WKE

Aug 2015

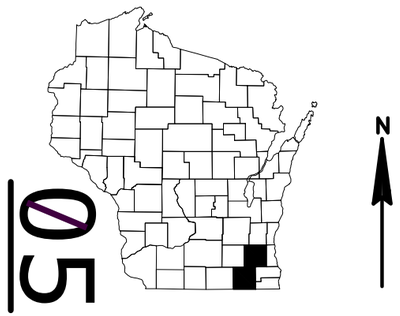
PROJECT ID: 1090-37-70

WITH:

COUNTY: WALW / WAUK

ORDER OF SHEETS

TOTAL SHEETS = 114



DESIGN DESIGNATION

A.A.D.T.	=	17,100 - 24,700
A.A.D.T.	=	NA
D.H.V.	=	NA
D.D.	=	NA
T.	=	NA
DESIGN SPEED	=	70 MPH
ESALS	=	NA

BEGIN PROJECT 1090-37-70
STA. 315+37
X = 718,232.30
Y = 344,134.07

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1090-37-70	WISC 2015467	1

BEAM GUARD END TREATMENTS

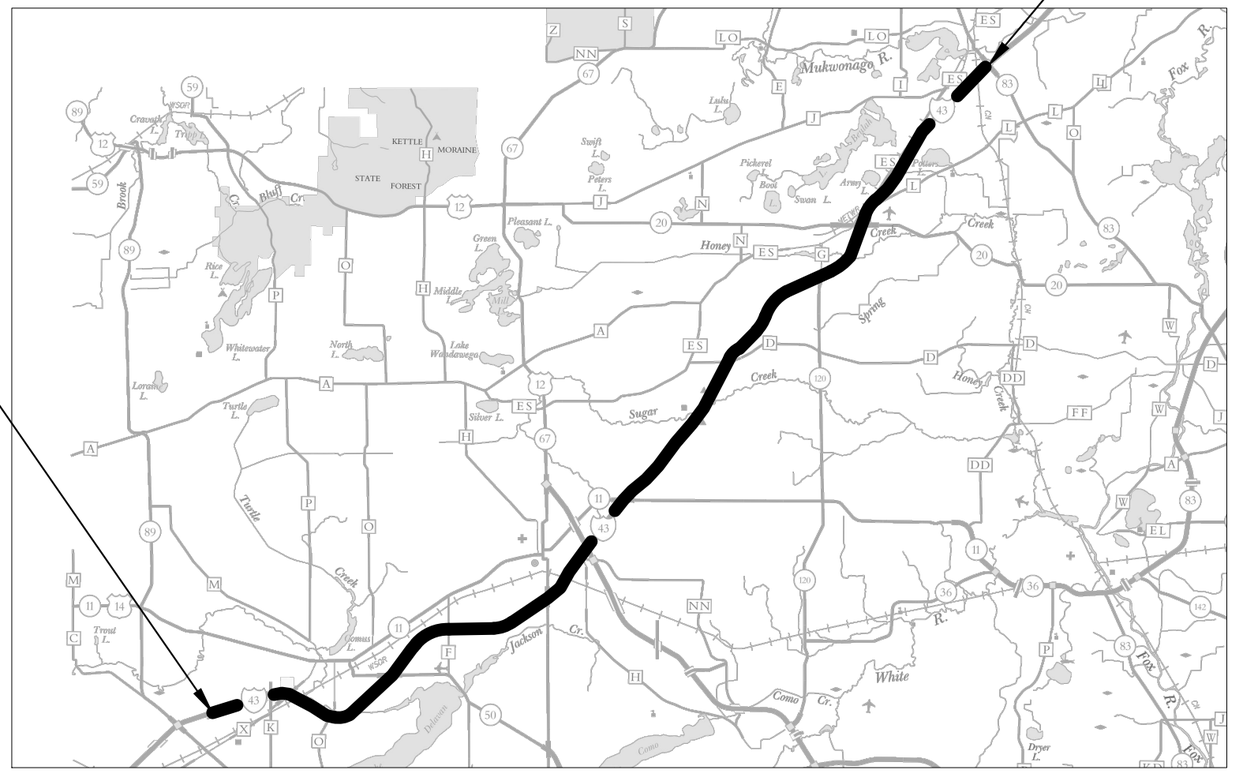
6 LOCATIONS

IH-43

WALWORTH / WAUKESHA COUNTIES

STATE PROJECT NUMBER
1090-37-70

END PROJECT
STA. 96+80



LAYOUT
SCALE 0 4 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	ALFRED BENESCH & COMPANY
Designer	CHIANG LEE
Project Manager	DOUG CAIN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BENEDICT ERUCHALU

APPROVED FOR THE DEPARTMENT

DATE: 05/01/2015 Douglas A Cain (Signature)

E

GENERAL NOTES

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

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES INSTALLATIONS AND SERVICES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

DISTURBED AREA WITHIN THE RIGHT-OF-WAY ARE TO BE RESTORED AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE PLANS.

THE CONTRACTOR IS RESPONSIBLE FOR FINISHING AND RESTORING PREVIOUSLY VEGETATED AREAS DISTURBED BY THEIR OPERATION OUTSIDE NORMAL CONSTRUCTION LIMITS.

USE BACKFILL SLURRY ITEM TO FILL HOLES CAUSED BY REMOVING GUARDRAIL POSTS

EROSION CONTROL GENERAL NOTES

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

RESTORE THE GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION.

WHEN PERFORMING ROADWAY CLEANING OPERATIONS, THE CONTRACTOR SHALL USE EQUIPMENT HAVING VACUUM OR WATER SPRAY MECHANISM TO ELIMINATE THE DISPERSION OF DUST. IF VACUUM EQUIPMENT IS EMPLOYED, IT SHALL HAVE SUITABLE SELF-PARTICULATE COLLECTORS TO PREVENT DISCHARGE FROM THE COLLECTION BIN INTO THE ATMOSPHERE.

2

UTILITIES CONTACTS

Mr. Bryan Stoehr
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Mr. Zach Lehman
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zach@sharontelephone.com

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ca2624@att.com

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Waukesha, WI 53187 0798
Phone: (414) 750-2605

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steve.cramer@twcable.com

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jasonhogan@alliantenergy.com

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Phone: (262) 363-6416
Mobile: (262) 225-7298
Fax: (262) 363-0552
dfalkner@villageofmukwonago.com

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waterdept@villageofmukwonago.com

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Delavan, WI 53115
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Mobile: (262) 215-9529
Fax: (262) 728-4142
bhuza@walcomet.com

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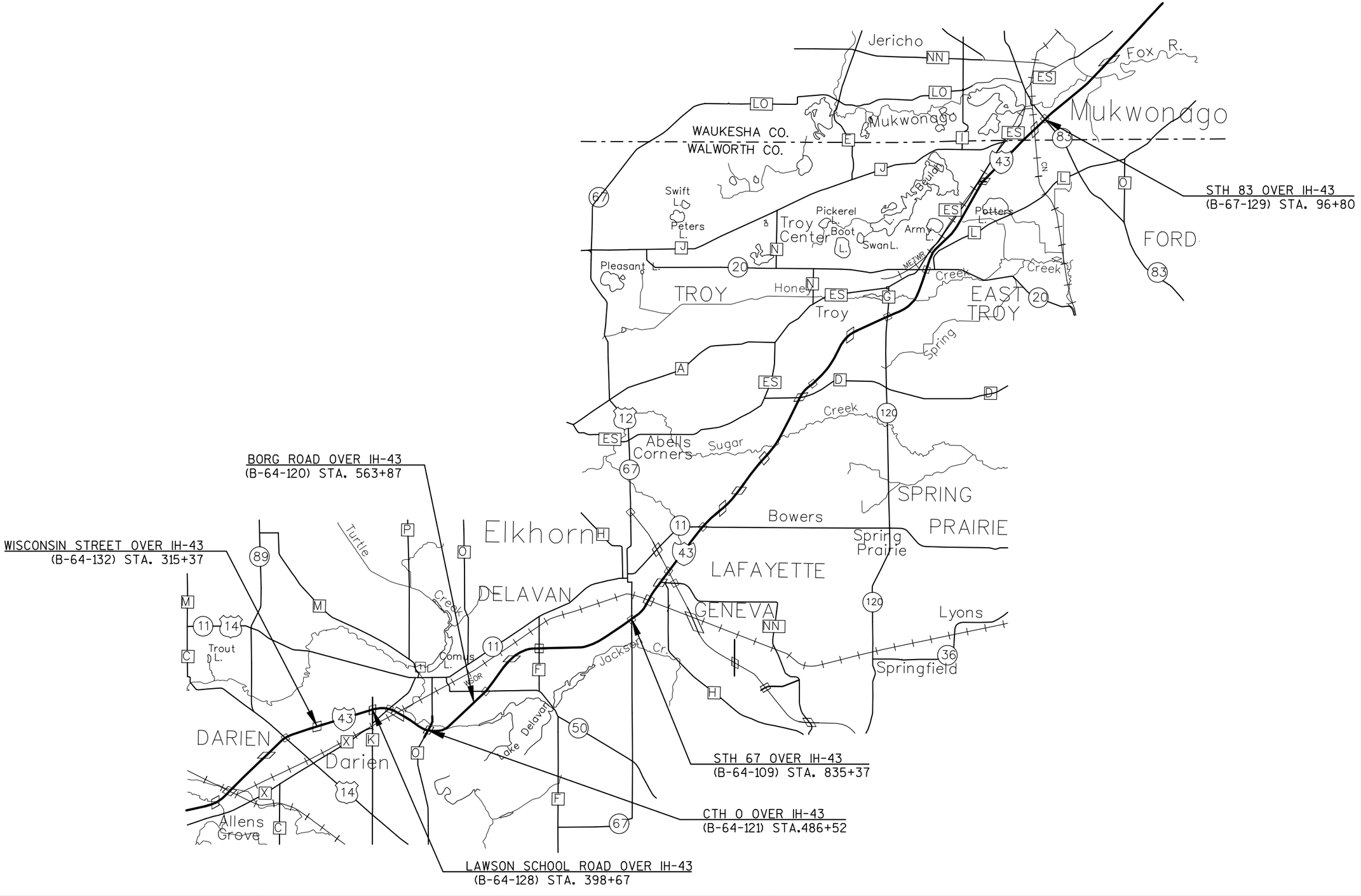
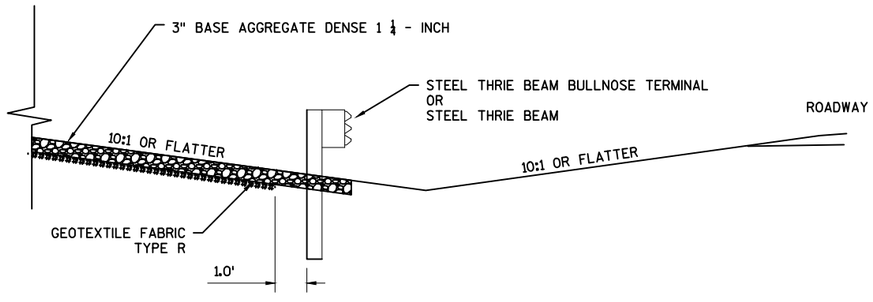
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com



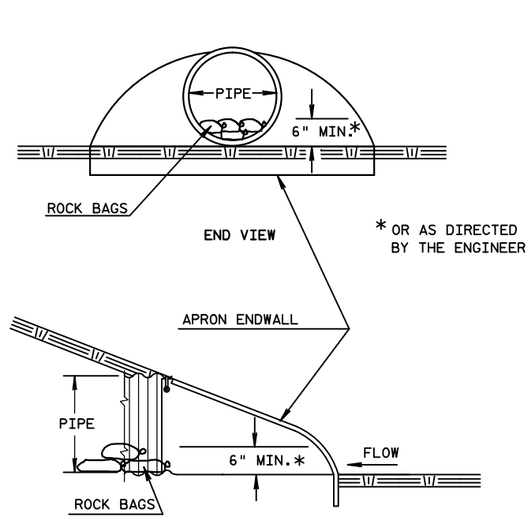
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PROJECT OVERVIEW	SHEET 4	E

2



GRADING BEHIND STEEL THRIE BEAM

NOTES:
-EXCAVATION FOR BASE AGGREGATE DENSE IS PAID UNDER THE BARRIER SYSTEM GRADING SHAPING FINISHING ITEM
-GEOTEXTILE FABRIC TYPE R AND BASE AGGREGATE DENSE 1 ¼ - INCH ARE PAID UNDER THE CORRESPONDING BID ITEM



ROCK BAGS AT CULVERTS

PROJECT NO:1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CONSTRUCTION DETAILS	SHEET 5	E

2

N

I-43 SOUTHBOUND

SHARON TELPHONE CO.

SHARON TELPHONE CO.

SLOPE INTERCEPT

SLOPE INTERCEPT

BASE AGGREGATE DENSE
1 ¼ -INCH
SEE CONSTRUCTION DETAIL

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

STEEL THRIE BEAM
SEE S.D.D.

REMOVING GUARDRAIL

34'

5.88'

314+00

+68
POST 5

315+00

+19

+55

316+00

+08
POST 5

314+52

316+22

REMOVING GUARDRAIL

BRIDGE COLUMNS

5.88'

14.75'

STEEL THRIE BEAM
SEE S.D.D.

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

SLOPE INTERCEPT

34'

I-43 NORTHBOUND

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 6	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021201_PD
PLOT DATE : 5/1/2015 9:51 AM PLOT BY : ROTIER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

N

I-43 SOUTHBOUND

SHARON TELPHONE CO.

1135
PKFPK
N=344269.368
E=718537.921
EL=939.47
STA= 318+68.99
OFFSET= 38.76 LT

SLOPE INTERCEPT

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

MARKERS CULVERT END
SEE S.D.D.

316+00

316+22

317+00

318+00

319+00

REMOVING GUARDRAIL

SLOPE INTERCEPT

I-43 NORTHBOUND

WALWORTH COUNTY METROPOLITAN
SEWERAGE DISTRICT

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 7	E

2

N

I-43 SOUTHBOUND

SLOPE INTERCEPT

WETLAND

BASE AGGREGATE DENSE
1 ¼ -INCH
SEE CONSTRUCTION DETAIL

34'

14.75'

STEEL THRIE BEAM
SEE S.D.D.

SLOPE INTERCEPT

5.88'

REMOVING GUARDRAIL

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

397+00

397+82

+98
POST 5

398+00

+52

+82

399+00

+36
POST 5

399+51

1074
MON; ALUM DISC
N= 346552.754
E= 726029.029
EL= 931.15
STA= 396+99.98
OFFSET= 0.136 RT

SLOPE INTERCEPT

BRIDGE COLUMNS

REMOVING GUARDRAIL

5.88'

WETLAND

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

34'

STEEL THRIE BEAM
SEE S.D.D.

I-43 NORTHBOUND

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - LAWSON SCHOOL ROAD OVER IH-43 (B-64-128)	SHEET 8	E

2

N

I-43 SOUTHBOUND

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

399+51

REMOVING GUARDRAIL

400+00

WETLAND

MARKERS CULVERT END
SEE S.D.D.

SLOPE INTERCEPT

401+00

1093
MON; ALUM DISC
N=346669.766
E=726409.098
EL=930.51
STA= 400+97.95
OFFSET=0' RT

1143
PKFPK
N=346729.481
E=726474.022
EL=935.92
STA= 401+77.65
OFFSET=37.8' LT

PC: 401+96.01

WETLAND

402+00

1144
PKFPK
N=346655.049
E=726491.328
EL=936.44
STA= 401+72.13
OFFSET= 38.4' RT

I-43 NORTHBOUND

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - LAWSON SCHOOL ROAD OVER IH-43 (B-64-128)	SHEET 9	E

2

N

I-43 SOUTHBOUND

WE ENERGIES GAS

CAUTION

SLOPE INTERCEPT

REMOVING GUARDRAIL

485+00

485+56

+72
POST 5

486+00

+26

34'

5.88'

14.75'

BASE AGGREGATE DENSE
1 ¼ -INCH
SEE CONSTRUCTION DETAIL

STEEL THRIE BEAM
SEE S.D.D.

SLOPE INTERCEPT

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

+23
POST 5

487+00

+69

487+38

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

SLOPE INTERCEPT

STEEL THRIE BEAM
SEE S.D.D.

5.88'

34'

BRIDGE COLUMNS

REMOVING GUARDRAIL

EXISTING PIPE UNDERDRAIN
TO REMAIN

I-43 NORTHBOUND

EXISTING PIPE UNDERDRAIN
TO REMAIN

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - CTH O OVER IH-43 (B-64-121)	SHEET 10	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021205_PD
PLOT DATE : 5/1/2015 9:51 AM
PLOT BY : ROTIER, STEVEN J
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

2

N

I-43 SOUTHBOUND

AT&T WISCONSIN

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

WETLAND

WETLAND

1148
PKFPK
N=343633.659
E=734418.821
EL=924.46
STA= 489+90.56
OFFSET= 38.8' LT

00

487+38

488+00

489+00

490+00

REMOVING GUARDRAIL

SLOPE INTERCEPT

EXISTING PIPE UNDERDRAIN
TO REMAIN

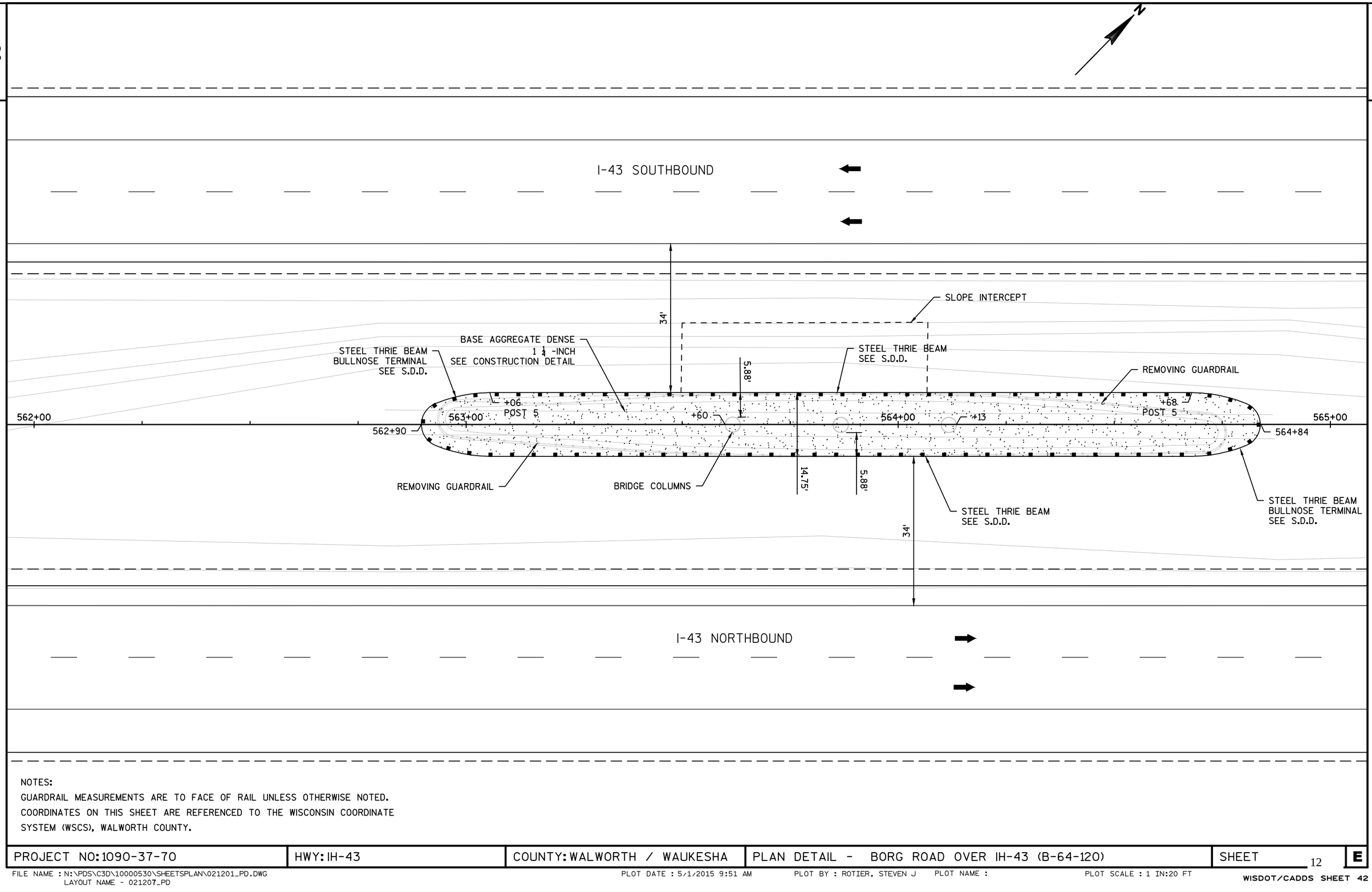
1147
PKFPK
N=343558.318
E=734397.287
EL=925.02
STA= 489+79
OFFSET= 38.7' RT

I-43 NORTHBOUND

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - CTH O OVER IH-43 (B-64-121)	SHEET 11	E

2



NOTES:
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COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - BORG ROAD OVER IH-43 (B-64-120)	SHEET 12	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021207_PD
PLOT DATE : 5/1/2015 9:51 AM PLOT BY : ROTIER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

N

I-43 SOUTHBOUND

1035
PKFPK
N=347661.402
E=740625.517
EL=952.45
STA= 567+24.38
OFFSET= 38.3' LT

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

565+00

566+00

567+00

564+84

REMOVING GUARDRAIL

I-43 NORTHBOUND

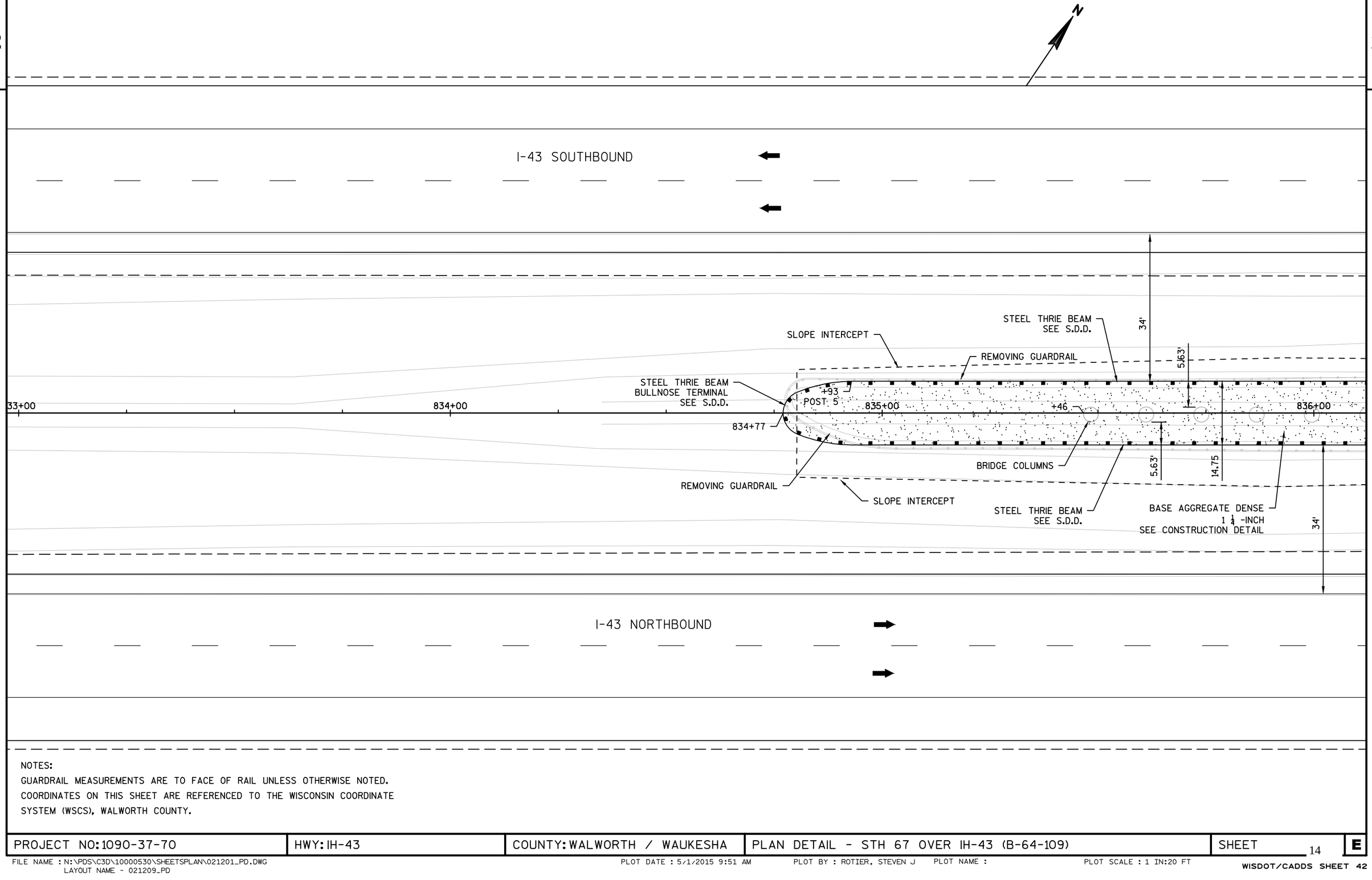
1156
PKFPK
N=347599.122
E=740671.656
EL=954.89

STA= 567+14.18
OFFSET= 38.5

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - BORG ROAD OVER IH-43 (B-64-120)	SHEET 13	E

2



NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - STH 67 OVER IH-43 (B-64-109)	SHEET 14	E

2

N

I-43 SOUTHBOUND

34'

STEEL THRIE BEAM
SEE S.D.D.

SLOPE INTERCEPT

WETLAND

REMOVING GUARDRAIL

836+00

+27

+81

POST 5

837+00

836+97

838+00

MARKERS CULVERT END
SEE S.D.D.

WETLAND

BRIDGE COLUMNS

REMOVING GUARDRAIL

SLOPE INTERCEPT

14.75'

34'

STEEL THRIE BEAM
SEE S.D.D.

WETLAND

STEEL THRIE BEAM
BULLNOSE TERMINAL
SEE S.D.D.

WETLAND

I-43 NORTHBOUND

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WALWORTH COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - STH 67 OVER IH-43 (B-64-109)	SHEET 15	E

2

2

N

I-43 SOUTHBOUND

CP2
PKFPK
N=102602.5718
E=658758.4402
EL=
STA=92+95
OFFSET=33.97' LT

00

93+00

94+00

95+00

WETLAND

EXISTING FIELD INLET

WETLAND

WETLAND

SLOPE INTERCEPT

NORTH
43
MILE
43
.8
D10-5
MOVE

BASE AGGREGATE
DENSE 3/4-INCH

50' TAPER

7"

5"

CP1
PKFPK
N=102563.6928
E=658815.4759
EL=
STA=93+07.15
OFFSET=33.98' RT

STA 93+68 26' RT
MGS GUARDRAIL TERMINAL EAT
SEE S.D.D.

EXISTING ASPHALT SHOULDER

7"

5-½" ASPHALTIC SURFACE

MGS GUARDRAIL 3
SEE S.D.D.

I-43 NORTHBOUND

NOTES:
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COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WAUKESHA COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - STH 83 OVER IH-43 (B-67-129)	SHEET 16	E

2

N

I-43 SOUTHBOUND

STA 96+02 28' LT
MGS GUARDRAIL TERMINAL TYPE 2
SEE S.D.D.

TIME WARNER CABLE

CENTURY LINK

EXISTING ASPHALT SHOULDER

7'

5-½" ASPHALTIC SURFACE

MGS GUARDRAIL 3
SEE S.D.D.

25' TAPER

5'

SLOPE INTERCEPT

WETLAND

REMOVING GUARDRAIL

BASE AGGREGATE
DENSE 3/4-INCH

SLOPE INTERCEPT

WETLAND

96+00

97+00

98+00

N= 102940.6412
E= 659139.2542
EL=
STA= 98+02.32
OFFSET= 16'RT

WETLAND

SLOPE INTERCEPT

CAUTION

BASE AGGREGATE
DENSE 3/4-INCH

SLOPE INTERCEPT

REMOVING GUARDRAIL

5-½" ASPHALTIC SURFACE

25' TAPER

5'

7'

EXISTING ASPHALT SHOULDER

WE ENERGIES GAS

MGS GUARDRAIL 3
SEE S.D.D.

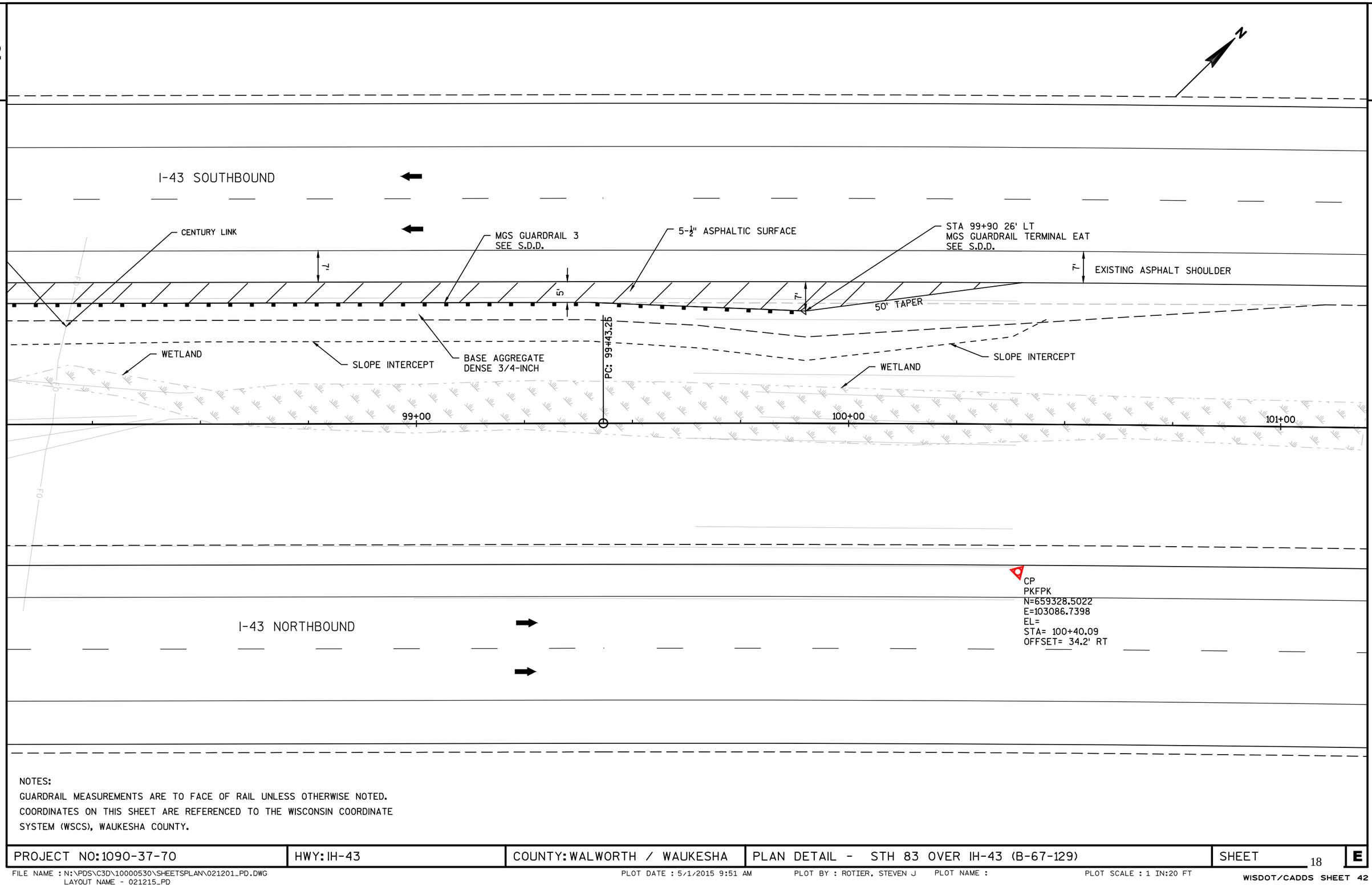
STA 97+56 28' RT
MGS GUARDRAIL TERMINAL TYPE 2
SEE S.D.D.

I-43 NORTHBOUND

NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WAUKESHA COUNTY.

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - STH 83 OVER IH-43 (B-67-129)	SHEET 17	E

2



NOTES:
GUARDRAIL MEASUREMENTS ARE TO FACE OF RAIL UNLESS OTHERWISE NOTED.
COORDINATES ON THIS SHEET ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (WSCS), WAUKESHA COUNTY.

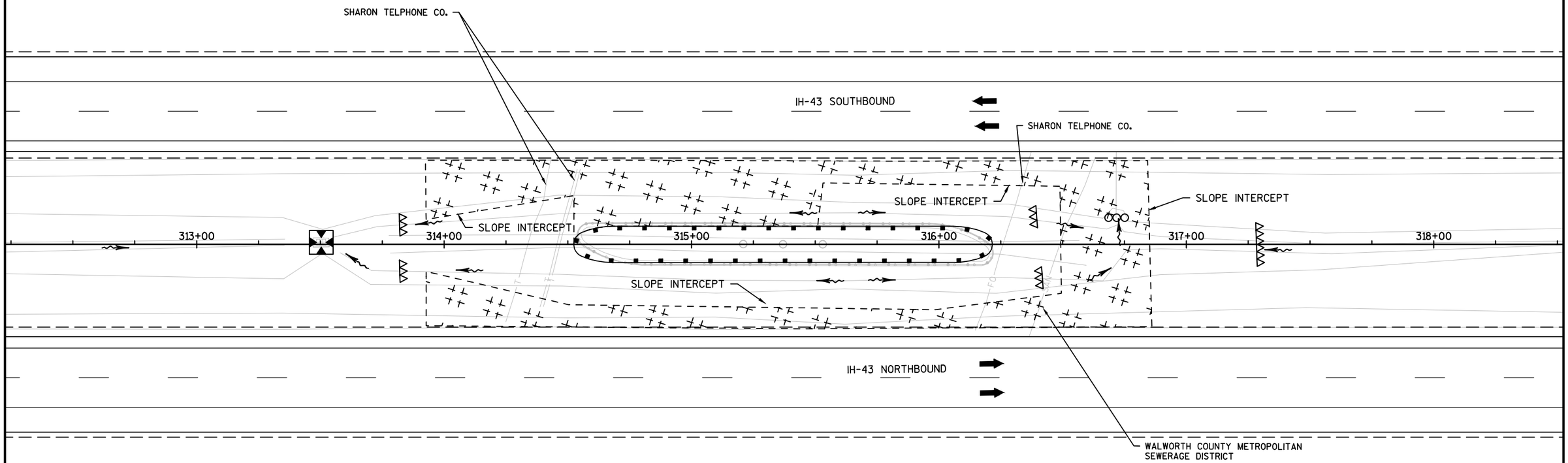
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL - STH 83 OVER IH-43 (B-67-129)	SHEET 18	E

2

LEGEND

- ###### EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #30
- EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #60
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE D
- TEMPORARY DITCH CHECK
- ROCK BAGS
- SURFACE WATER FLOW

N



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PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	EROSION CONTROL - WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 19	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 5/20/2015 1:08 PM PLOT BY : ROTIER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #30

EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #60

SILT FENCE

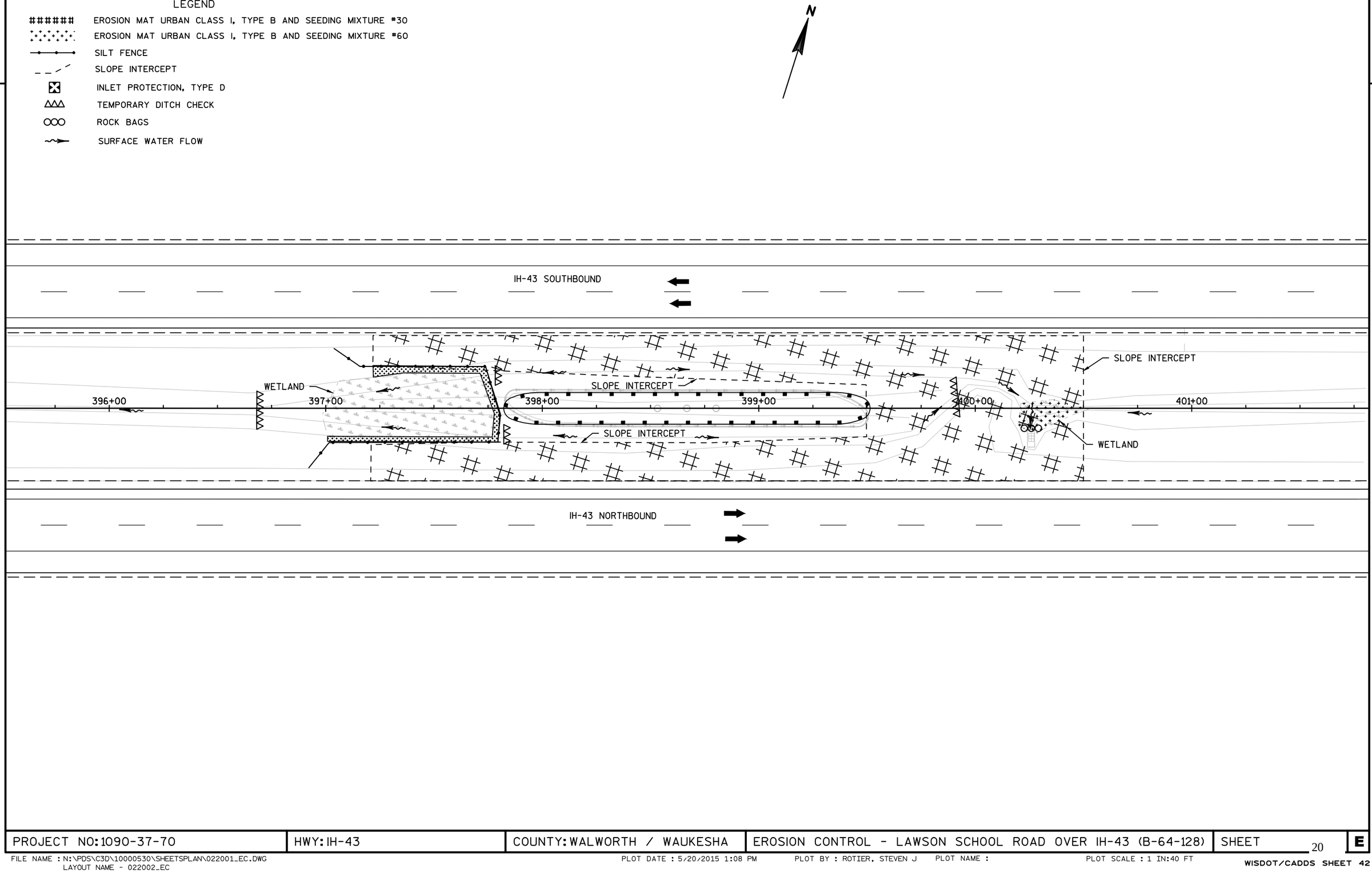
SLOPE INTERCEPT

INLET PROTECTION, TYPE D

TEMPORARY DITCH CHECK

ROCK BAGS

SURFACE WATER FLOW



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PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	EROSION CONTROL - LAWSON SCHOOL ROAD OVER IH-43 (B-64-128)	SHEET 20	E

2

LEGEND

EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #30

EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #60

SILT FENCE

SLOPE INTERCEPT

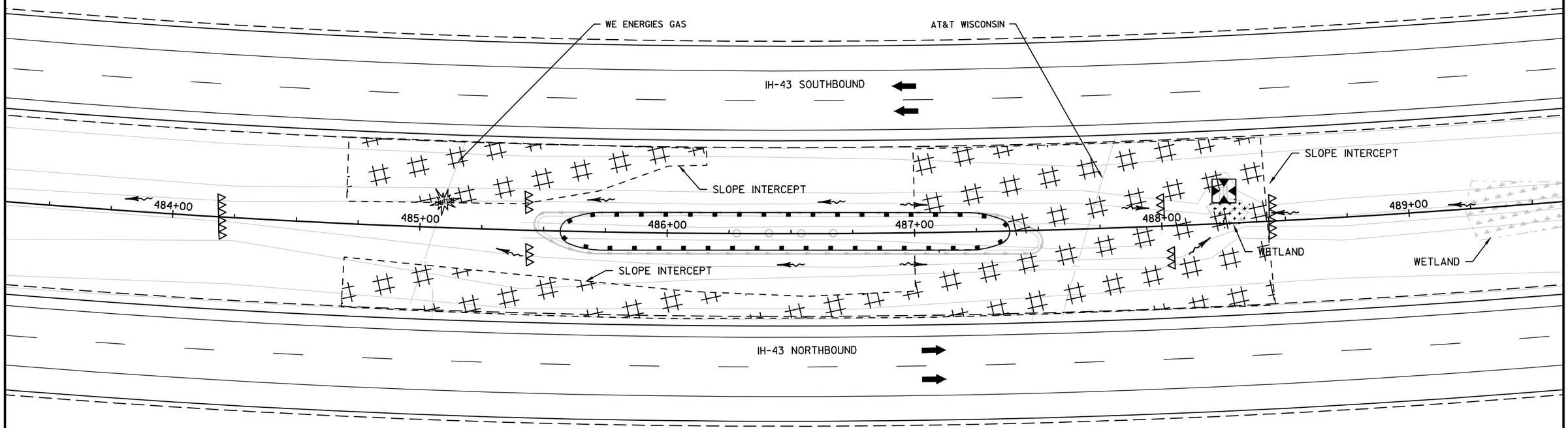
INLET PROTECTION, TYPE D

TEMPORARY DITCH CHECK

ROCK BAGS

SURFACE WATER FLOW

N



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PROJECT NO:1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	EROSION CONTROL - CTH O OVER IH-43 (B-64-121)	SHEET 21	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022003_EC

PLOT DATE : 5/20/2015 1:08 PM PLOT BY : ROTIER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #30

EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #60

SILT FENCE

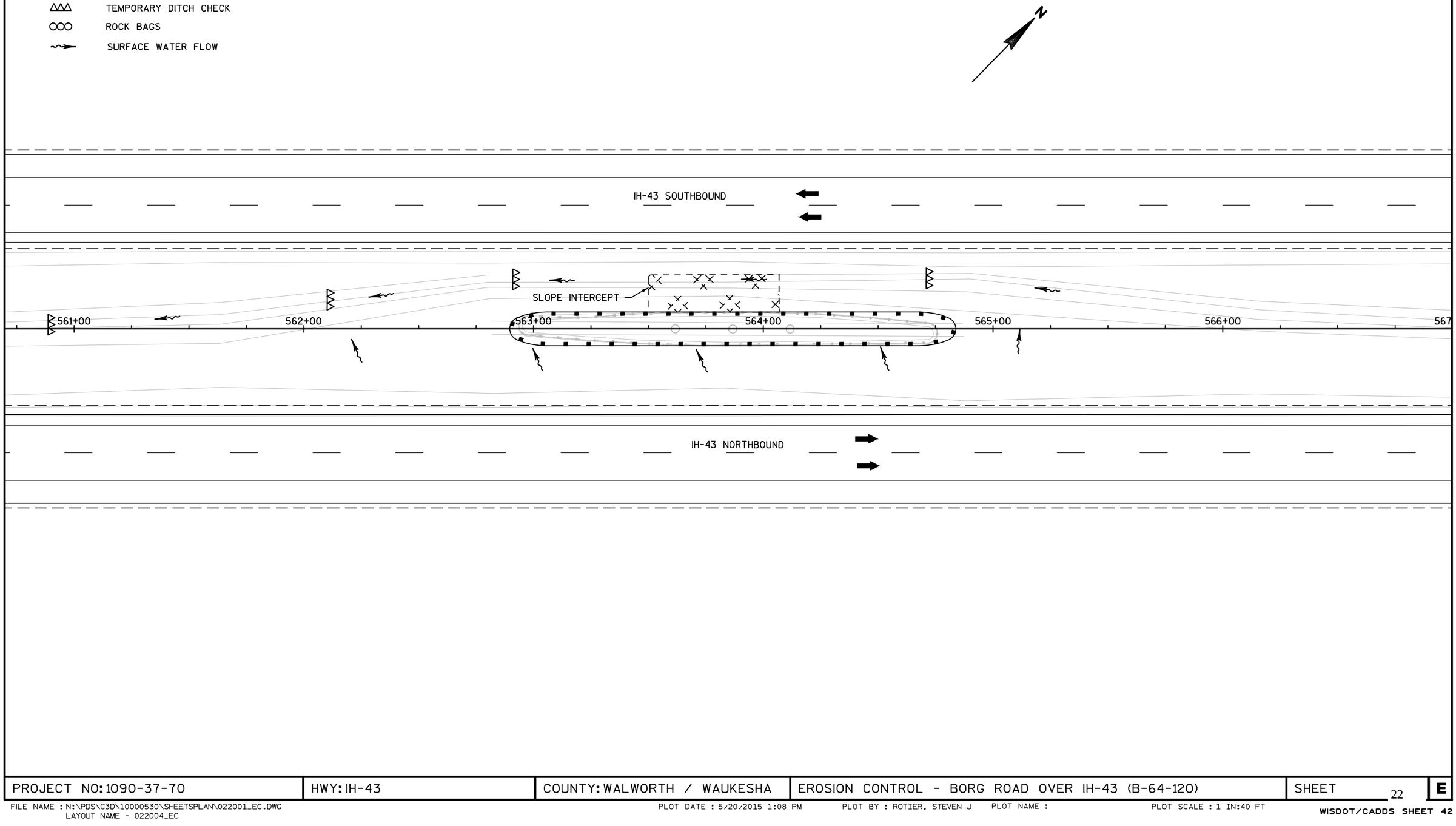
SLOPE INTERCEPT

INLET PROTECTION, TYPE D

TEMPORARY DITCH CHECK

ROCK BAGS

SURFACE WATER FLOW

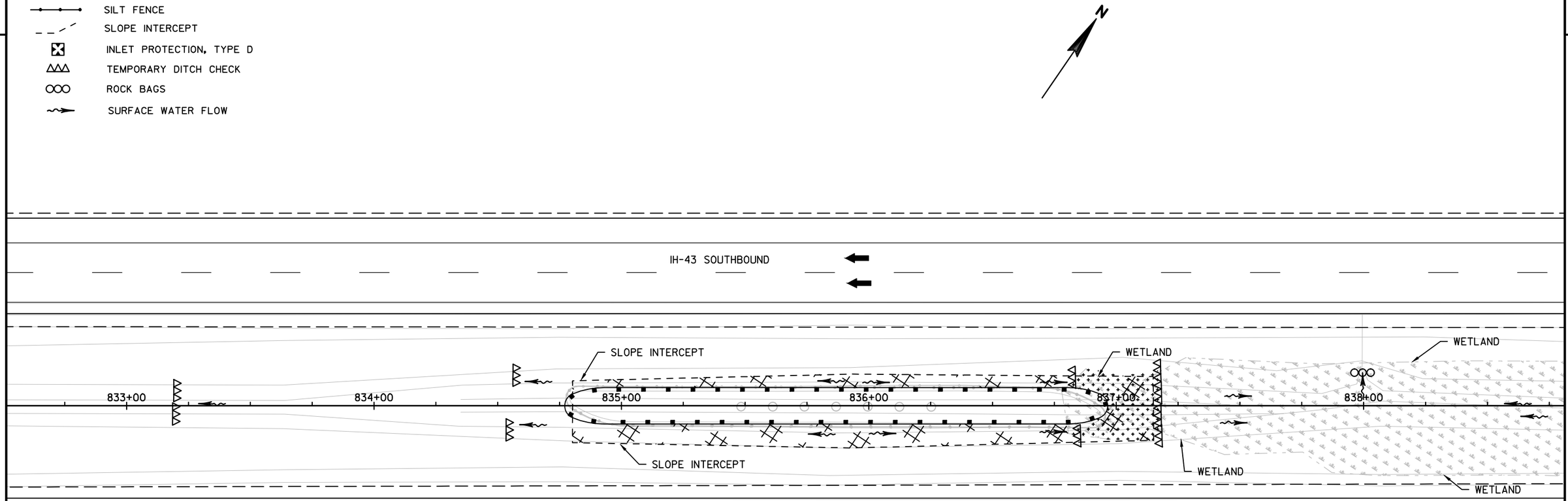


PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	EROSION CONTROL - BORG ROAD OVER IH-43 (B-64-120)	SHEET 22	E

2

LEGEND

- ###### EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE *30
- EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE *60
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE D
- TEMPORARY DITCH CHECK
- ROCK BAGS
- SURFACE WATER FLOW



PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	EROSION CONTROL - STH 67 OVER IH-43 (B-64-109)	SHEET 23	E

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LAYOUT NAME - 022005_EC

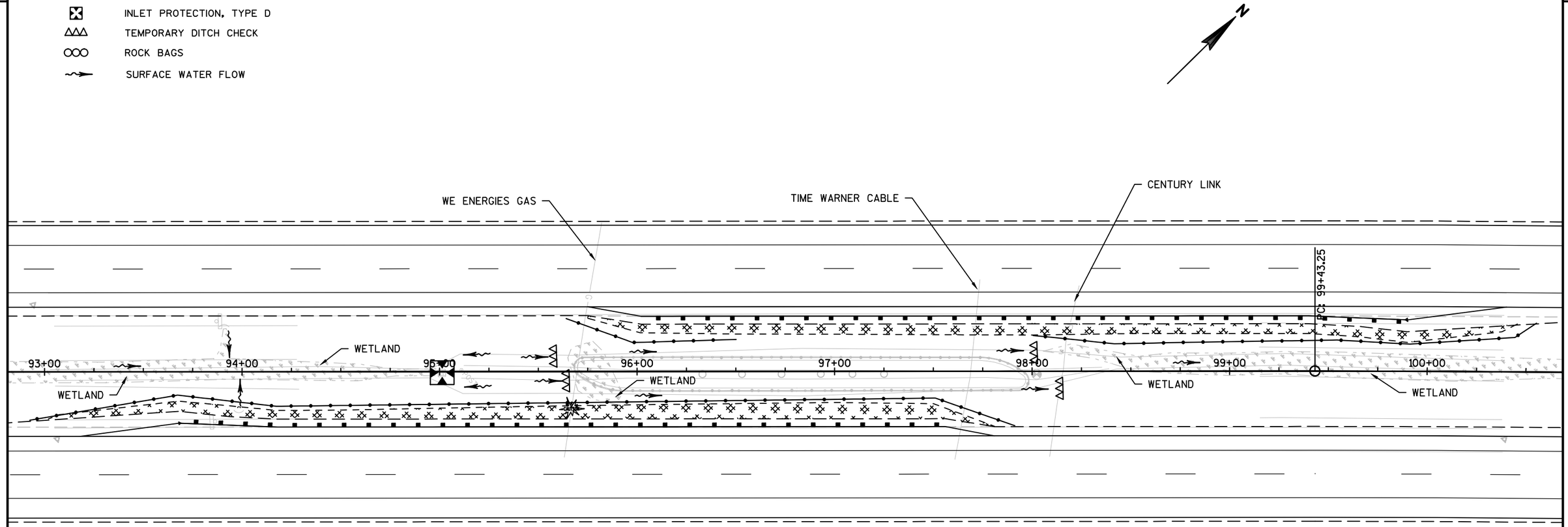
PLOT DATE : 5/20/2015 1:08 PM PLOT BY : ROTIER, STEVEN J PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- ###### EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #30
- EROSION MAT URBAN CLASS I, TYPE B AND SEEDING MIXTURE #60
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION, TYPE D
- TEMPORARY DITCH CHECK
- ROCK BAGS
- SURFACE WATER FLOW



PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	PLAN DETAIL	SHEET 24	E

DATE 09JUN15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1090-37-70 QUANTITY
0010	204.0165	Removing Guardrail	LF	2,435.000	2,435.000
0020	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	10.000	10.000
0030	213.0100	Finishing Roadway (project) 01. 1090-37-70	EACH	1.000	1.000
0040	305.0110	Base Aggregate Dense 3/4-Inch	TON	80.000	80.000
0050	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	250.000	250.000
0060	465.0105	Asphaltic Surface	TON	145.000	145.000
0070	614.0010	Barrier System Grading Shaping Finishing	EACH	7.000	7.000
0080	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	10.000	10.000
0090	614.0230	Steel Thrie Beam	LF	800.000	800.000
0100	614.2300	MGS Guardrail 3	LF	675.000	675.000
0110	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0120	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0130	619.1000	Mobilization	EACH	1.000	1.000
0140	628.1504	Silt Fence	LF	1,085.000	1,085.000
0150	628.1520	Silt Fence Maintenance	LF	1,085.000	1,085.000
0160	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0180	628.2008	Erosion Mat Urban Class I Type B	SY	6,540.000	6,540.000
0190	628.7020	Inlet Protection Type D	EACH	3.000	3.000
0200	628.7504	Temporary Ditch Checks	LF	319.000	319.000
0210	628.7570	Rock Bags	EACH	24.000	24.000
0220	630.0160	Seeding Mixture No. 60	LB	2.750	2.750
0230	633.5200	Markers Culvert End	EACH	3.000	3.000
0240	638.2102	Moving Signs Type II	EACH	1.000	1.000
0250	643.0100	Traffic Control (project) 01. 1090-37-70	EACH	1.000	1.000
0260	643.0300	Traffic Control Drums	DAY	2,640.000	2,640.000
0270	643.0715	Traffic Control Warning Lights Type C	DAY	1,020.000	1,020.000
0280	643.0800	Traffic Control Arrow Boards	DAY	120.000	120.000
0290	643.0900	Traffic Control Signs	DAY	420.000	420.000
0300	643.1050	Traffic Control Signs PCMS	DAY	60.000	60.000
0310	645.0130	Geotextile Fabric Type R	SY	1,500.000	1,500.000
0320	ASP.1T0A	On-the-Job Training Apprentice at $5. 00/HR	HRS	150.000	150.000
0330	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	150.000	150.000
0340	SPV.0035	Special 01. Backfill Slurry	CY	21.000	21.000

3

3

EROSION CONTROL

COUNTY	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH	630.0160 SEEDING MIXTURE NO. 60 LB	REMARKS
WALWORTH											
	WISCONSIN ST.	--	--	1	1	1150	1	44	8	--	
	LAWSON SCHOOL RD.	325	325	1	1	1700	--	60	8	1.60	
	CTH O	--	--	1	1	1750	1	64	--	0.25	
	BORG RD.	--	--	1	1	110	--	18	--	--	
	STH 67	--	--	1	1	380	--	79	8	0.90	
WAUKESHA											
	STH 83	760	760	1	1	1450	1	54	--	--	
	TOTAL	1085	1085	6	6	6540	3	319	24	2.75	

BEAM GUARD

COUNTY	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAILTERMINAL EAT LF	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 LF	SPV.0035.01 BACKFILL SLURRY CY
WALWORTH									
	WISCONSIN ST.	350	1	2	125	--	--	--	3
	LAWSON SCHOOL RD.	350	1	2	125	--	--	--	3
	CTH O	425	1	2	150	--	--	--	3
	BORG RD.	380	1	2	175	--	--	--	4
	STH 67	450	1	2	225	--	--	--	5
WAUKESHA									
	STH 83	480	2	--	--	675	2	2	5
	TOTAL	2435	7	10	800	675	2	2	21

TRAFFIC CONTROL

COUNTY	LOCATION	643.0100 TRAFFIC CONTROL (10903770) EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
WALWORTH							
	WISCONSIN ST.	--	440	170	20	70	10
	LAWSON SCHOOL RD.	--	440	170	20	70	10
	CTH O	--	440	170	20	70	10
	BORG RD.	--	440	170	20	70	10
	STH 67	--	440	170	20	70	10
WAUKESHA							
	STH 83	--	440	170	20	70	10
Project 10903770		1	--	--	--	--	--
	TOTAL	1	2640	1020	120	420	60

614.0010

BARRIER SYSTEM GRADING SHAPING FINISHING

FOR INFORMATION ONLY

COUNTY	LOCATION	FILL CY	TOPSOIL SY	SALVAGED TOPSOIL SY	SEEDING MIXTURE NO. 30 LB
WALWORTH					
	WISCONSIN ST.	41	385	770	21
	LAWSON SCHOOL RD.	114	560	1125	16
	CTH O	111	580	1155	32
	BORG RD.	2	40	80	2
	STH 67	4	125	250	6
WAUKESHA					
	STH 83	115	485	970	26
	TOTAL	387	2175	4350	103

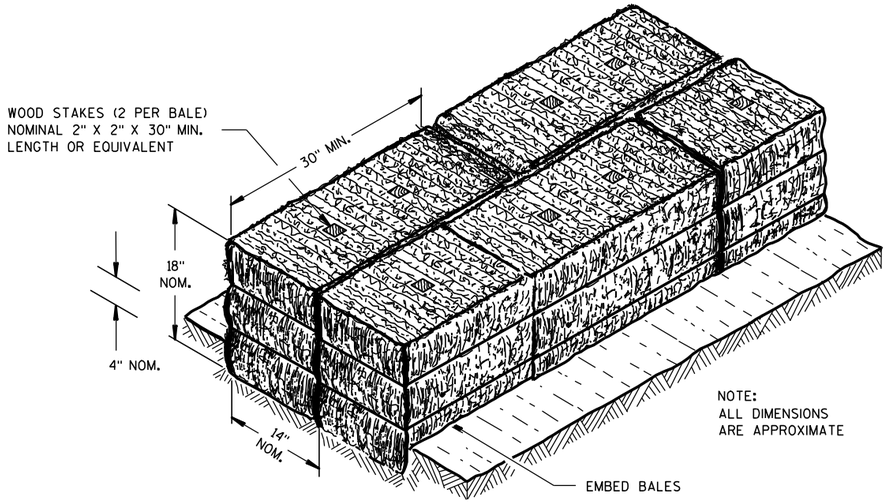
3

MISCELLANEOUS

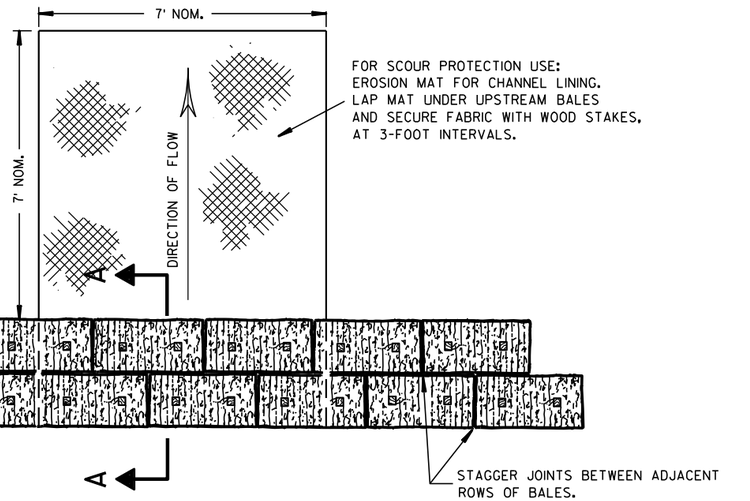
COUNTY	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	213.0100 FINISHING ROADWAY (10903770) Each	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	465.0105 ASPHALTIC SURFACE TON	619.1000 MOBILIZATION EACH	633.5200 MARKERS CULVERT END EACH	634.0410 POSTS WOOD 4X4-INCH X 10-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	645.0130 GEOTEXTILE FABRIC TYPE R SY
WALWORTH											
	WISCONSIN ST.	--	--	13	45	--	--	1	--	--	270
	LAWSON SCHOOL RD.	--	--	13	45	--	--	1	--	--	270
	CTH O	--	--	13	50	--	--	--	--	--	300
	BORG RD.	--	--	13	50	--	--	--	--	--	310
	STH 67	--	--	13	60	--	--	1	--	--	350
WAUKESHA				--			--	--		--	
	STH 83	10	--	13	--	145	--	--	0	0	--
Project 10903770			1	--	--		1	--		--	
	TOTAL	10	1	80	250	145	1	3	0	0	1500

Standard Detail Drawing List

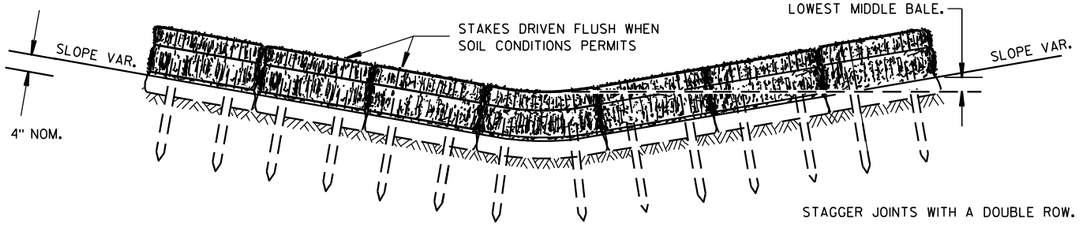
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
14B15-08A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A", (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
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
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (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
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15D12-05A	TRAFFIC CONTROL, LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-01B	ATTACHMENT OF SIGNS TO POSTS



SECTION A-A



PLAN VIEW



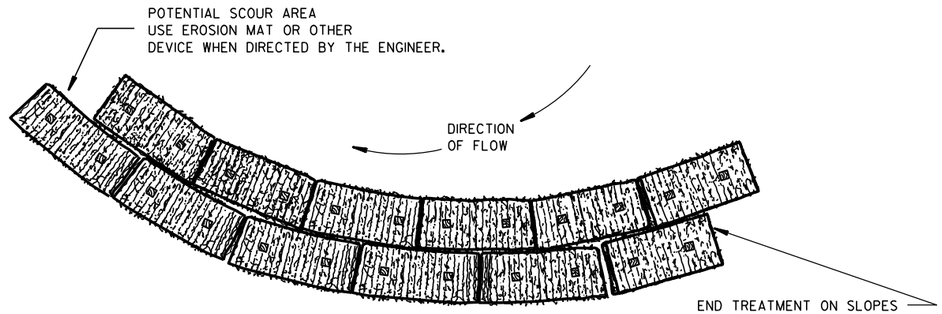
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

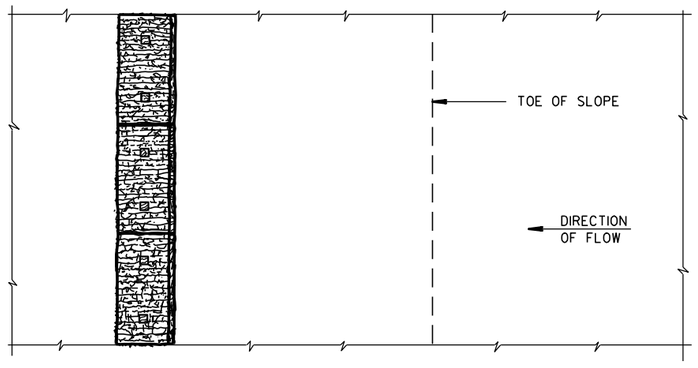
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

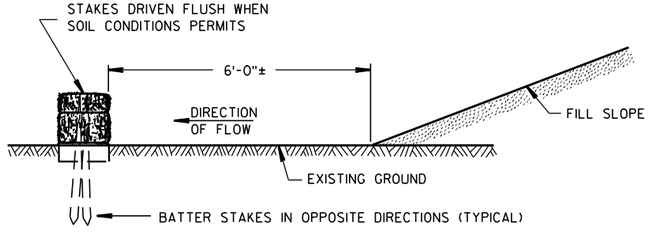


PLAN VIEW

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

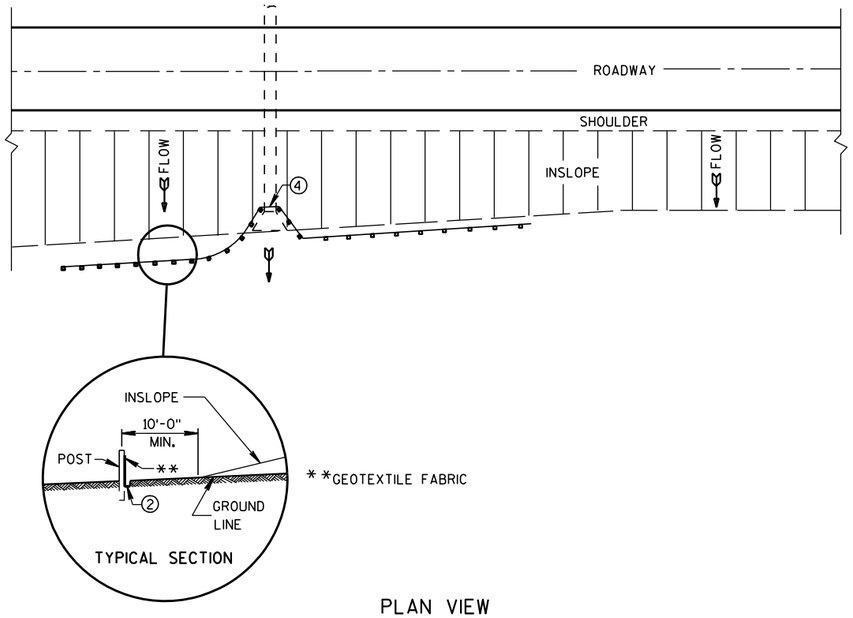
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

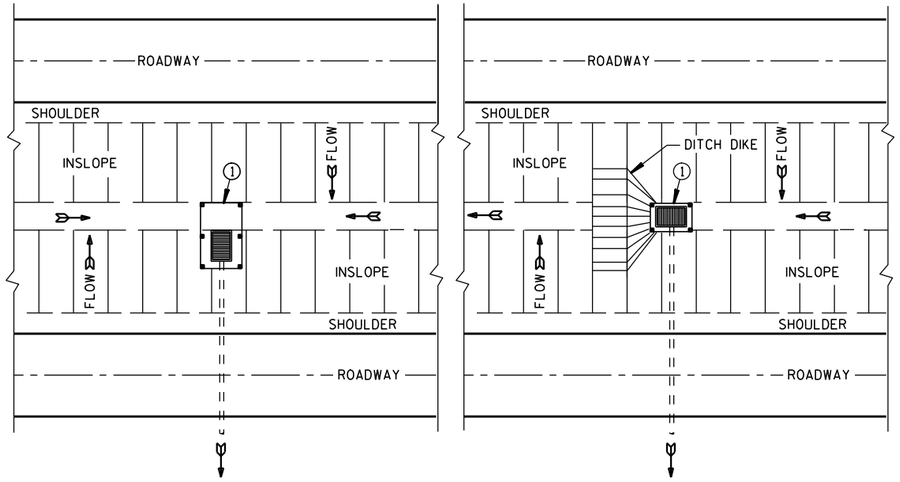
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



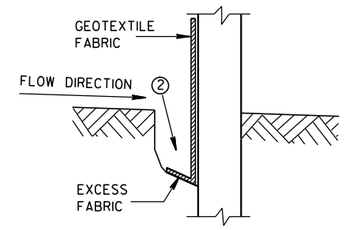
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

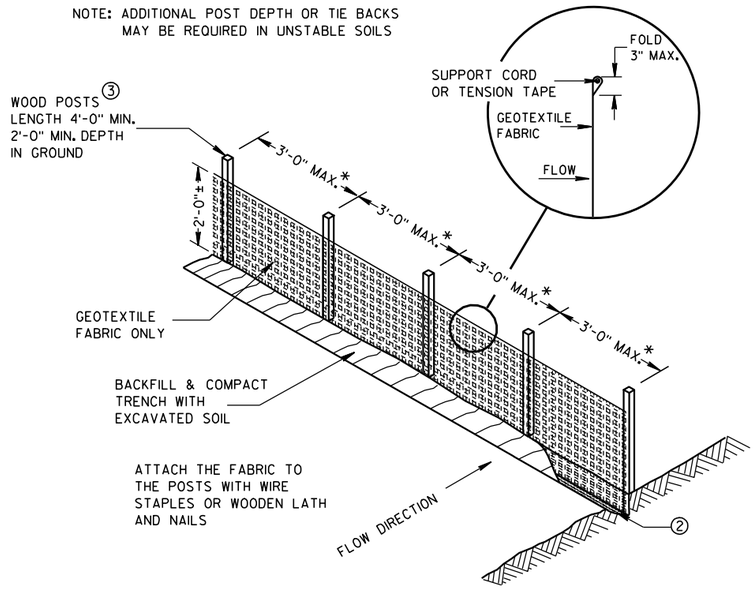
GENERAL NOTES

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

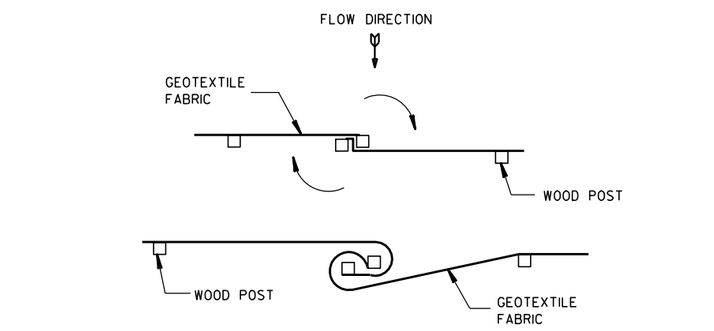
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



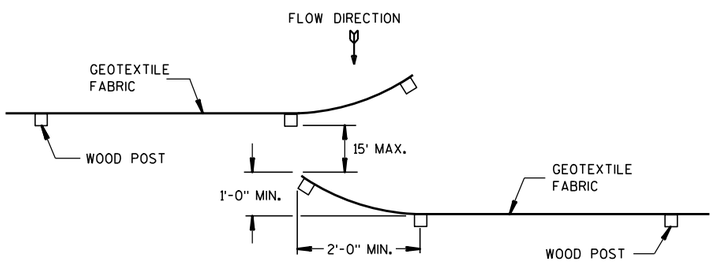
TRENCH DETAIL



SILT FENCE

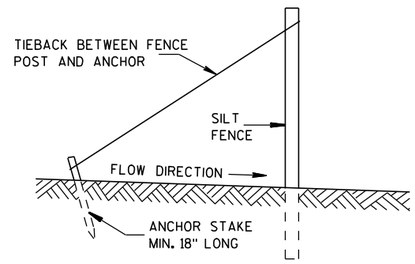


TWIST METHOD



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

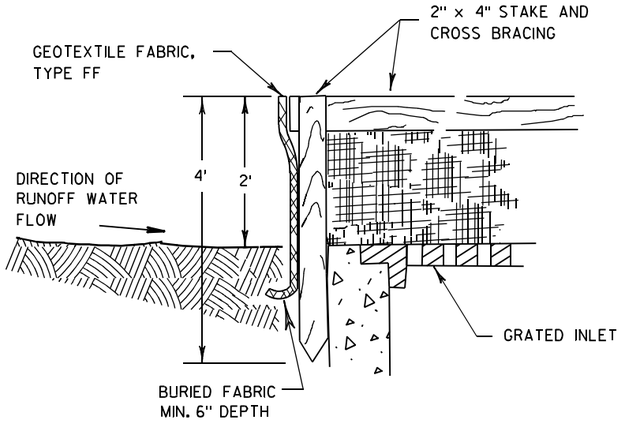
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

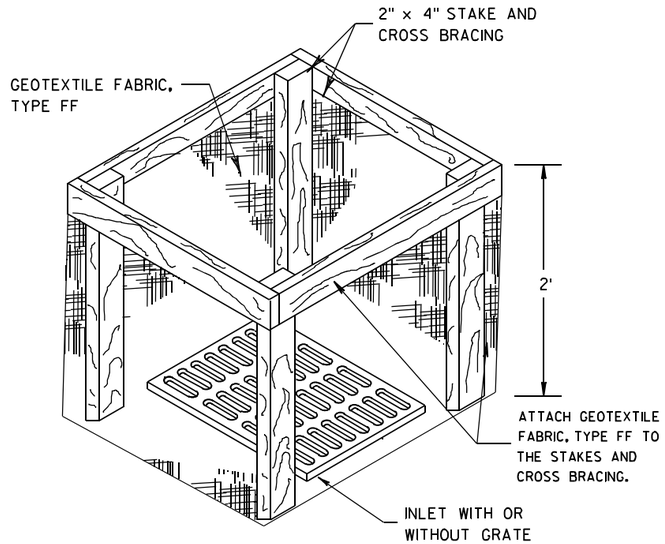
6

S.D.D. 8 E 9-6

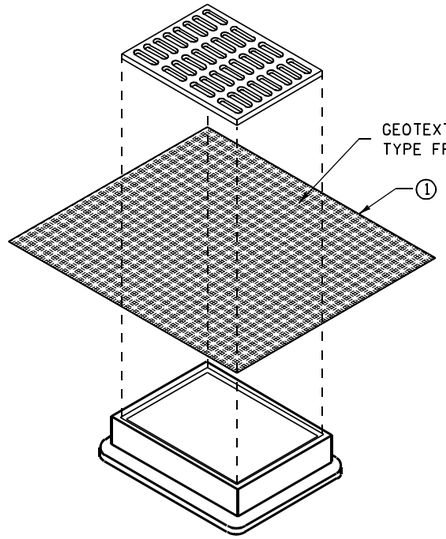
6

S.D.D. 8 E 9-6



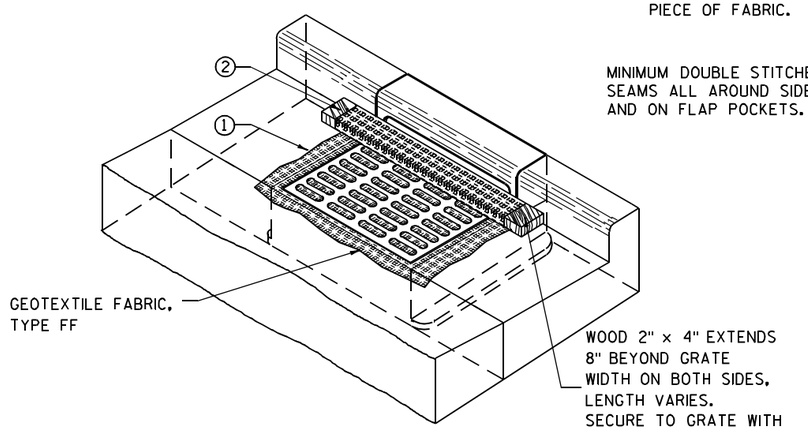


INLET PROTECTION, TYPE A

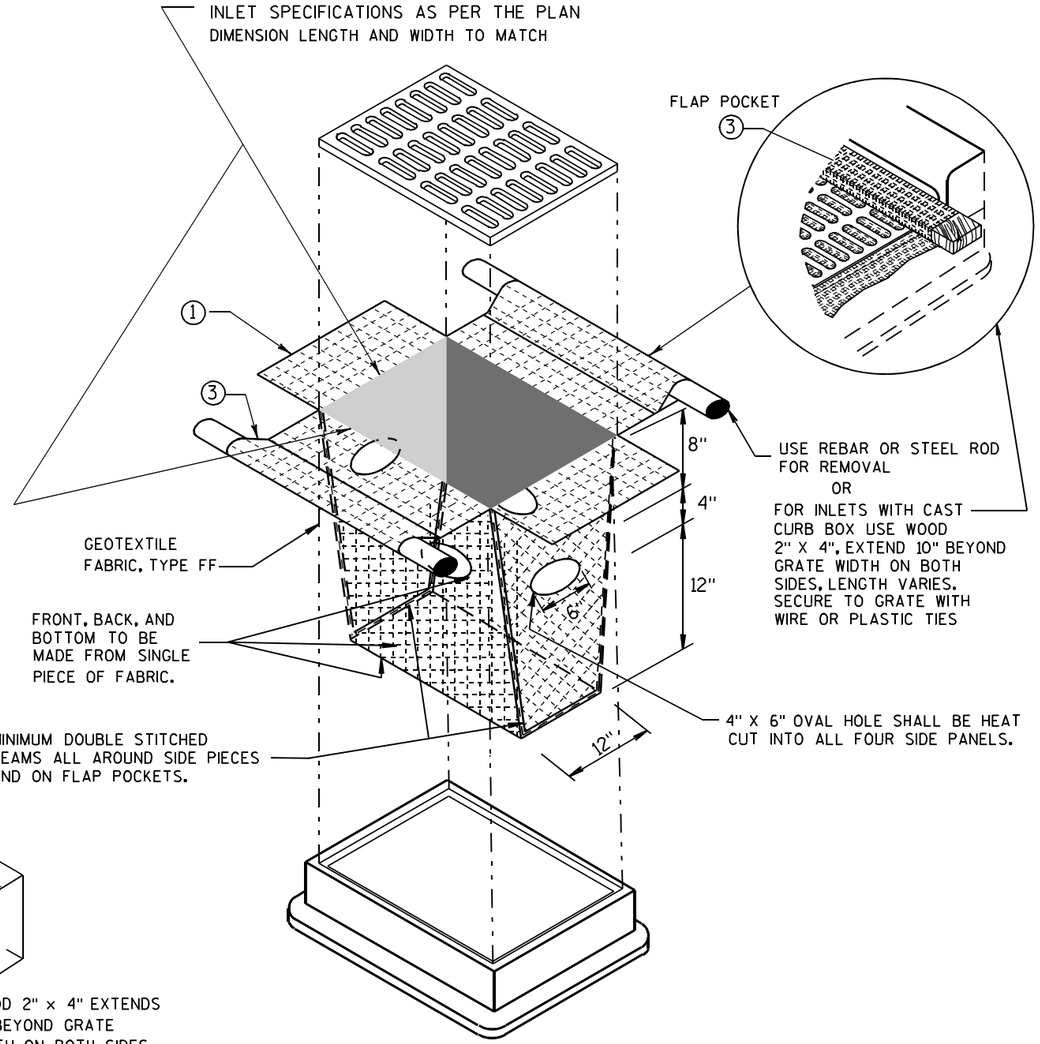


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

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

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

GENERAL NOTES

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

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

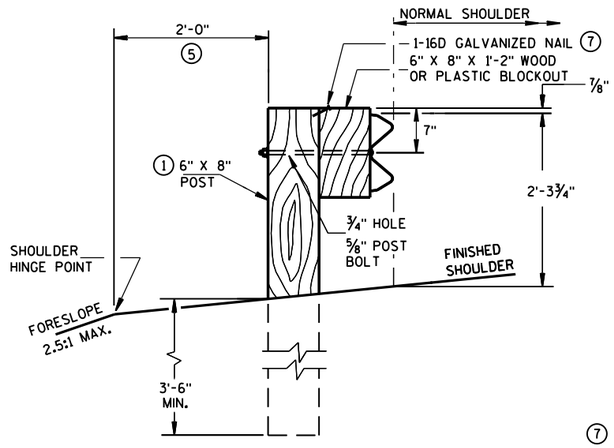
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

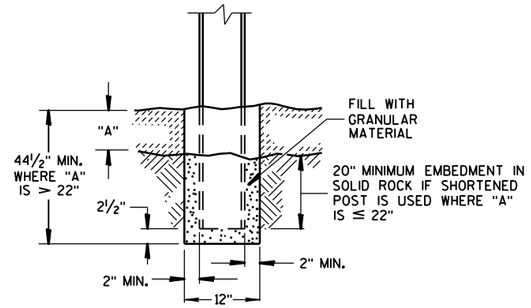
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

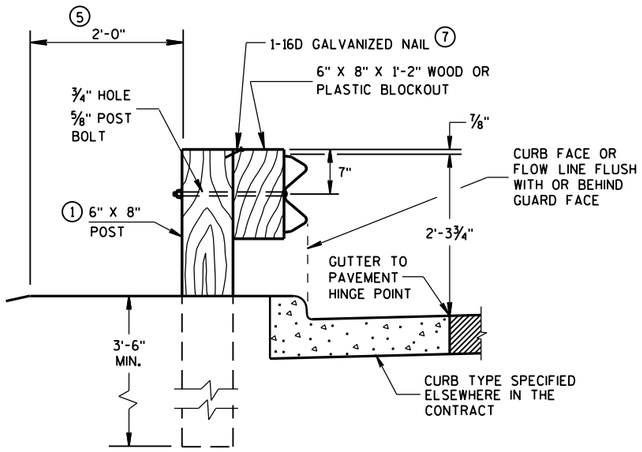
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



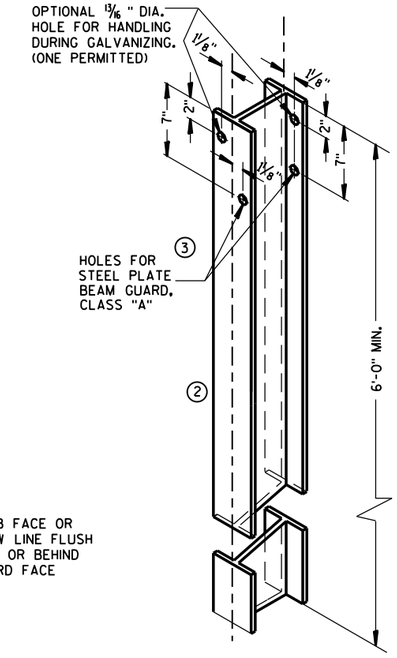
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

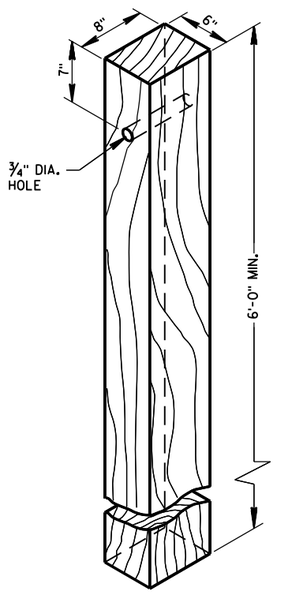


END VIEW
LOCATED ALONG A CURBED ROADWAY

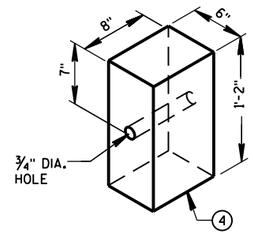


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

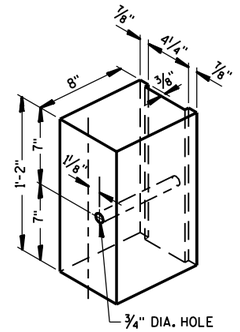
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



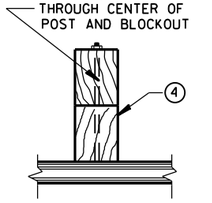
WOOD POST
(6"X8") NOMINAL



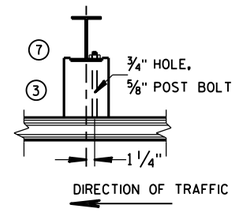
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



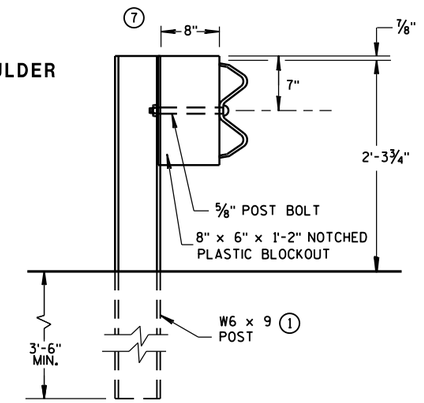
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



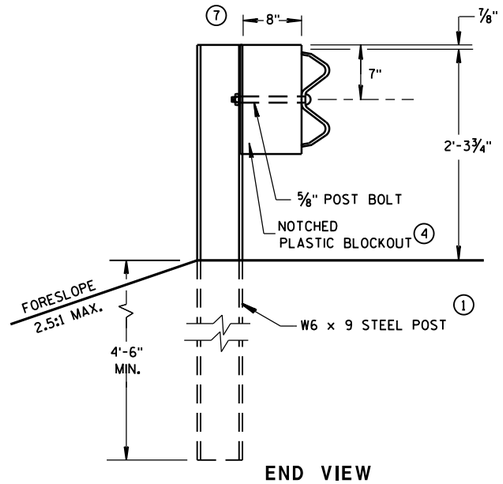
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



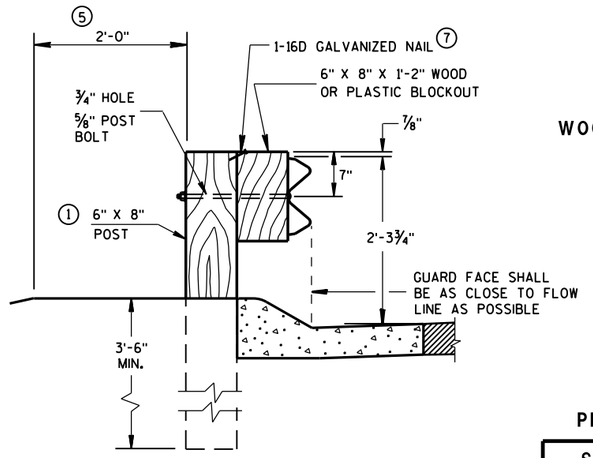
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



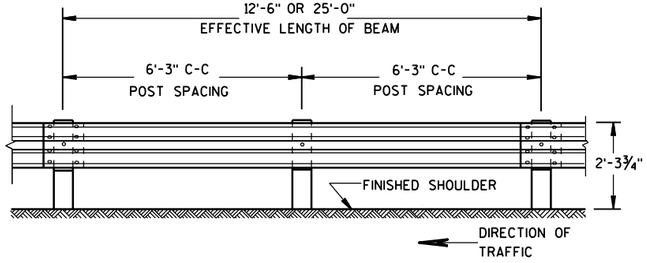
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

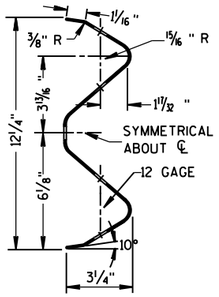
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 15-8a

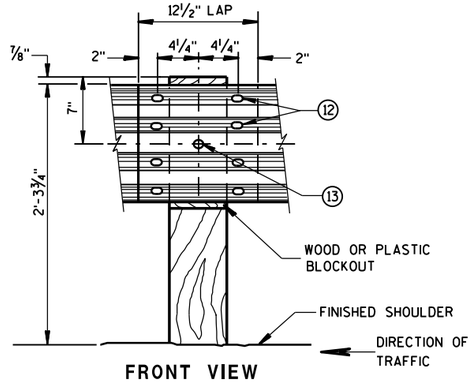


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(8) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

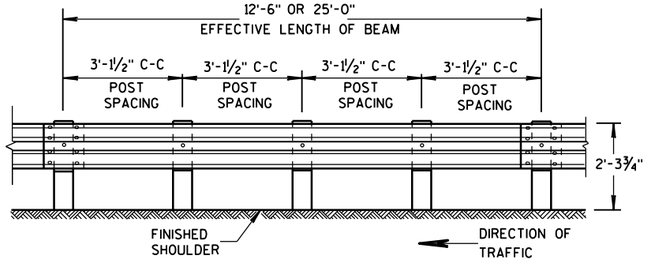
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(10) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

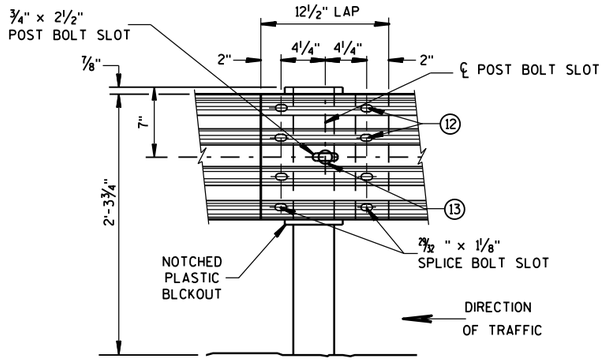
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

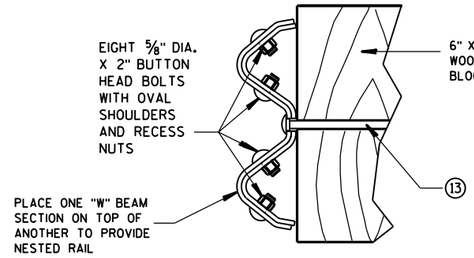
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

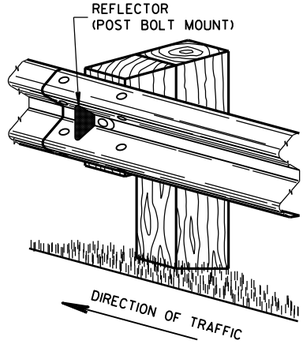


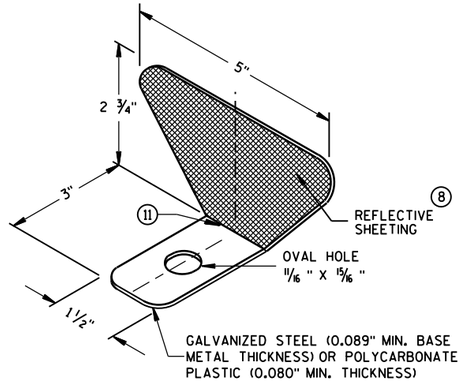
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (9)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 (10) 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 (11)	3



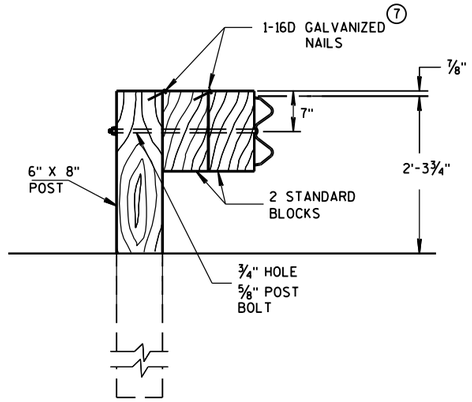


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

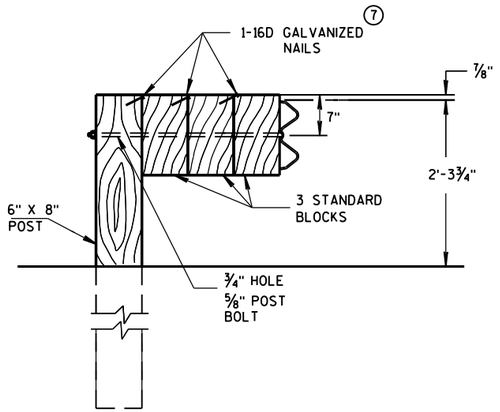
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 15-8b



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

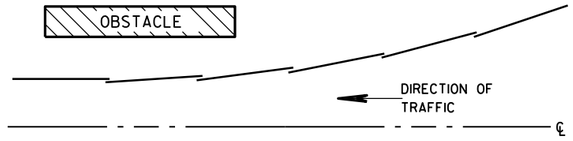


DETAIL FOR TRIPLE BLOCKS

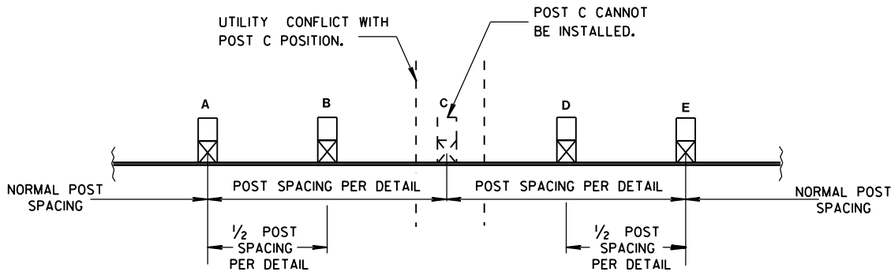
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

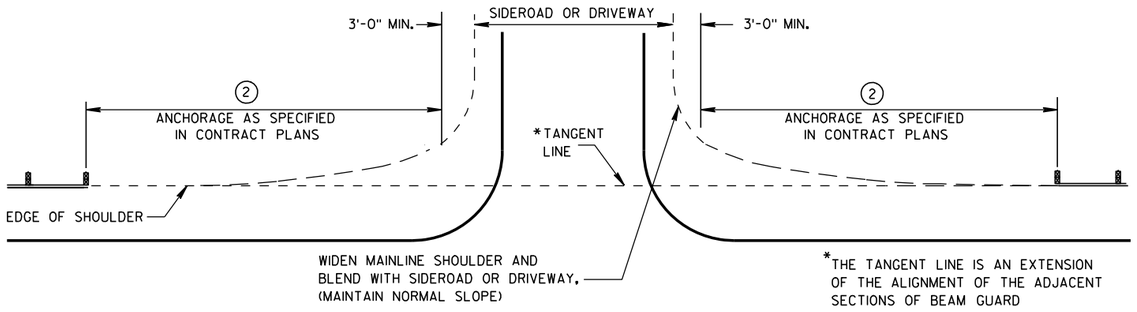
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

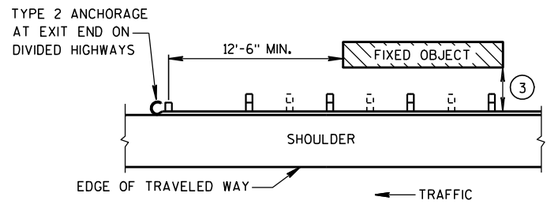
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

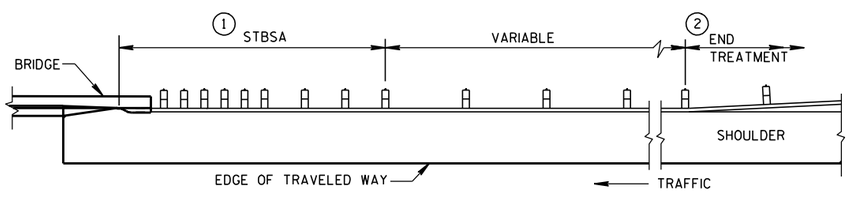
S.D.D. 14 B 15-8c



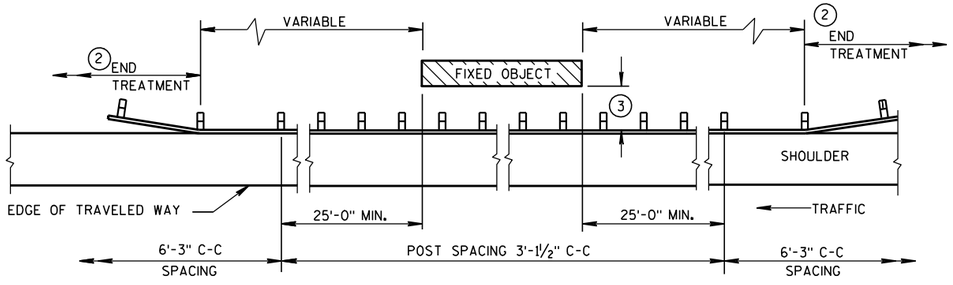
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

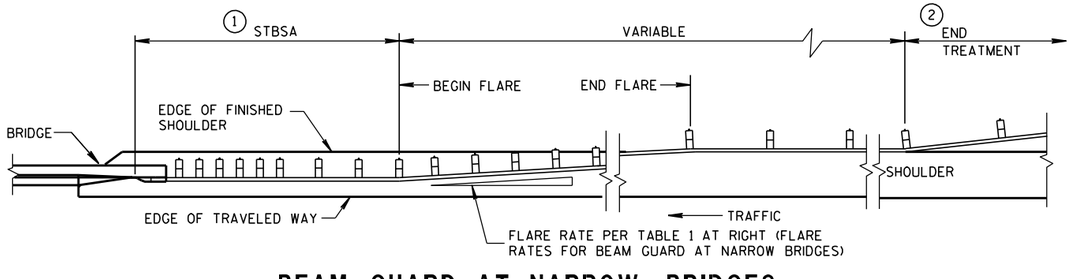


BEAM GUARD AT FULL WIDTH BRIDGES



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

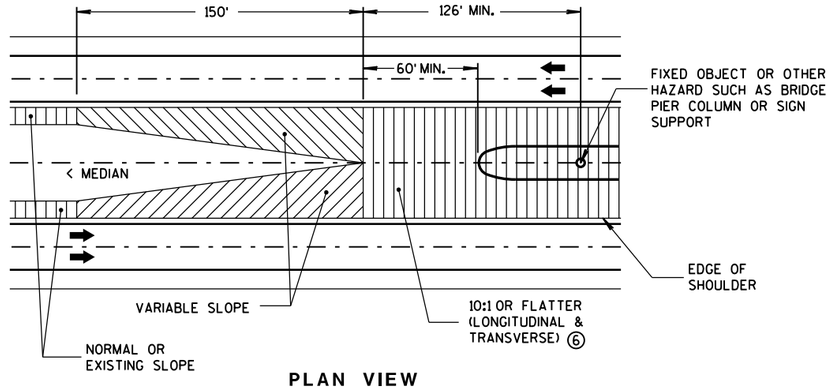
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-21-07
DATE

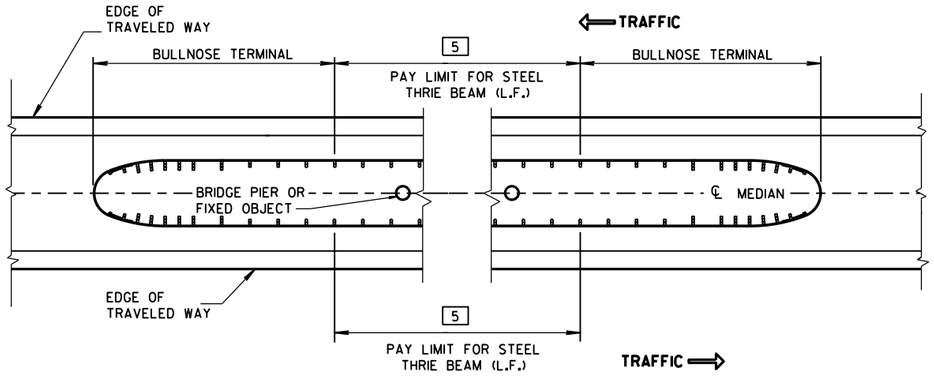
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

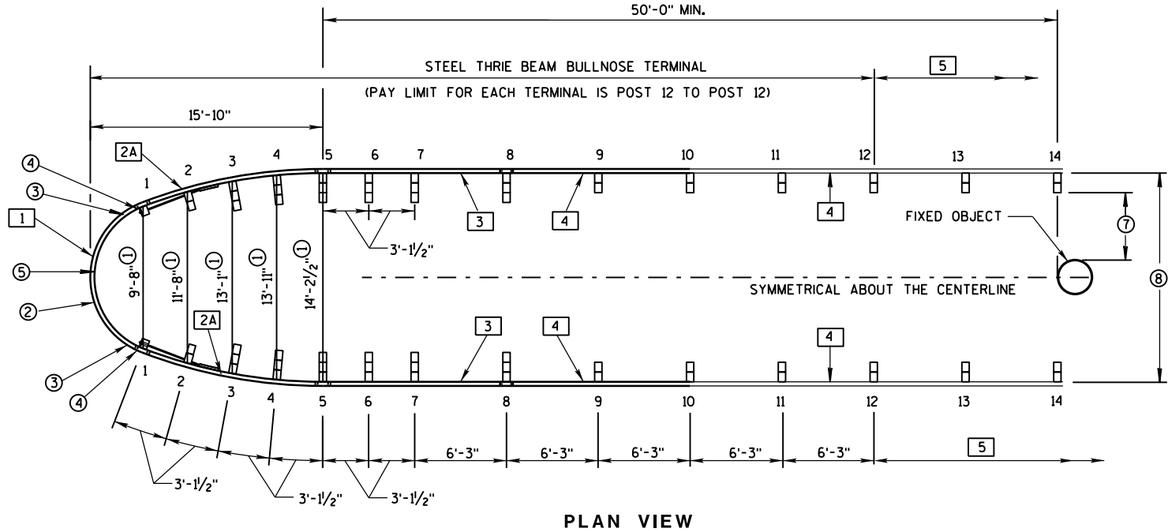


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

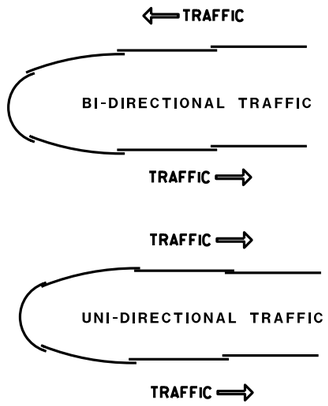


MEDIAN HAZARD PROTECTION PAY LIMITS



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.

