378923.021
DELTA = 30°35'51"
D = 11°16'06"
T = 139.09'
L = 271.54'
R = 508.47'
PC STA = 49+89.79"B"
PT STA = 52+61.33"B"

65+00"23SB"

65+00"23NB"

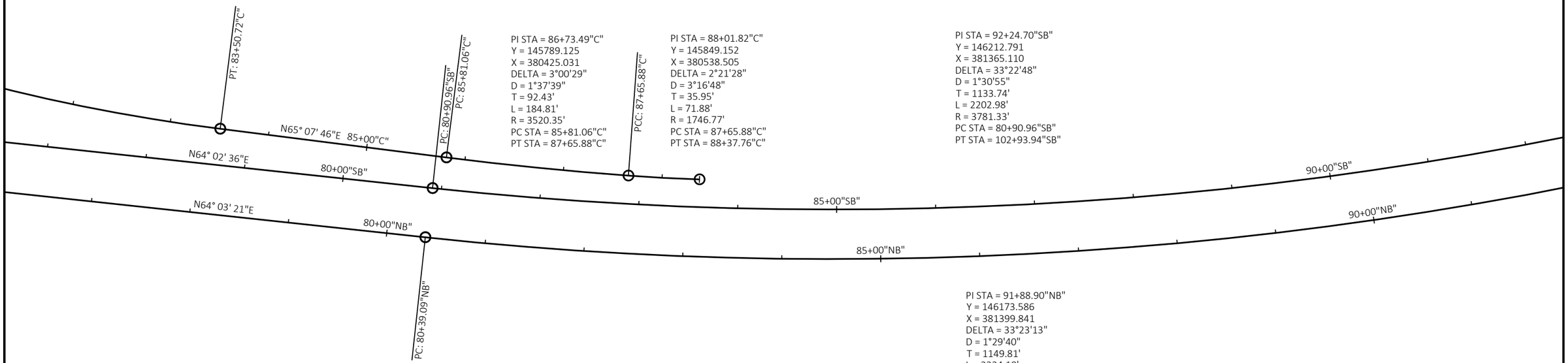
PI STA = 64+83.84"23NB"
Y = 144771.413
X = 379249.216
DELTA = 62°03'17"
D = 7°07'23"
T = 483.84'
L = 871.19'
R = 804.38'
PC STA = 60+00.00"23NB"
PT STA = 68+71.19"23NB"

PI STA = 64+83.84"23NB"
Y = 144771.413
X = 379249.216
DELTA = 62°03'17"
D = 7°07'23"
T = 483.84'
L = 871.19'
R = 804.38'
PC STA = 60+00.00"23NB"
PT STA = 68+71.19"23NB"

PC: 60+00.00"23S

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 162	E

2



PI STA = 86+73.49"C"
Y = 145789.125
X = 380425.031
DELTA = 3°00'29"
D = 1°37'39"
T = 92.43'
L = 184.81'
R = 3520.35'
PC STA = 85+81.06"C"
PT STA = 87+65.88"C"

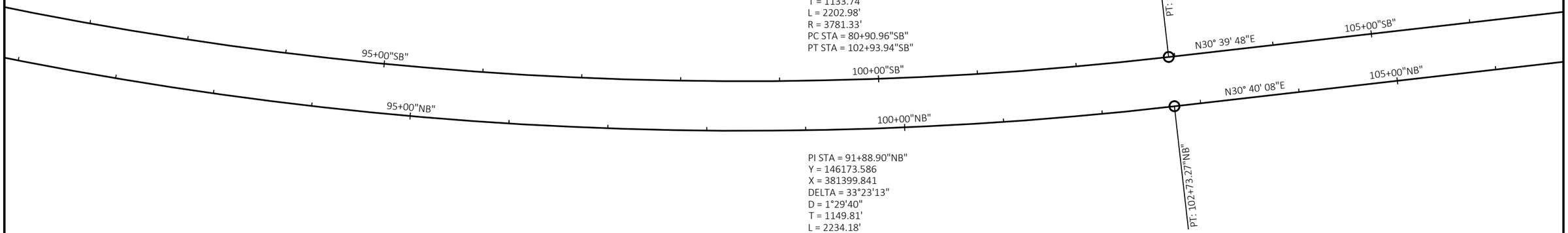
PI STA = 88+01.82"C"
Y = 145849.152
X = 380538.505
DELTA = 2°21'28"
D = 3°16'48"
T = 35.95'
L = 71.88'
R = 1746.77'
PC STA = 87+65.88"C"
PT STA = 88+37.76"C"

PI STA = 92+24.70"SB"
Y = 146212.791
X = 381365.110
DELTA = 33°22'48"
D = 1°30'55"
T = 1133.74'
L = 2202.98'
R = 3781.33'
PC STA = 80+90.96"SB"
PT STA = 102+93.94"SB"

PI STA = 91+88.90"NB"
Y = 146173.586
X = 381399.841
DELTA = 33°23'13"
D = 1°29'40"
T = 1149.81'
L = 2234.18'
R = 3834.10'
PC STA = 80+39.09"NB"
PT STA = 102+73.27"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 163	E

2



PI STA = 92+24.70"SB"
Y = 146212.791
X = 381365.110
DELTA = 33°22'48"
D = 1°30'55"
T = 1133.74'
L = 2202.98'
R = 3781.33'
PC STA = 80+90.96"SB"
PT STA = 102+93.94"SB"

PT: 102+93.94"SB"

PT: 102+73.27"NB"

PI STA = 91+88.90"NB"
Y = 146173.586
X = 381399.841
DELTA = 33°23'13"
D = 1°29'40"
T = 1149.81'
L = 2234.18'
R = 3834.10'
PC STA = 80+39.09"NB"
PT STA = 102+73.27"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 164	E

2

2

N

110+00"SB"

N30° 39' 48"E

115+00"SB"

120+00"SB"

110+00"NB"

N30° 40' 08"E

115+00"NB"

120+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 165	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_07

PLOT DATE : 5/23/2018 3:11 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

125+00"SB"

N30° 39' 48"E

130+00"SB"

135+00"SB"

125+00"NB"

N30° 40' 08"E

130+00"NB"

135+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 166	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_08

PLOT DATE : 5/23/2018 3:11 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

140+00"SB"

N30° 39' 48"E

145+00"SB"

150+00"SB"

B"

140+00"NB"

N30° 40' 08"E

145+00"NB"

150+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 167	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_09

PLOT DATE : 5/23/2018 3:11 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

SB" 155+00"SB" N30° 39' 48"E 160+00"SB" 165+00"SB"

+00"NB" 155+00"NB" N30° 40' 08"E 160+00"NB" 165+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 168	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_10
PLOT DATE : 5/23/2018 3:11 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

PI: 169+08.59"H"

170"H"

N29° 31' 39"E

175"H"

1716 GPS

5+00"SB"

170+00"SB"

N30° 39' 48"E

175+00"SB"

180+00"SB"

165+00"NB"

170+00"NB"

N30° 40' 08"E

175+00"NB"

180+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 169	E

2

N

PI STA = 191+07.12"H"
Y = 154932.929
X = 386451.964
DELTA = 79°44'21"
D = 4°00'07"
T = 1195.80'
L = 1992.53'
R = 1431.71'
PC STA = 179+11.32"H"
PT STA = 199+03.85"H"

PC: 179+11.32"H"

180"H"

185"H"

PC: 189+05.94"SB"

PI STA = 209+89.12"SB"
Y = 156387.790
X = 387397.751
DELTA = 64°06'27"
D = 1°43'20"
T = 2083.18'
L = 3722.35'
R = 3326.84'
PC STA = 189+05.94"SB"
PT STA = 226+28.30"SB"

180+00"SB"

N30° 39' 48"E

185+00"SB"

190+00"SB"

195+00"SB"

180+00"NB"

N30° 40' 08"E

185+00"NB"

190+00"NB"

195+00"N

PC: 188+84.89"NB"

PI STA = 209+37.43"NB"
Y = 156335.135
X = 387425.851
DELTA = 64°06'09"
D = 1°44'52"
T = 2052.54'
L = 3667.67'
R = 3278.21'
PC STA = 188+84.89"NB"
PT STA = 225+52.56"NB"

S54° 42' 41"E

PC: 189+30.10"EB

190"EB"

195"E"

PI STA =
Y = 155
X = 386
DELTA =
D = 1°4
T = 50.
L = 100
R = 325
PC STA
PT STA

PI STA = 192+17.85"EB"
Y = 154964.321
X = 386685.498
DELTA = 20°15'27"
D = 3°33'26"
T = 287.74'
L = 569.48'
R = 1610.69'
PC STA = 189+30.10"EB"
PT STA = 194+99.58"EB"

195"EB"

PC

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 170	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_12
PLOT DATE : 5/23/2018 3:11 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

PI STA = 189+12.53"G"
Y = 155181.101
X = 386464.854
DELTA = 66°38'22"
D = 5°00'57"
T = 750.91'
L = 1328.57'
R = 1142.29'
PC STA = 181+61.63"G"
PT STA = 194+90.20"G"

PI STA = 209+89.12"SB"
Y = 156387.790
X = 387397.751
DELTA = 64°06'27"
D = 1°43'20"
T = 2083.18'
L = 3722.35'
R = 3326.84'
PC STA = 189+05.94"SB"
PT STA = 226+28.30"SB"

PI STA = 202+07.53"G"
Y = 155952.999
X = 387713.812
DELTA = 14°48'44"
D = 1°45'29"
T = 423.62'
L = 842.52'
R = 3258.97'
PC STA = 197+83.91"G"
PT STA = 206+26.43"G"

PI STA = 195+34.68"E"
Y = 155074.026
X = 386784.187
DELTA = 1°46'01"
D = 1°45'42"
T = 50.15'
L = 100.29'
R = 3252.21'
PC STA = 194+84.53"E"
PT STA = 195+84.82"E"

PI STA = 196+66.41"E"
Y = 155170.502
X = 386873.888
DELTA = 4°03'28"
D = 2°29'17"
T = 81.58'
L = 163.10'
R = 2302.91'
PC STA = 195+84.82"E"
PT STA = 197+47.92"E"

PI STA = 199+28.89"E"
Y = 155349.649
X = 387065.826
DELTA = 6°06'33"
D = 1°41'22"
T = 180.97'
L = 361.59'
R = 3391.28'
PC STA = 197+47.92"E"
PT STA = 201+09.52"E"

PI STA = 202+03.43"E"
Y = 155514.758
X = 387285.596
DELTA = 10°21'03"
D = 5°31'33"
T = 93.91'
L = 187.31'
R = 1036.86'
PC STA = 201+09.52"E"
PT STA = 202+96.83"E"

PI STA = 203+80.95"E"
Y = 155594.378
X = 387444.828
DELTA = 22°28'05"
D = 13°31'45"
T = 84.12'
L = 166.07'
R = 423.49'
PC STA = 202+96.83"E"
PT STA = 204+62.90"E"

PI STA = 209+10.50"E"
Y = 155632.373
X = 387975.177
DELTA = 121°37'30"
D = 22°54'59"
T = 447.59'
L = 530.74'
R = 250.02'
PC STA = 204+62.90"E"
PT STA = 209+93.64"E"

PI STA = 209+37.43"NB"
Y = 156335.135
X = 387425.851
DELTA = 64°06'09"
D = 1°44'52"
T = 2052.54'
L = 3667.67'
R = 3278.21'
PC STA = 188+84.89"NB"
PT STA = 225+52.56"NB"

PI STA = 192+17.85"EB"
Y = 154964.321
X = 386685.498
DELTA = 20°15'27"
D = 3°33'26"
T = 287.74'
L = 569.48'
R = 1610.69'
PC STA = 189+30.10"EB"
PT STA = 194+99.58"EB"

PI STA = 201+17.36"EB"
Y = 154729.479
X = 387560.034
DELTA = 77°55'39"
D = 7°30'02"
T = 617.78'
L = 1038.95'
R = 763.88'
PC STA = 194+99.58"EB"
PT STA = 205+38.53"EB"

190"G"
PT: 194+90.20"G"
195"G"
N58° 16' 57"E
PC: 197+83.91"G"
200"G"
200+00"SB"
205+00"SB"
210+00"SB"
200+00"NB"
205+00"NB"
195+00"SB"
195+00"NB"
200"E"
195"E"
PCC: 195+84.82"E"
PCC: 197+47.92"E"
PCC: 201+09.52"E"
PCC: 202+96.83"E"
205"E"
PCC: 204+62.90"E"
PCC: 209+93.64"E"
210"F"
PC: 209+41.30"F"
N25° 56' 13"E
195"EB"
PCC: 194+99.58"EB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 171	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_13
PLOT DATE : 5/23/2018 3:11 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

PI STA = 202+07.53"G"
Y = 155952.999
X = 387713.812
DELTA = 14°48'44"
D = 1°45'29"
T = 423.62'
L = 842.52'
R = 3258.97'
PC STA = 197+83.91"G"
PT STA = 206+26.43"G"

PCC: 206+26.43"G"

PI STA = 206+48.94"G"
Y = 156083.417
X = 388140.446
DELTA = 0°46'08"
D = 1°42'28"
T = 22.51'
L = 45.03'
R = 3354.84'
PC STA = 206+26.43"G"
PT STA = 206+71.45"G"

PI STA = 209+89.12"SB"
Y = 156387.790
X = 387397.751
DELTA = 64°06'27"
D = 1°43'20"
T = 2083.18'
L = 3722.35'
R = 3326.84'
PC STA = 189+05.94"SB"
PT STA = 226+28.30"SB"

205"G"
210+00"SB"
215+00"SB"
220+00"SB"
225+00"SB"
215+00"NB"
220+00"NB"
210+00"NB"
220"F"
215"F"
210"F"

PI STA = 209+37.43"NB"
Y = 156335.135
X = 387425.851
DELTA = 64°06'09"
D = 1°44'52"
T = 2052.54'
L = 3667.67'
R = 3278.21'
PC STA = 188+84.89"NB"
PT STA = 225+52.56"NB"

PCC: 216+92.75"F"

PI STA = 221+14.85"F"
Y = 156158.144
X = 389026.632
DELTA = 14°38'02"
D = 1°44'35"
T = 422.10'
L = 839.61'
R = 3287.26'
PC STA = 216+92.75"F"
PT STA = 225+32.35"F"

PI STA = 213+45.88"F"
Y = 155994.340
X = 388216.336
DELTA = 52°38'04"
D = 7°00'16"
T = 404.59'
L = 751.45'
R = 818.00'
PC STA = 209+41.30"F"
PT STA = 216+92.75"F"

PC: 209+41.30"F"

'13"E

PI STA =
Y = 156
X = 389
DELTA =
D = 1°4
T = 422
L = 839

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 172	E

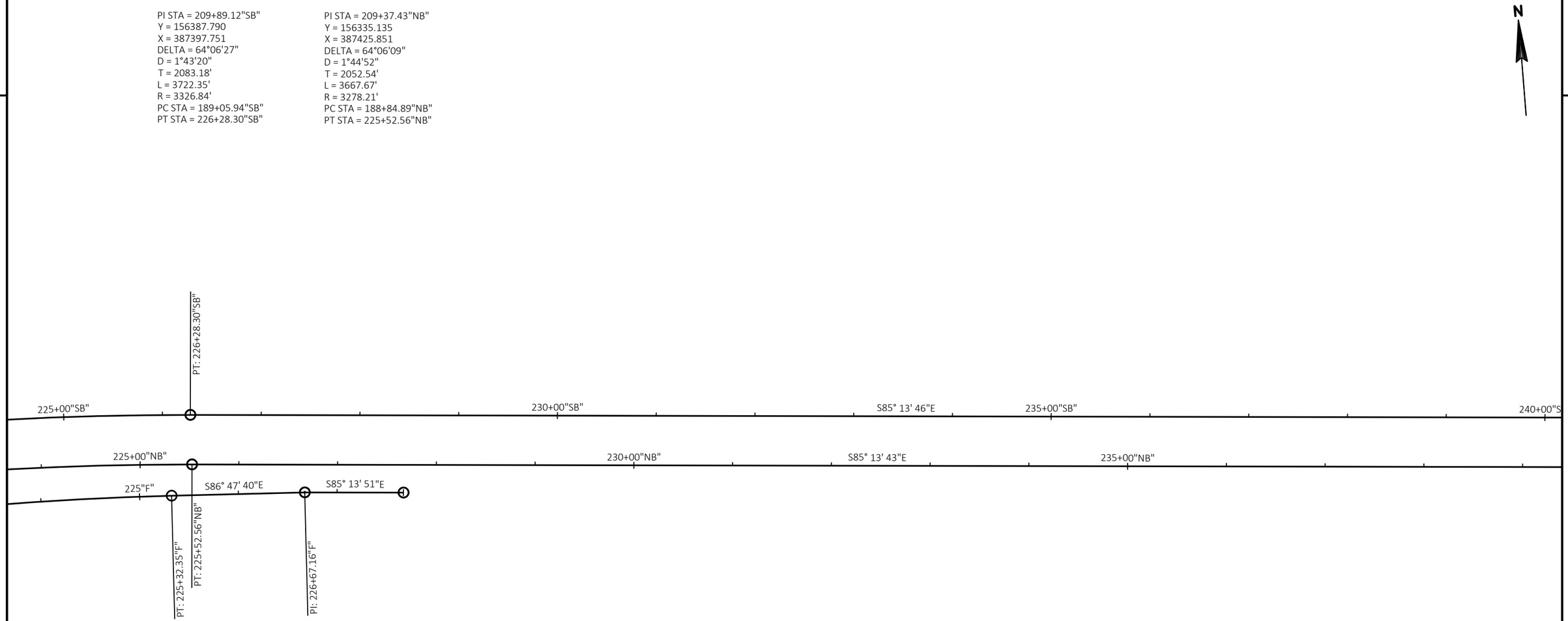
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_14

PLOT DATE : 5/23/2018 3:12 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

PI STA = 209+89.12"SB"
Y = 156387.790
X = 387397.751
DELTA = 64°06'27"
D = 1°43'20"
T = 2083.18'
L = 3722.35'
R = 3326.84'
PC STA = 189+05.94"SB"
PT STA = 226+28.30"SB"

PI STA = 209+37.43"NB"
Y = 156335.135
X = 387425.851
DELTA = 64°06'09"
D = 1°44'52"
T = 2052.54'
L = 3667.67'
R = 3278.21'
PC STA = 188+84.89"NB"
PT STA = 225+52.56"NB"



PI STA = 221+14.85"F"
Y = 156158.144
X = 389026.632
DELTA = 14°38'02"
D = 1°44'35"
T = 422.10'
L = 839.61'
R = 3287.26'
PC STA = 216+92.75"F"
PT STA = 225+32.35"F"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 173	E

2

2

240+00"SB"

245+00"SB"

S85° 13' 46"E

250+00"SB"

255

240+00"NB"

245+00"NB"

S85° 13' 43"E

250+00"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 174	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_16

PLOT DATE : 5/23/2018 3:12 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

255+00"SB"

S85° 13' 46"E

260+00"SB"

EP: 260+77.48"SB"

255+00"NB"

S85° 13' 43"E

260+00"NB"

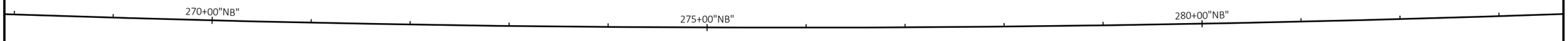
265+00"NB"

PC: 261+68.79"NB"

PI STA = 277+26.05"NB"
Y = 155734.065
X = 394626.838
DELTA = 7°46'28"
D = 0°15'00"
T = 1557.26'
L = 3109.74'
R = 22918.31'
PC STA = 261+68.79"NB"
PT STA = 292+78.53"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 175	E

2



PI STA = 277+26.05"NB"
Y = 155734.065
X = 394626.838
DELTA = 7°46'28"
D = 0°15'00"
T = 1557.26'
L = 3109.74'
R = 22918.31'
PC STA = 261+68.79"NB"
PT STA = 292+78.53"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 176	E

2

PI STA = 71+57.71"D"
Y = 145178.848
X = 378791.270
DELTA = 51°23'00"
D = 7°00'54"
T = 392.93'
L = 732.47'
R = 816.76'
PC STA = 67+64.78"D"
PT STA = 74+97.25"D"

PI STA = 77+76.17"23SB"
Y = 145935.419
X = 378452.386
DELTA = 43°03'00"
D = 3°54'25"
T = 578.43'
L = 1101.91'
R = 1466.55'
PC STA = 71+97.74"23SB"
PT STA = 82+99.65"23SB"

70+00"D"
PT: 74+97.25"D"
PI: 76+90.32"D"
PI: 77+12.85"D"
75+00"D"
PC: 73+67.82"23SB"
75+00"23SB"
75+00"23NB"
PT: 68+49.53"23SB"
70+00"23SB"
70+00"23NB"
N33° 34' 54"W
80+00"23SB"
80+00"23NB"
PT: 82+55.81"23NB"
PT: 82+99.65"23SB"
N7° 28' 10"E
PI: 68+71.69"23NB"
N77° 45' 28"E
16.01"NB"
PT: 68+69.72"SB"
75+00"C"

PI STA = 77+60.97"23NB"
Y = 145915.779
X = 378489.432
DELTA = 41°03'03"
D = 3°57'39"
T = 541.58'
L = 1036.41'
R = 1446.55'
PC STA = 72+19.40"23NB"
PT STA = 82+55.81"23NB"

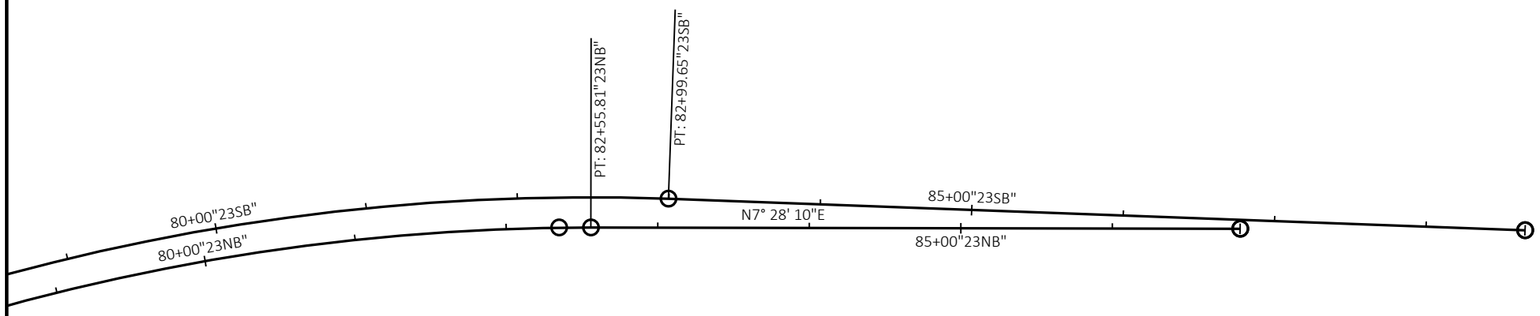
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 177	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\027201_AD.DWG
LAYOUT NAME - 027201_ad_20
PLOT DATE : 5/23/2018 3:12 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

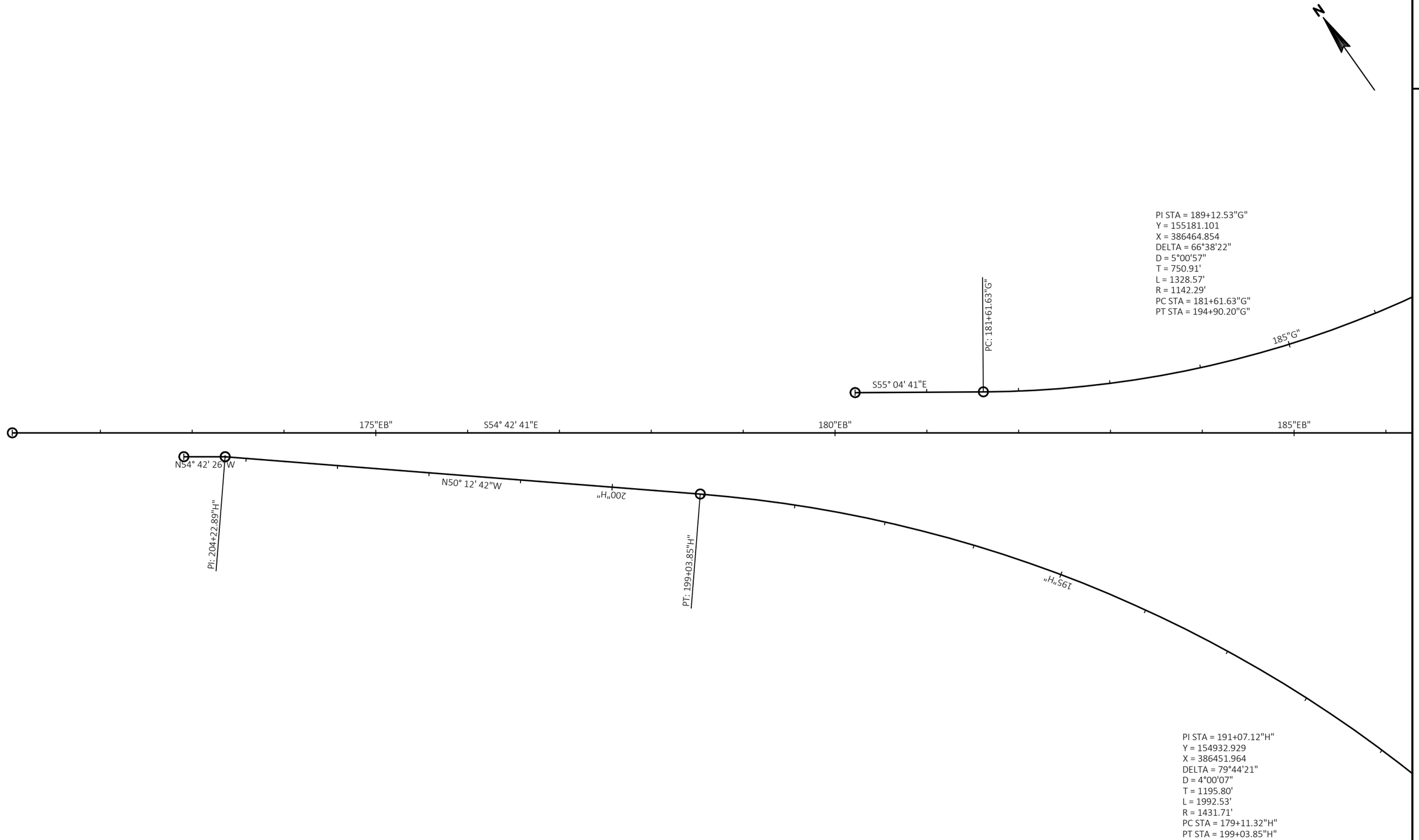
PI STA = 77+76.17"23SB"
Y = 145935.419
X = 378452.386
DELTA = 43°03'00"
D = 3°54'25"
T = 578.43'
L = 1101.91'
R = 1466.55'
PC STA = 71+97.74"23SB"
PT STA = 82+99.65"23SB"



PI STA = 77+60.97"23NB"
Y = 145915.779
X = 378489.432
DELTA = 41°03'03"
D = 3°57'39"
T = 541.58'
L = 1036.41'
R = 1446.55'
PC STA = 72+19.40"23NB"
PT STA = 82+55.81"23NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 178	E

2



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 179	E

2

9+12.53"G"
.101
.854
°38'22"
7"
'
9'
81+61.63"G"
94+90.20"G"

PI STA = 189+12.53"G"
Y = 155181.101
X = 386464.854
DELTA = 66°38'22"
D = 5°00'57"
T = 750.91'
L = 1328.57'
R = 1142.29'
PC STA = 181+61.63"G"
PT STA = 194+90.20"G"

190"G"

185"G"

185"EB"

S54° 42' 41"E

PC: 189+30.10"EB"

190"EB"

200+00"SB"

200+00"NB"

200'E"

PCC: 201+09.52"E"

X = 387285.596
DELTA = 10°21'03"
D = 5°31'33"
T = 93.91'
L = 187.31'
R = 1036.86'
PC STA = 201+09.52"E"
PT STA = 202+96.83"E"

R = 423.49'
PC STA = 202+96.83"E"
PT STA = 204+62.90"E"

PCC: 209

N

PI STA = 199+28.89"E"
Y = 155349.649
X = 387065.826
DELTA = 6°06'33"
D = 1°41'22"
T = 180.97'
L = 361.59'
R = 3391.28'
PC STA = 197+47.92"E"
PT STA = 201+09.52"E"

PCC: 197+47.92"E"

PI STA = 196+66.41"E"
Y = 155170.502
X = 386873.888
DELTA = 4°03'28"
D = 2°29'17"
T = 81.58'
L = 163.10'
R = 2302.91'
PC STA = 195+84.82"E"
PT STA = 197+47.92"E"

PCC: 195+84.82"E"

195+00"SB"

195+00"NB"

195'E"

PI STA = 195+34.68"E"
Y = 155074.026
X = 386784.187
DELTA = 1°46'01"
D = 1°45'42"
T = 50.15'
L = 100.29'
R = 3252.21'
PC STA = 194+84.53"E"
PT STA = 195+84.82"E"

PCC: 194+99.58"EB"

195"EB"

PI STA = 201+17.36"EB"
Y = 154729.479
X = 387560.034
DELTA = 77°55'39"
D = 7°30'02"
T = 617.78'
L = 1038.95'
R = 763.88'
PC STA = 194+99.58"EB"
PT STA = 205+38.53"EB"

200"EB"

PI STA = 192+17.85"EB"
Y = 154964.321
X = 386685.498
DELTA = 20°15'27"
D = 3°33'26"
T = 287.74'
L = 569.48'
R = 1610.69'
PC STA = 189+30.10"EB"
PT STA = 194+99.58"EB"

190"H"

PI STA = 209+89.12"SB"
Y = 156387.790
X = 387397.751
DELTA = 64°06'27"
D = 1°43'20"
T = 2083.18'
L = 3722.35'
R = 3326.84'
PC STA = 189+05.94"SB"
PT STA = 226+28.30"SB"

190+00"SB"

190+00"NB"

PI STA = 209+37.43"NB"
Y = 156335.135
X = 387425.851
DELTA = 64°06'09"
D = 1°44'52"
T = 2052.54'
L = 3667.67'
R = 3278.21'
PC STA = 188+84.89"NB"
PT STA = 225+52.56"NB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 180	E

2

195+00"SB"

200+00"SB"

195+00"NB"

200+00"NB"

195"E"

200"E"

205+00"SB"

205+00"NB"

200"G"

210+00"SB"

210+00"N

N58° 16' 57"E

PC: 19

PI STA = 202+07.53"G"
Y = 155952.999
X = 387713.812
DELTA = 14°48'44"
D = 1°45'29"
T = 423.62'
L = 842.52'
R = 3258.97'
PC STA = 197+83.91"G"
PT STA = 206+26.43"G"

PI STA = 195+34.68"E"
Y = 155074.026
X = 386784.187
DELTA = 1°46'01"
D = 1°45'42"
T = 50.15'
L = 100.29'
R = 3252.21'
PC STA = 194+84.53"E"
PT STA = 195+84.82"E"

PCC: 195+84.82"E"

PI STA = 196+66.41"E"
Y = 155170.502
X = 386873.888
DELTA = 4°03'28"
D = 2°29'17"
T = 81.58'
L = 163.10'
R = 2302.91'
PC STA = 195+84.82"E"
PT STA = 197+47.92"E"

PCC: 197+47.92"E"

PI STA = 199+28.89"E"
Y = 155349.649
X = 387065.826
DELTA = 6°06'33"
D = 1°41'22"
T = 180.97'
L = 361.59'
R = 3391.28'
PC STA = 197+47.92"E"
PT STA = 201+09.52"E"

PCC: 201+09.52"E"

PI STA = 202+03.43"E"
Y = 155514.758
X = 387285.596
DELTA = 10°21'03"
D = 5°31'33"
T = 93.91'
L = 187.31'
R = 1036.86'
PC STA = 201+09.52"E"
PT STA = 202+96.83"E"

PCC: 202+96.83"E"

PI STA = 203+80.95"E"
Y = 155594.378
X = 387444.828
DELTA = 22°28'05"
D = 13°31'45"
T = 84.12'
L = 166.07'
R = 423.49'
PC STA = 202+96.83"E"
PT STA = 204+62.90"E"

PCC: 204+62.90"E"

205"E"

PI STA = 209+37.43"NB"
Y = 156335.135
X = 387425.851
DELTA = 64°06'09"
D = 1°44'52"
T = 2052.54'
L = 3667.67'
R = 3278.21'
PC STA = 188+84.89"NB"
PT STA = 225+52.56"NB"

= 192+17.85"EB"
4964.321
6685.498
= 20°15'27"
33'26"
7.74'
9.48'
10.69'
= 189+30.10"EB"
= 194+99.58"EB"

195"EB"

PCC: 194+99.58"EB"

PI STA = 201+17.36"EB"
Y = 154729.479
X = 387560.034
DELTA = 77°55'39"
D = 7°30'02"
T = 617.78'
L = 1038.95'
R = 763.88'
PC STA = 194+99.58"EB"
PT STA = 205+38.53"EB"

PI STA = 209+10.50"E"
Y = 155632.373
X = 387975.177
DELTA = 121°37'30"
D = 22°54'59"
T = 447.59'
L = 530.74'
R = 250.02'
PC STA = 204+62.90"E"
PT STA = 209+93.64"E"

PCC: 209+93.64"E"

210"F"

N25° 56' 13"E

PC: 209+41.30"F"

200"EB"

210"E"

205"EB"

PT: 205+38.53"EB"

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	ALIGNMENT DETAILS	SHEET 181	E

1204-04-77

Line	Item	Item Description	Unit	Total	Qty
0002	203.0200	Removing Old Structure (station) 01. 114+33.56	LS	1.000	1.000
0004	203.0200	Removing Old Structure (station) 01. 221+99.98	LS	1.000	1.000
0006	203.0225.S	Debris Containment (structure) 01. B-25-0016	LS	1.000	1.000
0008	203.0225.S	Debris Containment (structure) 02. B-25-0018	LS	1.000	1.000
0010	203.0225.S	Debris Containment (structure) 03. B-25-0020	LS	1.000	1.000
0012	203.0225.S	Debris Containment (structure) 04. B-25-0021	LS	1.000	1.000
0014	203.0225.S	Debris Containment (structure) 05. B-25-0022	LS	1.000	1.000
0016	203.0225.S	Debris Containment (structure) 06. B-25-0023	LS	1.000	1.000
0018	204.0100	Removing Pavement	SY	146,128.000	146,128.000
0020	204.0150	Removing Curb & Gutter	LF	190.000	190.000
0022	204.0165	Removing Guardrail	LF	14,952.000	14,952.000
0024	204.0170	Removing Fence	LF	150.000	150.000
0026	204.0180	Removing Delineators and Markers	EACH	221.000	221.000
0028	204.0190	Removing Surface Drains	EACH	5.000	5.000
0030	204.0220	Removing Inlets	EACH	8.000	8.000
0032	204.0270	Abandoning Culvert Pipes	EACH	4.000	4.000
0034	205.0100	Excavation Common	CY	121,325.000	121,325.000
0036	206.1000	Excavation for Structures Bridges (structure) 01. B-25-0017	LS	1.000	1.000
0038	206.1000	Excavation for Structures Bridges (structure) 01. B-25-0020	LS	1.000	1.000
0040	210.1500	Backfill Structure Type A	TON	88.000	88.000
0042	213.0100	Finishing Roadway (project) 01. 1204-04-77	EACH	1.000	1.000
0044	305.0110	Base Aggregate Dense 3/4-Inch	TON	7,750.000	7,750.000
0046	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	140,500.000	140,500.000
0048	312.0110	Select Crushed Material	TON	18,050.000	18,050.000
0050	415.0085	Concrete Pavement 8 1/2-Inch	SY	18,861.000	18,861.000
0052	415.0095	Concrete Pavement 9 1/2-Inch	SY	135,544.000	135,544.000
0054	415.0410	Concrete Pavement Approach Slab	SY	1,015.000	1,015.000
0056	415.5110.S	Concrete Pavement Joint Layout	LS	1.000	1.000
0058	415.6000.S	Rout and Seal	LF	106,440.000	106,440.000
0060	416.0610	Drilled Tie Bars	EACH	10.000	10.000
0062	416.0620	Drilled Dowel Bars	EACH	92.000	92.000
0064	416.1010	Concrete Surface Drains	CY	10.000	10.000
0066	416.1110	Concrete Shoulder Rumble Strips	LF	31,470.000	31,470.000
0068	440.4410	Incentive IRI Ride	DOL	30,626.000	30,626.000
0070	460.2000	Incentive Density HMA Pavement	DOL	10,620.000	10,620.000
0072	460.5224	HMA Pavement 4 LT 58-28 S	TON	13,425.000	13,425.000
0074	465.0110	Asphaltic Surface Patching	TON	5.000	5.000
0076	465.0125	Asphaltic Surface Temporary	TON	2,449.000	2,449.000

1204-04-77

Line	Item	Item Description	Unit	Total	Qty
0078	465.0400	Asphaltic Shoulder Rumble Strips	LF	45,150.000	45,150.000
0080	502.0100	Concrete Masonry Bridges	CY	10.000	10.000
0082	502.0717.S	Crack Sealing Epoxy	LF	3,140.000	3,140.000
0084	502.3100	Expansion Device (structure) 01. B-25-0016	LS	1.000	1.000
0086	502.3100	Expansion Device (structure) 02. B-25-0018	LS	1.000	1.000
0088	502.3100	Expansion Device (structure) 03. B-25-0023	LS	1.000	1.000
0090	502.3200	Protective Surface Treatment	SY	4,943.000	4,943.000
0092	502.3210	Pigmented Surface Sealer	SY	436.000	436.000
0094	502.4205	Adhesive Anchors No. 5 Bar	EACH	286.000	286.000
0096	502.4206	Adhesive Anchors No. 6 Bar	EACH	18.000	18.000
0098	502.4207	Adhesive Anchors No. 7 Bar	EACH	56.000	56.000
0100	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,530.000	14,530.000
0102	506.0105	Structural Steel Carbon	LB	5,222.000	5,222.000
0104	506.2610	Bearing Pads Elastomeric Laminated	EACH	44.000	44.000
0106	506.7050.S	Removing Bearings (structure) 01. B-25-0016	EACH	4.000	4.000
0108	506.7050.S	Removing Bearings (structure) 02. B-25-0018	EACH	18.000	18.000
0110	506.7050.S	Removing Bearings (structure) 03. B-25-0023	EACH	8.000	8.000
0112	506.7050.S	Removing Bearings (structure) 04. B-25-0024	EACH	14.000	14.000
0114	509.0301	Preparation Decks Type 1	SY	429.000	429.000
0116	509.0302	Preparation Decks Type 2	SY	222.000	222.000
0118	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	65.000	65.000
0120	509.0500	Cleaning Decks	SY	4,532.000	4,532.000
0122	509.1000	Joint Repair	SY	124.000	124.000
0124	509.1500	Concrete Surface Repair	SF	523.000	523.000
0126	509.2000	Full-Depth Deck Repair	SY	59.000	59.000
0128	509.2500	Concrete Masonry Overlay Decks	CY	330.000	330.000
0130	509.5100.S	Polymer Overlay	SY	778.000	778.000
0132	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 02. B-25-0020	SY	680.000	680.000
0134	509.9050.S	Cleaning Parapets	LF	982.000	982.000
0136	511.1200	Temporary Shoring (structure) 01. B-25-0017	SF	250.000	250.000
0138	511.1200	Temporary Shoring (structure) 02. B-25-0020	SF	135.000	135.000
0140	516.0500	Rubberized Membrane Waterproofing	SY	6.000	6.000
0142	517.1800.S	Structure Repainting Recycled Abrasive (structure) 01. B-25-0023	LS	1.000	1.000
0144	517.1800.S	Structure Repainting Recycled Abrasive (structure) 02. B-25-0024	LS	1.000	1.000
0146	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-25-0023	LS	1.000	1.000
0148	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 02. B-25-0024	LS	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0150	517.6001.S	Portable Decontamination Facility	EACH	2.000	2.000
0152	520.3312	Culvert Pipe Class III-A 12-Inch	LF	60.000	60.000
0154	520.8700	Cleaning Culvert Pipes	EACH	1.000	1.000
0156	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	4.000	4.000
0158	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	3.000	3.000
0160	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	1,510.000	1,510.000
0162	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	10,910.000	10,910.000
0164	601.0586	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBTT	LF	200.000	200.000
0166	602.0405	Concrete Sidewalk 4-Inch	SF	270.000	270.000
0168	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	40.000	40.000
0170	604.0500	Slope Paving Crushed Aggregate	SY	729.000	729.000
0172	604.9010.S	Slope Paving Repair Crushed Aggregate	CY	12.000	12.000
0174	606.0200	Riprap Medium	CY	243.000	243.000
0176	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	157.000	157.000
0178	611.0630	Inlet Covers Type HM-GJ	EACH	33.000	33.000
0180	611.0654	Inlet Covers Type V	EACH	6.000	6.000
0182	611.3220	Inlets 2x2-FT	EACH	5.000	5.000
0184	611.3230	Inlets 2x3-FT	EACH	3.000	3.000
0186	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	295.000	295.000
0188	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	20.000	20.000
0190	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	7.000	7.000
0192	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000
0194	614.0230	Steel Thrie Beam	LF	200.000	200.000
0196	614.0250	Steel Thrie Beam Structure Approach Temporary	LF	84.000	84.000
0198	614.0360	Steel Plate Beam Guard Temporary	LF	626.000	626.000
0200	614.0380	Steel Plate Beam Guard Energy Absorbing Terminal Temporary	EACH	9.000	9.000
0202	614.2300	MGS Guardrail 3	LF	14,121.000	14,121.000
0204	614.2500	MGS Thrie Beam Transition	LF	1,023.000	1,023.000
0206	614.2610	MGS Guardrail Terminal EAT	EACH	35.000	35.000
0208	614.2620	MGS Guardrail Terminal Type 2	EACH	12.000	12.000
0210	616.0100	Fence Woven Wire (height) 01. 4.5 FEET	LF	150.000	150.000
0212	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1204-04-77	EACH	1.000	1.000
0214	619.1000	Mobilization	EACH	1.000	1.000
0216	624.0100	Water	MGAL	800.000	800.000
0218	625.0500	Salvaged Topsoil	SY	69,325.000	69,325.000
0220	627.0200	Mulching	SY	55,800.000	55,800.000

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Line	Item	Item Description	Unit	Total	Qty
0222	628.1504	Silt Fence	LF	14,780.000	14,780.000
0224	628.1520	Silt Fence Maintenance	LF	29,560.000	29,560.000
0226	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0228	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0230	628.2004	Erosion Mat Class I Type B	SY	18,555.000	18,555.000
0232	628.7005	Inlet Protection Type A	EACH	25.000	25.000
0234	628.7015	Inlet Protection Type C	EACH	36.000	36.000
0236	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0238	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0240	629.0210	Fertilizer Type B	CWT	56.000	56.000
0242	630.0130	Seeding Mixture No. 30	LB	1,257.000	1,257.000
0244	630.0200	Seeding Temporary	LB	629.000	629.000
0246	633.0100	Delineator Posts Steel	EACH	221.000	221.000
0248	633.0500	Delineator Reflectors	EACH	221.000	221.000
0250	633.1000	Delineator Brackets	EACH	221.000	221.000
0252	633.1100	Delineators Temporary	EACH	133.000	133.000
0254	633.5200	Markers Culvert End	EACH	7.000	7.000
0256	642.5201	Field Office Type C	EACH	1.000	1.000
0258	643.0300	Traffic Control Drums	DAY	84,122.000	84,122.000
0260	643.0420	Traffic Control Barricades Type III	DAY	8,270.000	8,270.000
0262	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	900.000	900.000
0264	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	900.000	900.000
0266	643.0705	Traffic Control Warning Lights Type A	DAY	9,758.000	9,758.000
0268	643.0715	Traffic Control Warning Lights Type C	DAY	9,320.000	9,320.000
0270	643.0800	Traffic Control Arrow Boards	DAY	976.000	976.000
0272	643.0900	Traffic Control Signs	DAY	41,271.000	41,271.000
0274	643.0910	Traffic Control Covering Signs Type I	EACH	2.000	2.000
0276	643.0920	Traffic Control Covering Signs Type II	EACH	40.000	40.000
0278	643.1050	Traffic Control Signs PCMS	DAY	112.000	112.000
0280	643.5000	Traffic Control	EACH	1.000	1.000
0282	644.1420.S	Temporary Pedestrian Surface Plywood	SF	1,000.000	1,000.000
0284	644.1601.S	Temporary Curb Ramp	EACH	2.000	2.000
0286	645.0111	Geotextile Type DF Schedule A	SY	10.000	10.000
0288	645.0120	Geotextile Type HR	SY	27.000	27.000
0290	646.1020	Marking Line Epoxy 4-Inch	LF	116,329.000	116,329.000
0292	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	10,575.000	10,575.000
0294	646.3020	Marking Line Epoxy 8-Inch	LF	75.000	75.000
0296	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	8,290.000	8,290.000
0298	646.6120	Marking Stop Line Epoxy 18-Inch	LF	18.000	18.000
0300	646.7220	Marking Chevron Epoxy 24-Inch	LF	960.000	960.000

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Line	Item	Item Description	Unit	Total	Qty
0302	646.8120	Marking Curb Epoxy	LF	80.000	80.000
0304	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	70,000.000	70,000.000
0306	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	96,730.000	96,730.000
0308	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	1,200.000	1,200.000
0310	650.4000	Construction Staking Storm Sewer	EACH	5.000	5.000
0312	650.4500	Construction Staking Subgrade	LF	8,840.000	8,840.000
0314	650.5000	Construction Staking Base	LF	67,105.000	67,105.000
0316	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	345.000	345.000
0318	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0320	650.7000	Construction Staking Concrete Pavement	LF	59,765.000	59,765.000
0322	650.9910	Construction Staking Supplemental Control (project) 01. 1204-04-77	LS	1.000	1.000
0324	650.9920	Construction Staking Slope Stakes	LF	13,870.000	13,870.000
0326	690.0150	Sawing Asphalt	LF	142.000	142.000
0328	690.0250	Sawing Concrete	LF	149.000	149.000
0330	715.0415	Incentive Strength Concrete Pavement	DOL	46,317.000	46,317.000
0332	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	875.000	875.000
0334	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,100.000	1,100.000
0336	SPV.0060	Special 01. Cleaning and Painting Bearings	EACH	18.000	18.000
0338	SPV.0060	Special 02. Soil Nail	EACH	16.000	16.000
0340	SPV.0105	Special 01. Remove Temporary Crossover V	LS	1.000	1.000
0342	SPV.0105	Special 02. Remove Temporary Crossover W	LS	1.000	1.000
0344	SPV.0105	Special 03. Remove Temporary Crossover X	LS	1.000	1.000
0346	SPV.0105	Special 04. Remove Temporary Crossover Y	LS	1.000	1.000
0348	SPV.0105	Special 05. Remove Temporary Crossover Z	LS	1.000	1.000
0350	SPV.0165	Special 01. Shotcrete	SF	360.000	360.000
0352	SPV.0165	Special 02. Wall Facing	SF	360.000	360.000
0354	SPV.0180	Special 01. Fast Set Deck Patching	SY	7.000	7.000

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REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
0010	63+48"SB"	-	113+20"SB"	USH 151 SB	13,338	
	115+18"SB"	-	159+05"SB"	USH 151 SB	11,778	
	160+79"SB"	-	222+51"SB"	USH 151 SB	16,561	
	224+15"SB"	-	240+00"SB"	USH 151 SB	4,267	
	37+00"NB"	-	113+32"NB"	USH 151 NB	20,394	
	115+52"NB"	-	158+56"NB"	USH 151 NB	11,618	
	160+38"NB"	-	221+85"NB"	USH 151 NB	16,474	
	223+35"NB"	-	240+00"NB"	USH 151 NB	4,479	
	39+85"A"	-	60+00"A"	RAMP A	4,981	
	60+00"SB 23"	-	88+37"SB"	STH 23 SB	7,856	
	49+90"B"	-	71+15"B"	RAMP B	2,811	
	70+74"C"	-	88+38"C"	RAMP C	2,092	
	65+35"D"	-	77+35"D"	RAMP D	1,725	
	194+85"E"	-	211+55"E"	RAMP E	3,831	
	205+58"F"	-	221+91"F"	RAMP F	2,803	
	180+22"G"	-	206+71"G"	RAMP G	3,051	
	168+09"H"	-	204+68"H"	RAMP H	4,669	
	171+45"EB"	-	205+58"EB"	USH 18 EB	13,398	
				TOTAL 0010	**146,128**	

REMOVING CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	204.0150 LF	REMARKS
0010	76+93"23SB"	-	78+80"23SB"	STH 23 TURN LANE	190	
				TOTAL 0010	**190**	

REMOVE TEMPORARY CROSSOVERS

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0105.01 LS	SPV.0105.02 LS	SPV.0105.03 LS	SPV.0105.04 LS	SPV.0105.05 LS
0010	175+90"SB"	-	187+34"SB"	CROSSOVER V	1	-	-	-	-
0010	66+50"NB"	-	77+50"SB"	CROSSOVER W	-	1	-	-	-
0010	77+91"NB"	-	87+05"NB"	CROSSOVER X	-	-	1	-	-
0010	233+55"NB"	-	257+07"NB"	CROSSOVER Y	-	-	-	1	-
0010	22+57"NB"	-	41+60"NB"	CROSSOVER Z	-	-	-	-	1
				TOTAL 0010	**1**	**1**	**1**	**1**	**1**

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 LF	REMARKS
0010	91+98"SB"	-	99+70"SB"	LT	765	
	114+92"SB"	-	120+29"SB"	LT	538	
	115+16"SB"	-	117+63"SB"	RT	295	
	150+25"SB"	-	159+25"SB"	LT	901	
	160+61"SB"	-	163+06"SB"	RT	289	
	160+73"SB"	-	161+94"SB"	LT	60	
	207+37"SB"	-	208+78"SB"	RT	141	
	220+59"SB"	-	222+55"SB"	LT	199	
	224+10"SB"	-	230+20"SB"	LT	612	
	224+10"SB"	-	226+65"SB"	RT	294	
	44+60"NB"	-	45+61"NB"	LT	101	
	91+13"NB"	-	98+96"NB"	RT	790	
	110+89"NB"	-	113+33"NB"	LT	281	
	112+38"NB"	-	113+55"NB"	RT	118	
	115+50"NB"	-	119+02"NB"	RT	348	
	151+84"NB"	-	158+58"NB"	RT	675	
	156+29"NB"	-	158+73"NB"	LT	281	
	176+86"NB"	-	185+77"NB"	RT	892	
	219+35"NB"	-	221+91"NB"	LT	290	
	219+82"NB"	-	221+91"NB"	RT	207	
	223+28"NB"	-	228+30"NB"	RT	490	
	174+46"EB"	-	176+46"EB"	LT	410	
	188+54"EB"	-	190+62"EB"	RT	210	
	192+67"EB"	-	203+48"EB"	RT	1,110	
	188+54"EB"	-	190+61"EB"	RT	210	
	192+64"EB"	-	203+30"EB"	RT	1,110	
	192+89"EB"	-	194+20"EB"	LT	128	
	198+09"EB"	-	203+28"EB"	LT	489	
	199+50"E"	-	201+35"E"	RT	186	
	195+46"G"	-	200+39"G"	RT	494	
	177+65"H"	-	184+66"H"	RT	698	
	53+54"A"	-	54+36"A"	RT	83	
	60+00"23 SB"	-	65+57"23 SB"	LT	621	
	68+33"23 SB"	-	69+57"23 SB"	LT	123	
	68+65"D"	-	73+64"D"	RT	513	
				TOTAL 0010	**14,952**	

REMOVING FENCE

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
0010	158+05"NB"	-	158+65"NB"	USH 151 NB	75	
	112+84"SB"	-	113+29"SB"	USH 151 SB	75	
				TOTAL 0010	**150**	

REMOVING DELINEATORS AND MARKERS

CATEGORY	LOCATION	204.0180 EACH	REMARKS
0010	PROJECT	221	
	TOTAL 0010	**221**	

REMOVING SURFACE DRAINS

CATEGORY	STATION	LOCATION	204.0190 EACH	REMARKS
0010	113+36"SB"	B-25-16	1	
0010	113+28"NB"	B-25-17	1	
0010	159+05"SB"	B-25-21	1	
0010	158+69"NB"	B-25-22	1	
0010	224+17"SB"	B-25-19	1	
		TOTAL 0010	**5**	

REMOVING INLETS

CATEGORY	STATION TO	STATION	LOCATION	204.0220 EACH	REMARKS
0010		113+03"SB"	B-25-16	1	
0010		113+53"NB"	B-25-17	1	
010		159+06"SB"	B-25-21	1	
0010		158+58"NB"	B-25-22	1	
0010		190+52"EB"	USH 18	2	
0010		193+02"EB"	USH 18	2	
0010					
			TOTAL 0010	**8**	

ABANDONING CULVERT PIPES

CATEGORY	STATION	LOCATION	204.0270 EACH	REMARKS
0010	113+03"SB"	B-25-16	1	
0010	113+53"NB"	B-25-17	1	
0010	159+06"SB"	B-25-21	1	
0010	158+58"NB"	B-25-22	1	
		TOTAL 0010	4	

EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 CY	REMARKS
0010	37+00"NB"	-	113+47"NB"	USH 151	16,550	
0010	115+22"NB"	-	158+79"NB"	USH 151	7,600	
0010	160+22"NB"	-	222+01"NB"	USH 151	11,620	
0010	223+20"NB"	-	240+00"NB"	USH 151	3,360	
0010	63+48"SB"	-	113+51"SB"	USH 151	10,110	
0010	115+03"SB"	-	159+20"SB"	USH 151	8,100	
0010	160+56"SB"	-	222+67"SB"	USH 151	12,050	
0010	223+99"SB"	-	240+00"SB"	USH 151	3,520	
0010	39+85"A"	-	60+00"A"	RAMP A	2,120	
0010	49+90"B"	-	71+15"B"	RAMP B	2,240	
0010	70+74"C"	-	88+38"C"	RAMP C	2,240	
0010	65+35"D"	-	77+35"D"	RAMP D	1,890	
0010	60+00"23 SB"	-	65+59"23 SB"	STH 23	1,270	
0010	68+41"23 SB"	-	88+37"23 SB"	STH 23	6,890	
0010	171+41"EB"	-	205+58"EB"	USH 18	8,260	
0010	194+85"E"	-	211+55"E"	RAMP E	2,020	
0010	205+58"F"	-	227+67"F"	RAMP F	3,620	
0010	180+22"G"	-	206+71"G"	RAMP G	3,260	
0010	168+09"H"	-	204+68"H"	RAMP H	4,075	
0010	22+57"NB"	-	41+60"NB"	CROSSOVER Z	3,070	
0010	233+55"NB"	-	257+07"NB"	CROSSOVER Y	1,940	
0010	66+50"NB"	-	77+50"NB"	CROSSOVER W	890	
0010	77+91"NB"	-	87+05"NB"	CROSSOVER X	1,030	
0010	175+90"SB"	-	187+34"SB"	CROSSOVER V	860	
0010				EBS	2,740	UNDISTRIBUTED
				TOTAL 0010	**121,325**	

BASE COURSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	REMARKS
0010	37+00"NB"	-	113+33"NB"	USH 151 NB	670	21,520	-	
	37+00"NB"	-	52+00"NB"	USH 151 NB	-	-	5,600	
	115+52"NB"	-	158+56"NB"	USH 151 NB	510	10,260	-	
	160+38"NB"	-	221+86"NB"	USH 151 NB	490	13,515	-	
	223+35"NB"	-	240+00"NB"	USH 151 NB	115	3,650	-	
	63+48"SB"	-	113+20"SB"	SB	430	11,270	-	
	115+18"SB"	-	159+05"SB"	SB	400	10,455	-	
	160+79"SB"	-	222+52"SB"	SB	445	12,980	-	
	224+15"SB"	-	240+00"SB"	SB	175	3,780	-	
	171+45"EB"	-	190+53"EB"	USH 18	220	5,190	-	
	192+96"EB"	-	205+58"EB"	USH 18	285	3,765	-	
	60+00"23SB"	-	65+59"23SB"	STH 23	65	1,545	-	
	68+41"23SB"	-	88+37"23SB"	STH 23	290	4,915	-	
	39+85"A"	-	60+00"A"	RAMP A	250	2,450	-	
	49+90"B"	-	71+15"B"	RAMP B	150	2,320	-	
	70+74"C"	-	88+38"C"	RAMP C	260	2,340	-	
	65+35"D"	-	77+35"D"	RAMP D	170	1,740	-	
	194+85"E"	-	211+55"E"	RAMP E	115	1,775	-	
	205+58"F"	-	221+91"F"	RAMP F	325	2,525	-	
	223+39"F"	-	227+67"F"	RAMP F	25	315	-	
	180+22"G"	-	206+71"G"	RAMP G	290	3,465	-	
	168+09"H"	-	204+68"H"	RAMP H	430	4,930	-	
	22+57"NB"	-	41+60"NB"	CROSSOVER Z	560	5,850	4,025	
	233+55"NB"	-	255+71"NB"	CROSSOVER Y	490	4,075	2,875	
	77+91"NB"		87+05"NB"	CROSSOVER X	220	2,035	1,850	
	66+50"NB"		77+50"NB"	CROSSOVER W	160	1,825	1,275	
	175+90"NB"		187+34"NB"	CROSSOVER V	180	2,010	1,425	
	77+50"NB"	-	78+16"NB"	MAINTENANCE CROSSOVER	10	-	-	
	169+65"NB"	-	170+32"NB"	MAINTENANCE CROSSOVER	10	-	-	
	100+13"SB"	-	100+79"SB"	MAINTENANCE CROSSOVER	10	-	-	
				UNDISTRUBUTED	-	-	1,000	
				TOTAL 0010	**7,750**	**140,500**	**18,050**	

CONCRETE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	415.0085 CONCRETE PAVEMENT 8 1/2-INCH SY	415.0095 CONCRETE PAVEMENT 9 1/2-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.1010 CONCRETE SURFACE DRAINS CY	REMARKS
0010	37+00"NB"	-	113+33"NB"	USH 151	-	22,040	-	-	
	113+11"NB"	-	113+47"NB"	B-25-0017	-	55	65	2	CONCRETE SHOULDERS
	115+24"NB"	-	115+52"NB"	B-25-0017	-	35	65	-	CONCRETE SHOULDERS
	115+52"NB"	-	158+56"NB"	USH 151	-	12,435	-	-	
	158+39"NB"	-	158+79"NB"	B-25-0022	-	50	60	2	CONCRETE SHOULDERS
	160+22"NB"	-	160+37"NB"	B-25-0022	-	35	60	-	CONCRETE SHOULDERS
	160+38"NB"	-	221+86"NB"	USH 151	-	17,725	-	-	
	221+85"NB"	-	222+00"NB"	B-25-0020	-	25	60	-	CONCRETE SHOULDERS
	223+20"NB"	-	223+51"NB"	B-25-0020	-	30	60	-	CONCRETE SHOULDERS
	223+35"NB"	-	240+00"NB"	USH 151	-	4,810	-	-	
	63+48"SB"	-	113+20"SB"	USH 151	-	14,350	-	-	
	113+10"SB"	-	113+50"SB"	B-25-0016	-	52	65	2	CONCRETE SHOULDERS
	115+03"SB"	-	115+18"SB"	B-25-0016	-	40	65	-	CONCRETE SHOULDERS
	115+18"SB"	-	159+05"SB"	USH 151	-	12,675	-	-	
	159+05"SB"	-	159+20"SB"	B-25-0021	-	47	60	2	CONCRETE SHOULDERS
	160+55"SB"	-	160+70"SB"	B-25-0021	-	30	60	-	CONCRETE SHOULDERS
	160+79"SB"	-	222+52"SB"	USH 151	-	17,870	-	-	
	222+52"SB"	-	222+66"SB"	B-25-0019	-	25	45	-	CONCRETE SHOULDERS
	224+00"SB"	-	224+30"SB"	B-25-0019	-	35	45	2	CONCRETE SHOULDERS
	224+15"SB"	-	240+00"SB"	USH 151	-	4,580	-	-	
	171+45"EB"	-	190+53"EB"	USH 18	-	8,835	-	-	
	190+53"EB"	-	190+72"EB"	B-25-0018	-	40	45	-	CONCRETE SHOULDERS
	192+69"EB"	-	192+95"EB"	B-25-0018	-	70	80	-	CONCRETE SHOULDERS
	190+53"EB"	-	190+76"EB"	B-25-18 NE	-	-	40	-	
	192+75"EB"	-	192+95"EB"	B-25-18 SE	-	-	30	-	
	192+96"EB"	-	205+58"EB"	USH 18	-	5,025	-	-	
	60+00"23 SB"	-	65+59"23 SB"	STH 23	1,970	-	-	-	
	65+36"23 SB"	-	65+79"23 SB"	B-25-0024	31	-	30	-	
	68+25"23 SB"	-	68+40"23 SB"	B-25-0024	30	-	25	-	
	68+25"SB"	-	68+40"23 SB"	B-25-24 NW	-	-	25	-	
	65+71"23 SB"	-	65+90"23 SB"	B-25-24 SE	-	-	30	-	
	68+41"23 SB"	-	88+37"23 SB"	STH 23	6,700	-	-	-	
	39+85"A"	-	60+00"A"	RAMP A	2,870	-	-	-	
	49+90"B"	-	71+15"B"	RAMP B	2,990	-	-	-	
	70+74"C"	-	88+38"C"	RAMP C	2,440	-	-	-	
	65+35"D"	-	77+35"D"	RAMP D	1,830	-	-	-	
	194+85"E"	-	211+55"E"	RAMP E	-	2,110	-	-	
	205+58"F"	-	221+91"F"	RAMP F	-	2,935	-	-	
	223+38"F"	-	227+67"F"	RAMP F	-	245	-	-	
	180+22"G"	-	206+71"G"	RAMP G	-	3,990	-	-	
	168+09"H"	-	204+68"H"	RAMP H	-	5,350	-	-	
				TOTAL 0010	**18,861**	**135,544**	**1,015**	**10**	

3

CONCRETE PAVEMENT JOINT LAYOUT

CATEGORY	LOCATION	415.5110.S LS	REMARKS
0010	Project	1	
	TOTAL 0010	**1**	

ROUT AND SEAL

CATEGORY	STATION	TO	STATION	LOCATION	415.6000.S LF	REMARKS
0010	37+00"NB"	-	113+33"NB"	USH 151	13,800	
	115+52"NB"	-	158+56"NB"	USH 151	8,610	
	160+38"NB"	-	221+86"NB"	USH 151	11,235	
	223+35"NB"	-	240+00"NB"	USH 151	2,900	
	63+48"SB"	-	113+20"SB"	USH 151	9,325	
	115+18"SB"	-	159+05"SB"	USH 151	8,775	
	160+79"SB"	-	222+52"SB"	USH 151	10,915	
	224+15"SB"	-	240+00"SB"	USH 151	3,170	
	171+45"EB"	-	190+53"EB"	USH 18	3,185	
	192+96"EB"	-	205+58"EB"	USH 18	2,270	
	60+00"23 SB"	-	65+59"23 SB"	STH 23	1,125	
	68+41"23 SB"	-	88+37"23 SB"	STH 23	4,435	
	39+85"A"	-	60+00"A"	RAMP A	3,205	
	49+90"B"	-	71+15"B"	RAMP B	2,520	
	70+74"C"	-	88+38"C"	RAMP C	3,070	
	65+35"D"	-	77+35"D"	RAMP D	2,220	
	194+85"E"	-	211+55"E"	RAMP E	1,605	
	205+58"F"	-	221+91"F"	RAMP F	2,995	
	223+38"F"	-	227+67"F"	RAMP F	415	
	180+22"G"	-	206+71"G"	RAMP G	4,495	
	168+09"H"	-	204+68"H"	RAMP H	6,170	
				TOTAL 0010	**106,440**	

DRILLED TIE BARS

CATEGORY	STATION TO	STATION	LOCATION	416.0610 EACH	REMARKS
0010		113+36"SB"	B-25-16 - SURFACE DRAIN	2	
0010		159+03"NB"	B-25-21 - SURFACE DRAIN	2	
0010		224+14"SB"	B-25-19 - SURFACE DRAIN	2	
0010		113+25"NB"	B-25-17 - SURFACE DRAIN	2	
0010		158+54"NB"	B-25-22 - SURFACE DRAIN	2	
			TOTAL 0010	**10**	

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH	REMARKS
0010	37+00"NB"	USH 151 NB	24	
	240+00"NB"	USH 151 NB	22	
	63+48"SB"	USH 151 SB	24	
	240+00"SB"	USH 151 SB	22	
		TOTAL 0010	**92**	

CONCRETE SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	416.1110 LF	REMARKS
0010	37+00"NB"	-	39+65"NB"	RT	265	
	46+32"NB"	-	58+54"NB"	RT	1,210	
	71+15"NB"	-	113+33"NB"	RT	4,235	
	115+52"NB"	-	158+39"NB"	RT	4,290	
	160+37"NB"	-	194+84"NB"	RT	3,445	
	203+74"NB"	-	215+49"NB"	RT	1,170	
	227+66"NB"	-	240+00"NB"	RT	1,235	
	63+48"SB"	-	75+86"SB"	RT	1,245	
	83+60"SB"	-	113+20"SB"	RT	2,950	
	115+18"SB"	-	159+05"SB"	RT	4,390	
	160+79"SB"	-	169+57"SB"	RT	880	
	182+02"SB"	-	202+19"SB"	RT	2,030	
	213+07"SB"	-	222+51"SB"	RT	950	
	224+15"SB"	-	240+00"SB"	RT	1,590	
	224+15"SB"	-	240+00"SB"	LT	1,585	
				TOTAL 0010	**31,470**	

ASPHALT PAVMENT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	REMARKS
0010	22+57"NB"	-	41+60"NB"	CROSSOVER Z	-	800	
	37+00"NB"	-	113+48"NB"	USH 151	1,680	-	
	77+49"NB"	-	78+16"NB"	MAINTENANCE CROSSOVER	35	-	
	66+50"NB"		77+50"NB"	CROSSOVER W	-	315	
	77+91"NB"		87+05"NB"	CROSSOVER X	-	330	
	100+13"NB"	-	100+79"NB"	MAINTENANCE CROSSOVER	35	-	
	115+22"NB"	-	158+79"NB"	USH 151	1,145	-	
	160+22"NB"	-	222+01"NB"	USH 151	1,350	-	
	169+66"NB"	-	170+32"NB"	MAINTENANCE CROSSOVER	35	-	
	223+20"NB"	-	240+00"NB"	USH 151	390	-	
	233+55"NB"	-	255+71"NB"	CROSSOVER Y	-	620	
	63+48"SB"	-	113+51"SB"	USH 151	1,165	-	
	115+03"SB"	-	159+20"SB"	USH 151	1,170	-	
	160+56"SB"	-	222+67"SB"	USH 151	1,205	-	
	175+90"NB"		187+34"NB"	CROSSOVER V	-	380	
	223+99"SB"	-	240+00"SB"	USH 151	430	-	
	171+45"EB"	-	190+73"EB"	USH 18	470	-	
	190+96"EB"	-	205+58"EB"	USH 18	450	-	
	60+00"23SB"	-	65+93"23SB"	STH 23	200	-	
	68+41"23SB"	-	88+37"23SB"	STH 23	520	-	
	46+82"A"	-	60+00"A"	Ramp A	340	-	
	51+70"B"	-	58+15"B"	Ramp B	280	-	
	71+18"C"	-	80+24"C"	Ramp C	295	-	
	65+35"D"	-	74+20"D"	Ramp D	270	-	
	203+81"E"	-	209+90"E"	Ramp E	220	-	
	209+41"F"	-	227+67"F"	Ramp F	490	-	
	183+93"G"	-	195+12"G"	Ramp G	550	-	
	181+04"H"	-	198+79"H"	Ramp H	700	-	
	249+13"NB"		205+09"NB"	MAINTENANCE CROSSOVER	-	4	
				TOTAL 0010	**13,425**	**2,449**	

ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	37+00"NB"	-	113+33"NB"	LT	7,635	
	115+52"NB"	-	158+50"NB"	LT	4,300	
	160+37"NB"	-	221+85"NB"	LT	6,150	
	223+35"NB"	-	240+00"NB"	LT	1,665	
	63+48"SB"	-	113+20"SB"	LT	4,975	
	115+18"SB"	-	159+05"SB"	LT	4,390	
	160+79"SB"	-	222+51"SB"	LT	6,175	
	171+45"EB"	-	172+90"EB"	RT	145	
	172+45"EB"	-	180+22"EB"	LT	780	
	177+88"EB"	-	190+53"EB"	RT	1,270	
	183+62"EB"	-	190+53"EB"	LT	690	
	192+95"EB"	-	205+58"EB"	RT	1,300	
	193+15"EB"	-	203+28"EB"	LT	975	
	205+58"F"	-	221+90"F"	RT	1,635	
	223+53"F"	-	227+67"F"	RT	415	
	180+22"G"	-	206+71"G"	RT	2,650	
				TOTAL 0010	**45,150**	

ASPHALTIC SURFACE PATCHING

CATEGORY	LOCATION	465.0110 TON	REMARKS
0010	PROJECT	5	
	TOTAL 0010	**5**	

CULVERT PIPE CLASS III-A 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	520.3312 LF	REMARKS
0010	249+13"NB"	-	250+09"NB"	MAINTENANCE CROSSOVER	60	BURY IN PLACE AFTER REMOVAL OF CROSSOVERS
				TOTAL 0010	**60**	

CROSS DRAIN CULVERT PIPES

CATEGORY	STATION	LOCATION	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	633.5200 MARKERS CULVERT END EACH	REMARKS
0010	113+38"NB"	RT 82'	1	-	-	1	
	158+43"NB"	RT 139'	1	-	-	1	
	190+52"EB"	USH 18	-	2	108	2	
	193+10"EB"	USH 18	-	1	49	1	
	113+15"SB"	LT 64'	1	-	-	1	
	159+06"SB"	LT 110'	1	-	-	1	
		TOTAL 0010	**4**	**3**	**157**	**7**	

CONCRETE CURB AND GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0413 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G LF	601.0586 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT LF	REMARKS
0010	171+45"EB"	-	190+53"EB"	USH 18	-	3,715	-	
	192+95"EB"	-	204+74"EB"	USH 18	-	2,320	-	
	60+00"23 SB"	-	65+70"23 SB"	STH 23	-	1,145	-	
	68+40"23 SB"	-	78+75"23 SB"	STH 23	-	2,065	-	
	79+29"23 SB"	-	85+32"23 SB"	STH 23	-	1,205	-	
	57+21"A"	-	60+00"A"	RAMP A	-	275	-	
	49+90"B"	-	51+70"B"	RAMP B	-	185	-	
	51+24"B"	-	58+15"B"	RAMP B	685	-	-	
	202+90"E"	-	211+20"E"	RAMP E	825	-	-	
	113+33"NB"	-	113+56"NB"	USH 151 - RT	-	-	23	B-25-17
	113+20"NB"	-	113+33"NB"	USH 151 - LT	-	-	13	B-25-17
	158+38"NB"	-	158+60"NB"	USH 151 - RT	-	-	23	B-25-22
	158+58"NB"	-	158+72"NB"	USH 151 - LT	-	-	14	B-25-22
	223+29"NB"	-	223+43"NB"	USH 151 - RT	-	-	14	B-25-20
	113+10"SB"	-	113+20"SB"	USH 151 - RT	-	-	12	B-25-16
	112+98"SB"	-	113+20"SB"	USH 151 - LT	-	-	22	B-25-16
	159+05"SB"	-	159+10"SB"	USH 151 - RT	-	-	17	B-25-21
	159+01"SB"		159+22"SB"	USH 151 - LT	-	-	22	B-25-21
	224+08"SB"	-	224+21"SB"	USH 151 - RT	-	-	13	B-25-19
	65+53"23SB"	-	65+58"23SB"	STH 23 SB - LT	-	-	5	B-25-24
	192+93"EB"		193+15"EB"	USH 18 - LT	-	-	22	B-25-18
				TOTAL 0010	**1,510**	**10,910**	**200**	

CONCRETE SIDEWALK 4-INCH

CATEGORY	STATION	LOCATION	602.0405 SF	REMARKS
0010	71+00"C"	RAMP C RT	110	
	71+00"C"	RAMP C LT	160	
		TOTAL 0010	**270**	

CURB RAMP DETECTABLE WARNING FIELD YELLOW

CATEGORY	STATION	LOCATION	602.0505 SF	REMARKS
0010	71+00"C"	RAMP C	40	
		TOTAL 0010	**40**	

RIPRAP MEDIUM

CATEGORY	STATION	LOCATION	606.0200 CY	REMARKS
0010	113+38"NB"	B-25-17	27	
	158+43"NB"	B-25-22	27	
	113+36"SB"	B-25-16	27	
	113+15"SB"	B-25-16	27	
	113+25"NB"	B-25-17	27	
	159+03"SB"	B-25-22	27	
	159+05"SB"	B-25-22	27	
	158+54"NB"	B-25-21	27	
	224+14"SB"	B-25-19	27	
		TOTAL 0010	**243**	

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INLETS AND COVERS

CATEGORY	STATION	LOCATION	611.0630 INLET COVERS TYPE HM-GJ LF	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2X2-FT EACH	611.3230 INLETS 2X3-FT EACH	REMARKS
0010	174+51"EB"	USH 18	2	-	-	-	
	179+00"EB"	USH 18	2	-	-	-	
	183+60"EB"	USH 18	2	-	-	-	
	190+52"EB"	USH 18	2	-	-	2	
	193+10"EB"	USH 18	1	-	1	1	
	195+10"EB"	USH 18	2	-	-	-	
	198+09"EB"	USH 18	2	-	-	-	
	201+10"EB"	USH 18	2	-	-	-	
	204+60"EB"	USH 18	1	-	-	-	
	62+15"23SB"	STH 23	2	-	-	-	
	65+00"23SB"	STH 23	2	-	-	-	
	65+57"23SB"	STH 23	-	1	-	-	B-25-0024
	68+50"23SB"	STH 23	2	-	-	-	
	73+40"23SB"	STH 23	2	-	-	-	
	75+91"23SB"	STH 23	2	-	-	-	
	78+68"23SB"	STH 23	2	-	-	-	
	85+07"23SB"	STH 23	2	-	-	-	
	113+39"NB"	B-25-0017	-	1	1	-	
	158+43"NB"	B-25-0022	-	1	1	-	
	223+45"NB"	B-25-0020	-	1	-	-	
	113+15"SB"	B-25-0016	-	1	1	-	
	159+06"SB"	B-25-0021	-	1	1	-	
	58+78"A"	RAMP A	1	-	-	-	
	53+16"B"	RAMP B	1	-	-	-	
	209+97"E"	RAMP E	1	-	-	-	
	TOTAL 0010		**33**	**6**	**5**	**3**	

PIPE UNDERDRAIN UNPERFORATED 12-INCH

CATEGORY	STATION TO	STATION	LOCATION	612.0212 LF	REMARKS
0010		113+38"NB"	B-25-17	50	
		158+43"NB"	B-25-22	130	
		113+15"SB"	B-25-16	30	
		159+06"SB"	B-25-21	85	
			TOTAL 0010	**295**	

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BEAMGUARD

CATEGORY	STATION	TO	STATION	LOCATION	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD EACH	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL SY	614.0230 STEEL THRIE BEAM LF	614.0250 STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY LF	614.0360 STEEL PLATE BEAM GUARD TEMPORARY LF	614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
0010	174+46"EB"	-	76+52"EB"	MEDIAN	-	2	200	-	-	-	-	-	-	-	
	187+69"EB"	-	90+68"EB"	RT	-	-	-	-	-	-	213	39	1	-	
	192+64"EB"	-	03+36"EB"	RT	-	-	-	-	-	-	1,075	39	-	1	
	192+89"EB"	-	95+23"EB"	LT	-	-	-	-	-	-	38	39	1	-	
	196+93"EB"	-	11+20"EB"	LT	-	-	-	-	-	-	550	-	1	1	
	197+97"E"		201+35"E"	RT	-	-	-	-	-	-	288	-	1	1	
	44+39"NB"	-	14+64"NB"	LT	-	-	-	-	-	-	75	-	1	1	
	45+54"NB"	-	16+04"NB"	S-25-0005	-	-	-	-	50	1	-	-	-	-	STAGES 2 & 3
	91+02"NB"	-	00+19"NB"	RT	-	-	-	-	-	1	875	-	1	1	STAGES 2 & 3
	110+56"NB"	-	13+33"NB"	LT	-	-	-	-	-	1	225	39	1	-	STAGES 2 & 3
	112+16"NB"	-	13+55"NB"	RT	-	-	-	-	-	-	50	39	1	-	
	115+31"NB"	-	17+39"NB"	LT	1	-	-	21	138	1	-	-	-	-	
	115+54"NB"	-	20+06"NB"	RT	-	-	-	-	-	-	413	39	-	1	
	151+37"NB"	-	58+63"NB"	RT	-	-	-	-	-	-	638	39	1	-	
	155+60"NB"	-	58+75"NB"	LT	-	-	-	-	-	-	225	39	1	-	
	160+20"NB"		161+91"NB"	RT	1	-	-	21	100	1	-	-	-	-	STAGES 2 & 3
	160+33"NB"		162+40"NB"	LT	1	-	-	21	138	1	-	-	-	-	STAGES 2 & 3
	176+80"NB"	-	85+80"NB"	RT	-	-	-	-	-	1	850	-	1	1	STAGES 2 & 3
	197+99"NB"	-	01+41"NB"	RT	-	-	-	-	-	-	288	-	1	1	
	218+84"NB"	-	21+86"NB"	LT	-	-	-	-	-	-	213	39	1	-	
	219+51"NB"	-	21+91"NB"	RT	-	-	-	-	-	-	150	39	1	-	
	223+40"NB"	-	29+95"NB"	RT	-	-	-	-	-	1	613	39	1	1	STAGES 2 & 3
	89+00"SB"	-	09+81"SB"	LT	-	-	-	-	-	-	975	-	2	-	
	114+89"SB"	-	22+00"SB"	LT	-	-	-	-	-	-	625	39	1	-	
	112+05"SB"		113+20"SB"	LT	-	-	-	-	-	-	25	39	1	-	
	111+27"SB"		113+41"SB"	RT	-	-	-	-	-	-	125	39	1	-	
	115+13"SB"	-	18+78"SB"	LT	-	-	-	-	-	-	275	39	1	-	
	148+99"SB"	-	59+25"SB"	LT	-	-	-	-	-	-	938	39	1	-	
	156+96"SB"		159+10"SB"	RT	-	-	-	-	-	-	125	39	1	-	
	160+59"SB"	-	63+73"SB"	LT	-	-	-	-	-	-	225	39	1	-	
	160+73"SB"	-	62+00"SB"	RT	-	-	-	-	-	-	38	39	1	-	
	206+39"SB"	-	09+15"SB"	LT	-	-	-	-	-	-	175	-	2	-	
	218+12"SB"	-	22+59"SB"	LT	-	-	-	-	-	-	358	39	1	-	
	220+44"SB"	-	22+59"SB"	RT	-	-	-	-	-	-	125	39	1	-	
	223+31"NB"	-	26+01"NB"	LT	1	-	-	21	200	1	-	-	-	-	

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BEAMGUARD

CATEGORY	STATION	TO	STATION	LOCATION	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD EACH	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL SY	614.0230 STEEL THRIE BEAM LF	614.0250 STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY LF	614.0360 STEEL PLATE BEAM GUARD TEMPORARY LF	614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
	224+04"SB"	-	27+06"SB"	LT	-	-	-	-	-	-	213	39	1	-	
	224+09"SB"	-	33+21"SB"	RT	-	-	-	-	-	-	825	39	1	-	
	68+38"23 SB	-	+90"23 SB	RT	-	-	-	-	-	-	163	39	1	-	
	53+35"A"	-	54+37"A"	RT	-	-	-	-	-	-	13	39	1	-	
	50+75"B"	-	+55"23 SB	RT	-	-	-	-	-	-	625	39	-	1	
	68+58"D"	-	73+69"D"	LT	-	-	-	-	-	-	475	-	1	1	
	177+66"H"		188+45"H"	LT	-	-	-	-	-	-	1,025	-	1	1	
				TOTAL 0010	**4**	**2**	**200**	**84**	**626**	**9**	**14,121**	**1,023**	**35**	**12**	

FENCE WOVEN WIRE (4.5 FEET)

CATEGORY	STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
0010	158+05"NB"	-	158+65"NB"	USH 151 NB	75	
0010	112+84"SB"	-	113+29"SB"	USH 151 SB	75	
			TOTAL 0010		**150**	

WATER

CATEGORY	LOCATION	624.0100 MGAL	REMARKS
0010	PROJECT 1204-04-77/78	800	
	TOTAL 0010	**800**	

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LANDSCAPE ITEMS

CATEGORY	STATION	TO	STATION	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	REMARKS
0010	37+00"NB"	-	52+00"NB"	USH 151	1360	1140	1	25	13	
0010	52+00"NB"	-	113+33"NB"	USH 151	6800	5940	5	123	62	
0010	115+52"NB"	-	158+56"NB"	USH 151	6940	4940	5	125	63	
0010	160+38"NB"	-	221+86"NB"	USH 151	7530	6470	5	136	68	
0010	223+35"NB"	-	240+00"NB"	USH 151	1600	1600	2	29	15	
0010	63+48"SB"	-	113+20"SB"	USH 151	7050	5390	5	127	64	
0010	115+18"SB"	-	159+05"SB"	USH 151	5840	3840	4	105	53	
0010	160+79"SB"	-	222+52"SB"	USH 151	6200	4665	4	112	56	
0010	224+15"SB"	-	240+00"SB"	USH 151	1815	1595	2	33	17	
0010	171+45"EB"	-	190+53"EB"	USH 18	1690	890	2	31	16	
0010	192+96"EB"	-	205+58"EB"	USH 18	3730	1810	3	68	34	
0010	60+00"23SB"	-	65+59"23SB"	STH 23	545	75	1	10	5	
0010	68+41"23SB"	-	88+37"23SB"	STH 23	2030	2030	2	37	19	
0010	39+85"A"	-	60+00"A"	RAMP A	1600	1330	2	29	15	
0010	49+90"B"	-	71+15"B"	RAMP B	1130	1130	1	21	11	
0010	70+74"C"	-	88+38"C"	RAMP C	1460	1460	1	27	14	
0010	65+35"D"	-	77+35"D"	RAMP D	1540	910	1	28	14	
0010	194+85"E"	-	211+55"E"	RAMP E	900	400	1	17	9	
0010	205+58"F"	-	221+91"F"	RAMP F	1670	600	2	30	15	
0010	223+39"F"	-	227+67"F"	RAMP F	450	450	1	9	5	
0010	180+22"G"	-	206+71"G"	RAMP G	2300	1560	2	42	21	
0010	168+09"H"	-	204+68"H"	RAMP H	5145	2545	4	93	47	
0010				UNDISTRUBUTED	-	5030	-	-	-	
0010										
				TOTAL 0010	**69325**	**55800**	**56**	**1257**	**629**	

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SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE EACH	628.1520 SILT FENCE MAINTENANCE LF	REMARKS
0010	90+00"NB"	-	100+00"NB"	USH 151 NB	1100	2200	
0010	111+00"NB"	-	113+30"NB"	USH 151 NB	220	440	
0010	115+67"NB"	-	120+40"NB"	USH 151 NB	500	1000	
0010	150+00"NB"	-	158+70"NB"	USH 151 NB	900	1800	
0010	176+00"NB"	-	186+00"NB"	USH 151 NB	1050	2100	
0010	196+75"E"	-	201+40"E"	RAMP E	500	1000	
0010	186+40"EB"	-	190+55"EB"	USH 18	450	900	
0010	195+10"EB"	-	203+90"EB"	USH 18	1800	3600	
0010	218+30"F"	-	221+91"F"	RAMP F	360	720	
0010	223+40"F"	-	230+00"NB"	RAMP F/USH 151	700	1400	
0010	87+00"SB"	-	100+50"SB"	USH 151 SB	1300	2600	
0010	115+00"SB"	-	123+00"SB"	USH 151 SB	600	1200	
0010	148+00"SB"	-	159+00"SB"	USH 151 SB	1100	2200	
0010	161+00"SB"	-	163+00"SB"	USH 151 SB	250	500	
0010	217+00"SB"	-	222+50"SB"	USH 151 SB	500	1000	
0010	224+00"SB"	-	234+00"SB"	USH 151 SB	550	1100	
0010	60+00"23SB'	-	65+60"23SB"	STH 23	575	1150	
0010	68+35"23SB'	-	71+00"23SB"	STH 23	250	500	
0010	68+35"D"	-	73+75"D"	RAMP D	575	1150	
0010	178+00"H"	-	190+00"H"	RAMP H	1050	2100	
0010	197+00"G"	-	202+00"G"	RAMP G	450	900	
				TOTAL 0010	**14780**	**29560**	

EROSION CONTROL MOBILIZATION

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
0010	PROJECT	6	3	
	TOTAL 0010	**6**	**3**	

EROSION MAT CLASS I TYPE B

CATEGORY	STATION	TO	STATION	LOCATION	628.2004 SY	REMARKS
0010	63+48"SB"	-	113+20"SB"	USH 151	1660	
	70+74"C"	-	88+38"C"	RAMP C	-	
				STAGE 2 TOTAL	1660	
	115+18"SB"	-	159+05"SB"	USH 151	2000	
	160+79"SB"	-	222+52"SB"	USH 151	1535	
	224+15"SB"	-	240+00"SB"	USH 151	220	
	171+45"EB"	-	190+53"EB"	USH 18	800	
	192+96"EB"	-	205+58"EB"	USH 18	1920	
	194+85"E"	-	211+55"E"	RAMP E	500	
	205+58"F"	-	221+91"F"	RAMP F	1070	
	180+22"G"	-	206+71"G"	RAMP G	740	
	168+09"H"	-	204+68"H"	RAMP H	2600	
				STAGE 3 TOTAL	11385	
	115+52"NB"	-	158+56"NB"	USH 151	2000	
	160+38"NB"	-	221+86"NB"	USH 151	1060	
	223+35"NB"	-	240+00"NB"	USH 151	-	
				STAGE 4 TOTAL	3060	
	37+00"NB"	-	52+00"NB"	USH 151	220	
	52+00"NB"	-	113+33"NB"	USH 151	860	
	60+00"23SB"	-	65+59"23SB"	STH 23	470	
	68+41"23SB"	-	88+37"23SB"	STH 23	-	
	39+85"A"	-	60+00"A"	RAMP A	270	
	49+90"B"	-	71+15"B"	RAMP B	-	
	65+35"D"	-	77+35"D"	RAMP D	630	
				STAGE 5 TOTAL	2450	
				PROJECT ID 1204-04-77 TOTAL:	**18555**	

INLET PROTECTION

CATEGORY	STATION	LOCATION	628.7005 INLET PROTECTION TYPE A DAY	628.7015 INLET PROTECTION TYPE C EACH	REMARKS
0010	38+50"NB"	30' LT	1	-	
	48+01"NB"	28' LT	1	-	
	58+23"NB"	28' LT	1	-	
	64+01"NB"	25' LT	1	-	
	68+00"NB"	26' LT	1	-	
	77+49"NB"	24' LT	1	-	
	90+98"NB"	25' LT	1	-	
	97+51"NB"	24' LT	1	-	
	100+98"NB"	24' LT	1	-	
	113+39"NB"	B-25-17	-	1	
	115+80"NB"	24' LT	1	-	
	144+00"NB"	25' LT	1	-	
	155+32"NB"	25' LT	1	-	
	158+43"NB"	B-25-22	-	1	
	160+49"NB"	50' RT	1	-	
	177+00"NB"	25' LT	1	-	
	185+10"NB"	128' LT	1	-	
	186+00"NB"	24' LT	1	-	
	199+02"NB"	24' LT	1	-	
	221+65"NB"	26' LT	1	-	
	223+45"NB"	B-25-20	-	1	
	257+79"NB"	25' LT	1	-	
	257+81"NB"	45' LT	1	-	
	61+19"NB"	STH 23 110' RT	1	-	
	64+00"NB"	STH 23 39' RT	1	-	
	68+73"NB"	STH 23 37' RT	1	-	
	78+90"NB"	STH 23 57' RT	1	-	
	58+28"NB"	RAMP A 21' RT	1	-	
	113+15"SB"	B-25-16	-	1	
	159+05"SB"	B-25-21	-	1	
	62+15"23SB"	STH 23	-	2	
	65+00"23SB"	STH 23	-	2	
	65+27"23SB"	STH 23	-	1	
	68+50"23SB"	STH 23	-	2	
	73+40"23SB"	STH 23	-	2	
	75+91"23SB"	STH 23	-	2	
	78+68"23SB"	STH 23	-	2	
	85+07"23SB"	STH 23	-	2	
	174+51"EB"	USH 18	-	2	
	179+00"EB"	USH 18	-	2	
	183+60"EB"	USH 18	-	2	
	190+52"EB"	USH 18	-	2	
	193+10"EB"	USH 18	-	1	
	195+10"EB"	USH 18	-	2	
	198+09"EB"	USH 18	-	2	
	201+10"EB"	USH 18	-	2	
	204+60"EB"	USH 18	-	1	
		TOTAL 0010	**25**	**36**	

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	628.7504 LF	REMARKS
0010	97+00"NB"	USH 151	8	
0010	98+15"NB"	USH 151	8	
0010	154+20"NB"	USH 151	8	
0010	230+00"NB"	USH 151	8	
0010	231+30"NB"	USH 151	8	
0010	UNDISTRUBETED	PROJECT	10	
		TOTAL 0010	**50**	

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	628.7555 EACH	REMARKS
0010	64+42"SB"	LT 64'	1	
0010	170+40"SB"	RT 25'	1	
0010	199+37"SB"	LT 37'	1	
0010	194+58"H"	RT 58'	1	
		TOTAL 0010	**4**	

DELINEATORS

CATEGORY	STATION TO STATION	LOCATION	633.0100 DELINEATOR POSTS STEEL DAY	633.0500 DELINEATOR REFLECTORS EACH	633.1000 DELINEATOR BRACKETS EACH	REMARKS
0010			221	221	221	
		TOTAL 0010	**221**	**221**	**221**	

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TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	LENGTH CALENDAR DAYS	633.1100 DELINEATORS TEMPORARY EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
0010	STAGE 1	32.00	-	17,580	1,110	-	-	2,220	960	120	2,040	28	
0010	STAGE 2	45.00	45	11,552	1,376	436	436	1,248	1,088	128	6,400	28	
0010	STAGE 3	45.00	12	13,770	1,890	-	-	1,620	1,530	180	8,325	-	
0010	STAGE 4	67.00	60	18,360	1,632	436	436	1,768	3,128	272	11,288	28	
0010	STAGE 5	67.00	16	16,414	2,262	-	-	2,088	2,262	232	12,470	-	
0010	STAGE 6	5.00	-	6,446	-	-	-	814	352	44	748	28	
0010	UNDISTRIBUTED		-	-	-	28	28	-	-	-	-	-	
	TOTAL 0010		**133**	**84,122**	**8,270**	**900**	**900**	**9,758**	**9,320**	**976**	**41,271**	**112**	

TRAFFIC CONTROL COVERING SIGNS

CATEGORY	STAGE	LENGTH CALENDAR DAYS	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	# CYCLES	# SIGNS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	# CYCLES	# SIGNS	REMARKS
0010	STAGE 1	32.00	-	-	-	-	-	-	
0010	STAGE 2	45.00	1	1	1	15	1	15	
0010	STAGE 3	45.00	-	-	-	9	1	9	
0010	STAGE 4	67.00	-	-	-	12	1	12	
0010	STAGE 5	67.00	1	1	1	4	1	4	
0010	STAGE 6	5.00	-	-	-	-	-	-	
	TOTAL 0010		**2**			**40**			

TEMPORARY CURB RAMP

CATEGORY	STATION	LOCATION	644.1601.S EACH	REMARKS
0010	71+00"C"	STH 23 NB/RAMP C	2	
		TOTAL 0010	**2**	

TEMPORARY PEDESTRIAN SURFACE PLYWOOD

CATEGORY	STATION	LOCATION	644.1420.S SF	REMARKS
0010	71+00"C"	STH 23 NB/RAMP C	400	
0010	79+00"23SB"	STH 23/LOVERS LANE	600	
		TOTAL 0010	**1000**	

GEOTEXTILE TYPE HR

CATEGORY	STATION	LOCATION	645.0120 SY	REMARKS
0010	113+37"NB"	B-25-17	6	
0010	158+43"NB"	B-25-22	6	
0010	113+03"SB"	B-25-16	6	
0010	159+06"SB"	B-25-21	6	
0010	224+25"SB"	B-25-19	3	
		TOTAL 0010	**27**	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (WHITE) LF	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.3545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	646.8120 MARKING CURB EPOXY LF	REMARKS
0010	37+00"NB"	-	240+00"NB"	USH 151	-	20,300	5,070	-	-	-	-	-	YELLOW EDGE LINE
	37+00"NB"	-	39+65"NB"	USH 151	265	-	-	-	-	-	-	-	WHITE EDGE LINE
	39+65"NB"	-	44+80"NB"	USH 151	130	-	-	-	-	-	-	-	WHITE - 3' LINE, 9' GAP
	44+80"NB"	-	46+86"NB"	USH 151	-	-	-	-	205	-	95	-	GORE
	46+86"NB"	-	58+02"NB"	USH 151	1,105	-	-	-	-	-	-	-	WHITE EDGE LINE
	58+02"NB"	-	64+55"NB"	USH 151	-	-	-	-	645	-	-	-	
	71+15"NB"	-	194+84"NB"	USH 151	12,380	-	-	-	-	-	-	-	WHITE EDGE LINE
	75+33"SB"	-	78+05"SB"	USH 151	-	-	-	-	275	-	-	-	
	194+84"NB"	-	201+86"NB"	USH 151	175	-	-	-	-	-	-	-	WHITE - 3' LINE, 9' GAP
	201+86"NB"	-	204+29"NB"	USH 151	-	-	-	-	240	-	115	-	GORE
	204+29"NB"	-	214+97"NB"	USH 151	1,060	-	-	-	-	-	-	-	WHITE EDGE LINE
	214+97"NB"	-	223+16"NB"	USH 151	-	-	-	-	815	-	-	-	
	227+66"NB"	-	240+00"NB"	USH 151	6,200	-	-	-	-	-	-	-	WHITE EDGE LINE
	63+48"SB"	-	240+00"SB"	USH 151	17,655	-	4,415	-	-	-	-	-	YELLOW EDGE LINE
	63+48"SB"	-	75+33"SB"	USH 151	1,190	-	-	-	-	-	-	-	WHITE EDGE LINE
	72+81"23SB"	-	73+55"23SB"	STH 23	-	-	-	-	-	-	55	-	GORE
	75+80"SB"	-	77+58"SB"	USH 151	-	-	-	-	-	-	135	-	GORE
	78+05"SB"	-	83+60"SB"	USH 151	140	-	-	-	-	-	-	-	WHITE - 3' LINE, 9' GAP
	83+60"SB"	-	169+57"SB"	USH 151	8,585	-	-	-	-	-	-	-	WHITE EDGE LINE
	176+12"SB"	-	182+53"SB"	USH 151	-	-	-	-	645	-	-	-	
	182+53"SB"	-	201+66"SB"	USH 151	1,925	-	-	-	-	-	-	-	WHITE EDGE LINE
	201+66"SB"	-	209+04"SB"	USH 151	-	-	-	-	745	-	-	-	
	202+13"SB"	-	208+10"SB"	USH 151	-	-	-	-	-	-	370	-	GORE
	209+04"SB"	-	213+08"SB"	USH 151	102	-	-	-	-	-	-	-	WHITE - 3' LINE, 9' GAP
	213+08"SB"	-	240+00"SB"	USH 151	2,700	-	-	-	-	-	-	-	WHITE EDGE LINE
	171+45"EB"	-	205+57"EB'	USH 18	-	-	860	-	-	-	-	-	YELLOW EDGE LINE
	172+45"EB"	-	202+92"EB"	USH 18	-	-	-	-	-	-	-	-	YELLOW EDGE LINE
	171+45"EB"	-	172+90"EB"	USH 18	145	-	-	-	-	-	-	-	WHITE EDGE LINE
	172+90"EB"	-	174+98"EB"	USH 18	52	-	-	-	-	-	-	-	WHITE - 3' LINE, 9' GAP
	174+98"EB"	-	178+42"EB"	USH 18	-	-	-	-	345	-	-	-	
	175+44"EB"	-	177+94"EB"	USH 18	-	-	-	-	-	-	190	-	GORE
	178+42"EB"	-	205+57"EB"	USH 18	2,760	-	-	-	-	-	-	-	WHITE EDGE LINE
	172+45"EB"	-	181+61"EB"	USH 18	775	-	230	-	-	-	-	-	WHITE EDGE LINE
	184+15"EB"	-	202+92"EB"	USH 18	1,830	-	-	-	-	-	-	-	WHITE EDGE LINE
	60+00"23SB"	-	70+16"23SB"	STH 23	1,055	-	-	-	-	-	-	-	WHITE EDGE LINE
	60+00"23SB"	-	72+32"23SB'	STH 23	1,215	-	-	-	-	-	-	-	WHITE EDGE LINE
	60+00"23SB"	-	78+80"23SB"	STH 23	-	1,895	-	-	-	-	-	-	YELLOW EDGE LINE
	60+00"23SB"	-	78+85"23SB"	STH 23	-	1,880	-	75	-	-	-	-	YELLOW EDGE LINE
	72+32"23SB"	-	73+83"23SB'	STH 23	-	-	-	-	155	-	-	-	
	78+70"23SB"			STH 23	-	-	-	-	-	-	-	18	

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PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (WHITE) LF	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.3545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	646.8120 MARKING CURB EPOXY LF	REMARKS
	79+24"23SB"	-	88+37"23SB"	STH 23	-	875	-	-	-	-	-	-	YELLOW EDGE LINE
	79+26"23SB"			STH 23	-	-	-	-	-	-	-	42	
	79+45"23SB"	-	88+37"23SB"	STH 23	-	890	-	-	-	-	-	-	YELLOW EDGE LINE
	75+67"23SB"	-	88+37"23SB"	STH 23	1,280	-	-	-	-	-	-	-	WHITE EDGE LINE
	70+68"23SB"	-	88+37"23SB"	STH 23	1,745	-	-	-	-	-	-	-	WHITE EDGE LINE
0010	85+30"23SB"			STH 23	-	-	-	-	-	-	-	20	
	39+85"A"	-	60+00"A"	RAMP A	2,015	-	-	-	-	-	-	-	WHITE EDGE LINE
	44+99"A"	-	47+03"A"	RAMP A	-	-	-	-	205	-	-	-	
	47+03"A"	-	60+00"A"	RAMP A	-	1,300	-	-	-	-	-	-	YELLOW EDGE LINE
	49+89"B"	-	71+15"B"	RAMP B	2,125	-	-	-	-	-	-	-	WHITE EDGE LINE
	49+89"B"	-	58+24"B"	RAMP B	-	880	-	-	-	-	-	-	YELLOW EDGE LINE
	58+24"B"	-	64+61"B"	RAMP B	-	-	-	-	645	-	-	-	
	70+74"C"	-	88+37"C"	RAMP C	1,790	-	-	-	-	-	-	-	WHITE EDGE LINE
	70+74"C"	-	80+13"C"	RAMP C	-	940	-	-	-	-	-	-	YELLOW EDGE LINE
	70+98"C"			RAMP C	-	-	-	-	-	18	-	-	
	80+13"C"	-	82+85"C"	RAMP C	-	-	-	-	275	-	-	-	
	65+35"D"	-	77+35"D"	RAMP D	1,200	-	-	-	-	-	-	-	WHITE EDGE LINE
	65+35"D"	-	74+00"D"	RAMP D	-	880	-	-	-	-	-	-	YELLOW EDGE LINE
	74+00"D"	-	75+51"D"	RAMP D	-	-	-	-	155	-	-	-	
	194+84"E"	-	211+54"E"	RAMP E	1,675	-	-	-	-	-	-	-	WHITE EDGE LINE
	204+13"E"	-	211+54"E"	RAMP E	-	780	-	-	-	-	-	-	YELLOW EDGE LINE
	201+79"E"	-	204+13"E"	RAMP E	-	-	-	-	240	-	-	-	
	205+57"F"	-	227+67"F"	RAMP F	2,210	-	-	-	-	-	-	-	WHITE EDGE LINE
	205+57"F"	-	215+13"F"	RAMP F	-	965	-	-	-	-	-	-	YELLOW EDGE LINE
	215+13"F"	-	223+19"F"	RAMP F	-	-	-	-	815	-	-	-	
	180+21"G"	-	206+71"G"	RAMP G	2,650	-	-	-	-	-	-	-	WHITE EDGE LINE
	182+64"G"	-	184+11"G"	RAMP G	-	-	-	-	150	-	-	-	
	184+11"G"	-	195+15"G"	RAMP G	-	1,120	-	-	-	-	-	-	YELLOW EDGE LINE
	195+14"G"	-	202+64"G"	RAMP G	-	-	-	-	745	-	-	-	
	168+08"H"	-	204+67"H"	RAMP H	3,660	-	-	-	-	-	-	-	WHITE EDGE LINE
	174+63"H"	-	181+03"H"	RAMP H	-	-	-	-	645	-	-	-	
	199+16"H"	-	202+61"H"	RAMP H	-	-	-	-	345	-	-	-	
	181+03"H"	-	199+16"H"	RAMP H	-	1,830	-	-	-	-	-	-	YELLOW EDGE LINE
				TOTAL 0010	**81,794**	**34,535**	**10,575**	**75**	**8,290**	**18**	**960**	**80**	

3

TEMPORARY PAVEMENT MARKING

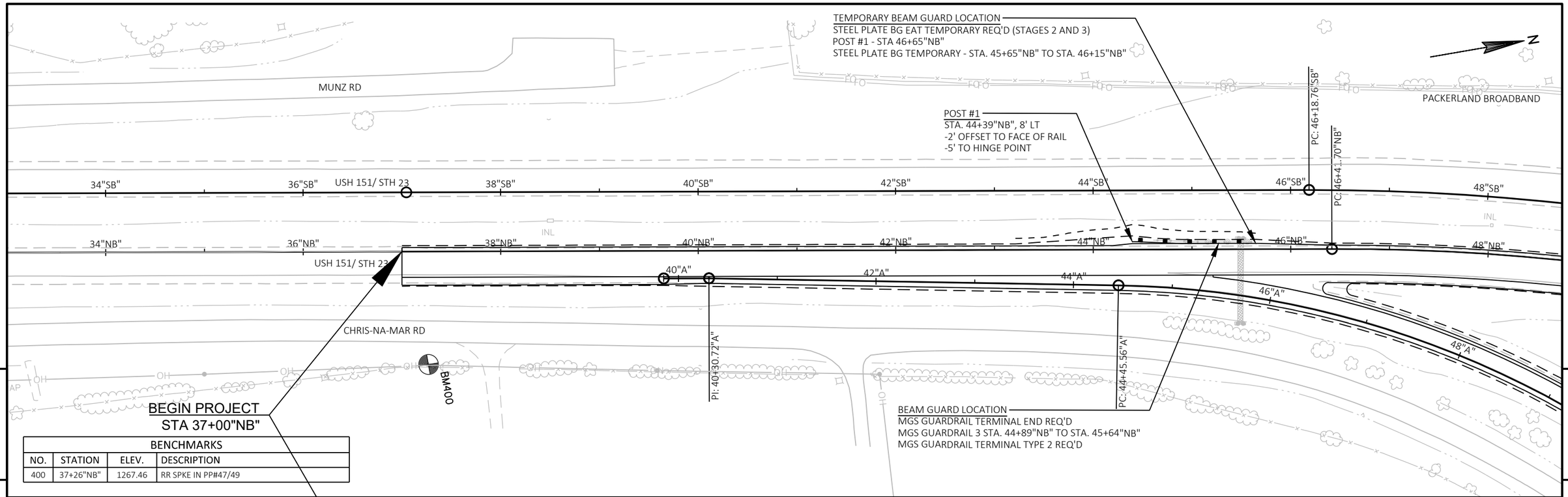
CATEGORY	STATION	TO	STATION	LOCATION	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH LS	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	649.0220 TEMPORARY MARKING LINE EPOXY 8-INCH LF	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	REMARKS
0010				STAGE 1	-	6,240	-	-	
				STAGE 2	70,000	7,635	-	200	
				STAGE 3	-	-	0	200	
				STAGE 4	-	82,855	-	600	
				STAGE 5	-	-	-	200	
				STAGE 6	-	-	-	-	
				TOTAL 0010	**70,000**	**96,730**	**0**	**1,200**	

SAWING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT CY	690.0250 SAWING CONCRETE LF	REMARKS
0010			37+00"NB"		10	24	
0010			63+48"SB"		10	24	
0010			240+00"NB"		11	24	
0010			240+00"SB"		11	24	
0010			171+45"EB"		16	53	
0010			88+33"23SB"		34	-	
0010	249+26"NB"	-	249+86"NB"	MAINTENANCE CROSSOVER	50	-	
				TOTAL 0010	**142**	**149**	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	37+00"NB"	-	52+00"NB"	USH 151 NB	-	1500	-	-	-	-	-	-	
0010	37+00"NB"	-	113+33"NB"	USH 151 NB	1	-	7635	-	-	7635	-	1815	
0010	115+52"NB"	-	158+56"NB"	USH 151 NB	1	-	4305	-	-	4305	-	2050	
0010	160+38"NB"	-	221+86"NB"	USH 151 NB	-	-	6150			6150	-	1430	
0010	223+35"NB"	-	240+00"NB"	USH 151 NB	-	-	1665	-	-	1665	-		
0010	63+48"SB"	-	113+20"SB"	USH 151 SB	1	-	4975	-	-	4975	-	990	
0010	115+18"SB"	-	159+05"SB"	USH 151 SB	1	-	4390	-	-	4390	-	2055	
0010	160+79"SB"	-	222+52"SB"	USH 151 SB	-	-	6175	-	-	6175	-	580	
0010	224+15"SB"	-	240+00"SB"	USH 151 SB	-	-	1585	-	-	1585	-	340	
0010	171+45"EB"	-	190+53"EB"	USH 18	-	-	1910	-	1	1910	-	400	
0010	192+96"EB"	-	205+58"EB"	USH 18	1	-	1265	-	-	1265	-	940	
0010	60+00"23SB"	-	65+59"23SB"	STH 23	-	-	560	345	-	560	-	545	
0010	68+41"23SB"	-	88+37"23SB"	STH 23	-	-	2000	-	-	2000	-		
0010	39+85"A"	-	60+00"A"	RAMP A	-	-	2015	-	-	2015	-	250	
0010	49+90"B"	-	71+15"B"	RAMP B	-	-	2125	-	-	2125	-	25	
0010	70+74"C"	-	88+38"C"	RAMP C	-	-	1765	-	-	1765	-	-	
0010	65+35"D"	-	77+35"D"	RAMP D	-	-	1200	-	-	1200	-		
0010	194+85"E"	-	211+55"E"	RAMP E	-	-	1670	-	-	1670	-		
0010	205+58"F"	-	221+91"F"	RAMP F	-	-	1635	-	-	1635	-		
0010	223+39"F"	-	227+67"F"	RAMP F	-	-	430	-	-	430	-		
0010	180+22"G"	-	206+71"G"	RAMP G	-	-	2650	-	-	2650	-		
0010	168+09"H"	-	204+68"H"	RAMP H	-	-	3660	-	-	3660	-	2450	
0010	22+57"NB"	-	41+60"NB"	CROSSOVER Z	-	1900	1900	-	-	-	-		
0010	233+55"NB"	-	255+71"NB"	CROSSOVER Y	-	2215	2215	-	-	-	-		
0010	77+91"NB"		87+05"NB"	CROSSOVER X	-	915	915	-	-	-	-		
0010	66+50"NB"		77+50"NB"	CROSSOVER W	-	1100	1100	-	-	-	-		
0010	175+90"NB"		187+34"NB"	CROSSOVER V	-	1145	1145	-	-	-	-		
0010	77+50"NB"	-	78+16"NB"	MAINTENANCE CROSSOVER	-	65	65	-	-	-	-		
0010				UNDISTRUBUTED	-	-	-	-	-	-	1	-	
				TOTAL 0010	**5**	**8840**	**67105**	**345**	**1**	**59765**	**1**	**13870**	



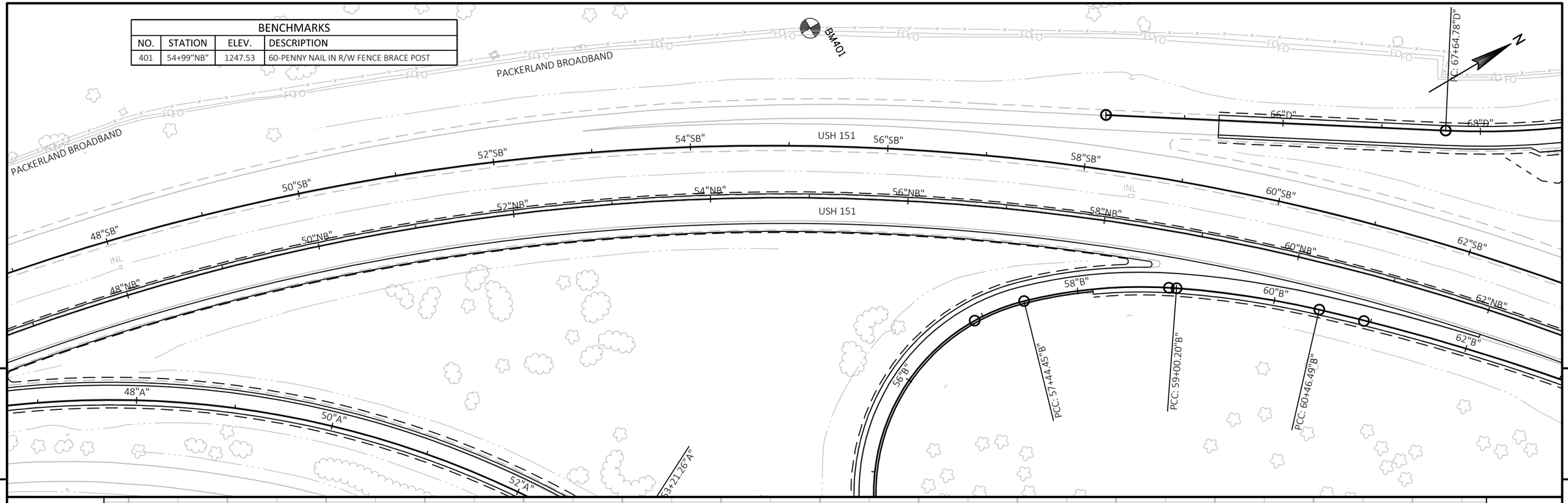
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
400	37+26"NB"	1267.46	RR SPKE IN PP#47/49

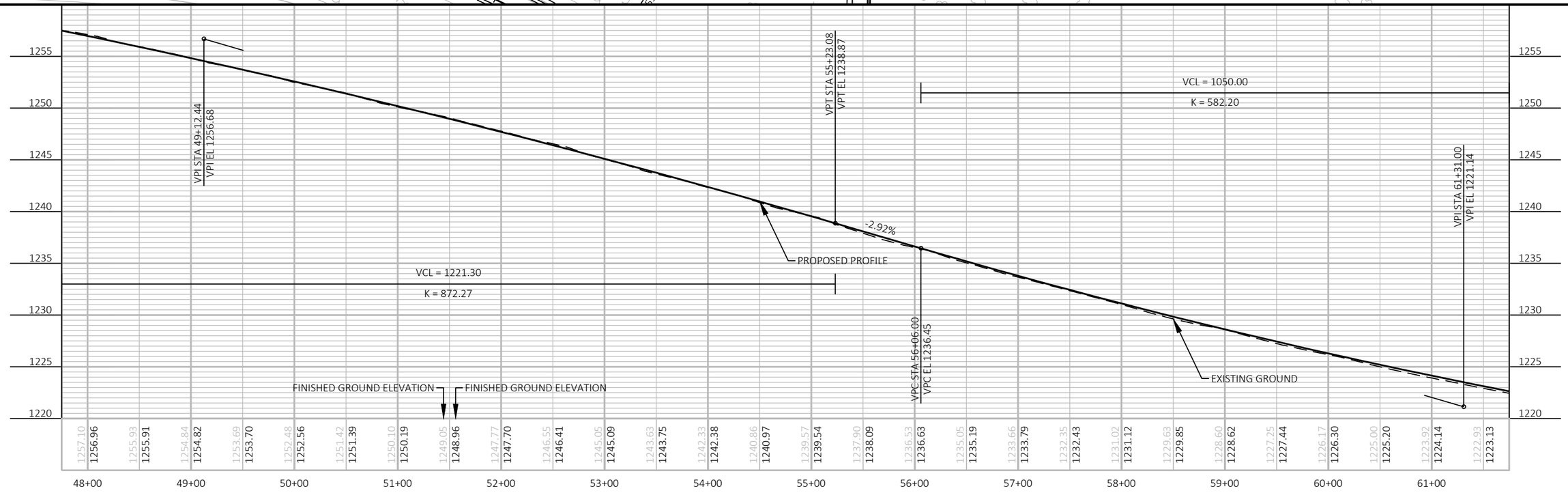
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 206 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_01

PLOT DATE : 5/23/2018 3:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : ##########

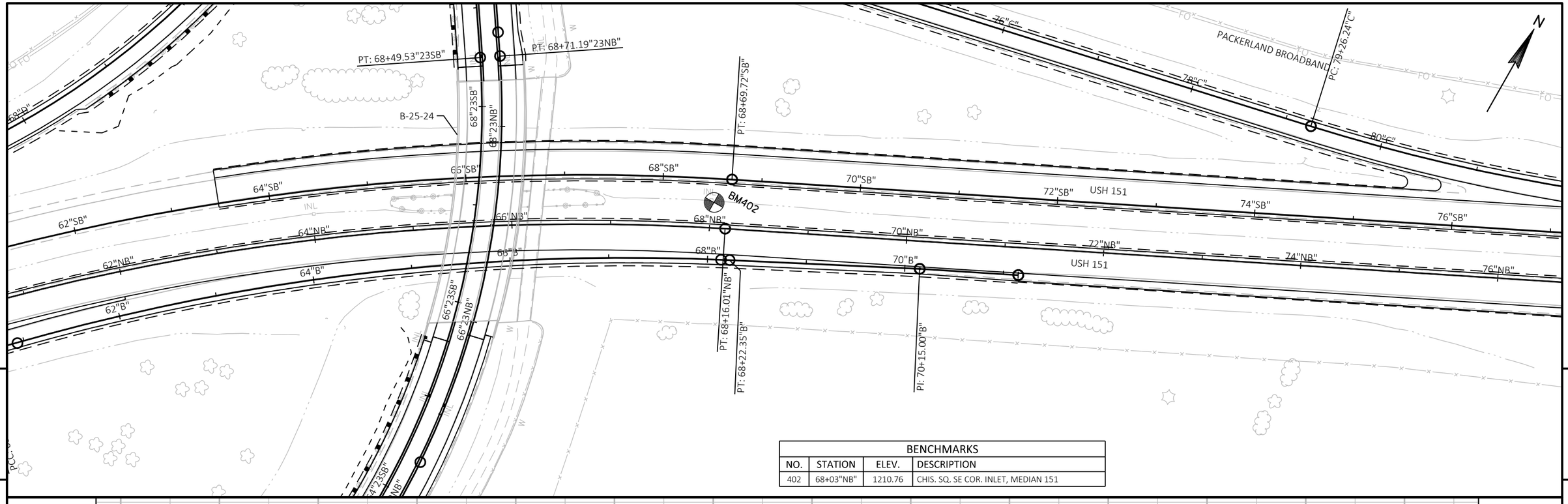
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
401	54+99"NB"	1247.53	60-PENNY NAIL IN R/W FENCE BRACE POST



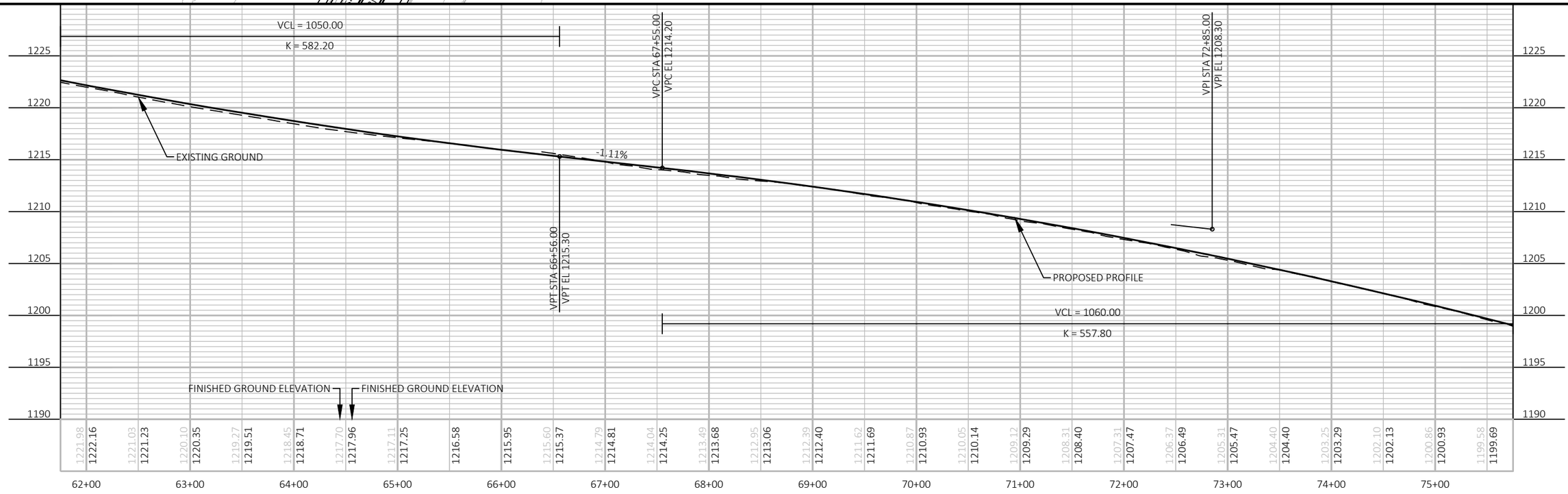


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 207	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_02
PLOT DATE : 5/23/2018 3:23 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

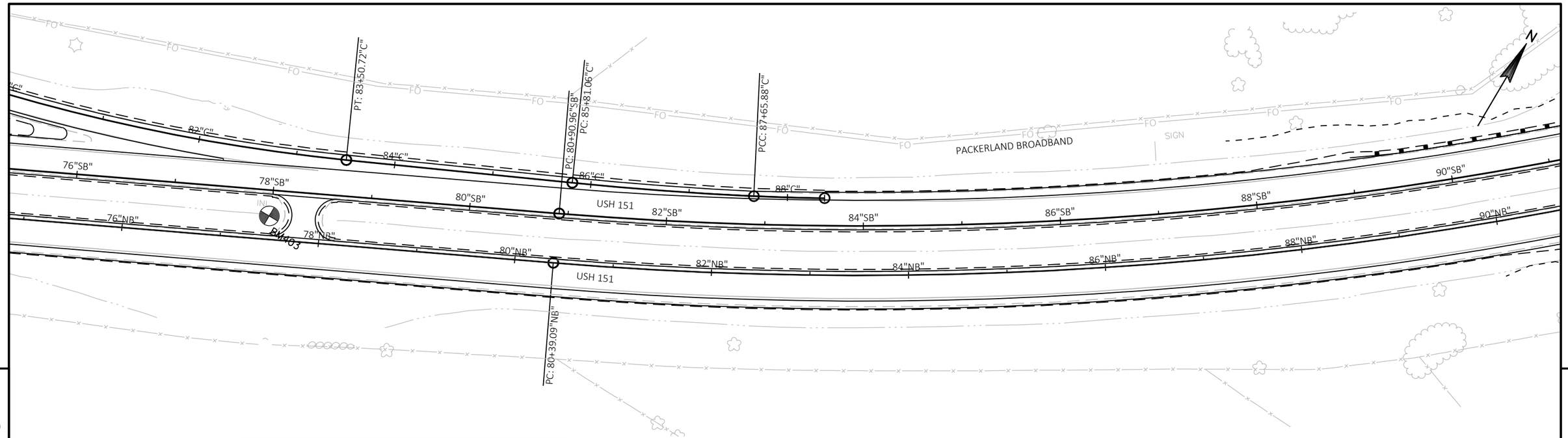


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
402	68+03"NB"	1210.76	CHIS. SQ. SE COR. INLET, MEDIAN 151

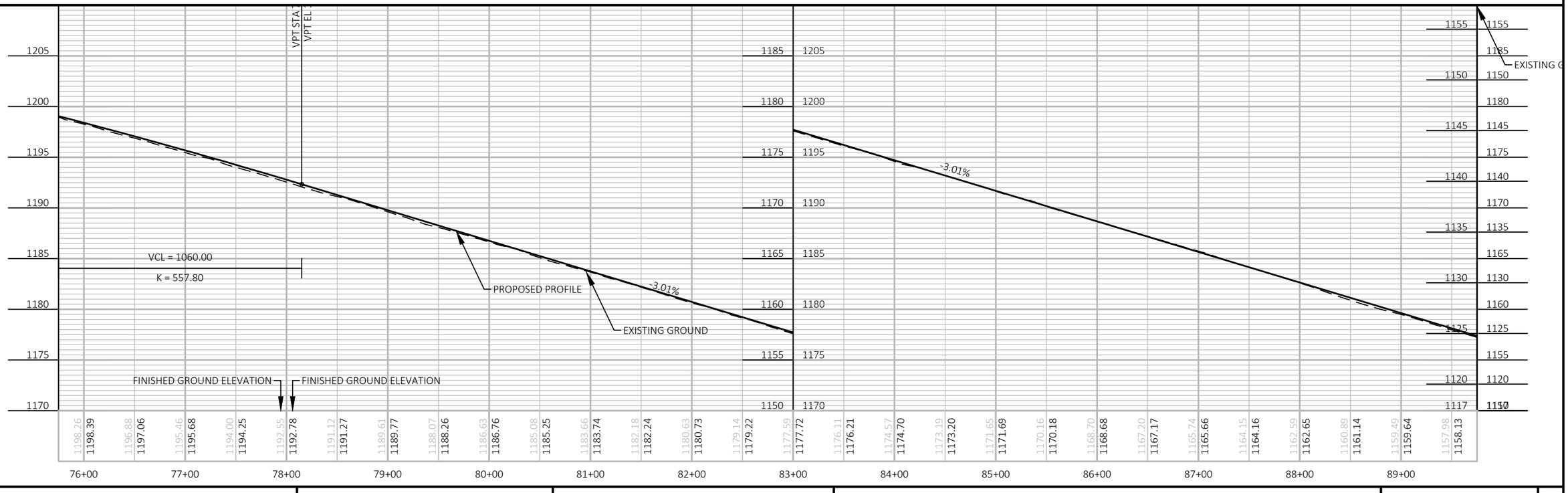


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 208	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_03
PLOT DATE : 5/23/2018 3:24 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
403	77+48"NB"	1190.10	CHIS. SQ. SW COR. INLET, MEDIAN 151

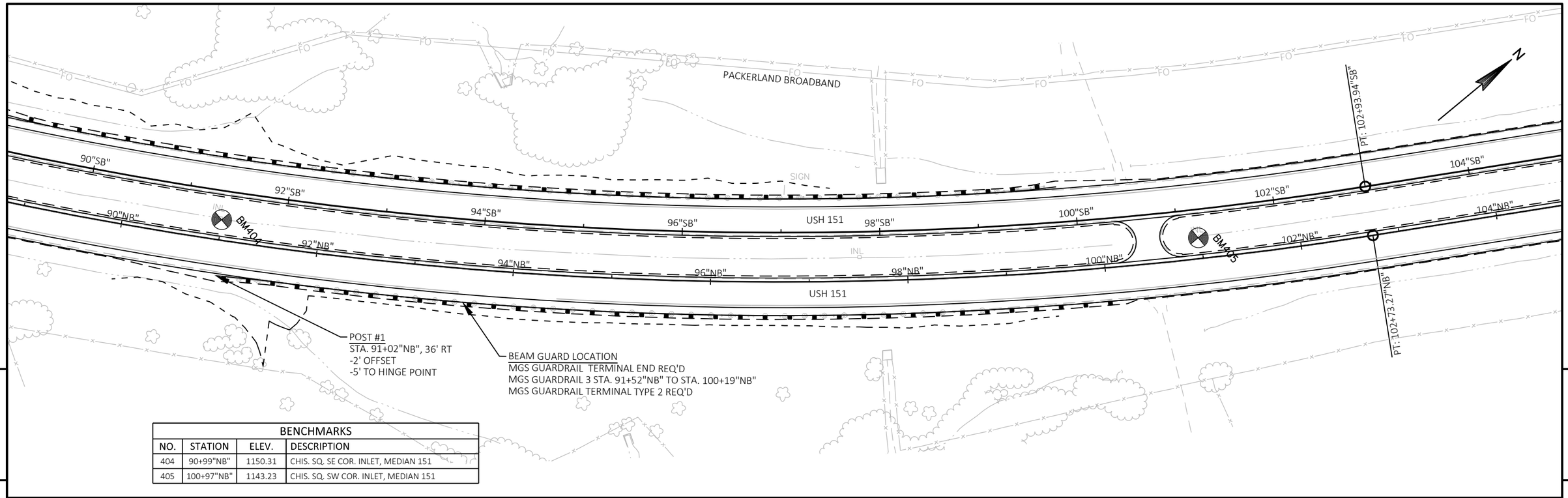


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 209	E

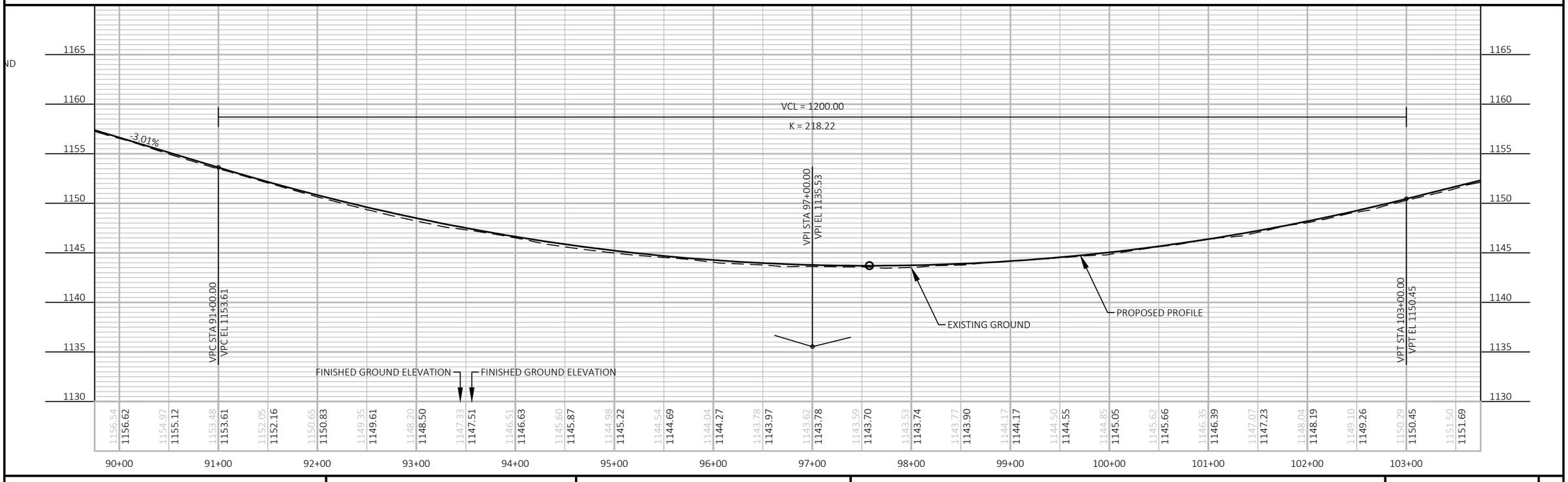
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_04

PLOT DATE : 5/23/2018 3:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : ############

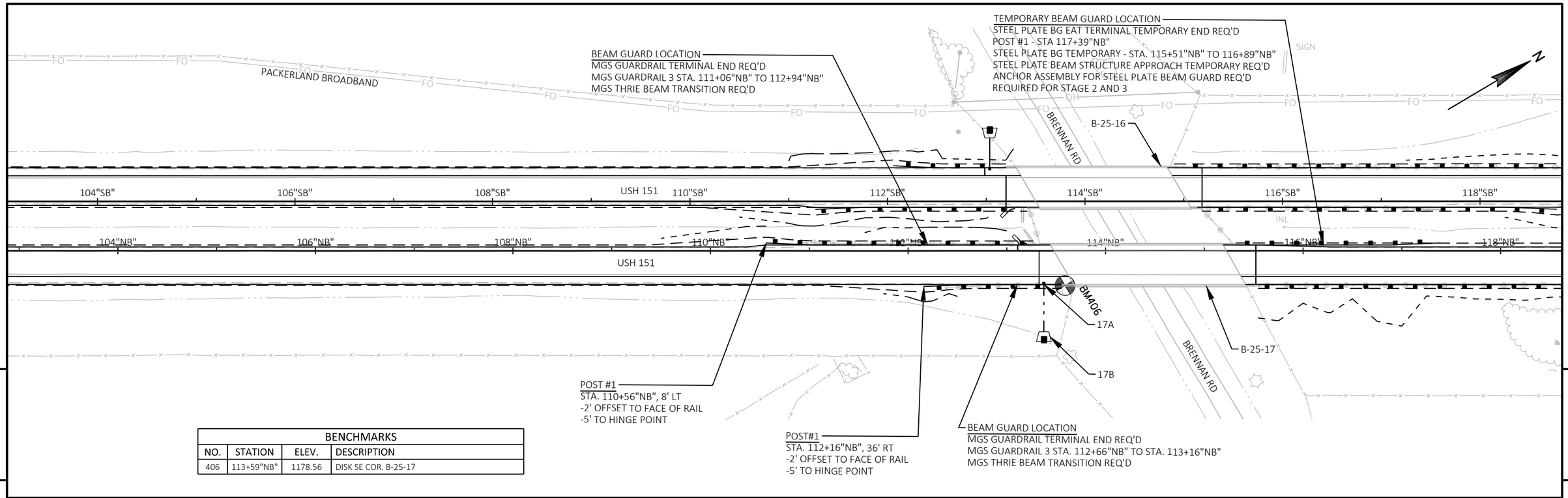
WISDOT/CADDS SHEET 44



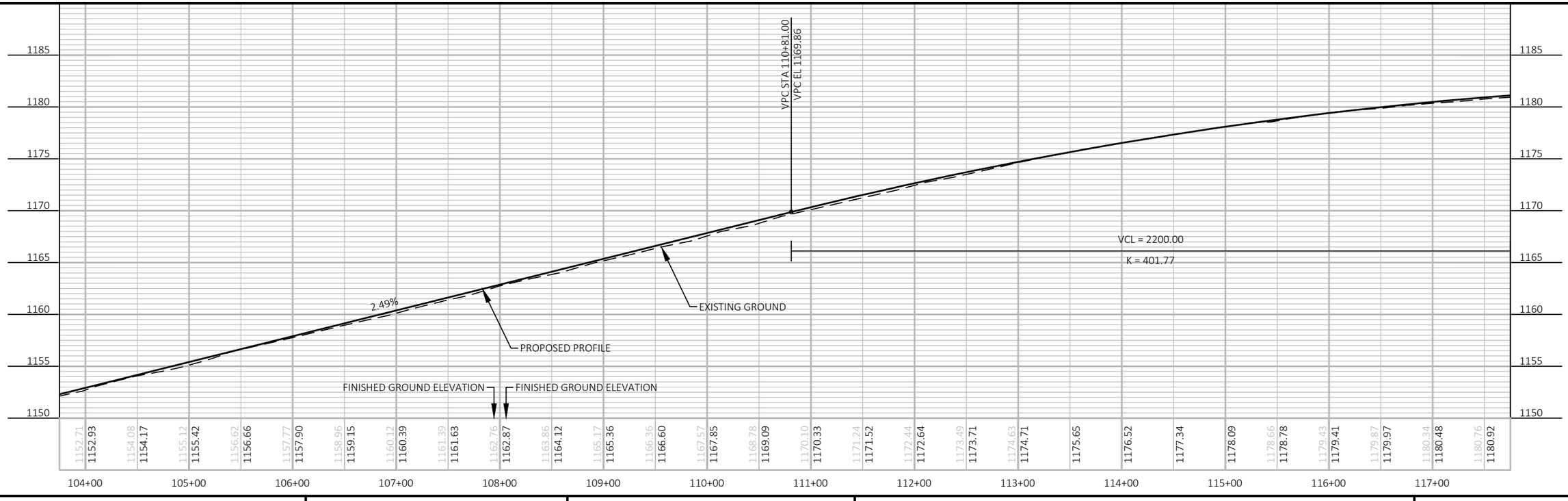
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
404	90+99"NB"	1150.31	CHIS. SQ. SE COR. INLET, MEDIAN 151
405	100+97"NB"	1143.23	CHIS. SQ. SW COR. INLET, MEDIAN 151



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 210	E



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
406	113+59"NB"	1178.56	DISK SE COR. B-25-17

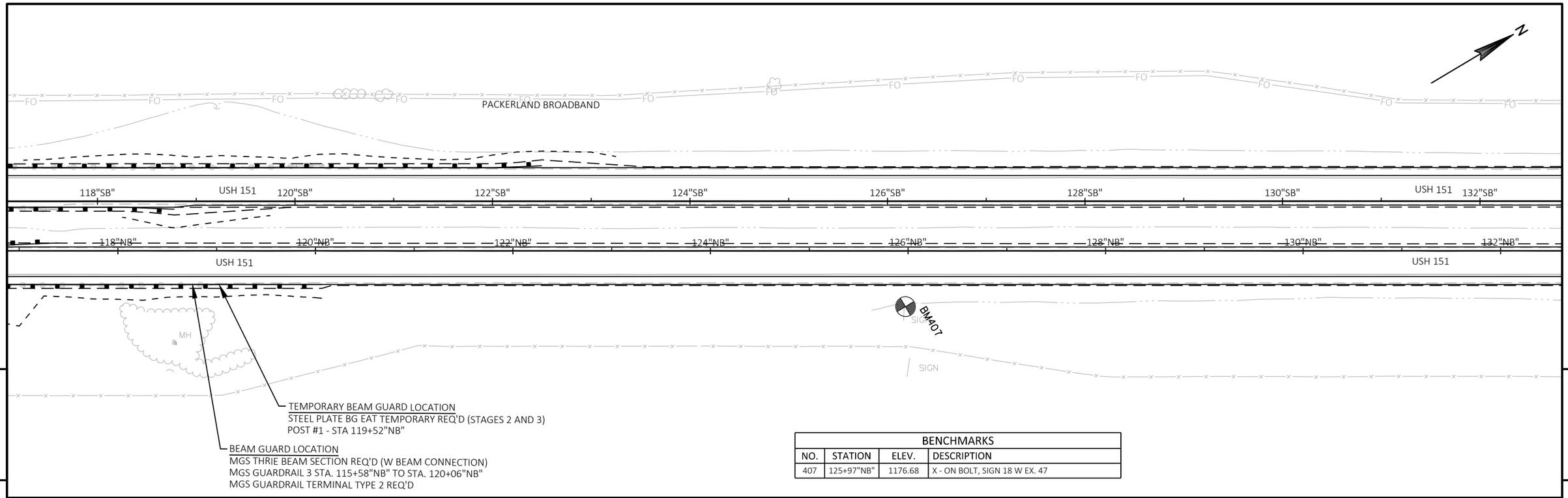


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 211	E

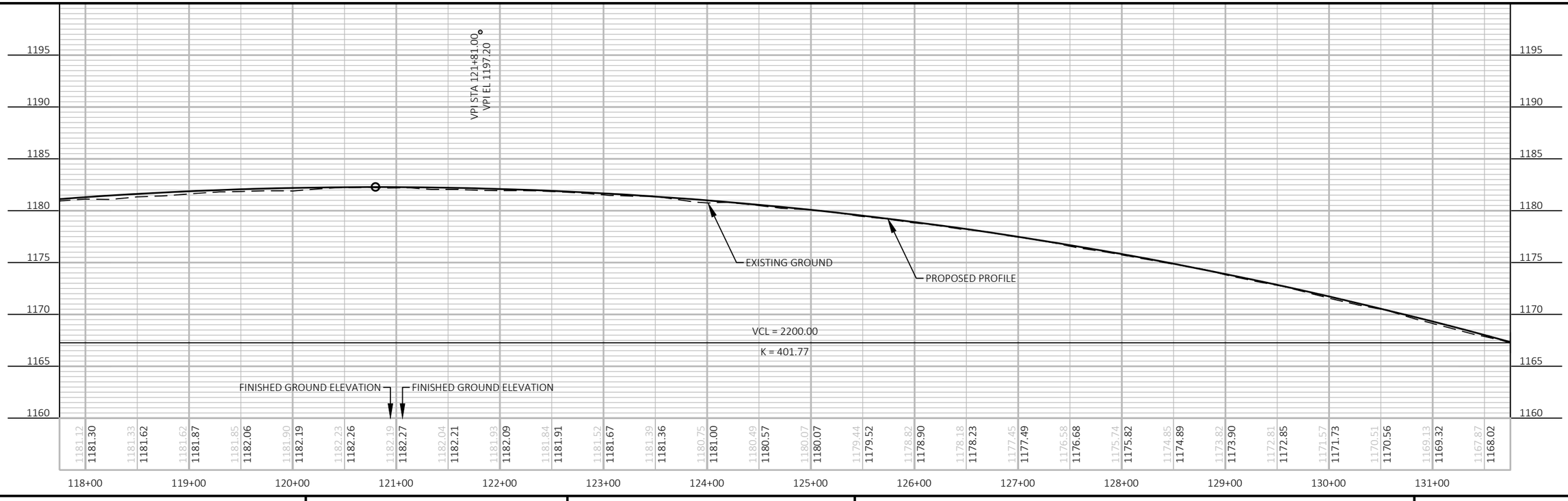
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_06

PLOT DATE : 5/23/2018 3:24 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : ############

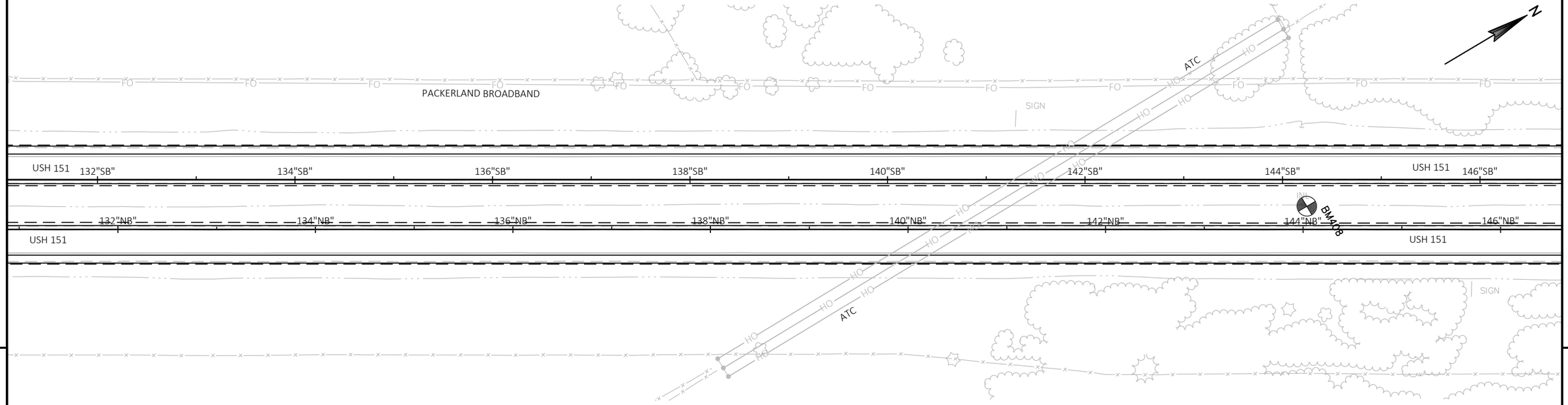
WISDOT/CADDS SHEET 44



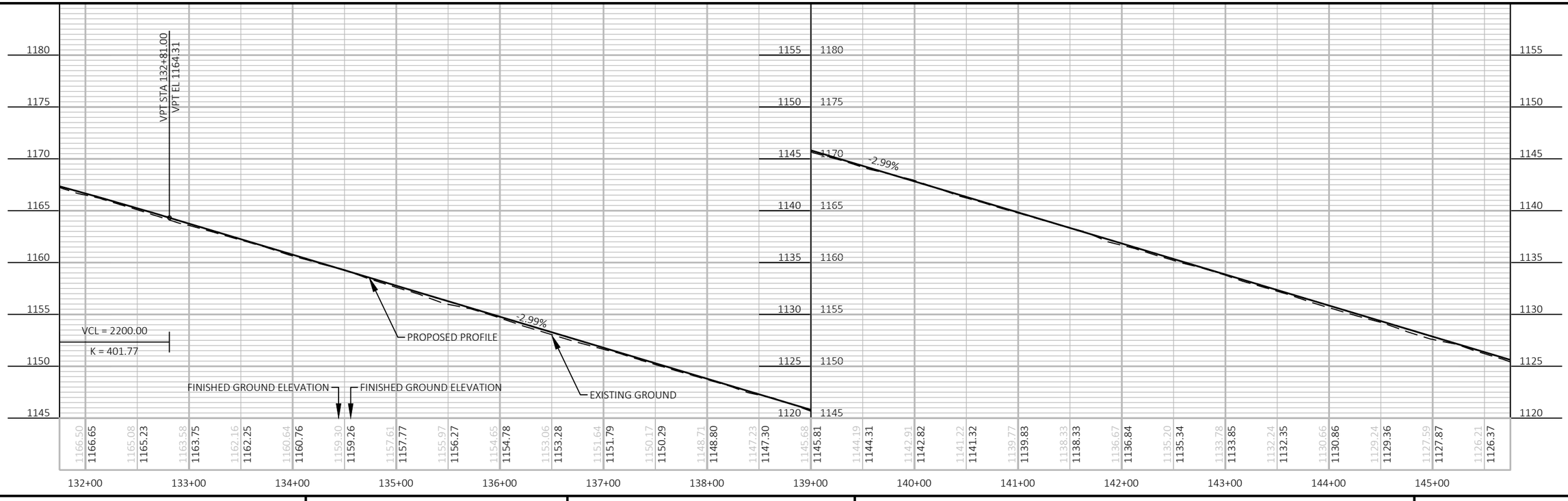
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
407	125+97"NB"	1176.68	X - ON BOLT, SIGN 18 W EX. 47



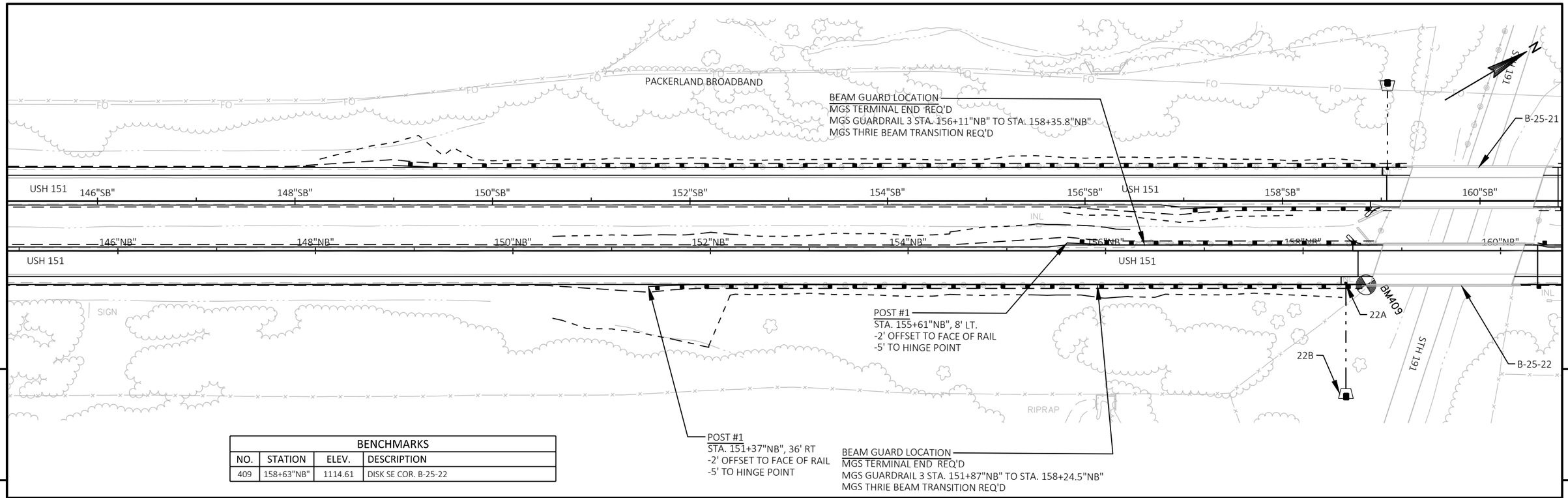
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 212 E



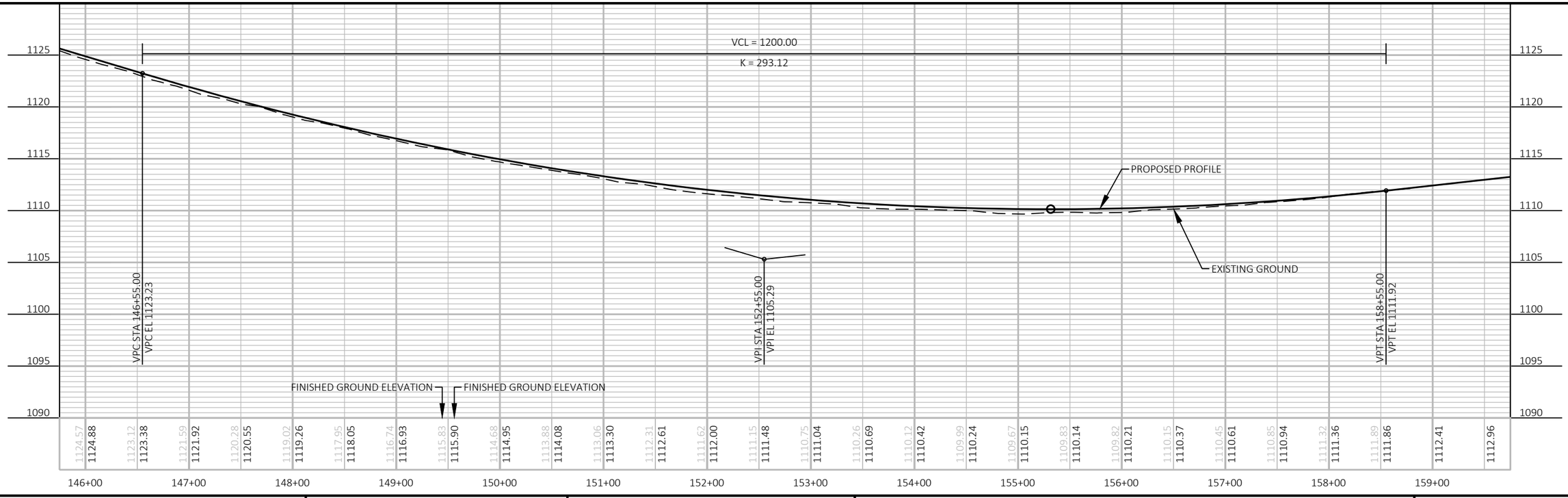
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
408	144+03"NB"	1127.63	CHIS. SQ. MEDIAN INLET NE COR.



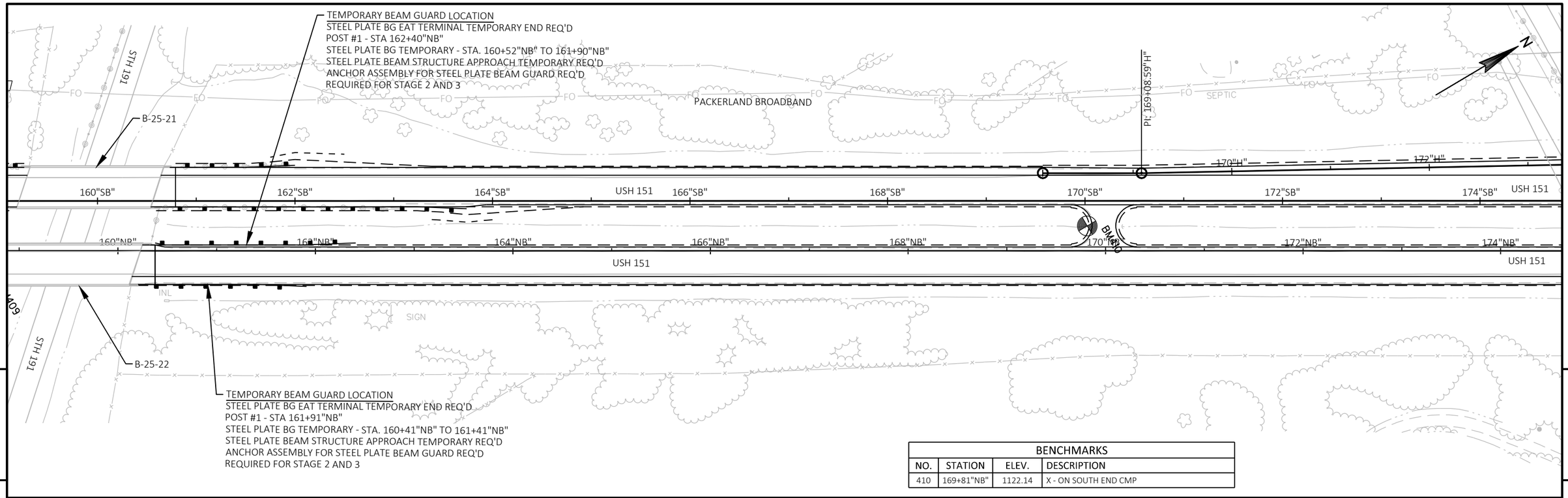
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 213 E



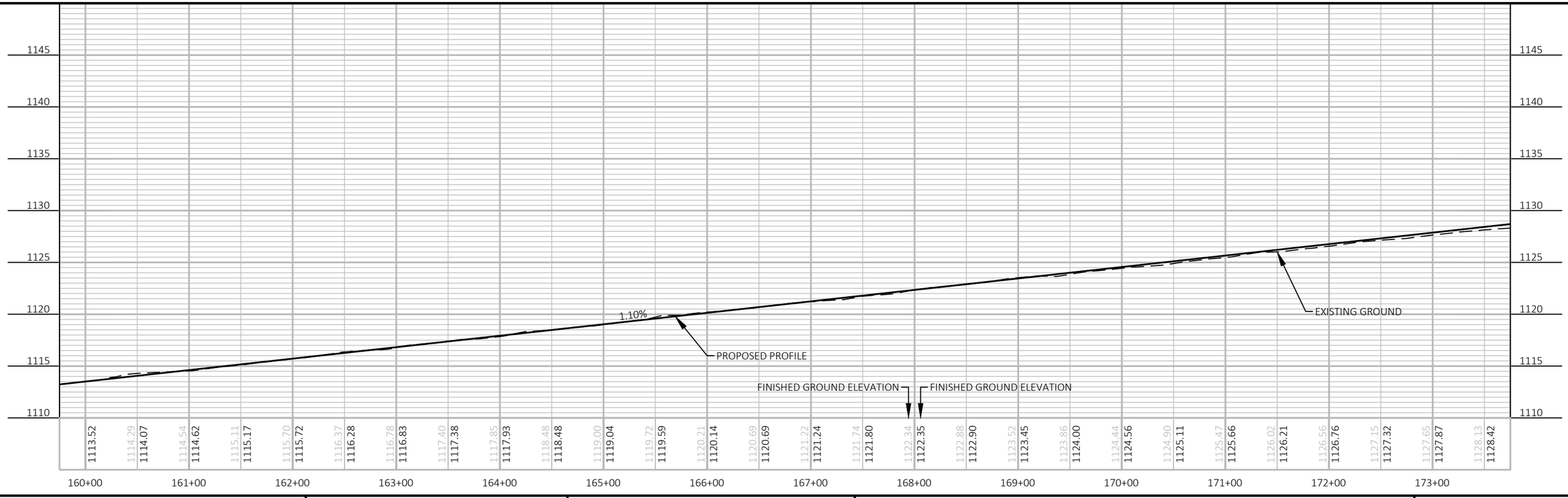
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
409	158+63"NB"	1114.61	DISK SE COR. B-25-22



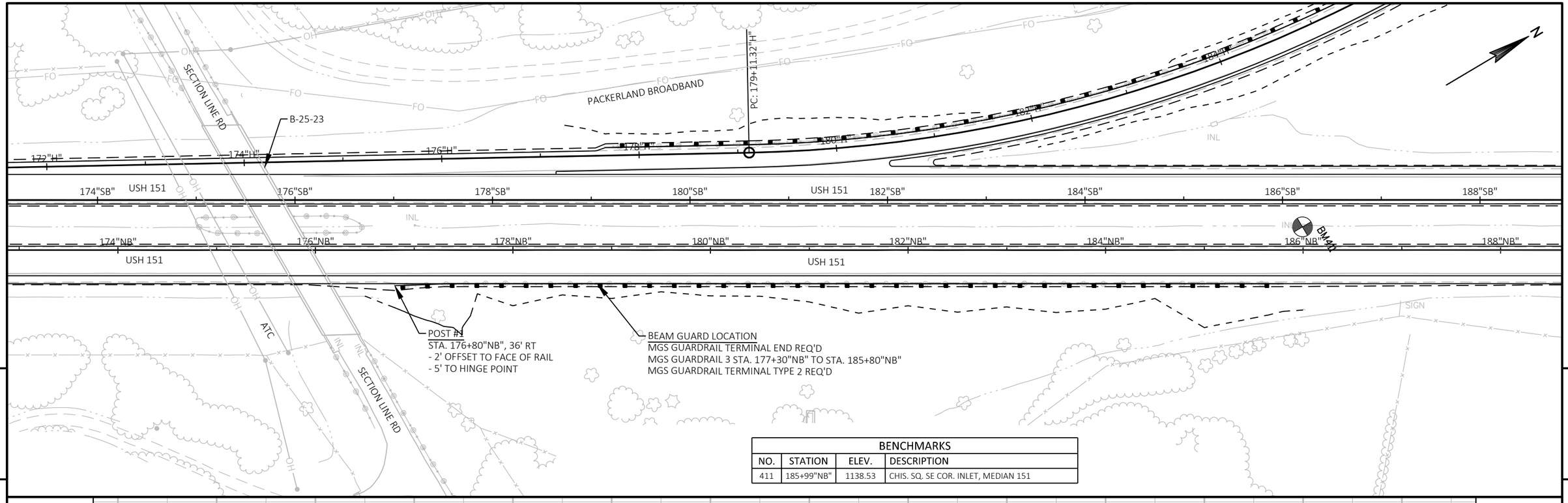
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 214	E



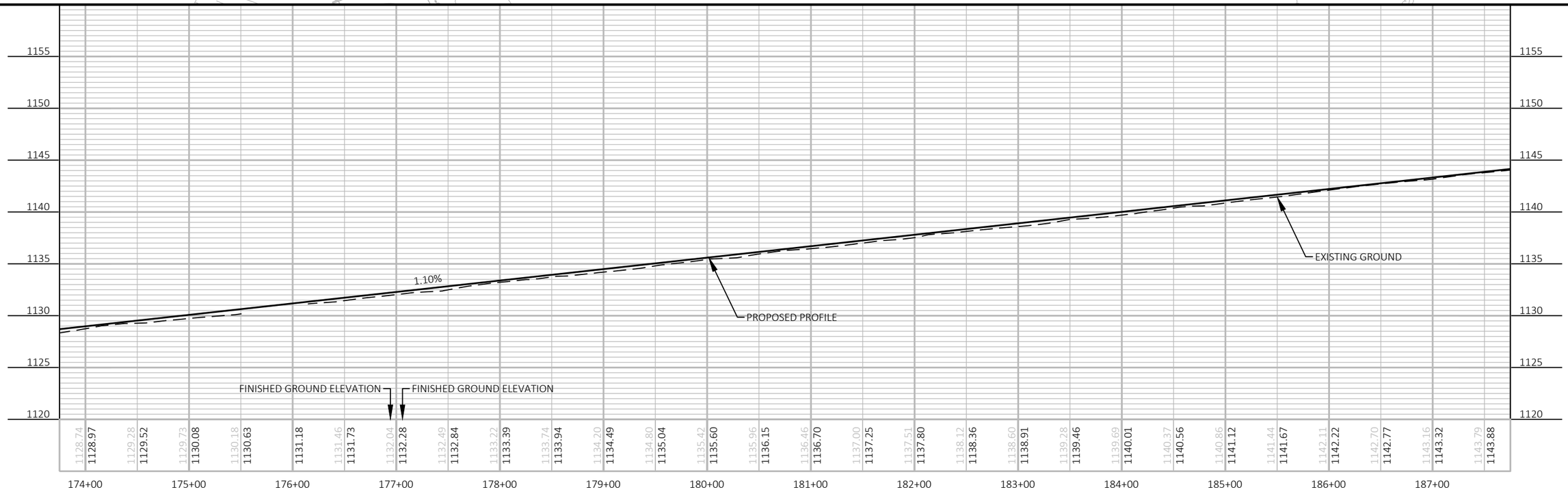
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
410	169+81"NB"	1122.14	X - ON SOUTH END CMP



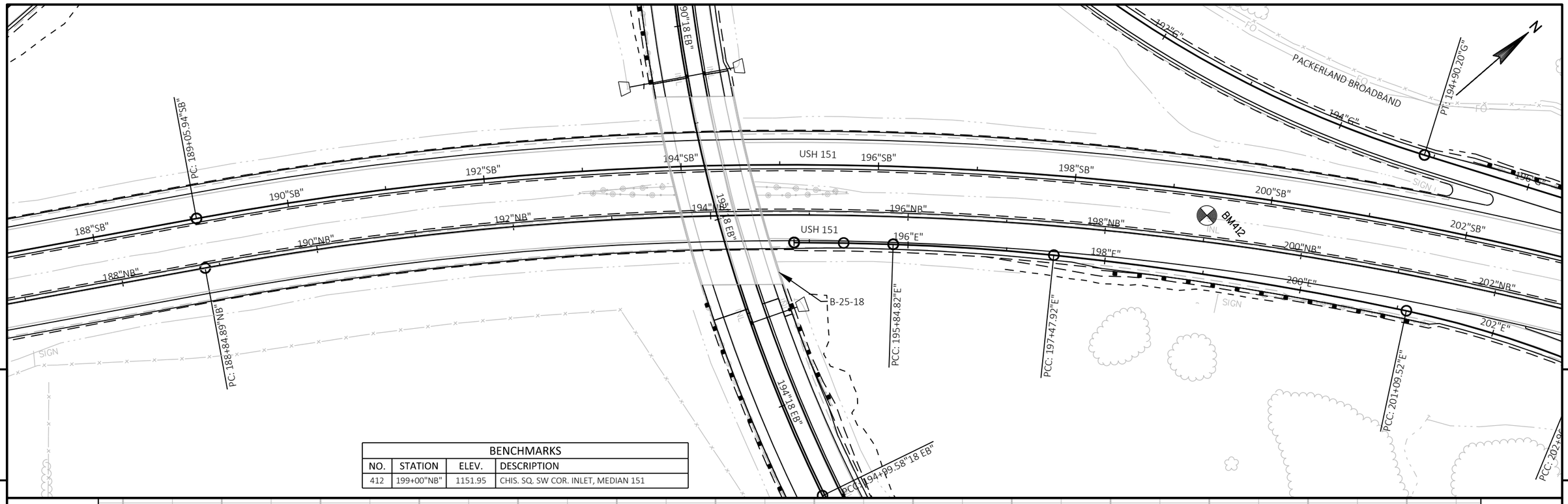
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 215	E



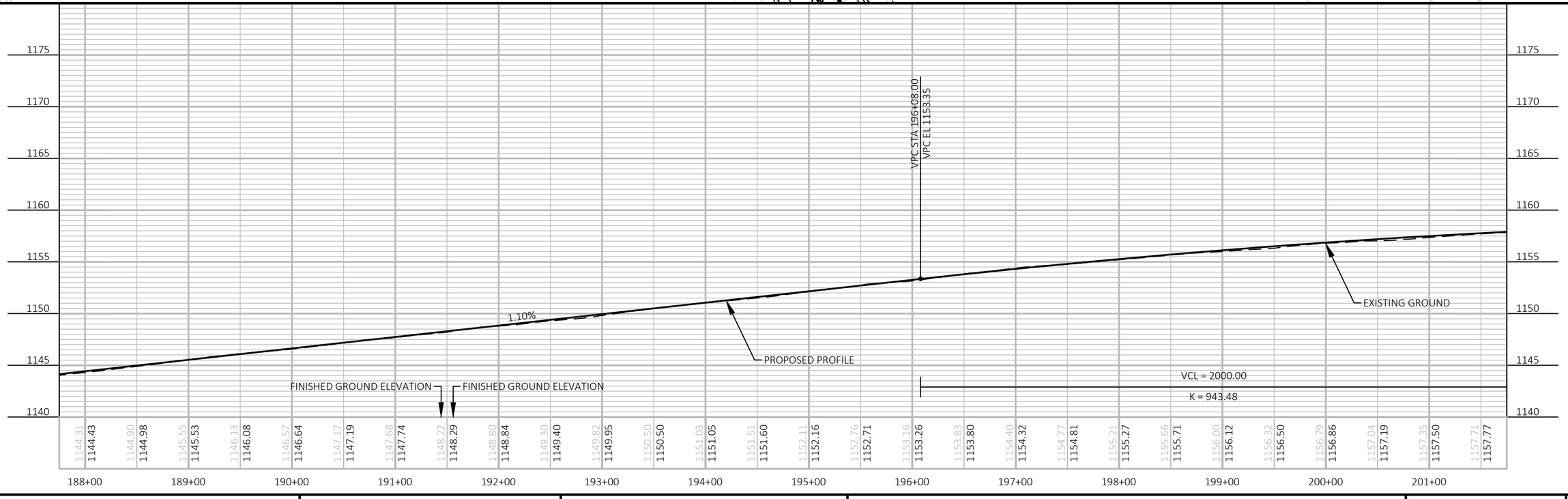
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
411	185+99"NB"	1138.53	CHIS. SQ. SE COR. INLET, MEDIAN 151



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 216	E

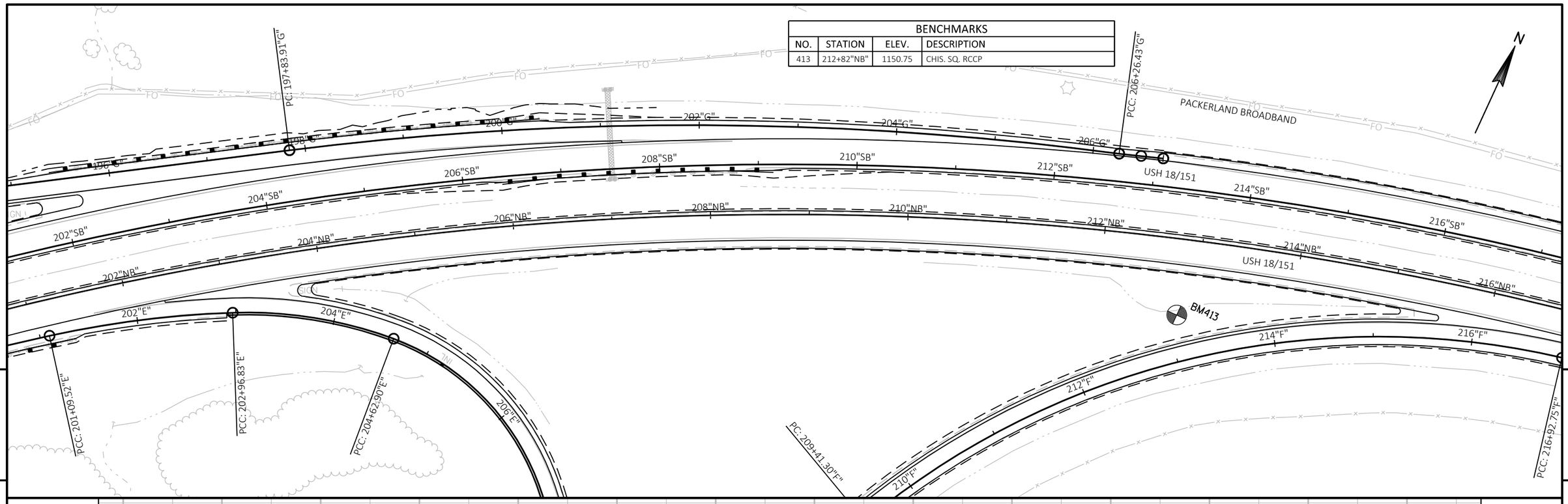


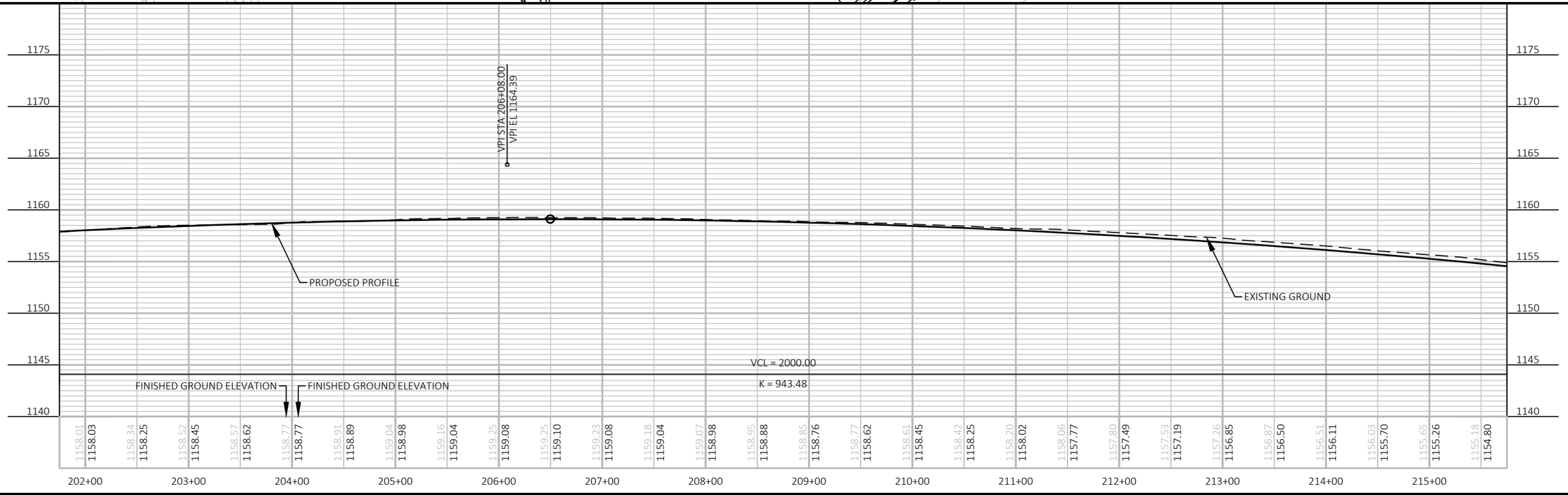
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
412	199+00"NB"	1151.95	CHIS. SQ. SW COR. INLET, MEDIAN 151



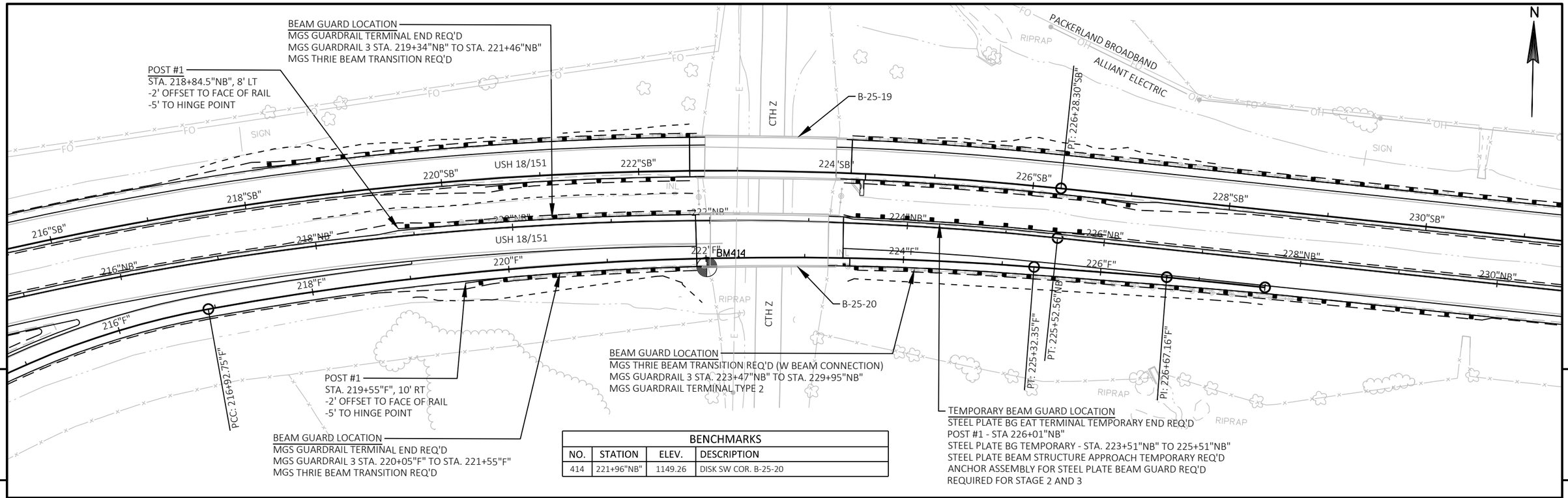
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 217	E

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
413	212+82"NB"	1150.75	CHIS. SQ. RCCP

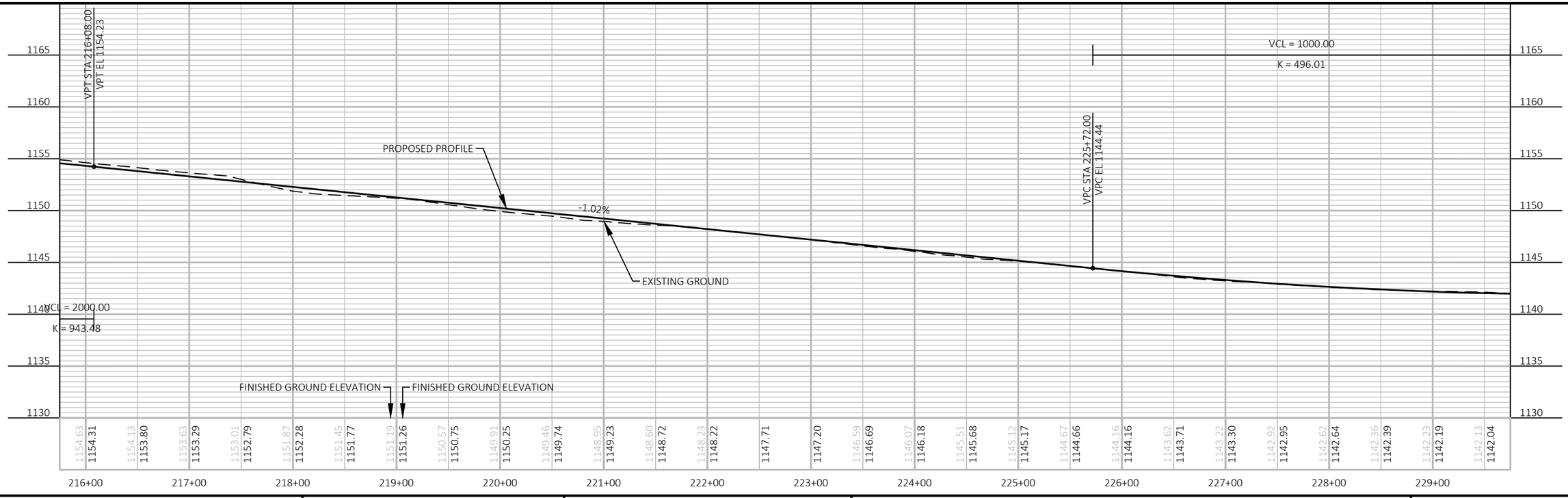




PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 218	E

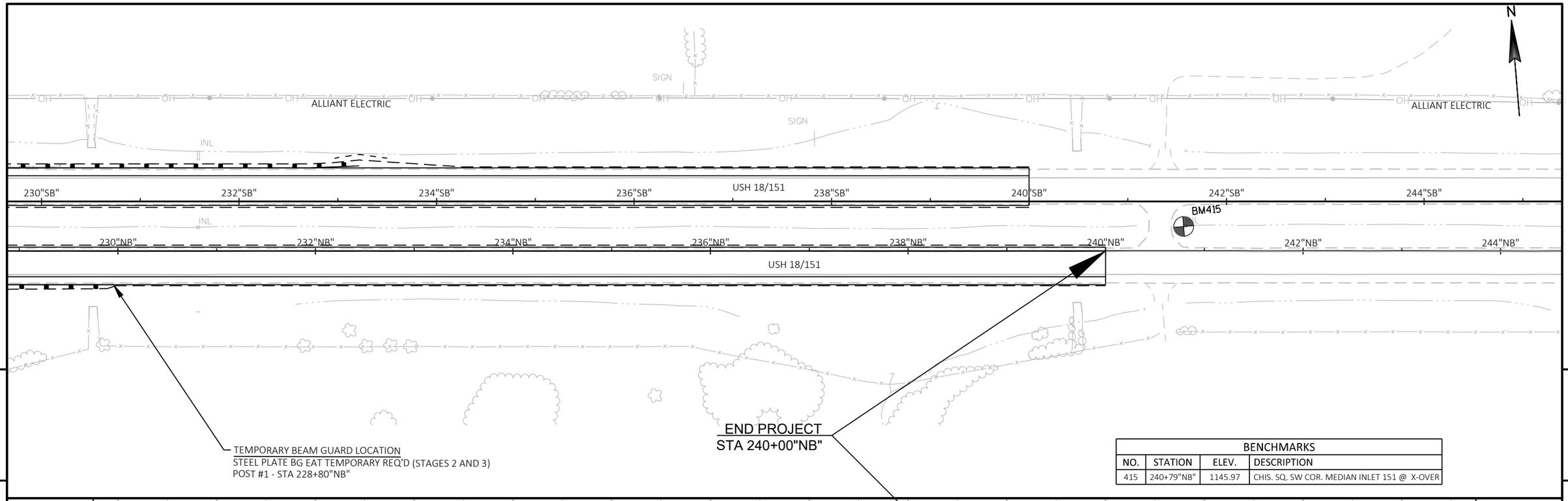


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
414	221+96"NB"	1149.26	DISK SW COR. B-25-20

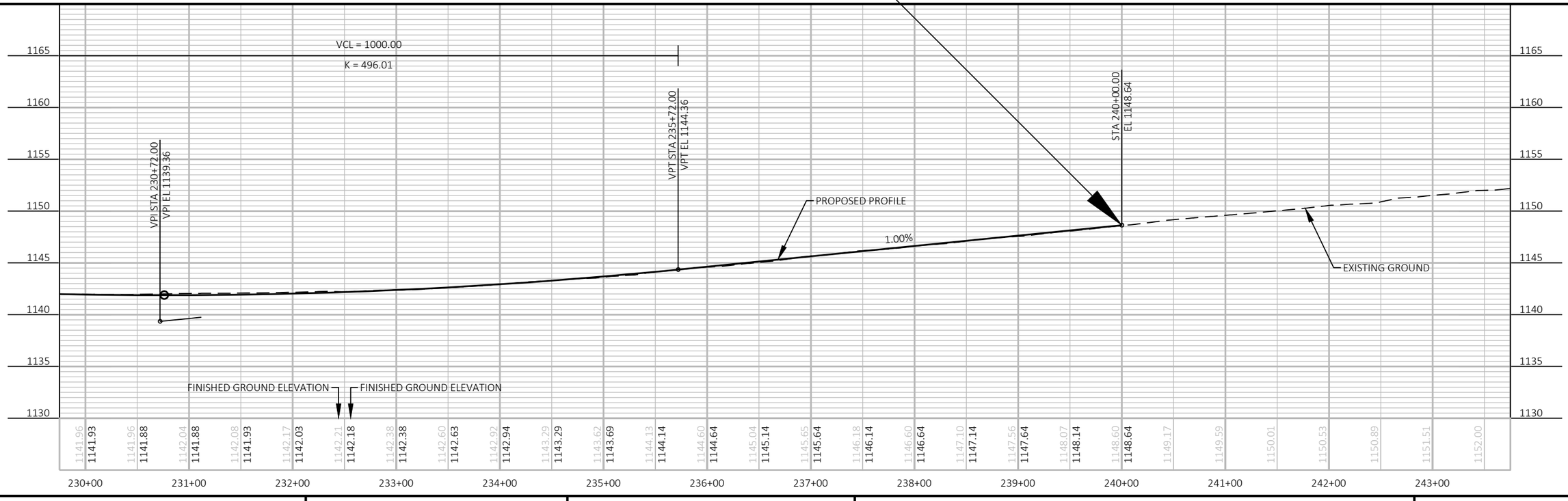


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 219	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_14
PLOT DATE : 5/23/2018 3:26 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : ############
WISDOT/CADDS SHEET 44



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
415	240+79"NB"	1145.97	CHIS. SQ. SW COR. MEDIAN INLET 151 @ X-OVER

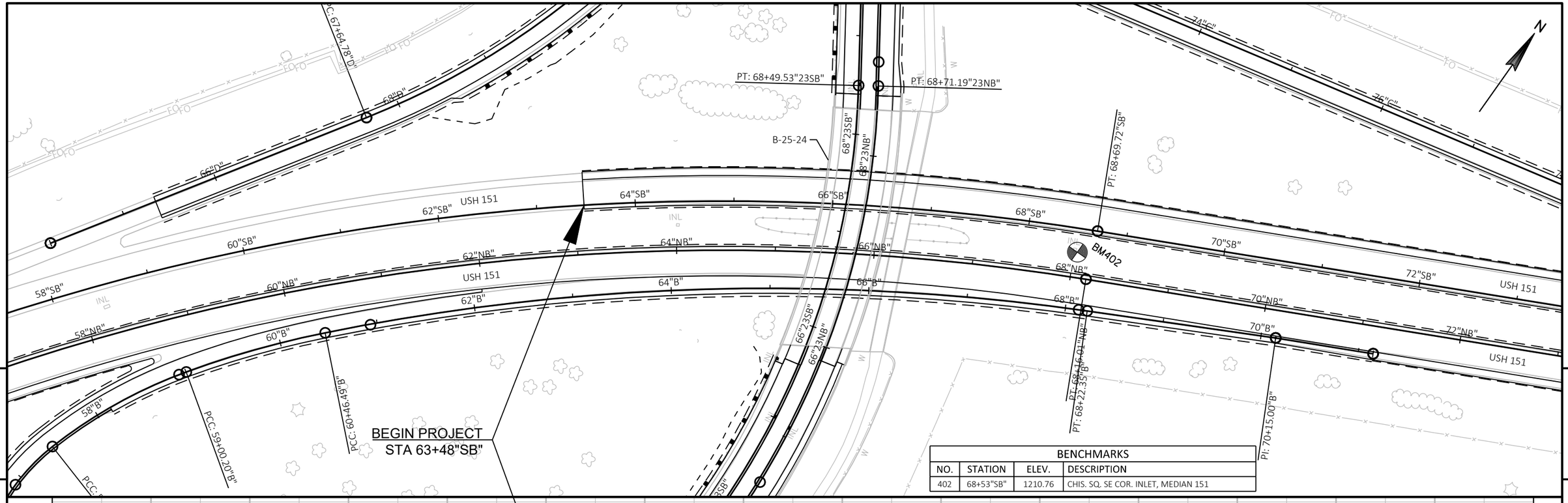


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 NORTHBOUND	SHEET 220	E

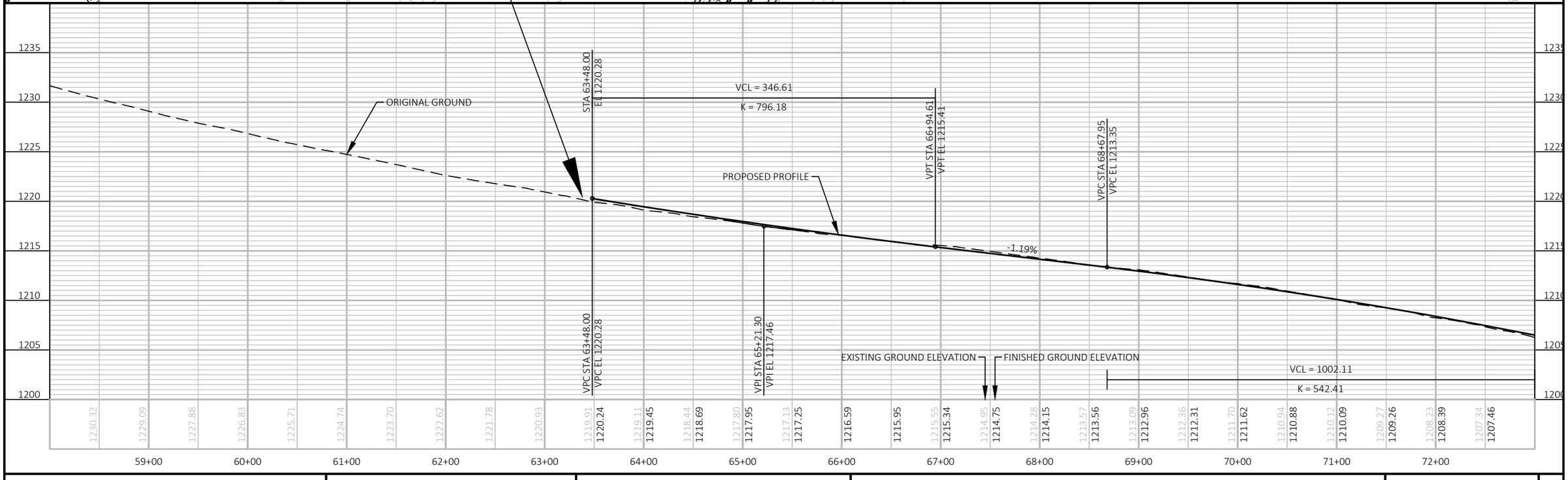
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp_15

PLOT DATE : 5/23/2018 3:26 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 44

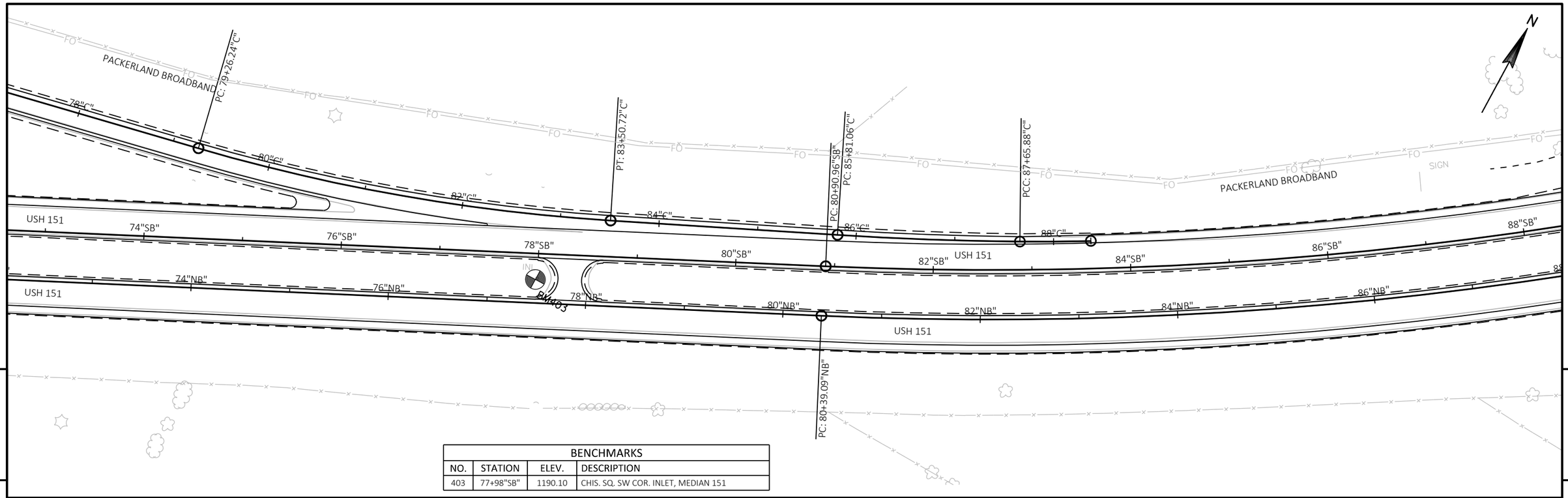


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
402	68+53"SB"	1210.76	CHIS. SQ. SE COR. INLET, MEDIAN 151

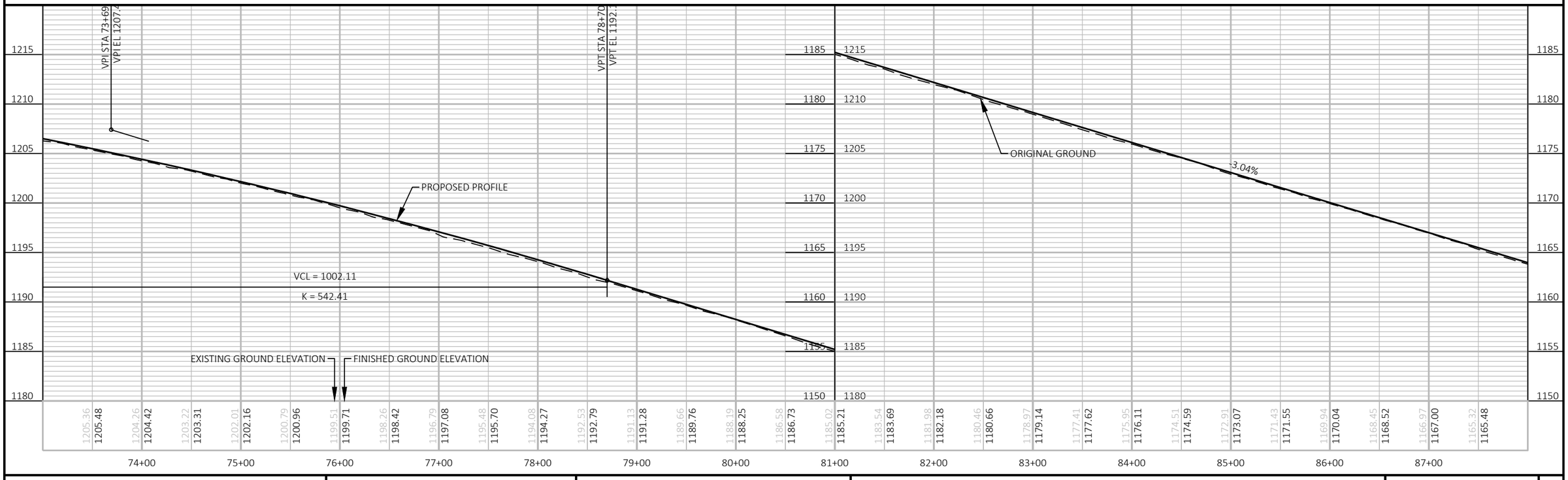


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 221	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050102_PP.DWG
LAYOUT NAME - 050102_pp_01
PLOT DATE : 5/23/2018 3:27 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
403	77+98"SB"	1190.10	CHIS. SQ. SW COR. INLET, MEDIAN 151



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 222	E

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 91+99"SB" TO STA. 99+31"SB"
MGS GUARDRAIL TERMINAL END REQ'D

POST #1
STA. 91+49"SB", 36' LT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

POST #1
STA. 99+81"SB", 36' LT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

PACKERLAND BROADBAND

PT: 102+93.94"SB"

PT: 102+73.27"NB"

88"SB" 90"SB" 92"SB" 94"SB" 96"SB" 98"SB" 100"SB" 102"SB"

88"NB" 90"NB" 92"NB" 94"NB" 96"NB" 98"NB" 100"NB" 102"NB"

USH 151

BM404

BM405

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
404	91+35"SB"	1150.31	CHIS. SQ. SE COR. INLET, MEDIAN 151
405	101+20"SB"	1143.23	CHIS. SQ. SW COR. INLET, MEDIAN 151

VCL = 1158.00
K = 209.81

ORIGINAL GROUND

PROPOSED PROFILE

VPC STA 91+51.00
VPC EL 1153.31

VPI STA 97+30.00
VPI EL 1135.74

EXISTING GROUND ELEVATION

FINISHED GROUND ELEVATION

89+00	90+00	91+00	92+00	93+00	94+00	95+00	96+00	97+00	98+00	99+00	100+00	101+00	102+00
1162.33 / 1162.45	1160.76 / 1160.93	1159.27 / 1159.41	1157.77 / 1157.90	1156.16 / 1156.38	1154.68 / 1154.86	1153.04 / 1153.34	1151.69 / 1151.88	1150.40 / 1150.54	1149.17 / 1149.32	1148.10 / 1148.22	1147.12 / 1147.23	1146.21 / 1146.37	1145.43 / 1145.62	1144.85 / 1145.00	1144.42 / 1144.49	1144.19 / 1144.10	1143.92 / 1143.83	1143.86 / 1143.68	1143.77 / 1143.65	1143.92 / 1143.74	1144.02 / 1143.95	1144.31 / 1144.28	1144.70 / 1144.72	1145.41 / 1145.29	1145.97 / 1145.97	1146.73 / 1146.78	1147.68 / 1147.70	1148.69 / 1148.74

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 223	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050102_PP.DWG
LAYOUT NAME - 050102_pp_03

PLOT DATE : 5/23/2018 3:27 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WisDOT RWIS TOWER
SENSOR IN SB USH 151 PAVEMENT
CONTACT WisDOT BHM 30 DAYS
PRIOR TO PAVEMENT REMOVAL

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 115+29"SB" TO STA. 122+00"SB"
MGS THRIE BEAM TRANSITION REQ'D

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 115+53"SB" TO STA. 118+28"SB"
MGS THRIE BEAM TRANSITION REQ'D

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 112+55"SB" TO STA. 112+80"SB"
MGS THRIE BEAM TRANSITION REQ'D

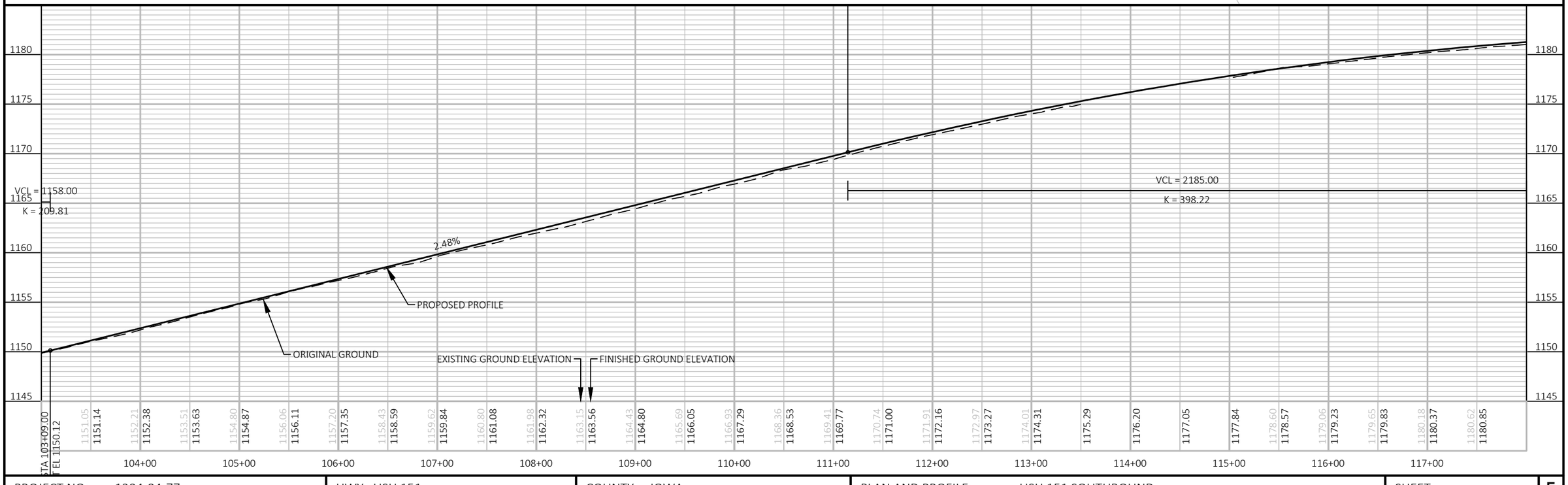
POST #1
STA. 112+05"SB", 36' RT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

POST #1
STA. 111+27"SB", 8' RT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

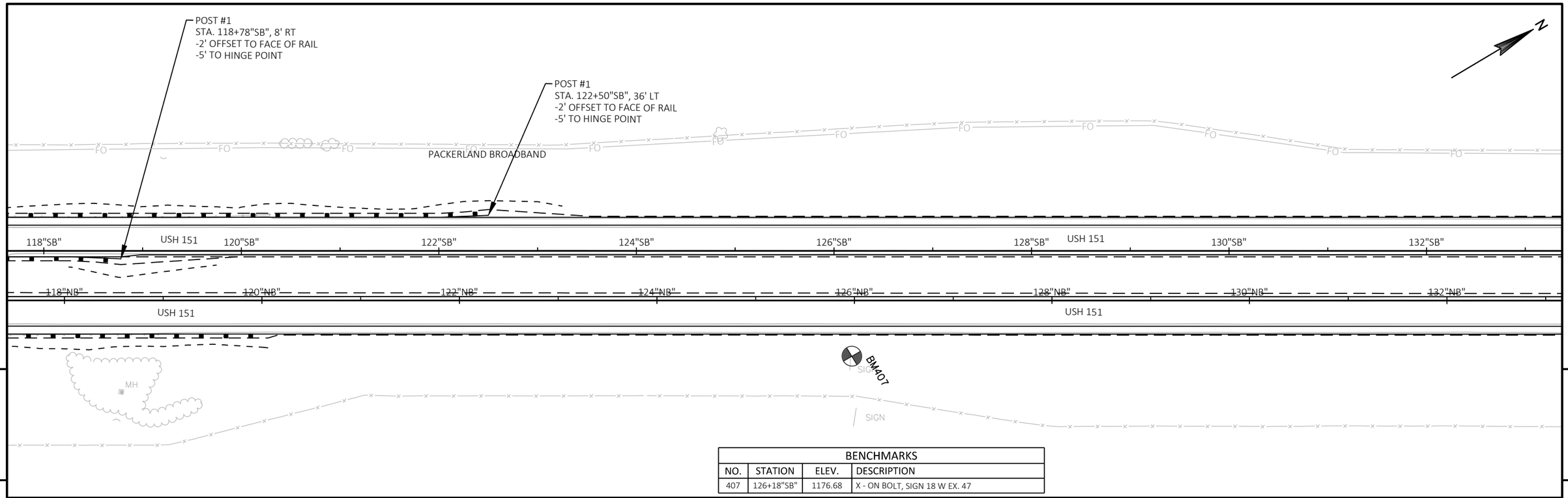
BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 111+77"SB" TO STA. 113+02"SB"
MGS THRIE BEAM TRANSITION REQ'D

PACKERLAND BROADBAND
ALLIANT ELECTRIC
BRENNAN RD
SIGN
INL
16A
16B
B-25-16
B-25-17
BM406
USH 151
PT: 102+93.94"SB"
PT: 102+73.27"NB"
104"SB" 106"SB" 108"SB" 110"SB" 112"SB" 114"SB" 116"SB" 118"SB"
104"NB" 106"NB" 108"NB" 110"NB" 112"NB" 114"NB" 116"NB" 118"NB"

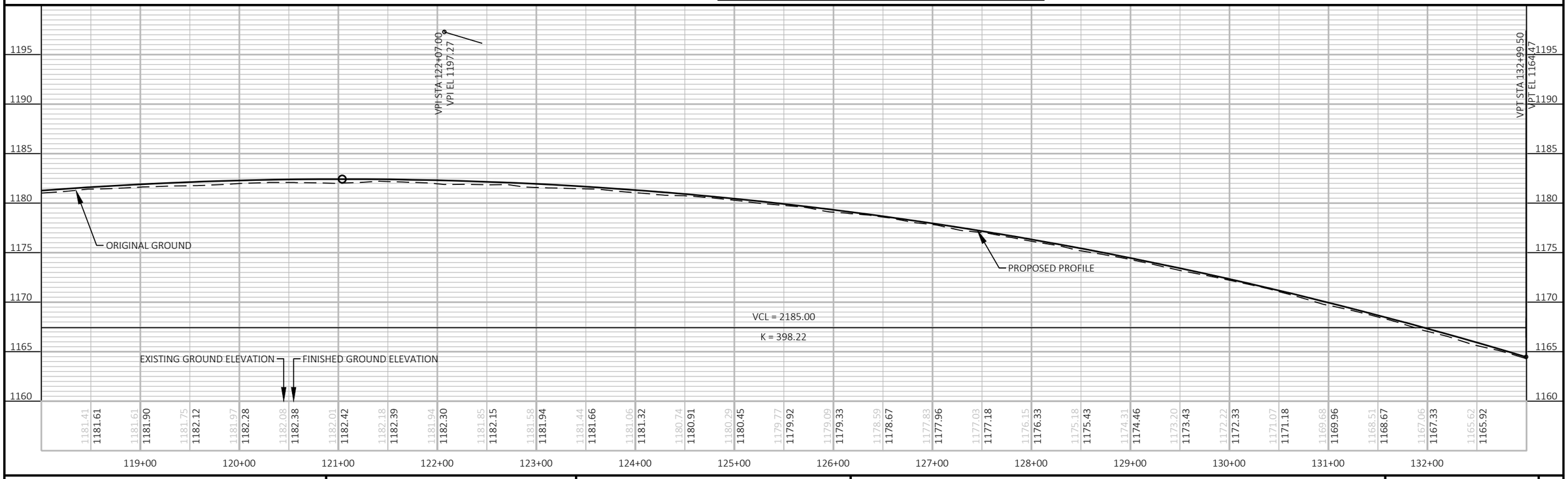
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
406	113+79"SB"	1178.56	DISK SE COR. B-25-17



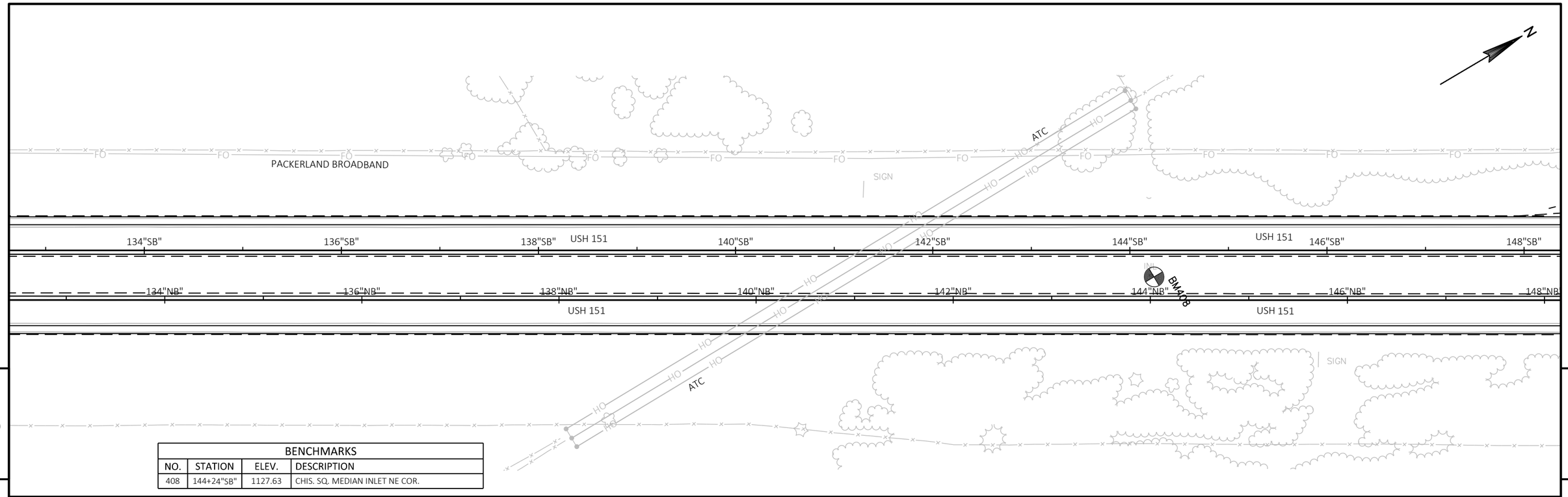
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 224	E



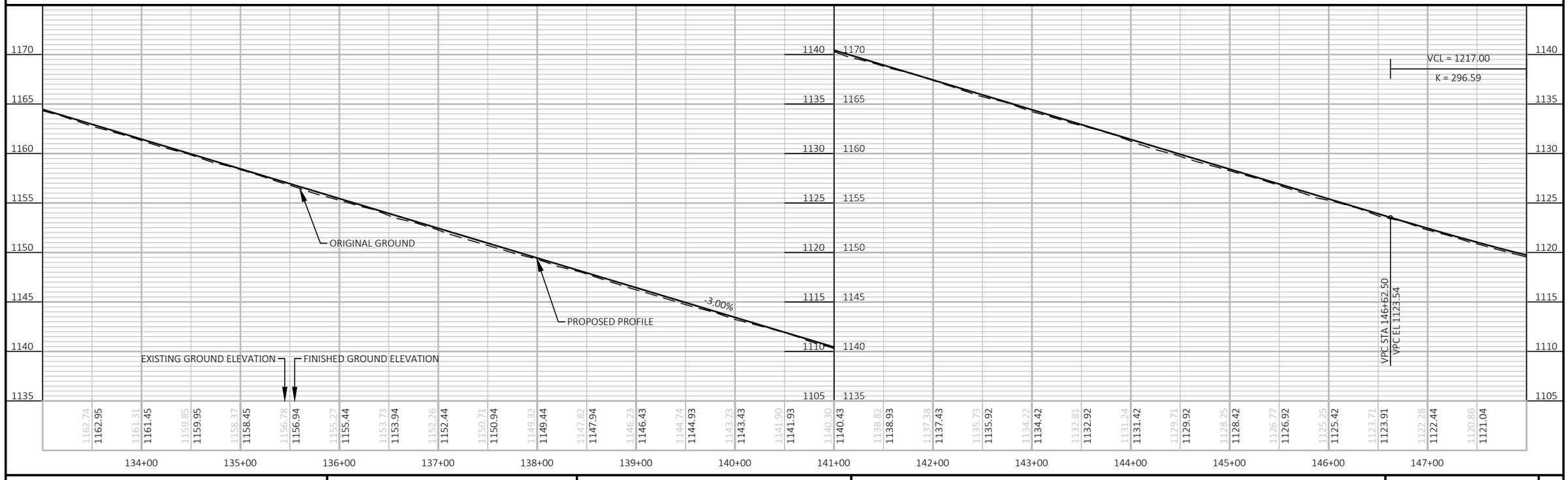
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
407	126+18"SB"	1176.68	X - ON BOLT, SIGN 18 W EX. 47



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 225	E



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
408	144+24"SB"	1127.63	CHIS. SQ. MEDIAN INLET NE COR.



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 226	E

POST #1
STA. 148+99"SB", 36' LT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

BEAM GUARD LOCATION
MGS THRIE BEAM TRANSITION REQ'D (W BEAM CONNECTION)
MGS GUARDRAIL 3 STA. 149+49"SB" TO STA. 159+19"SB"
MGS GUARDRAIL TERMINAL END REQ'D

PACKERLAND BROADBAND

BEAM GUARD LOCATION
MGS THRIE BEAM TRANSITION REQ'D
MGS GUARDRAIL 3 STA. 161+12.5"SB" TO STA. 161+50"SB"
MGS GUARDRAIL TERMINAL END REQ'D

POST #1
STA. 162+00"SB", 36' LT.
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

21B
21A
B-25-21
STH 191
USH 151
BM409
B-25-22
SIGN

148"SB" 150"SB" 152"SB" 154"SB" 156"SB" 158"SB" 160"SB" 162"SB"

148"NB" 150"NB" 152"NB" 154"NB" 156"NB" 158"NB" 160"NB" 162"NB"

POST #1
STA. 156+96"SB", 8' RT.
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

BEAM GUARD LOCATION
MGS THRIE BEAM TRANSITION REQ'D
MGS GUARDRAIL 3 STA. 157+46"SB" TO STA. 158+71"SB"
MGS GUARDRAIL TERMINAL END REQ'D

RIPRAP

BEAM GUARD LOCATION
MGS THRIE BEAM TRANSITION REQ'D
MGS GUARDRAIL 3 STA. 160+99"SB" TO STA. 163+24"SB"
MGS GUARDRAIL TERMINAL END REQ'D

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
409	158+84"SB"	1114.61	DISK SE COR. B-25-22

VCL = 1217.00
K = 296.59

ORIGINAL GROUND
PROPOSED PROFILE

VPI STA 152+71.00
VPI EL 1105.27

VPT STA 158+79.50
VPT EL 1111.96

EXISTING GROUND ELEVATION
FINISHED GROUND ELEVATION

| | | |

POST #1
STA. 163+74"SB", 8' RT.
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

PACKERLAND BROADBAND

PI: 169+08.59"H"

SECTION LINE RD

B-25-23

164"SB" 166"SB" 168"SB" 170"SB" 172"SB" 174"SB" 176"SB" 178"SB"

170"H" 172"H" 174"H" 176"H"

USH 151

164"NB" 166"NB" 168"NB" 170"NB" 172"NB" 174"NB" 176"NB" 178"NB"

BM #10

USH 151

SIGN

ATC/ALLIANT ELECTRIC
FRONTIER COMM

SECTION LINE RD

5

5

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
410	170+02"SB"	1122.14	X - ON SOUTH END CMP

1145 1140 1135 1130 1125 1120 1115 1110

1.10%

PROPOSED PROFILE

ORIGINAL GROUND

EXISTING GROUND ELEVATION

FINISHED GROUND ELEVATION

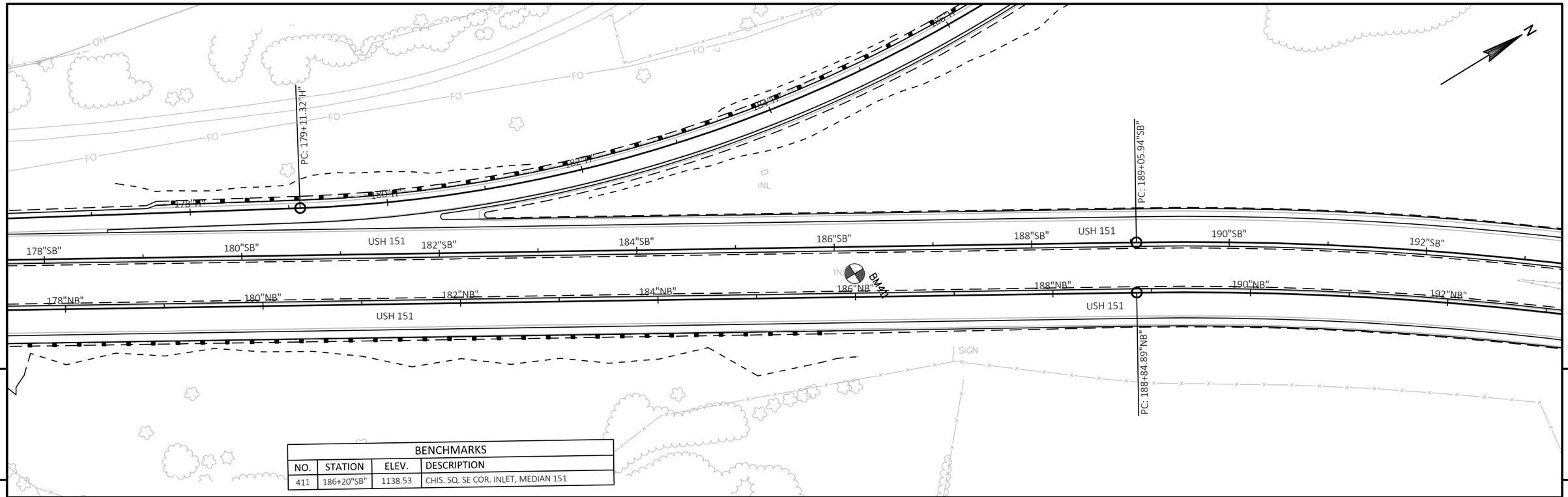
1117.15	1117.14	1117.66	1117.69	1118.22	1118.24	1118.83	1118.79	1119.27	1119.34	1119.67	1119.89	1120.38	1120.44
1121.02	1120.99	1121.46	1121.54	1121.98	1122.09	1122.64	1122.64	1123.17	1123.19	1123.65	1123.74	1124.09	1124.29
1124.59	1124.84	1125.16	1125.39	1125.63	1125.94	1126.21	1126.49	1126.99	1127.04	1127.41	1127.59	1128.11	1128.15
1128.58	1128.70	1129.11	1129.25	1129.63	1129.80	1130.35	1130.90	1131.37	1131.45	1131.86	1132.00	1132.48	1132.55

164+00 165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00

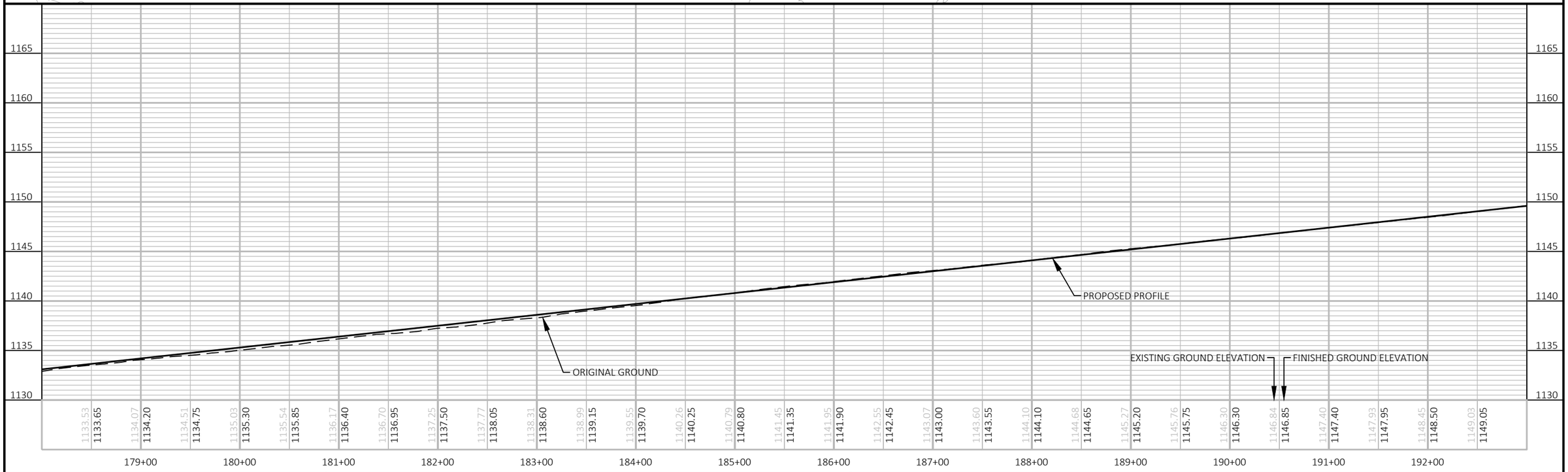
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 228	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050102_PP.DWG
LAYOUT NAME - 050102_pp_08

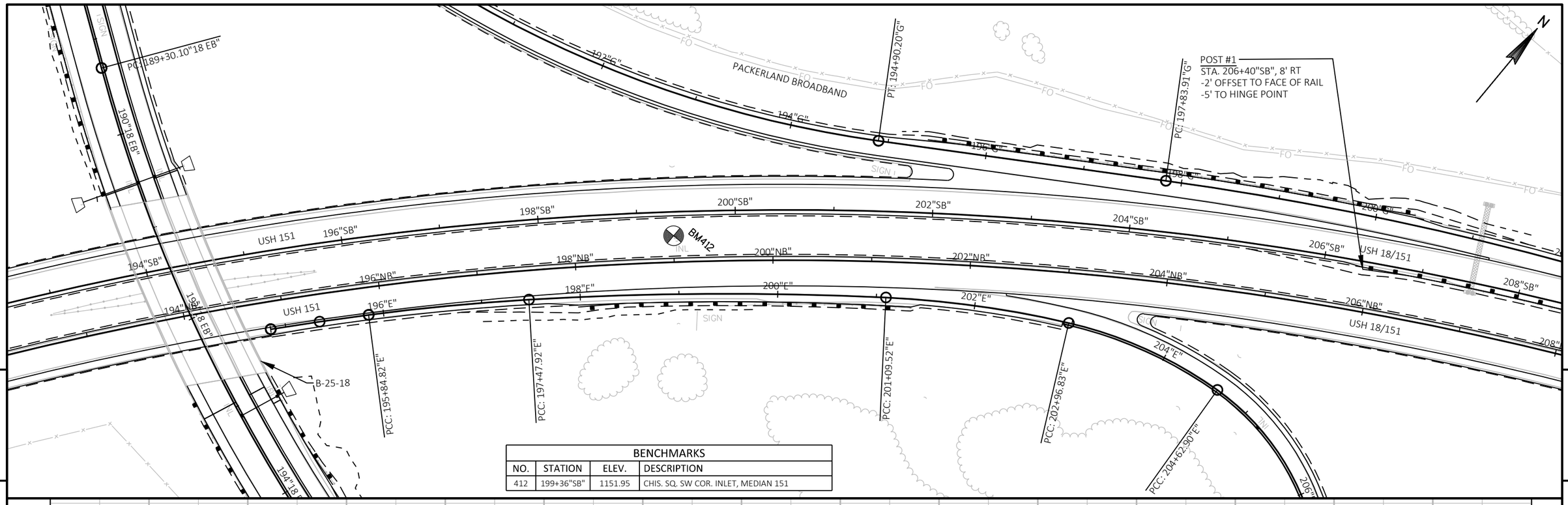
PLOT DATE : 5/23/2018 3:28 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT



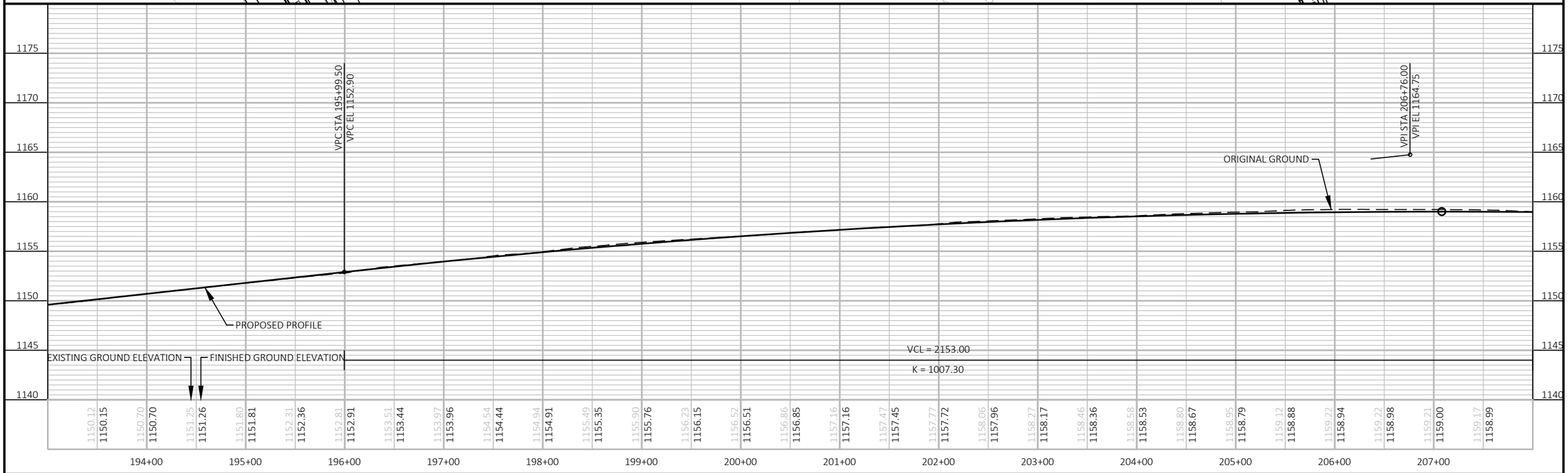
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
411	186+20"SB"	1138.53	CHIS. SQ. SE COR. INLET, MEDIAN 151



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 229	E



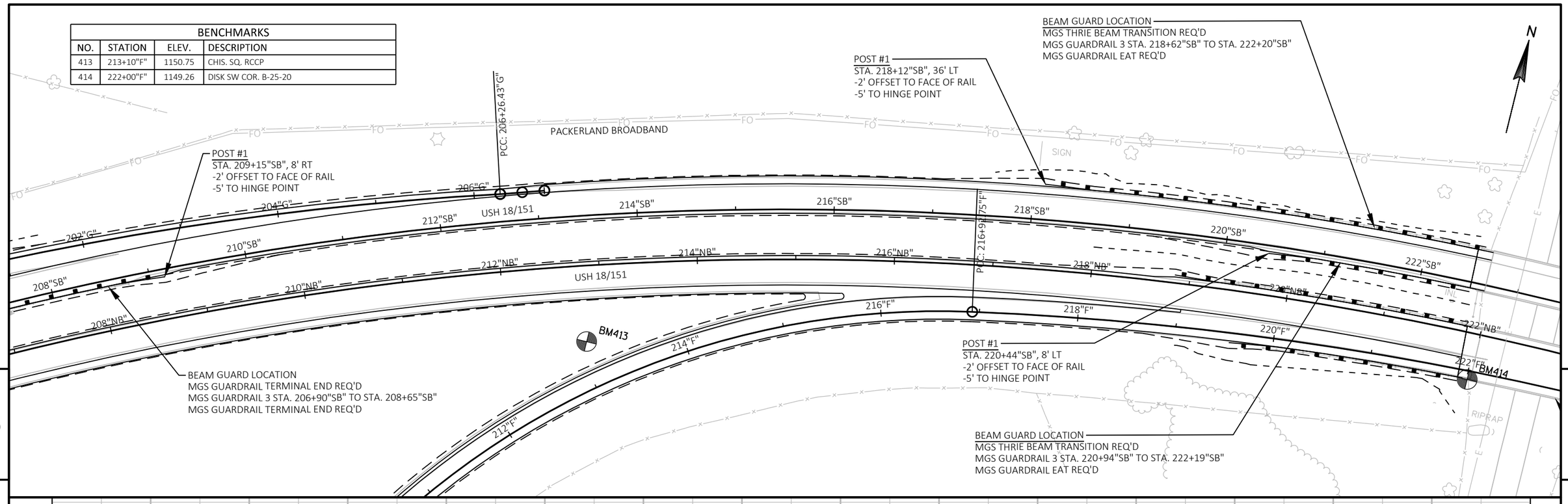
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
412	199+36"SB"	1151.95	CHIS. SQ. SW COR. INLET, MEDIAN 151

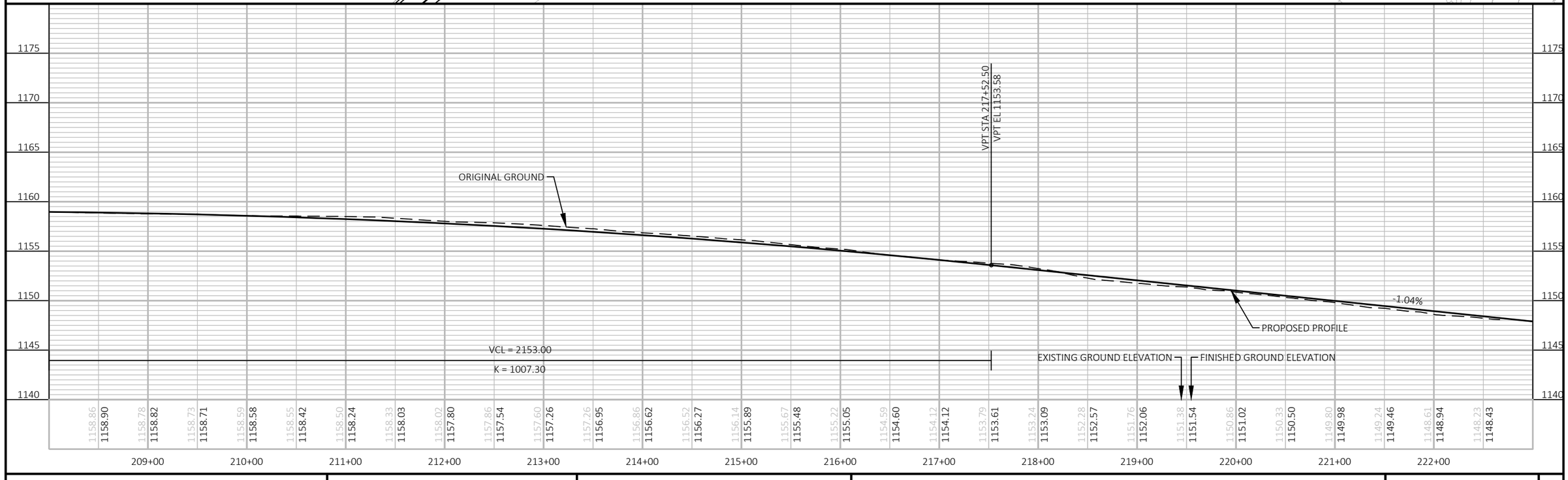


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 230	E

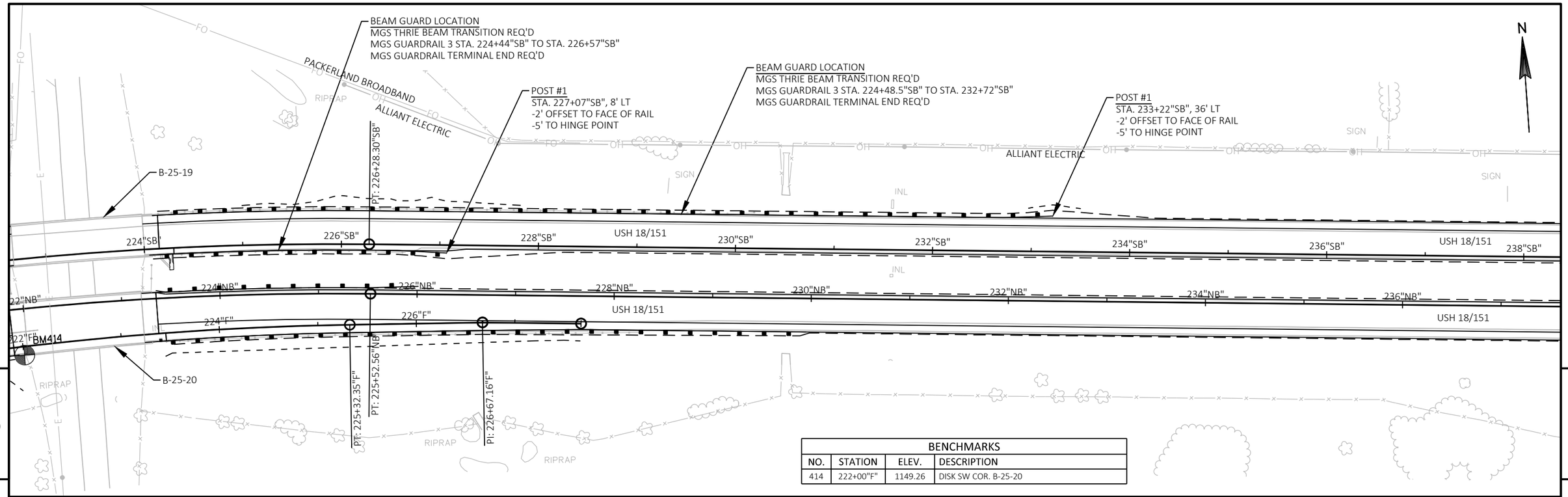
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050102_PP.DWG
LAYOUT NAME - 050102_pp_10
PLOT DATE : 5/23/2018 3:28 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
413	213+10"F"	1150.75	CHIS. SQ. RCCP
414	222+00"F"	1149.26	DISK SW COR. B-25-20

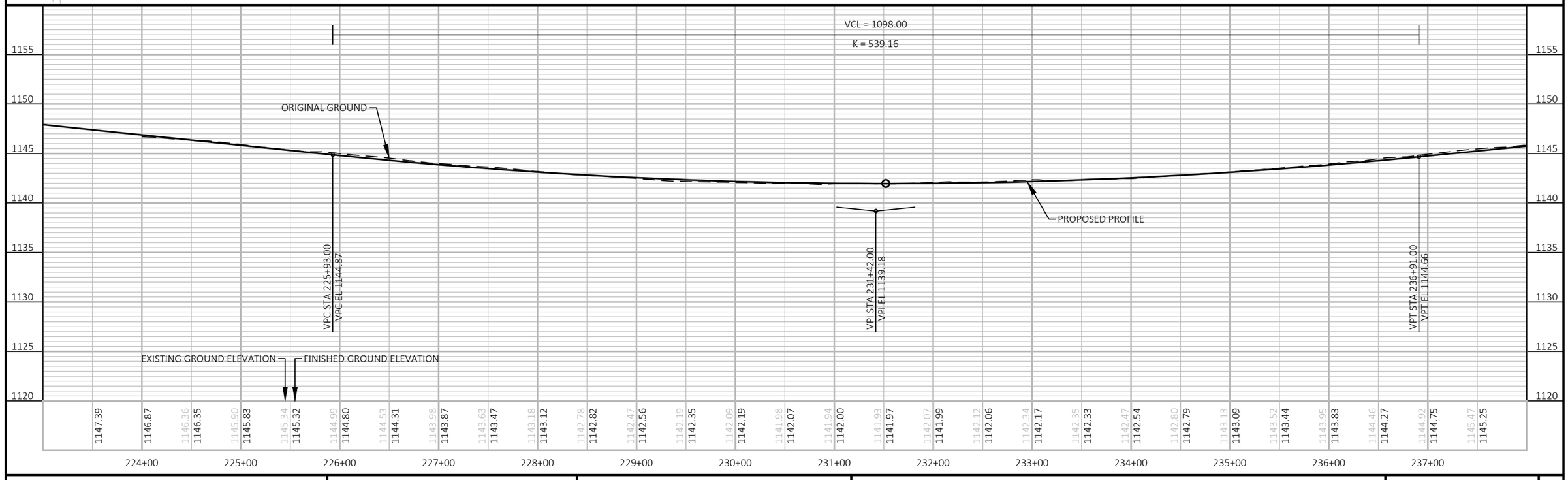




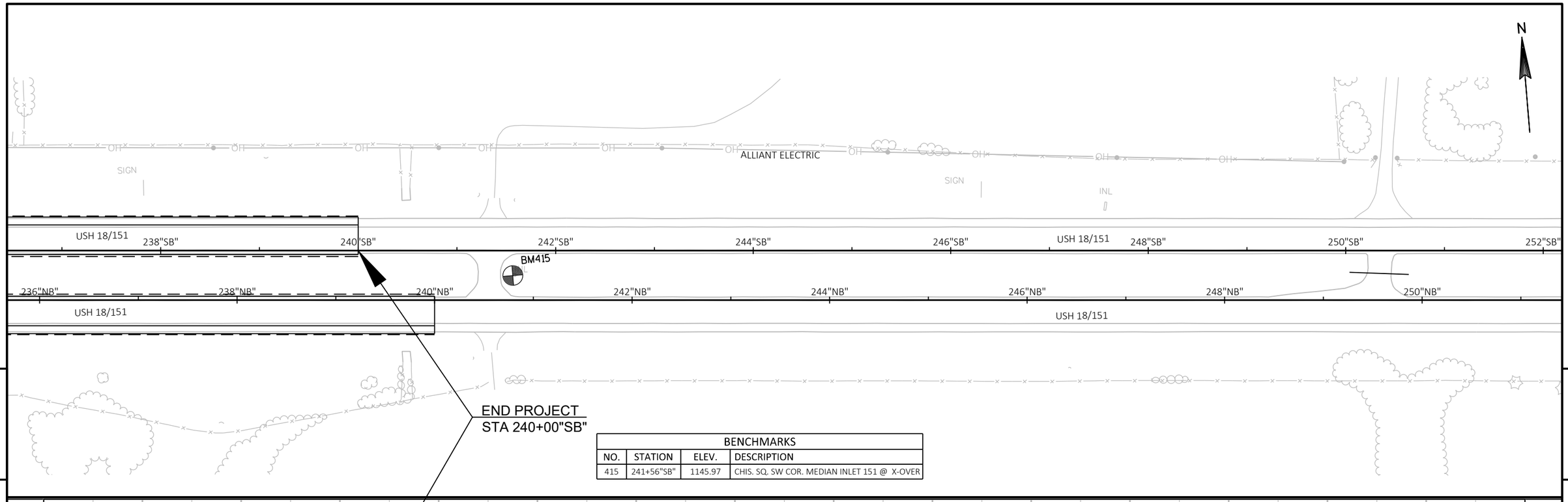
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 231	E



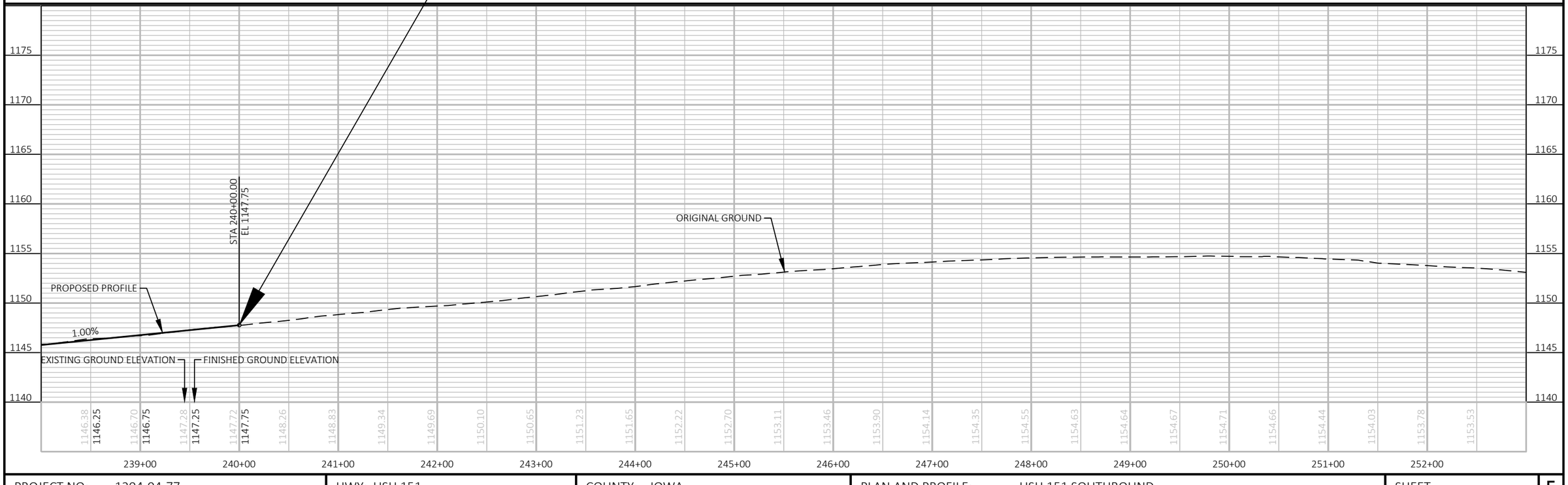
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
414	222+00"F"	1149.26	DISK SW COR. B-25-20



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 232	E



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
415	241+56"SB"	1145.97	CHIS. SQ. SW COR. MEDIAN INLET 151 @ X-OVER



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 151 SOUTHBOUND	SHEET 233	E

BEAM GUARD LOCATION
STEEL THRIE BEAM BULLNOSE TERMINALS REQUIRED
STEEL THRIE BRAM REQ'D

PACKERLAND BROADBAND

PC: 181+61.63"G"

USH 18

172"EB" 174"EB" 176"EB" 178"EB" 180"EB" 182"EB" 184"EB"

182"G" 184"G"

INL

SIGN

204"H" 202"H" 200"H" 198"H" 196"H" 194"H"

PI: 204+22.89"H"

PT: 199+03.85"H"

END PROJECT
STA 171+40"EB"

VPC STA 171+40.00"EB"
VPC EL 1156.09

VPI STA 171+99.19"EB"
VPI EL 1157.63

VPT STA 172+58.38"EB"
VPT EL 1158.82

PROPOSED PROFILE

2.01%

ORIGINAL GROUND

VCL = 118.38
K = 205.27

EXISTING GROUND ELEVATION

FINISHED GROUND ELEVATION

VPC STA 180+74.29"EB"
VPC EL 1175.23

VCL = 1103.98
K = 275.76

1185 1180 1175 1170 1165 1160 1155 1150

1156.08	1156.35	1157.39	1157.56
1158.44	1158.65	1159.52	1159.65
1160.47	1160.66	1161.38	1161.67
1162.50	1162.67	1163.45	1163.68
1164.55	1164.68	1165.40	1165.69
1166.25	1166.69	1167.25	1167.70
1168.28	1168.71	1169.25	1169.71
1170.21	1170.72	1171.15	1171.72
1172.33	1172.73	1173.38	1173.73
1174.54	1174.74	1175.51	1175.73
1176.39	1176.65	1177.13	1177.47
1177.82	1178.20	1178.53	1178.84
1179.02	1179.40	1179.53	1179.86
1179.87	1180.23	1180.16	1180.51
1180.31	1180.69	1180.37	1180.79

172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 18	SHEET 234 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050103_PP.DWG
LAYOUT NAME - 050103_pp_01

PLOT DATE : 5/23/2018 3:29 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

PACKERLAND BROADBAND

FO

184"C"

186"C"

189"C"

184"EB"

186"EB"

188"EB"

190"EB"

192"EB"

194"EB"

196"EB"

198"EB"

USH 18

INL

ISIGN

B-25-18

USH 151

196"SB"

196"NB"

196"E"

194"SB"

194"NB"

PCC: 189+30.10"EB"

PCC: 197+47.92"E"

PCC: 195+84.82"E"

PCC: 194+99.58"EB"

N

POST #1
STA. 187+69"EB", 36' RT
-2' OFFSET FACE TO RAIL
-5' TO HINGE POINT

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 188+19.5"EB" TO STA. 190+30"EB"
MGS THRIE BEAM TRANSITION REQ'D

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA. 193+29"EB" TO STA. 193+68"EB"
MGS THRIE BEAM TRANSITION REQ'D

POST #1
STA. 194+19"EB", 45' LT
-2' OFFSET FACE TO RAIL
-5' TO HINGE POINT

BEAM GUARD LOCATION
MGS THRIE BEAM TRANSITION REQ'D (W BEAM CONECTION)
MGS GUARDRAIL 3 STA. 192+70"EB" TO STA. 203+36"EB"
MGS GUARDRAIL TERMINAL TYPE 2

5

5

1180
1175
1170
1165
1160
1155
1150
1145

-1.99%

ORIGINAL GROUND

PROPOSED PROFILE

VCL = 1103.98
K = 275.76

VCL = 659.82
K = 465.34

VPT STA 191+78.27"EB"
VPT EL 1175.34

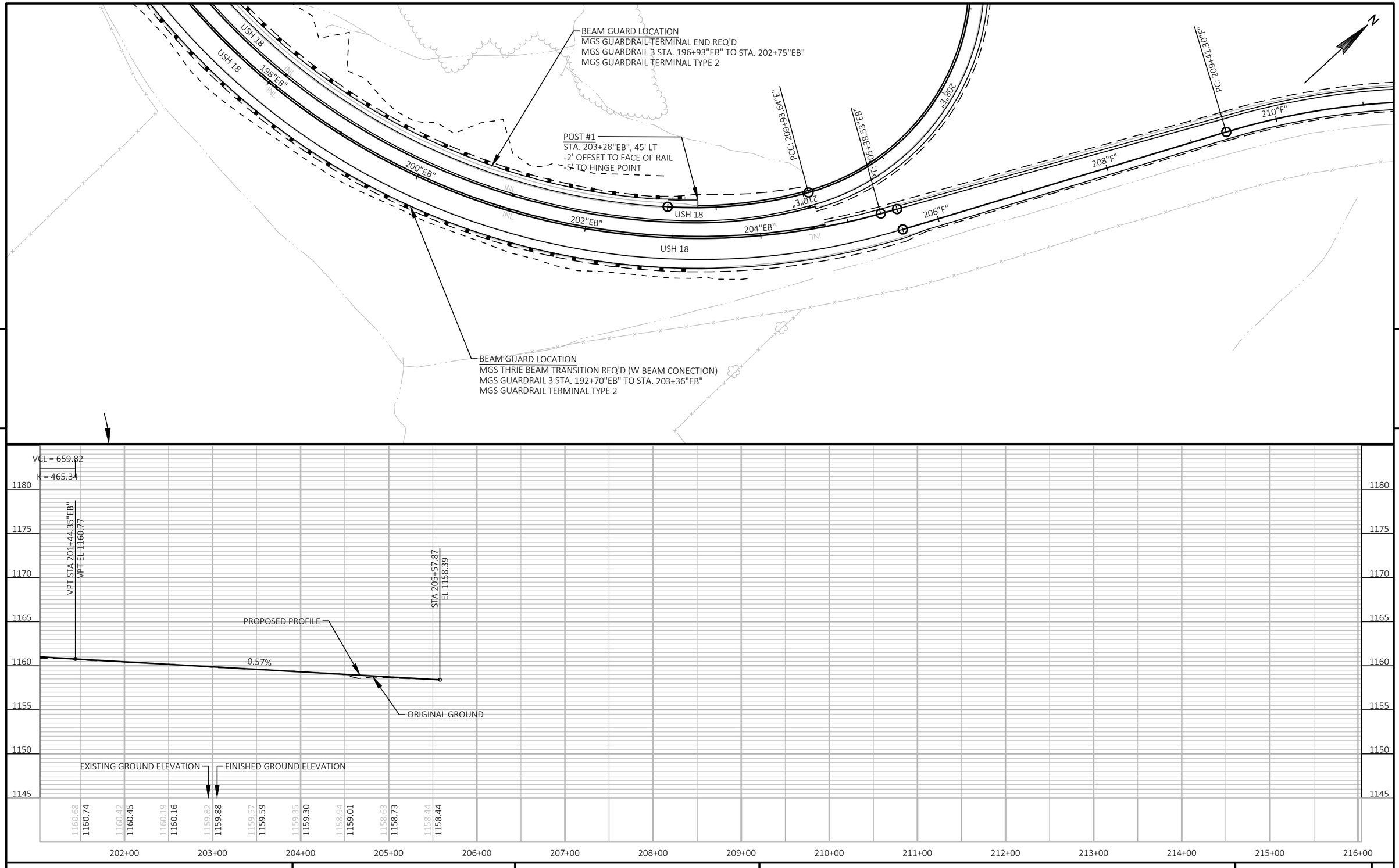
VPC STA 194+84.52"EB"
VPC EL 1169.23

VPI STA 198+14.43"EB"
VPI EL 1162.66

EXISTING GROUND ELEVATION

FINISHED GROUND ELEVATION

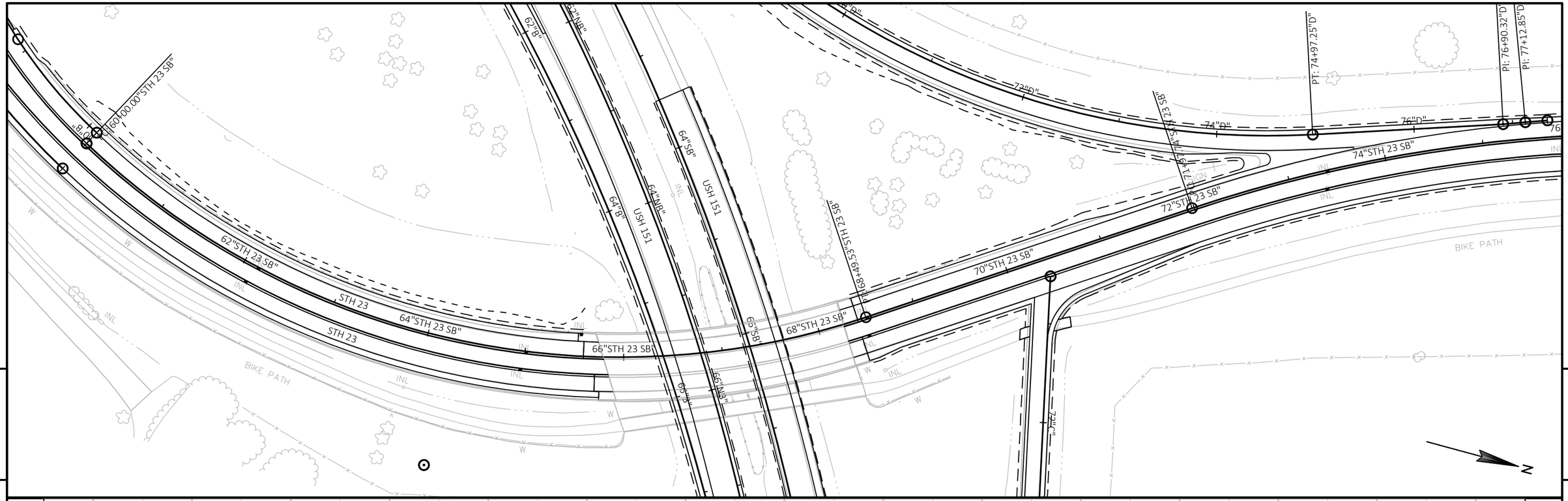
| | | |

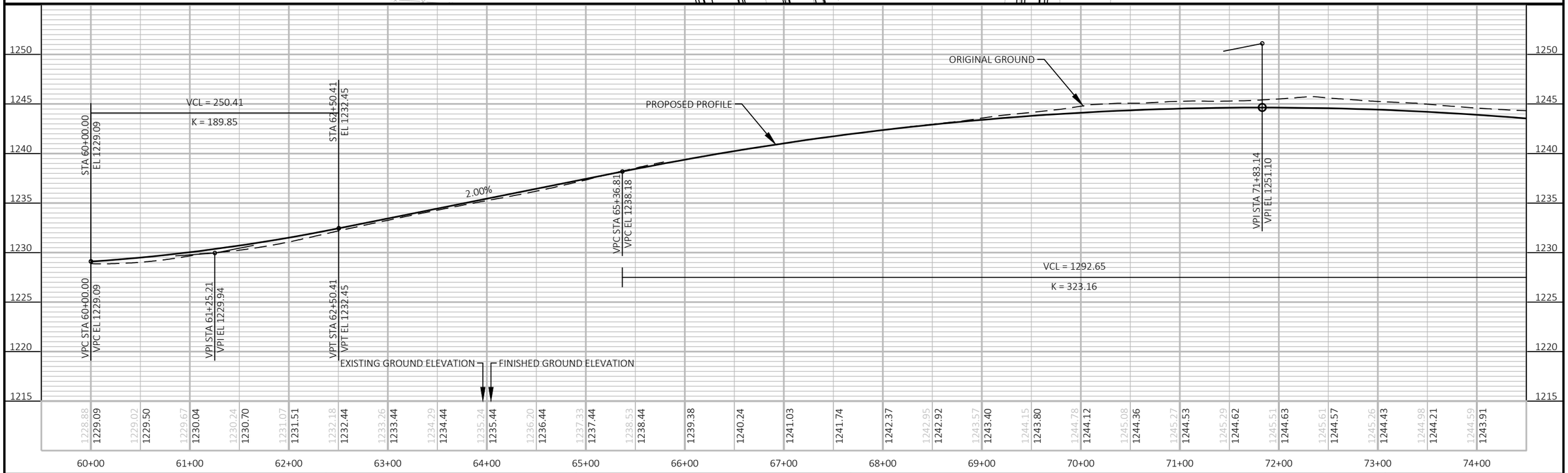


5

5

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: USH 18	SHEET 236	E





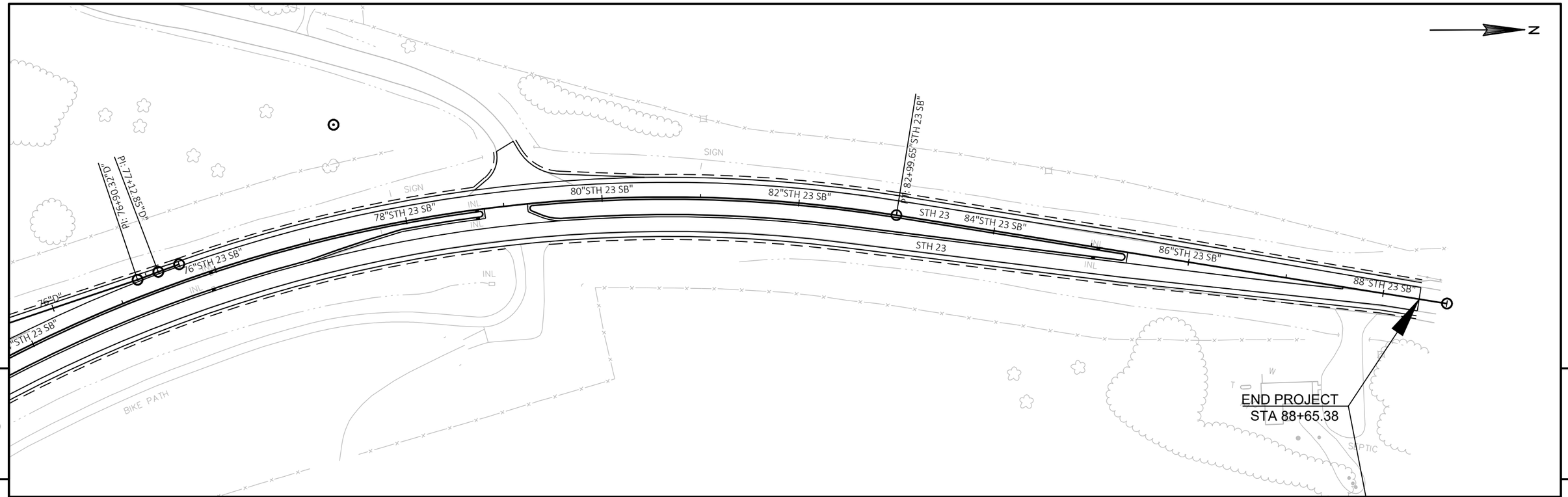
5

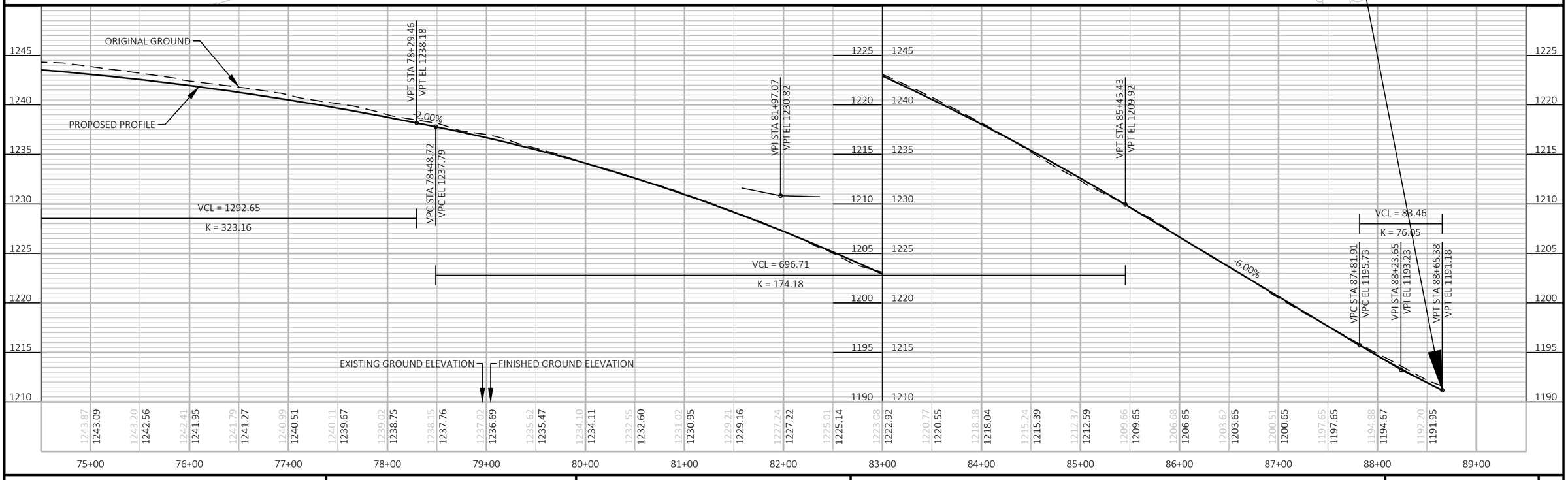
5

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PLOT: STH 23 SOUTHBOUND	SHEET 237	E

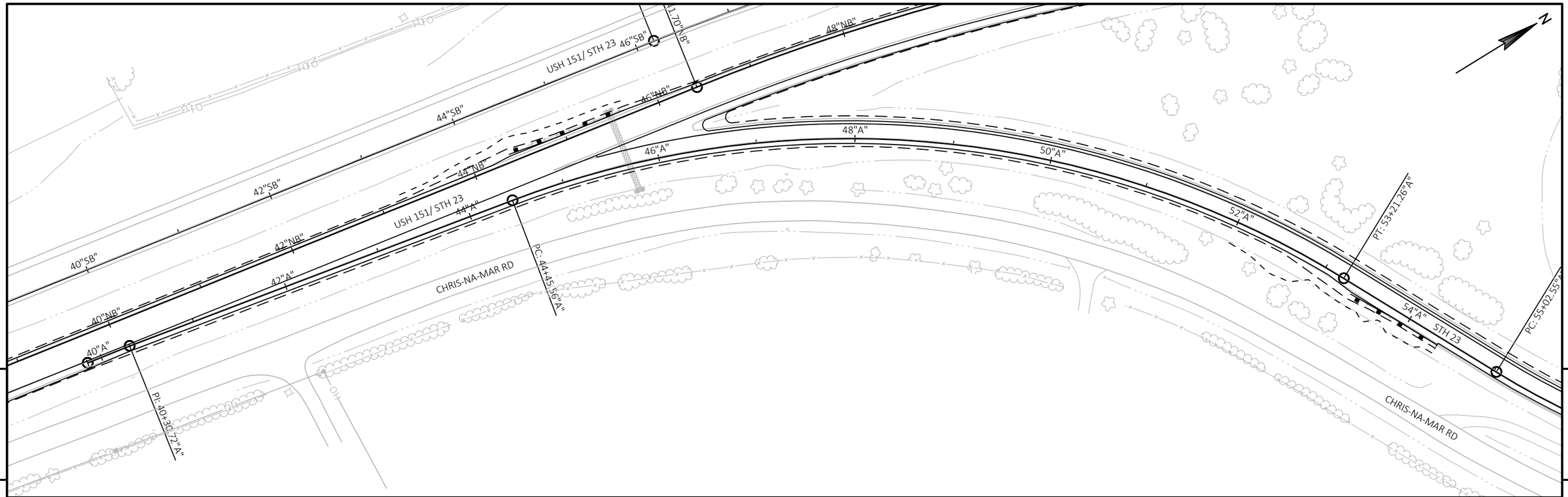
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050105_PP.DWG
LAYOUT NAME - 050105_pp_01

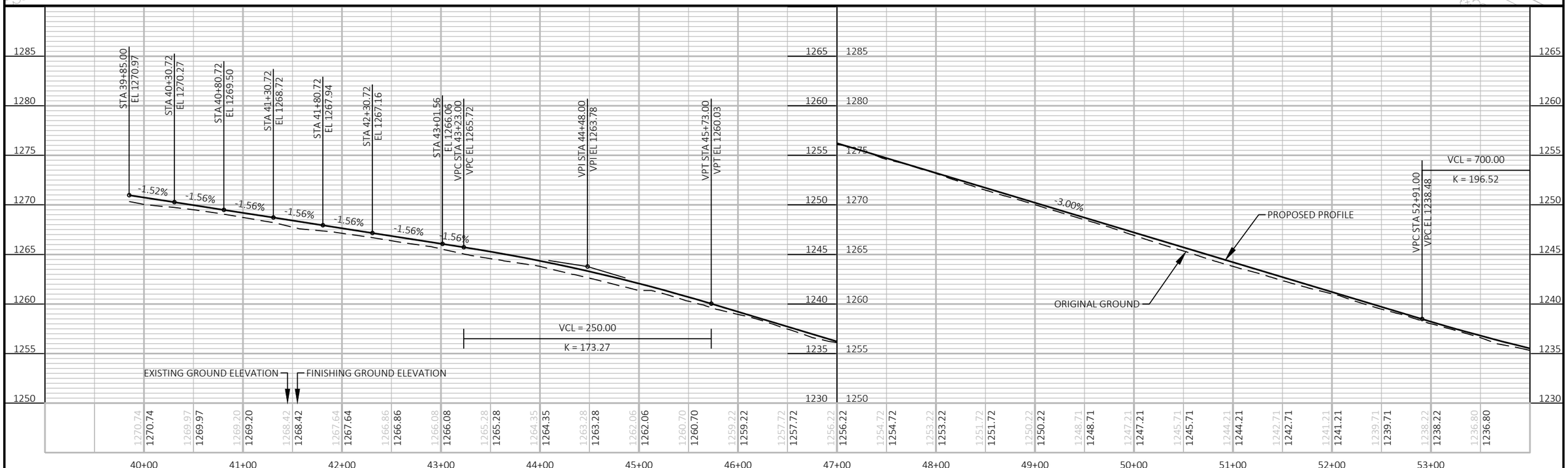
PLOT DATE : 5/23/2018 3:30 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: STH 23 SOUTHBOUND	SHEET 238 E