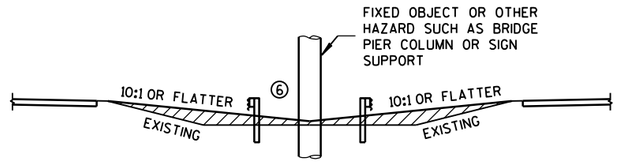
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

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.

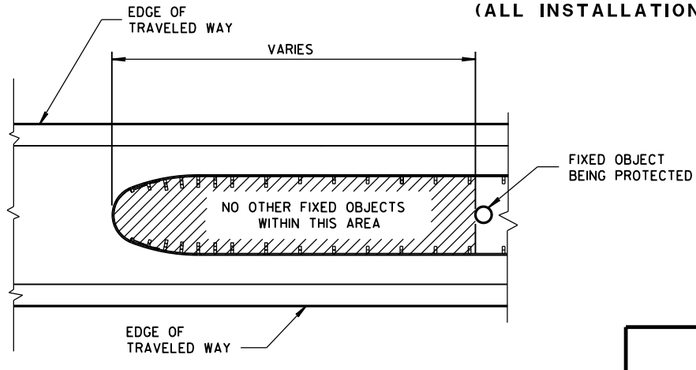
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

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)

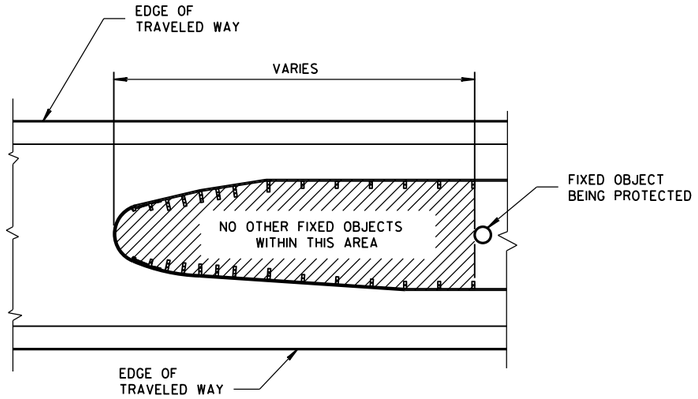


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
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)

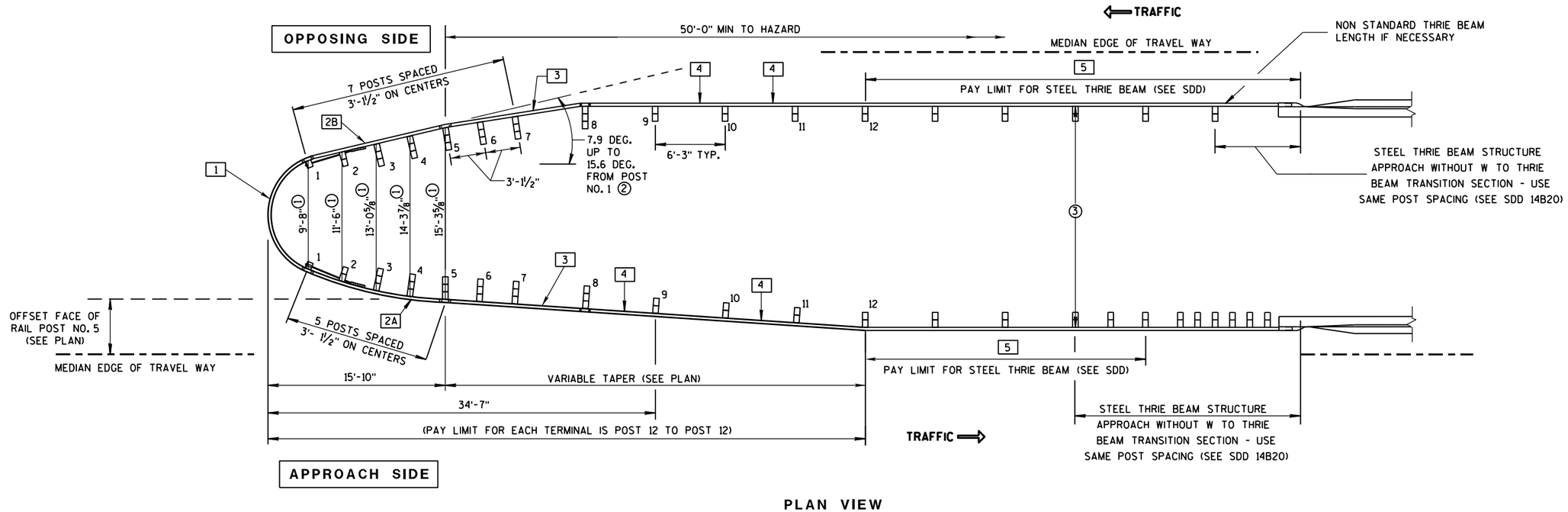
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[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.



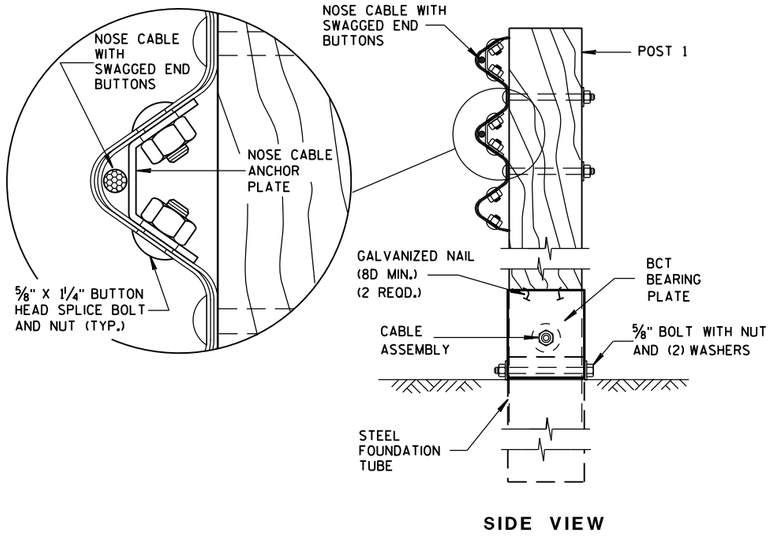
PLAN VIEW

WIDENED BULLNOSE DESIGN

(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

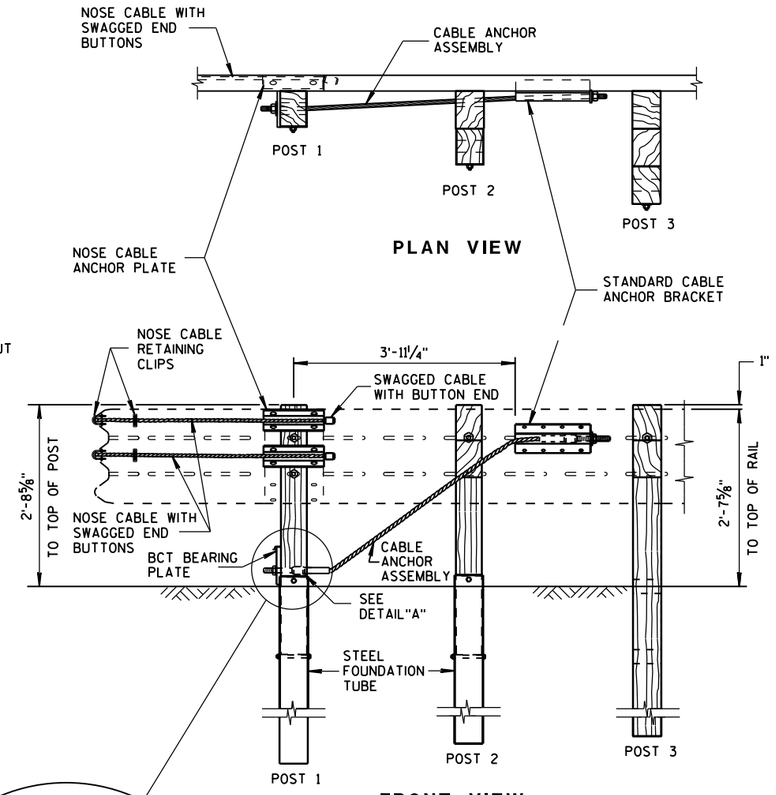
STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



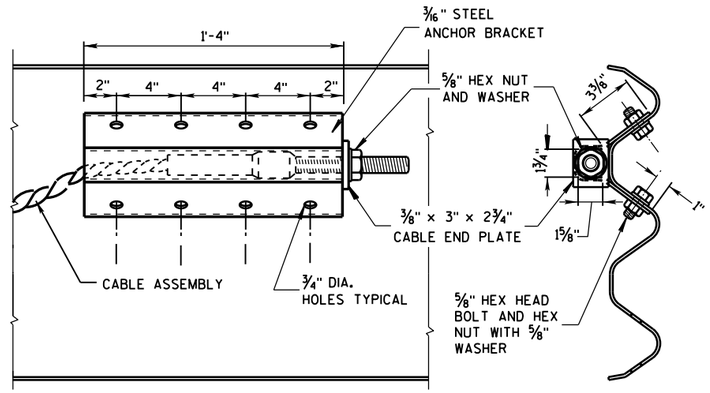
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

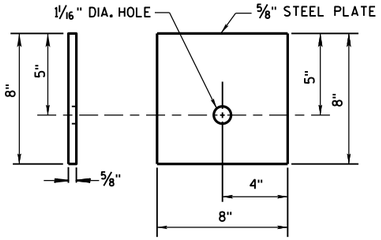
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

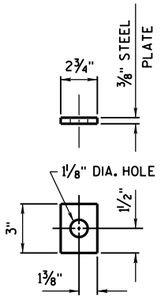


FRONT VIEW END VIEW

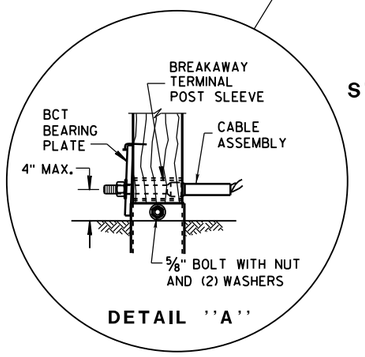
DETAILS OF CABLE ANCHOR BRACKET



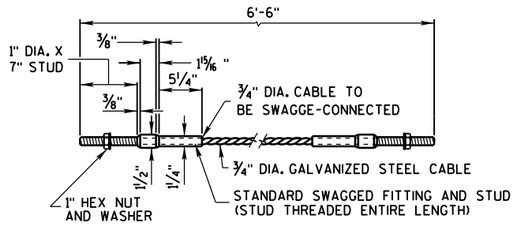
BCT BEARING PLATE



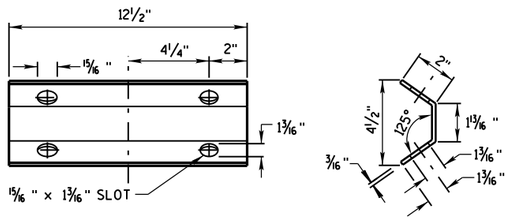
CABLE END PLATE



DETAIL ''A''



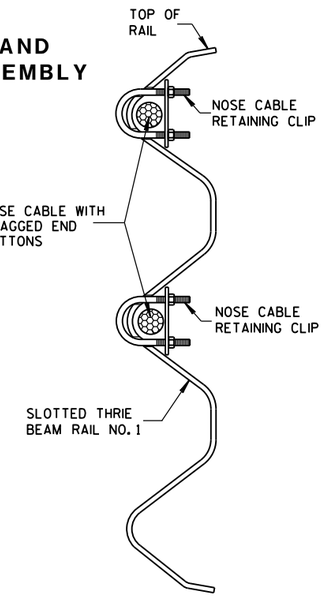
DETAILS OF CABLE ANCHOR ASSEMBLY



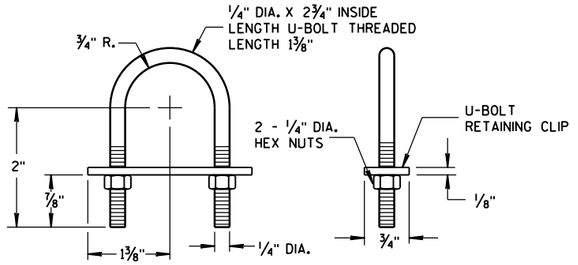
ELEVATION VIEW END VIEW

NOSE CABLE ANCHOR PLATE

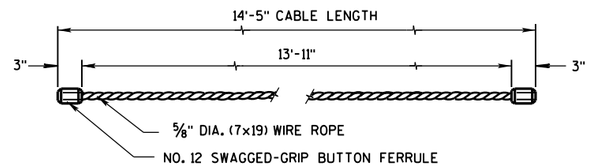
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



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
DEPARTMENT OF TRANSPOI

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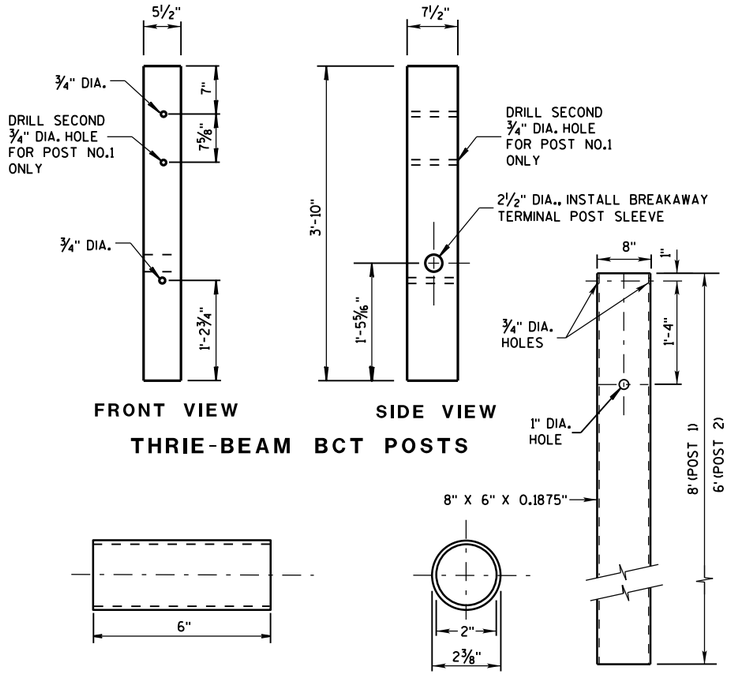
S.D.D. 14 B 26-3c

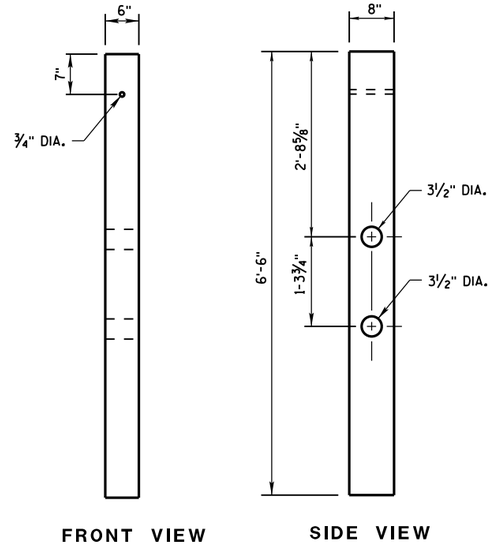


FRONT VIEW SIDE VIEW

THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

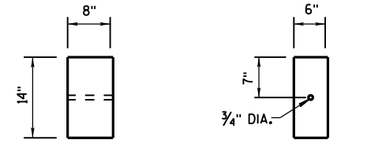


FRONT VIEW SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

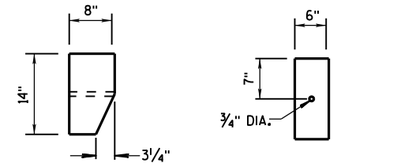
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



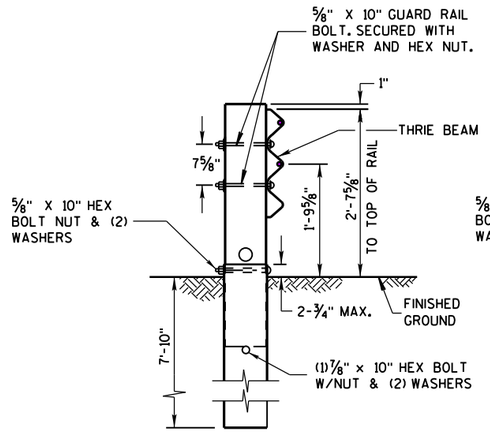
SIDE VIEW FRONT VIEW

STANDARD WOOD BLOCK



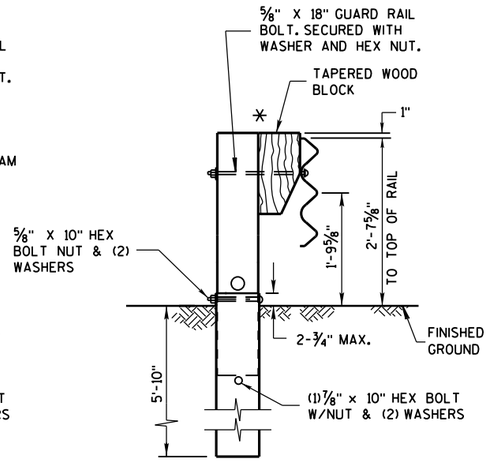
SIDE VIEW FRONT VIEW

TAPERED WOOD BLOCK



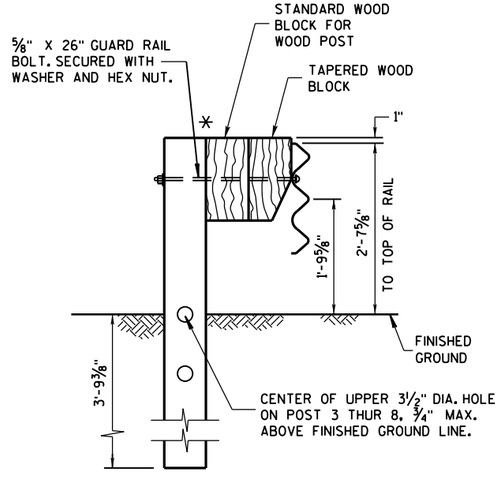
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



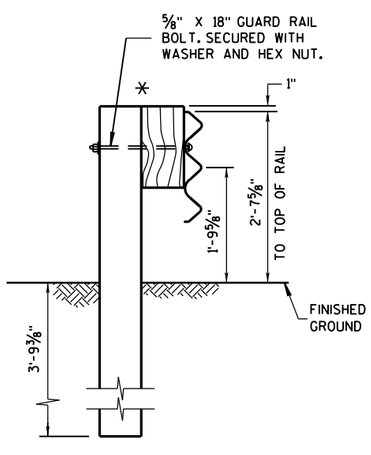
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

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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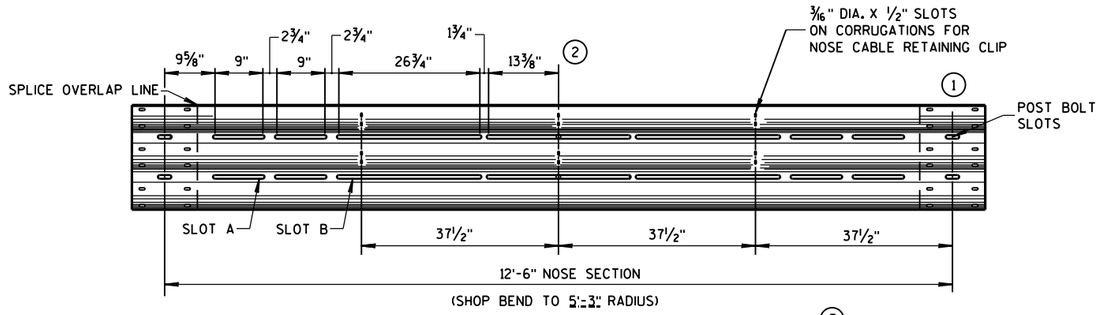
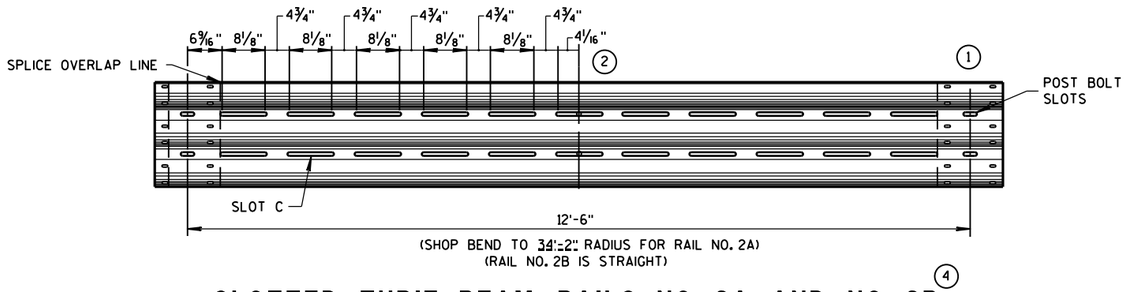
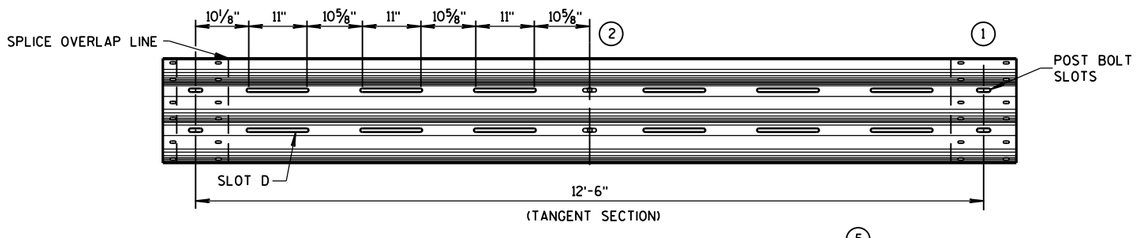
S.D.D. 14 B 26-3d



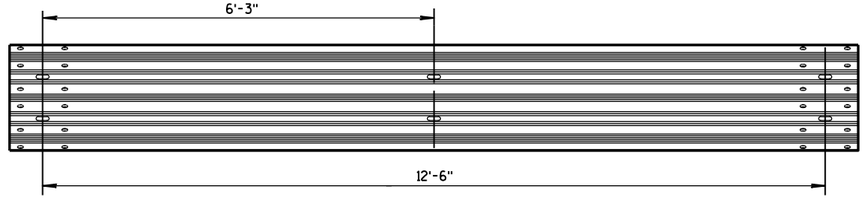
SLOTTED THRIE BEAM RAIL NO. 1 (3)



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.

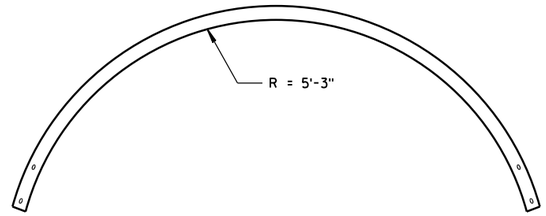
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

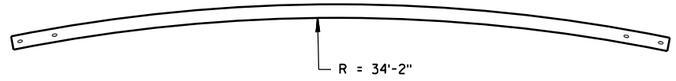
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



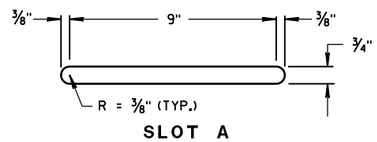
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

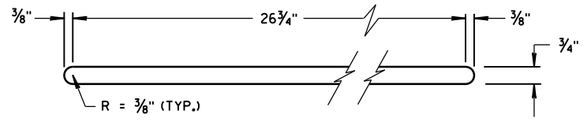


PLAN VIEW

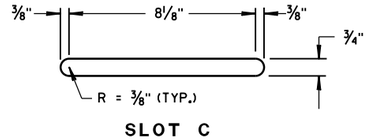
SLOTTED THRIE BEAM RAIL NO. 2A



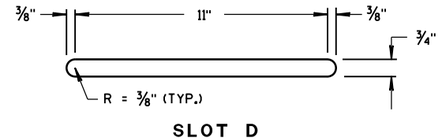
SLOT A



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
NT
FHWA

6

S.D.D. 14 B 26-3e

6

S.D.D. 14 B 26-3e

GENERAL NOTES

(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.

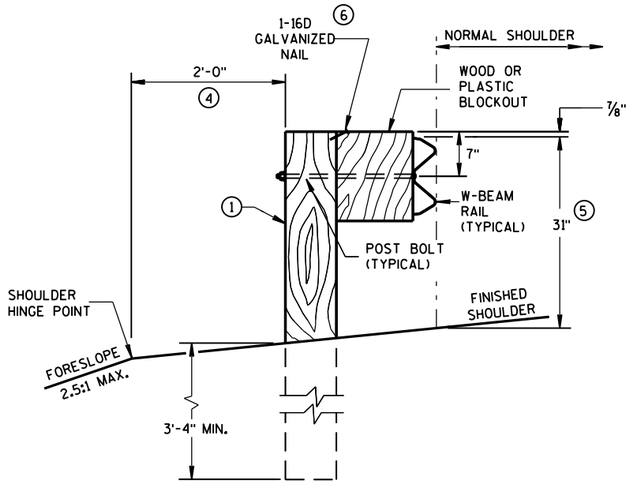
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

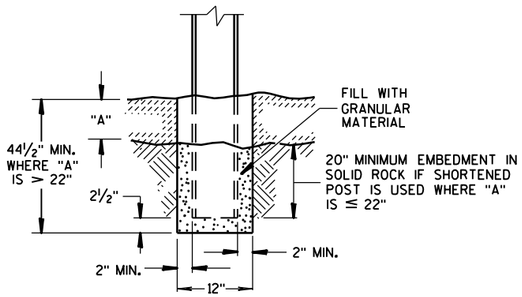
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



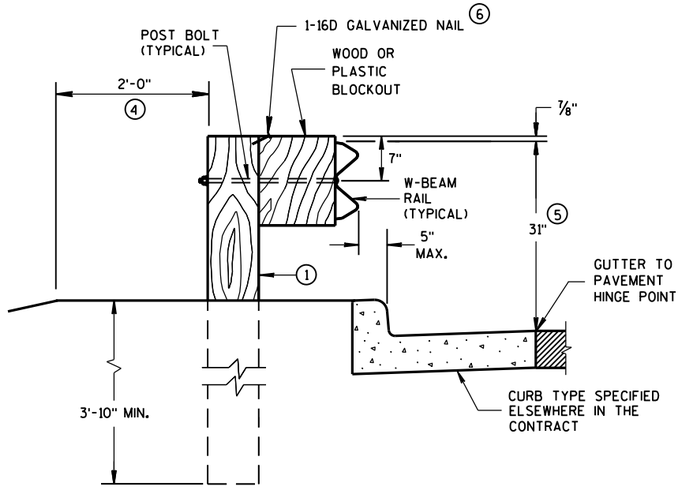
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



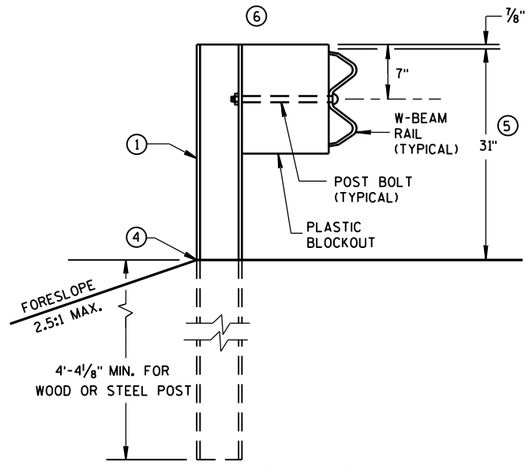
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



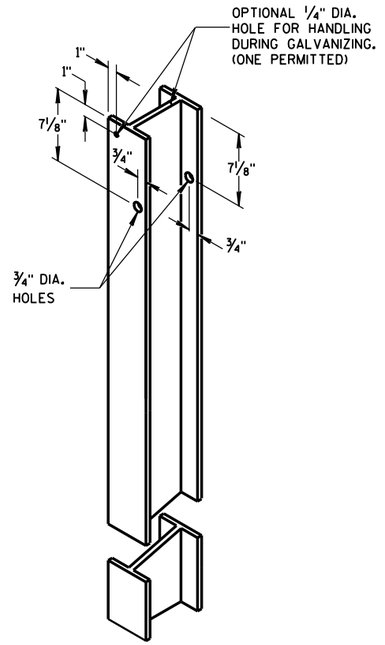
END VIEW

LOCATED ALONG A CURBED ROADWAY

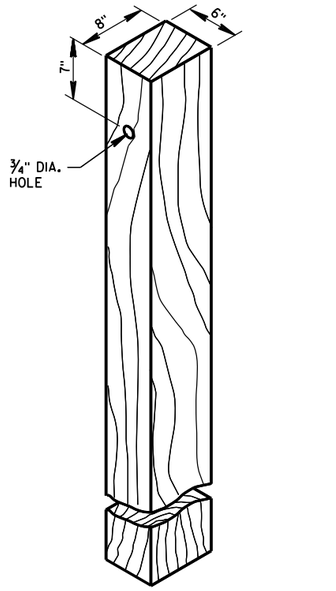


END VIEW

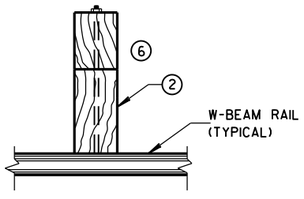
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



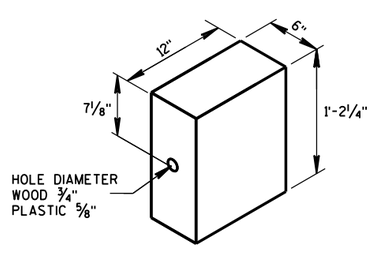
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



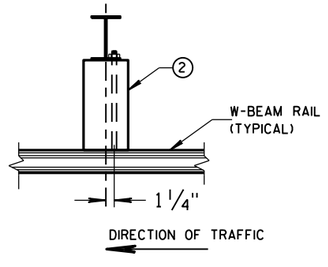
WOOD POST
(6" X 8") NOMINAL (1)



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

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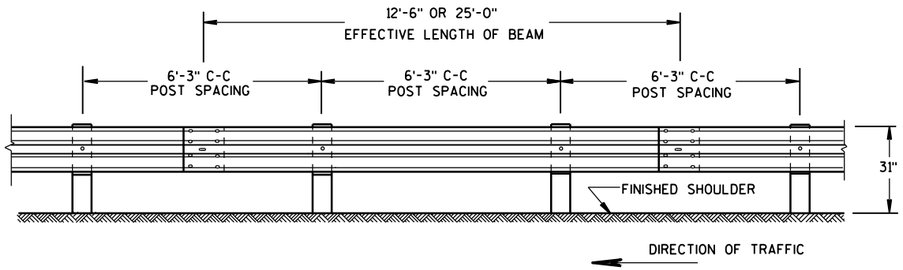
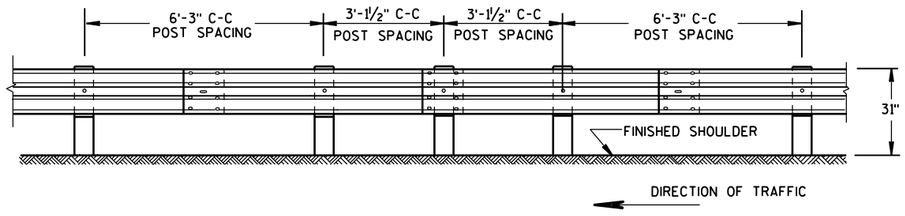


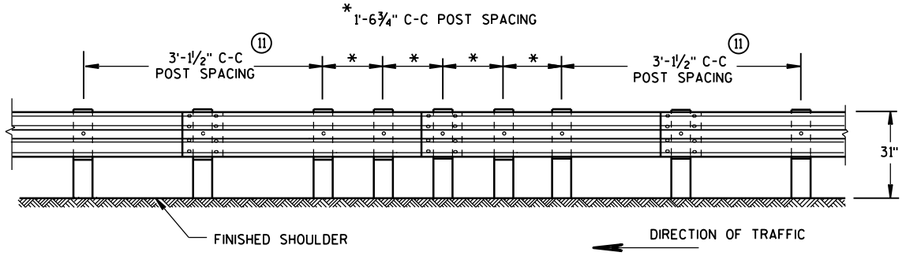
FRONT VIEW

POST SPACING STANDARD INSTALLATION



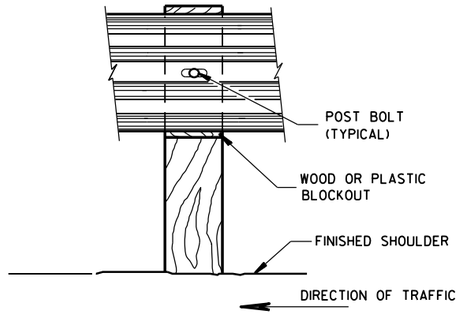
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

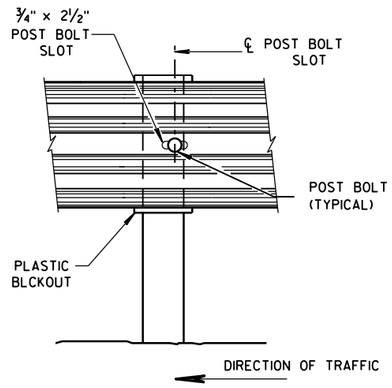


FRONT VIEW

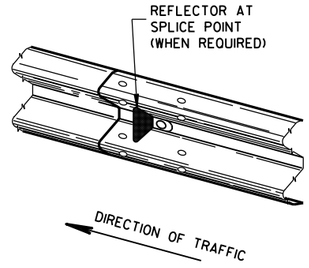
QUARTER POST SPACING (QS)

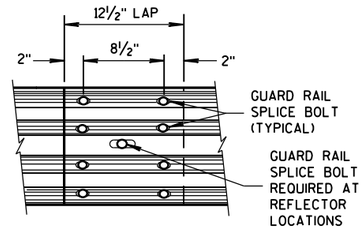


FRONT VIEW AT WOOD POST

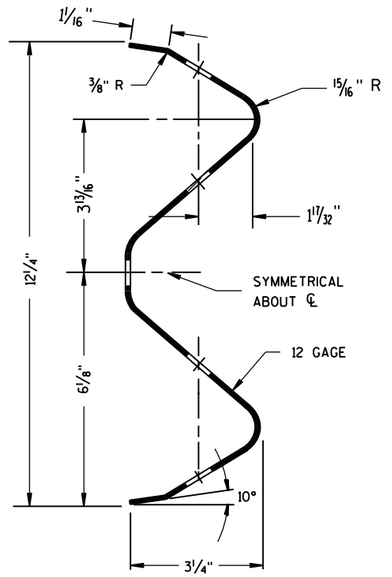


FRONT VIEW AT STEEL POST

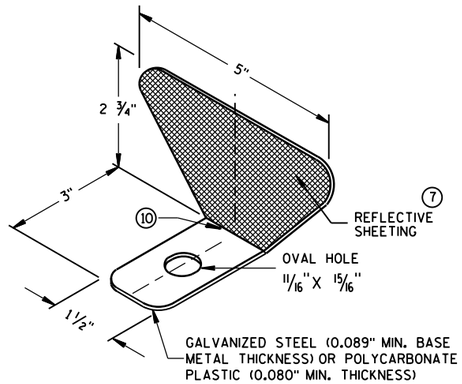




FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

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.

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED 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.

REFLECTOR SPACING ⑧

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
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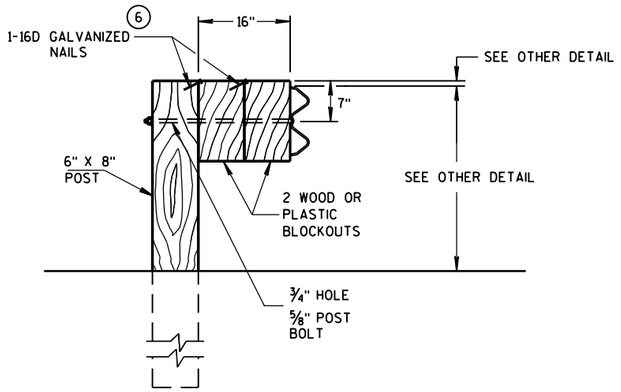
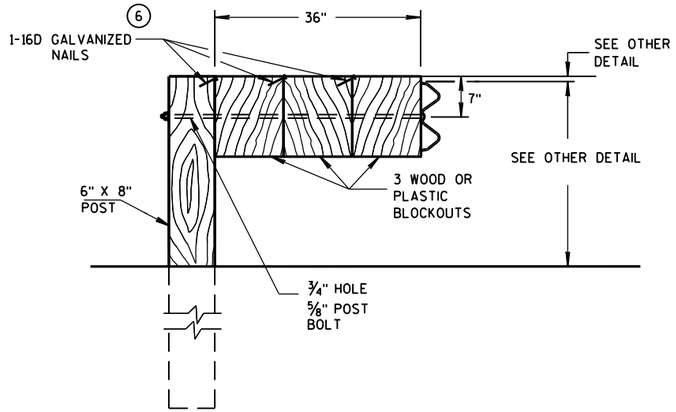


DETAIL FOR 16" BLOCKOUT DEPTH

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.

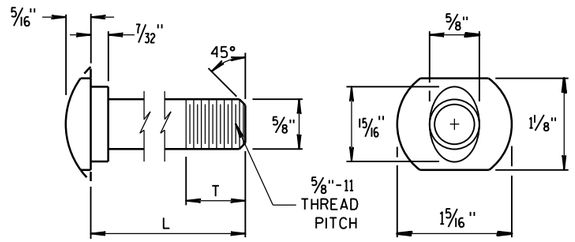


DETAIL FOR 36" BLOCKOUT DEPTH

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.

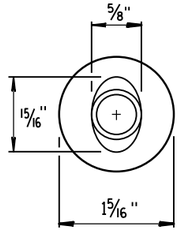
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

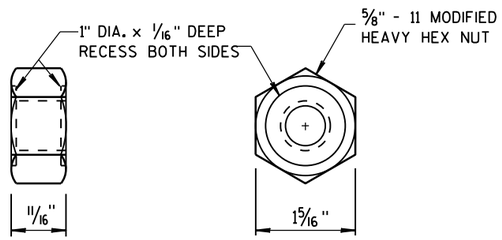


POST BOLT TABLE

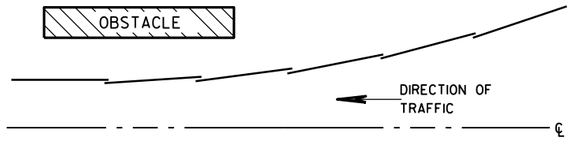
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

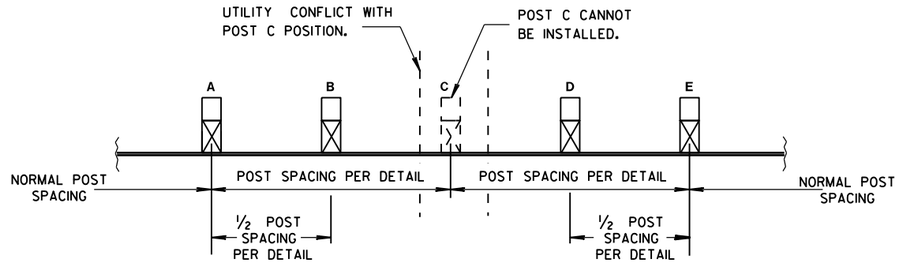


POST BOLT AND RECESS NUT

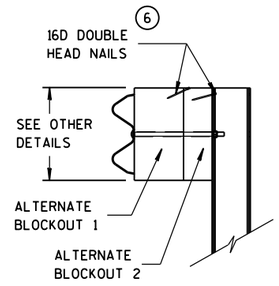


PLAN VIEW

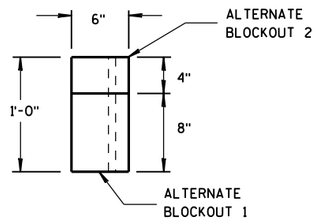
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 42-3c

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.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

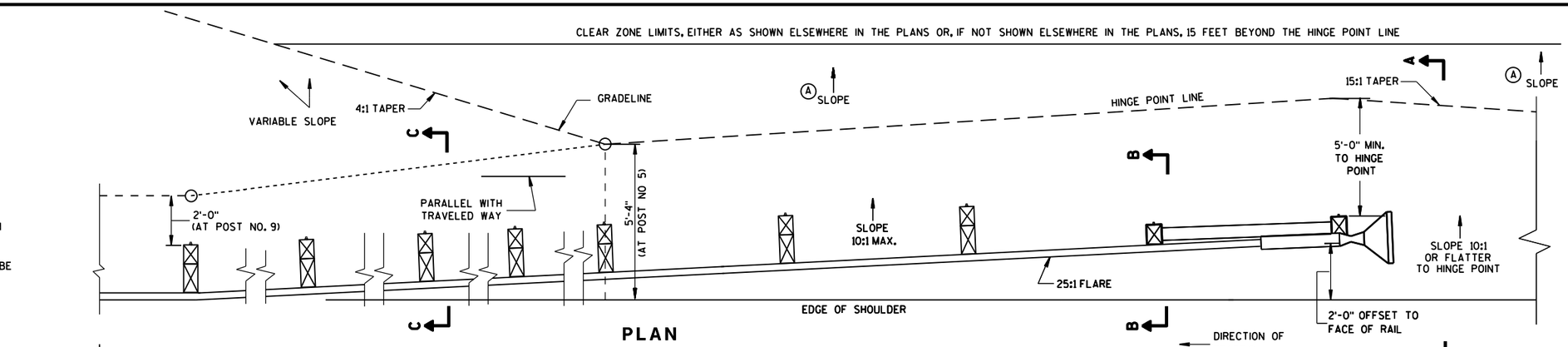
SEE SDD 14B42 FOR MORE INFORMATION.

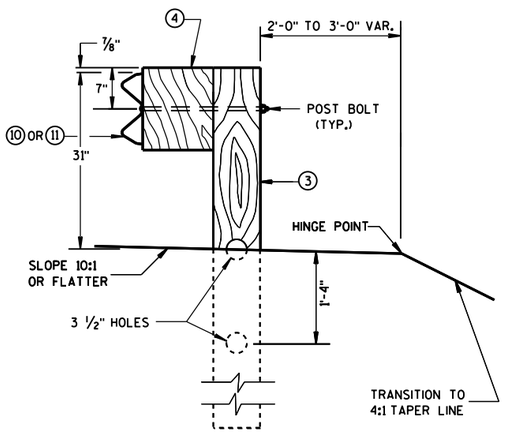
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

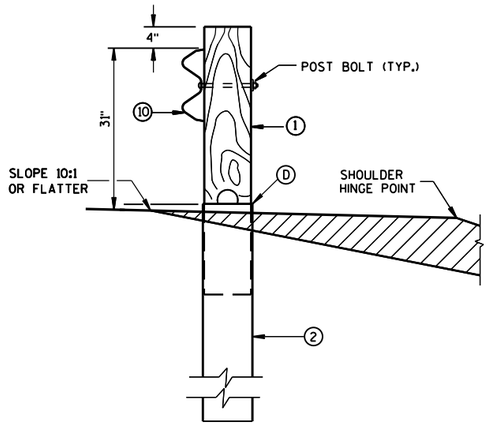
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.