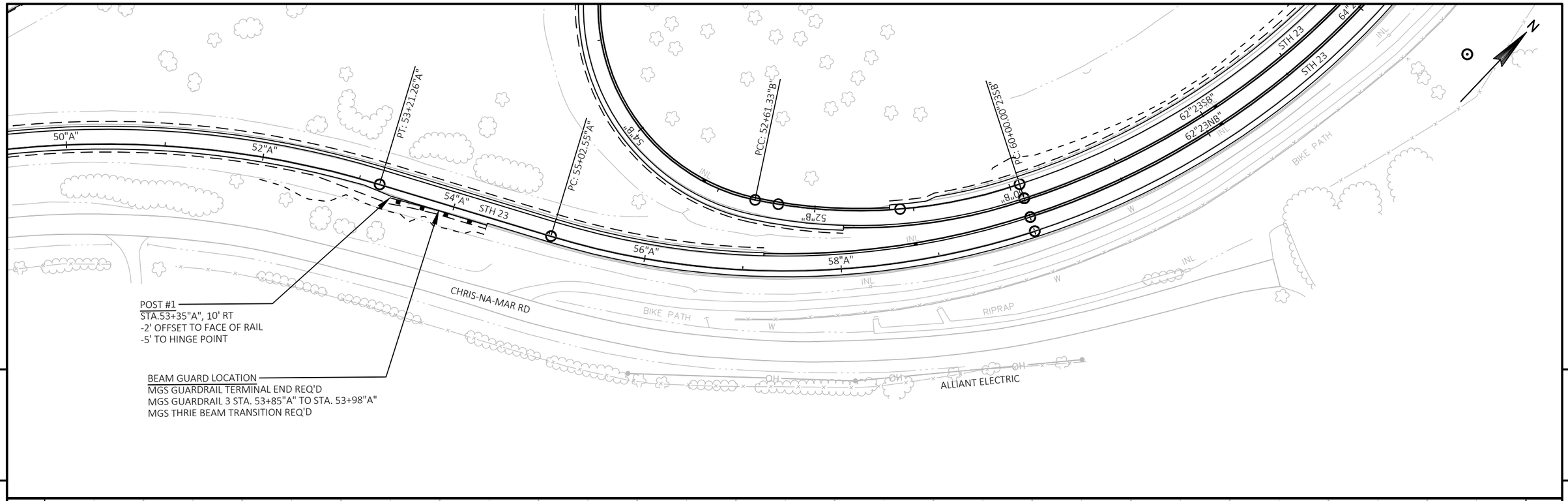


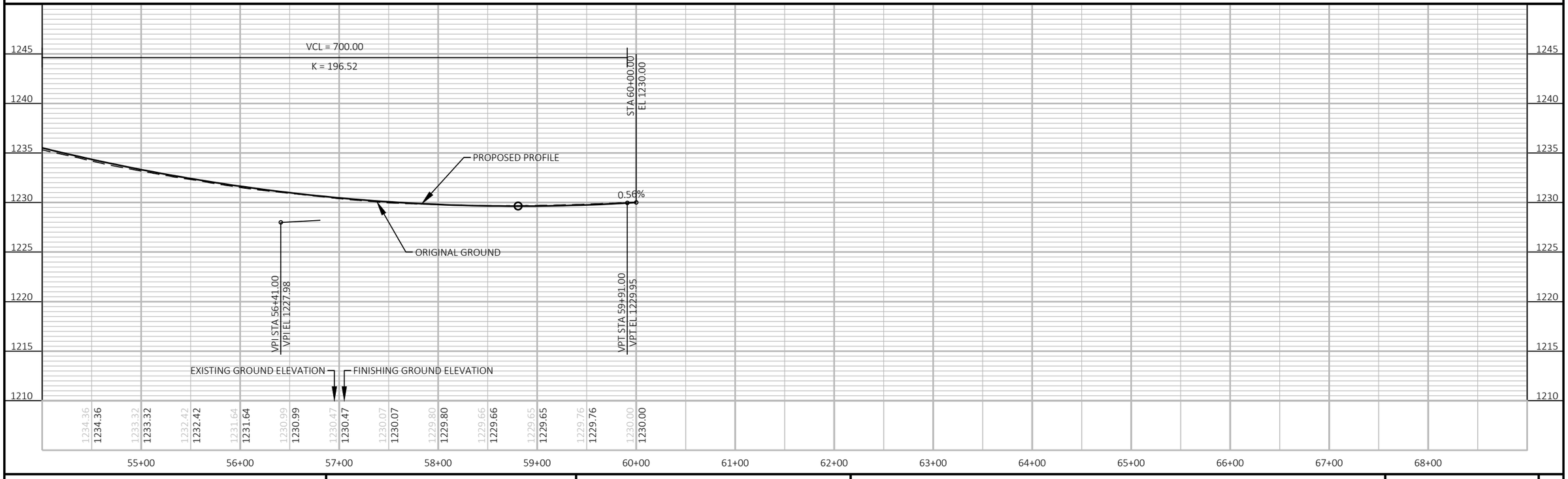
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP A	SHEET 239 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050106_PP.DWG
LAYOUT NAME - 050106_pp_01

PLOT DATE : 5/23/2018 3:31 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

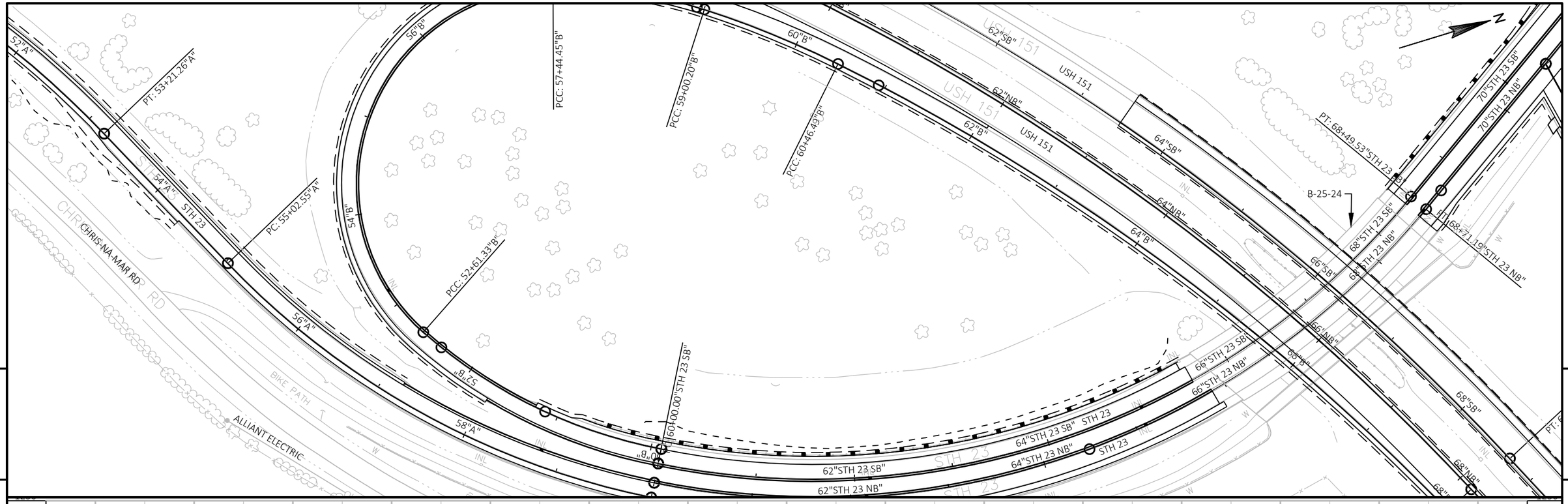


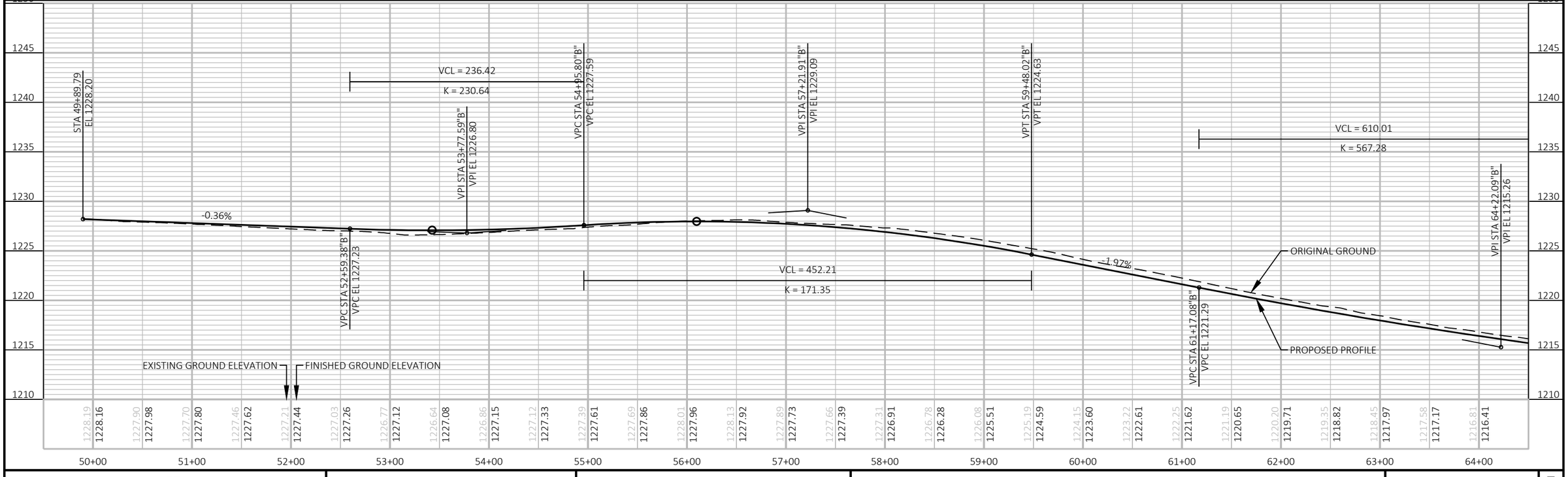


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP A	SHEET 240 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050106_PP.DWG
LAYOUT NAME - 050106_pp_02

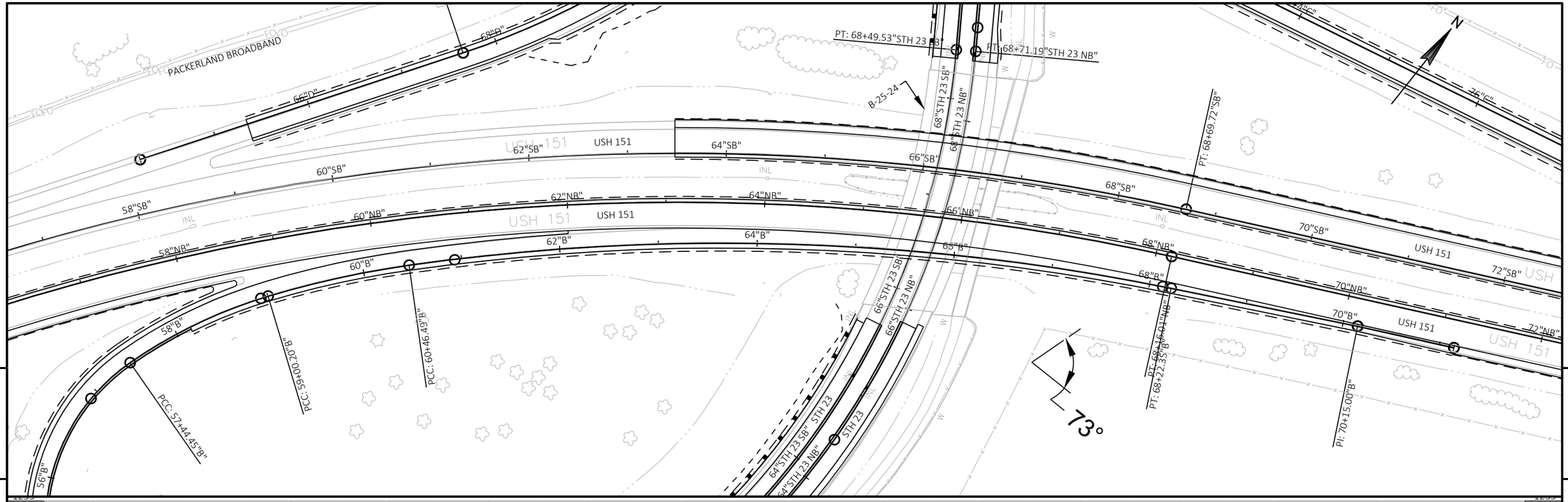
PLOT DATE : 5/23/2018 3:32 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

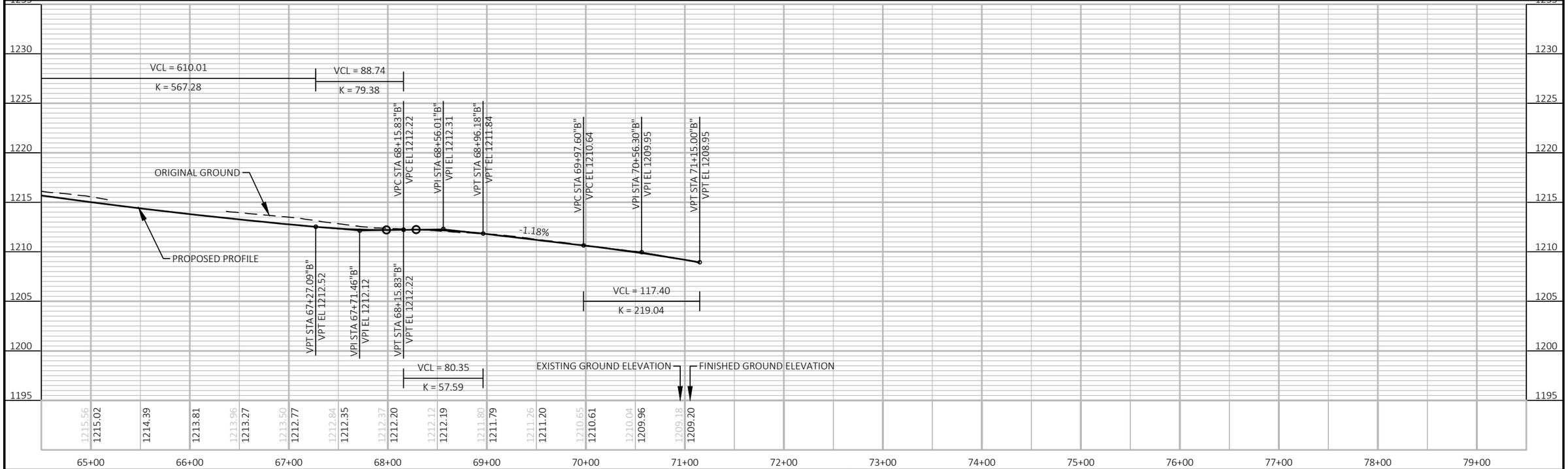




PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP B	SHEET 241	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050107_PP.DWG
LAYOUT NAME - 050107_pp_01
PLOT DATE : 5/23/2018 3:32 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

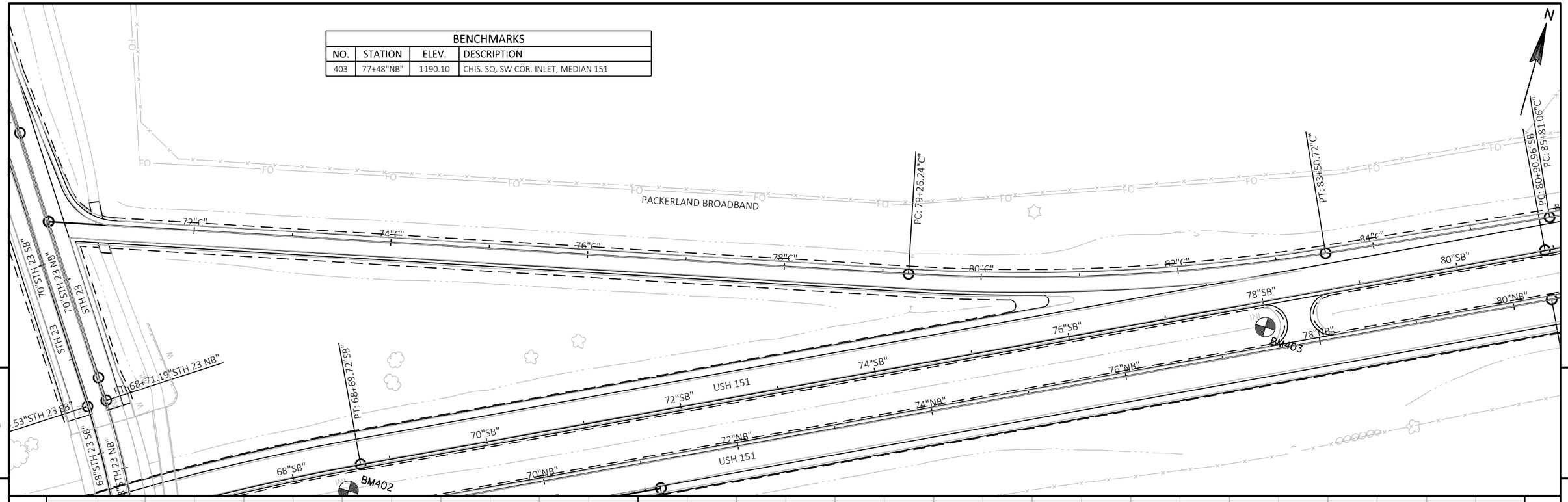


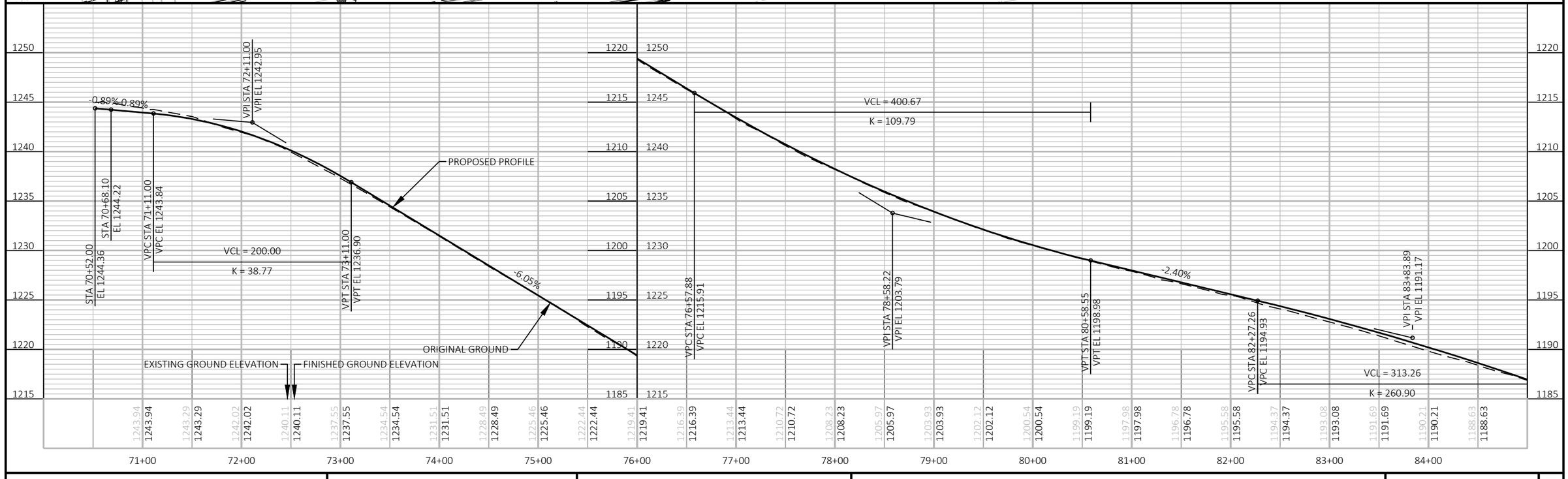


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP B	SHEET 242	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050107_PP.DWG
LAYOUT NAME - 050107_pp_02
PLOT DATE : 5/23/2018 3:33 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
403	77+48"NB"	1190.10	CHIS. SQ. SW COR. INLET, MEDIAN 151

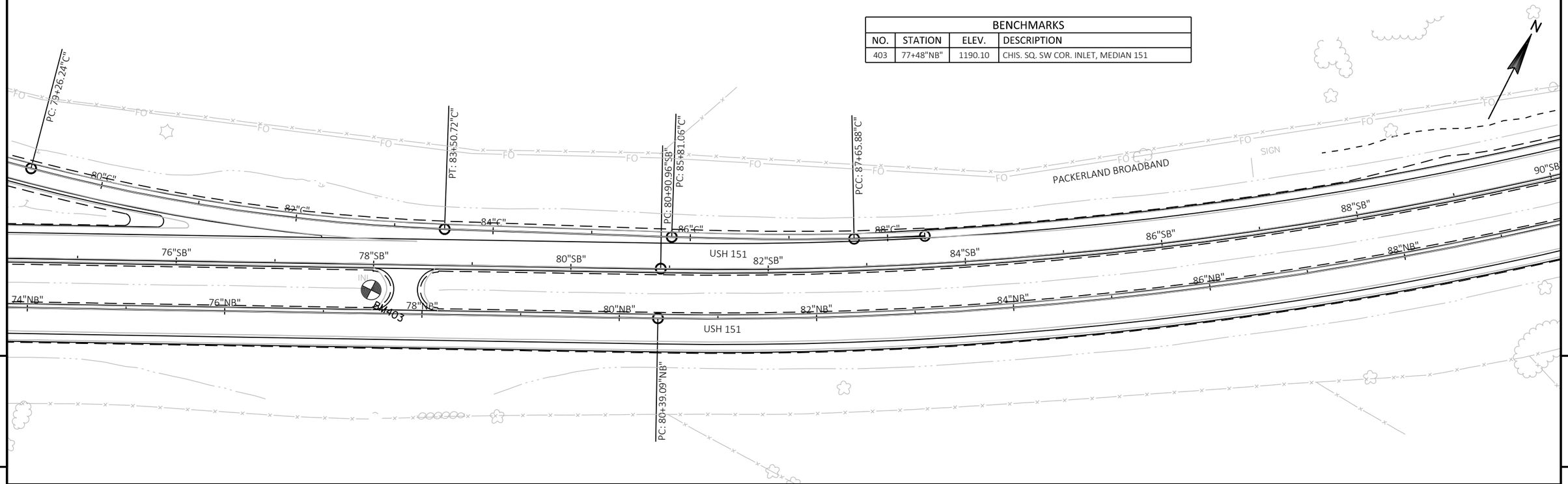


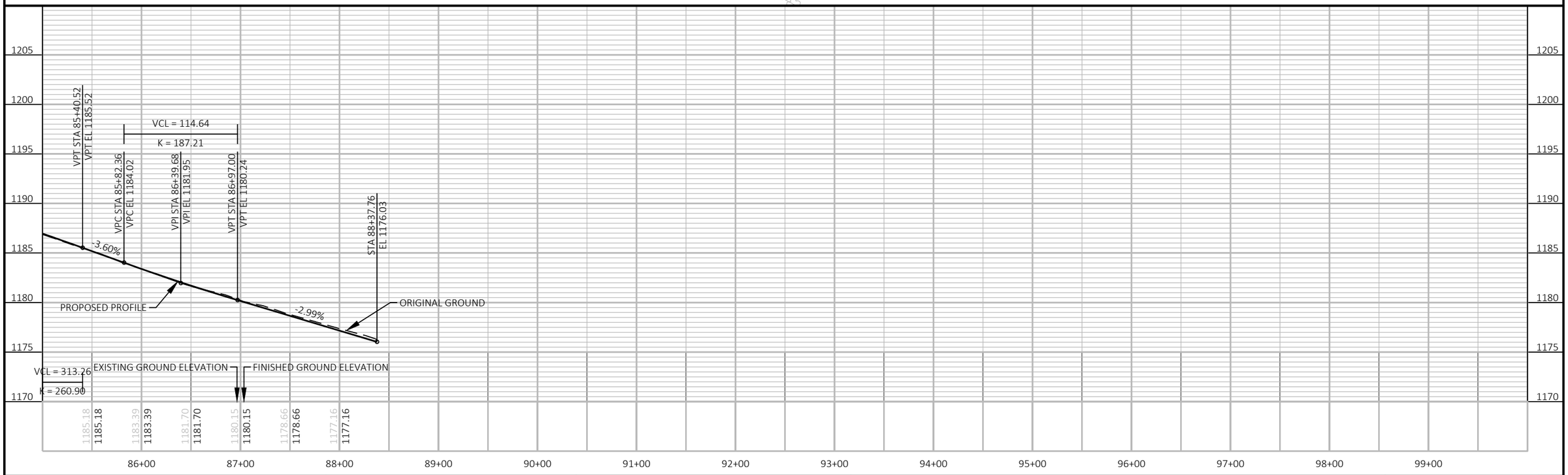


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP C	SHEET 243	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050108_PP.DWG
LAYOUT NAME - 050108_pp_01
PLOT DATE : 5/23/2018 3:33 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
403	77+48"NB"	1190.10	CHIS. SQ. SW COR. INLET, MEDIAN 151





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP C	SHEET 244	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050108_PP.DWG
LAYOUT NAME - 050108_pp_02
PLOT DATE : 5/23/2018 3:34 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA.68+58"D" TO STA.73+20"D"
MGS GUARDRAIL TERMINAL TYPE 2 REQ'D

POST #1
STA.73+69"D"
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

PACKERLAND BROADBAND
PCC: 67+64.78"D"
PT: 74+97.25"D"
PI: 76+90.32"D"
PI: 77+12.85"D"
58"SB"
58"NB"
58"B"
66"D"
68"D"
70"D"
72"D"
74"D"
76"D"
60"SB"
60"NB"
60"B"
62"SB"
62"NB"
62"B"
74'23SB"
74'23NB"
76'23SB"
76'23NB"
72'23SB"
72'23NB"
PCC: 57+44.45"B"
PCC: 59+00.20"B"
60+46.49"B"
USH 151
STH 23
INL
SGN
BIKE PATH
PACKERLAND BROADBAND

PROPOSED PROFILE
ORIGINAL GROUND
EXISTING GROUND ELEVATION
FINISHED GROUND ELEVATION
STA 65+35.00 VPC EL 1231.48
VPI STA 67+40.00 VPI EL 1229.60
VPT STA 69+40.61 VPT EL 1234.59
VPC STA 72+40.00 VPC EL 1242.05
VPI STA 74+40.00 VPI EL 1247.02
VPT STA 76+40.00 VPT EL 1244.42
STA 77+35.39 EL 1243.17
VCL = 401.21
K = 117.01
VCL = 400.00
K = 105.43
-0.94%
2.49%
-1.30%

1232.75	1231.86	1231.38	1231.39	1230.90	1231.07	1230.80	1230.97	1230.82	1231.08	1231.22	1231.40	1231.74	1231.94	1232.53	1232.69	1233.46	1233.65	1234.41	1234.83	1235.65	1236.07	1236.94	1237.32	1238.30	1238.56	1239.45	1239.80	1240.73	1241.05	1242.08	1242.29	1242.95	1243.37	1243.74	1244.21	1244.37	1244.81	1244.69	1245.18	1244.83	1245.31	1244.71	1245.21	1244.53	1244.86	1244.07	1244.28	1243.53	1243.63

65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP D	SHEET 245	E

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
412	199+00"NB"	1151.95	CHIS. SQ. SW COR. INLET, MEDIAN 151

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA.198+47.5"E" TO STA.201+35"E"
MGS GUARDRAIL TERMINAL TYPE 2

POST #1
STA.197+97"E", 10' RT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

STA 194+84.53
EL 1150.87

VPC STA 196+30.00"E"
VPC EL 1152.47

VPI STA 198+20.00"E"
VPI EL 1154.57

VPC STA 200+10.00"E"
VPC EL 1155.52

VPI STA 201+70.00"E"
VPI EL 1156.32

VPC STA 203+32.00"E"
VPC EL 1155.92

VPI STA 205+67.00"E"
VPI EL 1155.33

VPT STA 208+02.00"E"
VPT EL 1156.74

1.10%

-0.25%

VCL = 380.00
K = 628.27

VCL = 320.00
K = 426.80

VCL = 470.00
K = 553.10

ORIGINAL GROUND

PROPOSED PROFILE

EXISTING GROUND ELEVATION

FINISHED GROUND ELEVATION

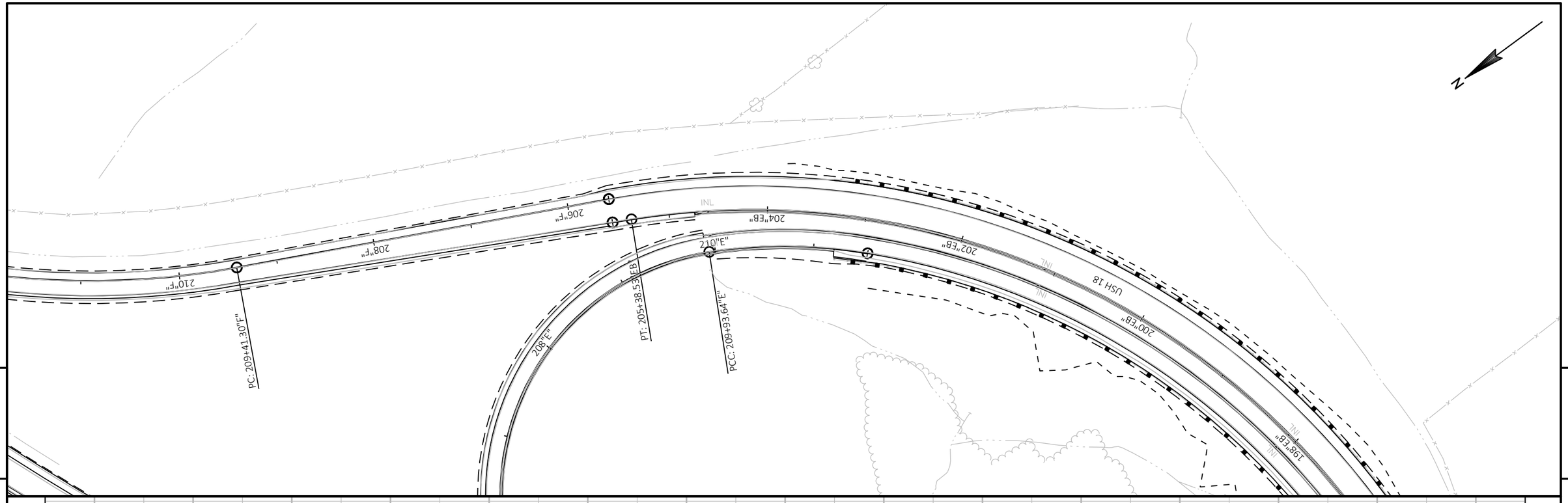
195+00	196+00	197+00	198+00	199+00	200+00	201+00	202+00	203+00	204+00	205+00	206+00	207+00	208+00	209+00
1150.95	1151.04	1151.56	1151.59	1152.11	1152.15	1152.67	1152.70	1153.29	1153.21	1153.78	1153.69	1154.21	1154.13	1154.54	1154.52	1154.87	1154.88	1155.15	1155.19	1155.48	1155.46	1155.78	1155.69	1156.03	1155.87	1156.22	1156.00	1156.21	1156.07	1155.97	1156.09	1155.94	1156.07	1155.98	1155.99	1155.85	1155.94	1155.79	1155.93	1155.65	1155.95	1155.83	1156.01	1156.11	1156.12	1156.20	1156.26	1156.39	1156.43	1156.67	1156.65	1156.84	1156.90	1156.96	1157.18	1157.44	1157.45

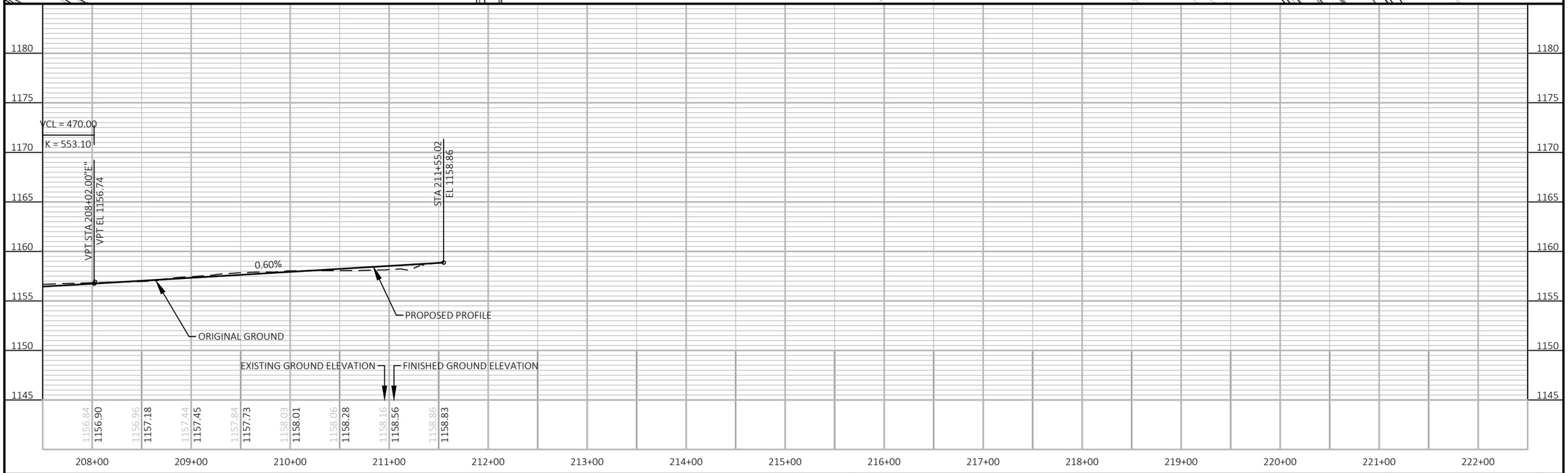
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP E	SHEET 246	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050110_PP.DWG
LAYOUT NAME - 050110_pp_01

PLOT DATE : 5/23/2018 3:35 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



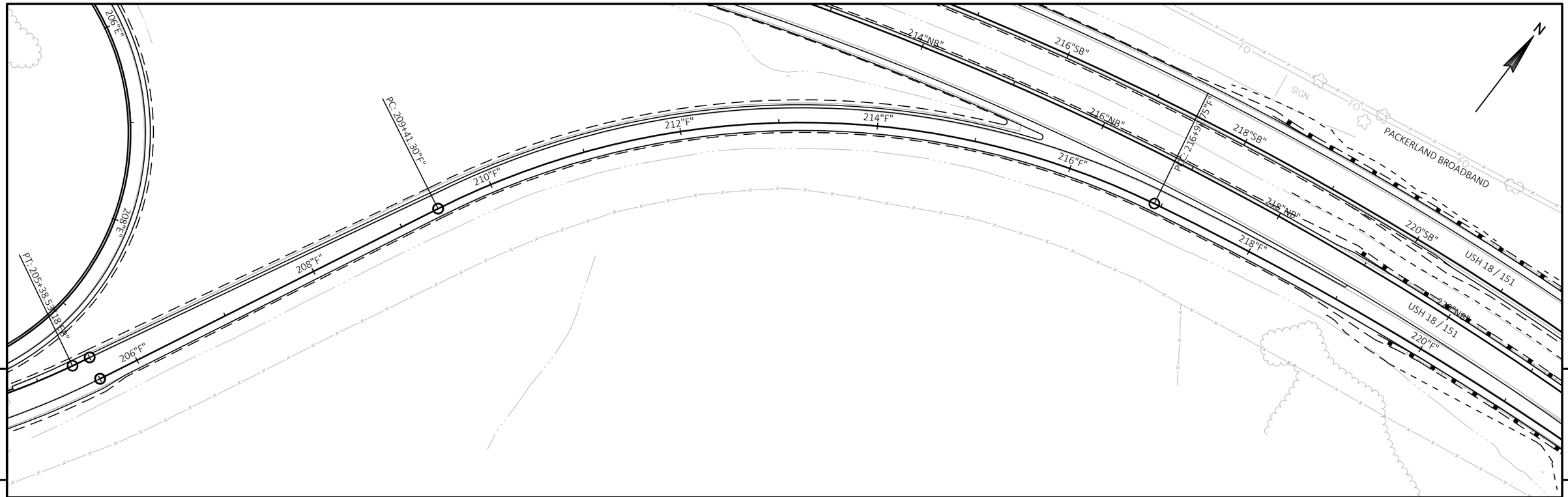


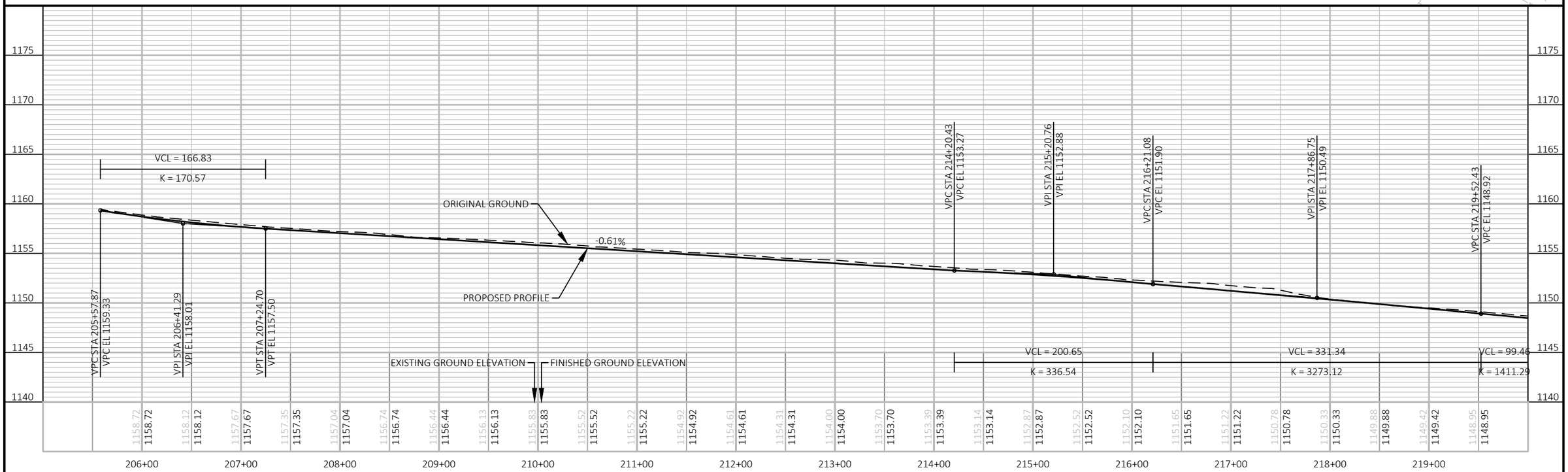
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP E	SHEET 247	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050110_PP.DWG
LAYOUT NAME - 050110_pp_02

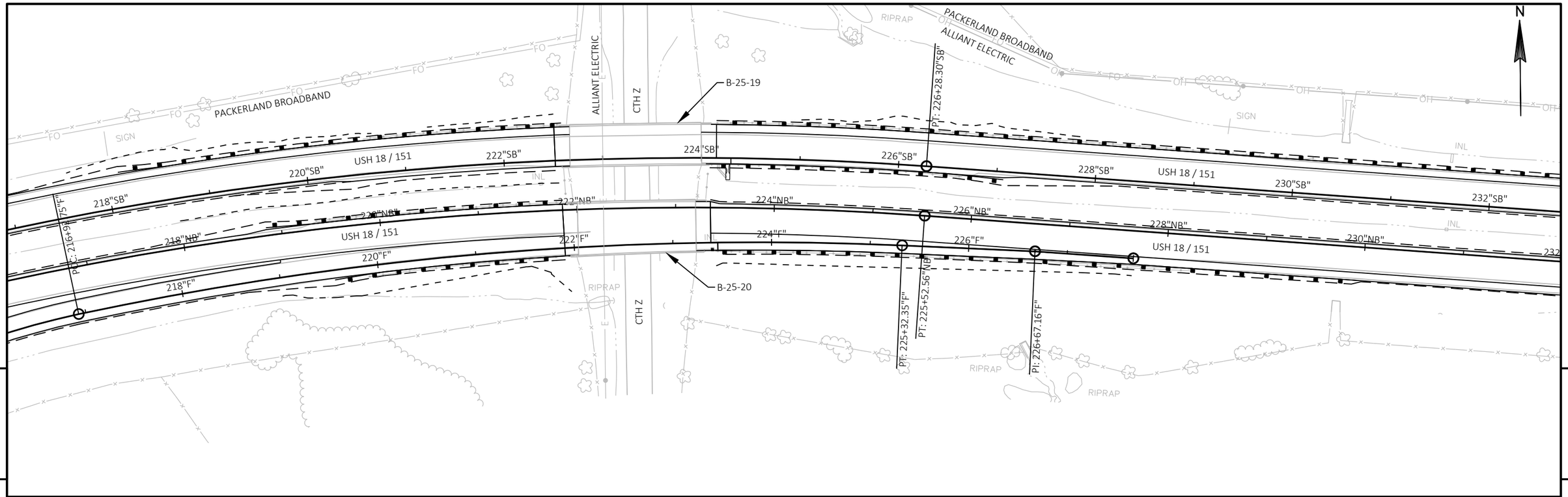
PLOT DATE : 5/23/2018 3:35 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

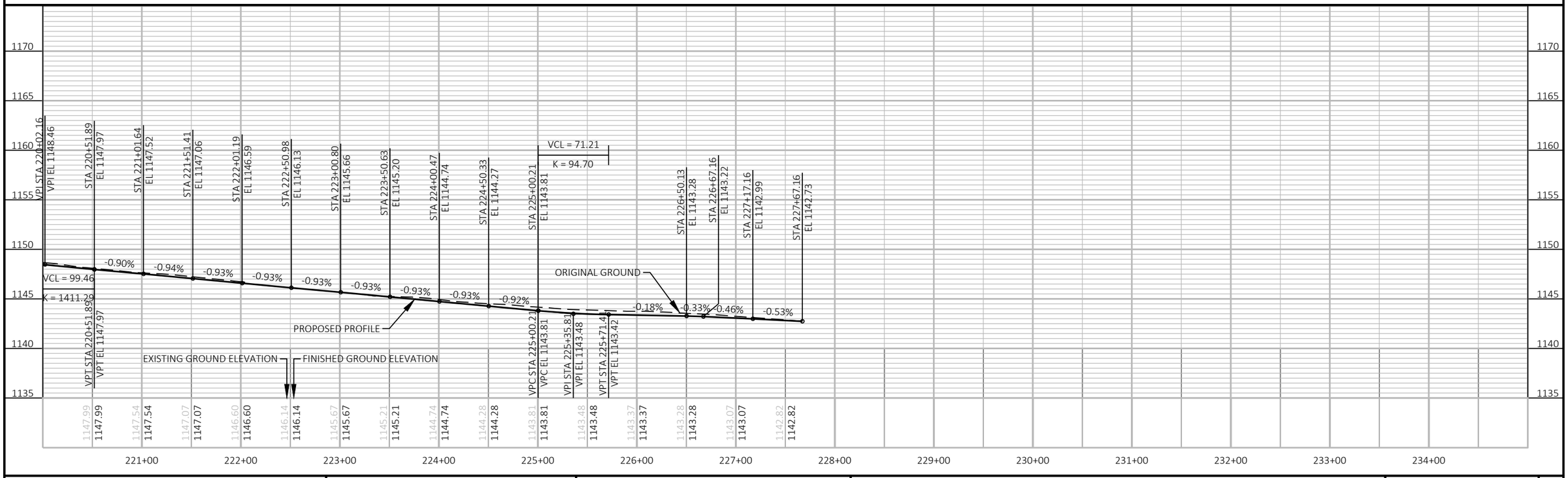
WISDOT/CADDS SHEET 44





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP F	SHEET 248	E

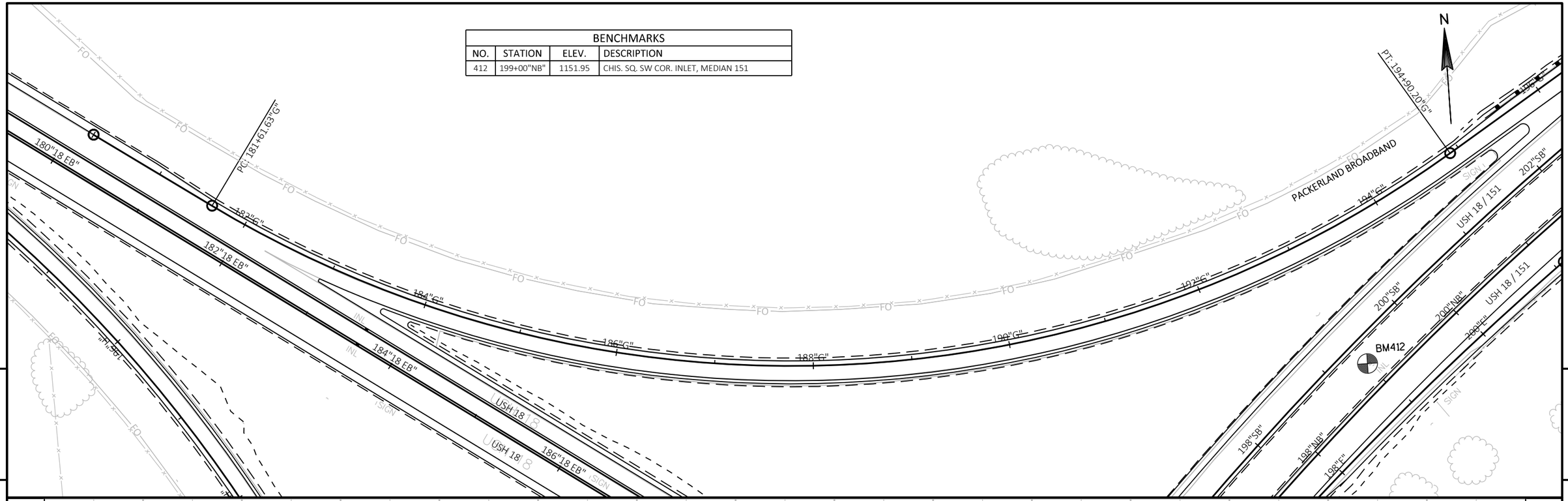


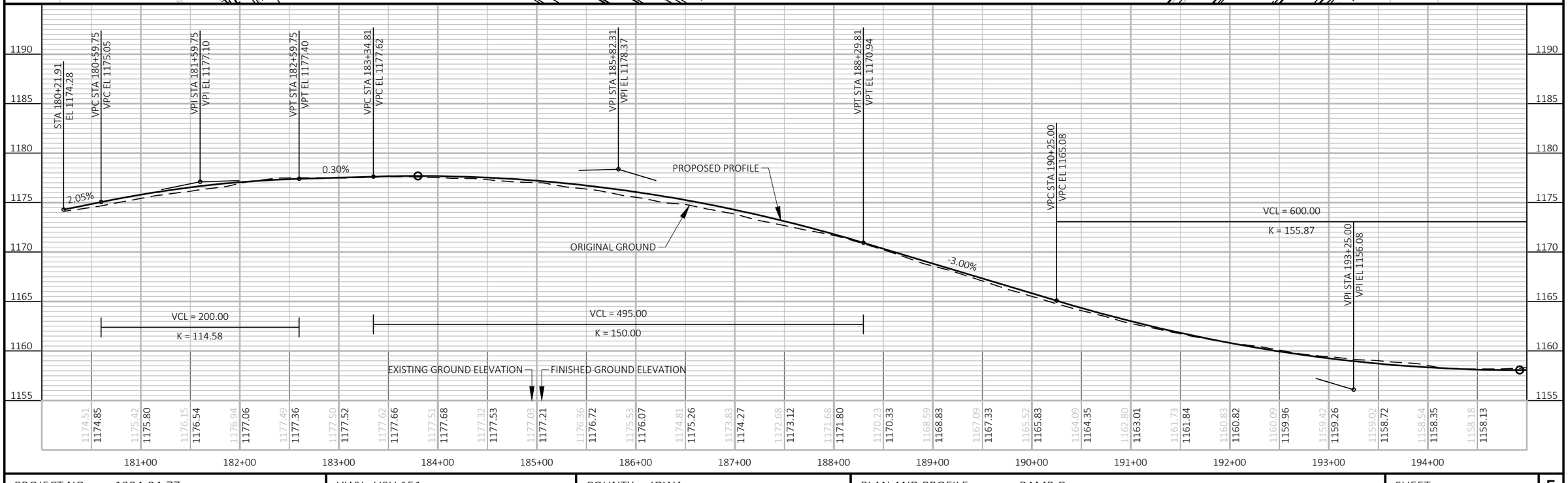


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP F	SHEET 249	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050111_PP.DWG
LAYOUT NAME - 050111_pp_02
PLOT DATE : 5/23/2018 3:36 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
412	199+00"NB"	1151.95	CHIS. SQ. SW COR. INLET, MEDIAN 151





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP G	SHEET 250	E

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
412	199+00"NB"	1151.95	CHIS. SQ. SW COR. INLET, MEDIAN 151
413	212+82"NB"	1150.75	CHIS. SQ. RCCP

BEAM GUARD LOCATION
MGS GUARDRAIL TERMINAL END REQ'D
MGS GUARDRAIL 3 STA.195+39"G" TO STA.199+89"G"
MGS GUARDRAIL TERMINAL TYPE 2

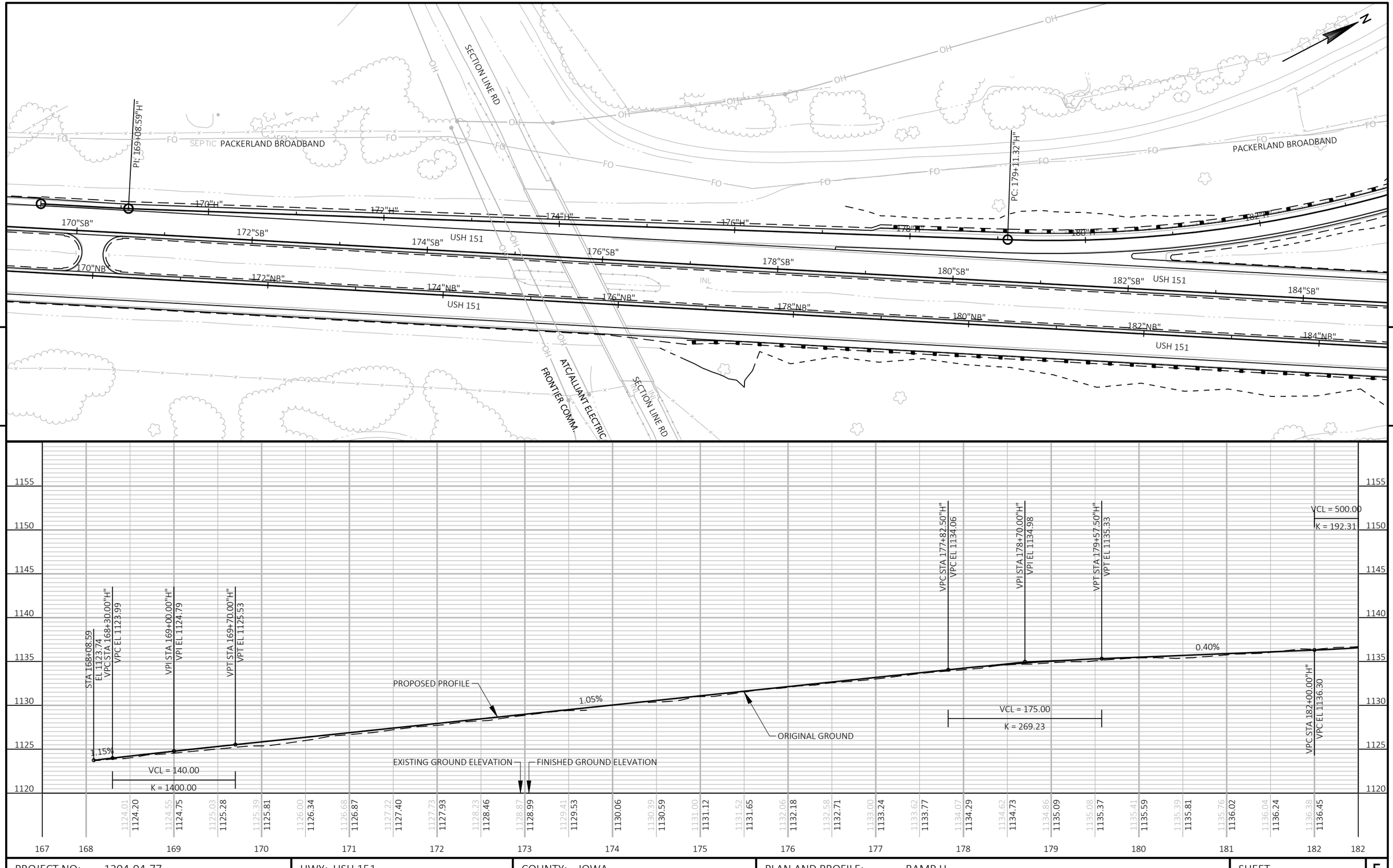
POST #1
STA.200+39"G", 10' LT
-2' OFFSET TO FACE OF RAIL
-5' TO HINGE POINT

PT: 194+90.20"G"
PC: 197+83.91"G"
PCC: 206+26.43"G"
PACKERLAND BROADBAND
PACKERLAND BROADBAND
FO
SIGN
USH 18/151
USH 18 / 151
194"G"
196"G"
198"G"
200"G"
202"G"
204"G"
206"G"
200"SB"
202"SB"
204"SB"
206"SB"
208"SB"
210"SB"
212"SB"
214"SB"
200"NB"
202"NB"
204"NB"
206"NB"
208"NB"
210"NB"
212"NB"
214"NB"
200"E"
202"E"
204"E"
214"F"
BM412
BM413
5
5

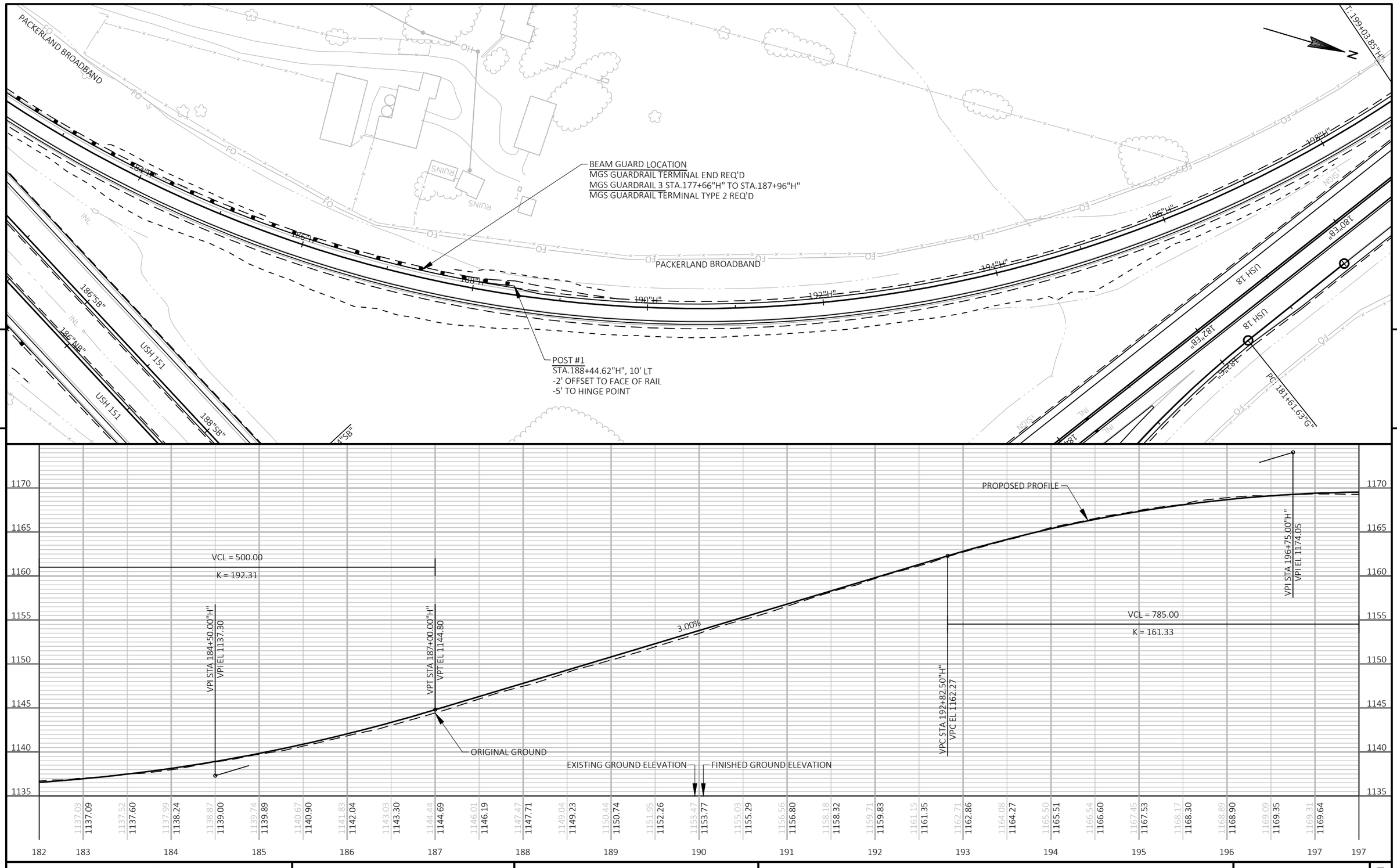
1180
1175
1170
1165
1160
1155
1150
1145

VCL = 600.00
K = 155.87
VPC STA 196+90.00
VPC EL 1159.18
VPI STA 200+15.00
VPI EL 1161.94
VPT STA 203+40.00
VPT EL 1160.16
STA 206+71.45
EL 1158.33
PROPOSED PROFILE
ORIGINAL GROUND
0.85%
-0.55%
VPT STA 196+25.00
VPT EL 1158.63
VCL = 650.00
K = 464.51
EXISTING GROUND ELEVATION
FINISHED GROUND ELEVATION

| | | |

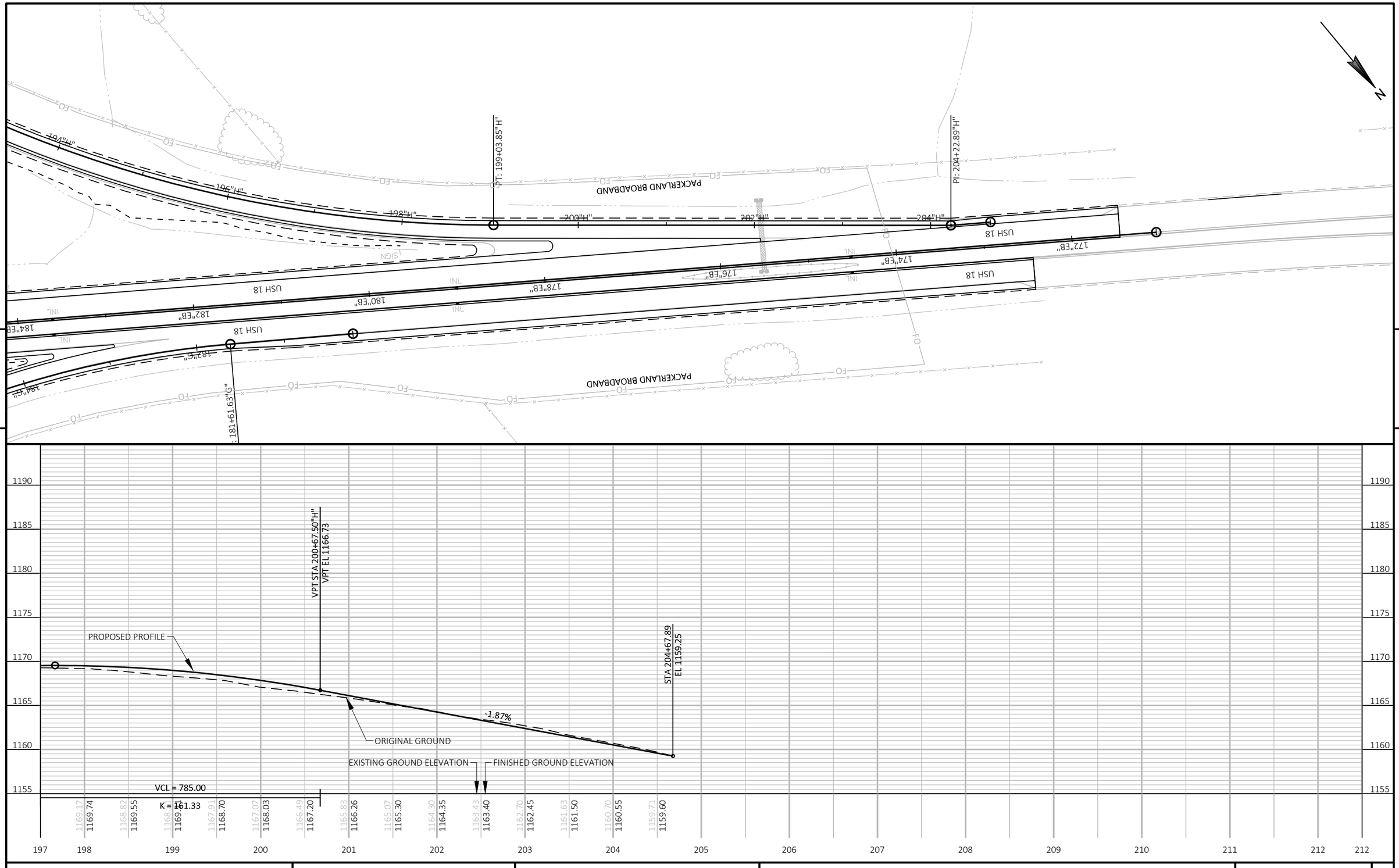


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP H	SHEET 252	E



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP H	SHEET 253	E

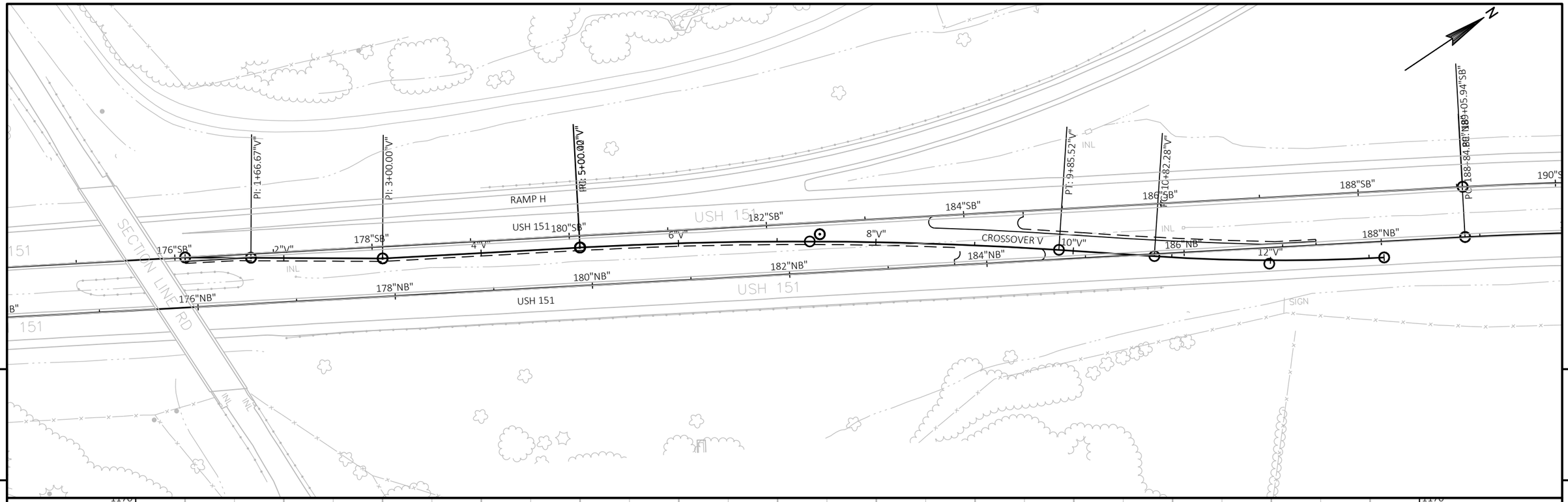
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050113_PP.DWG
LAYOUT NAME - 050113_pp_02
PLOT DATE : 5/23/2018 3:38 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

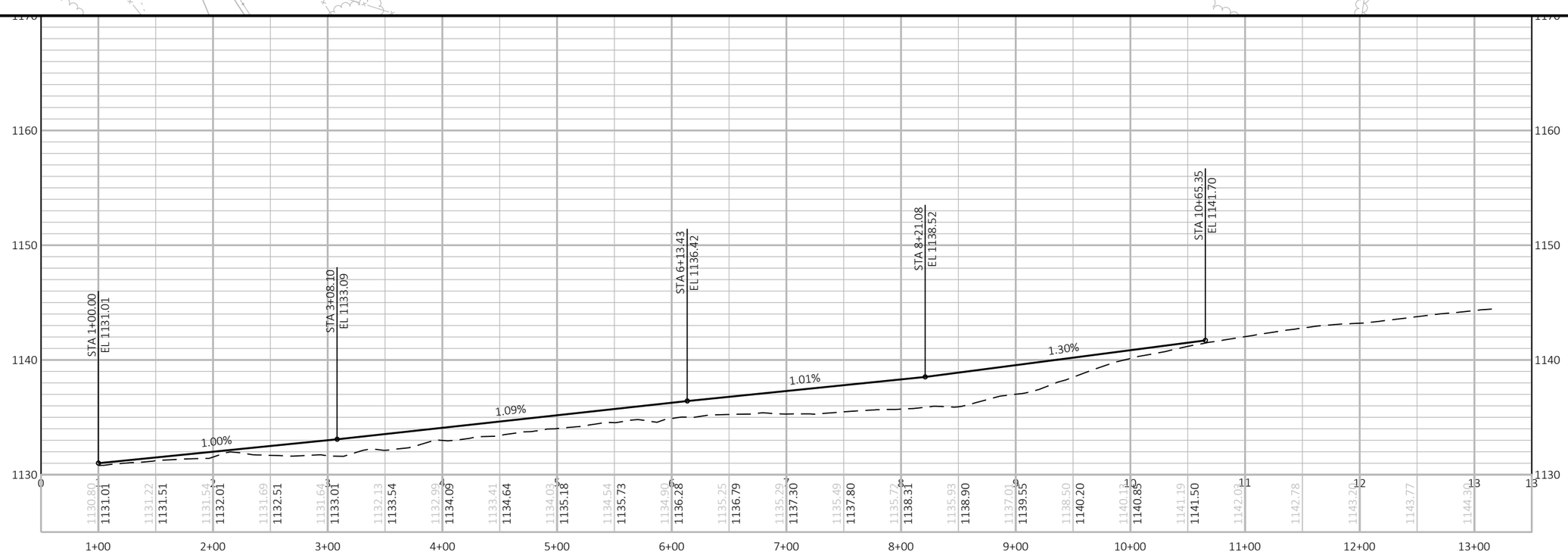


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: RAMP H	SHEET 254	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050113_PP.DWG
LAYOUT NAME - 050113_pp_03

PLOT DATE : 5/23/2018 3:39 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT



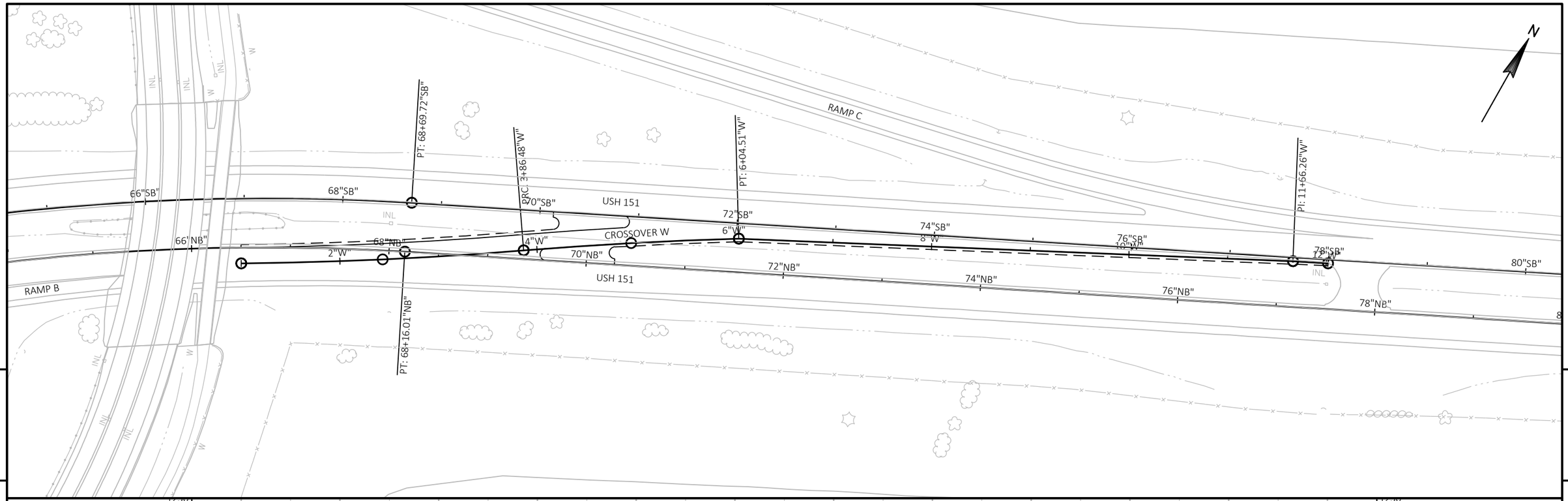


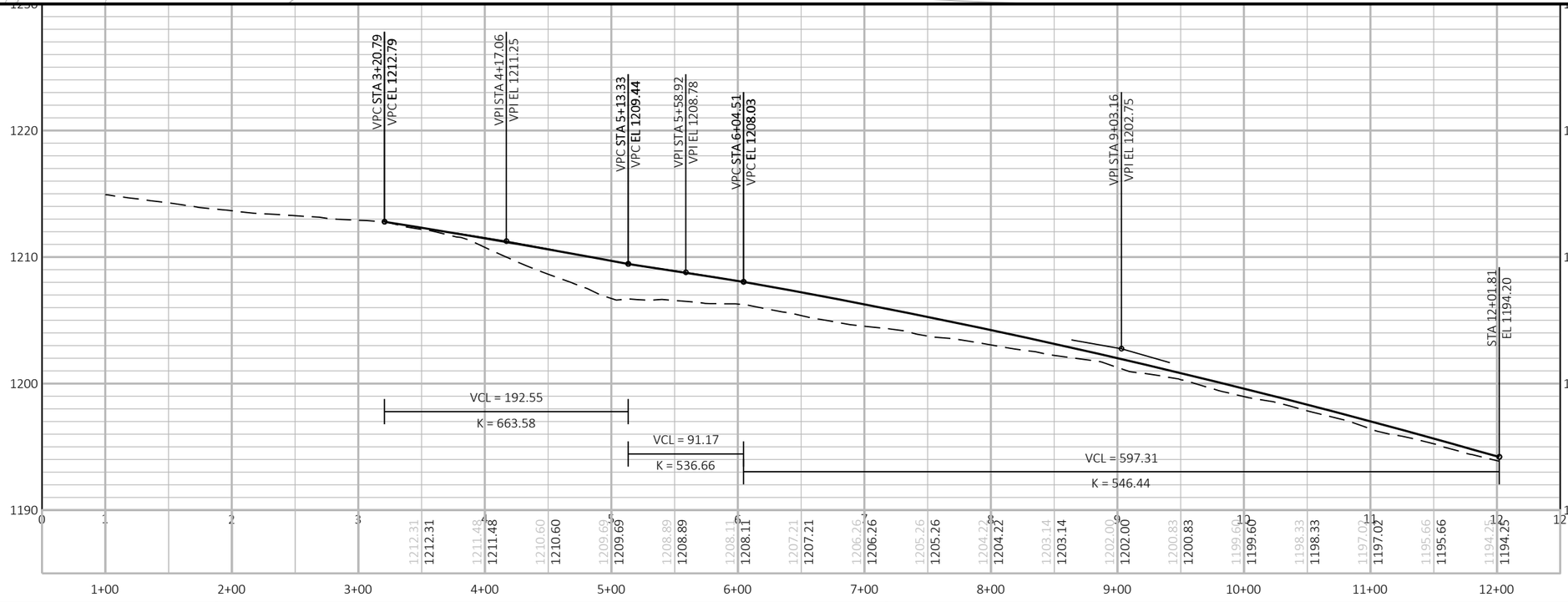
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER V	SHEET 255	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050114_PP.DWG
LAYOUT NAME - 050114_PP_V_1

PLOT DATE : 5/25/2018 7:23 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



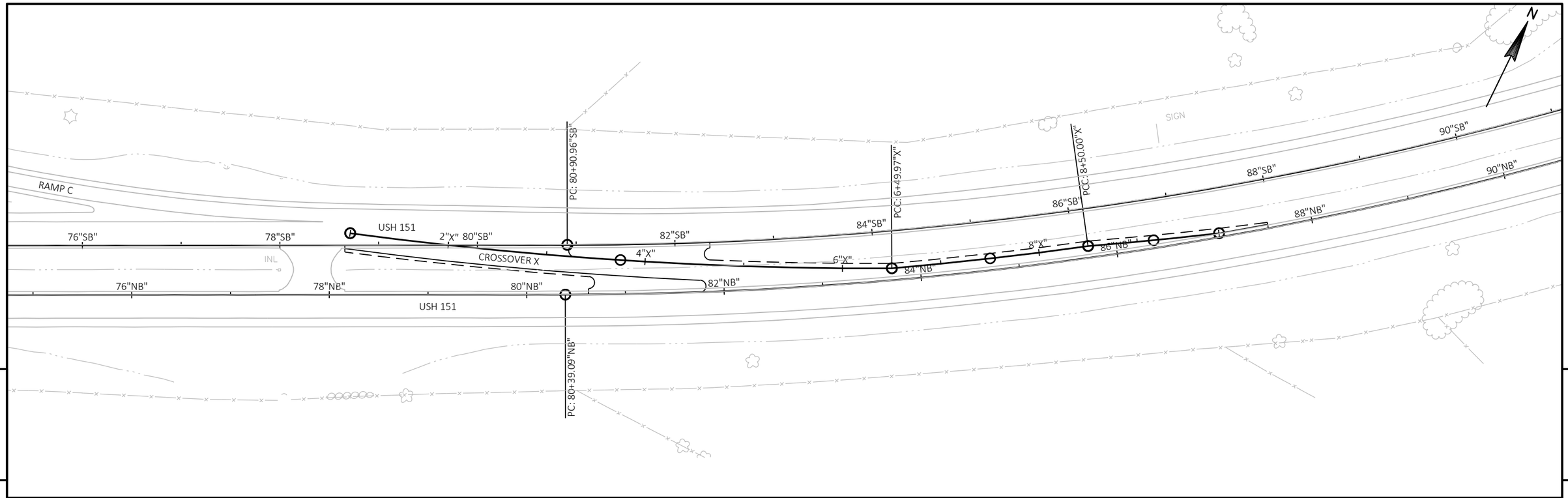


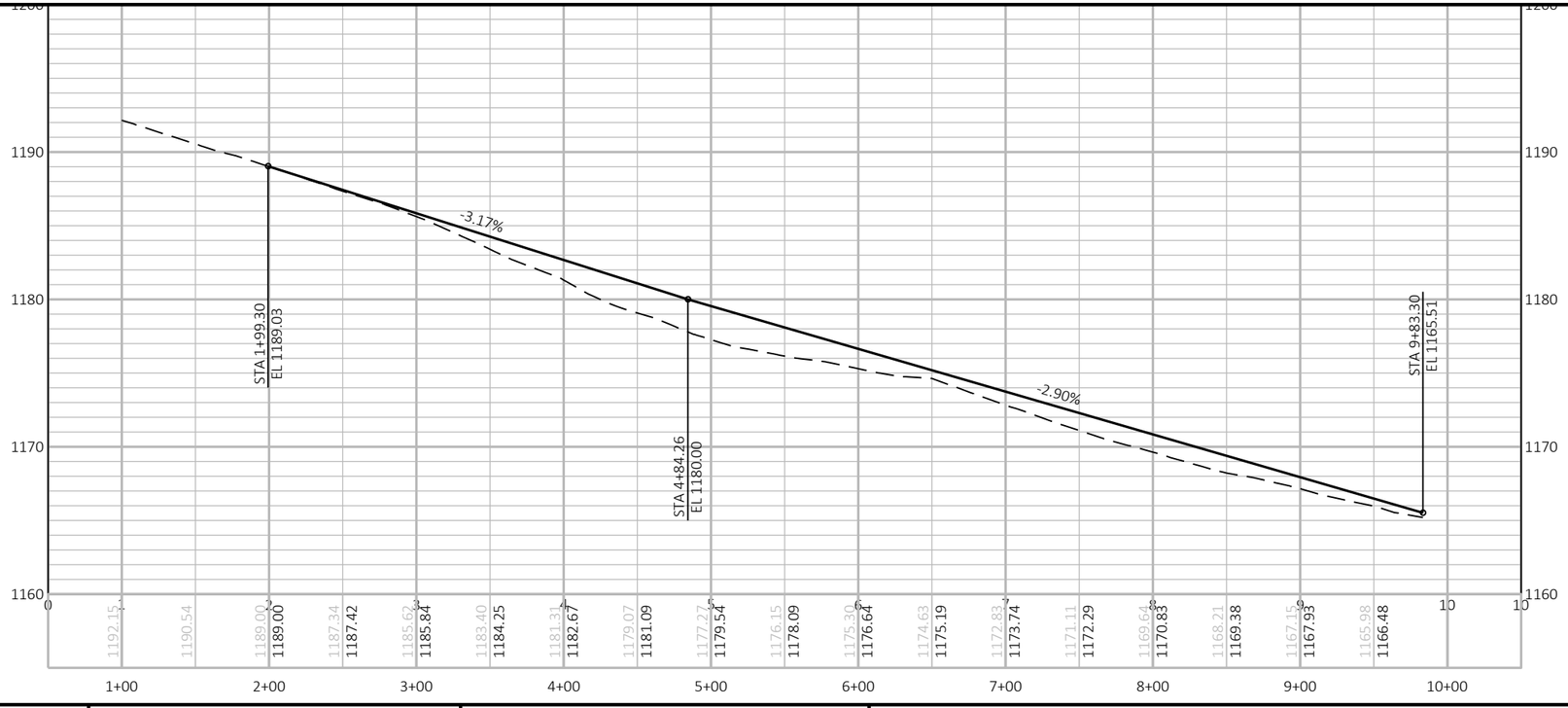
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER W	SHEET 256	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050115_PP.DWG
LAYOUT NAME - 050115_pp_W_1

PLOT DATE : 5/25/2018 7:28 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

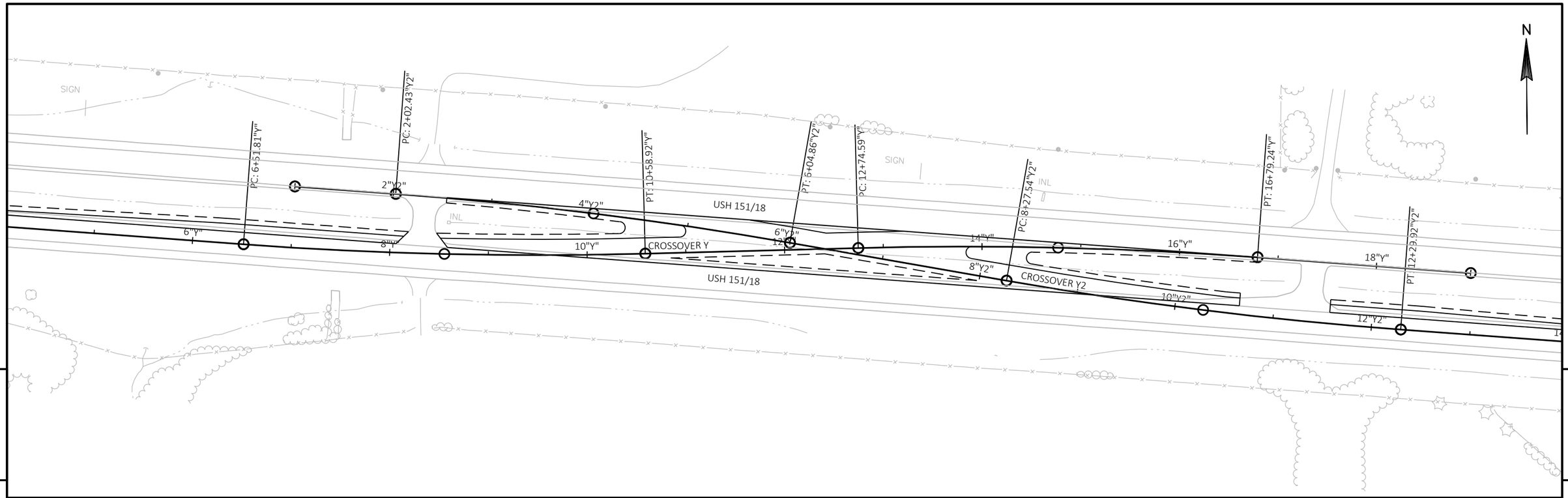


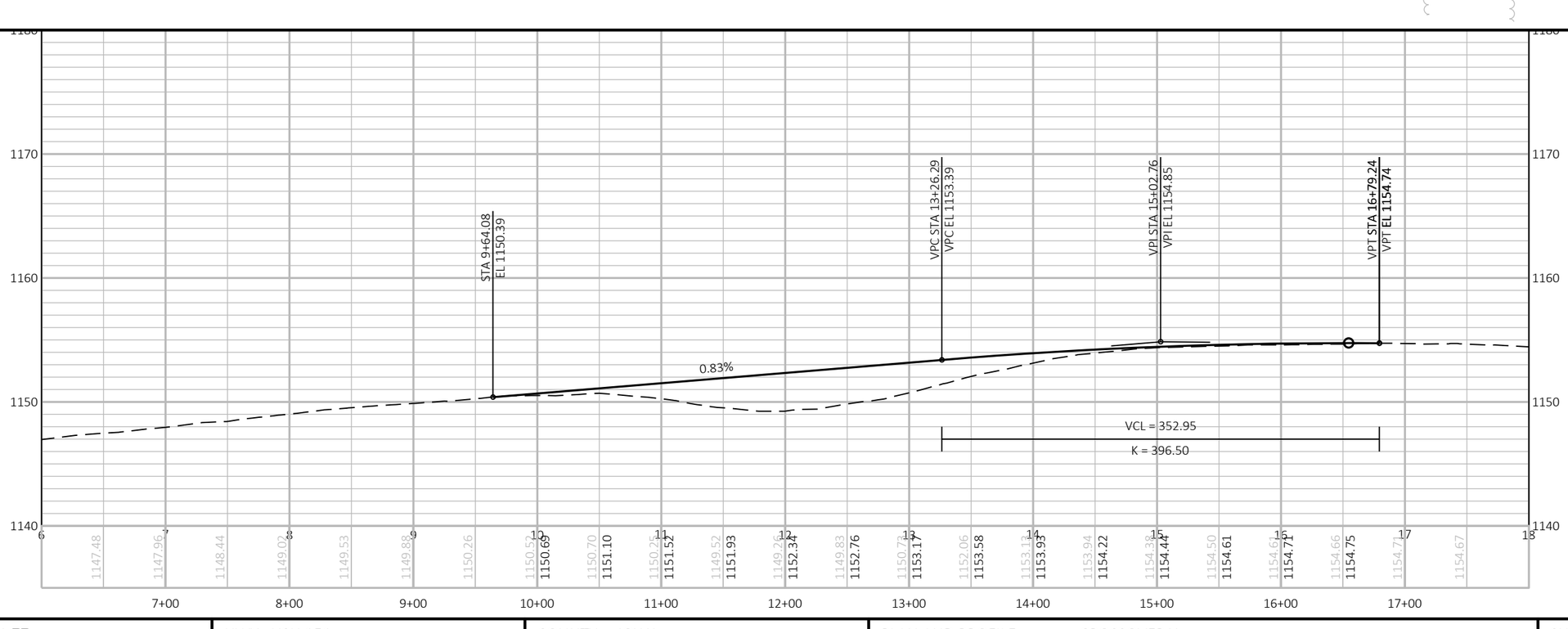


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER X	SHEET 257	E

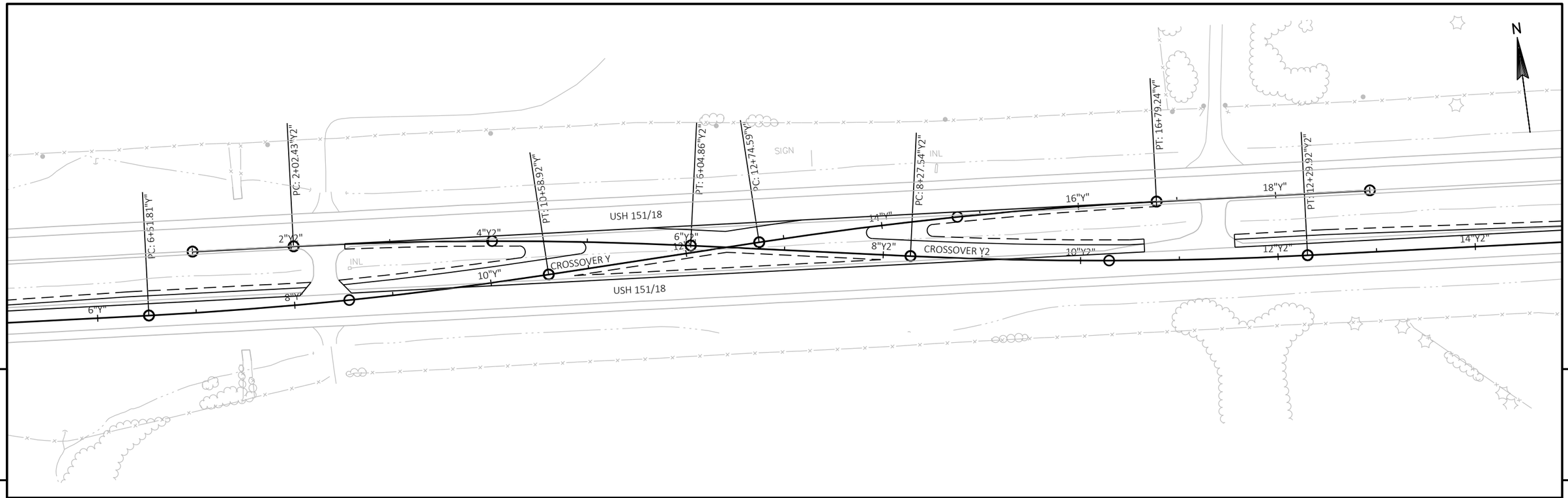
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050116_PP.DWG
LAYOUT NAME - 050116_PP_X_1

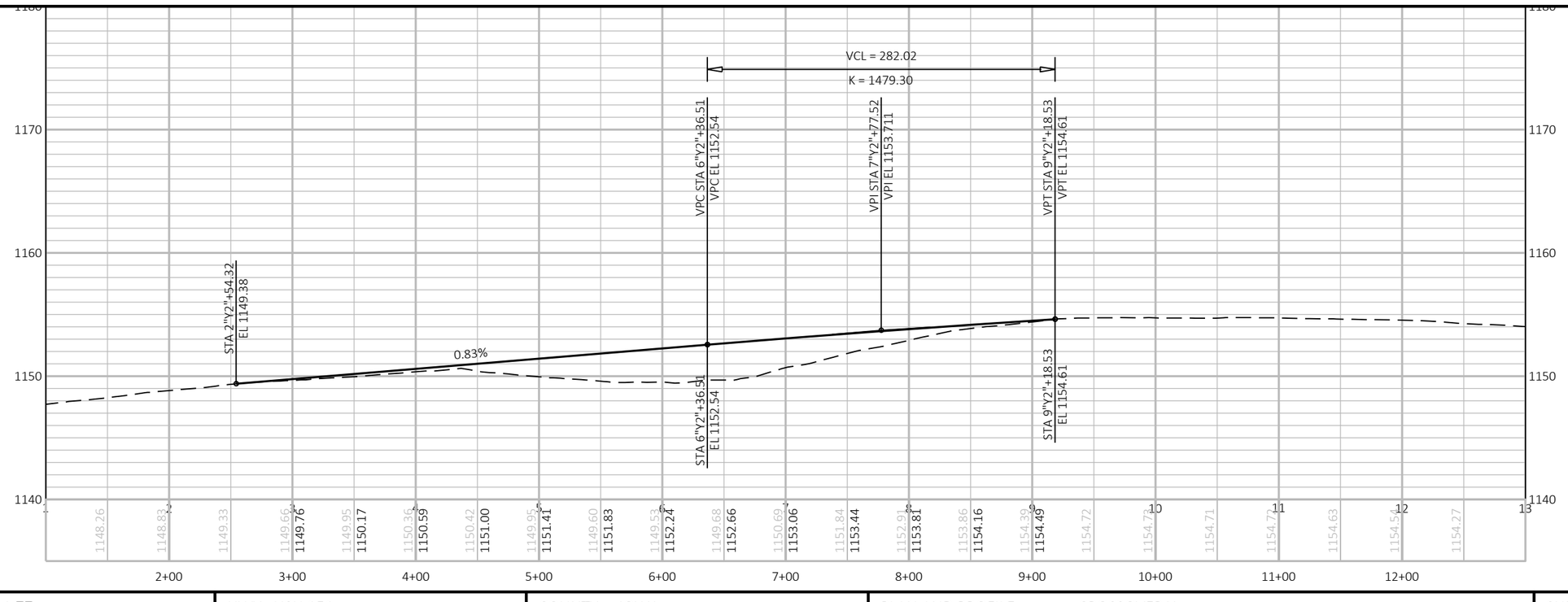
PLOT DATE : 5/25/2018 7:35 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER Y	SHEET 258	E



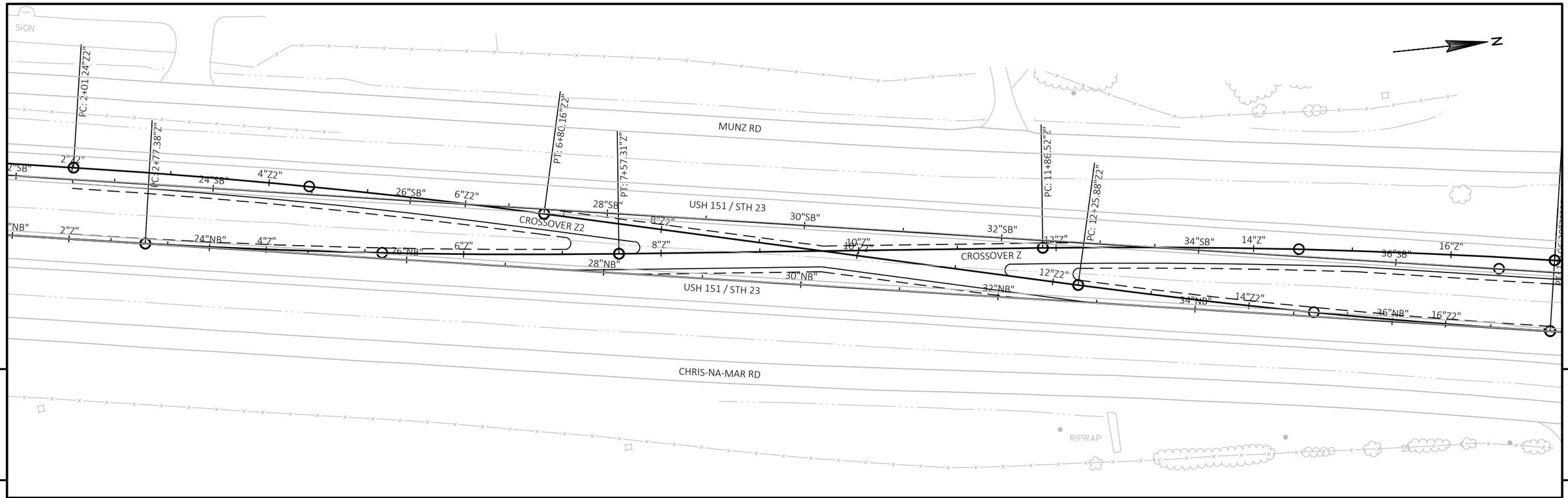


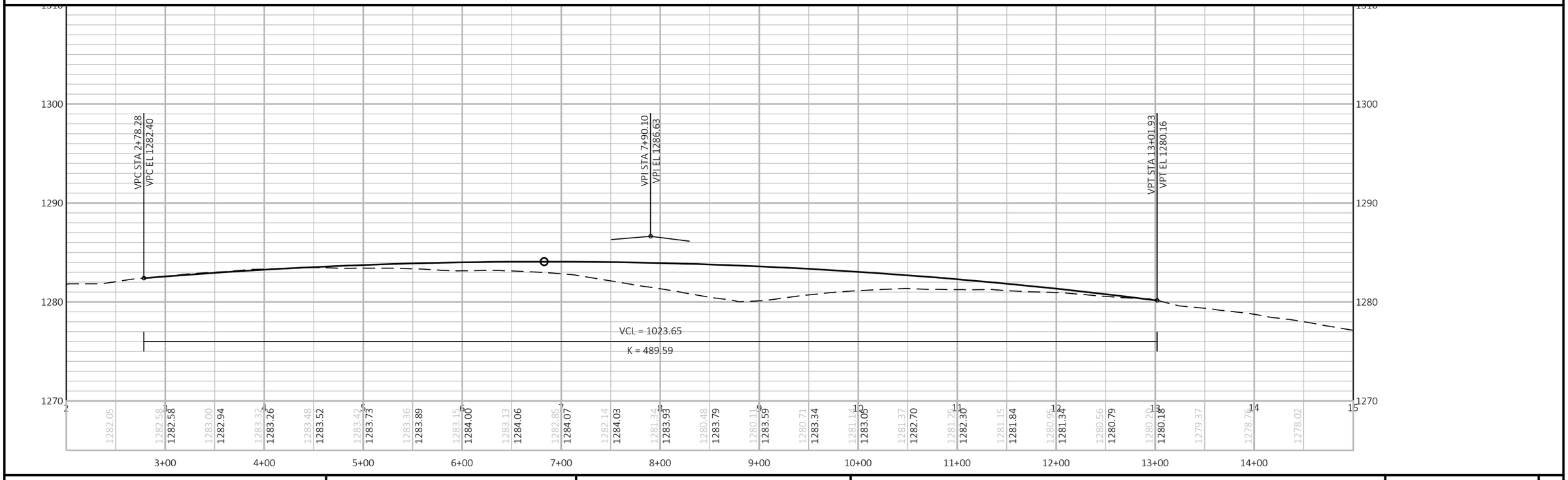
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER Y	SHEET 259	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\050117_PP.DWG
LAYOUT NAME - 050117_Y_2

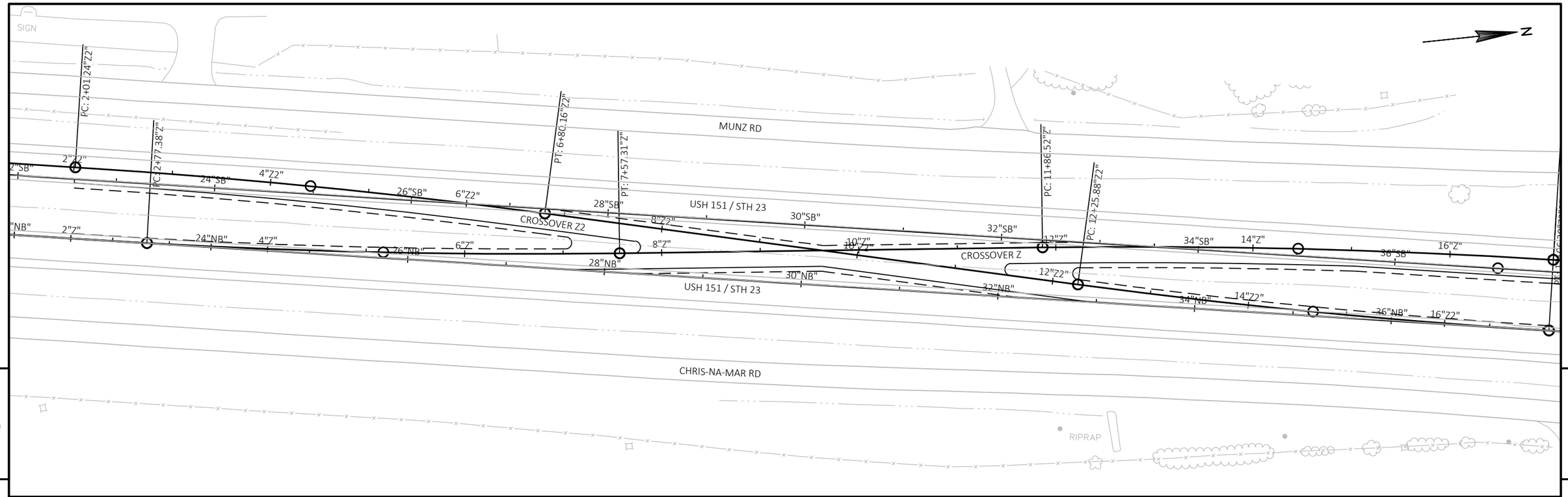
PLOT DATE : 5/25/2018 7:41 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:100 FT

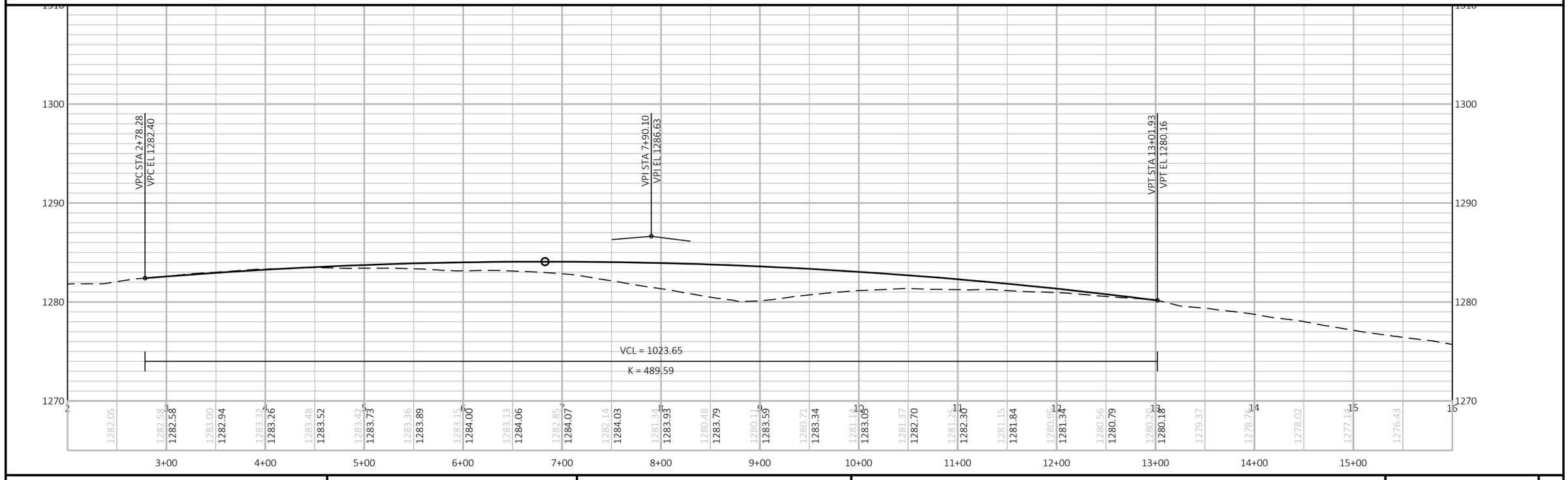
WISDOT/CADDS SHEET 44





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER Z	SHEET 260	E





PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	PLAN AND PROFILE: CROSSOVER Z	SHEET 261	E

Standard Detail Drawing List

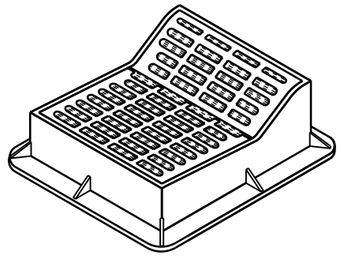
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
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
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
13A03-06	CONCRETE PAVEMENT SHOULDERS
13A08-01	ASPHALTIC RUMBLE STRIPS AT INTERSECTION
13A09-01	CONCRETE RUMBLE STRIPS AT INTERSECTION
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
13C18-06A	CONCRETE PAVEMENT JOINTING
13C18-06B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-06C	CONCRETE PAVEMENT JOINT TYPES
13C18-06D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B18-06B	STEEL PLATE BEAM GUARD, CLASS "A" AT MEDIAN APPROACH TO BRIDGES
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B28-03	GUARDRAIL MOW STRIP
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

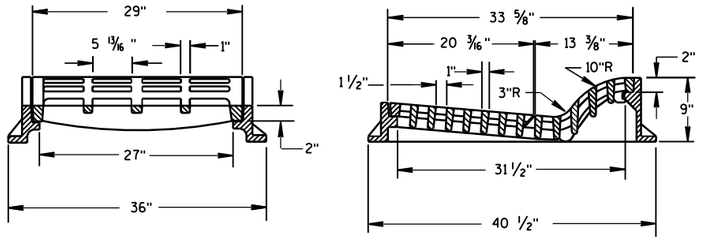
6

Standard Detail Drawing List

15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-04A	FLEXIBLE DELINEATOR POST
15A04-04B	DELINEATOR POST WITH REFLECTIVE SHEETING
15A04-04C	DELINEATOR WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D07-04	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D08-06	TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER
15D11-07	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-04B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D21-05	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

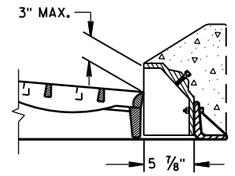
6





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

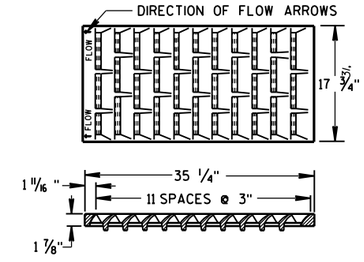
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

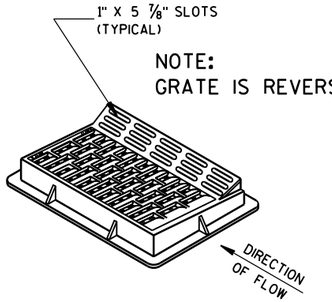
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

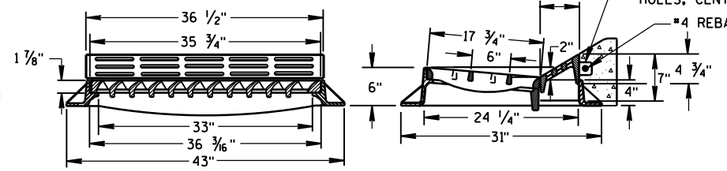
GENERAL NOTES

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.



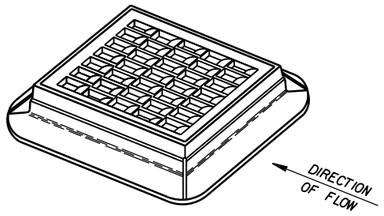


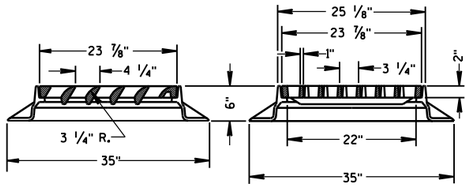


TYPE "HM"

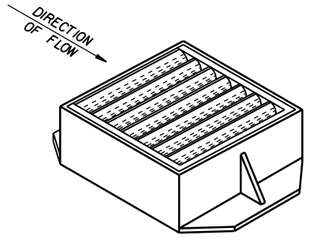
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

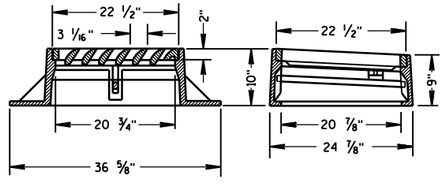
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



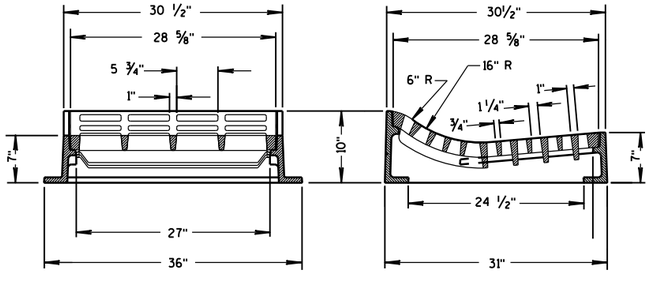


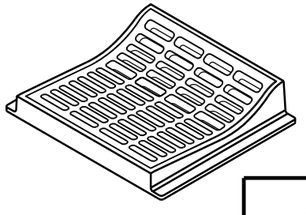
TYPE "S"





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

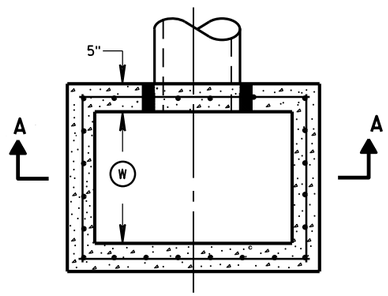
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

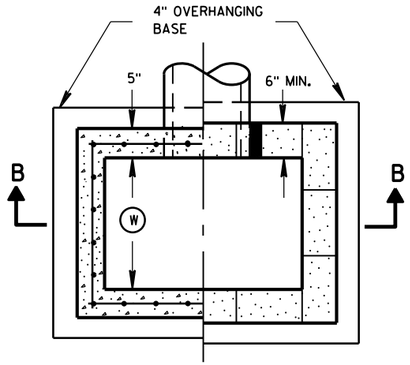
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

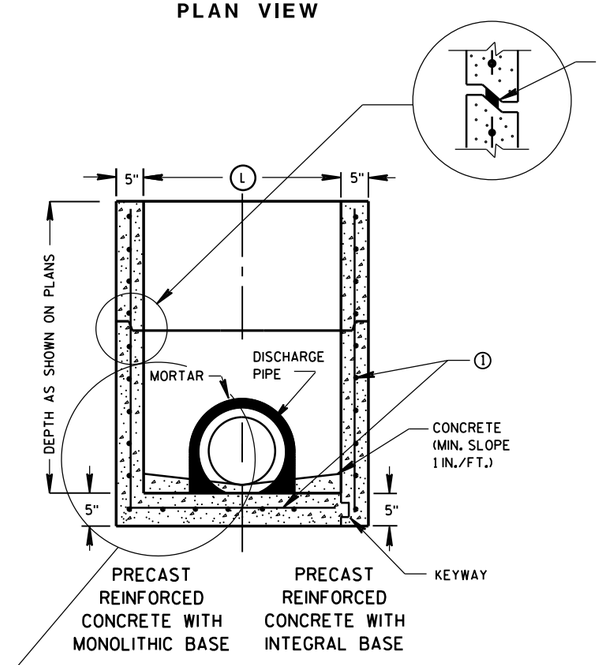
6
S.D.D. 8 A 5-19c



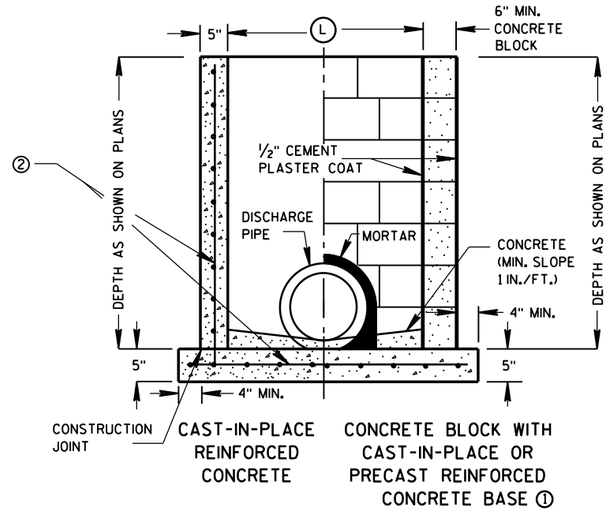
PLAN VIEW



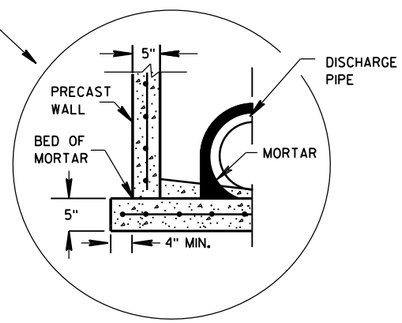
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 INLET 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 PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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 FOUNDATION 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.

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

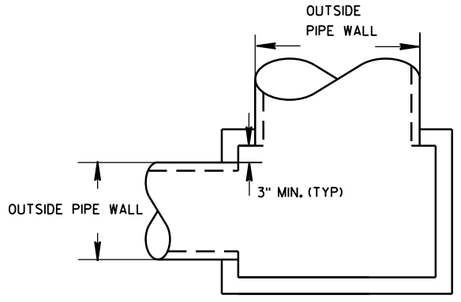
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



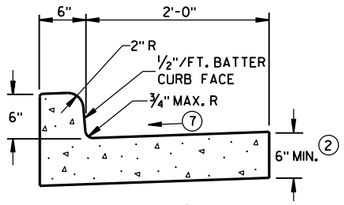
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

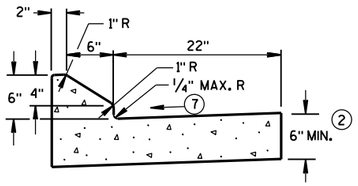
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

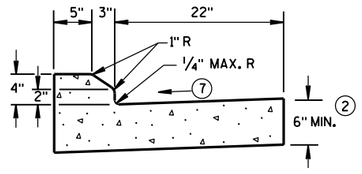
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



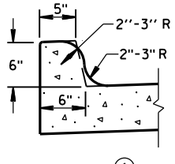
TYPES A (1) & D



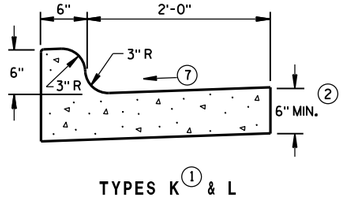
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

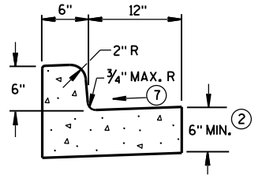


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



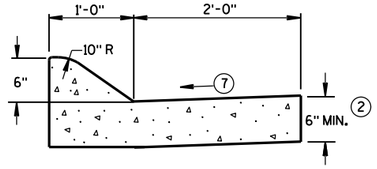
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

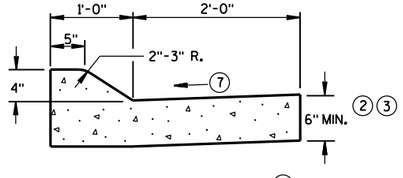


TYPES A (1) & D

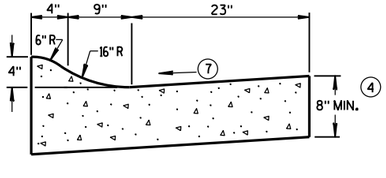
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

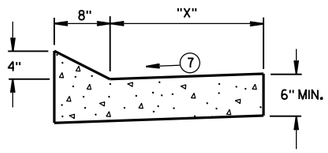


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

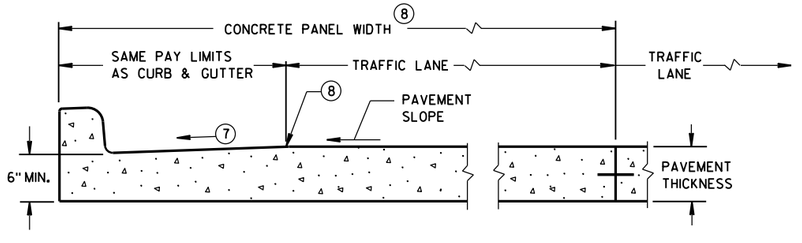
CONCRETE CURB & GUTTER 36"



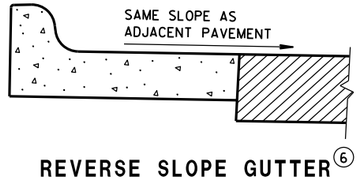
TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER



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

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.

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.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

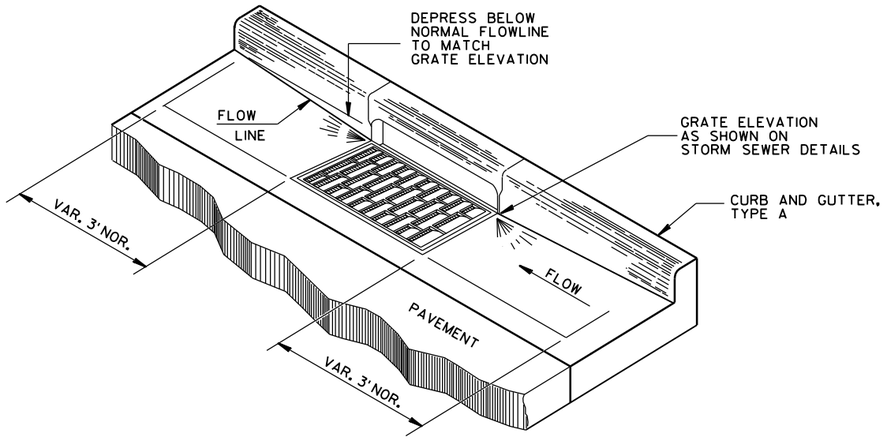
PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

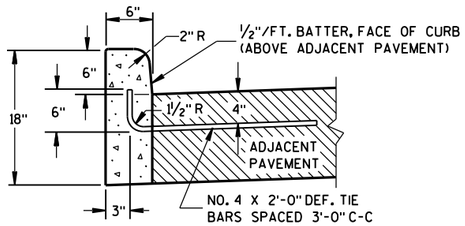
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

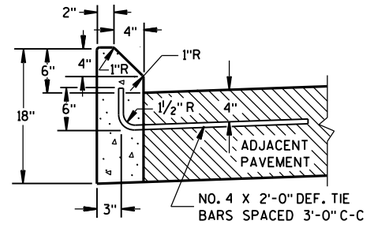
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(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.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

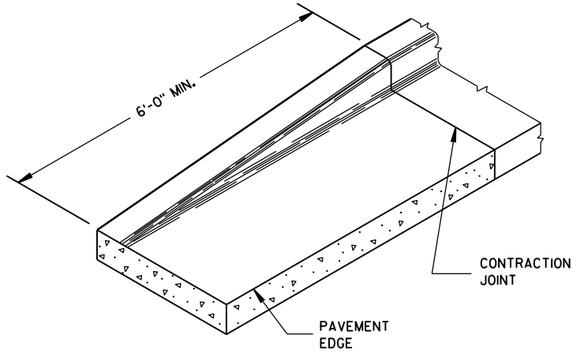


TYPES A (1) & D

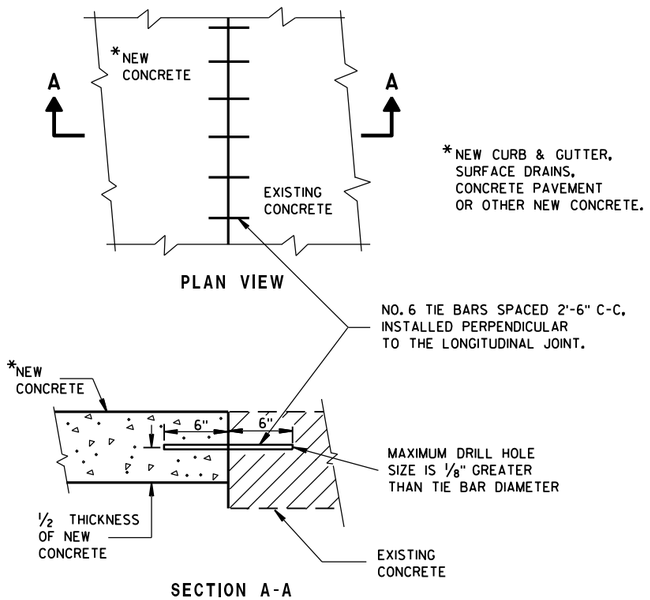


TYPES G (1) & J

CONCRETE CURB



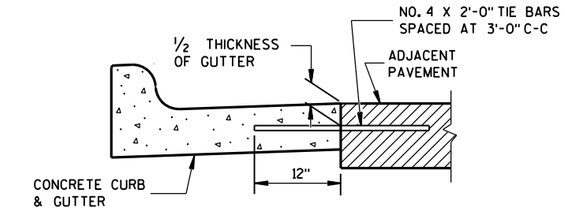
END SECTION CURB & GUTTER



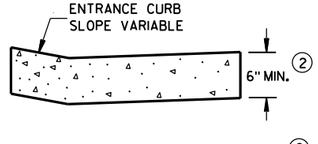
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
267 — ENT
FHWA

6

S.D.D. 8 D 1-20b

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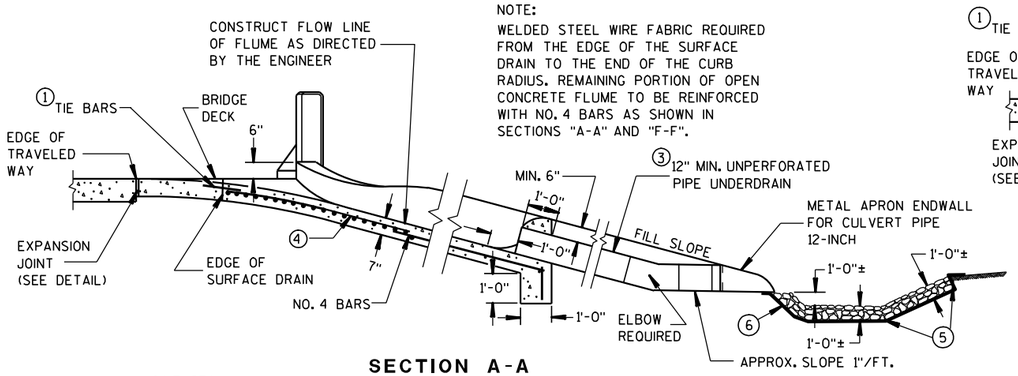
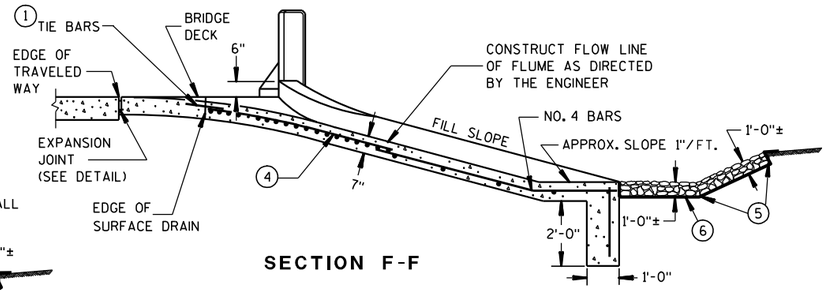
S.D.D. 8 D 1-20b



SECTION A-A



SECTION F-F

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.

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

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN SECTION 612.2 OF THE STANDARD SPECIFICATIONS EXCEPT DRAIN TILE.

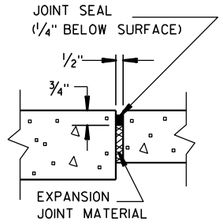
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

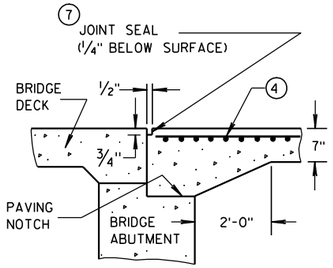
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

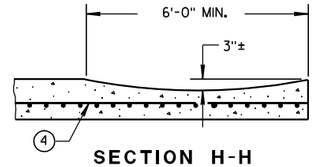
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



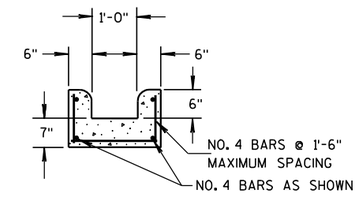
EXPANSION JOINT DETAIL



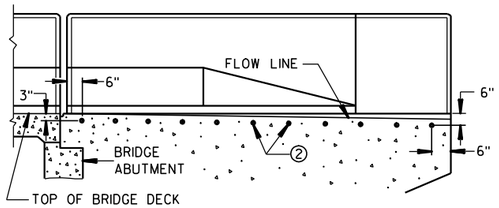
SECTION D-D



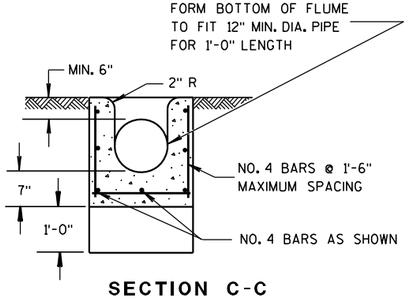
SECTION H-H



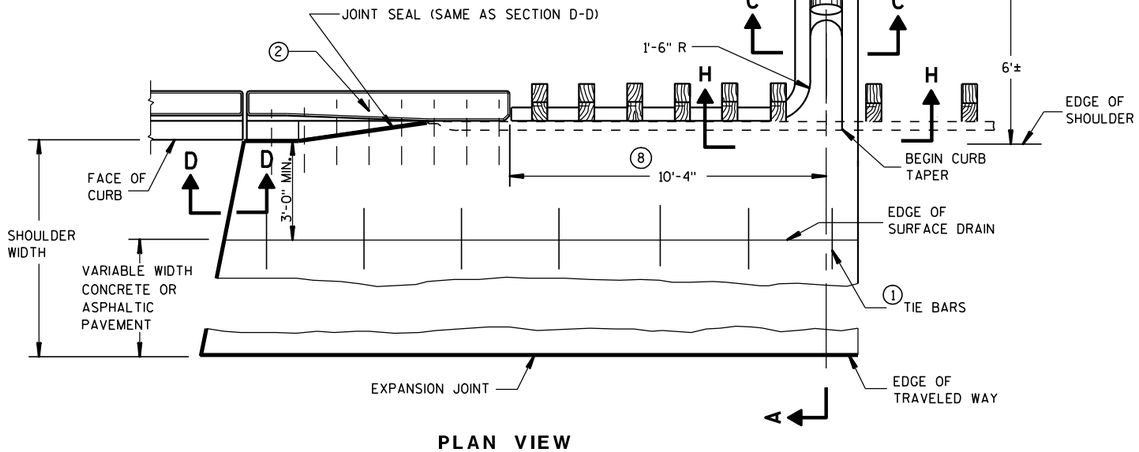
SECTION E-E



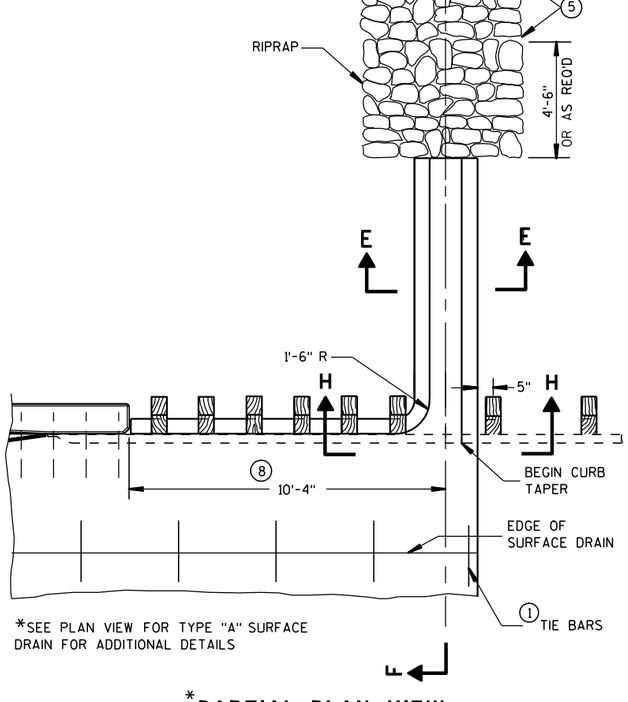
LOCATION OF TIE BARS IN WINGWALL



SECTION C-C



PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

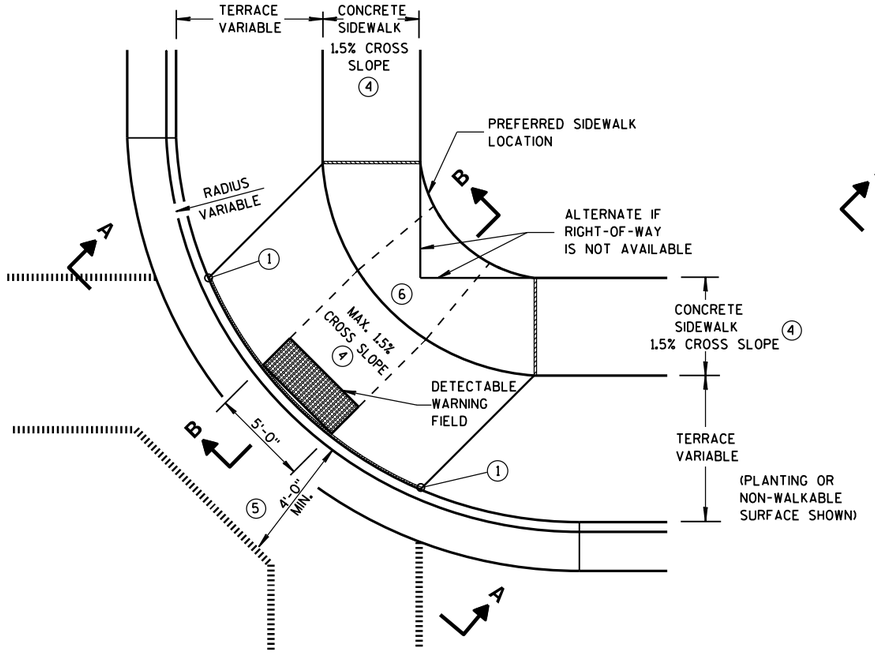
*PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

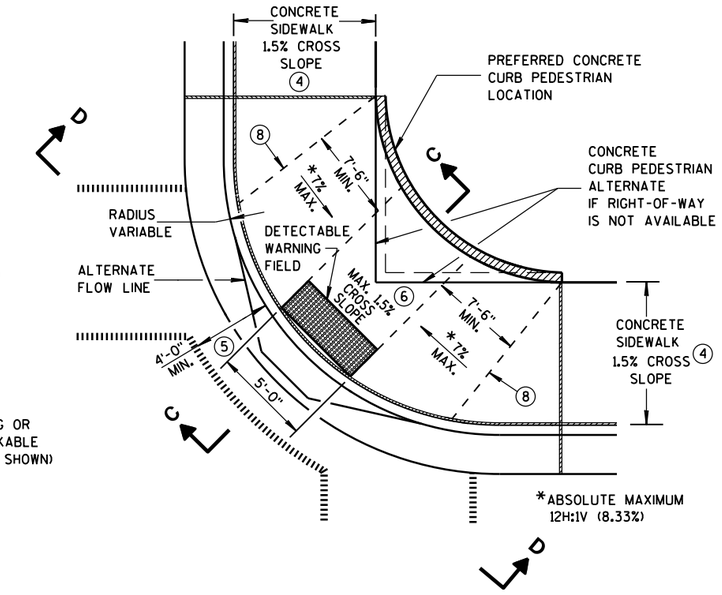
6
S.D.D. 8 D 2-6



PLAN VIEW

TYPE 1 RAMP

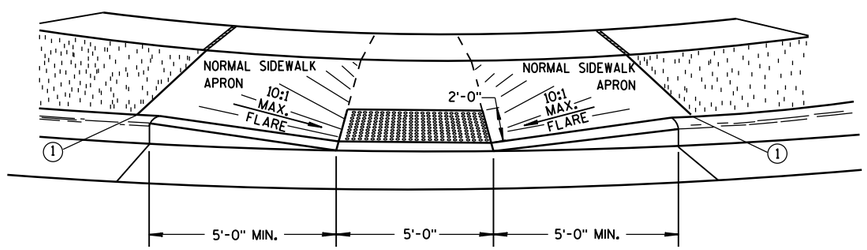
(CENTER OF CORNER RADIUS)



PLAN VIEW

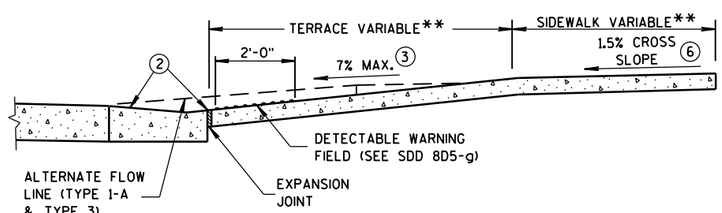
TYPE 1-A RAMP

(NO TERRACE)

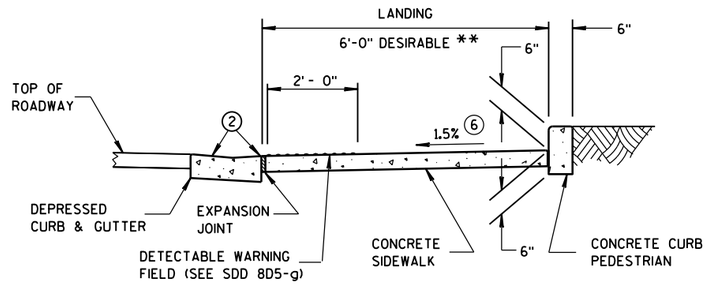


VIEW A-A

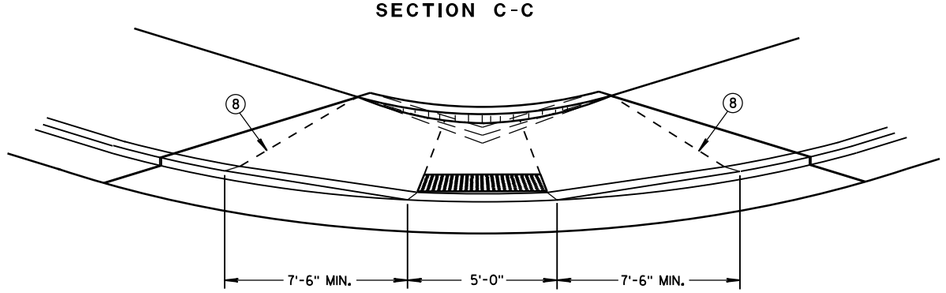
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

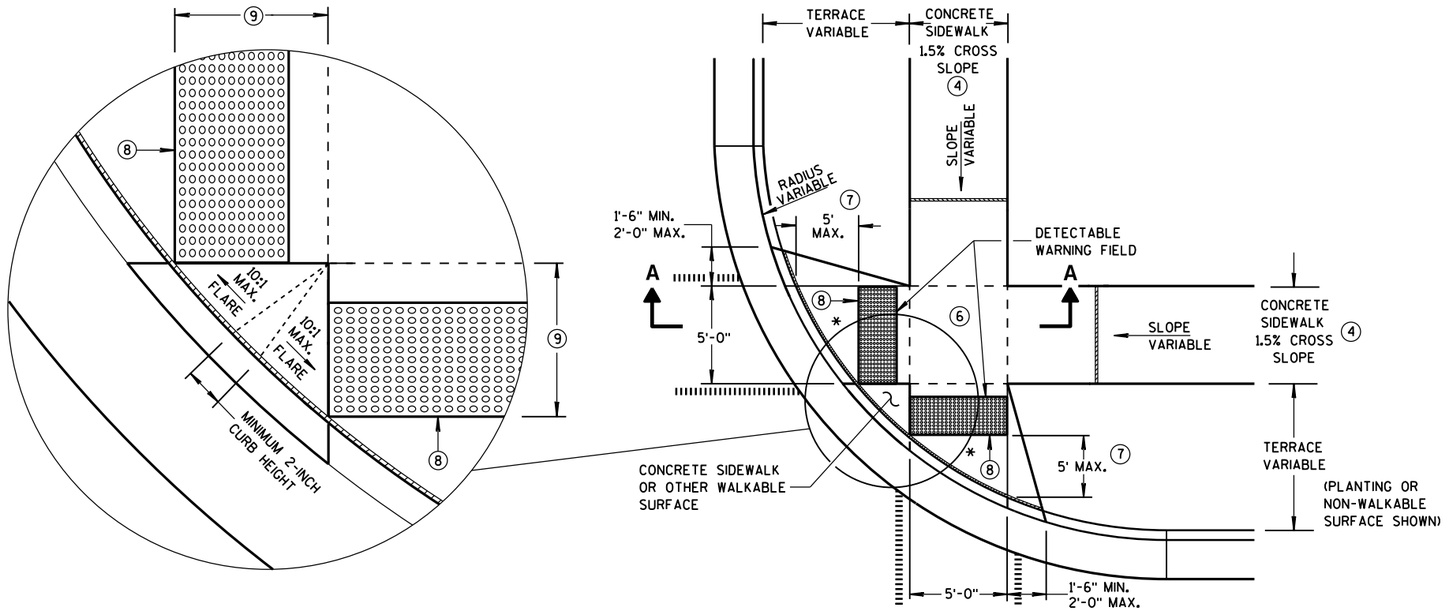
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

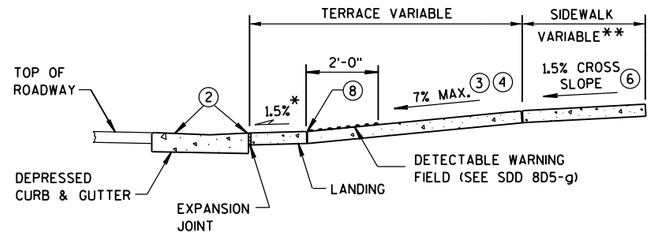
6

S.D.D. 8 D 5-19a



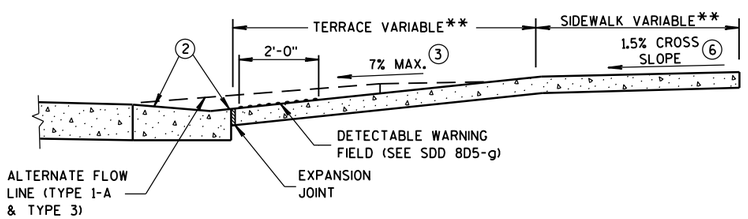
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

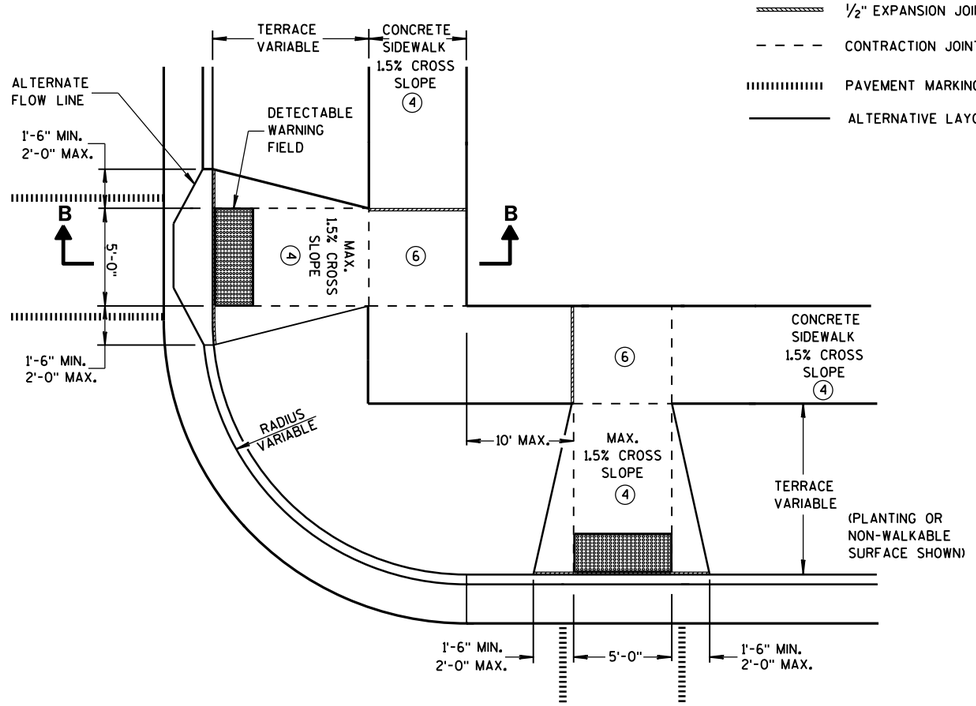


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

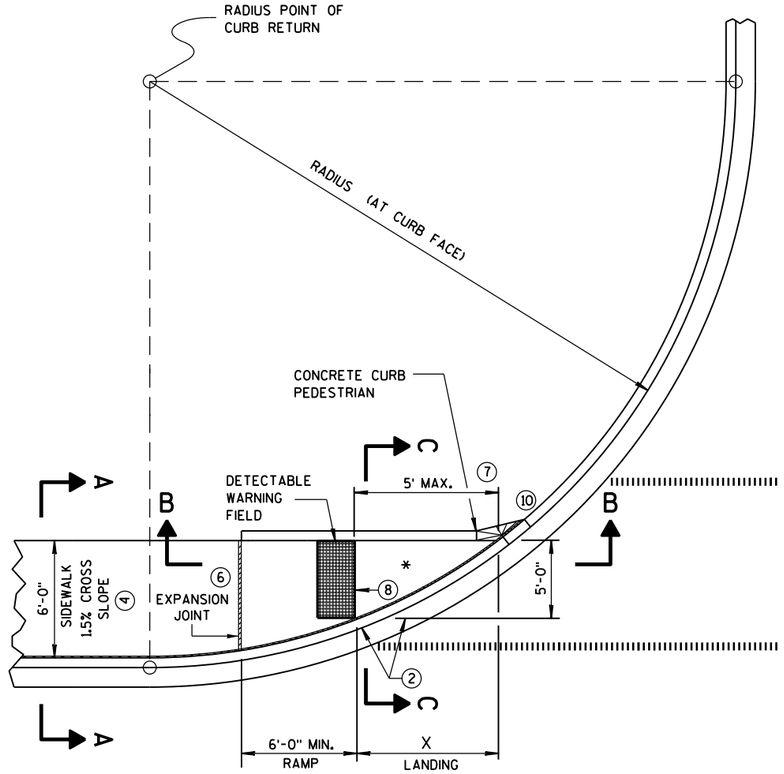
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

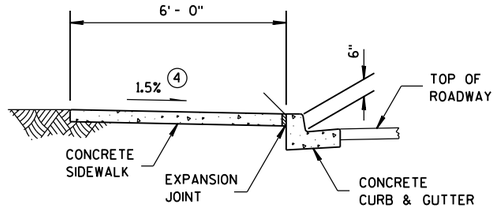
S.D.D. 8 D 5-19b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

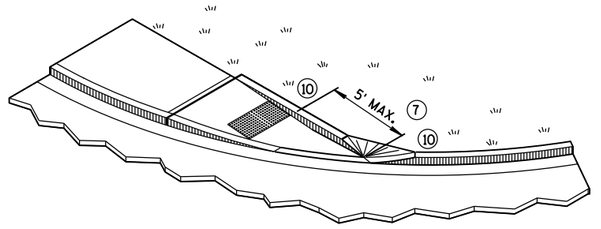
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

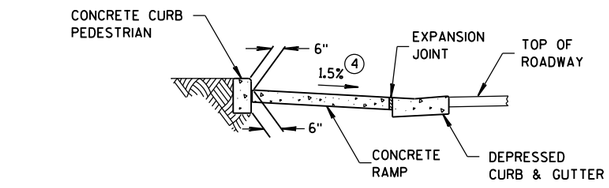
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

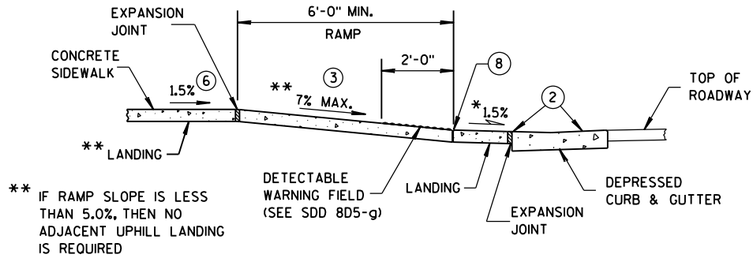
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



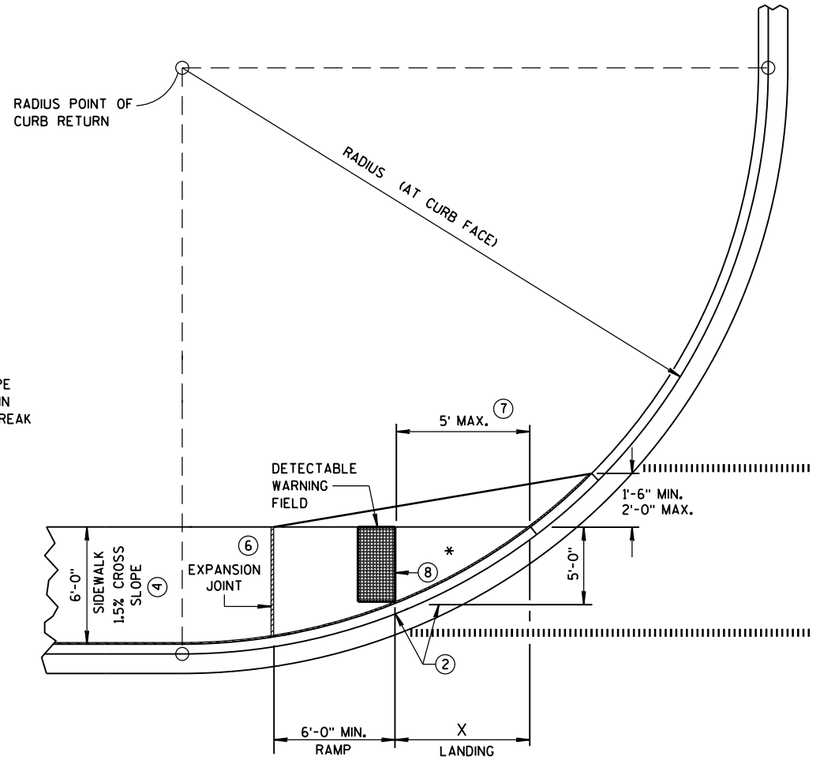
SECTION C-C FOR TYPE 4A



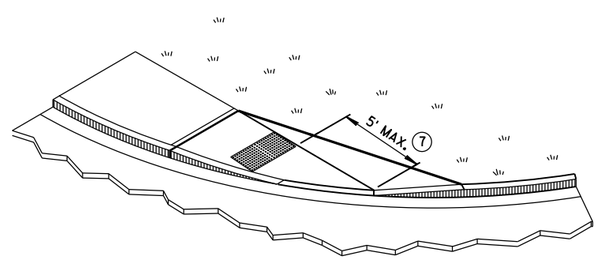
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

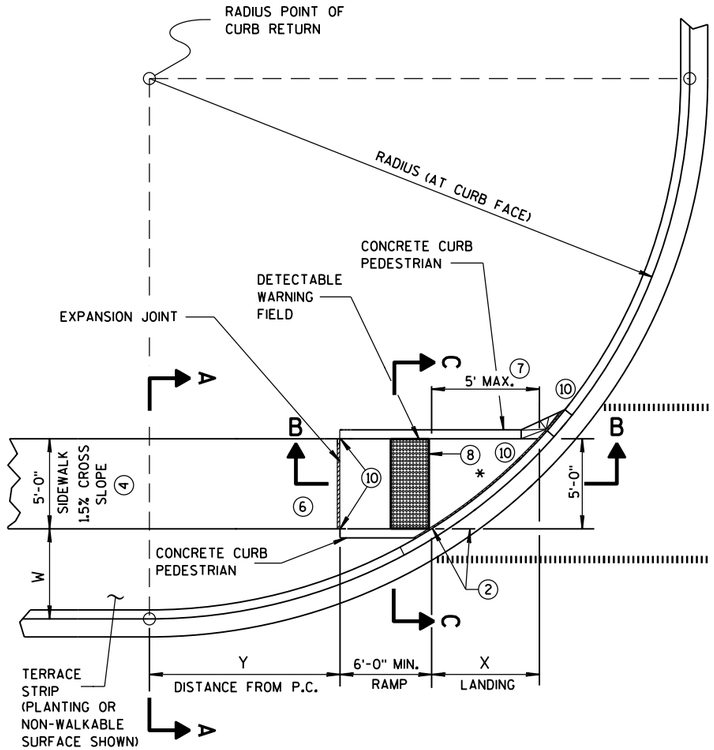
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

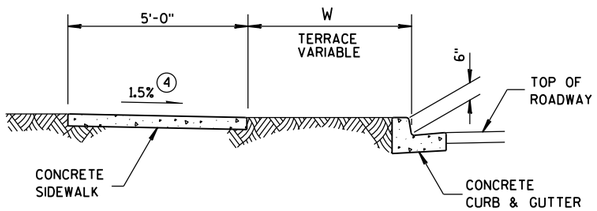
S.D.D. 8 D 5-19c

6

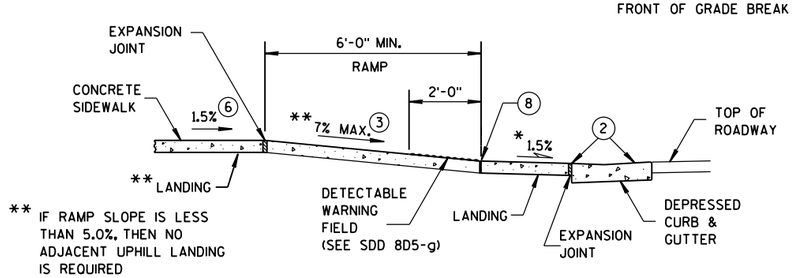
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW

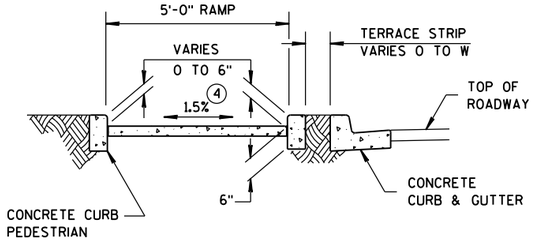


SECTION A-A FOR TYPE 4B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

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

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

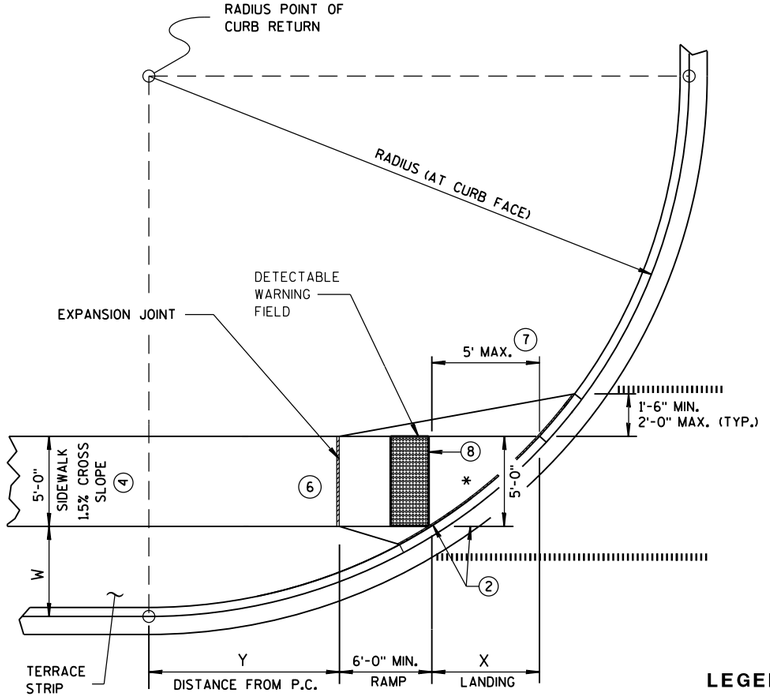
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

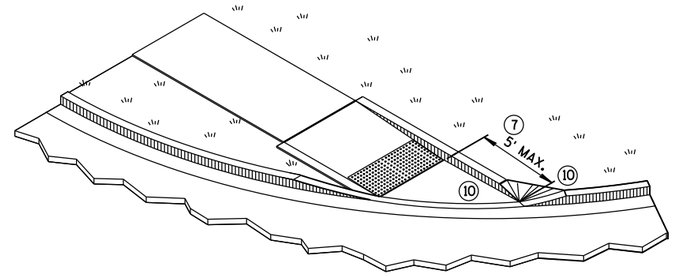
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

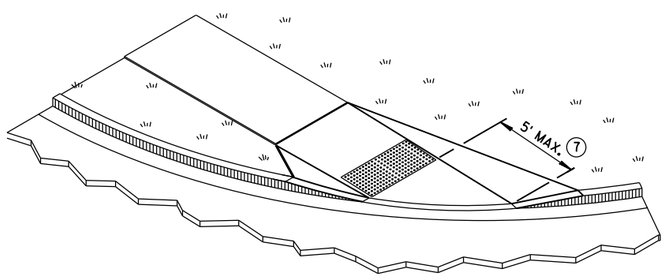
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

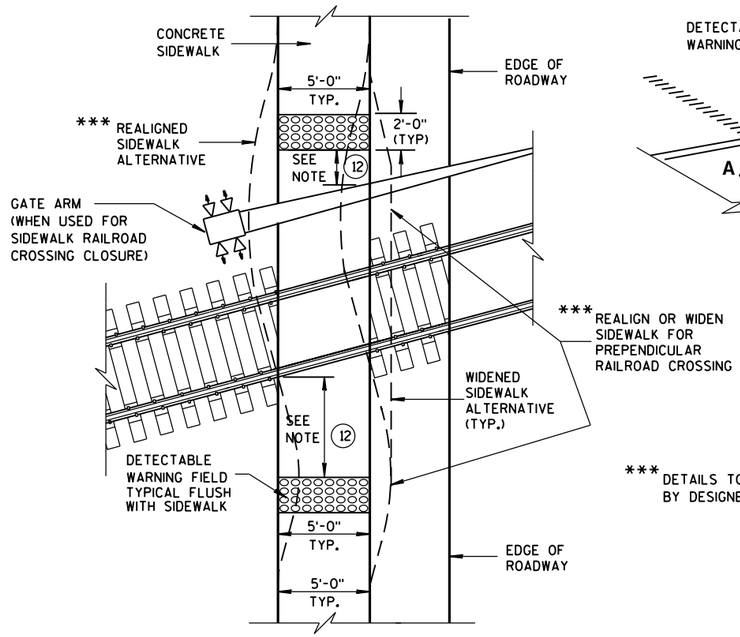
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

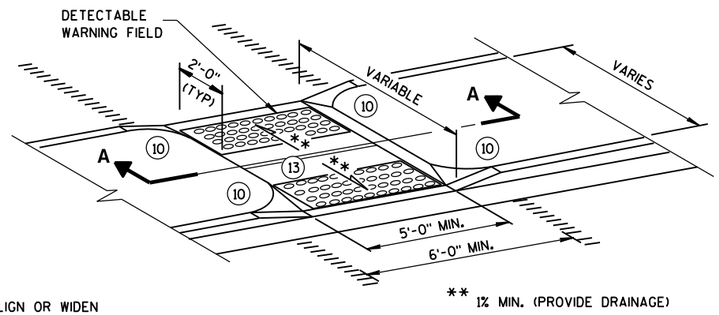
6

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



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

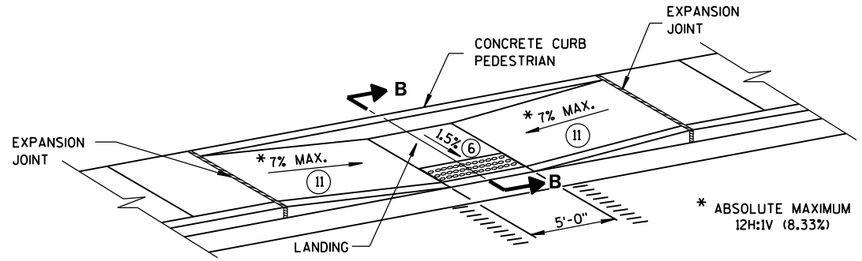
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

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

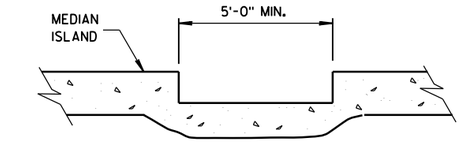
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

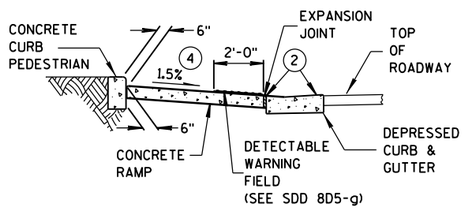
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

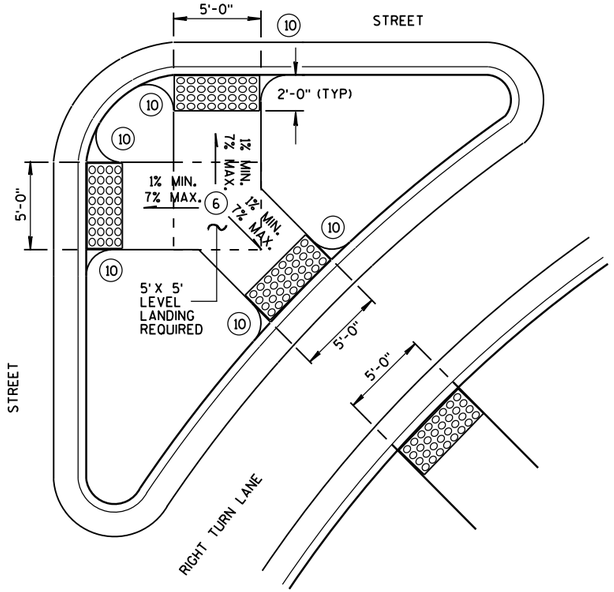


SECTION A-A

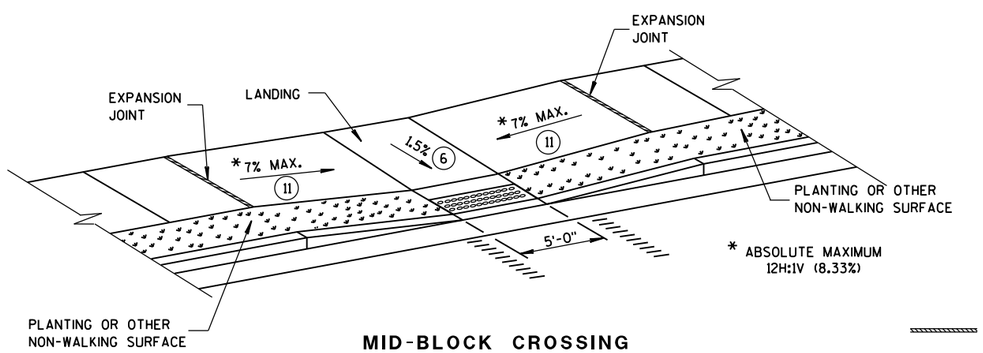


SECTION B-B

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



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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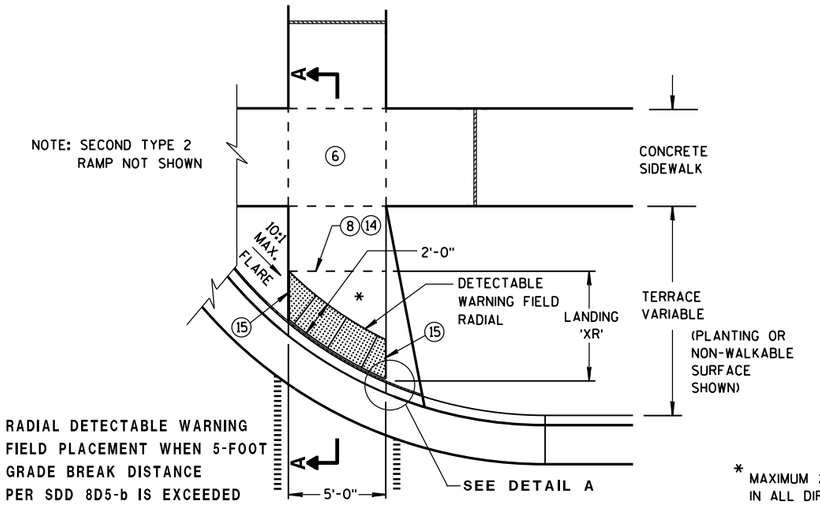
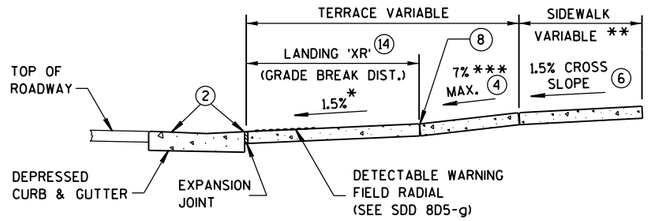


TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

LEGEND

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



** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

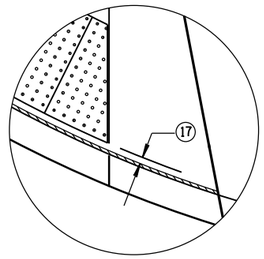
(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

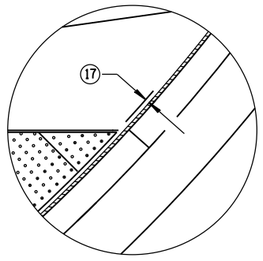
(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



DETAIL A



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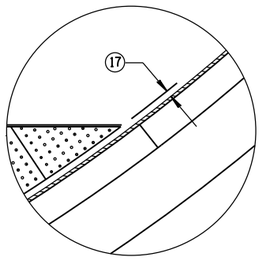
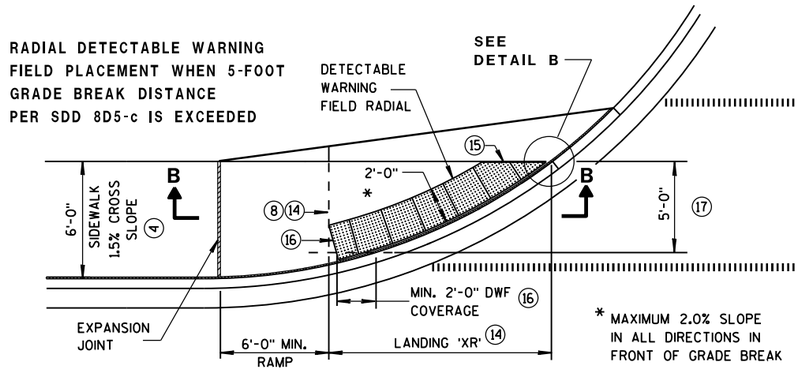
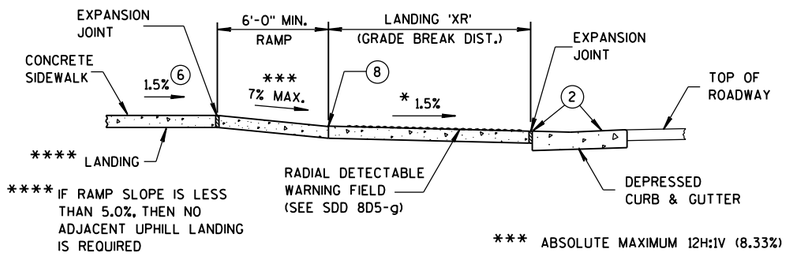


DETAIL B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

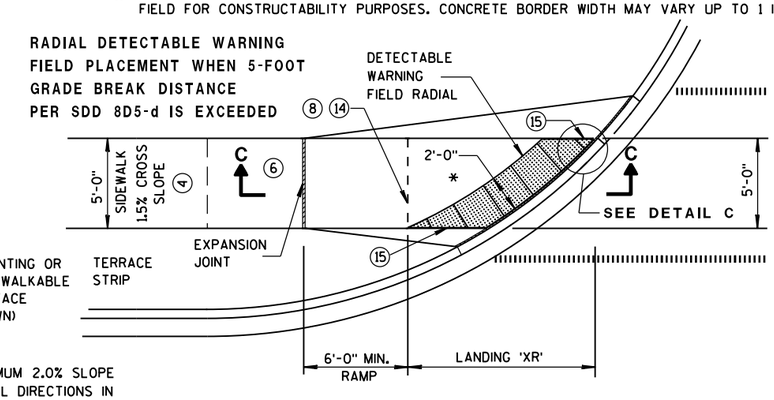
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

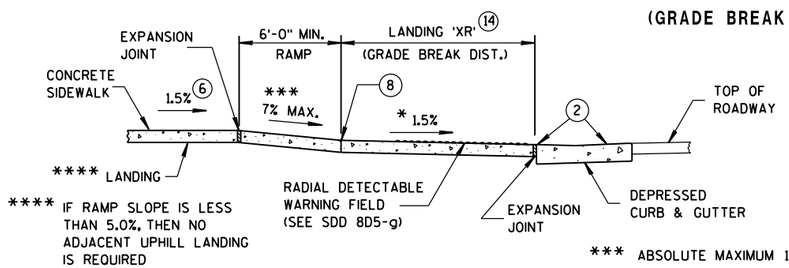
*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION B-B FOR TYPE 4A1



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

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



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 274

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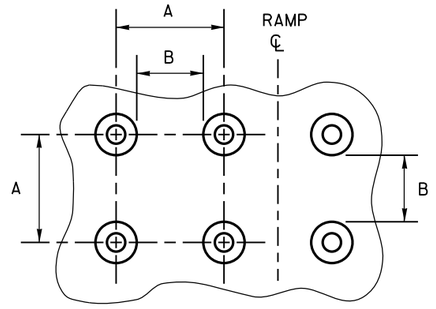
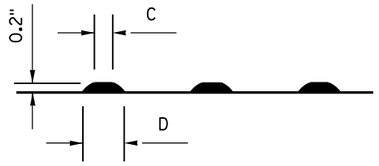
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

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

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

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

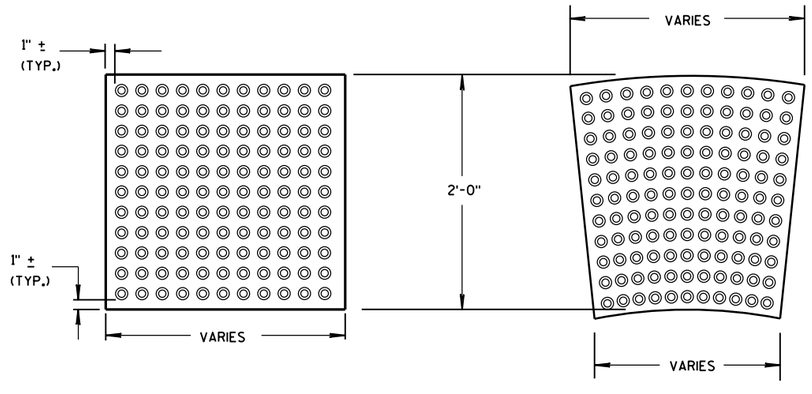
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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

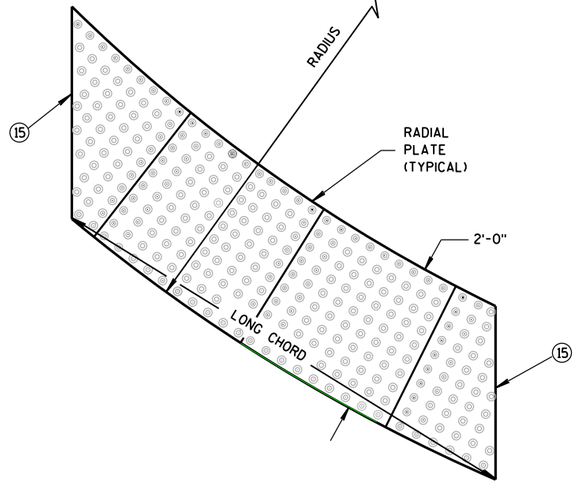


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
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FHWA

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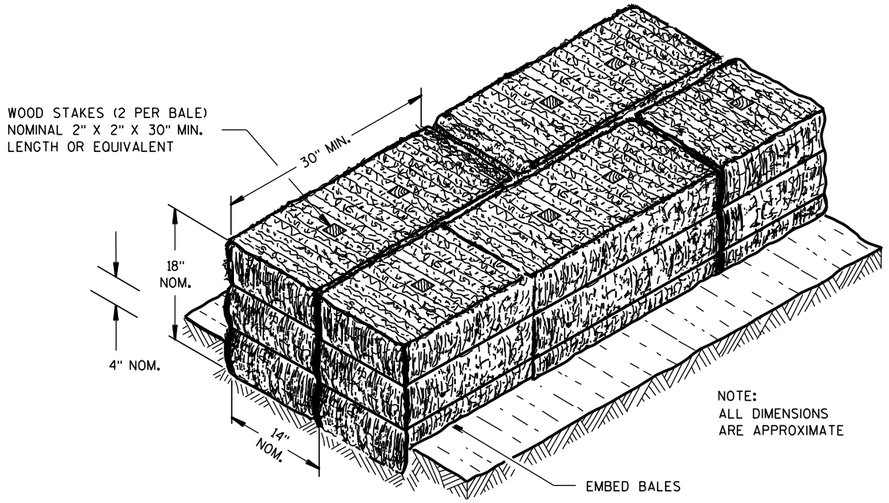
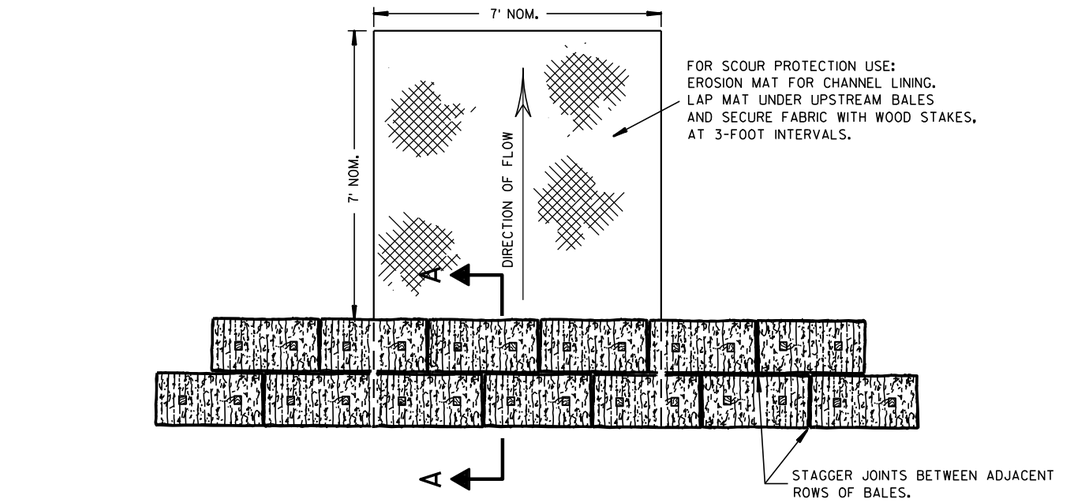
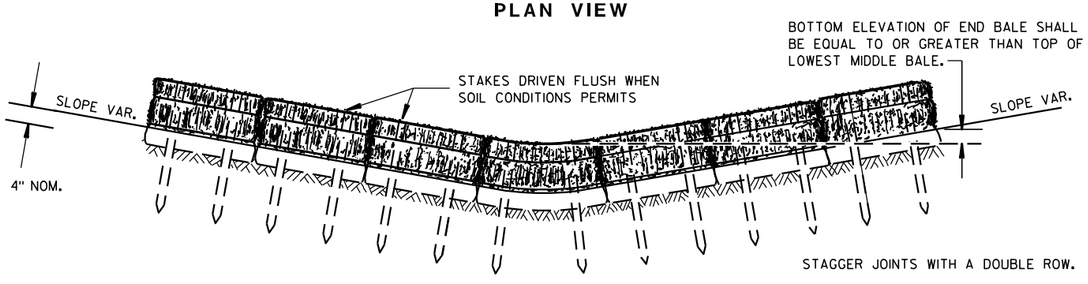


SECTION A-A



PLAN VIEW



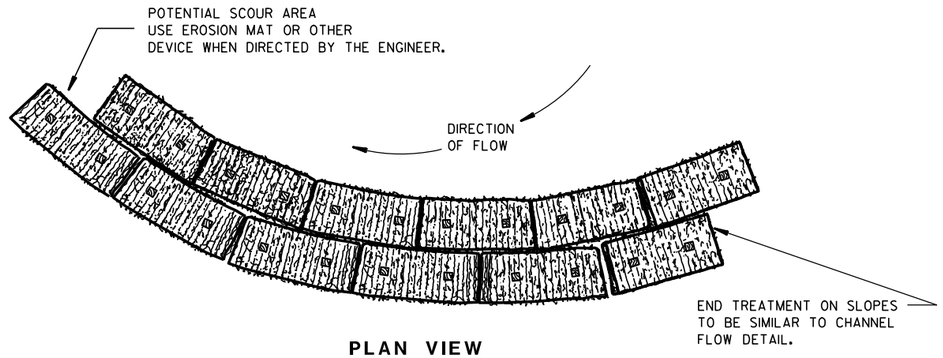
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

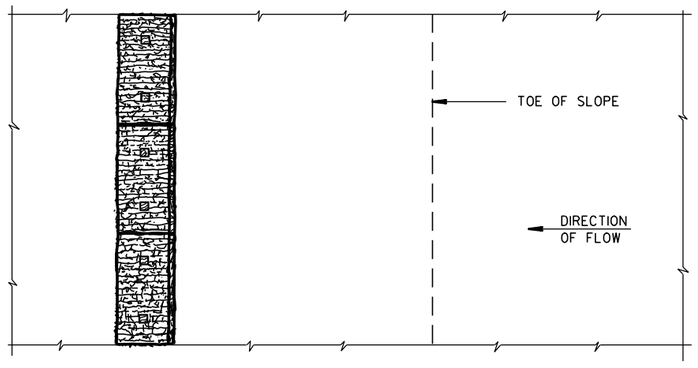
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

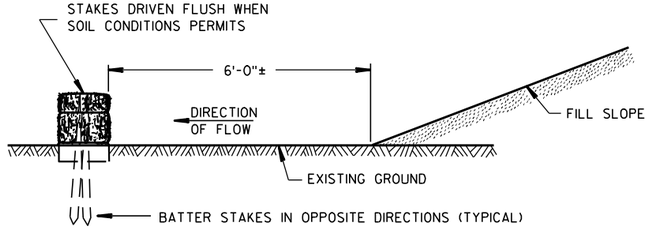


PLAN VIEW

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

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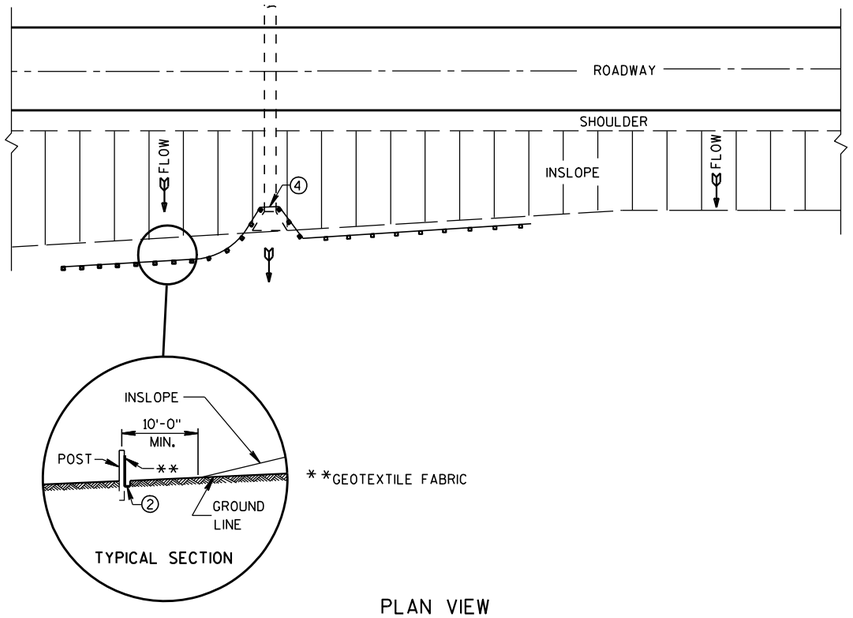
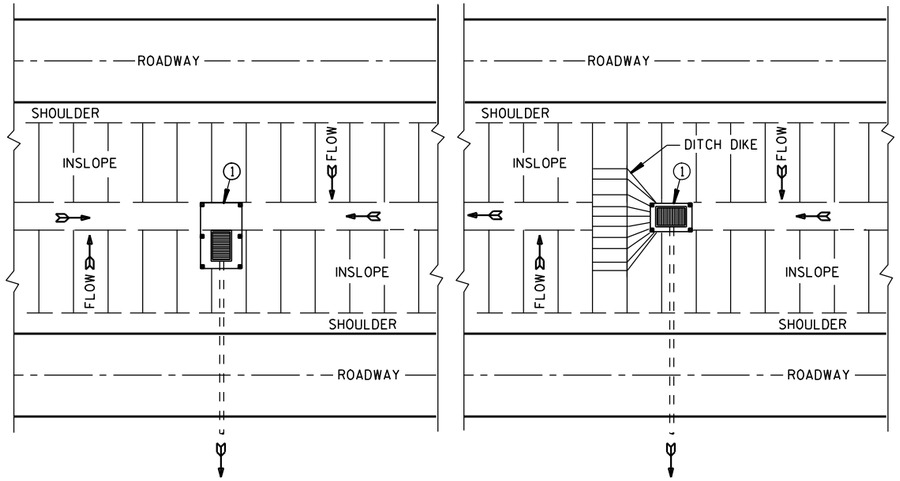
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



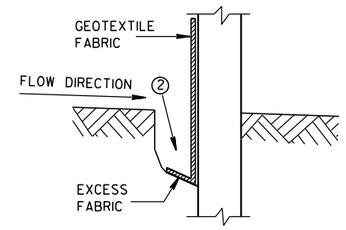
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

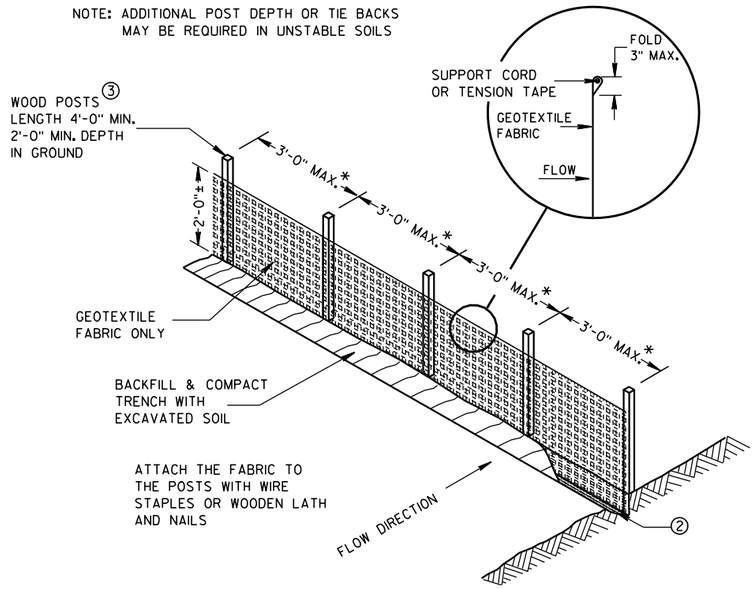
GENERAL NOTES

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

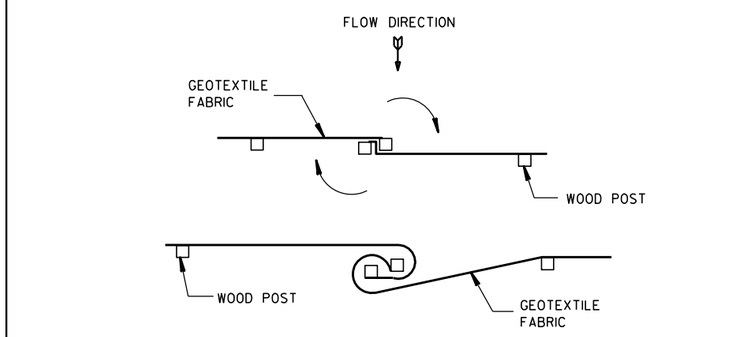
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



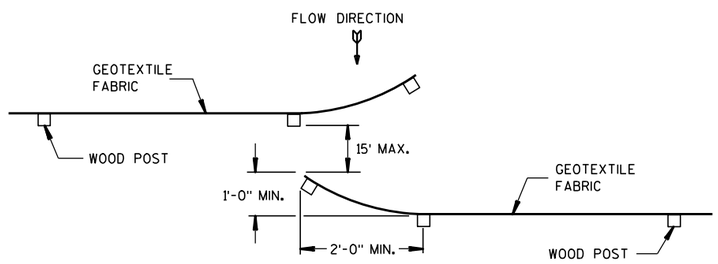
TRENCH DETAIL



SILT FENCE

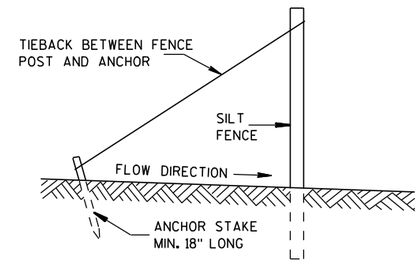


TWIST METHOD



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

277

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S.D.D. 8 E 9-6

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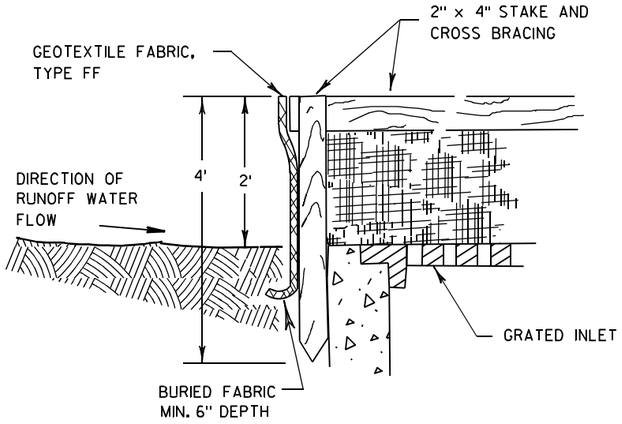
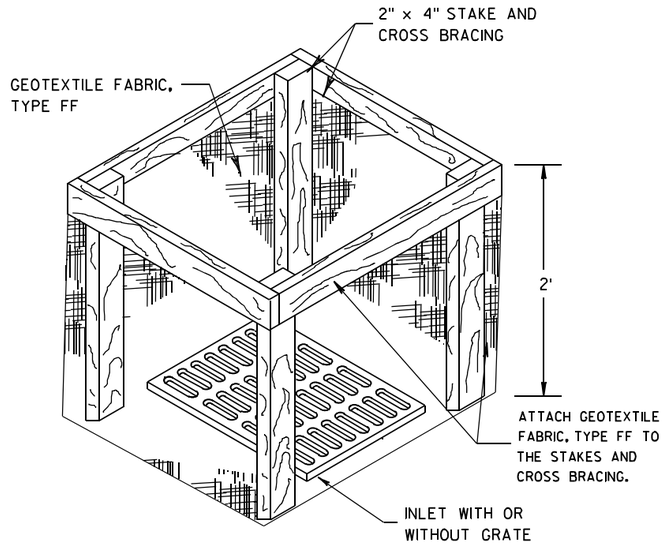
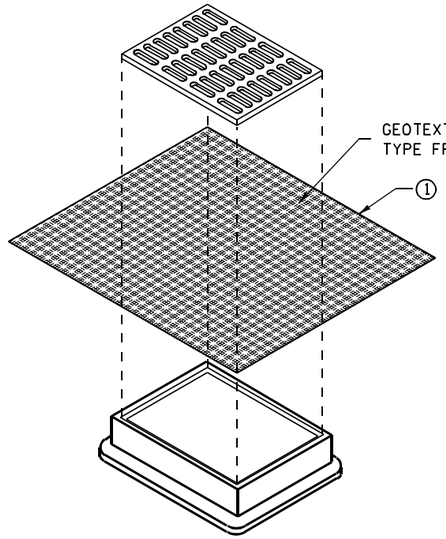
S.D.D. 8 E 9-6



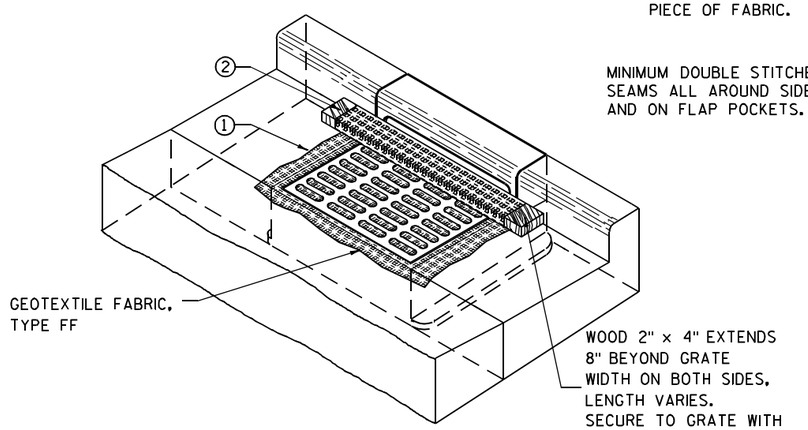


INLET PROTECTION, TYPE A

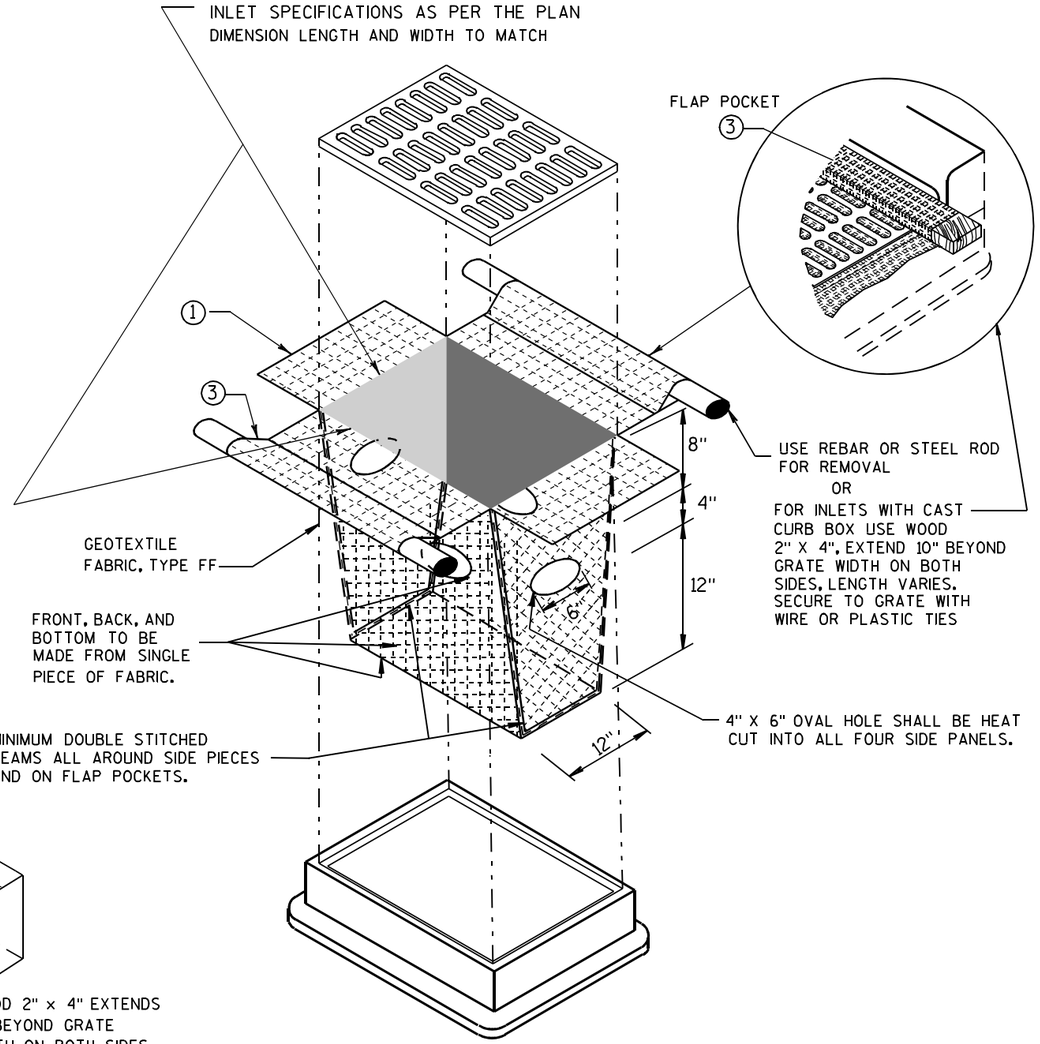


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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S.D.D. 8 E 10-2

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S.D.D. 8 E 10-2

METAL APRON ENDWALLS

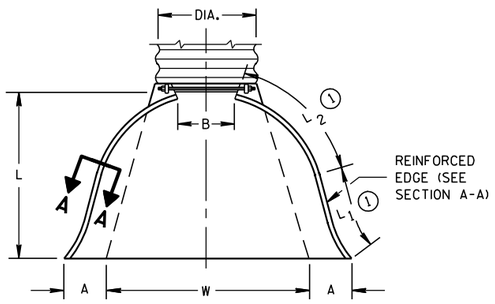
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

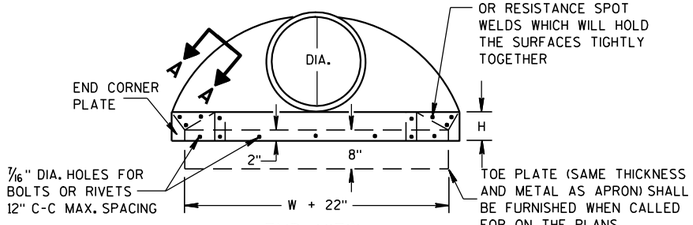
REINFORCED CONCRETE APRON ENDWALLS

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

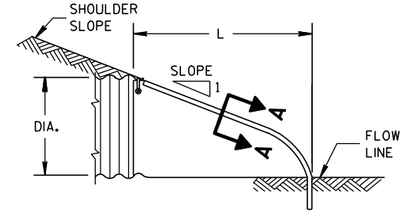
*MINIMUM
**MAXIMUM



PLAN VIEW

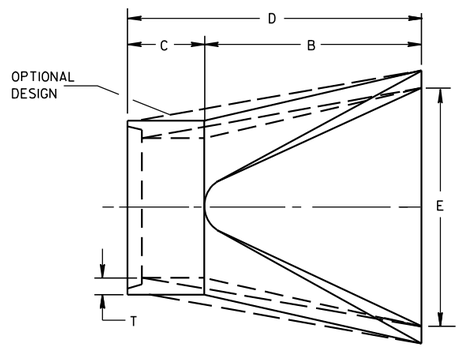


END VIEW

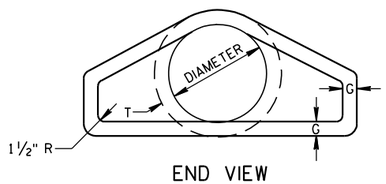


SIDE ELEVATION

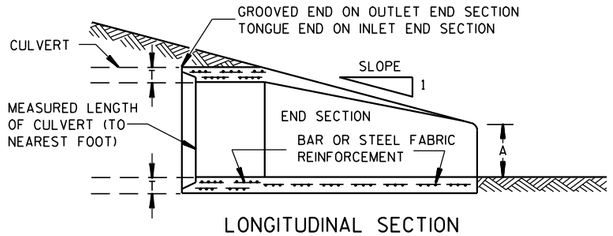
METAL ENDWALLS



PLAN

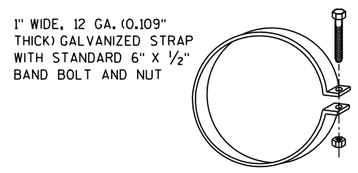


END VIEW



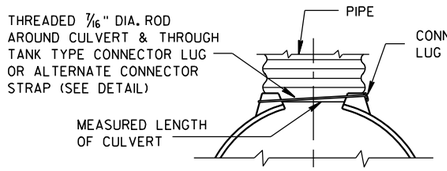
LONGITUDINAL SECTION

CONCRETE ENDWALLS

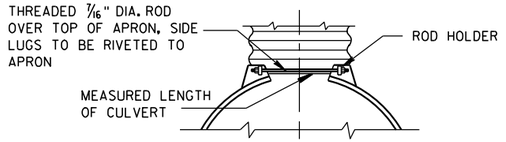


ALTERNATE FOR TYPE 1 CONNECTION

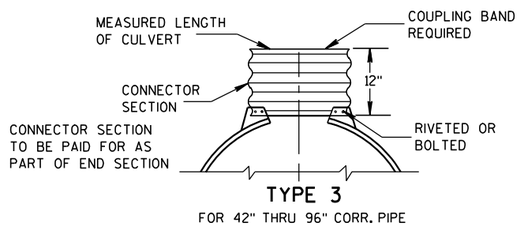
END SECTION CONNECTOR STRAP



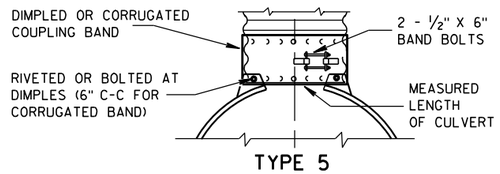
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

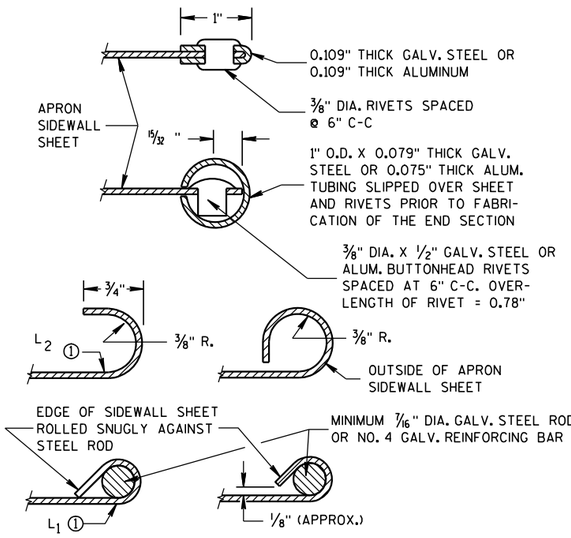
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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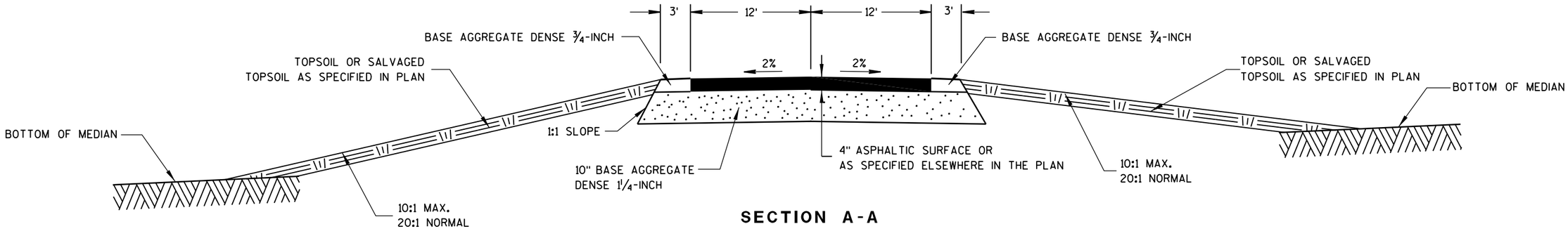
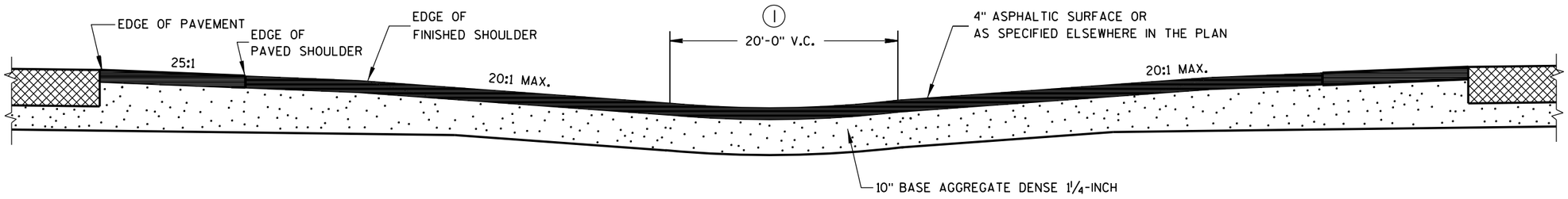
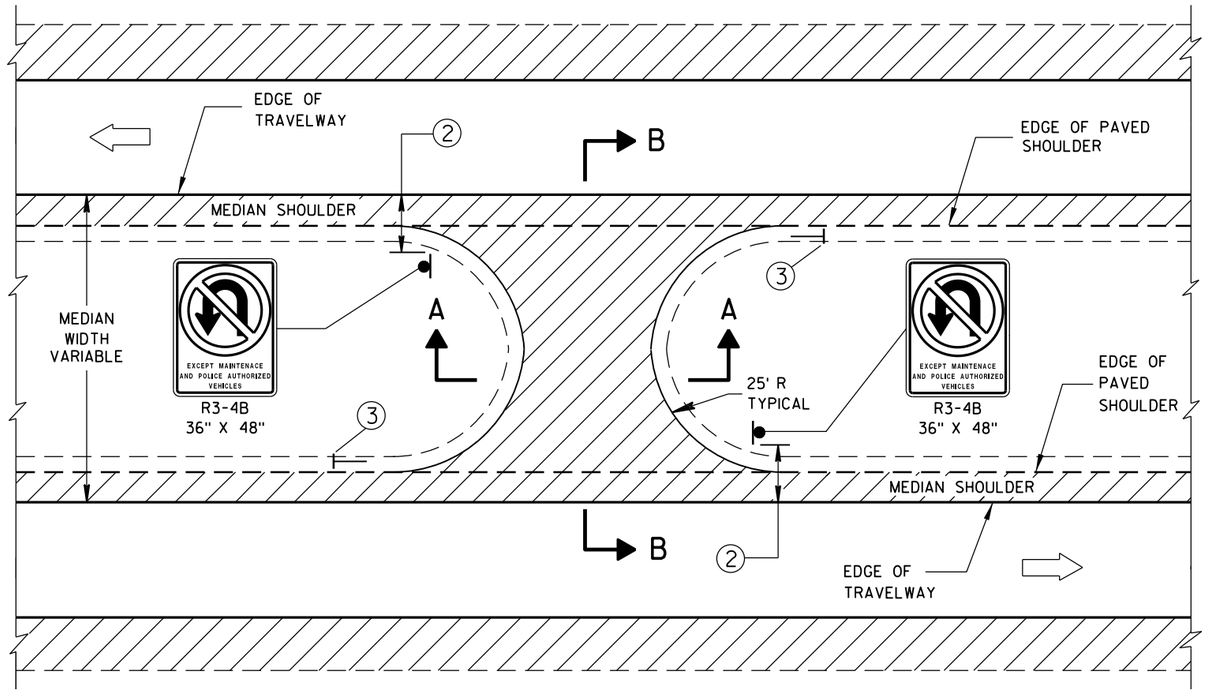
S.D.D. 8 F 1-11



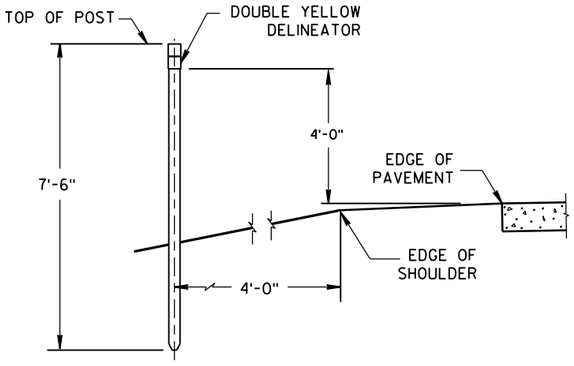
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

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

FHWA

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S.D.D. 11 A 1-5

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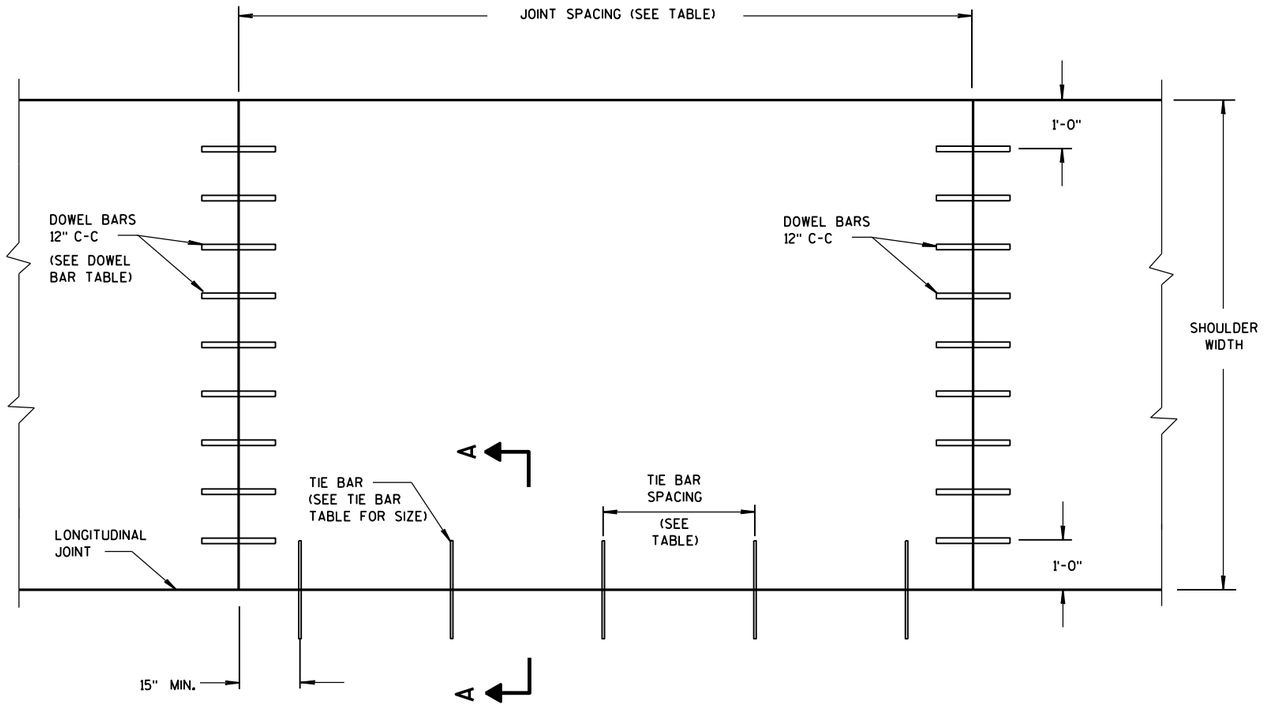
S.D.D. 11 A 1-5



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

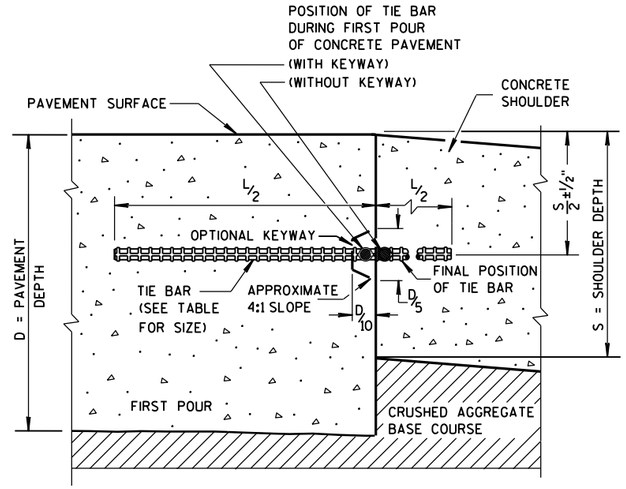
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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S.D.D. 13 A 3-6

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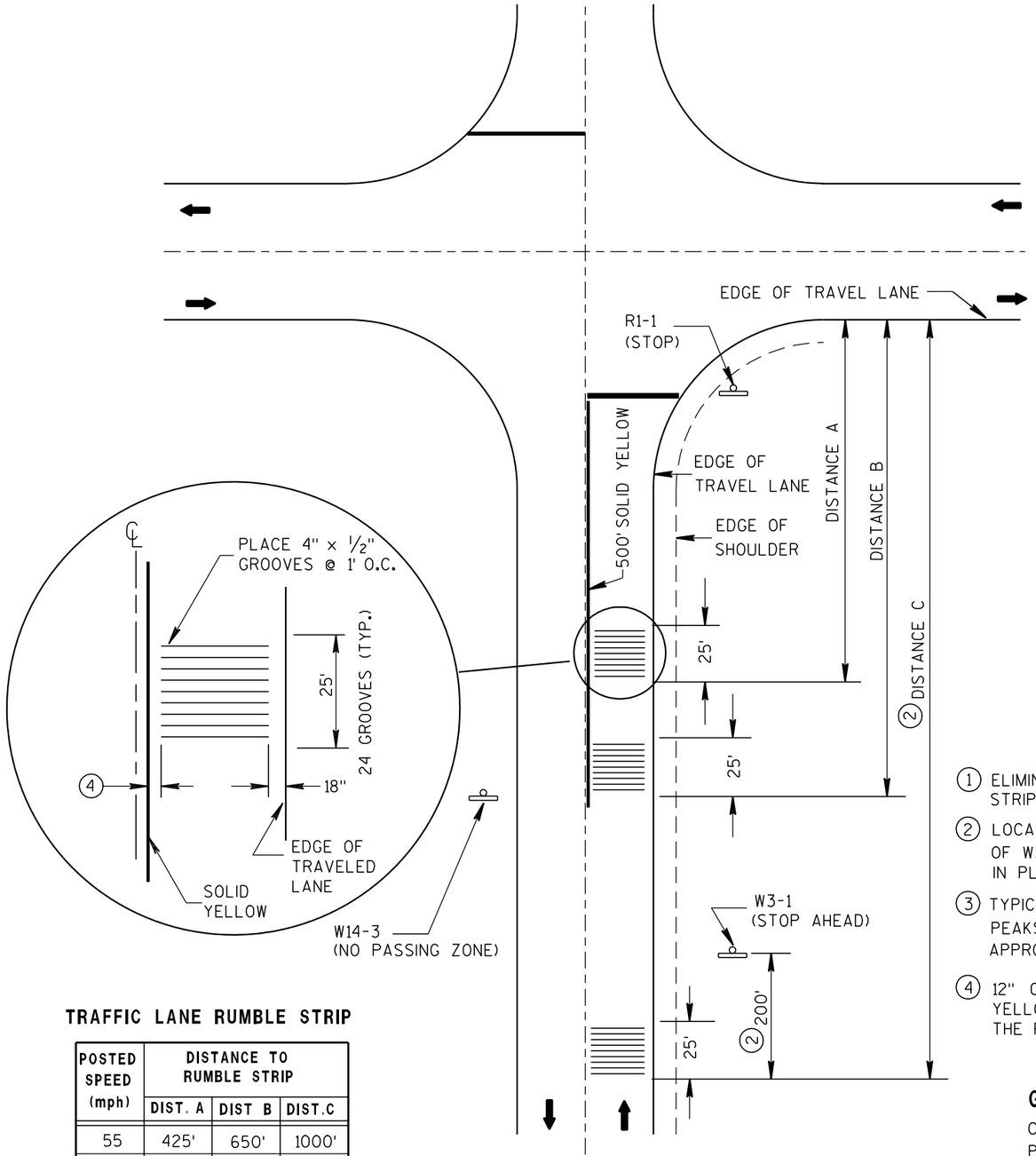
S.D.D. 13 A 3-6



ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

PLAN VIEW

RUMBLE STRIP LOCATION

TRAFFIC LANE RUMBLE STRIP

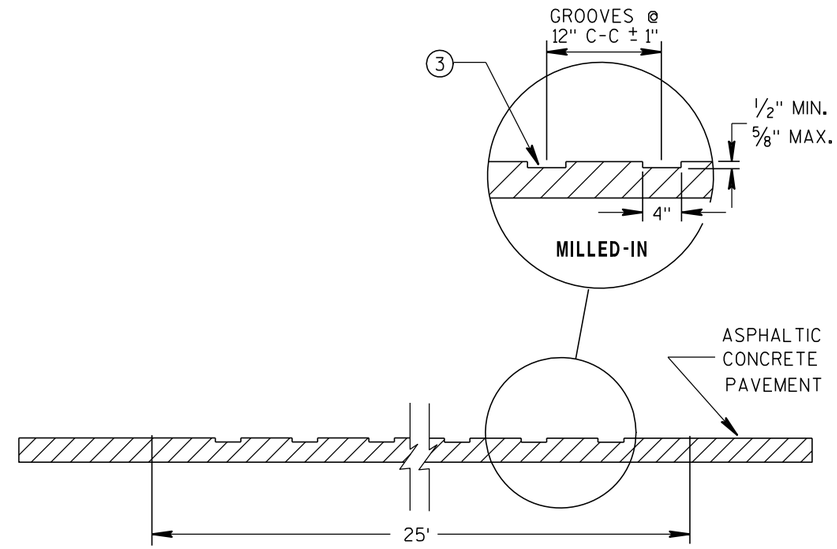
POSTED SPEED (mph)	DISTANCE TO RUMBLE STRIP		
	DIST. A	DIST B	DIST.C
55	425'	650'	1000'
50	325'	450'	800'
45	275'	400'	650'
40	225'	(1)	550'
35	175'	(1)	475'
≤ 30	125'	(1)	425'

(1) ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.

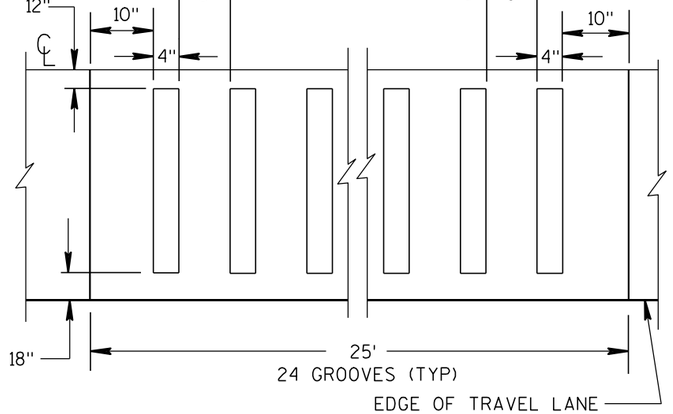
(2) LOCATE RUMBLE STRIP 200' IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE C.

(3) TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY 1/16"

(4) 12" CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.



ELEVATION VIEW



PLAN VIEW

ASPHALTIC PAVEMENT MILLED-IN

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.

PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

ASPHALTIC RUMBLE STRIPS AT INTERSECTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/17/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS | 282 ENT
ENGINEER

FHWA

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S.D.D. 13 A 8-1

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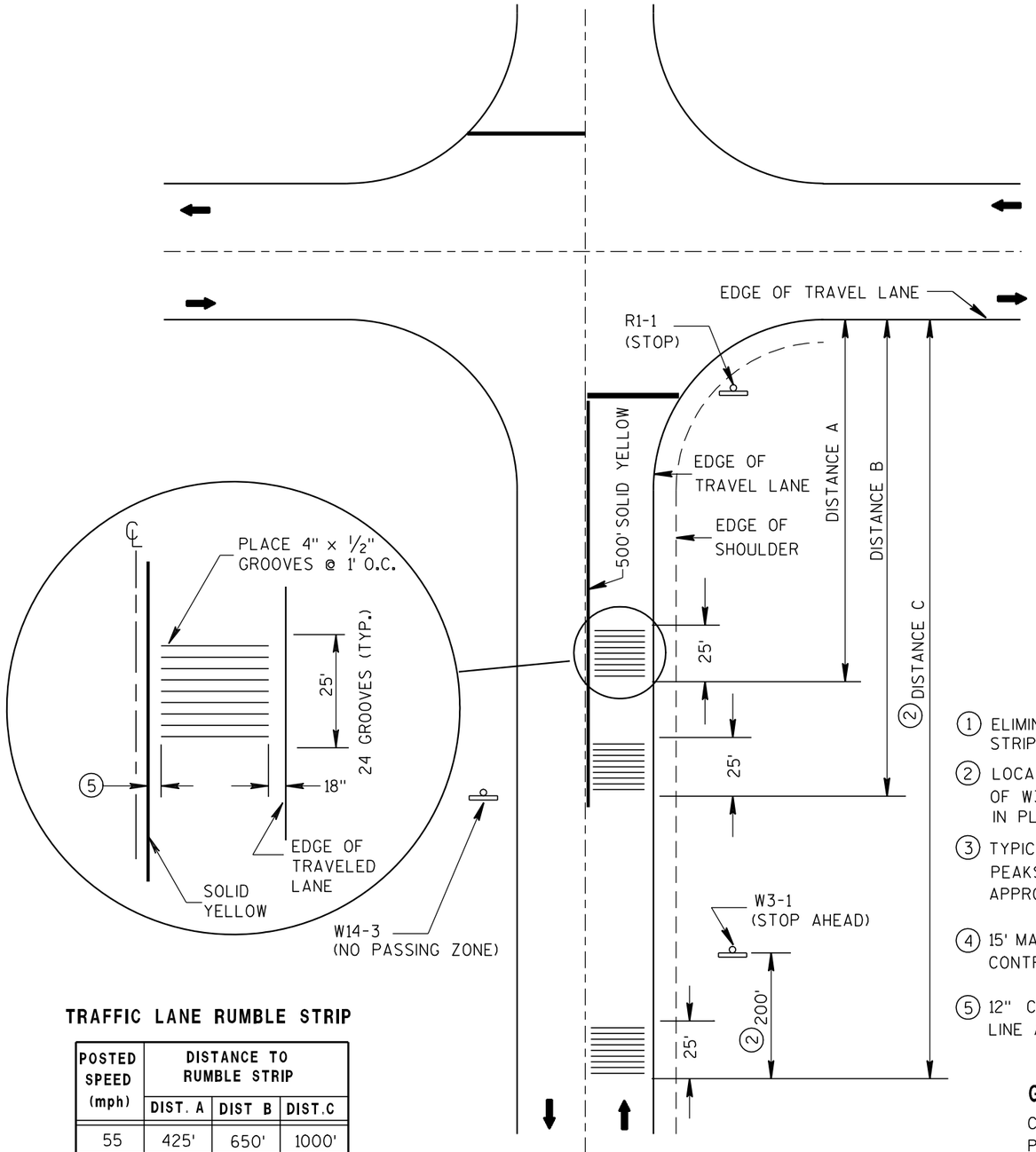
S.D.D. 13 A 8-1



ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

PLAN VIEW

RUMBLE STRIP LOCATION

TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (mph)	DISTANCE TO RUMBLE STRIP		
	DIST. A	DIST B	DIST.C
55	425'	650'	1000'
50	325'	450'	800'
45	275'	400'	650'
40	225'	(1)	550'
35	175'	(1)	475'
≤ 30	125'	(1)	425'

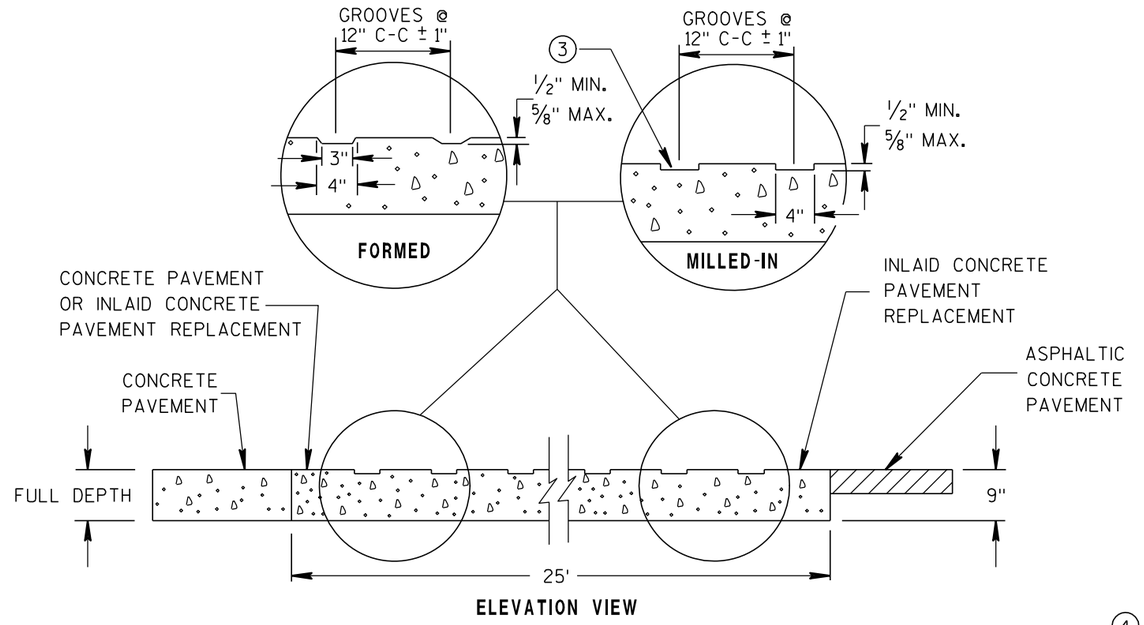
(1) ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.

(2) LOCATE RUMBLE STRIP 200' IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE C.

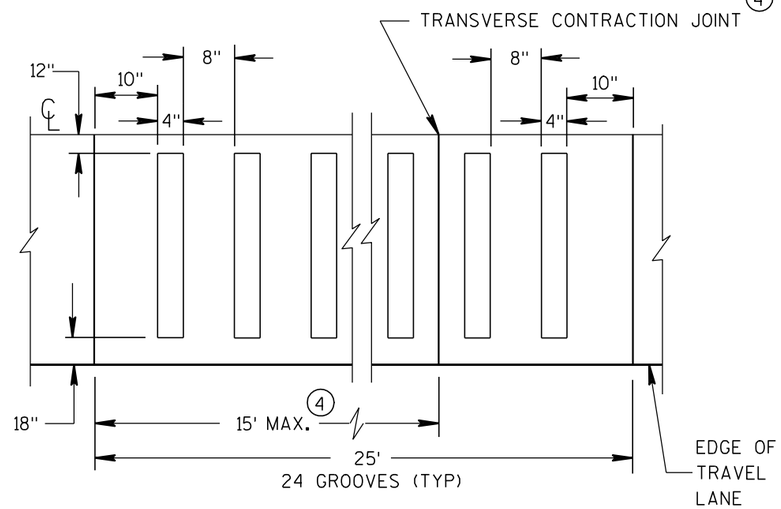
(3) TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY 1/16"

(4) 15' MAX. SPACING FOR TRANSVERSE CONTRACTION JOINT

(5) 12" CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE



ELEVATION VIEW



PLAN VIEW

CONCRETE PAVEMENT MILLED-IN OR TOOLED-IN

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

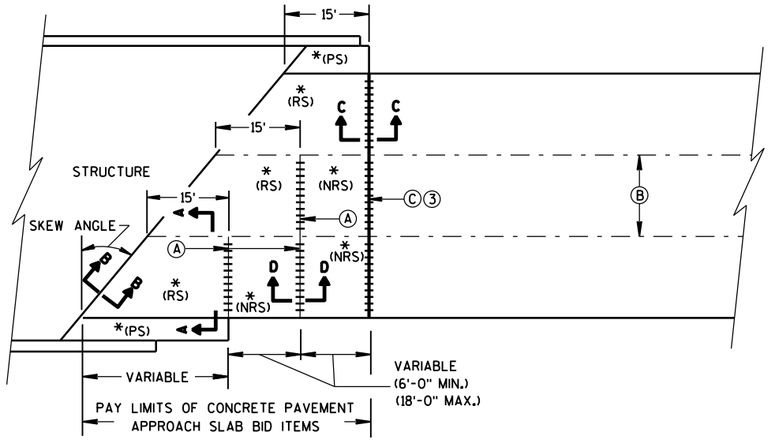
EXTEND CONCRETE FROM THE ℄ TO THE EDGE OF TRAVEL WAY.

PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

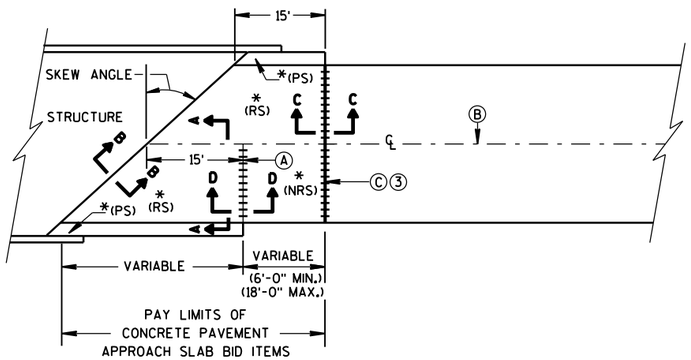
CONCRETE RUMBLE STRIPS AT INTERSECTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

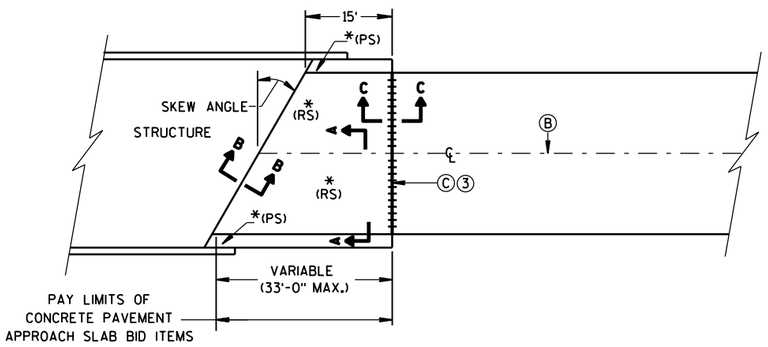
APPROVED
8/17/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

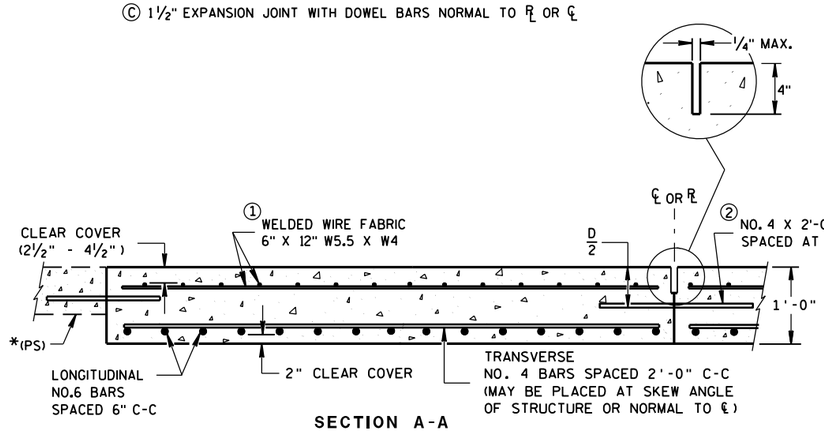
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

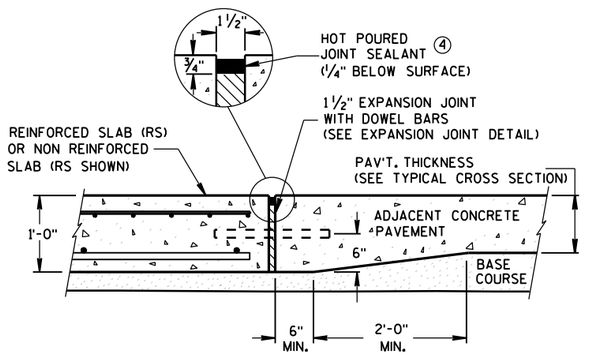
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

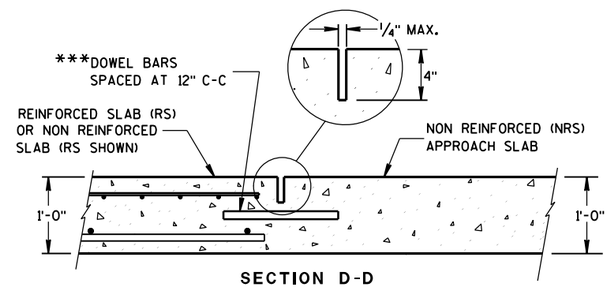
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

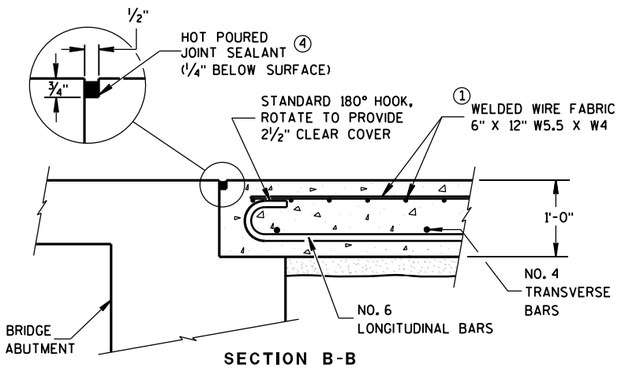
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

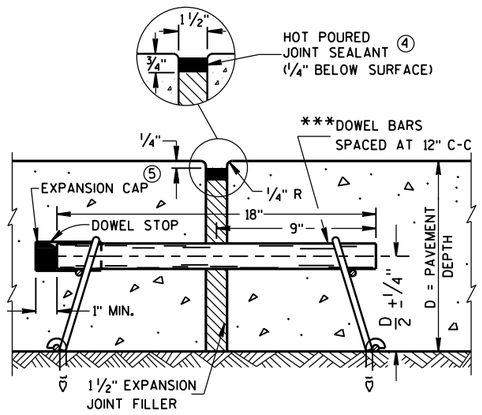
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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S.D.D. 13 B 2-8a

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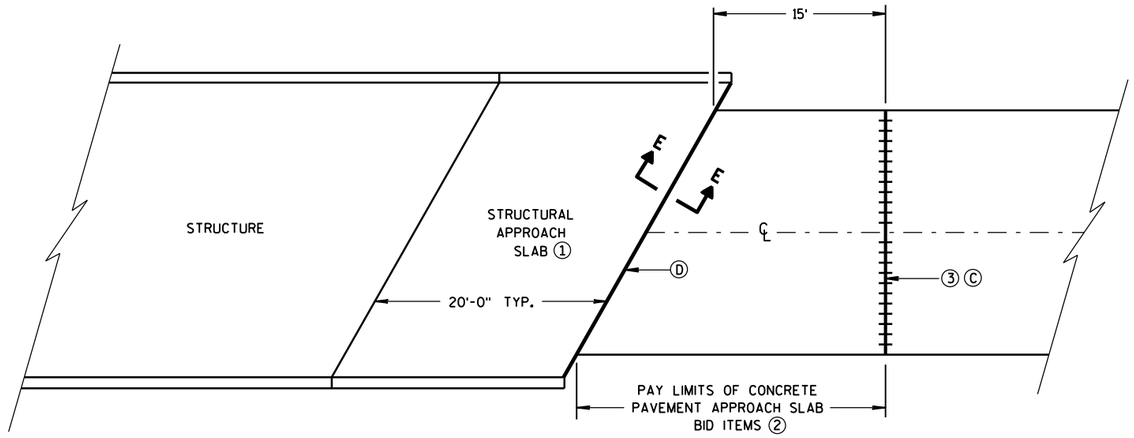
S.D.D. 13 B 2-8a



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

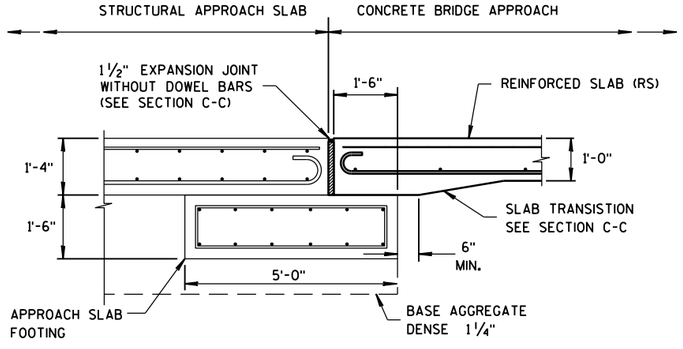
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPEF

FHWA

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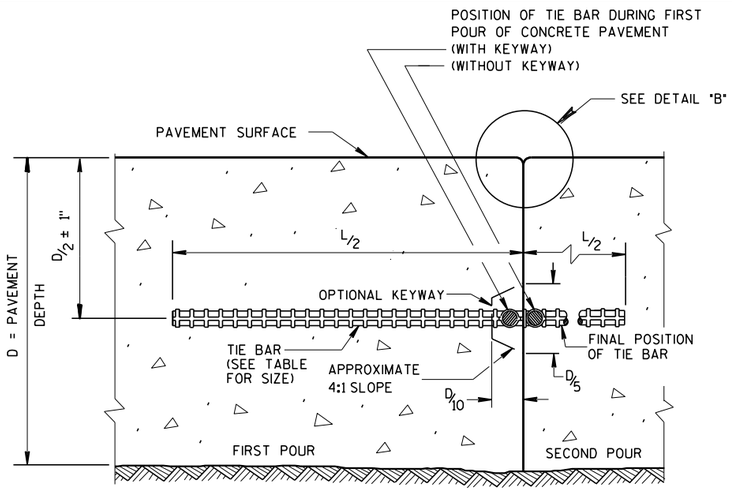
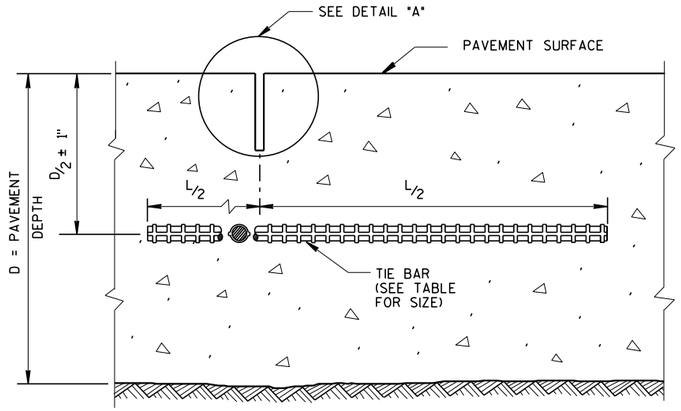
S.D.D. 13 B 2-8b



CONSTRUCTION JOINT



SAWED JOINT

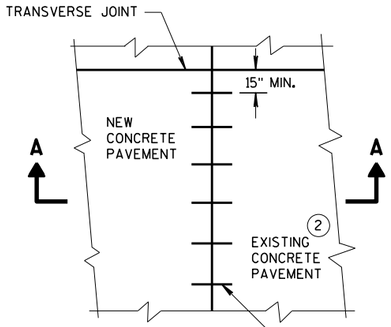
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

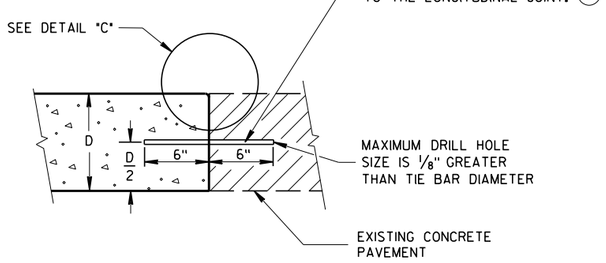
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

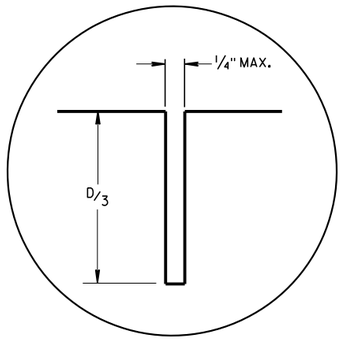


PLAN VIEW

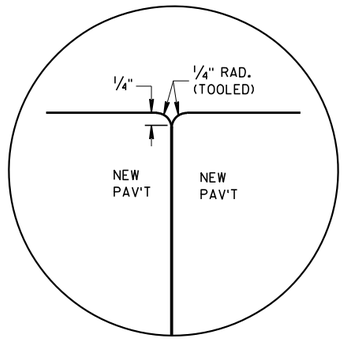


SECTION A-A

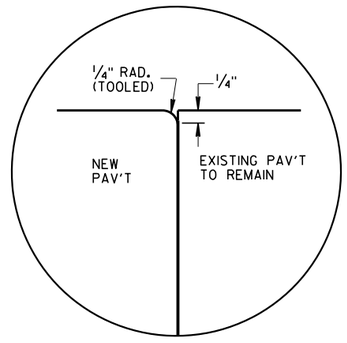
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



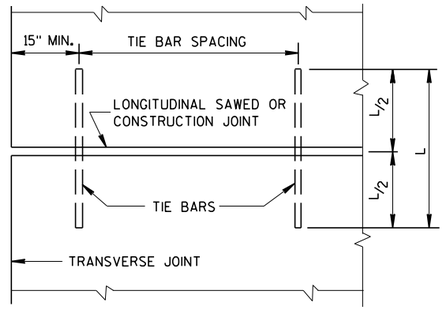
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

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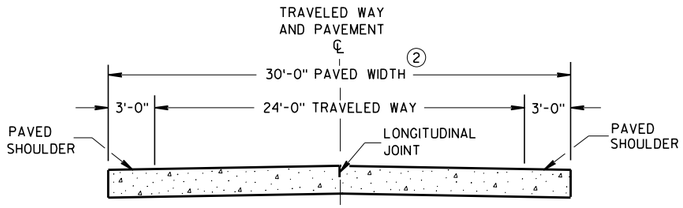
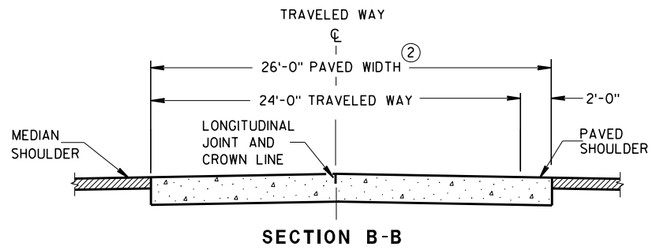
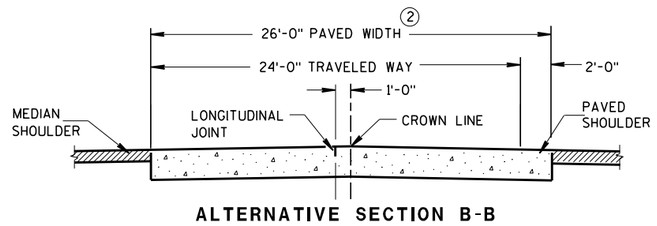
S.D.D. 13 C 1-19



SECTION A-A
TWO-LANE TWO-WAY HIGHWAY ①



SECTION B-B



ALTERNATIVE SECTION B-B
①
DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

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

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

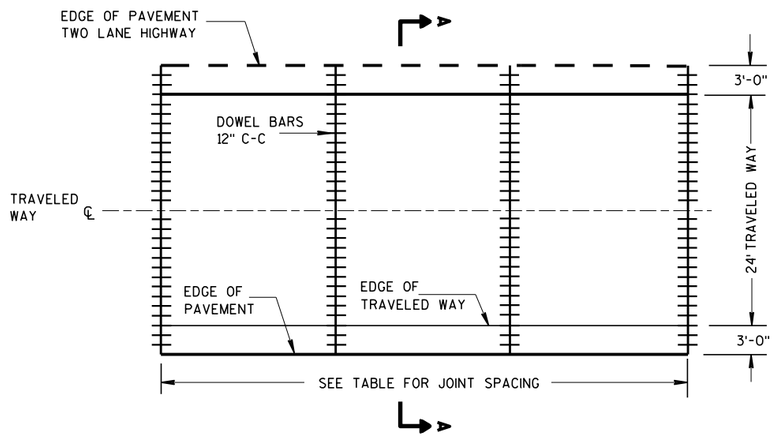
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

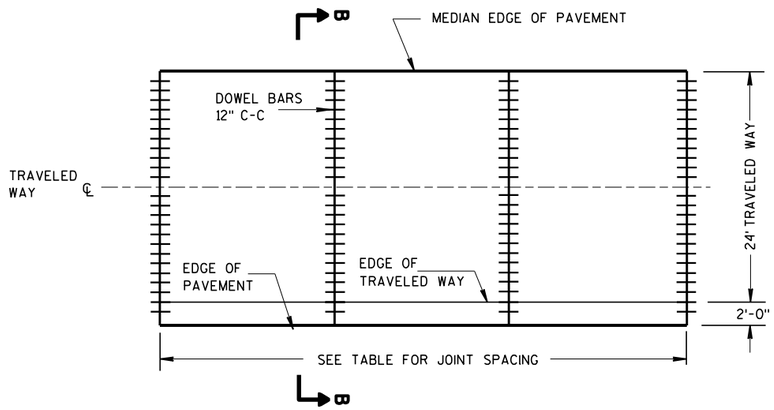
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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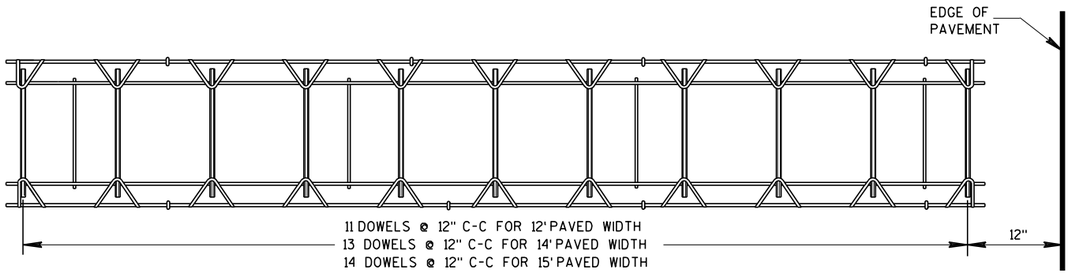
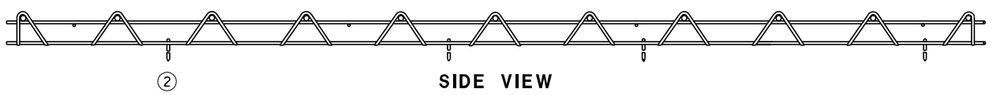
S.D.D. 13 C 11-12a



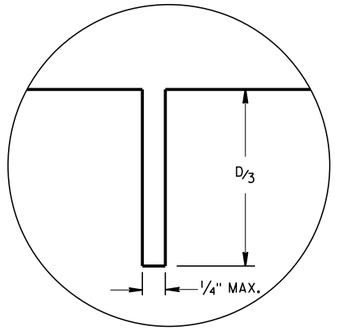
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

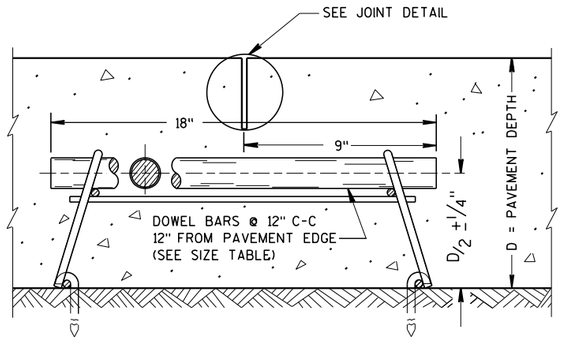
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

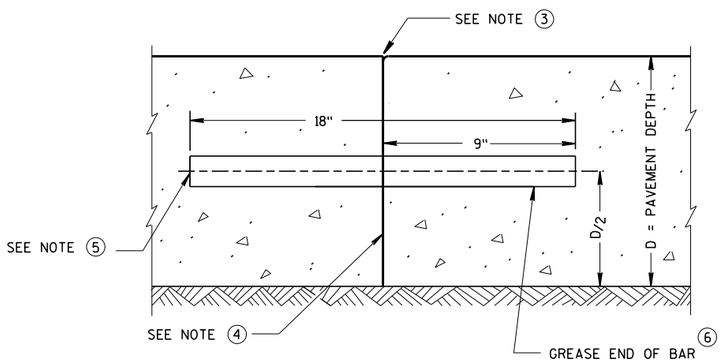
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

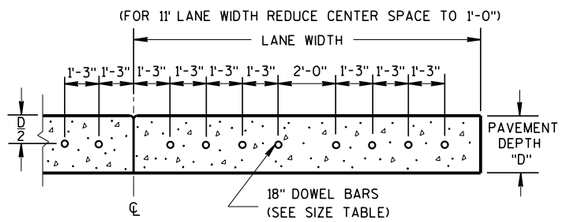
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUP

FHWA

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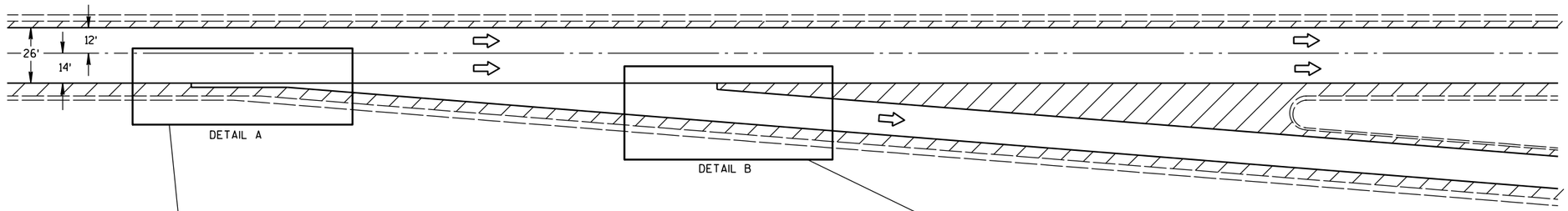
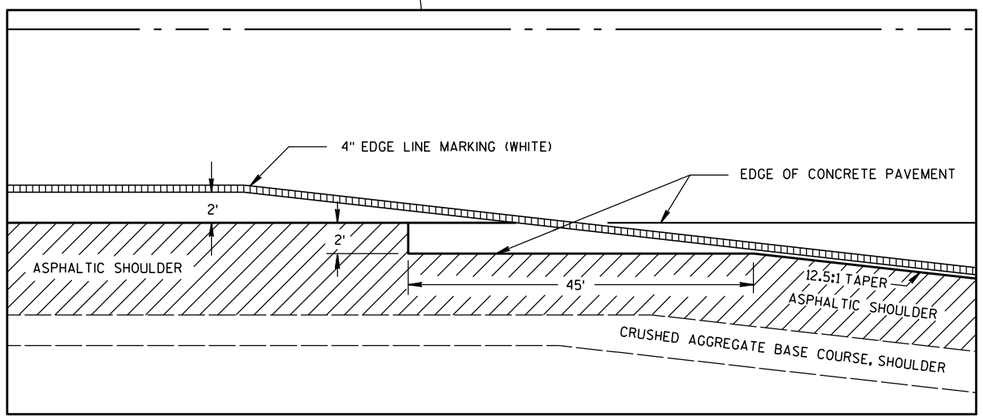
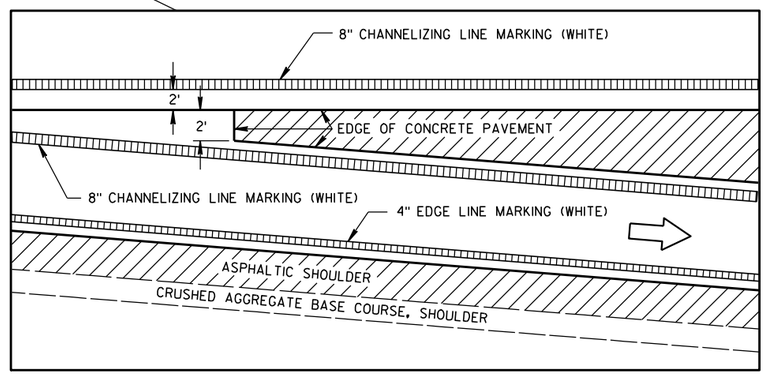
S.D.D. 13 C 11-12b



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 13 C 17-1a

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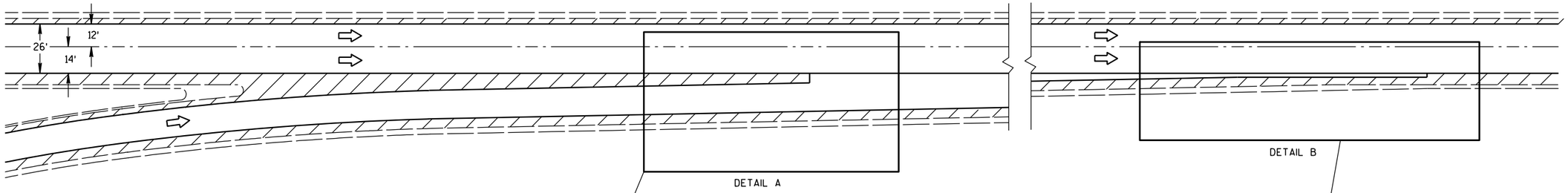
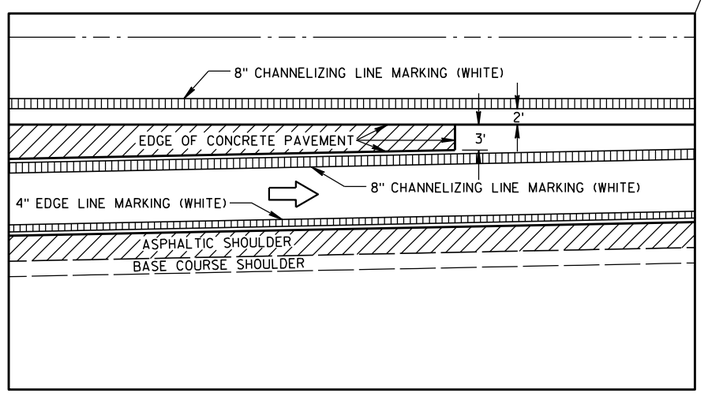
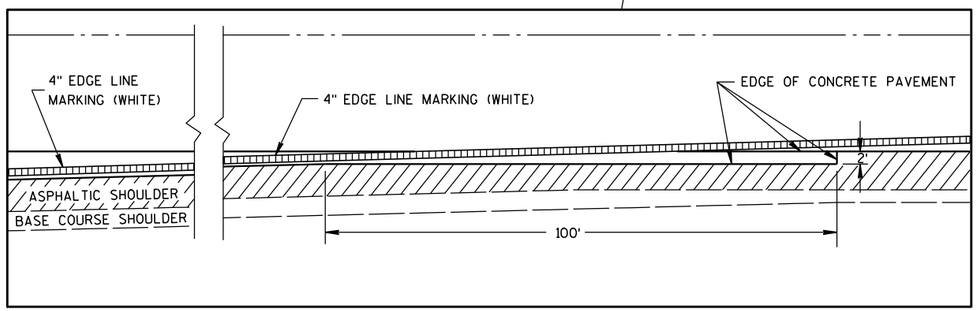
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

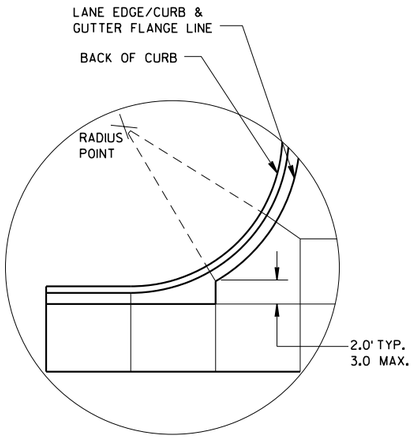
5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

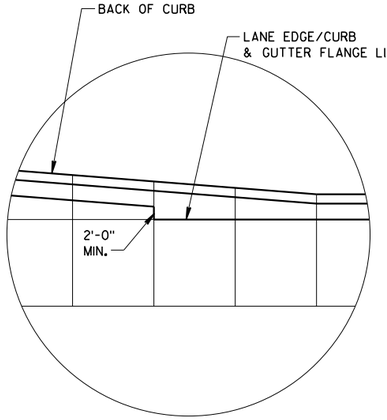
FHWA

6

S.D.D. 13 C 17-1b



DETAIL "A"



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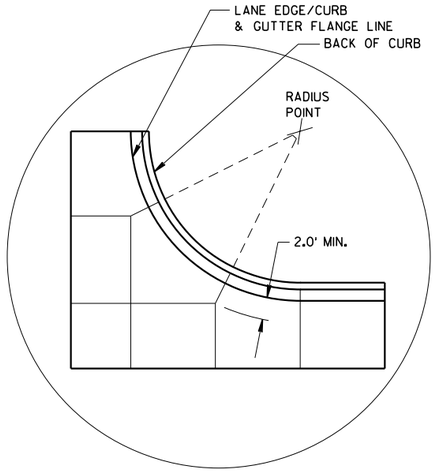

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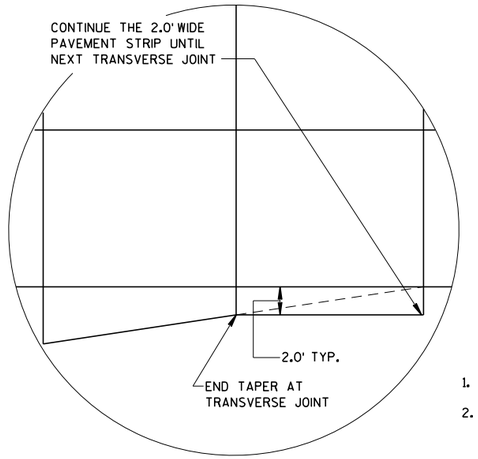


DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

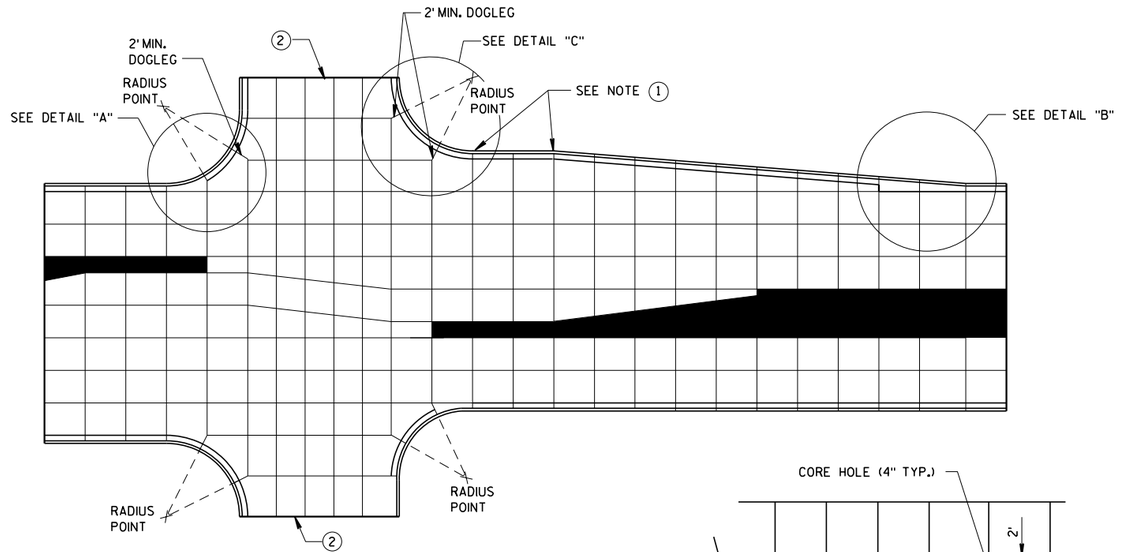
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

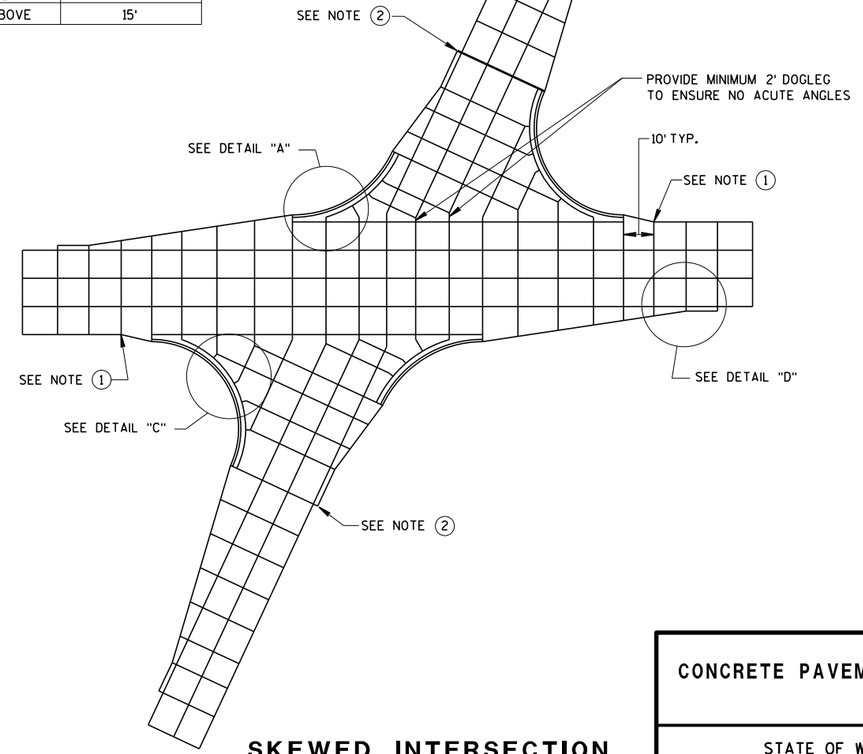
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



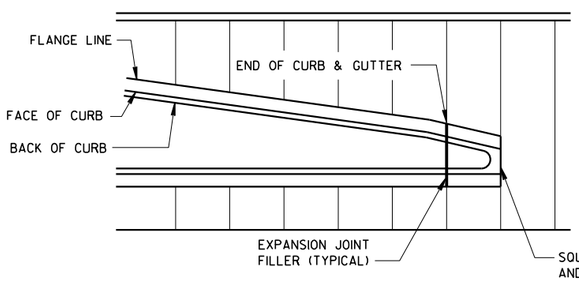
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

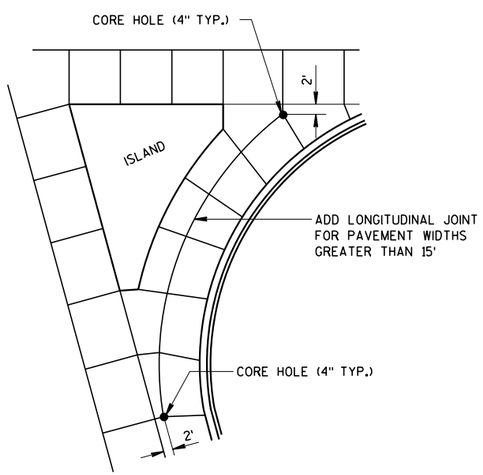
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

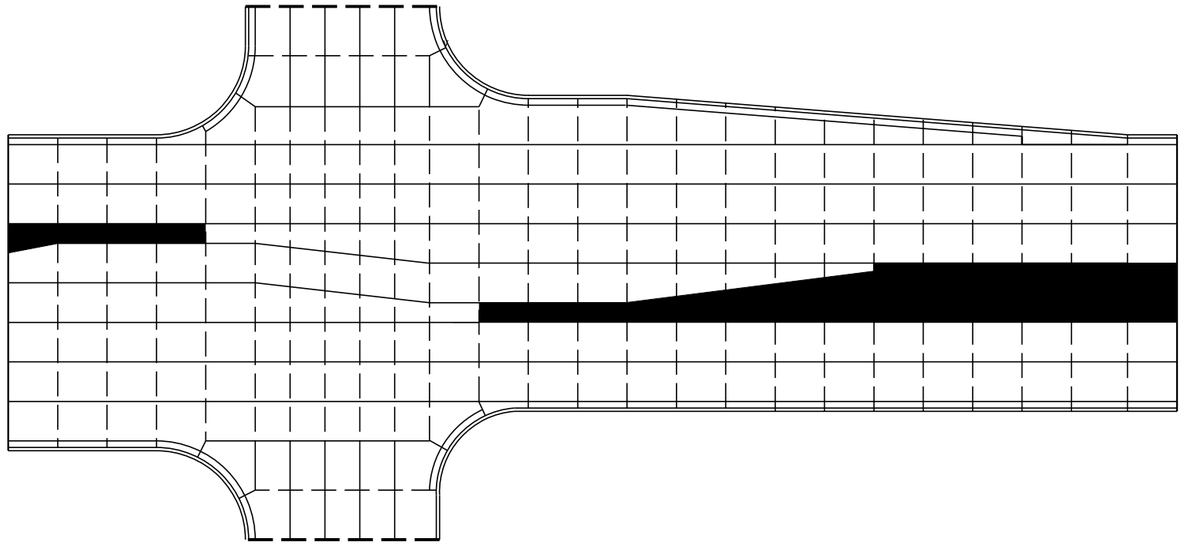
6
S.D.D. 13 C 18-6a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

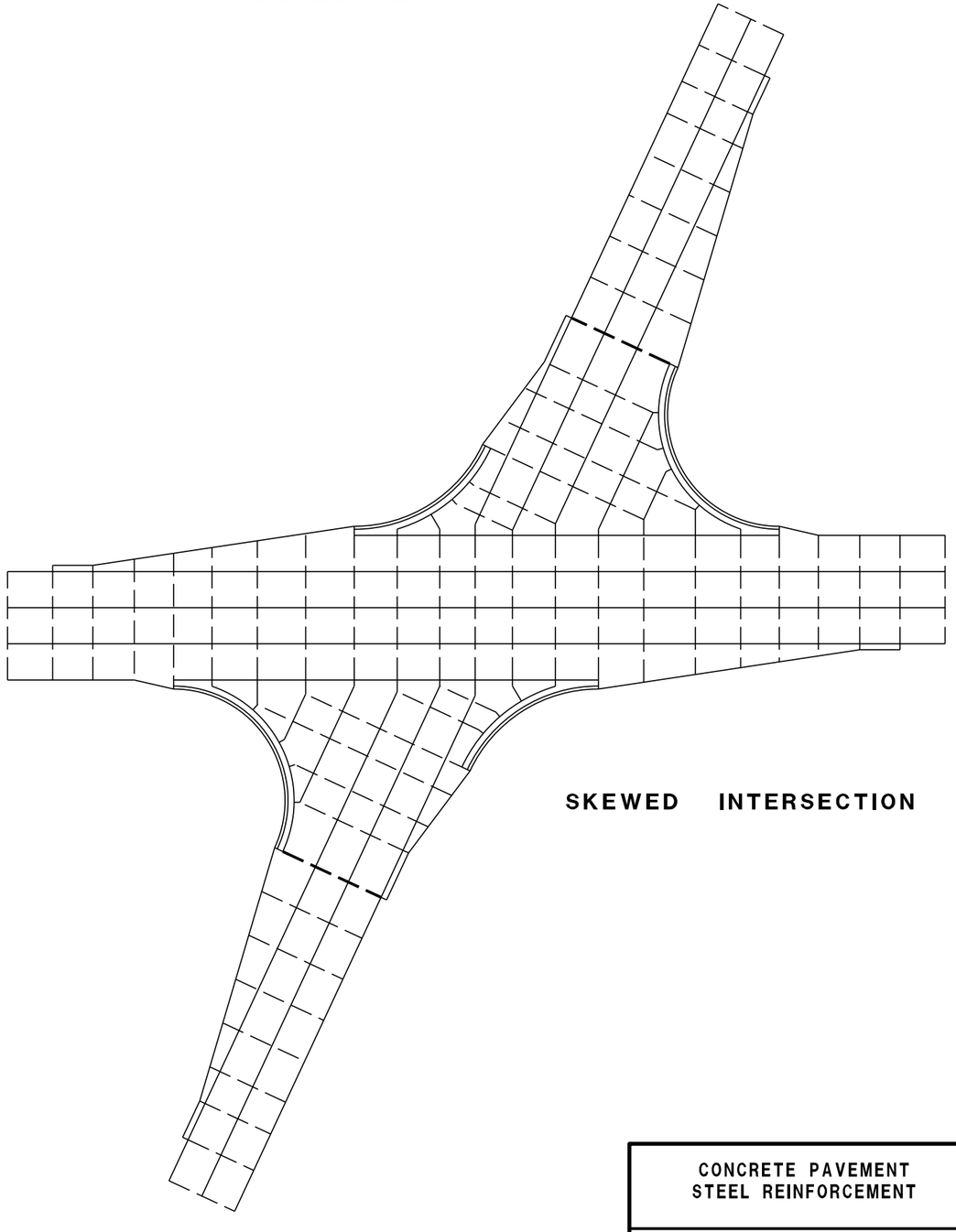
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