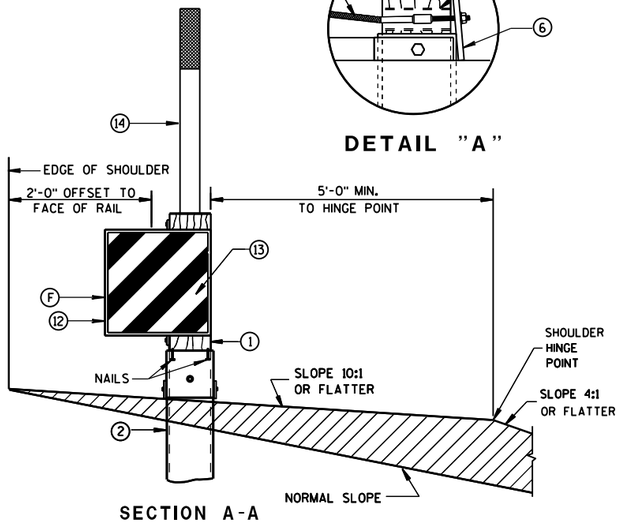




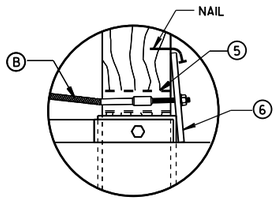
SECTION C-C
TYPICAL AT POST NOS. 3-9



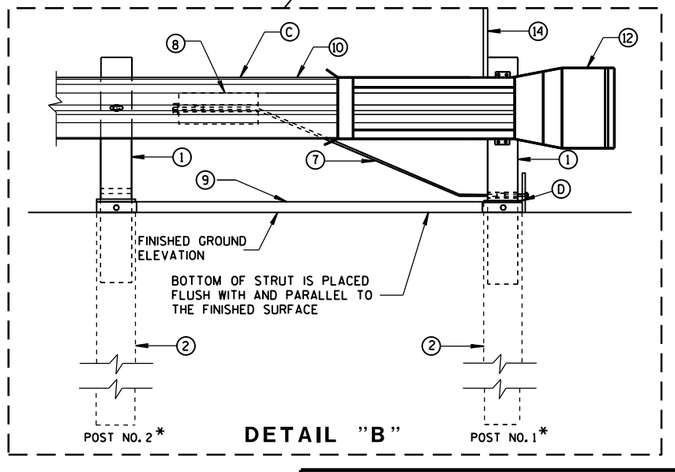
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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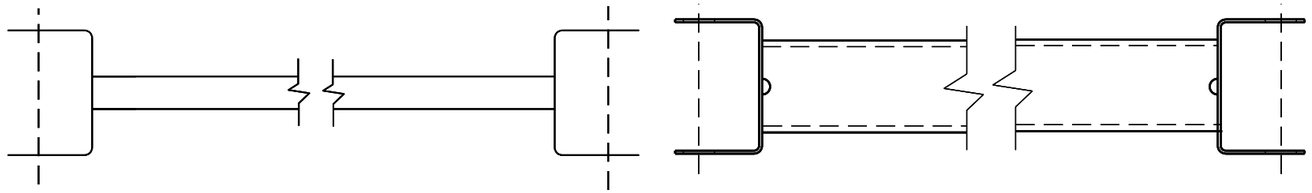
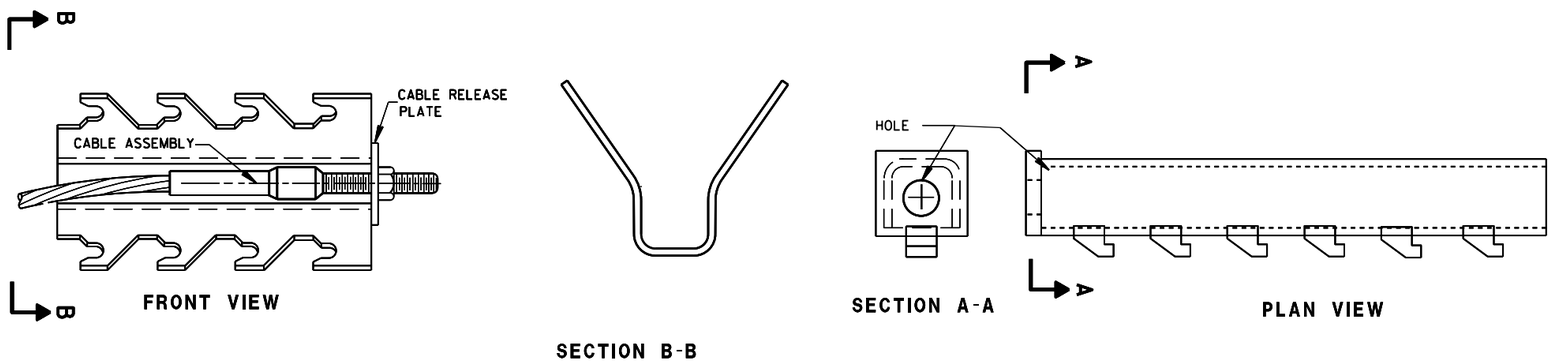


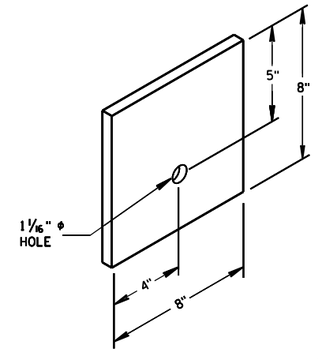
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(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)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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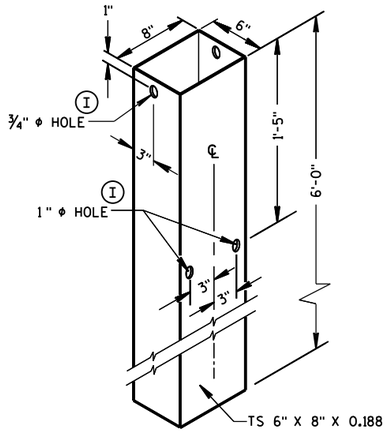
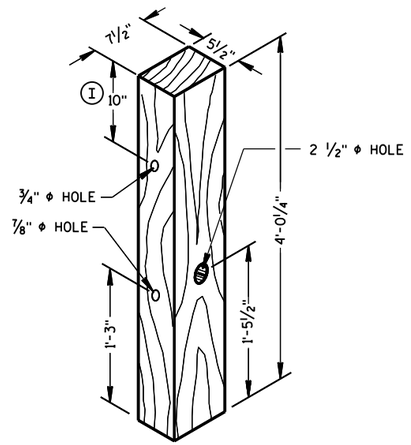
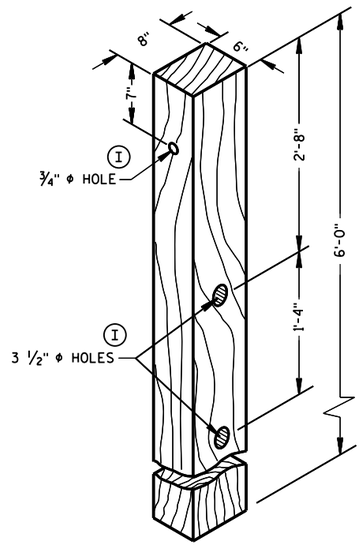


FOUNDATION TUBE (2)



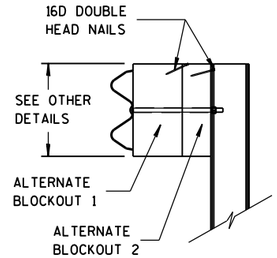
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

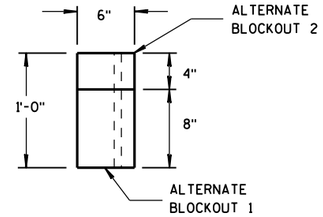


POSTS NUMBER 3-9

WOOD CRT POST (3)

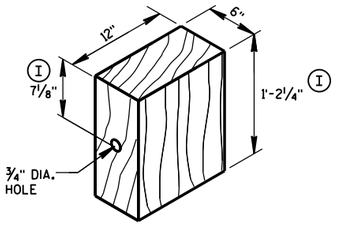


SIDE VIEW



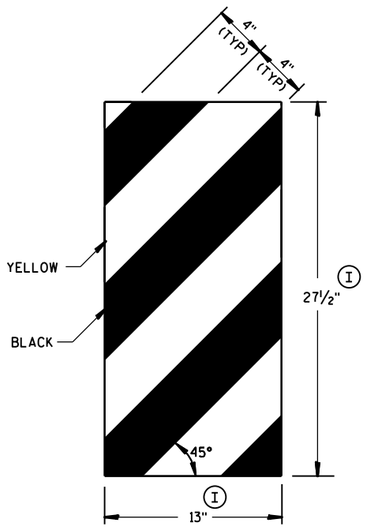
TOP VIEW

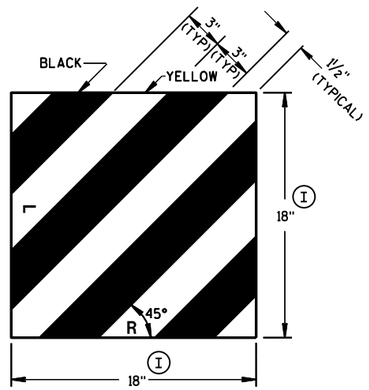
ALTERNATE WOOD BLOCKOUT DETAIL



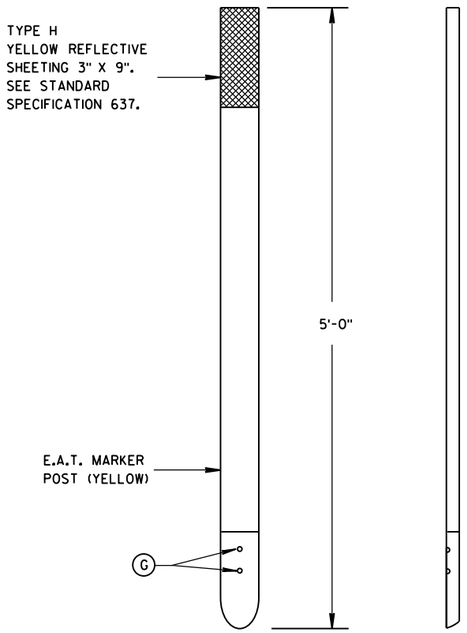
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





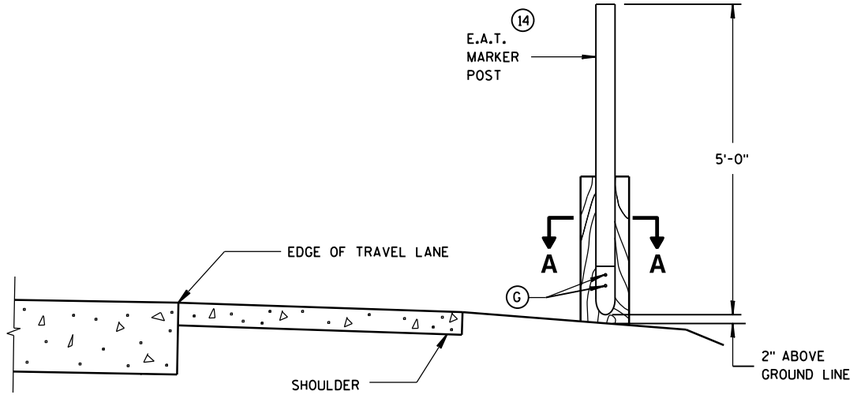
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

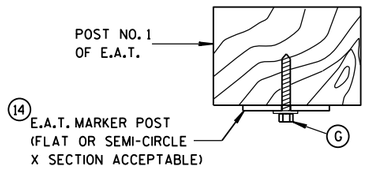
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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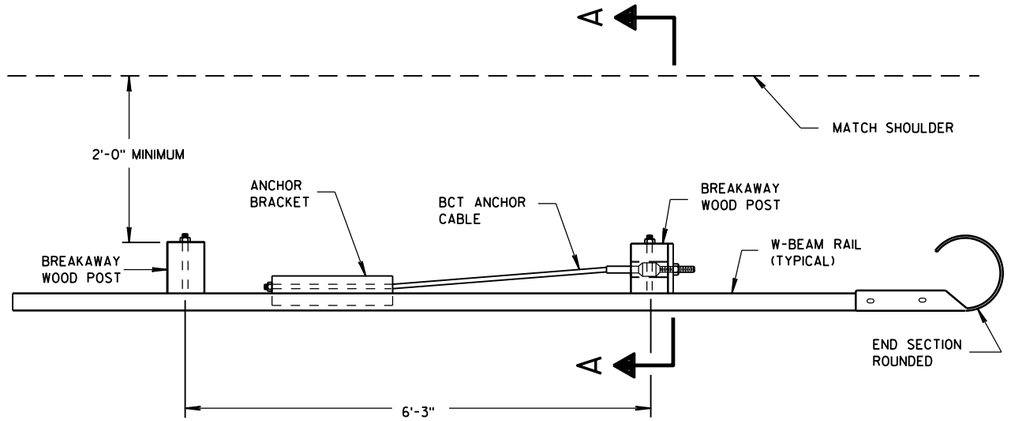
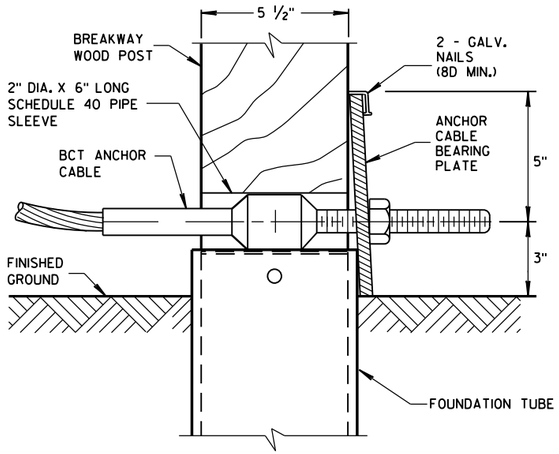
S.D.D. 14 B 44-2c



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.

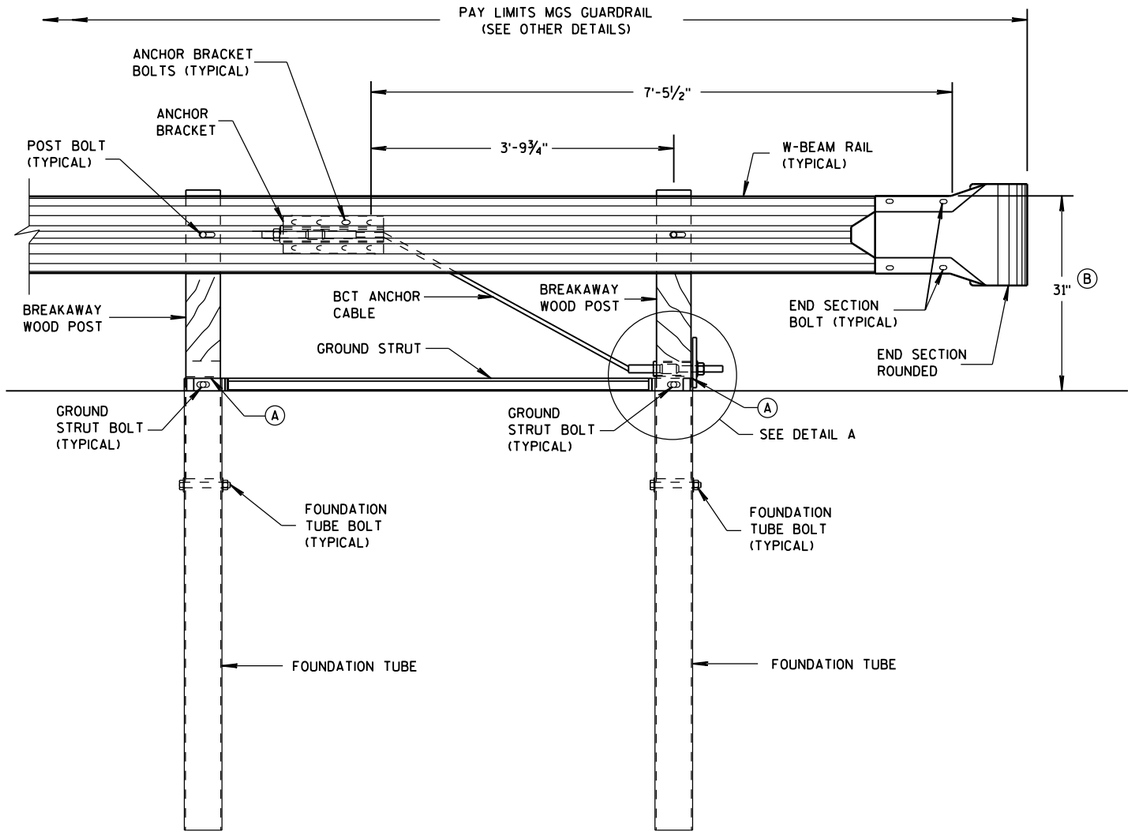
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

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.

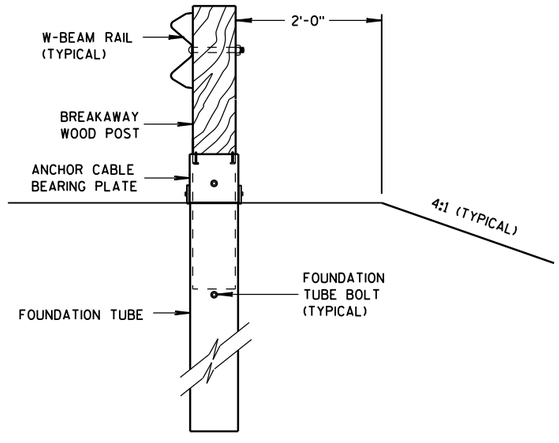
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

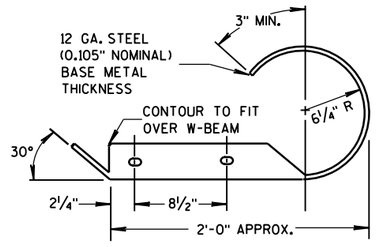


FRONT VIEW

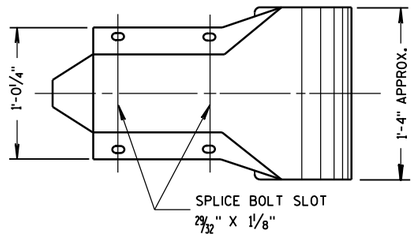
END RAIL DETAIL



SECTION A-A



PLAN VIEW



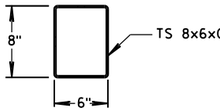
FRONT VIEW

W BEAM END SECTION ROUNDED

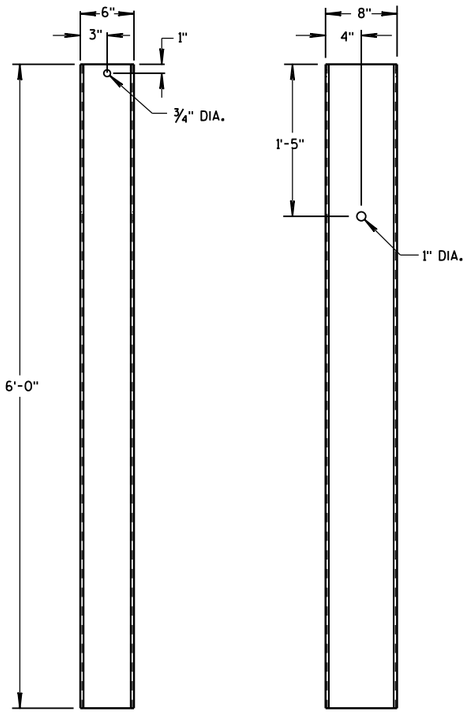
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a

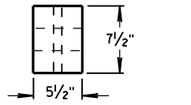


PLAN VIEW

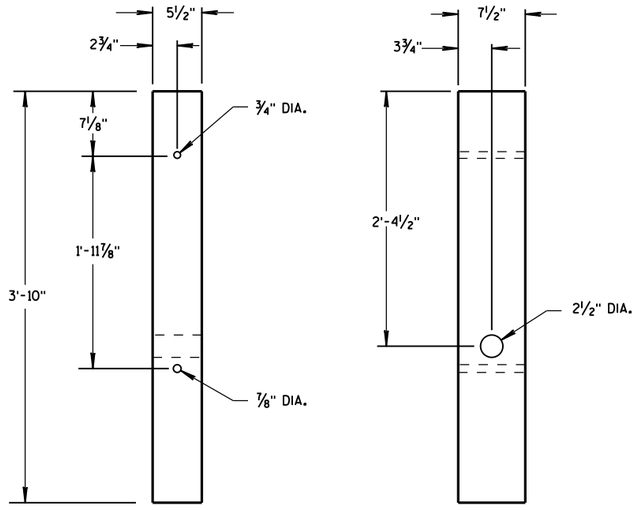


FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



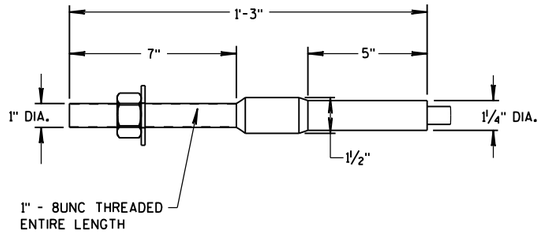
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

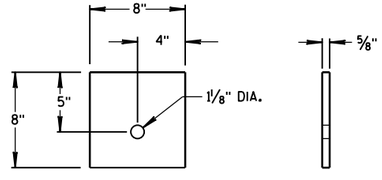
GENERAL NOTES

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



SIDE VIEW FRONT VIEW

ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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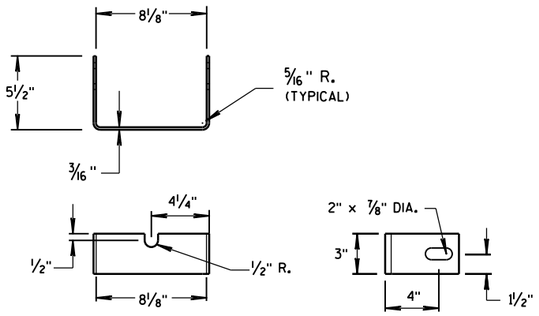
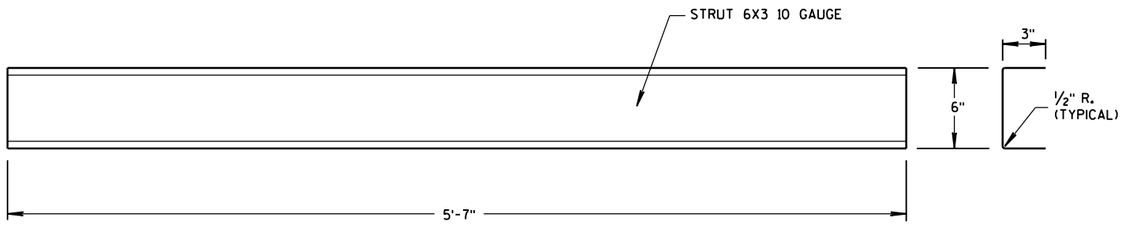
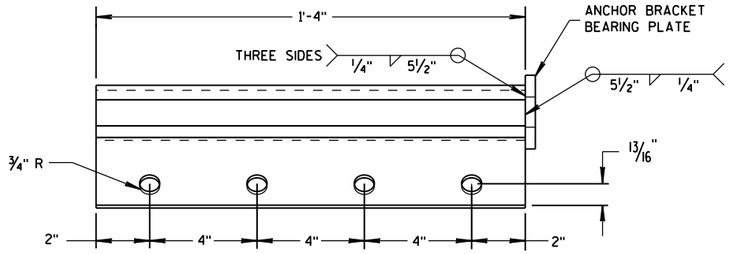
S.D.D. 14 B 47-2b

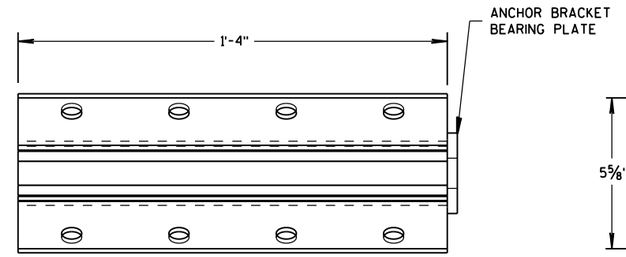


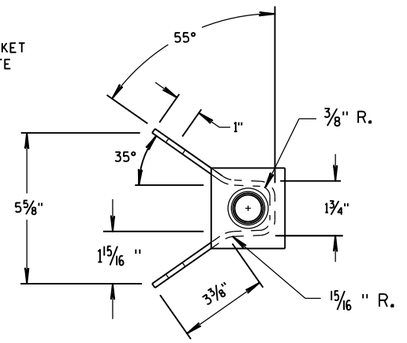
YOKE DETAIL



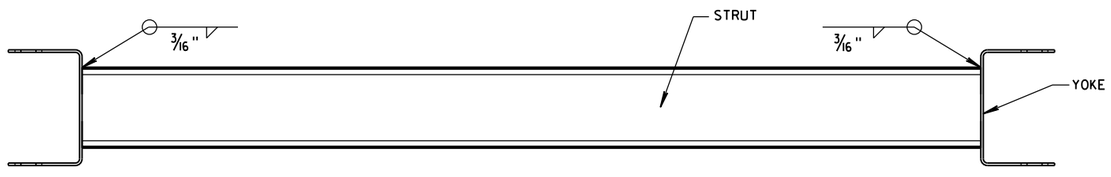
STRUT DETAIL



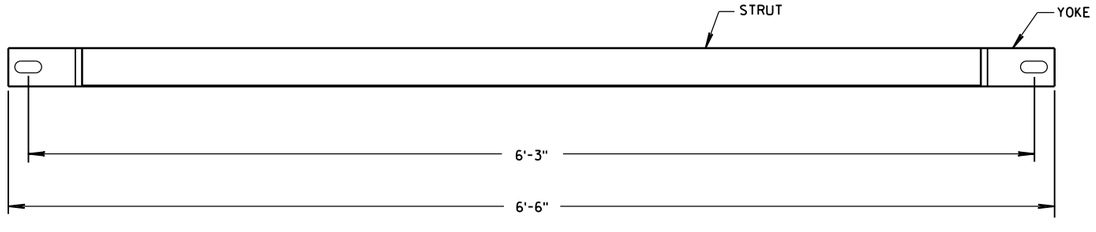




ANCHOR BRACKET

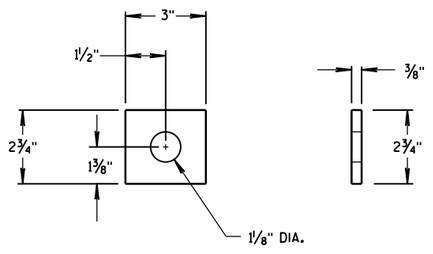


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

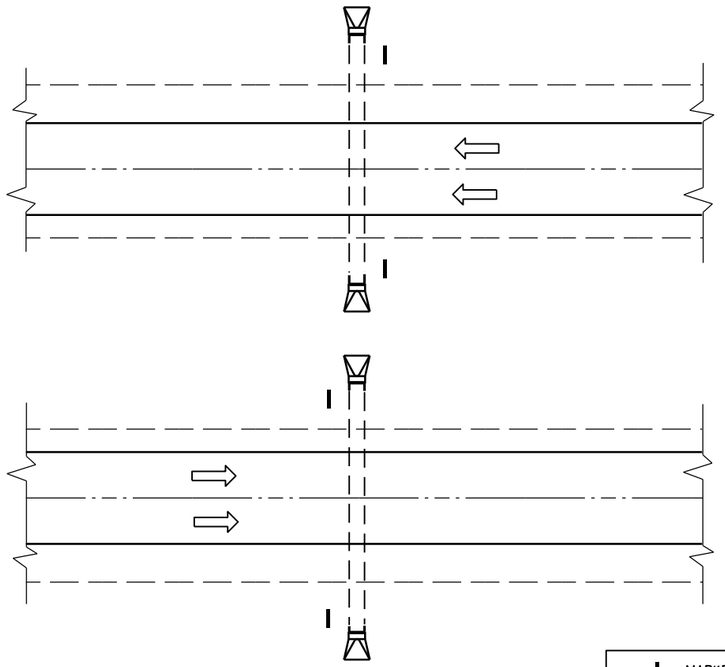
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

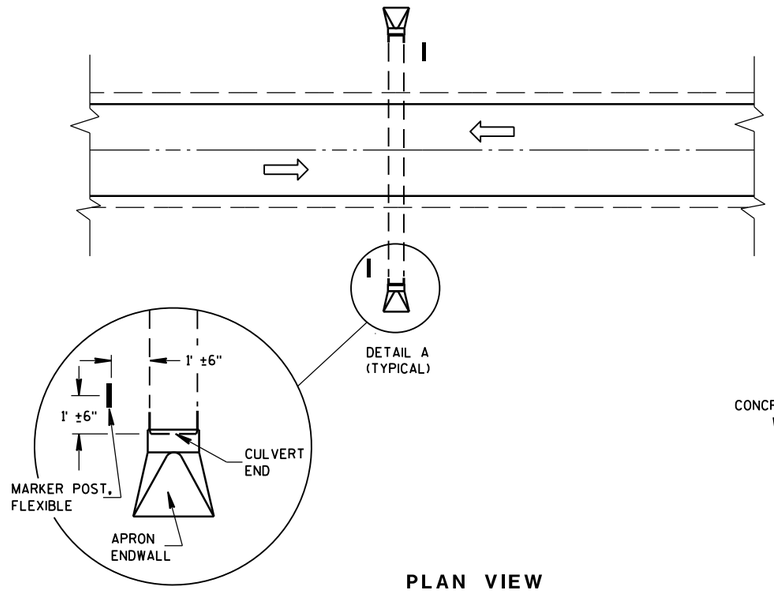
6

S.D.D. 14 B 47-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

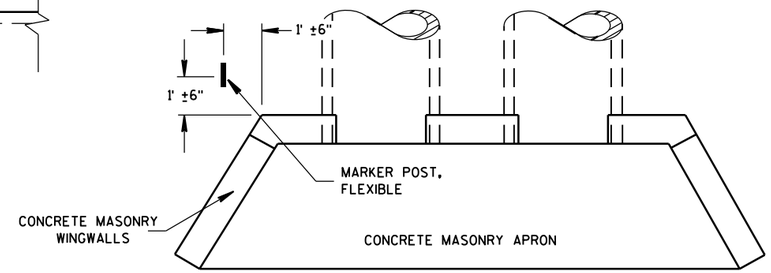
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

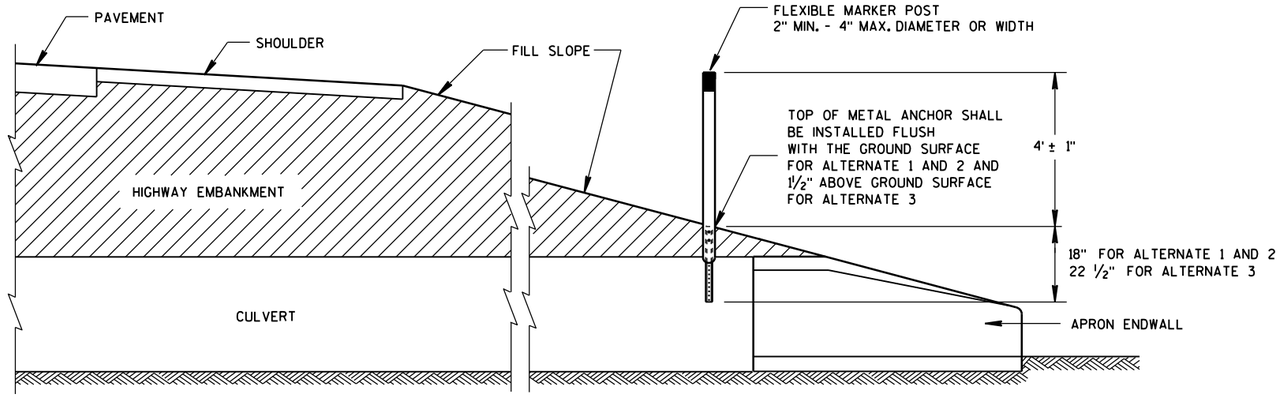
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

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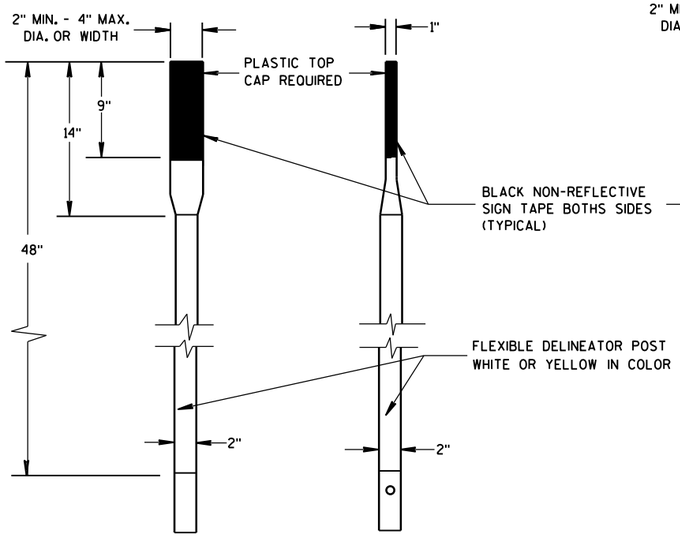
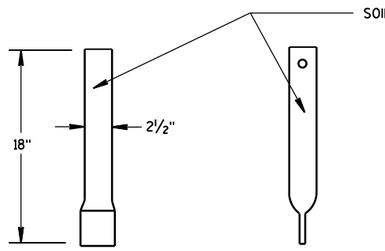
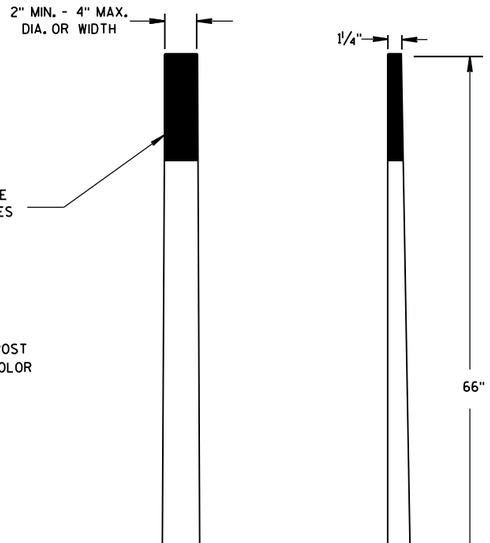
S.D.D. 15 A 3-2a





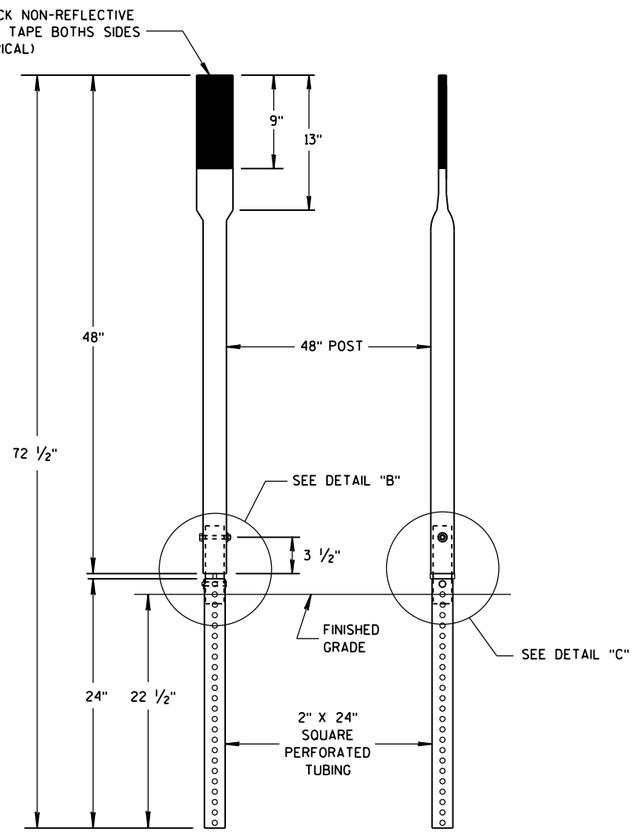
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

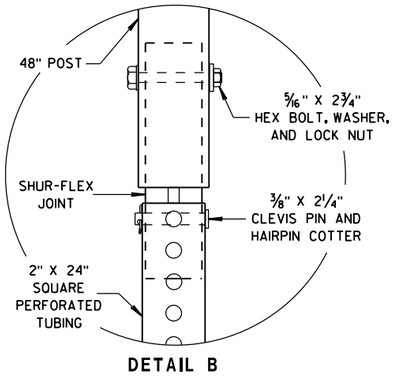
ALTERNATE 2



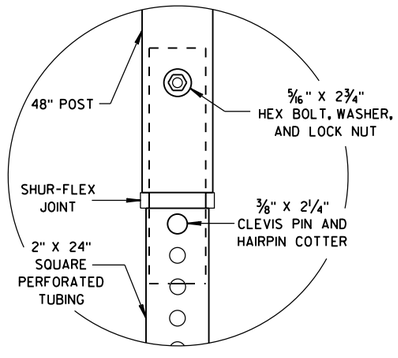
FRONT VIEW SIDE VIEW

ALTERNATE 3

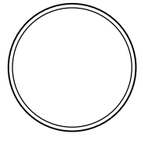
FLEXIBLE MARKER POSTS



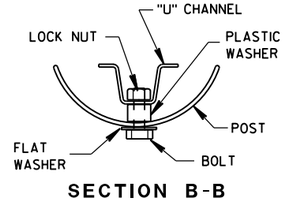
DETAIL B



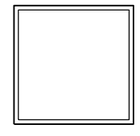
DETAIL C



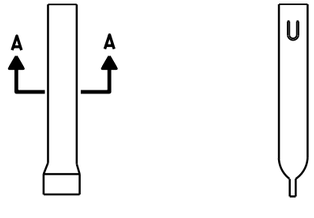
SECTION A-A



SECTION B-B

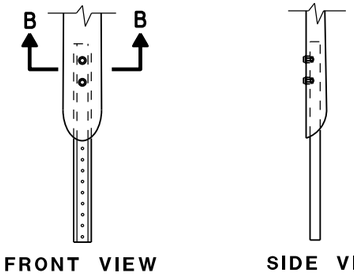


SECTION C-C



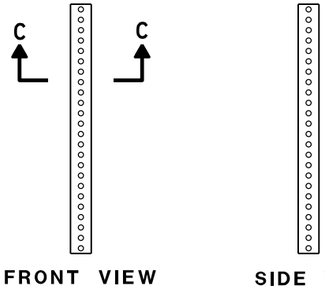
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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

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.

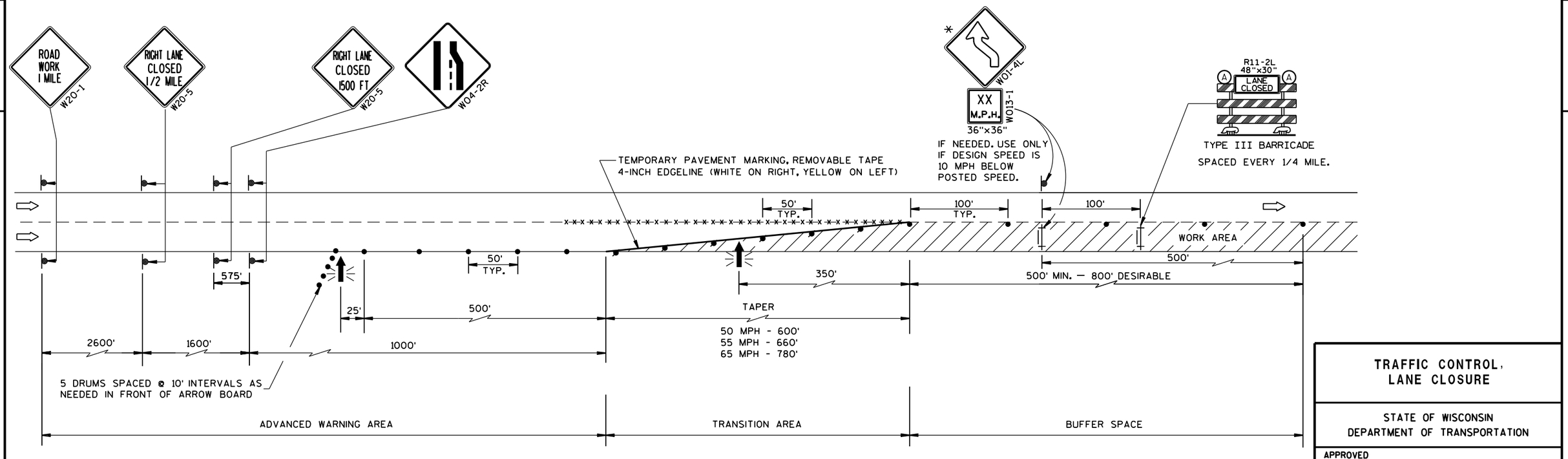
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 D 12-5a

LEGEND

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

GENERAL NOTES

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

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

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

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

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

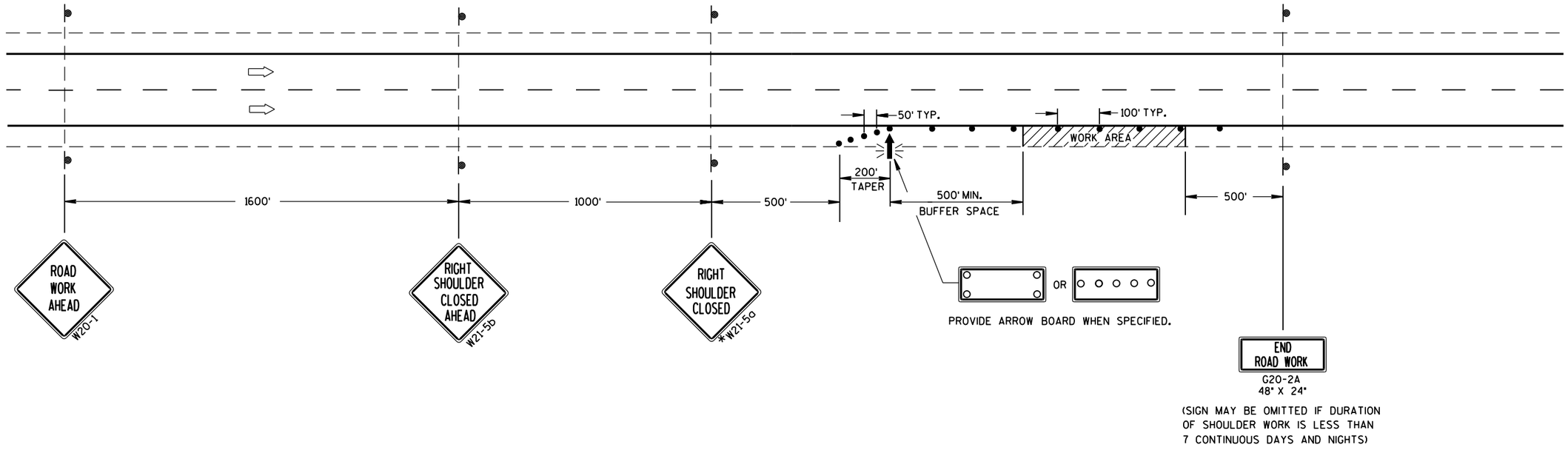
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

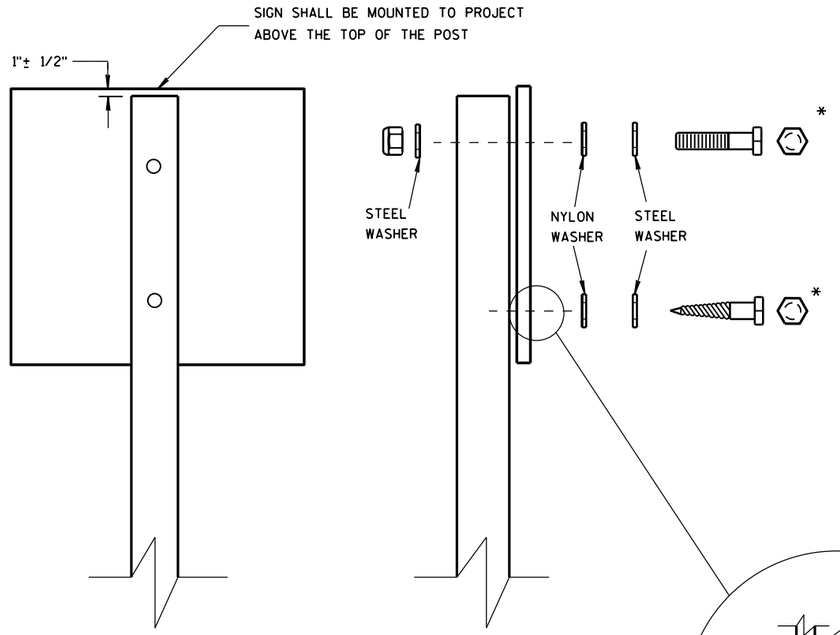
8/2013 — DATE

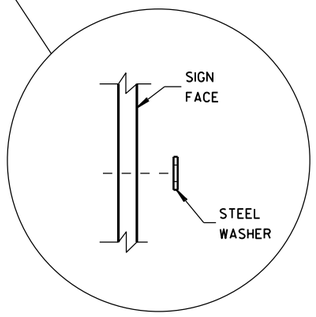
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 27-2





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.