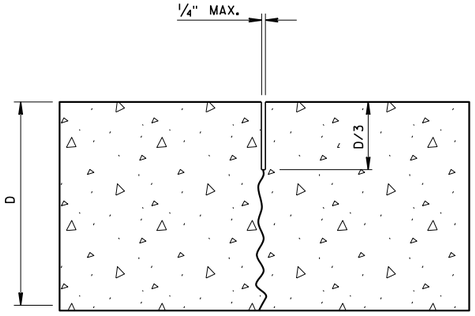
6

S.D.D. 13 C 18-6b

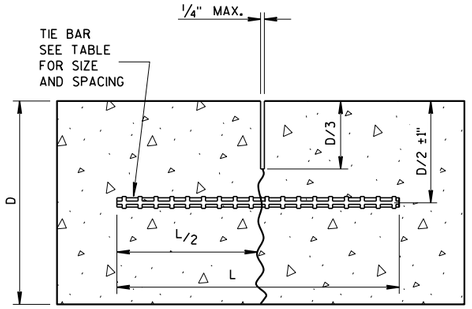
S.D.D. 13 C 18-6b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

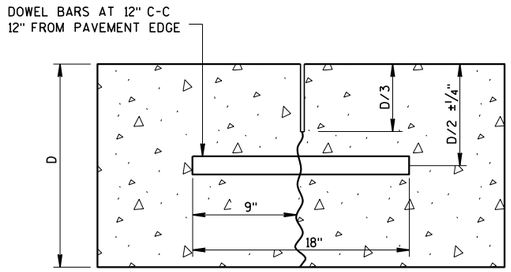
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

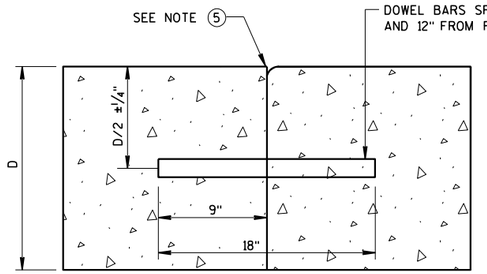
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



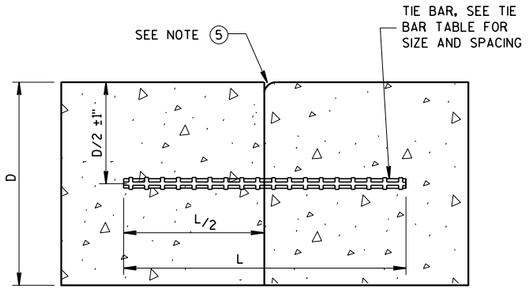
DOWELED-TRANSVERSE

CONTRACTION JOINTS

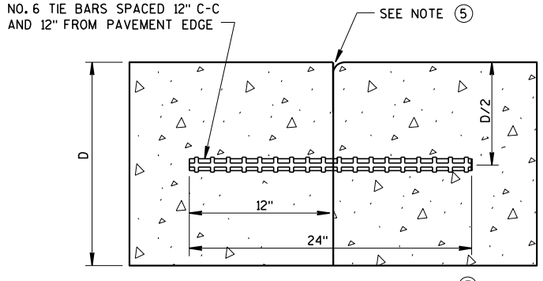
SEE NOTE (2)



DOWELED TRANSVERSE (3)

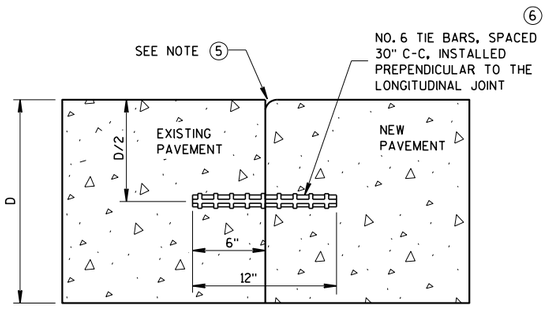


TIED LONGITUDINAL



TIED TRANSVERSE (3)

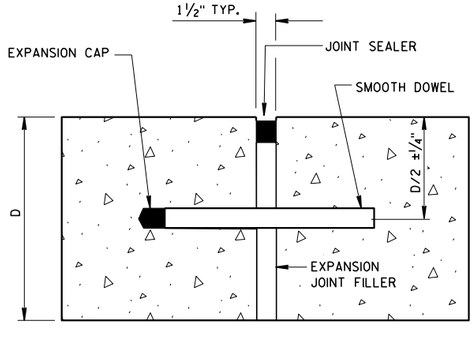
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

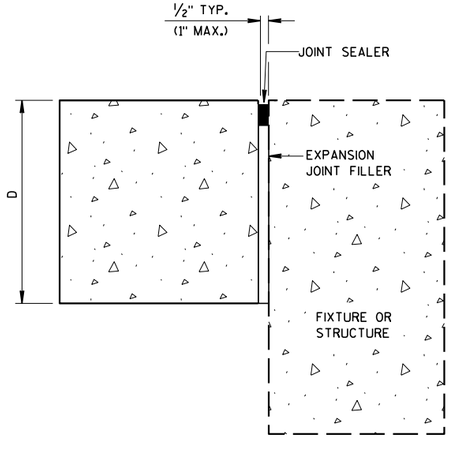
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

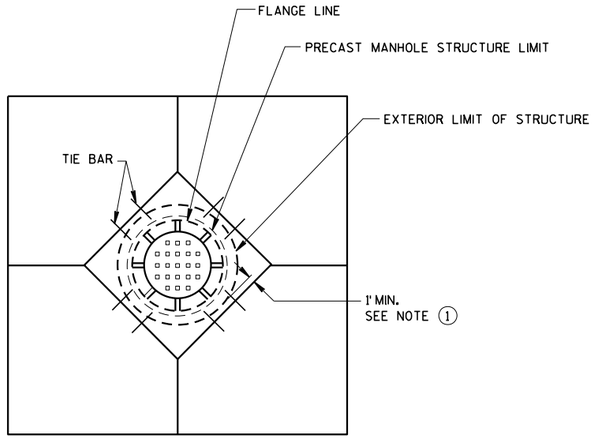
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

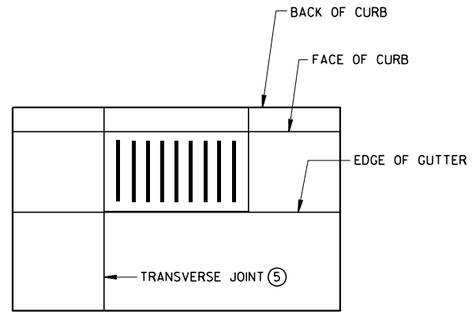
S.D.D. 13 C 18-6c

6

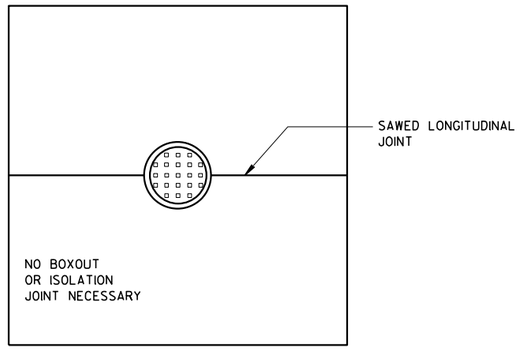
S.D.D. 13 C 18-6c



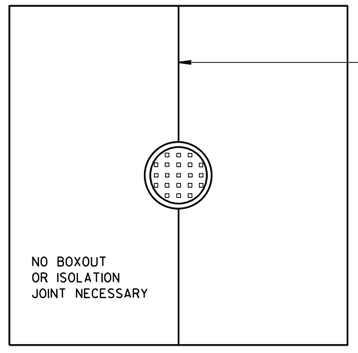
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



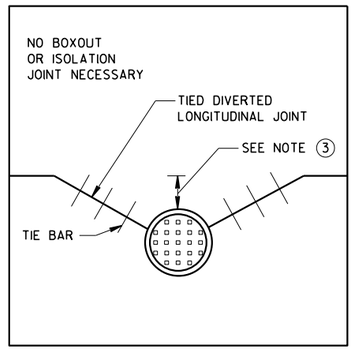
INLET WITH TRANSVERSE JOINT



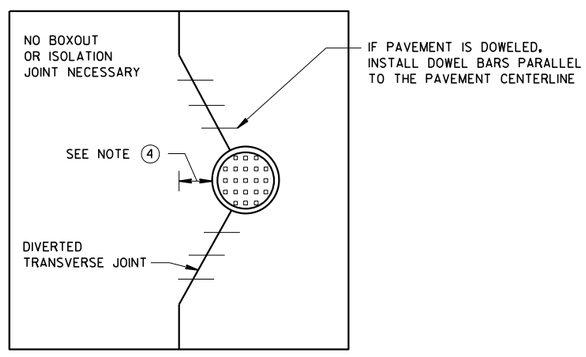
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter K... P.E. — PAVEMENT SUPT
FHWA

6

S.D.D. 13 C 18-6d

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

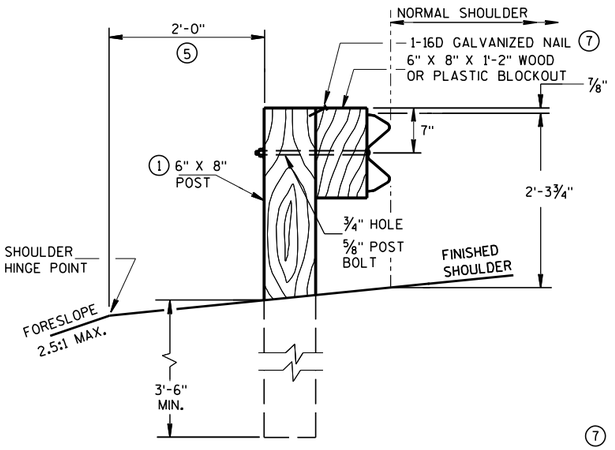
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

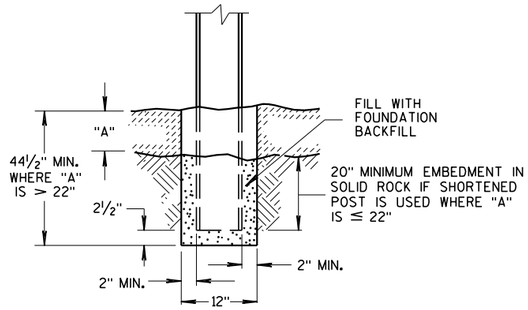
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

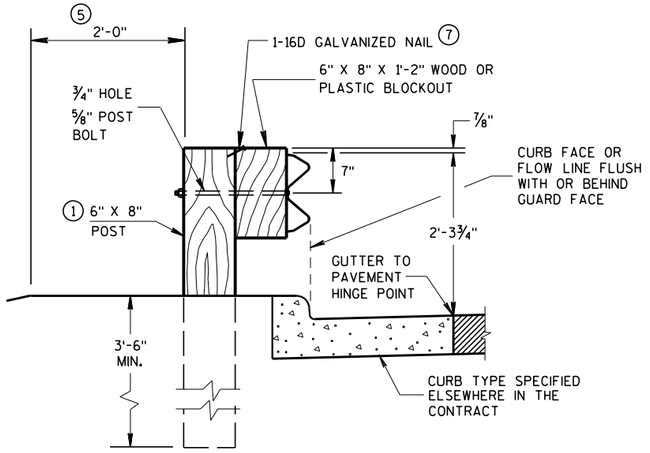
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



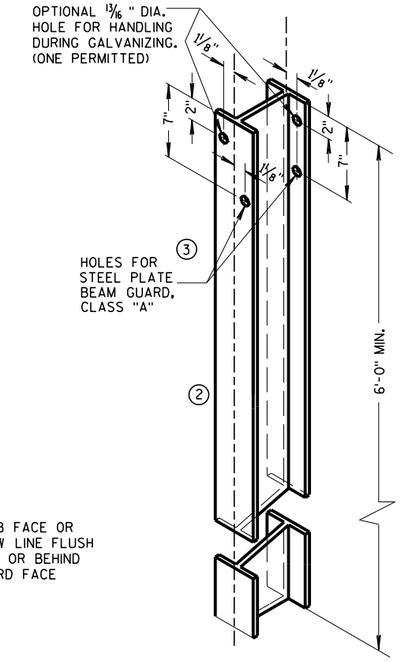
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

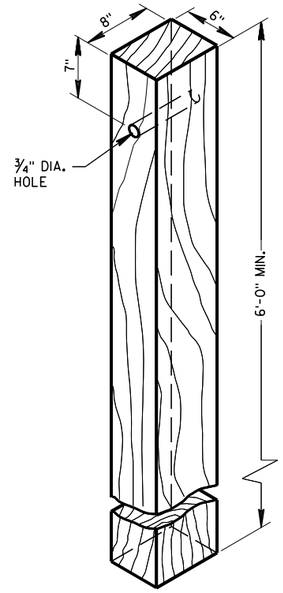


END VIEW
LOCATED ALONG A CURBED ROADWAY

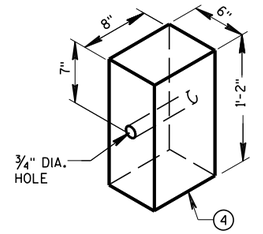


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

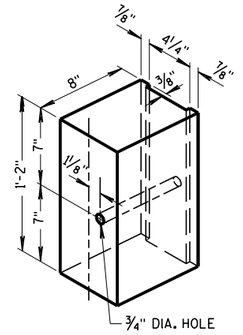
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



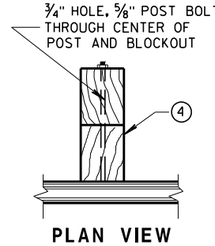
WOOD POST
(6"X8") NOMINAL



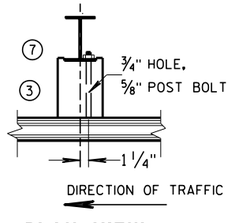
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



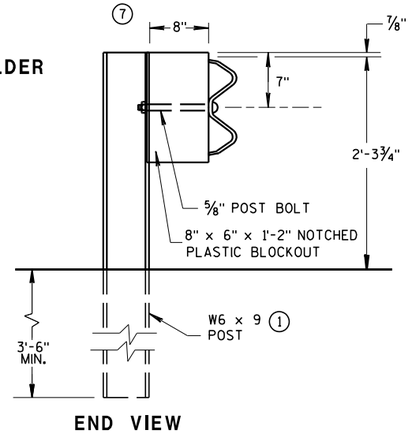
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



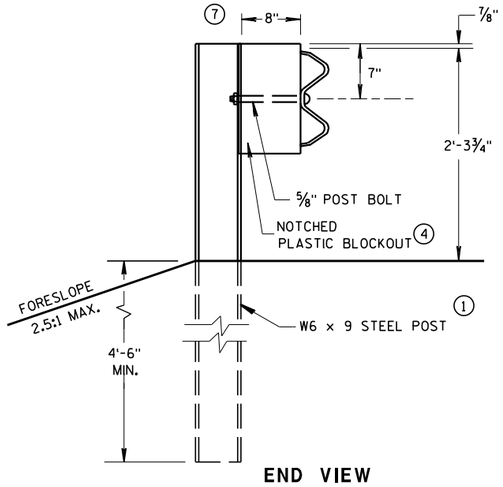
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



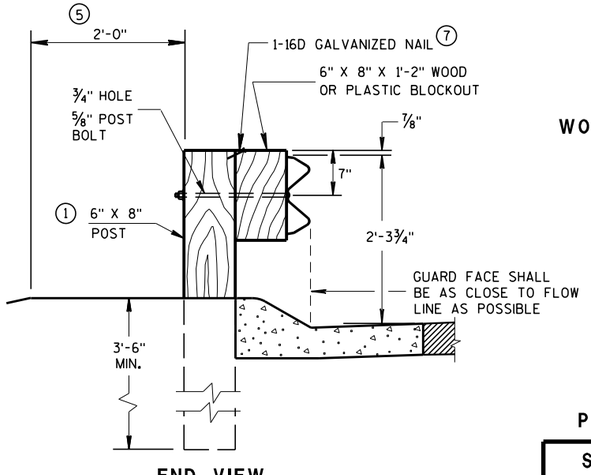
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



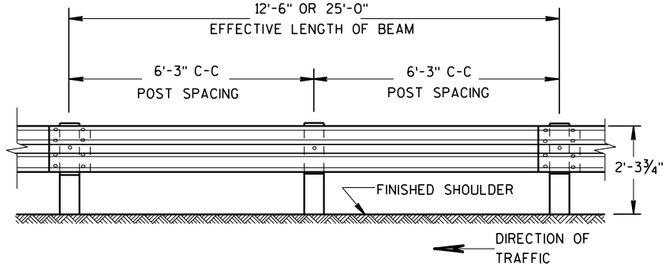
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

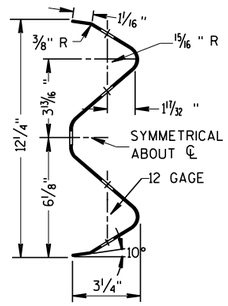
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-11a

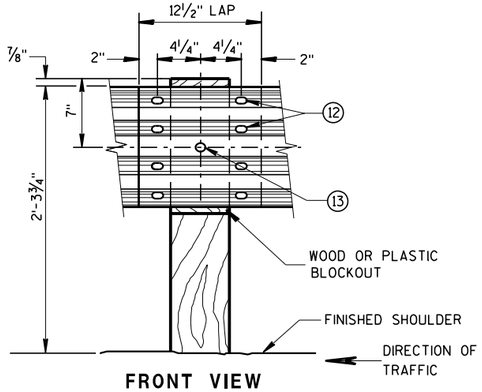


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

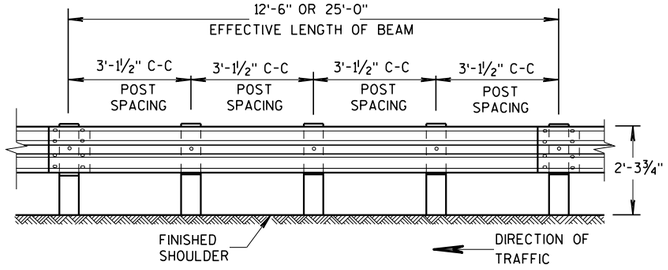
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

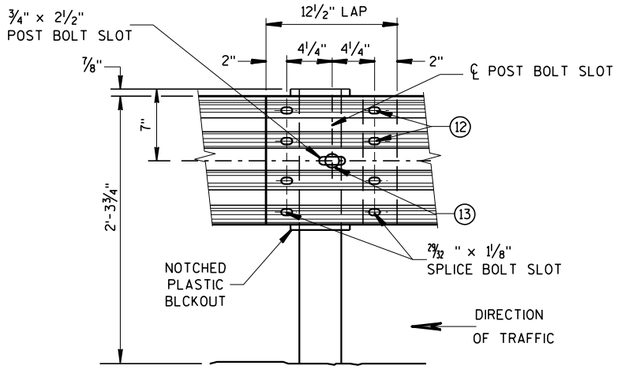
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

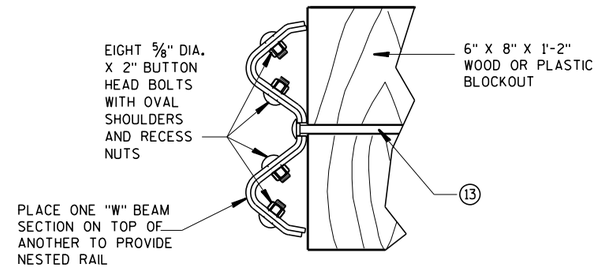
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

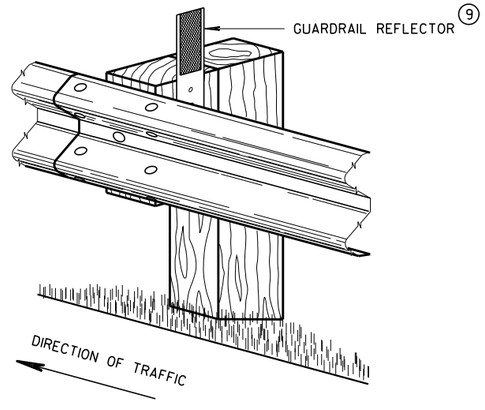
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



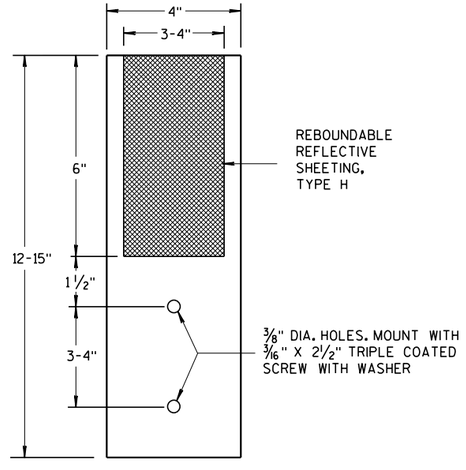
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCO 296
DEPARTMENT OF TRANSPORTATION

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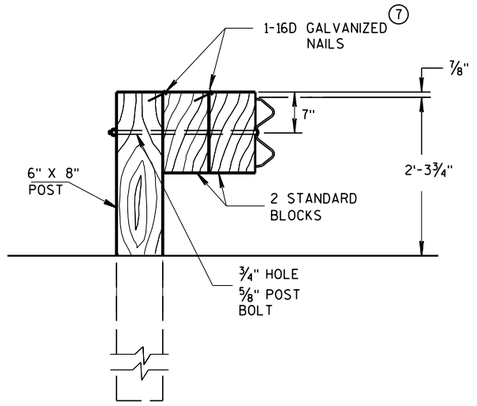
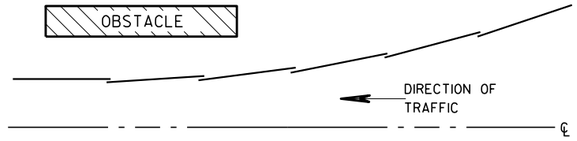
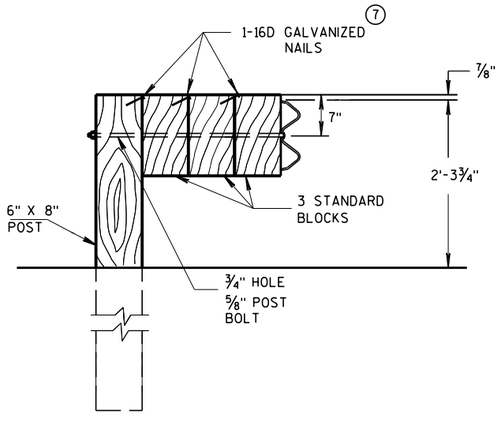


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

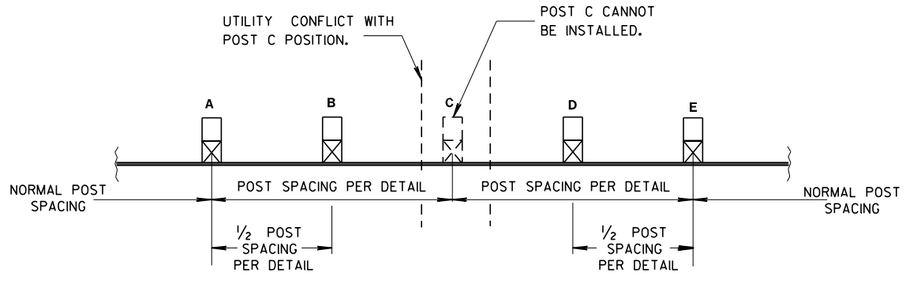


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

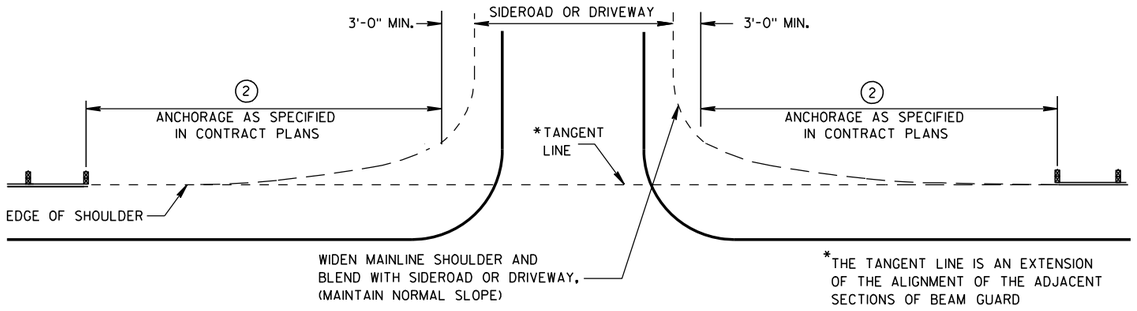
DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

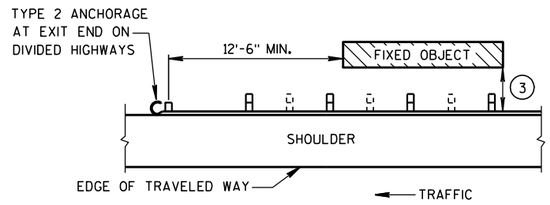
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
297
FHWA

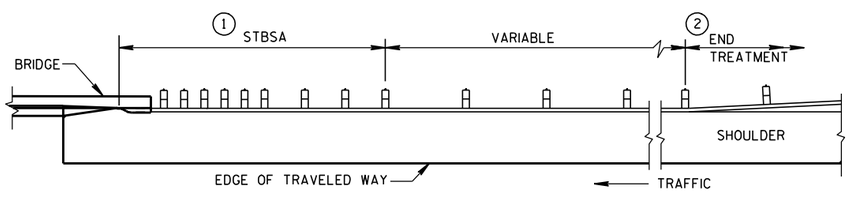
6
S.D.D. 14 B 15-11c



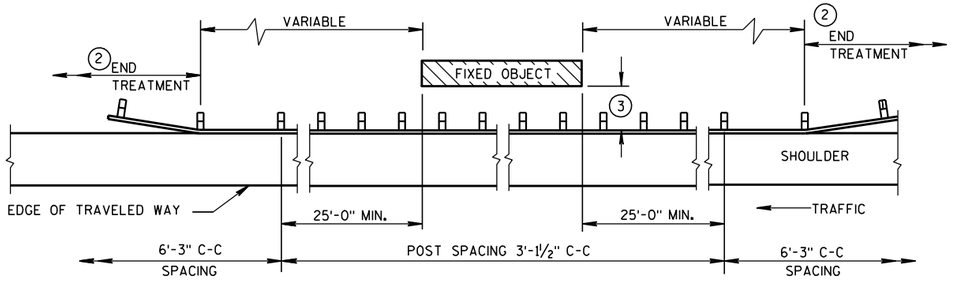
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

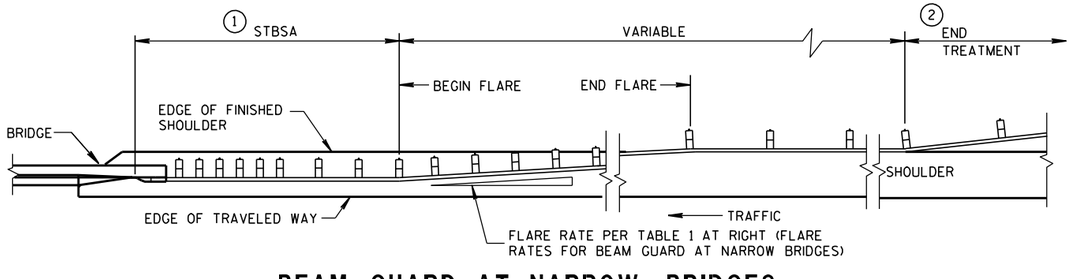


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

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

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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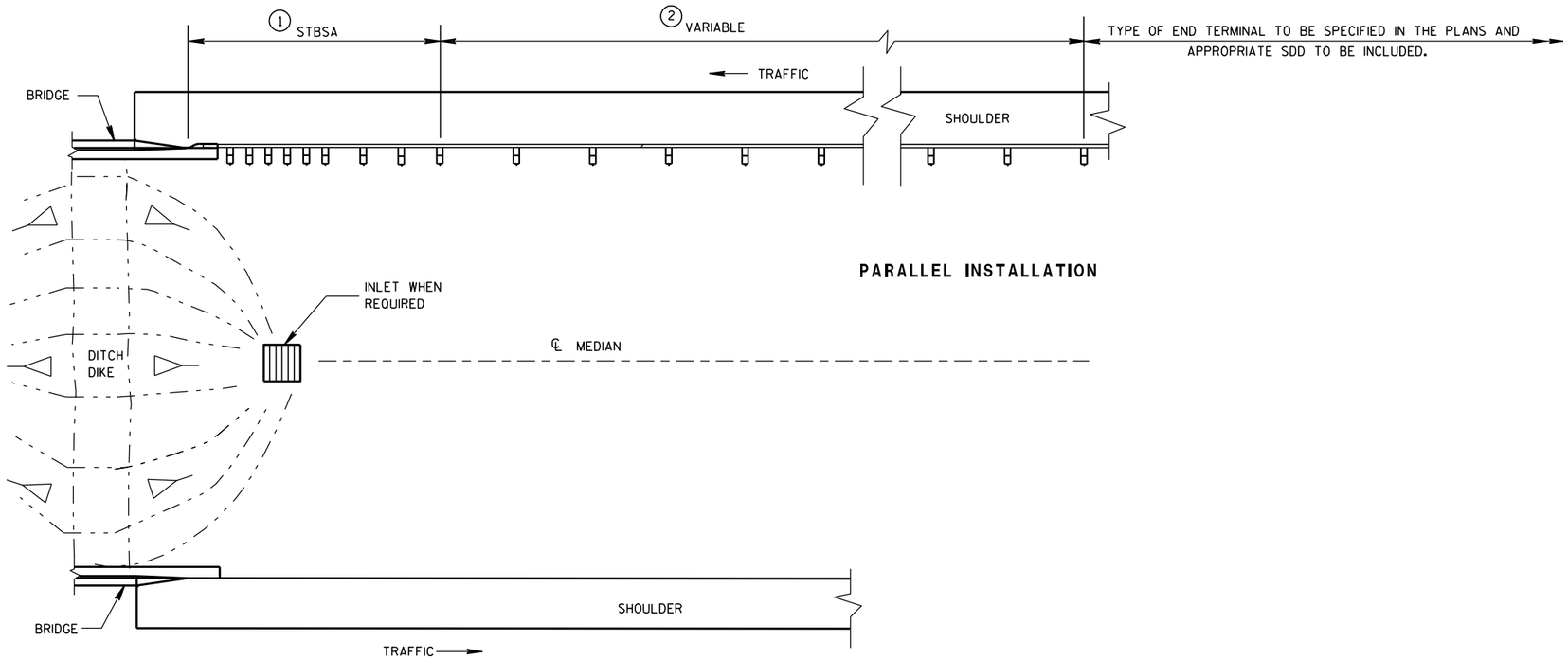
S.D.D. 14 B 18-6a

GENERAL NOTES

1. STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
2. LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.



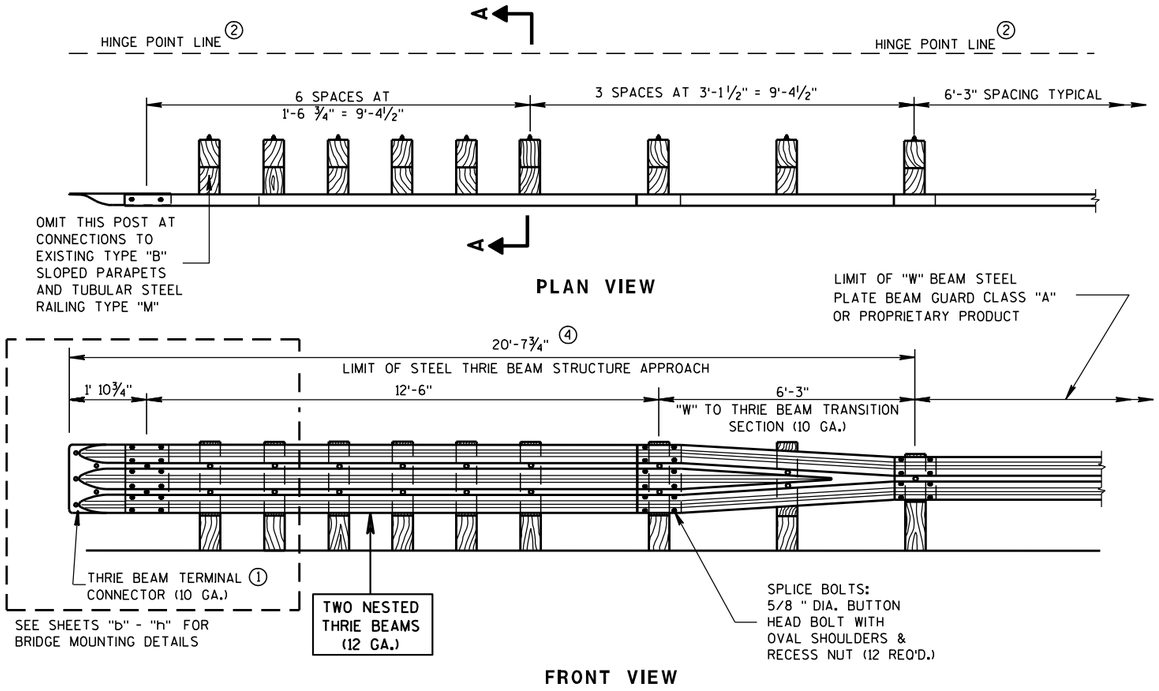
PARALLEL INSTALLATION

BEAM GUARD AT MEDIAN APPROACH TO BRIDGES

STEEL PLATE BEAM GUARD CLASS "A" AT MEDIAN APPROACH TO BRIDGES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-21-07 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

S.D.D. 14 B 18-6b



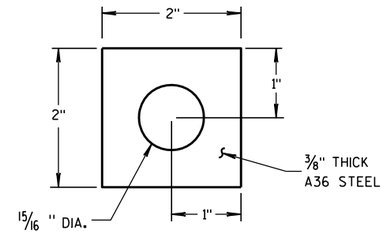


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

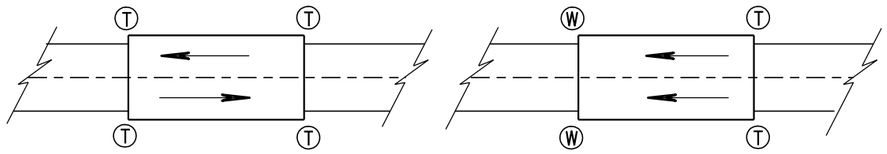
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



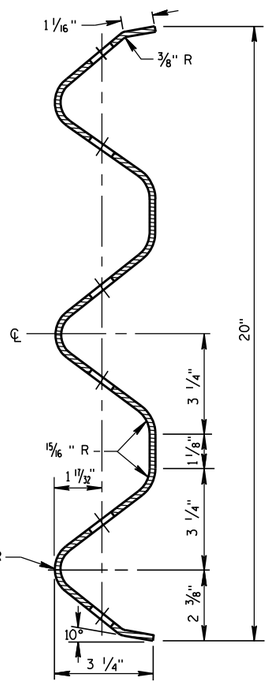
TWO WAY TRAFFIC

ONE WAY TRAFFIC

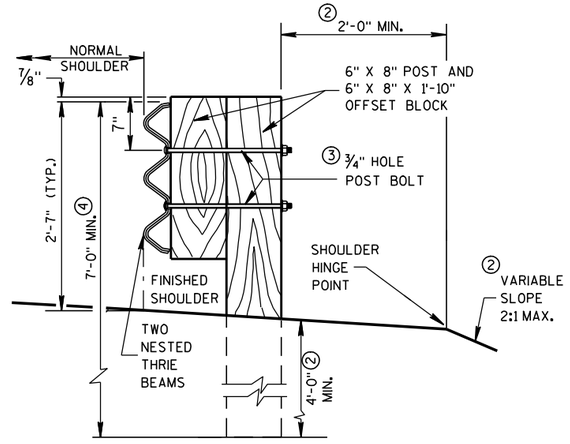
T THRIE BEAM CONNECTION

W W-BEAM CONNECTION WHEN REQUIRED

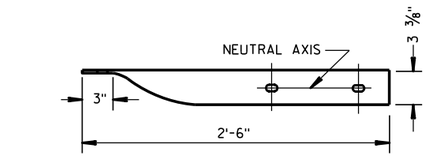
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

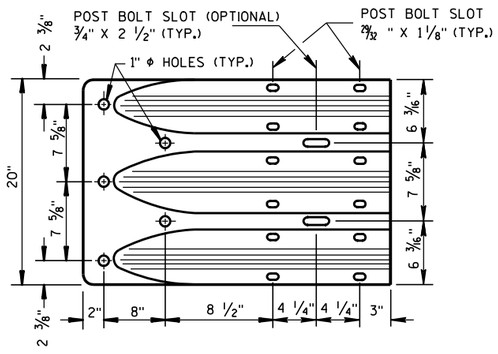


SECTION THRU THRIE BEAM RAIL ELEMENT

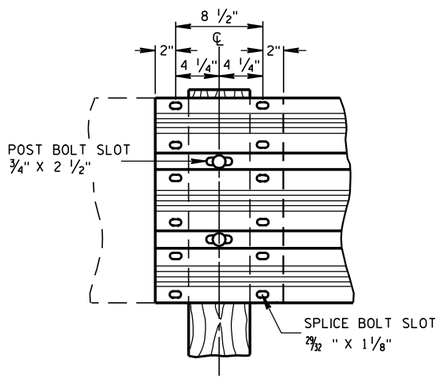


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

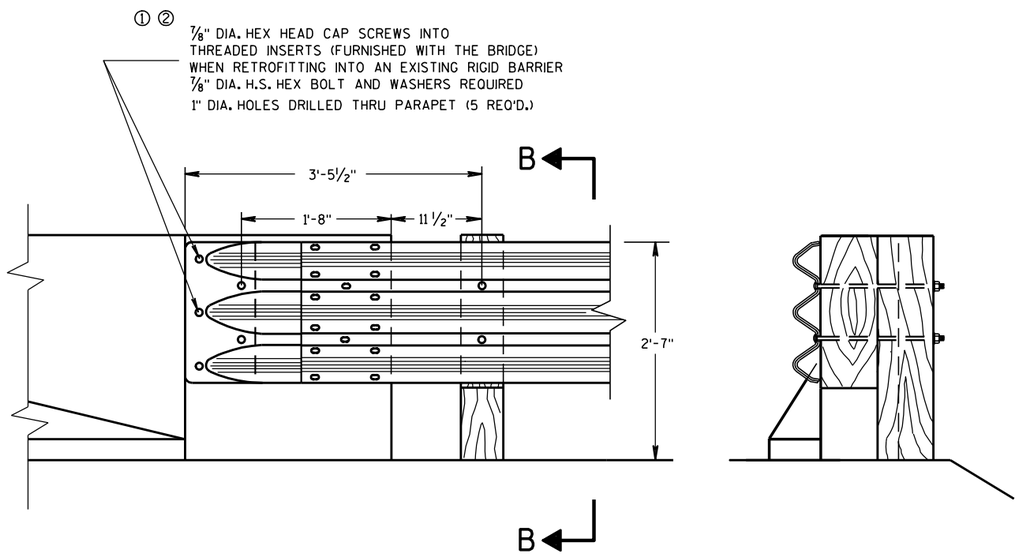
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

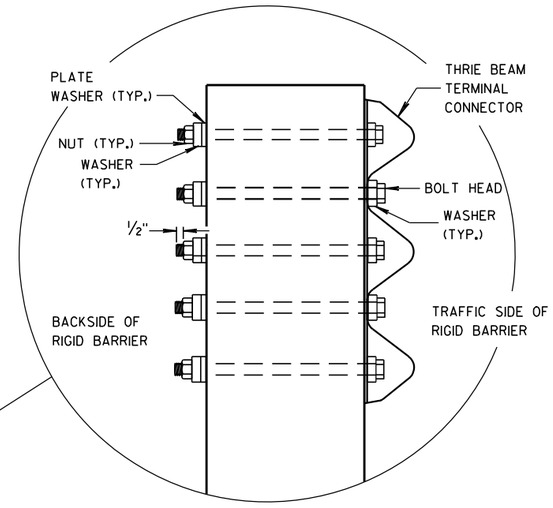
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

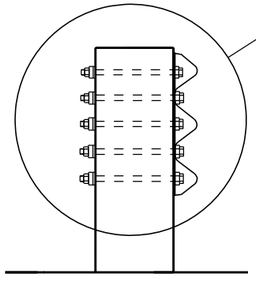
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

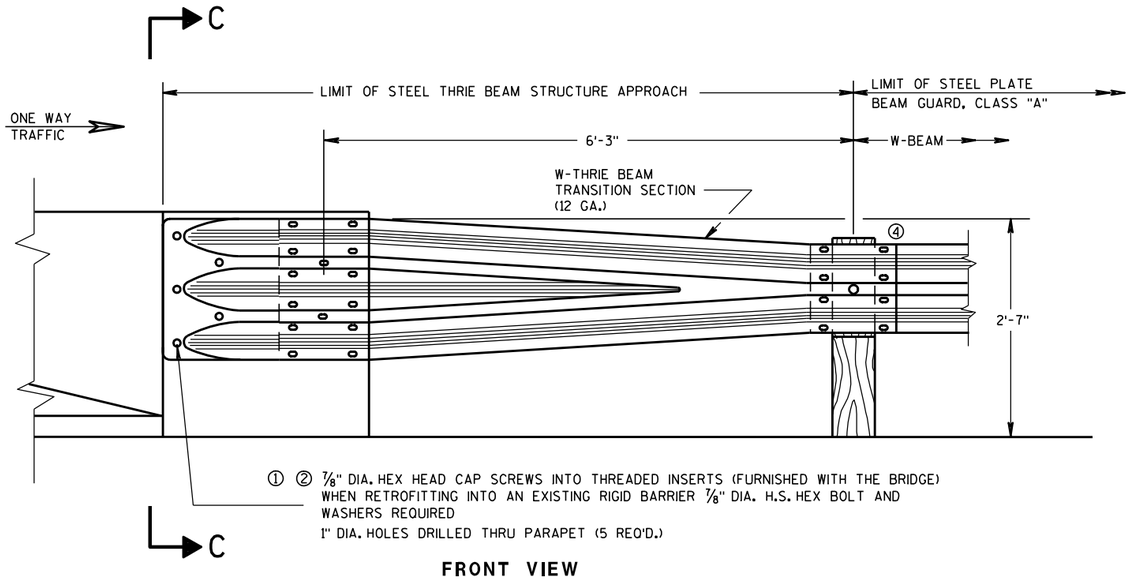
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





SECTION C-C



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

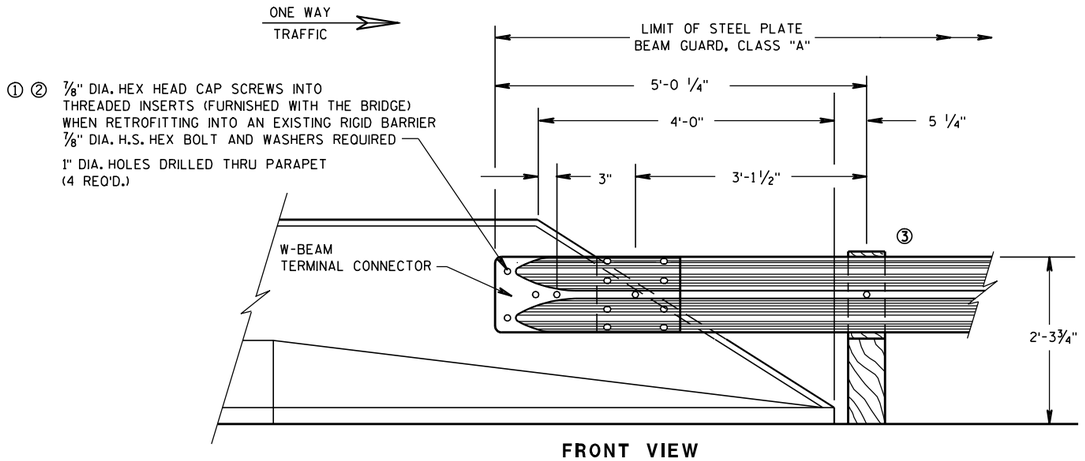
W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

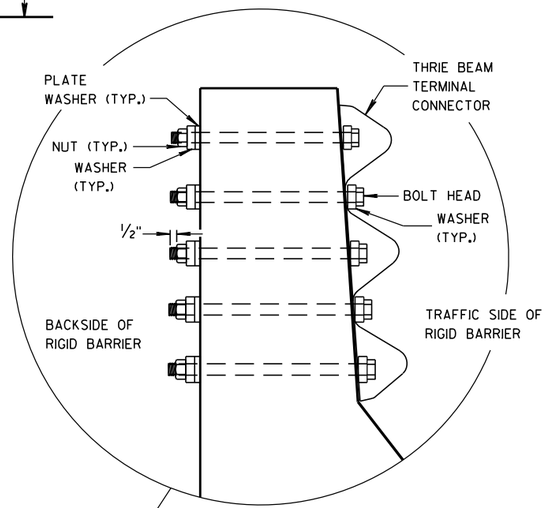
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

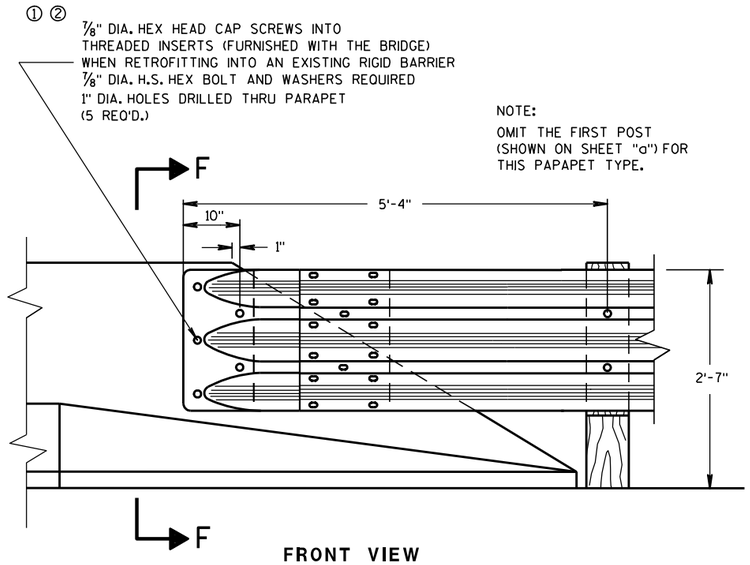
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

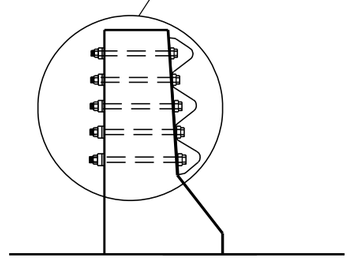
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012 — DATE
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FHWA

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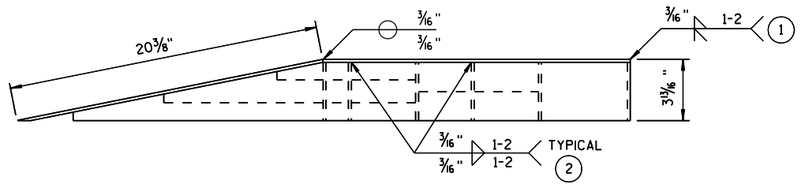
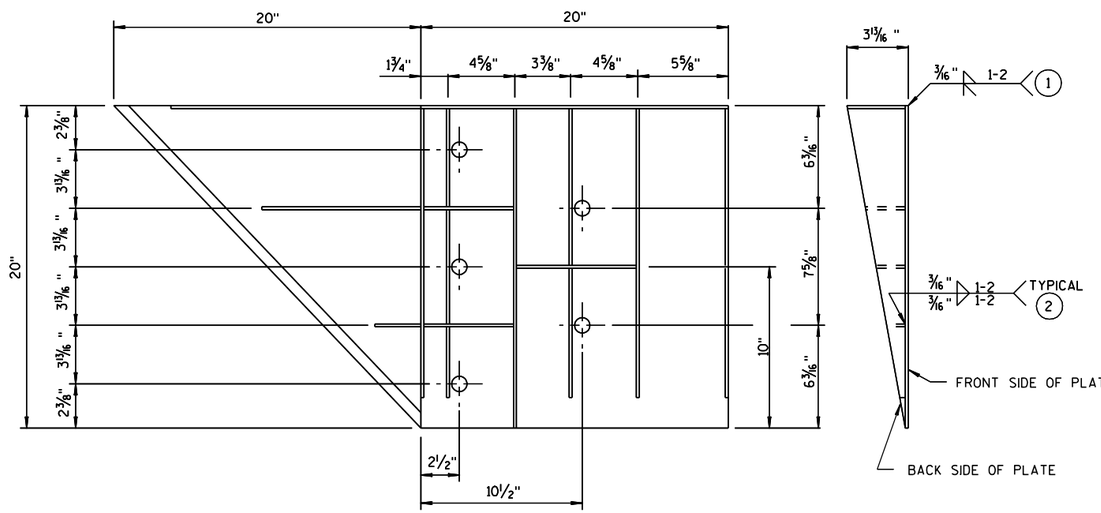
S.D.D. 14 B 20-11d





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

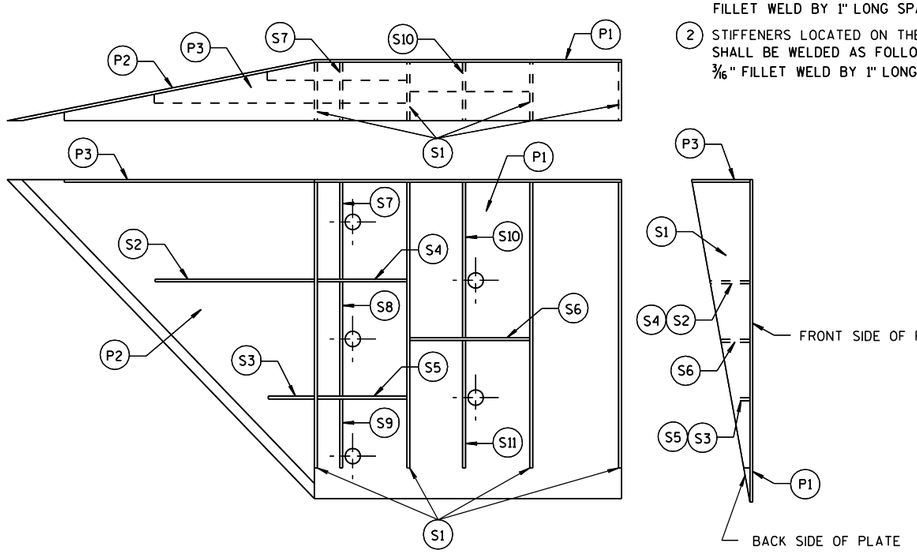


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012 — DATE
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FHWA

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S.D.D. 14 B 20-11g

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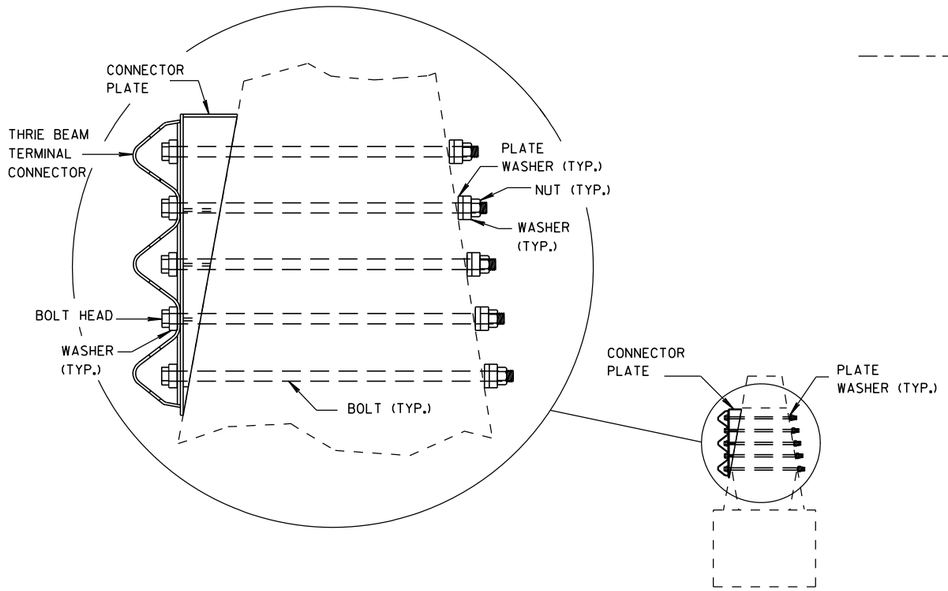
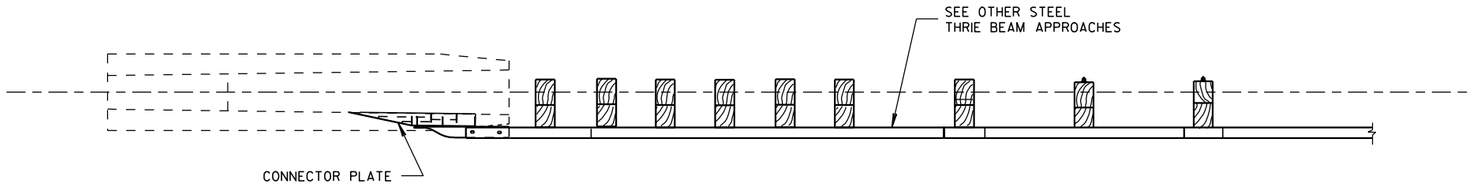
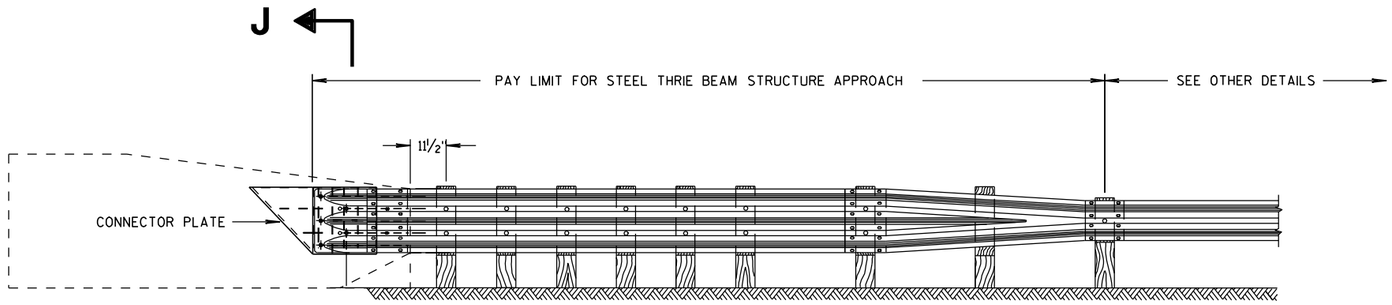


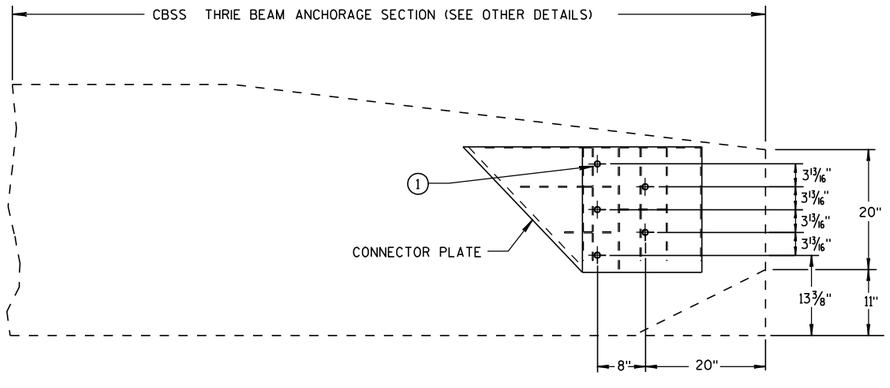
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

CONNECTOR PLATE, DRILLING HOLES THROUGH PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

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S.D.D. 14 B 20-11h

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

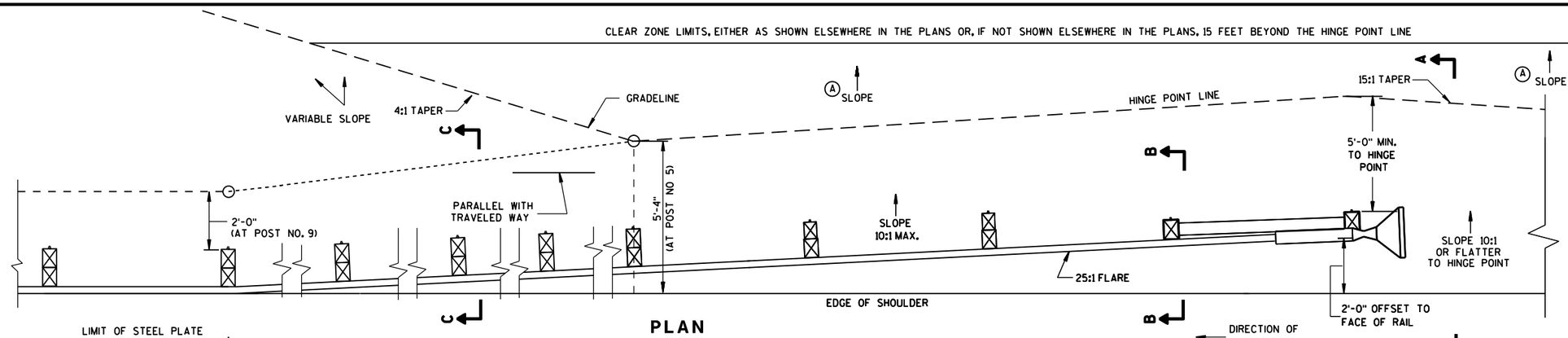
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

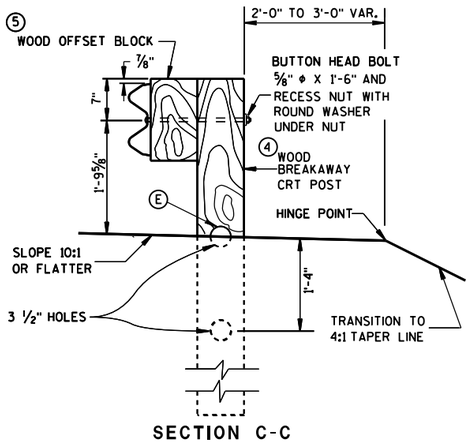
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

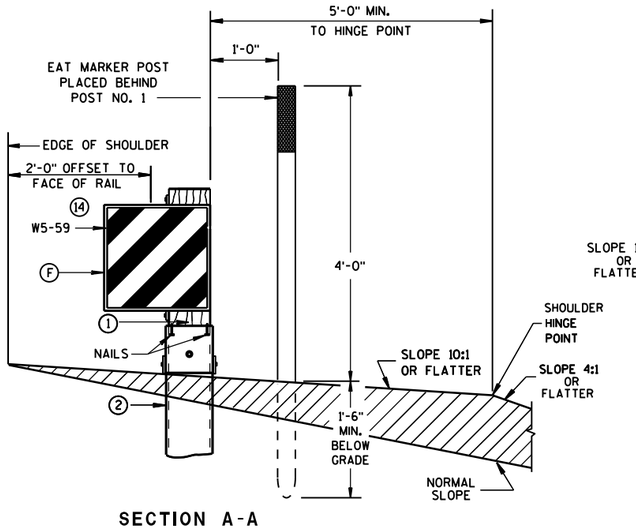
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

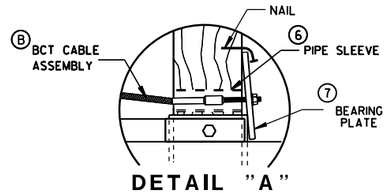




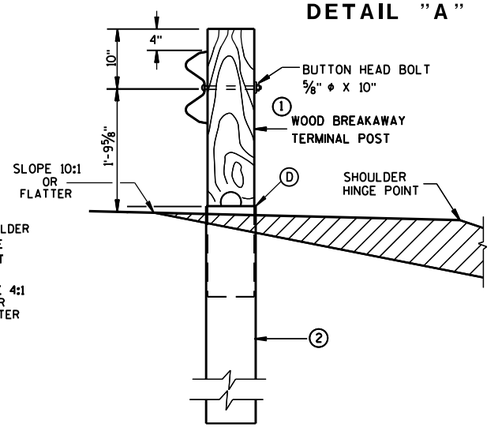
SECTION C-C
TYPICAL AT POST NOS. 6, 8



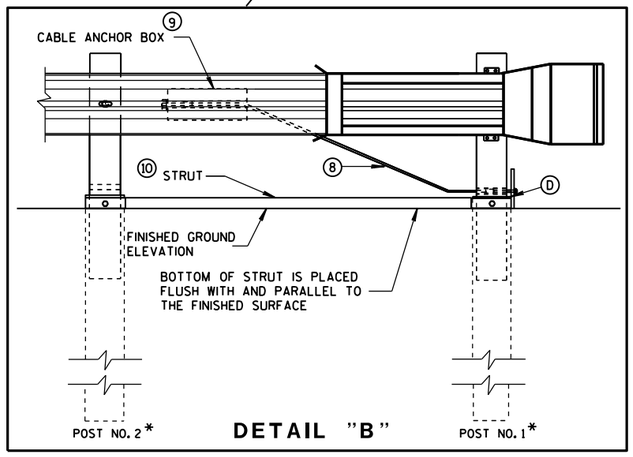
SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



SECTION B-B
TYPICAL AT POST NO. 2*



DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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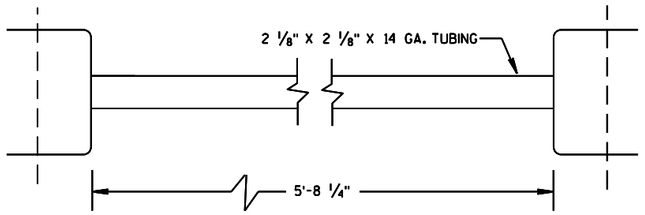
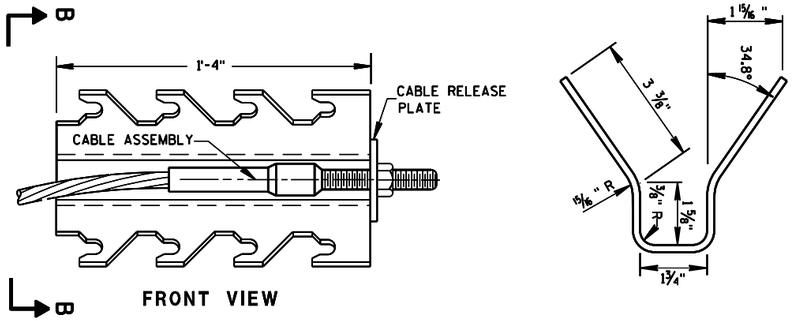
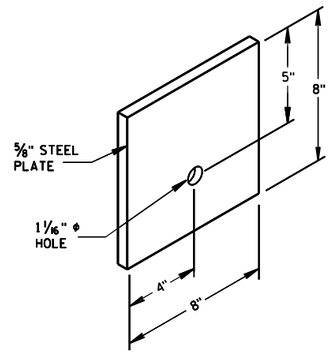
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

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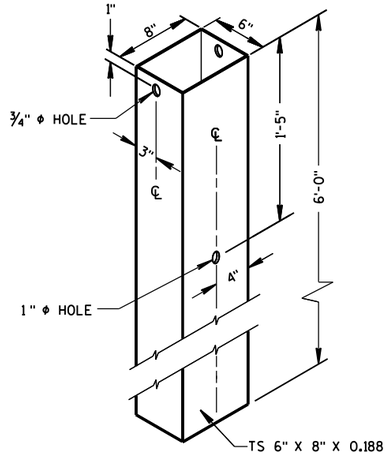
S.D.D. 14 B 24-9b

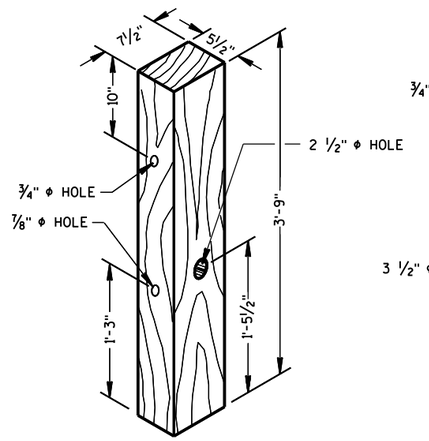
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

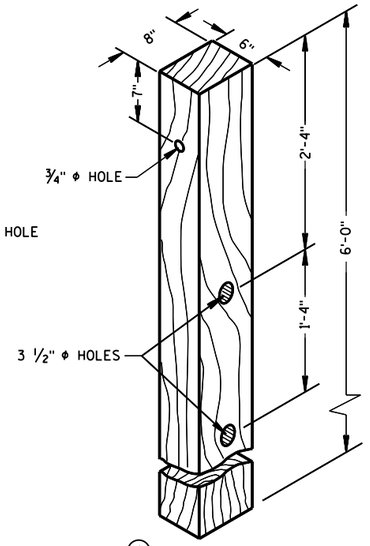
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST

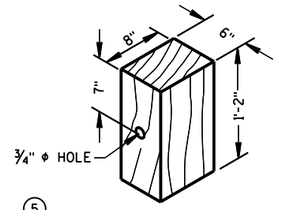


④ CRT POST
(POSTS NO'S 5-8)

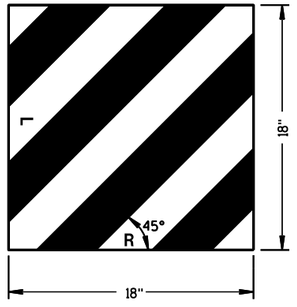
WOOD BREAKAWAY POSTS

GENERAL NOTES

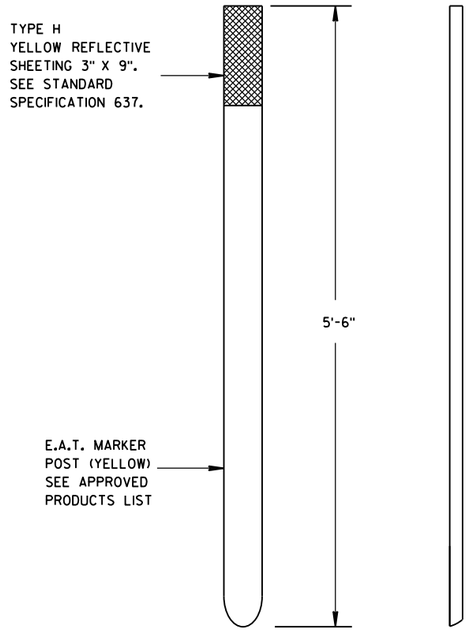
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV...

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S.D.D. 14 B 24-9c

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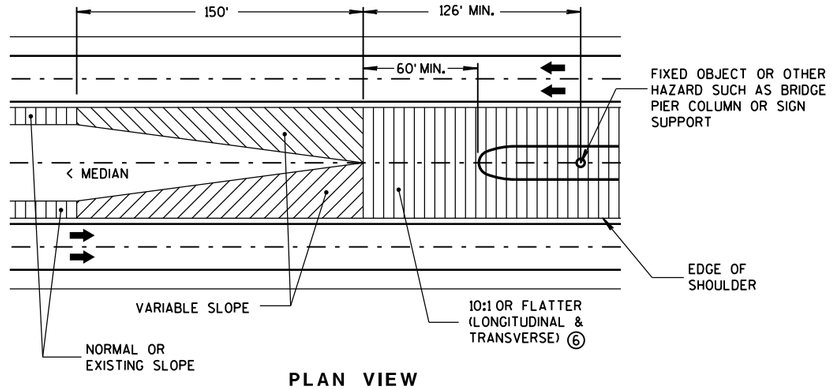
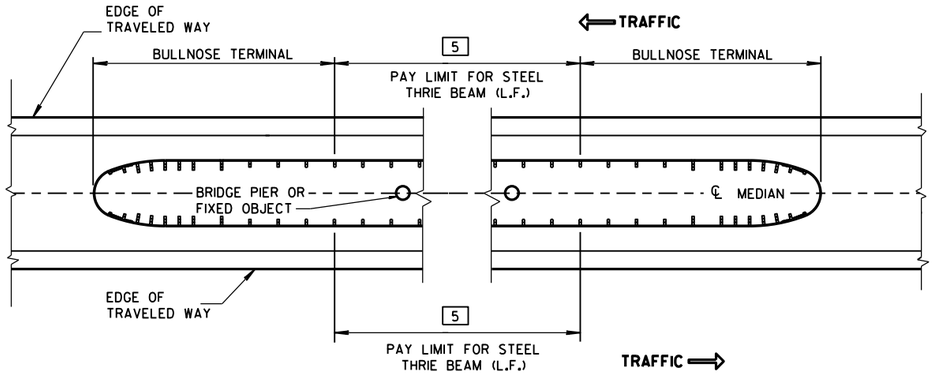
S.D.D. 14 B 24-9c

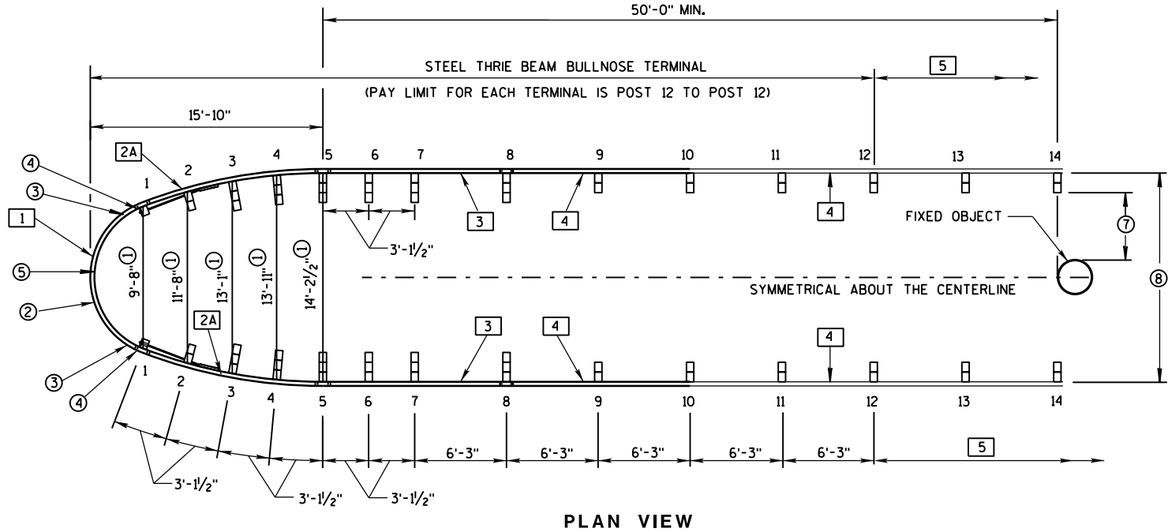


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

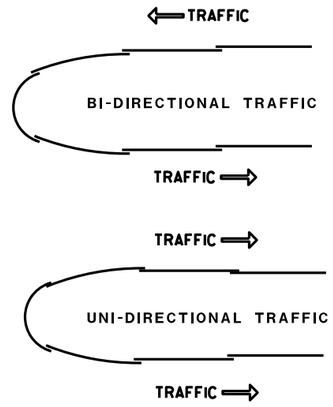


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

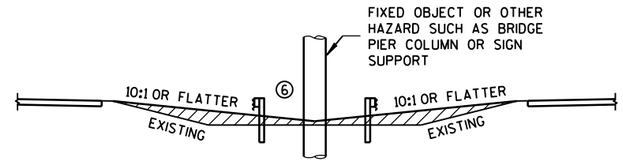
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

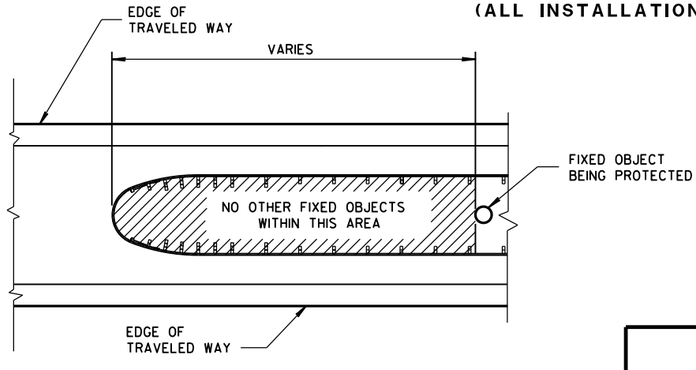
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)



HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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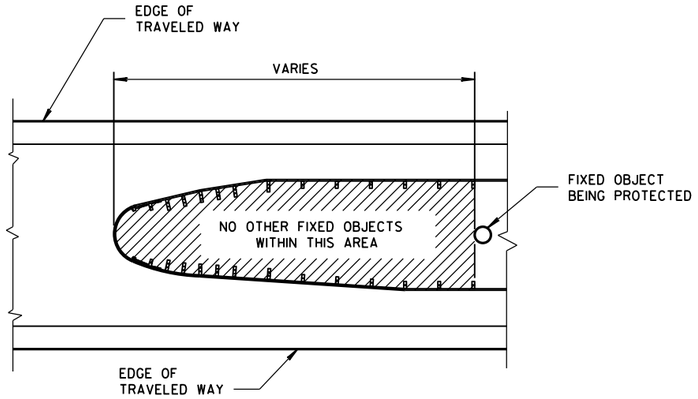
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

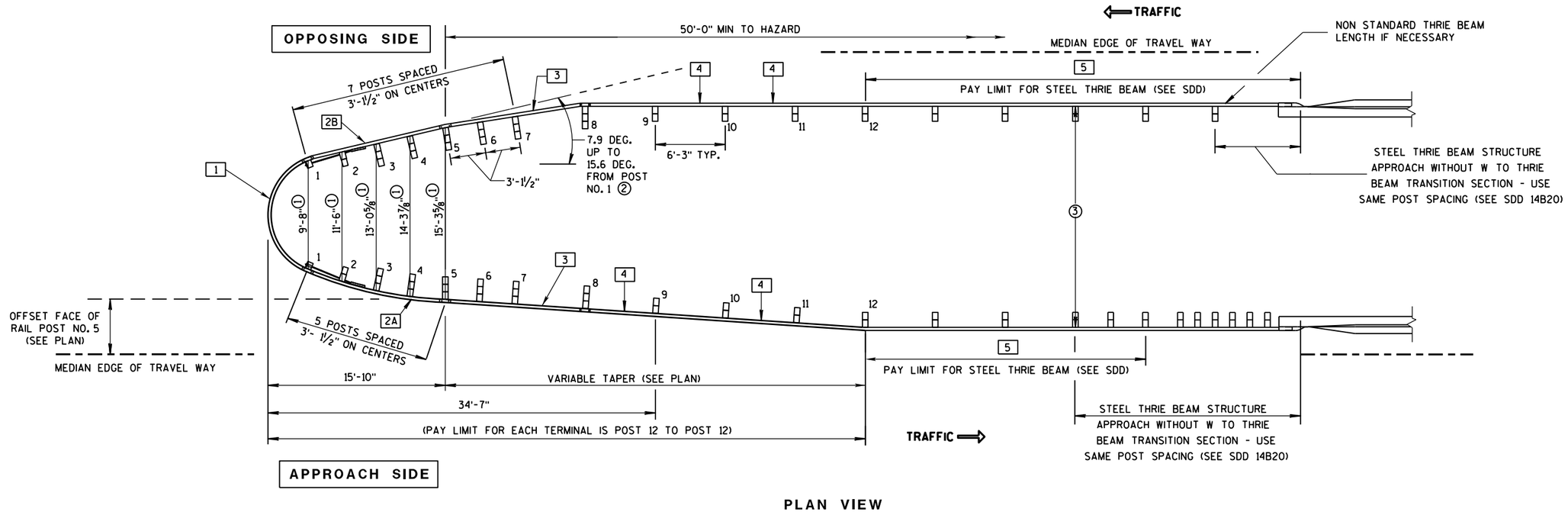
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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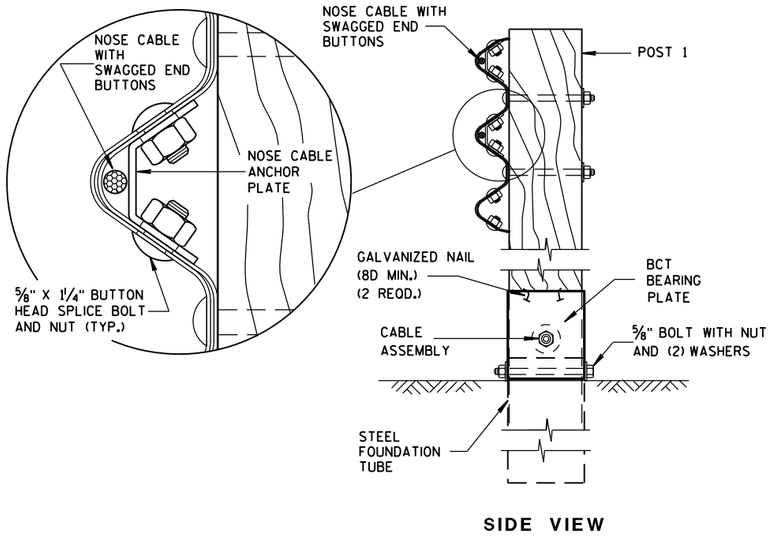
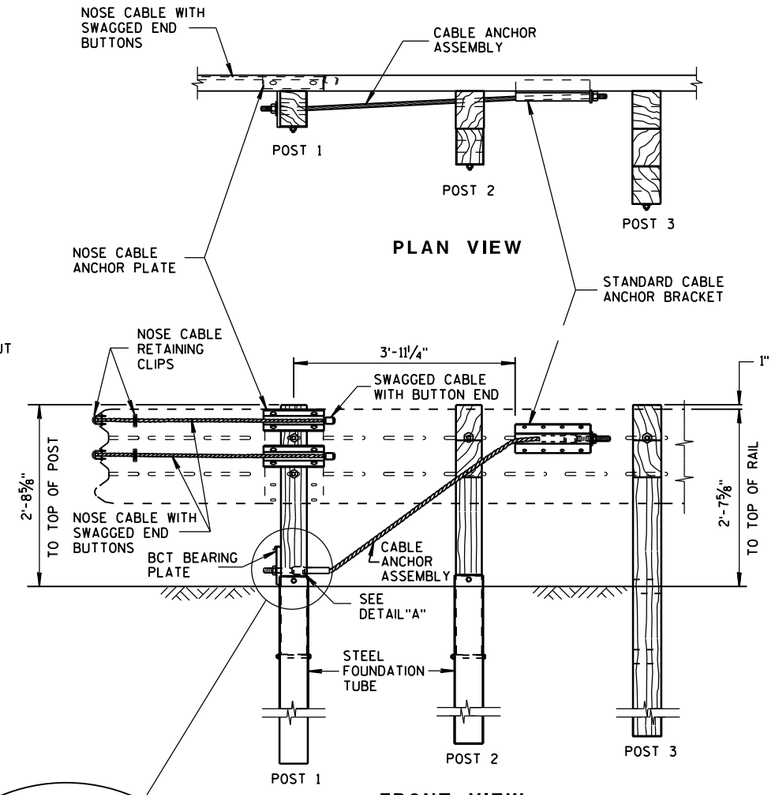
S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



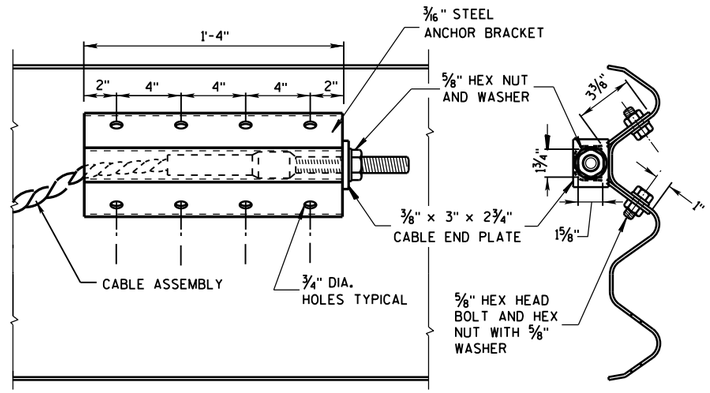
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

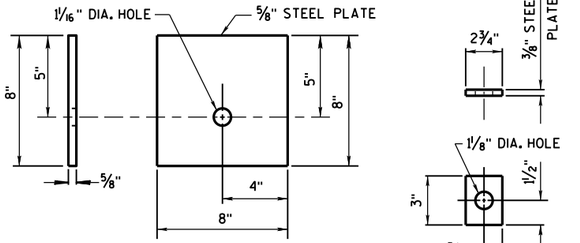
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



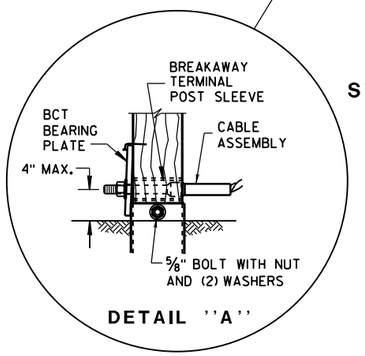
FRONT VIEW END VIEW

DETAILS OF CABLE ANCHOR BRACKET

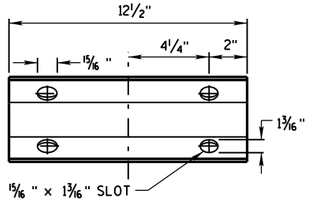


BCT BEARING PLATE

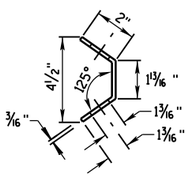
CABLE END PLATE



DETAIL ''A''



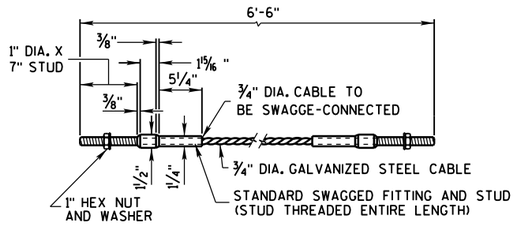
ELEVATION VIEW



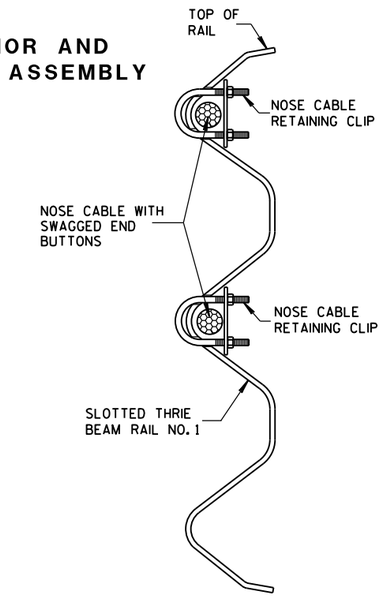
END VIEW

NOSE CABLE ANCHOR PLATE

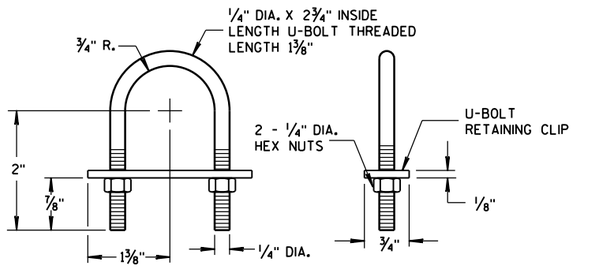
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



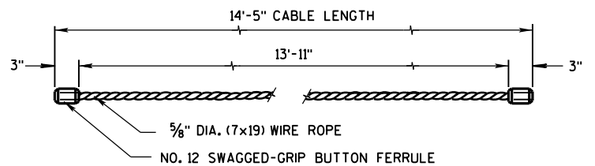
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
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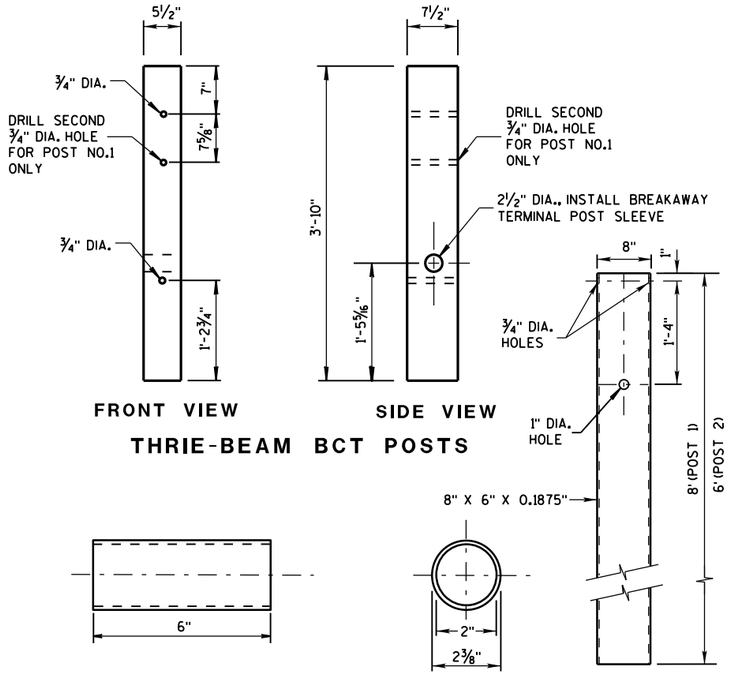
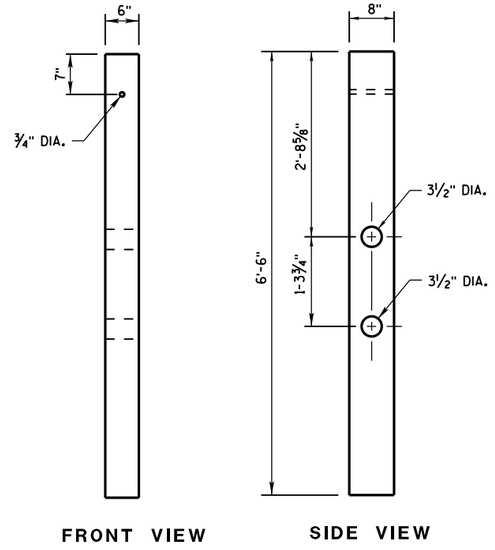
S.D.D. 14 B 26-3c



THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

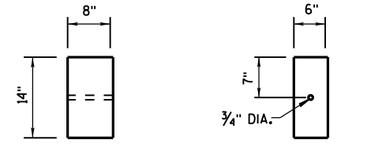
STEEL FOUNDATION TUBE



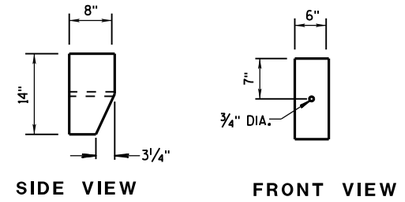
THRIE-BEAM CRT WOOD POSTS

GENERAL NOTES

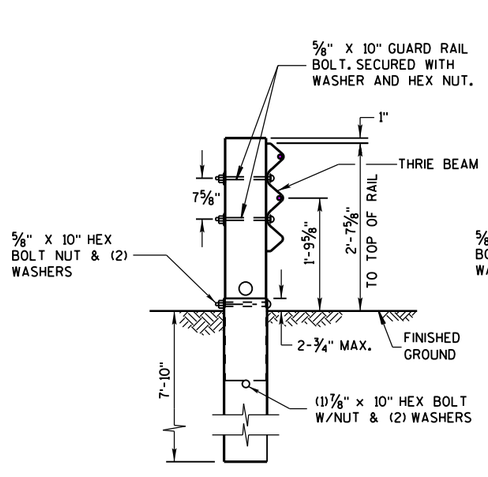
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



STANDARD WOOD BLOCK

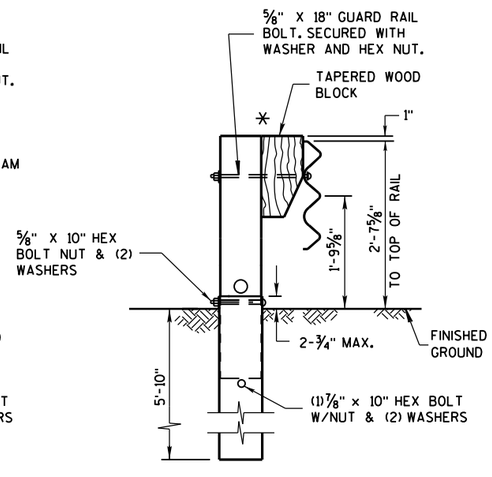


TAPERED WOOD BLOCK



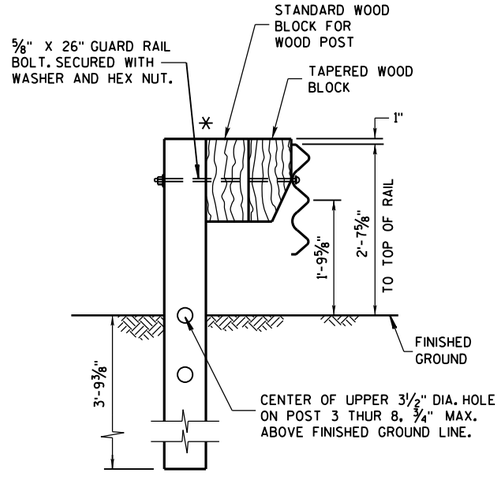
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



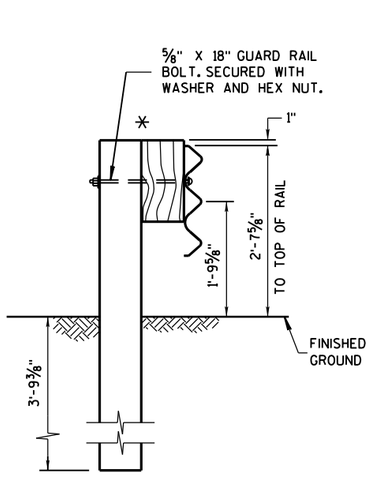
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12

(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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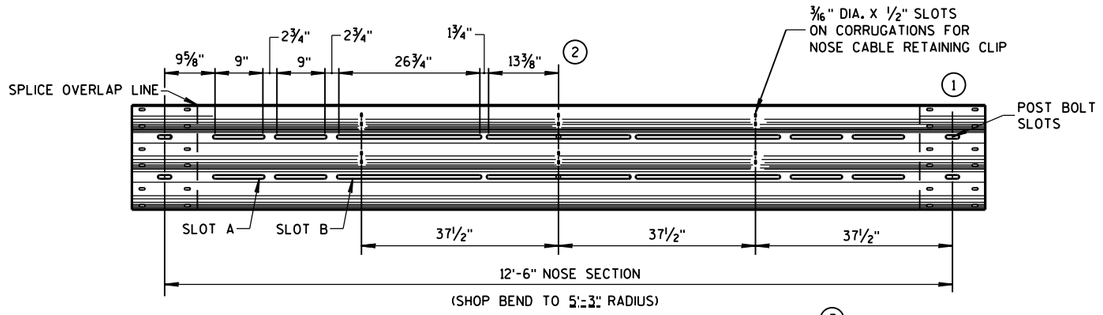
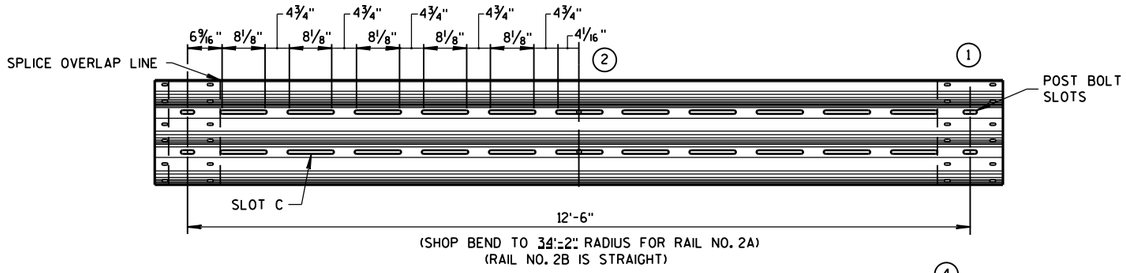
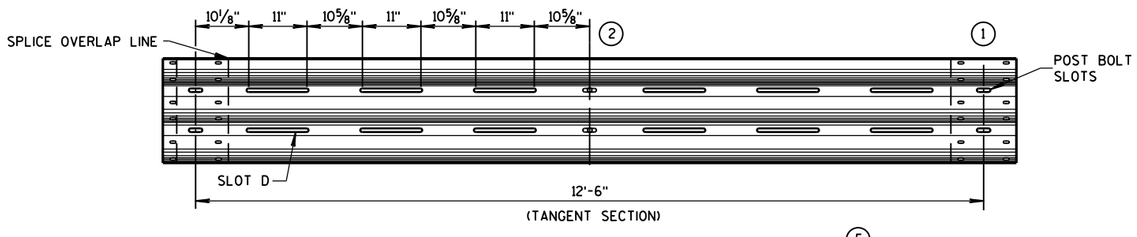
S.D.D. 14 B 26-3d



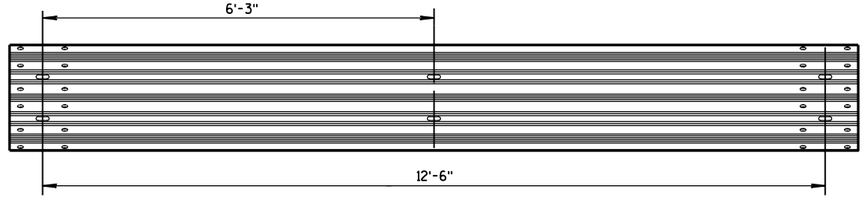
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

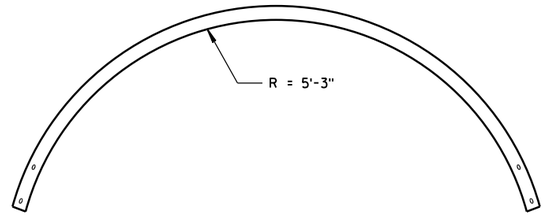
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

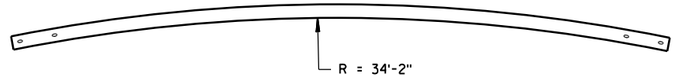
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



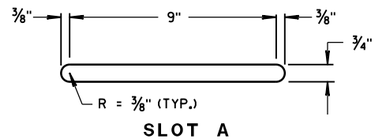
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

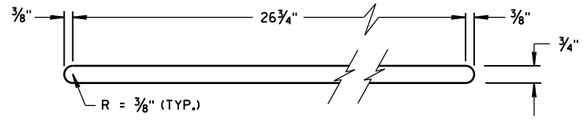


PLAN VIEW

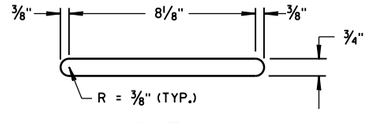
SLOTTED THRIE BEAM RAIL NO. 2A



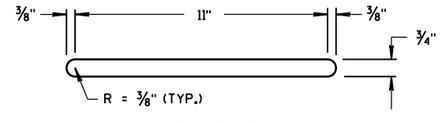
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 26-3e

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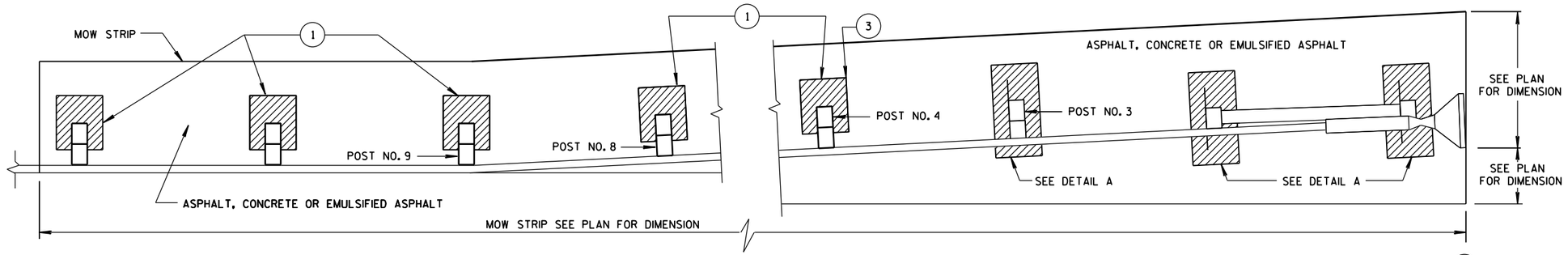
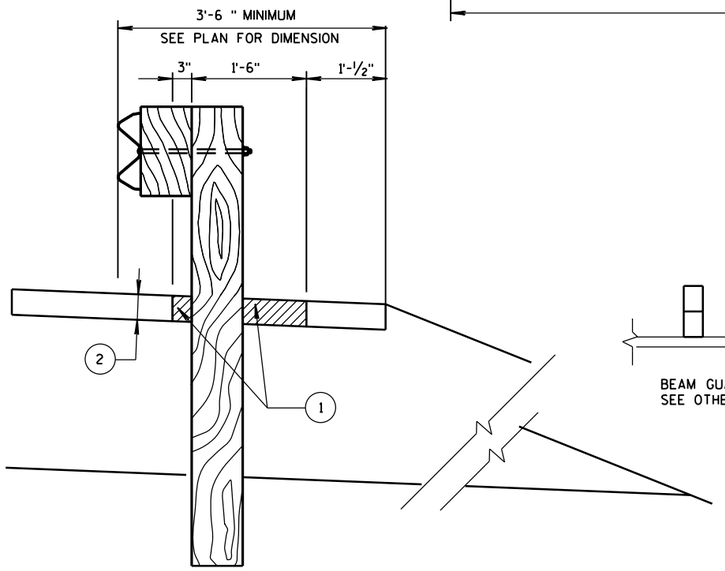
S.D.D. 14 B 26-3e

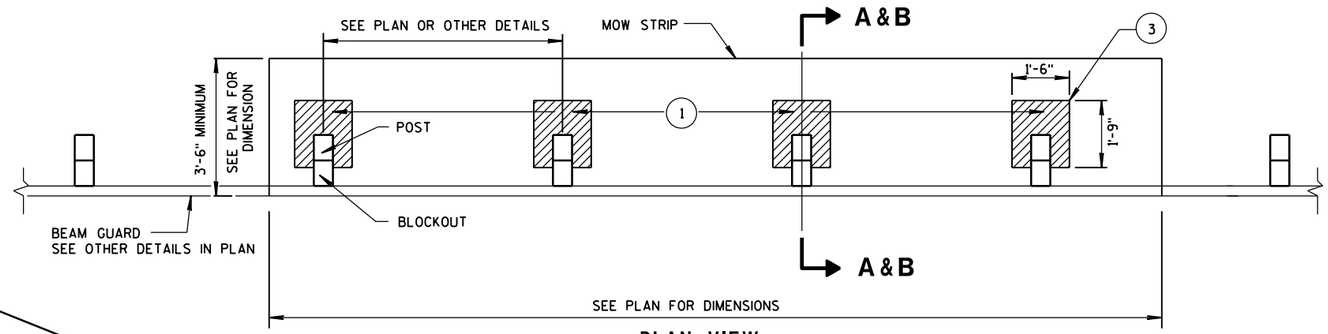


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

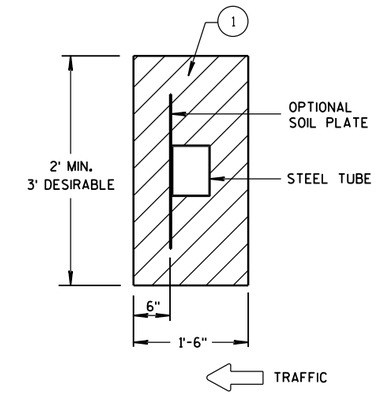


SECTION A-A

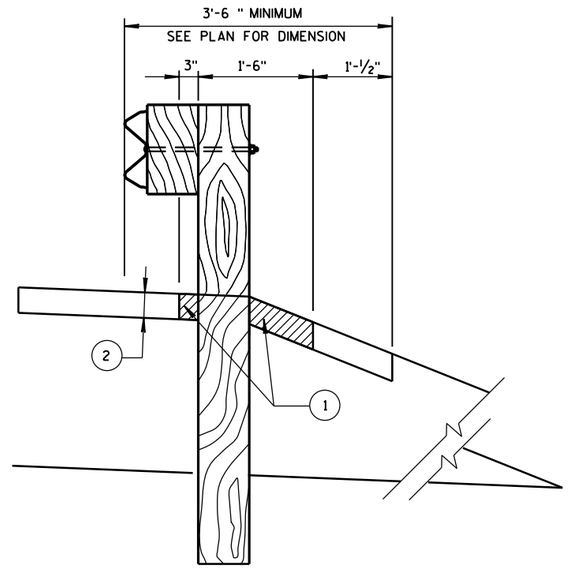


PLAN VIEW

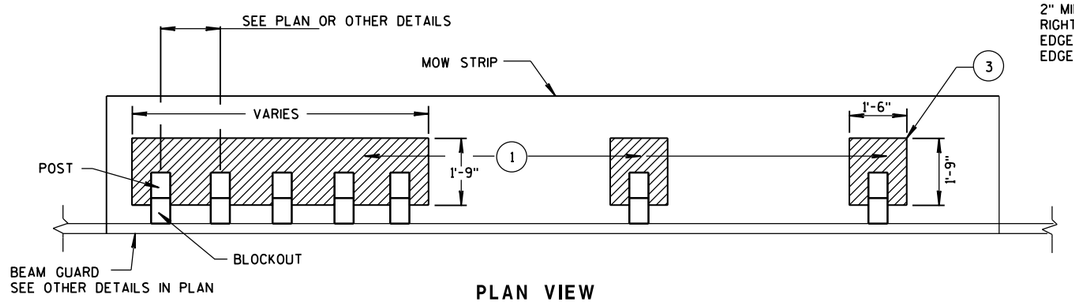
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



DETAIL A

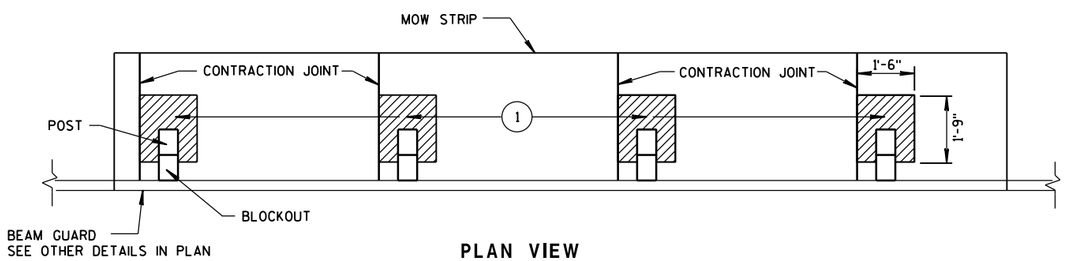


SECTION B-B



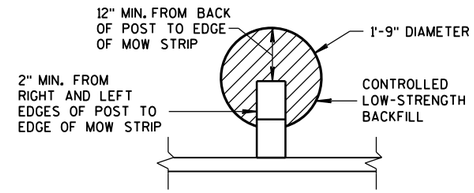
PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

(1) CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.

(2) DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS

(3) FOR EMULSIFIED ASPHALT MOW STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS.)

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 28-3

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S.D.D. 14 B 28-3

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

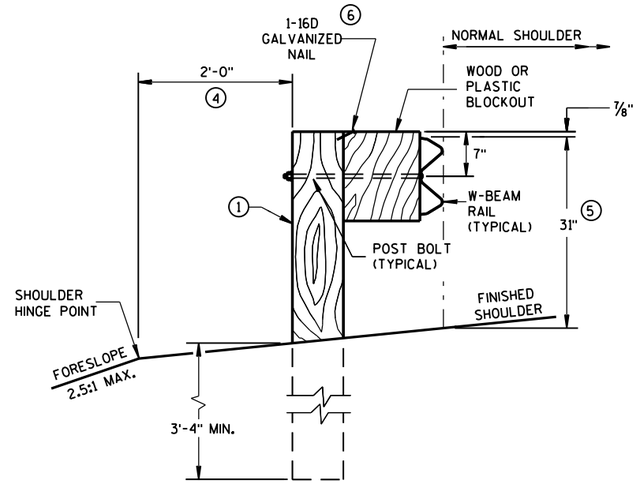
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

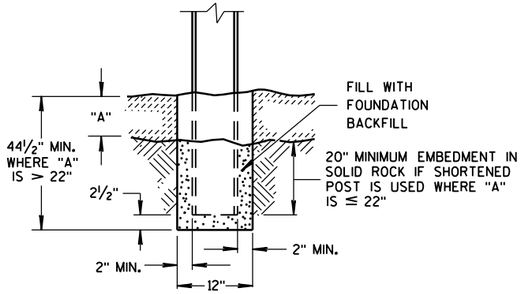
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



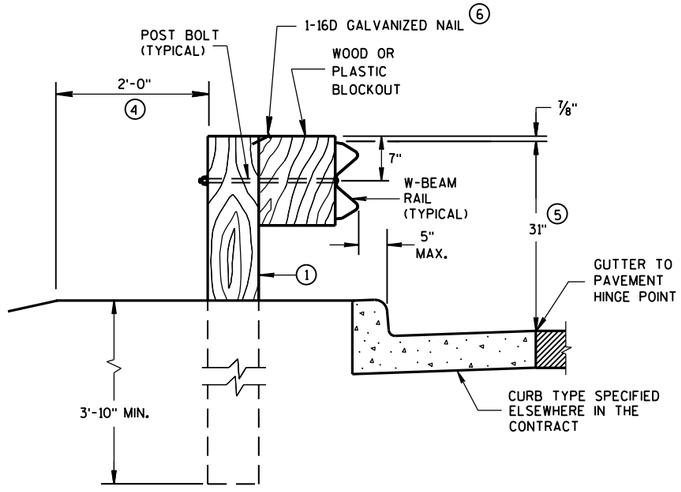
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



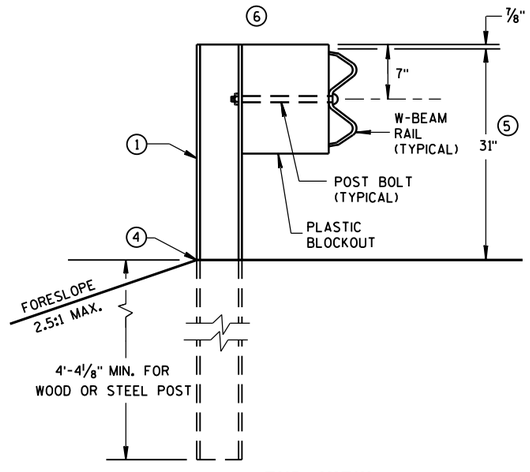
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



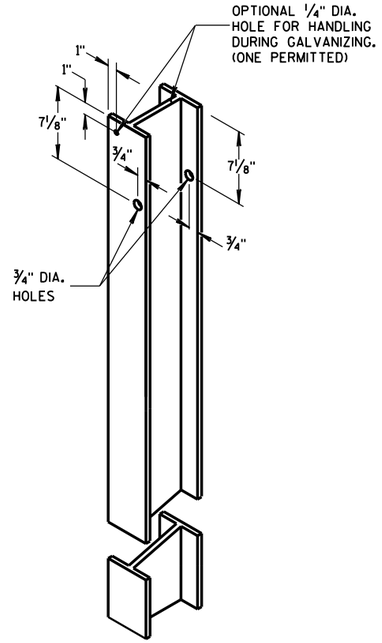
END VIEW

LOCATED ALONG A CURBED ROADWAY

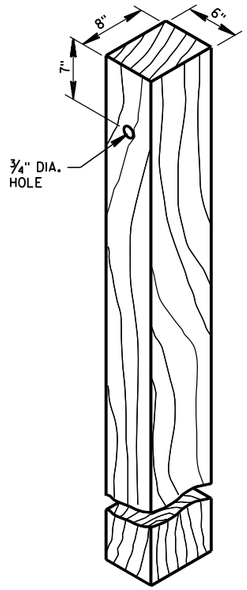


END VIEW

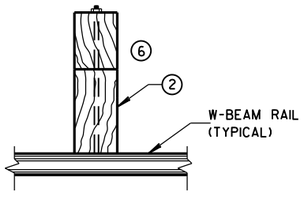
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



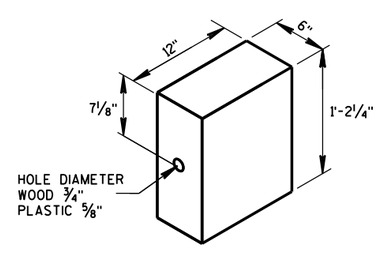
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



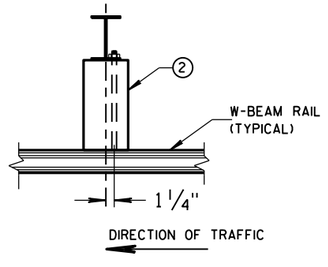
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)



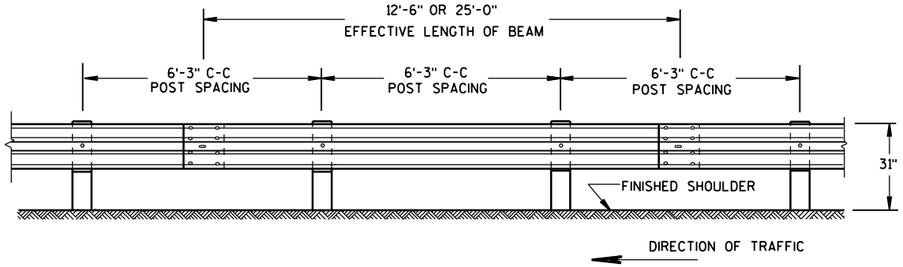
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

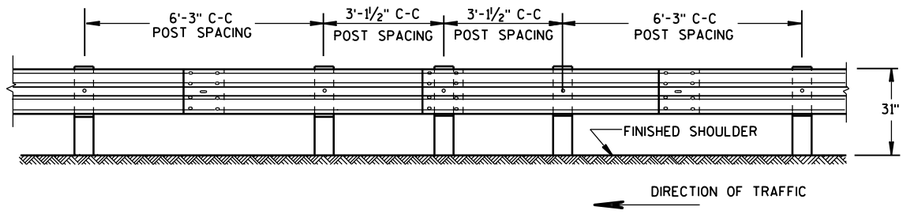
6

S.D.D. 14 B 42-5a



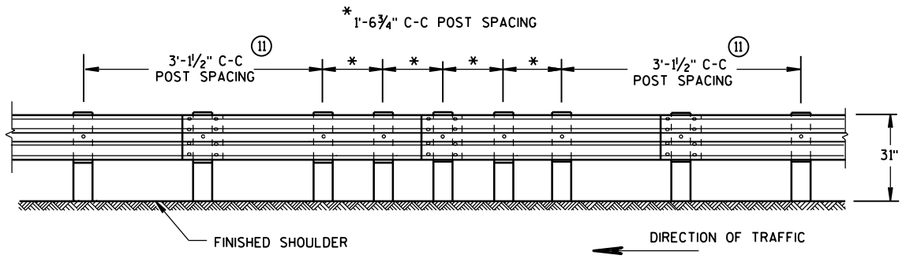
FRONT VIEW

POST SPACING STANDARD INSTALLATION



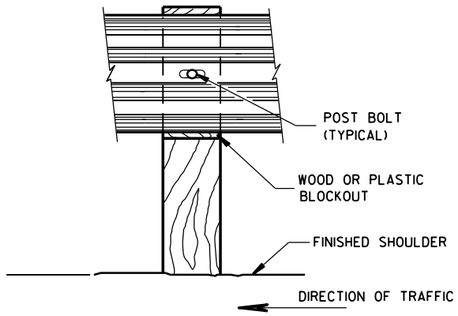
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

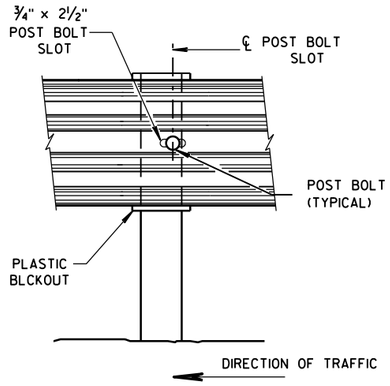


FRONT VIEW

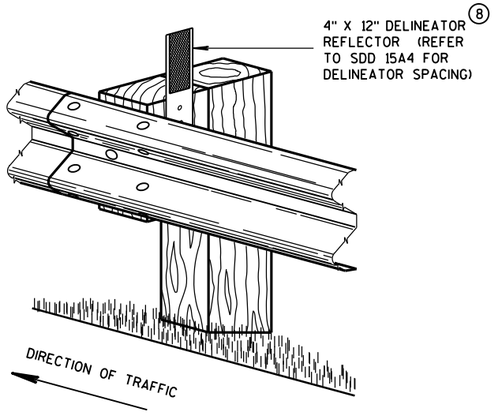
QUARTER POST SPACING (QS)



FRONT VIEW AT WOOD POST



FRONT VIEW AT STEEL POST



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

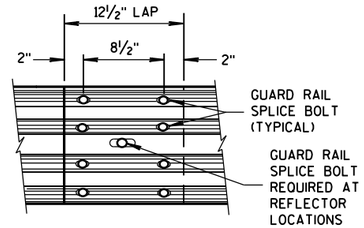
GENERAL NOTES

(8) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

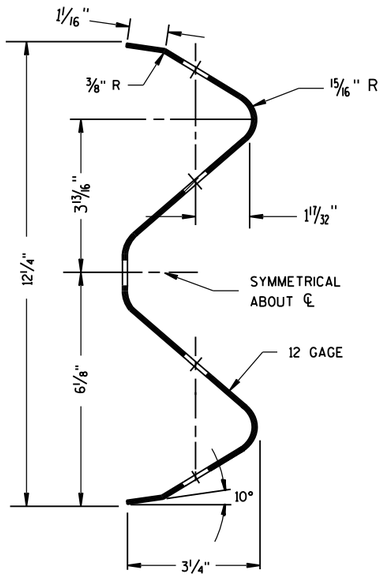
(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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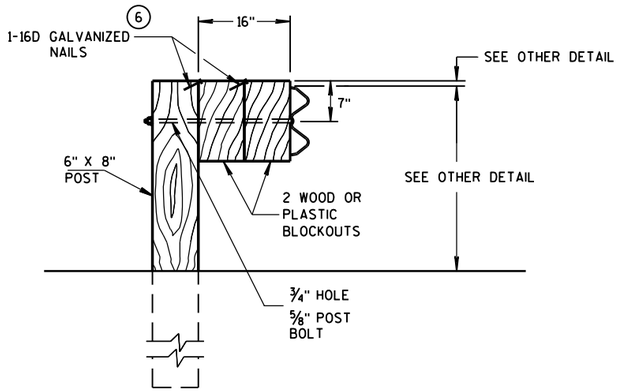
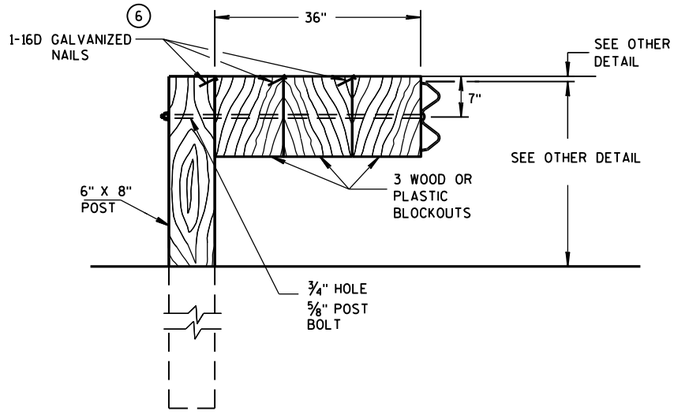
S.D.D. 14 B 42-5b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

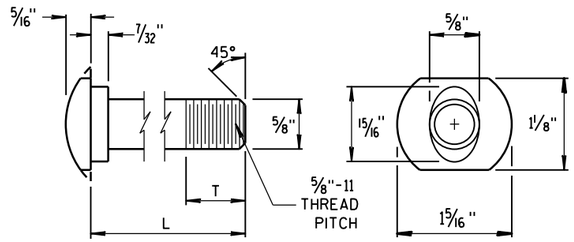


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

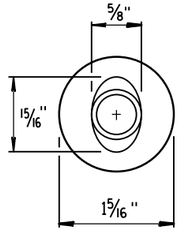
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

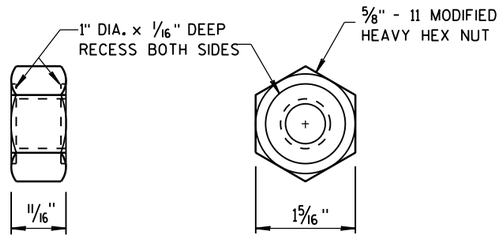


POST BOLT TABLE

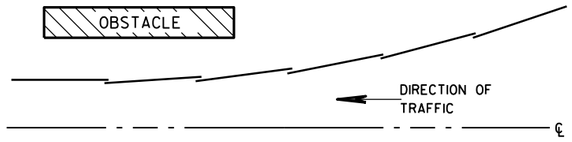
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

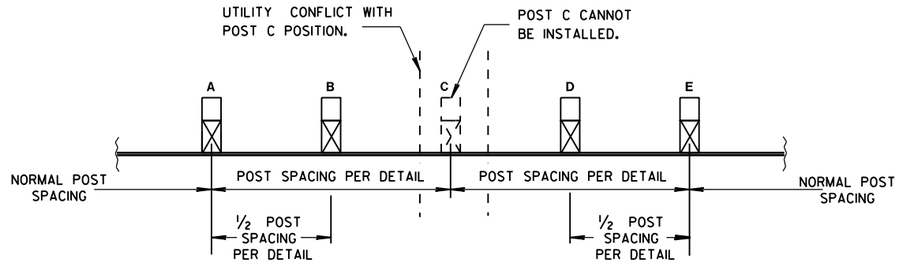


POST BOLT, SPLICE BOLT AND RECESS NUT

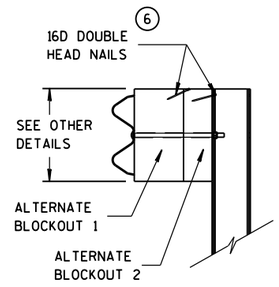


PLAN VIEW

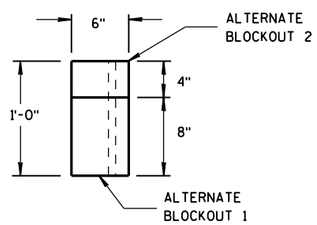
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

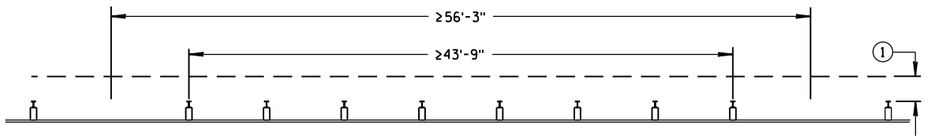
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

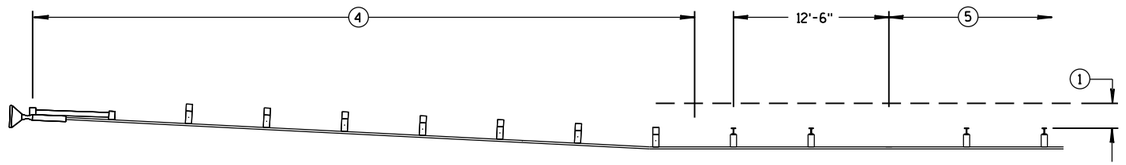
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

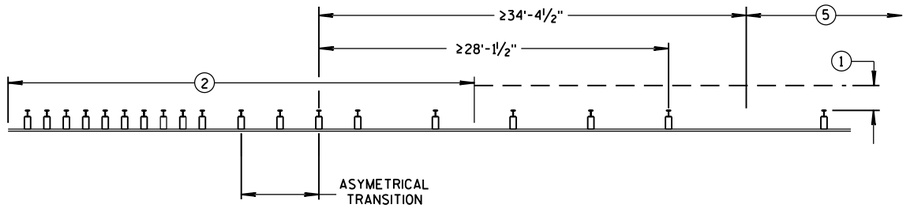
S.D.D. 14 B 42-5c



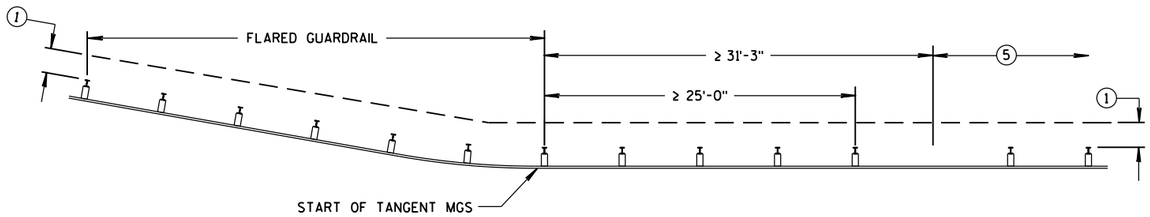
MISSING POST IN NORMAL BEAM GUARD RUN



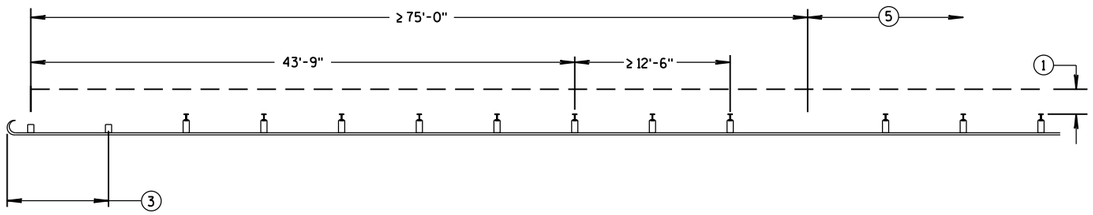
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



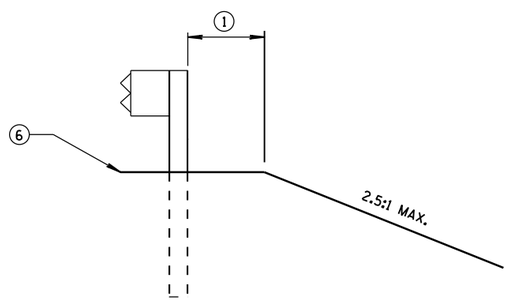
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

6

S.D.D. 14 B 42-5d

6

S.D.D. 14 B 42-5d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

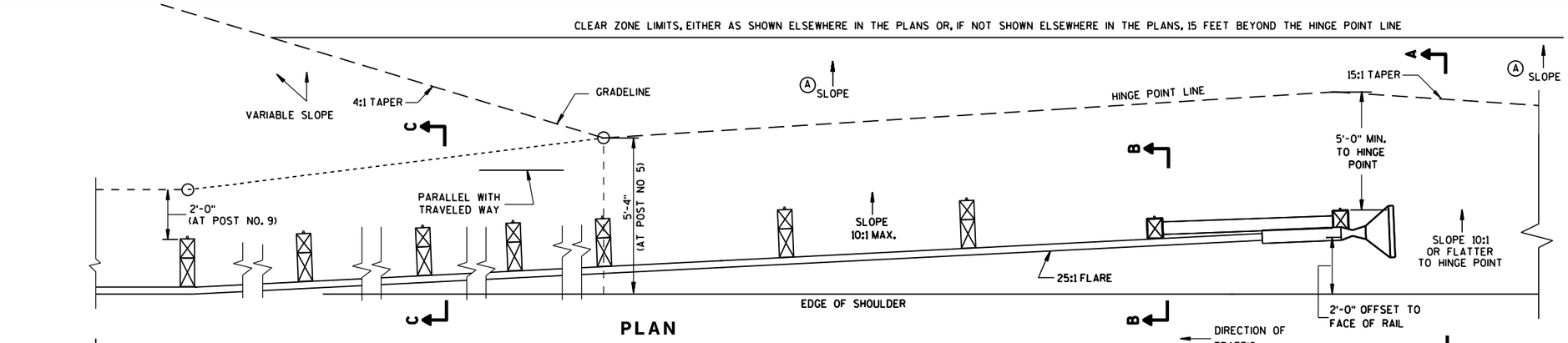
SEE SDD 14B42 FOR MORE INFORMATION.

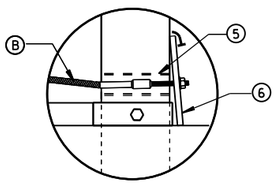
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

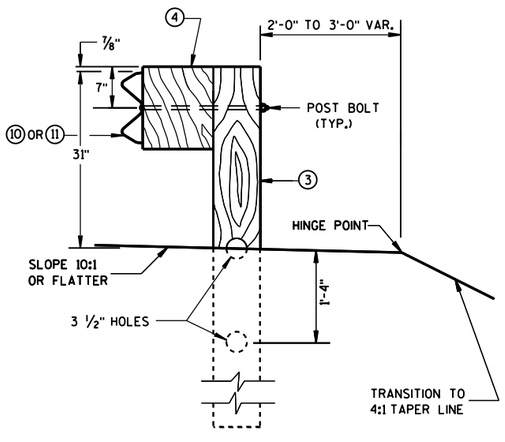
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

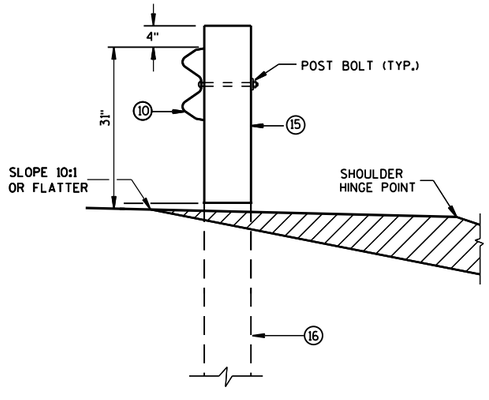
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



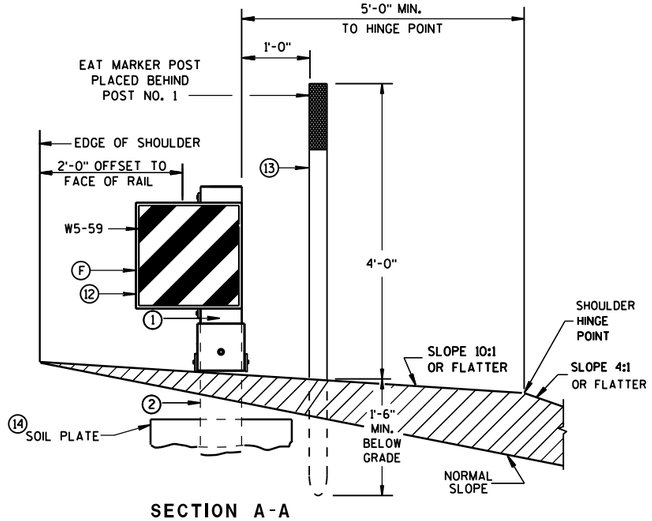




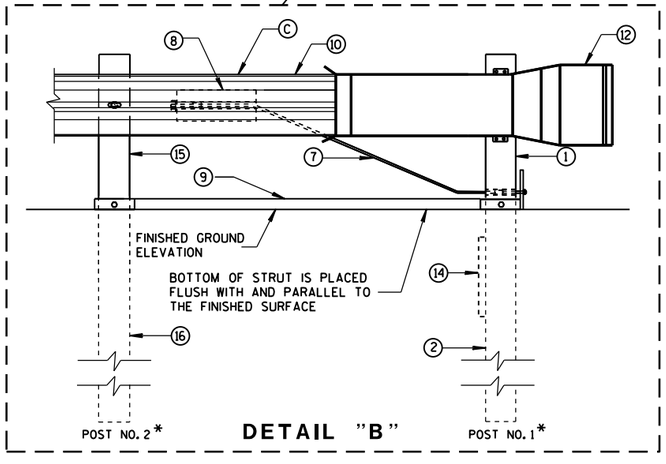
SECTION C-C
TYPICAL AT POST NOS. 3-9



SECTION B-B
TYPICAL AT POST NO. 2*



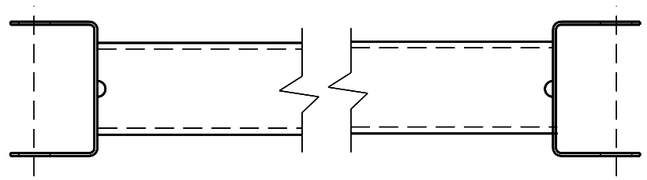
SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "B"

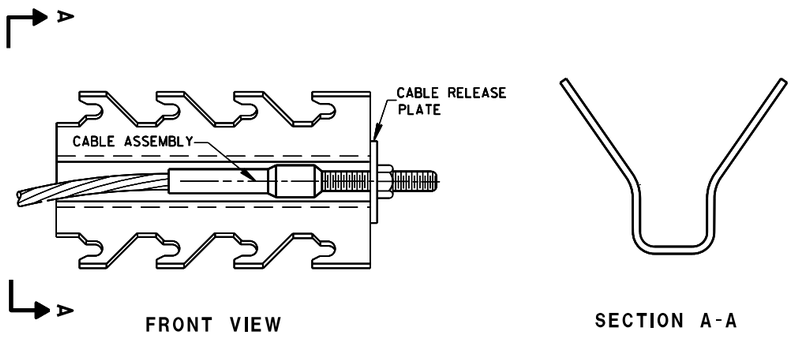
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
STATE OF WISCONSIN DEPARTMENT OF TRANSPO

6 S.D.D. 14 B 44-3a



(9) (H)

GENERIC GROUND STRUT



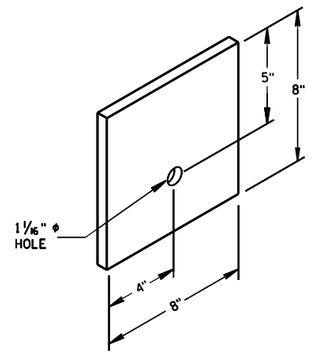
FRONT VIEW

SECTION A-A

GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



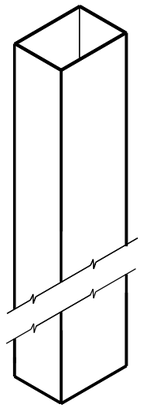
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 44-3b



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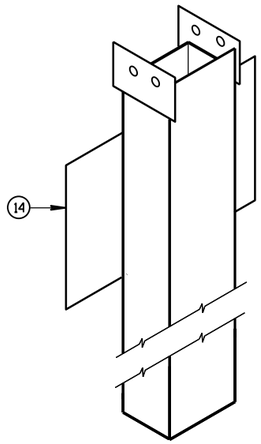
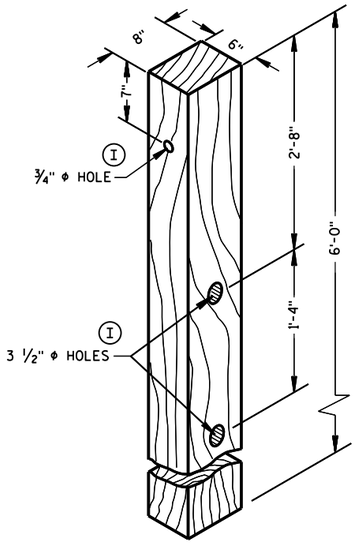
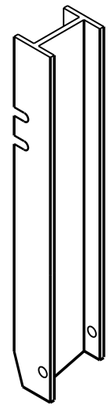


LOWER POST NO. 1 (2)



POSTS NUMBER 3-9

WOOD CRT POST (3)



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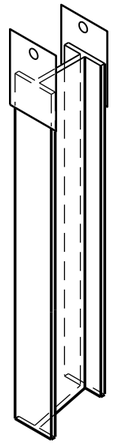

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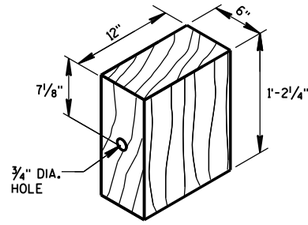
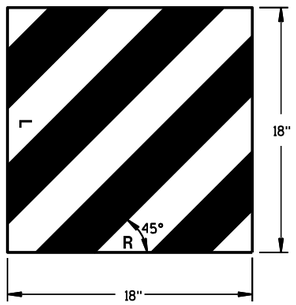


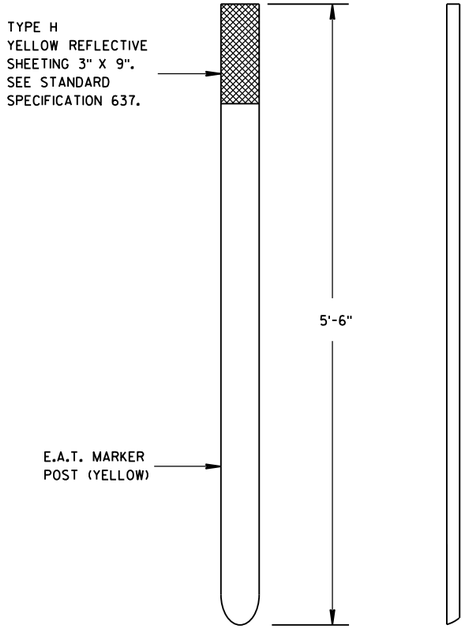
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



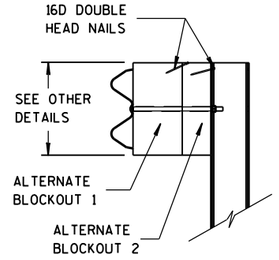
W5-59

REFLECTIVE SHEETING DETAIL (H)

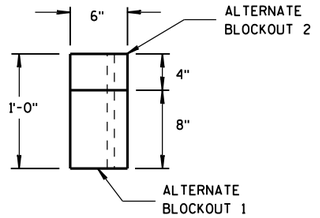


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

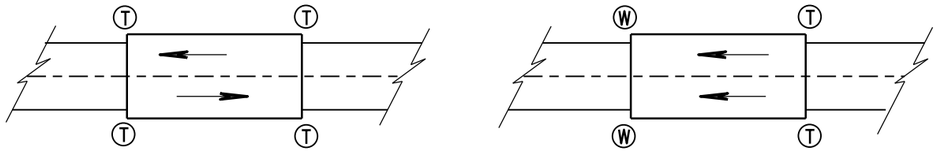
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

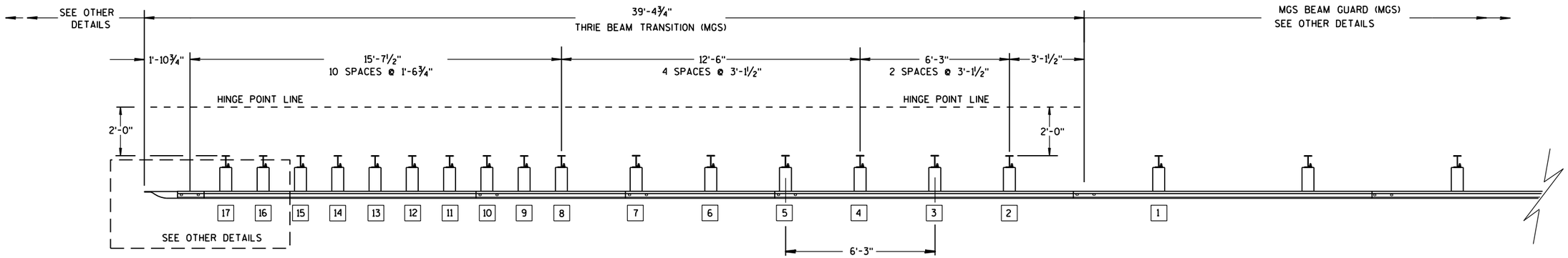
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

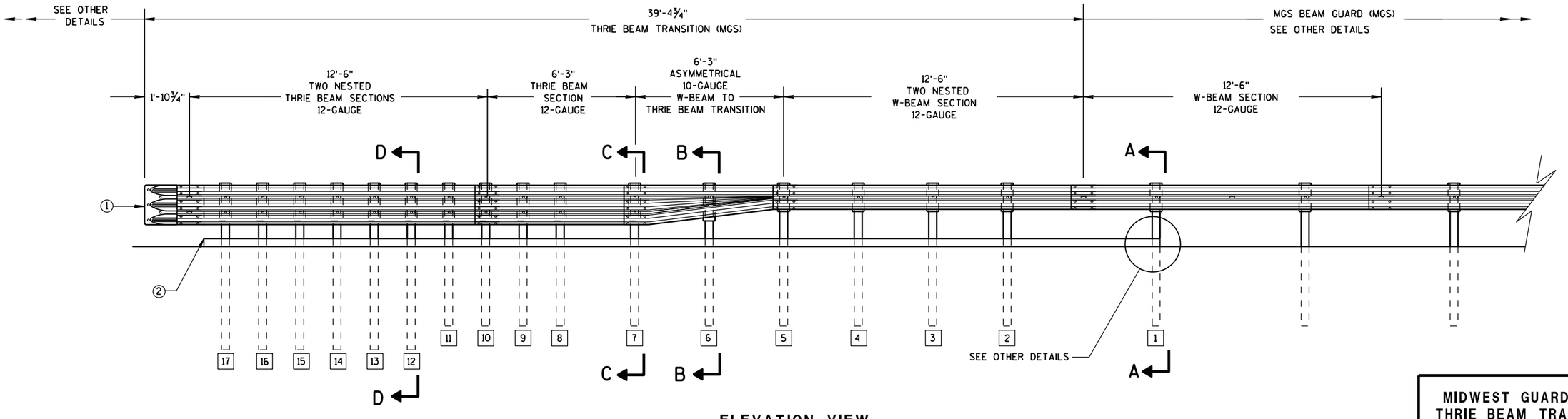
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4a

6

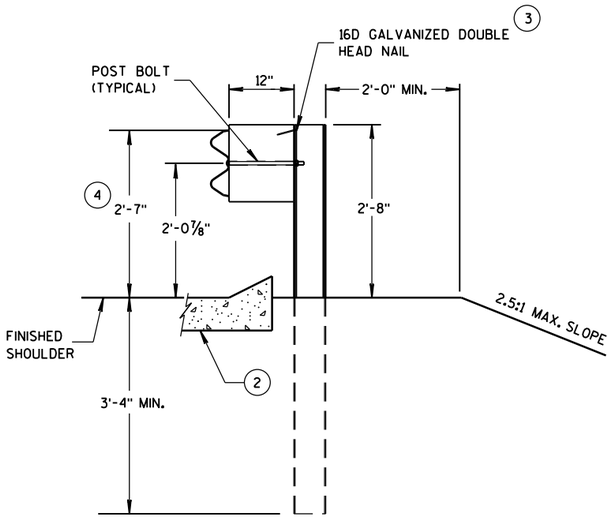
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

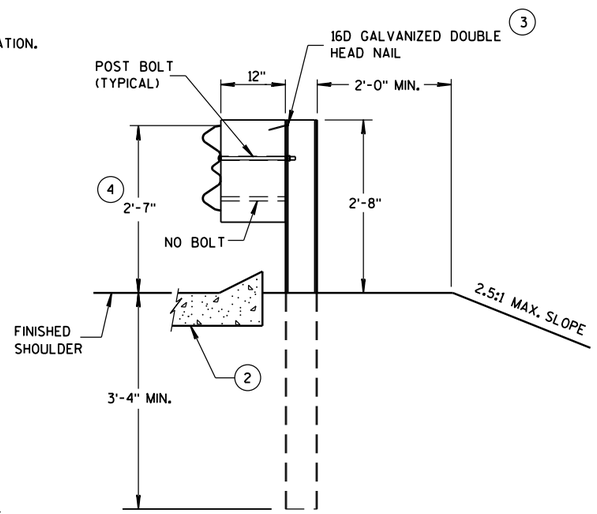
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



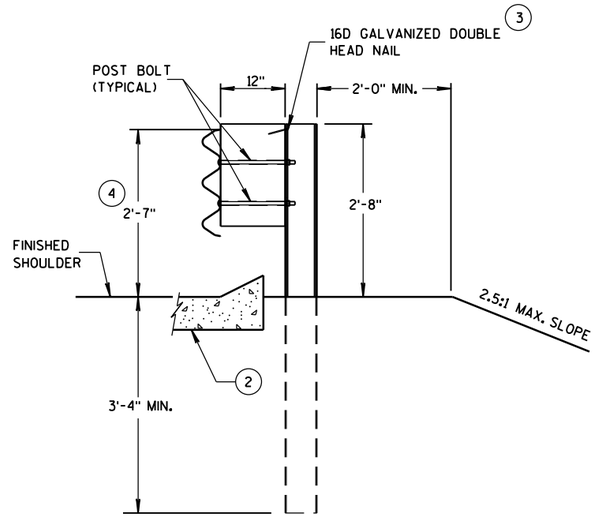
SECTION A-A

POSTS 1-5



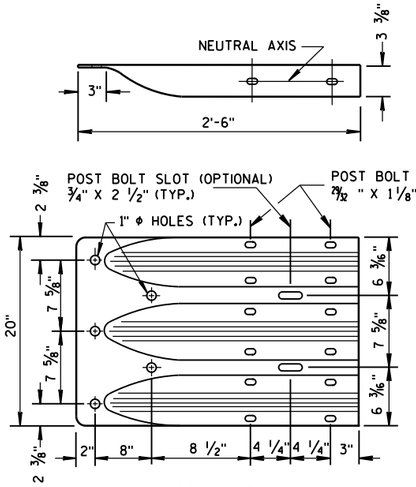
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

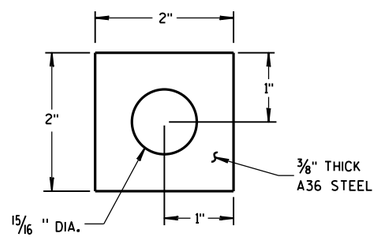
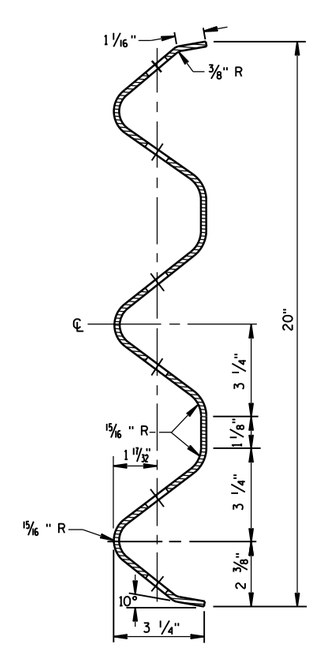
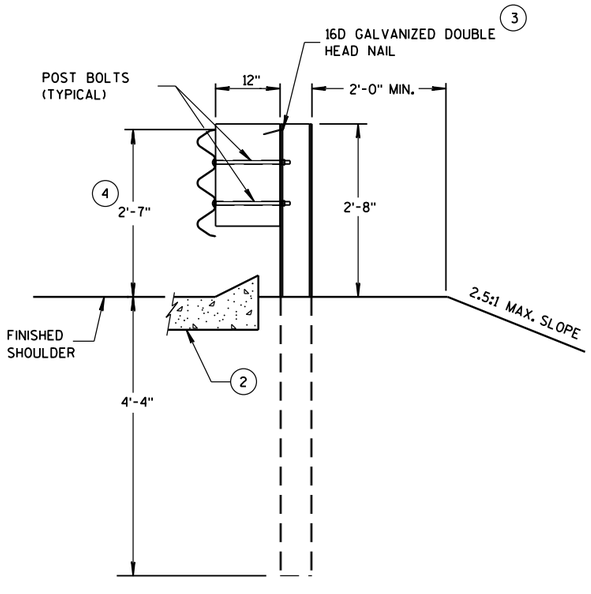


PLATE WASHER DETAIL

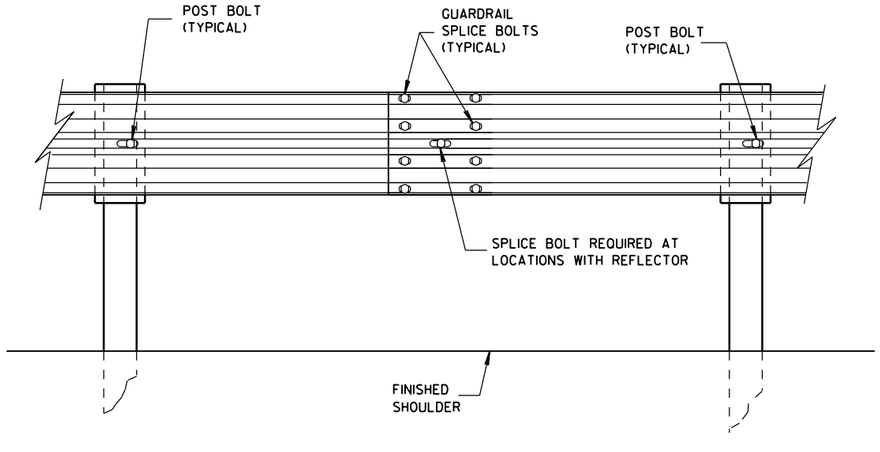


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



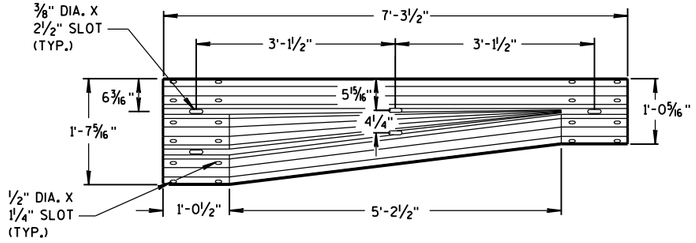
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

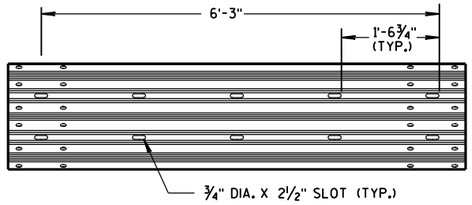
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

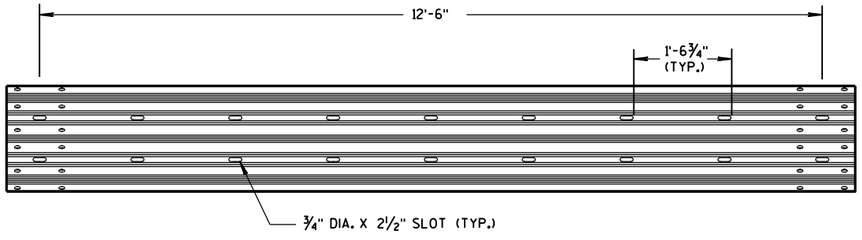
S.D.D. 14 B 45-4b



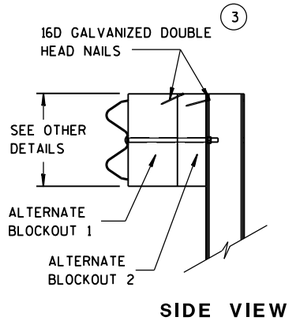
W-BEAM TO THRIE BEAM TRANSITION SECTION



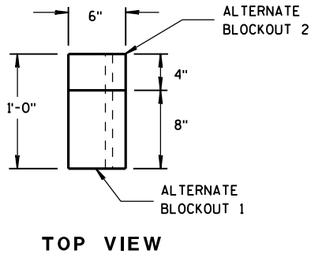
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

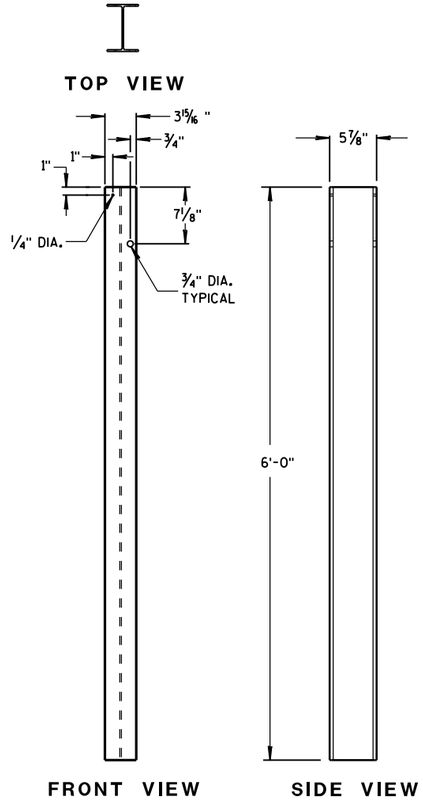


SIDE VIEW

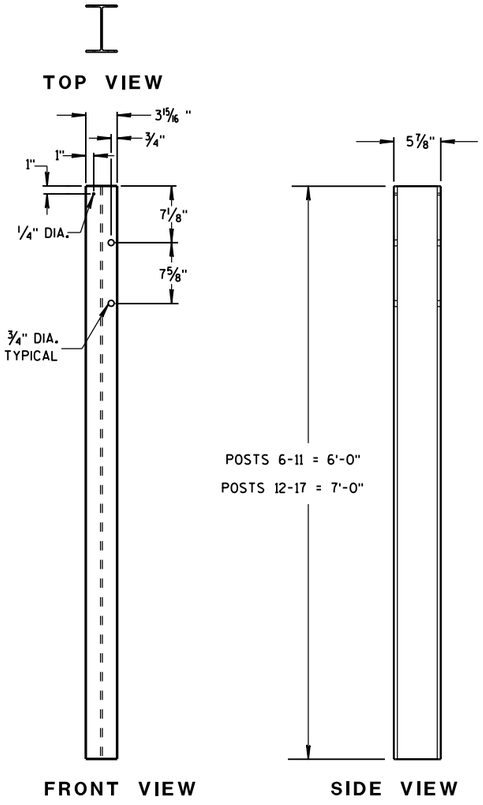


TOP VIEW

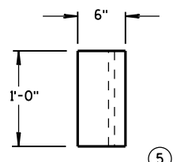
ALTERNATE WOOD BLOCKOUT DETAIL



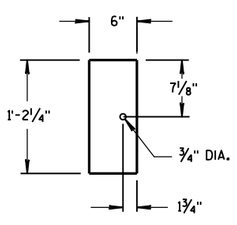
STEEL POSTS 1-5



STEEL POSTS 6-17

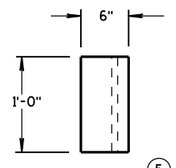


TOP VIEW

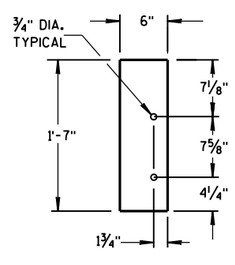


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

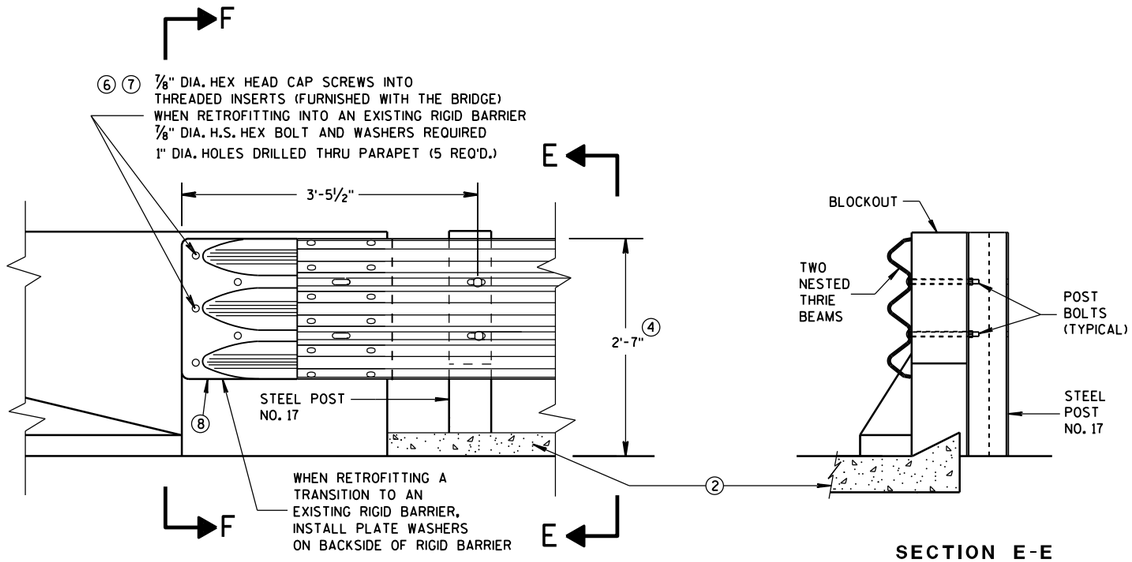
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4c
S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

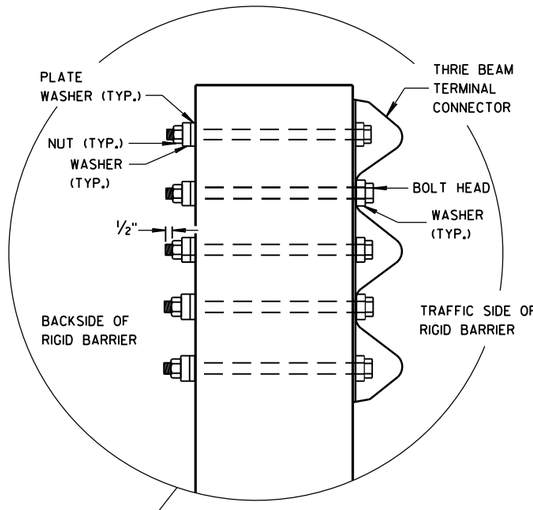
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

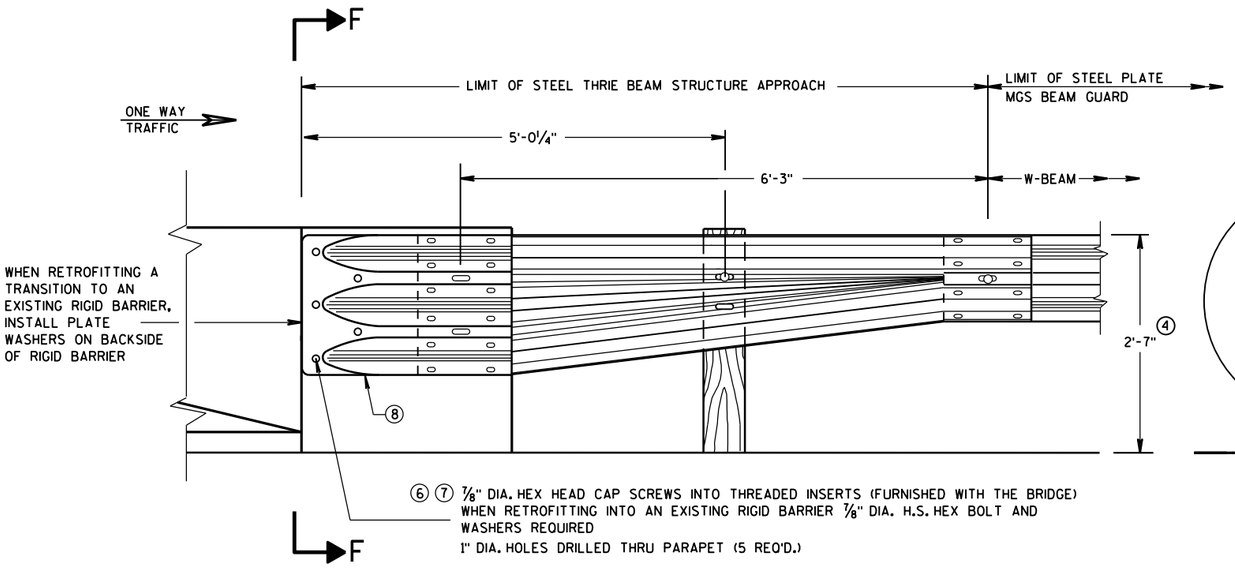
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

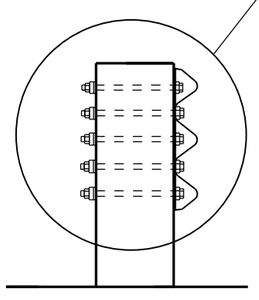
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

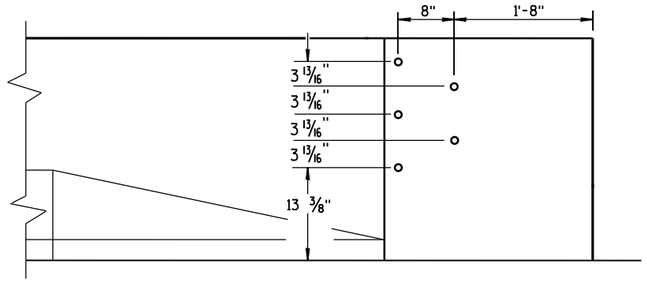




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

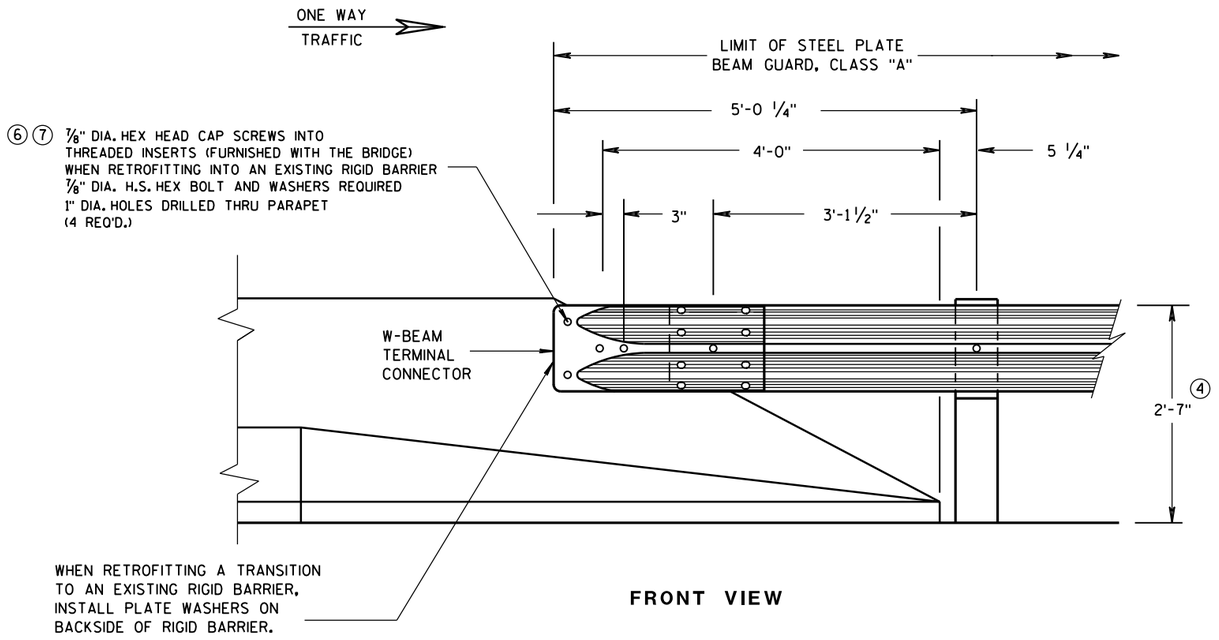
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

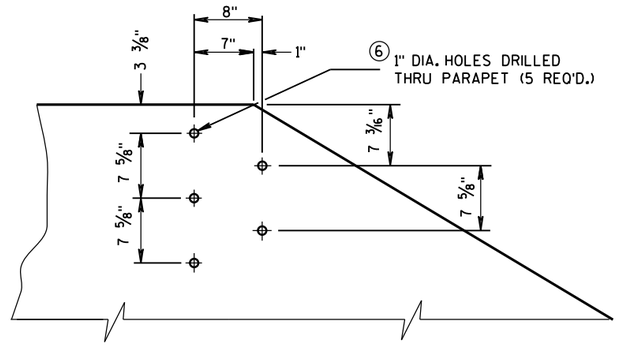
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

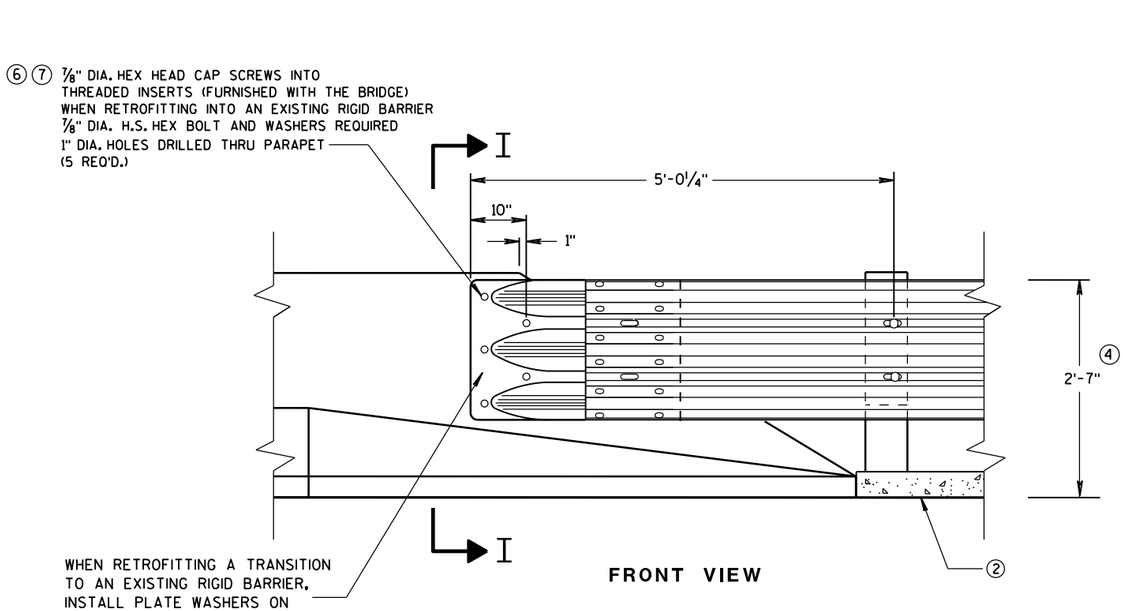
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

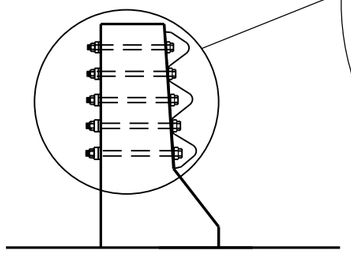
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



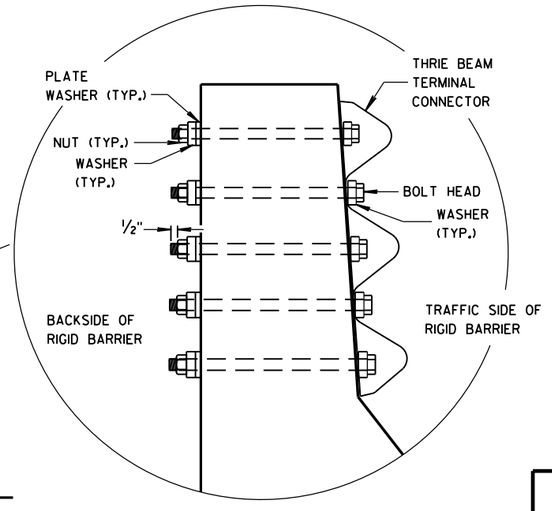
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 45-4f

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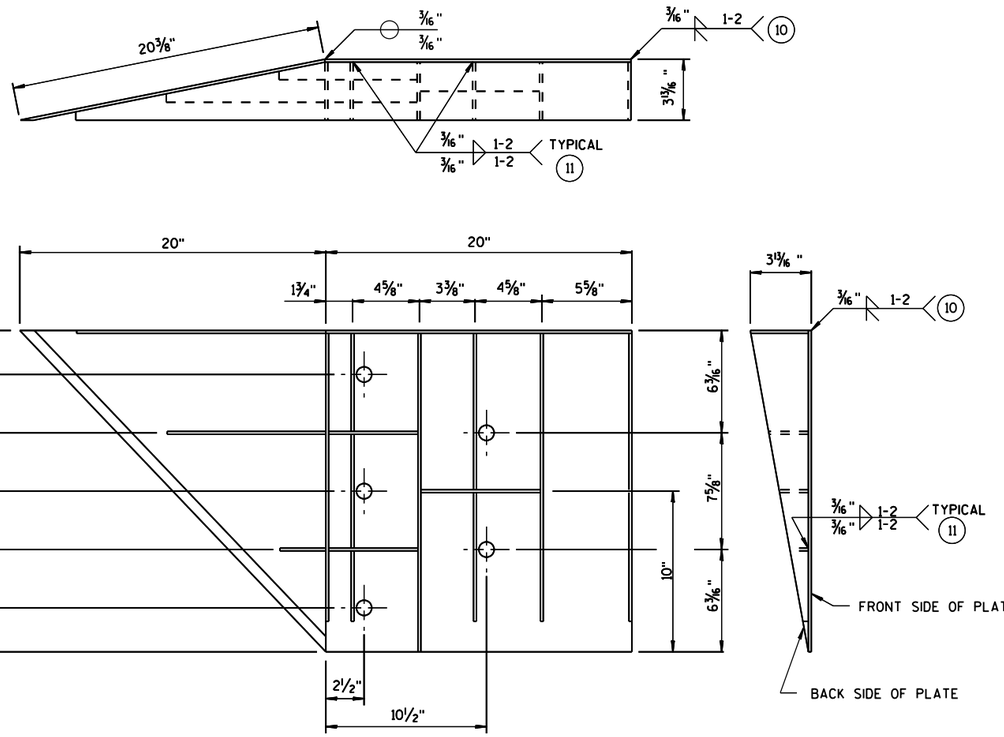
S.D.D. 14 B 45-4f



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

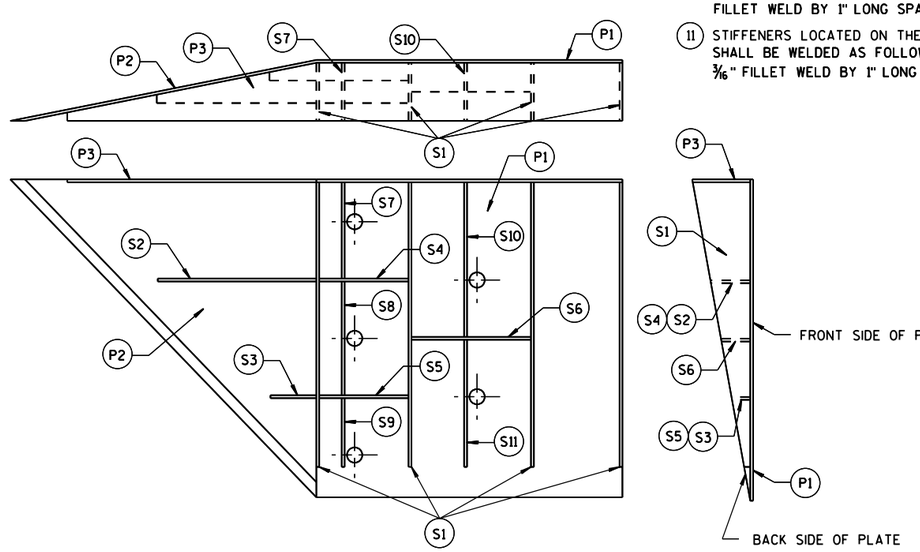


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 3/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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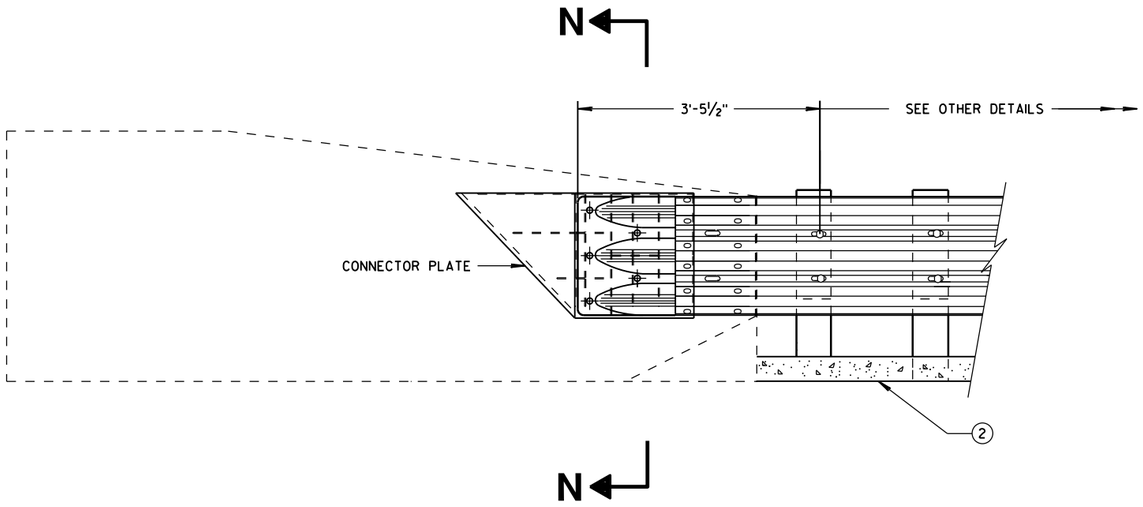
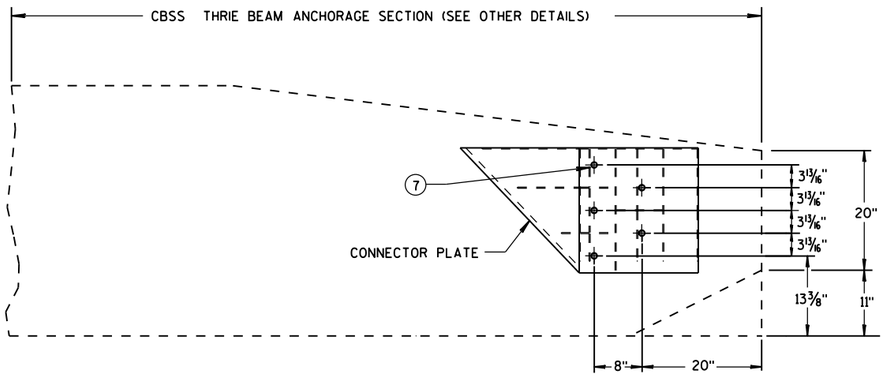


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



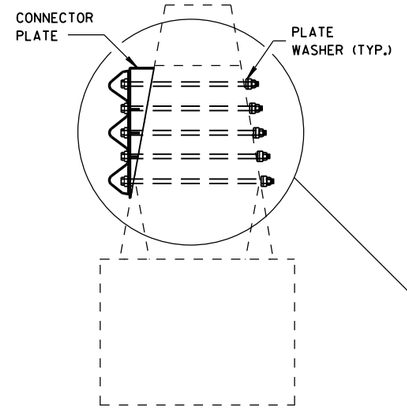
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

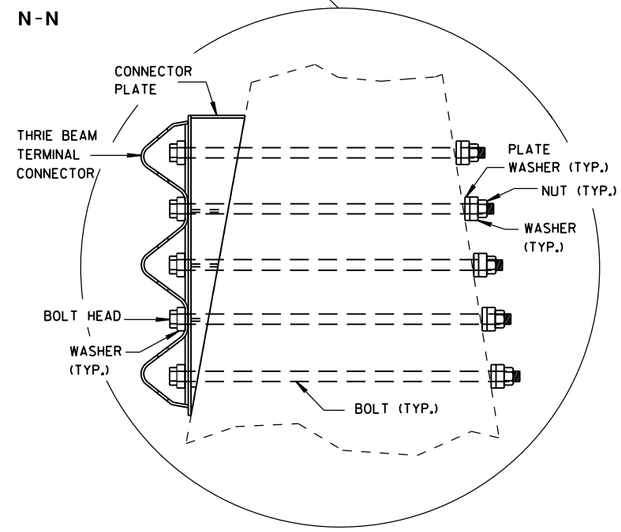
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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S.D.D. 14 B 45-4j

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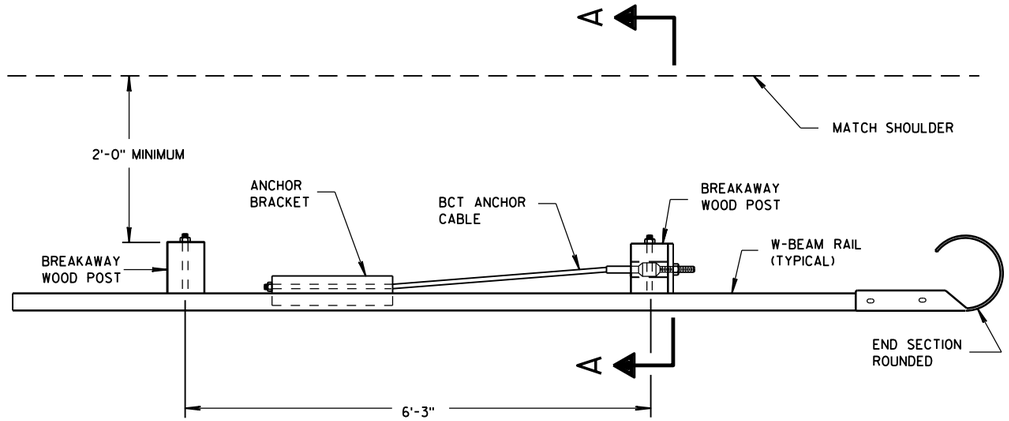
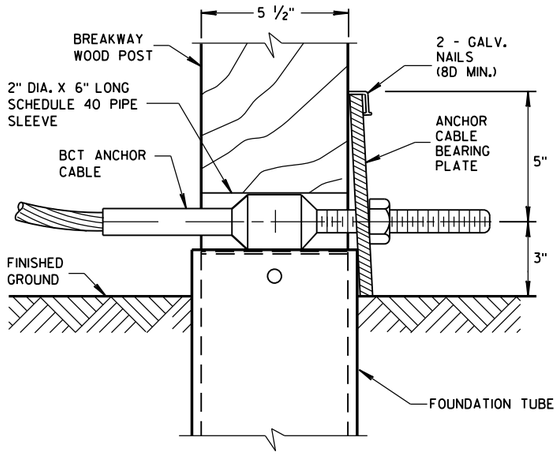


PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

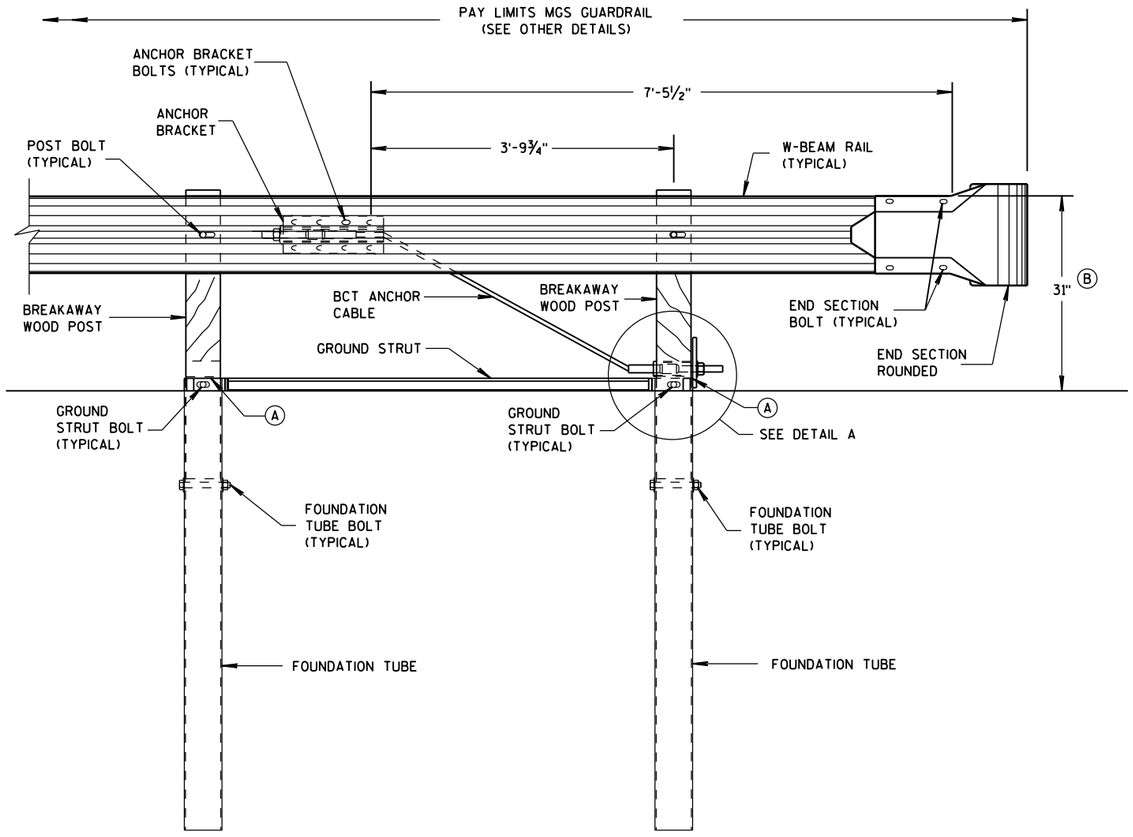
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

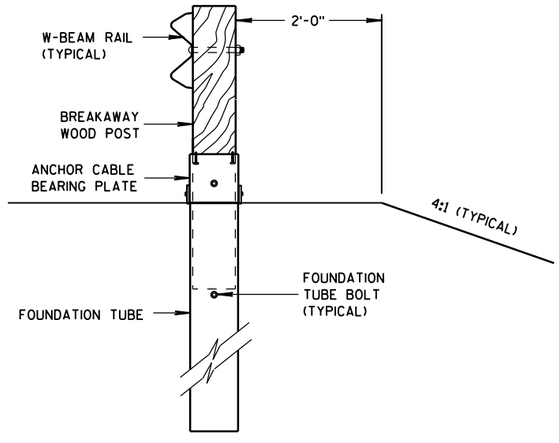
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

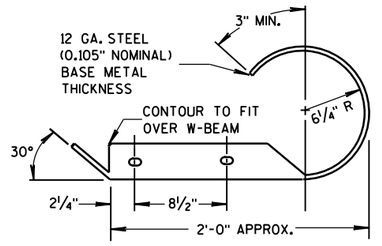


FRONT VIEW

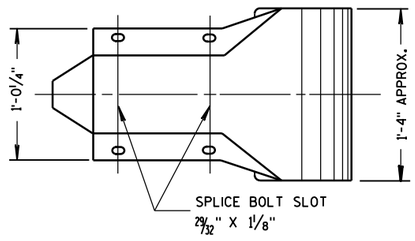
END RAIL DETAIL



SECTION A-A



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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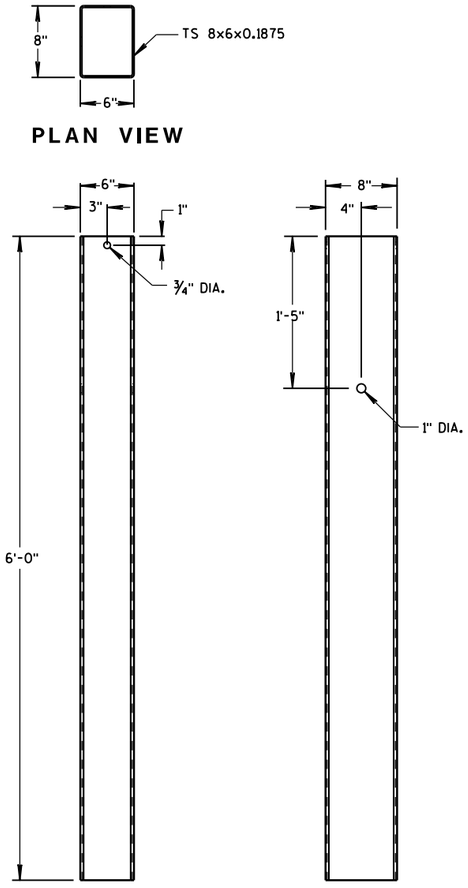
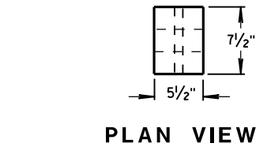
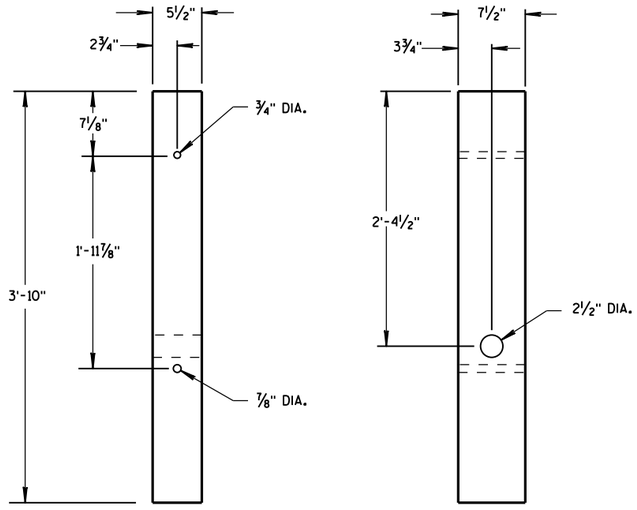
S.D.D. 14 B 47-2a



FOUNDATION TUBE



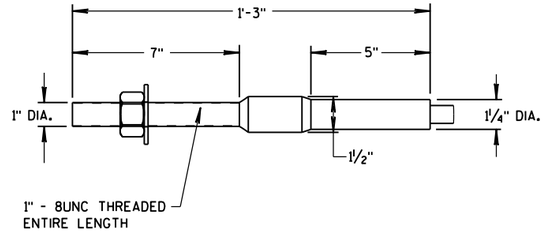


BREAKAWAY WOOD POST

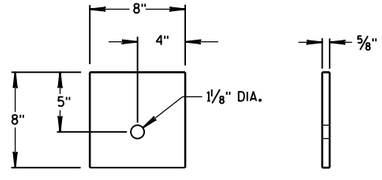
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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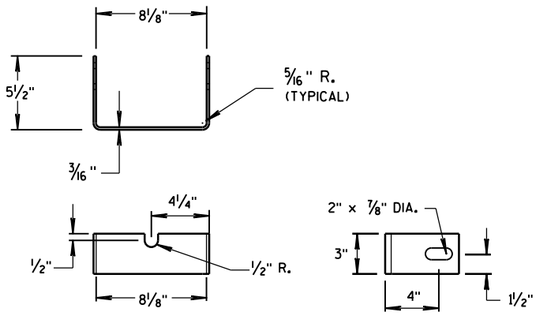
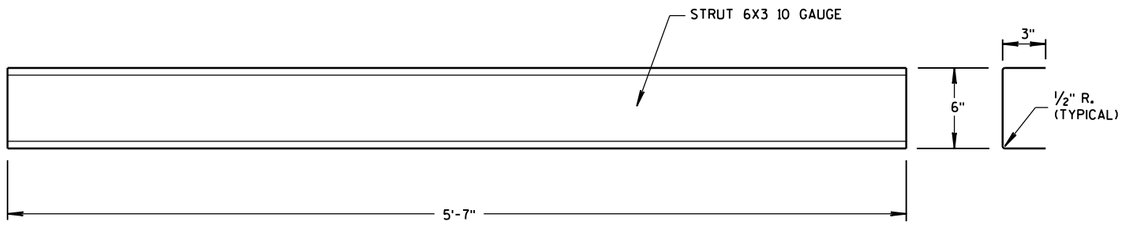
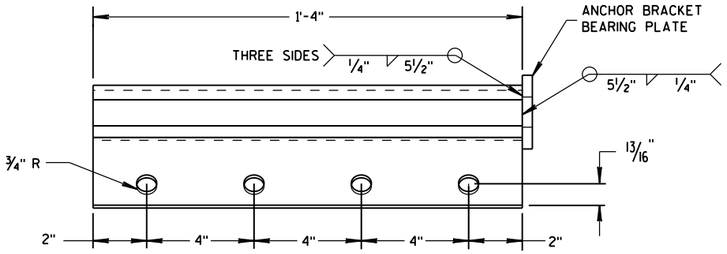
S.D.D. 14 B 47-2b

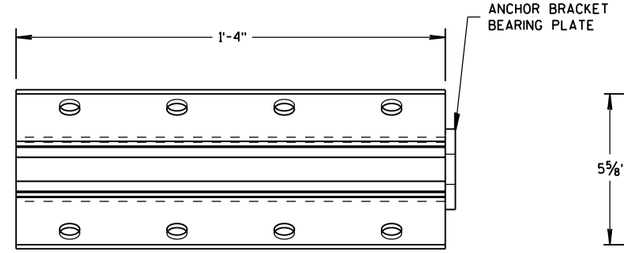


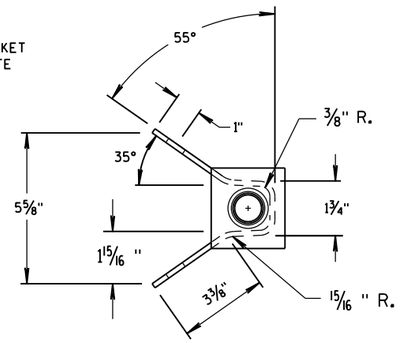
YOKE DETAIL



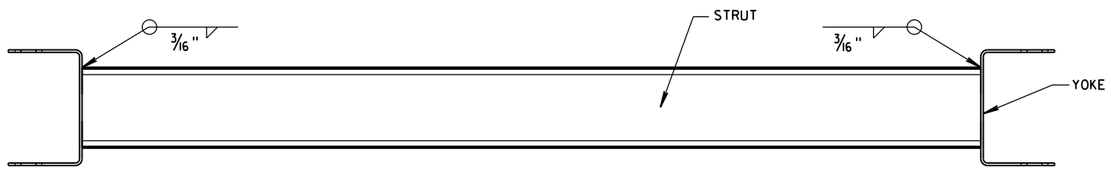
STRUT DETAIL



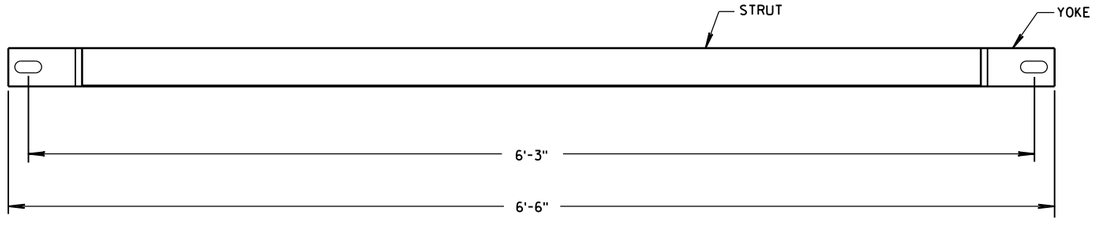




ANCHOR BRACKET

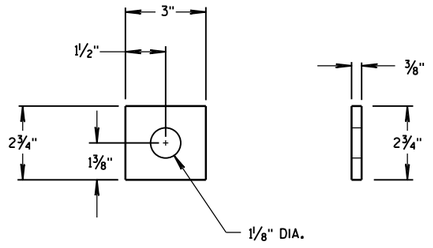


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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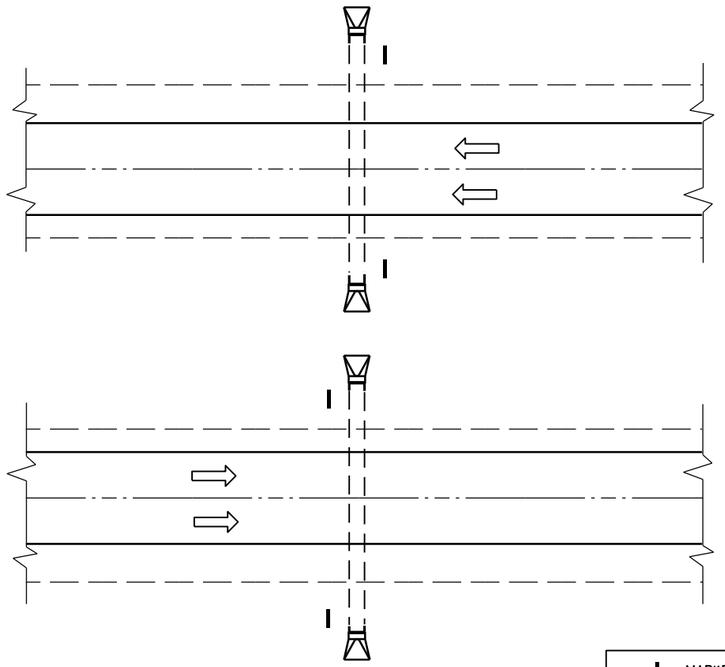
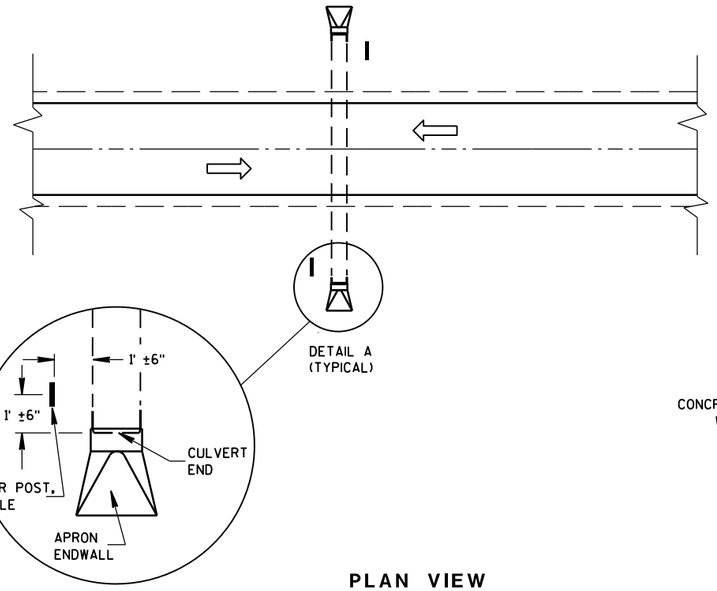


PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

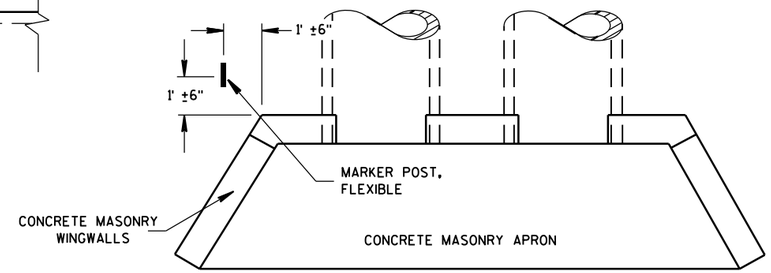
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

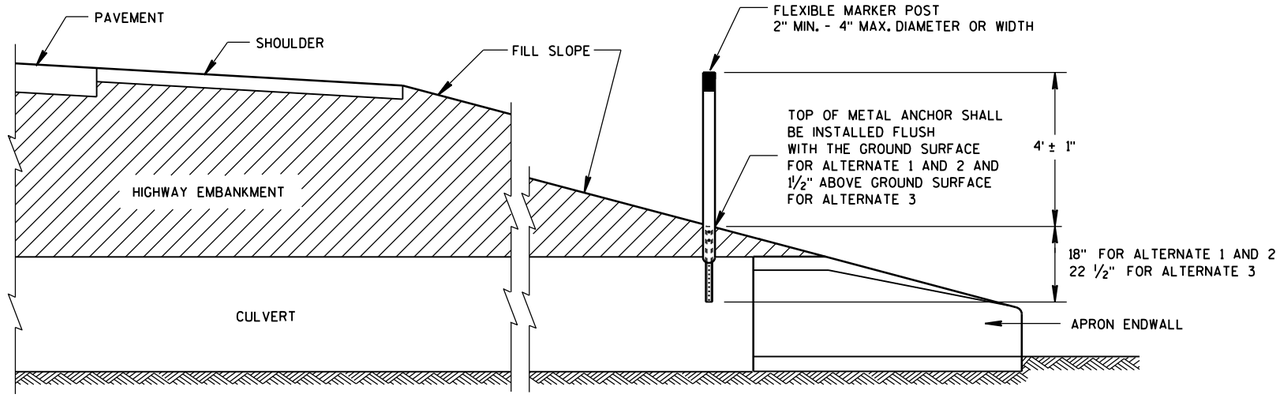
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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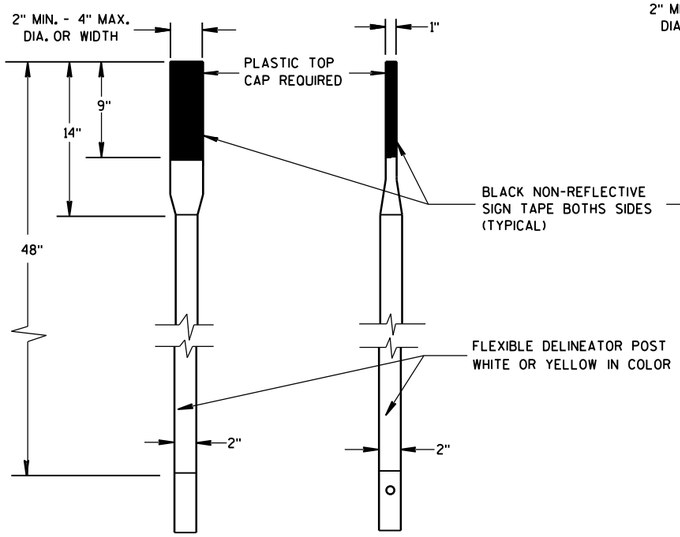
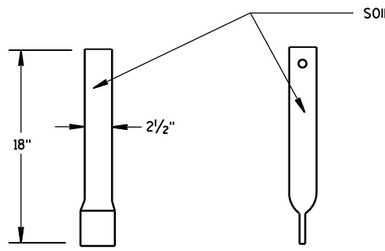
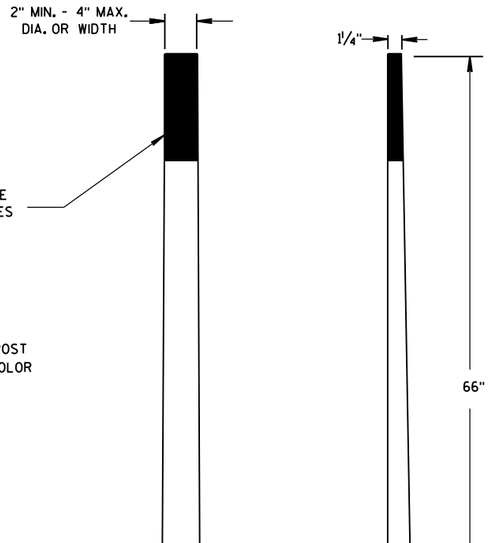




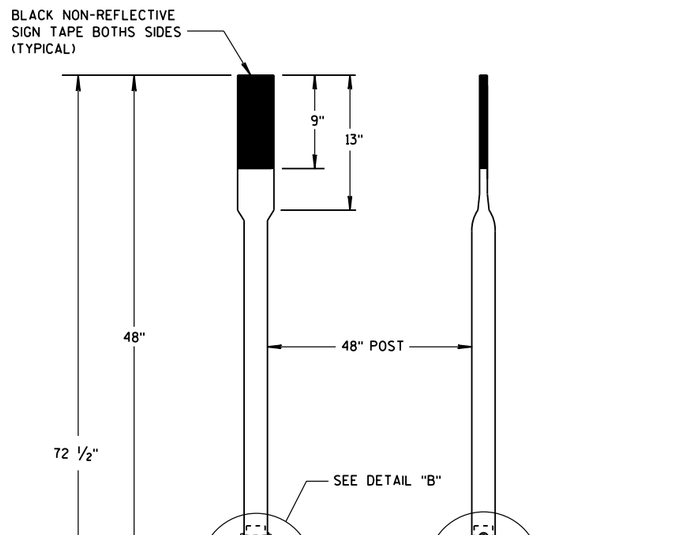
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

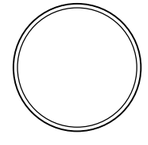
ALTERNATE 2



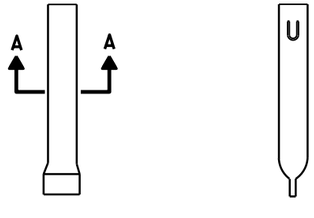
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

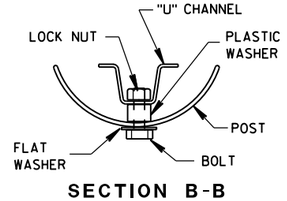


SECTION A-A

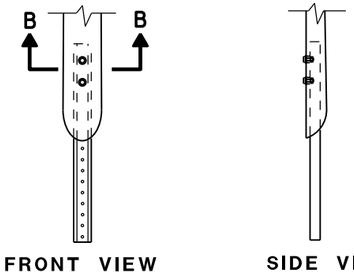


FRONT VIEW SIDE VIEW

ALTERNATE 1

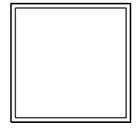


SECTION B-B

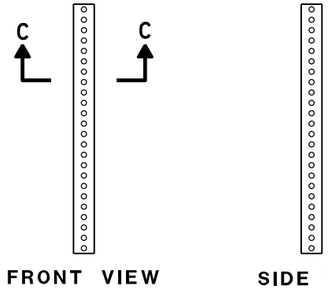


FRONT VIEW SIDE VIEW

ALTERNATE 2



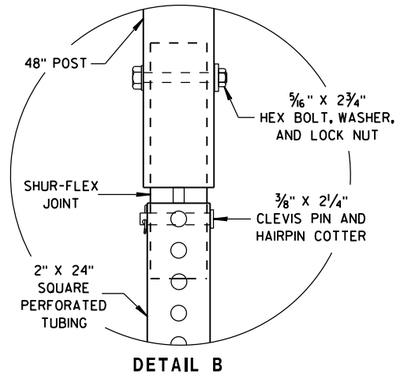
SECTION C-C



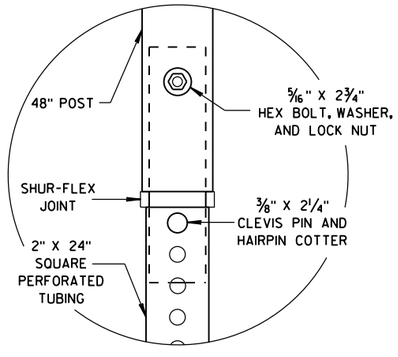
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

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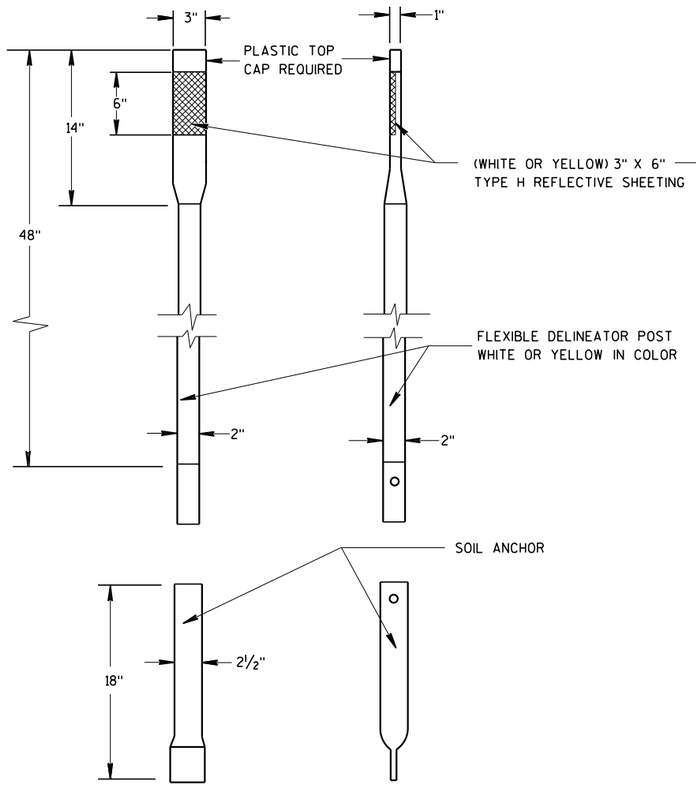
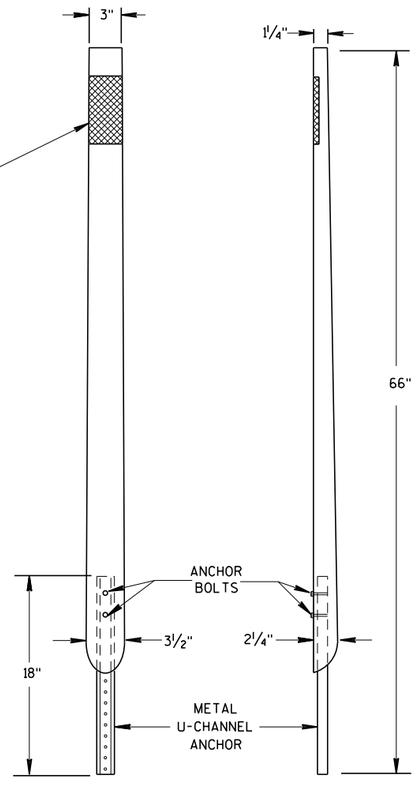
S.D.D. 15 A 3-2b



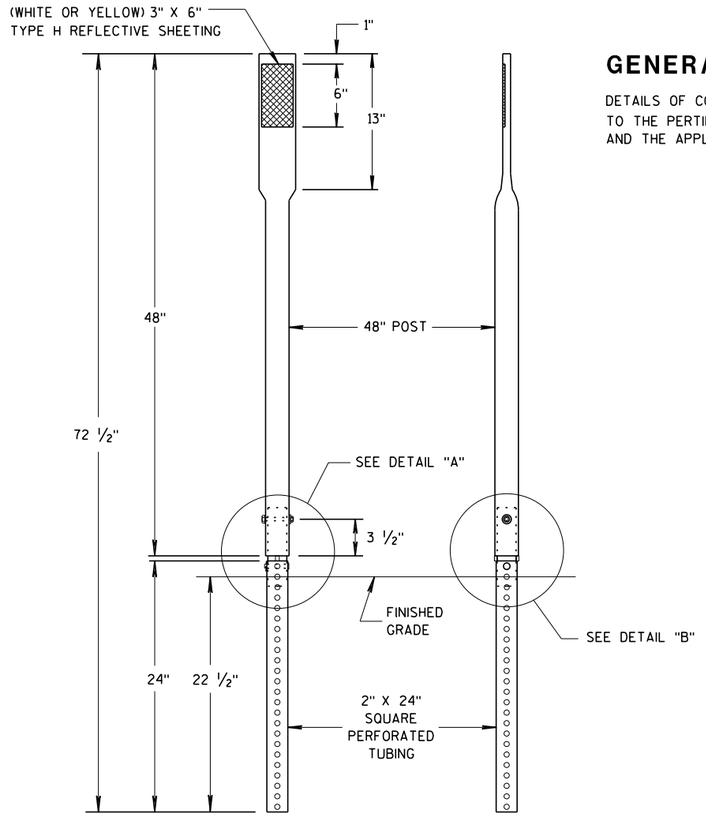
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2
FLEXIBLE DELINEATOR POSTS

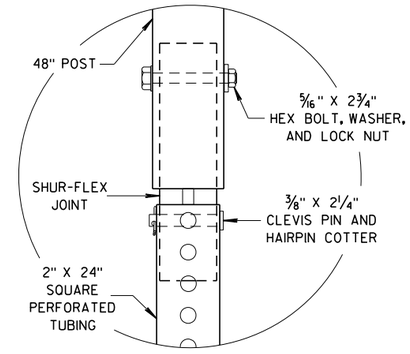


FRONT VIEW SIDE VIEW

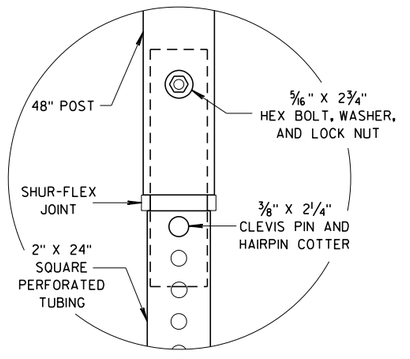
ALTERNATE 3

GENERAL NOTES

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



DETAIL A

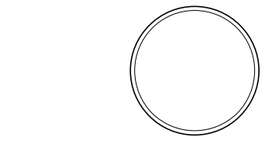


DETAIL B

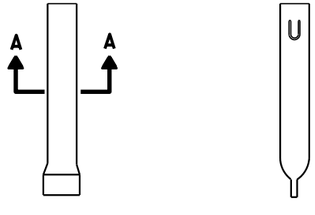
REFLECTOR SPACING TABLE

REFLECTOR SPACING	LOCATION
*100' C-C	RAMPS
400' C-C	MAINLINE

*START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

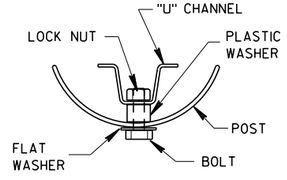


SECTION A-A

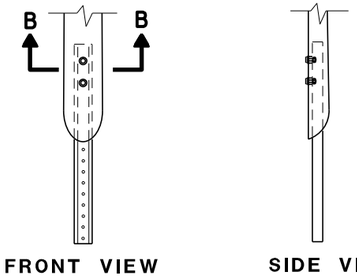


FRONT VIEW SIDE VIEW

ALTERNATE 1



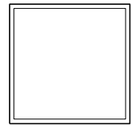
SECTION B-B



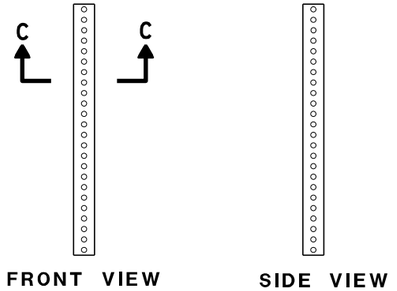
FRONT VIEW SIDE VIEW

ALTERNATE 2

FLEXIBLE MARKER POST ANCHORS



SECTION C-C



FRONT VIEW SIDE VIEW

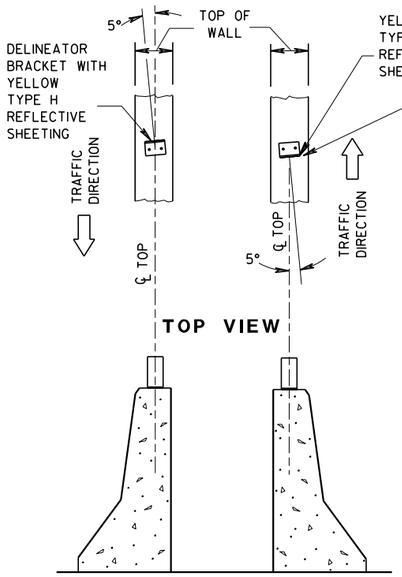
ALTERNATE 3

FLEXIBLE DELINEATOR POST

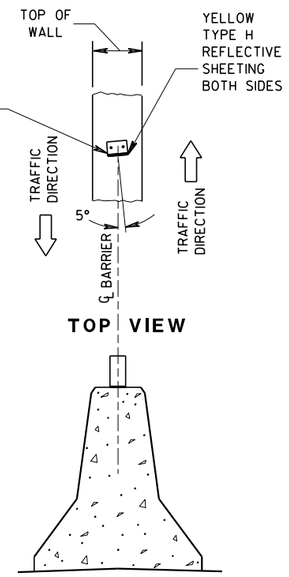
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Matt Rauch — STATE SIGNING AND MARKING ENGINEER
333
FHWA

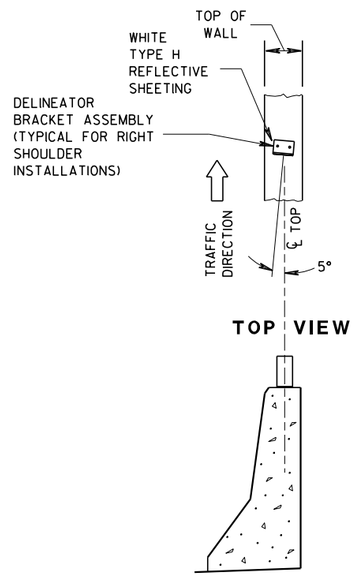
6
S.D.D. 15 A 4-4a



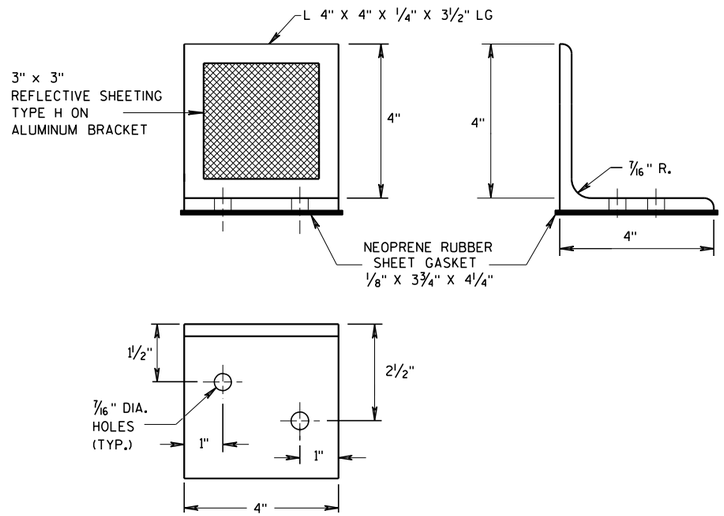
DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER

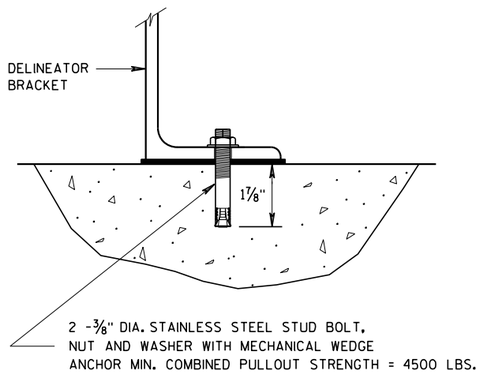


BARRIER LOCATED
TO RT. OF TRAFFIC FLOW



DELINEATOR BRACKET

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET
MOUNTING DETAIL

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

DELINEATOR BRACKET
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Matthew P. Rauch
DATE STATE SIGNING AND M. ENGINEER
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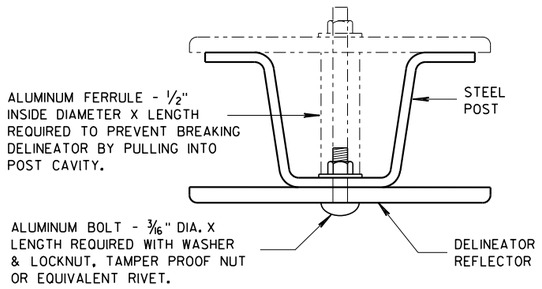
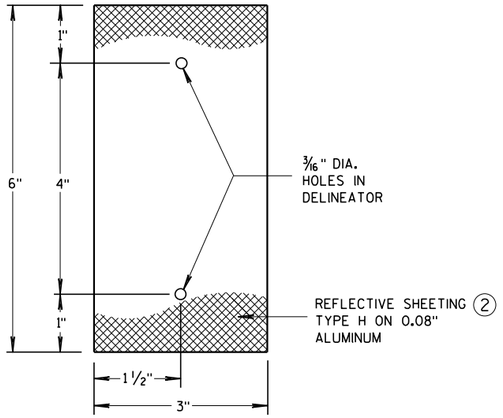
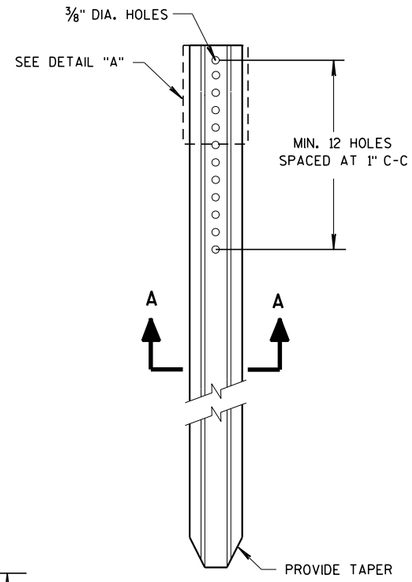


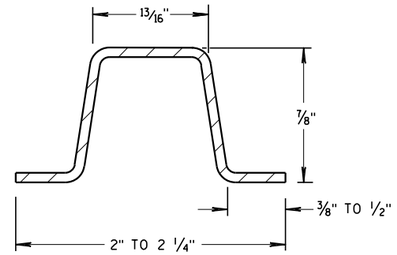
MOUNTING DETAIL
FOR DELINEATOR REFLECTOR



DETAIL "A"
3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



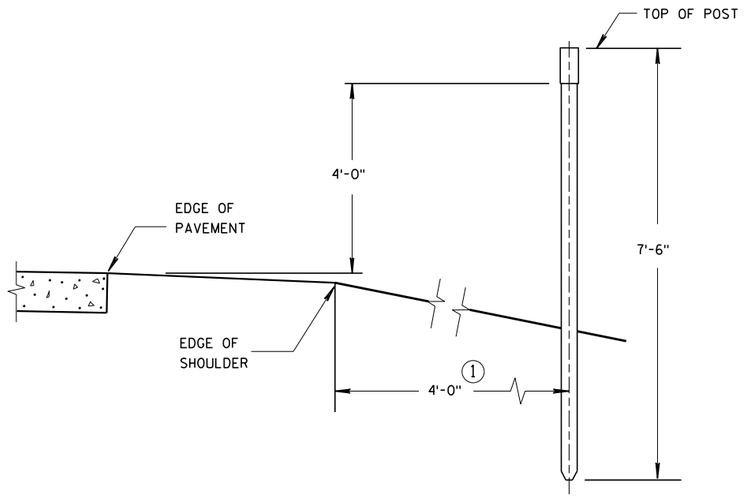
SECTION A-A

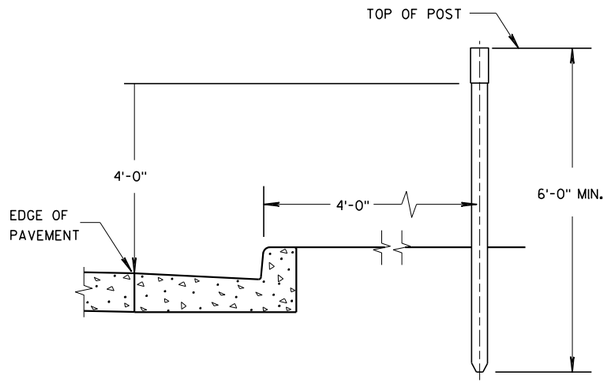
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

REFLECTOR SPACING TABLE

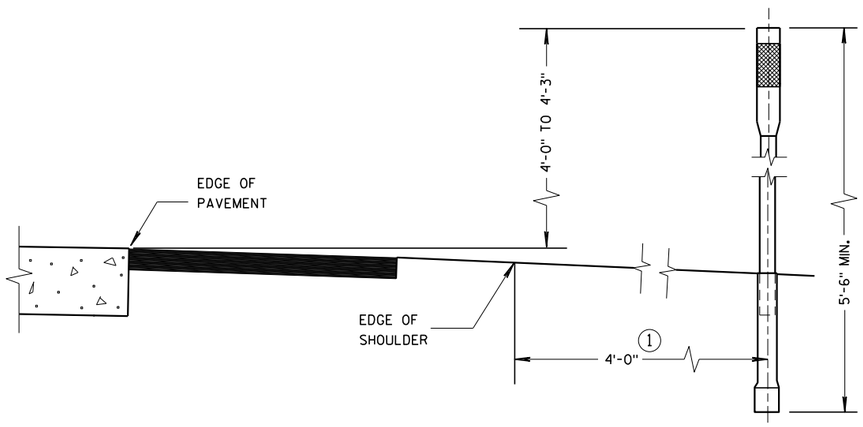
REFLECTOR SPACING	LOCATION
400'	MAINLINE
100'	RAMPS *

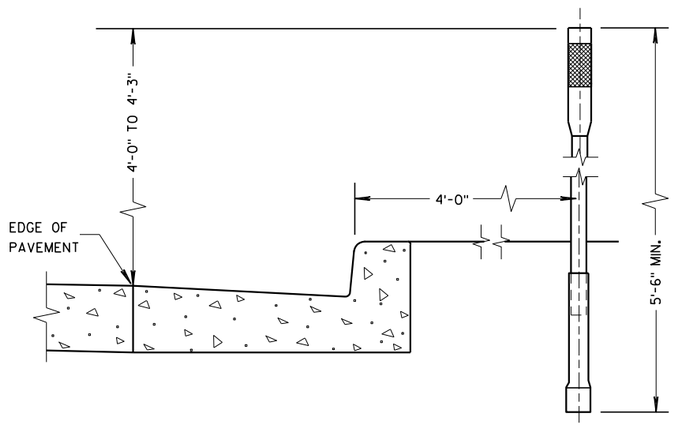
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER.





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Matthew P Rauch
DATE STATE SIGNING AND M 335 NGINEER
FHWA

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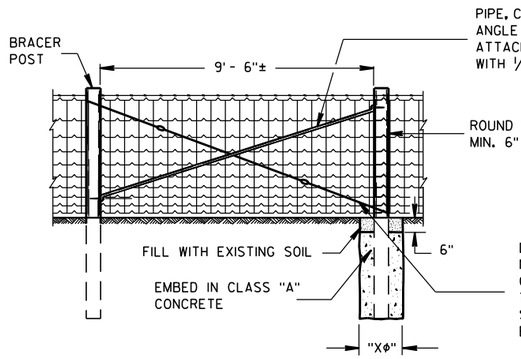
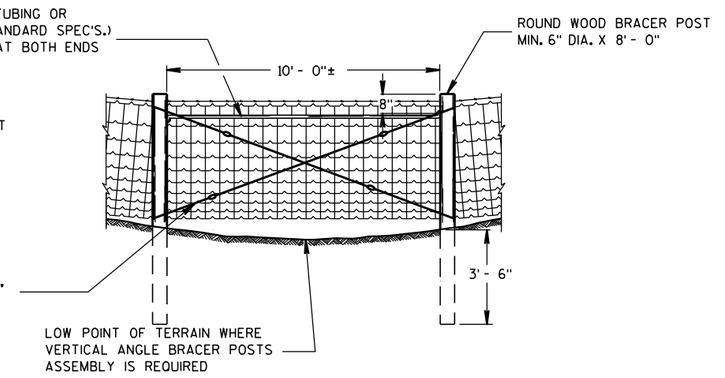
S.D.D. 15 A 4-4c

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

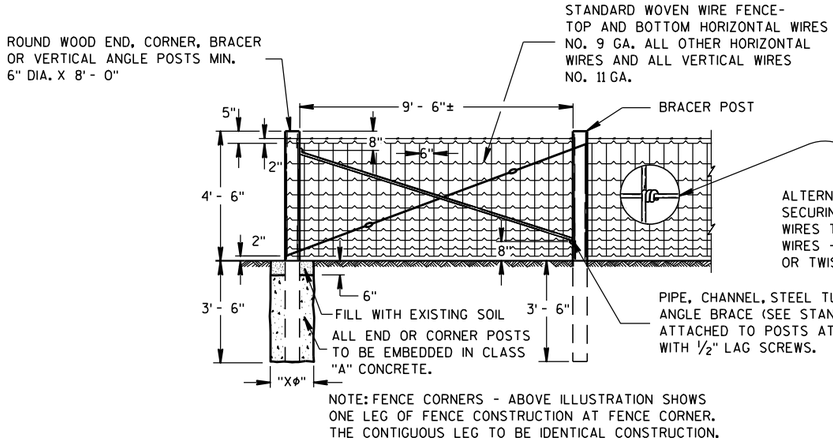
ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY

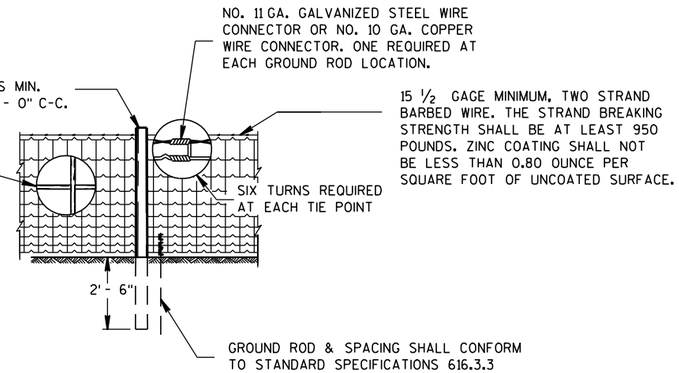


VERTICAL ANGLE BRACER POSTS ASSEMBLY



NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY



LINE FENCE CONSTRUCTION

GENERAL NOTES

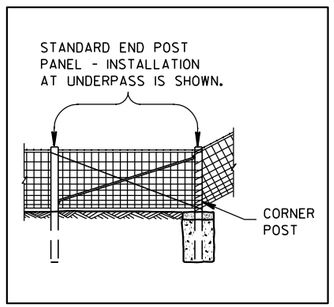
"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

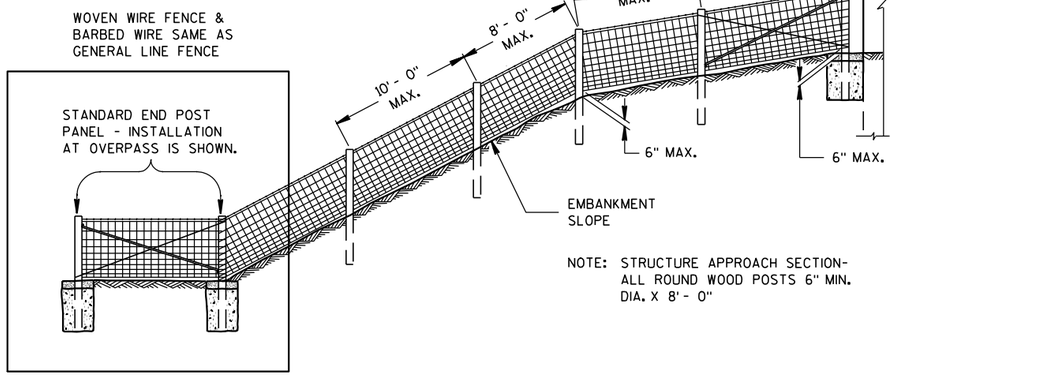
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



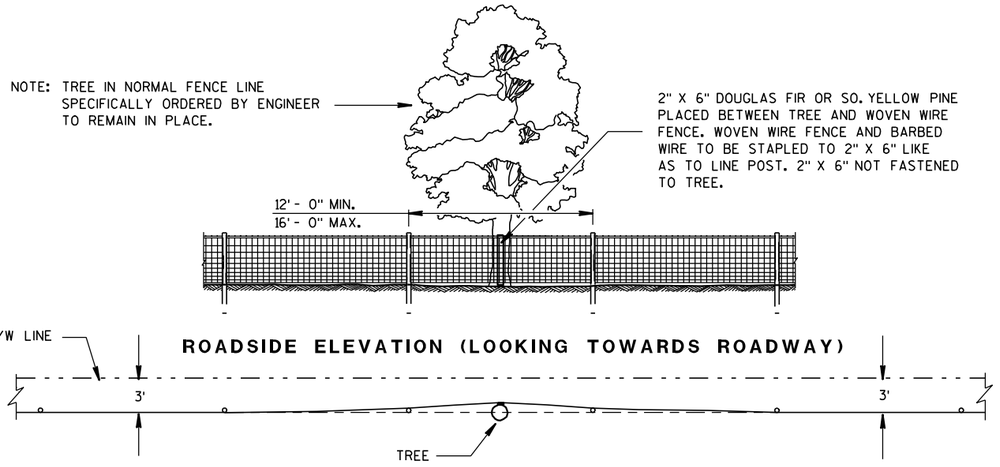
NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

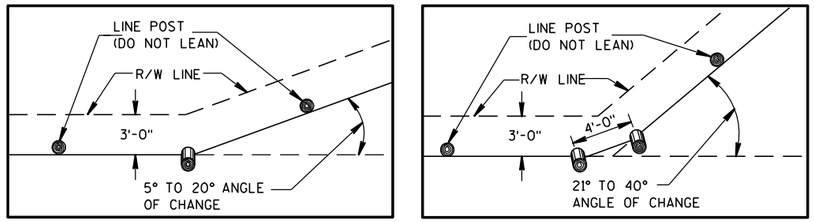
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



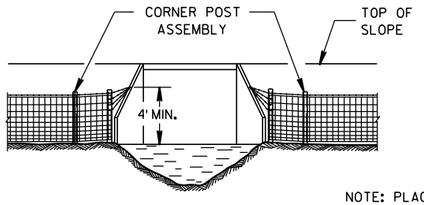
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

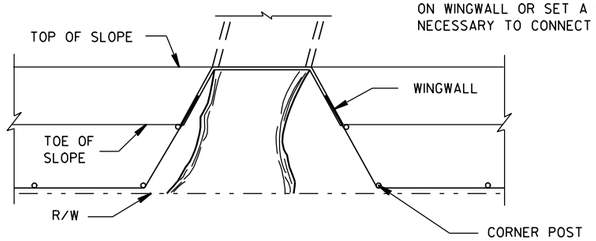
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

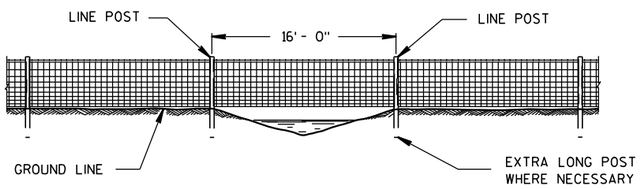
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



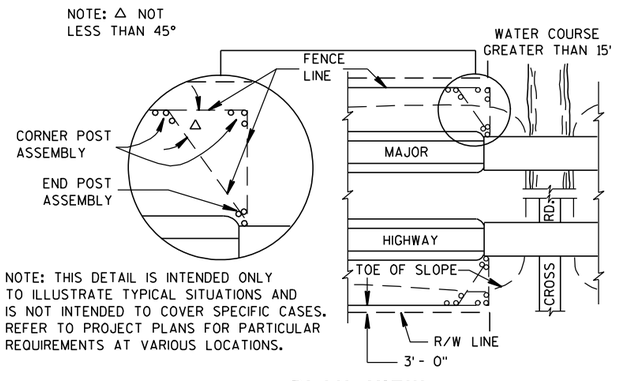
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

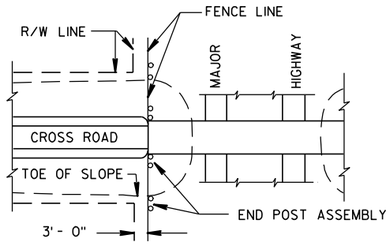


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



PLAN VIEW

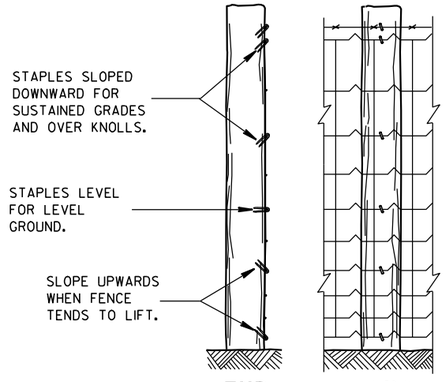
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW

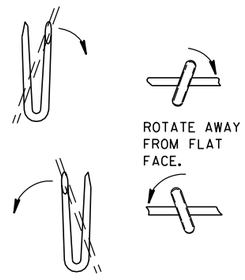
MAJOR HIGHWAY UNDERPASS

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL



LINE POST

FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 1-8b

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

GENERAL NOTES

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

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

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

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

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

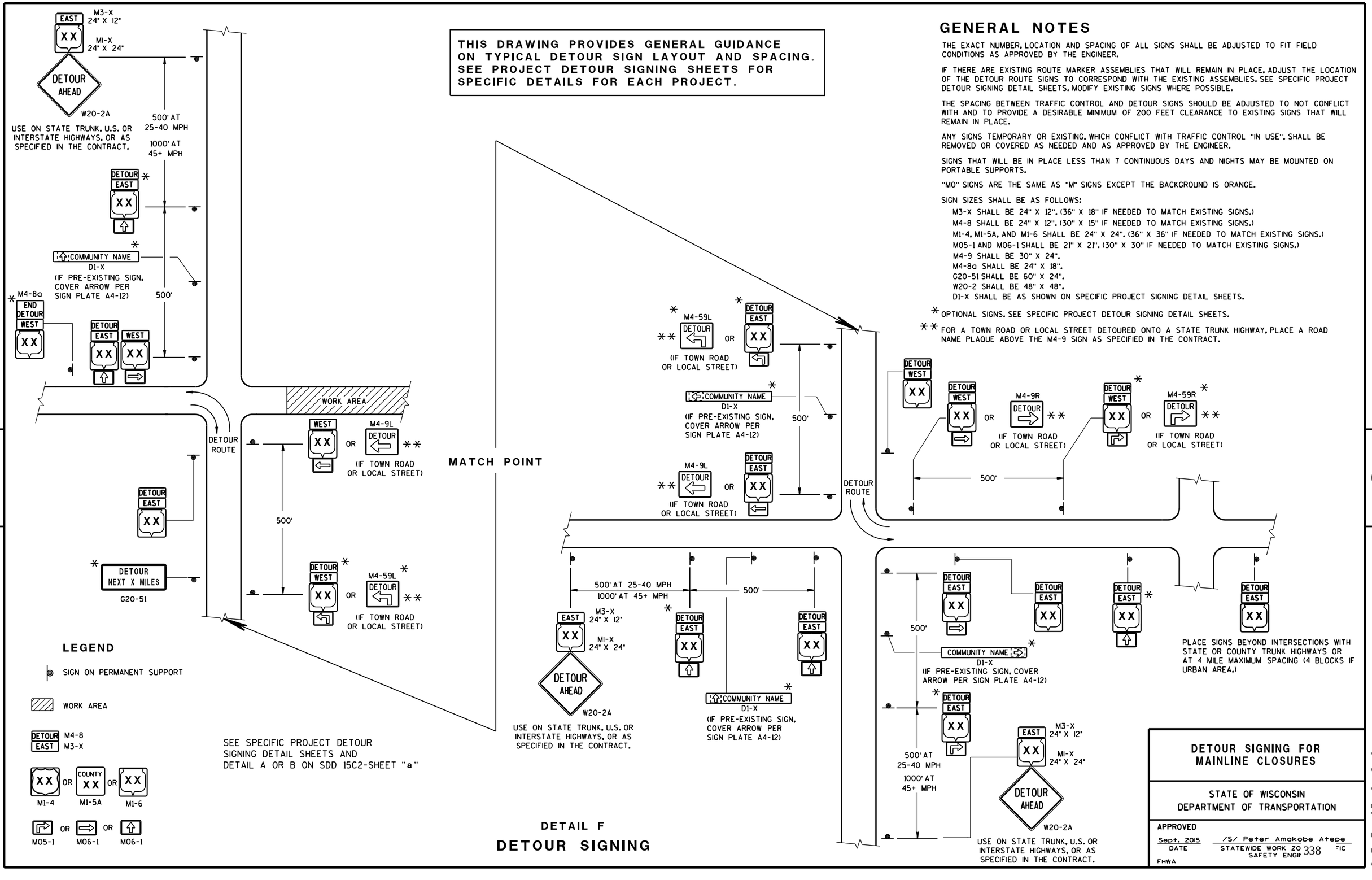
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X 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.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI FIC

FHWA

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

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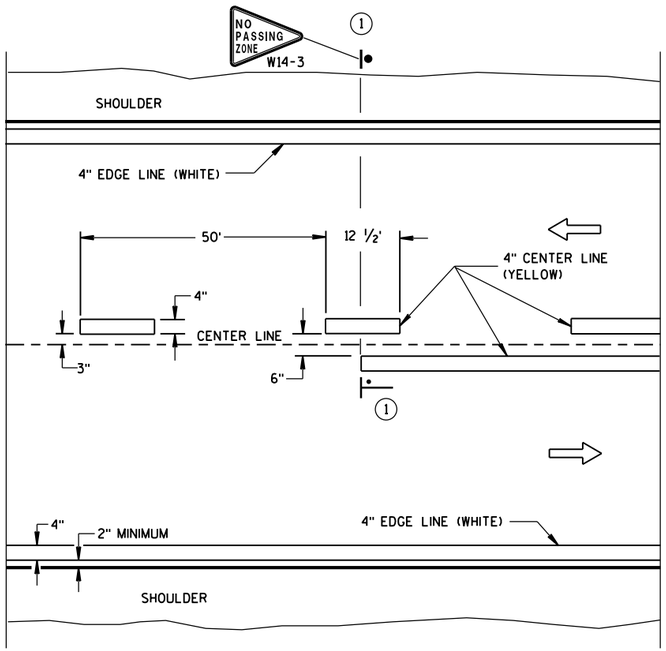
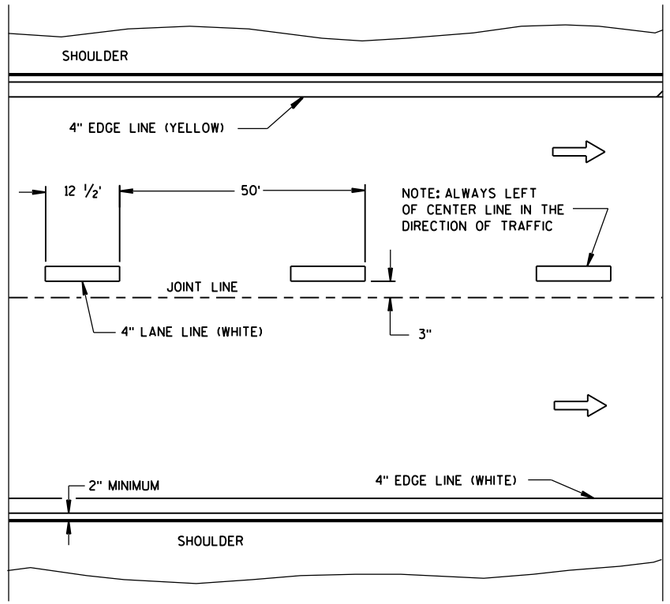
S.D.D. 15 C 2-6c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

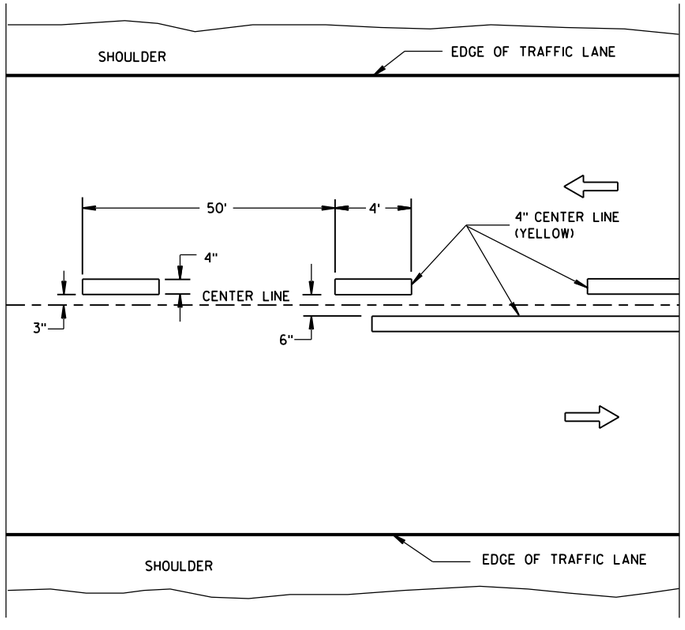
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

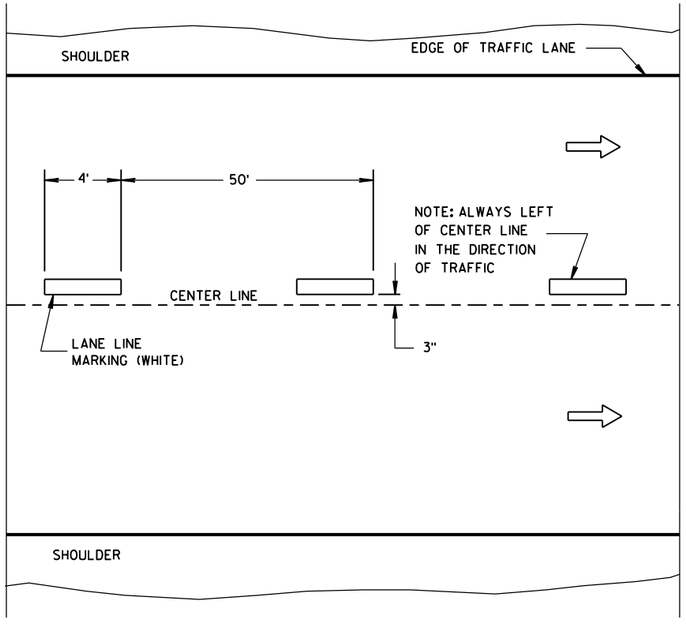
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

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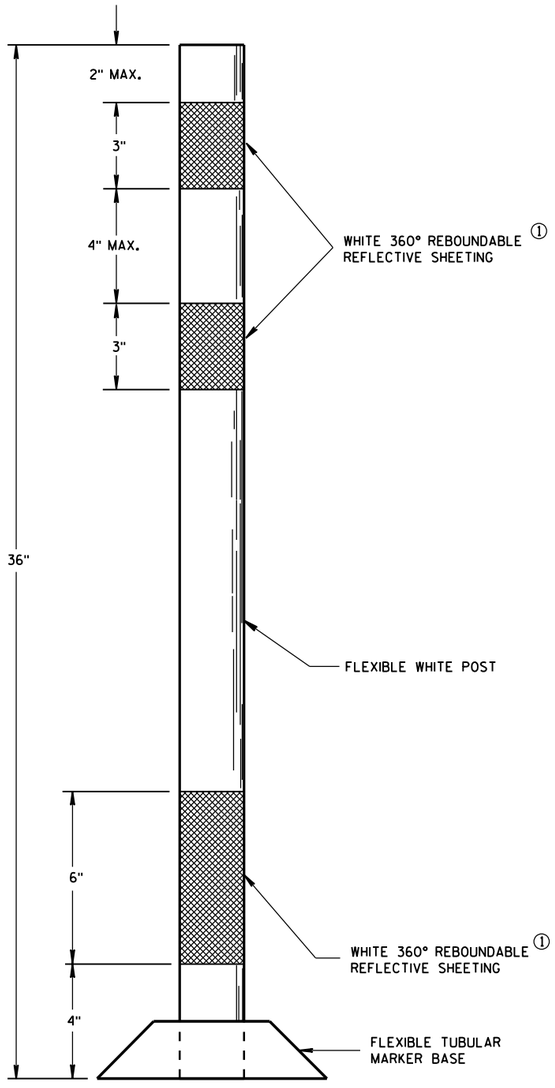
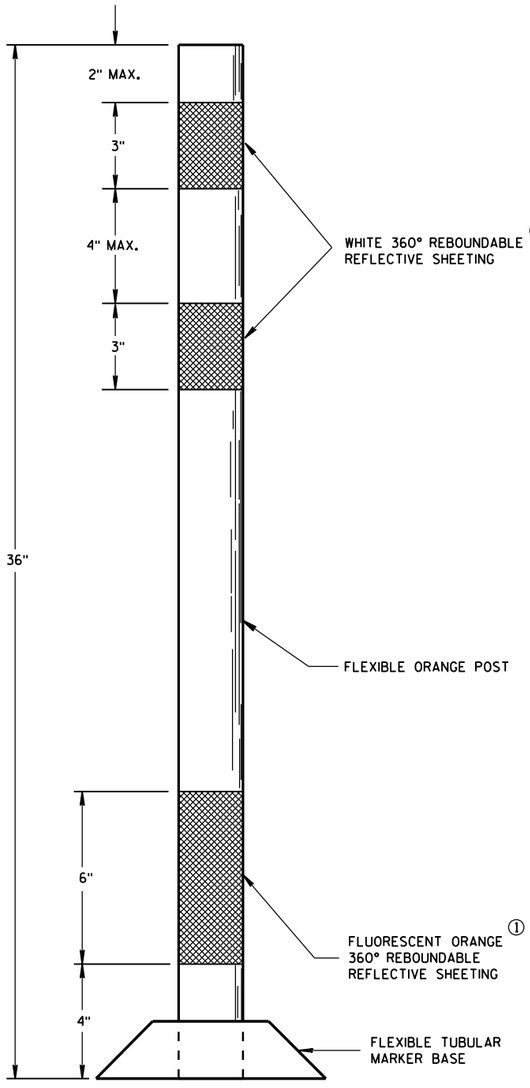
S.D.D. 15 C 8-18a



FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER



FLEXIBLE
TUBULAR MARKER POST
WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGR
FHWA

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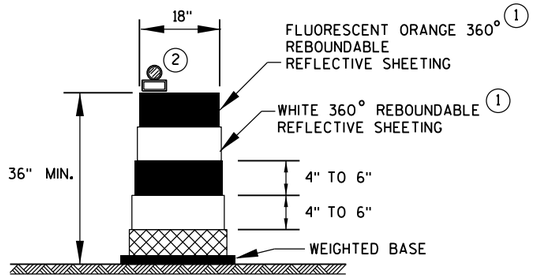
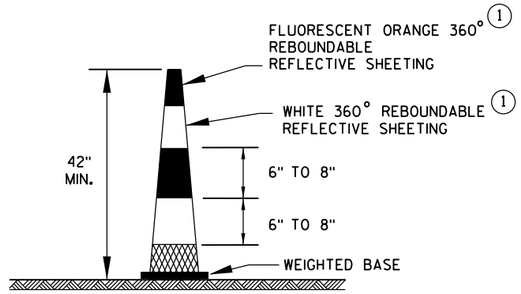
S.D.D. 15 C 11-7a



DRUM

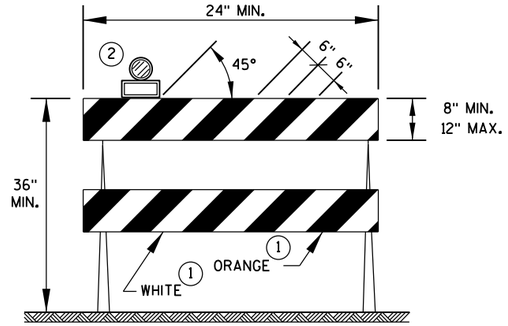


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

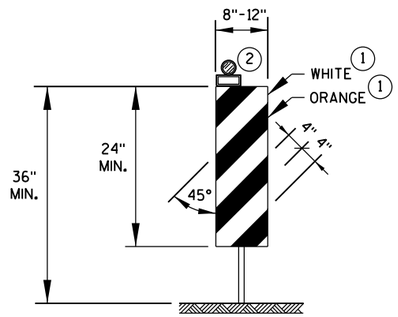
GENERAL NOTES

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



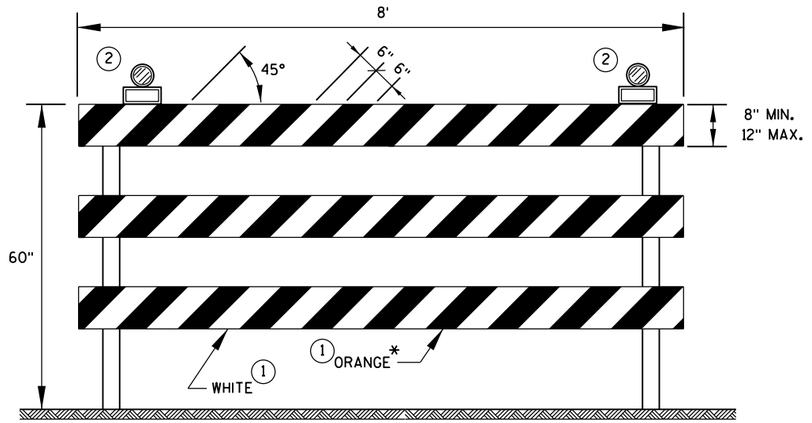
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

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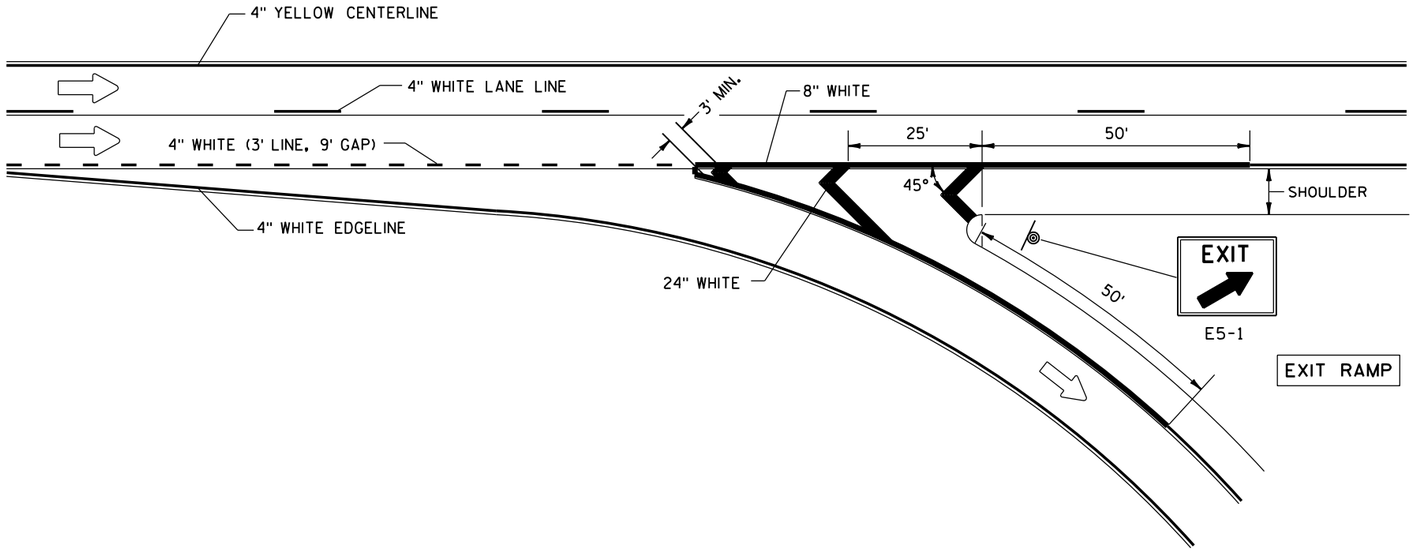
S.D.D. 15 C 11-7b



PAVEMENT MARKING FOR EXIT RAMP

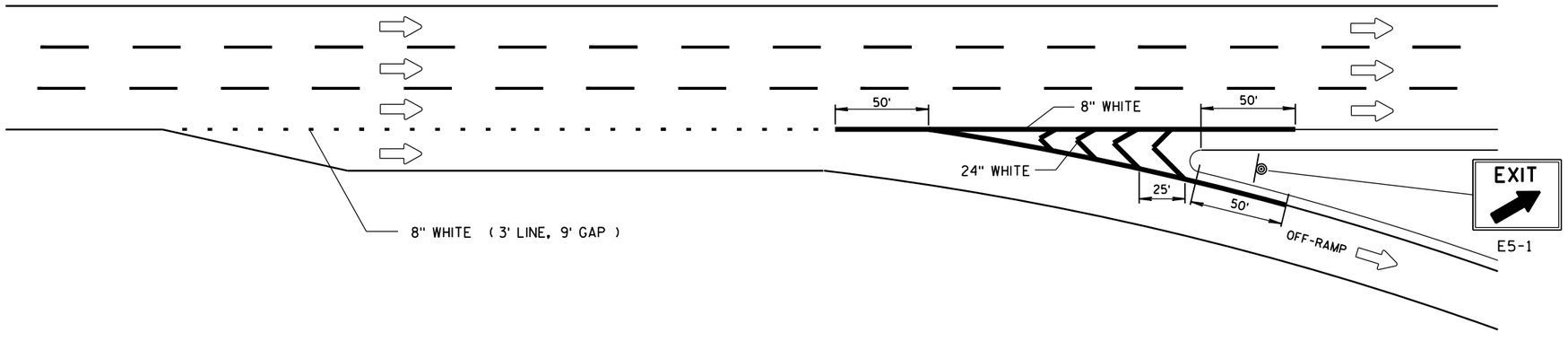
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

S.D.D. 15 C 31-3a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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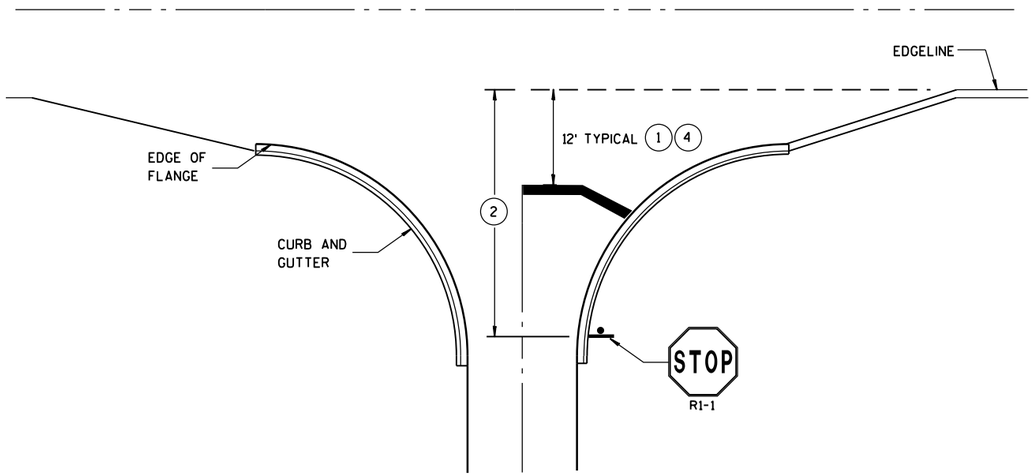
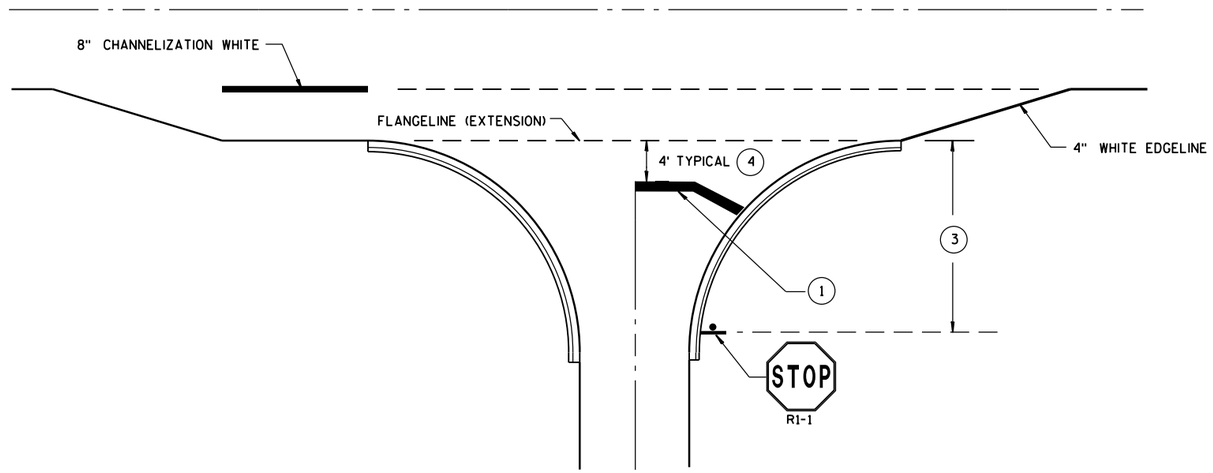
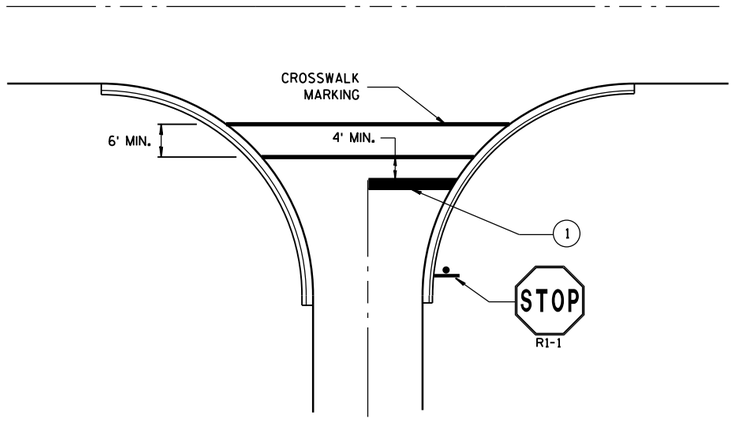
S.D.D. 15 C 31-3a



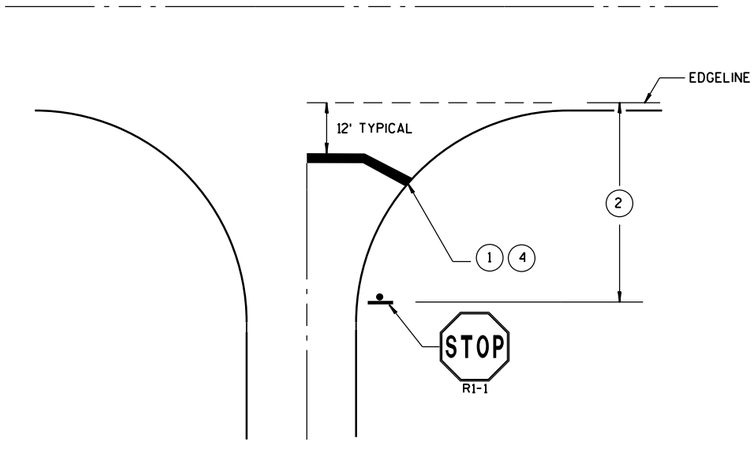
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

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

(1) 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE 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

Sept., 2017 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER

FHWA

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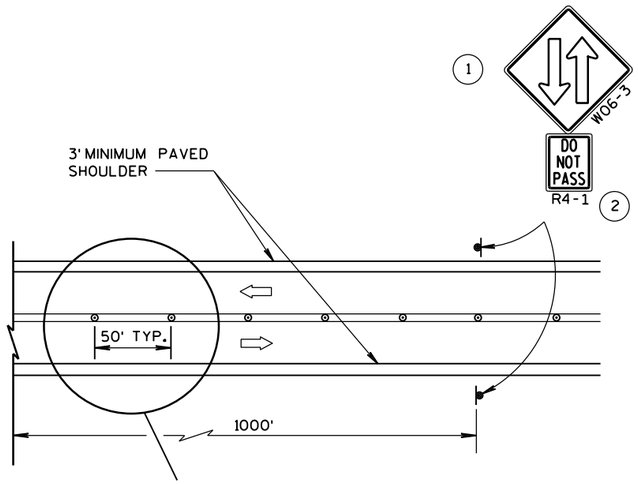
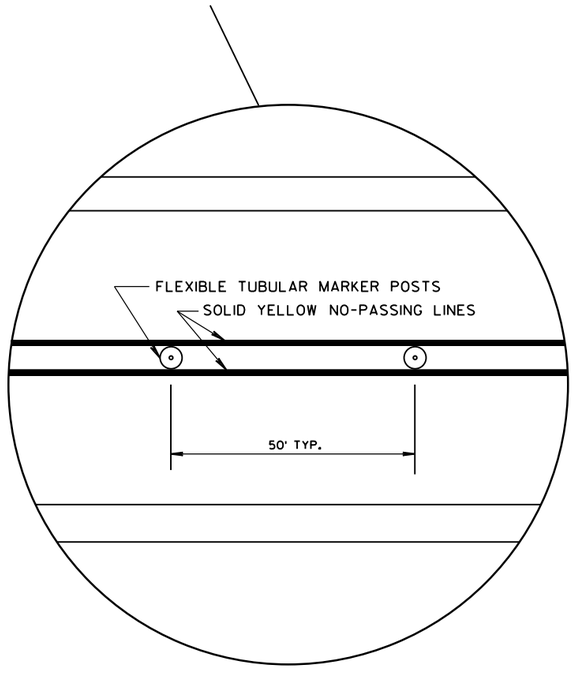
S.D.D. 15 C 33-3



TWO LANE, TWO WAY OPERATION



LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.