6

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S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Feb. 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

SIGN

EARTHWORK DATA TABLE

WISCONSIN ST. (FOR INFORMATION ONLY)

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
313+00	0	0	0	0	0	0	0	0	0
314+00	0	0	5	0	0	10	0	12	-12
315+00	6	0	3	11	0	15	11	31	-20
316+00	4	0	1	18	0	8	29	40	-11
317+00	0	0	2	8	0	5	37	47	-9
318+00	0	0	0	1	0	3	38	51	-13
			Column totals	38	0	41			

EARTHWORK DATA TABLE

LAWSON SCHOOL RD. (FOR INFORMATION ONLY)

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
396+00	0	0	0	0	0	0	0	0	0
397+00	0	0	3	0	0	5	0	6	-6
398+00	4	0	4	8	0	13	8	23	-15
399+00	4	0	6	15	0	18	23	46	-23
400+00	9	0	18	24	0	44	47	101	-54
401+00	0	0	0	16	0	33	63	142	-79
			Column totals	63	0	114			

EARTHWORK DATA TABLE

CTH O (FOR INFORMATION ONLY)

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
484+00	0	0	0	0	0	0	0	0	0
485+00	0	0	12	0	0	22	0	27	-27
486+00	4	0	2	8	0	25	8	59	-51
487+00	9	0	2	24	0	8	32	69	-37
488+00	6	0	14	27	0	30	59	106	-48
489+00	0	0	0	11	0	26	70	139	-69
			Column totals	70	0	111			

9

9

EARTHWORK DATA TABLE

BORG RD. (FOR INFORMATION ONLY)

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
562+00	0	0	0	0	0	0	0	0	0
563+00	7	0	0	13	0	0	13	0	13
564+00	6	0	1	24	0	1	37	2	36
565+00	0	0	0	11	0	1	49	3	46
			Column totals	49	0	2			

EARTHWORK DATA TABLE (FOR INFORMATION ONLY)

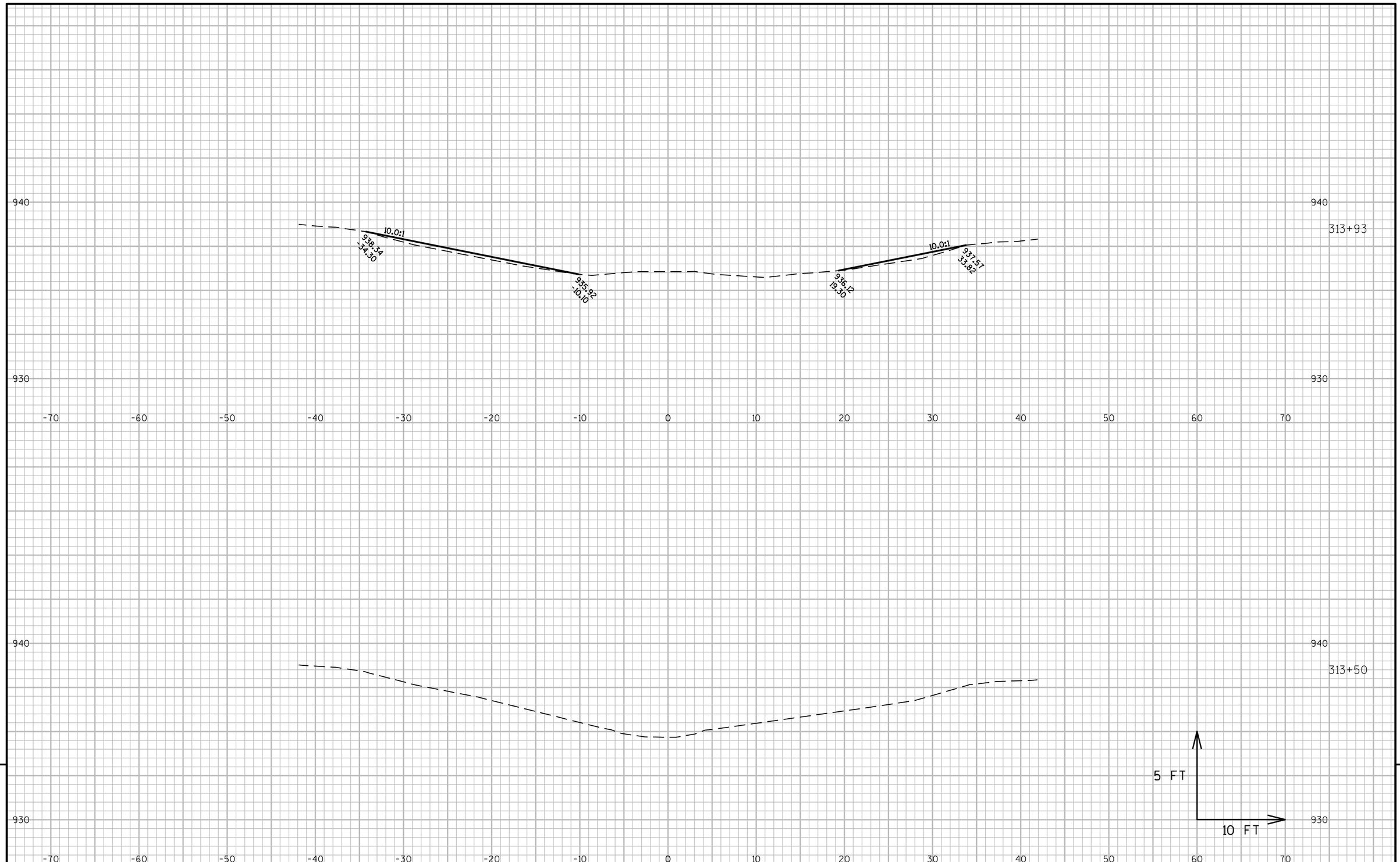
STH 67

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
833+00	0	0	0	0	0	0	0	0	0
834+00	0	0	0	0	0	0	0	0	0
835+00	7	0	0	12	0	0	12	0	12
836+00	6	0	1	24	0	2	36	2	34
837+00	2	0	0	15	0	2	51	5	46
838+00	0	0	0	3	0	0	55	5	50
			Column totals	55	0	4			

EARTHWORK DATA TABLE

STH 83 (FOR INFORMATION ONLY)

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	Mass Ordinate
95+00	0	0	4	0	0	0	0	0	0
96+00	0	0	9	0	0	25	0	31	-31
97+00	0	0	10	0	0	36	0	76	-76
98+00	0	0	7	0	0	31	0	115	-115
99+00	0	0	6	0	0	23	0	144	-144
			Column totals	0	0	115			



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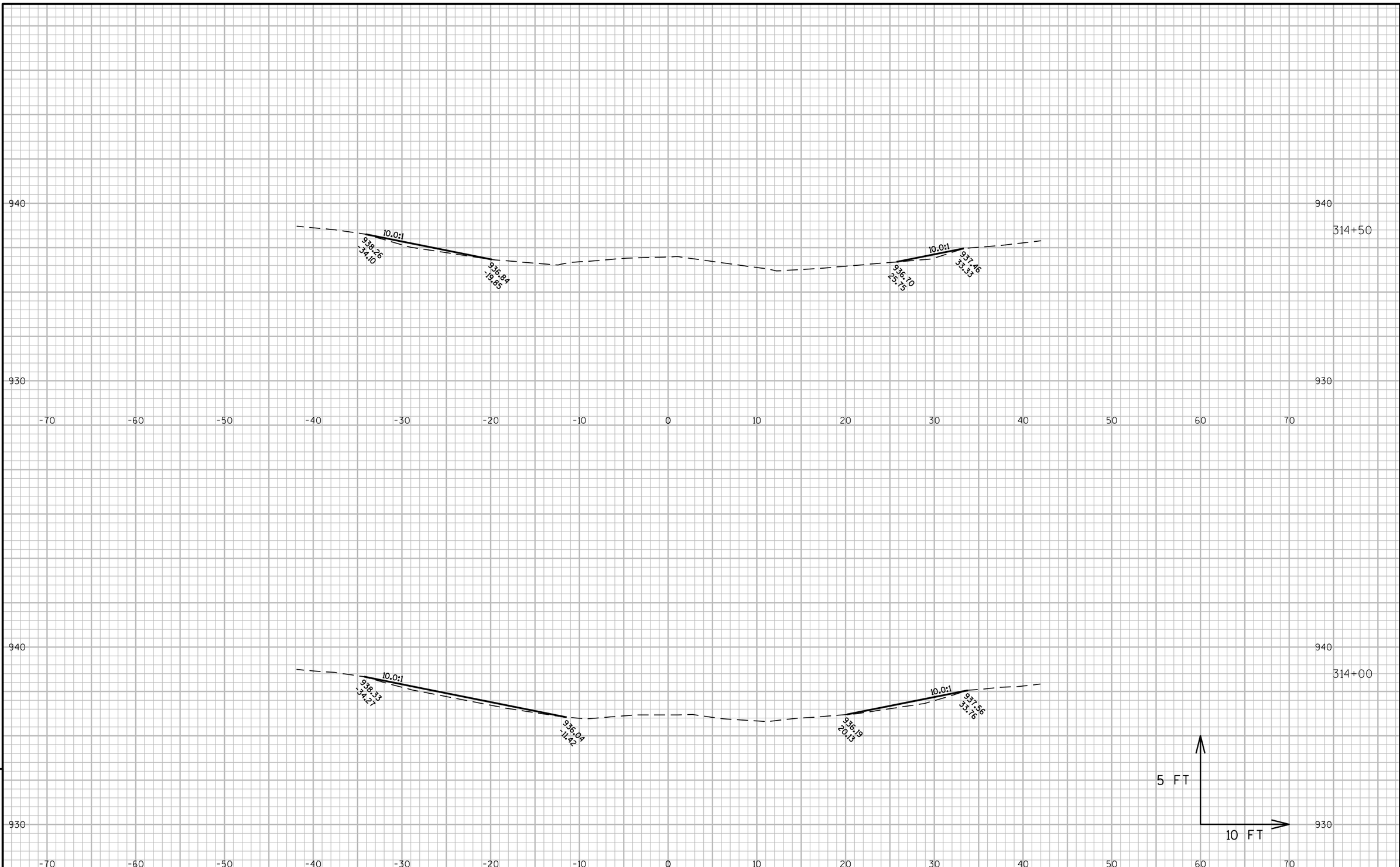
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 57	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (43)

PLOT DATE : 5/1/2015 7:29 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



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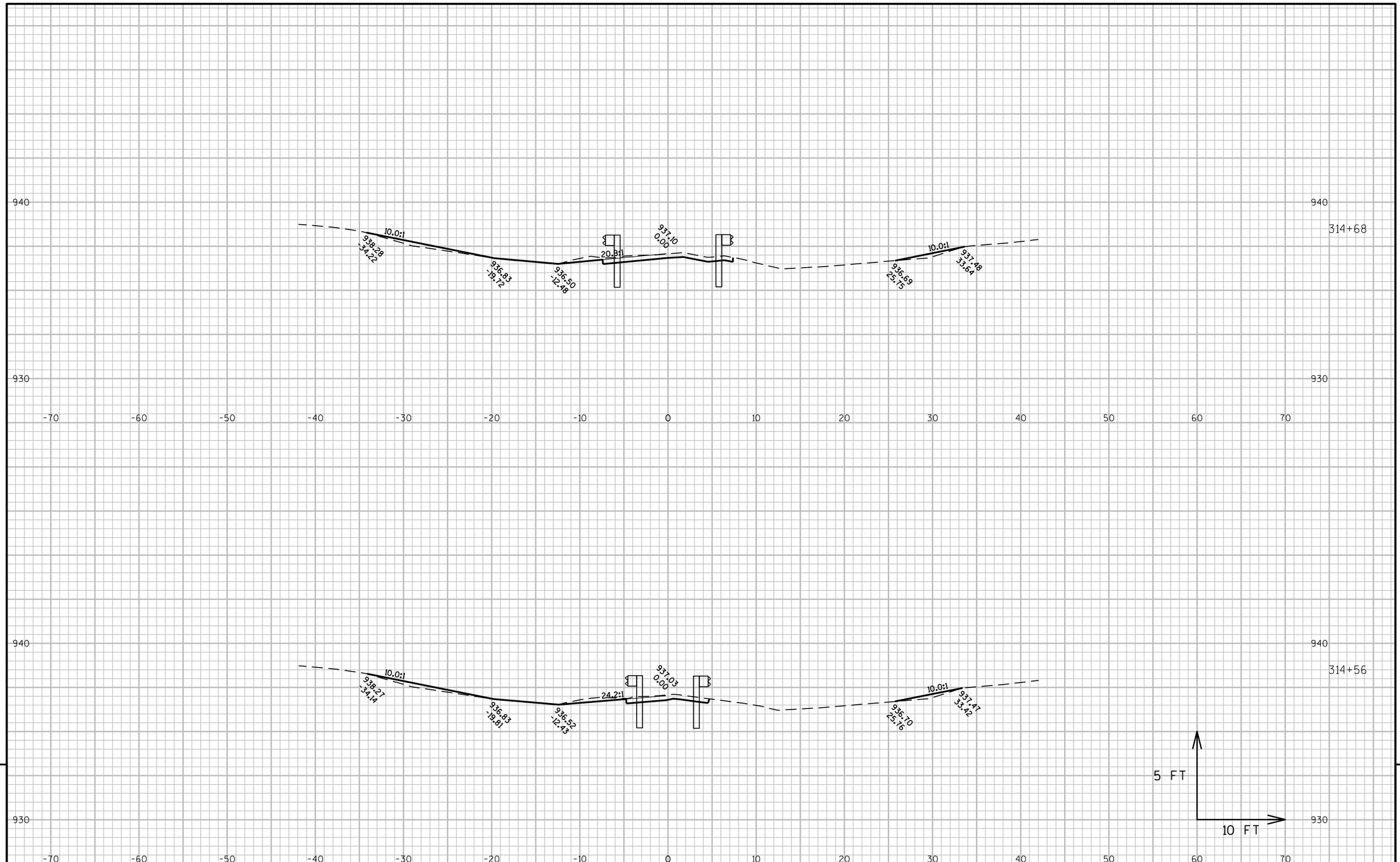
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 58	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (44)

PLOT DATE : 5/1/2015 7:29 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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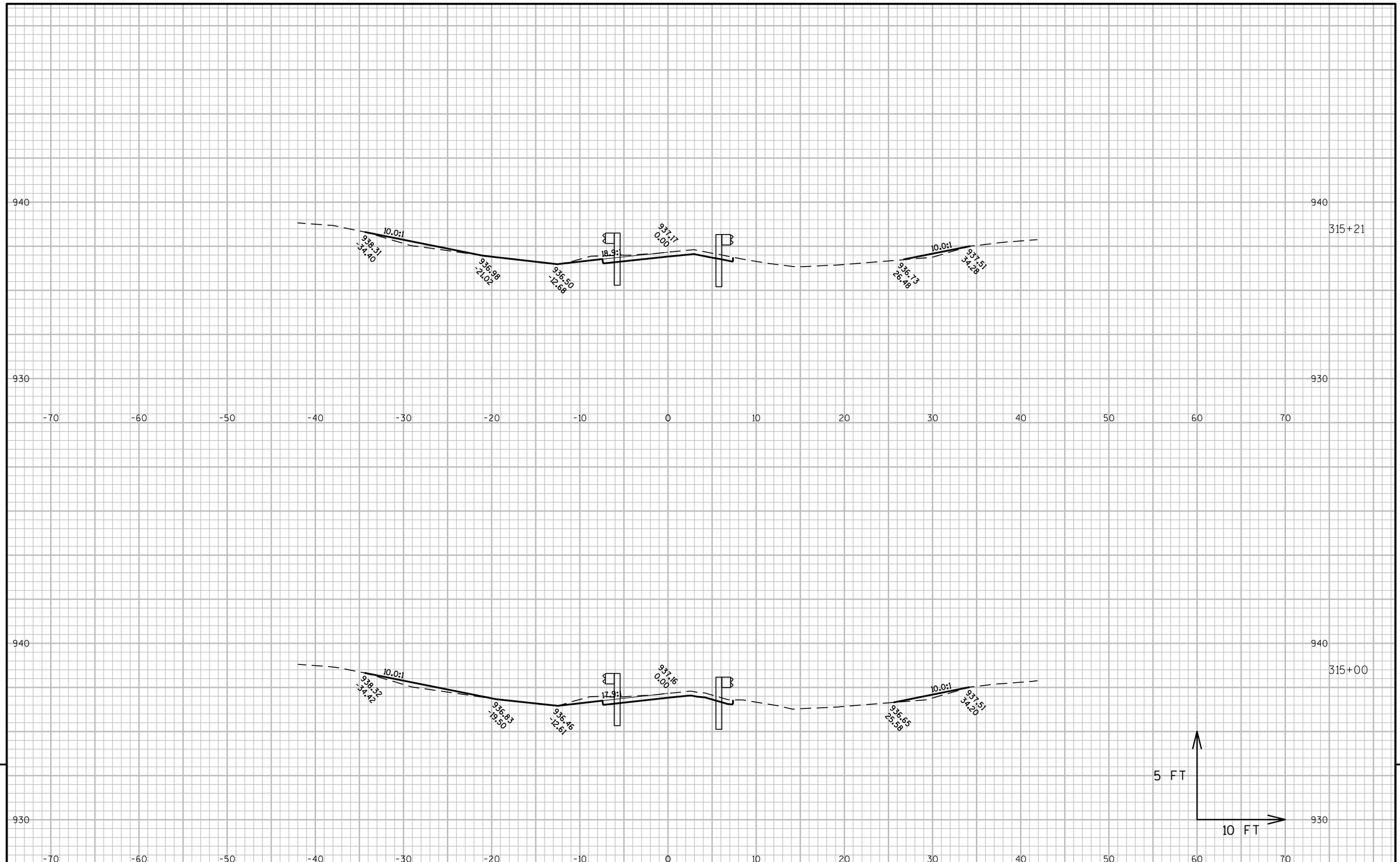
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 59	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (45)

PLOT DATE : 5/1/2015 7:29 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



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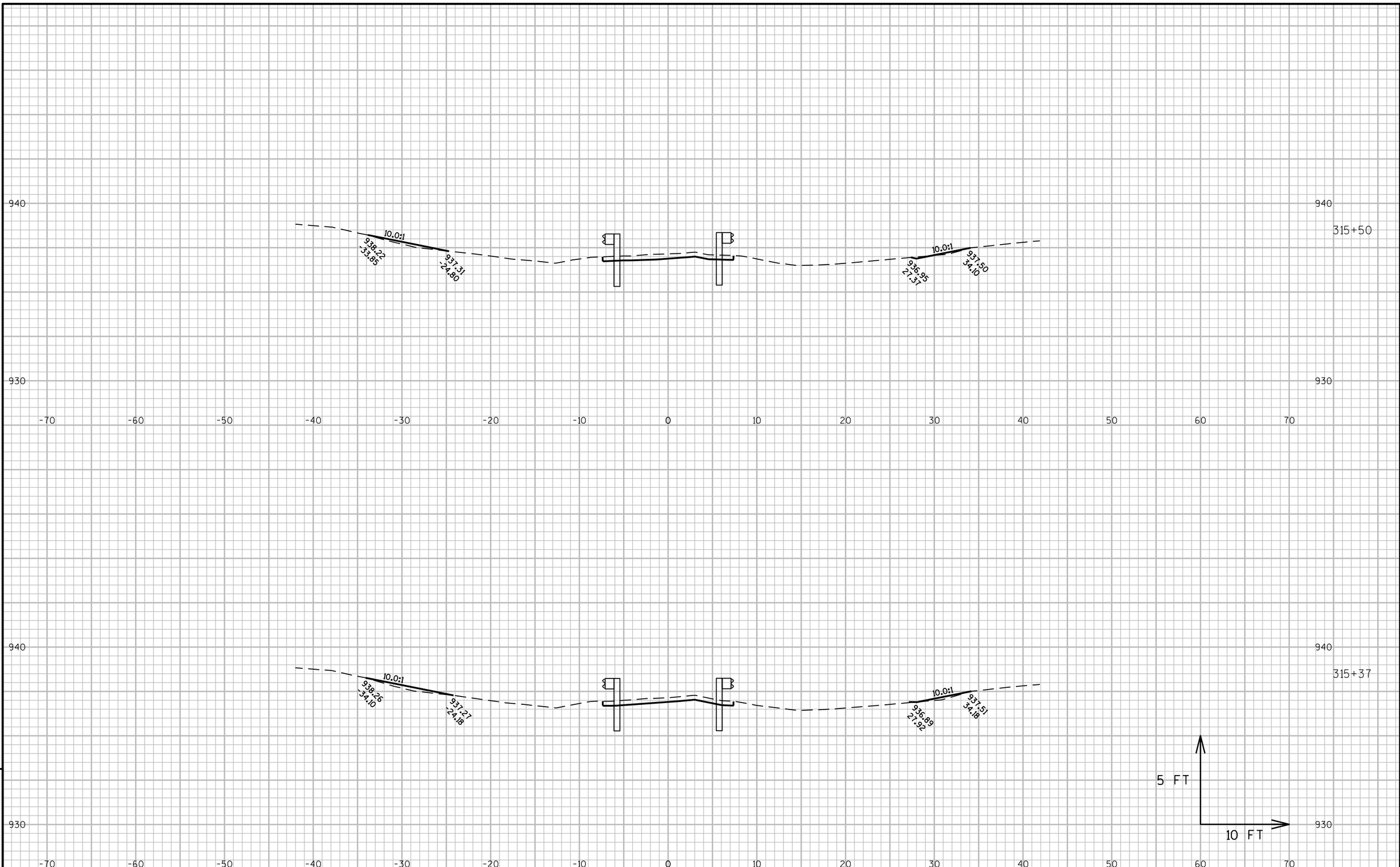
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 60	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (46)

PLOT DATE : 5/1/2015 7:30 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



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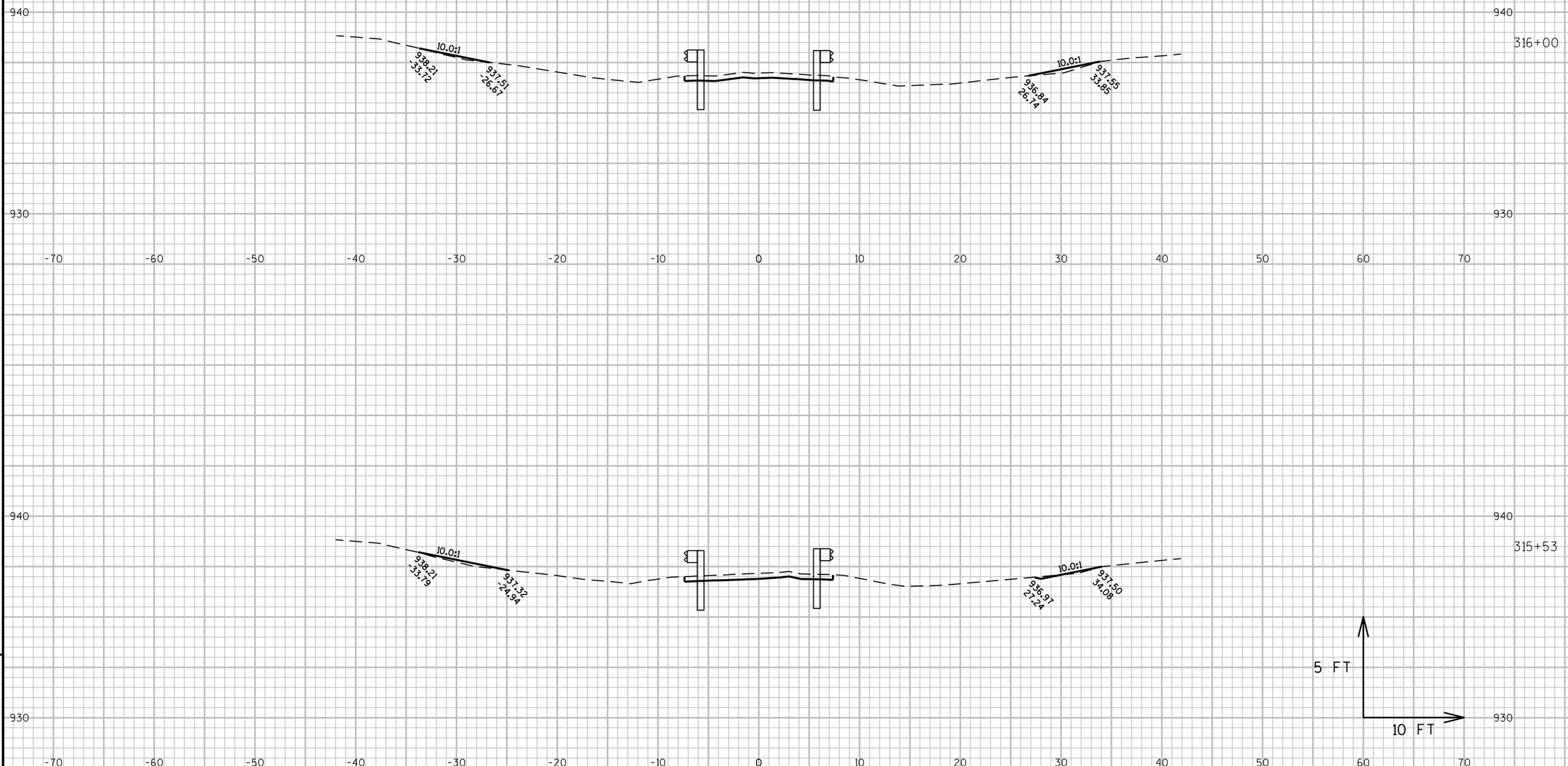
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 61	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (47)

PLOT DATE : 5/1/2015 7:30 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

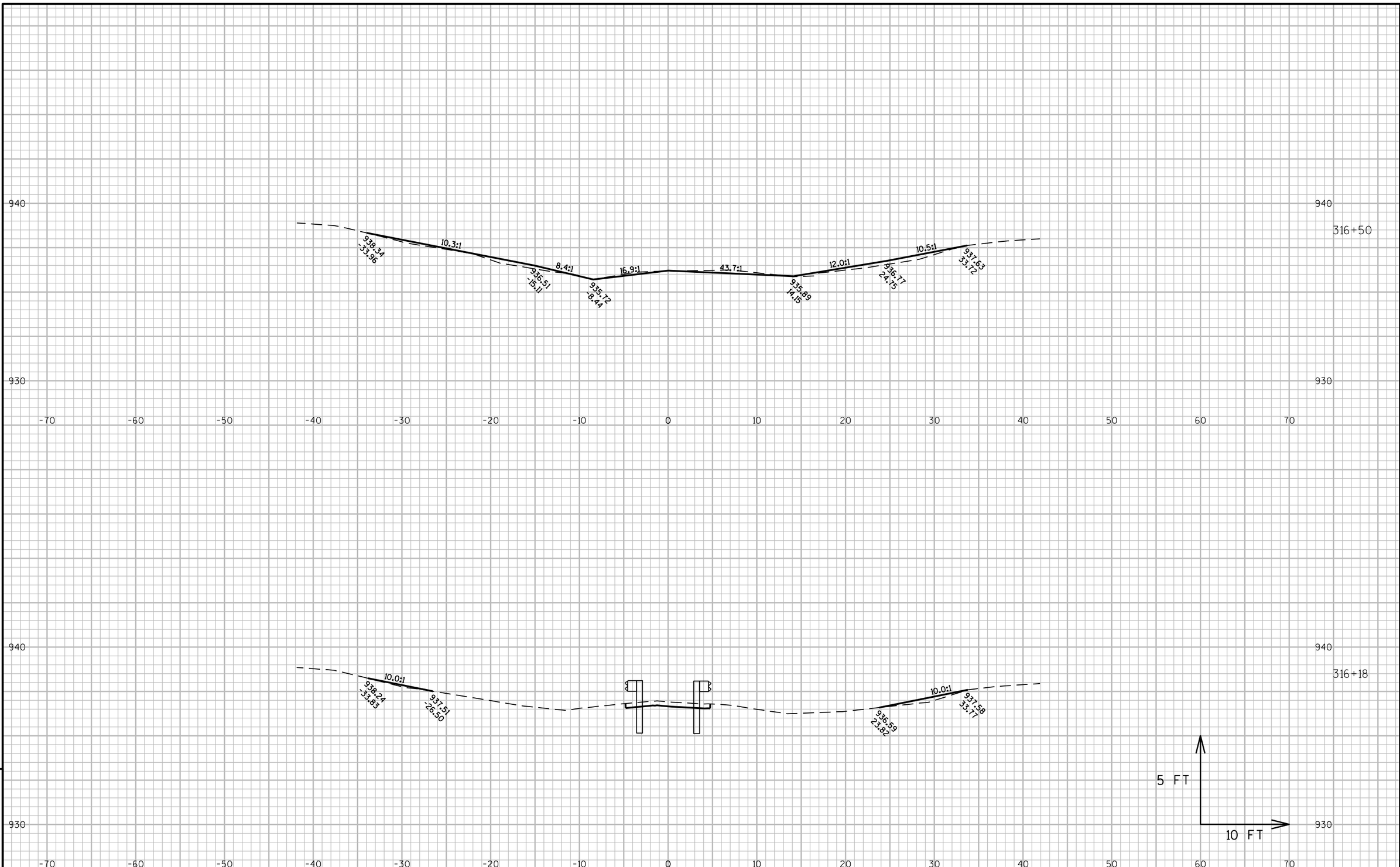


PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 62	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (48)

PLOT DATE : 5/1/2015 7:30 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 63	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (49)

PLOT DATE : 5/1/2015 7:31 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

940

930

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

940

317+00

930

940

316+82

938.46
-34.07

10.0:1

936.39
-13.34

7.5:1

935.22
-4.48

77.4:1

19.6:1

935.40
4.69

14.6:1

936.72
23.94

10.2:1

937.67
33.67

930

5 FT

10 FT

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9

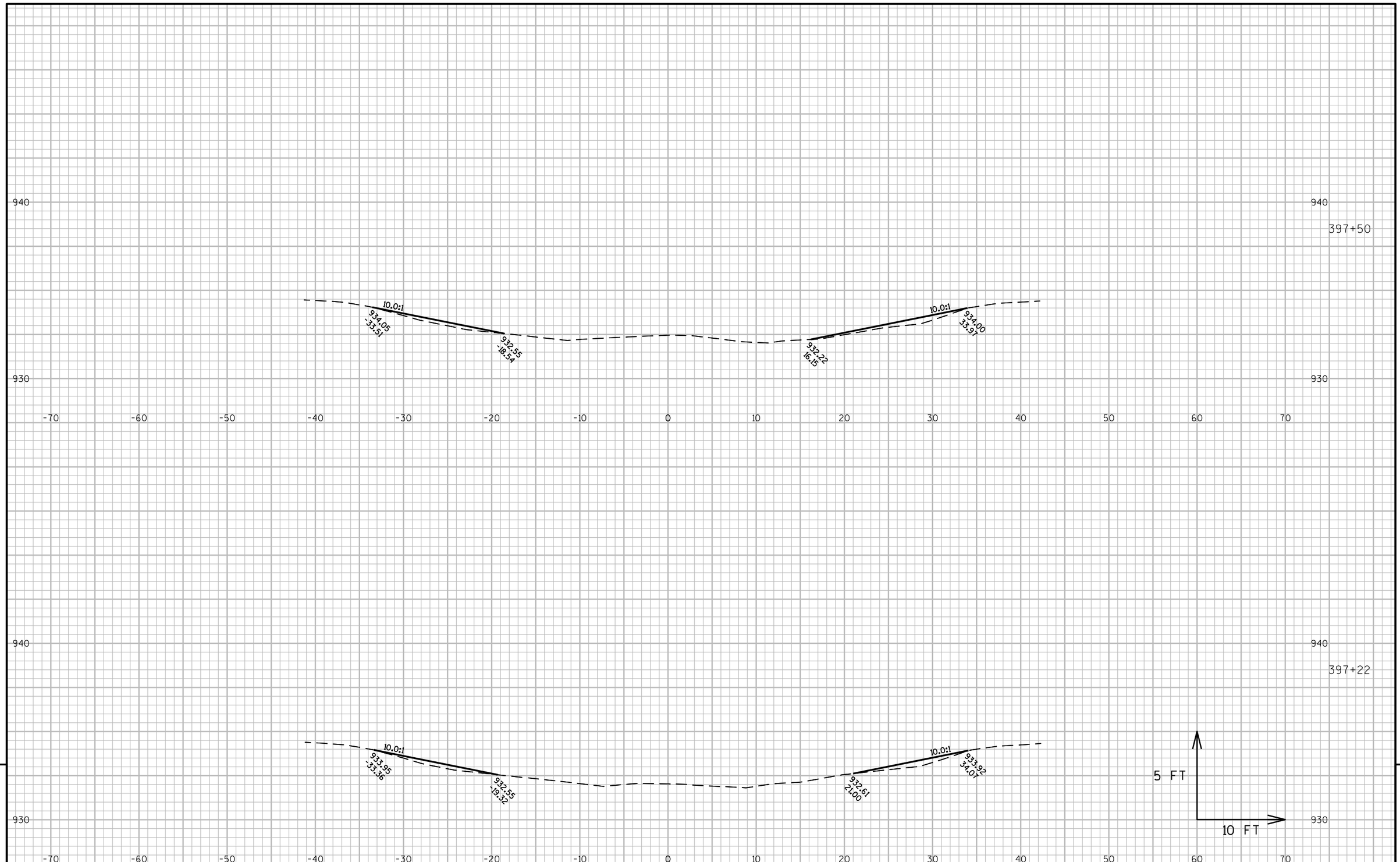
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: WISCONSIN STREET OVER IH-43 (B-64-132)	SHEET 64	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043012B.DWG
LAYOUT NAME - 090201-XS_WAL 043012B - SECTION SHEET - (50)

PLOT DATE : 5/1/2015 7:31 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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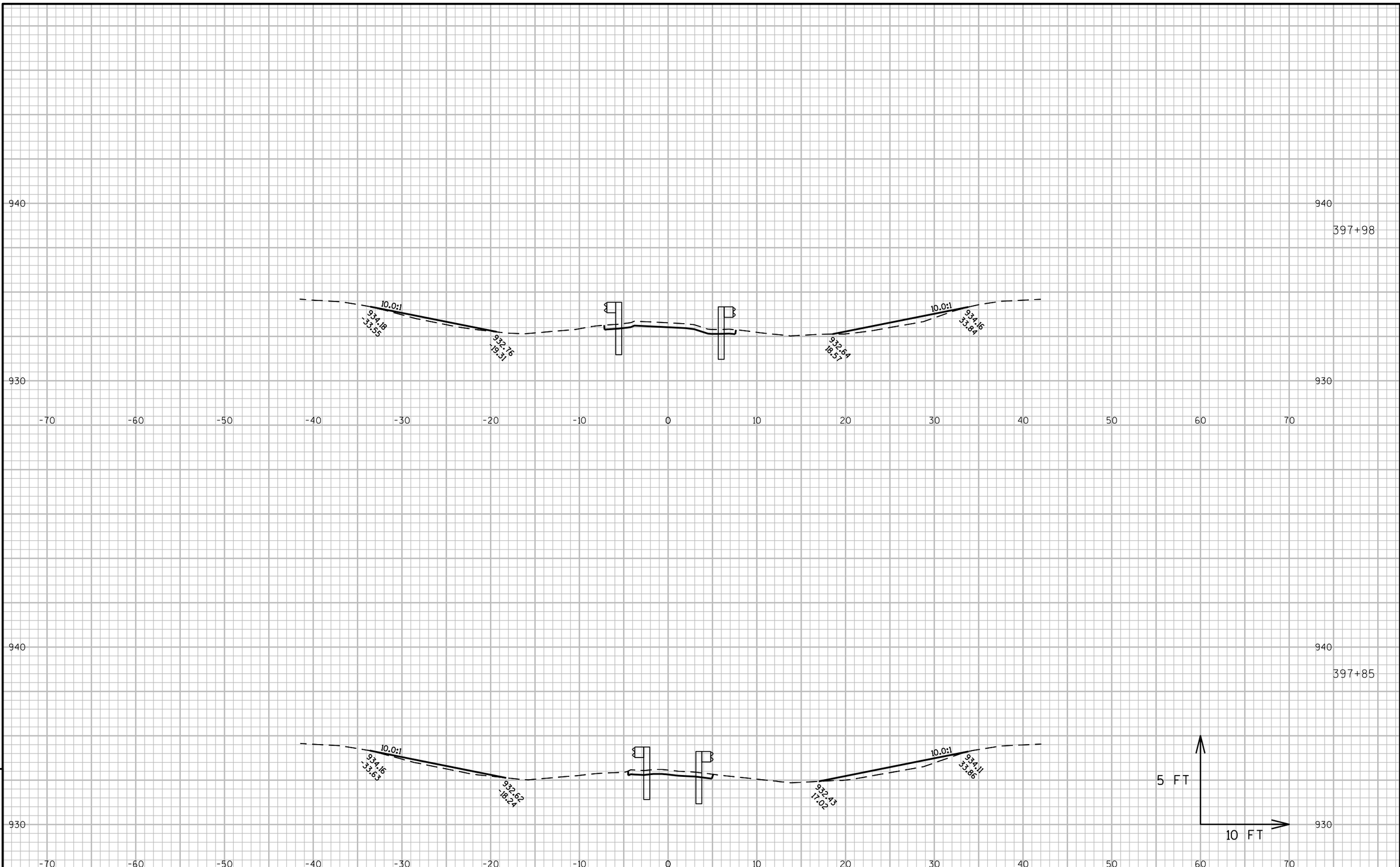
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 65	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (41)
PLOT DATE : 5/1/2015 7:32 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



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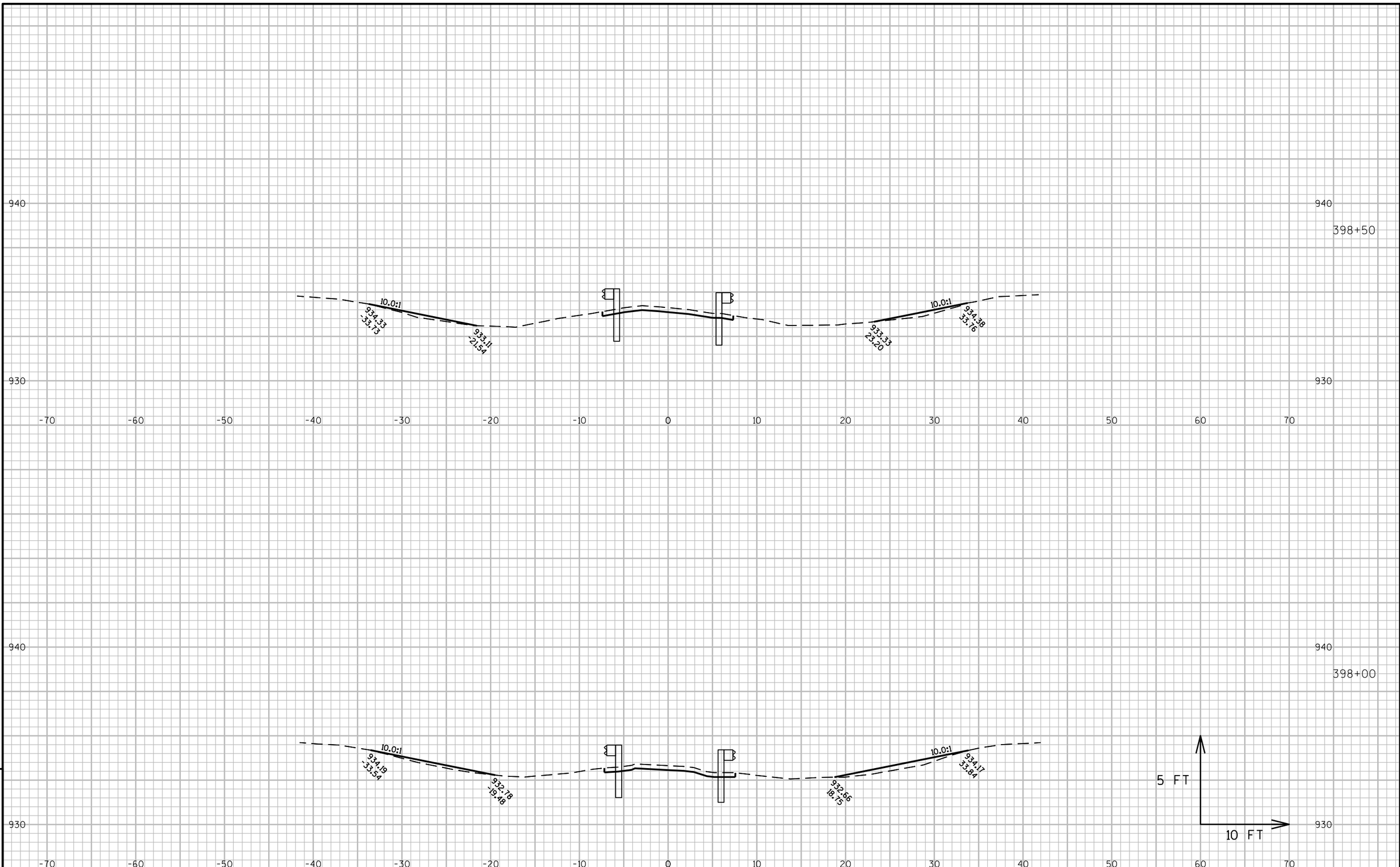
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 66	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (42)

PLOT DATE : 5/1/2015 7:32 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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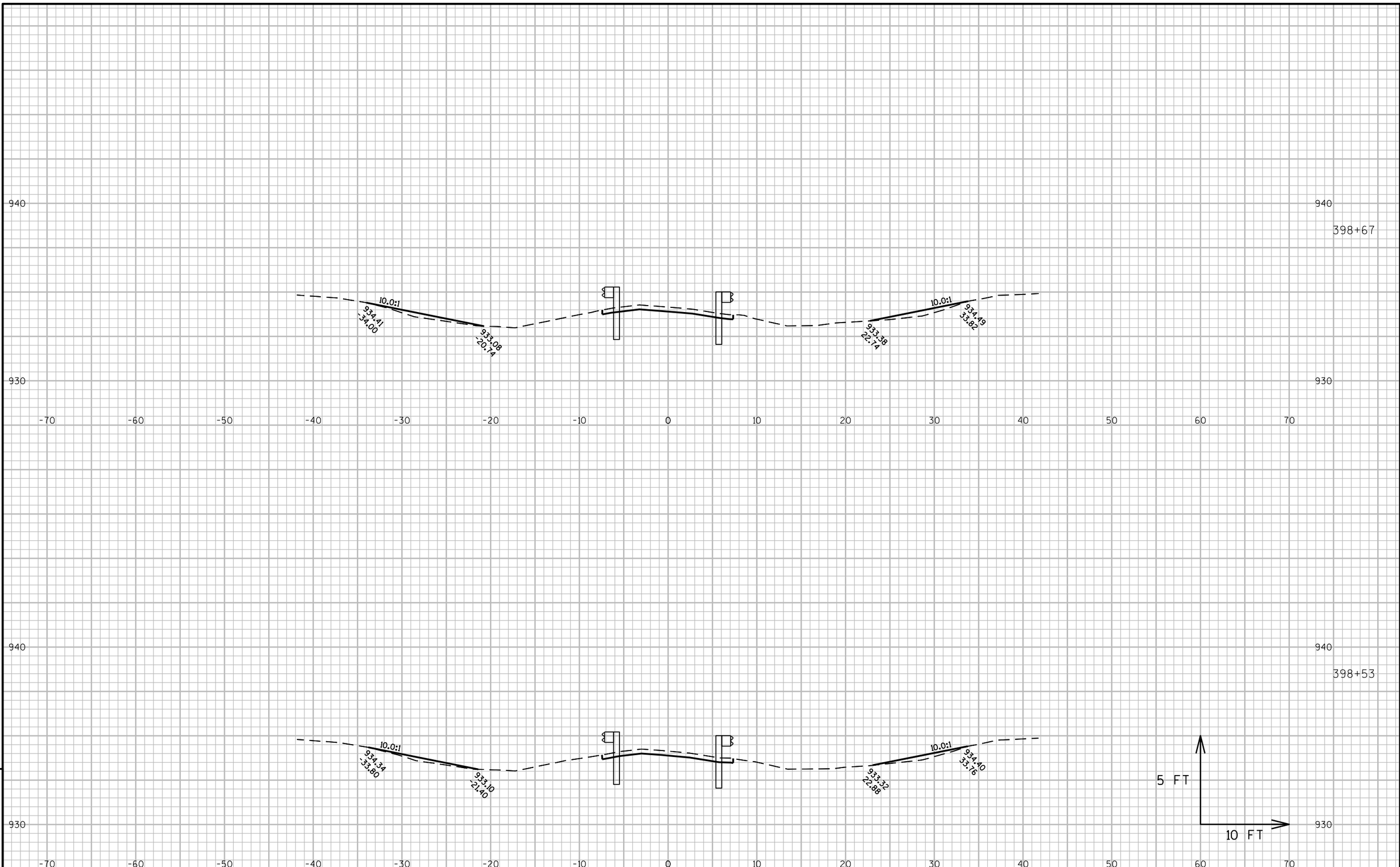
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 67	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (43)

PLOT DATE : 5/1/2015 7:32 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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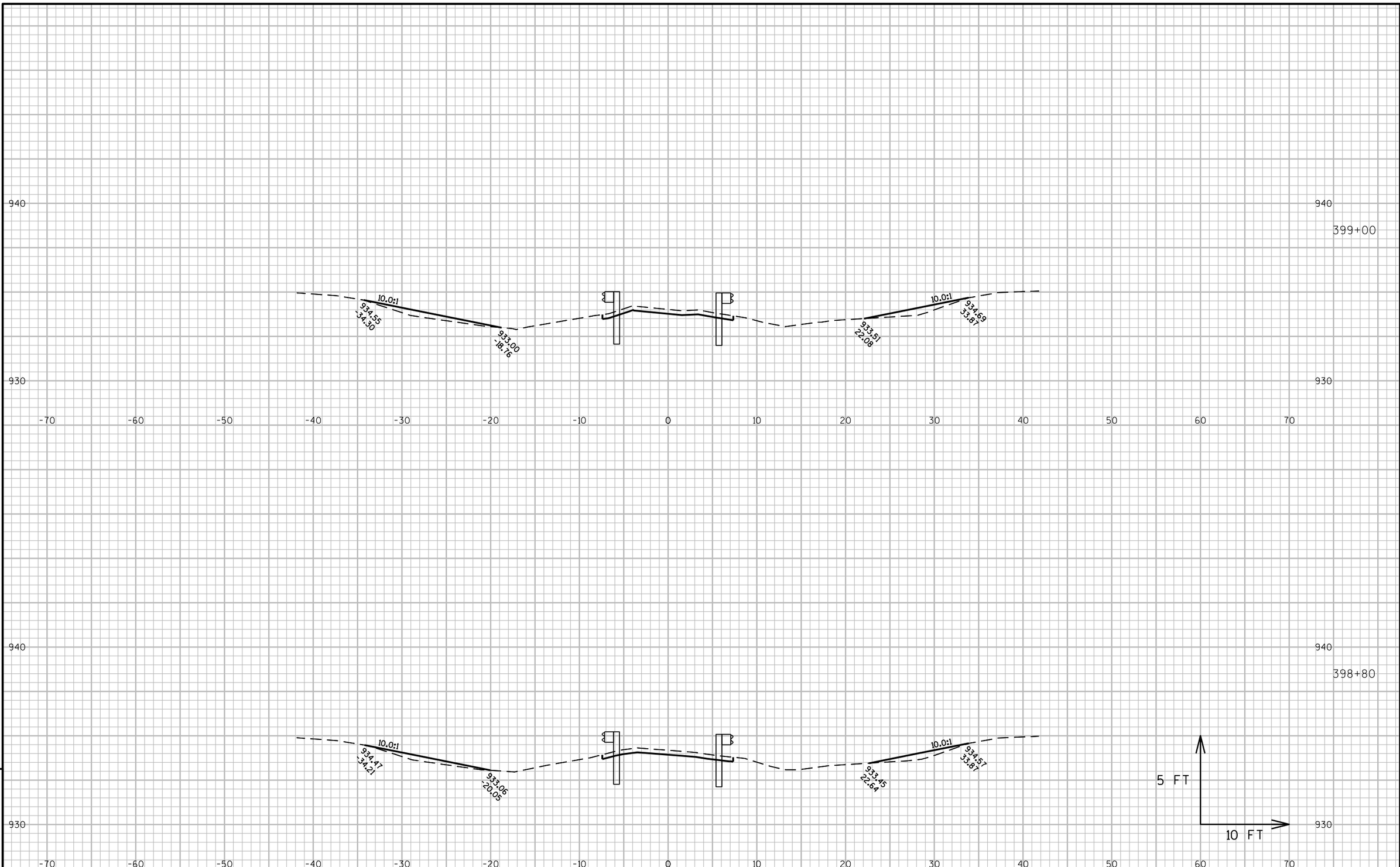
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 68	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (44)

PLOT DATE : 5/1/2015 7:32 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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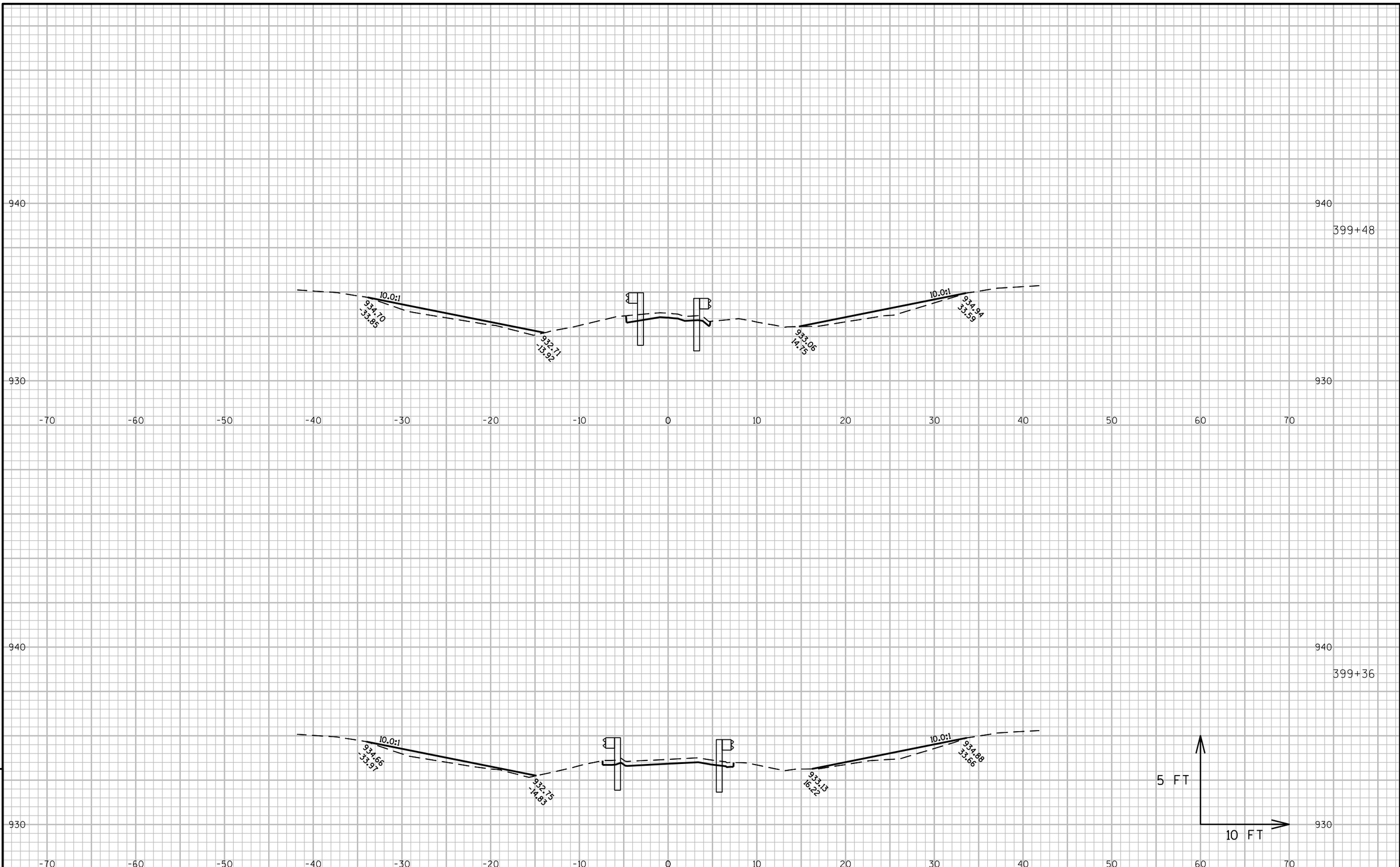
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 69	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (45)