(1)

W057-51
48"x24"

R4-1 (2)

THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

(2) CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"

TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN

FHWA

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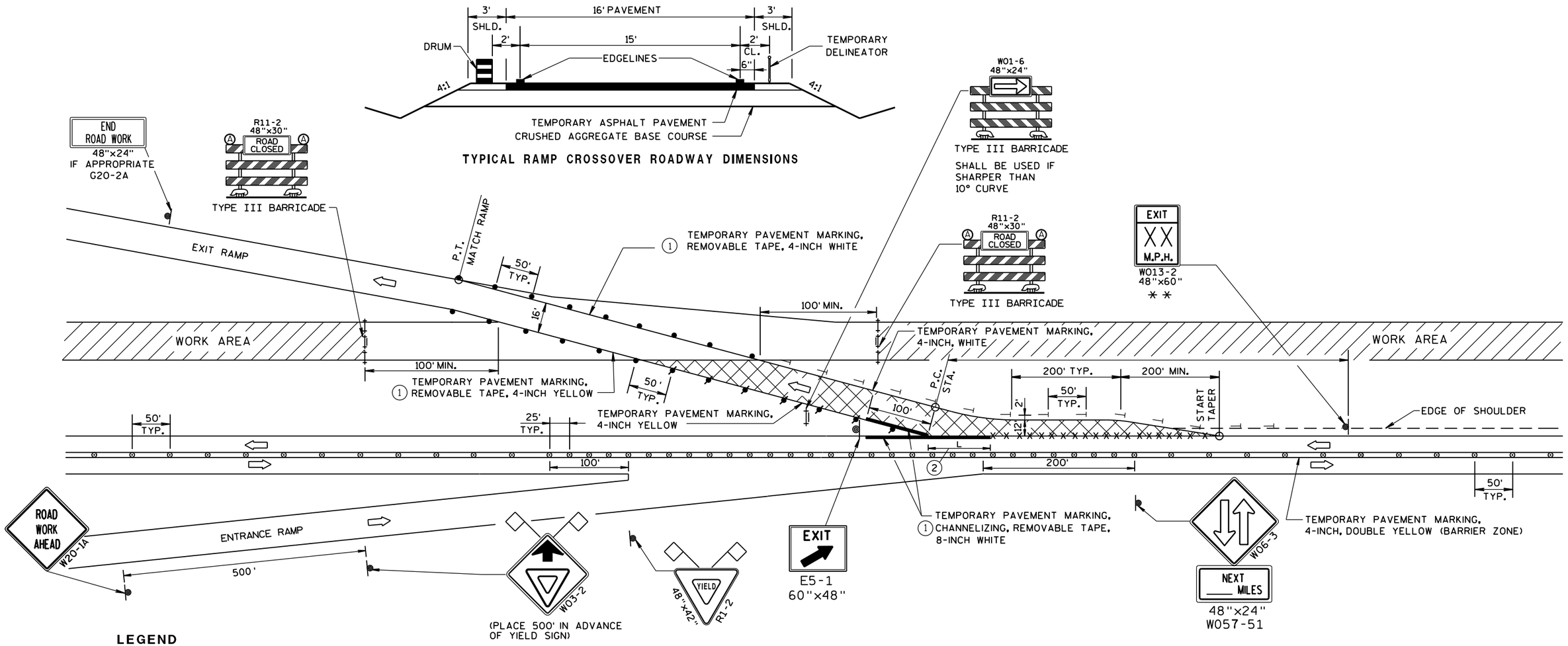
S.D.D. 15 D 6-3



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR)
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLAGS, 16" X 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

1. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER. OTHERWISE TEMPORARY PAVEMENT MARKING MAY BE USED.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

2. LENGTH L SHALL BE REQUIRED WHEN TANGENT LENGTH OF EXIT RAMP PARALLEL TO MAINLINE EXCEEDS 300 FEET. LENGTH SHALL BE EQUAL TO THE EXIT RAMP TANGENT LENGTH MINUS 300 FEET OR AS APPROVED BY THE ENGINEER AND SHALL CHANGE TO ACCOMODATE PAVING GAPS.

** ADJUST EXIT RAMP SPEED AS NEEDED IN THE FIELD. DISTANCE TO SIGN LOCATION SHALL ALSO BE PLACED ACCORDING TO TABLE.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10-FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

** TABLE FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE (FT)

POSTED SPEED LIMIT (MPH)	DESIRED EXIT RAMP SPEED (MPH)					
	10	20	30	40	50	60
45	350	300	250			
50	425	400	325	225		
55	500	475	400	300		
60	575	550	500	400	300	
65	650	625	575	500	375	100
70	650	625	575	500	375	375

TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FHWA

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S.D.D. 15 D 7-4

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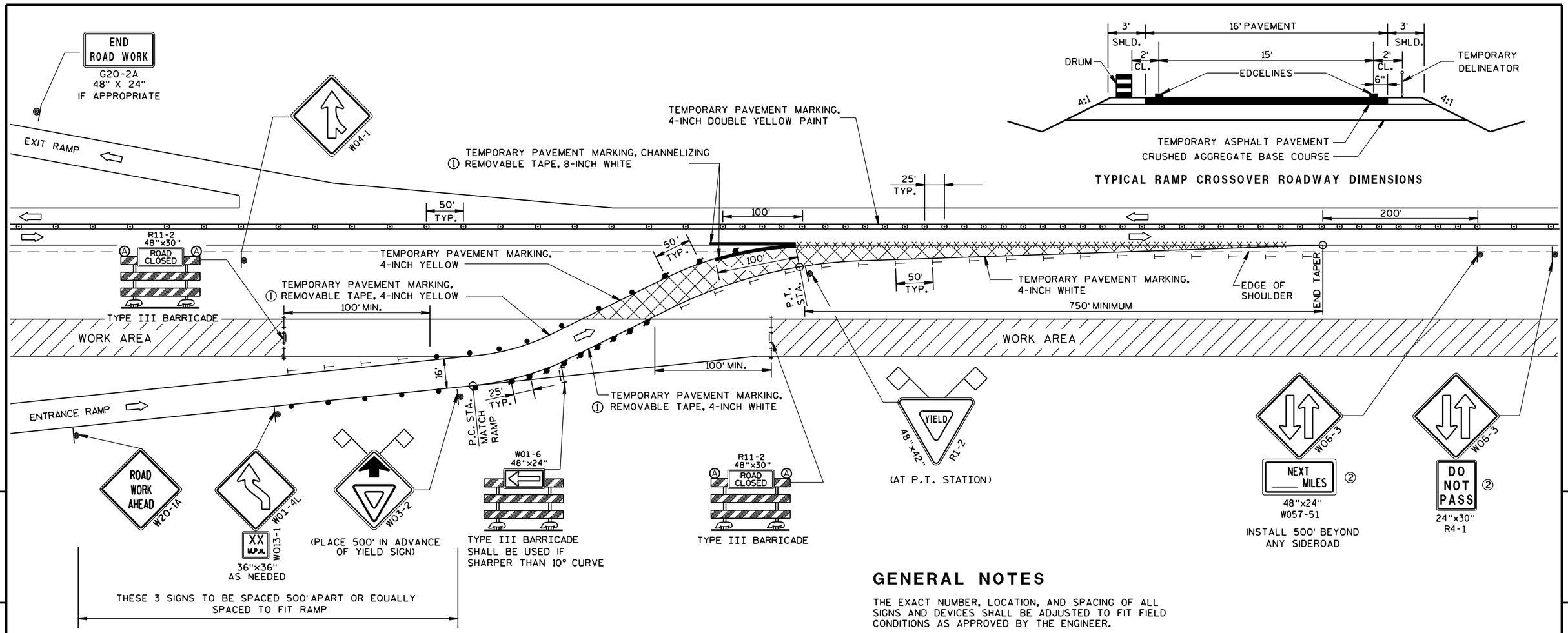
S.D.D. 15 D 7-4



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- ~~~~ REMOVING PAVEMENT MARKINGS
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLAGS, 16" X 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC
- WORK AREA

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 PERMANENT SIGNS AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

② INSTALL THE W06-3 SIGN WITH THE R4-1 SIGN 1000 FEET BEYOND THE W06-3 SIGN WITH THE W057-51 SIGN AND ALTERNATE THE SEQUENCE OF THESE SIGNS EVERY 1 MILE.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10-FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED OR REMOVED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2017
DATE
/S/ Andrew Heldtke
WORK ZONE ENG
FHWA

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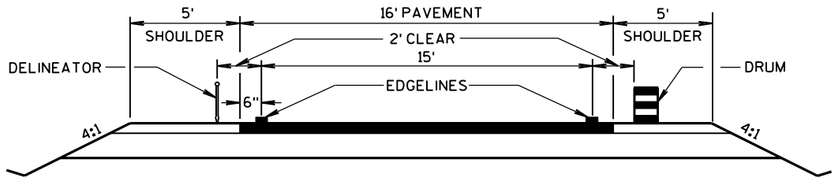
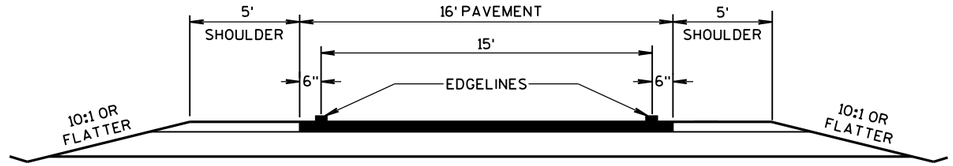
S.D.D. 15 D 8-6



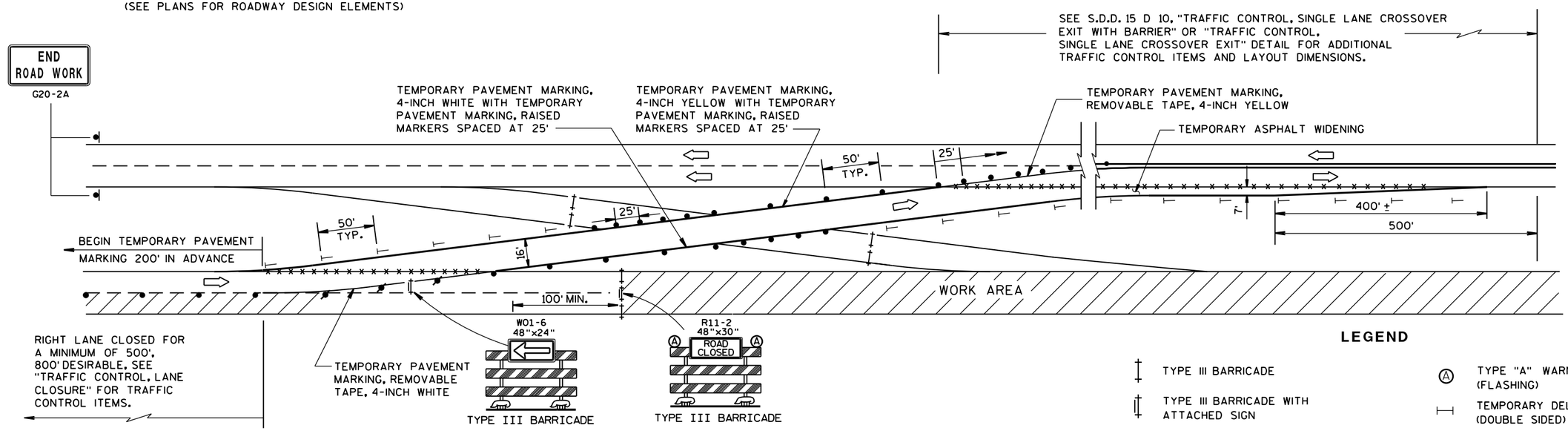
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/ TUBULAR MARKER
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

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 PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

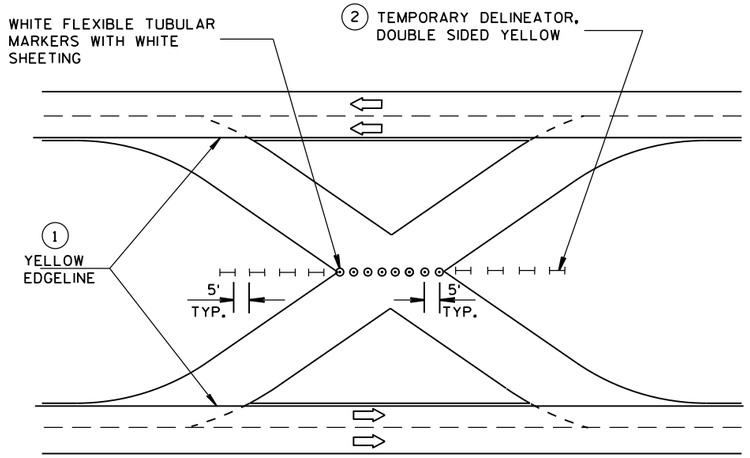
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

(1) FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

(2) FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017
DATE
/S/ Andrew Heldtke
WORK ZONE ENGI
FHWA

6

S.D.D. 15 D 11-7

LEGEND

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

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

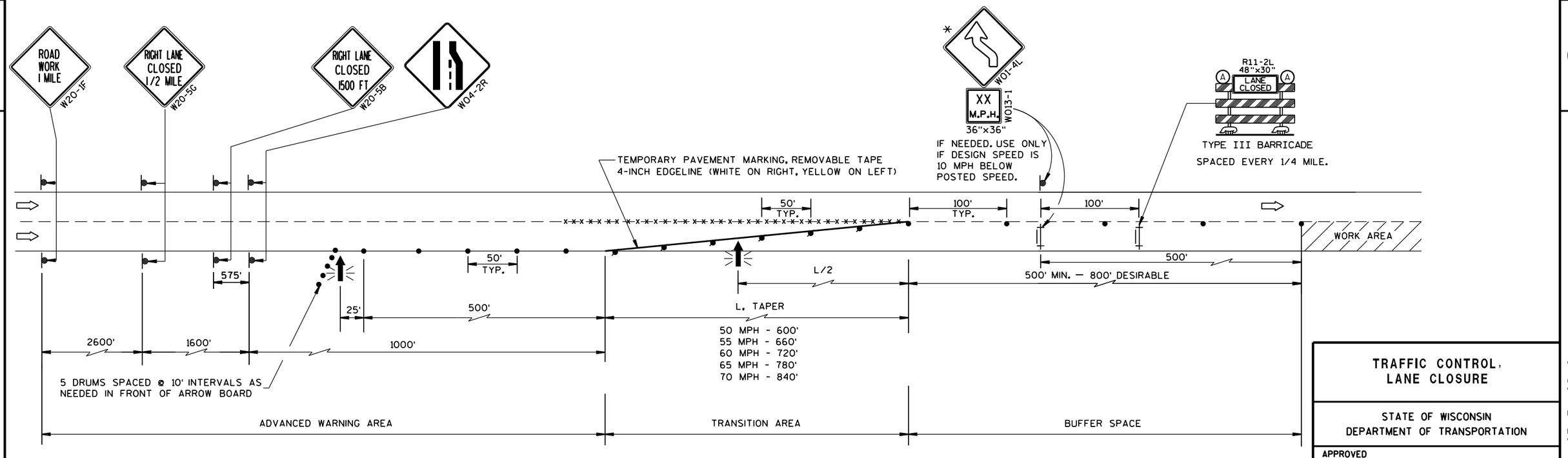
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a

LEGEND

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

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

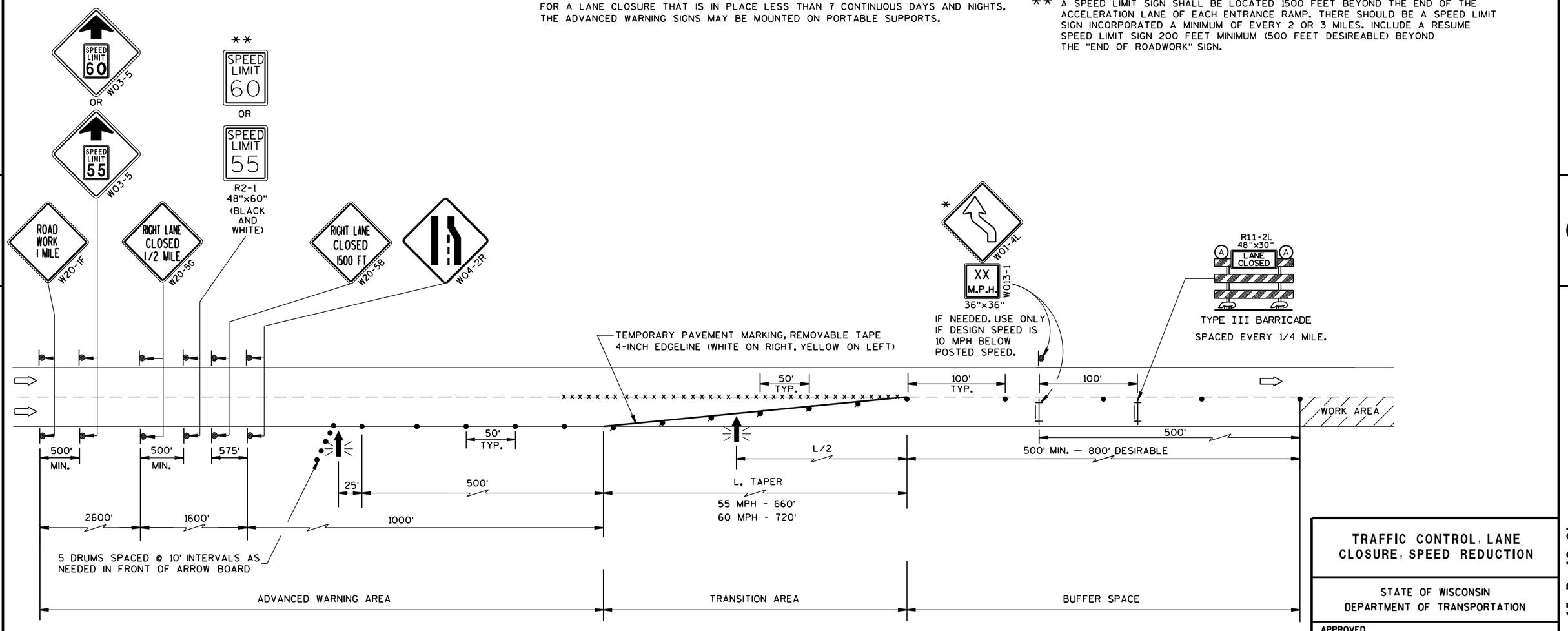
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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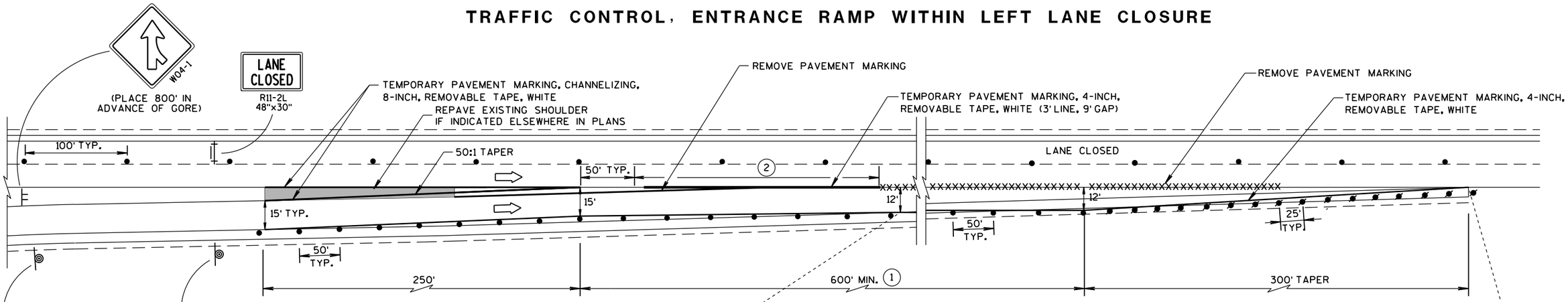
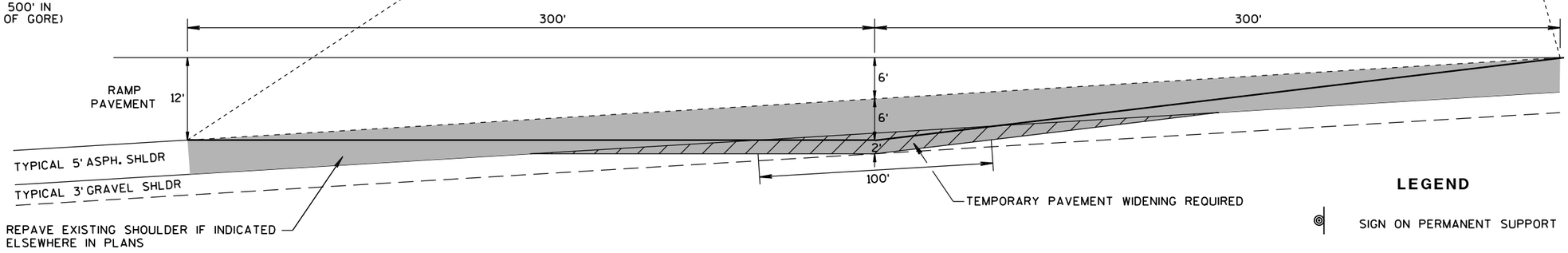
S.D.D. 15 D 12-6b

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



(1) EXTEND THE LENGTH OF MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS +2.2%.

(2) END TEMPORARY MARKING AT 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY. ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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 MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

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. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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.

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

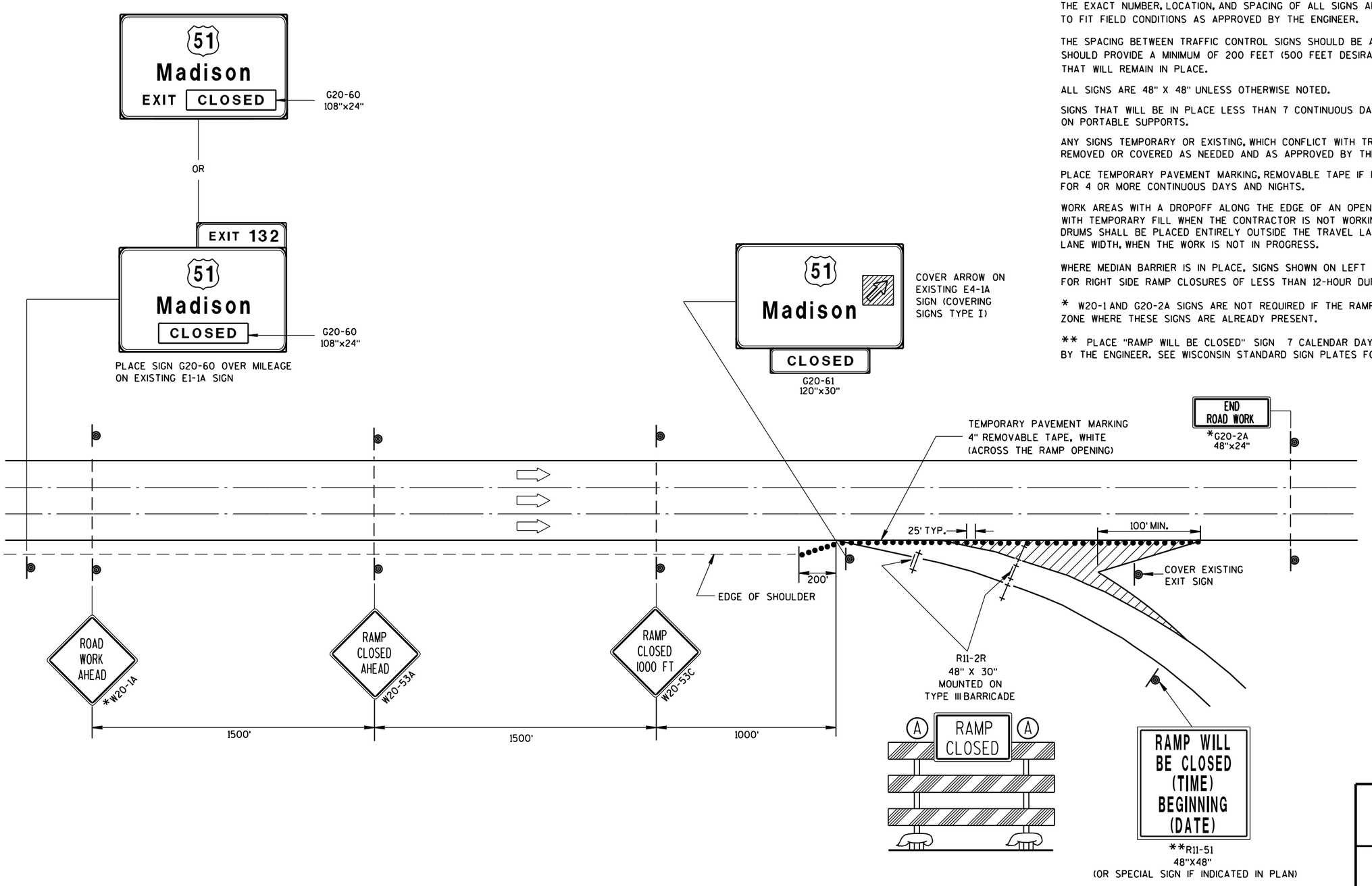
TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 D 15-4b



GENERAL NOTES

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

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 MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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.

PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

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

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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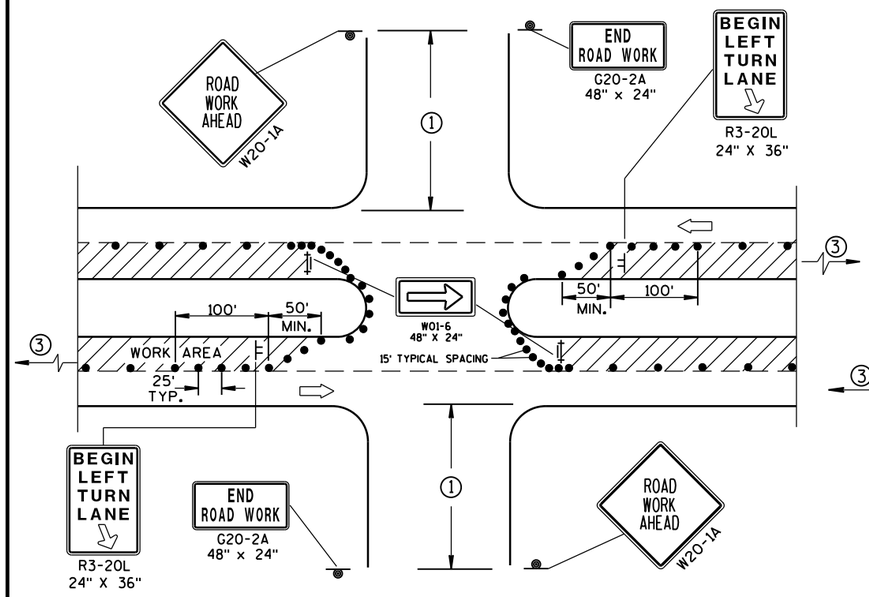
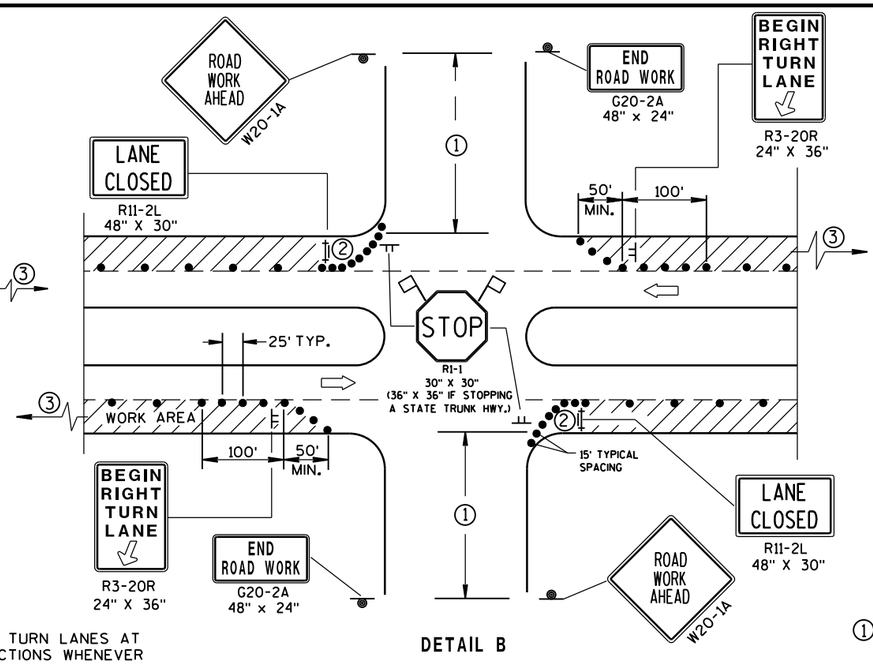


DETAIL A

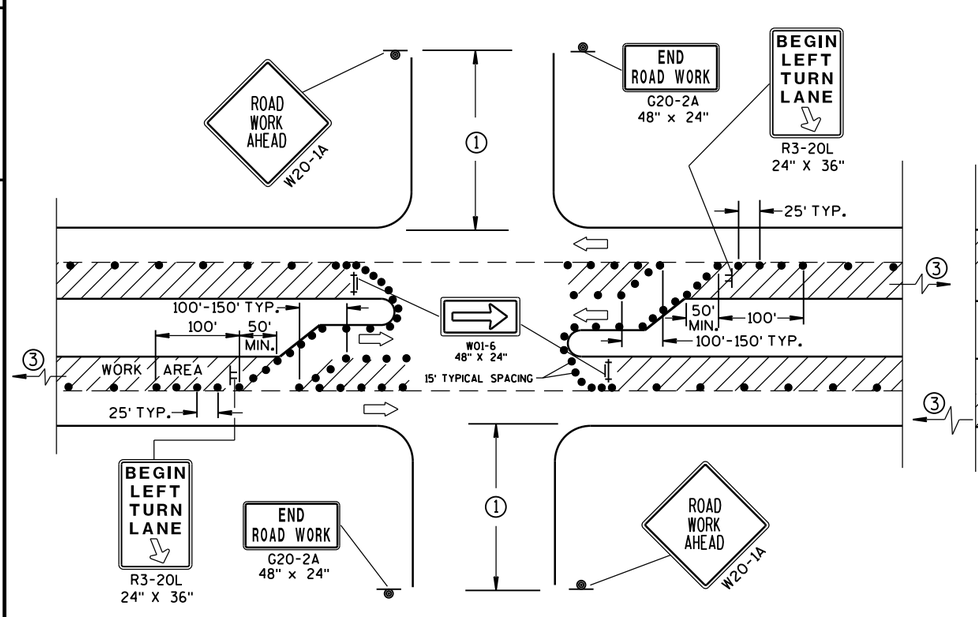
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



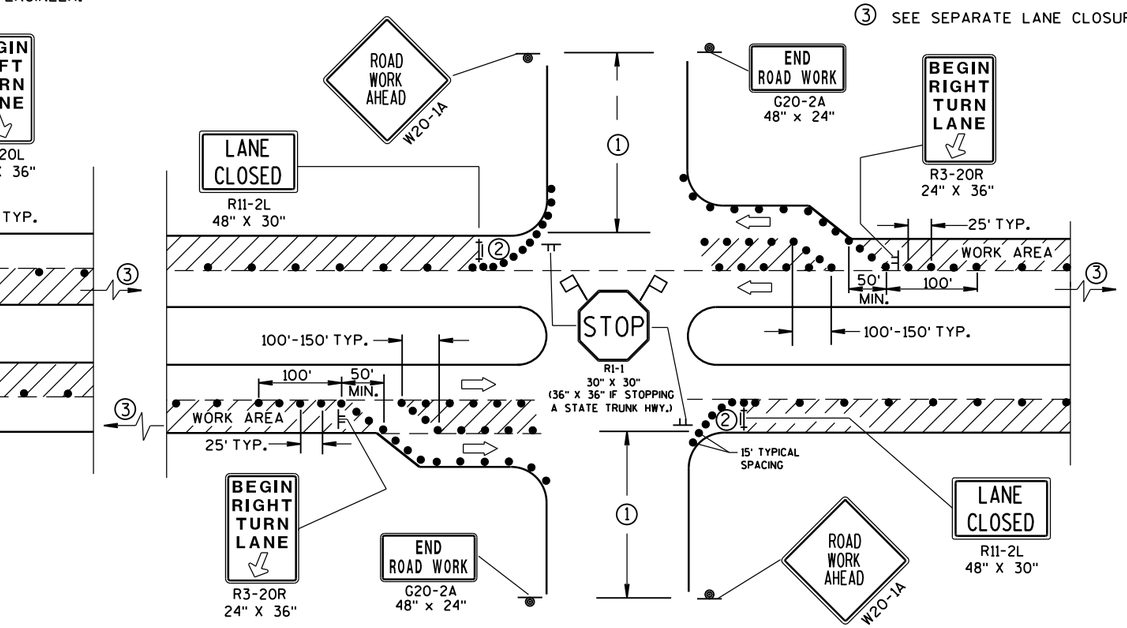
DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION



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)

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.

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

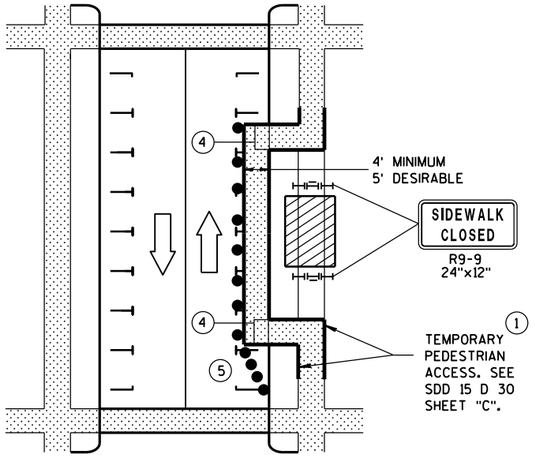
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

6

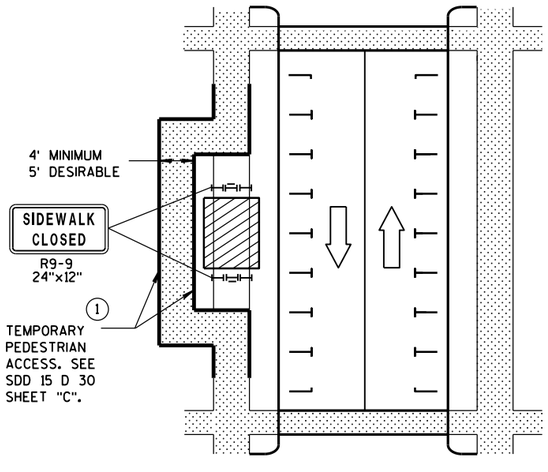
S.D.D. 15 D 21-5

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

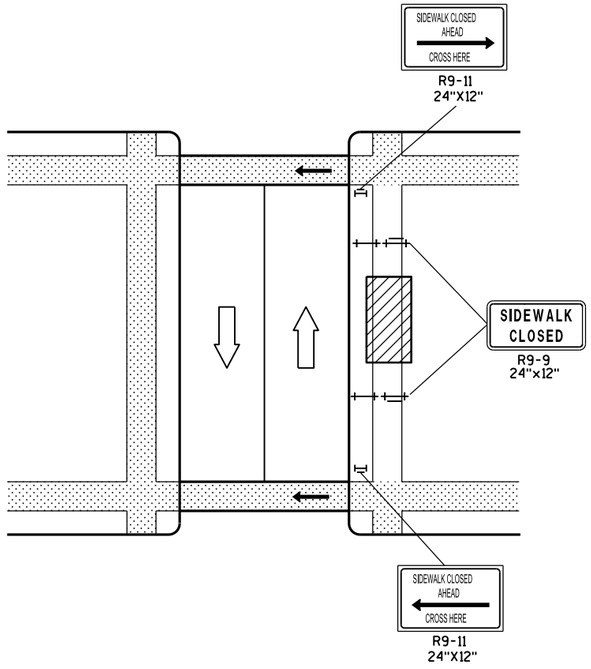


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

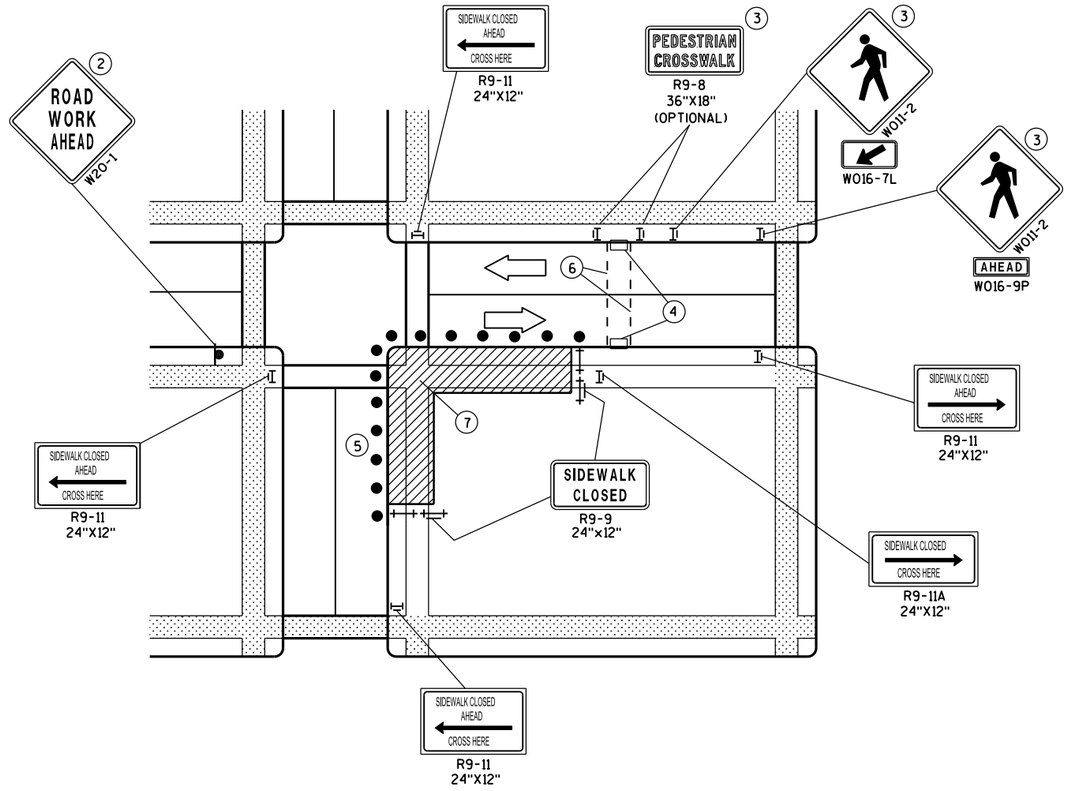
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

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

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 15 D 30-3a

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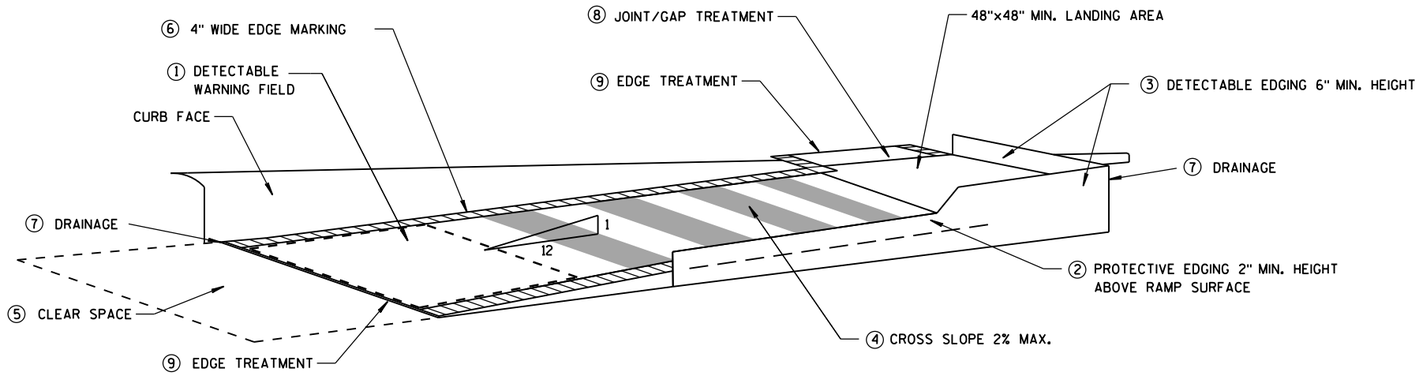
S.D.D. 15 D 30-3a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

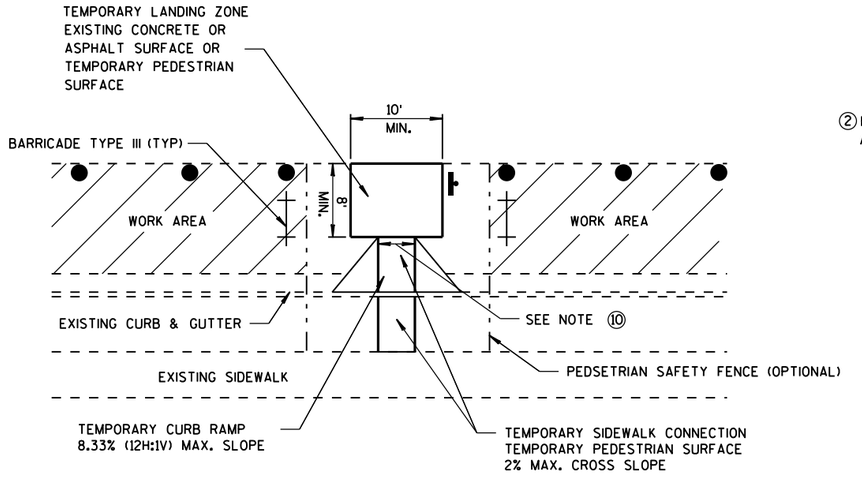
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

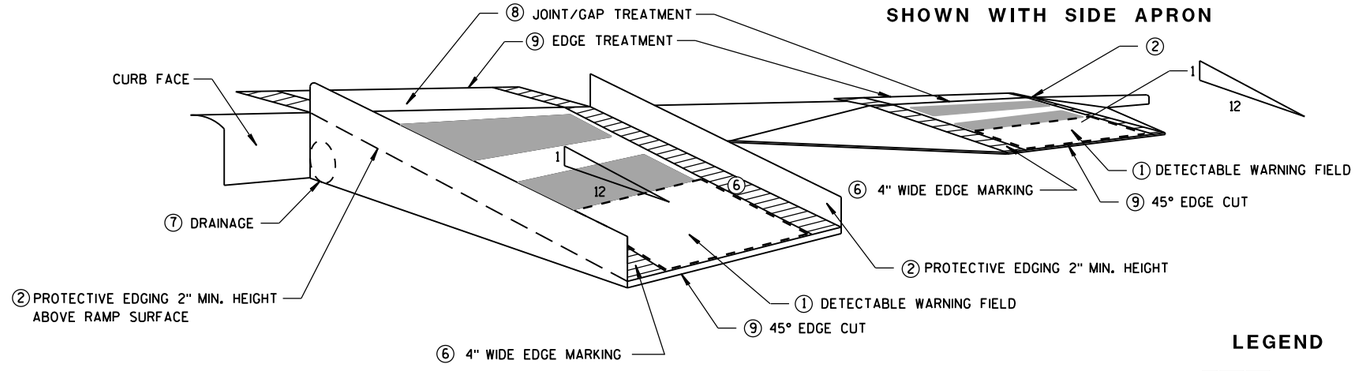
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

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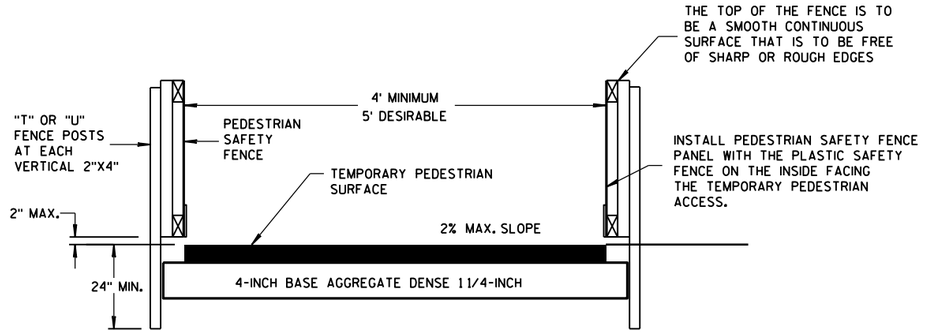
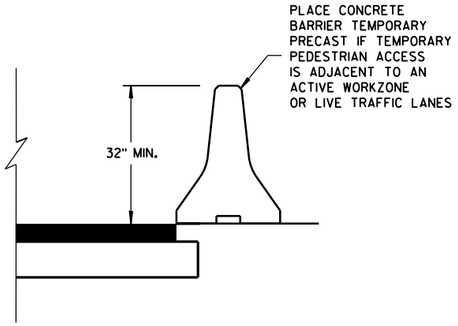
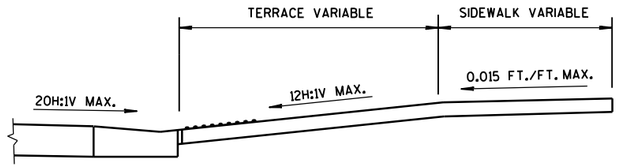




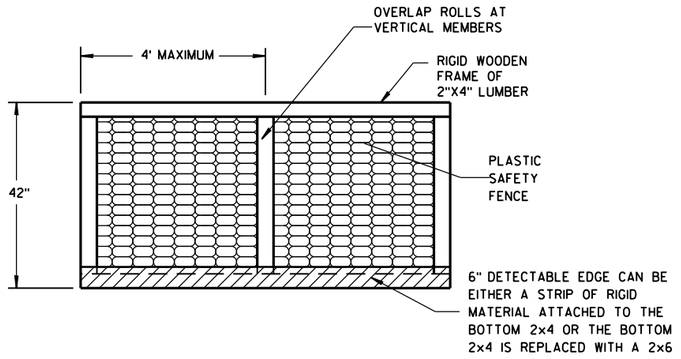
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

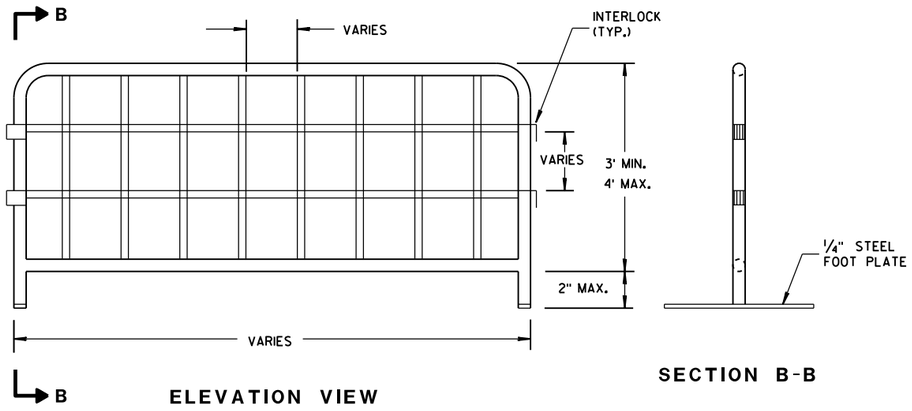
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



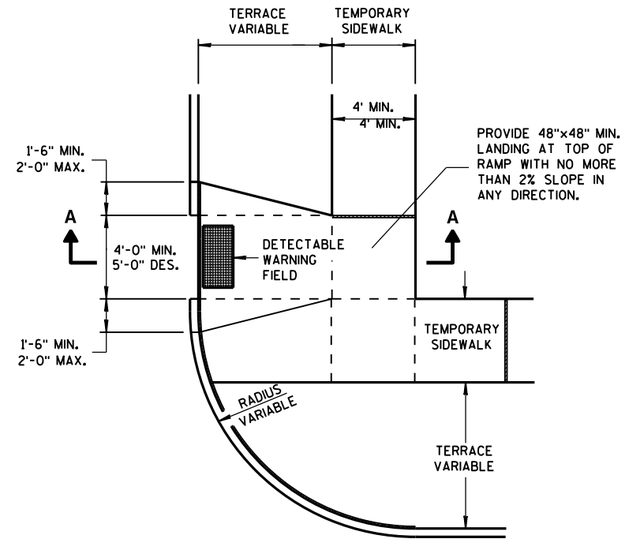
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

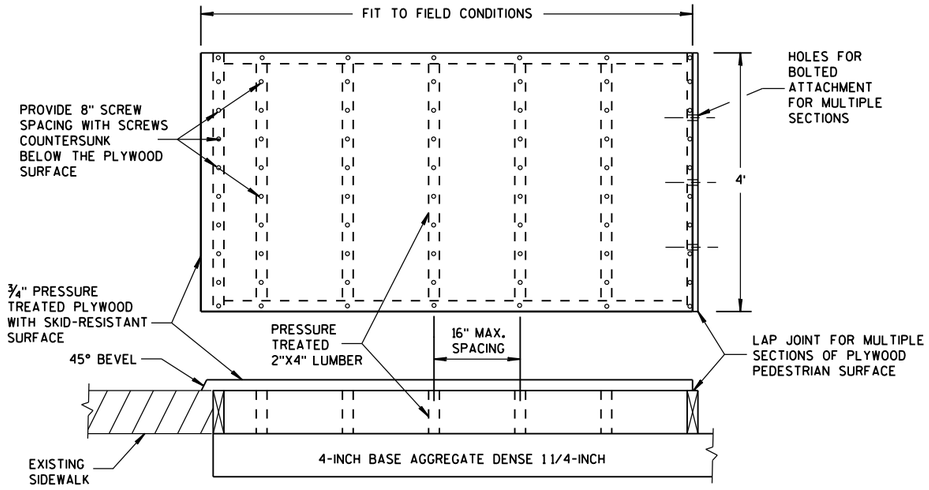
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



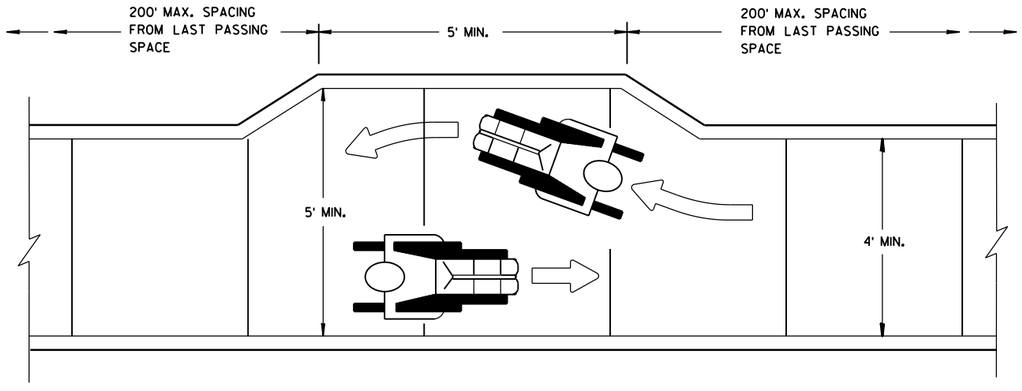
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON SAFETY ENGIN IC
FHWA

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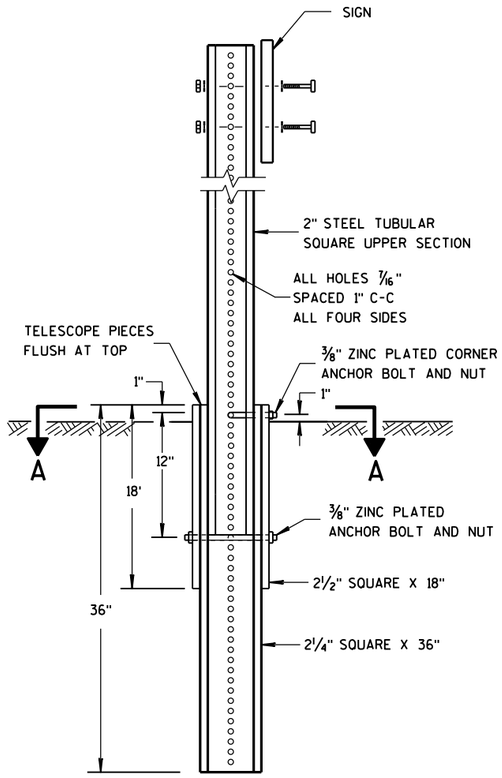
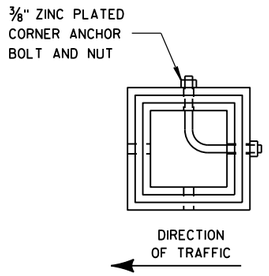
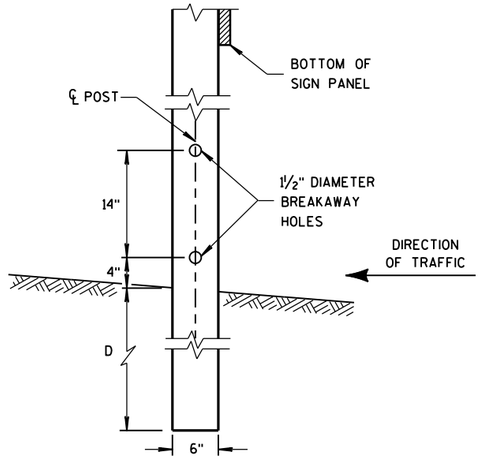


DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



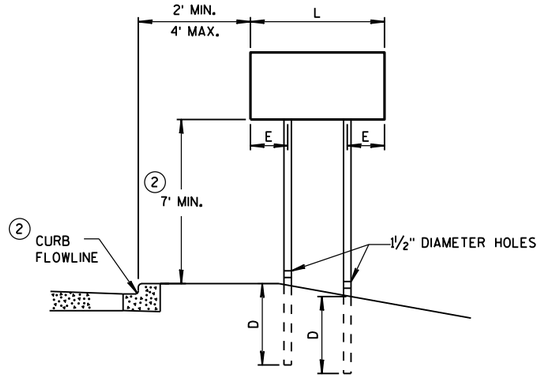
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

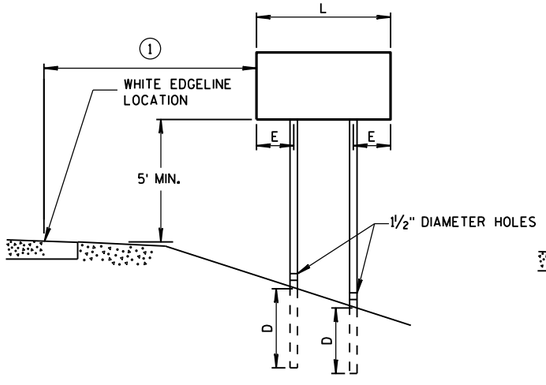
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

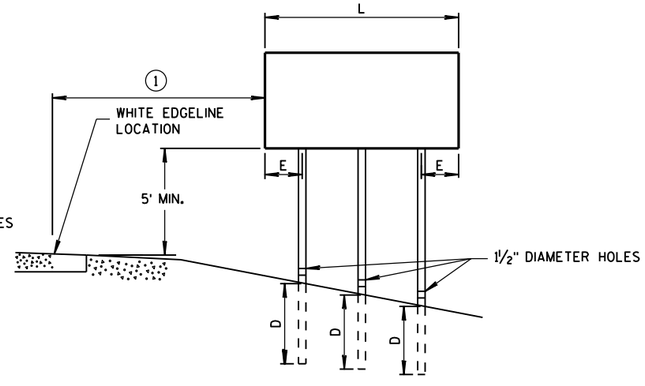
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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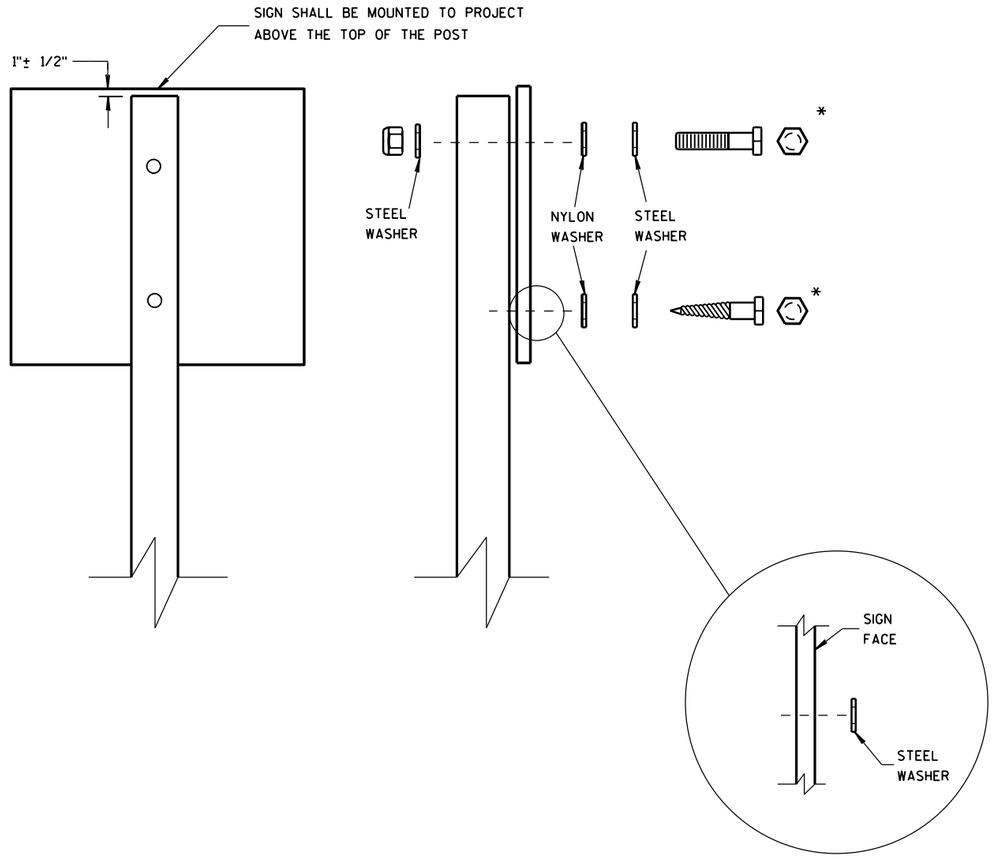
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

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

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

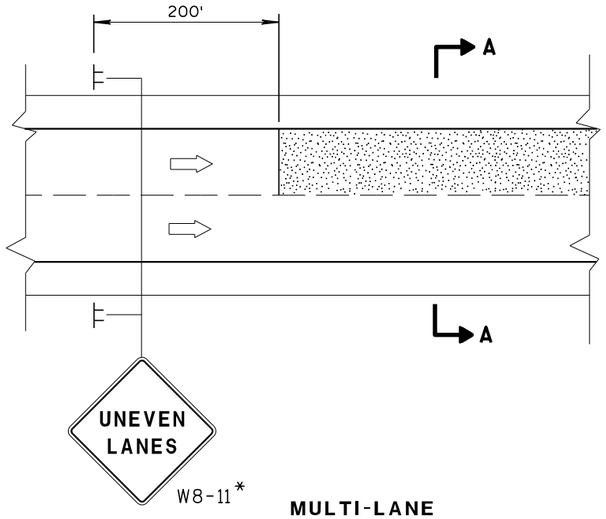
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

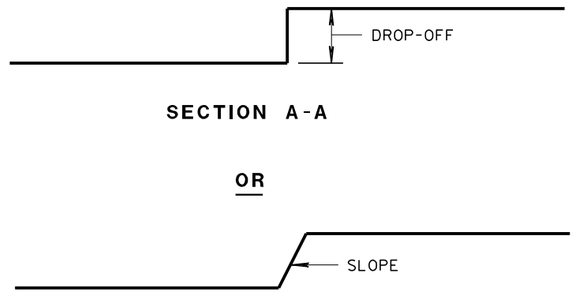
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA



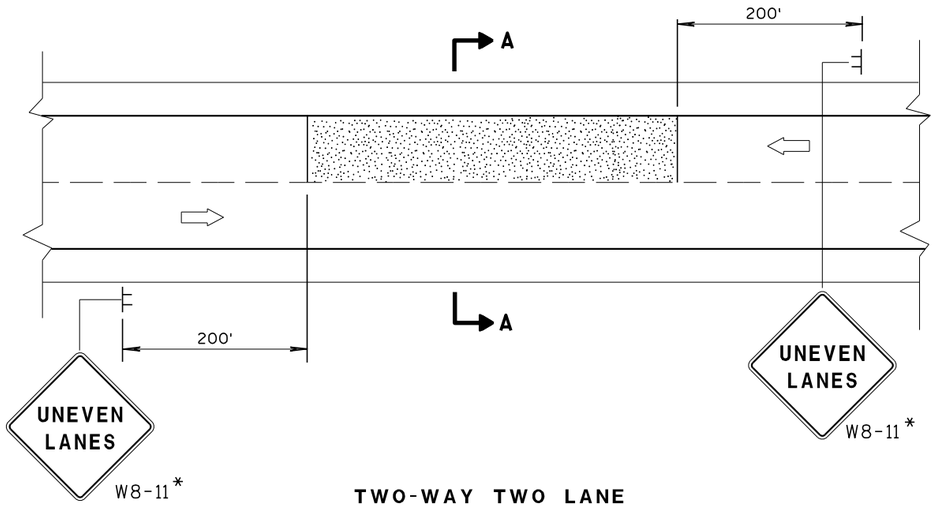
MULTI-LANE



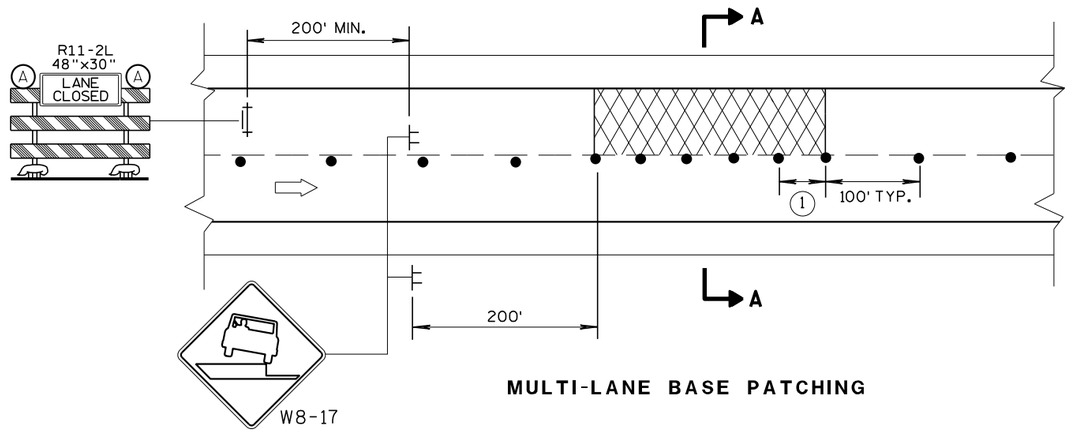
SECTION A-A

OR

SECTION A-A

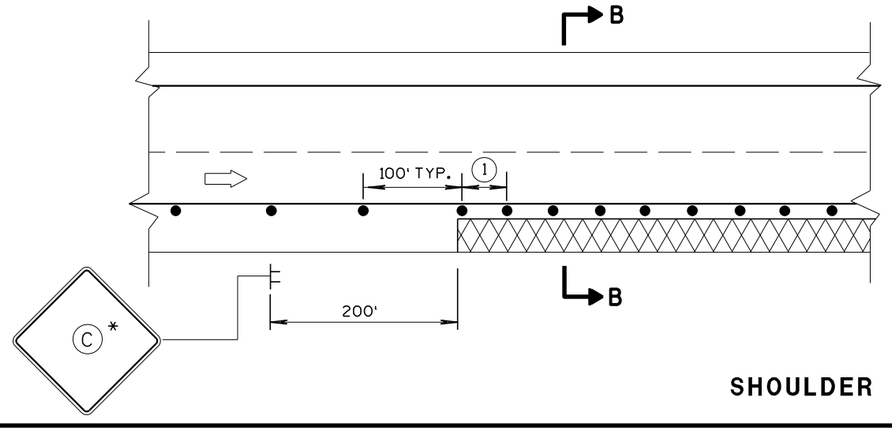


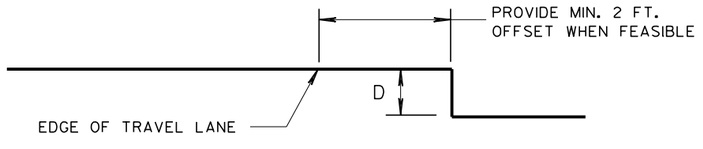
TWO-WAY TWO LANE



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS





SECTION B-B

SHOULDER DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EACH ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew H — WORK ZONE EN 358
FHWA

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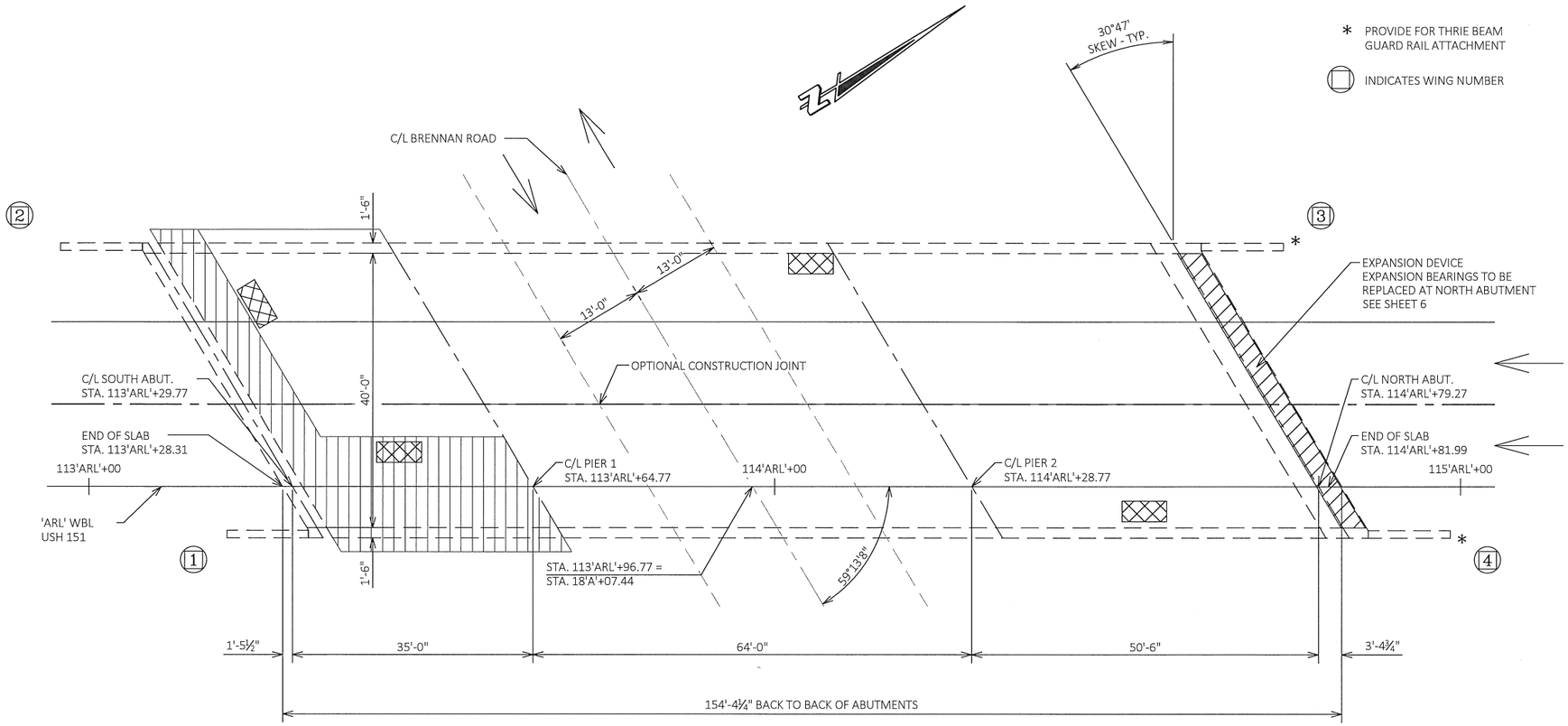
S.D.D. 15 D 39-2

STATE PROJECT NUMBER
1204-04-77



PLAN

3-SPAN - 45 INCH PRESTRESSED GIRDERS

JOINT REPAIR

ANTICIPATED
FULL DEPTH DECK REPAIR

SLOPE PAVING REPAIR
AMOUNT & LOCATION TO BE
DETERMINED BY ENGINEER

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
◑	203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-25-16	LS	1
	502.0717.S	CRACK SEALING EPOXY	LF	440
	502.3100	EXPANSION DEVICE (B-25-0016)	LS	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	686
◑	502.3210	PIGMENTED SURFACE SEALER	SY	142
	502.4205	ADHESIVE ANCHORS NO. 5 BARS	EA	47
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2140
	506.0105	STRUCTURAL STEEL CARBON	LB	438
	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EA	4
	506.7050.S	REMOVE BEARINGS (B-25-0016)	EA	4
◑	509.0301	PREPARATION DECKS TYPE 1	SY	170
◑	509.0302	PREPARATION DECKS TYPE 2	SY	105
	509.0500	CLEANING DECKS	SY	665
	509.1000	JOINT REPAIR	SY	21
◑	509.1500	CONCRETE SURFACE REPAIR	SF	20
◑	509.2000	FULL-DEPTH DECK REPAIR	SY	17
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	64
	509.9050.S	CLEANING PARAPETS	LF	357
◑	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	12

◑ AS DETERMINED BY ENGINEER IN THE FIELD

GENERAL NOTES

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

PIGMENTED SURFACE TREATMENT TO BE APPLIED TO THE FRONT FACE AND TOP SURFACE OF THE PARAPET.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

CLEAN & FILL LONGITUDINAL AND TRANSVERSE CRACKS IN NEW OVERLAY WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE" (B-25-0016).

SLOPE PAVING REPAIR SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼" IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT STRUCTURES DESIGN SECTION.

ANY EXCAVATION REQ'D TO COMPLETE THE OVERLAY OR JOINT REPAIR AT ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM, "CONCRETE MASONRY OVERLAY DECKS".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY DECKS".

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

IF EXISTING BAR STEEL REINFORCEMENT IS SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY ANCHORED BARS OF THE SAME SIZE AT THE DIRECTION OF THE ENGINEER. EMBED 1'-6" INTO EXISTING CONCRETE.

DESIGN DATA

LIVE LOAD:

DESIGN RATING	HS-20
INVENTORY RATING	HS-17
OPERATIONAL RATING	HS-29
MAXIMUM STANDARD PERMIT VEHICLE LOAD	184 KIPS

EXISTING MATERIAL PROPERTIES

CONCRETE MASONRY DECK	f'c = 4000 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

BENCHMARK

DISK IN SE CORNER OF B-25-16
BM406
NORTHING: 148078.52
EASTING: 382570.35
ELEVATION: 1178.56

TRAFFIC DATA

USH 151:

AADT (2015)	9850
AADT (2035)	13000
DESIGN SPEED	55 MPH

BRENNAN ROAD:

AADT (2015)	950
AADT (2035)	1100
DESIGN SPEED	40 MPH

LIST OF DRAWINGS

1. GENERAL PLAN
2. BRIDGE DECK CONDITION SURVEY
3. CROSS SECTION & DETAILS
4. EXPANSION DEVICE
5. COVER PLATE DETAILS
6. PARAPET DETAILS
7. PRESTRESSED GIRDER BEARINGS
8. SLOPE PAVING REPAIR DETAIL (CRUSHED AGGREGATE)

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER
4-19-18

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

TROY L. PETERSON
(715) 235-9081

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar
www.cedarcorp.com 800-472-7372

ACCEPTED William P. Dreher SDR 05/08/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-16

USH 151 OVER BRENNAN ROAD

COUNTY IOWA | TOWN/~~CITY/VILLAGE~~ DODGEVILLE

DESIGN SPEC. REHABILITATION - N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ATA	TLP	NJT	TLP

GENERAL PLAN

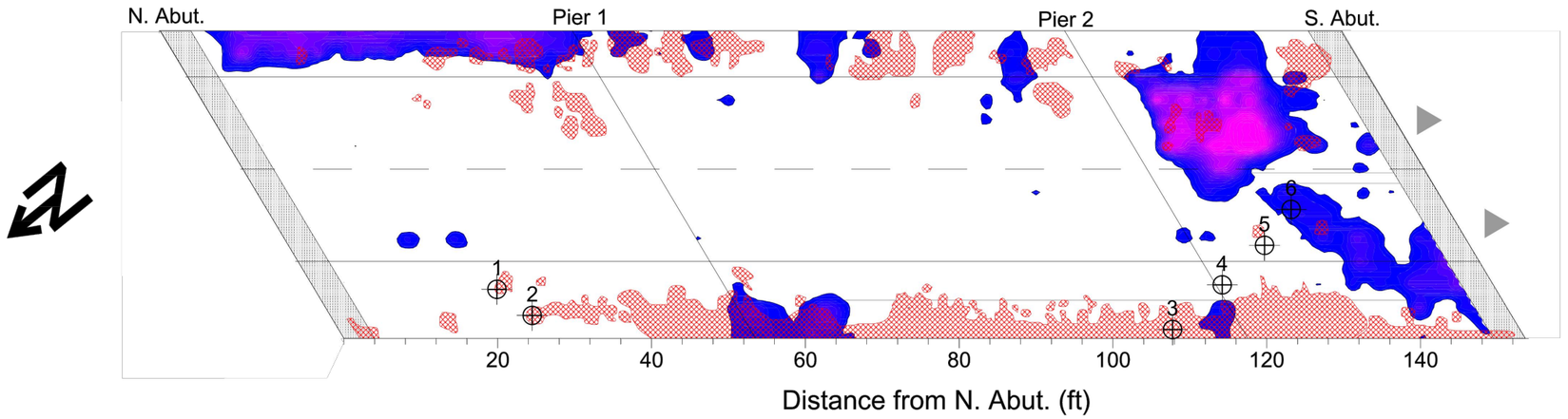
SHEET 1 OF 8
359

I.D. 1204-04-77 DATE: APRIL 18

8

STATE PROJECT NUMBER

1204-04-77



Increasing severity -->

Rebar-level delaminations detected by GPR

Debond/delam detected by Infrared Thermography

Conditions not detectable with GPR

⊕ Impact-echo test location

▶ Direction of traffic

Estimated Deck Preparation Items	Quantity (sq ft)	% of Deck Area
Type 1	499.6	7.6%
Type 2	841.3	12.7%
Full Depth	104.2	1.6%

Bridge Deck Condition Survey using IR and GPR

USH 18-STH 35 over Brennan Rd.
Bridge ID: B250016

analyzed by: LM date: 06/10/09
checked by: KRM date: 06/12/09

INFRASENSE, Inc.

sheet 1 of 1

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-16

DRAWN BY NJT | PLANS CK'D. TLP

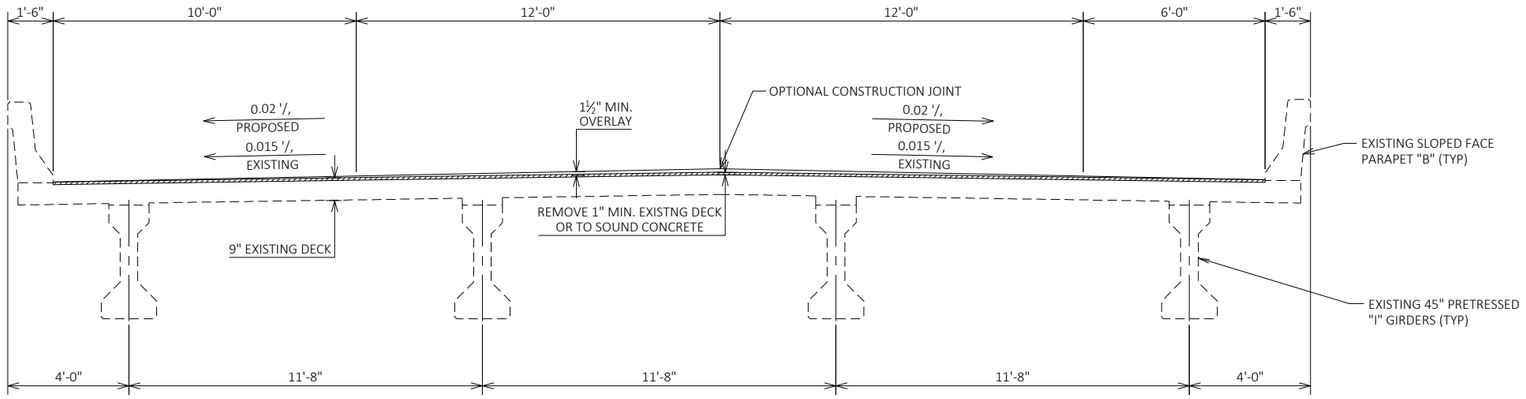
BRIDGE DEC-
CONDITION SURVEY

SHEET 2 OF 8

360

STATE PRO□ECT NUMBER

1204□04□77



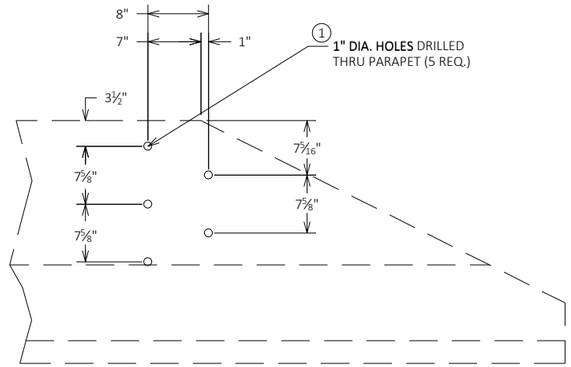
CROSS SECTION T□RU ROADWAY LOO□ING NORT□

BILL OF BARS

2140 # COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	15	10' - 0"			PAVING BLOCK HORIZONTAL
S402	X	39	5' - 0"	X		DIAPHRAGM STIRRUPS
S803	X	18	11' - 8"			DIAPHRAGM HORIZ. BETWEEN GIRDERS
S604	X	12	49' - 6"			TRANSVERSE DECK STEEL
S405	X	6	11' - 8"			DIAPHRAGM @ EXP. ASSEMBLY HORIZ.
S506	X	47	3' - 0"	X		PAVING BLOCK VERTICAL
S407	X	47	3' - 0"	X		PAVING BLOCK
S408	X	17	4' - 10"	X		PAVING BLOCK VERTICAL
S409	X	11	4' - 3"	X		PAVING BLOCK VERTICAL
S410	X	6	4' - 4"	X		PAVING BLOCK VERTICAL
S511	X	4	3' - 8"			PAVING BLOCK HORIZONTAL
S512	X	4	2' - 10"			PAVING BLOCK HORIZONTAL

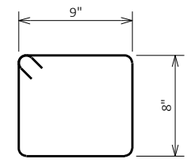
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



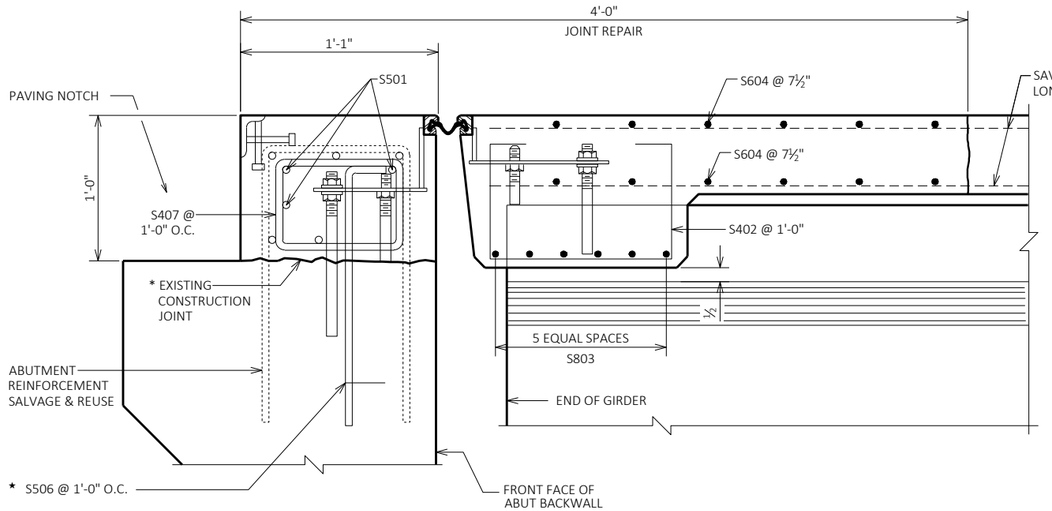
T□RIE BEAM GUARDRAIL ATTAC□MENT

(1) DRILLING BOLT HOLES THROUGH THE PARAPET. BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

S402



S407

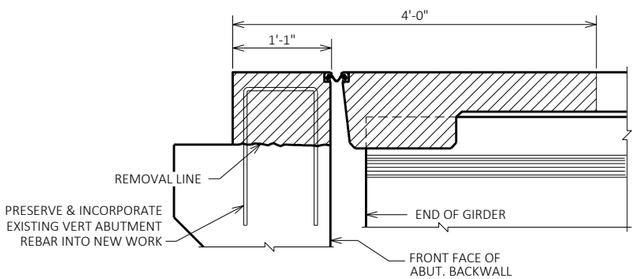


SECTION T□RU □OINT AT NORT□ ABUTMENT

NORMAL TO℄ SUBSTRUCTURE

* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.

* ADHESIVE ANCHOR EMBED 1'-6" IN CONCRETE. TURN 10" LEG TO FIT.



SECTION T□RU E□ISTING E□PANSION □OINT

NORTH ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B□25□16

DRAWN BY NJT | PLANS CK'D. TLP

CROSS SECTION □ DETAILS

SHEET 3 OF 8

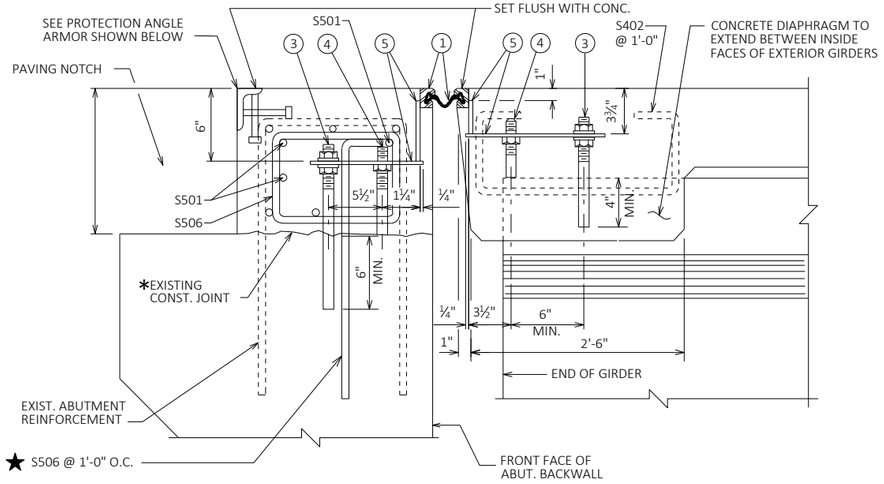
361

8

8

STATE PROJECT NUMBER

1204-04-77



SECTION THRU JOINT AT ABUTMENT

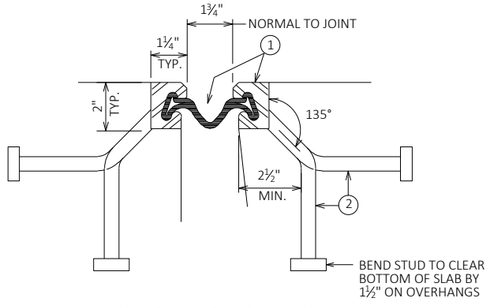
NORMAL TO ℄ SUBSTRUCTURE

* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.

★ ADHESIVE ANCHOR EMBED 1'-6" IN CONCRETE. TURN 10" LEG TO FIT.

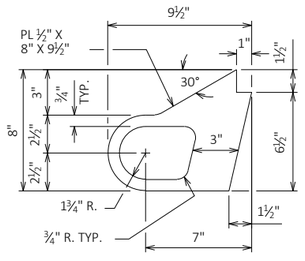
LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝"ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾"ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ` OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 1'-2" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾"ϕ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾"ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"ϕ X 2¼" GALVANIZED THREADED COUPLING.
10. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

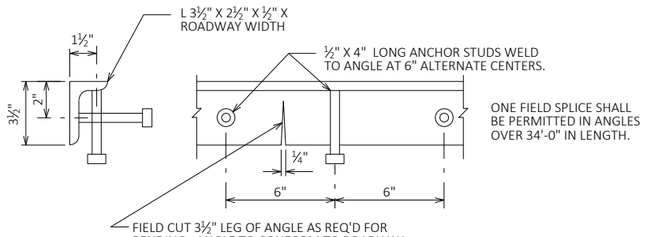


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

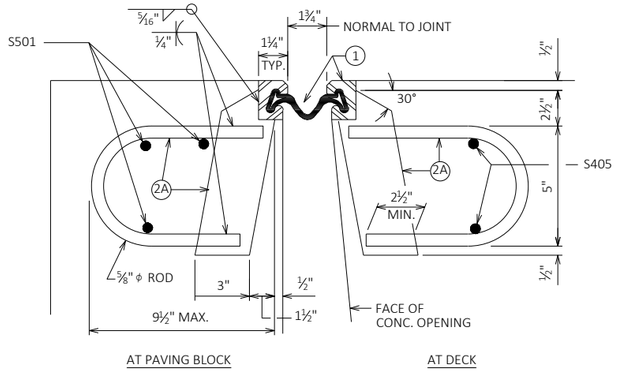


ALTERNATE STRIP SEAL ANCHOR



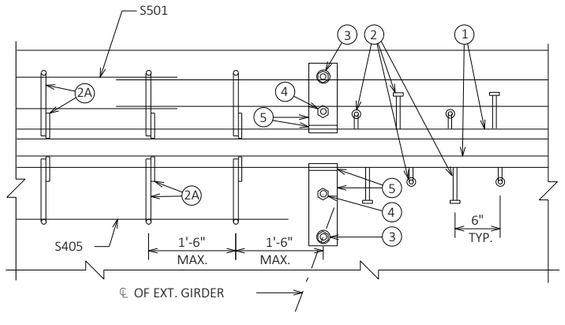
PROTECTION ANGLE ARMOR

SANDBLAST PROTECTION ANGLE AFTER FABRICATION PER NOTES. AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-25-16".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-16

DRAWN BY NJT | PLANS CK'D. TLP

EXPANSION DEVICE

SHEET 4 OF 8

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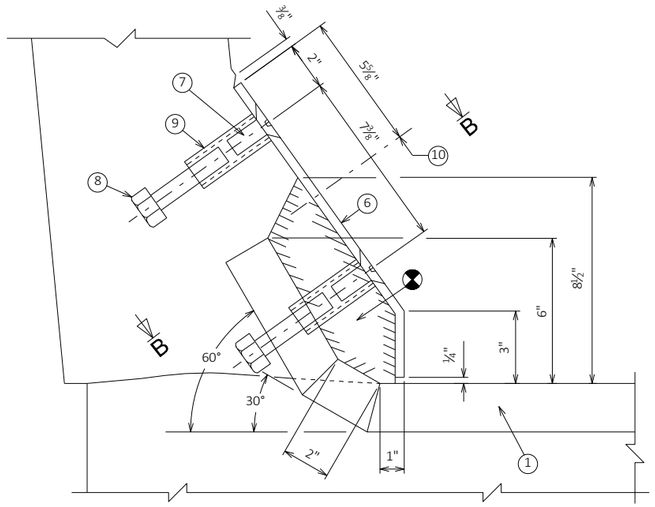
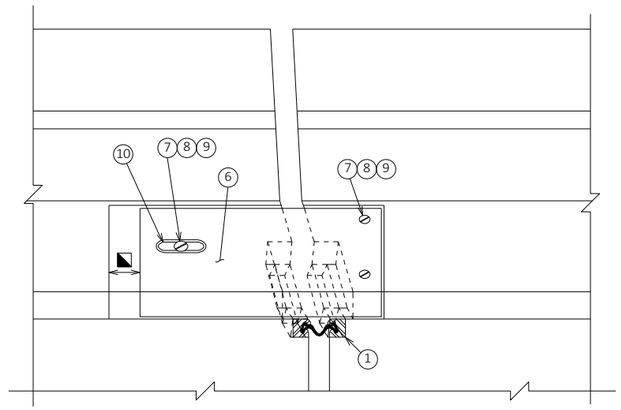
8

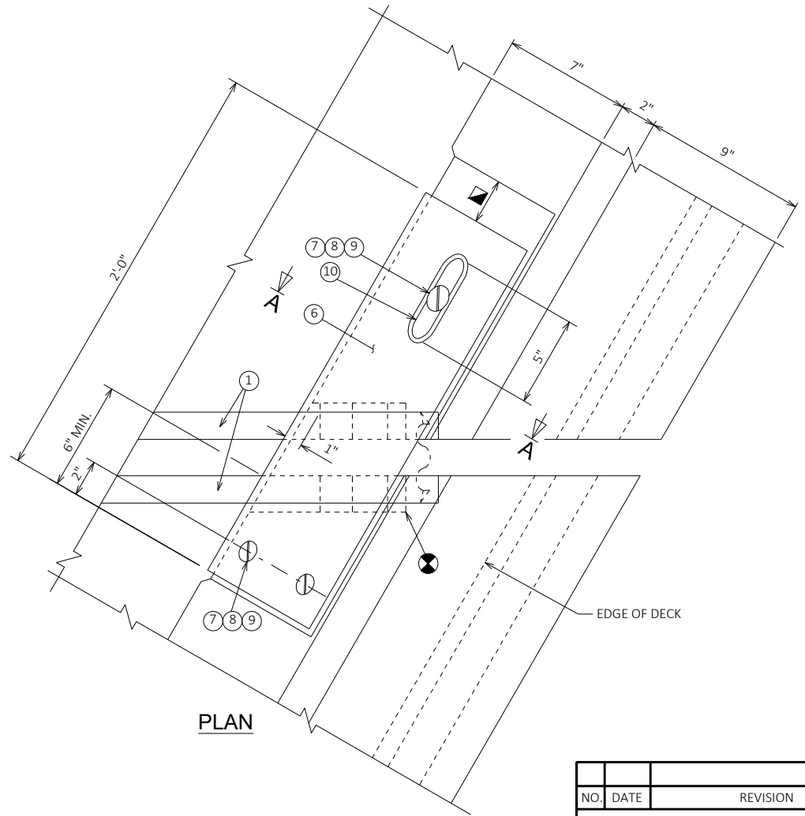
STATE PROJECT NUMBER
1204-04-77



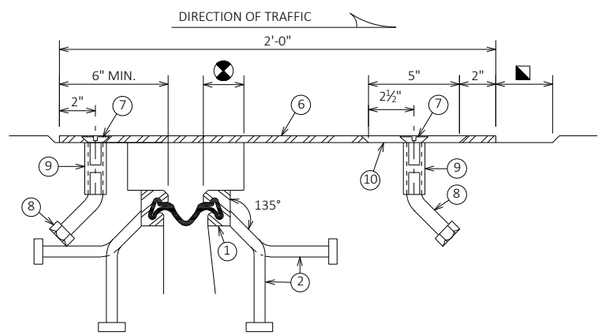
SECTION A-A



VIEW OF PARAPET PLATE
FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-16

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COVER PLATE DETAILS

SHEET 5 OF 8

363

8

8

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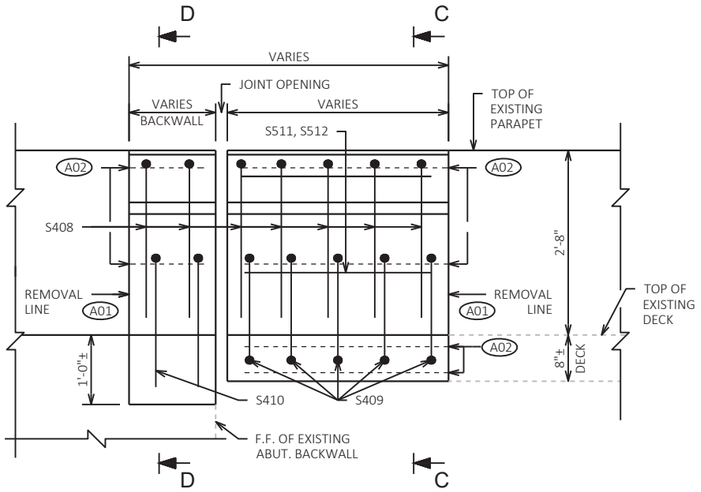
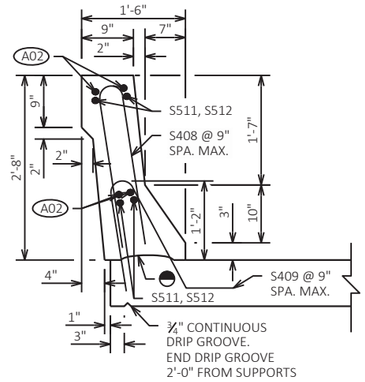
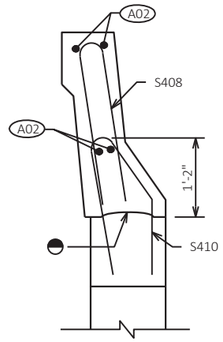


TITLE TEXT

EXTERIOR FACE



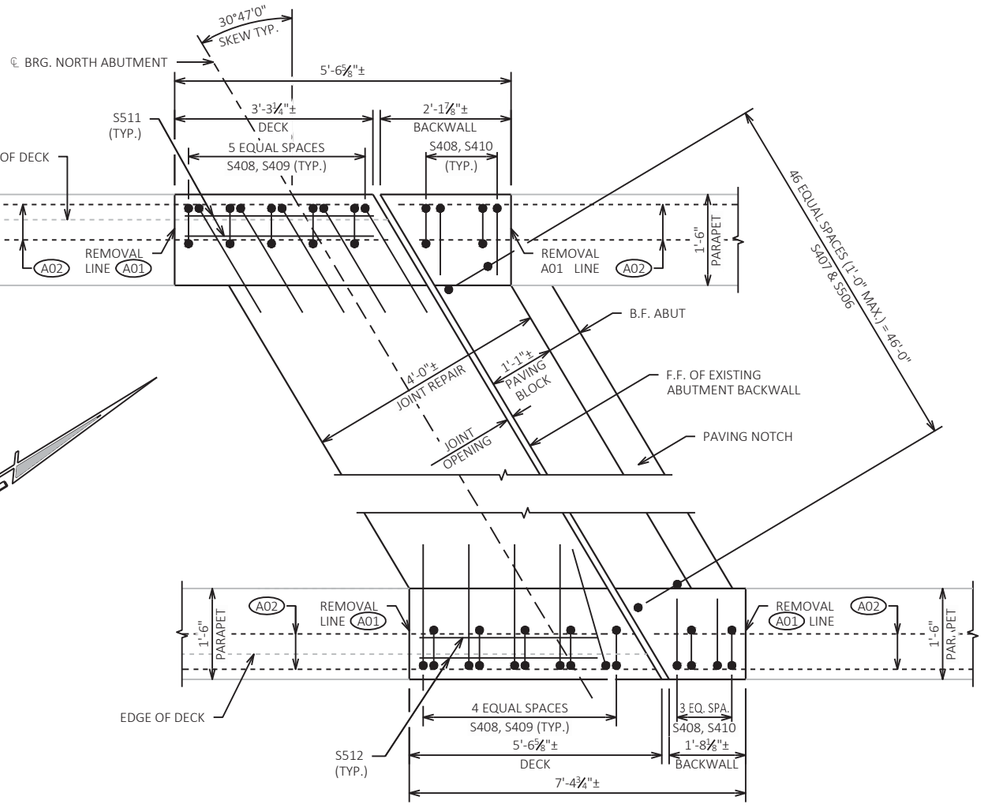
SECTION C-C



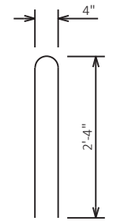
SECTION D-D

NOTES & LEGEND

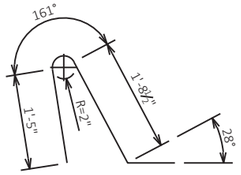
- CONST. JOINT - STRIKE OFF AS SHOWN.
- SEE SHEET 3 FOR BILL OF BARS
- SEE SHEET 3, 4, & 5 FOR ADDITIONAL DETAILS.
- A01 ROUGHEN EXISTING CONCRETE 1/4" MIN. EVERYWHERE NEW CONCRETE COMES INTO CONTACT WITH EXISTING CONCRETE.
- A02 SALVAGE EXITING REINFORCEMENT & EXTEND FULL LENGTH INTO NEW WORK.



PLAN



S408



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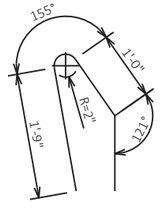


S410

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-16

DRAWN BY NJT | PLANS CK'D. TLP

PARAPET DETAILS

SHEET 6 OF 8

364

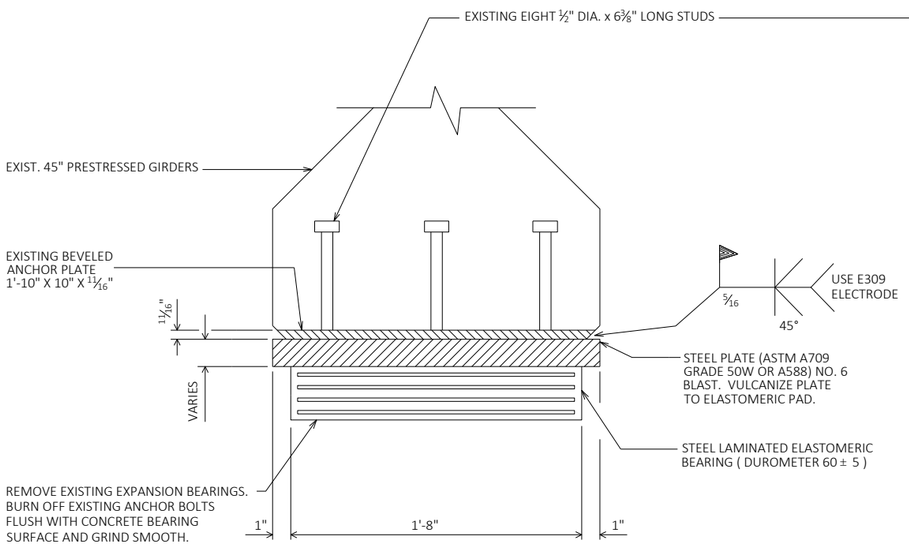
SCALE = 1:1

8

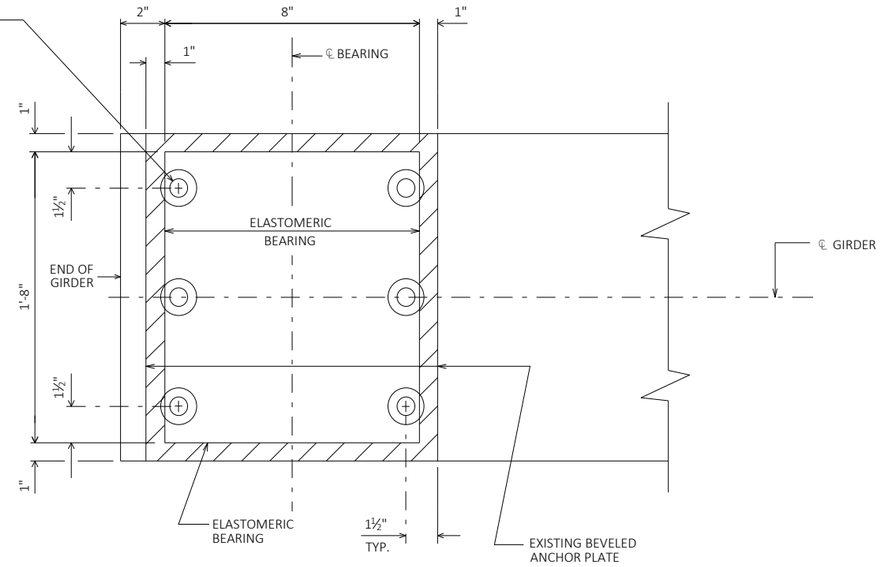
8

STATE PROJECT NUMBER

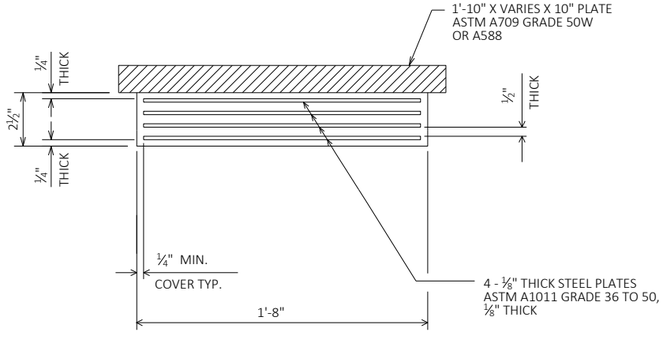
1204-04-77



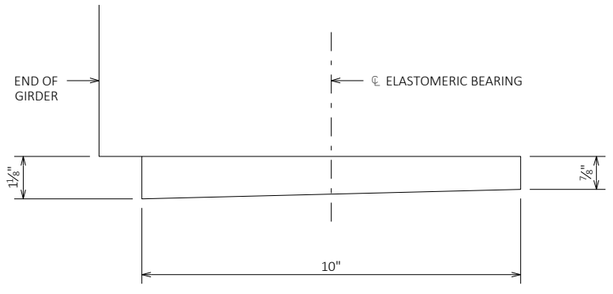
END VIEW



PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SECTION THRU ELASTOMERIC BEARING

NOTES

ON BEARING REPLACEMENTS, COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REQUIREMENTS.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATE SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLACE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

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STRUCTURE B-25-16

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PRESTRESSED GIRDER BEARINGS

SHEET 7 OF 8

365

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8

STATE PROJECT NUMBER
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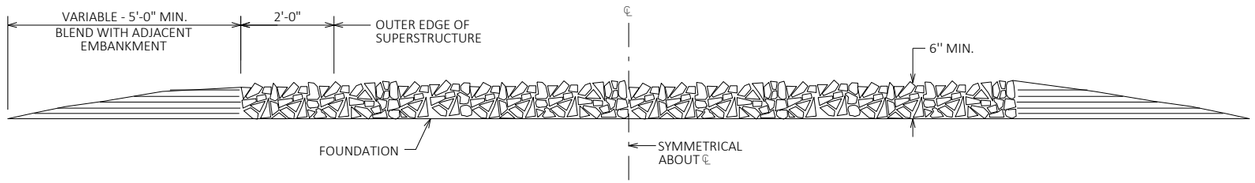
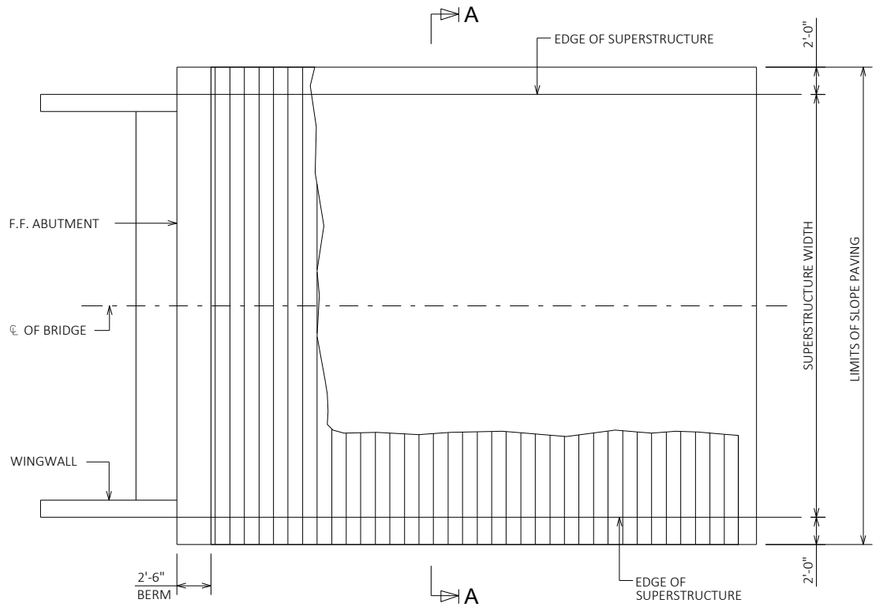
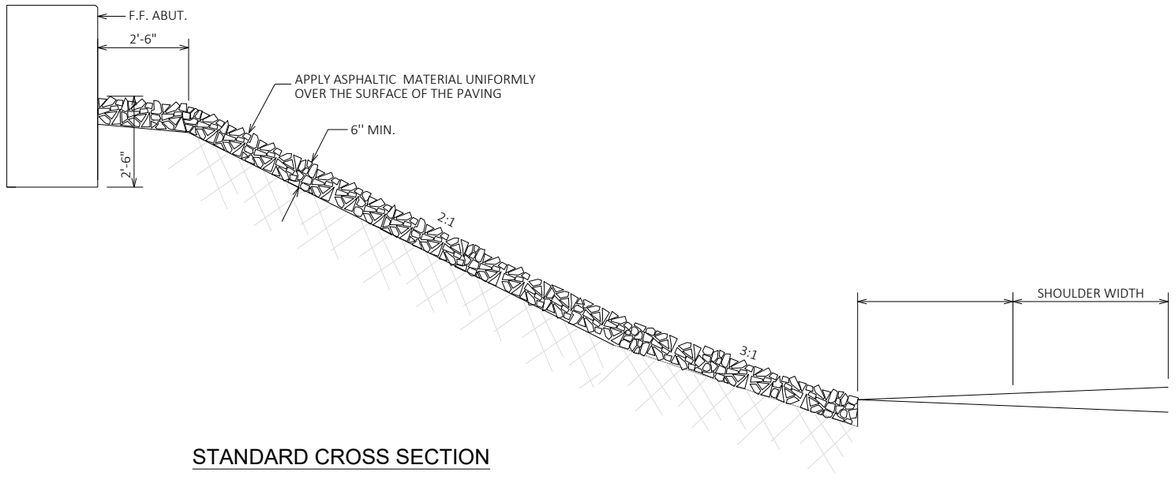


SECTION A-A



PLAN

ANTICIPATED AREAS OF REPAIR
TO BE DETERMINED BY ENGINEER



STANDARD CROSS SECTION

GENERAL NOTES

REPAIR WILL CONSIST OF REMOVAL OF EXISTING MATERIAL, PLACING FILL AS REQUIRED, AND REPLACING WITH NEW MATERIAL.

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

LIMITS OF SLOPE PAVING REPAIR TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-16

DRAWN BY	NJT	PLANS CK'D.	TLP

SLOPE PAVING REPAIR (CRUSHED AGGREGATE)

SHEET 8 OF 8

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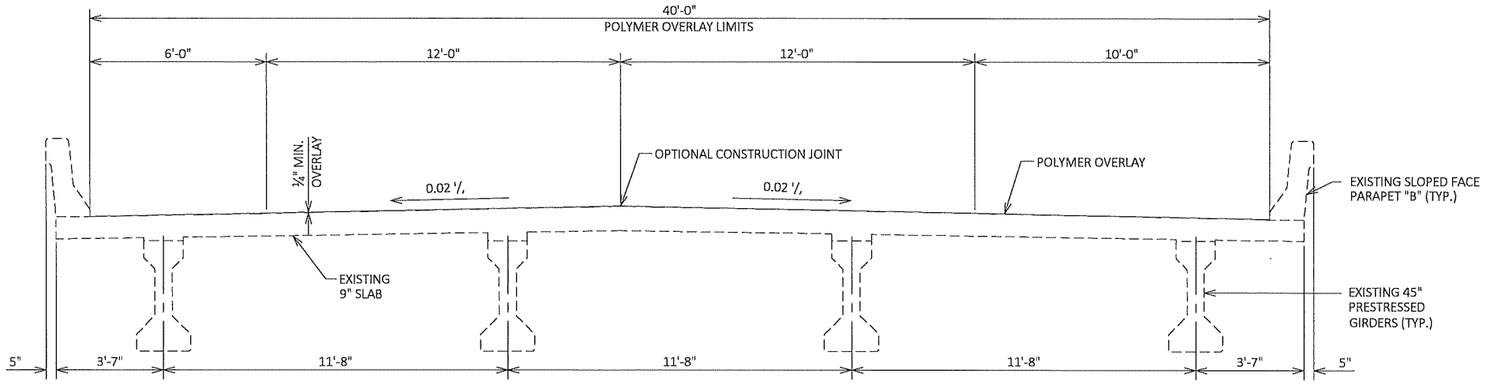
8

8

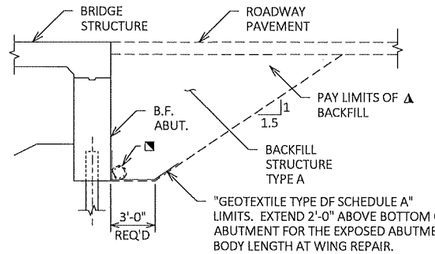
STATE PROJECT NUMBER
1204-04-77



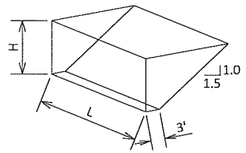
CROSS SECTION THRU ROADWAY LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE (STA 114+33.56)	LS	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-25-0017)	LS	1
210.1500	BACKFILL STRUCTURE TYPE A	TONS	50
502.0100	CONCRETE MASONRY BRIDGES	CY	7
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EA	18
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	860
509.0301	PREPARATION DECKS TYPE 1	SY	5
509.0302	PREPARATION DECKS TYPE 2	SY	2
509.1500	CONCRETE SURFACE REPAIR	SF	20
509.5100.S	POLYMER OVERLAY	SY	778
511.1200	TEMPORARY SHORING (B-25-0017)	SF	250
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	20
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	10
SPV.0180.01	FAST SET DECK PATCHING	SY	7
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	65



STRUCTURE BACKFILL & LIMITS



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS & 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "RAPID SET DECK REPAIR".

DESIGN DATA

LIVE LOAD:

DESIGN RATING	HS-20
INVENTORY RATING	HS-15
OPERATIONAL RATING	HS-25
MAXIMUM STANDARD PERMIT VEHICLE LOAD	179 KIPS

EXISTING MATERIAL PROPERTIES

CONCRETE MASONRY DECK	f'c = 4000 PSI
ALL OTHER	f'c = 3500 PSI
BAR STEEL REINFORCEMENT	fy = 60,000 PSI

TRAFFIC DATA

USH 151:

AADT (2015)	9850
AADT (2035)	13000
DESIGN SPEED	55 MPH

BRENNAN ROAD:

AADT (2015)	950
AADT (2035)	1100
DESIGN SPEED	40 MPH

BENCHMARK

DISK IN SE CORNER OF B-25-17
BM406
NORTHING: 148078.52
EASTING: 382570.35
ELEVATION: 1178.56

LIST OF DRAWINGS

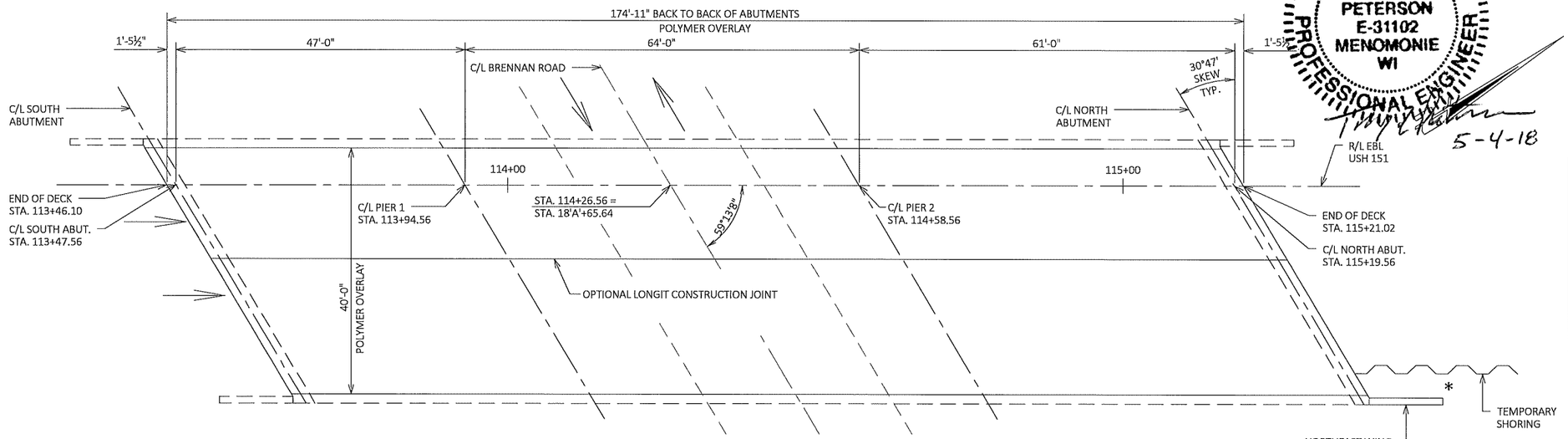
1. GENERAL PLAN
2. NORTH ABUTMENT WING DETAILS
3. SLOPED FACE PARAPET "B"

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

TROY L. PETERSON
(715) 235-9081



PLAN
3-SPAN - 45 INCH PRESTESSED GIRDERS

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER
5-4-18

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar corporation
www.cedarcorp.com 800-472-7372

ACCEPTED 05/07/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-25-17

USH 151 OVER BRENNAN ROAD

COUNTY	TOWN/~~CITY/VILLAGE~~
IOWA	DODGEVILLE

DESIGN SPEC. REHABILITATION - N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ATA	TLP	NJT	TLP

GENERAL PLAN

SHEET 1 OF 3

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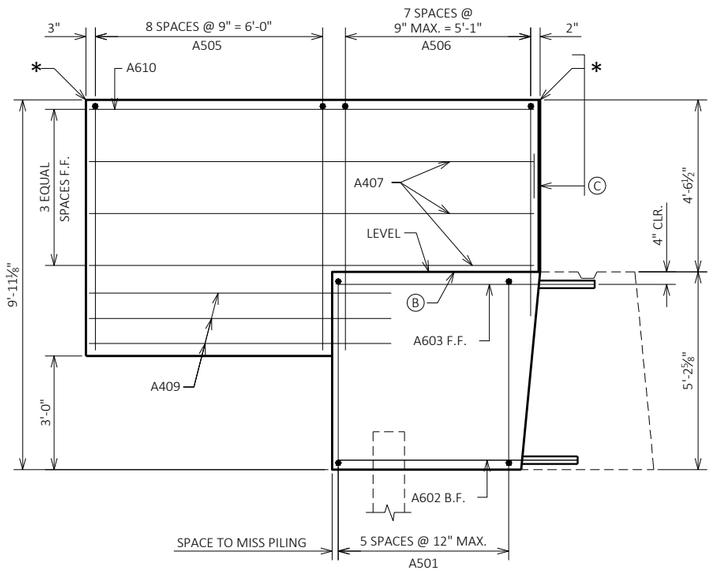
I.D. 1204-04-77 DATE: APRIL 18

STATE PROJECT NUMBER

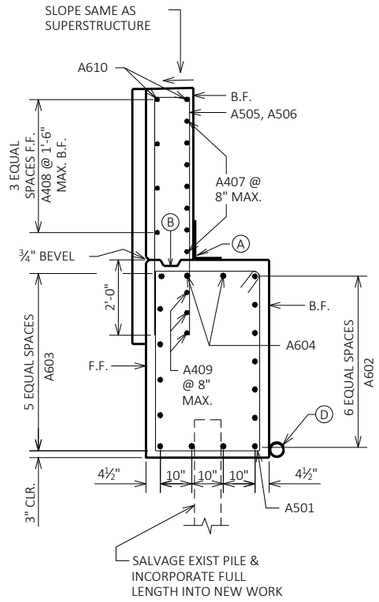
1204-04-77



* MATCH EXISTING ELEVATION

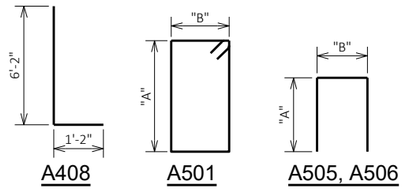
N.E. WING ELEVATION

PARAPET NOT SHOWN



TYPICAL SECTION THRU WING

B.F. = BACK FACE
F.F. = FRONT FACE



BAR MARK	"A"	"B"
A501	4-9	2-11
A505	6-5	1-2
A506	6-4	0-9

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
A602	1 SERIES OF 7	7-5 TO 7-11
A604	1 SERIES OF 2	6-8 TO 7-2

Ⓐ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) SEAL ALL HORIZ. & VERT. JOINTS ON BACK FACE.

Ⓑ KEYED CONST JOINT FORMED BY BEVELED 2" x 6".

Ⓒ ½" FILLER (INCLUDED IN WING LENGTH): SEAL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

Ⓓ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE TO 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT BOTH ENDS OF PIPE UNDERDRAIN (SEE DETAIL). RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

BILL OF BARS

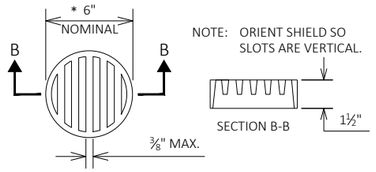
860 # COATED
(INCLUDES PARAPET REBAR)

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	6	15-10	X		VERT. WING BODY
◐ A602	X	7	7-8		⧓	HORIZ. B.F. WING BODY
◐ A603	X	6	6-7			HORIZ. F.F. WING BODY
◐ A604	X	2	6-11		⧓	HORIZ. WING BODY
A505	X	9	13-9	X		VERT. WING
A506	X	8	13-2	X		VERT. WING
A407	X	7	11-7			HORIZ. B.F. WING
A408	X	4	7-3	X		HORIZ. F.F. WING
A409	X	3	7-8			HORIZ. WING
A610	X	2	11-7			HORIZ. WING TOP

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

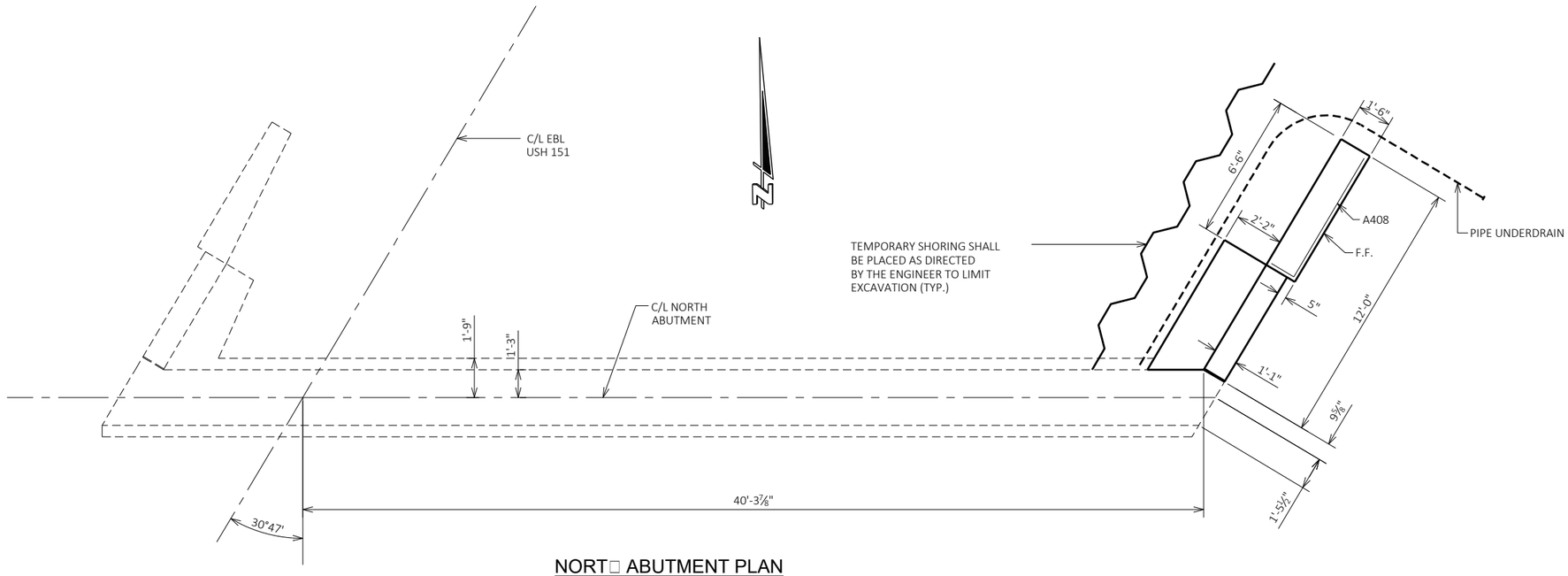
◐ ADHESIVE ANCHORS NO. 6 BARS. EMBED 1'-3" INTO EXISTING CONCRETE. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.



* DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

RODENT SHIELD

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



NORTH ABUTMENT PLAN

SHOWING WING REPLACEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-17

DRAWN BY NJT | PLANS CK'D. TLP

NORTH ABUTMENT WING DETAILS

SHEET 2 OF 3

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8

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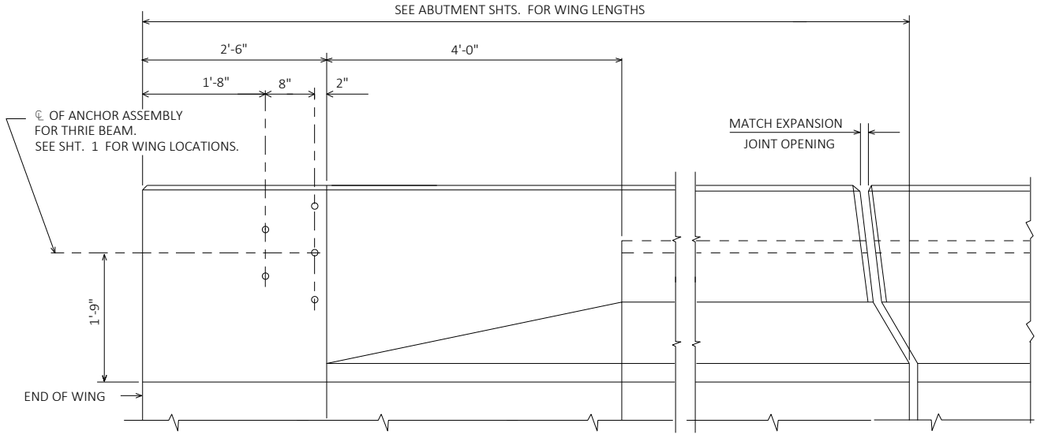
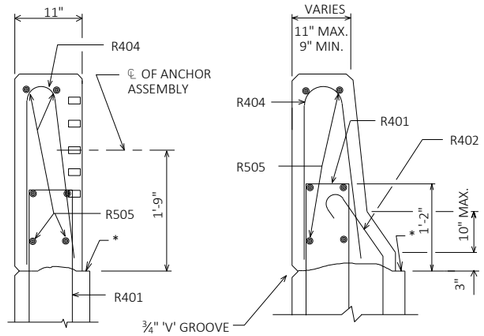
STATE PROJECT NUMBER

1204-04-77

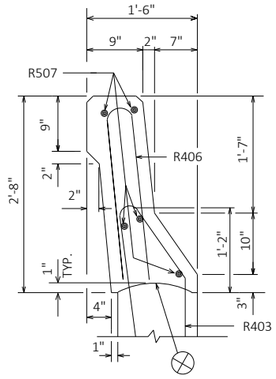


INSIDE ELEVATION



SECTION A

SECTION B



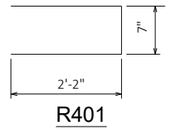
SECTION C

*FINISH THE CONC. SURFACE THAT ISN'T COVERED BY THE PARAPETS

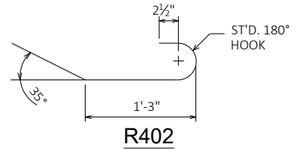
BILL OF BARS

FOR ABUTMENT PARAPETS
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE. EPOXY COAT ALL PARAPET REINF.

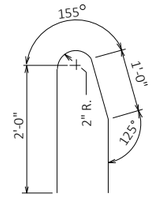
BAR MARK	NO. REQ'D NORTH ABUT.	LENGTH	BENT	LOCATION
R401	15	4-9	X	WING STIRRUPS
R402	4	3-1	X	WING
R403	8	4-7	X	WING STIRRUPS
R404	15	4-9	X	WING
R505	6	6-2		WING
R406	8	4-10	X	WING
R507	4	7-3		WING
R508	1	11-7	X	WING



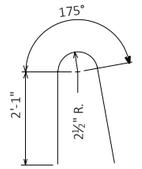
R401



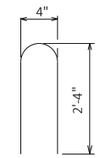
R402



R403

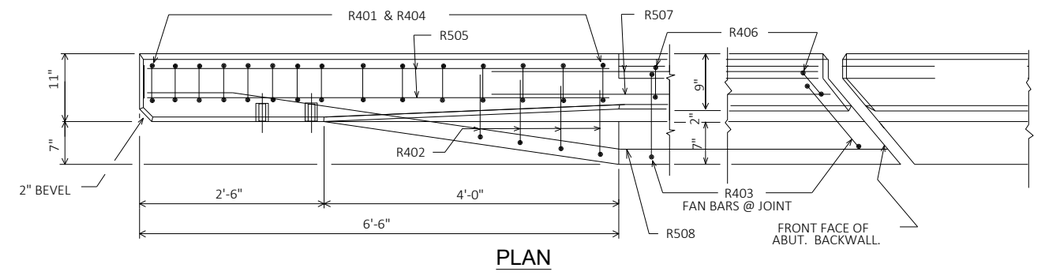


R404

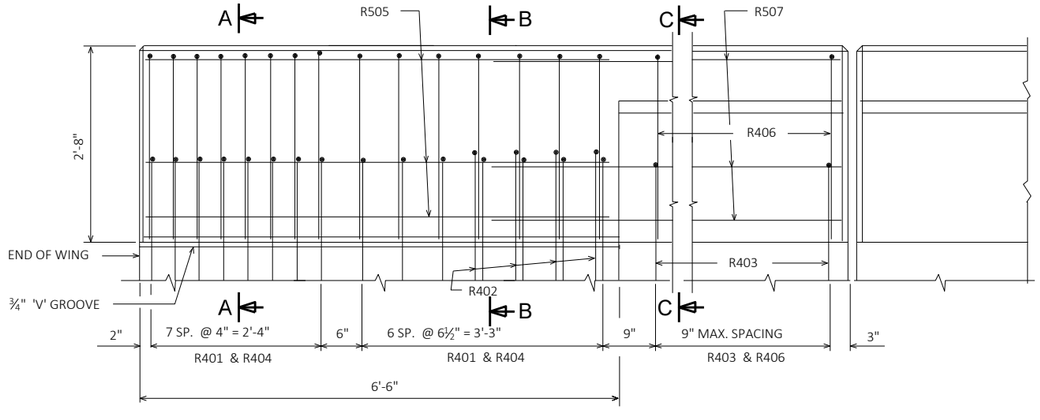


R406

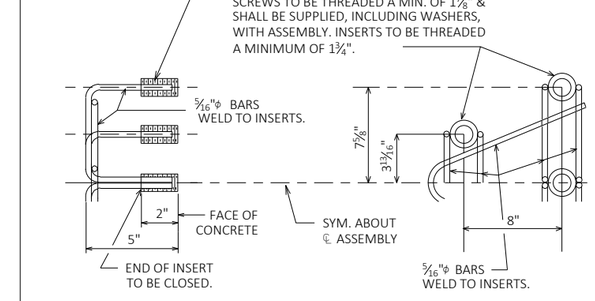
R508



PLAN



OUTSIDE ELEVATION



DETAIL OF ANC□OR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B□25□17

DRAWN BY	NJT	PLANS CK'D.	TLP

SLOPE FACED PARAPET 'B'

SHEET 3 OF 3

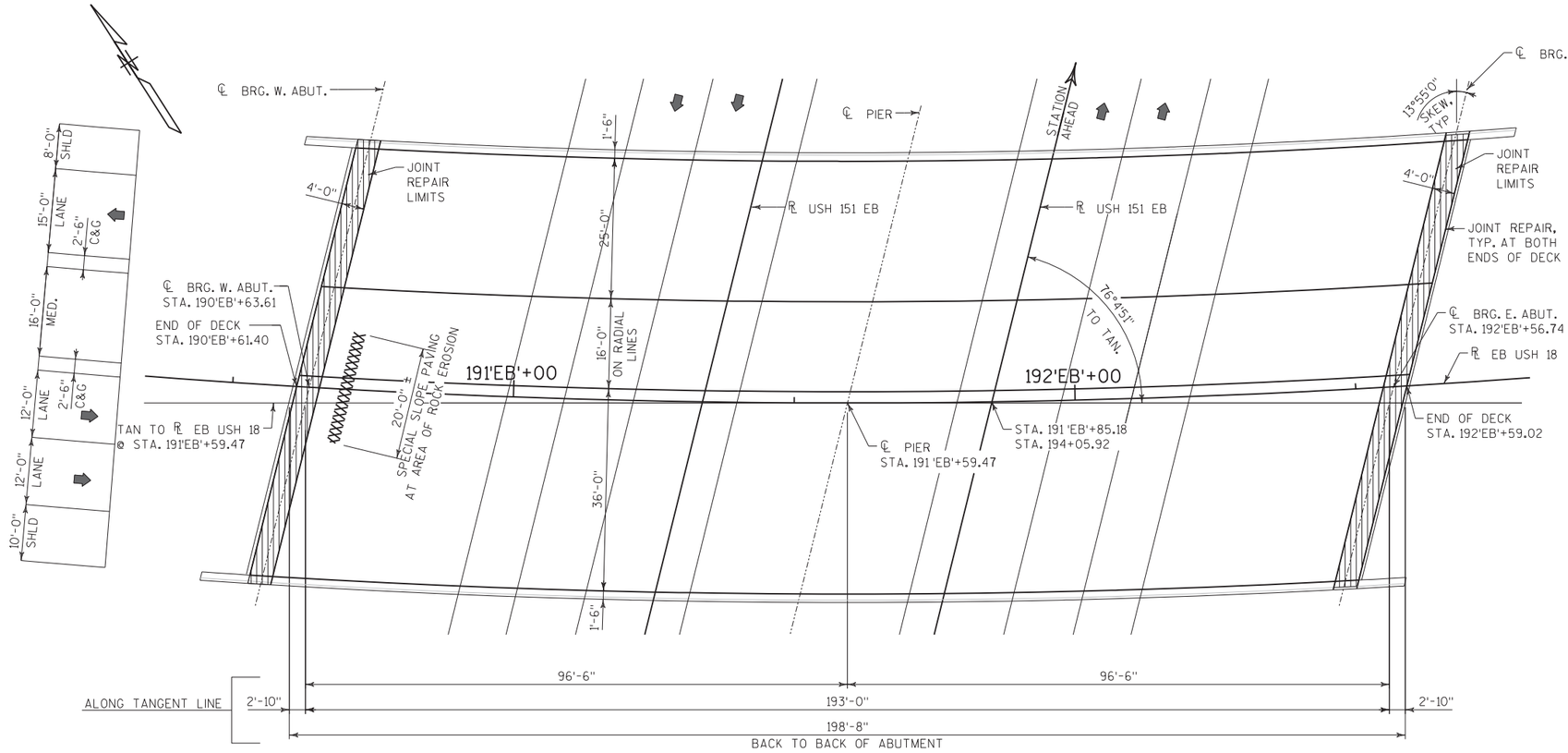
369

8

8

STATE PROJECT NUMBER

1204-04-77



PLAN

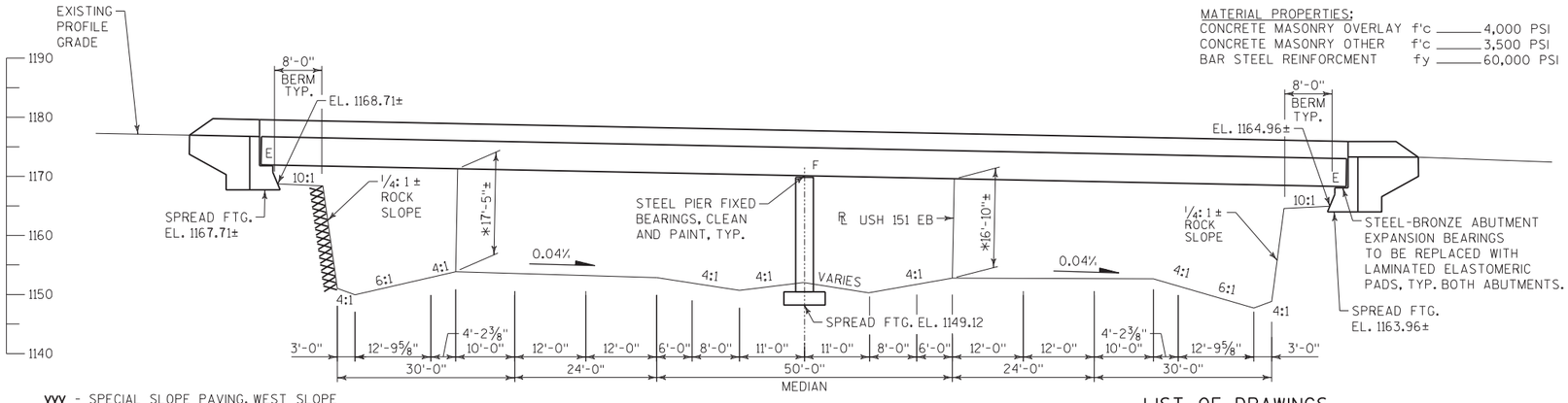
2 SPAN - 54" PRESTRESSED GIRDERS

DESIGN DATA

LIVE LOAD

INVENTORY RATING ——— HS-23
OPERATIONAL RATING ——— HS-57
WISCONSIN STANDARD
PERMIT VEHICLE (Wis-SPV) ——— 250 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY OVERLAY f'c ——— 4,000 PSI
CONCRETE MASONRY OTHER f'c ——— 3,500 PSI
BAR STEEL REINFORCMENT fy ——— 60,000 PSI



XXX - SPECIAL SLOPE PAVING, WEST SLOPE SEE GENERAL NOTES.

ELEVATION

NORMAL TO USH 151
* MINIMUM CLEARANCE BASED ON EXISTING PLANS, FIELD VERIFY.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SLOPE PAVING REPAIR
4. REPLACEMENT JOINT DETAILS
5. COVER PLATE DETAILS - 1
6. COVER PLATE DETAILS - 2
7. PARAPET DETAILS
8. BILL OF BARS

GENERAL NOTES AND LEGEND

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS, ELEVATIONS, AND STATIONING SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE EXISTING STRUCTURE, B-25-18, IS A 2-SPAN PRESTRESSED GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 80'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 198'-8" ALONG THE TANGENT LINE. THE ENTIRE BRIDGE DECK SHALL BE PREPARED FOR A CONCRETE OVERLAY. THE EXPANSION JOINTS SHALL BE REPLACED. THE ABUTMENT BEARINGS SHALL BE REPLACED. THE PIER BEARINGS SHALL BE CLEANED AND PAINTED.

CLEAN & FILL LONGITUDINAL AND TRANSVERSE CRACKS IN NEW OVERLAY WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

PIGMENTED SURFACE SEALER TO BE APPLIED TO FRONT FACE AND TOP OF PARAPET IN SURFACES IN THE JOINT REPAIR AREAS.

ALL CONCRETE REMOVAL NOT COVERED WITH CONCRETE OVERLAY SHALL BE DEFINED BY 1-INCH DEEP SAW CUT.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED BETWEEN MEDIAN AND PARAPETS, BOTH SIDES OF BRIDGE UNDER THE BID ITEM "CLEANING DECKS".

QUANTITY FOR PREPARATION DECKS TYPE 1 & 2 AND FULL DEPTH REPAIR IS NOMINAL, TO BE FINALIZED BY CONTRACTOR IN COORDINATION WITH THE ENGINEER DURING CLEANING OPERATIONS. DECK PREPARATION AND FULL DEPTH REPAIR SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY OR JOINT REPAIRS AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

SPECIAL SLOPE PAVING TO CONSIST OF REMOVING LOOSE OR WEATHERED MATERIALS, ROCK ANCHOR INSTALLATION AND CONSTRUCTION OF DRAINAGE AND REVETMENTS AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

IF EXISTING BAR STEEL REINFORCEMENTIS SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY ANCHORED BARS OF THE SAME SIZE AT THE DIRECTION OF THE ENGINEER. EMBED 1'-6" INTO EXISTING CONCRETE.

WISCONSIN
ANN C. THIELMANN
E-42457
MADISON
WI
PROFESSIONAL ENGINEER
05/10/18

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
ANN THIELMANN (608) 229-1414

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Madison, WI 53703
608.249-0140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/21/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-18

USH 18 OVER USH 151

COUNTY	VILLAGE
IOWA	DODGEVILLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ACT	GBJ	TRW	GBJ

GENERAL PLAN

SHEET 1 OF 8

370

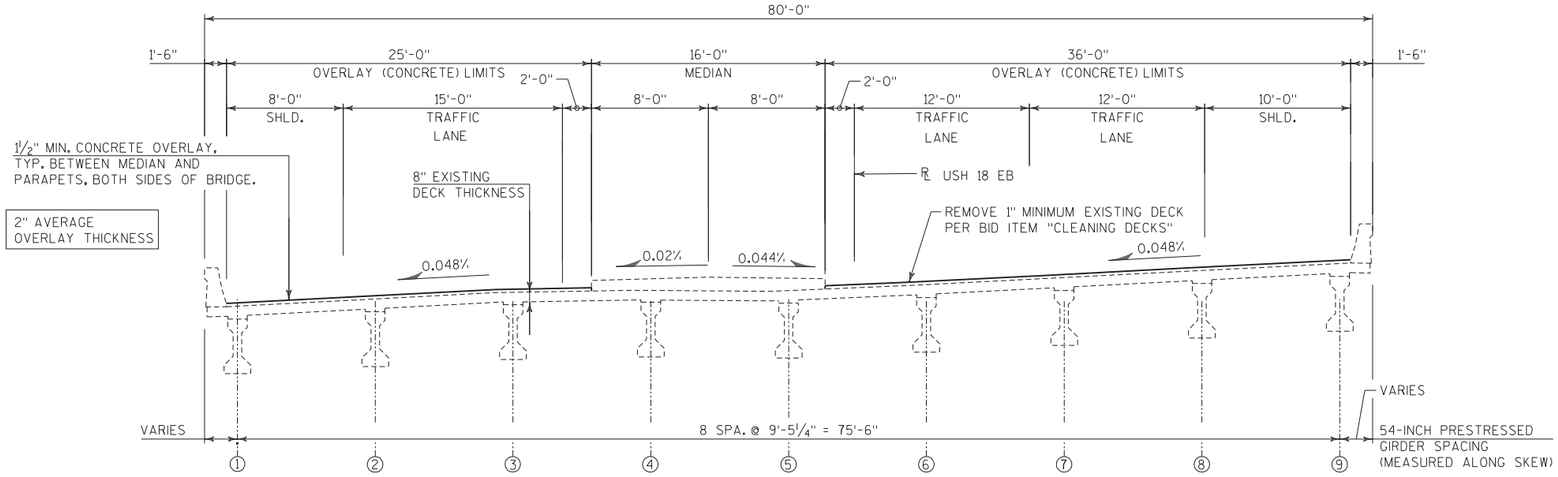
8

8

M:\2_Prjts\12040407_USH 151 Structures\Plns\CAD\Str\Final\B-25-18\B-25-018-01.dgn

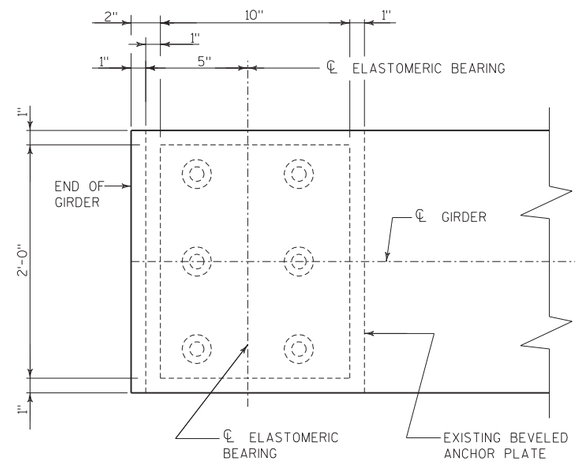
5/9/2018

STATE PROJECT NUMBER
1204-04-77

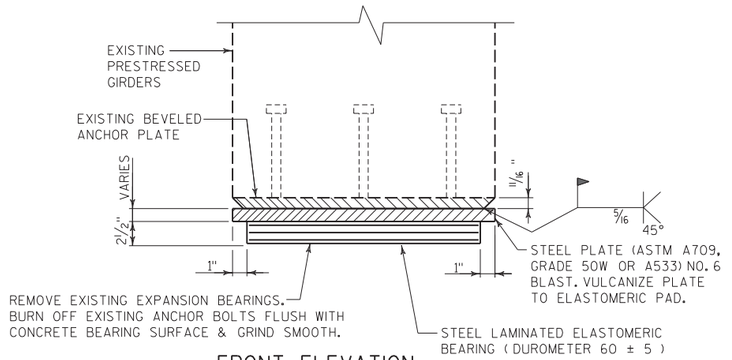


CROSS-SECTION THRU ROADWAY

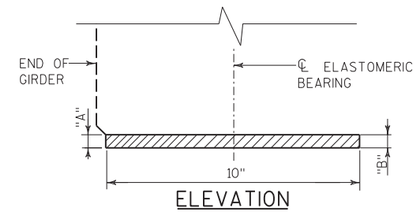
(LOOKING EAST)



PLAN VIEW

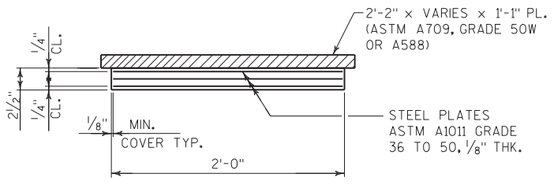


FRONT ELEVATION



ELEVATION

TOP PLATE THICKNESS		
	W. ABUT.	E. ABUT.
A	1¼"	⅞"
B	⅞"	1⅛"



SECTION THRU ELASTOMERIC BEARING

	TOTAL ESTIMATED QUANTITIES		
BID - ITEM NUMBER	BID - ITEM	UNITS	QUANTITY
203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-25-18	LS	1
210.1150	BACKFILL STRUCTURE TYPE A	TONS	10
* 502.0717.S	CRACK SEALING EPOXY	LF	588
502.3100	EXPANSION DEVICE B-25-18	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1700
502.3210	PIGMENTED SURFACE SEALER	SY	6
502.4205	ADHESIVE ANCHORS NO. 5 BARS	EACH	167
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	7030
506.0105	STRUCTURAL STEEL CARBON	LB	1495
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	18
506.7050.S	REMOVING BEARINGS, B-25-18	EACH	18
* 509.0301	PREPARATION DECKS TYPE 1	SY	10
* 509.0302	PREPARATION DECKS TYPE 2	SY	5
509.0500	CLEANING DECKS	SY	1341
509.1000	JOINT REPAIR	SY	70
* 509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	74
SPV.0060.01	CLEANING AND PAINTING BEARINGS	EACH	18
SPV.0060.02	SOIL NAILS	EACH	16
SPV.0165.01	SHOTCRETE	SF	360
SPV.0165.02	WALL FACING	SF	360

*QUANTITY IS FOR ESTIMATING PURPOSES ONLY. COORDINATE FINAL QUANTITY WITH ENGINEER IN THE FIELD. TOTAL QUANTITY NOT TO EXCEED PLAN QUANTITY WITHOUT APPROVAL OF THE ENGINEER. SEE GENERAL NOTES.

NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED."

GRIND EXIST. WELD THAT ATTACHE EXIST. TOP PLATE TO EXIST. BOT. FLANGE. GRIND AFFECTED AREAS SMOOTH.

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

ESTIMATED JACKING FORCES PER GIRDER LINE AT THE WEST ABUTMENT IS 45.5 KIPS AND 56.2 KIPS AT THE EAST ABUTMENT.

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STRUCTURE B-25-18

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CROSS SECTION & QUANTITIES

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EXPANSION BEARING REPLACEMENT - PRESTRESSED GIRDERS ELASTOMERIC BEARINGS

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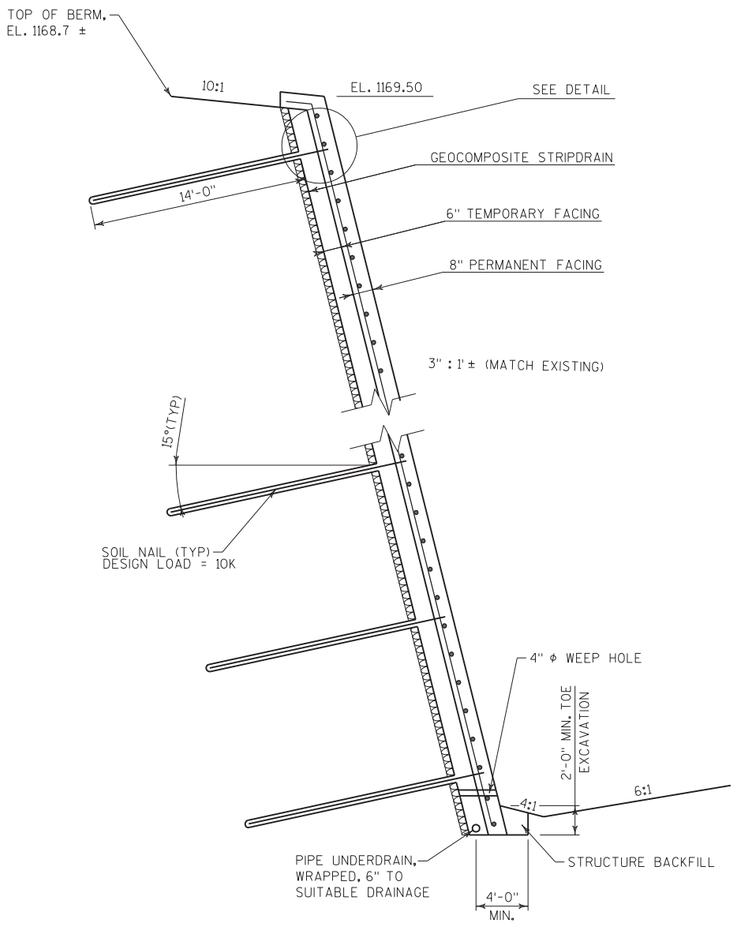
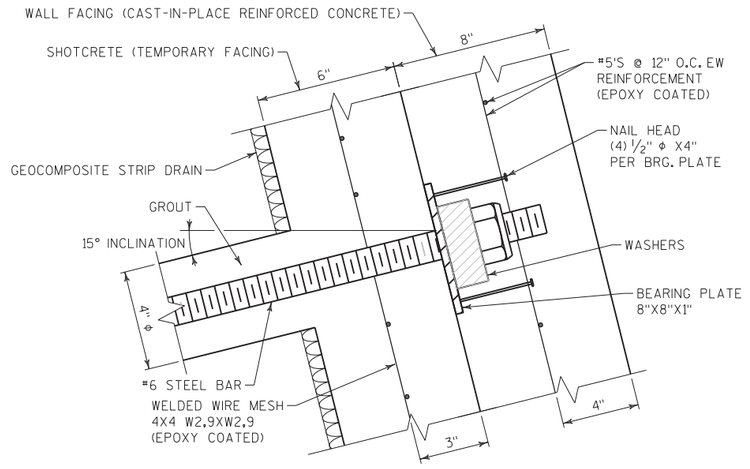
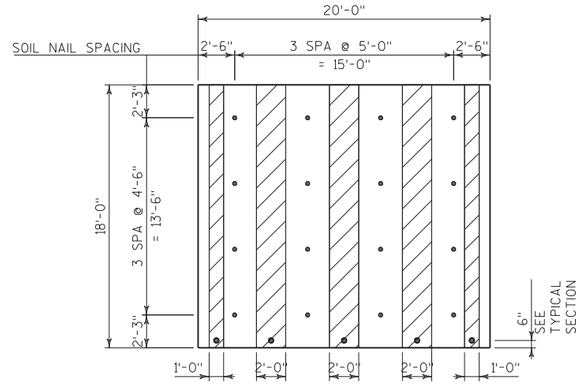


TYPICAL SECTION - SPECIAL SLOPE PAVING



TYPICAL SECTION DETAIL - SOIL NAIL WALL



WALL ANCHOR LAYOUT

GEOCOMPOSTIE STRIPDRAIN

MATERIAL PROPERTIES:

WALL FACING CONCRETE, f'c _____ 3500 psi
SHOTCRETE, f'c _____ 3000 psi
BAR STEEL REINFORCEMENT, fy ___ 60 ksi
SOIL NAIL, fy _____ 60 ksi

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SLOPE PAVING REPAIR

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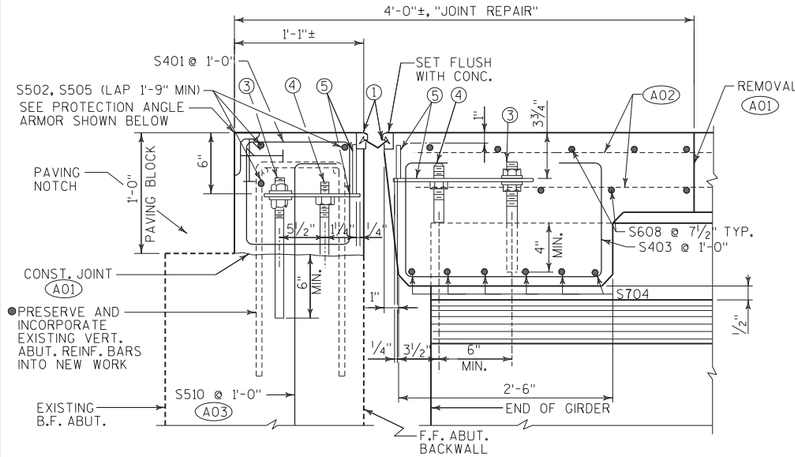
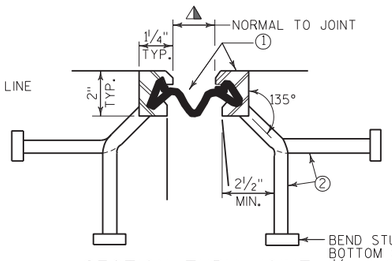


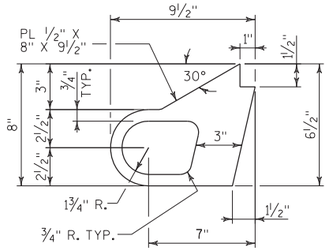
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

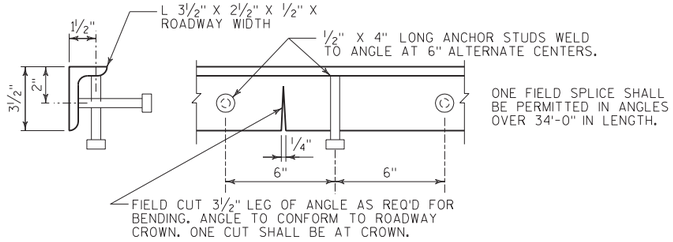


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS

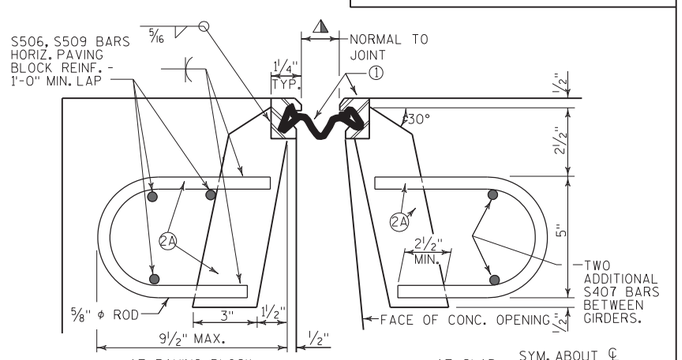


ALTERNATE STRIP SEAL ANCHOR



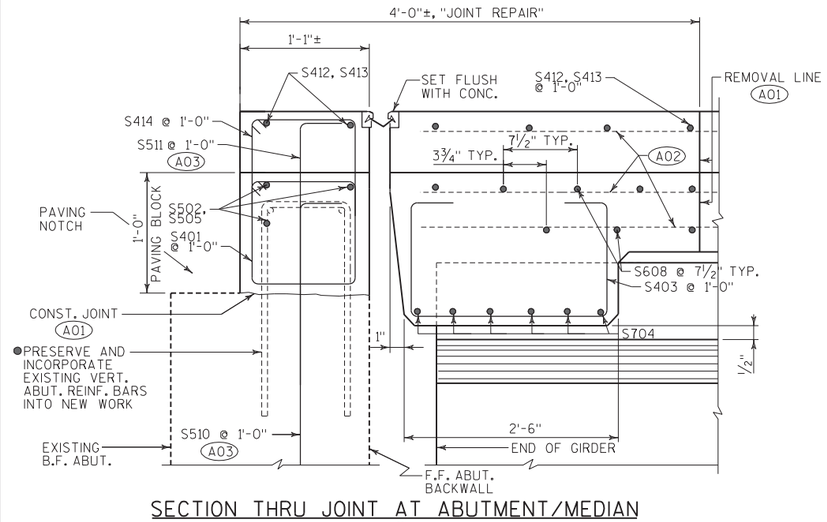
PROTECTION ANGLE ARMOR

SANDBLAST PROTECTION ANGLE AFTER FABRICATION PER NOTES. AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED. ANGLE & STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON".



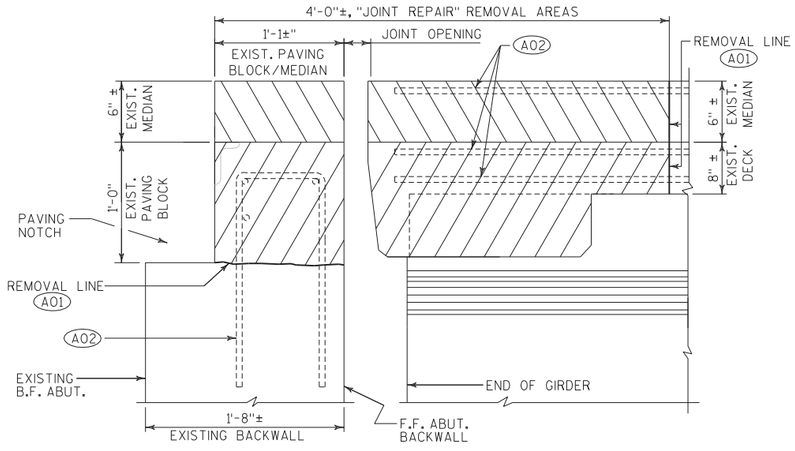
SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



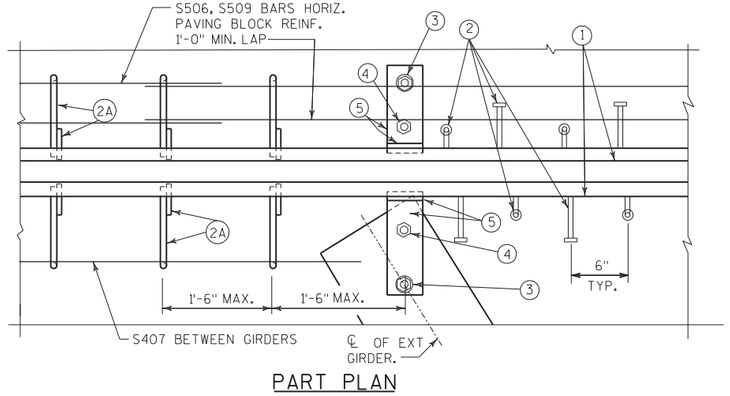
SECTION THRU JOINT AT ABUTMENT/MEDIAN

NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU EXISTING EXPANSION JOINTS AT BOTH ABUTMENTS

(SHOWING CONCRETE REMOVAL AREAS)



PART PLAN

LEGEND

⚠ ① NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING TO 1¾".

② STUDS ⅝" ϕ x 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

2A ½" THICK ANCHOR PLATE WITH ⅝" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" ϕ THREADED ROD WITH 2 NUTS AND WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

⑤ FABRICATE SUPPORT FROM 3" x ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

⑥ GALVANIZED PLATE ⅜" x 10½" x 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

⑦ ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾" ϕ x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

⑨ ¾" ϕ x 2¼" GALVANIZED THREADED COUPLING.

⑩ 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

A01 ROUGHEN EXISTING CONCRETE ¼" MIN. EVERYWHERE NEW CONCRETE COMES INTO CONTACT WITH EXISTING CONCRETE.

A02 SALVAGE EXITING REINFORCEMENT & EXTEND FULL LENGTH INTO NEW WORK.

A03 ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" INTO CONCRETE. SPACED AT 1'-0" BETWEEN THE EXISTING REINFORCEMENT. TURN 10" LEG AS NECESSARY TO FIT.

NOTES

● EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY A03 .

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-25-18".

SEE SHEET 5, 6 & 7 FOR ADDITIONAL DETAILS.

SEE SHEET 8 FOR BILL OF BARS.

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STRUCTURE B-25-18

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REPLACMENT JOINT DETAIL

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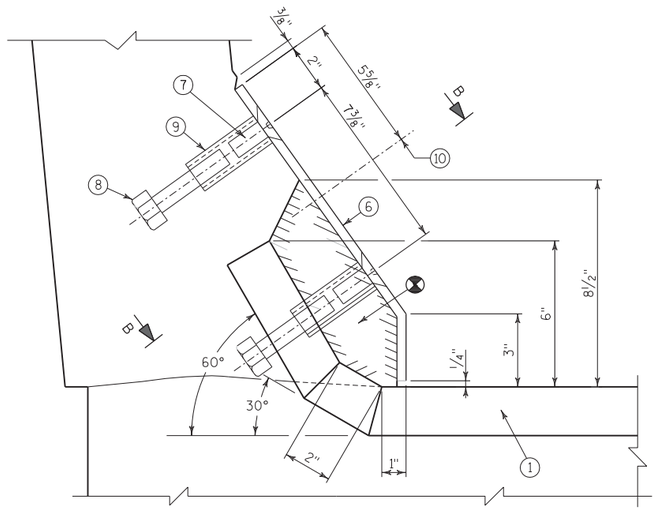
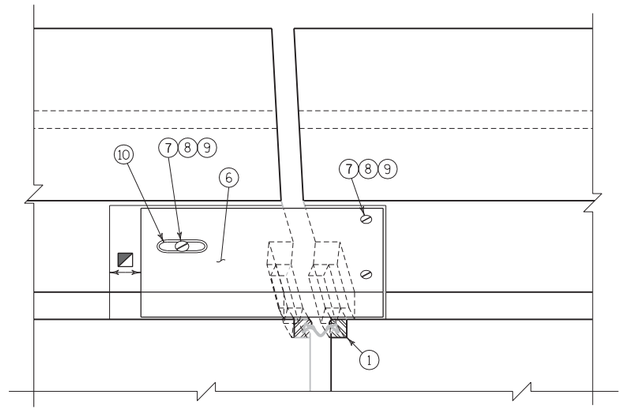
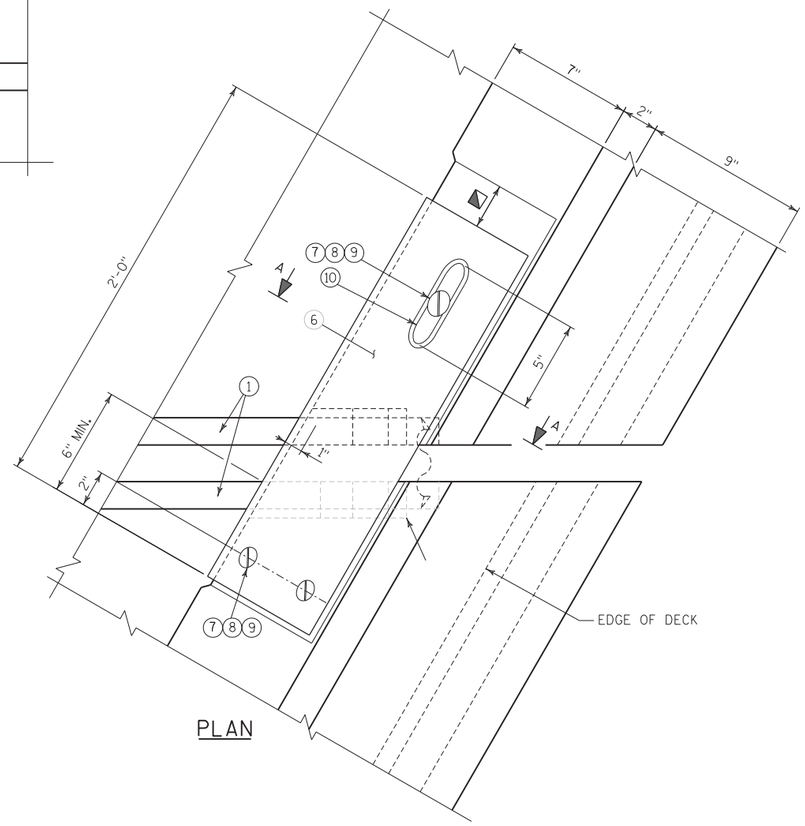


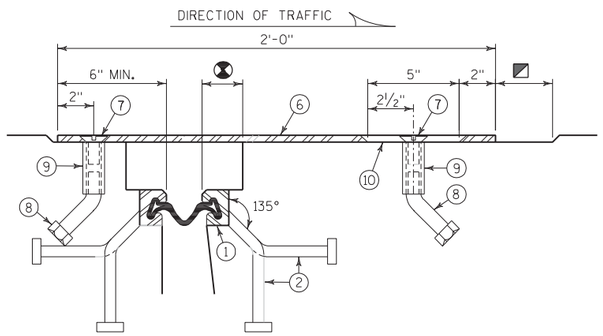
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

LEGEND & NOTES

- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2"

SEE SHEET 4 FOR COVER PLATE LEGEND

SEE SHEETS 4, 6 & 7 FOR ADDTIONAL DETAILS

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COVER PLATE DETAILS - 1

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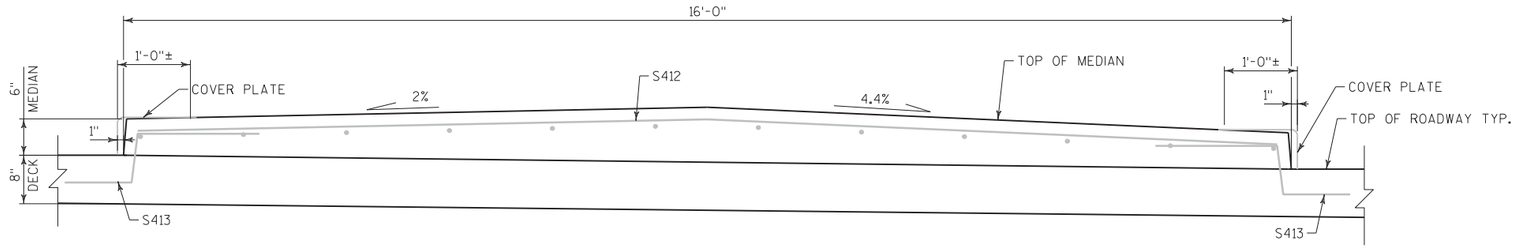
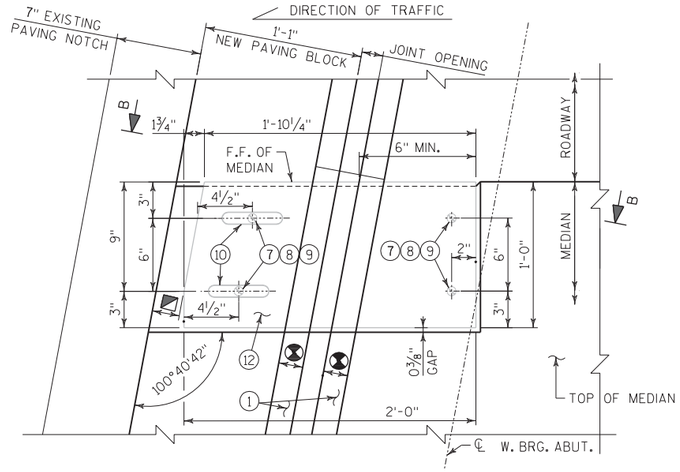


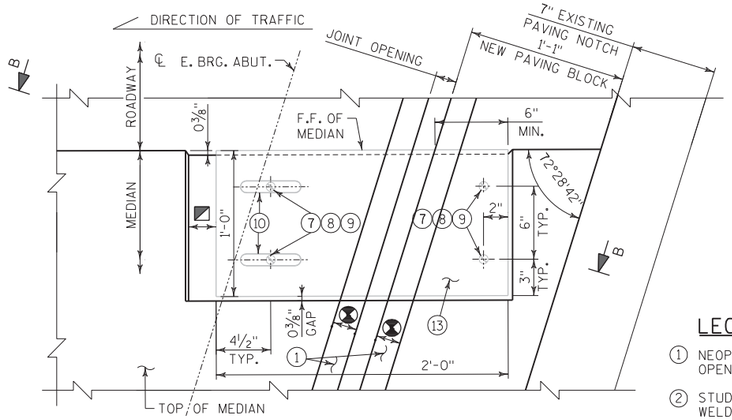
SECTION THROUGH MEDIAN

(LOOKING EAST)



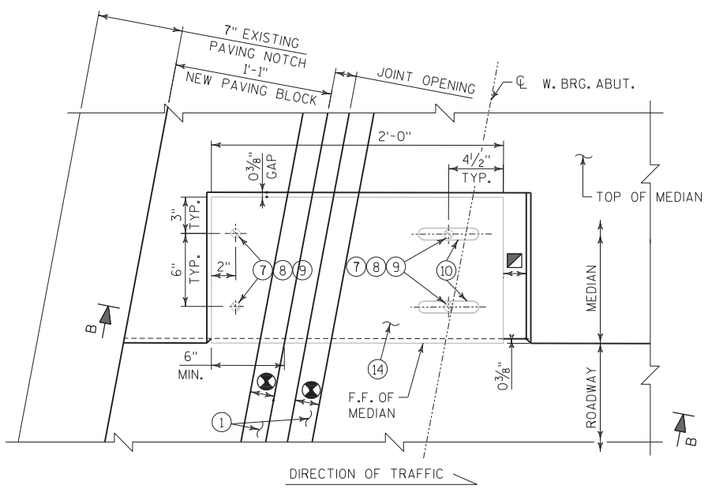
PLAN VIEW - SECTION A-A

NORTHWEST MEDIAN COVER PLATE



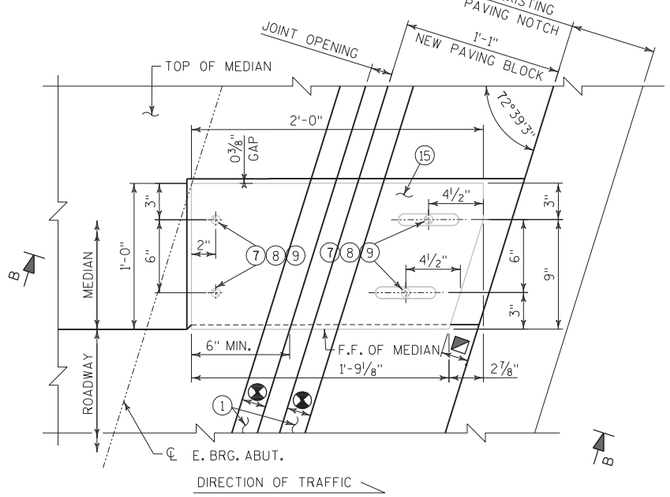
PLAN VIEW - SECTION C-C

NORTHEAST MEDIAN COVER PLATE



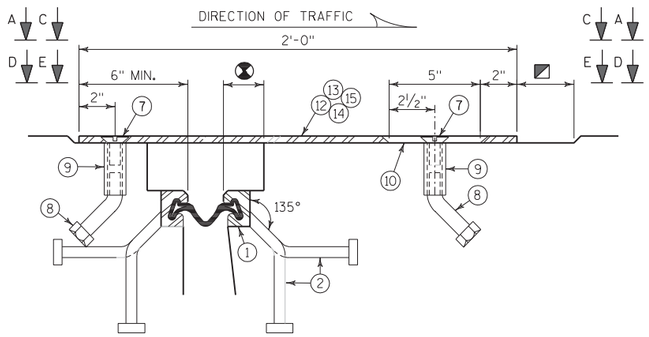
PLAN VIEW - SECTION D-D

SOUTHWEST MEDIAN COVER PLATE

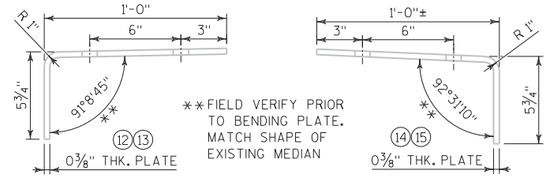


PLAN VIEW - SECTION E-E

SOUTHEAST MEDIAN COVER PLATE



SECTION B-B



SECTION THROUGH COVER PLATE

(12)(13)(14)(15)

LEGEND

(1) NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING TO 1¾".

(2) STUDS ⅝" Φ × 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" Φ THREADED ROD WITH 2 NUTS AND WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" × ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" × 10½" × 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) ¾" Φ × 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾" Φ × 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾" Φ × 2¼" GALVANIZED THREADED COUPLING.

(10) 1" × 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

(12) GALVANIZED PLATE ⅜" THK. X 1'-6" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(13) GALVANIZED PLATE ⅜" THK. X 1'-6" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(14) GALVANIZED PLATE ⅜" THK. X 1'-6" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(15) GALVANIZED PLATE ⅜" THK. X 1'-6" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½"

NOTES

SEE SHEET 8 FOR BILL OF BARS

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COVER PLATE DETAILS - 2

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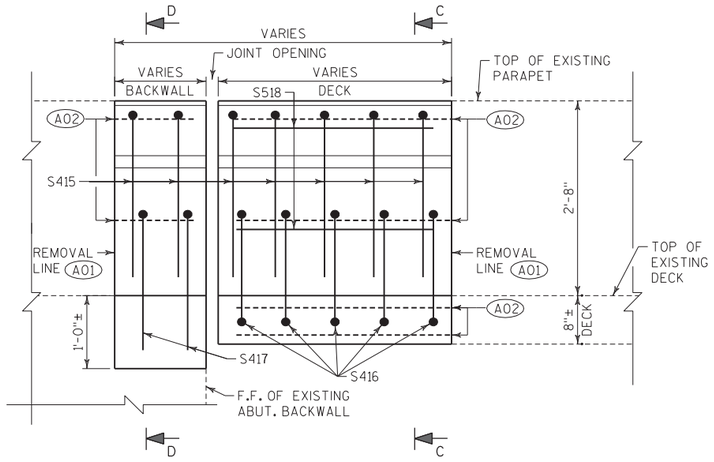

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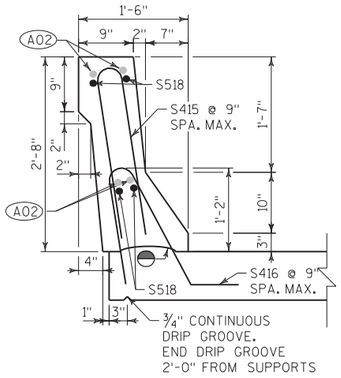
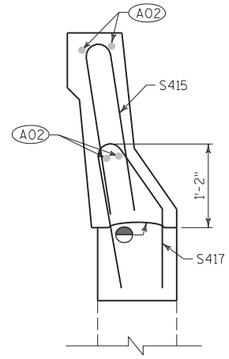


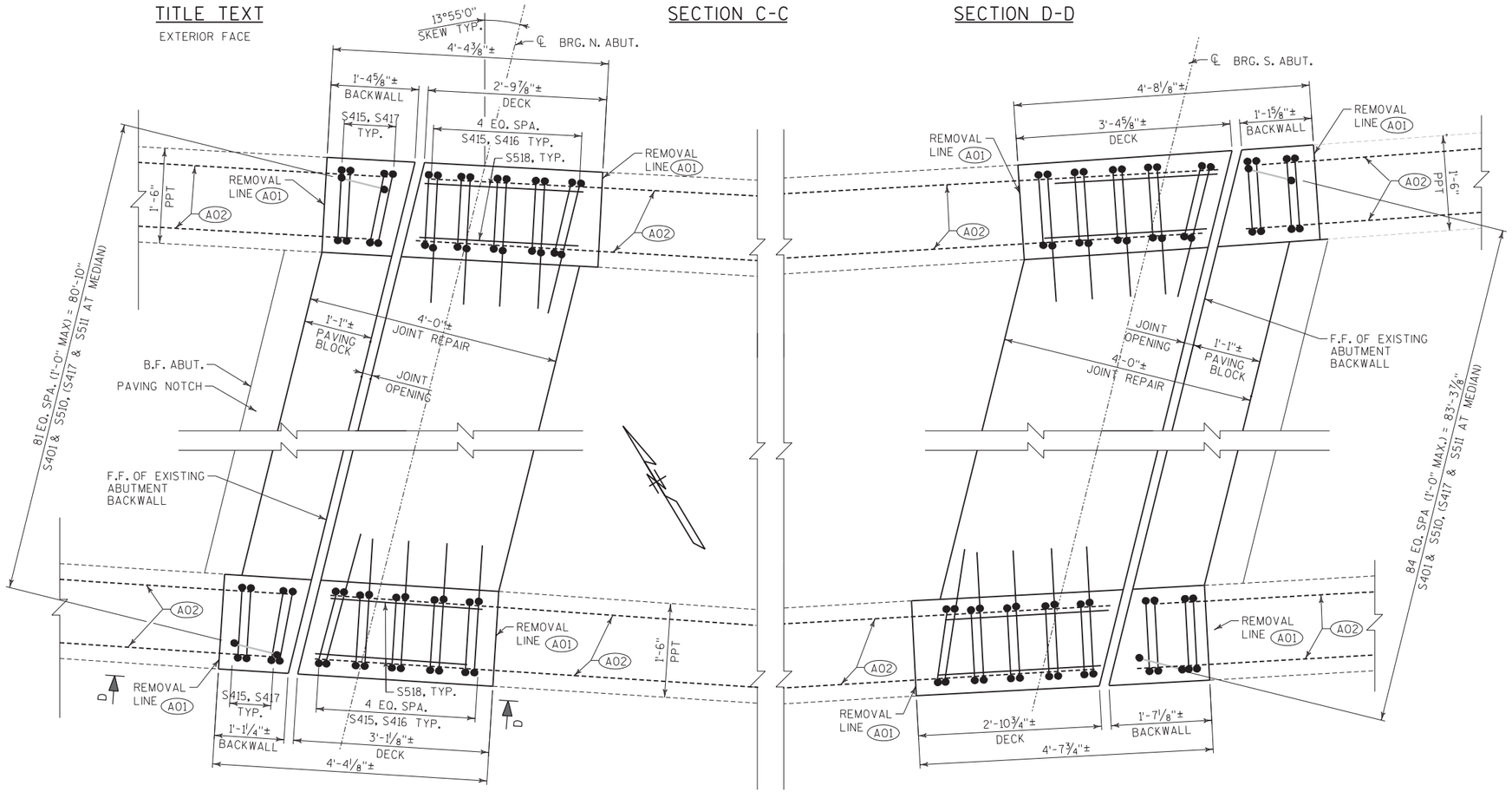
SECTION C-C



SECTION D-D

NOTES & LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- SEE SHEET 8 FOR BILL OF BARS
- SEE SHEET 4, 5 & 6 FOR ADDITIONAL DETAILS.
- (A01) ROUGHEN EXISTING CONCRETE ¼" MIN. EVERYWHERE NEW CONCRETE COMES INTO CONTACT WITH EXISTING CONCRETE.
- (A02) SALVAGE EXITING REINFORCEMENT & EXTEND FULL LENGTH INTO NEW WORK.



PLAN

NO.	DATE	REVISION	BY

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STRUCTURE B-25-18

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PARAPET DETAILS

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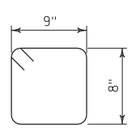
BILL OF BARS

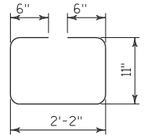
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL BAR STEEL REINFORCEMENT SHOWN IN THIS BILL SHALL BE EPOXY COATED.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
S401	133	3'-4"	X	-	PAVING BLOCK - STIRRUP	VERTICAL
S502	33	8'-9"	-	-	PAVING BLOCK - W. ABUT.	HORIZONTAL
S403	160	4'-8"	X	-	DIAPHRAGM - STIRRUPS	VERTICAL
S704	96	9'-0"	-	-	DIAPHRAGM - BETWEEN GIRDERS	HORIZONTAL
S505	36	8'-4"	-	-	PAVING BLOCK - E. ABUT.	HORIZONTAL
S506	33	8'-0"	-	-	PAVING BLOCK @ EXP. ASSEMBLY W. ABUT.	HORIZONTAL
S407	32	9'-0"	-	-	DIAPHRAGM @ EXP. ASSEMBLY	HORIZONTAL
S608	32	41'-9"	-	-	TRANSVERSE DECK STEEL	HORIZONTAL
S509	33	8'-3"	-	-	PAVING BLOCK @ EXP. ASSEMBLY E. ABUT.	HORIZONTAL
☆ S510	133	3'-3"	X	-	PAVING BLOCK	VERTICAL
☆ S511	34	4'-3"	X	-	MEDIAN - PAVING BLOCK	VERTICAL
S412	12	15'-9"	-	-	MEDIAN	HORIZONTAL
S413	24	3'-2"	X	-	MEDIAN	HORIZONTAL
S414	34	4'-4"	X	-	MEDIAN - PAVING BLOCK STIRRUP	VERTICAL
S415	28	4'-10"	X	-	PARAPET	VERTICAL
S416	20	4'-3"	X	-	PARAPET	VERTICAL
S417	8	4'-4"	X	-	PARAPET	VERTICAL
S518	20	2'-4"	-	-	PARAPET	HORIZONTAL



S401

S510, S511



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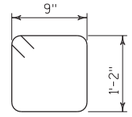

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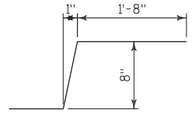

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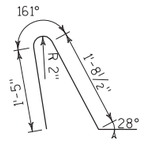

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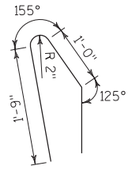

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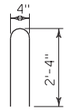

S415

NOTES

SEE SHEET 4, 5, 6 & 7 FOR DETAILS.

☆ ADHESIVE ANCHORS NO.5 BAR. EMBED 1'-6" IN CONCRETE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-18

DRAWN BY ACT | PLANS CK'D. GBJ

BILL OF BARS

SHEET 8 OF 8

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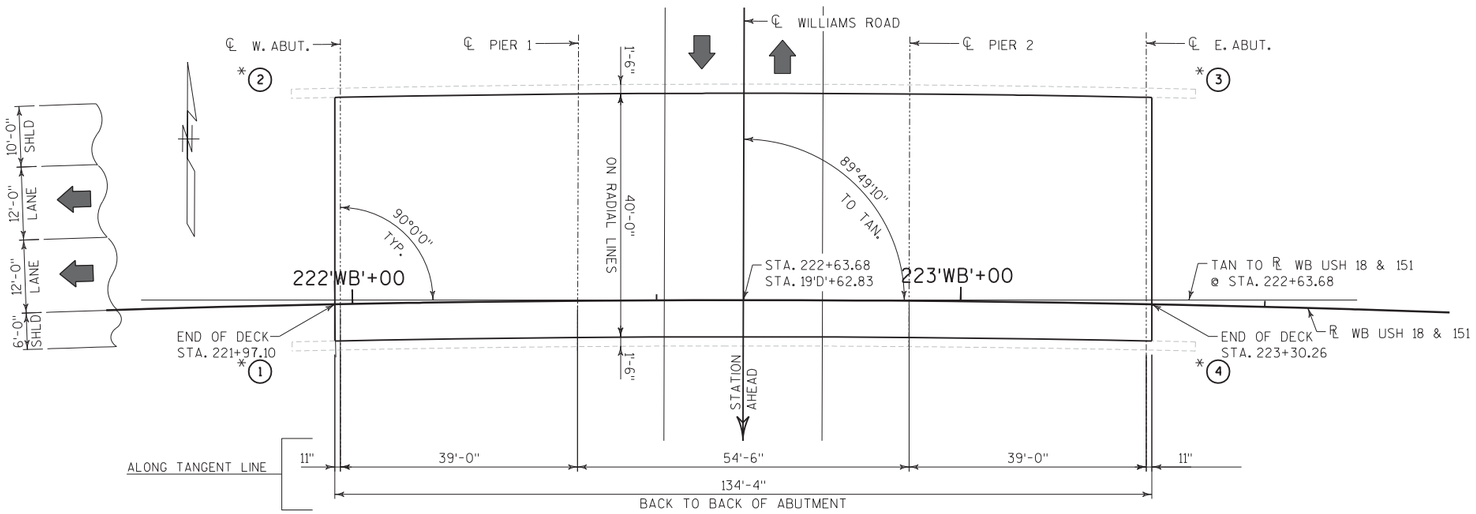
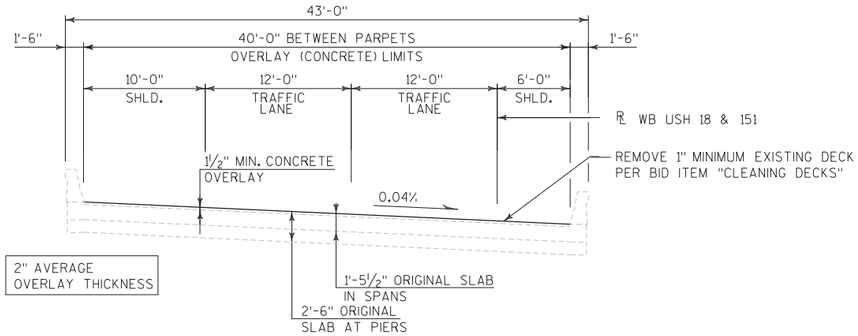
5/9/2018



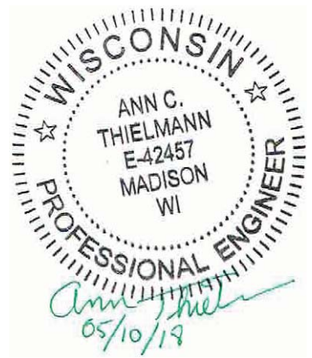
PLAN

3 SPAN - CONCRETE HAUNCHED SLAB



CROSS-SECTION THRU ROADWAY

(LOOKING EAST)



DESIGN DATA

LIVE LOAD

INVENTORY RATING _____ HS-20
OPERATIONAL RATING _____ HS-41
WISCONSIN STANDARD
PERMIT VEHICLE (Wis-SPV) _____ 250 KIPS

MATERIAL PROPERTIES

CONCRETE MASONRY OVERLAY _____ f'c 4,000 PSI

GENERAL NOTES AND LEGEND

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS, ELEVATIONS, AND STATIONING SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE EXISTING STRUCTURE, B-25-19, IS A 3-SPAN CONCRETE HAUNCHED SLAB STRUCTURE WITH AN OVERALL WIDTH OF 43'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 134'-4". THE ENTIRE BRIDGE DECK SHALL BE PREPARED FOR A CONCRETE MASONRY OVERLAY.

CLEAN & FILL LONGITUDINAL AND TRANSVERSE CRACKS IN NEW OVERLAY WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

PIGMENTED SURFACE SEALER TO BE APPLIED TO FRONT FACE AND TOP OF PARAPET IN SURFACES IN THE CONCRETE SURFACE REPAIR AREAS.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

ANY EXCAVATION REQUIRED TO COMPLETE OVERLAY WORK AT ABUTMENT TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS."

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE DECK UNDER THE BID ITEM "CLEANING DECKS."

QUANTITY FOR "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2" AND "FULL-DEPTH DECK REPAIR" AREAS ARE BASED ON PLANS AND AS DETERMINED BY THE ENGINEER DURING CLEANING OPERATIONS. DECK PREPARATION AND FULL-DEPTH DECK REPAIR SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

ANY EXCAVATION REQ'D. TO COMPLETE THE OVERLAY OR THE PAVING BLOCK AT ABUTS. IS INCIDENTAL TO THE BID ITEM, "CONCRETE MASONRY OVERLAY DECKS".

"CONCRETE SURFACE REPAIR" LOCATIONS ARE ANTICIPATED AT THE PARAPETS AND THE UNDER SIDE OF THE DECK IN SPAN 2. LOCATIONS SHALL BE VERIFIED BY THE FIELD ENGINEER.

MAINTAIN EXISTING CROSS-SLOPES.

* EXISTING BEAM GUARD ANCHORAGE TO REMAIN.

(X) INDICATES WING NUMBER.

LIST OF DRAWINGS

1. GENERAL PLAN

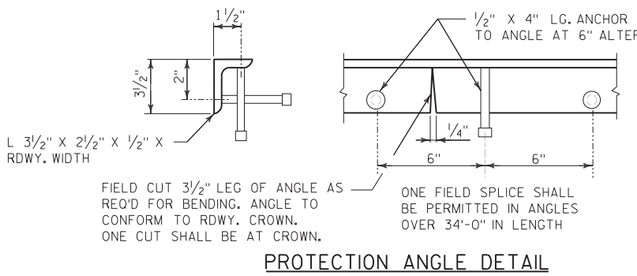
BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
ANN THIELMANN (608) 229-1414

TOTAL ESTIMATED QUANTITIES

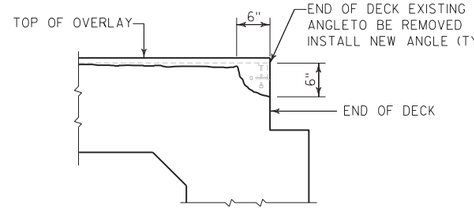
	BID ITEM NUMBER	BID ITEM	UNITS	QUANTITY
*	502.0717.S	CRACK SEALING EPOXY	LF	402
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	598
*	502.3210	PIGMENTED SURFACE SEALER	SY	16
	506.0105	STRUCTURAL STEEL CARBON	LB	753
*	509.0301	PREPARATION DECKS TYPE 1	SY	42
*	509.0302	PREPARATION DECKS TYPE 2	SY	21
	509.0500	CLEANING DECKS	SY	598
*	509.1500	CONCRETE SURFACE REPAIR	SF	144
*	509.2000	FULL-DEPTH DECK REPAIR	SY	1
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	36

* QUANTITY IS FOR ESTIMATING PURPOSES ONLY. COORDINATE FINAL QUANTITY WITH ENGINEER IN THE FIELD. TOTAL QUANTITY NOT TO EXCEED PLAN QUANTITY WITHOUT APPROVAL OF THE ENGINEER. SEE GENERAL NOTES.



PROTECTION ANGLE DETAIL

ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON".



SECTION AT END OF SLAB

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Madison, WI 53703
608-249-0140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/21/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-25-19

USH 18 - 151 WB OVER WILLIAMS ROAD/CTH Z

COUNTY IOWA | VILLAGE DODGEVILLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	ACT	DESIGN CK'D.	ATA	DRAWN BY	TRW	PLANS CK'D.	ACT

GENERAL PLAN

SHEET 1 OF 1

STATE PROJECT NUMBER
1204-04-77

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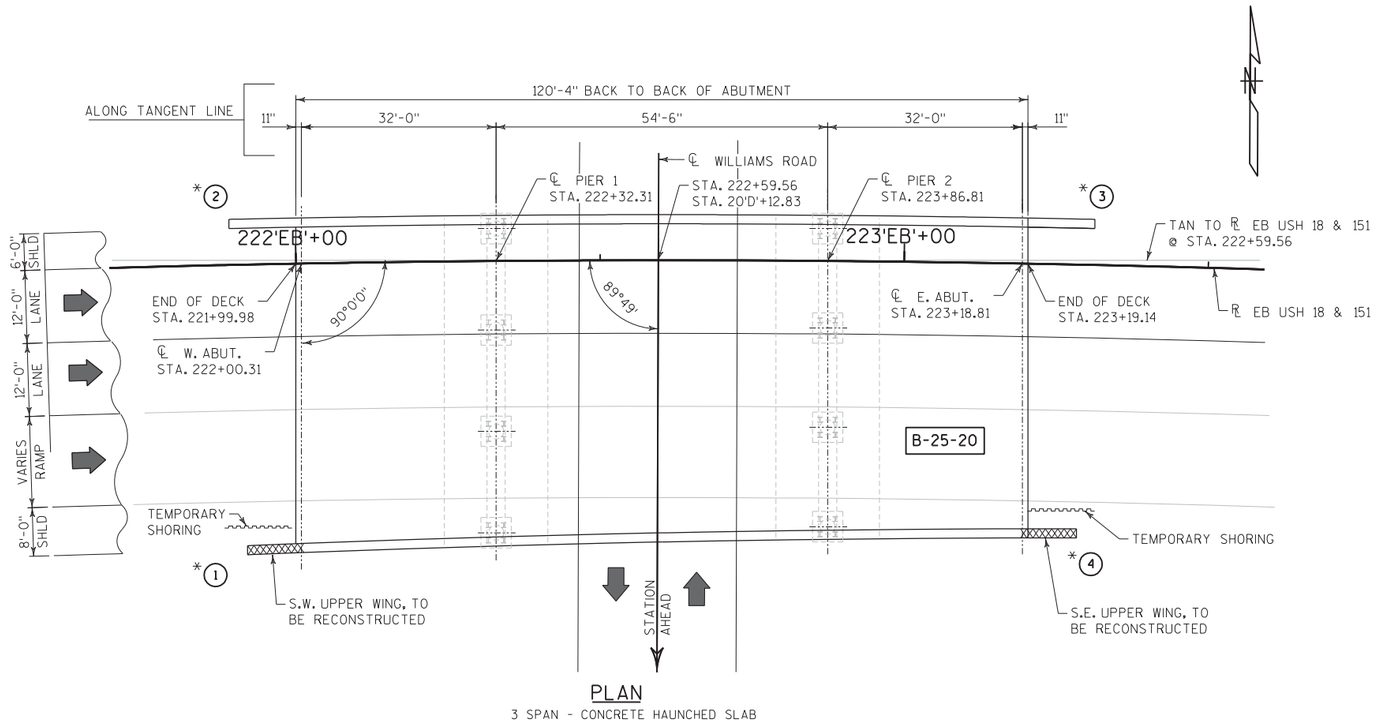
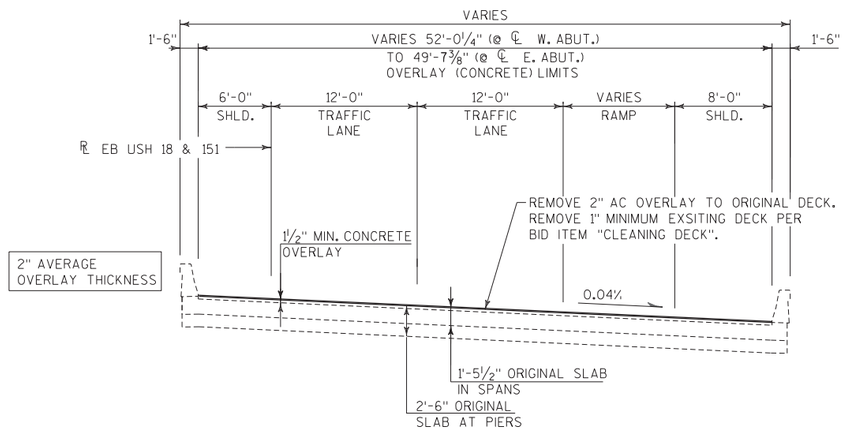
5/9/2018



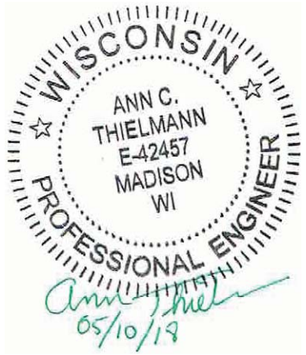
PLAN

3 SPAN - CONCRETE HAUNCHED SLAB



EXISTING CROSS-SECTION THRU ROADWAY

(LOOKING EAST)



DESIGN DATA

LIVE LOAD

INVENTORY RATING _____ HS-20
OPERATIONAL RATING _____ HS-42
WISCONSIN STANDARD
PERMIT VEHICLE (WIS-SPV) _____ 250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY _____ f'c 4,000 PSI
CONCRETE MASONRY OTHER _____ f'c 3,500 PSI
COATED BAR STEEL REINFORCEMENT _____ FY 60,000 PSI

GENERAL NOTES AND LEGEND

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS, ELEVATIONS, AND STATIONING SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE EXISTING STRUCTURE, B-25-20, IS A 3-SPAN CONCRETE HAUNCHED SLAB STRUCTURE WITH A VARYING OVERALL WIDTH OF 43'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 134'-4". THE ENTIRE BRIDGE DECK SHALL BE PREPARED FOR A CONCRETE MASONRY OVERLAY. BOTH SOUTHERN UPPER WINGS TO BE RECONSTRUCTED.

CLEAN & FILL LONGITUDINAL AND TRANSVERSE CRACKS IN NEW OVERLAY WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

PIGMENTED SURFACE SEALER TO BE APPLIED TO FRONT FACE AND TOP OF PARAPET IN SURFACES IN THE CONCRETE SURFACE REPAIR AREA AND UPPER WING RECONSTRUCTION.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM ENTIRE DECK UNDER THE BID ITEM "CLEANING DECKS".

AND EXCAVATION REQUIRED TO COMPLETE OVERLAY WORK IS TO BE CONSIDERED INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS." EXCAVATION FOR STRUCTURES IS TO BE APPLIED TO WINGWALL RECONSTRUCTION ONLY.

QUANTITY FOR "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2" AND "FULL-DEPTH DECK REPAIR" AREAS ARE BASED ON PLANS AND AS DETERMINED BY THE ENGINEER DURING CLEANING OPERATIONS. DECK PREPARATION AND FULL-DEPTH DECK REPAIR SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL INCREASE THE DECK GRADE BY MORE THAN ½".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

ANY EXCAVATION REQ'D. TO COMPLETE THE OVERLAY OR THE PAVING BLOCK AT ABUTS. IS INCIDENTAL TO THE BID ITEM, "CONCRETE MASONRY OVERLAY DECKS".

"CONCRETE SURFACE REPAIR" LOCATIONS ARE ANTICIPATED AT THE PARAPETS, SE & SW CORNERS OF THE ABUTMENTS AND UNDER THE DECK. LOCATIONS SHALL BE VERIFIED BY THE FIELD ENGINEER.

MAINTAIN EXISTING CROSS-SLOPES.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

IF EXISTING BAR STEEL REINFORCEMENTIS SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY ANCHORED BARS OF THE SAME SIZE AT THE DIRECTION OF THE ENGINEER. EMBED 1'-6" INTO EXISTING CONCRETE.

* EXISTING BEAM GUARD ANCHORAGE TO REMAIN.

(X) INDICATES WING NUMBER.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS-SECTION AND QUANTITIES
3. WING 1 & 4 DETAILS
4. PARAPET DETAILS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
ANN THIELMANN (608) 229-1414

STATE PROJECT NUMBER

1204-04-77

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daareorp.com
Madison, WI 53793
608-249-6140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/10/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-25-20

USH 18 - 151 EB OVER WILLIAMS ROAD/CTH Z

COUNTY	VILLAGE
IOWA	DODGEVILLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ACT	GBJ	ACT	GBJ

GENERAL PLAN

SHEET 1 OF 4

8

8

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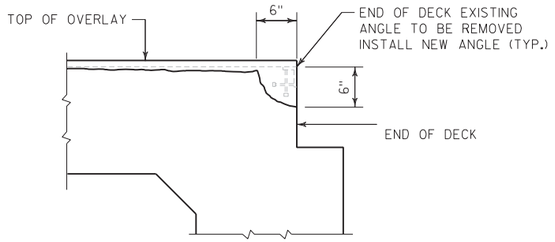
5/9/2018

STATE PROJECT NUMBER
1204-04-77

TOTAL ESTIMATED QUANTITIES

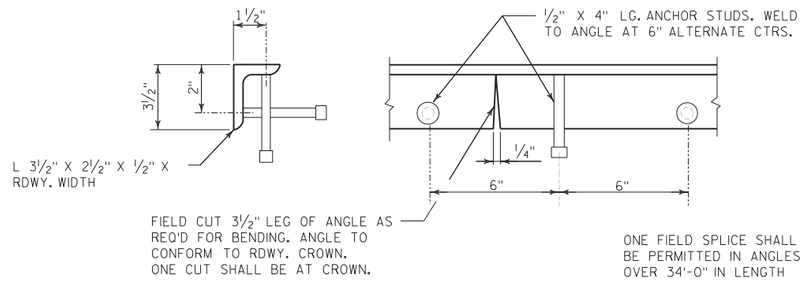
	BID ITEM NUMBER	BID ITEM	UNITS	QUANTITY
	203.0200	REMOVE OLD STRUCTURE STA. 221+99.98	LS	1
	203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-25-20	LS	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-25-20)	LS	1
	210.1500	BACKFILL STRUCTURE TYPE A	CY	28
	502.0100	CONCRETE MASONRY BRIDGES	CY	3
*	502.0717.S	CRACK SEALING EPOXY	LF	360
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	680
	502.3210	PIGMENTED SURFACE SEALER	SY	14
	502.4207	ADHESIVE ANCHORS NO. 7 BAR	EACH	56
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	650
	506.0105	STRUCTURAL STEEL CARBON	LB	956
*	509.0301	PREPARATION DECKS TYPE 1	SY	37
*	509.0302	PREPARATION DECKS TYPE 2	SY	19
	509.0500	CLEANING DECKS	SY	680
*	509.1500	CONCRETE SURFACE REPAIR	SF	172
*	509.2000	FULL-DEPTH DECK REPAIR	SY	1
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	41
	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-25-20	SY	680
	511.1200	TEMPORARY SHORING (B-25-20)	SF	135
	516.0500	RUBBERIZED MEMBRANE WATERPROFFING	SY	4
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2
		NON-BID ITEMS		
		FILLER	SIZE	1/2"

* QUANTITY IS FOR ESTIMATING PURPOSES ONLY. COORDINATE FINAL QUANTITY WITH ENGINEER IN THE FIELD. TOTAL QUANTITY NOT TO EXCEED PLAN QUANTITY WITHOUT APPROVAL OF THE ENGINEER. SEE GENERAL NOTES.



SECTION AT END OF SLAB

TYP. BOTH ENDS



PROTECTION ANGLE DETAIL

BOTH ENDS OF DECK
ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-20

DRAWN BY ACT | PLANS CK'D. GBJ

CROSS SECTION & QUANTITIES

SHEET 2 OF 4

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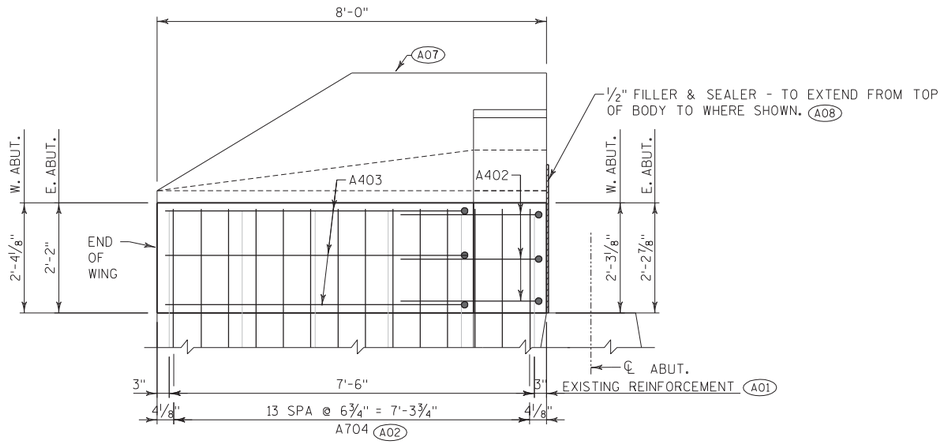
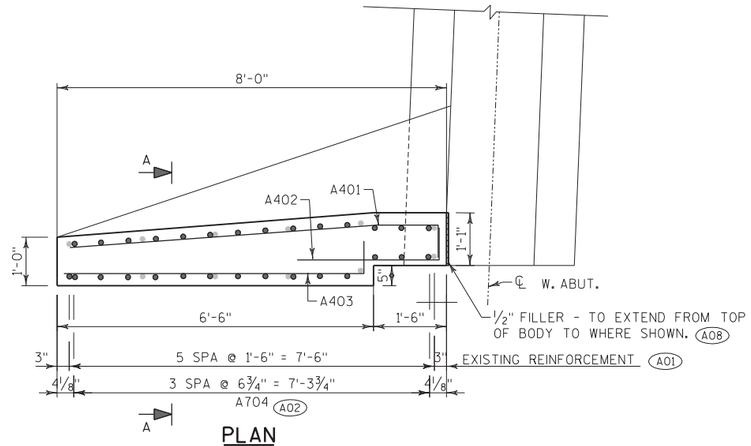
5/9/2018

STATE PROJECT NUMBER
1204-04-77



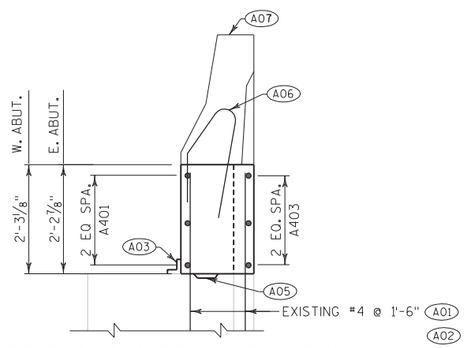
OUTSIDE ELEVATION

(WING 1 SHOWN, WING 4 SIMILAR)



PLAN

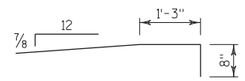
(WING 1 SHOWN, WING 4 SIMILAR)



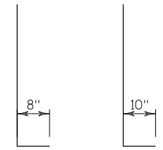
SECTION A-A, RECONSTRUCTION

BILL OF BARS

	BAR MARK	COAT	NO. REQ'D WING 1	NO. REQ'D WING 4	LENGTH	BENT	BAR SERIES	LOCATION	
	A401	X	3	3	8'-3"	X	-	WING WALL	HORIZONTAL
	A402	X	3	3	3'-6"	X	-	WING WALL	HORIZONTAL
	A403	X	3	3	6'-11"	X	-	WING WALL	HORIZONTAL
A04	A704	X	28	28	3'-6"	-	-	WING WALL	VERTICAL



A401



A402 A403

A01 PRESERVE EXISTING VERTICAL REINF. ABOVE WING BODY.

A02 SPACE A704 BETWEEN EXISTING VERTICAL BARS.

A03 18" RUBBERIZED MEMBRANE WATERPROFFING, TYPICAL ALL SOIL RETAINING CONST. JOINTS.

A04 ADHESIVE ANCHOR NO. 7 BAR. EMBED 18" IN CONCRETE.

A05 EXISTING CONST. JOINT.

A06 R404, R405, R409, SEE SHEET 4 FOR PLACEMENT.

A07 SEE SLOPED FACE PARAPET "B" DETAILS SHEET 4.

A08 SEAL EXPOSED SURFACES OF EXPOSED 1/2" FILL ER WITH NON- STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONC.) (TYP.)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-20

DRAWN BY ACT | PLANS CK'D. GBJ

WING 1 & 4 DETAILS

SHEET 3 OF 4

381

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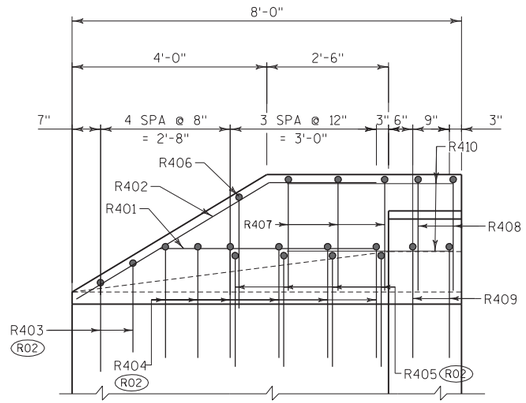
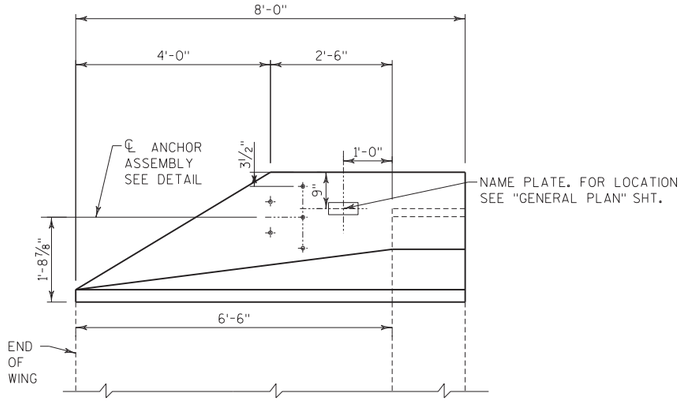
5/9/2018

STATE PROJECT NUMBER
1204-04-77



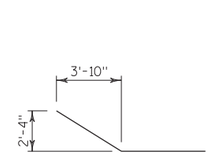
OUTSIDE ELEVATION



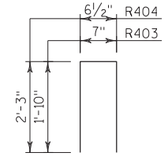
INSIDE ELEVATION

BILL OF BARS

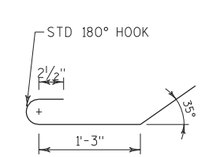
	BAR MARK	COAT	NO. REQ'D WING 1	NO. REQ'D WING 4	LENGTH	BENT	BAR SERIES	LOCATION	
	R401	X	2	2	4'-6"	-	-	PARAPET	HORIZONTAL
	R402	X	2	2	6'-8"	X	-	PARAPET	HORIZONTAL
	R403	X	2	2	4'-1"	X	-	PARAPET	VERTICAL
R02	R404	X	6	6	4'-11"	X	-	PARAPET	VERTICAL
R02	R405	X	4	4	3'-1	X	-	PARAPET	VERTICAL
	R406	X	1	1	4'-0"	X	-	PARAPET	VERTICAL
	R407	X	3	3	5'-0"	X	-	PARAPET	VERTICAL
	R408	X	2	2	4'-10"	X	-	PARAPET	VERTICAL
R02	R409	X	2	2	4'-7"	X	-	PARAPET	VERTICAL
	R410	X	4	4	3'-5"	-	-	PARAPET	HORIZONTAL



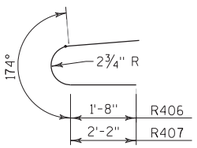
R402



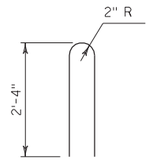
R403, R404



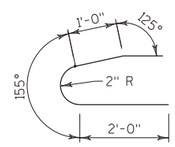
R405



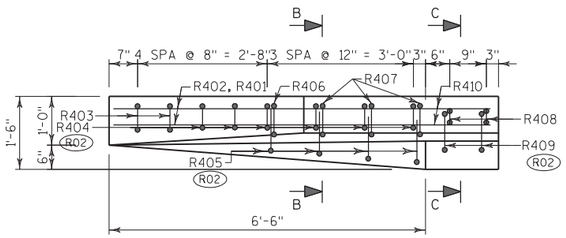
R406, R407



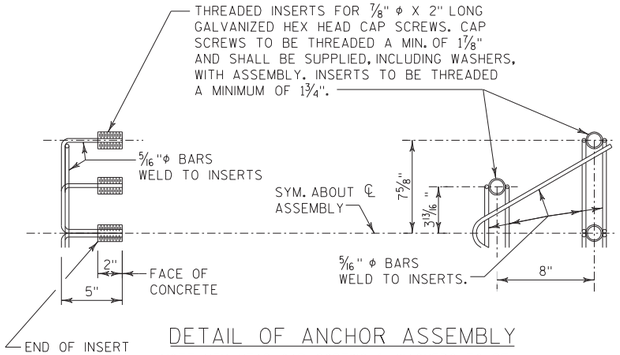
R408



R409



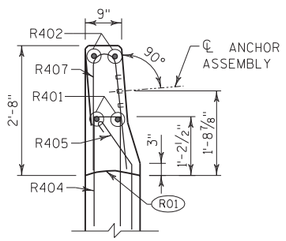
PLAN



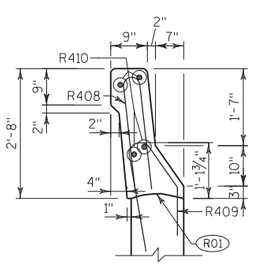
DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY BID ITEM SHALL BE "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



SECTION B-B



SECTION C-C

NOTES

(R01) CONST. JOINT - STRIKE OFF AS SHOWN & FINISH WITH A WOODEN TROWEL.

(R02) R404/R405/R409 BARS TO BE TIED TO WING STEEL BEFORE THE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-20

DRAWN BY ACT | PLANS CK'D. GBJ

PARAPET DETAILS

SHEET 4 OF 4

382

8

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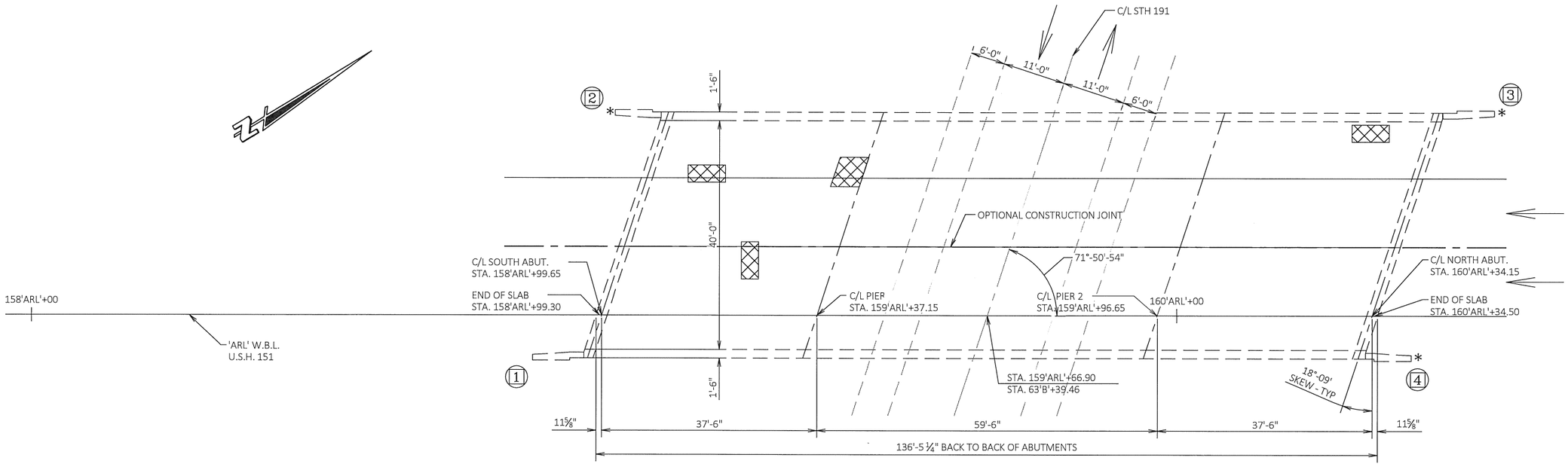
5/9/2018

STATE PROJECT NUMBER
1204-04-77

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

INDICATES WING NUMBER



PLAN

3-SPAN - CONCRETE HAUNCHED SLAB

ANTICIPATED
FULL DEPTH DECK REPAIR

GENERAL NOTES

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

PIGMENTED SURFACE TREATMENT TO BE APPLIED TO THE FRONT FACE AND TOP SURFACE OF THE PARAPET

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

CLEAN & FILL LONGITUDINAL AND TRANSVERSE CRACKS IN NEW OVERLAY WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE" (B-25-0021).

SLOPE PAVING REPAIR SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼" IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT STRUCTURES DESIGN SECTION.

ANY EXCAVATION REQ'D TO COMPLETE THE OVERLAY OR JOINT REPAIR AT ABUTS. TO BE CONSIDERED INCIDENTAL TO THE BID ITEM, "CONCRETE MASONRY OVERLAY DECKS".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY DECKS".

IF MORE THAN ⅓ OF THE TOP STEEL IS EXPOSED IN THE NEGATIVE MOMENT REGIONS, EITHER THE CENTERS OF ADJACENT SPANS MUST BE SHORED OR ONLY LONGITUDINALLY OVERLAY ⅓ OF THE BRIDGE AT A TIME. UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

IF EXISTING BAR STEEL REINFORCEMENT IS SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY ANCHORED BARS OF THE SAME SIZE AT THE DIRECTION OF THE ENGINEER. EMBED 1'-6" INTO EXISTING CONCRETE.

DESIGN DATA

LIVE LOAD:

DESIGN RATING	HS-20
INVENTORY RATING	HS-22
OPERATIONAL RATING	HS-36
MAXIMUM STANDARD PERMIT VEHICLE LOAD	250 KIPS

EXISTING MATERIALS PROPERTIES

CONCRETE MASONRY SLAB	f'c = 4,000 PSI

TRAFFIC DATA

U.S.H. 151:

AADT (2015)	9850
AADT (2035)	13000
DESIGN SPEED	55 MPH

S.T.H. 191:

AADT (2015)	1750
AADT (2035)	1950
DESIGN SPEED	50 MPH

BENCHMARK

DISK IN SE CORNER OF B-25-22
BM409
N. 151953.58 E. 384867.63
EL. 1114.61

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. BRIDGE DECK CONDITION SURVEY

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

TROY L. PETERSON
(715) 235-9081

WISCONSIN PROFESSIONAL ENGINEER
TROY L. PETERSON
E-31102
MENOMONIE
WI
4-19-18

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar
www.cedarcorp.com 800-472-7372

ACCEPTED William C. Dreher SDR 05/10/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-21

USH 151 OVER STH 191

COUNTY	TOWN/CITY/VILLAGE
IOWA	DODGEVILLE

DESIGN SPEC.
REHABILITATION - N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ATA	TLP	NJT	TLP

GENERAL PLAN

SHEET 1 OF 3
383

I.D. 1204-04-77

DATE: APRIL 18

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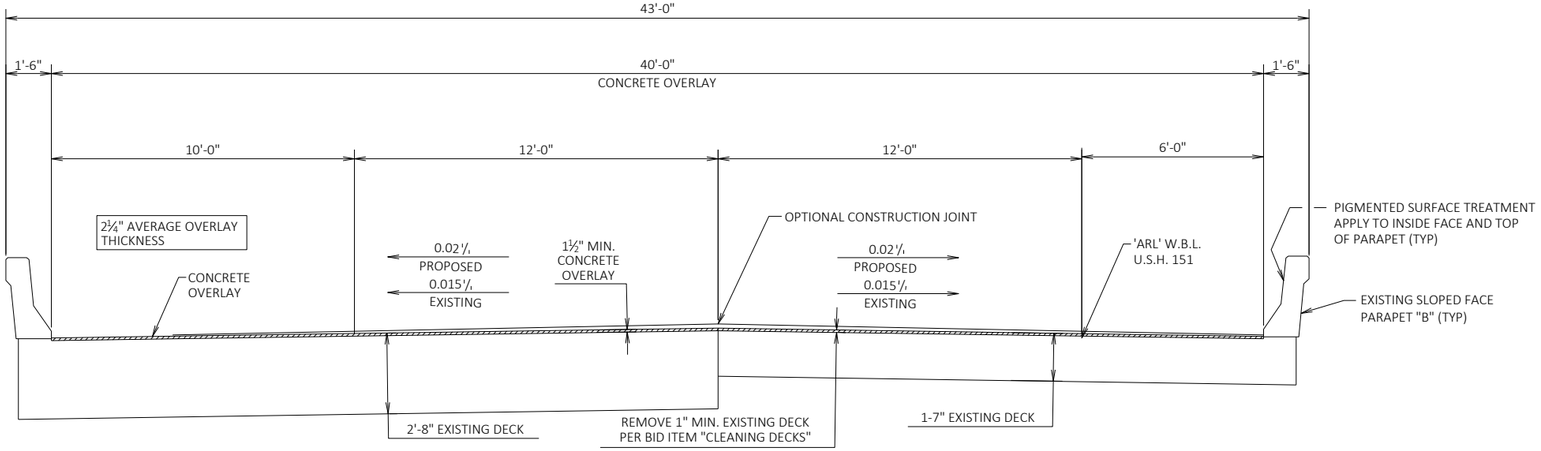
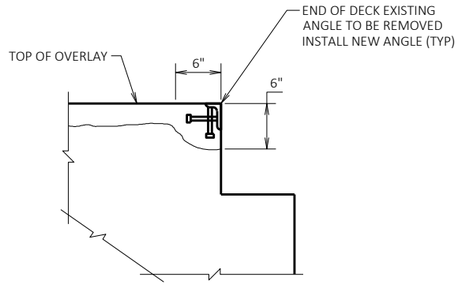
STATE PRO□ECT NUMBER
1204□04□77



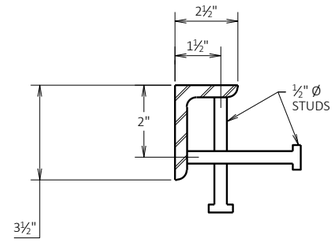
AT PIERS

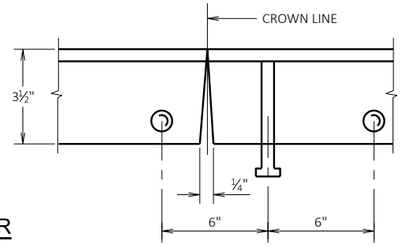
IN SPANS

CROSS SECTION T□RU ROADWAY LOO□ING NORT□



SECTION AT END OF SLAB □TYP□

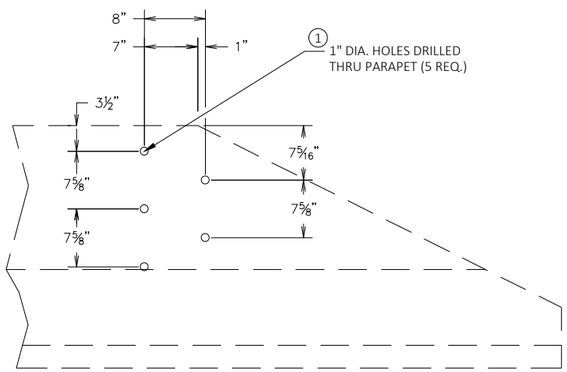




DETAIL "A"

PROTECTION ANGLE ARMOR

AT END OF DECK, PROVIDE L 3½" x 2½" x ½".
ATTACH ANGLE TO CONCRETE WITH ½" Ø STUDS x 4" LONG, WELD TO ANGLE AT 6" ALTERNATE CENTERS. FIELD CUT 3 ½" LEG OF ANGLE AS REQ'D FOR BENDING. SEE DETAIL "A". ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON". (NO PAINT REQ'D)



T□RIE BEAM GUARDRAIL ATTAC□MENT

1 DRILLING BOLT HOLES THROUGH THE PARAPET. BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

TOTAL ESTIMATED □UANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-25-21	LS	1
	502.0717.S	CRACK SEALING EPOXY	LF	600
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	606
*	502.3210	PIGMENTED SURFACE SEALER	SY	122
	506.0105	STRUCTURAL STEEL CARBON	LB	790
	509.0301	PREPARATION DECKS TYPE 1	SY	65
	509.0302	PREPARATION DECKS TYPE 2	SY	30
	509.0500	CLEANING DECKS	SY	606
	509.2000	FULL-DEPTH DECK REPAIR	SY	22
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	55
	509.9050.S	CLEANING PARAPETS	LF	305

* APPLY TO INSIDE FACE AND TOP OF PARAPETS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B□25□21

DRAWN BY NJT | PLANS CK'D. TLP

CROSS SECTION □ □UANTITIES

SHEET 2 OF 3

384

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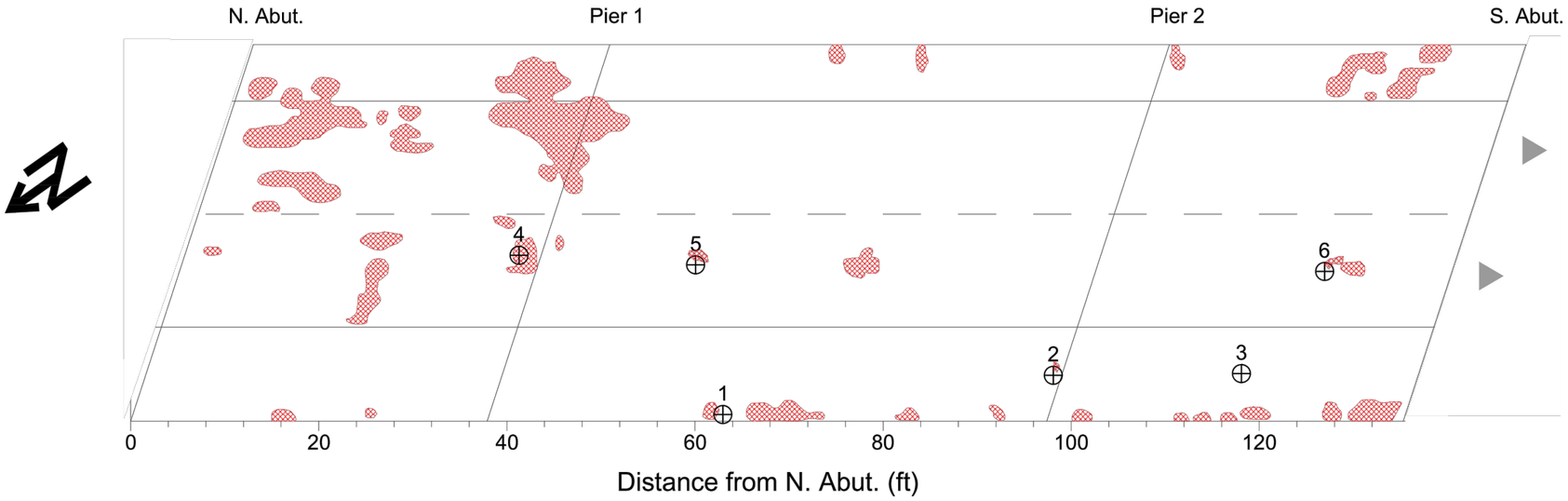
STATE PROJECT NUMBER

1204-04-77



Debond/delam detected by Infrared Thermography

⊕ Impact-echo test location

▶ Direction of traffic

Estimated Deck Preparation Items	Quantity (sq ft)	% of Deck Area
Type 1	284.0	4.9%
Type 2	NA	NA
Full Depth	263.4	4.5%

Bridge Deck Condition Survey using IR and GPR

USH 18-STH 35 over STH 191

Bridge ID: B250021

analyzed by: LM date: 6/11/09

checked by: KRM date: 6/15/09

INFRASENSE, Inc.

sheet 1 of 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-21

DRAWN BY NJT | PLANS CK'D. TLP

BRIDGE DEC-
CONDITION SURVEY

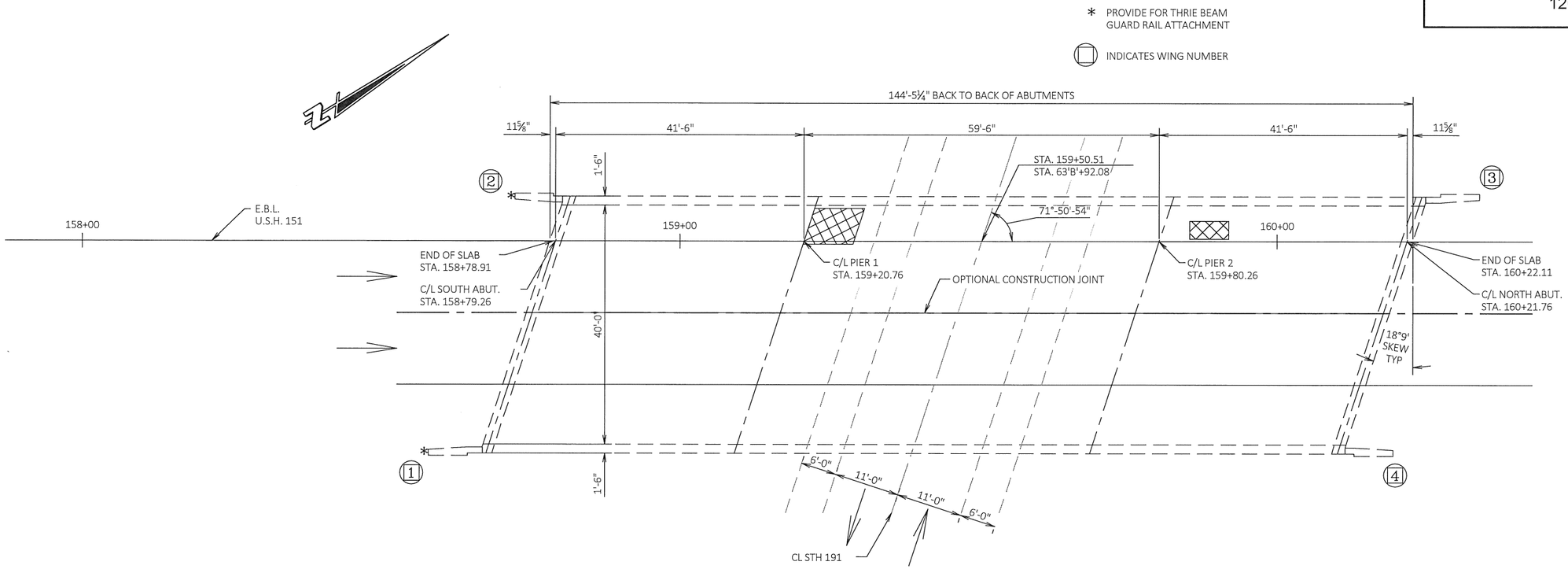
SHEET 3 OF 3

385

8

8

STATE PROJECT NUMBER
1204-04-77



PLAN

3-SPAN - CONCRETE HAUNCHED SLAB

ANTICIPATED
FULL DEPTH DECK REPAIR

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DESIGN DATA

LIVE LOAD:

DESIGN RATING	HS-20
INVENTORY RATING	HS-22
OPERATIONAL RATING	HS-36
MAXIMUM STANDARD PERMIT VEHICLE LOAD	250 KIPS

EXISTING MATERIALS PROPERTIES

CONCRETE MASONRY SLAB	f'c = 4,000 PSI

TRAFFIC DATA

U.S.H. 151:

AADT (2015)	9850
AADT (2035)	13000
DESIGN SPEED	55 MPH

S.T.H. 191:

AADT (2015)	1750
AADT (2035)	1950
DESIGN SPEED	50 MPH

BENCHMARK

DISK IN SE CORNER OF B-25-22
BM409
N. 151953.58 E. 384867.63
EL. 1114.61

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. BRIDGE DECK CONDITION SURVEY

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT

TROY L. PETERSON
(715) 235-9081

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER

4-19-18

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar
www.cedarcorp.com 800-472-7372

ACCEPTED 05/10/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-22

USH 151 OVER STH 191

COUNTY	TOWN/~~CITY/VILLAGE~~
IOWA	DODGEVILLE

DESIGN SPEC. REHABILITATION - N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ATA	TLP	NJT	TLP

GENERAL PLAN

SHEET 1 OF 3
386

I.D. 1204-04-77

DATE: APRIL 18

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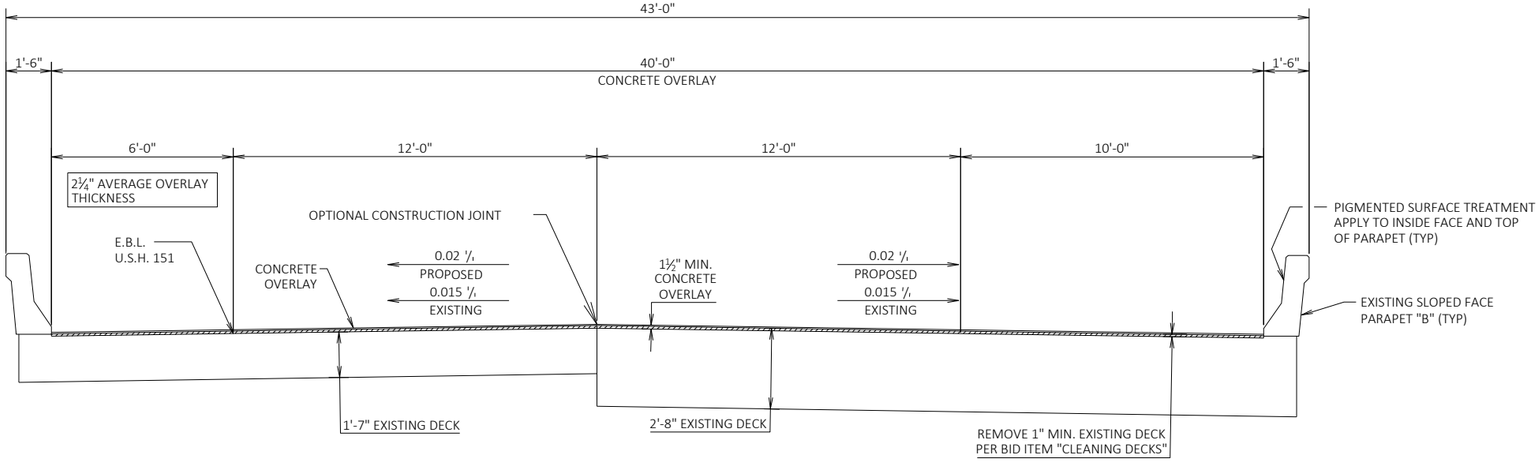
8

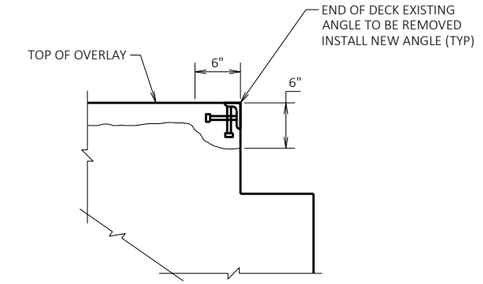
STATE PRO□ECT NUMBER

1204□04□77

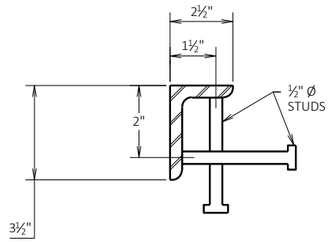


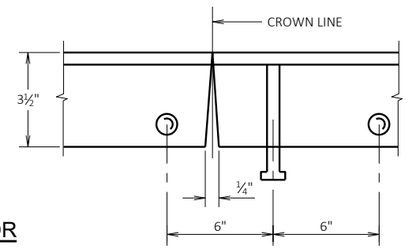
IN SPANS AT PIERS

CROSS SECTION T□RU ROADWAY LOO□ING NORT□



SECTION AT END OF SLAB □TYP□

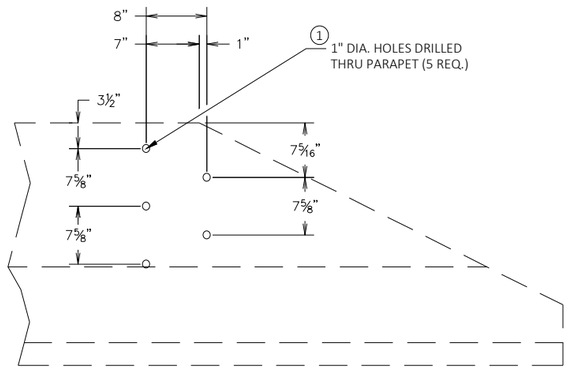




DETAIL "A"

PROTECTION ANGLE ARMOR

AT END OF DECK, PROVIDE L 3½" x 2½" x ½".
ATTACH ANGLE TO CONCRETE WITH ½" Ø STUDS x 4" LONG, WELD TO ANGLE AT 6" ALTERNATE CENTERS. FIELD CUT 3 ½" LEG OF ANGLE AS REQ'D FOR BENDING. SEE DETAIL "A".
ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON". (NO PAINT REQ'D)



T□RIE BEAM GUARDRAIL ATTAC□MENT

(1) DRILLING BOLT HOLES THROUGH THE PARAPET. BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

TOTAL ESTIMATED □UANTITIES

	ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-25-22	LS	1
	502.0717.S	CRACK SEALING EPOXY	LF	750
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	642
*	502.3210	PIGMENTED SURFACE SEALER	SY	128
	506.0105	STRUCTURAL STEEL CARBON	LB	790
	509.0301	PREPARATION DECKS TYPE 1	SY	100
	509.0302	PREPARATION DECKS TYPE 2	SY	40
	509.0500	CLEANING DECKS	SY	642
	509.2000	FULL-DEPTH DECK REPAIR	SY	17
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	60
	509.9050.S	CLEANING PARAPETS	LF	320

* APPLY TO INSIDE FACE AND TOP OF PARAPETS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B□25□22

DRAWN BY NJT | PLANS CK'D. TLP

CROSS SECTION □ □UANTITIES

SHEET 2 OF 3

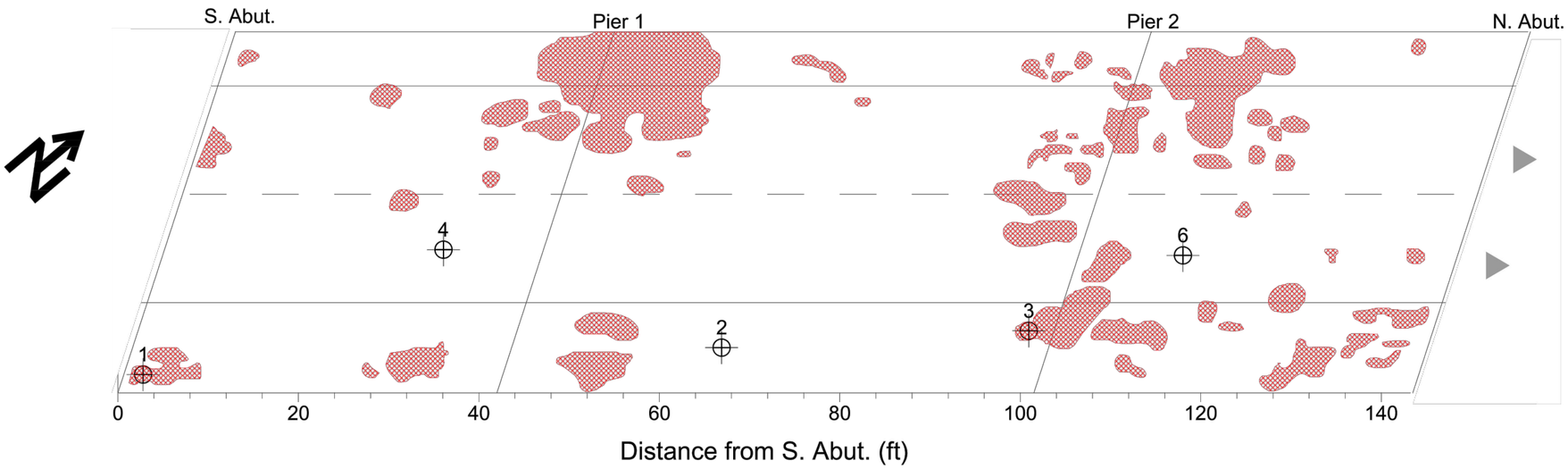
387

8

8

STATE PROJECT NUMBER

1204-04-77



Debond/delam detected by Infrared Thermography

⊕ Impact-echo test location

▶ Direction of traffic

Estimated Deck Preparation Items	Quantity (sq ft)	% of Deck Area
Type 1	673.4	10.9%
Type 2	NA	NA
Full Depth	93.5	1.5%

Bridge Deck Condition Survey using IR and GPR

USH 18-STH 35 over STH 191

Bridge ID: B250022

analyzed by: LM date: 6/22/09

checked by: KRM date: 6/23/09

INFRASENSE, Inc.

sheet 1 of 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-22

DRAWN BY NJT | PLANS CK'D. TLP

BRIDGE DEC-
CONDITION SURVEY

SHEET 3 OF 3

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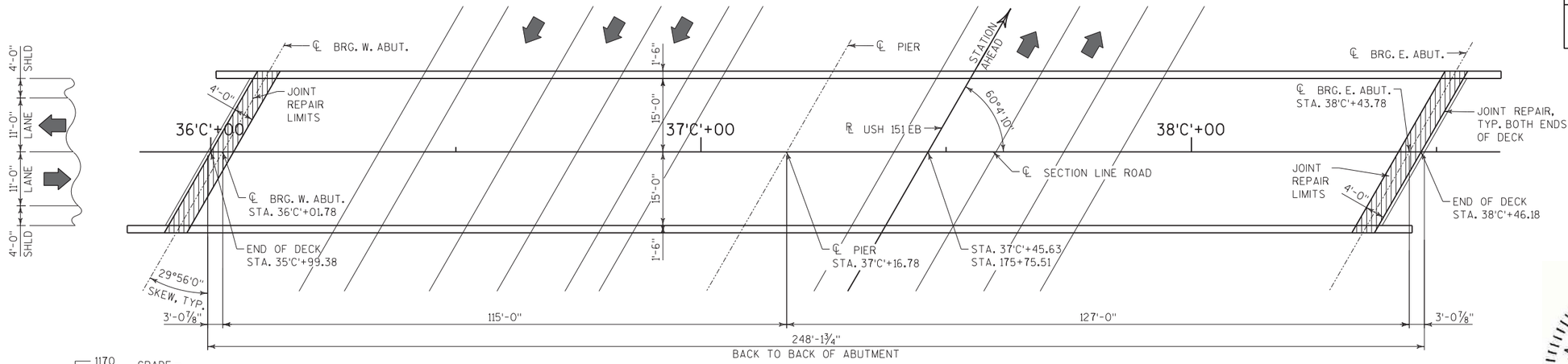
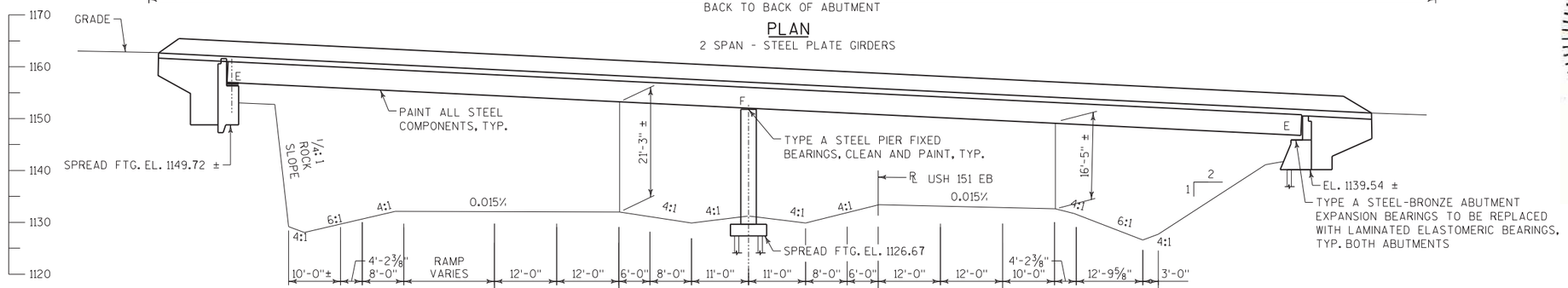


PLAN

2 SPAN - STEEL PLATE GIRDERS



ELEVATION

NORMAL TO USH 151

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS, ELEVATIONS, AND STATIONING SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE EXISTING STRUCTURE, B-25-23, IS A 2-SPAN STEEL GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 33'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 248'-1¾". THE ENTIRE SUPERSTRUCTURE SHALL BE PAINTED. THE EXPANSION JOINTS SHALL BE REPLACED. THE ABUTMENT BEARINGS SHALL BE REPLACED. THE PIER BEARINGS SHALL BE CLEANED AND PAINTED.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT.

CLEANING AND PAINTING OF BEARINGS AT THE PIER IS INCIDENTAL TO THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-25-23."

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK AND PAVING BLOCK AT THE JOINT REPAIR AREAS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO FRONT FACE AND TOP OF PARAPET IN SURFACES IN THE JOINT REPAIR AREAS.

GENERAL NOTES CONT'D

THE COLOR OF THE FINISH TOP COAT ON THE STEEL GIRDERS SHALL BE LIGHT GRAY. (FEDERAL COLOR NUMBER 26293.)

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

IF EXISTING BAR STEEL REINFORCEMENT IS SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY ANCHORED BARS OF THE SAME SIZE AT THE DIRECTION OF THE ENGINEER. EMBED 1'-6" INTO EXISTING CONCRETE.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNITS	QUANTITY
203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-25-23	LS	1
502.3100	EXPANSION DEVICE B-25-23	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	31
502.3210	PIGMENTED SURFACE SEALER	SY	8
502.4205	ADHESIVE ANCHORS NO. 5 BARS	EACH	72
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3850
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	8
506.7050.S	REMOVING BEARINGS, B-25-23	EACH	8
509.1000	JOINT REPAIR	SY	33
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-25-23	LS	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-25-23	LS	1
517.6001.S	PORTABLE DECOMTAMINATION FACILITY	EACH	1

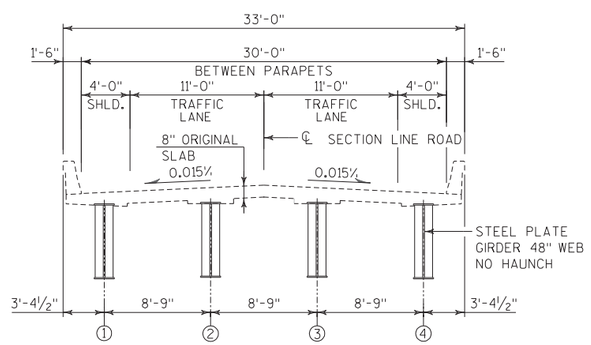
DESIGN DATA

EXISTING MATERIAL PROPERTIES:

BAR STEEL REINFORCMENT FY ——— 60,000 PSI

LIVE LOAD (FROM HSI):

DESIGN LOADING ——— HS-20
INVENTORY RATING ——— HS-19
OPERATIONAL RATING ——— HS-31
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) ——— 209 KIPS



CROSS-SECTION THRU ROADWAY

(LOOKING EAST)

LIST OF DRAWINGS

1. GENERAL PLAN
2. BEARING REPLACEMENT
3. REPLACEMENT JOINT DETAIL
4. COVER PLATE DETAILS
5. PARAPET DETAILS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
ANN THIELMANN (608) 229-1414

WISCONSIN PROFESSIONAL ENGINEER
ANN C. THIELMANN
E-42457
MADISON
WI
05/09/18

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daareorp.com
Madison, WI 53703
608-249-0140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SCR 05/21/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-23

SECTION LINE ROAD OVER USH 151

COUNTY	VILLAGE
IOWA	DODGEVILLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ACT	GBJ	ACT	GBJ

GENERAL PLAN

SHEET 1 OF 5

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5/9/2018

STATE PROJECT NUMBER
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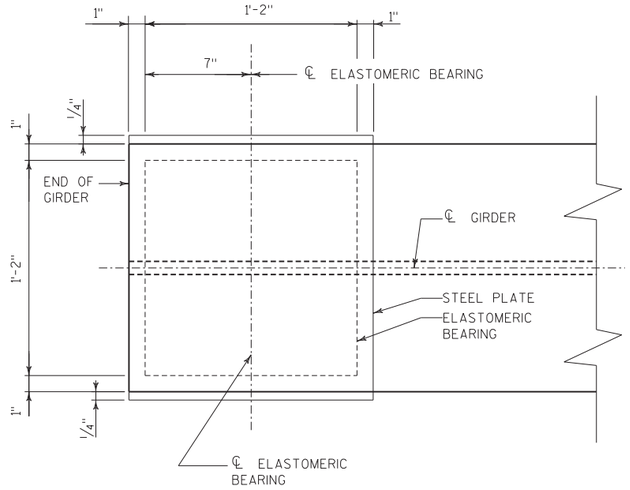
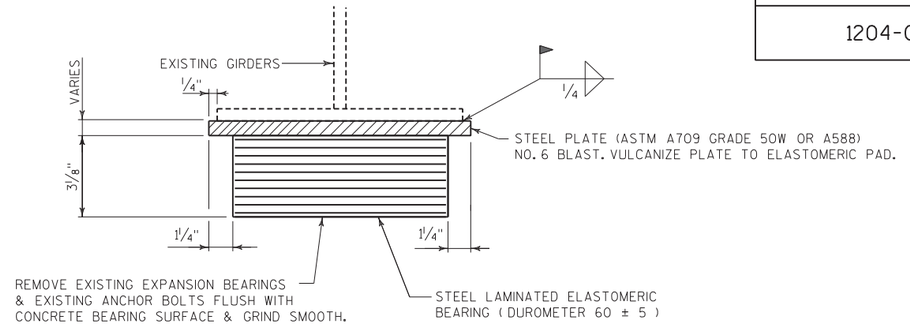


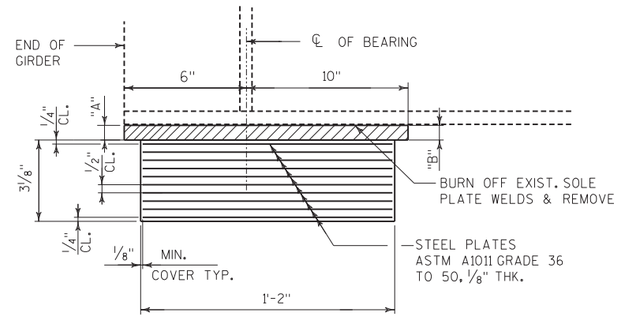
PLAN VIEW

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED."

GRIND EXIST. WELD THAT ATTACHED EXIST. TOP PLATE TO EXIST. BOT. FLANGE. GRIND AFFECTED AREAS SMOOTH.



FRONT ELEVATION



SECTION THRU ELASTOMERIC BEARING

TOP PLATE THICKNESS		
	W. ABUT.	E. ABUT.
A	1 3/8"	7/8"
B	3/4"	1 1/2"

EXPANSION BEARING REPLACEMENT - STEEL GIRDERS
ELASTOMERIC BEARINGS

NOTES:

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

ESTIMATED JACKING FORCES PER GIRDER LINE AT THE WEST ABUTMENT IS 45.5 KIPS AND 56.2 KIPS AT THE EAST ABUTMENT.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-23

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BEARING REPLACEMENT

SHEET 2 OF 5

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5/3/2018

STATE PROJECT NUMBER

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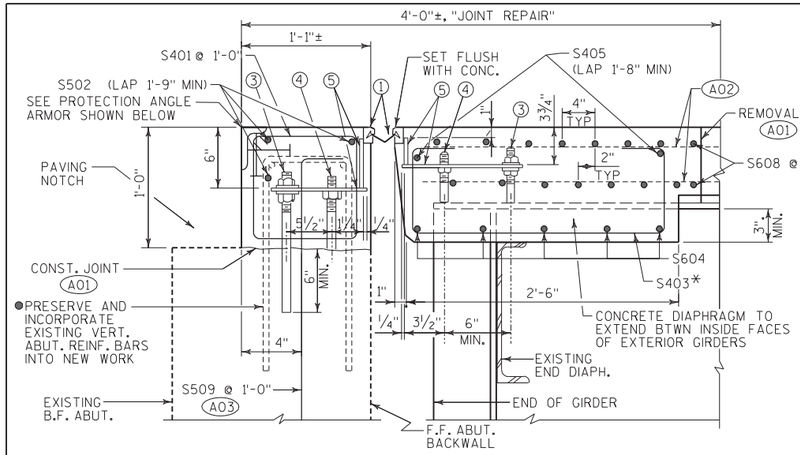
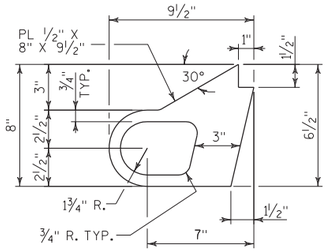


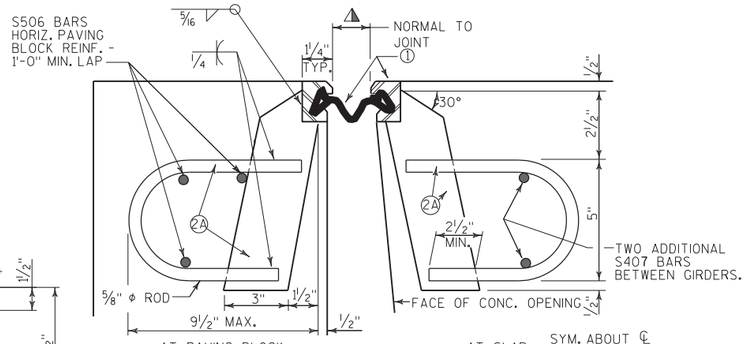
TYPICAL SECTION THRU JOINT

NORMAL TO ℄ SUBSTRUCTURE

* BARS PLACE PARALLEL TO GIRDERS.
SPACING PERPENDICULAR TO ℄ OF GIRDERS.
SPACING BTWN TOP FLANGE OF GIRDES.
12 SPA. @ 9" MAX = 8'-6¾" - BTWN GIRDERS 1 AND 4

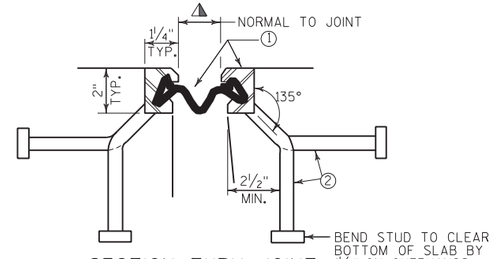


ALTERNATE STRIP SEAL ANCHOR



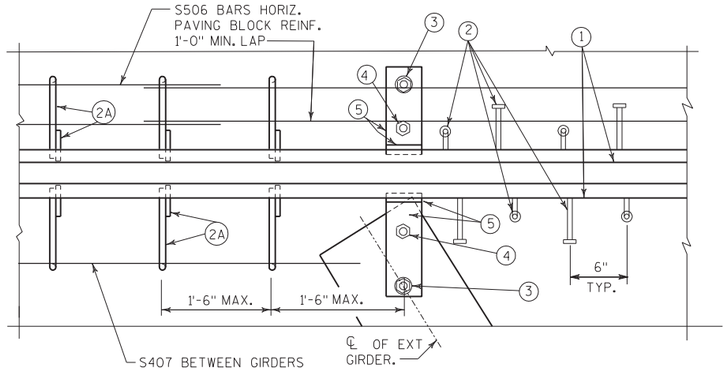
SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

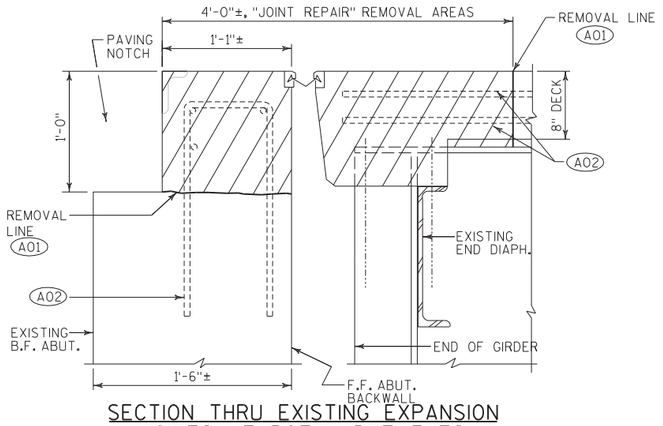


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS

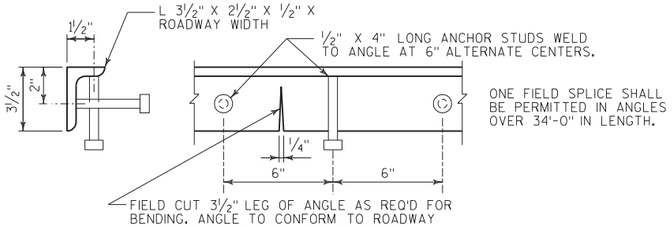


PART PLAN



SECTION THRU EXISTING EXPANSION JOINTS AT BOTH ABUTMENTS

(SHOWING CONCRETE REMOVAL AREAS)



PROTECTION ANGLE ARMOR

SANDBLAST PROTECTION ANGLE AFTER FABRICATION PER NOTES. AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.

⚠ TEMPERATURE TABLE

TEMPERATURE (°F)	JOINT OPENING (INCH)
90	1¼"
80	1 5/16"
70	1⅜"
60	1½"
50	1 9/16"
40	1 11/16"
30	1¾"

TEMP. IS THE SHADED UNDERSIDE DECK TEMP.

LEGEND

⚠ (1) NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING PER TEMPERATURE TABLE. JOINT OPENINGS GIVEN NORMAL TO JOINT.

(2) STUDS ⅝" ϕ x 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" ϕ THREADED ROD WITH 2 NUTS AND WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" x ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" ϕ HOLE FOR NO. 3 AND 1" ϕ HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" x 10½" x 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) ¾" ϕ x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾" ϕ x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾" ϕ x 2¼" GALVANIZED THREADED COUPLING.

(10) 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

(A01) ROUGHEN EXISTING CONCRETE ¼" MIN. EVERYWHERE NEW CONCRETE COMES INTO CONTACT WITH EXISTING CONCRETE.

(A02) SALVAGE EXITING REINFORCEMENT & EXTEND FULL LENGTH INTO NEW WORK.

(A03) ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" INTO CONCRETE. SPACED AT 1'-0" BETWEEN THE EXISTING REINFORCEMENT. TURN 10" LEG AS NECESSARY TO FIT.

SEE SHEET 4 FOR BILL OF BARS

NOTES

● EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY (A03) .

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. "6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-25-23".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-23

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REPLACMENT JOINT DETAIL

SHEET 3 OF 5

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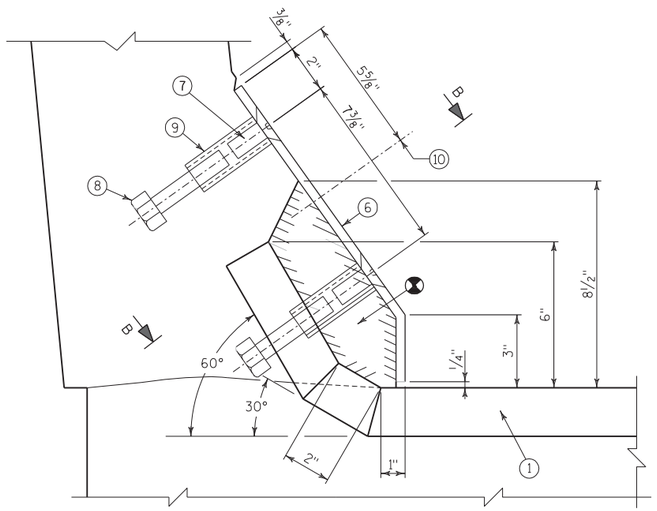
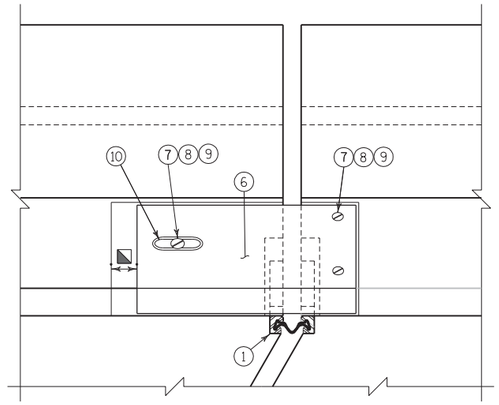
5/1/2018

STATE PROJECT NUMBER

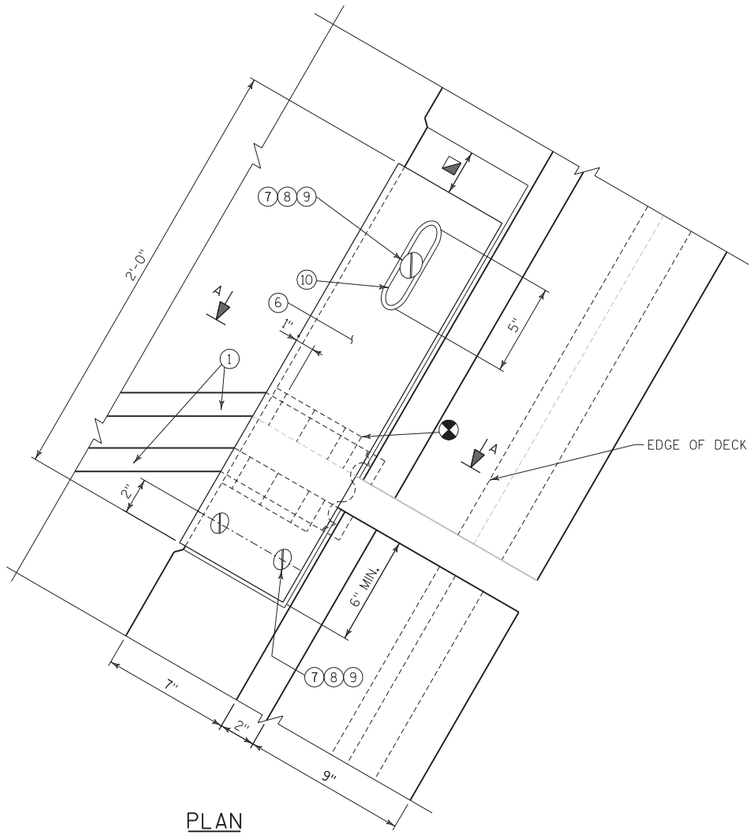
1204-04-77



SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



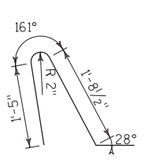
PLAN

SECTION B-B

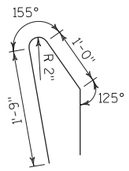
BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
ALL BAR STEEL REINFORCEMENT SHOWN IN THIS BILL SHALL BE EPOXY COATED.

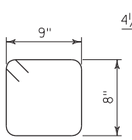
	MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
	S401	70	3'-4"	X	-	PAVING BLOCK - STIRRUP	VERTICAL
	S502	30	8'-4"	-	-	PAVING BLOCK	HORIZONTAL
	S403	78	4'-1"	X	-	DIAPHRAGM - STIRRUPS	VERTICAL
	S604	30	8'-6"	-	-	DIAPHRAGM - BETWEEN GIRDERS	HORIZONTAL
	S405	12	8'-6"	-	-	DIAPHRAGM	HORIZONTAL
	S506	30	7'-8"	-	-	PAVING BLOCK @ EXP. ASSEMBLY	HORIZONTAL
	S407	12	9'-4"	-	-	DIAPHRAGM @ EXP. ASSEMBLY	HORIZONTAL
	S608	64	20'-8"	-	-	TRANSVERSE DECK STEEL	HORIZONTAL
☆	S509	72	3'-3"	X	-	PAVING BLOCK - VERTICAL	VERTICAL
	S410	28	4'-10"	X	-	PARAPET	VERTICAL
	S411	20	4'-3"	X	-	PARAPET	VERTICAL
	S412	8	4'-4"	X	-	PARAPET	VERTICAL
	S513	16	11"	-	-	PARAPET	HORIZONTAL
	S514	16	2'-10"	-	-	PARAPET	HORIZONTAL



S411



S412



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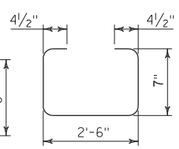
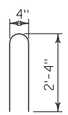


S403

S509



S410

NOTES & LEGEND

- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2"
  SEE SHEET 3 FOR ADDITIONAL NOTES
- ☆ ADHESIVE ANCHORS NO.5 BAR. EMBED 1'-6" IN CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-23

DRAWN BY ACT | PLANS CK'D. GBJ

COVER PLATE DETAILS

SHEET 4 OF 5

392

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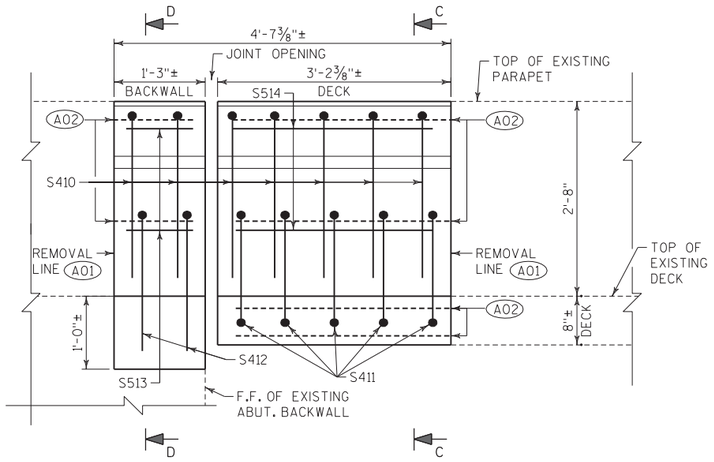
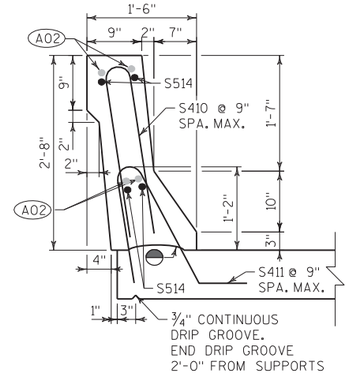
5/1/2018

STATE PROJECT NUMBER
1204-04-77

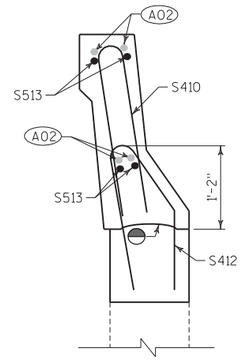


SECTION E-E

EXTERIOR FACE



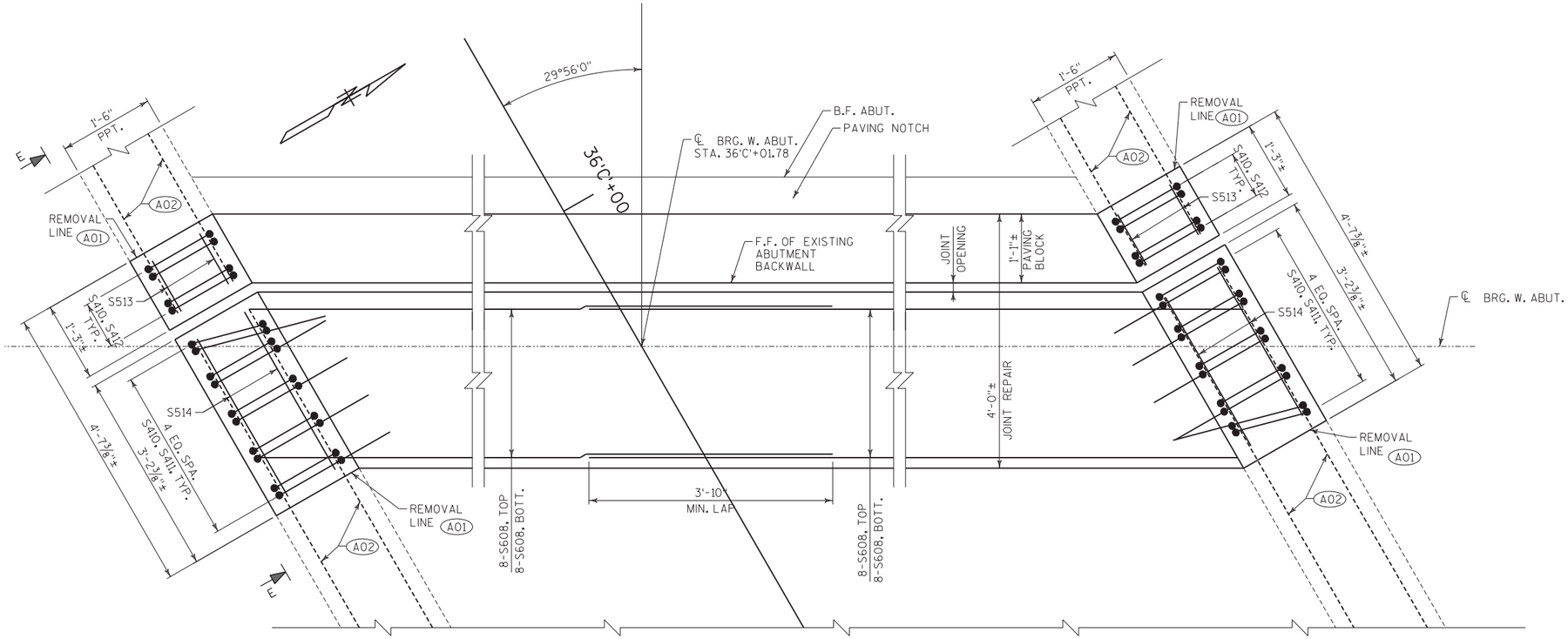
SECTION C-C



SECTION D-D

NOTES & LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- SEE SHEET 4 FOR BILL OF BARS
- SEE SHEET 3 & 4 FOR ADDITIONAL DETAILS.
- (A01) ROUGHEN EXISTING CONCRETE 1/4" MIN. EVERYWHERE NEW CONCRETE COMES INTO CONTACT WITH EXISTING CONCRETE.
- (A02) SALVAGE EXITING REINFORCEMENT & EXTEND FULL LENGTH INTO NEW WORK.



PLAN

WEST ABUTMENT SHOWN
EAST ABUTMENT SIMILAR

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-23

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PARAPET DETAILS

SHEET 5 OF 5

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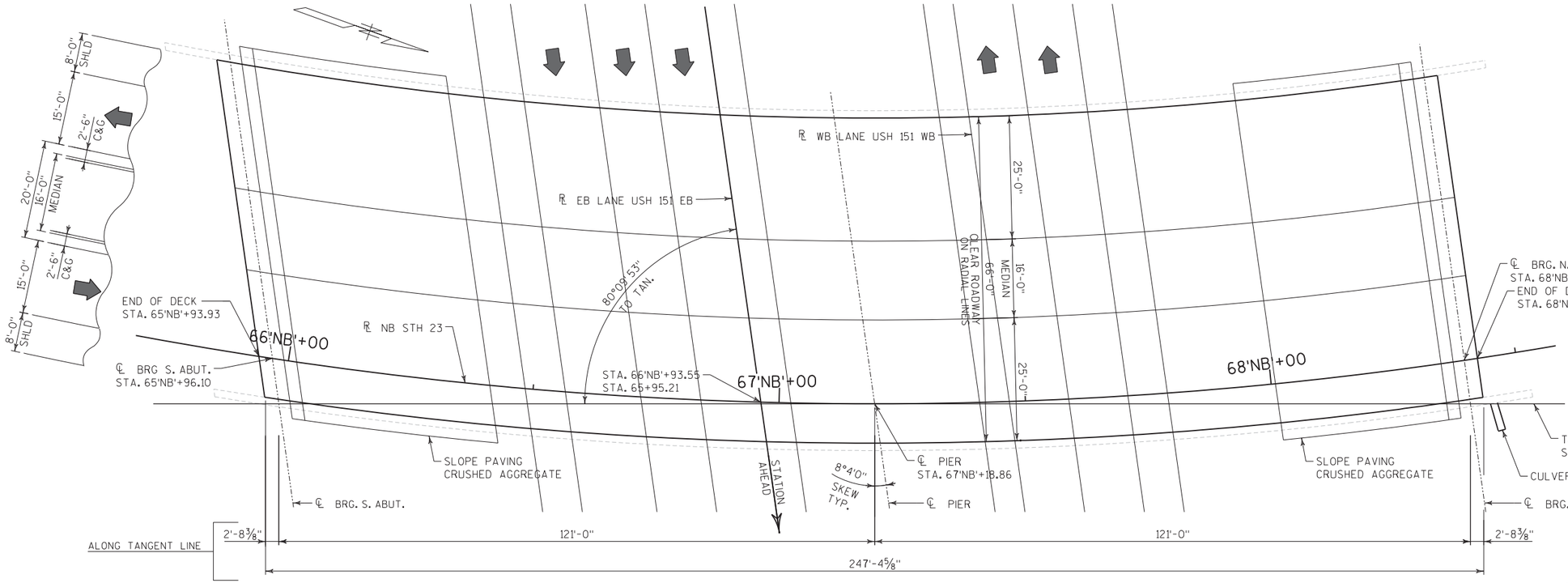
5/1/2018

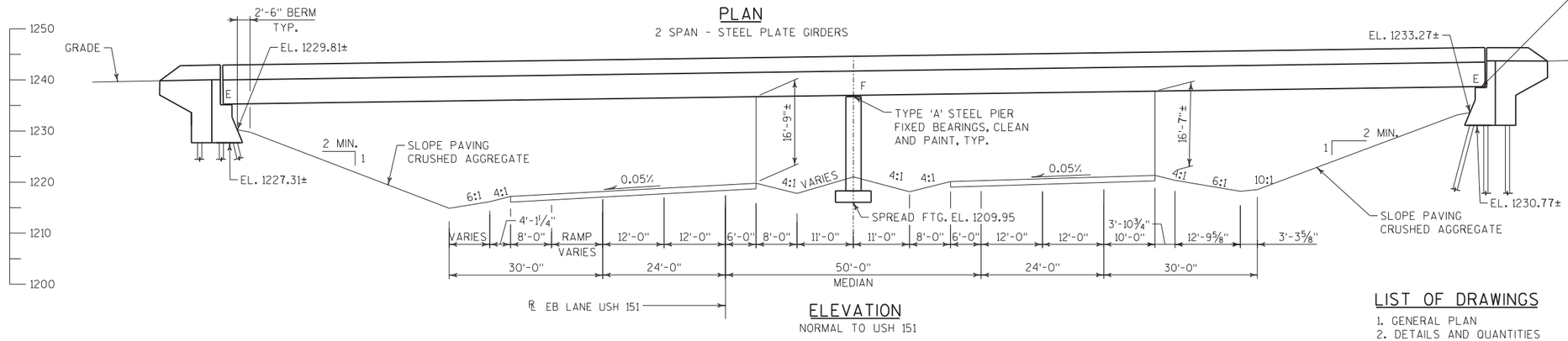
STATE PROJECT NUMBER

1204-04-77



PLAN

2 SPAN - STEEL PLATE GIRDERS



ELEVATION

NORMAL TO USH 151

DESIGN DATA

LIVE LOAD

INVENTORY RATING	HS-22 (TAKEN FROM HSI, 04/21/2005)
OPERATIONAL RATING	HS-37 (TAKEN FROM HSI, 04/21/2005)
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS (TAKEN FROM HSI, 04/21/2005)

MATERIAL PROPERTIES

CONCRETE MASONRY	f'c	4,000 PSI
BAR STEEL REINFORCMENT	fy	60,000 PSI

GENERAL NOTES AND LEGEND

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS, ELEVATIONS, AND STATIONING SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.

THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-25-24" INCLUDES THE CLEANING AND PAINTING OF THE PARTIAL PAINTING OF THE GIRDER ENDS.

CLEANING AND PAINTING OF BEARINGS AT THE PIER IS INCIDENTAL TO THE BID ITEM "STRUCTURE REPAINTING RECYCLED ABRASIVE B-25-24."

THE EXISTING STRUCTURE, B-25-24, IS A 2-SPAN STEEL GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 69'-0" AND AN OVERALL LENGTH BETWEEN BACK OF ABUTMENTS OF 247'-4 5/8" (MEASURED ALONG THE TANGENT LINE). THE ABUTMENT BEARINGS SHALL BE REPLACED. THE PIER BEARINGS SHALL BE CLEANED AND PAINTED. THE STRUCTURE SHALL BE PARTIALLY PAINTED AS DIRECTED BY THE FIELD ENGINEER.

PIGMENTED SURFACE SEALER TO BE APPLIED TO FRONT FACE AND TOP OF PARAPET IN SURFACES IN THE CONCRETE SURFACE REPAIR AREAS.

EXISITING STEEL SUPERSTRUCTURE SHALL BE PAINTED A COLOR TO MATCH THE EXISTING REDDISH/BROWN COLOR. (FEDERAL COLOR NUMBER 20152.)

ALL ERODED AREAS IN THE EXISTING SLOPES BELOW THE STRUCTURE SHALL BE REPAIRED BEFORE PLACING "SLOPE PAVING CRUSHED AGGREGATE". ALL REPAIRS TO THE EXISTING SLOPES SHALL BE INCIDENTAL TO THE BID ITEM "SLOPE PAVING CRUSHED AGGREGATE".

"CONCRETE SURFACE REPAIR" LOCATIONS ARE ANTICIPATED AT THE ABUTMENTS, PIERS AND THE UNDERSIDE OF THE DECK. LOCATIONS SHALL BE VERIFIED BY THE FIELD ENGINEER.

LIST OF DRAWINGS

1. GENERAL PLAN
2. DETAILS AND QUANTITIES

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER (608) 266-8489

CONSULTANT CONTACT:
ANN THIELMANN (608) 229-1414

WISCONSIN PROFESSIONAL ENGINEER
ANN C. THIELMANN
E-42457
MADISON
WI
05/14/18

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daareorp.com
Madison, WI 53703
608-249-0140

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/14/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-25-24

STH 23 OVER USH 151

COUNTY	VILLAGE
IOWA	DODGEVILLE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ACT	GBJ	ACT	GBJ

GENERAL PLAN

SHEET 1 OF 2

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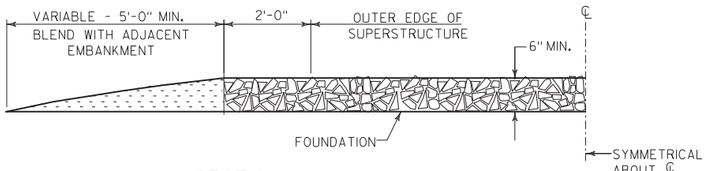
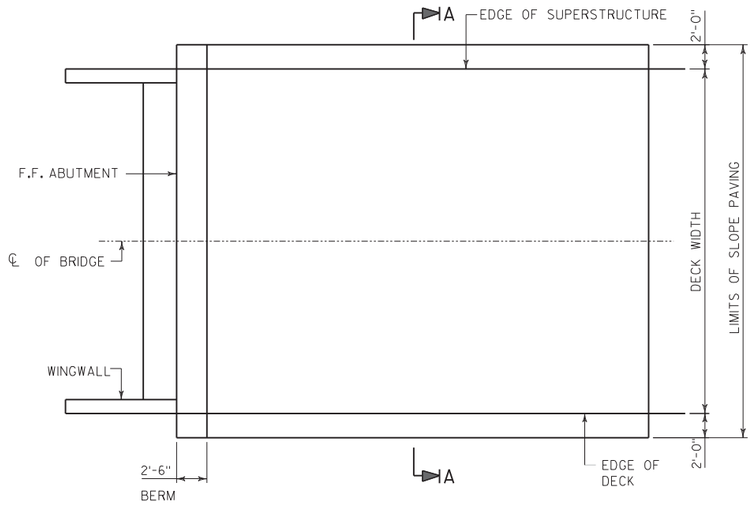
5/14/2018

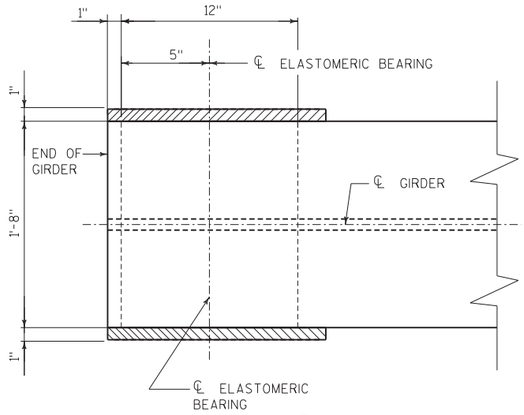
STATE PROJECT NUMBER
1204-04-77



SECTION A-A



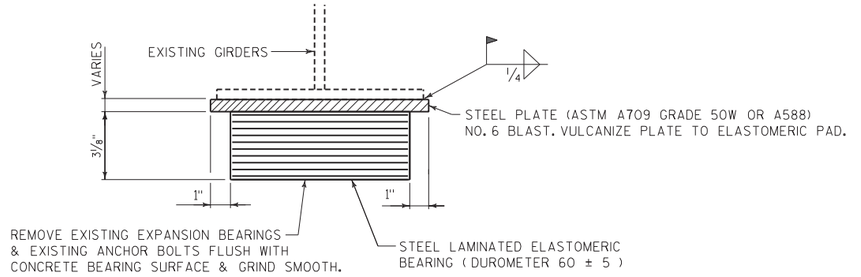
PLAN



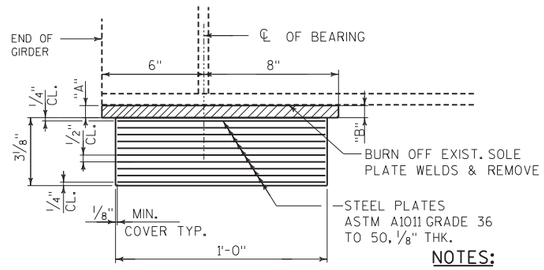
PLAN VIEW

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED."

GRIND EXIST. WELD THAT ATTACHED EXIST. TOP PLATE TO EXIST. BOT. FLANGE. GRIND AFFECTED AREAS SMOOTH.



FRONT ELEVATION



SECTION THRU ELASTOMERIC BEARING

TOP PLATE THICKNESS		
	S. ABUT.	N. ABUT.
A	1"	1 1/4"
B	1 1/4"	1"

NOTES:

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

ESTIMATED JACKING FORCES PER GIRDER LINE AT THE SOUTH ABUTMENT IS 61.25 KIPS AND 58.5 KIPS AT THE NORTH ABUTMENT.

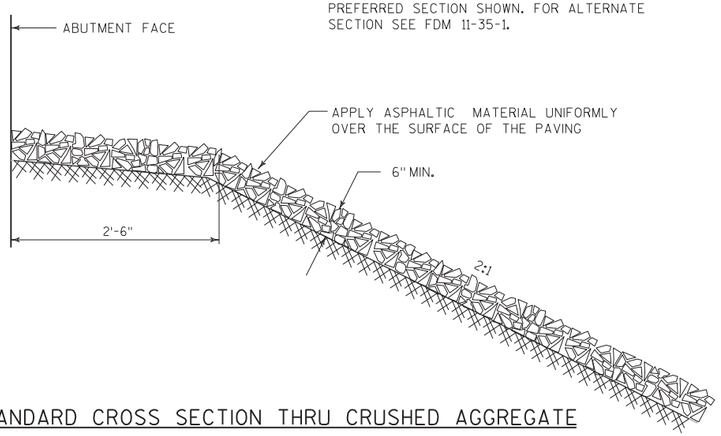
EXPANSION BEARING REPLACEMENT - STEEL GIRDERS ELASTOMERIC BEARINGS

GENERAL NOTES

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

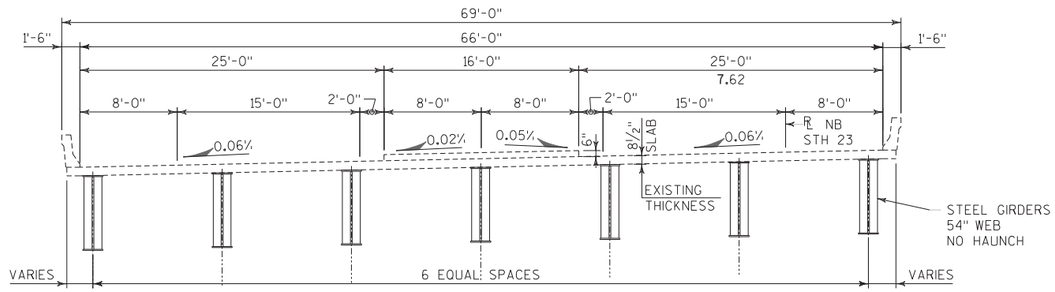
WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

PREFERRED SECTION SHOWN. FOR ALTERNATE SECTION SEE FDM 11-35-1.



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE

ROUND STONE WILL NOT BE ACCEPTED.



CROSS-SECTION THRU ROADWAY

(LOOKING NORTH)

TOTAL ESTIMATED QUANTITIES

	BID ITEM NO.	BID ITEMS	UNIT	TOTAL
	506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	14
	506.7050.S	REMOVING BEARINGS, B-25-24	EACH	14
*	509.1500	CONCRETE SURFACE REPAIR	SF	167
	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-25-24	LS	1
	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-25-24	LS	1
	517.6001.S	PORTABLE DECOMTAMINATION FACILITY	EACH	1
	520.8700	CLEANING CULVERT PIPES	EACH	1
	604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	729

* QUANTITY IS FOR ESTIMATING PURPOSES ONLY. COORDINATE FINAL QUANTITY WITH ENGINEER IN THE FIELD. TOTAL QUANTITY NOT TO EXCEED PLAN QUANTITY WITHOUT APPROVAL OF THE ENGINEER. SEE GENERAL NOTES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-25-24

DRAWN BY ACT | PLANS CK'D. GBJ

DETAILS & QUANTITIES

SHEET 2 OF 2

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5/14/2018

STAGE 1

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
CROSSOVER V											
176+83	17683.00	0.00	16.75	1.00	0.00	0	0	0	0	0	0
177+00	17700.00	17.00	17.25	1.10	0.00	11	1	0	11	1	0
178+00	17800.00	100.00	20.10	4.90	0.00	69	11	0	80	12	0
179+00	17900.00	100.00	22.30	4.15	0.00	79	17	0	158	29	0
180+00	18000.00	100.00	21.80	4.10	0.00	82	15	0	240	44	0
181+00	18100.00	100.00	21.15	4.00	0.00	80	15	0	320	59	0
182+00	18200.00	100.00	22.60	7.10	0.00	81	21	0	401	79	0
183+00	18300.00	100.00	22.00	9.50	0.00	83	31	0	483	110	0
184+00	18400.00	100.00	43.90	6.25	0.00	122	29	0	605	139	0
185+00	18500.00	100.00	20.50	14.45	0.00	119	38	0	725	178	0
186+00	18600.00	100.00	23.35	2.80	0.00	81	32	0	806	210	0
186+73	18673.00	73.00	17.00	0.00	0.00	55	4	0	860	213	0
						CROSSOVER V SUBTOTAL:			**860**	**213**	**0**
CROSSOVER W											
66+50	6650.00	0.00	5.90	0.00	0.00	0	0	0	0	0	0
67+00	6700.00	50.00	6.50	0.00	0.00	11	0	0	11	0	0
68+00	6800.00	100.00	16.80	0.16	0.00	43	0	0	55	0	0
69+00	6900.00	100.00	23.30	11.44	0.00	74	21	0	129	22	0
70+00	7000.00	100.00	49.10	5.06	0.00	134	31	0	263	52	0
71+00	7100.00	100.00	24.70	8.60	0.00	137	25	0	400	78	0
72+00	7200.00	100.00	20.65	7.65	0.00	84	30	0	484	108	0
73+00	7300.00	100.00	21.14	5.81	0.00	77	25	0	561	133	0
74+00	7400.00	100.00	23.00	3.54	0.00	82	17	0	643	150	0
75+00	7500.00	100.00	20.97	1.70	0.00	81	10	0	724	160	0
76+00	7600.00	100.00	18.75	0.27	0.00	74	4	0	798	163	0
77+00	7700.00	100.00	16.30	0.00	0.00	65	0	0	863	164	0
77+50	7750.00	50.00	13.40	0.00	0.00	28	0	0	890	164	0
						CROSSOVER W SUBTOTAL:			**890**	**164**	**0**
CROSSOVER X											
78+26.1	7826.10	0.00	0.03	0.00	0.00	0	0	0	0	0	0
79+00	7900.00	73.90	25.95	5.84	0.00	36	8	0	36	8	0
80+00	8000.00	100.00	31.10	7.67	0.00	106	25	0	141	33	0
81+00	8100.00	100.00	69.90	0.00	0.00	187	14	0	328	47	0
82+00	8200.00	100.00	34.90	0.20	0.00	194	0	0	522	48	0
83+00	8300.00	100.00	30.20	4.91	0.00	121	9	0	643	57	0
84+00	8400.00	100.00	27.50	4.28	0.00	107	17	0	750	74	0
85+00	8500.00	100.00	23.90	4.66	0.00	95	17	0	845	91	0
86+00	8600.00	100.00	24.60	3.74	0.00	90	16	0	935	106	0
87+00	8700.00	100.00	18.40	0.63	0.00	80	8	0	1,014	114	0
87+23.76	8723.76	23.76	16.10	0.00	0.00	15	0	0	1,030	115	0
						CROSSOVER X SUBTOTAL:			**1,030**	**115**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 1

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
CROSSOVER Y											
234+68.32	23468.32	0.00	13.40	0.00	0.00	0	0	0	0	0	0
235+00	23500.00	31.68	17.90	0.01	0.00	18	0	0	18	0	0
236+00	23600.00	100.00	19.40	0.61	0.00	69	1	0	87	1	0
237+00	23700.00	100.00	19.50	3.15	0.00	72	7	0	159	8	0
238+00	23800.00	100.00	20.00	5.01	0.00	73	15	0	233	23	0
239+00	23900.00	100.00	24.40	2.52	0.00	82	14	0	315	37	0
240+00	24000.00	100.00	26.30	0.55	0.00	94	6	0	409	43	0
240+50	24050.00	50.00	0.00	0.00	0.00	24	1	0	433	43	0
241+00	24100.00	50.00	28.30	3.39	0.00	26	3	0	459	46	0
242+00	24200.00	100.00	43.40	10.08	0.00	133	25	0	592	71	0
243+00	24300.00	100.00	44.25	14.22	0.00	162	45	0	754	116	0
244+00	24400.00	100.00	42.55	15.13	0.00	161	54	0	915	171	0
245+00	24500.00	100.00	46.65	9.01	0.00	165	45	0	1,080	215	0
246+00	24600.00	100.00	46.10	7.29	0.00	172	30	0	1,252	246	0
247+00	24700.00	100.00	44.10	9.84	0.00	167	32	0	1,419	277	0
248+00	24800.00	100.00	23.75	4.55	0.00	126	27	0	1,545	304	0
249+00	24900.00	100.00	0.00	0.00	0.00	44	8	0	1,589	312	0
249+50	24950.00	50.00	0.00	0.00	0.00	0	0	0	1,589	312	0
250+00	25000.00	50.00	22.25	1.99	0.00	21	2	0	1,609	314	0
251+00	25100.00	100.00	22.75	1.75	0.00	83	7	0	1,693	321	0
252+00	25200.00	100.00	21.25	0.51	0.00	81	4	0	1,774	325	0
253+00	25300.00	100.00	19.50	0.44	0.00	75	2	0	1,850	327	0
254+00	25400.00	100.00	16.80	0.27	0.00	67	1	0	1,917	328	0
254+44.04	25444.04	44.04	11.25	0.00	0.00	23	0	0	1,940	329	0
					CROSSOVER Y SUBTOTAL:				**1,940**	**329**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

CONTINUED NEXT PAGE

STAGE 1

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
CROSSOVER Z											
02+00.14	200.14	0.00	25.80	0.00	0.00	0	0	0	0	0	0
03+00	300.00	99.86	26.80	0.00	0.00	97	0	0	97	0	0
04+00	400.00	100.00	40.30	0.00	0.00	124	0	0	222	0	0
05+00	500.00	100.00	47.50	0.60	0.00	163	1	0	384	1	0
06+00	600.00	100.00	54.90	5.30	0.00	190	11	0	574	12	0
07+00	700.00	100.00	60.55	13.10	0.00	214	34	0	788	46	0
08+00	800.00	100.00	57.65	9.20	0.00	219	41	0	1,006	87	0
09+00	900.00	100.00	55.50	11.90	0.00	210	39	0	1,216	126	0
10+00	1000.00	100.00	61.25	6.40	0.00	216	34	0	1,432	160	0
11+00	1100.00	100.00	66.85	2.80	0.00	237	17	0	1,669	177	0
12+00	1200.00	100.00	67.00	4.70	0.00	248	14	0	1,917	191	0
13+00	1300.00	100.00	55.75	6.30	0.00	227	20	0	2,145	212	0
14+00	1400.00	100.00	48.00	1.25	0.00	192	14	0	2,337	226	0
15+00	1500.00	100.00	42.90	0.10	0.00	168	3	0	2,505	228	0
16+00	1600.00	100.00	39.50	0.20	0.00	153	1	0	2,658	229	0
17+00	1700.00	100.00	35.70	0.30	0.00	139	1	0	2,797	230	0
18+00	1800.00	100.00	21.00	0.00	0.00	105	1	0	2,902	230	0
19+00	1900.00	100.00	16.50	0.00	0.00	69	0	0	2,971	230	0
20+00	2000.00	100.00	13.50	0.00	0.00	56	0	0	3,027	230	0
21+00	2100.00	100.00	9.20	0.00	0.00	42	0	0	3,069	230	0
21+04.4	2104.40	4.40	9.00	0.00	0.00	1	0	0	3,070	230	0
					CROSSOVER Z SUBTOTAL:				**3,070**	**230**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

					STAGE 1 TOTAL:				**7,790**	**1,051**	**0**

STAGE 2

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 151 SB											
63+48	6348.00	0.00	52.38	0.00	0.00	0	0	0	0	0	0
64+00	6400.00	52.00	49.10	0.06	0.00	98	0	0	98	0	0
65+00	6500.00	100.00	51.80	0.00	0.00	187	0	0	285	0	0
66+00	6600.00	100.00	0.00	0.00	0.00	96	0	0	381	0	0
67+00	6700.00	100.00	76.90	0.00	0.00	142	0	0	523	0	0
68+00	6800.00	100.00	70.00	0.00	0.00	272	0	0	795	0	0
69+00	6900.00	100.00	61.50	0.00	0.00	244	0	0	1,038	0	0
70+00	7000.00	100.00	55.56	0.00	0.00	217	0	0	1,255	0	0
71+00	7100.00	100.00	55.68	0.00	0.00	206	0	0	1,461	0	0
72+00	7200.00	100.00	51.14	0.00	0.00	198	0	0	1,659	0	0
73+00	7300.00	100.00	50.90	0.00	0.00	189	0	0	1,848	0	0
74+00	7400.00	100.00	50.46	0.00	0.00	188	0	0	2,036	0	0
75+00	7500.00	100.00	51.16	0.00	0.00	188	0	0	2,224	0	0
76+00	7600.00	100.00	37.46	0.00	0.00	164	0	0	2,388	0	0
77+00	7700.00	100.00	35.11	0.00	0.00	134	0	0	2,522	0	0
78+00	7800.00	100.00	27.97	0.00	0.00	117	0	0	2,639	0	0
79+00	7900.00	100.00	40.80	0.00	0.00	127	0	0	2,767	0	0
80+00	8000.00	100.00	44.90	0.00	0.00	159	0	0	2,925	0	0
81+00	8100.00	100.00	42.10	0.00	0.00	161	0	0	3,086	0	0
82+00	8200.00	100.00	44.80	0.00	0.00	161	0	0	3,247	0	0
83+00	8300.00	100.00	44.40	0.00	0.00	165	0	0	3,413	0	0
84+00	8400.00	100.00	65.19	0.00	0.00	203	0	0	3,615	0	0
85+00	8500.00	100.00	63.11	0.00	0.00	238	0	0	3,853	0	0
86+00	8600.00	100.00	65.08	0.00	0.00	237	0	0	4,090	0	0
87+00	8700.00	100.00	62.30	0.01	0.00	236	0	0	4,326	0	0
88+00	8800.00	100.00	71.72	0.00	0.00	248	0	0	4,575	0	0
89+00	8900.00	100.00	102.78	0.37	0.00	323	1	0	4,898	1	0
90+00	9000.00	100.00	67.87	0.00	0.00	316	1	0	5,214	2	0
91+00	9100.00	100.00	50.73	4.91	0.00	220	9	0	5,433	11	0
92+00	9200.00	100.00	51.08	2.00	0.00	189	13	0	5,622	23	0
93+00	9300.00	100.00	54.86	3.32	0.00	196	10	0	5,818	33	0
94+00	9400.00	100.00	62.15	3.40	0.00	217	12	0	6,035	46	0
95+00	9500.00	100.00	60.70	2.29	0.00	228	11	0	6,262	56	0
96+00	9600.00	100.00	59.78	2.63	0.00	223	9	0	6,485	65	0
97+00	9700.00	100.00	67.11	3.06	0.00	235	11	0	6,720	76	0
98+00	9800.00	100.00	62.69	1.08	0.00	240	8	0	6,961	84	0
99+00	9900.00	100.00	73.31	1.28	0.00	252	4	0	7,213	88	0
100+00	10000.00	100.00	68.05	0.90	0.00	262	4	0	7,474	92	0
101+00	10100.00	100.00	69.35	0.00	0.00	254	2	0	7,729	94	0
102+00	10200.00	100.00	67.00	0.00	0.00	253	0	0	7,981	94	0
103+00	10300.00	100.00	64.36	0.00	0.00	243	0	0	8,225	94	0
104+00	10400.00	100.00	53.75	0.00	0.00	219	0	0	8,443	94	0
105+00	10500.00	100.00	58.77	0.00	0.00	208	0	0	8,652	94	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 2

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Cumulative Vol (CY) EBS
									1.00	1.00	1.00
USH 151 SB											
106+00	10600.00	100.00	54.20	0.00	0.00	209	0	0	8,861	94	0
107+00	10700.00	100.00	43.47	0.00	0.00	181	0	0	9,042	94	0
108+00	10800.00	100.00	43.96	0.00	0.00	162	0	0	9,204	94	0
109+00	10900.00	100.00	43.88	0.00	0.00	163	0	0	9,366	94	0
110+00	11000.00	100.00	45.53	0.00	0.00	166	0	0	9,532	94	0
111+00	11100.00	100.00	46.90	2.85	0.00	171	5	0	9,703	99	0
112+00	11200.00	100.00	48.90	6.53	0.00	177	17	0	9,880	116	0
113+00	11300.00	100.00	54.25	0.39	0.00	191	13	0	10,071	129	0
113+20.02	11320.02	20.02	48.49	0.26	0.00	38	0	0	10,110	129	0
						USH 51 SB SUBTOTAL:			**10,110**	**129**	**0**
RAMP C											
70+68.1	7068.10	0.00	68.70	0.00	0.00	0	0	0	0	0	0
71+00	7100.00	31.90	59.11	0.00	0.00	75	0	0	75	0	0
72+00	7200.00	100.00	39.59	0.00	0.00	183	0	0	258	0	0
73+00	7300.00	100.00	37.54	0.00	0.00	143	0	0	401	0	0
74+00	7400.00	100.00	31.83	0.00	0.00	128	0	0	530	0	0
75+00	7500.00	100.00	40.69	0.00	0.00	134	0	0	664	0	0
76+00	7600.00	100.00	40.00	0.00	0.00	149	0	0	813	0	0
77+00	7700.00	100.00	40.14	0.00	0.00	148	0	0	962	0	0
78+00	7800.00	100.00	41.38	0.00	0.00	151	0	0	1,113	0	0
79+00	7900.00	100.00	39.72	0.09	0.00	150	0	0	1,263	0	0
80+00	8000.00	100.00	42.80	0.00	0.00	153	0	0	1,416	0	0
81+00	8100.00	100.00	30.60	0.00	0.00	136	0	0	1,552	0	0
82+00	8200.00	100.00	32.11	1.01	0.00	116	2	0	1,668	2	0
83+00	8300.00	100.00	23.93	1.05	0.00	104	4	0	1,771	6	0
84+00	8400.00	100.00	20.51	1.01	0.00	82	4	0	1,854	10	0
85+00	8500.00	100.00	24.71	0.00	0.00	84	2	0	1,938	12	0
86+00	8600.00	100.00	24.51	0.00	0.00	91	0	0	2,029	12	0
87+00	8700.00	100.00	24.63	0.00	0.00	91	0	0	2,120	12	0
88+00	8800.00	100.00	22.68	0.00	0.00	88	0	0	2,207	12	0
88+37.76	8837.76	37.76	23.43	0.00	0.00	32	0	0	2,240	12	0
						RAMP C SUBTOTAL:			**2,240**	**12**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

STAGE 2 TOTAL:	**12,349**	**141**	**0**

STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 18 EB											
171+40	17140.00	0.00	54.10	0.00	0.00	0	0	0	0	0	0
172+00	17200.00	60.00	51.24	0.00	0.00	117	0	0	117	0	0
173+00	17300.00	100.00	35.83	0.00	0.00	161	0	0	278	0	0
174+00	17400.00	100.00	32.27	0.00	0.00	126	0	0	404	0	0
175+00	17500.00	100.00	34.04	0.00	0.00	123	0	0	527	0	0
176+00	17600.00	100.00	31.76	0.00	0.00	122	0	0	649	0	0
177+00	17700.00	100.00	29.11	0.00	0.00	113	0	0	762	0	0
178+00	17800.00	100.00	27.62	0.00	0.00	105	0	0	867	0	0
179+00	17900.00	100.00	37.48	0.00	0.00	121	0	0	987	0	0
180+00	18000.00	100.00	41.87	0.25	0.00	147	0	0	1,134	0	0
181+00	18100.00	100.00	47.47	0.00	0.00	165	0	0	1,300	1	0
182+00	18200.00	100.00	44.80	0.00	0.00	171	0	0	1,471	1	0
183+00	18300.00	100.00	45.36	0.00	0.00	167	0	0	1,638	1	0
184+00	18400.00	100.00	45.46	0.00	0.00	168	0	0	1,806	1	0
185+00	18500.00	100.00	44.75	0.00	0.00	167	0	0	1,973	1	0
186+00	18600.00	100.00	42.29	0.00	0.00	161	0	0	2,134	1	0
187+00	18700.00	100.00	42.50	2.56	0.00	157	5	0	2,291	6	0
188+00	18800.00	100.00	36.18	10.46	0.00	146	24	0	2,437	30	0
189+00	18900.00	100.00	39.79	0.79	0.00	141	21	0	2,577	51	0
190+00	19000.00	100.00	43.77	1.45	0.00	155	4	0	2,732	55	0
190+43.52	19043.52	43.52	49.38	0.29	0.00	75	1	0	2,807	56	0
191+00	19100.00	56.48	0.00	0.00	0.00	52	0	0	2,859	56	0
192+00	19200.00	100.00	0.00	0.00	0.00	0	0	0	2,859	56	0
192+95.79	19295.79	95.79	51.90	0.12	0.00	92	0	0	2,951	57	0
193+00	19300.00	4.21	52.24	0.13	0.00	8	0	0	2,959	57	0
194+00	19400.00	100.00	49.91	0.06	0.00	189	0	0	3,148	57	0
195+00	19500.00	100.00	46.45	0.20	0.00	178	0	0	3,327	58	0
196+00	19600.00	100.00	39.90	5.02	0.00	160	10	0	3,487	67	0
197+00	19700.00	100.00	37.85	2.92	0.00	144	15	0	3,631	82	0
198+00	19800.00	100.00	42.35	4.10	0.00	149	13	0	3,779	95	0
199+00	19900.00	100.00	44.48	3.80	0.00	161	15	0	3,940	109	0
200+00	20000.00	100.00	49.07	0.32	0.00	173	8	0	4,113	117	0
201+00	20100.00	100.00	48.20	1.52	0.00	180	3	0	4,293	121	0
202+00	20200.00	100.00	52.71	5.09	0.00	187	12	0	4,480	133	0
203+00	20300.00	100.00	54.35	2.00	0.00	198	13	0	4,678	146	0
204+00	20400.00	100.00	53.68	0.71	0.00	200	5	0	4,878	151	0
205+00	20500.00	100.00	64.72	0.81	0.00	219	3	0	5,098	154	0
205+57.87	20557.87	57.87	49.84	0.89	0.00	123	2	0	5,220	156	0
						USH 18 EB SUBTOTAL:			**5,220**	**156**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 18 WB											
171+04	17104.00	0.00	45.30	0.00	0.00	0	0	0	0	0	0
172+00	17200.00	96.00	44.89	0.00	0.00	160	0	0	160	0	0
173+00	17300.00	100.00	46.58	0.00	0.00	169	0	0	330	0	0
174+00	17400.00	100.00	46.90	0.00	0.00	173	0	0	503	0	0
175+00	17500.00	100.00	41.99	0.00	0.00	165	0	0	667	0	0
176+00	17600.00	100.00	40.30	0.00	0.00	152	0	0	820	0	0
177+00	17700.00	100.00	37.65	0.00	0.00	144	0	0	964	0	0
178+00	17800.00	100.00	41.59	0.00	0.00	147	0	0	1,111	0	0
179+00	17900.00	100.00	19.78	0.00	0.00	114	0	0	1,225	0	0
180+00	18000.00	100.00	20.40	0.00	0.00	74	0	0	1,299	0	0
181+00	18100.00	100.00	19.20	0.00	0.00	73	0	0	1,372	0	0
182+00	18200.00	100.00	17.47	0.00	0.00	68	0	0	1,440	0	0
183+00	18300.00	100.00	20.94	0.40	0.00	71	1	0	1,511	1	0
184+00	18400.00	100.00	19.41	0.80	0.00	75	2	0	1,586	3	0
185+00	18500.00	100.00	15.88	0.80	0.00	65	3	0	1,651	6	0
186+00	18600.00	100.00	19.60	0.44	0.00	66	2	0	1,717	8	0
187+00	18700.00	100.00	29.05	0.00	0.00	90	1	0	1,807	9	0
188+00	18800.00	100.00	31.25	0.00	0.00	112	0	0	1,919	9	0
189+00	18900.00	100.00	35.53	0.01	0.00	124	0	0	2,043	9	0
189+04.65	18904.65	4.65	0.00	0.00	0.00	3	0	0	2,046	9	0
190+00	19000.00	95.35	0.00	0.00	0.00	0	0	0	2,046	9	0
191+00	19100.00	100.00	0.00	0.00	0.00	0	0	0	2,046	9	0
191+44.01	19144.01	44.01	0.00	0.00	0.00	0	0	0	2,046	9	0
191+56.36	19156.36	12.35	46.95	4.75	0.00	11	1	0	2,056	10	0
192+00	19200.00	43.64	31.27	6.58	0.00	63	9	0	2,120	19	0
193+00	19300.00	100.00	26.99	2.59	0.00	108	17	0	2,227	36	0
194+00	19400.00	100.00	27.47	0.68	0.00	101	6	0	2,328	42	0
195+00	19500.00	100.00	23.34	1.42	0.00	94	4	0	2,422	46	0
196+00	19600.00	100.00	27.59	23.31	0.00	94	46	0	2,517	92	0
197+00	19700.00	100.00	26.93	2.92	0.00	101	49	0	2,618	141	0
198+00	19800.00	100.00	24.51	1.05	0.00	95	7	0	2,713	148	0
199+00	19900.00	100.00	22.61	16.07	0.00	87	32	0	2,800	180	0
200+00	20000.00	100.00	32.81	0.04	0.00	103	30	0	2,903	209	0
201+00	20100.00	100.00	35.59	0.00	0.00	127	0	0	3,030	210	0
201+16.45	20116.45	16.45	0.00	0.00	0.00	11	0	0	3,040	210	0
						USH 18 WB SUBTOTAL:			**3,040**	**210**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 151 SB											
115+18.42	11518.42	0.00	56.60	2.70	0.00	0	0	0	0	0	0
116+00	11600.00	81.58	54.60	0.00	0.00	168	4	0	168	4	0
117+00	11700.00	100.00	53.10	0.00	0.00	199	0	0	367	4	0
118+00	11800.00	100.00	50.60	2.20	0.00	192	4	0	559	8	0
119+00	11900.00	100.00	43.60	5.70	0.00	174	15	0	734	23	0
120+00	12000.00	100.00	45.00	0.34	0.00	164	11	0	898	34	0
121+00	12100.00	100.00	41.80	1.00	0.00	161	2	0	1,059	36	0
122+00	12200.00	100.00	44.30	1.00	0.00	159	4	0	1,218	40	0
123+00	12300.00	100.00	41.50	2.25	0.00	159	6	0	1,377	46	0
124+00	12400.00	100.00	45.10	0.00	0.00	160	4	0	1,537	50	0
125+00	12500.00	100.00	46.20	0.00	0.00	169	0	0	1,707	50	0
126+00	12600.00	100.00	46.40	0.00	0.00	171	0	0	1,878	50	0
127+00	12700.00	100.00	52.50	0.00	0.00	183	0	0	2,061	50	0
128+00	12800.00	100.00	46.50	0.00	0.00	183	0	0	2,244	50	0
129+00	12900.00	100.00	46.50	0.00	0.00	172	0	0	2,417	50	0
130+00	13000.00	100.00	49.80	0.00	0.00	178	0	0	2,595	50	0
131+00	13100.00	100.00	43.50	0.00	0.00	173	0	0	2,768	50	0
132+00	13200.00	100.00	47.10	0.00	0.00	168	0	0	2,936	50	0
133+00	13300.00	100.00	48.70	0.00	0.00	177	0	0	3,113	50	0
134+00	13400.00	100.00	49.30	0.00	0.00	181	0	0	3,294	50	0
135+00	13500.00	100.00	55.00	0.00	0.00	193	0	0	3,488	50	0
136+00	13600.00	100.00	50.90	0.00	0.00	196	0	0	3,684	50	0
137+00	13700.00	100.00	50.60	0.00	0.00	188	0	0	3,872	50	0
138+00	13800.00	100.00	52.85	0.00	0.00	192	0	0	4,063	50	0
139+00	13900.00	100.00	49.73	0.00	0.00	190	0	0	4,253	50	0
140+00	14000.00	100.00	49.60	0.00	0.00	184	0	0	4,437	50	0
141+00	14100.00	100.00	53.74	0.00	0.00	191	0	0	4,629	50	0
142+00	14200.00	100.00	54.77	0.00	0.00	201	0	0	4,830	50	0
143+00	14300.00	100.00	52.10	0.00	0.00	198	0	0	5,027	50	0
144+00	14400.00	100.00	52.55	0.00	0.00	194	0	0	5,221	50	0
145+00	14500.00	100.00	53.50	0.00	0.00	196	0	0	5,418	50	0
146+00	14600.00	100.00	52.30	0.00	0.00	196	0	0	5,614	50	0
147+00	14700.00	100.00	55.30	0.00	0.00	199	0	0	5,813	50	0
148+00	14800.00	100.00	49.00	0.00	0.00	193	0	0	6,006	50	0
149+00	14900.00	100.00	52.89	14.61	0.00	189	27	0	6,195	77	0
150+00	15000.00	100.00	51.00	0.00	0.00	192	27	0	6,387	104	0
151+00	15100.00	100.00	48.58	0.07	0.00	184	0	0	6,571	105	0
152+00	15200.00	100.00	44.90	0.60	0.00	173	1	0	6,745	106	0
153+00	15300.00	100.00	49.90	0.23	0.00	176	2	0	6,920	107	0
154+00	15400.00	100.00	49.86	0.32	0.00	185	1	0	7,105	108	0
155+00	15500.00	100.00	49.20	0.26	0.00	183	1	0	7,288	109	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
156+00	15600.00	100.00	46.56	1.14	0.00	177	3	0	7,466	112	0
157+00	15700.00	100.00	53.80	3.23	0.00	186	8	0	7,651	120	0
158+00	15800.00	100.00	57.30	0.12	0.00	206	6	0	7,857	126	0
159+00	15900.00	100.00	66.60	0.00	0.00	229	0	0	8,087	127	0
159+05.48	15905.48	5.48	67.60	0.00	0.00	14	0	0	8,100	127	0
						USH 151 SB SUBTOTAL:			**8,100**	**127**	**0**
USH 151 SB											
160+79.05	16079.05	0.00	63.20	0.81	0.00	0	0	0	0	0	0
161+00	16100.00	20.95	82.20	0.04	0.00	56	0	0	56	0	0
162+00	16200.00	100.00	67.00	1.17	0.00	276	2	0	333	3	0
163+00	16300.00	100.00	67.90	0.00	0.00	250	2	0	583	5	0
164+00	16400.00	100.00	58.30	1.96	0.00	234	4	0	816	8	0
165+00	16500.00	100.00	63.30	0.00	0.00	225	4	0	1,041	12	0
166+00	16600.00	100.00	58.90	0.00	0.00	226	0	0	1,268	12	0
167+00	16700.00	100.00	59.70	0.00	0.00	220	0	0	1,487	12	0
168+00	16800.00	100.00	59.50	0.00	0.00	221	0	0	1,708	12	0
169+00	16900.00	100.00	63.00	0.00	0.00	227	0	0	1,935	12	0
170+00	17000.00	100.00	29.20	0.00	0.00	171	0	0	2,106	12	0
171+00	17100.00	100.00	37.70	0.00	0.00	124	0	0	2,230	12	0
172+00	17200.00	100.00	35.70	0.00	0.00	136	0	0	2,365	12	0
173+00	17300.00	100.00	38.40	0.05	0.00	137	0	0	2,503	12	0
174+00	17400.00	100.00	38.30	0.05	0.00	142	0	0	2,645	12	0
175+00	17500.00	100.00	39.00	0.00	0.00	143	0	0	2,788	12	0
176+00	17600.00	100.00	10.40	0.00	0.00	91	0	0	2,879	12	0
177+00	17700.00	100.00	39.80	0.00	0.00	93	0	0	2,972	12	0
178+00	17800.00	100.00	40.81	0.00	0.00	149	0	0	3,122	12	0
179+00	17900.00	100.00	39.63	0.00	0.00	149	0	0	3,271	12	0
180+00	18000.00	100.00	37.50	0.00	0.00	143	0	0	3,413	12	0
181+00	18100.00	100.00	36.00	0.00	0.00	136	0	0	3,550	12	0
182+00	18200.00	100.00	36.30	0.00	0.00	134	0	0	3,683	12	0
183+00	18300.00	100.00	46.40	0.00	0.00	153	0	0	3,837	12	0
184+00	18400.00	100.00	52.16	0.00	0.00	183	0	0	4,019	12	0
185+00	18500.00	100.00	53.30	0.03	0.00	195	0	0	4,214	12	0
186+00	18600.00	100.00	60.20	0.00	0.00	210	0	0	4,425	13	0
186+62.41	18662.41	62.41	60.20	0.00	0.00	139	0	0	4,564	13	0
187+00	18700.00	37.59	57.20	0.01	0.00	82	0	0	4,645	13	0
187+52.6	18752.60	52.60	54.50	0.44	0.00	109	0	0	4,754	13	0
188+00	18800.00	47.40	55.20	0.22	0.00	96	1	0	4,851	14	0
188+42.8	18842.80	42.80	53.75	0.20	0.00	86	0	0	4,937	14	0
189+00	18900.00	57.20	55.80	0.55	0.00	116	1	0	5,053	15	0
189+32.99	18932.99	32.99	52.25	1.42	0.00	66	1	0	5,119	16	0
189+82.6	18982.60	49.61	55.40	1.33	0.00	99	3	0	5,218	18	0
190+00	19000.00	17.40	55.10	1.07	0.00	36	1	0	5,253	19	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
191+00	19100.00	100.00	55.20	0.52	0.00	204	3	0	5,458	22	0
192+00	19200.00	100.00	52.40	0.46	0.00	199	2	0	5,657	24	0
193+00	19300.00	100.00	55.90	0.63	0.00	201	2	0	5,858	26	0
194+00	19400.00	100.00	53.70	0.40	0.00	203	2	0	6,060	28	0
195+00	19500.00	100.00	54.50	0.10	0.00	200	1	0	6,261	29	0
196+00	19600.00	100.00	53.30	0.22	0.00	200	1	0	6,460	29	0
197+00	19700.00	100.00	59.30	0.12	0.00	209	1	0	6,669	30	0
198+00	19800.00	100.00	59.30	0.47	0.00	220	1	0	6,889	31	0
199+00	19900.00	100.00	64.10	0.19	0.00	229	1	0	7,117	32	0
200+00	20000.00	100.00	56.50	0.03	0.00	223	0	0	7,340	33	0
201+00	20100.00	100.00	57.30	0.00	0.00	211	0	0	7,551	33	0
202+00	20200.00	100.00	47.80	0.00	0.00	195	0	0	7,746	33	0
203+00	20300.00	100.00	47.30	0.00	0.00	176	0	0	7,922	33	0
204+00	20400.00	100.00	48.20	0.00	0.00	177	0	0	8,099	33	0
205+00	20500.00	100.00	52.40	0.00	0.00	186	0	0	8,285	33	0
206+00	20600.00	100.00	55.50	0.03	0.00	200	0	0	8,485	33	0
207+00	20700.00	100.00	52.70	0.00	0.00	200	0	0	8,685	33	0
208+00	20800.00	100.00	49.30	0.33	0.00	189	1	0	8,874	34	0
209+00	20900.00	100.00	48.80	0.00	0.00	182	1	0	9,056	34	0
210+00	21000.00	100.00	48.00	0.00	0.00	179	0	0	9,235	34	0
211+00	21100.00	100.00	53.80	0.00	0.00	189	0	0	9,424	34	0
212+00	21200.00	100.00	55.20	0.00	0.00	202	0	0	9,625	34	0
213+00	21300.00	100.00	60.00	0.00	0.00	213	0	0	9,839	34	0
214+00	21400.00	100.00	75.80	0.00	0.00	251	0	0	10,090	34	0
215+00	21500.00	100.00	77.20	0.00	0.00	283	0	0	10,374	34	0
216+00	21600.00	100.00	74.10	0.00	0.00	280	0	0	10,654	34	0
217+00	21700.00	100.00	69.70	0.00	0.00	266	0	0	10,920	34	0
218+00	21800.00	100.00	74.30	3.13	0.00	267	6	0	11,187	40	0
219+00	21900.00	100.00	43.30	2.50	0.00	218	10	0	11,405	50	0
220+00	22000.00	100.00	52.50	0.99	0.00	177	6	0	11,582	57	0
221+00	22100.00	100.00	49.00	0.18	0.00	188	2	0	11,770	59	0
222+00	22200.00	100.00	48.00	0.69	0.00	180	2	0	11,950	61	0
222+51.78	22251.78	51.78	56.50	3.69	0.00	100	4	0	12,050	65	0
					USH 151 SB SUBTOTAL:				**12,050**	**65**	**0**

STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 151 SB											
224+15.19	22415.19	0.00	63.20	0.07	0.00	0	0	0	0	0	0
225+00	22500.00	84.81	67.68	0.00	0.00	206	0	0	206	0	0
226+00	22600.00	100.00	66.36	1.06	0.00	248	2	0	454	2	0
227+00	22700.00	100.00	64.77	0.99	0.00	243	4	0	697	6	0
228+00	22800.00	100.00	58.42	0.00	0.00	228	2	0	925	8	0
229+00	22900.00	100.00	59.65	0.00	0.00	219	0	0	1,143	8	0
230+00	23000.00	100.00	60.38	0.00	0.00	222	0	0	1,366	8	0
231+00	23100.00	100.00	56.94	0.00	0.00	217	0	0	1,583	8	0
232+00	23200.00	100.00	59.72	0.00	0.00	216	0	0	1,799	8	0
233+00	23300.00	100.00	64.92	0.06	0.00	231	0	0	2,030	8	0
234+00	23400.00	100.00	55.32	0.00	0.00	223	0	0	2,252	8	0
235+00	23500.00	100.00	56.75	0.00	0.00	208	0	0	2,460	8	0
236+00	23600.00	100.00	61.37	0.00	0.00	219	0	0	2,679	8	0
237+00	23700.00	100.00	61.89	0.00	0.00	228	0	0	2,907	8	0
238+00	23800.00	100.00	56.86	0.00	0.00	220	0	0	3,127	8	0
239+00	23900.00	100.00	50.43	0.09	0.00	199	0	0	3,326	8	0
240+00	24000.00	100.00	54.30	0.00	0.00	194	0	0	3,520	8	0
						USH 151 SB SUBTOTAL:			**3,520**	**8**	**0**
RAMP E											
194+84.53	19484.53	0.00	11.20	0.68	0.00	0	0	0	0	0	0
195+00	19500.00	15.47	11.50	0.63	0.00	7	0	0	7	0	0
196+00	19600.00	100.00	12.70	0.11	0.00	45	1	0	51	2	0
197+00	19700.00	100.00	15.70	0.08	0.00	53	0	0	104	2	0
198+00	19800.00	100.00	20.30	1.65	0.00	67	3	0	171	5	0
199+00	19900.00	100.00	21.30	0.02	0.00	77	3	0	248	8	0
200+00	20000.00	100.00	25.20	0.00	0.00	86	0	0	334	8	0
201+00	20100.00	100.00	30.50	0.00	0.00	103	0	0	437	8	0
202+00	20200.00	100.00	38.40	0.00	0.00	128	0	0	564	8	0
203+00	20300.00	100.00	26.50	0.06	0.00	120	0	0	685	9	0
204+00	20400.00	100.00	39.90	0.05	0.00	123	0	0	808	9	0
205+00	20500.00	100.00	37.30	0.01	0.00	143	0	0	951	9	0
206+00	20600.00	100.00	49.20	0.00	0.00	160	0	0	1,111	9	0
207+00	20700.00	100.00	49.00	0.00	0.00	182	0	0	1,293	9	0
208+00	20800.00	100.00	54.40	0.00	0.00	191	0	0	1,484	9	0
209+00	20900.00	100.00	50.50	0.00	0.00	194	0	0	1,678	9	0
210+00	21000.00	100.00	35.90	0.04	0.00	160	0	0	1,838	9	0
211+00	21100.00	100.00	25.40	0.50	0.00	114	1	0	1,952	10	0
211+54.8	21154.80	54.80	42.00	0.00	0.00	68	1	0	2,020	10	0
						RAMP E SUBTOTAL:			**2,020**	**10**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
RAMP F											
205+57.87	20557.87	0.00	0.00	0.00	0.00	0	0	0	0	0	0
206+00	20600.00	42.13	71.60	0.00	0.00	56	0	0	56	0	0
207+00	20700.00	100.00	75.70	0.00	0.00	273	0	0	329	0	0
208+00	20800.00	100.00	57.00	0.00	0.00	246	0	0	574	0	0
209+00	20900.00	100.00	56.50	0.03	0.00	210	0	0	785	0	0
210+00	21000.00	100.00	56.00	0.00	0.00	208	0	0	993	0	0
211+00	21100.00	100.00	53.90	0.00	0.00	204	0	0	1,196	0	0
212+00	21200.00	100.00	56.70	0.00	0.00	205	0	0	1,401	0	0
213+00	21300.00	100.00	61.90	0.00	0.00	220	0	0	1,621	0	0
214+00	21400.00	100.00	60.30	0.00	0.00	226	0	0	1,847	0	0
215+00	21500.00	100.00	63.80	0.00	0.00	230	0	0	2,077	0	0
216+00	21600.00	100.00	44.40	0.00	0.00	200	0	0	2,277	0	0
217+00	21700.00	100.00	52.80	0.00	0.00	180	0	0	2,457	0	0
218+00	21800.00	100.00	37.70	0.00	0.00	168	0	0	2,625	0	0
219+00	21900.00	100.00	40.20	0.30	0.00	144	1	0	2,769	1	0
220+00	22000.00	100.00	46.30	0.00	0.00	160	1	0	2,929	1	0
221+00	22100.00	100.00	36.00	1.20	0.00	152	2	0	3,082	3	0
221+95	22195.00	95.00	30.80	1.40	0.00	118	5	0	3,199	8	0
222+00	22200.00	5.00	0.00	0.00	0.00	3	0	0	3,202	8	0
223+39	22339.00	139.00	0.00	0.00	0.00	0	0	0	3,202	8	0
223+44	22344.00	5.00	27.00	1.90	0.00	2	0	0	3,205	8	0
224+00	22400.00	56.00	31.90	0.00	0.00	61	2	0	3,266	10	0
225+00	22500.00	100.00	33.17	0.00	0.00	121	0	0	3,386	10	0
226+00	22600.00	100.00	28.40	0.00	0.00	114	0	0	3,500	10	0
227+00	22700.00	100.00	21.60	0.00	0.00	93	0	0	3,593	10	0
227+67.16	22767.16	67.16	0.00	0.00	0.00	27	0	0	3,620	10	0
						RAMP F SUBTOTAL:			**3,620**	**10**	**0**
RAMP G											
180+21.91	18021.91	0.00	24.90	0.00	0.00	0	0	0	0	0	0
181+00	18100.00	78.09	19.50	0.00	0.00	64	0	0	64	0	0
182+00	18200.00	100.00	28.70	0.00	0.00	89	0	0	153	0	0
183+00	18300.00	100.00	33.60	0.00	0.00	115	0	0	269	0	0
184+00	18400.00	100.00	42.80	0.00	0.00	141	0	0	410	0	0
185+00	18500.00	100.00	39.00	0.00	0.00	151	0	0	562	0	0
186+00	18600.00	100.00	30.00	0.01	0.00	128	0	0	690	0	0
187+00	18700.00	100.00	31.00	0.00	0.00	113	0	0	803	0	0
188+00	18800.00	100.00	43.80	0.00	0.00	139	0	0	941	0	0
189+00	18900.00	100.00	42.90	0.00	0.00	161	0	0	1,102	0	0
190+00	19000.00	100.00	39.40	0.00	0.00	152	0	0	1,254	0	0
191+00	19100.00	100.00	39.80	0.00	0.00	147	0	0	1,401	0	0
192+00	19200.00	100.00	42.20	0.00	0.00	152	0	0	1,553	0	0
193+00	19300.00	100.00	45.90	0.00	0.00	163	0	0	1,716	0	0
194+00	19400.00	100.00	41.60	0.00	0.00	162	0	0	1,878	0	0
195+00	19500.00	100.00	43.90	0.00	0.00	158	0	0	2,036	0	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
196+00	19600.00	100.00	34.80	0.01	0.00	146	0	0	2,182	0	0
197+00	19700.00	100.00	36.00	0.00	0.00	131	0	0	2,313	0	0
198+00	19800.00	100.00	38.90	0.02	0.00	139	0	0	2,452	0	0
199+00	19900.00	100.00	34.60	2.16	0.00	136	4	0	2,588	4	0
200+00	20000.00	100.00	33.60	0.36	0.00	126	5	0	2,714	9	0
201+00	20100.00	100.00	29.40	0.26	0.00	117	1	0	2,831	10	0
202+00	20200.00	100.00	25.60	0.00	0.00	102	0	0	2,933	10	0
203+00	20300.00	100.00	22.00	0.00	0.00	88	0	0	3,021	10	0
204+00	20400.00	100.00	18.50	0.00	0.00	75	0	0	3,096	10	0
205+00	20500.00	100.00	16.70	0.00	0.00	65	0	0	3,161	10	0
206+00	20600.00	100.00	15.10	0.00	0.00	59	0	0	3,220	10	0
206+71.45	20671.45	71.45	15.40	0.00	0.00	40	0	0	3,260	10	0
						RAMP G SUBTOTAL:			**3,260**	**10**	**0**
RAMP H											
168+08.59	16808.59	0.00	15.06	0.00	0.00	0	0	0	0	0	0
169+00	16900.00	91.41	13.99	0.00	0.00	49	0	0	49	0	0
170+00	17000.00	100.00	11.94	0.00	0.00	48	0	0	97	0	0
171+00	17100.00	100.00	15.92	0.15	0.00	52	0	0	149	0	0
172+00	17200.00	100.00	18.59	0.00	0.00	64	0	0	213	1	0
173+00	17300.00	100.00	22.69	0.00	0.00	76	0	0	289	1	0
173+63.85	17363.85	63.85	23.00	0.00	0.00	54	0	0	343	1	0
174+46.71	17446.71	82.86	26.97	0.00	0.00	77	0	0	420	1	0
175+00	17500.00	53.29	28.94	0.00	0.00	55	0	0	475	1	0
176+00	17600.00	100.00	31.16	0.00	0.00	111	0	0	586	1	0
177+00	17700.00	100.00	31.17	0.00	0.00	115	0	0	702	1	0
178+00	17800.00	100.00	29.75	1.50	0.00	113	3	0	815	3	0
179+00	17900.00	100.00	29.39	1.60	0.00	110	6	0	924	9	0
180+00	18000.00	100.00	27.04	8.06	0.00	105	18	0	1,029	27	0
181+00	18100.00	100.00	28.66	0.93	0.00	103	17	0	1,132	44	0
182+00	18200.00	100.00	44.31	0.29	0.00	135	2	0	1,267	46	0
183+00	18300.00	100.00	43.62	0.08	0.00	163	1	0	1,430	47	0
184+00	18400.00	100.00	33.90	4.16	0.00	144	8	0	1,573	54	0
185+00	18500.00	100.00	35.60	2.93	0.00	129	13	0	1,702	68	0
186+00	18600.00	100.00	29.23	10.22	0.00	120	24	0	1,822	92	0
187+00	18700.00	100.00	25.12	18.39	0.00	101	53	0	1,923	145	0
188+00	18800.00	100.00	28.04	13.78	0.00	98	60	0	2,021	204	0
189+00	18900.00	100.00	28.81	6.90	0.00	105	38	0	2,126	243	0
190+00	19000.00	100.00	29.33	2.81	0.00	108	18	0	2,234	261	0
191+00	19100.00	100.00	33.94	1.21	0.00	117	7	0	2,351	268	0
192+00	19200.00	100.00	36.90	1.51	0.00	131	5	0	2,482	273	0
193+00	19300.00	100.00	34.18	3.71	0.00	132	10	0	2,614	283	0
194+00	19400.00	100.00	45.89	2.79	0.00	148	12	0	2,762	295	0
195+00	19500.00	100.00	48.23	6.58	0.00	174	17	0	2,937	312	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 3

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
196+00	19600.00	100.00	49.90	0.19	0.00	182	13	0	3,118	325	0
197+00	19700.00	100.00	43.74	1.03	0.00	173	2	0	3,292	327	0
198+00	19800.00	100.00	38.19	0.00	0.00	152	2	0	3,443	329	0
199+00	19900.00	100.00	15.31	0.02	0.00	99	0	0	3,542	329	0
200+00	20000.00	100.00	15.79	0.09	0.00	58	0	0	3,600	329	0
201+00	20100.00	100.00	27.14	0.00	0.00	80	0	0	3,680	329	0
202+00	20200.00	100.00	33.53	0.00	0.00	112	0	0	3,792	329	0
203+00	20300.00	100.00	35.45	0.00	0.00	128	0	0	3,920	329	0
204+00	20400.00	100.00	22.25	0.00	0.00	107	0	0	4,026	329	0
204+67.89	20467.89	67.89	16.34	0.00	0.00	49	0	0	4,075	329	0
						RAMP H SUBTOTAL:			**4,075**	**329**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

			STAGE 3 TOTAL:			**44,905**	**925**	**0**

9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	EARTHWORK DATA	SHEET: 409	E

FILE NAME : N:\PDS\...\030200_mq.pptx PLOT DATE : June 14, 1911 PLOT BY : A.R.H. PLOT NAME : PLOT SCALE : 1:1

STAGE 4

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 151 NB											
115+54.5	11554.50	0.00	56.25	48.47	0.00	0	0	0	0	0	0
116+00	11600.00	45.50	56.80	1.86	0.00	95	42	0	95	42	0
117+00	11700.00	100.00	49.19	5.47	0.00	196	14	0	292	56	0
118+00	11800.00	100.00	44.30	2.39	0.00	173	15	0	465	71	0
119+00	11900.00	100.00	46.00	1.97	0.00	167	8	0	632	79	0
120+00	12000.00	100.00	45.25	1.87	0.00	169	7	0	801	86	0
121+00	12100.00	100.00	51.00	0.00	0.00	178	3	0	979	89	0
122+00	12200.00	100.00	49.70	0.00	0.00	186	0	0	1,166	89	0
123+00	12300.00	100.00	49.40	0.00	0.00	184	0	0	1,349	89	0
124+00	12400.00	100.00	49.40	0.00	0.00	183	0	0	1,532	89	0
125+00	12500.00	100.00	46.40	0.09	0.00	177	0	0	1,709	89	0
126+00	12600.00	100.00	47.00	0.00	0.00	173	0	0	1,882	90	0
127+00	12700.00	100.00	46.40	0.00	0.00	173	0	0	2,055	90	0
128+00	12800.00	100.00	53.40	0.00	0.00	185	0	0	2,240	90	0
129+00	12900.00	100.00	51.10	0.00	0.00	194	0	0	2,434	90	0
130+00	13000.00	100.00	50.40	0.04	0.00	188	0	0	2,622	90	0
131+00	13100.00	100.00	46.90	0.00	0.00	180	0	0	2,802	90	0
132+00	13200.00	100.00	50.70	0.18	0.00	181	0	0	2,983	90	0
133+00	13300.00	100.00	50.35	0.10	0.00	187	1	0	3,170	91	0
134+00	13400.00	100.00	51.06	0.00	0.00	188	0	0	3,358	91	0
135+00	13500.00	100.00	51.12	0.00	0.00	189	0	0	3,547	91	0
136+00	13600.00	100.00	51.29	0.00	0.00	190	0	0	3,736	91	0
137+00	13700.00	100.00	46.90	0.00	0.00	182	0	0	3,918	91	0
138+00	13800.00	100.00	52.01	0.00	0.00	183	0	0	4,101	91	0
139+00	13900.00	100.00	48.69	0.00	0.00	186	0	0	4,288	91	0
140+00	14000.00	100.00	55.48	0.00	0.00	193	0	0	4,481	91	0
141+00	14100.00	100.00	52.20	0.00	0.00	199	0	0	4,680	91	0
142+00	14200.00	100.00	54.91	0.00	0.00	198	0	0	4,879	91	0
143+00	14300.00	100.00	51.71	0.00	0.00	197	0	0	5,076	91	0
144+00	14400.00	100.00	47.07	0.00	0.00	183	0	0	5,259	91	0
145+00	14500.00	100.00	42.29	0.00	0.00	165	0	0	5,424	91	0
146+00	14600.00	100.00	44.57	0.00	0.00	161	0	0	5,585	91	0
147+00	14700.00	100.00	43.62	0.00	0.00	163	0	0	5,749	91	0
148+00	14800.00	100.00	44.54	0.00	0.00	163	0	0	5,912	91	0
149+00	14900.00	100.00	43.15	0.00	0.00	162	0	0	6,074	91	0
150+00	15000.00	100.00	43.62	0.00	0.00	161	0	0	6,235	91	0
151+00	15100.00	100.00	42.03	41.58	0.00	159	77	0	6,394	168	0
152+00	15200.00	100.00	40.43	38.78	0.00	153	149	0	6,546	317	0
153+00	15300.00	100.00	43.56	0.85	0.00	156	73	0	6,702	390	0
154+00	15400.00	100.00	42.55	1.61	0.00	159	5	0	6,861	394	0
155+00	15500.00	100.00	40.64	5.93	0.00	154	14	0	7,015	408	0
156+00	15600.00	100.00	45.28	4.84	0.00	159	20	0	7,174	428	0
157+00	15700.00	100.00	47.95	3.51	0.00	173	15	0	7,347	444	0
158+00	15800.00	100.00	56.85	1.55	0.00	194	9	0	7,541	453	0
158+55.7	15855.70	55.70	0.00	0.00	0.00	59	2	0	7,600	455	0
						USH 151 NB SUBTOTAL:			**7,600**	**455**	**0**

STAGE 4

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
USH 151 NB											
160+37.56	16037.56	0.00	0.00	0.00	0.00	0	0	0	0	0	0
161+00	16100.00	62.44	57.30	0.00	0.00	66	0	0	66	0	0
162+00	16200.00	100.00	58.10	0.00	0.00	214	0	0	280	0	0
163+00	16300.00	100.00	58.80	0.00	0.00	216	0	0	496	0	0
164+00	16400.00	100.00	59.60	0.00	0.00	219	0	0	716	0	0
165+00	16500.00	100.00	64.10	0.00	0.00	229	0	0	945	0	0
166+00	16600.00	100.00	60.50	0.00	0.00	231	0	0	1,176	0	0
167+00	16700.00	100.00	56.80	0.00	0.00	217	0	0	1,393	0	0
168+00	16800.00	100.00	57.70	0.00	0.00	212	0	0	1,605	0	0
169+00	16900.00	100.00	57.80	0.00	0.00	214	0	0	1,819	0	0
170+00	17000.00	100.00	41.00	0.00	0.00	183	0	0	2,002	0	0
171+00	17100.00	100.00	50.50	0.89	0.00	169	2	0	2,171	2	0
172+00	17200.00	100.00	44.30	1.30	0.00	176	4	0	2,347	6	0
173+00	17300.00	100.00	43.60	1.19	0.00	163	5	0	2,509	10	0
174+00	17400.00	100.00	47.60	0.64	0.00	169	3	0	2,678	14	0
175+00	17500.00	100.00	45.70	0.16	0.00	173	1	0	2,851	15	0
176+00	17600.00	100.00	0.00	0.00	0.00	85	0	0	2,936	16	0
177+00	17700.00	100.00	53.70	37.32	0.00	99	69	0	3,035	85	0
178+00	17800.00	100.00	44.90	9.07	0.00	183	86	0	3,218	171	0
179+00	17900.00	100.00	41.90	2.01	0.00	161	21	0	3,378	191	0
180+00	18000.00	100.00	47.20	1.25	0.00	165	6	0	3,543	197	0
181+00	18100.00	100.00	43.00	4.88	0.00	167	11	0	3,711	208	0
182+00	18200.00	100.00	38.10	7.61	0.00	150	23	0	3,861	232	0
183+00	18300.00	100.00	39.20	7.82	0.00	143	29	0	4,004	260	0
184+00	18400.00	100.00	35.80	6.44	0.00	139	26	0	4,143	287	0
185+00	18500.00	100.00	43.10	18.30	0.00	146	46	0	4,289	332	0
186+00	18600.00	100.00	48.50	9.03	0.00	170	51	0	4,458	383	0
187+00	18700.00	100.00	52.10	0.69	0.00	186	18	0	4,645	401	0
188+00	18800.00	100.00	60.20	0.21	0.00	208	2	0	4,853	403	0
189+00	18900.00	100.00	63.60	0.00	0.00	229	0	0	5,082	403	0
190+00	19000.00	100.00	56.30	0.00	0.00	222	0	0	5,304	403	0
191+00	19100.00	100.00	57.30	0.11	0.00	210	0	0	5,514	403	0
192+00	19200.00	100.00	55.40	0.10	0.00	209	0	0	5,723	404	0
193+00	19300.00	100.00	54.40	0.24	0.00	203	1	0	5,926	404	0
194+00	19400.00	100.00	55.10	0.05	0.00	203	1	0	6,129	405	0
195+00	19500.00	100.00	42.50	0.00	0.00	181	0	0	6,310	405	0
196+00	19600.00	100.00	40.50	0.03	0.00	154	0	0	6,464	405	0
197+00	19700.00	100.00	46.30	0.00	0.00	161	0	0	6,624	405	0
198+00	19800.00	100.00	44.20	0.00	0.00	168	0	0	6,792	405	0
199+00	19900.00	100.00	40.80	0.01	0.00	157	0	0	6,949	405	0
200+00	20000.00	100.00	40.70	0.11	0.00	151	0	0	7,100	405	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 4

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
201+00	20100.00	100.00	37.80	0.30	0.00	145	1	0	7,246	406	0
202+00	20200.00	100.00	39.90	0.02	0.00	144	1	0	7,390	407	0
203+00	20300.00	100.00	43.90	0.00	0.00	155	0	0	7,545	407	0
204+00	20400.00	100.00	61.30	0.00	0.00	195	0	0	7,740	407	0
205+00	20500.00	100.00	58.40	0.08	0.00	222	0	0	7,961	407	0
206+00	20600.00	100.00	62.90	0.00	0.00	225	0	0	8,186	407	0
207+00	20700.00	100.00	61.60	0.06	0.00	231	0	0	8,416	407	0
208+00	20800.00	100.00	59.50	0.16	0.00	224	0	0	8,641	407	0
209+00	20900.00	100.00	63.00	0.01	0.00	227	0	0	8,868	408	0
210+00	21000.00	100.00	63.00	0.00	0.00	233	0	0	9,101	408	0
211+00	21100.00	100.00	67.80	0.00	0.00	242	0	0	9,343	408	0
212+00	21200.00	100.00	73.30	0.00	0.00	261	0	0	9,604	408	0
213+00	21300.00	100.00	78.40	0.00	0.00	281	0	0	9,885	408	0
214+00	21400.00	100.00	77.40	0.00	0.00	289	0	0	10,174	408	0
215+00	21500.00	100.00	60.40	0.00	0.00	255	0	0	10,429	408	0
216+00	21600.00	100.00	57.80	0.00	0.00	219	0	0	10,648	408	0
217+00	21700.00	100.00	58.20	0.00	0.00	215	0	0	10,863	408	0
218+00	21800.00	100.00	35.00	9.73	0.00	173	18	0	11,035	426	0
219+00	21900.00	100.00	43.80	6.58	0.00	146	30	0	11,181	456	0
220+00	22000.00	100.00	39.20	5.51	0.00	154	22	0	11,335	478	0
221+00	22100.00	100.00	40.70	7.47	0.00	148	24	0	11,483	502	0
221+85.53	22185.53	85.53	45.70	0.39	0.00	137	12	0	11,620	515	0
						USH 151 NB SUBTOTAL:			**11,620**	**515**	**0**
USH 151 NB											
223+35.96	22335.96	0.00	41.10	0.00	0.00	0	0	0	0	0	0
224+00	22400.00	64.04	40.69	0.00	0.00	97	0	0	97	0	0
225+00	22500.00	100.00	47.05	0.00	0.00	162	0	0	259	0	0
226+00	22600.00	100.00	47.20	0.00	0.00	175	0	0	434	0	0
227+00	22700.00	100.00	44.47	0.00	0.00	170	0	0	604	0	0
228+00	22800.00	100.00	58.34	0.29	0.00	190	1	0	794	1	0
229+00	22900.00	100.00	58.31	0.97	0.00	216	2	0	1,010	3	0
230+00	23000.00	100.00	58.86	0.06	0.00	217	2	0	1,227	5	0
231+00	23100.00	100.00	65.37	0.00	0.00	230	0	0	1,457	5	0
232+00	23200.00	100.00	67.68	0.00	0.00	246	0	0	1,704	5	0
233+00	23300.00	100.00	57.05	0.16	0.00	231	0	0	1,935	5	0
234+00	23400.00	100.00	55.66	0.00	0.00	209	0	0	2,143	5	0
235+00	23500.00	100.00	55.35	0.00	0.00	206	0	0	2,349	5	0
236+00	23600.00	100.00	56.25	0.00	0.00	207	0	0	2,556	5	0
237+00	23700.00	100.00	52.40	0.04	0.00	201	0	0	2,757	6	0
238+00	23800.00	100.00	50.76	0.10	0.00	191	0	0	2,948	6	0
239+00	23900.00	100.00	55.70	0.00	0.00	197	0	0	3,145	6	0
240+00	24000.00	100.00	60.59	0.00	0.00	215	0	0	3,360	6	0
						USH 151 NB SUBTOTAL:			**3,360**	**6**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

STAGE 4 TOTAL: **22,580** **976** **0**

STAGE 5

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
STH 23 NB											
60+00	6000.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
61+00	6100.00	100.00	28.40	0.00	0.00	53	0	0	53	0	0
62+00	6200.00	100.00	25.60	0.00	0.00	100	0	0	153	0	0
63+00	6300.00	100.00	29.30	0.00	0.00	102	0	0	254	0	0
64+00	6400.00	100.00	28.50	0.00	0.00	107	0	0	361	0	0
65+00	6500.00	100.00	28.00	0.00	0.00	105	0	0	466	0	0
65+90.34	6590.34	90.34	34.00	0.00	0.00	104	0	0	570	0	0
						STH 23 NB SUBTOTAL:			**570**	**0**	**0**
STH 23 NB											
68+64.58	6864.58	0.00	41.30	0.54	0.00	0	0	0	0	0	0
69+00	6900.00	35.42	40.80	0.00	0.00	54	0	0	54	0	0
70+00	7000.00	100.00	52.60	0.00	0.00	173	0	0	227	0	0
70+50	7050.00	50.00	38.30	0.00	0.00	84	0	0	311	0	0
71+00	7100.00	50.00	72.00	0.00	0.00	102	0	0	413	0	0
72+00	7200.00	100.00	67.80	0.00	0.00	259	0	0	672	0	0
73+00	7300.00	100.00	67.90	0.00	0.00	251	0	0	923	0	0
74+00	7400.00	100.00	66.30	0.00	0.00	249	0	0	1,172	0	0
75+00	7500.00	100.00	60.50	0.00	0.00	235	0	0	1,407	0	0
76+00	7600.00	100.00	58.00	0.00	0.00	219	0	0	1,626	0	0
77+00	7700.00	100.00	54.60	0.00	0.00	209	0	0	1,835	0	0
78+00	7800.00	100.00	66.60	0.00	0.00	224	0	0	2,059	0	0
79+00	7900.00	100.00	54.30	0.00	0.00	224	0	0	2,283	0	0
80+00	8000.00	100.00	38.90	0.00	0.00	173	0	0	2,456	0	0
81+00	8100.00	100.00	38.60	0.00	0.00	144	0	0	2,599	0	0
82+00	8200.00	100.00	36.90	0.00	0.00	140	0	0	2,739	0	0
83+00	8300.00	100.00	30.40	0.00	0.00	125	0	0	2,863	0	0
84+00	8400.00	100.00	28.30	0.00	0.00	109	0	0	2,972	0	0
85+00	8500.00	100.00	32.50	0.00	0.00	113	0	0	3,085	0	0
86+00	8600.00	100.00	29.60	0.00	0.00	115	0	0	3,200	0	0
86+84.28	8684.28	84.28	28.10	0.00	0.00	90	0	0	3,290	0	0
						STH 23 NB SUBTOTAL:			**3,290**	**0**	**0**
STH 23 SB											
60+00	6000.00	0.00	36.30	3.14	0.00	0	0	0	0	0	0
61+00	6100.00	100.00	33.00	1.79	0.00	128	9	0	128	9	0
62+00	6200.00	100.00	35.90	0.00	0.00	128	3	0	256	12	0
63+00	6300.00	100.00	32.80	1.26	0.00	127	2	0	383	15	0
64+00	6400.00	100.00	30.50	3.28	0.00	117	8	0	500	23	0
65+00	6500.00	100.00	33.30	2.60	0.00	118	11	0	619	34	0
65+58.31	6558.31	58.31	41.90	23.41	0.00	81	28	0	700	62	0
						STH 23 SB SUBTOTAL:			**700**	**62**	**0**

STAGE 5

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
STH 23 SB											
68+40.83	6840.83	0.00	38.30	3.08	0.00	0	0	0	0	0	0
69+00	6900.00	59.17	41.70	0.57	0.00	88	4	0	88	4	0
70+00	7000.00	100.00	62.90	0.00	0.00	194	1	0	281	5	0
71+00	7100.00	100.00	75.10	0.00	0.00	256	0	0	537	5	0
72+00	7200.00	100.00	61.50	0.00	0.00	253	0	0	790	5	0
73+00	7300.00	100.00	42.90	0.00	0.00	193	0	0	983	5	0
74+00	7400.00	100.00	37.70	0.00	0.00	149	0	0	1,132	5	0
75+00	7500.00	100.00	39.80	0.00	0.00	144	0	0	1,276	5	0
76+00	7600.00	100.00	49.20	0.00	0.00	165	0	0	1,441	5	0
77+00	7700.00	100.00	51.20	0.00	0.00	186	0	0	1,627	5	0
78+00	7800.00	100.00	49.30	0.00	0.00	186	0	0	1,813	5	0
79+00	7900.00	100.00	46.40	0.00	0.00	177	0	0	1,990	5	0
80+00	8000.00	100.00	30.80	0.00	0.00	143	0	0	2,133	5	0
81+00	8100.00	100.00	41.60	0.00	0.00	134	0	0	2,267	5	0
82+00	8200.00	100.00	40.00	0.00	0.00	151	0	0	2,418	5	0
83+00	8300.00	100.00	46.50	0.00	0.00	160	0	0	2,578	5	0
84+00	8400.00	100.00	49.00	0.00	0.00	177	0	0	2,755	5	0
85+00	8500.00	100.00	36.30	0.00	0.00	158	0	0	2,913	5	0
86+00	8600.00	100.00	34.30	0.00	0.00	131	0	0	3,044	5	0
87+00	8700.00	100.00	69.80	0.00	0.00	193	0	0	3,237	5	0
88+00	8800.00	100.00	71.50	0.00	0.00	262	0	0	3,498	5	0
88+36.92	8836.92	36.92	77.40	0.00	0.00	102	0	0	3,600	5	0
					STH 23 SB SUBTOTAL:				**3,600**	**5**	**0**
USH 151 NB											
37+00	3700.00	0.00	107.80	0.00	0.00	0	0	0	0	0	0
38+00	3800.00	100.00	110.10	0.00	0.00	404	0	0	404	0	0
39+00	3900.00	100.00	105.50	0.00	0.00	399	0	0	803	0	0
40+00	4000.00	100.00	81.40	0.00	0.00	346	0	0	1,149	0	0
41+00	4100.00	100.00	78.60	0.00	0.00	296	0	0	1,445	0	0
42+00	4200.00	100.00	77.00	0.00	0.00	288	0	0	1,733	0	0
43+00	4300.00	100.00	74.70	0.00	0.00	281	0	0	2,014	0	0
44+00	4400.00	100.00	75.00	4.30	0.00	277	8	0	2,291	8	0
45+00	4500.00	100.00	86.50	1.20	0.00	299	10	0	2,591	18	0
46+00	4600.00	100.00	38.60	0.16	0.00	232	3	0	2,822	21	0
47+00	4700.00	100.00	117.30	0.00	0.00	289	0	0	3,111	21	0
48+00	4800.00	100.00	129.70	0.00	0.00	457	0	0	3,568	21	0
49+00	4900.00	100.00	130.10	0.00	0.00	481	0	0	4,049	21	0
50+00	5000.00	100.00	127.80	0.00	0.00	478	0	0	4,527	21	0
51+00	5100.00	100.00	129.80	0.00	0.00	477	0	0	5,004	21	0
52+00	5200.00	100.00	133.90	0.00	0.00	488	0	0	5,492	21	0
53+00	5300.00	100.00	73.50	0.00	0.00	384	0	0	5,876	21	0
54+00	5400.00	100.00	71.40	0.00	0.00	268	0	0	6,145	21	0
55+00	5500.00	100.00	70.70	0.00	0.00	263	0	0	6,408	21	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 5

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
56+00	5600.00	100.00	66.20	0.00	0.00	254	0	0	6,661	21	0
57+00	5700.00	100.00	69.90	0.00	0.00	252	0	0	6,914	21	0
58+00	5800.00	100.00	70.00	0.00	0.00	259	0	0	7,173	21	0
59+00	5900.00	100.00	45.10	0.00	0.00	213	0	0	7,386	21	0
60+00	6000.00	100.00	40.50	0.00	0.00	159	0	0	7,544	21	0
61+00	6100.00	100.00	41.00	0.00	0.00	151	0	0	7,695	21	0
62+00	6200.00	100.00	43.10	0.00	0.00	156	0	0	7,851	21	0
63+00	6300.00	100.00	43.30	0.00	0.00	160	0	0	8,011	21	0
64+00	6400.00	100.00	43.20	0.00	0.00	160	0	0	8,171	21	0
65+00	6500.00	100.00	48.30	0.00	0.00	169	0	0	8,341	21	0
66+00	6600.00	100.00	0.00	0.00	0.00	89	0	0	8,430	21	0
67+00	6700.00	100.00	51.00	0.00	0.00	94	0	0	8,524	21	0
68+00	6800.00	100.00	40.10	0.00	0.00	169	0	0	8,693	21	0
69+00	6900.00	100.00	45.20	0.00	0.00	158	0	0	8,851	21	0
70+00	7000.00	100.00	46.00	0.00	0.00	169	0	0	9,020	21	0
71+00	7100.00	100.00	41.30	0.00	0.00	162	0	0	9,182	21	0
72+00	7200.00	100.00	52.80	0.00	0.00	174	0	0	9,356	21	0
73+00	7300.00	100.00	54.00	0.00	0.00	198	0	0	9,554	21	0
74+00	7400.00	100.00	58.40	0.00	0.00	208	0	0	9,762	21	0
75+00	7500.00	100.00	53.50	0.00	0.00	207	0	0	9,969	21	0
76+00	7600.00	100.00	50.50	0.00	0.00	193	0	0	10,162	21	0
77+00	7700.00	100.00	47.50	0.00	0.00	181	0	0	10,343	21	0
78+00	7800.00	100.00	38.40	0.00	0.00	159	0	0	10,502	21	0
79+00	7900.00	100.00	47.10	0.07	0.00	158	0	0	10,661	21	0
80+00	8000.00	100.00	49.90	0.06	0.00	180	0	0	10,840	21	0
81+00	8100.00	100.00	51.50	0.15	0.00	188	0	0	11,028	22	0
82+00	8200.00	100.00	51.60	0.01	0.00	191	0	0	11,219	22	0
83+00	8300.00	100.00	48.60	0.40	0.00	186	1	0	11,404	23	0
84+00	8400.00	100.00	48.90	0.27	0.00	181	1	0	11,585	24	0
85+00	8500.00	100.00	50.30	0.03	0.00	184	1	0	11,769	25	0
86+00	8600.00	100.00	55.90	0.02	0.00	197	0	0	11,965	25	0
87+00	8700.00	100.00	55.80	0.00	0.00	207	0	0	12,172	25	0
88+00	8800.00	100.00	50.70	0.07	0.00	197	0	0	12,369	25	0
89+00	8900.00	100.00	45.30	0.02	0.00	178	0	0	12,547	25	0
90+00	9000.00	100.00	52.40	4.36	0.00	181	8	0	12,728	33	0
91+00	9100.00	100.00	51.90	13.01	0.00	193	32	0	12,921	65	0
92+00	9200.00	100.00	43.50	2.96	0.00	177	30	0	13,098	95	0
93+00	9300.00	100.00	41.50	1.82	0.00	157	9	0	13,255	104	0
94+00	9400.00	100.00	44.30	3.13	0.00	159	9	0	13,414	113	0
95+00	9500.00	100.00	42.10	2.35	0.00	160	10	0	13,574	123	0

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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STAGE 5

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Cumulative Vol (CY) EBS
									1.00	1.00	1.00
96+00	9600.00	100.00	43.80	1.09	0.00	159	6	0	13,733	129	0
97+00	9700.00	100.00	19.30	1.69	0.00	117	5	0	13,850	135	0
98+00	9800.00	100.00	50.50	2.68	0.00	129	8	0	13,979	143	0
99+00	9900.00	100.00	49.80	3.05	0.00	186	11	0	14,165	153	0
100+00	10000.00	100.00	47.50	0.00	0.00	180	6	0	14,345	159	0
101+00	10100.00	100.00	47.70	0.02	0.00	176	0	0	14,522	159	0
102+00	10200.00	100.00	44.00	0.00	0.00	170	0	0	14,691	159	0
103+00	10300.00	100.00	43.30	0.11	0.00	162	0	0	14,853	159	0
104+00	10400.00	100.00	44.40	0.00	0.00	162	0	0	15,016	159	0
105+00	10500.00	100.00	47.30	0.00	0.00	170	0	0	15,185	159	0
106+00	10600.00	100.00	45.70	0.11	0.00	172	0	0	15,358	160	0
107+00	10700.00	100.00	45.20	0.00	0.00	168	0	0	15,526	160	0
108+00	10800.00	100.00	45.60	0.00	0.00	168	0	0	15,694	160	0
109+00	10900.00	100.00	43.80	0.00	0.00	166	0	0	15,860	160	0
110+00	11000.00	100.00	40.90	1.75	0.00	157	3	0	16,016	163	0
111+00	11100.00	100.00	45.90	0.00	0.00	161	3	0	16,177	166	0
112+00	11200.00	100.00	45.80	3.62	0.00	170	7	0	16,347	173	0
113+00	11300.00	100.00	48.00	2.46	0.00	174	11	0	16,521	184	0
113+32.7	11332.70	32.70	0.00	0.00	0.00	29	1	0	16,550	186	0
						USH 151 NB SUBTOTAL:			**16,550**	**186**	**0**
RAMP A											
39+85	3985.00	0.00	6.40	0.00	0.00	0	0	0	0	0	0
40+00	4000.00	15.00	6.00	0.00	0.00	3	0	0	3	0	0
41+00	4100.00	100.00	9.70	0.00	0.00	29	0	0	33	0	0
42+00	4200.00	100.00	12.10	0.00	0.00	40	0	0	73	0	0
43+00	4300.00	100.00	11.10	0.00	0.00	43	0	0	116	0	0
44+00	4400.00	100.00	10.00	0.00	0.00	39	0	0	155	0	0
45+00	4500.00	100.00	16.40	0.00	0.00	49	0	0	204	0	0
46+00	4600.00	100.00	28.90	0.00	0.00	84	0	0	288	0	0
47+00	4700.00	100.00	40.60	0.00	0.00	129	0	0	416	0	0
48+00	4800.00	100.00	41.70	0.00	0.00	152	0	0	569	0	0
49+00	4900.00	100.00	33.60	0.05	0.00	139	0	0	708	0	0
50+00	5000.00	100.00	32.50	0.05	0.00	122	0	0	831	0	0
51+00	5100.00	100.00	27.30	0.00	0.00	111	0	0	941	0	0
52+00	5200.00	100.00	32.20	0.40	0.00	110	1	0	1,052	1	0
53+00	5300.00	100.00	33.10	0.40	0.00	121	1	0	1,173	3	0
54+00	5400.00	100.00	38.40	0.40	0.00	132	1	0	1,305	4	0
55+00	5500.00	100.00	36.40	0.00	0.00	139	1	0	1,443	5	0
56+00	5600.00	100.00	37.70	0.00	0.00	137	0	0	1,581	5	0
57+00	5700.00	100.00	40.80	0.00	0.00	145	0	0	1,726	5	0
58+00	5800.00	100.00	34.60	0.00	0.00	140	0	0	1,866	5	0
59+00	5900.00	100.00	33.00	0.00	0.00	125	0	0	1,991	5	0
59+57	5957.00	57.00	35.60	0.00	0.00	72	0	0	2,063	5	0
60+00	6000.00	43.00	35.60	0.00	0.00	57	0	0	2,120	5	0
						RAMP A SUBTOTAL:			**2,120**	**5**	**0**

Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

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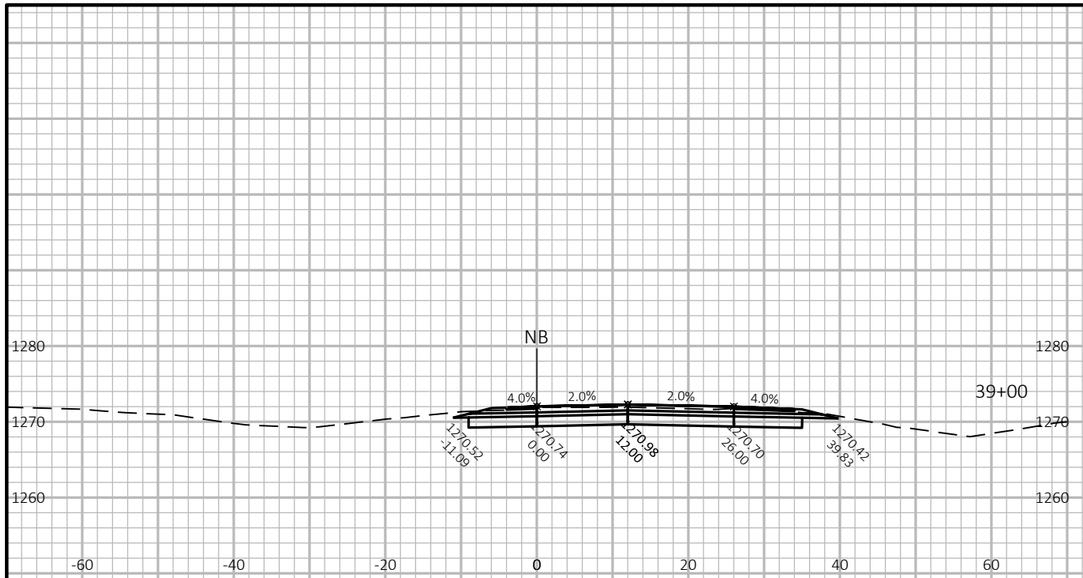
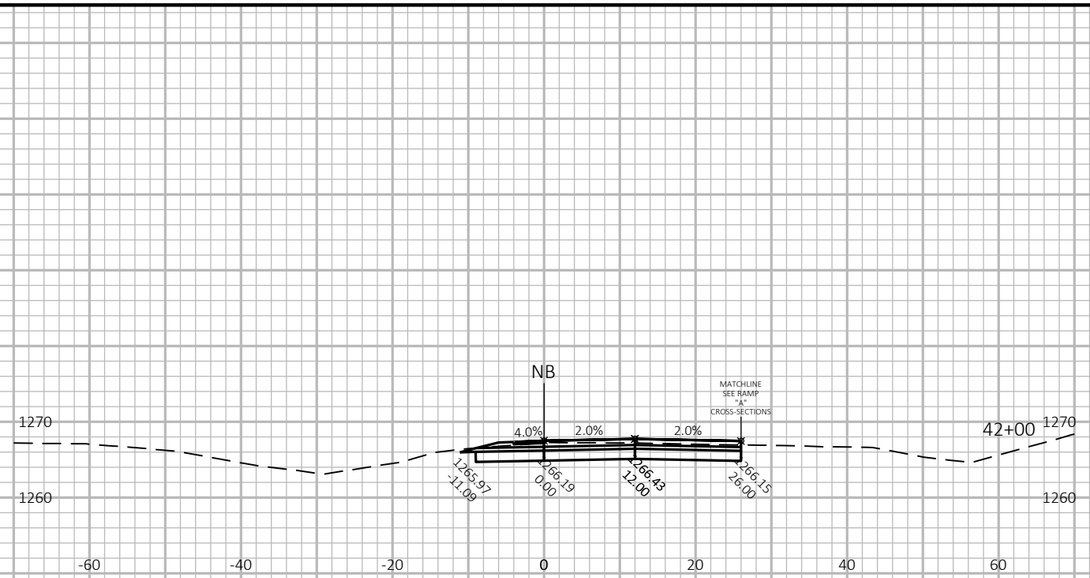
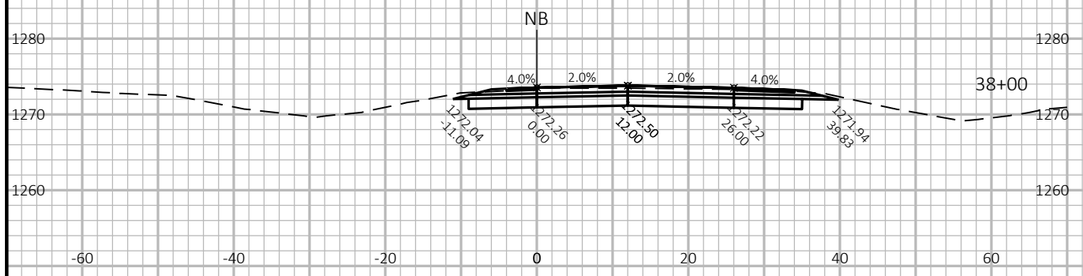
STAGE 5

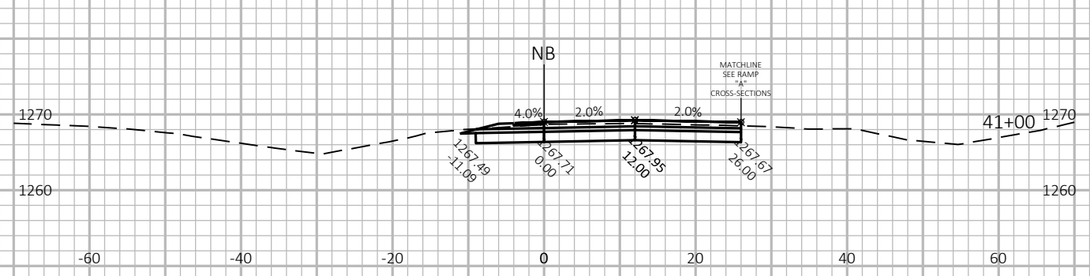
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Fill 1.00	Cumulative Vol (CY) EBS 1.00
RAMP B											
50+00	5000.00	0.00	27.50	2.57	0.00	0	0	0	0	0	0
51+00	5100.00	100.00	24.00	0.14	0.00	95	5	0	95	5	0
52+00	5200.00	100.00	21.50	0.00	0.00	84	0	0	180	5	0
53+00	5300.00	100.00	22.40	0.00	0.00	81	0	0	261	5	0
54+00	5400.00	100.00	23.70	0.00	0.00	85	0	0	346	5	0
55+00	5500.00	100.00	22.70	0.00	0.00	86	0	0	432	5	0
56+00	5600.00	100.00	30.10	0.00	0.00	98	0	0	530	5	0
57+00	5700.00	100.00	36.50	0.00	0.00	123	0	0	653	5	0
58+00	5800.00	100.00	43.60	0.00	0.00	148	0	0	802	5	0
58+43.86	5843.86	43.86	39.30	0.00	0.00	67	0	0	869	5	0
59+00	5900.00	56.14	38.00	0.00	0.00	80	0	0	949	5	0
60+00	6000.00	100.00	40.50	0.00	0.00	145	0	0	1,095	5	0
61+00	6100.00	100.00	40.70	0.00	0.00	150	0	0	1,245	5	0
62+00	6200.00	100.00	37.00	0.00	0.00	144	0	0	1,389	5	0
63+00	6300.00	100.00	40.80	0.00	0.00	144	0	0	1,533	5	0
64+00	6400.00	100.00	34.60	0.00	0.00	140	0	0	1,673	5	0
65+00	6500.00	100.00	35.00	0.00	0.00	129	0	0	1,802	5	0
66+50	6650.00	150.00	31.40	0.00	0.00	184	0	0	1,986	5	0
67+00	6700.00	50.00	29.00	0.00	0.00	56	0	0	2,042	5	0
68+00	6800.00	100.00	16.80	0.00	0.00	85	0	0	2,127	5	0
69+00	6900.00	100.00	9.70	0.00	0.00	49	0	0	2,176	5	0
70+00	7000.00	100.00	8.40	0.00	0.00	34	0	0	2,209	5	0
71+00	7100.00	100.00	6.60	0.00	0.00	28	0	0	2,237	5	0
71+15	7115.00	15.00	5.40	0.00	0.00	3	0	0	2,240	5	0
					RAMP B SUBTOTAL:				**2,240**	**5**	**0**
RAMP D											
65+35	6535.00	0.00	40.54	0.00	0.00	0	0	0	0	0	0
66+00	6600.00	65.00	41.57	0.00	0.00	99	0	0	99	0	0
67+00	6700.00	100.00	42.50	0.00	0.00	156	0	0	255	0	0
68+00	6800.00	100.00	53.10	0.00	0.00	177	0	0	432	0	0
69+00	6900.00	100.00	55.50	4.73	0.00	201	9	0	633	9	0
70+00	7000.00	100.00	52.30	8.87	0.00	200	25	0	832	34	0
71+00	7100.00	100.00	57.13	1.28	0.00	203	19	0	1,035	53	0
72+00	7200.00	100.00	54.32	1.86	0.00	206	6	0	1,241	59	0
73+00	7300.00	100.00	51.40	0.32	0.00	196	4	0	1,437	63	0
74+00	7400.00	100.00	39.16	0.00	0.00	168	1	0	1,605	63	0
75+00	7500.00	100.00	26.14	0.00	0.00	121	0	0	1,726	63	0
76+00	7600.00	100.00	18.22	0.00	0.00	82	0	0	1,808	63	0
77+00	7700.00	100.00	15.02	0.00	0.00	62	0	0	1,869	63	0
77+35.38	7735.38	35.38	16.68	0.00	0.00	21	0	0	1,890	63	0
					RAMP D SUBTOTAL:				**1,890**	**63**	**0**
					STAGE 5 TOTAL:				**30,960**	**326**	**0**

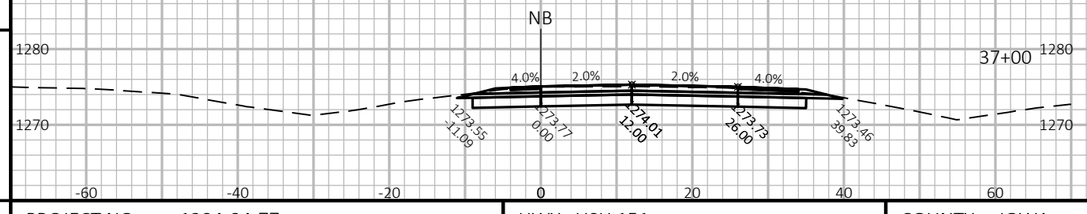
Earthwork values in the table have not been expanded. Expansion factors are: Fill Expansion - 1.25, EBS Expansion - 1.25

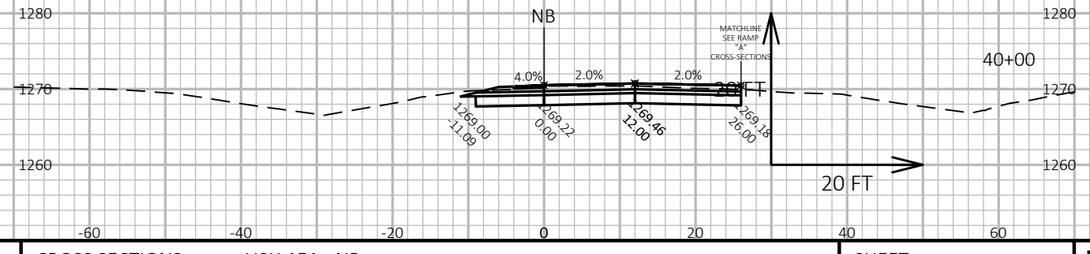












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 418	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_01

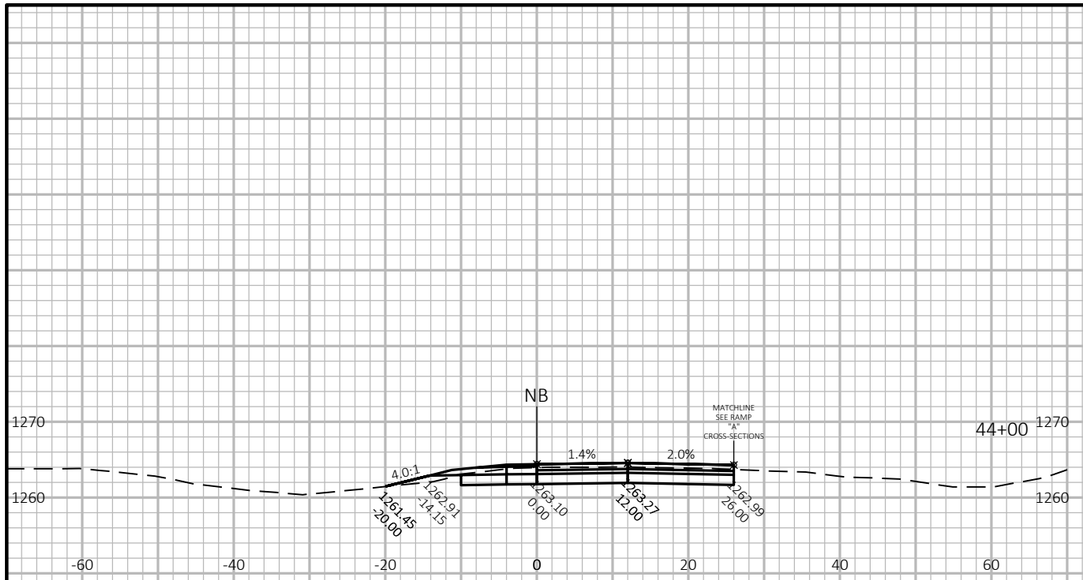
PLOT DATE : 5/22/2018 4:25 PM

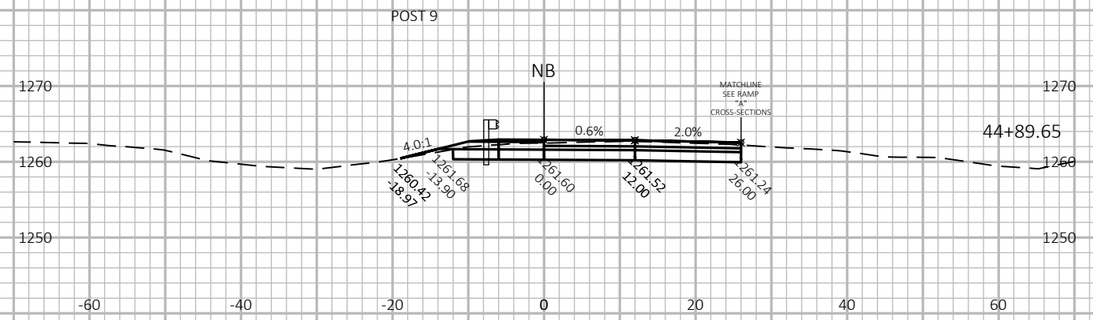
PLOT BY : SCHMIDT, DAVID B

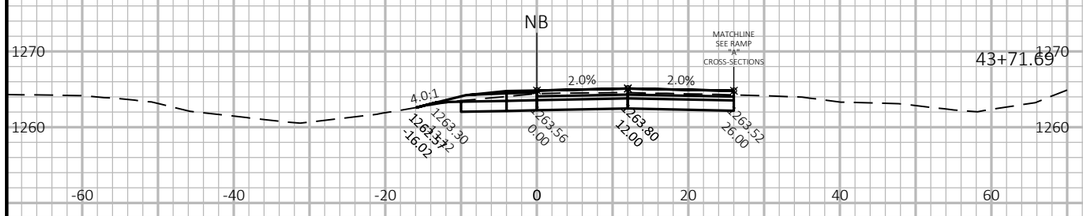
PLOT NAME :

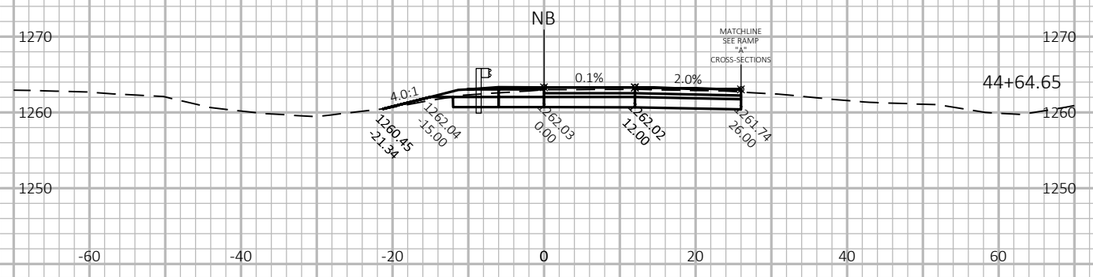
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

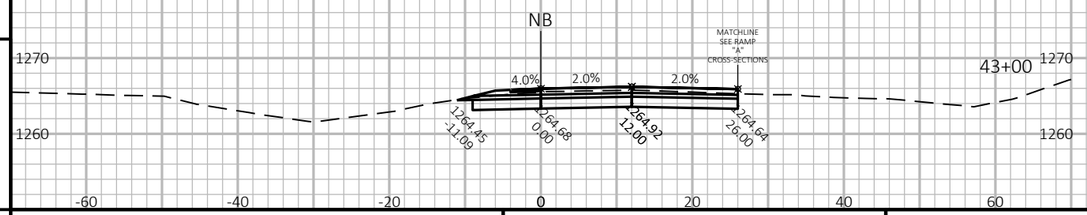
WISDOT/CADDS SHEET 49

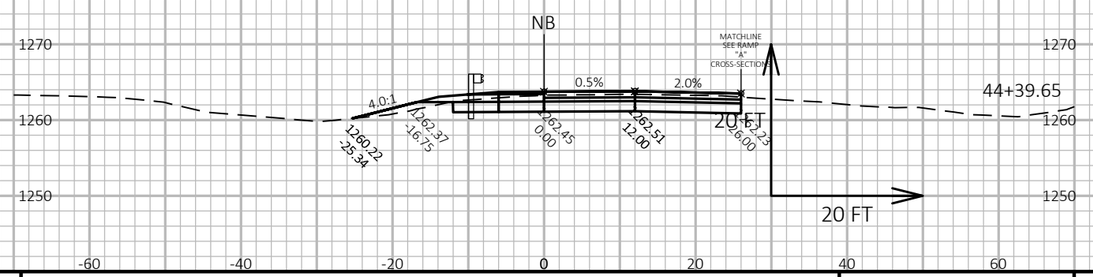












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 419	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_02

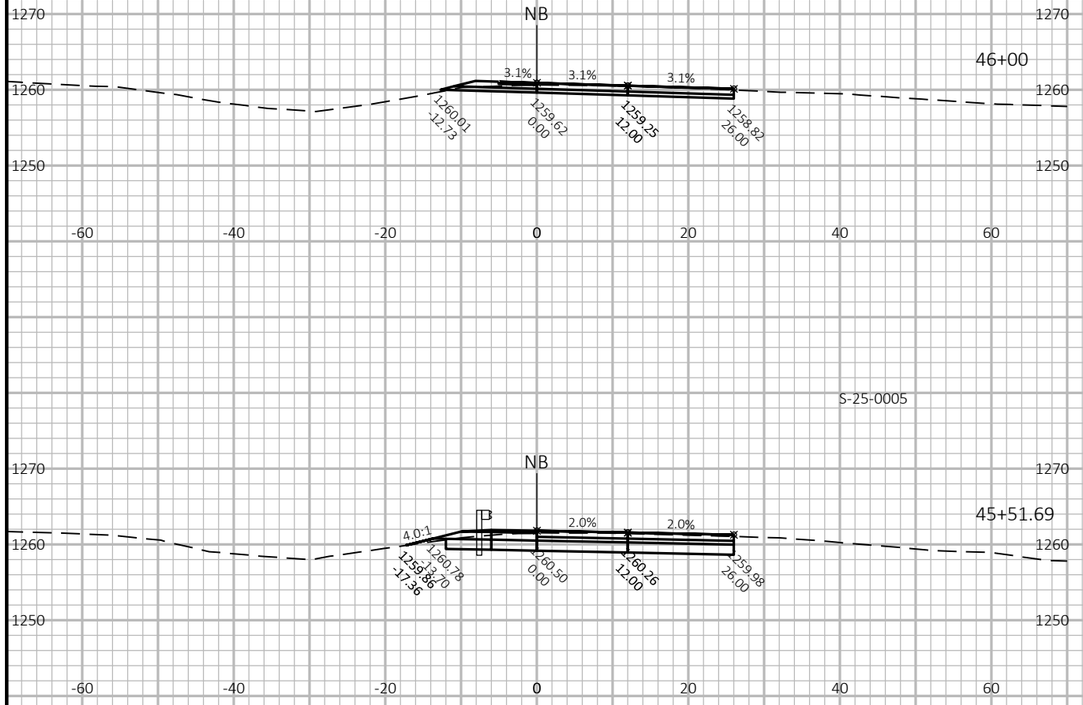
PLOT DATE : 5/22/2018 4:25 PM

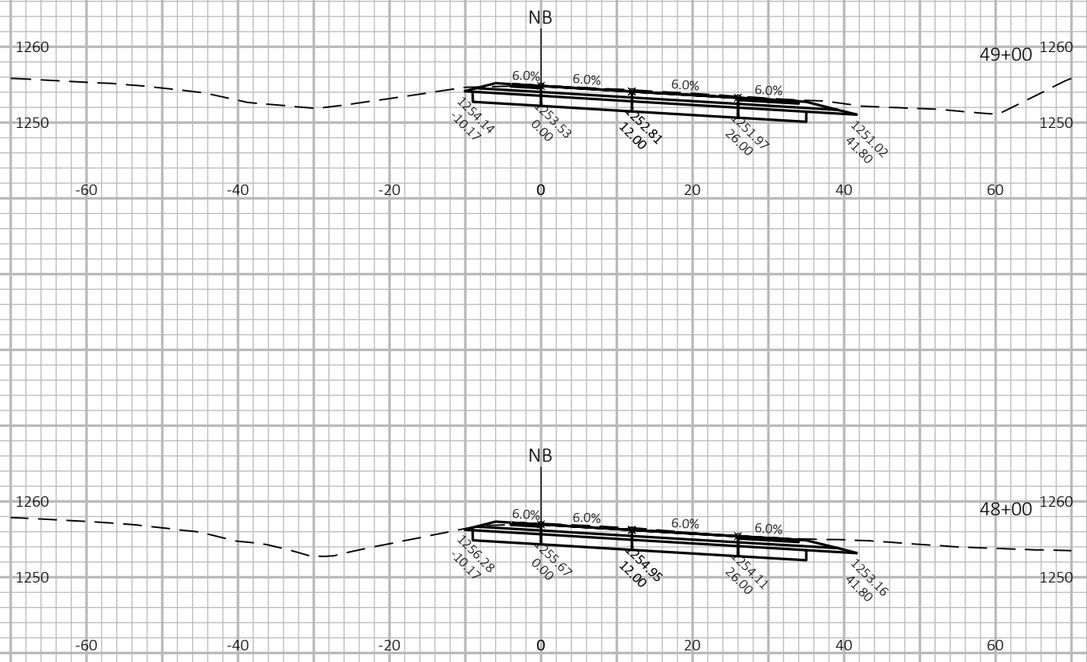
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

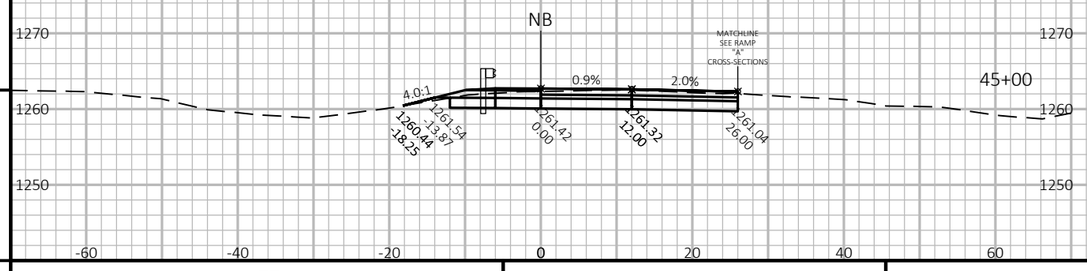
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

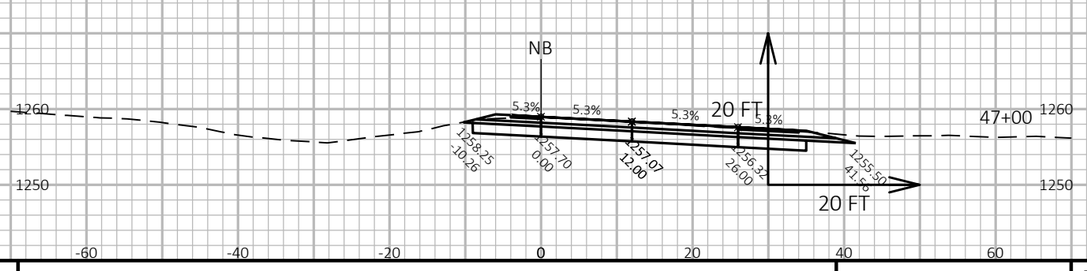
WISDOT/CADDS SHEET 49





S-25-0005





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 420	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_03

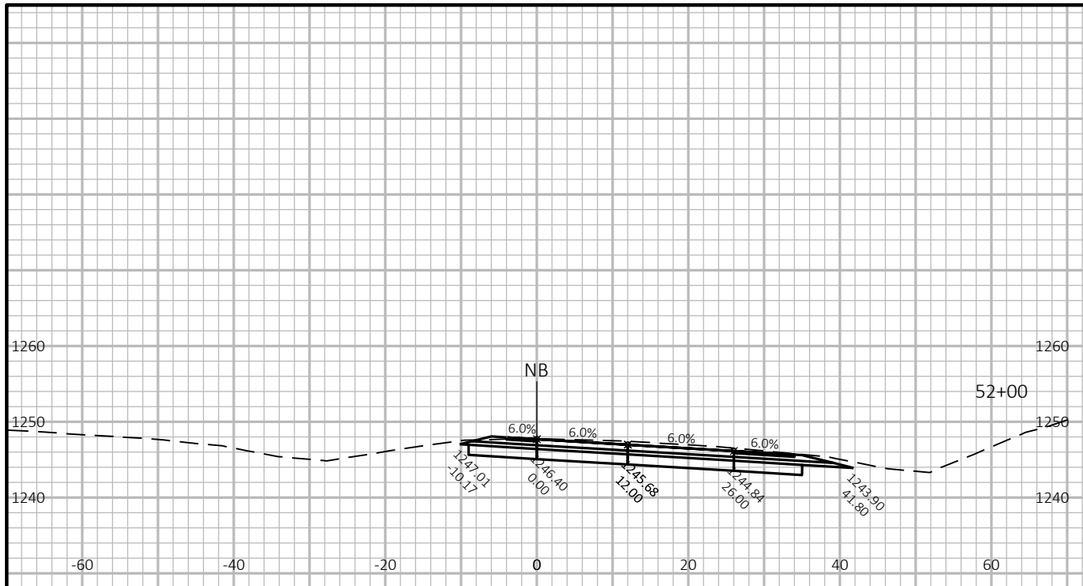
PLOT DATE : 5/22/2018 4:26 PM

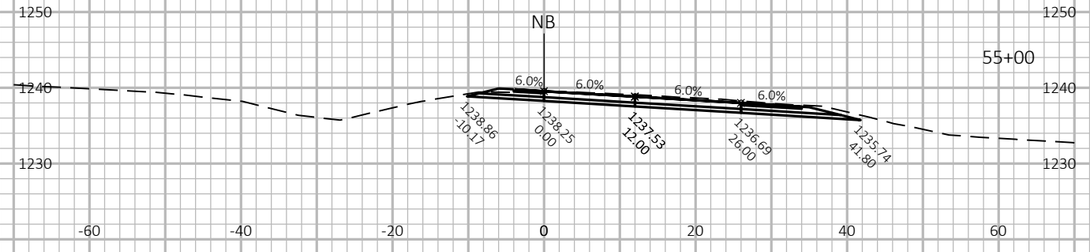
PLOT BY : SCHMIDT, DAVID B

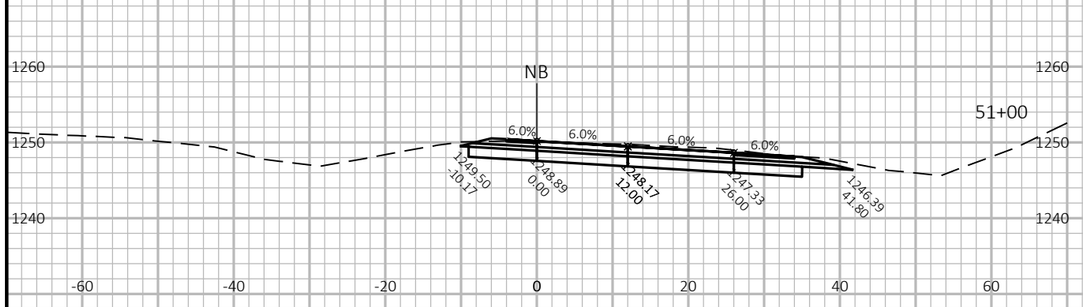
PLOT NAME :

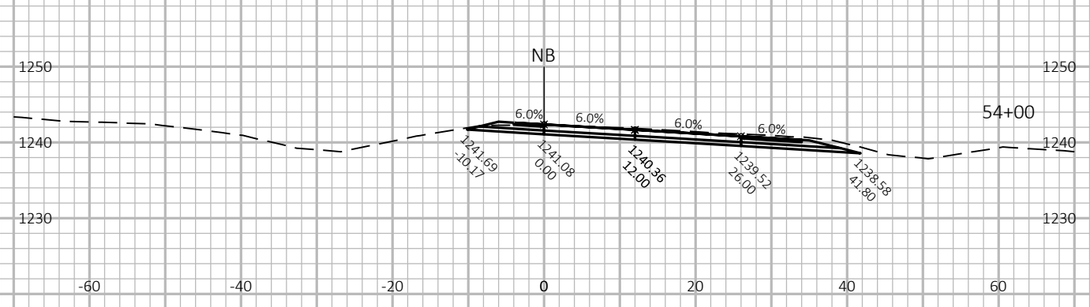
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

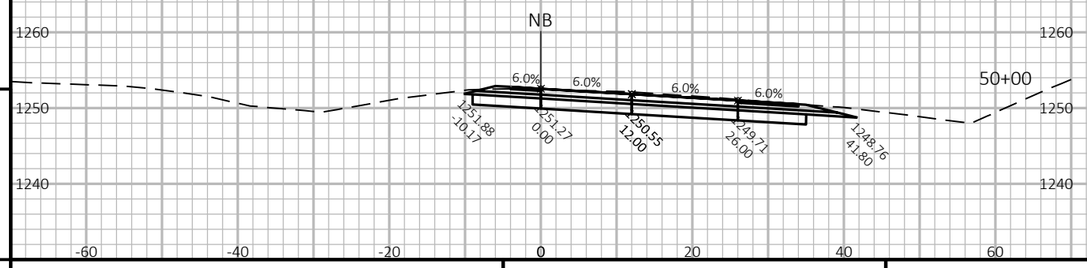
WISDOT/CADDS SHEET 49

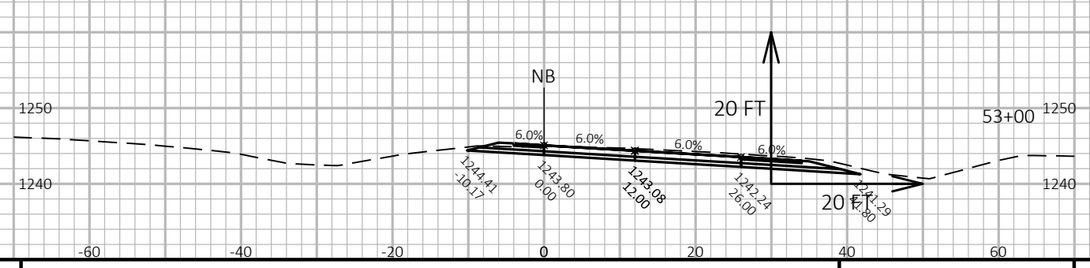












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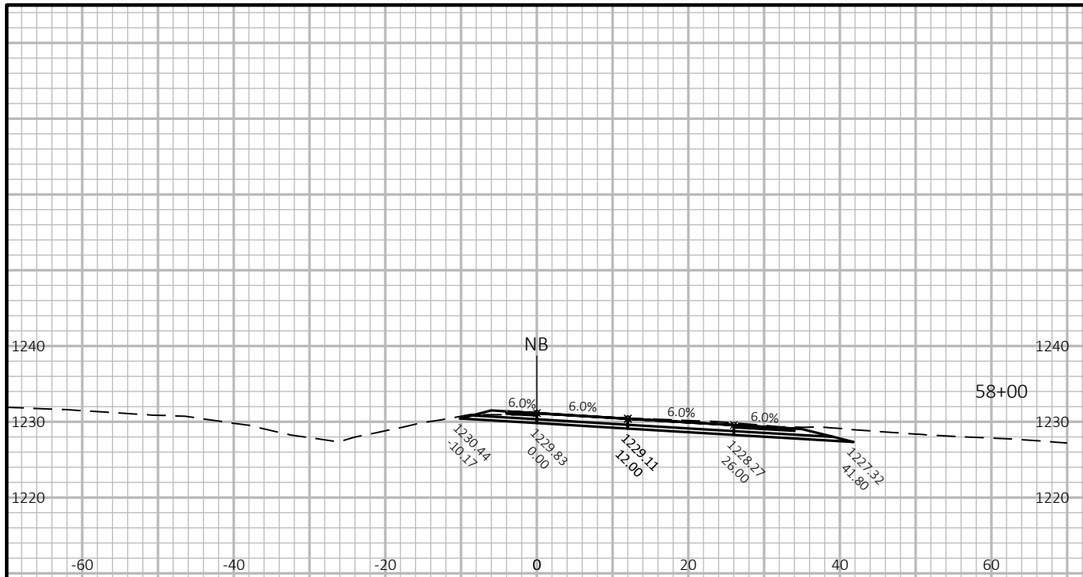
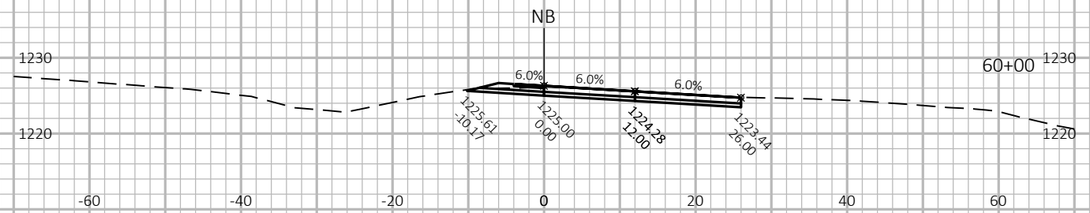
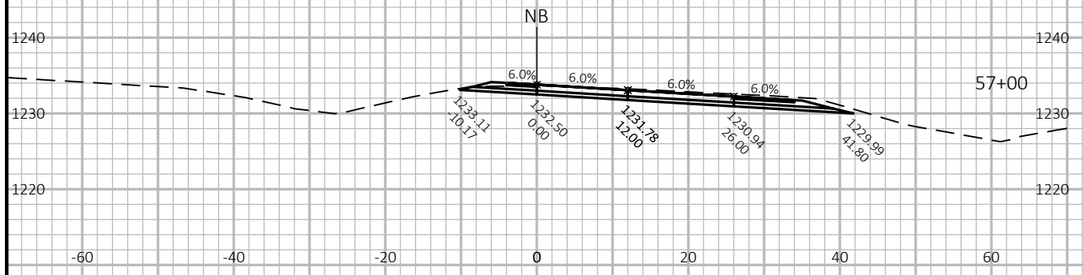
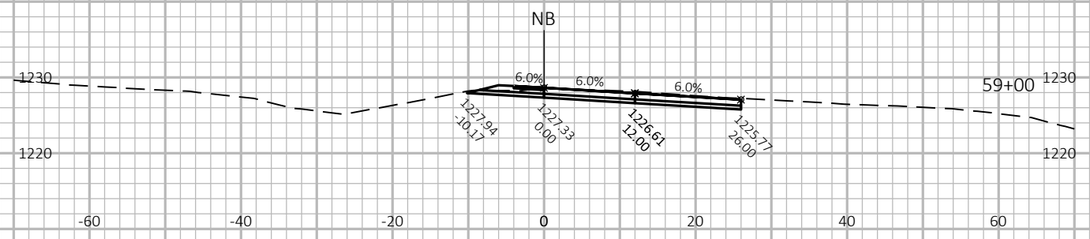
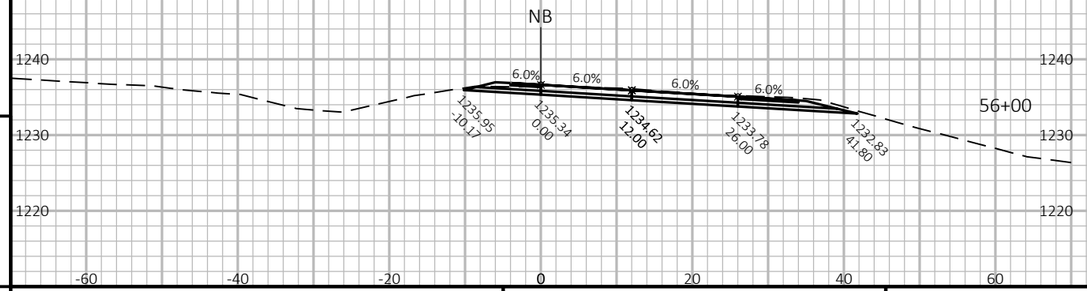
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 421	E

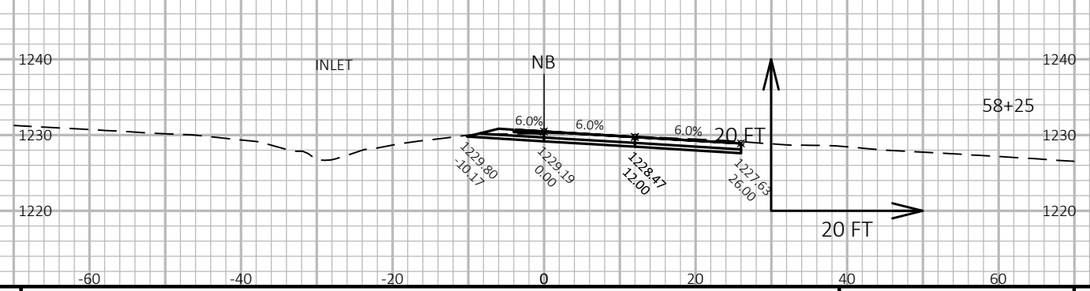












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 422	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_05

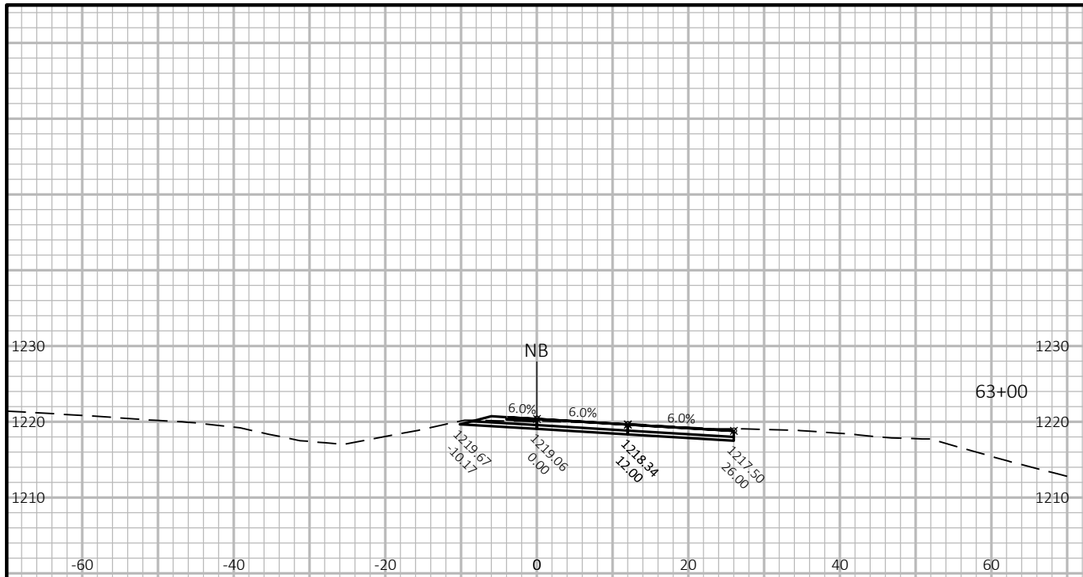
PLOT DATE : 5/22/2018 4:26 PM

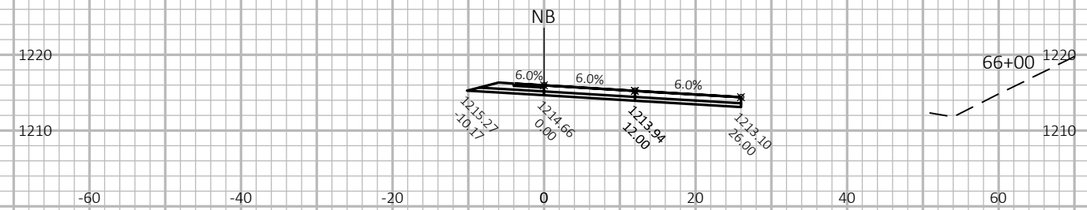
PLOT BY : SCHMIDT, DAVID B

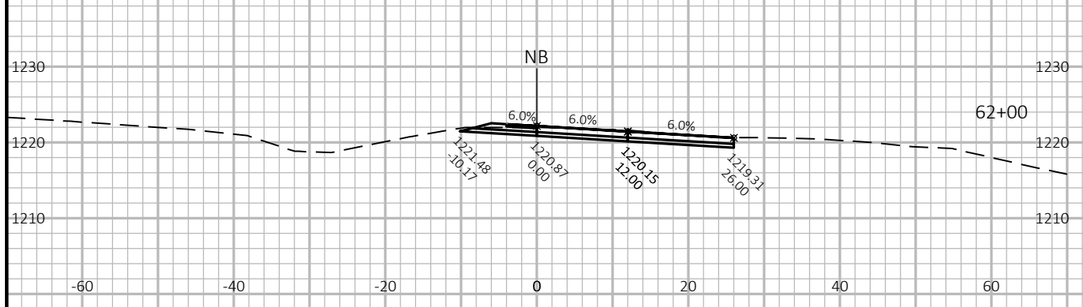
PLOT NAME :

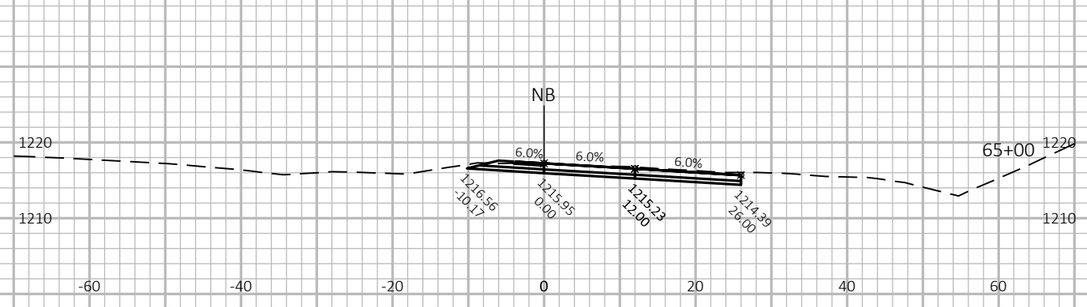
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

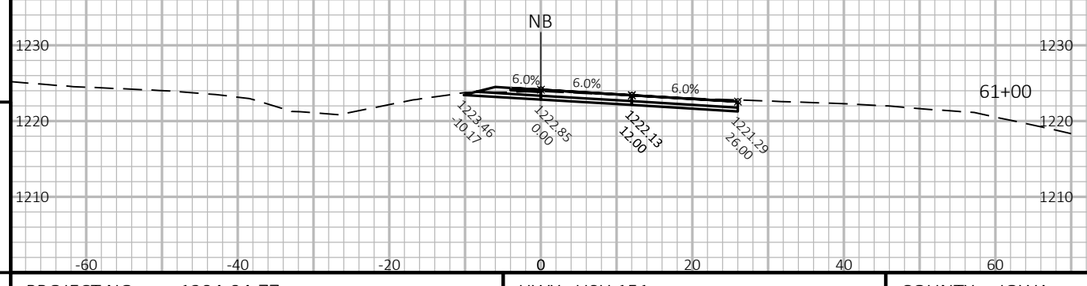
WISDOT/CADDS SHEET 49

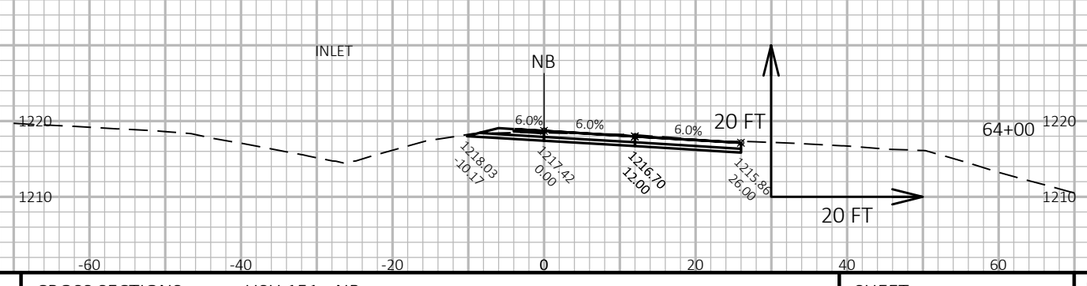












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 423	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_06

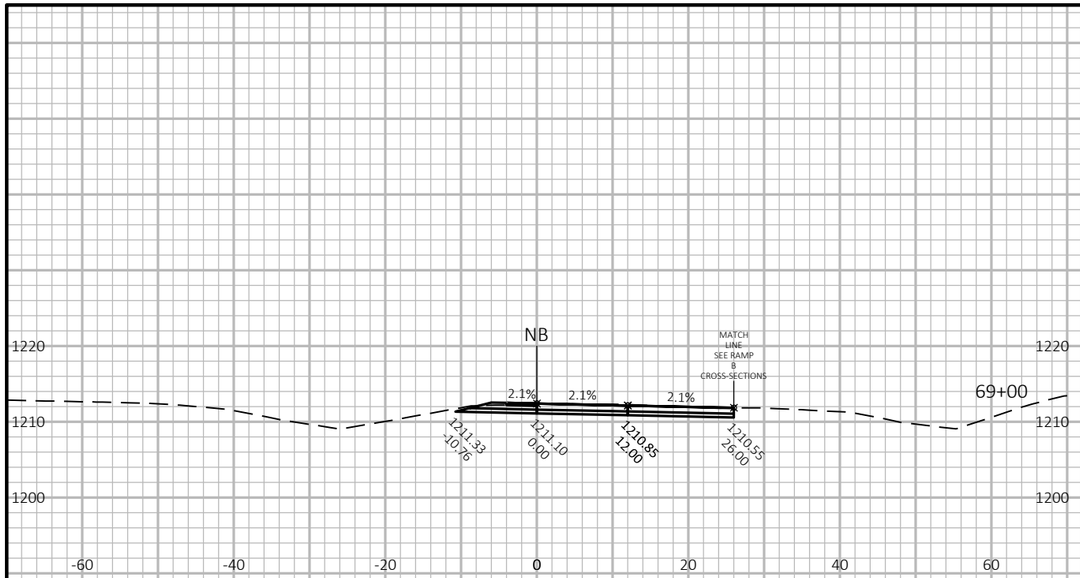
PLOT DATE : 5/22/2018 4:26 PM

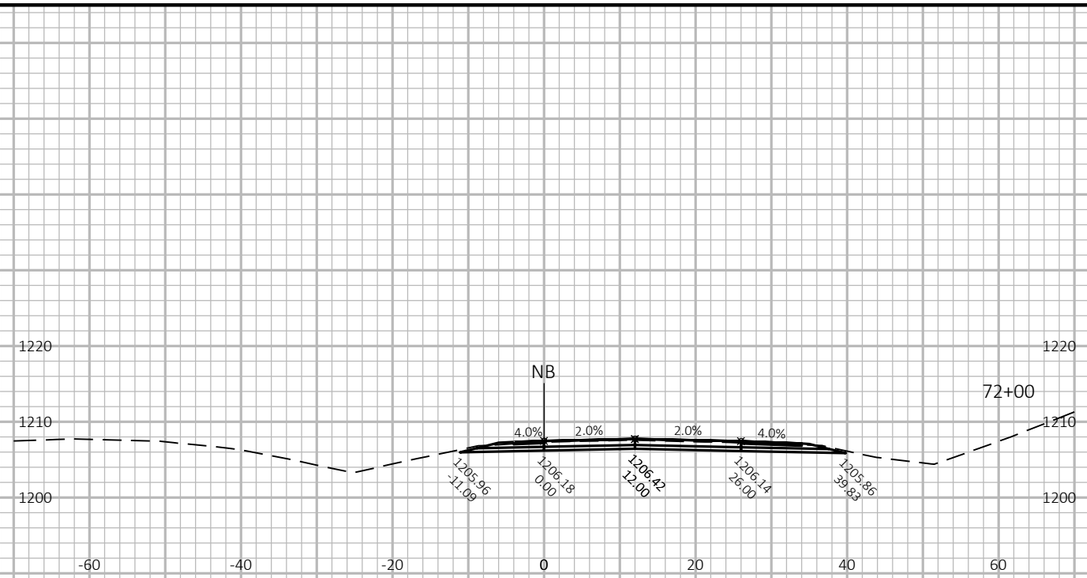
PLOT BY : SCHMIDT, DAVID B

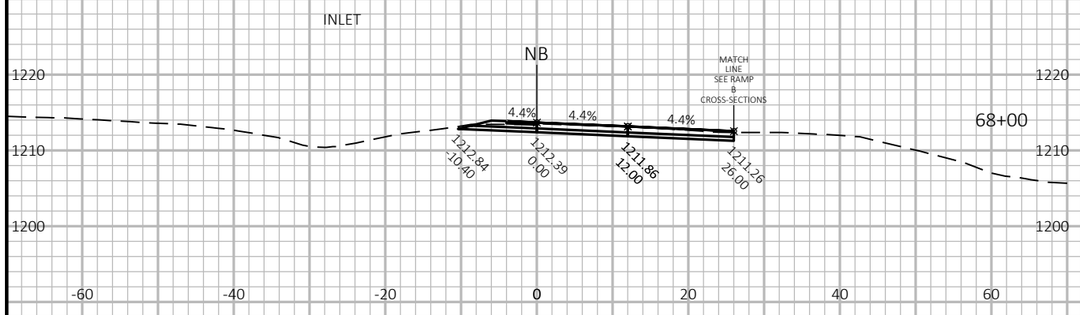
PLOT NAME :

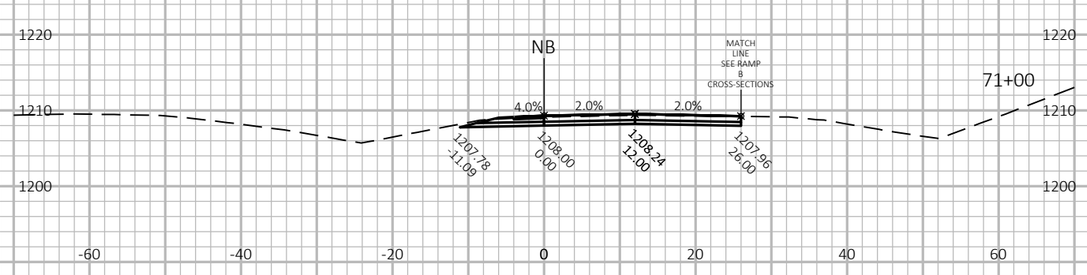
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

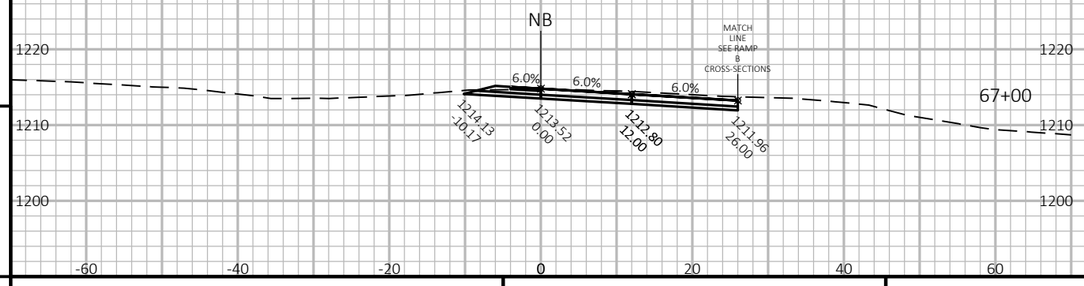
WISDOT/CADDS SHEET 49

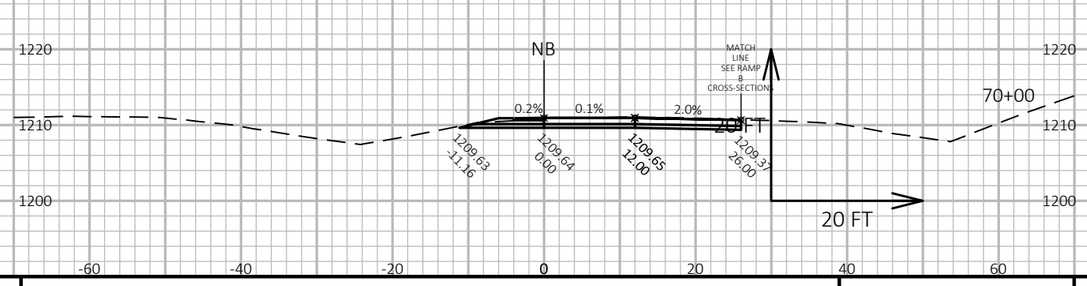












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 424	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_07

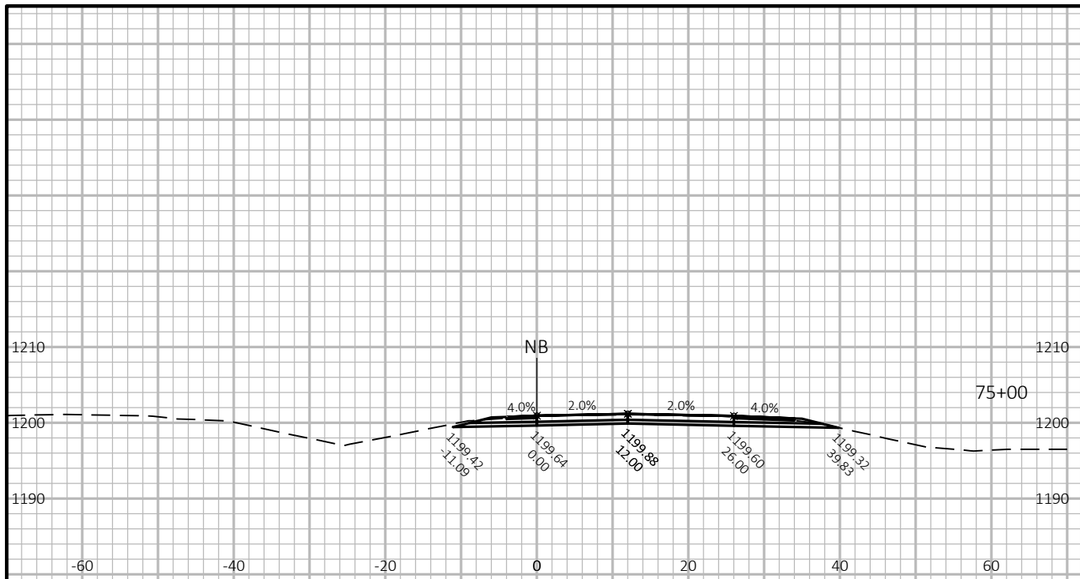
PLOT DATE : 5/22/2018 4:26 PM

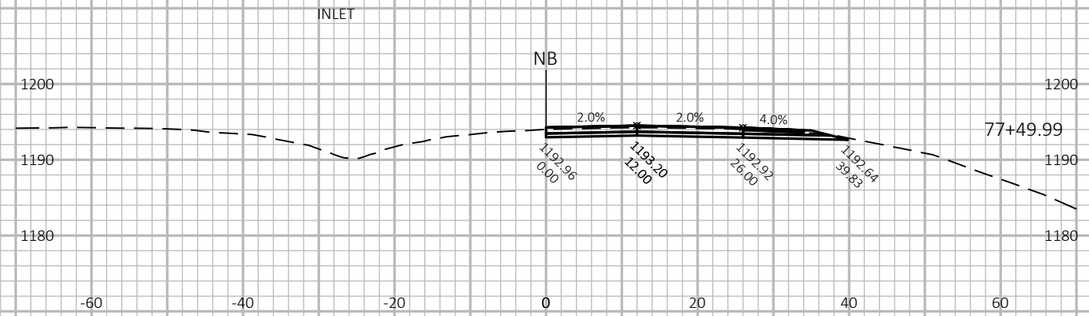
PLOT BY : SCHMIDT, DAVID B

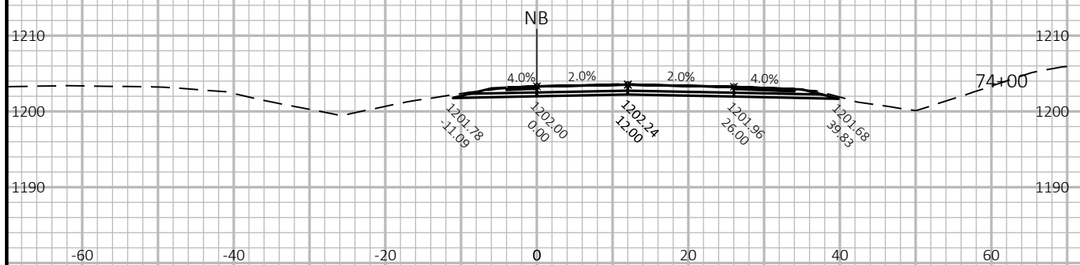
PLOT NAME :

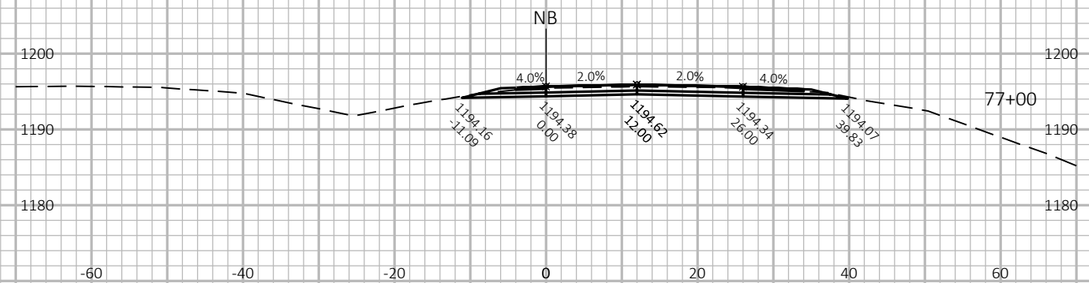
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

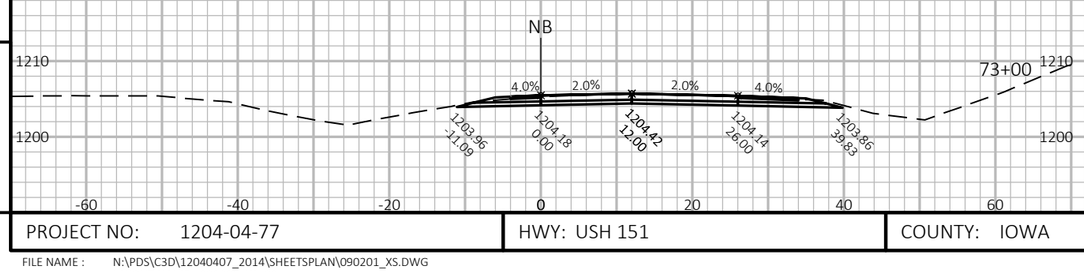
WISDOT/CADDS SHEET 49

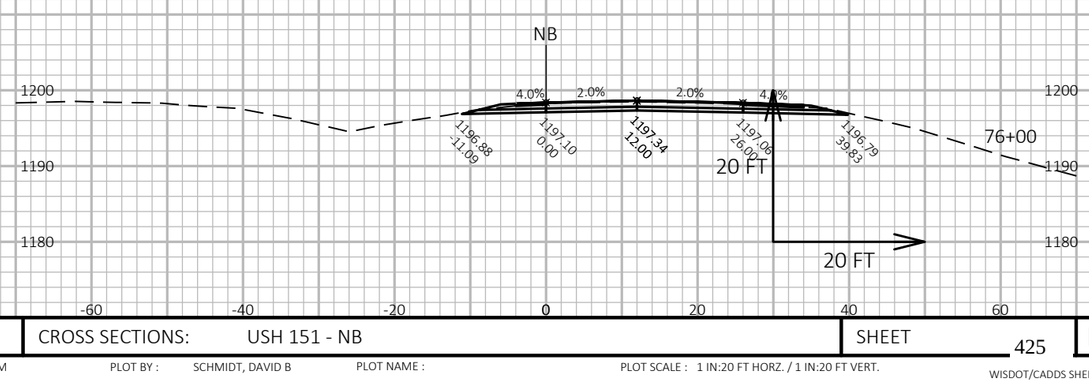












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 425	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_08

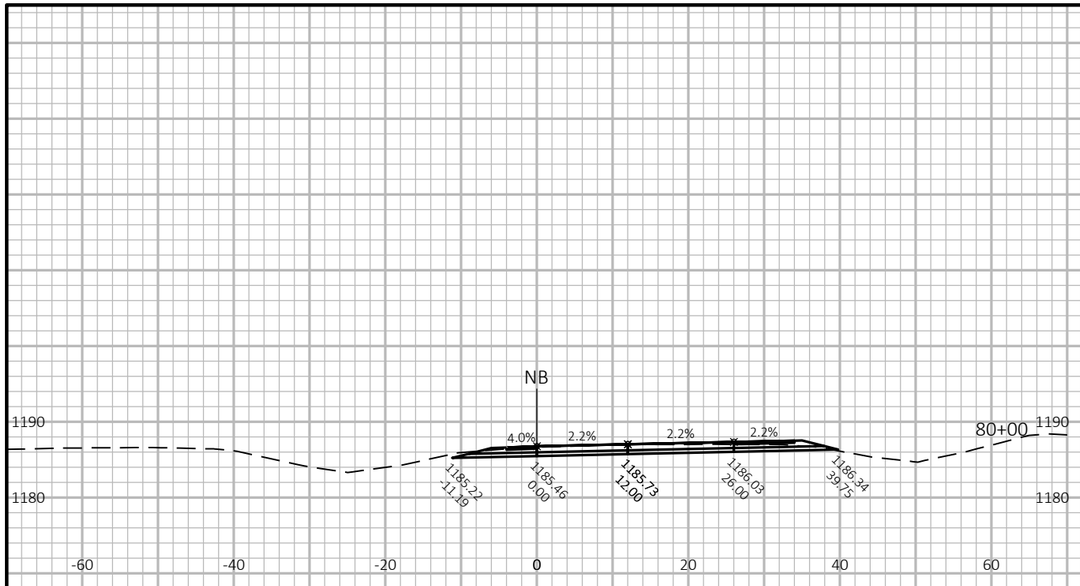
PLOT DATE : 5/22/2018 4:26 PM

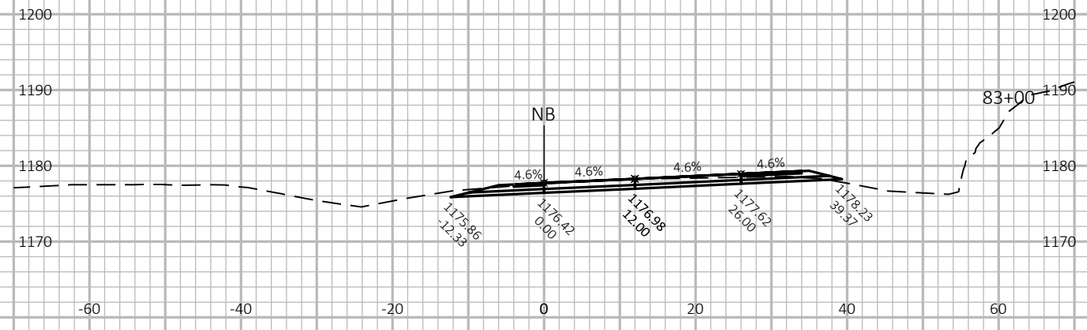
PLOT BY : SCHMIDT, DAVID B

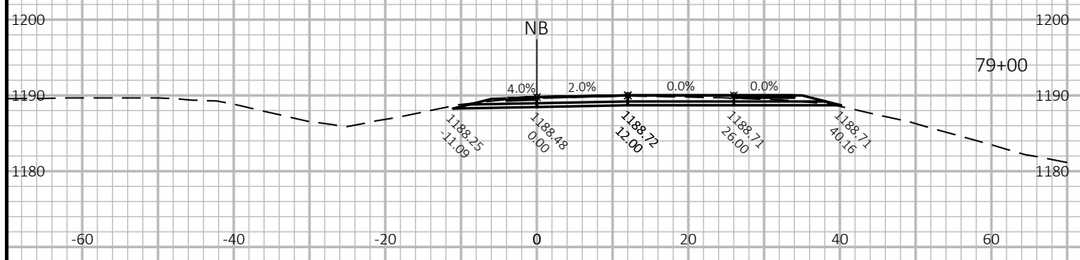
PLOT NAME :

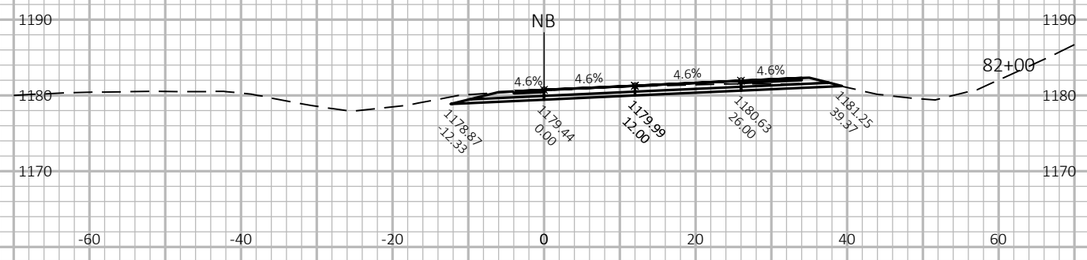
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

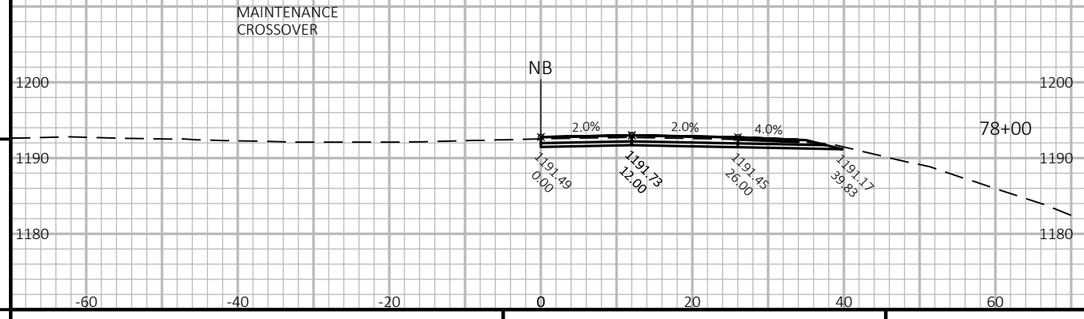
WISDOT/CADDS SHEET 49

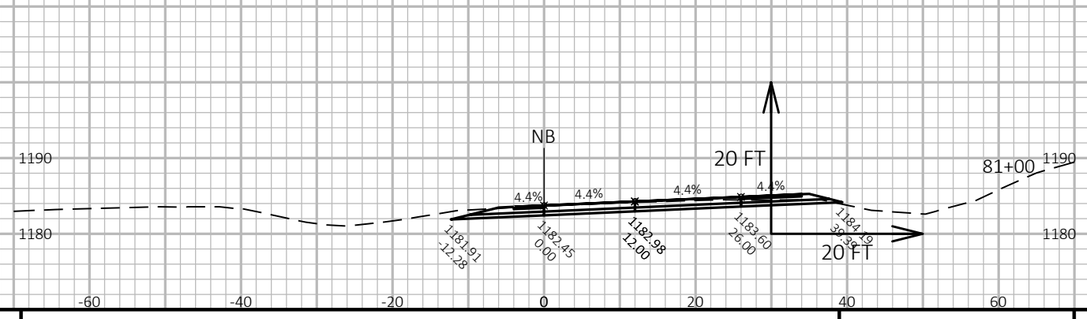












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 426	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_09

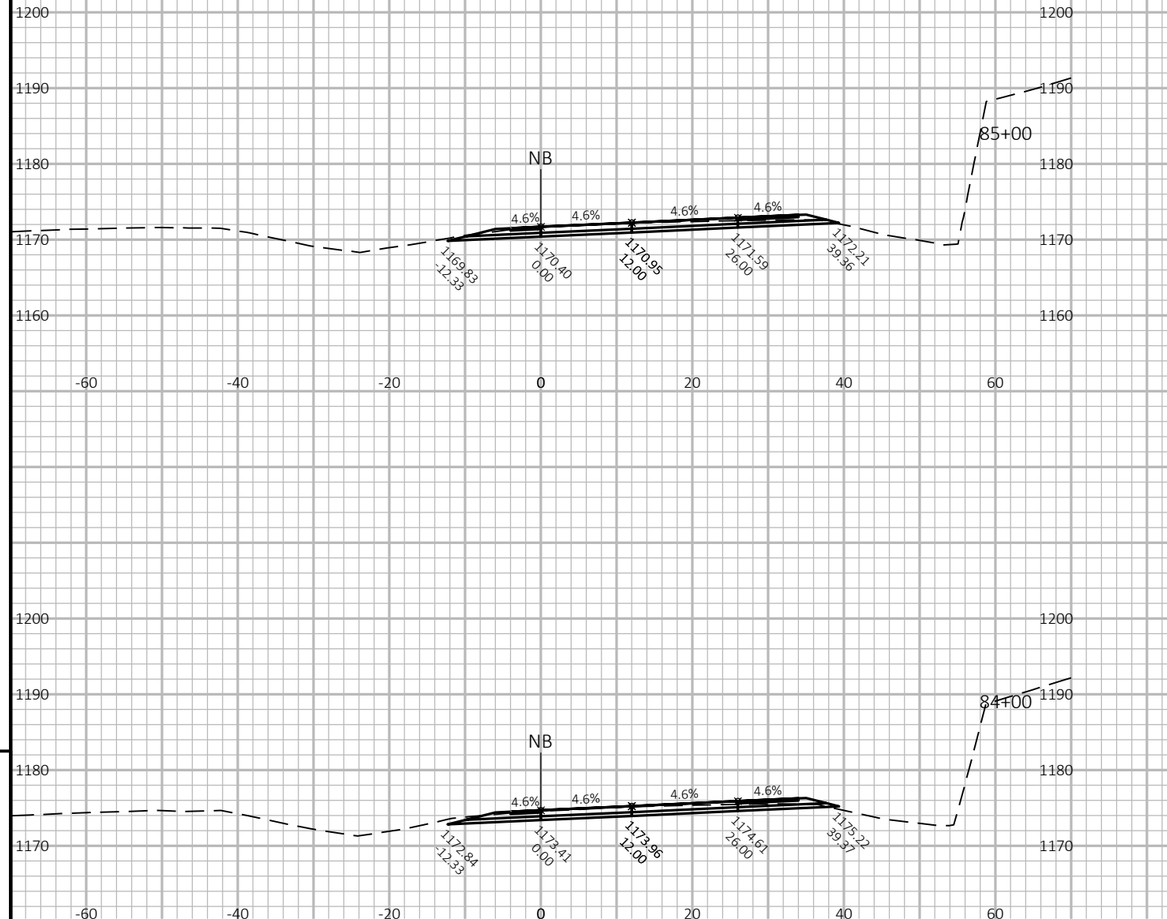
PLOT DATE : 5/22/2018 4:26 PM

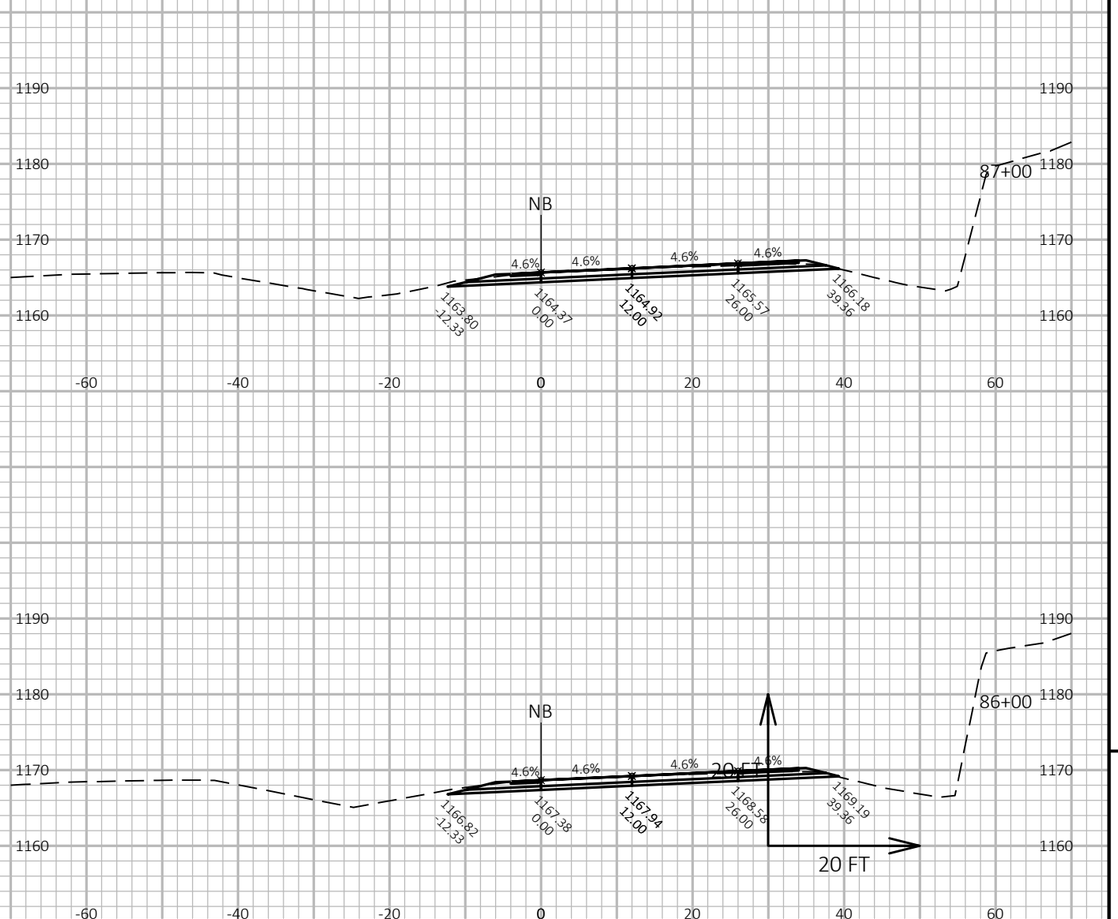
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 427	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_10

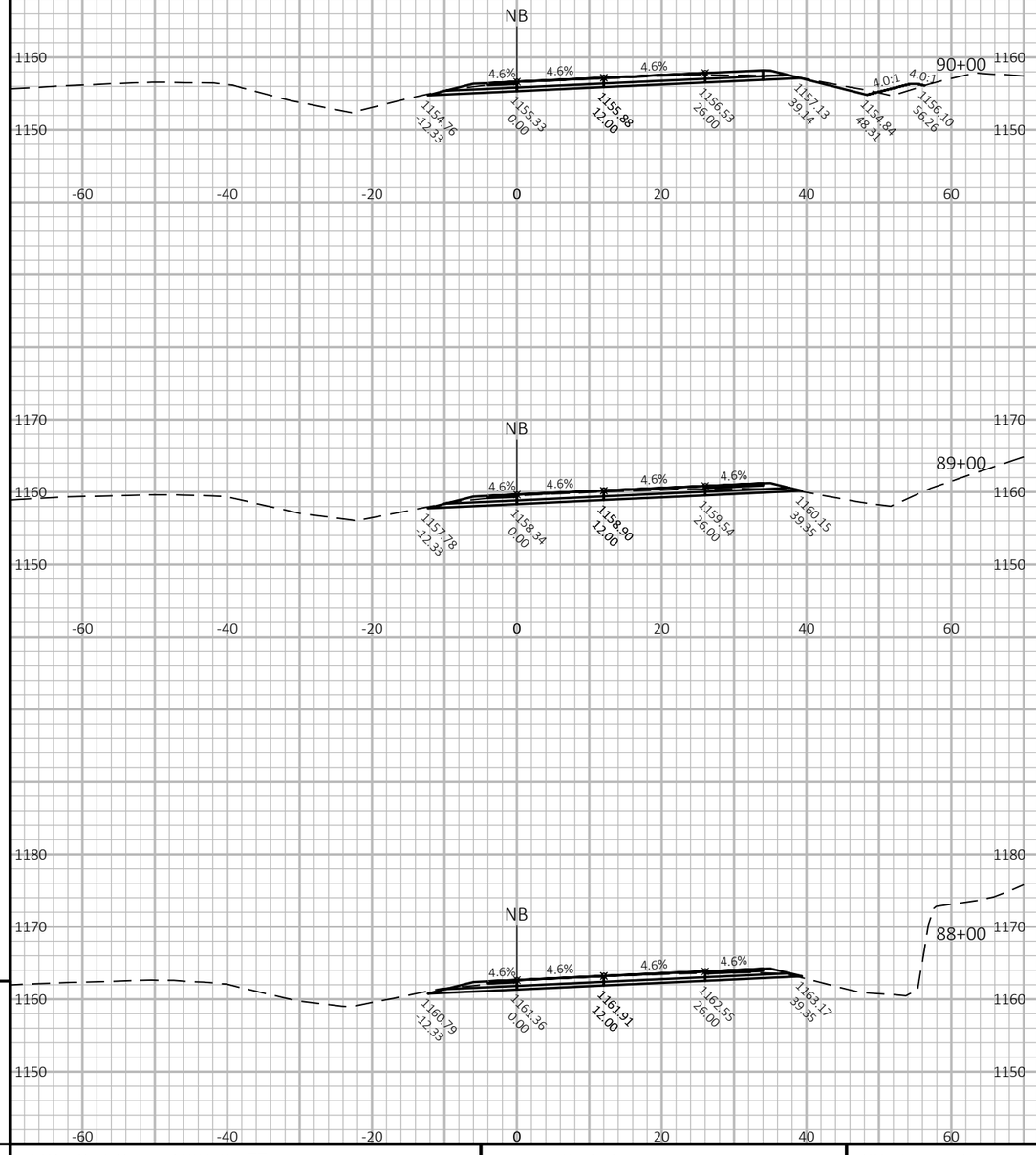
PLOT DATE : 5/22/2018 4:26 PM

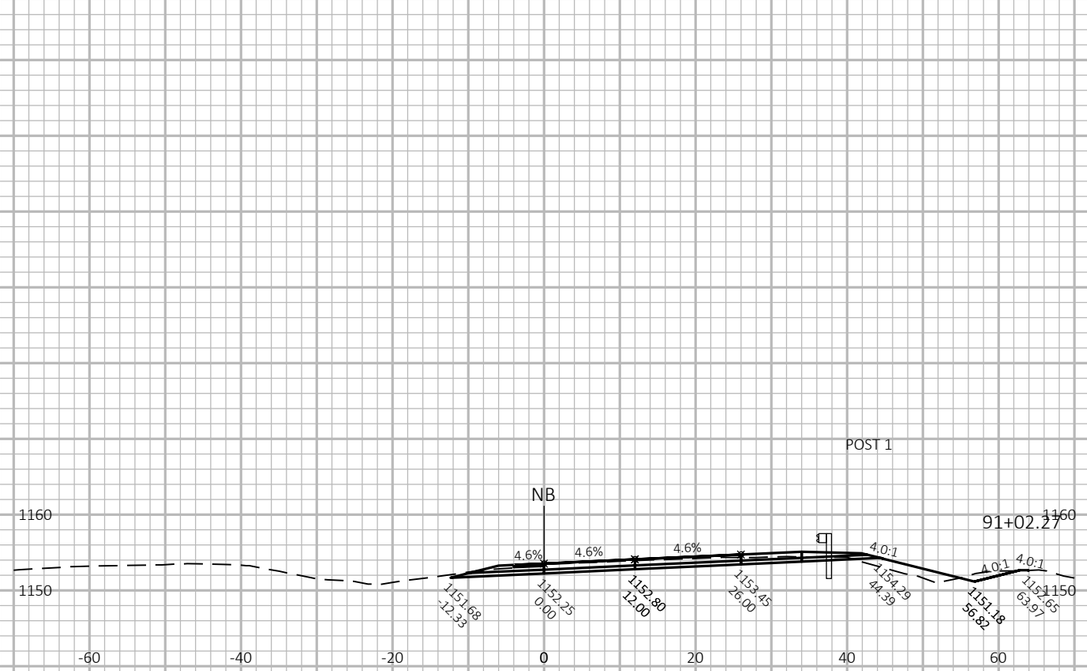
PLOT BY : SCHMIDT, DAVID B

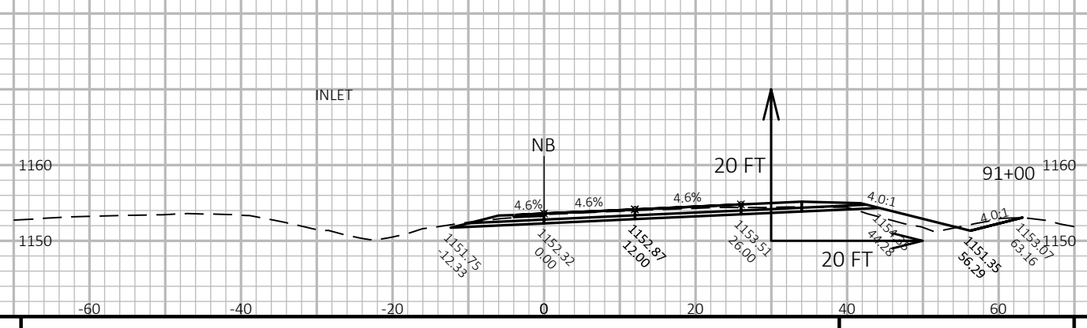
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 428	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_11

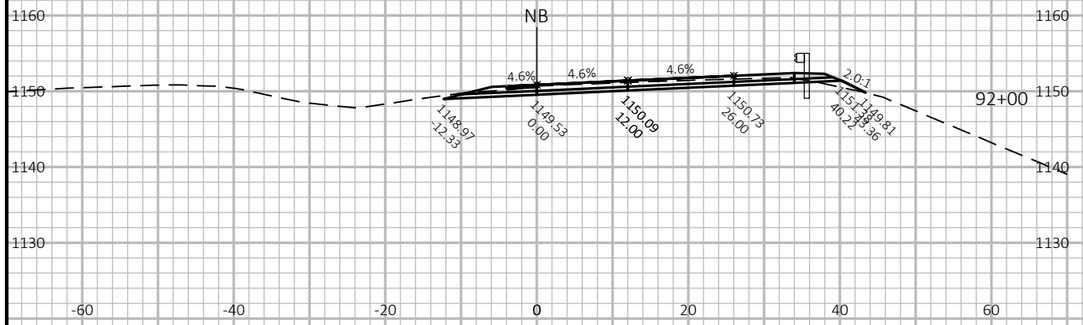
PLOT DATE : 5/22/2018 4:26 PM

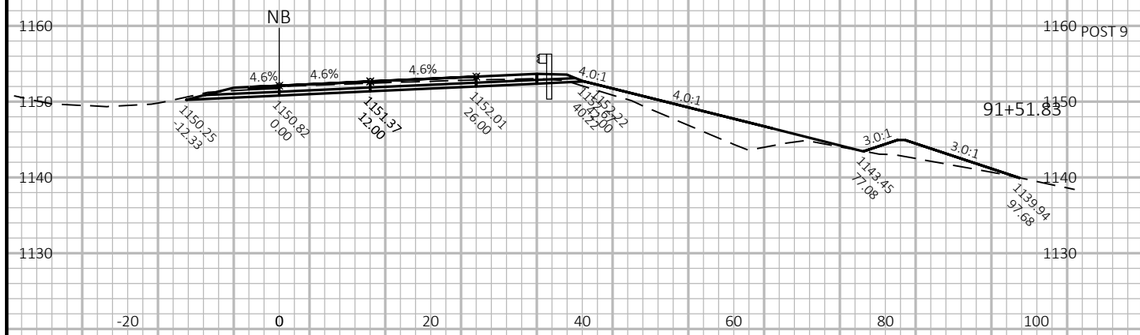
PLOT BY : SCHMIDT, DAVID B

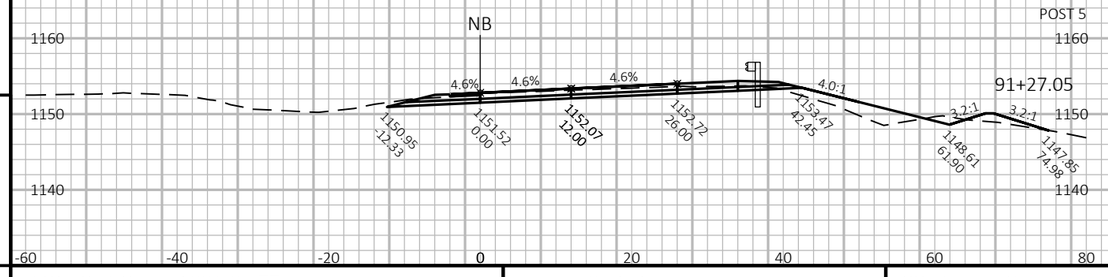
PLOT NAME :

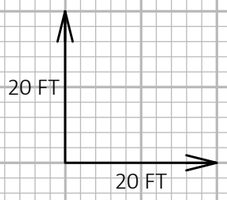
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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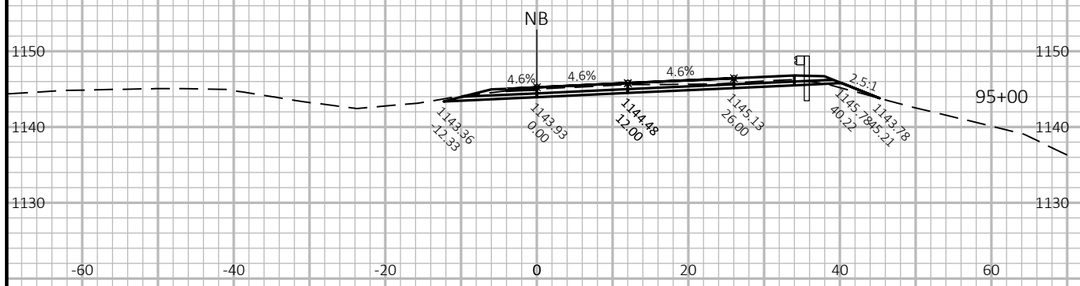
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 429	E

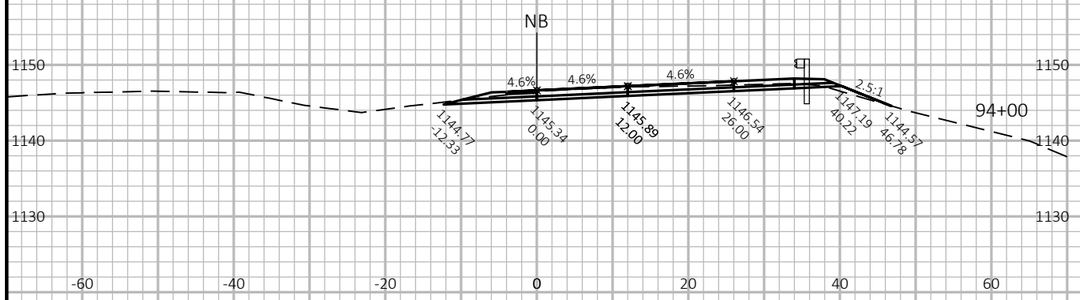
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_12

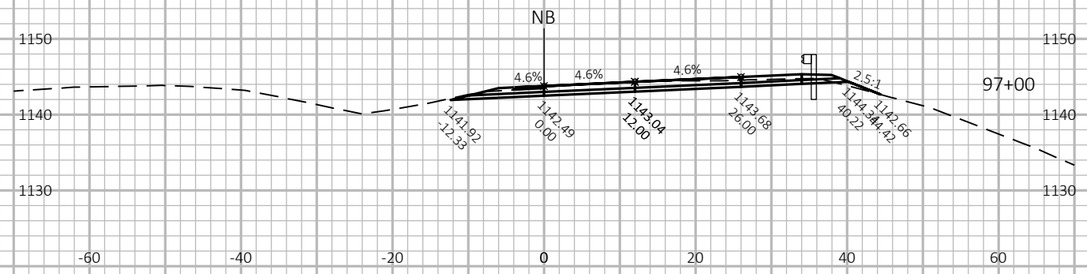
PLOT DATE : 5/22/2018 4:27 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

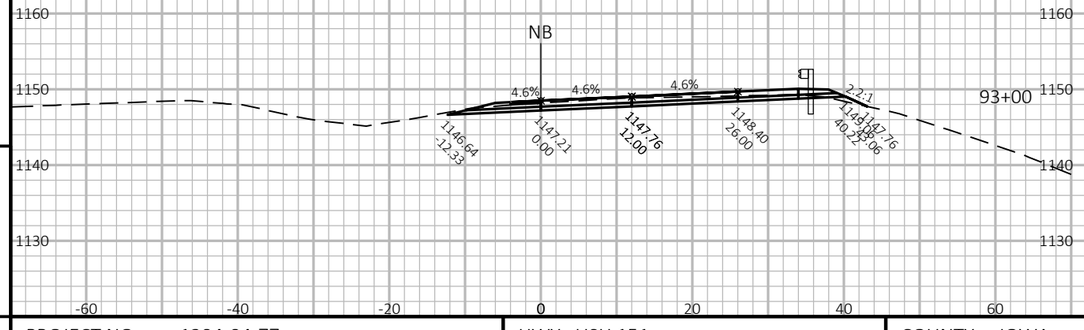
WISDOT/CADDS SHEET 49

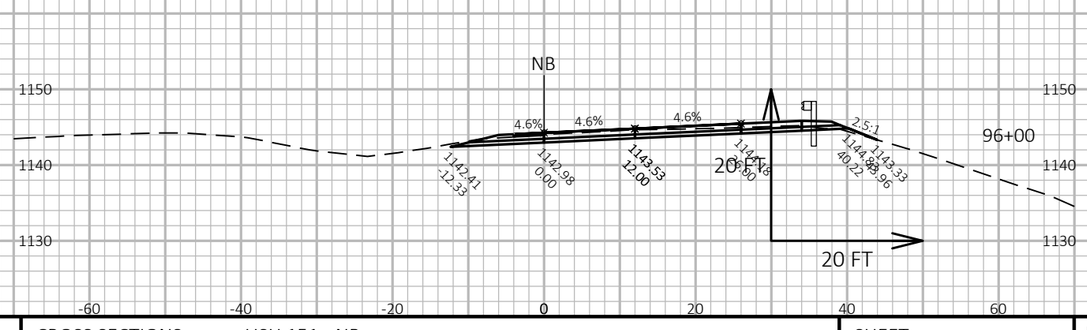


BOX CULVERT









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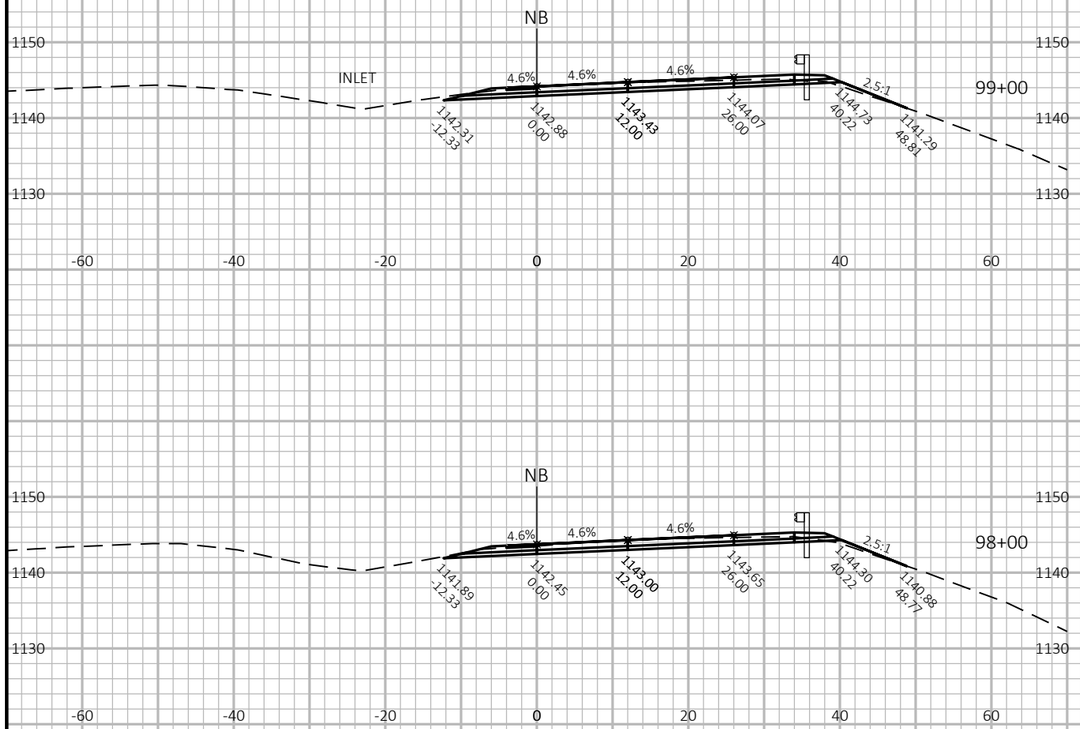
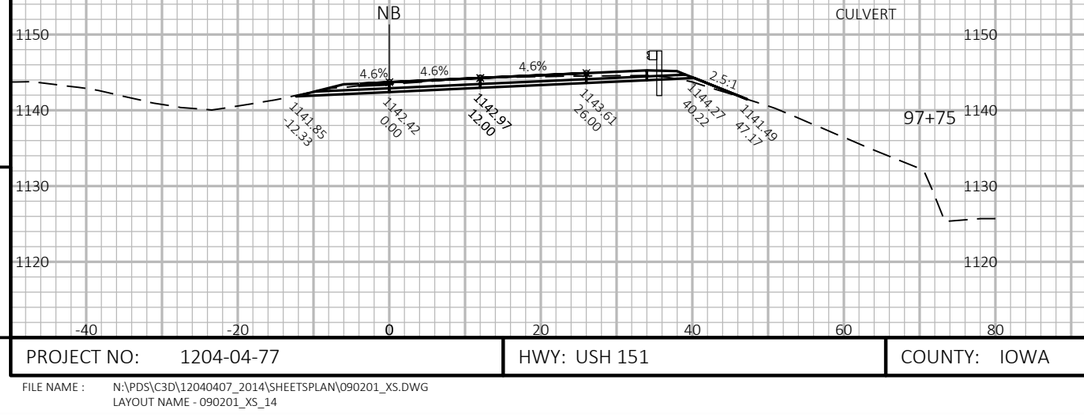
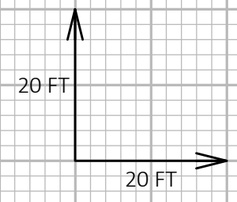
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 430	E







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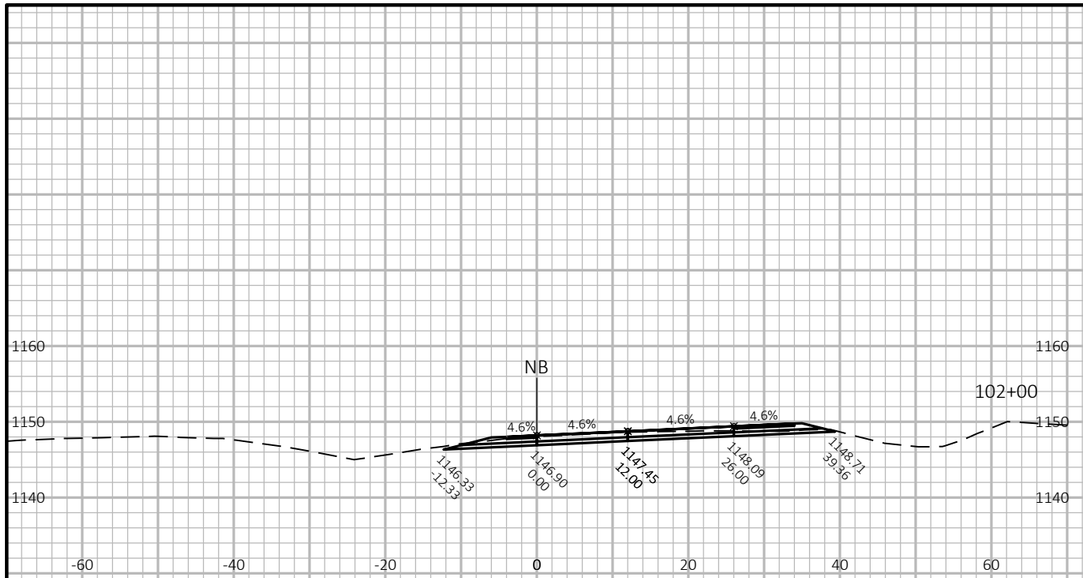
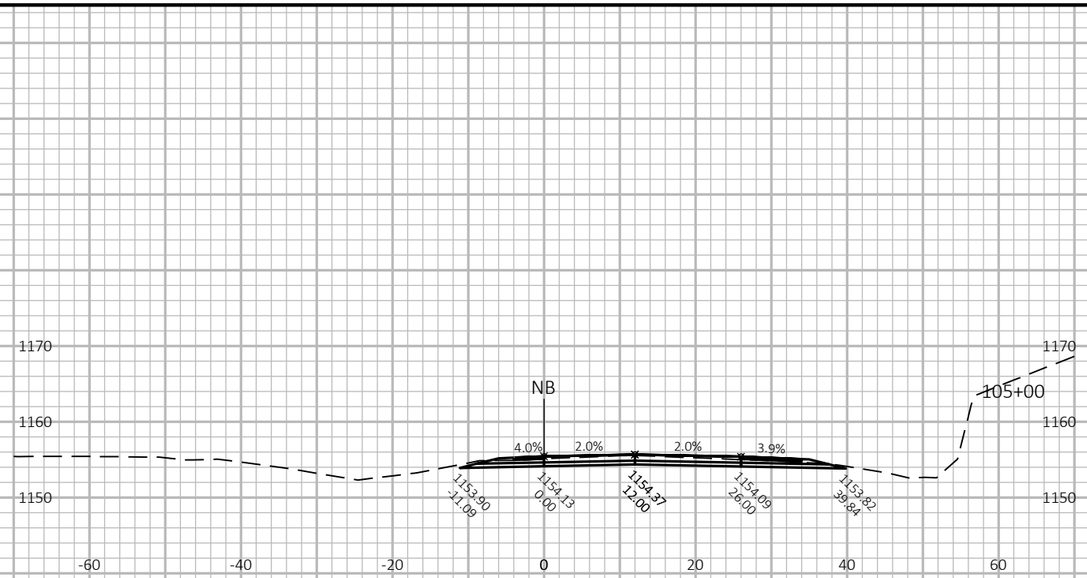
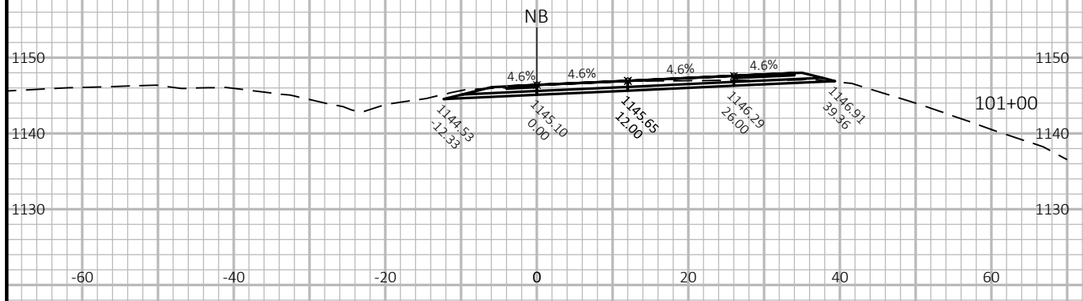
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 431	E

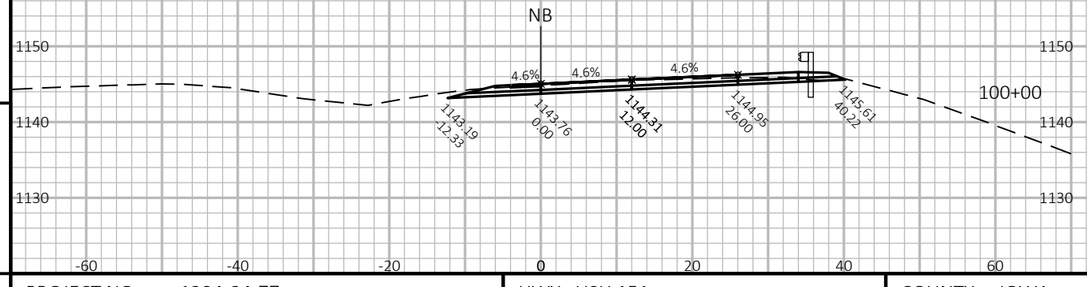
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_14

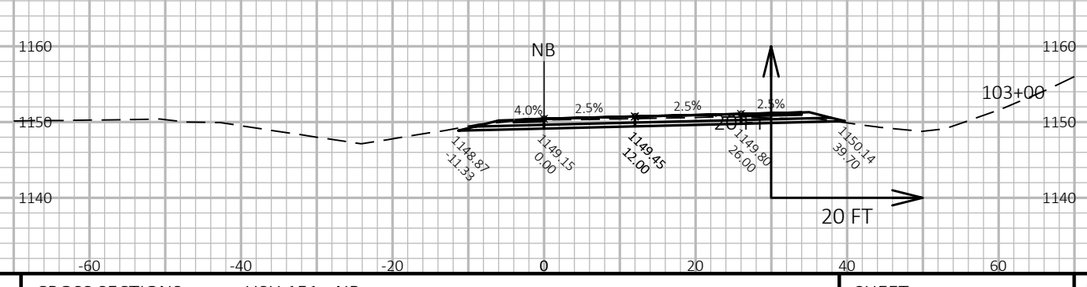
PLOT DATE : 5/22/2018 4:27 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.











PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 432 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_15

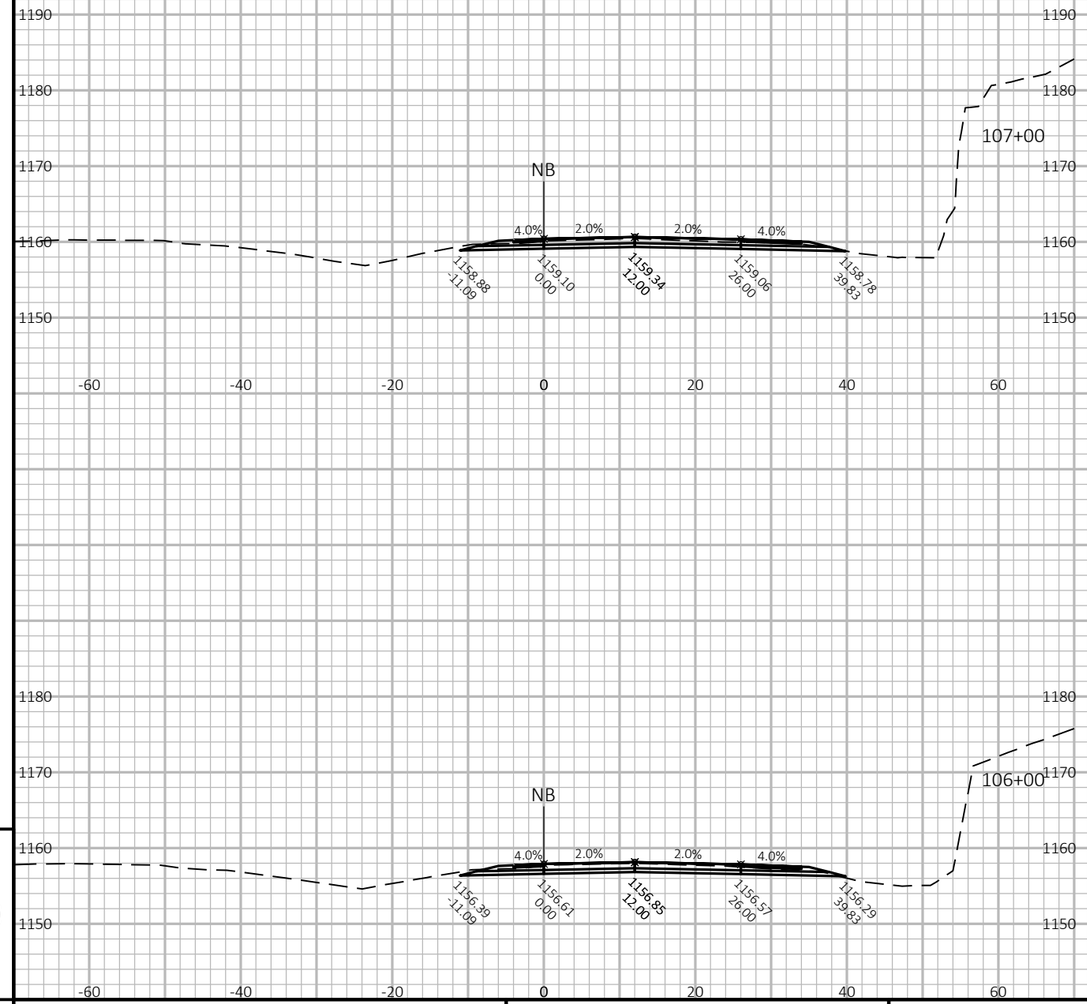
PLOT DATE : 5/22/2018 4:27 PM

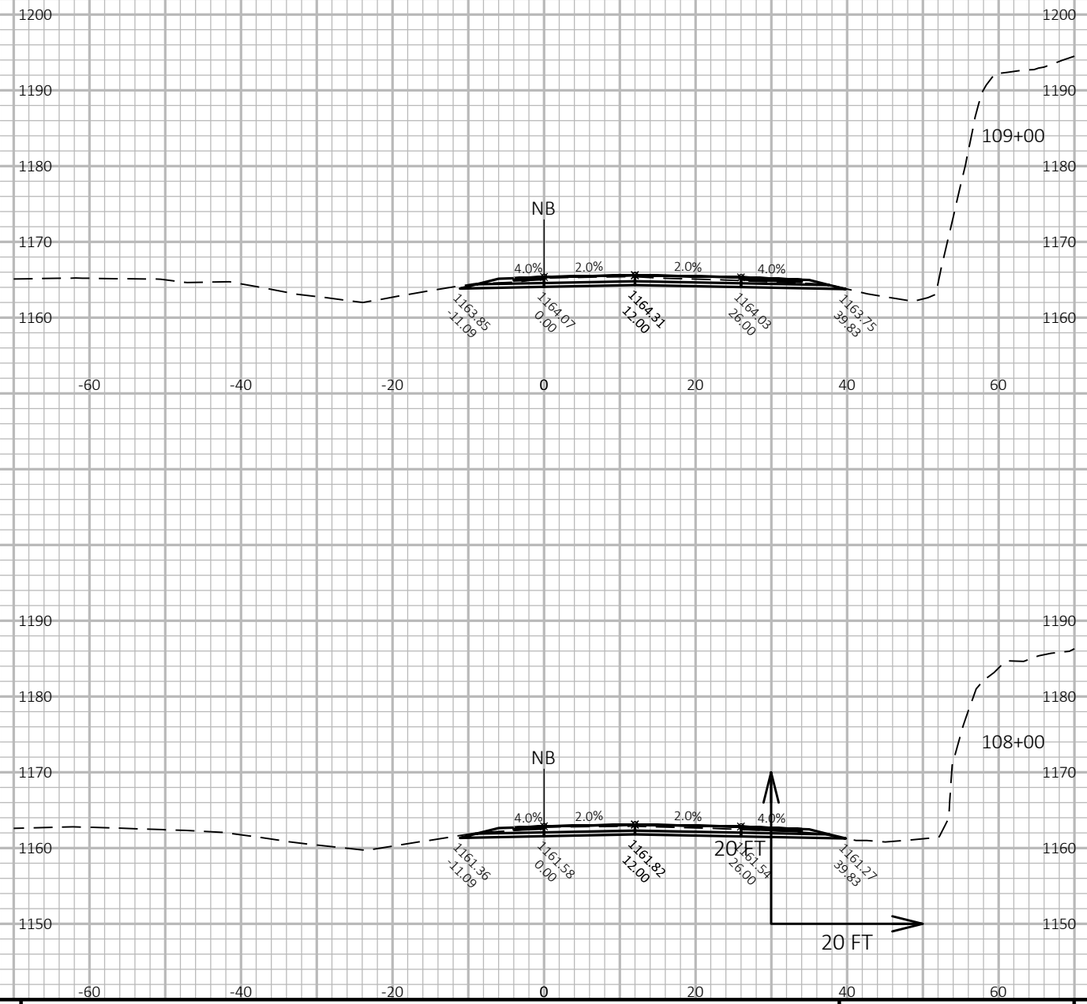
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 433	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_16

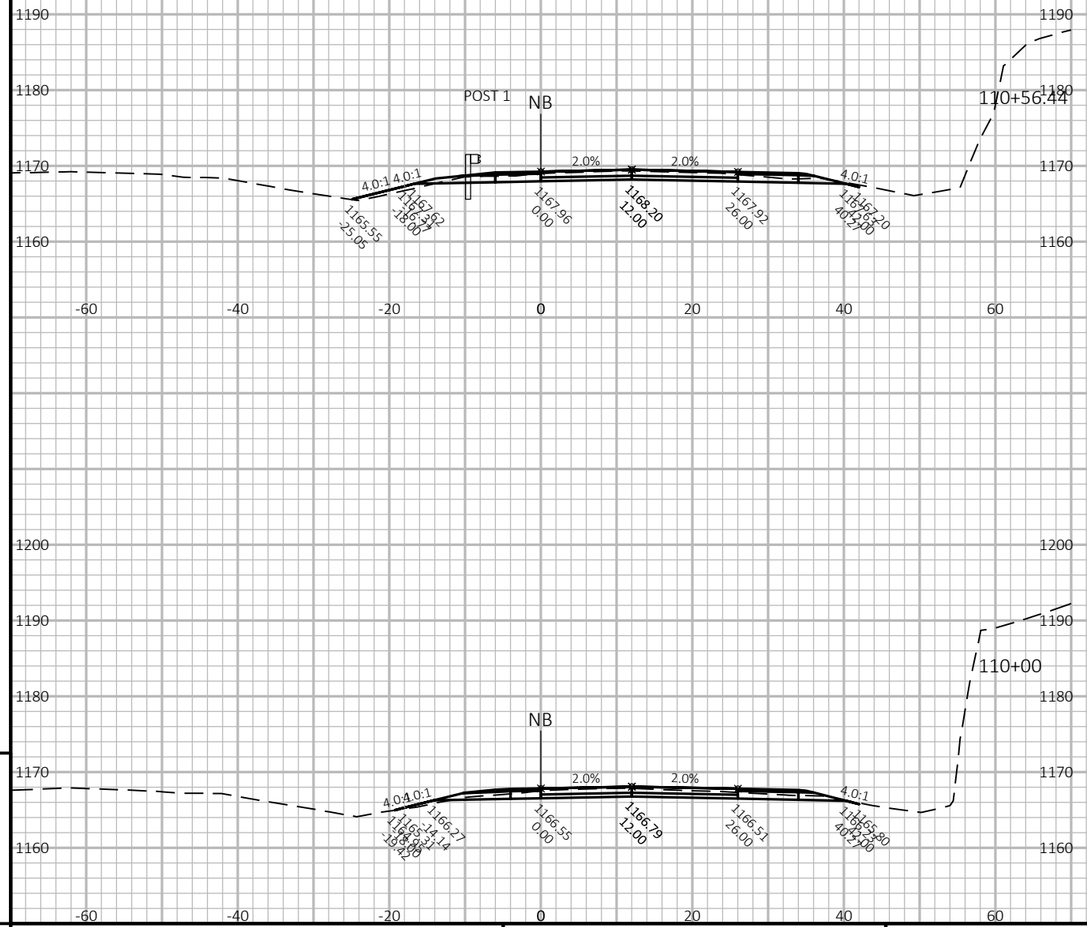
PLOT DATE : 5/22/2018 4:27 PM

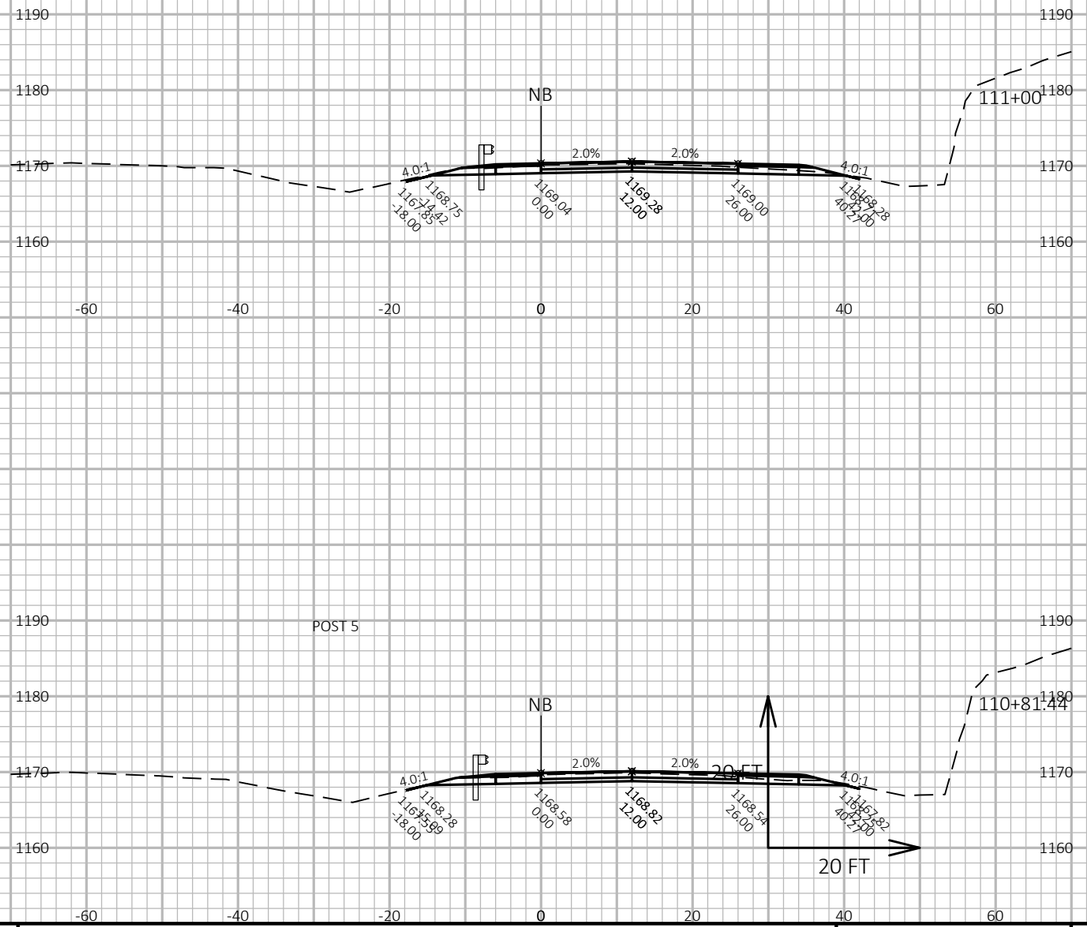
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 434	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_17

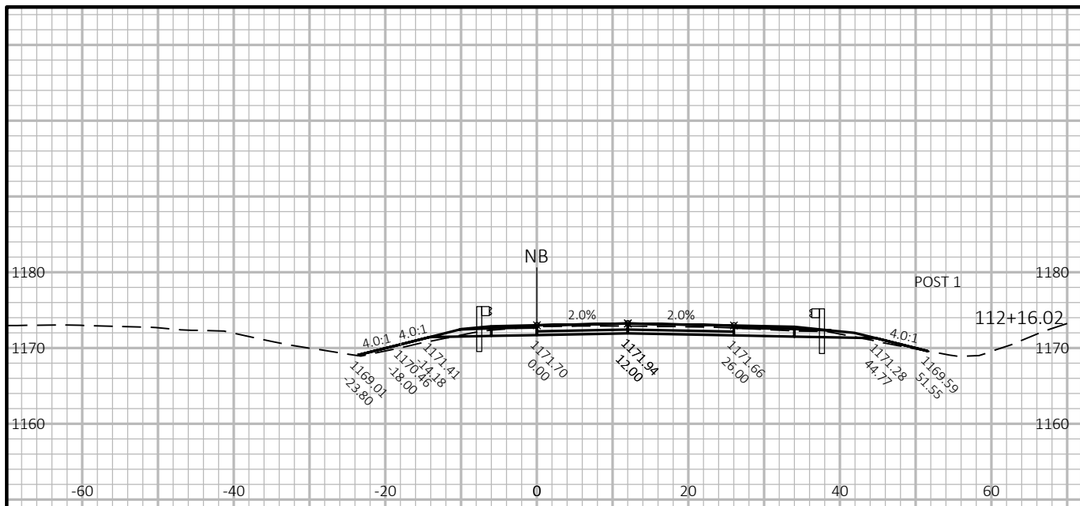
PLOT DATE : 5/22/2018 4:27 PM

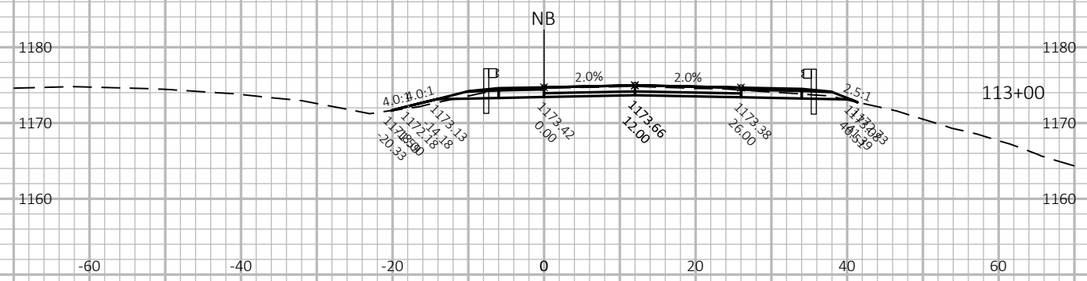
PLOT BY : SCHMIDT, DAVID B

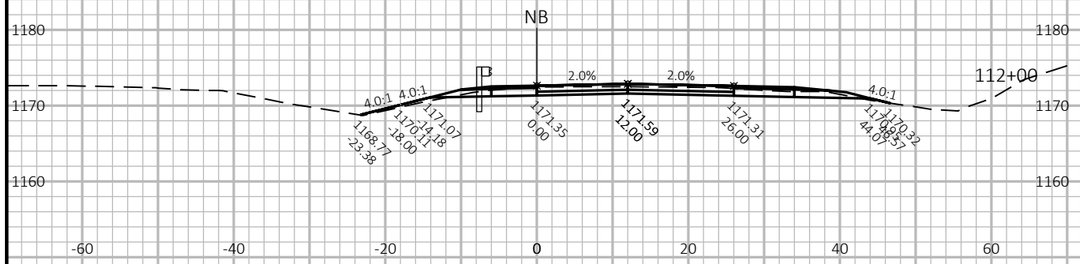
PLOT NAME :

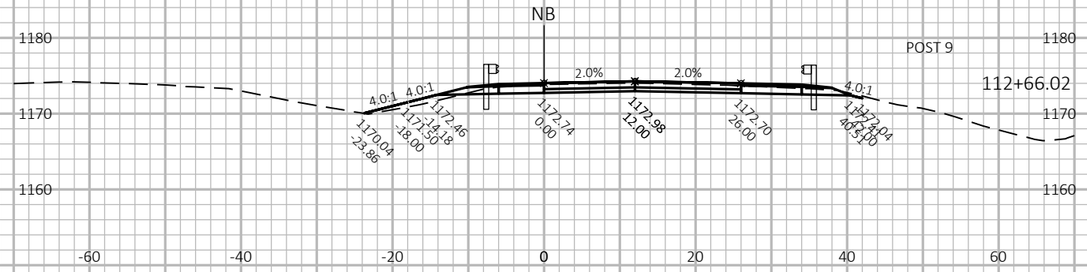
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

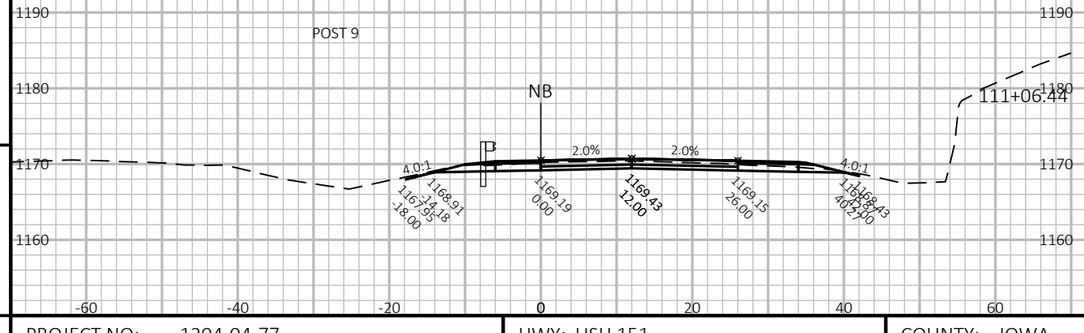
WISDOT/CADDS SHEET 49

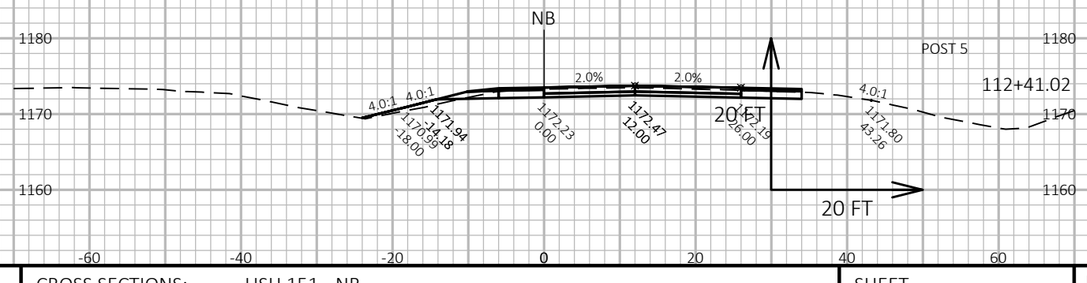












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 435	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_18

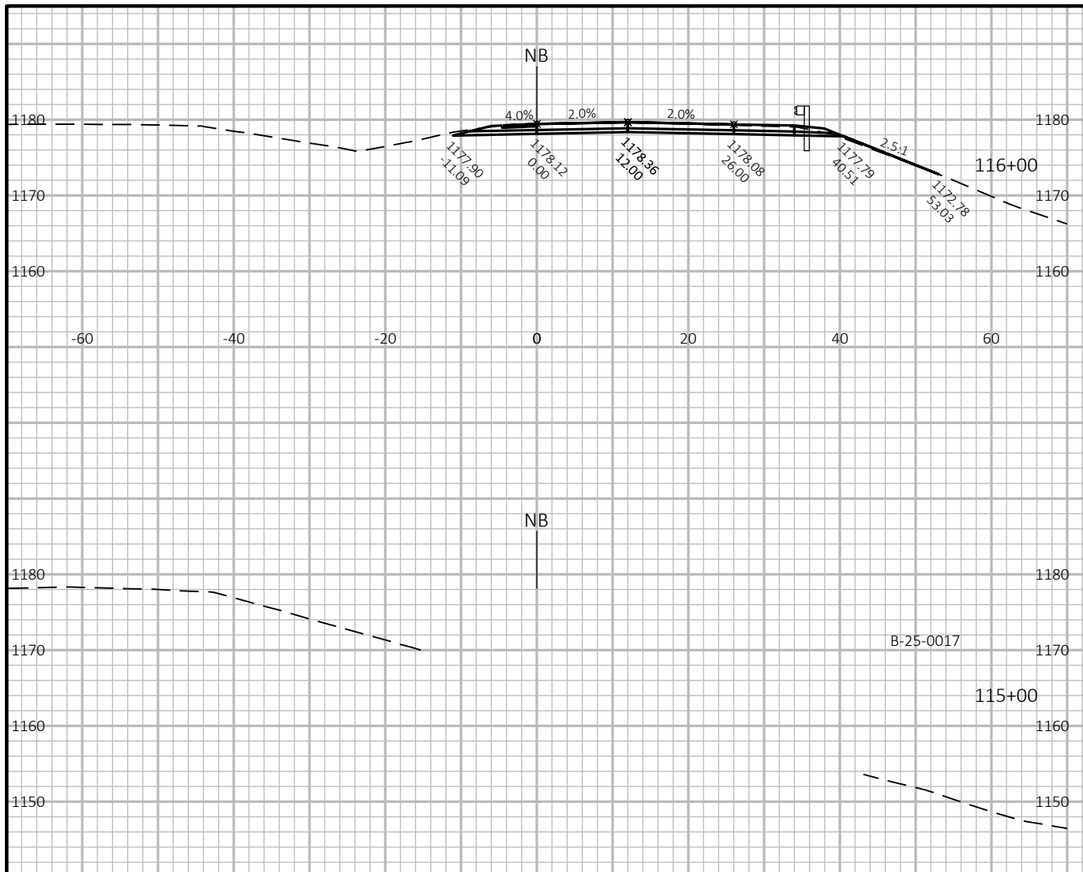
PLOT DATE : 5/22/2018 4:27 PM

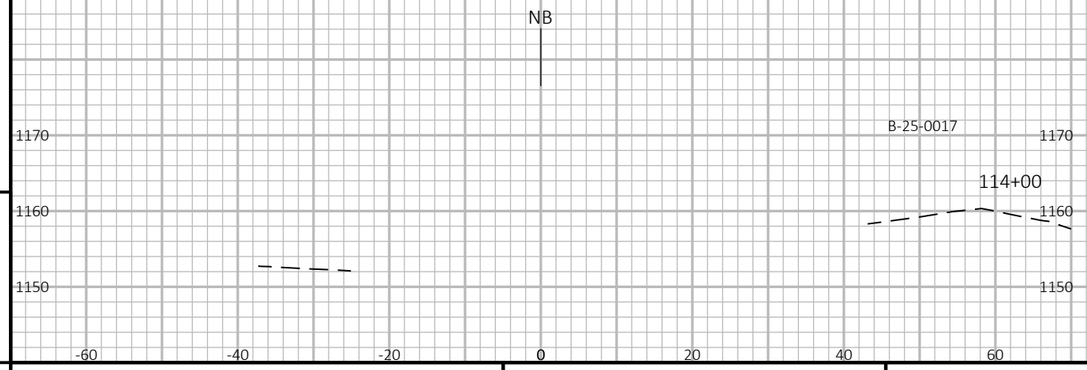
PLOT BY : SCHMIDT, DAVID B

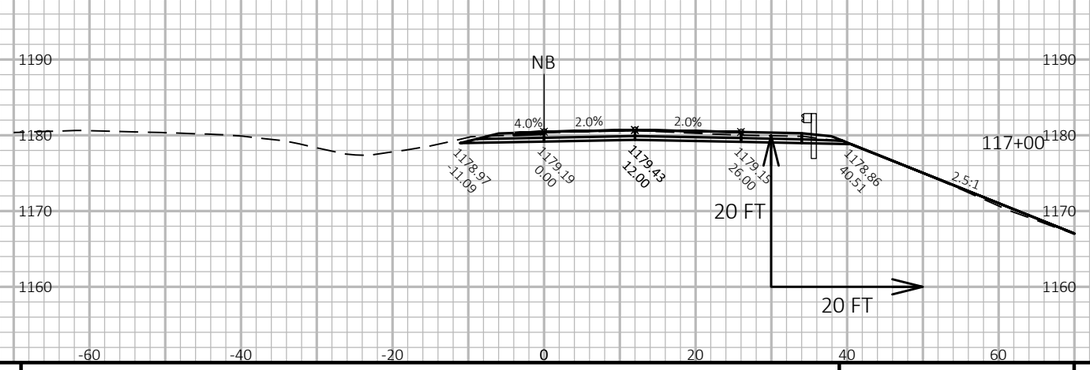
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 436	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_19

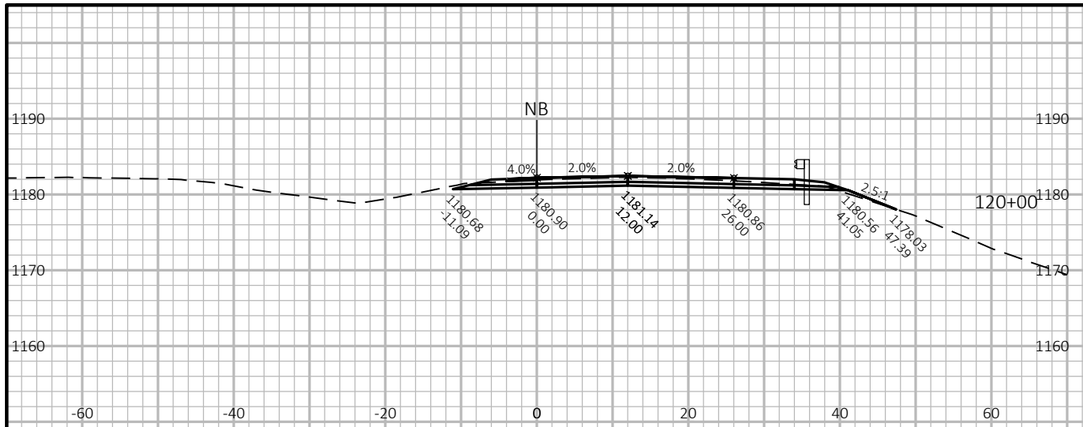
PLOT DATE : 5/22/2018 4:27 PM

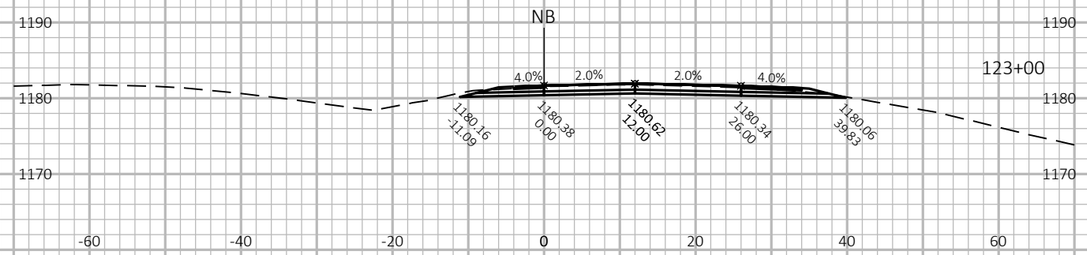
PLOT BY : SCHMIDT, DAVID B

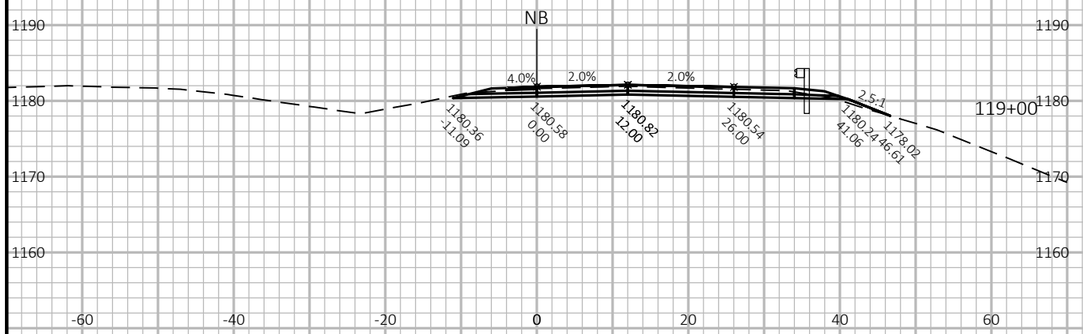
PLOT NAME :

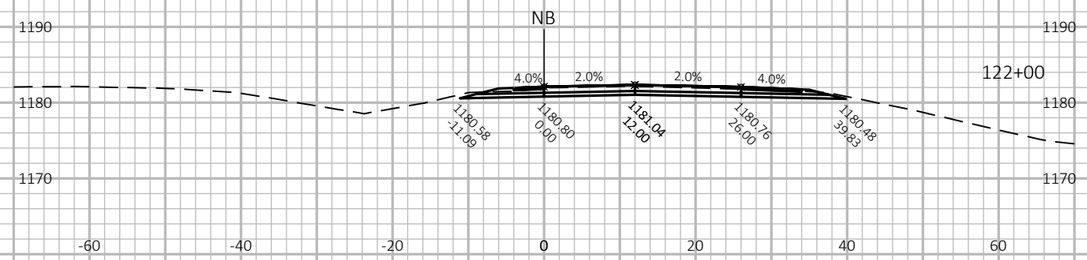
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

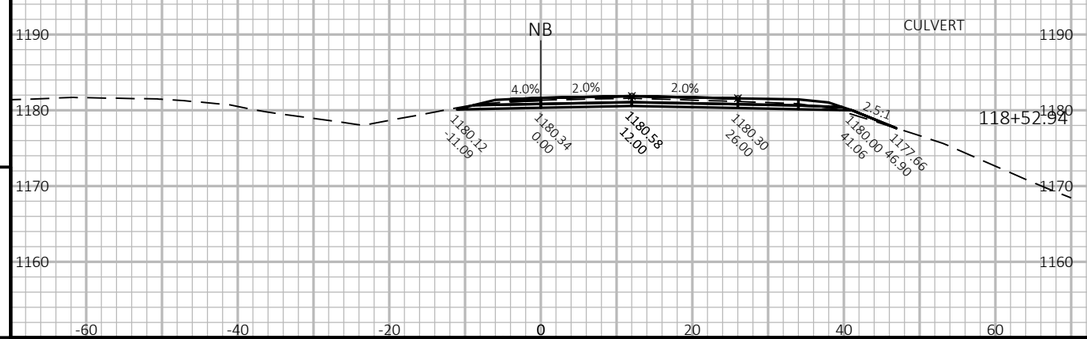
WISDOT/CADDS SHEET 49

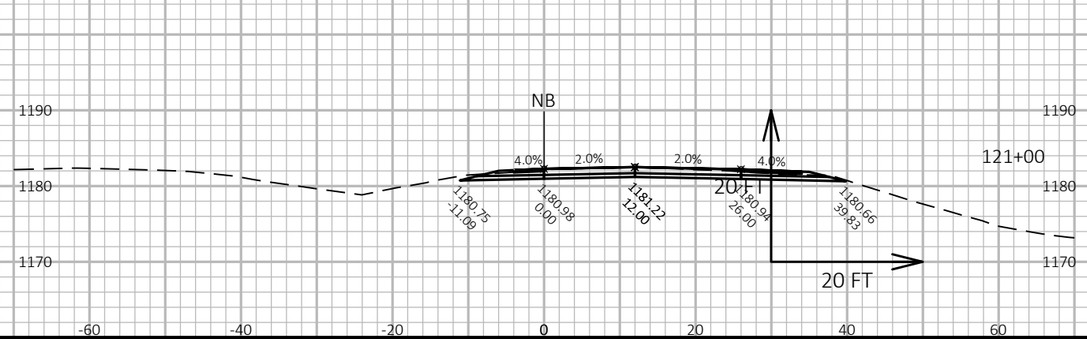












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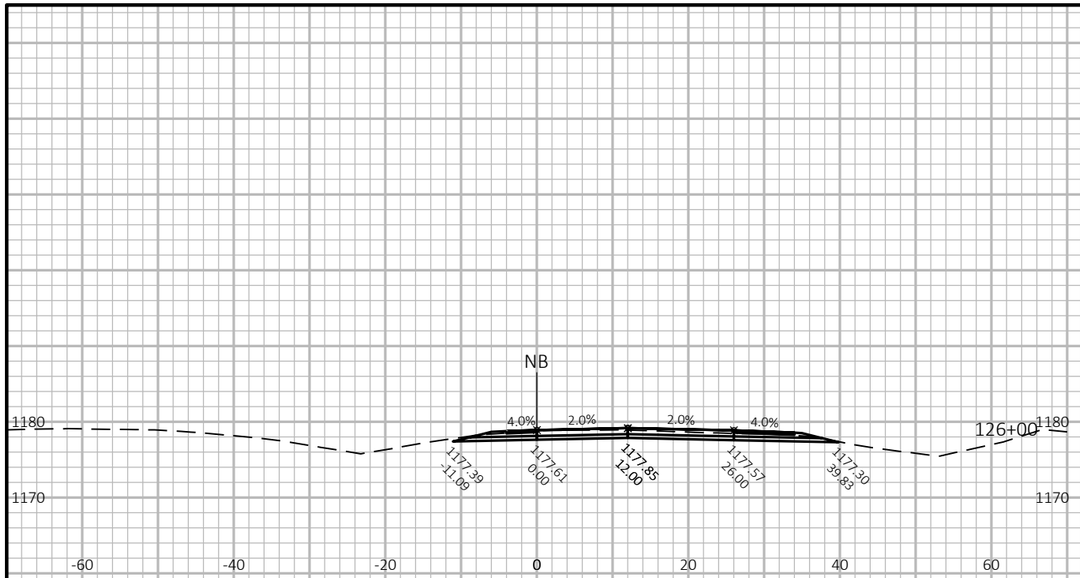
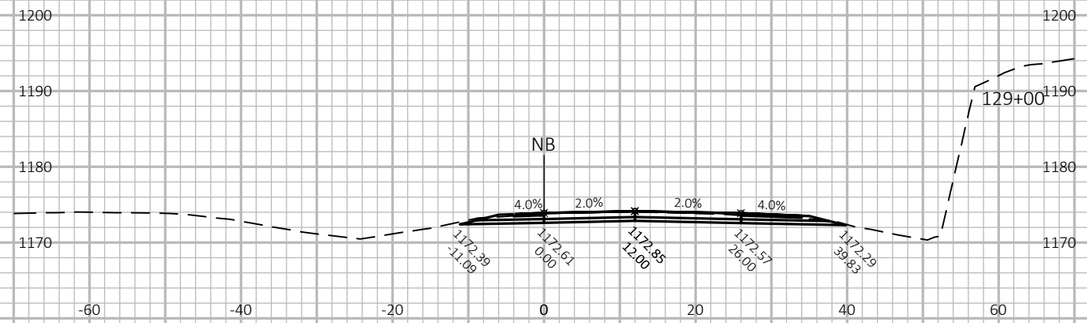
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 437	E

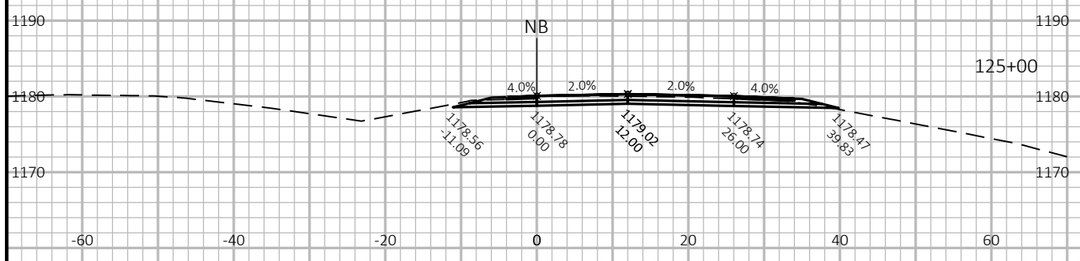
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_20

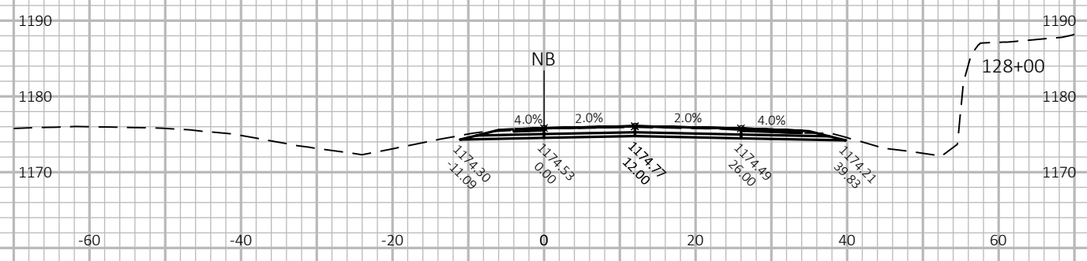
PLOT DATE : 5/22/2018 4:27 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

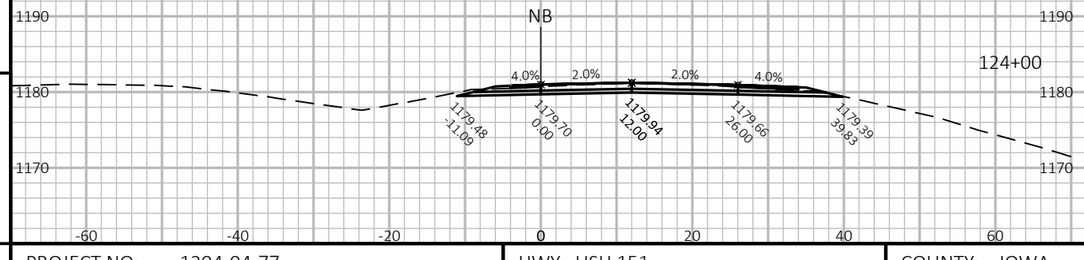
WISDOT/CADDS SHEET 49

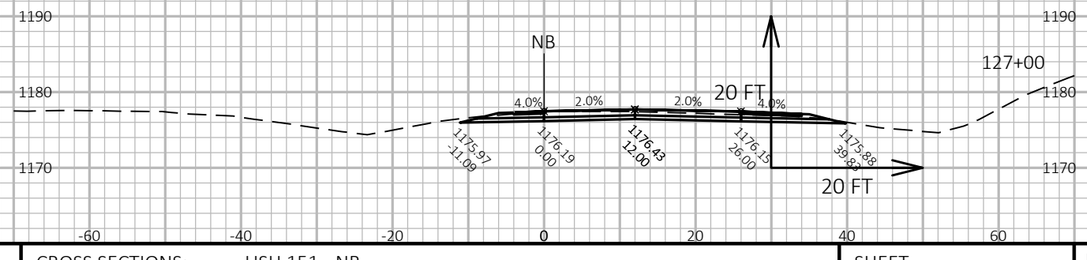












9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 438	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_21

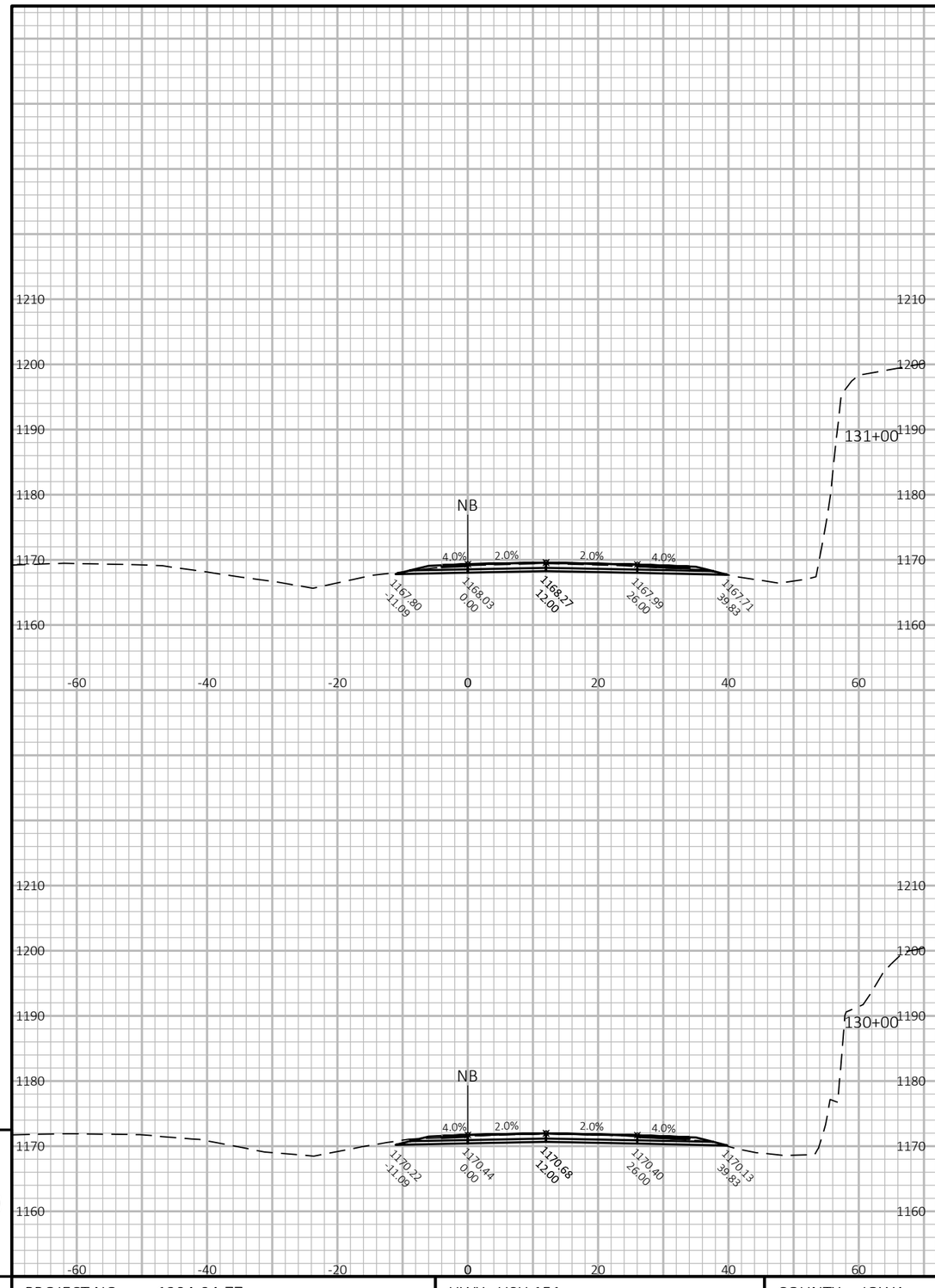
PLOT DATE : 5/22/2018 4:28 PM

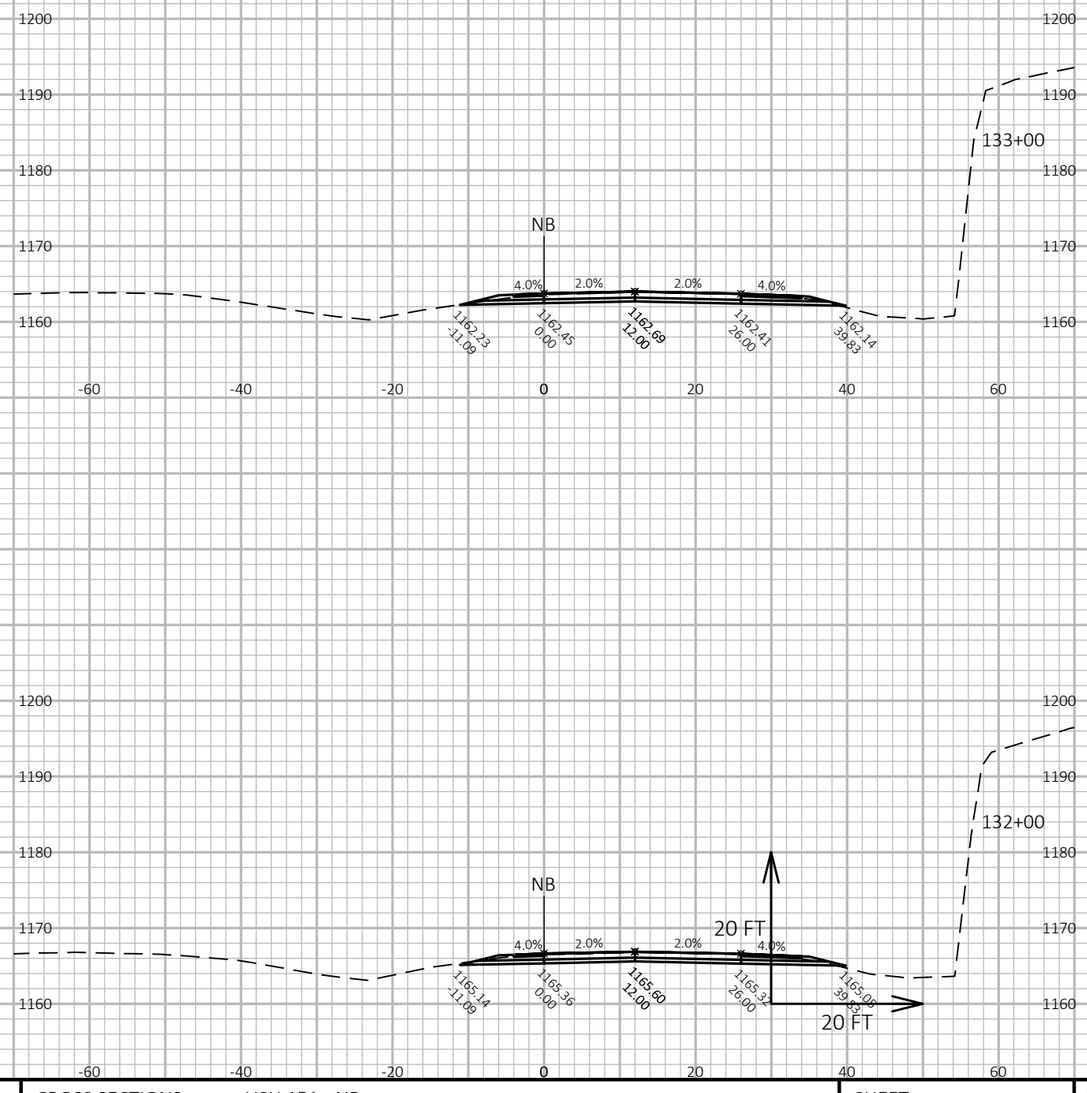
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 439	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_22

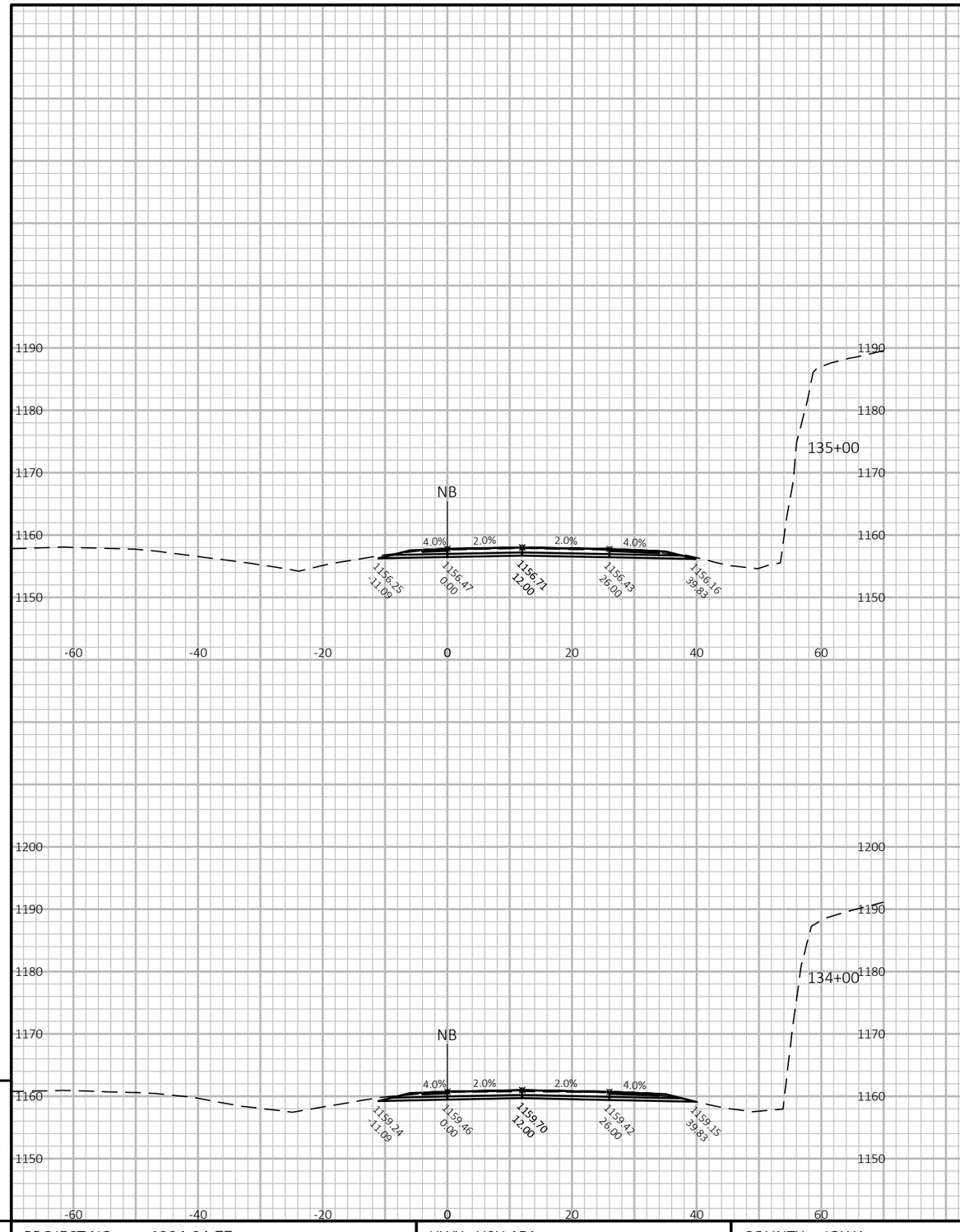
PLOT DATE : 5/22/2018 4:28 PM

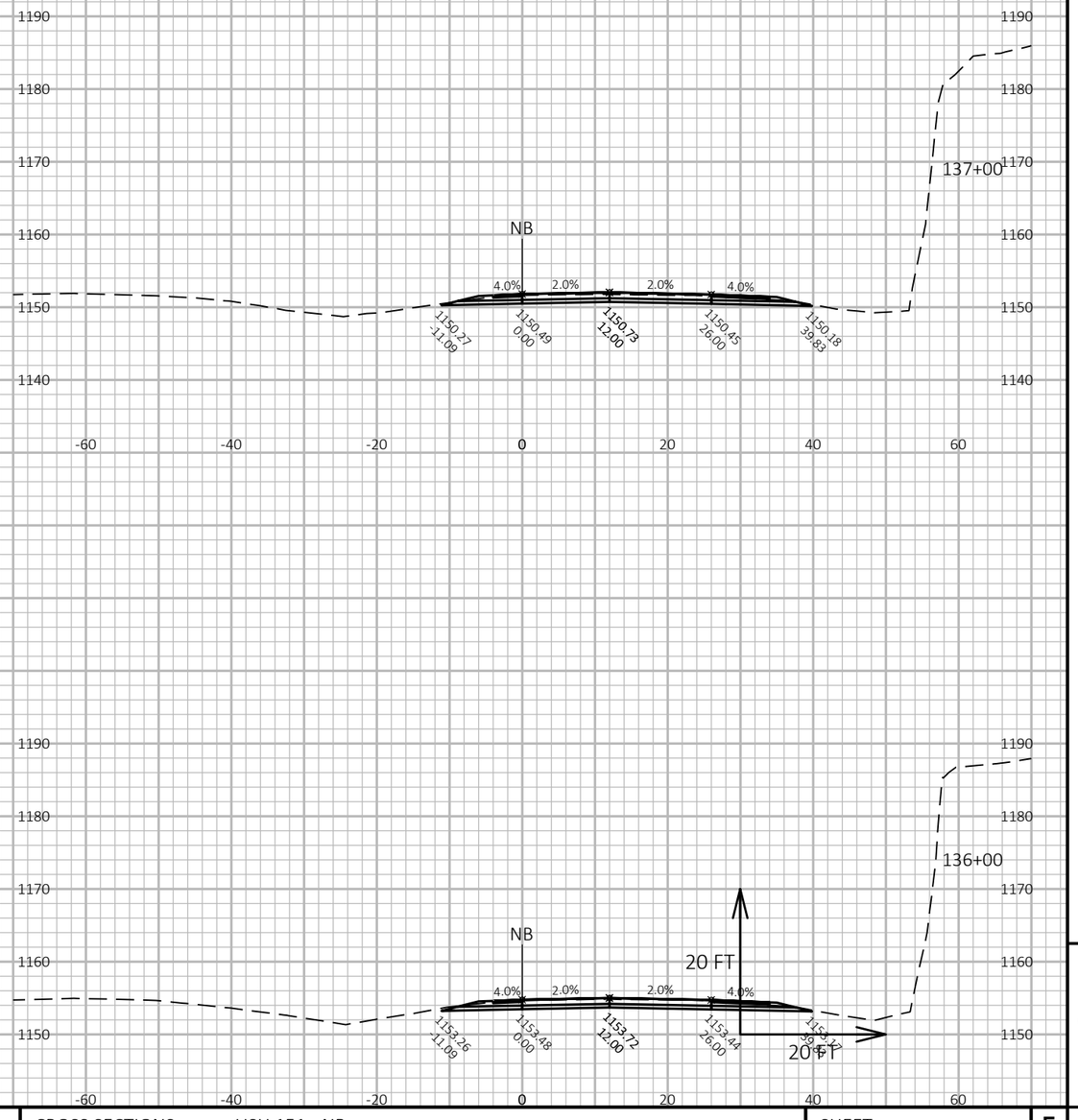
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 440	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_23