PLOT DATE : 5/1/2015 7:33 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

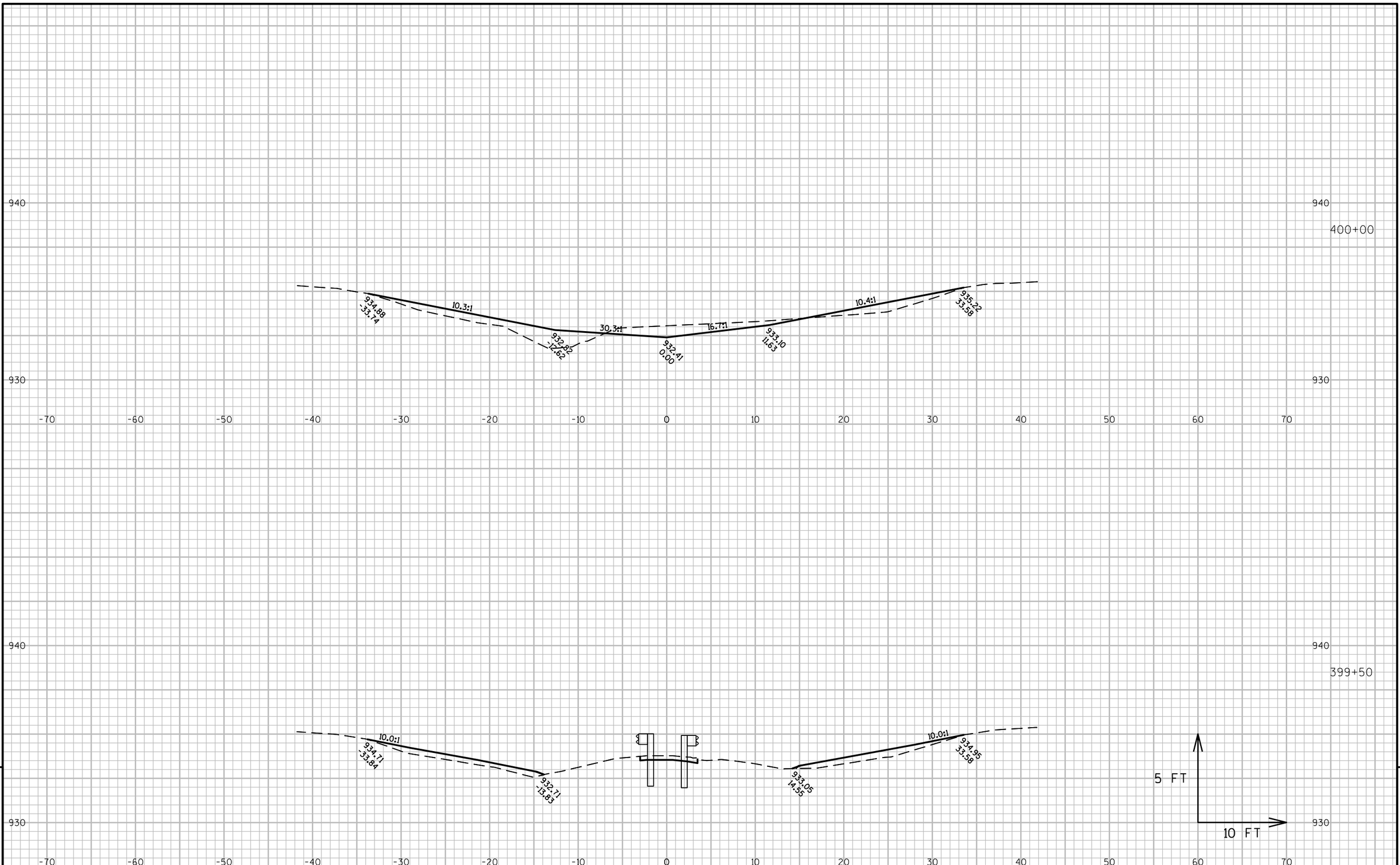
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 70	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (46)

PLOT DATE : 5/1/2015 7:33 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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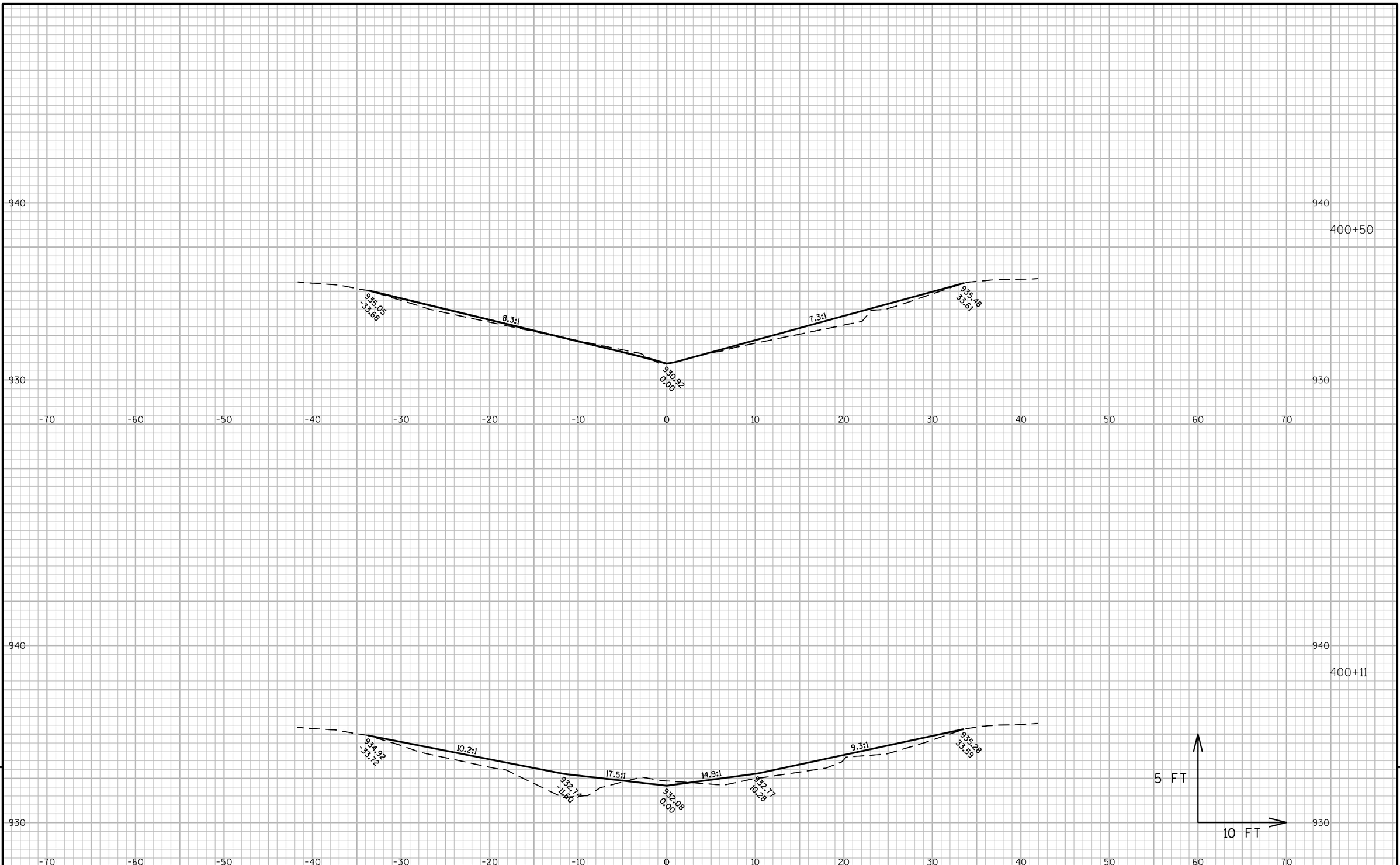
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 71	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043011B.DWG
LAYOUT NAME - 090201-XS_WAL 043011B - SECTION SHEET - (47)

PLOT DATE : 5/1/2015 7:33 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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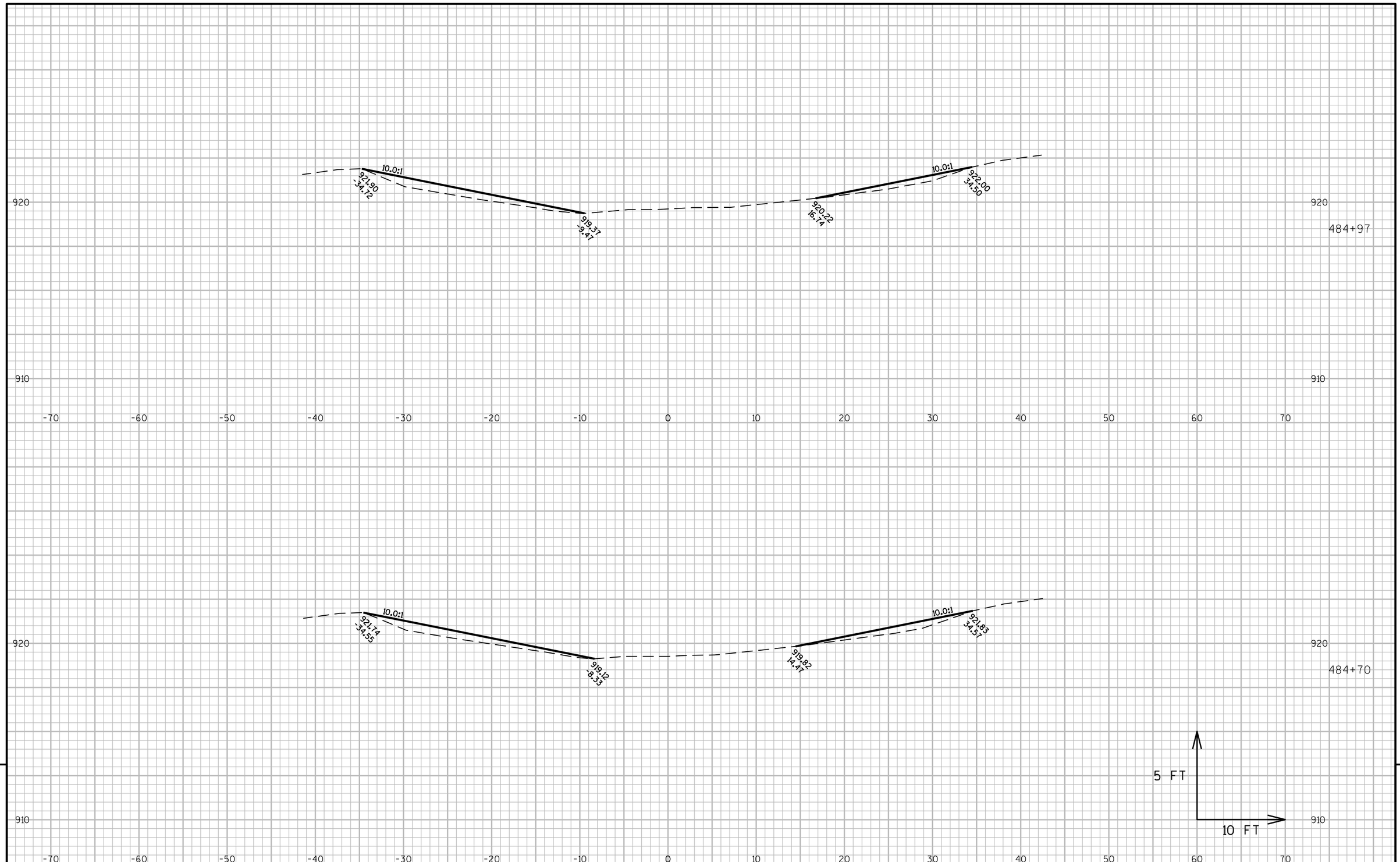
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: LAWSON SCHOOL ROAD OVER IH-43	SHEET 72	E



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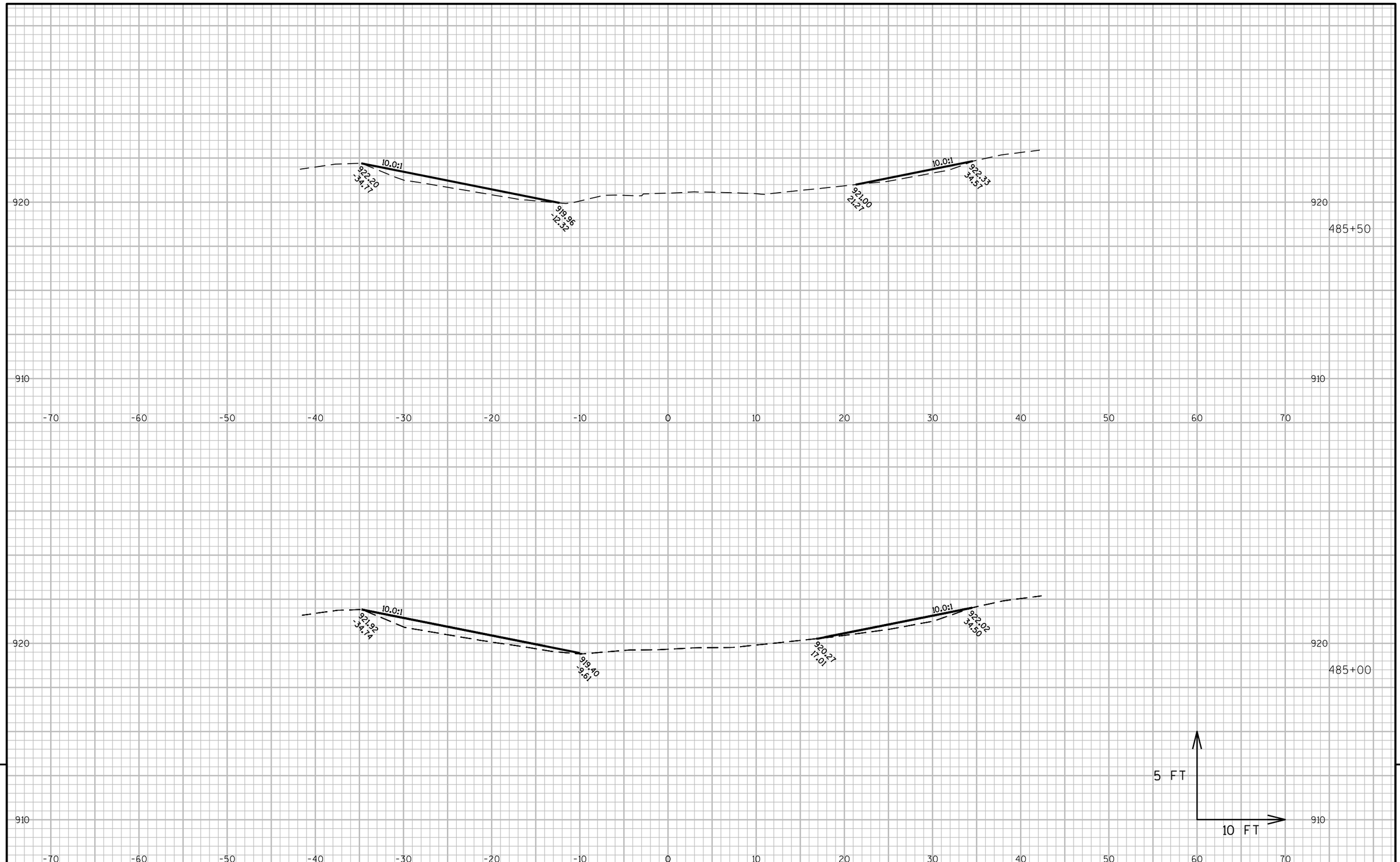
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 73	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (38)

PLOT DATE : 5/1/2015 7:34 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

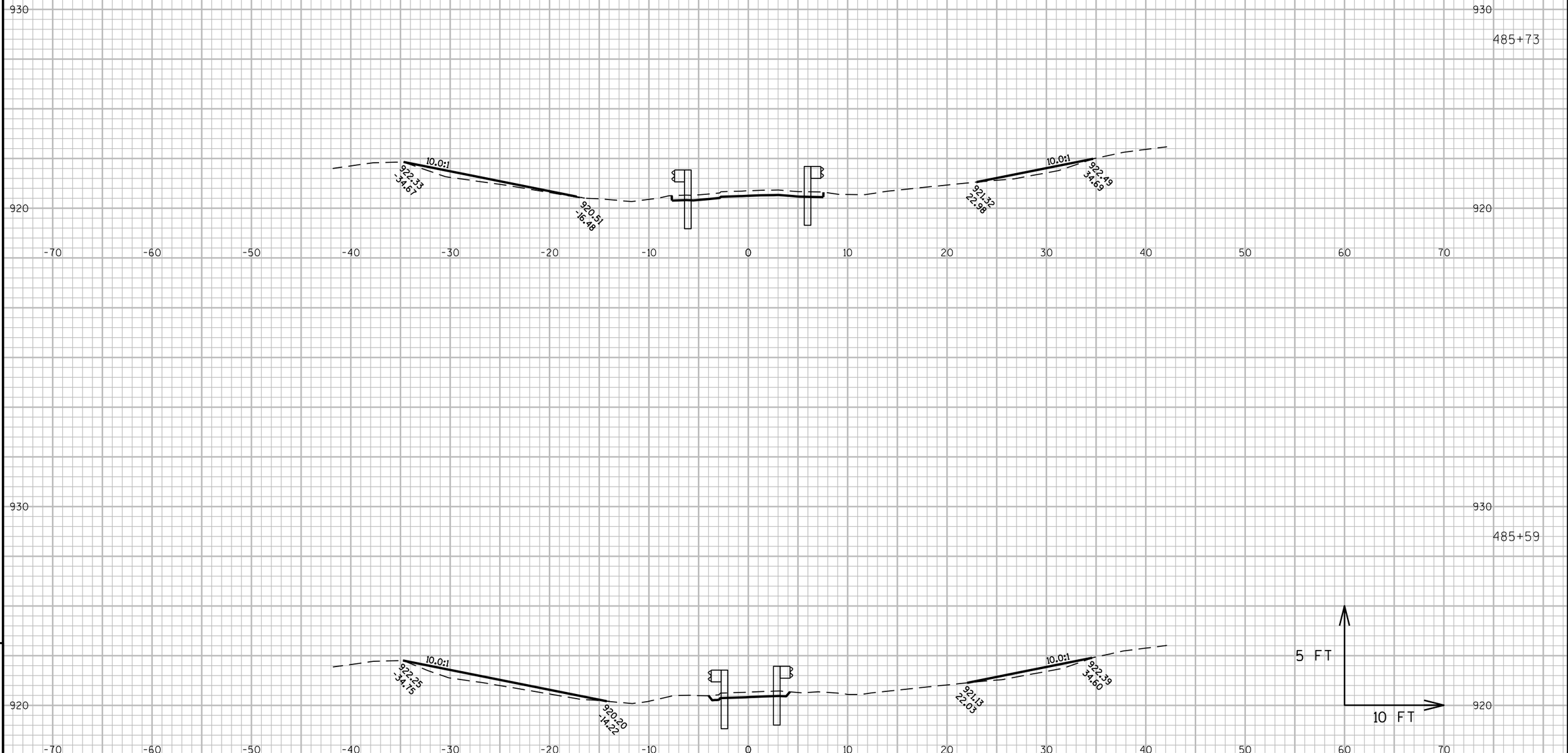
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 74	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (39)

PLOT DATE : 5/1/2015 7:34 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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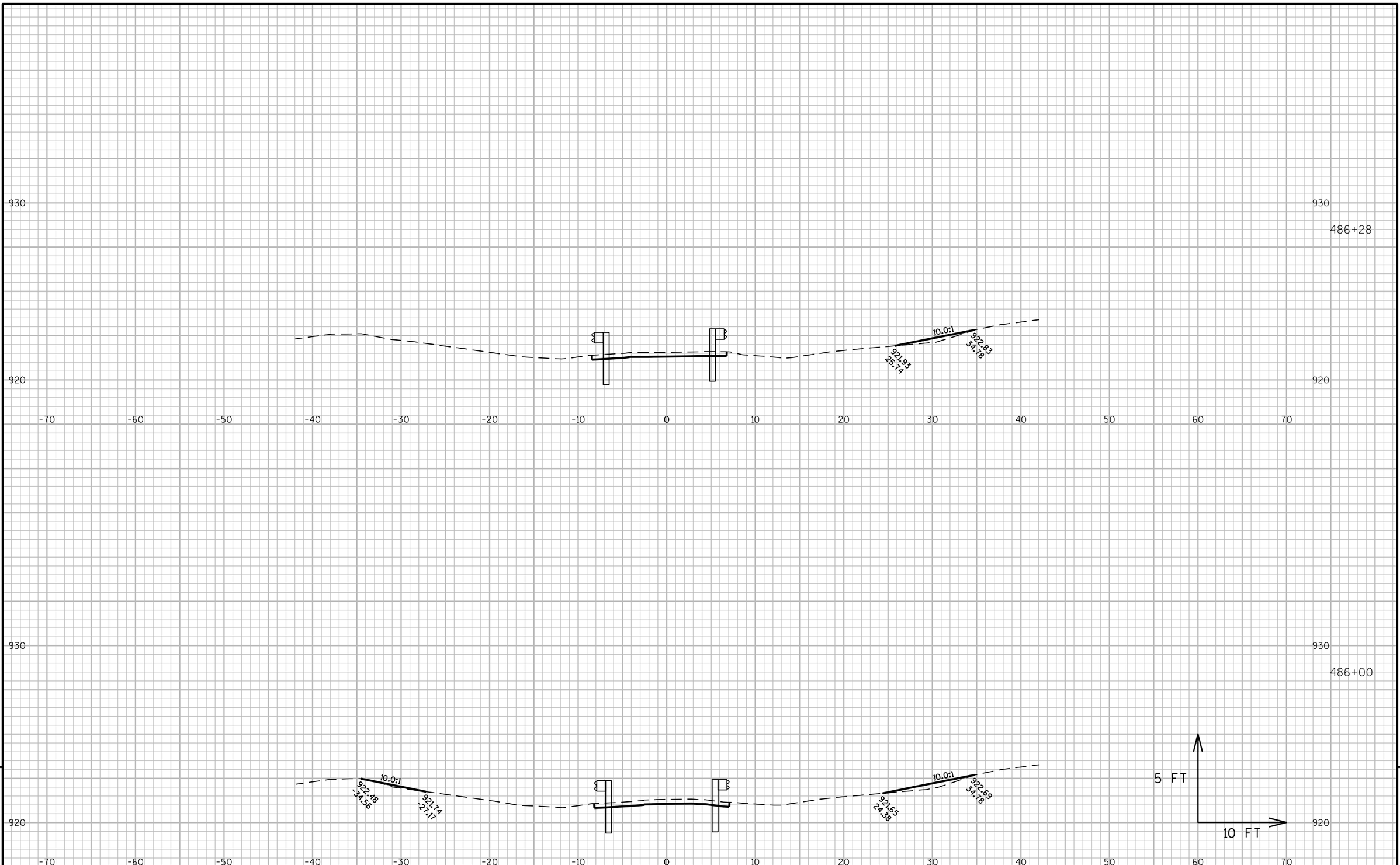
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 75	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (40)

PLOT DATE : 5/1/2015 7:35 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



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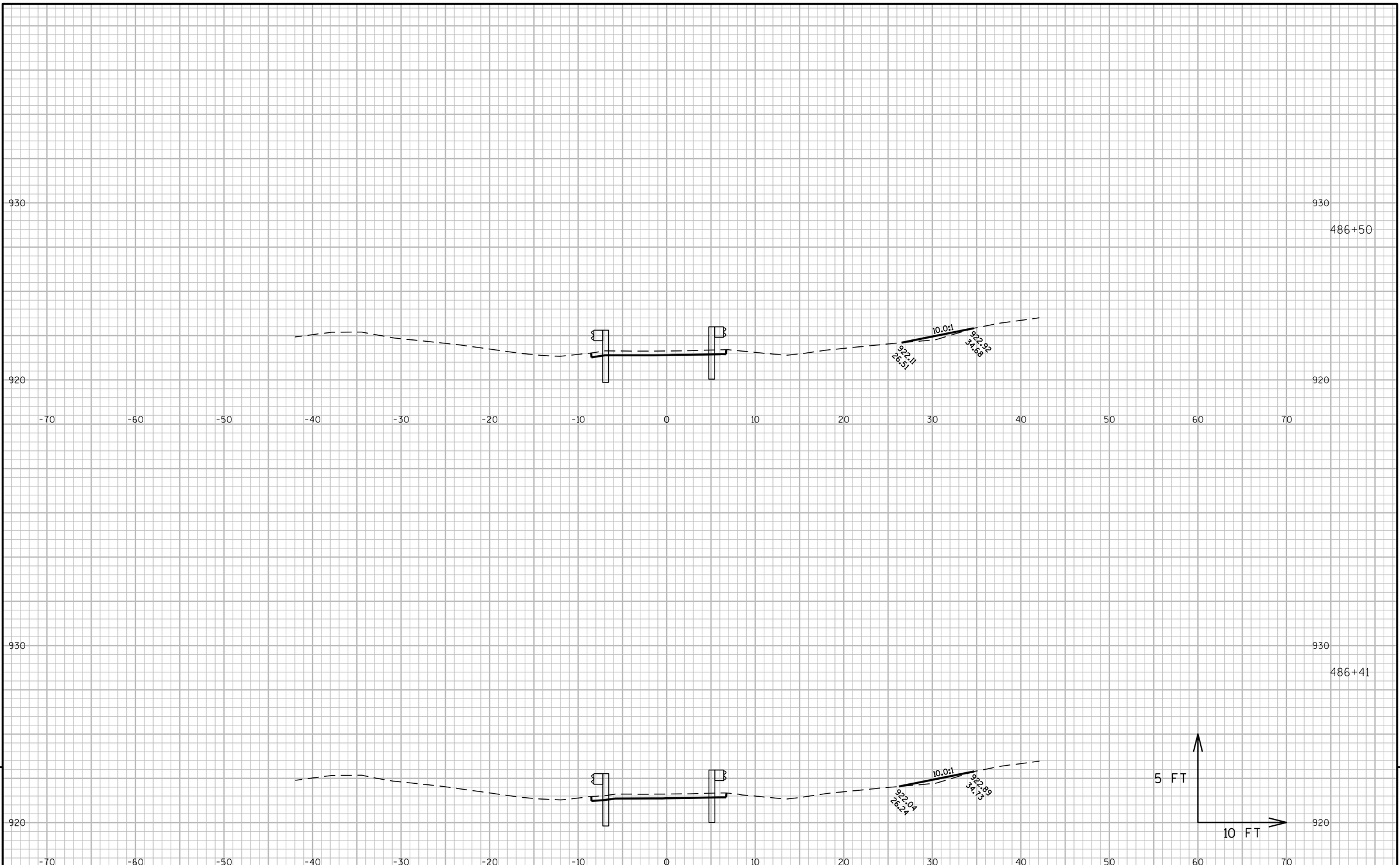
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 76	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (41)

PLOT DATE : 5/1/2015 7:35 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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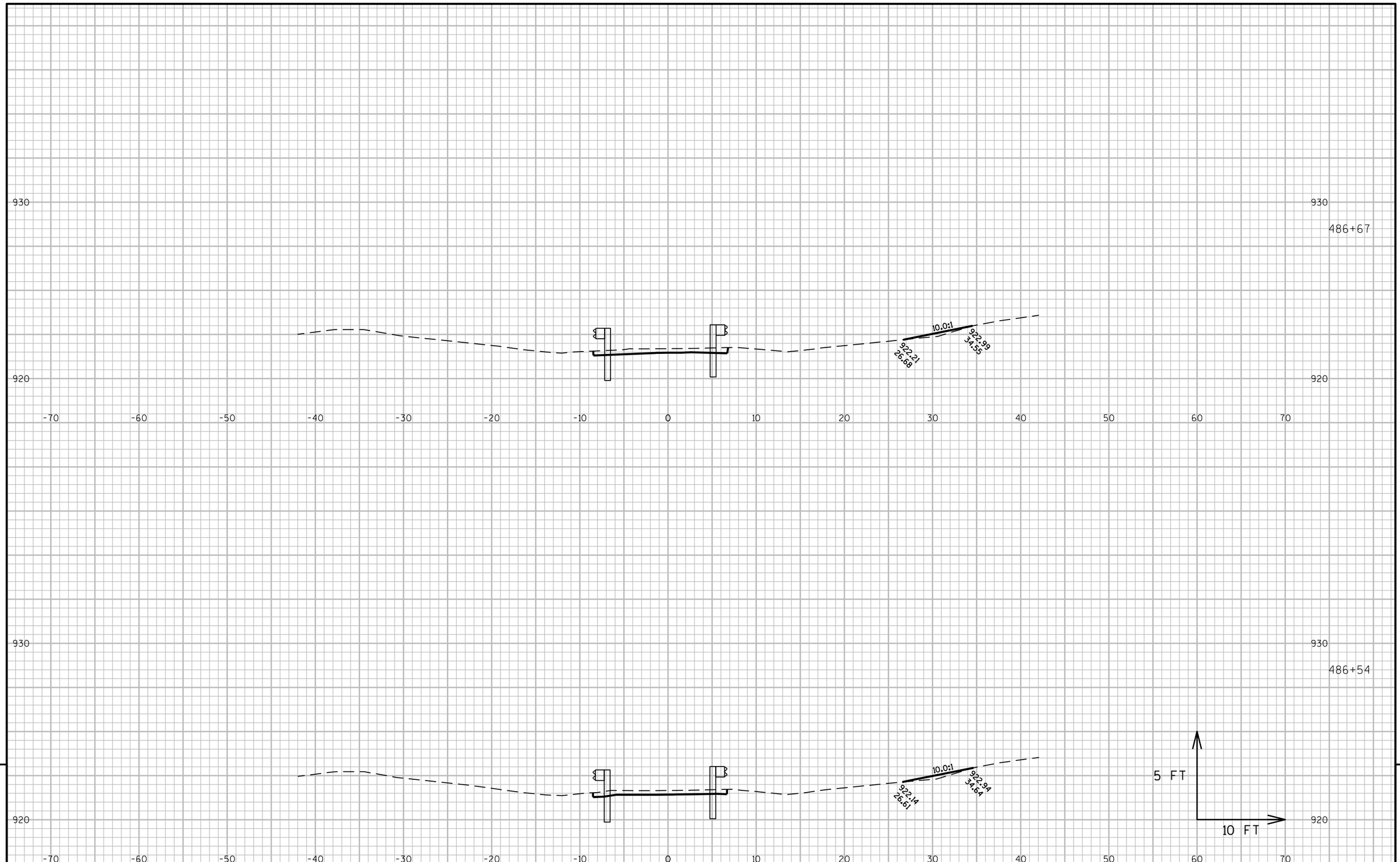
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 77	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (42)

PLOT DATE : 5/1/2015 7:35 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



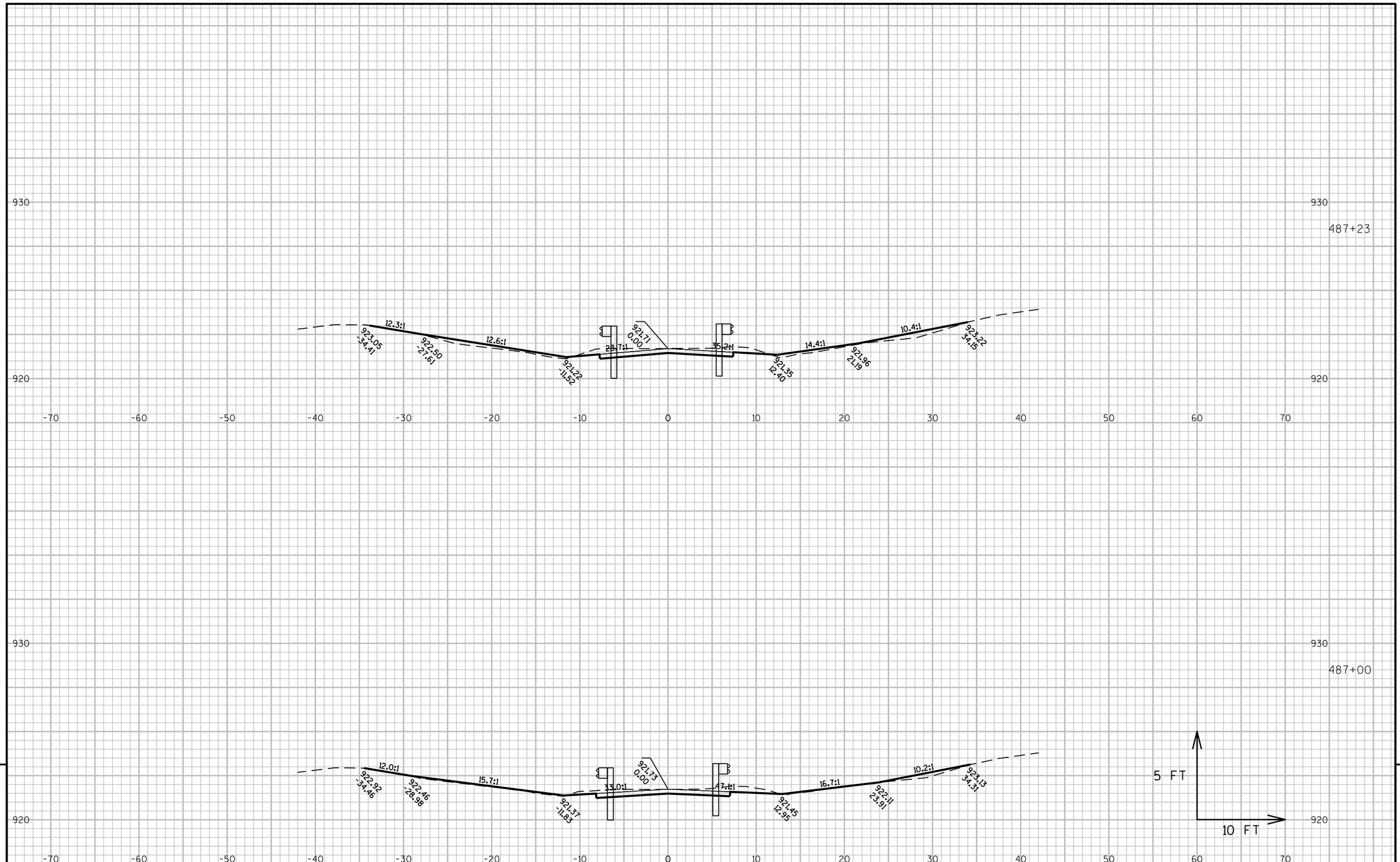
9

9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 78	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (43)

PLOT DATE : 5/1/2015 7:35 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

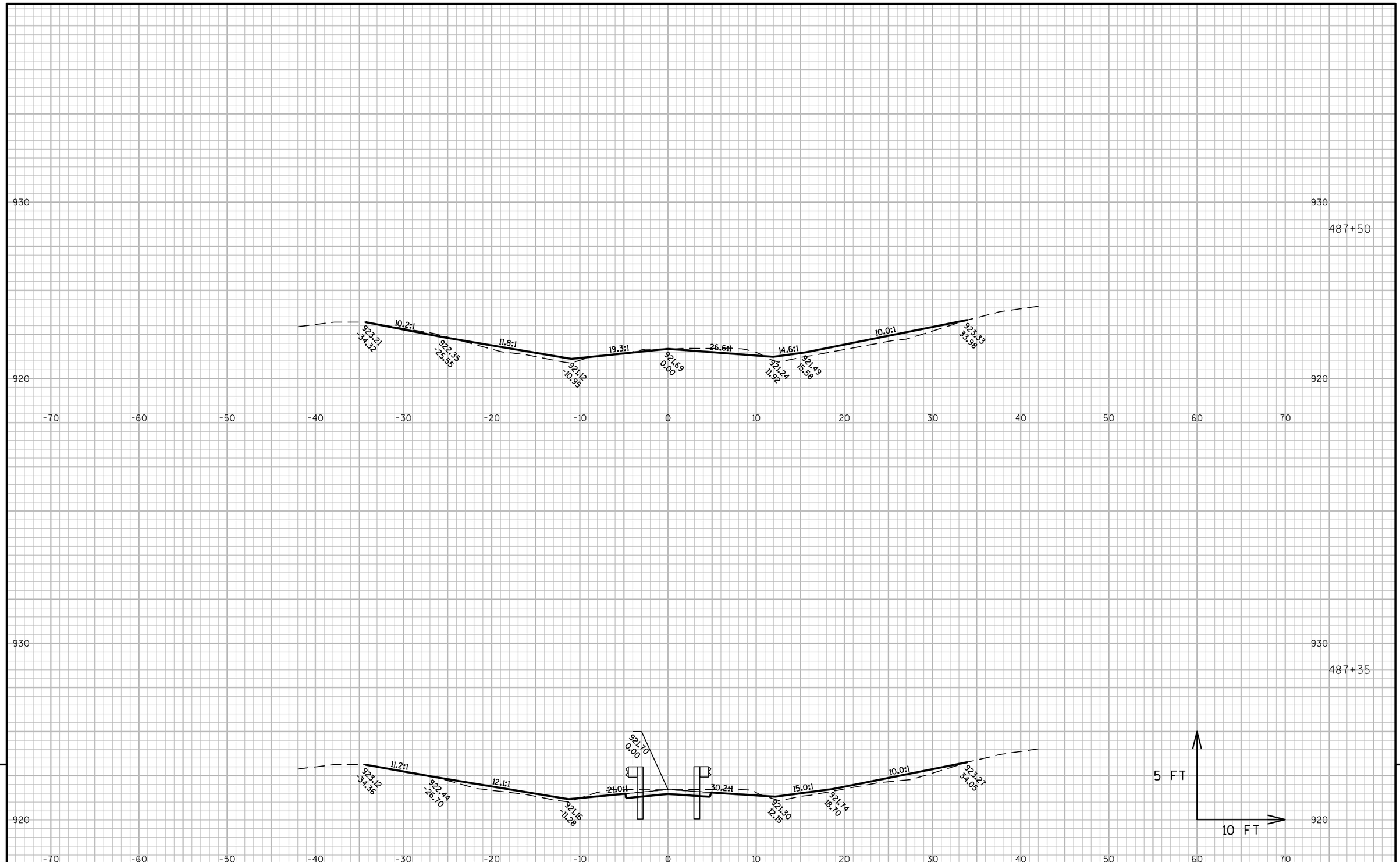


PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 79	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (44)

PLOT DATE : 5/1/2015 7:35 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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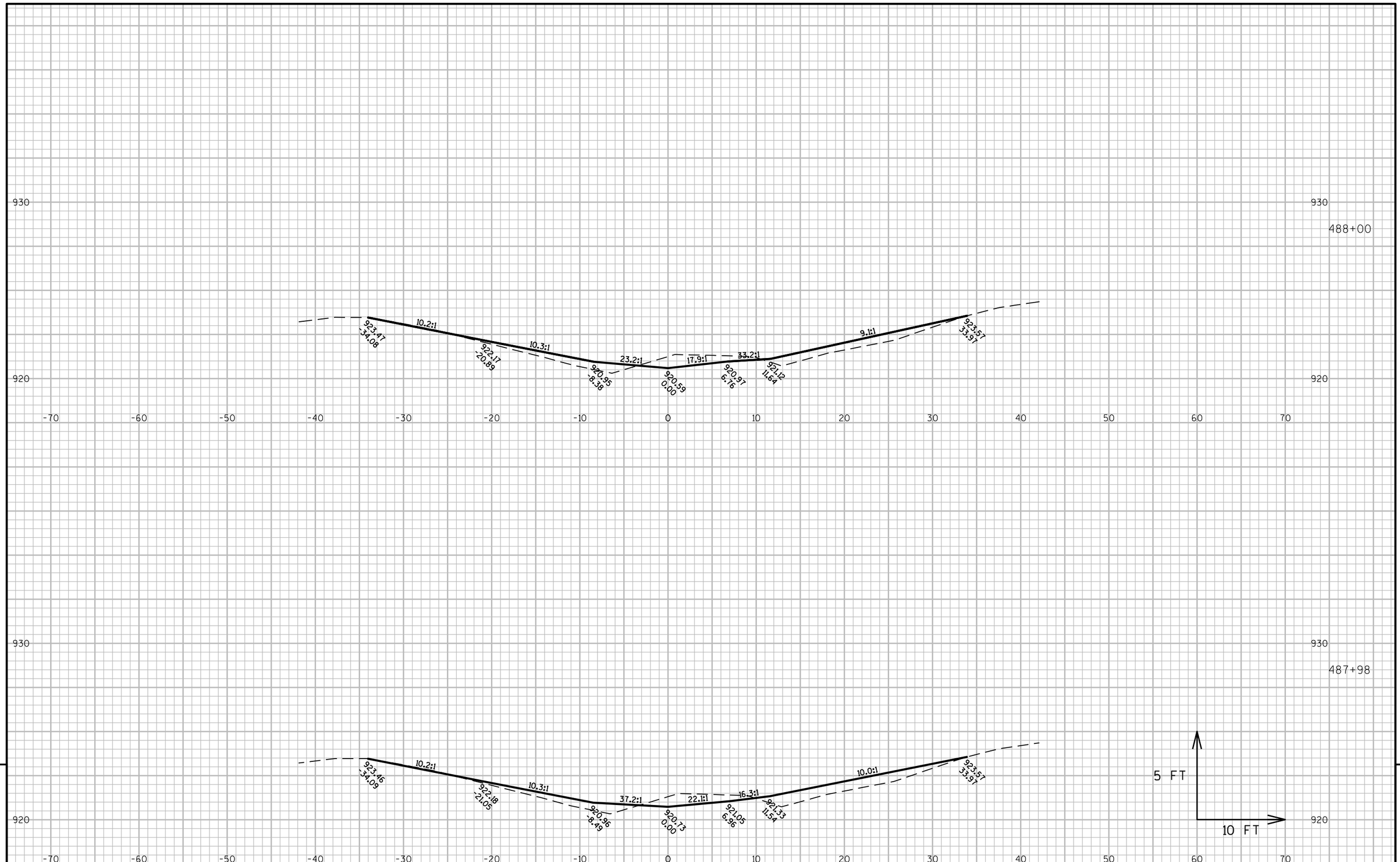
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 80	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (45)

PLOT DATE : 5/1/2015 7:36 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

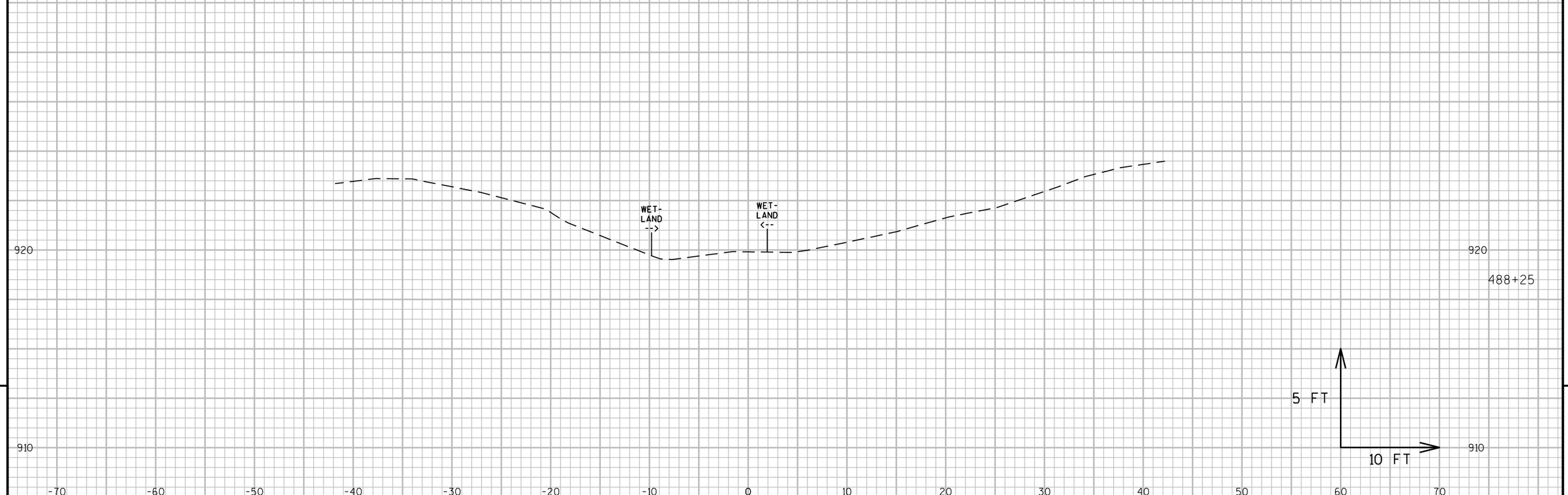
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 81	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (46)

PLOT DATE : 5/1/2015 7:36 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: CTH O OVER IH-43 (B-64-121)	SHEET 82	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043009B.DWG
LAYOUT NAME - 090201-XS_WAL 043009B - SECTION SHEET - (47)

PLOT DATE : 5/1/2015 7:36 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

950

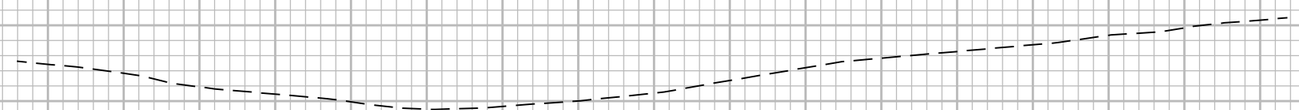
940

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

562+50

950

940



950

940

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

562+30

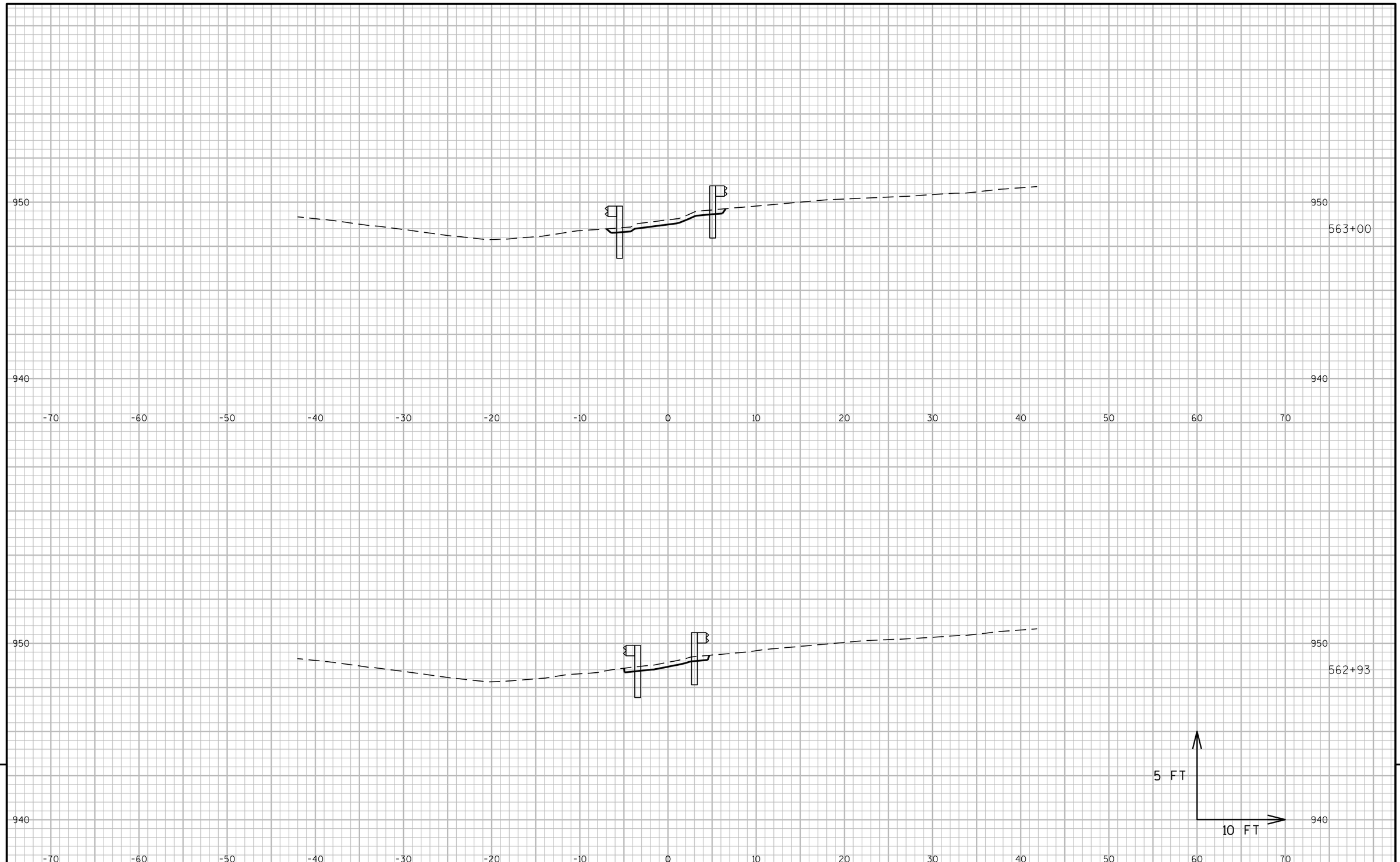
5 FT

10 FT

9

9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 83	E

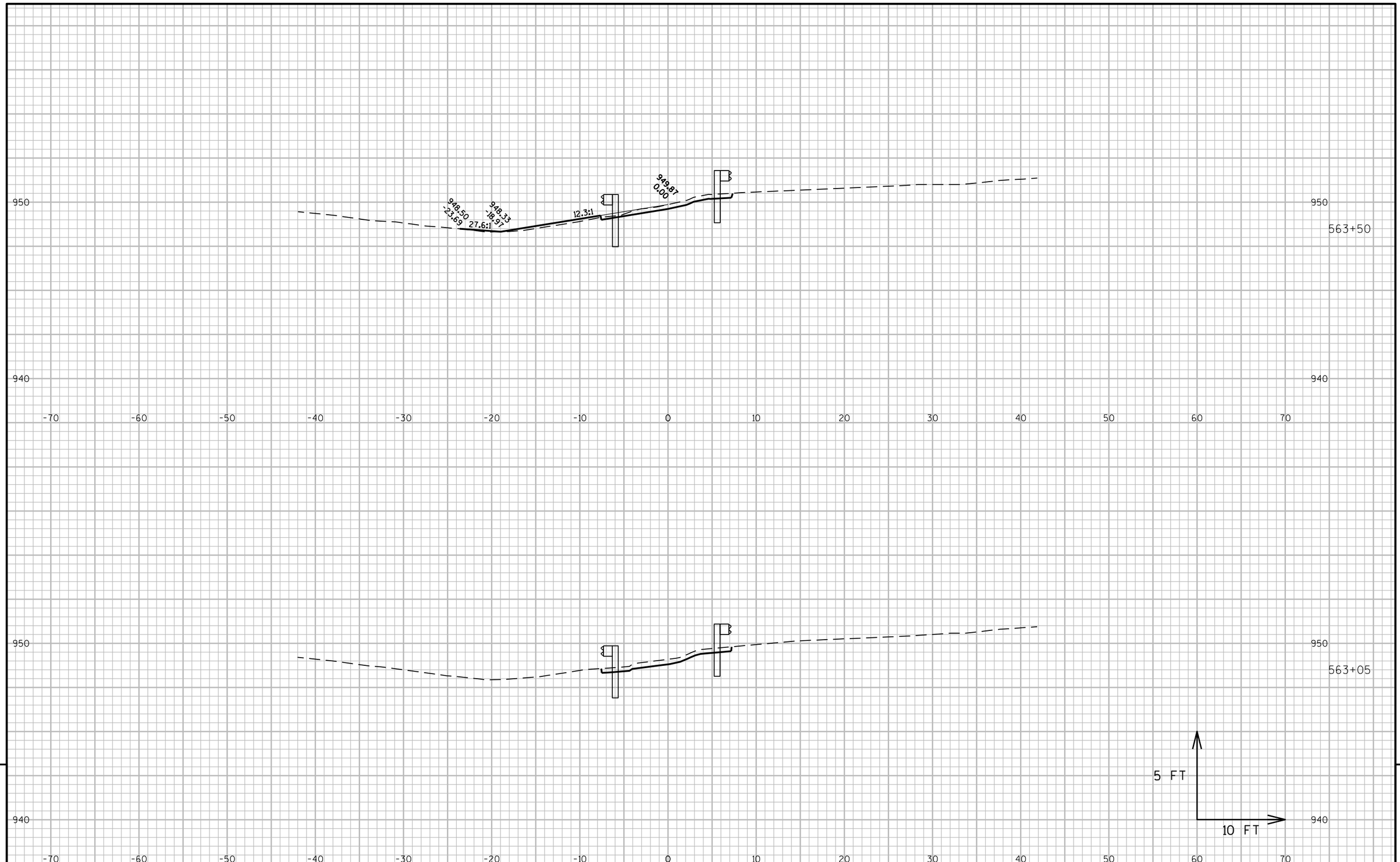


PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 84	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (28)

PLOT DATE : 5/1/2015 7:37 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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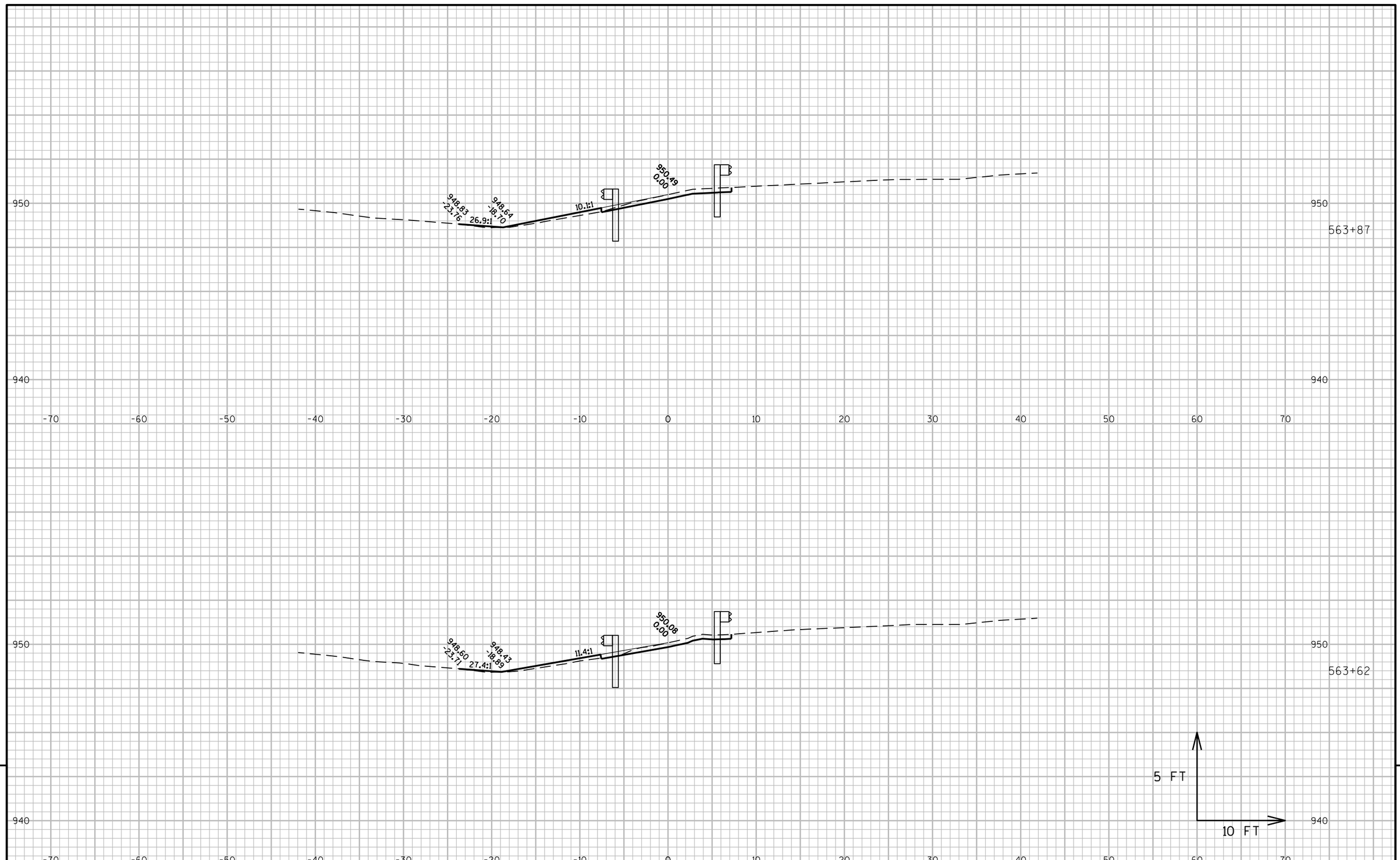
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 85	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (29)

PLOT DATE : 5/1/2015 7:37 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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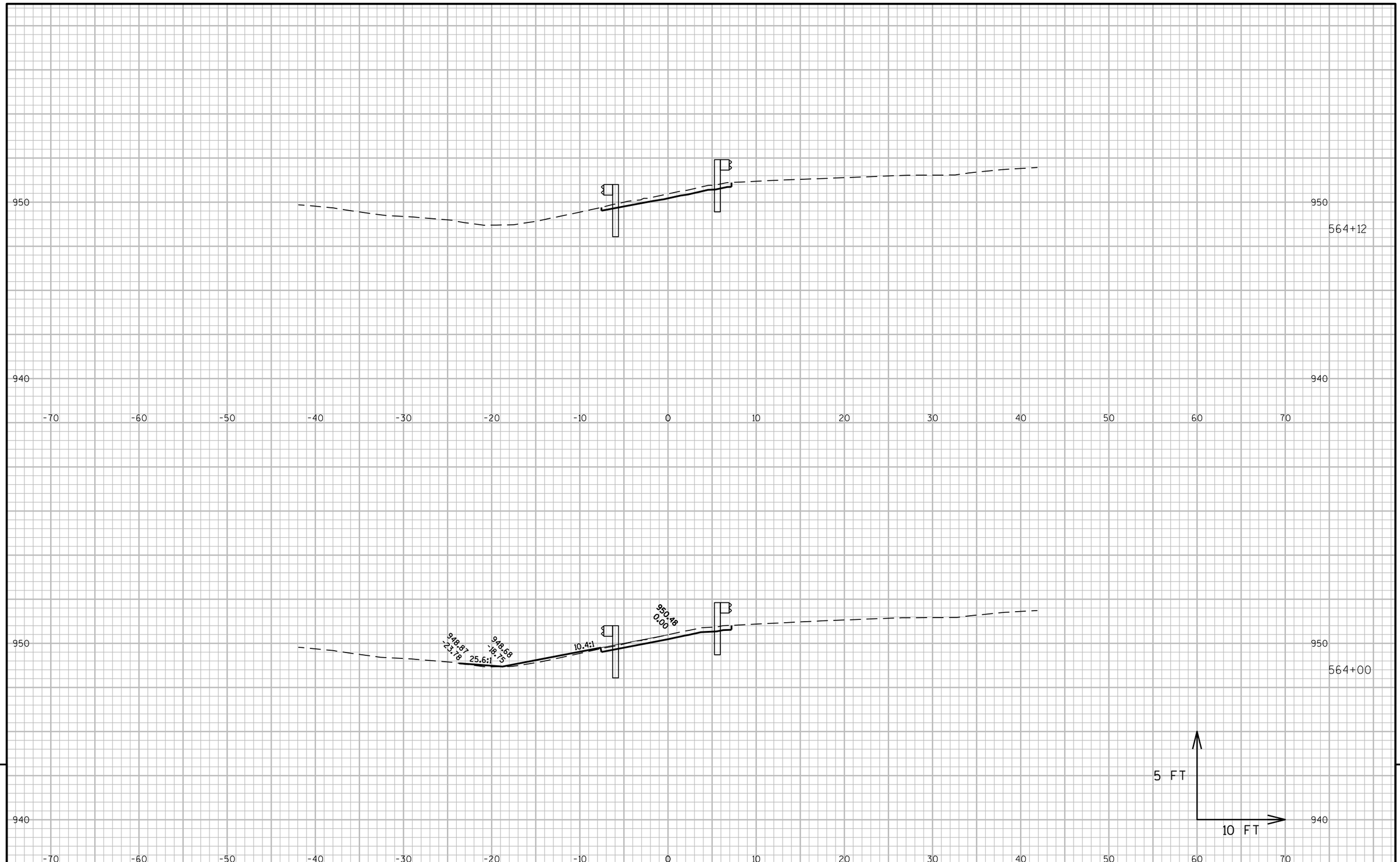
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 86	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (30)

PLOT DATE : 5/1/2015 7:37 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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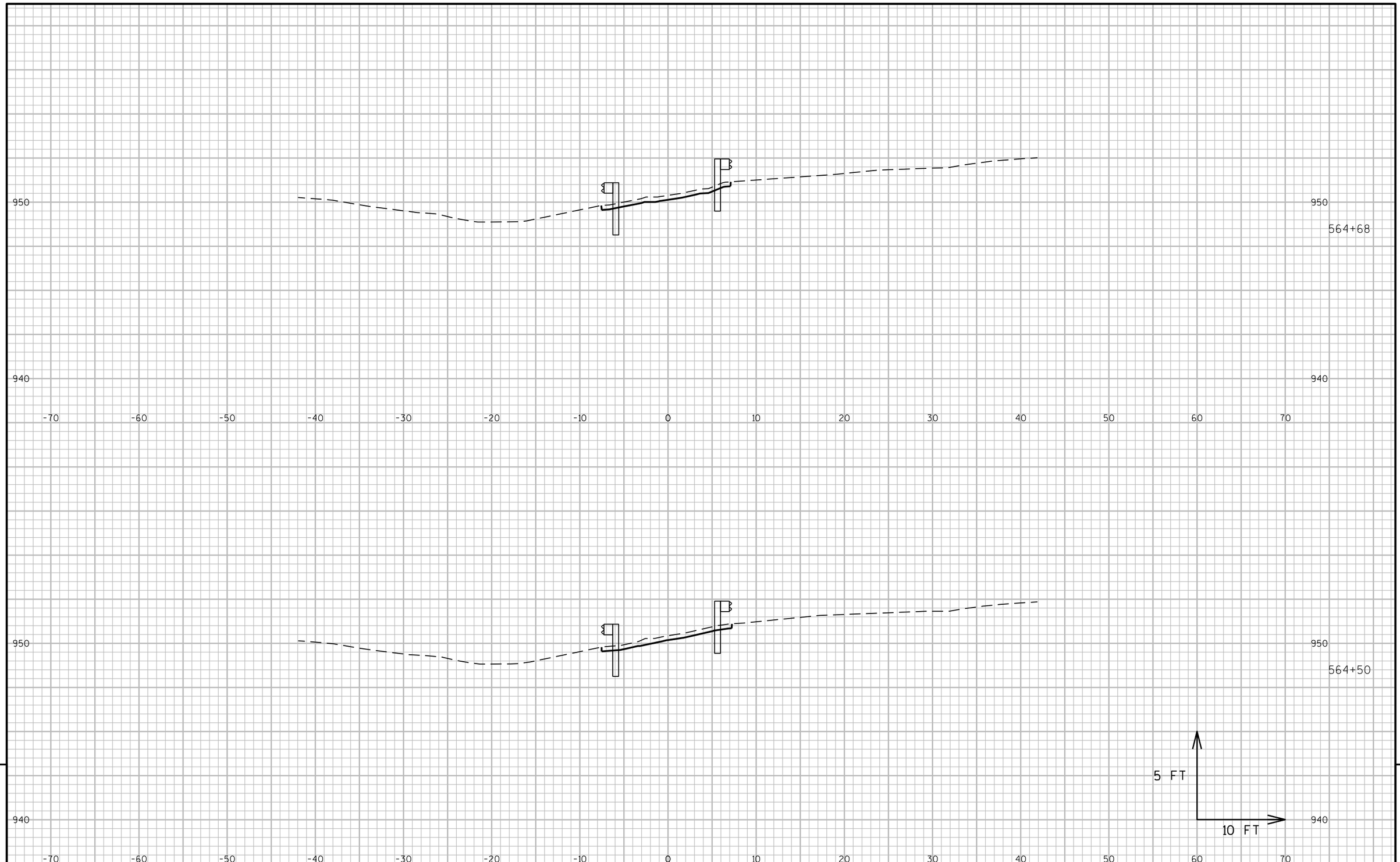
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 87	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (31)

PLOT DATE : 5/1/2015 7:37 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 88	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (32)

PLOT DATE : 5/1/2015 7:37 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

950

940

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

565+00

950

940

950

940

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

564+81

5 FT

10 FT

9

9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 89	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (33)

PLOT DATE : 5/1/2015 7:38 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

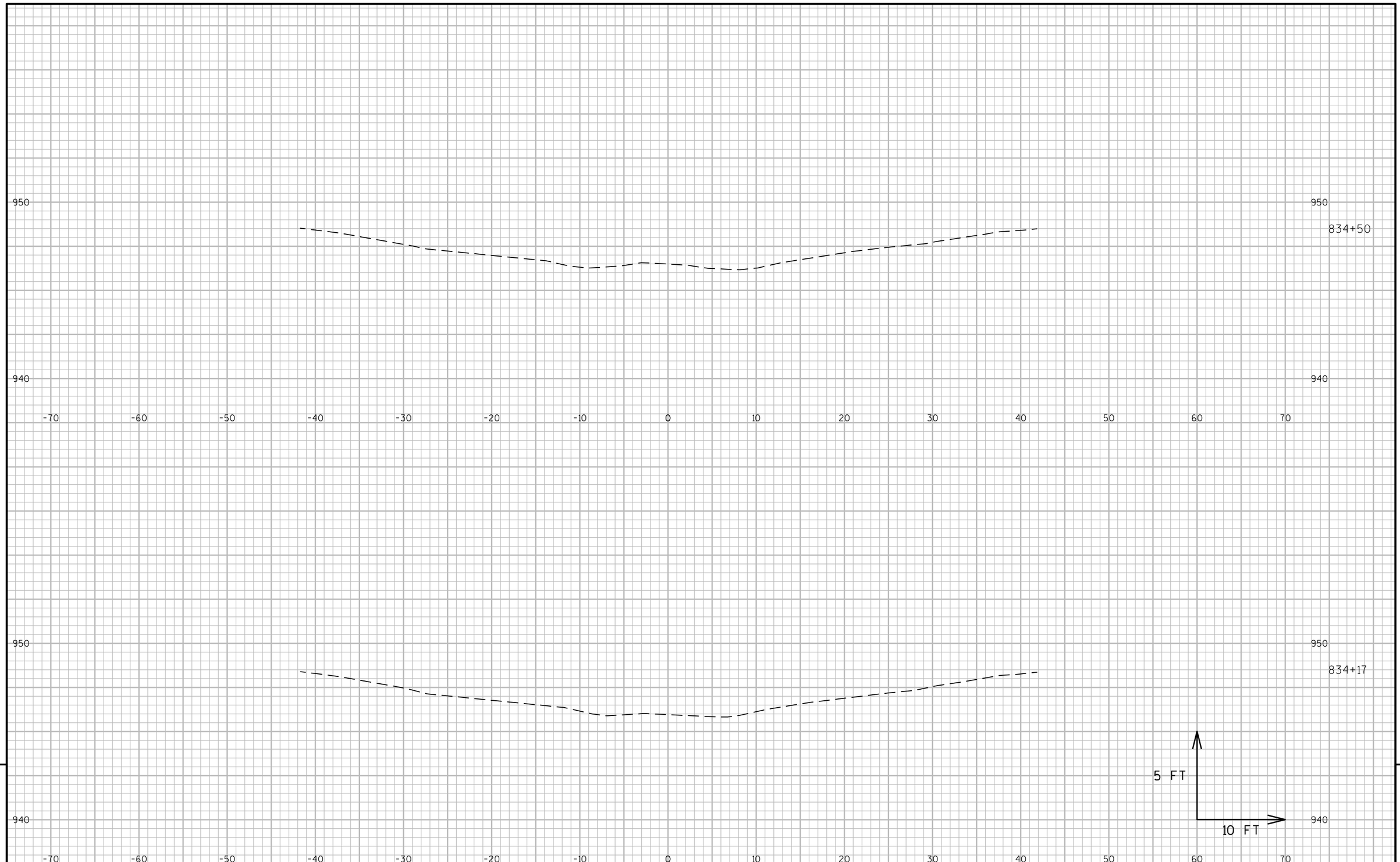
9

9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: BORG ROAD OVER IH-43 (B-64-120)	SHEET 90	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043008B.DWG
LAYOUT NAME - 090201-XS_WAL 043008B - SECTION SHEET - (34)

PLOT DATE : 5/1/2015 7:38 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

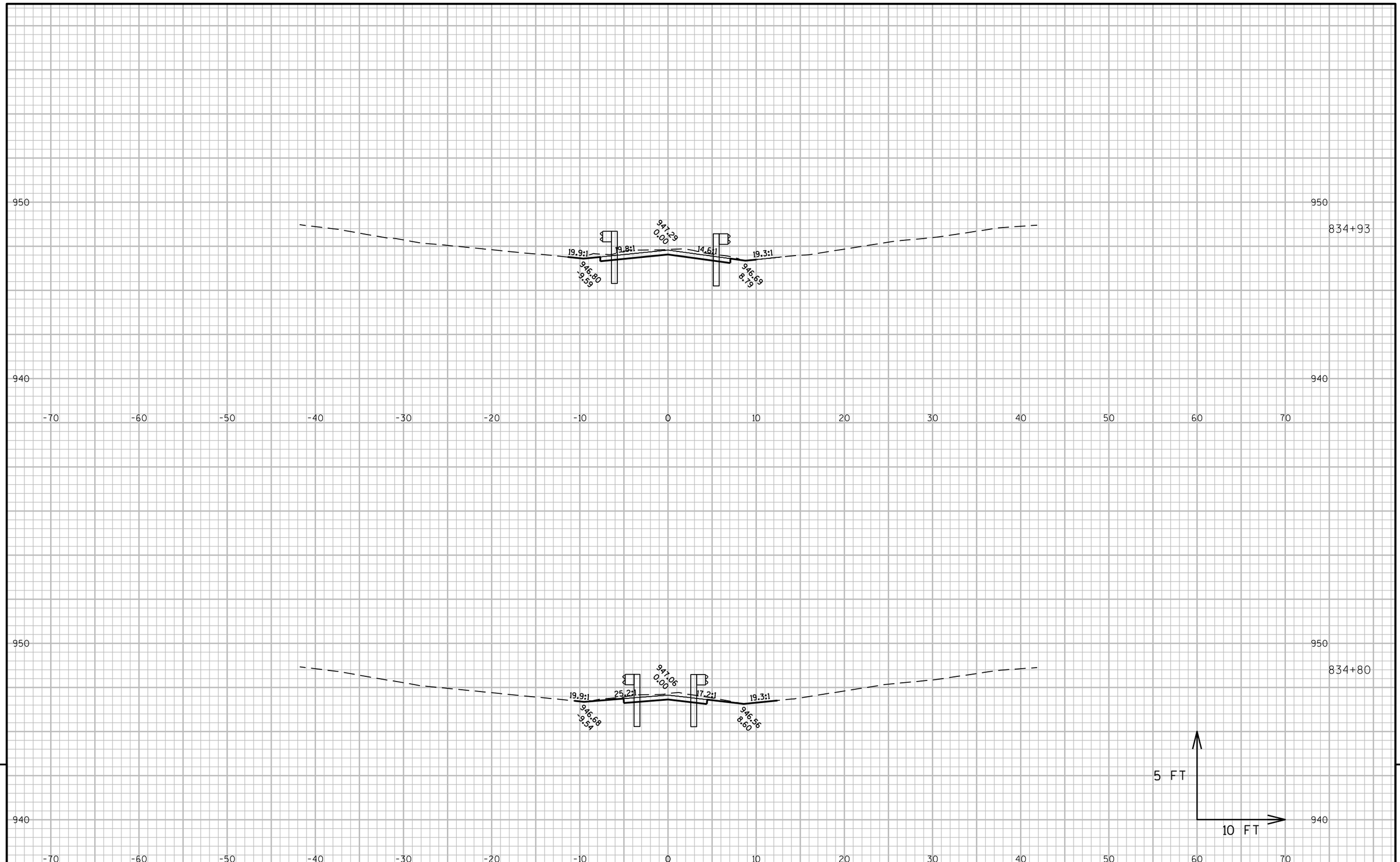
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 91	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (32)

PLOT DATE : 5/1/2015 7:39 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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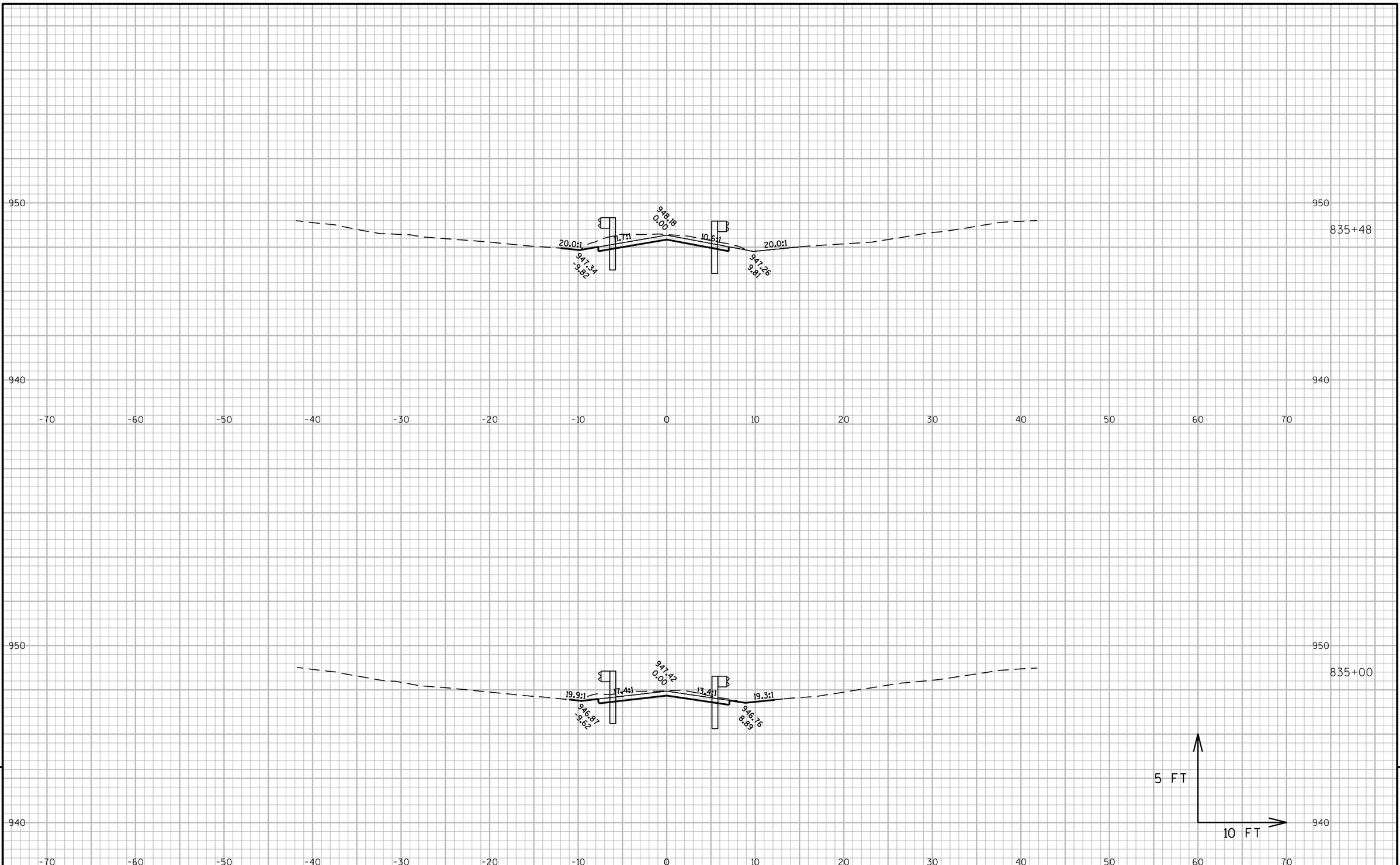
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 92	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (33)

PLOT DATE : 5/1/2015 7:39 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

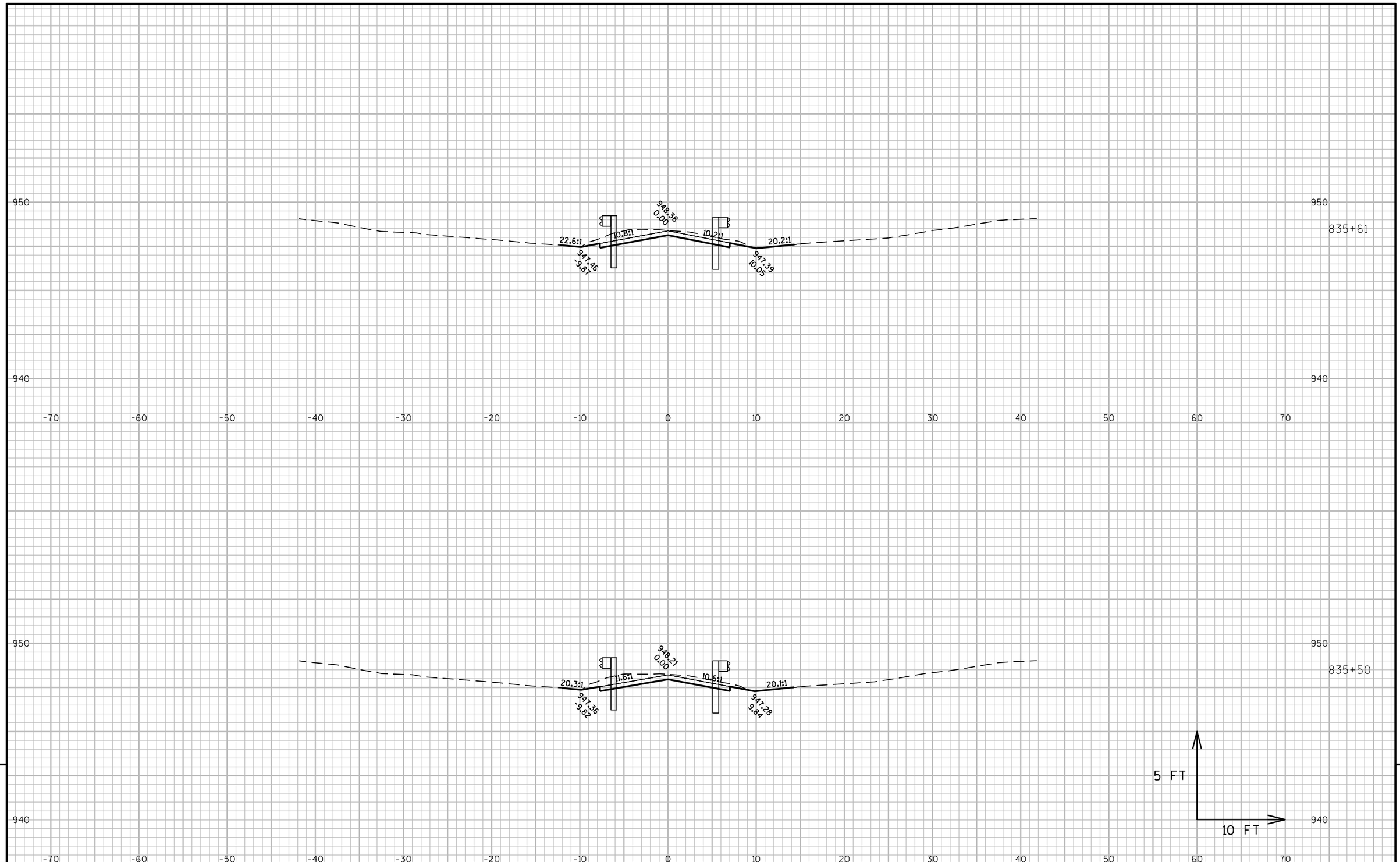
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 93	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (34)

PLOT DATE : 5/1/2015 7:39 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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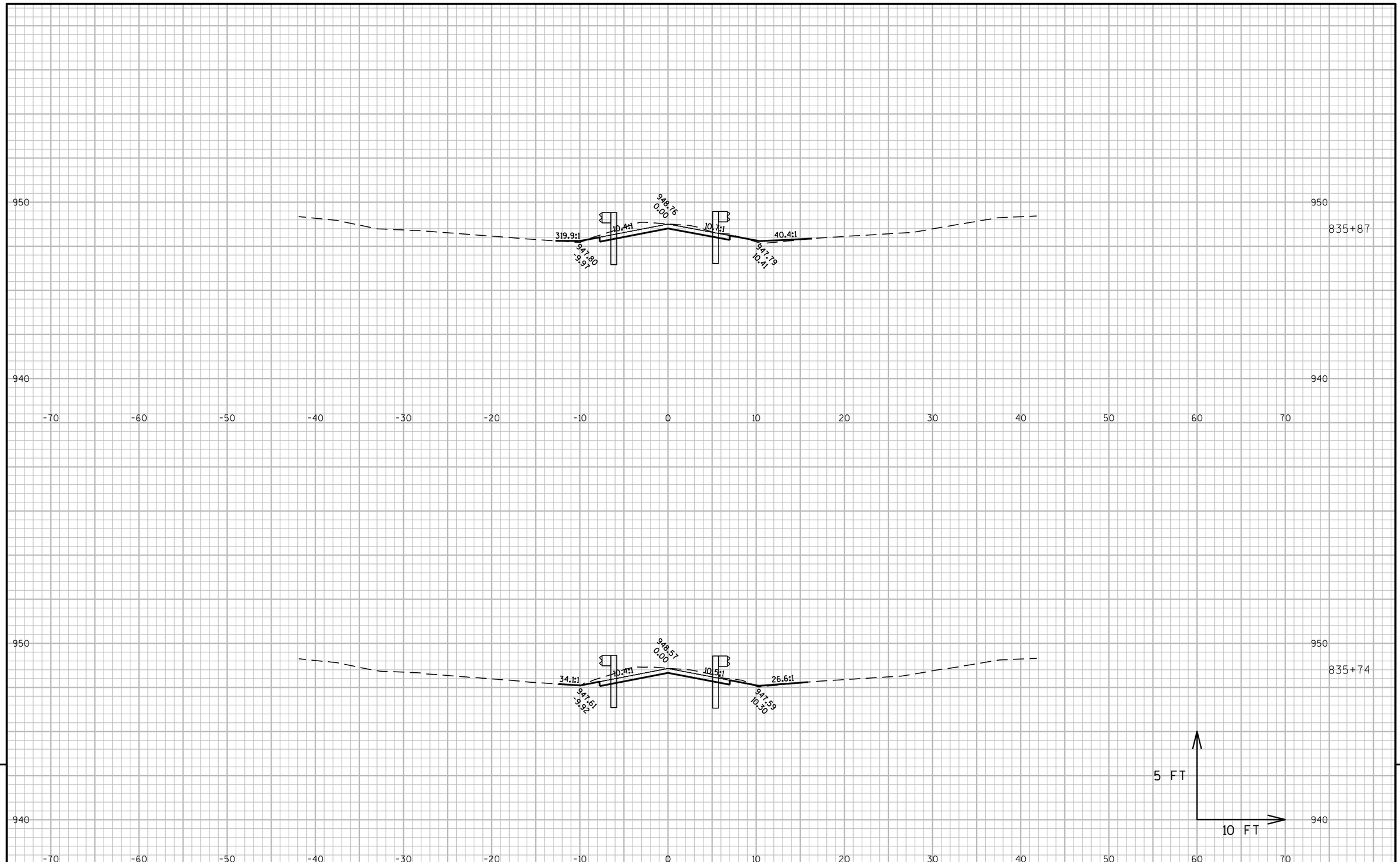
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 94	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (35)

PLOT DATE : 5/1/2015 7:39 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

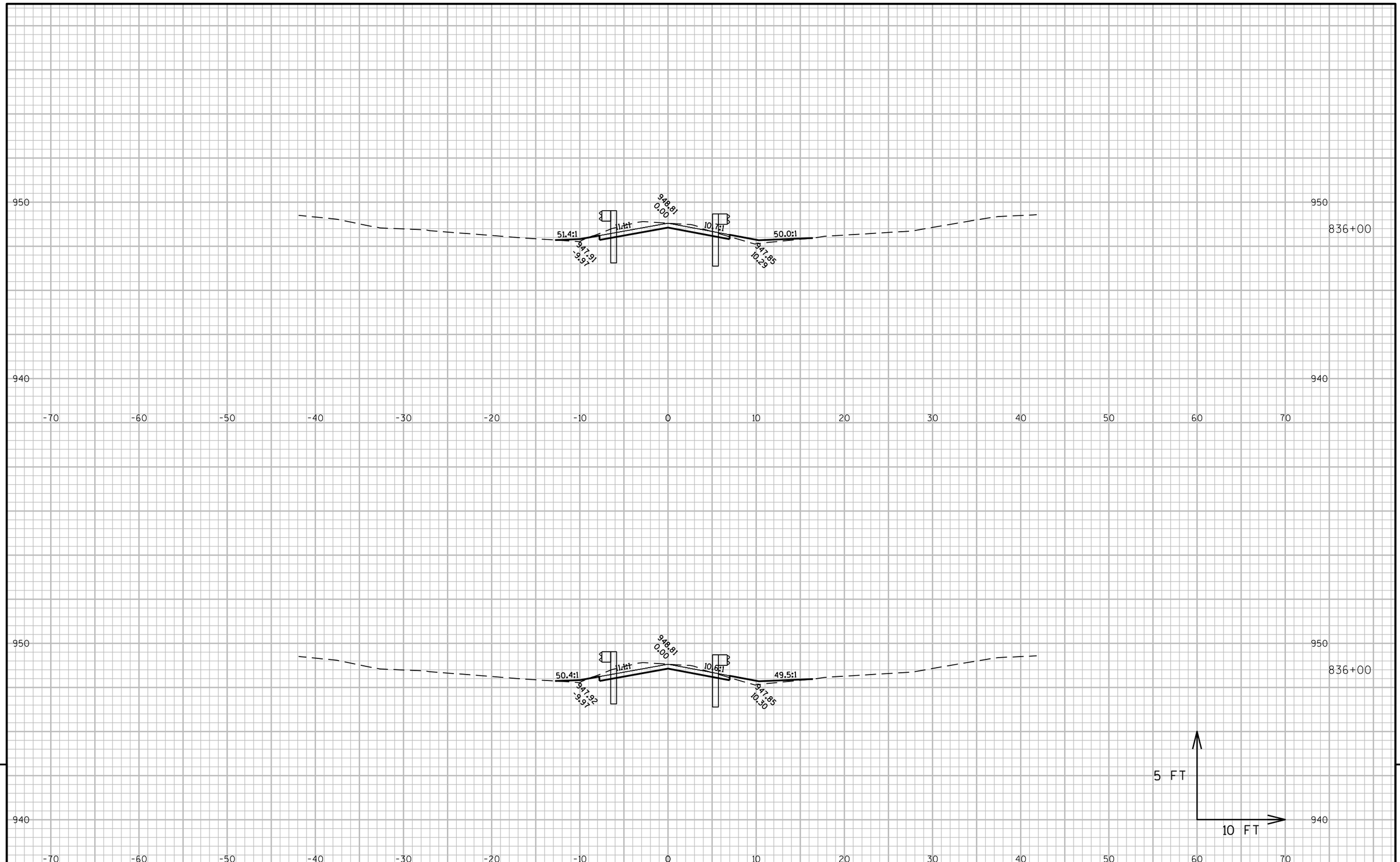
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 95	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (36)

PLOT DATE : 5/1/2015 7:40 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

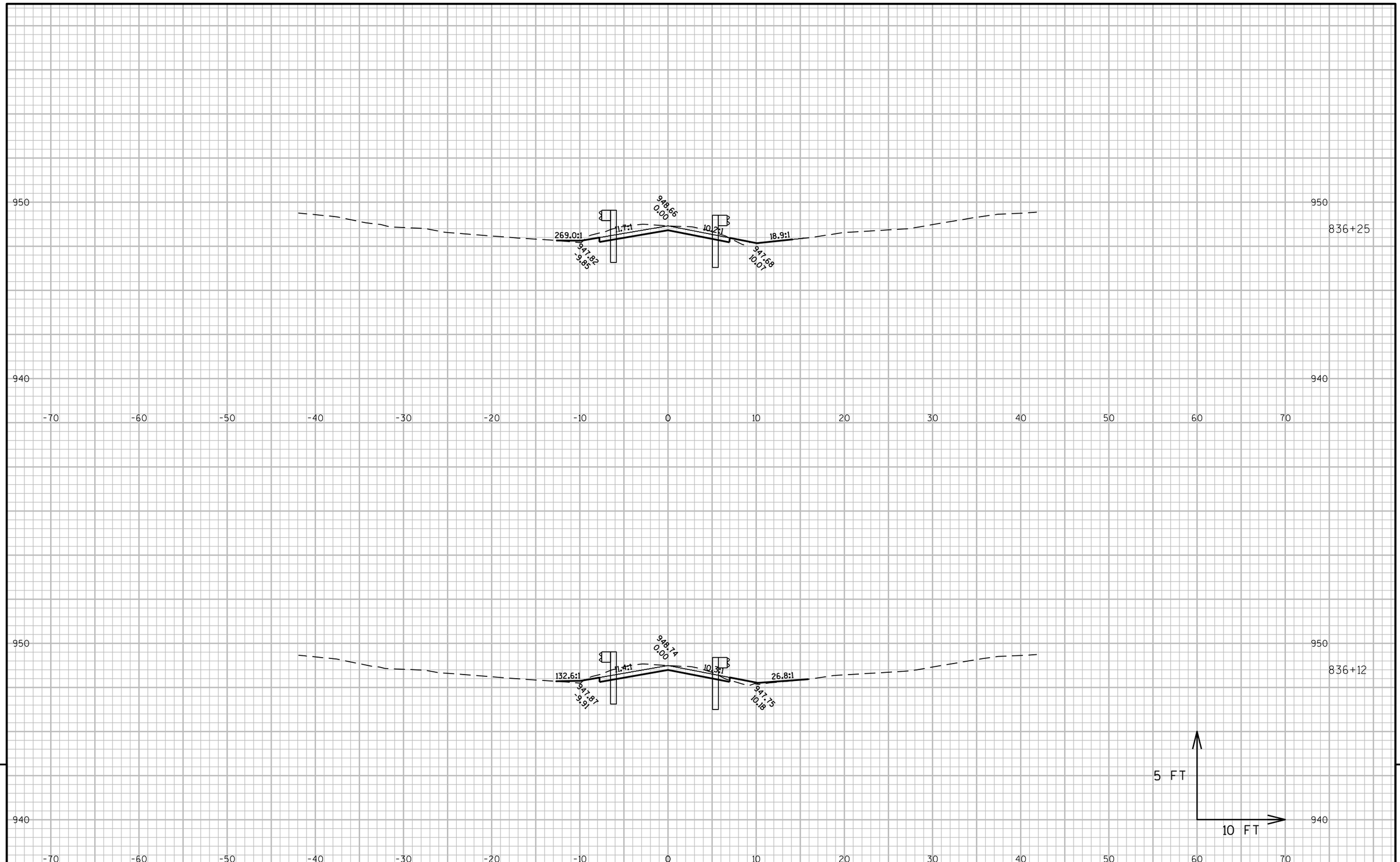


PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 96	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (37)

PLOT DATE : 5/1/2015 7:40 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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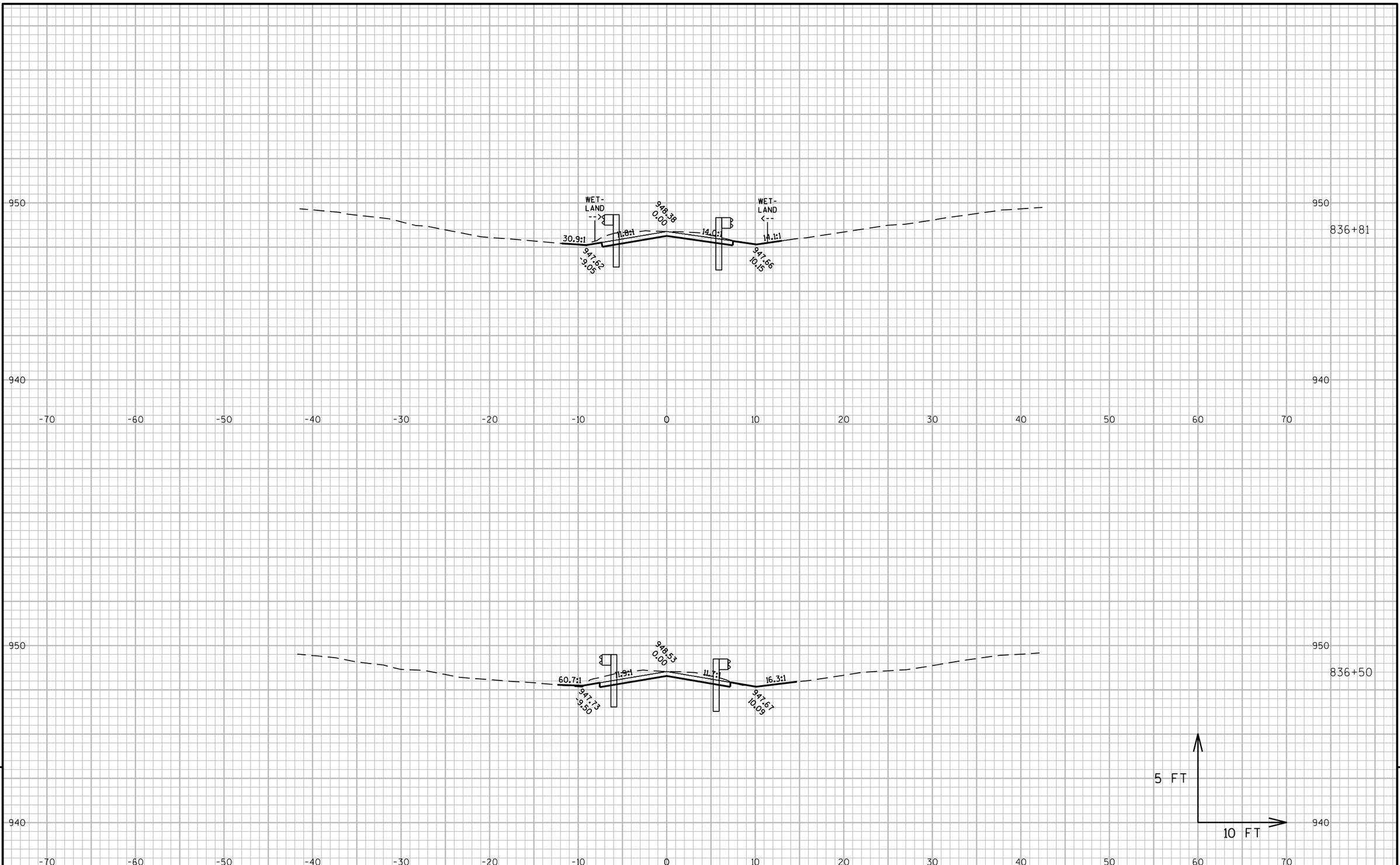
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 97	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (38)

PLOT DATE : 5/1/2015 7:40 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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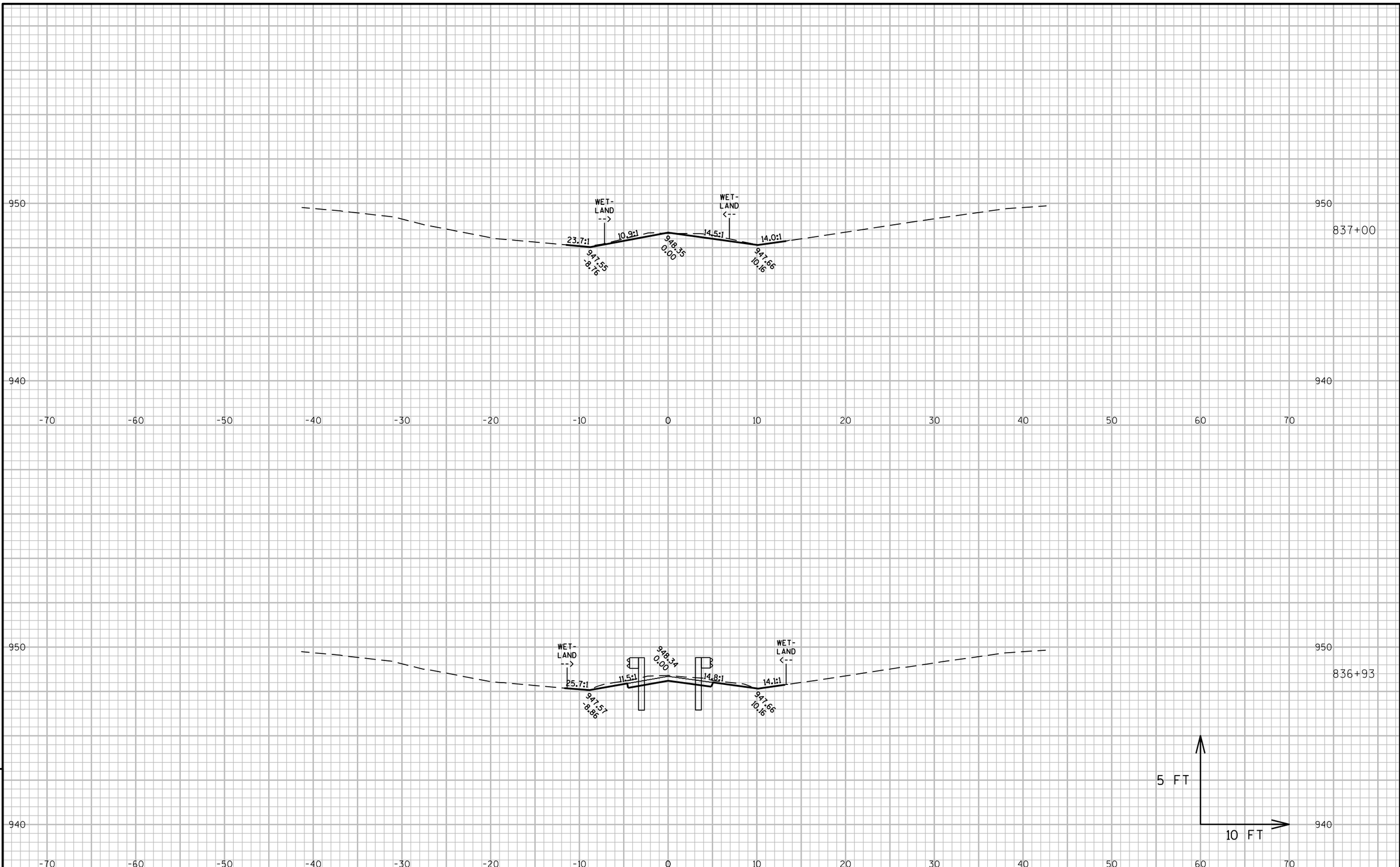
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 98	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (39)

PLOT DATE : 5/1/2015 7:40 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

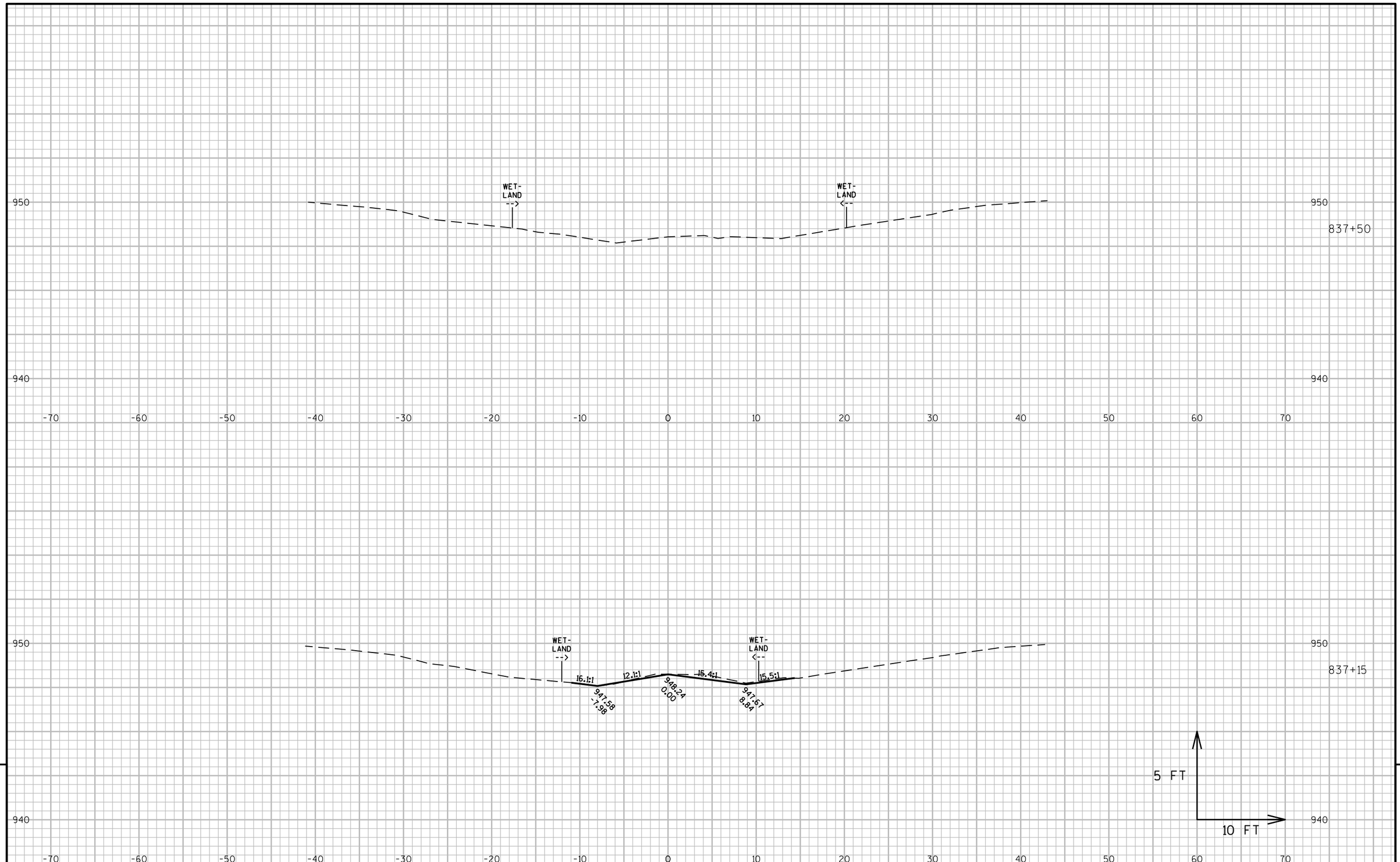
9

PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 99	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (40)

PLOT DATE : 5/1/2015 7:40 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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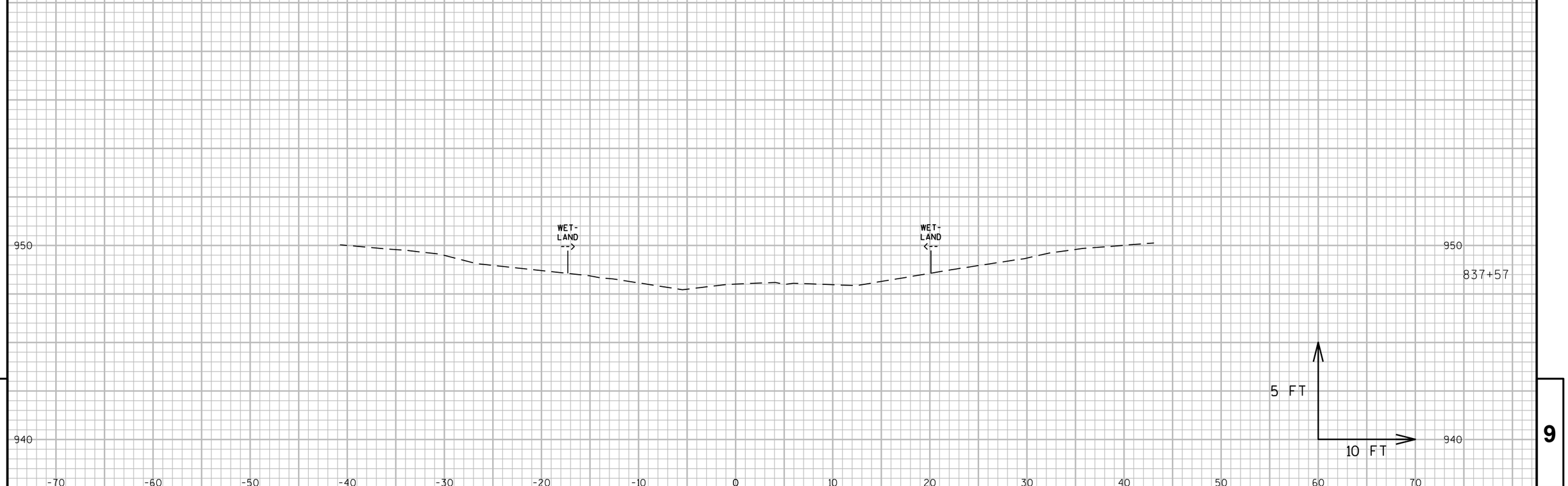
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 100	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAL 043007B.DWG
LAYOUT NAME - 090201-XS_WAL 043007B - SECTION SHEET - (41)

PLOT DATE : 5/1/2015 7:41 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



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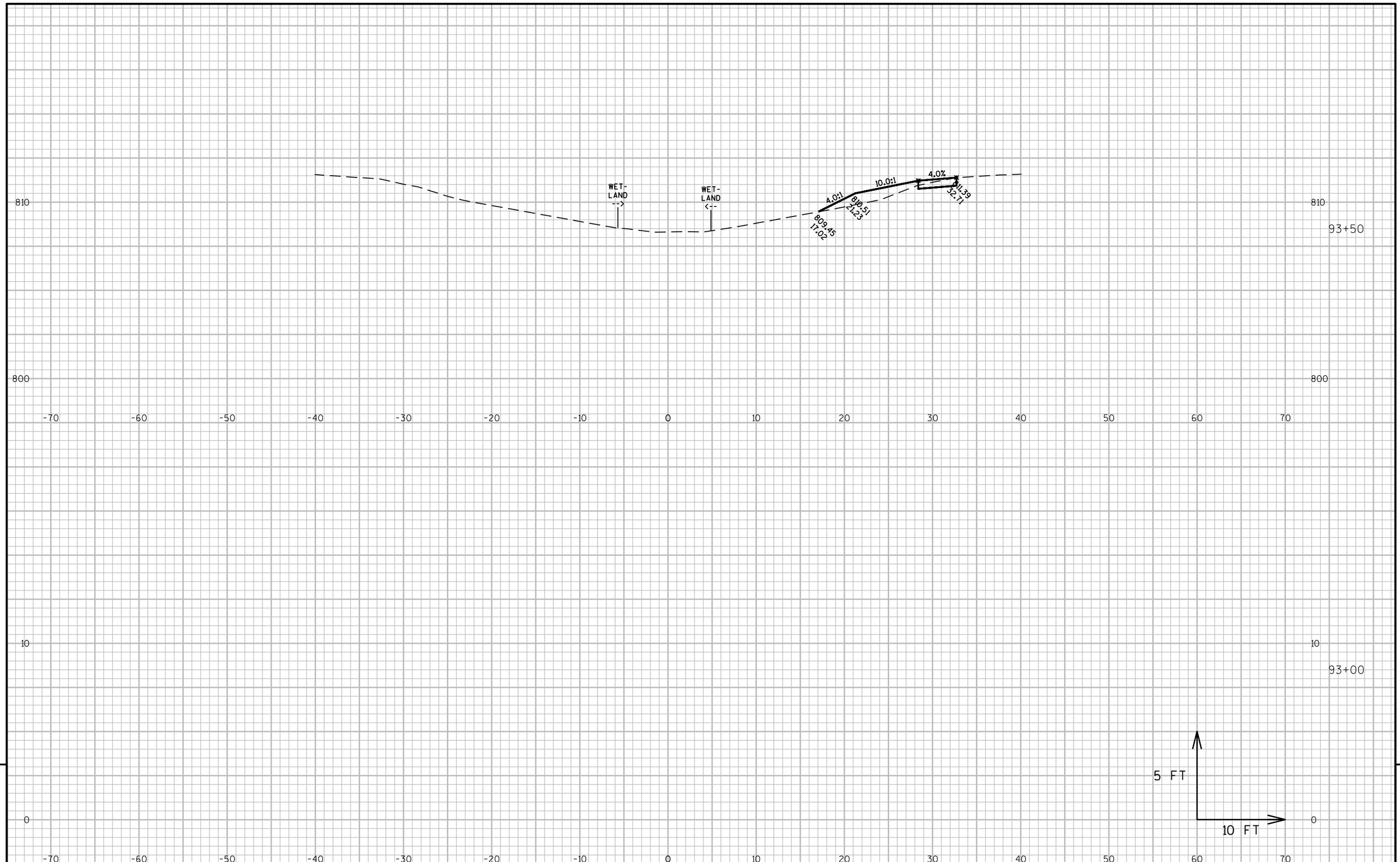
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 67 OVER IH-43 (B-64-109)	SHEET 101	E

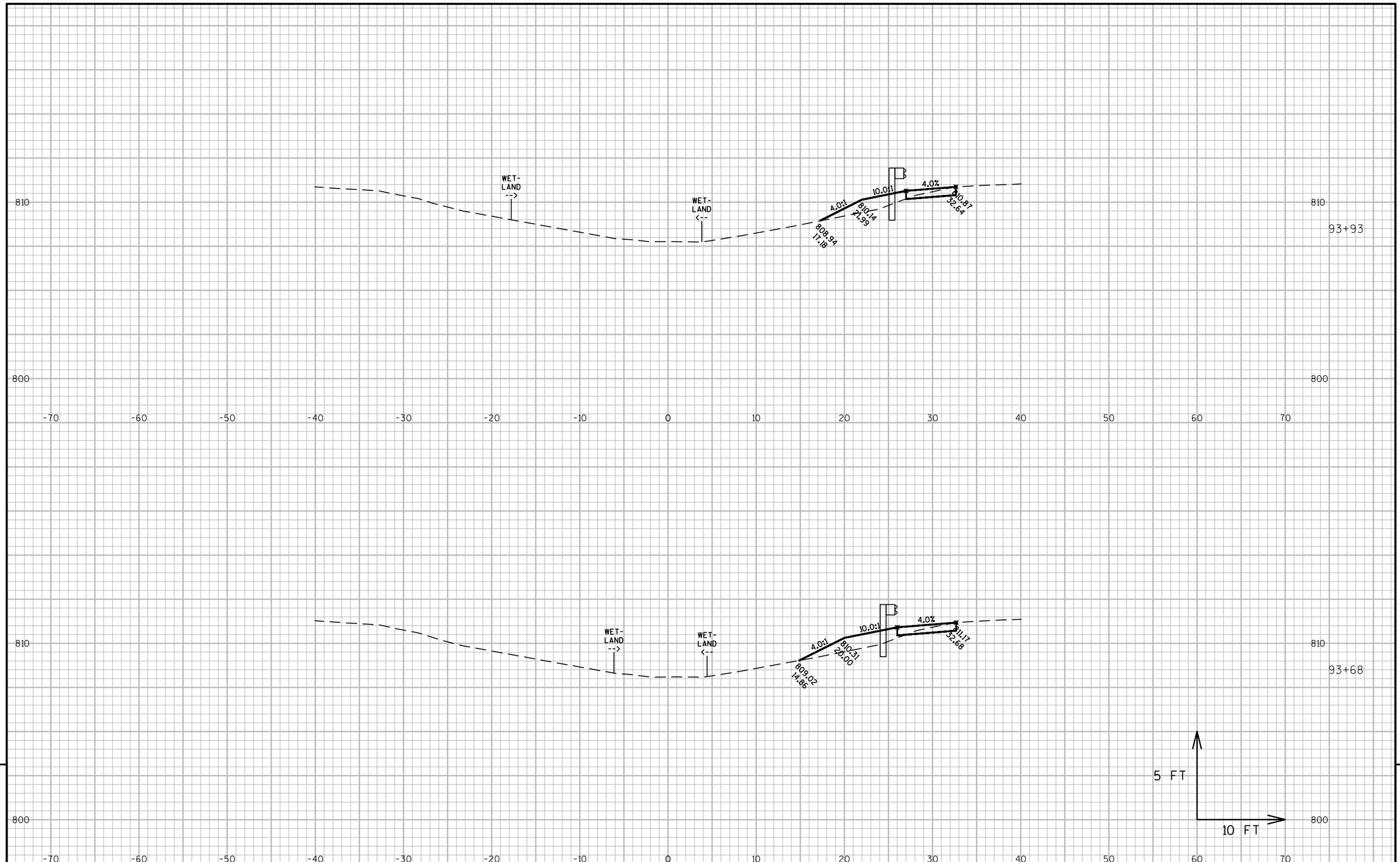


PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 102 E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (33)

PLOT DATE : 5/1/2015 7:41 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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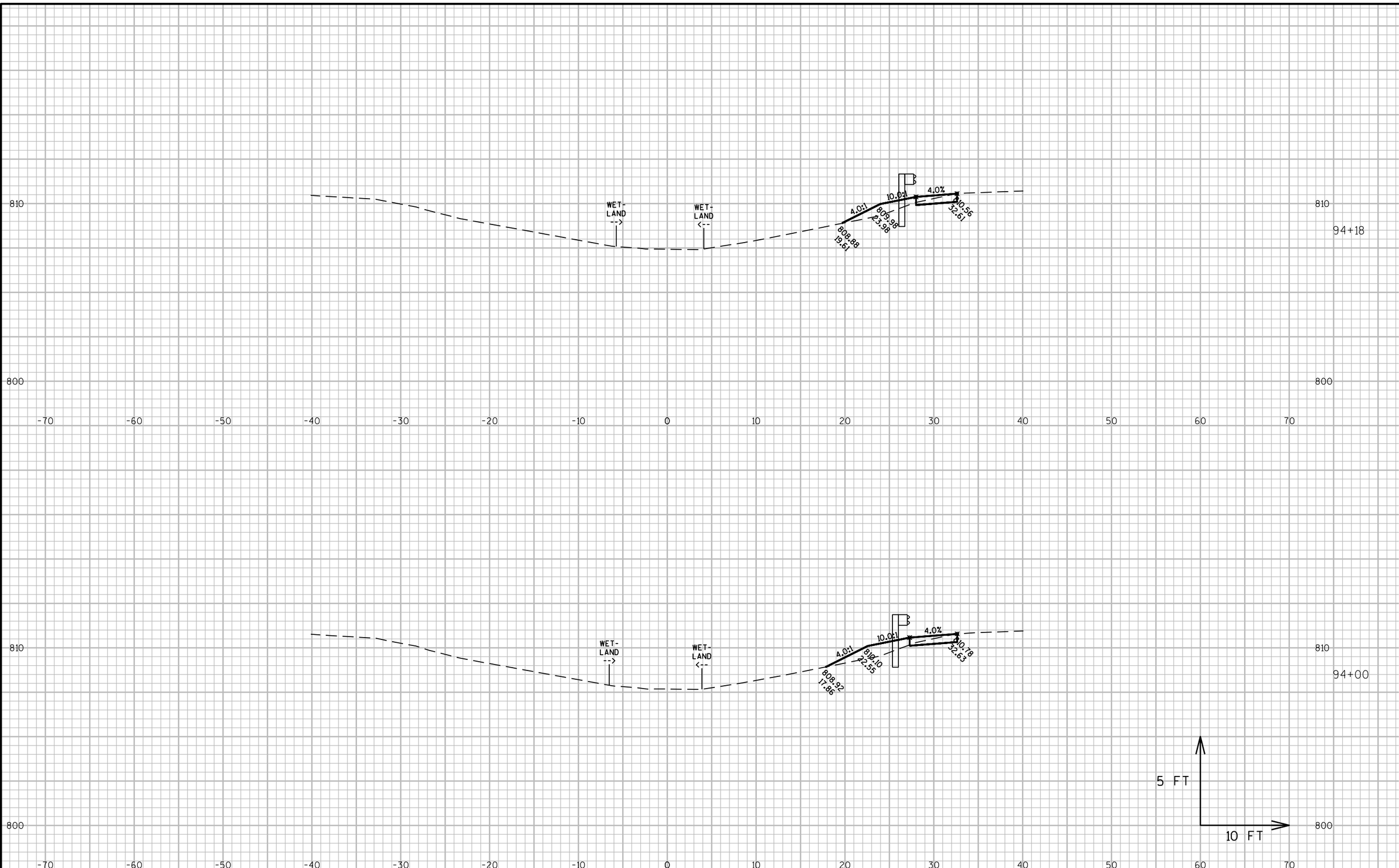
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 103	E



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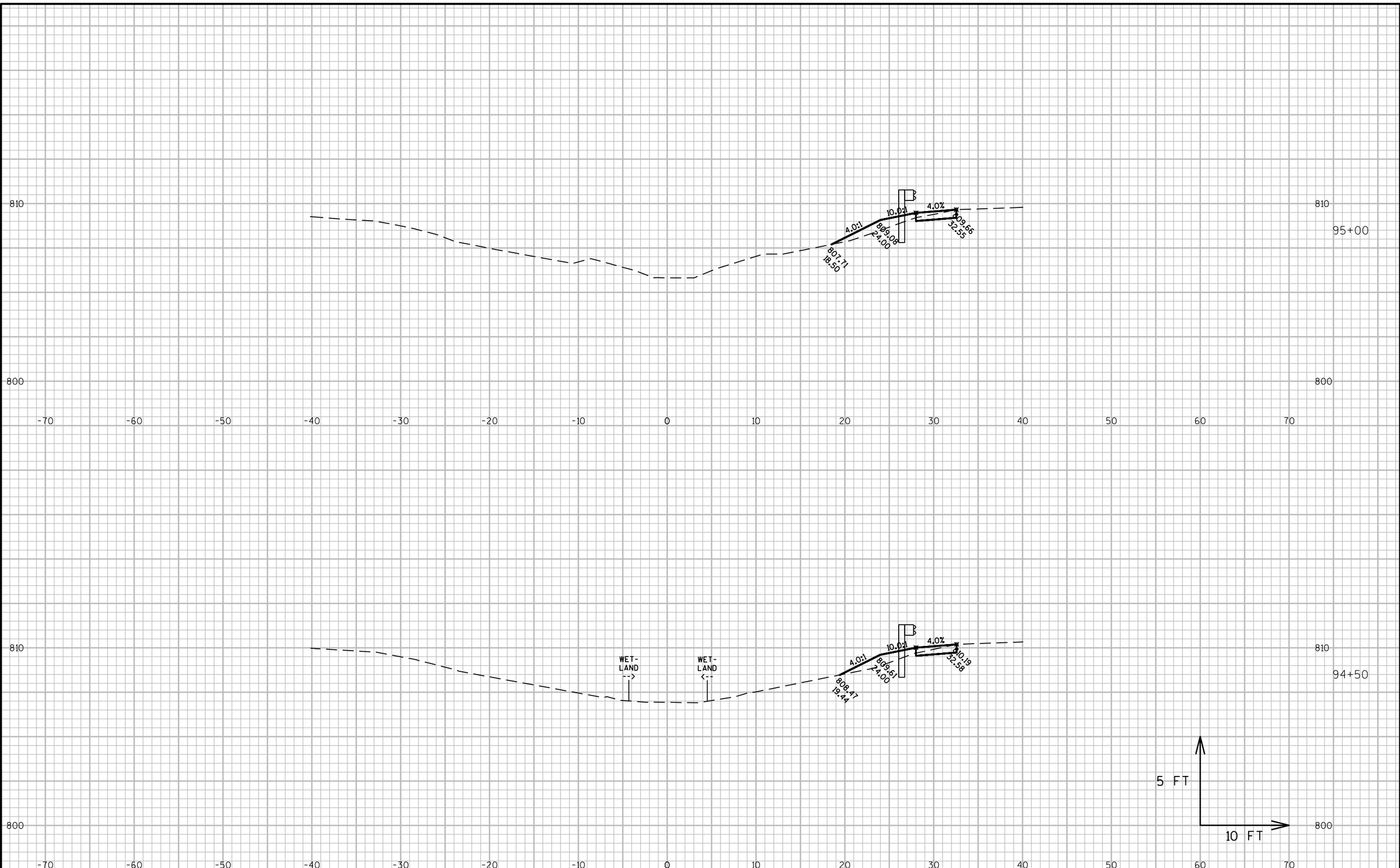
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 104	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (35)

PLOT DATE : 5/1/2015 7:41 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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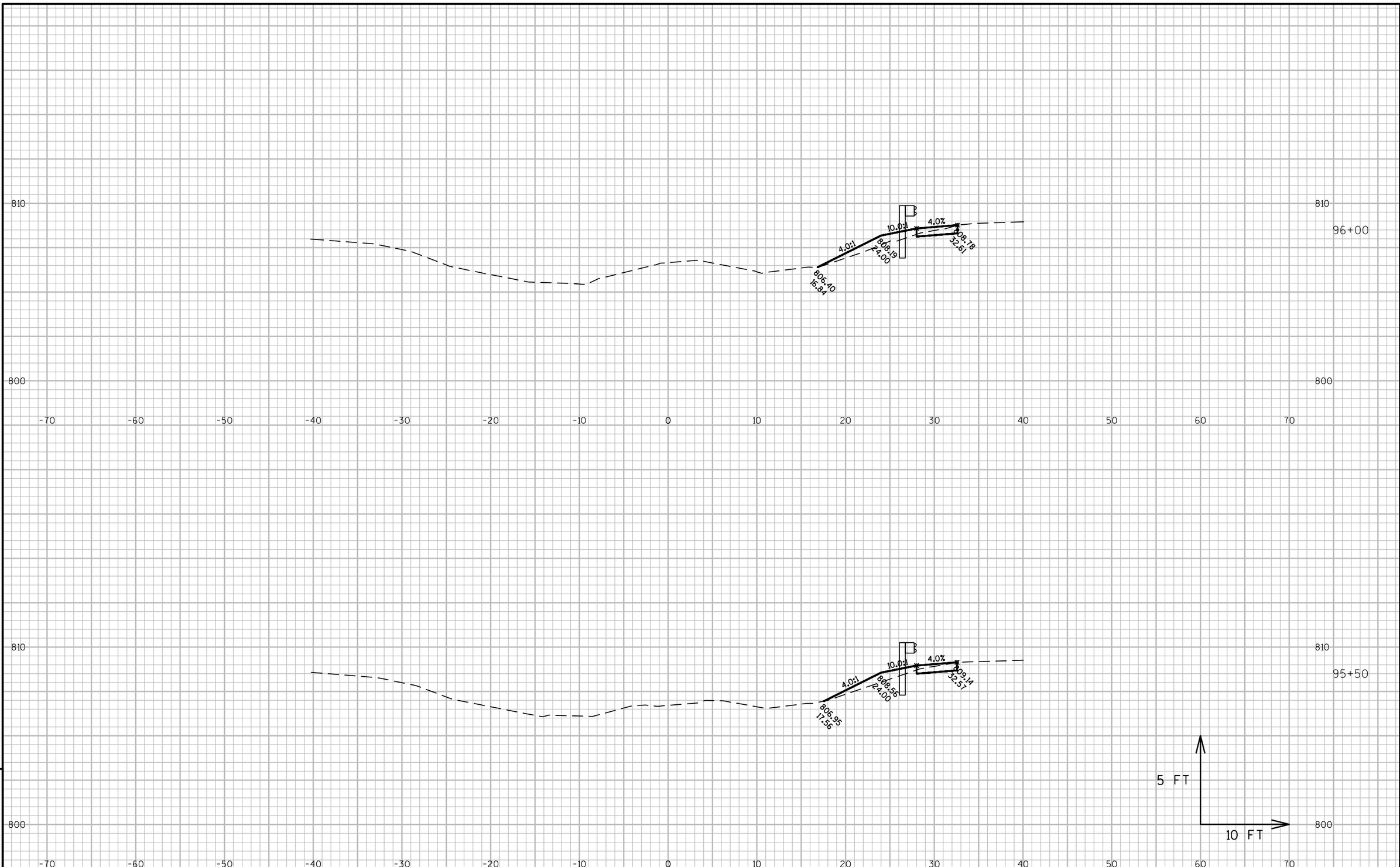
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 105	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (36)

PLOT DATE : 5/1/2015 7:41 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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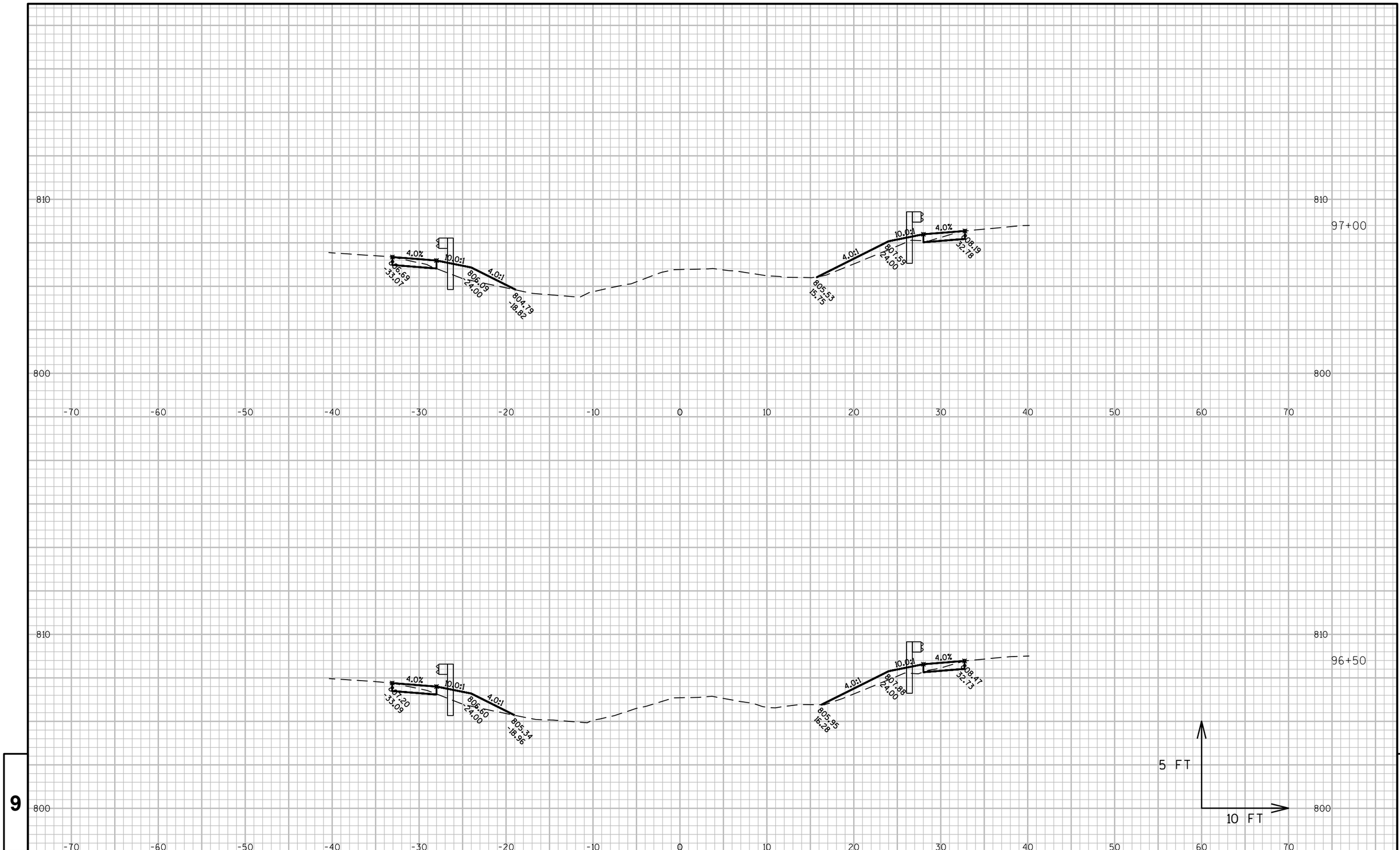
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 106	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (37)

PLOT DATE : 5/1/2015 7:42 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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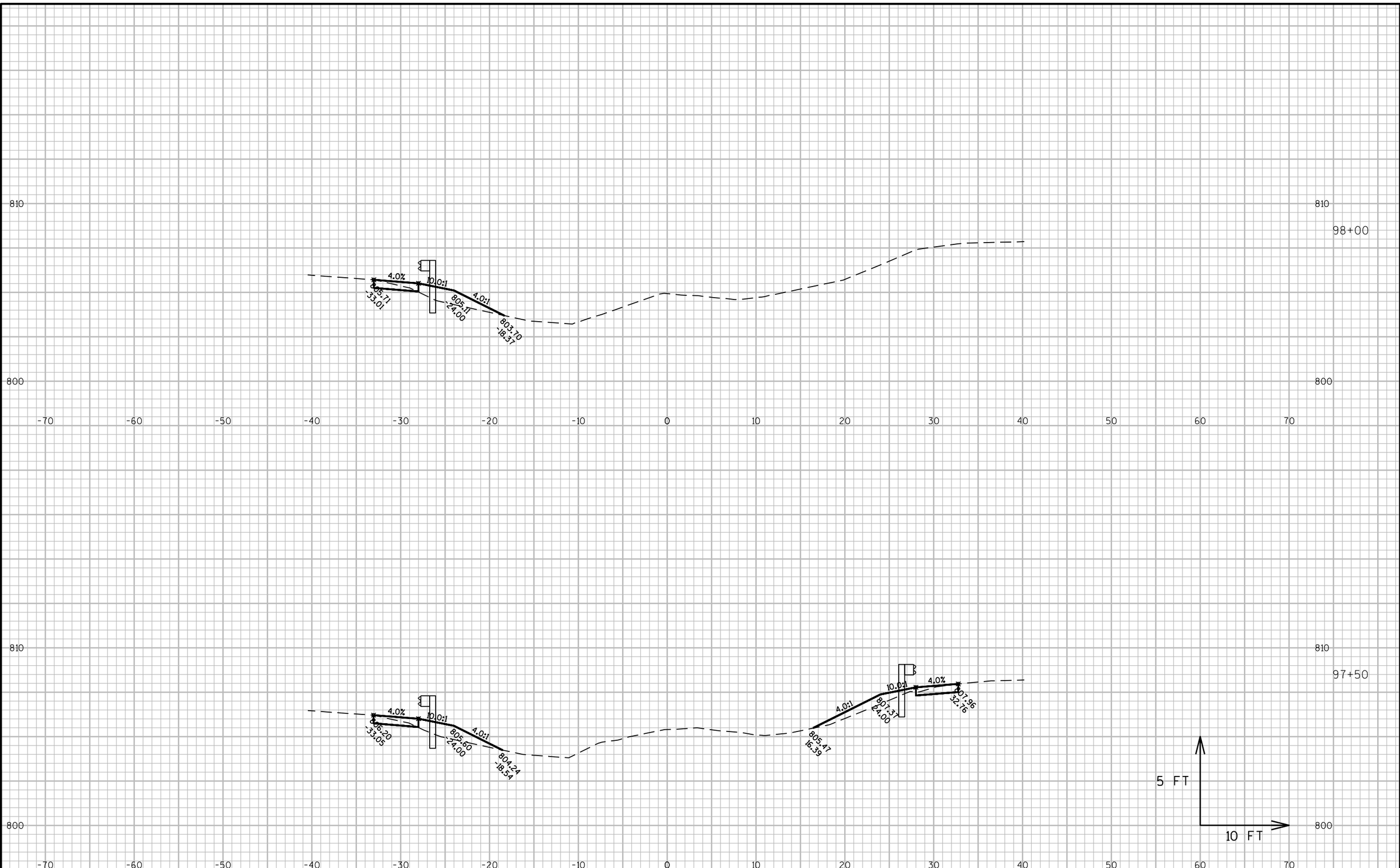
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 107	E

9

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (38)

PLOT DATE : 5/1/2015 7:42 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT



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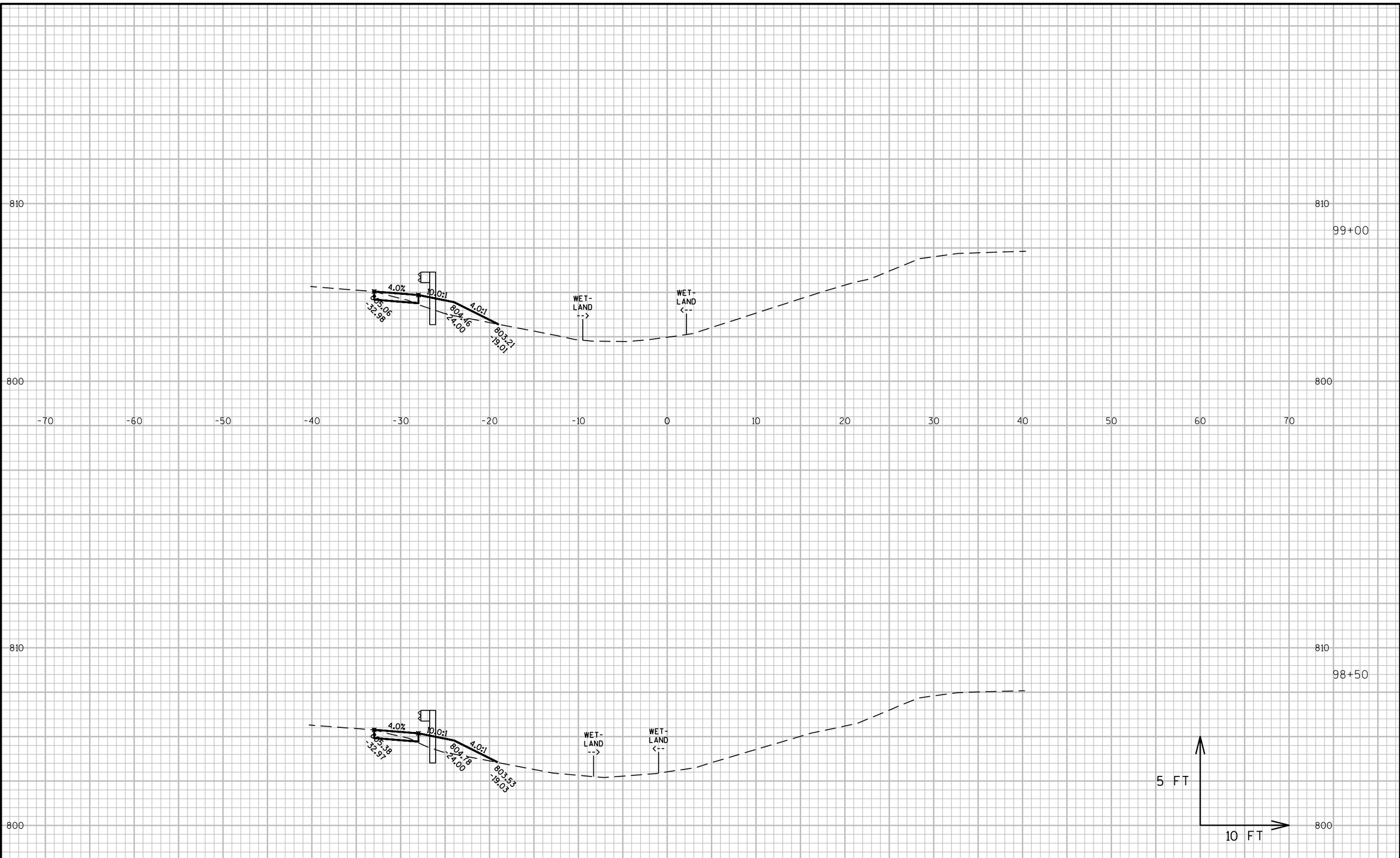
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 108	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (39)

PLOT DATE : 5/1/2015 7:42 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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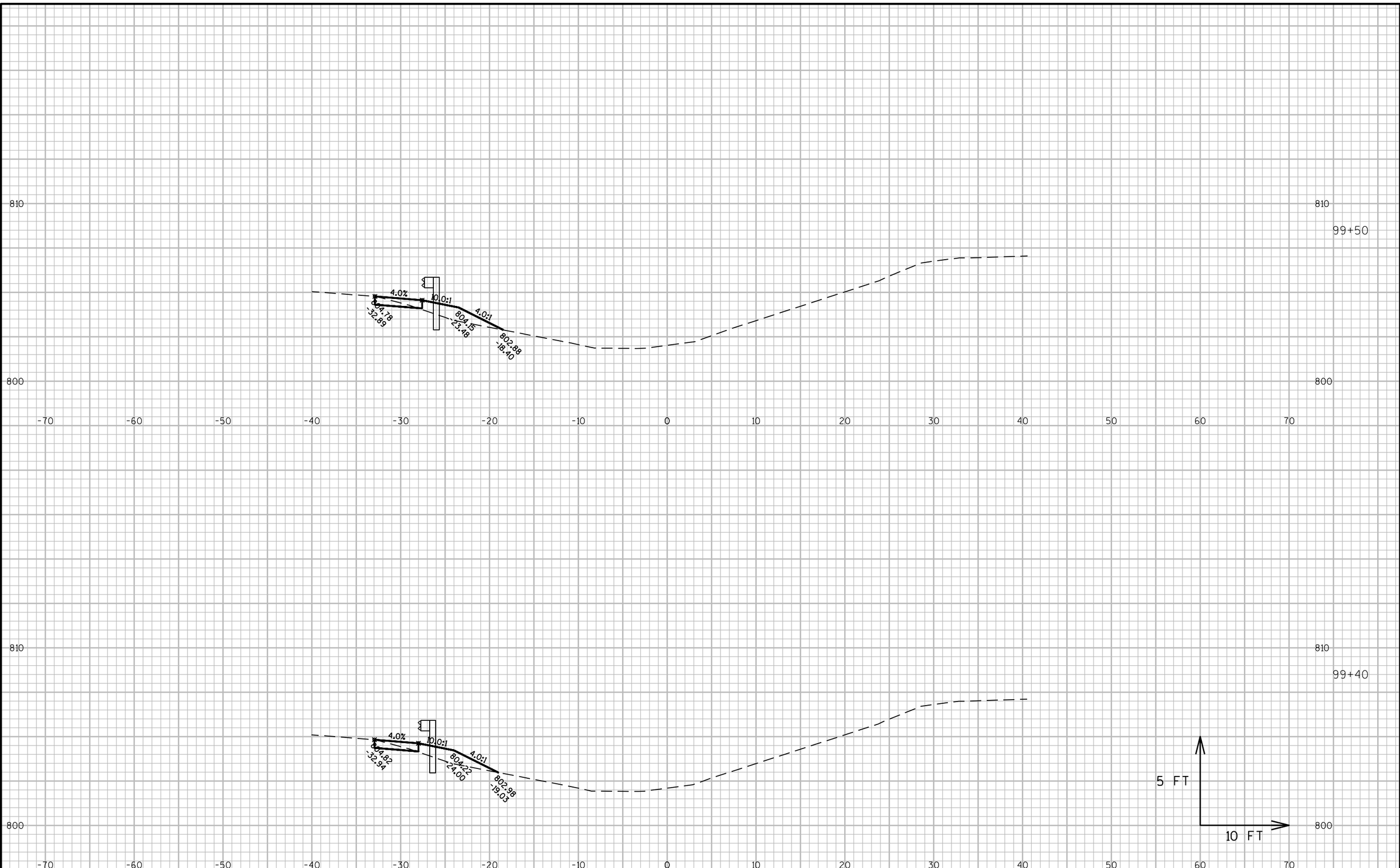
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 109 E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (40)

PLOT DATE : 5/1/2015 7:42 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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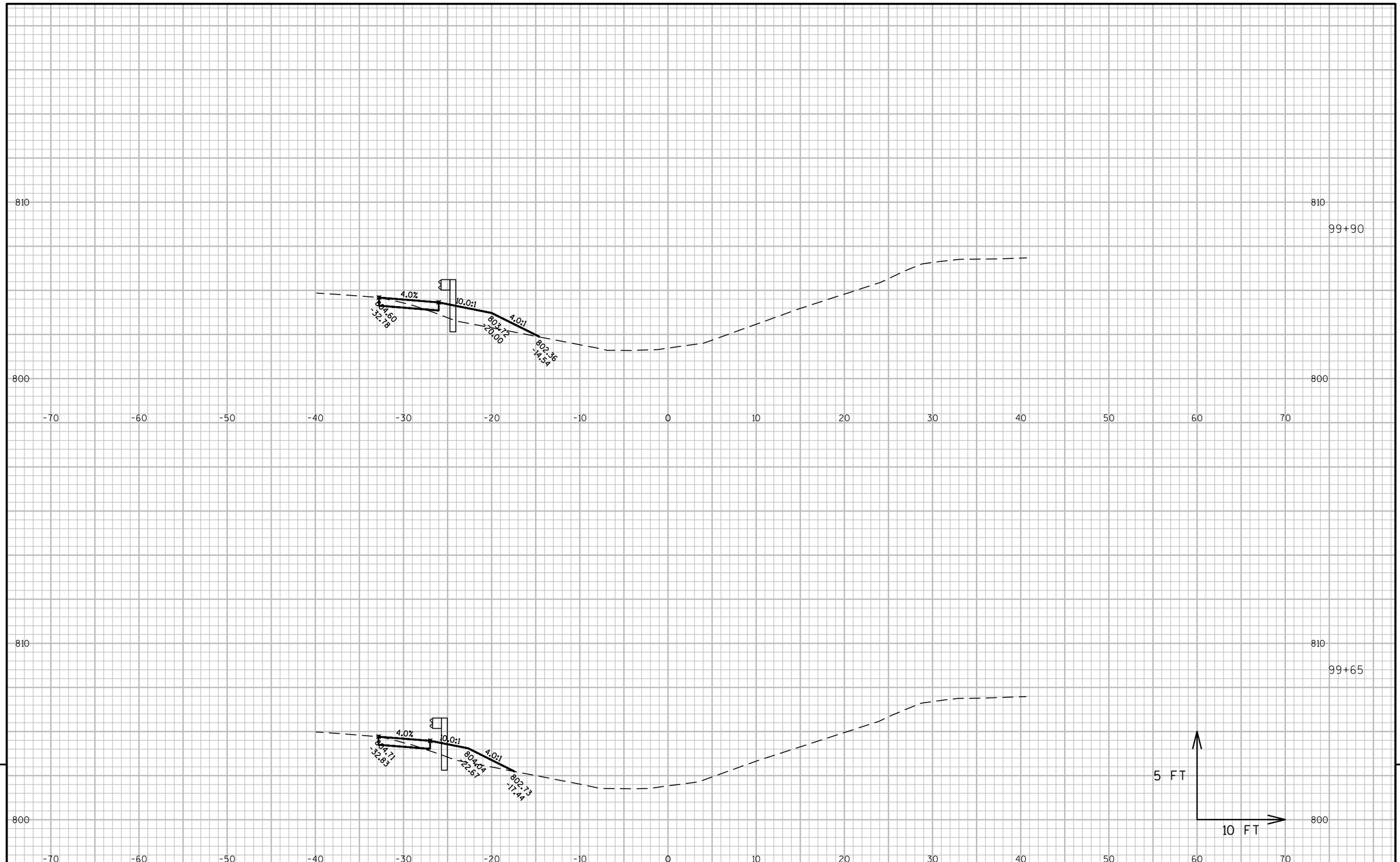
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 110	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (41)

PLOT DATE : 5/1/2015 7:42 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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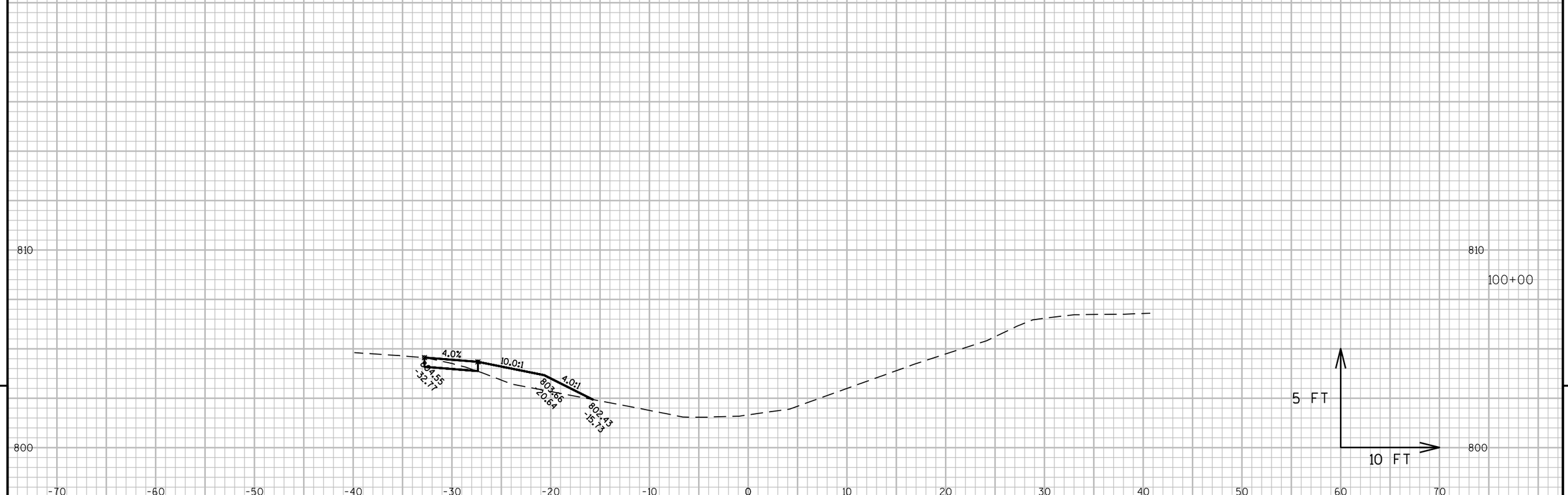
PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 111	E



9

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PROJECT NO: 1090-37-70	HWY: IH-43	COUNTY: WALWORTH / WAUKESHA	CROSS SECTIONS: STH 83 OVER IH-43 (B-67-129)	SHEET 112	E

FILE NAME : N:\PDS\C3D\10000530\SHEETSPLAN\090201-XS_WAU 043016B.DWG
LAYOUT NAME - 090201-XS_WAU 043016B - SECTION SHEET - (43)

PLOT DATE : 5/1/2015 7:43 AM PLOT BY : OMARI, EYAD K PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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