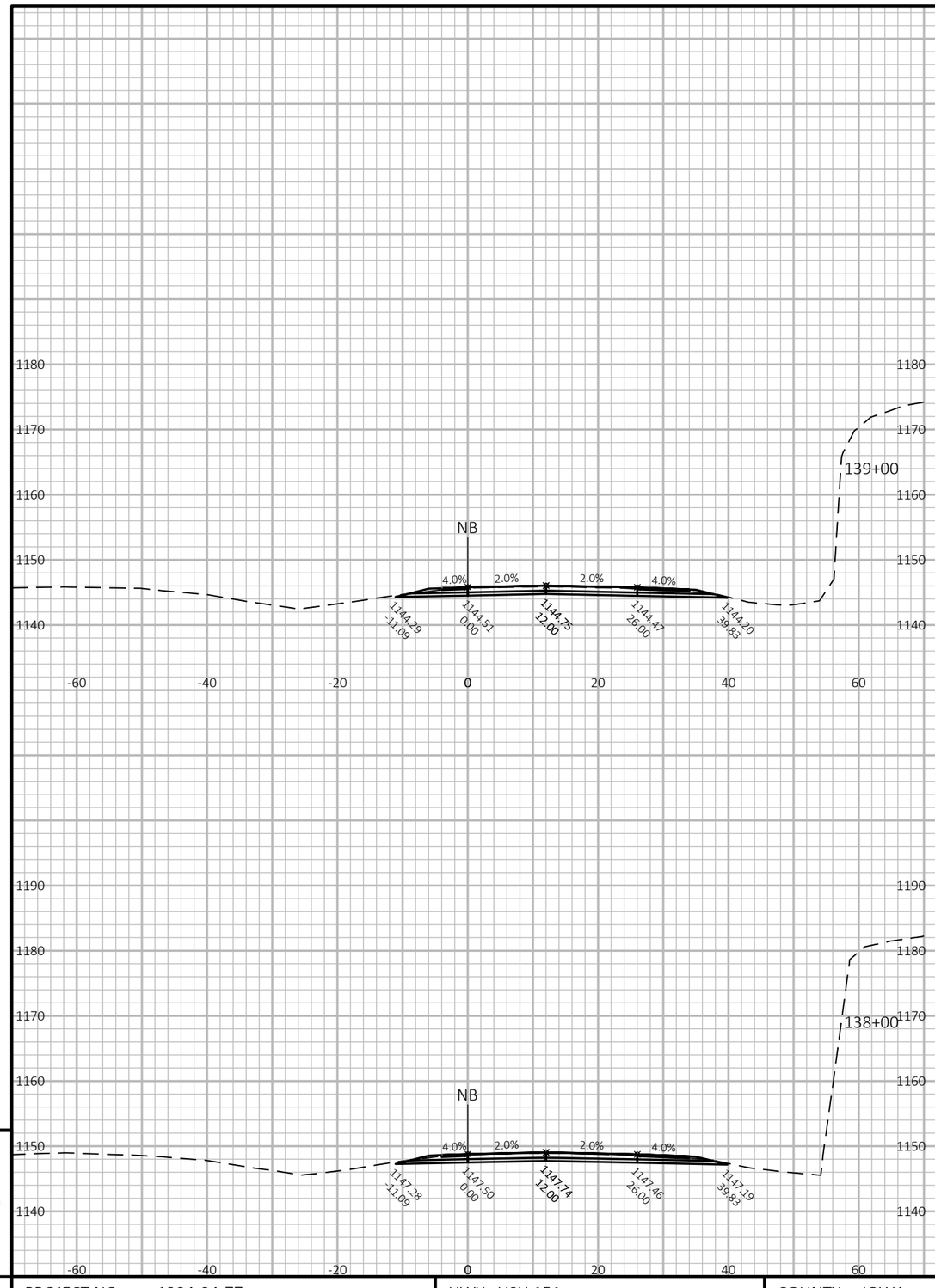
PLOT DATE : 5/22/2018 4:28 PM

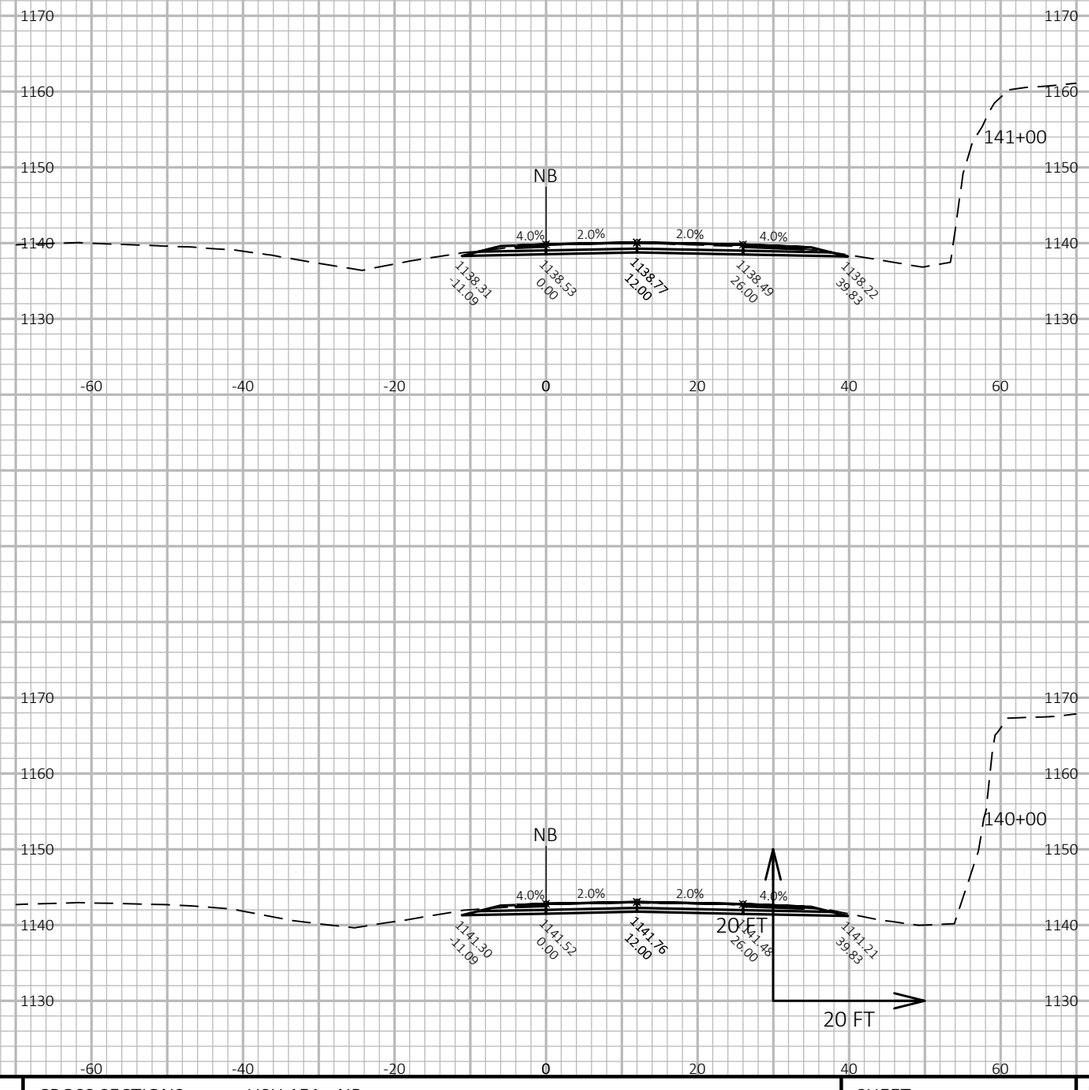
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 441	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_24

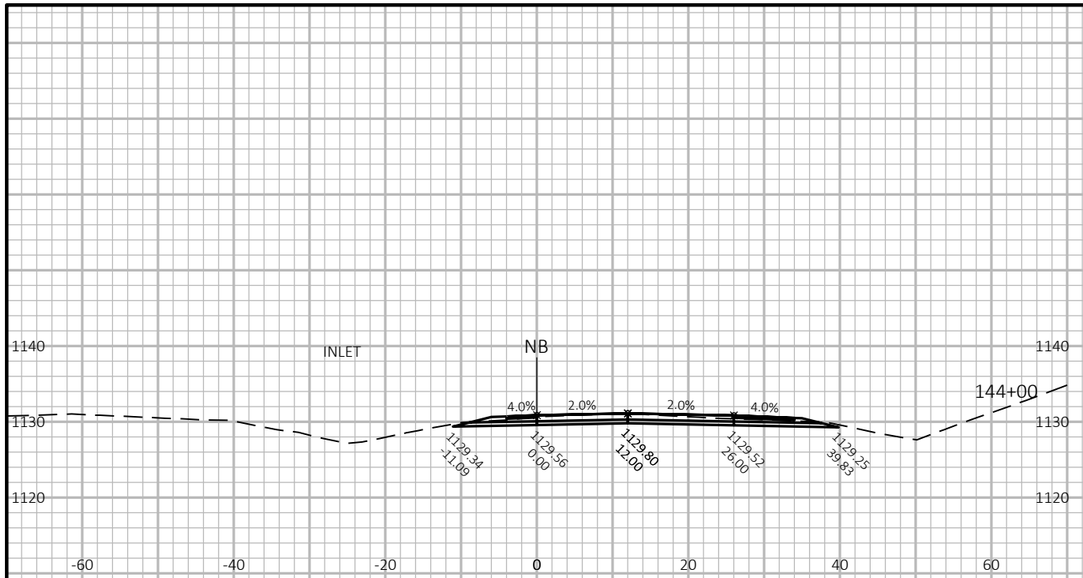
PLOT DATE : 5/22/2018 4:28 PM

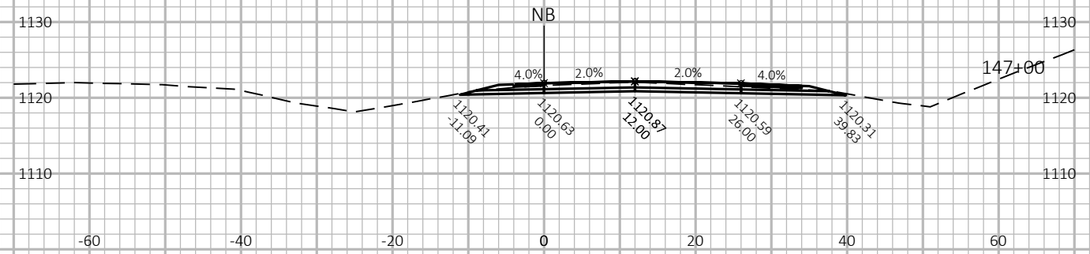
PLOT BY : SCHMIDT, DAVID B

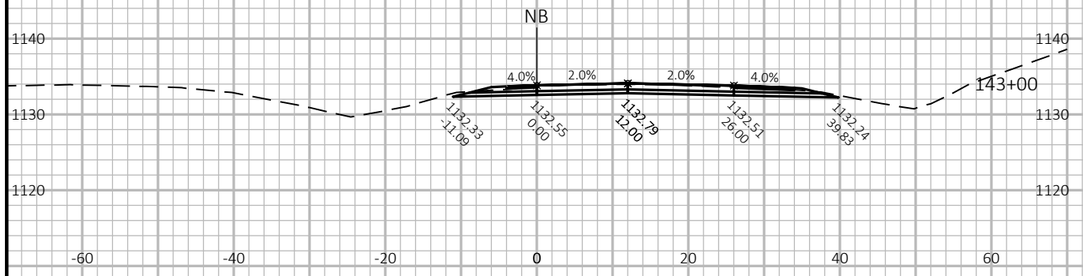
PLOT NAME :

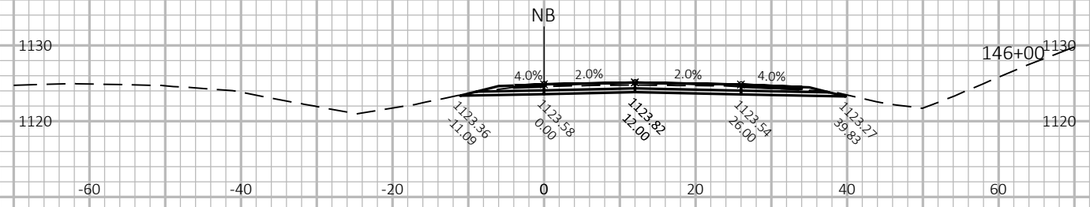
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

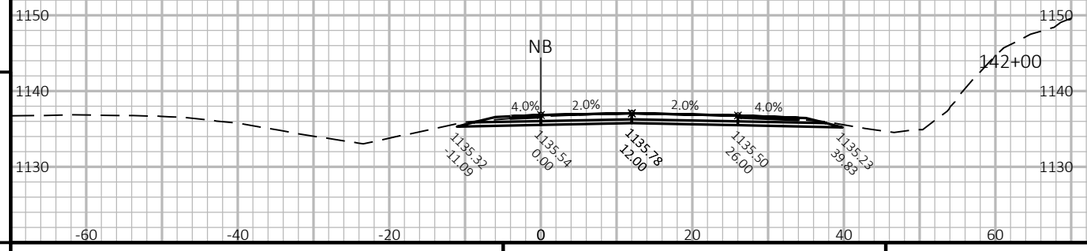
WISDOT/CADDS SHEET 49

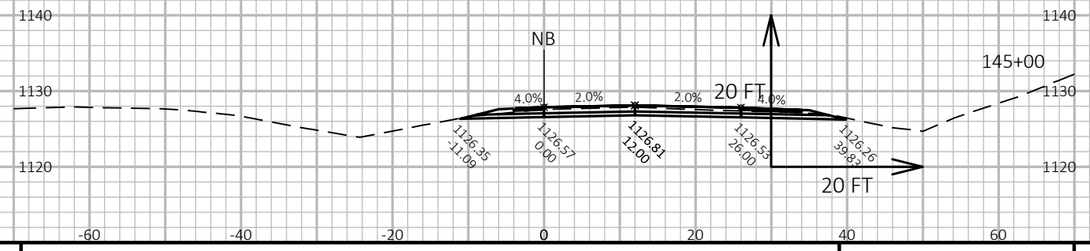












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 442	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_25

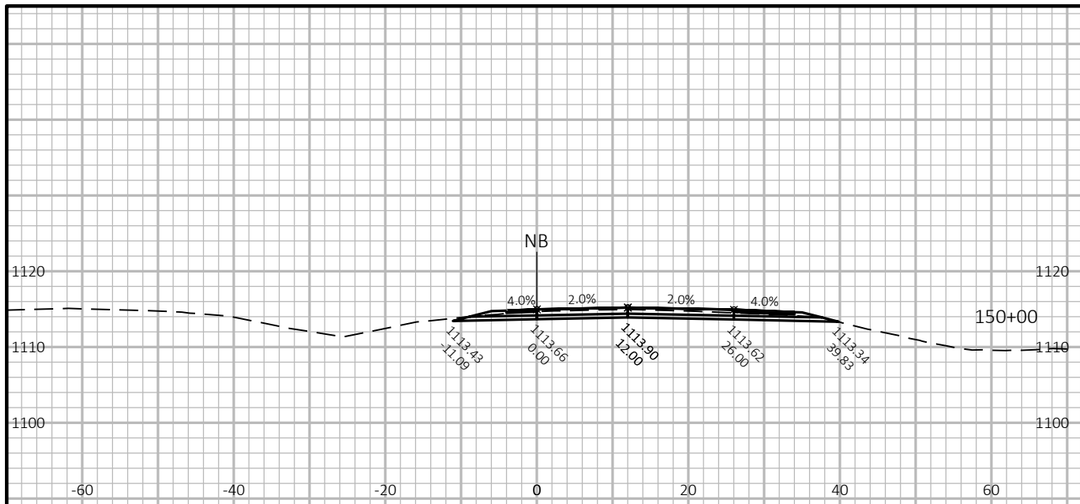
PLOT DATE : 5/22/2018 4:28 PM

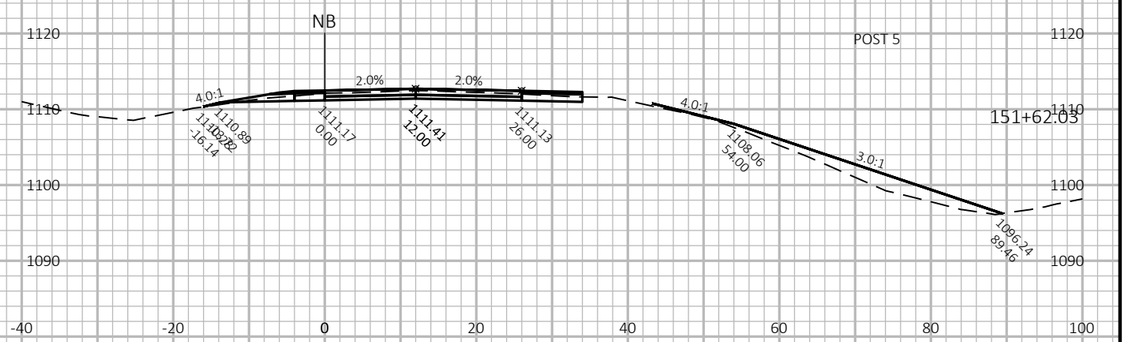
PLOT BY : SCHMIDT, DAVID B

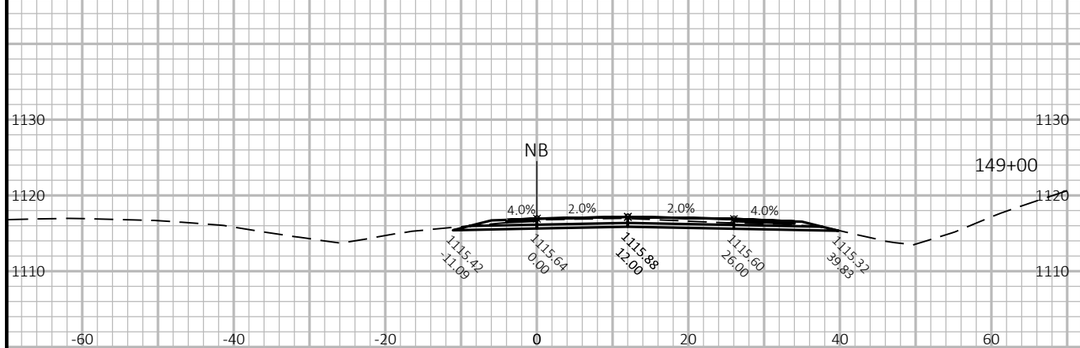
PLOT NAME :

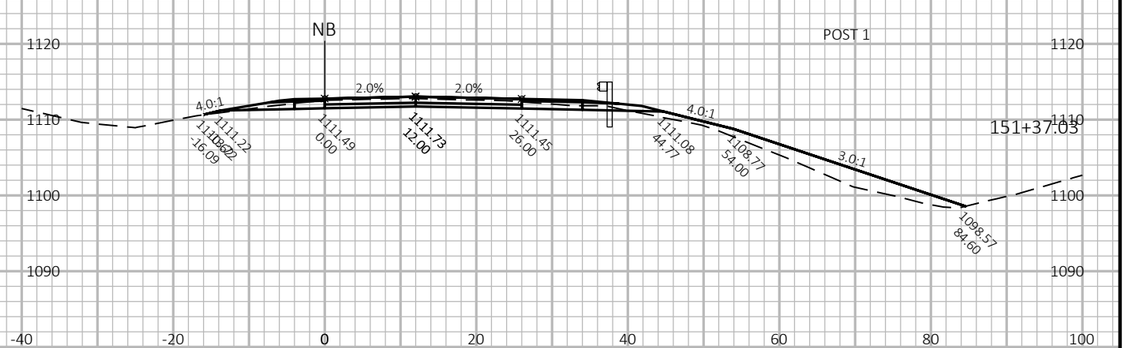
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

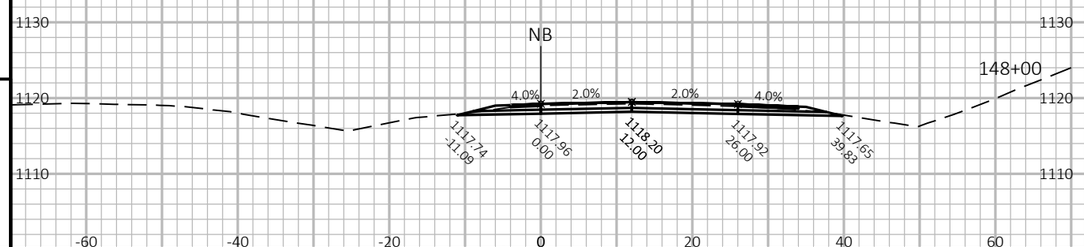
WISDOT/CADDS SHEET 49

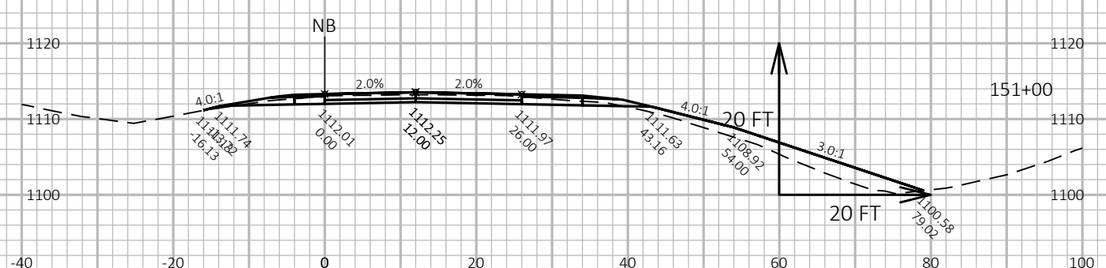












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 443	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_26

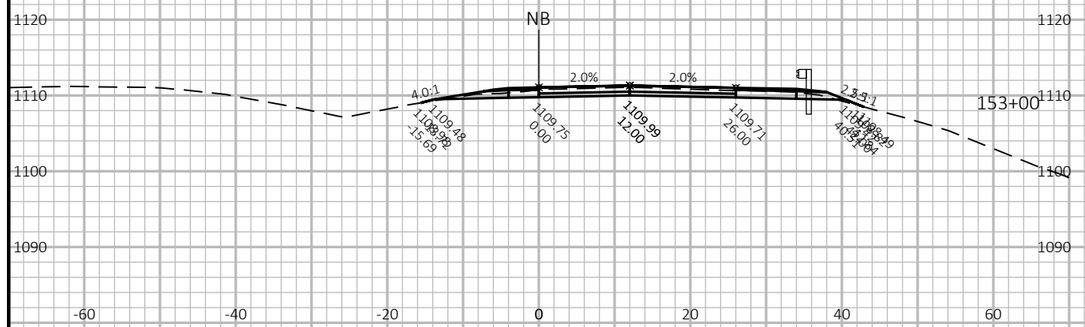
PLOT DATE : 5/22/2018 4:28 PM

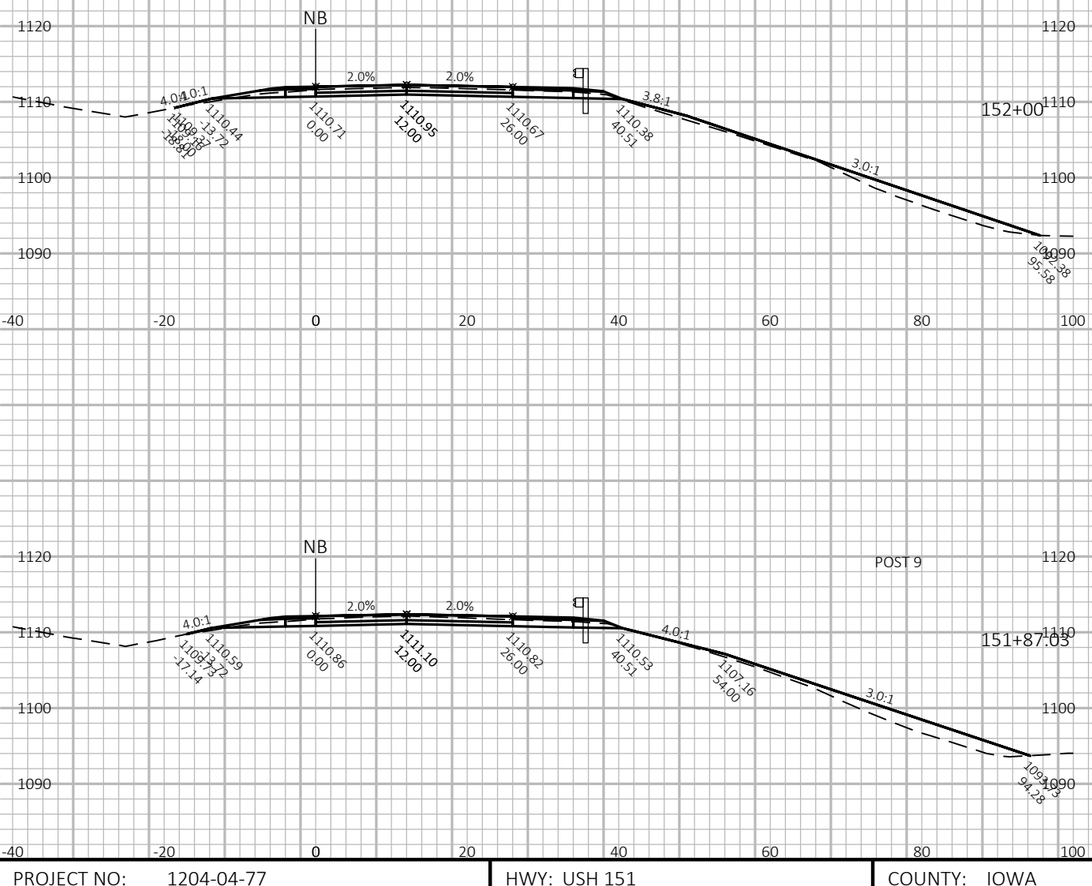
PLOT BY : SCHMIDT, DAVID B

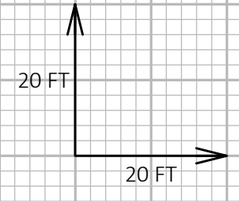
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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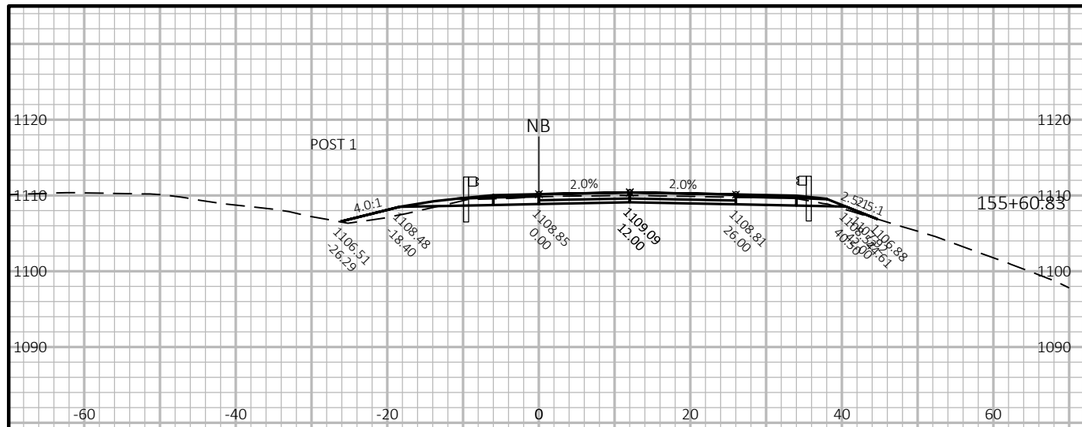
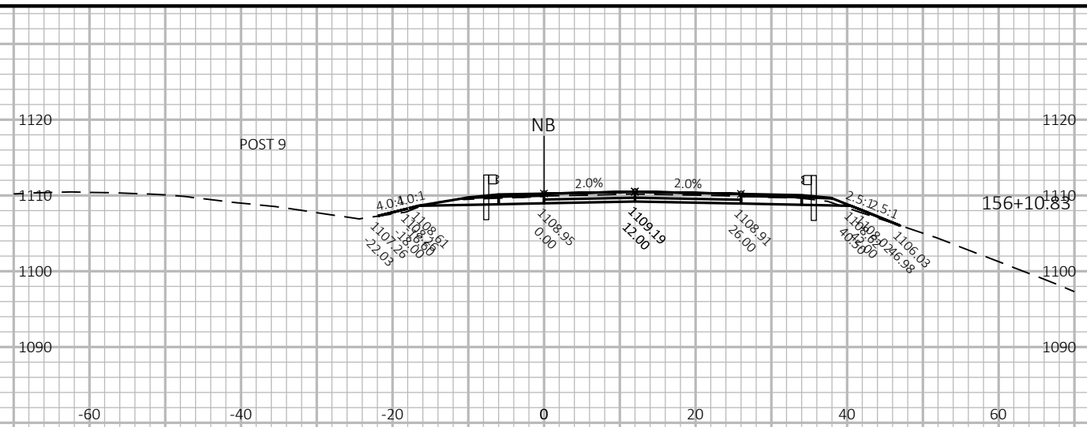
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 444	E

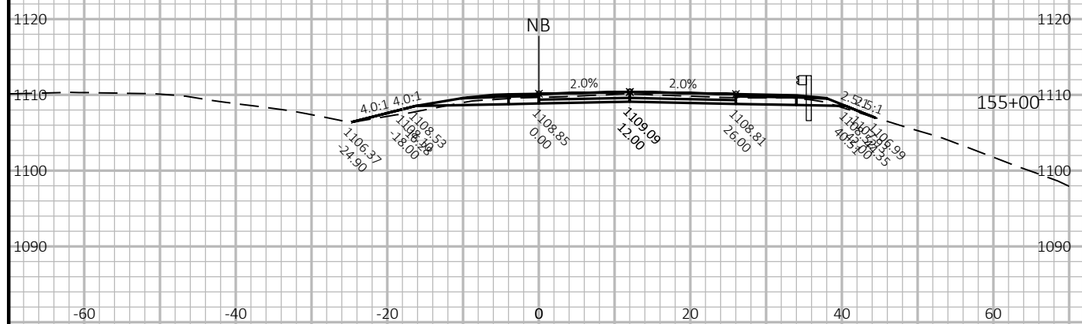
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_27

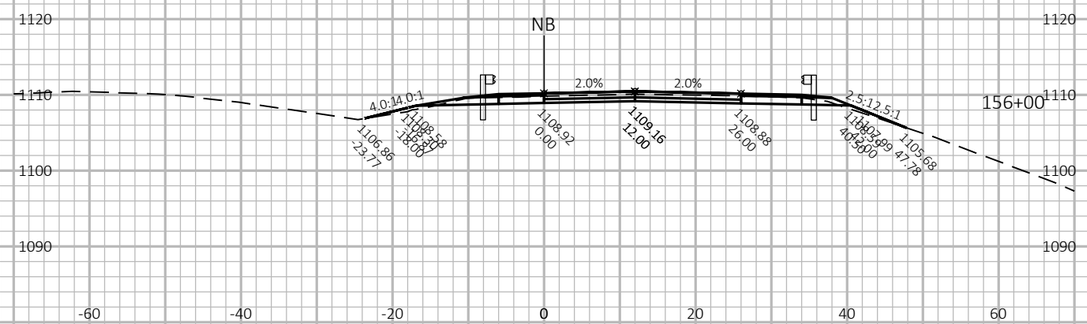
PLOT DATE : 5/22/2018 4:28 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

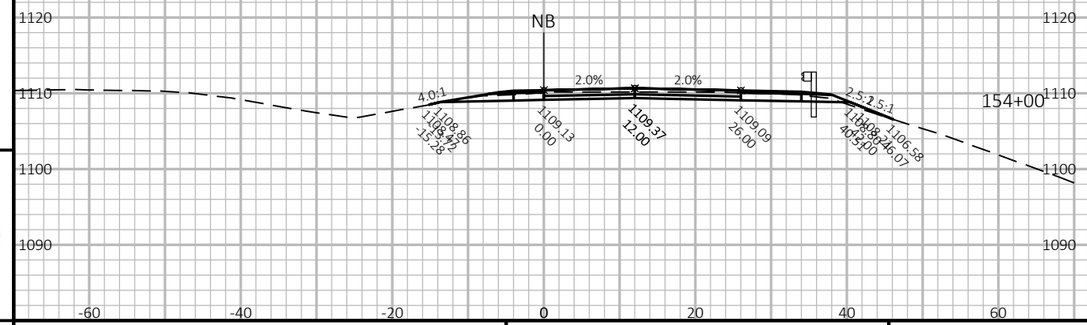
WISDOT/CADDS SHEET 49

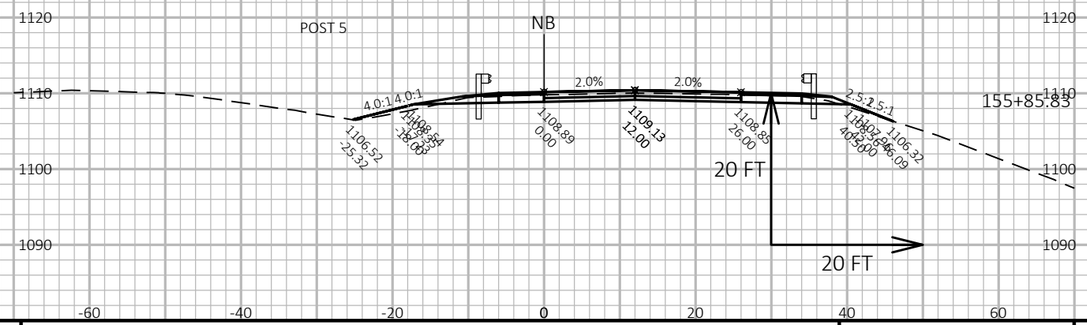












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 445	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_28

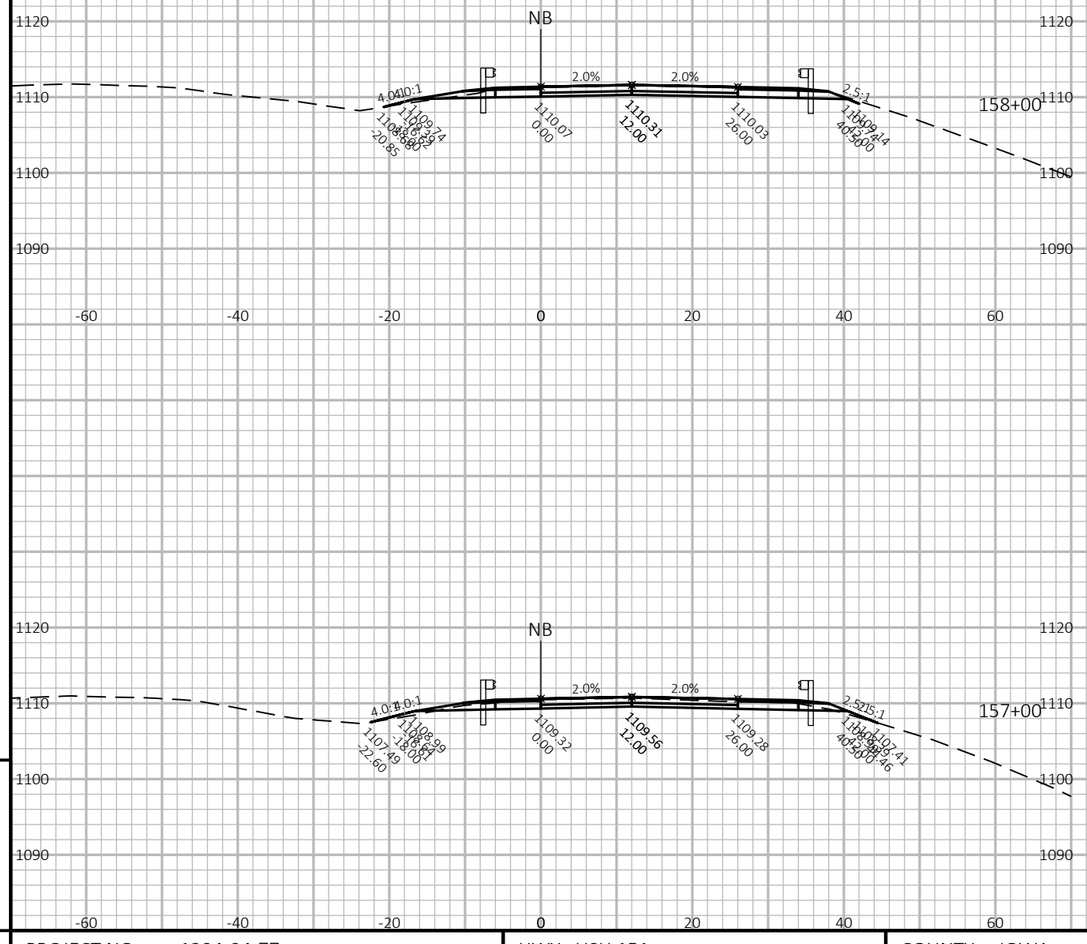
PLOT DATE : 5/22/2018 4:28 PM

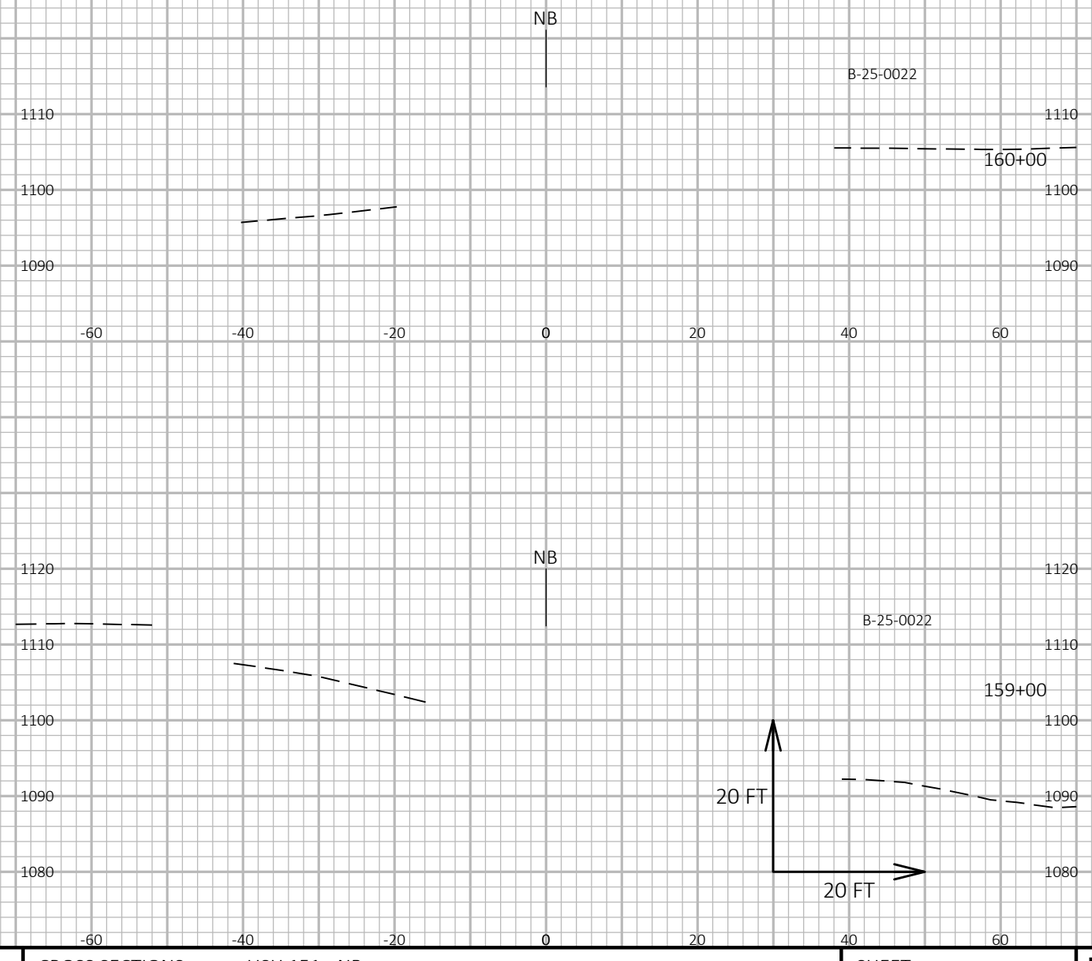
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 446	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_29

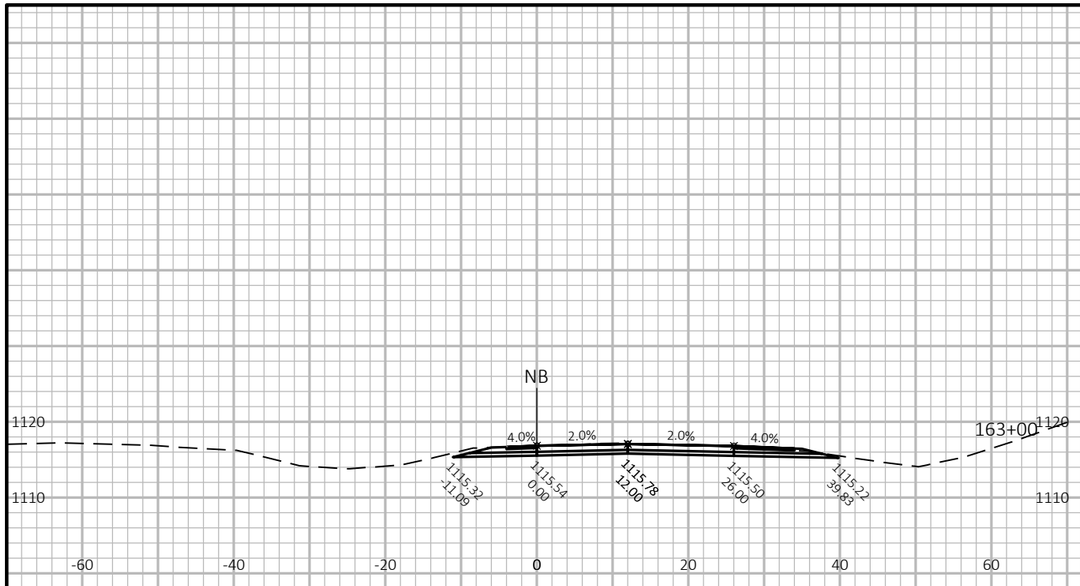
PLOT DATE : 5/22/2018 4:29 PM

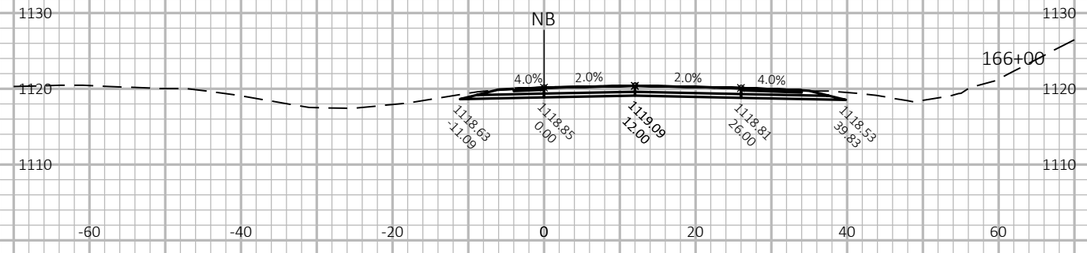
PLOT BY : SCHMIDT, DAVID B

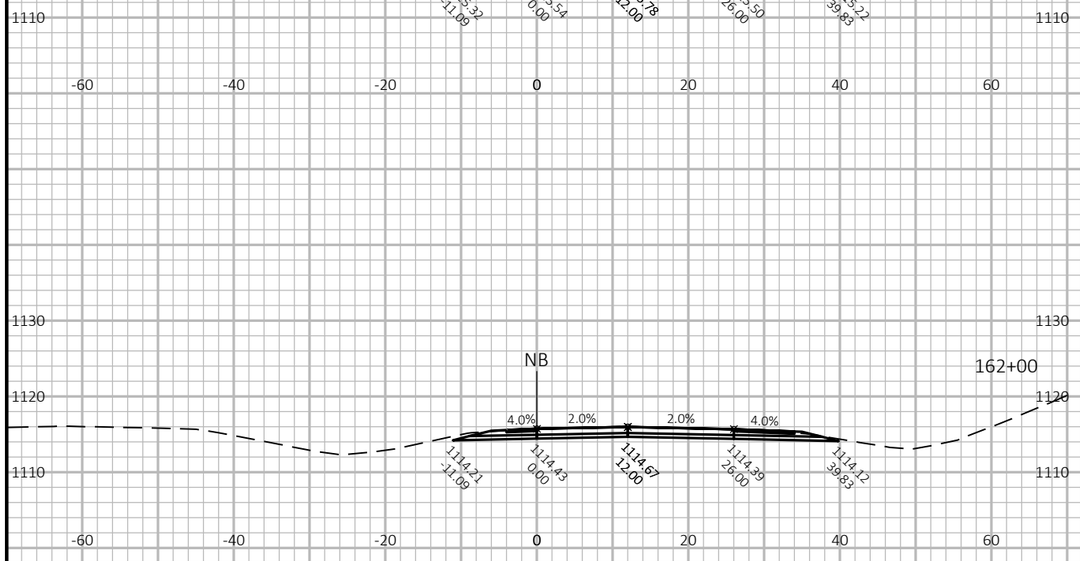
PLOT NAME :

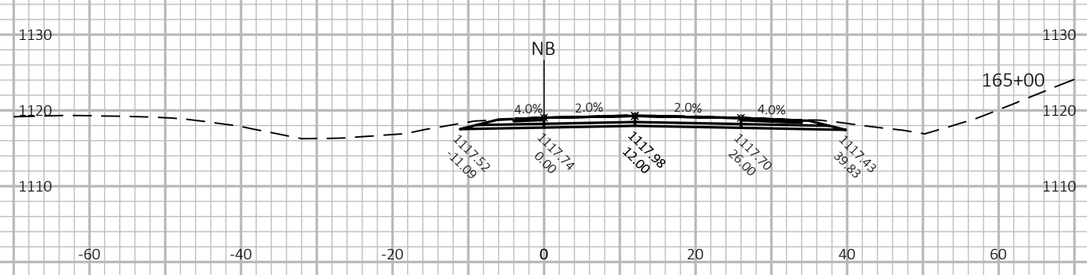
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

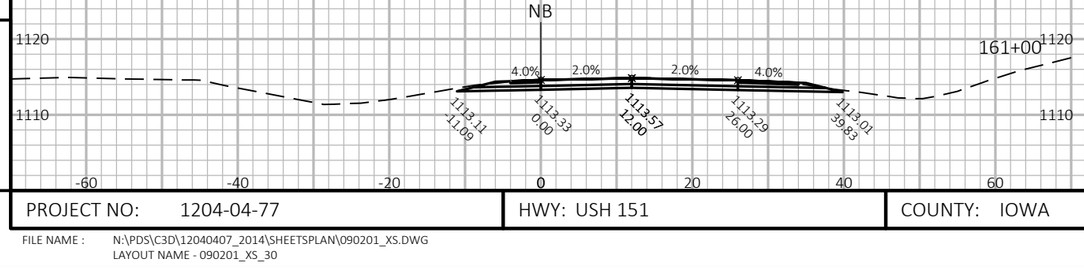
WISDOT/CADDS SHEET 49

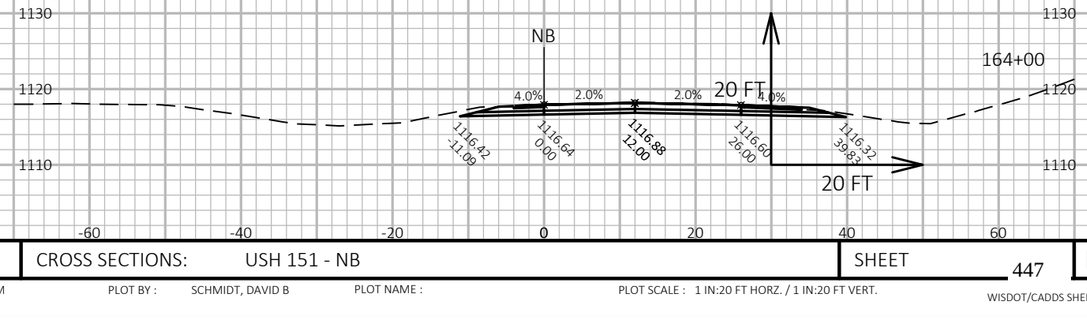












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 447	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_30

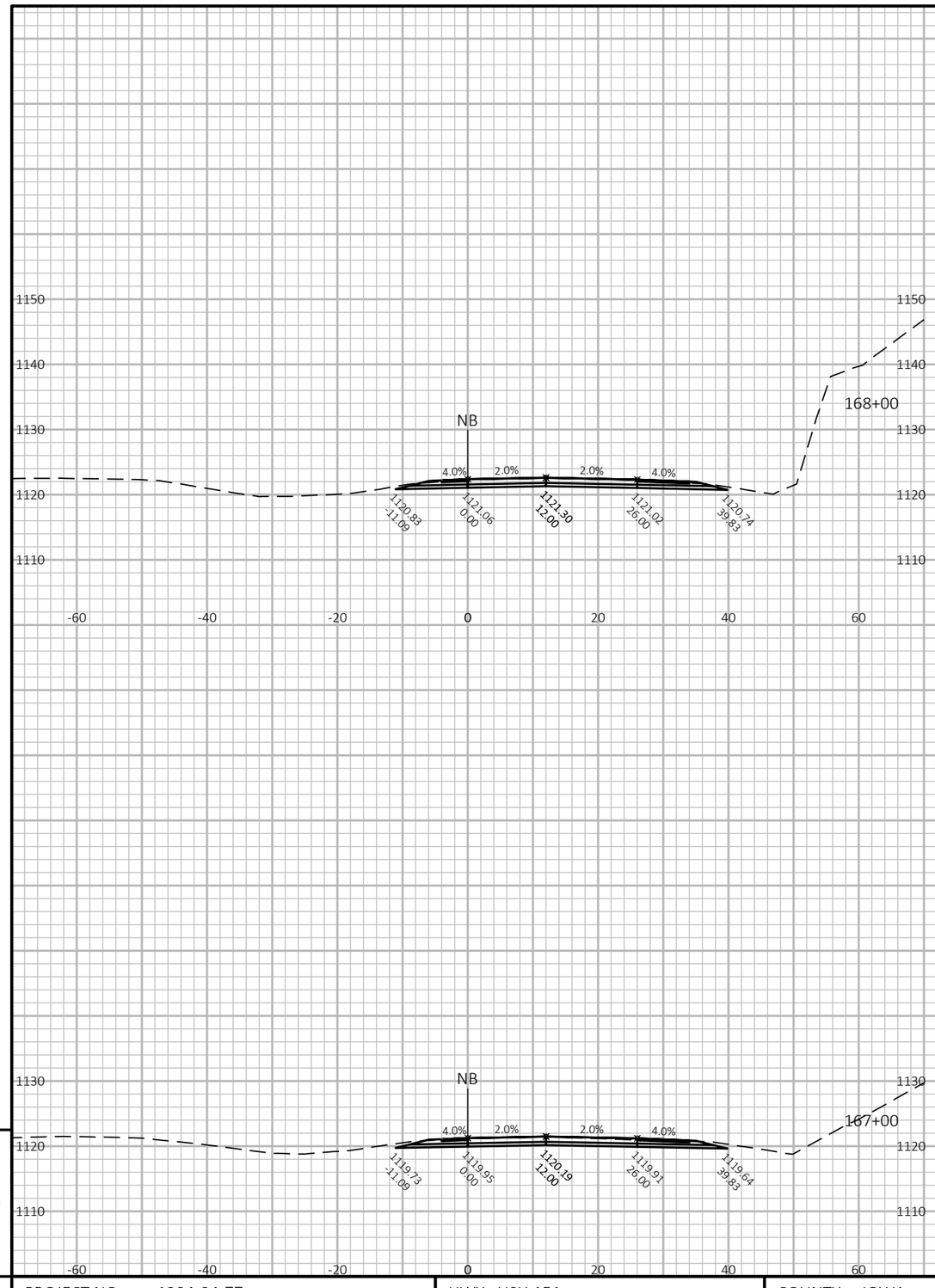
PLOT DATE : 5/22/2018 4:29 PM

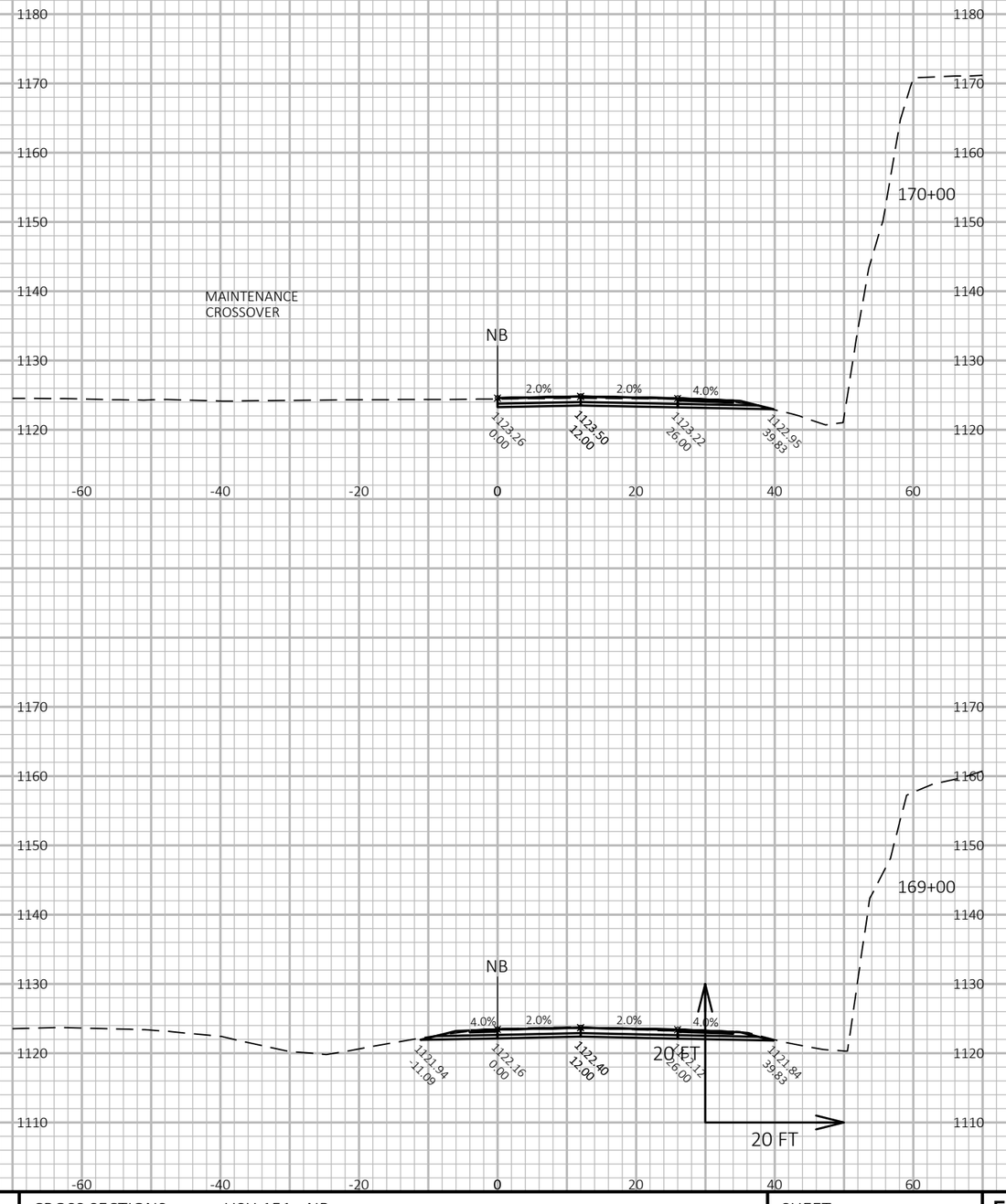
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 448	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_31

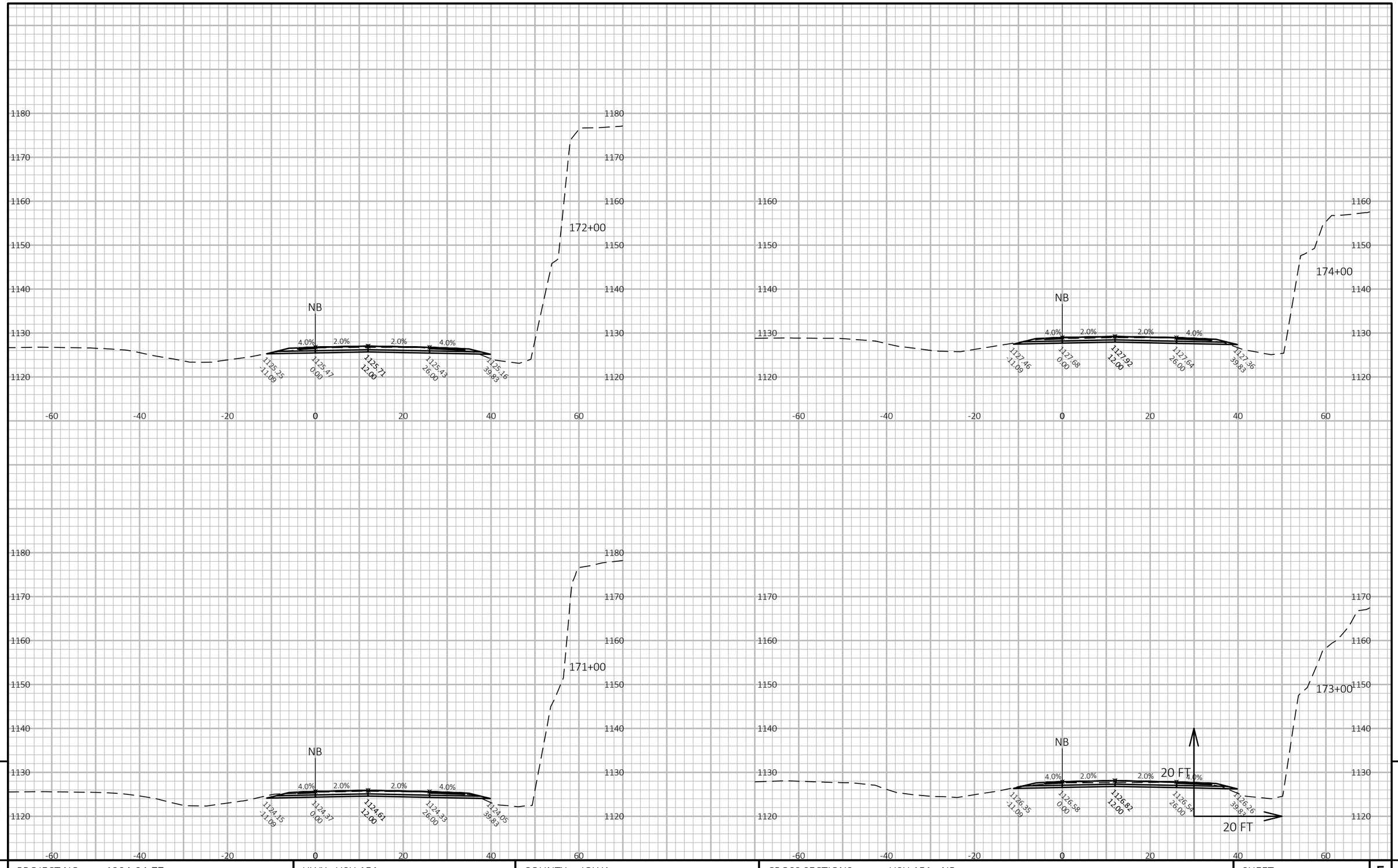
PLOT DATE : 5/22/2018 4:29 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 449	E

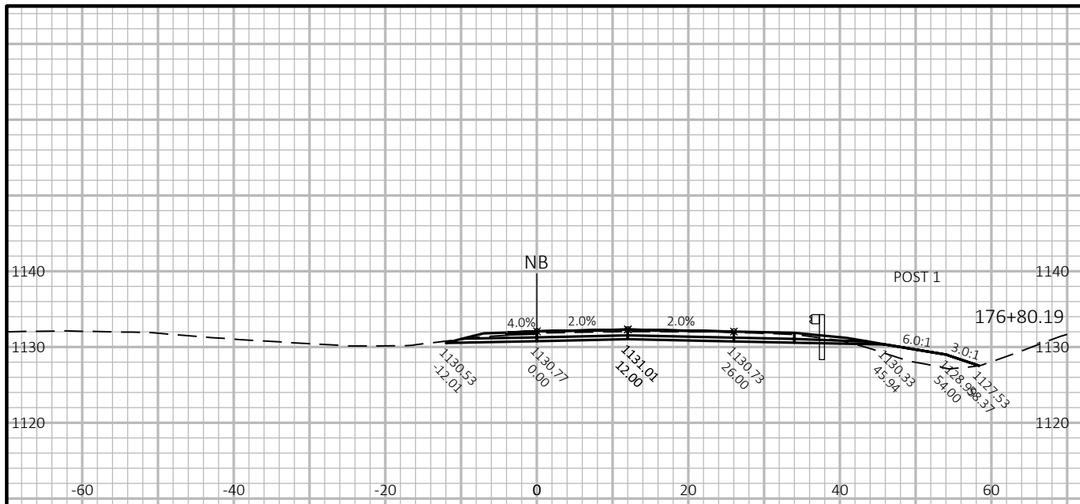
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_32

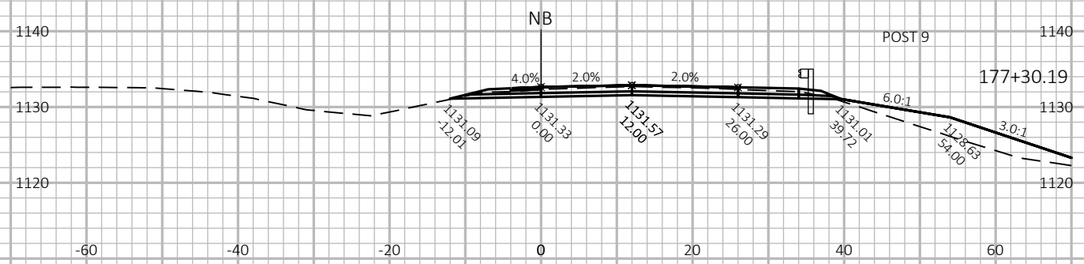
PLOT DATE : 5/22/2018 4:29 PM

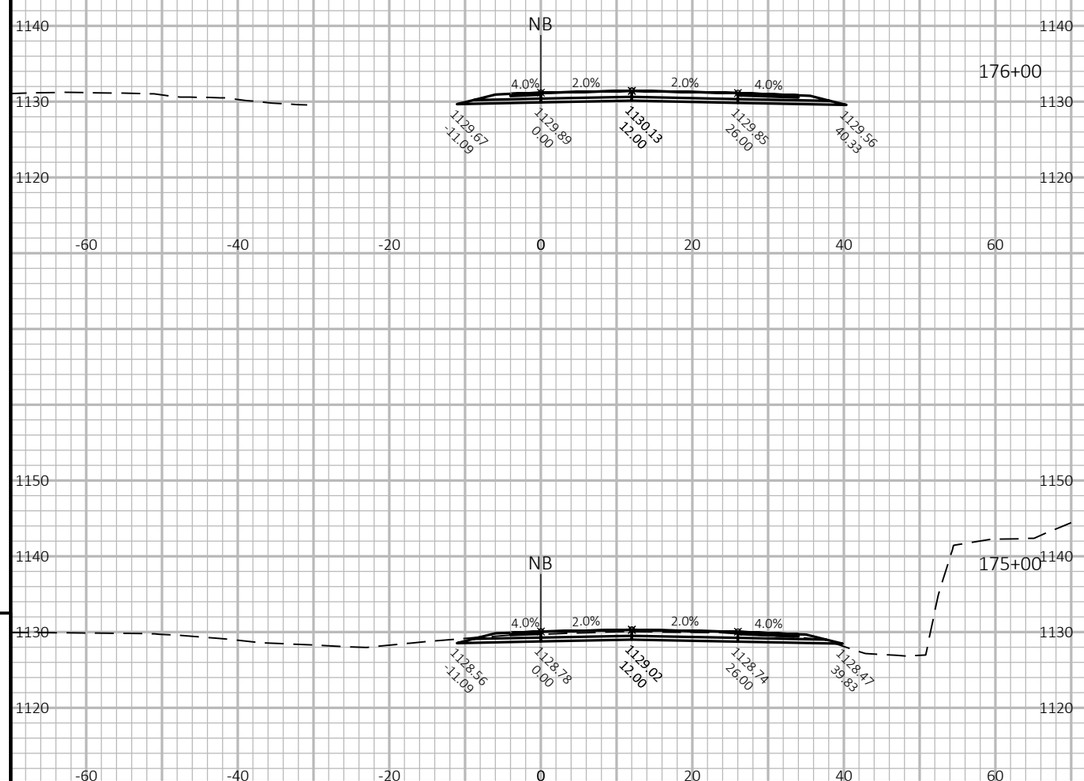
PLOT BY : SCHMIDT, DAVID B

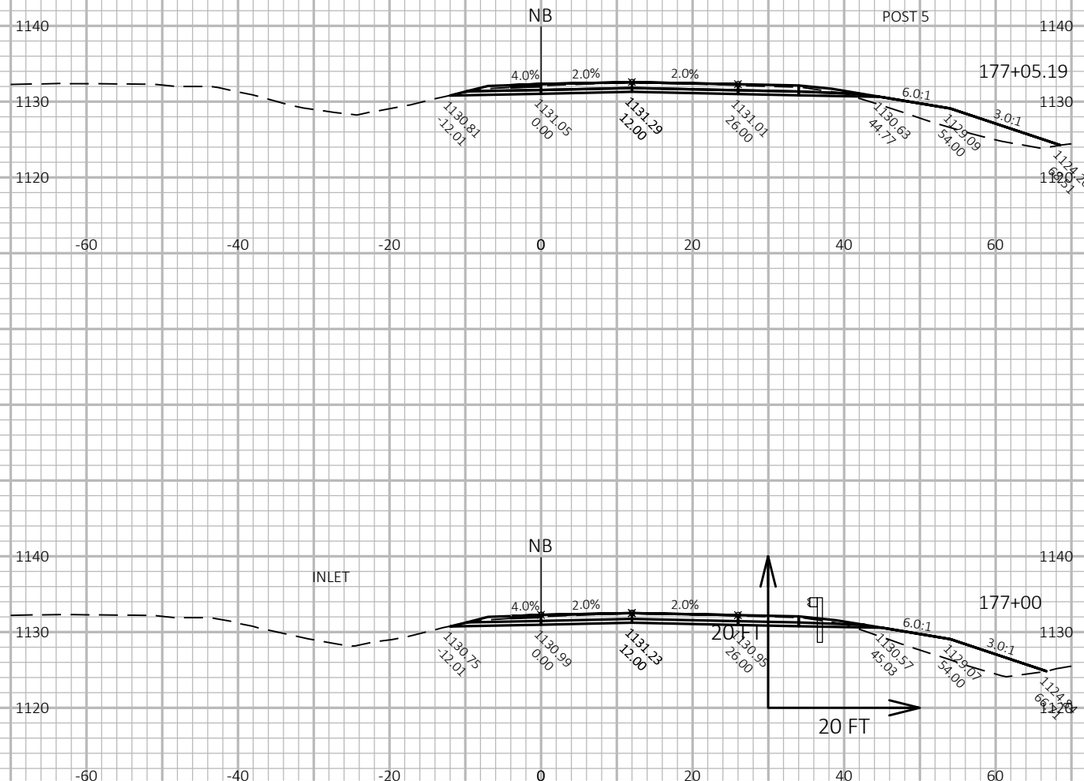
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.









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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 450	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_33

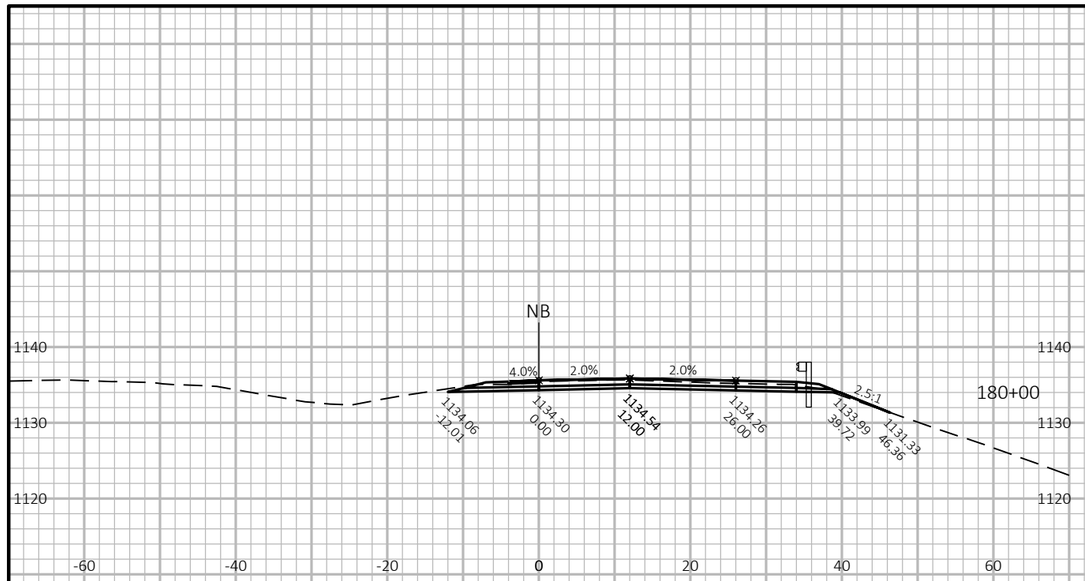
PLOT DATE : 5/22/2018 4:29 PM

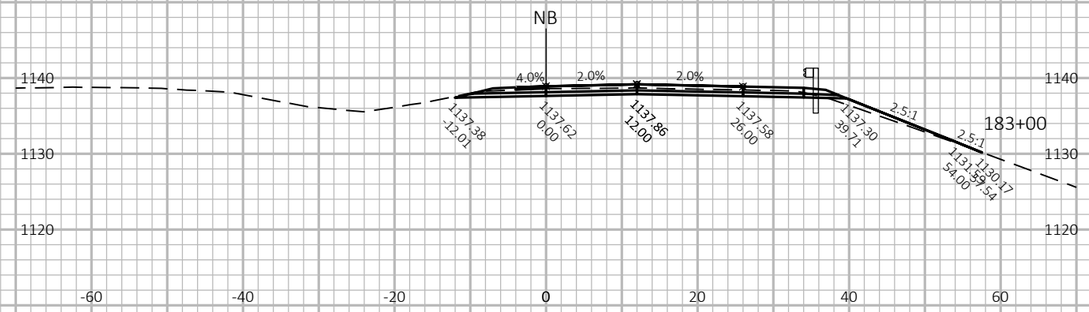
PLOT BY : SCHMIDT, DAVID B

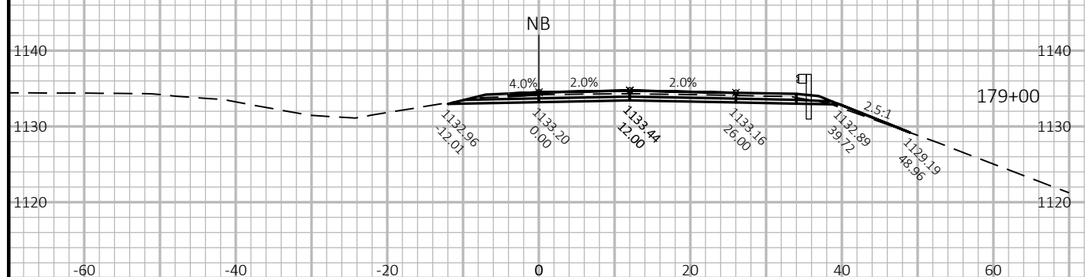
PLOT NAME :

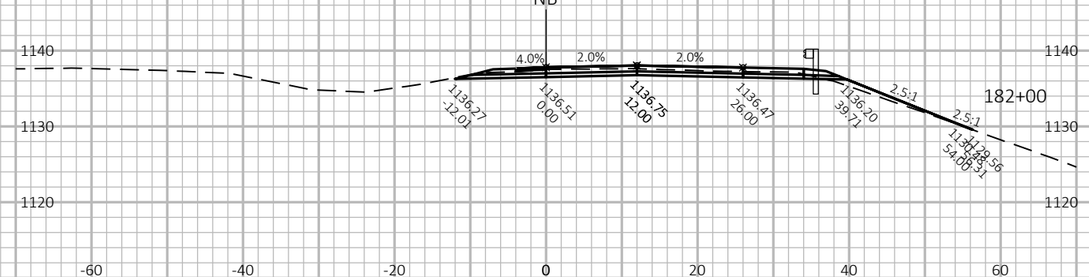
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

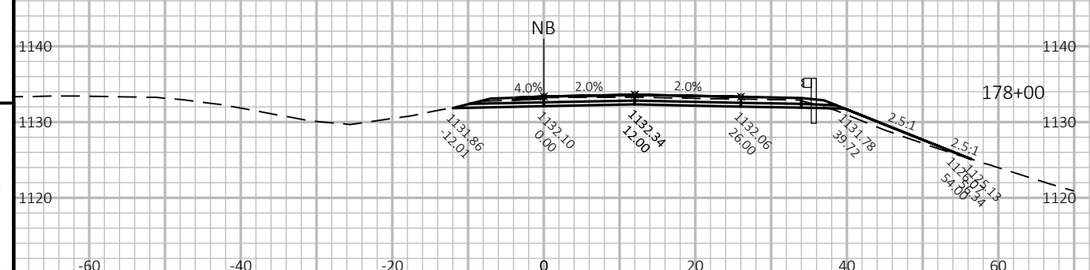
WISDOT/CADDS SHEET 49

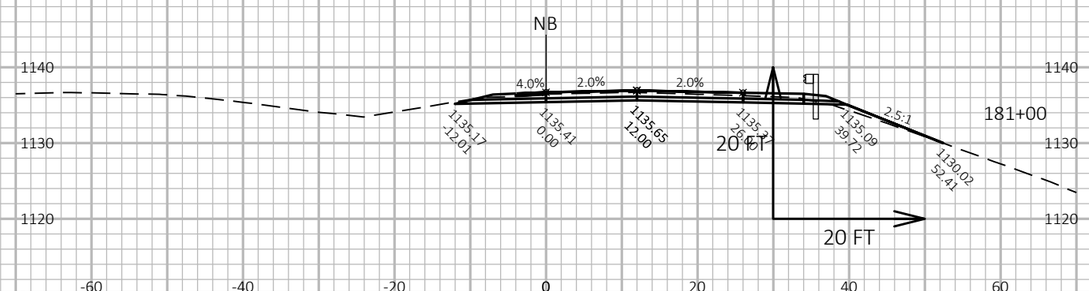












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 451	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_34

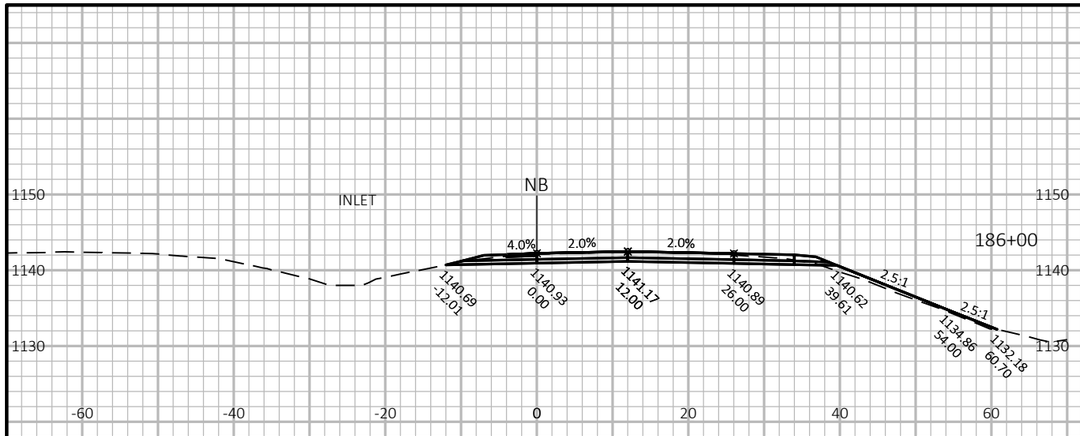
PLOT DATE : 5/22/2018 4:29 PM

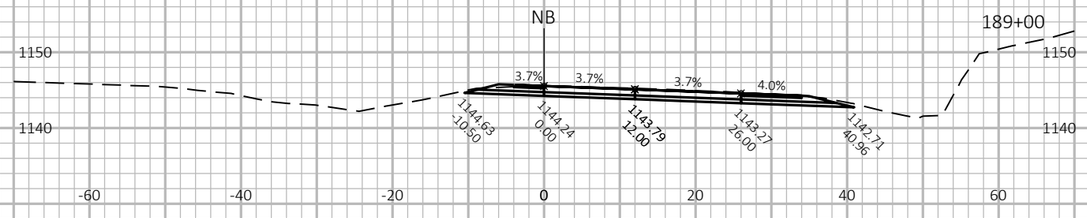
PLOT BY : SCHMIDT, DAVID B

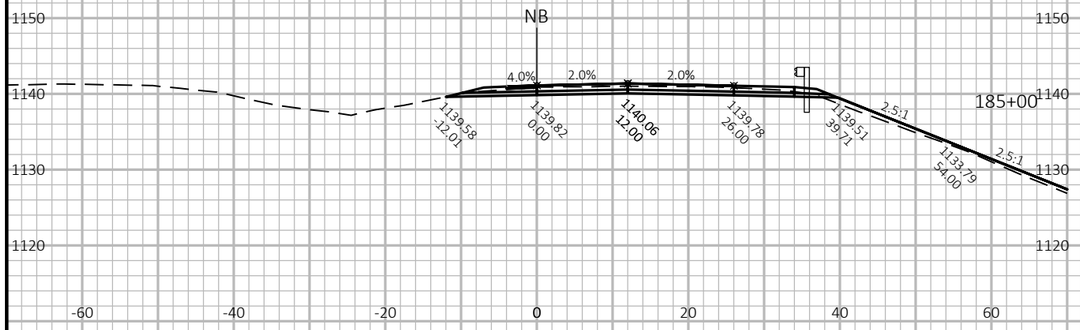
PLOT NAME :

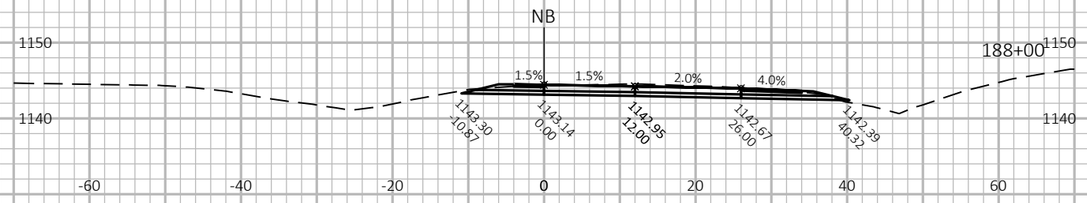
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

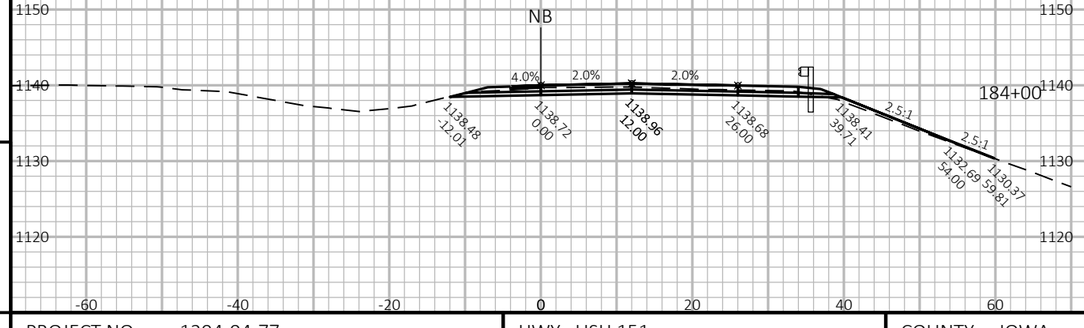
WISDOT/CADDS SHEET 49

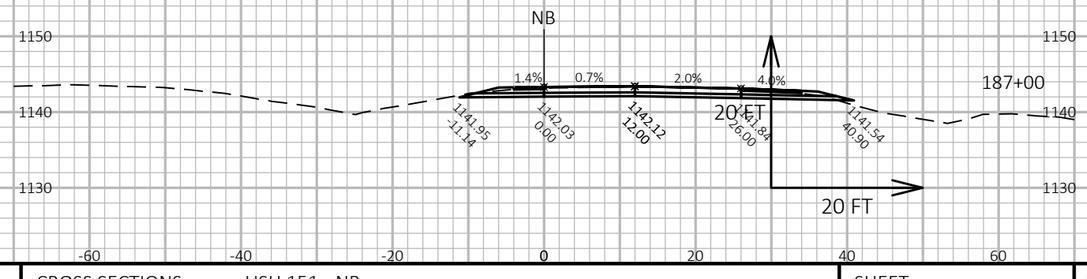












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 452	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_35

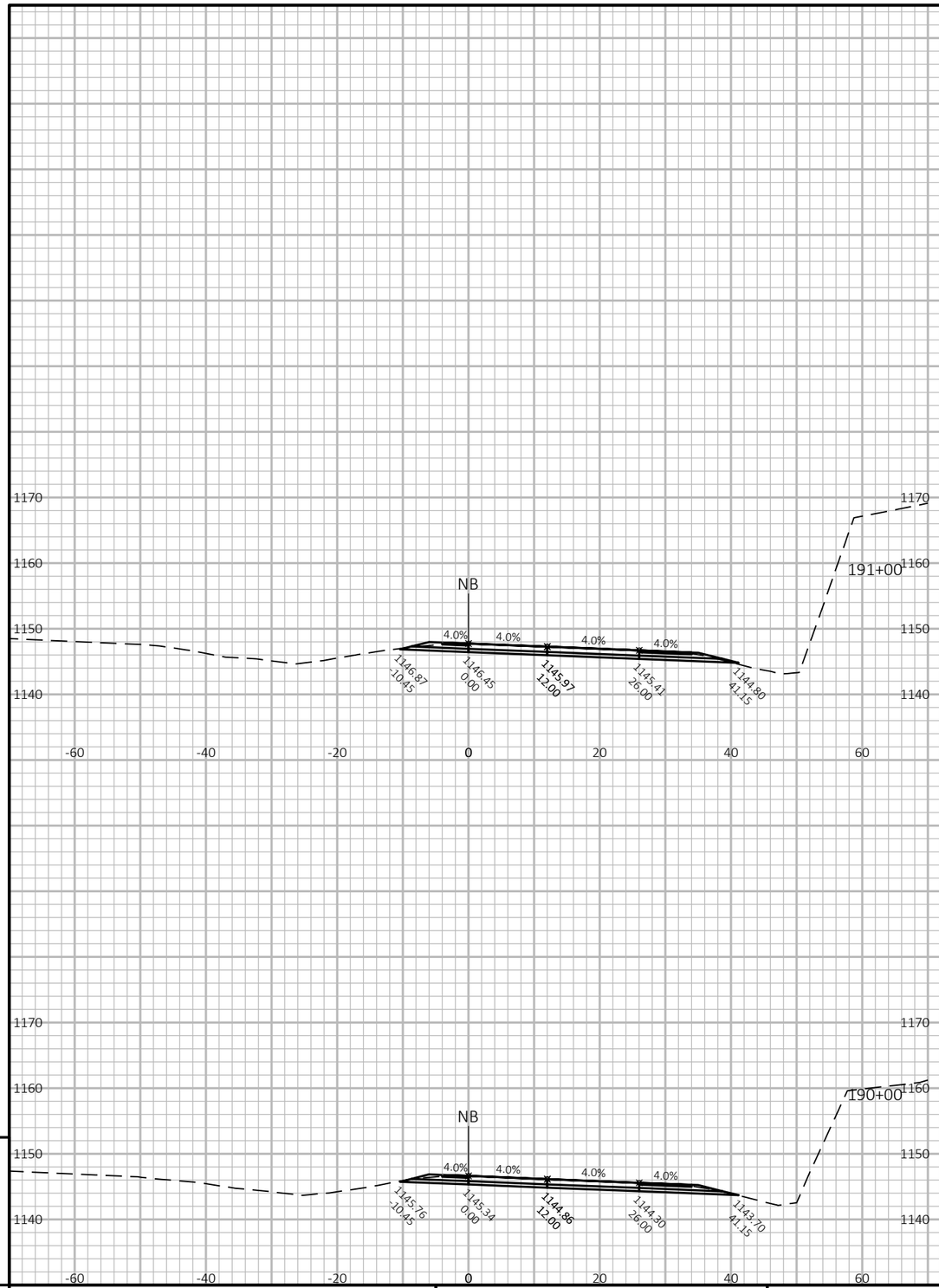
PLOT DATE : 5/22/2018 4:29 PM

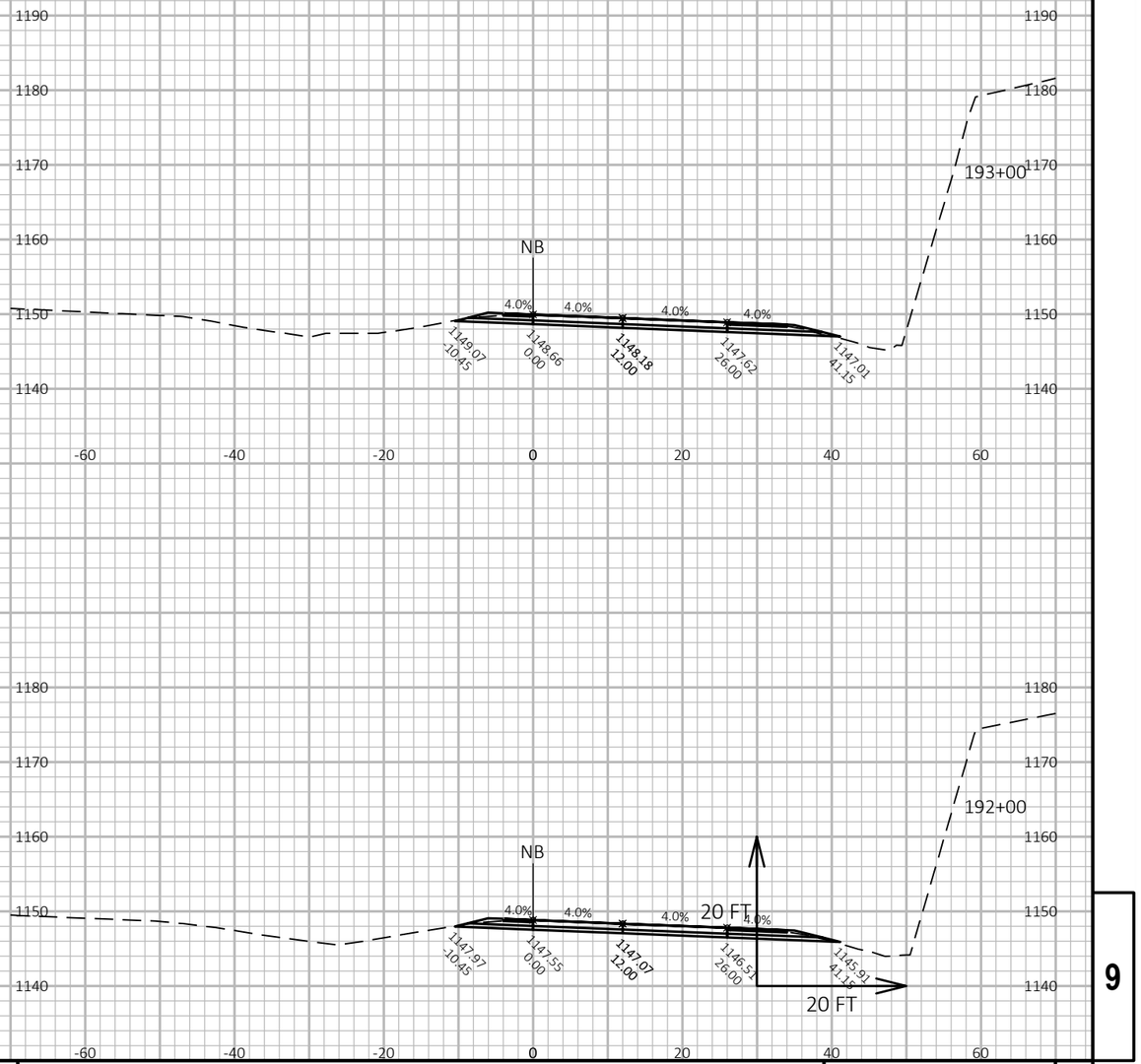
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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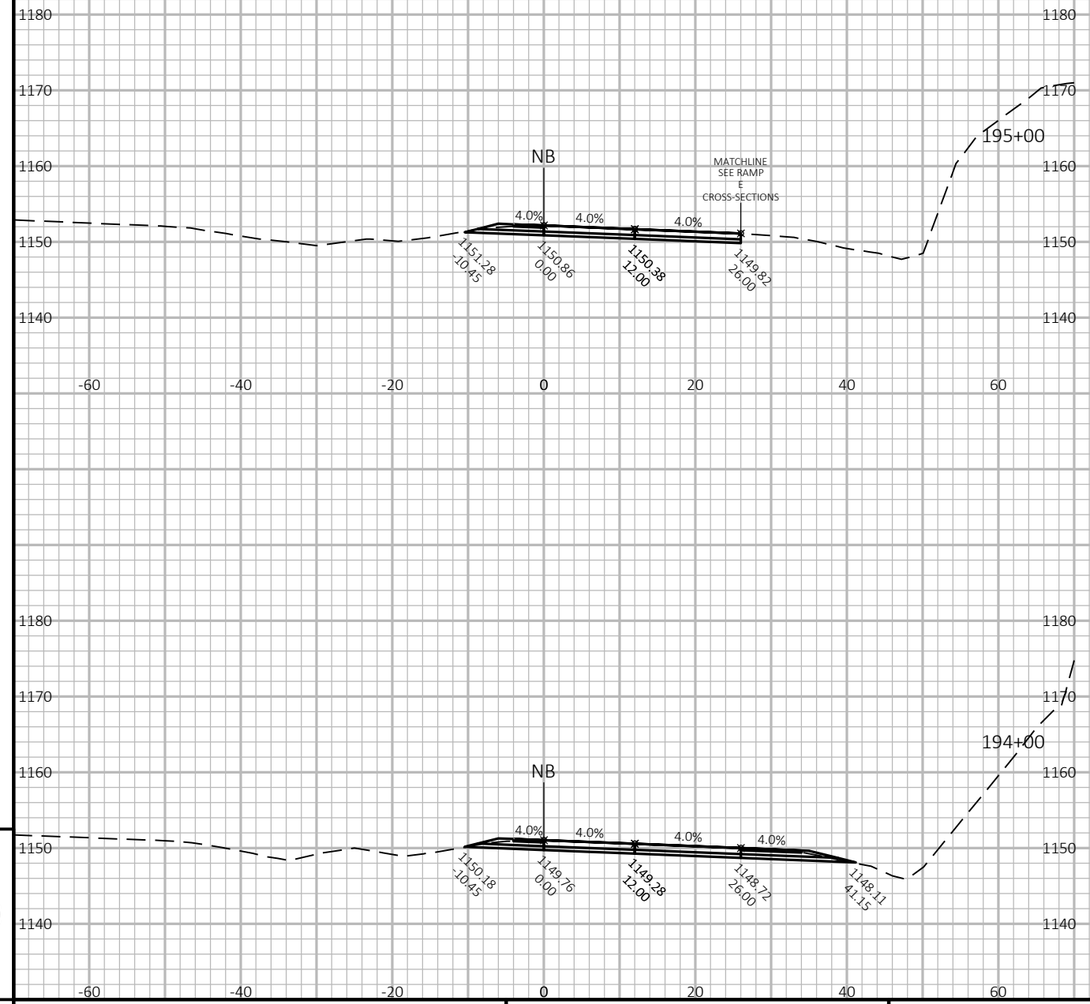
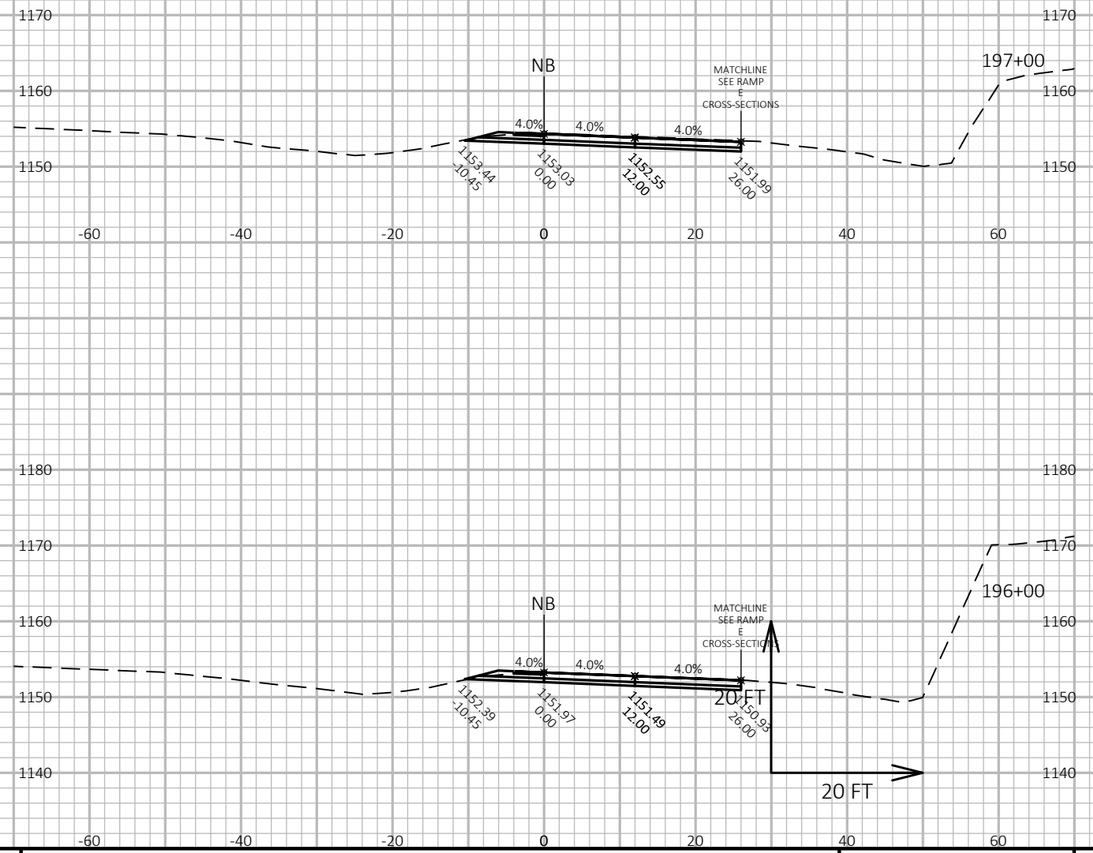
9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 453	E





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 454	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_37

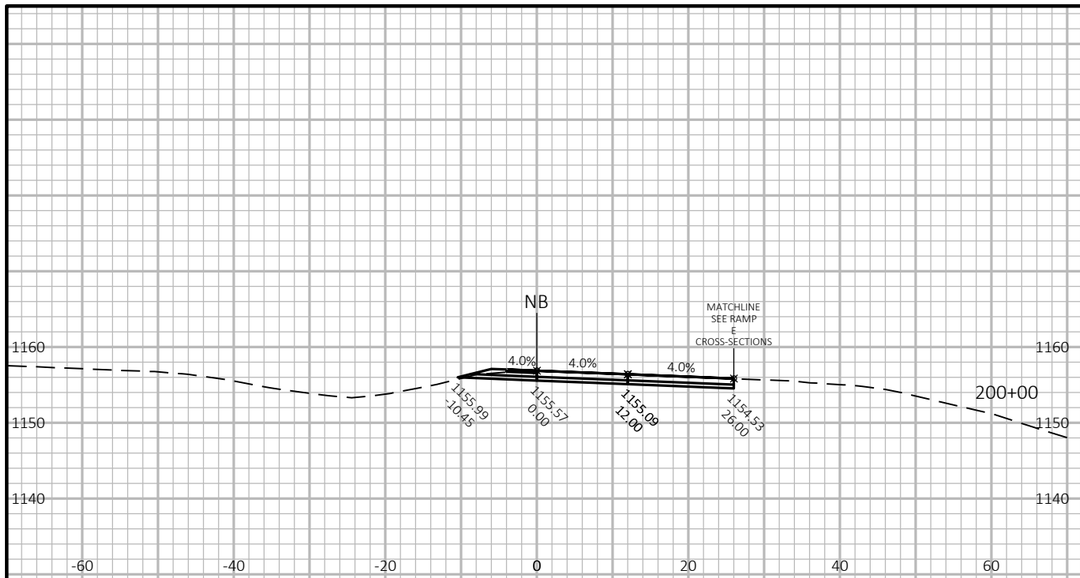
PLOT DATE : 5/22/2018 4:29 PM

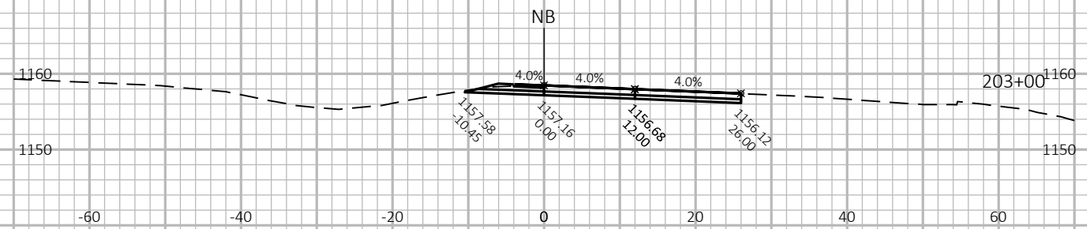
PLOT BY : SCHMIDT, DAVID B

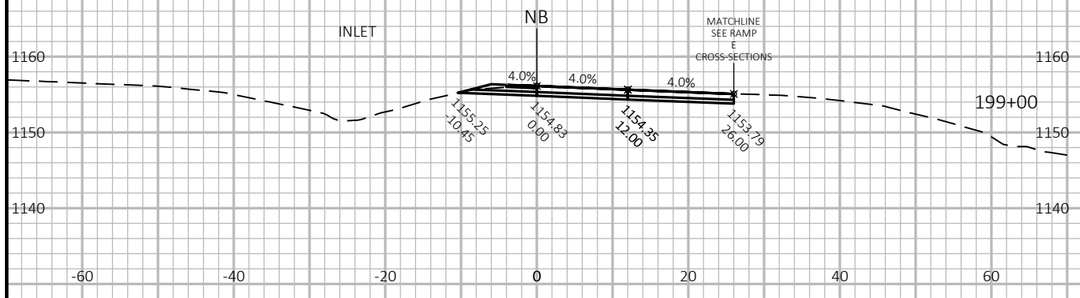
PLOT NAME :

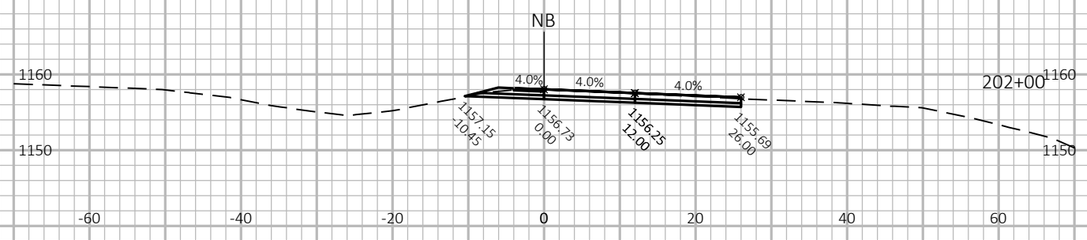
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

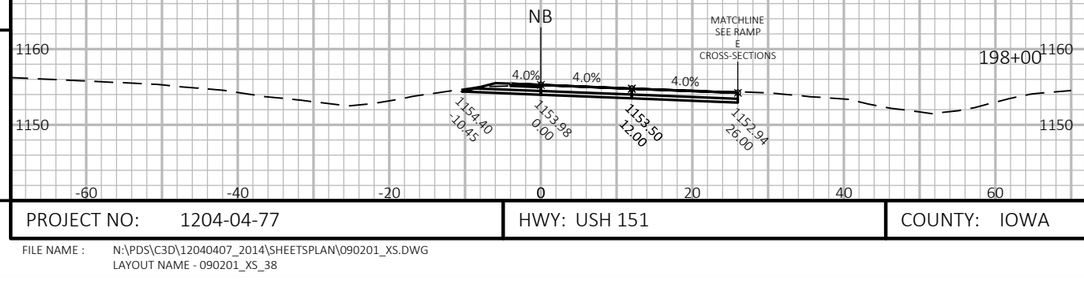
WISDOT/CADDS SHEET 49

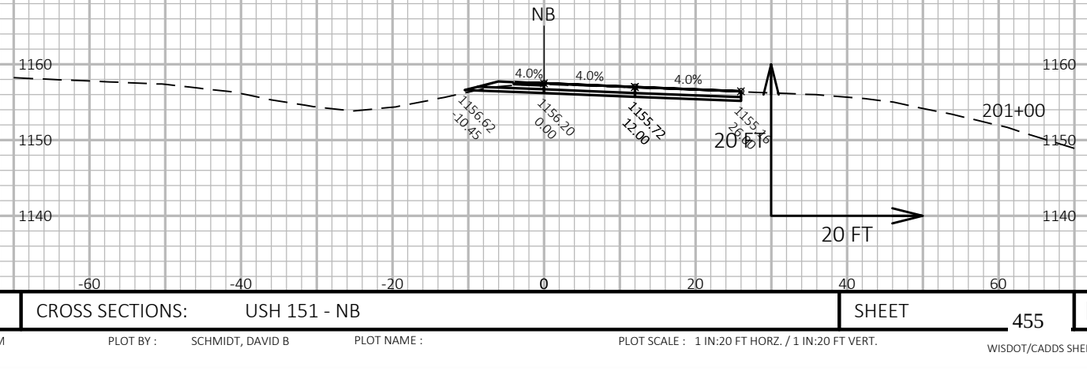












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 455	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_38

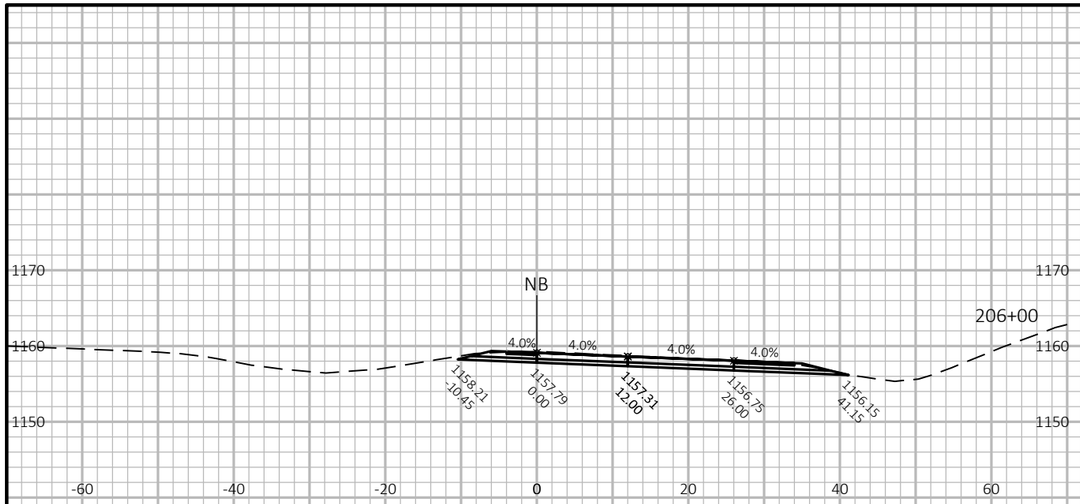
PLOT DATE : 5/22/2018 4:30 PM

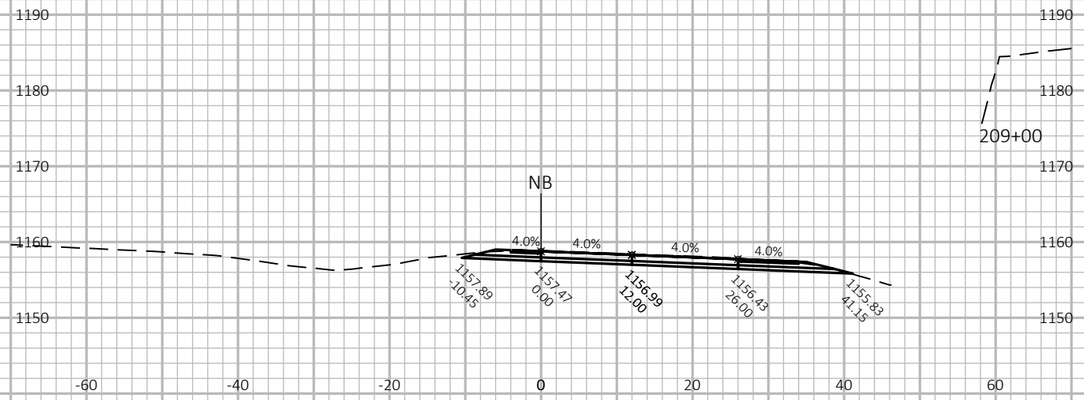
PLOT BY : SCHMIDT, DAVID B

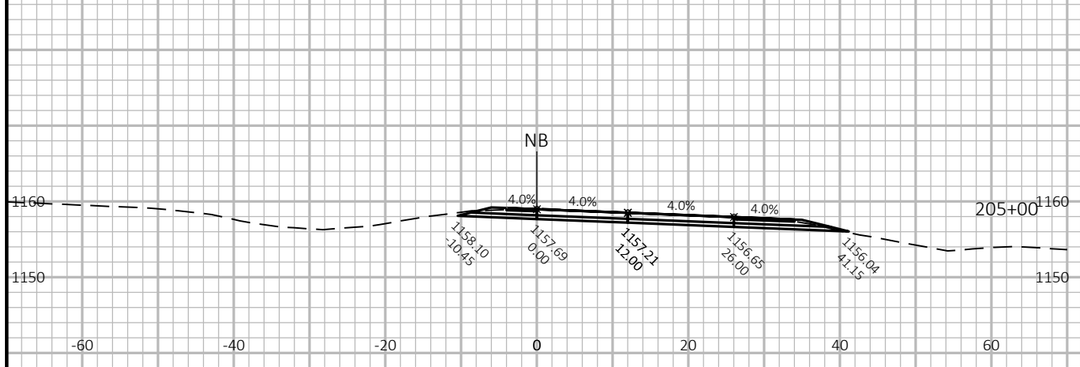
PLOT NAME :

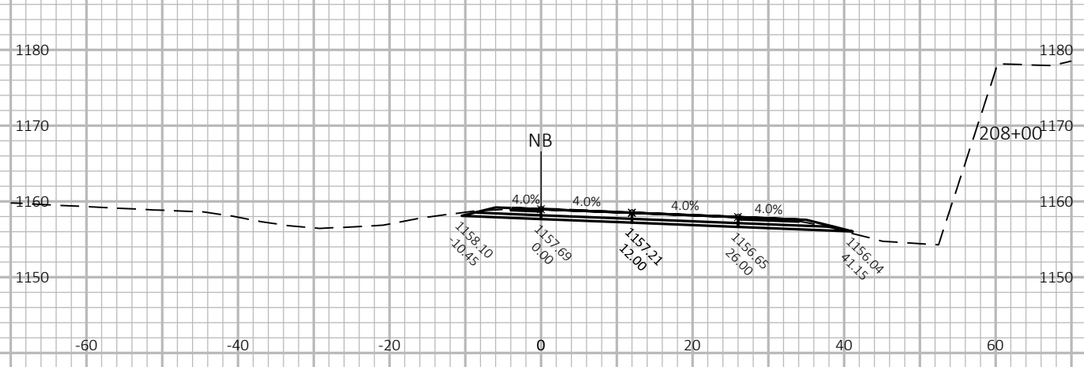
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

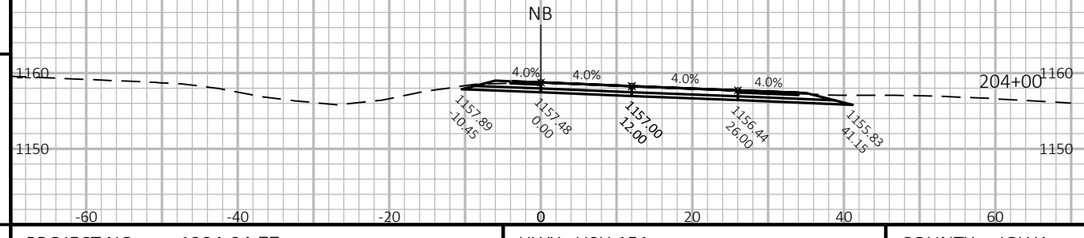
WISDOT/CADDS SHEET 49

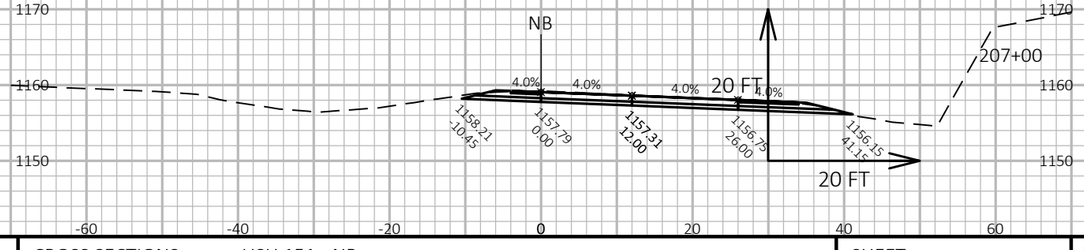












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 456	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_39

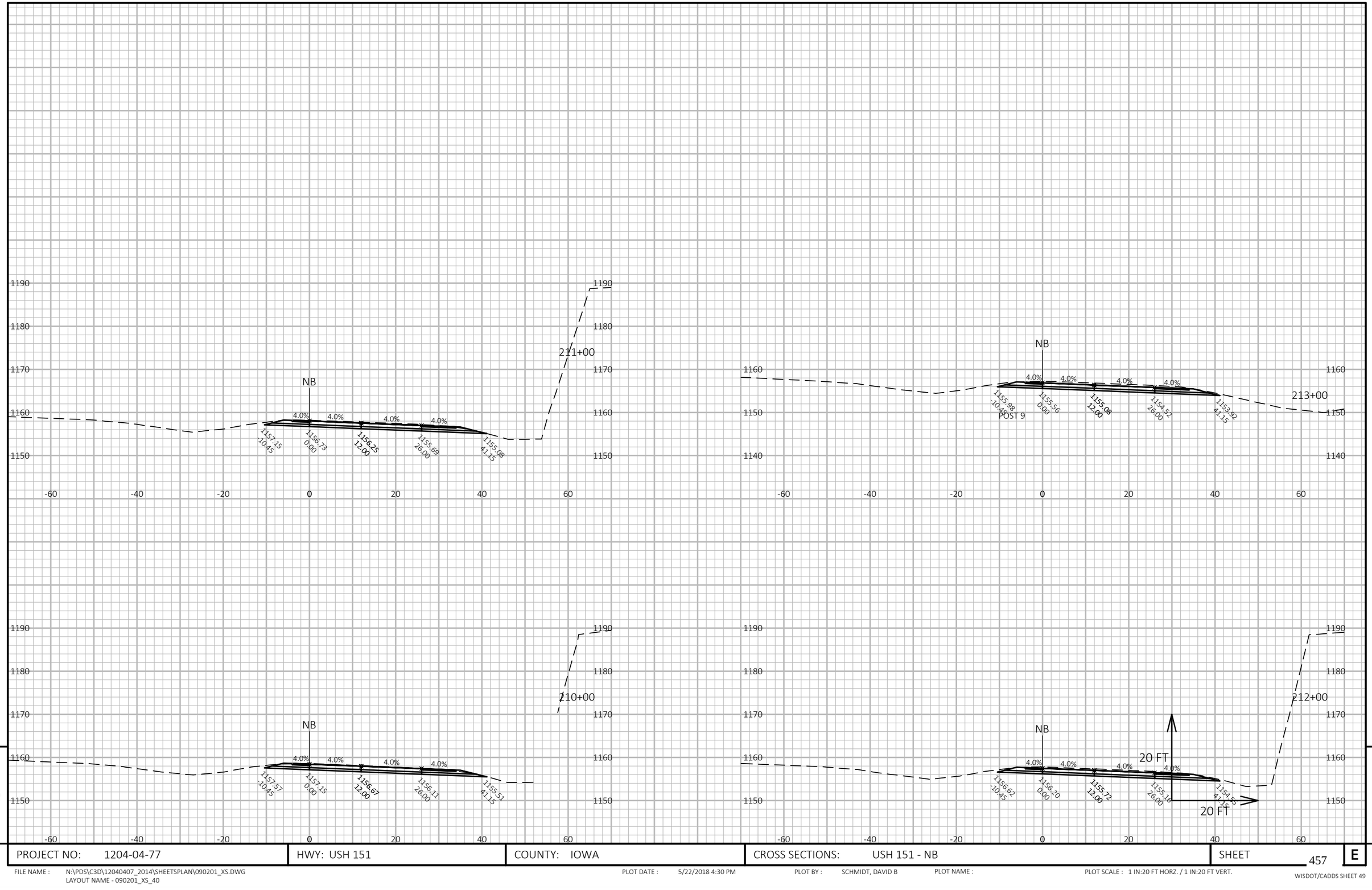
PLOT DATE : 5/22/2018 4:30 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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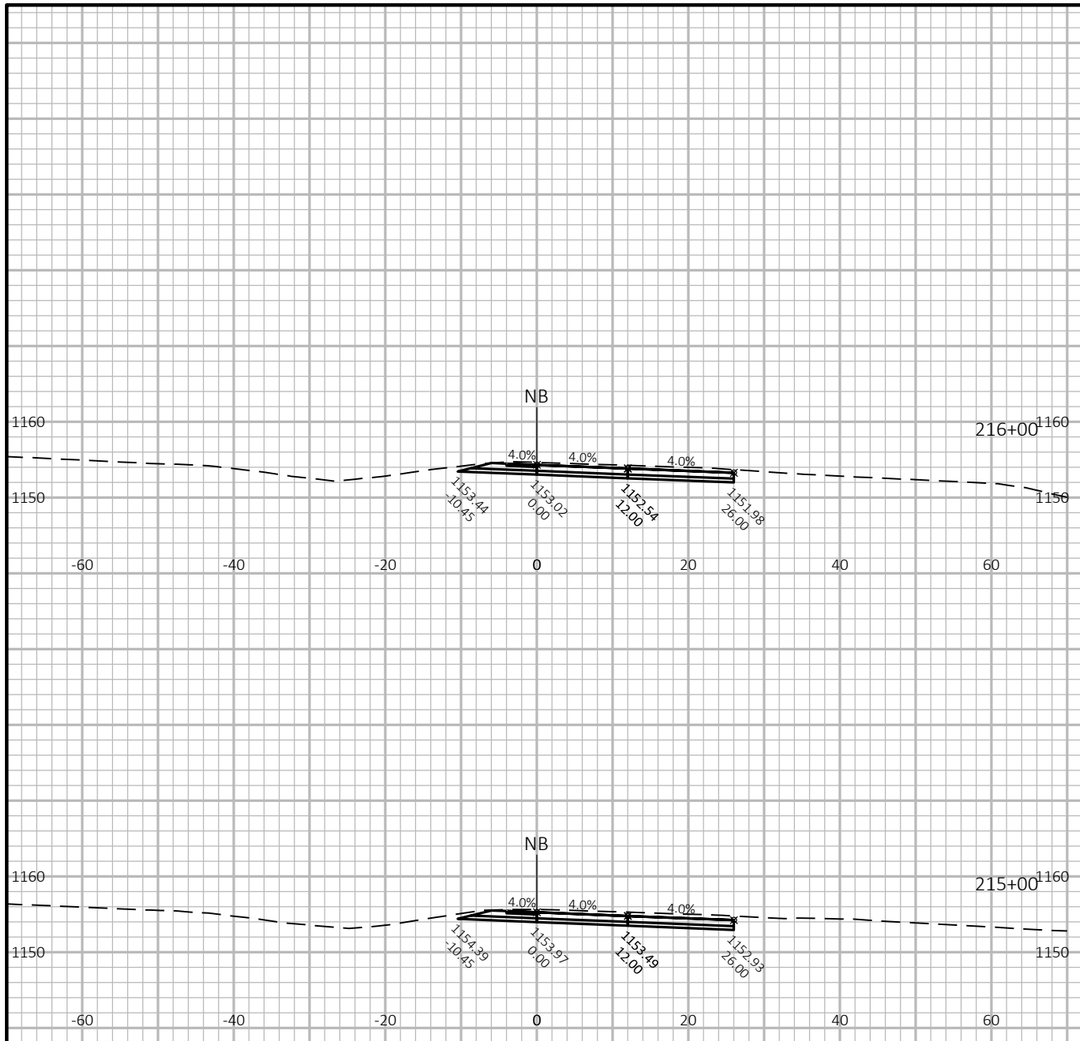
9

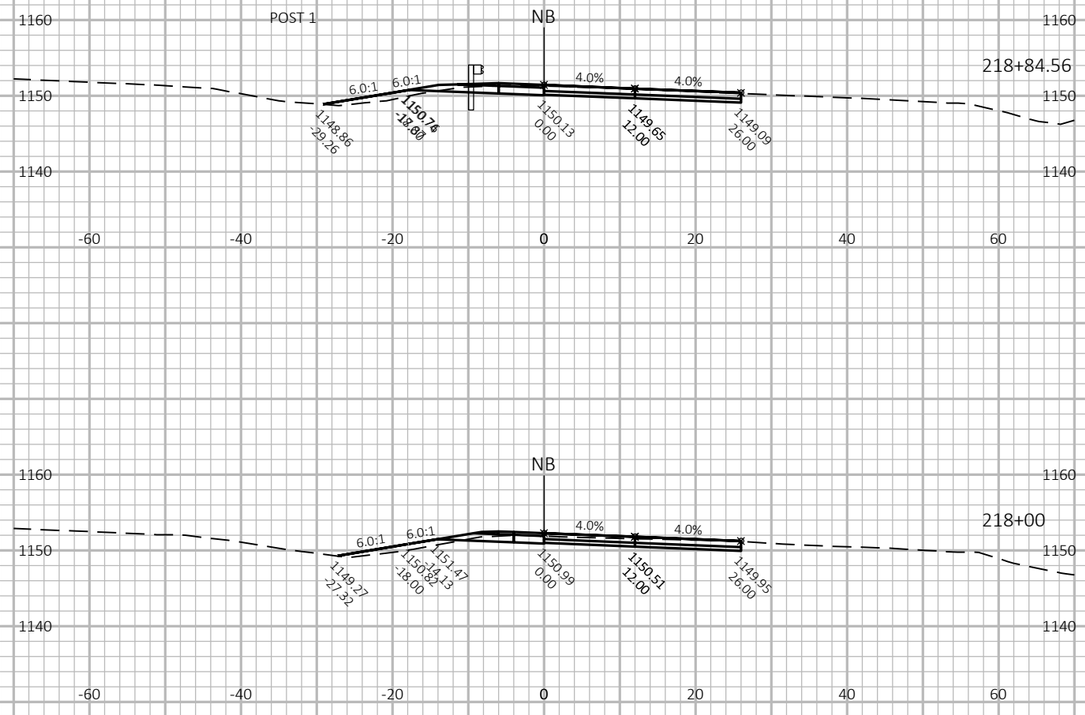
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 457	E

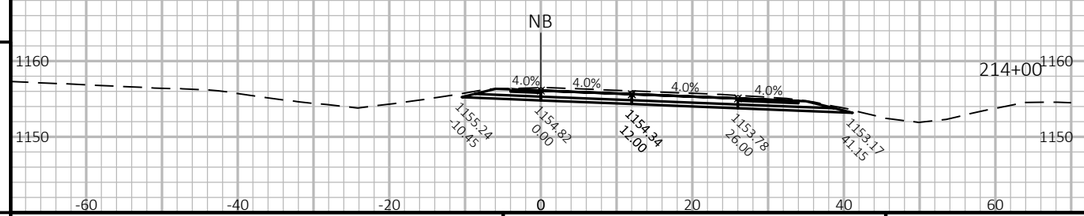
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_40

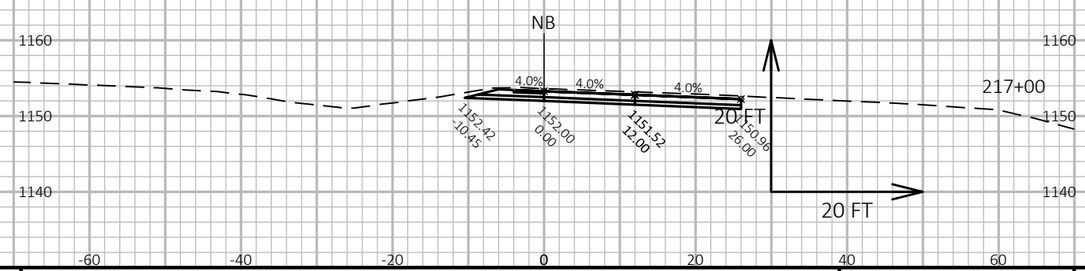
PLOT DATE : 5/22/2018 4:30 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 458	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_41

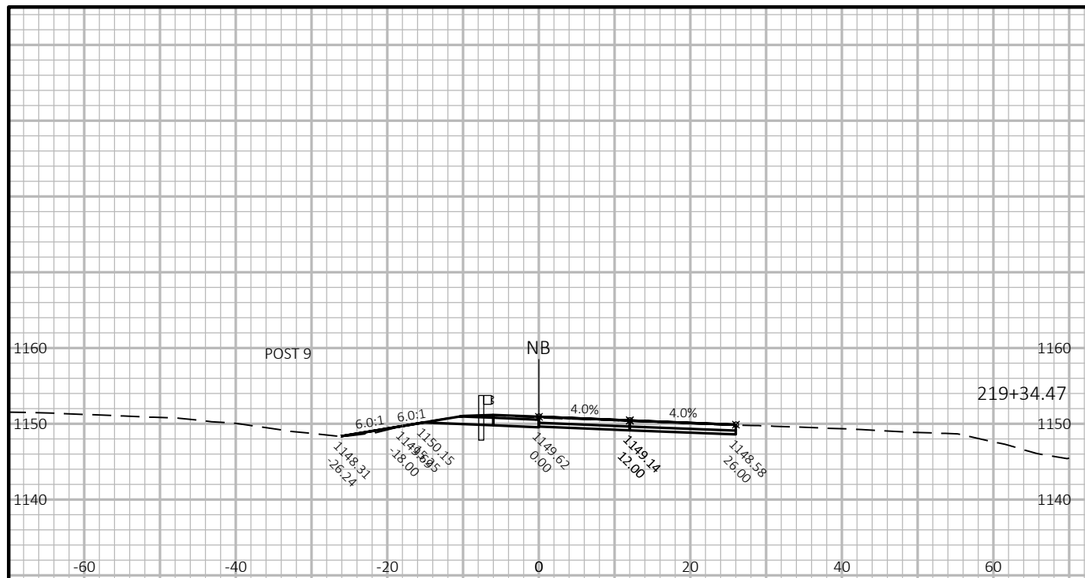
PLOT DATE : 5/22/2018 4:30 PM

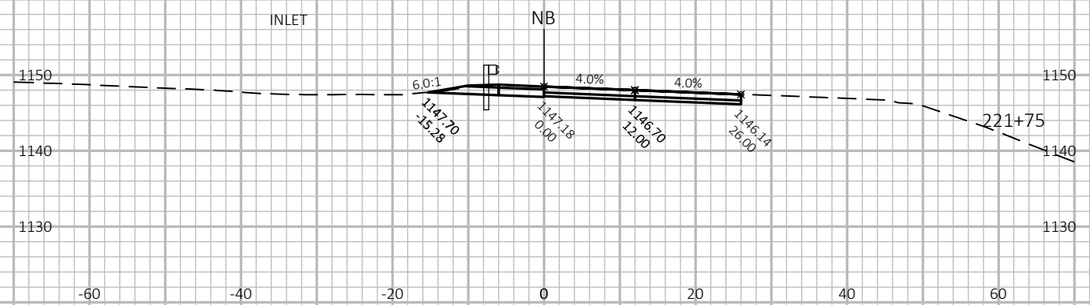
PLOT BY : SCHMIDT, DAVID B

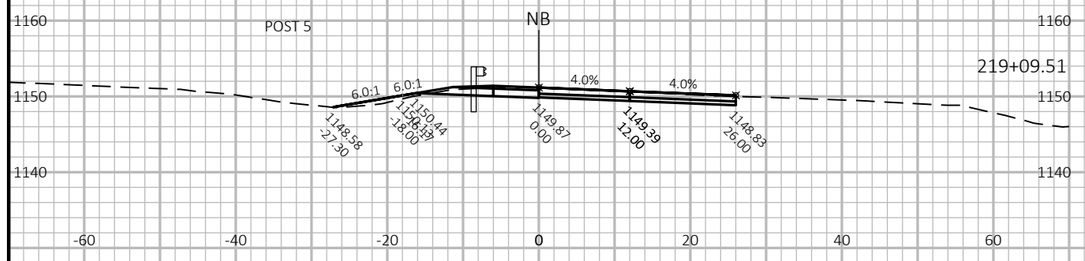
PLOT NAME :

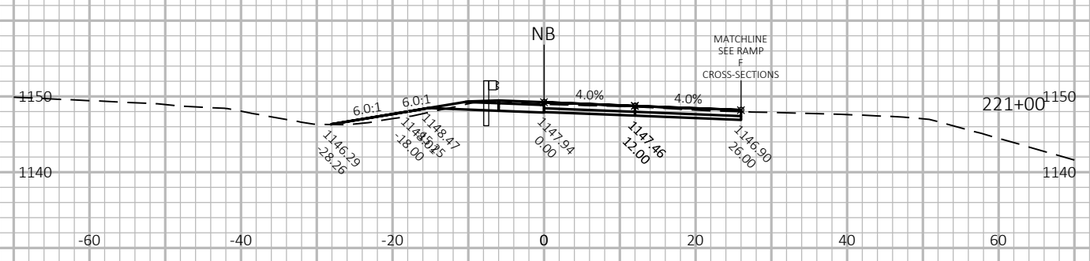
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

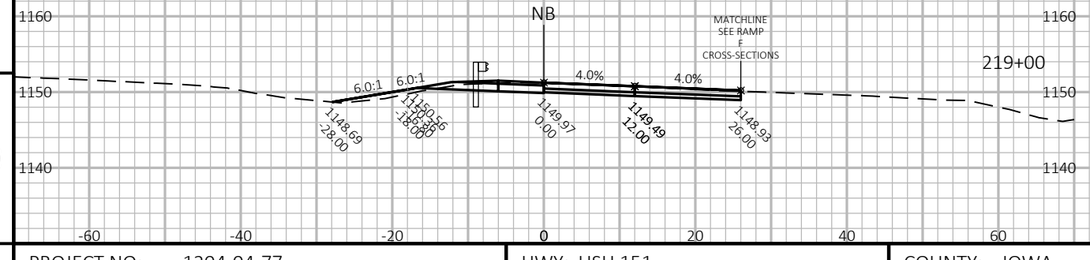
WISDOT/CADDS SHEET 49

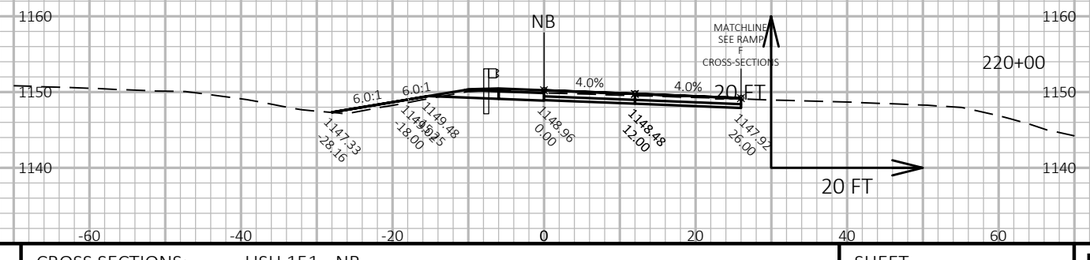












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 459	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_42

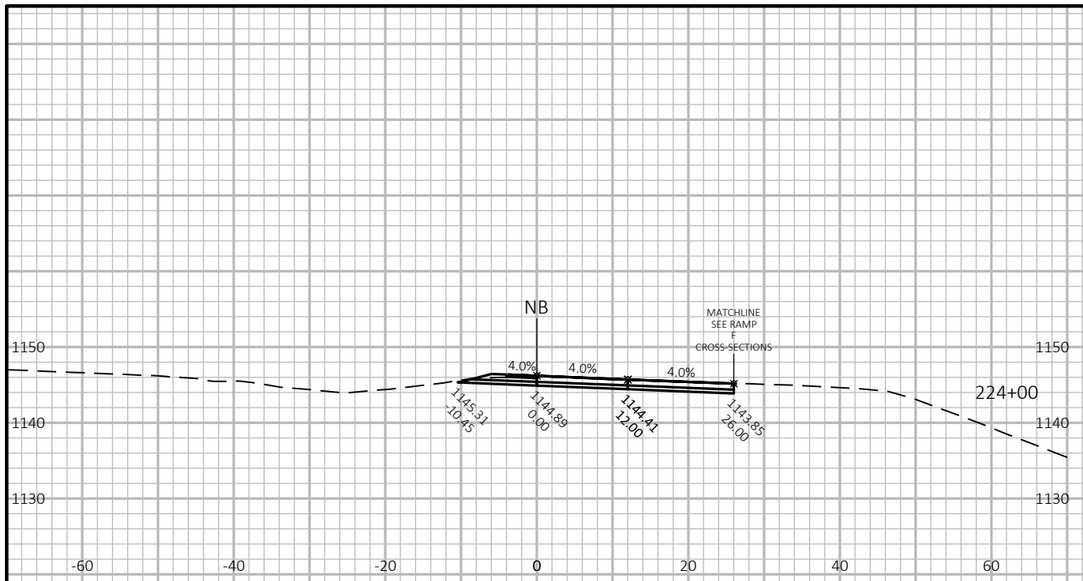
PLOT DATE : 5/22/2018 4:30 PM

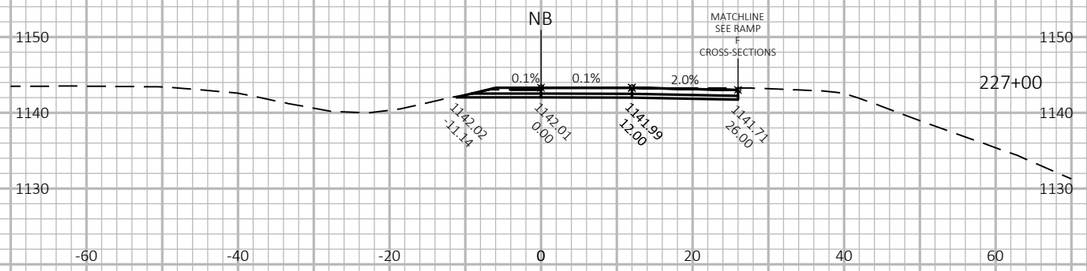
PLOT BY : SCHMIDT, DAVID B

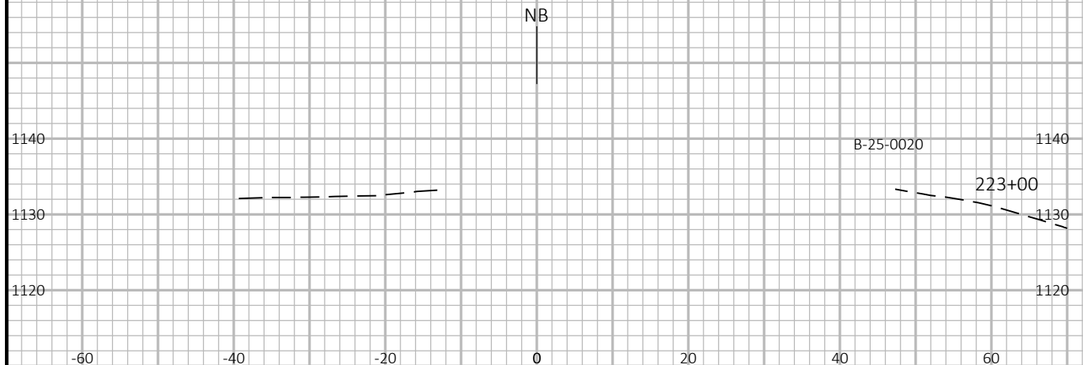
PLOT NAME :

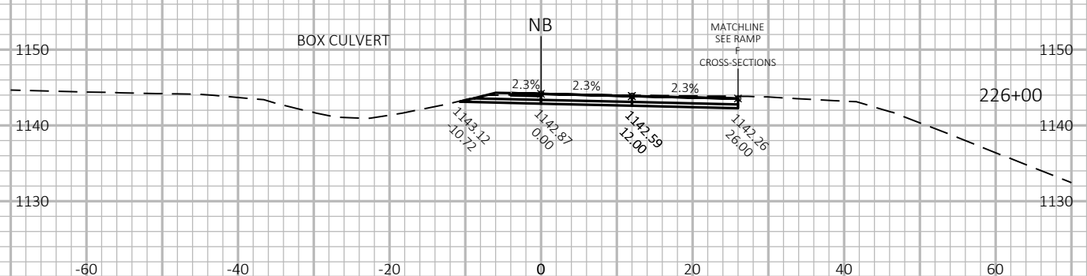
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

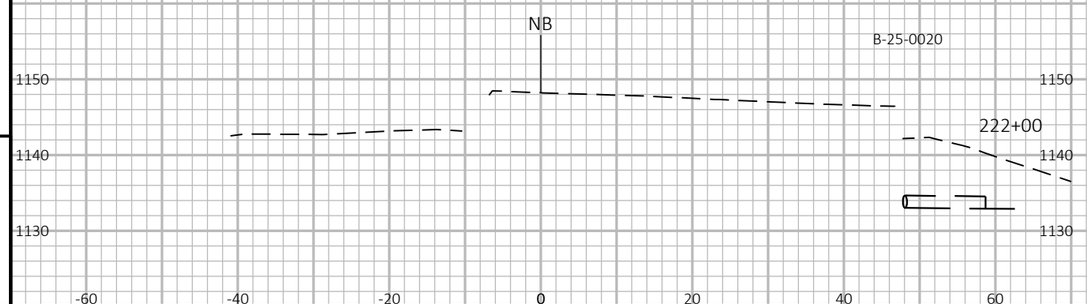
WISDOT/CADDS SHEET 49

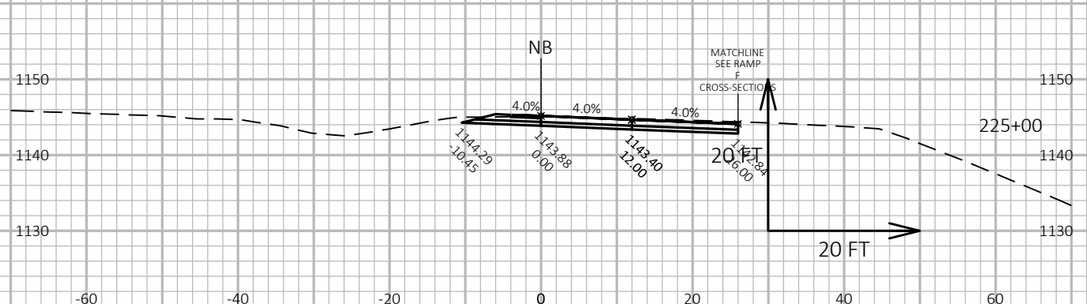












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 460	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_43

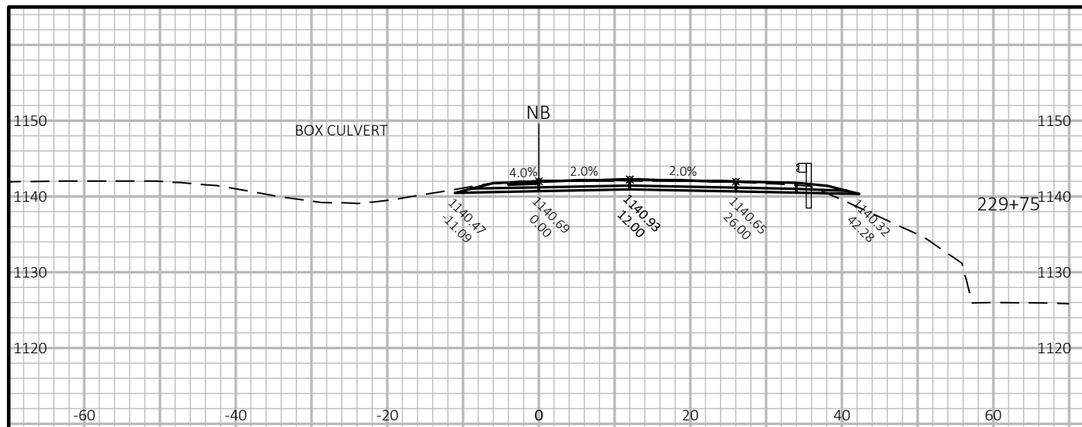
PLOT DATE : 5/22/2018 4:30 PM

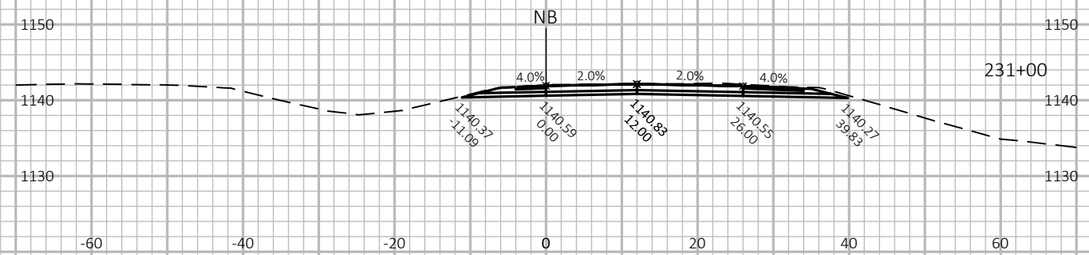
PLOT BY : SCHMIDT, DAVID B

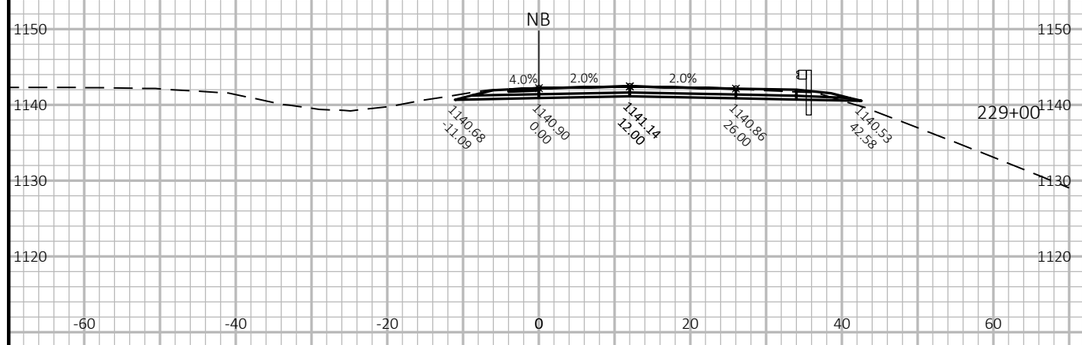
PLOT NAME :

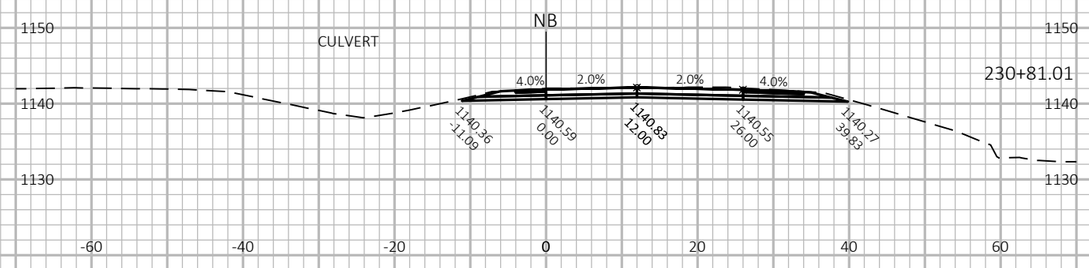
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

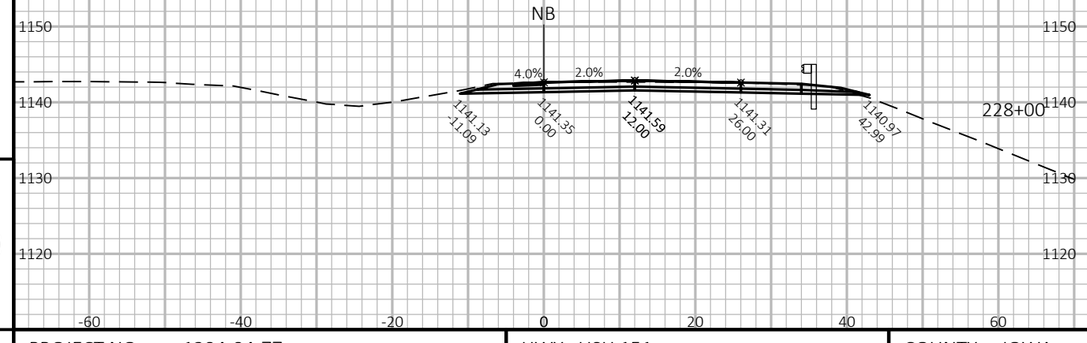
WISDOT/CADDS SHEET 49

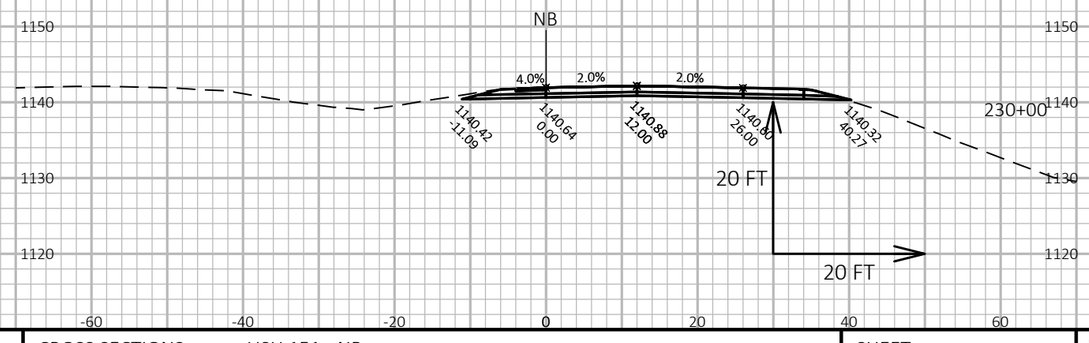












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 461	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_44

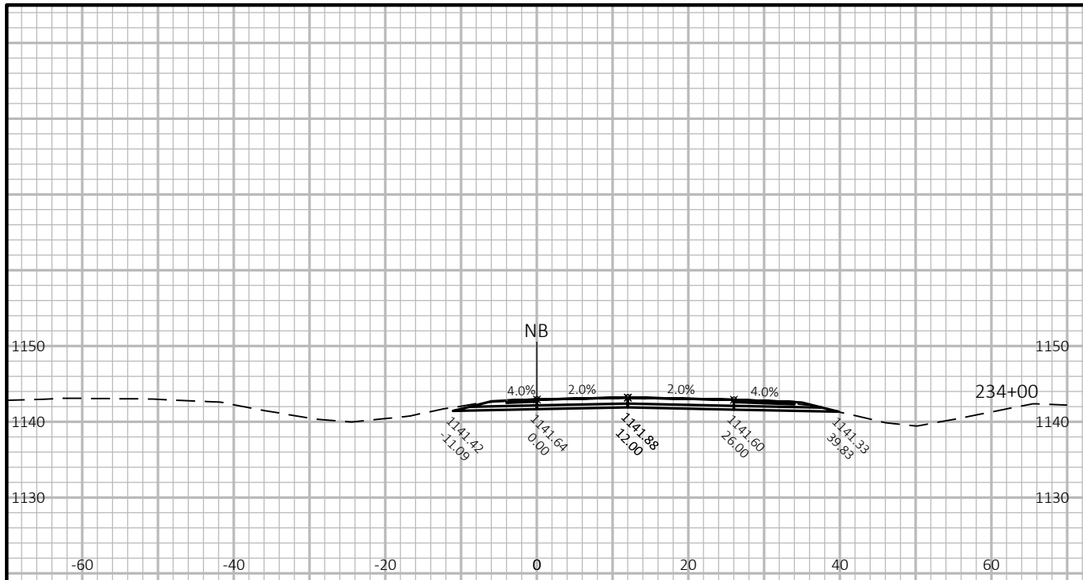
PLOT DATE : 5/22/2018 4:30 PM

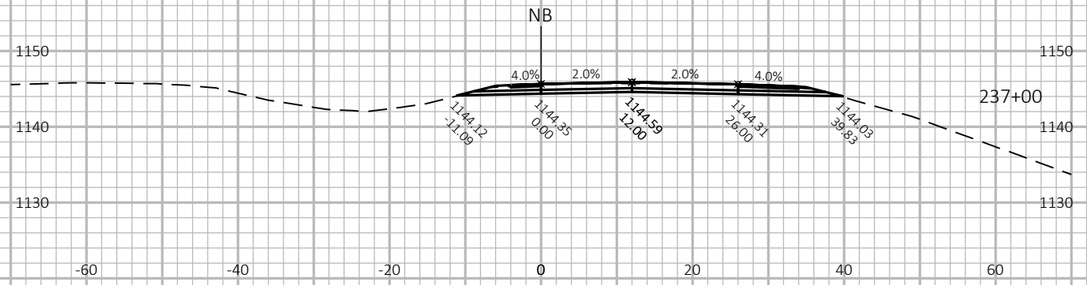
PLOT BY : SCHMIDT, DAVID B

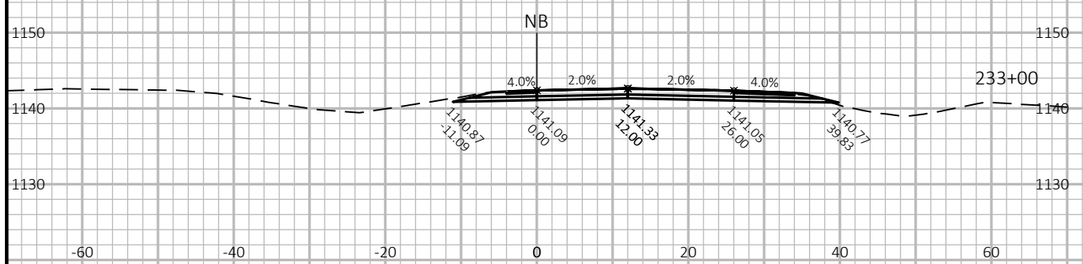
PLOT NAME :

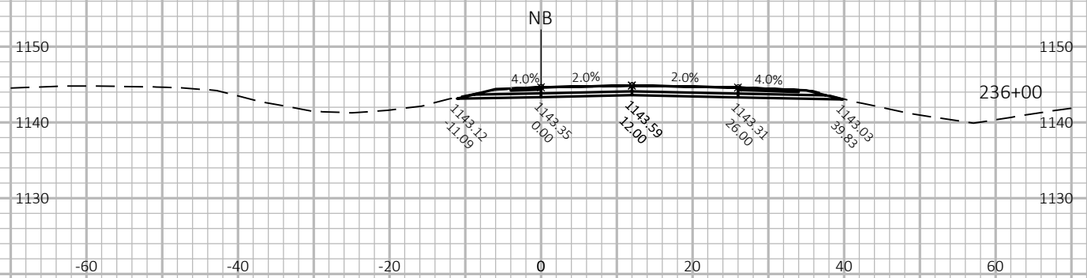
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

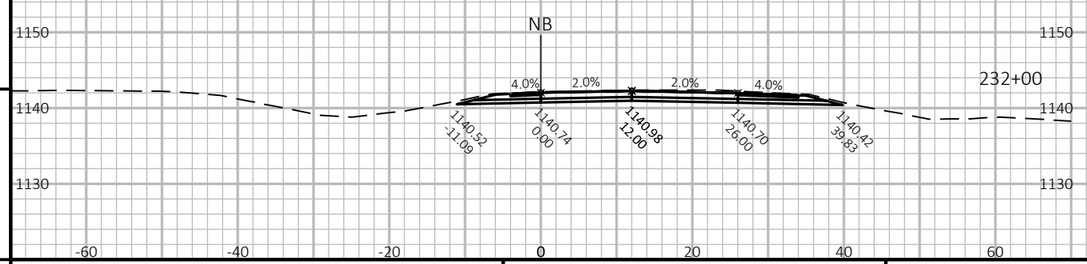
WISDOT/CADDS SHEET 49

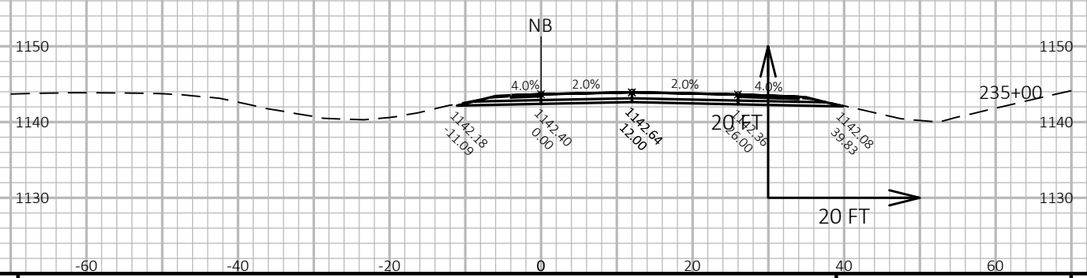












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 462	E

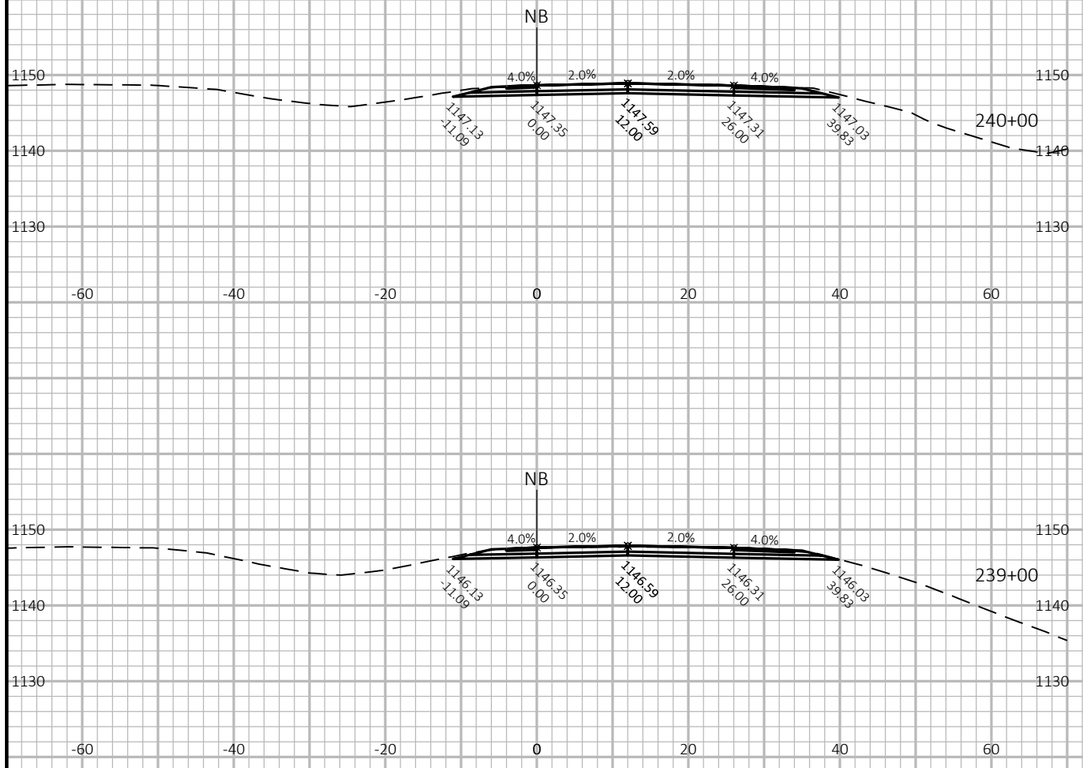
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_45

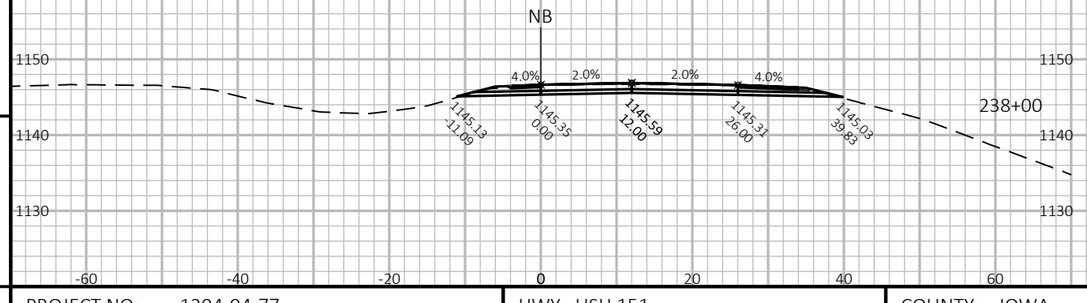
PLOT DATE : 5/22/2018 4:30 PM

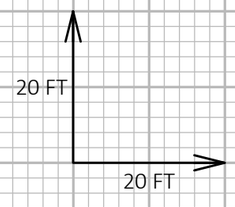
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.







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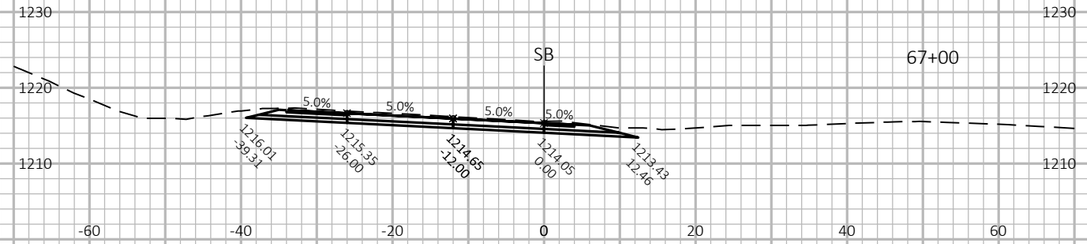
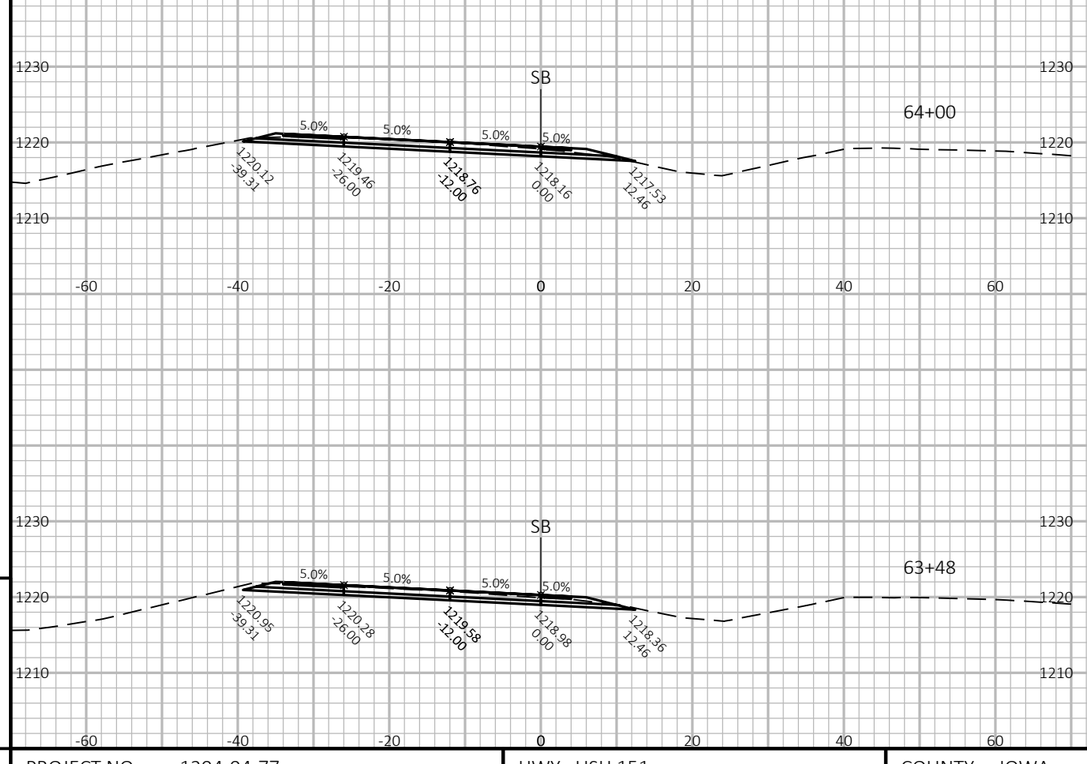
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - NB	SHEET 463	E

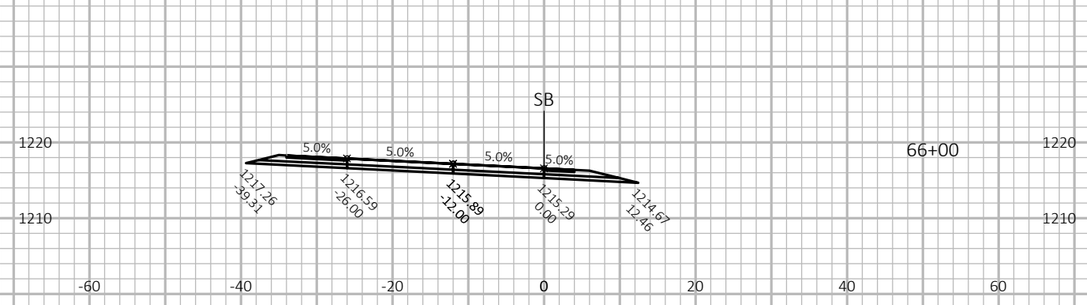
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS_46

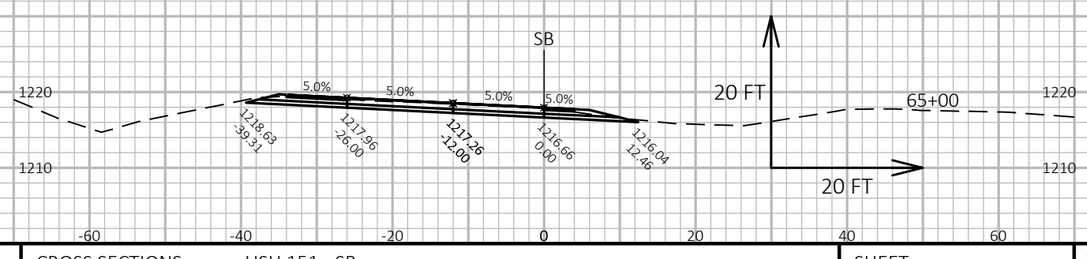
PLOT DATE : 5/22/2018 4:31 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 464	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_01

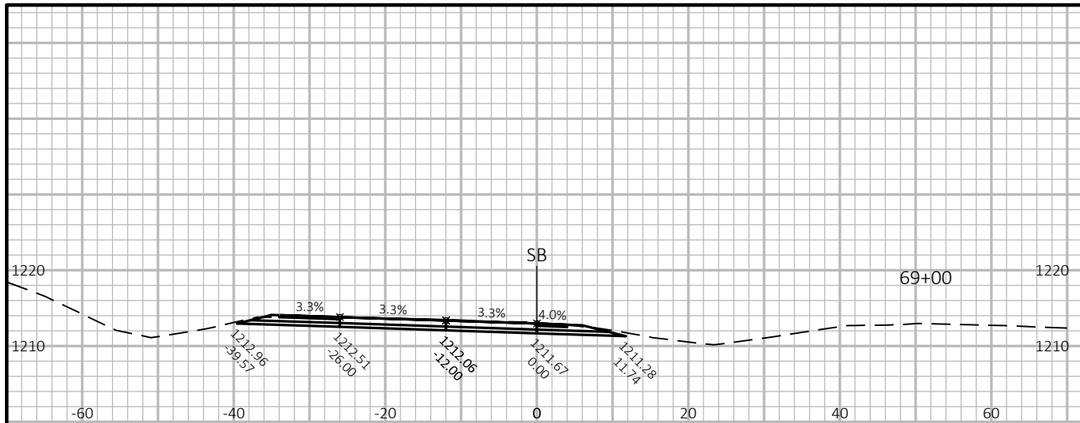
PLOT DATE : 5/22/2018 4:39 PM

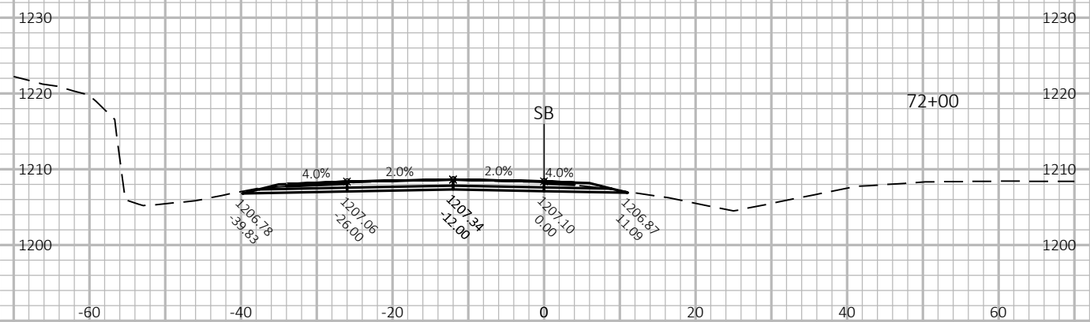
PLOT BY : SCHMIDT, DAVID B

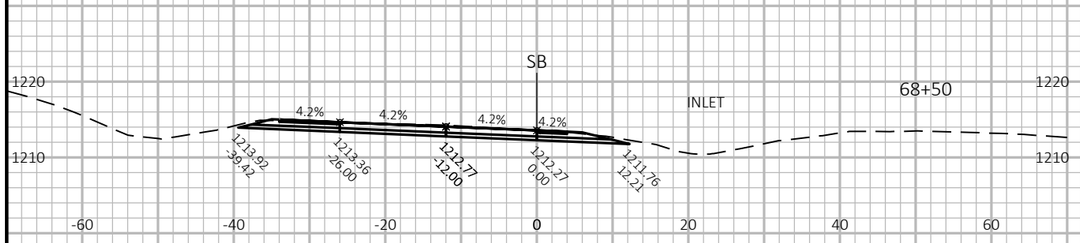
PLOT NAME :

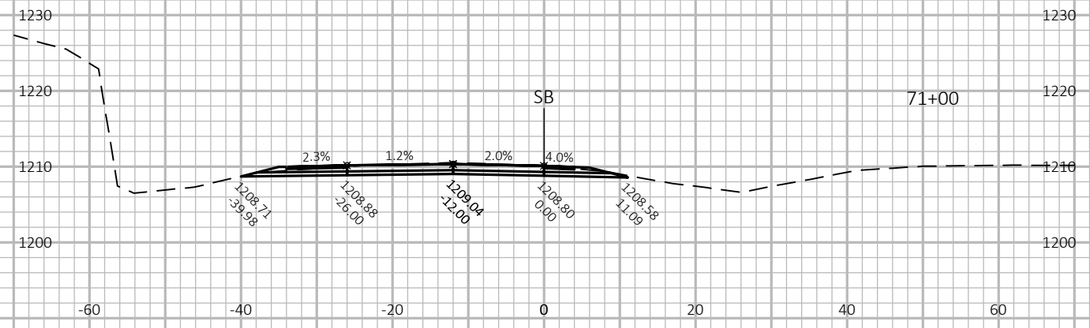
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

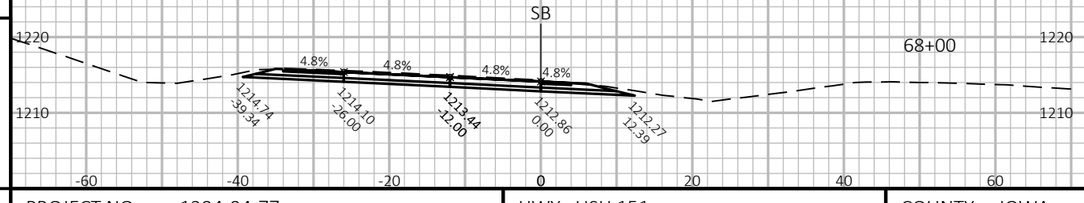
WISDOT/CADDS SHEET 49











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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 465	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_02

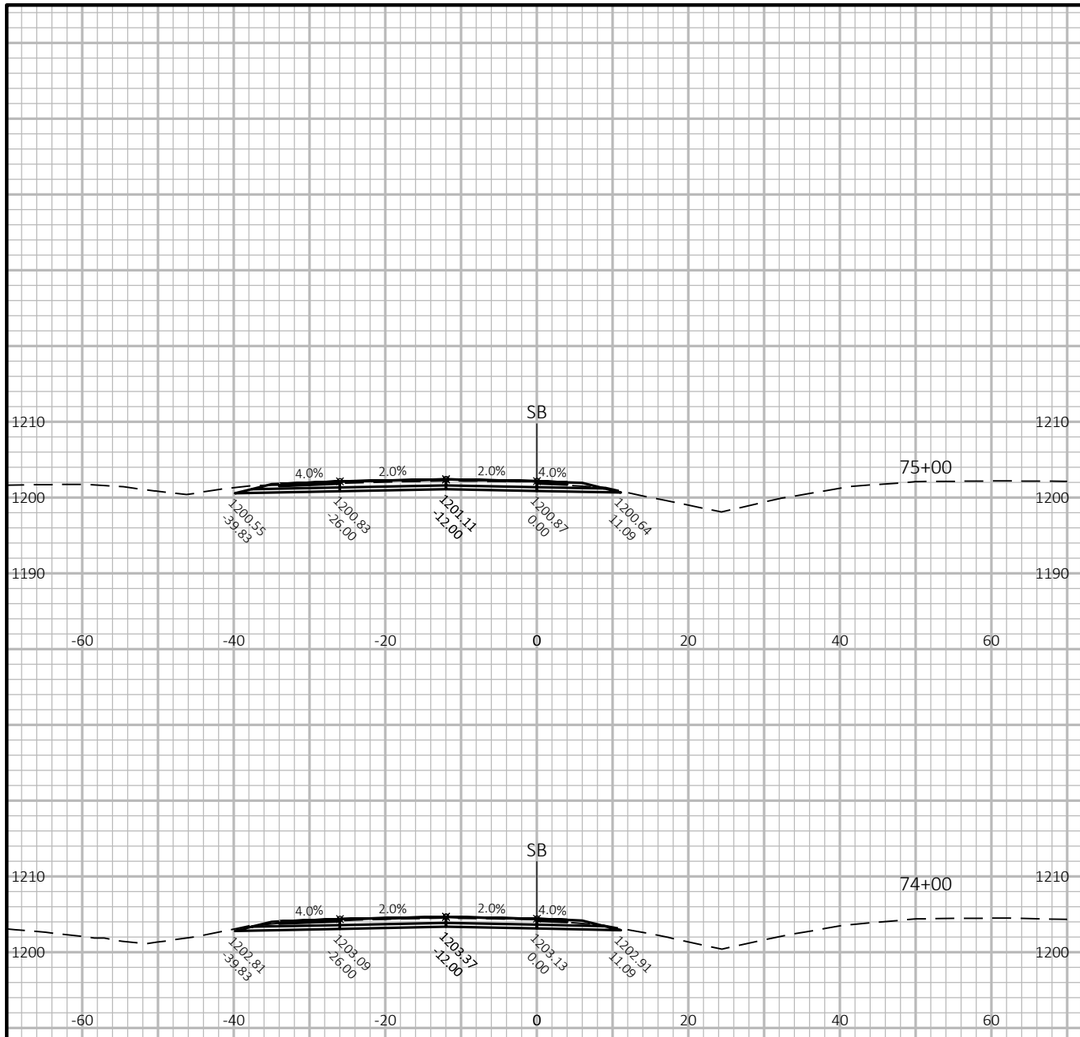
PLOT DATE : 5/22/2018 4:39 PM

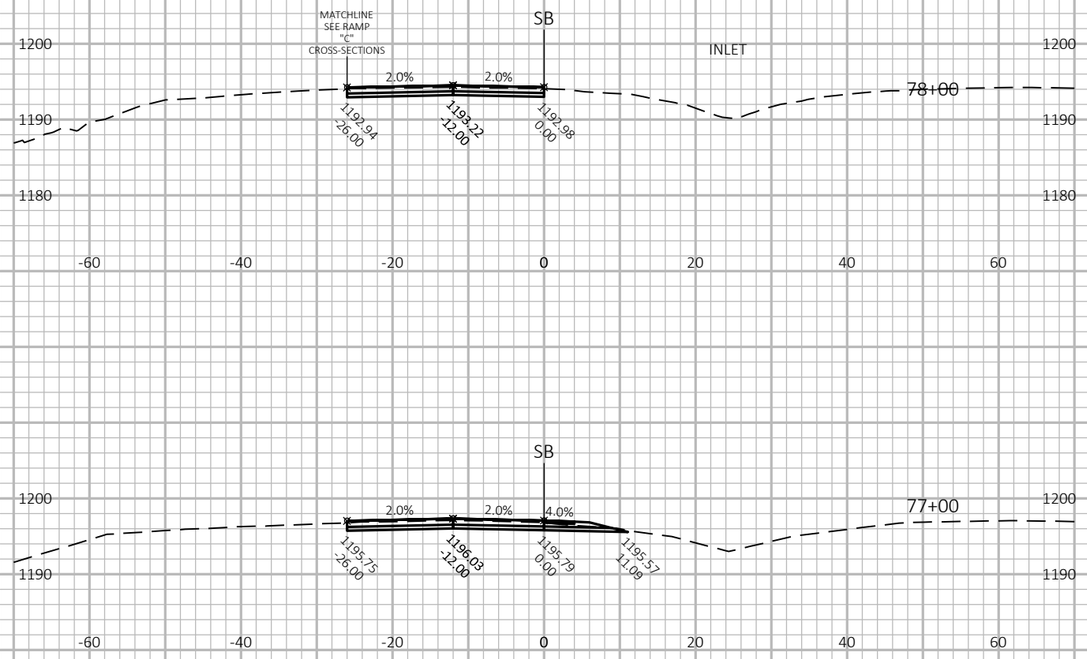
PLOT BY : SCHMIDT, DAVID B

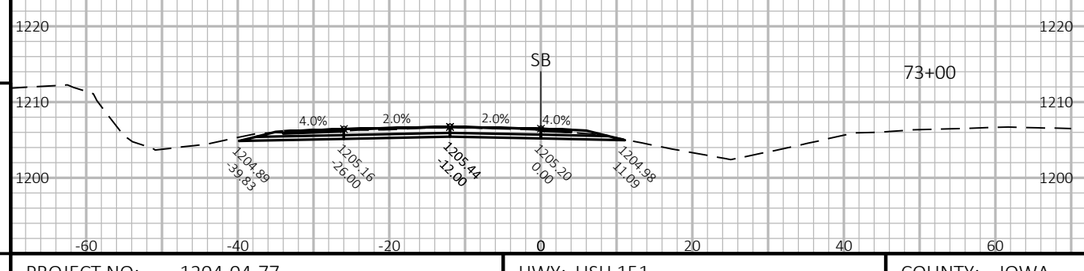
PLOT NAME :

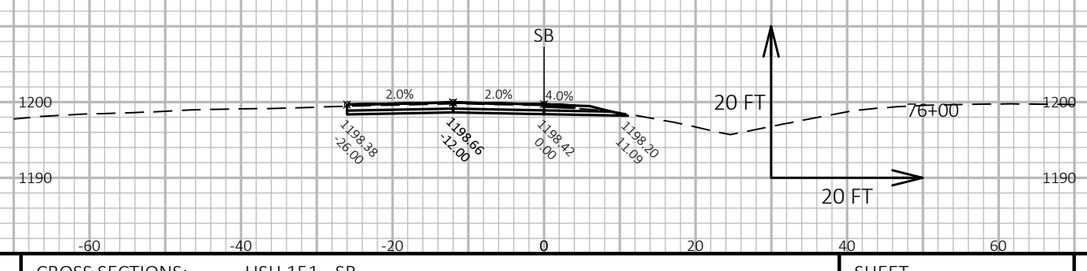
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 466	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_03

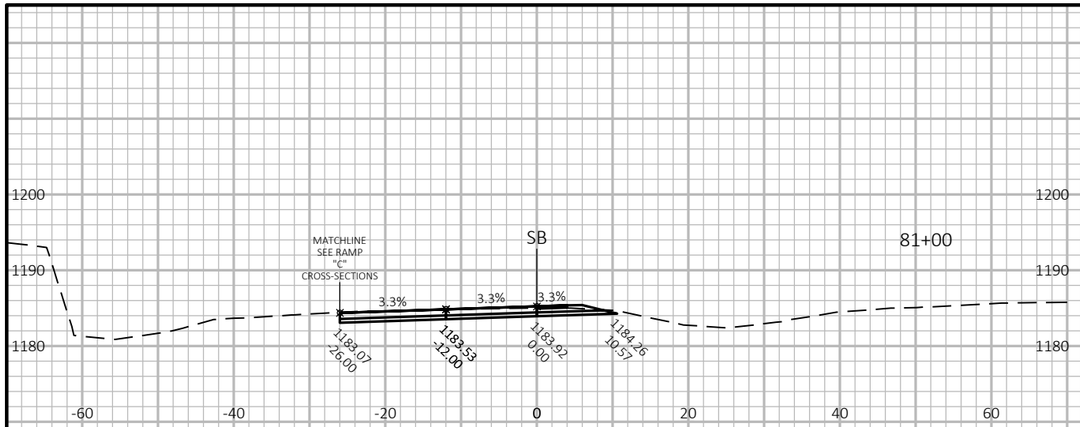
PLOT DATE : 5/22/2018 4:40 PM

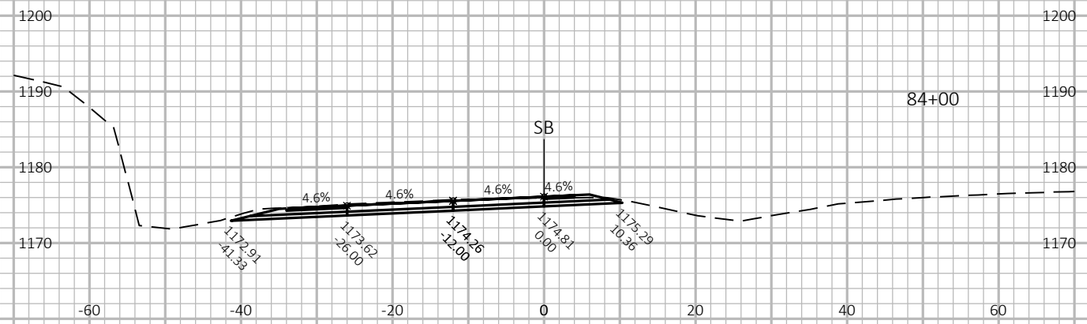
PLOT BY : SCHMIDT, DAVID B

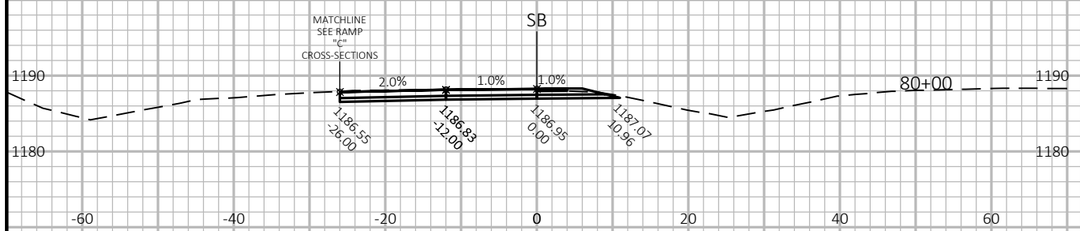
PLOT NAME :

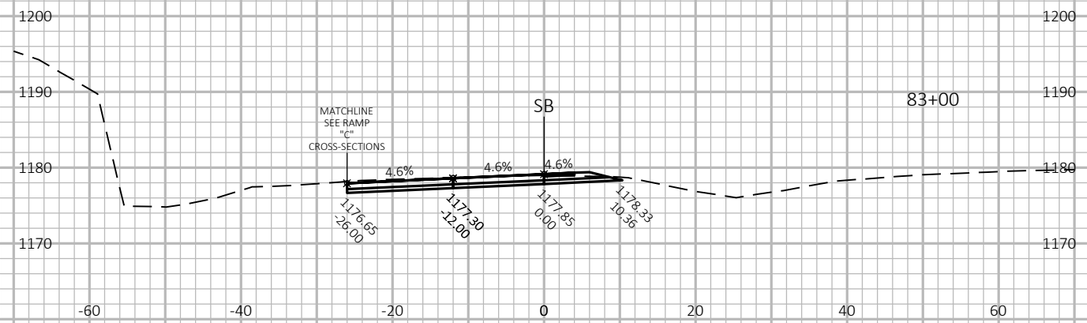
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

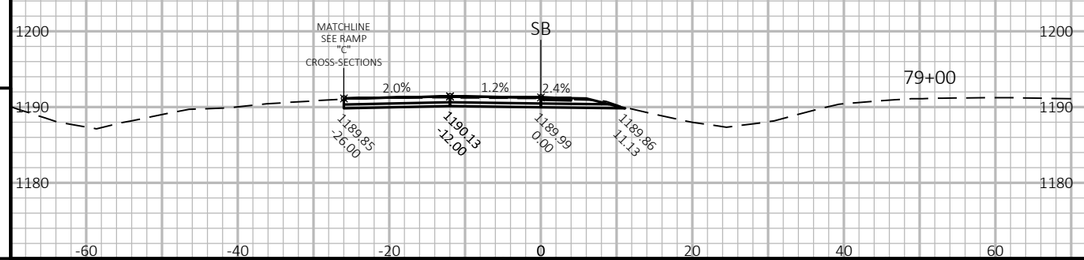
WISDOT/CADDS SHEET 49











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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 467	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_04

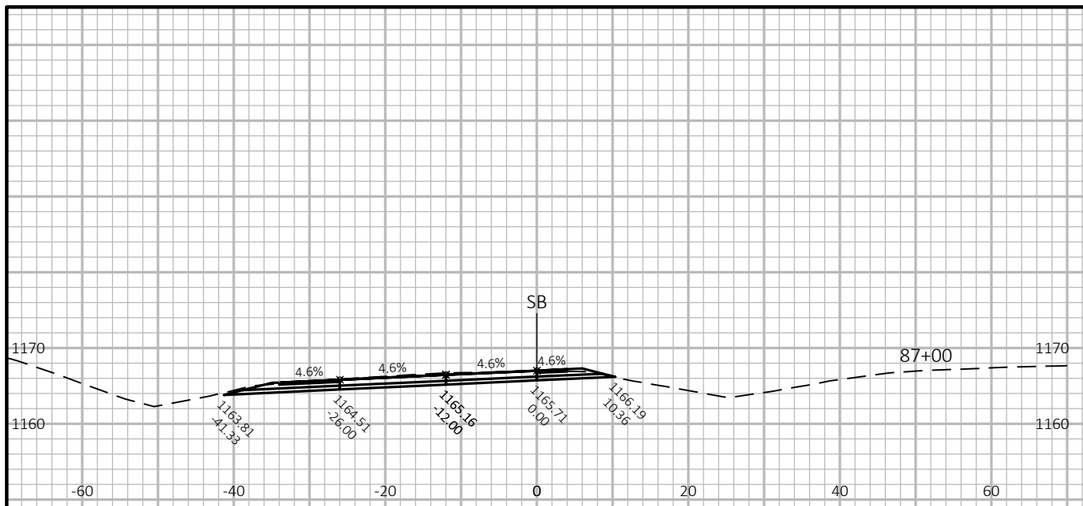
PLOT DATE : 5/22/2018 4:40 PM

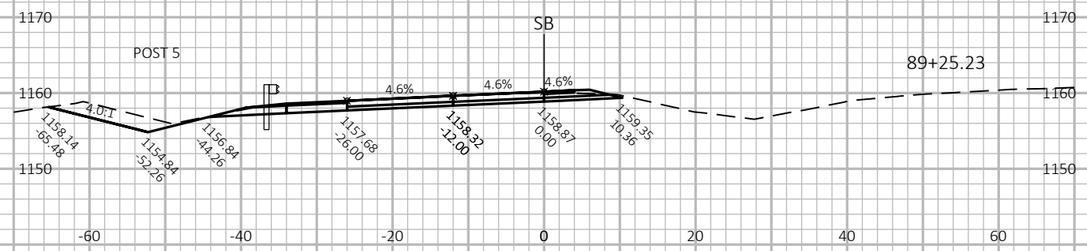
PLOT BY : SCHMIDT, DAVID B

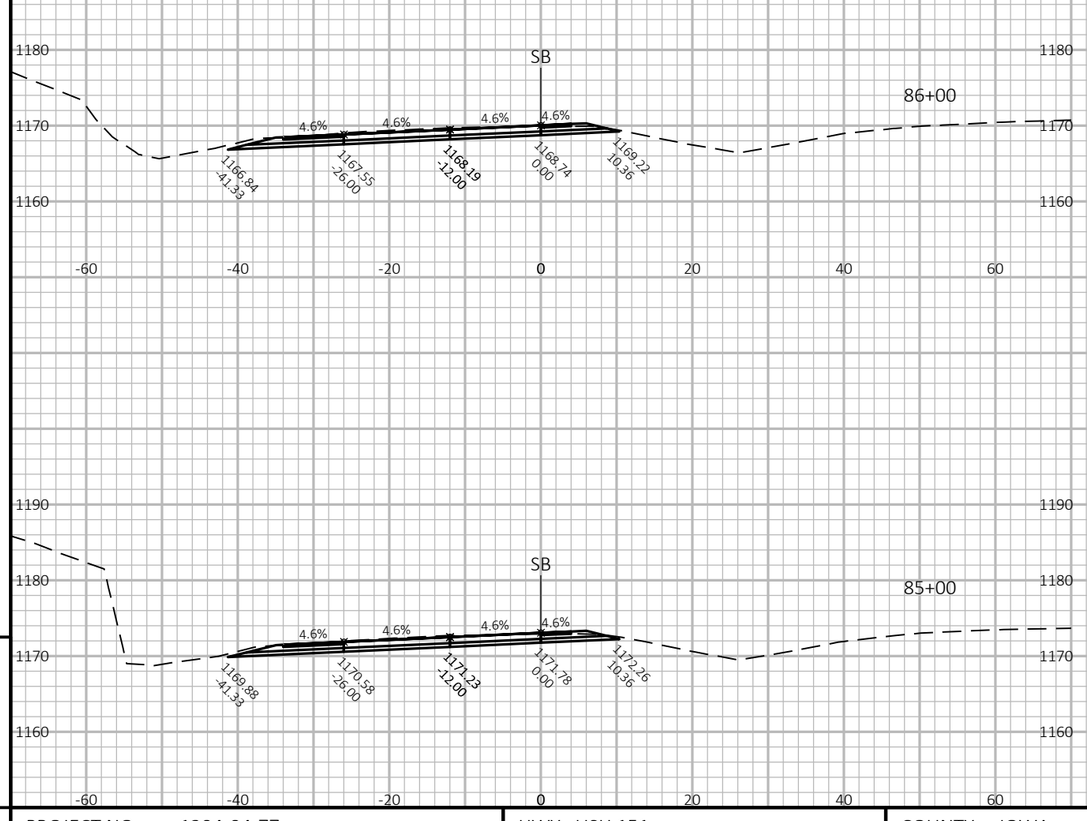
PLOT NAME :

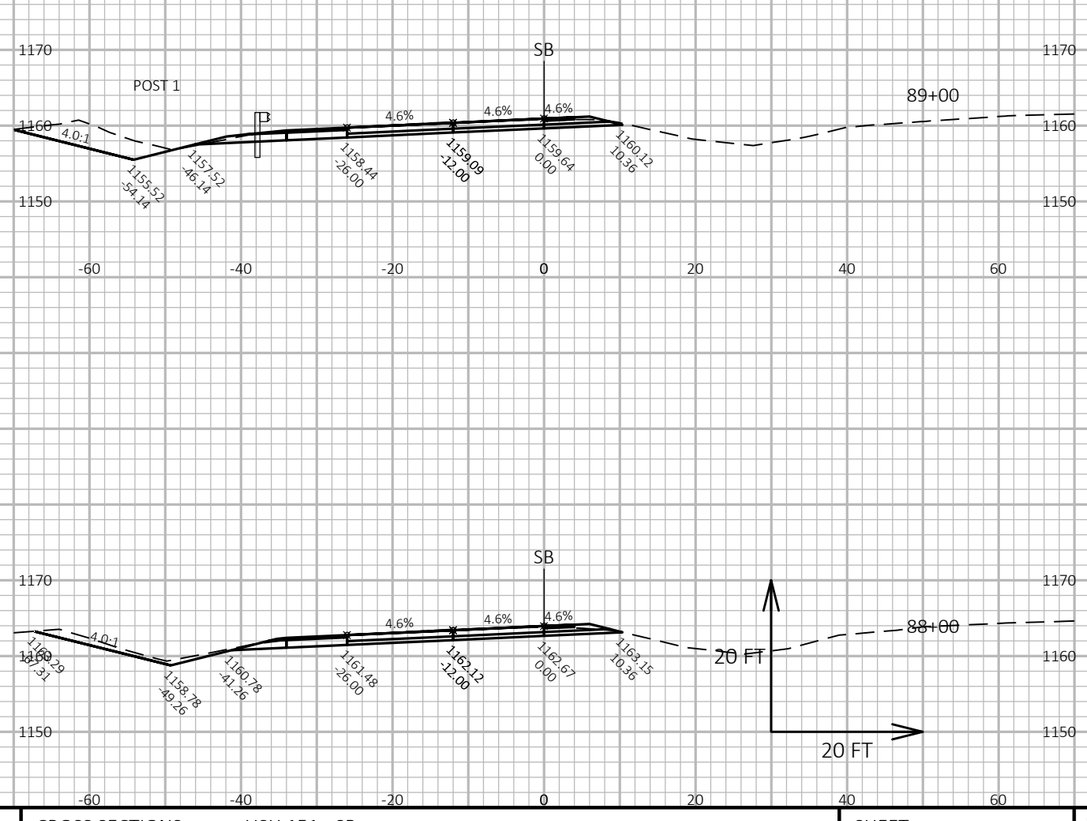
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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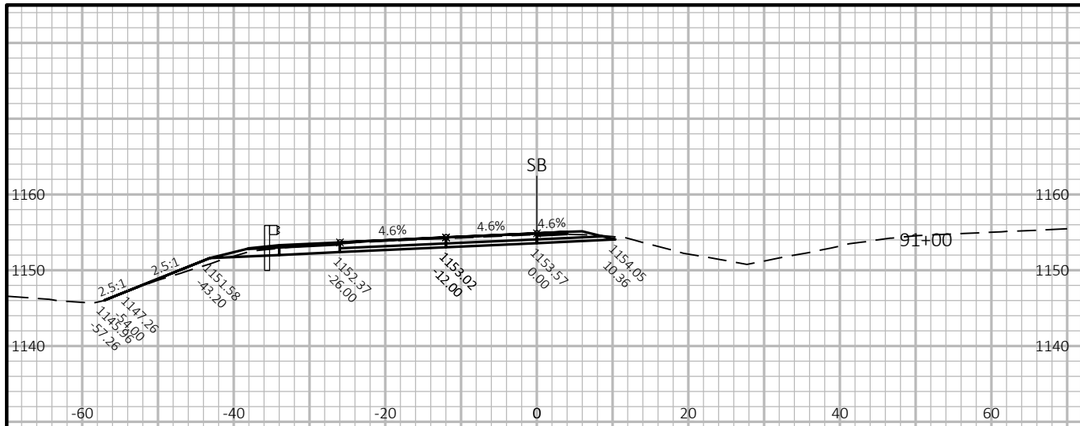
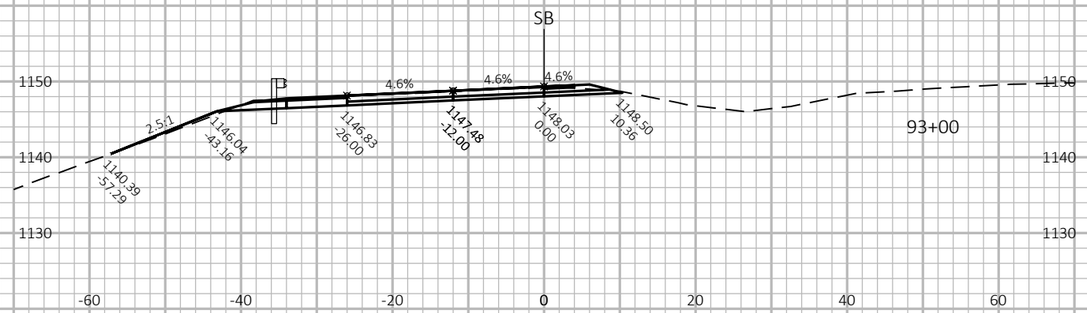
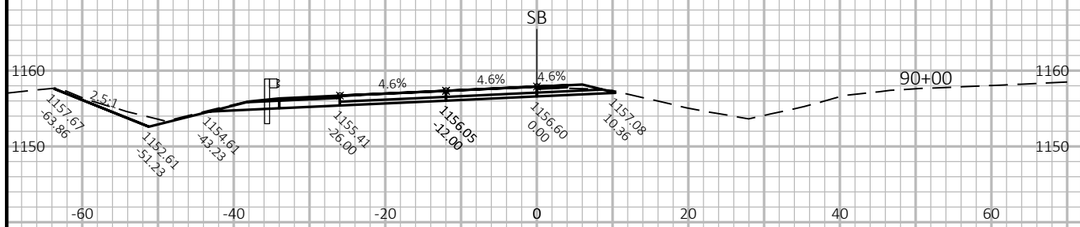
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 468	E

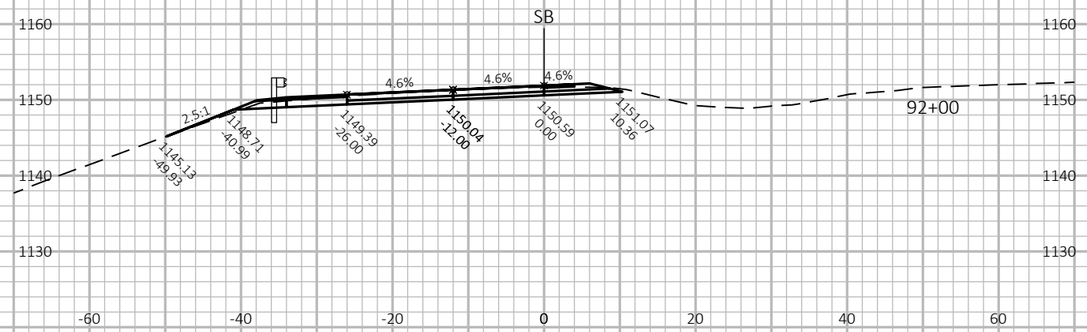
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_05

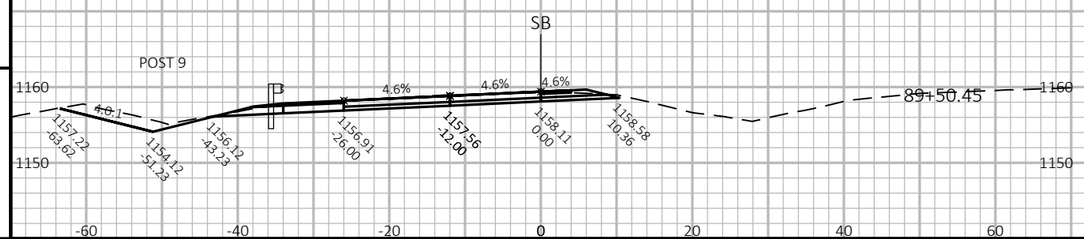
PLOT DATE : 5/22/2018 4:40 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

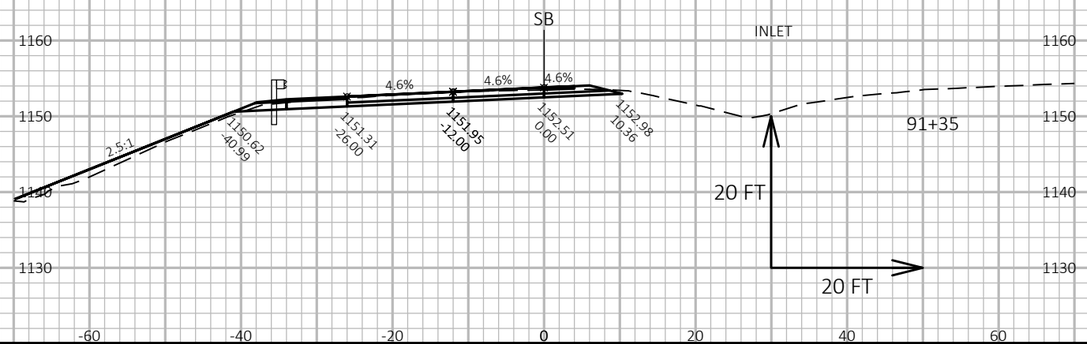












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 469	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_06

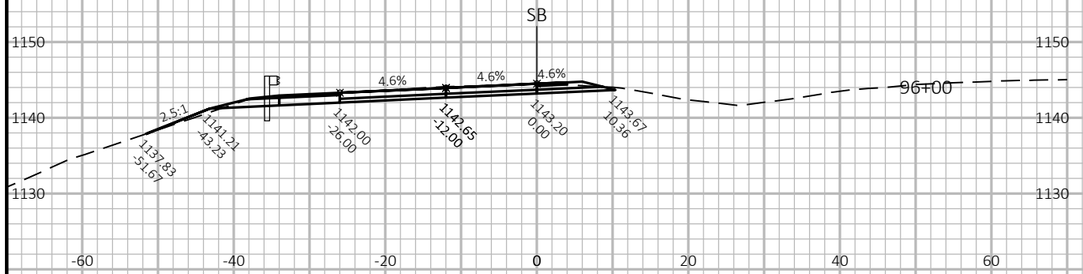
PLOT DATE : 5/22/2018 4:40 PM

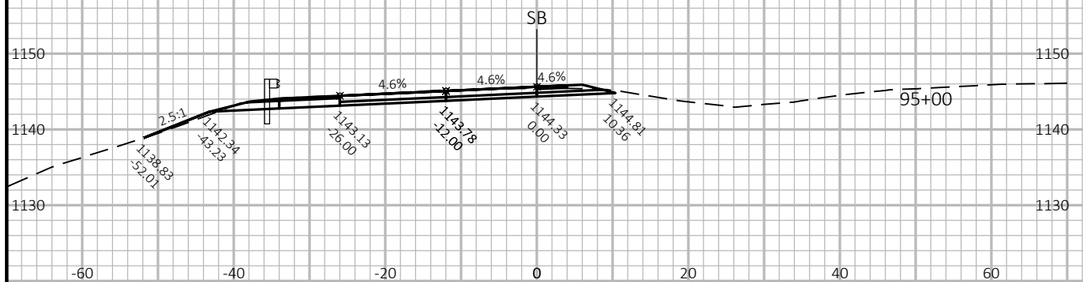
PLOT BY : SCHMIDT, DAVID B

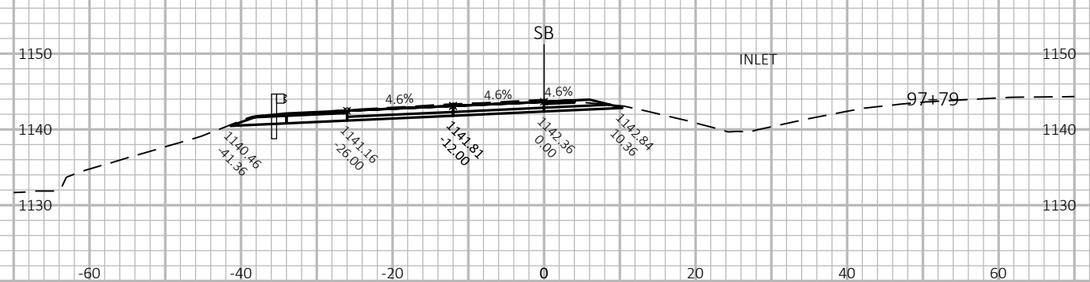
PLOT NAME :

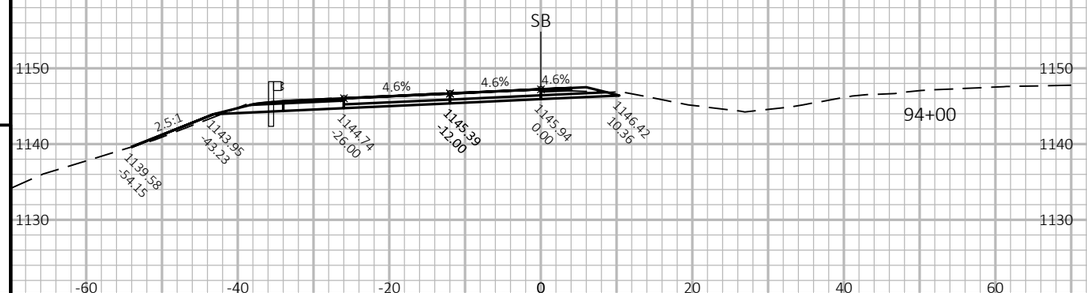
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

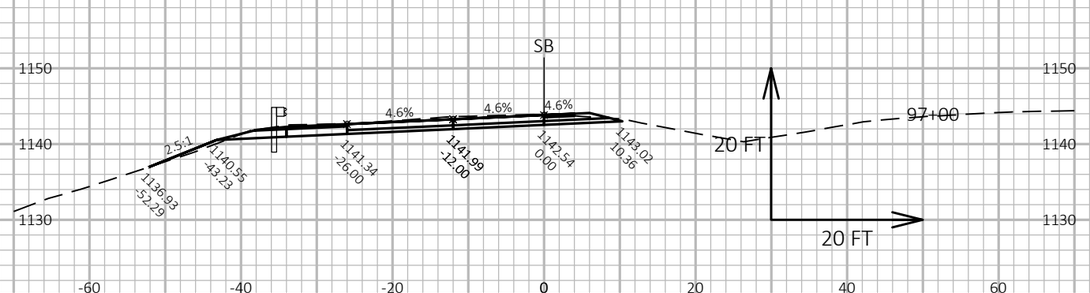
WISDOT/CADDS SHEET 49











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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 470	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_07

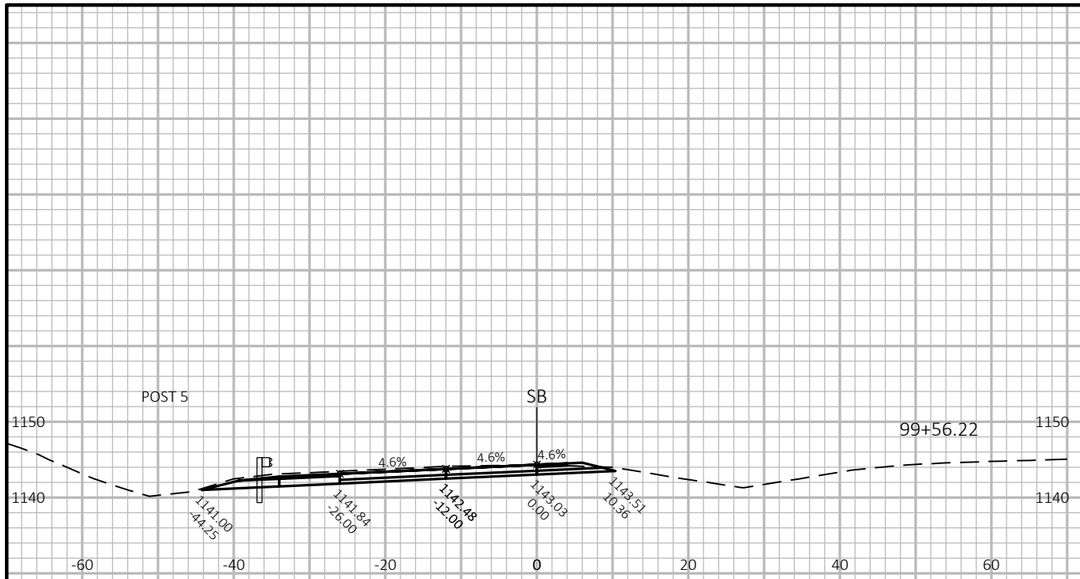
PLOT DATE : 5/22/2018 4:40 PM

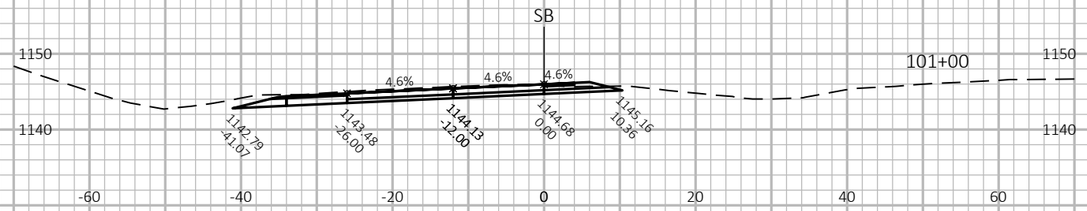
PLOT BY : SCHMIDT, DAVID B

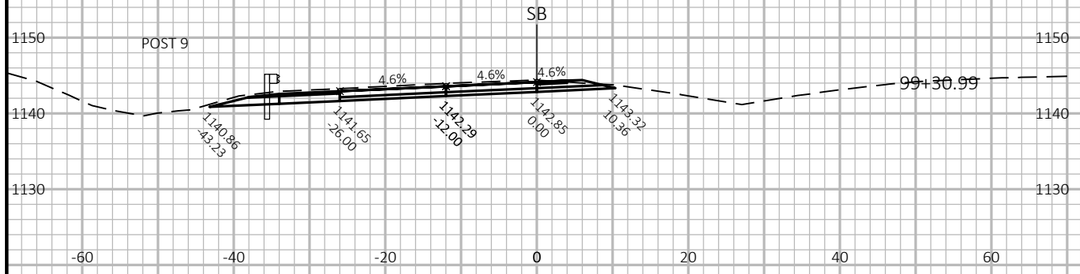
PLOT NAME :

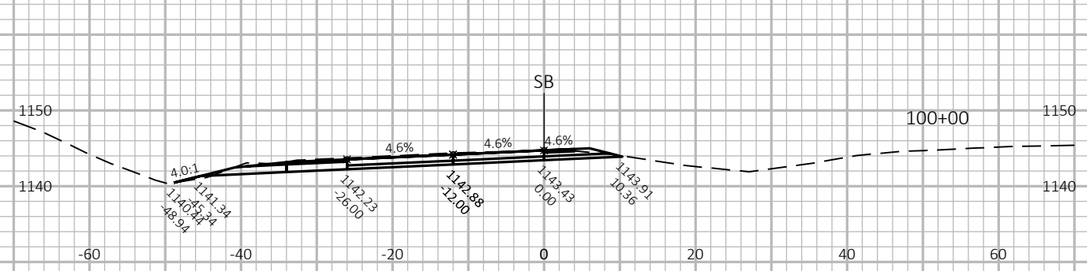
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

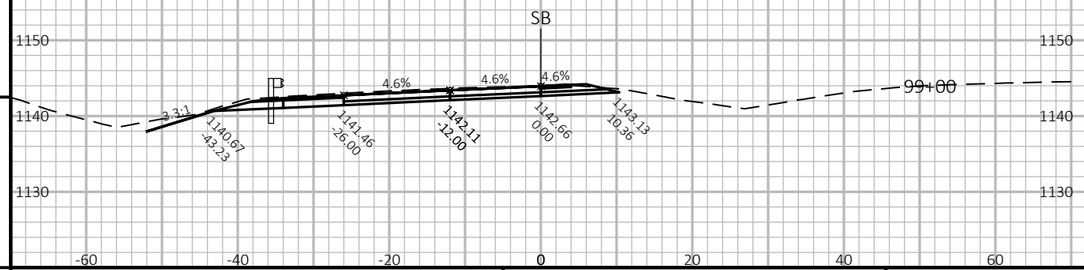
WISDOT/CADDS SHEET 49

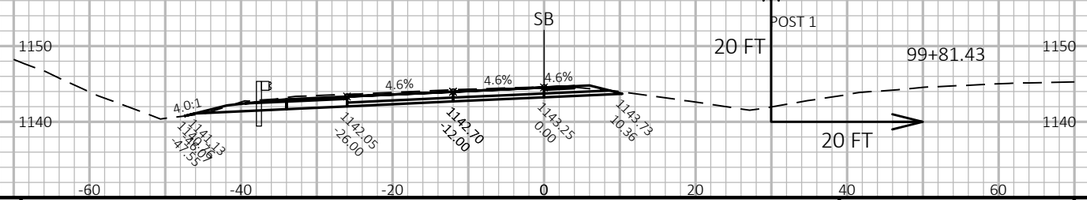












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 471	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_08

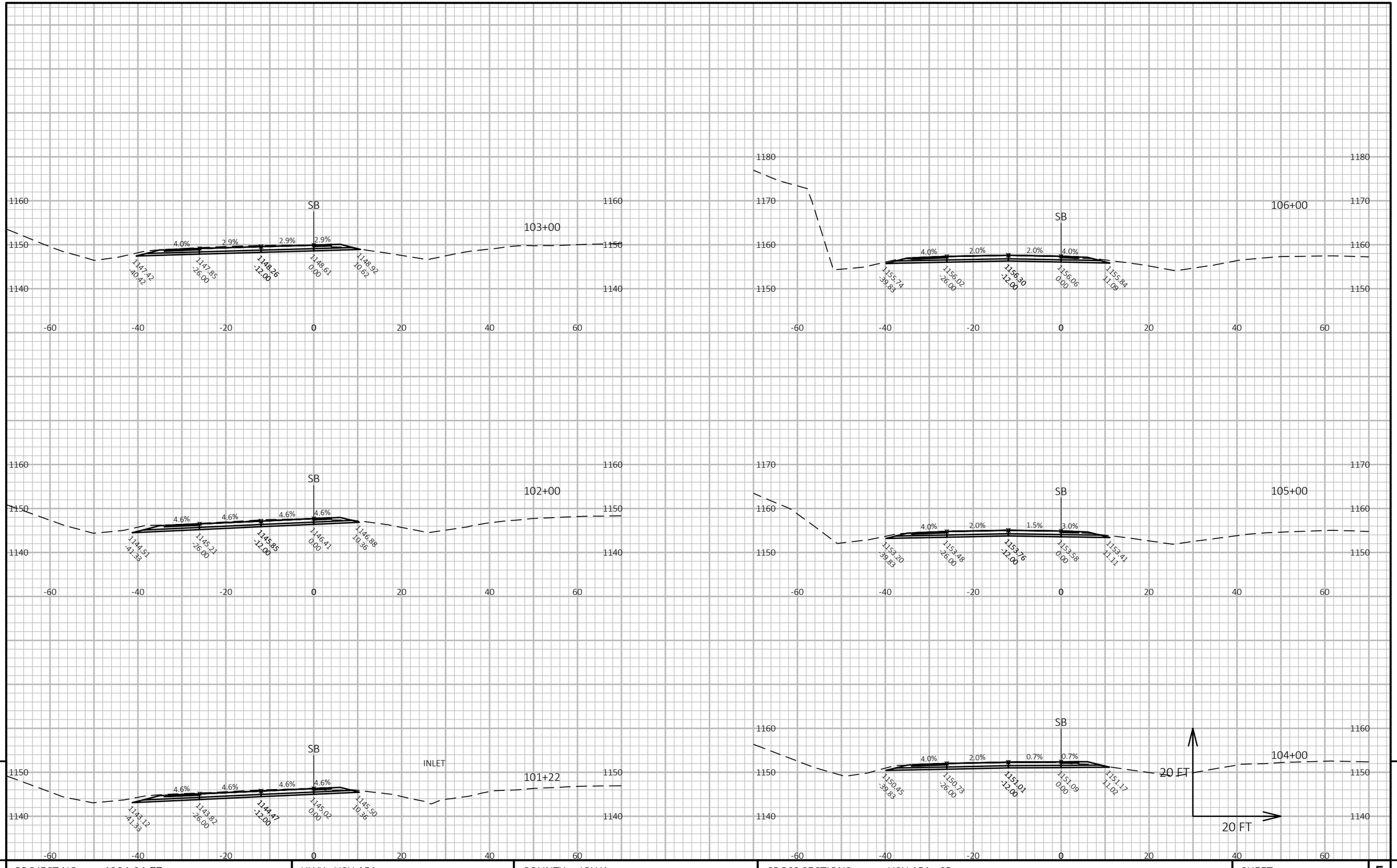
PLOT DATE : 5/22/2018 4:41 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 472 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_09

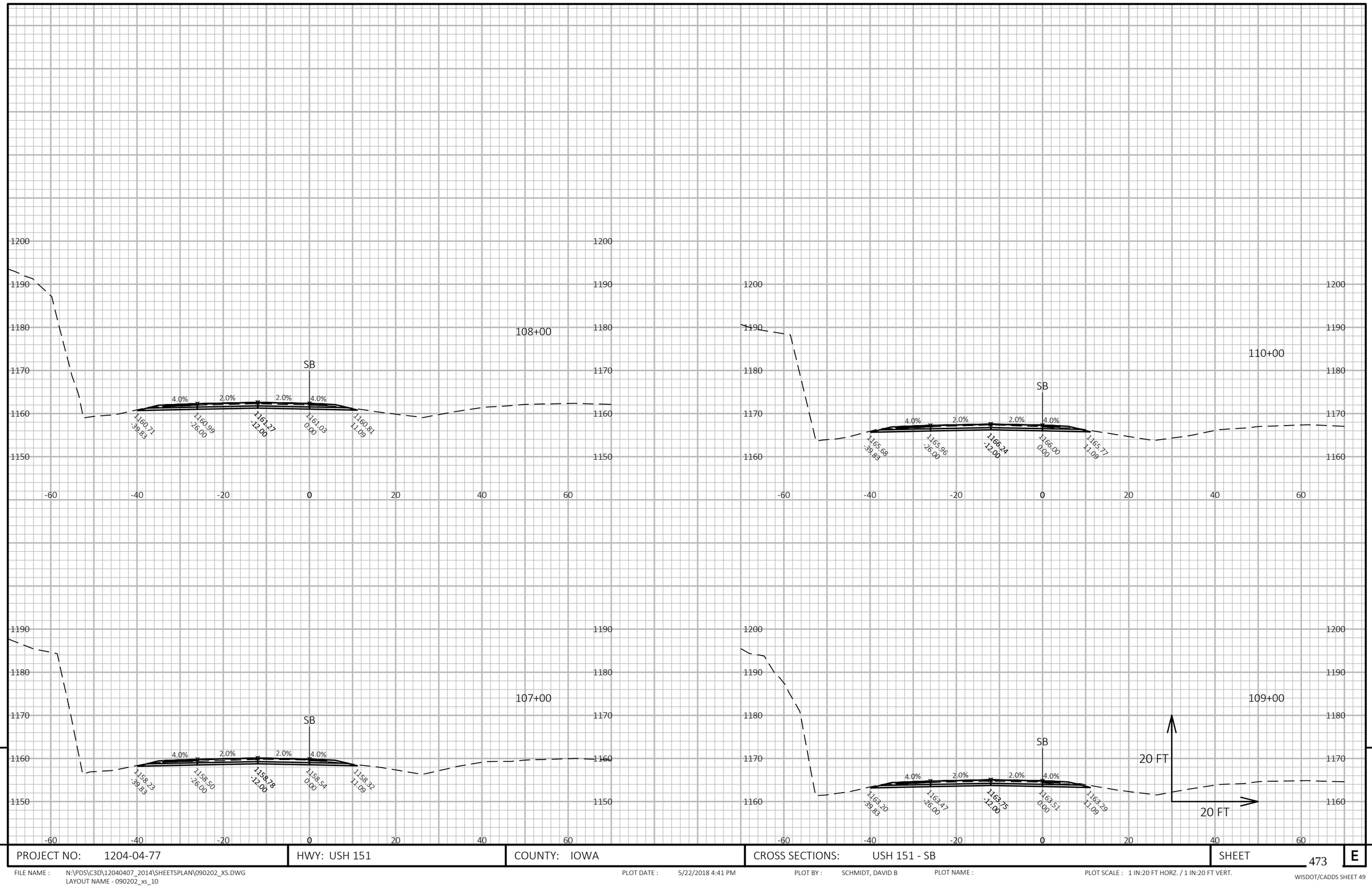
PLOT DATE : 5/22/2018 4:41 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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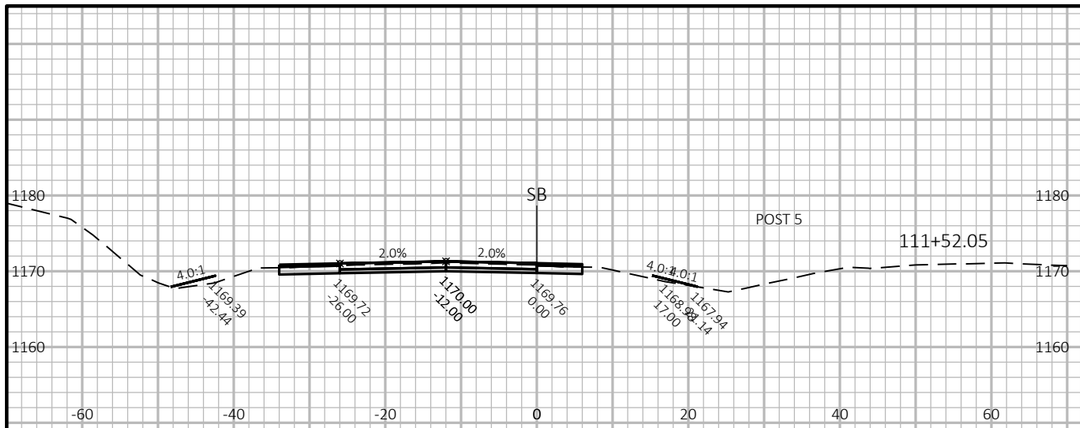
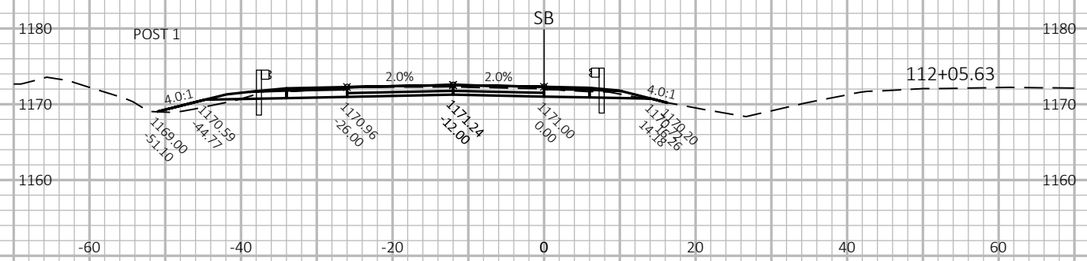
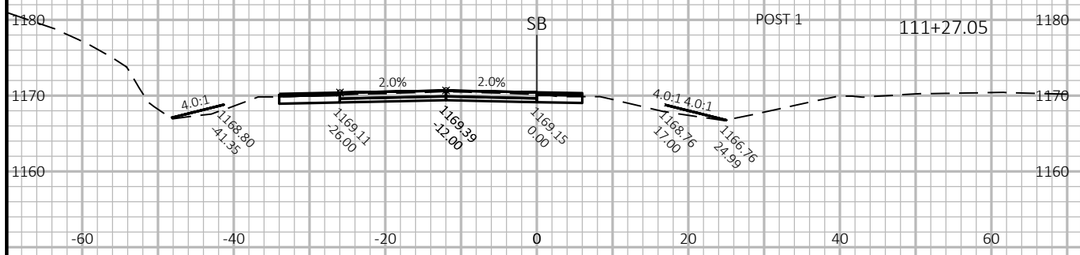
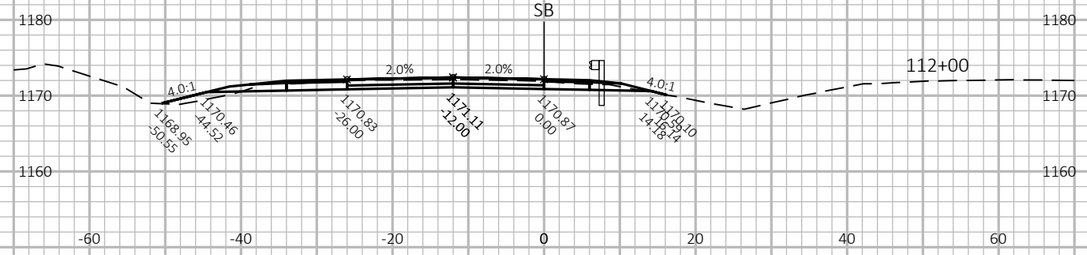
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 473	E

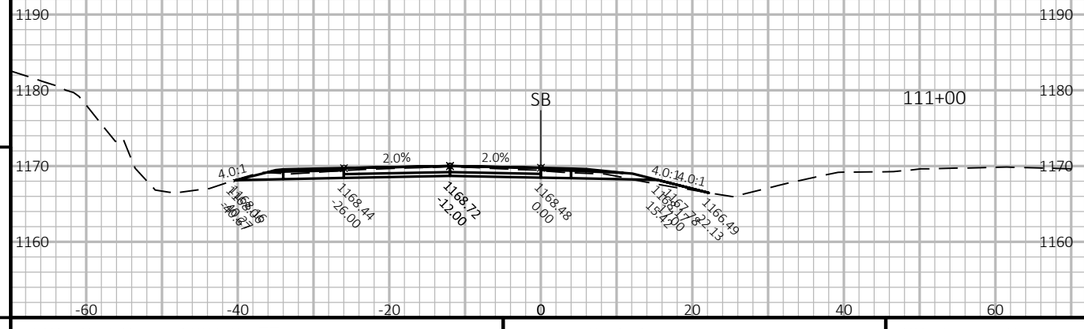
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_10
PLOT DATE : 5/22/2018 4:41 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

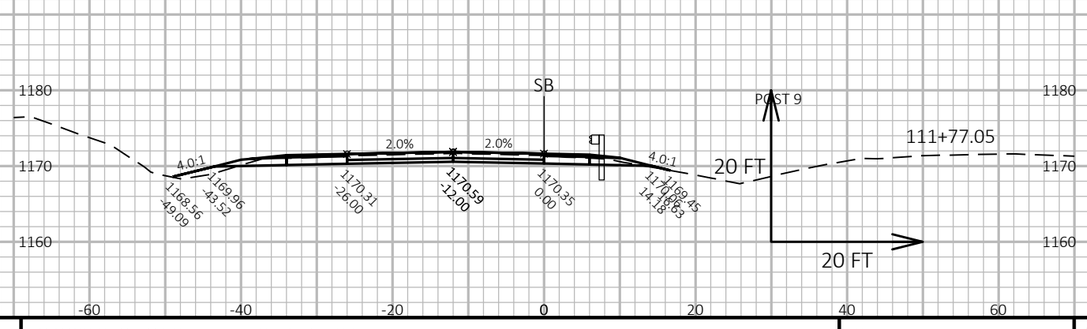












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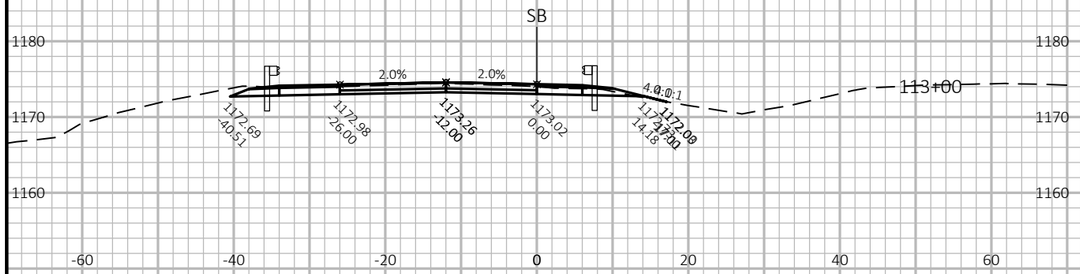
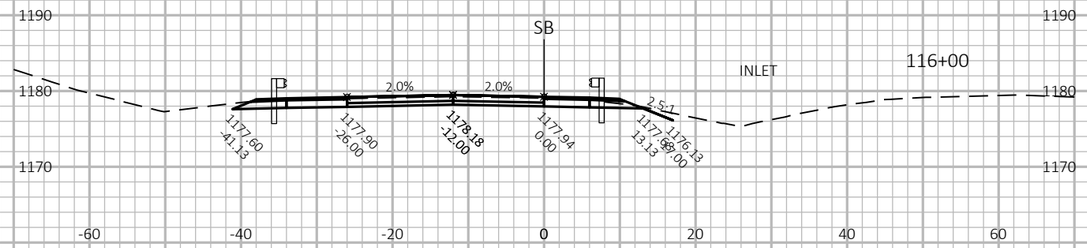
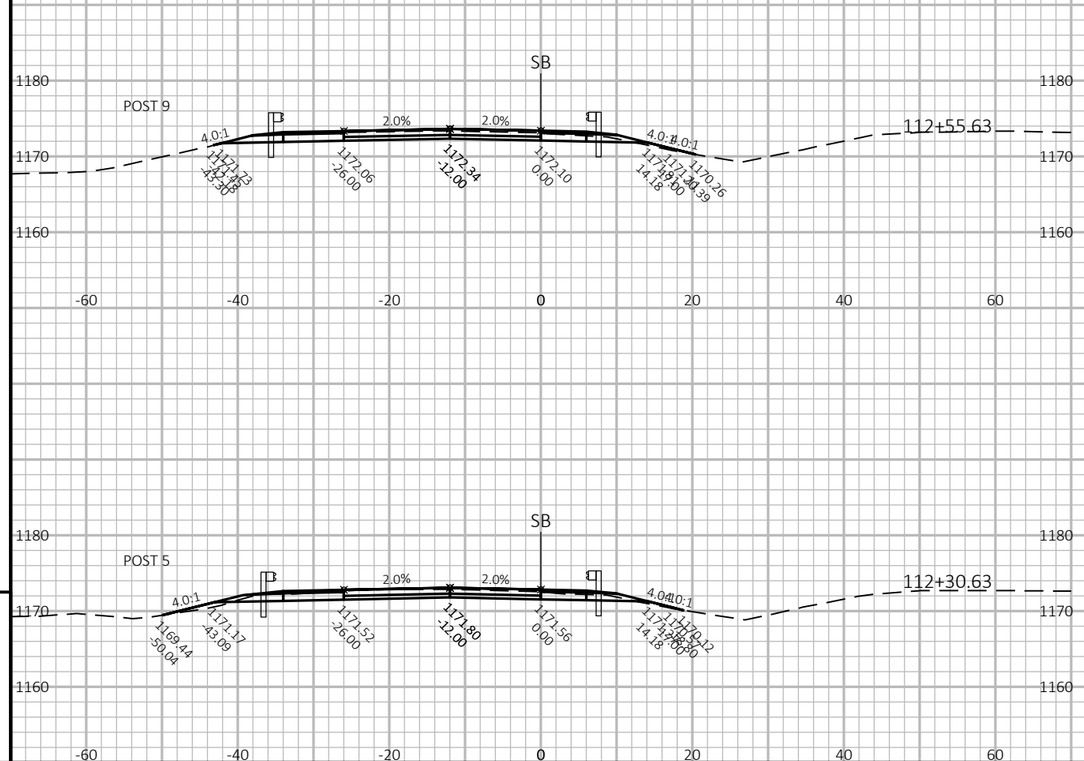
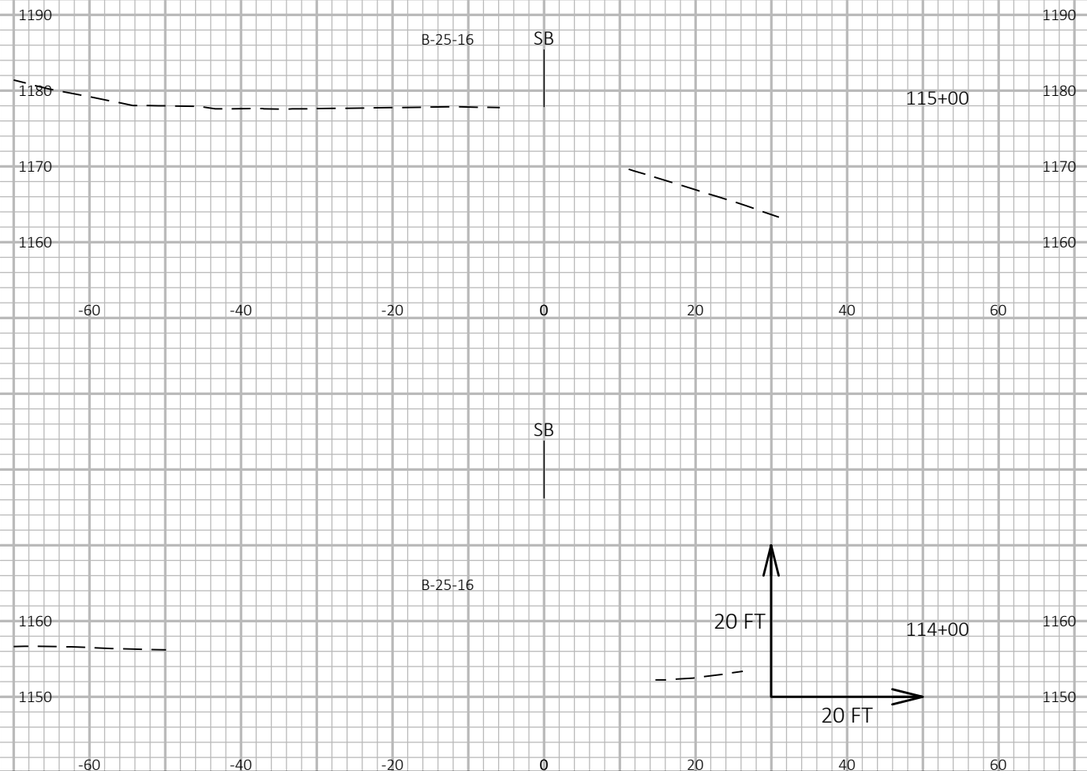
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 474	E









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 475	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_12

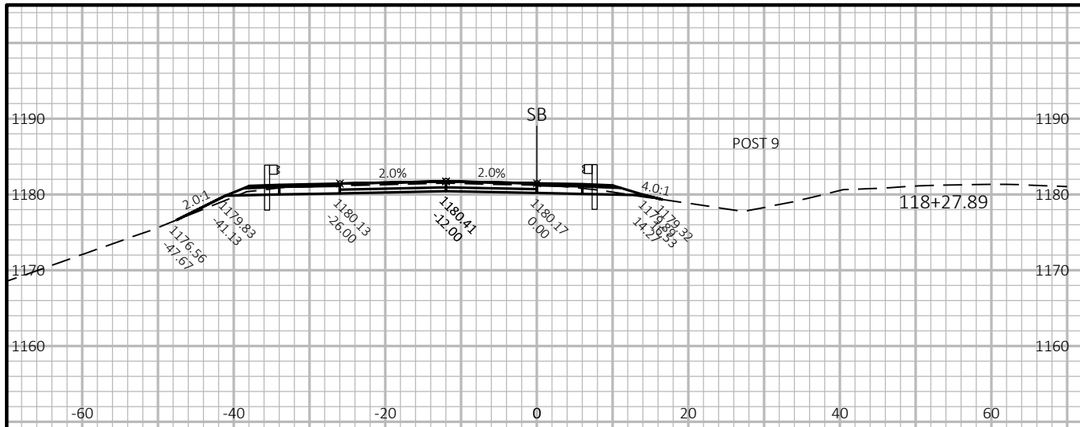
PLOT DATE : 5/22/2018 4:41 PM

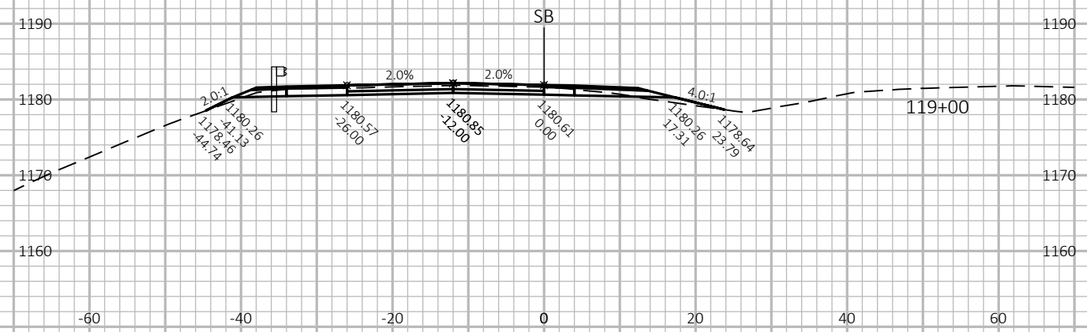
PLOT BY : SCHMIDT, DAVID B

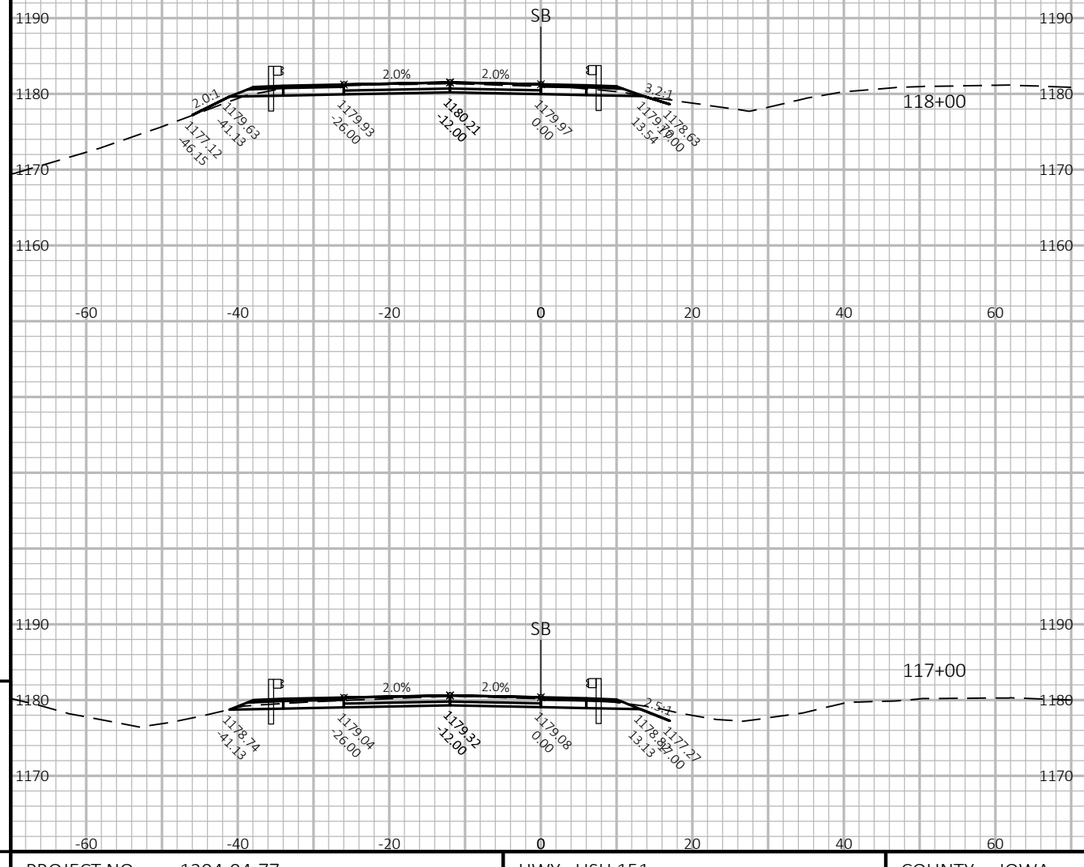
PLOT NAME :

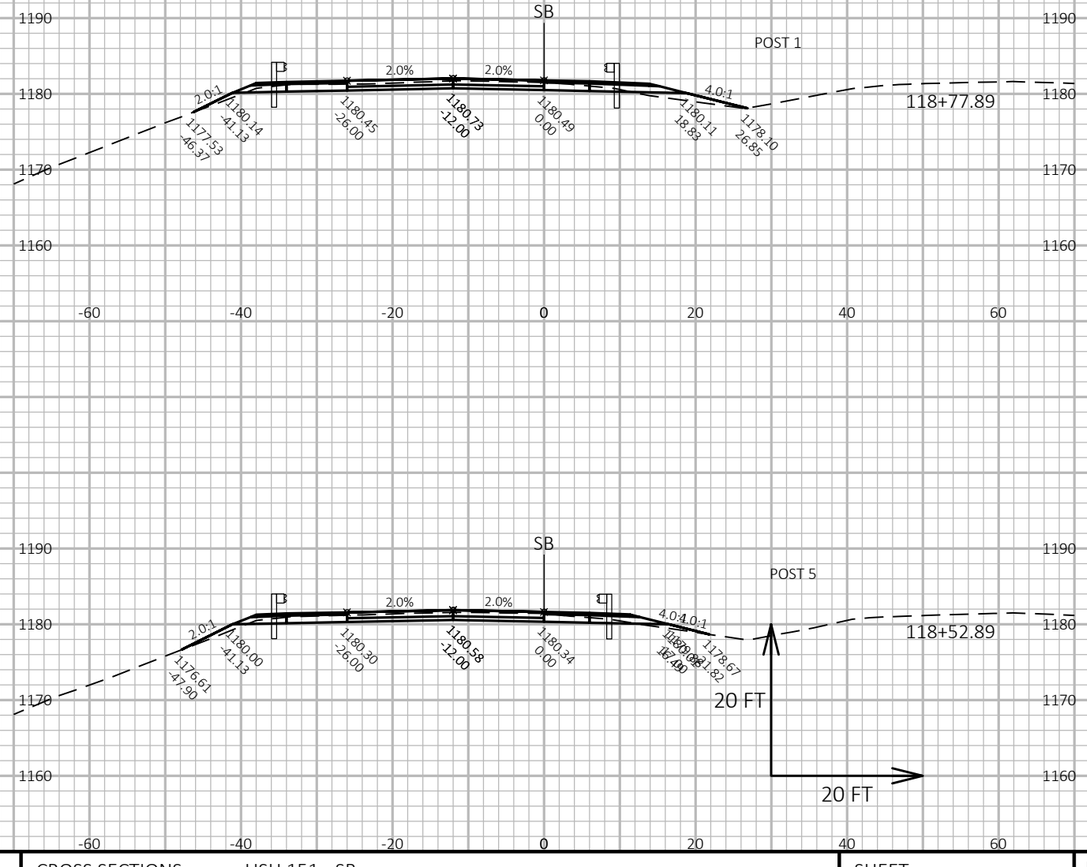
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 476	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_13

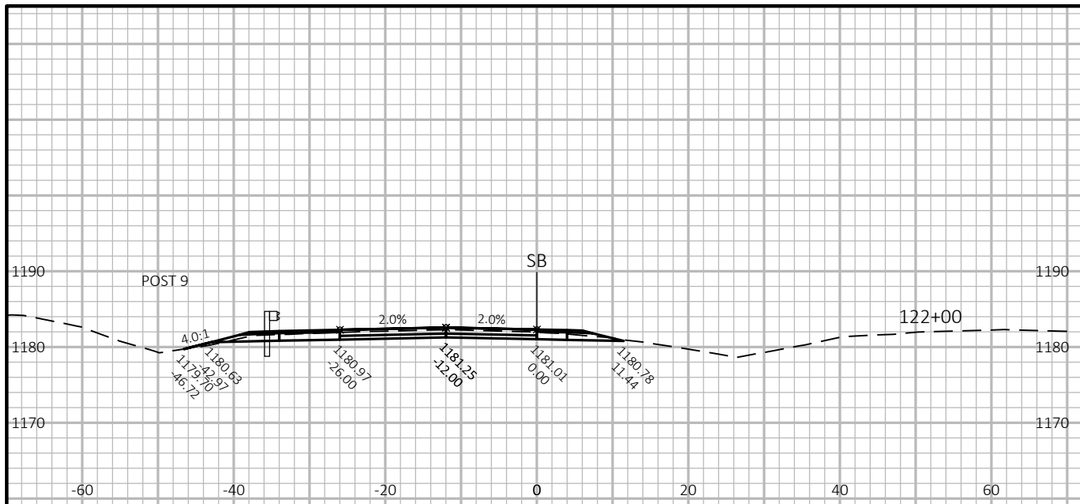
PLOT DATE : 5/22/2018 4:42 PM

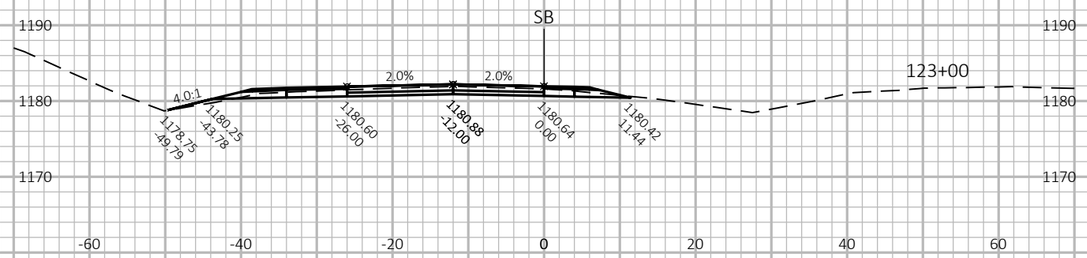
PLOT BY : SCHMIDT, DAVID B

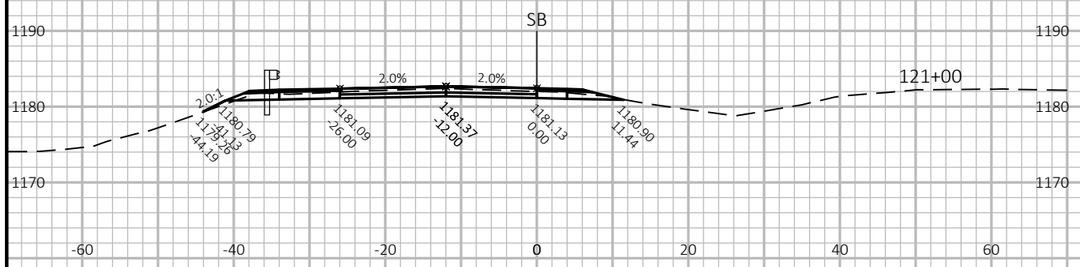
PLOT NAME :

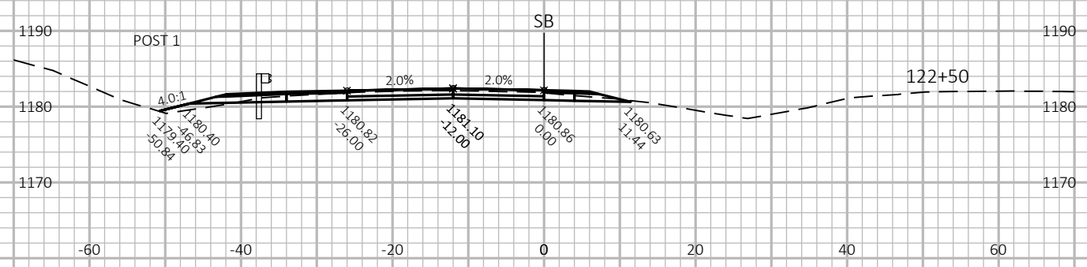
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

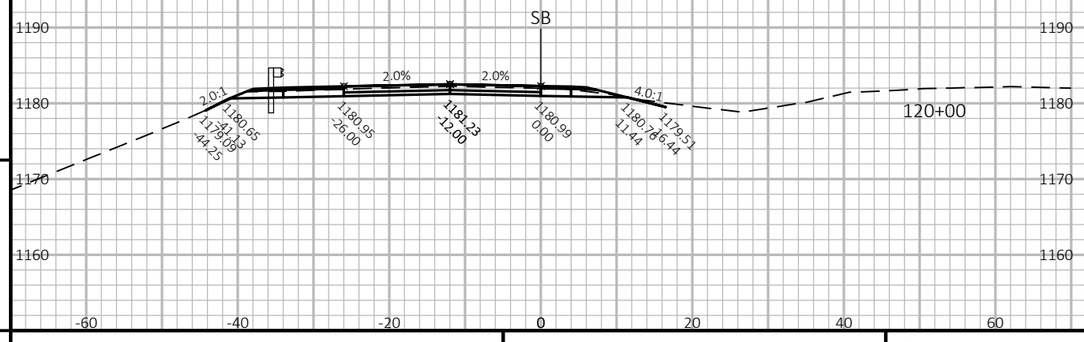
WISDOT/CADDS SHEET 49

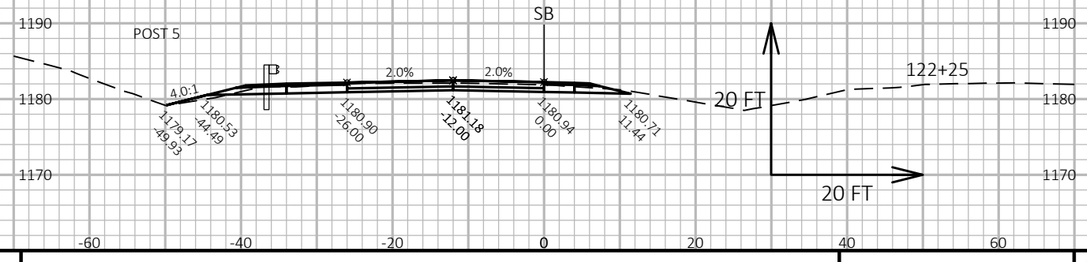












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 477	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_14

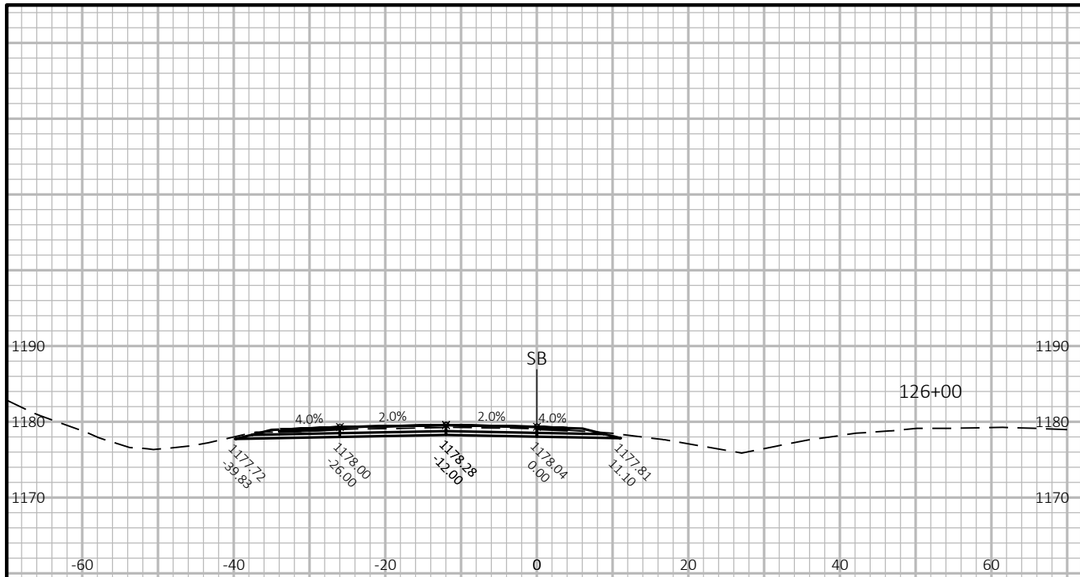
PLOT DATE : 5/22/2018 4:42 PM

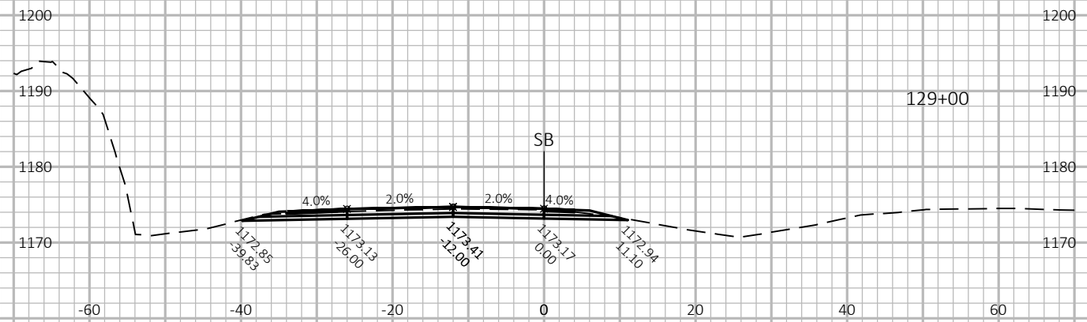
PLOT BY : SCHMIDT, DAVID B

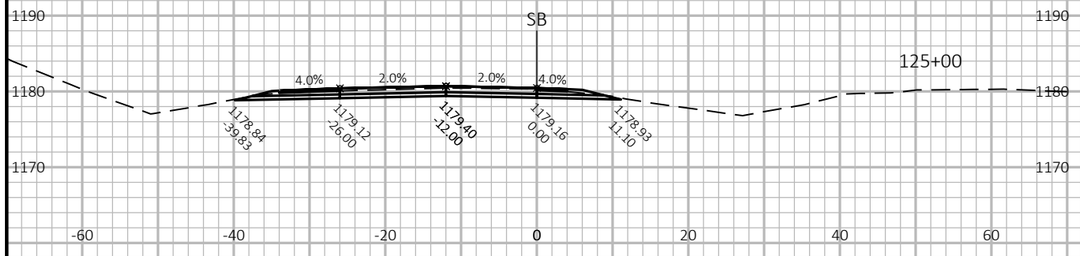
PLOT NAME :

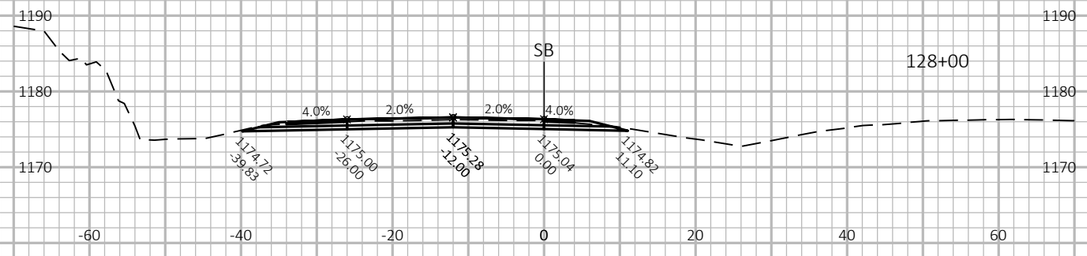
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

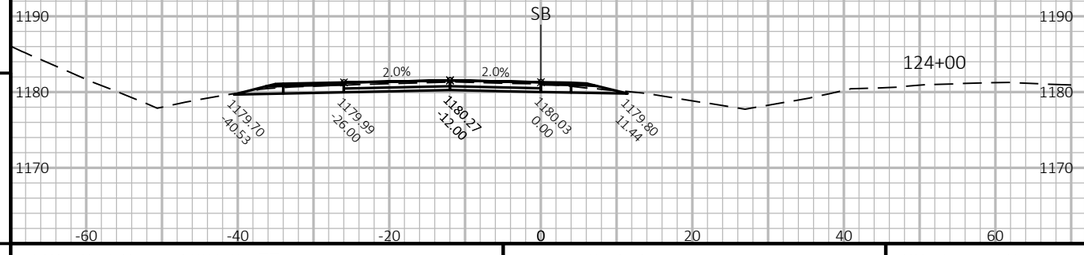
WISDOT/CADDS SHEET 49

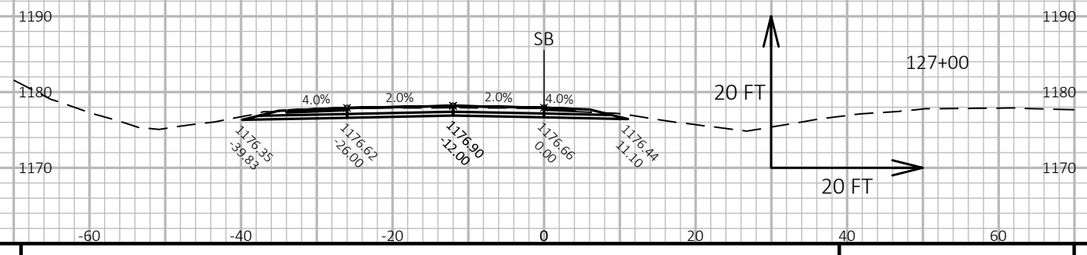












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 478	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_15

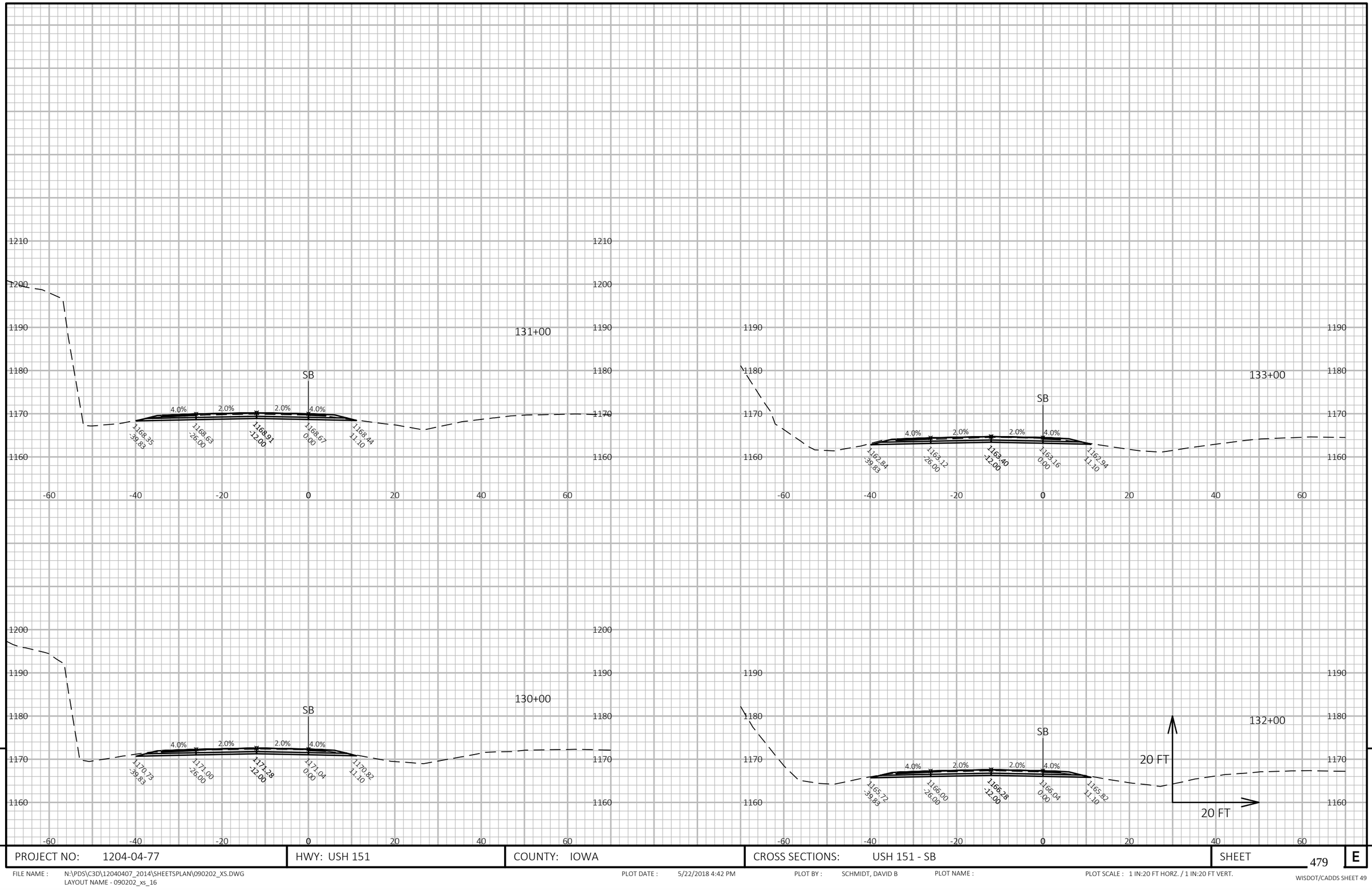
PLOT DATE : 5/22/2018 4:42 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 479	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_16

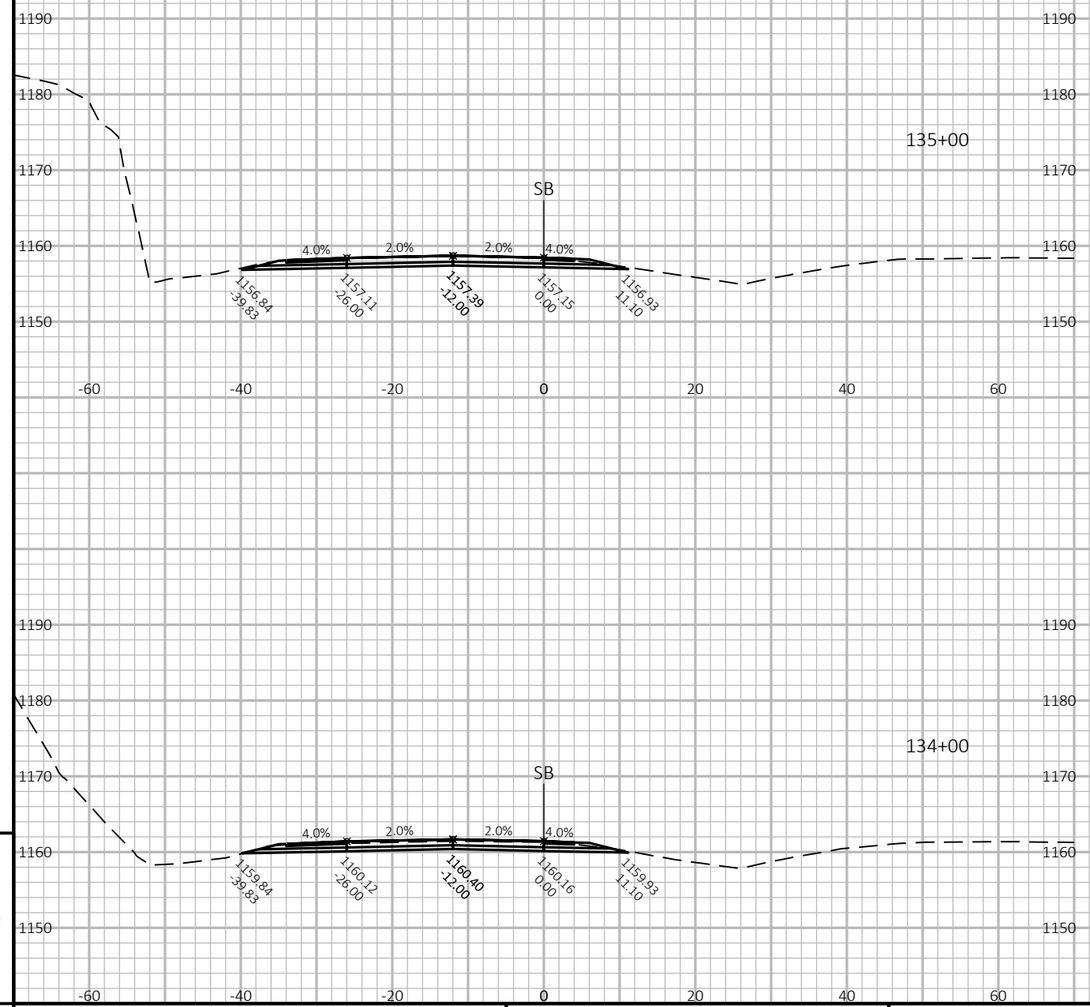
PLOT DATE : 5/22/2018 4:42 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

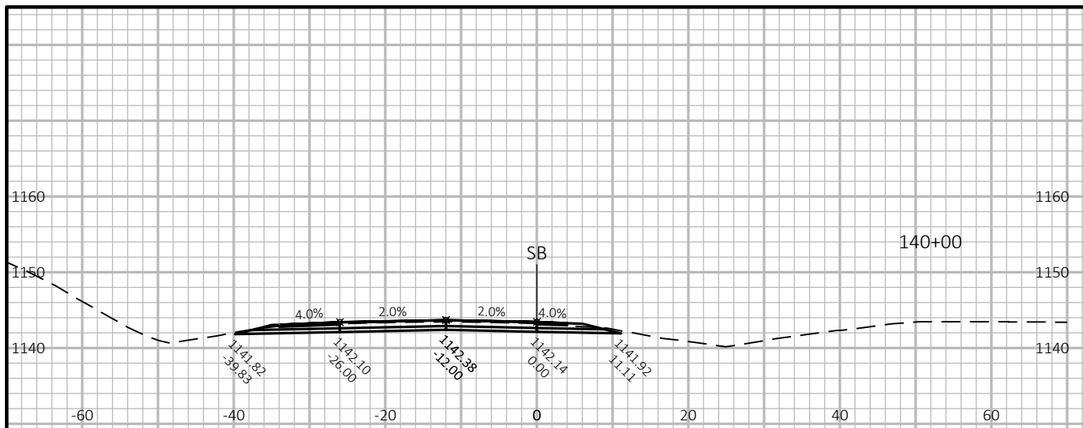


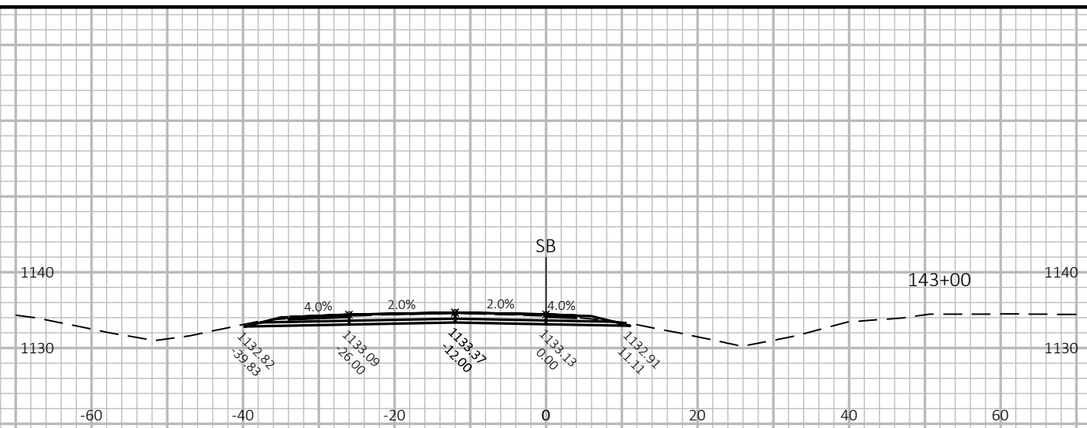
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 480	E

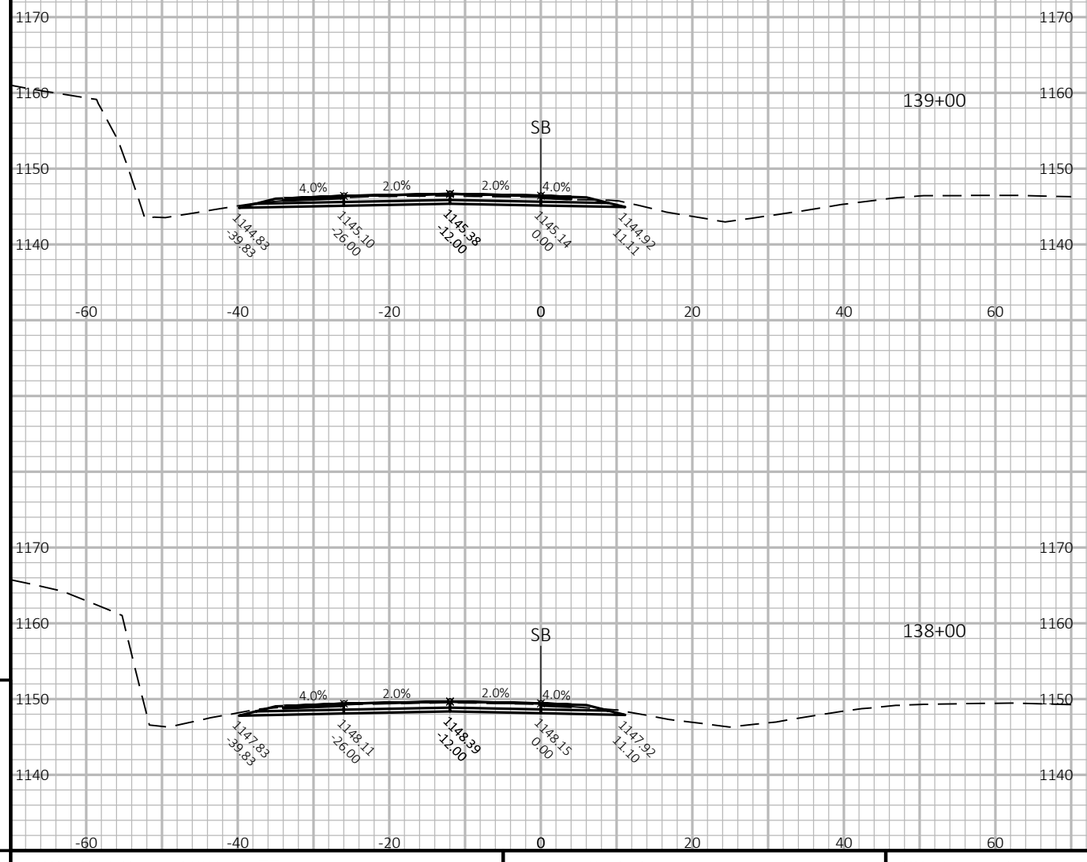
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_17

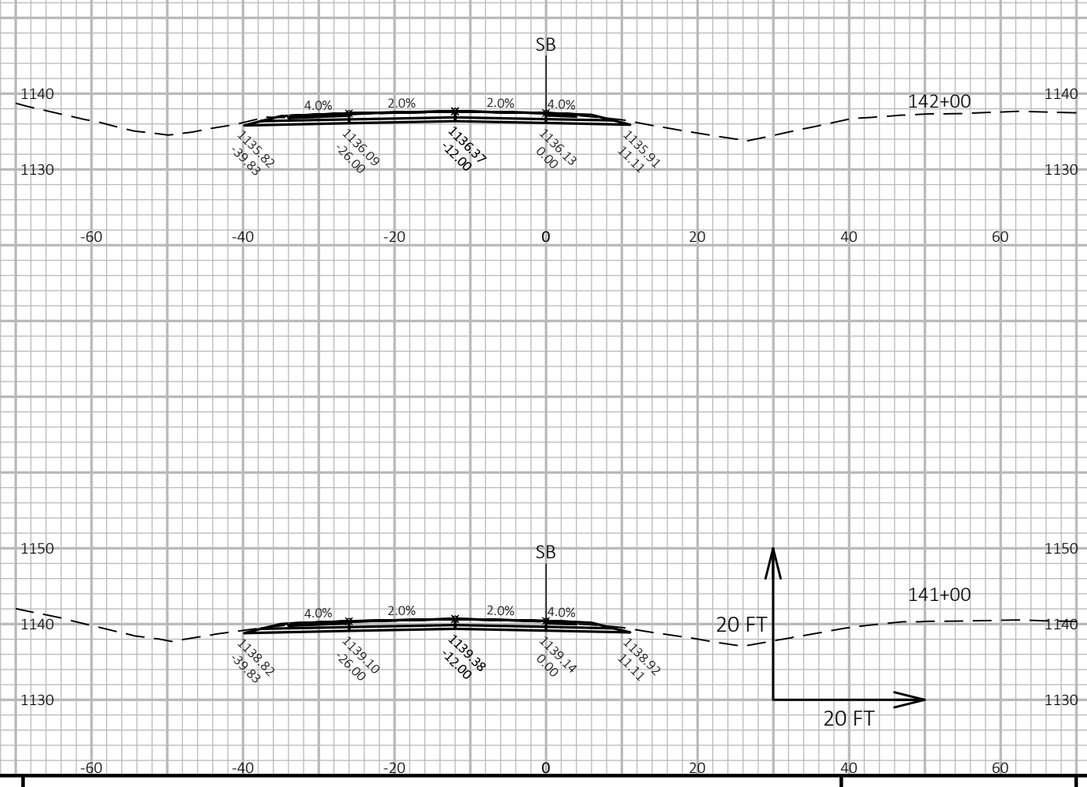
PLOT DATE : 5/22/2018 4:42 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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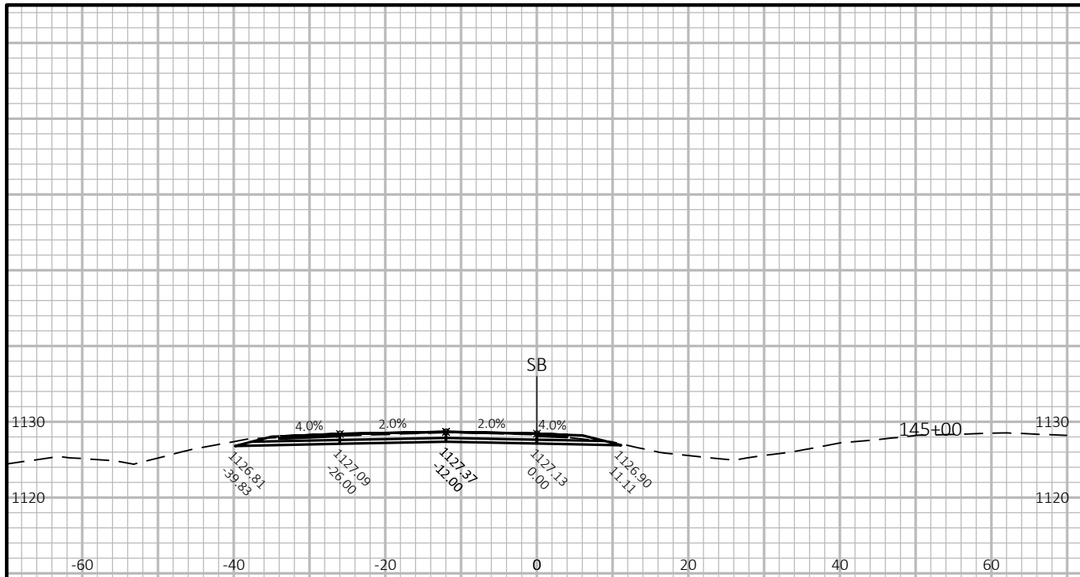
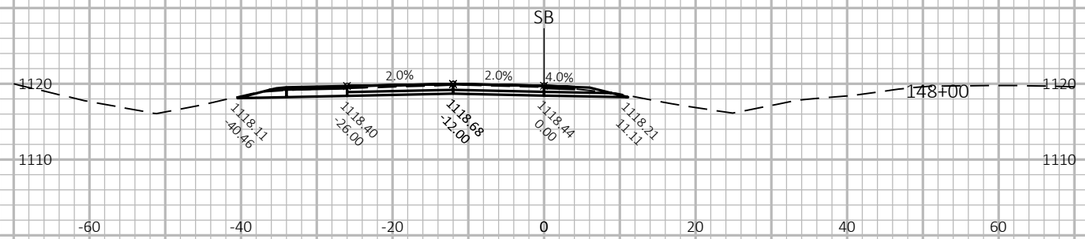
9

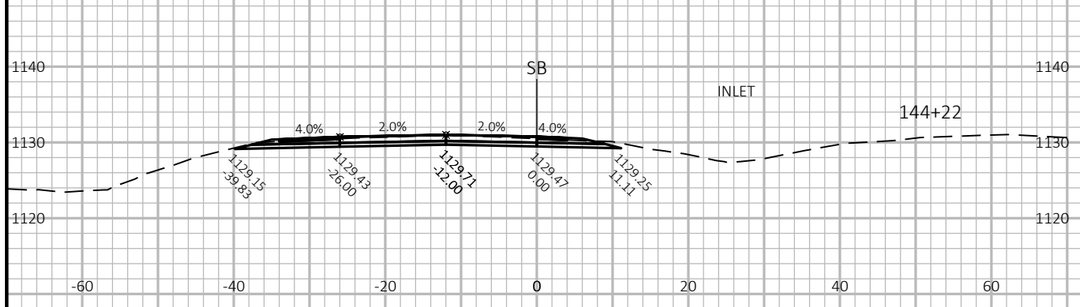
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 481	E

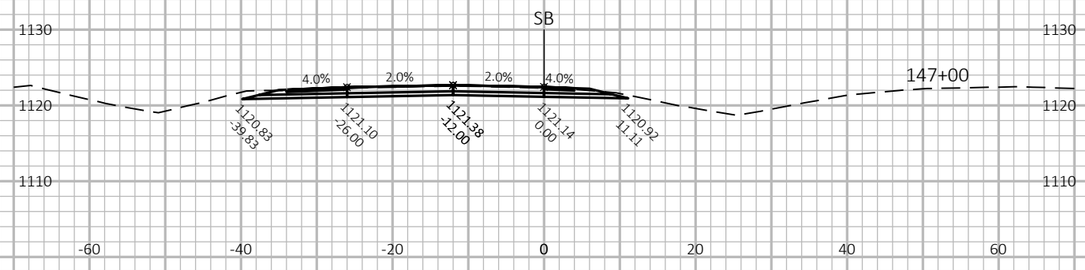
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_18

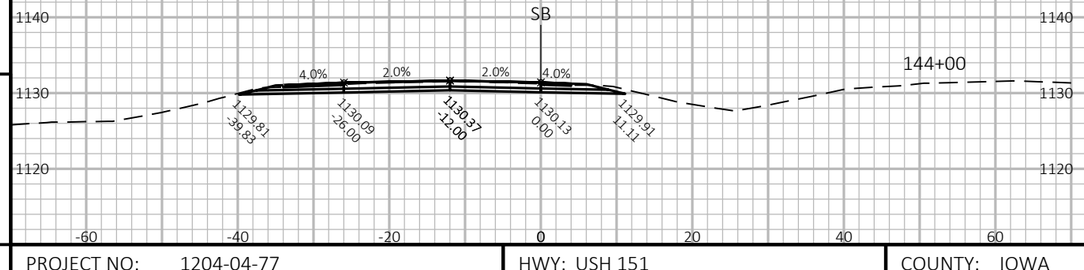
PLOT DATE : 5/22/2018 4:43 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

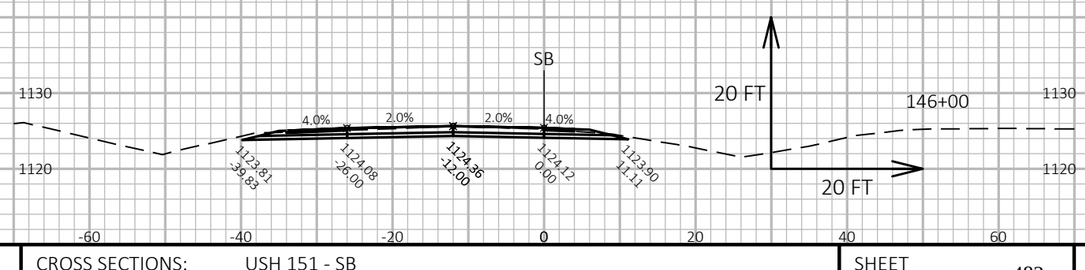












9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 482	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_19

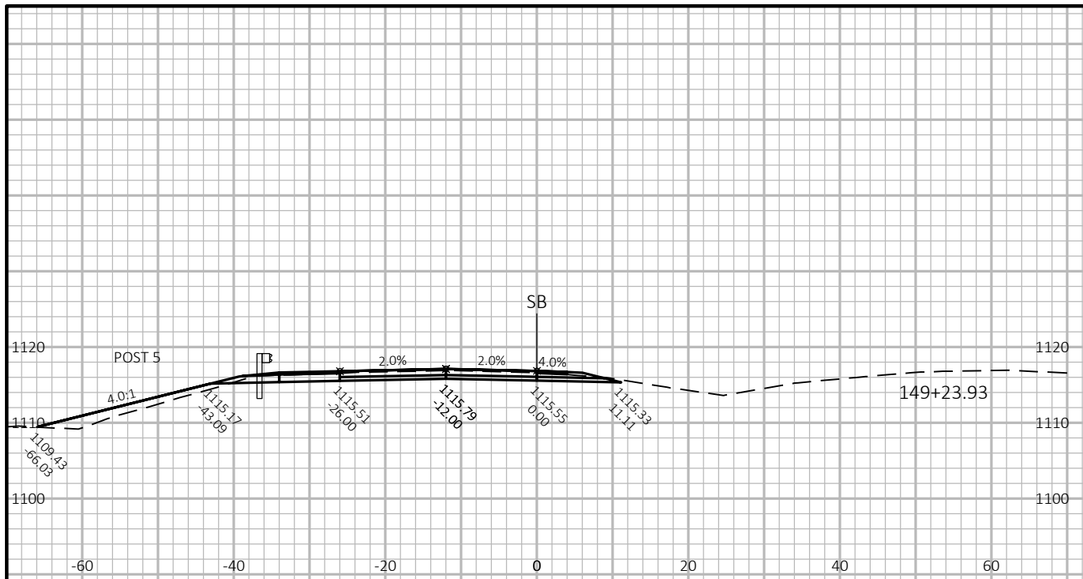
PLOT DATE : 5/22/2018 4:43 PM

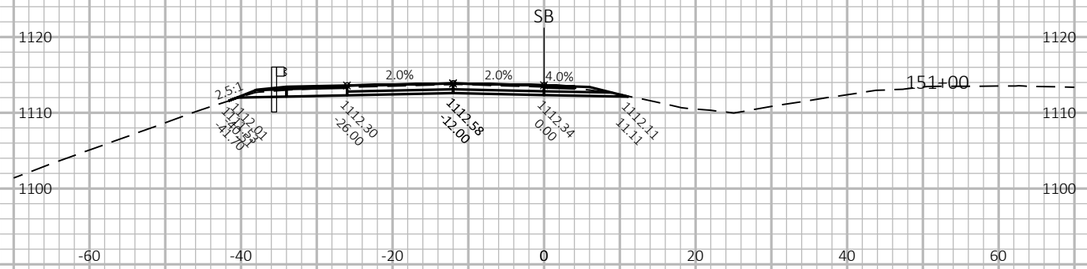
PLOT BY : SCHMIDT, DAVID B

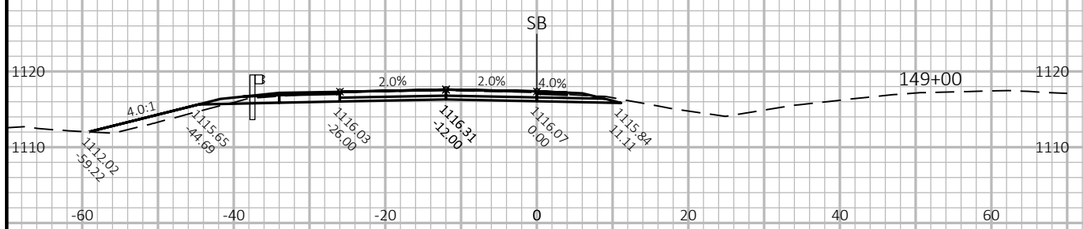
PLOT NAME :

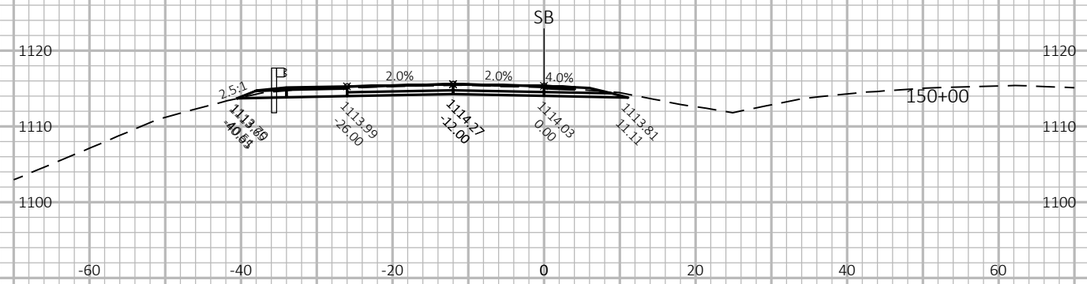
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

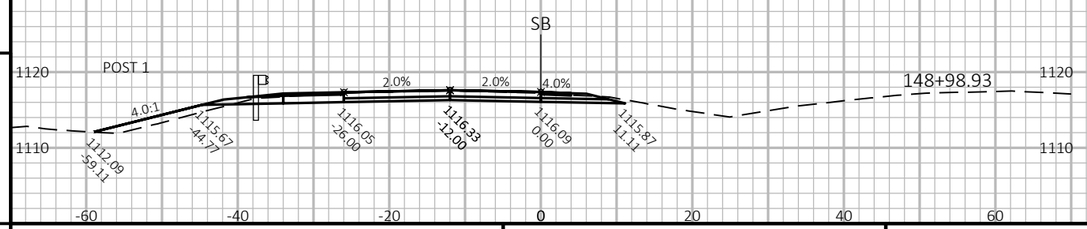
WISDOT/CADDS SHEET 49

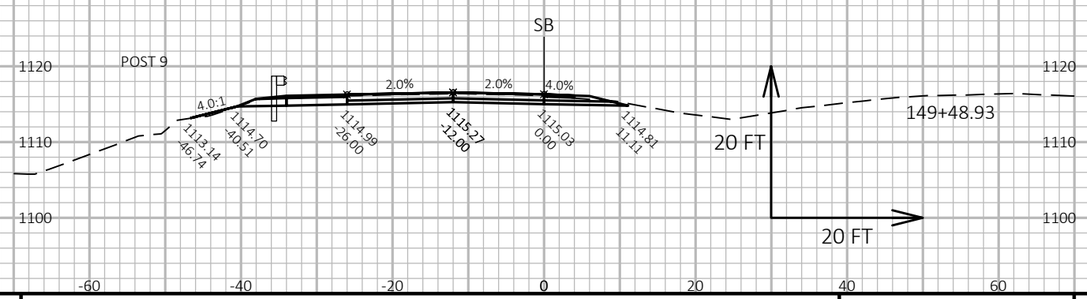












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 483	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_20

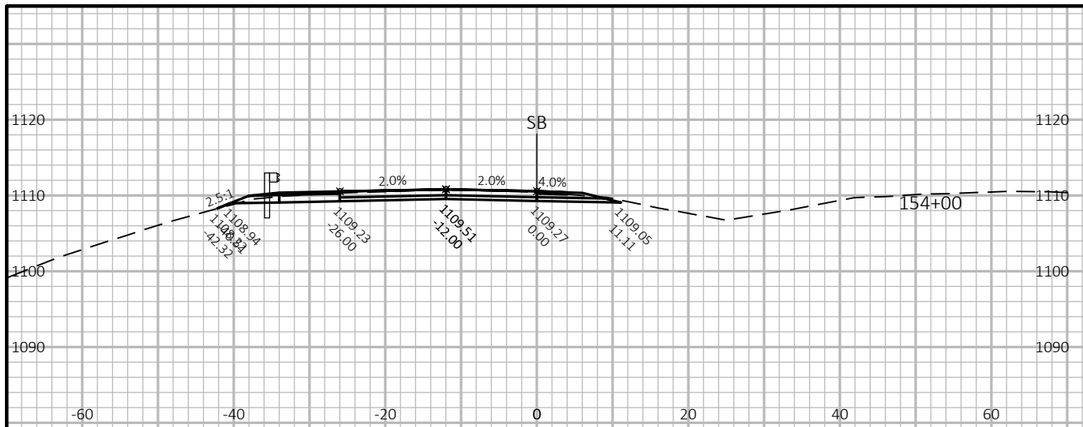
PLOT DATE : 5/22/2018 4:43 PM

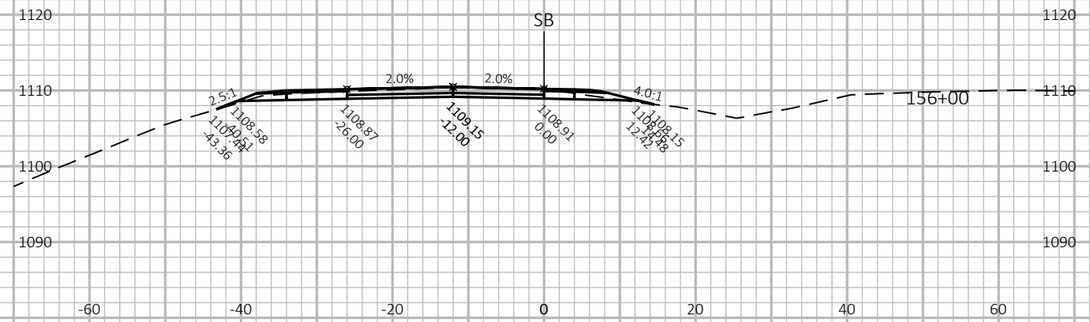
PLOT BY : SCHMIDT, DAVID B

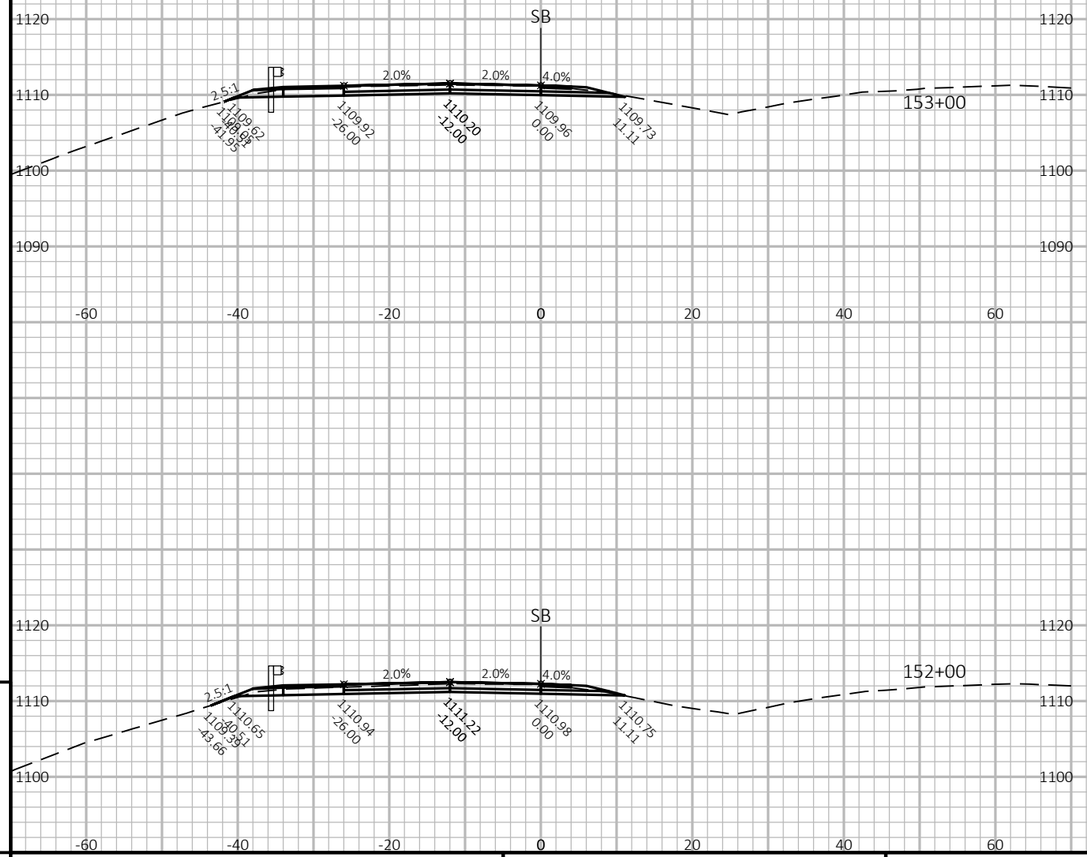
PLOT NAME :

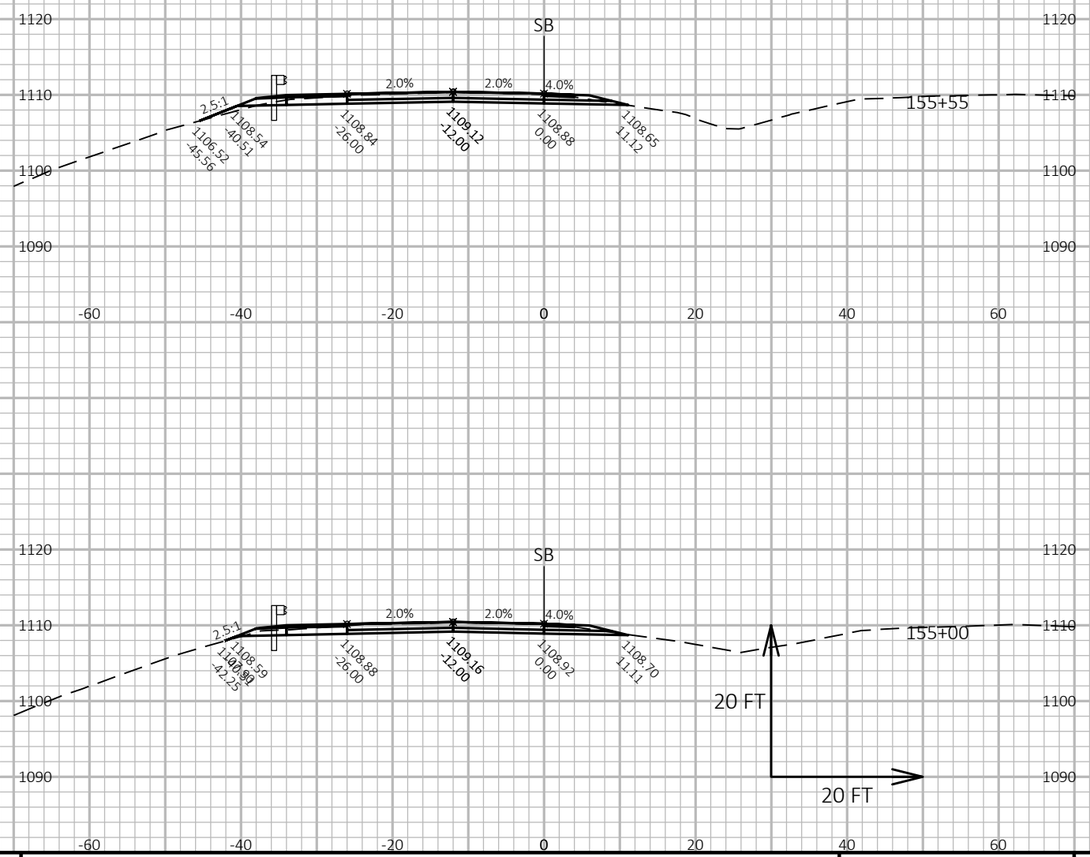
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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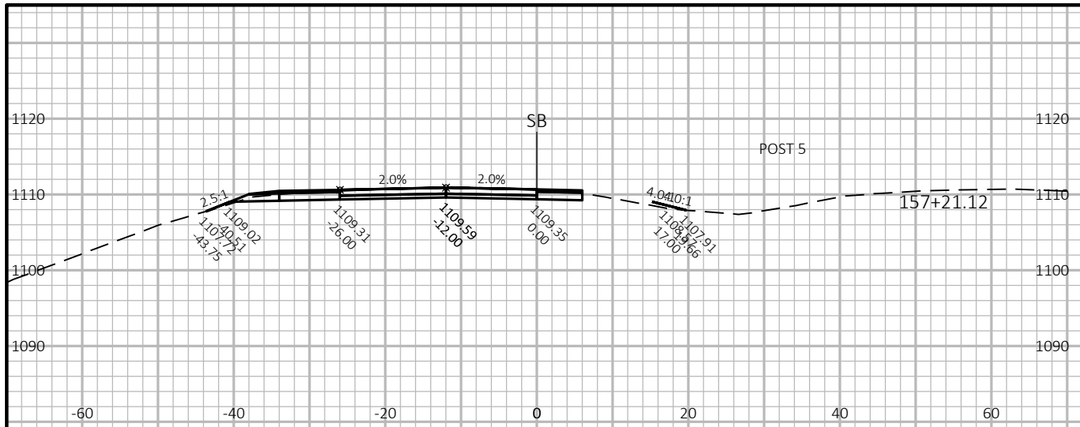
9

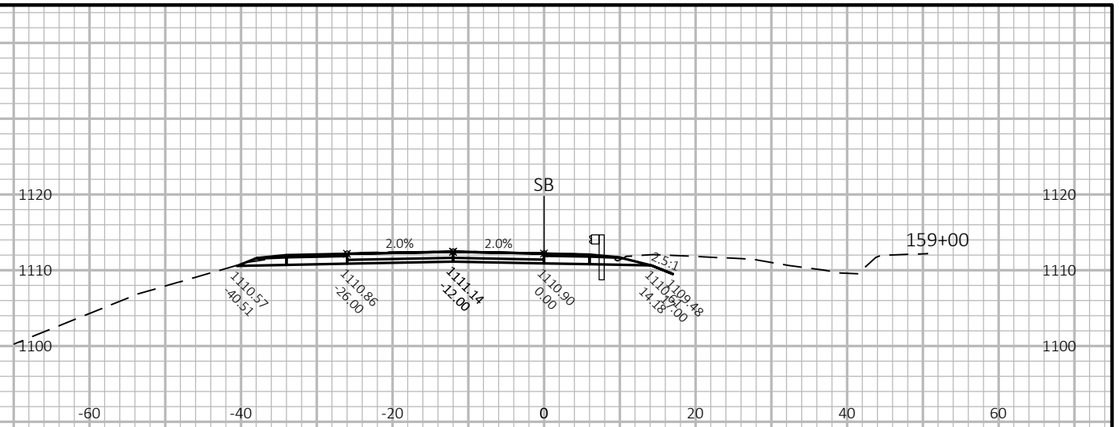
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 484	E

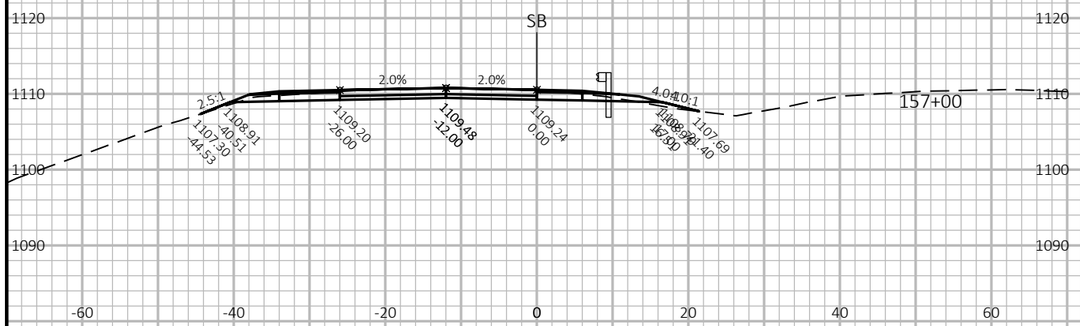
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_21

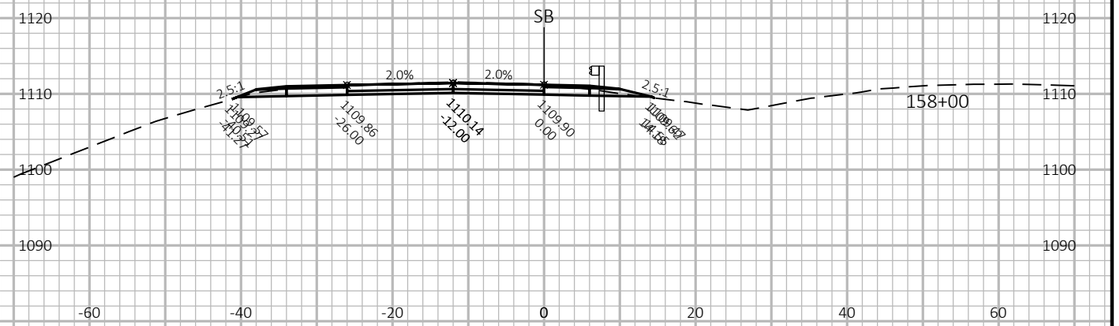
PLOT DATE : 5/22/2018 4:43 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

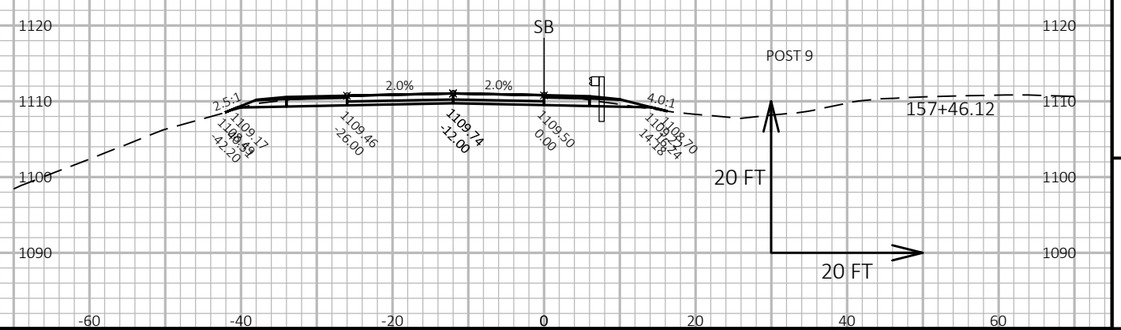
WISDOT/CADDS SHEET 49











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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 485	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_22

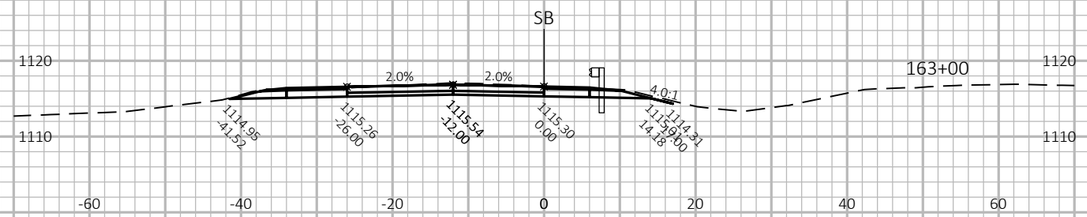
PLOT DATE : 5/22/2018 4:44 PM

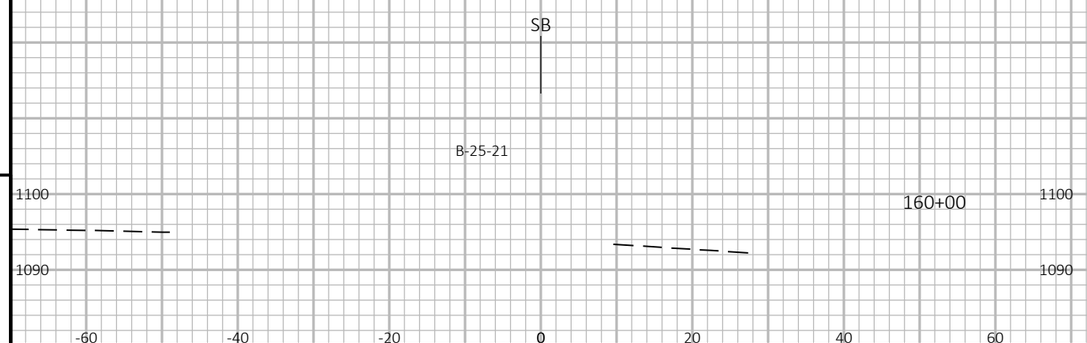
PLOT BY : SCHMIDT, DAVID B

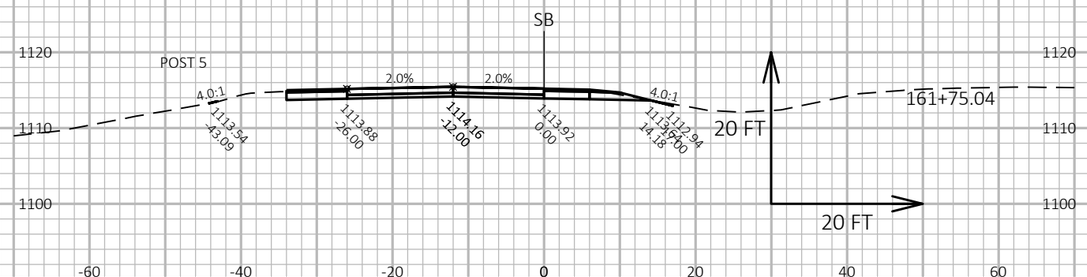
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 486	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_23

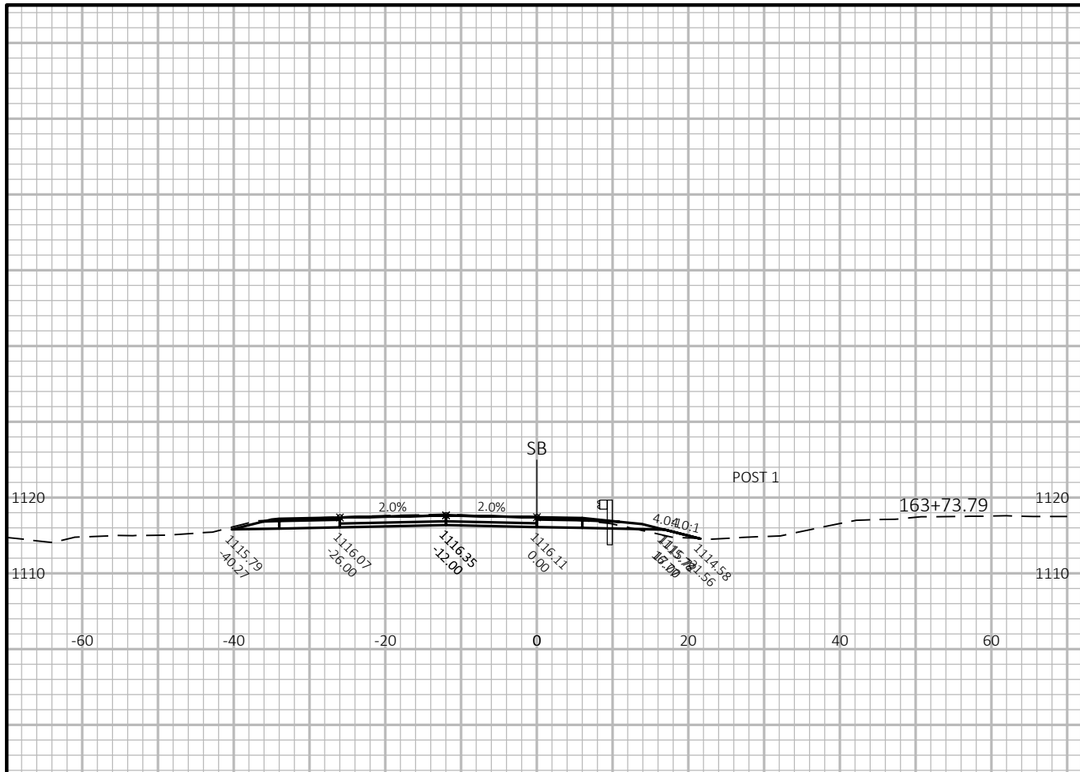
PLOT DATE : 5/22/2018 4:44 PM

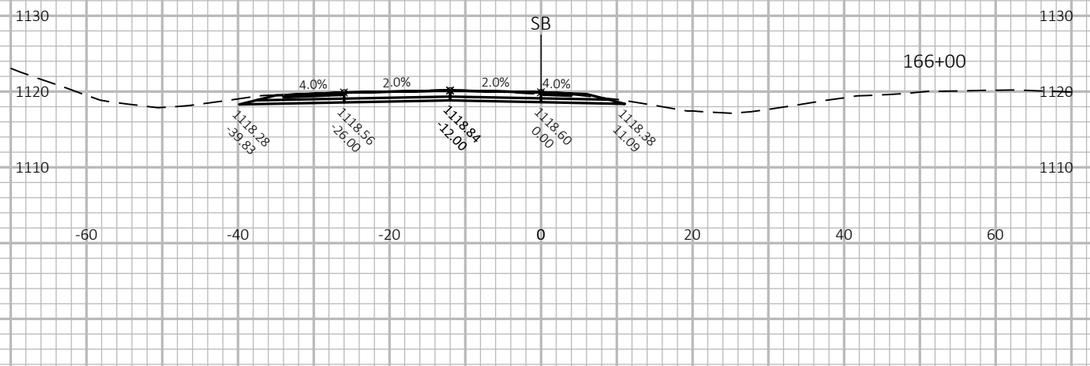
PLOT BY : SCHMIDT, DAVID B

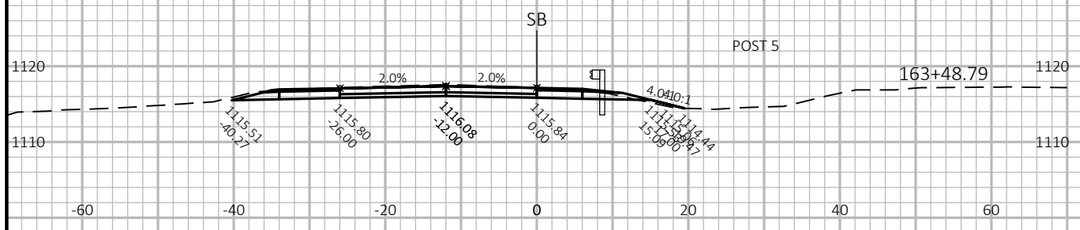
PLOT NAME :

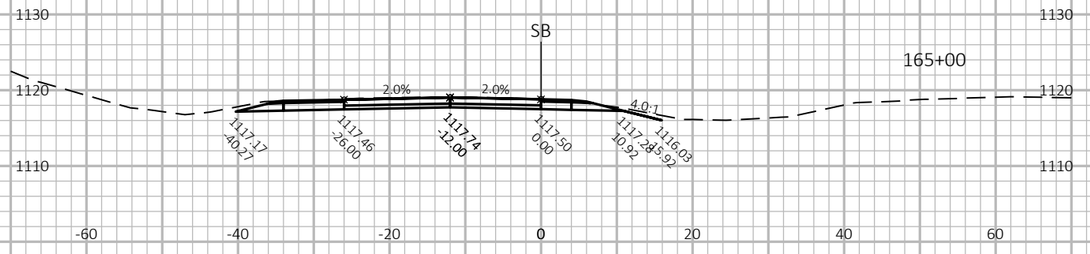
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

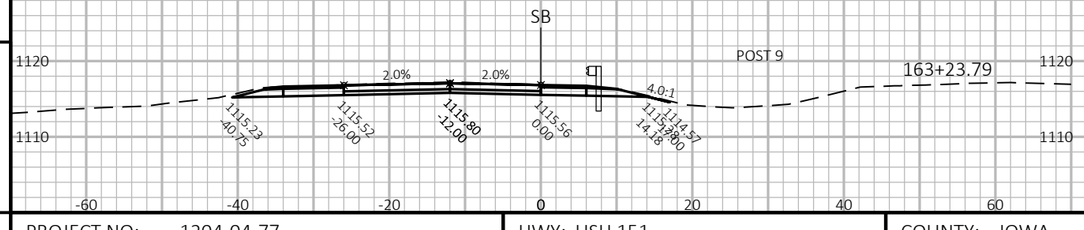
WISDOT/CADDS SHEET 49

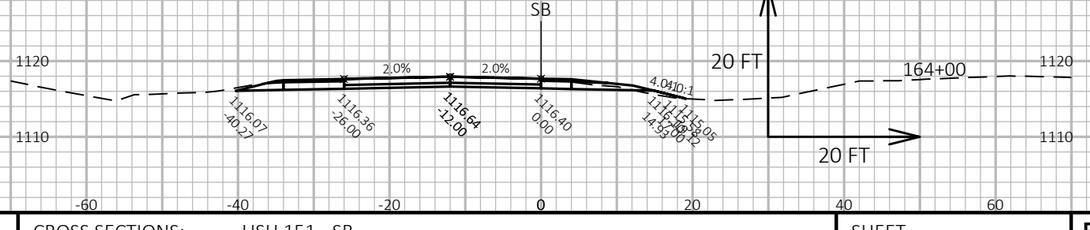












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 487	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_24

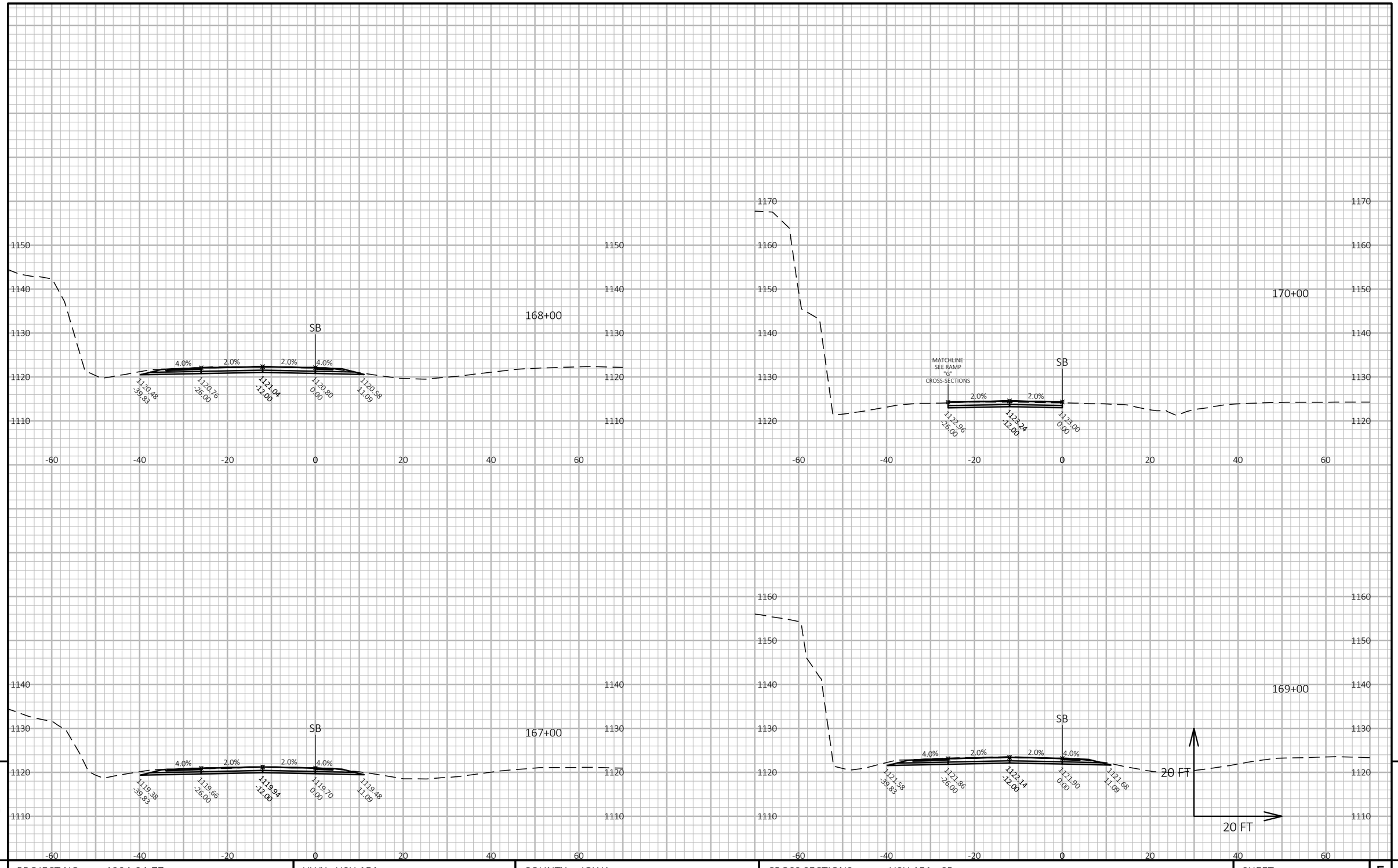
PLOT DATE : 5/22/2018 4:44 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 488	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_25

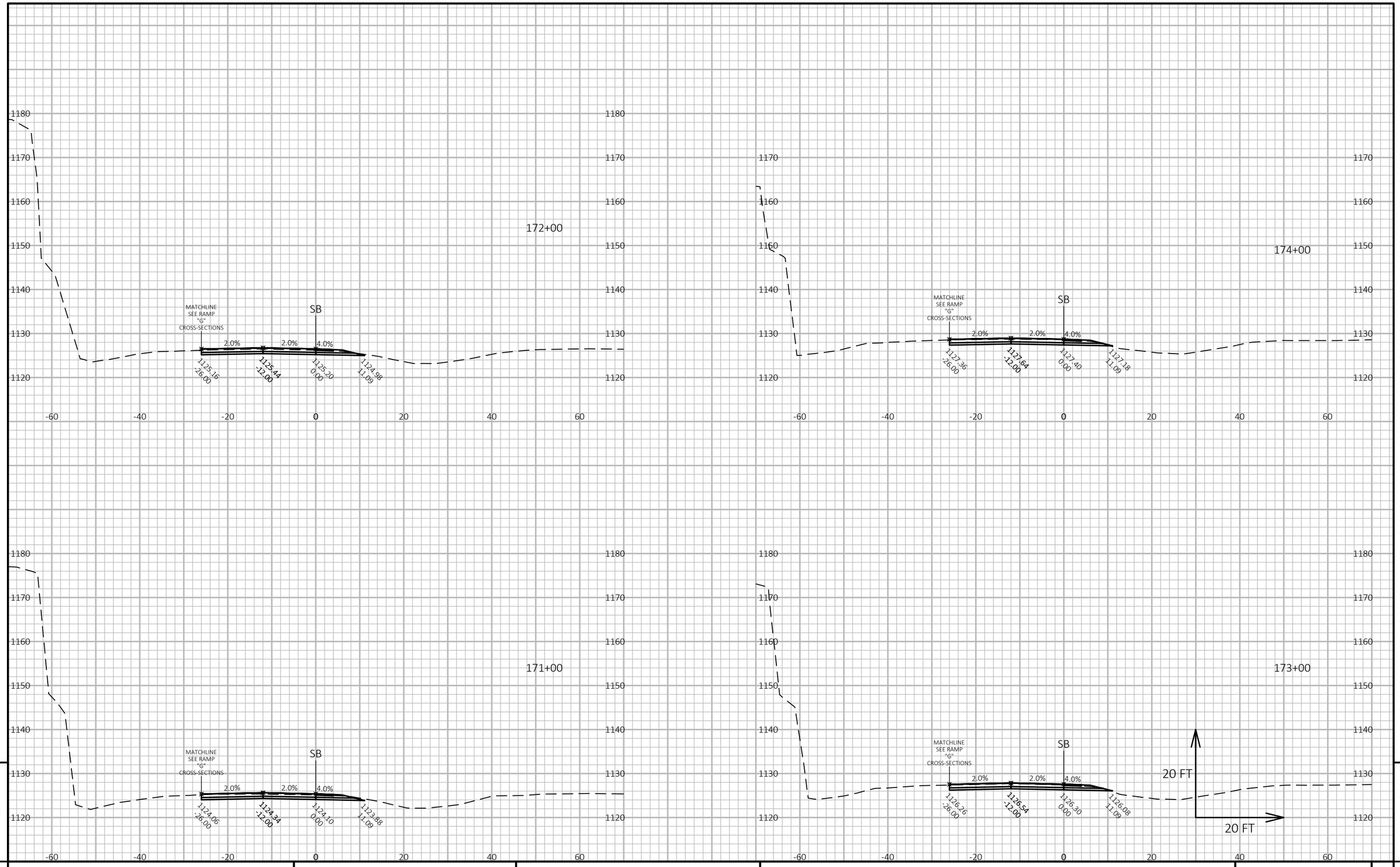
PLOT DATE : 5/22/2018 4:44 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

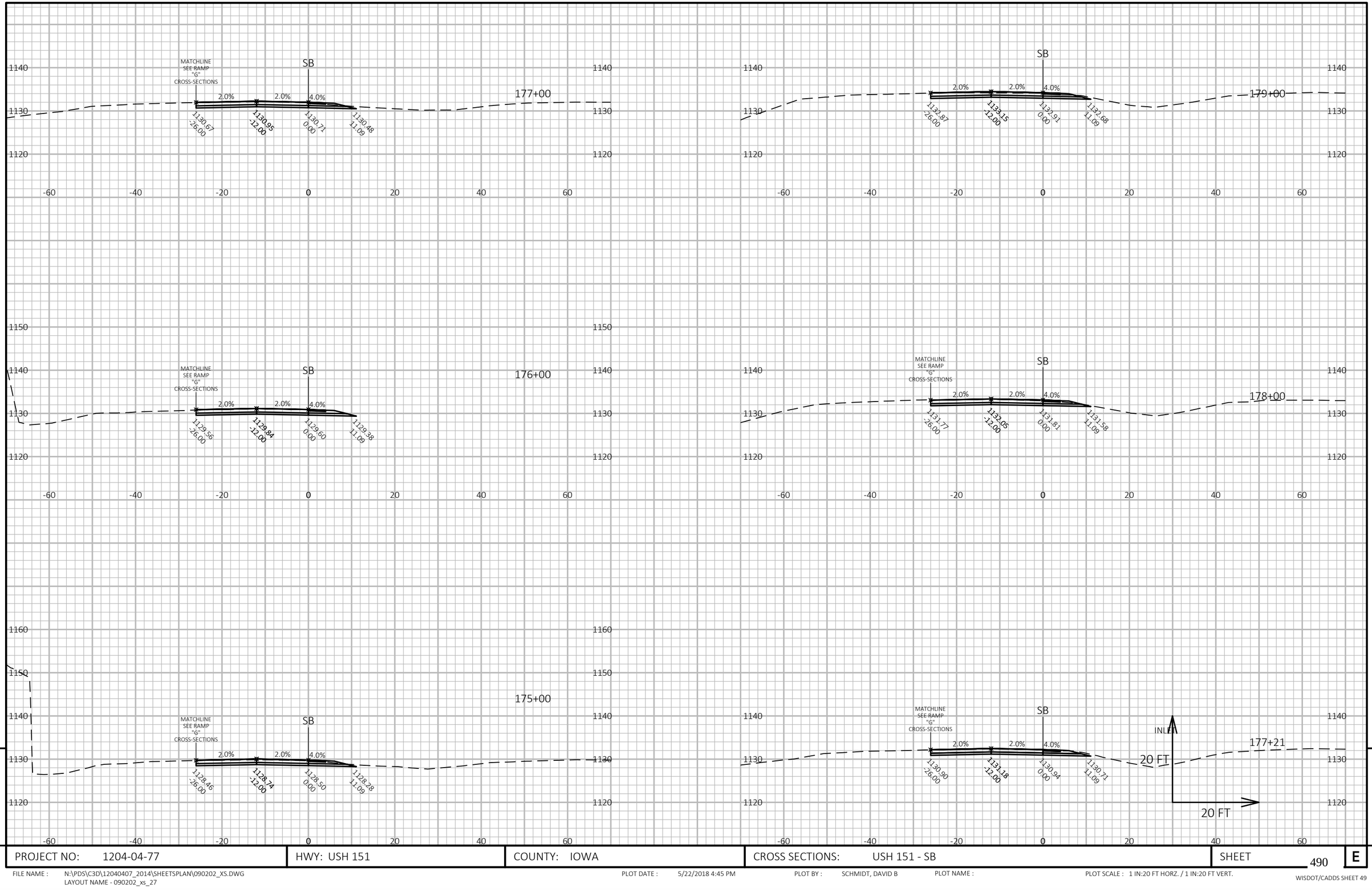


9 9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 489	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_26

PLOT DATE : 5/22/2018 4:44 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 490	E

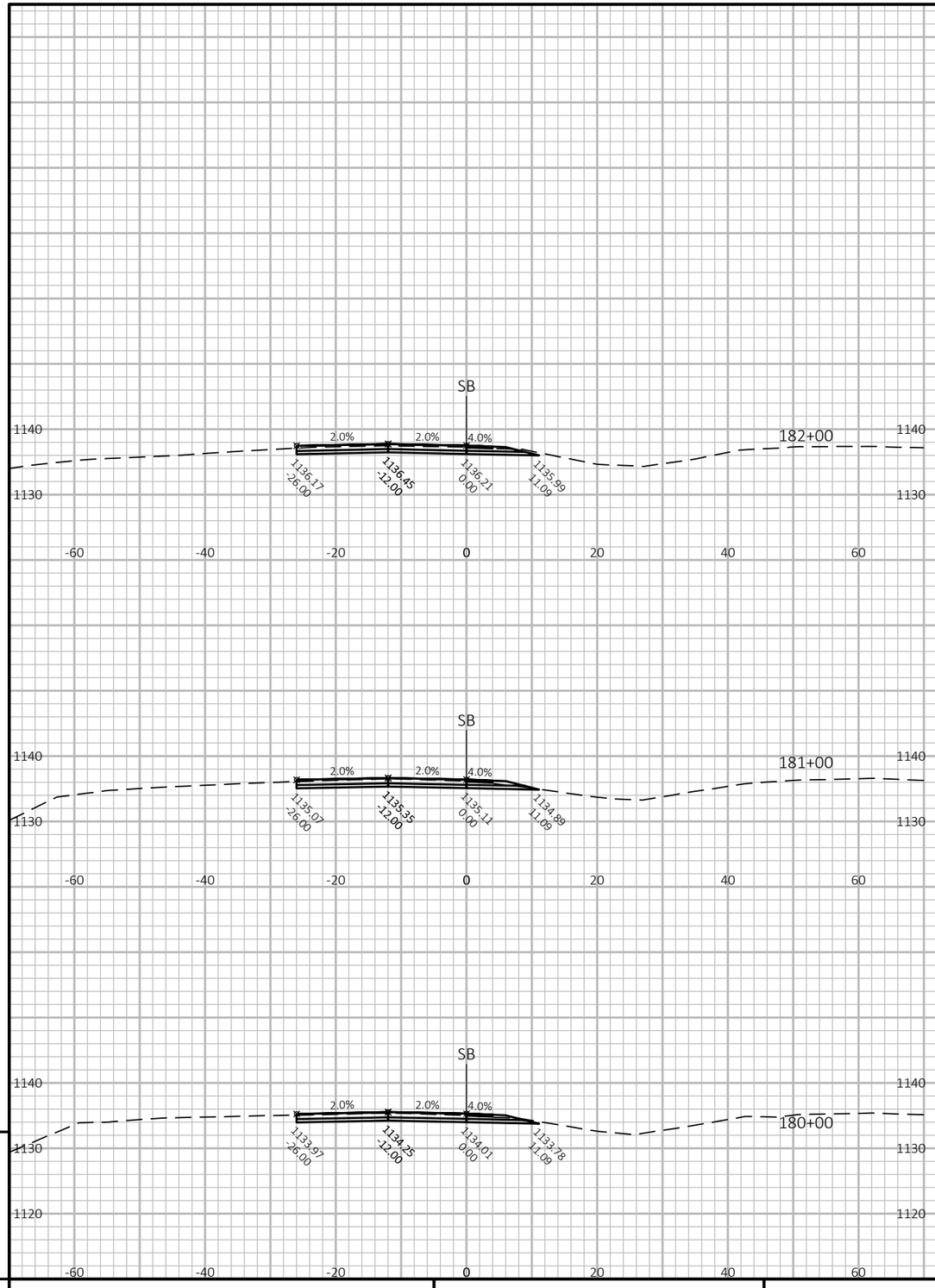
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_27

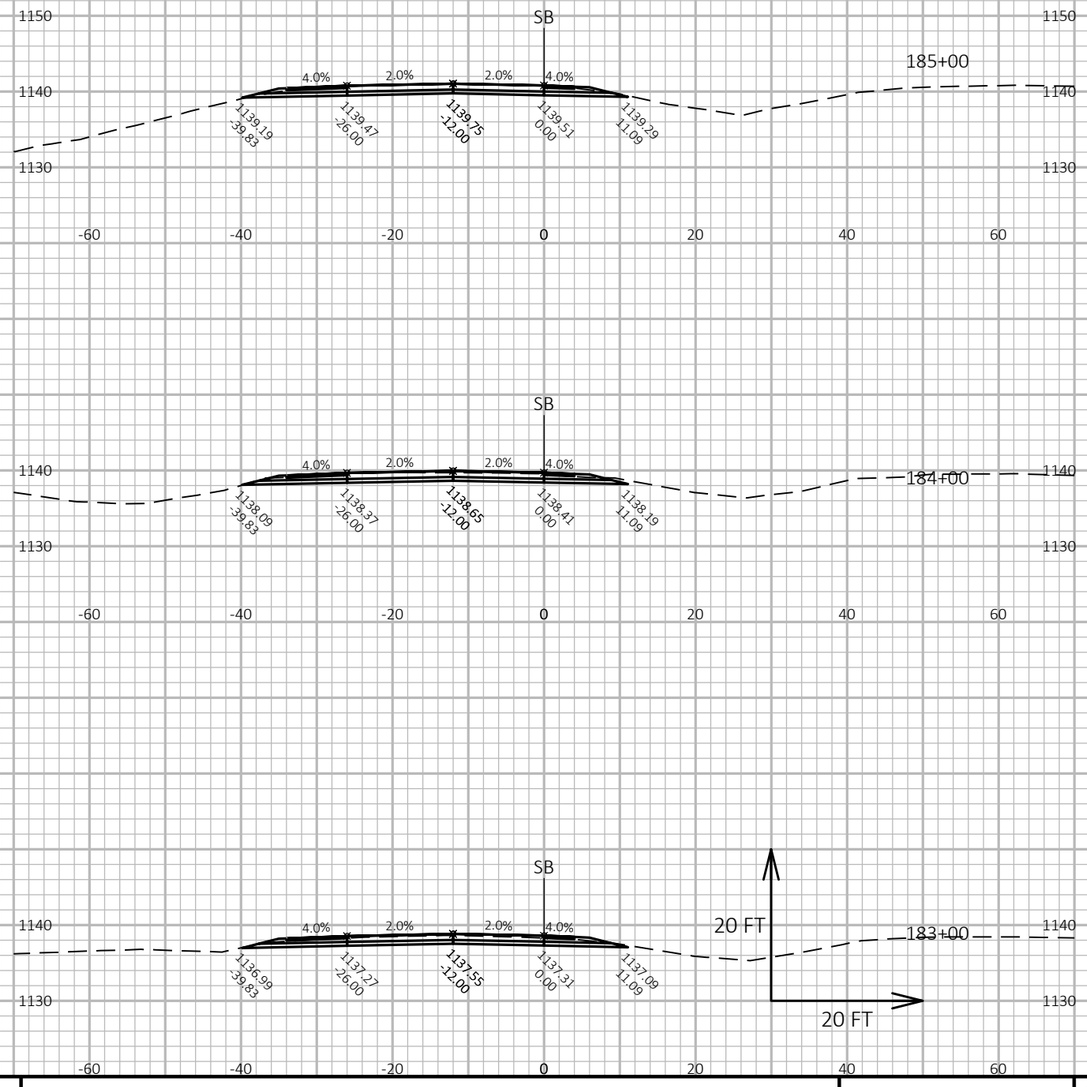
PLOT DATE : 5/22/2018 4:45 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 491	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_28

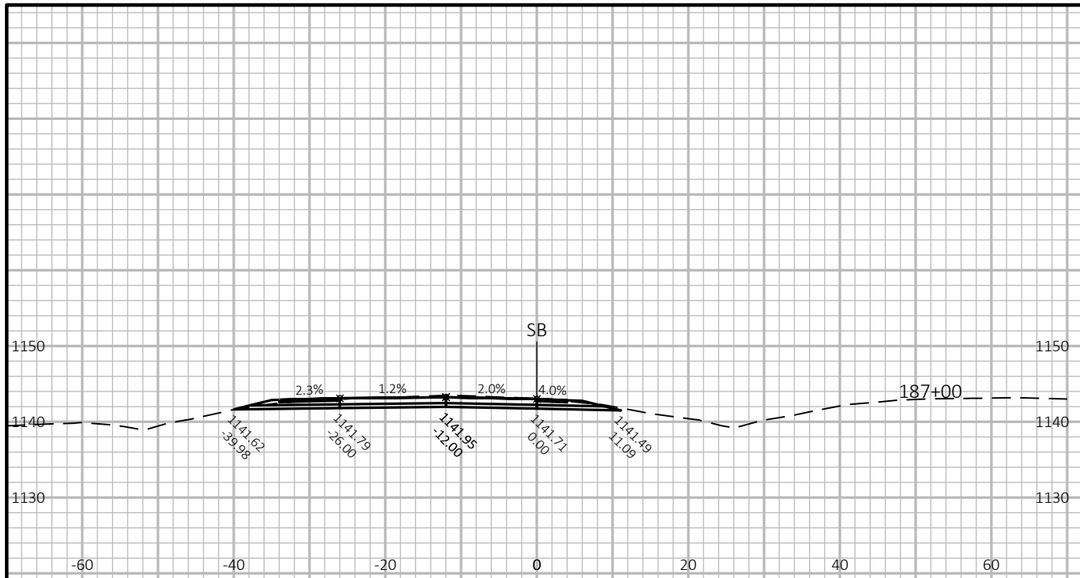
PLOT DATE : 5/22/2018 4:45 PM

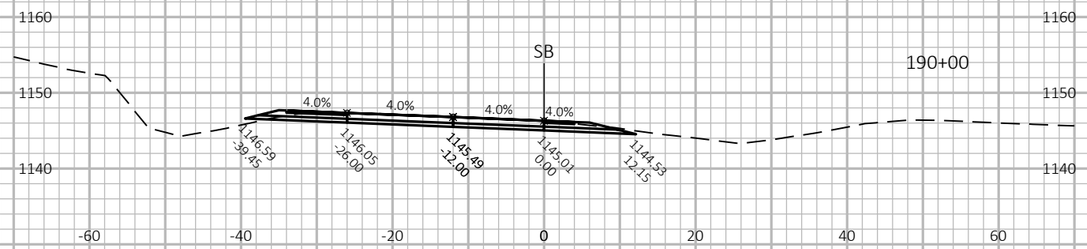
PLOT BY : SCHMIDT, DAVID B

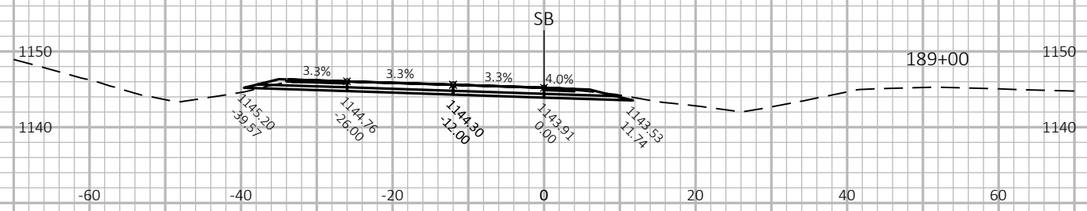
PLOT NAME :

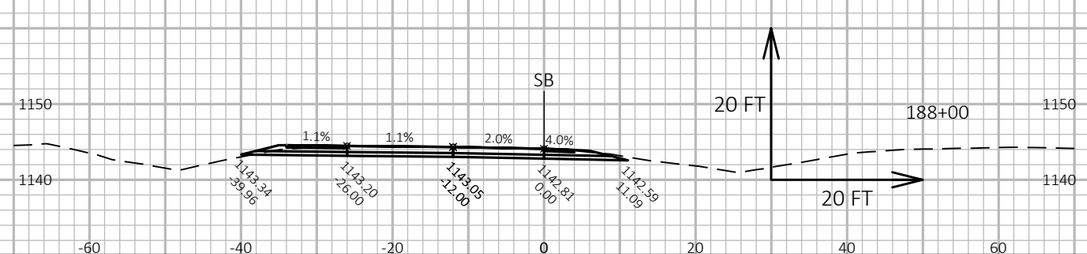
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 492	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_29

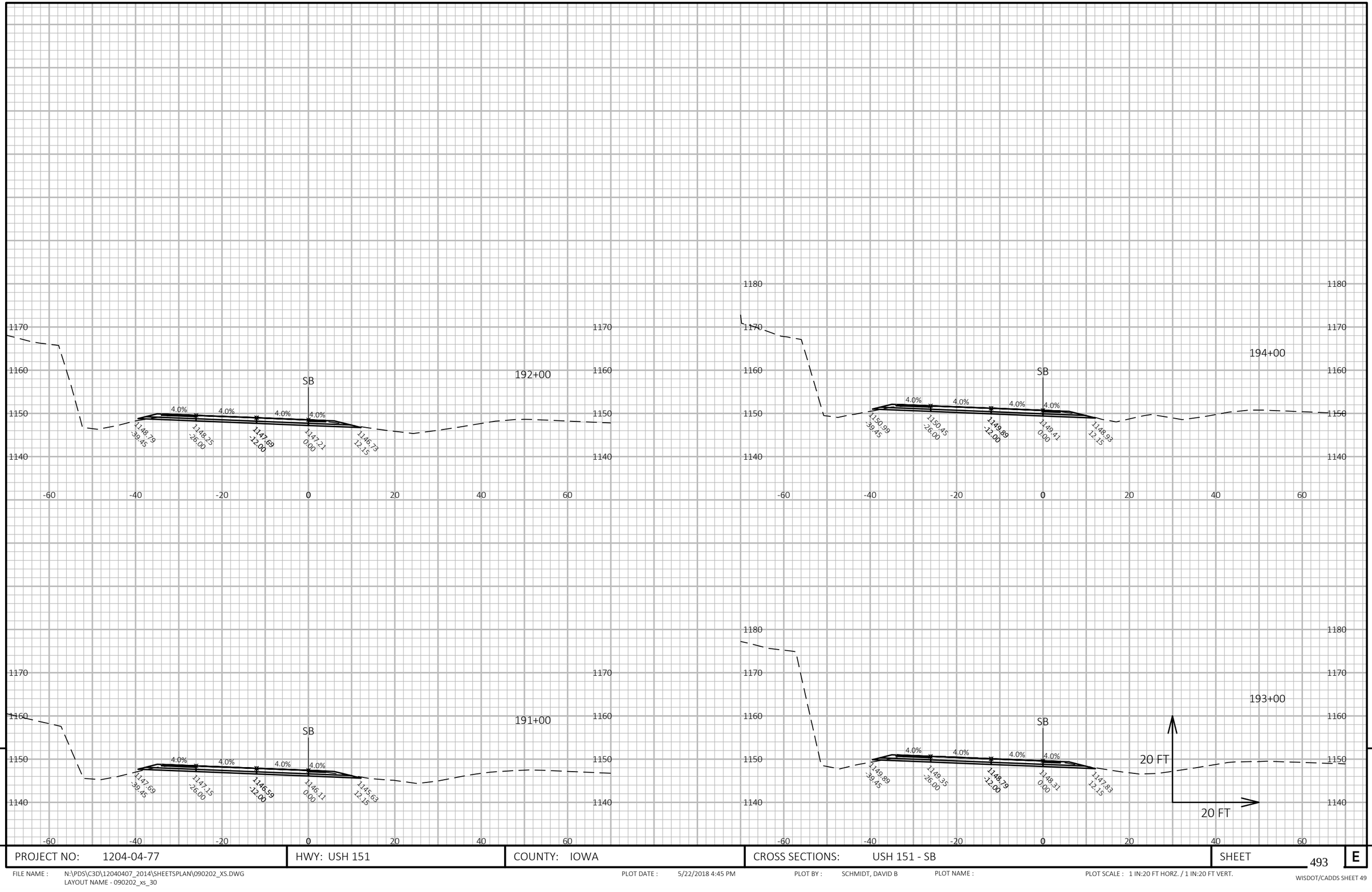
PLOT DATE : 5/22/2018 4:45 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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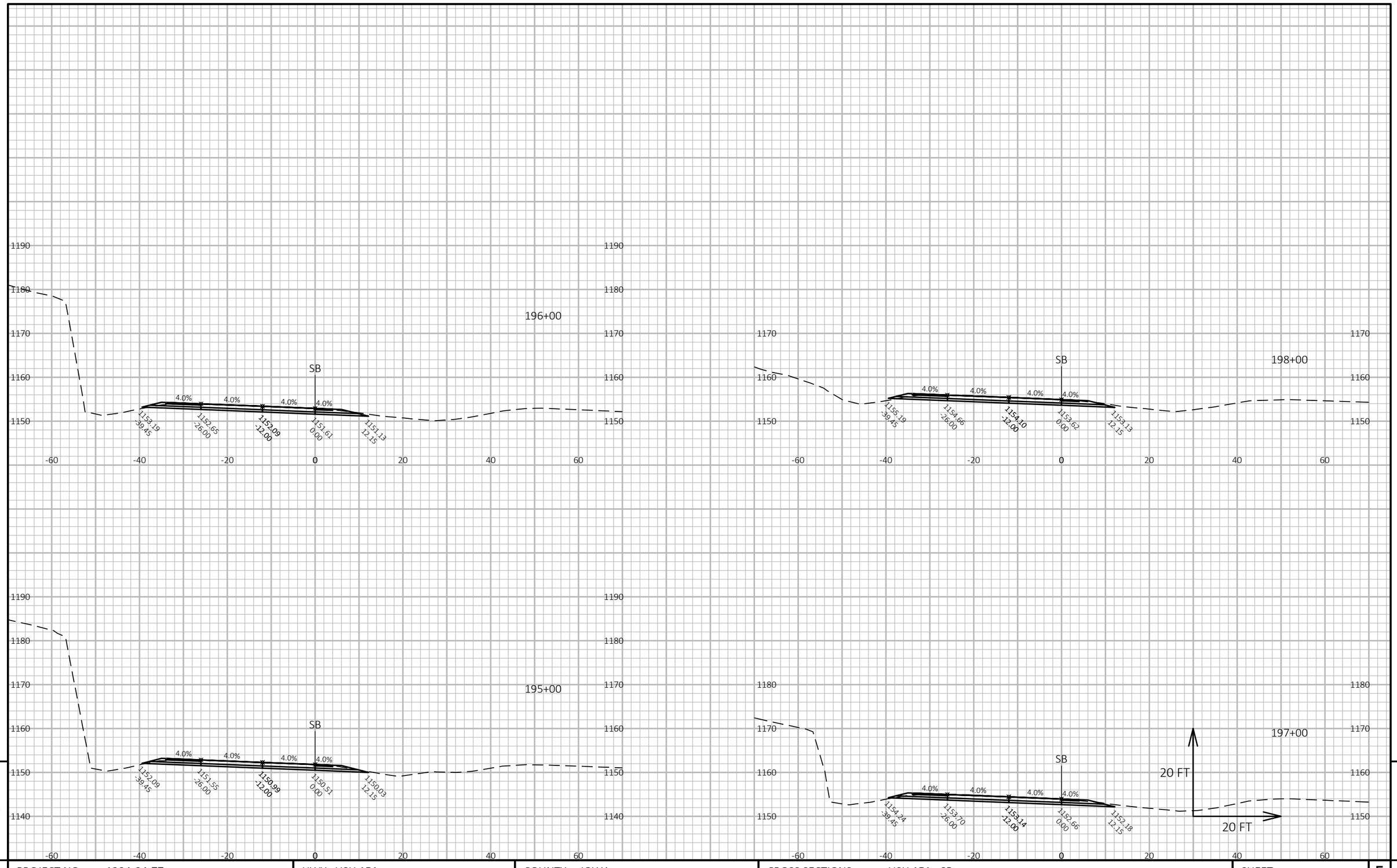
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 493	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_30

PLOT DATE : 5/22/2018 4:45 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 494	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_31

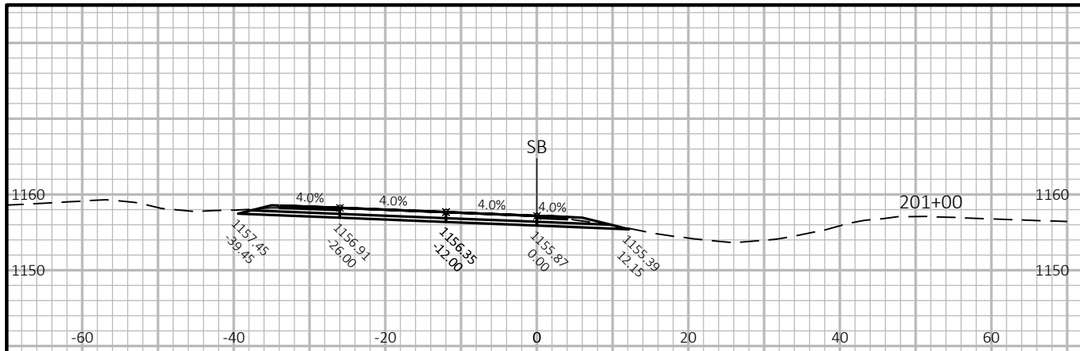
PLOT DATE : 5/22/2018 4:45 PM

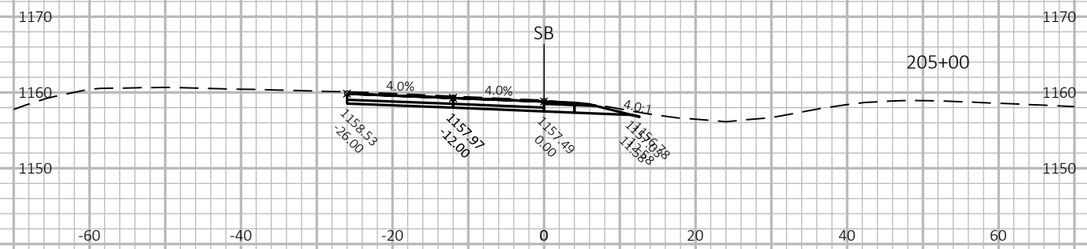
PLOT BY : SCHMIDT, DAVID B

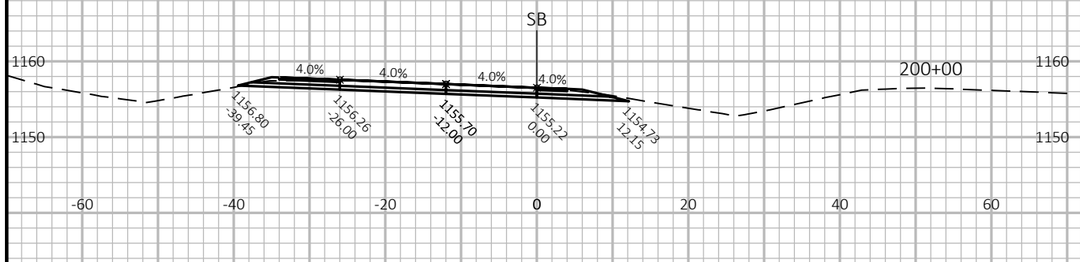
PLOT NAME :

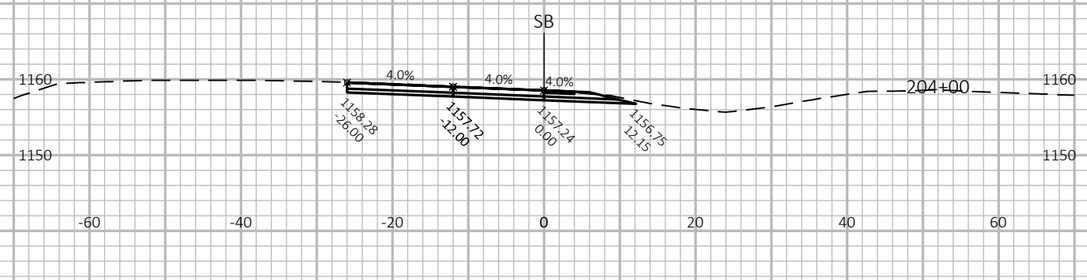
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

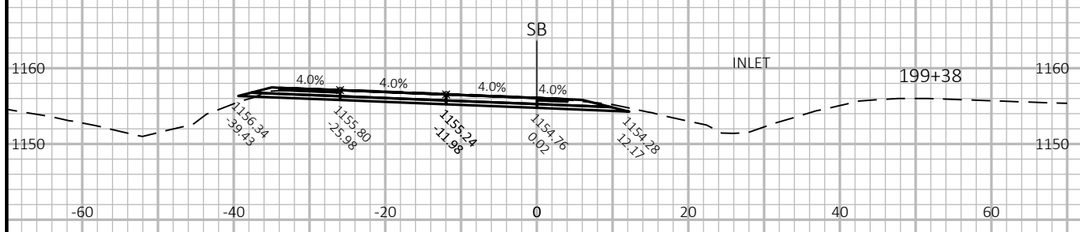
WISDOT/CADDS SHEET 49

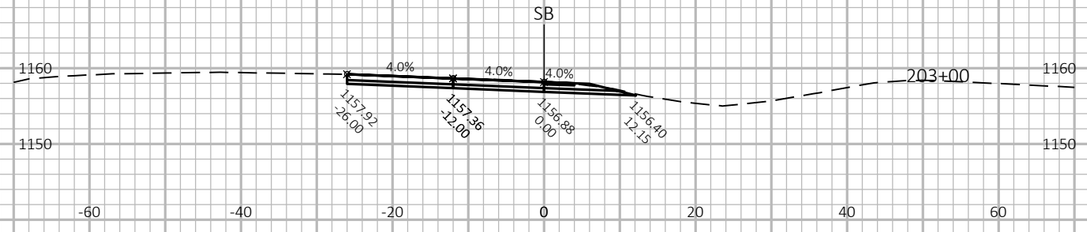


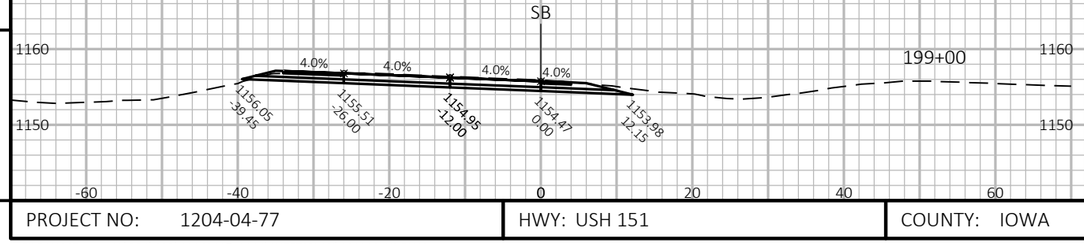


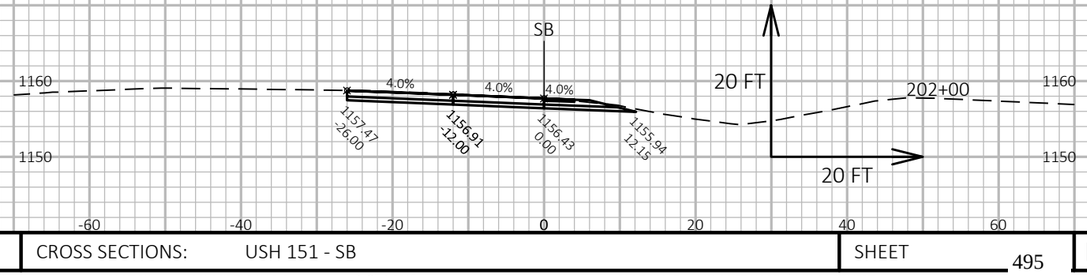












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 495	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_32

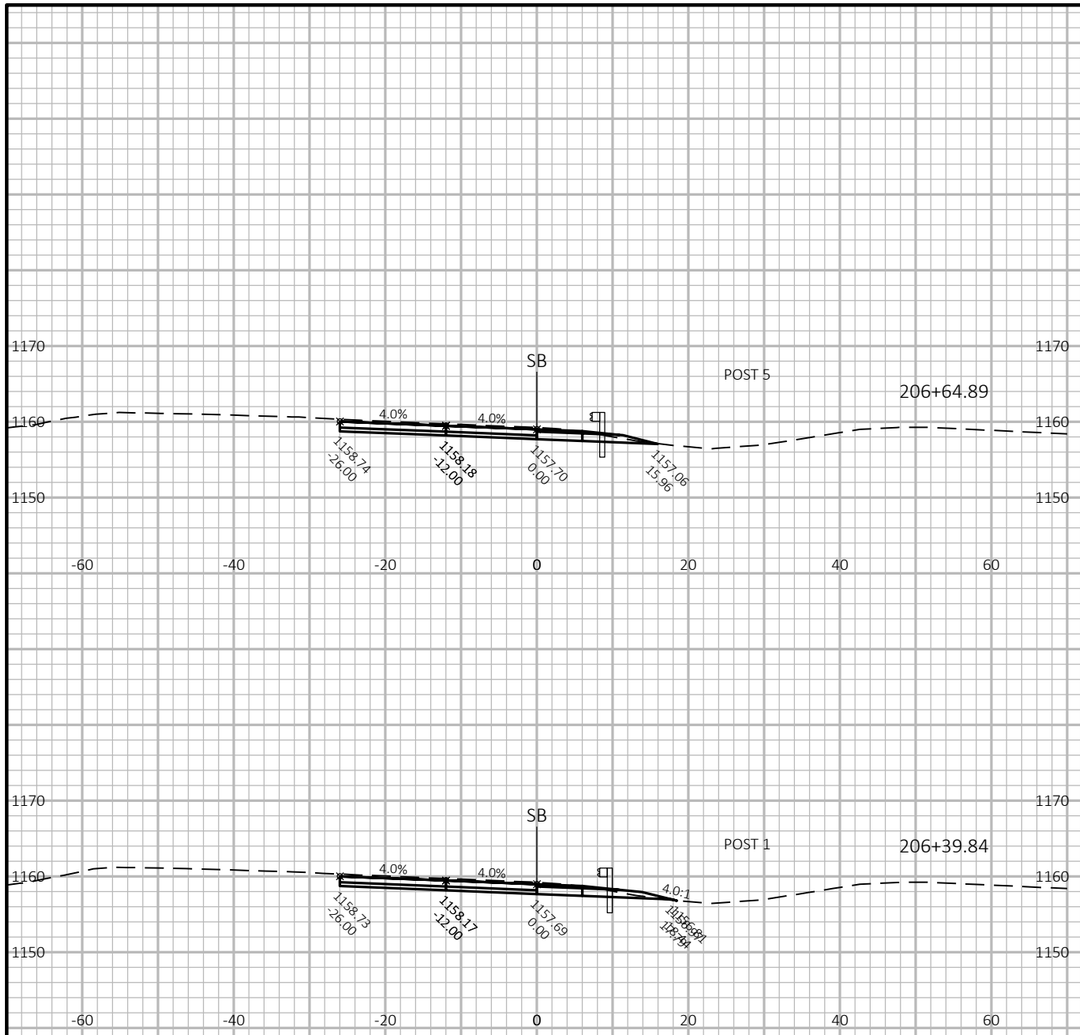
PLOT DATE : 5/22/2018 4:45 PM

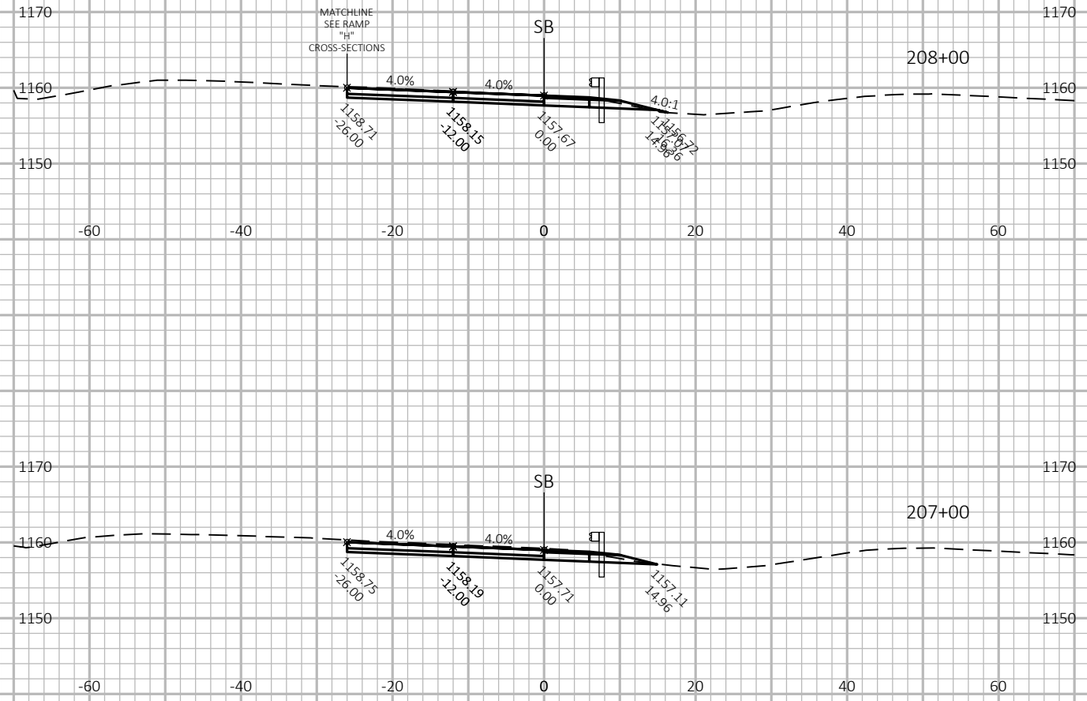
PLOT BY : SCHMIDT, DAVID B

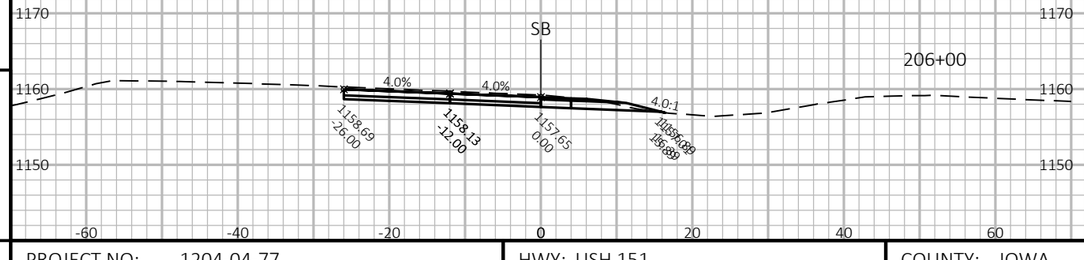
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 496	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_33

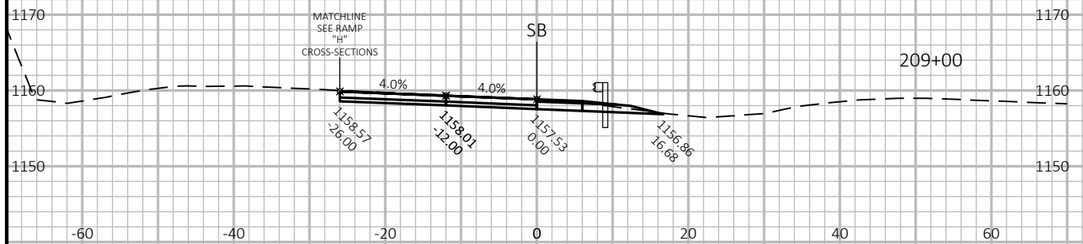
PLOT DATE : 5/22/2018 4:46 PM

PLOT BY : SCHMIDT, DAVID B

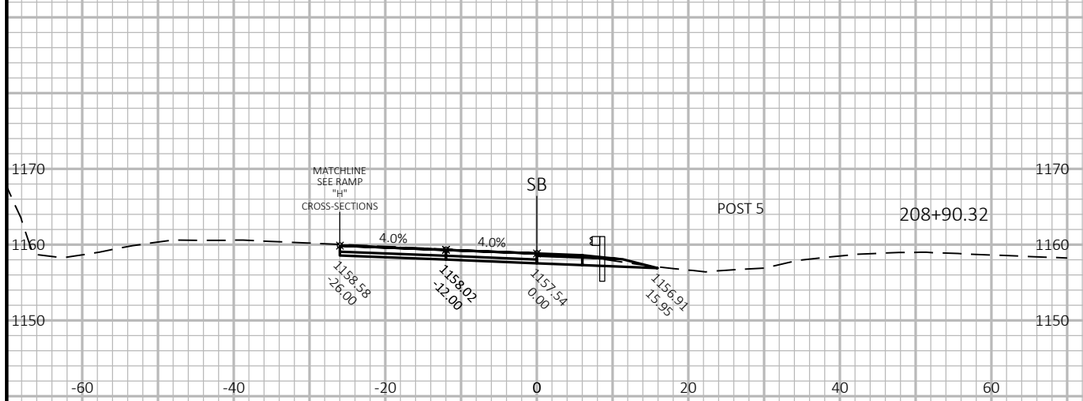
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

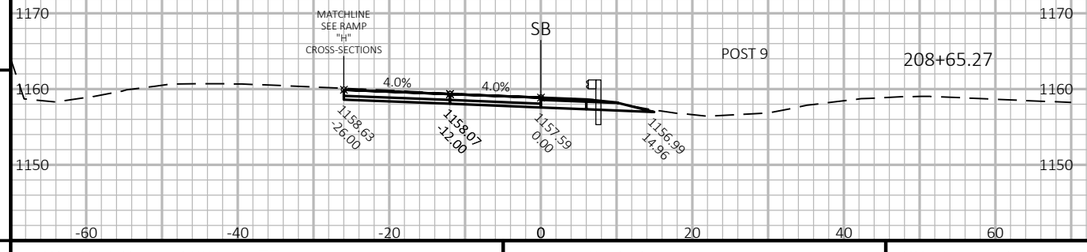
WISDOT/CADDS SHEET 49



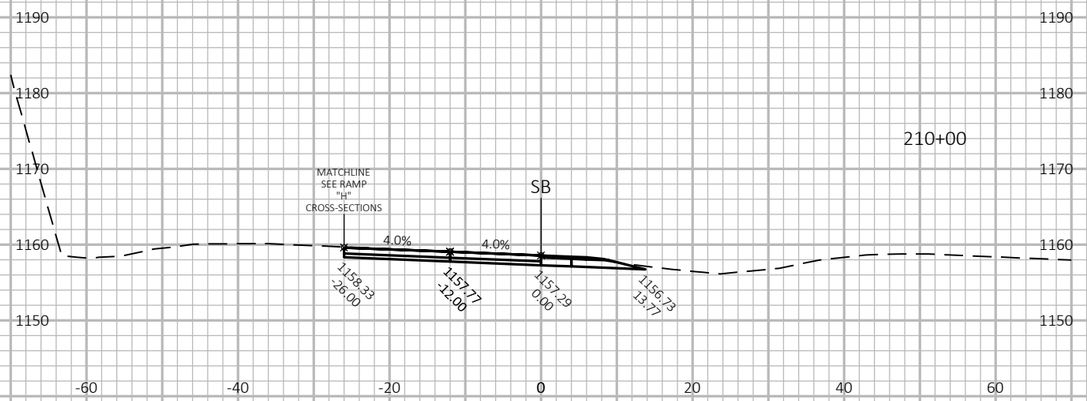
209+00

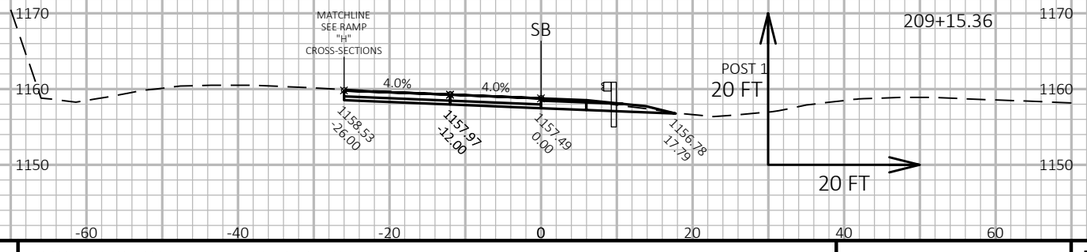


208+90.32



208+65.27





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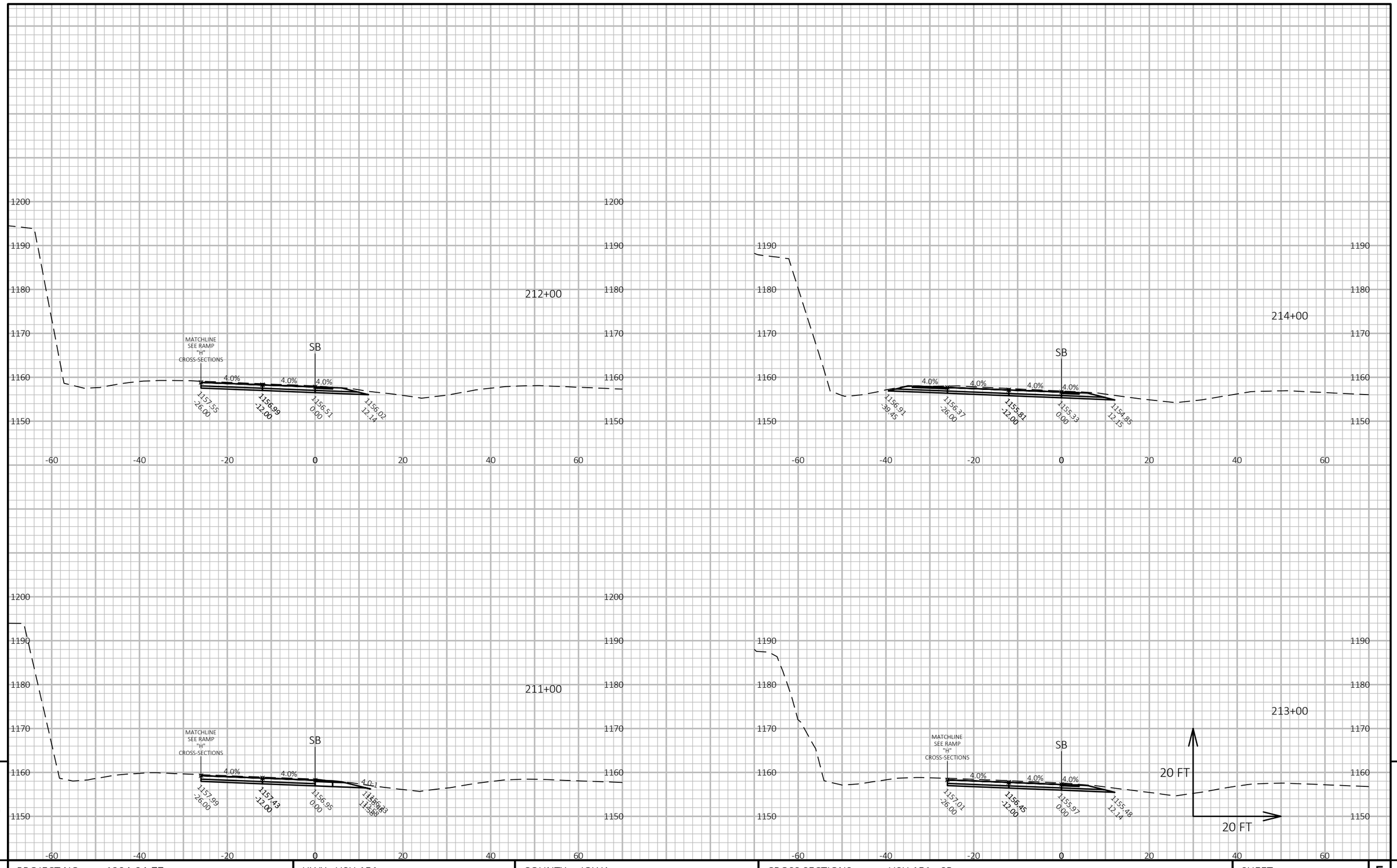
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 497	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_34

PLOT DATE : 5/22/2018 4:46 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 498	E

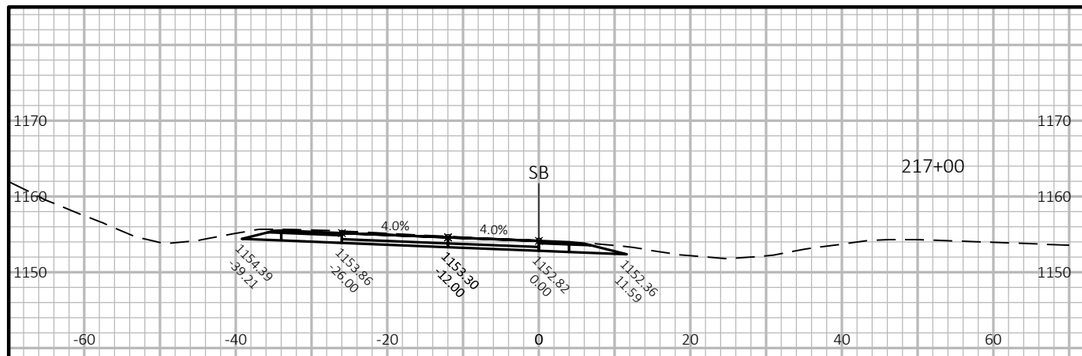
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_35

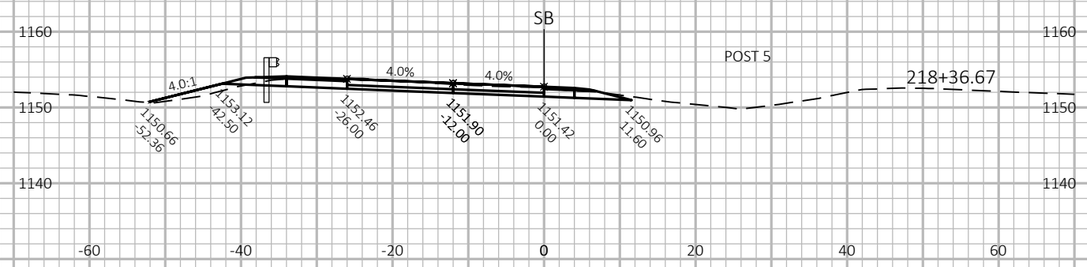
PLOT DATE : 5/22/2018 4:46 PM

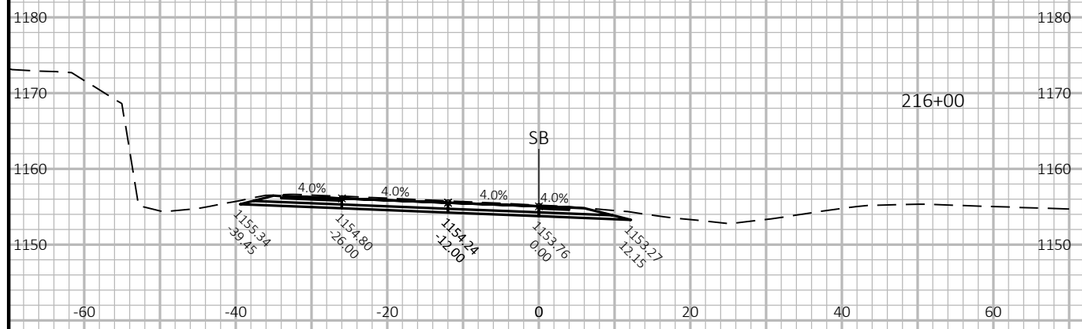
PLOT BY : SCHMIDT, DAVID B

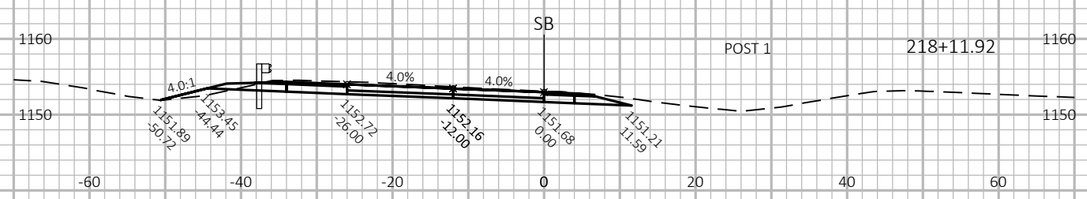
PLOT NAME :

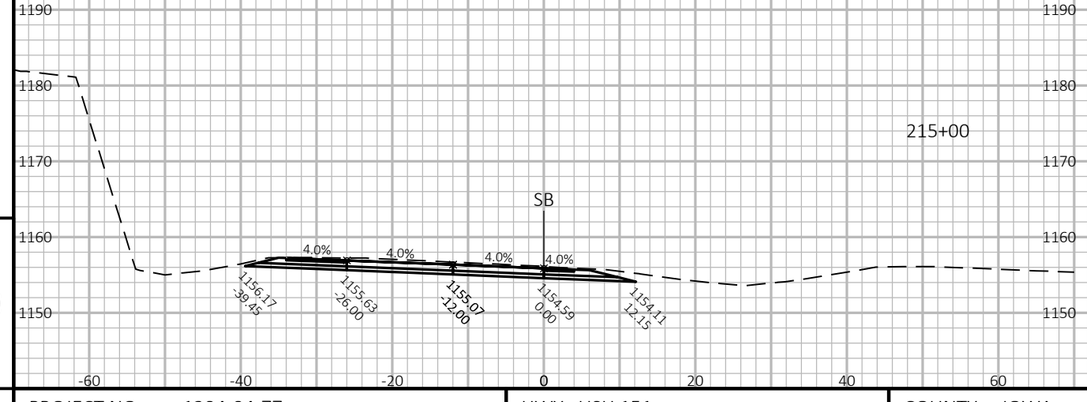
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

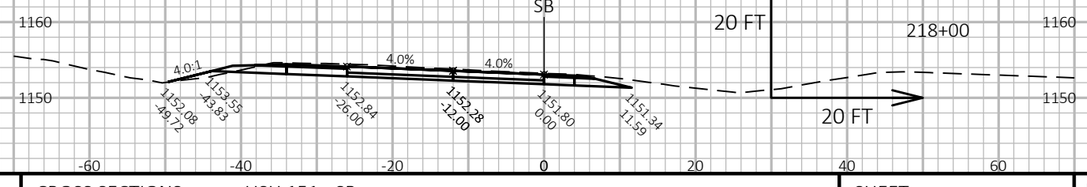












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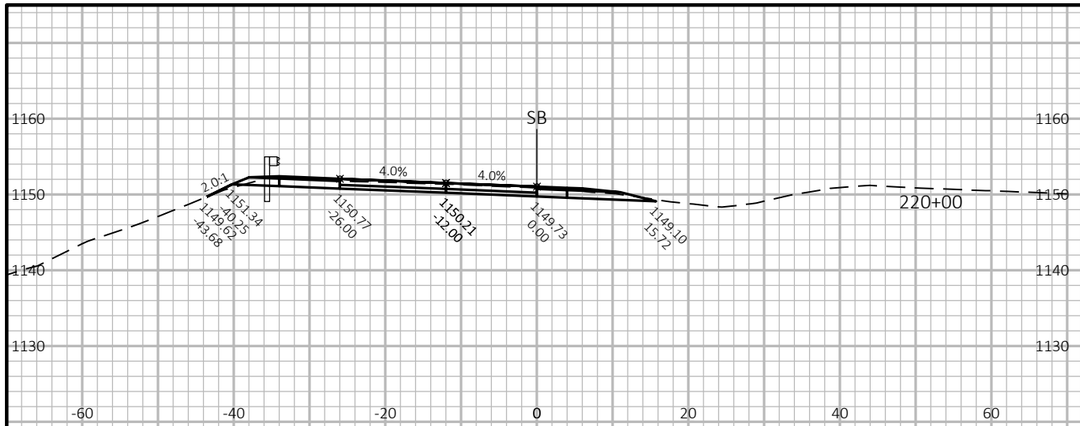
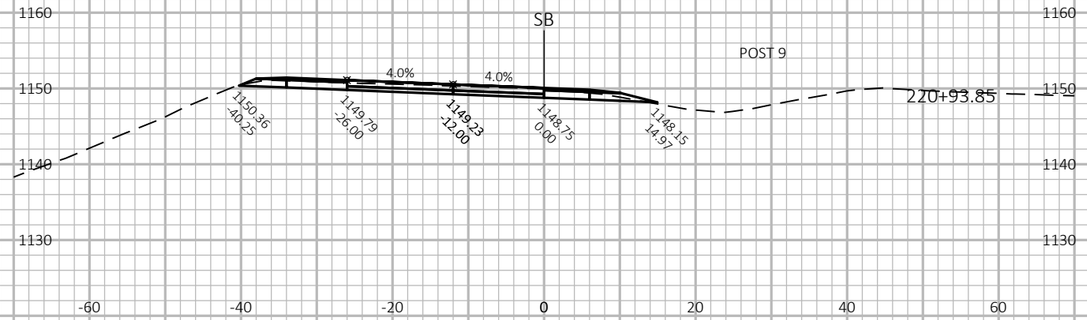
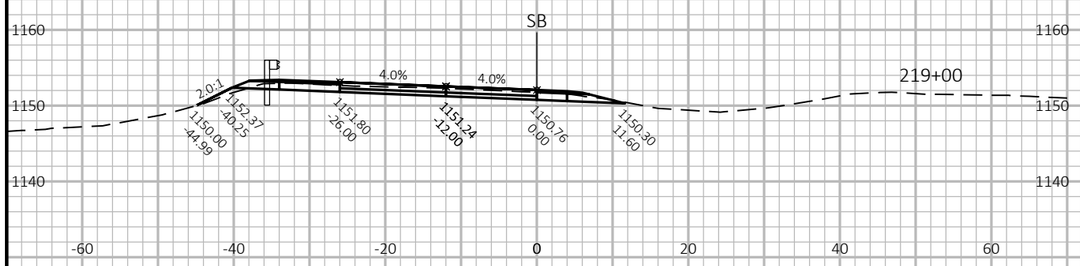
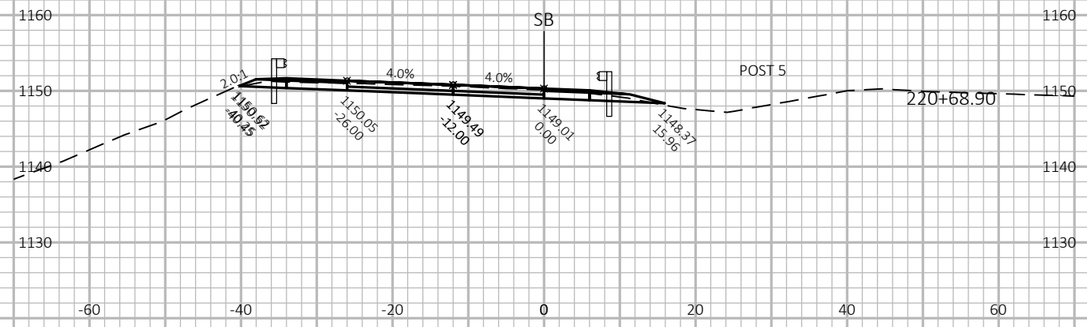
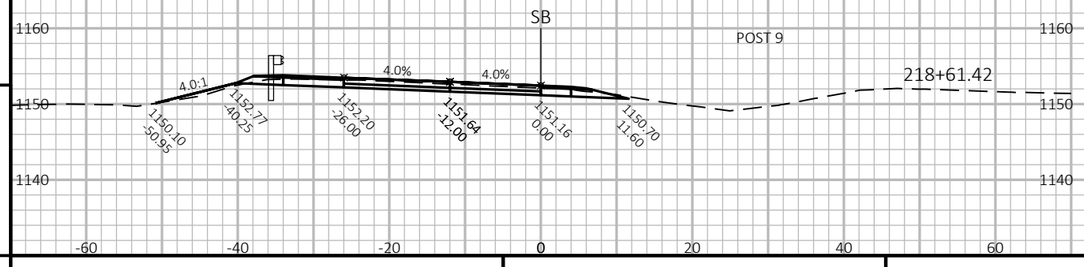
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 499	E

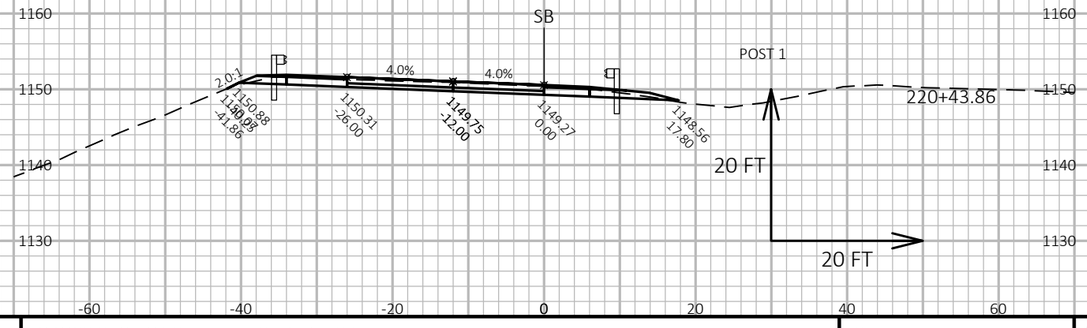












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 500 E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_37

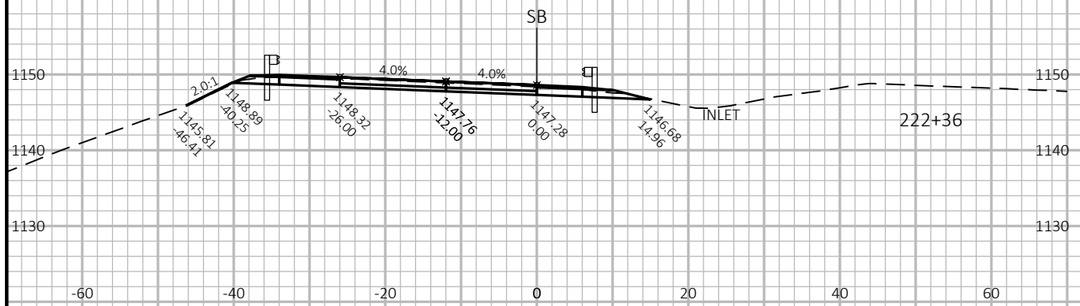
PLOT DATE : 5/22/2018 4:46 PM

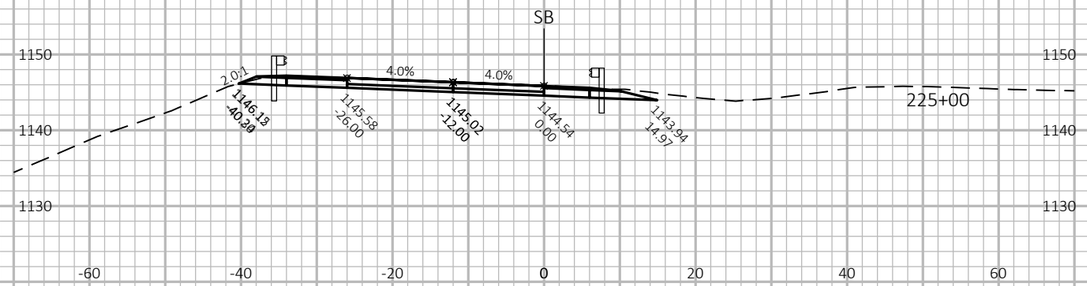
PLOT BY : SCHMIDT, DAVID B

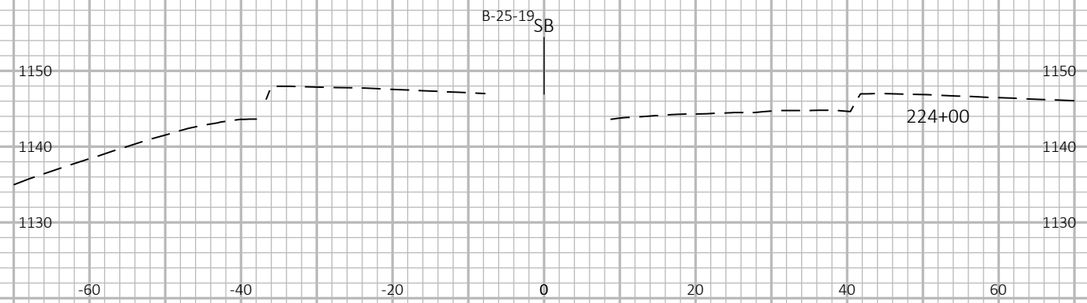
PLOT NAME :

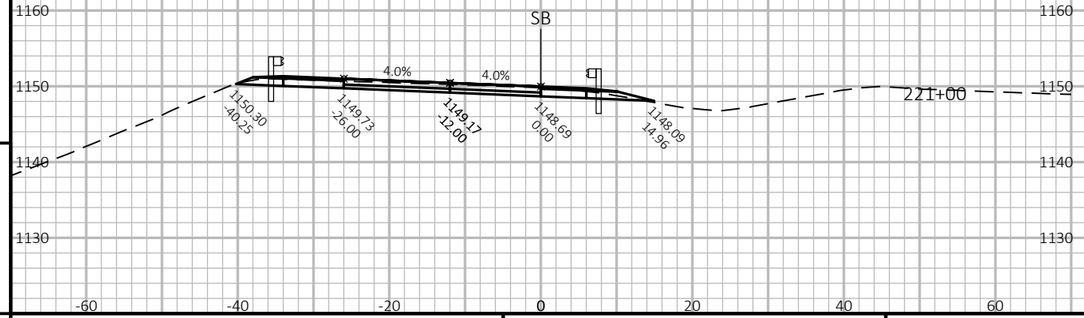
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

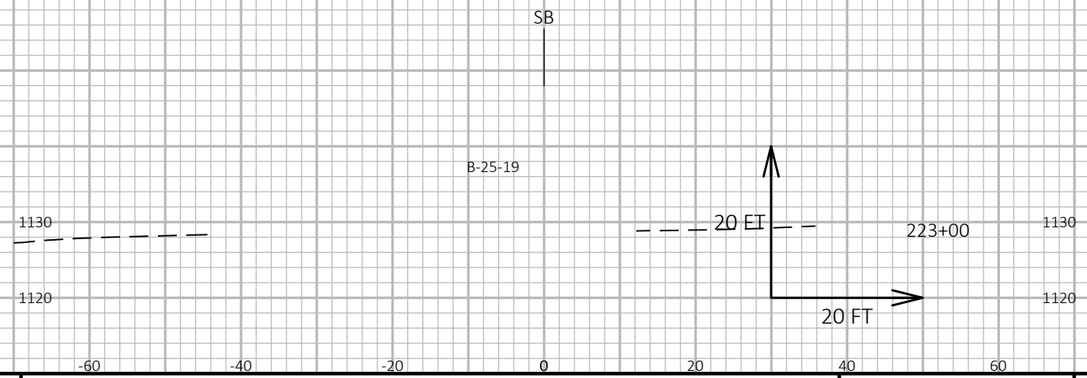
WISDOT/CADDS SHEET 49











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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 501	E

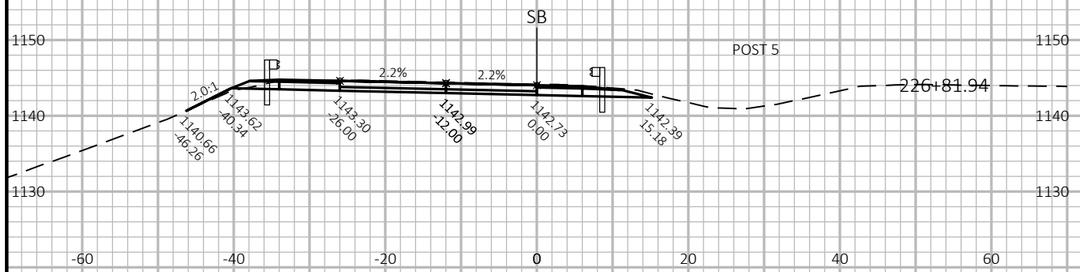
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_38

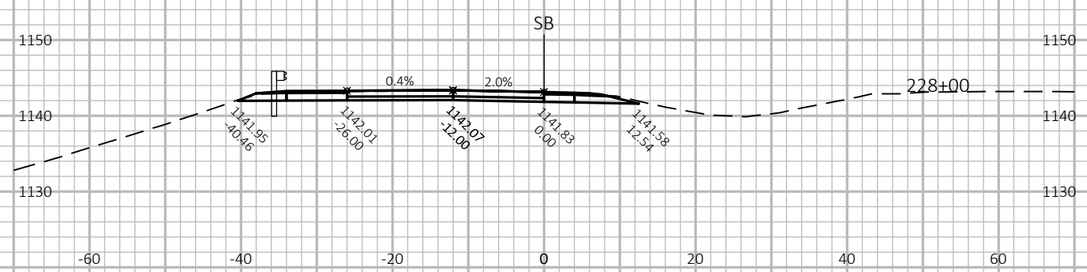
PLOT DATE : 5/22/2018 4:46 PM

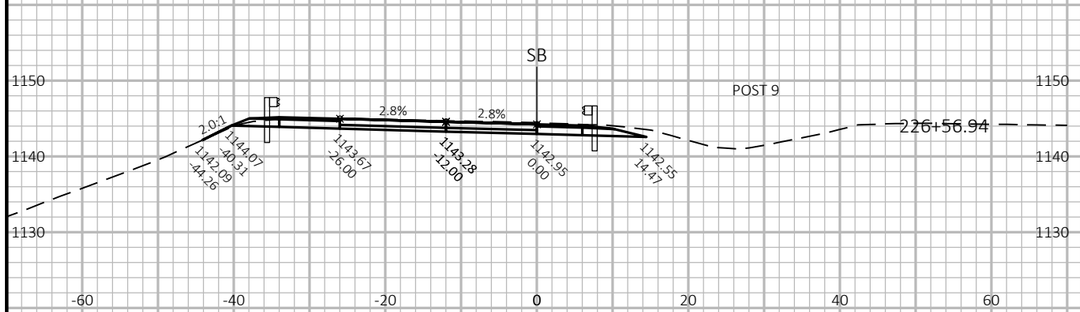
PLOT BY : SCHMIDT, DAVID B

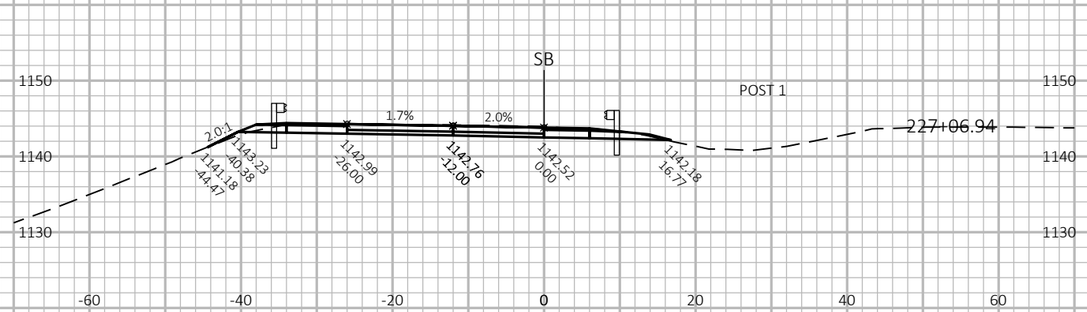
PLOT NAME :

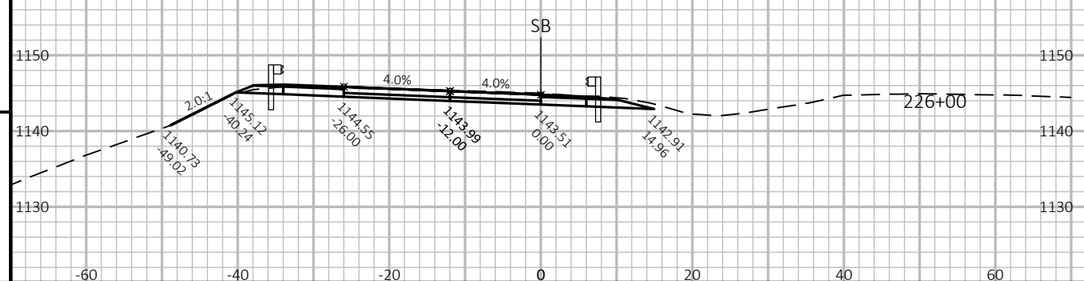
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

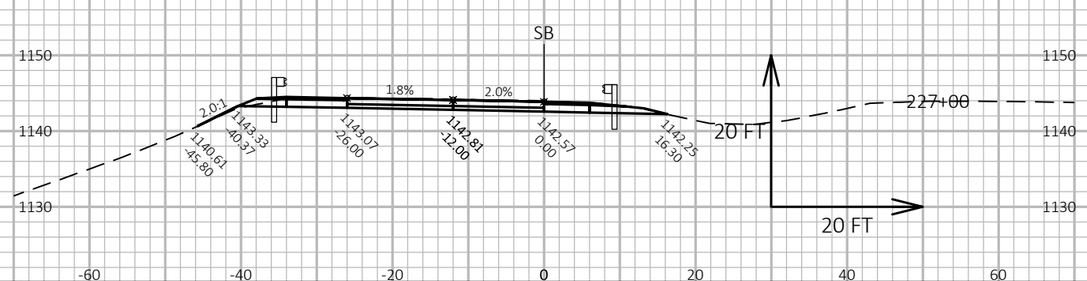












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 502	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_39

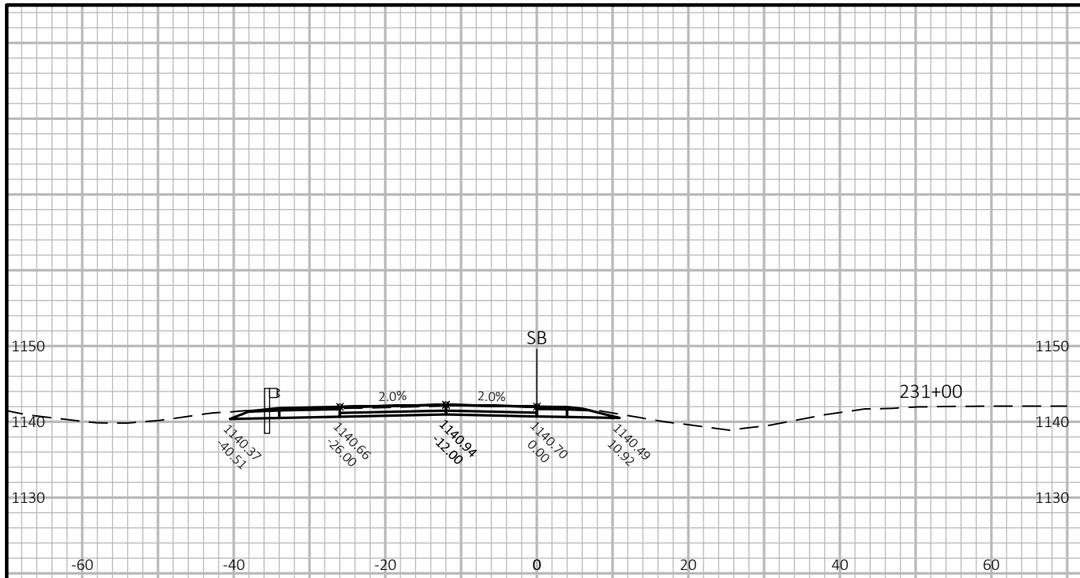
PLOT DATE : 5/22/2018 4:46 PM

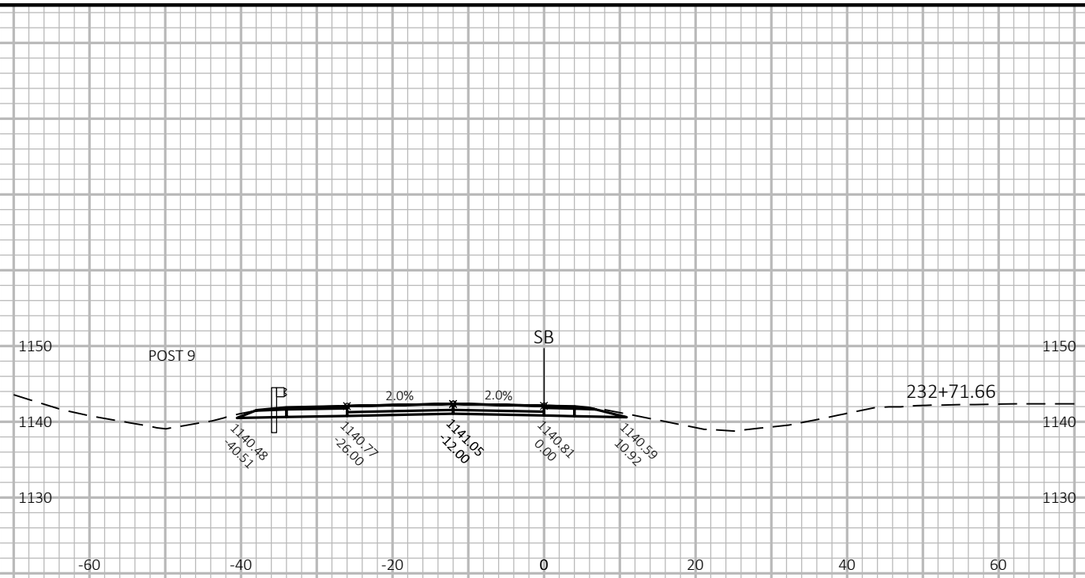
PLOT BY : SCHMIDT, DAVID B

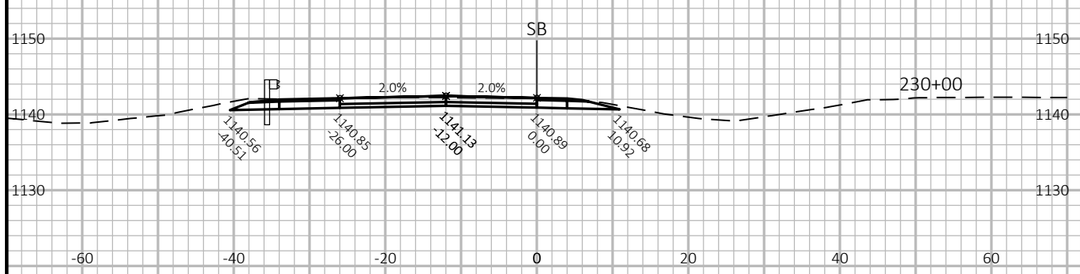
PLOT NAME :

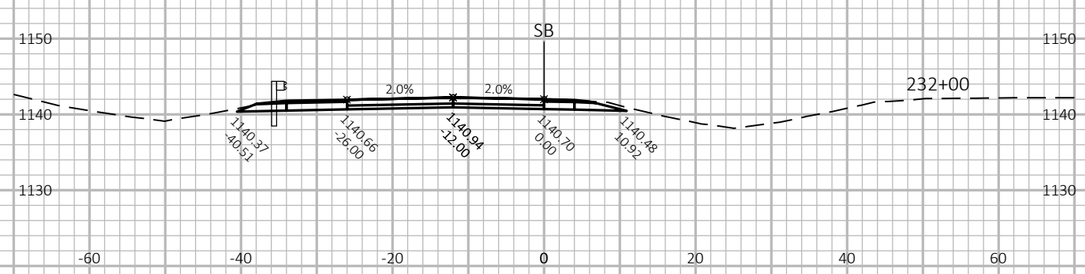
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

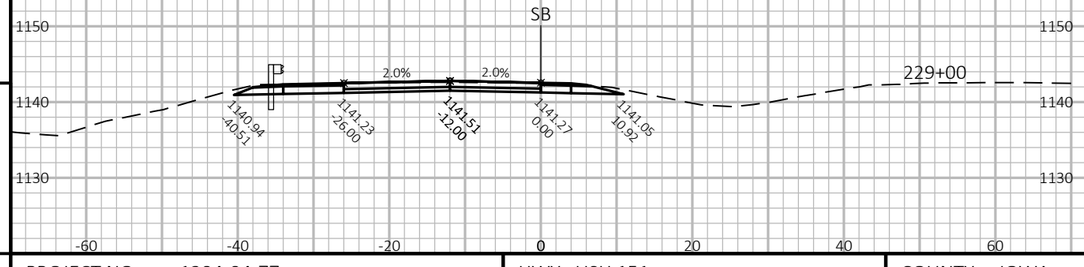
WISDOT/CADDS SHEET 49

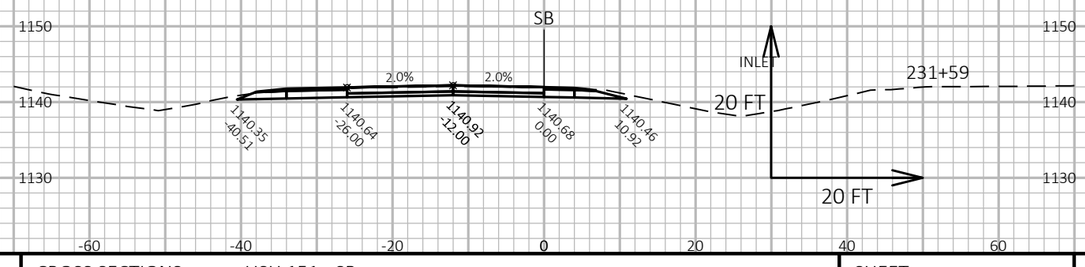












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 503	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_40

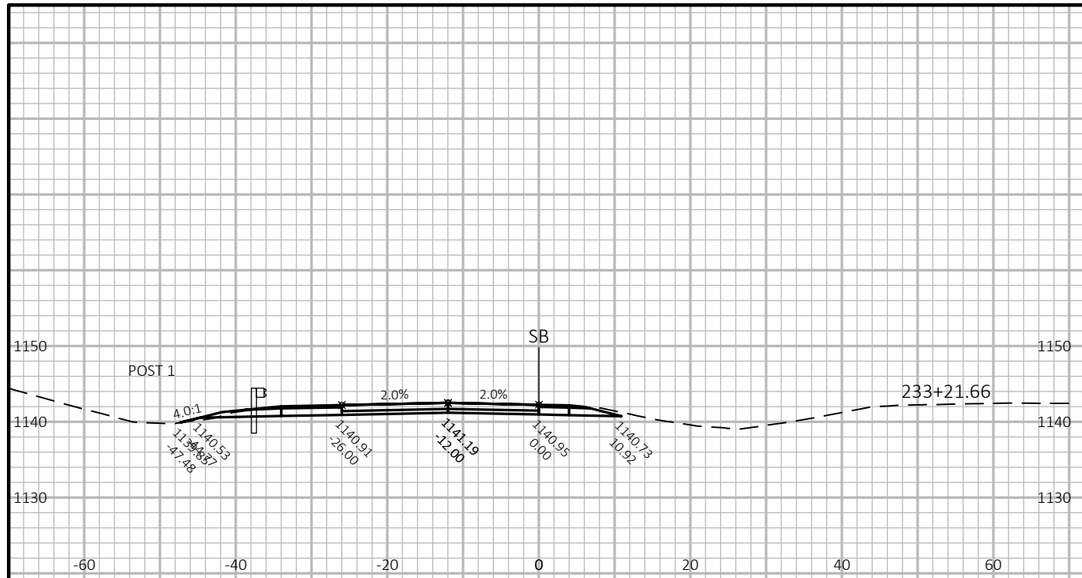
PLOT DATE : 5/22/2018 4:46 PM

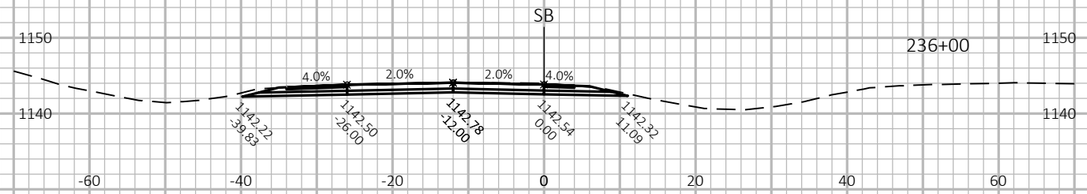
PLOT BY : SCHMIDT, DAVID B

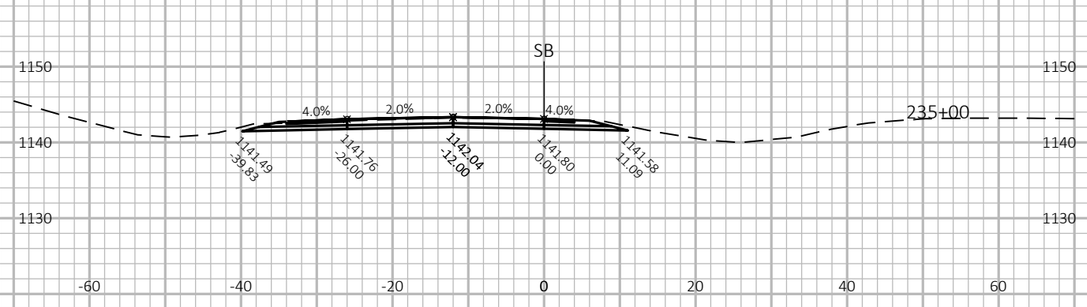
PLOT NAME :

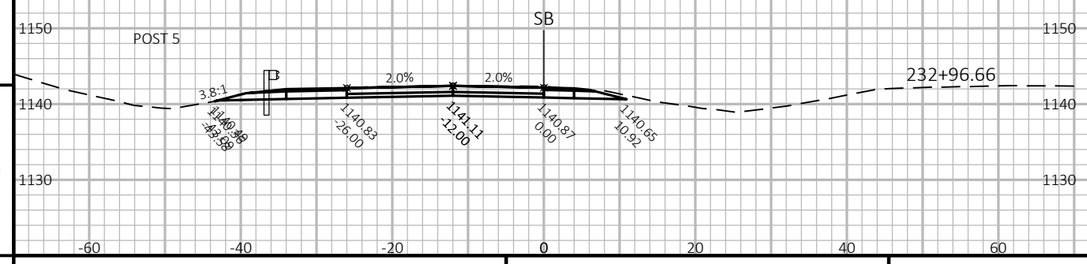
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 504	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_41

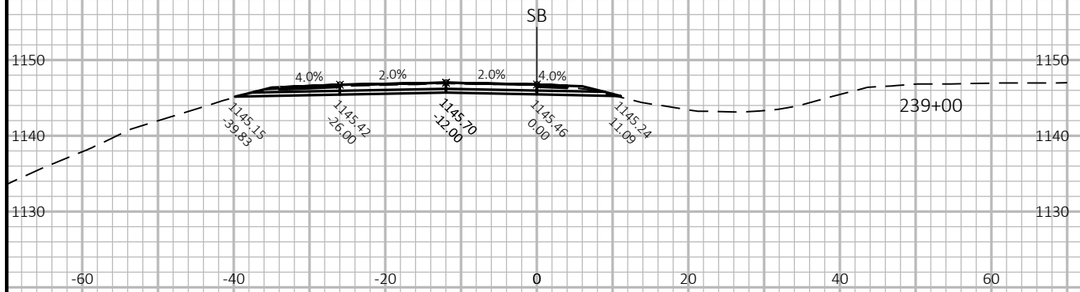
PLOT DATE : 5/22/2018 4:47 PM

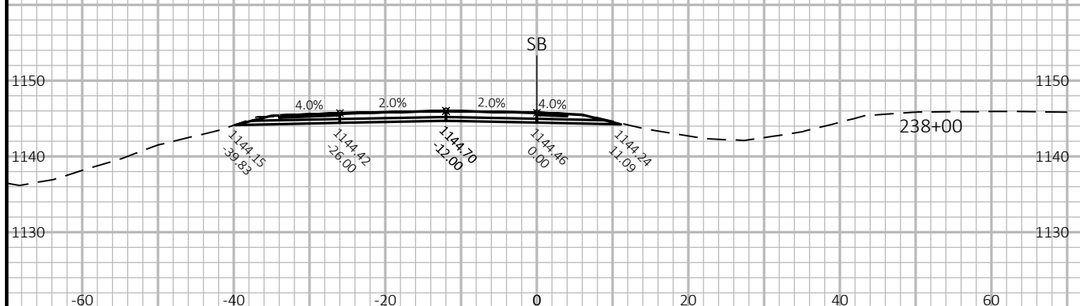
PLOT BY : SCHMIDT, DAVID B

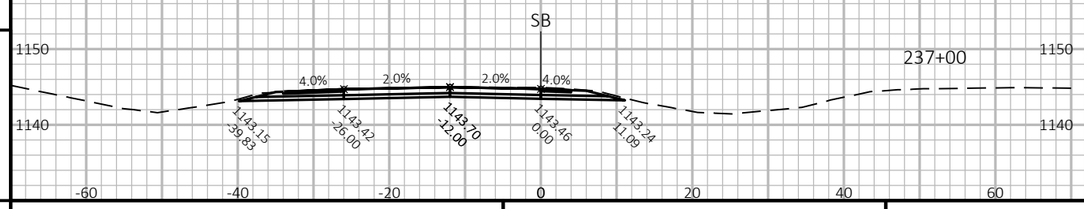
PLOT NAME :

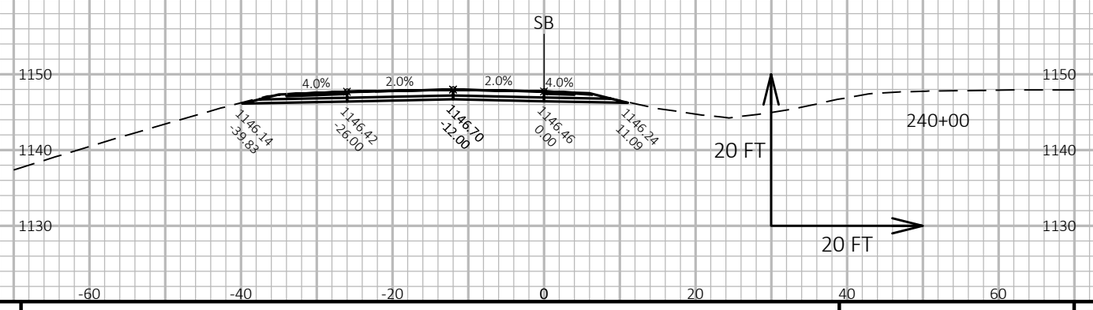
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 151 - SB	SHEET 505	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs_42

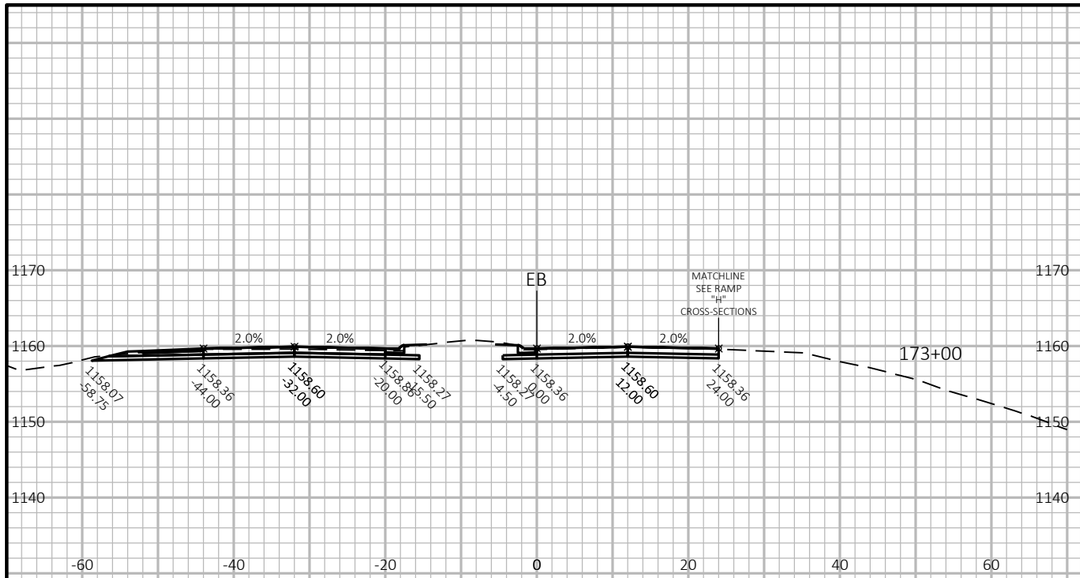
PLOT DATE : 5/22/2018 4:47 PM

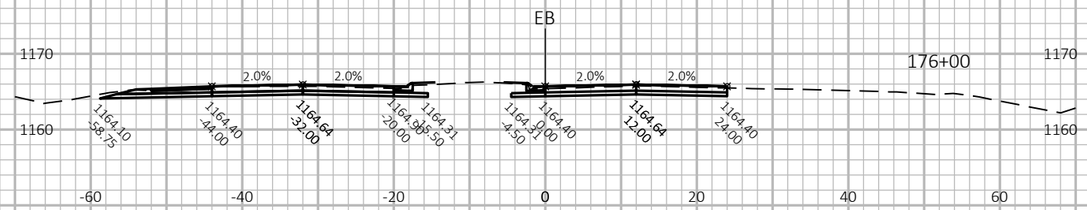
PLOT BY : SCHMIDT, DAVID B

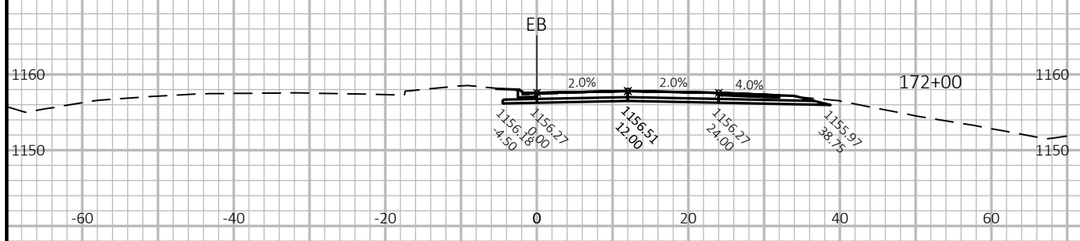
PLOT NAME :

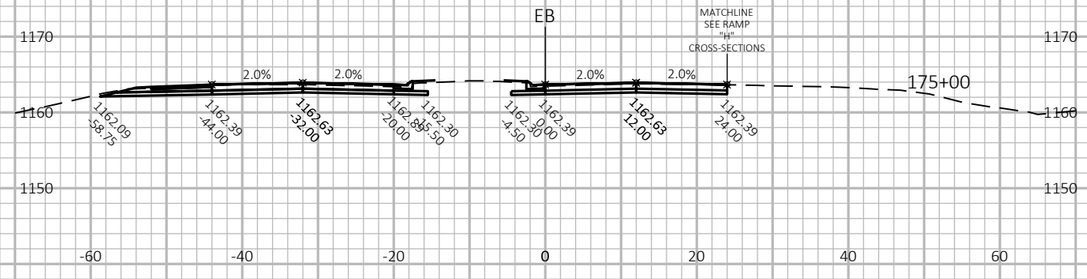
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

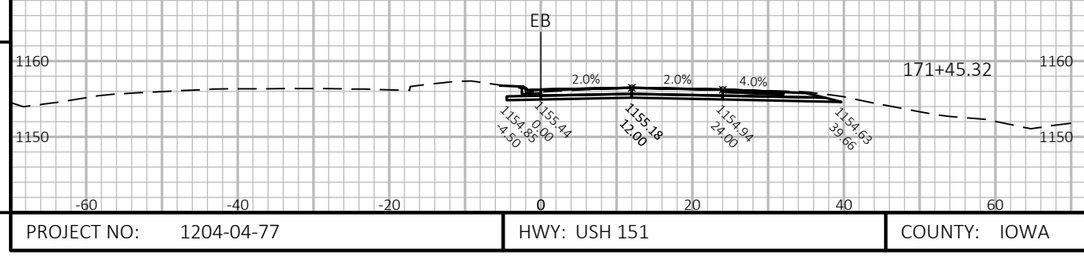
WISDOT/CADDS SHEET 49

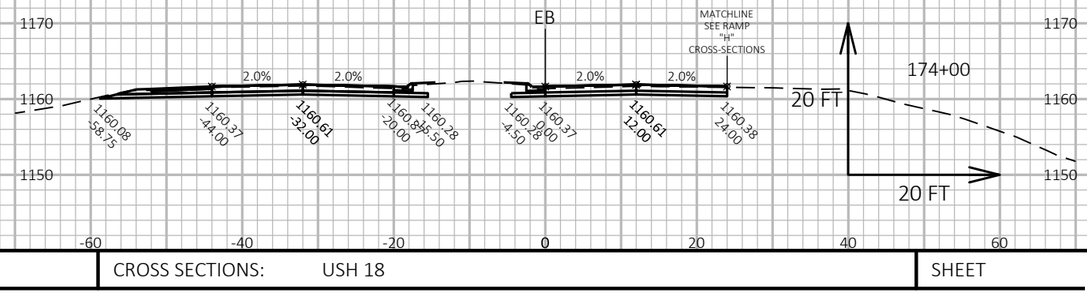












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 506	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_01

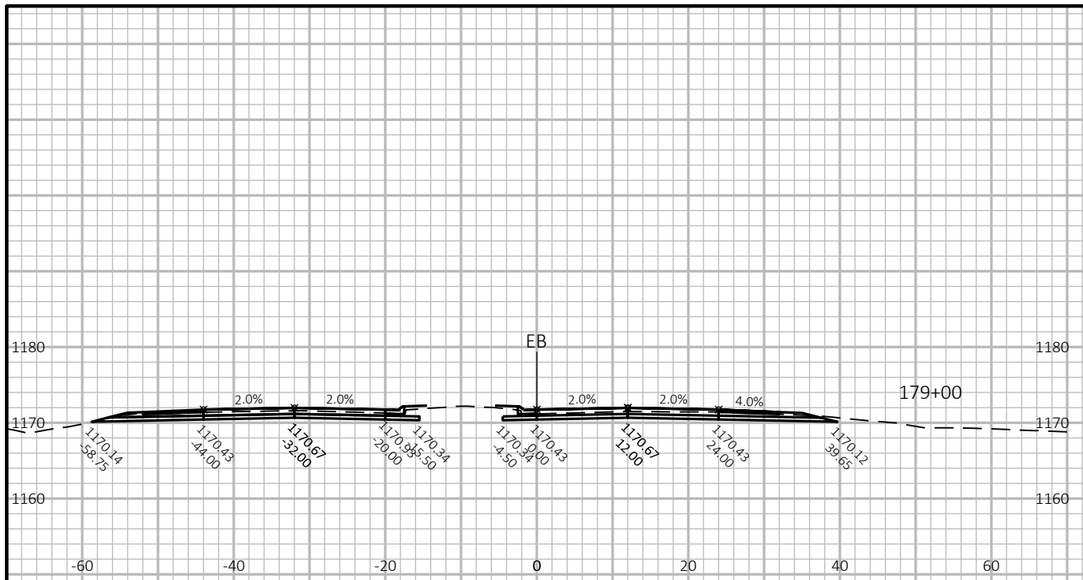
PLOT DATE : 5/22/2018 4:53 PM

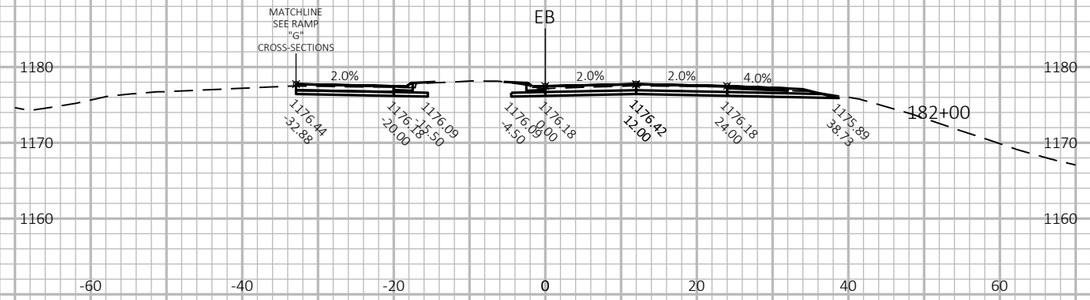
PLOT BY : SCHMIDT, DAVID B

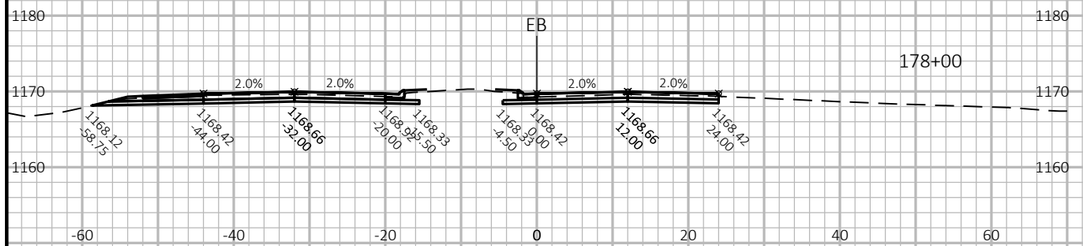
PLOT NAME :

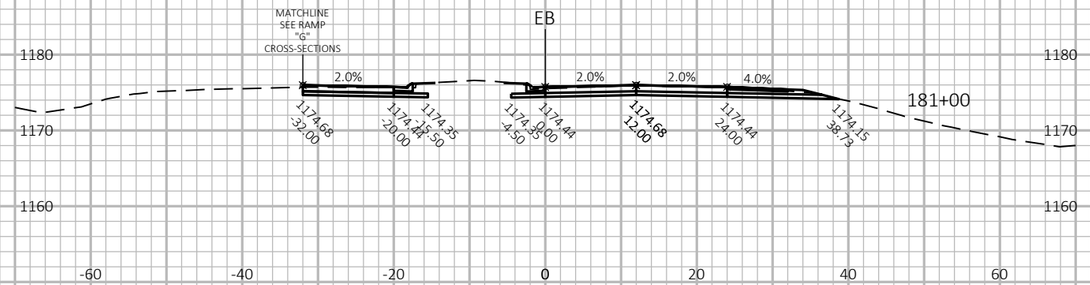
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

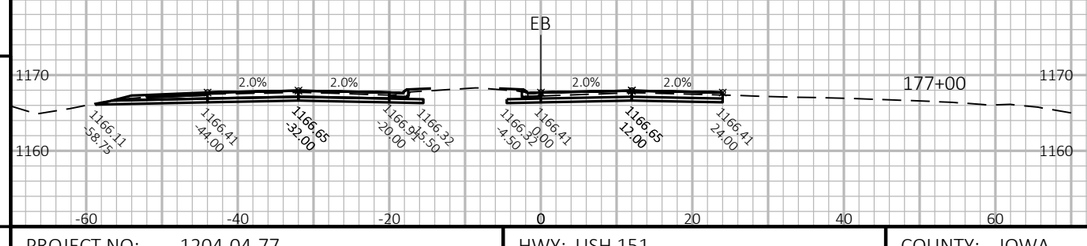
WISDOT/CADDS SHEET 49

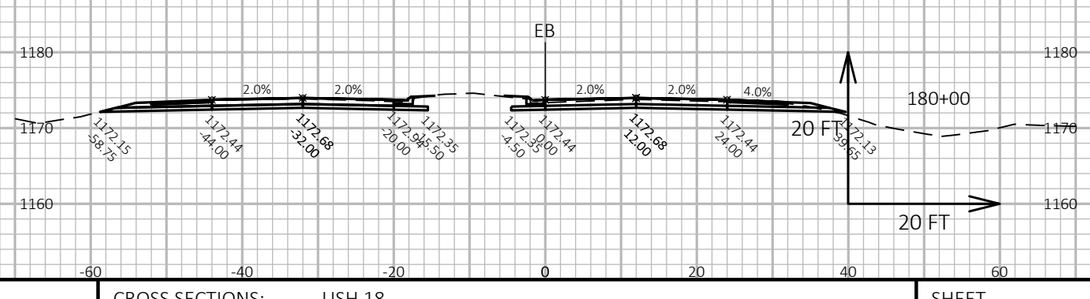












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 507	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_02

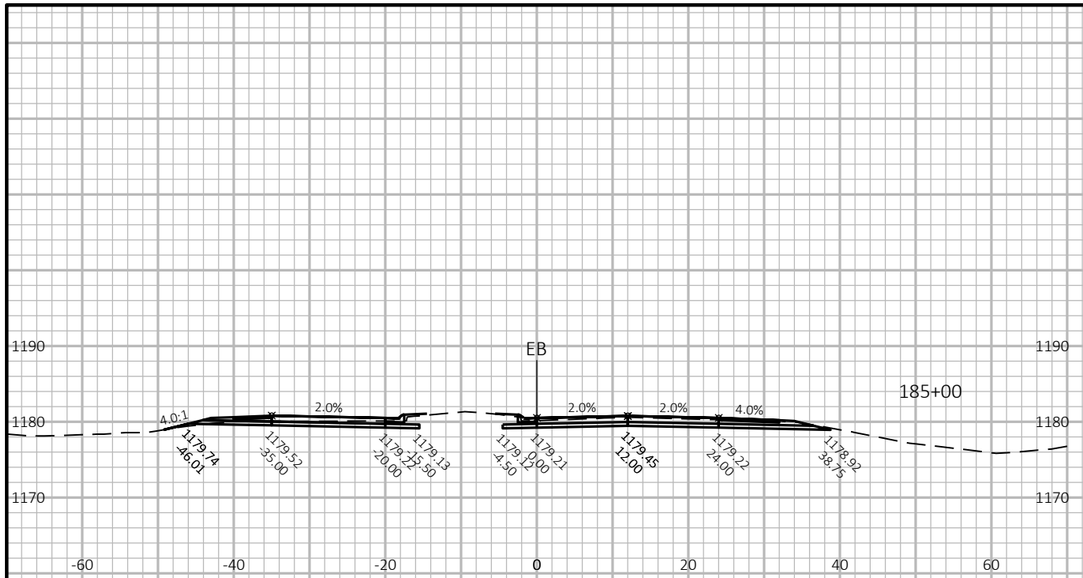
PLOT DATE : 5/22/2018 4:53 PM

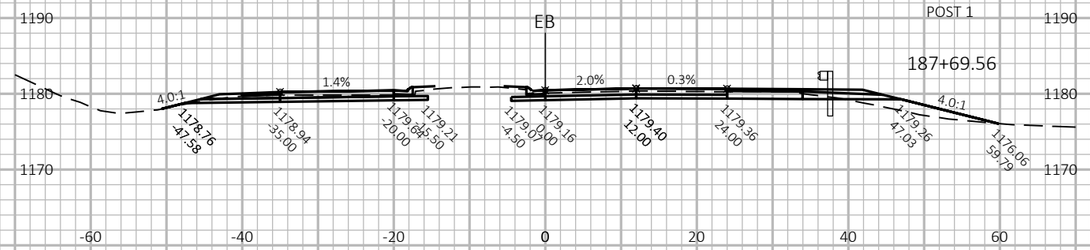
PLOT BY : SCHMIDT, DAVID B

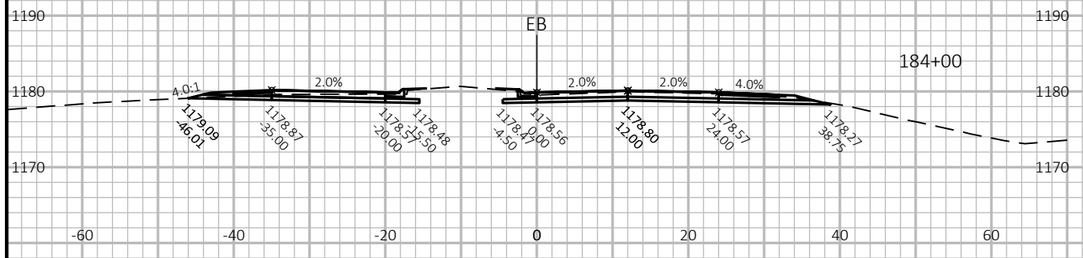
PLOT NAME :

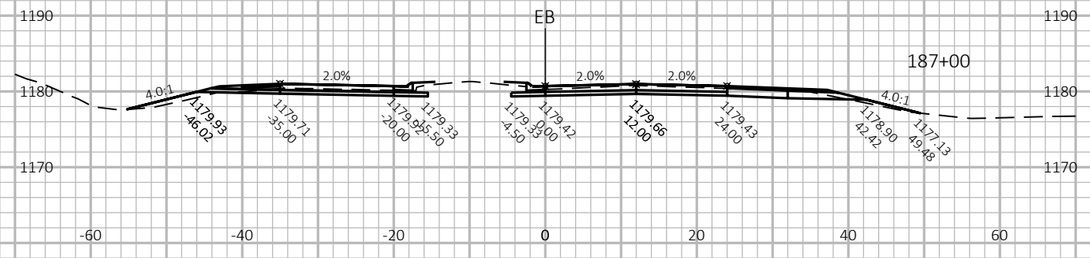
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

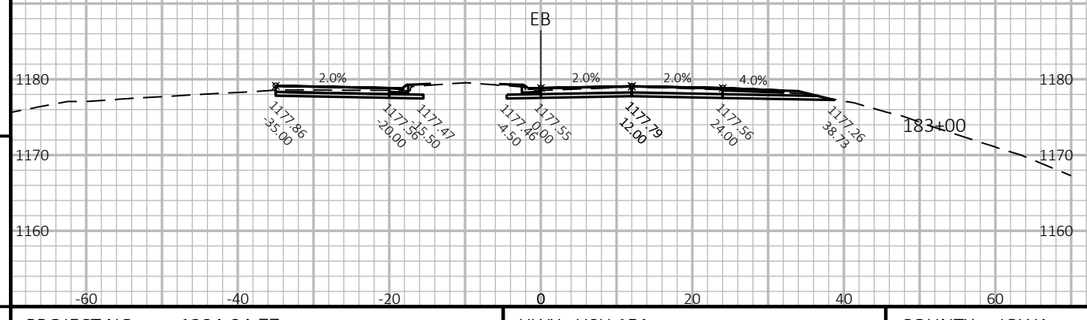
WISDOT/CADDS SHEET 49

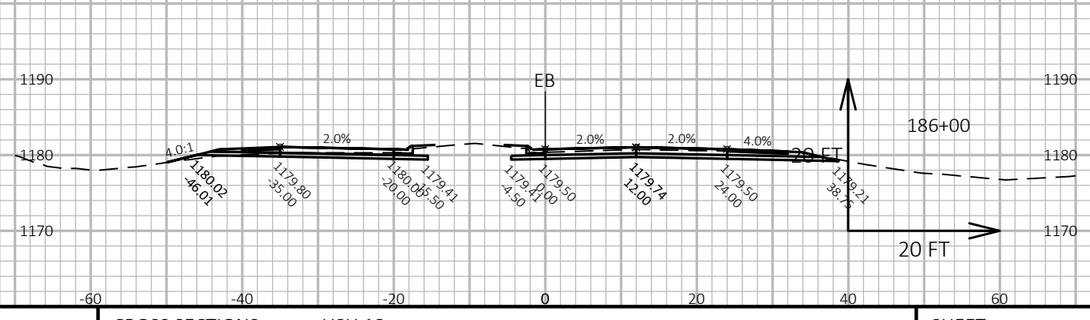












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 508	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_03

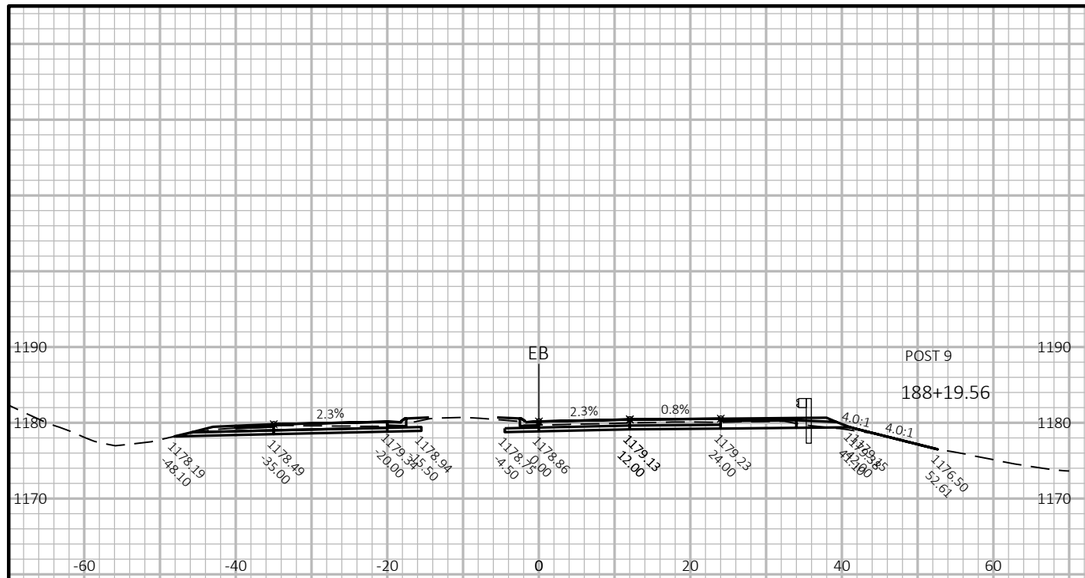
PLOT DATE : 5/22/2018 4:53 PM

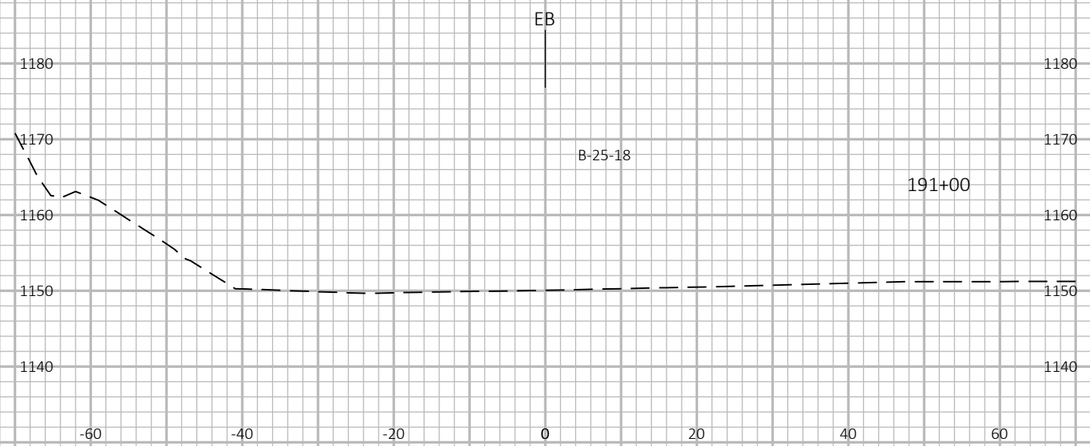
PLOT BY : SCHMIDT, DAVID B

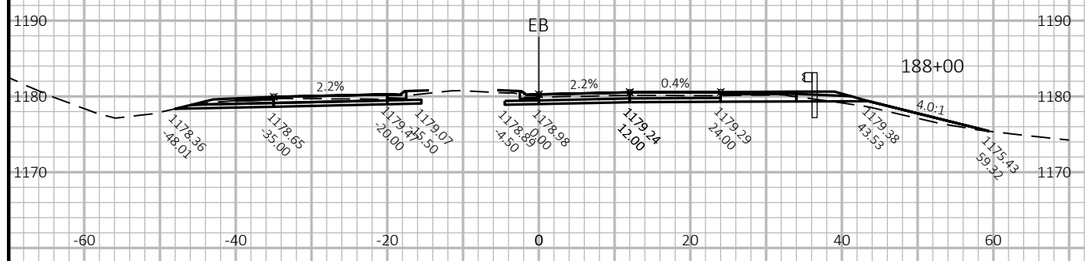
PLOT NAME :

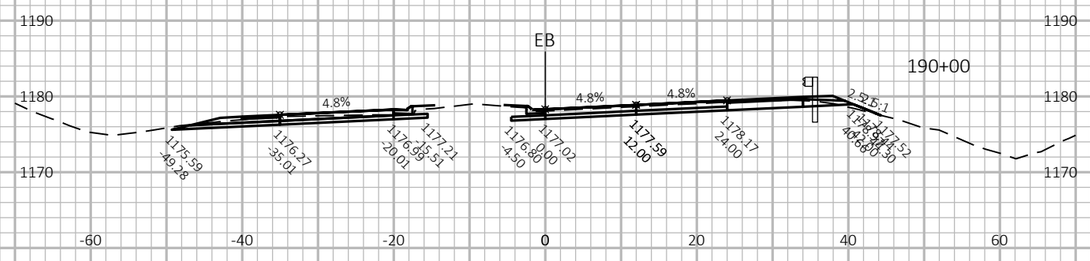
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

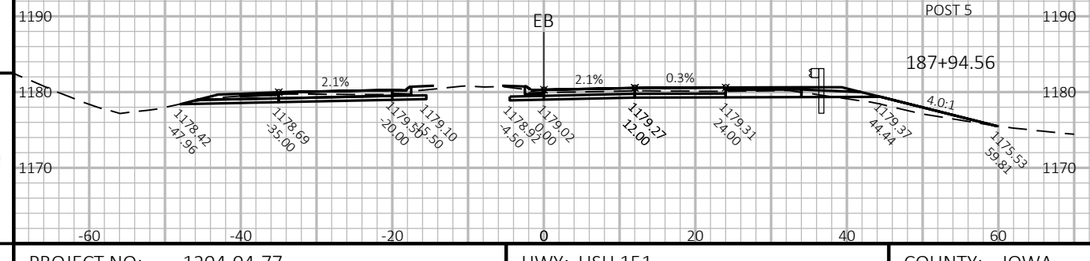
WISDOT/CADDS SHEET 49

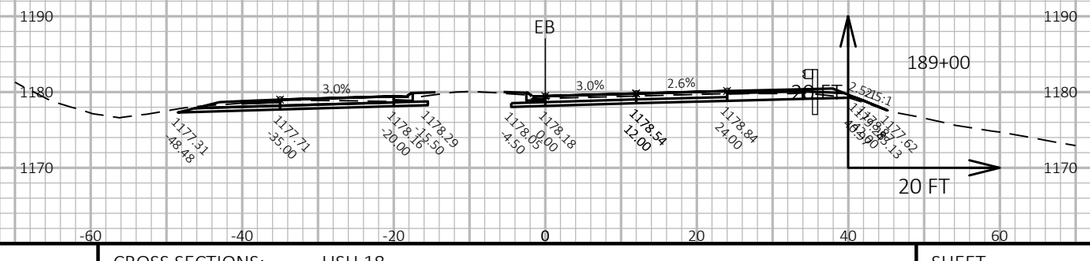












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 509	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_04

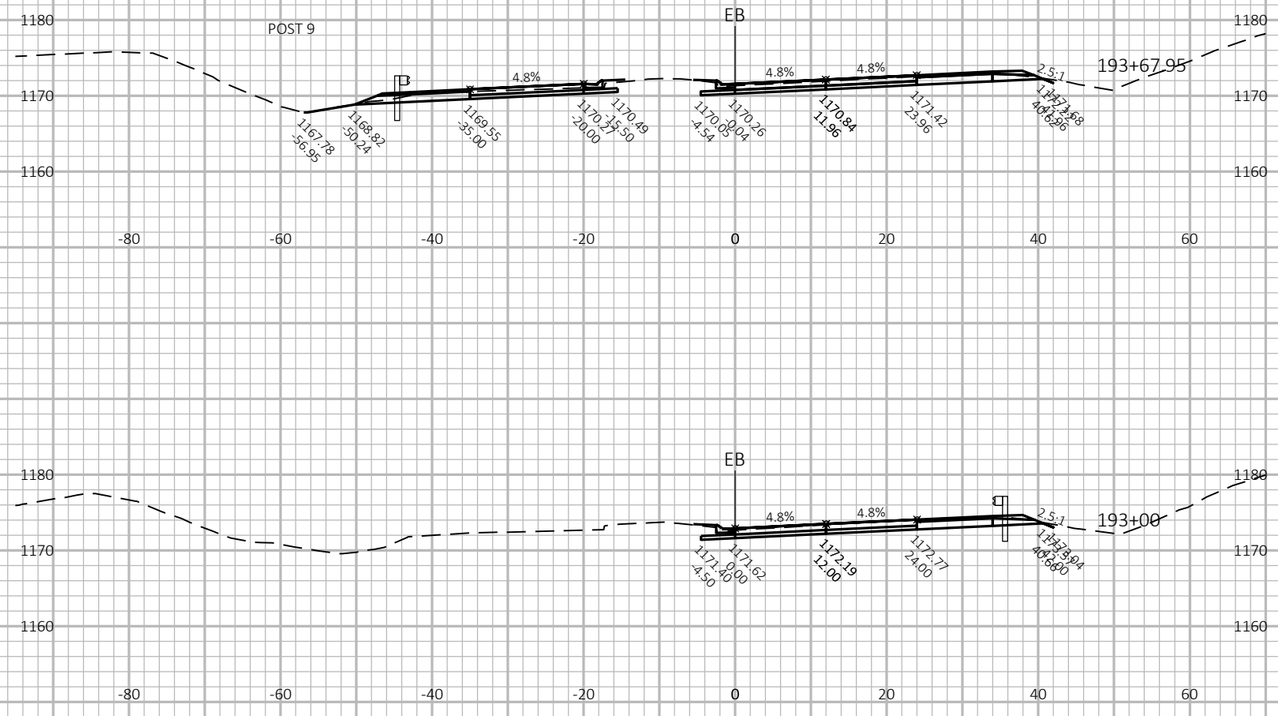
PLOT DATE : 5/22/2018 4:53 PM

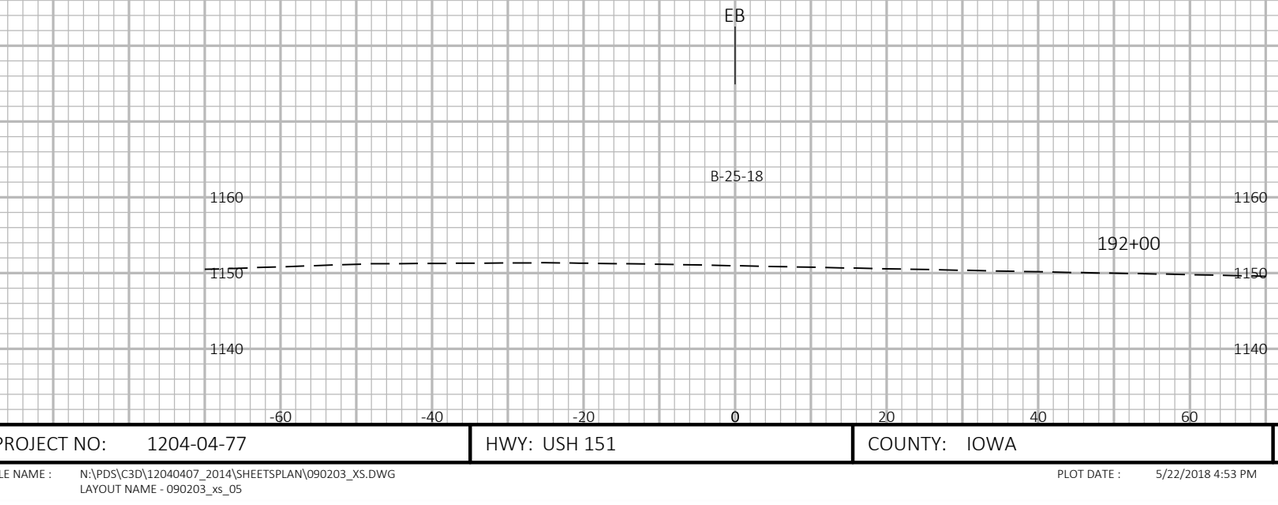
PLOT BY : SCHMIDT, DAVID B

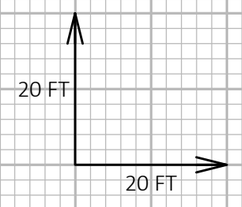
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 510	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_05

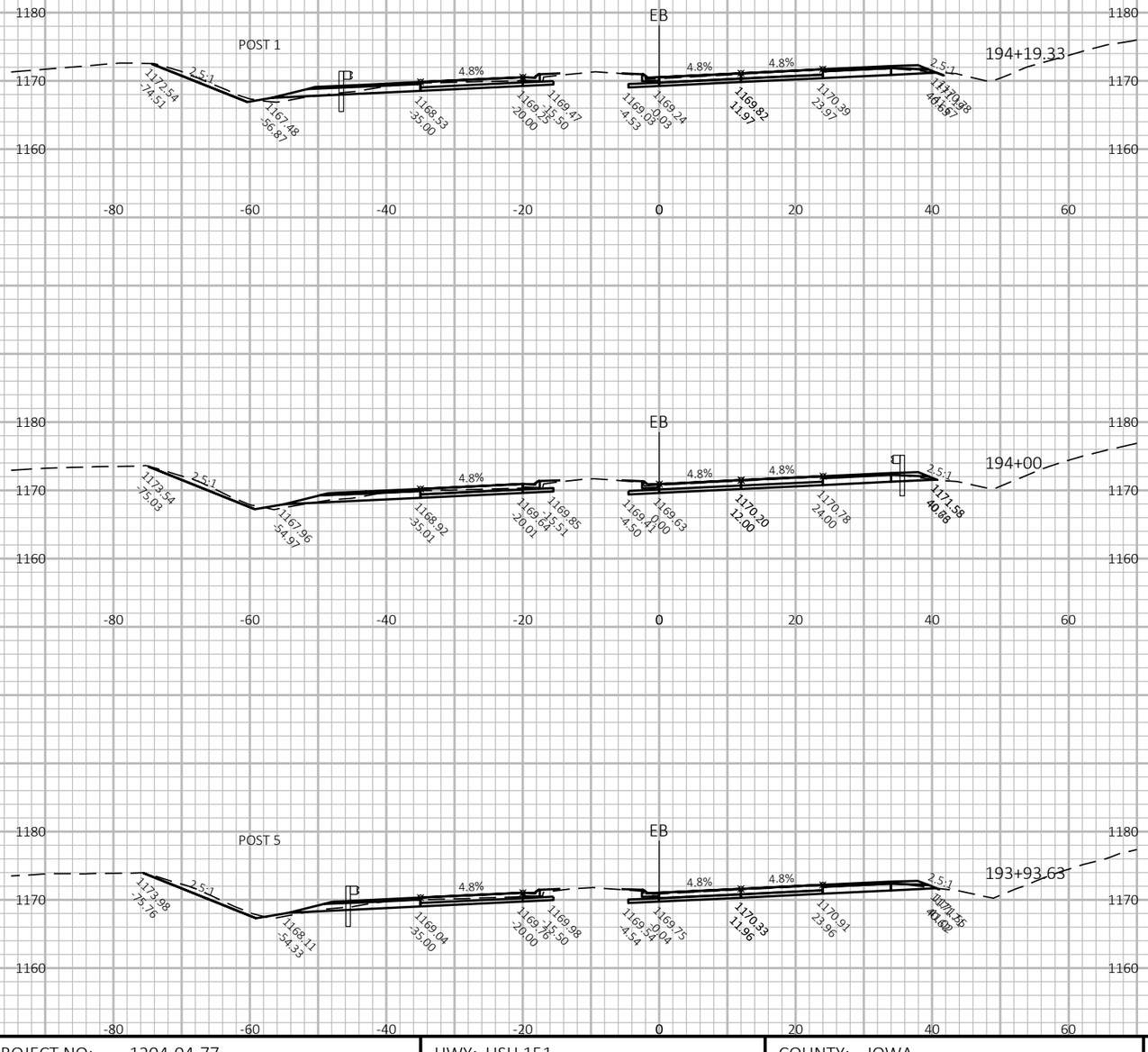
PLOT DATE : 5/22/2018 4:53 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 511	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_06

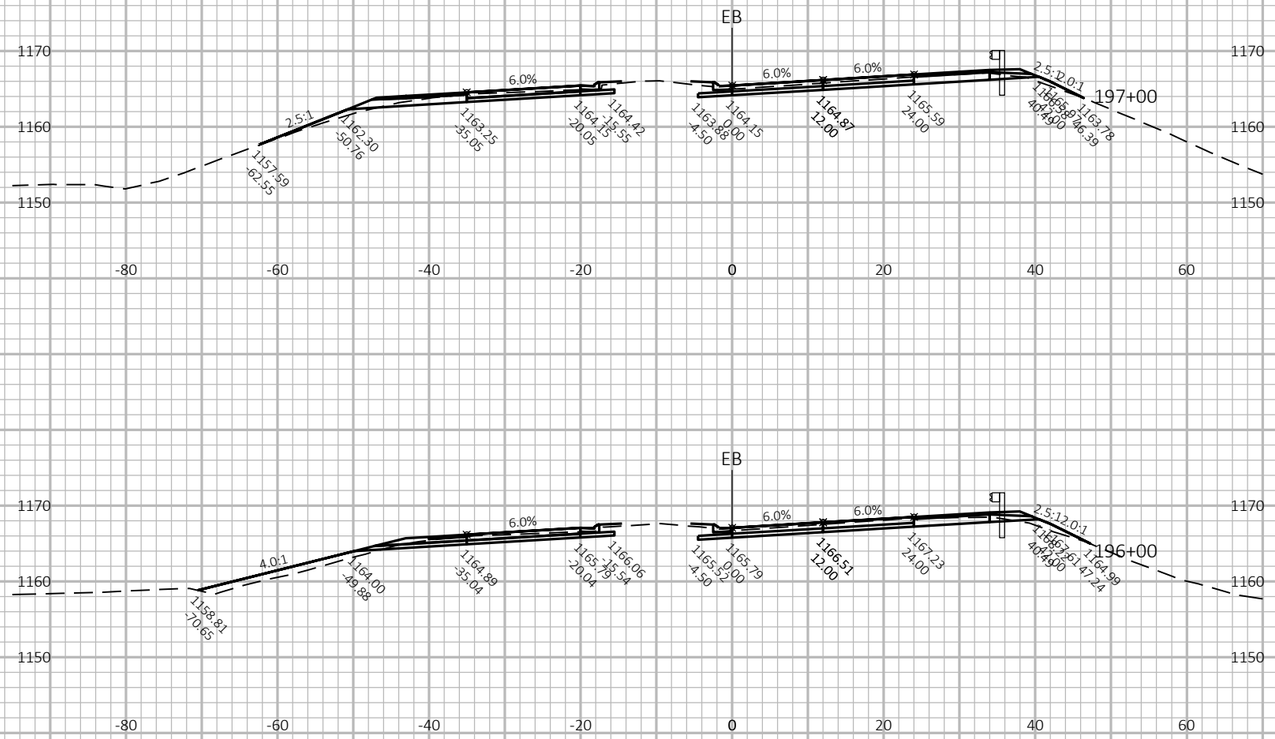
PLOT DATE : 5/22/2018 4:53 PM

PLOT BY : SCHMIDT, DAVID B

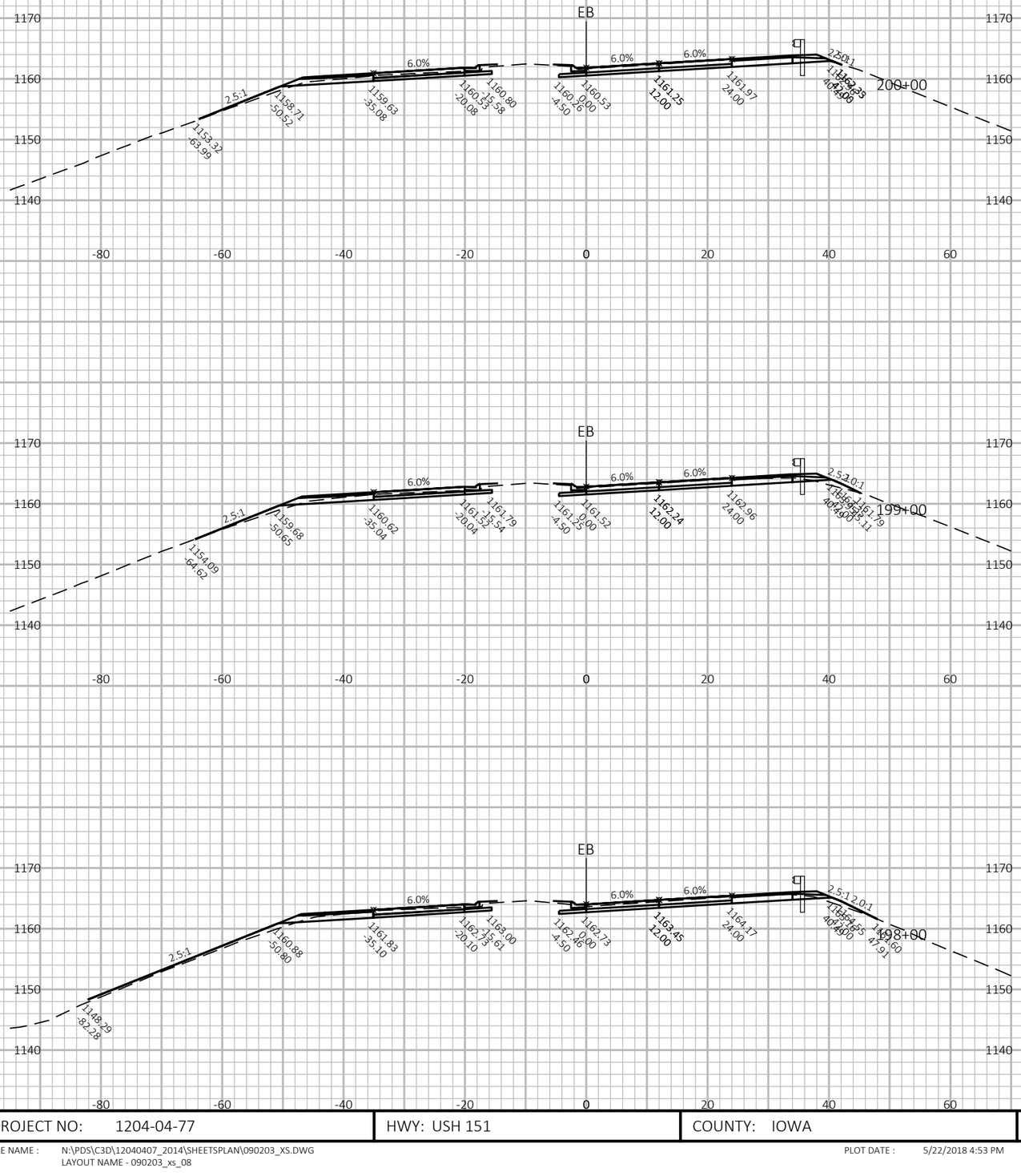
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 512	E



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 513	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_08

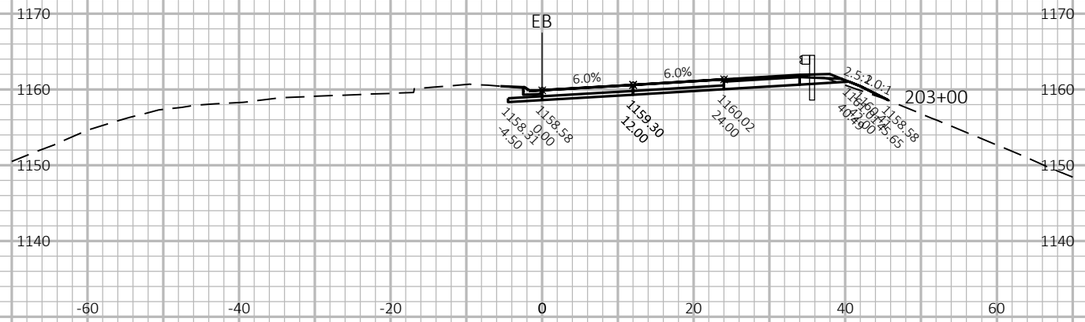
PLOT DATE : 5/22/2018 4:53 PM

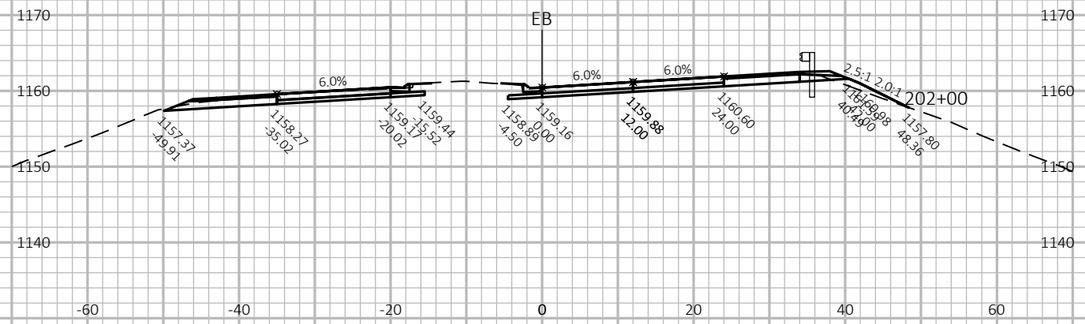
PLOT BY : SCHMIDT, DAVID B

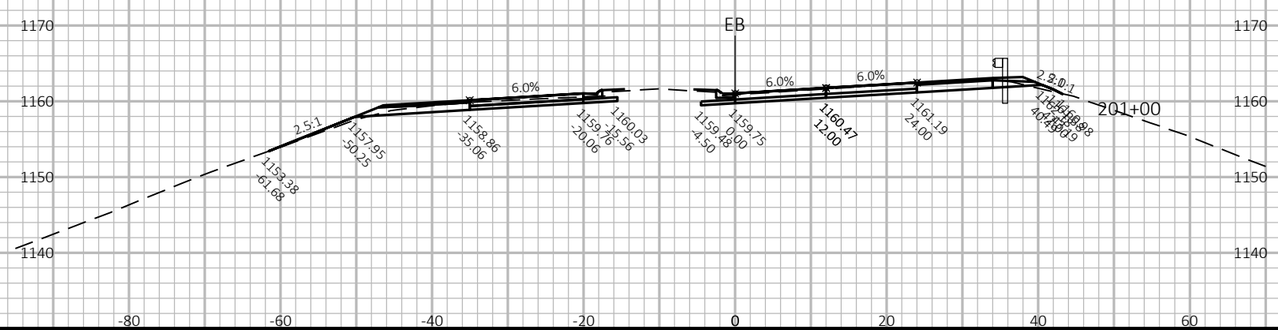
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 514	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_09

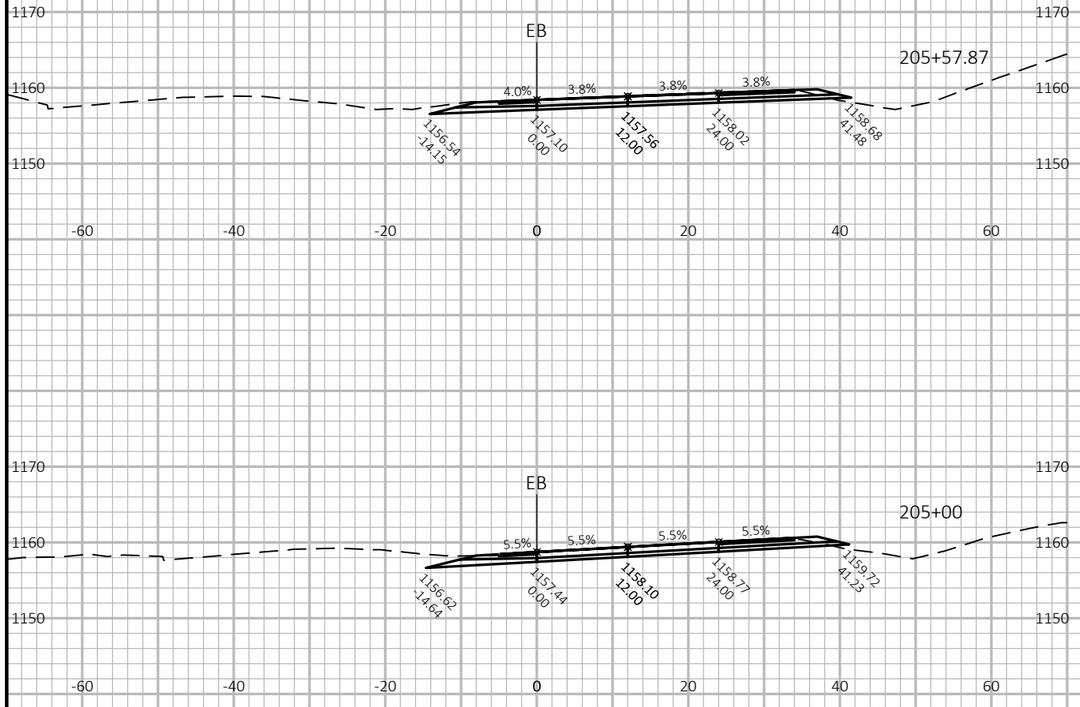
PLOT DATE : 5/22/2018 4:53 PM

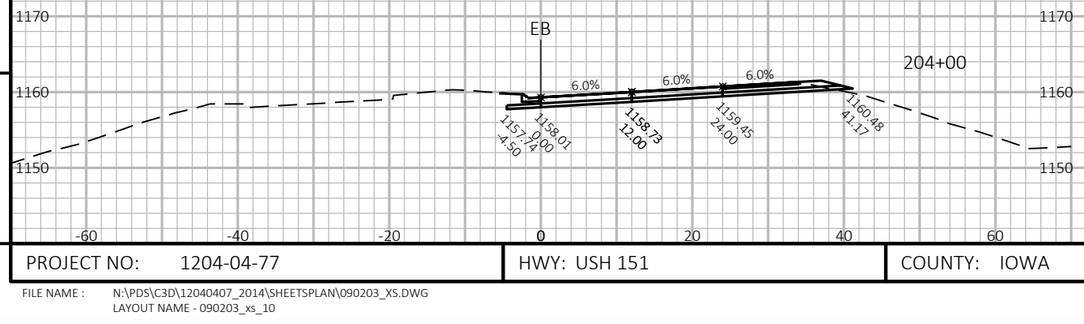
PLOT BY : SCHMIDT, DAVID B

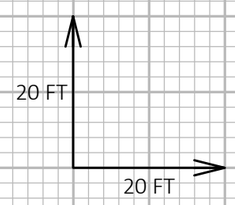
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: USH 18	SHEET 515	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_xs_10

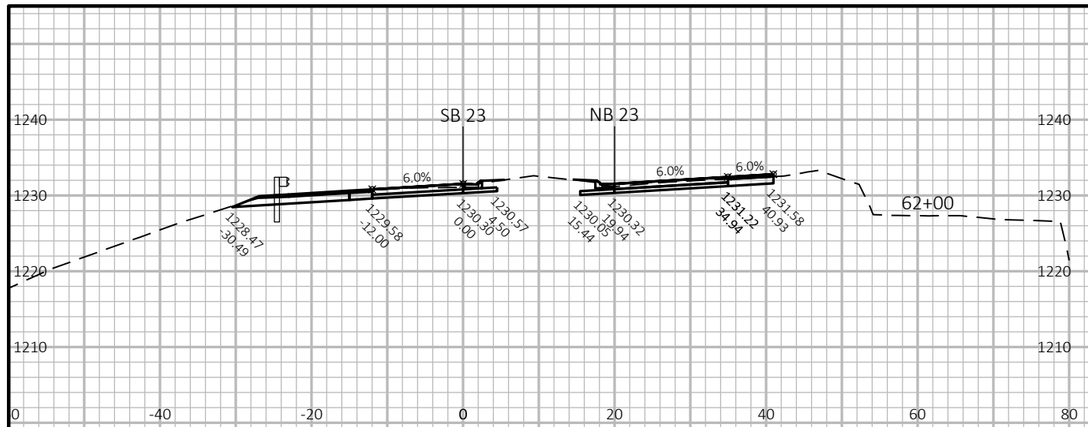
PLOT DATE : 5/22/2018 4:53 PM

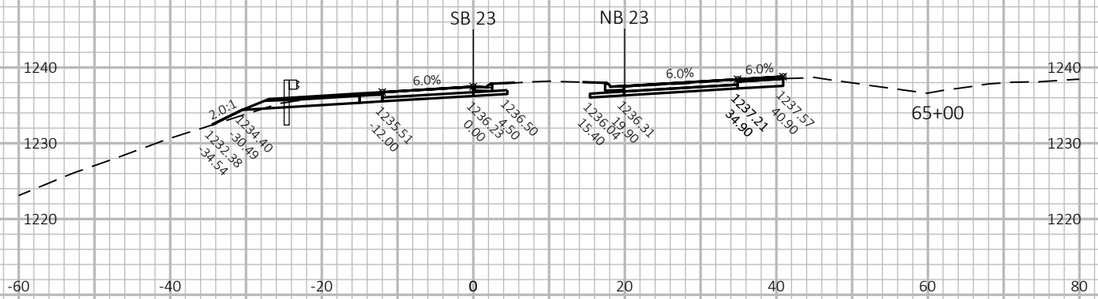
PLOT BY : SCHMIDT, DAVID B

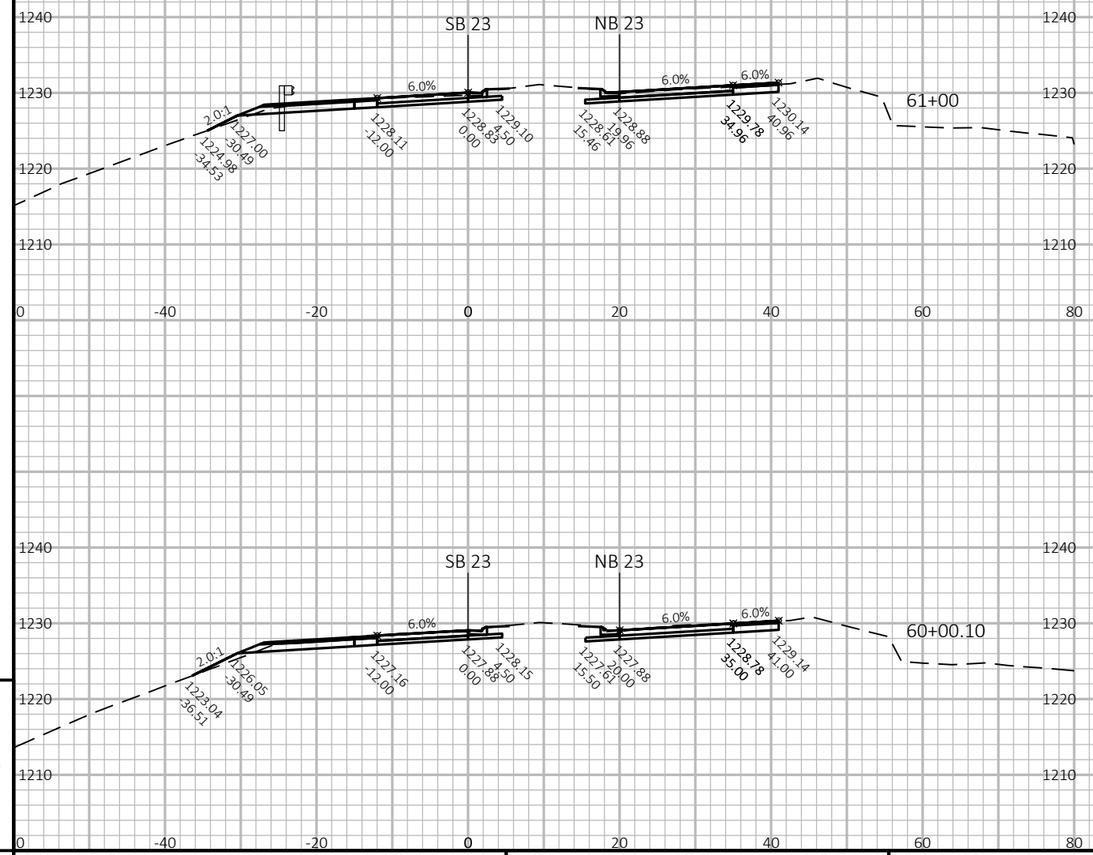
PLOT NAME :

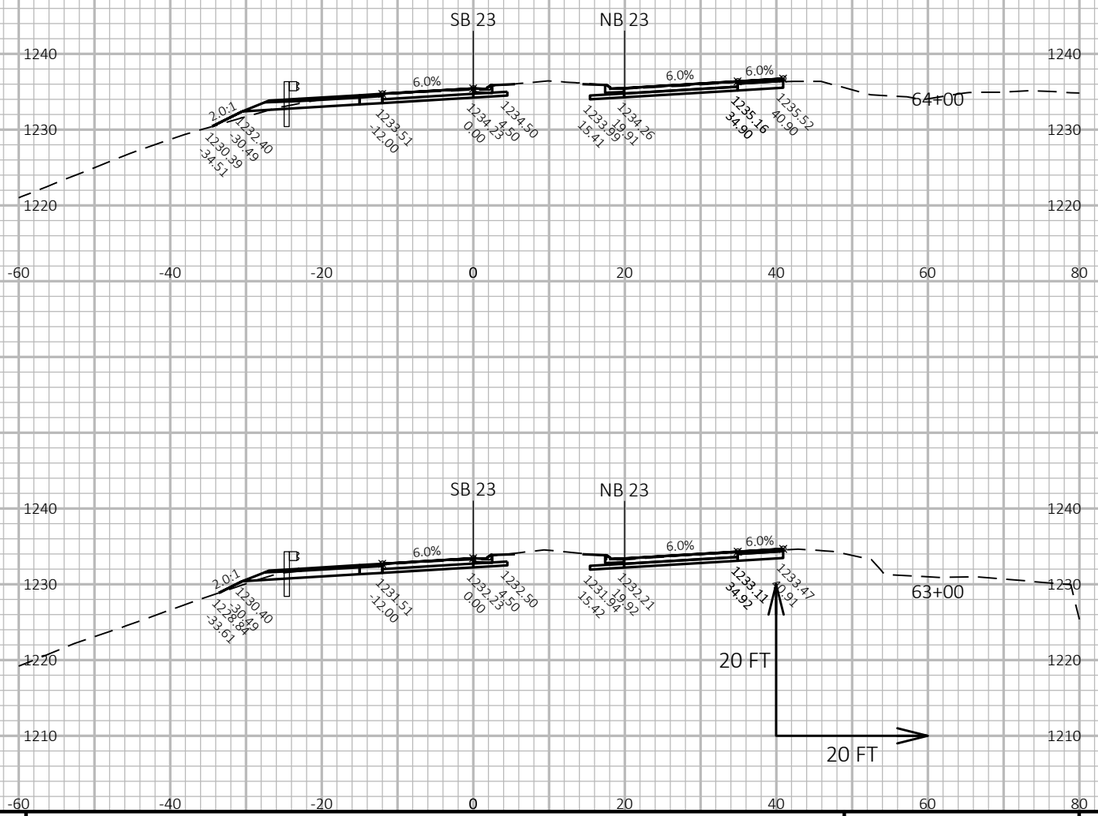
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: STH 23	SHEET 516	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090204_xs_ 1

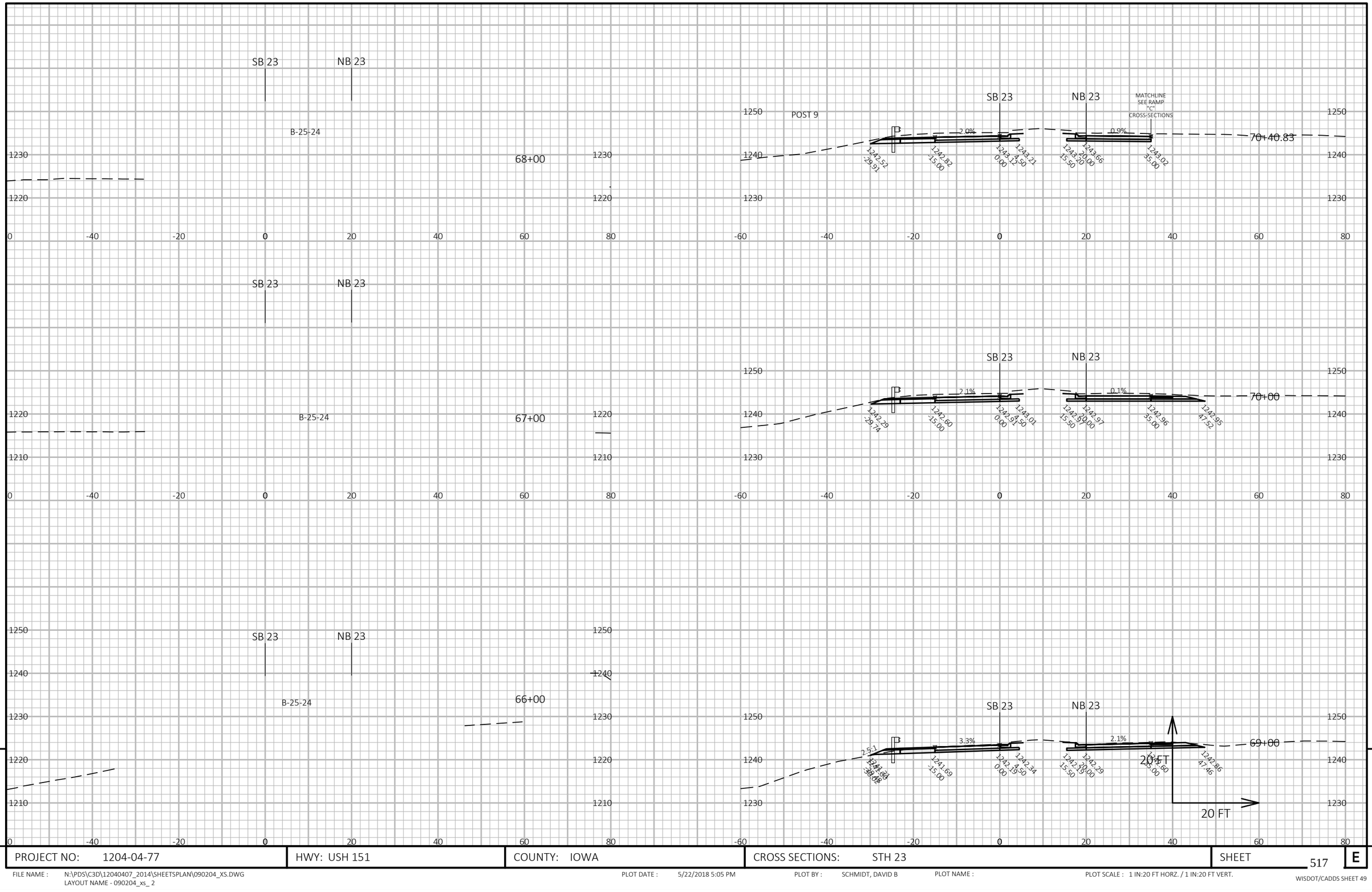
PLOT DATE : 5/22/2018 5:05 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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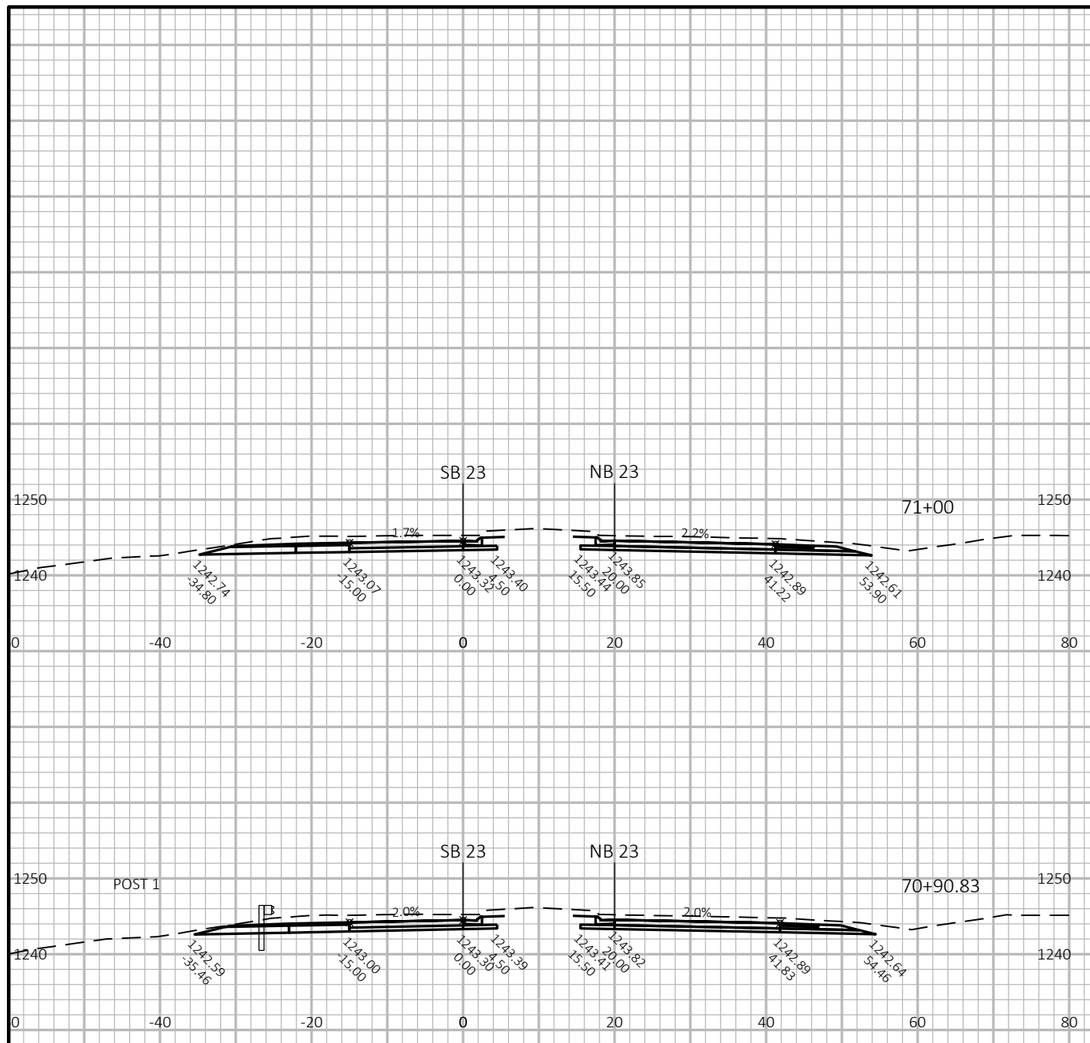
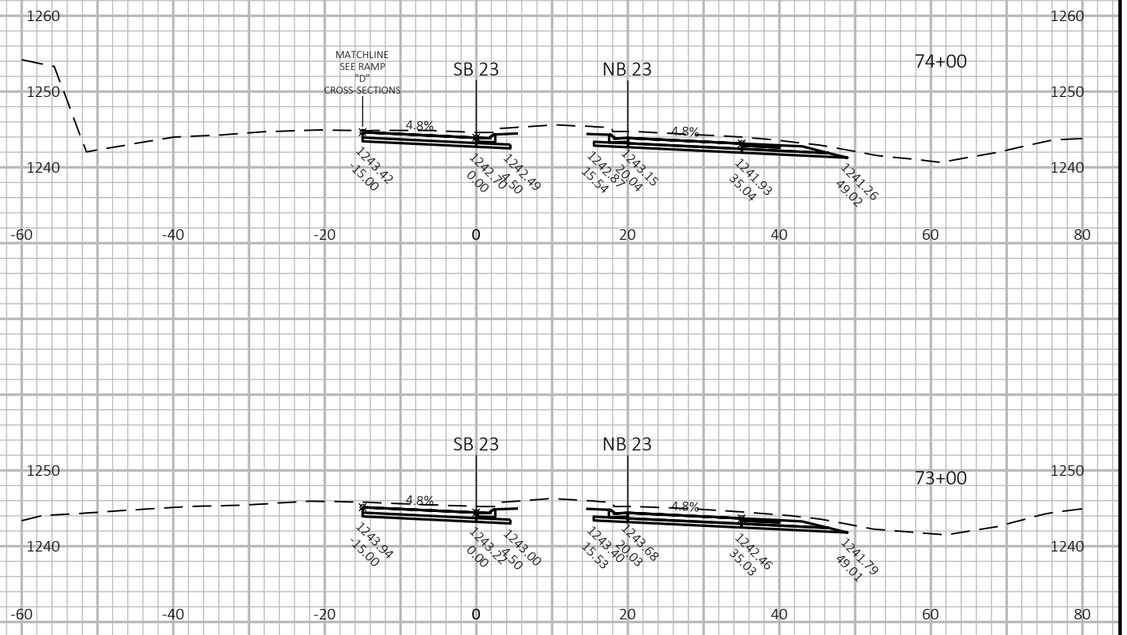
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: STH 23	SHEET 517	E

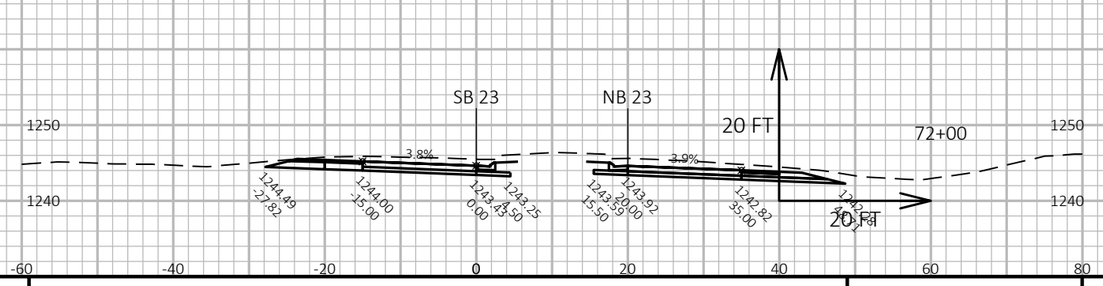
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090204_xs_ 2

PLOT DATE : 5/22/2018 5:05 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: STH 23	SHEET 518	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090204_xs_ 3

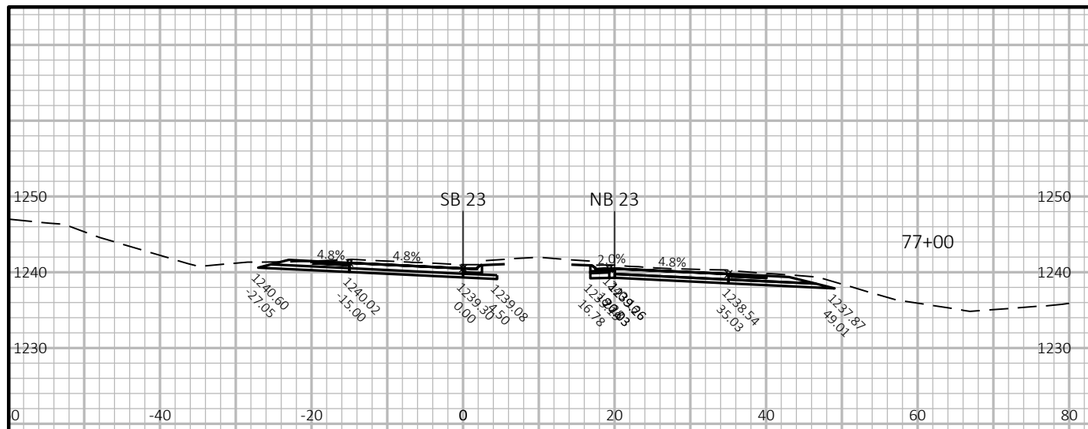
PLOT DATE : 5/22/2018 5:05 PM

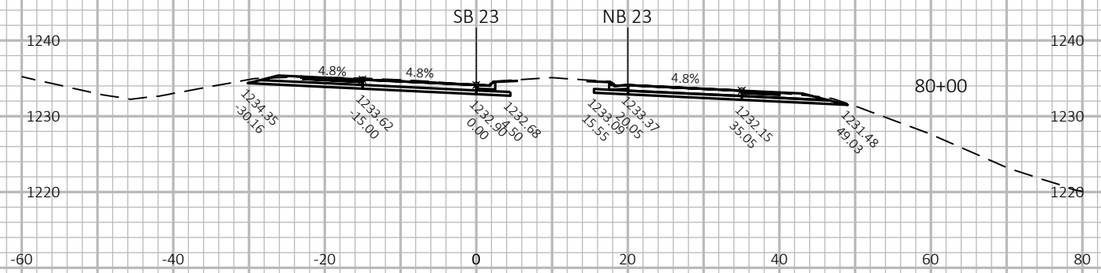
PLOT BY : SCHMIDT, DAVID B

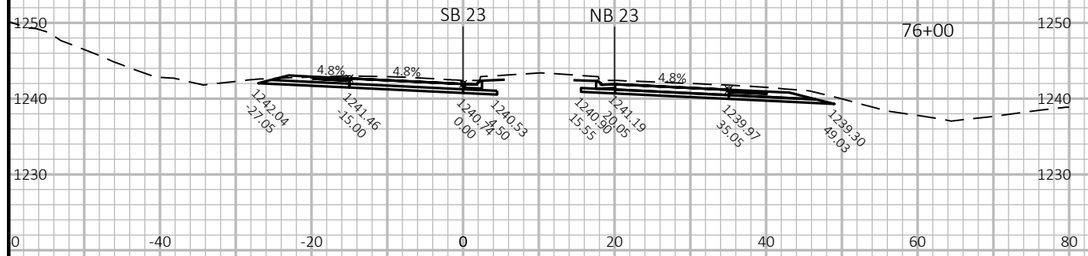
PLOT NAME :

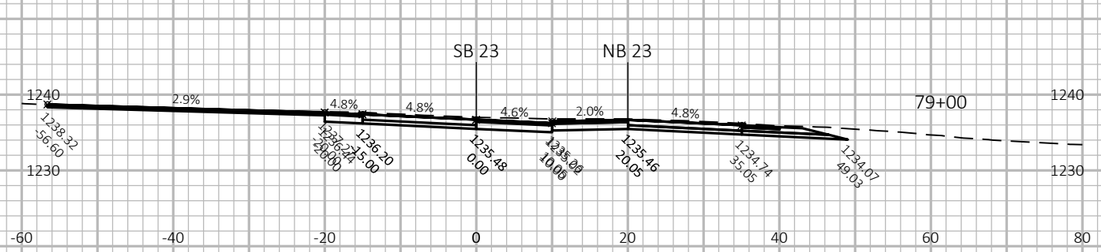
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

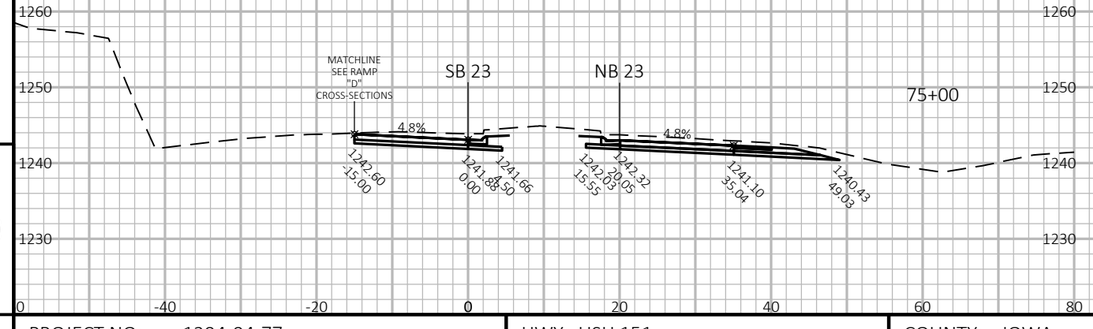
WISDOT/CADDS SHEET 49

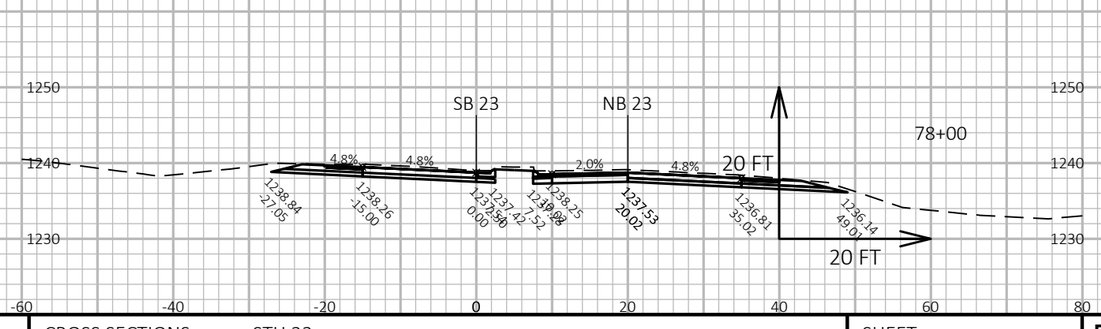












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: STH 23	SHEET 519	E

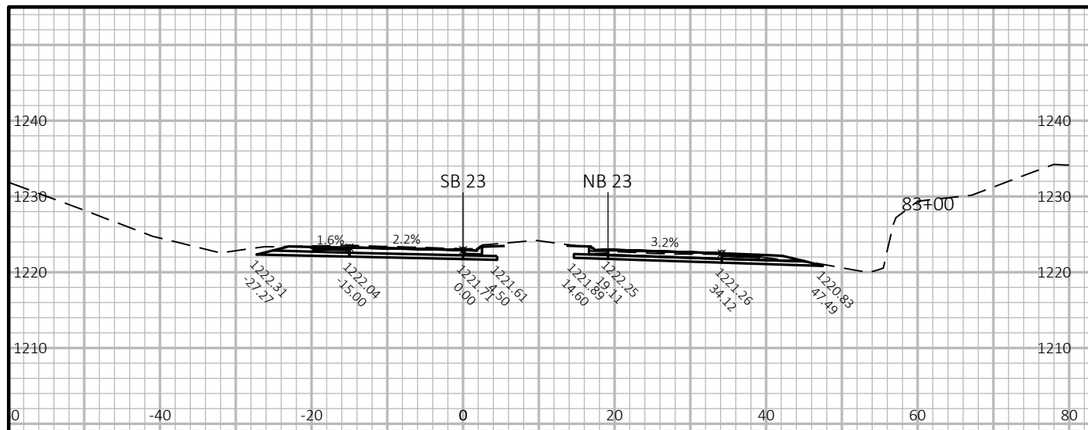
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090204_xs_ 4

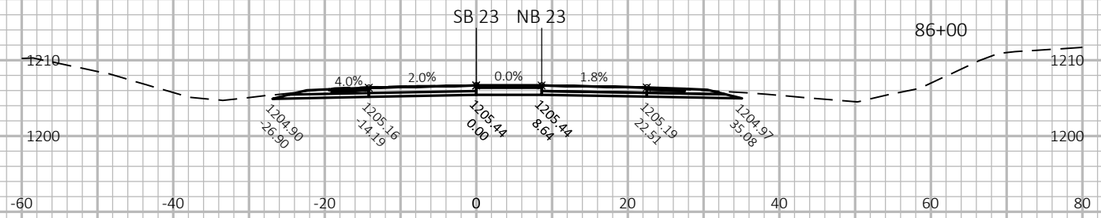
PLOT DATE : 5/22/2018 5:05 PM

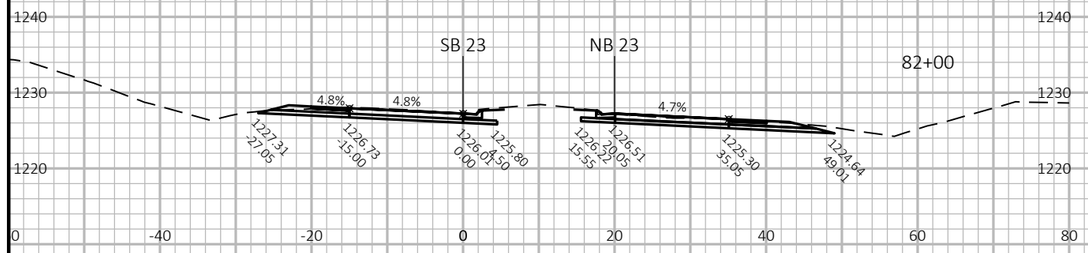
PLOT BY : SCHMIDT, DAVID B

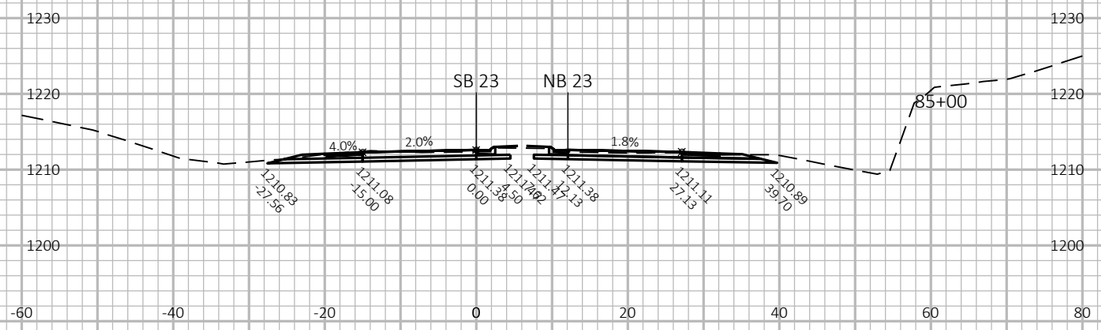
PLOT NAME :

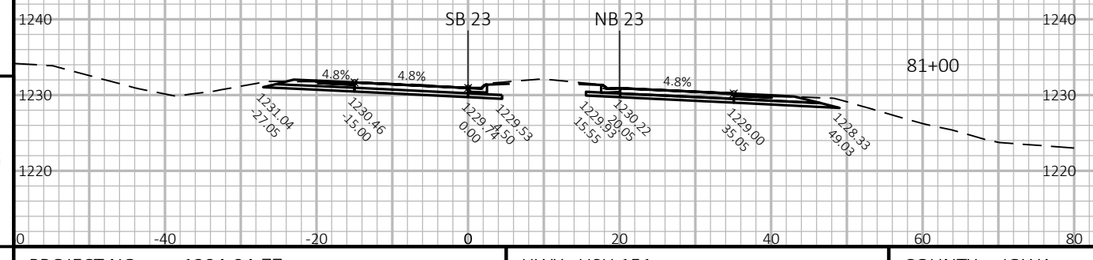
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

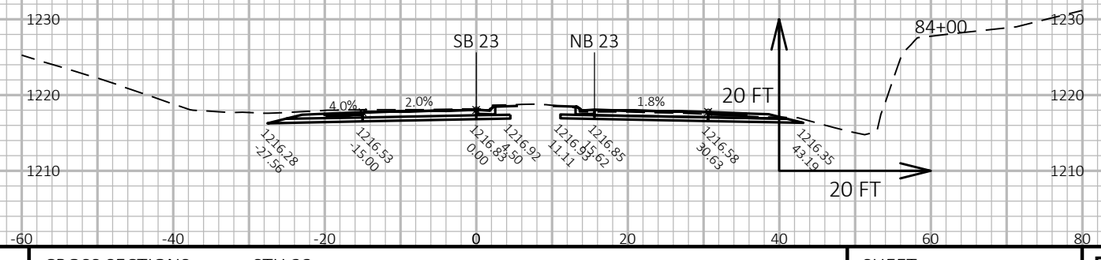












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: STH 23	SHEET 520	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090204_xs_ 5

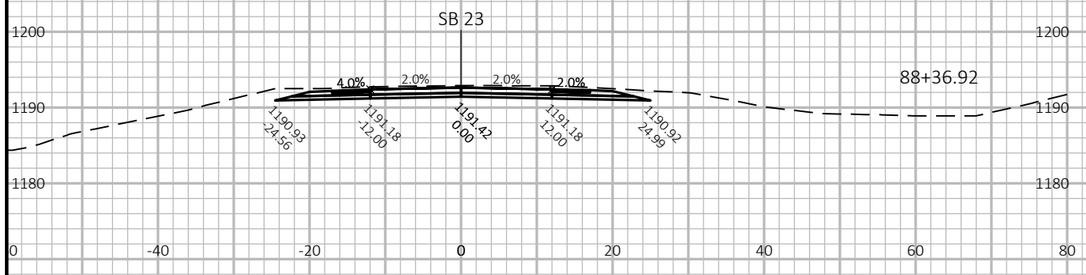
PLOT DATE : 5/22/2018 5:05 PM

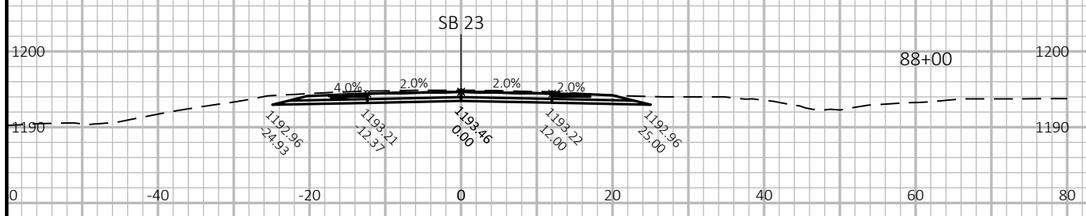
PLOT BY : SCHMIDT, DAVID B

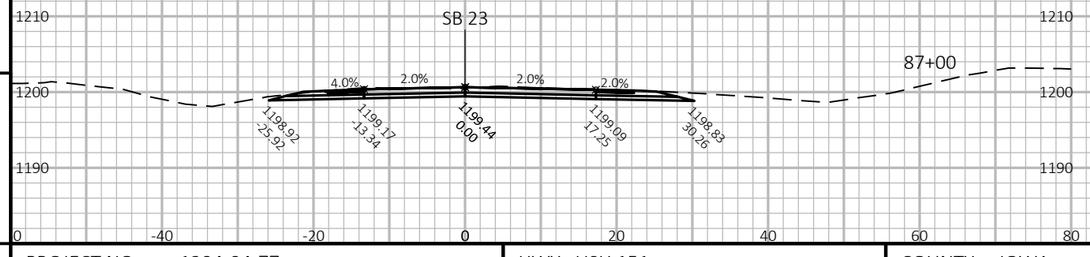
PLOT NAME :

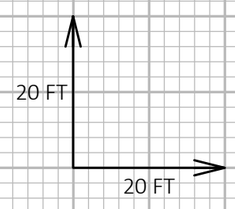
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: STH 23	SHEET 521	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090204_xs_ 6

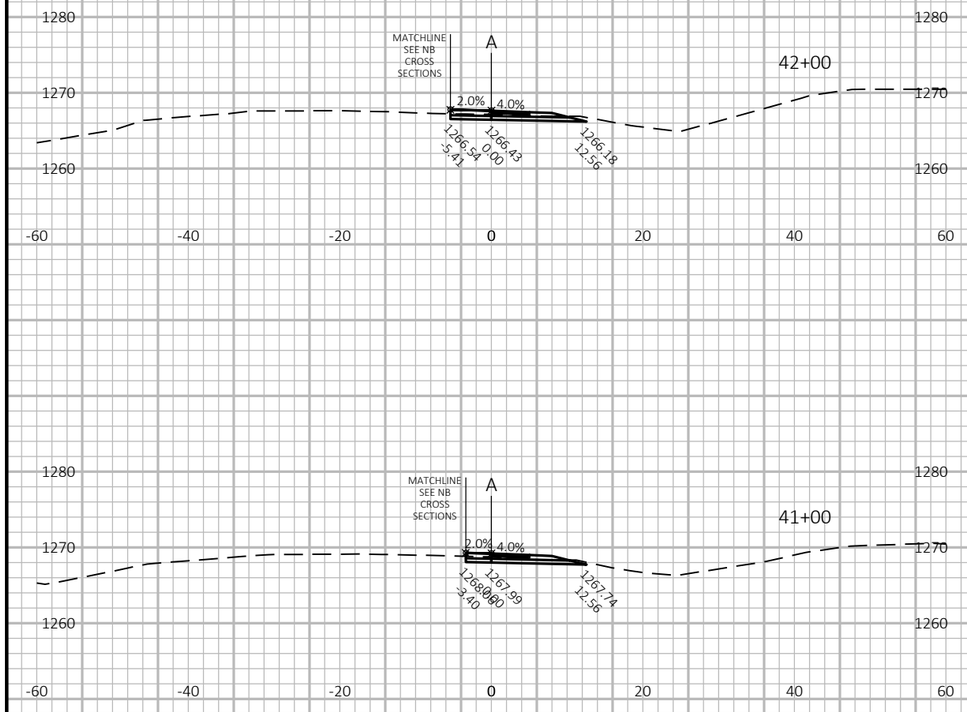
PLOT DATE : 5/22/2018 5:05 PM

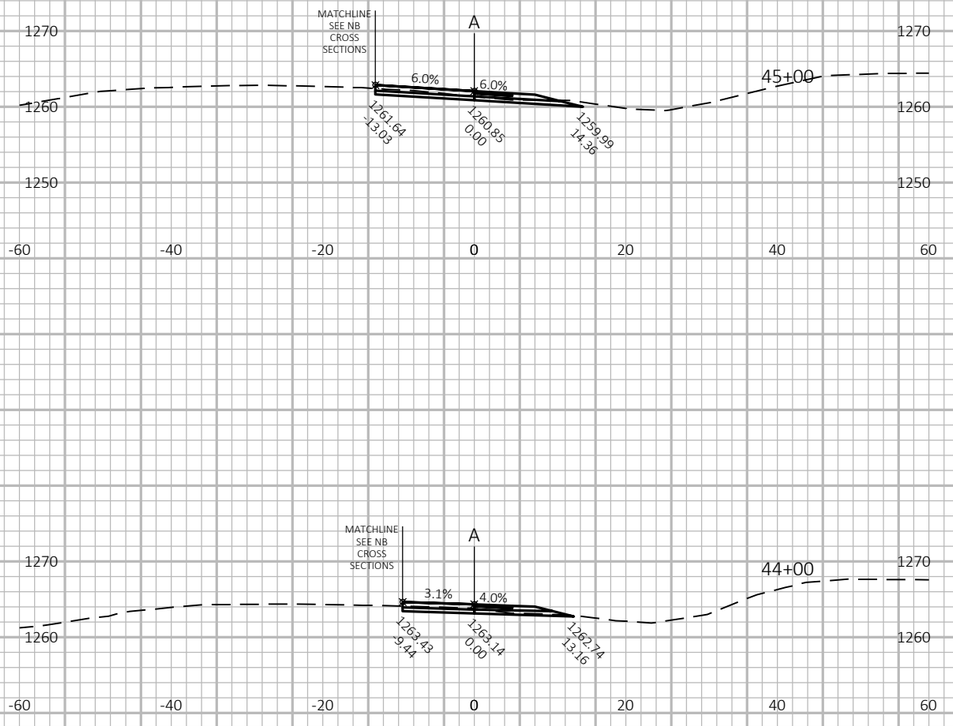
PLOT BY : SCHMIDT, DAVID B

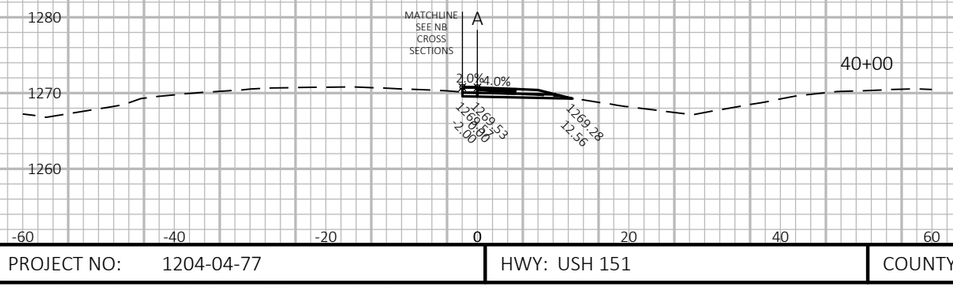
PLOT NAME :

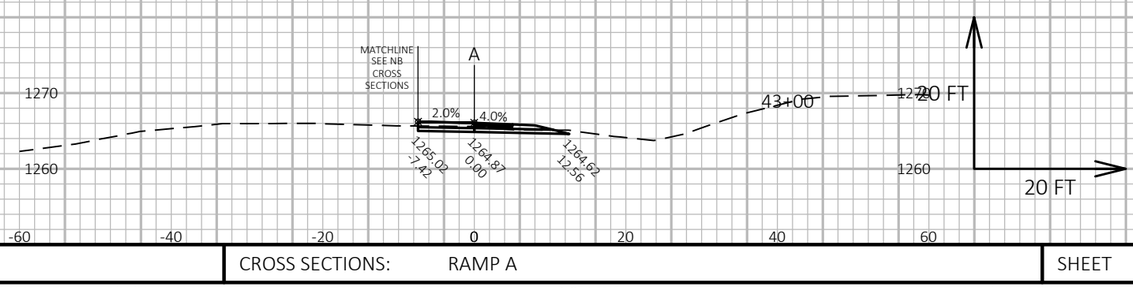
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP A	SHEET 522	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_xs-1

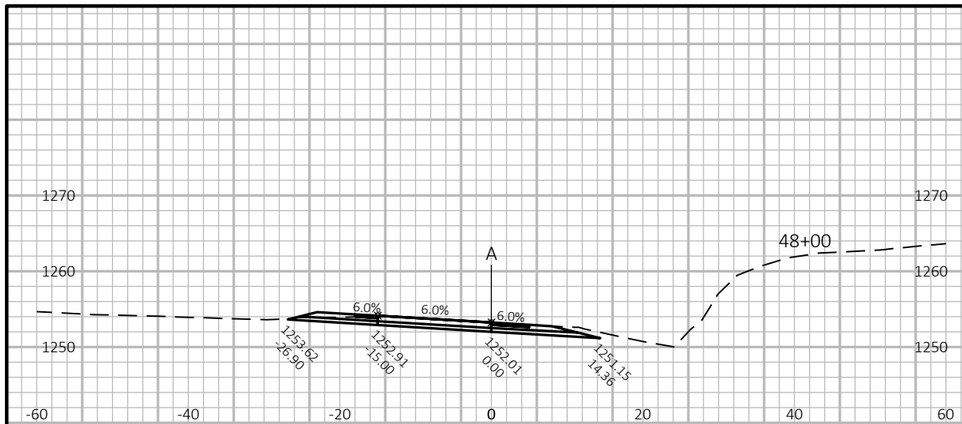
PLOT DATE : 5/22/2018 5:09 PM

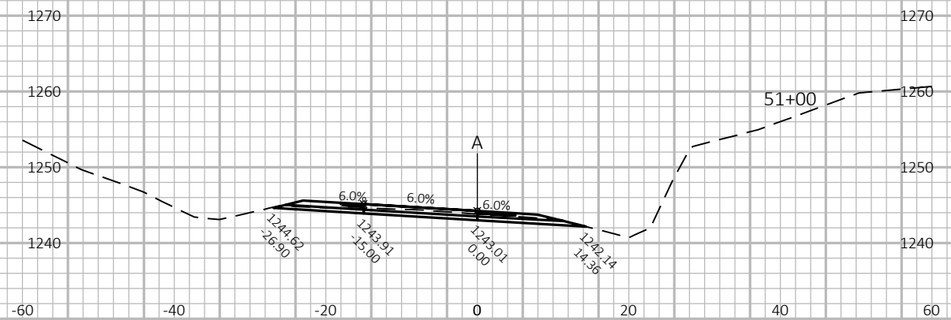
PLOT BY : SCHMIDT, DAVID B

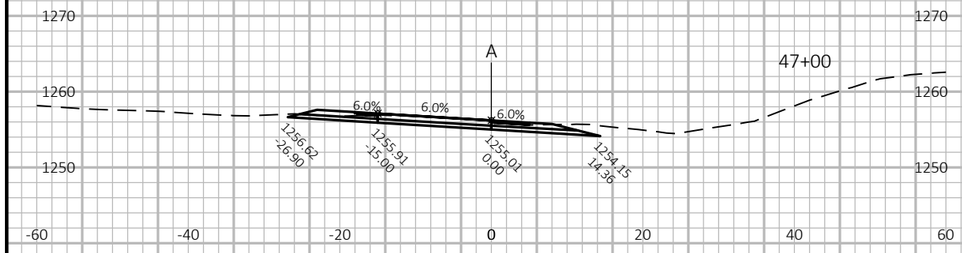
PLOT NAME :

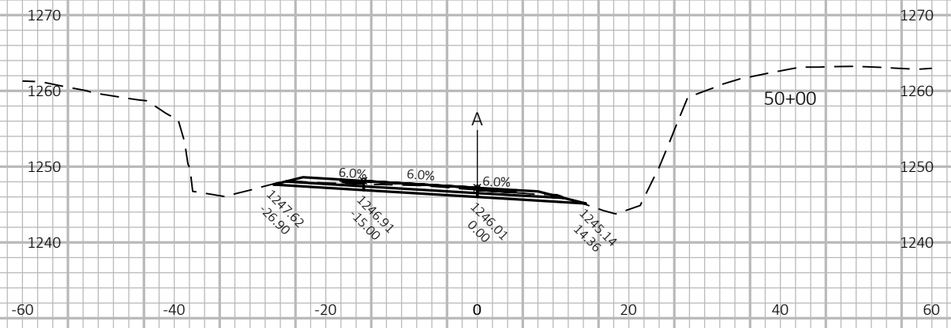
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

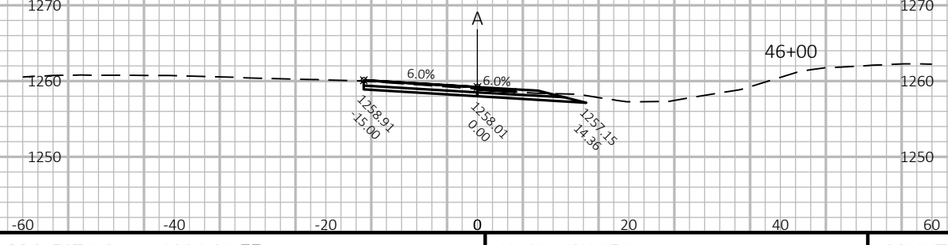
WISDOT/CADDS SHEET 49

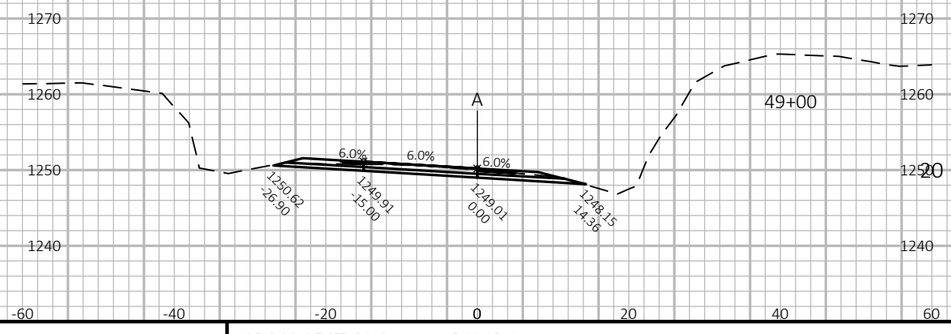


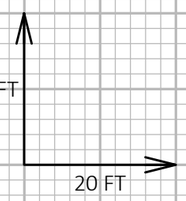












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP A	SHEET 523	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_xs-2

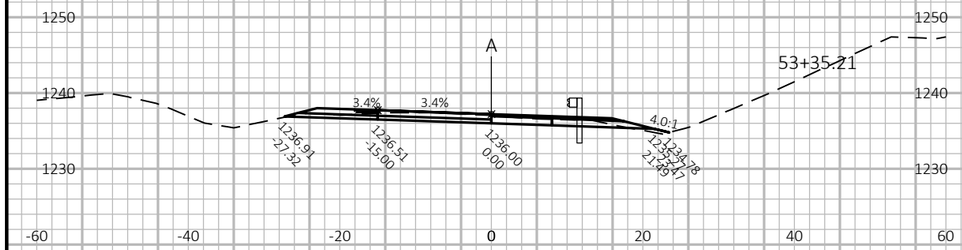
PLOT DATE : 5/22/2018 5:09 PM

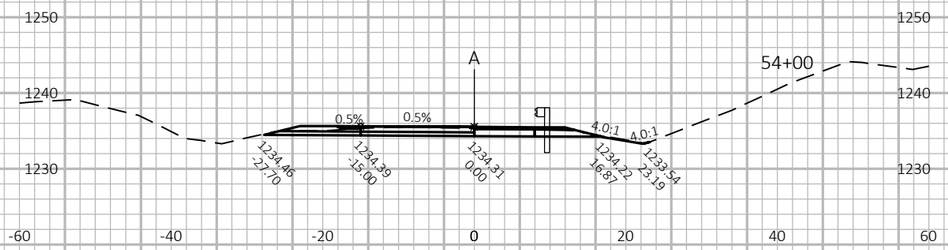
PLOT BY : SCHMIDT, DAVID B

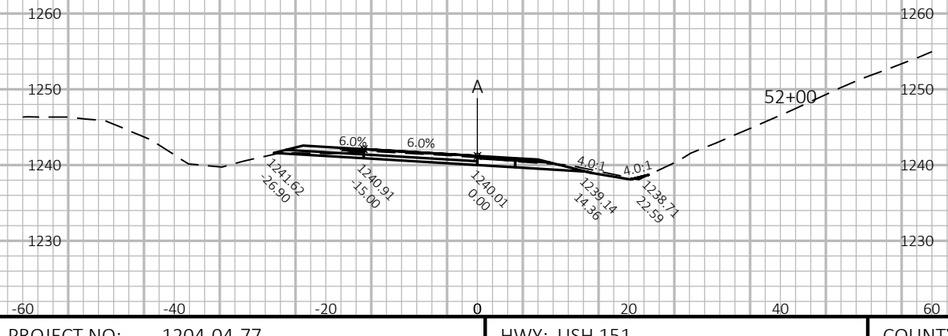
PLOT NAME :

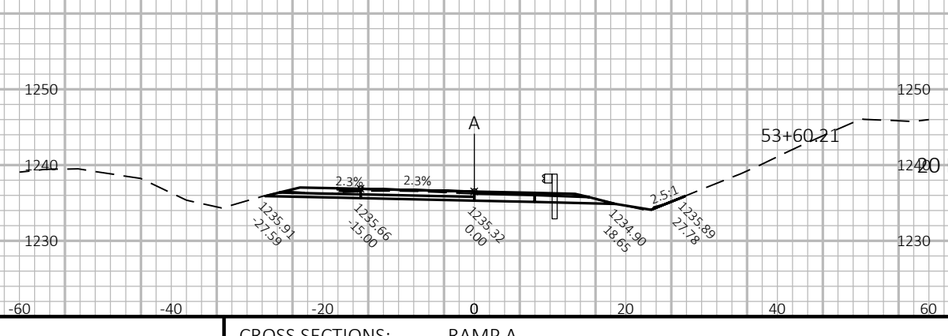
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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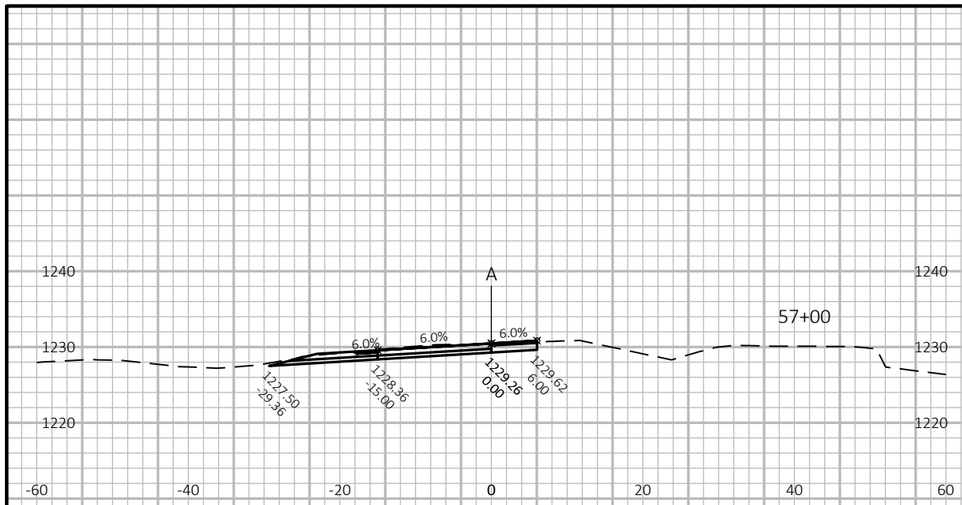
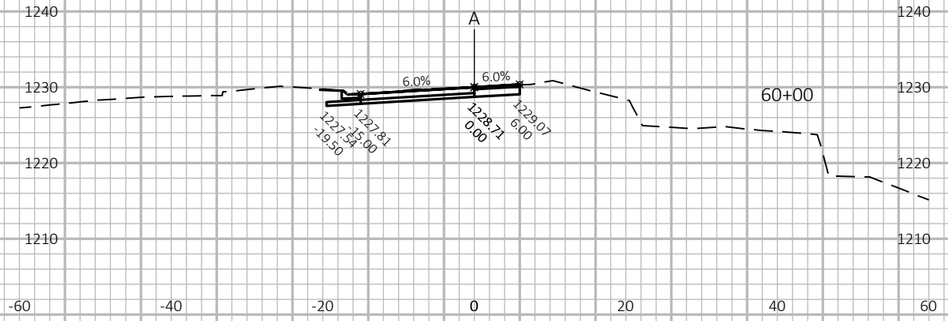
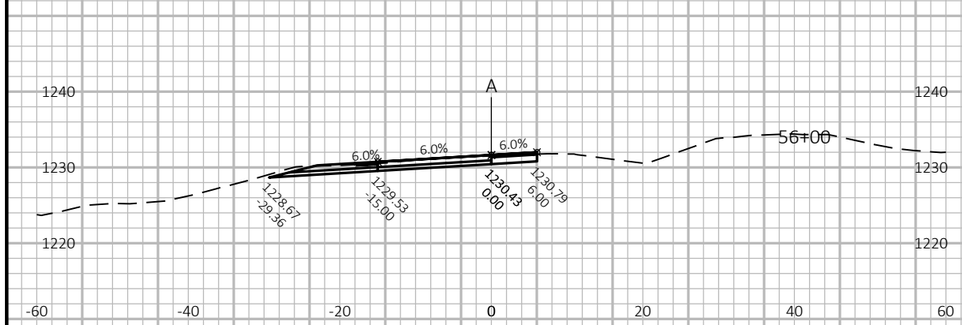
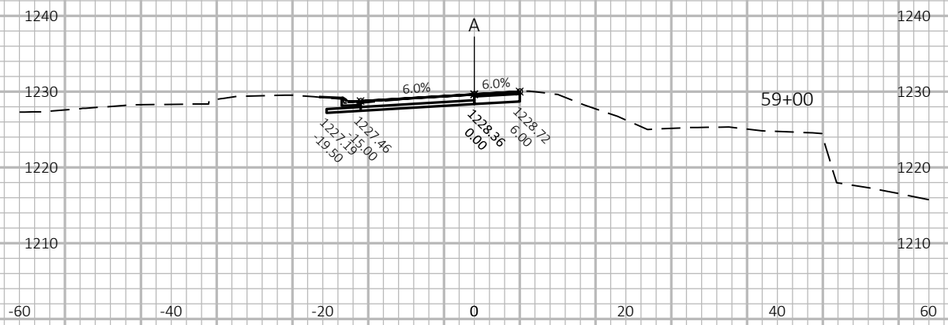
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP A	SHEET 524	E

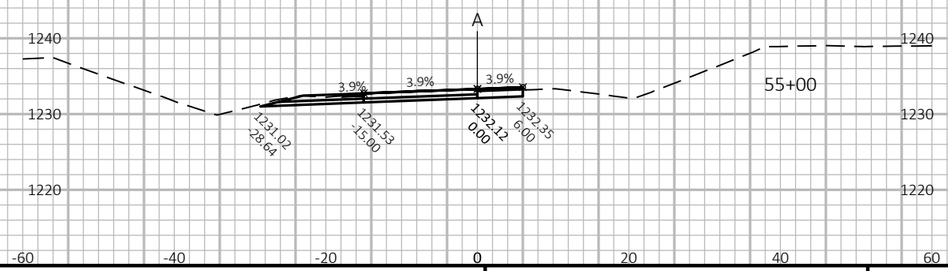
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_xs-3
PLOT DATE : 5/22/2018 5:09 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

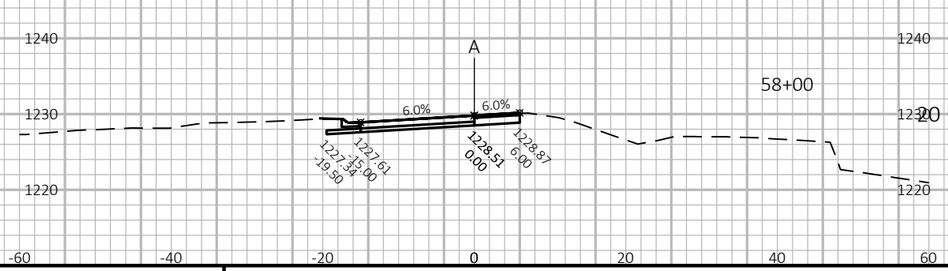


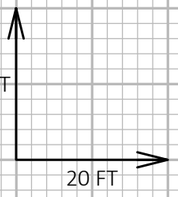












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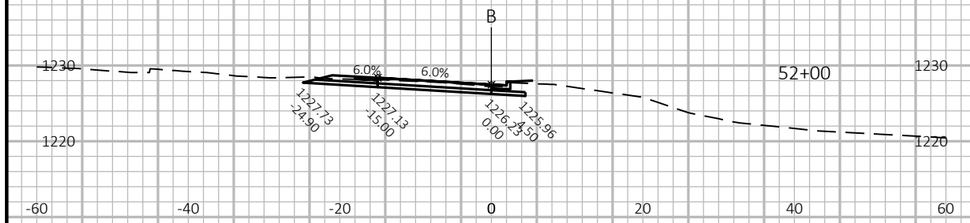
9

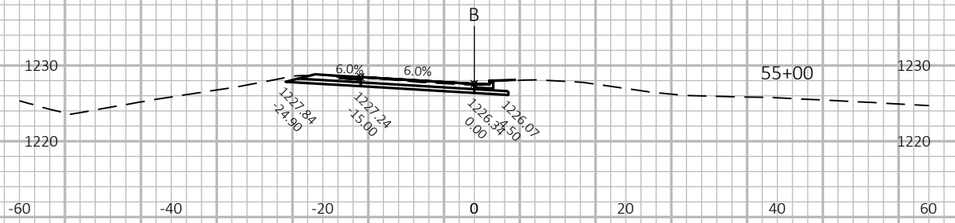
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP A	SHEET 525	E

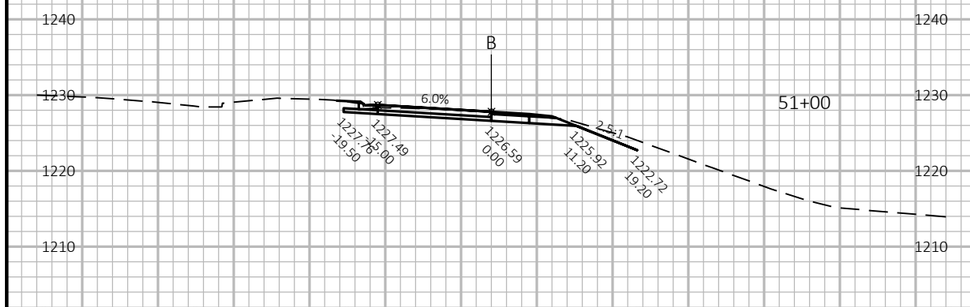
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_xs-4

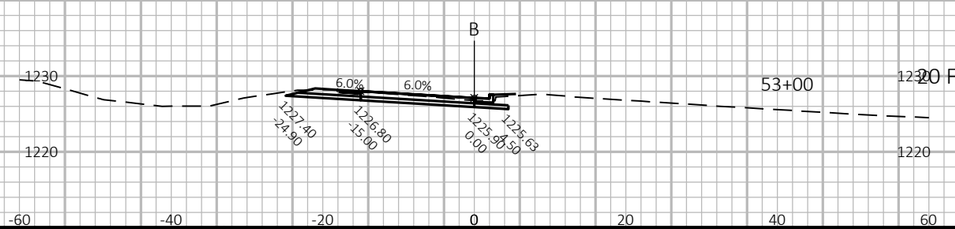
PLOT DATE : 5/22/2018 5:09 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP B	SHEET 526	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090206_XS.DWG
LAYOUT NAME - 090206_XS_01

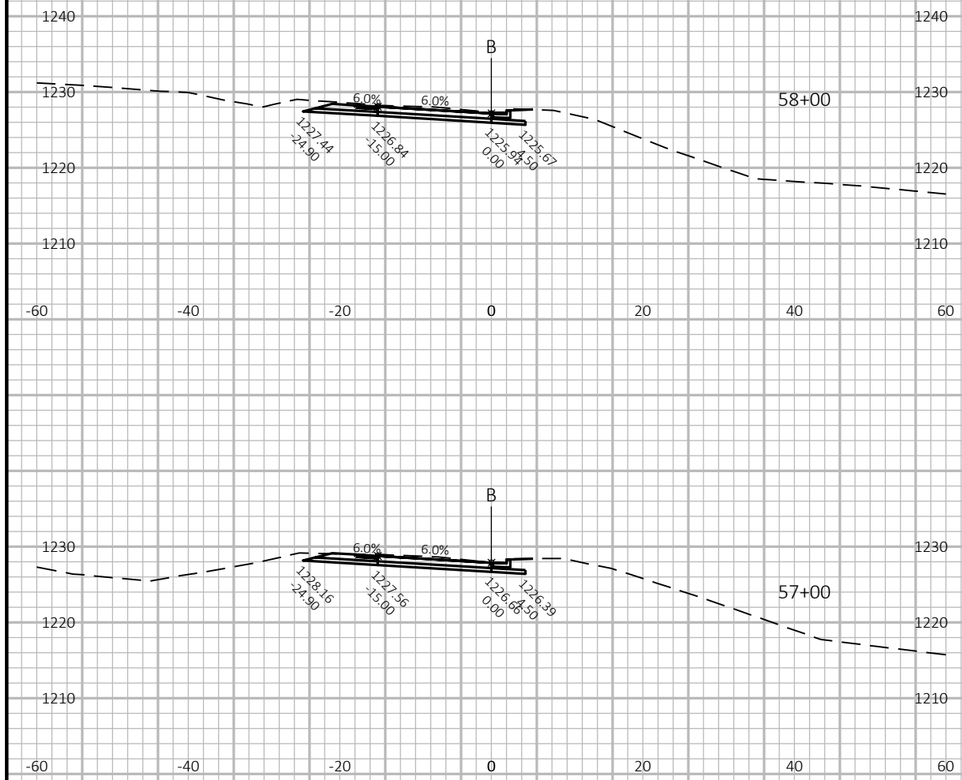
PLOT DATE : 5/22/2018 5:12 PM

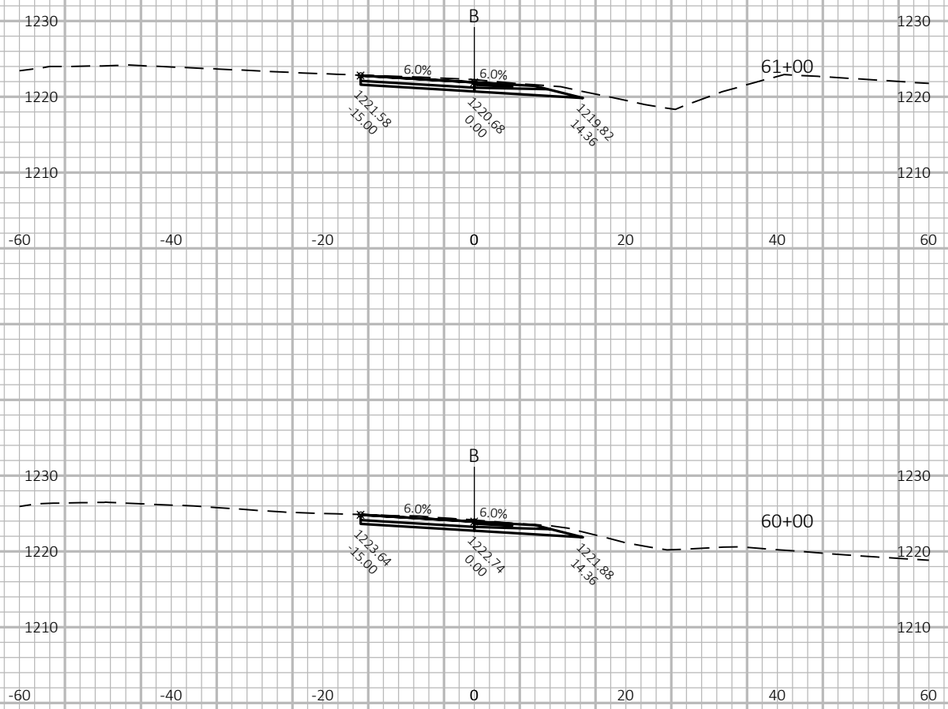
PLOT BY : SCHMIDT, DAVID B

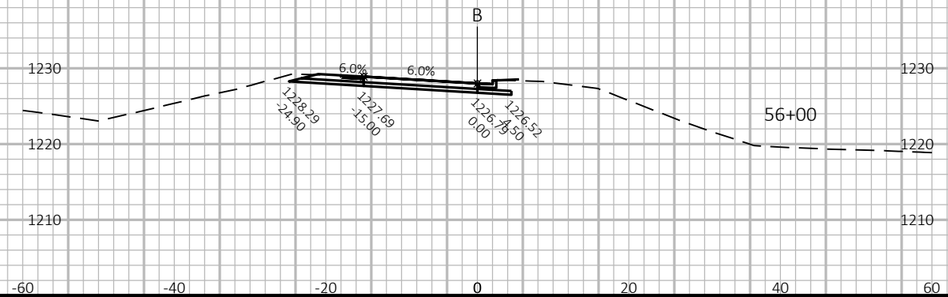
PLOT NAME :

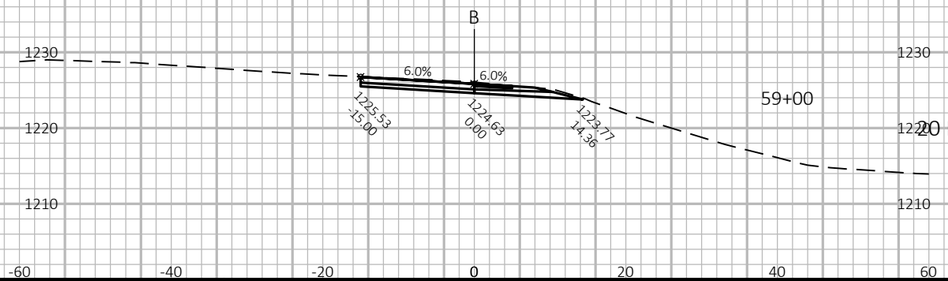
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP B	SHEET 527	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090206_XS.DWG
LAYOUT NAME - 090206_XS_02

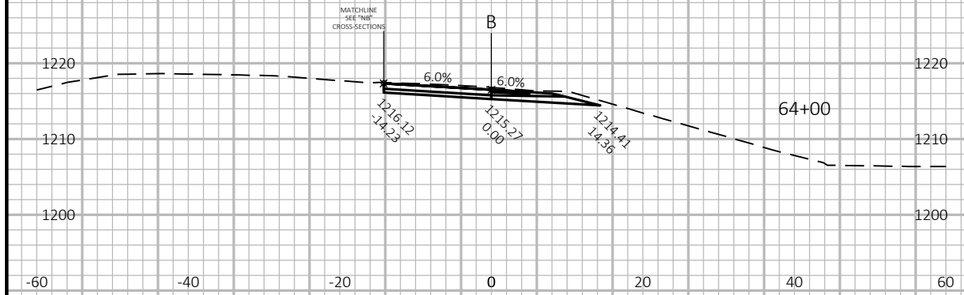
PLOT DATE : 5/22/2018 5:12 PM

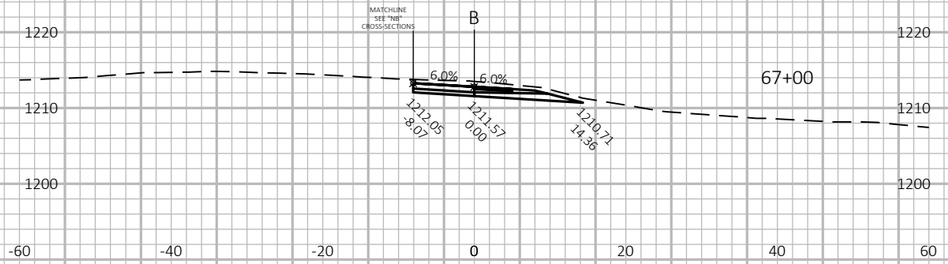
PLOT BY : SCHMIDT, DAVID B

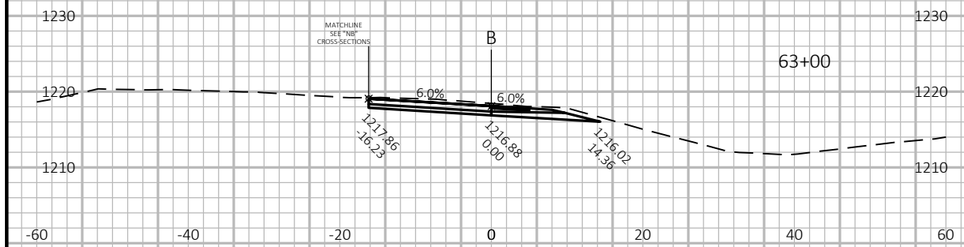
PLOT NAME :

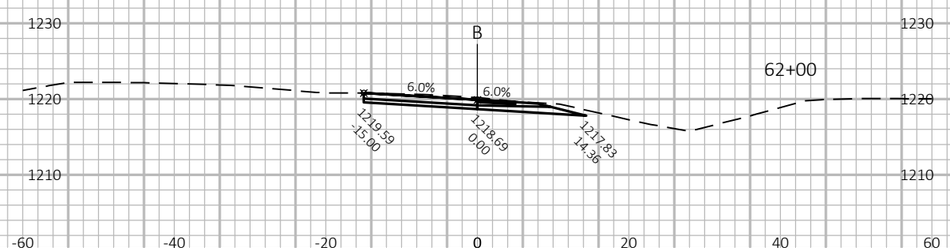
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

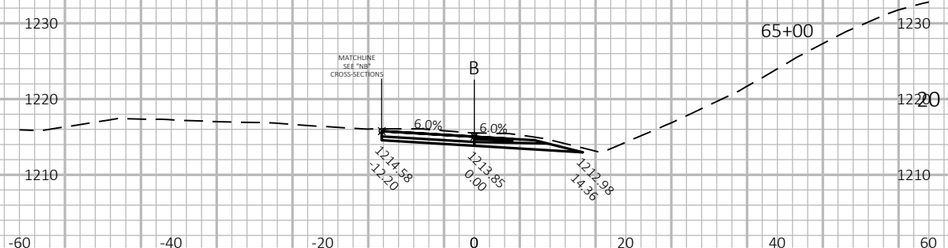
WISDOT/CADDS SHEET 49











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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP B	SHEET 528	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090206_XS.DWG
LAYOUT NAME - 090206_XS_03

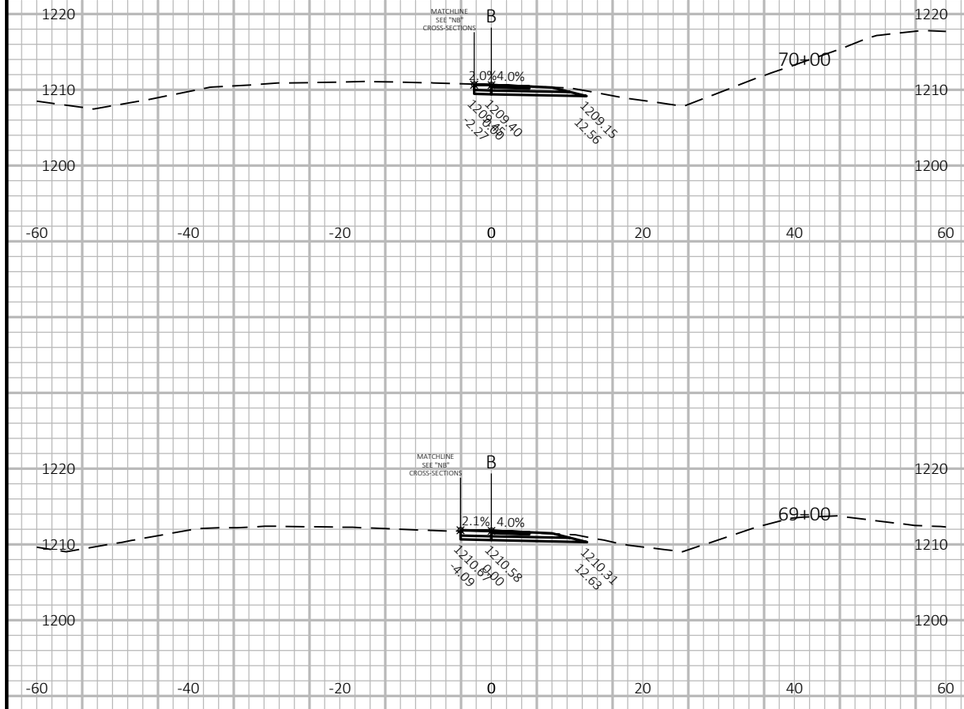
PLOT DATE : 5/22/2018 5:12 PM

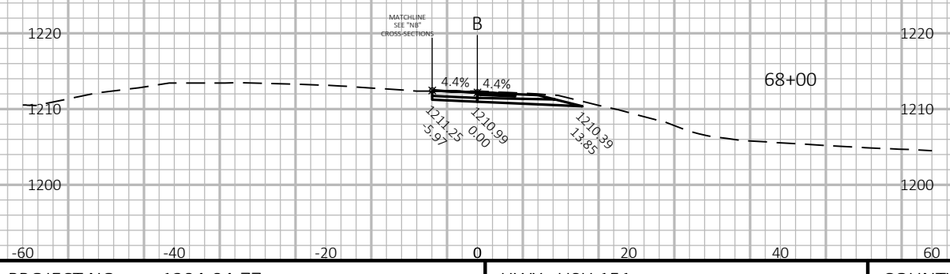
PLOT BY : SCHMIDT, DAVID B

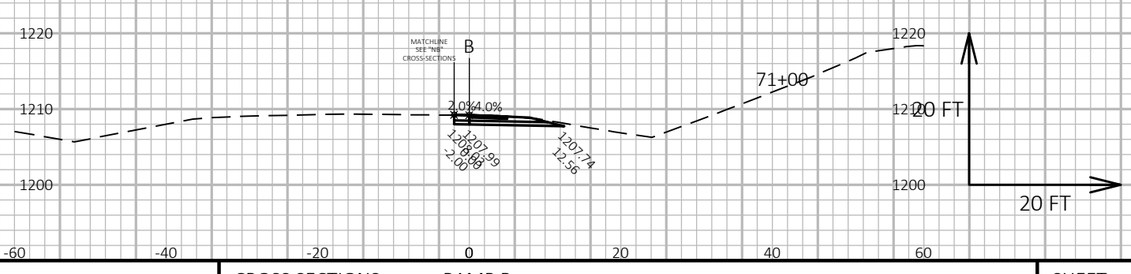
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP B	SHEET 529	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090206_XS.DWG
LAYOUT NAME - 090206_XS_04

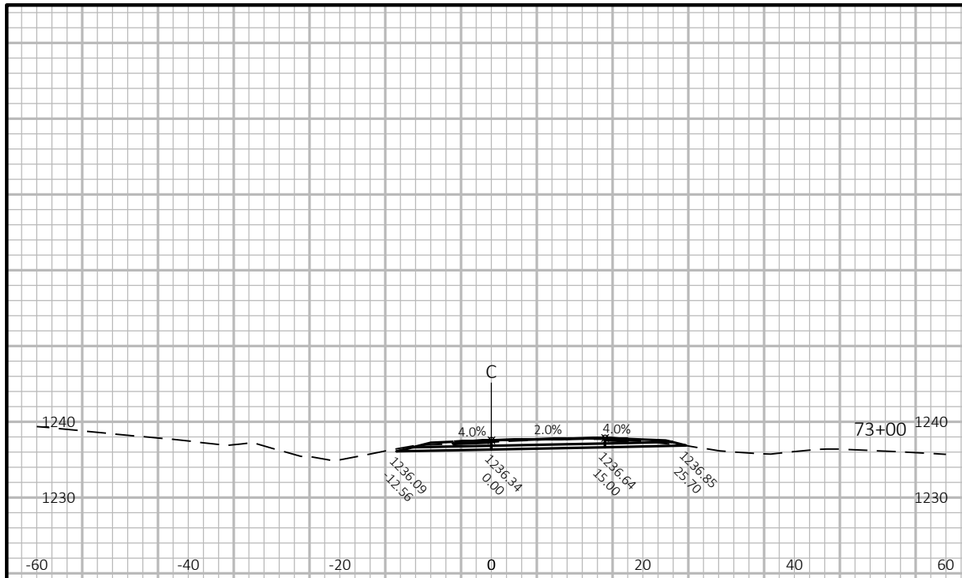
PLOT DATE : 5/22/2018 5:12 PM

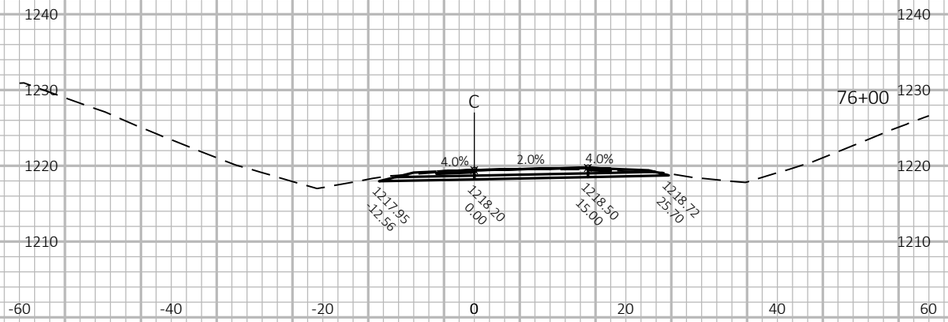
PLOT BY : SCHMIDT, DAVID B

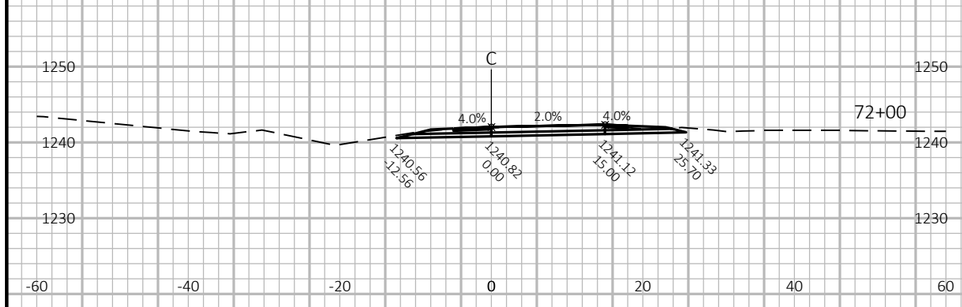
PLOT NAME :

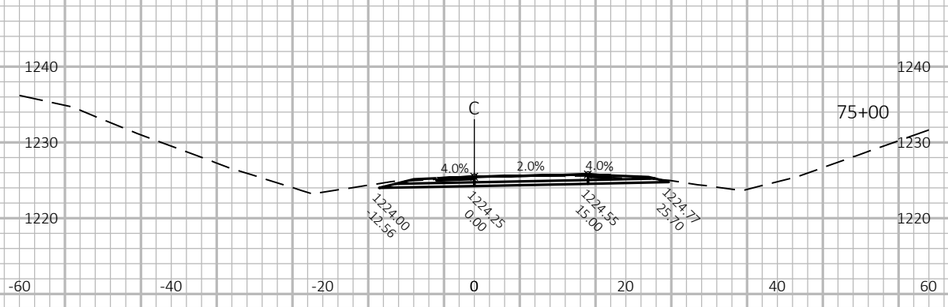
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

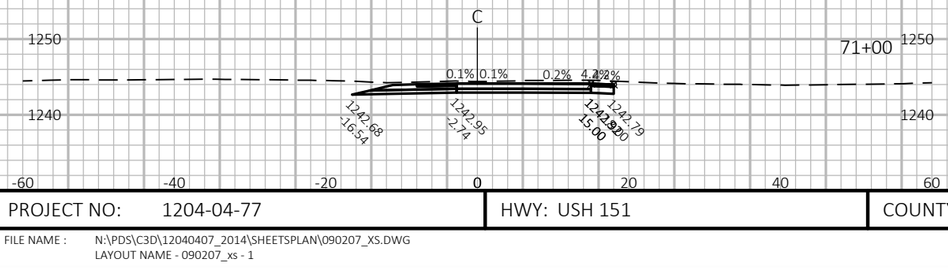
WISDOT/CADDS SHEET 49

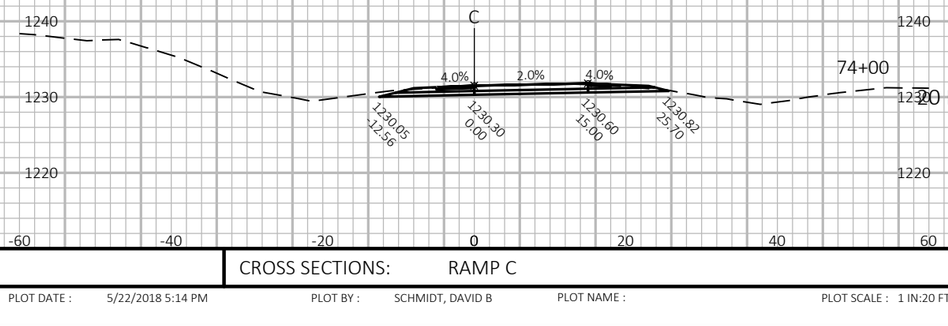


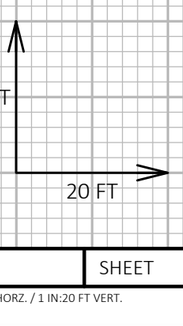












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP C	SHEET 530	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090207_XS.DWG
LAYOUT NAME - 090207_xs - 1

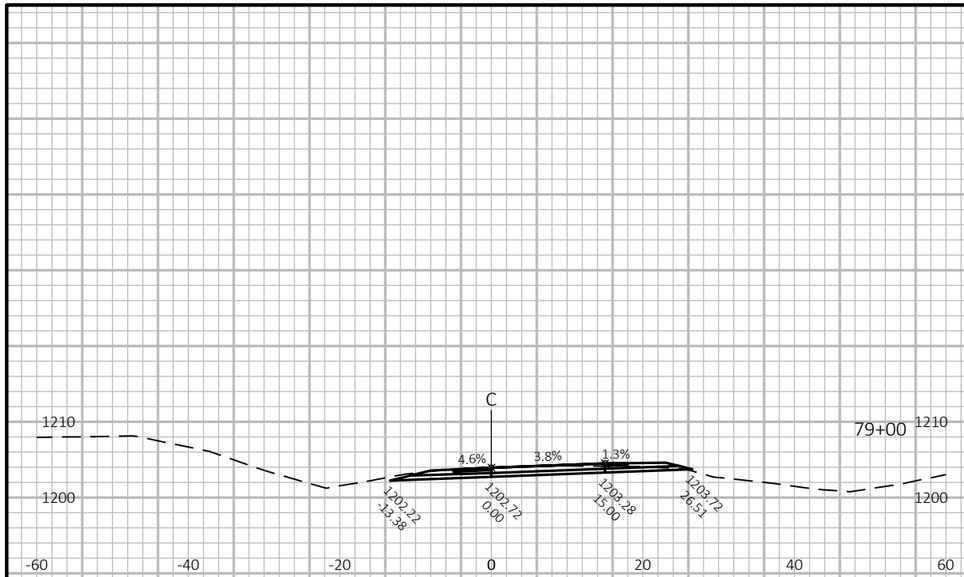
PLOT DATE : 5/22/2018 5:14 PM

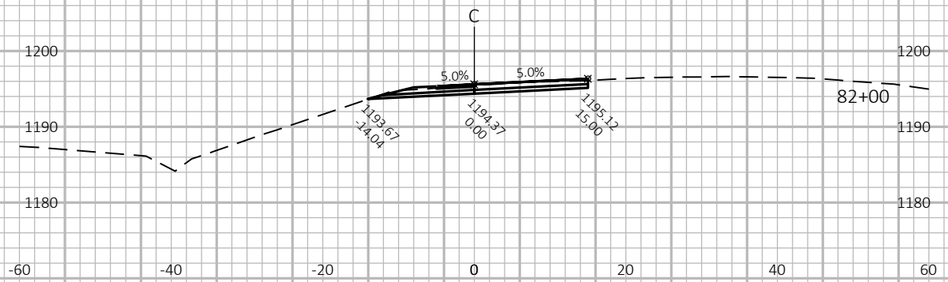
PLOT BY : SCHMIDT, DAVID B

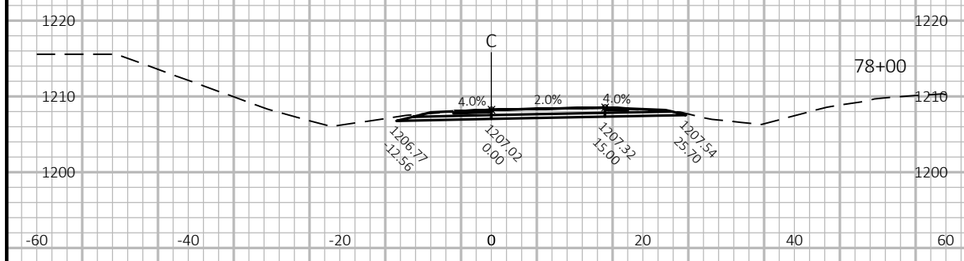
PLOT NAME :

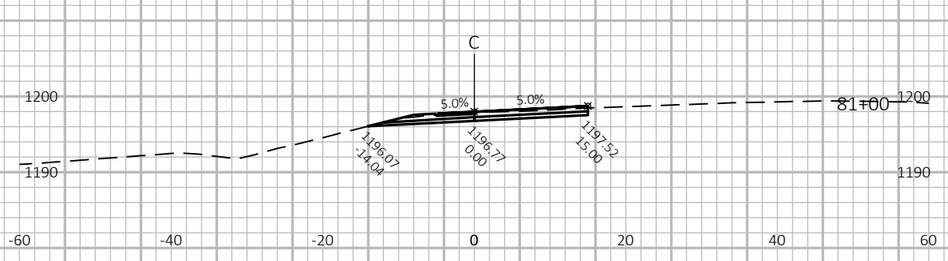
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

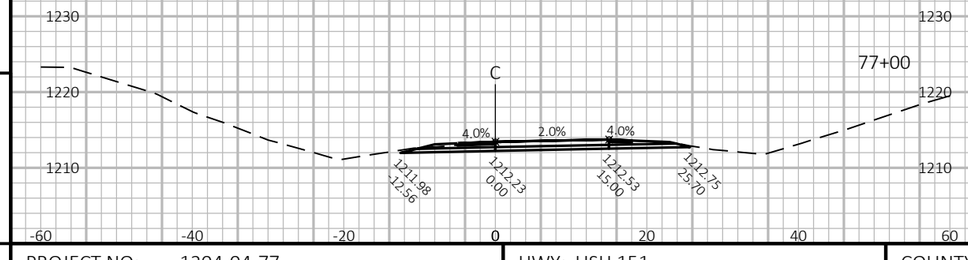
WISDOT/CADDS SHEET 49

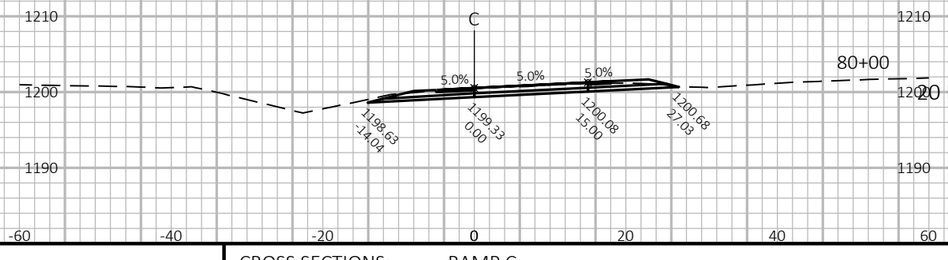












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP C	SHEET 531	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090207_XS.DWG
LAYOUT NAME - 090207_xs - 2

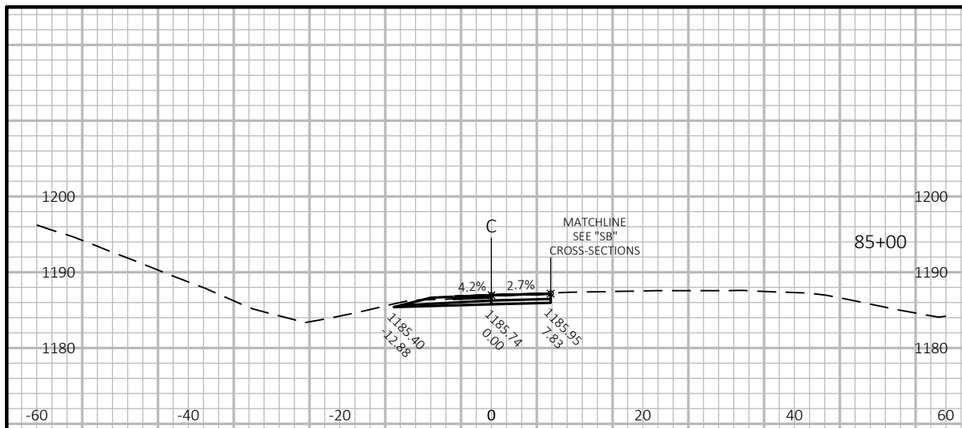
PLOT DATE : 5/22/2018 5:14 PM

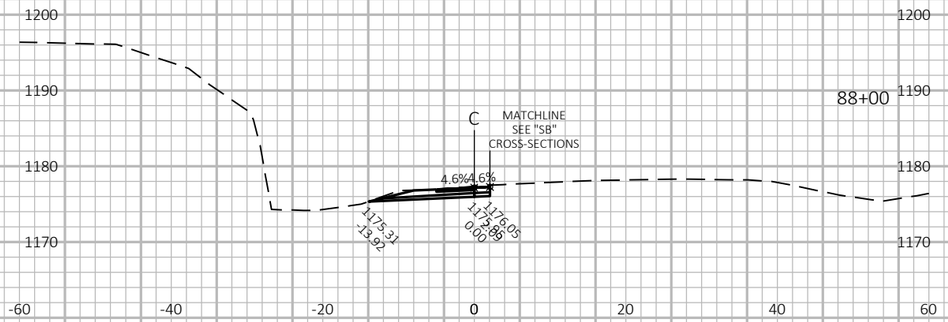
PLOT BY : SCHMIDT, DAVID B

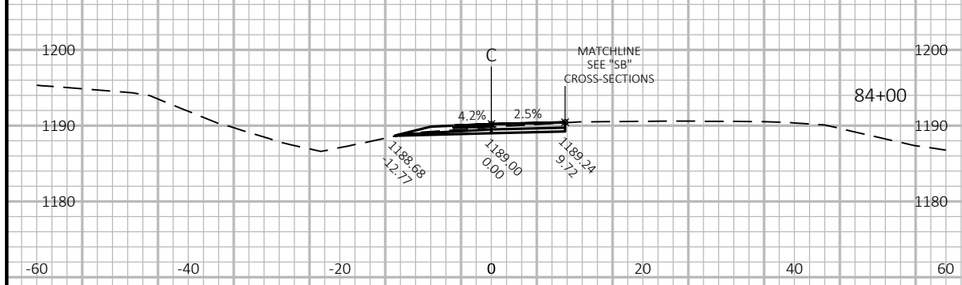
PLOT NAME :

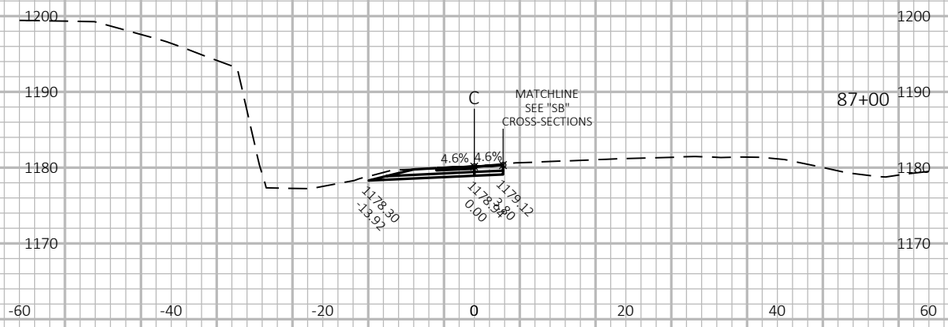
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

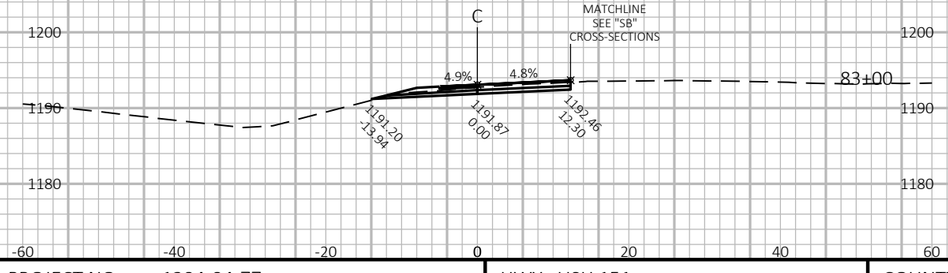
WISDOT/CADDS SHEET 49

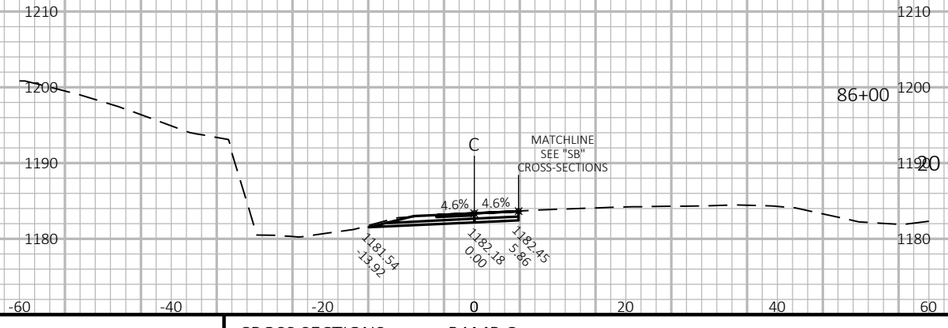












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP C	SHEET 532	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090207_XS.DWG
LAYOUT NAME - 090207_xs - 3

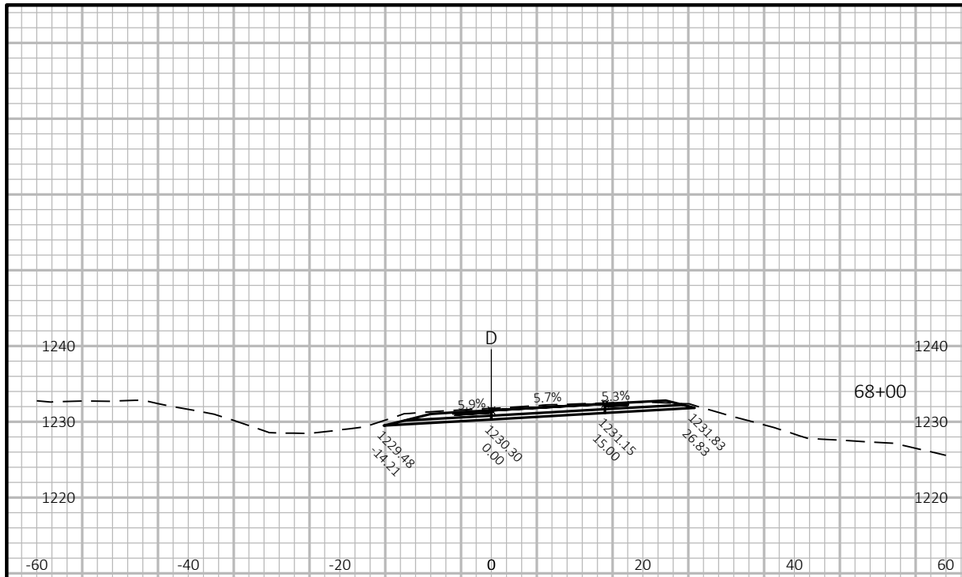
PLOT DATE : 5/22/2018 5:14 PM

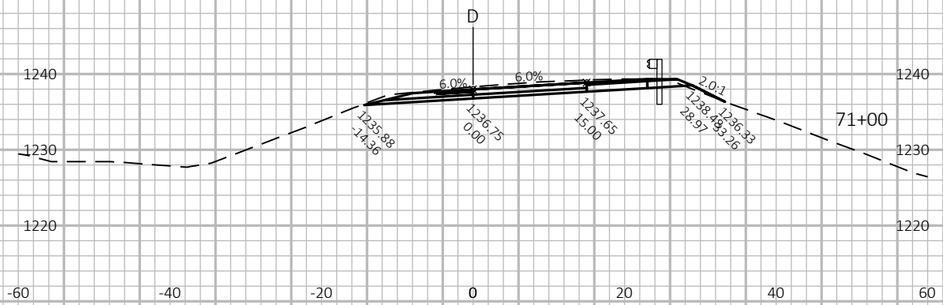
PLOT BY : SCHMIDT, DAVID B

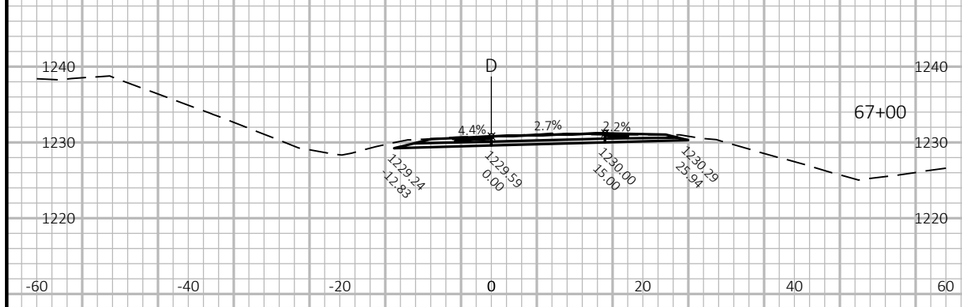
PLOT NAME :

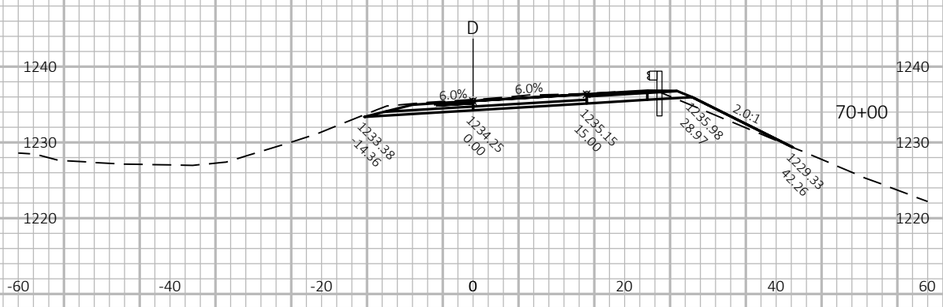
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

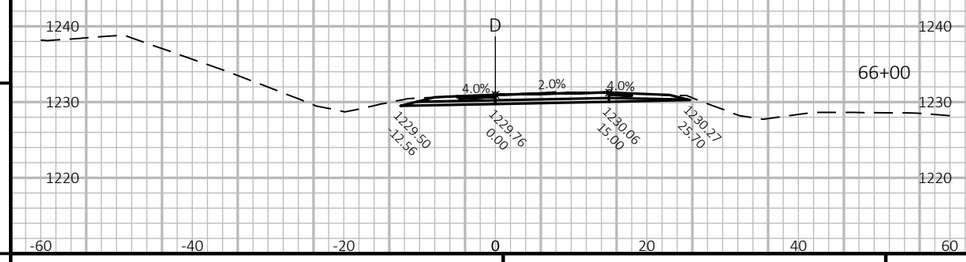
WISDOT/CADDS SHEET 49

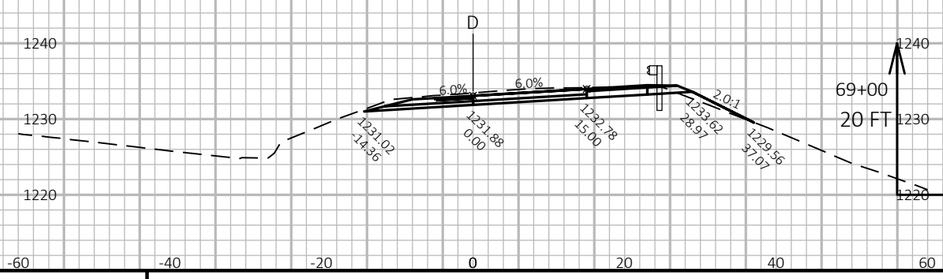












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP D	SHEET 533	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - 090208_xs - 1

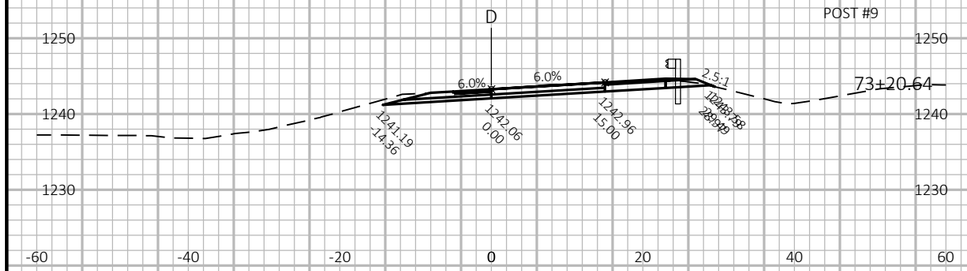
PLOT DATE : 5/22/2018 5:17 PM

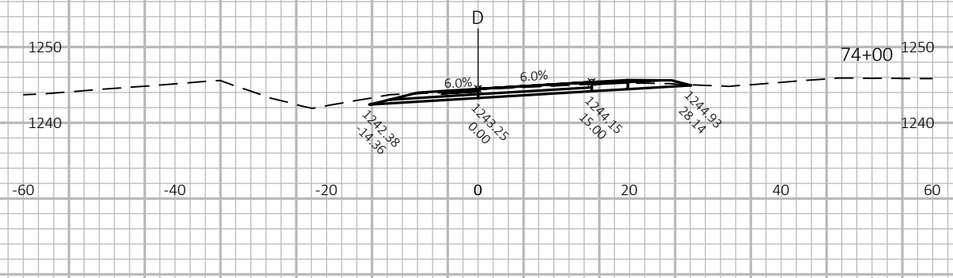
PLOT BY : SCHMIDT, DAVID B

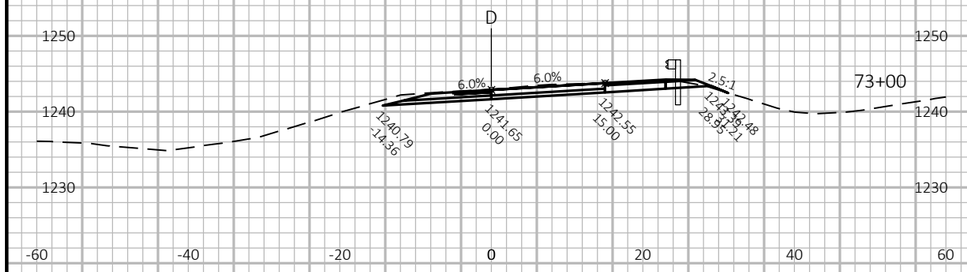
PLOT NAME :

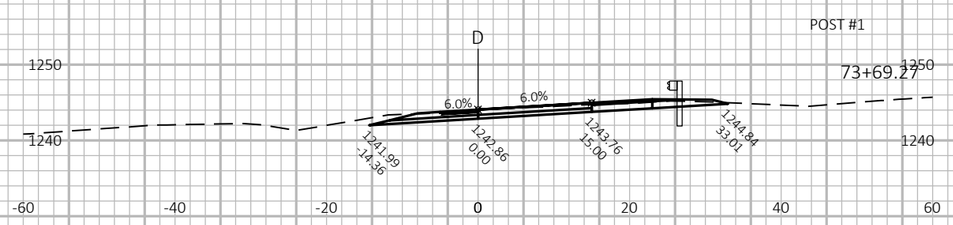
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

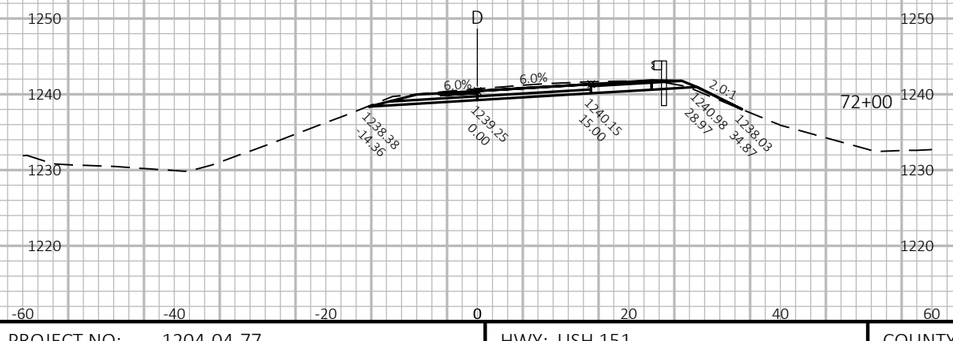
WISDOT/CADDS SHEET 49

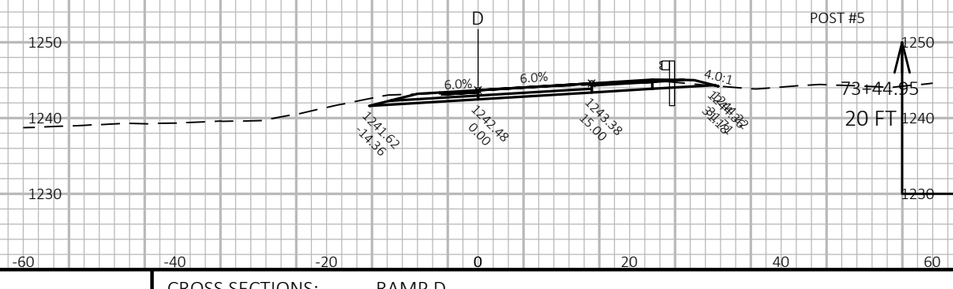












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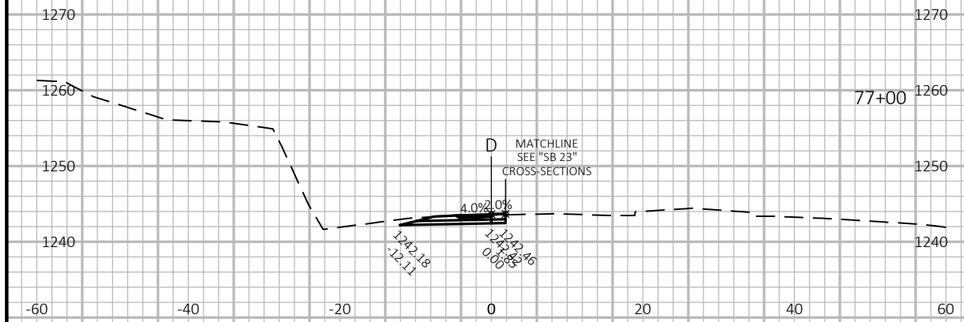
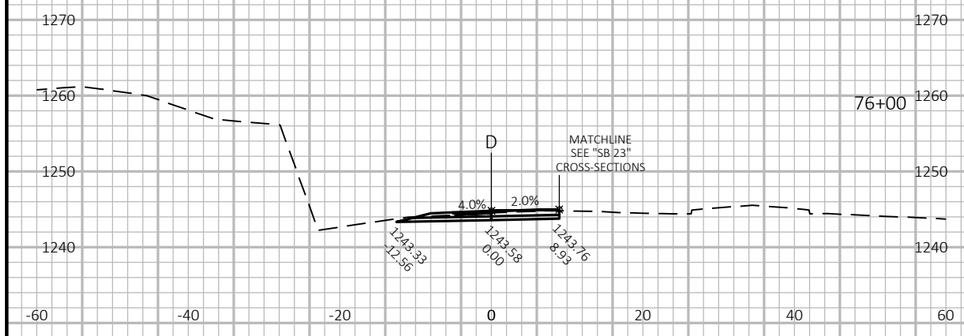
9

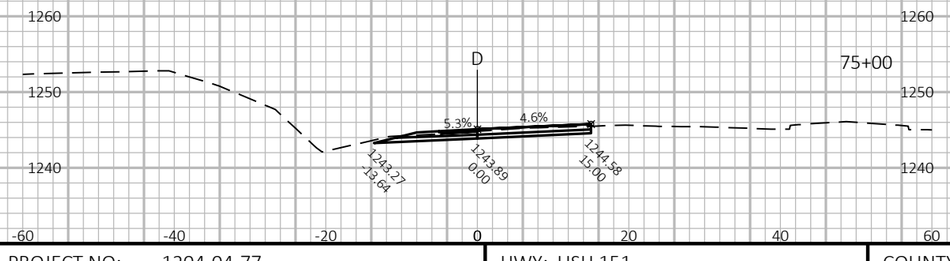
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP D	SHEET 534	E

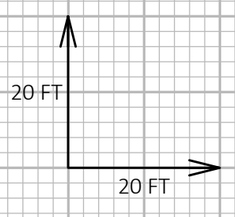
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - 090208_xs - 2

PLOT DATE : 5/22/2018 5:17 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.









9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP D	SHEET 535	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - 090208_xs - 3

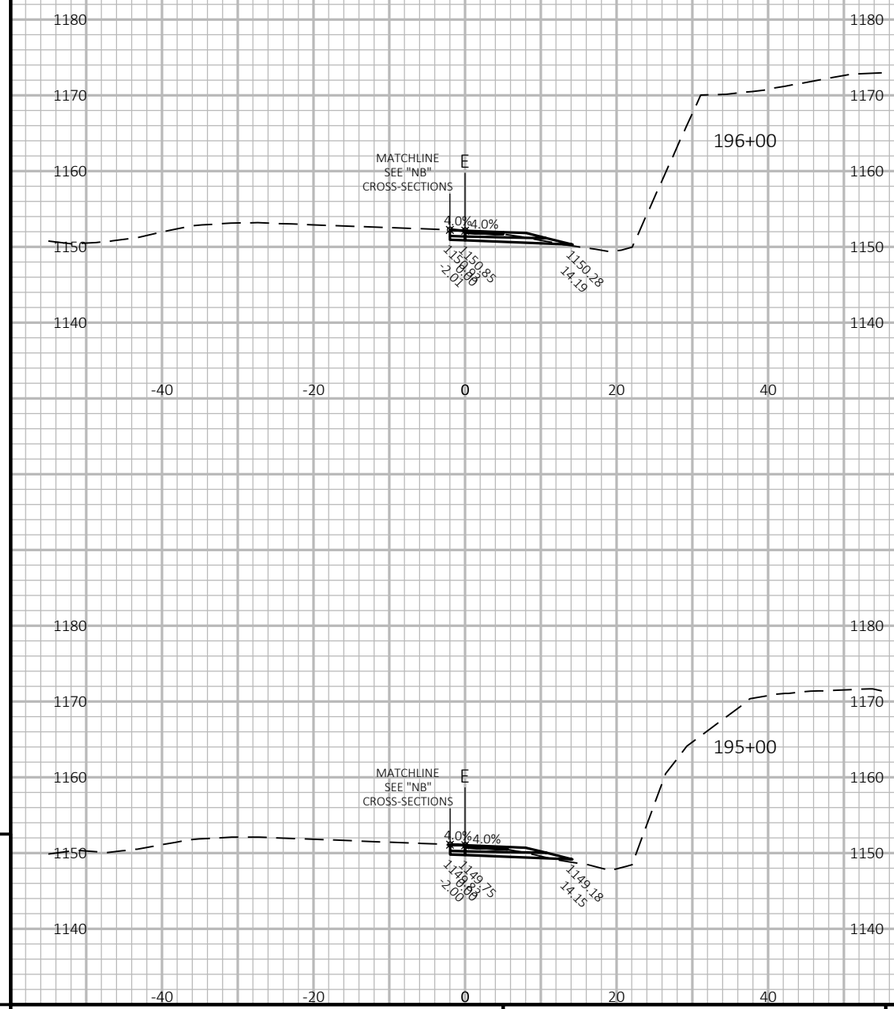
PLOT DATE : 5/22/2018 5:17 PM

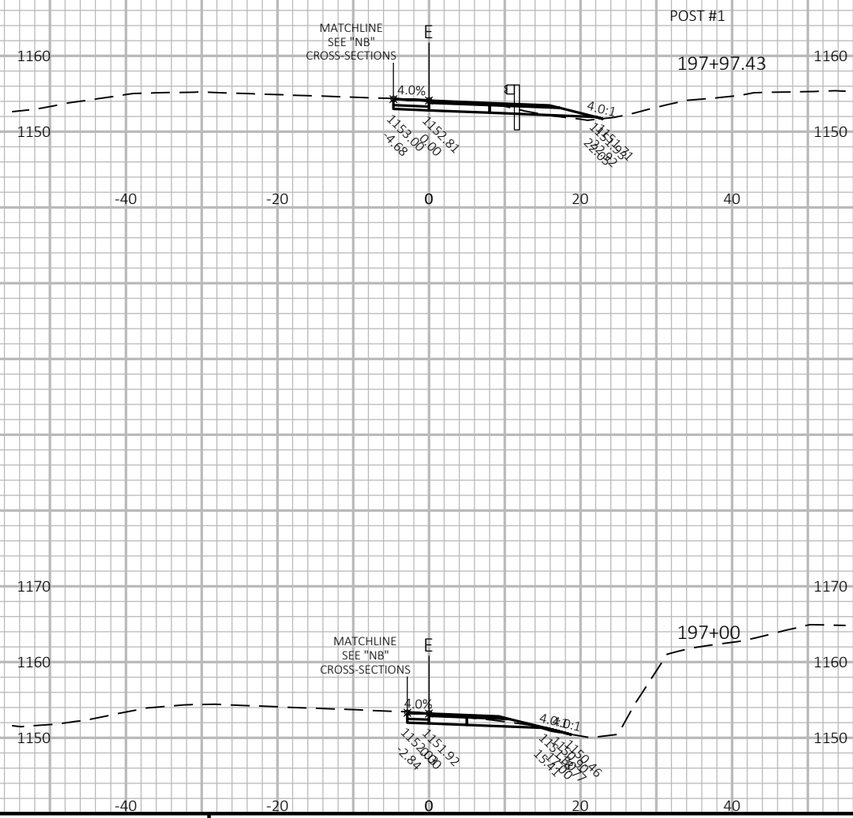
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP E	SHEET 536	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090209_XS.DWG
LAYOUT NAME - 090209_xs_1

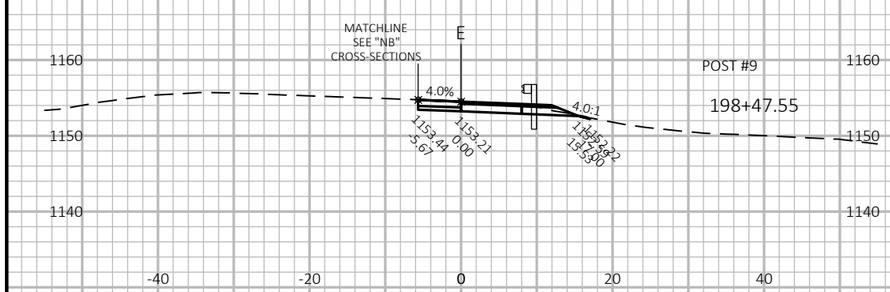
PLOT DATE : 5/22/2018 5:19 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

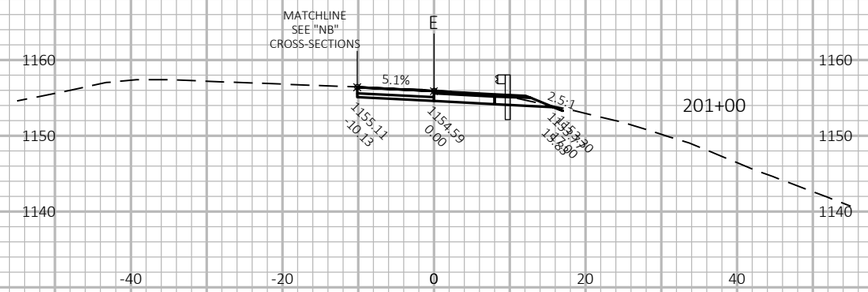
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

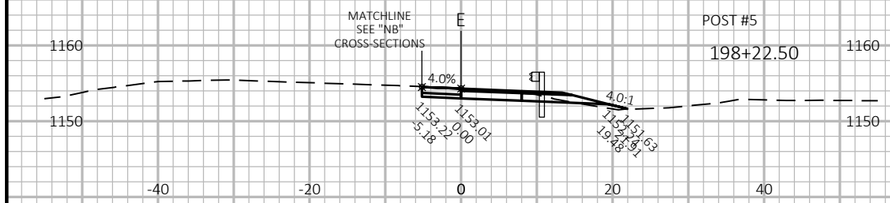


POST #9

198+47.55

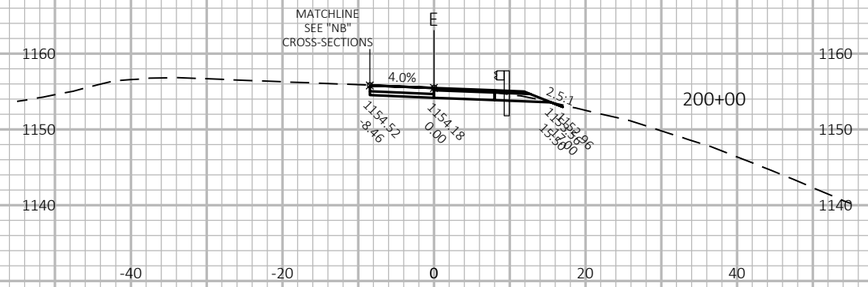


201+00

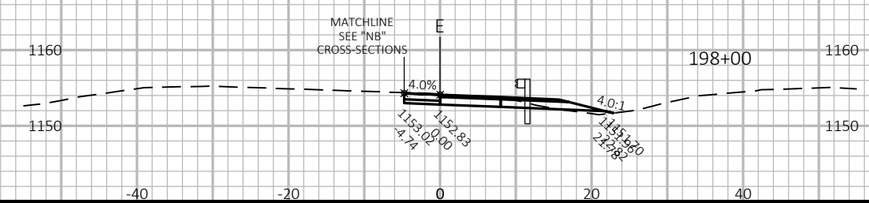


POST #5

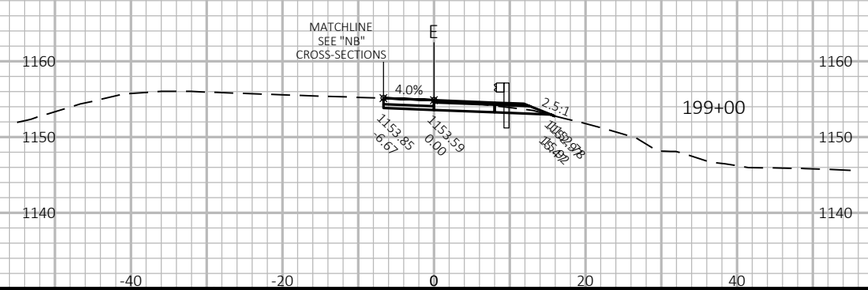
198+22.50



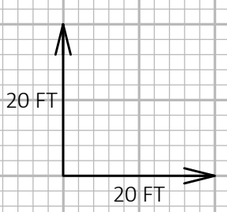
200+00



198+00



199+00



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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP E	SHEET 537	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090209_XS.DWG
LAYOUT NAME - 090209_xs_2

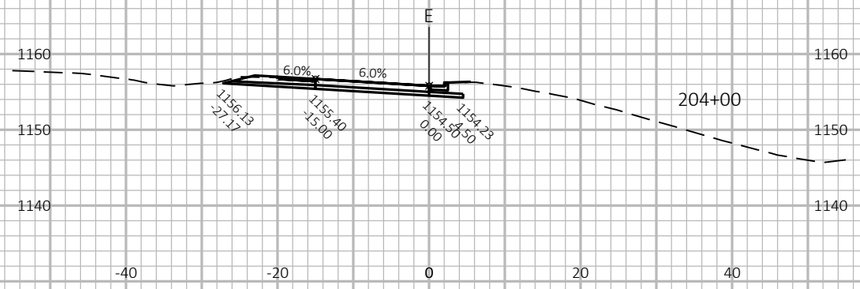
PLOT DATE : 5/22/2018 5:19 PM

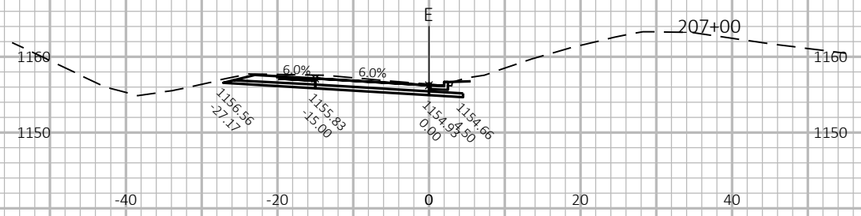
PLOT BY : SCHMIDT, DAVID B

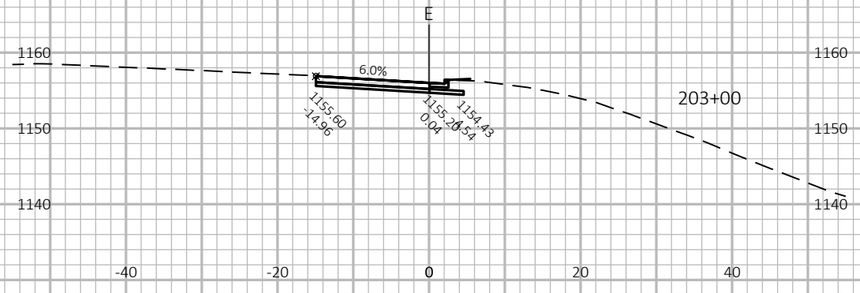
PLOT NAME :

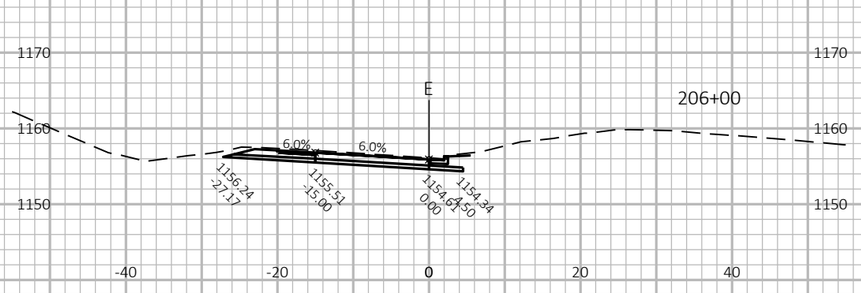
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

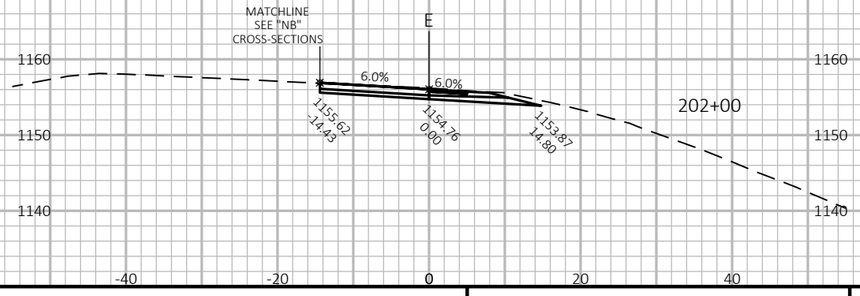
WISDOT/CADDS SHEET 49

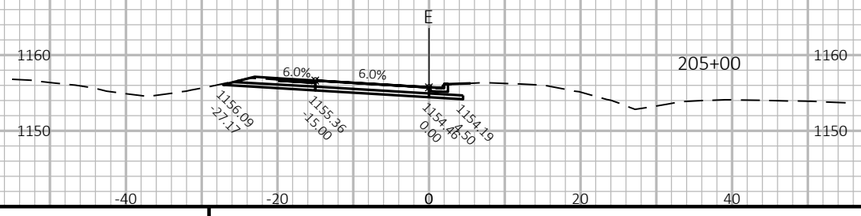


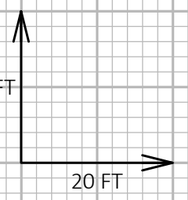












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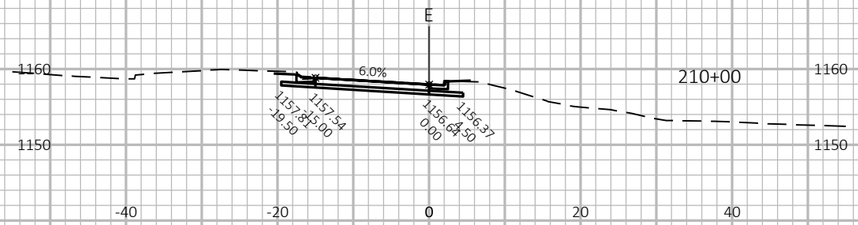
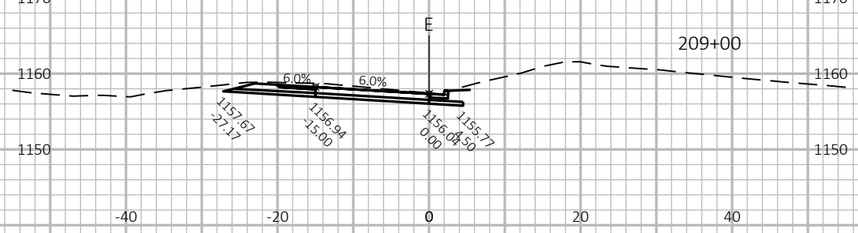
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP E	SHEET 538	E

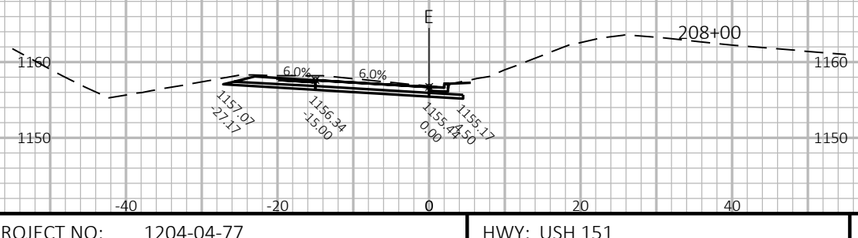
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090209_XS.DWG
LAYOUT NAME - 090209_xs_3

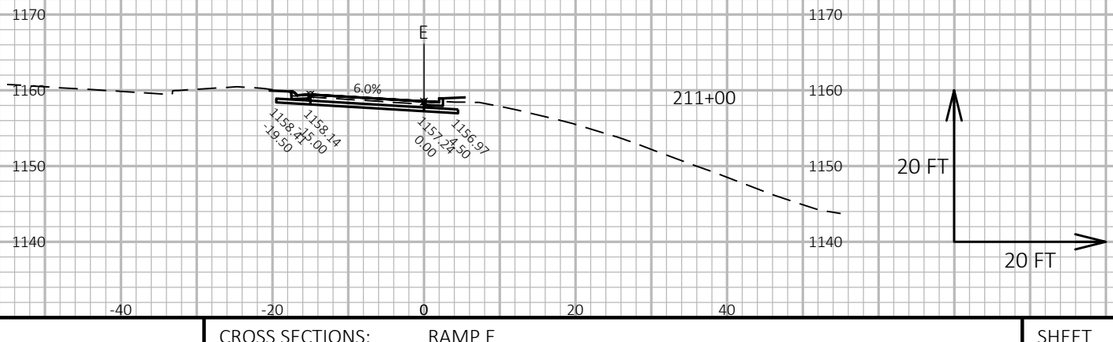
PLOT DATE : 5/22/2018 5:19 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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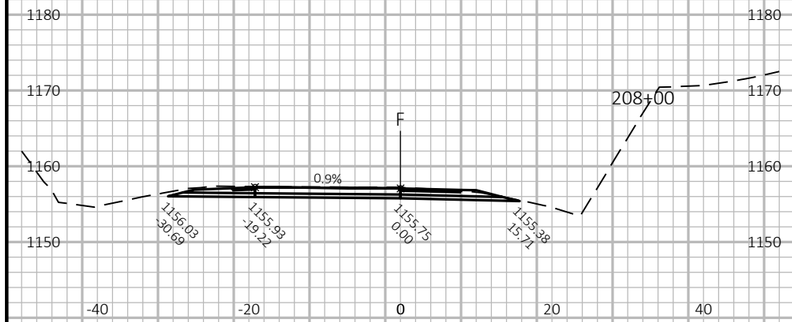
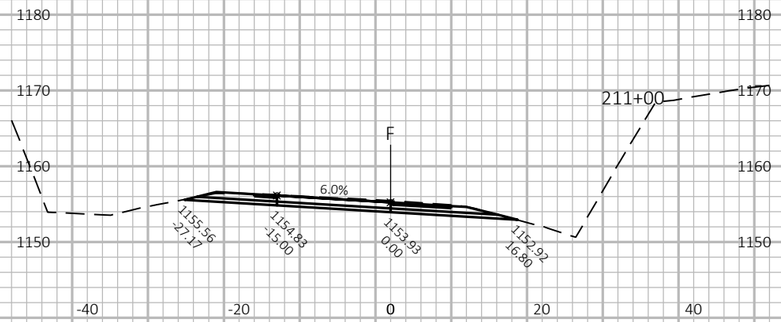
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP E	SHEET 539	E

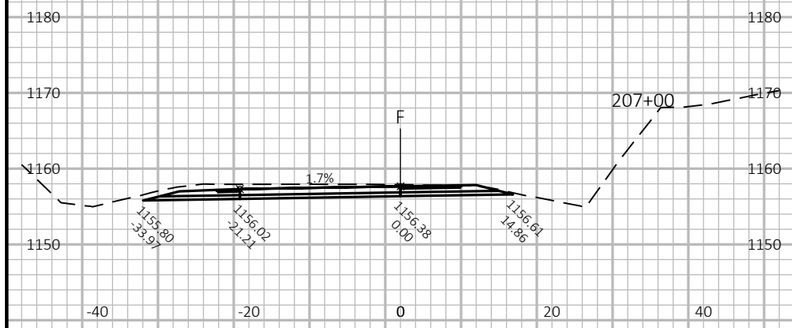
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090209_XS.DWG
LAYOUT NAME - 090209_xs_4

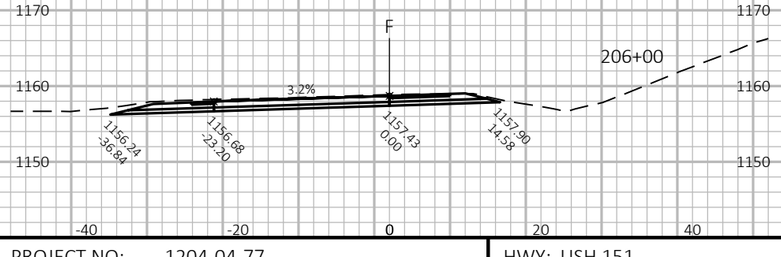
PLOT DATE : 5/22/2018 5:19 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

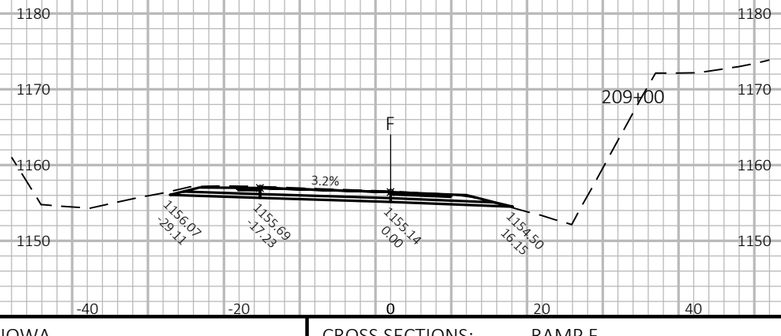
WISDOT/CADDS SHEET 49

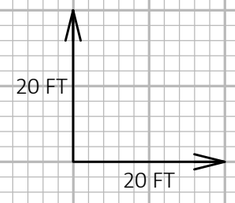












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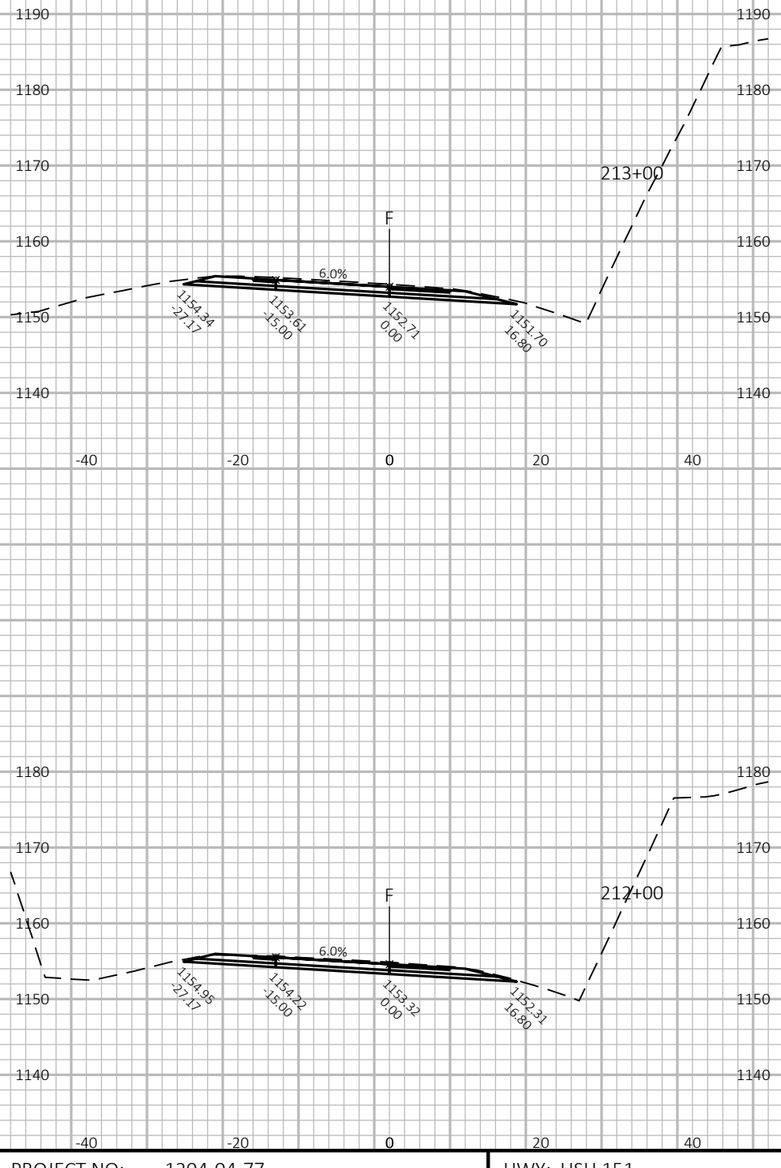
9

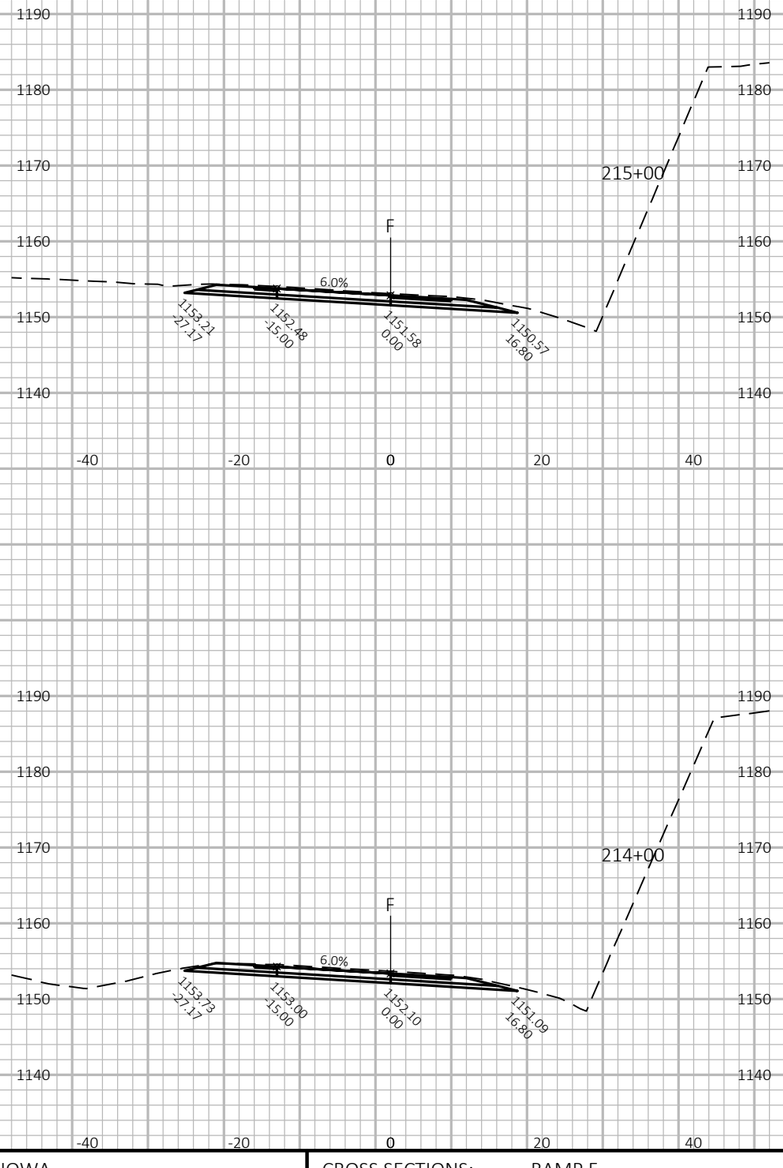
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP F	SHEET 540	E

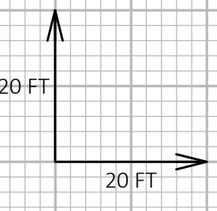
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090210_XS.DWG
LAYOUT NAME - 090210_xs_1

PLOT DATE : 5/22/2018 5:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

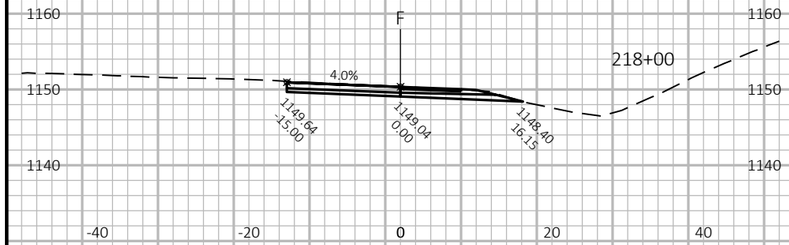
9

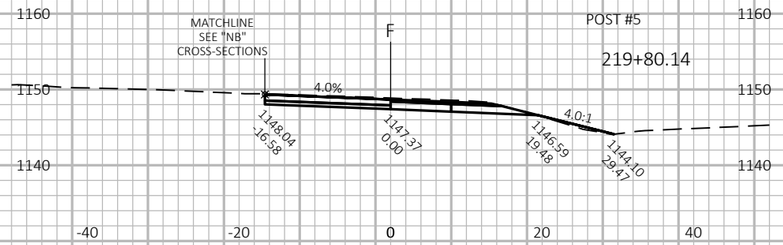
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP F	SHEET 541	E

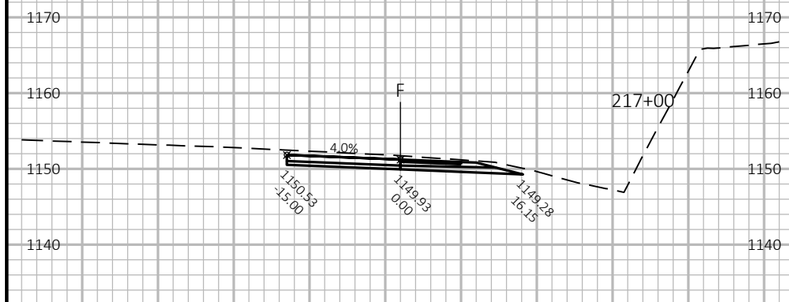
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090210_XS.DWG
LAYOUT NAME - 090210_xs_2

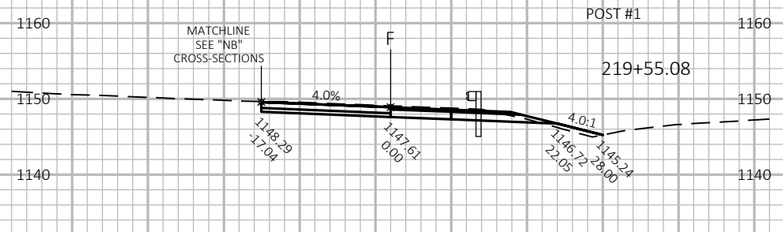
PLOT DATE : 5/22/2018 5:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

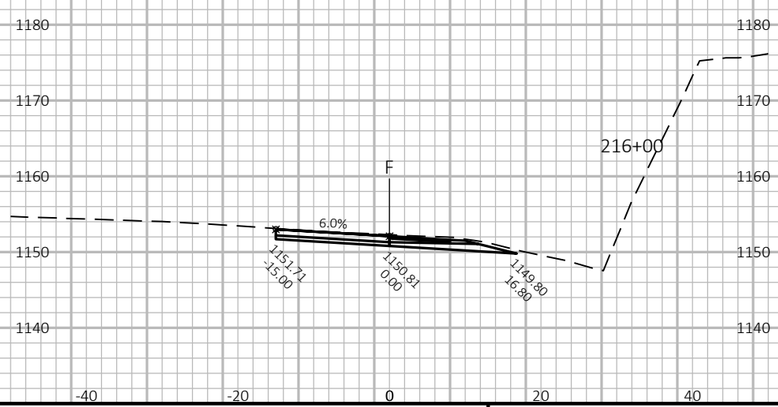
WISDOT/CADDS SHEET 49

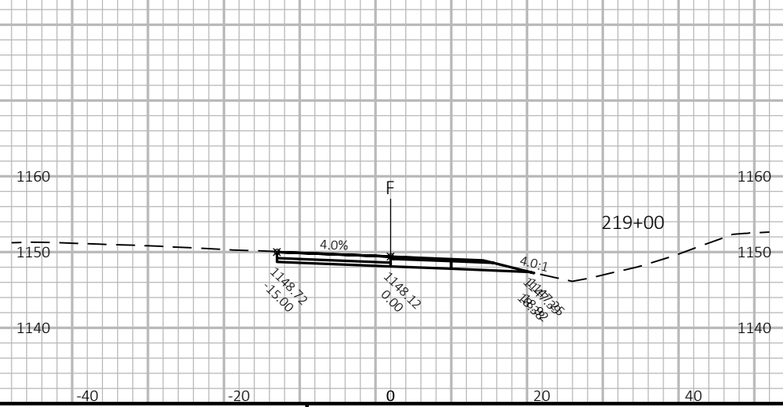


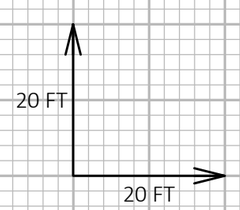












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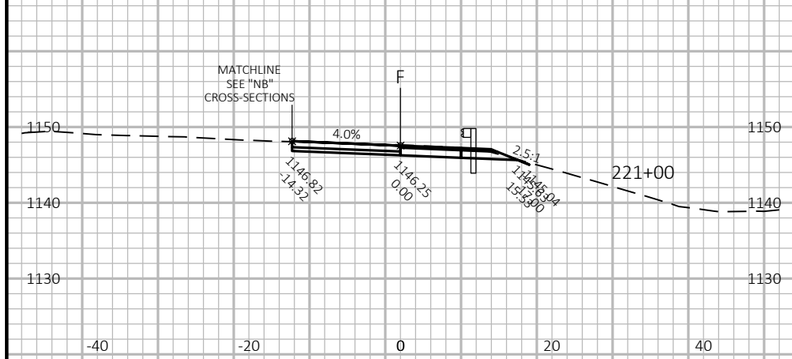
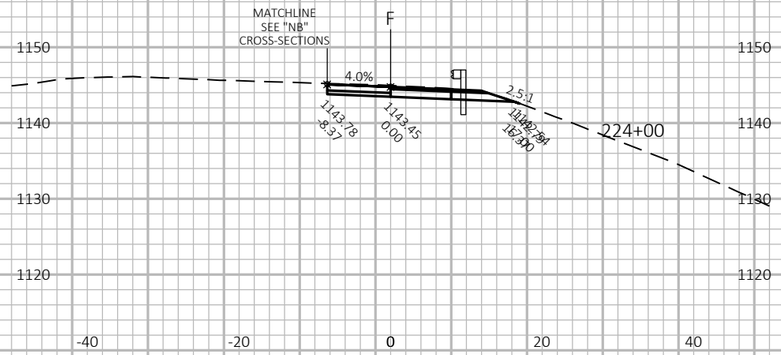
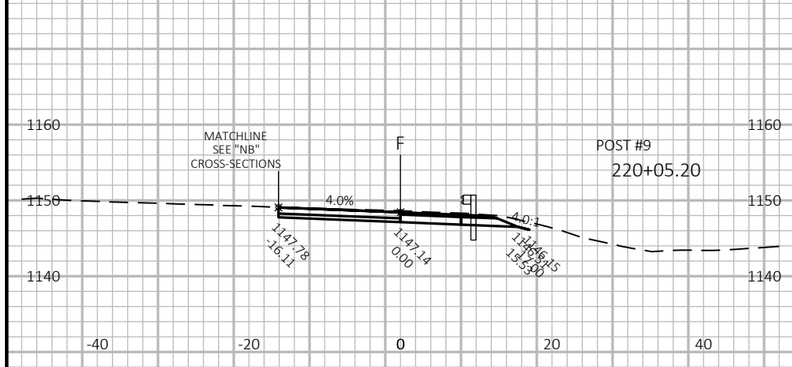
9

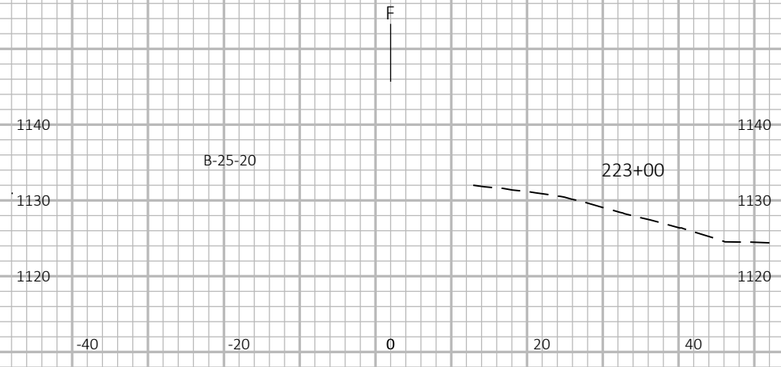
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP F	SHEET 542	E

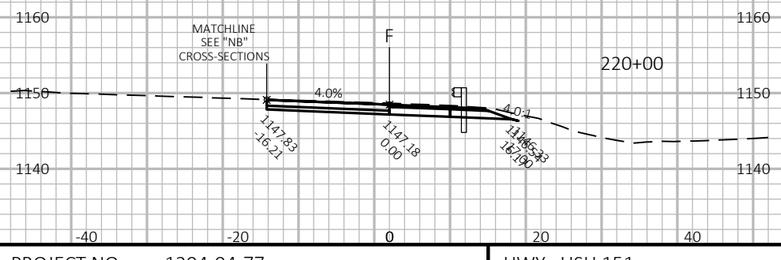
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090210_XS.DWG
LAYOUT NAME - 090210_xs_3
PLOT DATE : 5/22/2018 5:23 PM
PLOT BY : SCHMIDT, DAVID B
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

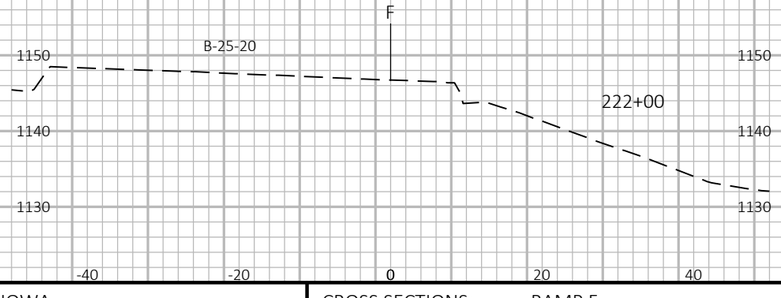


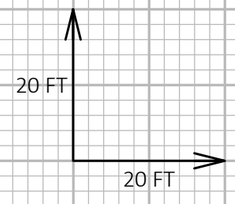












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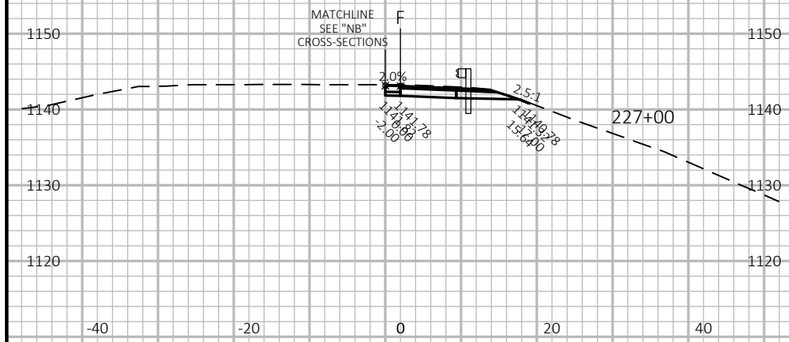
9

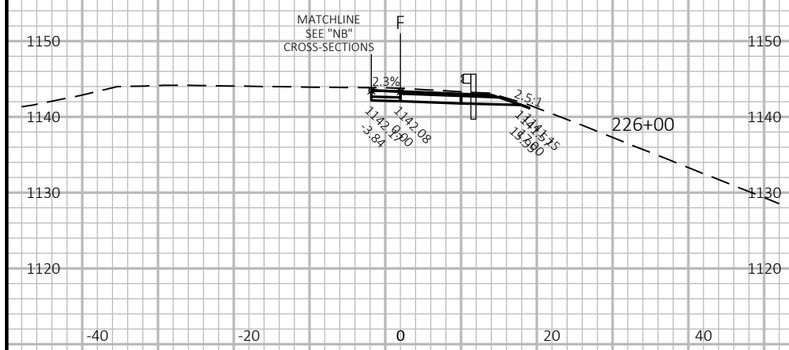
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP F	SHEET 543	E

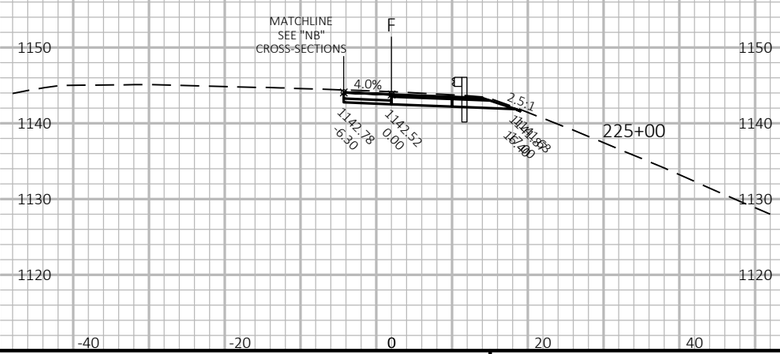
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090210_XS.DWG
LAYOUT NAME - 090210_xs_4

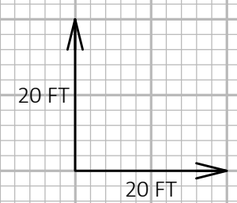
PLOT DATE : 5/22/2018 5:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49









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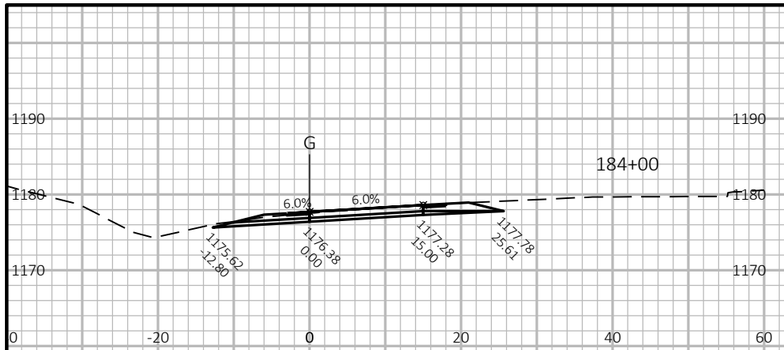
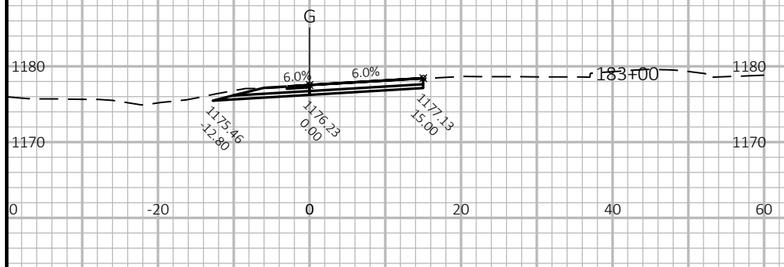
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP F	SHEET 544	E

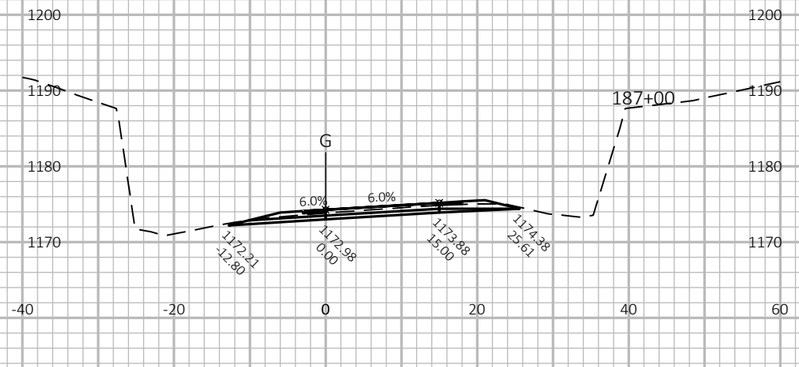
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090210_XS.DWG
LAYOUT NAME - 090210_xs_5

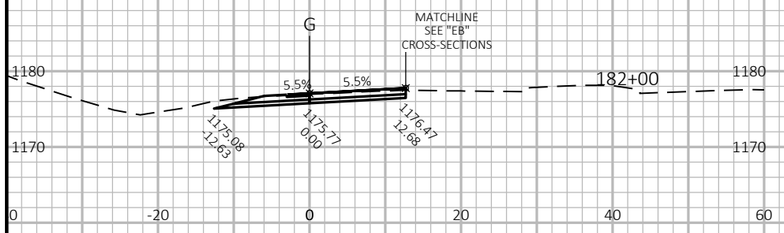
PLOT DATE : 5/22/2018 5:23 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

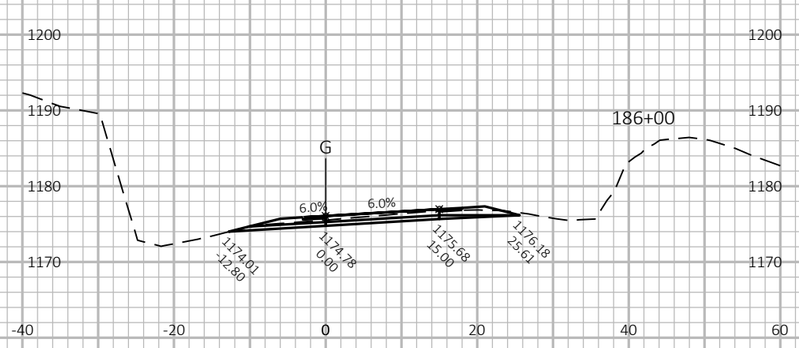
WISDOT/CADDS SHEET 49

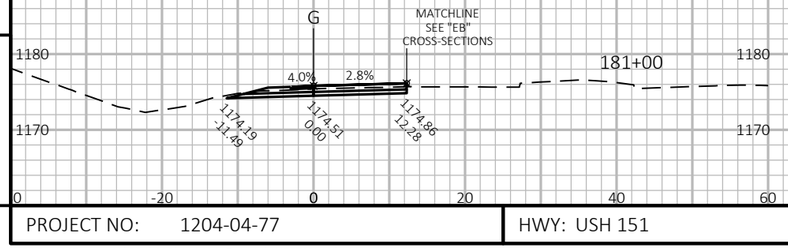


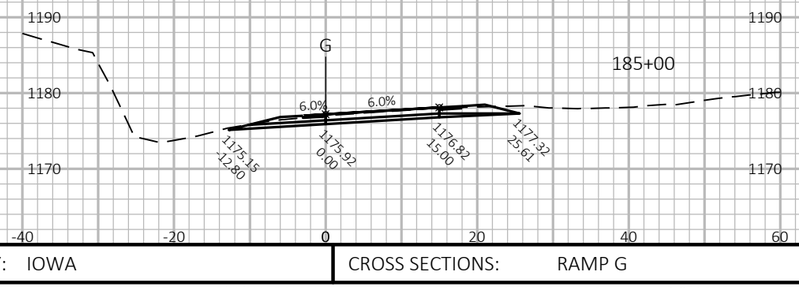












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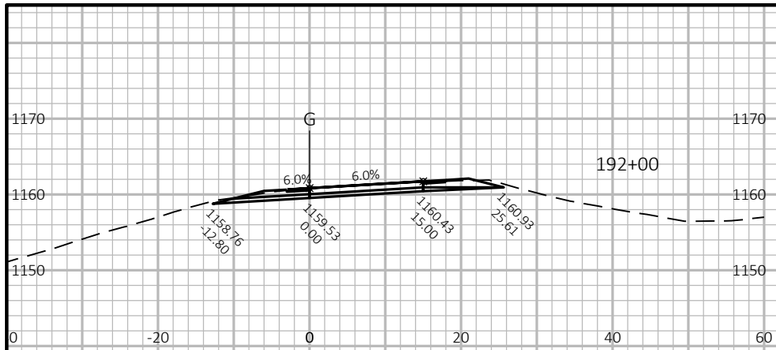
9

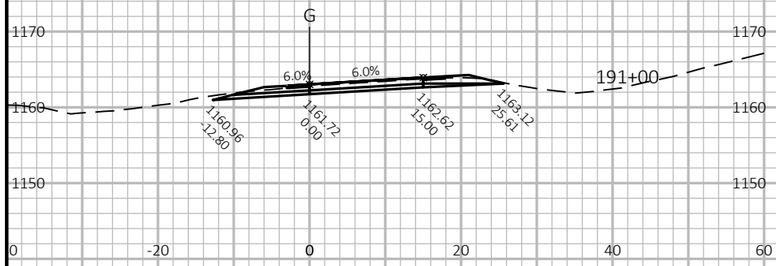
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP G	SHEET 545	E

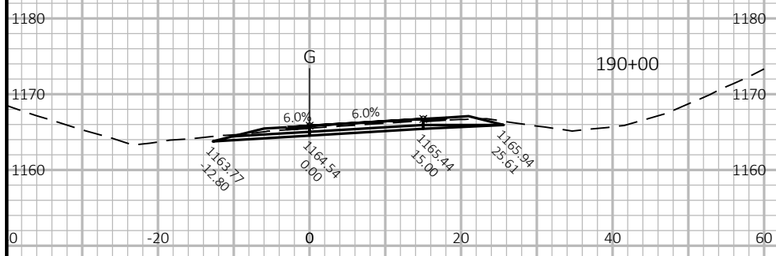
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090211_XS.DWG
LAYOUT NAME - 090211_xs_1

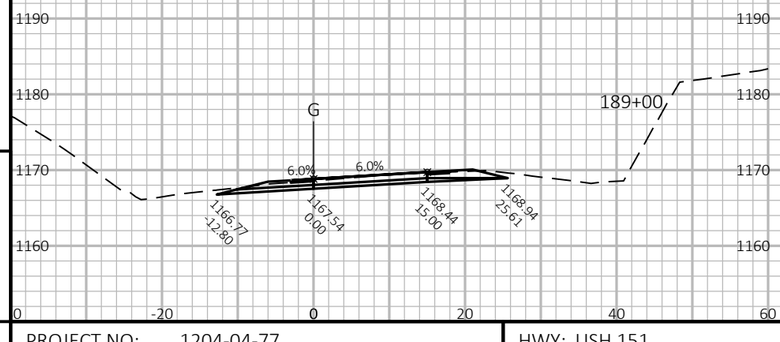
PLOT DATE : 5/22/2018 5:28 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

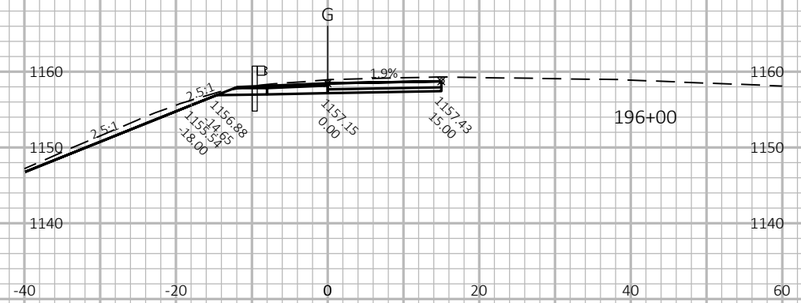
WISDOT/CADDS SHEET 49

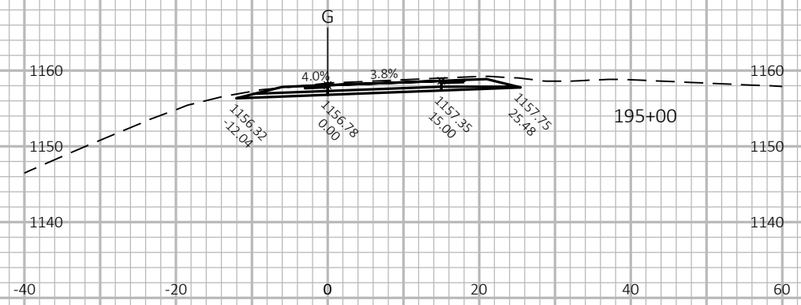


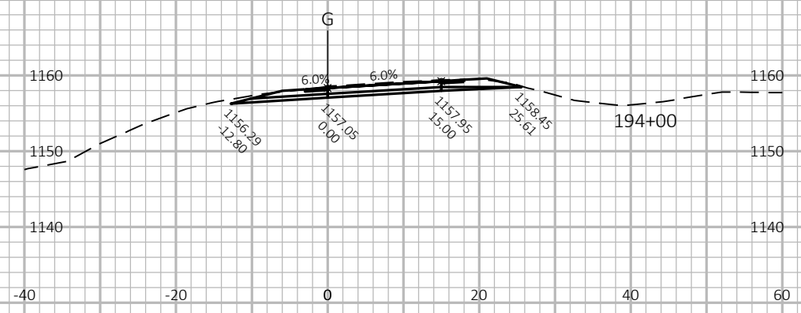


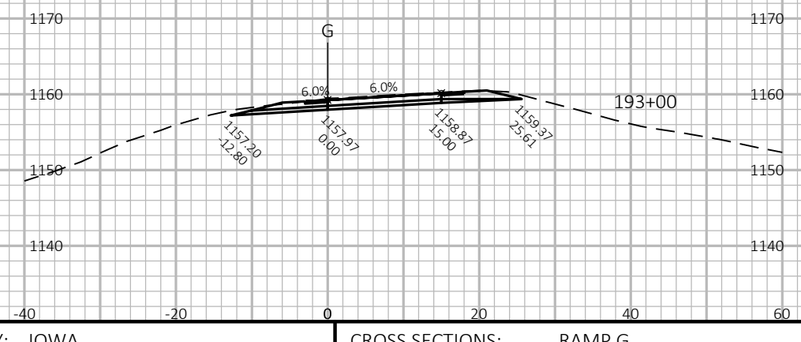


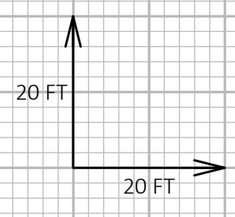












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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP G	SHEET 546	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090211_XS.DWG
LAYOUT NAME - 090211_xs_2

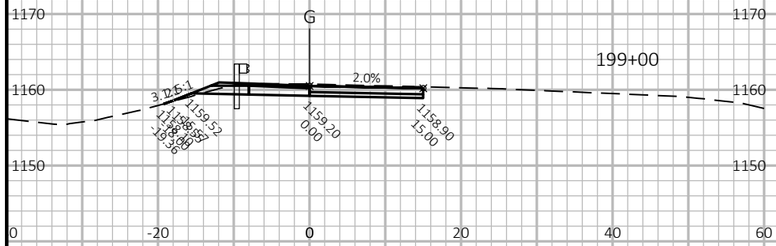
PLOT DATE : 5/22/2018 5:28 PM

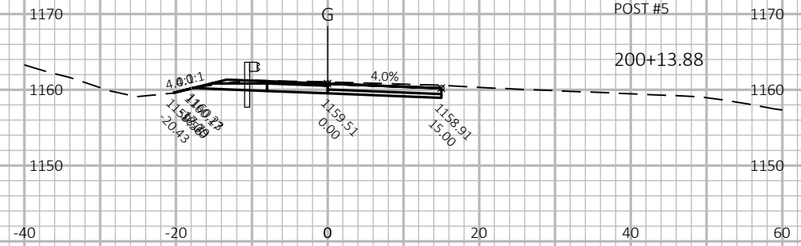
PLOT BY : SCHMIDT, DAVID B

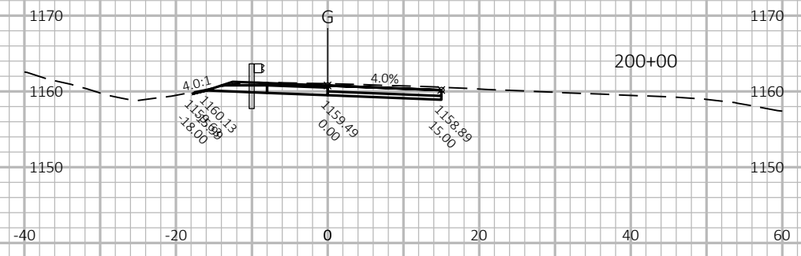
PLOT NAME :

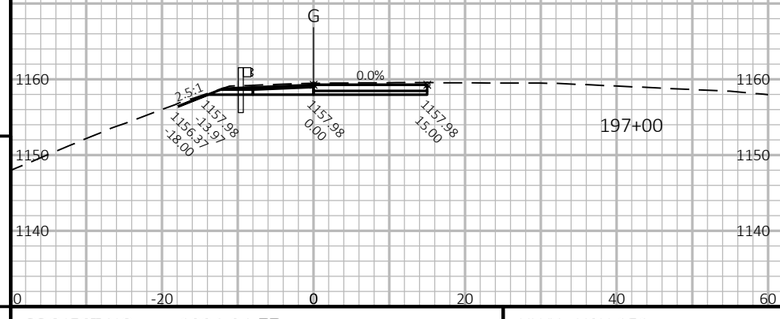
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

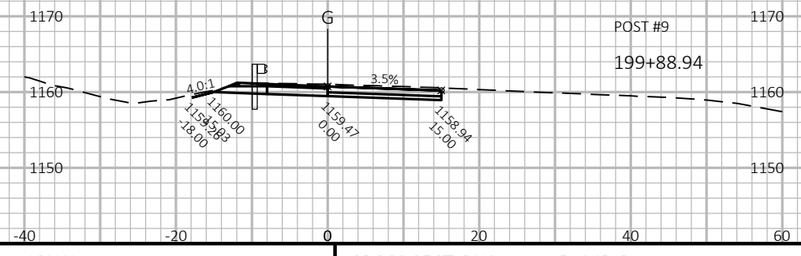
WISDOT/CADDS SHEET 49

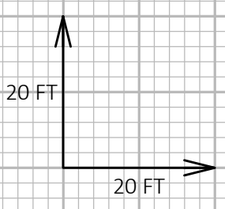












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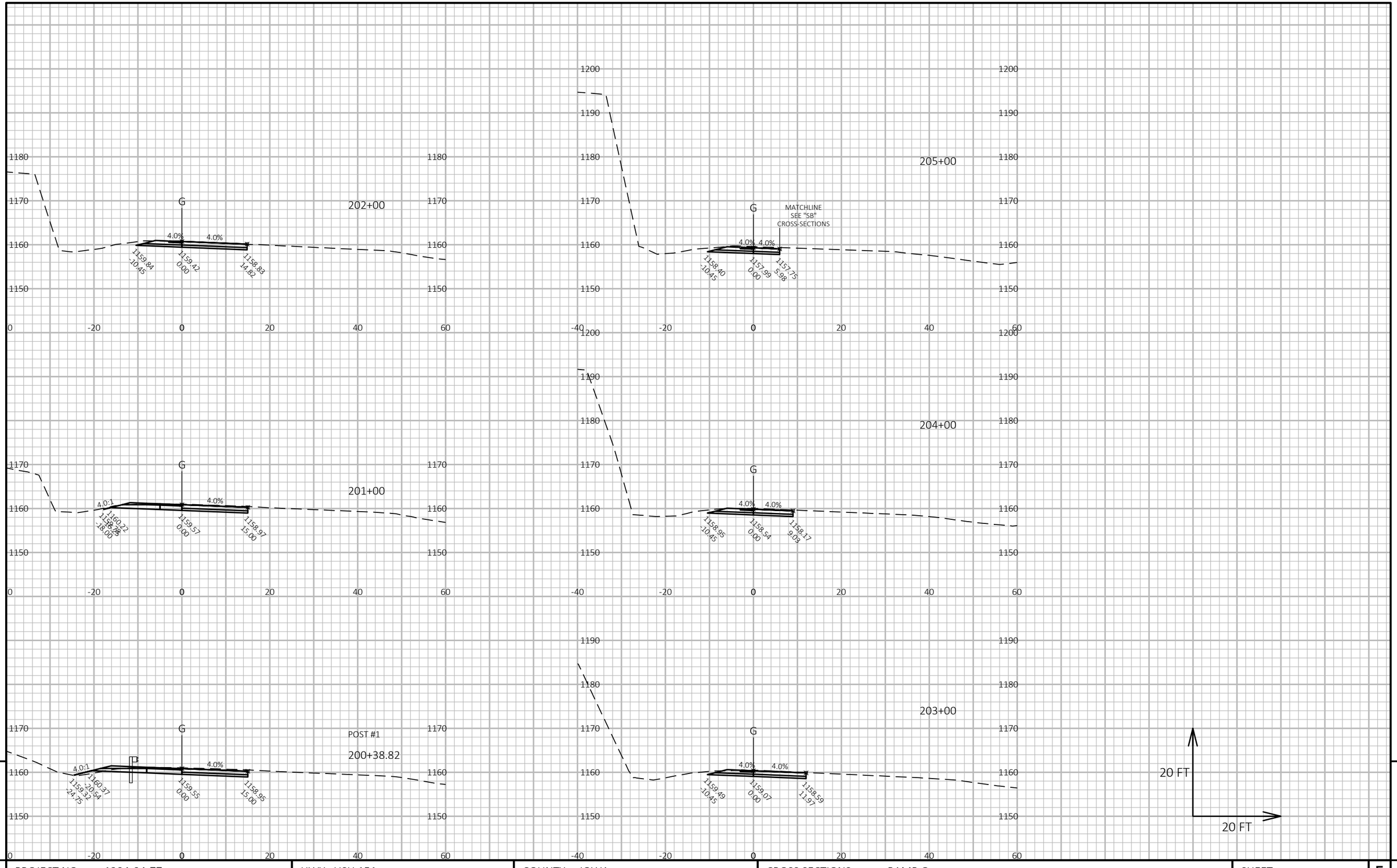
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP G	SHEET 547	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090211_XS.DWG
LAYOUT NAME - 090211_xs_3

PLOT DATE : 5/22/2018 5:28 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

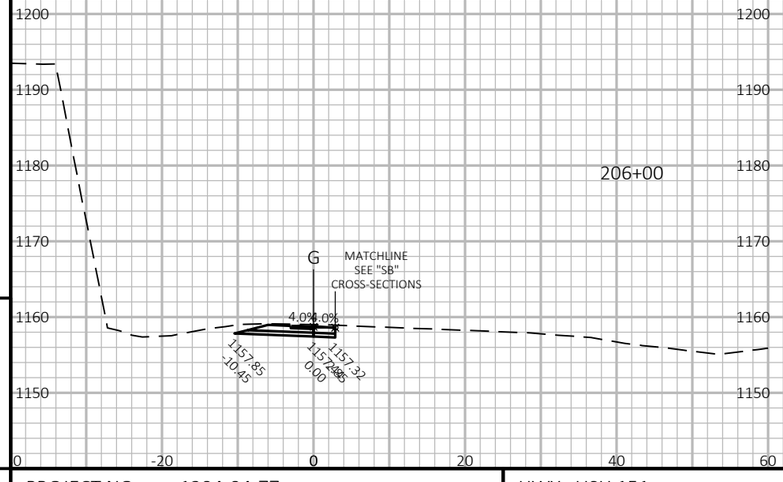
9

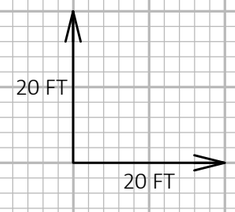
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP G	SHEET 548	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090211_XS.DWG
LAYOUT NAME - 090211_xs_4

PLOT DATE : 5/22/2018 5:28 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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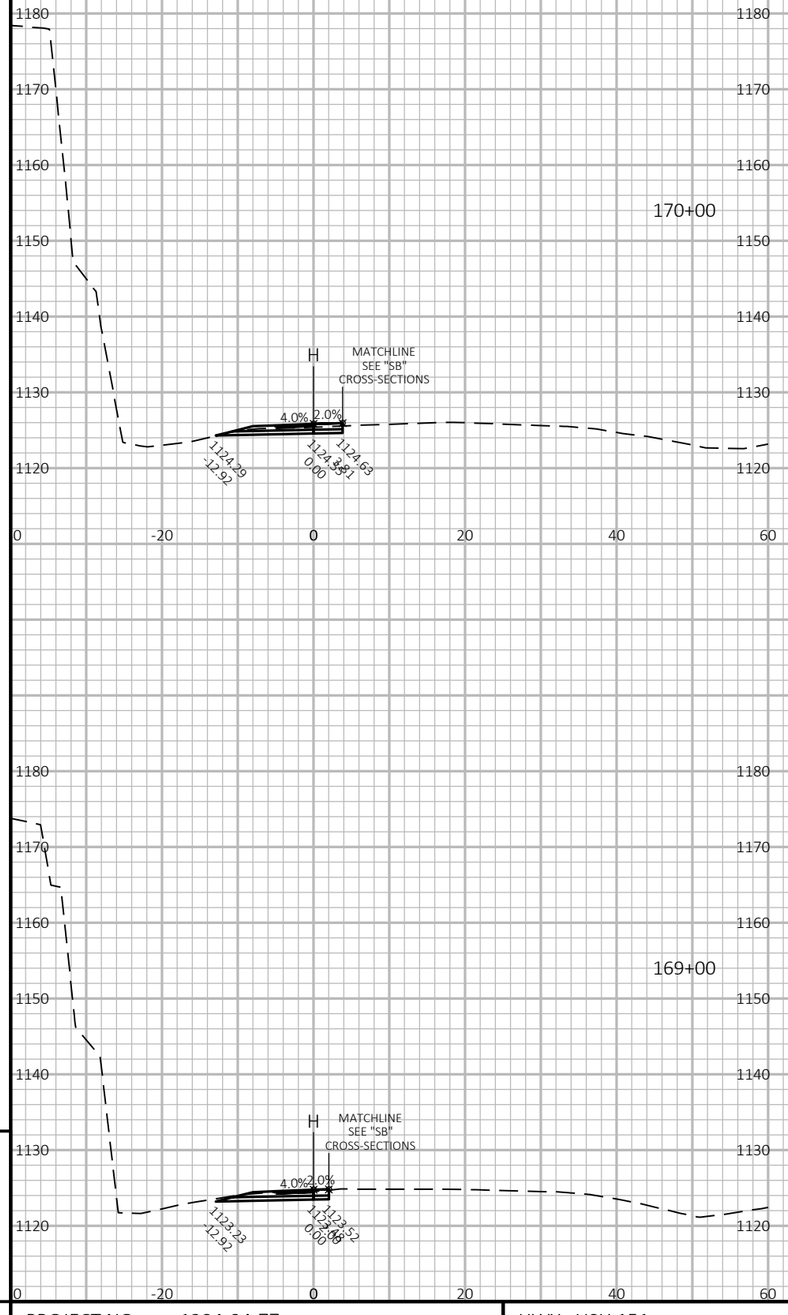
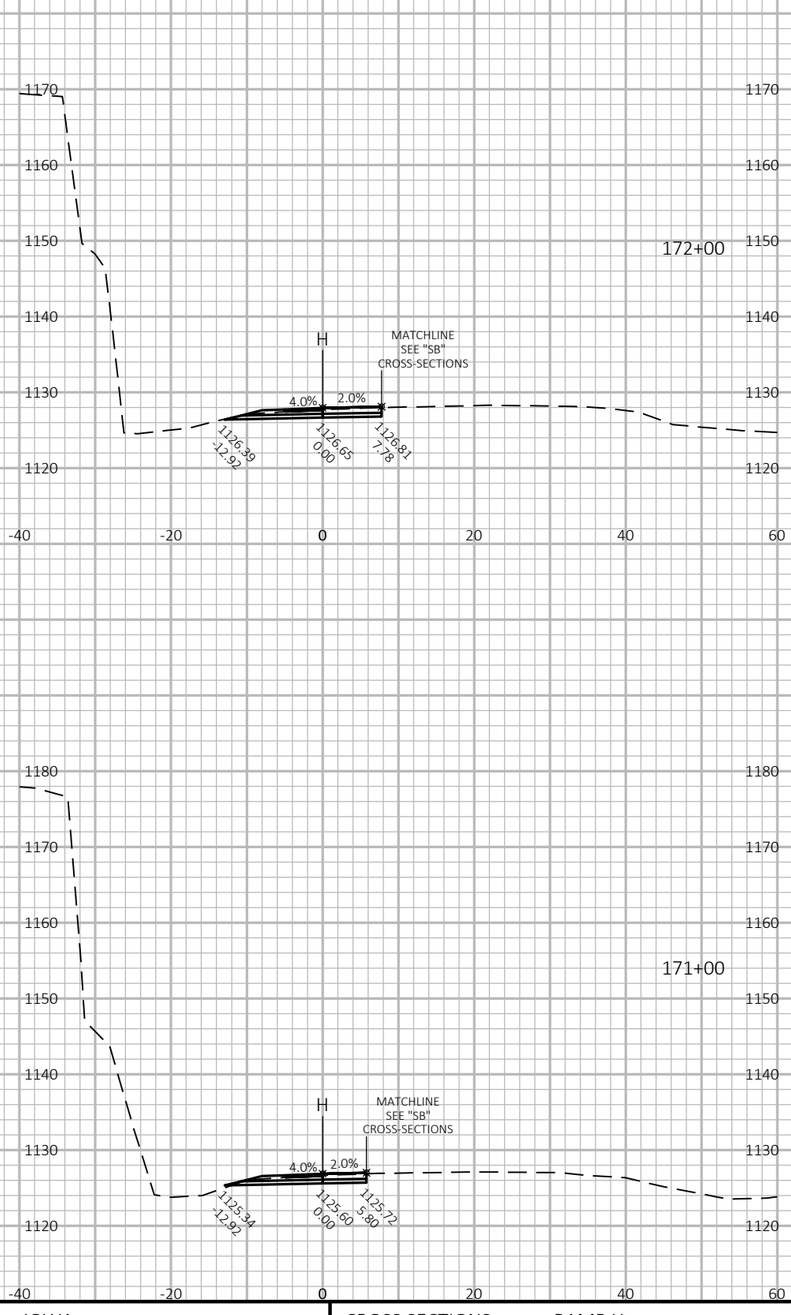
9

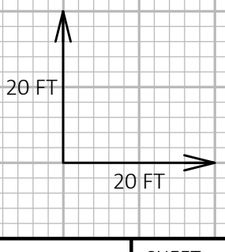
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP G	SHEET 549	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090211_XS.DWG
LAYOUT NAME - 090211_xs_5

PLOT DATE : 5/22/2018 5:28 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.







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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 550	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 1

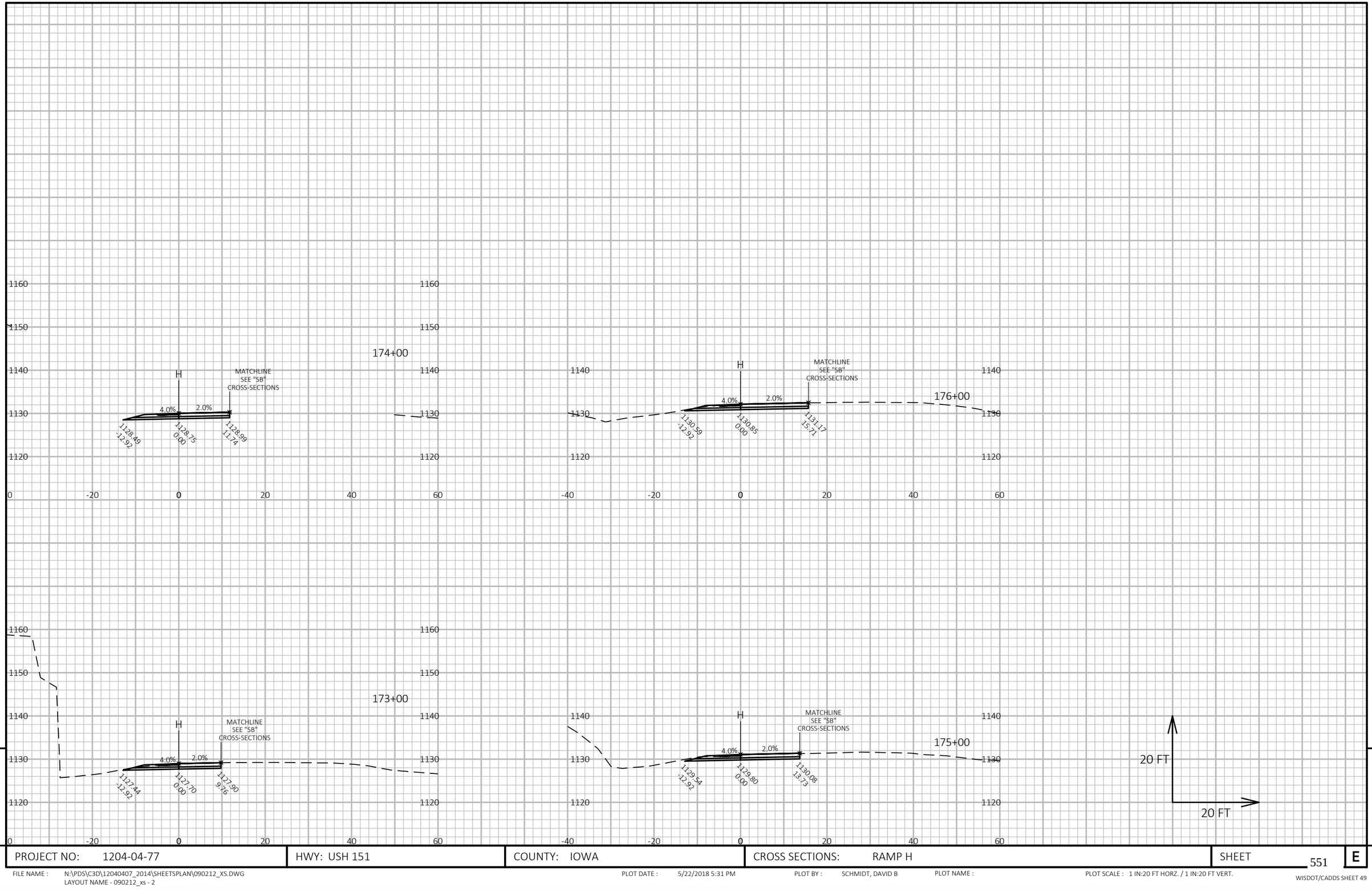
PLOT DATE : 5/22/2018 5:31 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 551	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 2

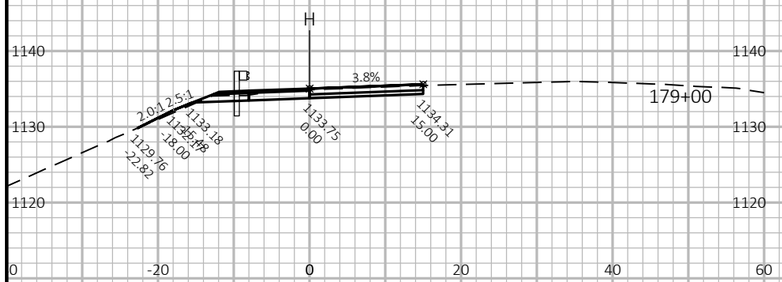
PLOT DATE : 5/22/2018 5:31 PM

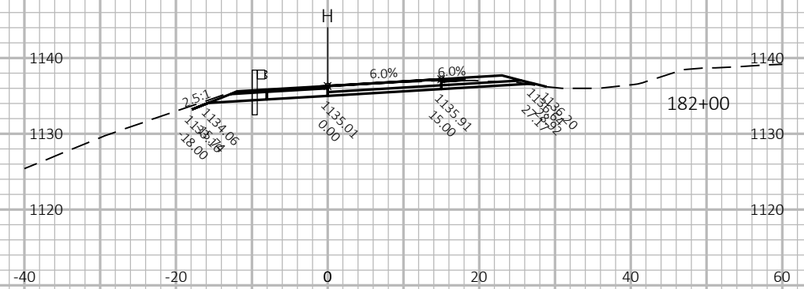
PLOT BY : SCHMIDT, DAVID B

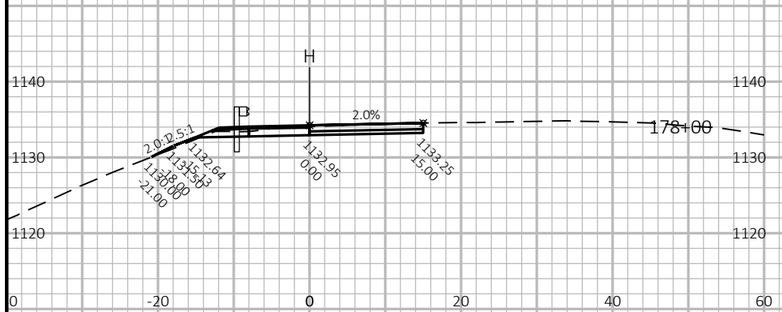
PLOT NAME :

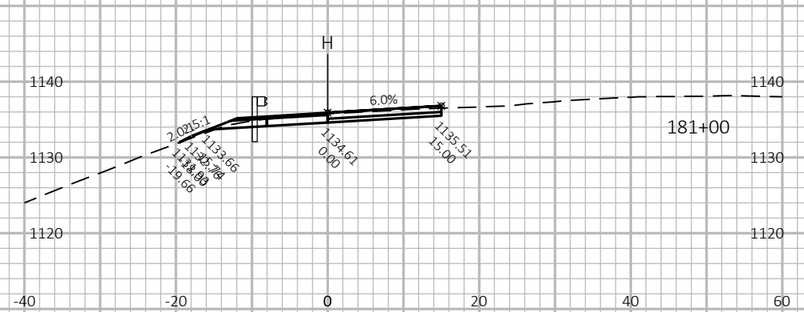
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

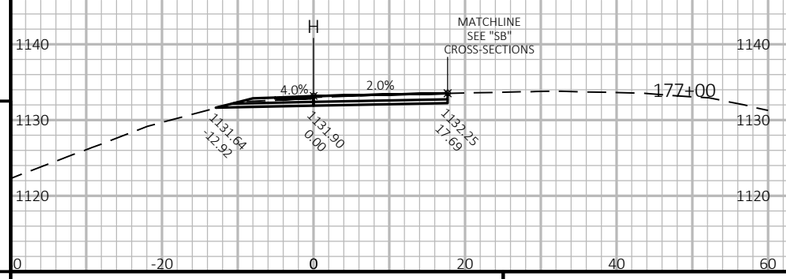
WISDOT/CADDS SHEET 49

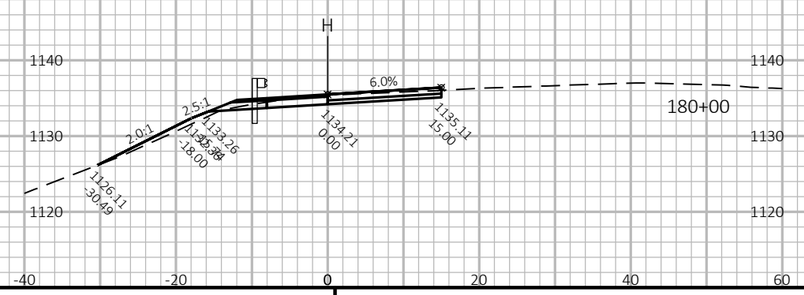


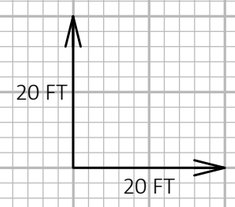












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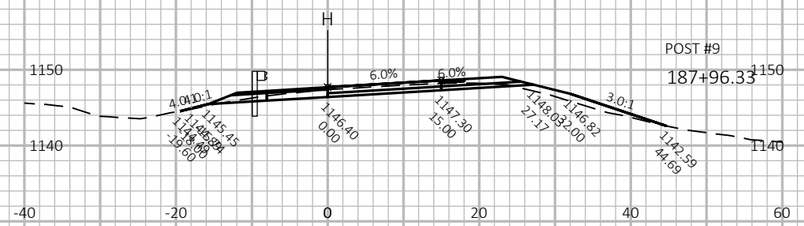
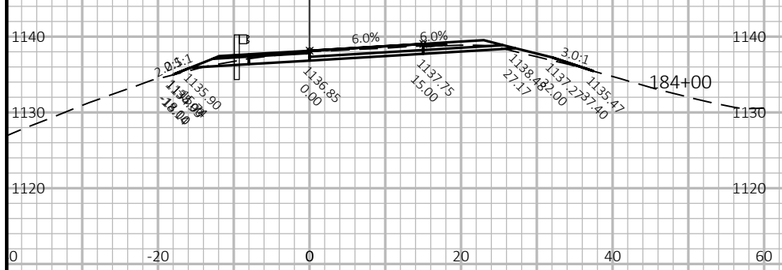
9

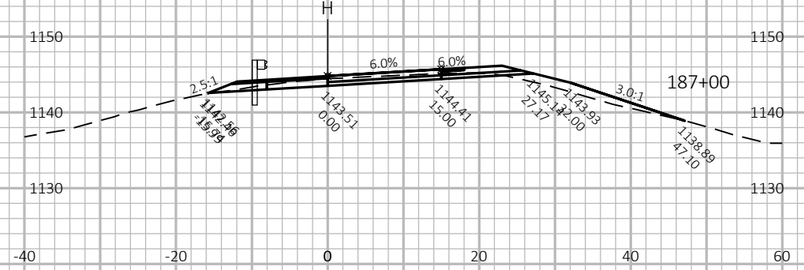
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 552	E

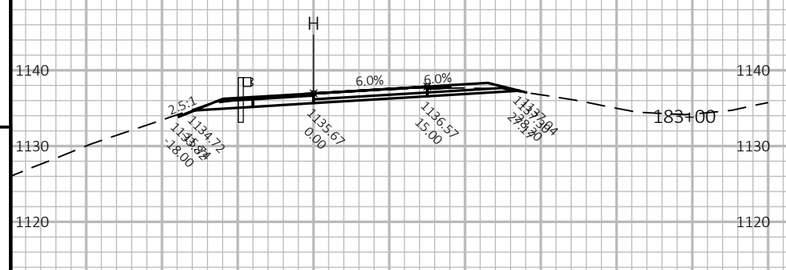
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 3

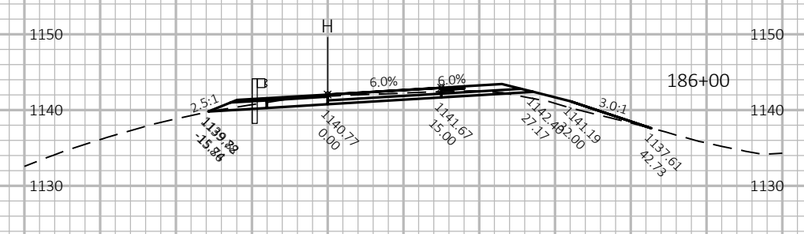
PLOT DATE : 5/22/2018 5:31 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.











9

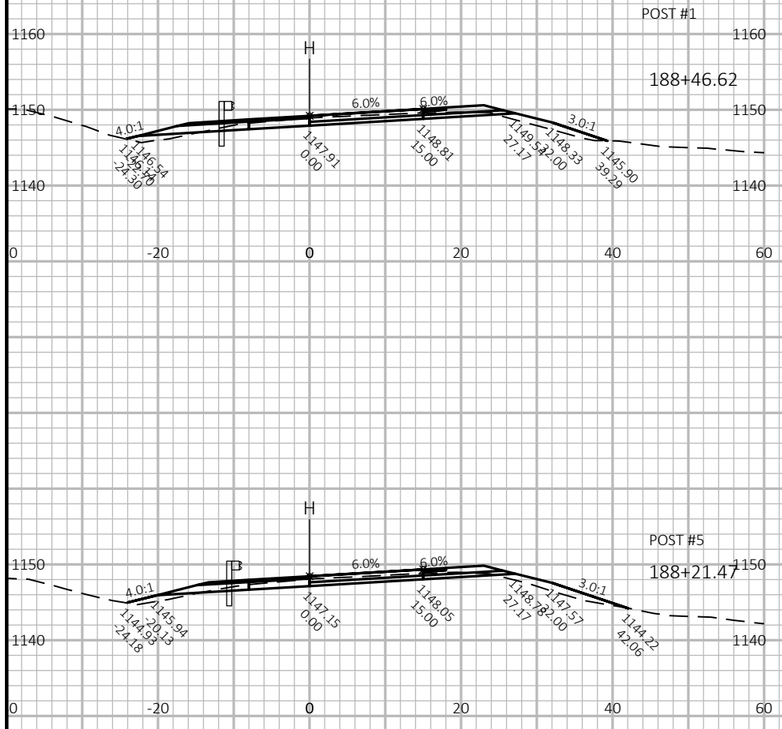
9

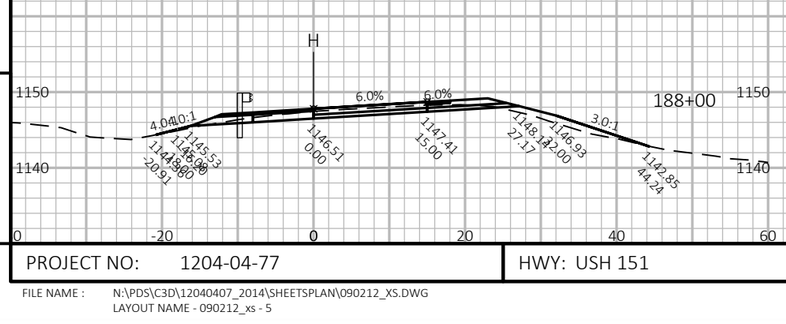
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 553	E

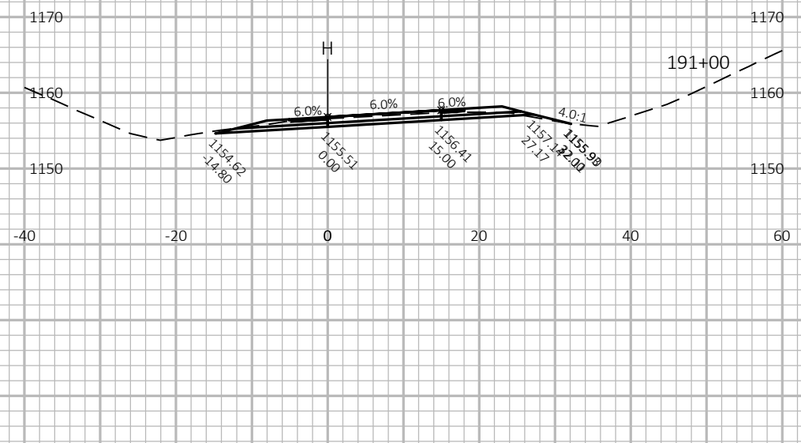
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 4

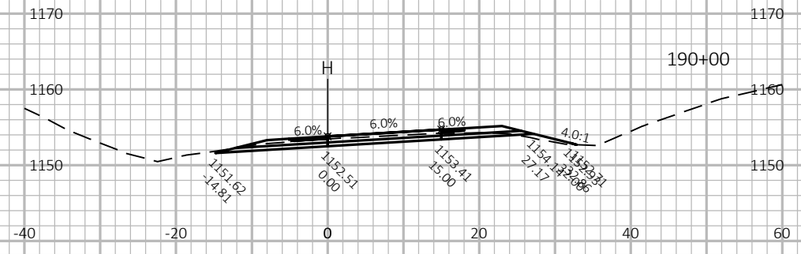
PLOT DATE : 5/22/2018 5:31 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

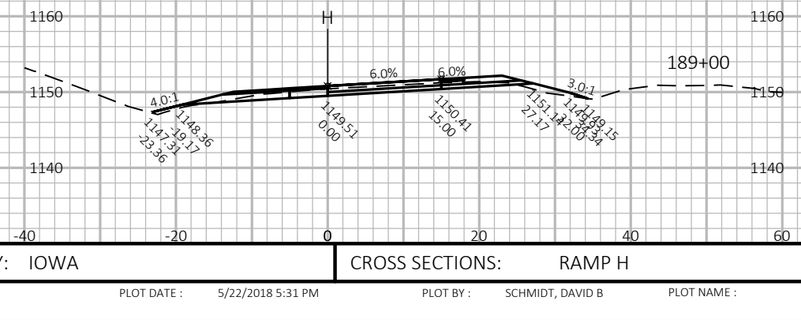
WISDOT/CADDS SHEET 49

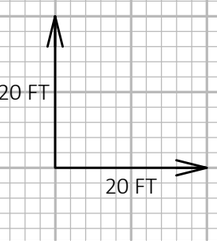












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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 554	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 5

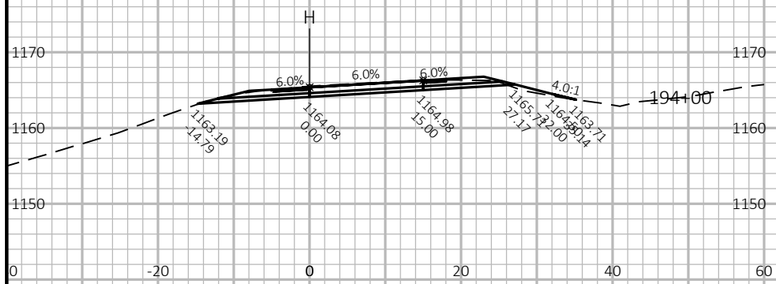
PLOT DATE : 5/22/2018 5:31 PM

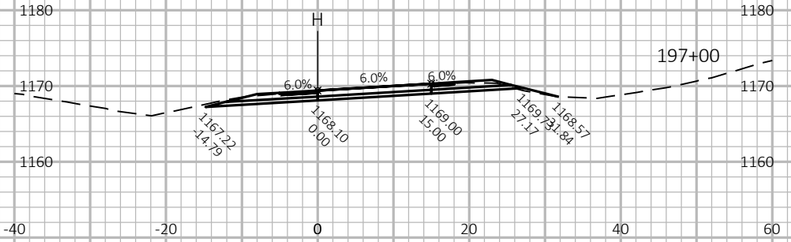
PLOT BY : SCHMIDT, DAVID B

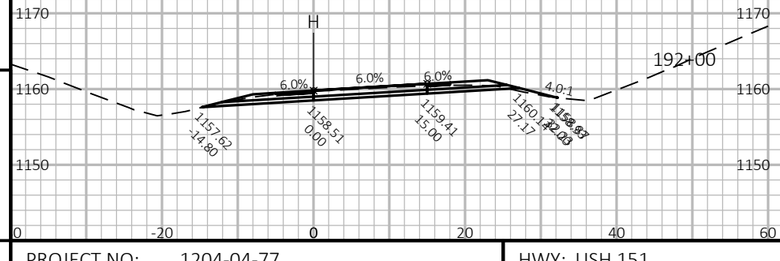
PLOT NAME :

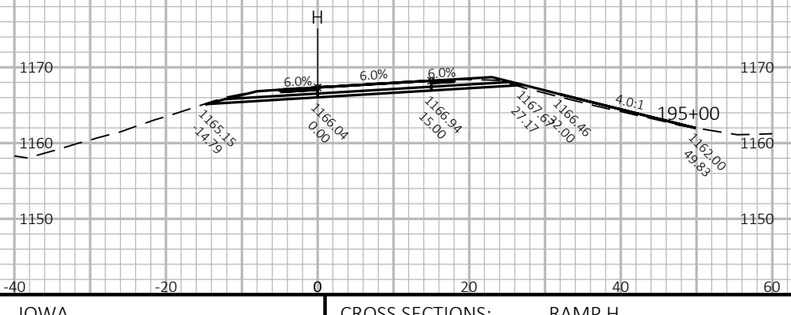
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

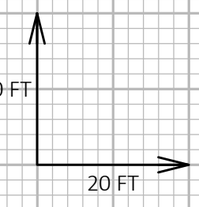
WISDOT/CADDS SHEET 49











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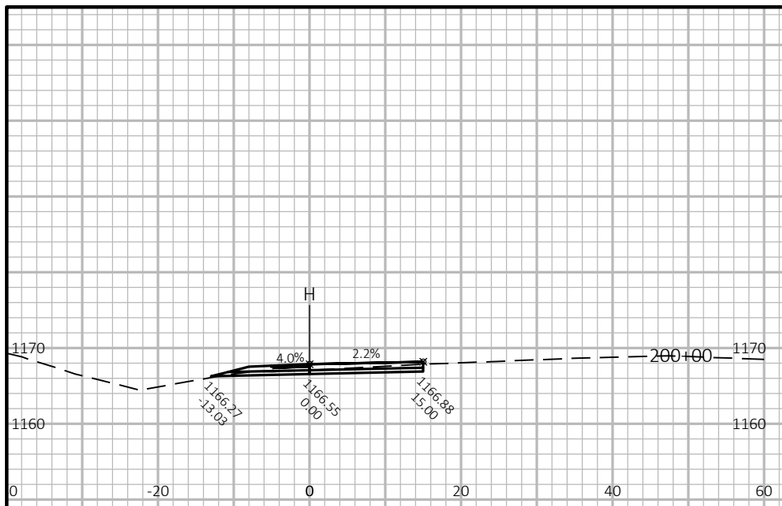
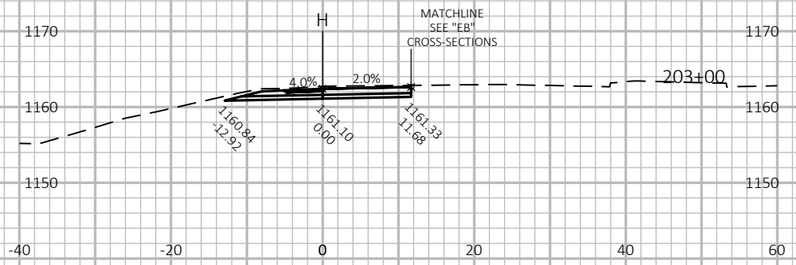
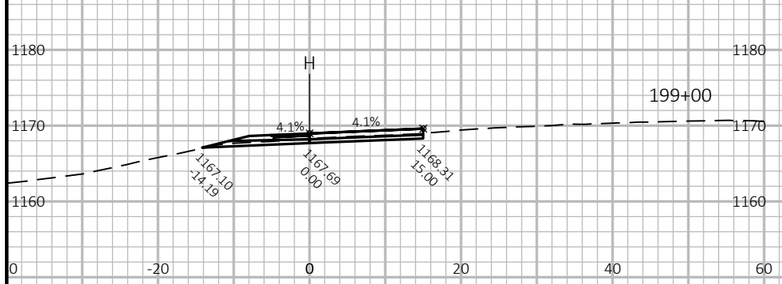
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 555	E

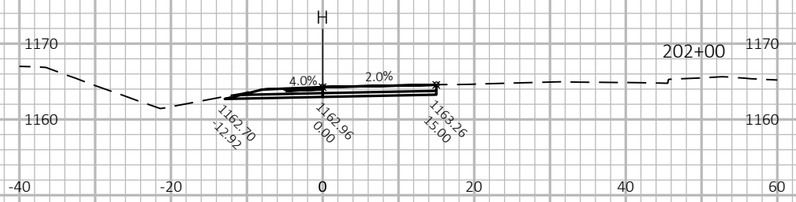
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 6

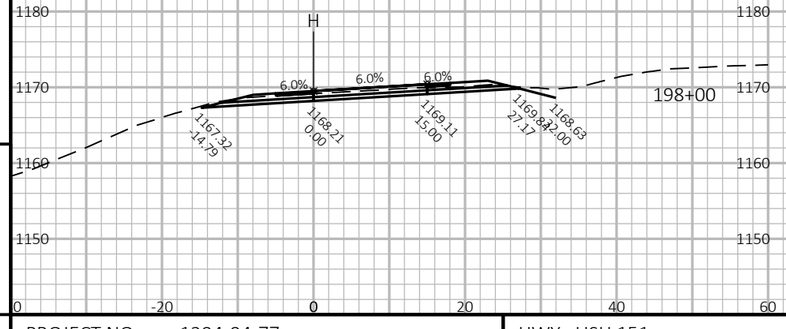
PLOT DATE : 5/22/2018 5:31 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

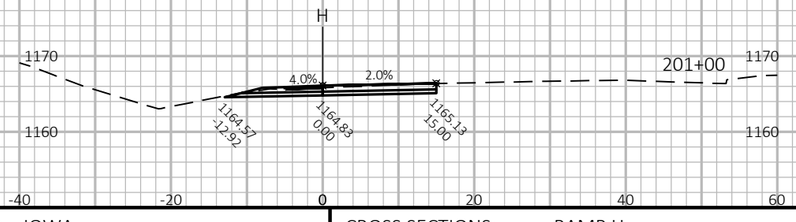


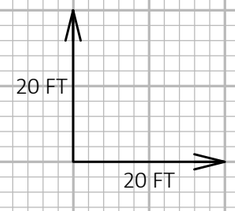












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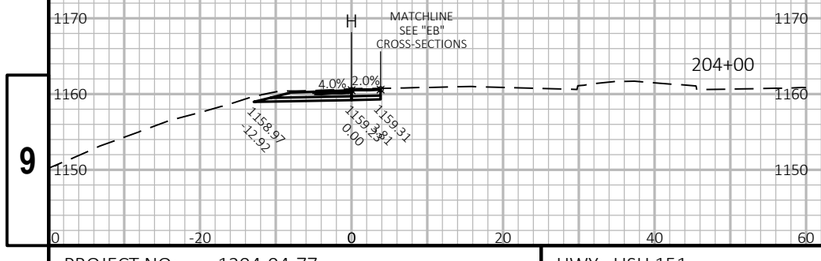
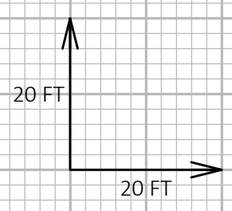
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 556	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 7

PLOT DATE : 5/22/2018 5:31 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: RAMP H	SHEET 557	E

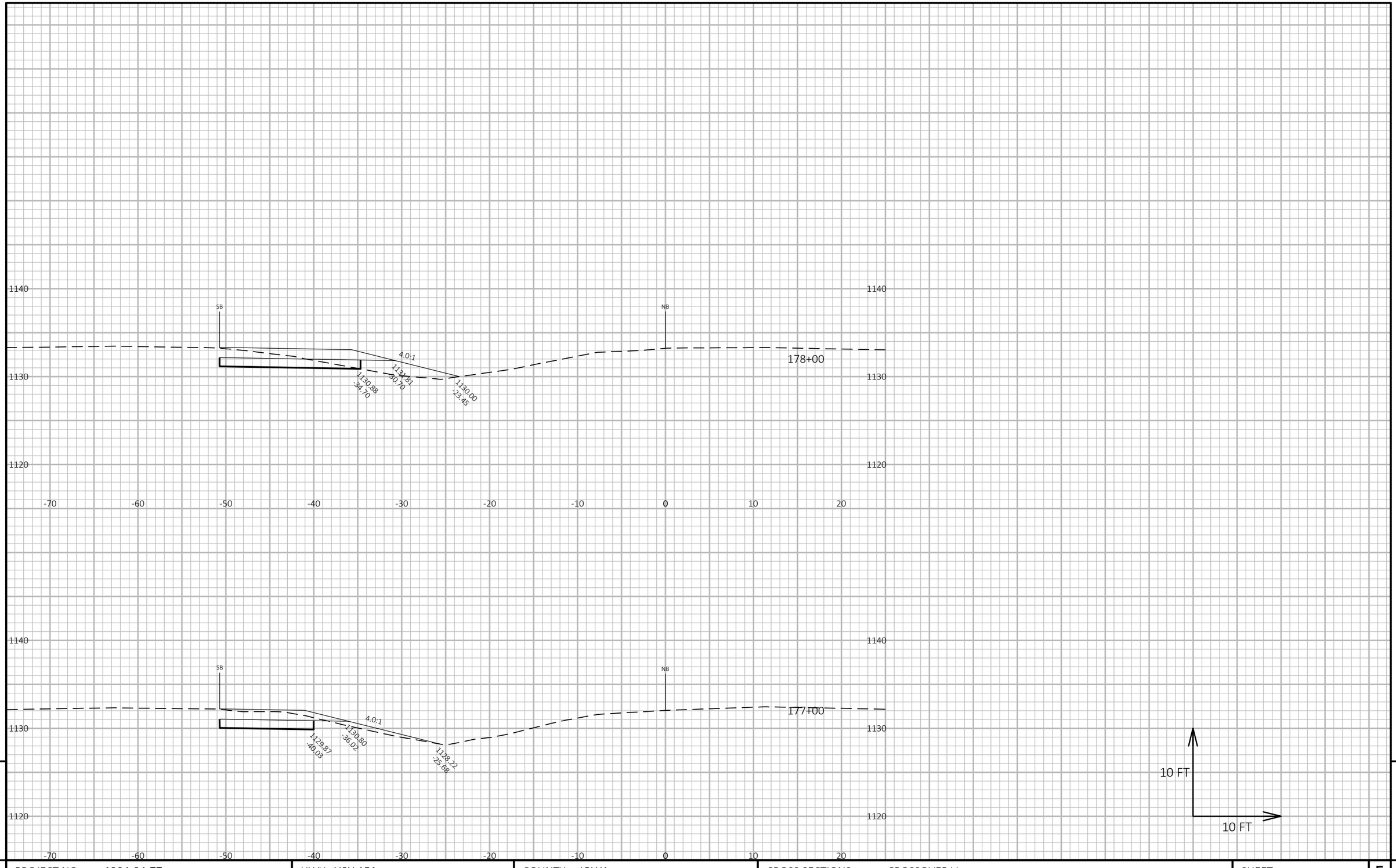
FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090212_XS.DWG
LAYOUT NAME - 090212_xs - 8

PLOT DATE : 5/22/2018 5:31 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER V	SHEET 558	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090214_XS.DWG
LAYOUT NAME - 090214_xs_1

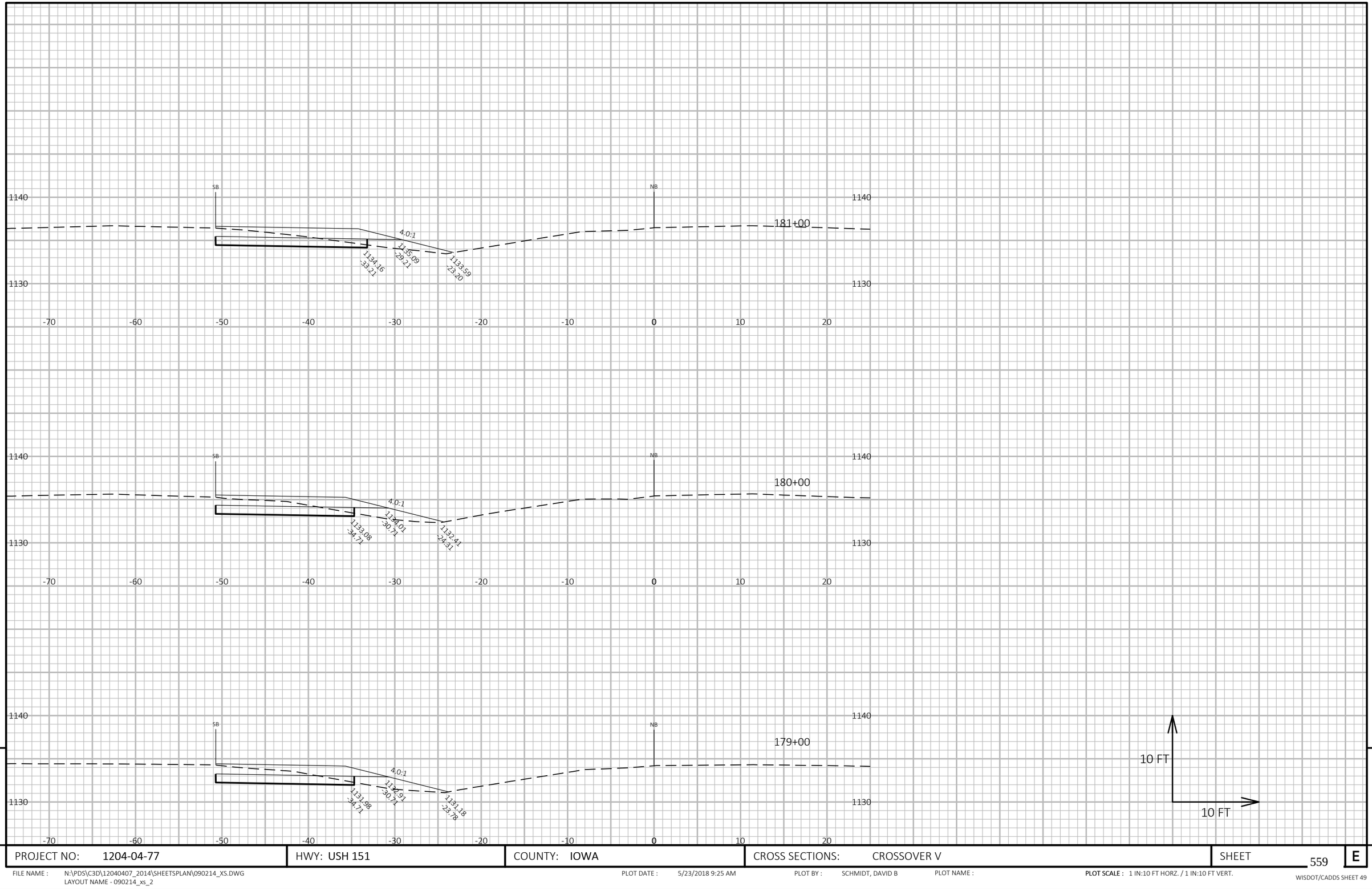
PLOT DATE : 5/23/2018 9:25 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

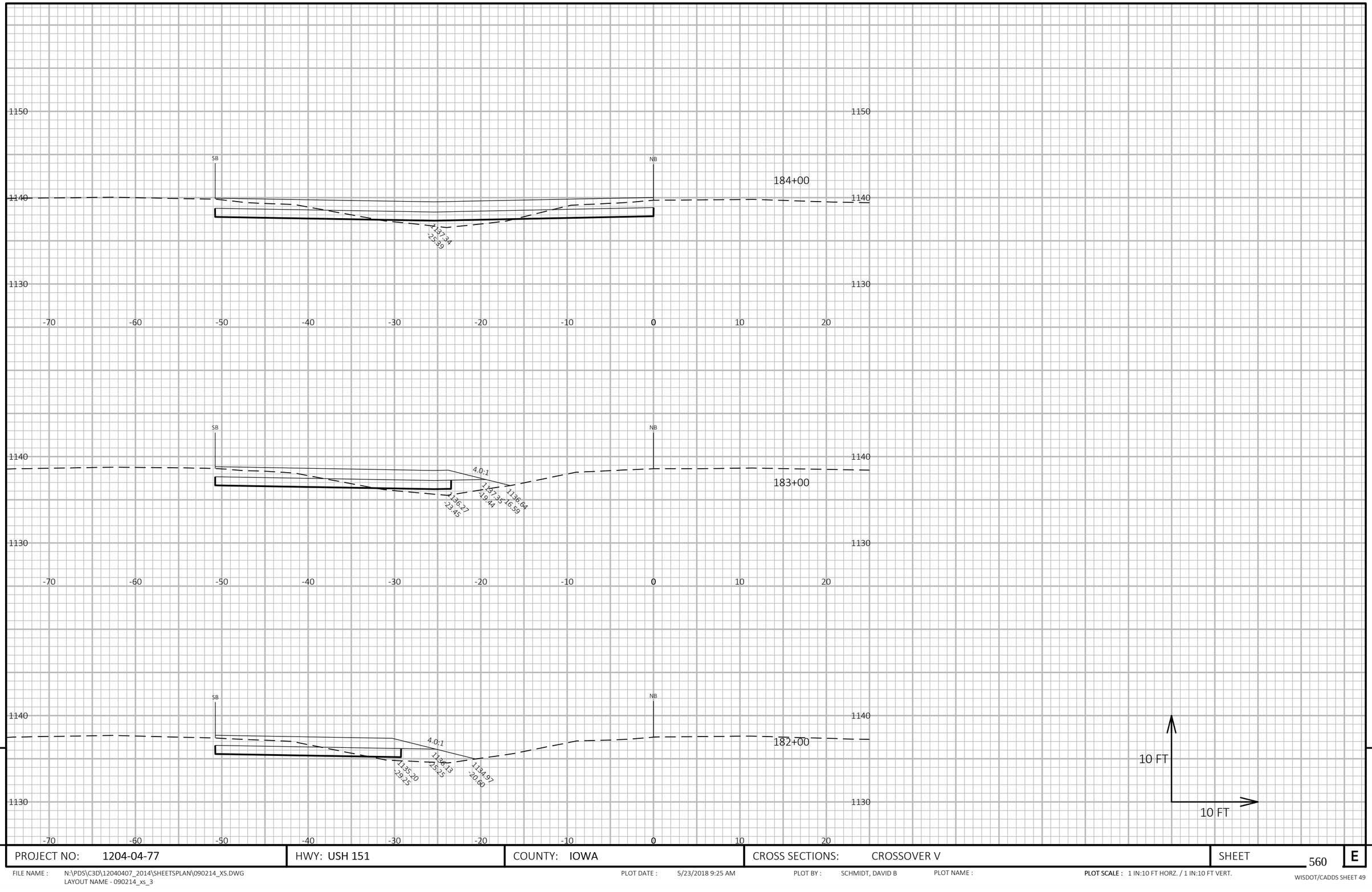


PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER V	SHEET 559	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090214_XS.DWG
LAYOUT NAME - 090214_xs_2

PLOT DATE : 5/23/2018 9:25 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER V	SHEET 560	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090214_XS.DWG
LAYOUT NAME - 090214_xs_3

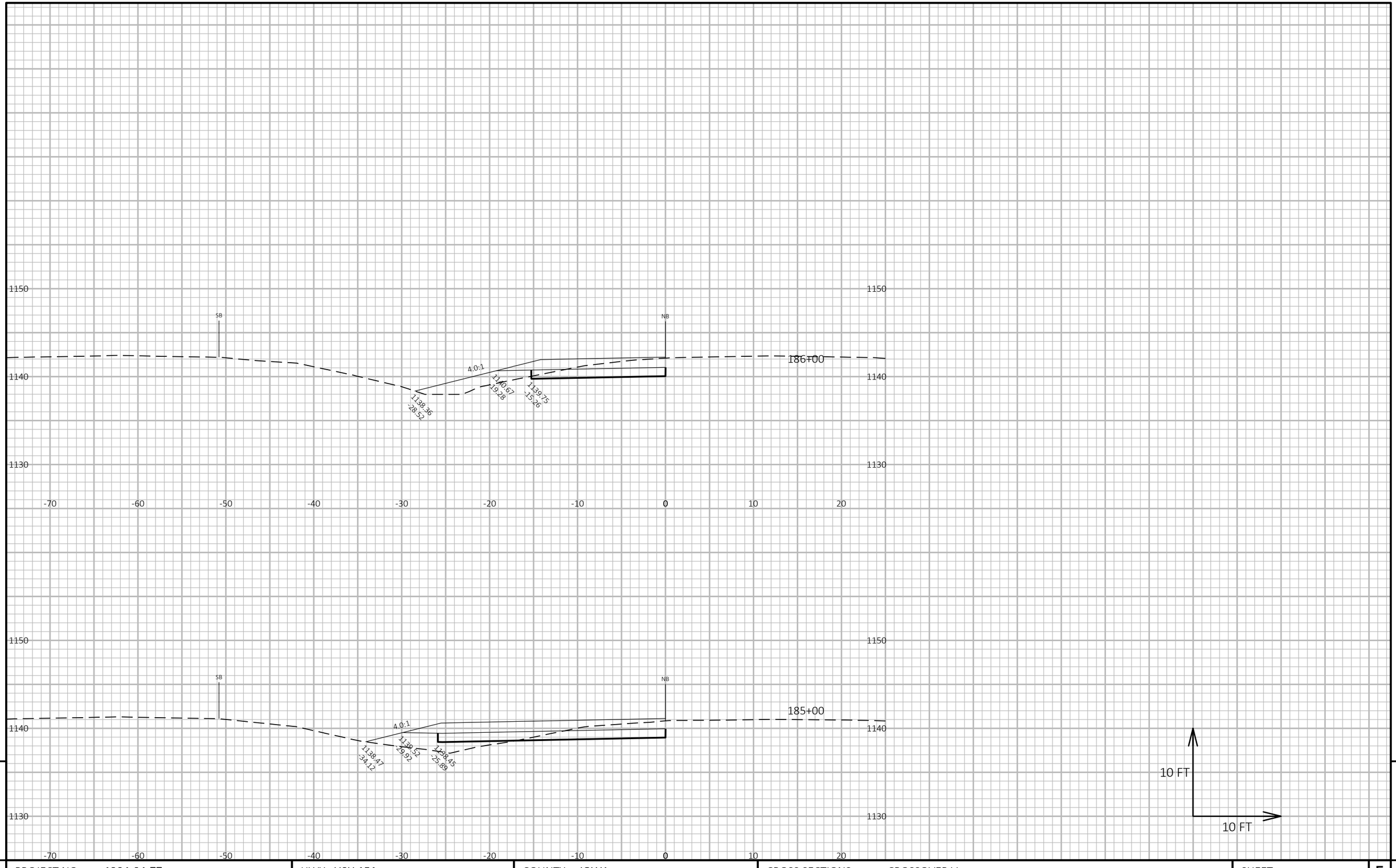
PLOT DATE : 5/23/2018 9:25 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER V	SHEET 561	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090214_XS.DWG
LAYOUT NAME - 090214_xs_4

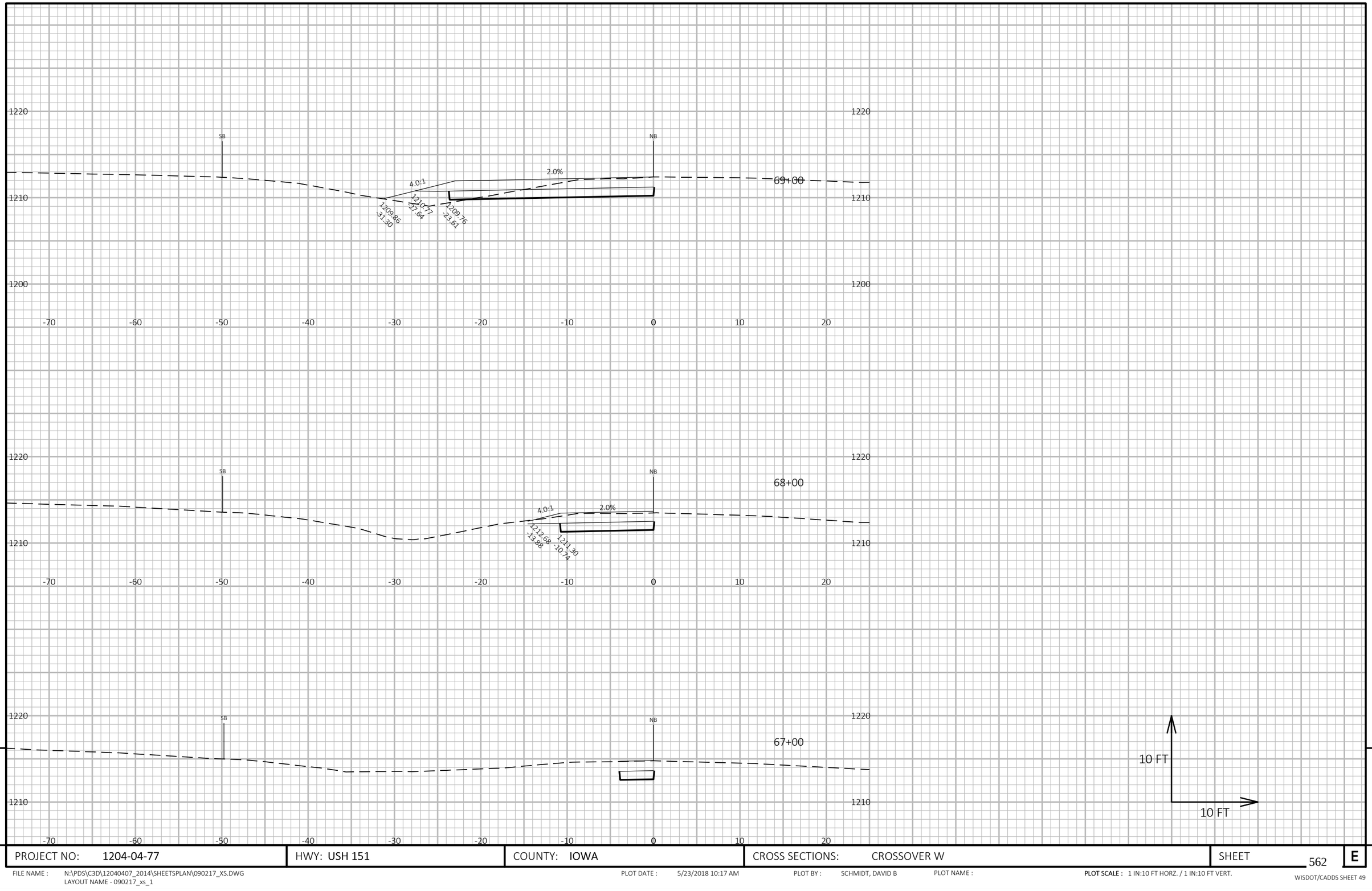
PLOT DATE : 5/23/2018 9:25 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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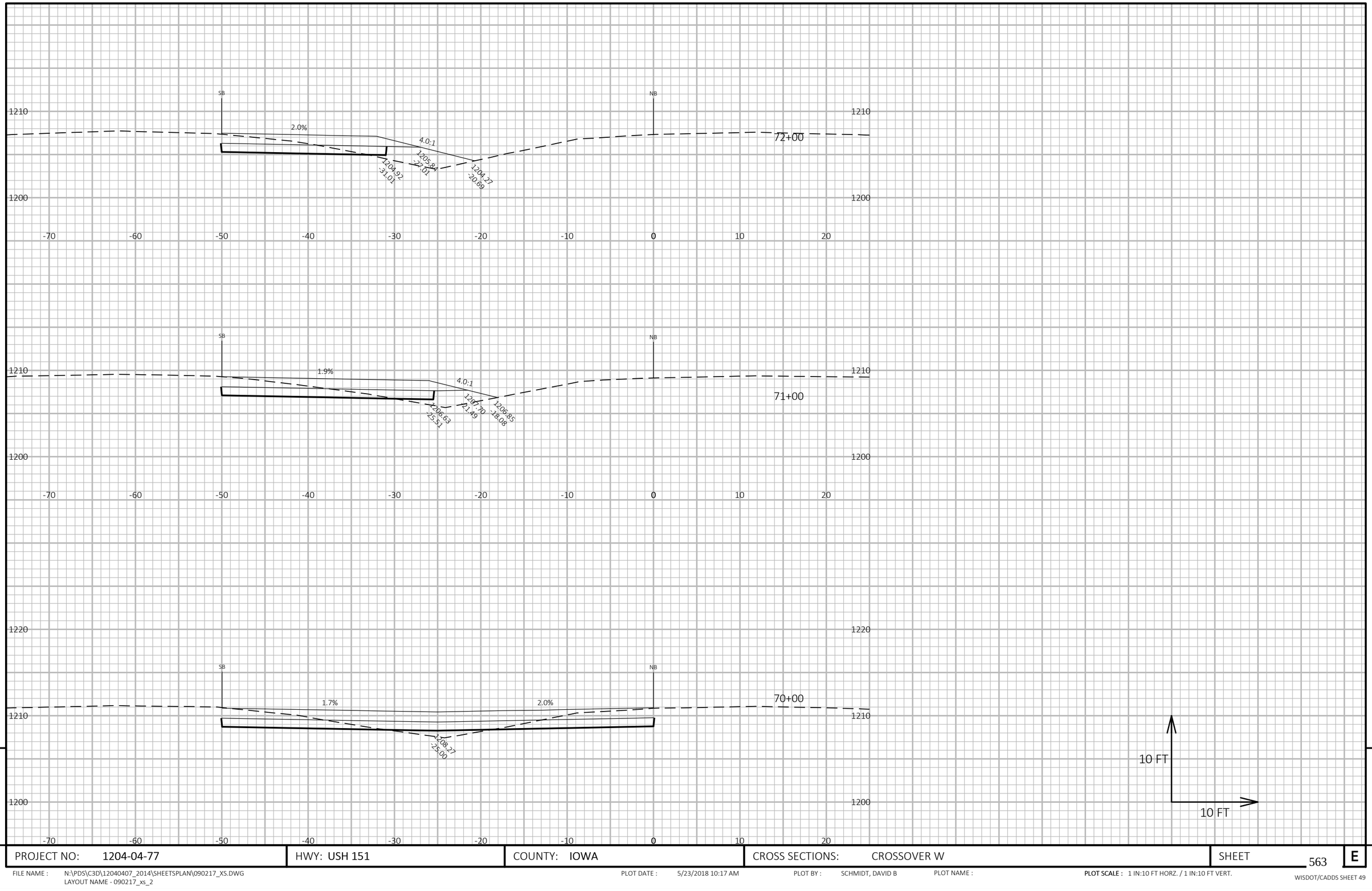
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER W	SHEET 562	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090217_XS.DWG
LAYOUT NAME - 090217_xs_1

PLOT DATE : 5/23/2018 10:17 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



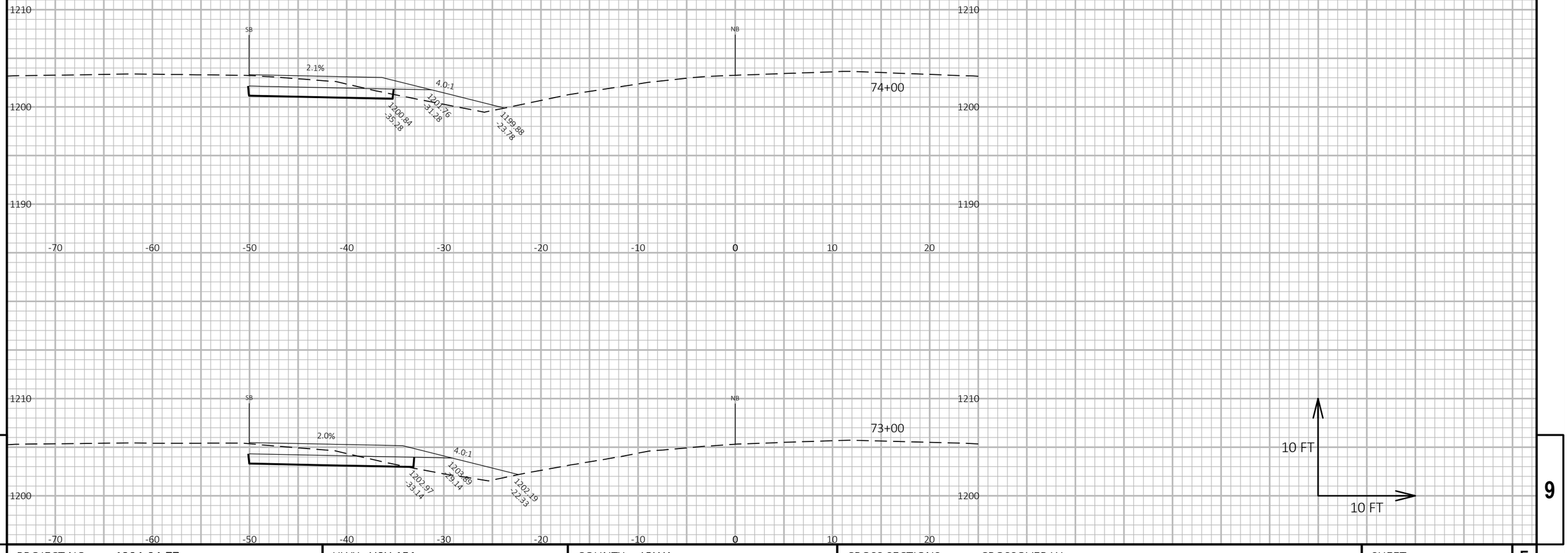
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER W	SHEET 563	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090217_XS.DWG
LAYOUT NAME - 090217_xs_2

PLOT DATE : 5/23/2018 10:17 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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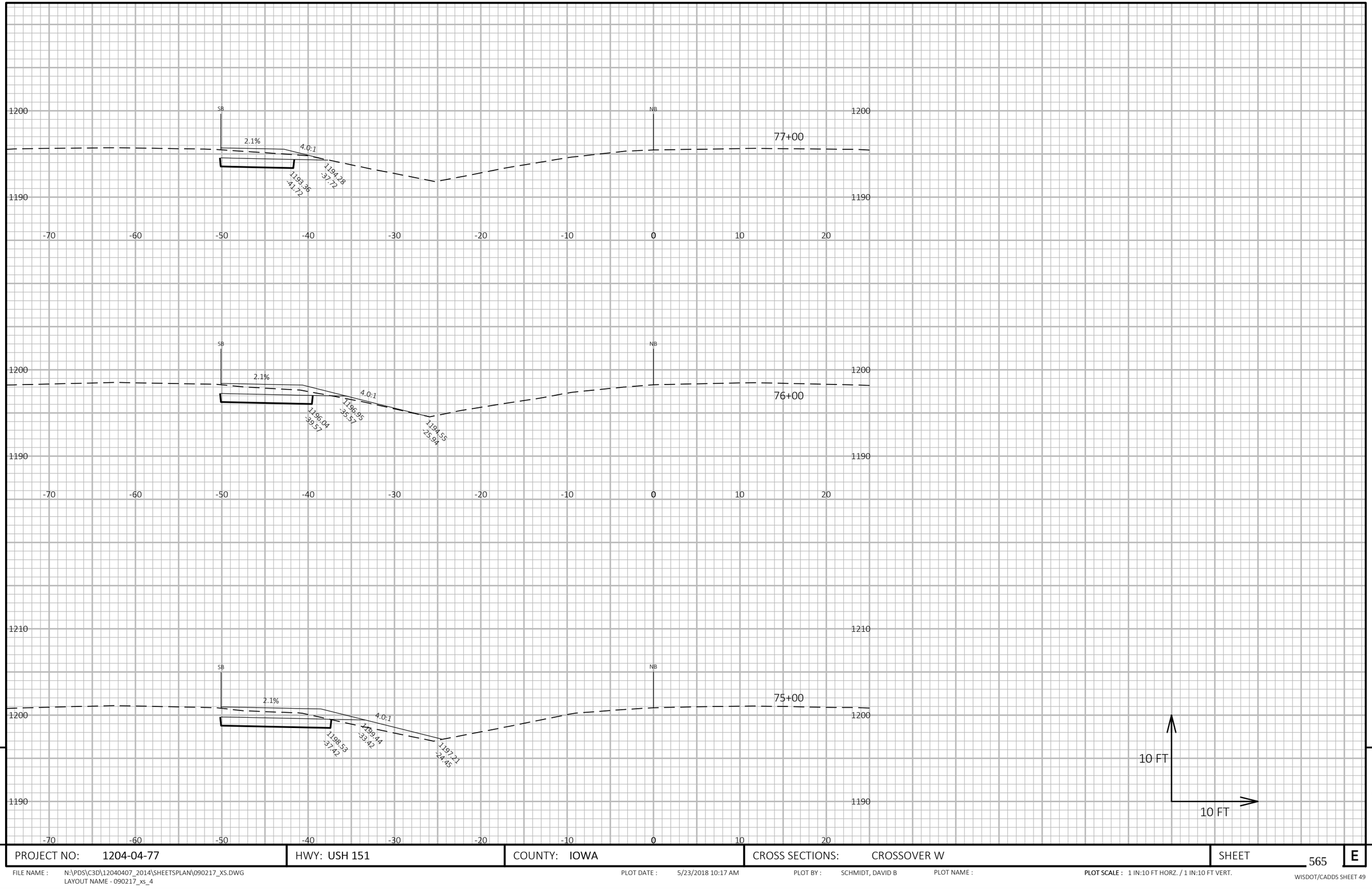
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER W	SHEET 564	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090217_XS.DWG
LAYOUT NAME - 090217_xs_3

PLOT DATE : 5/23/2018 10:17 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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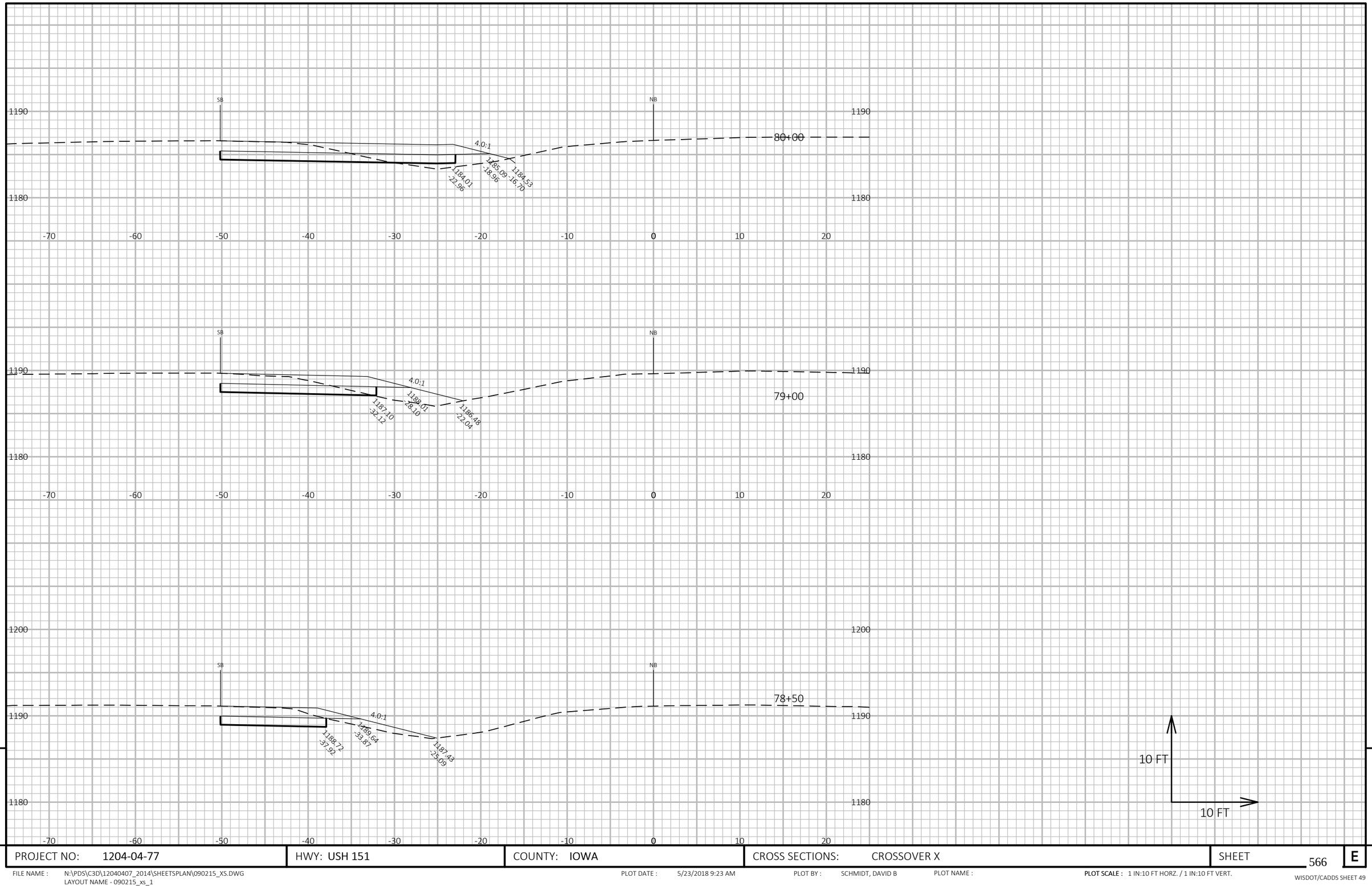
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER W	SHEET 565	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090217_XS.DWG
LAYOUT NAME - 090217_xs_4

PLOT DATE : 5/23/2018 10:17 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER X	SHEET 566	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090215_XS.DWG
LAYOUT NAME - 090215_xs_1

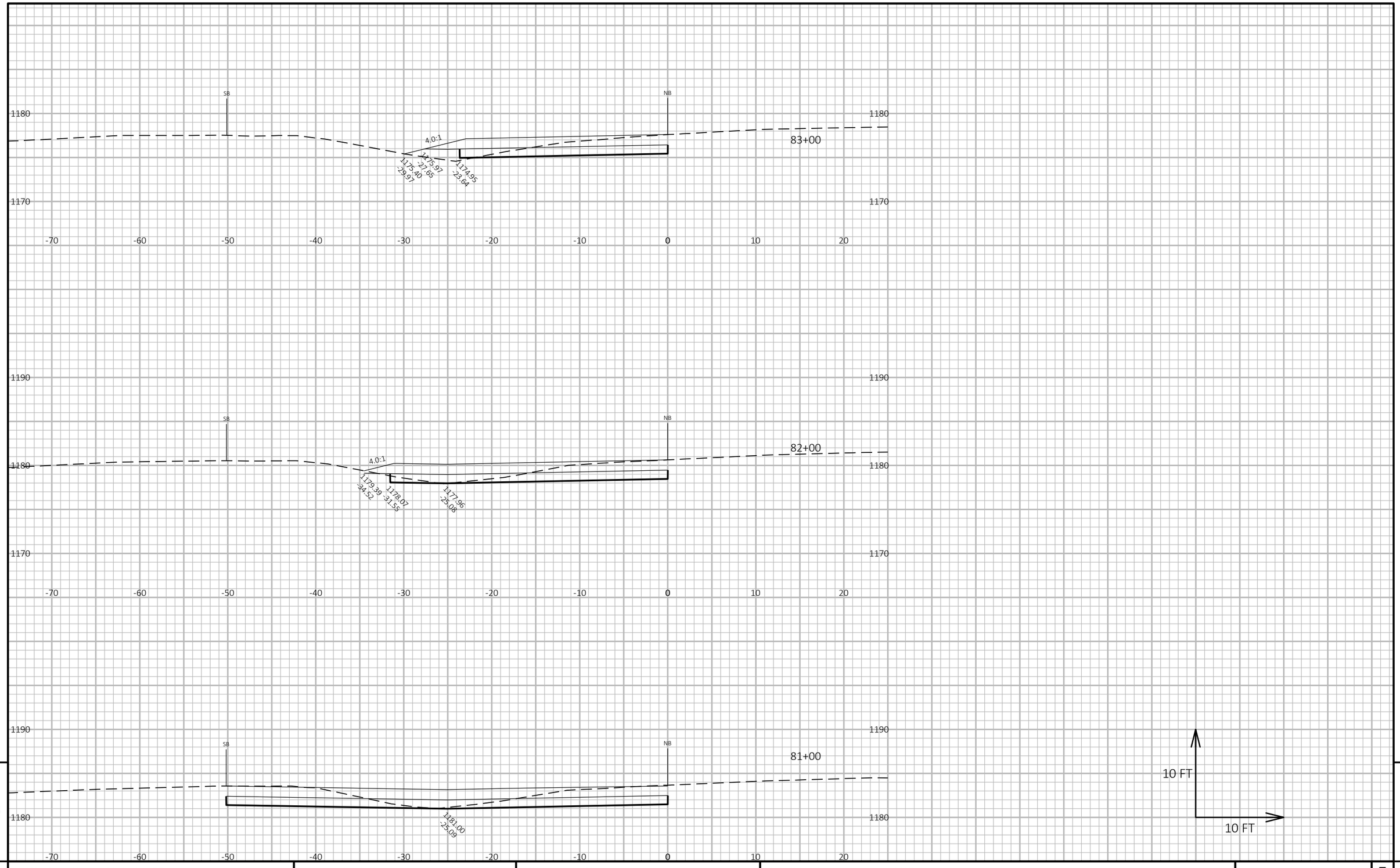
PLOT DATE : 5/23/2018 9:23 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER X	SHEET 567	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090215_XS.DWG
LAYOUT NAME - 090215_xs_2

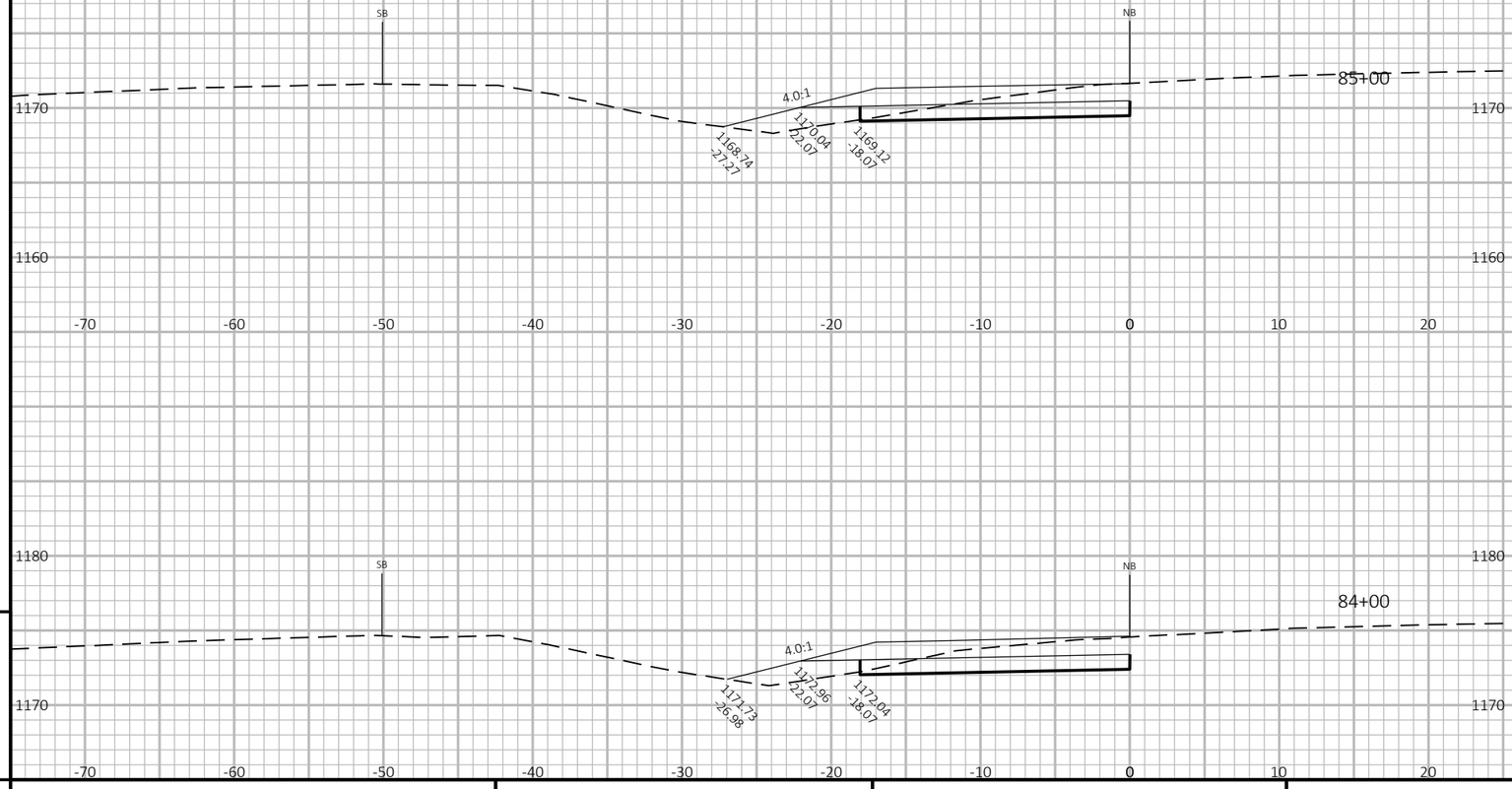
PLOT DATE : 5/23/2018 9:23 AM

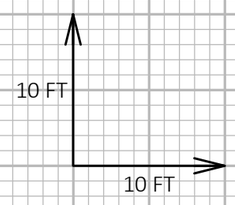
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER X	SHEET 568	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090215_XS.DWG
LAYOUT NAME - 090215_xs_3

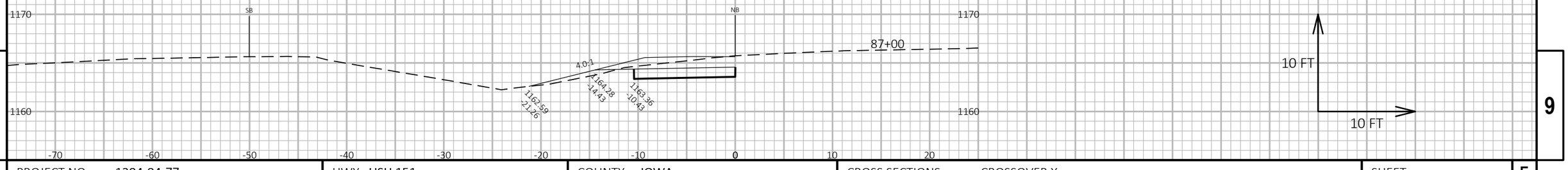
PLOT DATE : 5/23/2018 9:23 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER X	SHEET 569	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090215_XS.DWG
LAYOUT NAME - 090215_xs_4

PLOT DATE : 5/23/2018 9:23 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

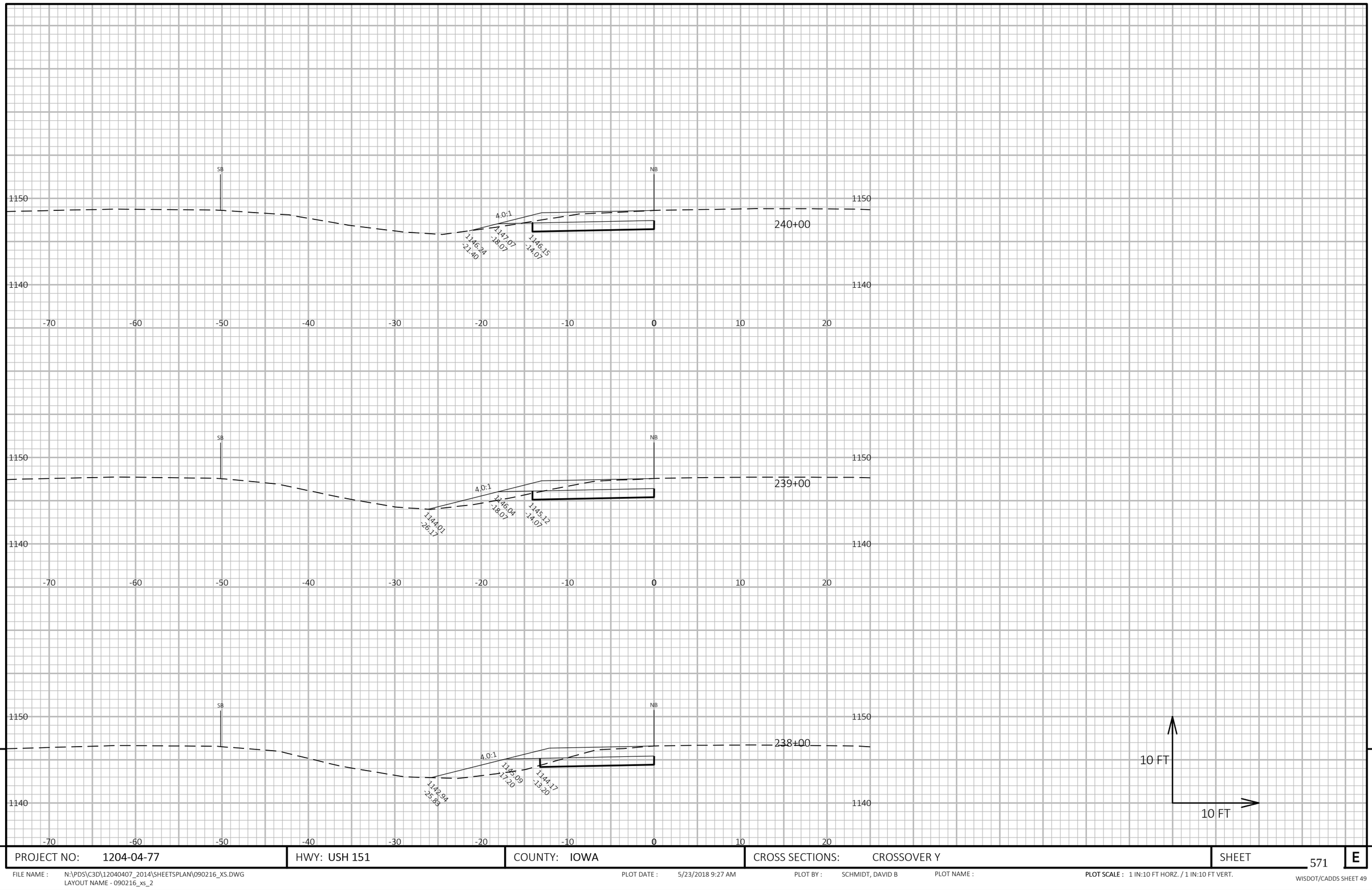
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 570	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_1

PLOT DATE : 5/23/2018 9:27 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

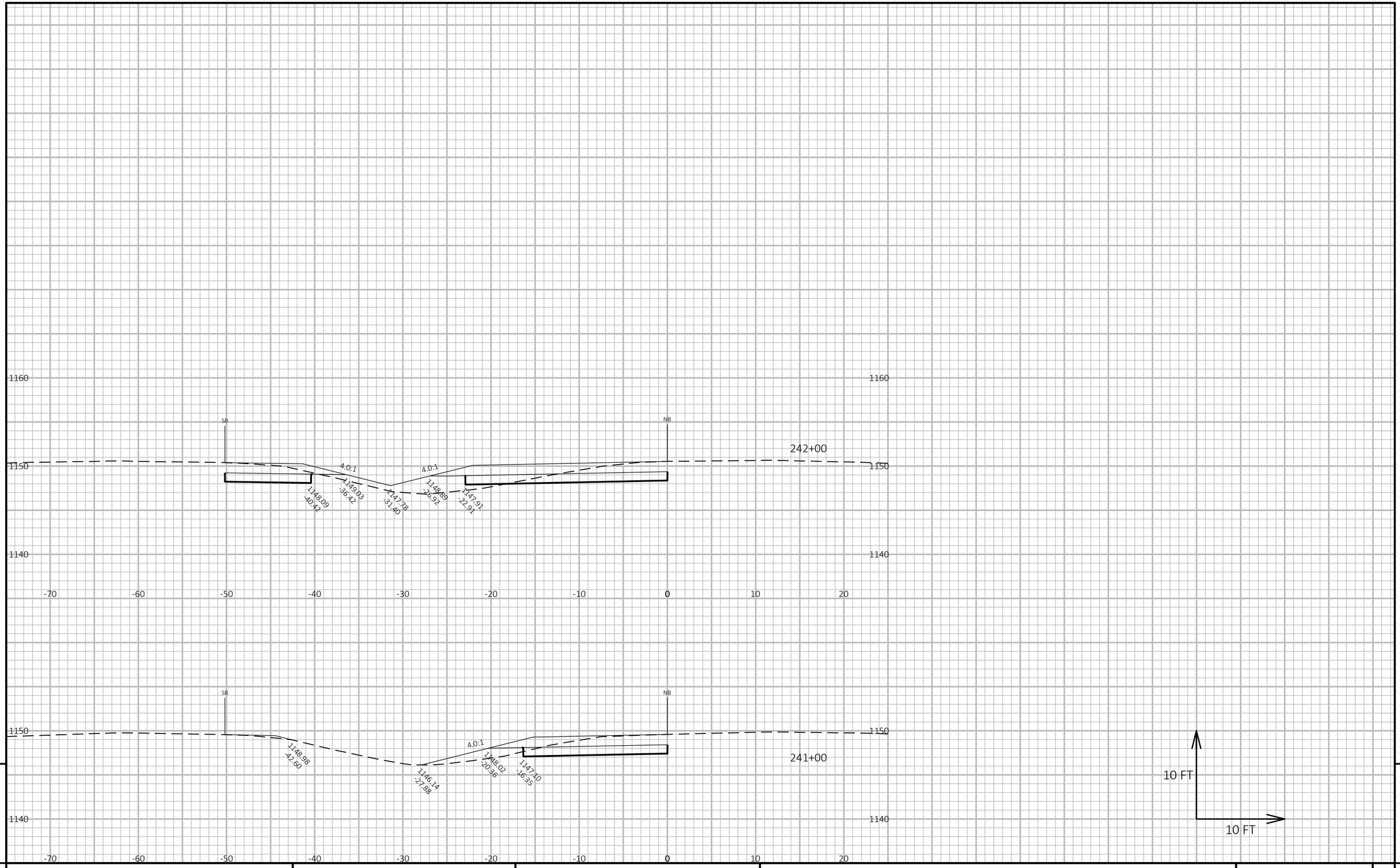
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 571	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_2

PLOT DATE : 5/23/2018 9:27 AM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 572	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_3

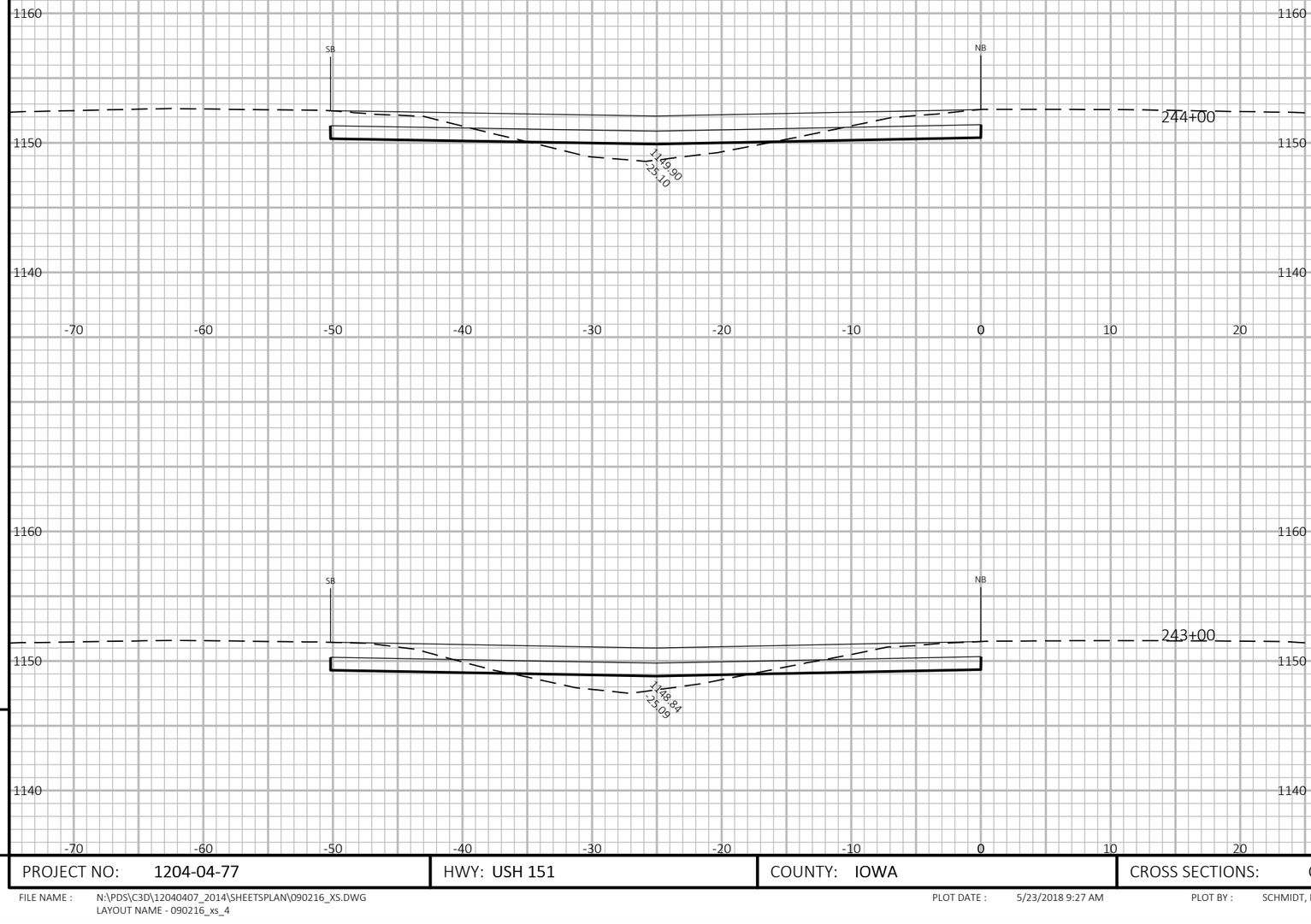
PLOT DATE : 5/23/2018 9:27 AM

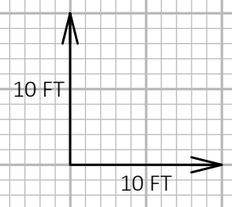
PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 573	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_4

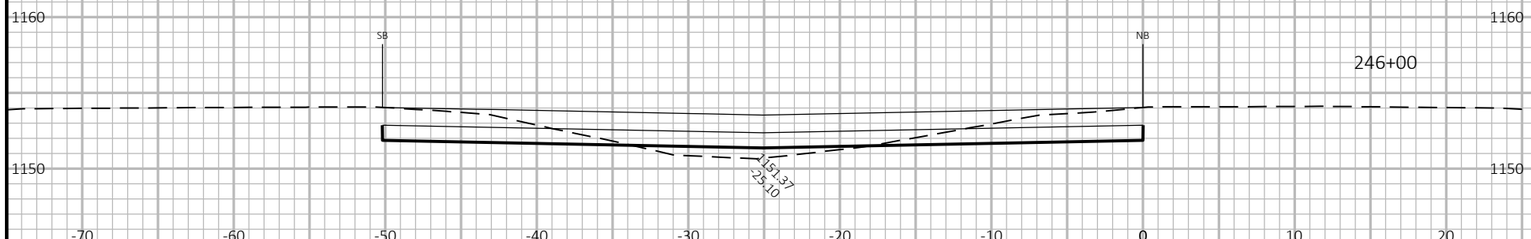
PLOT DATE : 5/23/2018 9:27 AM

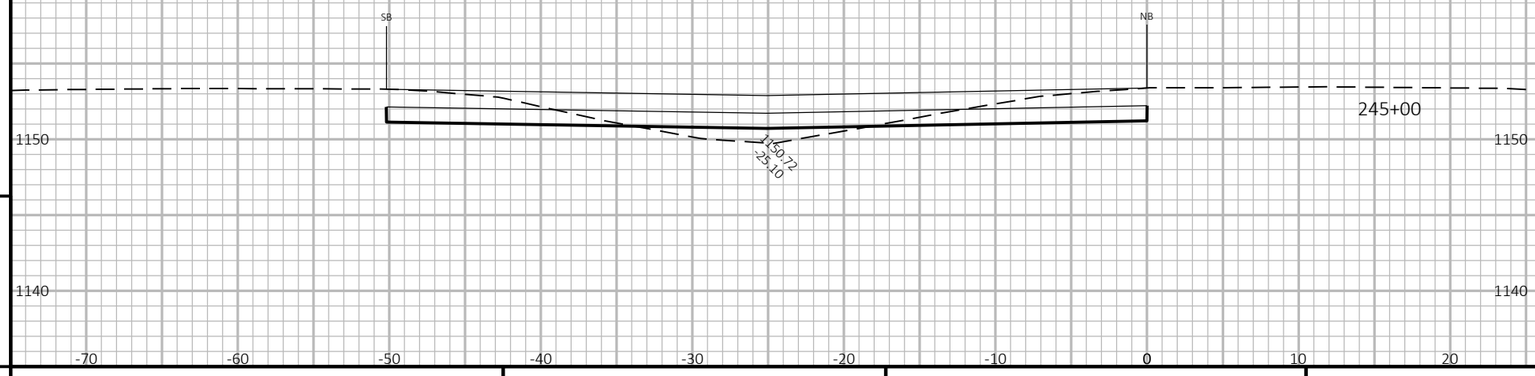
PLOT BY : SCHMIDT, DAVID B

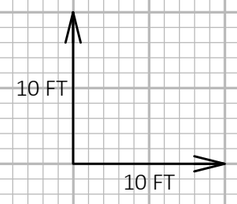
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 574	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_5

PLOT DATE : 5/23/2018 9:27 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 575	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_6

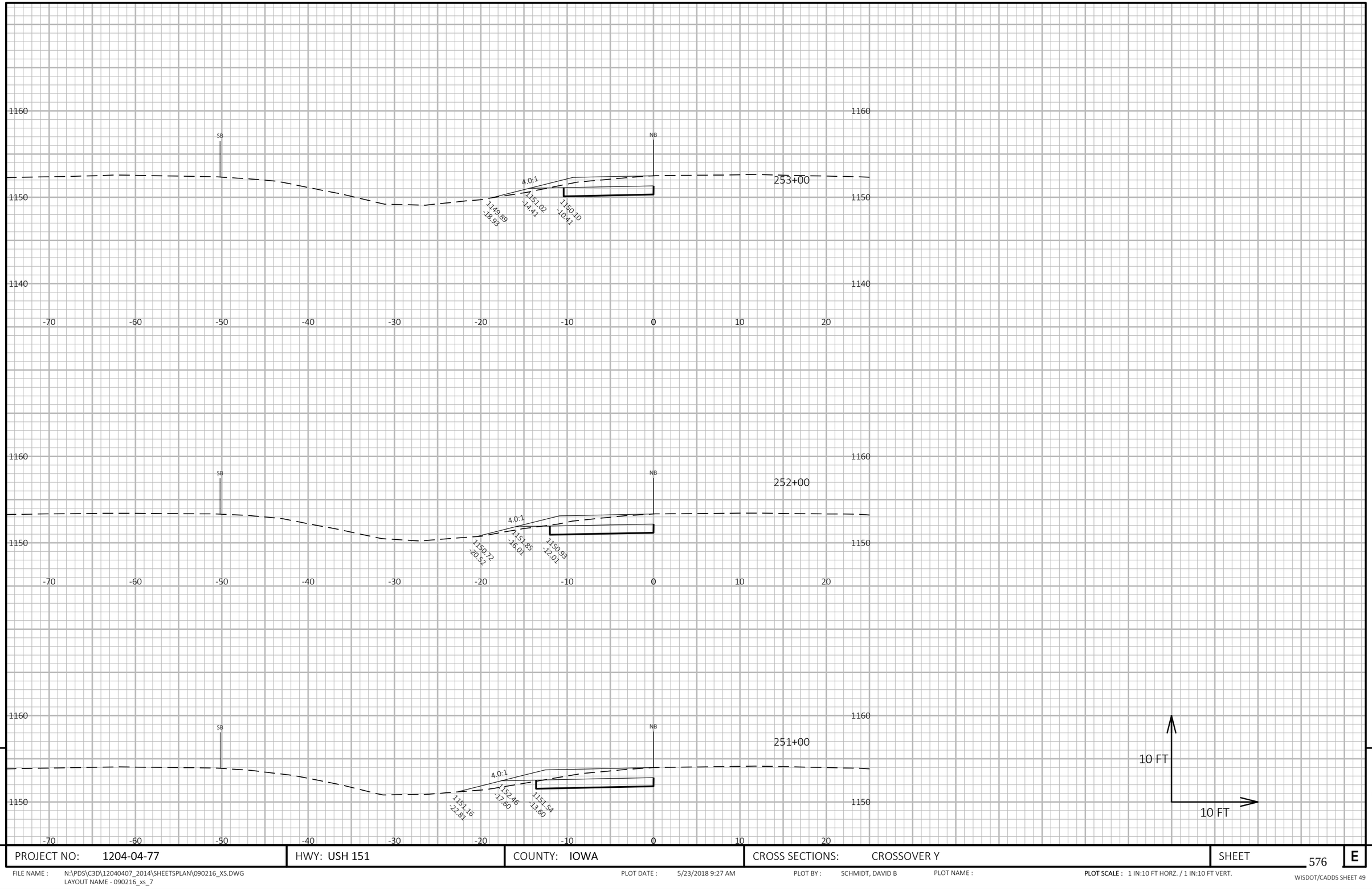
PLOT DATE : 5/23/2018 9:27 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 576	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_7

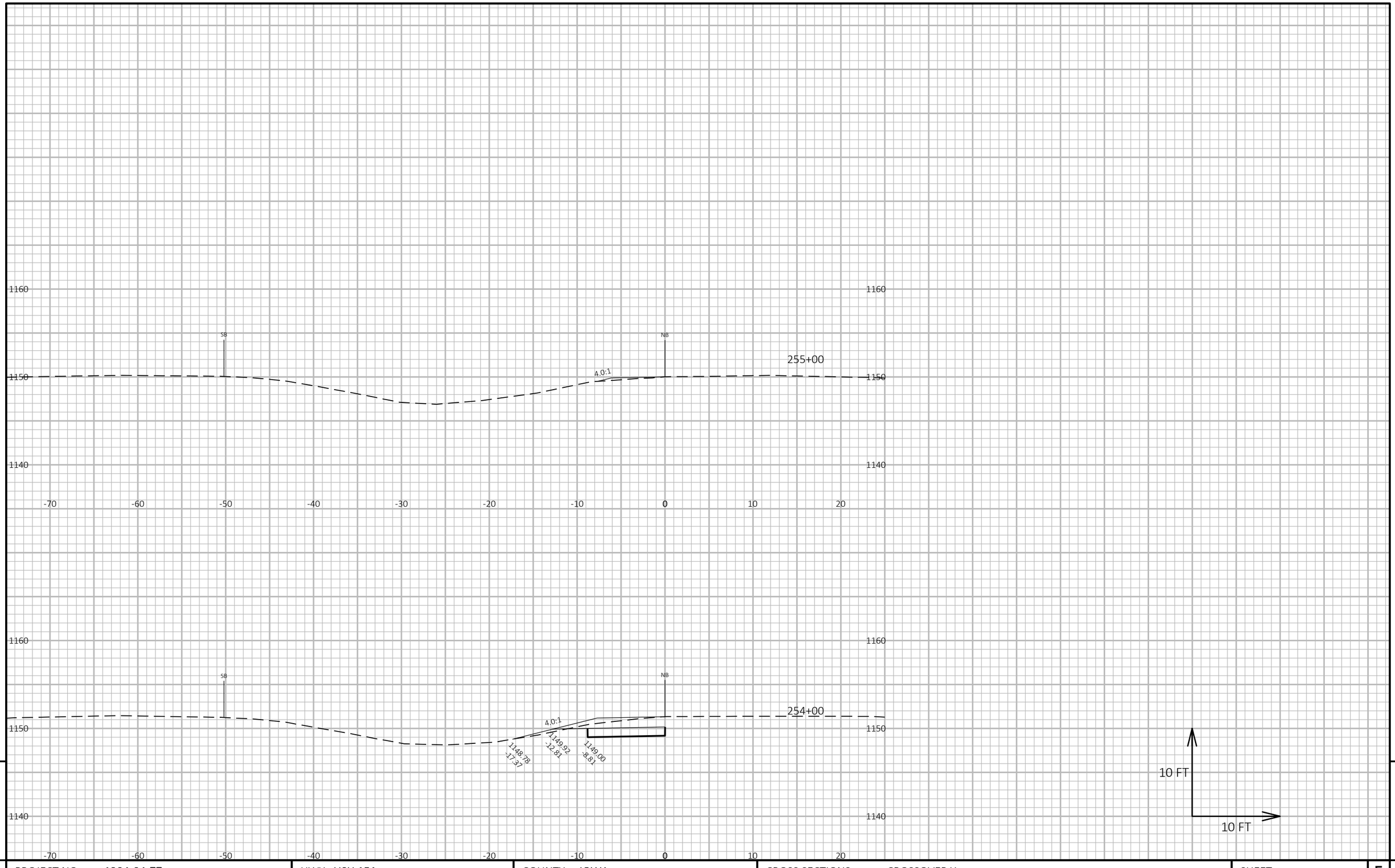
PLOT DATE : 5/23/2018 9:27 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Y	SHEET 577	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090216_XS.DWG
LAYOUT NAME - 090216_xs_8

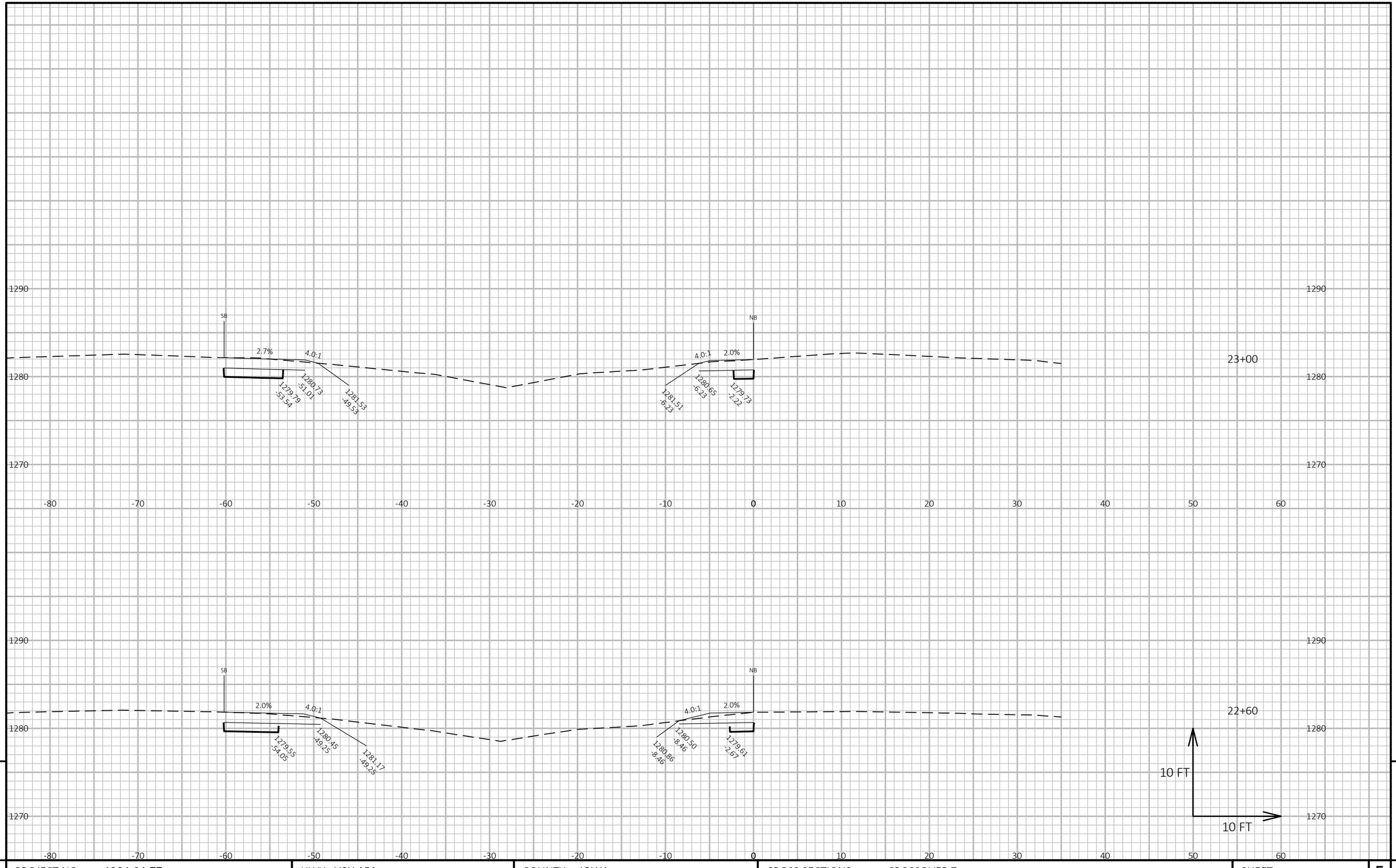
PLOT DATE : 5/23/2018 9:27 AM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 578	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_1

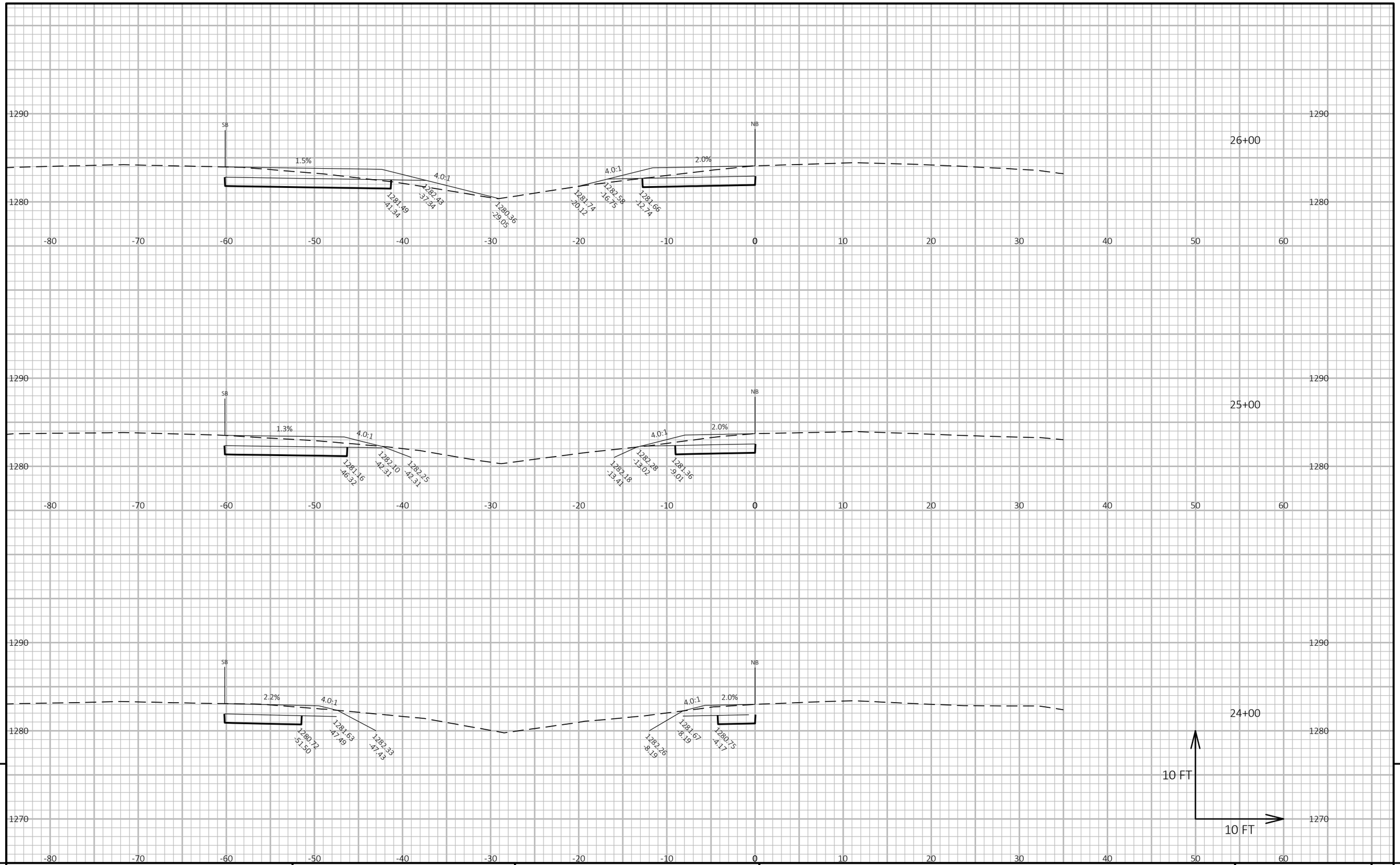
PLOT DATE : 5/23/2018 12:03 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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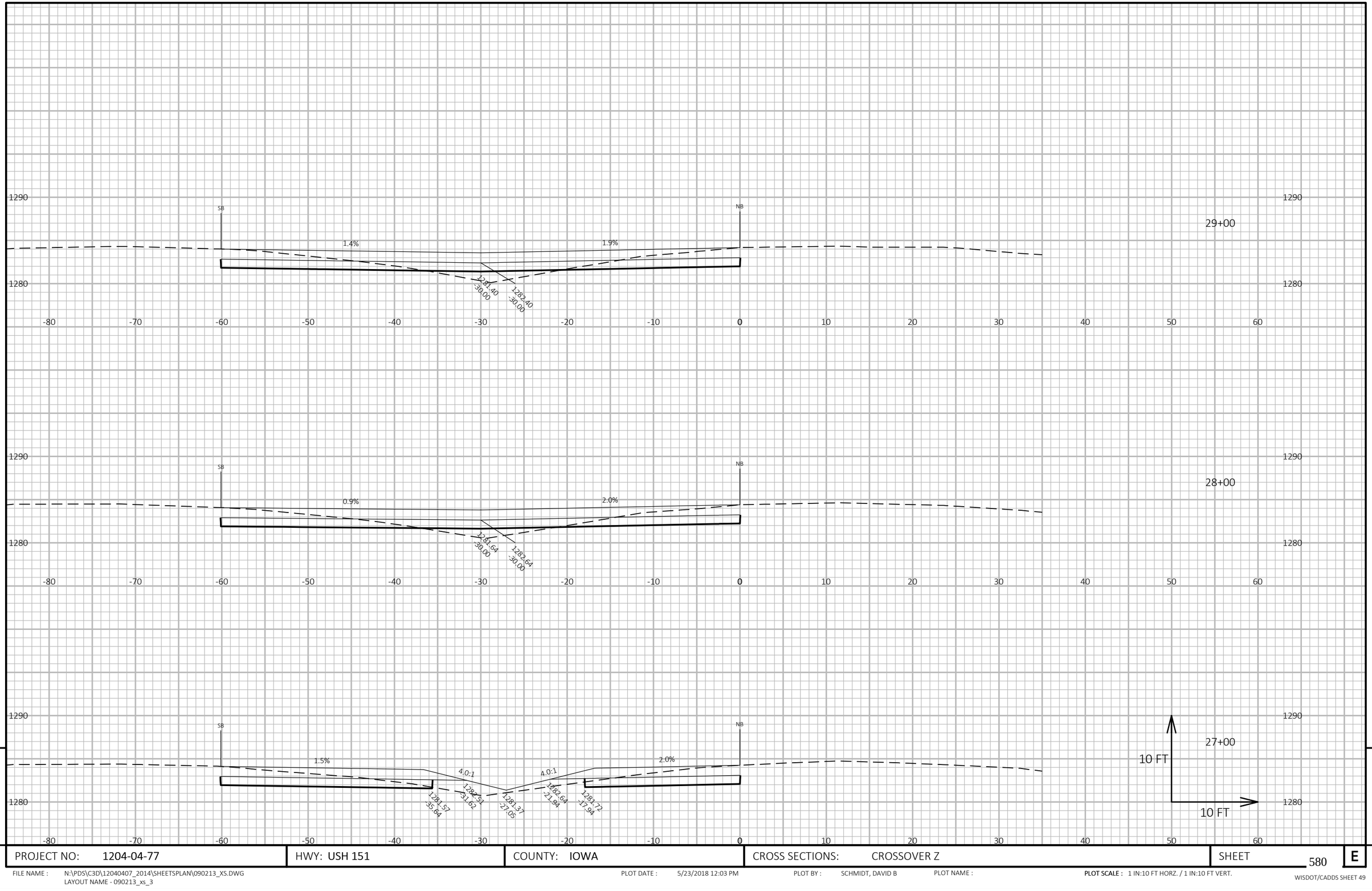
PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 579	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_2

PLOT DATE : 5/23/2018 12:03 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 580	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_3

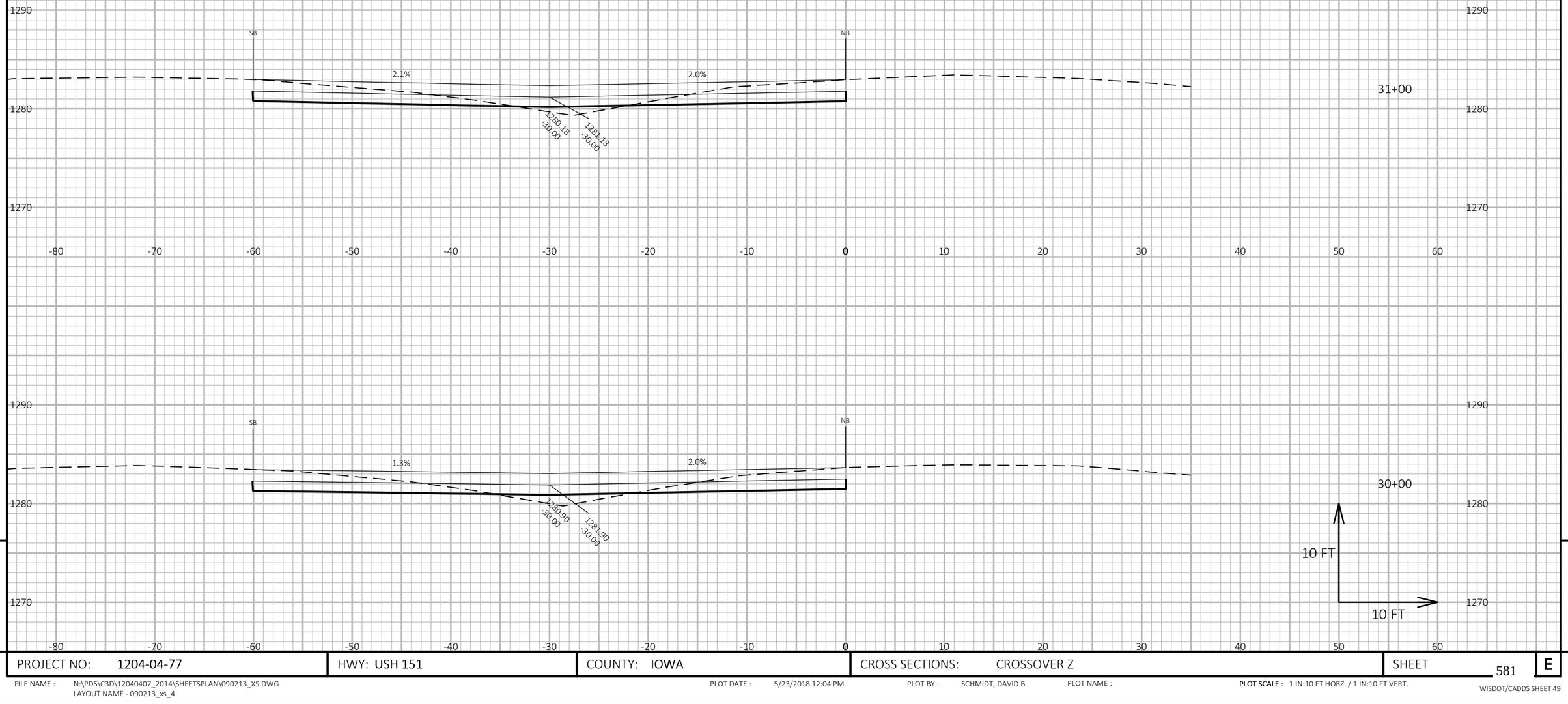
PLOT DATE : 5/23/2018 12:03 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 581	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_4

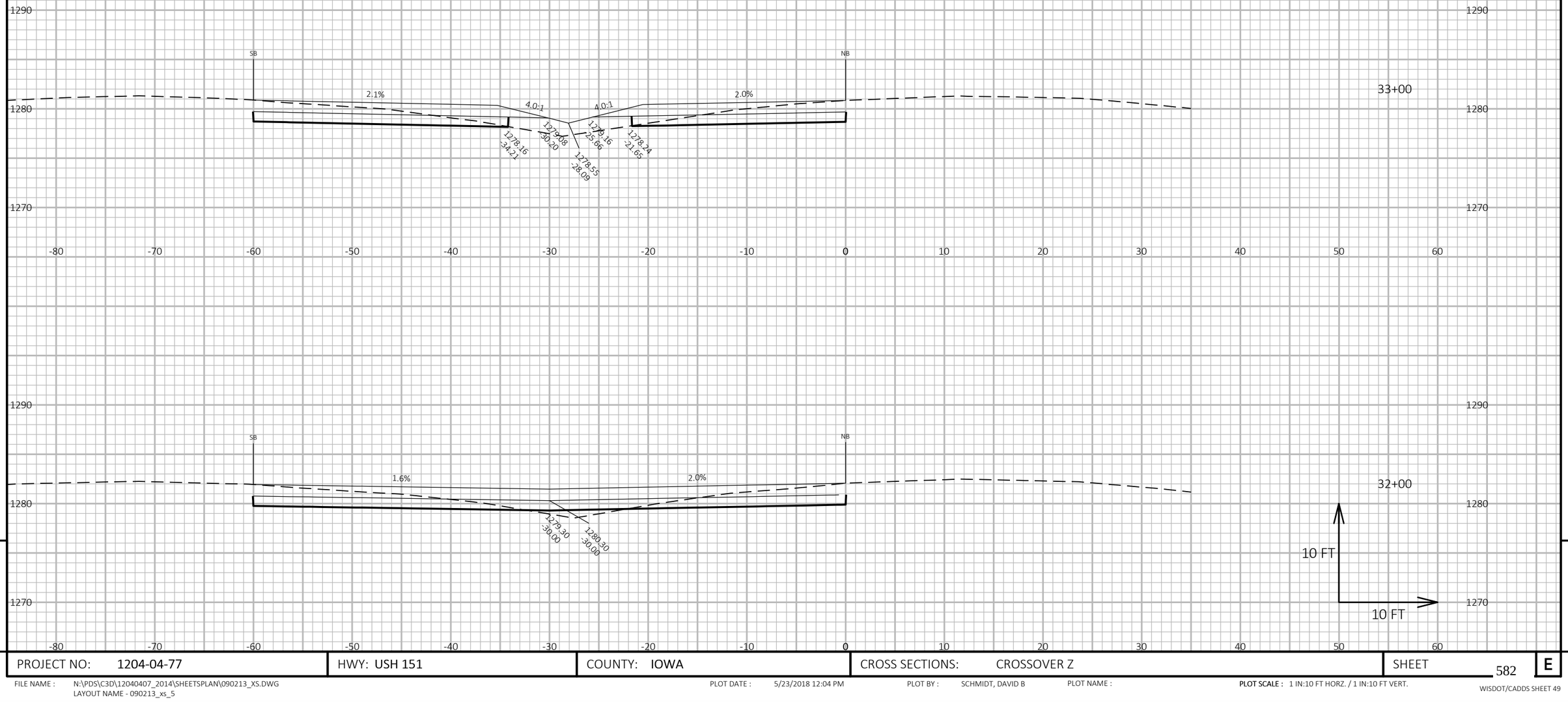
PLOT DATE : 5/23/2018 12:04 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 582	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_5

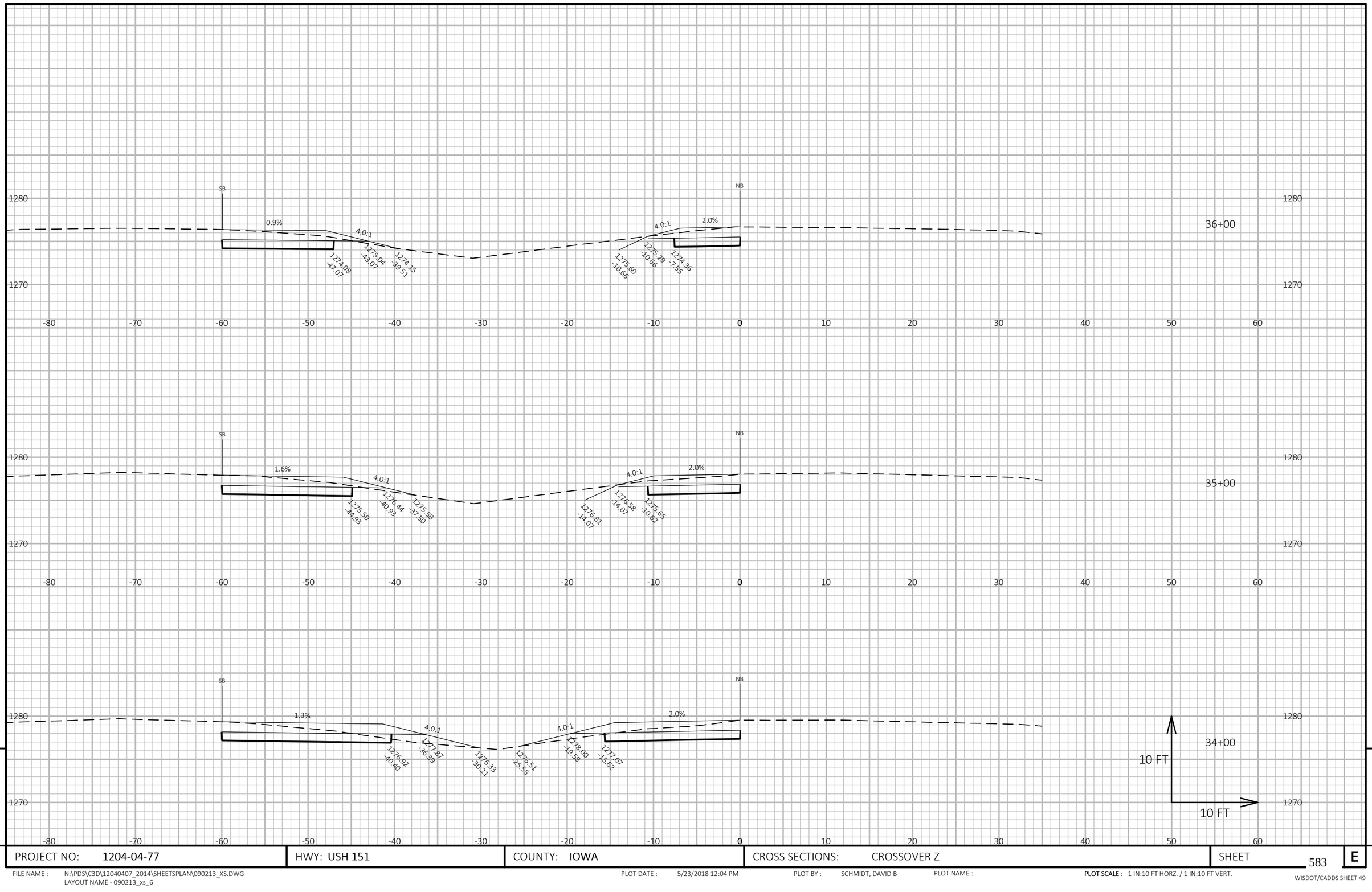
PLOT DATE : 5/23/2018 12:04 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 583	E

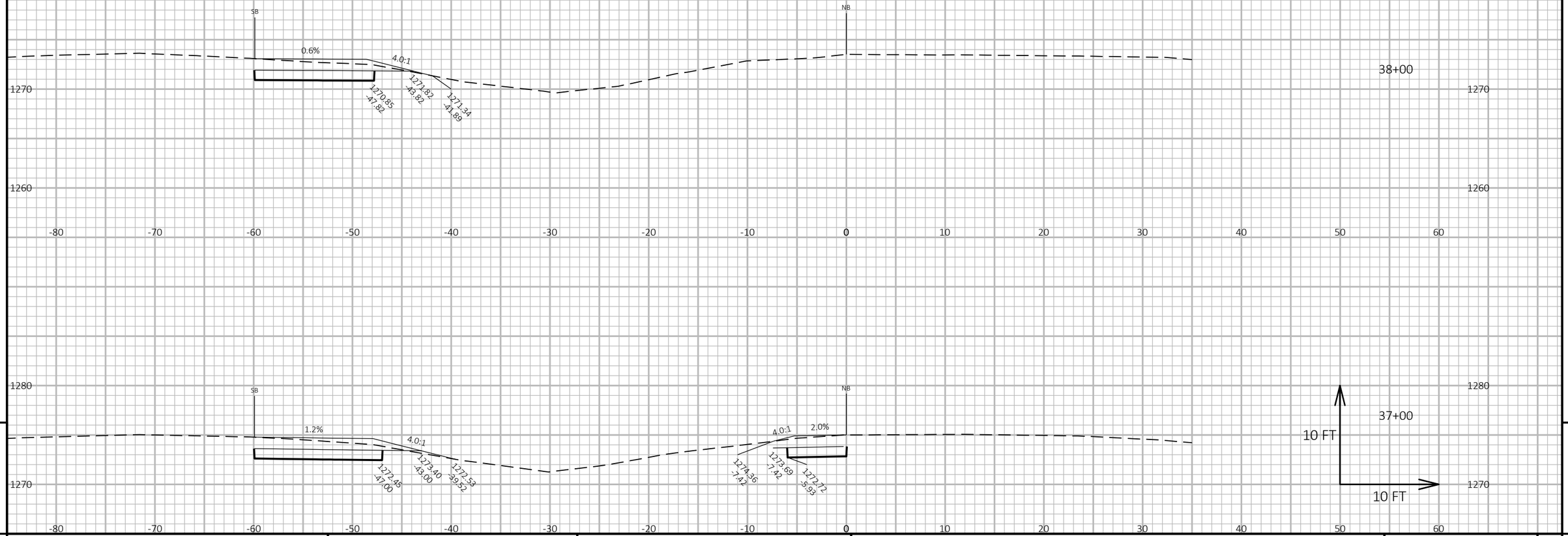
9

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_6

PLOT DATE : 5/23/2018 12:04 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 584	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_7

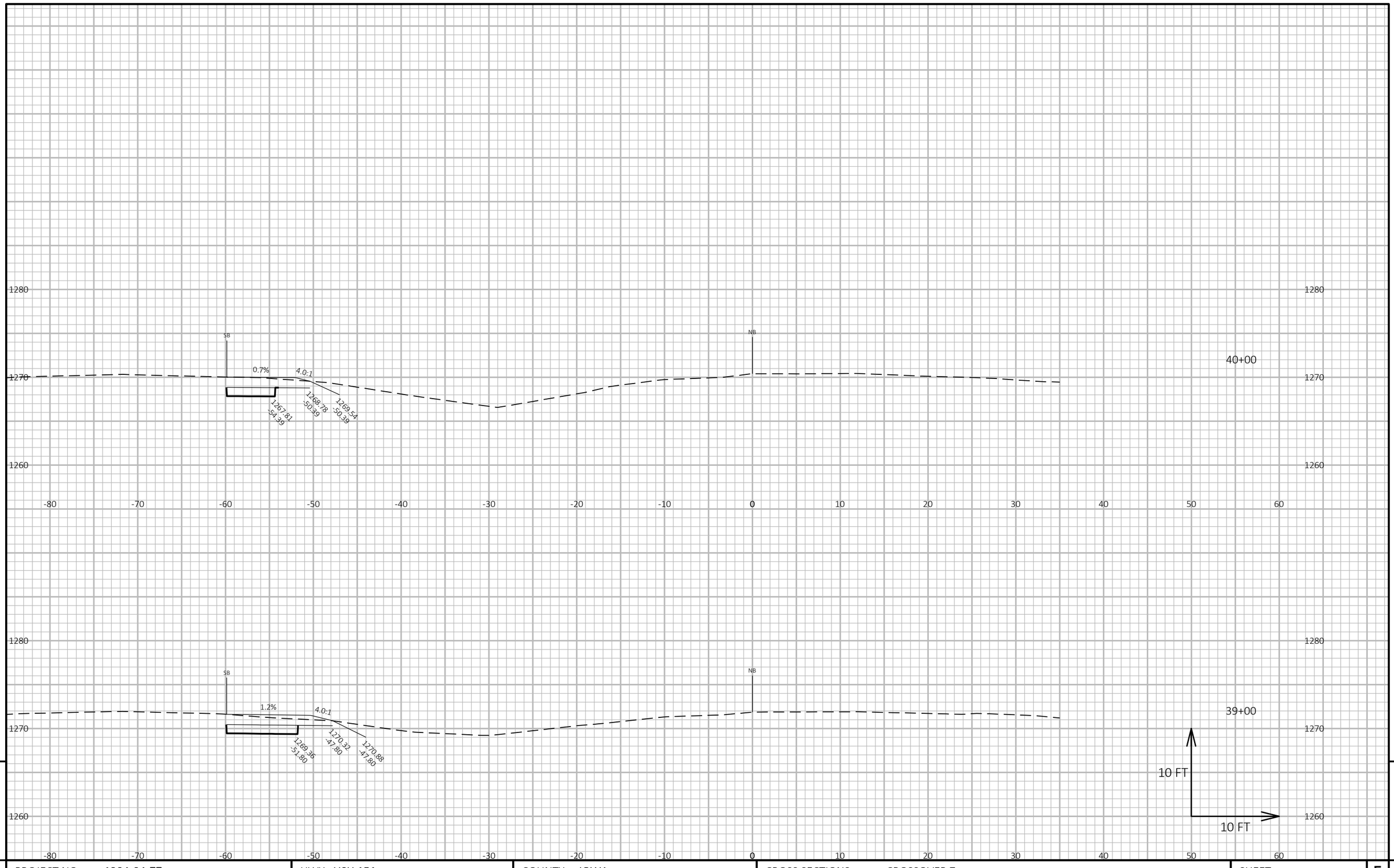
PLOT DATE : 5/23/2018 12:04 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 585	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_8

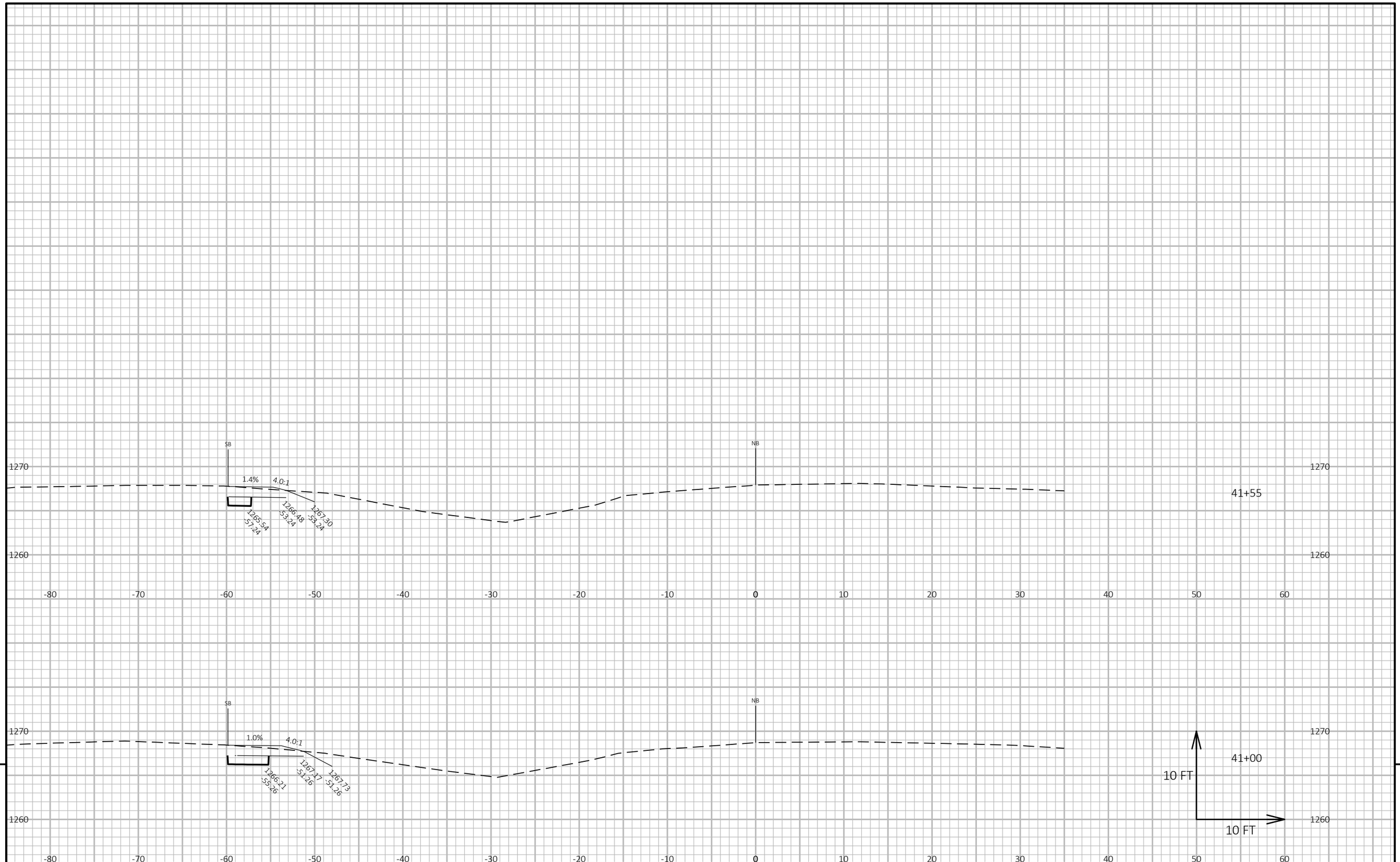
PLOT DATE : 5/23/2018 12:04 PM

PLOT BY : SCHMIDT, DAVID B

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1204-04-77	HWY: USH 151	COUNTY: IOWA	CROSS SECTIONS: CROSSOVER Z	SHEET 586	E

FILE NAME : N:\PDS\C3D\12040407_2014\SHEETSPLAN\090213_XS.DWG
LAYOUT NAME - 090213_xs_9

PLOT DATE : 5/23/2018 12:04 PM PLOT BY : SCHMIDT, DAVID B PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov