

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE

UTILITIES

COMMUNICATIONS LINE

AT&T LEGACY
BRAD KEMPH (LOCATOR)
715-254-5238
COPY ALL CORRESPONDENCE TO:
BILL KOENIG (ENGINEER)
JMC ENGINEERS & ASSOCIATES
128 W SUNSET AVENUE
APPLETON, WI 54911
608-628-0575 (MOBILE)
wekoenig@att.net

AT&T WISCONCIN
RICK PODOLAK
304 SOUTH DEWEY ST, 4TH FLOOR
EAU CLAIRE, WI 54701
715-839-5565 (OFFICE)
715-410-0656 (MOBILE)
rp4514@att.com

CENTURYLINK COMMUNICATIONS
BOB SAMPSON
1310 E. MARY STREET
OTTUMWA, IA 52501
642-684-4106 (OFFICE)
636-887-5367 (MOBILE)
Robert.Sampson@Centurylink.com

LEVEL 3 COMMUNICATIONS
BOB STRONG
5480 FELTL RD
MINNETONKA, MN 55343
952-351-2353 (OFFICE)
612-805-6827 (MOBILE)
bob.strong@level3.com
COPY ALL CORRESPONDENCE TO:
Level3.networkrelocations@level3.com



Dial  or (800)242-8511

www.DiggersHotline.com

ELECTRICITY - DISTRIBUTION

DUNN ENERGY COOPERATIVE
MIKE ANDRASCHKO
N5725 600TH STREET
PO BOX 220
MENOMONIE, WI 54751-0220
715-232-6240 (OFFICE)
mandra@dunnenergy.com

XCEL ENERGY
MIKE JOHNSEN
320 HELLER ROAD
MENOMONIE, WI 54751
715-232-7415 (OFFICE)
715-577-7428 (MOBILE)
michael.a.johnsen@xcelenergy.com
COPY ALL CORRESPONDENCE TO:
DAWN SCHULTZ
1414 W HAMILTON AVE
PO BOX 8
EAU CLAIRE, WI 54702-0008
715-737-2482 (OFFICE)
dawn.schultz@xcelenergy.com

ELECTRIC - TRANSMISSION

XCEL ENERGY
BRUCE ZEMKE
414 NICOLLET MALL - 5TH FLOOR
MINNEAPOLIS, MN 55401
612-330-7815 (OFFICE)
651-214-2620 (MOBILE)
bruce.m.zemke@xcelenergy.com
COPY ALL CORRESPONDENCE TO:
DAWN SCHULTZ
1414 W HAMILTON AVE
PO BOX 8
EAU CLAIRE, WI 54702-0008
715-737-2482 (OFFICE)
dawn.schultz@xcelenergy.com

WISCONSIN DNR CONTACT

AMY LESIK
DEPARTMENT OF NATURAL RESOURCES
WEST CENTRAL REGION HDQTRS
1300 W CLAIREMONT AVENUE
PO BOX 4001
EAU CLAIRE, WI 54701-4001
(715) 836-6571

GENERAL NOTES

HORIZONTAL CONTROL POINTS AND ANY OTHER SURVEY INFORMATION WILL BE PROVIDED BY NORTHWEST REGION TECHNICAL SERVICES UPON REQUEST.

CURVE DATA IS BASED ON THE ARC DEFINITION.

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

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL DIGGERS HOTLINE PRIOR TO BEGINNING WORK OPERATIONS.

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

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

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

WETLANDS MAY EXIST IN LOCATIONS THAT ARE NOT SHOWN ON THE PLANS. DO NOT STAGE IN OR DISTURB WETLAND AREAS.

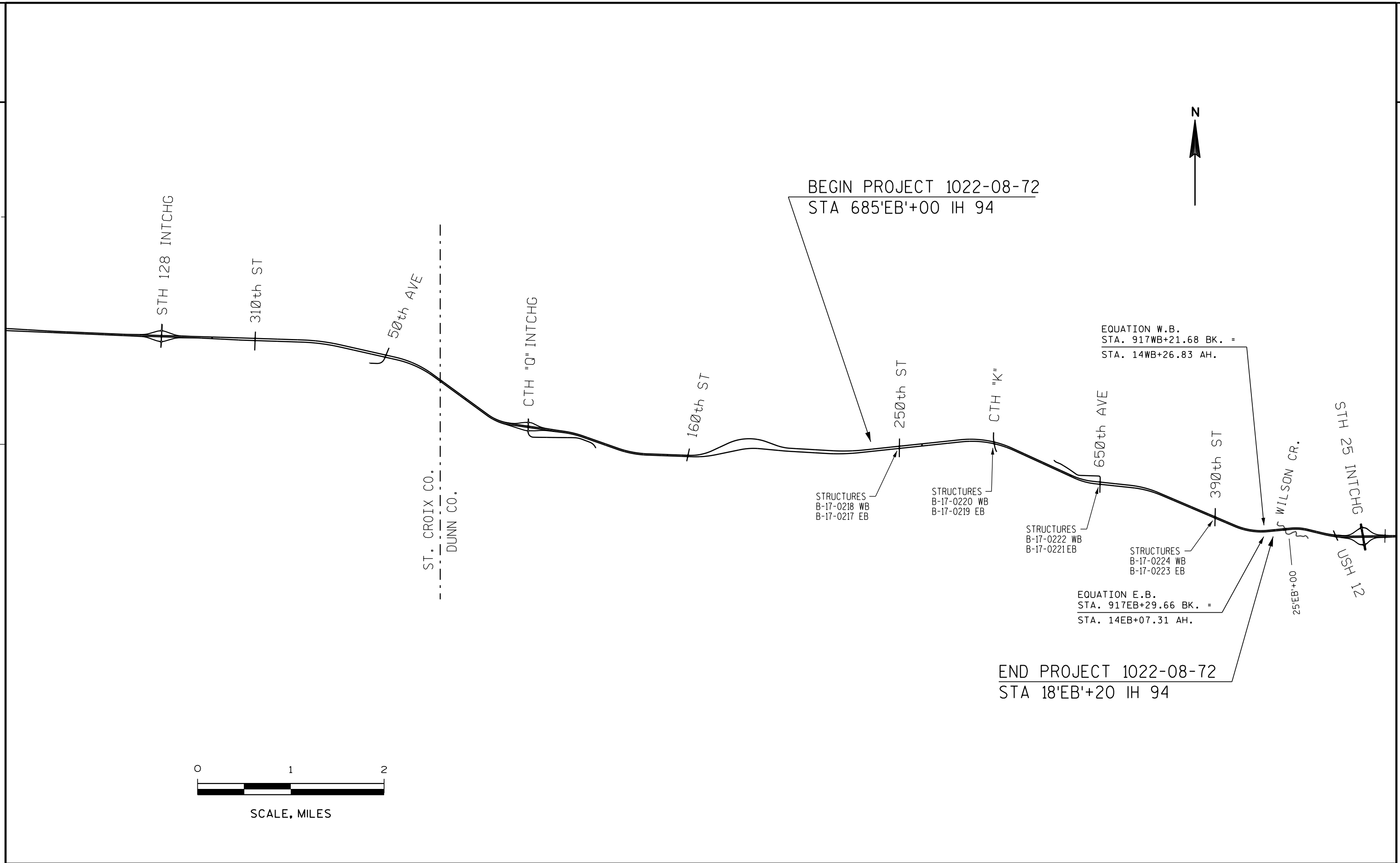
A SHRINKAGE FACTOR OF 33% WAS USED IN BALANCING EARTHWORK. ACTUAL SHRINKAGE ENCOUNTERED IN THE FIELD MAY VARY.

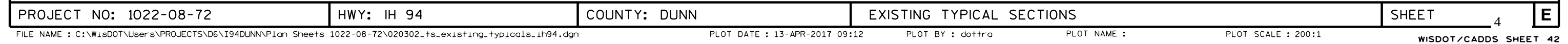
EXCAVATION BELOW SUBGRADE (EBS) IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATIONS AND LIMITS FOR EBS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

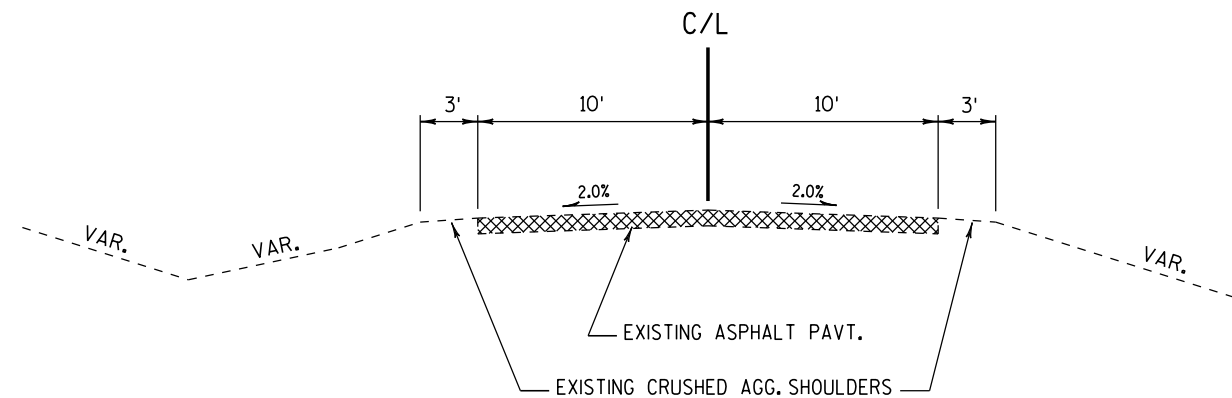
WHEN THE QUANTITY OF BASE AGGREGATE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

ORDER OF SECTION 2 SHEETS

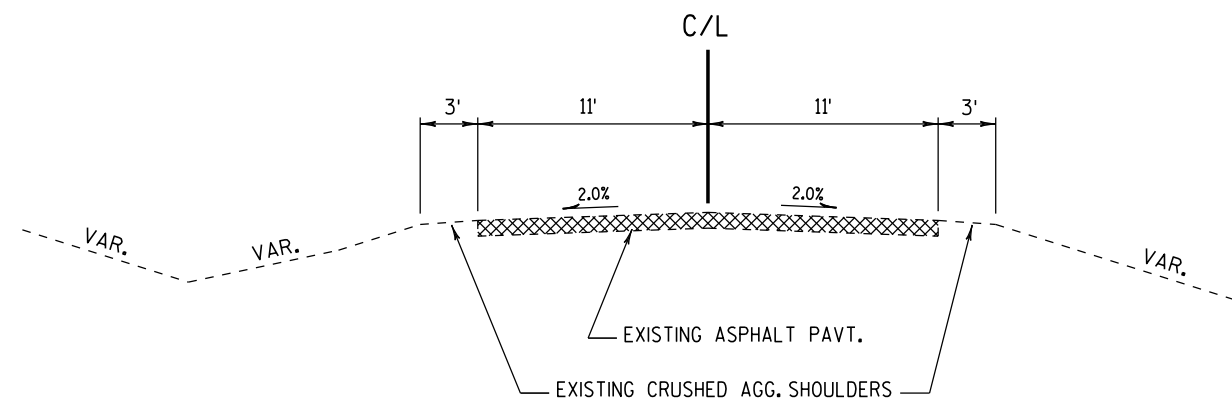
- Project Overview
- Typical Sections
- Construction Details
- Erosion Control
- Signing
- Traffic Control and Construction Staging
- Fencing and Median Cable Barrier
- Alignment Data



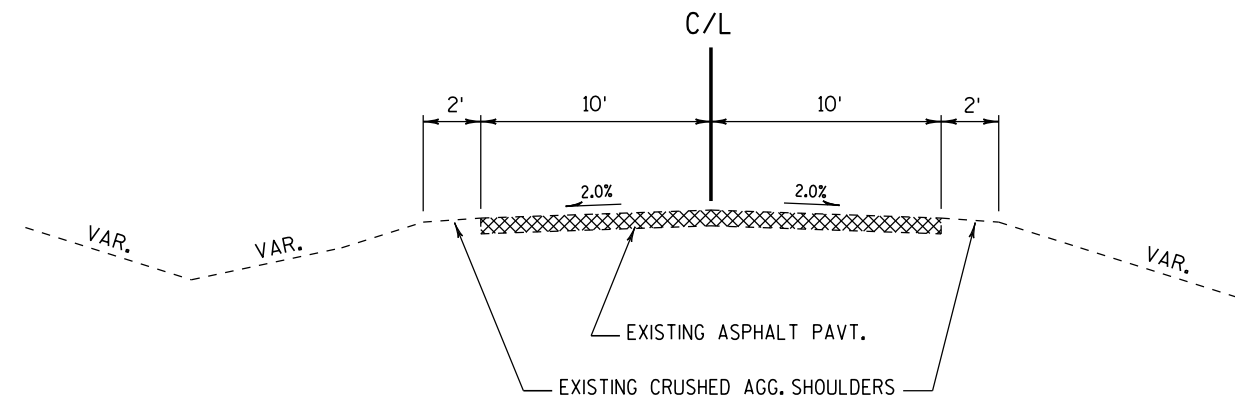




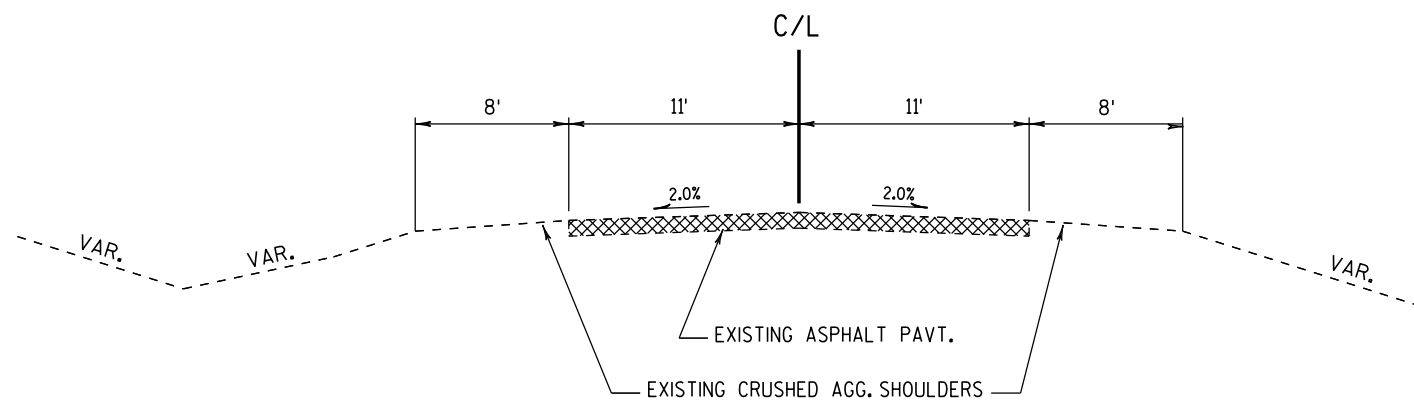
EXISTING TYPICAL SECTION
250th STREET



EXISTING TYPICAL SECTION
CTH K

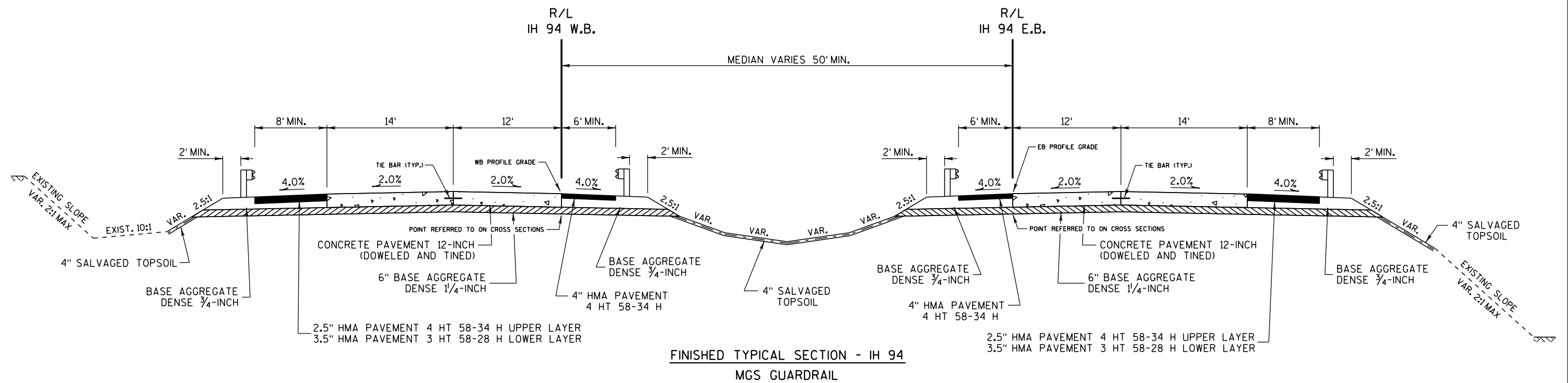
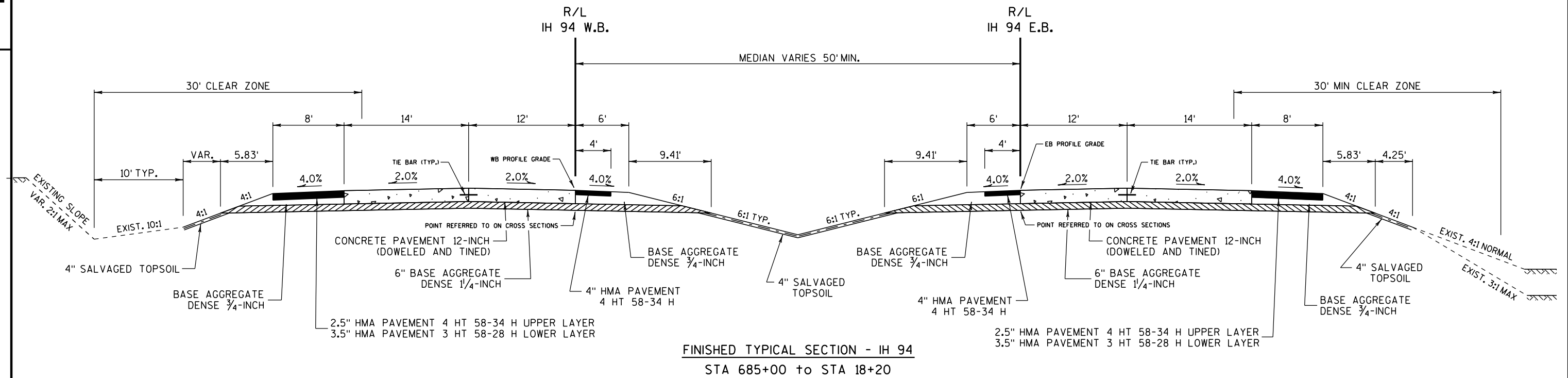


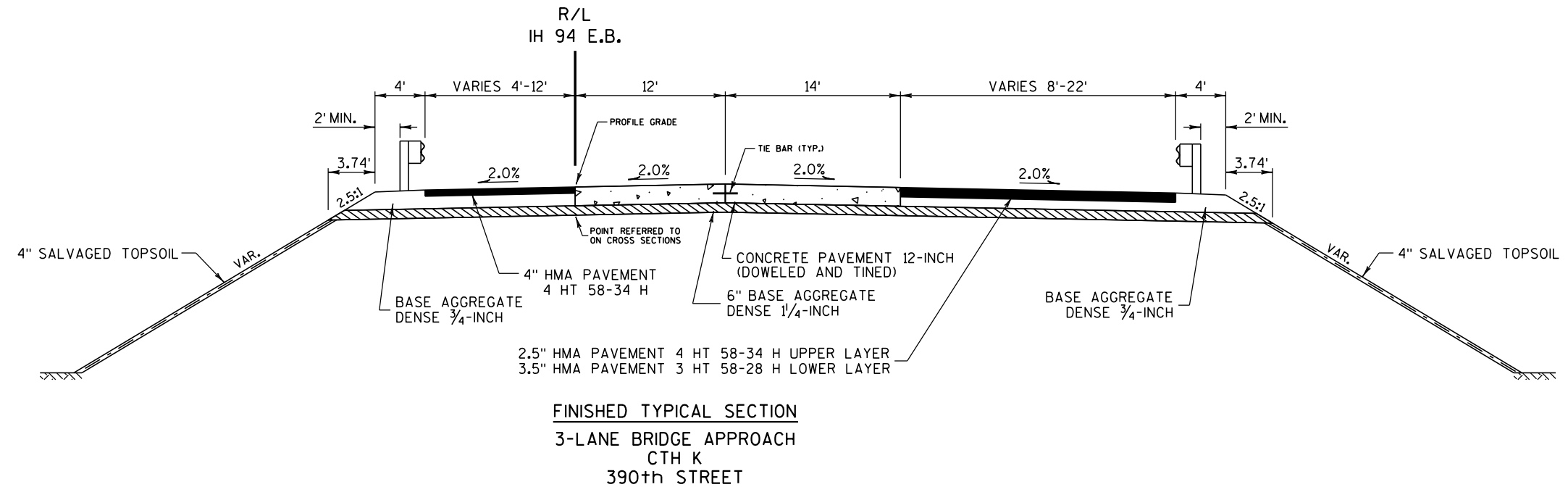
EXISTING TYPICAL SECTION
650th AVENUE



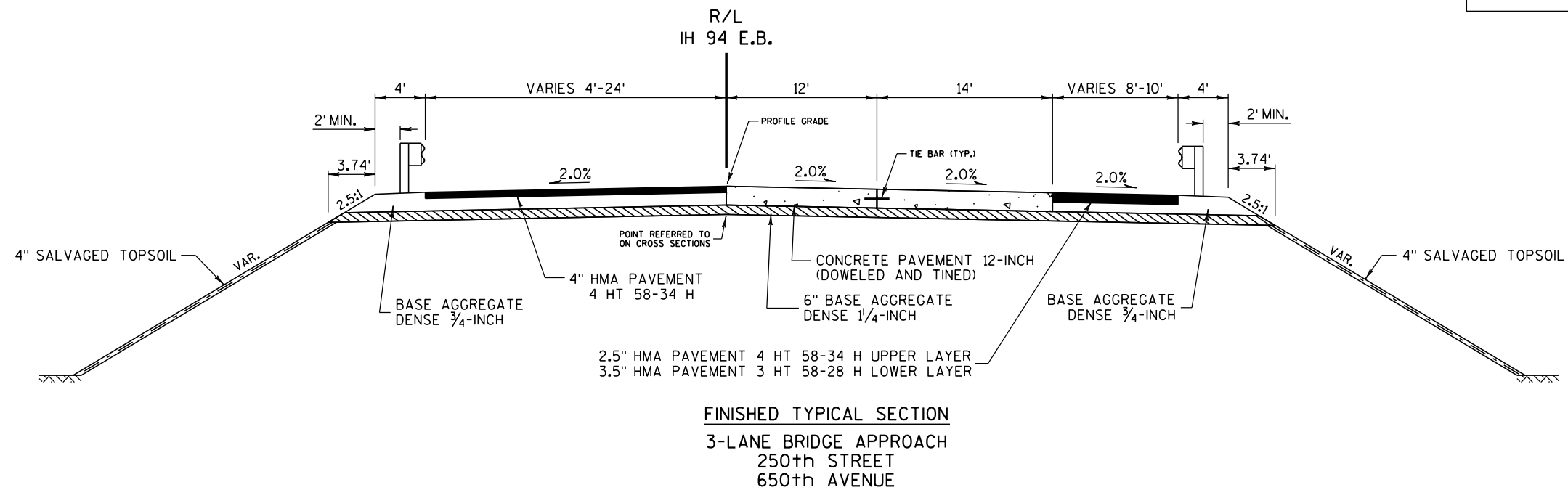
EXISTING TYPICAL SECTION
390th STREET

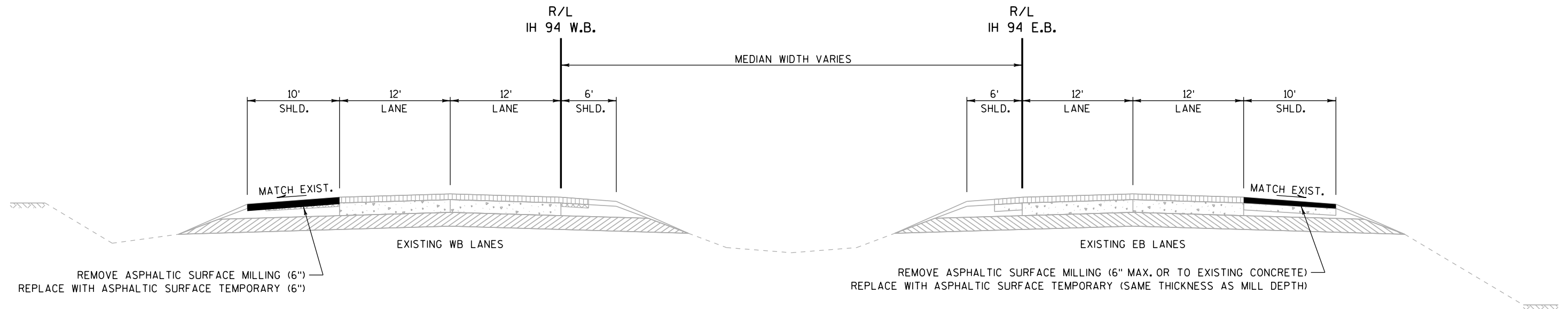
2





NOTE: EB SHOWN, WB IS MIRROR IMAGE.





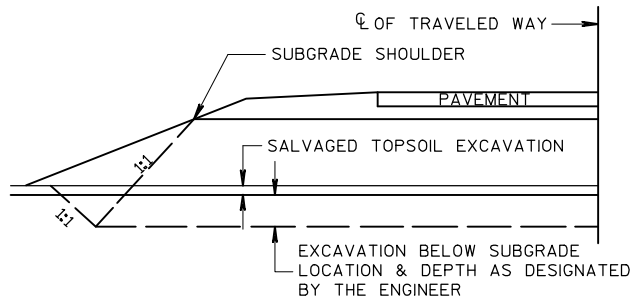
MILL & RESURFACE OUTSIDE SHOULDERS
REQ'D. FOR TEMPORARY TRAFFIC

INTERMEDIATE TYPICAL SECTION - IH 94
REQ'D. FOR STAGES 2-G AND 6-C

WB LANES
STA 666+00 to STA 685+00
STA 758+00 to STA 807+00
STA 845+00 to STA 872+50
STA 898+250 to STA 23+15

FINISHED TYPICAL SECTION - IH 94
REQ'D. FOR STAGE 6-C

EB LANES
STA 660+00 to STA 685+00
STA 18+20 to STA 23+35

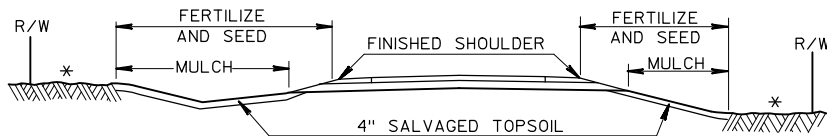


DETAIL FOR EXCAVATION BELOW SUBGRADE

RUNOFF COEFFICIENT TABLE

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

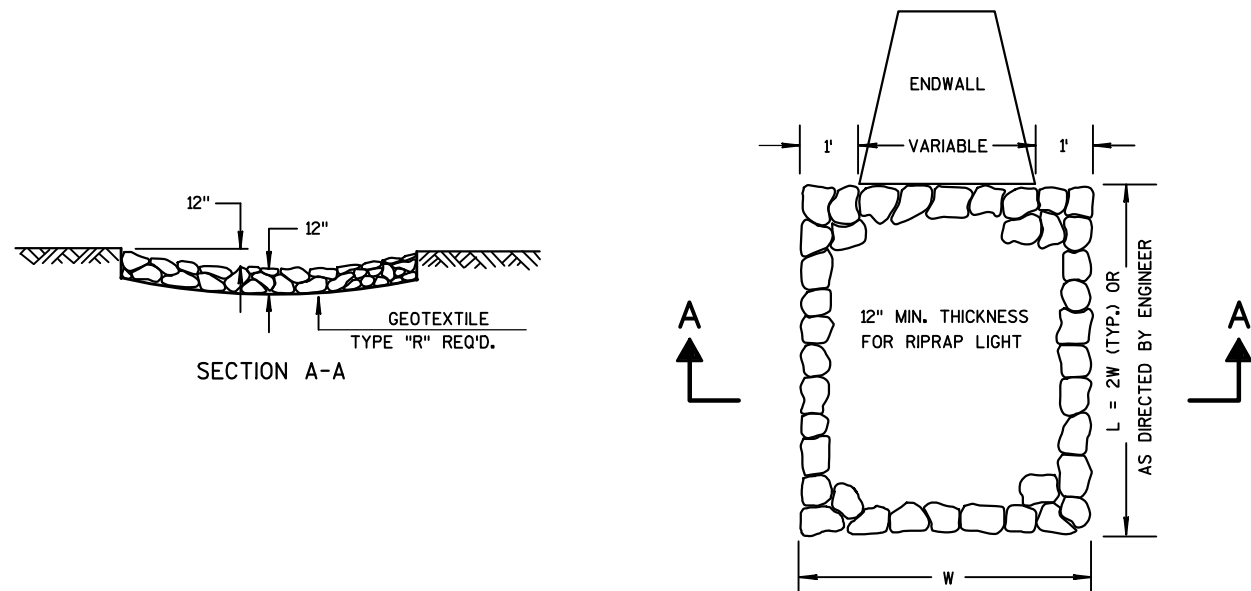
TOTAL PROJECT AREA = 228 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 123 ACRES



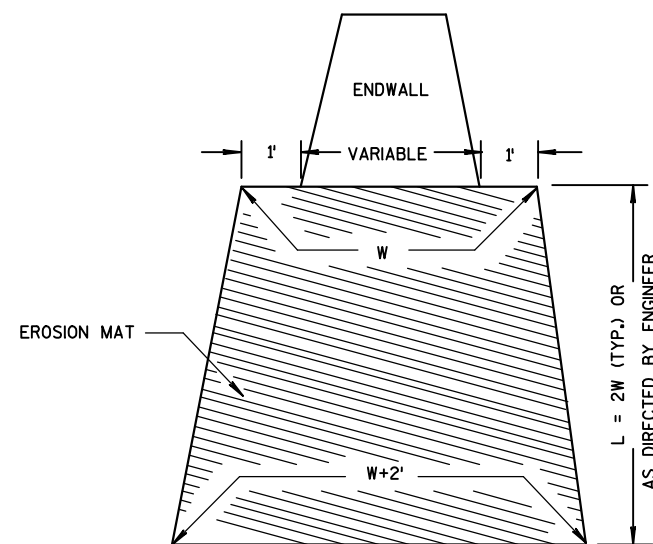
* DISTURBED AREAS TO BE
FERTILIZED & SEEDED

DETAIL FOR FINISHING ITEMS

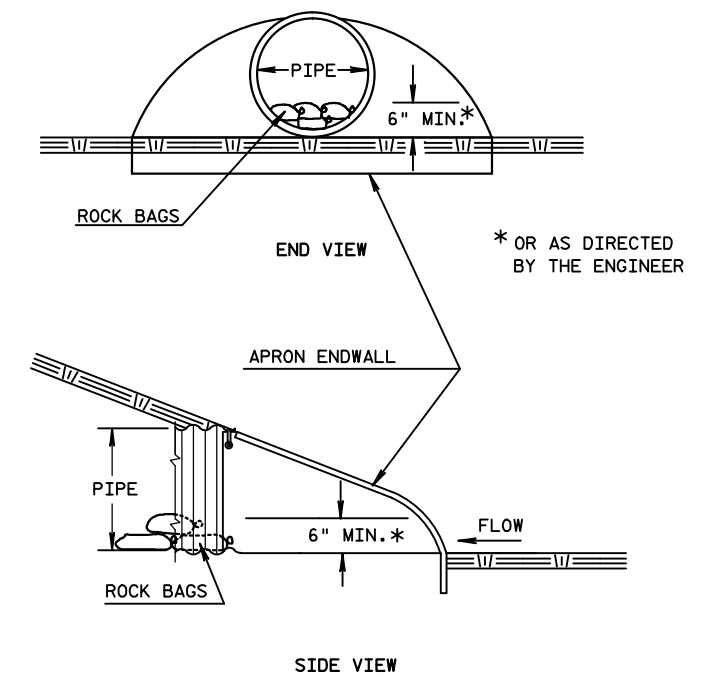
2



RIPRAP LIGHT TREATMENT AT CULVERTS

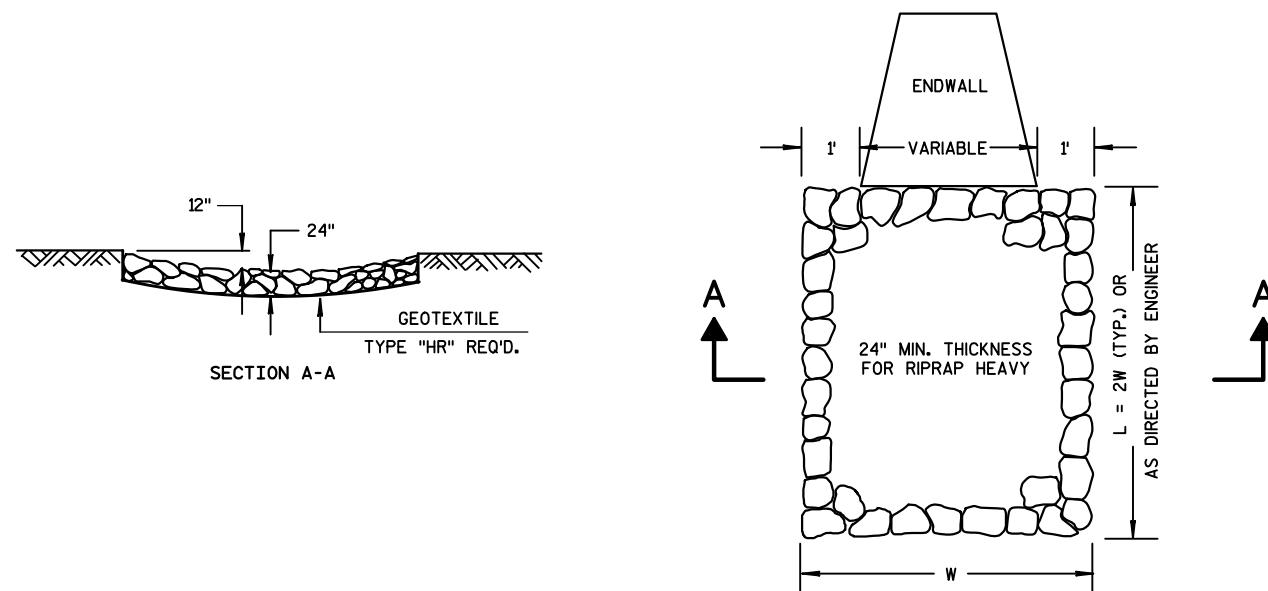


EROSION MAT TREATMENT AT CULVERTS

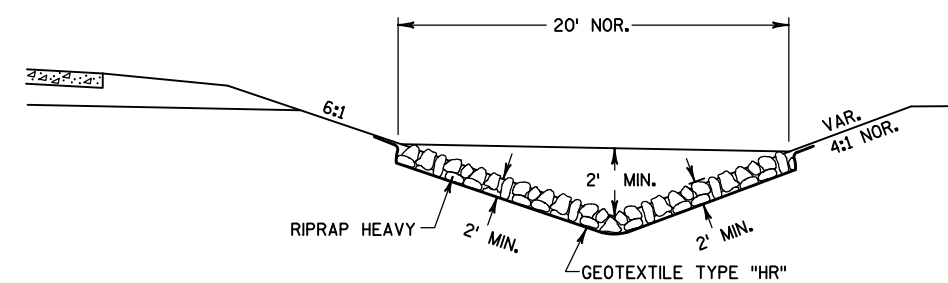


CULVERT PIPE DITCH CHECK

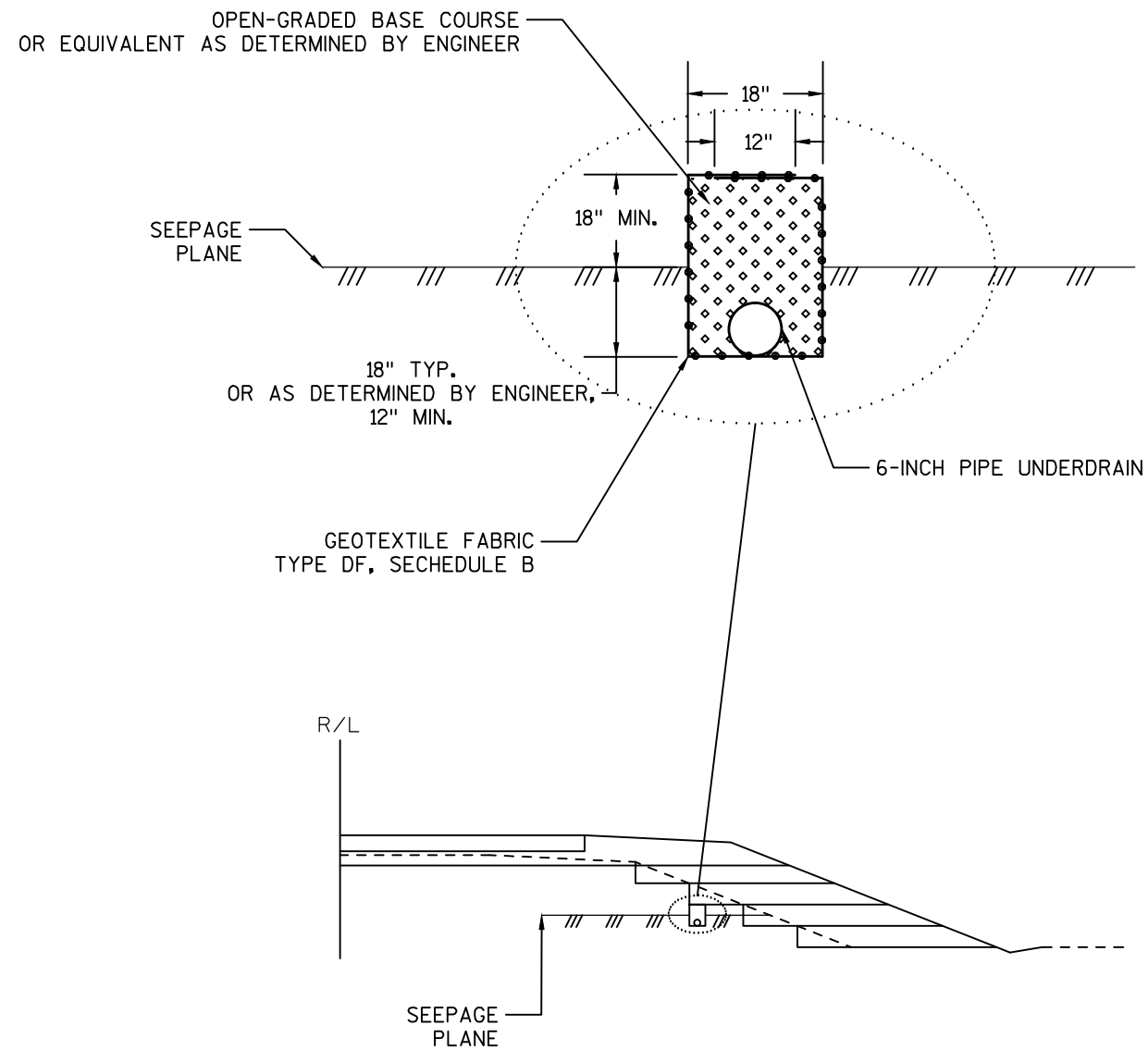
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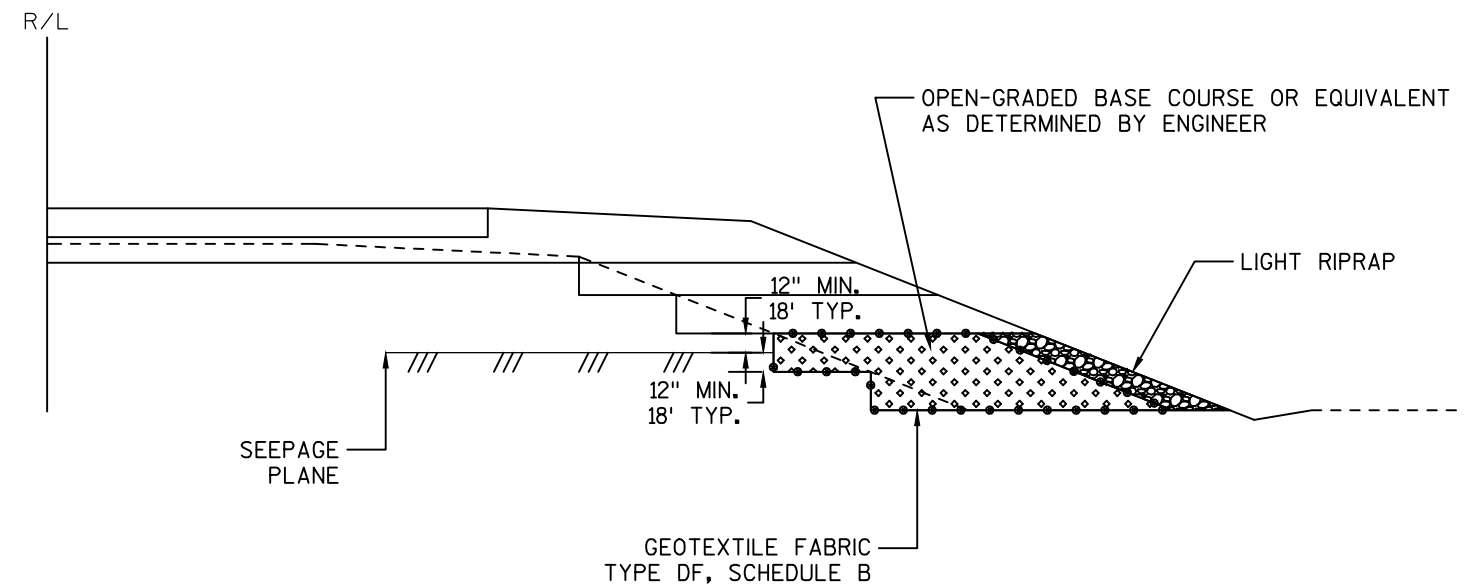
RIPRAP HEAVY TREATMENT AT CULVERTS



DETAIL OF RIPRAP HEAVY DITCH



BANK UNDERDRAIN: TYPICALLY USED FOR SEEPAGE LENGTHS > 25'
ALONG THE EXISING EMBANKMENT SLOPE



GRANULAR BLANKET DRAIN: TYPICALLY USED FOR SEEPAGE LENGTHS < 25' AND
WITHIN THE BOTTOM TWO HORIZONTAL STEPS OR
BENCHES OF THE ROADWAY CONSTRUCTION

EMBANKMENT SEEPAGE CONSTRUCTION DETAILS

C/L
TEMP MEDIAN RDWY

12' LANE

12' WIDENING

14'

2.5'

4' TYP.

0.5' TYP.

2.0%

4.0%

3:1 MAX

VAR.

VAR.

TEMPORARY PAVEMENT IN-PLACE

TEMPORARY BASE AGG. IN-PLACE

BASE AGGREGATE DENSE 1 1/4-INCH

R/L
IH 94

8' 12' 12' 2' 10' WIDENING

TEMP LANE TEMP LANE

2.0% 2.0% 4.0% 4.0%

CONCRETE PAVEMENT IN-PLACE

BASE AGG. IN-PLACE

HMA SHOULDER IN-PLACE

BASE AGGREGATE DENSE 1 1/4-INCH

V4R.

4:1

SAWING CONCRETE REQ'D.

35'

OR AS DIRECTED BY THE ENGINEER

REMOVING ASPHALTIC SURFACE BUTT JOINTS (2")
REPLACE WITH HMA PAVEMENT (2")

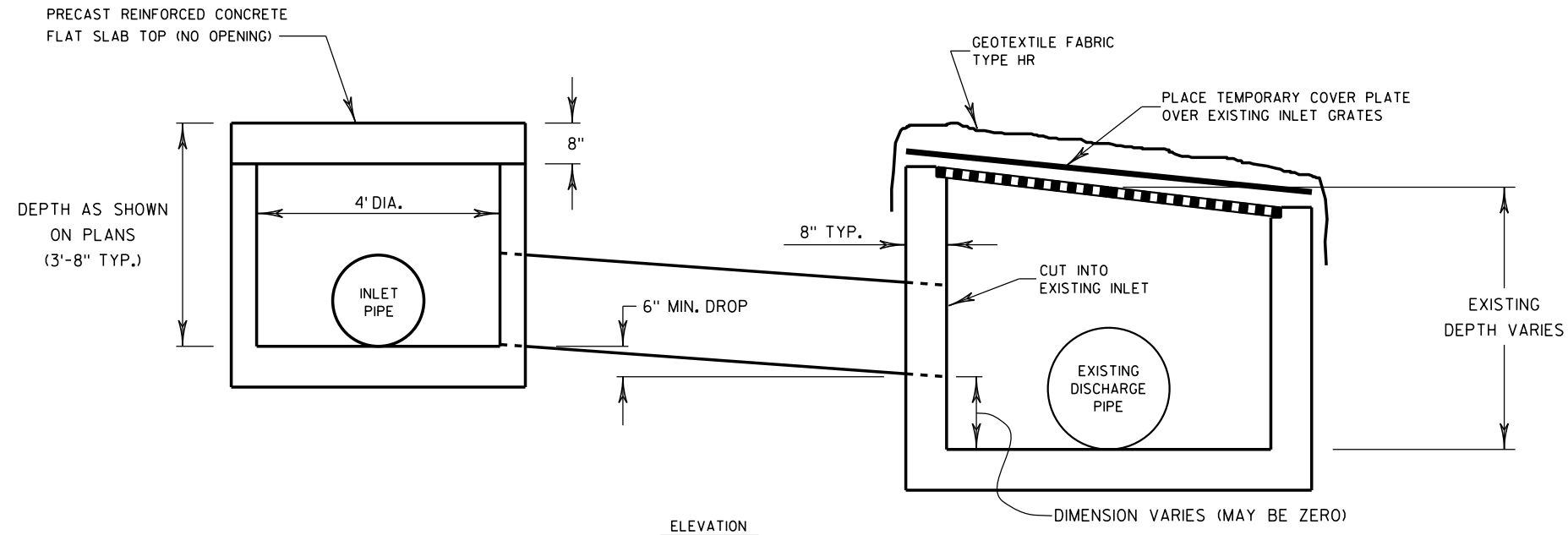
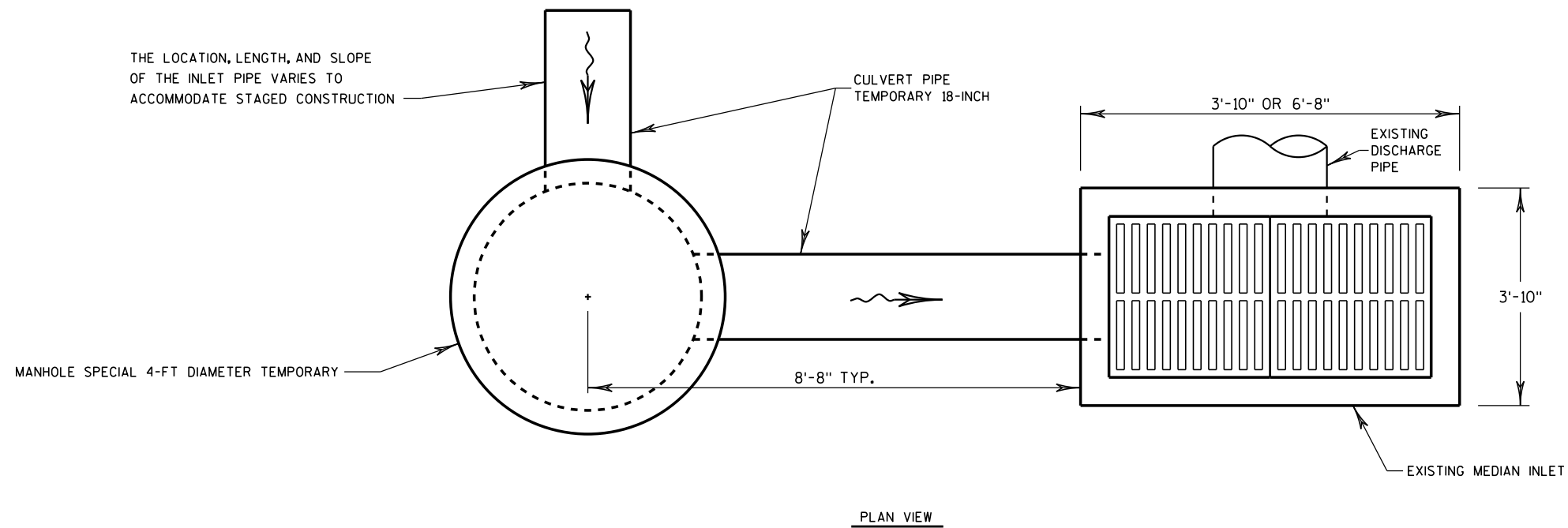
CONCRETE PAVEMENT 12-INCH

BASE AGGREGATE DENSE 1 1/4-INCH

EXISTING HMA PAVEMENT SURFACE

EXISTING CONCRETE PAVEMENT

WISDOT/CADDS SHEET 42



NOTE:

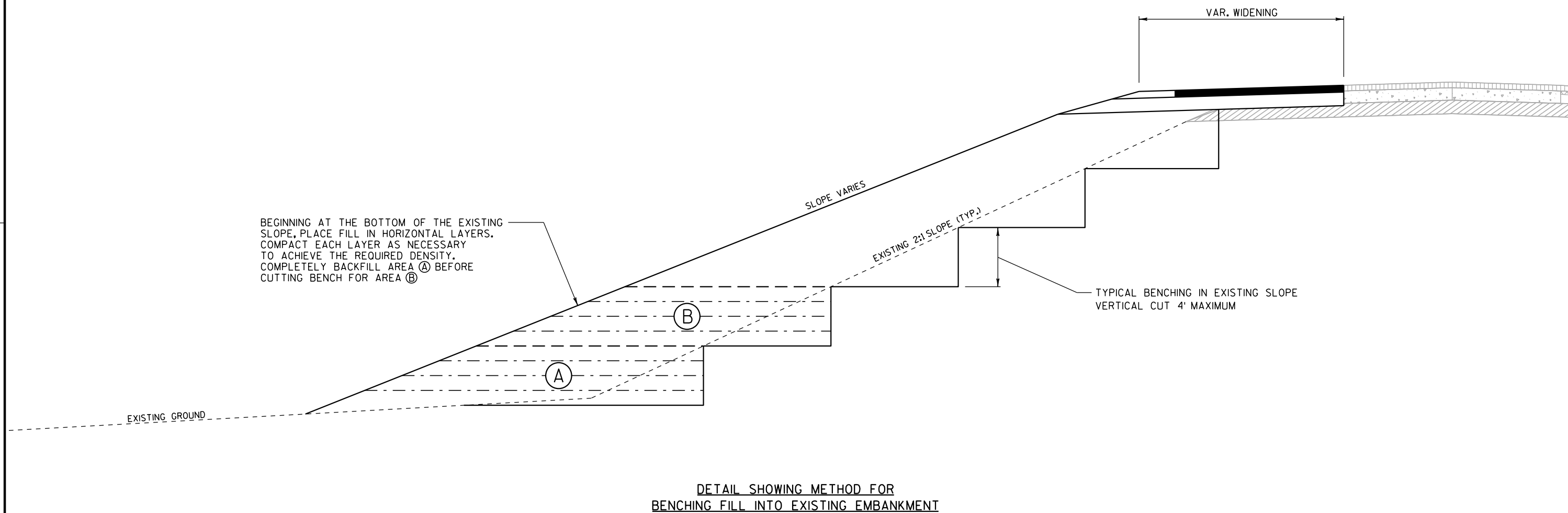
AFTER CUTTING AN APPROPRIATE OPENING, MORTAR THE TEMPORARY PIPE IN PLACE AND REPAIR THE STRUCTURAL INTEGRITY OF THE EXISTING INLET AS REQUIRED BY THE ENGINEER.

THE CONTRACTOR SHALL INSTALL THE GEOTEXTILE FABRIC TO NOT ALLOW ANY FILL MATERIAL TO ENTER THE INLET.

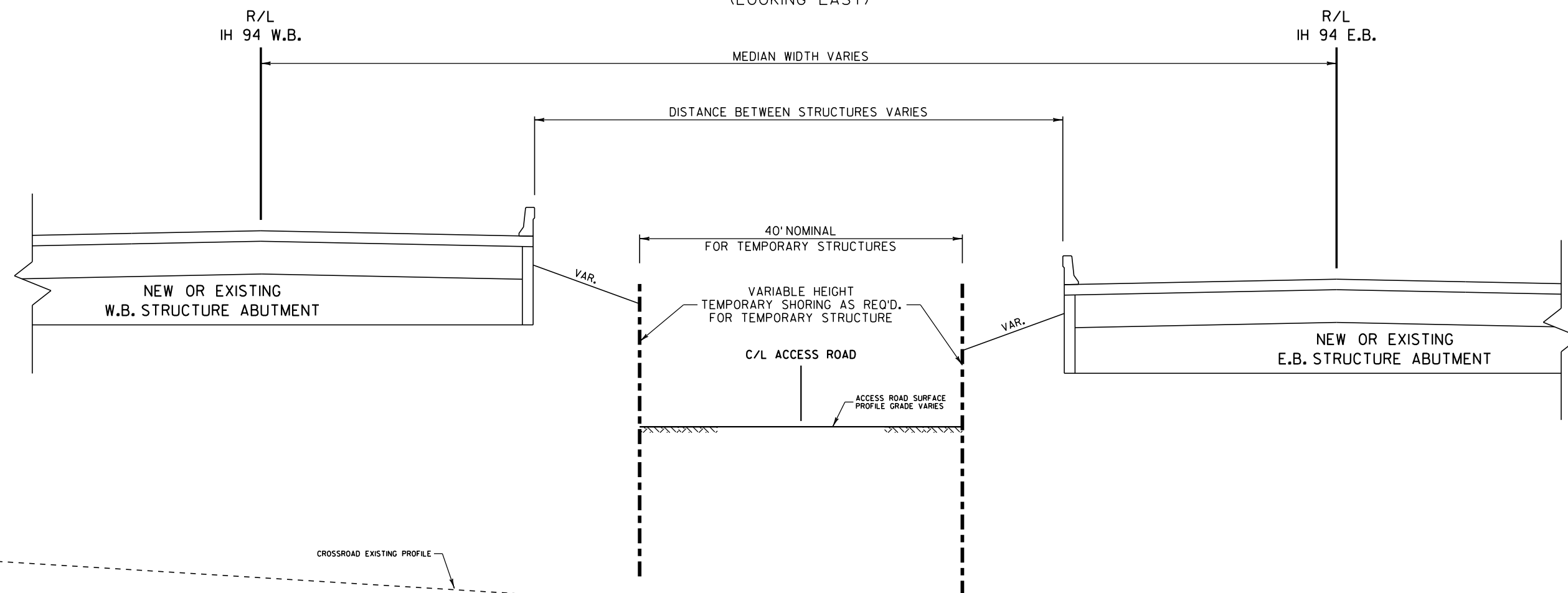
REMOVAL OF THE TEMPORARY PIPE, TEMPORARY COVER PLATE, AND GEOTEXTILE FABRIC; REPAIR OF THE INLET WALL; AND CLEANING OF ANY SEDIMENT MATERIAL IN THE INLET BOX IS INCIDENTAL TO THE BID ITEM "RECONSTRUCTING MEDIAN INLETS SPECIAL".

MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY

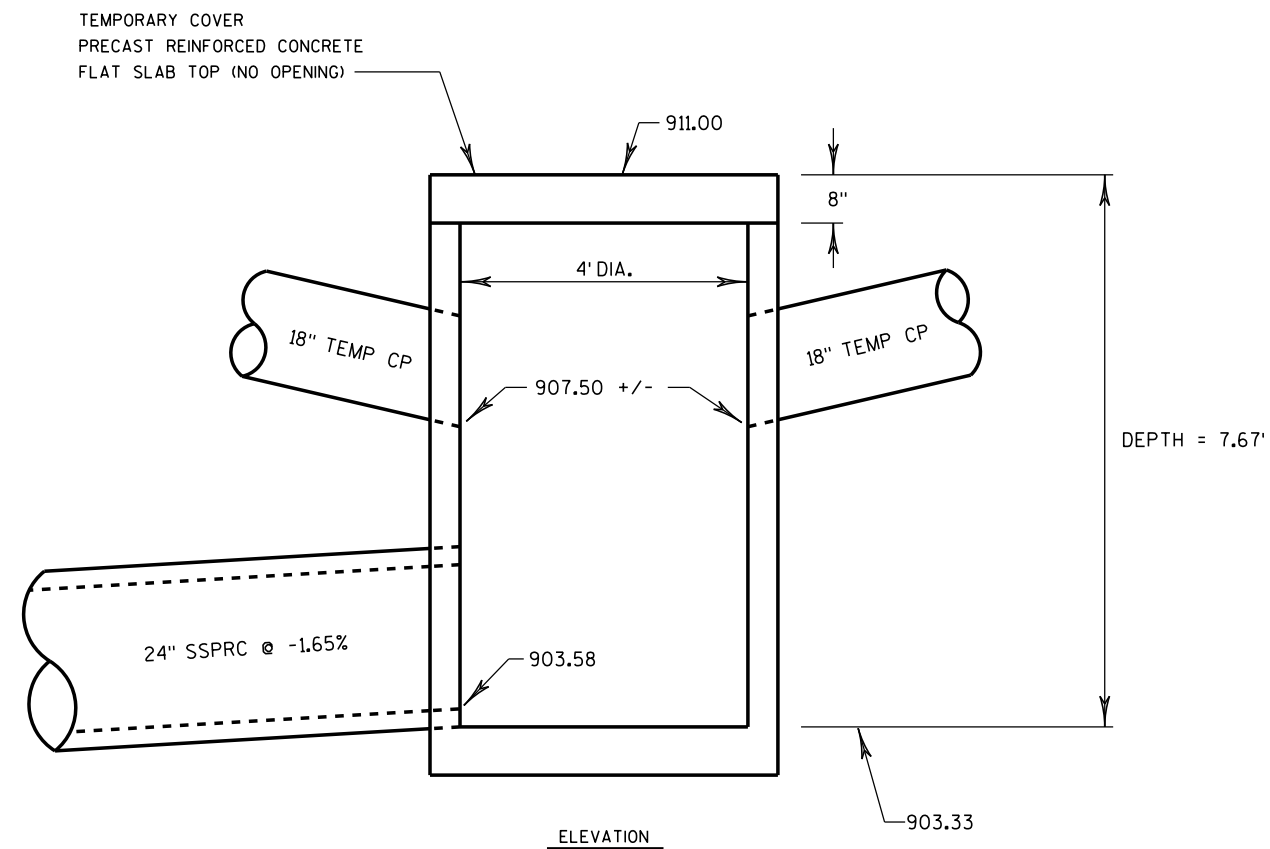
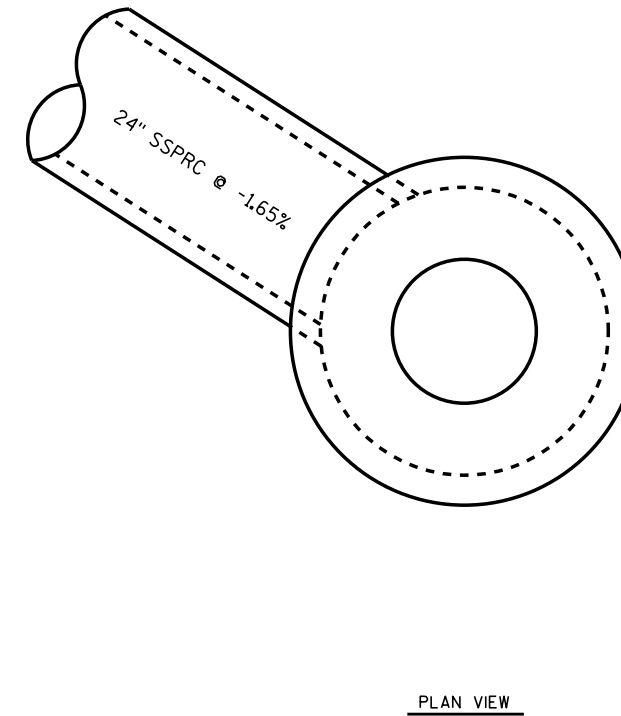
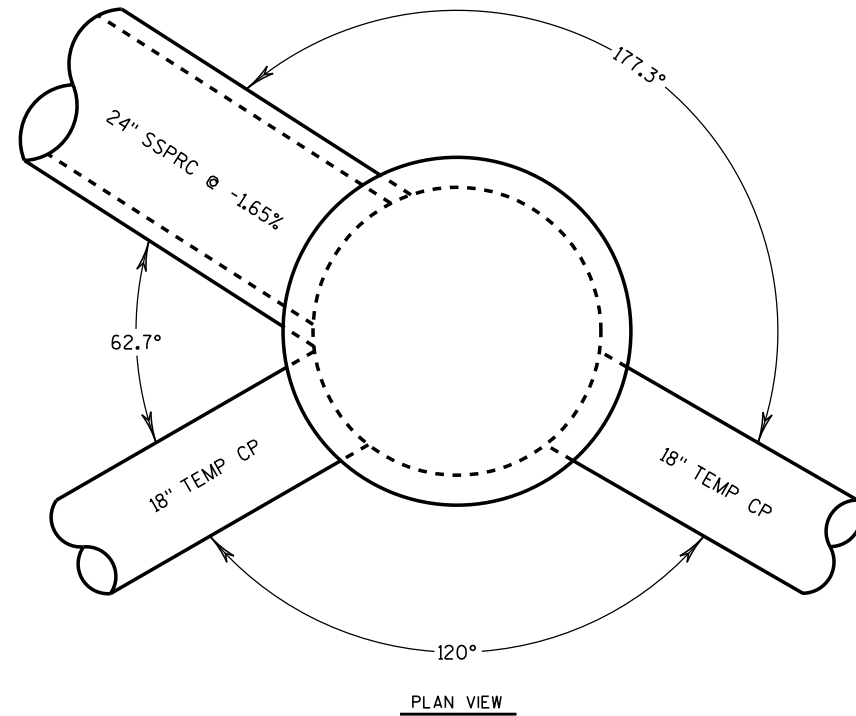
RECONSTRUCTING MEDIAN INLETS SPECIAL



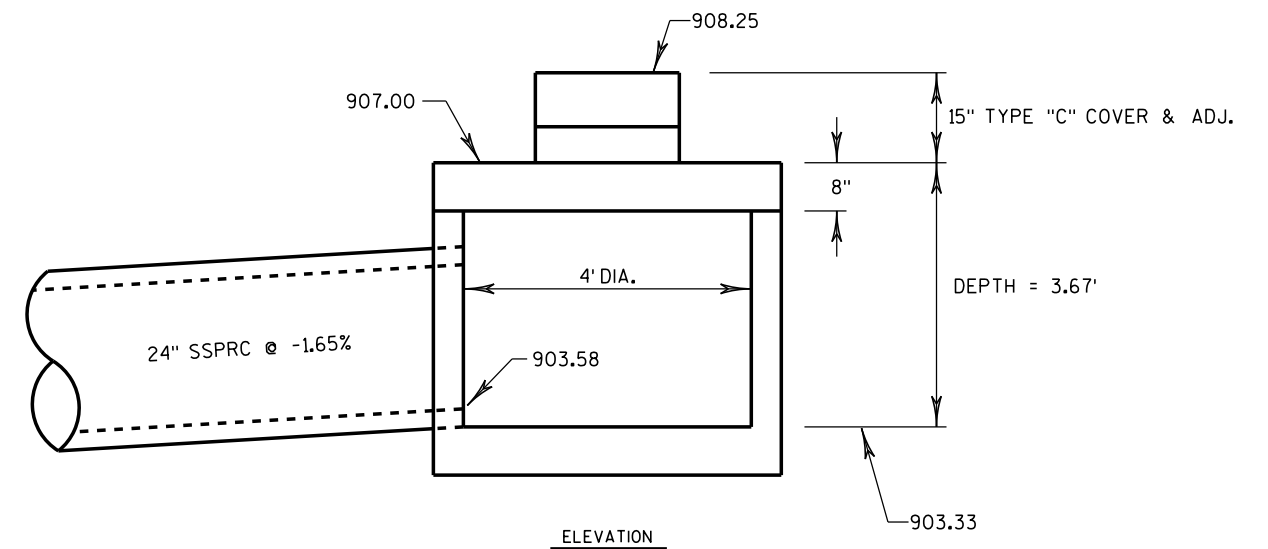
CROSS SECTION THRU IH 94 ROADWAY
(LOOKING EAST)



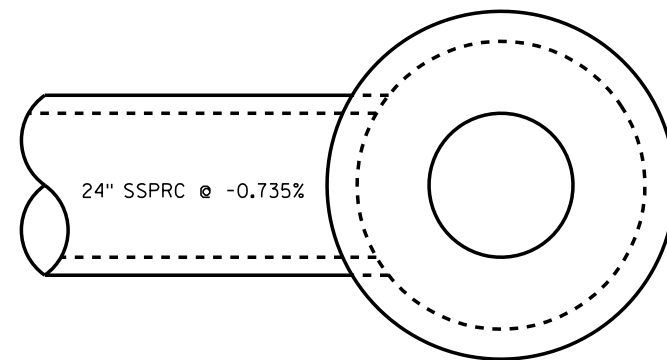
POSSIBLE CONSTRUCTION ACCESS TO MEDIAN FROM CROSSROAD
TEMPORARY SHORING REQUIRED
(INCIDENTAL TO TEMPORARY STRUCTURE)



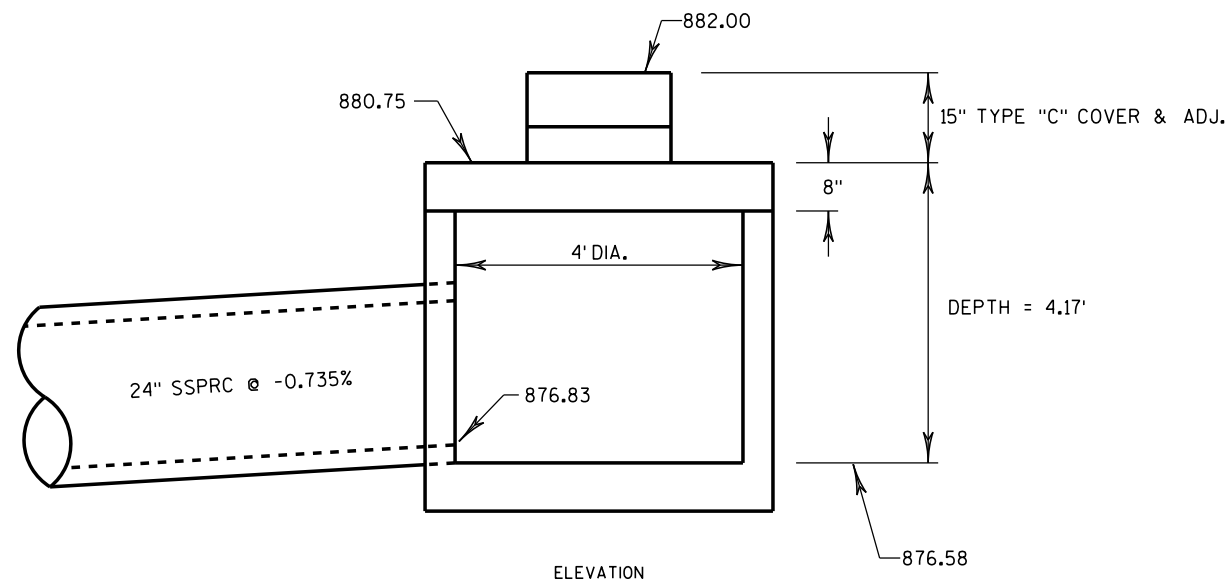
MANHOLE NO. 401 - STA 751EB+00, 47.8' LT
STAGE 2 THRU STAGE 5



MANHOLE NO. 401 - STA 751EB+00, 47.8' LT
STAGE 6

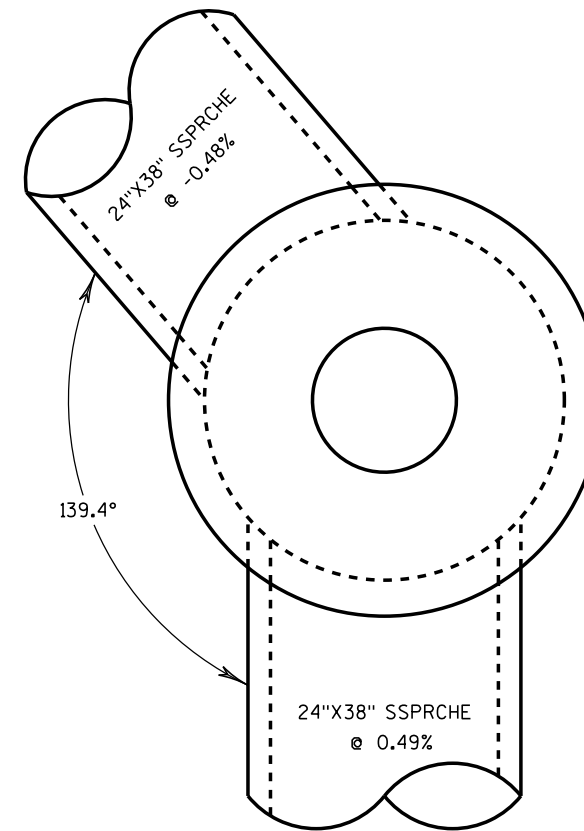


PLAN VIEW

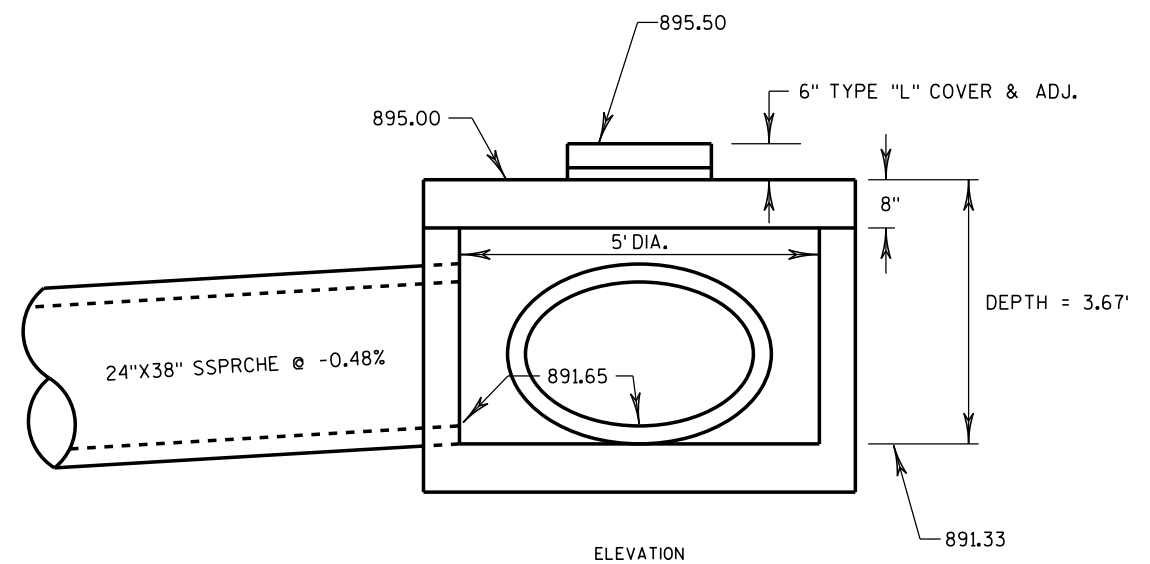


ELEVATION

MANHOLE NO. 402
STA 887WB+50, 28.0' RT



PLAN VIEW



ELEVATION

MANHOLE NO. 501
STA 9+74.25 CTH K, 18.0' RT

Diagram showing the elevation view of a structure. Key dimensions and labels include:

- Top center: 894.00
- Top left: 893.50
- Top right: 6" TYPE "L" COVER & ADJ.
- Right side vertical dimension: 8"
- Right side vertical dimension: DEPTH = 3.80'
- Center horizontal dimension: 5' DIA.
- Center vertical dimension: 890.25
- Center vertical dimension: 889.97
- Left side pipe: 18" SSPRC @ 3.48%
- Right side pipe: 18" SSPRC @ 2.24%
- Bottom right: 889.70
- Bottom center: ELEVATION

19"X30" SS-SPRCHS
@ 0.46"

19"X30" SS-SPRCHS
@ 1.02"

150°

891.30

6" TYPE "L" COVER & ADJ.

890.80

8" 8"

5' DIA.

887.95

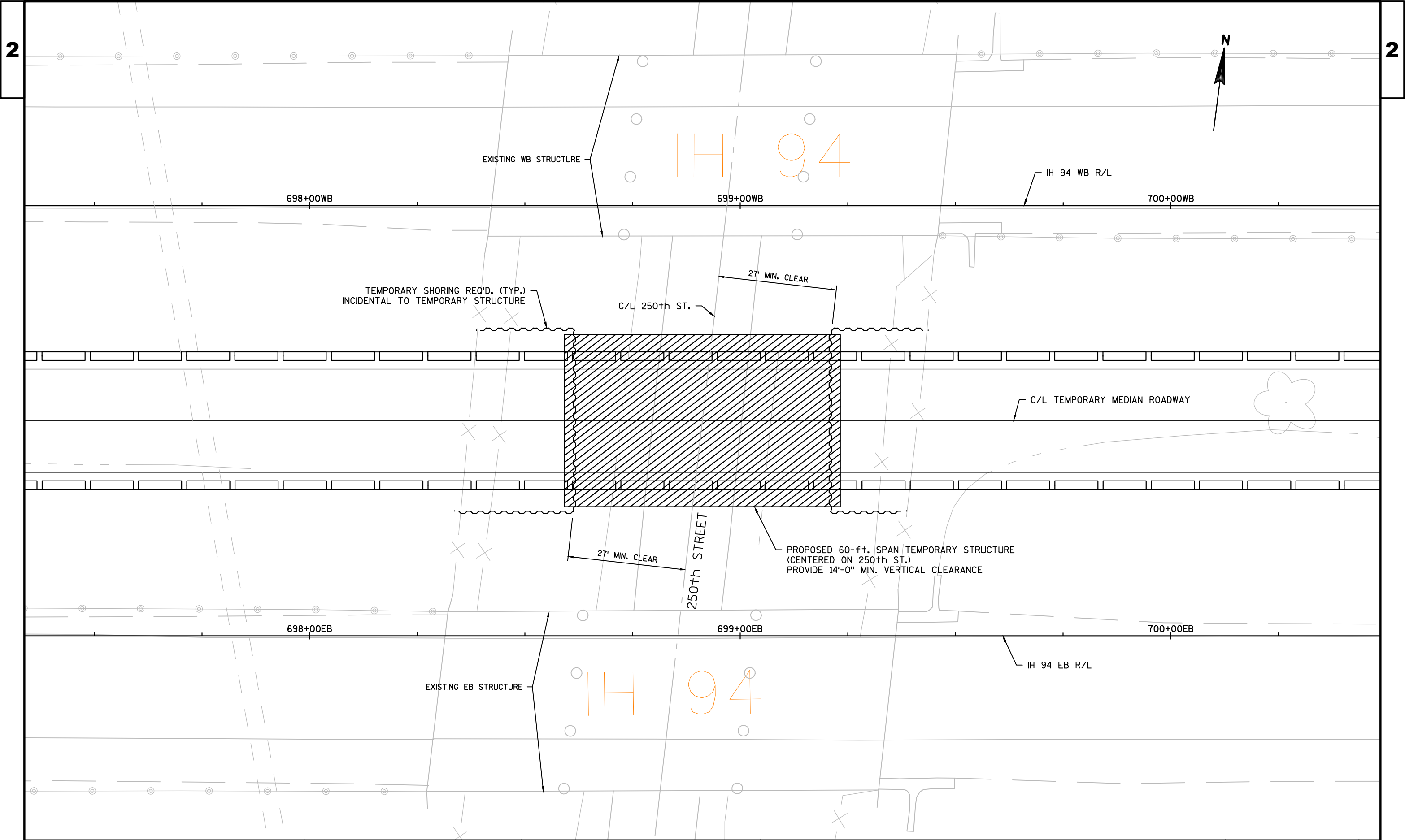
19"X30" SSSPRCHE
@ -0.46%

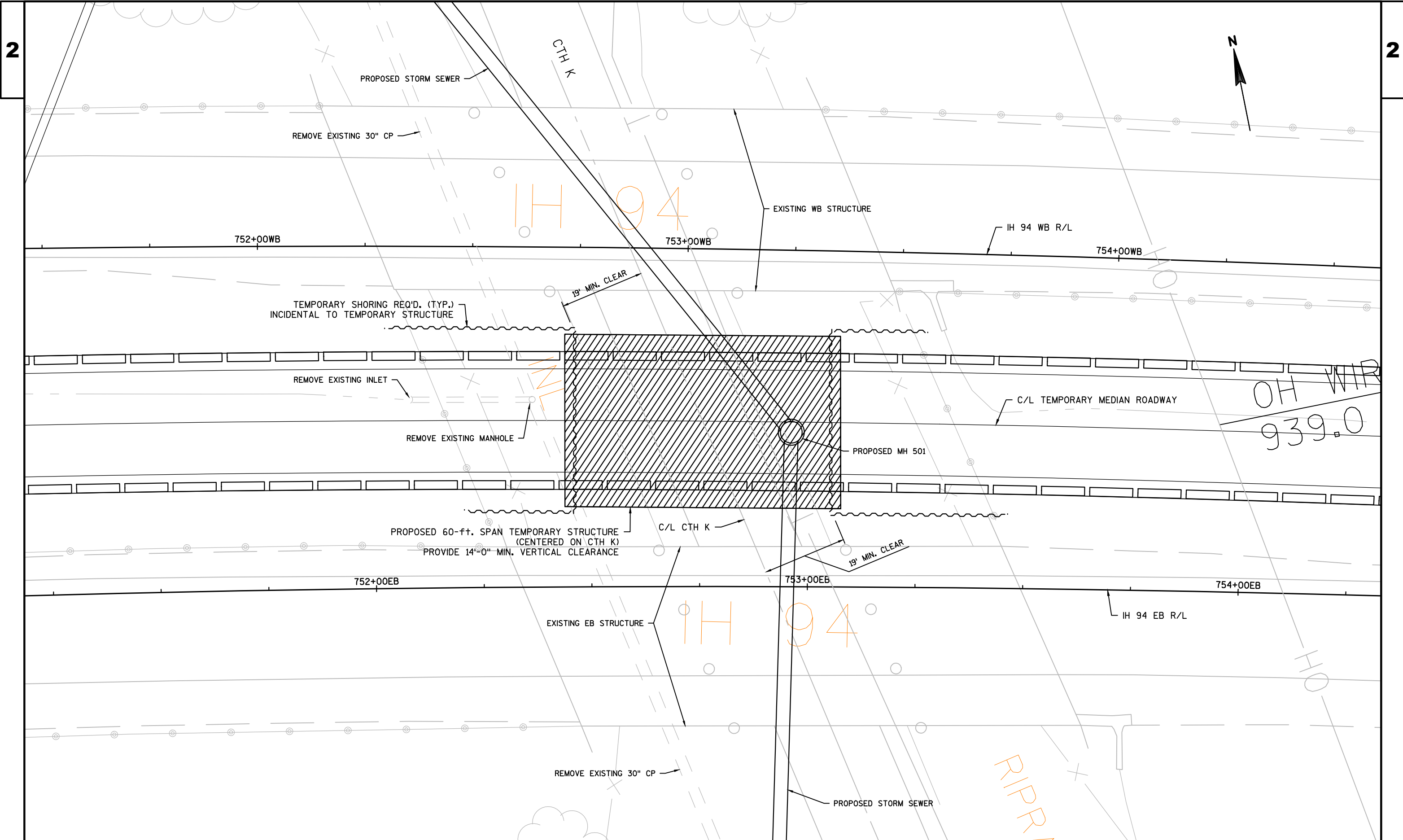
DEPTH = 3.12'

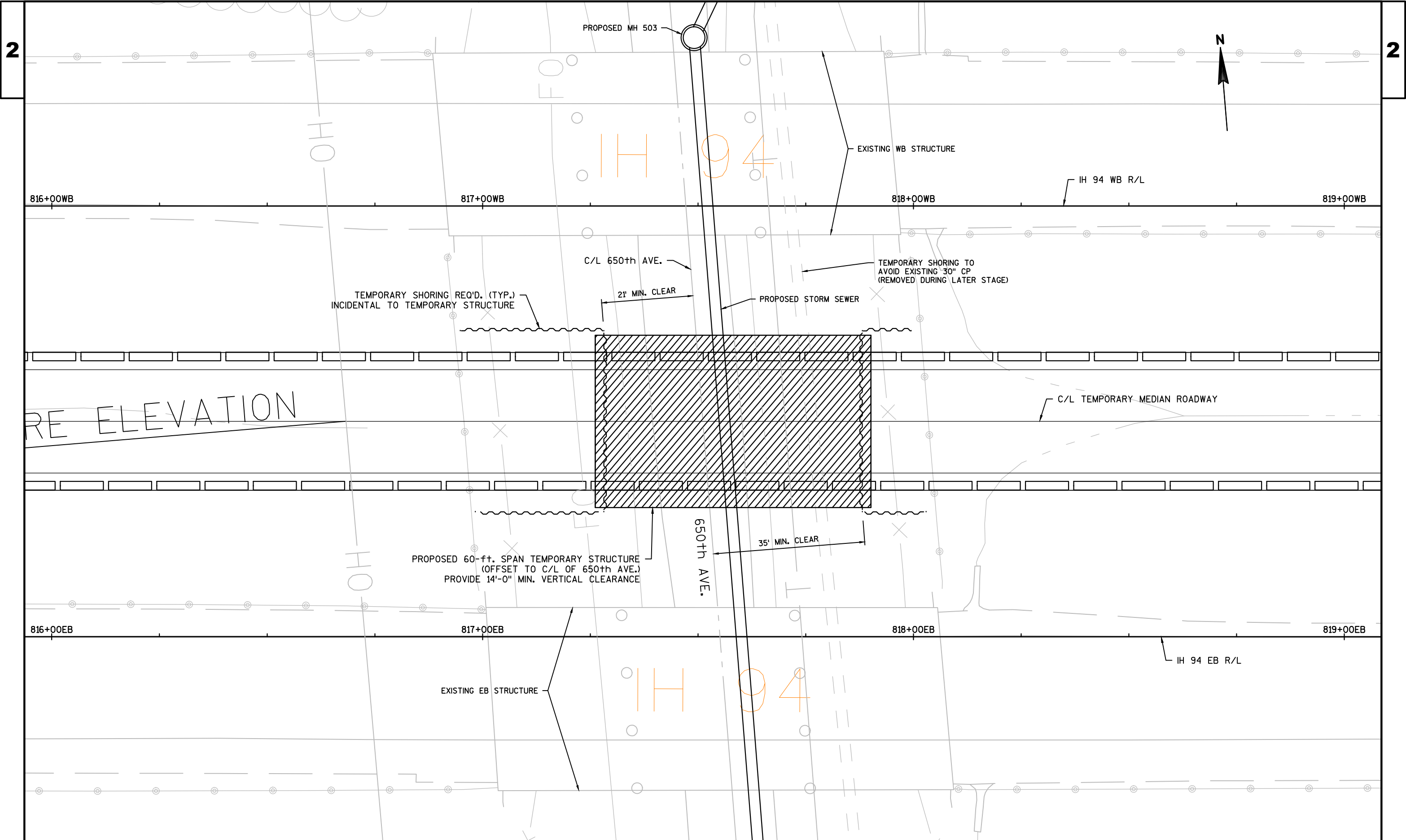
887.68

ELEVATION

WISDOT/CADDS SHEET 42

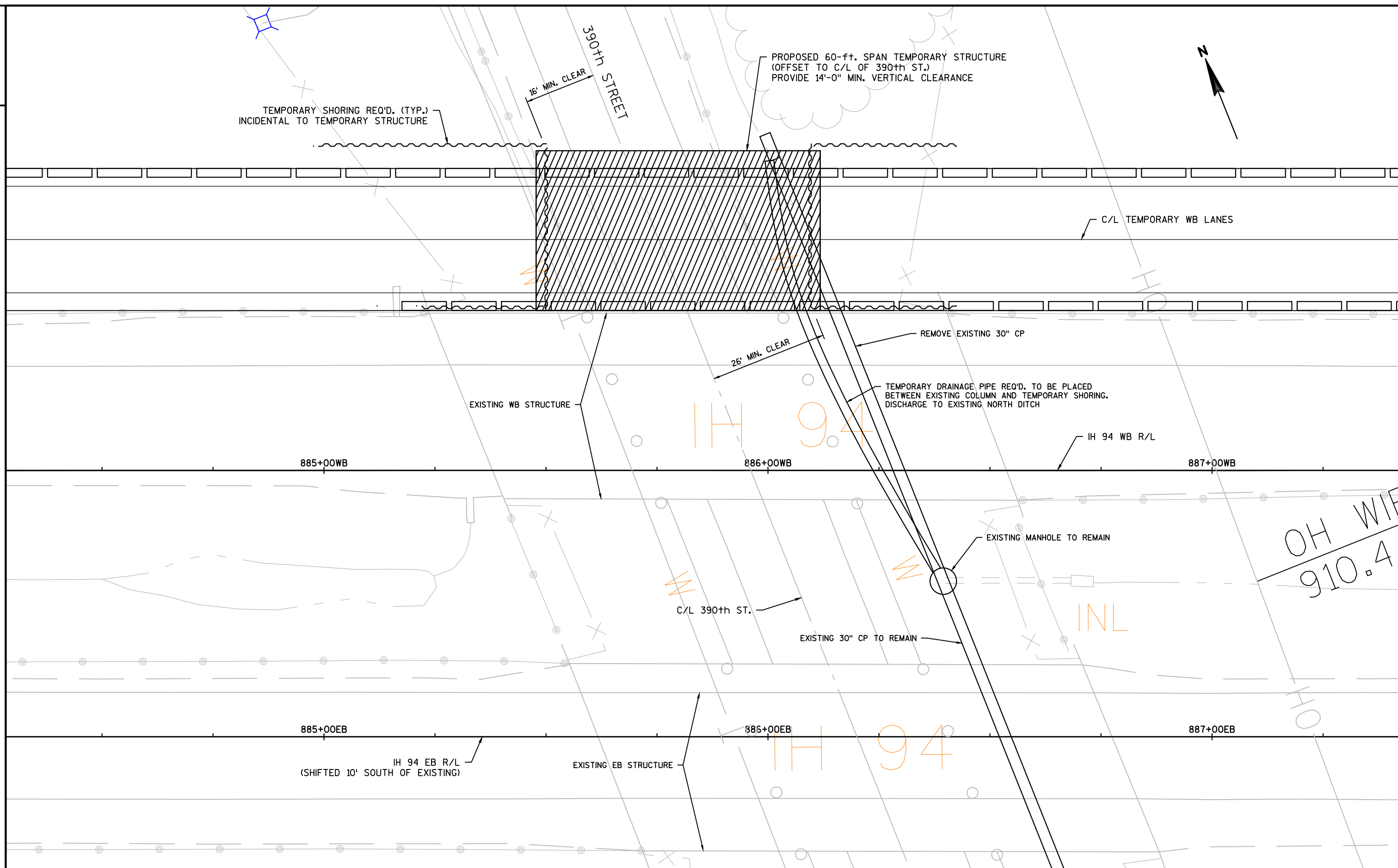






2

2



PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

PLAN DETAILS - TEMPORARY STRUCTURE AT 390th STREET

SHEET

23

E

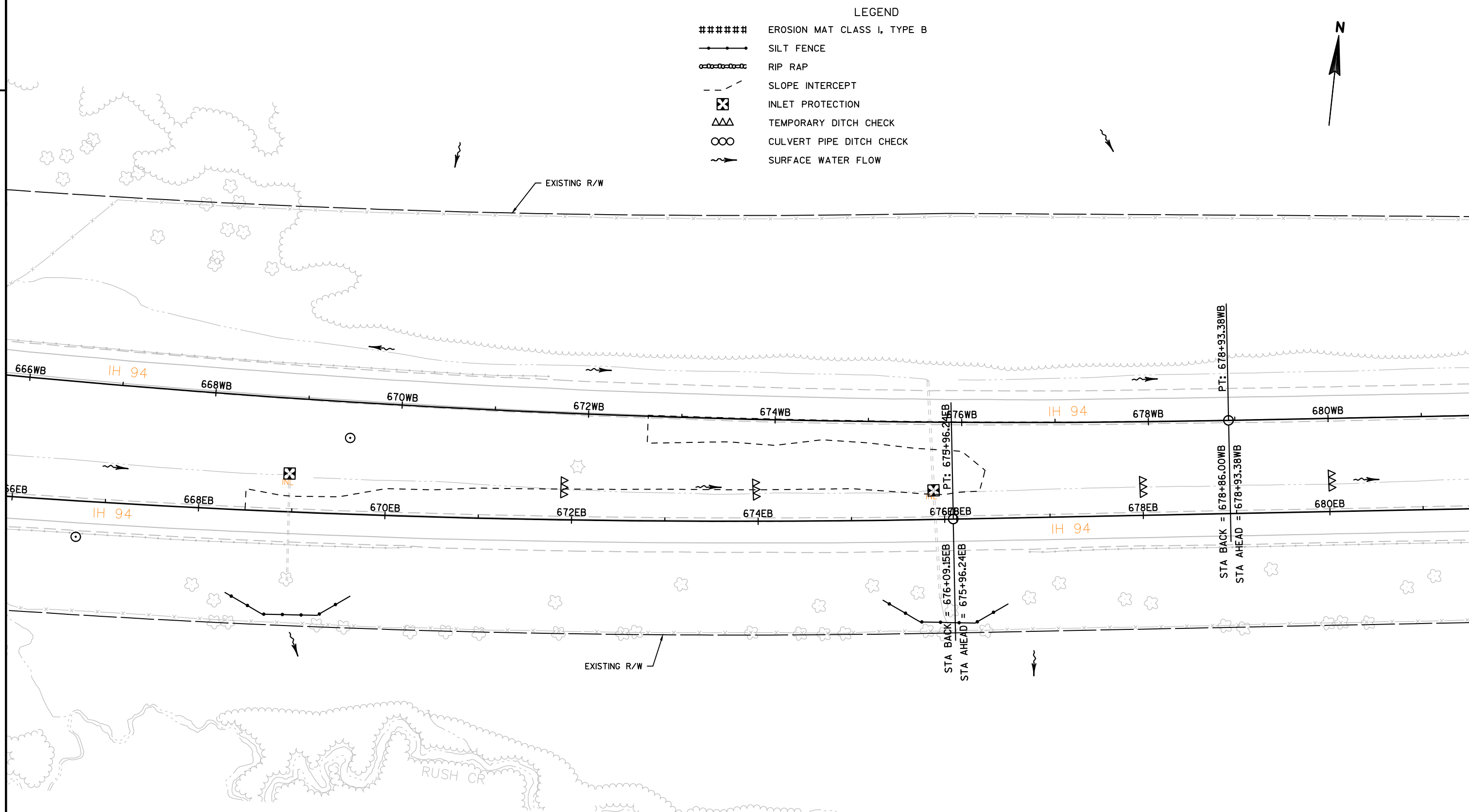
FILE NAME : N:\PDS\C3D\10220706\SHEETSPLAN\PLAN SHEETS 10220872\021251_PD_TEMP_SHORING.DWG
LAYOUT NAME - SHEET - (4)

PLOT DATE : 7/19/2017 11:44 AM

PLOT BY : ANDERSON, THOMAS R PLOT NAME :

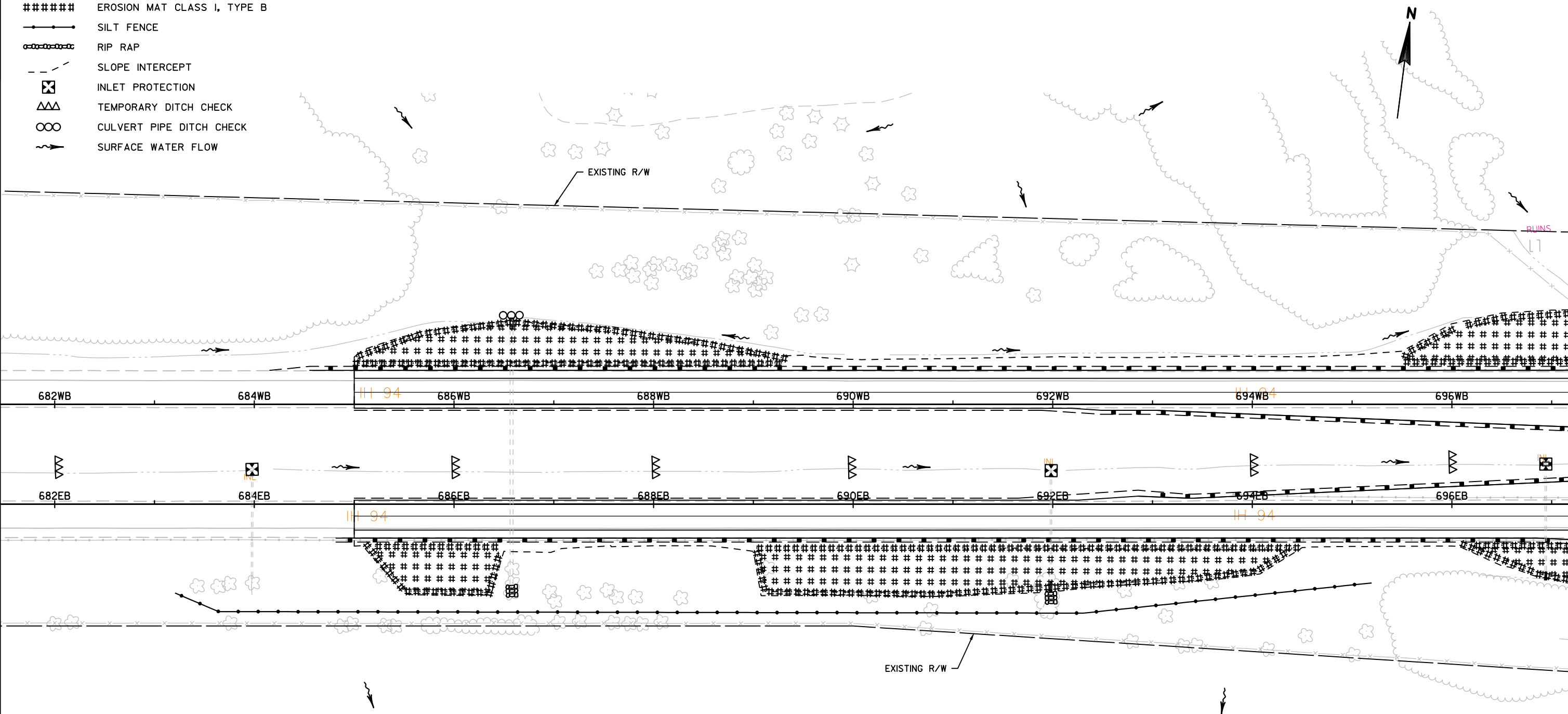
PLOT SCALE : 1 IN:20 FT

WISDOT/CADDs SHEET 42



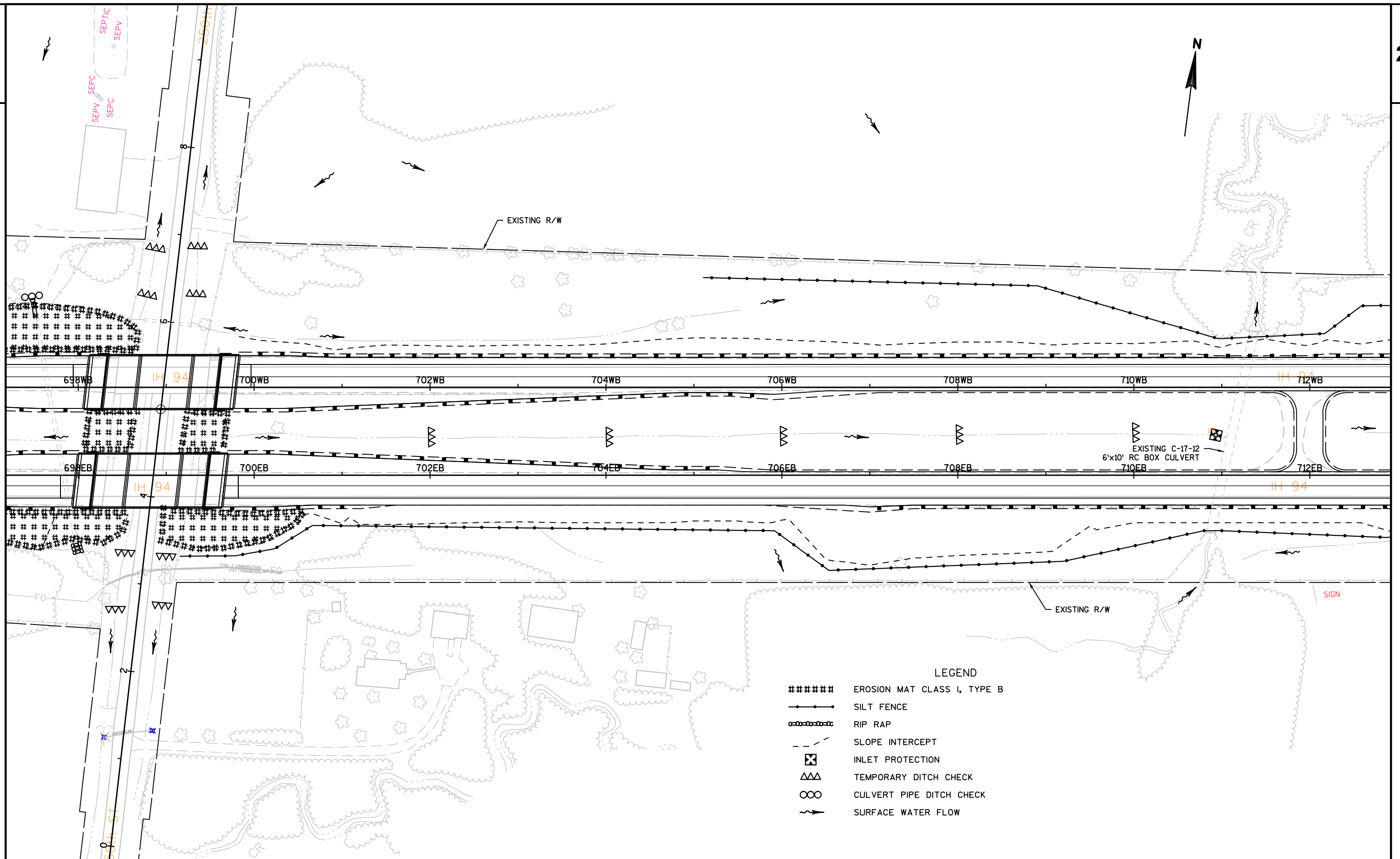
LEGEND

- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIP RAP
- - - SLOPE INTERCEPT
- ⊗ INLET PROTECTION
- △△△ TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- ~> SURFACE WATER FLOW



2

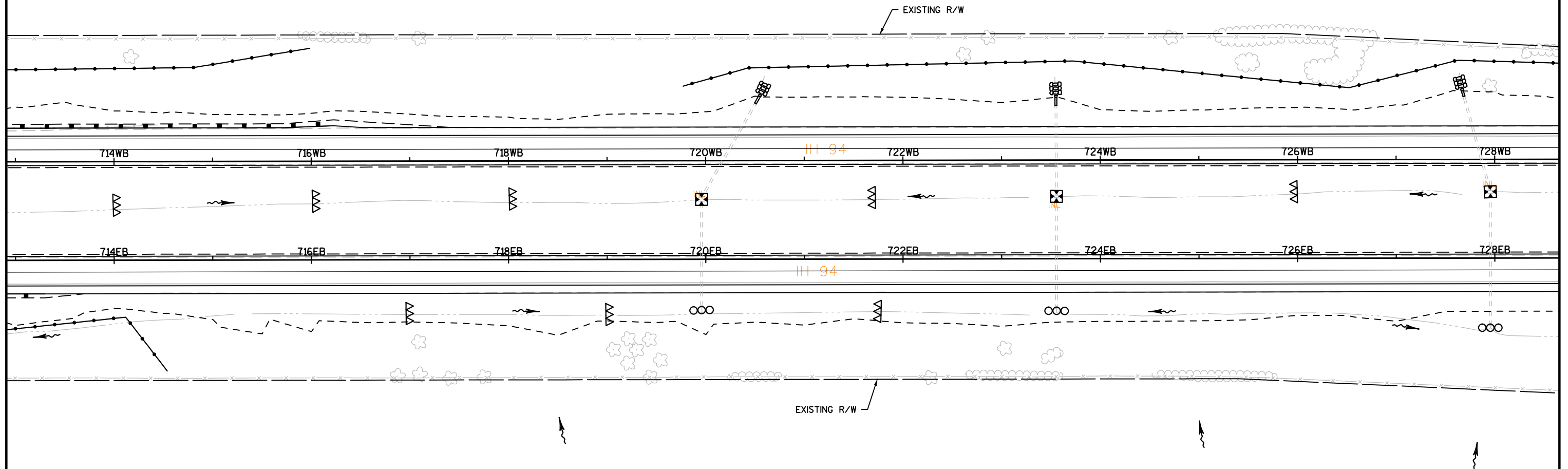
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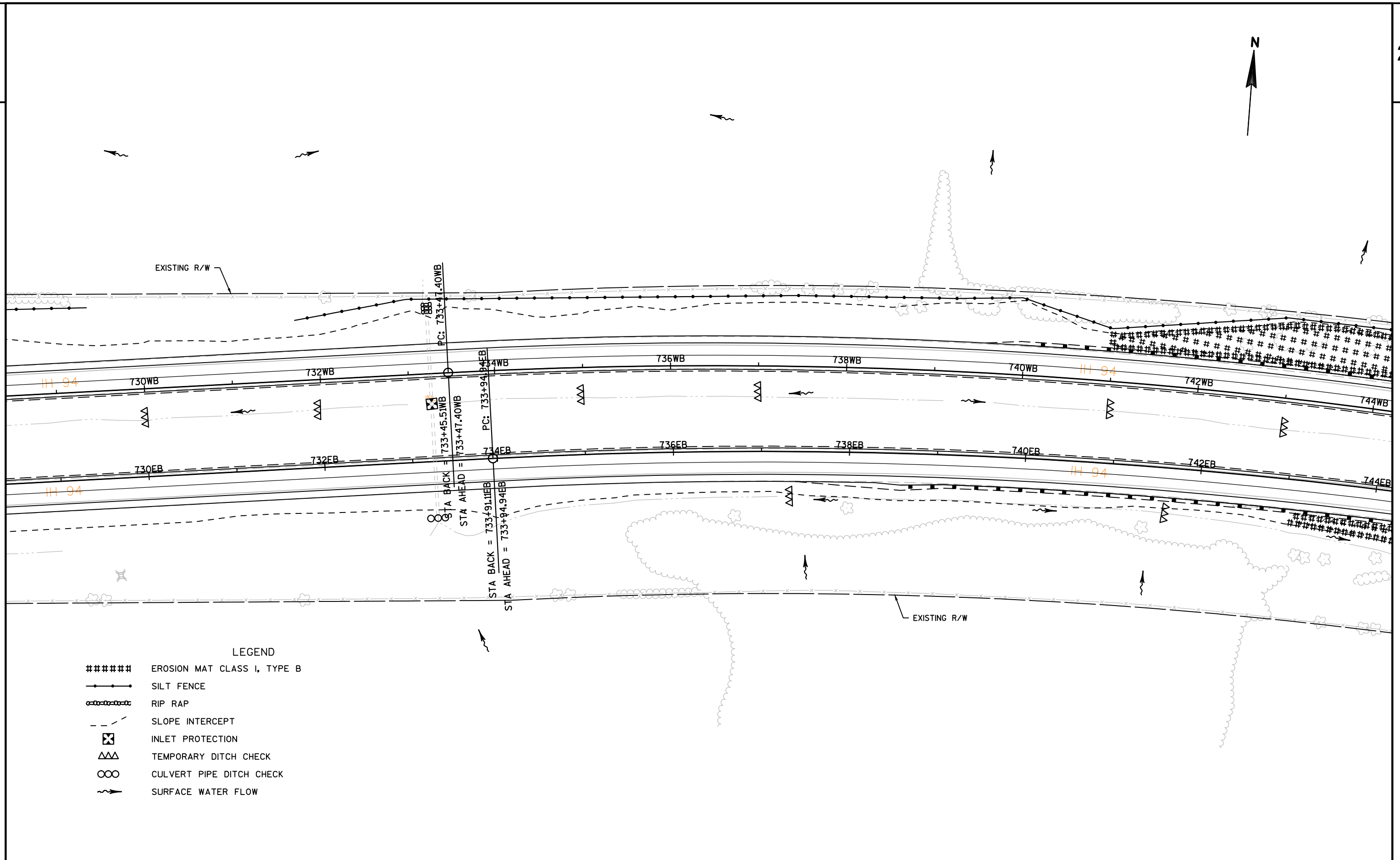


PROJECT NO:1022-08-72	HWY:IH 94	COUNTY:DUNN	EROSION CONTROL	SHEET 26	E
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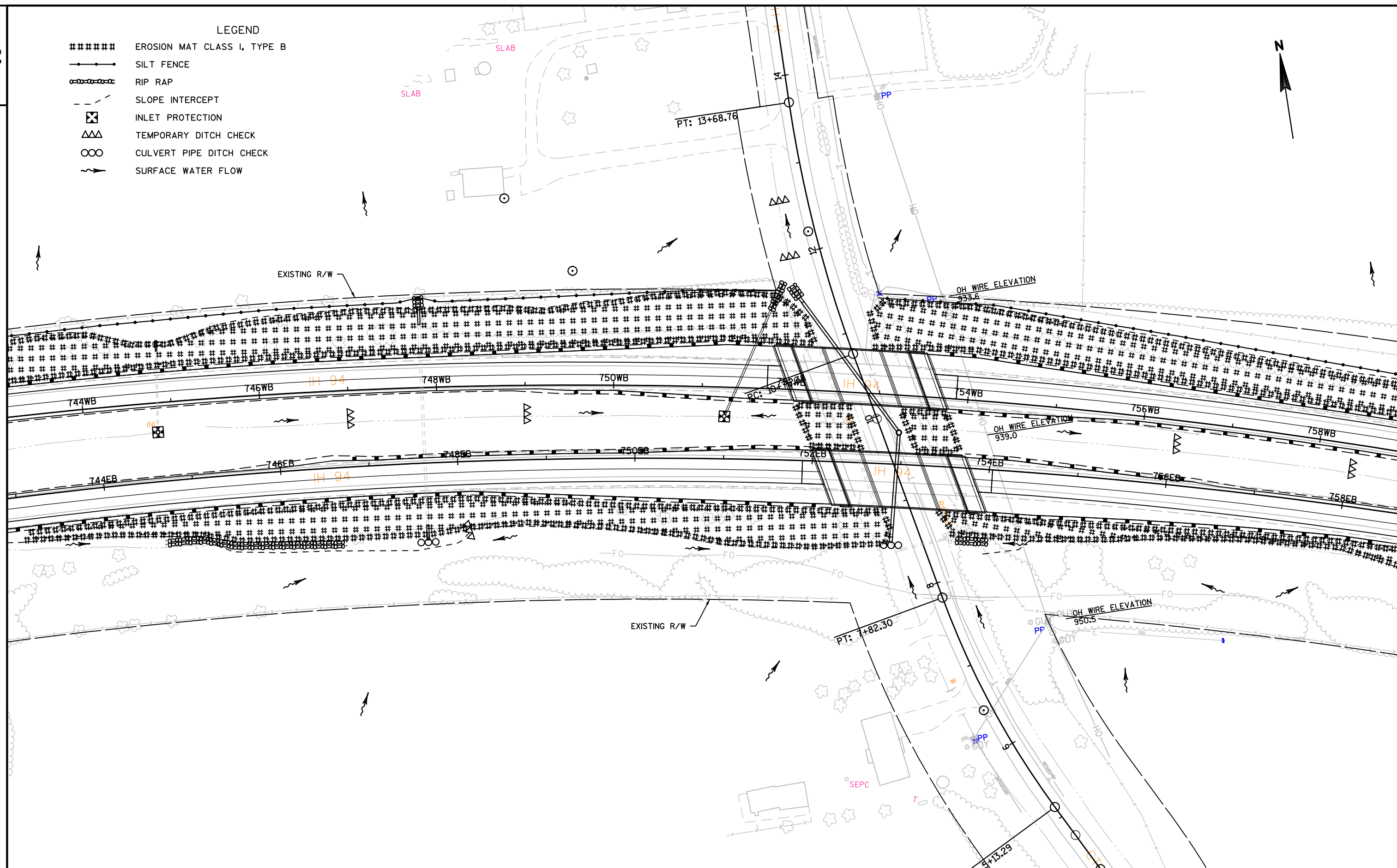
FILE NAME : N:\PDS\C3D\10220706\SHEETS\PLAN\PLAN SHEETS 10220872\L22501_EC_EROSION_CONTROL_IH94_EAST.DWG PLOT DATE : 7/19/2017 10:21 AM PLOT BY : ANDERSON, THOMAS R PLOT NAME : PLOT SCALE : 1 IN:100 FT WISDOT/CADDs SHEET 42

- LEGEND
- ##### EROSION MAT CLASS I, TYPE B
 - SILT FENCE
 - RIP RAP
 - - - SLOPE INTERCEPT
 - ⊠ INLET PROTECTION
 - △△ TEMPORARY DITCH CHECK
 - CULVERT PIPE DITCH CHECK
 - ~> SURFACE WATER FLOW

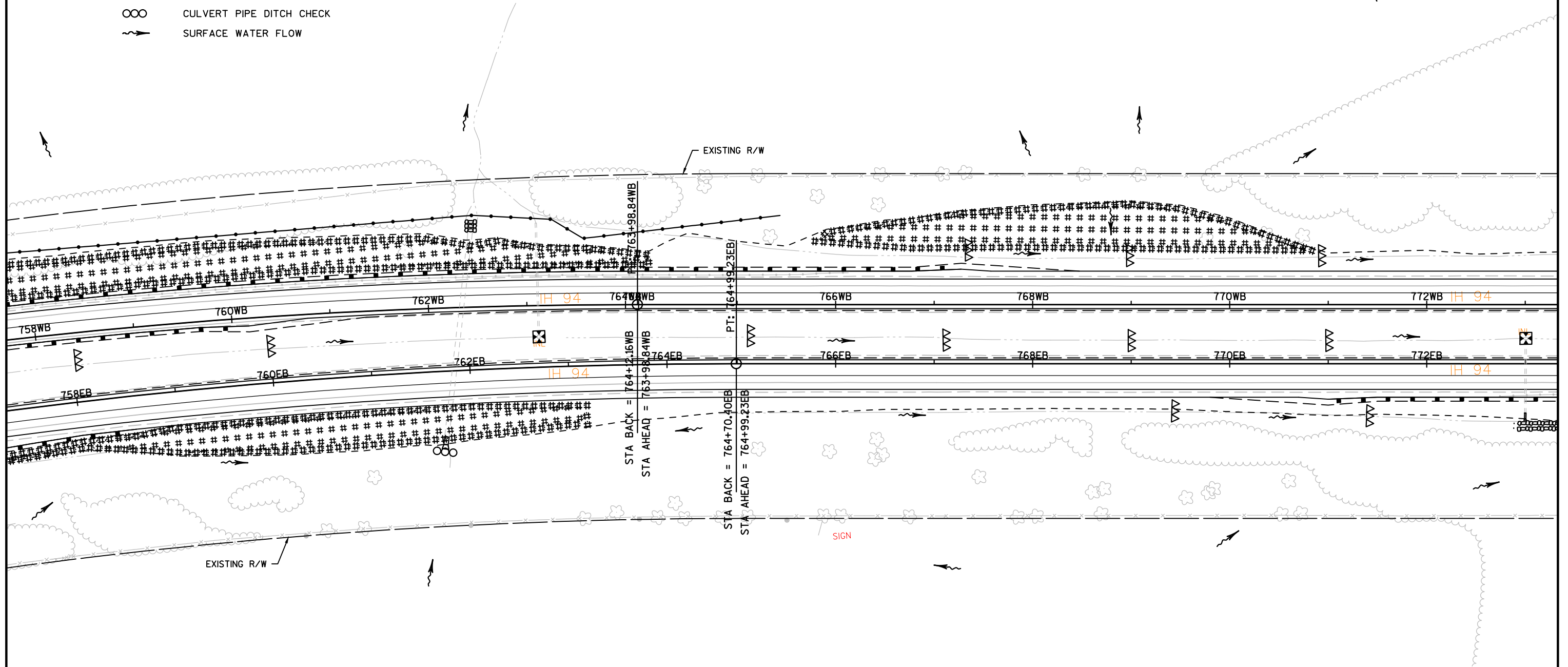




- LEGEND
- ##### EROSION MAT CLASS I, TYPE B
 - SILT FENCE
 - RIP RAP
 - - - SLOPE INTERCEPT
 - ⊠ INLET PROTECTION
 - △△ TEMPORARY DITCH CHECK
 - CULVERT PIPE DITCH CHECK
 - SURFACE WATER FLOW

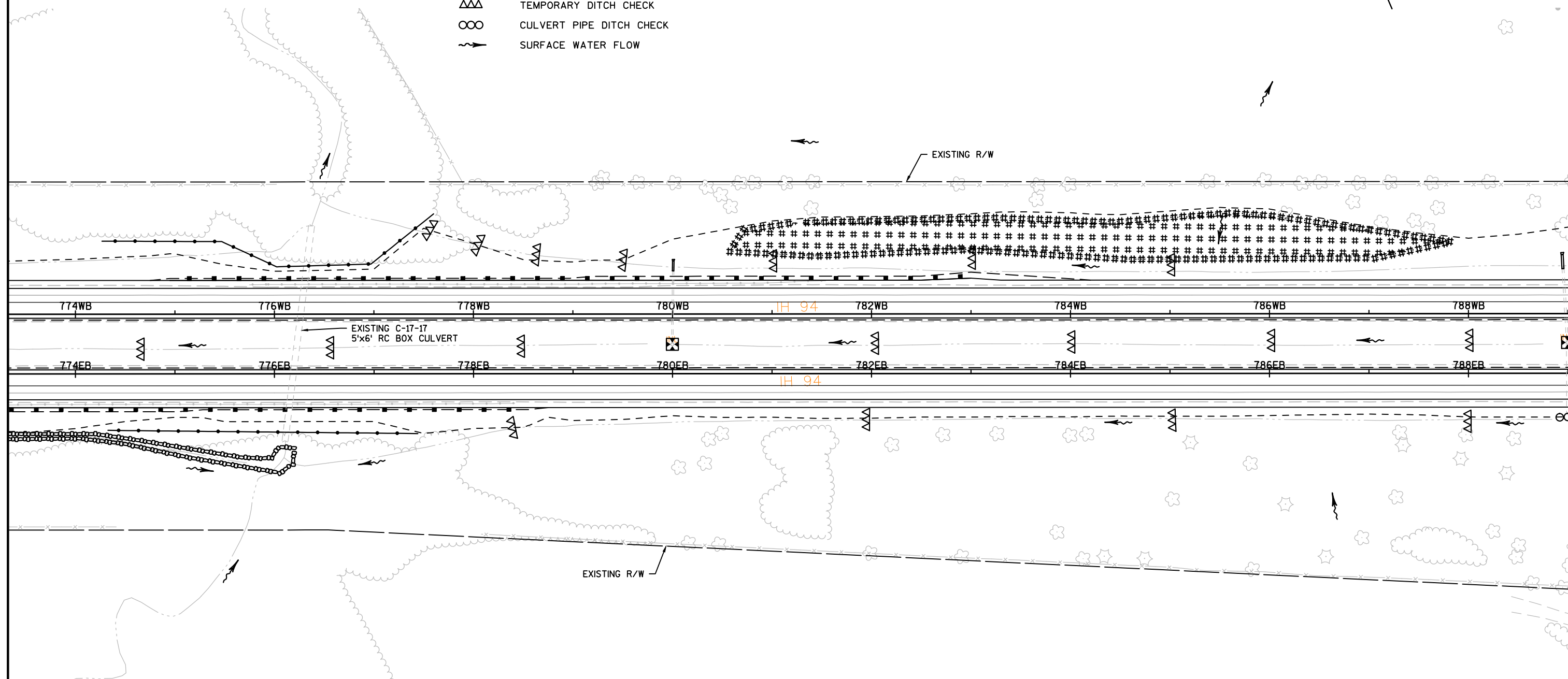


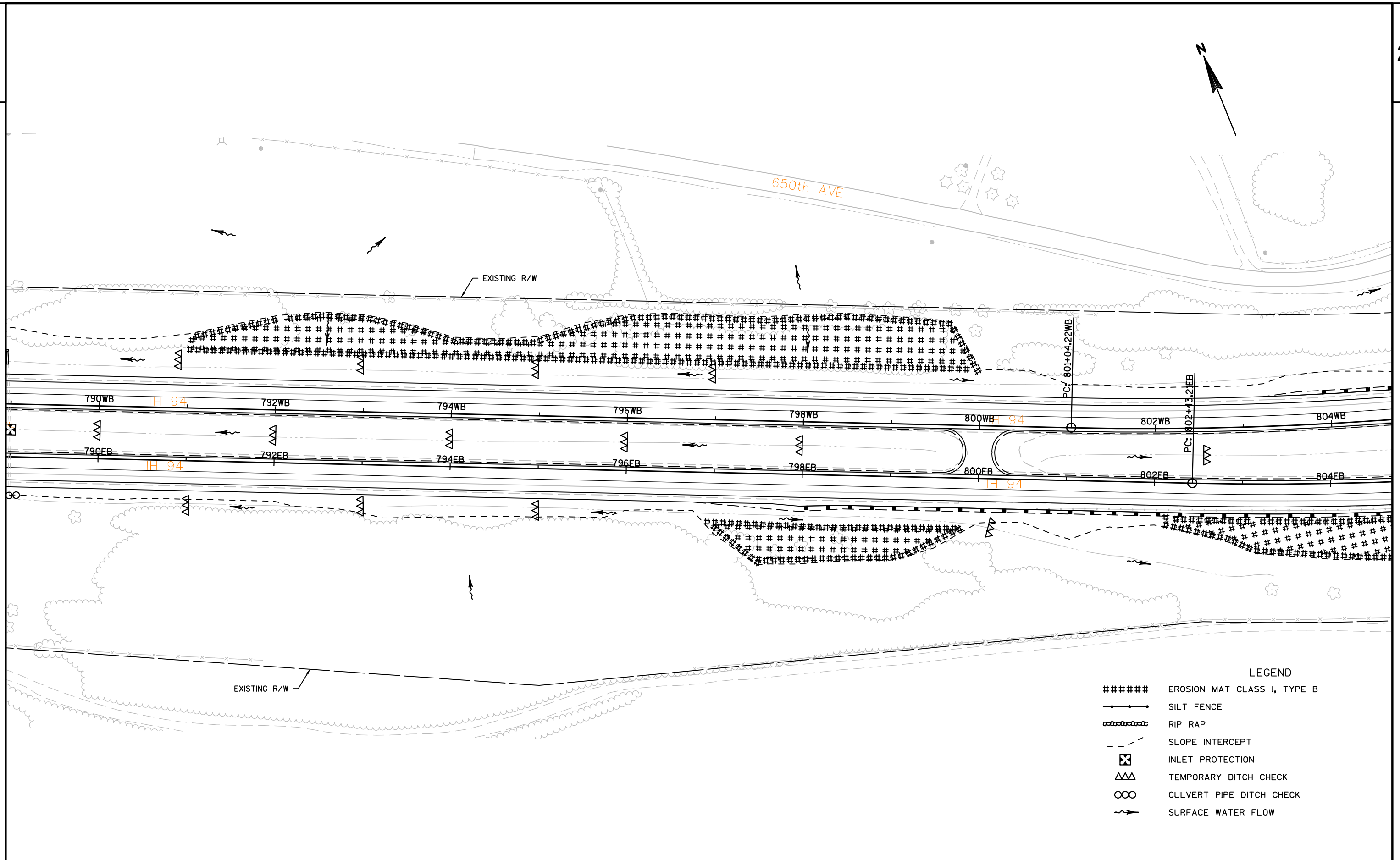
- LEGEND
- ##### EROSION MAT CLASS I, TYPE B
 - SILT FENCE
 - RIP RAP
 - - - SLOPE INTERCEPT
 - ☒ INLET PROTECTION
 - △△△ TEMPORARY DITCH CHECK
 - CULVERT PIPE DITCH CHECK
 - ~> SURFACE WATER FLOW

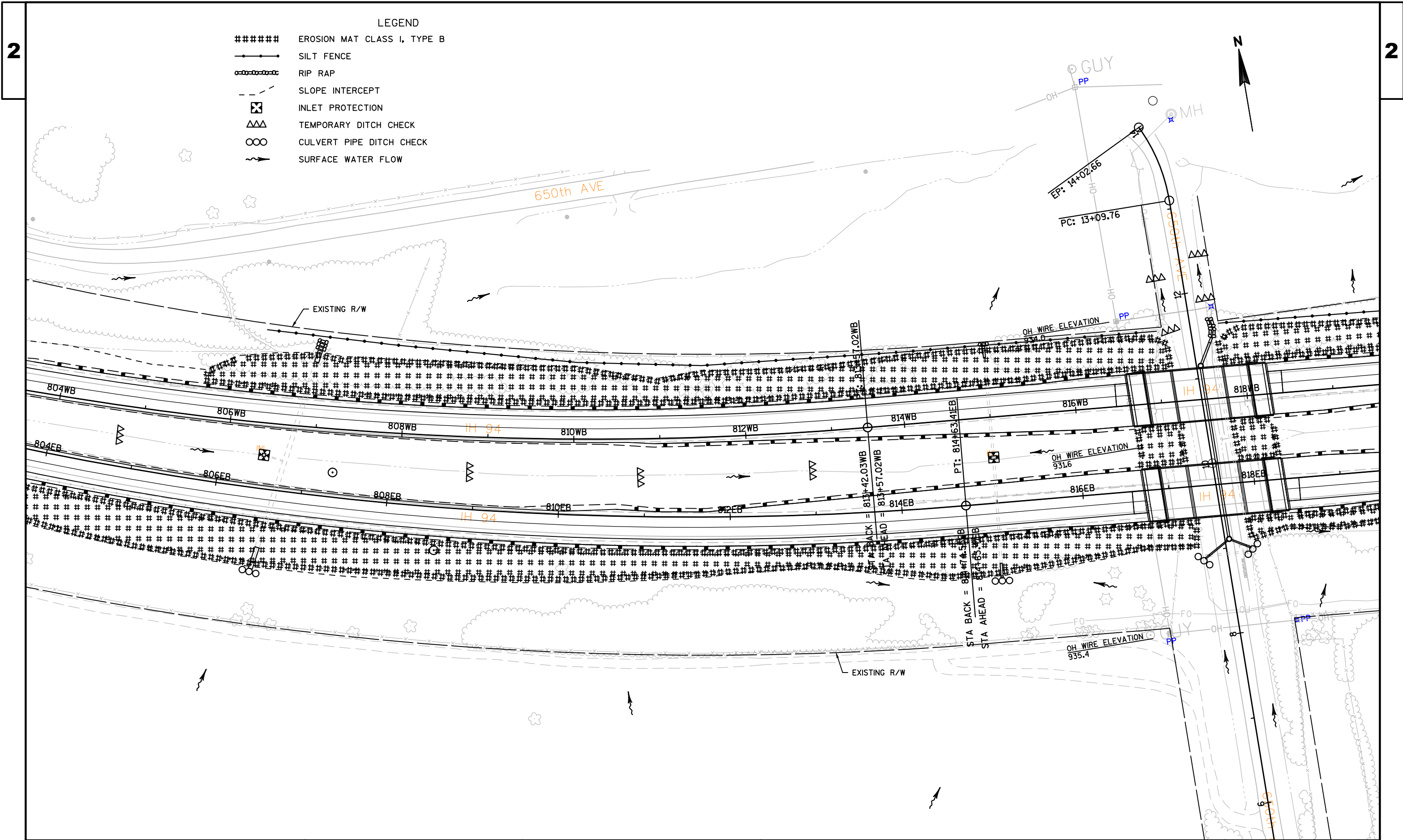


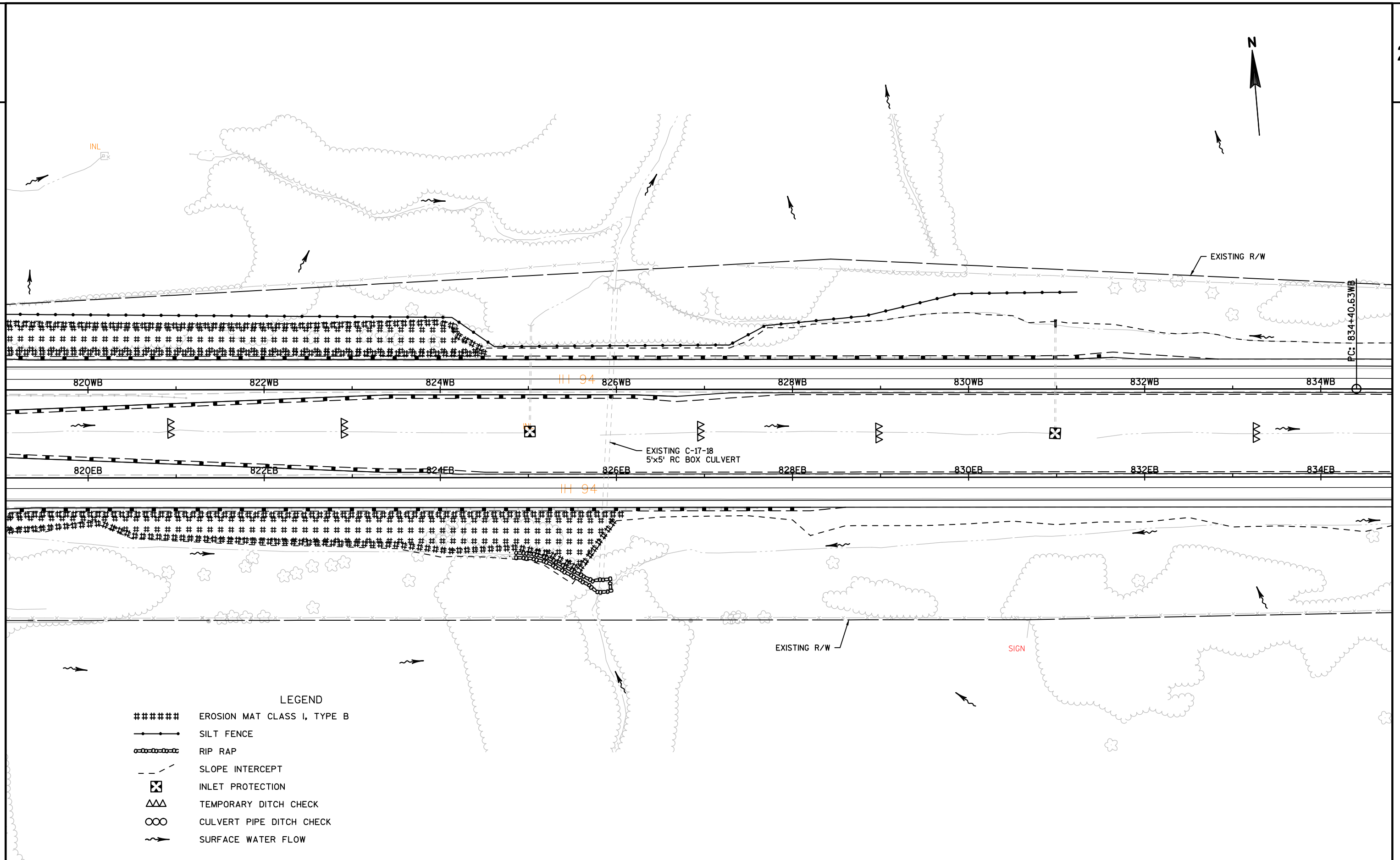
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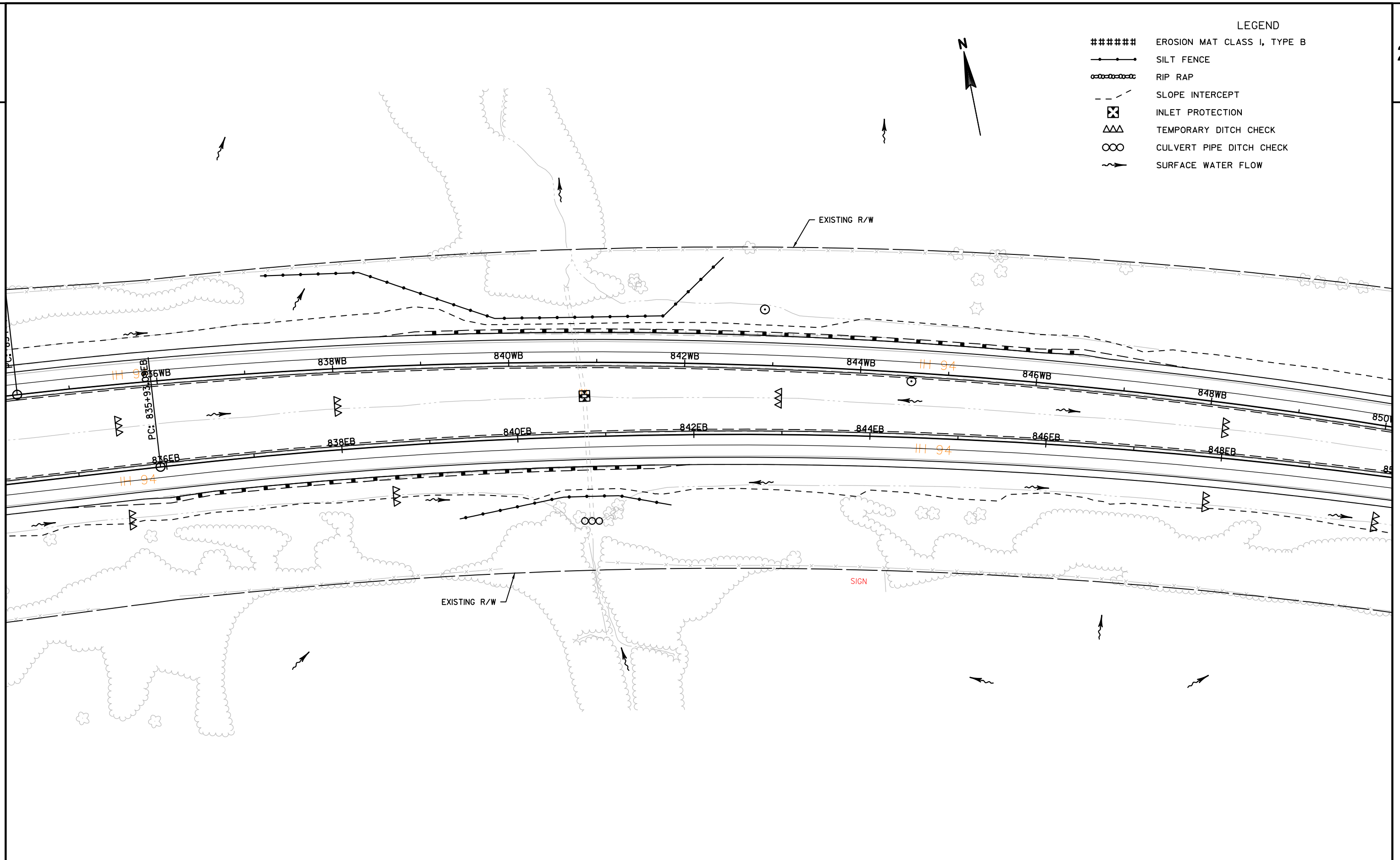
#####	EROSION MAT CLASS I, TYPE B
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—○—○—○—	RIP RAP
- - - - -	SLOPE INTERCEPT
⊠	INLET PROTECTION
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE DITCH CHECK
~>	SURFACE WATER FLOW



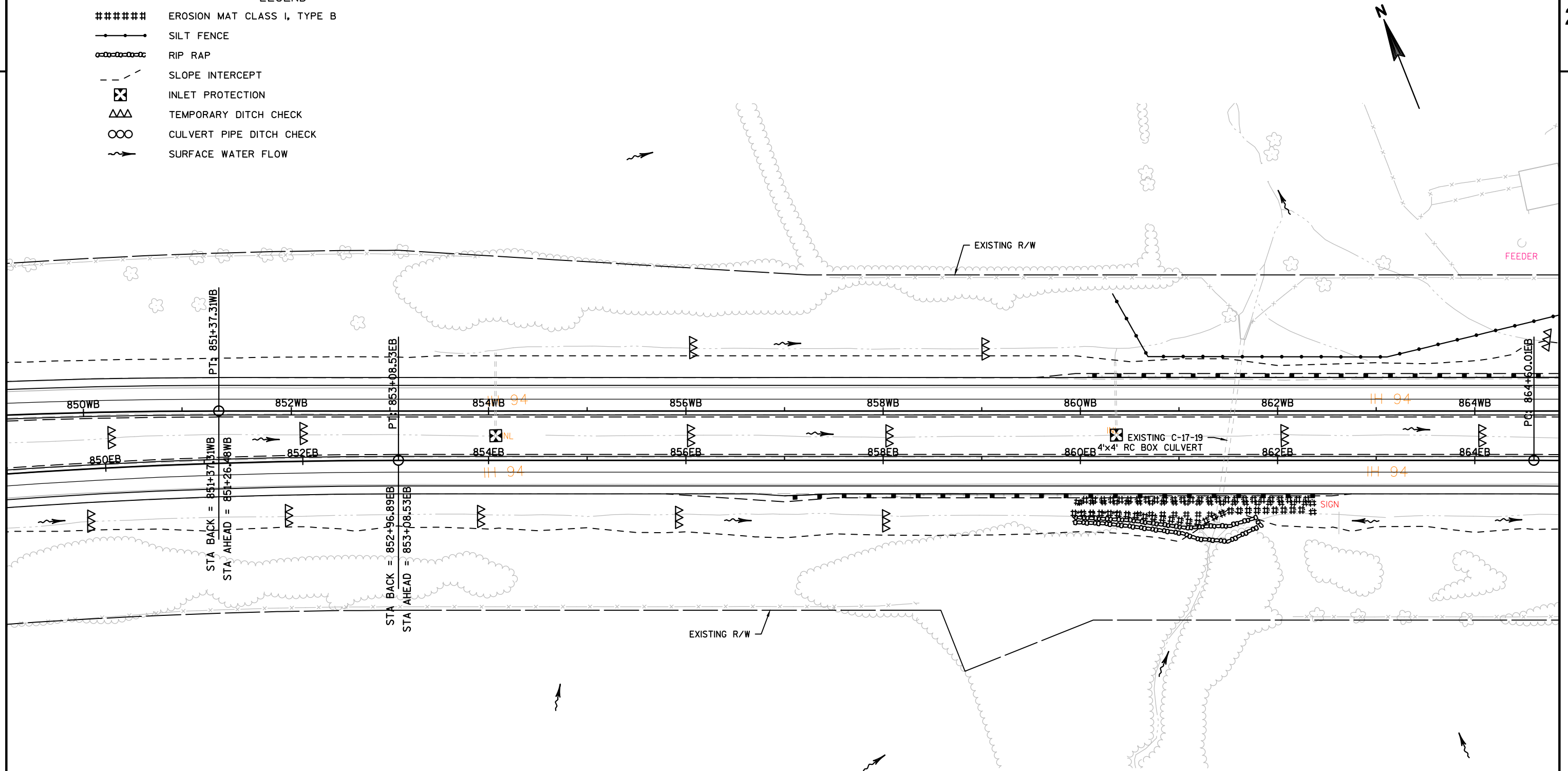


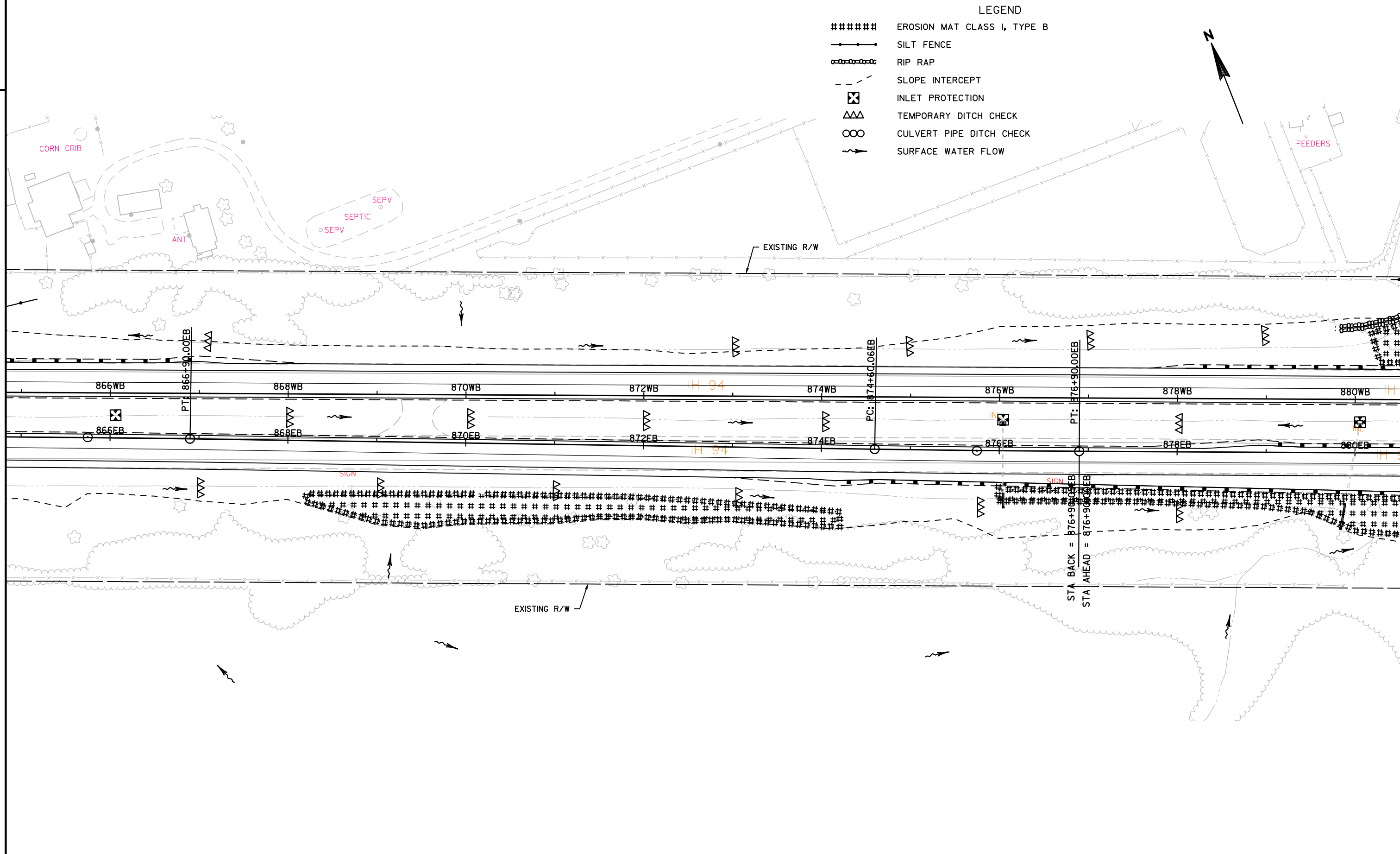






- LEGEND
- ##### EROSION MAT CLASS I, TYPE B
 - SILT FENCE
 - RIP RAP
 - - - SLOPE INTERCEPT
 - ⊗ INLET PROTECTION
 - △△△ TEMPORARY DITCH CHECK
 - CULVERT PIPE DITCH CHECK
 - ~> SURFACE WATER FLOW



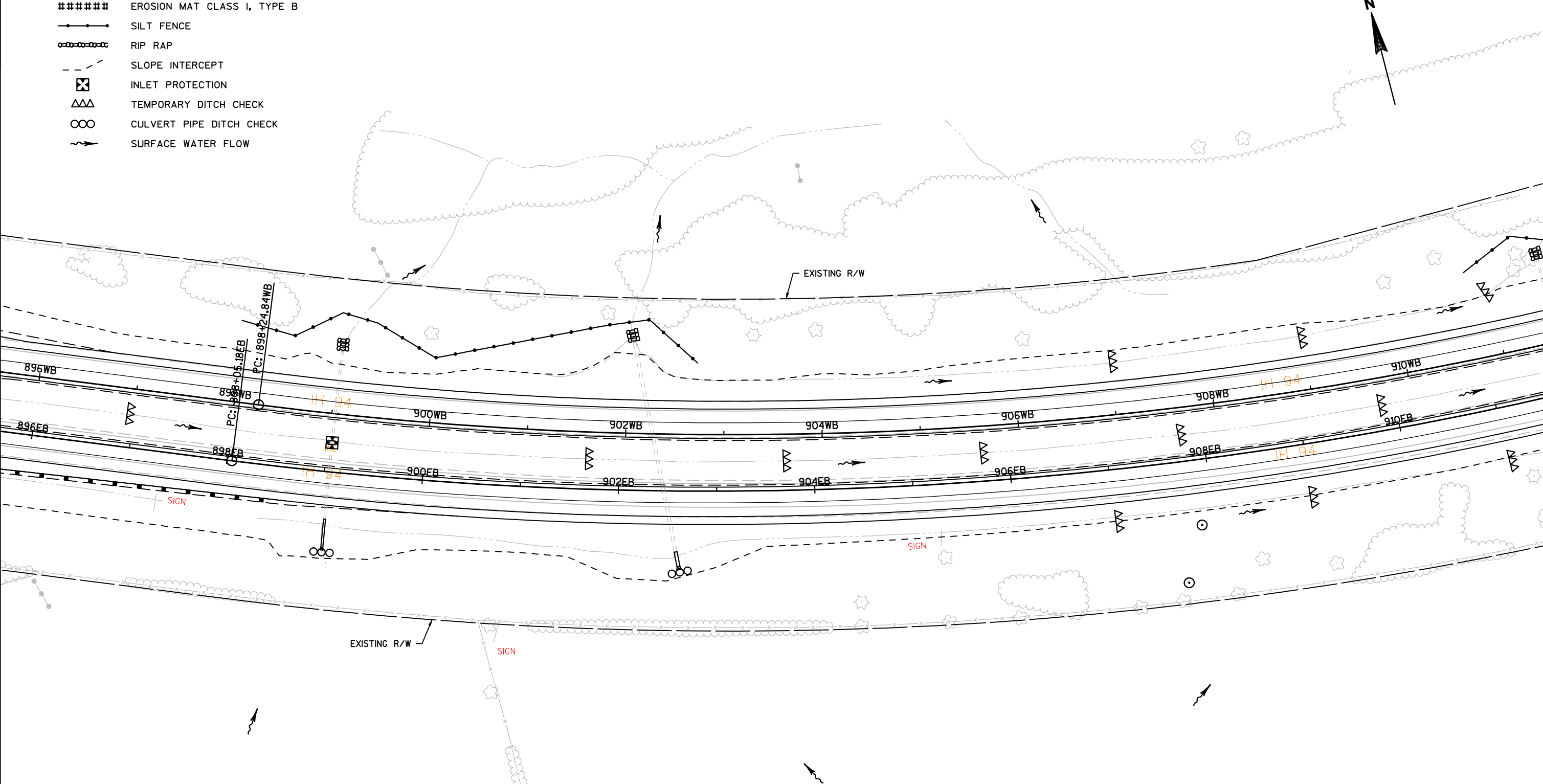


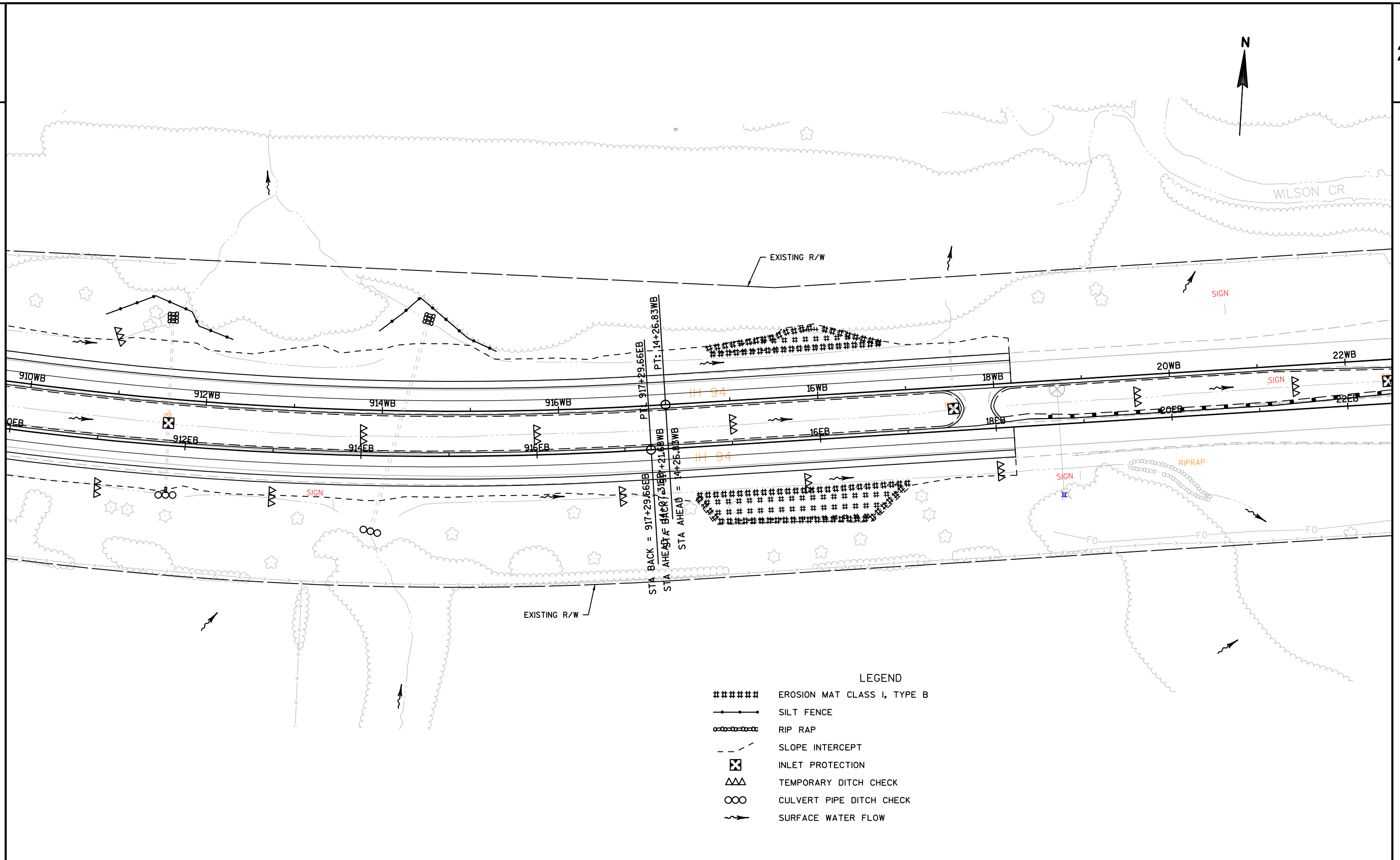
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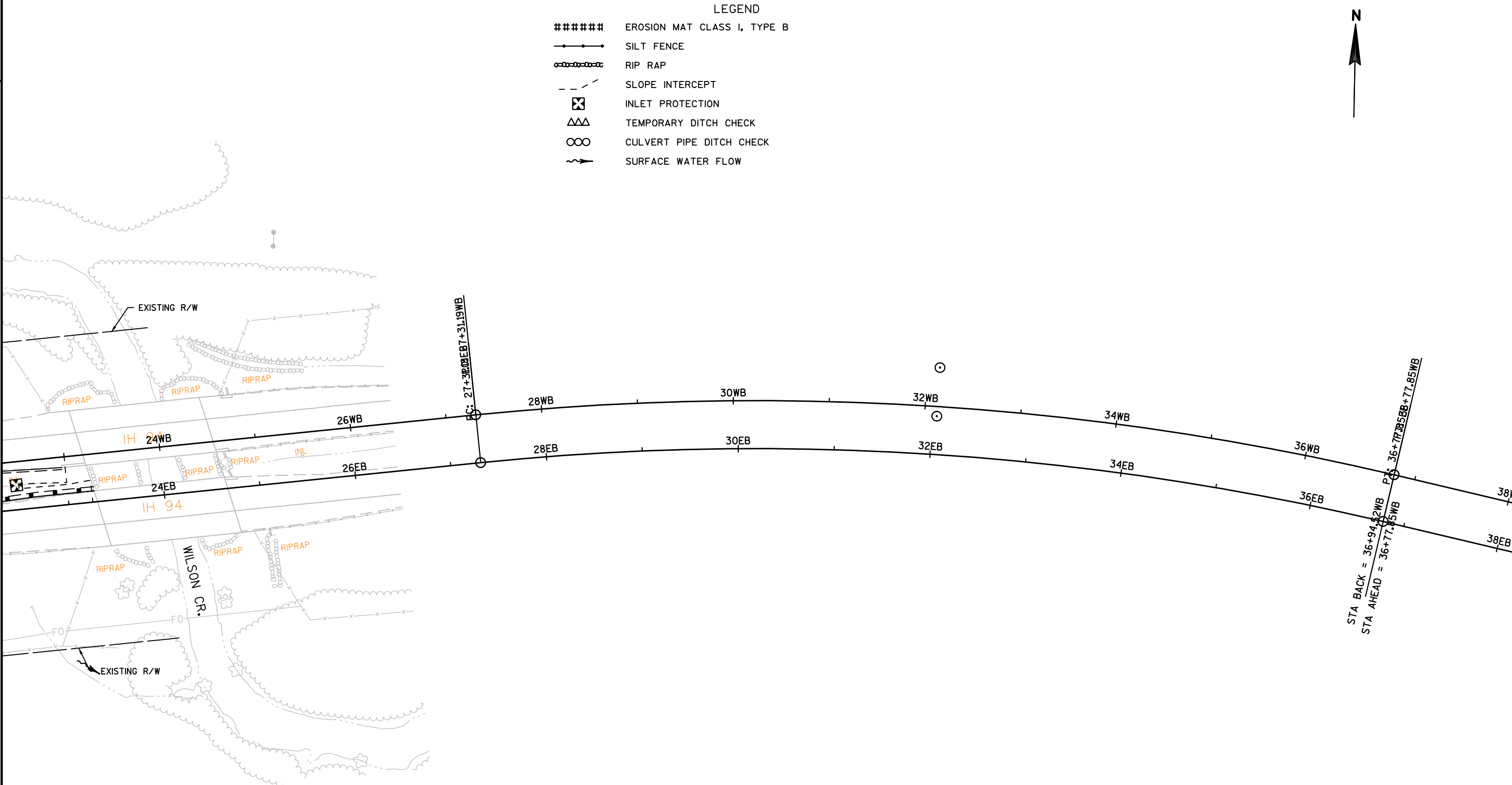


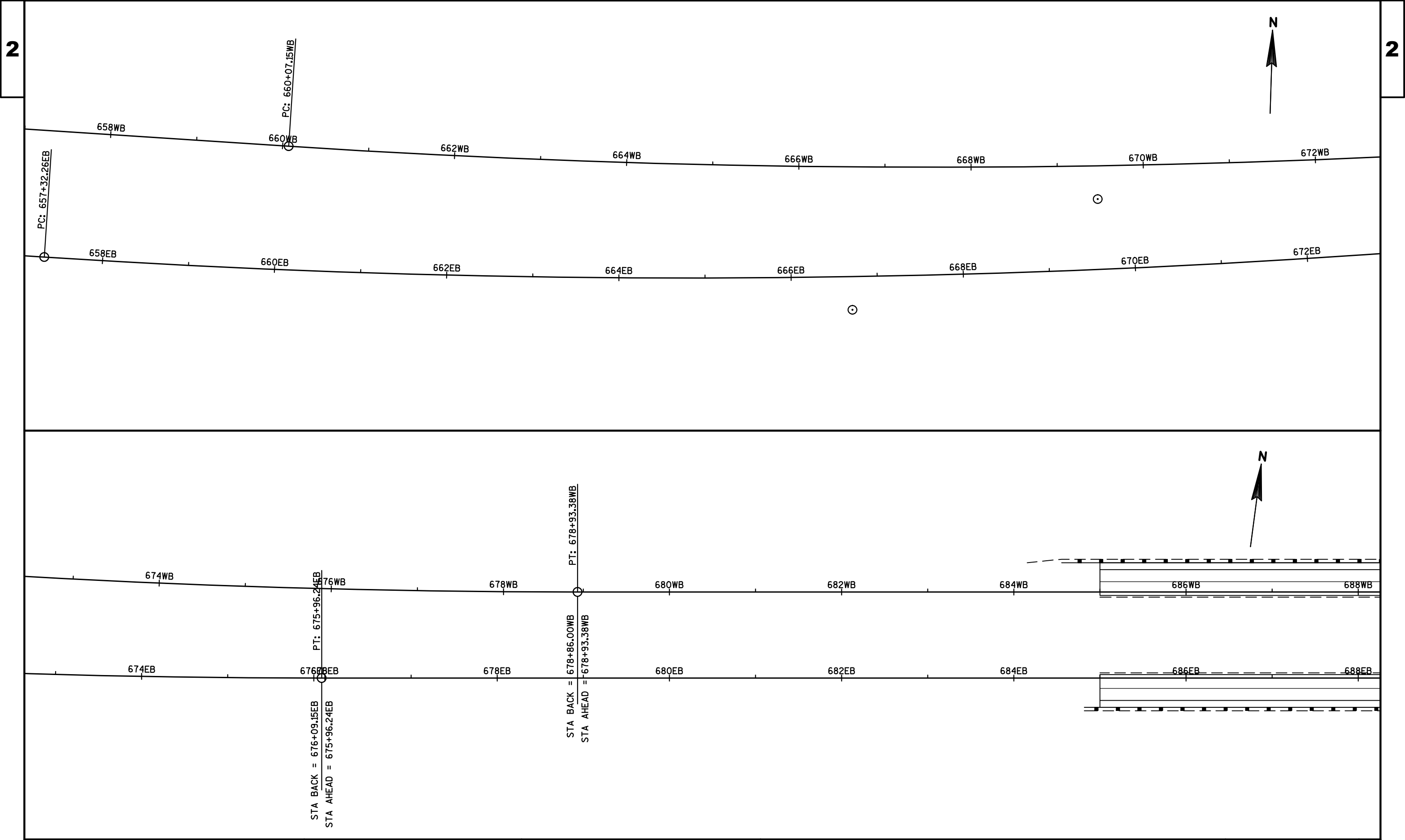
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- ##### EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIP RAP
- - - SLOPE INTERCEPT
- ⊠ INLET PROTECTION
- △△△ TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- ~> SURFACE WATER FLOW









PROJECT NO:1022-08-72

HWY: IH 94

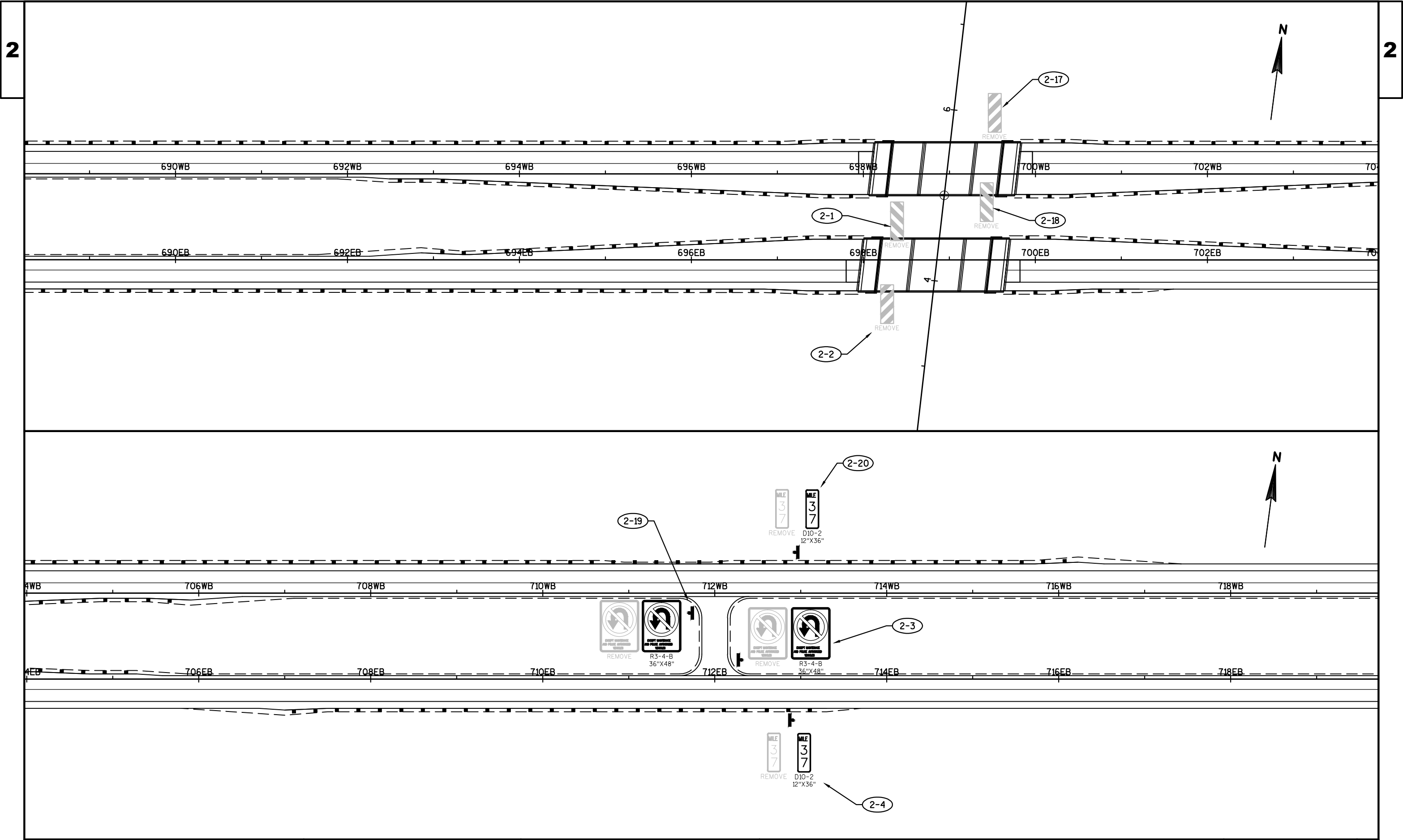
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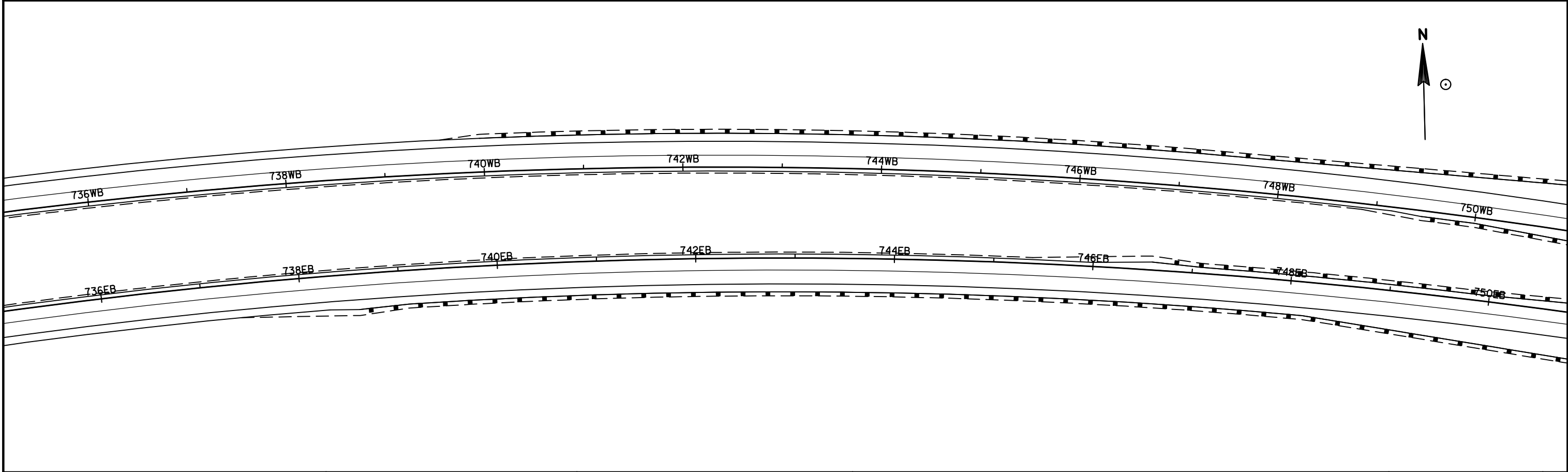
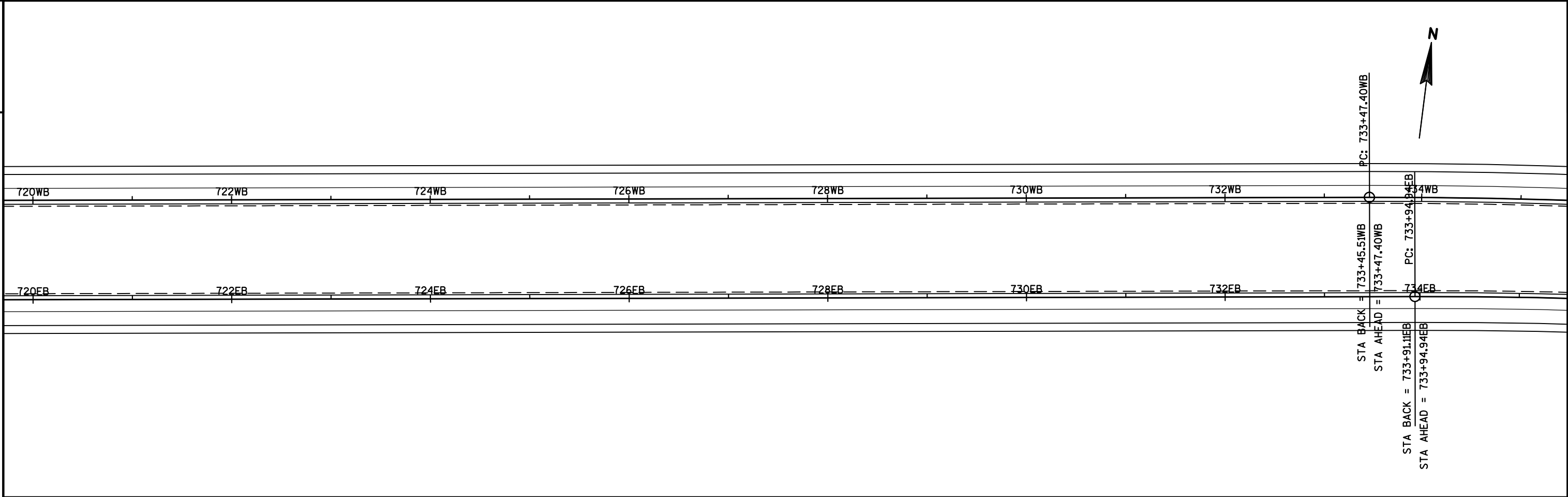
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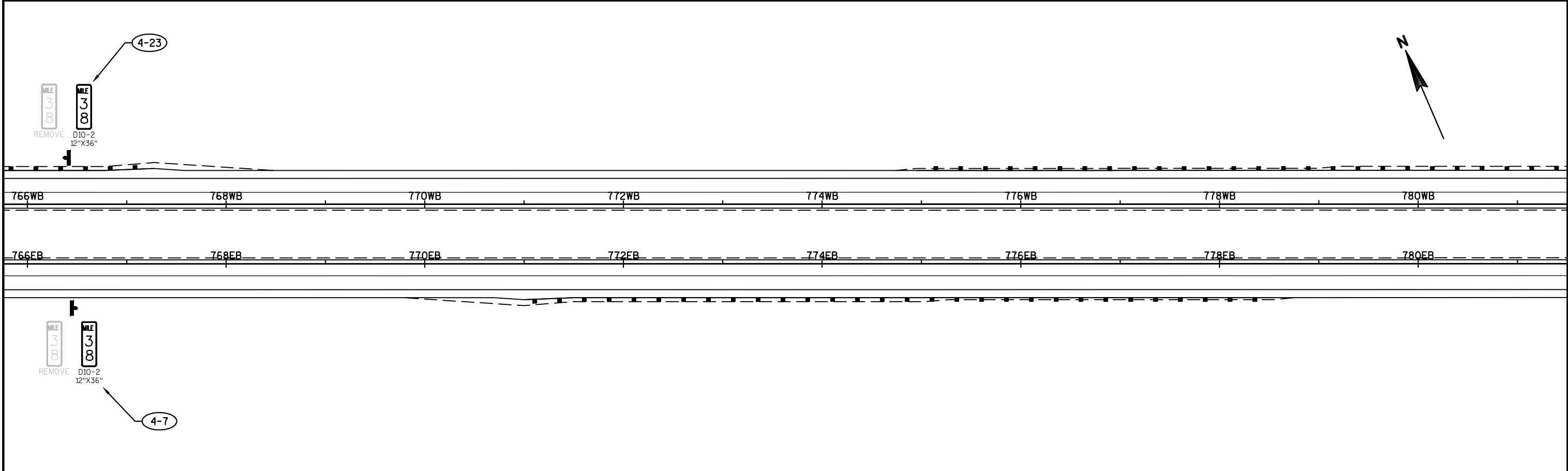
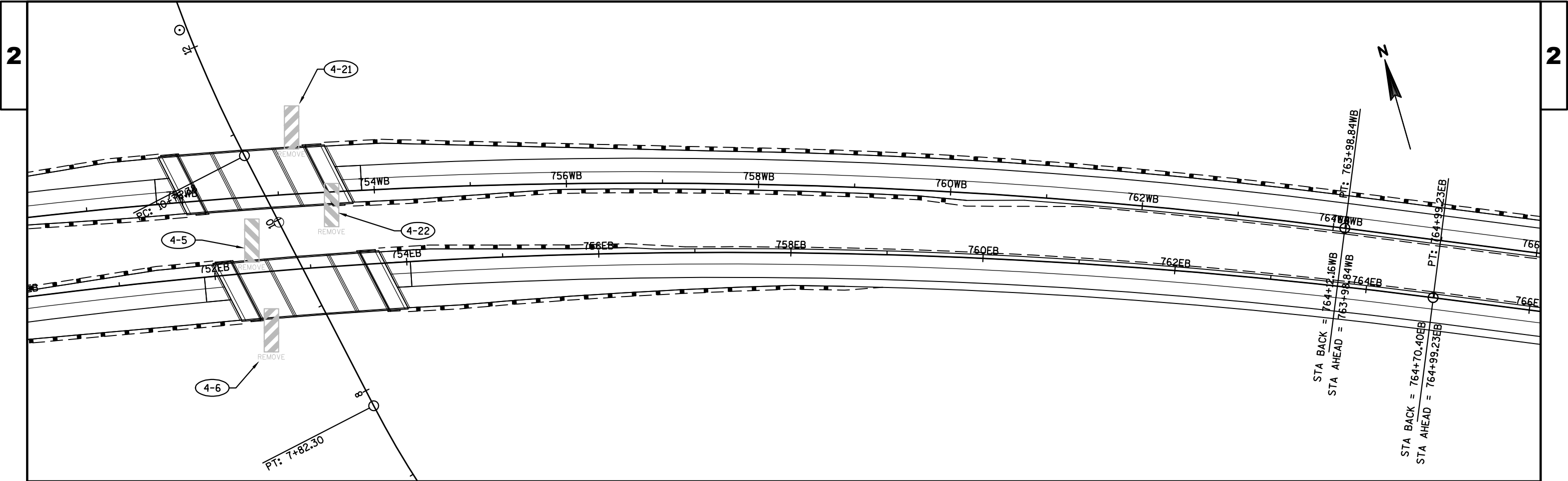
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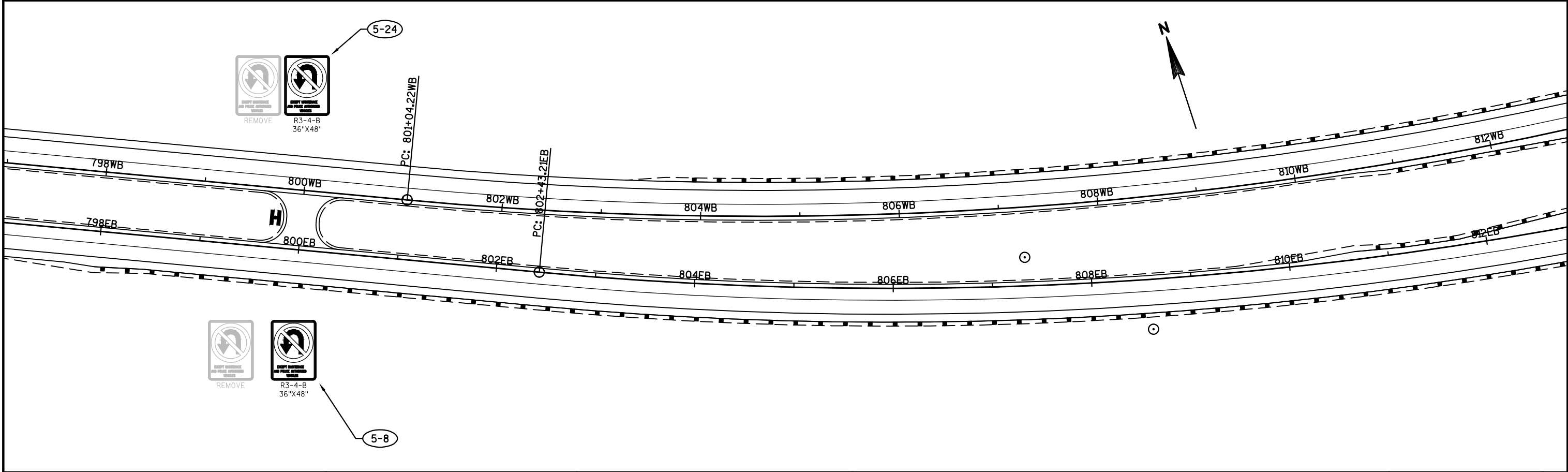
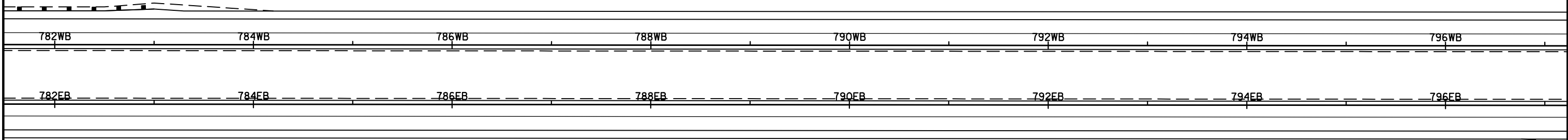
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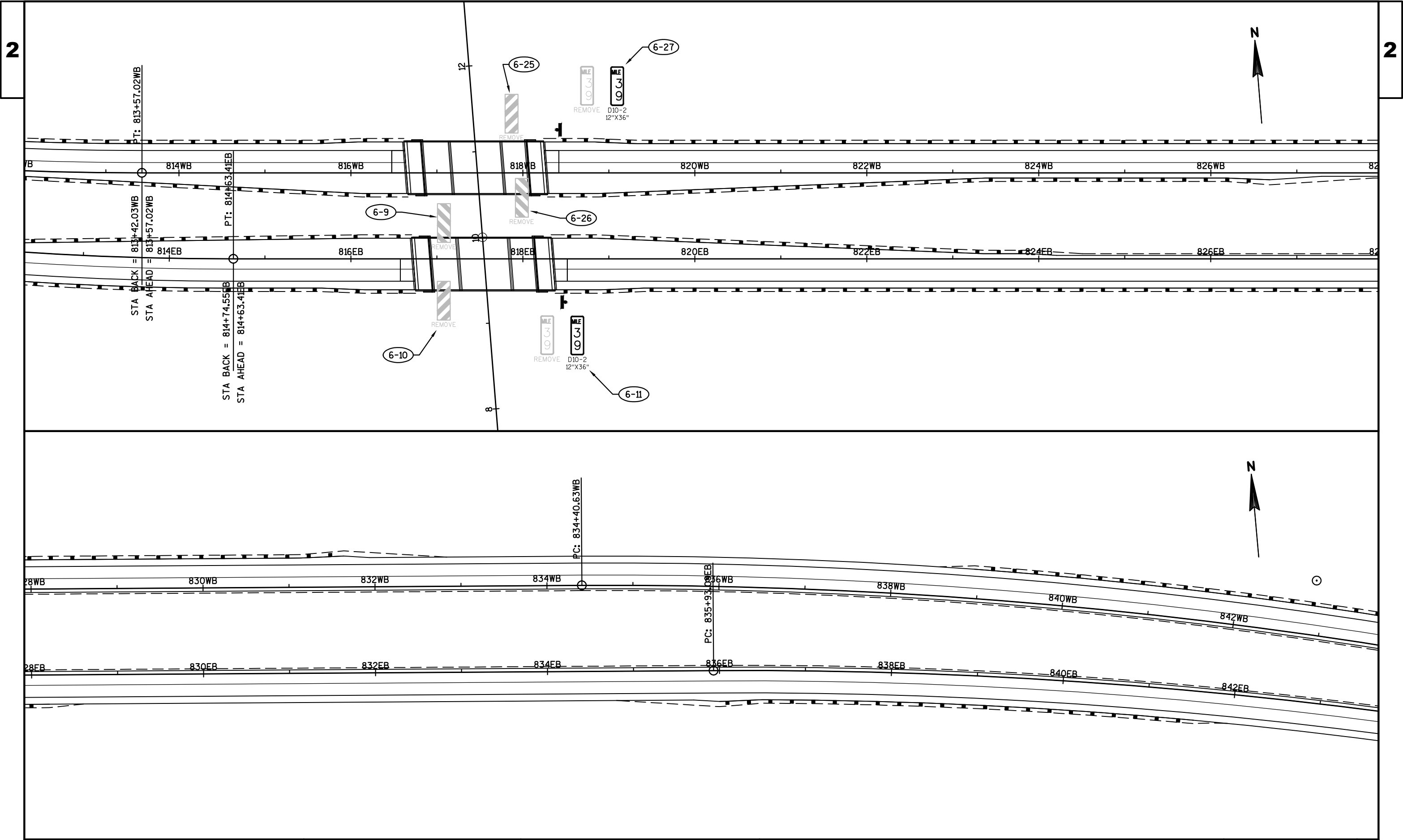
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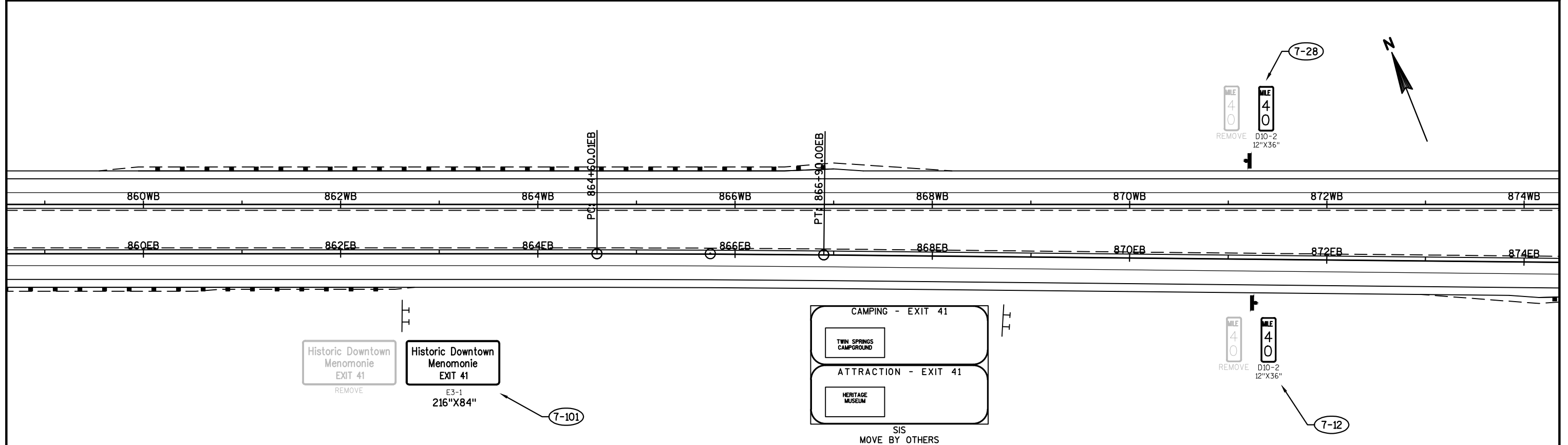
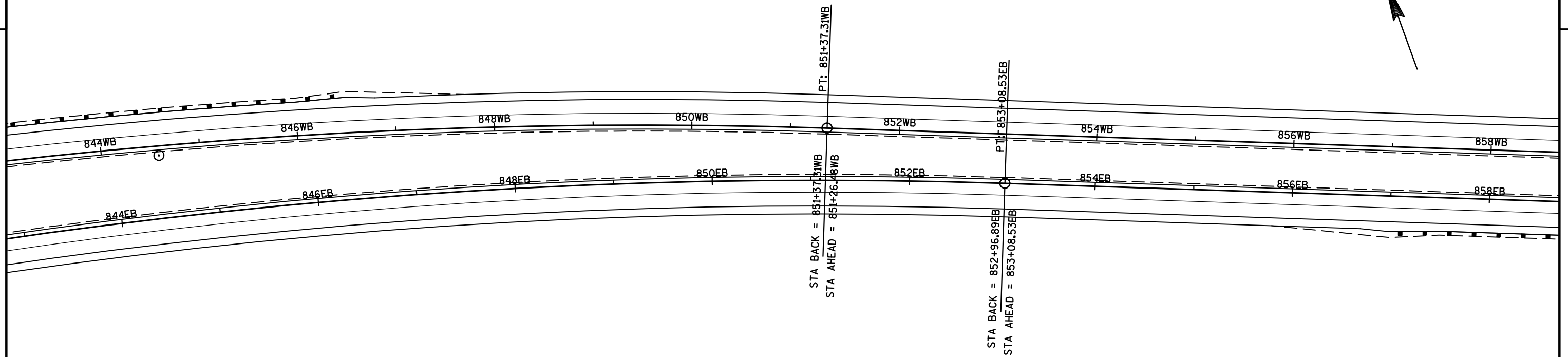


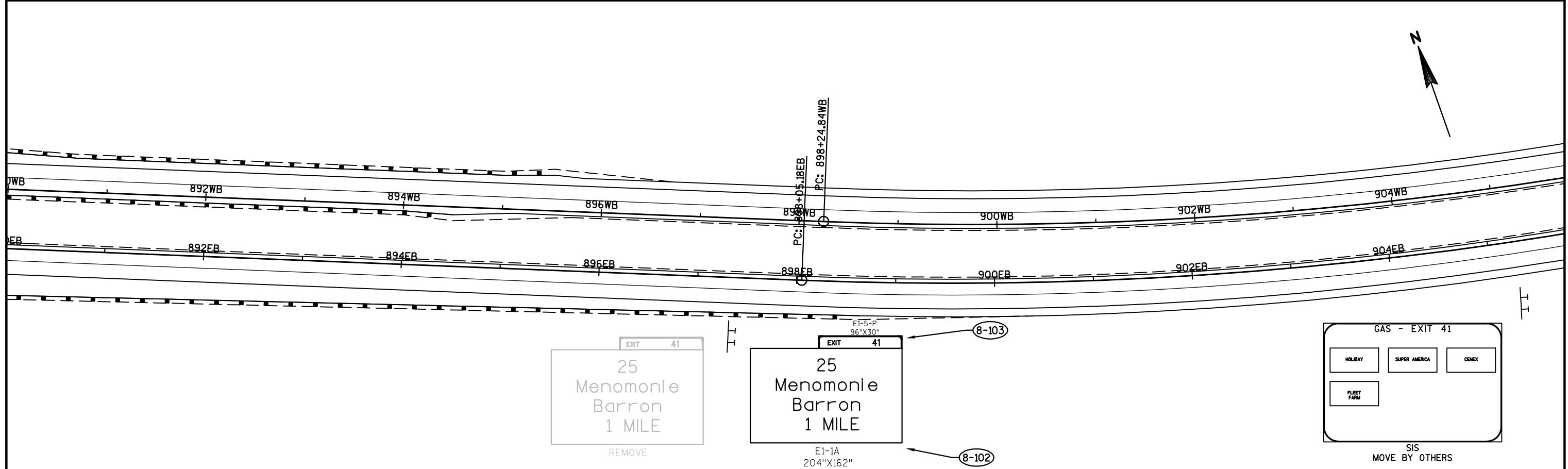
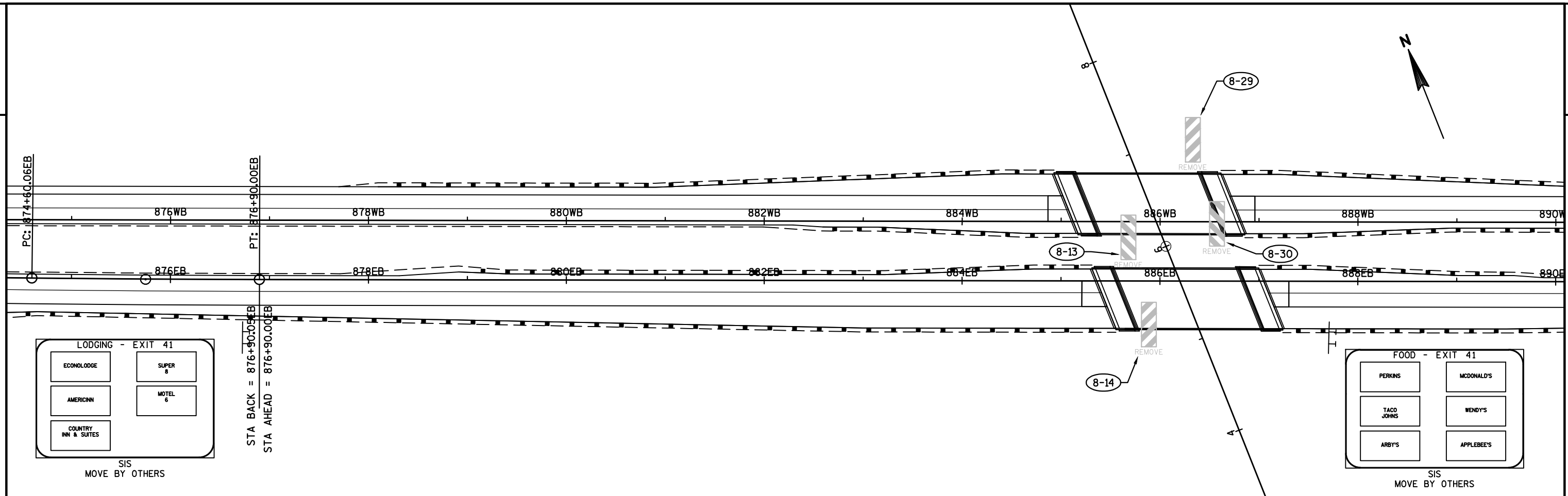


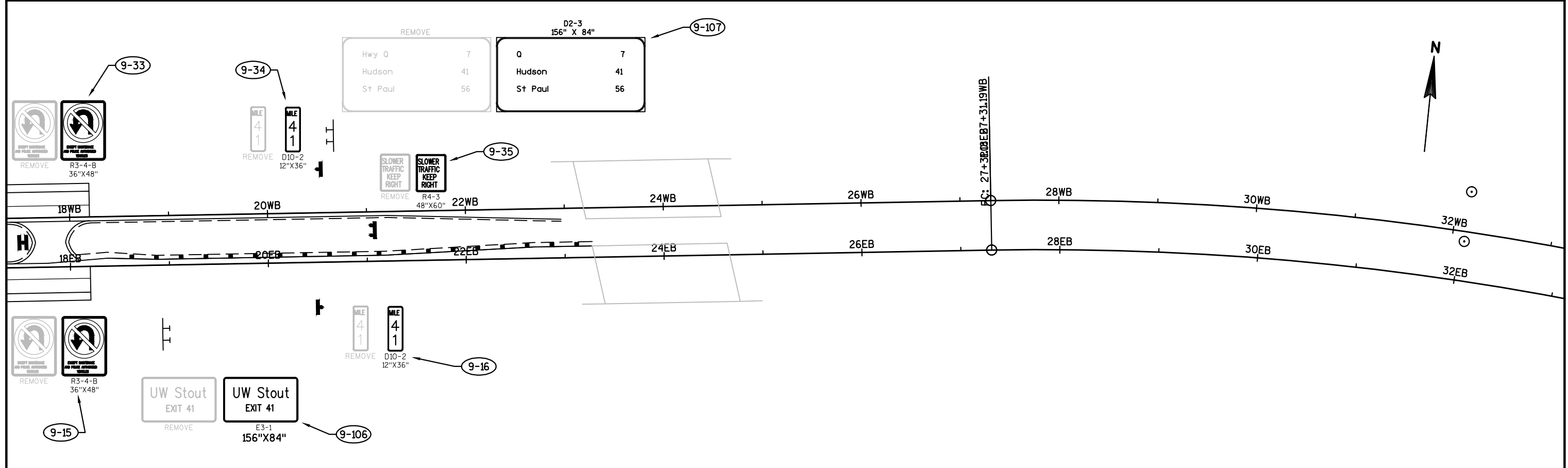
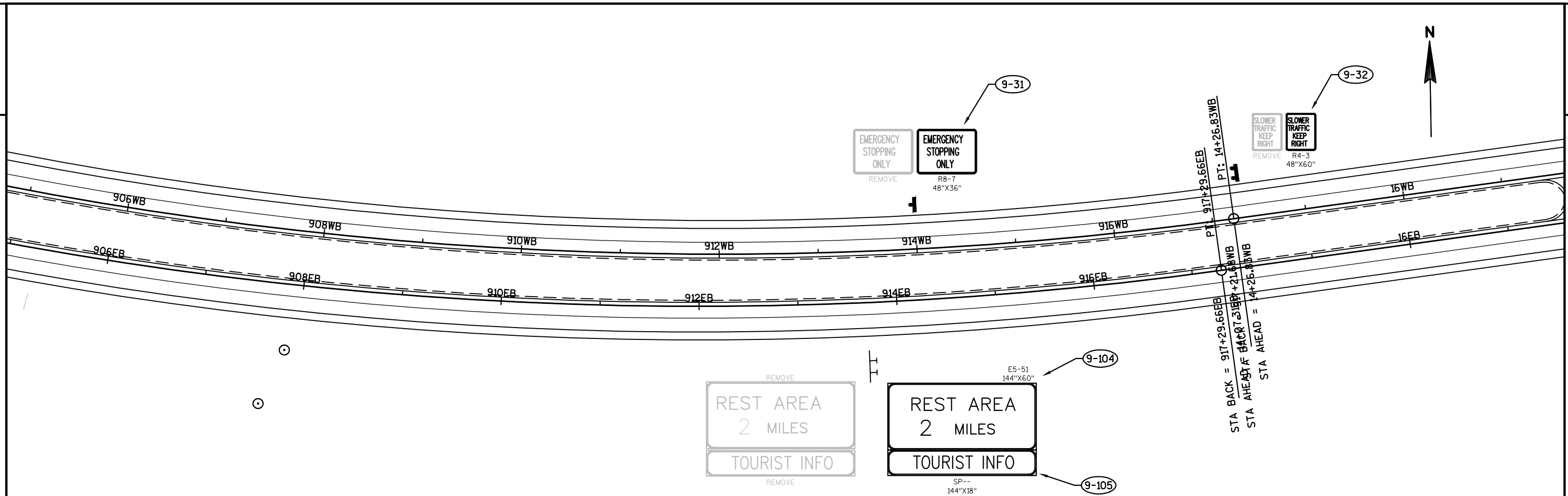


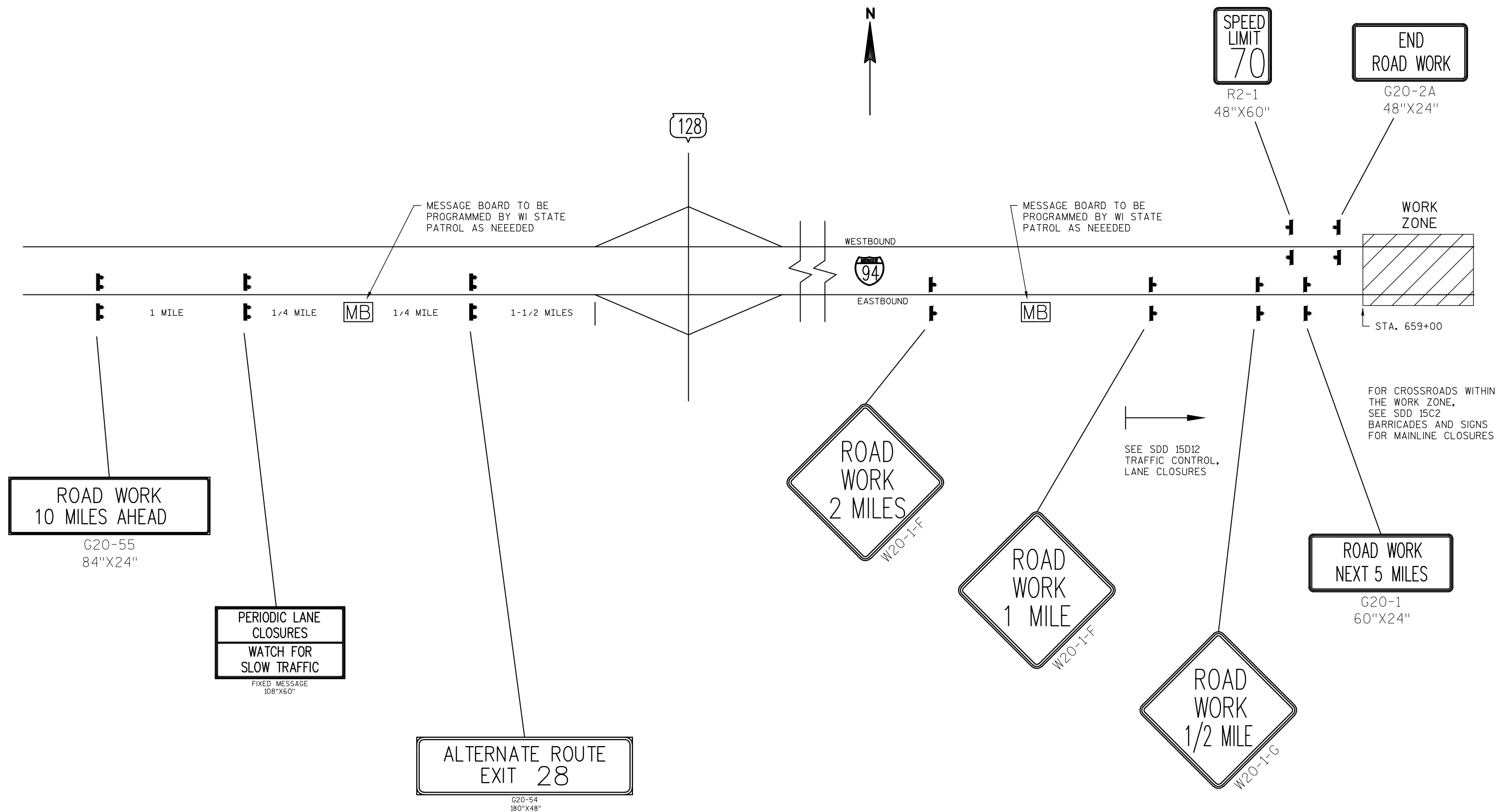


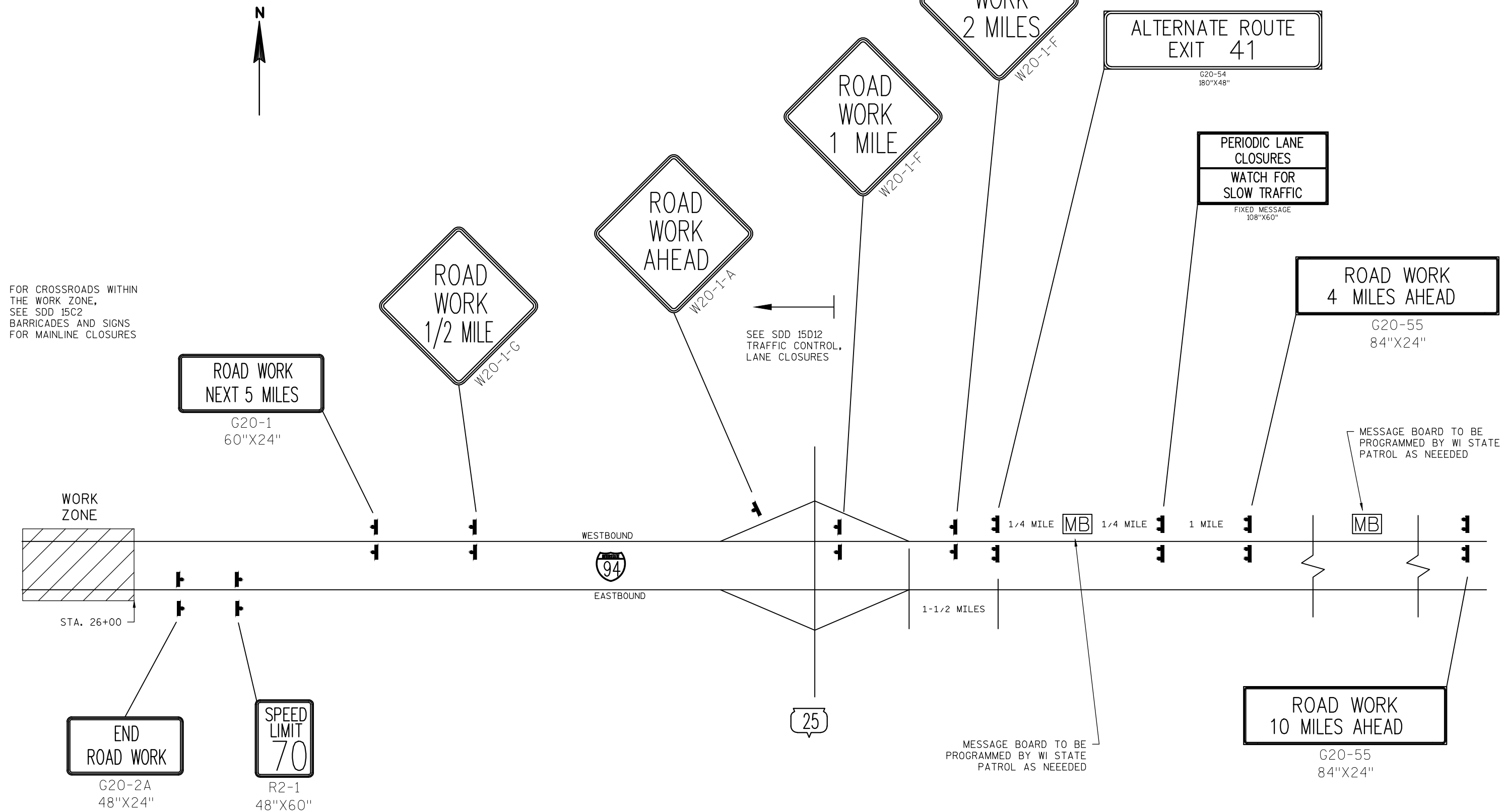








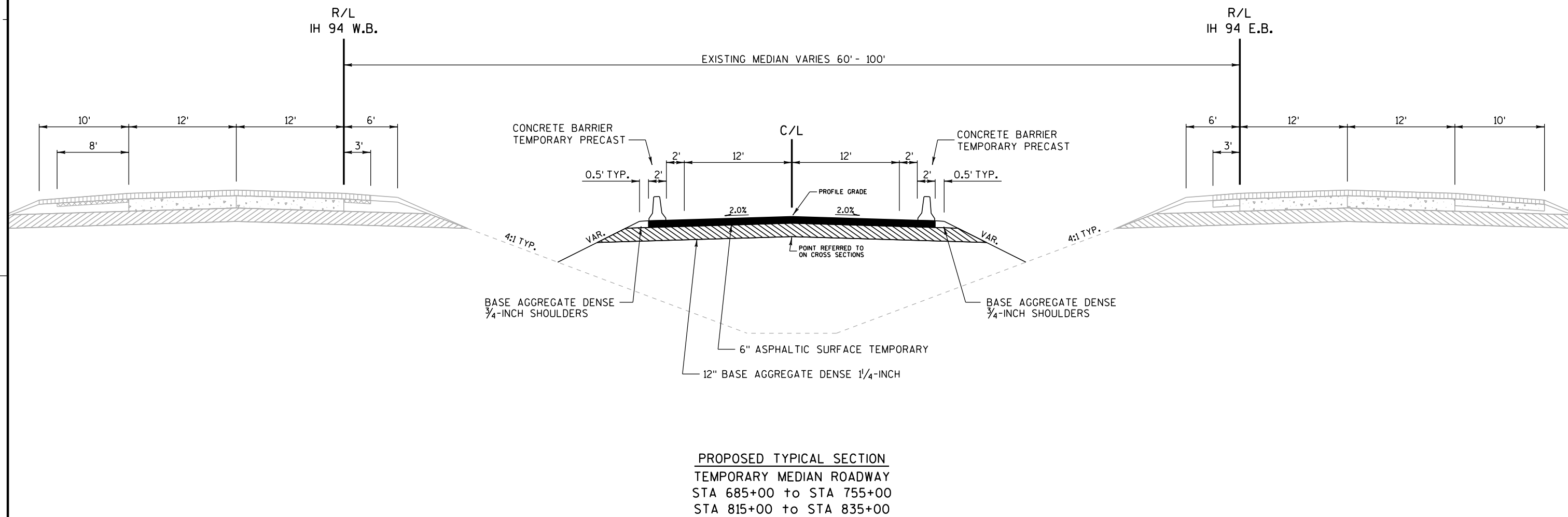


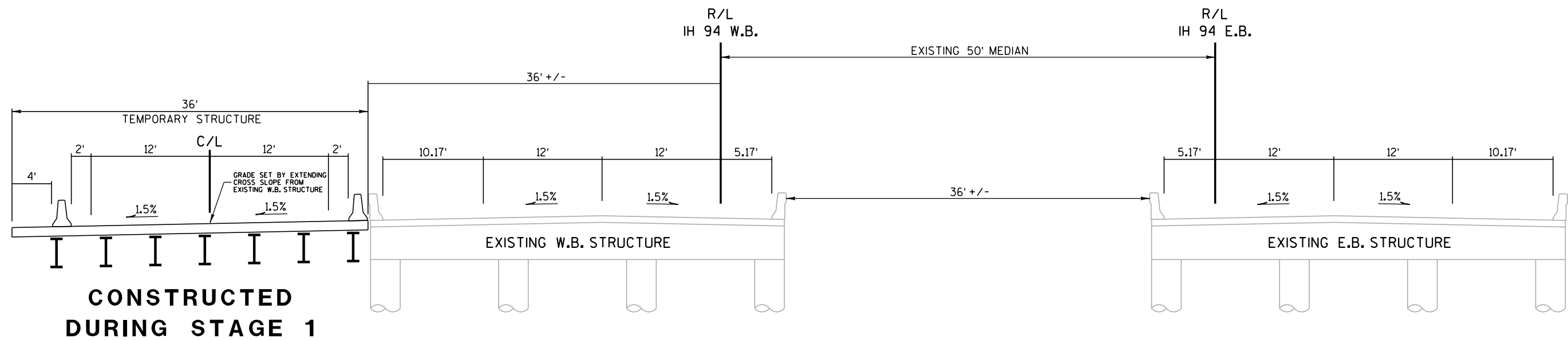


PROPOSED
CONSTRUCTION STAGING PLAN
250TH STREET - WILSON CREEK

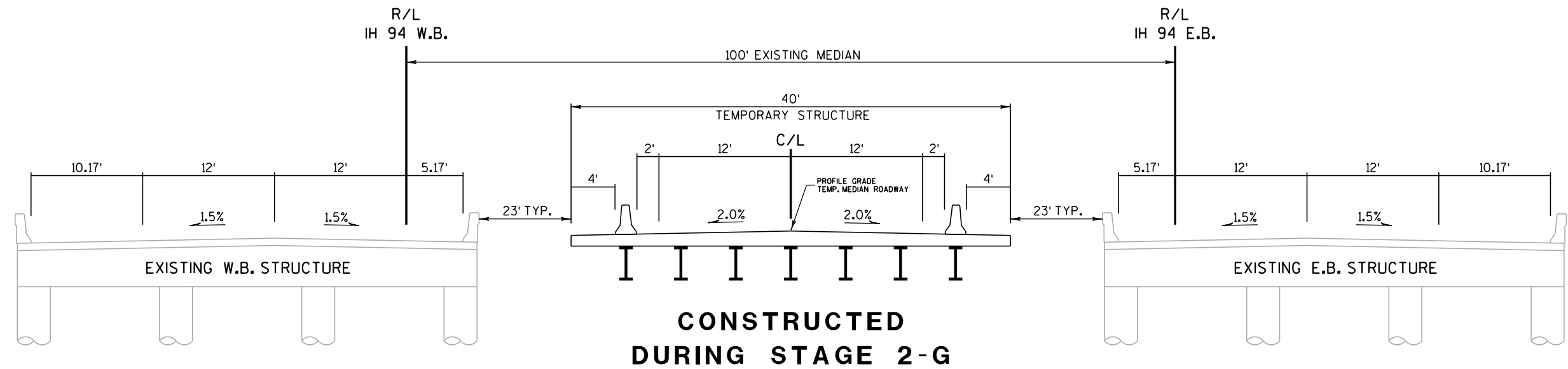
STAGE	DESCRIPTION	DURATION	SCHEDULE
1	CONSTRUCT EB MEDIAN WIDENING FOR CROSSEOVERS. CONSTRUCT W.B. TEMPORARY OUTSIDE WIDENING AT 390th ST. CONSTRUCT TEMPORARY STRUCTURE OVER 390th ST.	6 WEEKS	APR 2 - MAY 11, 2018
2-A	MILL AND RESURFACE OUTSIDE SHOULDERS WB & EB AT LOCATIONS SPECIFIED.	9 WEEKS	MAY 14 - JUL 13, 2018
2-B	REMOVE W.B. WHITE EDGE LINE. PLACE W.B. TEMPORARY LANE LINE & WHITE EDGE LINE.		
2-C	SHIFT SINGLE LANE W.B. TRAFFIC. REMOVE W.B. LANE LINE & YELLOW EDGE LINE. PLACE W.B. TEMPORARY YELLOW EDGE LINE.		
2-D	SHIFT TWO LANES W.B. TRAFFIC WITH BARRELS.		
2-E	REPLACE W.B. BARRELS WITH CONCRETE BARRIER TEMPORARY PRECAST.		
2-F	PLACE E.B. CONCRETE BARRIER TEMPORARY PRECAST.		
2-G	CONSTRUCT W.B. TEMPORARY MEDIAN WIDENING. CONSTRUCT TEMPORARY MEDIAN ROADWAY & TEMPORARY STRUCTURES OVER 250th ST, CTH K, AND 650th AVE.		
2-H	MOVE E.B. BARRIER TO W.B. TEMPORARY MEDIAN WIDENING.		
3	SWITCH TWO LANES E.B. TRAFFIC TO TEMPORARY WIDENING. CONSTRUCT NEW E.B. LANES & E.B. BRIDGES.	18 WEEKS	JUL 16 - NOV 16, 2018

STAGE	DESCRIPTION	DURATION	SCHEDULE
4-A	SWITCH TWO LANES EB TRAFFIC TO TEMPORARY LANES WITH BARRELS.	6 WEEKS	APR 1 - MAY 10, 2019
4-B	MOVE BARRIER TO REPLACE EB BARRELS.		
4-C	REMOVE W.B. TEMPORARY MEDIAN WIDENING. CONSTRUCT E.B. TEMPORARY MEDIAN WIDENING.		
4-D	MOVE W.B. BARRIER TO E.B. TEMPORARY MEDIAN WIDENING.		
5	SWITCH TWO LANES W.B. TRAFFIC TO TEMPORARY WIDENING. CONSTRUCT NEW W.B. LANES & W.B. BRIDGES.	17 WEEKS	MAY 13 - SEP 6, 2019
6-A	SWITCH TWO LANES W.B. TRAFFIC TO NEW W.B. CONSTRUCTION.	10 WEEKS	SEP 9 - NOV 15, 2019
6-B	MOVE BARRIER TO FINISHED W.B. CONCRETE FOR TEMPORARY LANES.		
6-C	REMOVE E.B. TEMP WIDENING/MEDIAN ROADWAY/TEMP STRUCTURES. CONSTRUCT EB/WB INSIDE SHOULDERS/RESTORE MEDIAN.		
6-D	REMOVE ALL BARRIER & EB/WB TEMPORARY YELLOW EDGE LINE. PLACE EB/WB LANE LINE & YELLOW EDGE LINE.		
6-E	SHIFT EB/WB SINGLE LANE TRAFFIC TO PASSING LANE. REMOVE EB/WB TEMPORARY LANE LINE & TEMPORARY WHITE EDGE LINE. PLACE EB/WB WHITE EDGE LINE.		

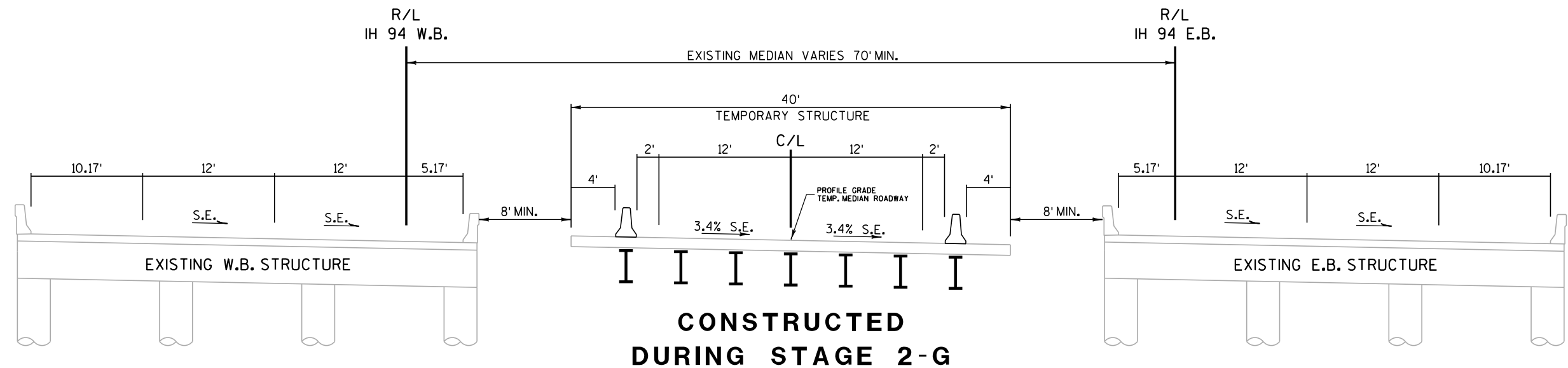




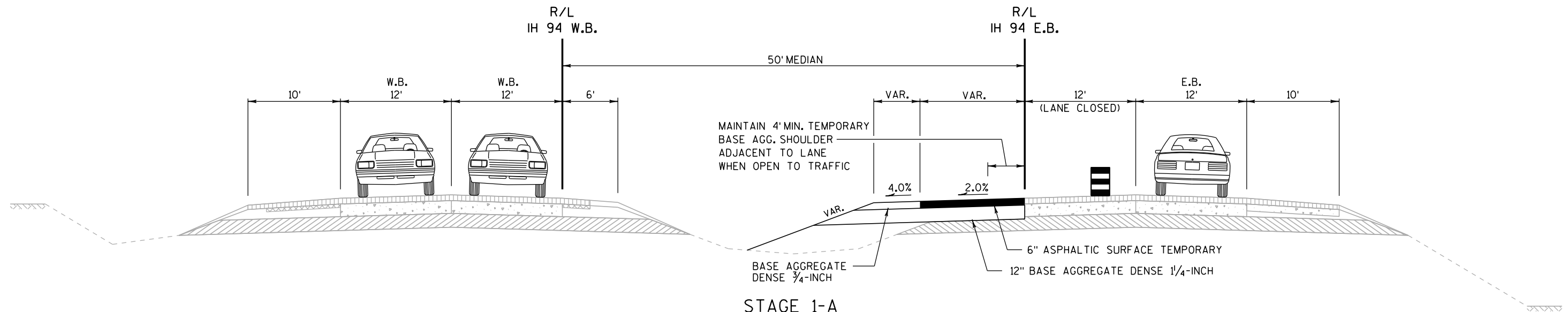
PROPOSED TYPICAL SECTION
TEMPORARY BRIDGE OVERPASS
390th STREET



PROPOSED TYPICAL SECTION
TEMPORARY BRIDGE OVERPASS
250th STREET
650th AVENUE

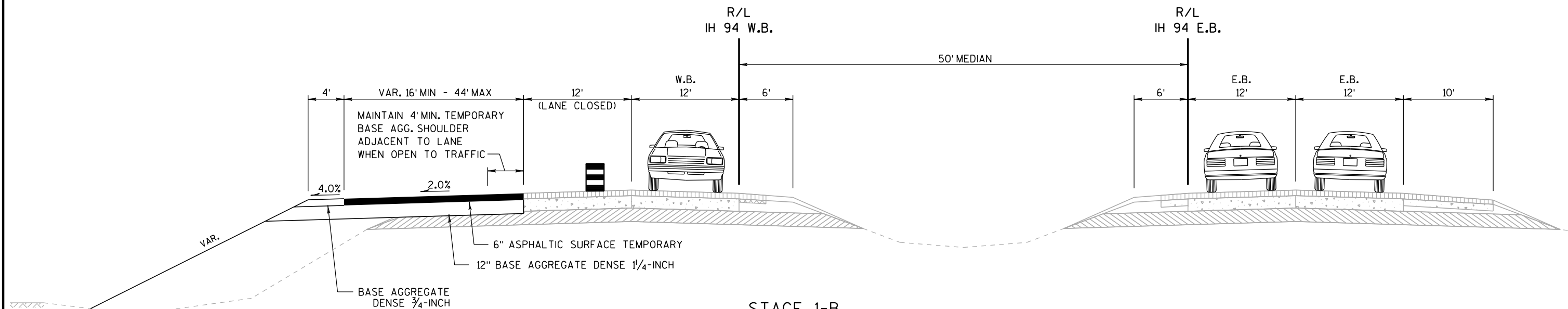


PROPOSED TYPICAL SECTION
TEMPORARY BRIDGE OVERPASS
CTH K



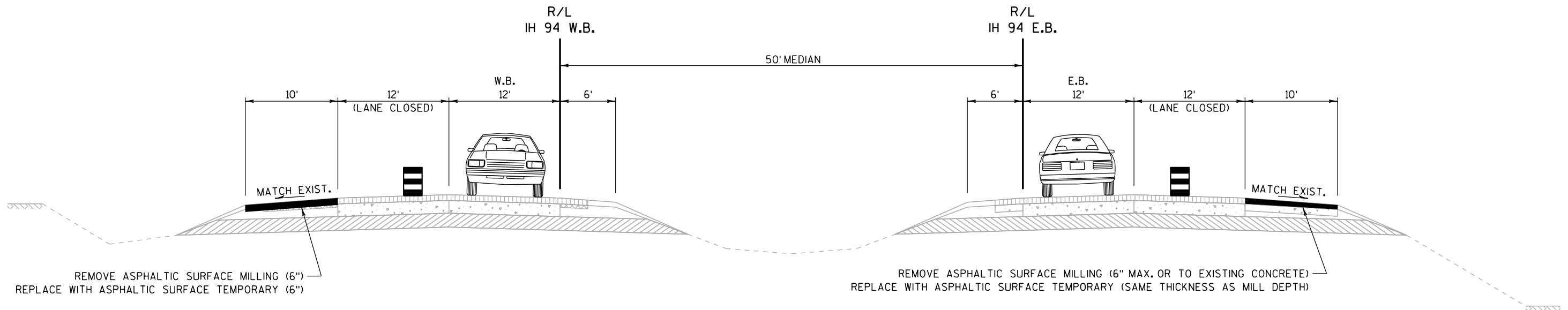
STAGE 1-A
(CROSS SECTIONS/EARTHWORK INCLUDED IN STAGE 2-G)

CONSTRUCT EB MEDIAN WIDENING FOR CROSSOVERS
STA 668+50 to STA 680+25
STA 19+00 to STA 23+25



STAGE 1-B

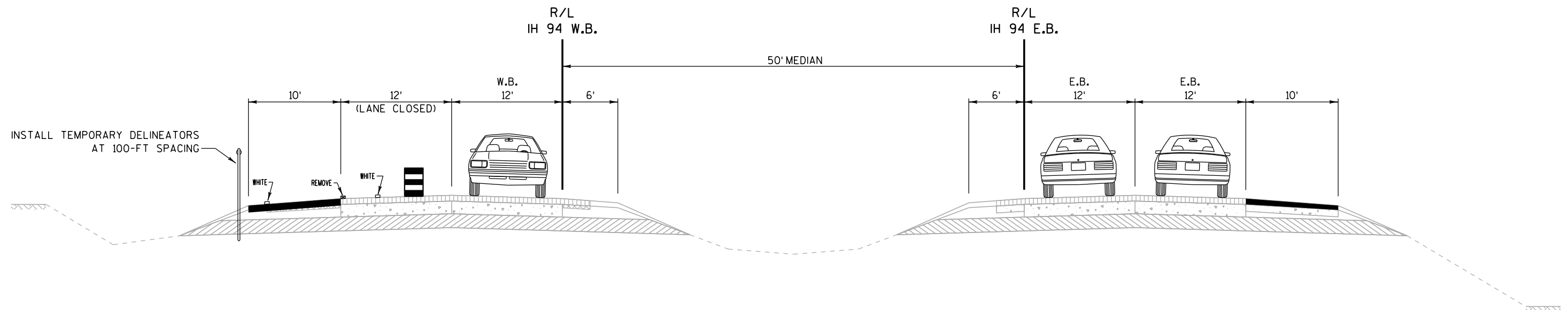
CONSTRUCT WB TEMPORARY OUTSIDE WIDENING
STA 872+50 to STA 898+25



STAGE 2-A

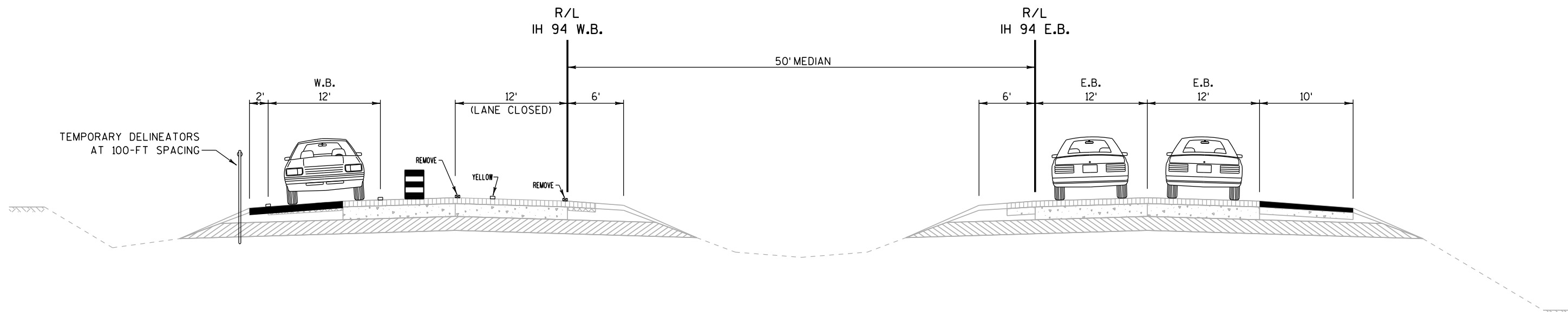
MILL & RESURFACE OUTSIDE SHOULDERS

WB	EB
STA 666+00 to STA 685+00	STA 660+00 to STA 685+00
STA 758+00 to STA 807+00	STA 18+20 to STA 23+35
STA 845+00 to STA 872+50	
STA 898+250 to STA 23+15	



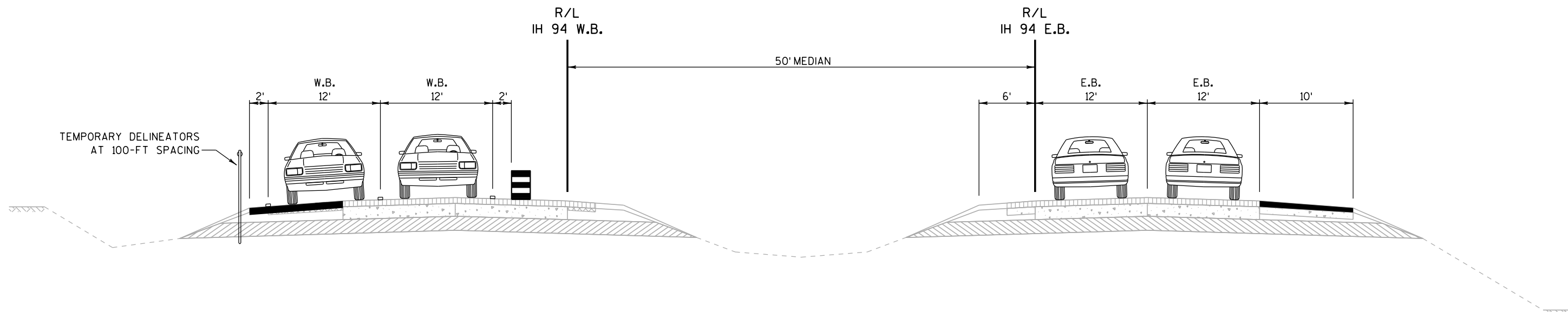
STAGE 2-B

REMOVE WB WHITE EDGE LINE
PLACE WB TEMPORARY LANE LINE & WHITE EDGE LINE
STA 758+00 to STA 807+00
STA 845+00 to STA 872+50
STA 898+25 to STA 23+15



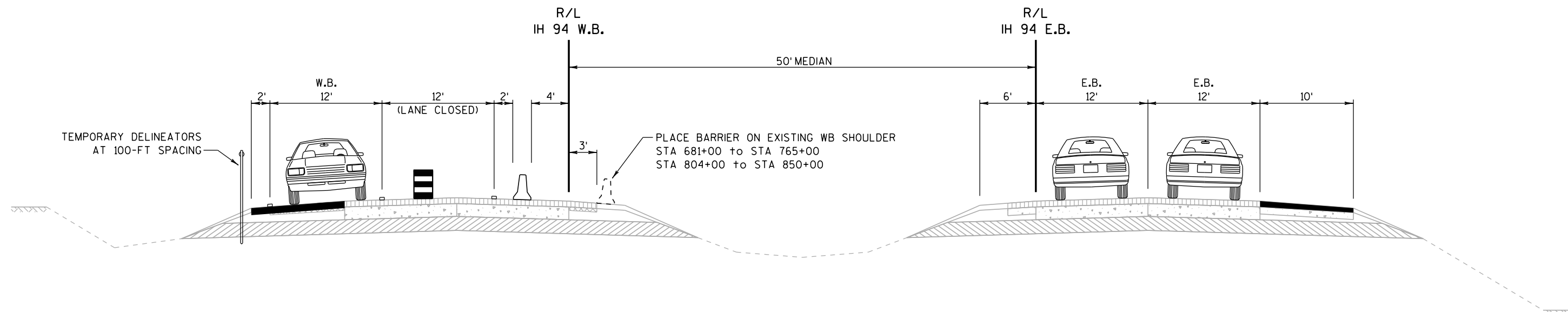
STAGE 2-C

SHIFT TRAFFIC WITH DRUMS WB DRIVING LANE
 REMOVE WB LANE LINE & YELLOW EDGE LINE
 PLACE WB TEMPORARY YELLOW EDGE LINE
 STA 758+00 to STA 807+00
 STA 845+00 to STA 872+50
 STA 898+25 to STA 23+15



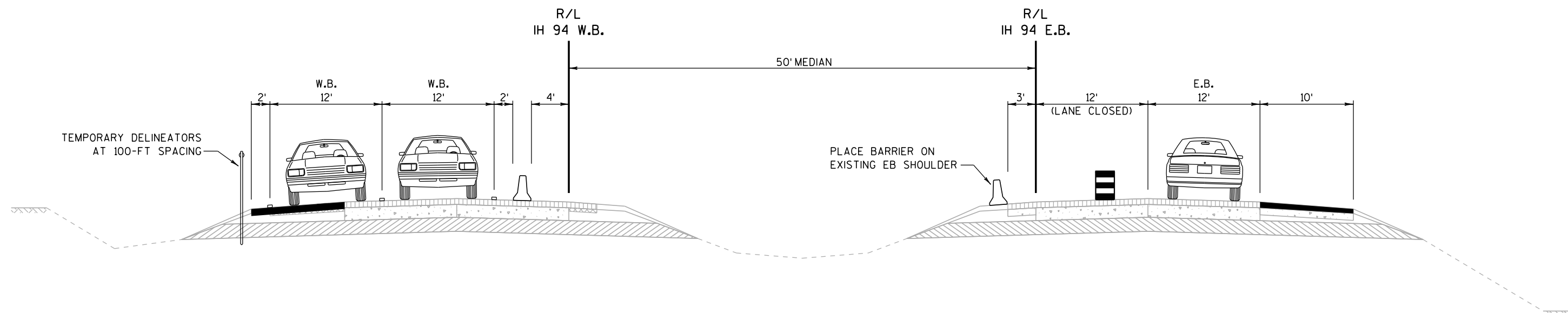
STAGE 2-D

SHIFT TRAFFIC WITH DRUMS WB PASSING LANE
 STA 758+00 to STA 807+00
 STA 845+00 to STA 872+50
 STA 898+25 to STA 23+15



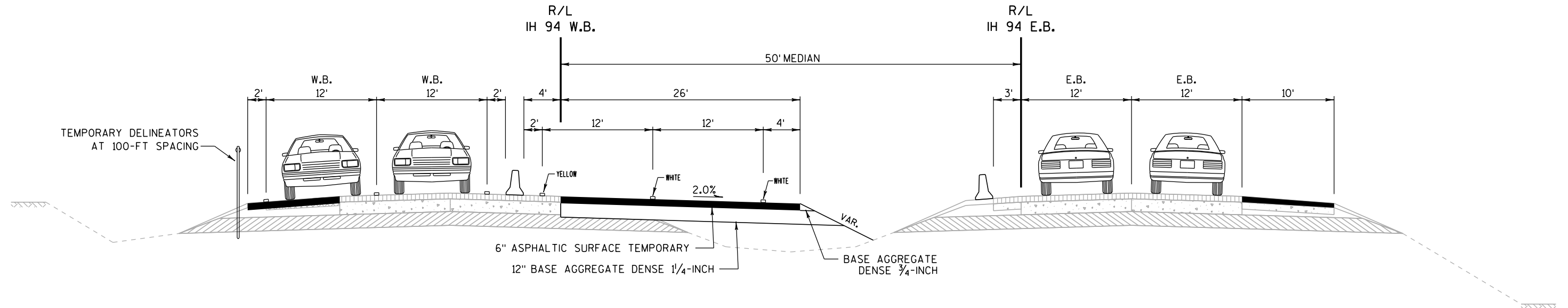
STAGE 2-E

REPLACE WB DRUMS WITH
CONCRETE BARRIER TEMPORARY PRECAST
STA 758+00 to STA 807+00
STA 845+00 to STA 17+00



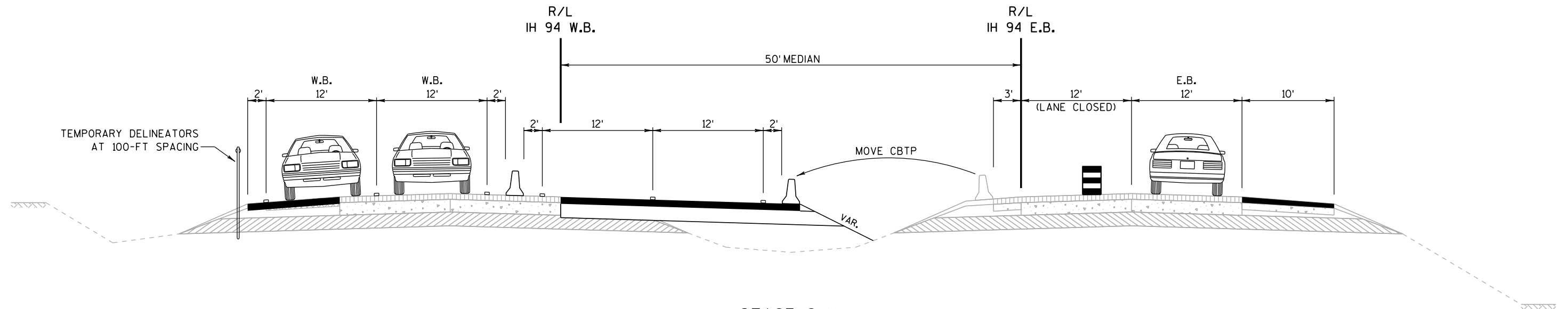
STAGE 2-F

PLACE EB CONCRETE BARRIER TEMPORARY PRECAST
STA 681+00 to STA 17+00



STAGE 2-G

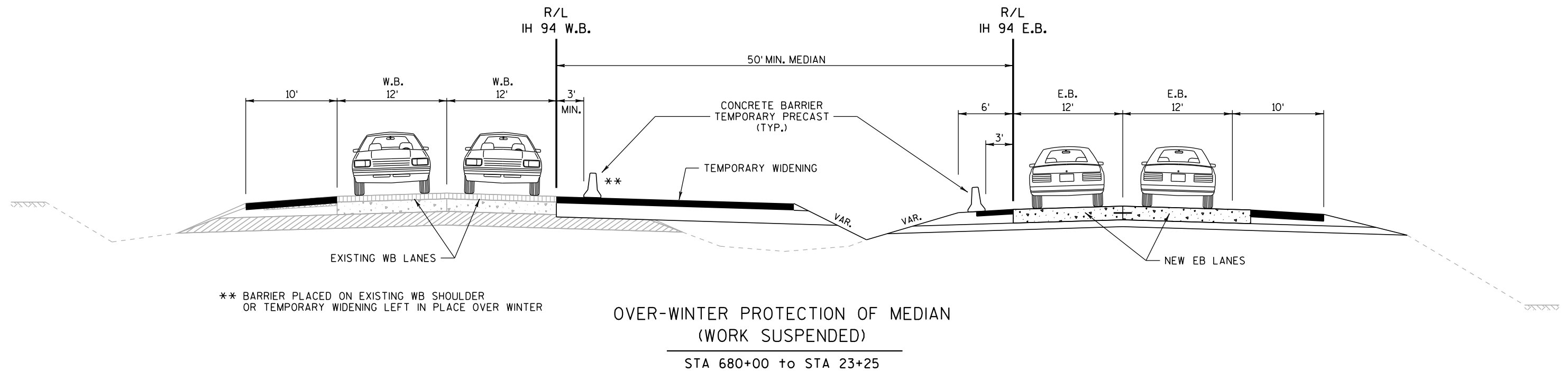
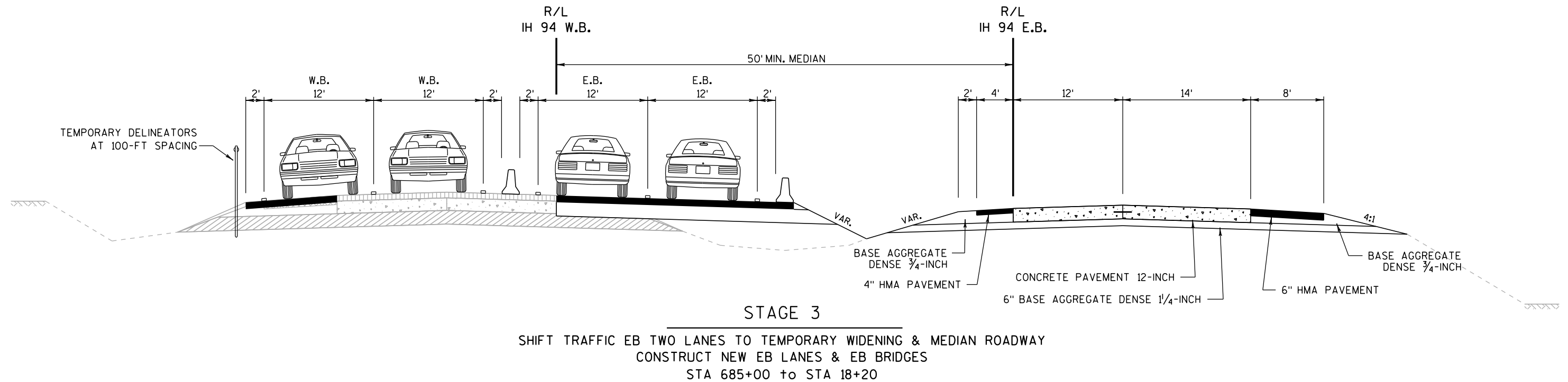
CONSTRUCT WB TEMPORARY MEDIAN WIDENING
CONSTRUCT TEMPORARY MEDIAN ROADWAY & TEMPORARY STRUCTURES
STA 668+50 to STA 23+25

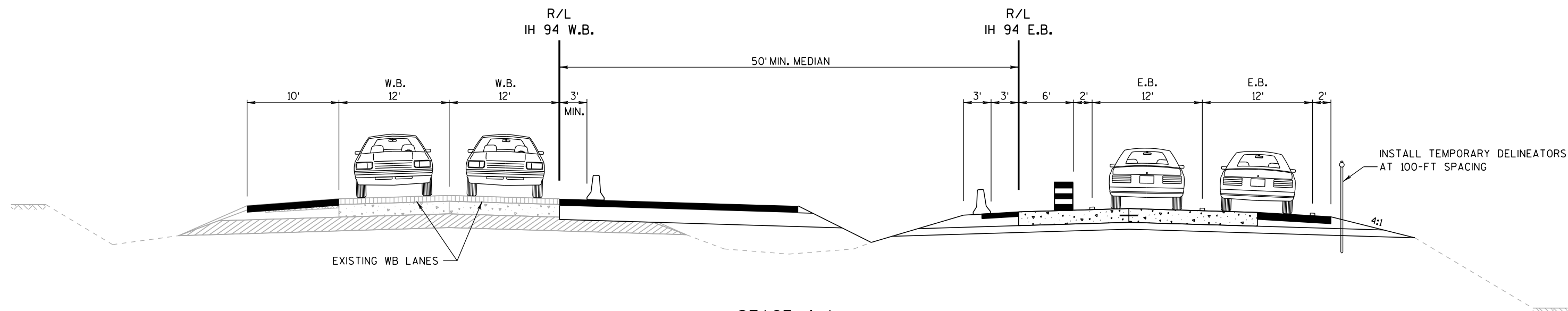


STAGE 2-H

MOVE EB BARRIER TO TEMPORARY MEDIAN WIDENING/ROADWAY RIGHT SIDE
STA 668+50 to STA 23+25
PLACE ADDITIONAL BARRIER ON TEMPORARY MEDIAN ROADWAY LEFT SIDE
STA 680+00 to STA 764+00
STA 801+00 to STA 851+00

2 |

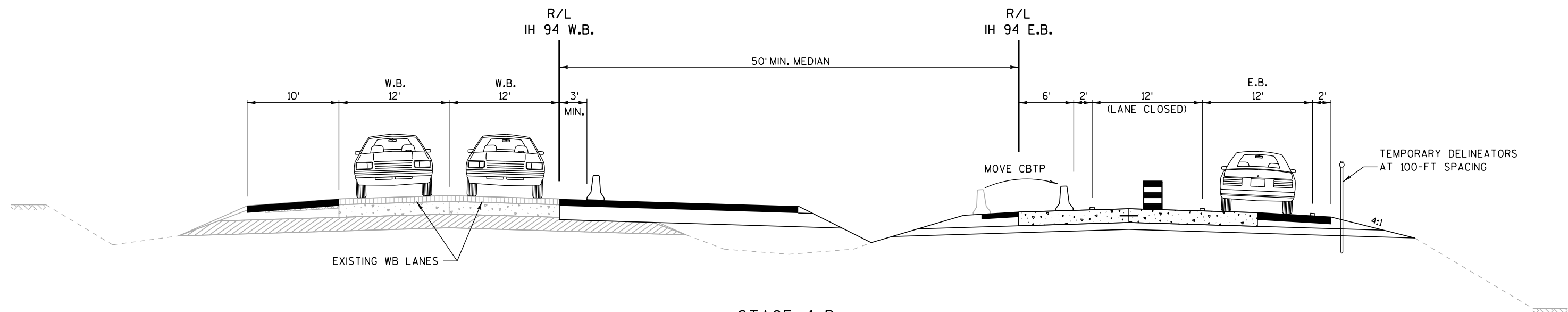




STAGE 4-A

SHIFT TRAFFIC WITH DRUMS EB TWO LANES TO TEMPORARY LANES

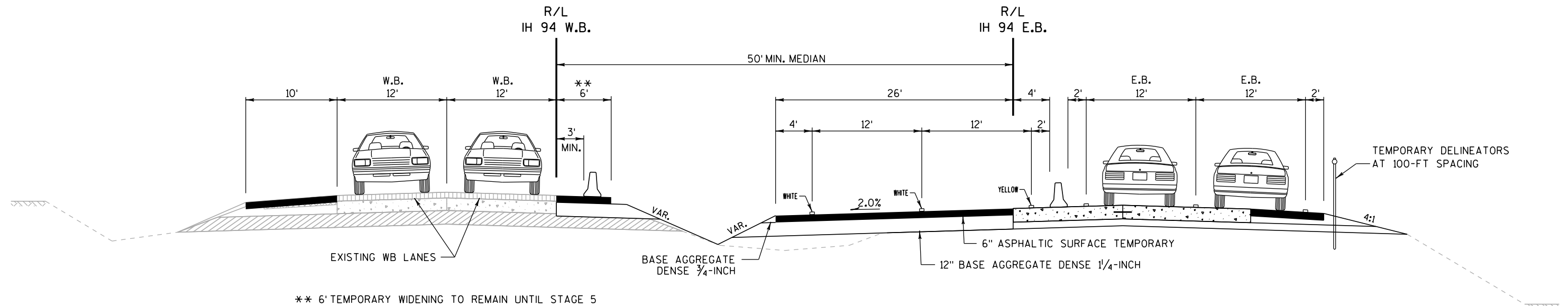
EB
STA 759+00 to STA 808+50
STA 847+00 to STA 26+00



STAGE 4-B

MOVE BARRIER TO REPLACE EB DRUMS

EB
STA 759+00 to STA 808+50
STA 847+00 to STA 26+00

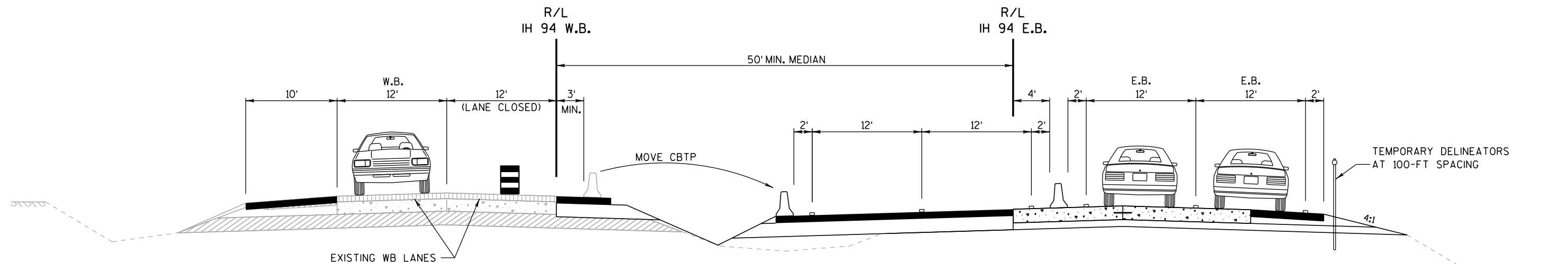


STAGE 4-C

REMOVE WB TEMPORARY MEDIAN WIDENING
CONSTRUCT EB TEMPORARY MEDIAN WIDENING

WB
STA 758+00 to STA 807+00
STA 845+00 to STA 26+00

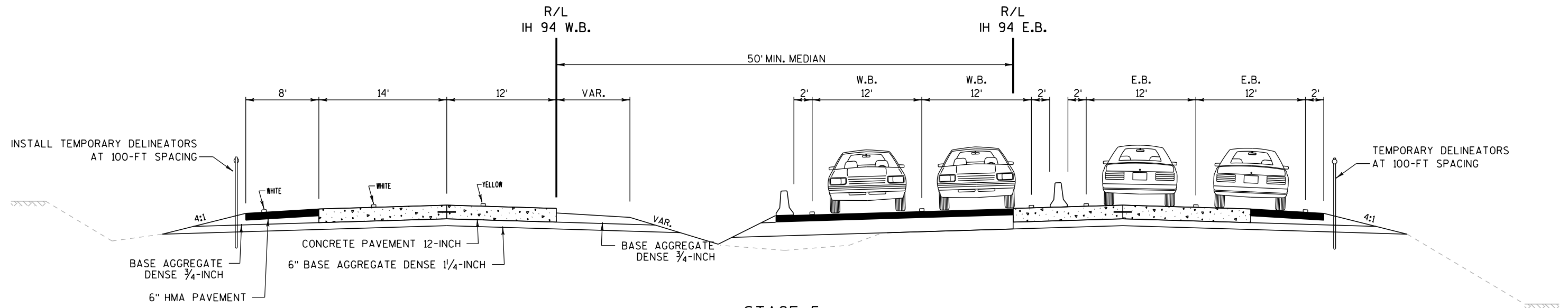
EB
STA 759+00 to STA 808+50
STA 847+00 to STA 26+00



STAGE 4-D

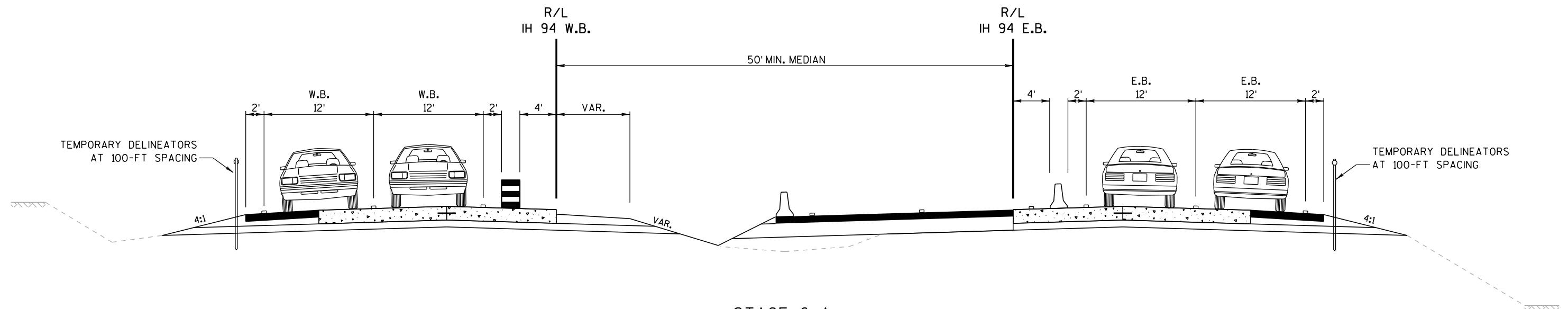
MOVE WB BARRIER TO EB TEMPORARY MEDIAN WIDENING

WB
STA 758+00 to STA 807+00
STA 845+00 to STA 26+00



STAGE 5

SHIFT TRAFFIC WB TWO LANES TO TEMPORARY WIDENING & MEDIAN ROADWAY
CONSTRUCT NEW WB LANES & WB BRIDGES
STA 685+00 to STA 18+20

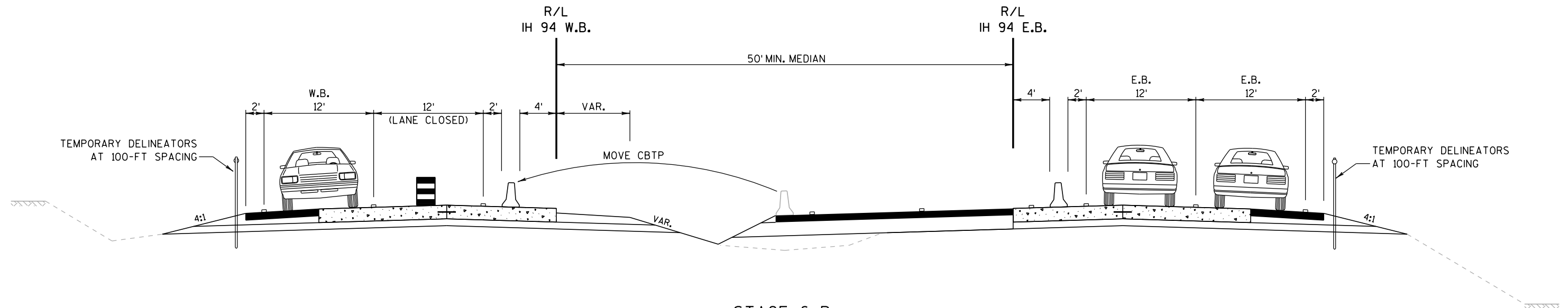


STAGE 6-A

SHIFT ALL TRAFFIC TO TEMPORARY TWO LANES

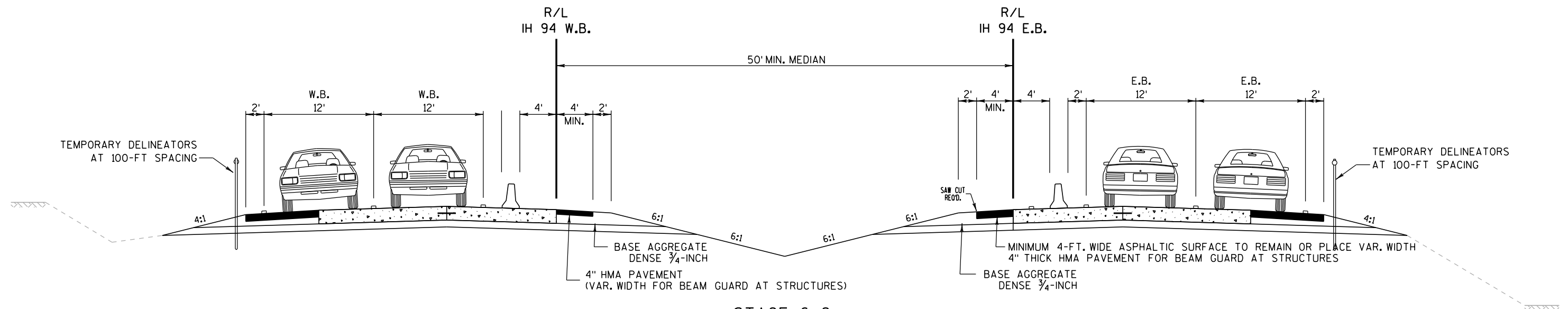
WB
STA 666+00 to STA 26+00

EB
STA 660+00 to STA 26+00



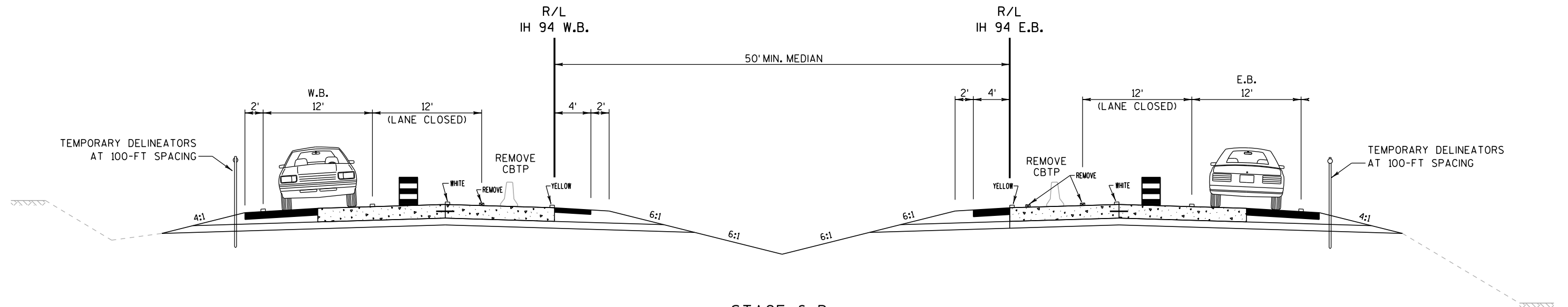
STAGE 6-B

MOVE BARRIER AS NECESSARY FOR TEMPORARY LANES WB & EB
STA 660+00 to STA 26+00



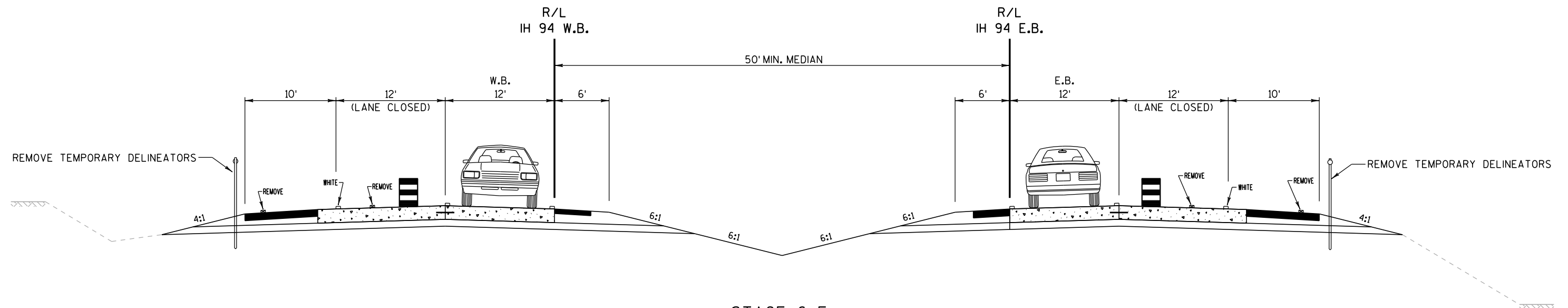
STAGE 6-C

REMOVE EB TEMPORARY WIDENING/MEDIAN ROADWAY/TEMPORARY STRUCTURES
FINISH EB AND WB INSIDE SHOULDERS/RESTORE MEDIAN
STA 668+50 to STA 23+00



STAGE 6-D

REMOVE ALL BARRIER & WB/EB TEMPORARY YELLOW EDGE LINE
PLACE EB/WB LANE LINE & YELLOW EDGE LINE
STA 660+00 to STA 26+00



STAGE 6-E

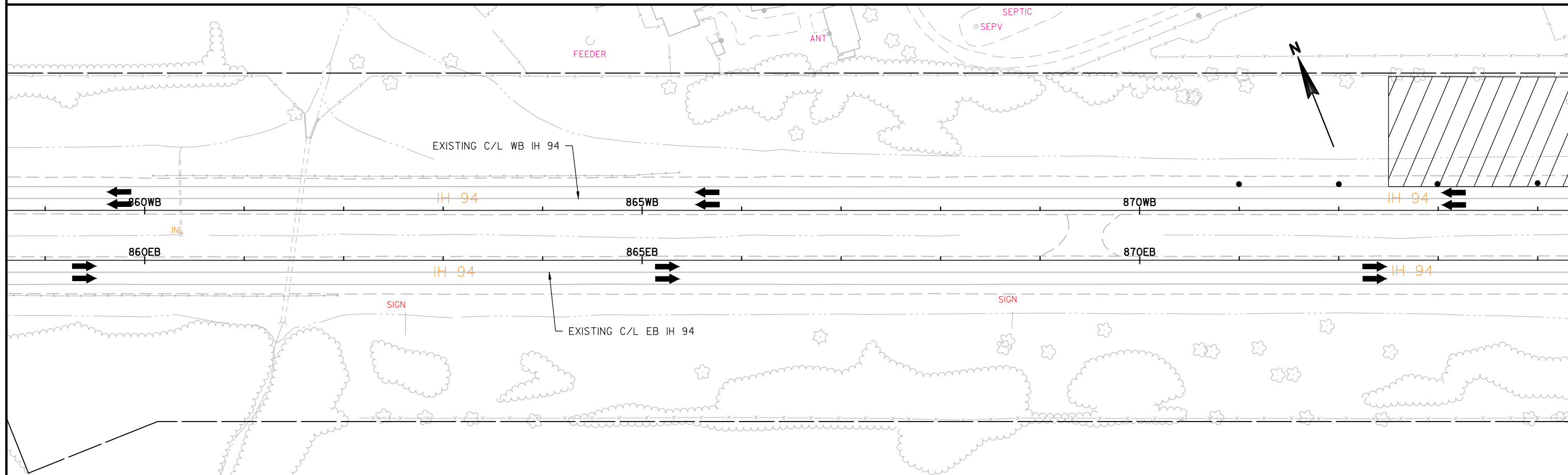
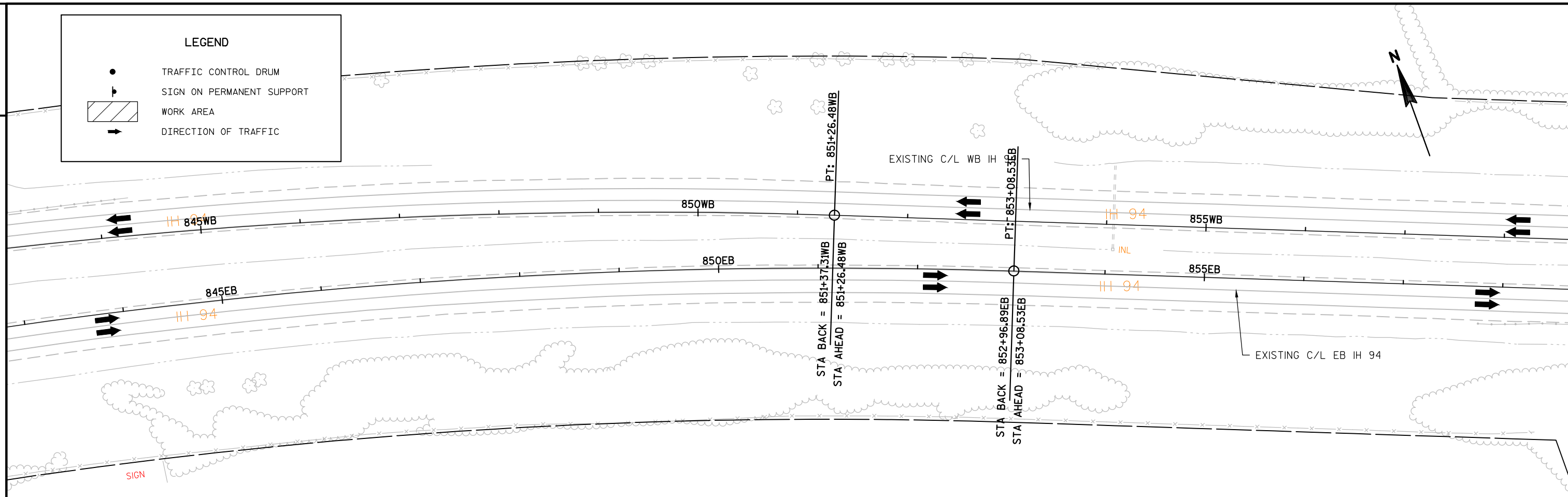
SHIFT TRAFFIC WITH DRUMS EB AND WB PASSING LANE
REMOVE EB/WB TEMPORARY LANE LINE & TEMPORARY WHITE EDGE LINE
PLACE EB/WB WHITE EDGE LINE
STA 660+00 to STA 26+00

2

LEGEND

- TRAFFIC CONTROL DRUM
- ▬ SIGN ON PERMANENT SUPPORT
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC

2



PROJECT NO:1022-08-72

HWY: IH 94

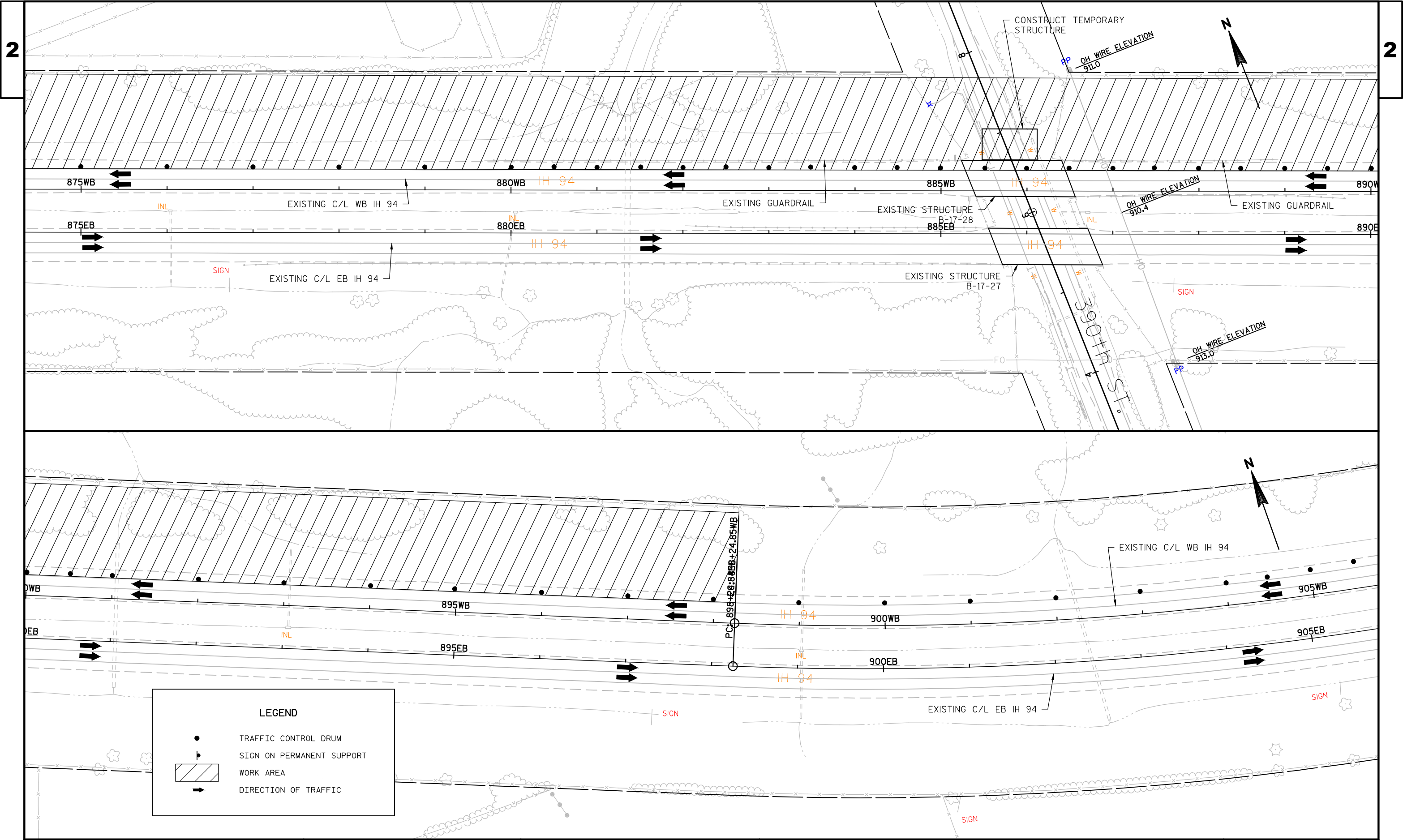
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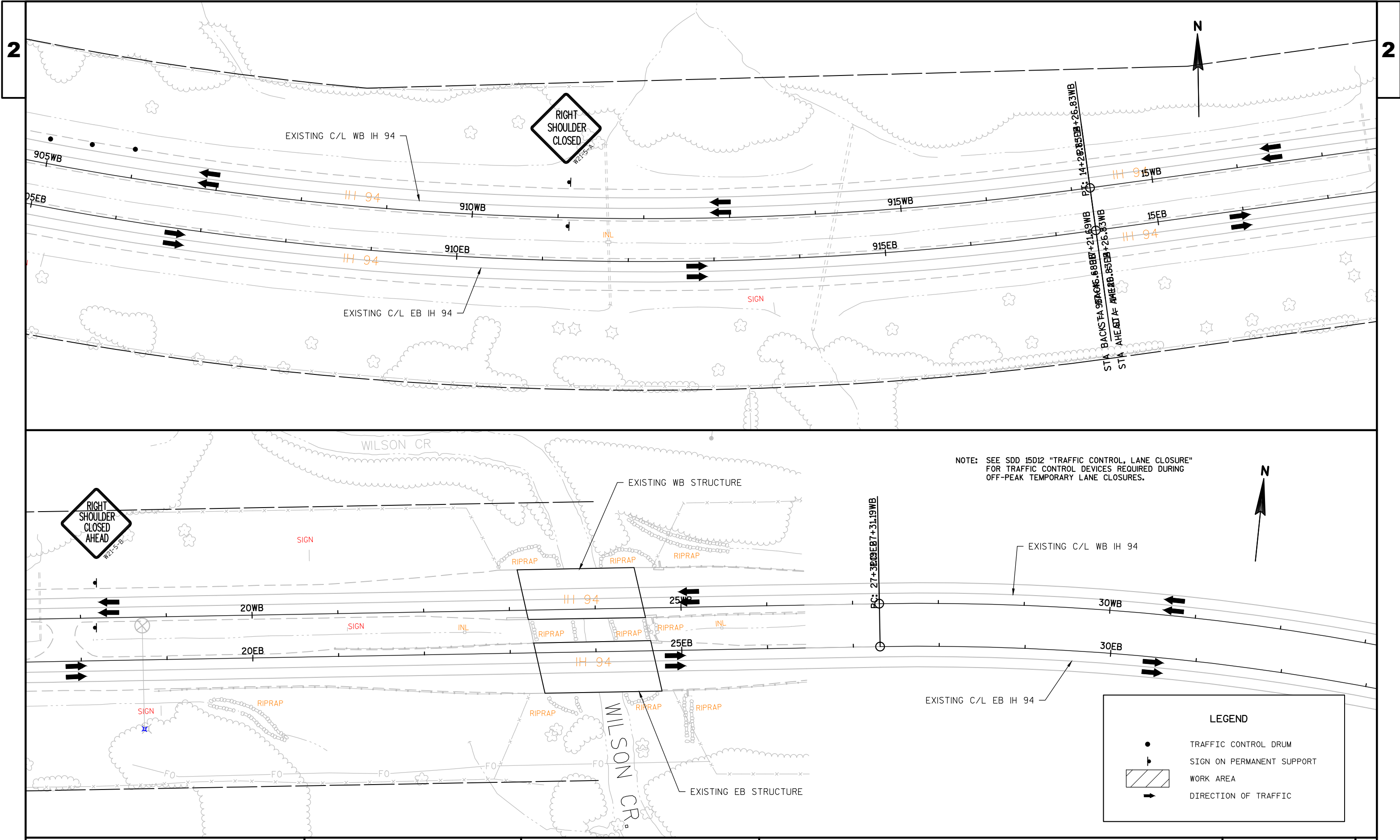
TRAFFIC CONTROL - STAGE 1-B

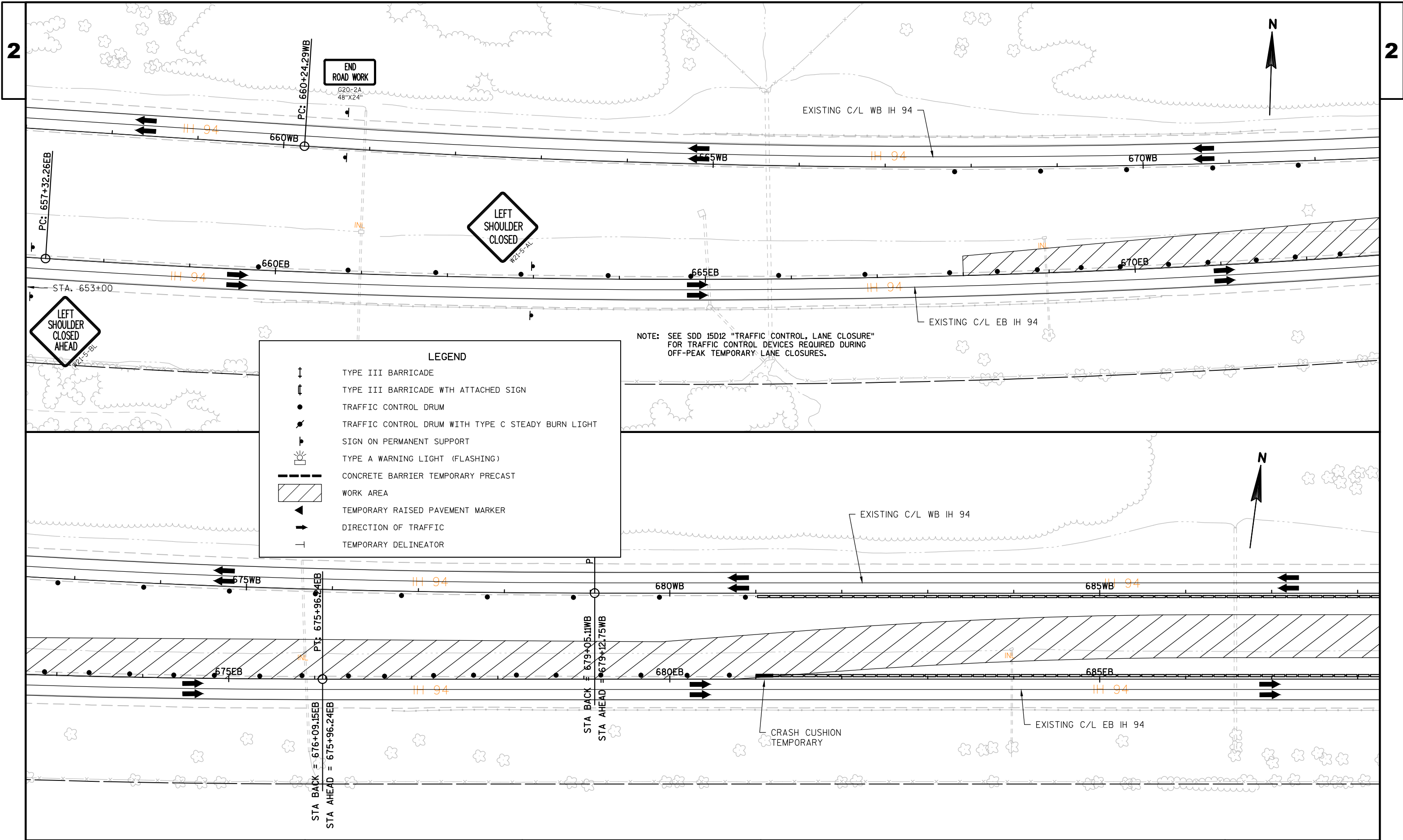
SHEET

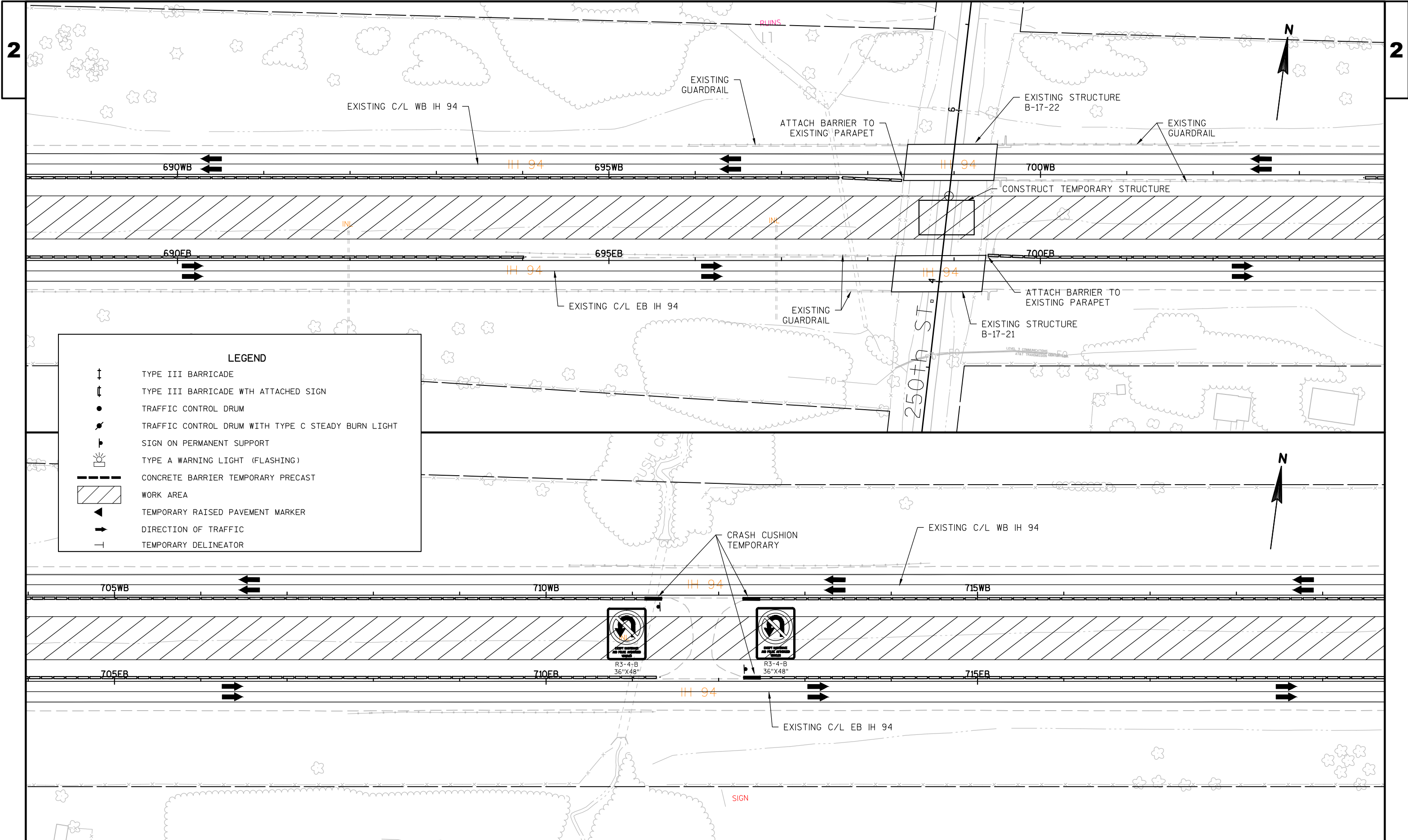
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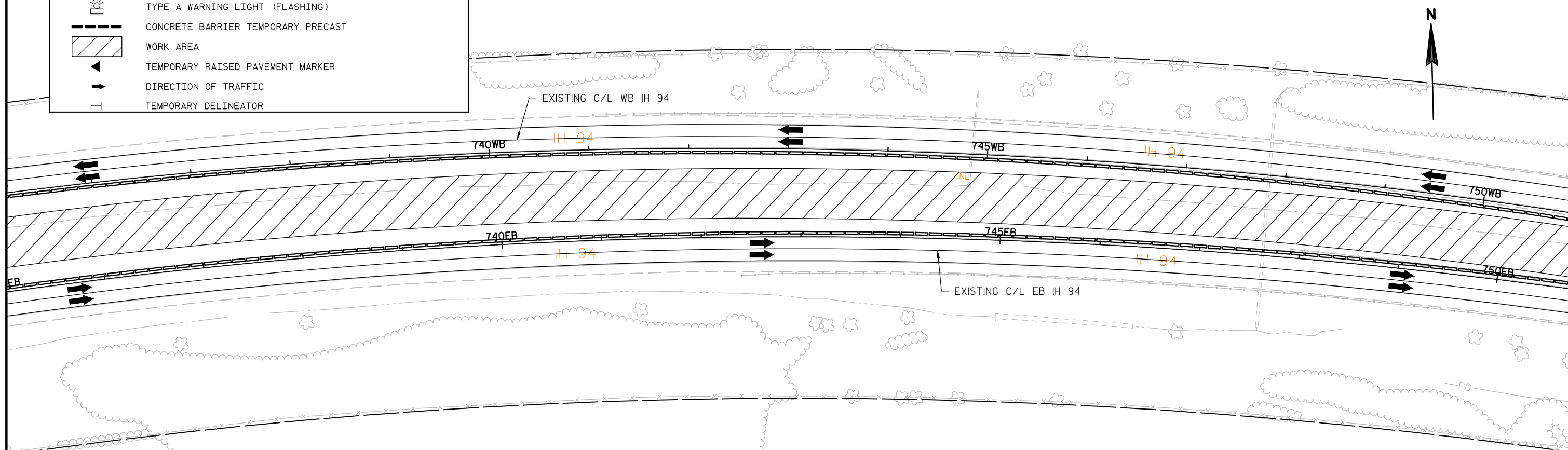
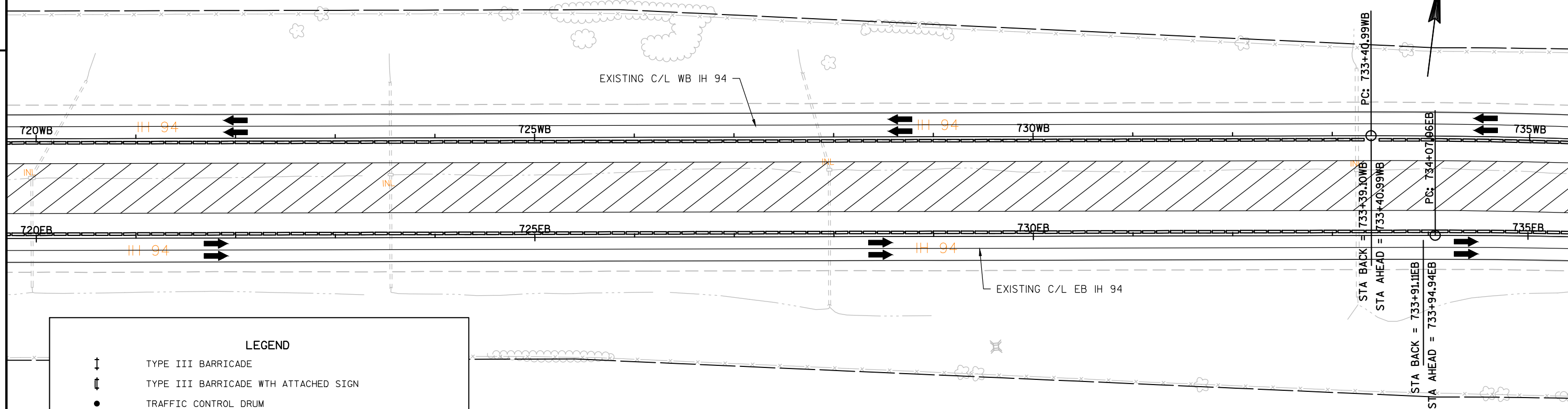
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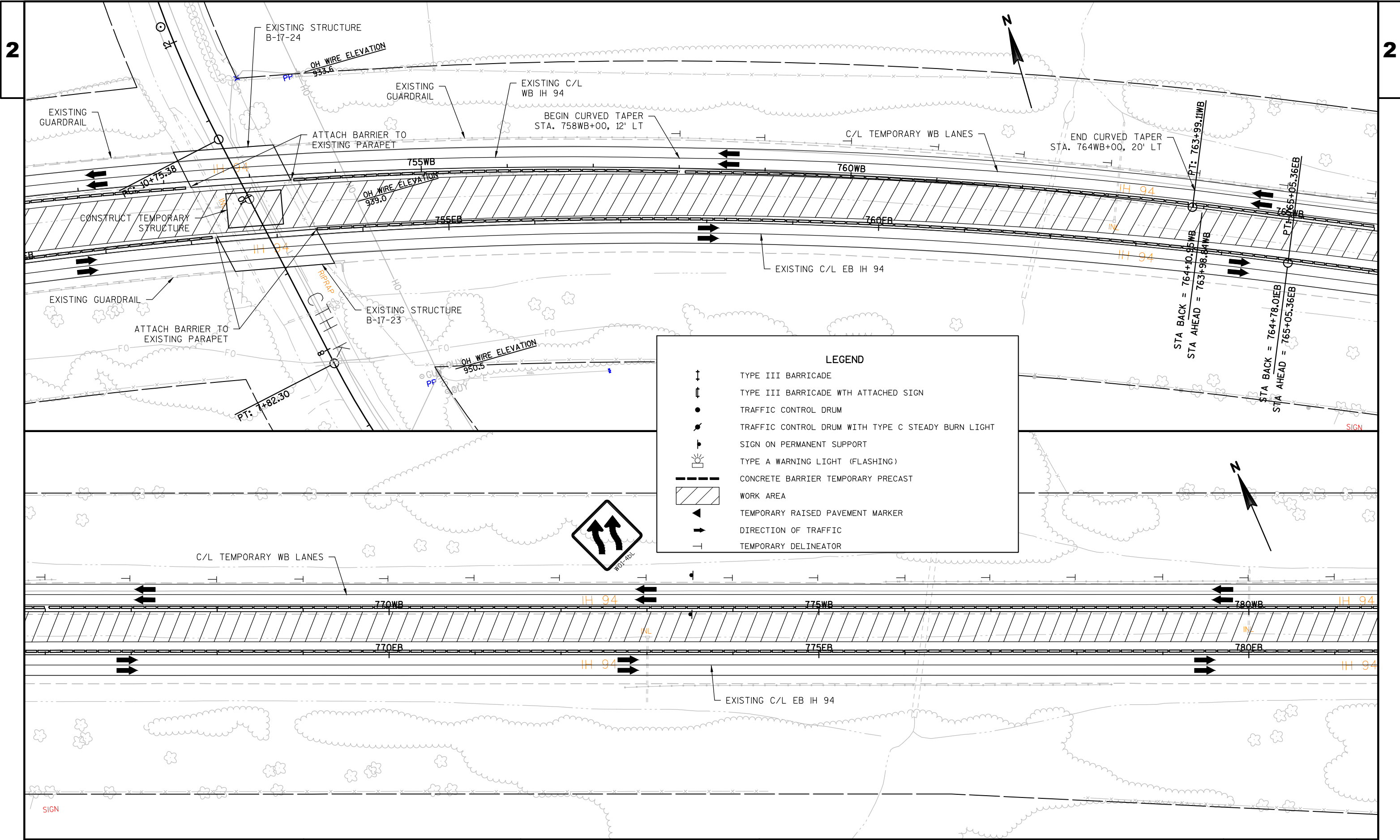


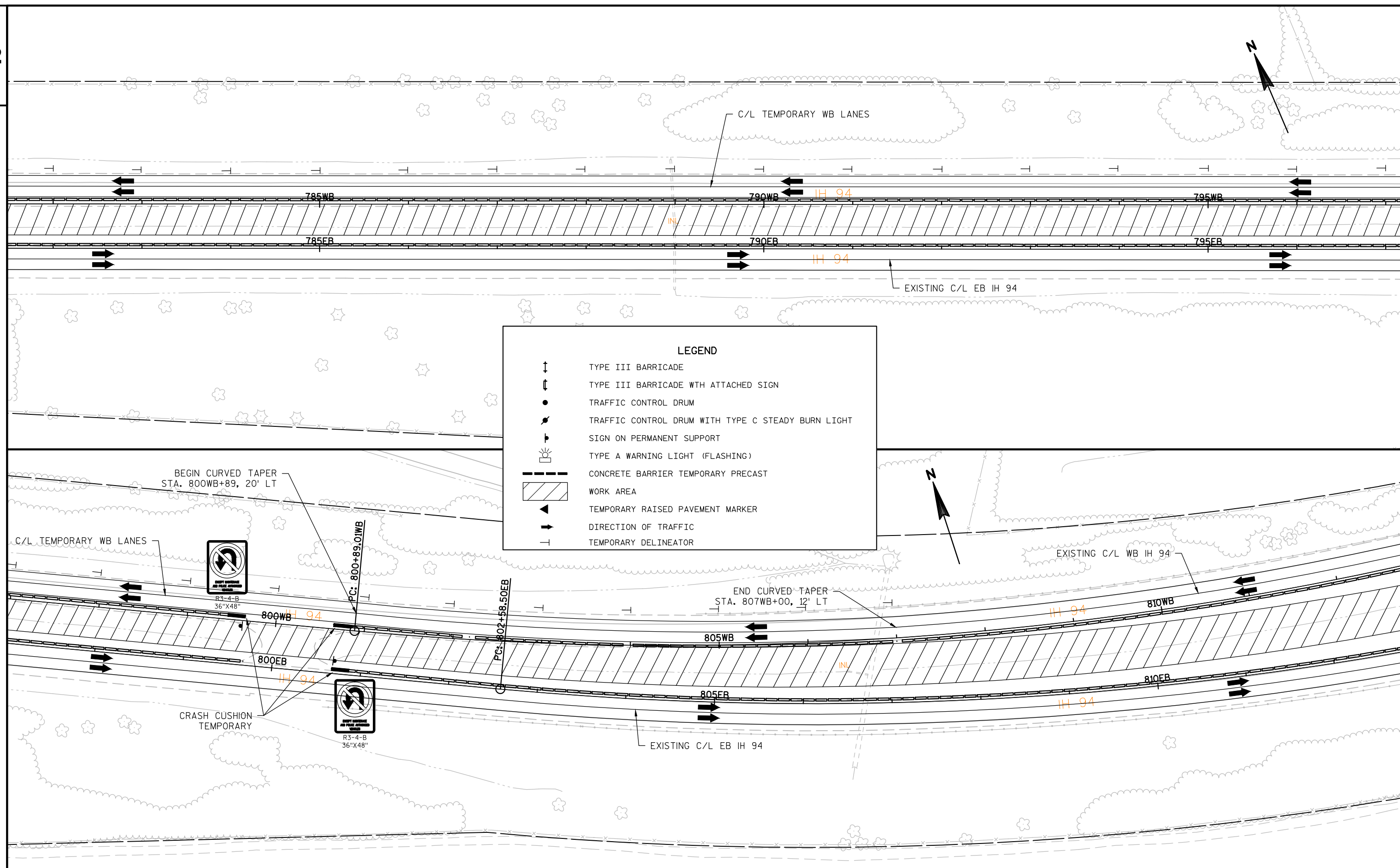




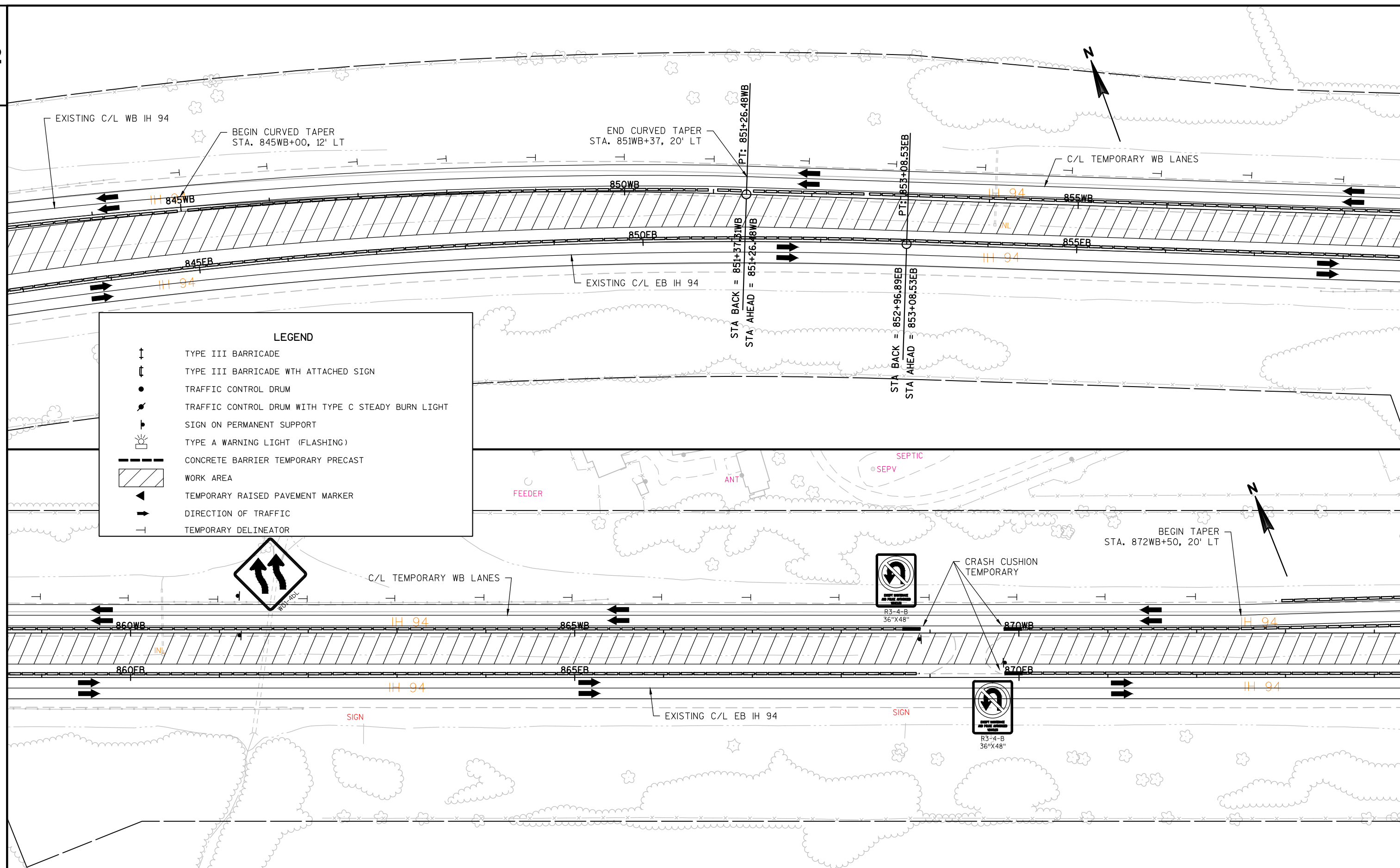


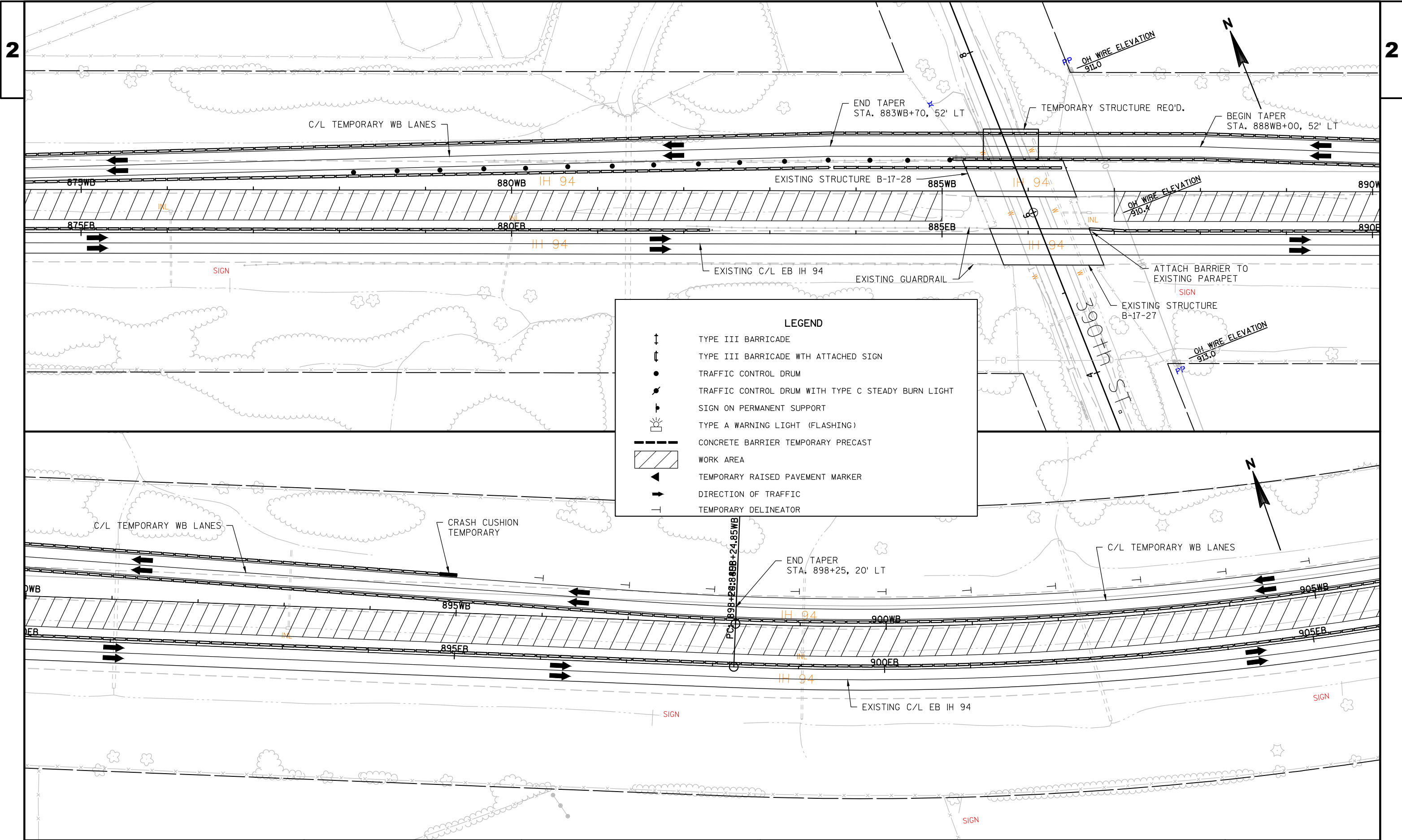


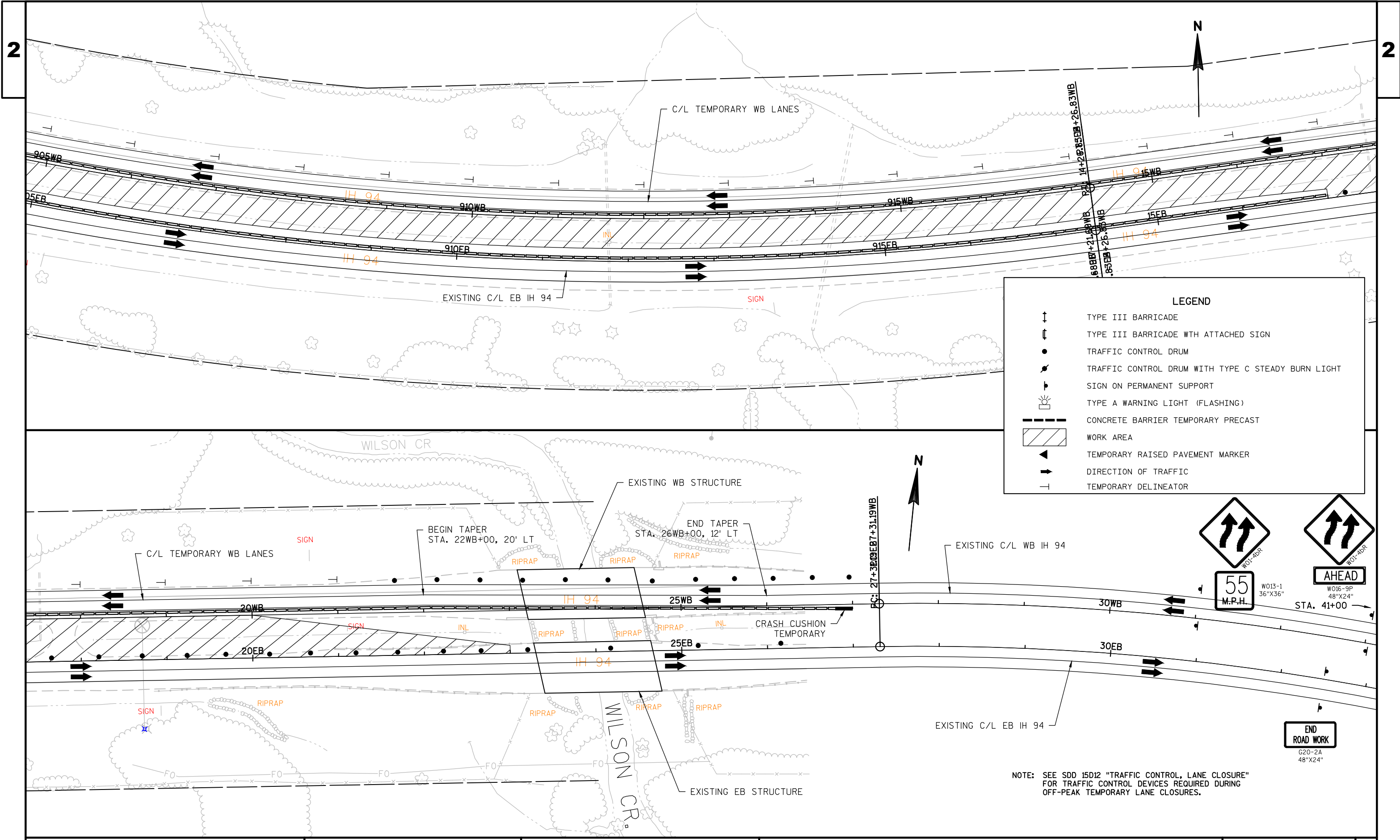


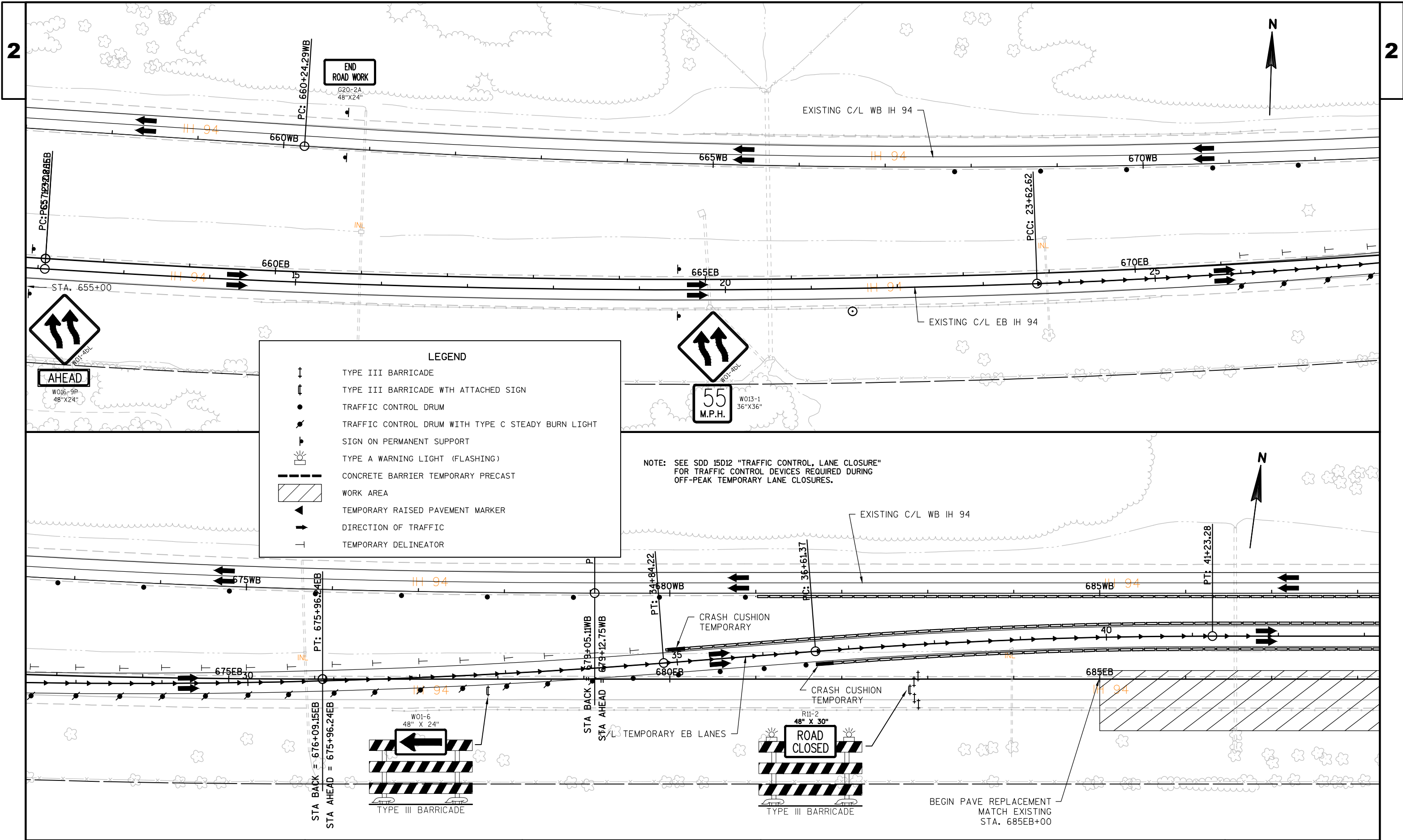


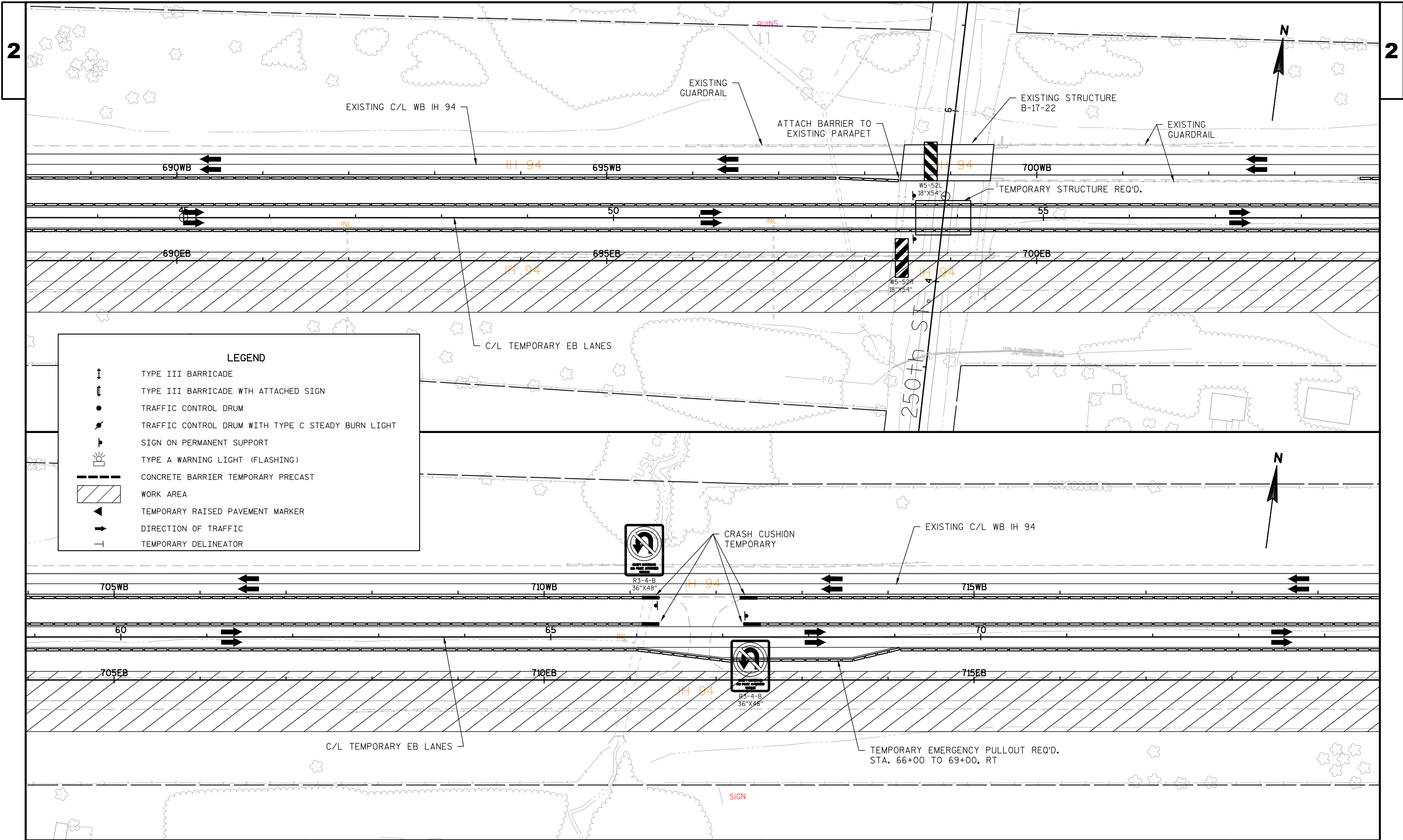


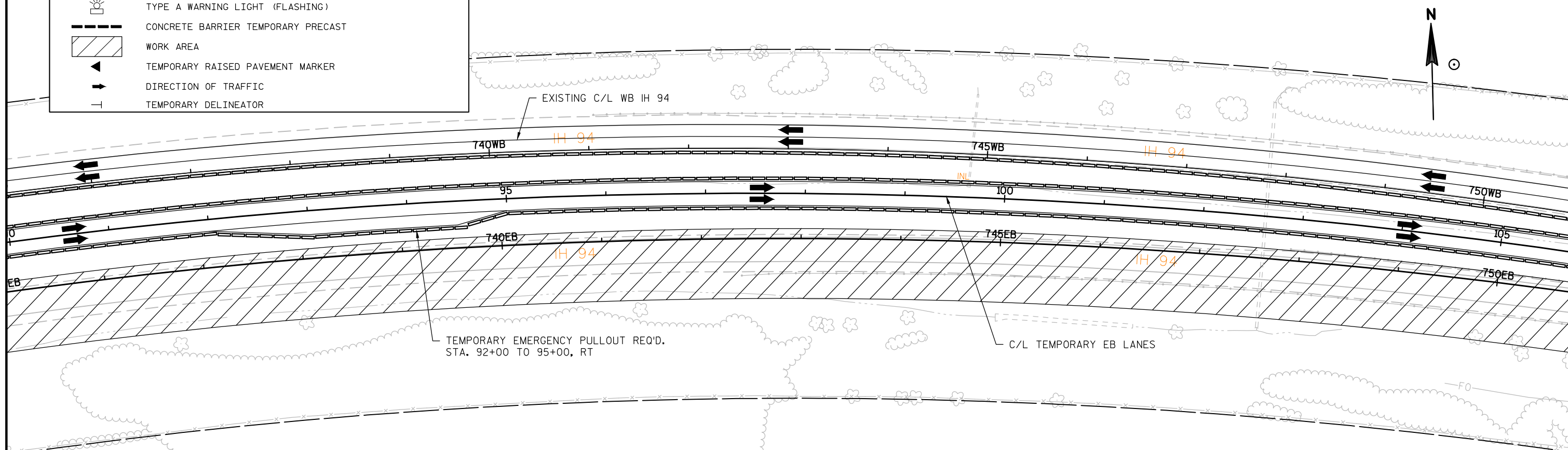
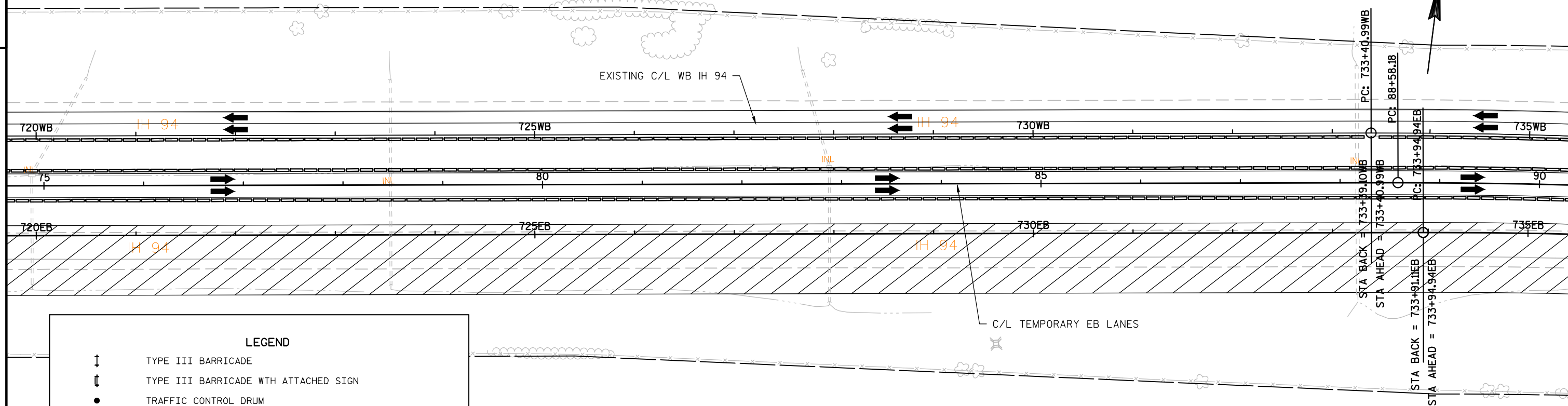


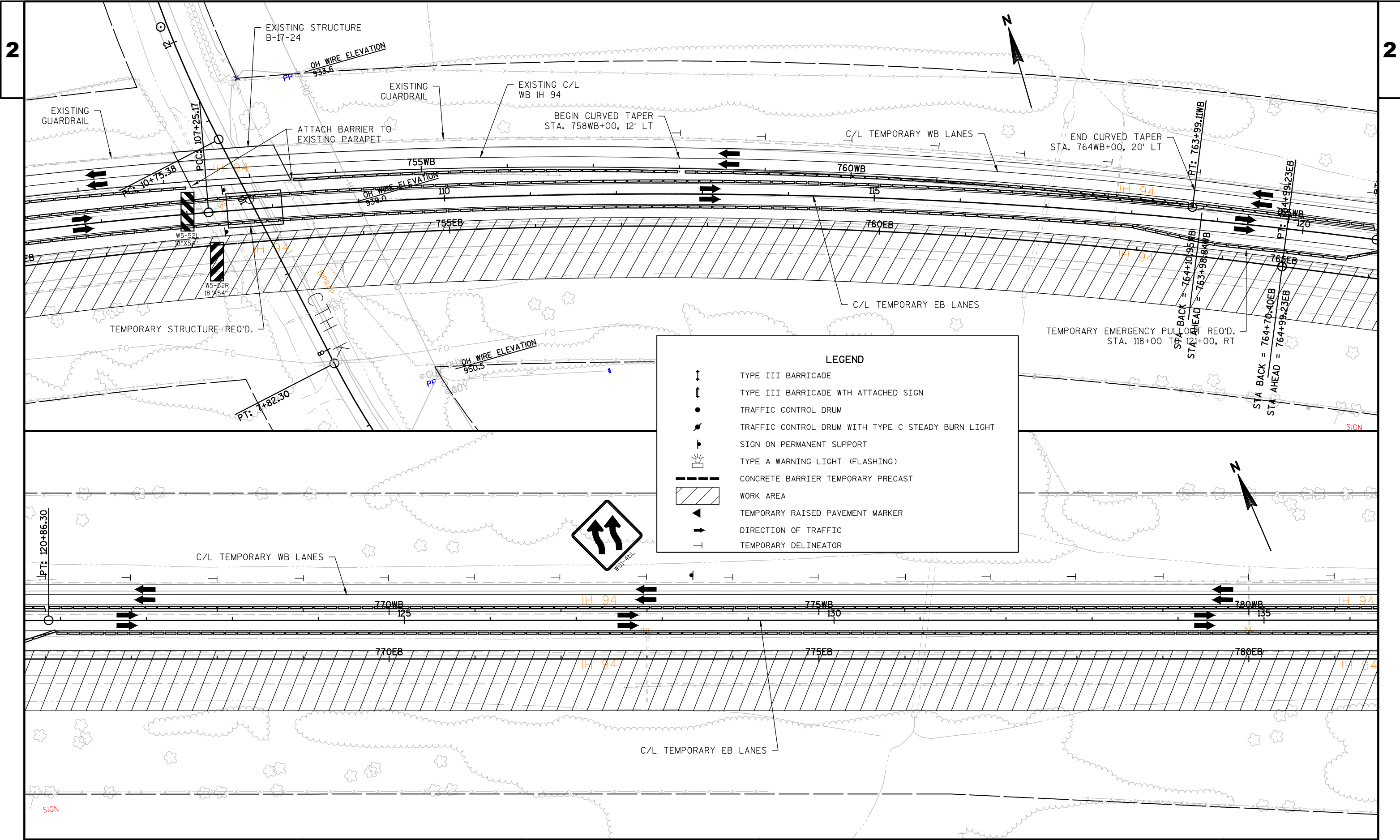












PROJECT NO:1022-08-72

HWY:IH 94

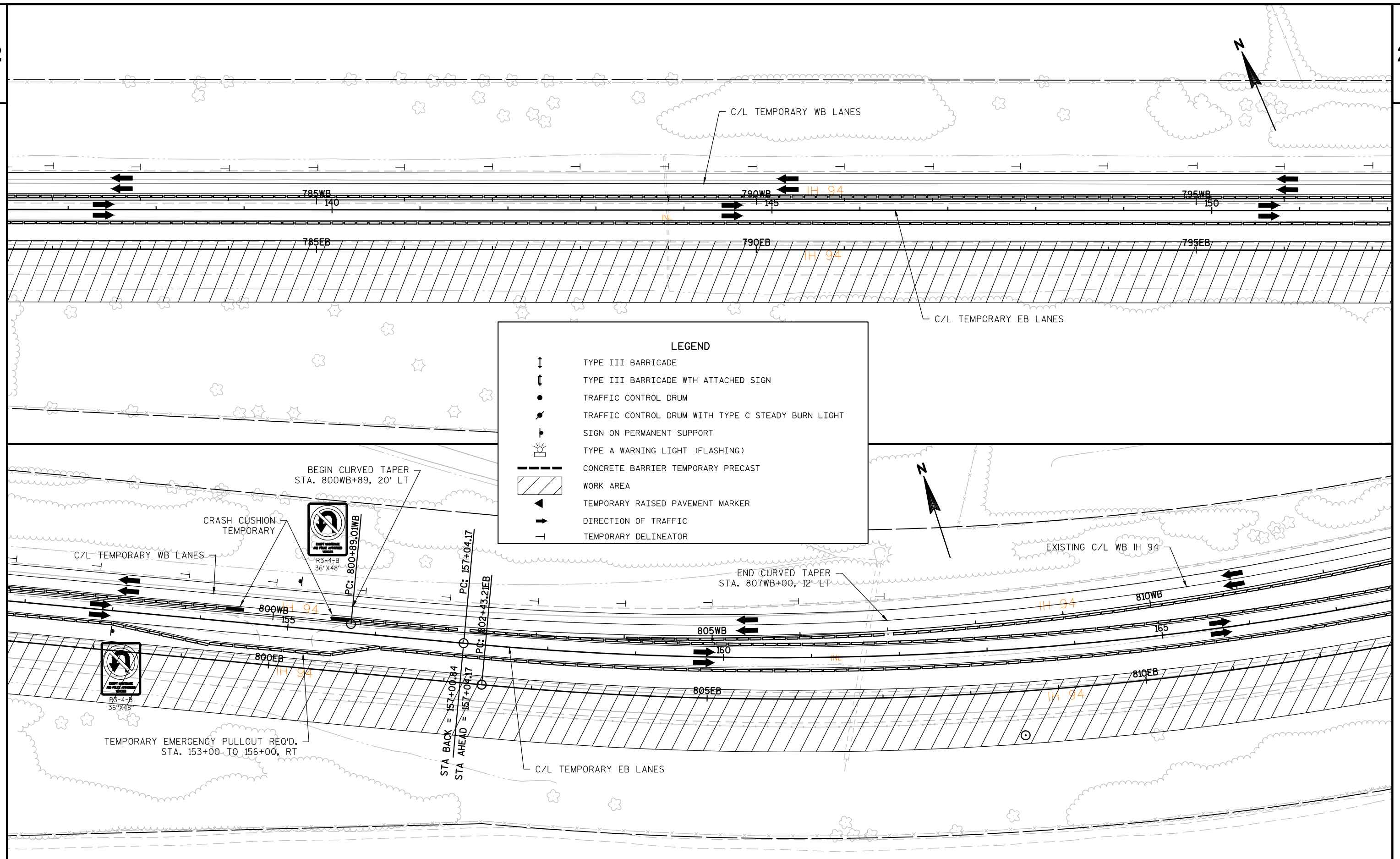
COUNTY:DUNN

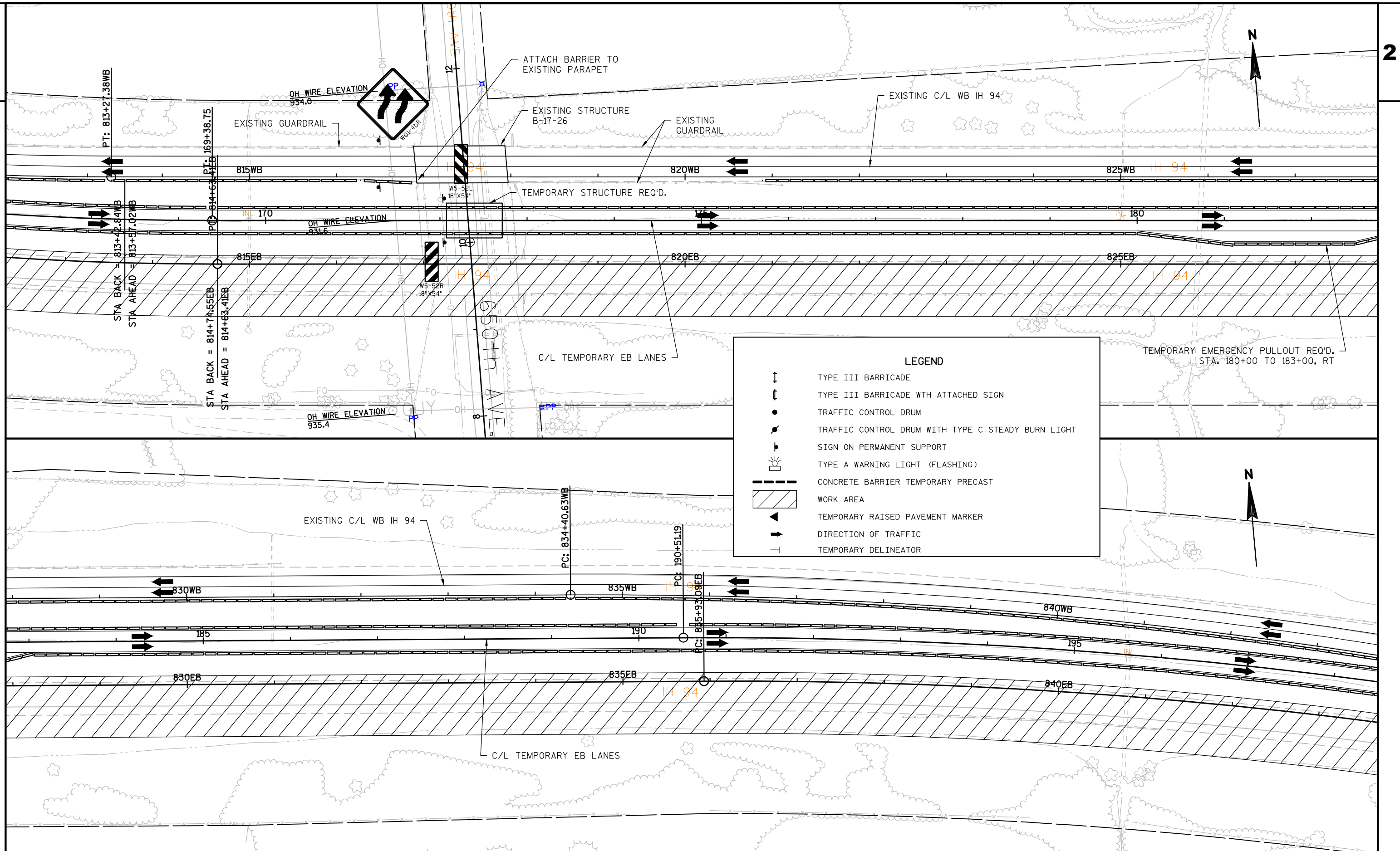
TRAFFIC CONTROL - STAGE 3

SHEET

83

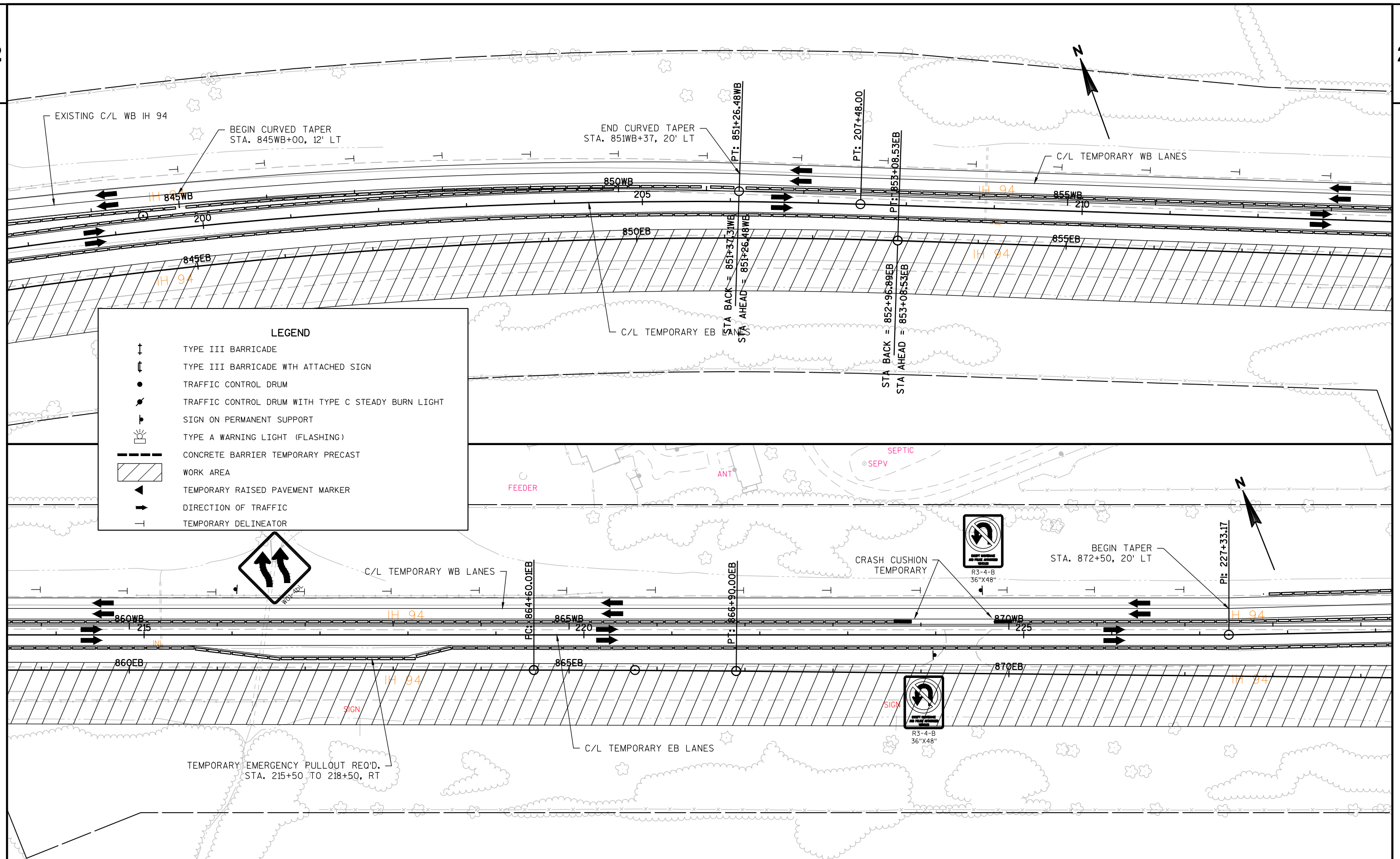
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2

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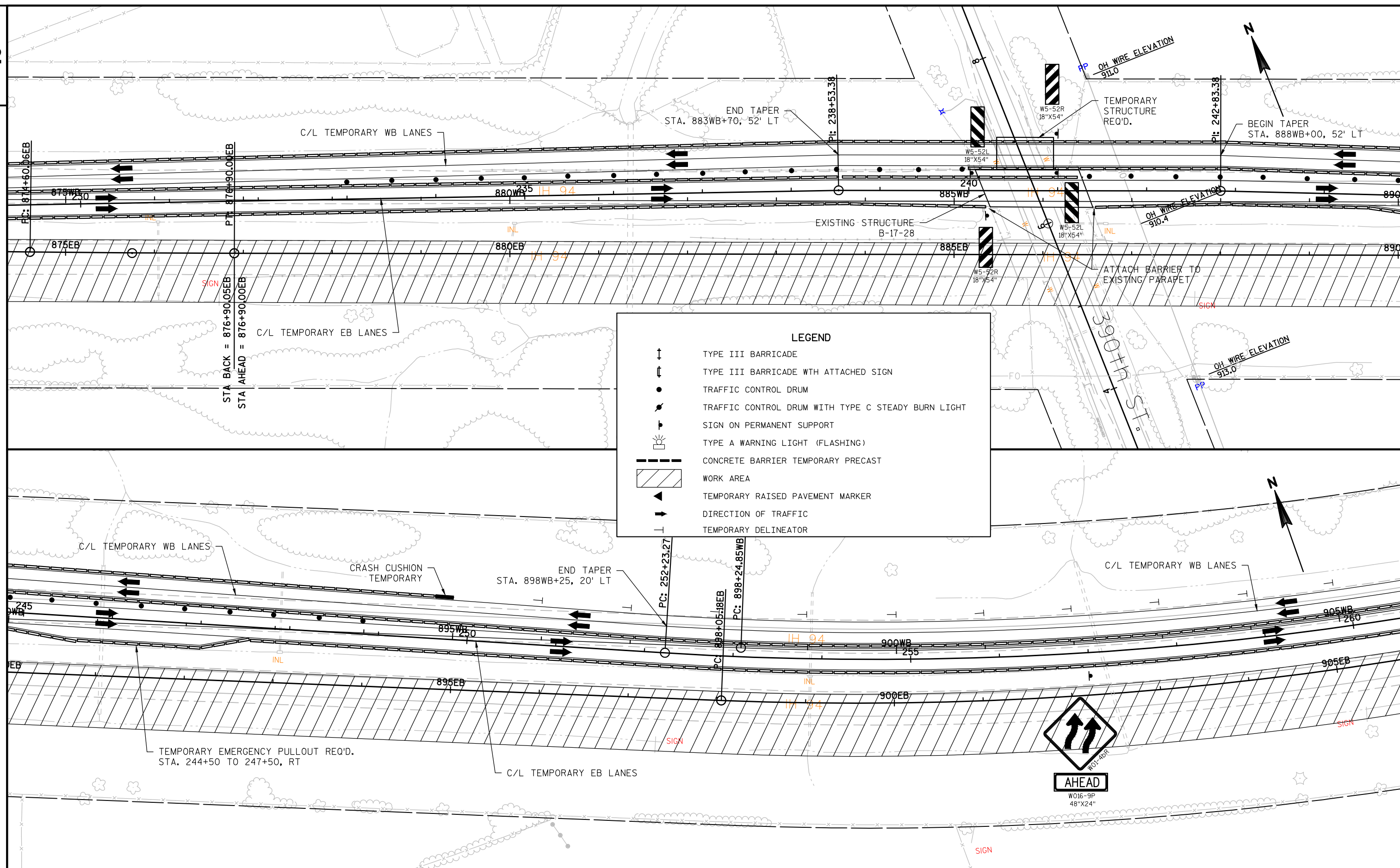
PROJECT NO:1022-08-72

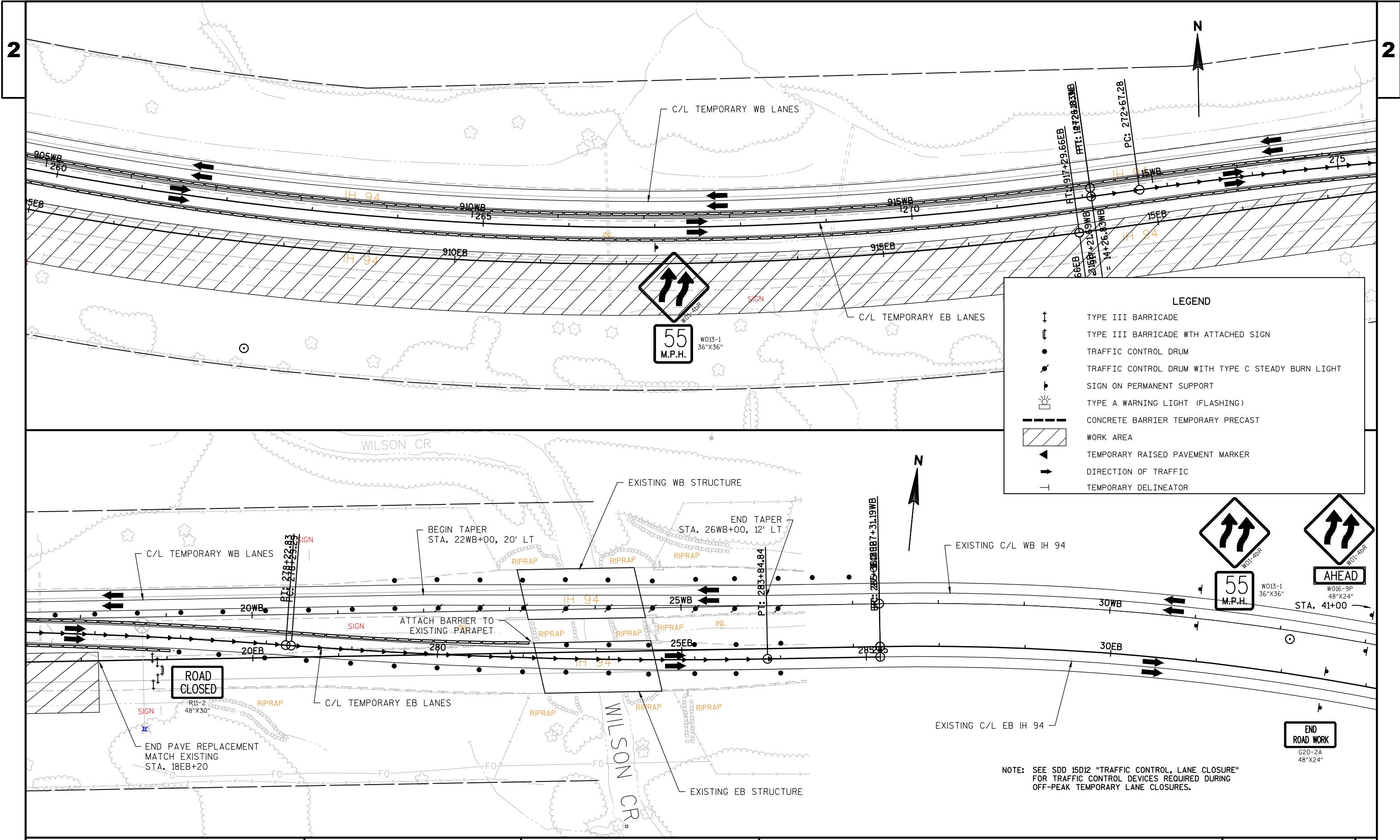
HWY: IH 94

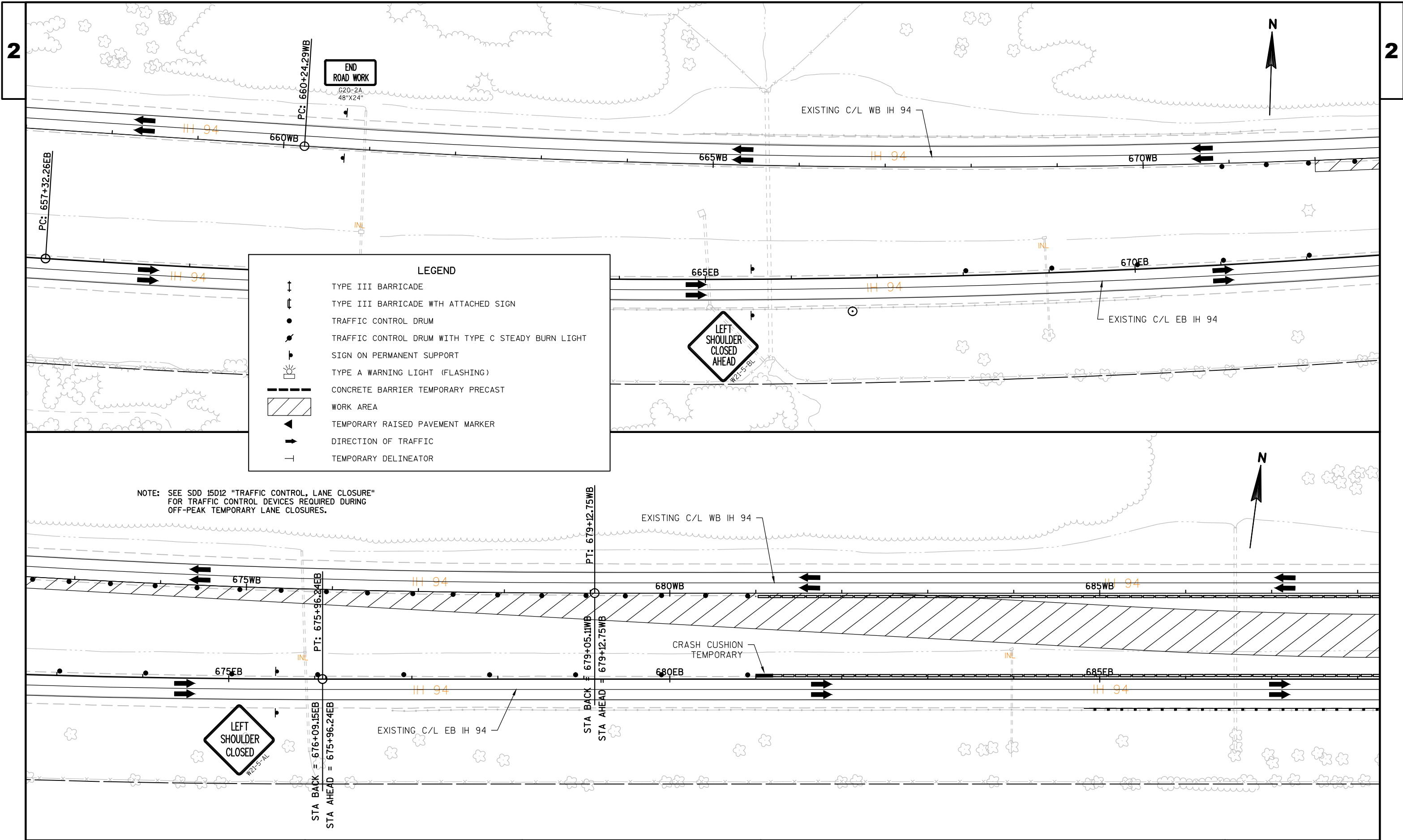
COUNTY: DUNN

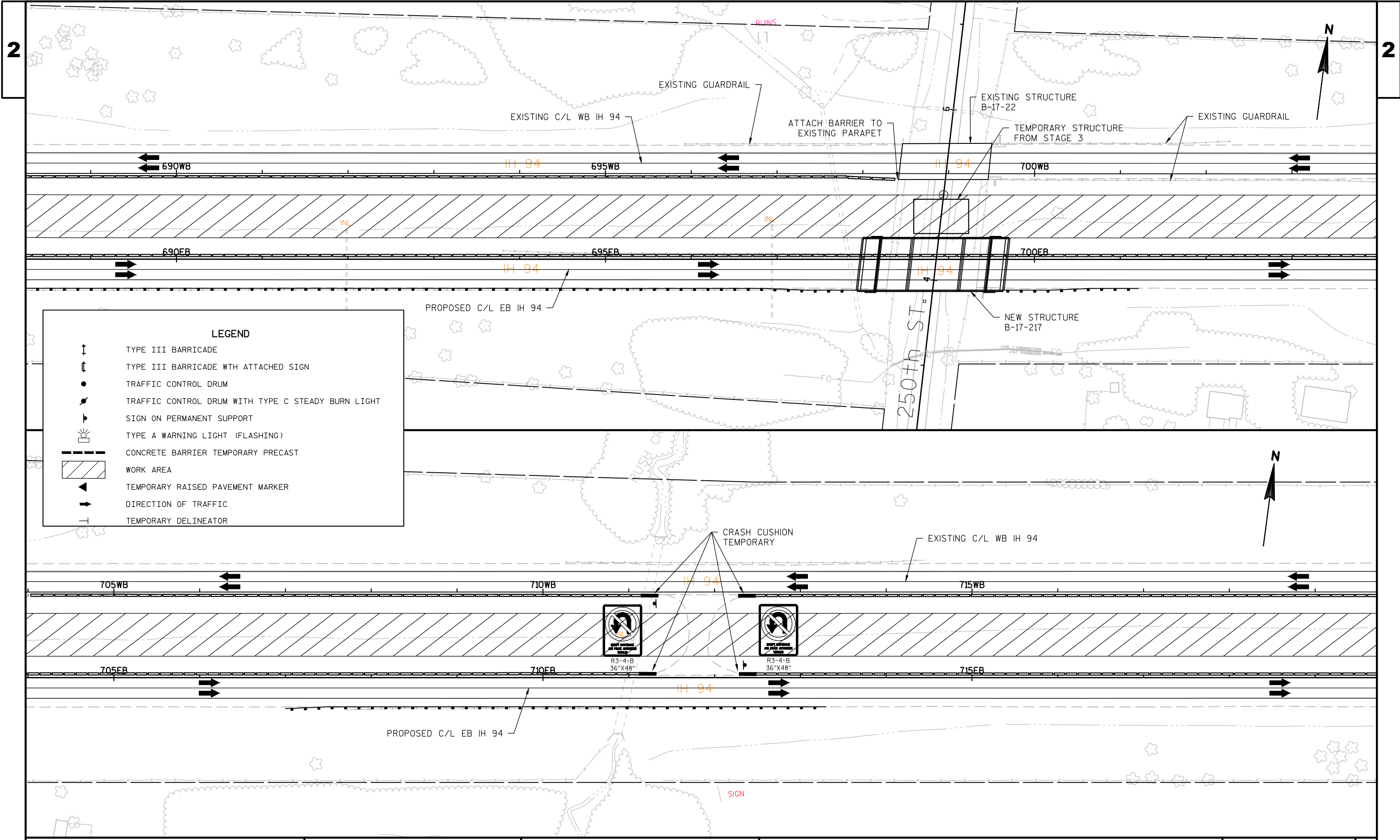
TRAFFIC CONTROL - STAGE 3

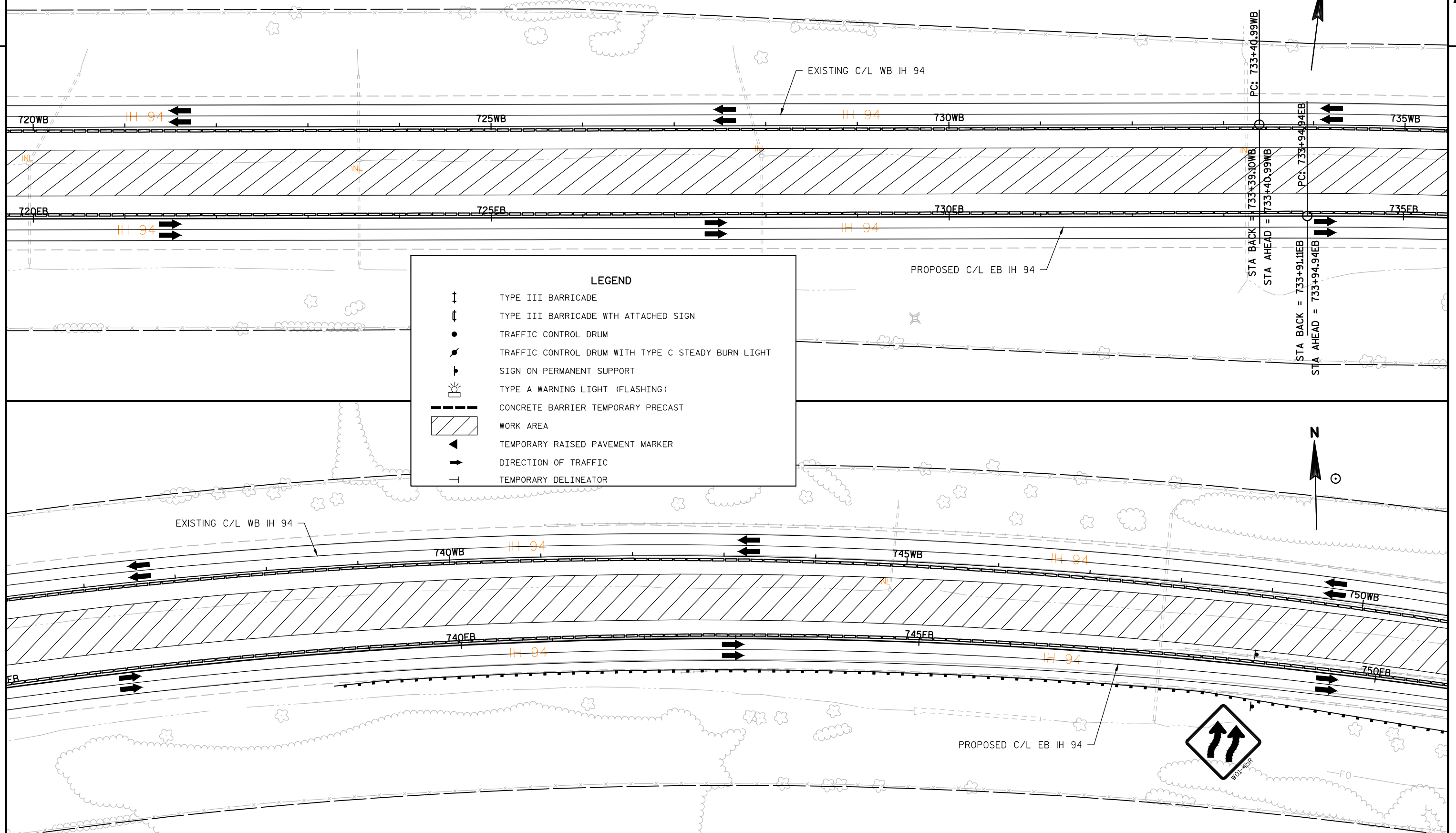
SHEET 86

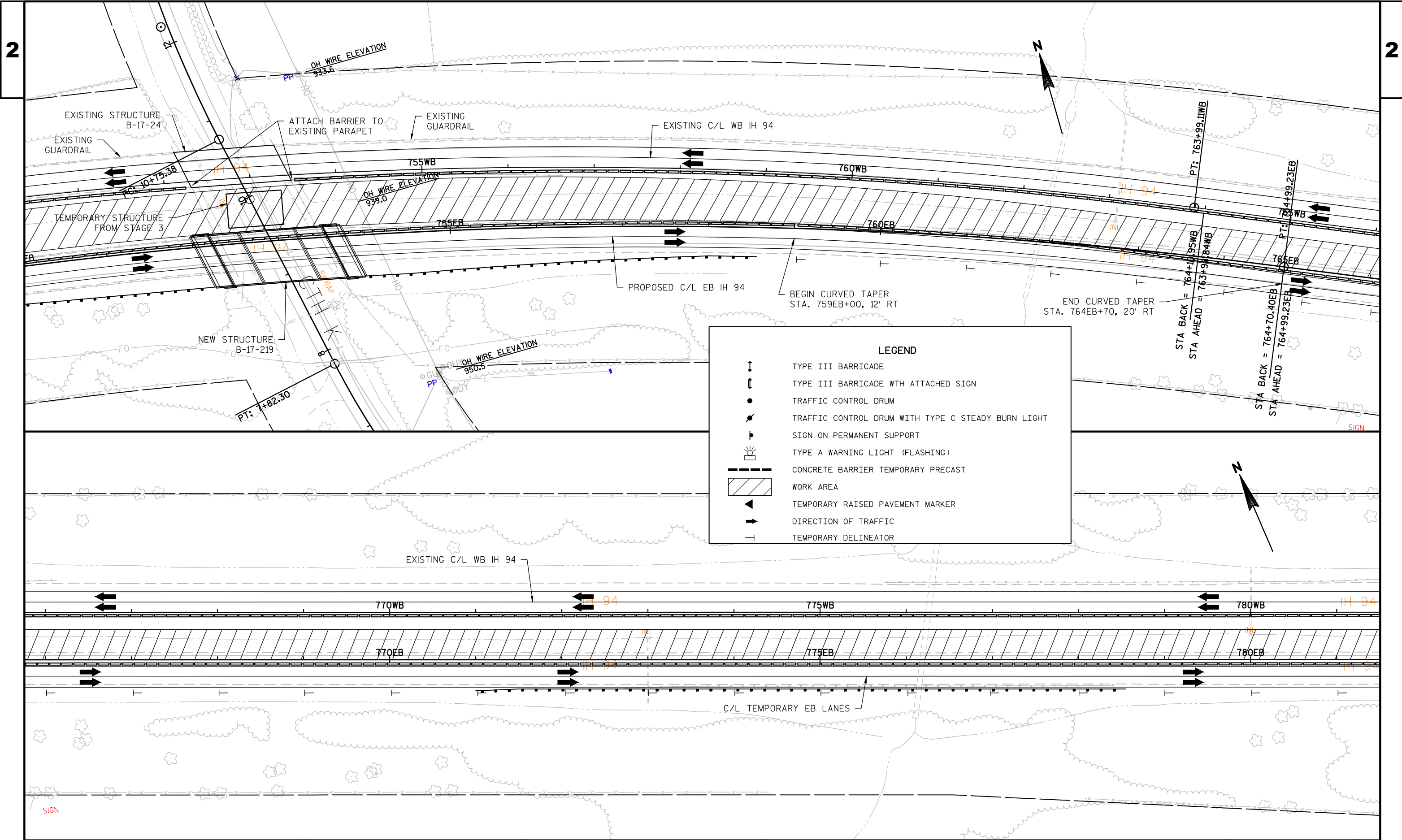












PROJECT NO:1022-08-72

HWY:IH 94

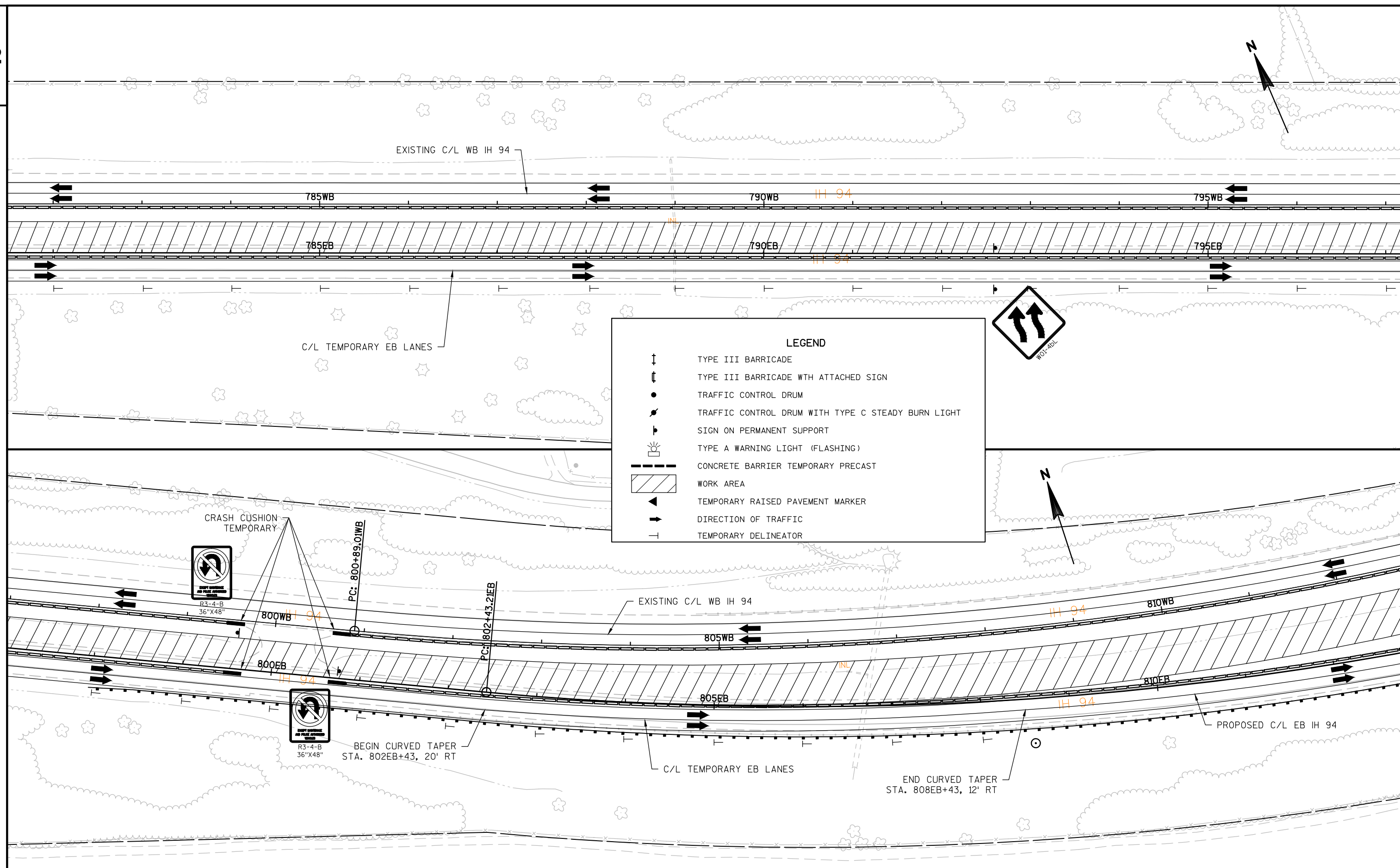
COUNTY:DUNN

TRAFFIC CONTROL - STAGE 4C

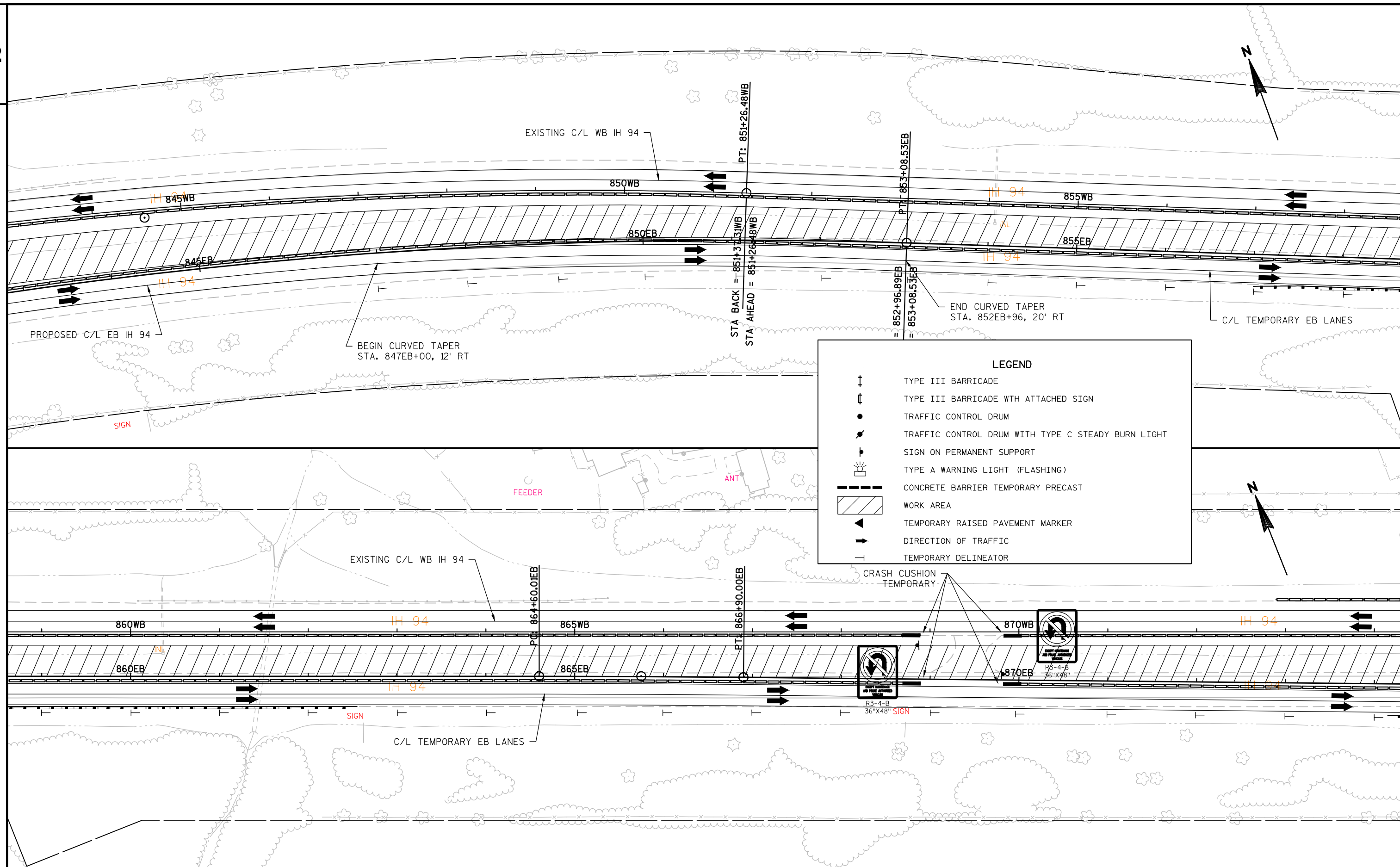
SHEET

92

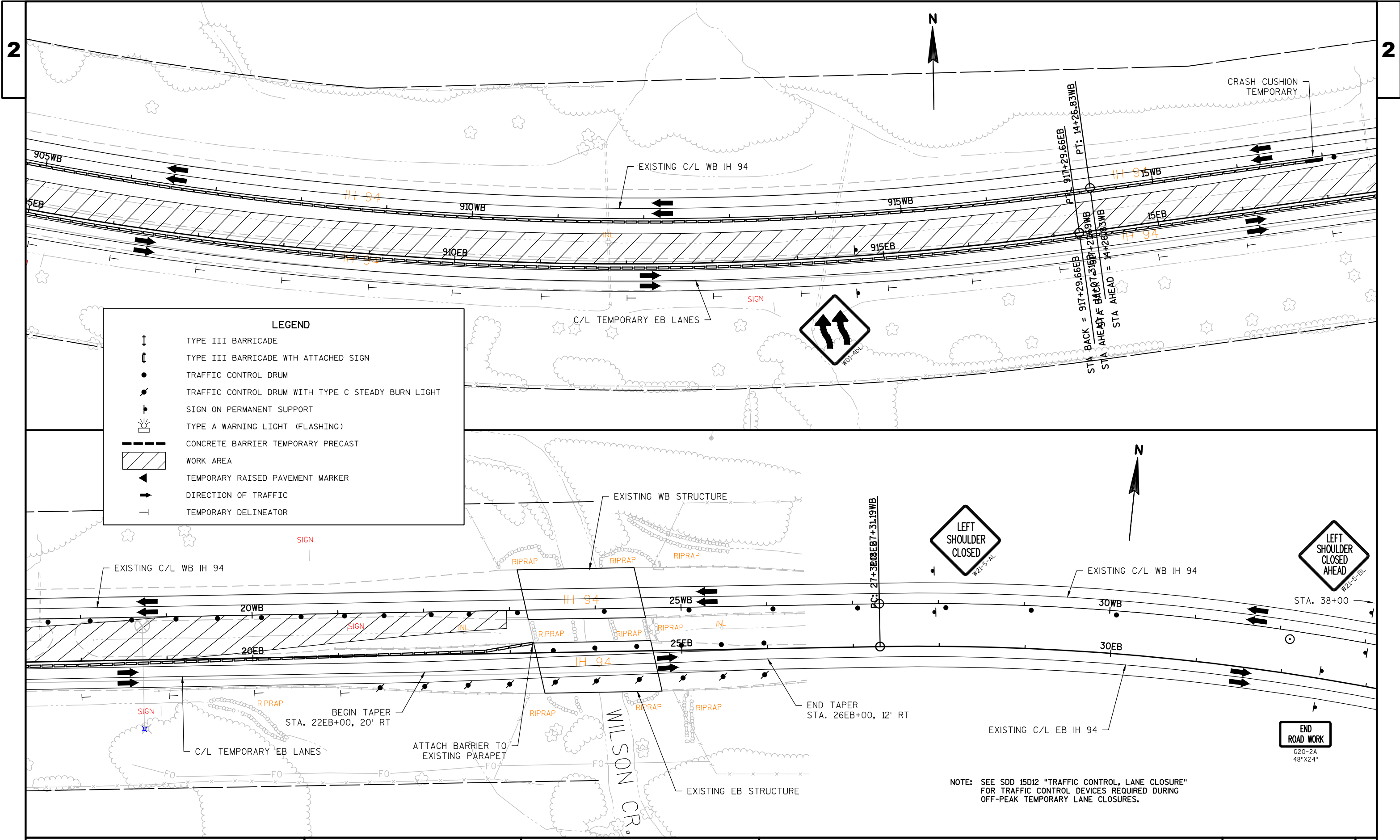
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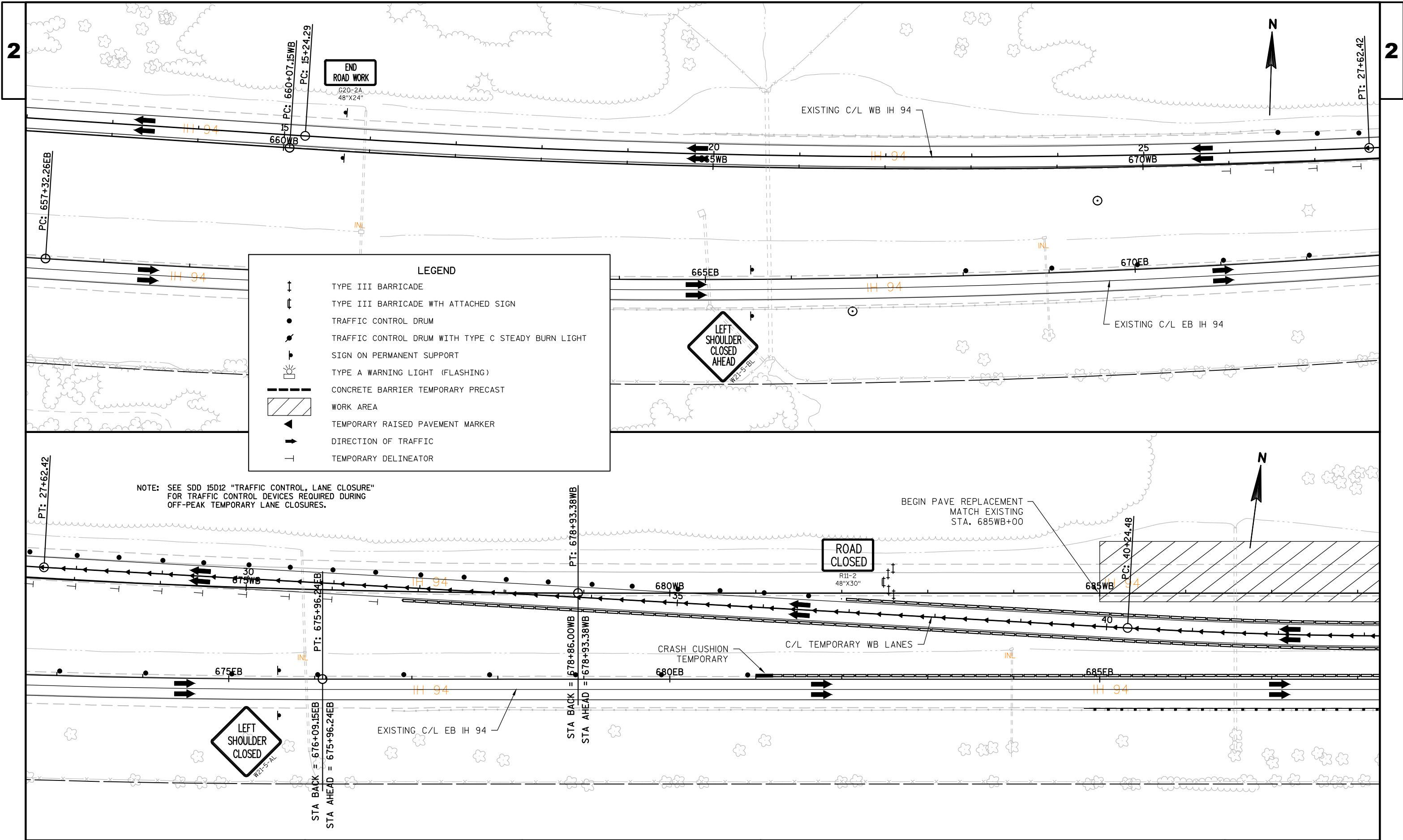


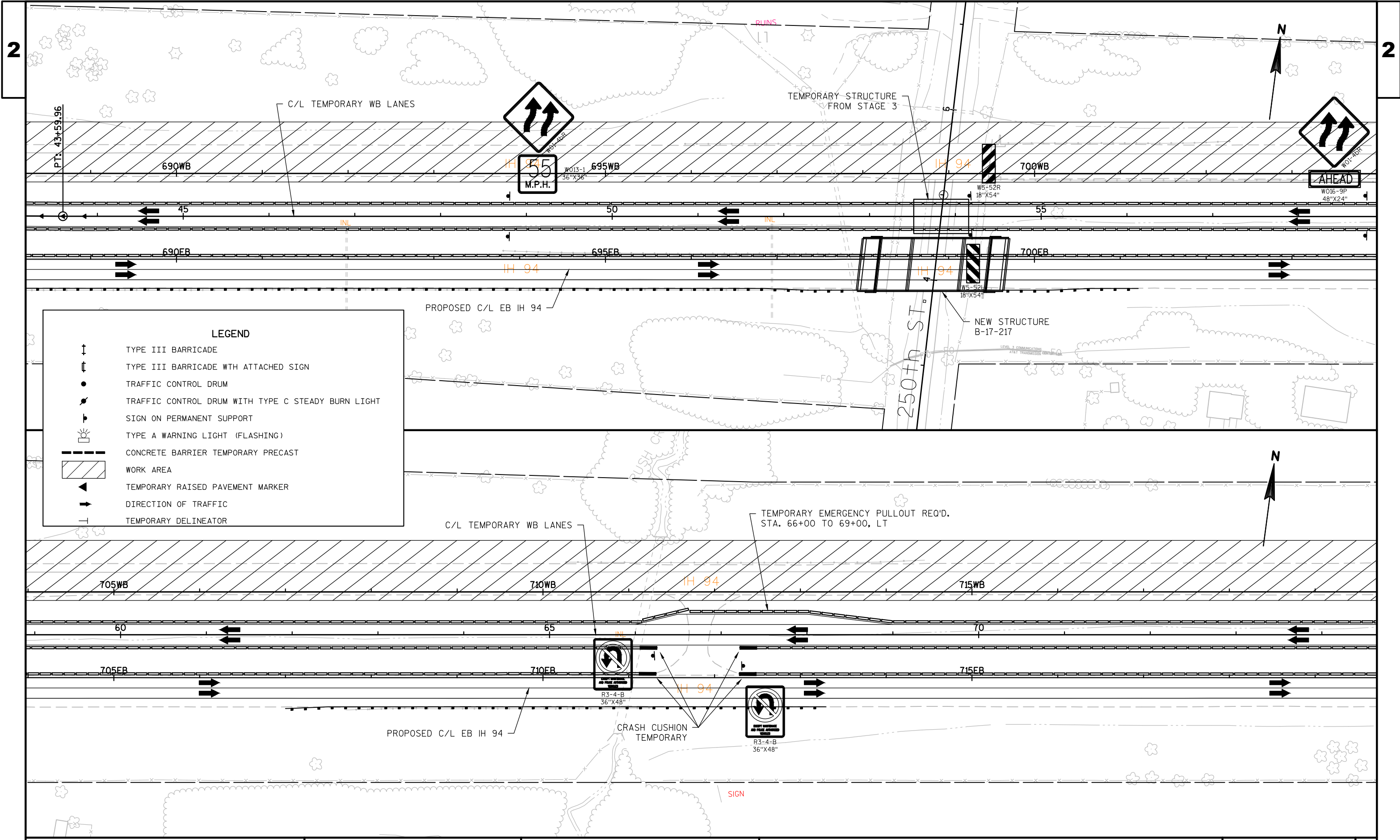






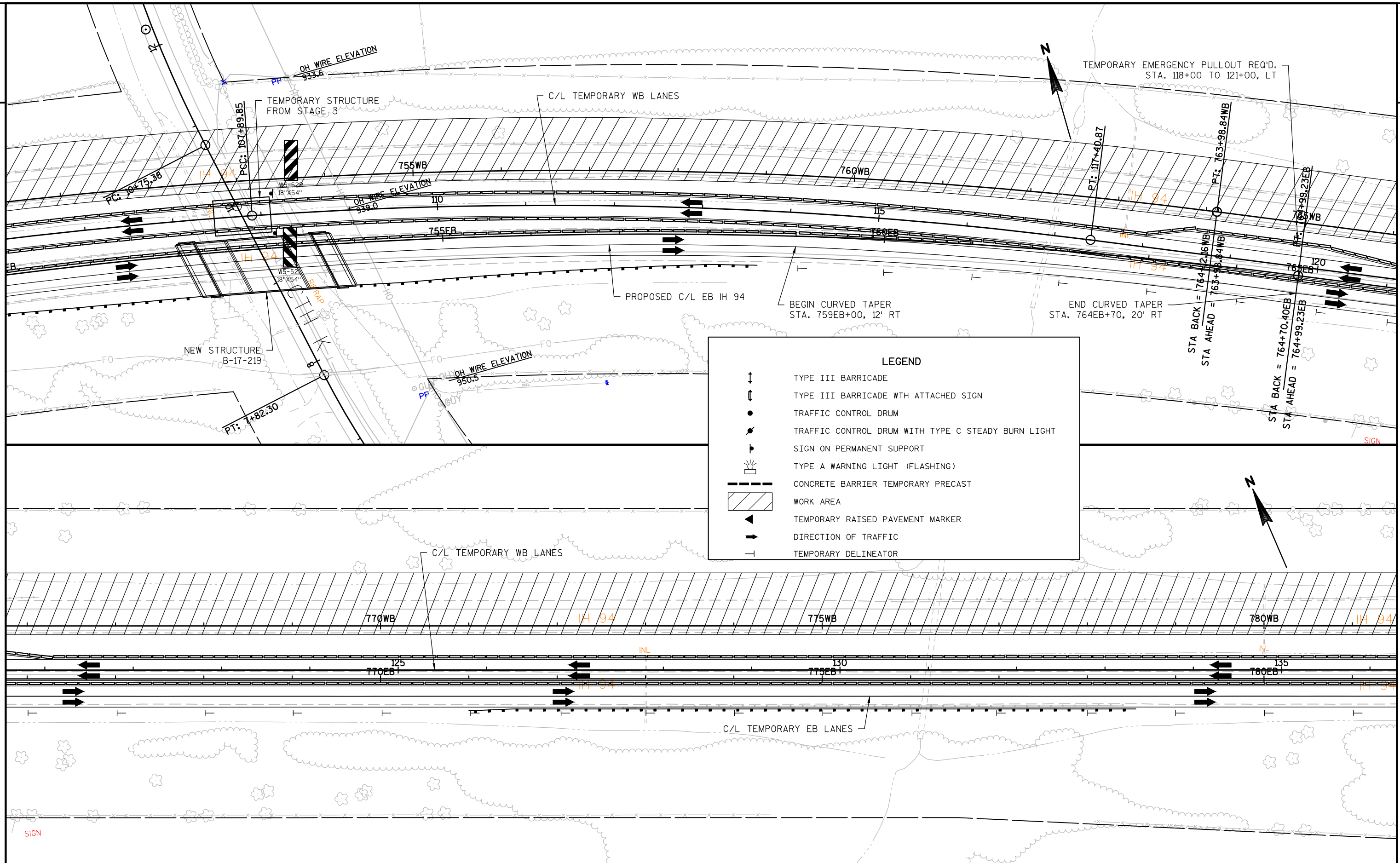


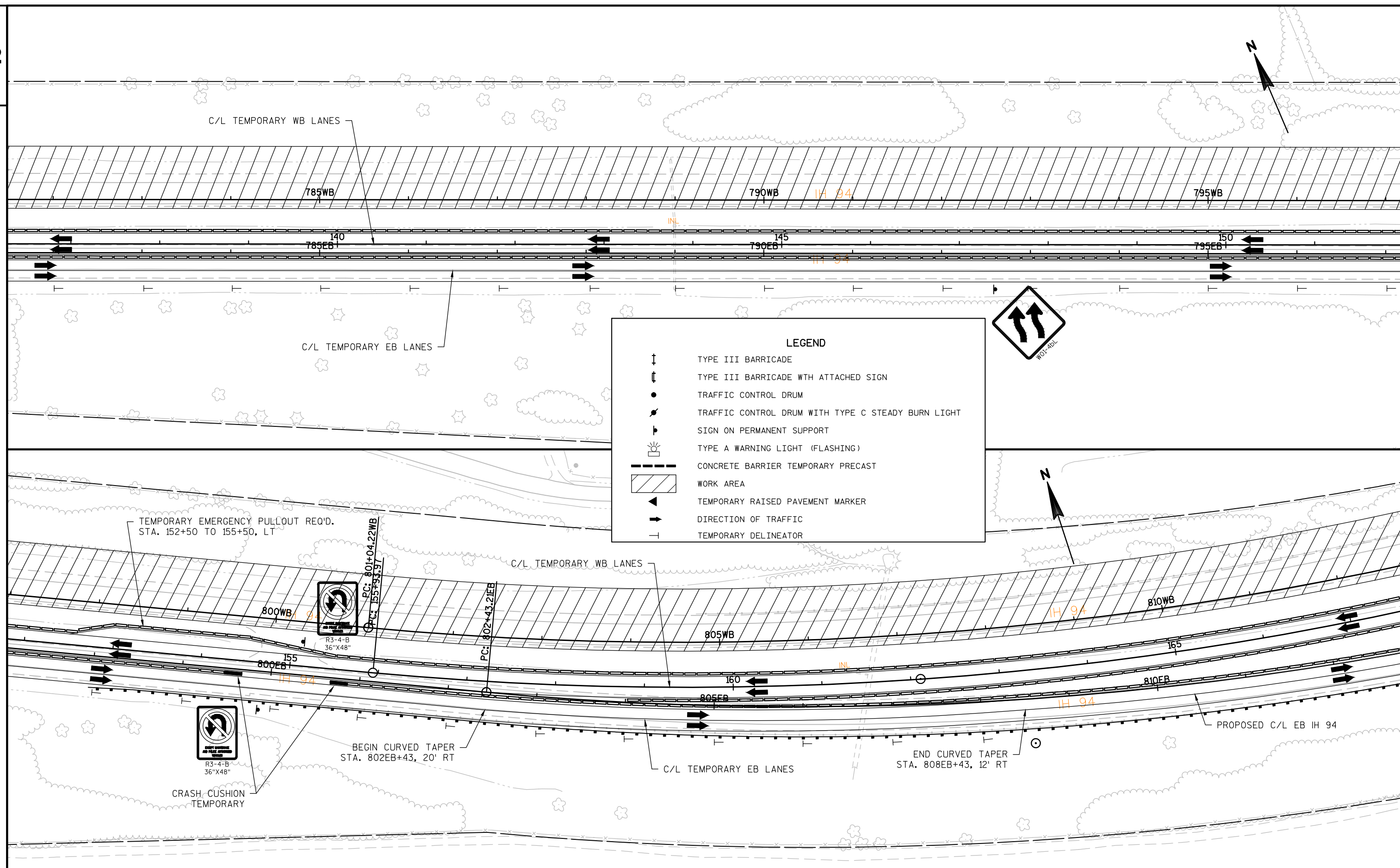


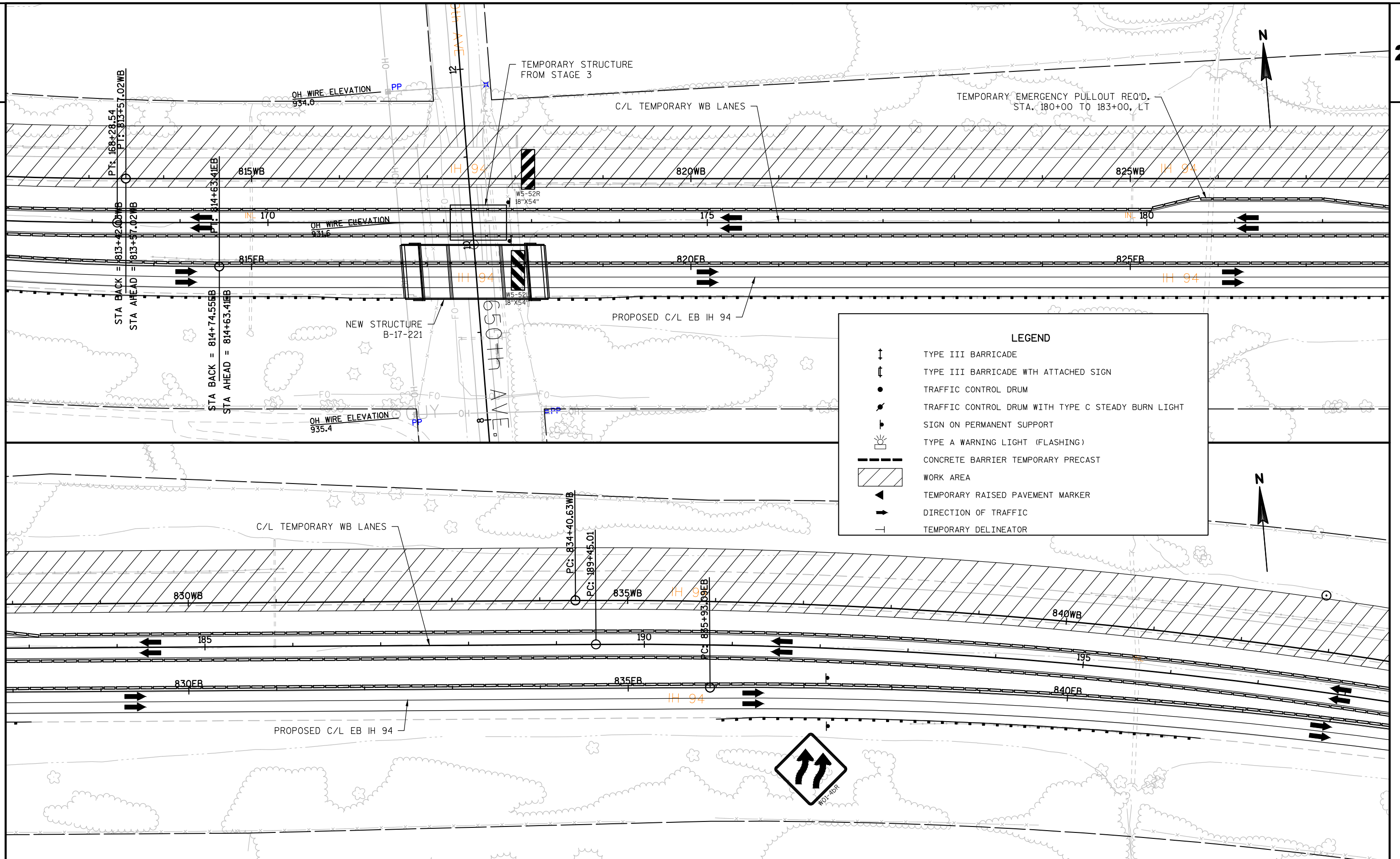


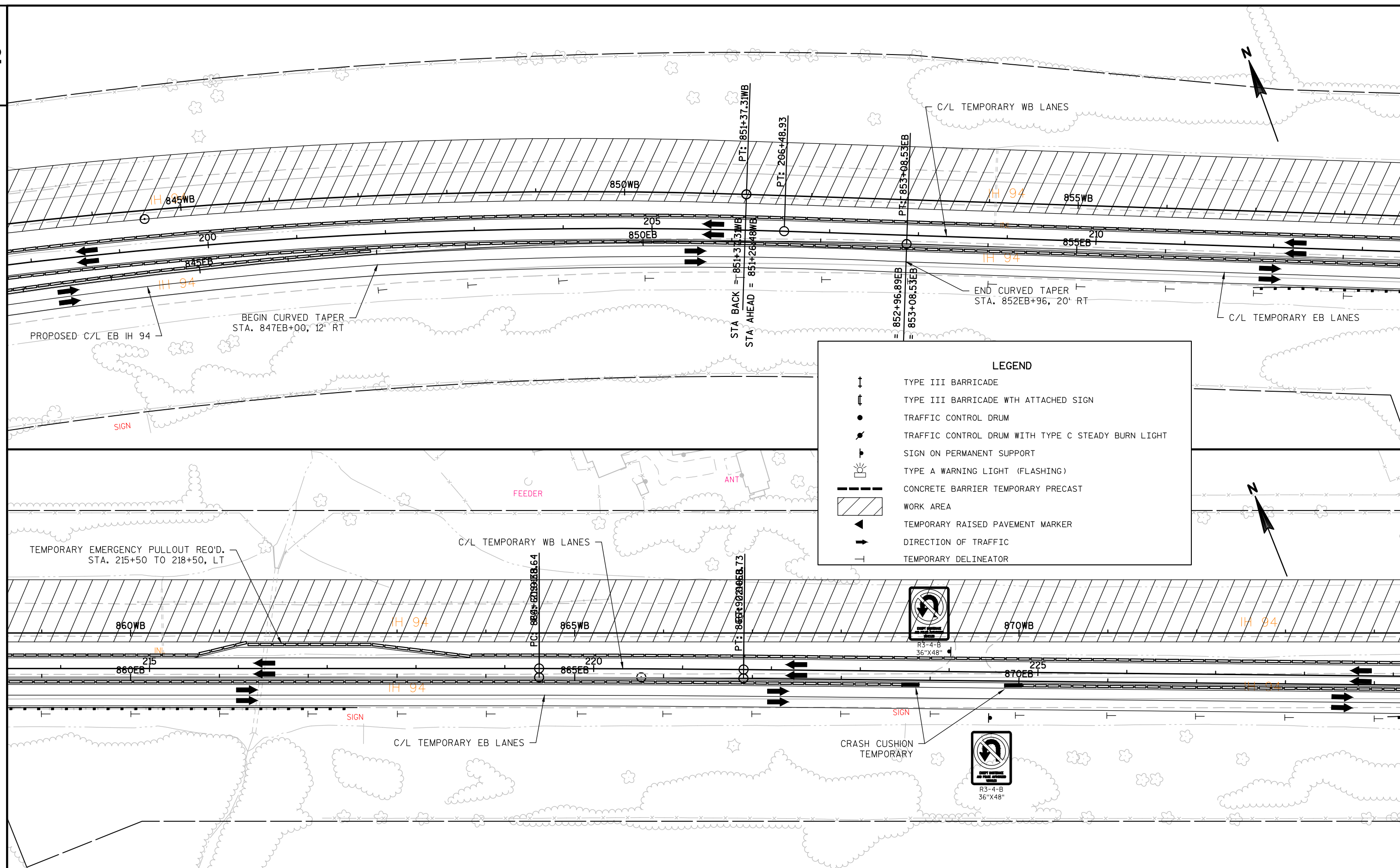
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PROJECT NO:1022-08-72

HWY: IH 94

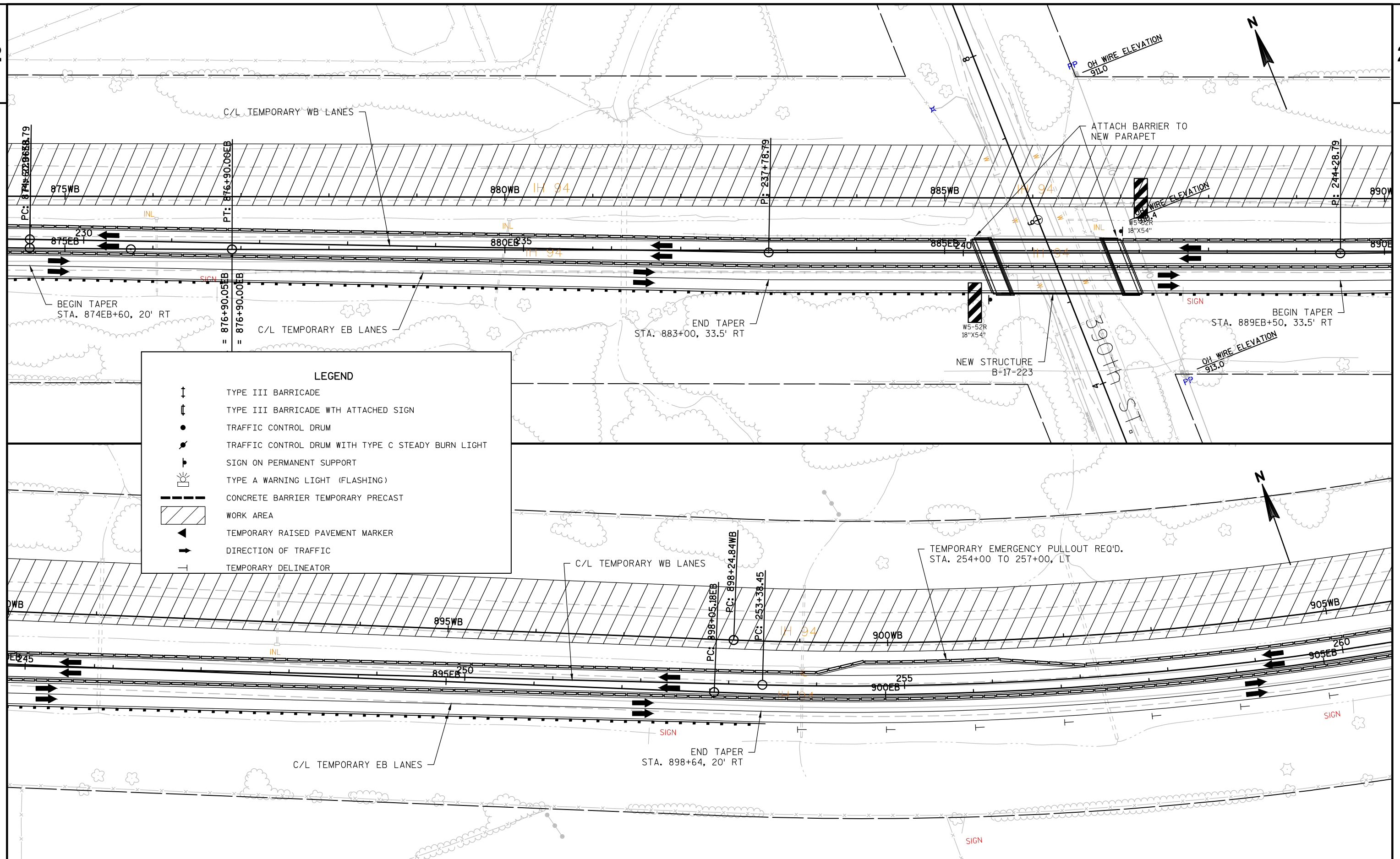
COUNTY: DUNN

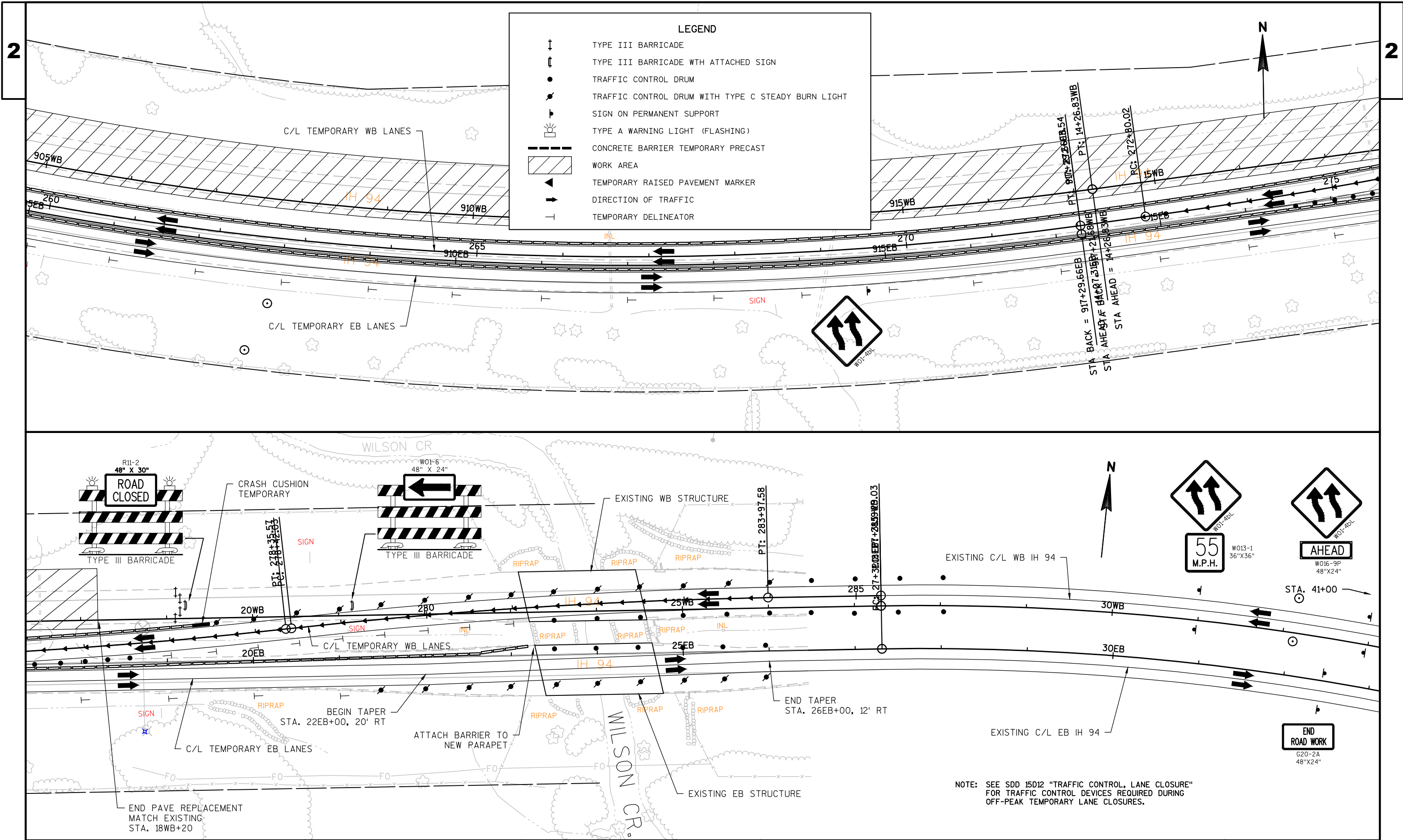
TRAFFIC CONTROL - STAGE 5

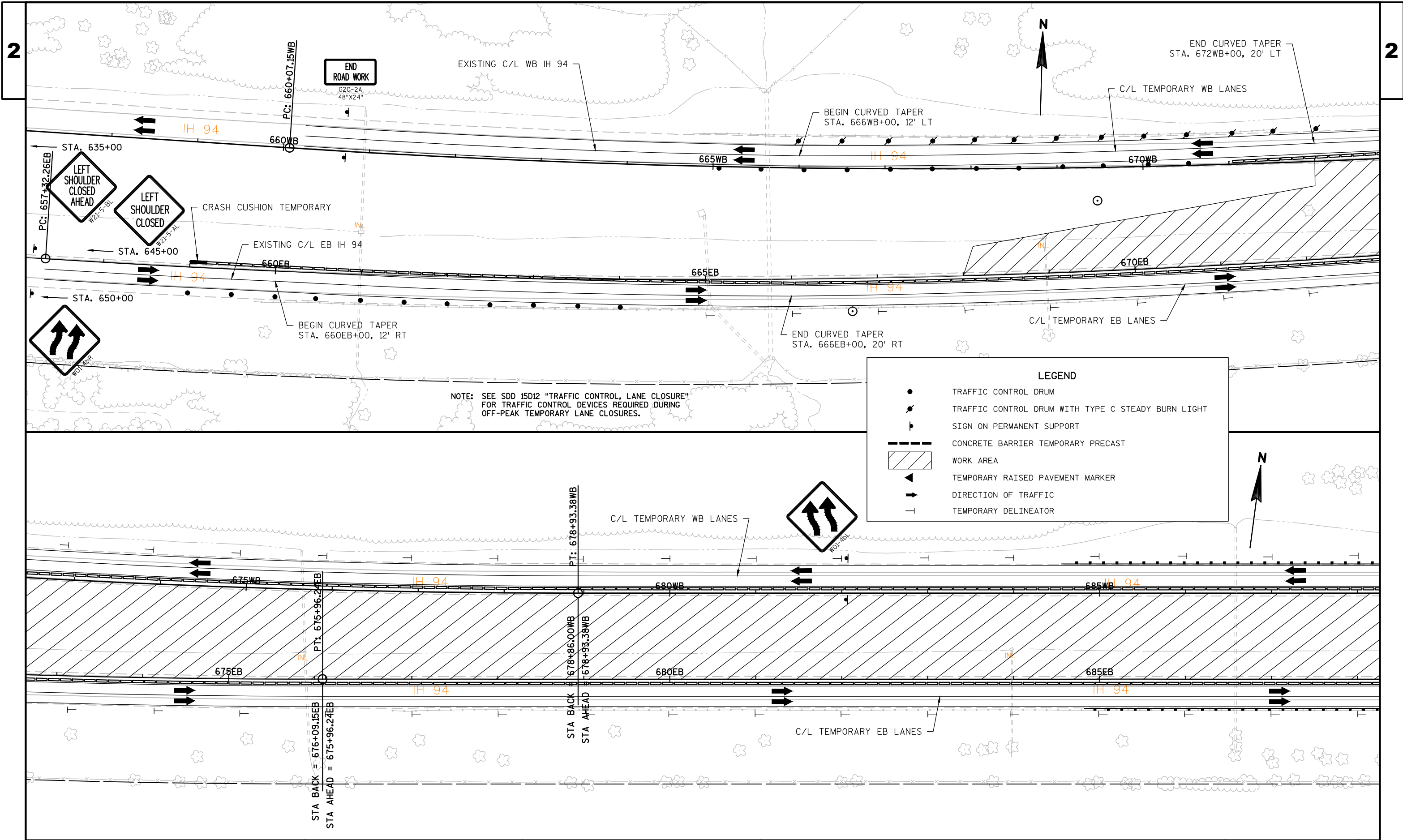
SHEET

104

E







PROJECT NO:1022-08-72

HWY:IH 94

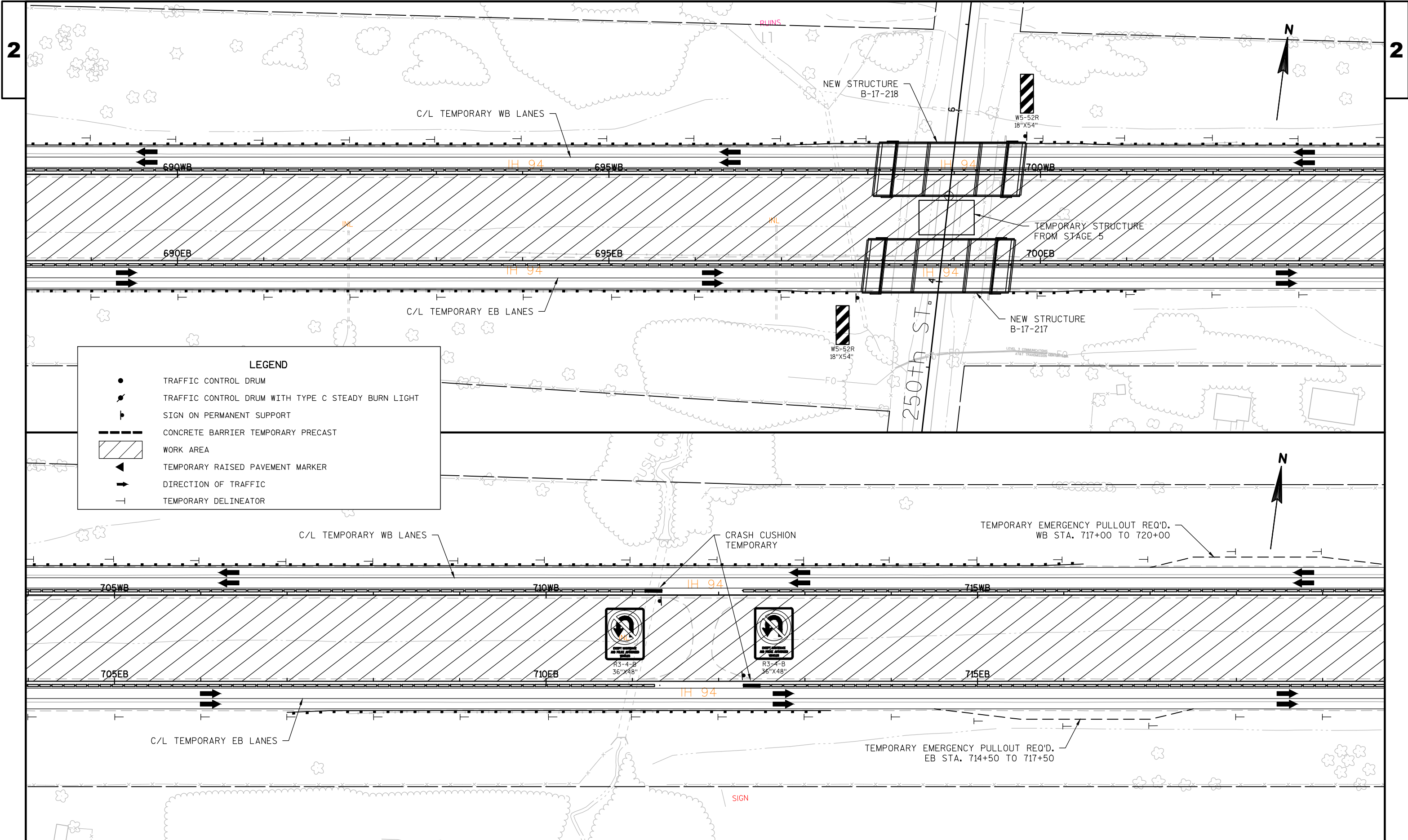
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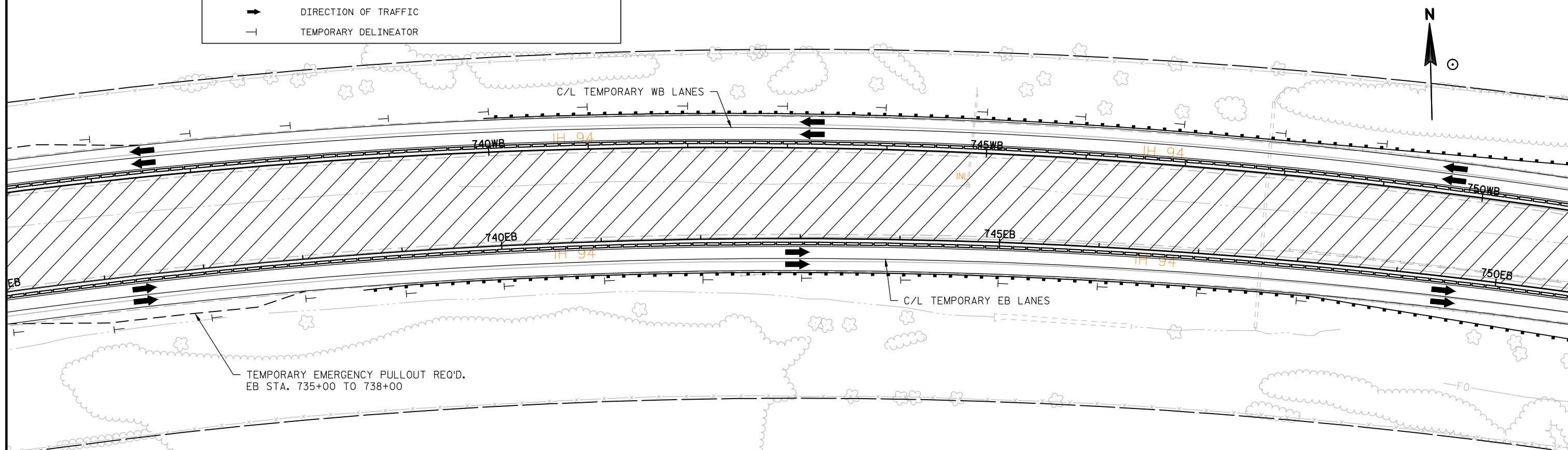
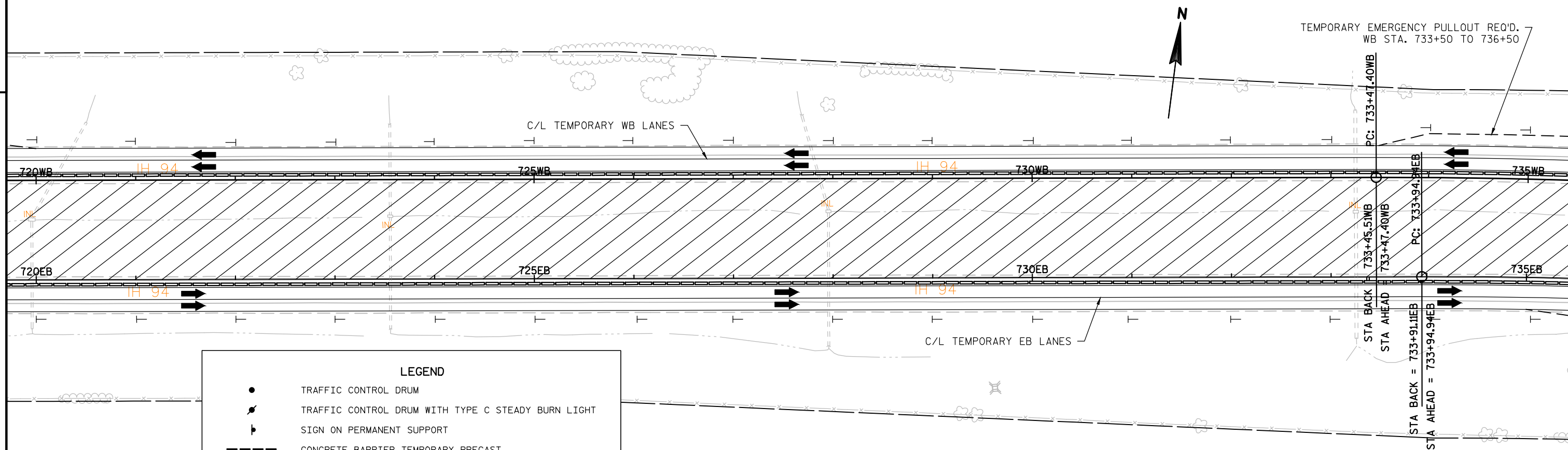
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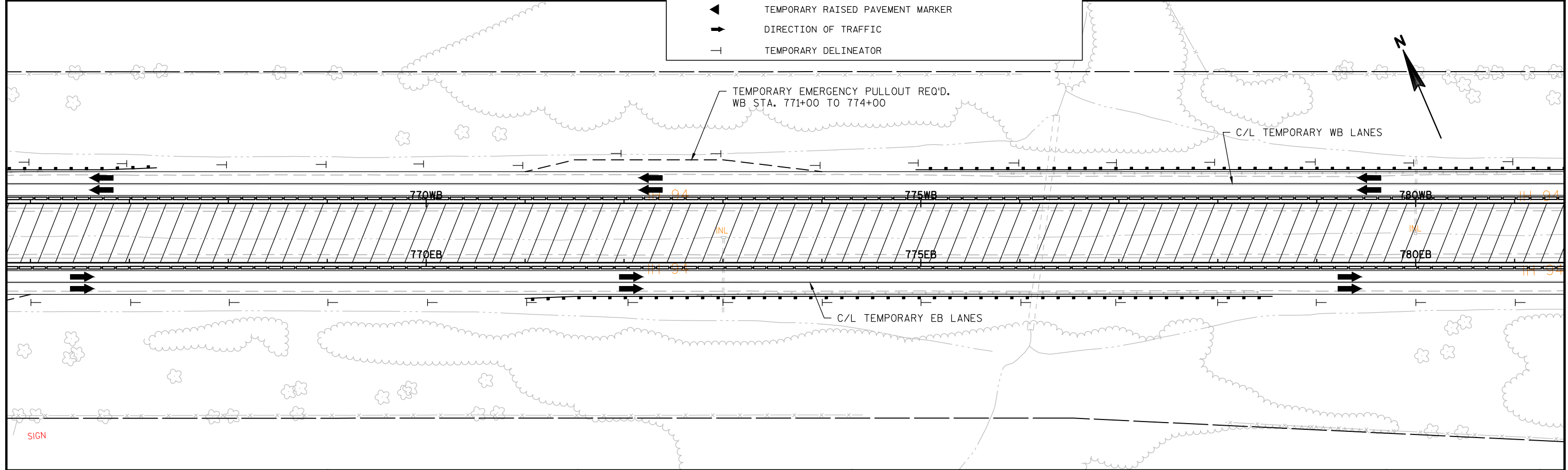
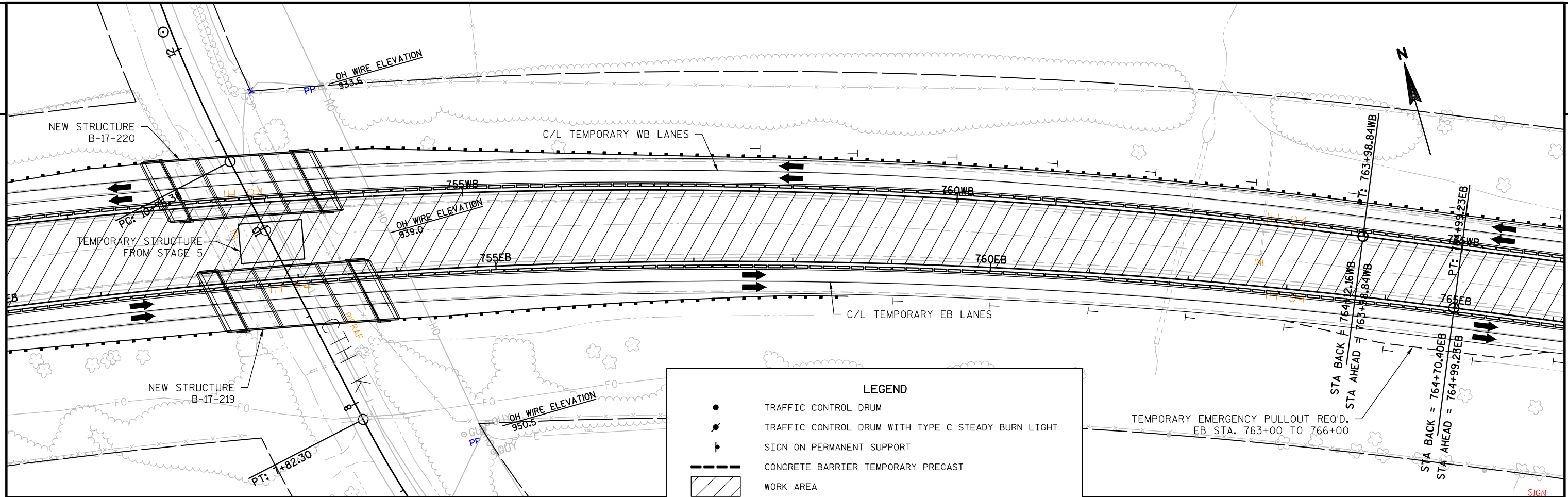
SHEET

107

E

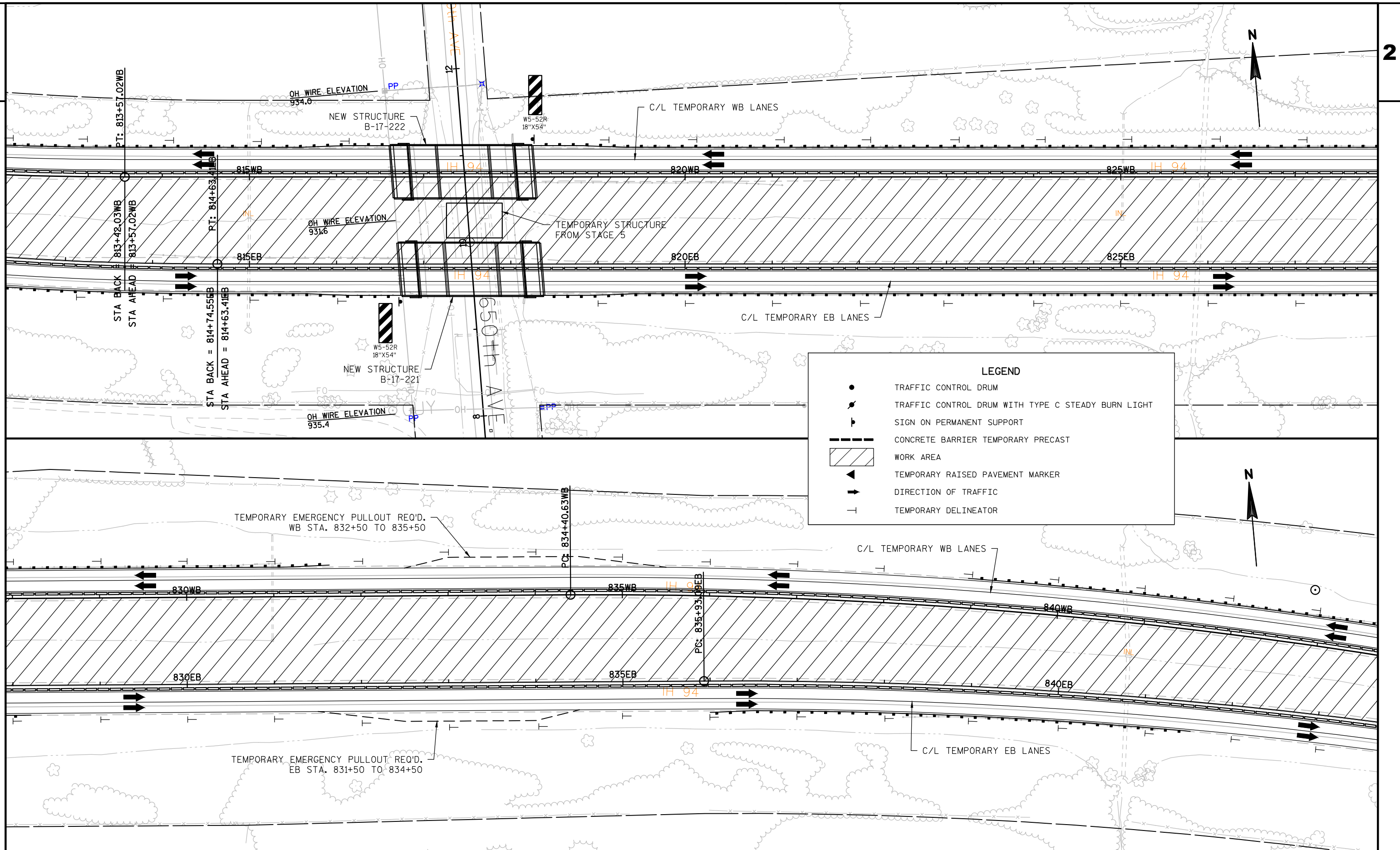






2





PROJECT NO:1022-08-72

HWY:IH 94

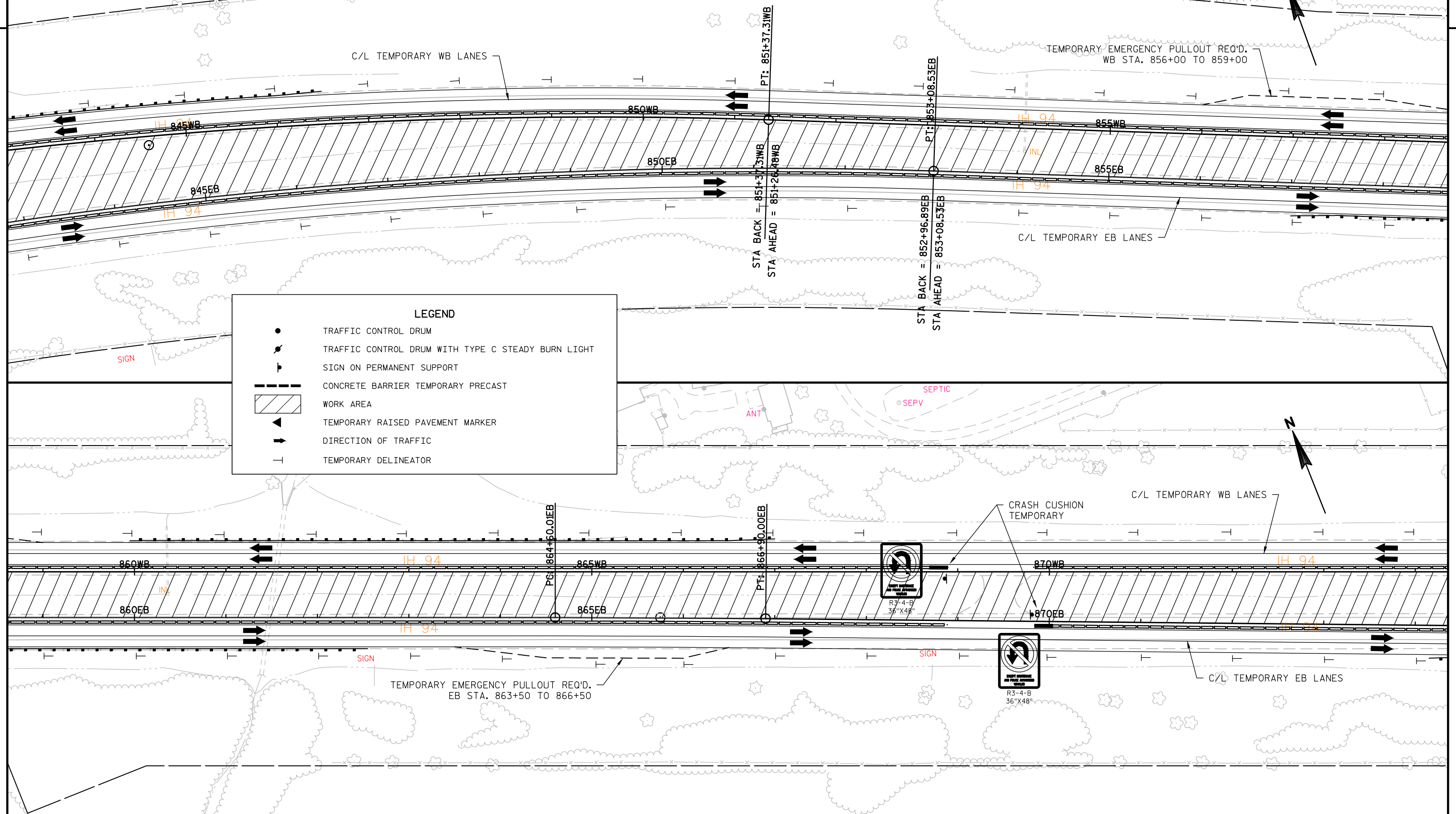
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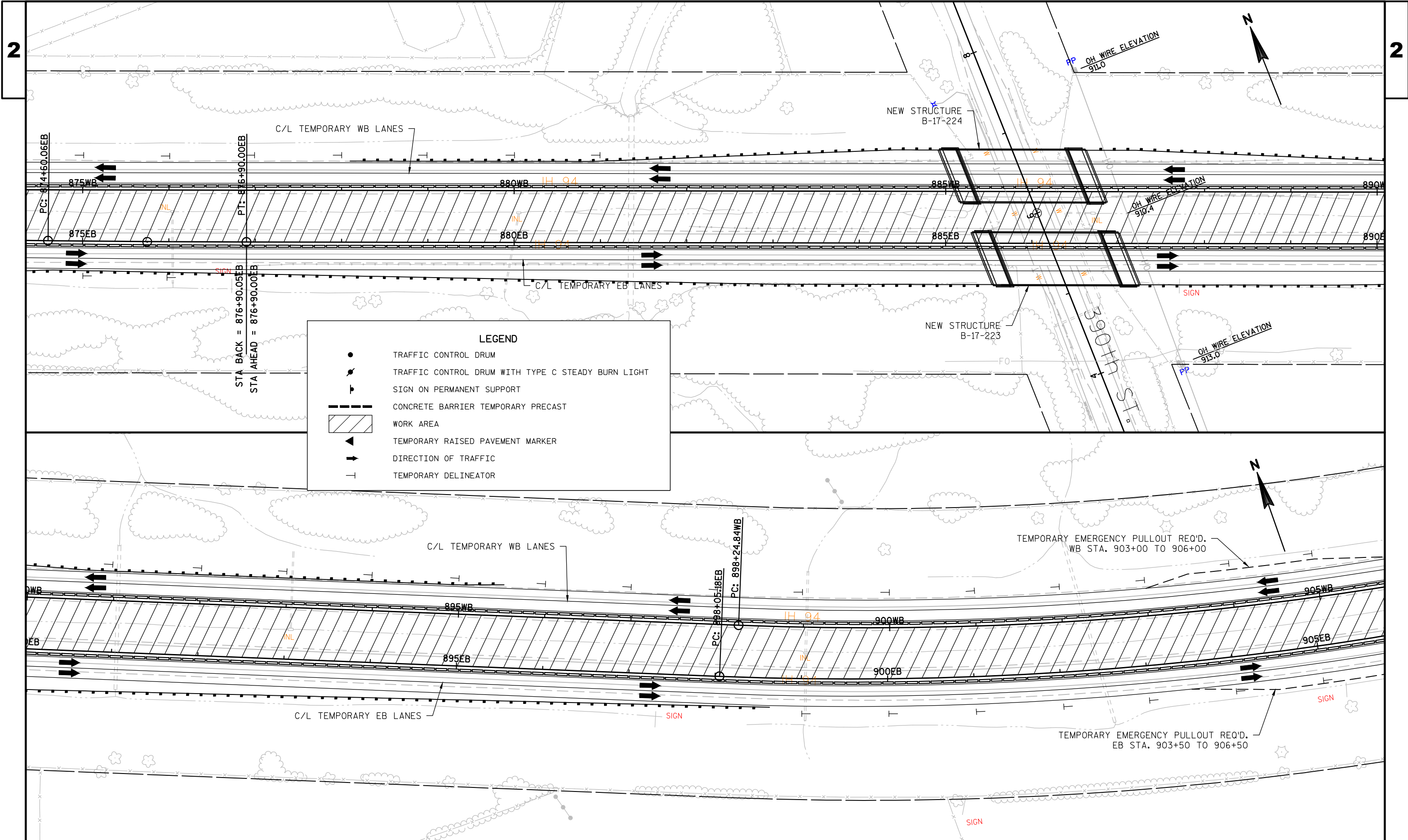
TRAFFIC CONTROL - STAGE 6C

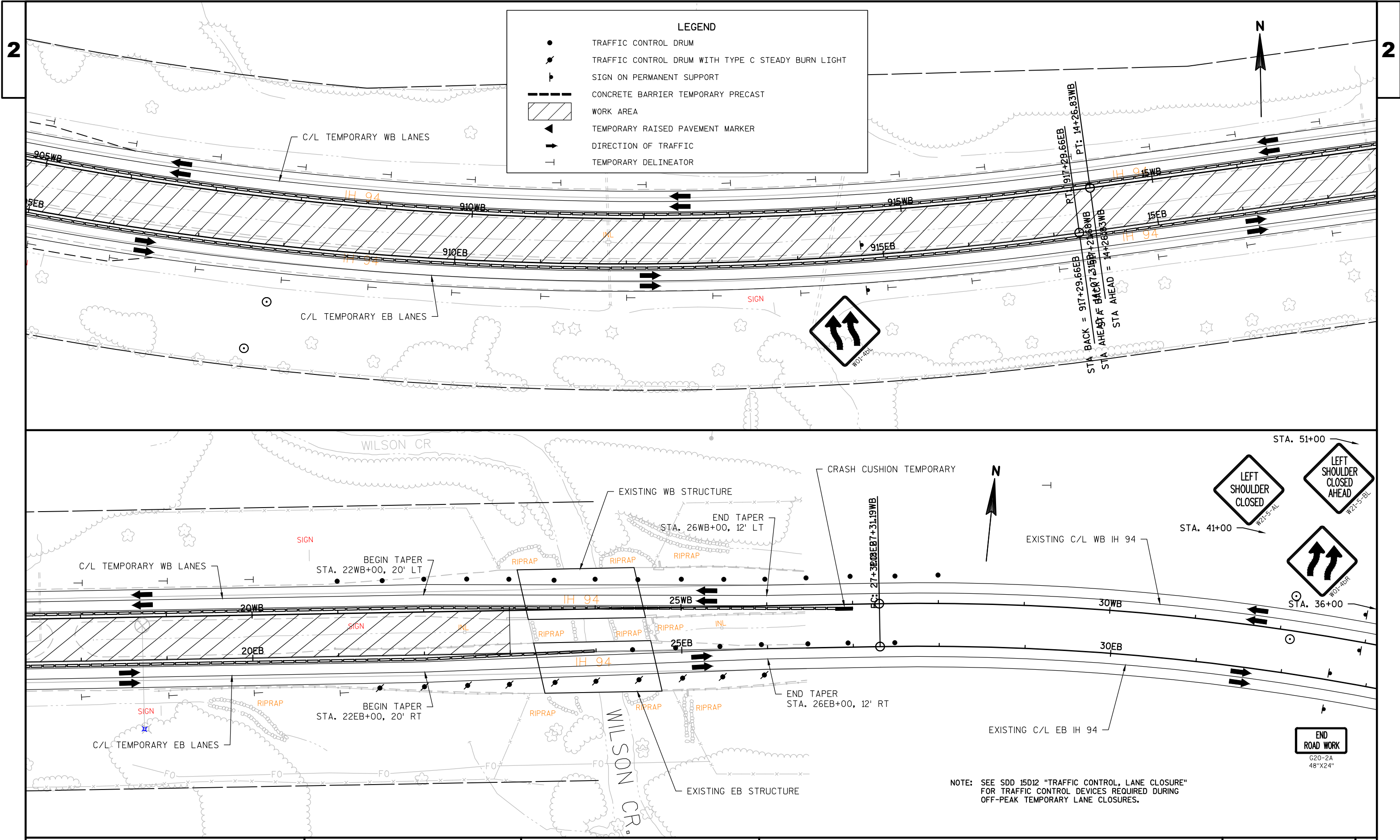
SHEET

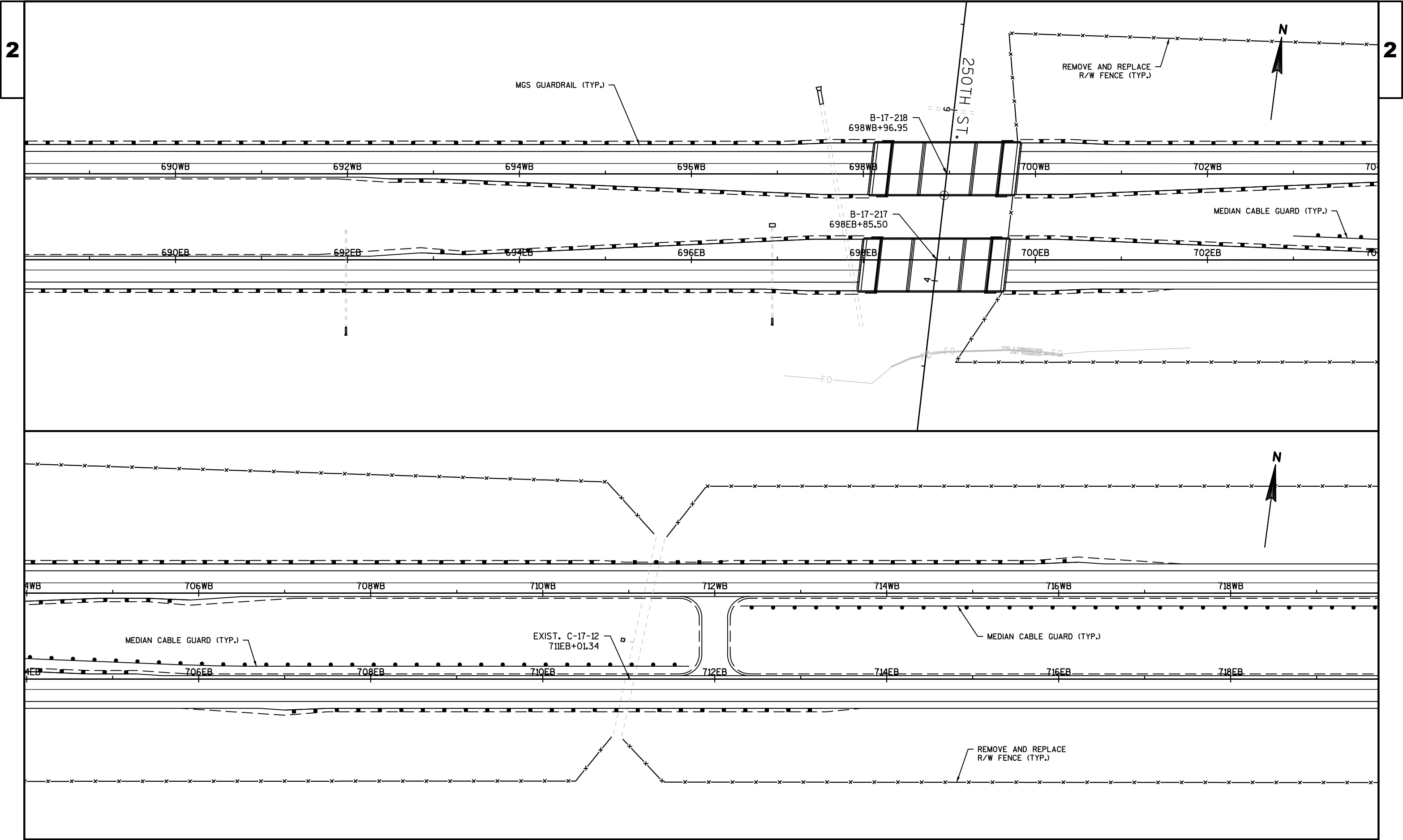
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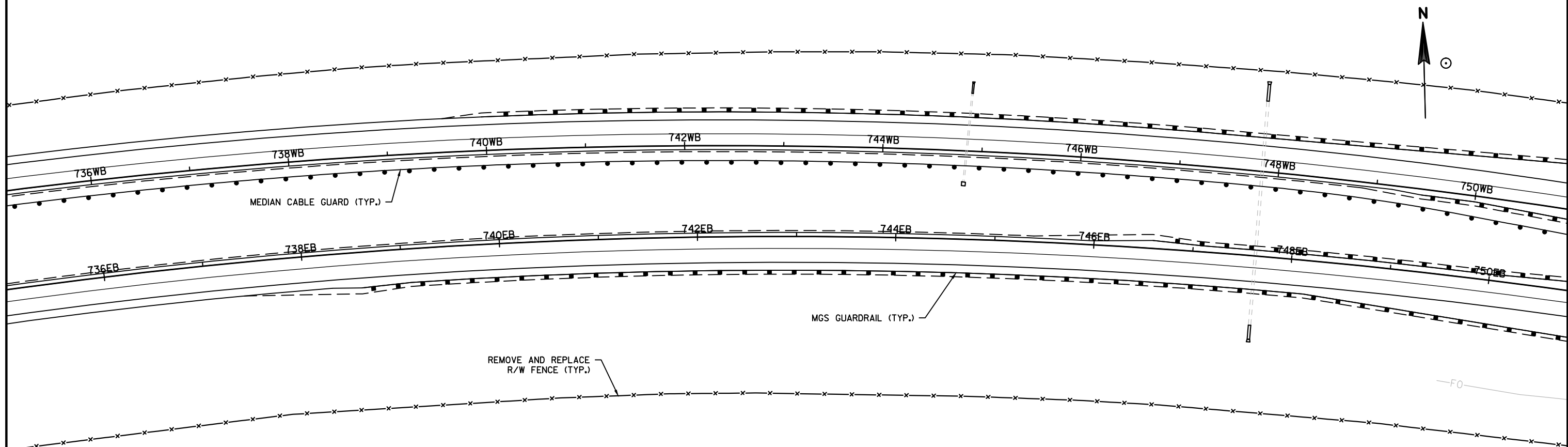
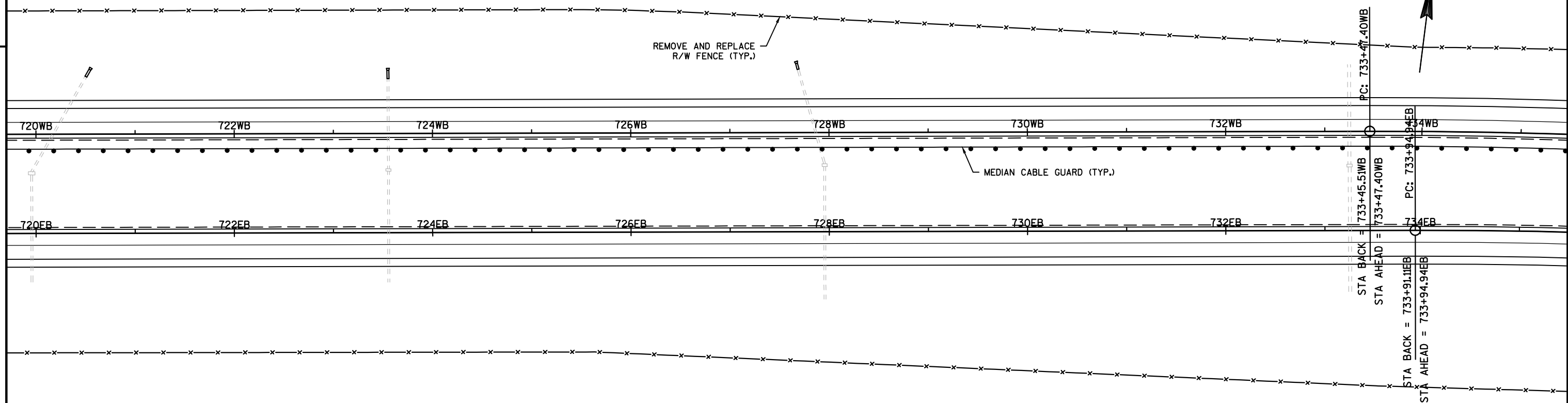
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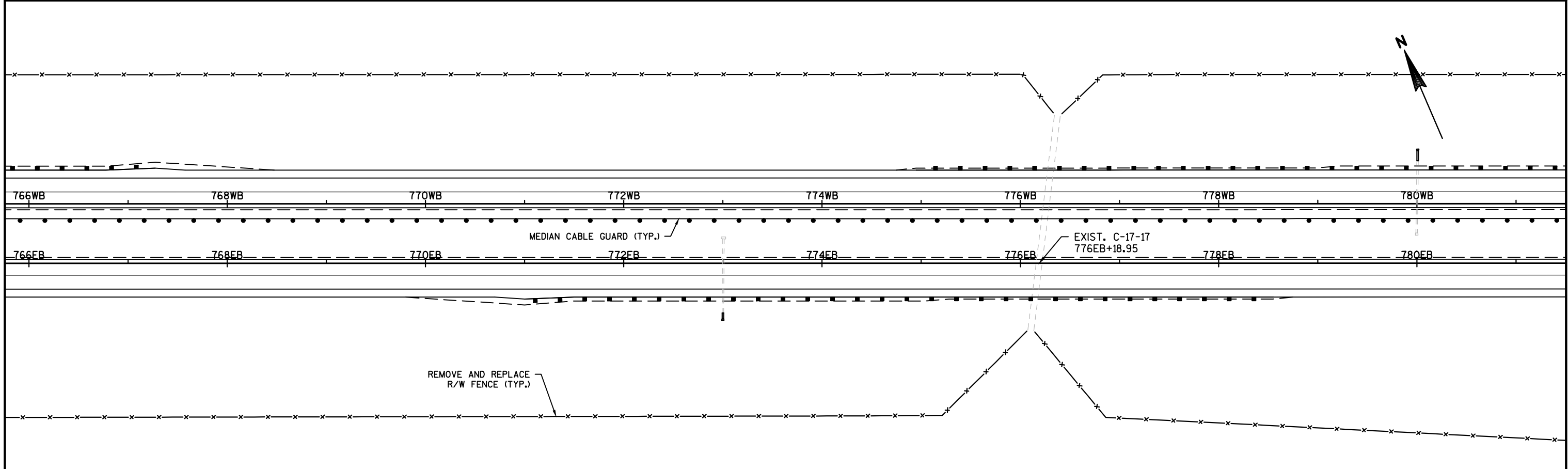
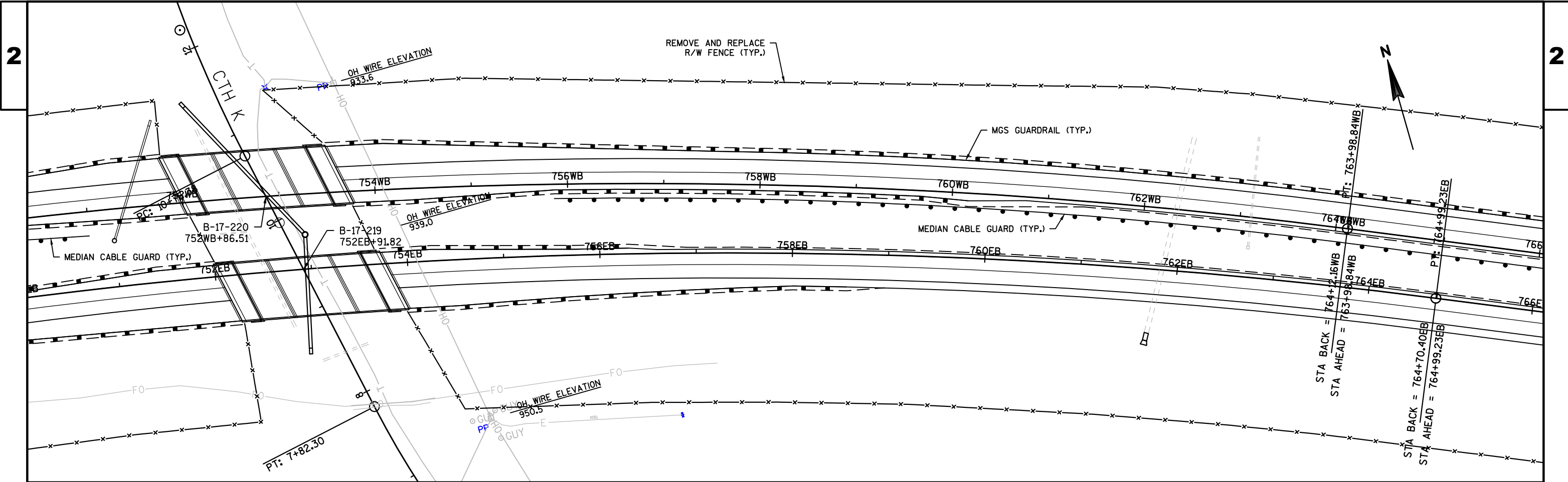












REMOVE AND REPLACE
R/W FENCE (TYP.)



782WB

784WB

786WB

788WB

790WB

792WB

794WB

796WB

782EB

784EB

786EB

788EB

790EB

792EB

794EB

796EB

MEDIAN CABLE GUARD (TYP.)



798WB

800WB

802WB

804WB

806WB

808WB

810WB

812WB

798EB

800EB

802EB

804EB

806EB

808EB

810EB

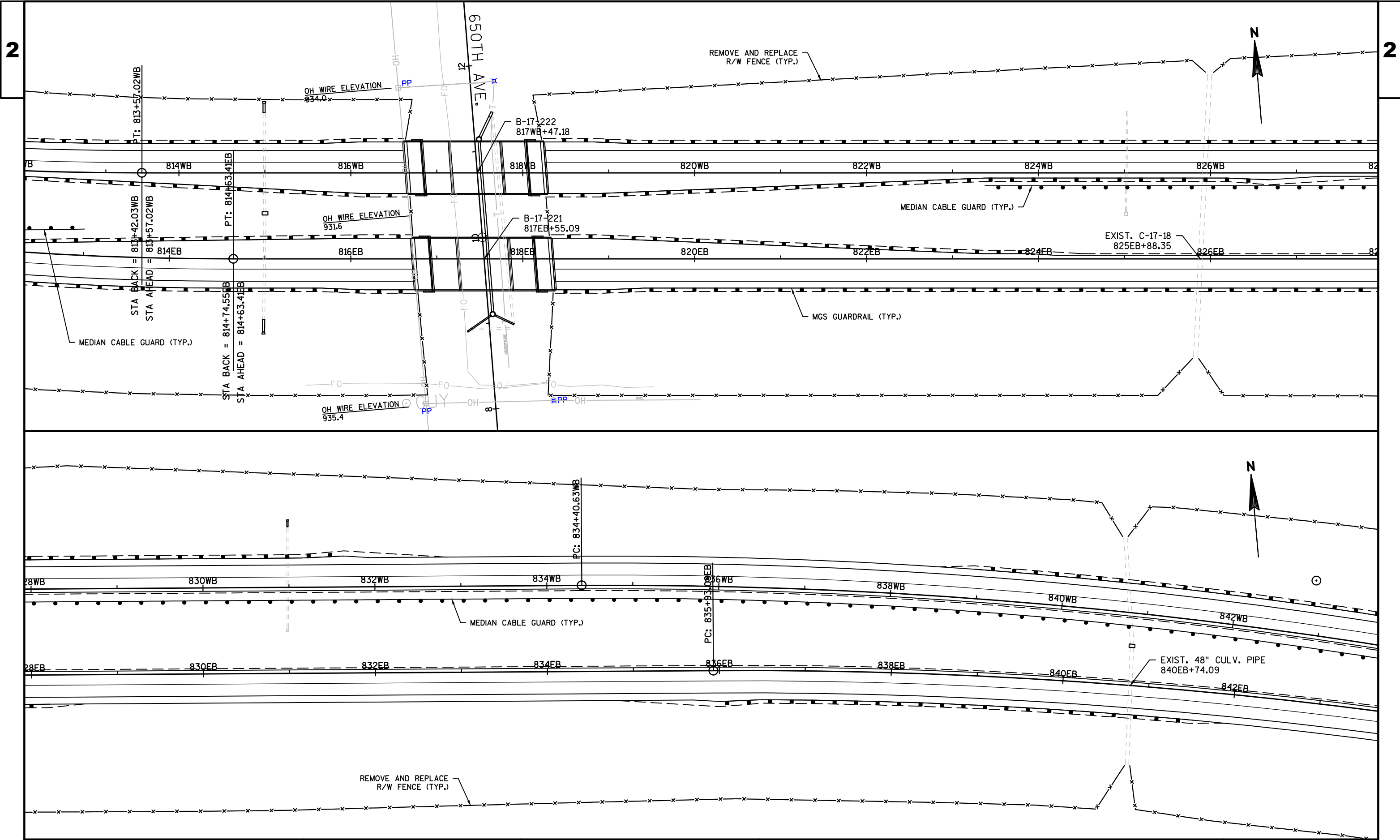
812EB

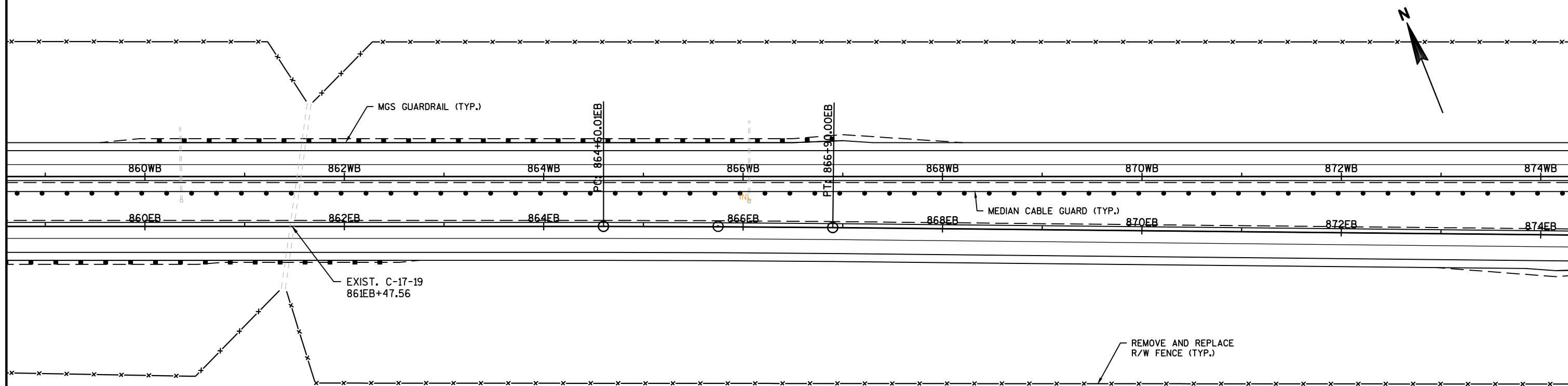
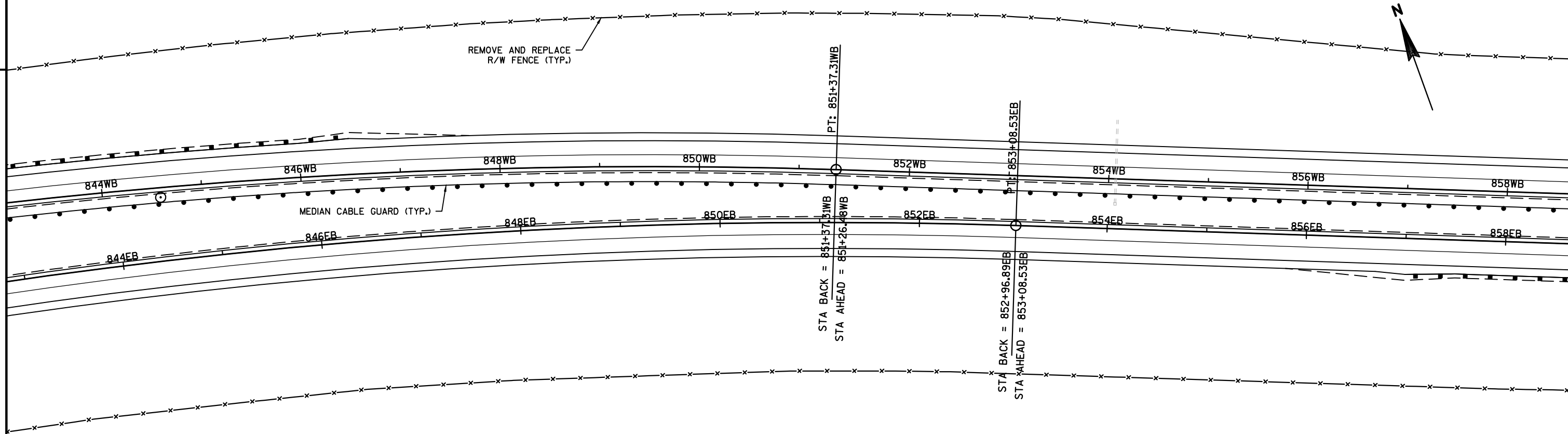
MEDIAN CABLE GUARD (TYP.)

MEDIAN CABLE GUARD (TYP.)

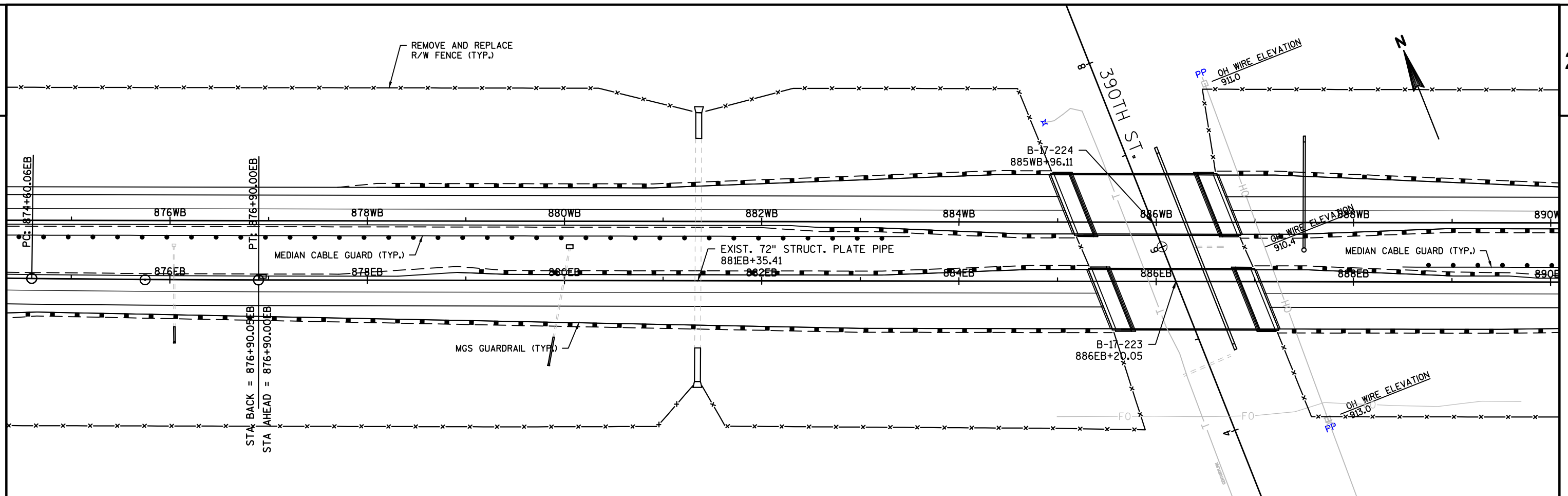
MGS GUARDRAIL (TYP.)

REMOVE AND REPLACE
R/W FENCE (TYP.)

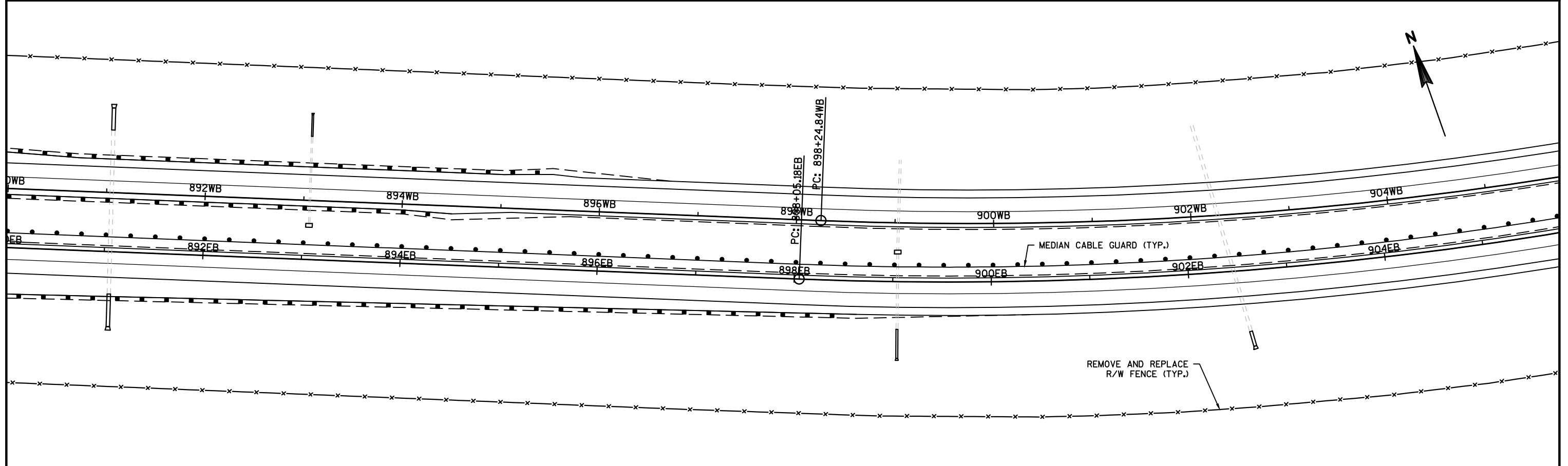




2



2



PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

FENCING AND MEDIAN CABLE GUARD

SHEET

122

E

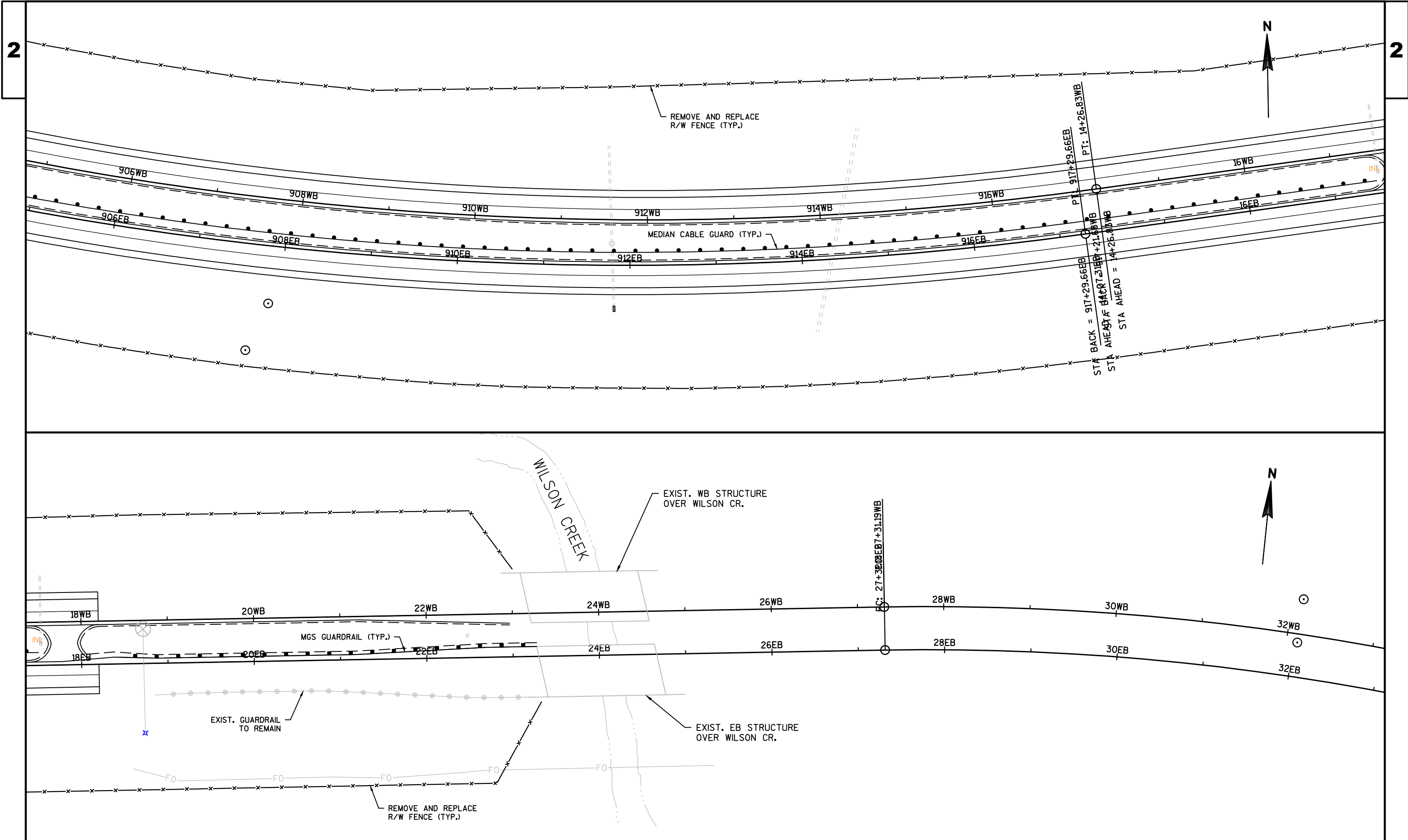
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LAYOUT NAME - 023251 - (45)

PLOT DATE : 4/14/2017 3:02 PM

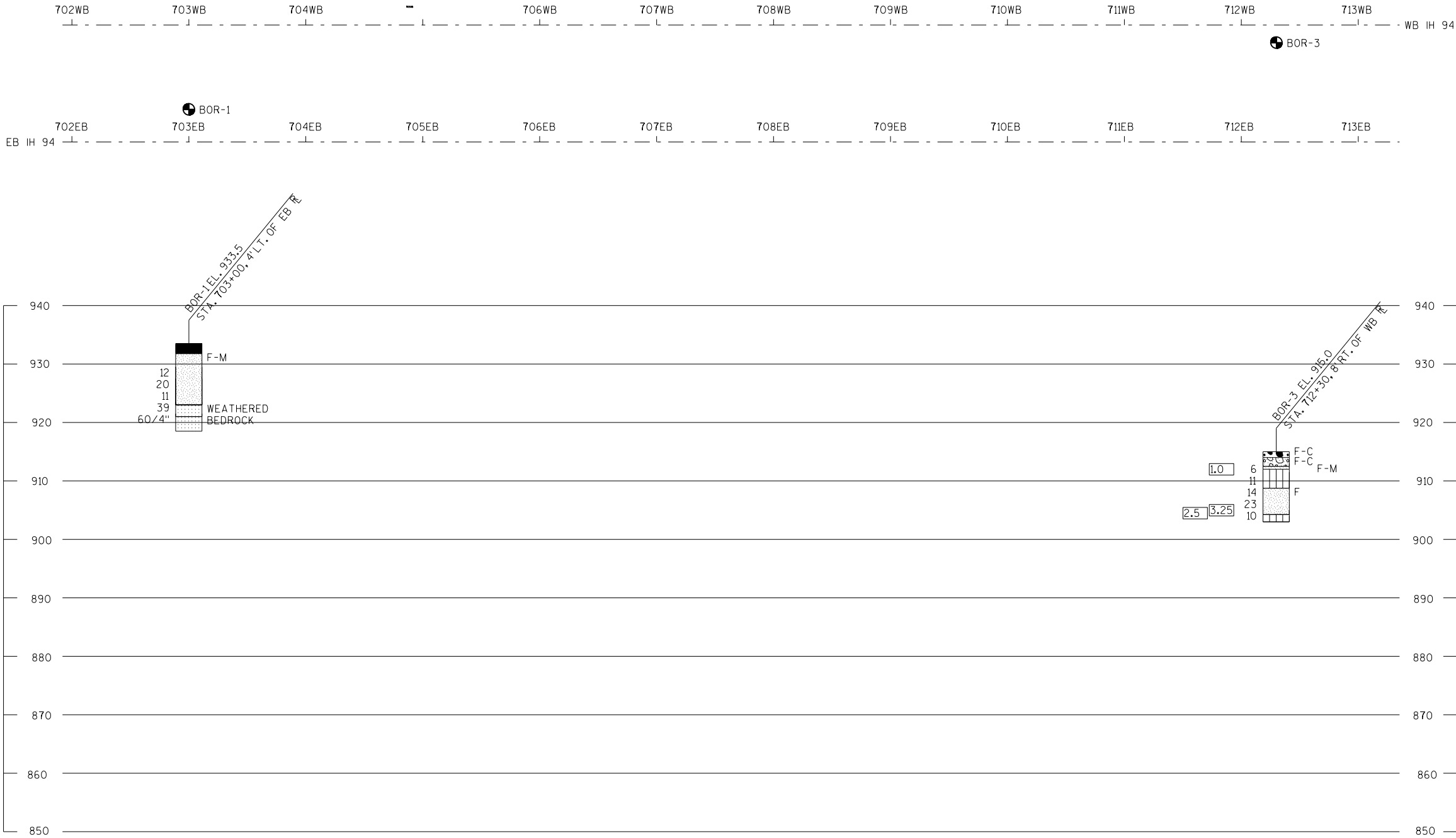
PLOT BY : ANDERSON, THOMAS R PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 44



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	4/19/2017	186321.6204	134053.9073
3	4/18/2017	186497.8937	134968.8336
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			



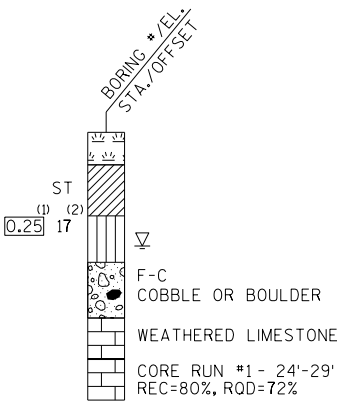
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

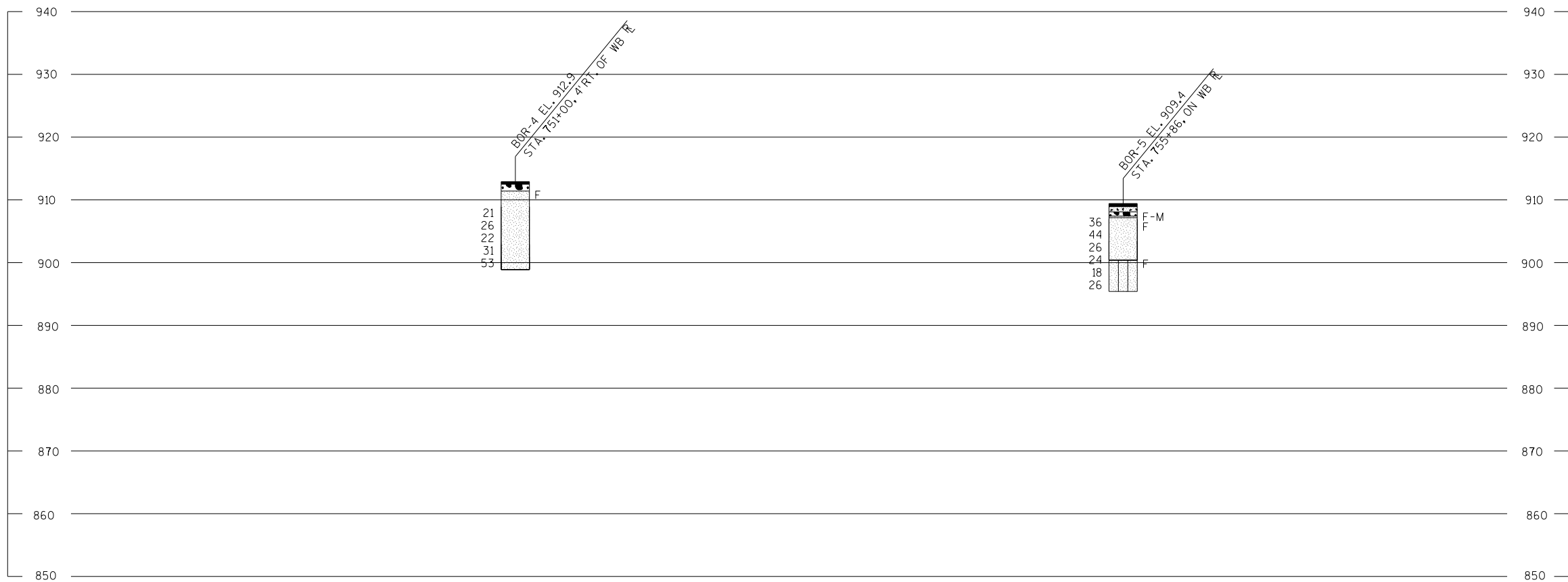
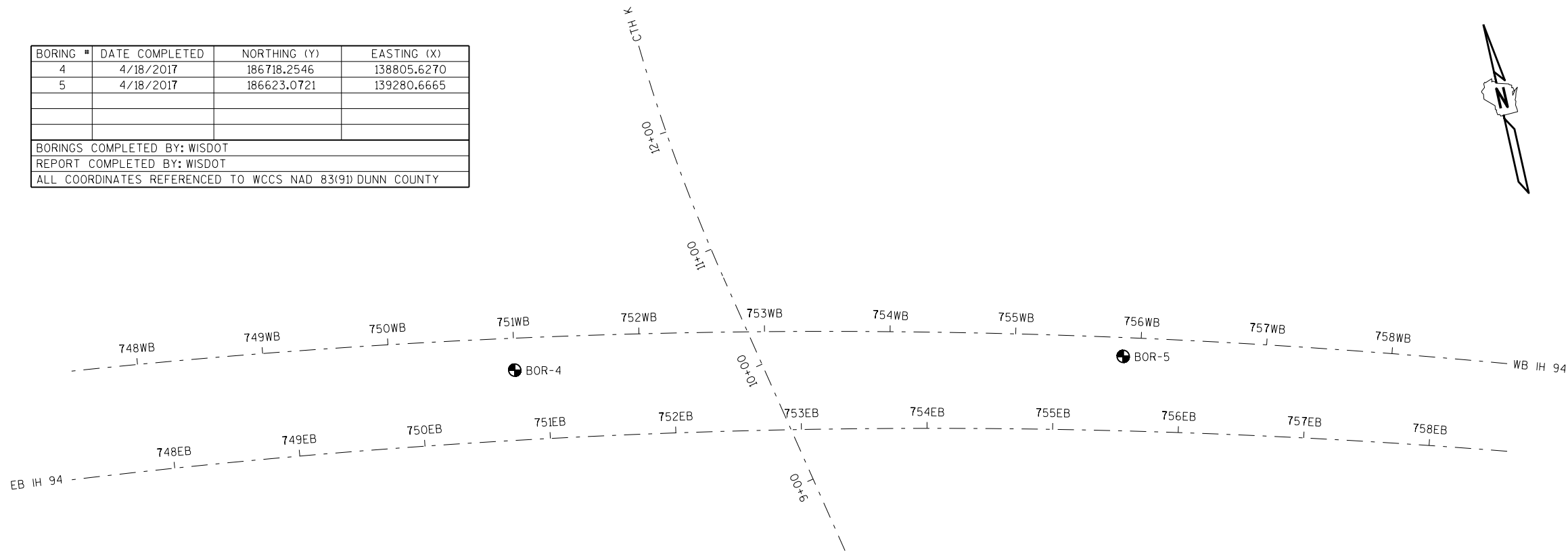
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
4	4/18/2017	186718.2546	138805.6270
5	4/18/2017	186623.0721	139280.6665
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			



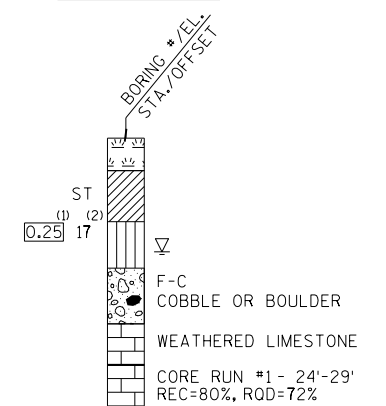
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



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GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

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PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

SOIL BORINGS FOR CABLE GUARD

SHEET

E

FILE NAME : \$\$....designfile....\$\$

PLOT DATE : \$\$...plottingdate...\$\$

PLOT BY : \$\$...plotuser...\$\$

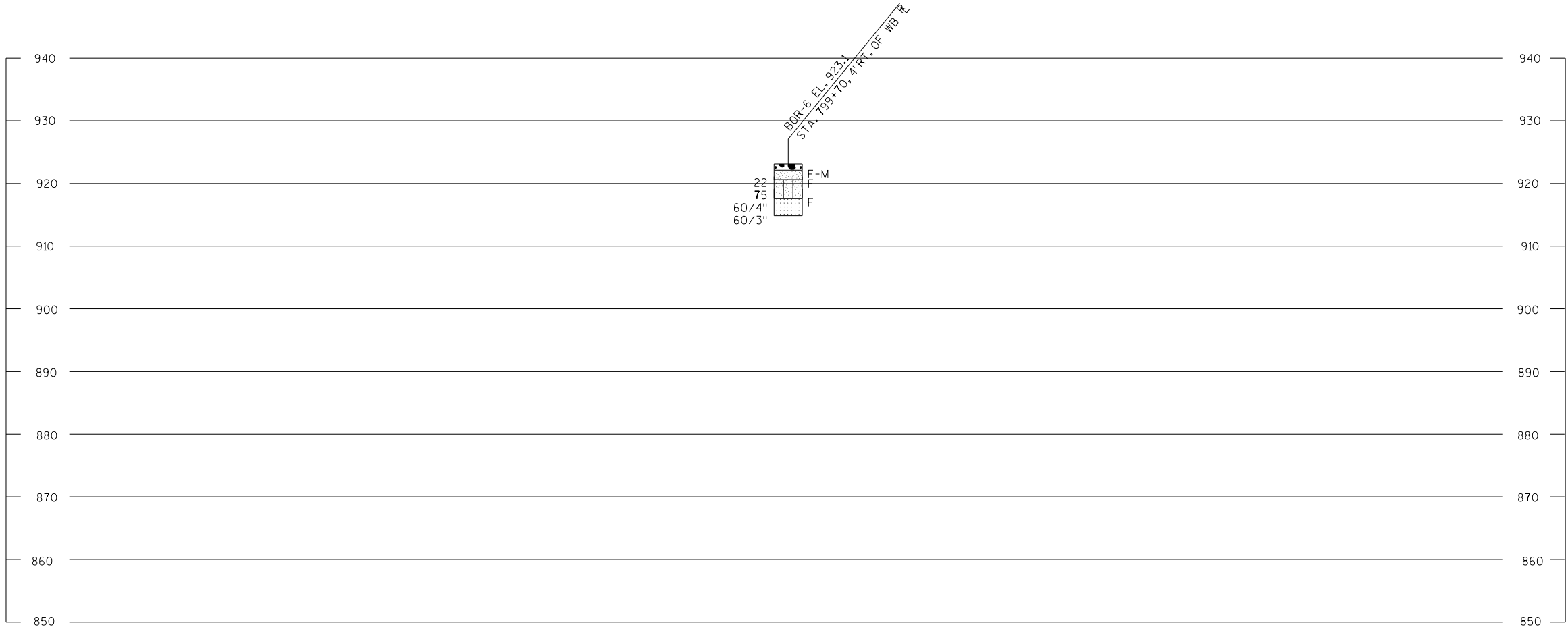
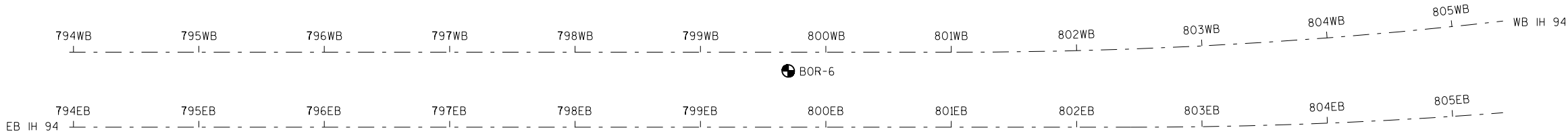
PLOT NAME :

PLOT SCALE : \$\$.....plotscale.....\$\$

WISDOT/CADDS SHEET 125

SCALE =

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
6	4/18/2017	184943.6362	143339.4096
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			



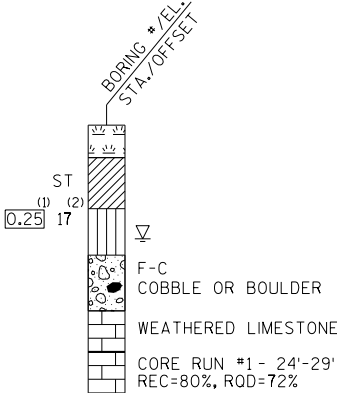
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

	ASPHALT		TOPSOIL		PEAT
	CONCRETE		FILL		GRAVEL
	SAND		CLAY		SILT
	BOULDERS OR COBBLES		LIMESTONE		BEDROCK (UNKNOWN)
	SHALE		SANDSTONE		IGNEOUS/META

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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PROJECT NO:1022-08-72

HWY: IH 94

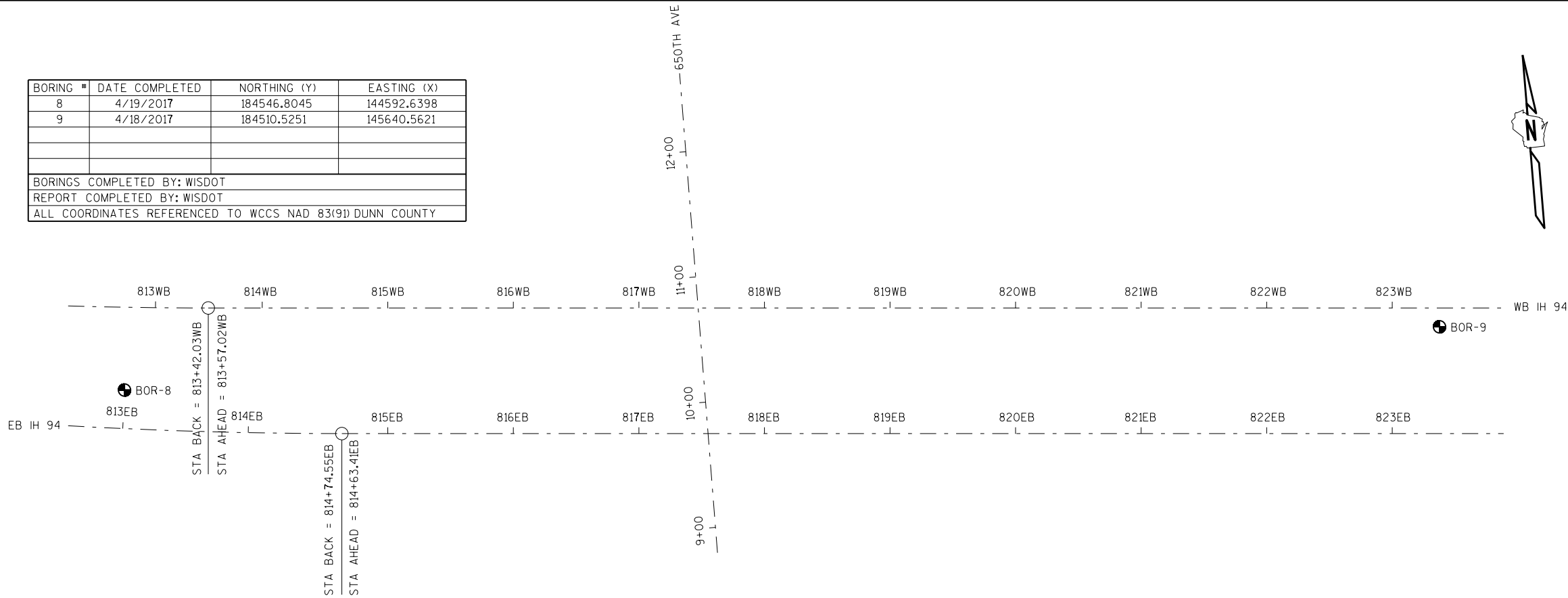
COUNTY: DUNN

SOIL BORINGS FOR CABLE GUARD

SHEET

E

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
8	4/19/2017	184546.8045	144592.6398
9	4/18/2017	184510.5251	145640.5621
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			



STATE PROJECT NUMBER
1022-08-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

LEGEND OF BORING

BORING #/EL./STA./OFF-SET

ST

(1) 0.25

(2) 17

F-C

COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1- 24'-29'

REC=80%, ROD=72%

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

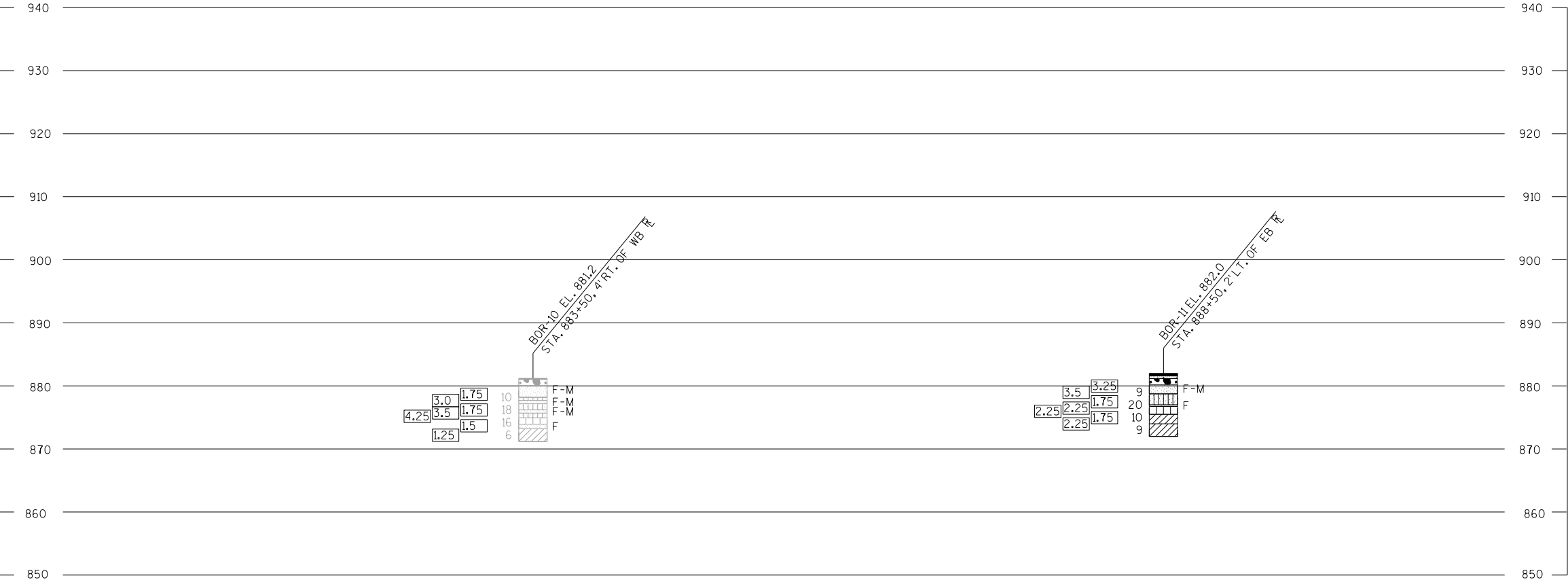
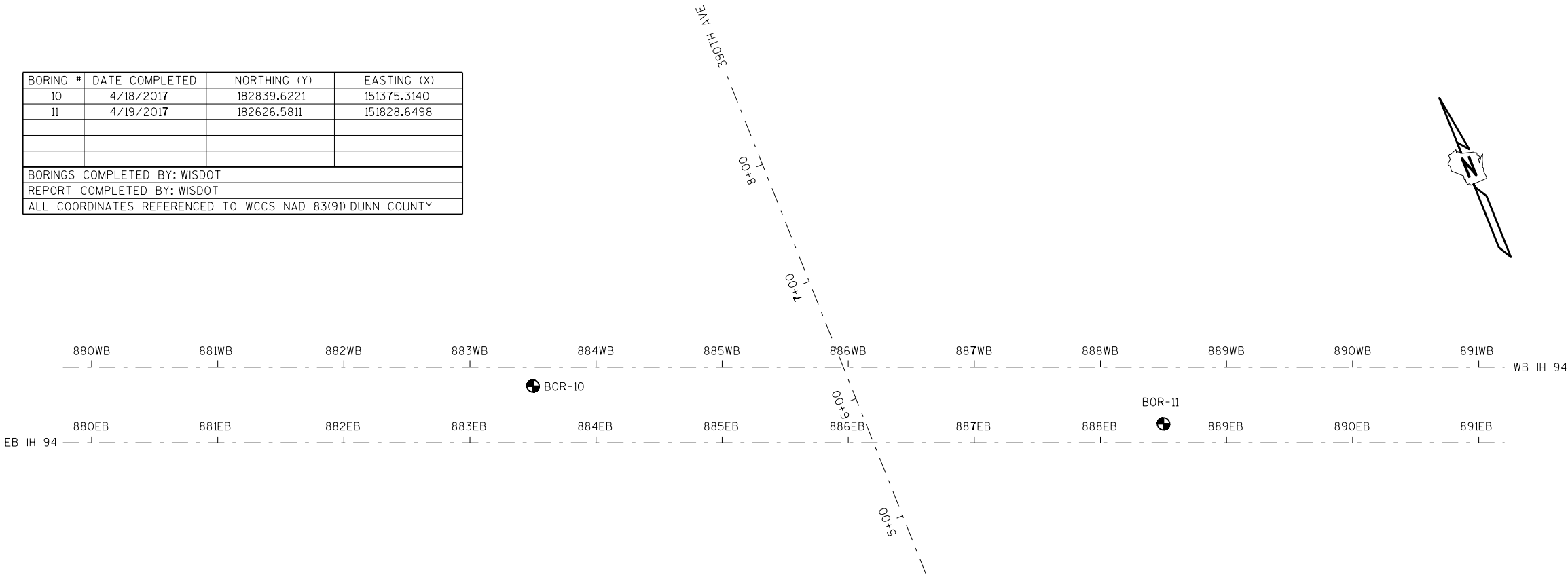
▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
10	4/18/2017	182839.6221	151375.3140
11	4/19/2017	182626.5811	151828.6498
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			



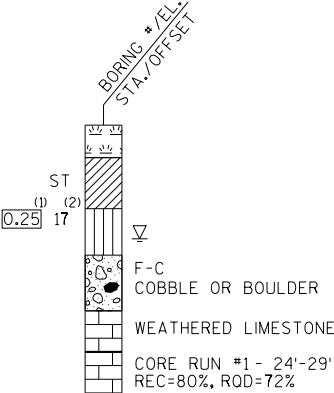
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

	ASPHALT		TOPSOIL		PEAT
	CONCRETE		FILL		GRAVEL
	SAND		CLAY		SILT
	BOULDERS OR COBBLES		LIMESTONE		BEDROCK (UNKNOWN)
	SHALE		SANDSTONE		IGNEOUS/META

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

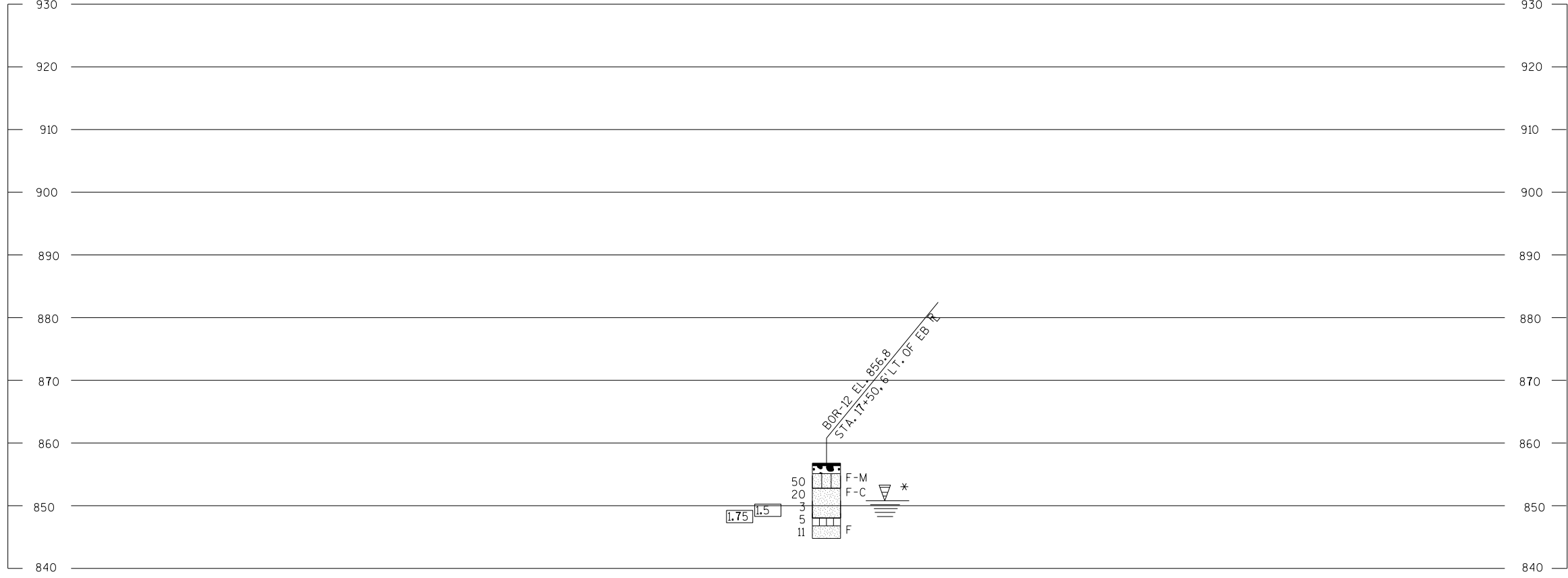
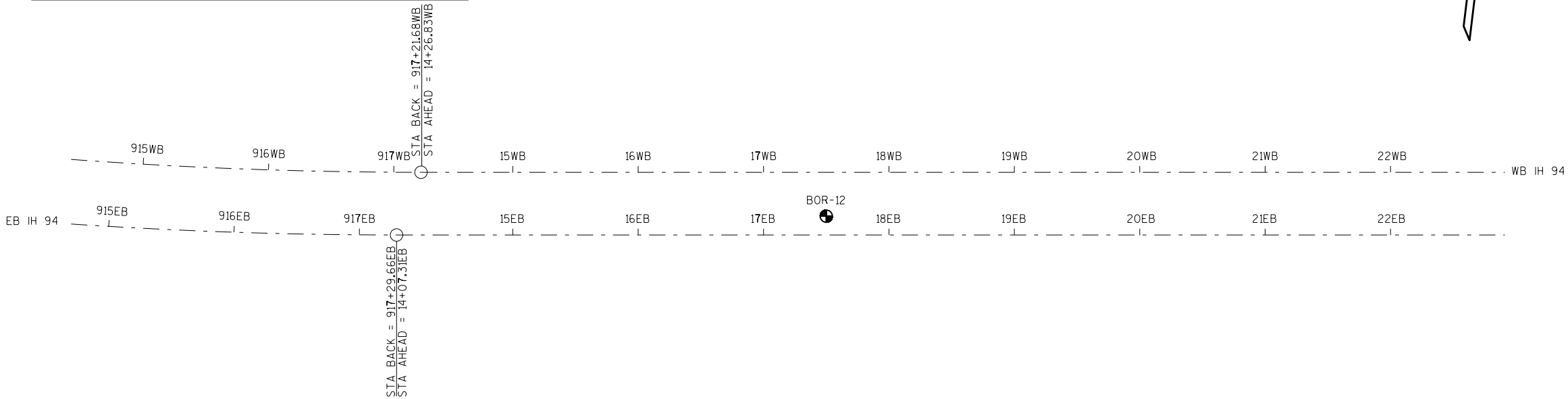
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
12	4/19/2017	182069.1234	154937.3365
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			



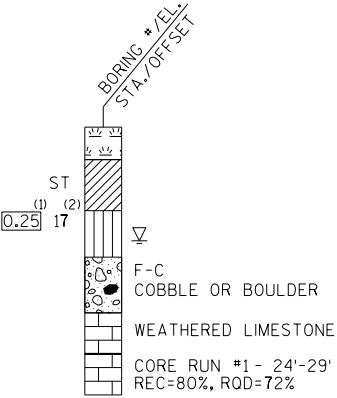
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

	ASPHALT		TOPSOIL		PEAT
	CONCRETE		FILL		GRAVEL
	SAND		CLAY		SILT
	BOULDERS OR COBBLES		LIMESTONE		BEDROCK (UNKNOWN)
	SHALE		SANDSTONE		IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

Alignment: IH 94 EB Ref Line

Tangent N 191670.237E 85803.952Z Station 205+00(1)
Distance 4011.196' Bearing "S 88° 53' 24.28 E""

Arc
PC N191592.537E 89814.395 Station 245+11.2(1)
CC N214499.551E 90258.2
PI N 191589.586E 89966.719 Station 246+63.55(1)
TAN 152.353'
DB "S 88° 53' 24.28 E""
DA "S 89° 39' 7.44 E""
LChord Distance 304.700' Bearing "S 89° 16' 15.86 E""
External Distance.507'
Middle Ordinate .507'
Radius 22911.312'
DEG "0° 15' 0.27""
DELTA "0° 45' 43.16""
LENGTH 304.702'
PT N191588.661 E 90119.07 Station 248+21.13(2)

Tangent N 191588.661 E 90119.07 Z Station 248+21.13(2)
***Station Equation ***BACK STA248+15.9 AHEAD STA 248+21.13
Distance 3536.026' Bearing "S 89° 39' 7.44 E""

Arc
PC N191567.188 E 93655.03 Station 283+57.16(2)
CC N168567.612E 93515.361
PI N 191565.754E 93891.229 Station 285+93.36(2)
TAN 236.204'
DB "S 89° 39' 7.44 E""
DA "S 88° 28' 31.02 E""
LChord Distance 472.382' Bearing "S 89° 3' 49.23 E""
External Distance1.213'
Middle Ordinate 1.213'
Radius 23000.000'
DEG "0° 14' 56.8""
DELTA "1° 10' 36.42""
LENGTH 472.391'
PT N191559.469E 94127.349 Station 288+29.55(2)

Tangent N 191559.469E 94127.349 Z Station 288+29.55(2)
Distance 1966.353' Bearing "S 88° 28' 31.02 E""

Arc
PC N191507.148 E 96093.006 Station 307+95.9(2)
CC N214405.35 E 96702.501
PI N 191502.086E 96283.19 Station 309+86.15(2)
TAN 190.252'
DB "S 88° 28' 31.02 E""
DA "S 89° 25' 37.27 E""
LChord Distance 380.491' Bearing "S 88° 57' 4.15 E""
External Distance.790'
Middle Ordinate .790'
Radius 22906.312'
DEG "0° 15' 0.47""
DELTA "0° 57' 6.25""
LENGTH 380.495'
PT N191500.183E 96473.433 Station 311+74.6(3)

Tangent N 191500.183E 96473.433Z Station 311+74.6(3)
***Station Equation ***BACK STA311+76.39 AHEAD STA 311+74.6
Distance 3218.279' Bearing "S 89° 25' 37.27 E""

Arc
PC N191468 E 99691.551 Station 343+92.88(3)
CC N179997.417E 99576.836
PI N 191457.209E 100770.532 Station 354+71.91(3)
TAN 1079.035'
DB "S 89° 25' 37.27 E""
DA "S 78° 40' 46.5 E""
LChord Distance 2148.585' Bearing "S 84° 3' 11.89 E""
External Distance50.638'
Middle Ordinate 50.415'
Radius 11471.156'
DEG "0° 29' 58.12""
DELTA "10° 44' 50.77""
LENGTH 2151.738'
PT N191245.399E 101828.573 Station 365+53.63(4)

Tangent N 191245.399E 101828.573Z Station 365+53.63(4)
***Station Equation ***BACK STA365+44.62AHEAD STA 365+53.63
Distance 3290.868' Bearing "S 78° 40' 46.5 E""

Arc
PC N190599.416E 105055.417 Station 398+44.5(4)
CC N184969.542 E 103928.371
PI N 190365.221E 106225.284 Station 410+37.58(4)
TAN 1193.078'
DB "S 78° 40' 46.5 E""
DA "S 55° 12' 7.22 E""
LChord Distance 2336.250' Bearing "S 66° 56' 26.86 E""
External Distance122.649'
Middle Ordinate 120.083'
Radius 5741.578'
DEG "0° 59' 52.48""
DELTA "23° 28' 39.29""
LENGTH 2352.675'
PT N189684.349 E 107205.002 Station 422+28.48(5)

Tangent N 189684.349 E 107205.002 Z Station 422+28.48(5)
***Station Equation ***BACK STA421+97.17 AHEAD STA 422+28.48
Distance 3749.499' Bearing "S 55° 12' 7.22 E""

Arc
PC N187544.567 E 110283.976 Station 459+77.98(5)
CC N189925.957 E 111938.962
PI N 187132.205E 110877.331 Station 467+00.55(5)
TAN 722.574'
DB "S 55° 12' 7.22 E""
DA "S 83° 11' 3.24 E""
LChord Distance 1402.274' Bearing "S 69° 11' 35.23 E""
External Distance88.664'
Middle Ordinate 86.034'
Radius 2900.000'
DEG "1° 58' 32.58""
DELTA "27° 58' 56.03""
LENGTH 1416.308'
PT N187046.452 E 111594.798 Station 473+78.05(6)

Tangent N 187046.452 E 111594.798 Z Station 473+78.05(6)
***Station Equation ***BACK STA473+94.29AHEAD STA 473+78.05
Distance 3101.280' Bearing "S 83° 11' 3.24 E""

Arc
PC N186678.401E 114674.16 Station 504+79.33(6)
CC N180969.037 E 113991.766
PI N 186611.118 E 115237.096 Station 510+46.27(6)
TAN 566.942'
DB "S 83° 11' 3.24 E""
DA "S 71° 55' 19.44 E""
LChord Distance 1128.412' Bearing "S 77° 33' 11.34 E""
External Distance27.882'
Middle Ordinate 27.748'
Radius 5750.000'
DEG "0° 59' 47.21""
DELTA "11° 15' 43.81""
LENGTH 1130.231'
PT N186435.19 E 115776.051 Station 516+13.33(7)

Tangent N 186435.19 E 115776.051 Z Station 516+13.33(7)
***Station Equation ***BACK STA516+09.56 AHEAD STA 516+13.33
Distance 2015.991' Bearing "S 71° 55' 19.44 E""

Arc
PC N185809.607 E 117692.523 Station 536+29.32(7)
CC N191244.938E 119466.747
PI N 185539.345 E 118520.471 Station 545+00.26(7)
TAN 870.941'
DB "S 71° 55' 19.44 E""
DA "S 89° 14' 39.44 E""
LChord Distance 1722.019' Bearing "S 80° 34' 59.44 E""
External Distance65.954'
Middle Ordinate 65.201'
Radius 5717.578'
DEG "1° 0' 7.56""
DELTA "17° 19' 20.01""
LENGTH 1728.594'
PT N185527.857 E 119391.336 Station 553+50.37(8)

Tangent N 185527.857 E 119391.336 Z Station 553+50.37(8)
***Station Equation ***BACK STA553+57.92AHEAD STA 553+50.37
Distance 2514.288' Bearing "S 89° 14' 39.44 E""

Arc
PC N185494.696 E 121905.406 Station 578+64.66(8)
CC N191211.776 E 121980.817
PI N 185485.57 E 122597.294 Station 585+56.61(8)
TAN 691.948'
DB "S 89° 14' 39.44 E""
DA "N 76° 57' 17.36 E""
LChord Distance 1373.871' Bearing "N 83° 51' 18.96 E""
External Distance41.718'
Middle Ordinate 41.416'
Radius 5717.578'
DEG "1° 0' 7.56""
DELTA "13° 48' 3.2""
LENGTH 1377.198'
PT N185641.756E 123271.384 Station 592+41.86(8)

Tangent N 185641.756E 123271.384Z Station 592+41.86(8)
Distance 1372.563' Bearing "N 76° 57' 17.36 E""

Arc
PC N185951.569E 124608.525 Station 606+14.42(8)
CC N182218.738E 125473.418
PI N 186081.164 E 125167.849 Station 611+88.56(8)
TAN 574.141'
DB "N 76° 57' 17.36 E""
DA "S 86° 0' 6.04 E""
LChord Distance 1135.605' Bearing "N 85° 28' 35.67 E""
External Distance42.776'
Middle Ordinate 42.303'
Radius 3831.719'
DEG "1° 29' 43.09""
DELTA "17° 2' 36.6""
LENGTH 1139.803'
PT N186041.131 E 125740.593 Station 617+54.22(8)

Tangent N 186041.131 E 125740.593 Z Station 617+54.22(8)
Distance 1085.864' Bearing "S 86° 0' 6.04 E""

Arc
PC N185965.417E 126823.815 Station 628+40.09(8)
CC N208909.437 E 128427.542
PI N 185937.459 E 127223.787 Station 632+41.04(8)
TAN 400.949'
DB "S 86° 0' 6.04 E""
DA "S 87° 59' 56.75 E""
LChord Distance 801.776' Bearing "S 87° 0' 1.4 E""
External Distance3.495'
Middle Ordinate 3.494'
Radius 23000.000'
DEG "0° 14' 56.8""
DELTA "1° 59' 50.72""
LENGTH 801.816'
PT N185923.46 E 127624.492 Station 638+52.1(9)

Alignment: IH 94 EB Ref Line - continued

Tangent N 185923.46 E 127624.492 Z Station 638+52.1(9)
***Station Equation ***BACK STA636+41.9 AHEAD STA 638+52.1
Distance 1880.165' Bearing "S 87° 59' 56.75 E""

Arc
PC N185857.814E 129503.51 Station 657+32.26(9)
CC N197297.99 E 129903.19
PI N 185824.974 E 130443.487 Station 666+72.82(9)
TAN 940.551'
DB "S 87° 59' 56.75 E""
DA "N 82° 36' 23.9 E""
LChord Distance 1874.784' Bearing "N 87° 18' 13.57 E""
External Distance38.575'
Middle Ordinate 38.445'
Radius 11447.156'
DEG "0° 30' 1.89""
DELTA "9° 23' 39.36""
LENGTH 1876.886'
PT N185946.005 E 131376.218 Station 675+96.24(10)

Tangent N 185946.005 E 131376.218 Z Station 675+96.24(10)
***Station Equation ***BACK STA676+09.15 AHEAD STA 675+96.24
Distance 5794.865' Bearing "N 82° 36' 23.9 E""

Arc
PC N186691.693E 137122.905 Station 733+94.94(11)
***Station Equation ***BACK STA733+91.11 AHEAD STA 733+94.94
CC N180989.498 E 137862.82
PI N 186894.425 E 138685.277 Station 749+70.41(11)
TAN 1575.470'
DB "N 82° 36' 23.9 E""
DA "S 66° 44' 52.76 E""
LChord Distance 3038.932' Bearing "S 82° 4' 14.43 E""
External Distance211.930'
Middle Ordinate 204.396'
Radius 5750.000'
DEG "0° 59' 47.21""
DELTA "30° 38' 43.35""
LENGTH 3075.461'
PT N186272.467 E 140132.782 Station 764+99.23(12)

Tangent N 186272.467 E 140132.782Z Station 764+99.23(12)
***Station Equation ***BACK STA764+70.4 AHEAD STA 764+99.23
Distance 3743.977' Bearing "S 66° 44' 52.76 E""

Arc
PC N184794.435 E 143572.663 Station 802+43.21(12)
CC N188294.976 E 145076.76
PI N 184549.243 E 144143.306 Station 808+64.3(12)
TAN 621.089'
DB "S 66° 44' 52.76 E""
DA "S 85° 15' 55.13 E""
LChord Distance 1225.995' Bearing "S 76° 0' 23.94 E""
External Distance50.292'
Middle Ordinate 49.636'
Radius 3810.000'
DEG "1° 30' 13.77""
DELTA "18° 31' 2.37""
LENGTH 1231.347'
PT N184497.978 E 144762.276 Station 814+63.41(13)

Tangent N 184497.978 E 144762.276 Z Station 814+63.41(13)
***Station Equation ***BACK STA814+74.55 AHEAD STA 814+63.41
Distance 2129.677' Bearing "S 85° 15' 55.13 E""

Arc
PC N184322.19 E 146884.685 Station 835+93.09(13)
CC N178600.205 E 146410.765
PI N 184251.352E 147739.965 Station 844+51.3(13)
TAN 858.209'
DB "S 85° 15' 55.13 E""
DA "S 68° 15' 46.4 E""
LChord Distance 1697.559' Bearing "S 76° 45' 50.76 E""
External Distance63.785'
Middle Ordinate 63.084'
Radius 5741.578'
DEG "0° 59' 52.48""
DELTA "17° 0' 8.73""
LENGTH 1703.803'
PT N183933.516E 148537.149 Station 853+08.53(14)

Tangent N 183933.516E 148537.149Z Station 853+08.53(14)
***Station Equation ***BACK STA852+96.89AHEAD STA 853+08.53
Distance 1151.478' Bearing "S 68° 15' 46.4 E""

Arc
PC N183507.067 E 149606.749 Station 864+60.01(14)
CC N162142.531 E 141088.734
PI N 183464.478 E 149713.569 Station 865+75.01(14)
TAN 114.997'
DB "S 68° 15' 46.4 E""
DA "S 67° 41' 23.82 E""
LChord Distance 229.991' Bearing "S 67° 58' 35.11 E""
External Distance.287'
Middle Ordinate .287'
Radius 23000.000'
DEG "0° 14' 56.8""
DELTA "0° 34' 22.58""
LENGTH 229.992'
PT N183420.823 E 149819.958 Station 866+90(14)

Tangent N 183420.823 E 149819.958Z Station 866+90(14)
Distance 770.056' Bearing "S 67° 41' 23.82 E""

Arc
PC N183128.496E 150532.37 Station 874+60.06(14)
CC N204406.788 E 159263.594
PI N 183084.841E 150638.759 Station 875+75.05(14)
TAN 114.997'
DB "S 67° 41' 23.82 E""
DA "S 68° 15' 46.4 E""
LChord Distance 229.991' Bearing "S 67° 58' 35.11 E""
External Distance.287'
Middle Ordinate .287'
Radius 23000.000'
DEG "0° 14' 56.8""
DELTA "0° 34' 22.58""
LENGTH 229.992'
PT N183042.252 E 150745.579 Station 876+90(15)

Tangent N 183042.252 E 150745.579 Z Station 876+90(15)
***Station Equation ***BACK STA876+90.05AHEAD STA 876+90
Distance 2115.182' Bearing "S 68° 15' 46.4 E""

Arc
PC N182258.898 E 152710.356 Station 898+05.18(15)
CC N185835.135E 154136.198
PI N 181894.924E 153623.261 Station 907+87.97(15)
TAN 982.788'
DB "S 68° 15' 46.4 E""
DA "N 83° 5' 49.23 E""
LChord Distance 1904.504' Bearing "S 82° 34' 58.59 E""
External Distance123.458'
Middle Ordinate 119.622'
Radius 3850.000'
DEG "1° 29' 17.53""
DELTA "28° 38' 24.38""
LENGTH 1924.477'
PT N182013.044E 154598.925 Station 917+29.66(15)

Tangent N 182013.044E 154598.925 Z Station 917+29.66(15)
***Station Equation ***BACK STA917+29.66 AHEAD STA 14+07.31
Distance 1323.874' Bearing "N 83° 5' 49.23 E""

Arc
PC N182172.158 E 155913.202 Station 27+31.18(16)
CC N179352.955 E 156254.512
PI N 182229.58 E 156387.505 Station 32+08.95(16)
TAN 477.767'
DB "N 83° 5' 49.23 E""
DA "S 77° 48' 10.64 E""
LChord Distance 942.291' Bearing "S 87° 21' 10.71 E""
External Distance39.909'
Middle Ordinate 39.356'
Radius 2839.789'
DEG "2° 1' 3.38""
DELTA "19° 6' 0.14""
LENGTH 946.668'
PT N182128.641 E 156854.487 Station 36+77.85(16)

Tangent N 182128.641 E 156854.487 Z Station 36+77.85(16)
Distance 987.334' Bearing "S 77° 48' 10.64 E""

Arc
PC N181920.042E 157819.534 Station 46+65.19(16)
CC N187544.721E 159035.329
PI N 181767.684E 158524.394 Station 53+86.33(16)
TAN 721.139'
DB "S 77° 48' 10.64 E""
DA "N 87° 54' 41.03 E""
LChord Distance 1431.085' Bearing "S 84° 56' 44.81 E""
External Distance45.009'
Middle Ordinate 44.660'
Radius 5754.578'
DEG "0° 59' 44.36""
DELTA "14° 17' 8.34""
LENGTH 1434.798'
PT N181793.966E 159245.054 Station 60+99.98(16)

Tangent N 181793.966E 159245.054 Z Station 60+99.98(16)
Distance 2578.971' Bearing "N 87° 54' 41.03 E""

End N 181887.956E 161822.312 Z Station 86+78.96(16)

Alignment Length = 78247.16'

Alignment: IH 94 WB Ref Line

Tangent N 191730.225E 85805.113 Z Station 205+00(1)
Distance 4011.196' Bearing "S 88° 53' 24.28 E""

Arc
PC N191652.526E 89815.557 Station 245+11.2(1)
CC N214499.551E 90258.2
PI N 191649.583E 89967.483 Station 246+63.15(1)
TAN 151.954'
DB "S 88° 53' 24.28 E""
DA "S 89° 39' 7.44 E""
LChord Distance 303.902' Bearing "S 89° 16' 15.86 E""
External Distance.505'
Middle Ordinate .505'
Radius 22851.312'
DEG "0° 15' 2.64""
DELTA "0° 45' 43.16""
LENGTH 303.904'
PT N191648.66 E 90119.434 Station 248+21.13(2)

Tangent N 191648.66 E 90119.434 Z Station 248+21.13(2)
***Station Equation ***BACK STA248+15.1 AHEAD STA 248+21.13
Distance 3837.288' Bearing "S 89° 39' 7.44 E""

Tangent N 191625.358E 93956.651 Z Station 286+56.69(3)
***Station Equation ***BACK STA286+58.42AHEAD STA 286+56.69
Distance 5736.186' Bearing "S 89° 25' 37.27 E""

Arc
PC N191567.995E 99692.551 Station 343+92.88(3)
CC N179997.417E 99576.836
PI N 191557.11 E 100780.938 Station 354+81.32(3)
TAN 1088.441'
DB "S 89° 25' 37.27 E""
DA "S 78° 40' 46.5 E""
LChord Distance 2167.315' Bearing "S 84° 3' 11.89 E""
External Distance51.079'
Middle Ordinate 50.855'
Radius 11571.156'
DEG "0° 29' 42.58""
DELTA "10° 44' 50.77""
LENGTH 2170.496'
PT N191343.454E 101848.203 Station 365+53.63(4)

Tangent N 191343.454E 101848.203Z Station 365+53.63(4)
***Station Equation ***BACK STA365+63.37AHEAD STA 365+53.63
Distance 3191.130' Bearing "S 78° 40' 46.5 E""

Arc
PC N190717.049E 104977.249 Station 397+44.76(4)
CC N185110.708E 103854.914
PI N 190483.832 E 106142.225 Station 409+32.85(4)
TAN 1188.091'
DB "S 78° 40' 46.5 E""
DA "S 55° 12' 7.22 E""
LChord Distance 2326.485' Bearing "S 66° 56' 26.86 E""
External Distance122.136'
Middle Ordinate 119.581'
Radius 57117.578'
DEG "1° 0' 7.56""
DELTA "23° 28' 39.29""
LENGTH 2342.841'
PT N189805.807 E 107117.849 Station 420+87.6(4)

Tangent N 189805.807 E 107117.849 Z Station 420+87.6(4)
Distance 3880.831' Bearing "S 55° 12' 7.22 E""

Arc
PC N187591.075E 110304.668 Station 459+68.43(4)
CC N189892.639 E 111904.177
PI N 187192.536E 110878.133 Station 466+66.78(4)
TAN 698.352'
DB "S 55° 12' 7.22 E""
DA "S 83° 11' 3.24 E""
LChord Distance 1355.269' Bearing "S 69° 11' 35.23 E""
External Distance85.692'
Middle Ordinate 83.150'
Radius 2802.789'
DEG "2° 2' 39.27""
DELTA "27° 58' 56.03""
LENGTH 1368.832'
PT N187109.658E 111571.55 Station 473+47.47(5)

Tangent N 187109.658E 111571.55 Z Station 473+47.47(5)
***Station Equation ***BACK STA473+37.26AHEAD STA 473+47.47
Distance 3082.477' Bearing "S 83° 11' 3.24 E""

Arc
PC N186743.838 E 114632.243 Station 504+29.95(5)
CC N180993.19 E 113944.914
PI N 186676.068 E 115199.249 Station 510+00.99(5)
TAN 571.042'
DB "S 83° 11' 3.24 E""
DA "S 71° 55' 19.44 E""
LChord Distance 1136.572' Bearing "S 77° 33' 11.34 E""
External Distance28.084'
Middle Ordinate 27.948'
Radius 5791.578'
DEG "0° 59' 21.46""
DELTA "11° 15' 43.81""
LENGTH 1138.404'
PT N186498.868 E 115742.101 Station 515+61.3(6)

Tangent N 186498.868 E 115742.101 Z Station 515+61.3(6)
***Station Equation ***BACK STA515+68.35 AHEAD STA 515+61.3
Distance 2068.025' Bearing "S 71° 55' 19.44 E""

Arc
PC N185857.138E 117708.039 Station 536+29.33(6)
CC N191244.938E 119466.747
PI N 185589.24 E 118528.746 Station 544+92.65(6)
TAN 863.325'
DB "S 71° 55' 19.44 E""
DA "S 89° 14' 39.44 E""
LChord Distance 1706.960' Bearing "S 80° 34' 59.44 E""
External Distance65.377'
Middle Ordinate 64.631'
Radius 5667.578'
DEG "1° 0' 39.38""
DELTA "17° 19' 20.01""
LENGTH 1713.478'
PT N185577.853 E 119391.996 Station 553+50.37(7)

Tangent N 185577.853 E 119391.996 Z Station 553+50.37(7)
***Station Equation ***BACK STA553+42.8 AHEAD STA 553+50.37
Distance 2370.030' Bearing "S 89° 14' 39.44 E""

Arc
PC N185546.594 E 121761.82 Station 577+20.4(7)
CC N188411.134 E 121799.604
PI N 185537.501E 122451.21 Station 584+09.85(7)
TAN 689.450'
DB "S 89° 14' 39.44 E""
DA "N 63° 41' 32.5 E""
LChord Distance 1340.623' Bearing "N 77° 13' 26.53 E""
External Distance81.795'
Middle Ordinate 79.524'
Radius 2864.789'
DEG "2° 0' 0""
DELTA "27° 3' 48.06""
LENGTH 1353.167'
PT N185843.059 E 123069.252 Station 590+73.57(7)

Tangent N 185843.059 E 123069.252 Z Station 590+73.57(7)
Distance 961.444' Bearing "N 63° 41' 32.5 E""

Arc
PC N186269.162E 123931.117 Station 600+35.01(7)
CC N183714.533E 125194.117
PI N 186793.257 E 124991.188 Station 612+17.56(7)
TAN 1182.551'
DB "N 63° 41' 32.5 E""
DA "S 71° 14' 4.4 E""
LChord Distance 2184.492' Bearing "N 86° 13' 44.06 E""
External Distance235.616'
Middle Ordinate 217.623'
Radius 2849.789'
DEG "2° 0' 37.9""
DELTA "45° 4' 23.1""
LENGTH 2241.854'
PT N186412.837E 126110.879 Station 622+76.87(7)

Tangent N 186412.837E 126110.879 Z Station 622+76.87(7)
Distance 578.402' Bearing "S 71° 14' 4.4 E""

Arc
PC N186226.768 E 126658.535 Station 628+55.27(7)
CC N188953.477 E 127584.948
PI N 186090.26 E 127060.318 Station 632+79.61(7)
TAN 424.340'
DB "S 71° 14' 4.4 E""
DA "S 87° 59' 56.75 E""
LChord Distance 839.614' Bearing "S 79° 37' 0.58 E""
External Distance31.096'
Middle Ordinate 30.763'
Radius 2879.789'
DEG "1° 59' 22.5""
DELTA "16° 45' 52.36""
LENGTH 842.616'
PT N186075.444 E 127484.4 Station 637+06.79(8)

Tangent N 186075.444 E 127484.4 Z Station 637+06.79(8)
***Station Equation ***BACK STA636+97.88AHEAD STA 637+06.79
Distance 2300.356' Bearing "S 87° 59' 56.75 E""

Arc
PC N185995.127E 129783.353 Station 660+07.15(8)
CC N197447.296 E 130183.452
PI N 185962.253 E 130724.316 Station 669+48.68(8)
TAN 941.537'
DB "S 87° 59' 56.75 E""
DA "N 82° 36' 23.9 E""
LChord Distance 1876.749' Bearing "N 87° 18' 13.57 E""
External Distance38.615'
Middle Ordinate 38.486'
Radius 11459.156'
DEG "0° 30' 0""
DELTA "9° 23' 39.36""
LENGTH 1878.853'
PT N186083.41 E 131658.024 Station 678+93.38(9)

Tangent N 186083.41 E 131658.024Z Station 678+93.38(9)
***Station Equation ***BACK STA678+86 AHEAD STA 678+93.38
Distance 5452.126' Bearing "N 82° 36' 23.9 E""

Arc
PC N186784.994 E 137064.822 Station 733+47.4(10)
***Station Equation ***BACK STA733+45.51 AHEAD STA 733+47.4
CC N181102.633 E 137802.162
PI N 186987.021E 138621.759 Station 749+17.39(10)
TAN 1569.990'
DB "N 82° 36' 23.9 E""
DA "S 66° 44' 52.76 E""
LChord Distance 3028.362' Bearing "S 82° 4' 14.43 E""
External Distance211.192'
Middle Ordinate 203.685'
Radius 5730.000'
DEG "0° 59' 59.73""
DELTA "30° 38' 43.35""
LENGTH 3064.763'
PT N186367.227 E 140064.23 Station 763+98.84(11)

Tangent N 186367.227 E 140064.23 Z Station 763+98.84(11)
***Station Equation ***BACK STA764+12.16 AHEAD STA 763+98.84
Distance 3705.381' Bearing "S 66° 44' 52.76 E""

Arc
PC N184904.431E 143468.65 Station 801+04.22(11)
CC N188423.348 E 144980.642
PI N 184657.953 E 144042.288 Station 807+28.57(11)
TAN 624.350'
DB "S 66° 44' 52.76 E""
DA "S 85° 15' 55.13 E""
LChord Distance 1232.431' Bearing "S 76° 0' 23.94 E""
External Distance50.556'
Middle Ordinate 49.897'
Radius 3830.000'
DEG "1° 29' 45.5""
DELTA "18° 31' 2.37""
LENGTH 1237.811'
PT N184606.418E 144664.507 Station 813+57.02(12)

Tangent N 184606.418E 144664.507 Z Station 813+57.02(12)
***Station Equation ***BACK STA813+42.03 AHEAD STA 813+57.02
Distance 2083.606' Bearing "S 85° 15' 55.13 E""

Arc
PC N184434.433 E 146741.003 Station 834+40.63(12)
CC N178736.366 E 146269.063
PI N 184363.891E 147592.708 Station 842+95.25(12)
TAN 854.621'
DB "S 85° 15' 55.13 E""
DA "S 68° 15' 46.4 E""
LChord Distance 1690.463' Bearing "S 76° 45' 50.76 E""
External Distance63.518'
Middle Ordinate 62.821'
Radius 5717.578'
DEG "1° 0' 7.56""
DELTA "17° 0' 8.73""
LENGTH 1696.681'
PT N184047.383 E 148386.56 Station 851+37.31(12)

Tangent N 184047.383 E 148386.56 Z Station 851+37.31(12)
Distance 4698.366' Bearing "S 68° 15' 46.4 E""

Arc
PC N182307.35 E 152750.838 Station 898+24.84(13)
CC N185832.238 E 154156.207
PI N 181948.603E 153650.635 Station 907+93.52(13)
TAN 968.676'
DB "S 68° 15' 46.4 E""
DA "N 83° 5' 49.23 E""
LChord Distance 1877.157' Bearing "S 82° 34' 58.59 E""
External Distance121.686'
Middle Ordinate 117.905'
Radius 3794.719'
DEG "1° 30' 35.58""
DELTA "28° 38' 24.38""
LENGTH 1896.844'
PT N182065.027 E 154612.289 Station 14+26.83(14)

Tangent N 182065.027 E 154612.289Z Station 14+26.83(14)
***Station Equation ***BACK STA917+21.68 AHEAD STA 14+26.83
Distance 1304.358' Bearing "N 83° 5' 49.23 E""

Arc
PC N182221.796E 155907.192 Station 27+31.19(14)
CC N179352.955 E 156254.512
PI N 182280.229 E 156389.846 Station 32+17.37(14)
TAN 486.179'
DB "N 83° 5' 49.23 E""
DA "S 77° 48' 10.64 E""
LChord Distance 958.882' Bearing "S 87° 21' 10.71 E""
External Distance40.612'
Middle Ordinate 40.049'
Radius 2889.789'
DEG "1° 58' 57.71""
DELTA "19° 6' 0.14""
LENGTH 963.336'
PT N182177.512 E 156865.051 Station 36+77.85(15)

Tangent N 182177.512 E 156865.051Z Station 36+77.85(15)
***Station Equation ***BACK STA36+94.52 AHEAD STA 36+77.85
Distance 987.334' Bearing "S 77° 48' 10.64 E""

Arc
PC N181968.913 E 157830.098 Station 46+65.18(15)
CC N187544.721E 159035.329
PI N 181817.879 E 158528.834 Station 53+80.06(15)
TAN 714.873'
DB "S 77° 48' 10.64 E""
DA "N 87° 54' 41.03 E""
LChord Distance 1418.650' Bearing "S 84° 56' 44.81 E""
External Distance44.618'
Middle Ordinate 44.272'
Radius 5704.578'
DEG "1° 0' 15.78""
DELTA "14° 17' 8.34""
LENGTH 1422.332'
PT N181843.933E 159243.232 Station 60+99.98(16)

Tangent N 181843.933E 159243.232 Z Station 60+99.98(16)
***Station Equation ***BACK STA60+87.52 AHEAD STA 60+99.98
Distance 2578.971' Bearing "N 87° 54' 41.03 E""

End N 181937.923E 161820.49 Z Station 86+78.95(16)

Alignment Length = 78463.72'

Alignment: 250th Street Centerline

Tangent N 185672.623 E 133654.987 Z Station -1+43.52
Distance 1237.274' Bearing "N 0° 51' 40.09 W""

End N 186909.758 E 133636.392 Z Station 10+93.75

Alignment Length = 1237.27'

Alignment: CTH "K" Centerline

Arc
PC N186068.471E 139202.273 Station 03+51.53
CC N185805.598 E 138536.063
PI N 186103.379E 139188.499 Station 03+89.06
TAN 37.528'
DB "N 21° 31' 59.32 W""
DA "N 27° 31' 55.53 W""
LChord Distance 74.953' Bearing "N 24° 31' 57.43 W""

External Distance.983'
Middle Ordinate .981'
Radius 716.197'
DEG "8° 0' 0.01""
DELTA "5° 59' 56.22""
LENGTH 74.987'
PT N186136.657E 139171.152 Station 04+26.52

Tangent N 186136.657E 139171.152 Z Station 04+26.52
Distance 86.778' Bearing "N 27° 31' 55.53 W""

Arc
PC N186213.608E 139131.039 Station 05+13.29
CC N186655.02 E 139977.826
PI N 186333.673 E 139068.452 Station 06+48.69
TAN 135.399'
DB "N 27° 31' 55.53 W""
DA "N 11° 23' 30.47 W""
LChord Distance 268.116' Bearing "N 19° 27' 43 W""
External Distance9.551'
Middle Ordinate 9.457'
Radius 954.930'
DEG "5° 59' 59.99""
DELTA "16° 8' 25.07""
LENGTH 269.005'
PT N186466.405 E 139041.708 Station 07+82.3

Tangent N 186466.405 E 139041.708Z Station 07+82.3
Distance 293.078' Bearing "N 11° 23' 30.47 W""

Arc
PC N186753.709 E 138983.82 Station 10+75.38
CC N187036.631E 140387.996
PI N 186898.018E 138954.744 Station 12+22.59
TAN 147.209'
DB "N 11° 23' 30.47 W""
DA "N 0° 20' 37.41 E""
LChord Distance 292.875' Bearing "N 5° 31' 26.53 W""

External Distance7.545'
Middle Ordinate 7.505'
Radius 1432.395'
DEG "4° 0' 0""
DELTA "11° 44' 7.88""
LENGTH 293.388'
PT N187045.224 E 138955.627 Station 13+68.76

Tangent N 187045.224 E 138955.627 Z Station 13+68.76
Distance 178.579' Bearing "N 0° 20' 37.41 E""

End N 187223.8 E 138956.698 Z Station 15+47.34

Alignment Length = 1195.81'

Alignment: 650th Avenue Centerline

Tangent N 183884.177E 145050.742 Z Station 03+85.19
Distance 924.565' Bearing "N 0° 12' 55.74 E""

Arc
PC N184808.735 E 145054.219 Station 13+09.76
CC N184809.487 E 144854.22
PI N 184856.038 E 145054.397 Station 13+57.06
TAN 47.303'
DB "N 0° 12' 55.74 E""
DA "N 26° 23' 53.6 W""
LChord Distance 92.066' Bearing "N 13° 5' 28.93 W""

External Distance5.518'
Middle Ordinate 5.370'
Radius 200.000'
DEG "28° 38' 52.4""
DELTA "26° 36' 49.34""
LENGTH 92.899'
PT N184898.409 E 145033.365 Station 14+02.66

End N 184898.409 E 145033.365 Z Station 14+02.66

Alignment Length = 1017.46'

Alignment: 390th Street Centerline

Tangent N 182073.343 E 151609.648Z Station -0+62.15
Distance 1325.621' Bearing "N 0° 0' 50.25 W""

End N 183398.963 E 151609.325Z Station 12+63.47

Alignment Length = 1325.62'

Alignment: Stage 3 IH 94 Temporary EB Centerline

Tangent N 185888.847 E 128271.578Z Station
Distance 1232.265' Bearing "S 87° 59' 56.75 E""

Arc
PC N185845.822 E 129503.091 Station 12+08.15(1)
CC N197297.99 E 129903.19
PI N 185825.651E 130080.463 Station 17+85.88(1)
TAN 577.724'
DB "S 87° 59' 56.75 E""
DA "N 86° 13' 42.79 E""
LChord Distance 1153.982' Bearing "N 89° 6' 53.02 E""
External Distance14.554'
Middle Ordinate 14.536'
Radius 11459.155'
DEG "0° 30' 0""
DELTA "5° 46' 20.47""
LENGTH 1154.470'
PT N185863.652 E 130656.935 Station 23+62.62(1)

Arc
PC N185863.652 E 130656.935 Station 23+62.62(1)
CC N193846.327 E 130130.722
PI N 185900.599 E 131217.436 Station 29+24.34(1)
TAN 561.718'
DB "N 86° 13' 42.79 E""
DA "N 78° 11' 44.6 E""
LChord Distance 1120.676' Bearing "N 82° 12' 43.69 E""
External Distance19.696'
Middle Ordinate 19.648'
Radius 8000.000'
DEG "0° 42' 58.31""
DELTA "8° 1' 58.19""
LENGTH 1121.595'
PT N186015.51 E 131767.275 Station 34+84.22(1)

Tangent N 186015.51 E 131767.275Z Station 34+84.22(1)
Distance 177.151' Bearing "N 78° 11' 44.6 E""

Arc
PC N186051.749E 131940.679 Station 36+61.37(1)
CC N180178.636E 133168.094
PI N 186099.019E 132166.862 Station 38+92.44(1)
TAN 231.069'
DB "N 78° 11' 44.6 E""
DA "N 82° 36' 23.9 E""
LChord Distance 461.796' Bearing "N 80° 24' 4.25 E""
External Distance4.448'
Middle Ordinate 4.444'
Radius 6000.000'
DEG "0° 57' 17.75""
DELTA "4° 24' 39.3""
LENGTH 461.910'
PT N186128.753E 132396.01 Station 41+23.28(1)

Tangent N 186128.753E 132396.01 Z Station 41+23.28(1)
Distance 4734.902' Bearing "N 82° 36' 23.9 E""

Arc
PC N186738.044 E 137091.547 Station 88+58.18(1)
CC N181049.235E 137829.724
PI N 186859.238 E 138025.54 Station 98+00(1)
TAN 941.824'
DB "N 82° 36' 23.9 E""
DA "S 78° 44' 45.54 E""
LChord Distance 1858.762' Bearing "S 88° 4' 10.82 E""
External Distance76.801'
Middle Ordinate 75.786'
Radius 5736.501'
DEG "0° 59' 55.66""
DELTA "18° 38' 50.57""
LENGTH 1866.991'
PT N186675.433 E 138949.254 Station 107+25.17(1)

Arc
PC N186675.433 E 138949.254 Station 107+25.17(1)
CC N180300.417 E 137680.72
PI N 186542.127E 139619.182 Station 114+08.23(1)
TAN 683.062'
DB "S 78° 44' 45.54 E""
DA "S 66° 44' 52.76 E""
LChord Distance 1358.644' Bearing "S 72° 44' 49.15 E""
External Distance35.792'
Middle Ordinate 35.596'
Radius 6500.000'
DEG "0° 52' 53.3""
DELTA "11° 59' 52.78""
LENGTH 1361.129'
PT N186272.47 E 140246.765 Station 120+86.3(1)

Tangent N 186272.47 E 140246.765 Z Station 120+86.3(1)
Distance 3614.541' Bearing "S 66° 44' 52.76 E""

Arc
PC N184845.536 E 143567.723 Station 157+04.17(2)
***Station Equation ***BACK STA157+00.84AHEAD STA 157+04.17
CC N188355.265 E 145075.768
PI N 184599.701E 144139.863 Station 163+26.89(2)
TAN 622.719'
DB "S 66° 44' 52.76 E""
DA "S 85° 15' 55.13 E""
LChord Distance 1229.213' Bearing "S 76° 0' 23.94 E""
External Distance50.424'
Middle Ordinate 49.767'
Radius 3820.000'
DEG "1° 29' 59.6""
DELTA "18° 31' 2.37""
LENGTH 1234.579'
PT N184548.3 E 144760.458 Station 169+38.75(2)

Tangent N 184548.3 E 144760.458 Z Station 169+38.75(2)
Distance 2112.442' Bearing "S 85° 15' 55.13 E""

Arc
PC N184373.935 E 146865.691 Station 190+51.19(2)
CC N178675.448 E 146393.717
PI N 184303.388 E 147717.461 Station 199+05.88(2)
TAN 854.686'
DB "S 85° 15' 55.13 E""
DA "S 68° 15' 46.3 E""
LChord Distance 1690.590' Bearing "S 76° 45' 50.71 E""
External Distance63.523'
Middle Ordinate 62.825'
Radius 5718.000'
DEG "1° 0' 7.29""
DELTA "17° 0' 8.83""
LENGTH 1696.810'
PT N183986.856 E 148511.372 Station 207+48(2)

Tangent N 183986.856 E 148511.372 Z Station 207+48(2)
Distance 1985.167' Bearing "S 68° 15' 46.3 E""

Tangent N 183251.652E 150355.379 Z Station 227+33.17(2)
Distance 1120.216' Bearing "S 69° 23' 17.51 E""

Tangent N 182857.297 E 151403.887Z Station 238+53.38(2)
Distance 430.000' Bearing "S 68° 15' 46.4 E""

Tangent N 182698.047 E 151803.311 Z Station 242+83.38(2)
Distance 939.883' Bearing "S 66° 58' 47.31 E""

Arc
PC N182330.501E 152668.348 Station 252+23.27(2)
CC N185832.24 E 154156.205
PI N 181932.899E 153604.121 Station 262+40.01(2)
TAN 1016.739'
DB "S 66° 58' 47.31 E""
DA "N 83° 5' 49.23 E""
LChord Distance 1964.541' Bearing "S 81° 56' 29.04 E""
External Distance133.510'
Middle Ordinate 128.983'
Radius 3804.720'
DEG "1° 30' 21.29""
DELTA "29° 55' 23.47""
LENGTH 1987.046'
PT N182055.1 E 154613.489 Station 272+10.31(2)

Tangent N 182055.1 E 154613.489Z Station 272+10.31(2)
Distance 56.964' Bearing "N 83° 5' 49.23 E""

Arc
PC N182061.946E 154670.041 Station 272+67.28(2)
CC N176105.44 E 155391.173
PI N 182095.356 E 154945.999 Station 275+45.25(2)
TAN 277.974'
DB "N 83° 5' 49.23 E""
DA "N 88° 24' 7.62 E""
LChord Distance 555.351' Bearing "N 85° 44' 58.42 E""
External Distance6.436'
Middle Ordinate 6.429'
Radius 6000.000'
DEG "0° 57' 17.75""
DELTA "5° 18' 18.4""
LENGTH 555.550'
PT N182103.107E 155223.865 Station 278+22.83(2)

Tangent N 182103.107E 155223.865 Z Station 278+22.83(2)
Distance 6.462' Bearing "N 88° 24' 7.62 E""

Arc
PC N182103.287E 155230.324 Station 278+29.29(2)
CC N188100.954E 155063.016
PI N 182111.038 E 155508.19 Station 281+07.26(2)
TAN 277.974'
DB "N 88° 24' 7.62 E""
DA "N 83° 5' 49.23 E""
LChord Distance 555.351' Bearing "N 85° 44' 58.42 E""
External Distance6.436'
Middle Ordinate 6.429'
Radius 6000.000'
DEG "0° 57' 17.75""
DELTA "5° 18' 18.4""
LENGTH 555.550'
PT N182144.448E 155784.148 Station 283+84.84(2)

Tangent N 182144.448E 155784.148Z Station 283+84.84(2)
Distance 131.448' Bearing "N 83° 5' 49.23 E""

End N 182160.246E 155914.644Z Station 285+16.29(2)

Alignment Length = 28537.07'

Alignment: Stage 5 IH 94 Temporary WB Centerline

Tangent N 186062.739 E 128277.65 Z Station 00+00
Distance 1524.292' Bearing "S 87° 59' 56.75 E""

Arc
PC N186009.518E 129801.013 Station 15+24.29
CC N197461.692E 130201.112
PI N 185987.882 E 130420.303 Station 21+43.96
TAN 619.668'
DB "S 87° 59' 56.75 E""
DA "N 85° 48' 36.93 E""
LChord Distance 1237.528' Bearing "N 88° 54' 20.09 E""
External Distance16.742'
Middle Ordinate 16.718'
Radius 11459.161'
DEG "0° 30' 0""
DELTA "6° 11' 26.32""
LENGTH 1238.130'
PT N186033.155E 131038.314 Station 27+62.42

Tangent N 186033.155E 131038.314 Z Station 27+62.42
Distance 1262.054' Bearing "N 85° 48' 36.93 E""

Arc
PC N186125.36 E 132296.996 Station 40+24.48
CC N192109.326E 131858.638
PI N 186137.618 E 132464.332 Station 41+92.26
TAN 167.785'
DB "N 85° 48' 36.93 E""
DA "N 82° 36' 23.9 E""
LChord Distance 335.439' Bearing "N 84° 12' 30.41 E""
External Distance2.346'
Middle Ordinate 2.345'
Radius 6000.000'
DEG "0° 57' 17.75""
DELTA "3° 12' 13.03""
LENGTH 335.482'
PT N186159.209E 132630.722 Station 43+59.96

Tangent N 186159.209E 132630.722 Z Station 43+59.96
Distance 4498.222' Bearing "N 82° 36' 23.9 E""

Arc
PC N186738.044 E 137091.547 Station 88+58.18
CC N181049.235E 137829.724
PI N 186863.516E 138058.506 Station 98+33.25
TAN 975.066'
DB "N 82° 36' 23.9 E""
DA "S 78° 5' 59.91 E""
LChord Distance 1922.557' Bearing "S 87° 44' 48.01 E""
External Distance82.279'
Middle Ordinate 81.115'
Radius 5736.501'
DEG "0° 59' 55.66""
DELTA "19° 17' 36.2""
LENGTH 1931.670'
PT N186662.453 E 139012.617 Station 107+89.85

Arc
PC N186662.453 E 139012.617 Station 107+89.85
CC N181965.61 E 138022.834
PI N 186564.078 E 139479.436 Station 112+66.92
TAN 477.073'
DB "S 78° 5' 59.91 E""
DA "S 66° 44' 52.76 E""
LChord Distance 949.467' Bearing "S 72° 25' 26.34 E""
External Distance23.650'
Middle Ordinate 23.534'
Radius 4800.000'
DEG "1° 11' 37.18""
DELTA "11° 21' 7.16""
LENGTH 951.022'
PT N186375.741E 139917.76 Station 117+40.87

Tangent N 186375.741E 139917.76 Z Station 117+40.87
Distance 3853.093' Bearing "S 66° 44' 52.76 E""

Arc
PC N184854.632 E 143457.895 Station 155+93.97
CC N188364.362 E 144965.939
PI N 184608.797 E 144030.035 Station 162+16.69
TAN 622.719'
DB "S 66° 44' 52.76 E""
DA "S 85° 15' 55.13 E""
LChord Distance 1229.213' Bearing "S 76° 0' 23.94 E""
External Distance50.424'
Middle Ordinate 49.767'
Radius 3820.000'
DEG "1° 29' 59.6""
DELTA "18° 31' 2.37""
LENGTH 1234.579'
PT N184557.397 E 144650.629 Station 168+28.54

Tangent N 184557.397 E 144650.629 Z Station 168+28.54
Distance 2116.461' Bearing "S 85° 15' 55.13 E""

Arc
PC N184382.7 E 146759.868 Station 189+45.01
CC N178660.294 E 146285.913
PI N 184311.857 E 147615.211 Station 198+03.28
TAN 858.272'
DB "S 85° 15' 55.13 E""
DA "S 68° 15' 46.4 E""
LChord Distance 1697.684' Bearing "S 76° 45' 50.76 E""
External Distance63.790'
Middle Ordinate 63.089'
Radius 5742.000'
DEG "0° 59' 52.21""
DELTA "17° 0' 8.73""
LENGTH 1703.929'
PT N183993.997 E 148412.454 Station 206+48.93

Tangent N 183993.997 E 148412.454Z Station 206+48.93
Distance 1289.706' Bearing "S 68° 15' 46.4 E""

Arc
PC N183516.356E 149610.453 Station 219+38.64
CC N162142.531 E 141088.734
PI N 183473.749 E 149717.319 Station 220+53.69
TAN 115.047'
DB "S 68° 15' 46.4 E""
DA "S 67° 41' 23.82 E""
LChord Distance 230.091' Bearing "S 67° 58' 35.11 E""
External Distance.288'
Middle Ordinate .288'
Radius 23010.000'
DEG "0° 14' 56.41""
DELTA "0° 34' 22.58""
LENGTH 230.092'
PT N183430.075 E 149823.754 Station 221+68.73

Tangent N 183430.075 E 149823.754 Z Station 221+68.73
Distance 770.056' Bearing "S 67° 41' 23.82 E""

Tangent N 183137.747E 150536.166Z Station 229+38.79
Distance 839.999' Bearing "S 67° 19' 54.59 E""

Tangent N 182814.017 E 151311.277 Z Station 237+78.79
Distance 650.000' Bearing "S 68° 15' 46.4 E""

Tangent N 182573.291E 151915.058 Z Station 244+28.79
Distance 909.666' Bearing "S 69° 4' 28.2 E""

Arc
PC N182248.4 E 152764.728 Station 253+38.45
CC N185835.135E 154136.198
PI N 181908.633E 153653.301 Station 262+89.77
TAN 951.317'
DB "S 69° 4' 28.2 E""
DA "N 83° 5' 49.23 E""
LChord Distance 1846.805' Bearing "S 82° 59' 19.49 E""
External Distance116.085'
Middle Ordinate 112.678'
Radius 3840.000'
DEG "1° 29' 31.48""
DELTA "27° 49' 42.58""
LENGTH 1865.084'
PT N182022.971E 154597.723 Station 272+03.54

Tangent N 182022.971E 154597.723 Z Station 272+03.54
Distance 76.478' Bearing "N 83° 5' 49.23 E""

Arc
PC N182032.163E 154673.647 Station 272+80.02
CC N187988.669 E 153952.514
PI N 182065.572 E 154949.605 Station 275+57.99
TAN 277.974'
DB "N 83° 5' 49.23 E""
DA "N 77° 47' 30.83 E""
LChord Distance 555.351' Bearing "N 80° 26' 40.03 E""
External Distance6.436'
Middle Ordinate 6.429'
Radius 6000.000'
DEG "0° 57' 17.75""
DELTA "5° 18' 18.39""
LENGTH 555.550'
PT N182124.353E 155221.293 Station 278+35.57

Tangent N 182124.353E 155221.293Z Station 278+35.57
Distance 6.462' Bearing "N 77° 47' 30.83 E""

Arc
PC N182125.72 E 155227.608 Station 278+42.03
CC N176261.404E 156496.387
PI N 182184.501 E 155499.296 Station 281+20
TAN 277.974'
DB "N 77° 47' 30.83 E""
DA "N 83° 5' 49.23 E""
LChord Distance 555.351' Bearing "N 80° 26' 40.03 E""
External Distance6.436'
Middle Ordinate 6.429'
Radius 6000.000'
DEG "0° 57' 17.75""
DELTA "5° 18' 18.39""
LENGTH 555.550'
PT N182217.91 E 155775.254 Station 283+97.58

Tangent N 182217.91 E 155775.254 Z Station 283+97.58
Distance 131.448' Bearing "N 83° 5' 49.23 E""

End N 182233.709 E 155905.75 Z Station 285+29.03

Alignment Length = 28529.03'

Estimate Of Quantities

1022-08-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	77.000	77.000
0004	201.0205	Grubbing	STA	81.000	81.000
0006	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0008	203.0200	Removing Old Structure (station) 01. 698+81.25 WB	LS	1.000	1.000
0010	203.0200	Removing Old Structure (station) 02. 698+81.25 EB	LS	1.000	1.000
0012	203.0200	Removing Old Structure (station) 03. 752+86.51 WB	LS	1.000	1.000
0014	203.0200	Removing Old Structure (station) 04. 752+91.82 EB	LS	1.000	1.000
0016	203.0200	Removing Old Structure (station) 05. 816+91.8 WB	LS	1.000	1.000
0018	203.0200	Removing Old Structure (station) 06. 817+02.8 EB	LS	1.000	1.000
0020	203.0200	Removing Old Structure (station) 07. 885+37.93 WB	LS	1.000	1.000
0022	203.0200	Removing Old Structure (station) 08. 885+61.71 EB	LS	1.000	1.000
0024	204.0100	Removing Pavement	SY	157,471.000	157,471.000
0026	204.0110	Removing Asphaltic Surface	SY	17,225.000	17,225.000
0028	204.0115	Removing Asphaltic Surface Butt Joints	SY	296.000	296.000
0030	204.0120	Removing Asphaltic Surface Milling	SY	17,305.000	17,305.000
0032	204.0157	Removing Concrete Barrier	LF	340.000	340.000
0034	204.0165	Removing Guardrail	LF	492.000	492.000
0036	204.0170	Removing Fence	LF	47,230.000	47,230.000
0038	204.0180	Removing Delineators and Markers	EACH	120.000	120.000
0040	204.0210	Removing Manholes	EACH	2.000	2.000
0042	204.0220	Removing Inlets	EACH	3.000	3.000
0044	204.0245	Removing Storm Sewer (size) 01. 15-Inch	LF	56.000	56.000
0046	204.0245	Removing Storm Sewer (size) 02. 30-Inch	LF	670.000	670.000
0048	204.9060.S	Removing (item description) 01. Apron Endwalls	EACH	1.000	1.000
0050	204.9060.S	Removing (item description) 02. Mortar Rubble Endwalls	EACH	9.000	9.000
0052	205.0100	Excavation Common	CY	299,374.000	299,374.000
0054	205.3000.S	Temporary Emergency Pullouts	EACH	28.000	28.000
0056	206.1000	Excavation for Structures Bridges (structure) 01. B-17-218	LS	1.000	1.000
0058	206.1000	Excavation for Structures Bridges (structure) 02. B-17-217	LS	1.000	1.000
0060	206.1000	Excavation for Structures Bridges (structure) 03. B-17-220	LS	1.000	1.000
0062	206.1000	Excavation for Structures Bridges (structure) 04. B-17-219	LS	1.000	1.000
0064	206.1000	Excavation for Structures Bridges (structure) 05. B-17-222	LS	1.000	1.000
0066	206.1000	Excavation for Structures Bridges (structure) 06. B-17-221	LS	1.000	1.000
0068	206.1000	Excavation for Structures Bridges (structure) 07. B-17-	LS	1.000	1.000

Estimate Of Quantities

1022-08-72					
Line	Item	Item Description	Unit	Total	Qty
		224			
0070	206.1000	Excavation for Structures Bridges (structure) 08. B-17-223	LS	1.000	1.000
0072	208.0100	Borrow	CY	148,925.000	148,925.000
0074	208.1100	Select Borrow	CY	80,849.000	80,849.000
0076	210.1500	Backfill Structure Type A	TON	3,674.000	3,674.000
0078	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1022-08-72	LS	1.000	1.000
0080	213.0100	Finishing Roadway (project) 01. 1022-08-72	EACH	1.000	1.000
0082	305.0110	Base Aggregate Dense 3/4-Inch	TON	80,680.000	80,680.000
0084	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	228,718.000	228,718.000
0086	310.0115	Base Aggregate Open-Graded	CY	615.000	615.000
0088	312.0115	Select Crushed Material	CY	2,200.000	2,200.000
0090	415.0120	Concrete Pavement 12-Inch	SY	132,585.000	132,585.000
0092	415.0410	Concrete Pavement Approach Slab	SY	854.000	854.000
0094	416.0620	Drilled Dowel Bars	EACH	64.000	64.000
0096	416.1110	Concrete Shoulder Rumble Strips	LF	45,860.000	45,860.000
0098	440.4410	Incentive IRI Ride	DOL	36,000.000	36,000.000
0100	455.0605	Tack Coat	GAL	10,852.000	10,852.000
0102	460.2000	Incentive Density HMA Pavement	DOL	14,470.000	14,470.000
0104	460.7423	HMA Pavement 3 HT 58-28 H	TON	8,980.000	8,980.000
0106	460.7444	HMA Pavement 4 HT 58-34 H	TON	13,625.000	13,625.000
0108	465.0105	Asphaltic Surface	TON	710.000	710.000
0110	465.0125	Asphaltic Surface Temporary	TON	52,275.000	52,275.000
0112	465.0400	Asphaltic Shoulder Rumble Strips	LF	55,160.000	55,160.000
0114	502.0100	Concrete Masonry Bridges	CY	7,982.000	7,982.000
0116	502.3200	Protective Surface Treatment	SY	9,304.000	9,304.000
0118	502.3210	Pigmented Surface Sealer	SY	1,121.000	1,121.000
0120	503.0155	Prestressed Girder Type I 54W-Inch	LF	1,270.000	1,270.000
0122	505.0400	Bar Steel Reinforcement HS Structures	LB	99,750.000	99,750.000
0124	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,186,645.000	1,186,645.000
0126	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	7,590.000	7,590.000
0128	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	40.000	40.000
0130	506.4000	Steel Diaphragms (structure) 01. B-17-224	EACH	18.000	18.000
0132	506.4000	Steel Diaphragms (structure) 02. B-17-223	EACH	18.000	18.000
0134	516.0500	Rubberized Membrane Waterproofing	SY	252.000	252.000
0136	520.2012	Culvert Pipe Temporary 12-Inch	LF	311.000	311.000
0138	520.2018	Culvert Pipe Temporary 18-Inch	LF	1,219.000	1,219.000
0140	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0142	520.8700	Cleaning Culvert Pipes	EACH	4.000	4.000

Estimate Of Quantities

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Line	Item	Item Description	Unit	Total	Qty
0144	521.0118	Culvert Pipe Corrugated Steel 18-Inch	LF	102.000	102.000
0146	521.0124	Culvert Pipe Corrugated Steel 24-Inch	LF	56.000	56.000
0148	521.0130	Culvert Pipe Corrugated Steel 30-Inch	LF	46.000	46.000
0150	521.0136	Culvert Pipe Corrugated Steel 36-Inch	LF	18.000	18.000
0152	521.0142	Culvert Pipe Corrugated Steel 42-Inch	LF	52.000	52.000
0154	521.0148	Culvert Pipe Corrugated Steel 48-Inch	LF	12.000	12.000
0156	521.0154	Culvert Pipe Corrugated Steel 54-Inch	LF	6.000	6.000
0158	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	9.000	9.000
0160	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	5.000	5.000
0162	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	4.000	4.000
0164	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	2.000	2.000
0166	521.1042	Apron Endwalls for Culvert Pipe Steel 42-Inch	EACH	2.000	2.000
0168	521.1048	Apron Endwalls for Culvert Pipe Steel 48-Inch	EACH	1.000	1.000
0170	521.1054	Apron Endwalls for Culvert Pipe Steel 54-Inch	EACH	1.000	1.000
0172	521.1072	Apron Endwalls for Culvert Pipe Steel 72-Inch	EACH	2.000	2.000
0174	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	8.000	8.000
0176	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	208.000	208.000
0178	522.0160	Culvert Pipe Reinforced Concrete Class III 60-Inch	LF	24.000	24.000
0180	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0182	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	3.000
0184	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0186	522.1060	Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	EACH	2.000	2.000
0188	523.0519	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	1.000	1.000
0190	523.0524	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	EACH	2.000	2.000
0192	526.0100	Temporary Structure (station) 01. 698+81.25 WB	LS	1.000	1.000
0194	526.0100	Temporary Structure (station) 02. 753+03.93 WB	LS	1.000	1.000
0196	526.0100	Temporary Structure (station) 03. 817+55.09 EB	LS	1.000	1.000
0198	526.0100	Temporary Structure (station) 04. 885+75 WB	LS	1.000	1.000
0200	527.0172	Pipe Structural Plate 72-Inch	LF	60.000	60.000
0202	550.0500	Pile Points	EACH	70.000	70.000
0204	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	6,570.000	6,570.000
0206	550.2108	Piling CIP Concrete 10 3/4 X 0.50-Inch	LF	14,105.000	14,105.000
0208	603.8000	Concrete Barrier Temporary Precast Delivered	LF	162,430.000	162,430.000
0210	603.8125	Concrete Barrier Temporary Precast Installed	LF	205,980.000	205,980.000
0212	604.0500	Slope Paving Crushed Aggregate	SY	4,949.000	4,949.000

Estimate Of Quantities

1022-08-72					
Line	Item	Item Description	Unit	Total	Qty
0214	606.0100	Riprap Light	CY	47.000	47.000
0216	606.0300	Riprap Heavy	CY	2,140.000	2,140.000
0218	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	134.000	134.000
0220	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	50.000	50.000
0222	610.0419	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	232.000	232.000
0224	610.0424	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	LF	300.000	300.000
0226	611.0430	Reconstructing Inlets	EACH	9.000	9.000
0228	611.0545	Manhole Covers Type L	EACH	3.000	3.000
0230	611.0612	Inlet Covers Type C	EACH	2.000	2.000
0232	611.0642	Inlet Covers Type MS	EACH	2.000	2.000
0234	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0236	611.2005	Manholes 5-FT Diameter	EACH	3.000	3.000
0238	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0240	612.0106	Pipe Underdrain 6-Inch	LF	3,300.000	3,300.000
0242	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	1,000.000	1,000.000
0244	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	2,118.000	2,118.000
0246	613.1100.S	Cable Barrier Type 1	LF	19,300.000	19,300.000
0248	613.1200.S	Cable Barrier End Terminal Type 1	EACH	12.000	12.000
0250	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	32.000	32.000
0252	614.0905	Crash Cushions Temporary	EACH	37.000	37.000
0254	614.0920	Salvaged Rail	LF	17,905.000	17,905.000
0256	614.0925	Salvaged Guardrail End Treatments	EACH	28.000	28.000
0258	614.2300	MGS Guardrail 3	LF	28,225.000	28,225.000
0260	614.2330	MGS Guardrail 3 K	LF	1,125.000	1,125.000
0262	614.2500	MGS Thrie Beam Transition	LF	791.000	791.000
0264	614.2610	MGS Guardrail Terminal EAT	EACH	23.000	23.000
0266	614.2620	MGS Guardrail Terminal Type 2	EACH	23.000	23.000
0268	616.0100	Fence Woven Wire (height) 4-FT	LF	46,544.000	46,544.000
0270	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1022-08-72	EACH	1.000	1.000
0272	619.1000	Mobilization	EACH	1.000	1.000
0274	624.0100	Water	MGAL	4,605.000	4,605.000
0276	625.0500	Salvaged Topsoil	SY	437,930.000	437,930.000
0278	627.0200	Mulching	SY	543,805.000	543,805.000
0280	628.1504	Silt Fence	LF	18,070.000	18,070.000
0282	628.1520	Silt Fence Maintenance	LF	18,070.000	18,070.000
0284	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000

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Line	Item	Item Description	Unit	Total	Qty
0286	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0288	628.2004	Erosion Mat Class I Type B	SY	59,890.000	59,890.000
0290	628.2039	Erosion Mat Class III Type D	SY	16,480.000	16,480.000
0292	628.6510	Soil Stabilizer Type B	ACRE	17.000	17.000
0294	628.7005	Inlet Protection Type A	EACH	34.000	34.000
0296	628.7504	Temporary Ditch Checks	LF	5,875.000	5,875.000
0298	628.7555	Culvert Pipe Checks	EACH	187.000	187.000
0300	628.7560	Tracking Pads	EACH	8.000	8.000
0302	629.0210	Fertilizer Type B	CWT	388.100	388.100
0304	630.0110	Seeding Mixture No. 10	LB	2,005.000	2,005.000
0306	630.0130	Seeding Mixture No. 30	LB	7,035.000	7,035.000
0308	630.0200	Seeding Temporary	LB	16,665.000	16,665.000
0310	633.0100	Delineator Posts Steel	EACH	126.000	126.000
0312	633.0500	Delineator Reflectors	EACH	132.000	132.000
0314	633.1100	Delineators Temporary	EACH	787.000	787.000
0316	633.5200	Markers Culvert End	EACH	74.000	74.000
0318	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0320	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	10.000	10.000
0322	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000
0324	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	2.000	2.000
0326	635.0200	Sign Supports Structural Steel HS	LB	1,946.000	1,946.000
0328	635.0300	Sign Supports Replacing Base Connection Bolts	EACH	3.000	3.000
0330	636.0100	Sign Supports Concrete Masonry	CY	3.200	3.200
0332	636.0500	Sign Supports Steel Reinforcement	LB	196.000	196.000
0334	637.1220	Signs Type I Reflective SH	SF	599.500	599.500
0336	637.2210	Signs Type II Reflective H	SF	154.000	154.000
0338	638.2601	Removing Signs Type I	EACH	5.000	5.000
0340	638.2602	Removing Signs Type II	EACH	35.000	35.000
0342	638.3000	Removing Small Sign Supports	EACH	35.000	35.000
0344	638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000
0346	642.5201	Field Office Type C	EACH	1.000	1.000
0348	643.0200.S	Traffic Control Surveillance and Maintenance (project) 01. 1022-08-72	DAY	434.000	434.000
0350	643.0300	Traffic Control Drums	DAY	77,964.000	77,964.000
0352	643.0420	Traffic Control Barricades Type III	DAY	9,602.000	9,602.000
0354	643.0705	Traffic Control Warning Lights Type A	DAY	12,548.000	12,548.000
0356	643.0715	Traffic Control Warning Lights Type C	DAY	9,358.000	9,358.000
0358	643.0800	Traffic Control Arrow Boards	DAY	200.000	200.000
0360	643.0900	Traffic Control Signs	DAY	37,600.000	37,600.000
0362	643.1000	Traffic Control Signs Fixed Message	SF	180.000	180.000

Estimate Of Quantities

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Line	Item	Item Description	Unit	Total	Qty
0364	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	1,736.000	1,736.000
0366	645.0111	Geotextile Type DF Schedule A	SY	1,184.000	1,184.000
0368	645.0112	Geotextile Type DF Schedule B	SY	3,730.000	3,730.000
0370	645.0120	Geotextile Type HR	SY	4,048.000	4,048.000
0372	645.0130	Geotextile Type R	SY	182.000	182.000
0374	645.0220	Geogrid Type SR	SY	6,450.000	6,450.000
0376	646.0600	Removing Pavement Markings	LF	72,723.000	72,723.000
0378	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	13,550.000	13,550.000
0380	646.0900.S	Pavement Marking Late Season	LF	88,464.000	88,464.000
0382	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	106,600.000	106,600.000
0384	647.0803	Pavement Marking Aerial Enforcement Bars Epoxy 24-Inch	LF	96.000	96.000
0386	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	131,466.000	131,466.000
0388	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	142,452.000	142,452.000
0390	649.2100	Temporary Raised Pavement Markers Type I	EACH	237.000	237.000
0392	650.4000	Construction Staking Storm Sewer	EACH	93.000	93.000
0394	650.4500	Construction Staking Subgrade	LF	90,787.000	90,787.000
0396	650.5000	Construction Staking Base	LF	44,902.000	44,902.000
0398	650.6500	Construction Staking Structure Layout (structure) 01. B-17-218	LS	1.000	1.000
0400	650.6500	Construction Staking Structure Layout (structure) 02. B-17-217	LS	1.000	1.000
0402	650.6500	Construction Staking Structure Layout (structure) 03. B-17-220	LS	1.000	1.000
0404	650.6500	Construction Staking Structure Layout (structure) 04. B-17-219	LS	1.000	1.000
0406	650.6500	Construction Staking Structure Layout (structure) 05. B-17-222	LS	1.000	1.000
0408	650.6500	Construction Staking Structure Layout (structure) 06. B-17-221	LS	1.000	1.000
0410	650.6500	Construction Staking Structure Layout (structure) 07. B-17-224	LS	1.000	1.000
0412	650.6500	Construction Staking Structure Layout (structure) 08. B-17-223	LS	1.000	1.000
0414	650.7000	Construction Staking Concrete Pavement	LF	45,885.000	45,885.000
0416	650.9910	Construction Staking Supplemental Control (project) 01. 1022-08-72	LS	1.000	1.000
0418	650.9920	Construction Staking Slope Stakes	LF	90,787.000	90,787.000
0420	690.0150	Sawing Asphalt	LF	24,890.000	24,890.000

Estimate Of Quantities

1022-08-72					
Line	Item	Item Description	Unit	Total	Qty
0422	690.0250	Sawing Concrete	LF	1,757.000	1,757.000
0424	715.0415	Incentive Strength Concrete Pavement	DOL	40,032.000	40,032.000
0426	715.0502	Incentive Strength Concrete Structures	DOL	48,006.000	48,006.000
0428	715.0710	Optimized Aggregate Gradation Incentive	DOL	119,327.000	119,327.000
0430	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,100.000	2,100.000
0432	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,400.000	2,400.000
0434	SPV.0060	Special 01. Manholes Special 4-FT Diameter Temporary	EACH	25.000	25.000
0436	SPV.0060	Special 02. Reconstructing Median Inlets Special	EACH	25.000	25.000
0438	SPV.0060	Special 03. Cleaning Box Culverts	EACH	1.000	1.000
0440	SPV.0060	Special 04. Temporary Inlets Median 1 Grate	EACH	4.000	4.000
0442	SPV.0090	Special 01. Construction Staking Finished Median	LF	24,930.000	24,930.000
0444	SPV.0090	Special 02. Bore and Jack Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	96.000	96.000
0446	SPV.0090	Special 03. Prestressed Girder Type I 54W-Inch-Self-Consolidating Concrete	LF	1,270.000	1,270.000
0448	SPV.0105	Special 01. Construction Staking Concrete Pavement Joint Layout	LS	1.000	1.000
0450	SPV.0105	Special 02. Project Concrete Crack Mitigation and Repair Special	LS	1.000	1.000

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CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	CLEARING	GRUBBING	REMARKS
					201.0105 STA	201.0205 STA	
0010	752+06	-	753+06	EB 94, RT	--	1	CLEAR BRUSH AT END OF CULVERT
0010	770+00	-	776+00	EB 94, RT	6	6	
0010	817+36	-	818+36	EB 94, RT	--	1	CLEAR BRUSH AT END OF CULVERT
0010	824+00	-	826+00	EB 94, RT	2	2	
0010	858+00	-	862+00	EB 94, RT	4	4	
0010	873+00	-	886+00	EB 94, RT	13	13	
0010	739+00	-	745+00	WB IH 94, LT	6	6	
0010	748+00	-	752+00	WB IH 94, LT	4	4	
0010	752+06	-	753+06	WB IH 94, LT	--	1	CLEAR BRUSH AT END OF CULVERT
0010	753+00	-	761+00	WB IH 94, LT	8	8	
0010	777+00	-	778+00	WB IH 94, LT	1	1	
0010	789+00	-	800+00	WB IH 94, LT	11	11	
0010	805+00	-	817+00	WB IH 94, LT	12	12	
0010	818+00	-	824+00	WB IH 94, LT	6	6	
0010	865+50	-	866+50	WB IH 94, LT	--	1	CLEAR BRUSH AT END OF CULVERT
0010	879+00	-	883+00	WB IH 94, LT	4	4	
TOTAL 0010					77	81	

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100	REMARKS
			EACH	
0010	8+93	650th AVENUE	1	24"x46' C.P.
0010	776+00	EB 94, RT	1	24"x20' CMCP
TOTAL 0010			2	

REMOVING ASPHALTIC SURFACE

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	204.0110	REMARKS
						SY	
0010	2G	685+00	-	18+20	EB 94 Lt	955	Maint. Crossovers
0010	5	690+00	-	698+42	WB 94 LT & RT	1220	SHOULDERS
0010	5	699+47	-	701+00	WB 94 LT & RT	225	SHOULDERS
0010	5	744+00	-	752+28	WB 94 LT & RT	1200	SHOULDERS
0010	5	753+45	-	756+00	WB 94 LT & RT	370	SHOULDERS
0010	5	813+00	-	816+92	WB 94 LT & RT	570	SHOULDERS
0010	5	817+96	-	819+00	WB 94 LT & RT	150	SHOULDERS
0010	5	879+00	-	885+38	WB 94 LT & RT	925	SHOULDERS
0010	5	886+57	-	900+00	WB 94 LT & RT	1950	SHOULDERS
0010	5	879+00	-	885+38	WB 94 LT	4000	TEMP WIDENING
0010	5	886+12	-	900+00	WB 94 LT	3500	TEMP WIDENING
0010	6C	692+26	-	697+98	EB 94, LT	335	INSIDE SHOULDER
0010	6C	699+67	-	705+58	EB 94, LT	350	INSIDE SHOULDER
0010	6C	745+99	-	752+04	EB 94, LT	305	INSIDE SHOULDER
0010	6C	753+77	-	756+60	EB 94, LT	160	INSIDE SHOULDER
0010	6C	810+07	-	816+72	EB 94, LT	385	INSIDE SHOULDER
0010	6C	818+35	-	824+21	EB 94, LT	345	INSIDE SHOULDER
0010	6C	17+78	-	23+25	EB 94, LT	280	INSIDE SHOULDER
TOTAL 0010						17225	

REMOVING PAVEMENT

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	204.0100	REMARKS
						SY	
0010	2G	668+50	-	680+25	EB 94, LT	396	3' INSIDE SHOULDER
0010	3	685+00	-	698+31	IH 94 EB	5476	37' WIDE INCL. SHOULDERS
0010	3	699+36	-	752+33	IH 94 EB	21765	37' WIDE INCL. SHOULDERS
0010	3	753+48	-	817+01	IH 94 EB	26048	37' WIDE INCL. SHOULDERS
0010	3	818+06	-	885+58	IH 94 EB	27710	37' WIDE INCL. SHOULDERS
0010	3	886+73	-	18+20	IH 94 EB	14254	37' WIDE INCL. SHOULDERS
0010	5	685+00	-	698+42	IH 94 WB	3582	24' WIDE NO SHOULDERS
0010	5	699+47	-	752+28	IH 94 WB	14080	24' WIDE NO SHOULDERS
0010	5	753+45	-	816+92	IH 94 WB	16920	24' WIDE NO SHOULDERS
0010	5	817+96	-	885+38	IH 94 WB	18008	24' WIDE NO SHOULDERS
0010	5	886+54	-	18+20	IH 94 WB	9232	24' WIDE NO SHOULDERS
TOTAL 0010						157471	

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REMOVING ASPHALTIC SURFACE BUTT JOINTS

204.0115						
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	684+65	-	685+00	IH 94 EB	148	EB MAINLINE
0010	684+65	-	685+00	IH 94 WB	148	WB MAINLINE
TOTAL 0010					296	

REMOVING ASPHALTIC SURFACE MILLING

204.0120							
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	2A	666+00	-	685+00	WB IH 94, LT	2105	OUTSIDE SHOULDER
0010	2A	758+00	-	807+00	WB IH 94, LT	5460	OUTSIDE SHOULDER
0010	2A	845+00	-	872+50	WB IH 94, LT	3070	OUTSIDE SHOULDER
0010	2A	898+25	-	23+15	WB IH 94, LT	3200	OUTSIDE SHOULDER
0010	2A	660+00	-	685+00	EB IH 94, RT	2795	OUTSIDE SHOULDER
0010	2A	18+20	-	23+35	EB IH 94, RT	675	OUTSIDE SHOULDER
TOTAL 0010						17305	

REMOVING CONCRETE BARRIER

204.0157						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	5+07	-	6+76	390th ST, RT	170	
0010	5+23	-	6+92	390th ST, LT	170	
TOTAL 0010					340	

REMOVING GUARDRAIL

204.0165				
CATEGORY	STATION	LOCATION	LF	REMARKS
0010	698+38	EB IH 94, LT	80	MEDIAN
0010	699+42	EB IH 94, LT	80	MEDIAN
0010	752+18	EB IH 94, LT	54	MEDIAN
0010	753+33	EB IH 94, LT	54	MEDIAN
0010	816+95	EB IH 94, LT	80	MEDIAN
0010	818+03	EB IH 94, LT	80	MEDIAN
0010	885+50	EB IH 94, LT	32	MEDIAN
0010	886+63	EB IH 94, LT	32	MEDIAN
TOTAL 0010			492	

REMOVING FENCE

204.0170						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	699+07	-	710+82	EB IH 94, RT	1272	B-17-21 to C-17-12
0010	710+91	-	752+35	EB IH 94, RT	4234	C-17-12 to B-17-23
0010	753+98	-	776+08	EB IH 94, RT	2290	B-17-23 to C-17-17
0010	776+14	-	816+89	EB IH 94, RT	4314	C-17-17 to B-17-25
0010	818+29	-	825+80	EB IH 94, RT	896	B-17-25 to C-17-18
0010	825+86	-	840+81	EB IH 94, RT	1534	C-17-18 to 48-IN C.P.
0010	840+85	-	861+36	EB IH 94, RT	2084	48-IN C.P. to C-17-19
0010	861+42	-	881+32	EB IH 94, RT	2100	C-17-19 to 72-IN C.P.
0010	881+39	-	885+90	EB IH 94, RT	632	72-IN C.P. to B-17-27
0010	887+23	-	23+32	EB IH 94, RT	4162	B-17-27 to WILSON CR.
0010	699+69	-	711+32	WB IH 94, LT	1324	B-17-22 to C-17-12
0010	711+43	-	751+80	WB IH 94, LT	4192	C-17-12 to B-17-24
0010	752+90	-	776+34	WB IH 94, LT	2482	B-17-24 to C-17-17
0010	776+40	-	816+72	WB IH 94, LT	4082	C-17-17 to B-17-26
0010	818+11	-	825+96	WB IH 94, LT	906	B-17-26 to C-17-18
0010	826+02	-	840+63	WB IH 94, LT	1496	C-17-18 to 48-IN C.P.
0010	840+67	-	861+63	WB IH 94, LT	2186	48-IN C.P. to C-17-19
0010	861+67	-	881+33	WB IH 94, LT	1990	C-17-19 to 72-IN C.P.
0010	881+39	-	881+94	WB IH 94, LT	450	72-IN C.P. to B-17-28
0010	886+46	-	23+02	WB IH 94, LT	4020	B-17-28 to WILSON CR.
0010	698+45			IH 94 MEDIAN	88	B-17-21/22 WEST ABUT
0010	699+33			IH 94 MEDIAN	88	B-17-21/22 EAST ABUT
0010	752+26			IH 94 MEDIAN	64	B-17-23/24 WEST ABUT
0010	753+26			IH 94 MEDIAN	64	B-17-23/24 EAST ABUT
0010	817+03			IH 94 MEDIAN	88	B-17-25/26 WEST ABUT
0010	817+94			IH 94 MEDIAN	88	B-17-25/26 EAST ABUT
0010	885+56			IH 94 MEDIAN	52	B-17-27/28 WEST ABUT
0010	886+56			IH 94 MEDIAN	52	B-17-27/28 EAST ABUT
TOTAL 0010					47230	

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REMOVING DELINEATORS AND MARKERS

CATEGORY	STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
0010	685+00	-	18+20	EB IH 94, RT	60	DELINEATORS
0010	685+00	-	18+20	WB IH 94, LT	60	DELINEATORS
TOTAL 0010					120	

REMOVING MANHOLES

CATEGORY	STATION	LOCATION	204.0210 EACH	REMARKS
0010	10+05	CTH K	1	35' LT
0010	5+88	390th ST	1	31' RT
TOTAL 0010			2	

REMOVING INLETS

CATEGORY	STATION	LOCATION	204.0220 EACH	REMARKS
0010	752+08	EB IH 94, 43.8' LT	1	NO. 110
0010	876+04	EB IH 94, 35' LT	1	NO. 123
0010	886+68	EB IH 94, 35.1' LT	1	NO. 125
TOTAL 0010			3	

REMOVING STORM SEWER (SIZE) 01. 15-INCH

CATEGORY	STATION	LOCATION	204.0245.01 LF	REMARKS
0010	752+08	EB IH 94, 43.8' LT	28	CMCP
0010	886+68	EB IH 94, 35.1' LT	28	CMCP
TOTAL 0010			56	

REMOVING STORM SEWER (SIZE) 02. 30-INCH

CATEGORY	STATION	TO	STATION	LOCATION	204.0245.02 LF	REMARKS
0010	8+92	-	11+24	CTH K, 35' LT	232	RCCP
0010	8+98	-	11+38	650th AVE, 28' RT	240	CMCP
0010	4+82	-	6+80	390th ST, 31' RT	198	CMCP
TOTAL 0010					670	

REMOVING (ITEM DESCRIPTION) 01. APRON ENDWALLS

CATEGORY	STATION	LOCATION	204.9060.S.01 EACH	REMARKS
0010	911+82	EB IH 94, 47' RT	1	24-IN. RCCP
TOTAL 0010			1	

REMOVING (ITEM DESCRIPTION) 02. MORTAR RUBBLE ENDWALLS

CATEGORY	STATION	LOCATION	204.9060.S.02 EACH	REMARKS
0010	806+57	EB IH 94, 70' RT	1	60-IN. RCCP
0010	817+84	EB IH 94, 79' RT	1	24-IN. CMCP
0010	817+91	EB IH 94, 76' RT	1	30-IN. CMCP
0010	881+34	EB IH 94, 74' RT	1	72-IN. STRUCT. PLATE
0010	881+34	WB IH 94, 87' LT	1	72-IN. STRUCT. PLATE
0010	8+92	CTH K, 35' LT	1	30-IN. RCCP
0010	11+24	CTH K, 35' LT	1	30-IN. RCCP
0010	8+93	650th AVE, 24' RT	1	24-IN. CMCP
0010	8+98	650th AVE, 28' RT	1	30-IN. CMCP
TOTAL 0010			9	

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TEMPORARY EMERGENCY PULLOUTS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	205.3000.S EACH	* BASE AGGREGATE DENSE 1 1/4-INCH TON	* SALVAGED TOPSOIL SY	* FERTILIZER TYPE B CWT	* SEEDING MIX NO. 30 LB	* MULCHING SY
0010	3	66+00	-	69+00	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	3	92+00	-	95+00	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	3	118+00	-	121+00	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	3	153+00	-	156+00	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	3	180+00	-	183+00	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	3	215+50	-	218+50	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	3	244+50	-	247+50	MEDIAN RDWY, RT	1	370	---	---	---	---
0010	5	66+00	-	69+00	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	5	92+00	-	95+00	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	5	118+00	-	121+00	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	5	152+50	-	155+50	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	5	180+00	-	183+00	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	5	215+50	-	218+50	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	5	254+00	-	257+00	MEDIAN RDWAY, LT	1	370	---	---	---	---
0010	6C	714+50	-	717+50	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	735+00	-	738+00	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	763+00	-	766+00	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	785+50	-	788+50	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	831+50	-	834+50	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	863+50	-	866+50	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	903+50	-	906+50	EB IH 94, RT	1	770	1060	0.8	23	1250
0010	6C	717+00	-	720+00	WB IH 94, LT	1	770	1060	0.8	23	1250
0010	6C	733+50	-	736+50	WB IH 94, LT	1	770	1060	0.8	23	1250
0010	6C	771+00	-	774+00	WB IH 94, LT	1	770	1060	0.8	23	1250
0010	6C	800+00	-	803+00	WB IH 94, LT	1	770	1060	0.8	23	1250
0010	6C	832+50	-	835+50	WB IH 94, LT	1	770	1060	0.8	23	1250
0010	6C	856+00	-	859+00	WB IH 94, LT	1	770	1060	0.8	23	1250
0010	6C	903+00	-	906+00	WB IH 94, LT	1	770	1060	0.8	23	1250
TOTAL 0010						28	15960	14840	11.2	322	17500

* ITEMS AND QUANTITIES FOR INFORMATION ONLY

EARTHWORK SUMMARY TABLE

				205.0100	(1)	(2)	(3)	EXPANDED		(4)	(5)	(6)	(7)	(8)
				EXCAVATION	ASPHALTIC	CONCRETE	USEABLE	FILL		208.0100	208.1100	SUITABLE	UNSUITABLE	208.1100
				COMMON	PAVEMENT	PAVEMENT	MATERIAL	FACTOR =		BORROW	BORROW	WASTE	WASTE	SELECT
CAT 0010	STATION	TO	STATION	ALIGNMENT	CY	CY	CY	1.33		CY	CY	CY	CY	BORROW
Stage 1B	872+49.995	-	885+49.764	IH 94 WB Ref Line	2141	300	0	6716		5725	0		850	1131
	886+09.964	-	898+24.995	IH 94 WB Ref Line	1676	275	0	3178		2627	0		850	1131
	Stage 1B Total				3817	575	0	9894		8352	0	0	1700	2261
Stage 2G	668+50.000	-	680+30.998	IH 94 EB Ref Line	528	55	66	1749		1342	0		0	0
	35+25.000	-	53+53.440	Stage-3-EB-centerline	2713	0	0	18490		16627	0		850	1131
	54+13.440	-	107+48.750	Stage-3-EB-centerline	6013	0	0	53302		49889	0		2600	3458
	108+08.750	-	172+09.440	Stage-3-EB-centerline	8396	325	0	25484		21413	0		4000	5320
	172+69.440	-	201+60.000	Stage-3-EB-centerline	2653	0	0	17253		14600	0		0	0
	846+86.027	-	885+24.995	IH 94 WB Ref Line	4663	280	0	2216		0	0		0	0
	886+57.995	-	19+07.800	IH 94 WB Ref Line	2729	260	0	7275		5306	0		500	665
	19+07.806	-	23+24.996	IH 94 EB Ref Line	297	30	0	135		0	0		0	0
Stage 2G Total					27992	950	66	125904		106878	0	0	7950	10574
Stage 3	685+00.000	-	697+93.500	IH 94 EB Ref Line	2006	760	1406	2519		2679	0		0	0
	699+70.000	-	751+99.000	IH 94 EB Ref Line	12806	3023	5589	10456		0	6262		0	0
	753+99.000	-	816+70.500	IH 94 EB Ref Line	14223	3618	6689	13389		0	9473		0	0
	818+38.000	-	885+31.000	IH 94 EB Ref Line	19618	3849	7115	15725		0	7071		0	0
	887+24.500	-	18+20.000	IH 94 EB Ref Line	3313	1980	3660	32892		22836	12383		0	0
Stage 3 Total					51966	13230	24459	74981		25515	35189	0	0	0
Stage 4C	672+63.894	-	682+99.996	IH 94 WB Ref Line	1641	76	0	4261		2696	0		0	0
	37+95.700	-	47+00.000	Stage-5-WB-centerline	659	901	0	3436		3678	0		0	0
	109+00.000	-	115+50.000	Stage-5-WB-centerline	643	0	0	1270		627	0		0	0
	760+44.000	-	805+69.000	IH 94 EB Ref Line	10984	2946	0	2927		0	0		0	0
	160+50.000	-	171+00.000	Stage-5-WB-centerline	3550	221	0	3329		0	0		0	0
	188+00.000	-	201+00.000	Stage-5-WB-centerline	1813	0	0	1963		150	0		0	0
	846+13.000	-	885+31.000	IH 94 EB Ref Line	5860	2336	0	3666		142	0		0	0
	887+24.500	-	19+07.800	IH 94 EB Ref Line	9242	1561	0	4807		0	0		0	0
	19+07.810	-	23+00.000	IH 94 WB Ref Line	643	30	0	613		0	0		0	0
	Stage 4C Total				35035	8071	0	22671		0	0	4293	0	0
Stage 5	685+00.000	-	698+06.500	IH 94 WB Ref Line	1024	929	1095	3434		0	4434		0	0
	699+83.000	-	751+79.000	IH 94 WB Ref Line	7162	3651	4303	14987		8180	7599		0	0
	753+77.500	-	816+61.500	IH 94 WB Ref Line	30713	4387	5170	16234		0	8078		0	0
	818+29.000	-	884+92.500	IH 94 WB Ref Line	14991	4670	5503	4860		0	4860		0	0
	886+86.000	-	18+20.000	IH 94 WB Ref Line	9918	3318	2821	3779		0	7854		0	0
Stage 5 Total					63808	16955	18892	51148		8180	32825	17818	0	0
Stage 6C	668+50.000	-	697+93.500	IH 94 EB Ref Line	23256	1202	0	3739		0	0		0	0
	699+83.005	-	751+52.700	IH 94 EB Ref Line	33149	3160	0	29989		0	0		0	0
	753+99.221	-	816+61.500	IH 94 EB Ref Line	19407	3042	0	16365		0	0		0	0
	818+38.004	-	884+92.500	IH 94 EB Ref Line	24002	3169	0	20833		0	0		0	0
	887+24.500	-	23+00.000	IH 94 EB Ref Line	7292	1442	0	3474		0	0		0	0
Stage 6 Total					107106	12015	0	36985		0	0	58106	0	0
Totals for Pay					289724					148925	68014			12835

- (1) ASPHALTIC PAVEMENT IS INCLUDED IN THE QUANTITY OF EXCAVATION COMMON. IT IS CONSIDERED SALVAGEABLE FOR OTHER PURPOSES AND IS NOT INCLUDED IN THE QUANTITY OF USEABLE MATERIAL.
- (2) CONCRETE PAVEMENT IS INCLUDED IN THE QUANTITY OF EXCAVATION COMMON. IT IS CONSIDERED SALVAGEABLE FOR OTHER PURPOSES AND IS NOT INCLUDED IN THE QUANTITY OF USEABLE MATERIAL.
- (3) USEABLE MATERIAL = EXCAVATION COMMON - EBS - SALVAGED ASPHALT - SALVAGED CONCRETE
- (4) TO CONSTRUCT RAISED PROFILES ON IH 94, USE SELECT BORROW FOR TOP 2 FEET OF FILL INBETWEEN PROPOSED SUBGRADE SHOULDER POINTS.
- (5) SUITABLE WASTE IS SURPLUS MATERIAL SUITABLE FOR USE AS FILL THAT IS BEYOND THE VOLUME NEEDED FOR THAT STAGE.
- (6) UNSUITABLE WASTE = EBS
- (7) EXCAVATION BELOW SUBGRADE (EBS) IS APPROXIMATE AND IS NOT USED TO BALANCE EARTHWORK. QUANTITY IS INCLUDED AND PAID FOR IN THE ITEM OF EXCAVATION COMMON.
- (8) REPLACE EBS WITH SELECT BORROW.

PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 1022-08-72

CATEGORY	STATION	TO	STATION	LOCATION	211.0100 LS	REMARKS
0010	3+50	-	6+00	250th ST	0.20	REPLACE EXISTING ASPHALT AS NECESSARY
0010	8+25	-	11+50	CTH K	0.30	REPLACE EXISTING ASPHALT AS NECESSARY
0010	8+75	-	11+50	650th ST	0.25	REPLACE EXISTING ASPHALT AS NECESSARY
0010	4+60	-	7+30	390th ST	0.25	REPLACE EXISTING ASPHALT AS NECESSARY
TOTAL 0010					1.00	

BASE AGGREGATE DENSE 3/4-INCH

						305.0110	
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	TON	REMARKS
0010	1B	872+50	-	885+50	WB IH 94, LT	230	TEMP WIDENING
0010	1B	886+09	-	898+25	WB IH 94, LT	210	TEMP WIDENING
0010	2G	668+50	-	698+61	EB IH 94, LT	290	TEMP WIDENING
0010	2G	54+13	-	107+48	STAGE 3 TEMP EB C/L	540	TEMP ROADWAY
0010	2G	108+08	-	172+09	STAGE 3 TEMP EB C/L	420	TEMP ROADWAY
0010	2G	172+69	-	240+08	STAGE 3 TEMP EB C/L	505	TEMP ROADWAY
0010	2G	886+50	-	23+25	EB IH 94, LT	260	TEMP WIDENING
0010	3	685+00	-	697+94	EB IH 94	1715	MAINLINE
0010	3	699+70	-	751+99	EB IH 94	5430	MAINLINE
0010	3	754+00	-	816+71	EB IH 94	6620	MAINLINE
0010	3	818+38	-	885+31	EB IH 94	7090	MAINLINE
0010	3	887+24	-	18+20	EB IH 94	3665	MAINLINE
0010	4C	672+64	-	692+08	WB IH 94, RT	210	TEMP WIDENING
0010	4C	109+00	-	171+00	STAGE 5 TEMP WB C/L	360	TEMP ROADWAY
0010	4C	188+00	-	240+10	STAGE 5 TEMP WB C/L	275	TEMP ROADWAY
0010	4C	887+24	-	23+00	WB IH 94, RT	180	TEMP WIDENING
0010	5	685+00	-	698+06	WB IH 94	1480	MAINLINE
0010	5	699+83	-	751+79	WB IH 94	5540	MAINLINE
0010	5	753+78	-	816+61	WB IH 94	6800	MAINLINE
0010	5	818+29	-	884+92	WB IH 94	7010	MAINLINE
0010	5	886+86	-	18+20	WB IH 94	3455	MAINLINE
0010	6C	668+50	-	697+93	EB IH 94, LT	2560	MEDIAN SHOULDER
0010	6C	699+83	-	751+53	EB IH 94, LT	5290	MEDIAN SHOULDER
0010	6C	753+99	-	816+61	EB IH 94, LT	6330	MEDIAN SHOULDER
0010	6C	818+38	-	884+92	EB IH 94, LT	6560	MEDIAN SHOULDER
0010	6C	887+24	-	23+00	EB IH 94, LT	3605	MEDIAN SHOULDER
0010	6C	712+00			EB IH 94, LT	20	MAINT. XOVER
0010	6C	800+00			EB IH 94, LT	15	MAINT. XOVER
0010	6C	17+80			EB IH 94, LT	15	MAINT. XOVER
0010	UNDISTRIBUTED					4000	
TOTAL 0010						80680	

BASE AGGREGATE DENSE 1 1/4-INCH

* 305.0120							
CATEGORY	STATION	TO	STATION	LOCATION	TON	REMARKS	
0010	1B	872+50	-	885+50	WB IH 94, LT	3525	TEMP WIDENING
0010	1B	886+09	-	898+25	WB IH 94, LT	3260	TEMP WIDENING
0010	2G	668+50	-	698+61	EB IH 94, LT	6925	TEMP WIDENING
0010	2G	54+13	-	107+48	STAGE 3 TEMP EB C/L	15400	TEMP ROADWAY
0010	2G	108+08	-	172+09	STAGE 3 TEMP EB C/L	16310	TEMP ROADWAY
0010	2G	172+69	-	240+08	STAGE 3 TEMP EB C/L	15865	TEMP ROADWAY
0010	2G	886+50	-	23+25	EB IH 94, LT	7880	TEMP WIDENING
0010	3	685+00	-	697+94	EB IH 94	2455	MAINLINE
0010	3	699+70	-	751+99	EB IH 94	9675	MAINLINE
0010	3	754+00	-	816+71	EB IH 94	11580	MAINLINE
0010	3	818+38	-	885+31	EB IH 94	12715	MAINLINE
0010	3	887+24	-	18+20	EB IH 94	6570	MAINLINE
0010	4C	672+64	-	692+08	WB IH 94, RT	4505	TEMP WIDENING
0010	4C	109+00	-	171+00	STAGE 5 TEMP WB C/L	15110	TEMP ROADWAY
0010	4C	188+00	-	240+10	STAGE 5 TEMP WB C/L	12010	TEMP ROADWAY
0010	4C	887+24	-	23+00	WB IH 94, RT	7975	TEMP WIDENING
0010	5	685+00	-	698+06	WB IH 94	2465	MAINLINE
0010	5	699+83	-	751+79	WB IH 94	9645	MAINLINE
0010	5	753+78	-	816+61	WB IH 94	11655	MAINLINE
0010	5	818+29	-	884+92	WB IH 94	12425	MAINLINE
0010	5	886+86	-	18+20	WB IH 94	6390	MAINLINE
0010	6C	668+50	-	697+93	EB IH 94, LT	1975	MEDIAN SHOULDER
0010	6C	699+83	-	751+53	EB IH 94, LT	4350	MEDIAN SHOULDER
0010	6C	753+99	-	816+61	EB IH 94, LT	5180	MEDIAN SHOULDER
0010	6C	818+38	-	884+92	EB IH 94, LT	5465	MEDIAN SHOULDER
0010	6C	887+24	-	23+00	EB IH 94, LT	3025	MEDIAN SHOULDER
0010	6C	712+00		EB IH 94, LT	260	MAINT. XOVER	
0010	6C	800+00		EB IH 94, LT	165	MAINT. XOVER	
0010	6C	17+80		EB IH 94, LT	140	MAINT. XOVER	
0010	UNDISTRIBUTED					10750	
TOTAL 0010					225650		

* NOTE: SEE BRIDGE PLANS FOR ADDITIONAL QUANTITIES.

BASE AGGREGATE OPEN-GRADED

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	310.0115 CY	REMARKS
0010	1B	883+00	-	886+00	WB IH 94, LT	17	EMBANKMENT SEEPAGE
0010	1B	887+00	-	890+00	WB IH 94, LT	17	EMBANKMENT SEEPAGE
0010	2G	760+00	-	764+00	WB IH 94, RT	80	SUBGRADE SEEPAGE
0010	2G	841+00	-	850+00	WB IH 94, RT	180	SUBGRADE SEEPAGE
0010	3	754+00	-	755+00	EB IH 94, RT	17	EMBANKMENT SEEPAGE
0010	3	883+00	-	886+00	EB IH 94, RT	51	EMBANKMENT SEEPAGE
0010	3	887+00	-	890+00	EB IH 94, RT	51	EMBANKMENT SEEPAGE
0010	5	697+00	-	698+00	WB IH 94, LT	51	EMBANKMENT SEEPAGE
0010	5	815+50	-	816+50	WB IH 94, LT	51	EMBANKMENT SEEPAGE
0010	2 - 5	685+00	-	18+20	UNDISTRIBUTED	100	
TOTAL 0010						615	

SELECT CRUSHED MATERIAL

					312.0115		
CATEGORY		STATION	TO	STATION	LOCATION	CY	REMARKS
0010	1B	882+00	-	885+00	WB IH 94, LT	450	TEMP WIDENING
0010	1B	887+00	-	890+00	WB IH 94, LT	450	TEMP WIDENING
0010	2G	70+00	-	74+00	STG 3 TEMP EB C/L	600	TEMP MEDIAN RDWY
0010	2 - 5	685+00	-	18+20	UNDISTRIBUTED	700	
					TOTAL 0010	2200	

CONCRETE PAVEMENT 12-INCH

DRILLED DOWEL BARS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	415.0120 SY	REMARKS
0010	3	685+00.00	-	697+79.94	EB IH 94	3750	MAINLINE
0010	3	699+82.09	-	751+88.96	EB IH 94	15130	MAINLINE
0010	3	754+03.77	-	816+57.50	EB IH 94	18130	MAINLINE
0010	3	818+51.72	-	885+21.11	EB IH 94	19330	MAINLINE
0010	3	887+30.30	-	18+20.00	EB IH 94	9935	MAINLINE
0010	5	685+00.00	-	697+94.36	WB IH 94	3790	MAINLINE
0010	5	699+96.52	-	751+73.14	WB IH 94	15070	MAINLINE
0010	5	753+86.91	-	816+47.54	WB IH 94	18185	MAINLINE
0010	5	818+41.77	-	884+86.66	WB IH 94	19345	MAINLINE
0010	5	886+95.86	-	18+20.00	WB IH 94	9920	MAINLINE
TOTAL 0010						132585	

CATEGORY	STAGE	STATION	LOCATION	416.0620 EACH	REMARKS
0010	3	685+00	EB IH 94	16	2 LANES EB
0010	3	18+20	EB IH 94	16	2 LANES EB
0010	5	685+00	WB IH 94	16	2 LANES WB
0010	5	18+20	WB IH 94	16	2 LANES WB
TOTAL 0010				64	

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE SHOULDER RUMBLE STRIPS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
0010	3	697+79.94	-	697+97.92	EB IH 94	48	B-17-217
0010	3	699+67.09	-	699+82.09	EB IH 94	48	B-17-217
0010	3	751+88.96	-	752+03.96	EB IH 94	59	B-17-219
0010	3	753+77.22	-	754+03.77	EB IH 94	60	B-17-219
0010	3	816+57.50	-	816+72.50	EB IH 94	47	B-17-221
0010	3	818+34.66	-	818+51.72	EB IH 94	47	B-17-221
0010	3	885+21.11	-	885+36.11	EB IH 94	59	B-17-223
0010	3	887+04.80	-	887+30.30	EB IH 94	59	B-17-223
0010	5	697+94.36	-	698+09.36	WB IH 94	48	B-17-218
0010	5	699+78.54	-	699+96.52	WB IH 94	48	B-17-218
0010	5	751+73.14	-	751+98.65	WB IH 94	59	B-17-220
0010	5	753+71.91	-	753+86.91	WB IH 94	60	B-17-220
0010	5	816+47.54	-	816+64.59	WB IH 94	47	B-17-222
0010	5	818+26.77	-	818+41.77	WB IH 94	47	B-17-222
0010	5	884+86.66	-	885+12.17	WB IH 94	59	B-17-224
0010	5	886+80.86	-	886+95.86	WB IH 94	59	B-17-224
TOTAL 0010						854	

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	416.1110 LF	REMARKS
0010	6E	685+00	-	697+98	EB IH 94, RT	1295	
0010	6E	699+67	-	752+04	EB IH 94, RT	5230	
0010	6E	753+77	-	816+72	EB IH 94, RT	6275	
0010	6E	818+35	-	885+36	EB IH 94, RT	6685	
0010	6E	887+05	-	18+20	EB IH 94, RT	3435	
0010	6E	685+00	-	698+09	WB IH 94, LT	1310	
0010	6E	699+78	-	751+99	WB IH 94, LT	5215	
0010	6E	753+72	-	816+65	WB IH 94, LT	6290	
0010	6E	818+27	-	885+12	WB IH 94, LT	6695	
0010	6E	886+81	-	18+20	WB IH 94, LT	3430	
TOTAL 0010						45860	

TACK COAT

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	455.0605 GAL	REMARKS
0010	1-B	872+50	-	885+48	WB IH 94, LT	215	6-IN. TEMP WIDENING
0010	1-B	886+12	-	898+25	WB IH 94, LT	195	6-IN. TEMP WIDENING
0010	2-A	666+00	-	685+00	WB OUTSIDE SHOULDER	211	6-IN. MILL/RESURFACE
0010	2-A	758+00	-	807+00	WB OUTSIDE SHOULDER	546	6-IN. MILL/RESURFACE
0010	2-A	845+00	-	872+50	WB OUTSIDE SHOULDER	307	6-IN. MILL/RESURFACE
0010	2-A	898+25	-	23+15	WB OUTSIDE SHOULDER	320	6-IN. MILL/RESURFACE
0010	2-A	660+00	-	685+00	EB OUTSIDE SHOULDER	280	6-IN. MILL/RESURFACE
0010	2-A	18+20	-	23+35	EB OUTSIDE SHOULDER	68	6-IN. MILL/RESURFACE
0010	2-G	668+50	-	698+59	EB IH 94, LT	413	6-IN TEMP MEDIAN RDWY
0010	2-G	699+23	-	752+44	EB IH 94, LT	948	6-IN TEMP MEDIAN RDWY
0010	2-G	753+35	-	817+26	WB IH 94, RT	1017	6-IN TEMP MEDIAN RDWY
0010	2-G	817+90	-	885+00	WB IH 94, RT	999	6-IN TEMP MEDIAN RDWY
0010	2-G	887+00	-	23+25	WB IH 94, RT	503	6-IN TEMP MEDIAN RDWY
0010	3	684+65	-	685+00	EB IH 94	8	2-IN BUTT JOINT
0010	3	685+00	-	697+98	EB IH 94, RT	59	6-IN OUTSIDE SHLDR
0010	3	699+67	-	752+04	EB IH 94, RT	256	6-IN OUTSIDE SHLDR
0010	3	753+77	-	816+73	EB IH 94, RT	299	6-IN OUTSIDE SHLDR
0010	3	818+35	-	885+36	EB IH 94, RT	350	6-IN OUTSIDE SHLDR
0010	3	887+05	-	18+20	EB IH 94, RT	205	6-IN OUTSIDE SHLDR
0010	4-C	672+64	-	692+08	WB IH 94, RT	268	6-IN TEMP MEDIAN RDWY
0010	4-C	753+96	-	816+19	EB IH 94, LT	977	6-IN TEMP MEDIAN RDWY
0010	4-C	833+19	-	885+36	EB IH 94, LT	779	6-IN TEMP MEDIAN RDWY
0010	4-C	887+05	-	23+00	EB IH 94, LT	528	6-IN TEMP MEDIAN RDWY
0010	5	684+65	-	685+00	WB IH 94	8	2-IN BUTT JOINT
0010	5	685+00	-	698+09	WB IH 94, LT	59	6-IN OUTSIDE SHLDR
0010	5	699+79	-	751+99	WB IH 94, LT	248	6-IN OUTSIDE SHLDR
0010	5	753+72	-	816+65	WB IH 94, LT	297	6-IN OUTSIDE SHLDR
0010	5	818+27	-	885+12	WB IH 94, LT	318	6-IN OUTSIDE SHLDR
0010	5	886+81	-	18+20	WB IH 94, LT	171	6-IN OUTSIDE SHLDR
TOTAL 0010						10852	

HMA PAVEMENT 3 HT 58-28 H

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	460.7423 TON	REMARKS
0010	3	685+00	-	697+98	EB IH 94, RT	235	3.5-IN LOWER OUTSIDE SHLDR
0010	3	699+67	-	752+04	EB IH 94, RT	1015	3.5-IN LOWER OUTSIDE SHLDR
0010	3	753+77	-	816+73	EB IH 94, RT	1185	3.5-IN LOWER OUTSIDE SHLDR
0010	3	818+35	-	885+36	EB IH 94, RT	1390	3.5-IN LOWER OUTSIDE SHLDR
0010	3	887+05	-	18+20	EB IH 94, RT	820	3.5-IN LOWER OUTSIDE SHLDR
0010	5	685+00	-	698+09	WB IH 94, LT	235	3.5-IN LOWER OUTSIDE SHLDR
0010	5	699+79	-	751+99	WB IH 94, LT	985	3.5-IN LOWER OUTSIDE SHLDR
0010	5	753+72	-	816+65	WB IH 94, LT	1175	3.5-IN LOWER OUTSIDE SHLDR
0010	5	818+27	-	885+12	WB IH 94, LT	1260	3.5-IN LOWER OUTSIDE SHLDR
0010	5	886+81	-	18+20	WB IH 94, LT	680	3.5-IN LOWER OUTSIDE SHLDR
TOTAL 0010						8980	

3

HMA PAVEMENT 4 HT 58-34 H

						460.7444		
CATEGORY	STAGE	STATION TO	STATION	LOCATION	TON	REMARKS		
0010	3	684+65	- 685+00	EB IH 94	20	2-IN BUTT JOINT		
0010	3	685+00	- 697+98	EB IH 94, RT	170	2.5-IN UPPER OUTSIDE SHLDR		
0010	3	699+67	- 752+04	EB IH 94, RT	725	2.5-IN UPPER OUTSIDE SHLDR		
0010	3	753+77	- 816+73	EB IH 94, RT	845	2.5-IN UPPER OUTSIDE SHLDR		
0010	3	818+35	- 885+36	EB IH 94, RT	995	2.5-IN UPPER OUTSIDE SHLDR		
0010	3	887+05	- 18+20	EB IH 94, RT	585	2.5-IN UPPER OUTSIDE SHLDR		
0010	3	685+00	- 697+98	EB IH 94, LT	150	4-IN INSIDE SHOULDER		
0010	3	699+67	- 752+04	EB IH 94, LT	565	4-IN INSIDE SHOULDER		
0010	3	753+77	- 816+73	EB IH 94, LT	670	4-IN INSIDE SHOULDER		
0010	3	818+35	- 885+36	EB IH 94, LT	710	4-IN INSIDE SHOULDER		
0010	3	887+05	- 23+25	EB IH 94, LT	420	4-IN INSIDE SHOULDER		
0010	5	684+65	- 685+00	WB IH 94	20	2-IN BUTT JOINT		
0010	5	685+00	- 698+09	WB IH 94, LT	170	2.5-IN UPPER OUTSIDE SHLDR		
0010	5	699+79	- 751+99	WB IH 94, LT	705	2.5-IN UPPER OUTSIDE SHLDR		
0010	5	753+72	- 816+65	WB IH 94, LT	840	2.5-IN UPPER OUTSIDE SHLDR		
0010	5	818+27	- 885+12	WB IH 94, LT	900	2.5-IN UPPER OUTSIDE SHLDR		
0010	5	886+81	- 18+20	WB IH 94, LT	485	2.5-IN UPPER OUTSIDE SHLDR		
0010	6-C	685+00	- 698+09	WB IH 94, RT	295	4-IN INSIDE SHOULDER		
0010	6-C	699+79	- 751+99	WB IH 94, RT	735	4-IN INSIDE SHOULDER		
0010	6-C	753+72	- 816+65	WB IH 94, RT	840	4-IN INSIDE SHOULDER		
0010	6-C	818+27	- 885+12	WB IH 94, RT	900	4-IN INSIDE SHOULDER		
0010	6-C	886+81	- 23+00	WB IH 94, RT	480	4-IN INSIDE SHOULDER		
0010	6-C	692+26	- 697+98	EB IH 94, LT	210	4-IN INSIDE SHOULDER		
0010	6-C	699+67	- 705+58	EB IH 94, LT	220	4-IN INSIDE SHOULDER		
0010	6-C	745+99	- 752+04	EB IH 94, LT	115	4-IN INSIDE SHOULDER		
0010	6-C	753+77	- 756+60	EB IH 94, LT	65	4-IN INSIDE SHOULDER		
0010	6-C	810+07	- 816+73	EB IH 94, LT	275	4-IN INSIDE SHOULDER		
0010	6-C	818+35	- 824+21	EB IH 94, LT	220	4-IN INSIDE SHOULDER		
0010	6-C	17+78	- 23+25	EB IH 94, LT	105	4-IN INSIDE SHOULDER		
0010	6-C	712+00		EB IH 94, LT	85	4-IN MAINT XOVER		
0010	6-C	800+00		EB IH 94, LT	55	4-IN MAINT XOVER		
0010	6-C	17+80		EB IH 94, LT	50	4-IN MAINT XOVER		
TOTAL 0010					13625			

ASPHALTIC SURFACE

						465.0105		
CATEGORY	STAGE	STATION TO	STATION	LOCATION	TON	REMARKS		
0010		3+50	- 6+00	250th ST	130	REPLACE EXISTING ASPHALT AS NECESSARY		
0010		8+25	- 11+50	CTH K	230	REPLACE EXISTING ASPHALT AS NECESSARY		
0010		8+75	- 11+50	650th AVE	140	REPLACE EXISTING ASPHALT AS NECESSARY		
0010		4+60	- 7+30	390th ST	210	REPLACE EXISTING ASPHALT AS NECESSARY		
TOTAL 0010					710			

ASPHALTIC SURFACE TEMPORARY

						465.0125		
CATEGORY	STAGE	STATION TO	STATION	LOCATION	TON	REMARKS		
0010	1-B	872+50	- 885+48	WB IH 94, LT	1460	6-IN. TEMP WIDENING		
0010	1-B	886+12	- 898+25	WB IH 94, LT	1320	6-IN. TEMP WIDENING		
0010	2-A	666+00	- 685+00	WB OUTSIDE SHOULDER	700	6-IN. MILL/RESURFACE		
0010	2-A	758+00	- 807+00	WB OUTSIDE SHOULDER	1800	6-IN. MILL/RESURFACE		
0010	2-A	845+00	- 872+50	WB OUTSIDE SHOULDER	1015	6-IN. MILL/RESURFACE		
0010	2-A	898+25	- 23+15	WB OUTSIDE SHOULDER	1060	6-IN. MILL/RESURFACE		
0010	2-A	660+00	- 685+00	EB OUTSIDE SHOULDER	925	6-IN. MILL/RESURFACE		
0010	2-A	18+20	- 23+35	EB OUTSIDE SHOULDER	225	6-IN. MILL/RESURFACE		
0010	2-G	668+50	- 698+59	EB IH 94, LT	2810	6-IN TEMP MEDIAN RDWY		
0010	2-G	699+23	- 752+44	EB IH 94, LT	6450	6-IN TEMP MEDIAN RDWY		
0010	2-G	753+35	- 817+26	WB IH 94, RT	6915	6-IN TEMP MEDIAN RDWY		
0010	2-G	817+90	- 885+00	WB IH 94, RT	6800	6-IN TEMP MEDIAN RDWY		
0010	2-G	887+00	- 23+25	WB IH 94, RT	3425	6-IN TEMP MEDIAN RDWY		
0010	4-C	672+64	- 692+08	WB IH 94, RT	1820	6-IN TEMP MEDIAN RDWY		
0010	4-C	753+96	- 816+19	EB IH 94, LT	6650	6-IN TEMP MEDIAN RDWY		
0010	4-C	833+19	- 885+36	EB IH 94, LT	5300	6-IN TEMP MEDIAN RDWY		
0010	4-C	887+05	- 23+00	EB IH 94, LT	3600	6-IN TEMP MEDIAN RDWY		
TOTAL 0010					52275			

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ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	6D	668+50	-	697+95	EB IH 94, LT	2955	
0010	6D	699+68	-	752+03	EB IH 94, LT	5230	
0010	6D	753+78	-	816+72	EB IH 94, LT	6275	
0010	6D	818+35	-	885+36	EB IH 94, LT	6685	
0010	6D	887+05	-	23+25	EB IH 94, LT	3940	
0010	6D	672+64	-	698+09	WB IH 94, RT	2535	
0010	6D	699+79	-	751+98	WB IH 94, RT	5215	
0010	6D	753+72	-	816+64	WB IH 94, RT	6290	
0010	6D	818+27	-	885+12	WB IH 94, RT	6695	
0010	6D	886+81	-	23+15	WB IH 94, RT	3930	
0010	6E	660+00	-	685+00	EB IH 94, RT	2510	
0010	6E	18+20	-	23+35	EB IH 94, RT	515	
0010	6E	666+00	-	685+00	WB IH 94, LT	1890	
0010	6E	18+20	-	23+15	WB IH 94, LT	495	
TOTAL 0010						55160	

CULVERT PIPE TEMPORARY 12-INCH

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	520.2012 LF	REMARKS
0010	2	113+50	-	114+00	STAGE 3 TEMP EB C/L LT & RT	64	INL 21 TO RT DITCH
0010	2	198+00	-	198+50	STAGE 3 TEMP EB C/L LT & RT	68	INL 22 TO RT DITCH
0010	4	113+00	-	113+50	STAGE 5 TEMP WB C/L LT & RT	68	INL 41 TO LT DITCH
0010	4	198+50	-	199+50	STAGE 5 TEMP WB C/L LT & RT	111	INL 42 TO LT DITCH
TOTAL 0010						311	

CULVERT PIPE TEMPORARY 18-INCH

CATEGORY	STAGE	STATION TO	STATION	LOCATION	520.2018 LF	REMARKS
0010	2	683+87.3 -	17+42.4	EB IH 94, MEDIAN	200	TYPICAL TEMP MH - EXIST INLET 8' EACH OF 25 LOCATIONS
0010	2	38+78.4		STAGE 3 TEMP EB C/L, RT	36	TEMP DITCH - TEMP MH 2101
0010	2	38+80.3		STAGE 3 TEMP EB C/L, LT	18	TEMP DITCH - TEMP MH 2101
0010	2	46+79.7		STAGE 3 TEMP EB C/L, RT/LT	50	TEMP DITCH - TEMP MH 2102
0010	2	51+74.2		STAGE 3 TEMP EB C/L, RT/LT	56	TEMP DITCH - TEMP MH 2103
0010	2	65+75.1		STAGE 3 TEMP EB C/L, RT/LT	47	TEMP DITCH - TEMP MH 2104
0010	2	74+75.8		STAGE 3 TEMP EB C/L, RT/LT	51	TEMP DITCH - TEMP MH 2105
0010	2	78+59.7		STAGE 3 TEMP EB C/L, RT/LT	52	TEMP DITCH - TEMP MH 2106
0010	2	82+99.7		STAGE 3 TEMP EB C/L, RT/LT	52	TEMP DITCH - TEMP MH 2107
0010	2	88+29.2		STAGE 3 TEMP EB C/L, RT/LT	47	TEMP DITCH - TEMP MH 2108
0010	2	99+53.2		STAGE 3 TEMP EB C/L, RT/LT	47	TEMP DITCH - TEMP MH 2109
0010	2	105+85.7		STAGE 3 TEMP EB C/L, LT	23	TEMP DITCH - MH 401
0010	2	105+90.7		STAGE 3 TEMP EB C/L, RT	31	TEMP DITCH - MH 401
0010	2	117+69.8		STAGE 3 TEMP EB C/L, RT	12	TEMP DITCH - TEMP MH 2111
0010	2	127+70.9		STAGE 3 TEMP EB C/L, RT	8	TEMP DITCH - TEMP MH 2112
0010	2	134+92.8		STAGE 3 TEMP EB C/L, RT	10	TEMP DITCH - TEMP MH 2113
0010	2	143+93.7		STAGE 3 TEMP EB C/L, RT	9	TEMP DITCH - TEMP MH 2114
0010	2	161+21.2		STAGE 3 TEMP EB C/L, RT	19	TEMP DITCH - TEMP MH 2115
0010	2	169+69.4		STAGE 3 TEMP EB C/L, RT/LT	56	TEMP DITCH - TEMP MH 2116
0010	2	179+72.4		STAGE 3 TEMP EB C/L, RT/LT	53	TEMP DITCH - TEMP MH 2117
0010	2	185+69.0		STAGE 3 TEMP EB C/L, RT/LT	54	TEMP DITCH - TEMP MH 2118
0010	2	195+74.3		STAGE 3 TEMP EB C/L, RT/LT	50	TEMP DITCH - TEMP MH 2119
0010	2	208+79.7		STAGE 3 TEMP EB C/L, RT	8	TEMP DITCH - TEMP MH 2120
0010	2	215+09.1		STAGE 3 TEMP EB C/L, RT	10	TEMP DITCH - TEMP MH 2121
0010	2	230+74.7		STAGE 3 TEMP EB C/L, RT	6	TEMP DITCH - TEMP MH 2123
0010	2	253+75.2		STAGE 3 TEMP EB C/L, RT	6	TEMP DITCH - TEMP MH 2127
0010	2	266+34.0		STAGE 3 TEMP EB C/L, RT	10	TEMP DITCH - TEMP MH 2128
0010	2	274+84.4		STAGE 3 TEMP EB C/L, RT	42	TEMP DITCH - TEMP MH 2129
0010	4	38+82.1		STAGE 5 TEMP WB C/L, RT	16	TEMP DITCH - TEMP MH 2101
0010	4	117+67.7		STAGE 5 TEMP WB C/L, LT	12	TEMP DITCH - TEMP MH 2111
0010	4	127+68.5		STAGE 5 TEMP WB C/L, LT	10	TEMP DITCH - TEMP MH 2112
0010	4	134+90.4		STAGE 5 TEMP WB C/L, LT	7	TEMP DITCH - TEMP MH 2113
0010	4	143+91.4		STAGE 5 TEMP WB C/L, LT	6	TEMP DITCH - TEMP MH 2114
0010	4	161+19.1		STAGE 5 TEMP WB C/L, LT	12	TEMP DITCH - TEMP MH 2115
0010	4	208+75.1		STAGE 5 TEMP WB C/L, LT	11	TEMP DITCH - TEMP MH 2120
0010	4	215+04.6		STAGE 5 TEMP WB C/L, LT	10	TEMP DITCH - TEMP MH 2121
0010	4	230+70.2		STAGE 5 TEMP WB C/L, LT	3	TEMP DITCH - TEMP MH 2123
0010	4	247+97.8		STAGE 5 TEMP WB C/L, LT	7	TEMP DITCH - TEMP MH 2126
0010	4	253+71.3		STAGE 5 TEMP WB C/L, LT	10	TEMP DITCH - TEMP MH 2127
0010	4	266+42.2		STAGE 5 TEMP WB C/L, LT	9	TEMP DITCH - TEMP MH 2128
0010	4	274+97.1		STAGE 5 TEMP WB C/L, LT	43	TEMP DITCH - TEMP MH 2129
TOTAL 0010					1219	

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CONCRETE COLLARS FOR PIPE

CATEGORY	STATION	LOCATION	520.8000 EACH	REMARKS
0010	806+52	EB IH 94, 68' RT	1	60" RCCP EXTENSION
0010	911+82	EB IH 94, 47' RT	1	24" RCCP EXTENSION
0010	806+94	WB IH 94, 76' LT	1	60" RCCP EXTENSION
TOTAL 0010			3	

CLEANING CULVERT PIPES

CATEGORY	STATION	LOCATION	520.8700 EACH	REMARKS
0010	773+00	EB IH 94	1	18" X 74' CMCP
0010	854+07	WB IH 94	1	12" X 82' LINED CMCP
0010	899+05	EB/WB IH 94	1	20" X 166' LINED CMCP
0010	914+34	EB/WB IH 94	1	28" X 230' LINED CMCP
TOTAL 0010			4	

24-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 24-INCH 521.0124 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH 521.1024 EACH	STEEL THICKNESS INCHES	REMARKS
0010	899+05	EB IH 94, 48' RT	26	1	0.064	EXTEND EXISTING
0010	720+51	WB IH 94, 58' LT	6	1	0.064	EXTEND EXISTING
0010	723+55	WB IH 94, 55' LT	6	1	0.064	EXTEND EXISTING
0010	727+69	WB IH 94, 64' LT	6	1	0.064	EXTEND EXISTING
0010	788+95	WB IH 94, 45' LT	12	1	0.064	EXTEND EXISTING
TOTAL 0010			56	5		

18-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 18-INCH 521.0118 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH 521.1018 EACH	STEEL THICKNESS INCHES	REMARKS
0010	691+98	EB IH 94, 78' RT	8	1	0.064	EXTEND EXISTING
0010	696+94	EB IH 94, 68' RT	6	1	0.064	EXTEND EXISTING
0010	773+00	EB IH 94, 50' RT	6	1	0.064	EXTEND EXISTING
0010	876+05	EB IH 94, 48' RT	14	1	0.064	EXTEND EXISTING
0010	879+89	EB IH 94, 57' RT	26	1	0.064	EXTEND EXISTING
0010	744+88	WB IH 94, 58' LT	8	1	0.064	EXTEND EXISTING
0010	780+01	WB IH 94, 43' LT	8	1	0.064	EXTEND EXISTING
0010	830+99	WB IH 94, 70' LT	6	1	0.064	EXTEND EXISTING
0010	893+06	WB IH 94, 65' LT	20	1	0.064	EXTEND EXISTING
TOTAL 0010			102	9		

30-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 30-INCH 521.0130 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH 521.1030 EACH	STEEL THICKNESS INCHES	REMARKS
0010	747+63	EB IH 94, 70' RT	12	1	0.079	EXTEND EXISTING
0010	814+99	EB IH 94, 70' RT	12	1	0.079	EXTEND EXISTING
0010	747+83	WB IH 94, 71' LT	14	1	0.079	EXTEND EXISTING
0010	814+99	WB IH 94, 70' LT	8	1	0.079	EXTEND EXISTING
TOTAL 0010			46	4		

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36-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 36-INCH 521.0136 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH 521.1036 EACH	STEEL THICKNESS INCHES	REMARKS
0010	902+59	EB IH 94, 62' RT	12	1	0.079	EXTEND EXISTING
0010	686+58	WB IH 94, 75' LT	6	1	0.079	EXTEND EXISTING
TOTAL 0010			18	2		

42-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 42-INCH 521.0142 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 42-INCH 521.1042 EACH	STEEL THICKNESS INCHES	REMARKS
0010	891+06	EB IH 94, 43' RT	32	1	0.109	EXTEND EXISTING
0010	891+04	WB IH 94, 63' LT	20	1	0.109	EXTEND EXISTING
TOTAL 0010			52	2		

48-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 48-INCH 521.0148 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 48-INCH 521.1048 EACH	STEEL THICKNESS INCHES	REMARKS
0010	697+51	WB IH 94, 81, LT	12	1	0.109	EXTEND EXISTING
TOTAL 0010			12	1		

54-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	CULVERT PIPE CORRUGATED STEEL 54-INCH 521.0154 LF	APRON ENDWALLS FOR CULVERT PIPE STEEL 54-INCH 521.1054 EACH	STEEL THICKNESS INCHES	REMARKS
0010	761+73	EB IH 94, 66' RT	6	1	0.109	EXTEND EXISTING
TOTAL 0010			6	1		

72-INCH STEEL PIPE EXTENSIONS

CATEGORY	STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE STEEL 72-INCH 521.1072 EACH	PIPE STRUCTURAL PLATE 72-INCH 527.0172 LF	STEEL THICKNESS INCHES	REMARKS
0010	881+35	EB IH 94, 68' RT	1	34	0.10	EXTEND EXISTING
0010	881+36	WB IH 94, 84' LT	1	26	0.10	EXTEND EXISTING
TOTAL 0010			2	60		

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24-INCH CONCRETE PIPE

CATEGORY	STAGE	STATION	LOCATION	CULVERT PIPE	APRON ENDWALLS	STORM SEWER	BORE AND JACK	JOINT TIES	REMARKS
				REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	PIPE REINFORCED CONCRETE CLASS III 24-INCH 608.0324 LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH SPV.0090.02 LF		
0010	2	751+39	WB IH 94	---	---	---	96	6	FROM MH 401 TO LT SLOPE
0010	3	911+82	EB IH 94, 47' RT	8	1	---	---	2	EXTEND EXISTING
0010	5	751+62	WB IH 94, 58' LT	---	1	26	---	6	EXTEND PIPE FROM MH 401
0010	5	887+50	WB IH 94	---	1	108	---	6	MH 402 TO LT DITCH
TOTAL 0010				8	3	134	96		

30-INCH CONCRETE PIPE

CATEGORY	STATION	LOCATION	CULVERT PIPE	APRON ENDWALLS	JOINT TIES	REMARKS
			REINFORCED CONCRETE CLASS III 30-INCH 522.0130 LF	FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 522.1030 EACH		
0010	886+53	EB/WB IH 94	208	2	12	INLET END OF AEW AT STA. 4+76 390th ST, 31' RT DISCH END OF AEW AT STA. 6+96 390th ST, 31' RT
TOTAL 0010			208	2		

60-INCH CONCRETE PIPE

CATEGORY	STATION	LOCATION	CULVERT PIPE	APRON ENDWALLS	JOINT TIES	REMARKS
			REINFORCED CONCRETE CLASS III 60-INCH 522.0160 LF	FOR CULVERT PIPE REINFORCED CONCRETE 60-INCH 522.1060 EACH		
0010	806+57	EB IH 94, 68' RT	18	1	6	EXTEND EXISTING
0010	806+94	WB IH 94, 76' LT	6	1	2	EXTEND EXISTING
TOTAL 0010			24	2		

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CONCRETE BARRIER TEMPORARY PRECAST

						CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF
CATEGORY	STAGE	STATION	TO	STATION	LOCATION		
0010	2-E	873+00	-	895+00	WB IH 94, 36'-67' LT	2200	2200
0010	2-E	681+00	-	698+41	WB IH 94, 4' RT	1740	1740
0010	2-E	703+75	-	752+31	WB IH 94, 4' RT	4860	4860
0010	2-E	753+48	-	816+92	WB IH 94, 4' RT - 5' LT	6345	6345
0010	2-E	820+90	-	886+50	WB IH 94, 4' RT - 27' LT	6560	6560
0010	2-E	885+00	-	27+00	WB IH 94, 37' LT - 5' LT	4480	4480
0010	2-F	681+00	-	694+05	EB IH 94, 4' LT	1305	1305
0010	2-F	699+37	-	752+30	EB IH 94, 4' LT	5290	5290
0010	2-F	753+46	-	814+25	EB IH 94, 4' LT	6055	6055
0010	2-F	818+06	-	882+33	EB IH 94, 4' LT	6420	6420
0010	2-F	886+71	-	17+00	EB IH 94, 4' LT	3350	3350
0010	2-H	35+00	-	118+70	STAGE 3 TEMP EB C/L, 15' LT	8340	8340
0010	2-H	158+85	-	204+75	STAGE 3 TEMP EB C/L, 15' LT	4600	4600
0010	2-H	273+00	-	281+12	STAGE 3 TEMP EB C/L, 15' LT	815	815
0010	2-H	36+60	-	240+23	STAGE 3 TEMP EB C/L, 15' RT	20365	20365
0010	2-H	241+40	-	277+00	STAGE 3 TEMP EB C/L, 15' RT	3560	3560
0010	WINTER	681+00	-	23+25	EB IH 94, 4' LT	24525	24525
0010	WINTER	758+00	-	807+00	WB IH 94, 4' RT	---	4915
0010	WINTER	845+00	-	883+00	WB IH 94, 4' RT	---	3800
0010	WINTER	889+00	-	17+00	WB IH 94, 4' RT	---	3100
0010	WINTER	873+00	-	885+23	WB IH 94, 36' RT	---	1235
0010	WINTER	886+40	-	895+00	WB IH 94, 36' RT	---	860
0010	4-B	759+00	-	808+50	EB IH 94, 5' RT	---	4920
0010	4-B	847+00	-	23+25	EB IH 94, 5'-18' RT	---	7940
0010	4-D	32+00	-	47+00	STAGE 5 TEMP WB C/L, 15' RT	1500	1500
0010	4-D	37+00	-	47+00	STAGE 5 TEMP WB C/L, 15' LT	1000	1000
0010	4-D	66+00	-	69+00	STAGE 5 TEMP WB C/L, VAR. LT	---	320
0010	4-D	92+00	-	95+00	STAGE 5 TEMP WB C/L, VAR. LT	---	320
0010	4-D	109+00	-	117+00	STAGE 5 TEMP WB C/L, 15' RT	800	800
0010	4-D	109+00	-	171+00	STAGE 5 TEMP WB C/L, 15' LT	6200	6200
0010	4-D	158+75	-	171+00	STAGE 5 TEMP WB C/L, 15' RT	1225	1225
0010	4-D	180+00	-	183+00	STAGE 5 TEMP WB C/L, VAR. LT	---	320
0010	4-D	188+00	-	204+00	STAGE 5 TEMP WB C/L, 15' RT	1600	1600
0010	4-D	188+00	-	240+10	STAGE 5 TEMP WB C/L, 15' LT	5210	5210
0010	4-D	241+79	-	277+50	STAGE 5 TEMP WB C/L, 15' LT	3570	3570
0010	6-B	659+00	-	681+00	EB IH 94, 5' RT	2215	2215
0010	6-B	681+00	-	765+00	EB IH 94, 5' RT	---	8400
0010	6-B	802+43	-	853+08	EB IH 94, 5' RT	---	5075
0010	6-B	874+60	-	898+05	EB IH 94, 5' RT	---	2345
0010	6-B	671+00	-	27+00	WB IH 94, 5' LT	25900	25900
0010		3+25	-	6+25	250th ST, LT & RT	600	600
0010		8+35	-	11+35	CTH K, LT & RT	600	600
0010		8+75	-	11+75	650th AVE, LT & RT	600	600
0010		4+50	-	7+50	390th ST, LT & RT	600	600
TOTAL 0010						162430	205980

RIPRAP HEAVY AND GEOTEXTILE TYPE HR

CATEGORY	STATION	TO	STATION	LOCATION	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE TYPE HR 645.0120 SY	REMARKS
0010	686+58			EB IH 94, 81' RT	10	27	
0010	697+98			EB IH 94, 77' RT	14	35	
0010	744+60	-	746+70	EB IH 94, RT	310	570	
0010	772+85	-	776+25	EB IH 94, RT	500	920	
0010	824+80	-	826+00	EB IH 94, RT	185	345	
0010	859+90	-	861+85	EB IH 94, RT	300	545	
0010	880+65	-	882+20	EB IH 94, RT	260	480	
0010	733+25			WB IH 94, 67' LT	10	27	
0010	747+82			WB IH 94, 88' LT	8	22	
0010	762+45			WB IH 94, 76' LT	17	41	
0010	806+97			WB IH 94, 90' LT	20	47	
0010	814+99			WB IH 94, 80' LT	8	22	
0010	879+75	-	882+60	WB IH 94, LT	440	810	
0010	891+04			WB IH 94, 86' LT	12	32	
0010	902+07			WB IH 94, 92' LT	10	27	
0010	914+50			WB IH 94, 98' LT	10	27	
0010	11+53			CTH K, 37' LT	8	22	
0010	11+44			650th AVE, 23' RT	10	27	
0010	6+96			390th ST, 31' RT	8	22	
TOTAL 0010					2140	4048	

RIPRAP LIGHT AND GEOTEXTILE TYPE R

CATEGORY	STATION	TO	STATION	LOCATION	RIPRAP LIGHT 606.0100 CY	GEOTEXTILE TYPE R 645.0130 SY	REMARKS
0010	691+98			EB IH 94, 86' RT	2	10	
0010	696+94			EB IH 94, 74' RT	2	10	
0010	753+65	-	754+10	EB IH 94, RT	25	84	
0010	720+55			WB IH 94, 65' LT	3	13	
0010	723+55			WB IH 94, 64' LT	3	13	
0010	727+67			WB IH 94, 70' LT	3	13	
0010	751+74			WB IH 94, 88' LT	3	13	
0010	899+04			WB IH 94, 64' LT	3	13	
0010	911+54			WB IH 94, 86' LT	3	13	
TOTAL 0010					47	182	

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18-INCH CONCRETE PIPE

CATEGORY	STATION TO		STATION	LOCATION	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH 608.0418	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH 522.1018	JOINT TIES EACH	REMARKS
					LF	EACH		
0010	8+92	-	9+10	650th AVE, LT	30	1	6	LT DITCH TO MH 401
0010	8+96	-	9+10	650th AVE, RT	20	1	6	RT DITCH TO MH 401
TOTAL 0010					50	2		

19X30-INCH CONCRETE PIPE

CATEGORY	STATION TO		STATION	LOCATION	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH 610.0419	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH 523.0519	JOINT TIES EACH	REMARKS
					LF	EACH		
0010	9+10	-	11+14	650th AVE, RT	204	---	---	MH 401 TO MH 402
0010	11+14	-	11+44	650th AVE, RT	28	1	6	MH 402 TO RT DITCH
TOTAL 0010					232	1		

24X38-INCH CONCRETE PIPE

CATEGORY	STATION TO		STATION	LOCATION	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 24X38-INCH 610.0424	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24X38-INCH 523.0524	JOINT TIES EACH	REMARKS
					LF	EACH		
0010	8+61	-	9+74	CTH K, LT/RT	118	1	6	LT DITCH TO MH 501
0010	9+74	-	11+53	CTH K, RT/LT	182	1	6	MH 501 TO LT DITCH
TOTAL 0010					300	2		

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RECONSTRUCTING INLETS

CATEGORY	STAGE	STATION	LOCATION	611.0430 EACH	INLET NO.	INLET TYPE	EXIST GRATE ELEV	FINISHED GRATE ELEV	REMARKS
0010	6	696+94	EB IH 94, 40.3' LT	1	103	MEDIAN 2 GRATE	934.44	937.20	SINGLE SLOPE
0010	6	710+93	EB IH 94, 45.6' LT	1	104	MEDIAN 1 GRATE	908.52	910.80	SINGLE SLOPE
0010	6	744+67	EB IH 94, 55.7' LT	1	109	MEDIAN 1 GRATE	912.62	914.60	SINGLE SLOPE
0010	6	806+51	EB IH 94, 39.2' LT	1	115	MEDIAN 1 GRATE	911.80	914.80	SINGLE SLOPE
0010	6	815+00	EB IH 94, 53.0' LT	1	116	MEDIAN 2 GRATE	901.39	904.30	SINGLE SLOPE
0010	6	840+77	EB IH 94, 46.1' LT	1	119	MEDIAN 2 GRATE	885.63	887.50	SINGLE SLOPE
0010	6	880+05	EB IH 94, 34.3' LT	1	124	MEDIAN 2 GRATE	875.92	878.50	SINGLE SLOPE
0010	6	893+06	EB IH 94, 34.6' LT	1	126	MEDIAN 2 GRATE	878.77	883.70	SINGLE SLOPE
0010	6	899+05	EB IH 94, 30.0' LT	1	127	MEDIAN 2 GRATE	879.55	883.00	SINGLE SLOPE
TOTAL 0010				9					

INLET COVERS TYPE C

CATEGORY	STATION	LOCATION	611.0612 EACH	REMARKS
0010	751+00	EB IH 94, 47.8' LT	1	MH 401
0010	887+50	WB IH 94, 28.0' RT	1	MH 402
TOTAL 0010			2	

MANHOLES 4-FT DIAMETER

CATEGORY	NO.	STATION	LOCATION	611.2004 EACH	DEPTH FEET	REMARKS
0010	401	751+00	EB IH 94, 47.8' LT	1	7.67 STAGE 2-5	SEE CONST. DETAILS
				---	3.67 STAGE 6	SEE CONST. DETAILS
0010	402	887+50	WB IH 94, 28.0' RT	1	4.17 STAGE 5	SEE CONST. DETAILS
TOTAL 0010				2		

MANHOLE COVERS TYPE L

CATEGORY	STATION	LOCATION	611.0545 EACH	NO.
0010	9+74.25	CTH K, 18.0' RT	1	501
0010	9+10	650th AVE, 5' RT	1	502
0010	11+14	650th AVE, 5' RT	1	503
TOTAL 0010			3	

MANHOLES 5-FT DIAMETER

CATEGORY	NO.	STATION	LOCATION	611.2005 EACH	DEPTH FEET	REMARKS
0010	501	9+74.25	CTH K, 18.0' RT	1	3.67	SEE CONST. DETAILS
0010	502	9+10	650th AVE, 5.0' RT	1	3.80	SEE CONST. DETAILS
0010	503	11+14	650th AVE, 5.0' RT	1	3.12	SEE CONST. DETAILS
TOTAL 0010				3		

MEDIAN INLETS

CATEGORY	STAGE	INLET NO.	STATION	LOCATION	INLETS MEDIAN 2 GRATE 611.3902 EACH	INLET COVERS TYPE MS 611.0642 EACH	GRATE ELEV	INVERT ELEV	DEPTH FT	REMARKS
0010	6	323	876+04	EB IH 94, 30.5' LT	1	2	876.90	874.65	2.5	2 DIFFERENT SLOPES, REPLACES INL 123
TOTAL 0010					1	2				

3

PIPE UNDERDRAIN 6-INCH

		612.0106							
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS		
0010	1B	883+00	-	886+00	WB IH 94, LT	300	EMBANKMENT SEEPAGE		
0010	1B	887+00	-	890+00	WB IH 94, LT	300	EMBANKMENT SEEPAGE		
0010	2G	760+00	-	764+00	WB IH 94, RT	400	SUBGRADE SEEPAGE		
0010	2G	841+00	-	850+00	WB IH 94, RT	900	SUBGRADE SEEPAGE		
0010	3	754+00	-	755+00	EB IH 94, RT	100	EMBANKMENT SEEPAGE		
0010	3	883+00	-	886+00	EB IH 94, RT	300	EMBANKMENT SEEPAGE		
0010	3	887+00	-	890+00	EB IH 94, RT	300	EMBANKMENT SEEPAGE		
0010	5	697+00	-	698+00	WB IH 94, LT	100	EMBANKMENT SEEPAGE		
0010	5	815+50	-	816+50	WB IH 94, LT	100	EMBANKMENT SEEPAGE		
0010	2 - 5	685+00	-	18+20	UNDISTRIBUTED	500			
TOTAL 0010						3300			

PIPE UNDERDRAIN UNPERFORATED 6-INCH

		612.0206							
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS		
0010	1B	883+00	-	886+00	WB IH 94, LT	100	EMBANKMENT SEEPAGE		
0010	1B	887+00	-	890+00	WB IH 94, LT	100	EMBANKMENT SEEPAGE		
0010	2G	760+00	-	764+00	WB IH 94, RT	50	SUBGRADE SEEPAGE		
0010	2G	841+00	-	850+00	WB IH 94, RT	50	SUBGRADE SEEPAGE		
0010	3	754+00	-	755+00	EB IH 94, RT	100	EMBANKMENT SEEPAGE		
0010	3	883+00	-	886+00	EB IH 94, RT	100	EMBANKMENT SEEPAGE		
0010	3	887+00	-	890+00	EB IH 94, RT	100	EMBANKMENT SEEPAGE		
0010	5	697+00	-	698+00	WB IH 94, LT	100	EMBANKMENT SEEPAGE		
0010	5	815+50	-	816+50	WB IH 94, LT	100	EMBANKMENT SEEPAGE		
0010	2 - 5	685+00	-	18+20	UNDISTRIBUTED	200			
TOTAL 0010						1000			

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MEDIAN CABLE BARRIER

						CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH		
CATEGORY	STATION	TO	STATION	LOCATION				REMARKS	
0100	703+00	-	711+70	EB IH 94, 15' LT	815	2	OFFSET VARIES BEHIND GUARDRAIL		
0100	800+30	-	813+00	EB IH 94, 15' LT	1210	2	OFFSET VARIES BEHIND GUARDRAIL		
0100	888+50	-	17+50	EB IH 94, 15' LT	3160	2			
0100	712+30	-	751+00	WB IH 94, 15' RT	3810	2	OFFSET VARIES BEHIND GUARDRAIL		
0100	755+86	-	799+70	WB IH 94, 15' RT	4340	2			
0100	823+38	-	883+50	WB IH 94, 15' RT	5965	2			
TOTAL 0100						19300	12		

CRASH CUSHIONS TEMPORARY											
CATEGORY	STAGE	STATION	LOCATION	614.0905 EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	
0010	2E	249+75	STAGE 3 TEMP WB C/L LT	1	2	OM-3R (W05-58R)	TL-3	UNIDIRECTIONAL	L	TEMP CONC BARRIER	
0010	2E	711+25	WB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2E	712+25	WB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2E	799+65	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2E	800+65	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2E	868+90	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2E	869+90	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2E	27+00	WB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	2F	681+00	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	2F	712+25	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	2F	800+65	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	2F	869+90	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	2H	35+00	STAGE 3 TEMP EB C/L LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	2H	36+50	STAGE 3 TEMP EB C/L RT	1	2	OM-3R (W05-58R)	TL-3	UNIDIRECTIONAL	L	TEMP CONC BARRIER	
0010	2H	66+25	STAGE 3 TEMP EB C/L LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	2H	67+25	STAGE 3 TEMP EB C/L LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	WINTER	681+00	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	WINTER	711+25	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	WINTER	712+25	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	WINTER	800+65	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	WINTER	869+90	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	WINTER	17+00	WB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	4B	799+65	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	4B	800+65	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	4B	868+90	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	4B	869+90	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	4D	66+25	STAGE 5 TEMP WB C/L RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	4D	67+25	STAGE 5 TEMP WB C/L RT	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	L & R	TEMP CONC BARRIER	
0010	4D	277+50	STAGE 5 TEMP WB C/L LT	1	2	OM-3R (W05-58R)	TL-3	UNIDIRECTIONAL	L	TEMP CONC BARRIER	
0010	6A	659+00	EB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6A	712+25	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6A	800+65	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6A	869+90	EB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6B	711+25	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6B	799+65	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6B	868+90	WB IH 94 LT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
0010	6B	27+00	WB IH 94 RT	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMP CONC BARRIER	
TOTAL 0010				37							

SALVAGED GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED RAIL 614.0920	SALVAGED GUARDRAIL END TREATMENTS 614.0925	REMARKS
					LF	EACH	
0010	684+82	-	698+27	EB IH 94, RT	1350	--	
0010	693+80	-	698+32	EB IH 94, LT	453	1	
0010	707+70	-	711+27	EB IH 94, RT	307	1	
0010	742+40	-	752+48	EB IH 94, RT	958	1	
0010	747+90	-	752+30	EB IH 94, LT	390	1	
0010	772+74	-	778+42	EB IH 94, RT	518	1	
0010	800+61	-	817+04	EB IH 94, RT	1604	1	
0010	813+96	-	817+01	EB IH 94, LT	266	1	
0010	818+09	-	827+61	EB IH 94, RT	952	--	
0010	838+22	-	841+18	EB IH 94, RT	246	1	
0010	857+75	-	861+95	EB IH 94, RT	370	1	
0010	876+89	-	885+72	EB IH 94, RT	833	1	
0010	882+03	-	885+55	EB IH 94, LT	303	1	
0010	20+95	-	23+28	EB IH 94, LT	183	1	
0010	695+92	-	698+46	WB IH 94, LT	255	--	
0010	699+50	-	702+28	WB IH 94, LT	228	1	
0010	699+46	-	703+99	WB IH 94, RT	403	1	
0010	710+26	-	714+45	WB IH 94, LT	370	1	
0010	741+04	-	752+15	WB IH 94, LT	1110	--	
0010	753+30	-	766+13	WB IH 94, LT	1246	1	
0010	753+48	-	756+64	WB IH 94, RT	266	1	
0010	775+75	-	781+54	WB IH 94, LT	530	1	
0010	804+74	-	816+89	WB IH 94, LT	1200	--	
0010	817+93	-	831+09	WB IH 94, LT	1266	1	
0010	817+97	-	821+13	WB IH 94, RT	266	1	
0010	840+24	-	844+30	WB IH 94, LT	355	1	
0010	860+07	-	865+38	WB IH 94, LT	480	1	
0010	879+69	-	885+24	WB IH 94, LT	555	--	
0010	886+40	-	888+92	WB IH 94, LT	202	1	
0010	886+56	-	889+71	WB IH 94, RT	265	1	
0010	4+03	-	5+23	390th ST, LT	75	1	
0010	4+11	-	5+07	390th ST, RT	50	1	
0010	6+76	-	7+47	390th ST, RT	25	1	
0010	6+92	-	7+63	390th ST, LT	25	1	
TOTAL 0010					17905	28	

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MGS GUARDRAIL 3 AND 3K								
							MGS GUARDRAIL 3 614.2300 LF	MGS GUARDRAIL 3 K 614.2330 LF
CATEGORY	STAGE	STATION	TO	STATION	LOCATION			REMARKS
0010	3	684+82	-	697+57	EB IH 94, RT	1275	--	
0010	6	693+39	-	697+64	EB IH 94, LT	425	--	
0010	3	699+69	-	701+19	EB IH 94, RT	150	--	
0010	6	699+76	-	705+26	EB IH 94, LT	550	--	
0010	3	707+53	-	713+28	EB IH 94, RT	575	--	
0010	3	739+12	-	751+87	EB IH 94, RT	1275	--	
0010	6	747+12	-	751+62	EB IH 94, LT	450	--	
0010	6	753+78	-	756+28	EB IH 94, LT	250	--	
0010	3	754+05	-	758+55	EB IH 94, RT	450	--	
0010	3	771+53	-	775+03	EB IH 94, RT	350	--	
0010	3	775+03	-	778+53	EB IH 94, RT	--	350	C-17-17
0010	3	798+49	-	816+38	EB IH 94, RT	1800	--	
0010	6	811+20	-	816+34	EB IH 94, LT	525	--	
0010	6	818+39	-	823+89	EB IH 94, LT	550	--	
0010	3	818+44	-	828+19	EB IH 94, RT	975	--	
0010	3	836+53	-	841+53	EB IH 94, RT	500	--	
0010	3	857+53	-	860+53	EB IH 94, RT	300	--	
0010	3	860+53	-	862+53	EB IH 94, RT	--	200	C-17-19
0010	3	874+69	-	885+19	EB IH 94, RT	1050	--	
0010	6	879+44	-	884+94	EB IH 94, LT	550	--	
0010	6	887+06	-	889+56	EB IH 94, LT	250	--	
0010	3	887+30	-	898+55	EB IH 94, RT	1125	--	
0010	6	18+91	-	22+91	EB IH 94, LT	400	--	
0010	5	684+58	-	698+08	WB IH 94, LT	1350	--	
0010	6	692+51	-	698+01	WB IH 94, RT	550	--	
0010	6	700+13	-	705+38	WB IH 94, RT	525	--	
0010	5	700+20	-	710+70	WB IH 94, LT	1050	--	
0010	5	710+70	-	712+20	WB IH 94, LT	--	150	C-17-12
0010	5	712+20	-	715+70	WB IH 94, LT	350	--	
0010	5	739+98	-	751+73	WB IH 94, LT	1175	--	
0010	6	749+48	-	751+98	WB IH 94, RT	250	--	
0010	5	753+88	-	766+75	WB IH 94, LT	1300	--	
0010	5	774+97	-	779+22	WB IH 94, LT	--	425	C-17-17
0010	5	779+22	-	782+47	WB IH 94, LT	325	--	
0010	5	803+66	-	816+56	WB IH 94, LT	1275	--	
0010	6	810+96	-	816+61	WB IH 94, RT	550	--	
0010	5	818+61	-	831+11	WB IH 94, LT	1250	--	
0010	6	818+66	-	826+16	WB IH 94, RT	750	--	
0010	5	838+97	-	845+97	WB IH 94, LT	700	--	
0010	5	859+97	-	866+47	WB IH 94, LT	650	--	
0010	5	878+12	-	884+87	WB IH 94, LT	675	--	
0010	6	882+61	-	885+11	WB IH 94, RT	250	--	
0010	5	886+99	-	894+99	WB IH 94, LT	800	--	
0010	6	887+23	-	893+98	WB IH 94, RT	675	--	
TOTAL 0010						28225	1125	

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MGS THRIE BEAM TRANSITION								
							614.2500 LF	
CATEGORY	STAGE	STATION	TO	STATION	LOCATION			REMARKS
0010	3	697+57	-	697+96	EB IH 94, 36' RT	39		B-17-217
0010	6	697+64	-	698+03	EB IH 94, 24' LT	39		B-17-217
0010	3	699+61	-	699+69	EB IH 94, 36' RT	8		B-17-217
0010	6	699+68	-	699+76	EB IH 94, 24' LT	8		B-17-217
0010	6	751+62	-	752+01	EB IH 94, 12' LT	39		B-17-219
0010	3	751+87	-	752+26	EB IH 94, 48' RT	39		B-17-219
0010	6	753+70	-	753+78	EB IH 94, 12' LT	8		B-17-219
0010	3	753+97	-	754+05	EB IH 94, 48' RT	8		B-17-219
0010	6	816+34	-	816+73	EB IH 94, 24' LT	39		B-17-221
0010	3	816+38	-	816+77	EB IH 94, 36' RT	39		B-17-221
0010	6	818+31	-	818+39	EB IH 94, 24' LT	8		B-17-221
0010	3	818+36	-	818+44	EB IH 94, 36' RT	8		B-17-221
0010	6	884+94	-	885+33	EB IH 94, 12' LT	39		B-17-223
0010	3	885+19	-	885+58	EB IH 94, 48' RT	39		B-17-223
0010	6	886+98	-	887+06	EB IH 94, 12' LT	8		B-17-223
0010	3	887+22	-	887+30	EB IH 94, 48' RT	8		B-17-223
0010	6	22+91	-	23+30	EB IH 94, 12' LT	39		EXISTING STRUCTURE
0010	6	698+01	-	698+09	WB IH 94, 24' RT	8		B-17-218
0010	5	698+08	-	698+16	WB IH 94, 36' LT	8		B-17-218
0010	6	699+74	-	700+13	WB IH 94, 24' RT	39		B-17-218
0010	5	699+81	-	700+20	WB IH 94, 36' LT	39		B-17-218
0010	5	751+73	-	751+81	WB IH 94, 48' LT	8		B-17-220
0010	6	751+98	-	752+06	WB IH 94, 12' RT	8		B-17-220
0010	5	753+49	-	753+88	WB IH 94, 48' LT	39		B-17-220
0010	6	753+75	-	754+14	WB IH 94, 12' RT	39		B-17-220
0010	5	816+56	-	816+64	WB IH 94, 36' LT	8		B-17-222
0010	6	816+61	-	816+69	WB IH 94, 24' RT	8		B-17-222
0010	5	818+22	-	818+61	WB IH 94, 36' LT	39		B-17-222
0010	6	818+27	-	818+66	WB IH 94, 24' RT	39		B-17-222
0010	5	884+87	-	884+95	WB IH 94, 48' LT	8		B-17-224
0010	6	885+11	-	885+19	WB IH 94, 12' RT	8		B-17-224
0010	5	886+60	-	886+99	WB IH 94, 48' LT	39		B-17-224
0010	6	886+84	-	887+23	WB IH 94, 12' RT	39		B-17-224
TOTAL 0010						791		

MGS GUARDRAIL TERMINAL EAT

MGS GUARDRAIL TERMINAL TYPE 2

CATEGORY	STAGE	STATION	LOCATION	614.2610 EACH	REMARKS
0010	6	692+86	EB IH 94, 8' LT	1	
0010	3	707+00	EB IH 94, 36' RT	1	
0010	3	738+59	EB IH 94, 36' RT	1	
0010	6	746+59	EB IH 94, 8' LT	1	
0010	3	771+00	EB IH 94, 36' RT	1	
0010	3	797+96	EB IH 94, 36' RT	1	
0010	6	810+67	EB IH 94, 8' LT	1	
0010	3	836+00	EB IH 94, 36' RT	1	
0010	3	857+00	EB IH 94, 36' RT	1	
0010	3	874+16	EB IH 94, 36' RT	1	
0010	6	878+91	EB IH 94, 8' LT	1	
0010	6	18+38	EB IH 94, 8' LT	1	
0010	6	705+91	WB IH 94, 8' RT	1	
0010	5	716+23	WB IH 94, 36' LT	1	
0010	6	760+17	WB IH 94, 8' RT	1	
0010	5	767+28	WB IH 94, 36' LT	1	
0010	5	783+00	WB IH 94, 36' LT	1	
0010	6	826+69	WB IH 94, 8' RT	1	
0010	5	831+64	WB IH 94, 36' LT	1	
0010	5	846+50	WB IH 94, 36' LT	1	
0010	5	867+00	WB IH 94, 36' LT	1	
0010	6	894+51	WB IH 94, 8' RT	1	
0010	5	895+52	WB IH 94, 36' LT	1	
TOTAL 0010				23	

CATEGORY	STAGE	STATION	LOCATION	614.2620 EACH	REMARKS
0010	3	701+19	EB IH 94, 34' RT	1	
0010	6	705+26	EB IH 94, 6' LT	1	
0010	3	713+28	EB IH 94, 34' RT	1	
0010	6	756+28	EB IH 94, 6' LT	1	
0010	3	758+55	EB IH 94, 34' RT	1	
0010	3	778+53	EB IH 94, 34' RT	1	
0010	6	823+89	EB IH 94, 6' LT	1	
0010	3	828+19	EB IH 94, 34' RT	1	
0010	3	841+53	EB IH 94, 34' RT	1	
0010	3	862+53	EB IH 94, 34' RT	1	
0010	6	889+56	EB IH 94, 6' LT	1	
0010	3	898+55	EB IH 94, 34' RT	1	
0010	5	684+58	WB IH 94, 34' LT	1	
0010	6	692+51	WB IH 94, 6' RT	1	
0010	5	739+98	WB IH 94, 34' LT	1	
0010	6	749+48	WB IH 94, 6' RT	1	
0010	5	774+97	WB IH 94, 34' LT	1	
0010	5	803+66	WB IH 94, 34' LT	1	
0010	6	810+96	WB IH 94, 6' RT	1	
0010	5	838+97	WB IH 94, 34' LT	1	
0010	5	859+97	WB IH 94, 34' LT	1	
0010	5	878+12	WB IH 94, 34' LT	1	
0010	6	882+61	WB IH 94, 6' RT	1	
TOTAL 0010				23	

FENCE WOVEN WIRE (HEIGHT) 4-FT

CATEGORY	STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
0010	699+07	-	710+82	EB IH 94, RT	1294	B-17-217 to C-17-12
0010	710+91	-	752+35	EB IH 94, RT	4214	C-17-12 to B-17-219
0010	753+98	-	776+08	EB IH 94, RT	2250	B-17-219 to C-17-17
0010	776+14	-	816+89	EB IH 94, RT	4304	C-17-17 to B-17-221
0010	818+29	-	825+80	EB IH 94, RT	888	B-17-221 to C-17-18
0010	825+86	-	840+81	EB IH 94, RT	1534	C-17-18 to 48-IN C.P.
0010	840+85	-	861+36	EB IH 94, RT	2084	48-IN C.P. to C-17-19
0010	861+42	-	881+32	EB IH 94, RT	2074	C-17-19 to 72-IN C.P.
0010	881+39	-	885+90	EB IH 94, RT	576	72-IN C.P. to B-17-223
0010	887+23	-	23+32	EB IH 94, RT	4114	B-17-223 to WILSON CR.
0010	699+69	-	711+32	WB IH 94, LT	1312	B-17-218 to C-17-12
0010	711+43	-	751+80	WB IH 94, LT	4150	C-17-12 to B-17-220
0010	752+90	-	776+34	WB IH 94, LT	2480	B-17-220 to C-17-17
0010	776+40	-	816+72	WB IH 94, LT	4042	C-17-17 to B-17-222
0010	818+11	-	825+96	WB IH 94, LT	840	B-17-222 to C-17-18
0010	826+02	-	840+63	WB IH 94, LT	1496	C-17-18 to 48-IN C.P.
0010	840+67	-	861+63	WB IH 94, LT	2186	48-IN C.P. to C-17-19
0010	861+67	-	881+33	WB IH 94, LT	1988	C-17-19 to 72-IN C.P.
0010	881+39	-	881+94	WB IH 94, LT	410	72-IN C.P. to B-17-224
0010	886+46	-	23+02	WB IH 94, LT	4000	B-17-224 to WILSON CR.
0010	699+70			IH 94 MEDIAN	48	B-17-217/218 EAST ABUT
0010	751+92			IH 94 MEDIAN	54	B-17-219/220 WEST ABUT
0010	753+56			IH 94 MEDIAN	50	B-17-219/220 EAST ABUT
0010	816+72			IH 94 MEDIAN	46	B-17-221/222 WEST ABUT
0010	818+28			IH 94 MEDIAN	46	B-17-221/222 EAST ABUT
0010	885+26			IH 94 MEDIAN	32	B-17-223/224 WEST ABUT
0010	886+92			IH 94 MEDIAN	32	B-17-223/224 EAST ABUT
TOTAL 0010					46544	

WATER

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
0010	1B	872+50	-	898+25	WB IH 94, LT	110	COMPACTION/DUST CONTROL
0010	2G	668+50	-	23+25	EB IH 94, LT	965	COMPACTION/DUST CONTROL
0010	3	685+00	-	18+20	EB IH 94	1015	COMPACTION/DUST CONTROL
0010	4C	672+64	-	23+00	WB IH 94, RT	610	COMPACTION/DUST CONTROL
0010	5	685+00	-	18+20	WB IH 94	1005	COMPACTION/DUST CONTROL
0010	6C	668+50	-	23+00	EB IH 94, LT	675	COMPACTION/DUST CONTROL
0010	UNDISTRIBUTED					225	
TOTAL 0010						4605	

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FINISHING ITEMS												
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 10 630.0110 LB	SEEDING MIXTURE NO. 30 630.0130 LB	SEEDING TEMPORARY 630.0200 LB	REMARKS
0010	1-B	872+50	-	885+60	WB IH 94, LT	3335	2960	2.5	--	--	107	
0010	1-B	885+60	-	898+25	WB IH 94, LT	2080	2740	1.7	--	--	74	
0010	2/3	23+25	-	53+70	STAGE 3 TEMP EB C/L, LT	5055	6890	4.3	--	--	186	
0010	2/3	36+20	-	53+70	STAGE 3 TEMP EB C/L, RT	3160	4690	3.0	--	--	127	
0010	2/3	54+00	-	107+50	STAGE 3 TEMP EB C/L, LT	7640	10050	6.3	--	--	271	
0010	2/3	54+00	-	107+50	STAGE 3 TEMP EB C/L, RT	10115	14830	9.3	--	--	400	
0010	2/3	107+85	-	115+20	STAGE 3 TEMP EB C/L, LT	415	640	0.4	--	--	17	
0010	2/3	107+85	-	172+15	STAGE 3 TEMP EB C/L, RT	9490	5360	9.7	--	--	415	
0010	2/3	161+00	-	172+15	STAGE 3 TEMP EB C/L, LT	910	1475	0.9	--	--	40	
0010	2/3	172+45	-	200+50	STAGE 3 TEMP EB C/L, LT	3695	5050	3.2	--	--	136	
0010	2/3	172+45	-	240+50	STAGE 3 TEMP EB C/L, RT	13040	19110	12.0	--	--	516	
0010	2/3	241+00	-	275+00	STAGE 3 TEMP EB C/L, RT	6950	10310	6.5	--	--	278	
0010	2/3	278+50	-	281+00	STAGE 3 TEMP EB C/L, LT	210	210	0.1	--	--	6	
0010	3	685+00	-	698+75	EB IH 94, RT	4830	1825	3.4	35	100	145	
0010	3	698+75	-	753+35	EB IH 94, RT	17095	16300	12.6	135	360	540	
0010	3	753+35	-	817+60	EB IH 94, RT	17720	12325	13.3	140	380	570	
0010	3	817+60	-	886+60	EB IH 94, RT	25770	22800	18.5	200	530	800	
0010	3	886+60	-	18+20	EB IH 94, RT	10920	10500	8.1	85	230	350	
0010	4/5	27+60	-	47+00	STAGE 5 TEMP WB C/L, RT	6935	8305	5.2	--	--	224	
0010	4/5	39+00	-	53+00	STAGE 5 TEMP WB C/L, LT	2255	3820	2.4	--	--	103	
0010	4/5	54+75	-	106+55	STAGE 5 TEMP WB C/L, LT	5695	8155	5.1	--	--	220	
0010	4/5	109+00	-	115+00	STAGE 5 TEMP WB C/L, RT	480	500	0.2	--	--	9	
0010	4/5	109+00	-	171+50	STAGE 5 TEMP WB C/L, LT	12165	18290	11.5	--	--	494	
0010	4/5	161+00	-	171+50	STAGE 5 TEMP WB C/L, RT	1510	2025	1.3	--	--	55	
0010	4/5	173+00	-	240+70	STAGE 5 TEMP WB C/L, LT	11015	16290	10.3	--	--	440	
0010	4/5	188+00	-	200+50	STAGE 5 TEMP WB C/L, RT	1980	2575	1.6	--	--	70	
0010	4/5	241+00	-	275+50	STAGE 5 TEMP WB C/L, LT	6935	9985	6.3	--	--	270	
0010	4/5	278+50	-	281+00	STAGE 5 TEMP WB C/L, RT	455	455	0.3	--	--	12	
0010	5	685+00	-	699+00	WB IH 94, LT	4385	2200	3.1	35	90	135	
0010	5	699+00	-	752+50	WB IH 94, LT	15845	13600	11.7	125	335	500	
0010	5	752+50	-	817+40	WB IH 94, LT	32300	18740	22.4	240	640	960	
0010	5	817+40	-	885+60	WB IH 94, LT	19695	19400	14.6	155	420	630	
0010	5	885+60	-	18+20	WB IH 94, LT	12120	11050	8.9	95	255	380	
0010	6	668+50	-	699+00	IH 94 MEDIAN	20495	24115	15.2	--	435	650	
0010	6	699+00	-	752+75	IH 94 MEDIAN	37415	47660	30.0	--	860	1285	
0010	6	752+75	-	817+50	IH 94 MEDIAN	24450	36890	23.2	--	665	1000	
0010	6	817+50	-	886+00	IH 94 MEDIAN	28970	42245	26.6	--	760	1140	
0010	6	886+00	-	23+25	IH 94 MEDIAN	10400	18040	11.4	--	325	490	
0010	--	685+00	-	18+20	R/W FENCING	--	41400	26.0	560	--	1120	UNDISTRIBUTED
0010	--	685+00	-	18+20	UNDISTRIBUTED	40000	50000	35.0	200	650	1500	
TOTAL 0010						437930	543805	388.1	2005	7035	16665	

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SILT FENCE

CATEGORY	STAGE	STATION TO	STATION	LOCATION	SILT FENCE	SILT FENCE	REMARKS
					628.1504	628.1520	
					LF	LF	
0010	3	668+00	- 670+00	EB IH 94, RT	150	150	
0010	3	675+00	- 677+00	EB IH 94, RT	150	150	
0010	3	683+00	- 695+00	EB IH 94, RT	1200	1200	
0010	3	699+00	- 715+00	EB IH 94, RT	1600	1600	
0010	3	774+00	- 778+00	EB IH 94, RT	320	320	
0010	3	839+00	- 842+00	EB IH 94, RT	250	250	
0010	3	882+00	- 886+00	EB IH 94, RT	400	400	
0010	5	705+00	- 716+00	WB IH 94, LT	1100	1100	
0010	5	720+00	- 730+00	WB IH 94, LT	1000	1000	
0010	5	732+00	- 752+00	WB IH 94, LT	2100	2100	
0010	5	753+00	- 766+00	WB IH 94, LT	1300	1300	
0010	5	774+00	- 778+00	WB IH 94, LT	350	350	
0010	5	806+00	- 817+00	WB IH 94, LT	1050	1050	
0010	5	818+00	- 831+00	WB IH 94, LT	1400	1400	
0010	5	837+00	- 843+00	WB IH 94, LT	600	600	
0010	5	860+00	- 865+00	WB IH 94, LT	550	550	
0010	5	880+00	- 885+00	WB IH 94, LT	500	500	
0010	5	891+00	- 893+00	WB IH 94, LT	250	250	
0010	5	898+00	- 903+00	WB IH 94, LT	500	500	
0010	5	911+00	- 912+00	WB IH 94, LT	150	150	
0010	5	914+00	- 915+00	WB IH 94, LT	150	150	
0010	1-6	685+00	- 18+20	UNDISTRIBUTED	3000	3000	
TOTAL 0010					18070	18070	

EROSION MAT CLASS III TYPE D

CATEGORY	STAGE	STATION TO	STATION	LOCATION	628.2039	REMARKS
					SY	
0010	2G	55+00	- 72+00	STAGE 3 TEMP EB C/L, LT	2270	12' WIDE IN TEMP V-DITCH
0010	2G	55+00	- 72+00	STAGE 3 TEMP EB C/L, RT	2270	12' WIDE IN TEMP V-DITCH
0010	2G	79+00	- 88+00	STAGE 3 TEMP EB C/L, LT	1200	12' WIDE IN TEMP V-DITCH
0010	2G	79+00	- 88+00	STAGE 3 TEMP EB C/L, RT	1200	12' WIDE IN TEMP V-DITCH
0010	2G	775+00	- 792+00	EB IH 94, LT	2270	12' WIDE IN TEMP V-DITCH
0010	2G	905+00	- 17+00	EB IH 94, LT	2000	12' WIDE IN TEMP V-DITCH
0010	4C	775+00	- 792+00	WB IH 94, RT	2270	12' WIDE IN TEMP V-DITCH
0010	4C	905+00	- 17+00	WB IH 94, RT	2000	12' WIDE IN TEMP V-DITCH
0010	1-6	685+00	- 18+20	UNDISTRIBUTED	1000	
TOTAL 0010					16480	

EROSION MAT CLASS I TYPE B

CATEGORY	STAGE	STATION TO	STATION	LOCATION	628.2004	REMARKS
					SY	
0010	1-B	880+00	- 883+00	WB IH 94, LT	1000	TEMPORARY WIDENING
0010	3	685+00	- 686+50	EB IH 94, RT	550	
0010	3	689+00	- 694+00	EB IH 94, RT	2215	
0010	3	696+00	- 698+50	EB IH 94, RT	735	
0010	3	699+00	- 701+00	EB IH 94, RT	575	
0010	3	743+00	- 753+00	EB IH 94, RT	3135	
0010	3	753+50	- 763+00	EB IH 94, RT	2075	
0010	3	797+00	- 800+00	EB IH 94, RT	920	
0010	3	802+00	- 817+00	EB IH 94, RT	5720	
0010	3	818+00	- 826+00	EB IH 94, RT	2550	
0010	3	860+00	- 862+50	EB IH 94, RT	400	
0010	3	868+00	- 874+00	EB IH 94, RT	1625	
0010	3	876+00	- 886+00	EB IH 94, RT	2065	
0010	3	886+50	- 895+50	EB IH 94, RT	1620	
0010	3	14+50	- 17+00	EB IH 94, RT	765	
0010	5	685+00	- 689+00	WB IH 94, LT	1285	
0010	5	695+50	- 699+50	WB IH 94, LT	1390	
0010	5	741+00	- 752+00	WB IH 94, LT	4950	
0010	5	753+00	- 764+00	WB IH 94, LT	4265	
0010	5	766+00	- 771+00	WB IH 94, LT	1685	
0010	5	780+50	- 788+00	WB IH 94, LT	2650	
0010	5	791+00	- 800+00	WB IH 94, LT	3845	
0010	5	805+50	- 817+00	WB IH 94, LT	4400	
0010	5	818+00	- 824+50	WB IH 94, LT	2365	
0010	5	880+00	- 882+50	WB IH 94, LT	1235	
0010	5	884+50	- 885+50	WB IH 94, LT	260	
0010	5	886+00	- 894+00	WB IH 94, LT	2825	
0010	5	15+00	- 17+00	WB IH 94, LT	285	
0010	6	685+00	- 18+20	UNDISTRIBUTED	500	MEDIAN
0010	1-6	685+00	- 18+20	UNDISTRIBUTED	2000	
TOTAL 0010					59890	

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SOIL STABILIZER TYPE B

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	628.6510 ACRE	REMARKS
0010	1	880+00	-	883+00	WB IH 94, LT	0.3	TEMP WIDENING
0010	2	676+00	-	22+00	EB IH 94, LT	1.0	TEMP MEDIAN
0010	3	685+00	-	18+20	EB IH 94, RT	5.2	
0010	4	676+00	-	22+00	WB IH 94, RT	1.0	TEMP MEDIAN
0010	5	685+00	-	18+20	WB IH 94, LT	6.5	
0010	1-6	685+00	-	18+20	UNDISTRIBUTED	3.0	
TOTAL 0010						17.0	

TEMPORARY DITCH CHECKS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	628.7504 LF	REMARKS
0010	1	2+00	-	7+00	250th ST. LT/RT	100	
0010	1	12+00	-	13+00	CTH K, LT	30	
0010	1	11+50	-	12+50	650th AVE, LT/RT	50	
0010	1	7+50	-	8+50	390th ST, LT/RT	50	
0010	2	55+00	-	72+00	TEMP EB C/L, LT&RT	550	TEMP V-DITCH
0010	2	79+00	-	88+00	TEMP EB C/L, LT&RT	300	TEMP V-DITCH
0010	2	775+00	-	792+00	EB IH 94. LT	280	TEMP V-DITCH
0010	2	905+00	-	17+00	EB IH 94. LT	250	TEMP V-DITCH
0010	2	676+00	-	22+00	EB IH 94. LT	500	UNDISTRIBUTED TEMP MEDIAN
0010	3	716+00	-	722+00	EB IH 94, RT	50	
0010	3	736+00	-	750+00	EB IH 94, RT	50	
0010	3	768+00	-	804+00	EB IH 94, RT	160	
0010	3	834+00	-	886+00	EB IH 94, RT	230	
0010	3	906+00	-	18+20	EB IH 94, RT	110	
0010	4	775+00	-	792+00	WB IH 94, RT	280	TEMP V-DITCH
0010	4	905+00	-	17+00	WB IH 94, RT	250	TEMP V-DITCH
0010	4	676+00	-	22+00	WB IH 94, RT	300	UNDISTRIBUTED TEMP MEDIAN
0010	5	766+00	-	800+00	WB IH 94, LT	225	
0010	5	855+00	-	880+00	WB IH 94, LT	130	
0010	5	906+00	-	912+00	WB IH 94, LT	50	
0010	6	668+00	-	698+00	EB IH 94, LT	180	FINISHED MEDIAN
0010	6	700+00	-	752+00	EB IH 94, LT	300	FINISHED MEDIAN
0010	6	754+00	-	816+00	EB IH 94, LT	400	FINISHED MEDIAN
0010	6	818+00	-	885+00	EB IH 94, LT	350	FINISHED MEDIAN
0010	6	887+00	-	22+00	EB IH 94, LT	200	FINISHED MEDIAN
0010	1-6	685+00	-	18+20	UNDISTRIBUTED	500	
TOTAL 0010						5875	

INLET PROTECTION TYPE A

CATEGORY	STAGE	STATION	LOCATION	628.7005 EACH	REMARKS
0010	2	668+96	EB IH 94, 41' LT	1	
0010	2	675+89	EB IH 94, 31' LT	1	
0010	2	880+05	EB IH 94, 34' LT	1	
0010	2	886+71	EB IH 94, 35' LT	1	
0010	2	893+06	EB IH 94, 35' LT	1	
0010	6	683+98	EB IH 94, 35' LT	1	
0010	6	691+98	EB IH 94, 34' LT	1	
0010	6	696+94	EB IH 94, 40' LT	1	
0010	6	710+93	EB IH 94, 46' LT	1	
0010	6	719+96	EB IH 94, 61' LT	1	
0010	6	723+56	EB IH 94, 63' LT	1	
0010	6	727+96	EB IH 94, 67' LT	1	
0010	6	733+25	EB IH 94, 66' LT	1	
0010	6	744+66	EB IH 94, 56' LT	1	
0010	6	751+00	EB IH 94, 48' LT	1	
0010	6	762+71	EB IH 94, 31' LT	1	
0010	6	773+00	EB IH 94, 26' LT	1	
0010	6	780+00	EB IH 94, 29' LT	1	
0010	6	788+99	EB IH 94, 31' LT	1	
0010	6	806+51	EB IH 94, 39' LT	1	
0010	6	815+00	EB IH 94, 53' LT	1	
0010	6	825+02	EB IH 94, 52' LT	1	
0010	6	830+98	EB IH 94, 50' LT	1	
0010	6	840+77	EB IH 94, 46' LT	1	
0010	6	854+07	EB IH 94, 25' LT	1	
0010	6	860+37	EB IH 94, 26' LT	1	
0010	6	866+06	EB IH 94, 26' LT	1	
0010	6	876+04	EB IH 94, 31' LT	1	
0010	6	880+05	EB IH 94, 34' LT	1	
0010	6	887+50	EB IH 94, 32' LT	1	
0010	6	893+06	EB IH 94, 35' LT	1	
0010	6	899+05	EB IH 94, 30' LT	1	
0010	6	911+79	EB IH 94, 26' LT	1	
0010	6	17+53	EB IH 94, 25' LT	1	
TOTAL 0010				34	

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CULVERT PIPE CHECKS

628.7555						
CATEGORY	STAGE	STATION TO	STATION	LOCATION	EACH	REMARKS
0010	1	8+61		CTH K, 33' LT	3	
0010	1	8+92		650th AVE, 26' LT	2	
0010	1	8+96		650th AVE, 28' RT	2	
0010	1	4+76		390th ST, 31' RT	3	
0010	2	676+00	- 22+00	EB IH 94, LT	80	TEMP PIPES IN MEDIAN
0010	3	719+96		EB IH 94, 49' RT	3	
0010	3	723+56		EB IH 94, 50' RT	3	
0010	3	727+96		EB IH 94, 68' RT	3	
0010	3	733+25		EB IH 94, 62' RT	5	
0010	3	747+63		EB IH 94, 85' RT	3	
0010	3	761+72		EB IH 94, 75' RT	7	
0010	3	789+00		EB IH 94, 41' RT	3	
0010	3	806+53		EB IH 94, 93' RT	7	
0010	3	814+98		EB IH 94, 85' RT	3	
0010	3	840+82		EB IH 94, 91' RT	5	
0010	3	891+07		EB IH 94, 76' RT	5	
0010	3	899+05		EB IH 94, 78' RT	3	
0010	3	902+62		EB IH 94, 77' RT	5	
0010	3	911+82		EB IH 94, 53' RT	3	
0010	3	914+13		EB IH 94, 83' RT	5	
0010	4	676+00	- 22+00	WB IH 94, RT	24	TEMP PIPES IN MEDIAN
0010	5	686+58		WB IH 94, 83' LT	5	
0010	5	697+48		WB IH 94, 97' LT	5	
TOTAL 0010					187	

TRACKING PADS

628.7560						
CATEGORY	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	685+00	-	18+20	IH 94	8	UNDISTRIBUTED
TOTAL 0010					8	

DELINEATORS

					DELINEATOR POSTS STEEL 633.0100	DELINEATOR REFLECTORS 633.0500	
CATEGORY	STATION	TO	STATION	LOCATION	EACH	EACH	REMARKS
0010	685+00	-	18+20	EB IH 94, RT	60	60	WHITE
0010	712+00			EB IH 94, LT	1	2	DOUBLE YELLOW
0010	800+00			EB IH 94, LT	1	2	DOUBLE YELLOW
0010	17+80			EB IH 94, LT	1	2	DOUBLE YELLOW
0010	685+00	-	18+20	WB IH 94, LT	60	60	WHITE
0010	712+00			WB IH 94, RT	1	2	DOUBLE YELLOW
0010	800+00			WB IH 94, RT	1	2	DOUBLE YELLOW
0010	17+80			WB IH 94, RT	1	2	DOUBLE YELLOW
TOTAL 0010					126	132	

DELINEATORS TEMPORARY

633.1100						
CATEGORY	STAGE	STATION TO	STATION	LOCATION	EACH	REMARKS
0010	2/3	758+00	- 807+00	WB IH 94	50	LEFT
0010	2/3	845+00	- 872+00	WB IH 94	28	LEFT
0010	2/3	895+00	- 21+00	WB IH 94	30	LEFT
0010	3	26+00	- 34+50	STAGE 3 TEMP EB C/L	18	LEFT
0010	4/5	759+00	- 808+00	EB IH 94	50	RIGHT
0010	4/5	847+00	- 21+00	EB IH 94	78	RIGHT
0010	5	26+00	- 31+50	STAGE 5 TEMP WB C/L	12	RIGHT
0010	5	277+00	- 281+00	STAGE 5 TEMP WB C/L	9	RIGHT
0010	6	665+00	- 21+00	EB IH 94	260	RIGHT
0010	6	673+00	- 21+00	WB IH 94	252	LEFT
TOTAL 0010					787	

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MARKERS CULVERT END

CATEGORY	STATION	TO	STATION	LOCATION	633.5200 EACH	REMARKS
0010	686+58	-	914+13	EB IH 94, RT	27	
0010	686+58	-	17+53	WB IH 94, LT	34	
0010	5+99			250th ST, LT/RT	2	
0010	8+46			CTH K, LT/RT	2	
0010	8+61			CTH K, 33' LT	1	
0010	11+53			CTH K, 37' LT	1	
0010	8+92			650th AVE, 26' LT	1	
0010	8+96			650th AVE, 28' RT	1	
0010	11+44			650th AVE, 23' RT	1	
0010	4+72			390th ST, LT/RT	2	
0010	4+76			390th ST, 31' RT	1	
0010	6+96			390th ST, 31' RT	1	
TOTAL 0010					74	

SIGNS TYPE I

CATEGORY	SIGN NO.	APPROX. STATION	LOCATION	SIGN CODE	SIGN SIZE	TYPE/SIZE OF STEEL	POST SIZE	POST LENGTH	SIGN SUPPORTS									REMOVING STRUCTURAL				REMARKS
									SIGN SUPPORTS		SIGN CONNECTION	SIGN CONCRETE MASONRY	SIGN STEEL REINFORCEMENT	SIGN TYPE I REFLECTIVE SH	REMOVING SIGNS TYPE I	STEEL SIGN SUPPORTS	SIGN MOUNTED ON SAME POST AS					
									STEEL	HS												
																		635.0200 LB	635.0300 EACH	636.0100 CY	636.0500 LB	
0010	7-101	862+62	EB IH 94, RT	E3-1	216" X 84"	2 - TYPE B	W12" X 16.0	18'LT/16'RT	837.0	---	1.6	98	126.00	1	1	---	HISTORIC DOWNTOWN MENOMONIE EXIT 41					
0010	8-102	897+33	EB IH 94, RT	E1-1-A	204" X 162"	2 - TYPE B	W12" X 16.0	24'LT/27'RT	1109.0	---	1.6	98	229.50	1	1	---	25, MENOMONIE, BARRON, 1 MILE					
0010	8-103	897+33	EB IH 94, RT	E1-5-P	96" X 30"	---	---	---	---	---	---	---	20.00	---	---	8-102	EXIT 41					
0010	9-104	913+70	EB IH 94, RT	E5-51	144" X 60"	EXIST	EXIST	EXIST	---	1	---	---	60.00	1	---	EXIST	REST AREA, 2 MILES					
0010	9-105	913+70	EB IH 94, RT	SP--	144" X 18"	---	---	---	---	---	---	---	18.00	---	---	9-104	TOURIST INFO					
0010	9-106	18+92	EB IH 94, RT	E3-1	132" X 60"	EXIST	EXIST	EXIST	---	1	---	---	55.00	1	---	EXIST	UW STOUT, EXIST 41					
0010	9-107	20+68	WB IH 94, LT	E8-1	156" X 84"	EXIST	EXIST	EXIST	---	1	---	---	91.00	1	---	EXIST	Q 7, HUDSON 41, ST PAUL 56					
TOTAL 0010									1946.0	3	3.2	196	599.50	5	2							

SIGNING ITEMS

CATEGORY	SIGN NO.	SIGN CODE	STATION	SIZE	SIGN DESCRIPTION	POSTS	POSTS	POSTS	POSTS	SIGNS	REMOVING	REMOVING	SIGN MOUNTED ON SAME POST AS	REMARKS
						WOOD 4X6-INCH X 14-FT 634.0614 EACH	WOOD 4X6-INCH X 16-FT 634.0616 EACH	WOOD 4X6-INCH X 18-FT 634.0618 EACH	WOOD 4X6-INCH X 20-FT 634.0620 EACH	TYPE II REFLECTIVE H 637.2210 SF	SIGNS TYPE II 638.2602 EACH	SMALL SIGN SUPPORTS 638.3000 EACH		
0010	2-1	W5-52-L	698EB+22	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 EB
0010	2-2	W5-52-R	698EB+15	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 EB
0010	2-3	R3-4-B	712EB+31	36" X 48"	No U Turn Sign	--	1	--	--	12.00	1	1	--	IH 94 EB
0010	2-4	D10-2	712EB+91	12" X 36"	Mile 37	1	--	--	--	3.00	1	1	--	IH 94 EB
0010	4-5	W5-52-L	752EB+17	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 EB
0010	4-6	W5-52-R	752EB+45	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 EB
0010	4-7	D10-2	766EB+48	12" X 36"	Mile 38	1	--	--	--	3.00	1	1	--	IH 94 EB
0010	5-8	R3-4-B	799EB+75	36" X 48"	No U Turn Sign	--	1	--	--	12.00	1	1	--	IH 94 EB
0010	6-9	W5-52-L	816EB+91	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 EB
0010	6-10	W5-52-R	816EB+97	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 EB
0010	6-11	D10-2	818EB+50	12" X 36"	Mile 39	1	--	--	--	3.00	1	1	--	IH 94 EB
0010	7-12	D10-2	871EB+28	12" X 36"	Mile 40	--	1	--	--	3.00	1	1	--	IH 94 EB
0010	8-3	W5-52-L	885EB+56	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 EB
0010	8-14	W5-52-R	885EB+83	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 EB
0010	9-15	R3-4-B	17EB+55	36" X 48"	No U Turn Sign	--	1	--	--	12.00	1	1	--	IH 94 EB
0010	9-16	D10-2	20EB+53	12" X 36"	Mile 41	--	1	--	--	3.00	1	1	--	IH 94 EB
0010	2-17	W5-52-R	699WB+55	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 WB
0010	2-18	W5-52-L	699WB+62	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 WB
0010	2-19	R3-4-B	711WB+71	36" X 48"	No U Turn Sign	--	1	--	--	12.00	1	1	--	IH 94 WB
0010	2-20	D10-2	712WB+93	12" X 36"	Mile 37	--	1	--	--	3.00	1	1	--	IH 94 WB
0010	4-21	W5-52-R	753WB+28	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 WB
0010	4-22	W5-52-L	753WB+57	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 WB
0010	4-23	D10-2	766WB+38	12" X 36"	Mile 38	--	1	--	--	3.00	1	1	--	IH 94 WB
0010	5-24	R3-4-B	799WB+75	36" X 48"	No U Turn Sign	--	--	--	--	12.00	1	--	5-8	IH 94 WB
0010	6-25	W5-52-R	818WB+02	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 WB
0010	6-26	W5-52-L	818WB+08	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 WB
0010	6-27	D10-2	818WB+40	12" X 36"	Mile 39	--	1	--	--	3.00	1	1	--	IH 94 WB
0010	7-28	D10-2	871WB+18	12" X 36"	Mile 40	1	--	--	--	3.00	1	1	--	IH 94 WB
0010	8-29	W5-52-R	886WB+37	18" X 54"	Clearance Striper Down Right	--	--	--	--	--	1	1	--	IH 94 WB
0010	8-30	W5-52-L	886WB+64	18" X 54"	Clearance Striper Down Left	--	--	--	--	--	1	1	--	IH 94 WB
0010	9-31	R8-7	913WB+96	48" X 36"	Emergency Stopping Only	--	1	--	--	12.00	1	1	--	IH 94 WB
0010	9-32	R4-3	14WB+33	48" X 60"	Slower Traffic Keep Right	--	--	2	--	20.00	1	2	--	IH 94 WB
0010	9-33	R3-4-B	17WB+55	36" X 48"	No U Turn Sign	--	--	--	--	12.00	1	--	9-15	IH 94 WB
0010	9-34	D10-2	20WB+51	12" X 36"	Mile 41	1	--	--	--	3.00	1	1	--	IH 94 WB
0010	9-35	R4-3	21WB+05	48" X 60"	Slower Traffic Keep Right	--	--	--	2	20.00	1	2	--	IH 94 WB
TOTAL 0010						5	10	2	2	154.00	35	35		

TRAFFIC CONTROL ITEMS											
CATEGORY	STAGE	DAYS	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (1022-08-72) 643.0200.S DAY	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL SIGNS FIXED MESSAGE 643.1000 SF	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY
0010	1	42	42	2100	---	---	---	---	168	---	---
0010	2	56	56	5320	---	---	---	---	1344	---	---
0010	3	119	119	14042	1309	714	3094	---	5593	---	---
0010	4	42	42	3024	---	---	420	---	1092	---	---
0010	5	119	119	10710	1309	714	2856	---	5593	---	---
0010	6	56	56	3808	---	---	1288	---	1680	---	---
0010	ADVANCED SIGNING	434	---	---	---	---	---	---	13454	180	1736
0010	TEMP LANE CLOSURE	100	---	30000	2000	4000	1700	200	2600	---	---
0010	250th ST	112	---	2240	1568	2240	---	---	1792	---	---
0010	CTH K	112	---	2240	1568	2240	---	---	1792	---	---
0010	650th AVE	112	---	2240	1568	2240	---	---	1792	---	---
0010	390th ST	112/20	---	2240	280	400	---	---	700	---	---
TOTAL 0010			434	77964	9602	12548	9358	200	37600	180	1736

GEOTEXTILE TYPE DF SCHEDULE B

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	645.0112 SY	REMARKS
0010	1B	883+00	-	886+00	WB IH 94, LT	112	EMBANKMENT SEEPAGE
0010	1B	887+00	-	890+00	WB IH 94, LT	112	EMBANKMENT SEEPAGE
0010	2G	760+00	-	764+00	WB IH 94, RT	450	SUBGRADE SEEPAGE
0010	2G	841+00	-	850+00	WB IH 94, RT	1000	SUBGRADE SEEPAGE
0010	3	754+00	-	755+00	EB IH 94, RT	112	EMBANKMENT SEEPAGE
0010	3	883+00	-	886+00	EB IH 94, RT	336	EMBANKMENT SEEPAGE
0010	3	887+00	-	890+00	EB IH 94, RT	336	EMBANKMENT SEEPAGE
0010	5	697+00	-	698+00	WB IH 94, LT	336	EMBANKMENT SEEPAGE
0010	5	815+50	-	816+50	WB IH 94, LT	336	EMBANKMENT SEEPAGE
0010	2 - 5	685+00	-	18+20	UNDISTRIBUTED	600	
TOTAL 0010						3730	

GEOGRID TYPE SR

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	645.0220 SY	REMARKS
0010	1B	882+00	-	885+00	WB IH 94, LT	1335	TEMP WIDENING
0010	1B	887+00	-	890+00	WB IH 94, LT	1335	TEMP WIDENING
0010	2G	70+00	-	74+00	STG 3 TEMP EB C/L	1780	TEMP MEDIAN RDWY
0010	2 - 5	685+00	-	18+20	UNDISTRIBUTED	2000	
TOTAL 0010						6450	

REMOVING PAVEMENT MARKINGS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	646.0600 LF	REMARKS
0010	2	758+00	-	807+00	WB IH 94	4900 1238 4900	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	2	845+00	-	26+00	WB IH 94	8400 2113 8400	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	3	669+00	-	685+00	EB IH 94	1600 413 1600	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	3	18+20	-	26+00	EB IH 94	780 200 780	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	WINTER	758+00	-	807+00	WB IH 94	4900 1238 4900	TEMP YELLOW EDGELINE TEMP WHITE LANELINE TEMP WHITE EDGELINE
0010	WINTER	845+00	-	26+00	WB IH 94	8400 2113 8400	TEMP YELLOW EDGELINE TEMP WHITE LANELINE TEMP WHITE EDGELINE
0010	5	672+50	-	685+00	WB IH 94	1250 325 1250	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	5	18+20	-	26+00	WB IH 94	780 200 780	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	6	660+00	-	669+00	EB IH 94	900 238 900	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
0010	6	666+00	-	672+50	WB IH 94	--- 175 650	YELLOW EDGELINE WHITE DASH LANELINE WHITE EDGELINE
TOTAL 0010						72723	

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PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH

						646.0841.S		
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS	
0010	6	660+00	-	26+00	IH 94 EB	6800	WHITE DASH LANELINE	
0010	6	666+00	-	26+00	IH 94 WB	6750	WHITE DASH LANELINE	
TOTAL 0010						13550		

PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH

						646.2304.S		
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS	
0010	6	660+00	-	26+00	EB IH 94, RT	26950	WHITE EDGE LINE	
0010	6	660+00	-	26+00	EB IH 94, LT	26950	YELLOW EDGE LINE	
0010	6	666+00	-	26+00	WB IH 94, LT	26350	WHITE EDGE LINE	
0010	6	666+00	-	26+00	WB IH 94, RT	26350	YELLOW EDGE LINE	
TOTAL 0010						106600		

PAVEMENT MARKING AERIAL ENFORCEMENT BARS EPOXY 24-INCH

						647.0803		
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS	
0010	6	685+00	-	18+20	EB IH 94	48	UNDISTRIBUTED	
0010	6	685+00	-	18+20	WB IH 94	48	UNDISTRIBUTED	
TOTAL 0010						96		

PAVEMENT MARKING LATE SEASON

						646.0900.S		
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS	
0010	3	669+00	-	26+00	EB IH 94	26000	OVER-WINTER YELLOW EDGE LINE	
						6513	* OVER-WINTER WHITE DASH LANELINE	
						26000	OVER-WINTER WHITE EDGE LINE	
0010	3	758+00	-	807+00	WB IH 94	4900	OVER-WINTER YELLOW EDGE LINE	
						1238	* OVER-WINTER WHITE DASH LANELINE	
						4900	OVER-WINTER WHITE EDGE LINE	
0010	3	845+00	-	26+00	WB IH 94	8400	OVER-WINTER YELLOW EDGE LINE	
						2113	* OVER-WINTER WHITE DASH LANELINE	
						8400	OVER-WINTER WHITE EDGE LINE	

TOTAL 0010 88464

* PLACED AS SHOWN ON PLANS FOR PERMANENT MARKINGS (12.5' LINES)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

						649.0400		
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	LF	REMARKS	
0010	3	23+50	-	32+00	STAGE 3 TEMP EB C/L	863	* WHITE DASH LANELINE	
		23+50	-	34+00	STAGE 3 TEMP EB C/L, RT	1050	WHITE EDGE LINE	
0010	3	280+00	-	284+00	STAGE 3 TEMP EB C/L	113	* WHITE DASH LANELINE	
		278+00	-	284+00	STAGE 3 TEMP EB C/L, RT	600	WHITE EDGE LINE	
0010	4	759+00	-	808+50	EB IH 94	4950	YELLOW EDGE LINE	
						1250	* WHITE DASH LANELINE	
						4950	WHITE EDGE LINE	
0010	4	847+00	-	26+00	EB IH 94	8200	YELLOW EDGE LINE	
						2063	* WHITE DASH LANELINE	
						8200	WHITE EDGE LINE	
0010	5	27+50	-	35+00	STAGE 5 TEMP WB C/L, LT	750	WHITE EDGE LINE	
		27+50	-	33+00	STAGE 5 TEMP WB C/L	150	* WHITE DASH LANELINE	
0010	5	278+50	-	284+00	STAGE 5 TEMP WB C/L, LT	550	WHITE EDGE LINE	
		280+00	-	284+00	STAGE 5 TEMP WB C/L	113	* WHITE DASH LANELINE	
		280+50	-	284+00	STAGE 5 TEMP EB C/L, RT	350	YELLOW EDGE LINE	
0010	6	660+00	-	765+00	EB IH 94	10500	YELLOW EDGE LINE	
						2638	* WHITE DASH LANELINE	
						10500	WHITE EDGE LINE	
0010	6	802+00	-	853+00	EB IH 94	5100	YELLOW EDGE LINE	
						1288	* WHITE DASH LANELINE	
						8100	WHITE EDGE LINE	
0010	6	666+00	-	26+00	WB IH 94	26300	YELLOW EDGE LINE	
						6588	* WHITE DASH LANELINE	
						26300	WHITE EDGE LINE	

TOTAL 0010 131466

* PLACED AS SHOWN ON PLANS FOR PERMANENT MARKINGS (12.5' LINES)

TEMPORARY PAVEMENT MARKING PAINT 4-INCH

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	649.0402 LF	REMARKS
0010	2	758+00	-	807+00	WB IH 94	4900	YELLOW EDGELINE
						1238	* WHITE DASH LANELINE
						4900	WHITE EDGELINE
0010	2	845+00	-	26+00	WB IH 94	8400	YELLOW EDGELINE
						2113	* WHITE DASH LANELINE
						8400	WHITE EDGELINE
0010	3	23+50	-	284+00	STAGE 3 TEMP EB C/L, LT	26050	YELLOW EDGELINE
		32+00	-	280+00	STAGE 3 TEMP EB C/L	6213	* WHITE DASH LANELINE
		34+00	-	278+00	STAGE 3 TEMP EB C/L, RT	24400	WHITE EDGELINE
0010	5	35+00	-	278+50	STAGE 5 TEMP WB C/L, LT	24350	WHITE EDGELINE
		33+00	-	280+00	STAGE 5 TEMP WB C/L	6188	* WHITE DASH LANELINE
		27+50	-	280+50	STAGE 5 TEMP WB C/L, RT	25300	YELLOW EDGELINE
TOTAL 0010						142452	

* PLACED AS SHOWN ON PLANS FOR PERMANENT MARKINGS (12.5' LINES)

TEMPORARY RAISED PAVEMENT MARKERS TYPE I

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	649.2100 EACH	REMARKS
0010	3	23+50	-	42+00	STAGE 3 TEMP EB C/L	75	
0010	3	271+75	-	284+00	STAGE 3 TEMP EB C/L	50	
0010	5	27+50	-	43+75	STAGE 5 TEMP WB C/L	66	
0010	5	272+75	-	284+00	STAGE 5 TEMP WB C/L	46	
TOTAL 0010						237	

CONSTRUCTION STAKING ITEMS										
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	REMARKS
0010	1-B	872+50	-	885+20	WB IH 94, LT	1270	1270	--	1270	TEMPORARY WIDENING
0010	1-B	886+40	-	898+25	WB IH 94, LT	1185	1185	--	1185	TEMPORARY WIDENING
0010	2-G	668+50	-	680+25	EB IH 94, LT	1188	1188	--	1188	TEMPORARY WIDENING
0010	2-G	35+25	-	53+30	STAGE 3 TEMP EB C/L	1805	1805	--	1805	TEMP MEDIAN RDWY
0010	2-G	54+35	-	107+00	STAGE 3 TEMP EB C/L	5265	5265	--	5265	TEMP MEDIAN RDWY
0010	2-G	108+50	-	115+00	STAGE 3 TEMP EB C/L	650	650	--	650	TEMP MEDIAN RDWY
0010	2-G	760+50	-	804+50	WB IH 94, RT	4413	4413	--	4413	TEMPORARY WIDENING
0010	2-G	159+39	-	171+00	STAGE 3 TEMP EB C/L	1161	1161	--	1161	TEMP MEDIAN RDWY
0010	2-G	171+80	-	201+60	STAGE 3 TEMP EB C/L	2980	2980	--	2980	TEMP MEDIAN RDWY
0010	2-G	847+00	-	885+24	WB IH 94, RT	3835	3835	--	3835	TEMPORARY WIDENING
0010	2-G	886+71	-	19+00	WB IH 94, RT	3524	3524	--	3524	TEMPORARY WIDENING
0010	2-G	19+00	-	23+25	EB IH 94, LT	425	425	--	425	TEMPORARY WIDENING
0010	3	685+00	-	697+98	EB IH 94	1298	--	1298	1298	MAINLINE
0010	3	699+67	-	752+04	EB IH 94	5233	--	5233	5233	MAINLINE
0010	3	753+77	-	816+72	EB IH 94	6278	--	6278	6278	MAINLINE
0010	3	818+35	-	885+36	EB IH 94	6690	--	6690	6690	MAINLINE
0010	3	887+05	-	18+20	EB IH 94	3438	--	3438	3438	MAINLINE
0010	4-C	672+64	-	683+00	WB IH 94, RT	1029	1029	--	1029	TEMPORARY WIDENING
0010	4-C	38+00	-	47+00	STAGE 5 TEMP WB C/L	900	900	--	900	TEMP MEDIAN RDWY
0010	4-C	109+00	-	115+50	STAGE 5 TEMP WB C/L	650	650	--	650	TEMP MEDIAN RDWY
0010	4-C	760+50	-	805+50	EB IH 94, LT	4471	4471	--	4471	TEMPORARY WIDENING
0010	4-C	160+50	-	171+00	STAGE 5 TEMP WB C/L	1050	1050	--	1050	TEMP MEDIAN RDWY
0010	4-C	188+00	-	201+00	STAGE 5 TEMP WB C/L	1300	1300	--	1300	TEMP MEDIAN RDWY
0010	4-C	846+15	-	885+30	EB IH 94, LT	3903	3903	--	3903	TEMPORARY WIDENING
0010	4-C	887+25	-	19+00	EB IH 94, LT	3498	3498	--	3498	TEMPORARY WIDENING
0010	4-C	19+00	-	23+00	WB IH 94, RT	400	400	--	400	TEMPORARY WIDENING
0010	5	685+00	-	698+09	WB IH 94	1309	--	1309	1309	MAINLINE
0010	5	699+79	-	751+99	WB IH 94	5218	--	5218	5218	MAINLINE
0010	5	753+72	-	816+65	WB IH 94	6291	--	6291	6291	MAINLINE
0010	5	818+27	-	885+12	WB IH 94	6696	--	6696	6696	MAINLINE
0010	5	886+81	-	18+20	WB IH 94	3434	--	3434	3434	MAINLINE
TOTAL 0010						90787	44902	45885	90787	

3

CONSTRUCTION STAKING STORM SEWER

650.4000					
CATEGORY	STAGE	STATION	LOCATION	EACH	REMARKS
0010	2	8+61.2	CTH K, 33.3' LT	1	AEW INLET
0010	2	9+74.3	CTH K, 18.0' RT	1	MH 501
0010	2	11+53.4	CTH K, 36.9' LT	1	AEW DISCH
0010	2	8+92.2	650th AVE, 25.8' LT	1	AEW INLET
0010	2	8+96.5	650th AVE, 28.5' RT	1	AEW INLET
0010	2	9+10.0	650th AVE, 5.0' RT	1	MH 502
0010	2	11+14.0	650th AVE, 5.0' RT	1	MH 503
0010	2	11+44.3	650th AVE, 22.5' RT	1	AEW DISCH
0010	2	4+76.0	390th ST, 31.0' RT	1	AEW INLET
0010	2	6+96.0	390th ST, 31.0' RT	1	AEW DISCH
0010	2	683+87.3	EB IH 94, 34.6' LT	1	TEMP MH 2101
0010	2	691+87.5	EB IH 94, 33.9' LT	1	TEMP MH 2102
0010	2	696+82.0	EB IH 94, 40.2' LT	1	TEMP MH 2103
0010	2	710+82.9	EB IH 94, 48.0' LT	1	TEMP MH 2104
0010	2	719+83.6	EB IH 94, 60.5' LT	1	TEMP MH 2105
0010	2	723+67.6	EB IH 94, 63.2' LT	1	TEMP MH 2106
0010	2	728+07.5	EB IH 94, 67.2' LT	1	TEMP MH 2107
0010	2	733+36.9	EB IH 94, 65.5' LT	1	TEMP MH 2108
0010	2	744+56.0	EB IH 94, 56.1' LT	1	TEMP MH 2109
0010	2	751+00.0	EB IH 94, 47.8' LT	1	MH 401
0010	2	762+60.5	EB IH 94, 30.9' LT	1	TEMP MH 2111
0010	2	772+88.5	EB IH 94, 25.6' LT	1	TEMP MH 2112
0010	2	780+10.4	EB IH 94, 29.4' LT	1	TEMP MH 2113
0010	2	789+11.4	EB IH 94, 31.0' LT	1	TEMP MH 2114
0010	2	806+40.4	EB IH 94, 39.3' LT	1	TEMP MH 2115
0010	2	814+88.1	EB IH 94, 52.9' LT	1	TEMP MH 2116
0010	2	824+91.1	EB IH 94, 52.1' LT	1	TEMP MH 2117
0010	2	830+87.7	EB IH 94, 49.8' LT	1	TEMP MH 2118
0010	2	840+65.0	EB IH 94, 46.0' LT	1	TEMP MH 2119
0010	2	853+96.5	EB IH 94, 24.9' LT	1	TEMP MH 2120
0010	2	860+25.9	EB IH 94, 25.6' LT	1	TEMP MH 2121
0010	2	875+91.9	EB IH 94, 35.0' LT	1	TEMP MH 2123
0010	2	893+18.4	EB IH 94, 34.8' LT	1	TEMP MH 2126
0010	2	898+92.6	EB IH 94, 29.9' LT	1	TEMP MH 2127
0010	2	911+66.8	EB IH 94, 25.3' LT	1	TEMP MH 2128
0010	2	17+42.4	EB IH 94, 25.0' LT	1	TEMP MH 2129
0010	2	38+78.4	STAGE 3 TEMP EB C/L, 30.4' RT	1	END OF TEMP PIPE
0010	2	38+80.3	STAGE 3 TEMP EB C/L, 27.2' LT	1	END OF TEMP PIPE
0010	2	46+79.7	STAGE 3 TEMP EB C/L, 30.0' RT/24.8' LT	2	END OF TEMP PIPE

650.4000					
CATEGORY	STAGE	STATION	LOCATION	EACH	REMARKS
0010	2	51+74.2	STAGE 3 TEMP EB C/L, 32.5' RT/27.2' LT	2	END OF TEMP PIPE
0010	2	65+75.1	STAGE 3 TEMP EB C/L, 25.3' RT/25.9' LT	2	END OF TEMP PIPE
0010	2	74+75.8	STAGE 3 TEMP EB C/L, 26.6' RT/28.5' LT	2	END OF TEMP PIPE
0010	2	78+59.7	STAGE 3 TEMP EB C/L, 26.3' RT/29.4' LT	2	END OF TEMP PIPE
0010	2	82+99.7	STAGE 3 TEMP EB C/L, 25.3' RT/30.9' LT	2	END OF TEMP PIPE
0010	2	88+29.2	STAGE 3 TEMP EB C/L, 23.6' RT/27.8' LT	2	END OF TEMP PIPE
0010	2	99+53.2	STAGE 3 TEMP EB C/L, 22.6' RT/27.8' LT	2	END OF TEMP PIPE
0010	2	105+85.7	STAGE 3 TEMP EB C/L, 27.2' LT	1	END OF TEMP PIPE
0010	2	105+90.7	STAGE 3 TEMP EB C/L, 22.5' RT	1	END OF TEMP PIPE
0010	2	751+62.2	WB IH 94, 58.0' LT	1	END OF TEMP PIPE
0010	2	117+69.8	STAGE 3 TEMP EB C/L, 24.2' RT	1	END OF TEMP PIPE
0010	2	127+70.9	STAGE 3 TEMP EB C/L, 29.3' RT	1	END OF TEMP PIPE
0010	2	134+92.8	STAGE 3 TEMP EB C/L, 27.3' RT	1	END OF TEMP PIPE
0010	2	143+93.7	STAGE 3 TEMP EB C/L, 25.3' RT	1	END OF TEMP PIPE
0010	2	161+21.2	STAGE 3 TEMP EB C/L, 28.8' RT	1	END OF TEMP PIPE
0010	2	169+69.4	STAGE 3 TEMP EB C/L, 30.1' RT/29.9' LT	2	END OF TEMP PIPE
0010	2	179+72.4	STAGE 3 TEMP EB C/L, 28.6' RT/28.8' LT	2	END OF TEMP PIPE
0010	2	185+69.0	STAGE 3 TEMP EB C/L, 29.3' RT/29.3' LT	2	END OF TEMP PIPE
0010	2	195+50.3	STAGE 3 TEMP EB C/L, 28.6' RT/25.6' LT	2	END OF TEMP PIPE
0010	2	208+79.7	STAGE 3 TEMP EB C/L, 25.6' RT	1	END OF TEMP PIPE
0010	2	215+09.1	STAGE 3 TEMP EB C/L, 26.6' RT	1	END OF TEMP PIPE
0010	2	230+74.7	STAGE 3 TEMP EB C/L, 29.2' RT	1	END OF TEMP PIPE
0010	2	253+75.2	STAGE 3 TEMP EB C/L, 28.2' RT	1	END OF TEMP PIPE
0010	2	266+34.0	STAGE 3 TEMP EB C/L, 29.8' RT	1	END OF TEMP PIPE
0010	2	274+84.4	STAGE 3 TEMP EB C/L, 23.4' RT	1	END OF TEMP PIPE
0010	4	887+50.0	EB IH 94, 32.0' LT	1	MH 402
0010	4	38+82.1	STAGE 5 TEMP WB C/L, 50.6' RT	1	END OF TEMP PIPE
0010	4	117+67.7	STAGE 5 TEMP WB C/L, 30.0' LT	1	END OF TEMP PIPE
0010	4	127+68.5	STAGE 5 TEMP WB C/L, 27.3' LT	1	END OF TEMP PIPE
0010	4	134+90.4	STAGE 5 TEMP WB C/L, 27.3' LT	1	END OF TEMP PIPE
0010	4	143+91.4	STAGE 5 TEMP WB C/L, 27.2' LT	1	END OF TEMP PIPE
0010	4	161+19.1	STAGE 5 TEMP WB C/L, 27.3' LT	1	END OF TEMP PIPE
0010	4	208+75.1	STAGE 5 TEMP WB C/L, 27.3' LT	1	END OF TEMP PIPE
0010	4	215+04.6	STAGE 5 TEMP WB C/L, 26.6' LT	1	END OF TEMP PIPE
0010	4	230+70.2	STAGE 5 TEMP WB C/L, 30.5' LT	1	END OF TEMP PIPE
0010	4	247+97.8	STAGE 5 TEMP WB C/L, 40.2' LT	1	END OF TEMP PIPE
0010	4	253+71.3	STAGE 5 TEMP WB C/L, 31.4' LT	1	END OF TEMP PIPE
0010	4	266+42.2	STAGE 5 TEMP WB C/L, 25.7' LT	1	END OF TEMP PIPE
0010	4	274+97.1	STAGE 5 TEMP WB C/L, 23.6' LT	1	END OF TEMP PIPE
0010	5	751+74.0	WB IH 94, 88.0' LT	1	AEW DISCH
0010	5	887+50.0	WB IH 94, 87.5' LT	1	AEW DISCH
0010	6	876+04.0	EB IH 94, 30.5' LT	1	INL 323

TOTAL 0010 93

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SAWING ASPHALT

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	690.0150 LF	REMARKS
0010	1	872+50	-	884+00	WB IH 94, 24' LT	1170	
0010	1	887+50	-	898+25	WB IH 94, 24' LT	1095	
0010	2G	760+50	-	804+50	WB IH 94, 0' RT	4420	
0010	2G	847+00	-	885+24	WB IH 94, 0' RT	3840	
0010	2G	886+71	-	19+00	WB IH 94, 0' RT	3530	
0010	6C	760+50	-	805+50	EB IH 94, 4' LT	4475	
0010	6C	846+15	-	878+30	EB IH 94, 4' LT	3205	
0010	6C	889+90	-	18+20	EB IH 94, 4' LT	3155	
TOTAL 0010						24890	

SAWING CONCRETE

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	690.0250 LF	REMARKS
0010	1	668+50	-	680+25	EB IH 94, 0' LT	1195	TIED CONC SHOULDERS
0010	1	19+00	-	23+25	EB IH 94, 0' LT	440	TIED CONC SHOULDERS
0010	3	685+00			EB IH 94	37	INCLUDES SHOULDERS
0010	3	18+20			EB IH 94	37	INCLUDES SHOULDERS
0010	5	685+00			WB IH 94	24	
0010	5	18+20			WB IH 94	24	
TOTAL 0010						1757	

MANHOLES SPECIAL 4-FT DIAMETER TEMPORARY

CATEGORY	STAGE	MANHOLE NO.	STATION	LOCATION	SPV.0060.01 EACH	COVER ELEV	INVERT ELEV	DEPTH FT
0010	2	2101	683+87.3	EB IH 94, 34.6' LT	1	946.67	943.00	3.67
0010	2	2102	691+87.5	EB IH 94, 33.9' LT	1	941.67	938.00	3.67
0010	2	2103	696+82.0	EB IH 94, 40.2' LT	1	934.51	930.84	3.67
0010	2	2104	710+82.9	EB IH 94, 48.0' LT	1	909.04	905.37	3.67
0010	2	2105	719+83.6	EB IH 94, 60.5' LT	1	904.47	900.80	3.67
0010	2	2106	723+67.6	EB IH 94, 63.2' LT	1	906.02	902.35	3.67
0010	2	2107	728+07.5	EB IH 94, 67.2' LT	1	909.54	905.87	3.67
0010	2	2108	733+36.9	EB IH 94, 65.5' LT	1	914.04	910.37	3.67
0010	2	2109	744+56.0	EB IH 94, 56.1' LT	1	912.89	909.22	3.67
0010	2	2111	762+60.5	EB IH 94, 30.9' LT	1	899.48	895.81	3.67
0010	2	2112	772+88.5	EB IH 94, 25.6' LT	1	893.33	889.66	3.67
0010	2	2113	780+10.4	EB IH 94, 29.4' LT	1	898.31	894.64	3.67
0010	2	2114	789+11.4	EB IH 94, 31.0' LT	1	913.54	909.87	3.67
0010	2	2115	806+40.4	EB IH 94, 39.3' LT	1	913.17	909.50	3.67
0010	2	2116	814+88.1	EB IH 94, 52.9' LT	1	903.17	899.50	3.67
0010	2	2117	824+91.1	EB IH 94, 52.1' LT	1	897.17	893.50	3.67
0010	2	2118	830+87.7	EB IH 94, 49.8' LT	1	893.95	890.28	3.67
0010	2	2119	840+65.0	EB IH 94, 46.0' LT	1	887.17	883.50	3.67
0010	2	2120	853+96.5	EB IH 94, 24.9' LT	1	886.99	883.32	3.67
0010	2	2121	860+25.9	EB IH 94, 25.6' LT	1	884.77	881.10	3.67
0010	2	2123	875+91.9	EB IH 94, 35.0' LT	1	878.86	875.19	3.67
0010	4	2126	893+18.4	EB IH 94, 34.8' LT	1	880.44	876.77	3.67
0010	2	2127	898+92.6	EB IH 94, 29.9' LT	1	881.17	877.50	3.67
0010	2	2128	911+66.8	EB IH 94, 25.3' LT	1	870.69	867.02	3.67
0010	2	2129	17+42.4	EB IH 94, 25.0' LT	1	855.31	851.64	3.67
TOTAL 0010					25			

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RECONSTRUCTING MEDIAN INLETS SPECIAL										
CATEGORY	STAGE	INLET NO.	STATION	LOCATION	SPV.0060.02 EACH	EXIST GRATE ELEV	EXIST INVERT ELEV	EXIST DEPTH FT	NO. OF GRATES	
0010	2	101	683+97	EB IH 94, 35' LT	1	944.76	939.56	5.20	1	
0010	2	102	691+97	EB IH 94, 34' LT	1	939.61	934.11	5.50	1	
0010	2	103	696+93	EB IH 94, 41' LT	1	934.44	930.34	4.10	2	
0010	2	104	710+95	EB IH 94, 44' LT	1	908.52	904.87	3.65	1	
0010	2	105	719+95	EB IH 94, 60' LT	1	902.80	900.30	2.50	2	
0010	2	106	723+55	EB IH 94, 63' LT	1	904.35	901.85	2.50	2	
0010	2	107	727+95	EB IH 94, 67' LT	1	908.22	905.37	2.85	2	
0010	2	108	733+24	EB IH 94, 65' LT	1	913.72	909.87	3.85	2	
0010	2	109	744+66	EB IH 94, 56' LT	1	912.62	908.72	3.90	1	
0010	2	111	762+70	EB IH 94, 30' LT	1	899.01	895.31	3.70	1	
0010	2	112	772+99	EB IH 94, 25' LT	1	891.41	889.16	2.25	2	
0010	2	113	779+99	EB IH 94, 29' LT	1	896.39	894.14	2.25	1	
0010	2	114	789+00	EB IH 94, 30' LT	1	912.37	909.37	3.00	2	
0010	2	115	806+51	EB IH 94, 39' LT	1	911.80	909.00	2.80	1	
0010	2	116	814+98	EB IH 94, 52' LT	1	901.39	894.69	6.70	2	
0010	2	117	825+01	EB IH 94, 52' LT	1	895.84	889.59	6.25	1	
0010	2	118	830+97	EB IH 94, 49' LT	1	891.88	889.78	2.10	1	
0010	2	119	840+75	EB IH 94, 45' LT	1	885.63	875.23	10.40	2	
0010	2	120	854+06	EB IH 94, 24' LT	1	885.12	882.82	2.30	1	
0010	2	121	860+36	EB IH 94, 25' LT	1	882.70	880.60	2.10	1	
0010	2	123	876+04	EB IH 94, 34' LT	1	876.74	874.69	2.05	2	
0010	4	126	893+06	EB IH 94, 34' LT	1	878.77	876.27	2.50	2	
0010	2	127	899+04	EB IH 94, 29' LT	1	879.55	877.00	2.55	2	
0010	2	128	911+78	EB IH 94, 25' LT	1	870.12	866.52	3.60	2	
0010	2	129	17+51	EB IH 94, 25' LT	1	853.24	851.14	2.10	1	
TOTAL 0010					25					

TEMPORARY INLETS MEDIAN 1 GRATE

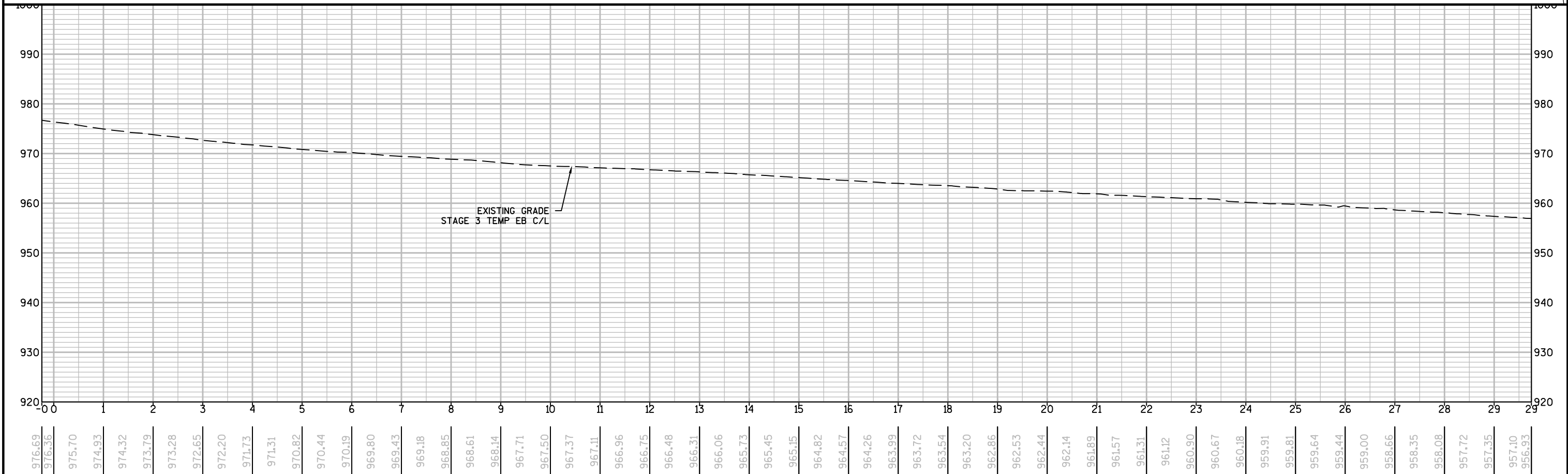
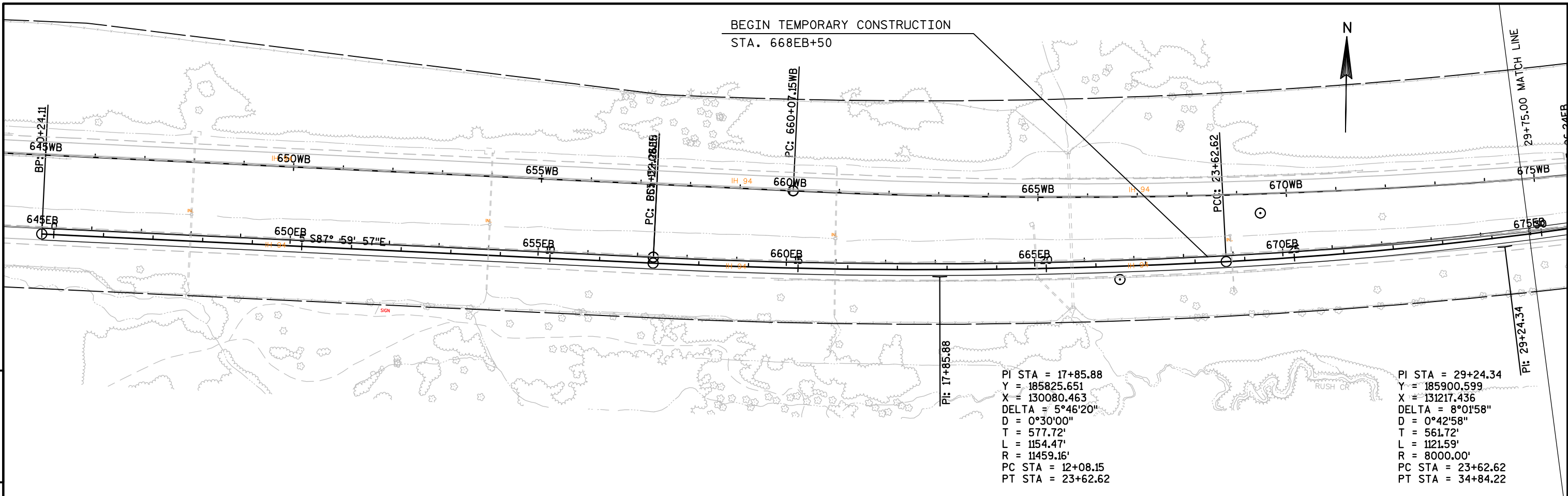
CATEGORY	STAGE	INLET		STATION	LOCATION	SPV.0060.04	GRATE	DISCH	DEPTH	REMARKS
		NO.				EACH	ELEV	ELEV		
0010	2	21	113+50	STAGE 3	TEMP EB C/L, 20.5' LT	1	906.00	903.50	2.67'	NO SLOPE
0010	2	22	198+00	STAGE 3	TEMP EB C/L, 20.5' LT	1	891.00	889.00	2.17'	NO SLOPE
0010	4	41	113+00	STAGE 5	TEMP WB C/L, 20.5' RT	1	907.50	905.00	2.67'	NO SLOPE
0010	4	42	198+50	STAGE 5	TEMP WB C/L, 20.5' RT	1	892.00	890.00	2.17'	NO SLOPE
TOTAL 0010						4				

CLEANING BOX CULVERTS

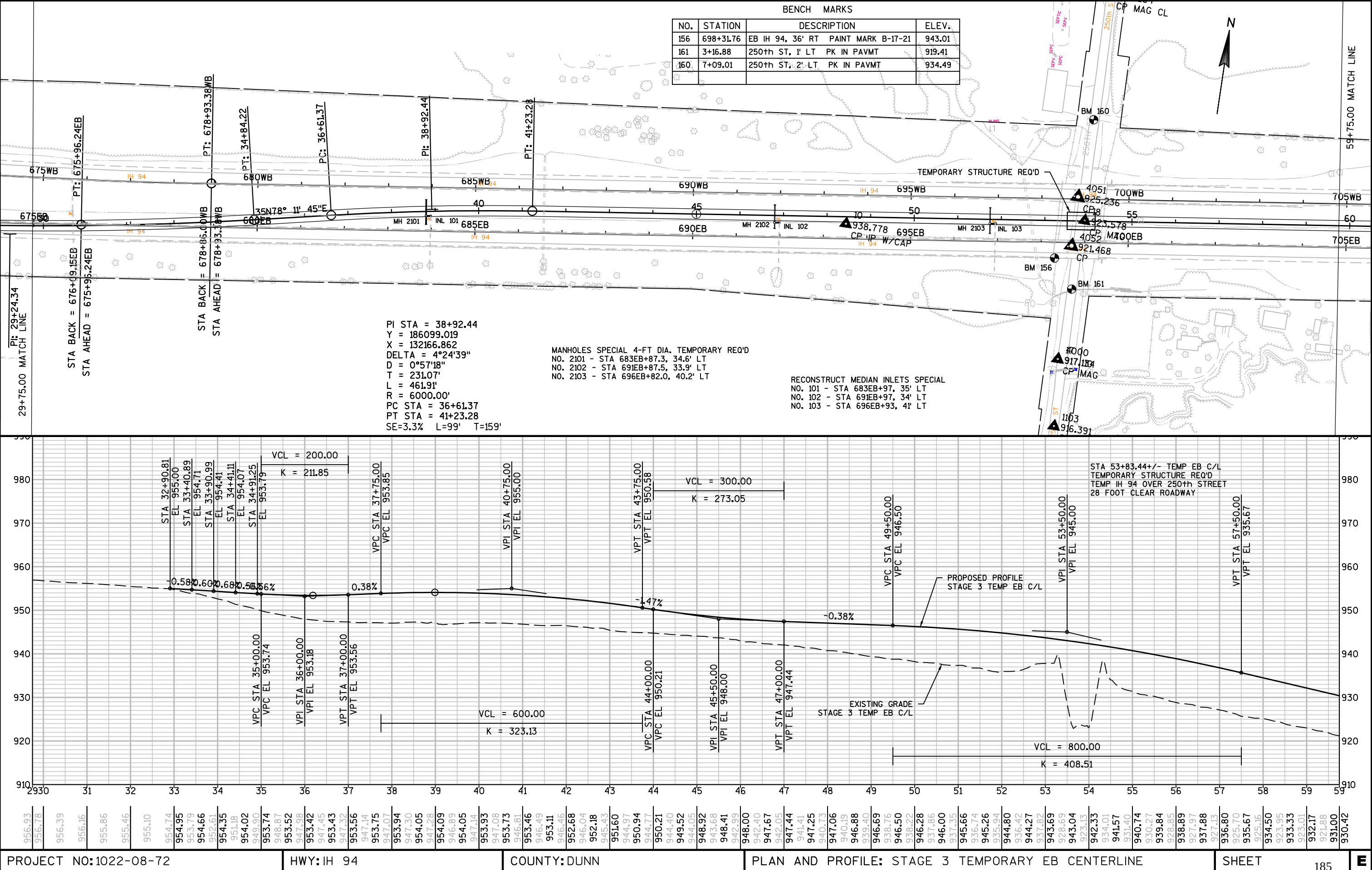
CATEGORY	STATION	LOCATION	SPV.0060.03 EACH	REMARKS
0010	776+19	EB/WB IH 94	1	5' X 6' X 218' C-17-17
TOTAL 0010			1	

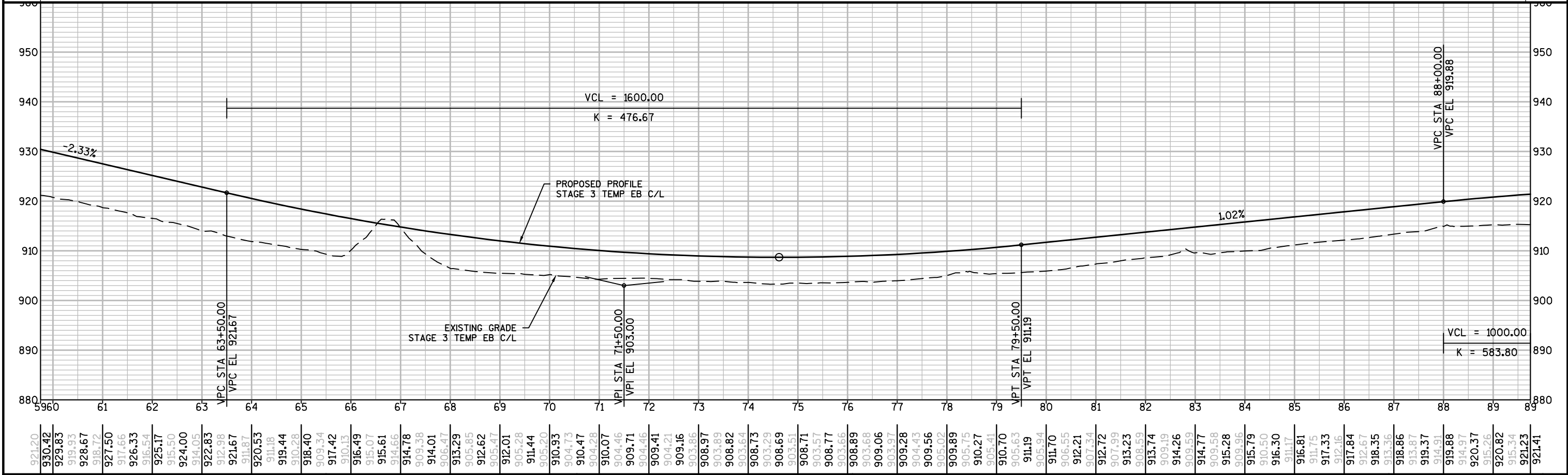
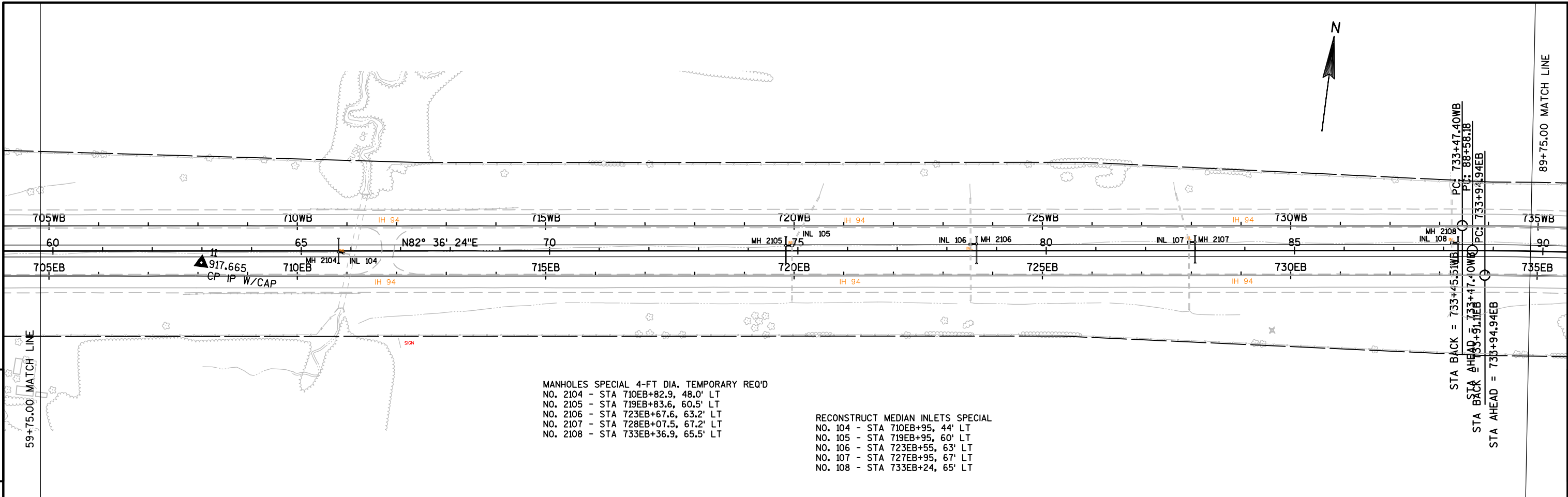
CONSTRUCTION STAKING FINISHED MEDIAN

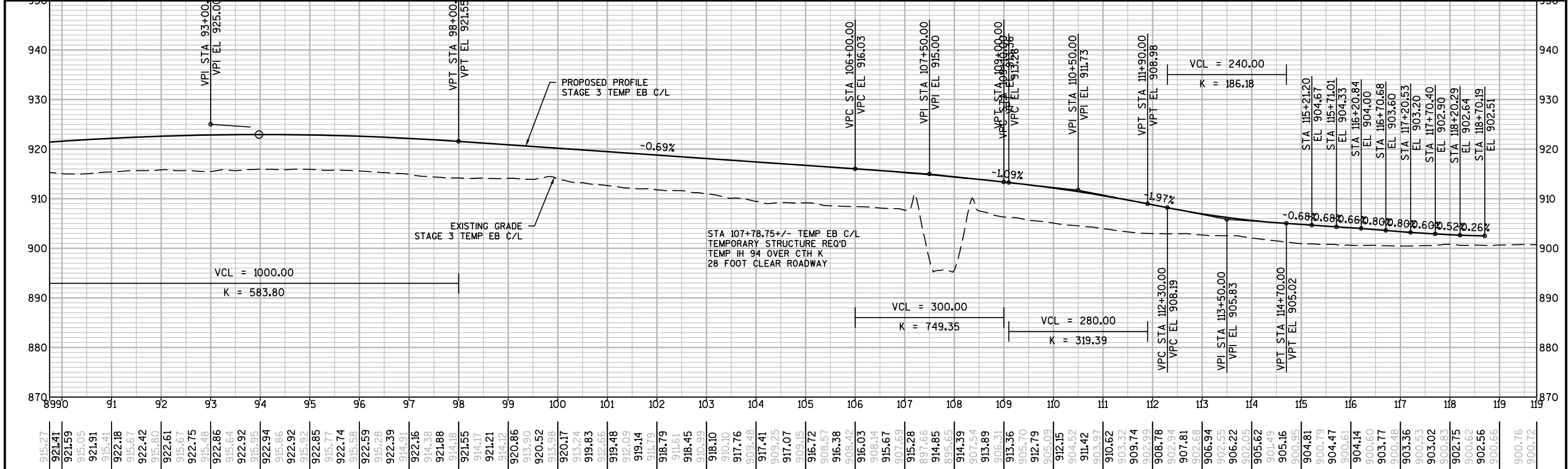
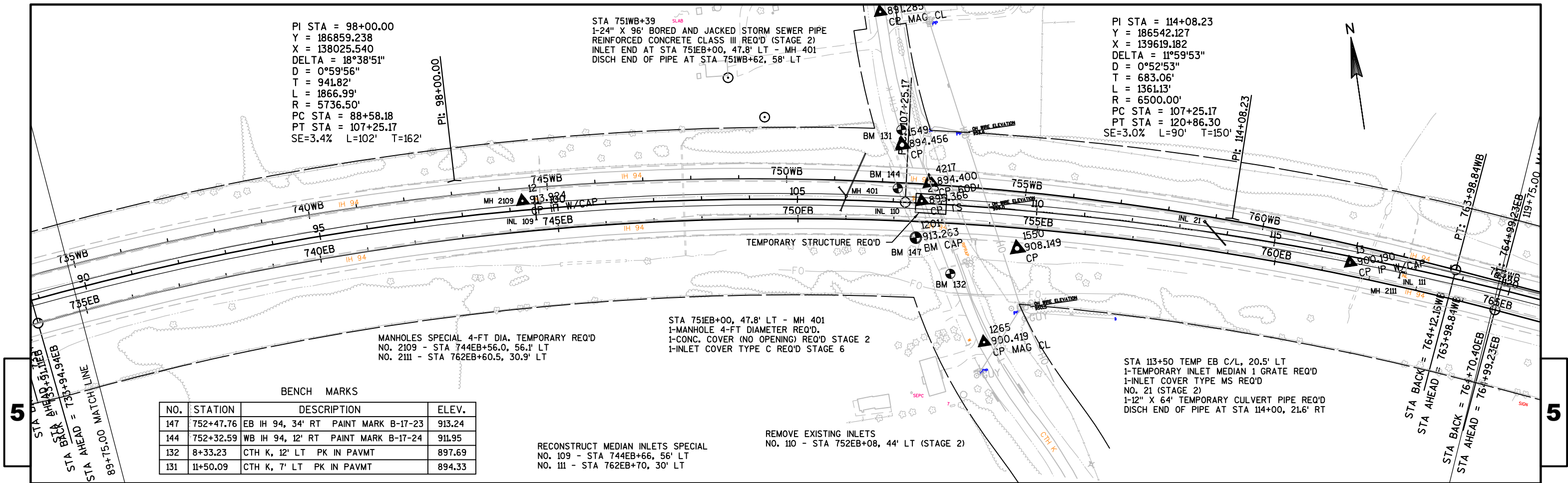
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	SPV.0090.01 LF	REMARKS
0010	6	670+00	-	671+98	EB IH 94, LT	2811	MEDIAN
0010	6	699+67	-	752+04	EB IH 94, LT	5233	MEDIAN
0010	6	753+77	-	816+72	EB IH 94, LT	6278	MEDIAN
0010	6	818+35	-	885+36	EB IH 94, LT	6690	MEDIAN
0010	6	887+05	-	23+00	EB IH 94, LT	3918	MEDIAN
TOTAL 0010						24930	



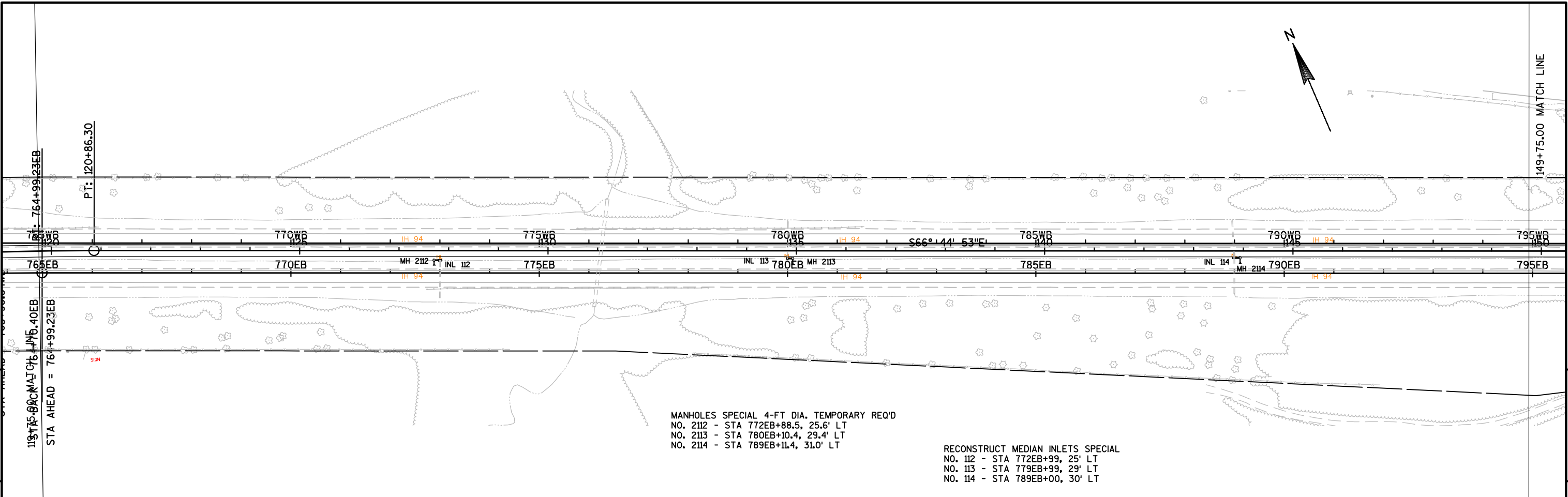
NO.	STATION	DESCRIPTION	ELEV.
156	698+37.76	EB IH 94, 36' RT PAINT MARK B-17-21	943.01
161	3+16.88	250th ST, 1' LT PK IN PAVMT	919.41
160	7+09.01	250th ST, 2' LT PK IN PAVMT	934.49







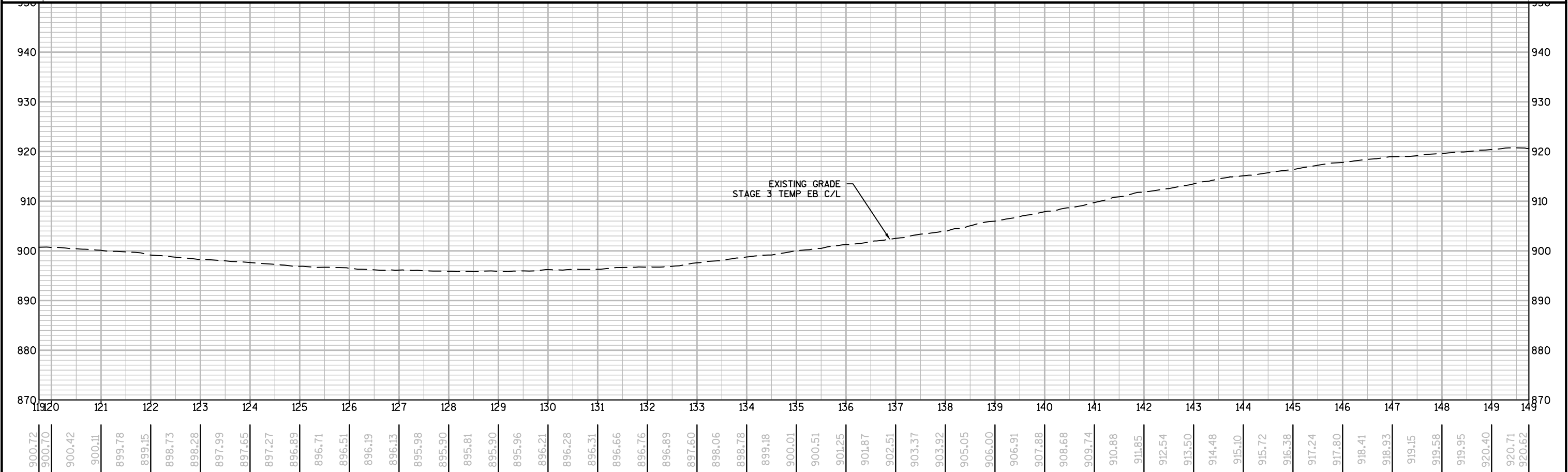
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MANHOLES SPECIAL 4-FT DIA. TEMPORARY REQ'D
NO. 2112 - STA 772EB+88.5, 25.6' LT
NO. 2113 - STA 780EB+10.4, 29.4' LT
NO. 2114 - STA 789EB+11.4, 31.0' LT

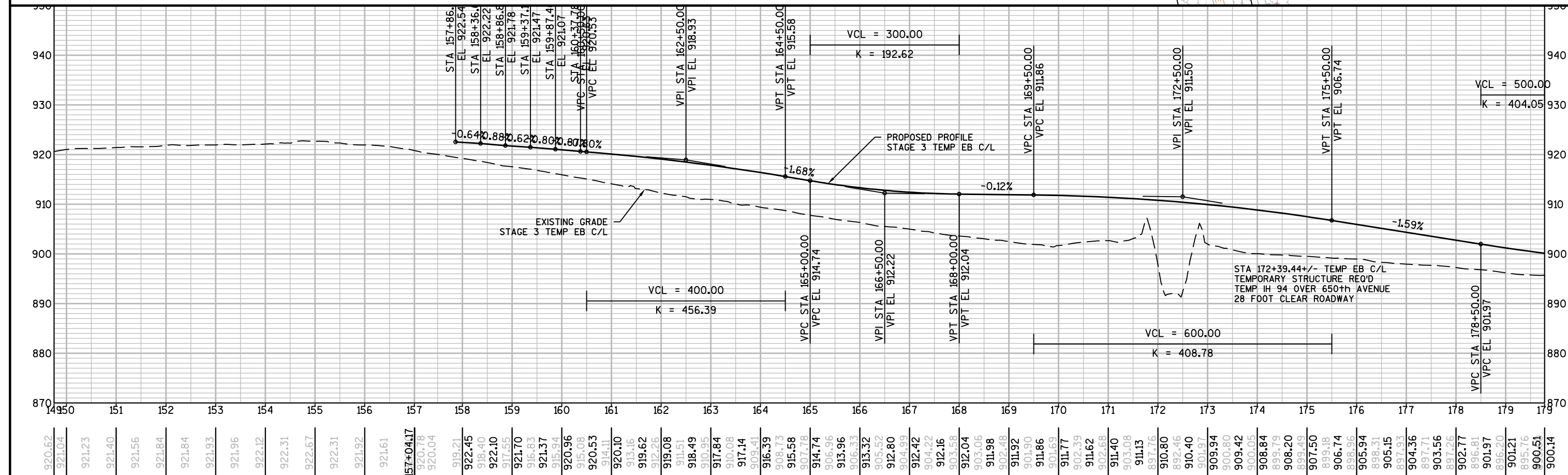
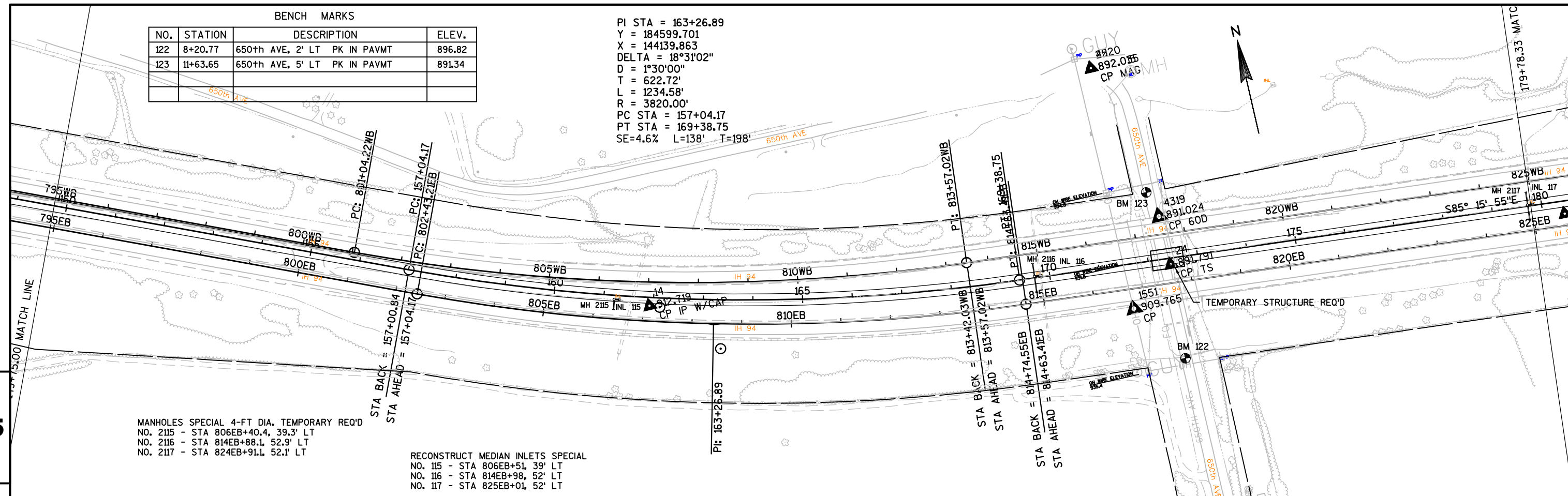
RECONSTRUCT MEDIAN INLETS SPECIAL
NO. 112 - STA 772EB+99, 25' LT
NO. 113 - STA 779EB+99, 29' LT
NO. 114 - STA 789EB+00, 30' LT

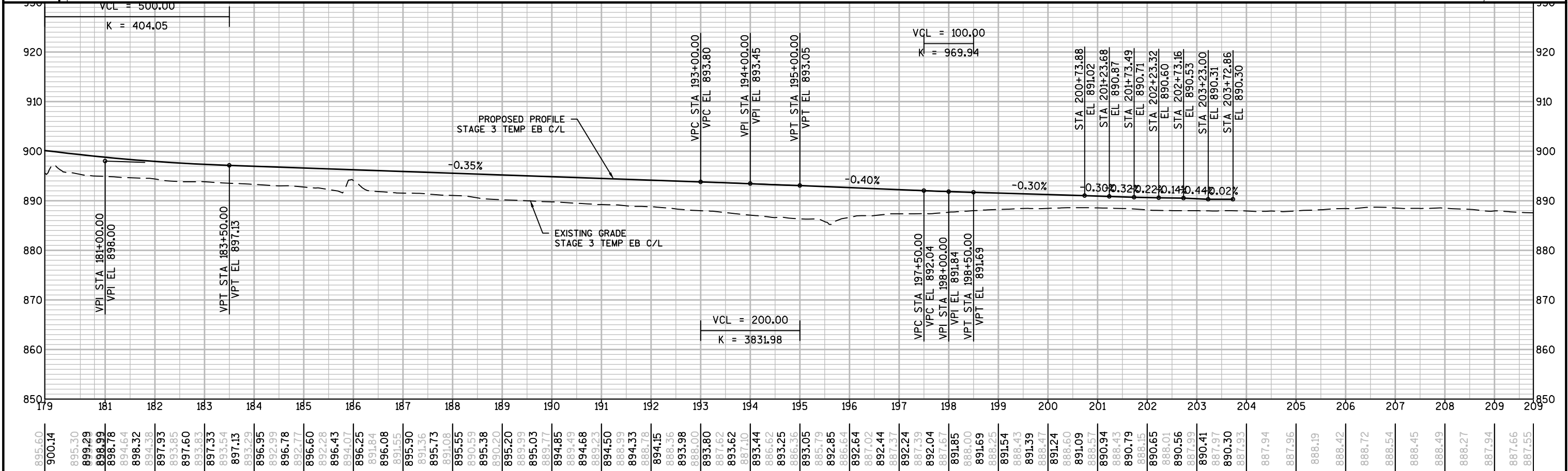
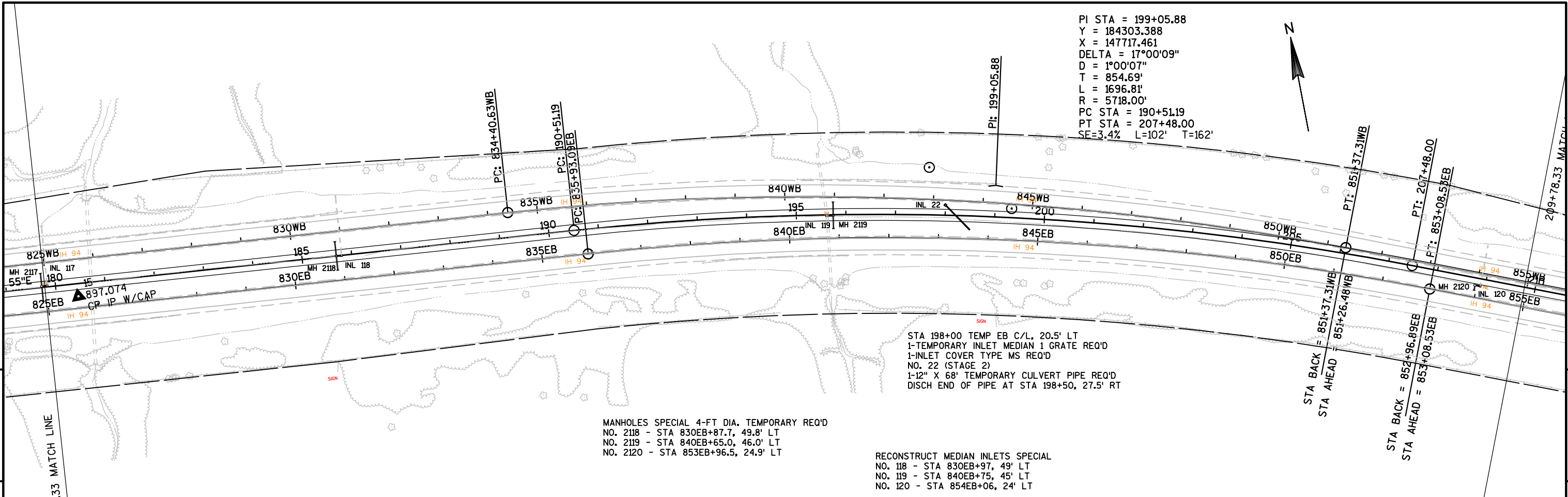


PROJECT NO:1022-08-72	HWY:IH 94	COUNTY:DUNN	PLAN AND PROFILE: STAGE 3 TEMPORARY EB CENTERLINE	SHEET 188	E
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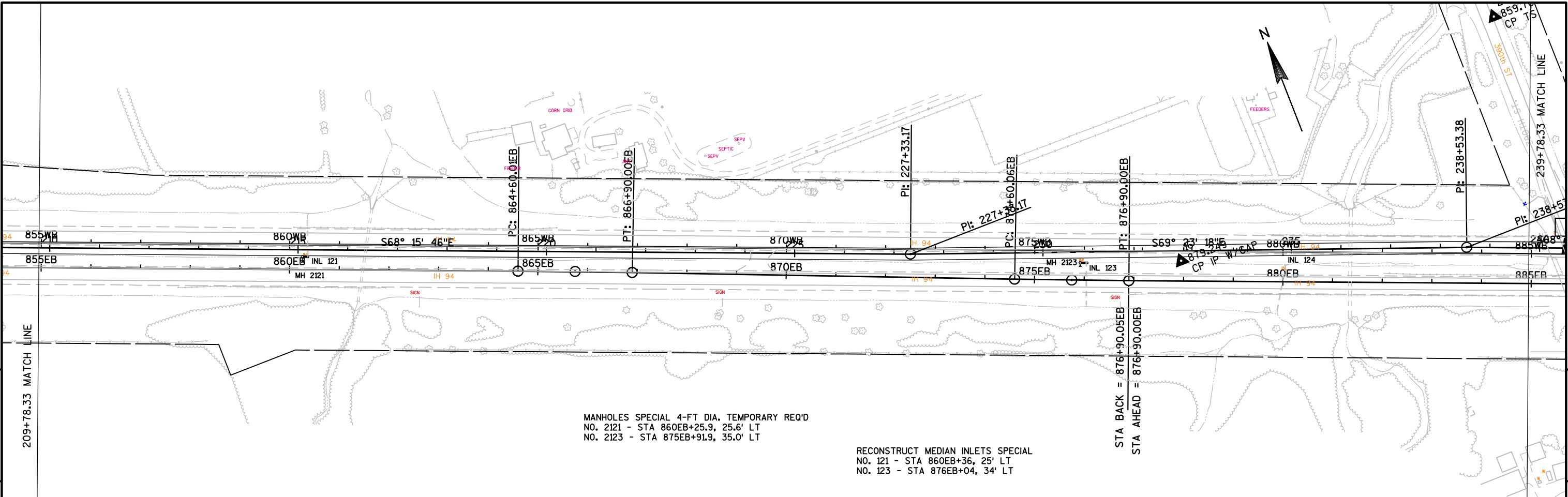
NO.	STATION	DESCRIPTION	ELEV.
122	8+20.77	650th AVE, 2' LT PK IN PAVMT	896.82
123	11+63.65	650th AVE, 5' LT PK IN PAVMT	891.34
	650th AVE		

PI STA = 163+26.89
Y = 184599.701
X = 144139.863
DELTA = 18°31'02"
D = 1°30'00"
T = 622.72'
L = 1234.58'
R = 3820.00'
PC STA = 157+04.17
PT STA = 169+38.75
SE=4.6% L=138' T=198'





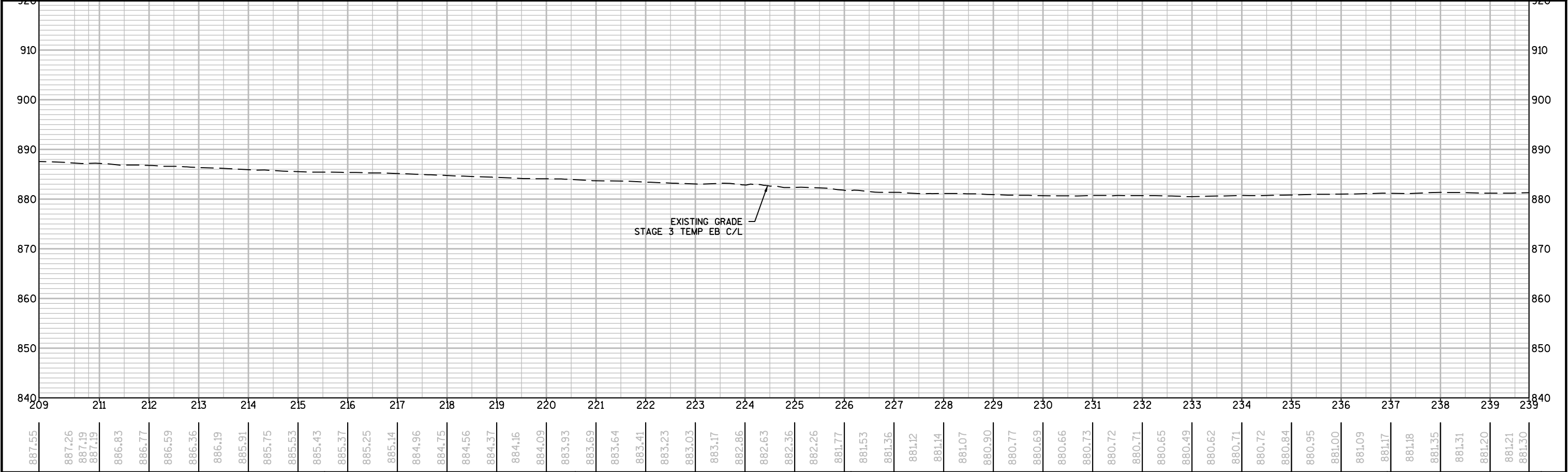
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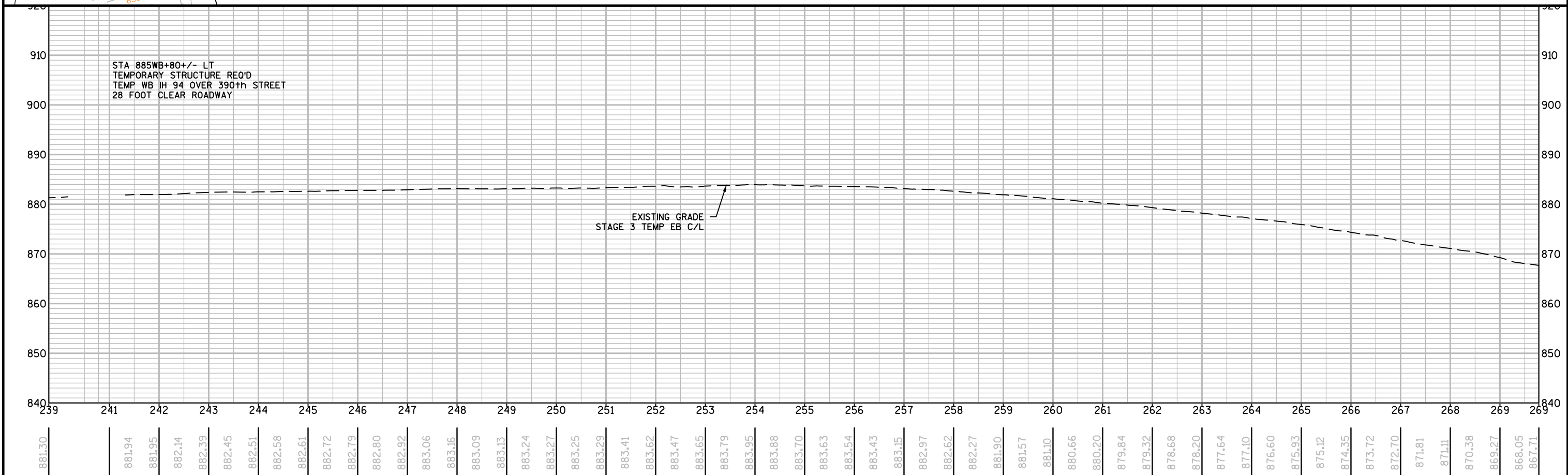
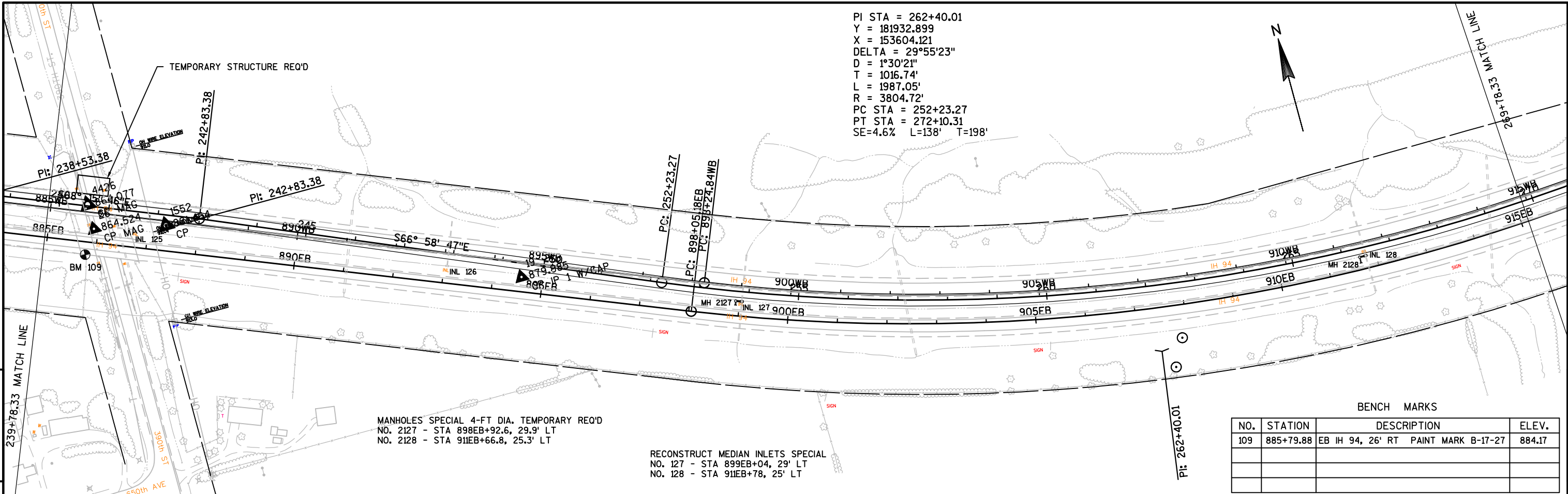
MANHOLES SPECIAL 4-FT DIA. TEMPORARY REQ'D
NO. 2121 - STA 860EB+25.9, 25.6' LT
NO. 2123 - STA 875EB+91.9, 35.0' LT

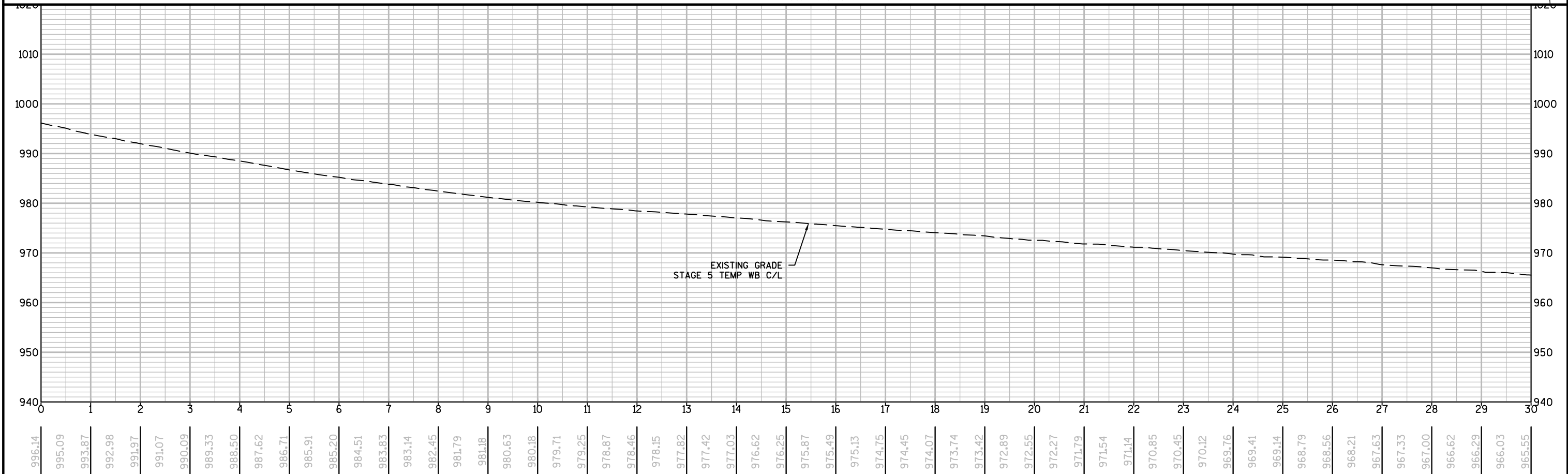
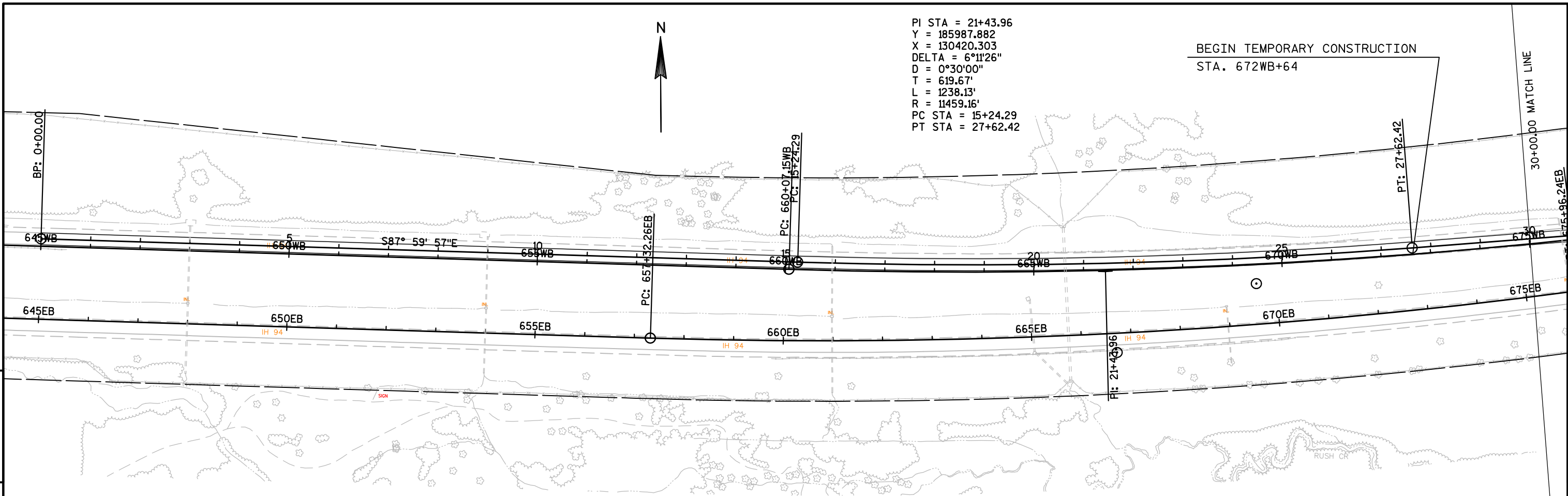
RECONSTRUCT MEDIAN INLETS SPECIAL
NO. 121 - STA 860EB+36, 25' LT
NO. 123 - STA 876EB+04, 34' LT

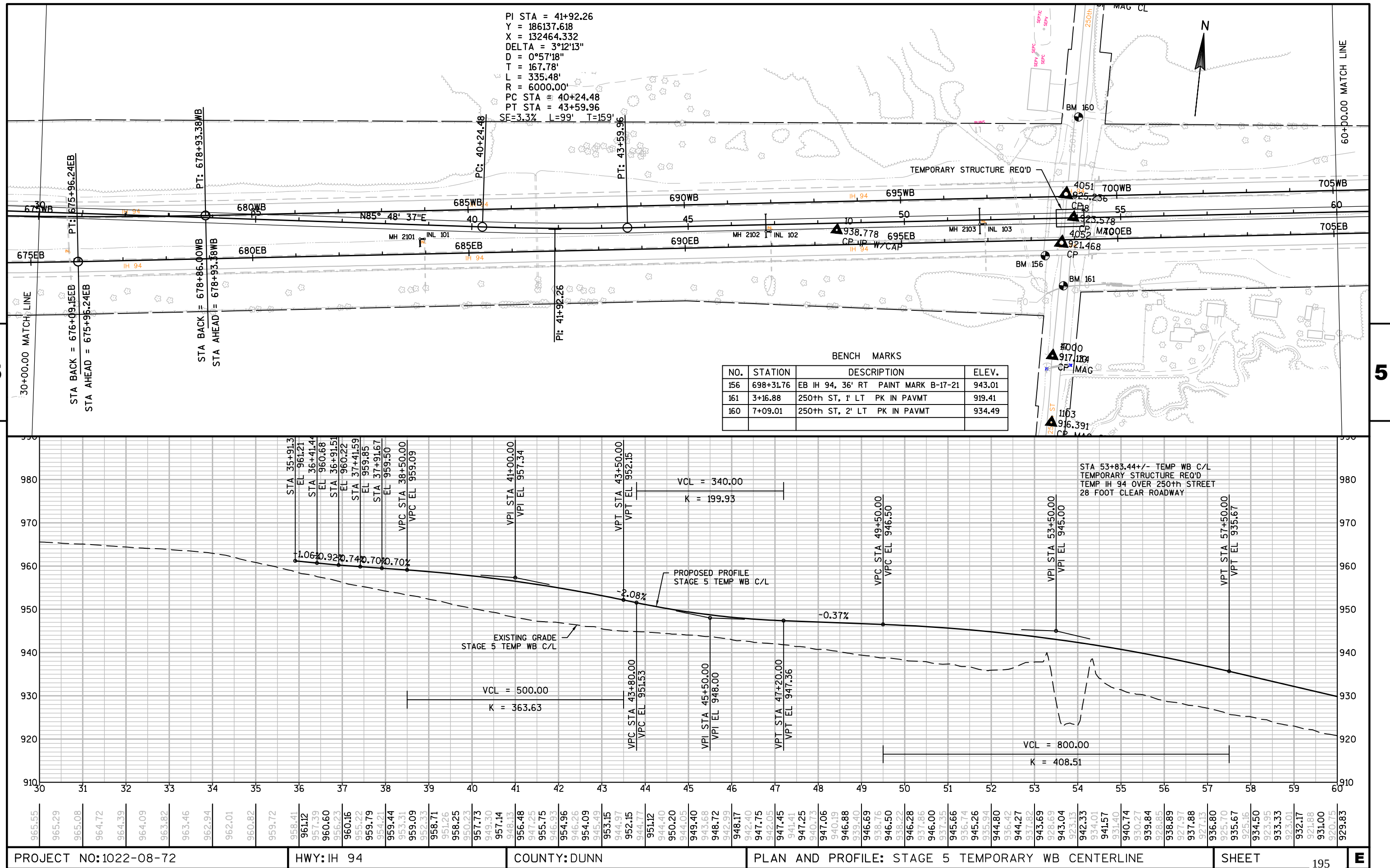
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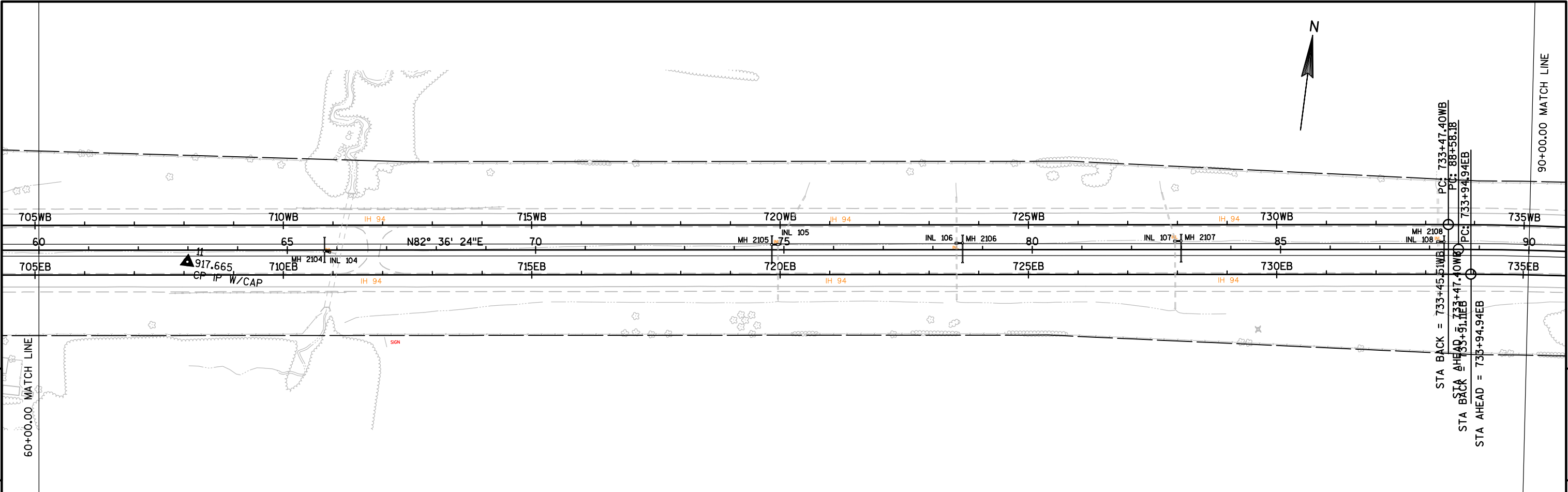
PROJECT NO:1022-08-72					HWY:IH 94					COUNTY:DUNN					PLAN AND PROFILE: STAGE 3 TEMPORARY EB CENTERLINE										SHEET 191					E
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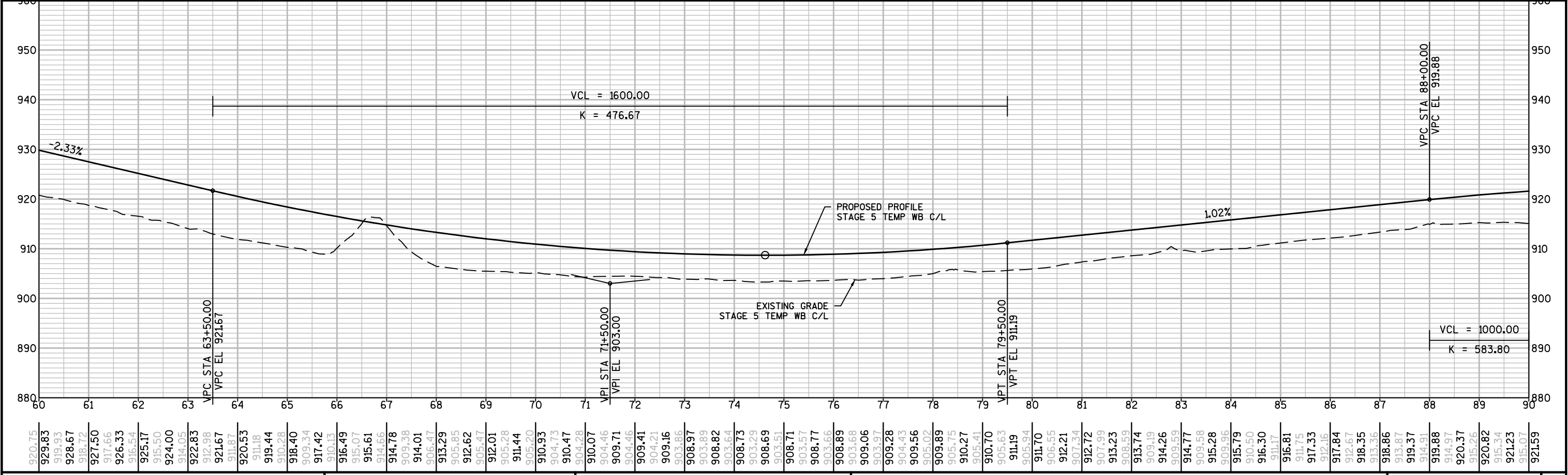




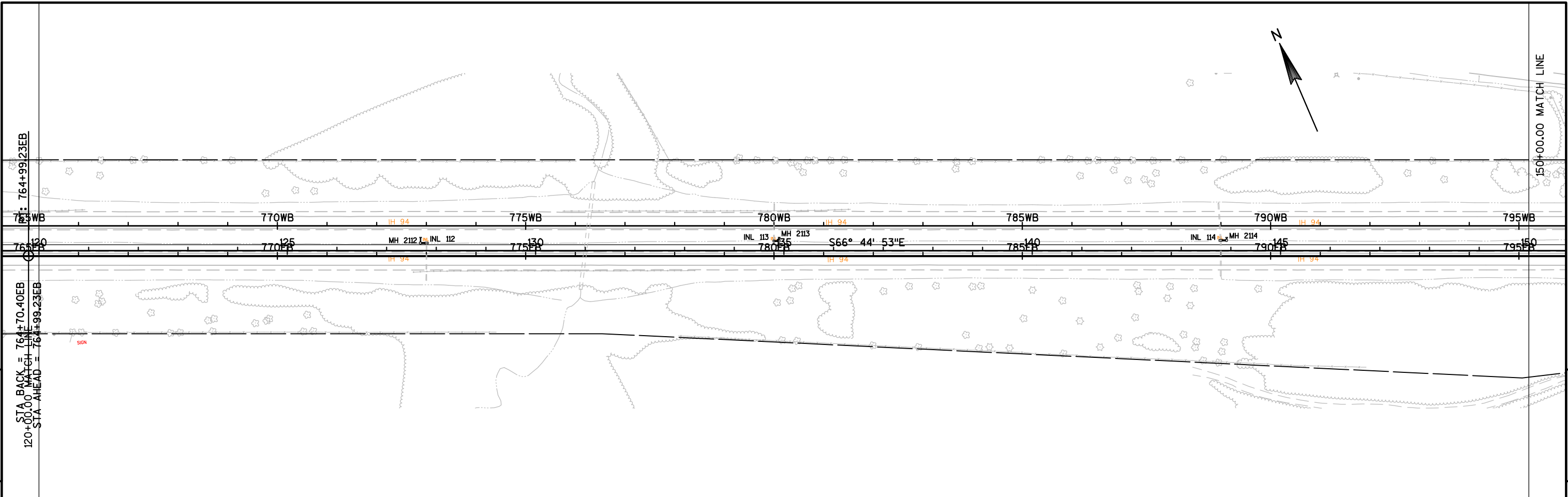
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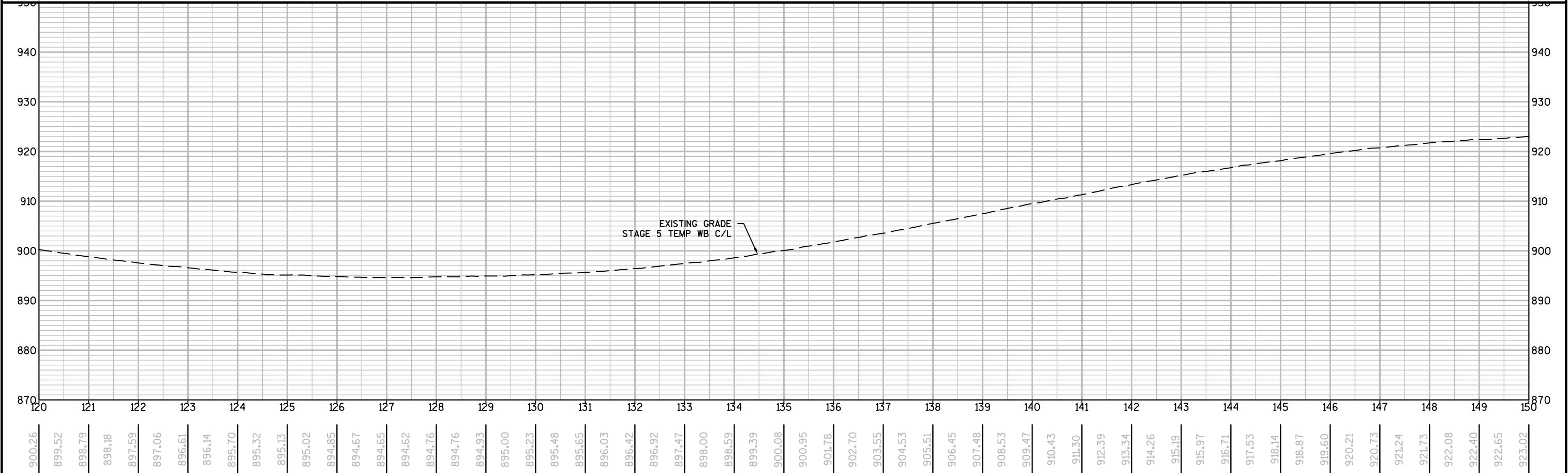
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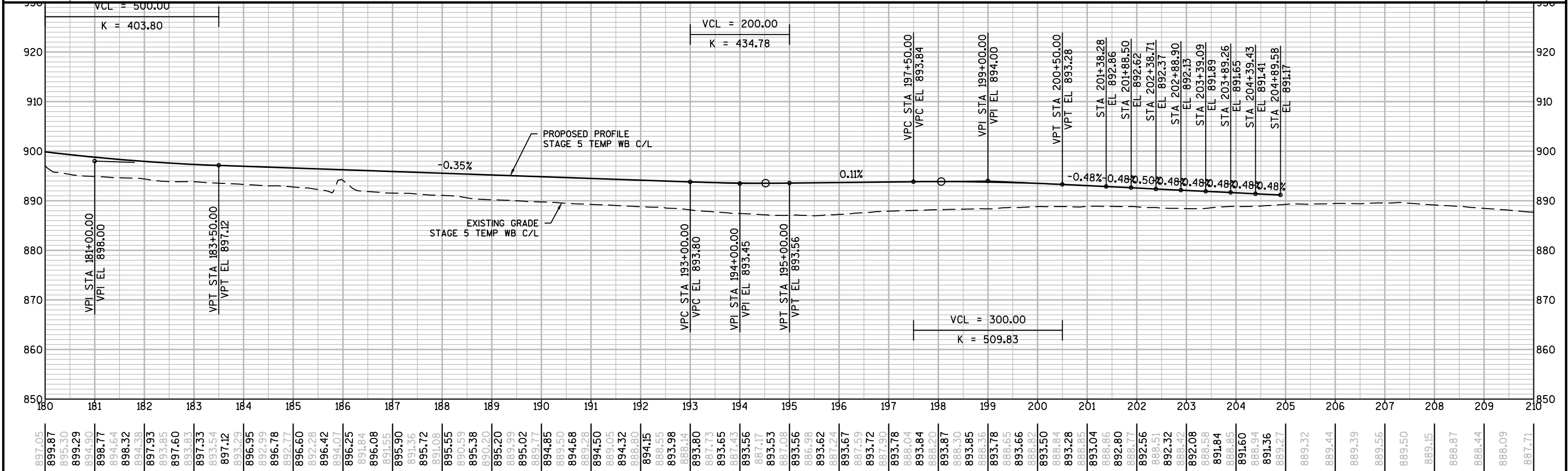
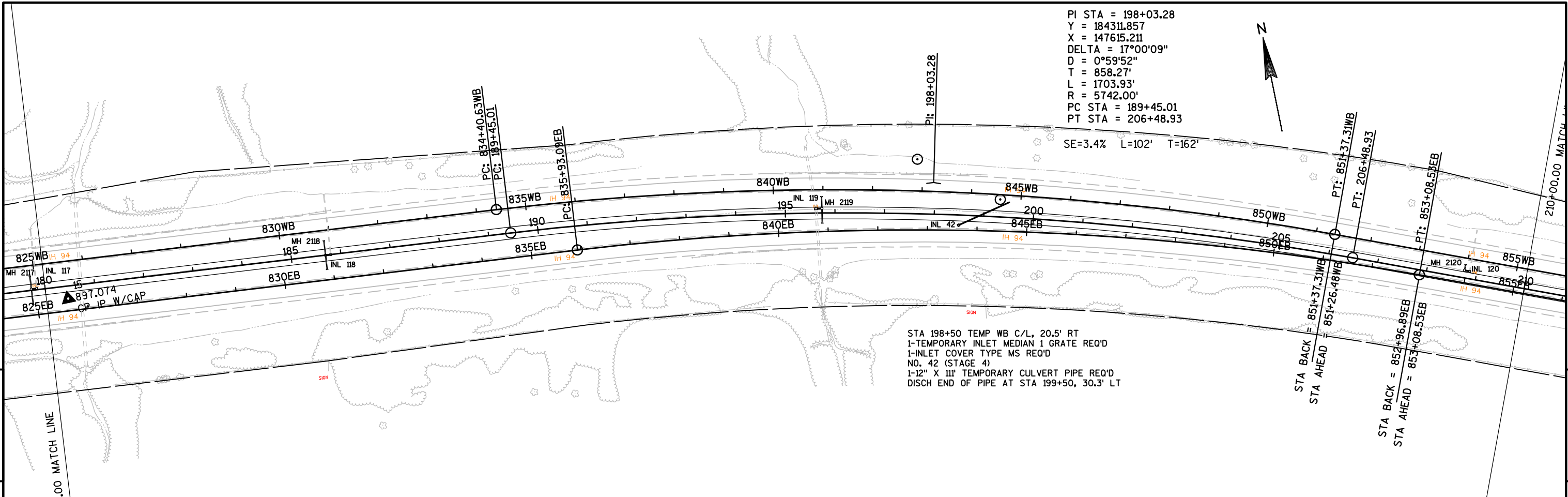


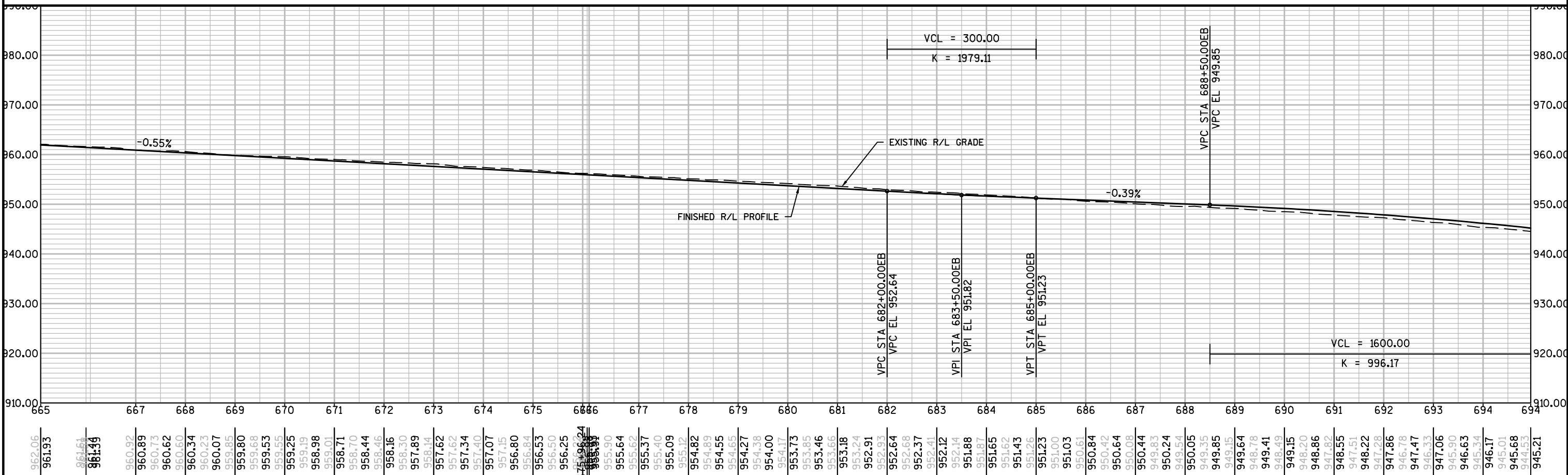
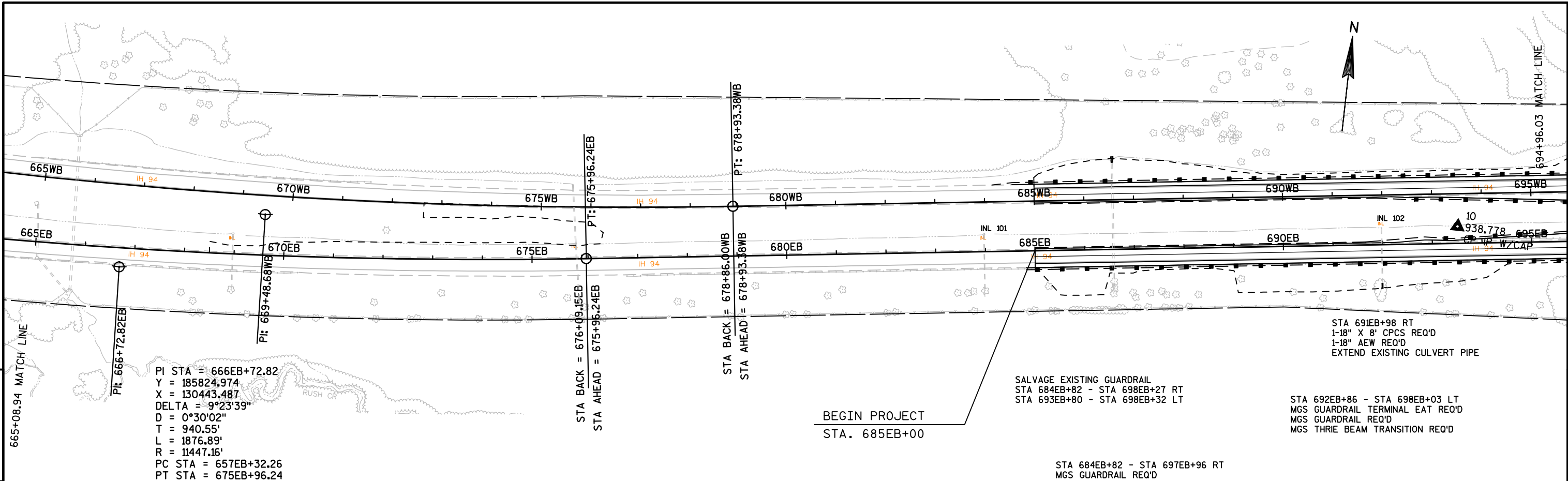
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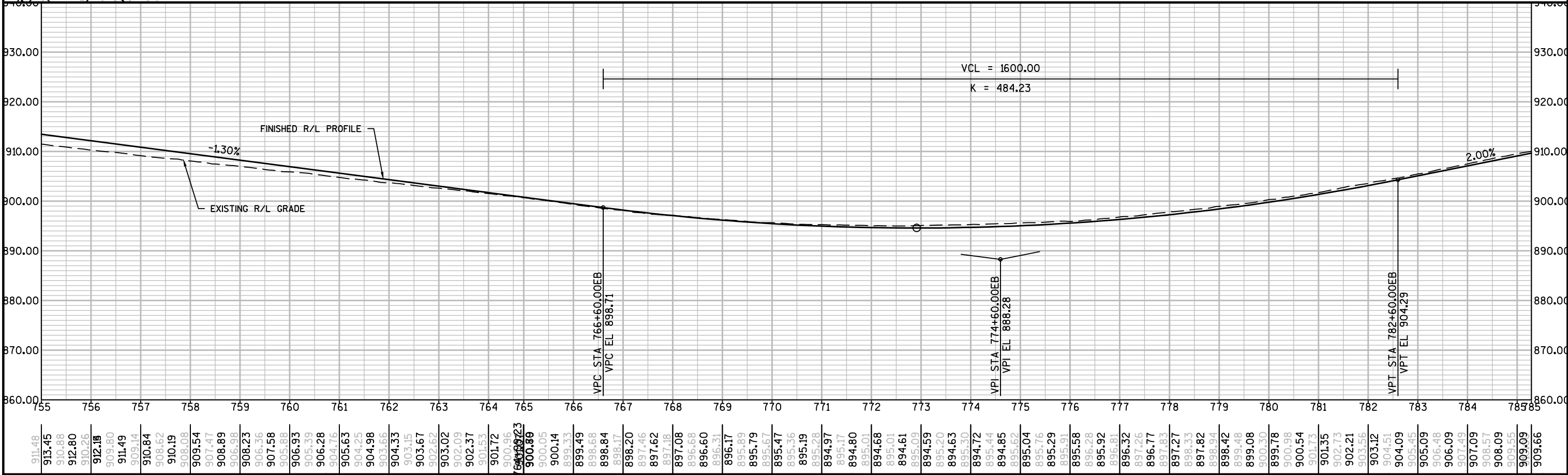
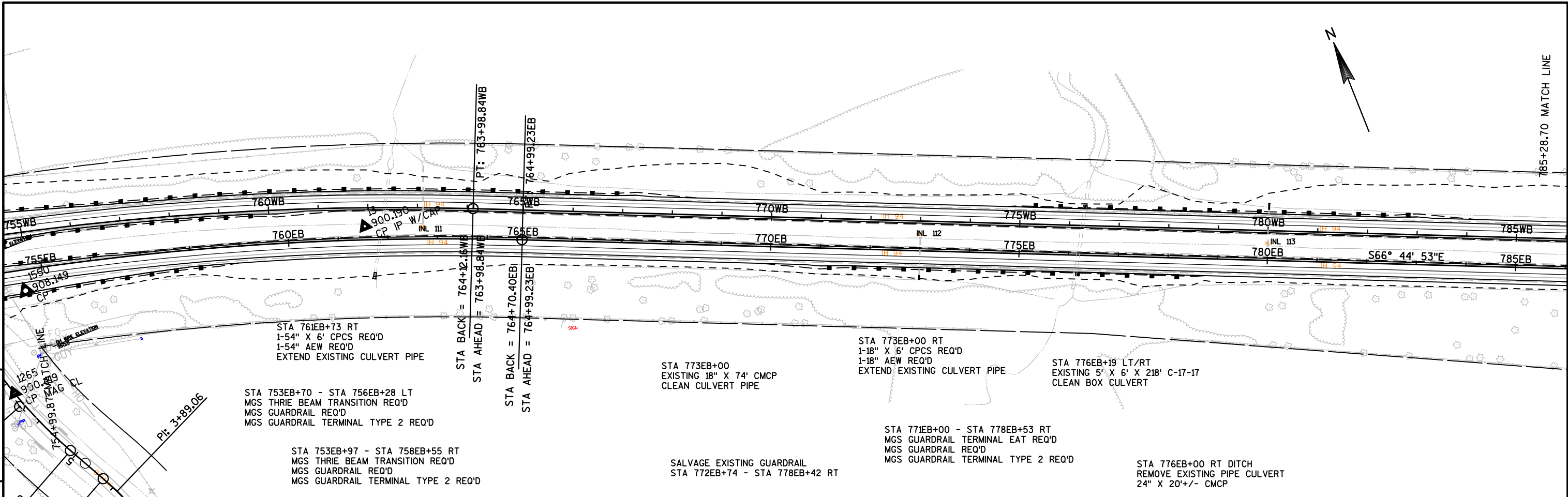


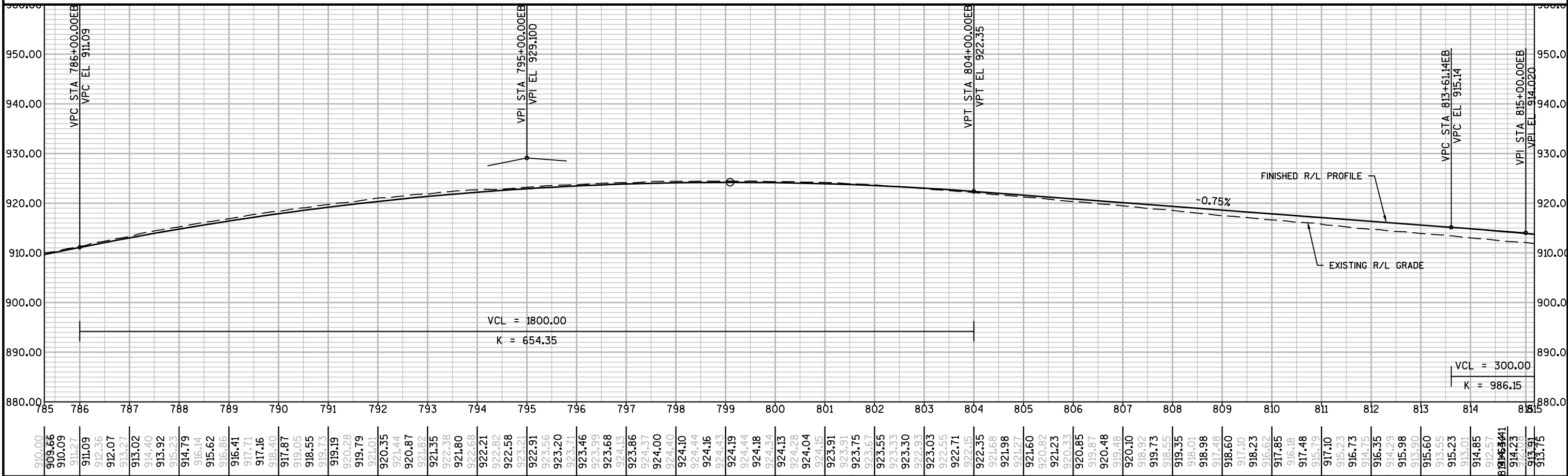
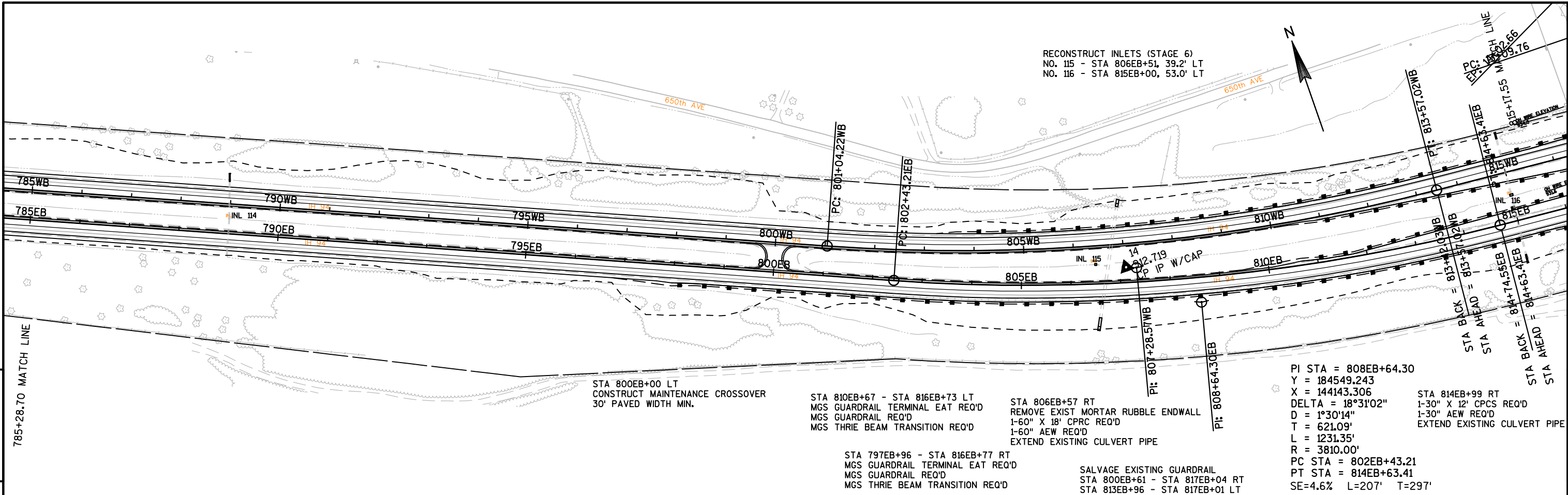
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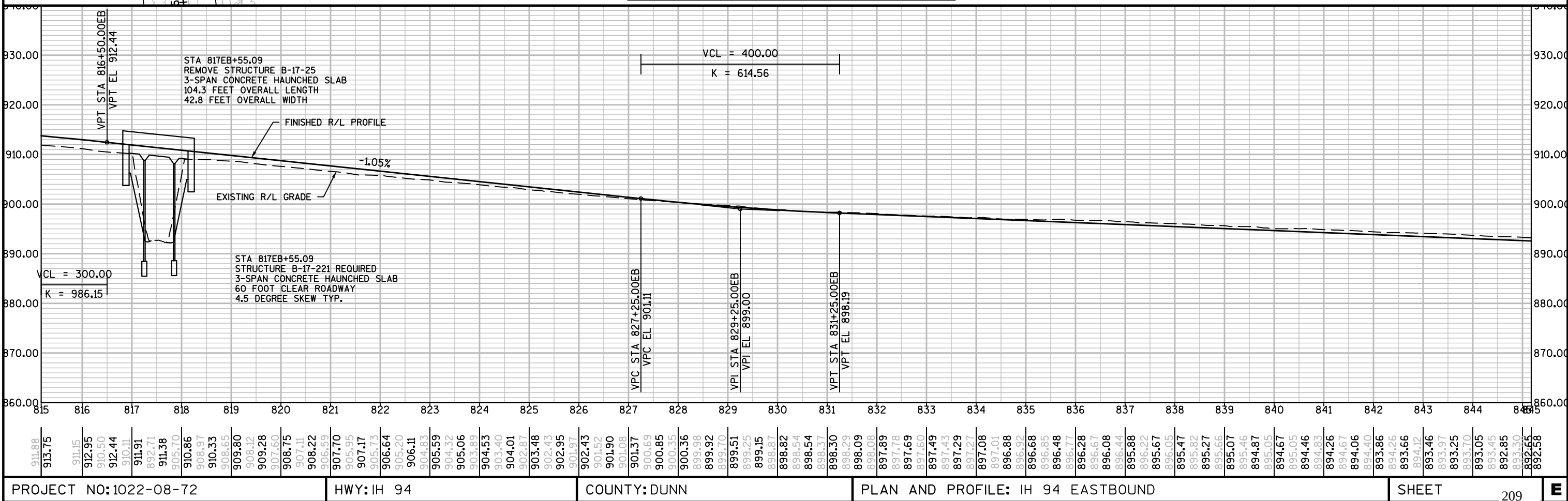
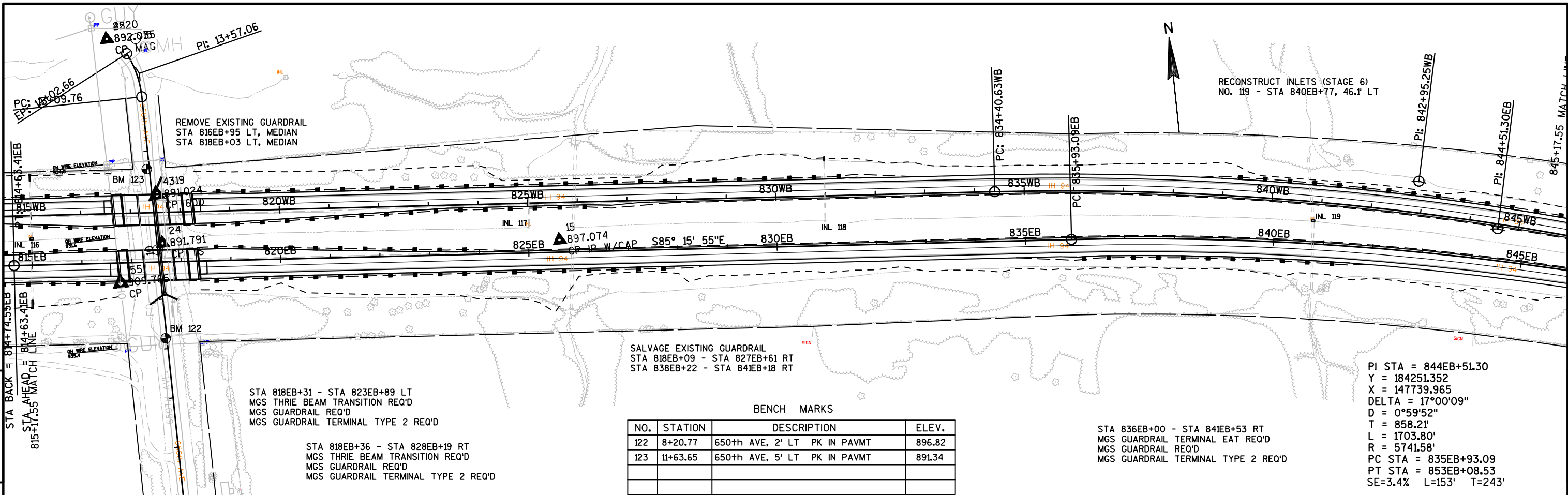


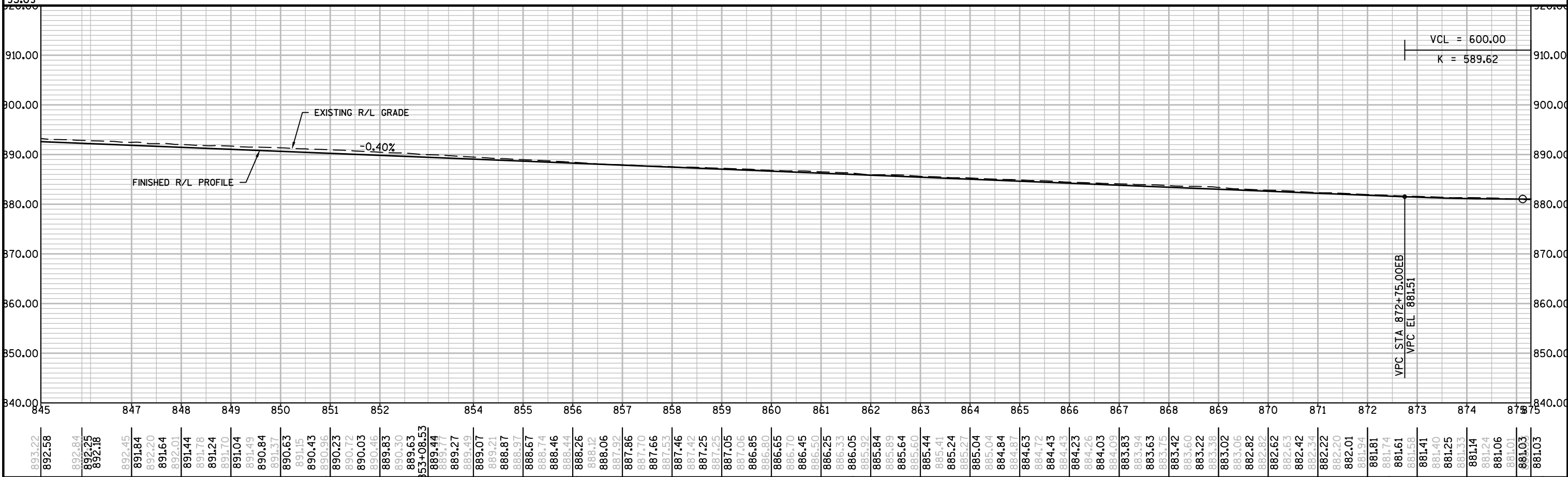
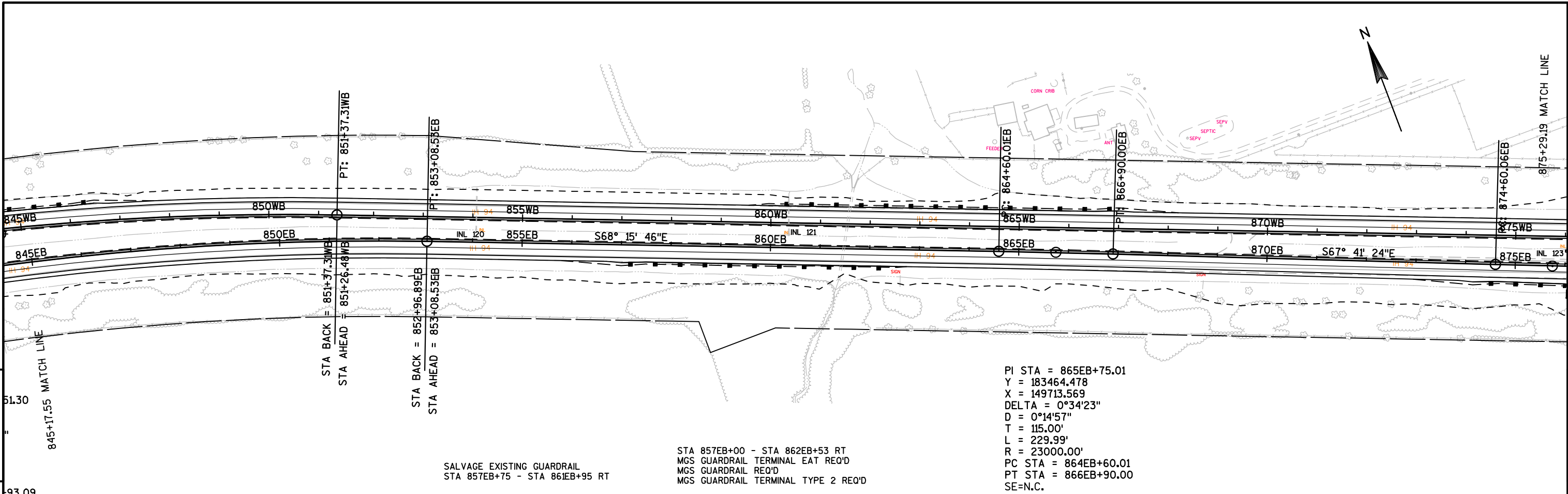


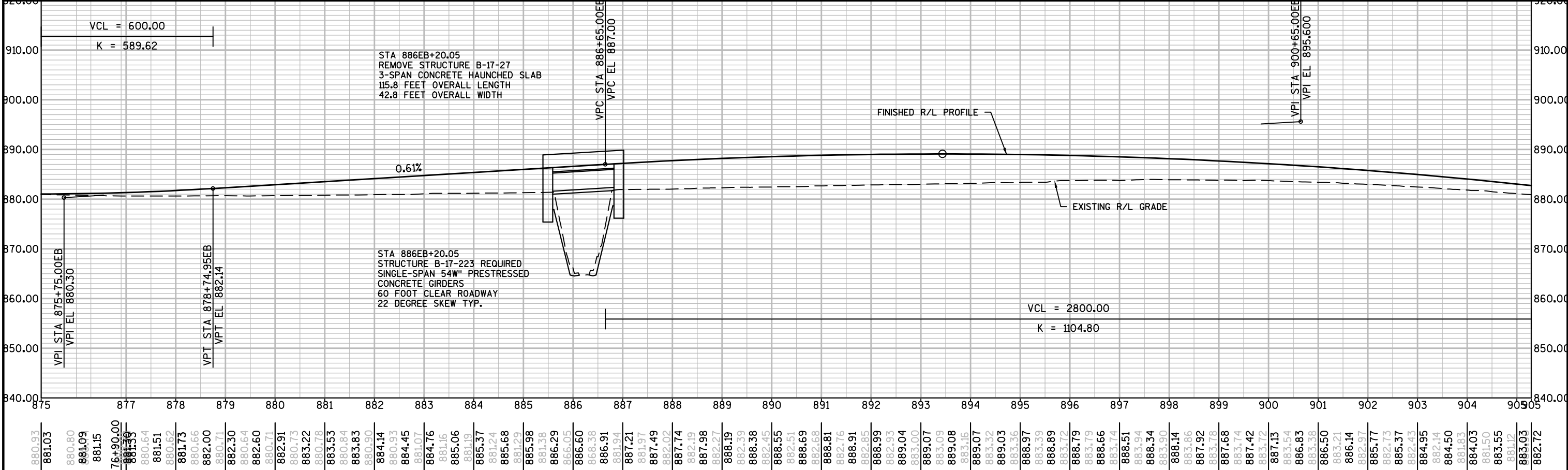
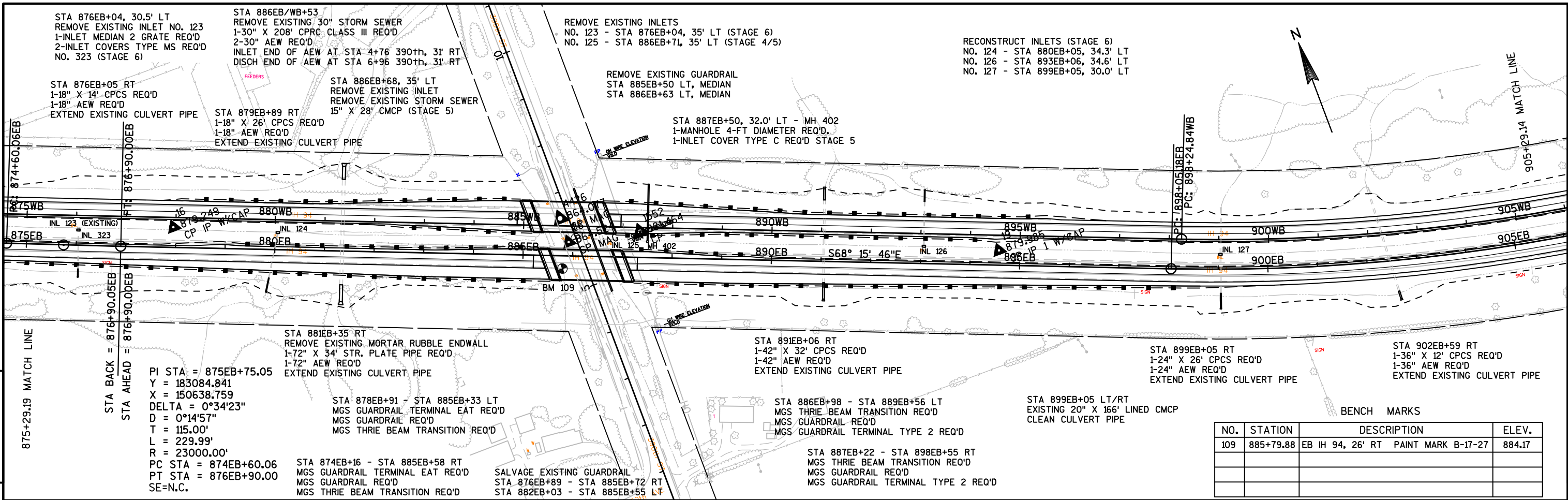




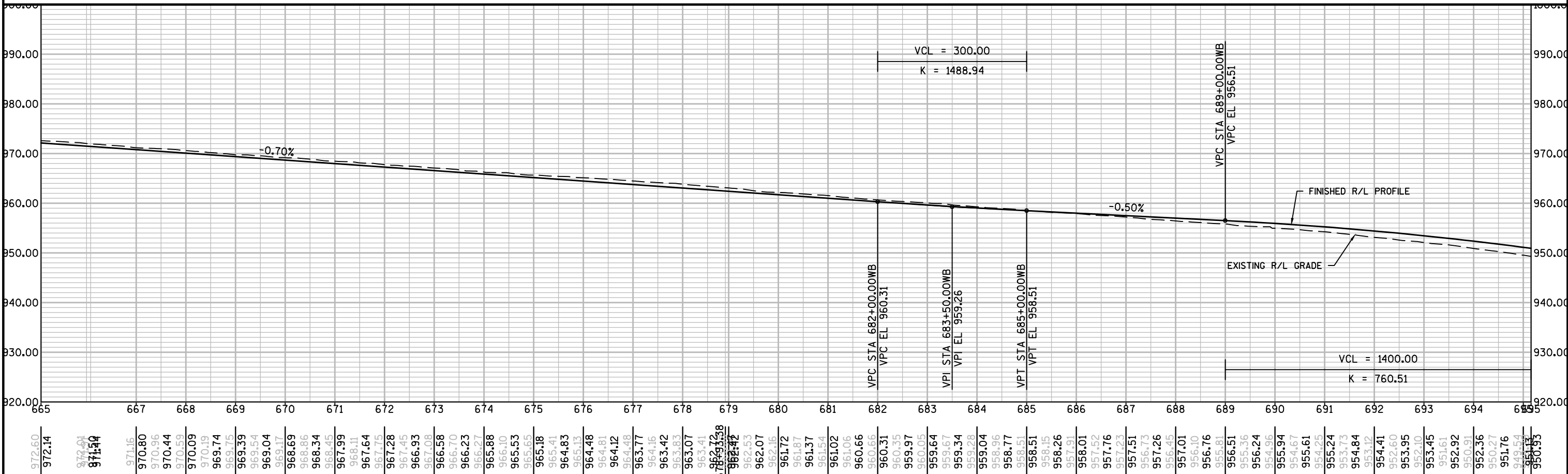
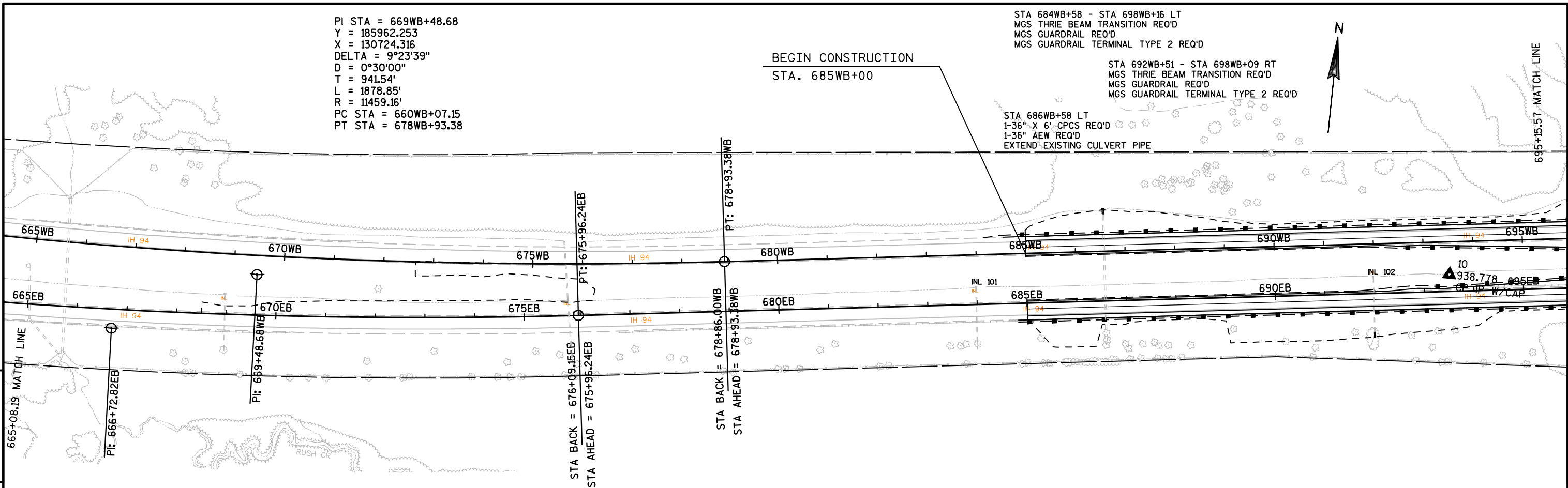


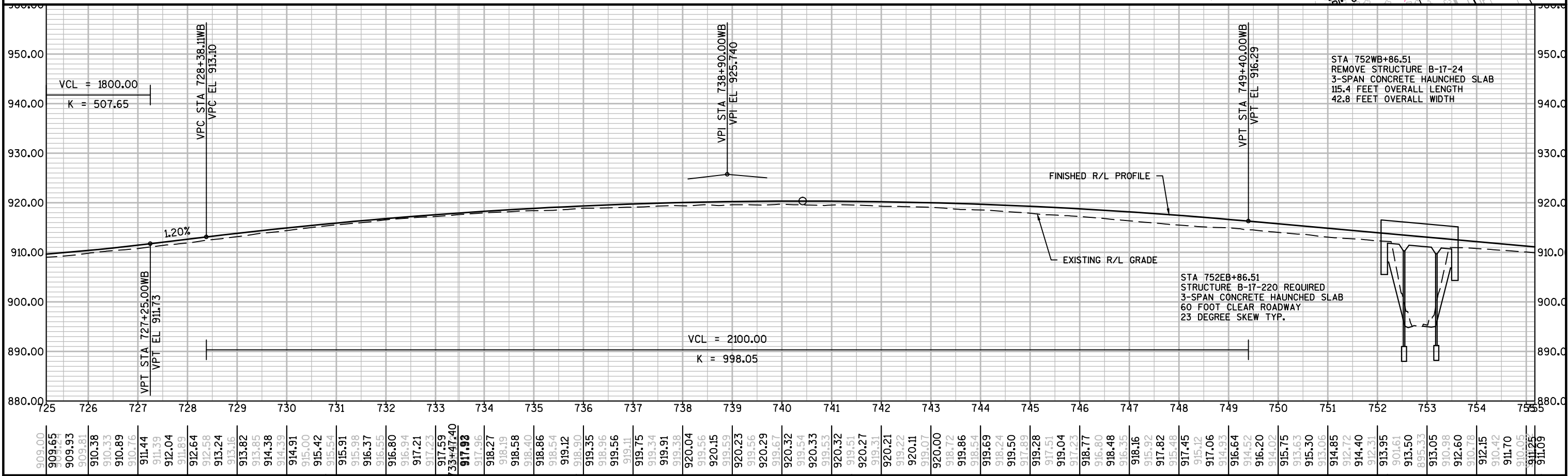
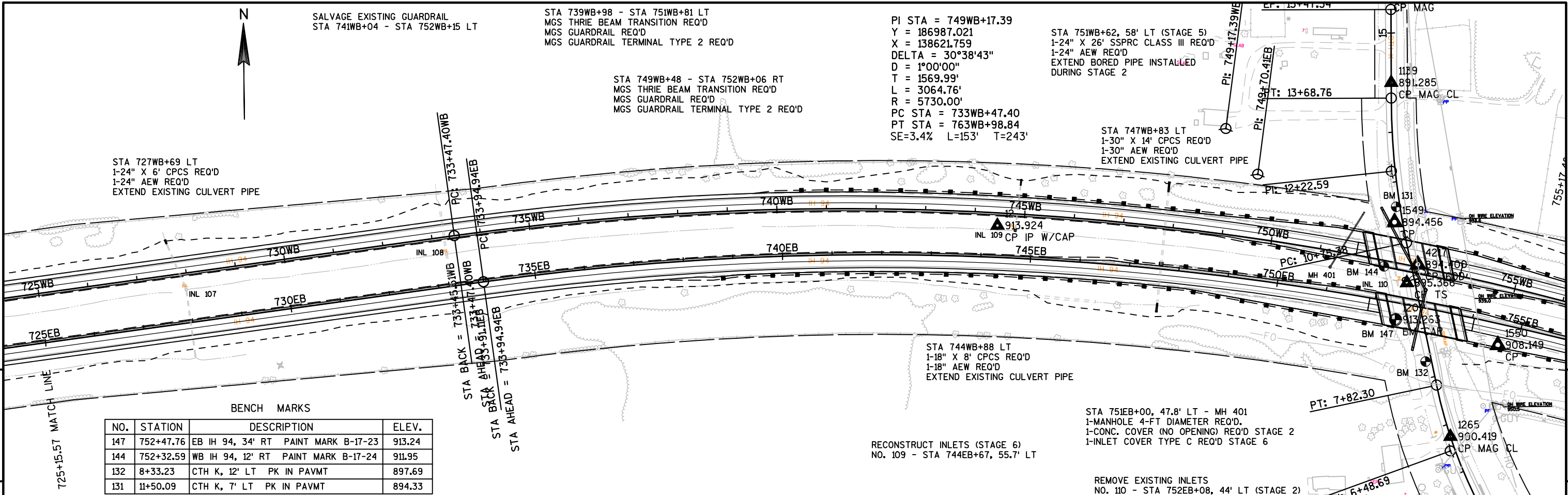


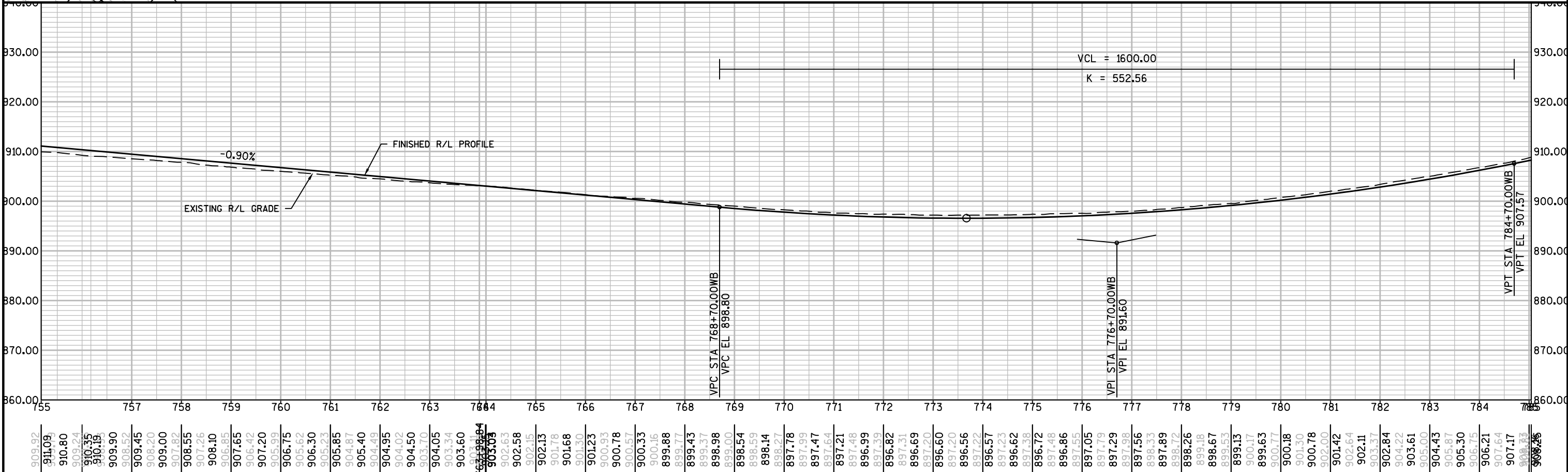
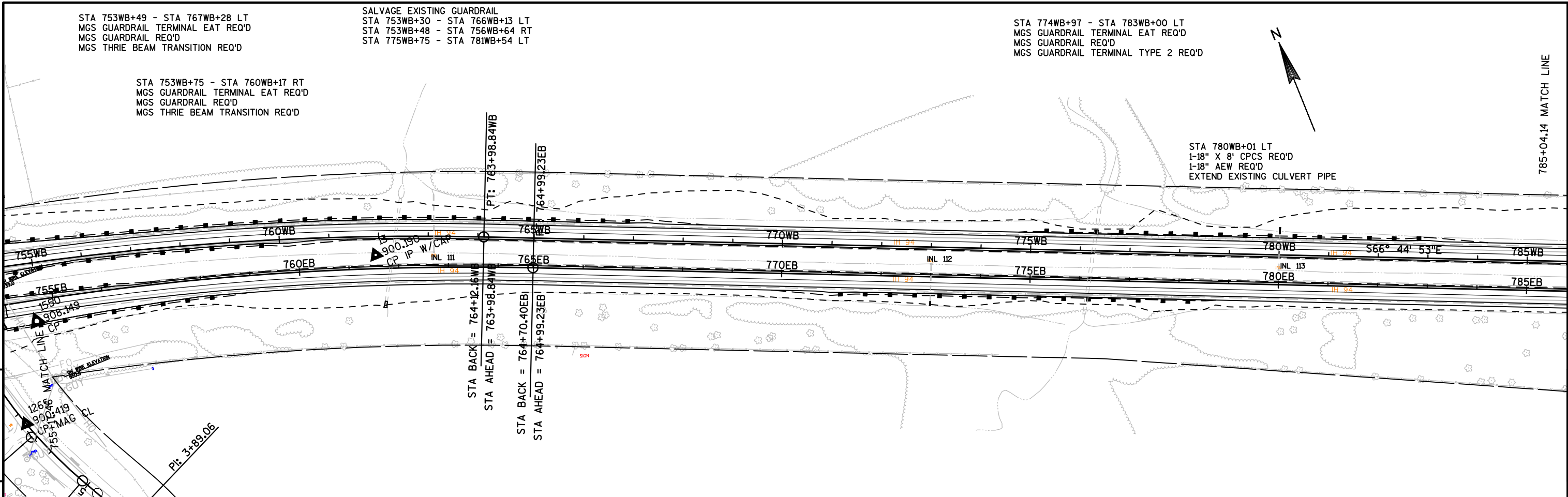


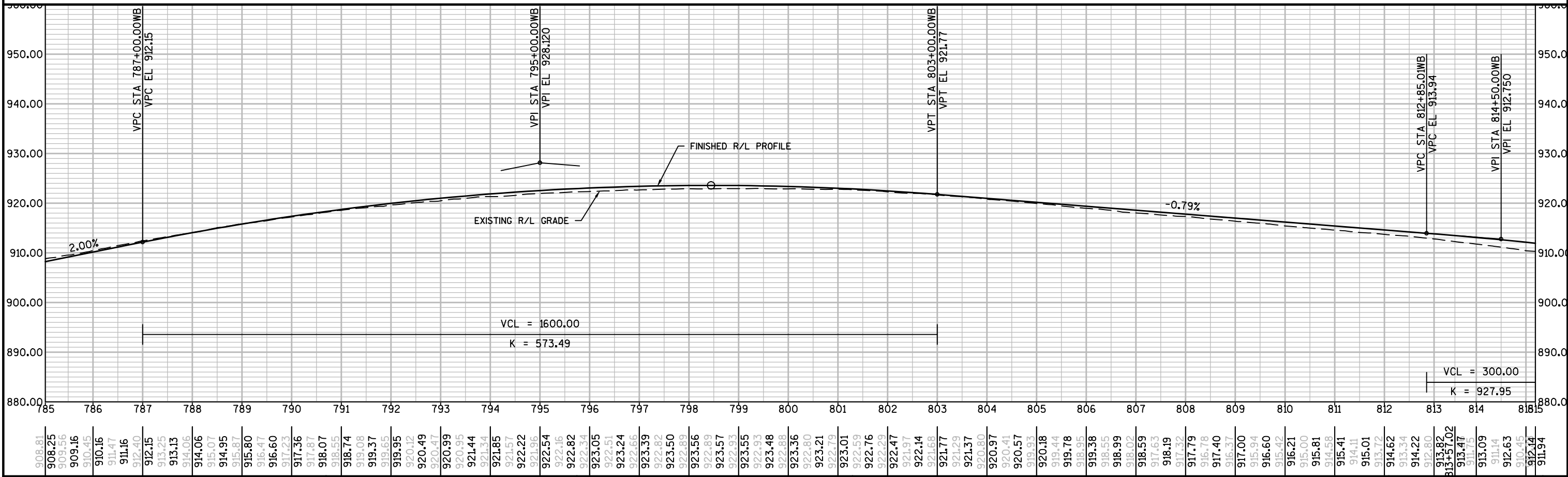
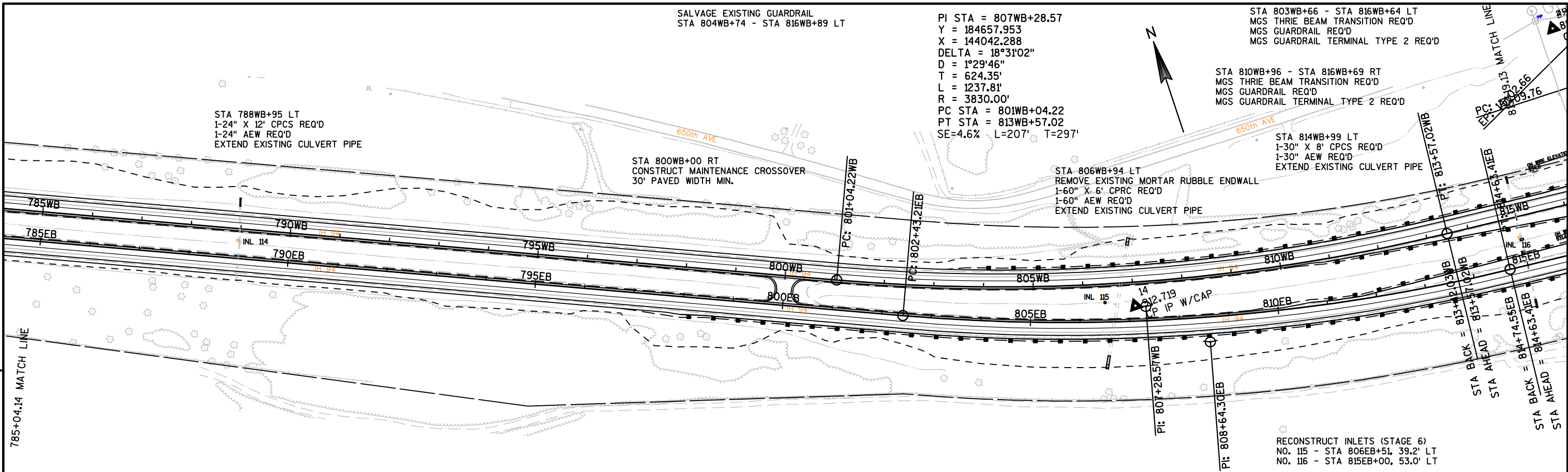


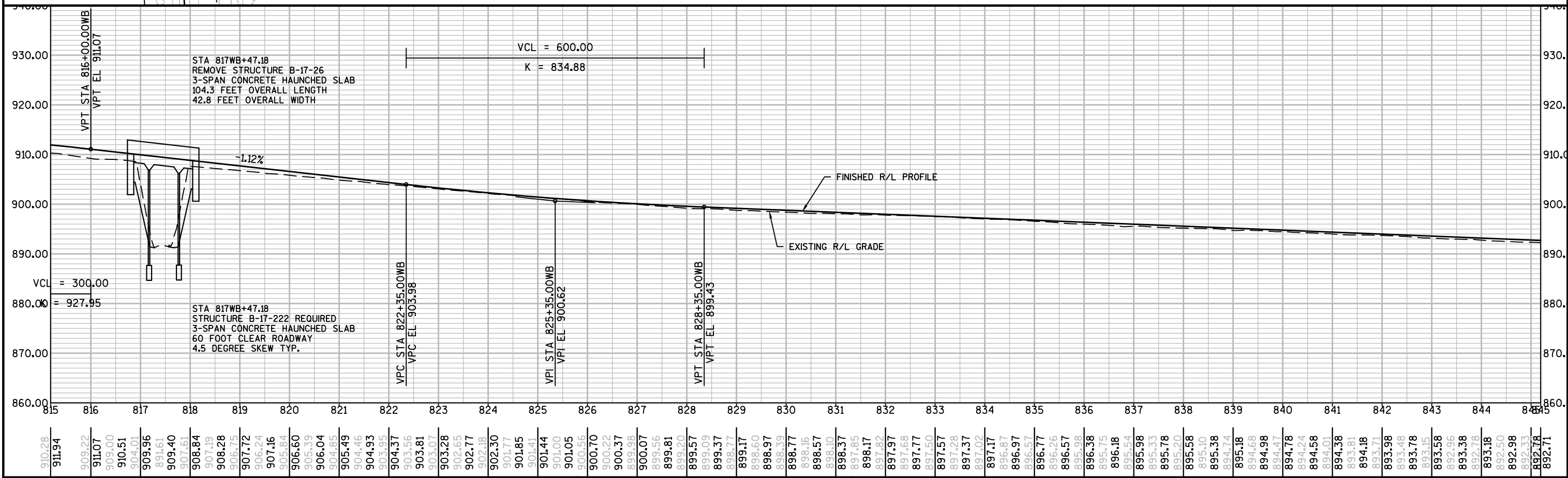
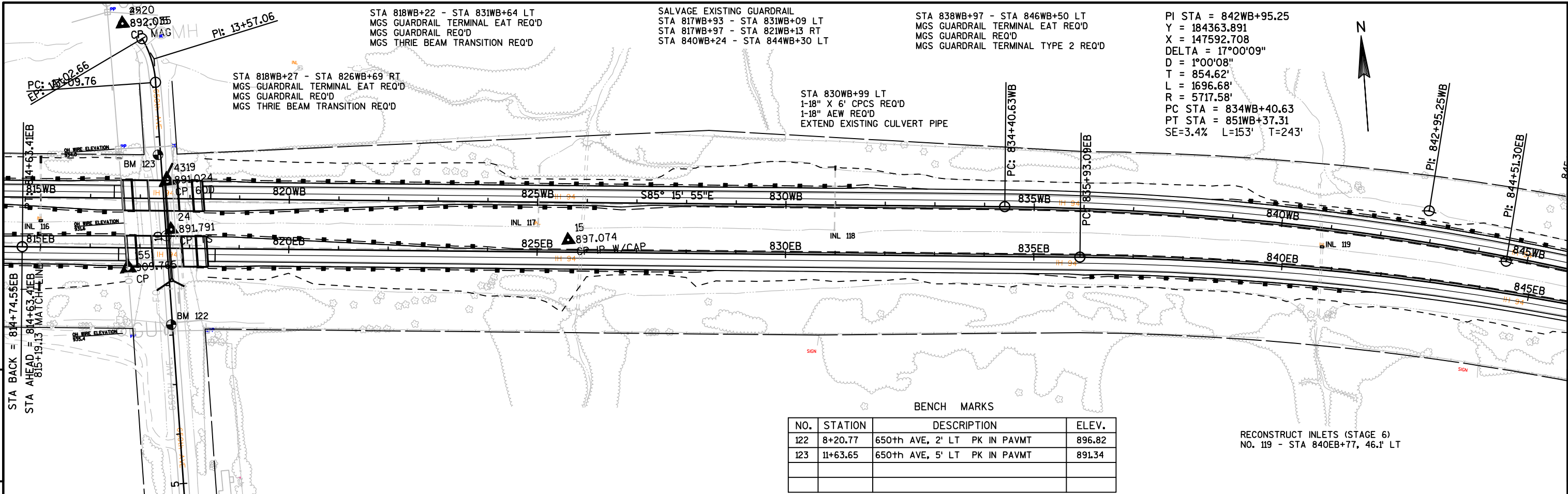
PROJECT NO:1022-08-72	HWY:IH 94	COUNTY:DUNN	PLAN AND PROFILE: IH 94 EASTBOUND	SHEET 211
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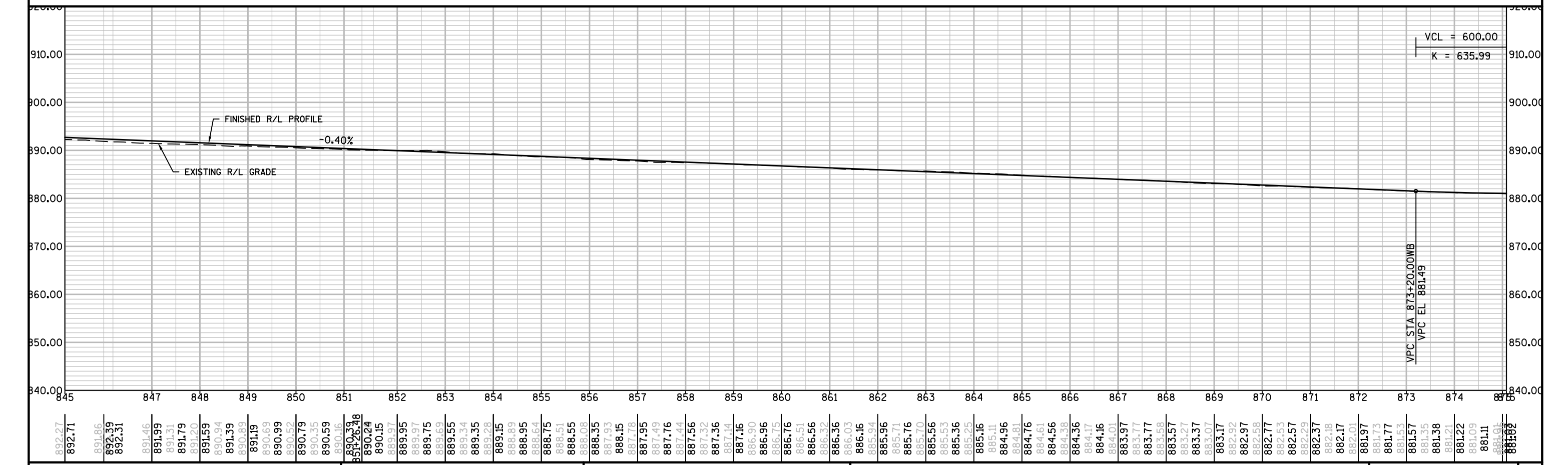
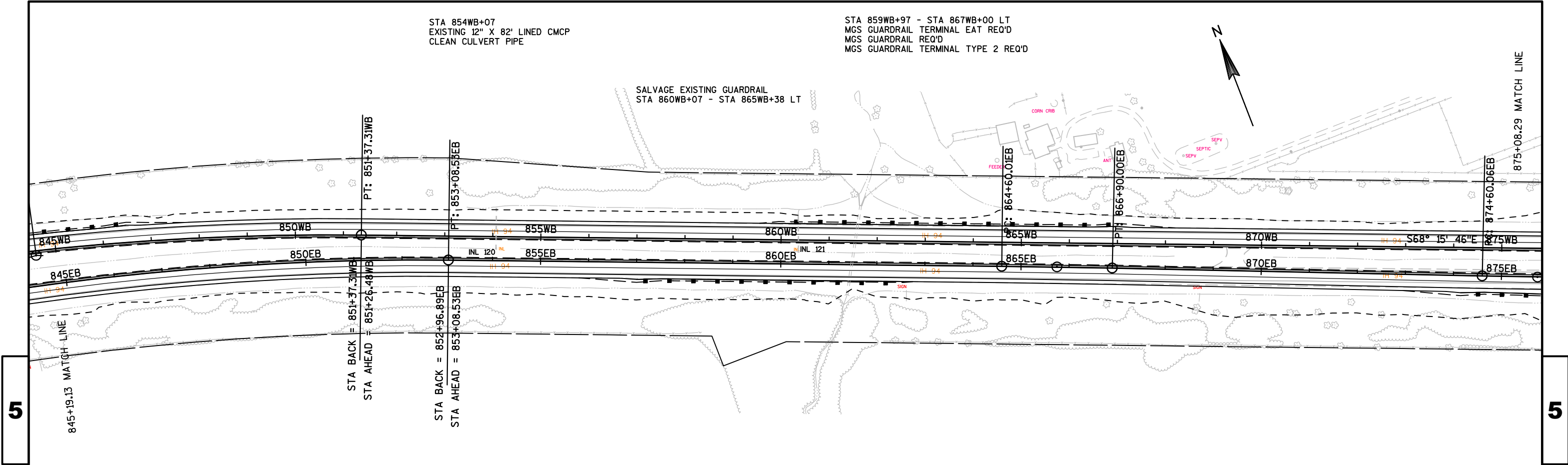


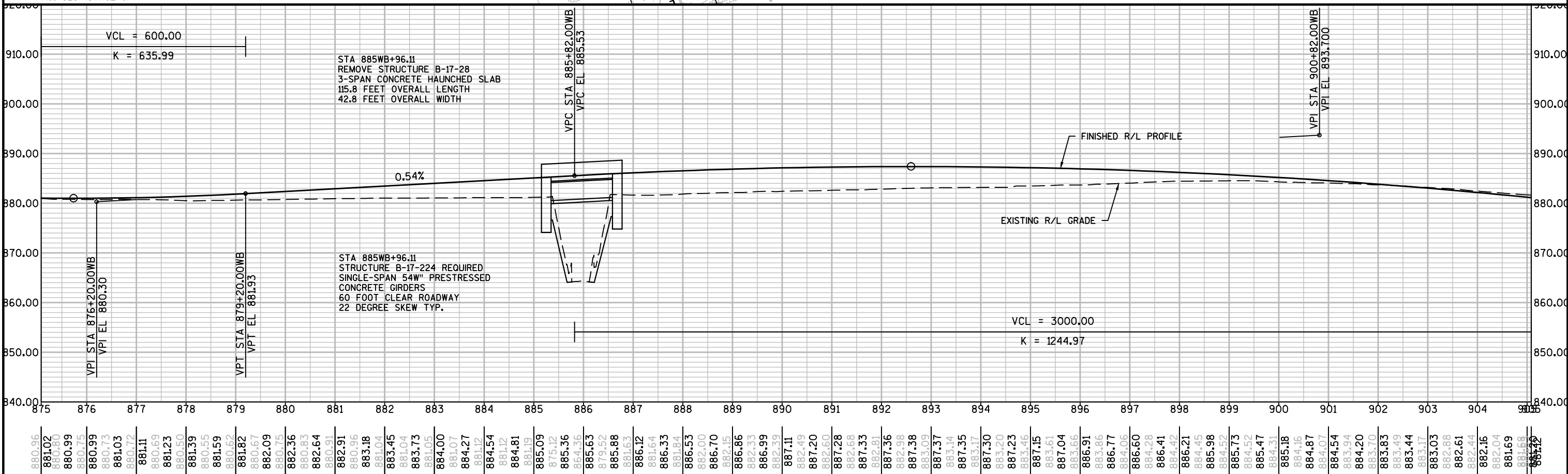
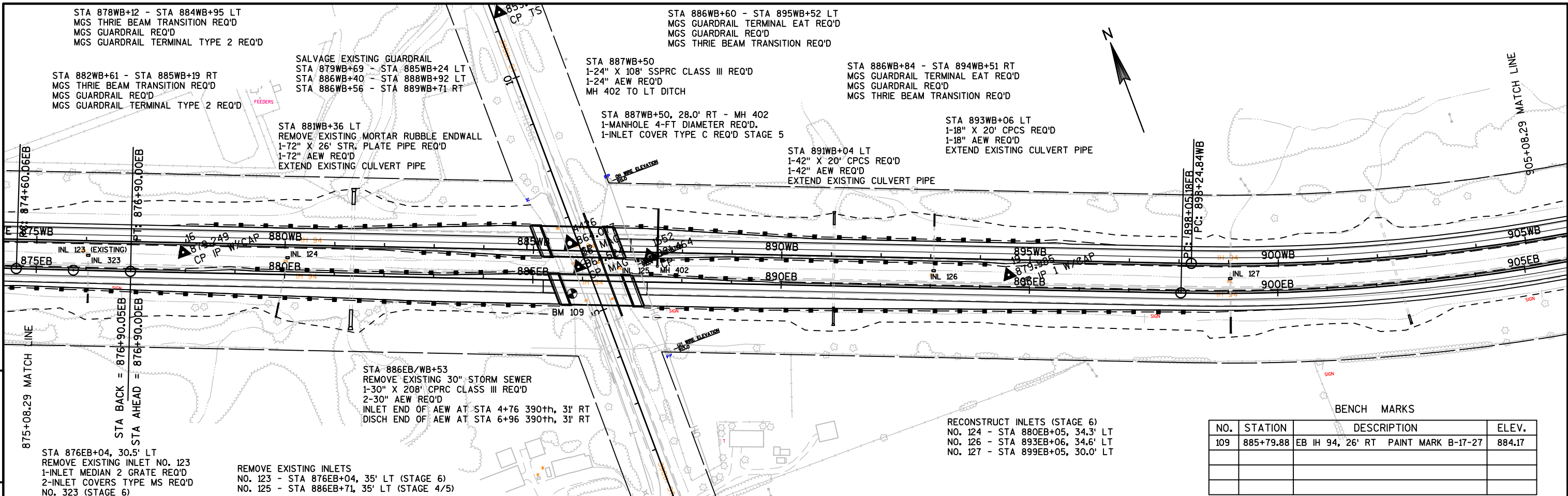


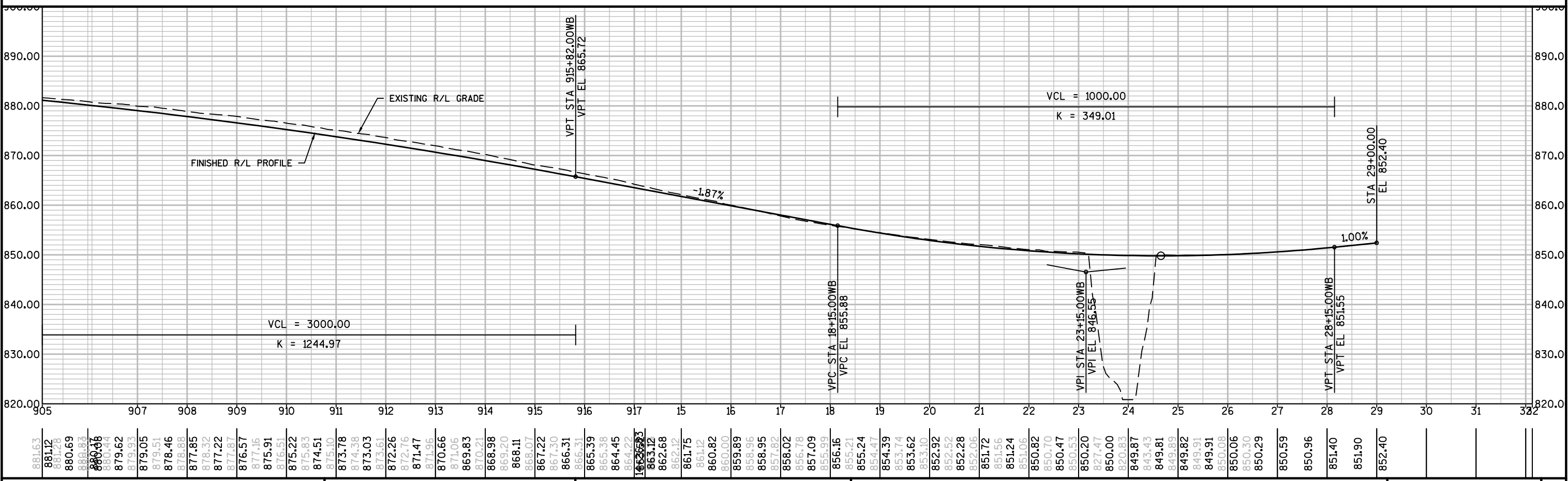
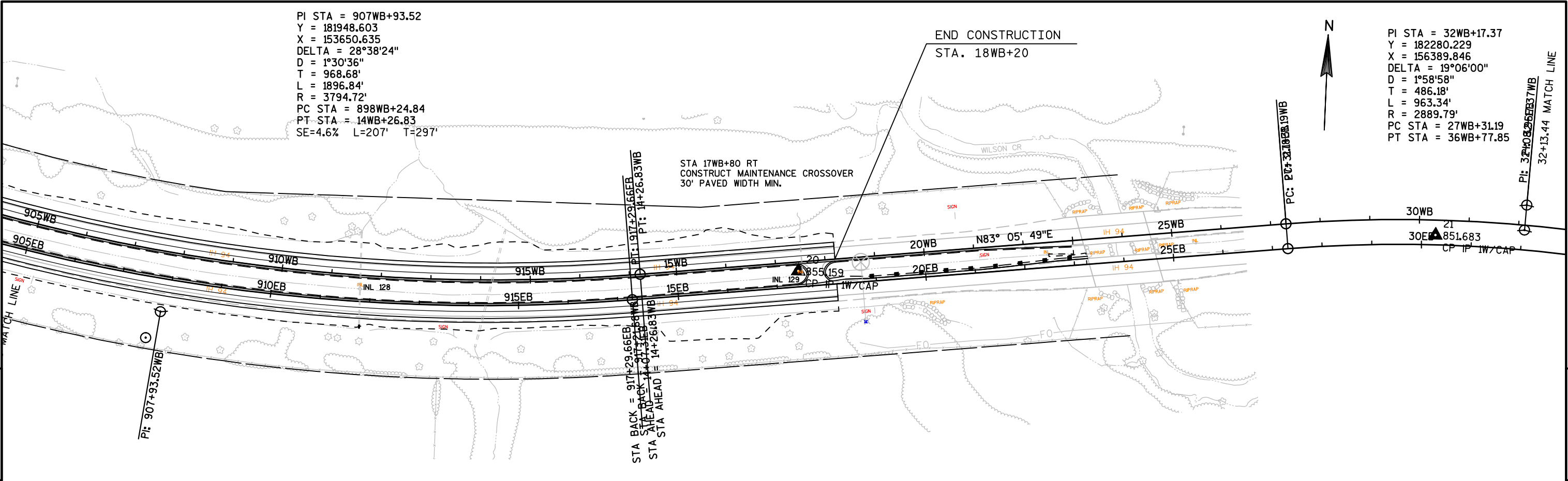


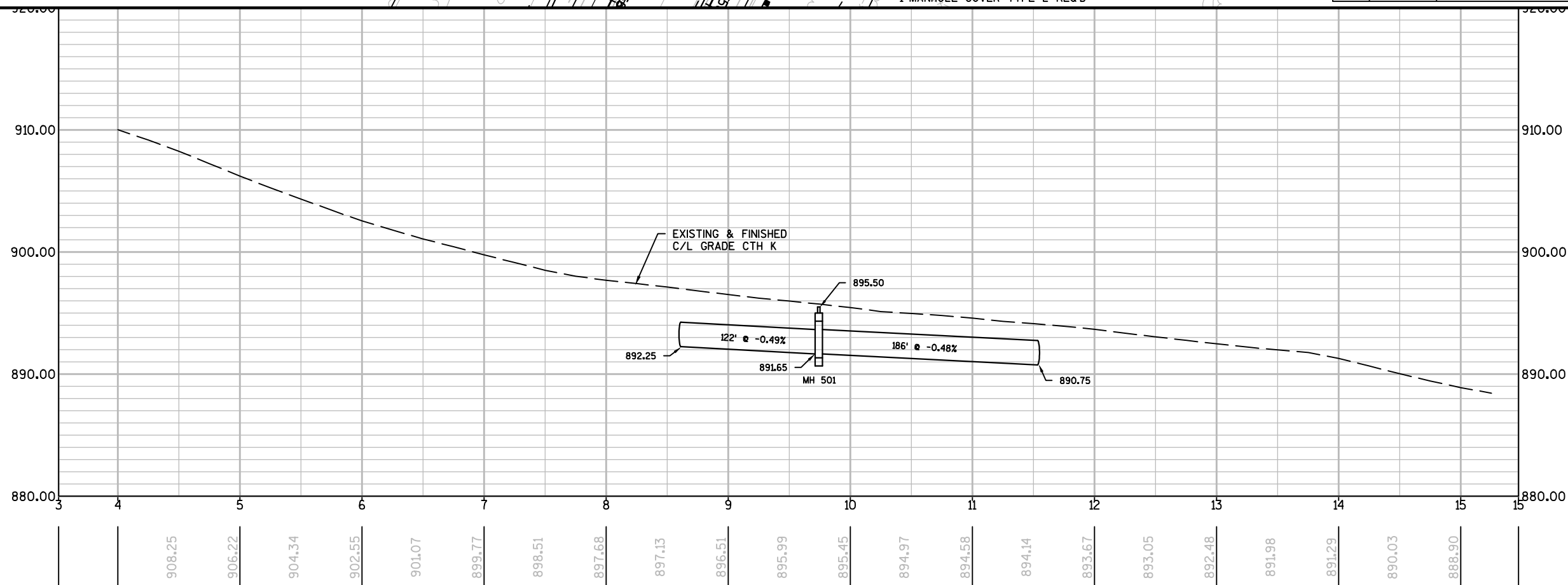
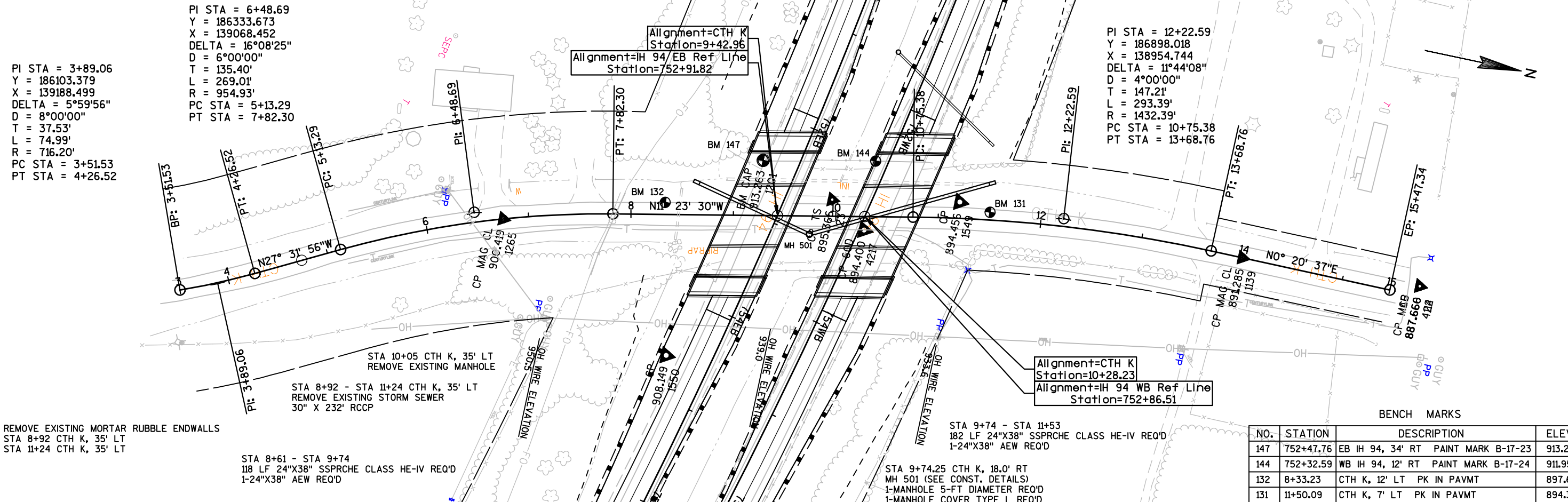












BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
122	8+20.77	650th AVE, 2' LT PK IN PAVMT	896.82
123	11+63.65	650th AVE, 5' LT PK IN PAVMT	891.34

REMOVE EXISTING MORTAR RUBBLE ENDWALLS
STA 8+93 650th, 24' RT
STA 8+98 650th, 28' RT

STA 8+92 - STA 9+10, LT
30 LF 18" SSPRC CLASS IV REQ'D
1-18" AEW REQ'D

STA 8+96 - STA 9+10, RT
20 LF 18" SSPRC CLASS IV REQ'D
1-18" AEW REQ'D

STA 8+98 - STA 11+38 650th, 28' RT
REMOVE EXISTING STORM SEWER
30" X 240' CMCP

STA 9+10 650th, 5.0' RT
MH 502 (SEE CONST. DETAILS)
1-MANHOLE 5-FT DIAMETER REQ'D
1-MANHOLE COVER TYPE L REQ'D

STA 8+93 650th AVE
REMOVE EXISTING PIPE CULVERT
24" X 46' CMCP

Alignment=650th Avenue
Station=9+74.92
Alignment=IH 94 EB Ref Line
Station=817+55.09

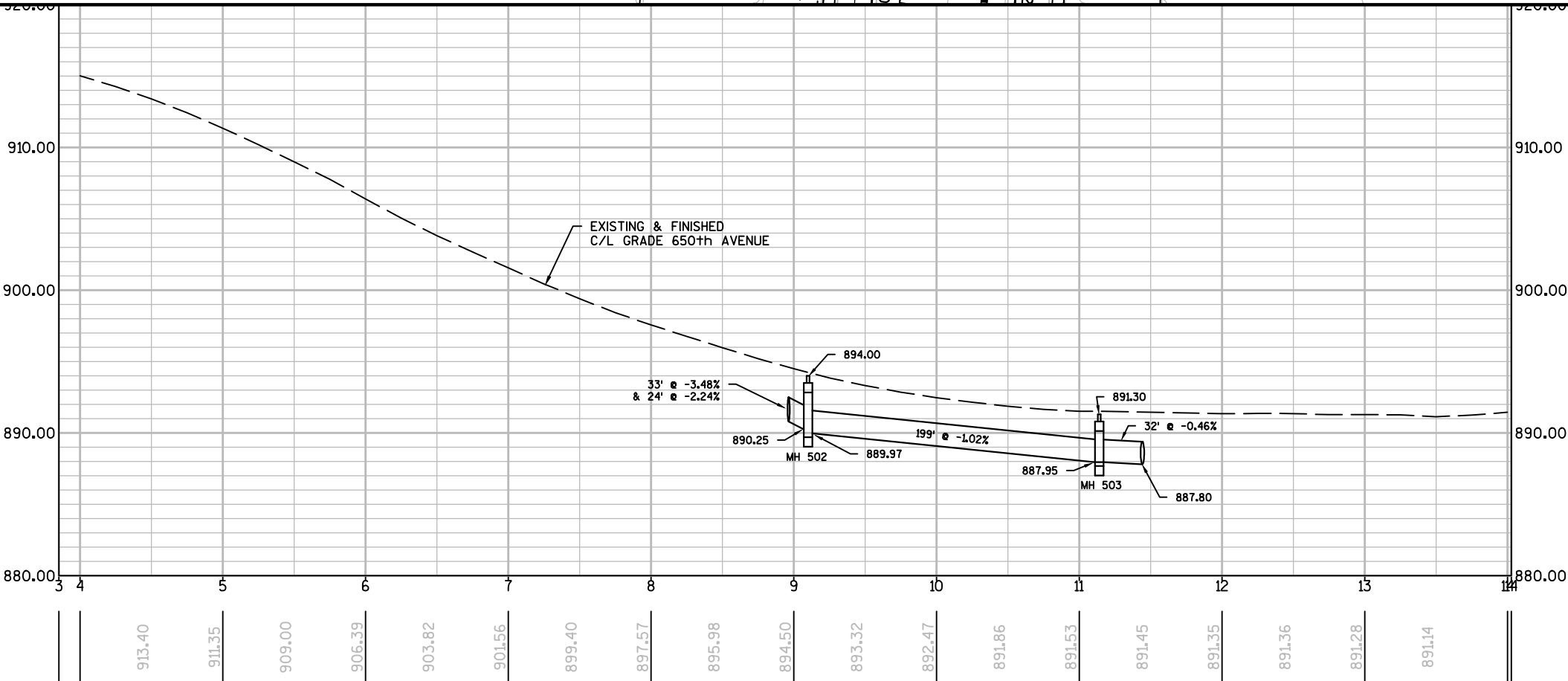
Alignment=650th Avenue
Station=10+75.23
Alignment=IH 94 WB Ref Line
Station=817+47.18

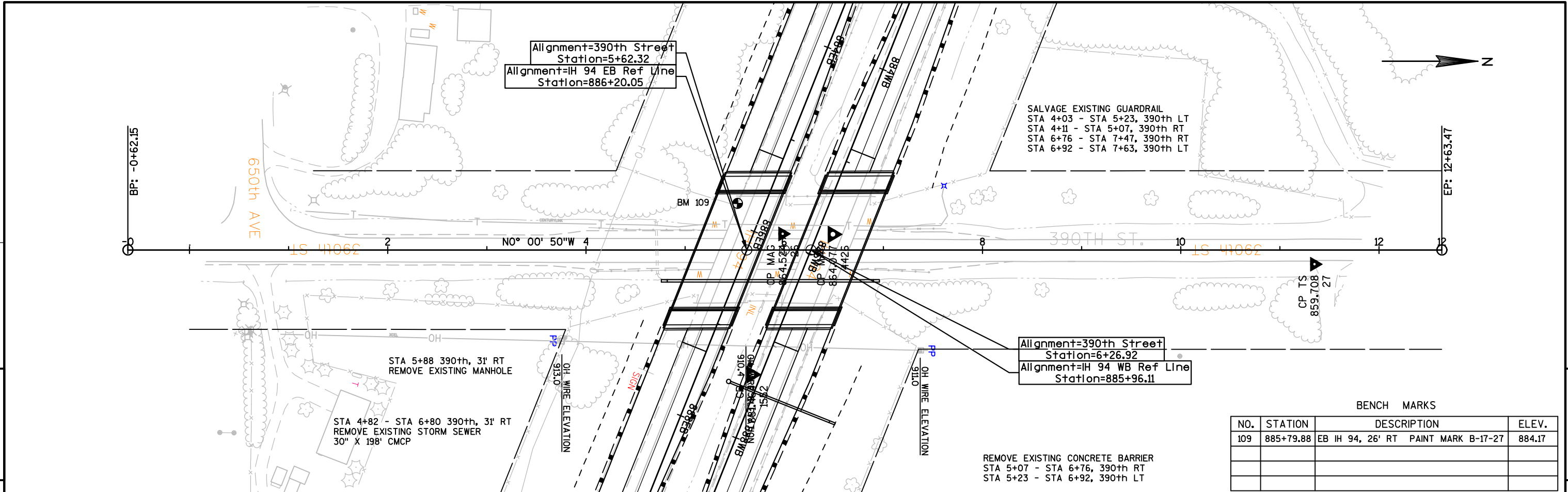
STA 11+14 650th, 5.0' RT
MH 503 (SEE CONST. DETAILS)
1-MANHOLE 5-FT DIAMETER REQ'D
1-MANHOLE COVER TYPE L REQ'D

STA 9+10 - STA 11+14
204 LF 19"X30" SSPRCHE CLASS HE-IV REQ'D

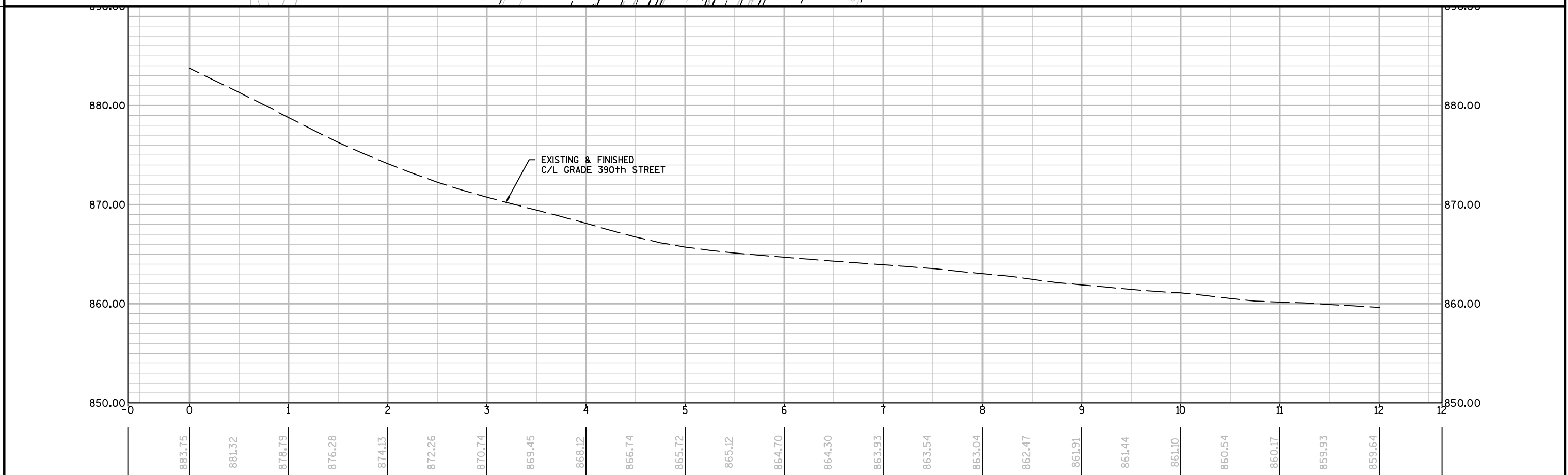
STA 11+14 - STA 11+44
28 LF 19"X30" SSPRCHE CLASS HE-IV REQ'D
1-19"X30" AEW REQ'D

PI STA = 13+57.06
Y = 184856.038
X = 145054.397
DELTA = 26°36'49"
D = 28°38'52"
T = 47.30'
L = 92.90'
R = 200.00'
PC STA = 13+09.76
PT STA = 14+02.66





BENCH MARKS				
NO.	STATION	DESCRIPTION		ELEV.
109	885+79.88	EB IH 94, 26' RT	PAINT MARK B-17-27	884.17

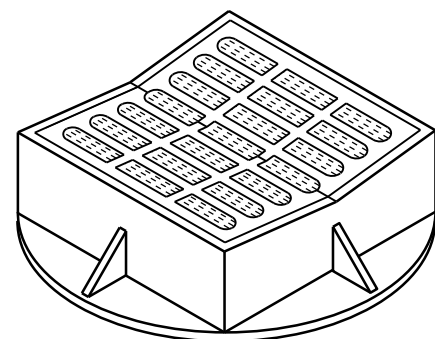
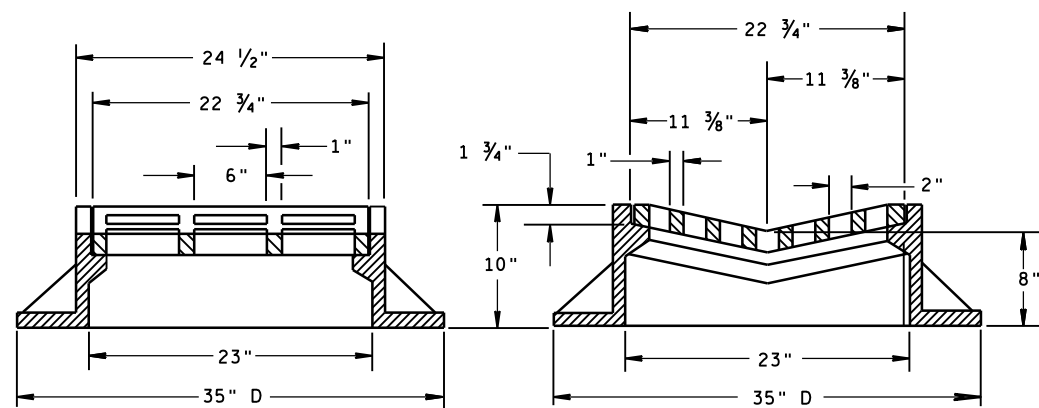


Standard Detail Drawing List

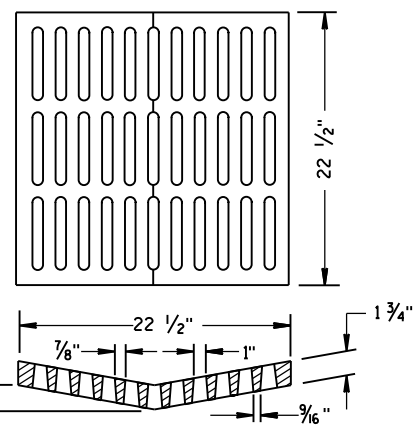
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C18-05A	CONCRETE PAVEMENT JOINTING
13C18-05B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
13C18-05D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	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)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE

Standard Detail Drawing List

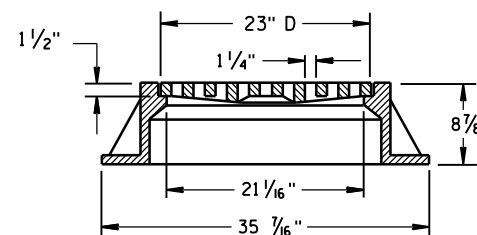
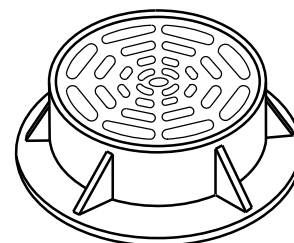
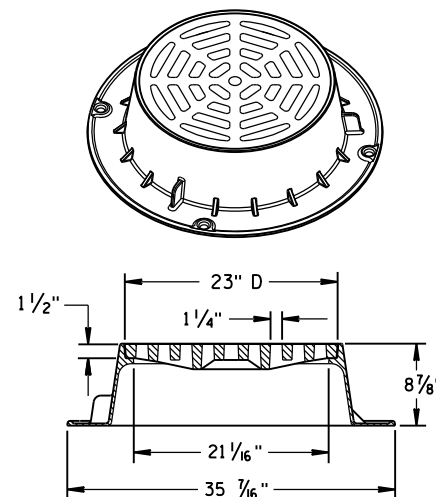
15B01-08B	FENCE WOVEN WIRE
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C12-05	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C14-02	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C34-02	STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKER, TYPE 2
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D13-02	TEMPORARY EMERGENCY PULLOUTS
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-04	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS



TYPE "B"

ALTERNATIVE GRATE FOR
TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
 NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

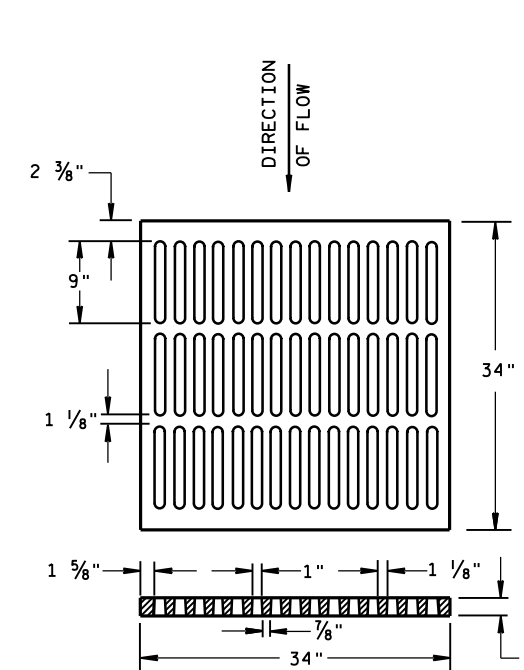
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

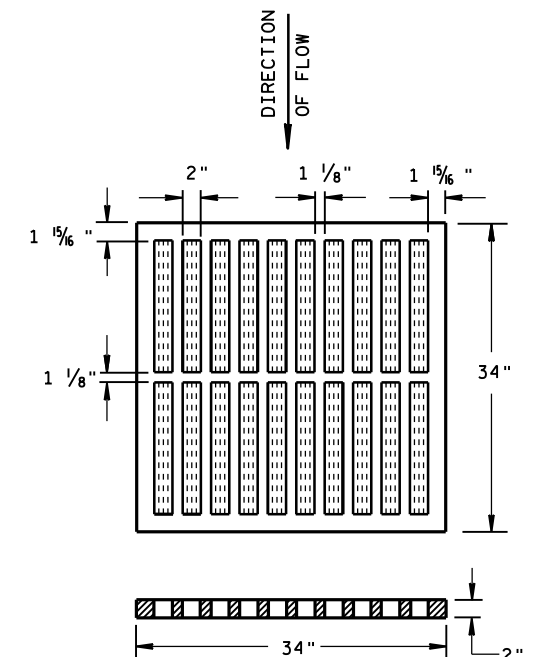
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



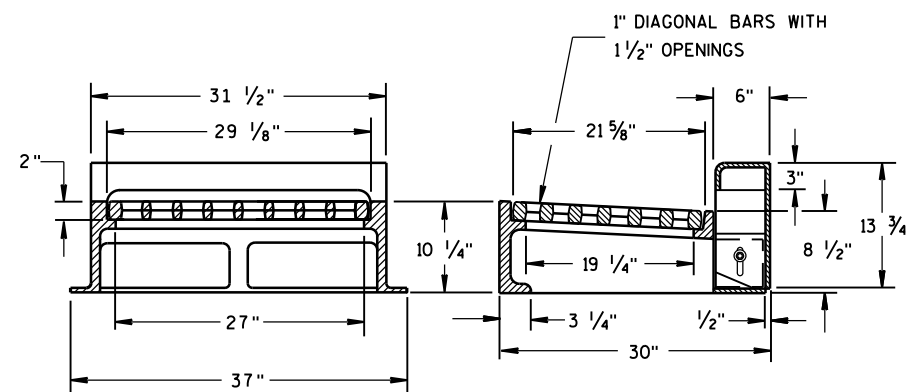
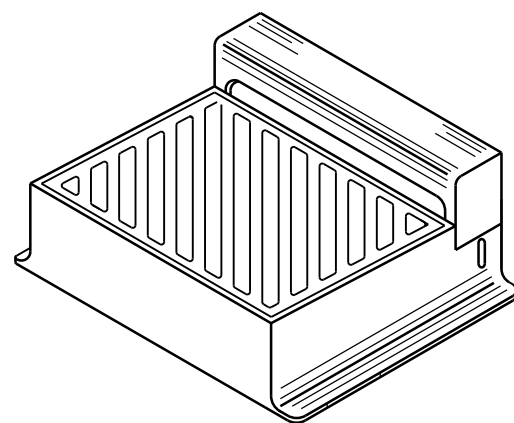
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
 NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
 NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

DIAGONAL SLOTS, SHALL BE ORIENTED
 TO THE DIRECTION OF FLOW AS ILLUSTRATED.
 GRATES ARE MANUFACTURED TO BE REVERSIBLE.

DIRECTION
OF FLOW

INLET COVERS
 TYPE B, B-A, C,
 MS, MS-A, & WM

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED

DATE 11/27/2013

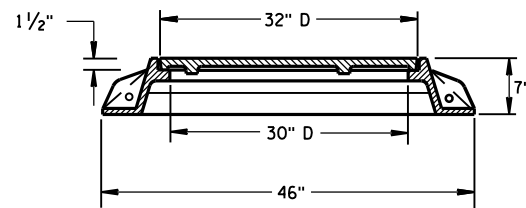
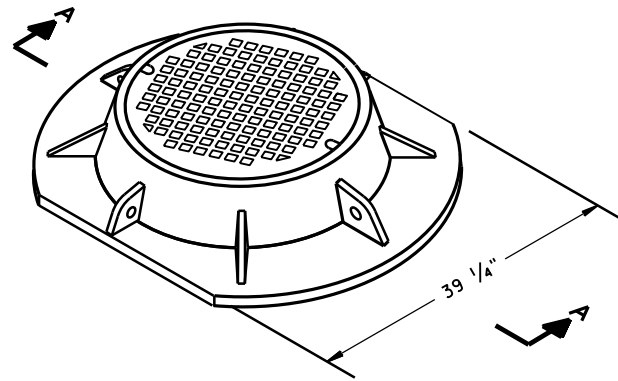
FHWA

/S/ Jerry H. Zogg

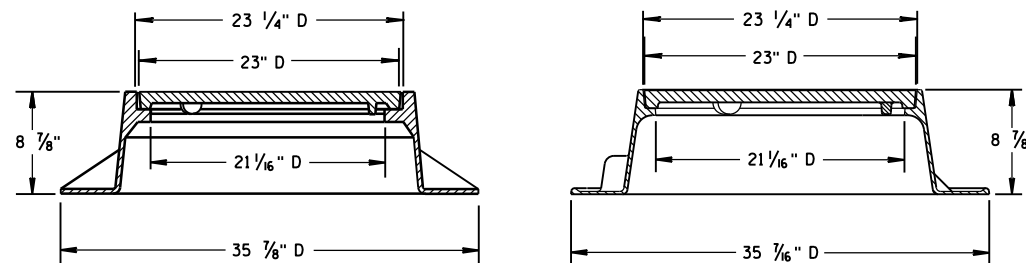
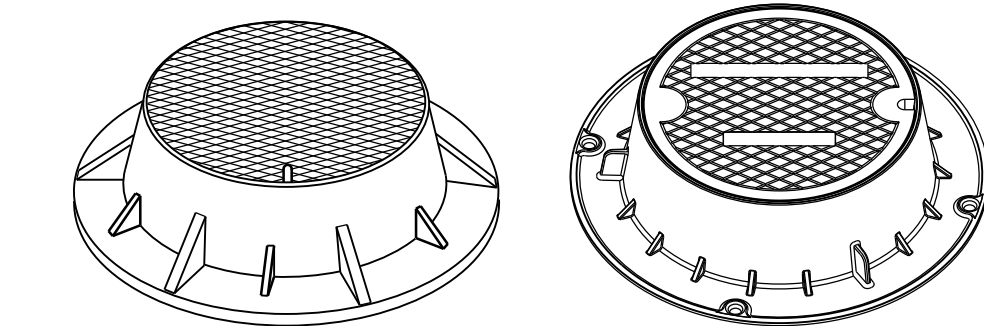
ROADWAY STANDARDS ENGINEER

228

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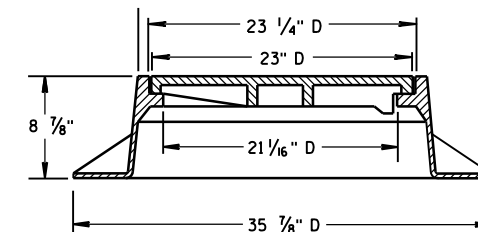
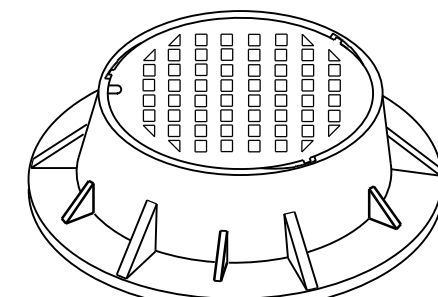
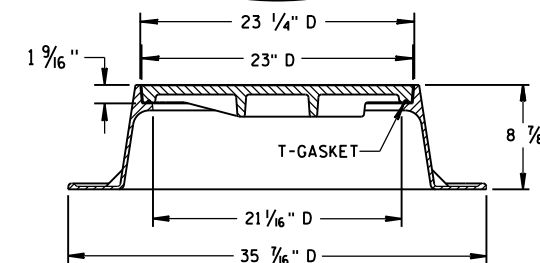
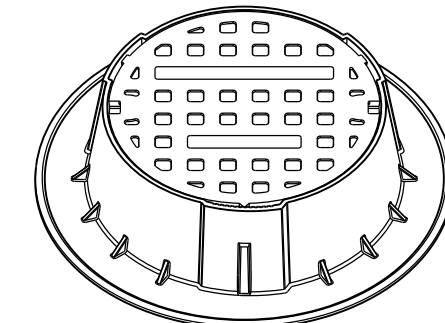


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

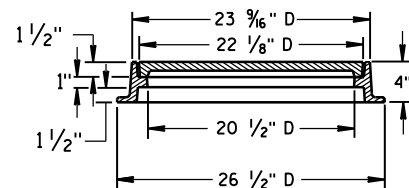
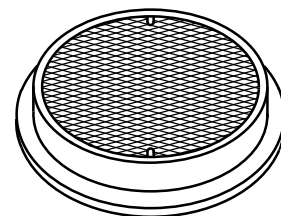


TYPE "J" SPECIAL

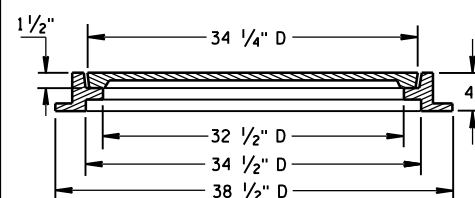
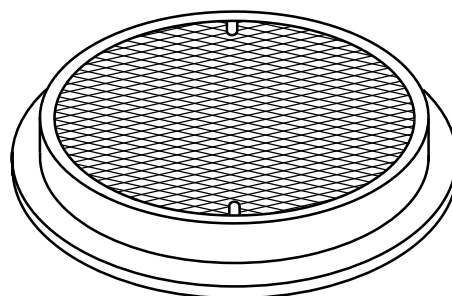
TYPE "B" NON-ROCKING SELF-SEAL LID

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

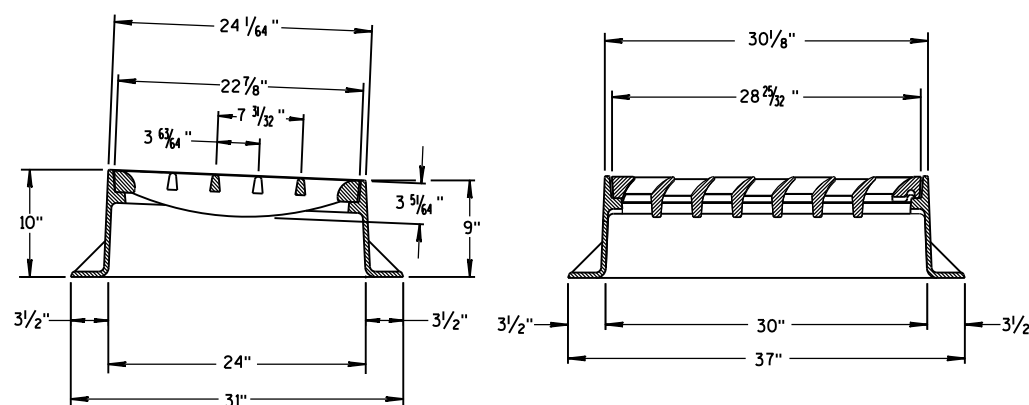
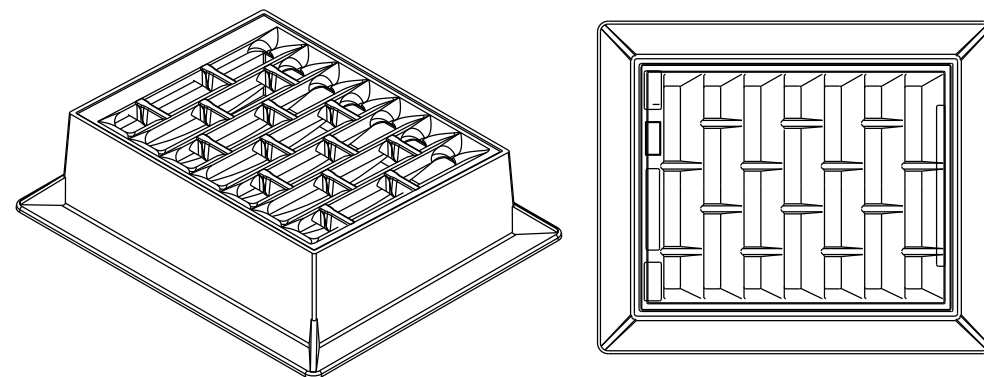
NOTE: EITHER CASTING IS ACCEPTABLE



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

GENERAL NOTES

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

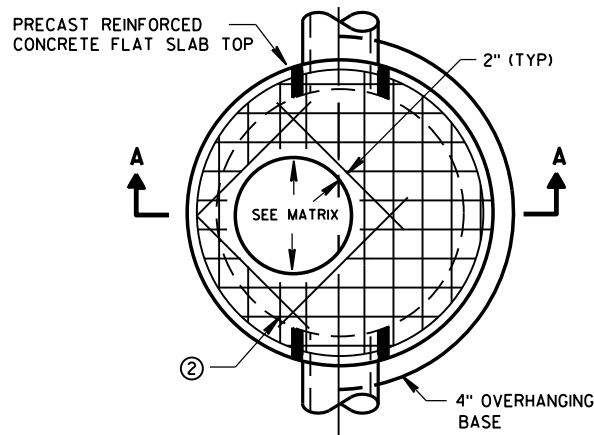
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

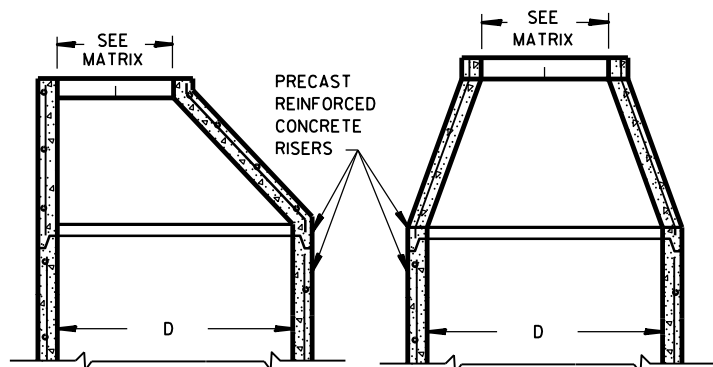
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K,
J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS & 229
ENGINEER
FWHA

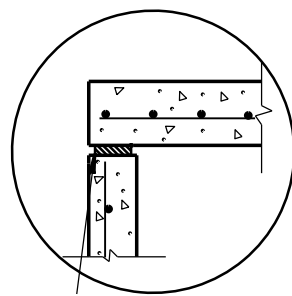


PLAN VIEW CIRCULAR OPENING

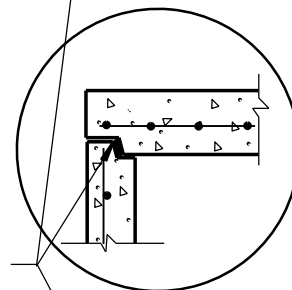


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

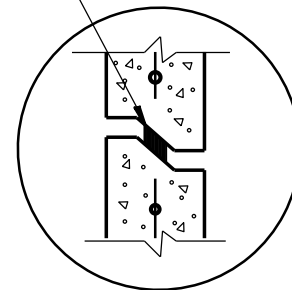
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT

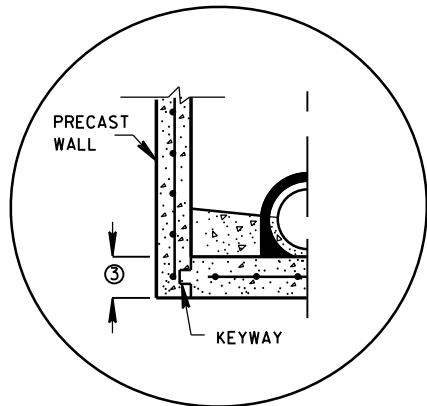


TOP WITH TONGUE AND GROOVE JOINT

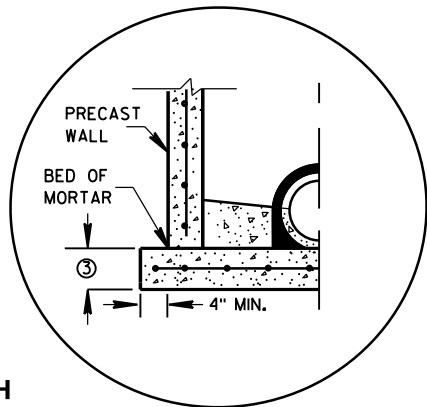


DETAIL "B"

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

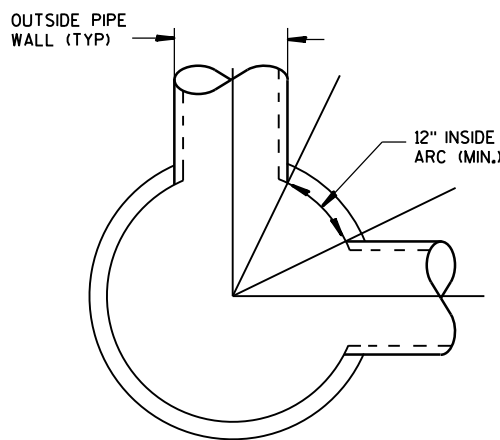


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

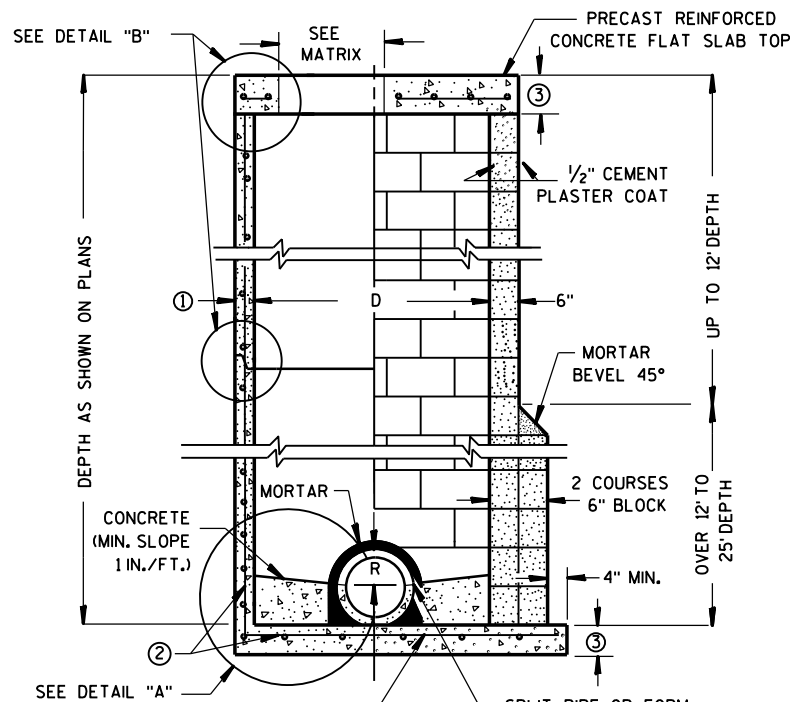


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

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

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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

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

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

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

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

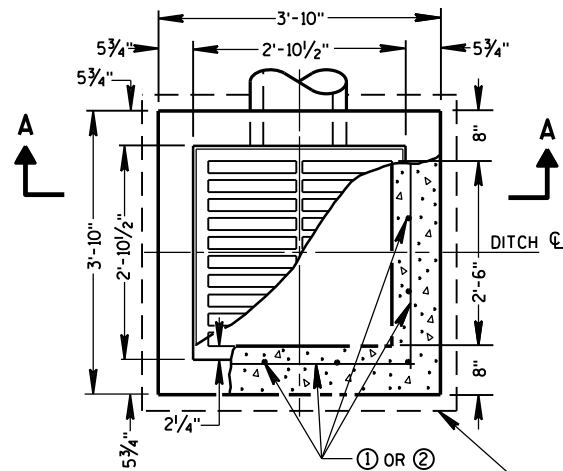
PIPE MATRIX

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

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

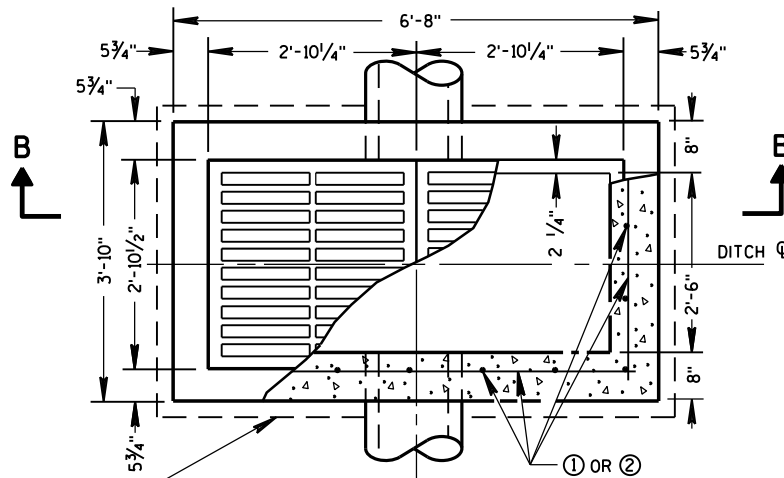
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERV 230

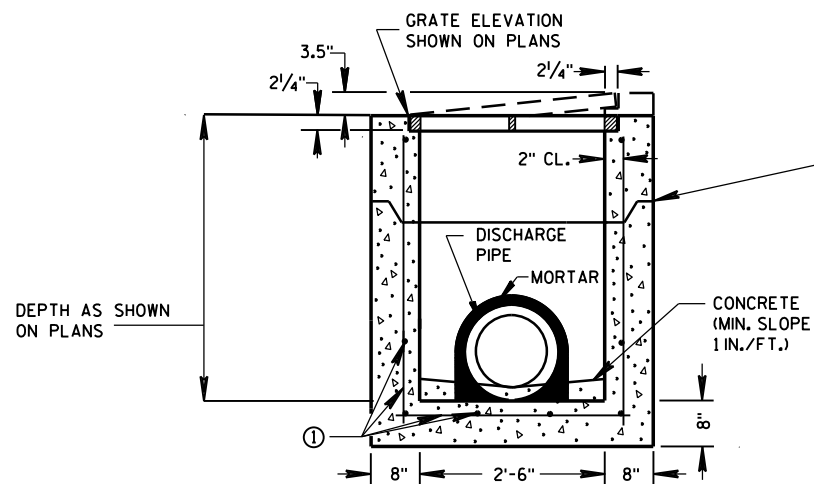


PLAN VIEW

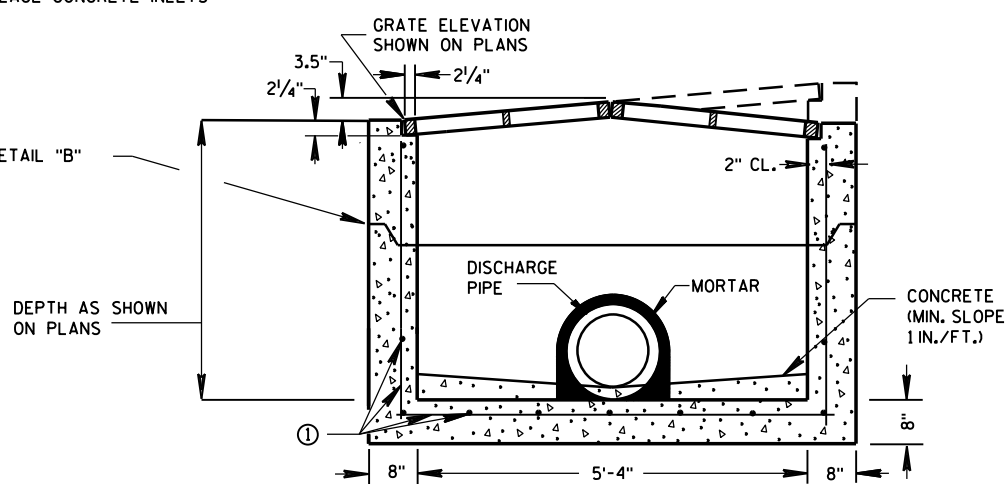
4" OVERHANGING BASE ON REINFORCED
CAST-IN-PLACE CONCRETE INLETS



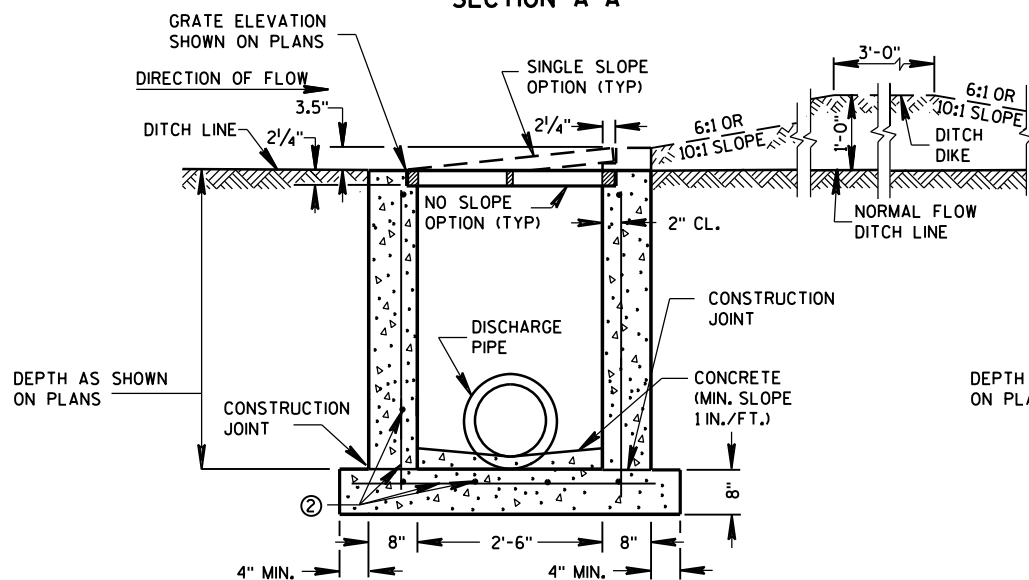
PLAN VIEW



PRECAST REINFORCED CONCRETE
SECTION A-A

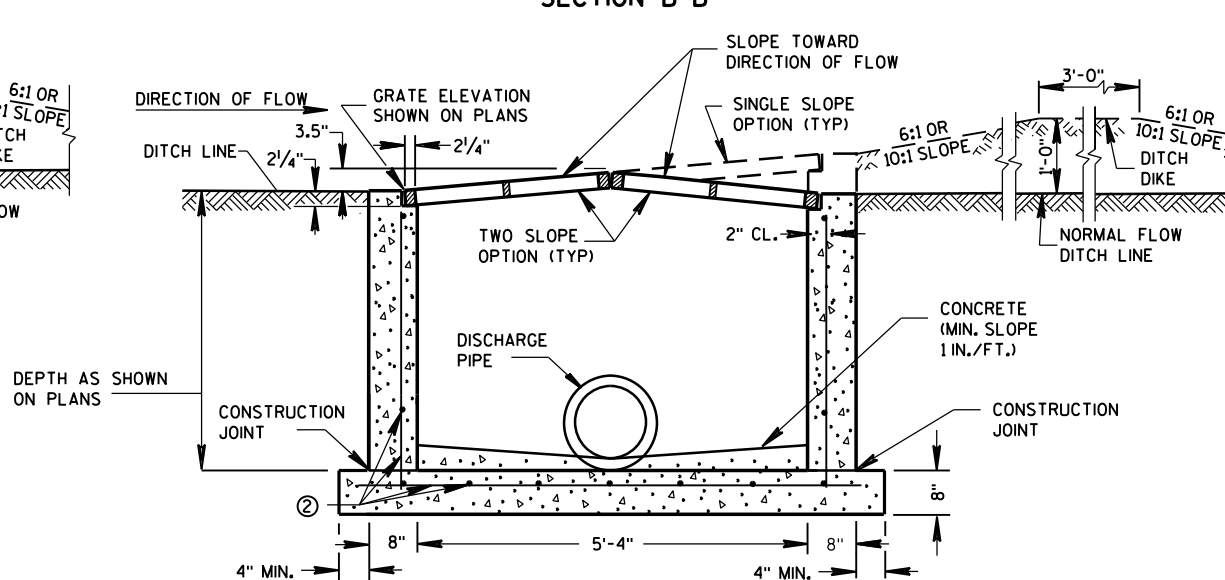


PRECAST REINFORCED CONCRETE
SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE
SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE
SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

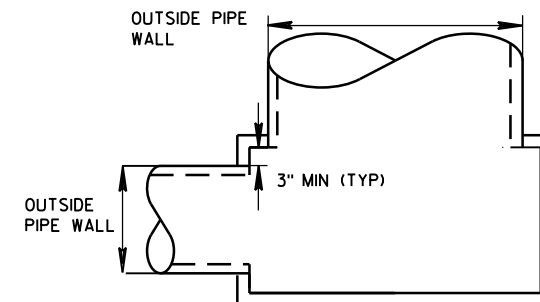
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

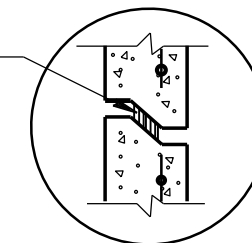
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

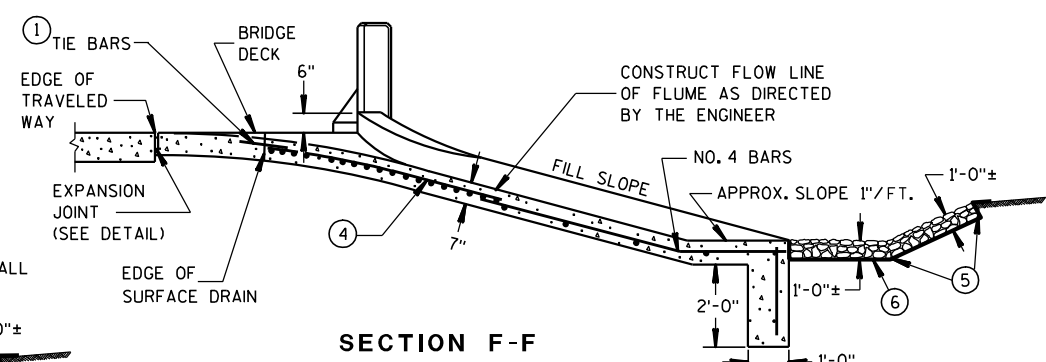


DETAIL "B"

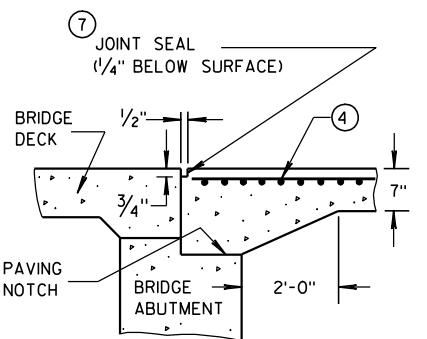
INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

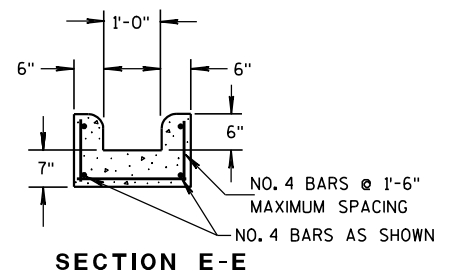
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERVISOR
FHWA 231 ENT



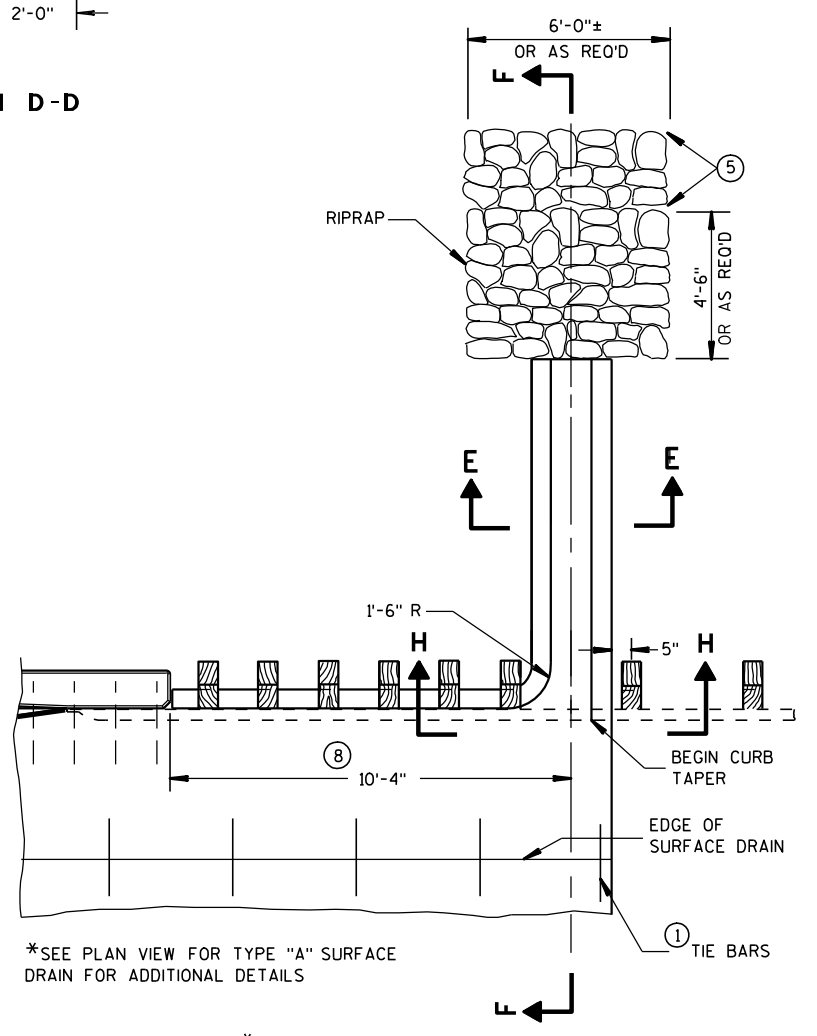
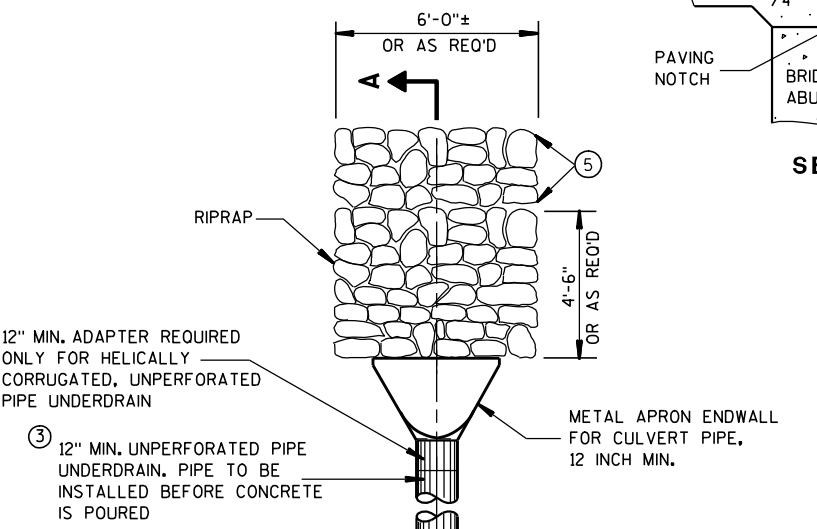
SECTION F-F



SECTION D-D

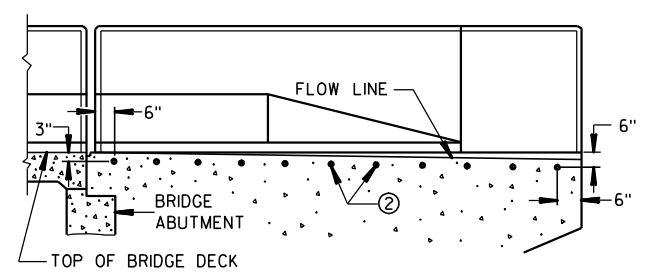


SECTION E-E



* PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"

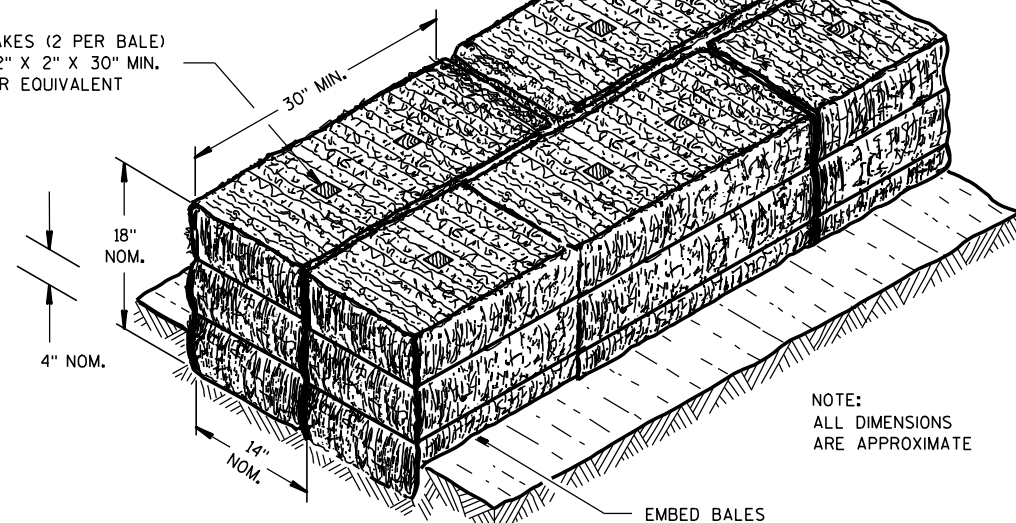
⑧ THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD, THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



LOCATION OF TIE BARS IN WINGWALL

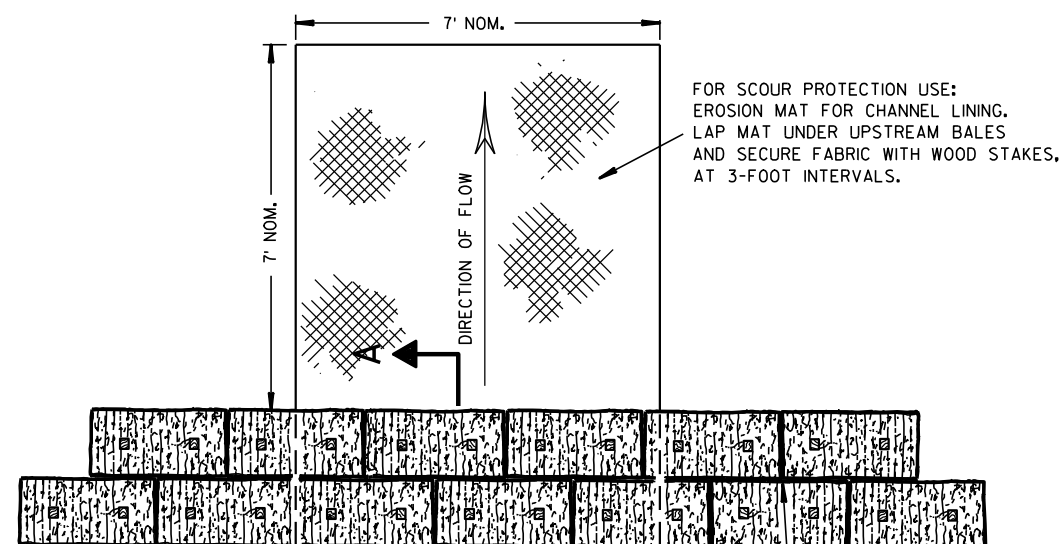
APPROVED
9/4/08 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS 232 'MENT
ENGINEER

WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT

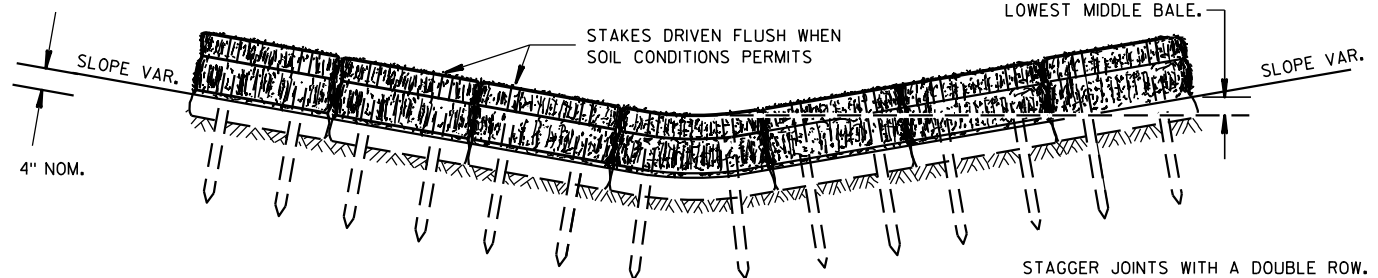


NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

SECTION A-A



PLAN VIEW



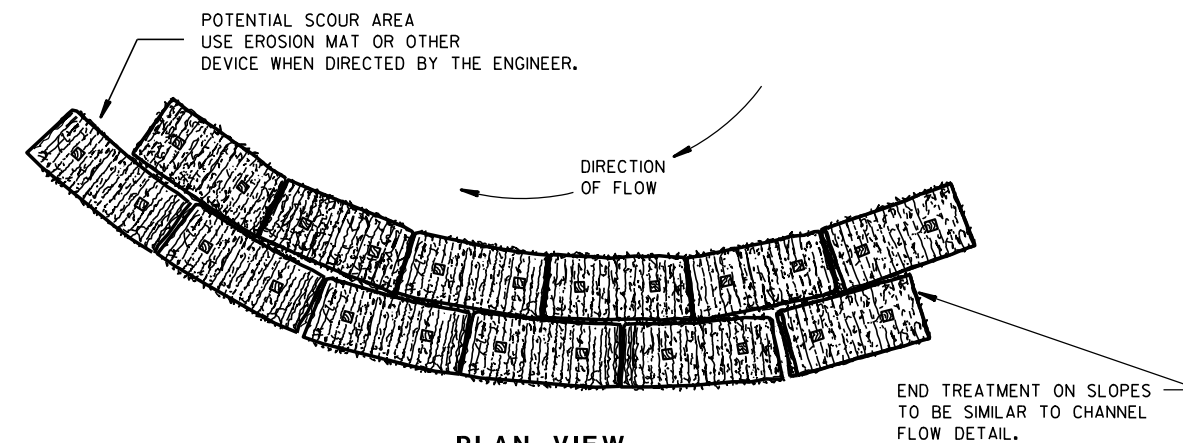
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

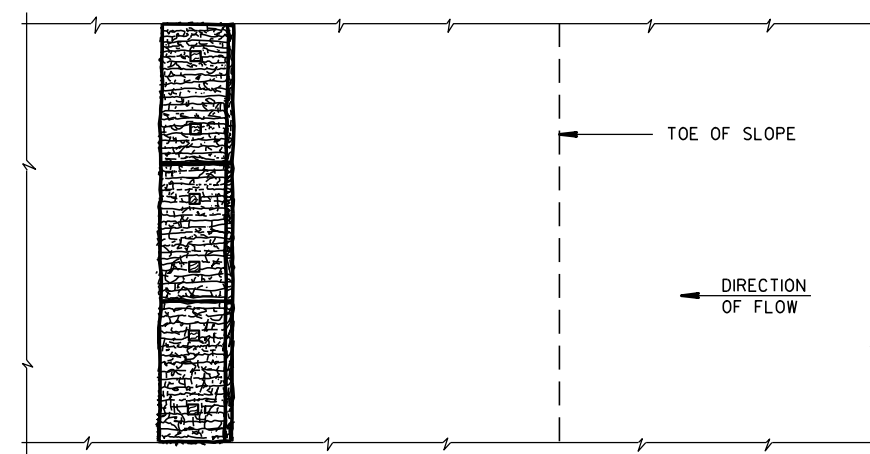
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

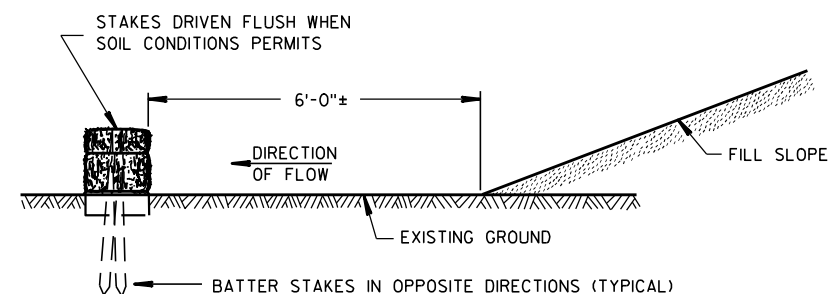


PLAN VIEW

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

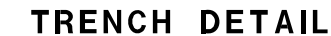
6/04/02
DATE

FHWA

/S/ Beth Conn-----
CHIEF ROADWAY DEVELOP 233 ENGINEER



- 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 1½" X 1½" 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.



SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

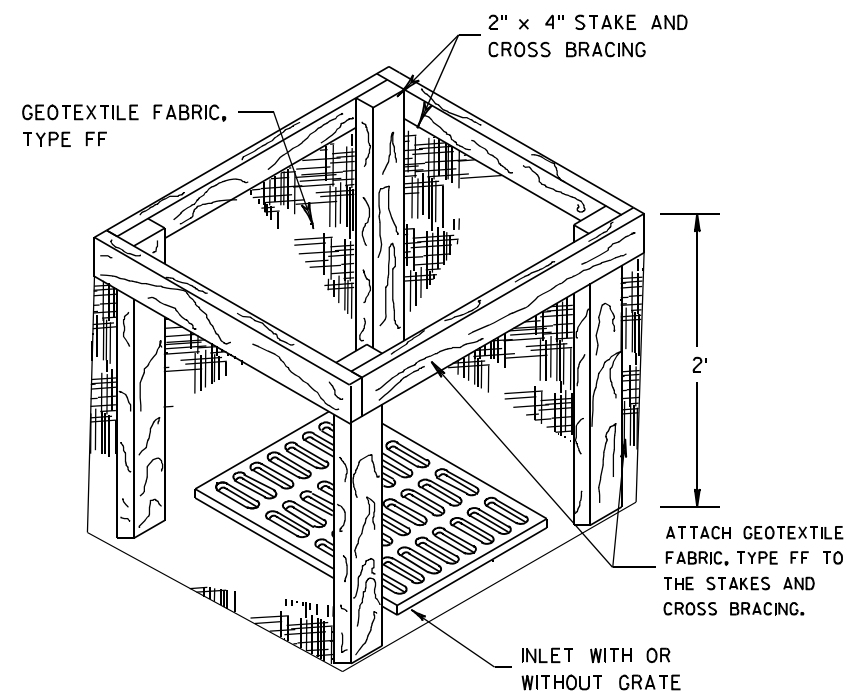
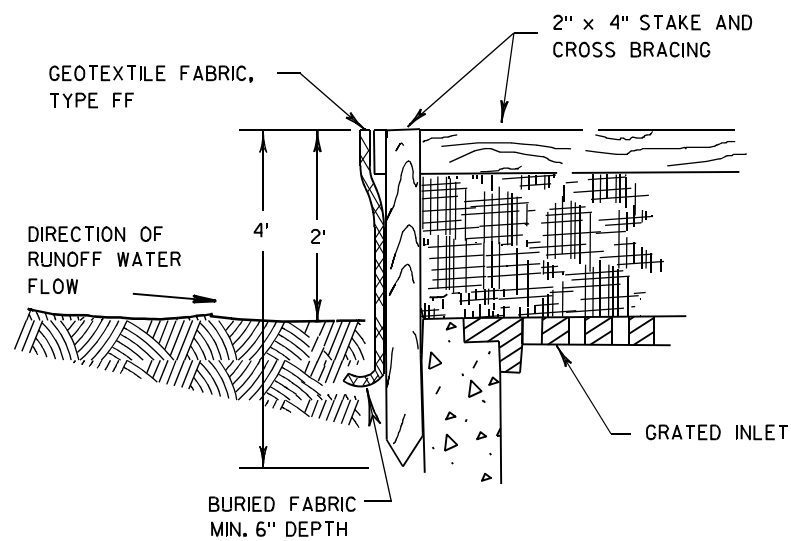
APPROVED
4-29-05
DATE

/S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT

234

ENGINEER

FHWA



INLET PROTECTION, TYPE A

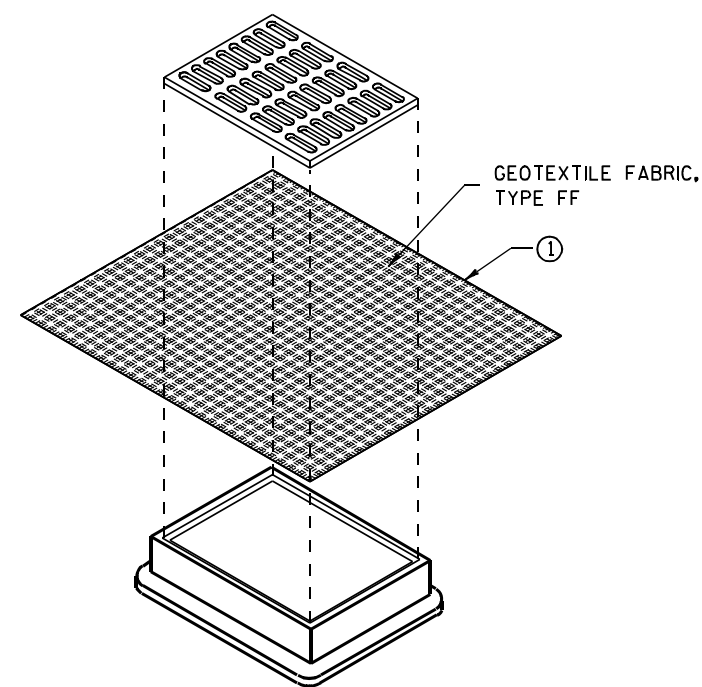
GENERAL NOTES

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

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

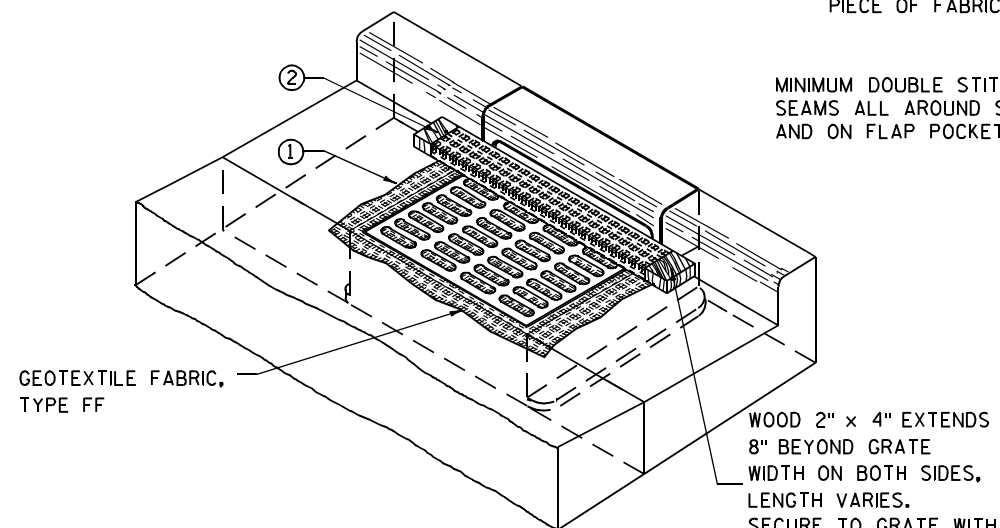
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

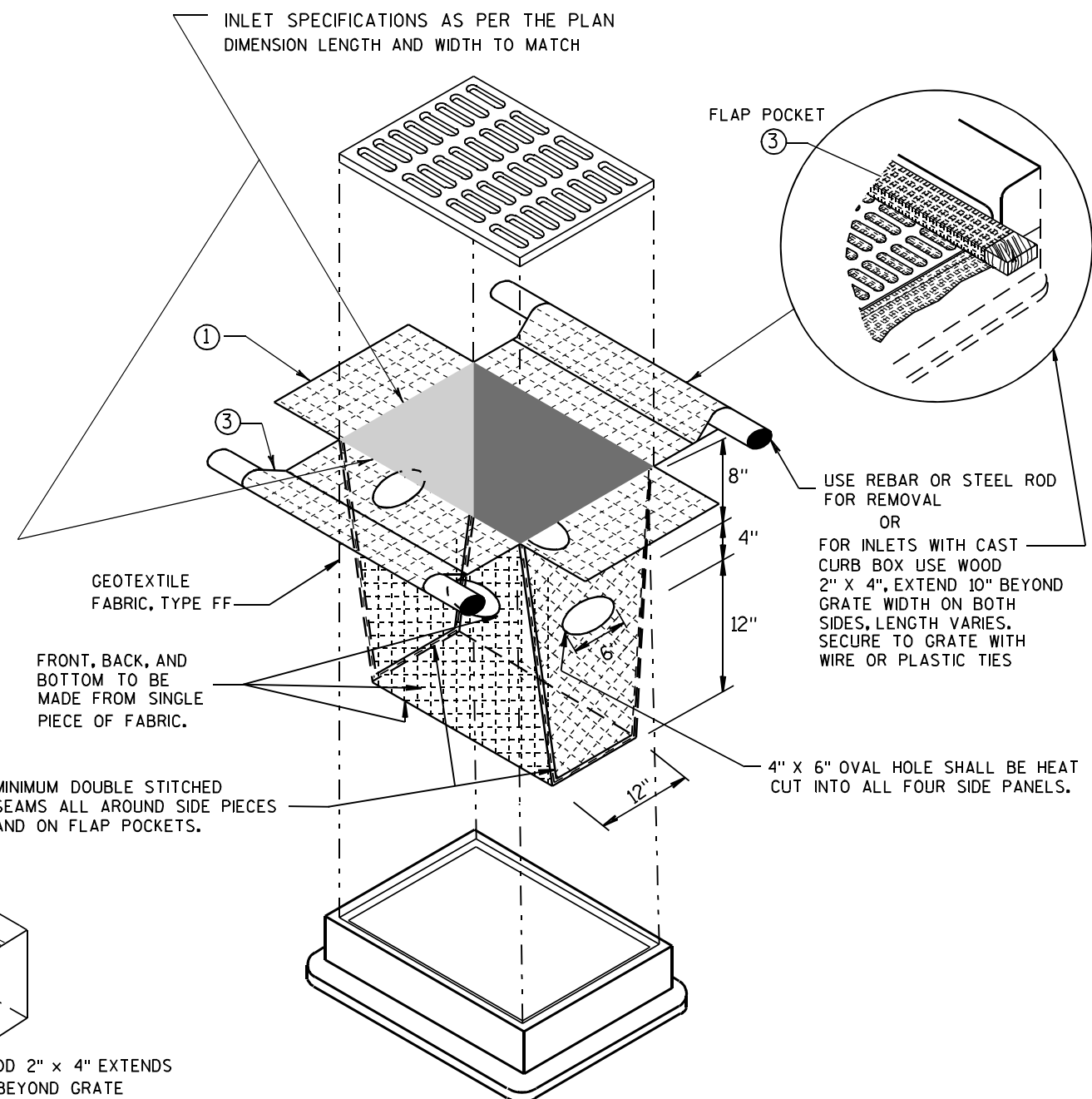
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



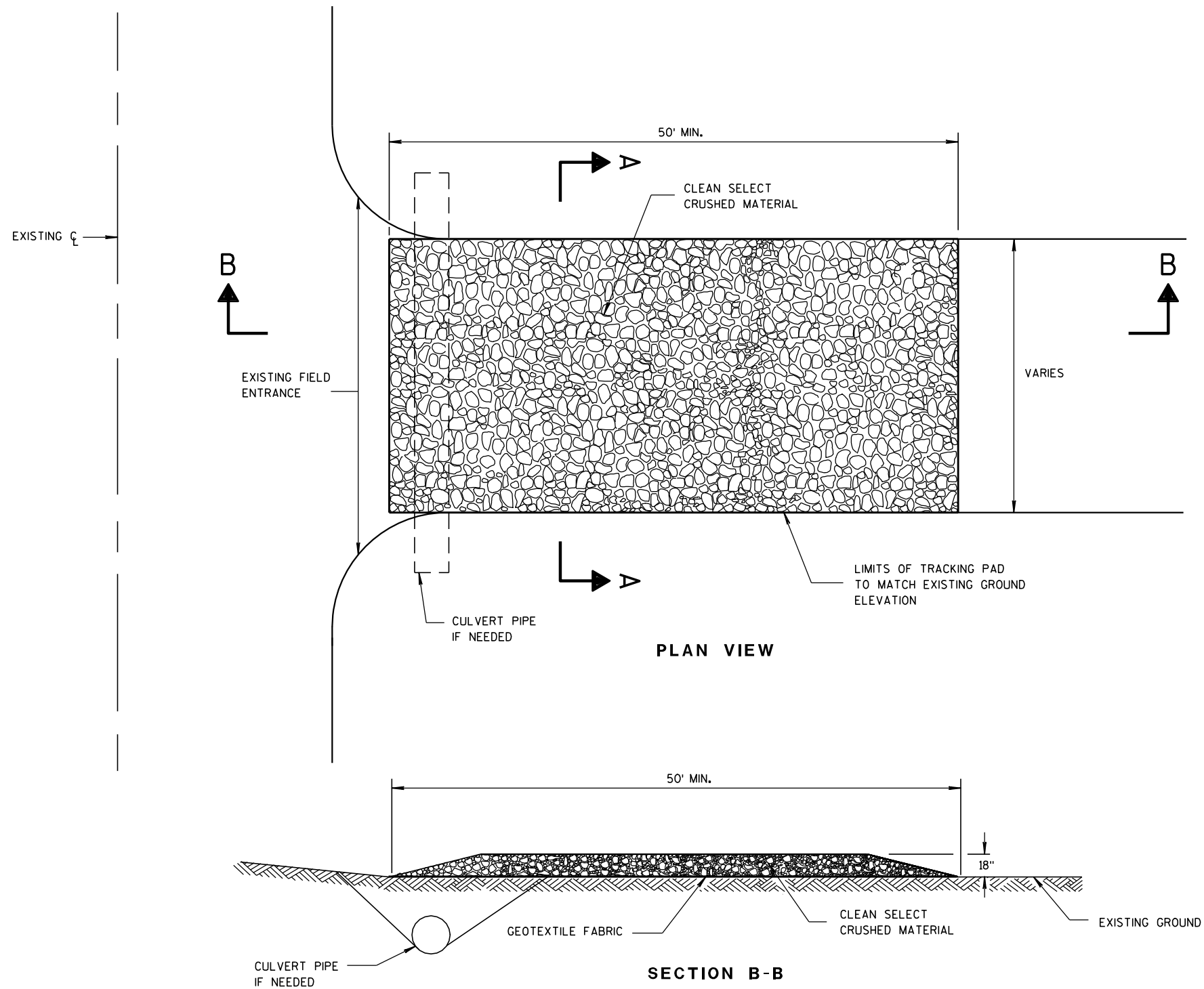
INLET PROTECTION, TYPE D

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 235
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

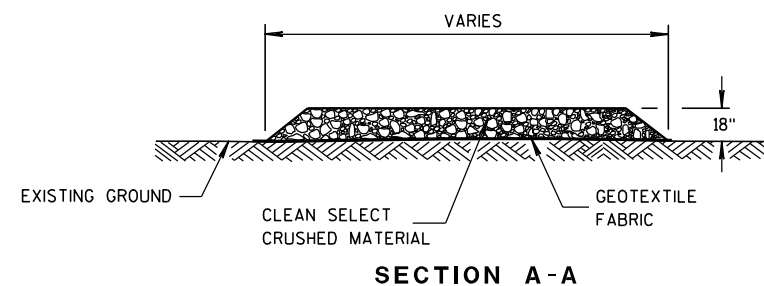
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011

DATE

/S/ Jerry H. Zonn

ROADWAY STANDARDS 236

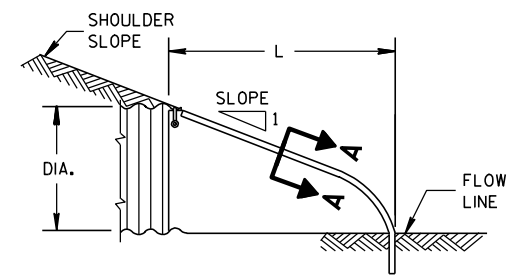
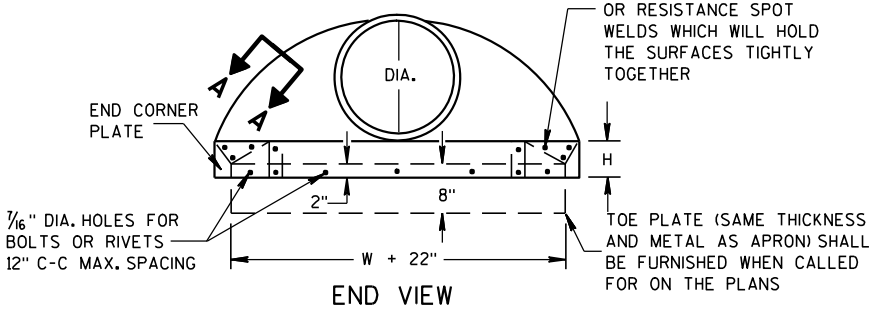
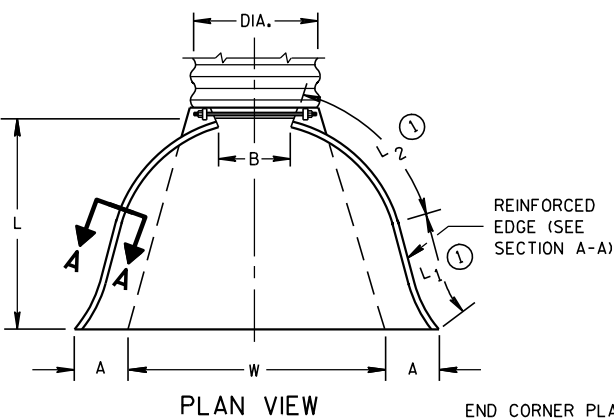
ENGINEER

ENT

FHWA

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

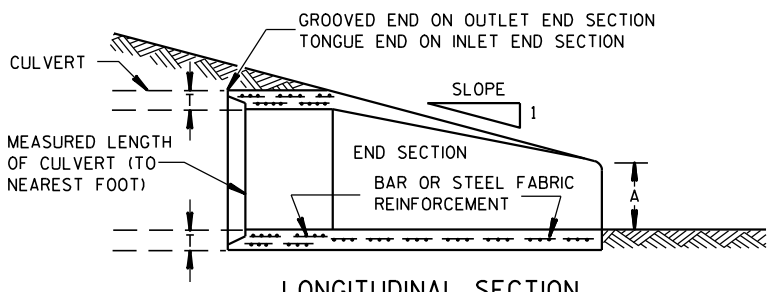
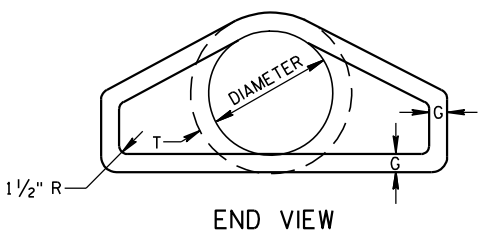
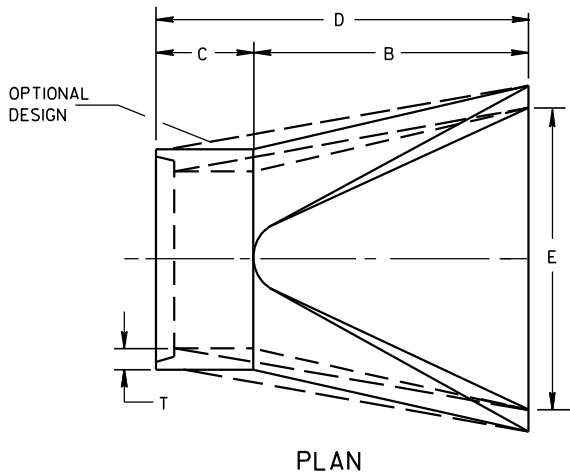
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

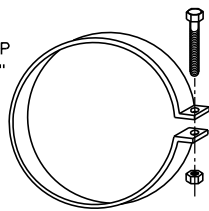
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43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

* MINIMUM
** MAXIMUM

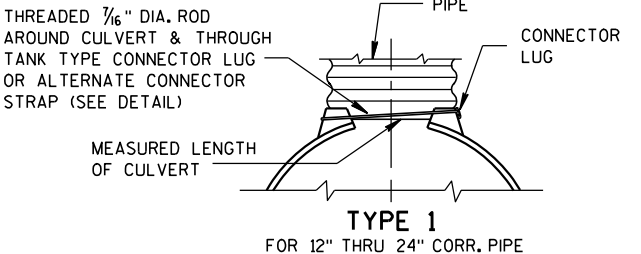


LONGITUDINAL SECTION
CONCRETE ENDWALLS

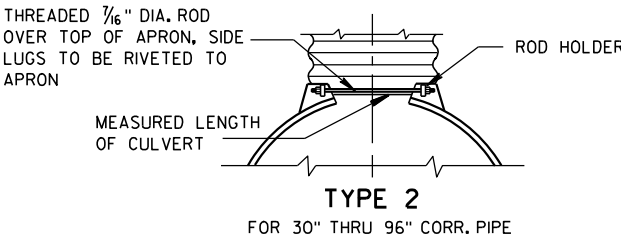
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



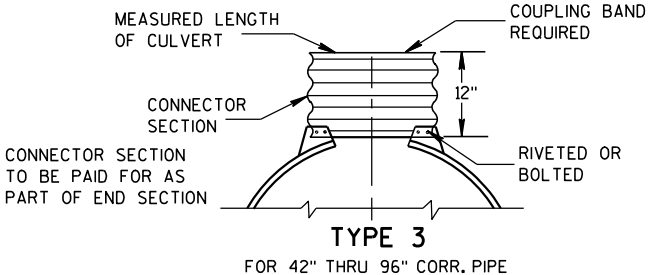
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



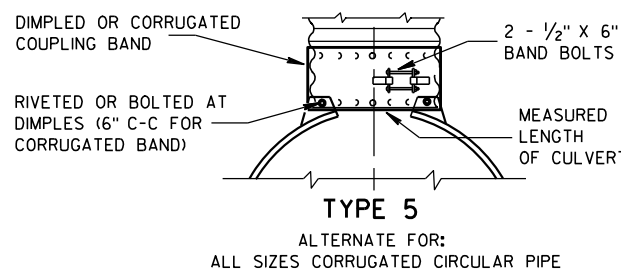
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



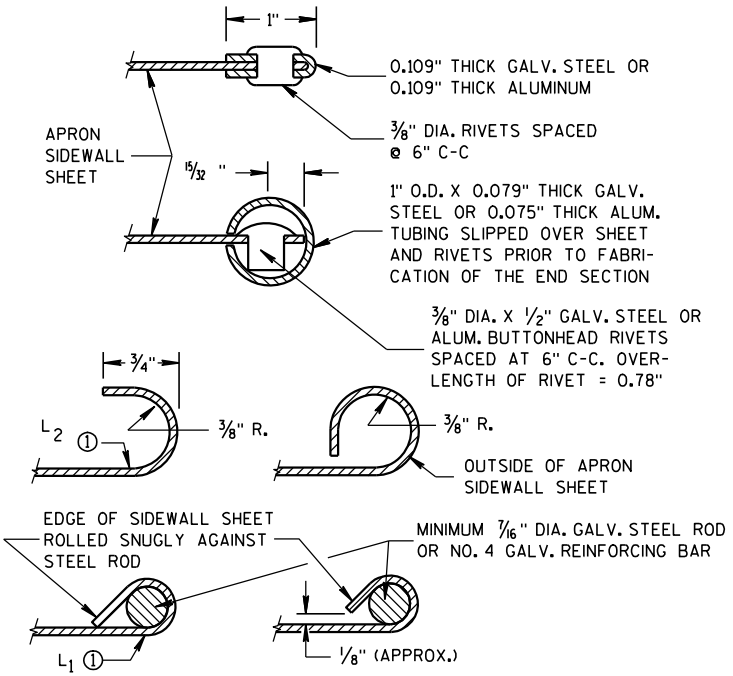
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

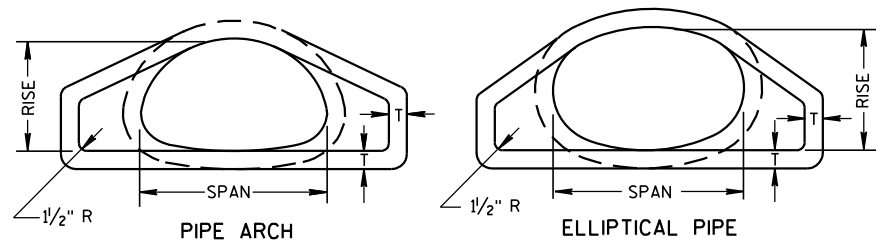
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

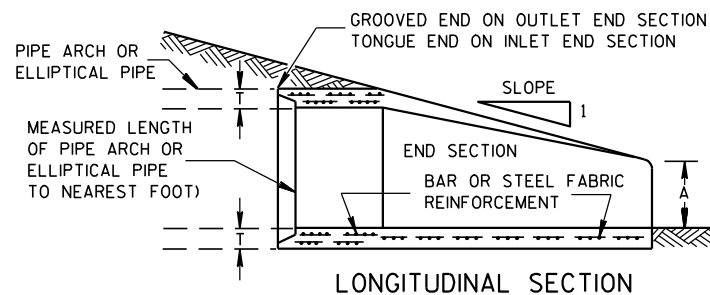
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOPMENT NEER
FHWA	

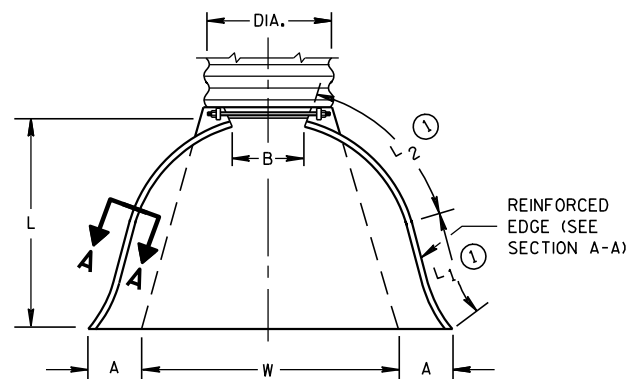


END VIEW



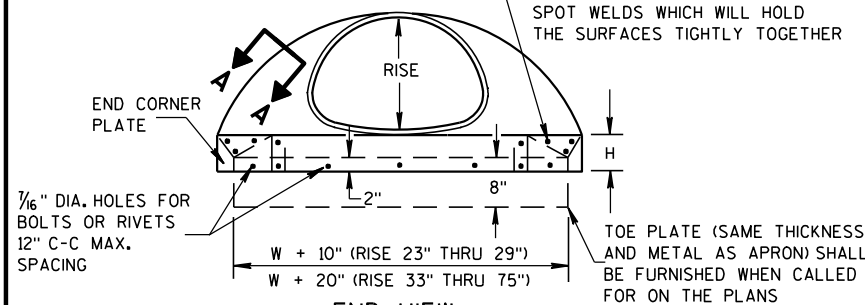
LONGITUDINAL SECTION

CONCRETE ENDWALLS

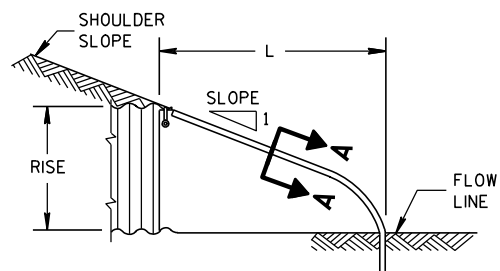
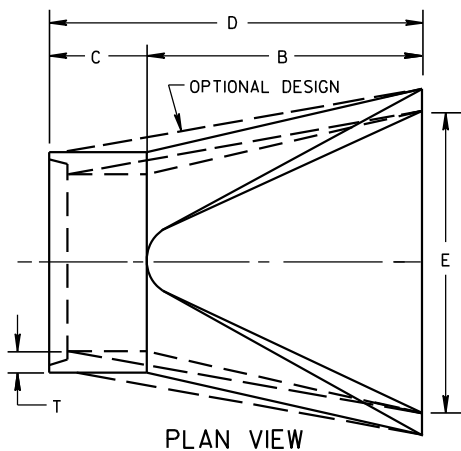


PLAN VIEW

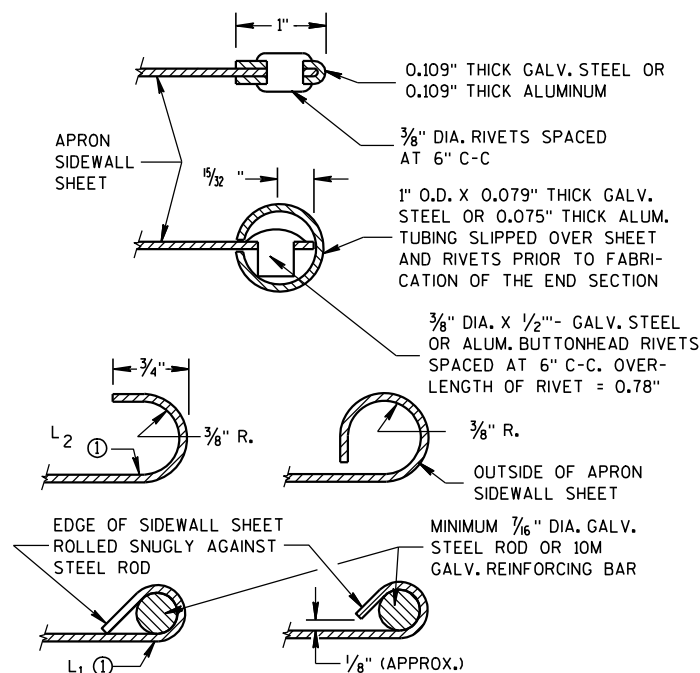
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW

SIDE ELEVATION
METAL ENDWALLS

PLAN VIEW



SECTION A-A

2- 2 ² / ₃ " x 1 ¹ / ₂ " CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 ¹ / ₂ ")	L ₁ ①	L ₂ ①	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 ¹ / ₂ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 ³ / ₈	36	2 ¹ / ₂ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 ³ / ₄	42	2 ¹ / ₂ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 ¹ / ₂	48	2 ¹ / ₂ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 ⁵ / ₈	60	2 ¹ / ₂ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 ³ / ₈	75	2 ¹ / ₂ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 ³ / ₄	85	2 ¹ / ₂ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 ¹ / ₂ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 ³ / ₄	102	2 ¹ / ₄ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 ¹ / ₄	114	2 ¹ / ₄ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

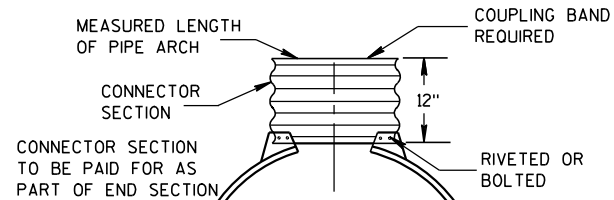
3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ⓪	L ₂ ⓪	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

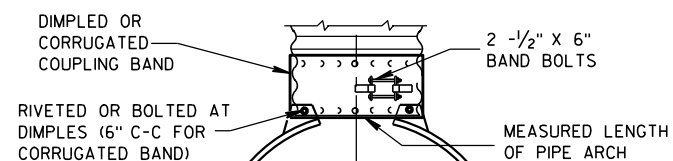
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:
ALL SIZES CORRUGATED PIPE ARCHESNOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 1/8	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 1/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPESTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94

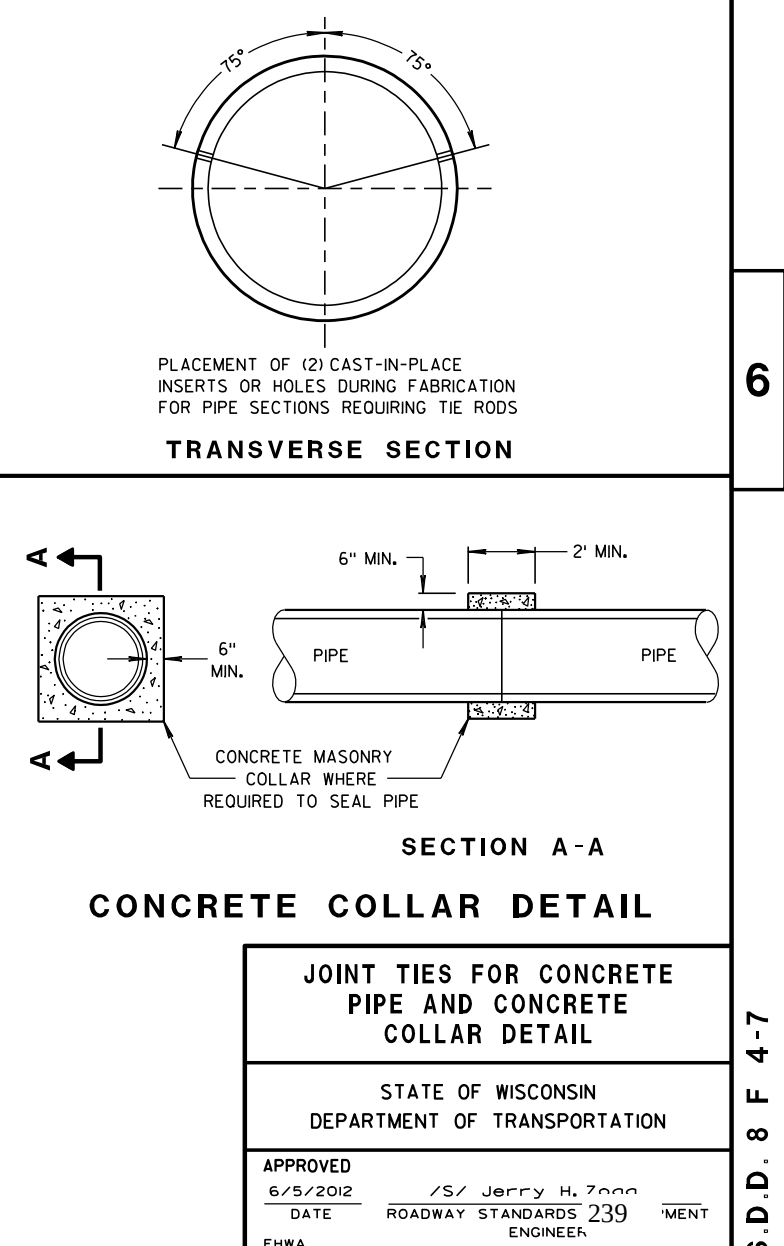
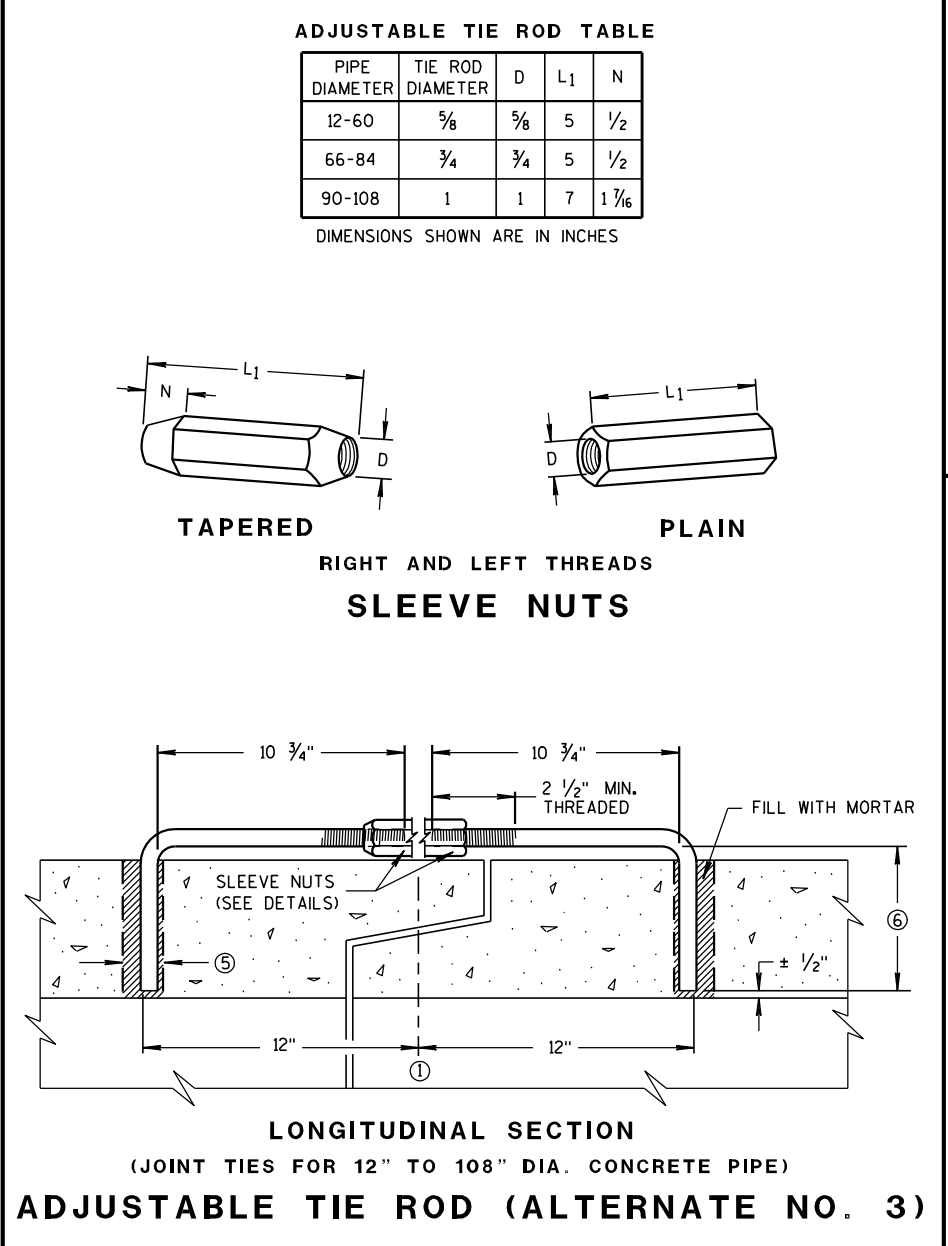
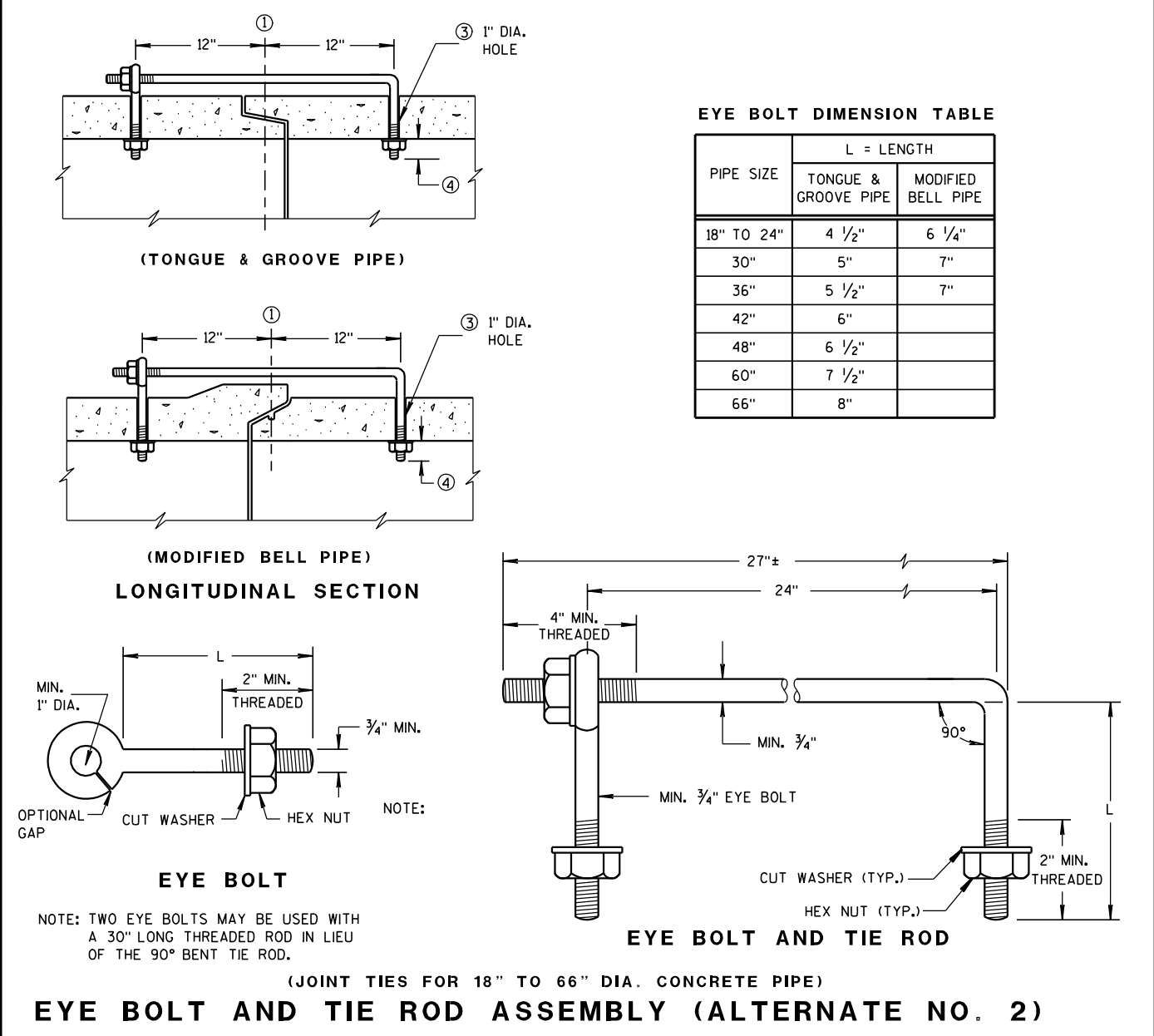
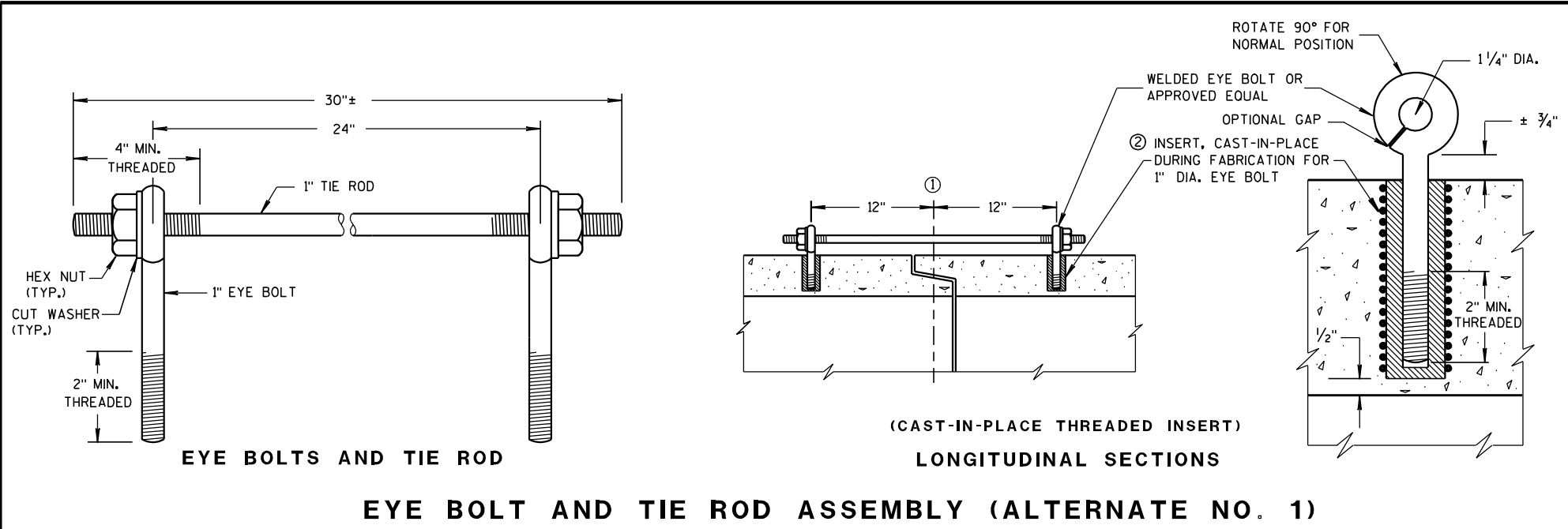
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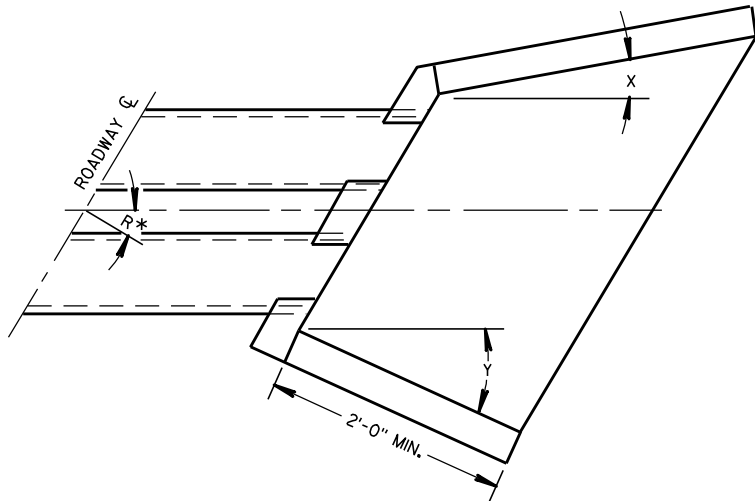
/S/ Rory L. Rhinehart

CHIEF ROADWAY DEVELOPER

FHWA

ENGINEER





WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

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.

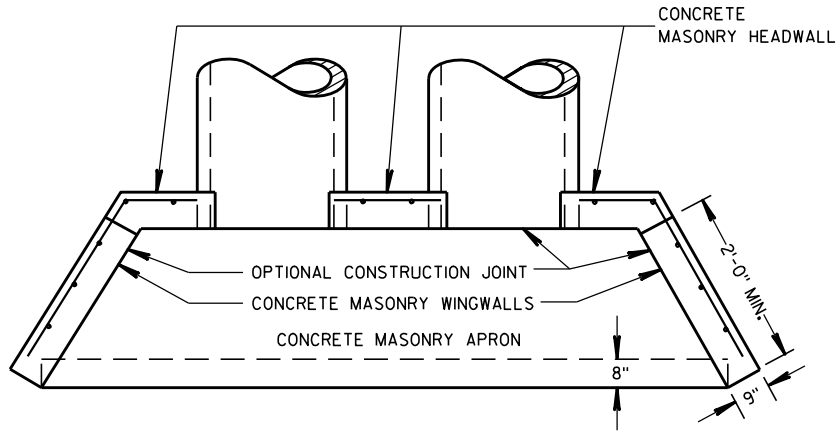
FILL SLOPES FLATTER THAN 2 1/2:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

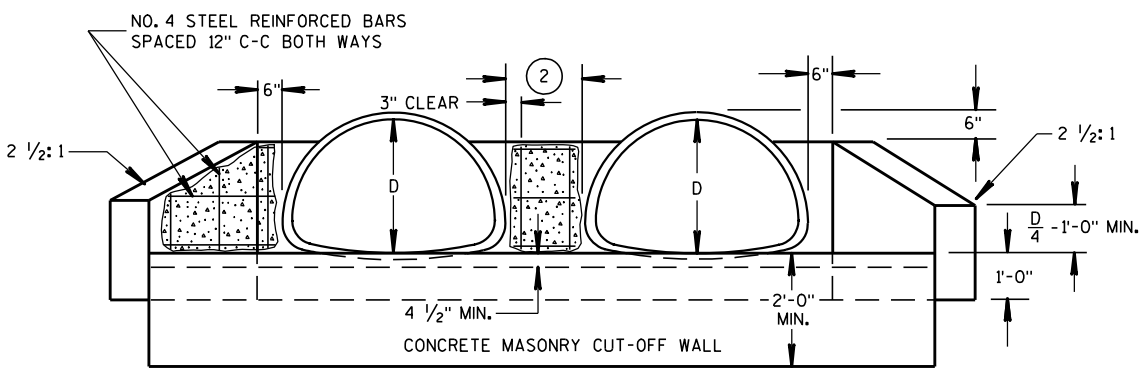
1 MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

2 THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

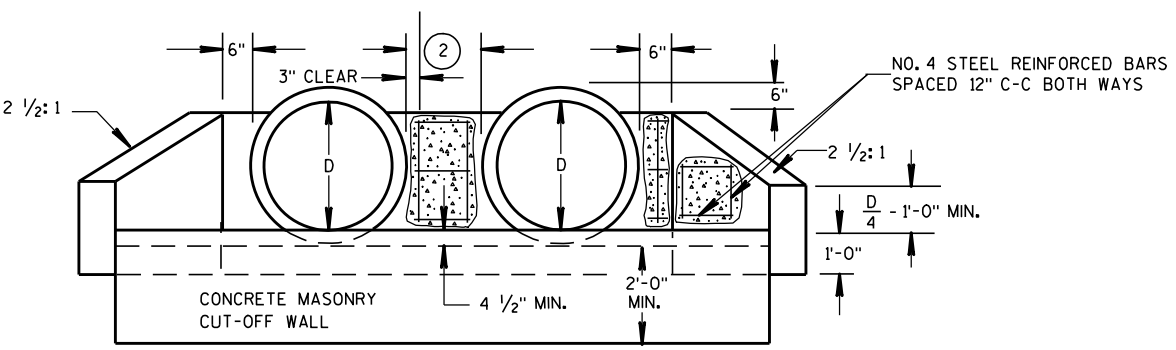
DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	1/2 DIA. OR SPAN
OVER 72"	3'-0"



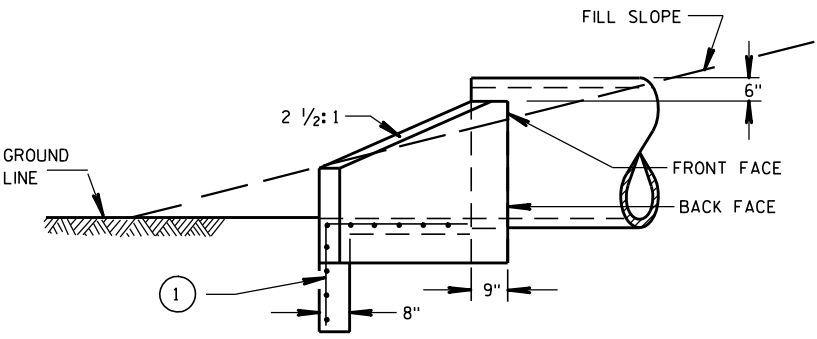
PLAN VIEW
CULVERT PIPE AND PIPE ARCH



END ELEVATION
PIPE ARCH



END ELEVATION
CULVERT PIPE

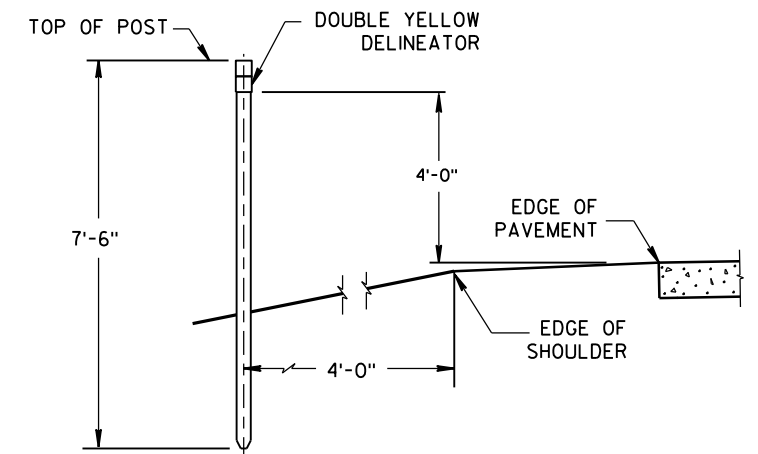
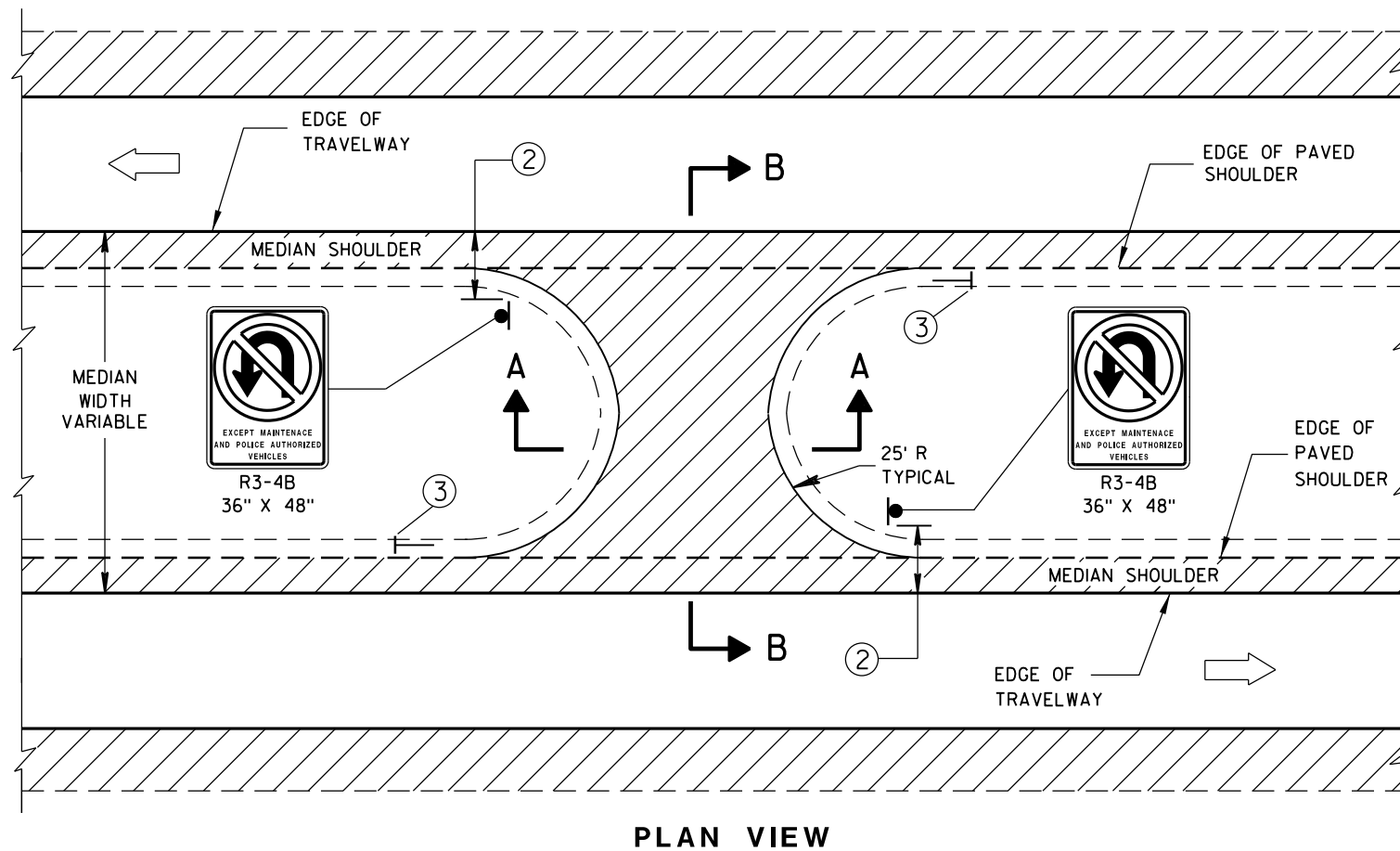
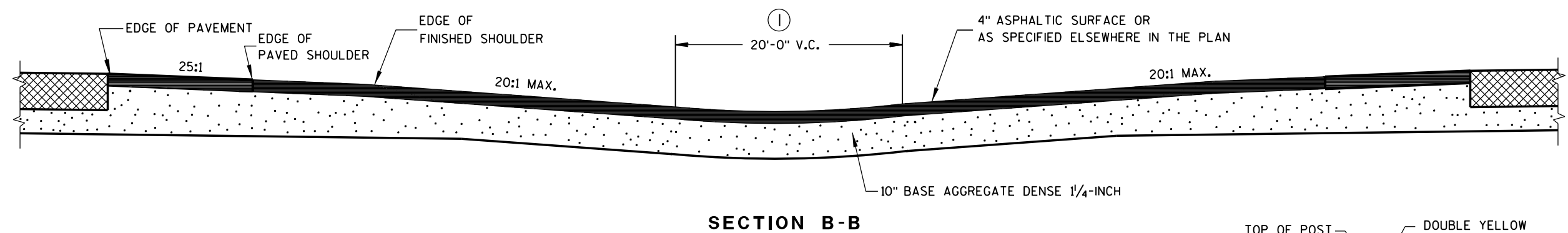
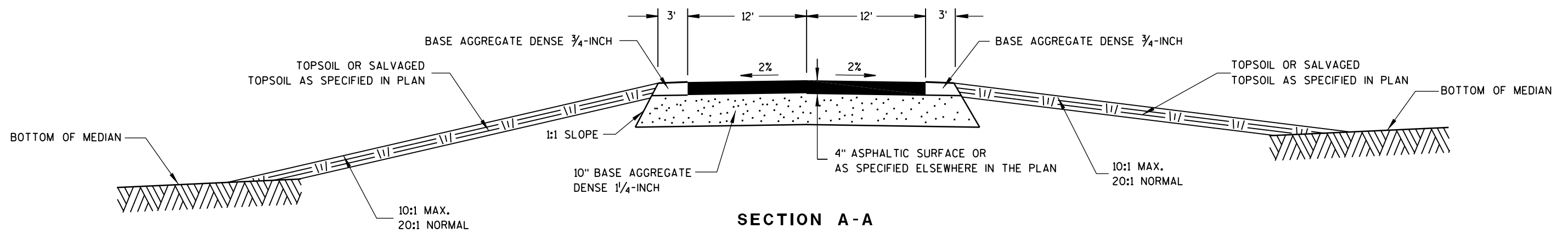


SIDE ELEVATION
CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS
FOR CULVERT PIPE AND
PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/14/98 DATE /S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOPER
FHWA ENGINEER



GENERAL NOTES

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

- ① ADJUST VERTICAL CURVE LOCATION Laterally TO MAINTAIN 20:1 MAX.
- ② SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
- ③ INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER
FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

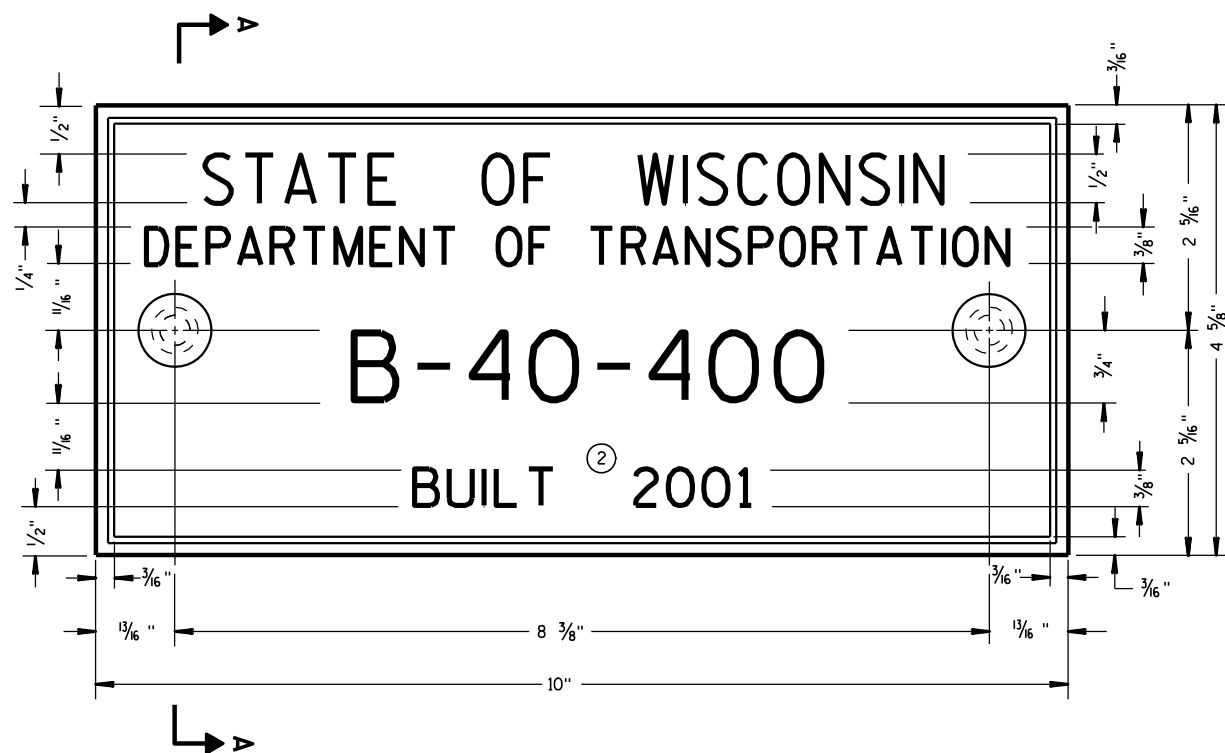
APPROVED

8/2013
DATE

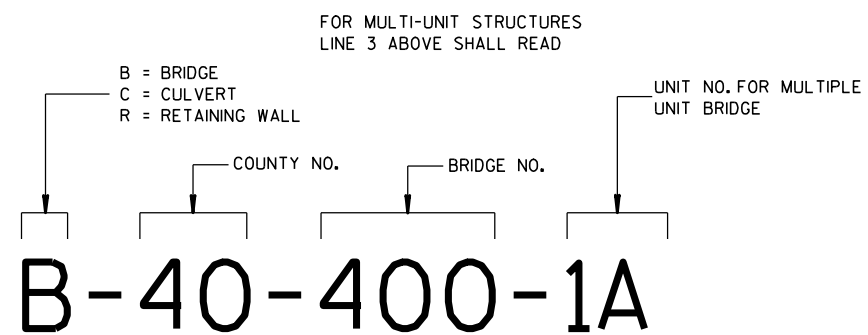
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

NT



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



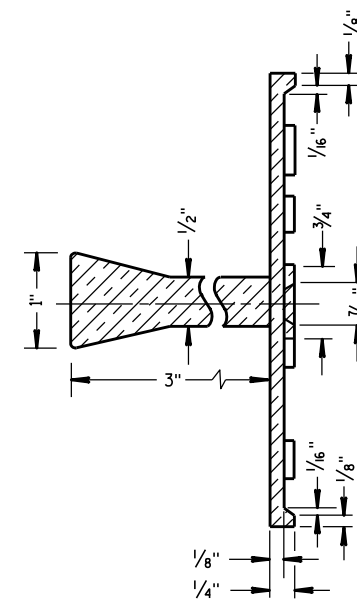
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

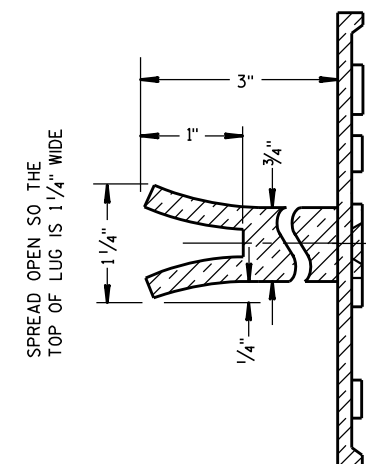
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

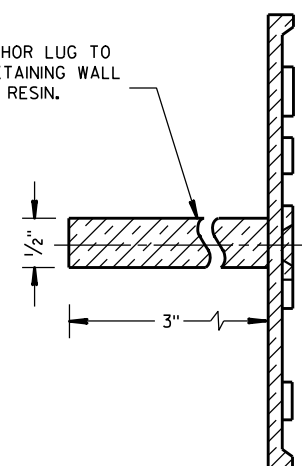


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

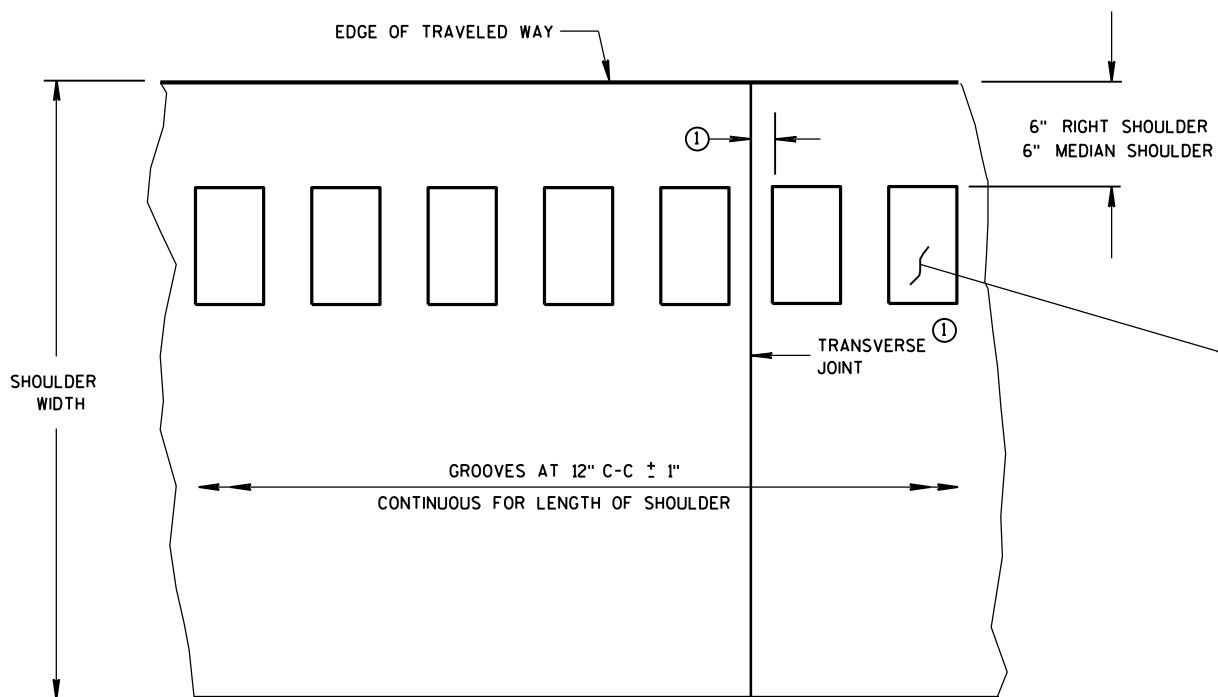
NAME PLATE
(STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

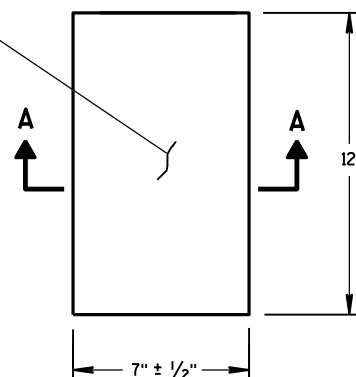
APPROVED

DATE 3/26/10 /S/ Scot Beck
CHIEF STRUCTURAL DEVELOPER 242 JEEF

FHWA



PLAN VIEW
SHOULDER WITH GROOVES



PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

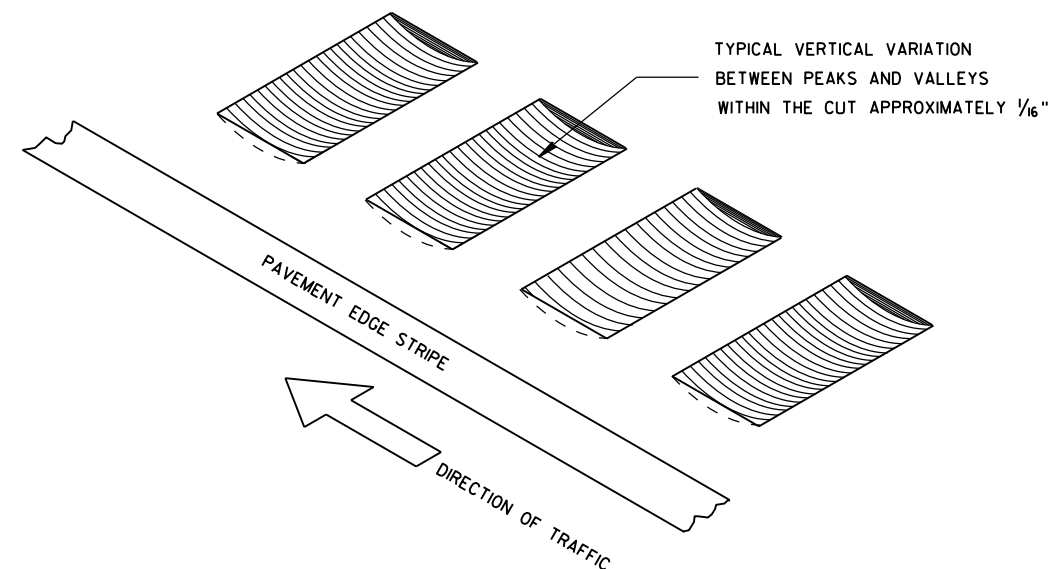
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

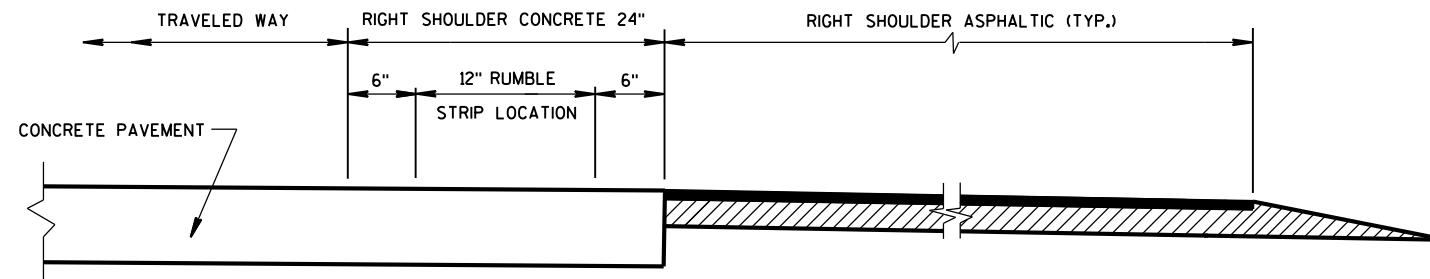
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

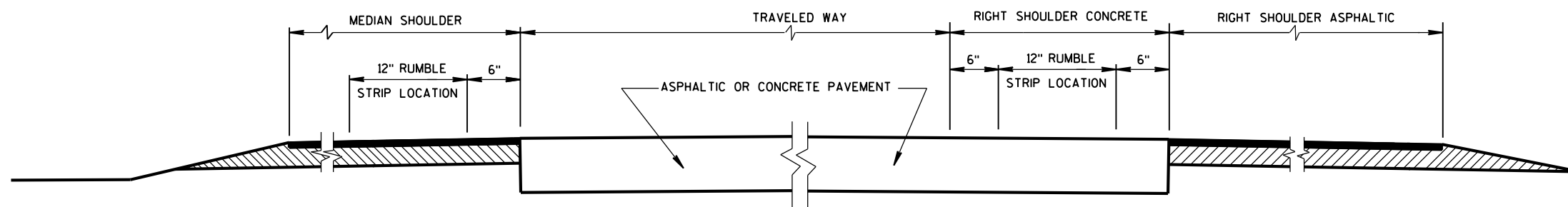
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



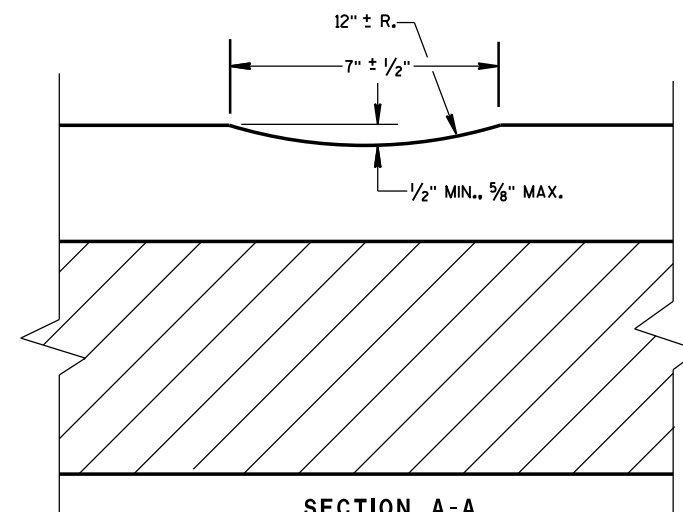
ISOMETRIC



SECTION VIEW
(CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



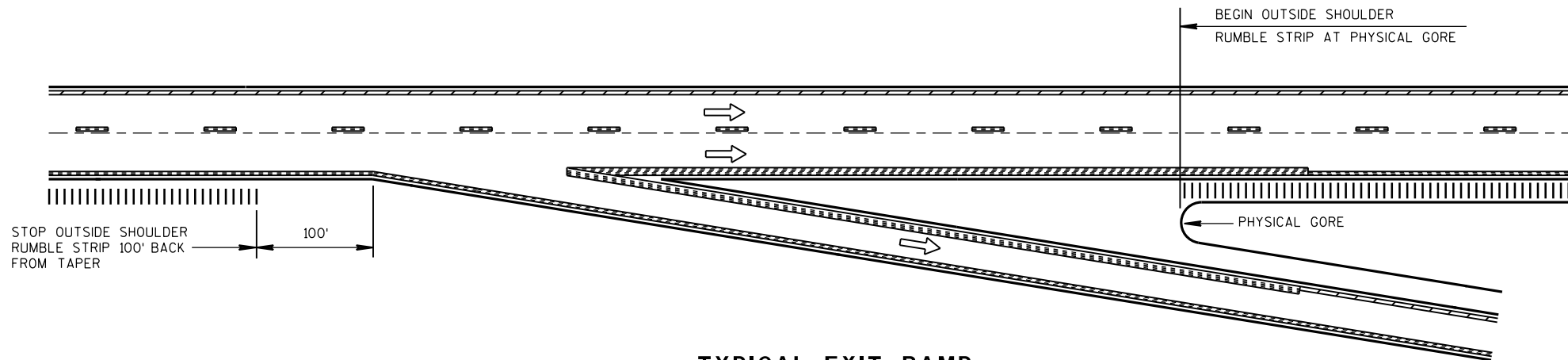
SECTION VIEW
TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS
IN RURAL DIVIDED HIGHWAYS
(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP,
MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



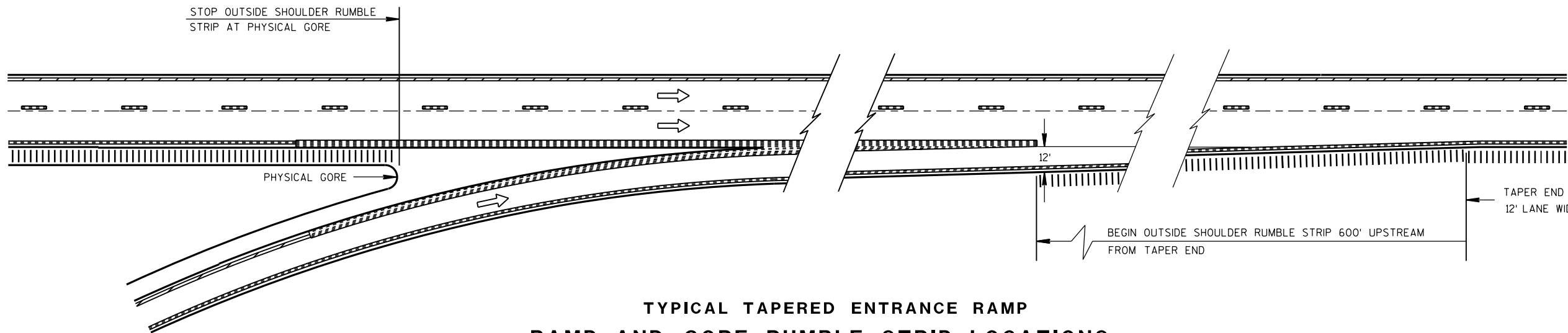
TYPICAL EXIT RAMP

NOTES:

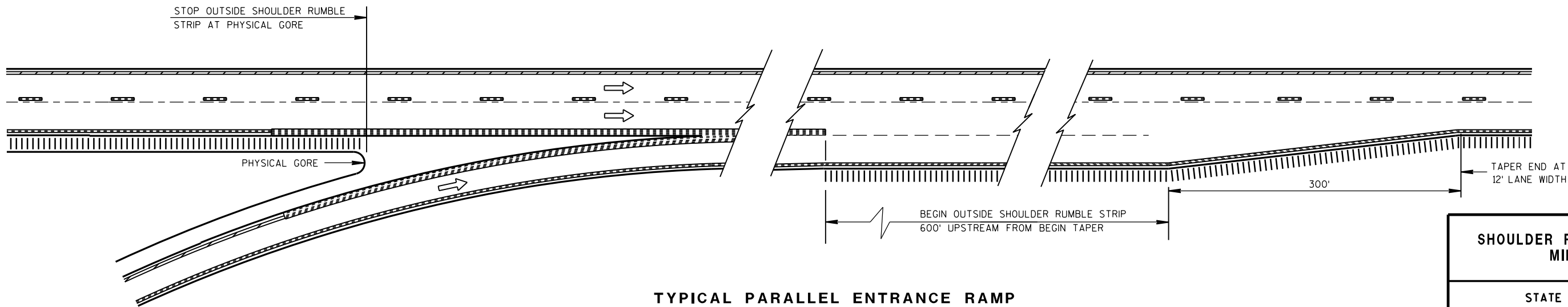
NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL



**TYPICAL TAPERED ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS**



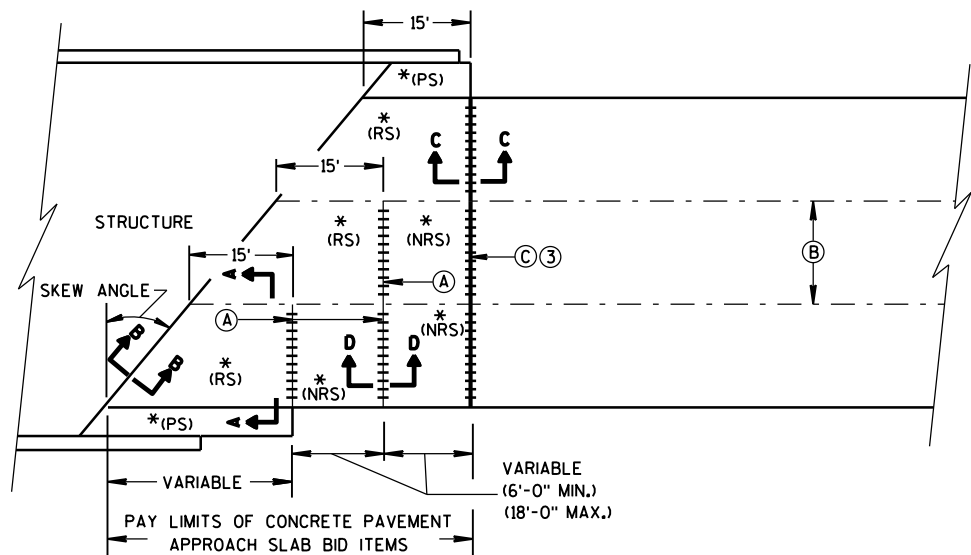
**TYPICAL PARALLEL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS**

**SHOULDER RUMBLE STRIP,
MILLING**

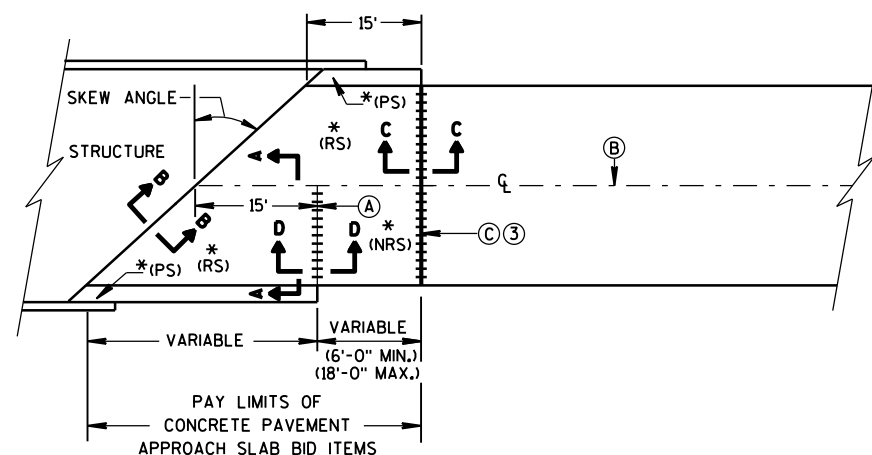
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012
DATE
FHWA

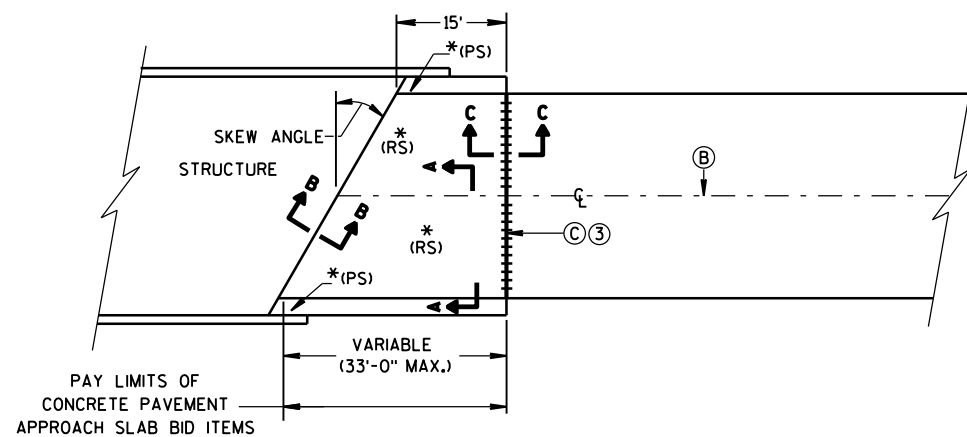
/S/ Jerry H. Zoag
ROADWAY STANDARDS ENGINEER 244 ENT



**SKewed APPROACH
(PAVEMENT MORE THAN 2 LANES)**



**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**

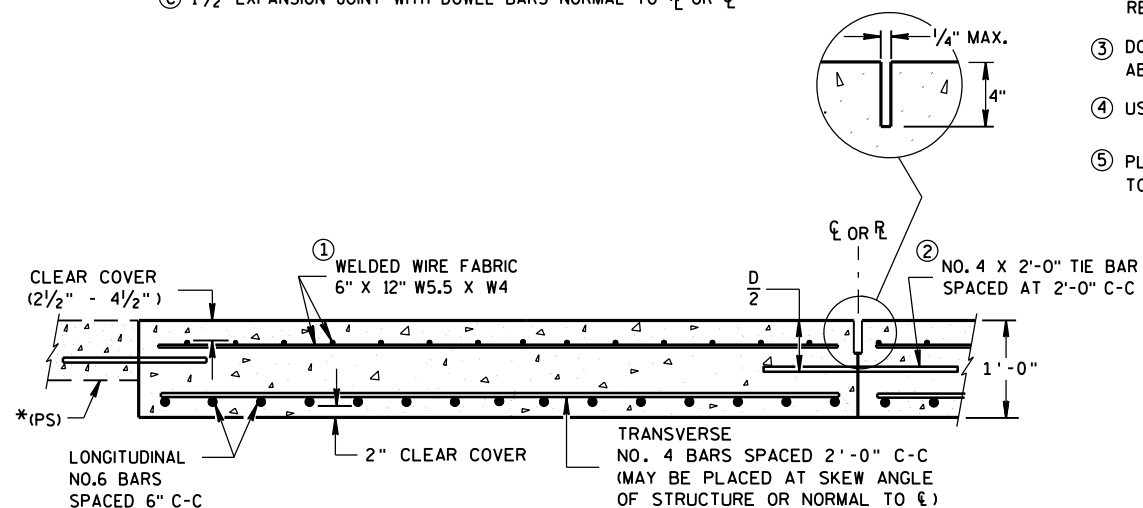


**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')
APPROACH SLAB AND ADJACENT PAVEMENT**

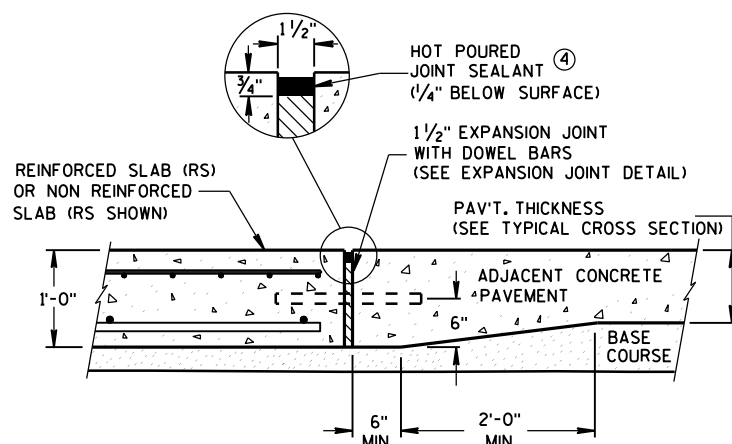
* (RS) = REINFORCED CONCRETE SLAB
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
* (NRS) = NON-REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

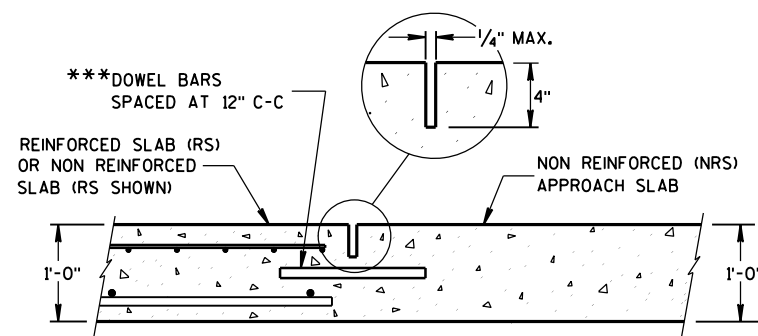
- (A) STANDARD CONTRACTION JOINT NORMAL TO ℓ OR ℓ_c
(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
(C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℓ OR ℓ_c



**SECTION A-A
REINFORCEMENT POSITIONING DETAIL**



**SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**



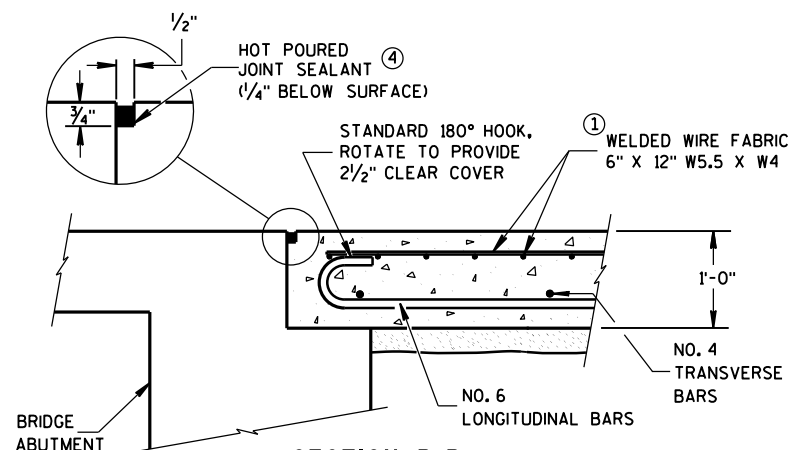
**SECTION D-D
CONTRACTION JOINT**

GENERAL NOTES

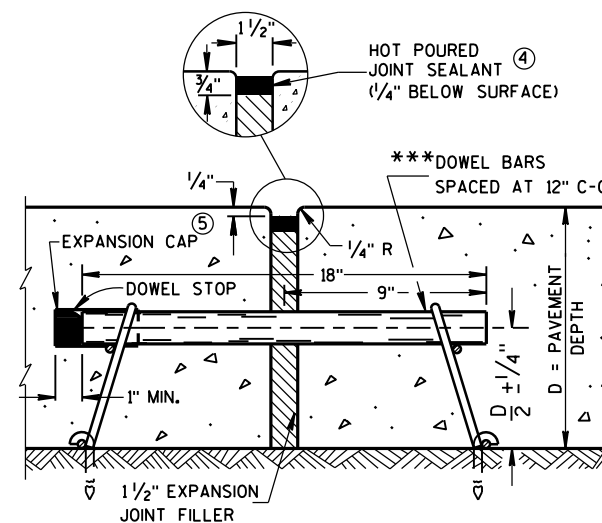
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
- PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



**SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT**

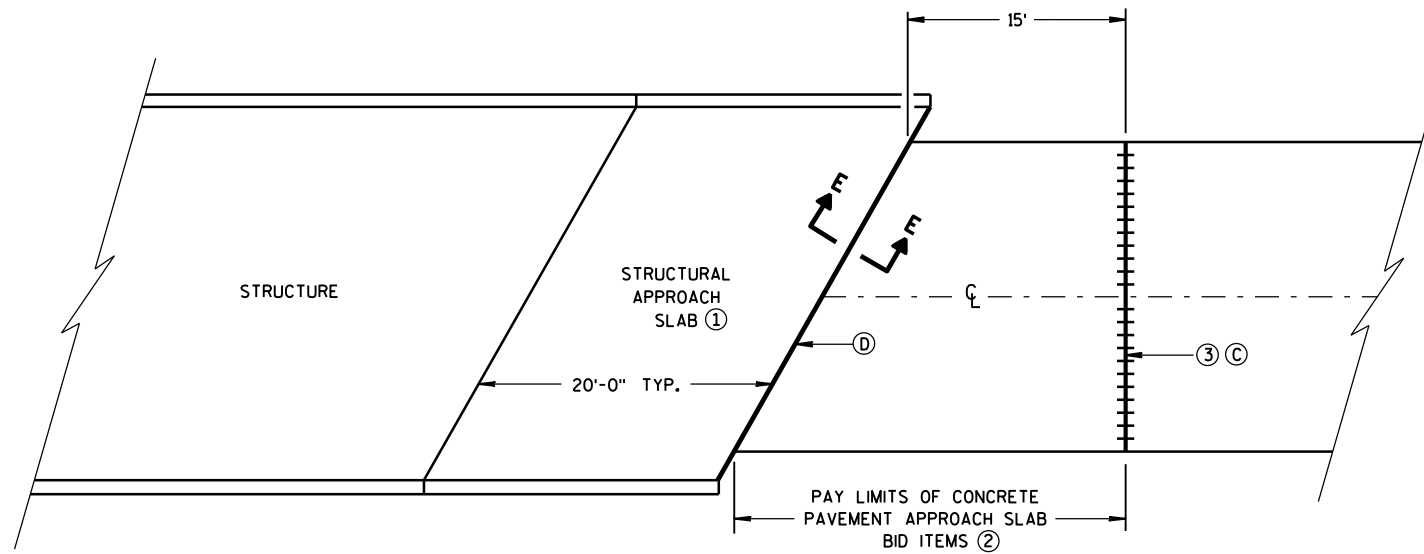


EXPANSION JOINT DETAIL

**CONCRETE PAVEMENT
APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE
PAVEMENT SUPER 245
FHWA

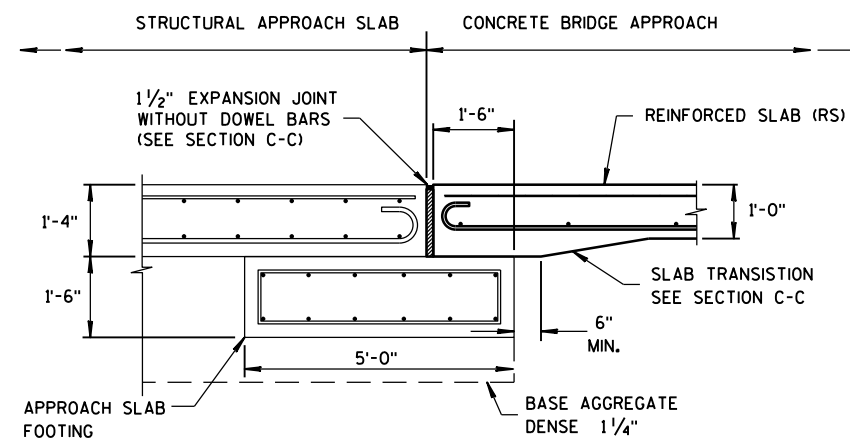
**BRIDGE APPROACHES****GENERAL NOTES**

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

- ① SEE BRIDGE PLAN.
- ② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

③ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO R_L OR C_L

④ 1½" EXPANSION JOINT (NO DOWELS)

**SECTION E-E****FOOTING DETAIL**

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

**STRUCTURAL APPROACH SLAB
AND CONCRETE PAVEMENT
APPROACH SLAB**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

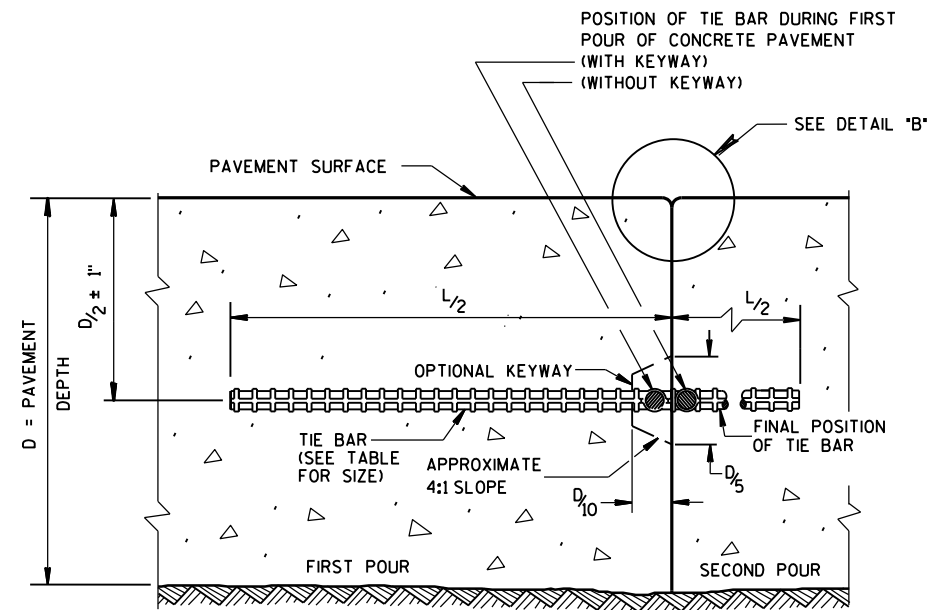
June, 2015

DATE

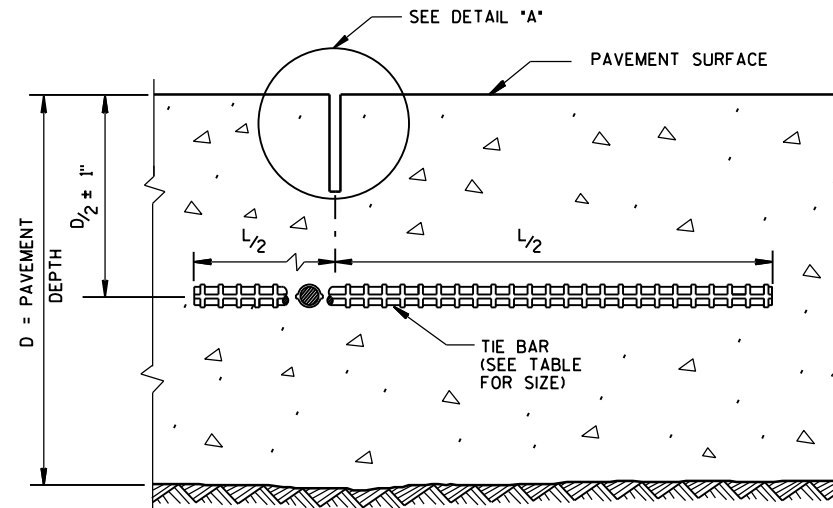
FHWA

/S/ Peter Kemp, P.E.

PAVEMENT SUPER 246



CONSTRUCTION JOINT



SAWED JOINT

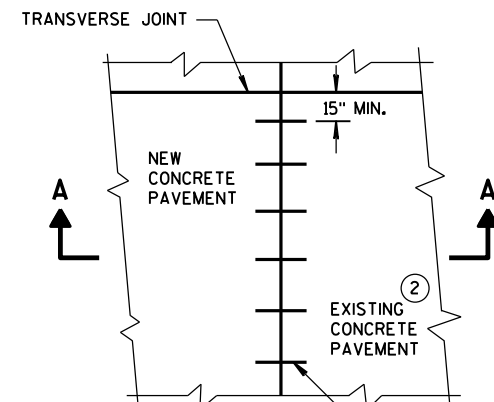
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

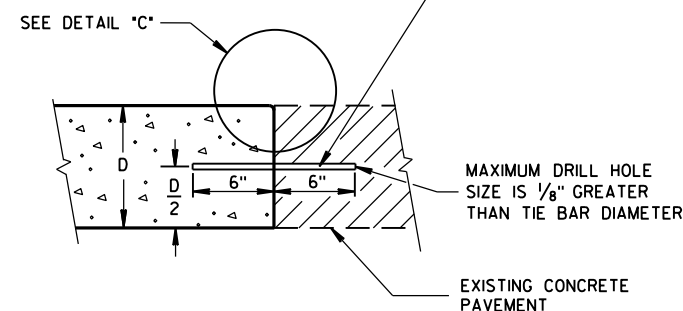
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

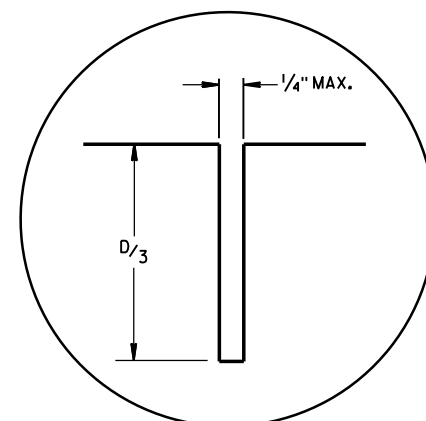


PLAN VIEW

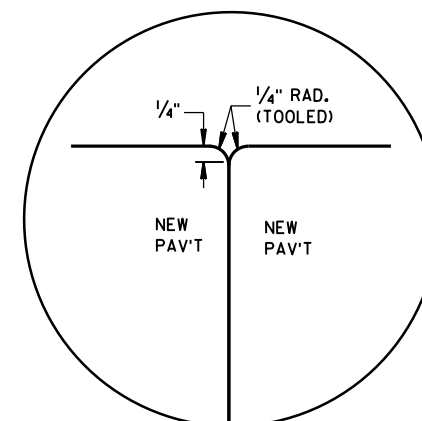
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



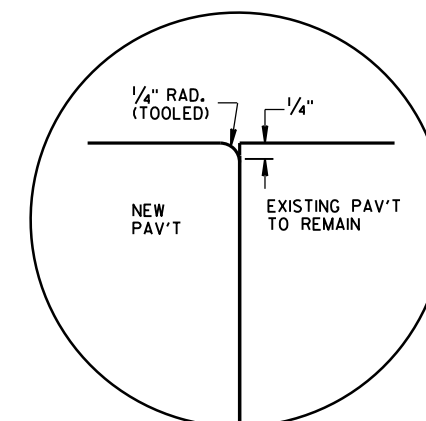
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



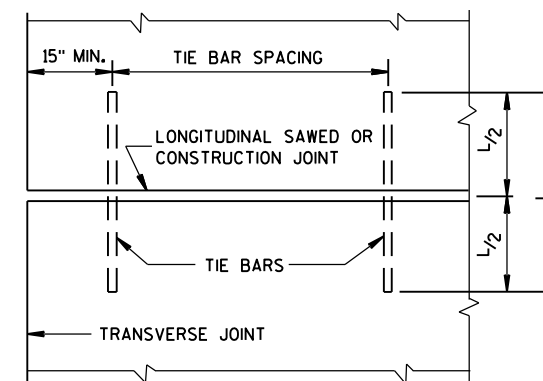
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

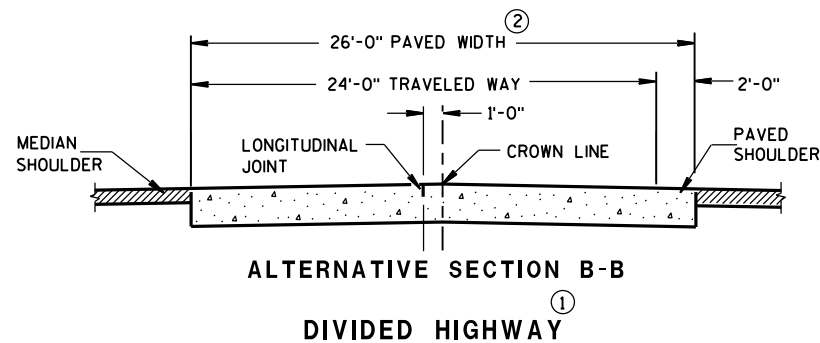
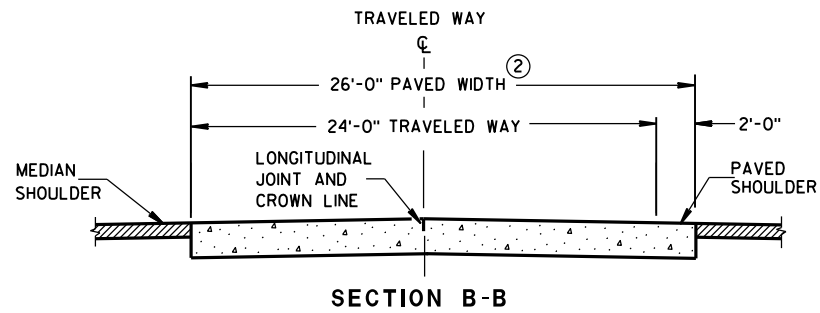
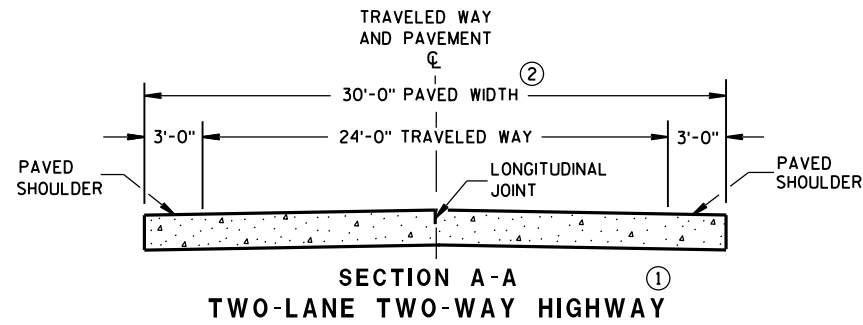


PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPER 247
FHWA



GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

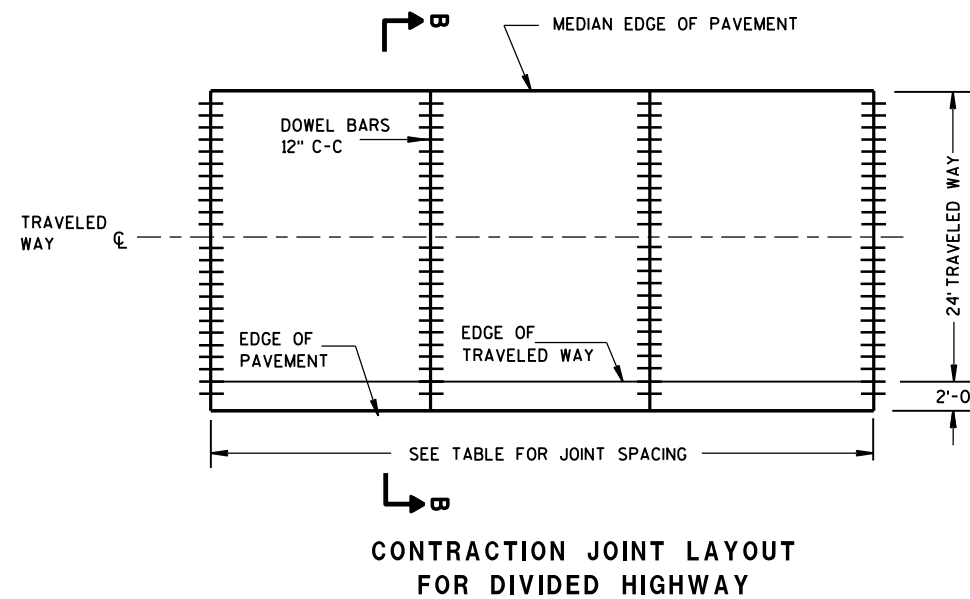
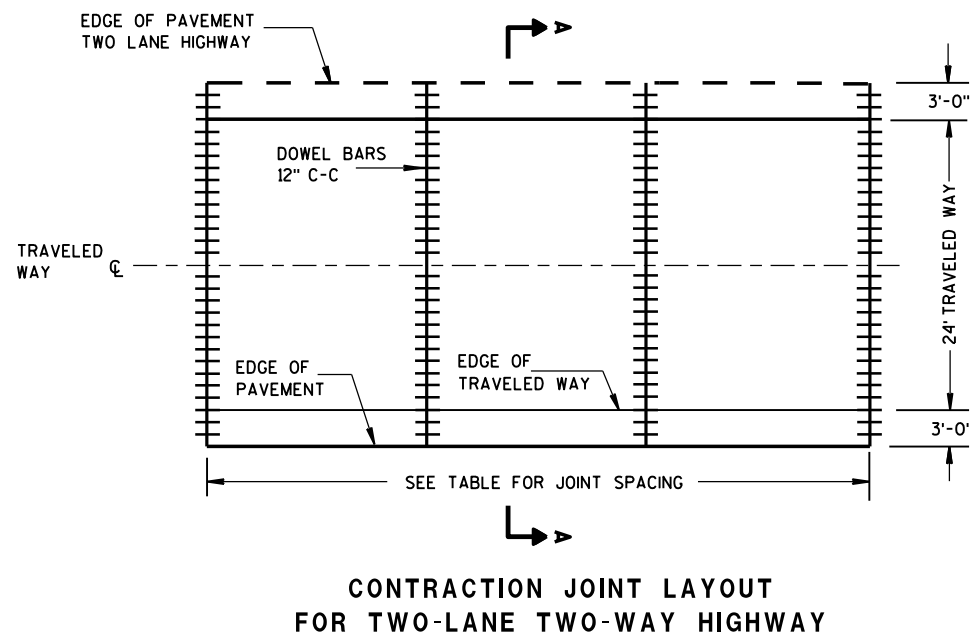
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

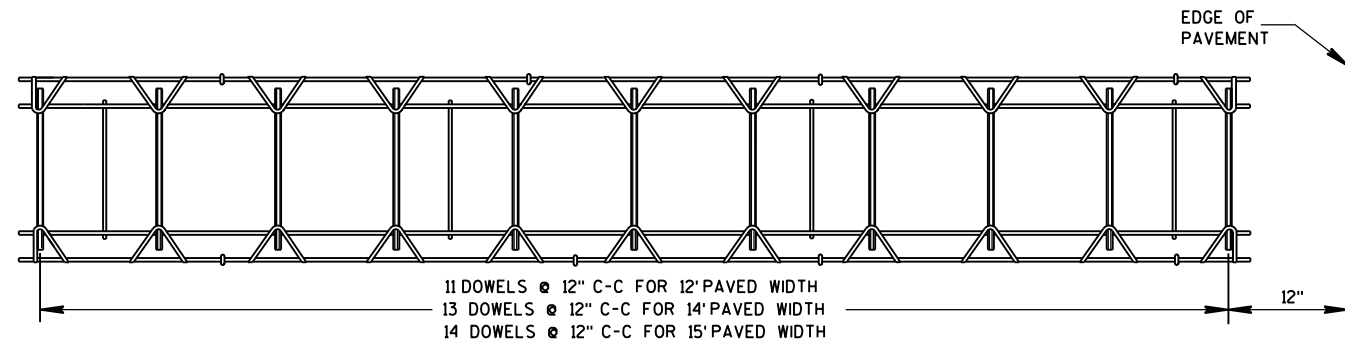
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

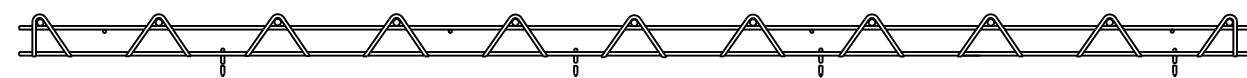


RURAL DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 248



PLAN VIEW

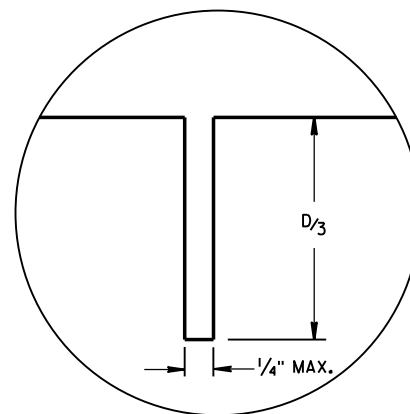


②

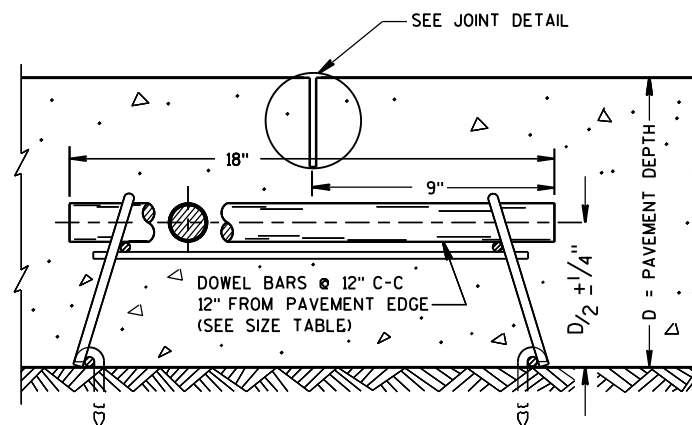
SIDE VIEW

(NORMAL TO CENTERLINE)

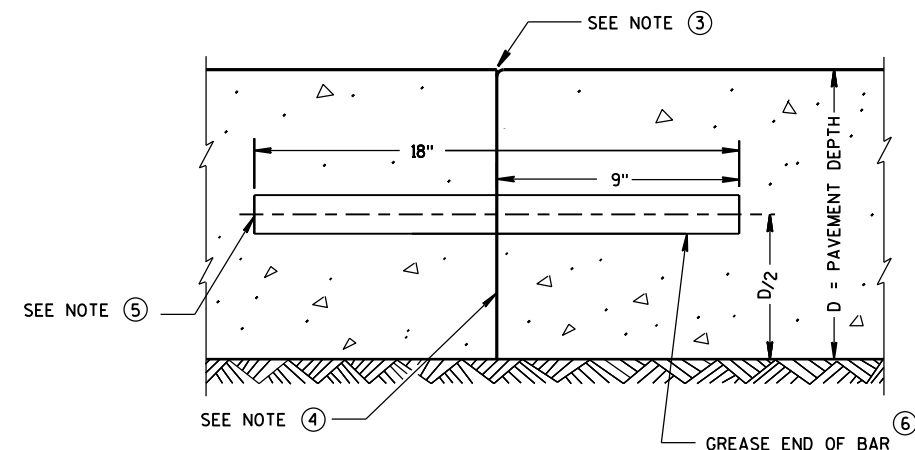
CONTRACTION JOINT DOWEL ASSEMBLY ①



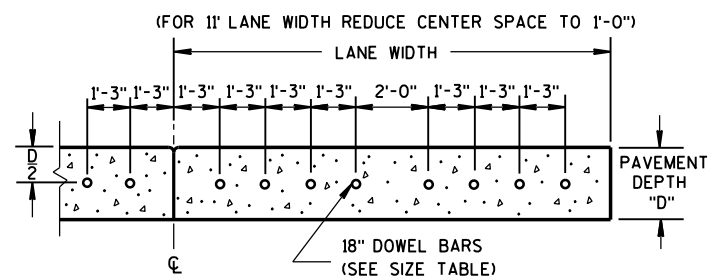
JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

GENERAL NOTES

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A $1/4$ -INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS $1/8$ -INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.

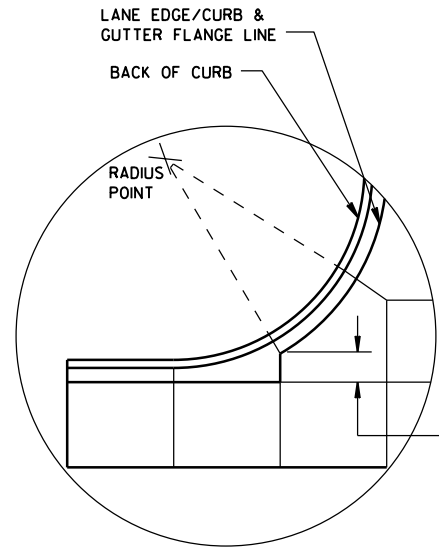
RURAL DOWELED
CONCRETE PAVEMENTSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

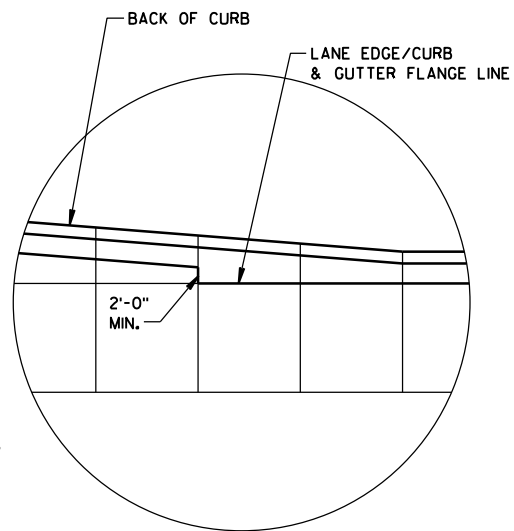
5/3/2013
DATE/S/ Deb Bischoff
PAVEMENT POLICY & DE 249

VEER

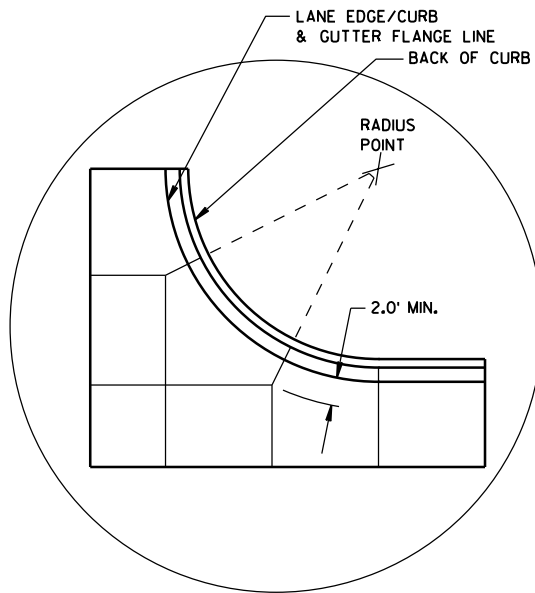
FHWA



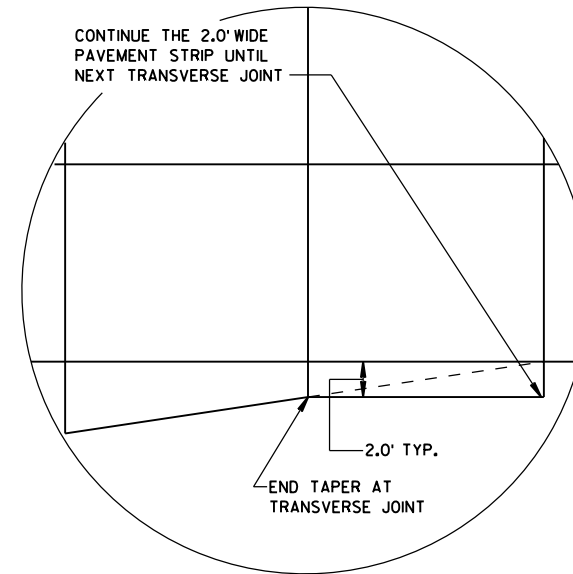
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

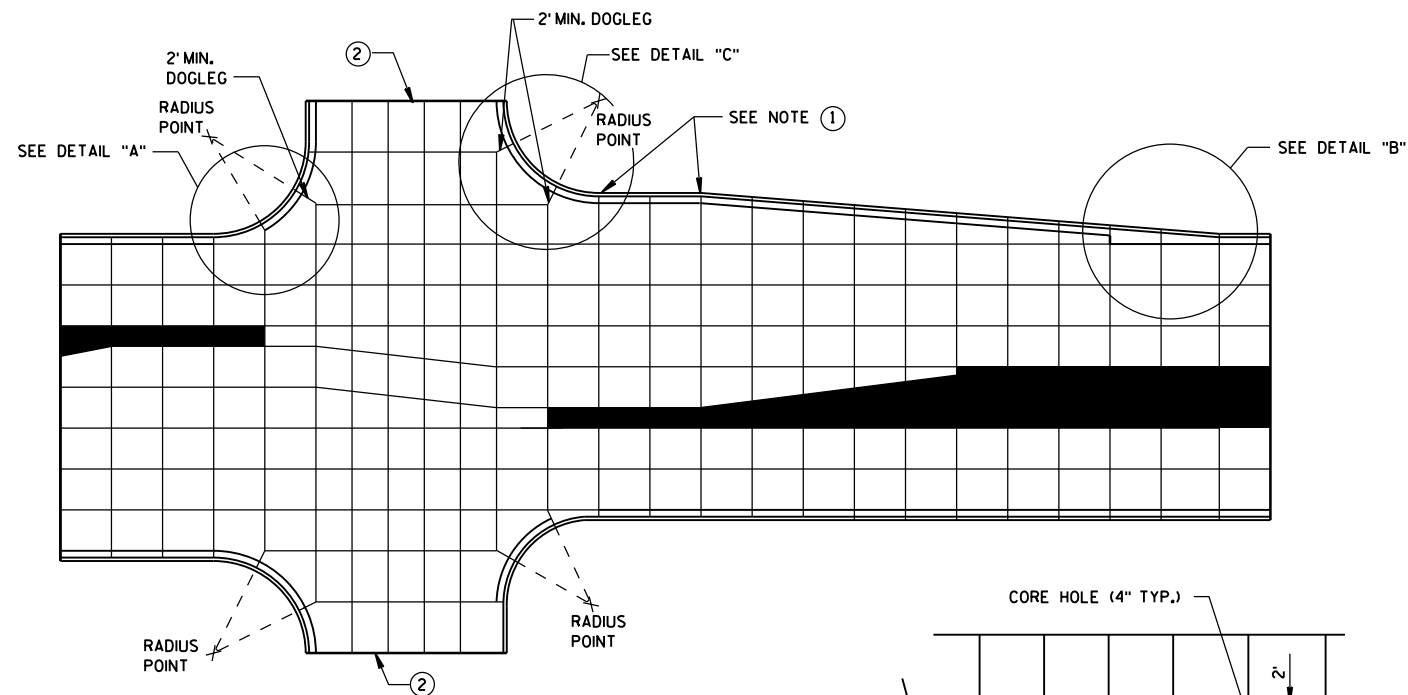
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

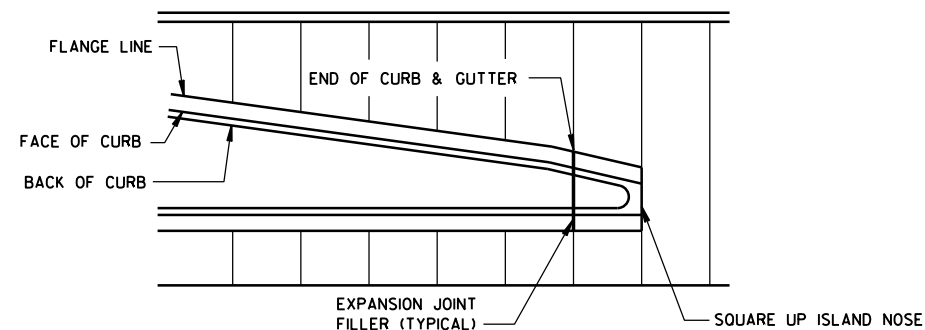
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

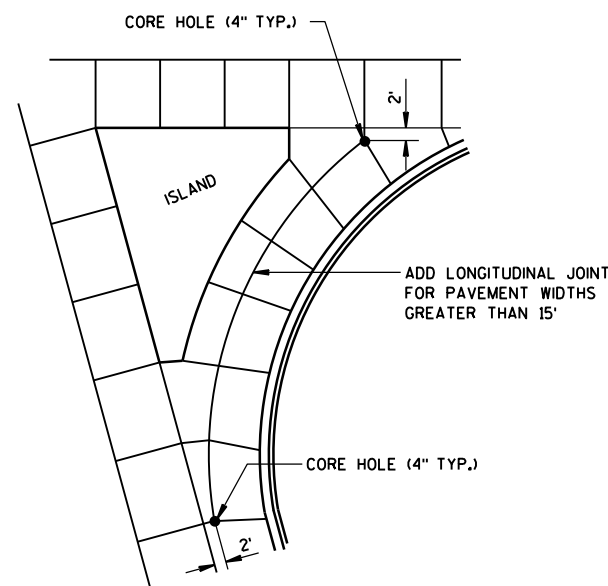
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



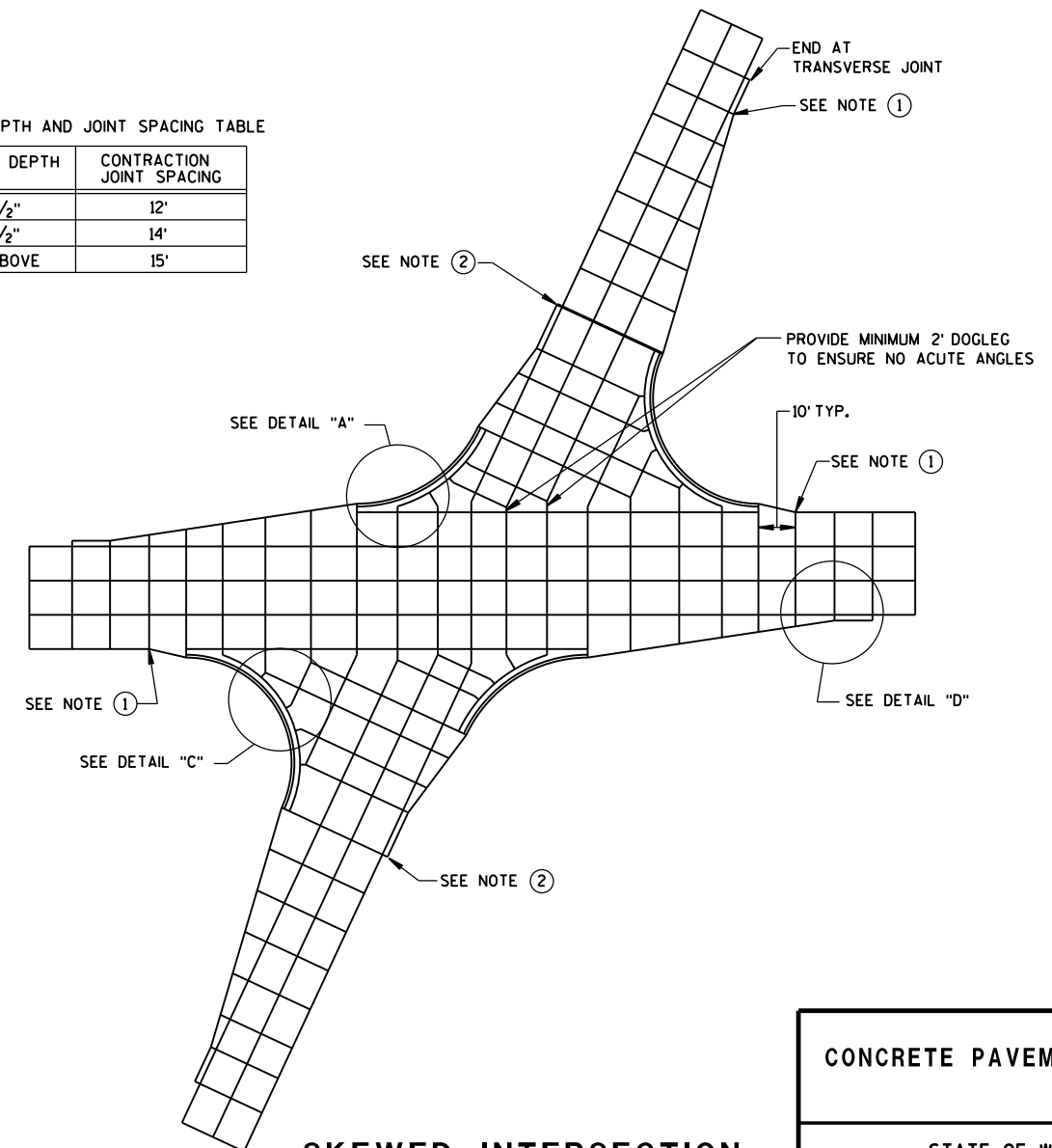
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



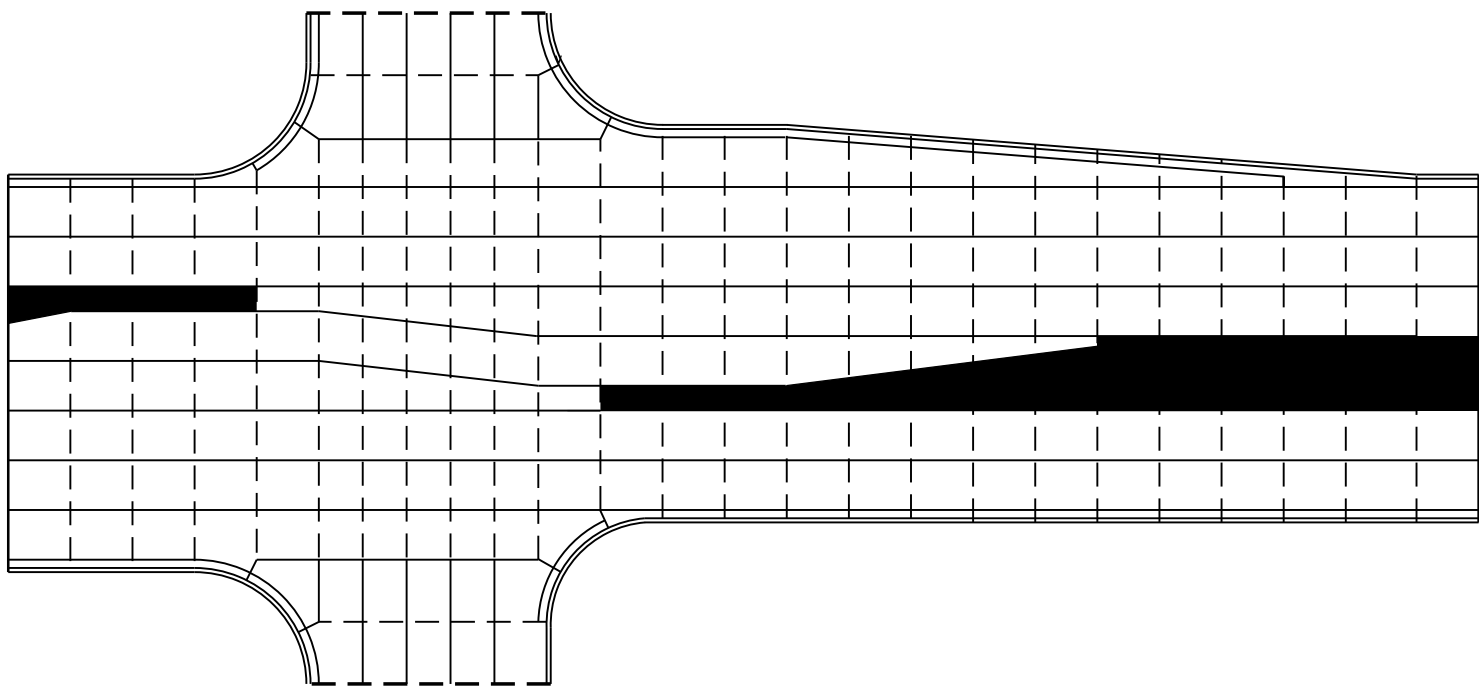
SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

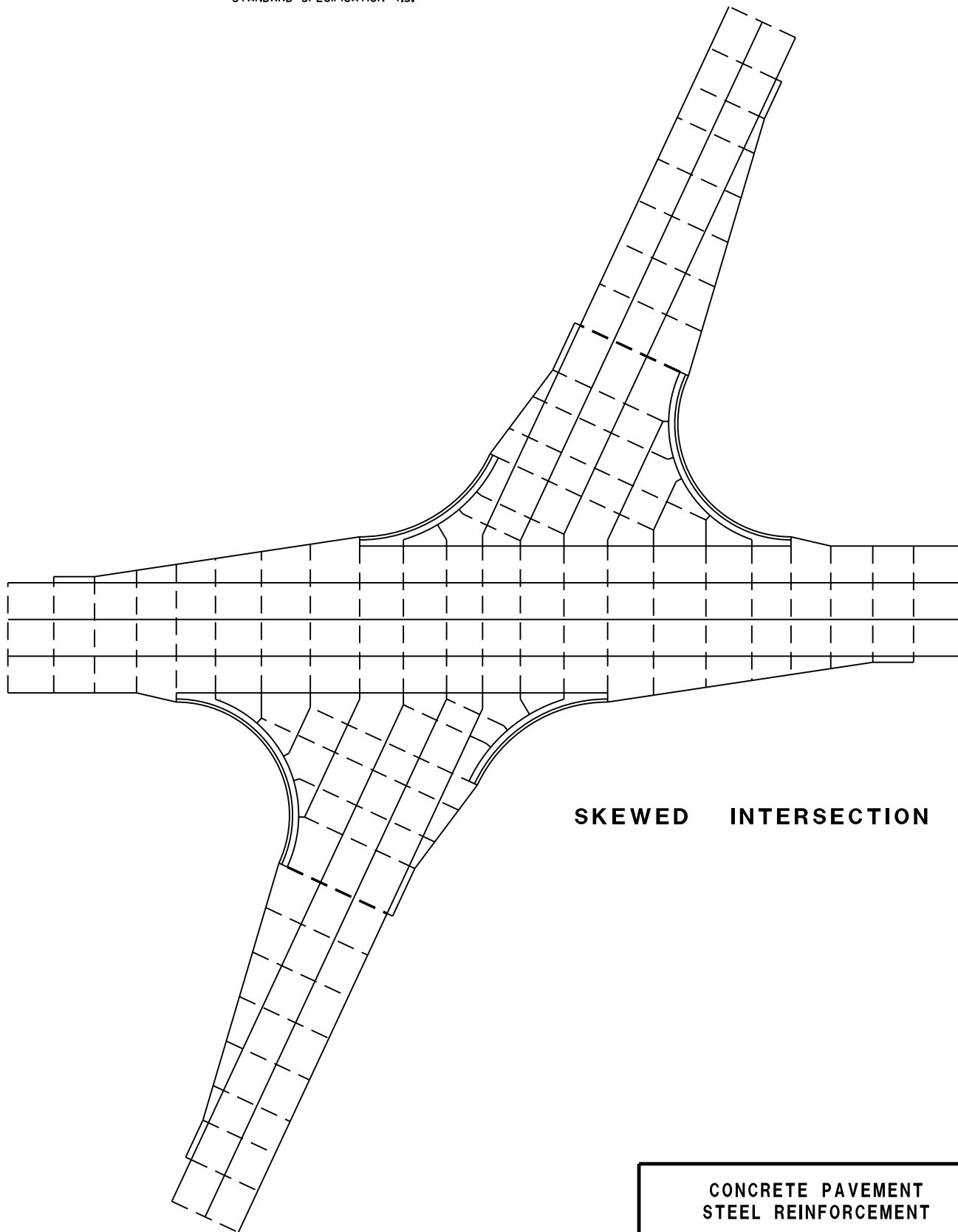
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

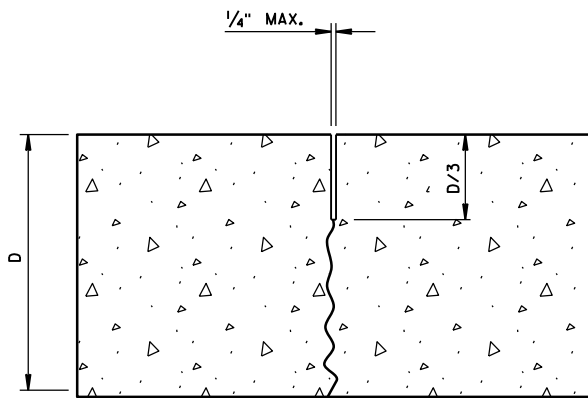


SKEWED INTERSECTION

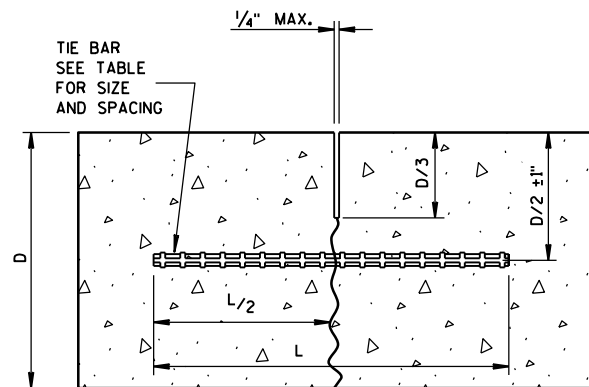
CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

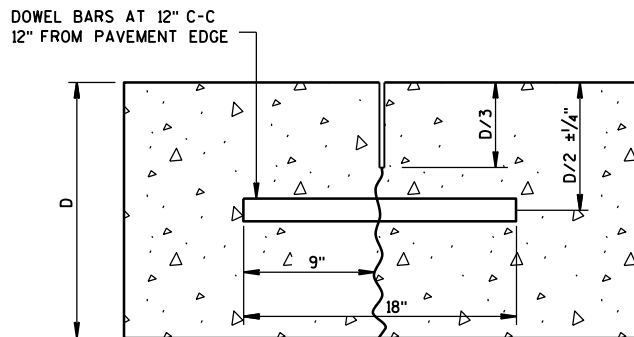
251



UNDOWELED-TRANSVERSE



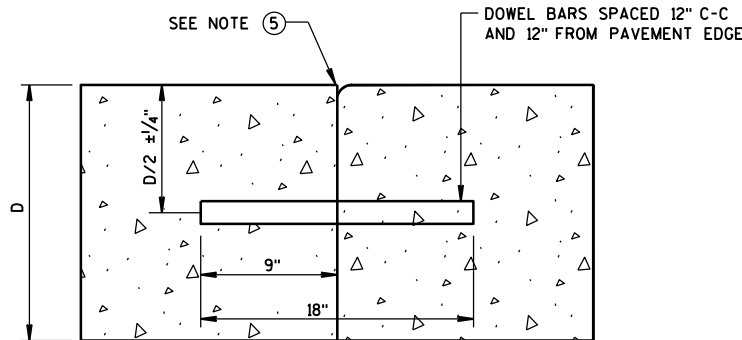
TIED LONGITUDINAL



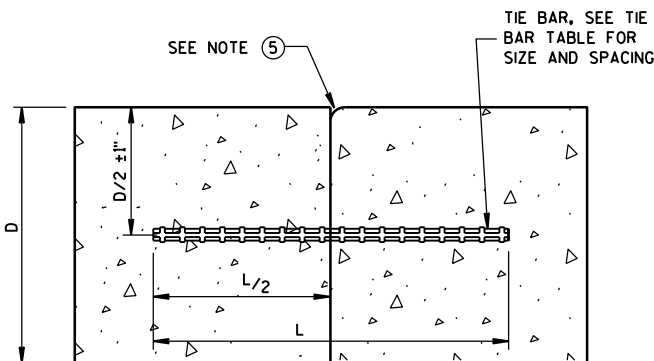
DOWELED-TRANSVERSE

CONTRACTION JOINTS

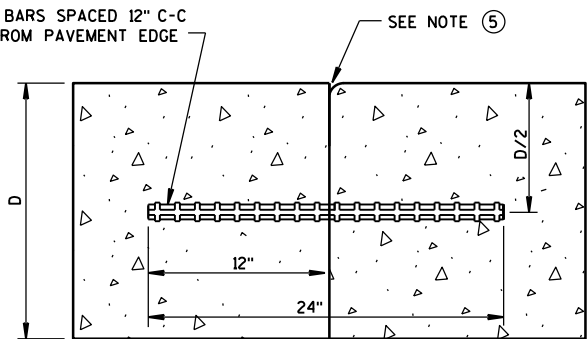
SEE NOTE ②



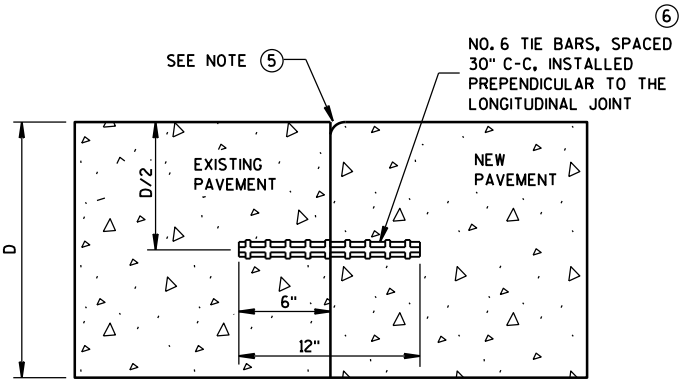
DOWELED TRANSVERSE ③



TIED LONGITUDINAL



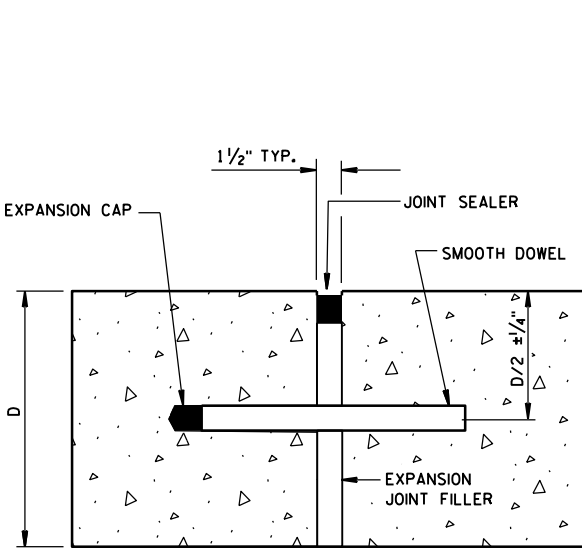
TIED TRANSVERSE ③
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



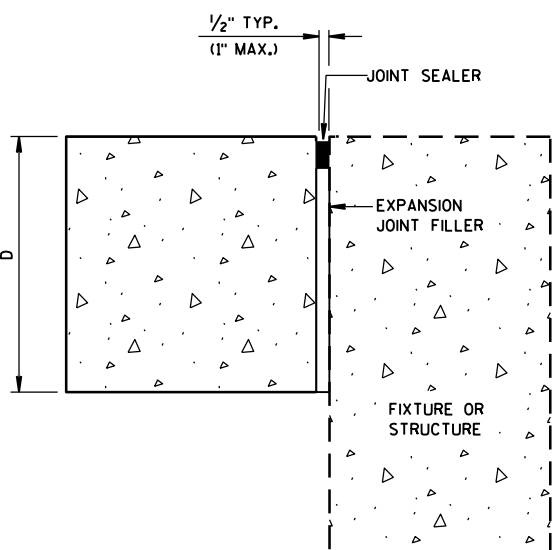
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE ④



DOWELED-TRANSVERSE
SEE NOTE ①



UNTIED-LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE			
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
	NO. 5	36"	36"
≥ 10 1/2"	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

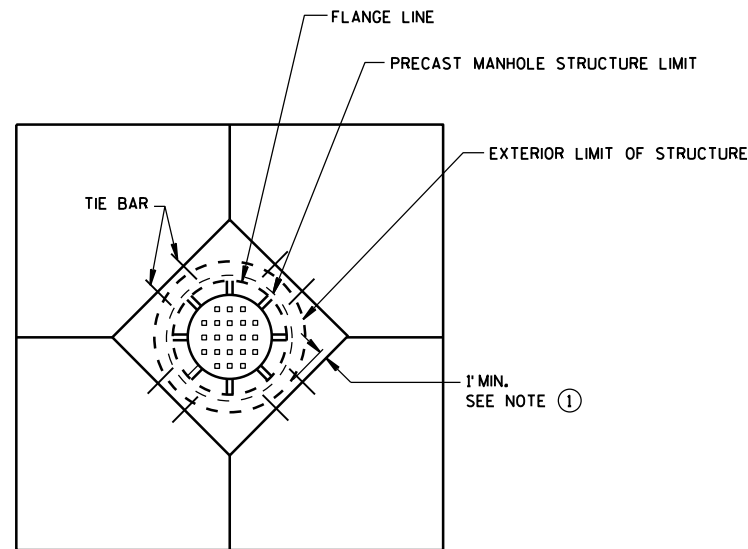
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

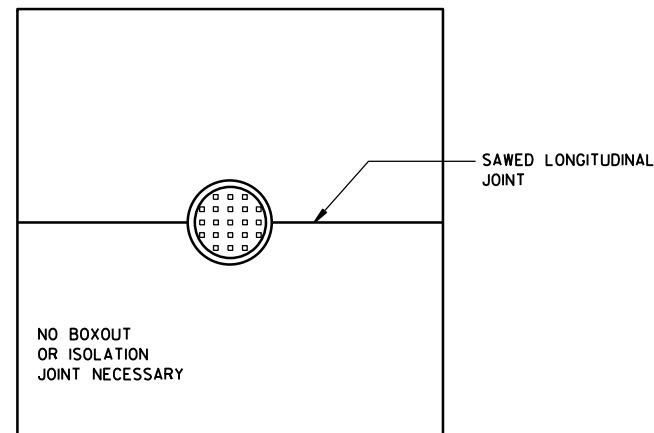
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

CONCRETE PAVEMENT
JOINT TYPES

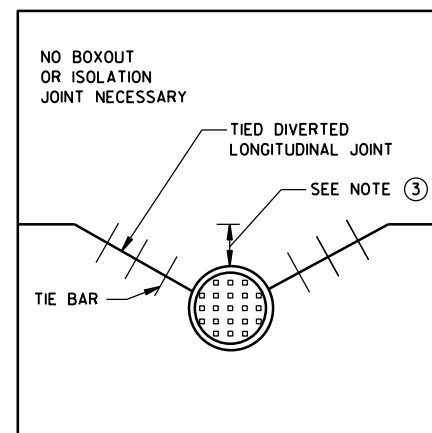
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



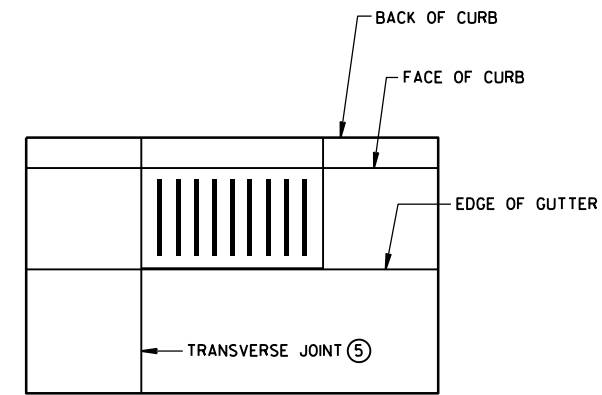
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



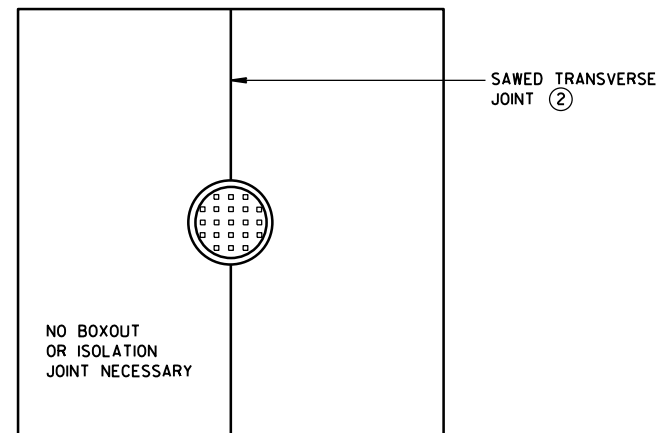
**MANHOLE WITH
LONGITUDINAL JOINT**



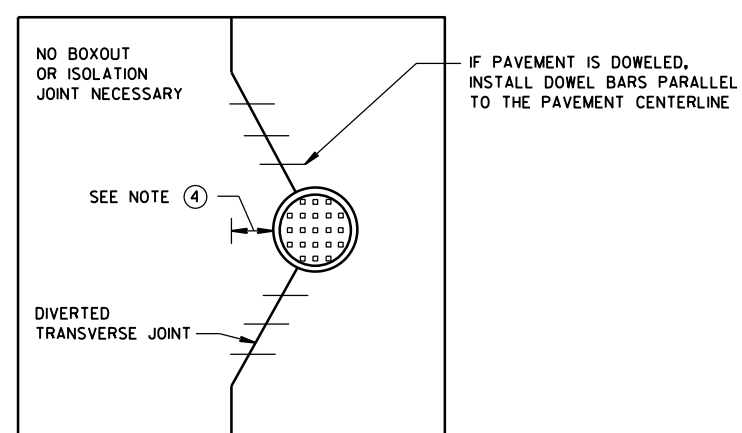
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

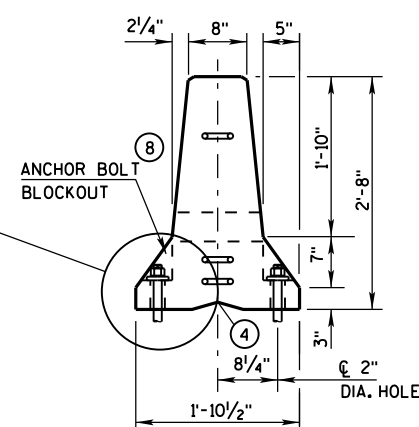
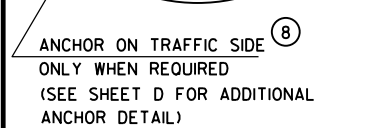
GENERAL NOTES

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

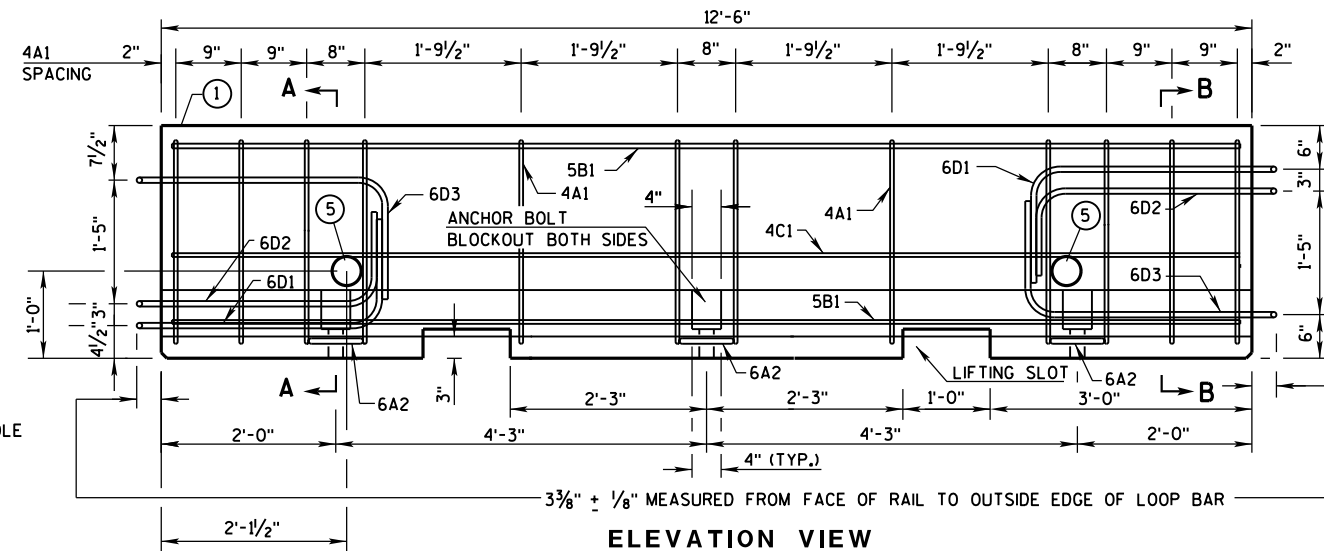
**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

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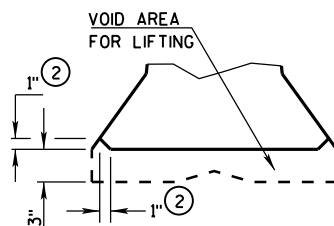
APPROVED
December, 2016 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPEF 253
FHWA



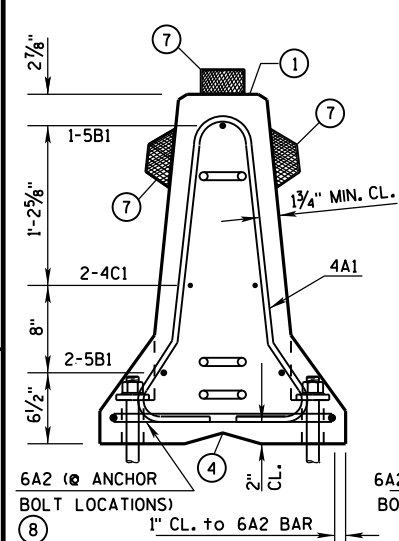
END VIEW



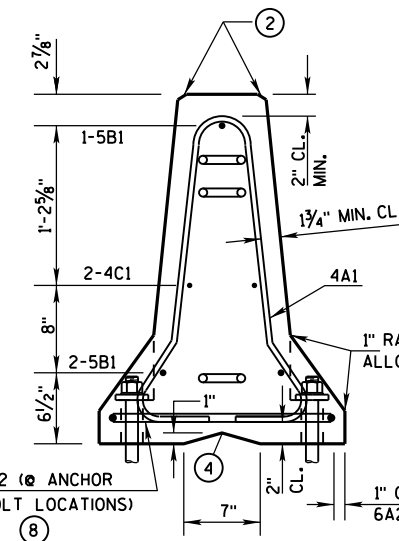
ELEVATION VIEW



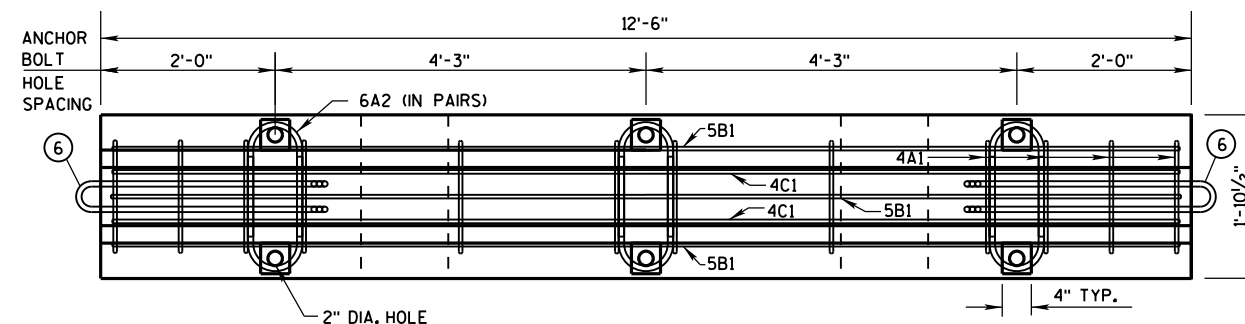
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

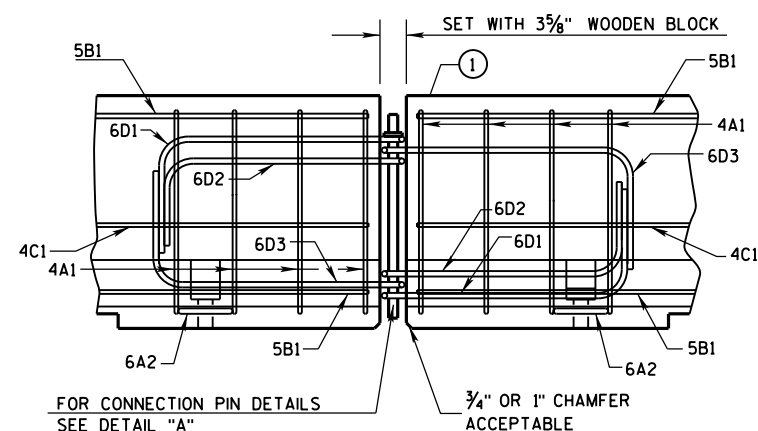


SECTION B-B
(STIRRUP PLACEMENT)

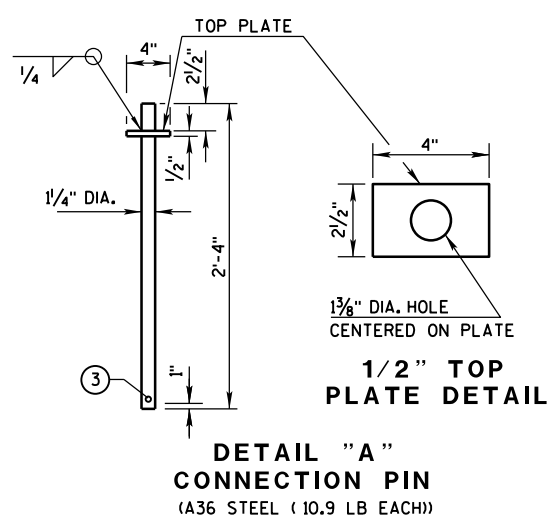


PLAN VIEW

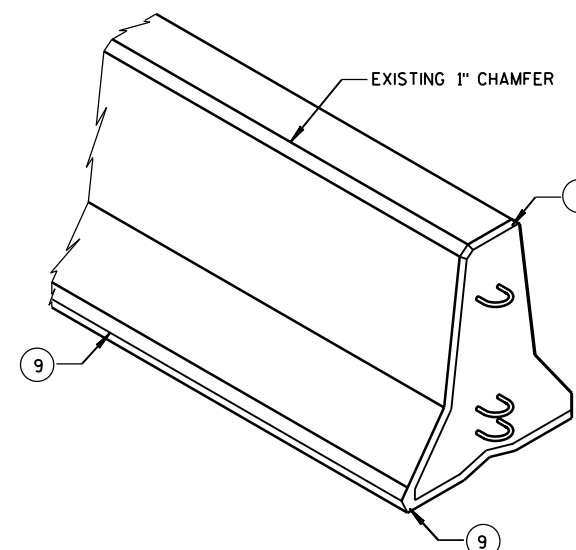
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(d) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE $\frac{3}{4}$ " SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3- $\frac{1}{2}$ " PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN $\frac{1}{8}$ " OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

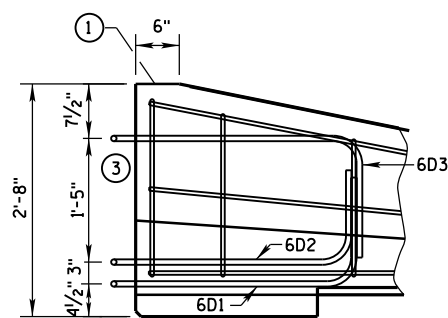
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE: WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ A $\frac{3}{8}$ " HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- ④ "V" NOTCH IS OPTIONAL.
- ⑤ THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- ⑥ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- ⑦ USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- ⑧ SEE SHEET D FOR ANCHORING CRITERIA.
- ⑨ 1" CHAMFER OPTIONAL.

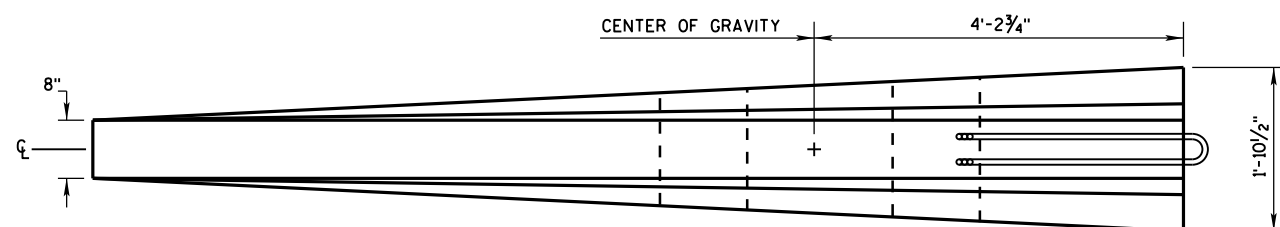
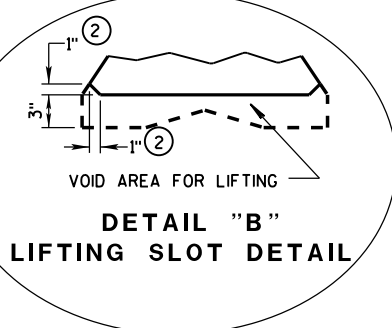
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

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DEPARTMENT OF TRANSPORTATION 254



- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)



**CHAMFER
DETAIL**

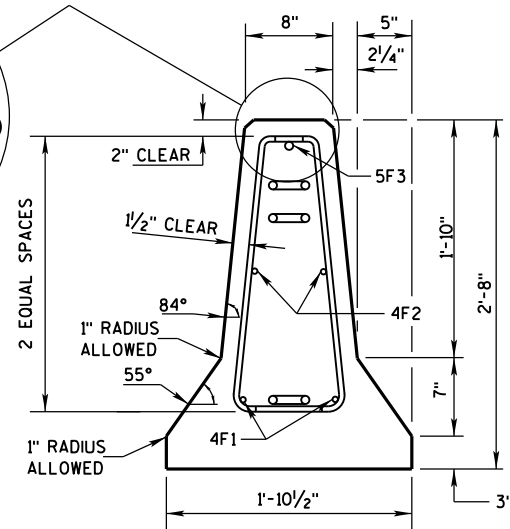


Diagram illustrating the barrier placement on a curve. The diagram shows a cross-section of a barrier with a 10"± OFFSET and a 5°± MAX. angle. The barrier is divided into sections, with dimensions of 12'-6" and 12'-6" indicated. The text "BARRIER ON CURVE" is prominently displayed. The diagram also shows the "END SECTION" of the barrier.

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

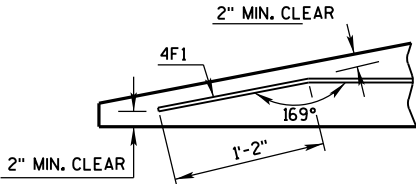
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

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DEPARTMENT OF TRANSPORTATION 255

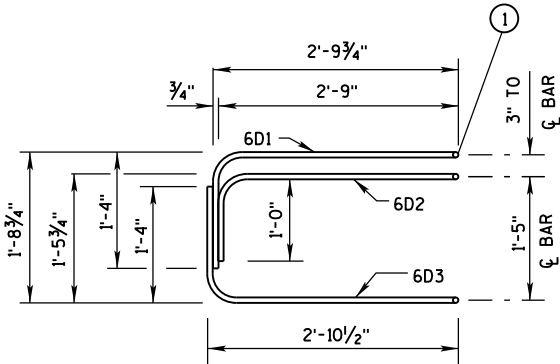
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

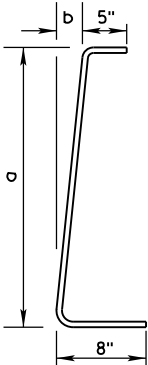
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

TAPER BARRIER SECTION

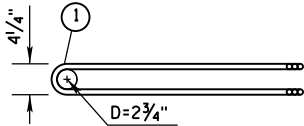
GENERAL NOTES

① NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION
BILL OF MATERIALS

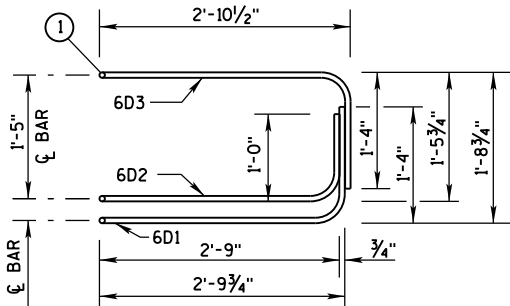
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

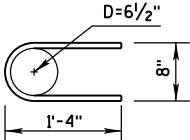


PLAN VIEW
LOOP BAR ASSEMBLY

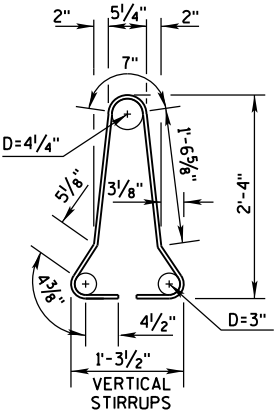
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

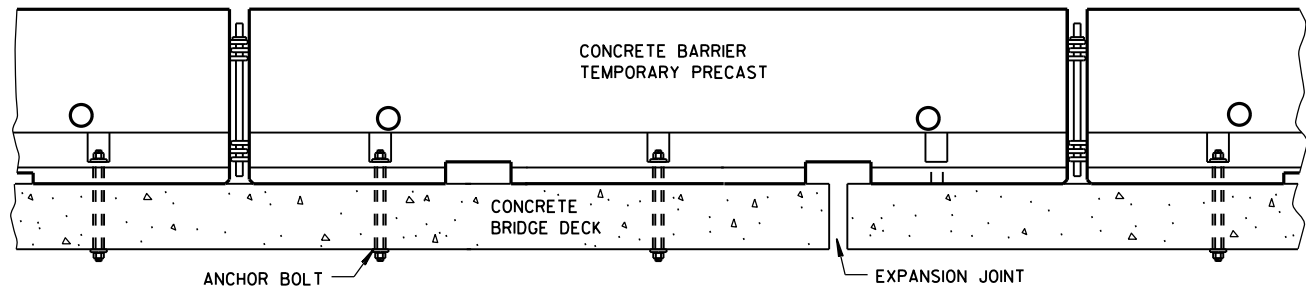
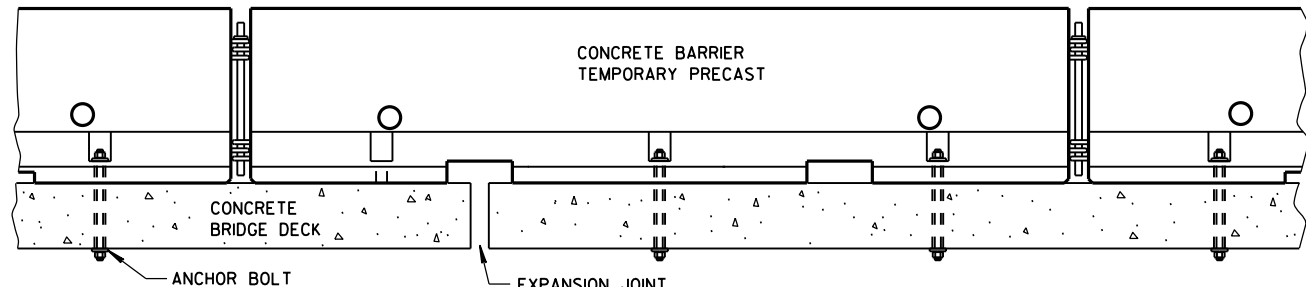


4A1

BARRIER SECTION

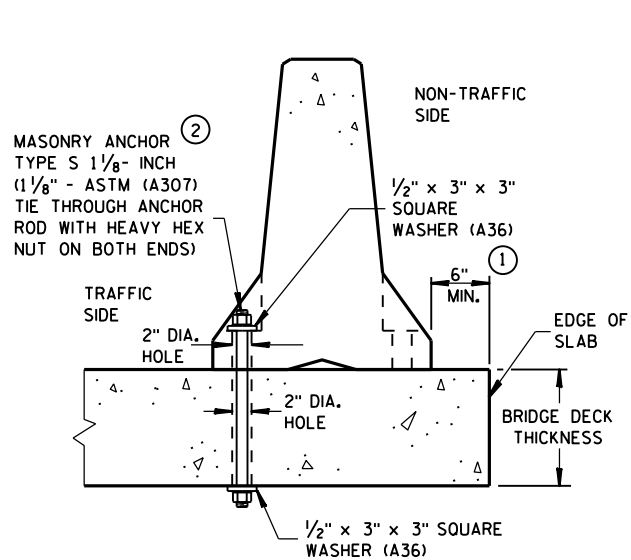
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



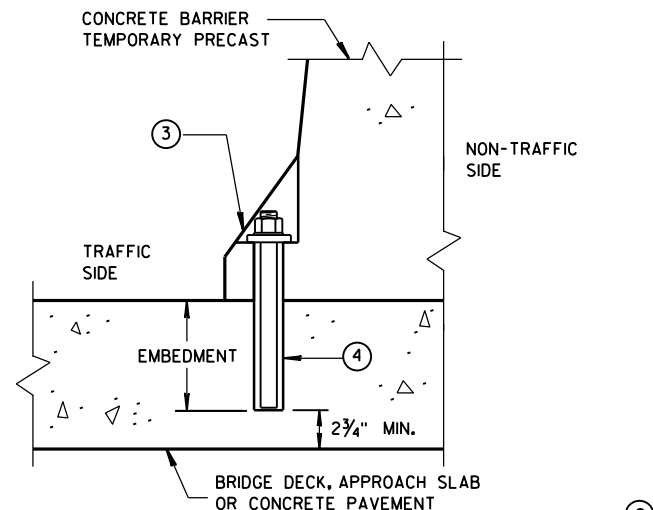
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



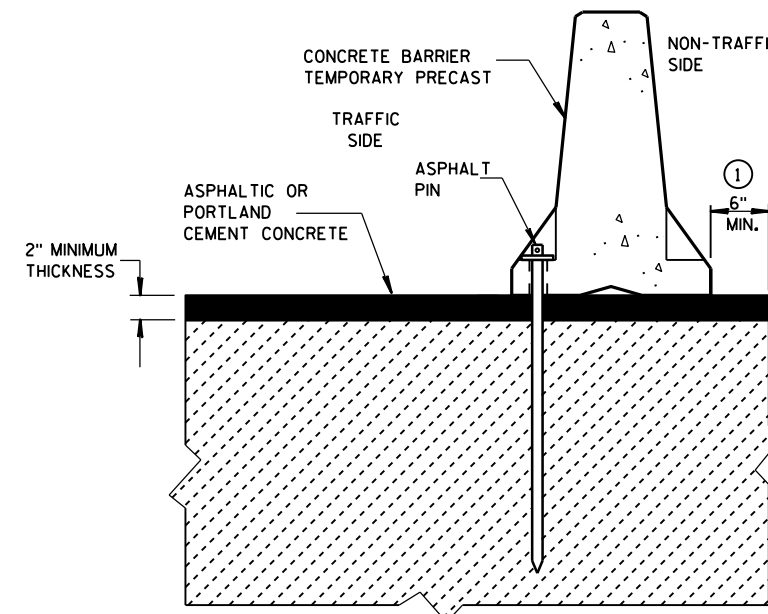
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



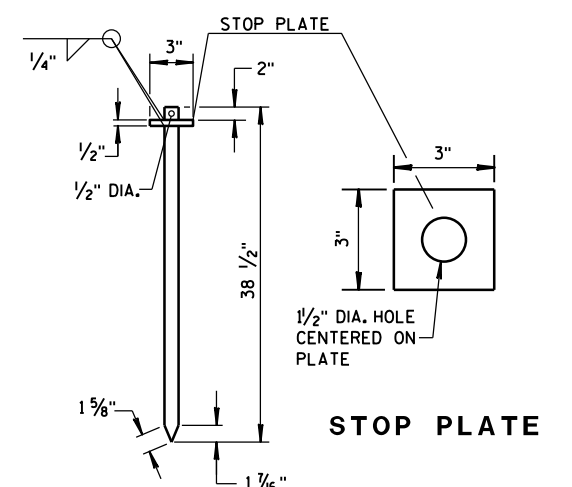
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

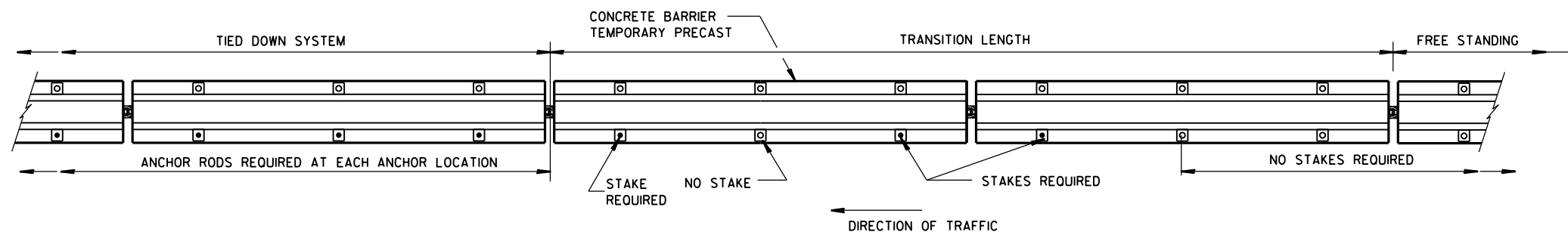


STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPHALT PIN (ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

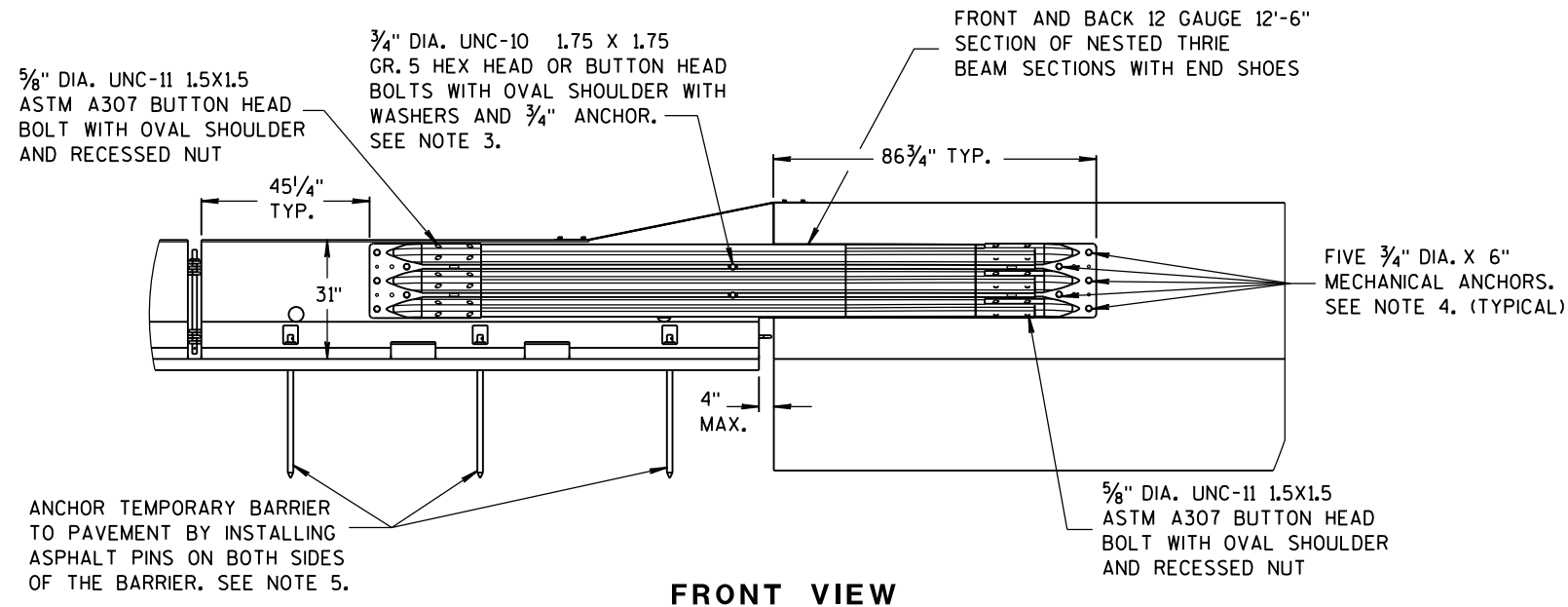
GENERAL NOTES

- CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

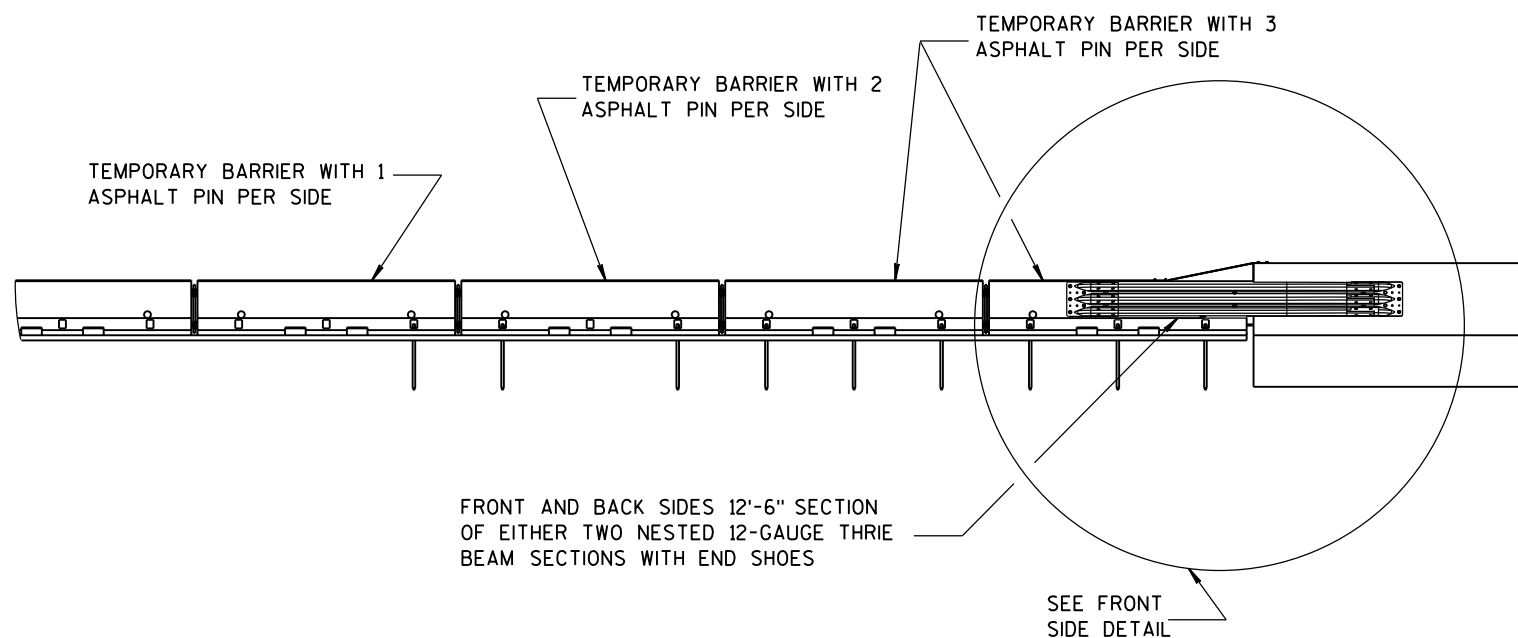
UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.
- 1/8" DIAMETER A307 THREADED ROD, 1/2" x 3" x 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



FRONT VIEW

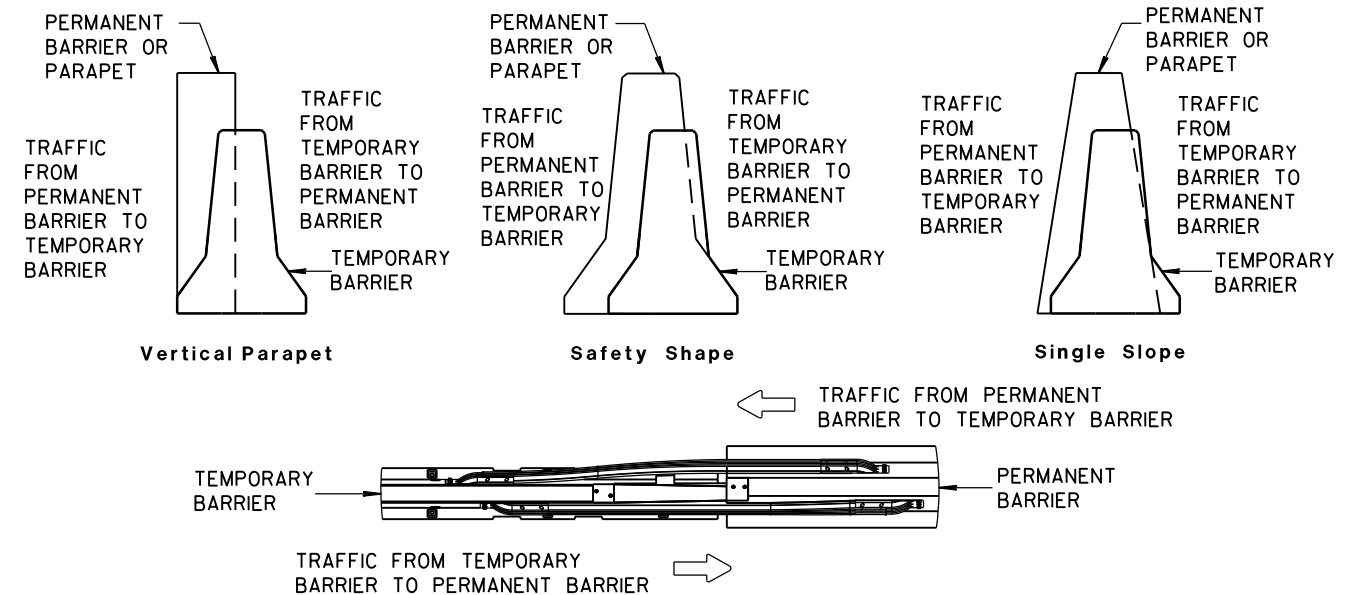
NOTES

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

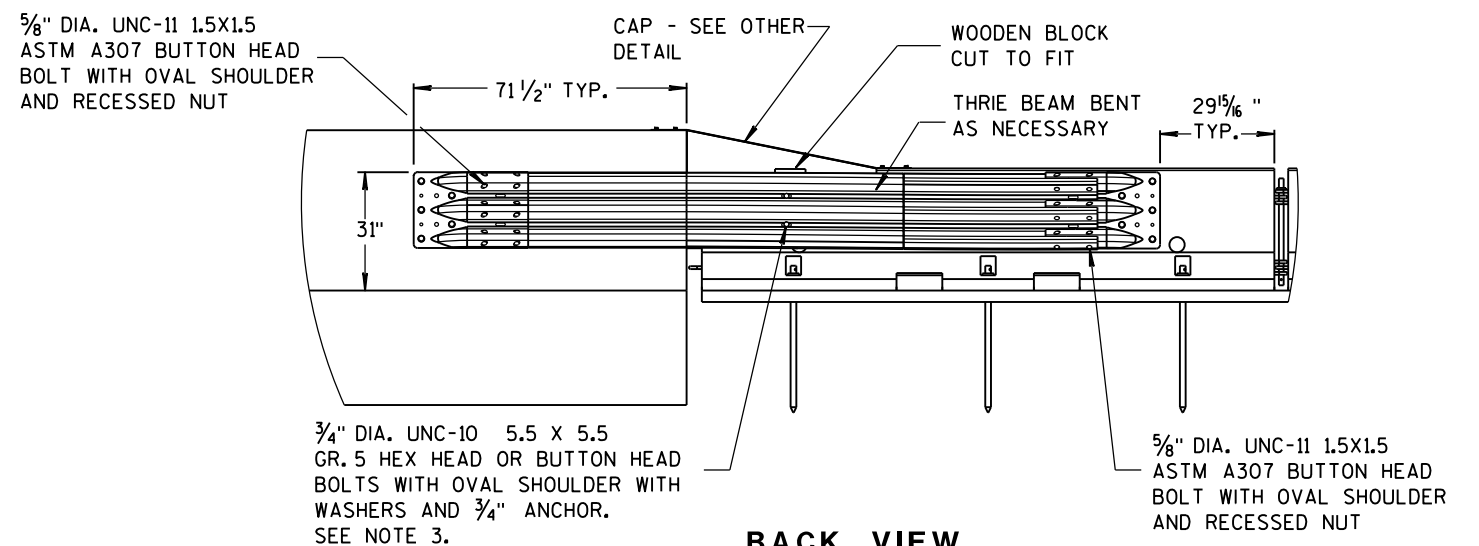


FRONT VIEW

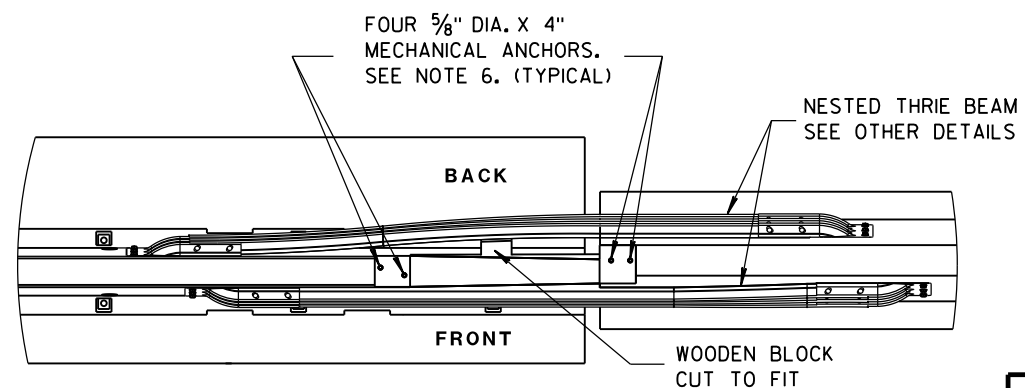
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



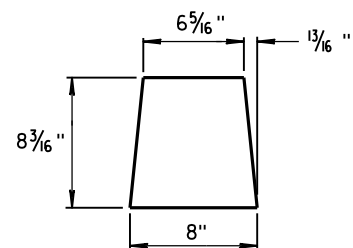
BACK VIEW



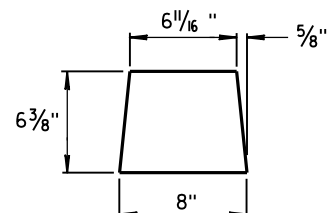
PLAN VIEW

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

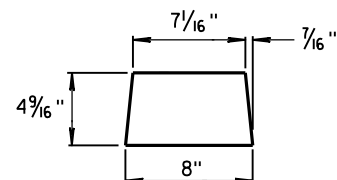
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



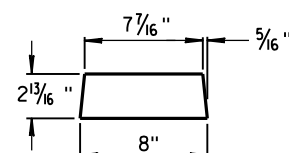
GUSSET 1



GUSSET 2

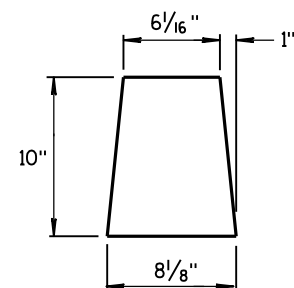


GUSSET 3

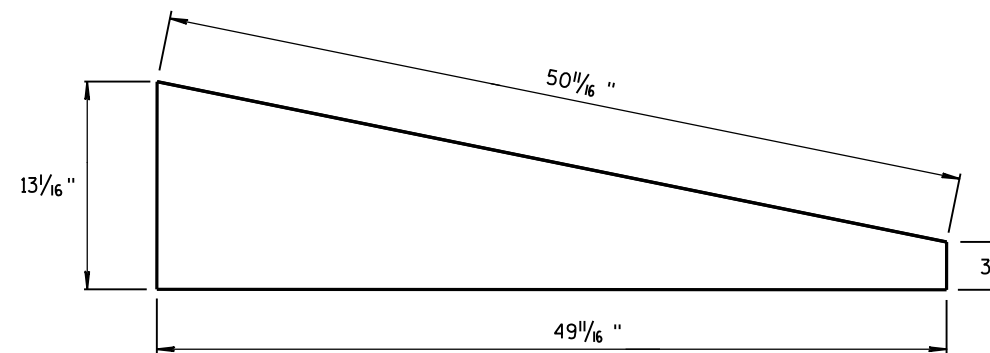


GUSSET 4

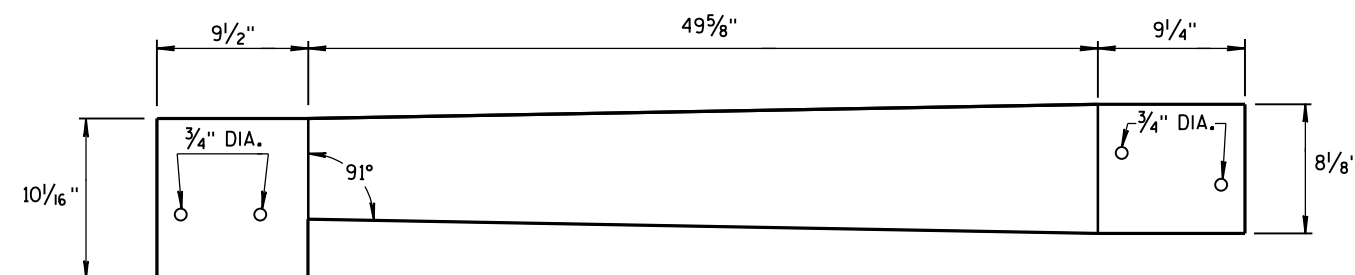
GUSSETS



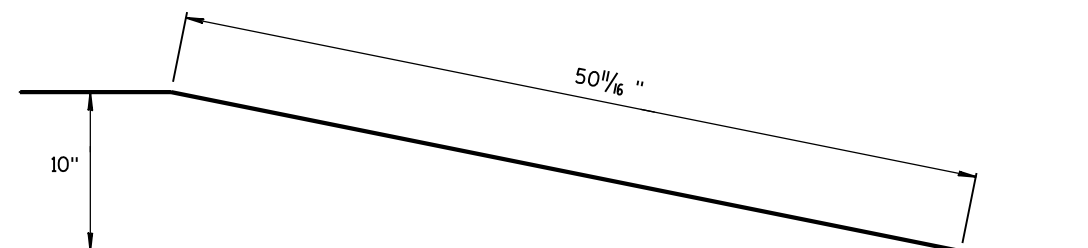
END PLATE



SIDE PLATE

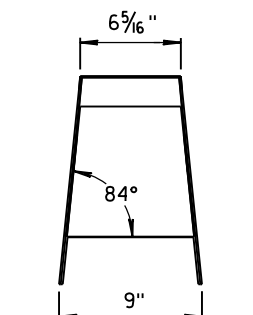


TOP PLATE

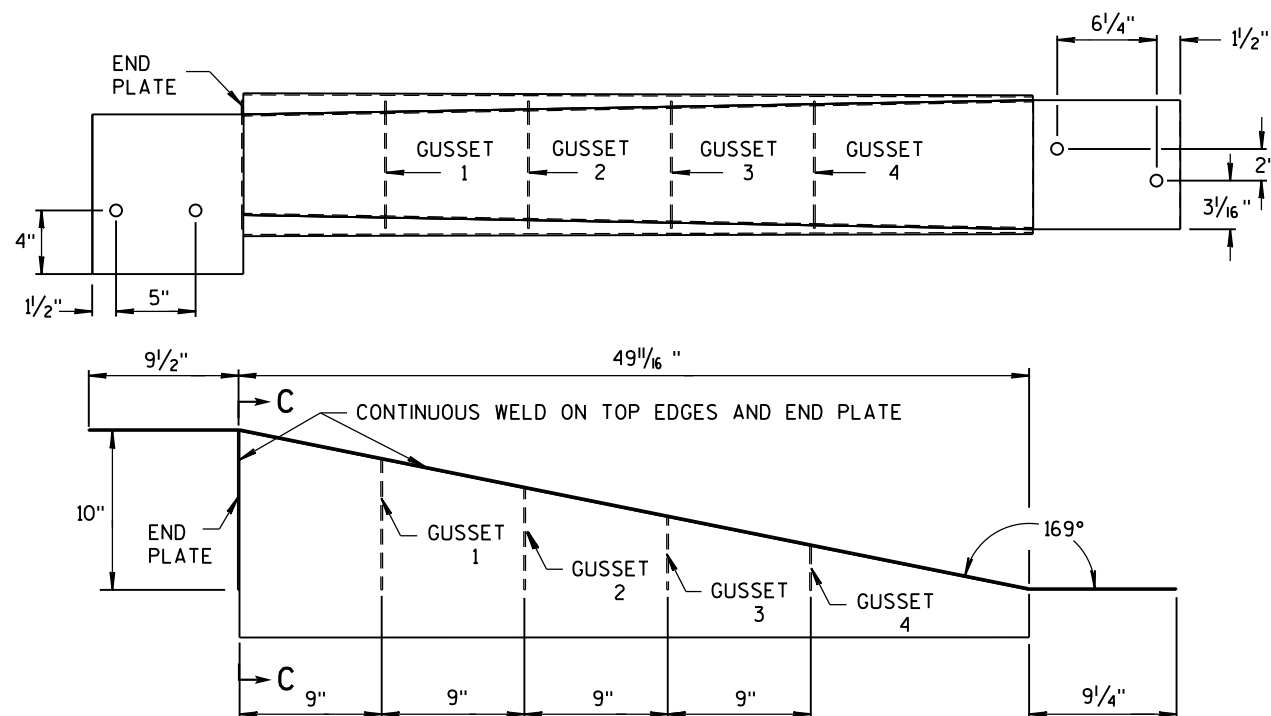


**SIDE, TOP AND END PLATES FOR CAP
FROM TEMPORARY CONCRETE BARRIER
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C



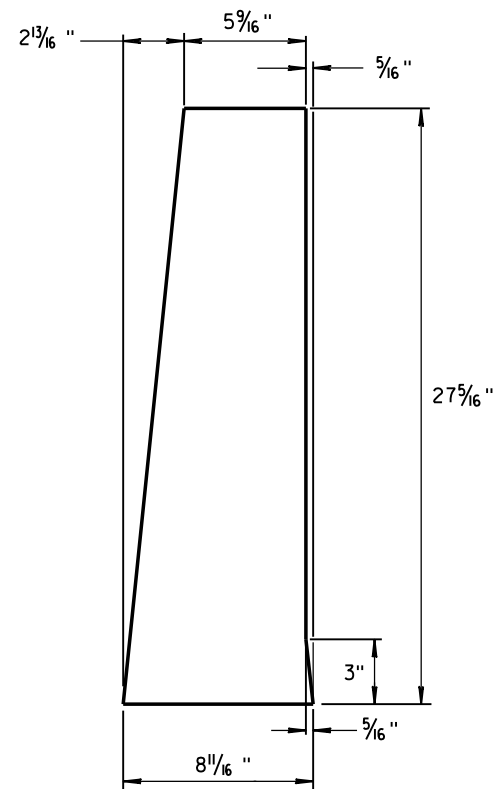
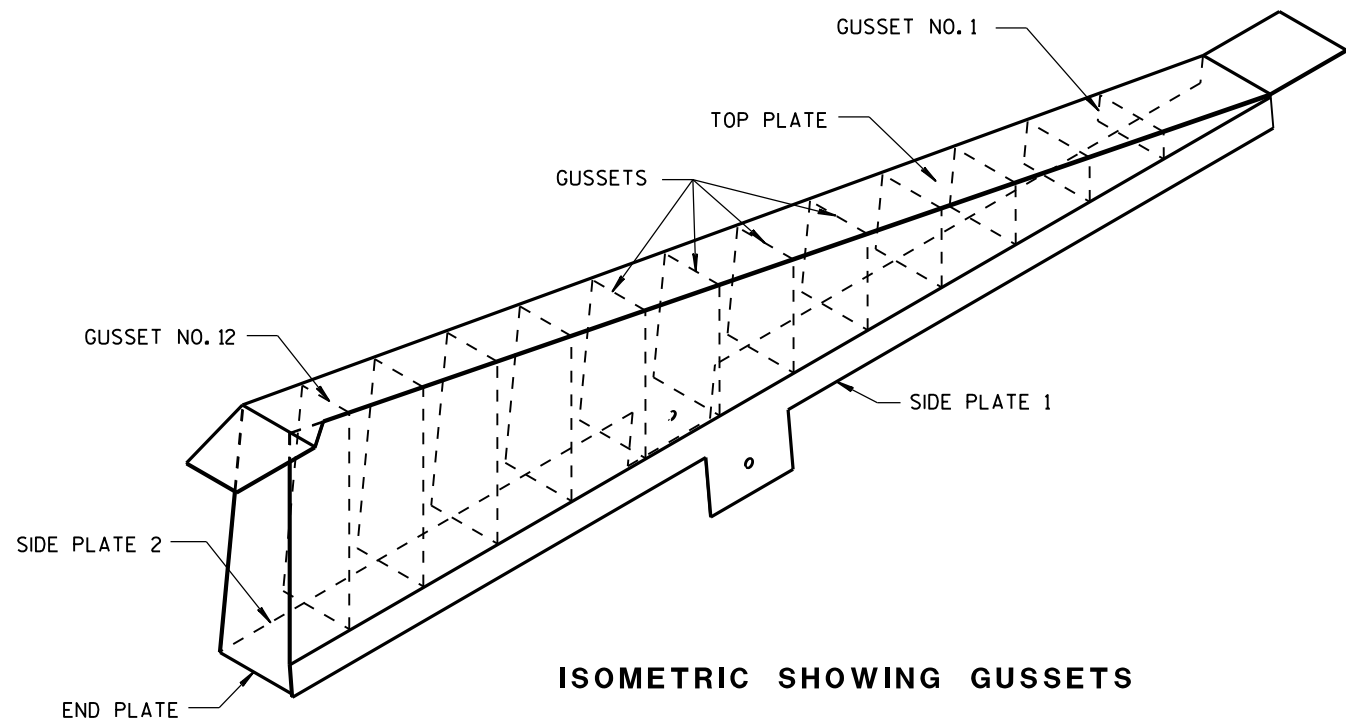
NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

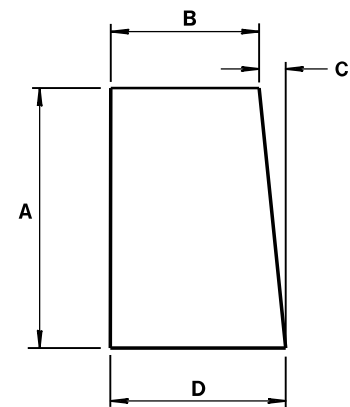
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

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DEPARTMENT OF TRANSPORTATION 259



1/8" STEEL PLATE

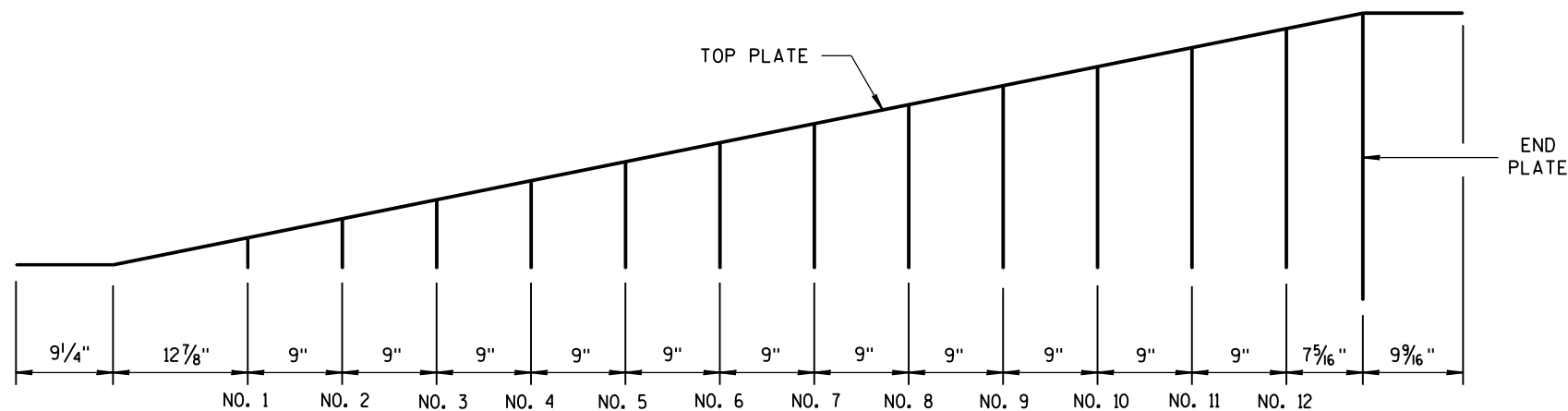


ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8 "	1 1/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8 "	7"	1 1/16 "	8 1/16 "
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8 "	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8 "	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

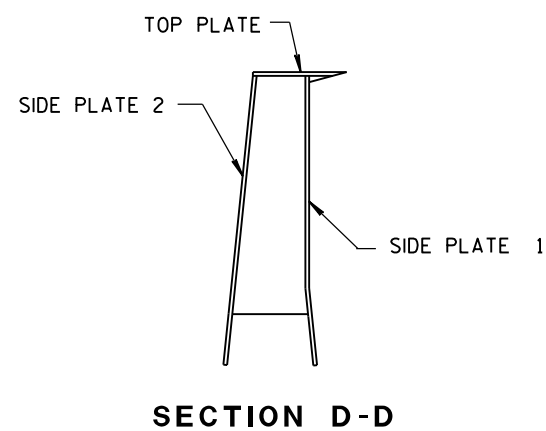
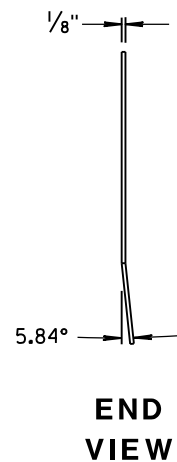
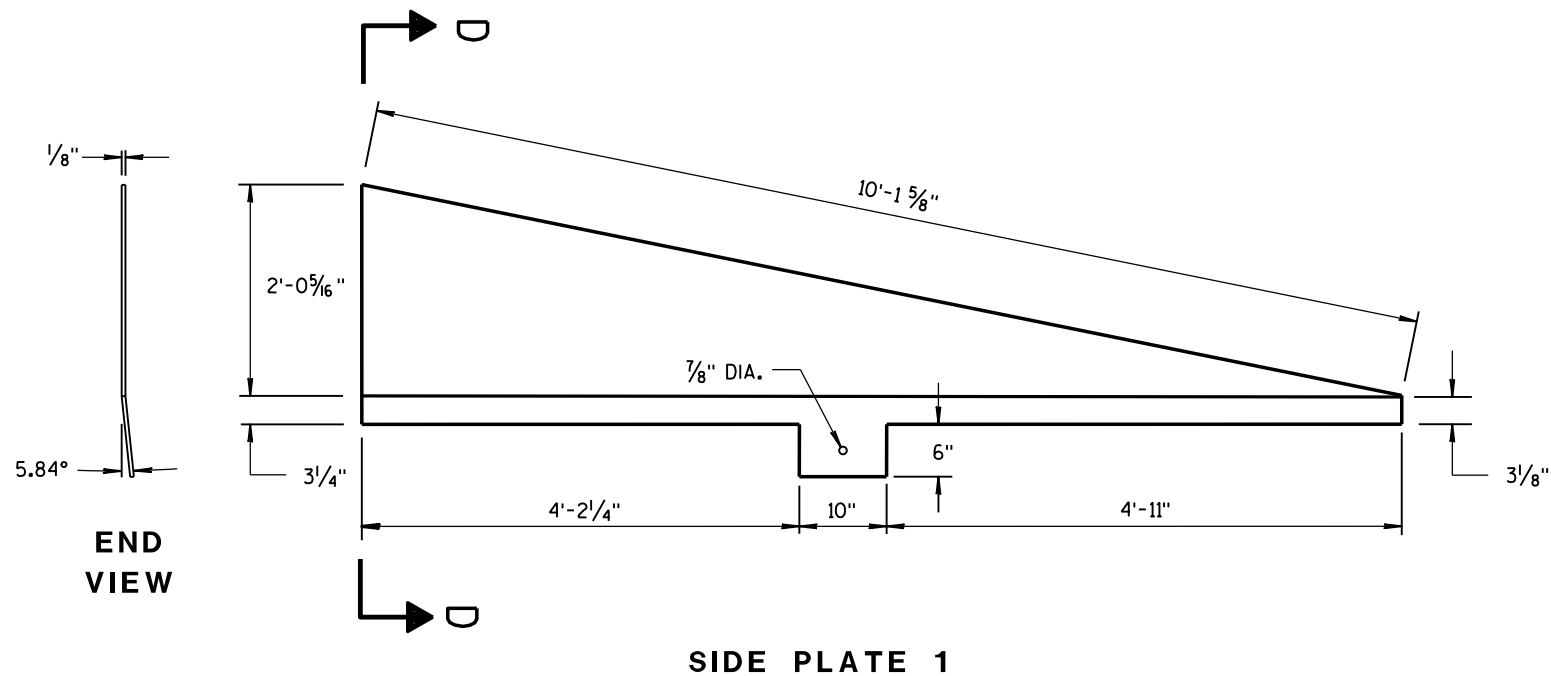
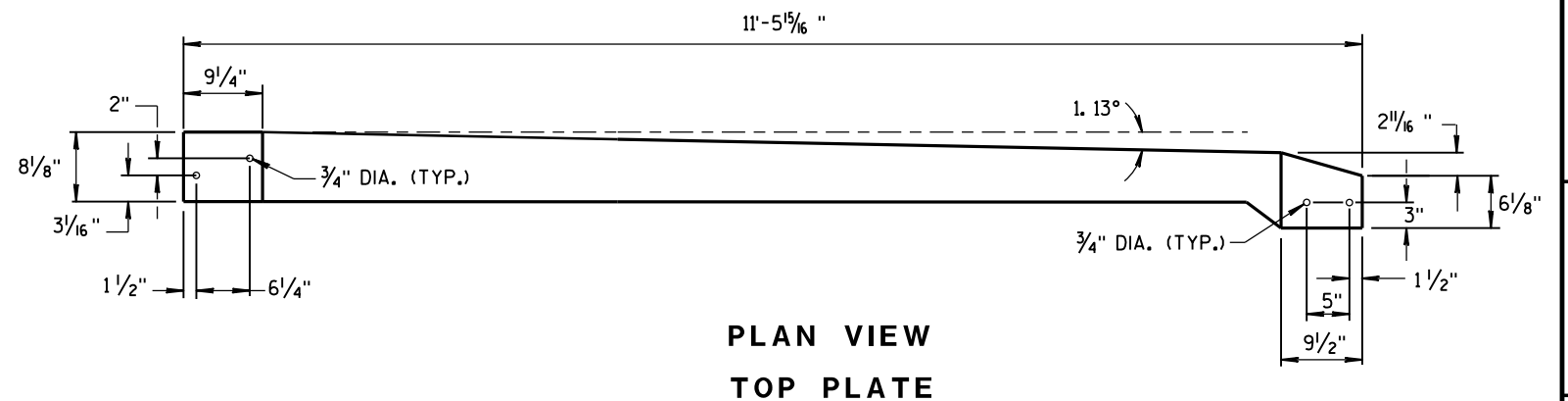
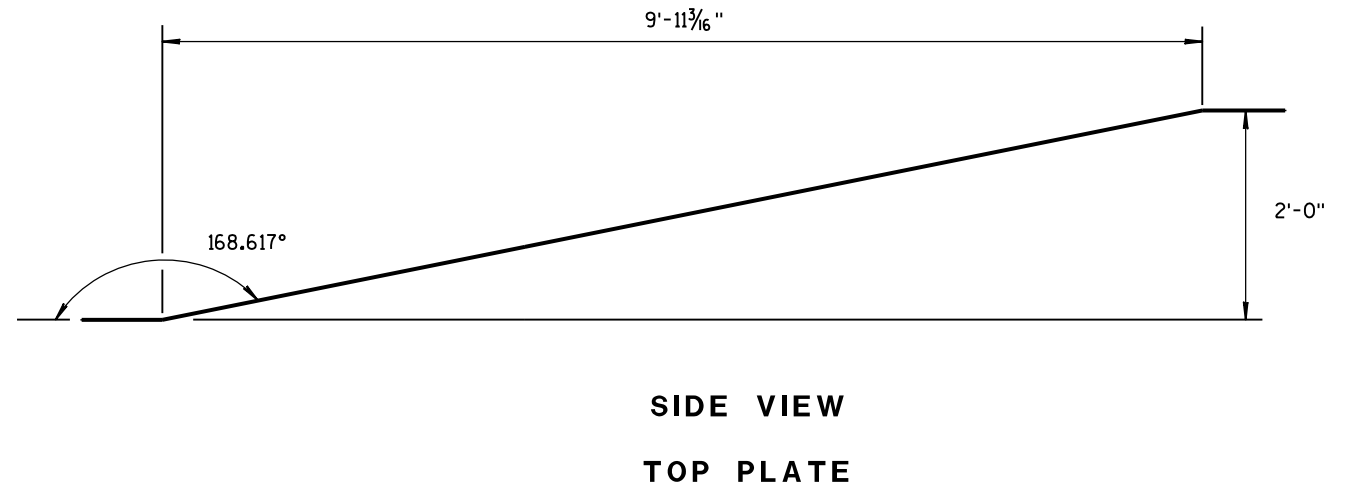
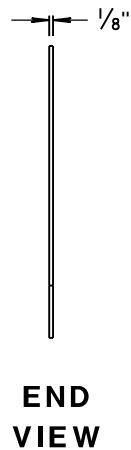
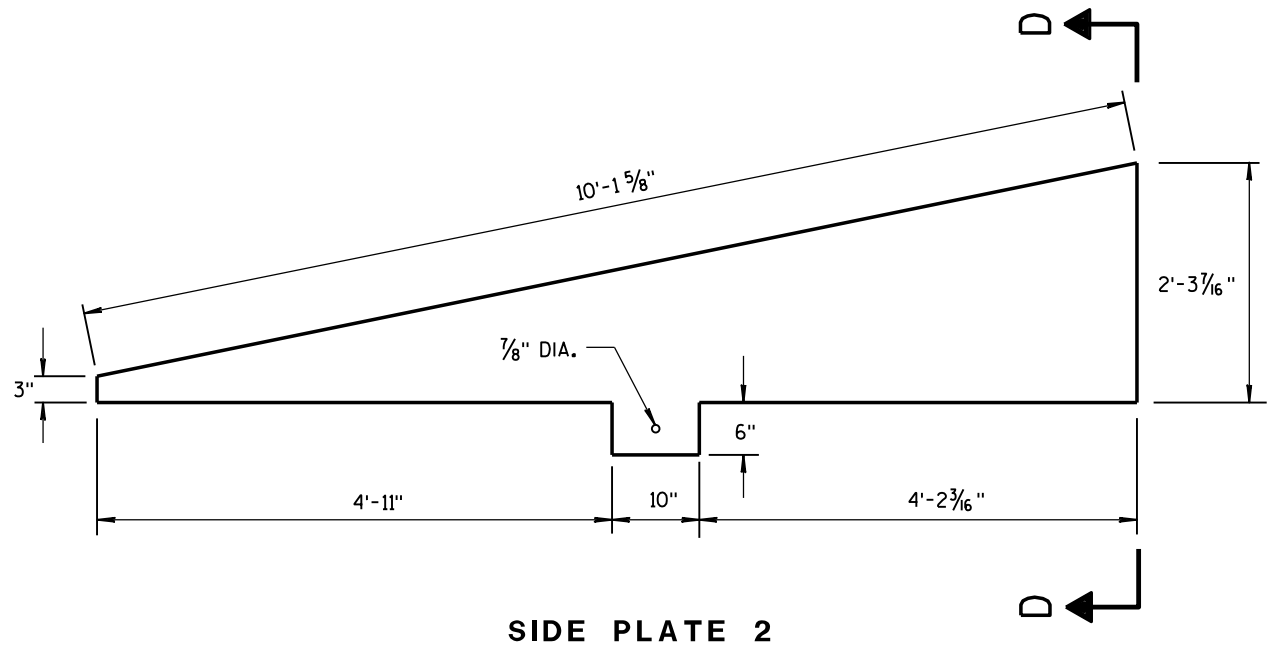
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

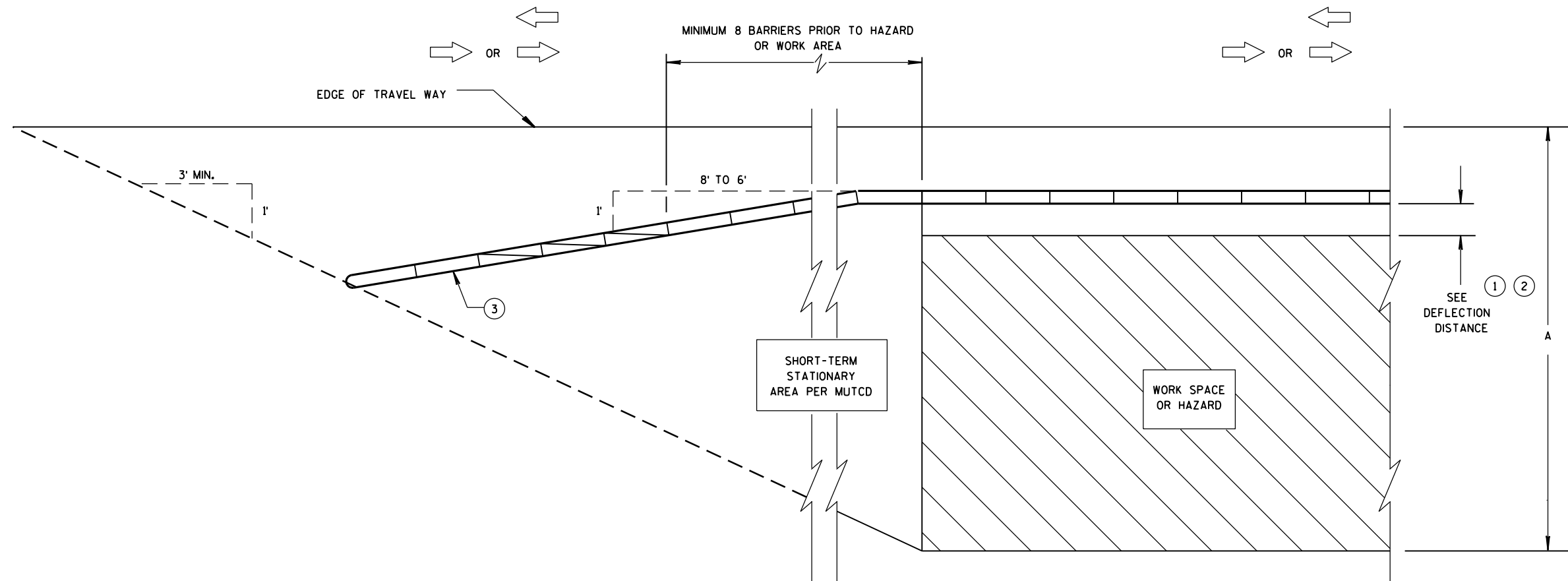
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
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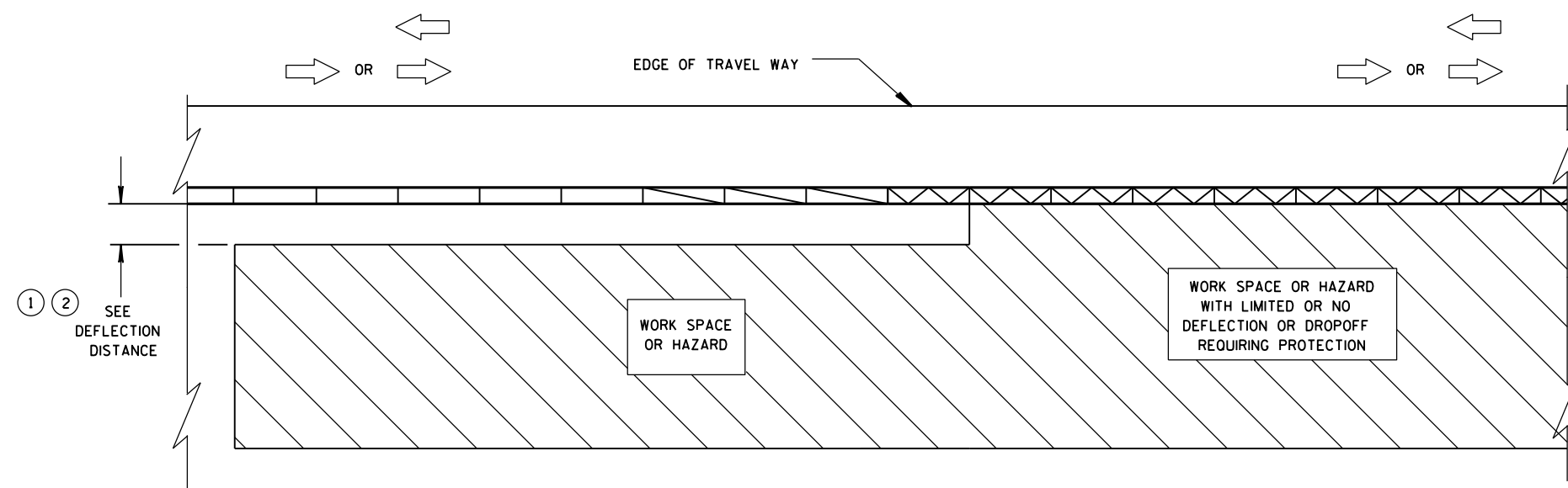


**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 56" PERMANENT CONCRETE BARRIER**

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
June 2014	/S/ Jerry H. Zoog		
DATE	ROADWAY STANDARD	261	INT
FHWA	ENGINEER		



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION**



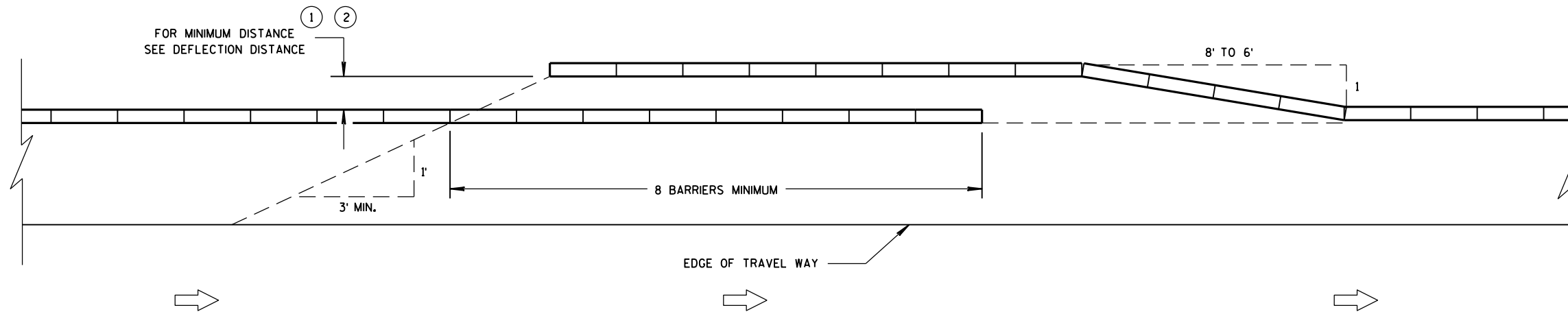
**TRANSITION FROM FREE STANDING TEMPORARY BARRIER
TO ANCHORED BARRIER**

LEGEND

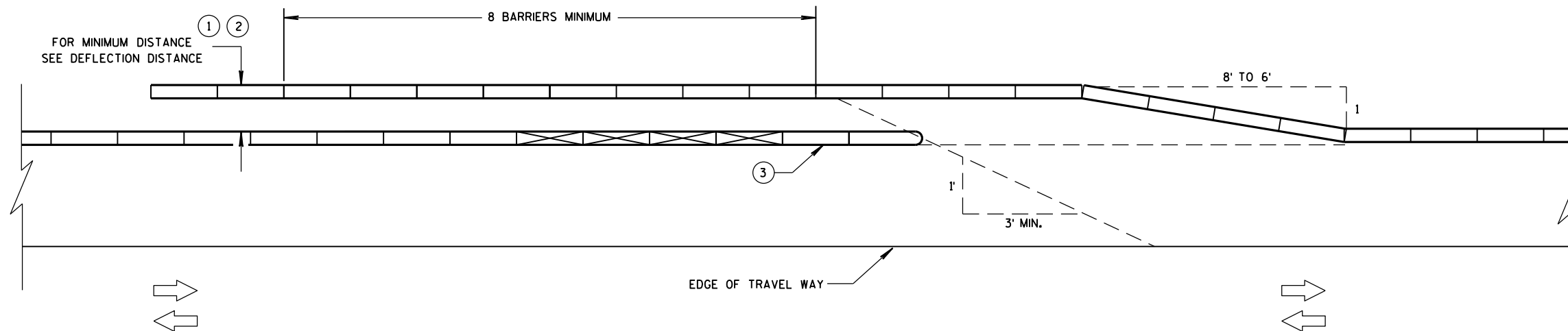
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

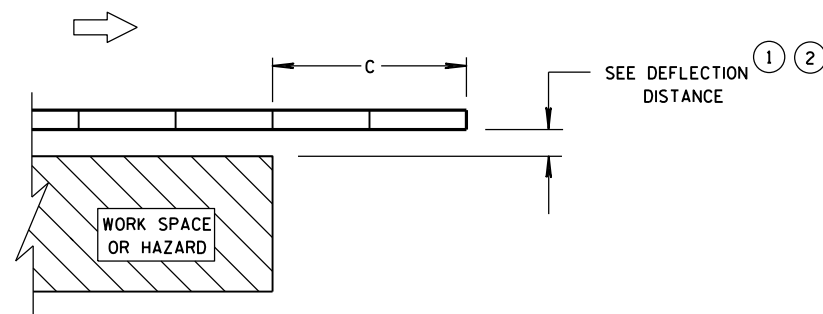
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 263



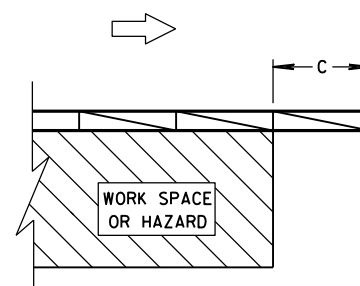
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**



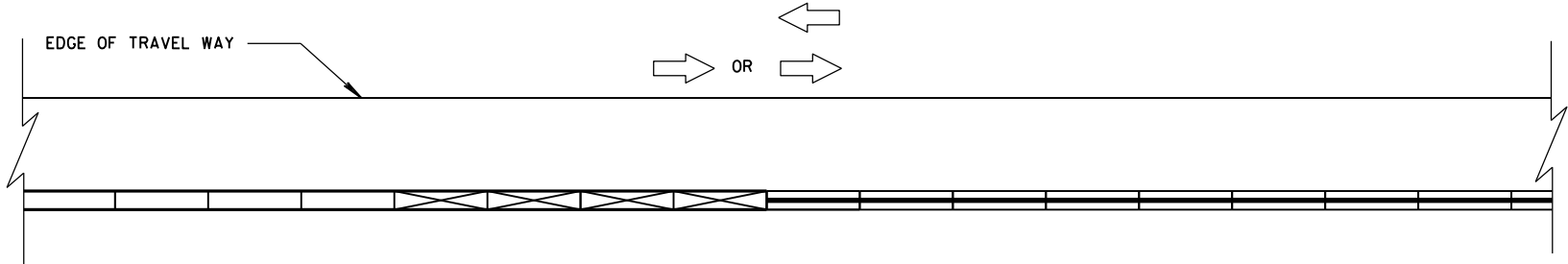
**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

LEGEND

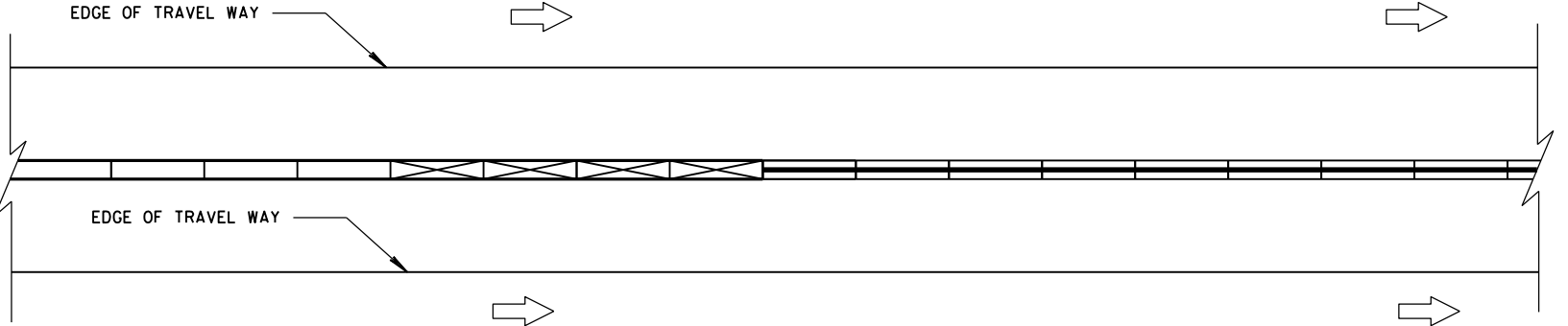
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



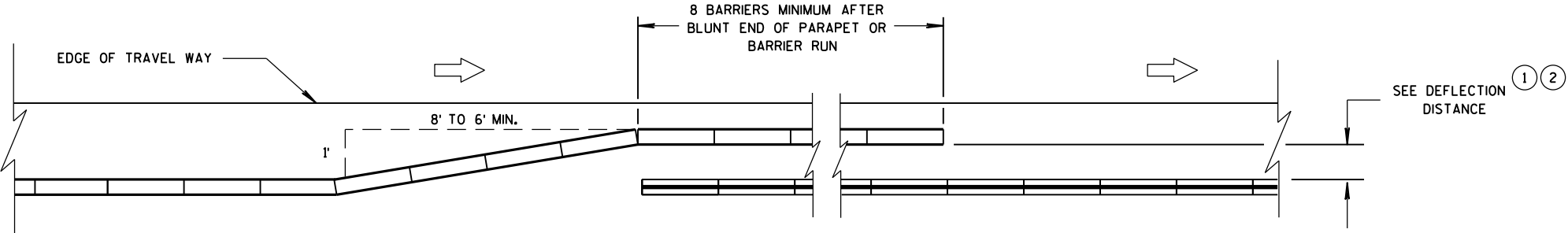
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



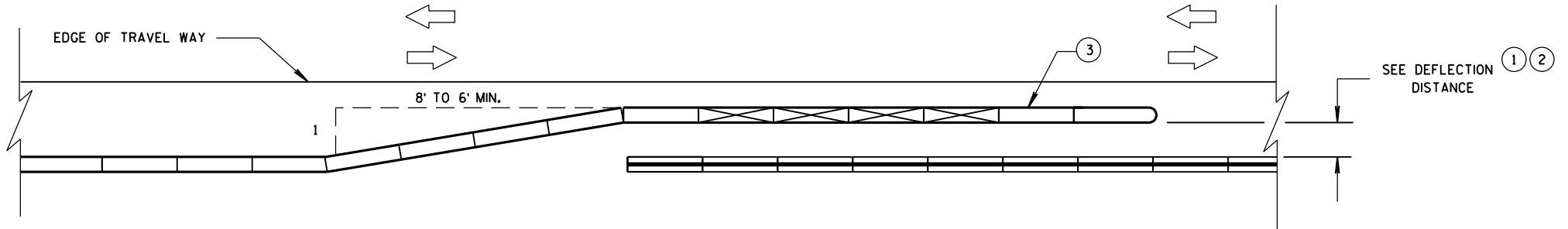
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 265

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE

2

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100

6

6

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015

DATE

/S/ Jerry H. Zogg

ROADWAY STANDARDS

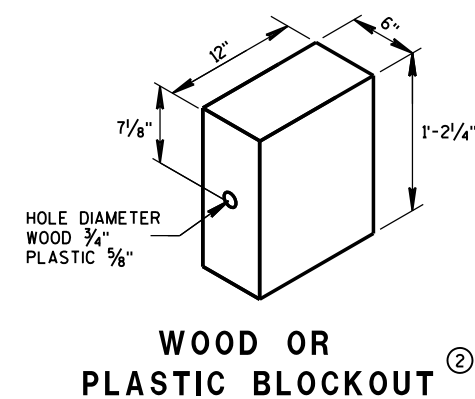
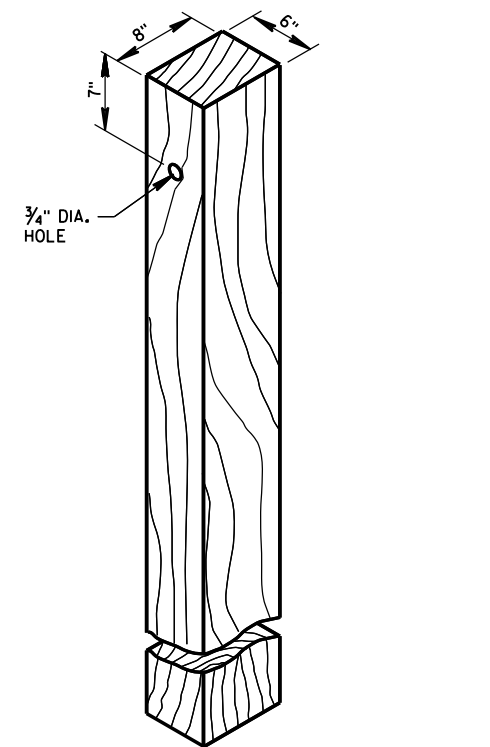
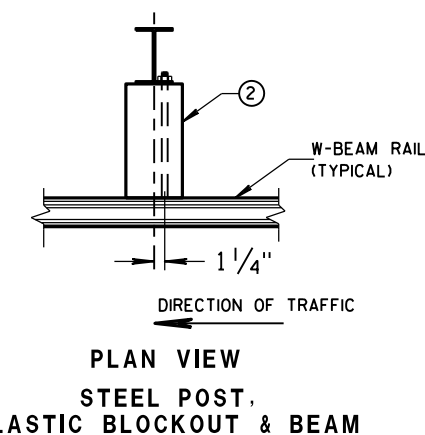
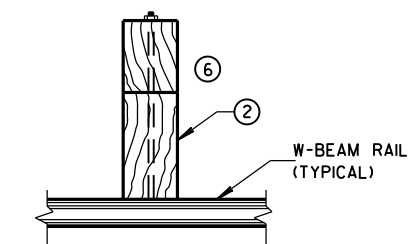
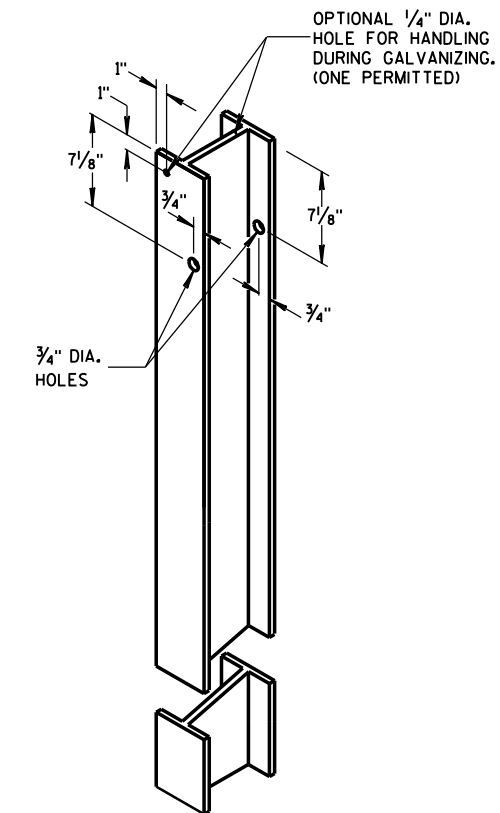
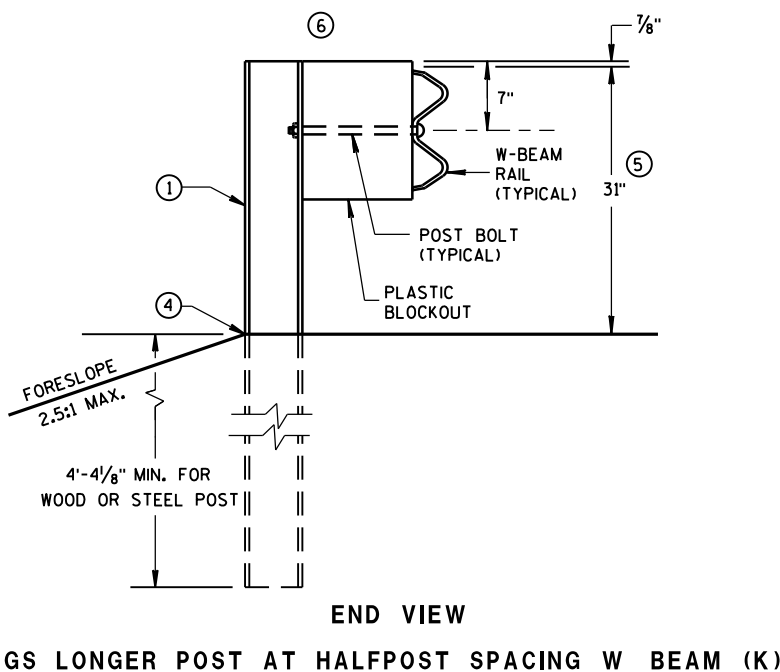
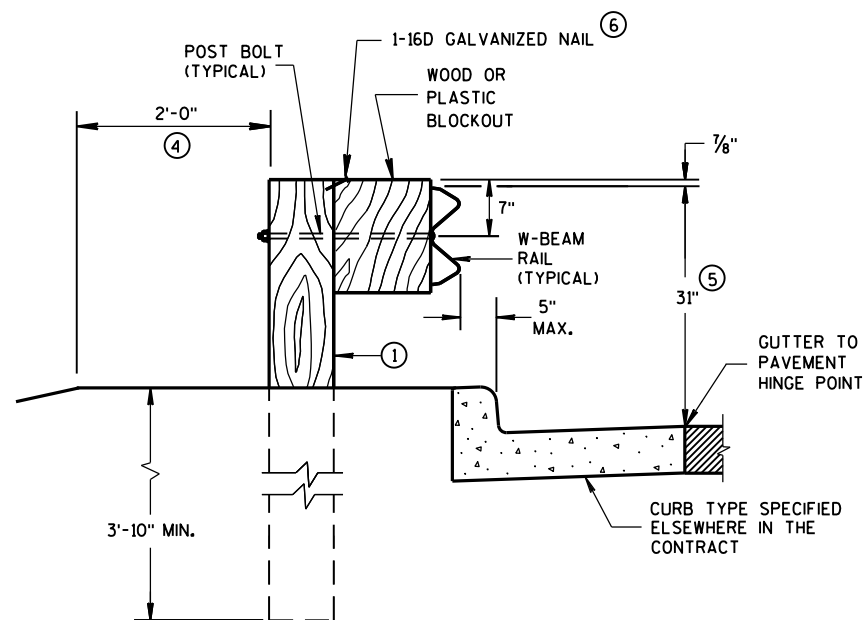
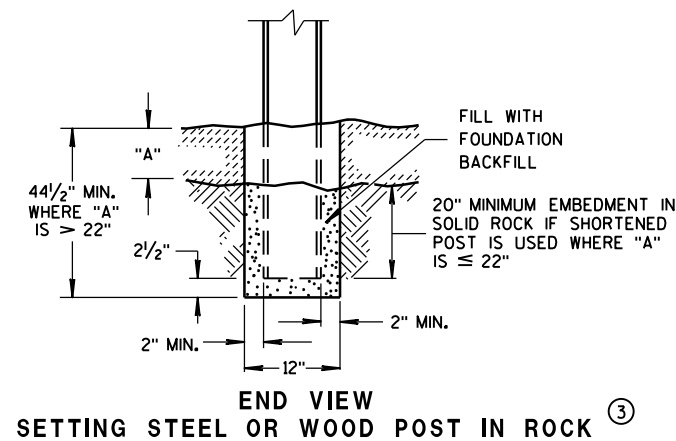
266

ENT

ENGINEER

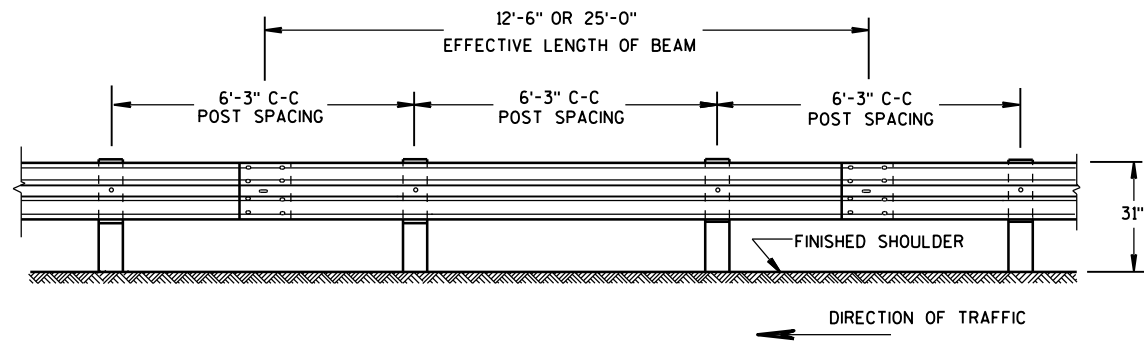
FHWA

- 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 2 1/2 INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND 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 $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" 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.



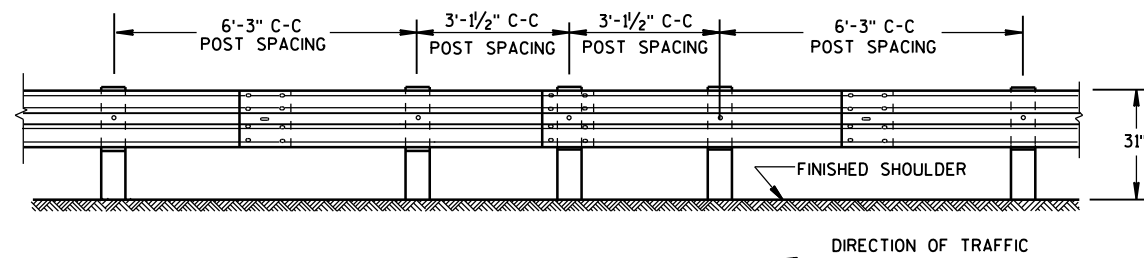
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 267



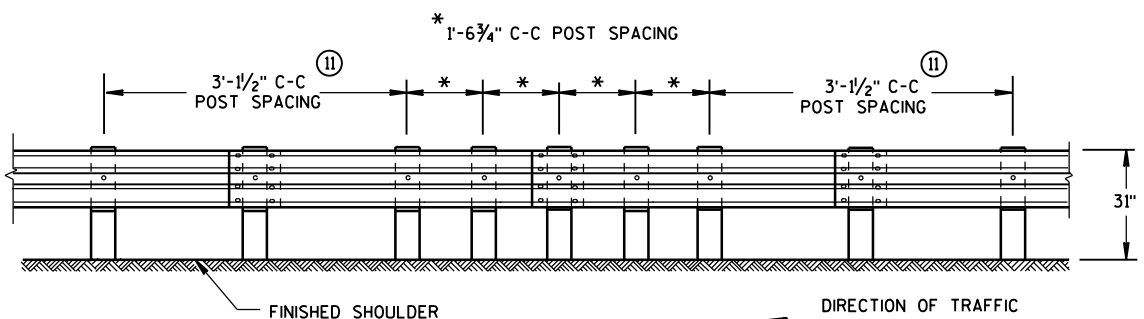
FRONT VIEW

POST SPACING STANDARD INSTALLATION



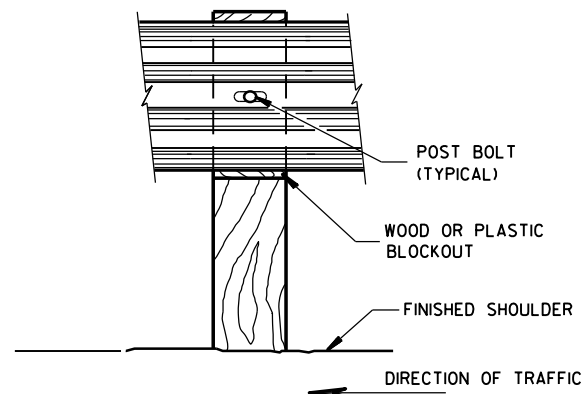
FRONT VIEW

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

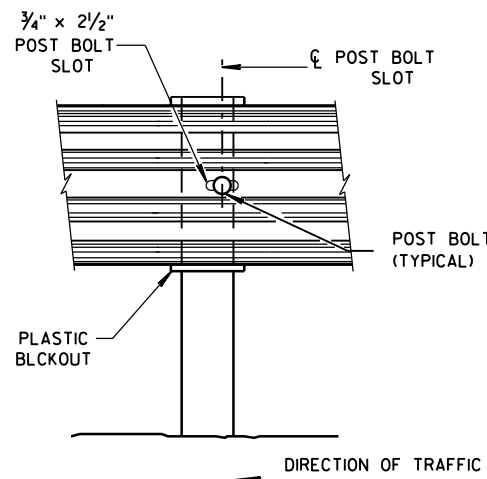


FRONT VIEW

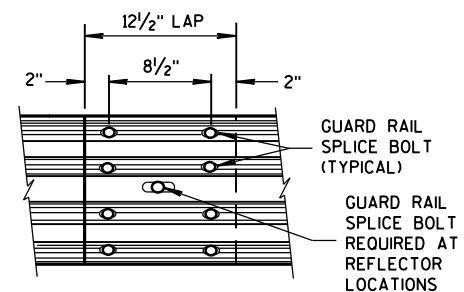
QUARTER POST SPACING (QS)



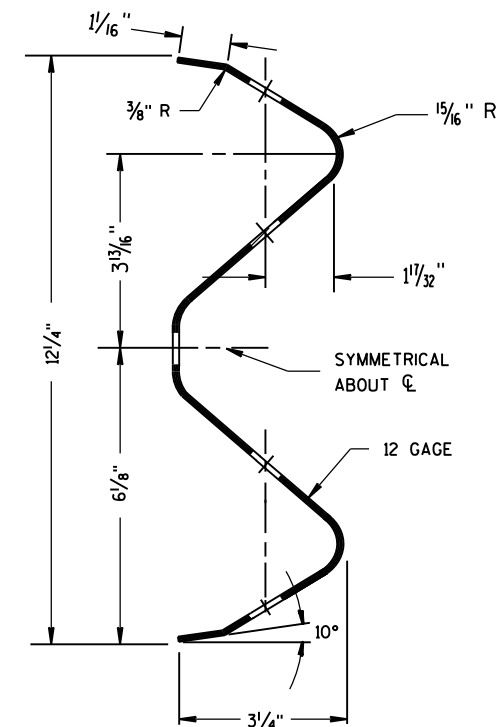
FRONT VIEW AT WOOD POST



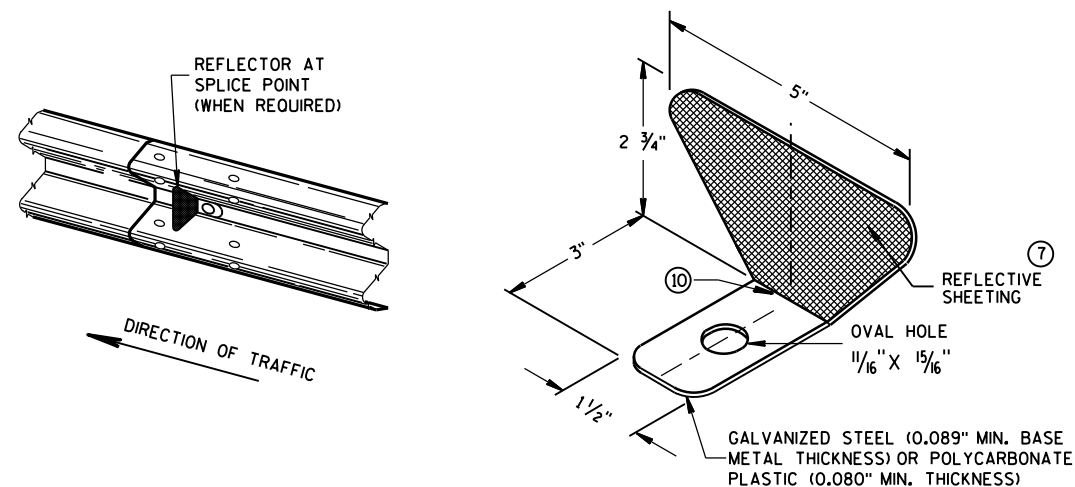
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

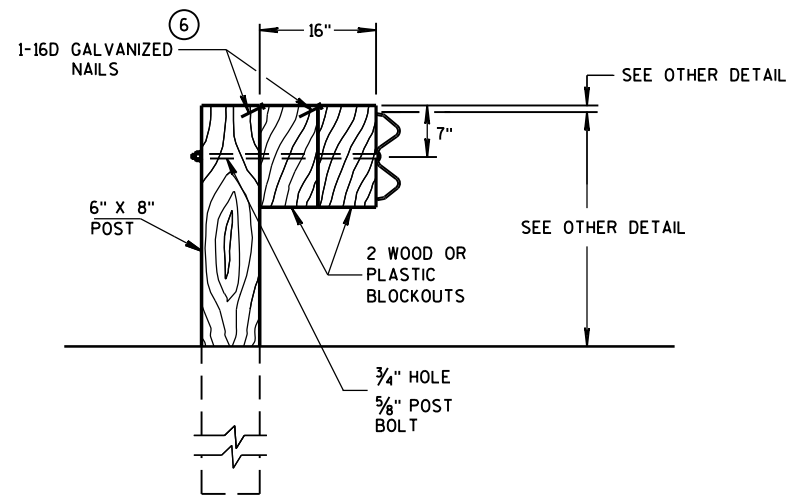
- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
 - ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF 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 $90^\circ \pm 1^\circ$ 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 $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

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

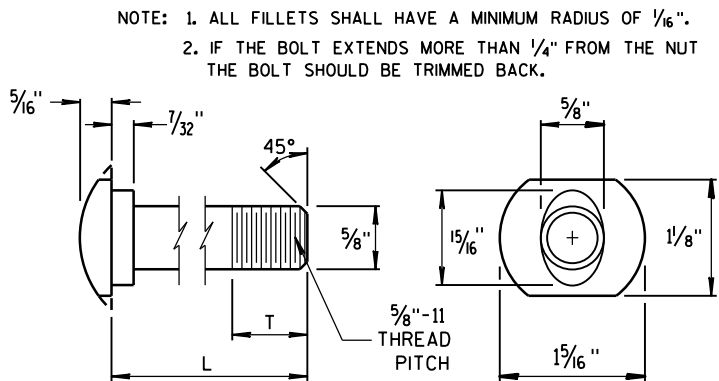
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

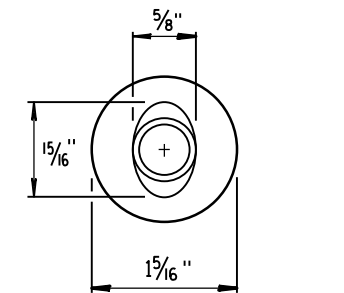


DETAIL FOR 16" BLOCKOUT DEPTH

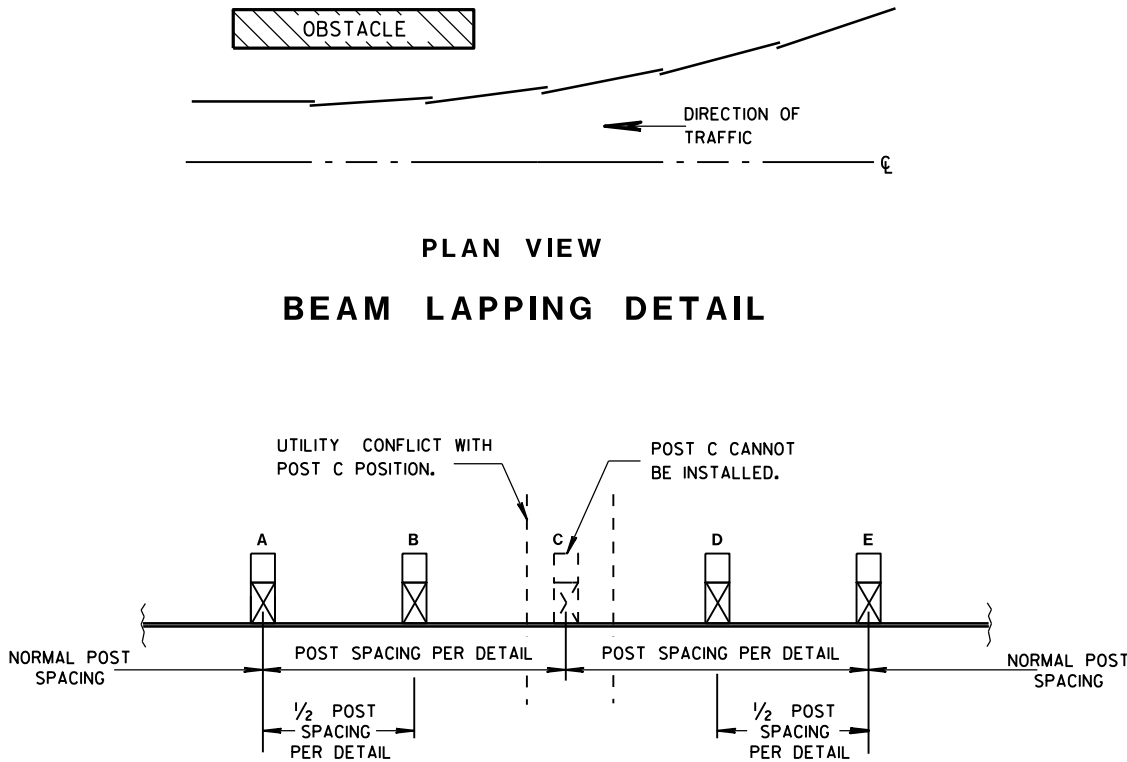
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



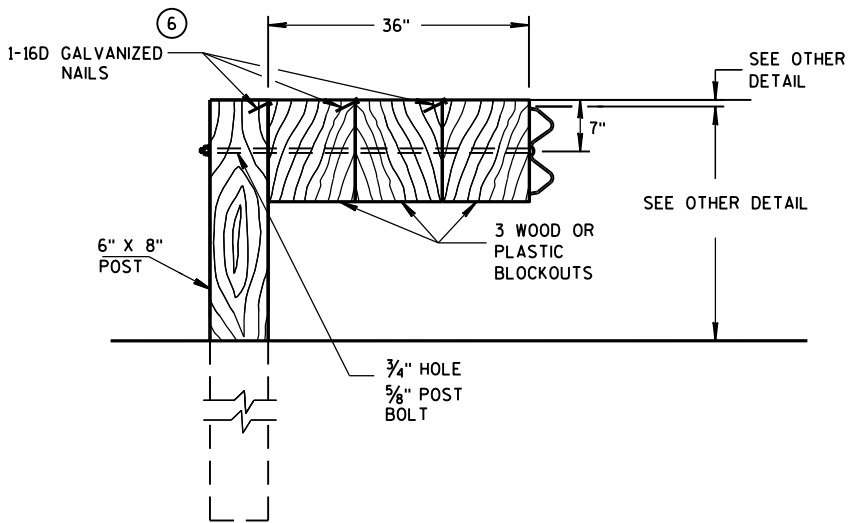
POST BOLT TABLE



ALTERNATE BOLT HEAD



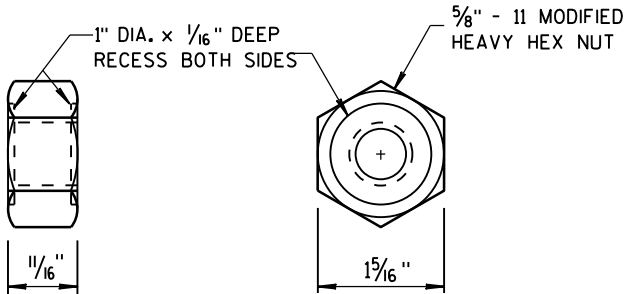
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



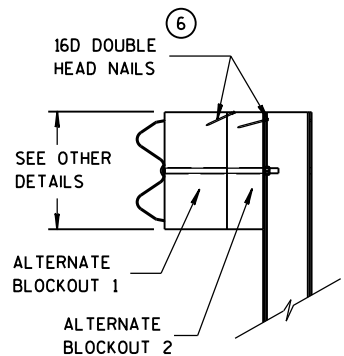
DETAIL FOR 36" BLOCKOUT DEPTH

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.

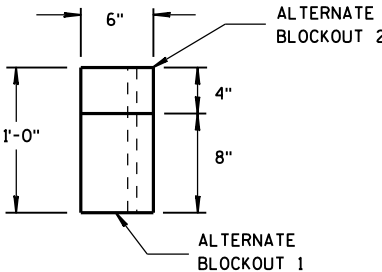
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS (269) INT
ENGINEER

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.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" 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.

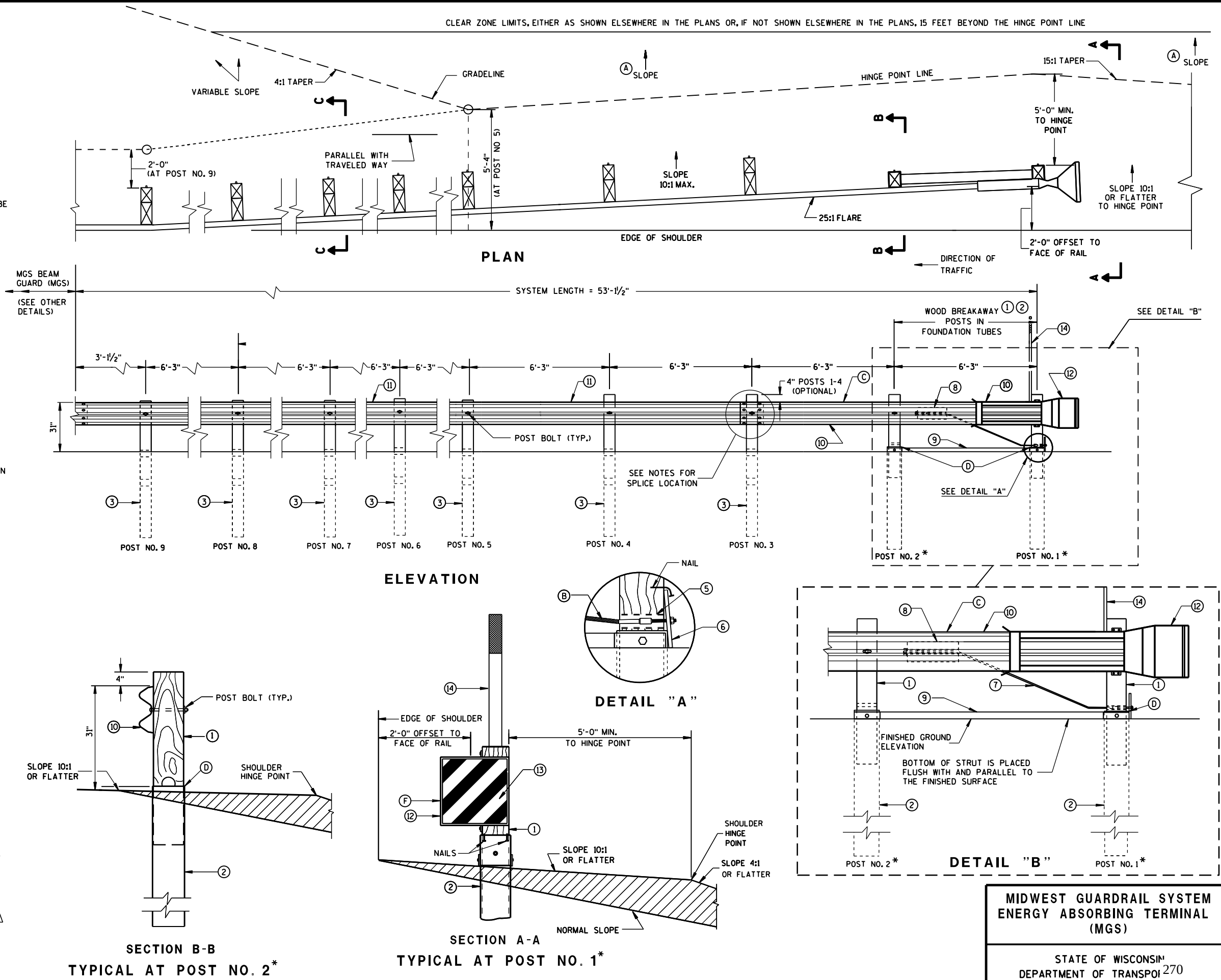
SEE SDD 14B42 FOR MORE INFORMATION.

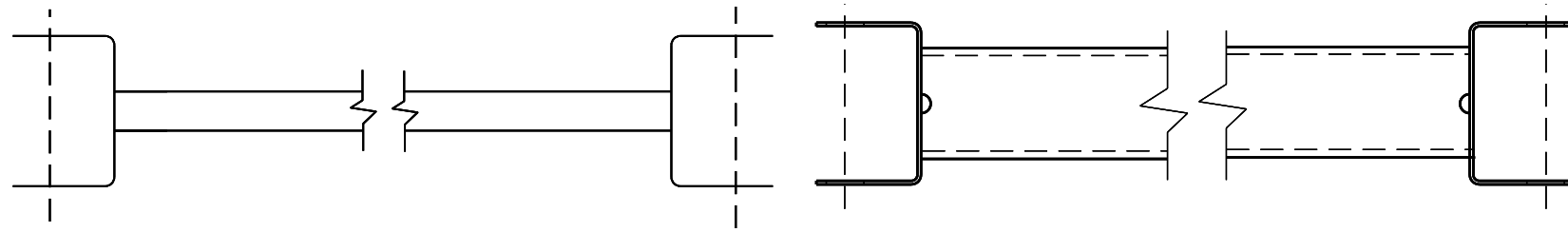
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

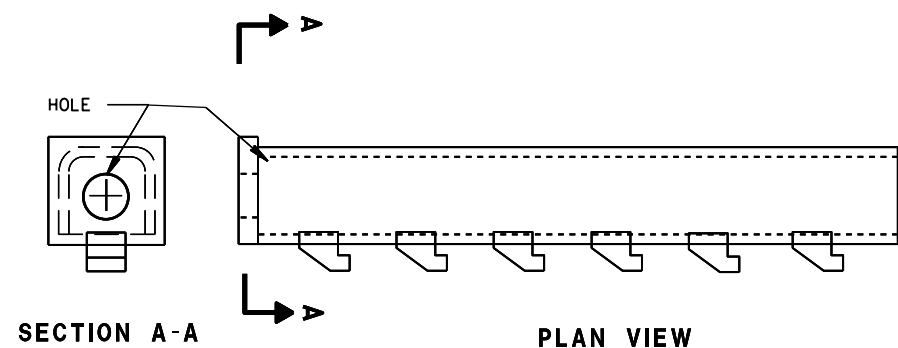
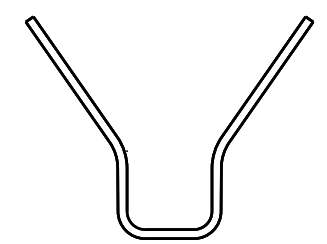
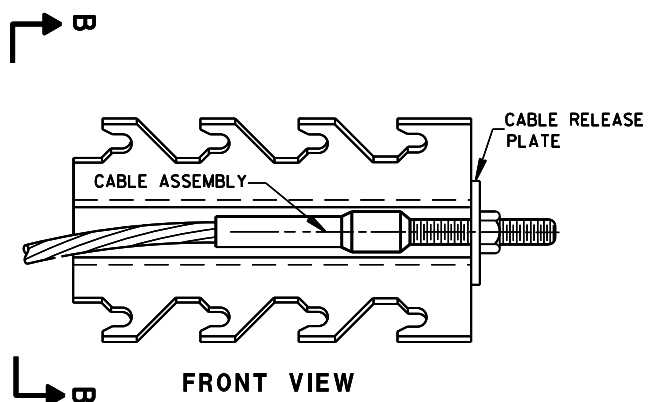
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3/2" 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.





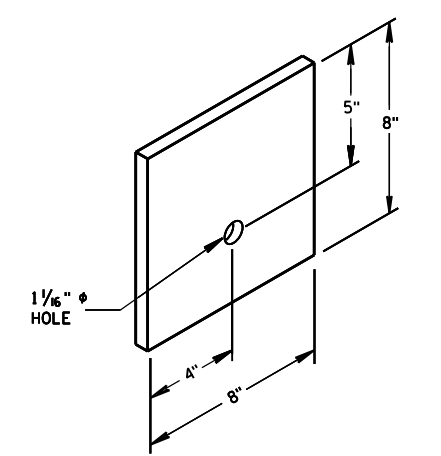
9 H
GENERIC GROUND STRUT



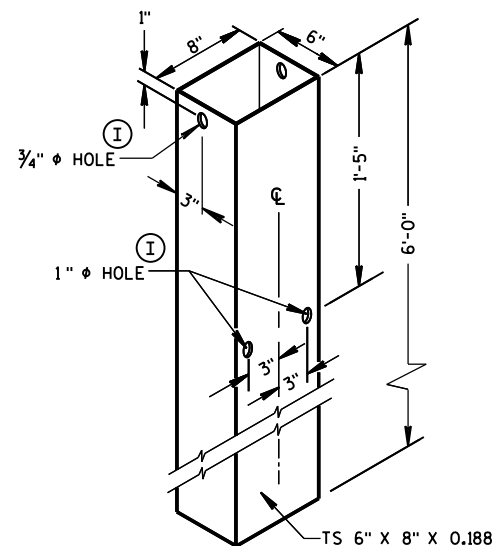
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

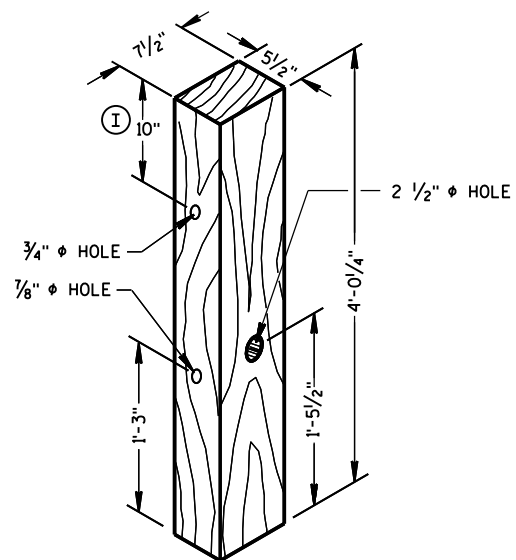
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND 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)



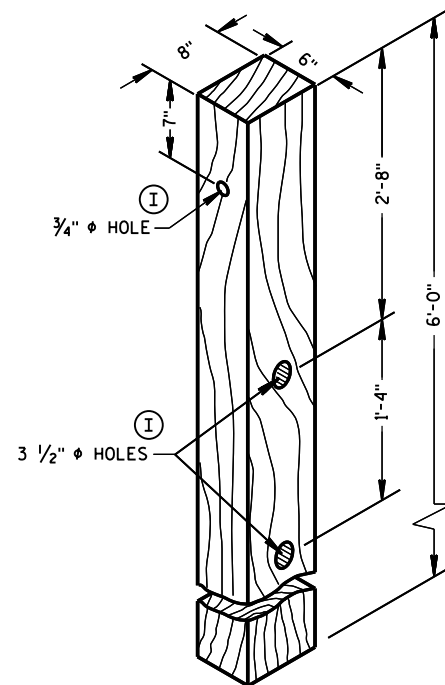
⑥
BEARING PLATE



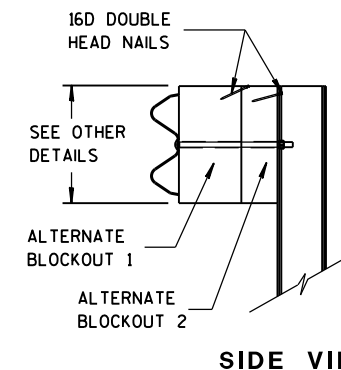
FOUNDATION TUBE ②



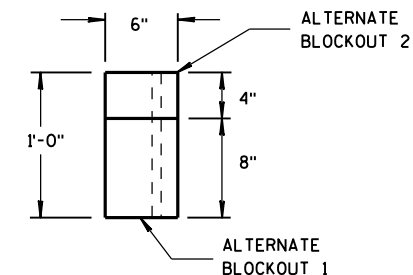
POSTS NUMBER 1 AND 2
WOOD BREAKAWAY POST ①



POSTS NUMBER 3-9
WOOD CRT POST ③

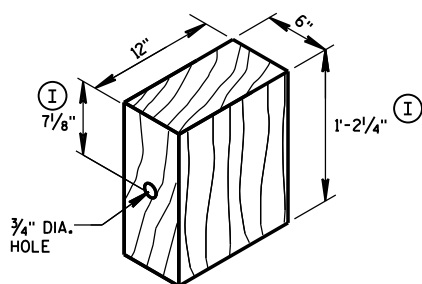


SIDE VIEW



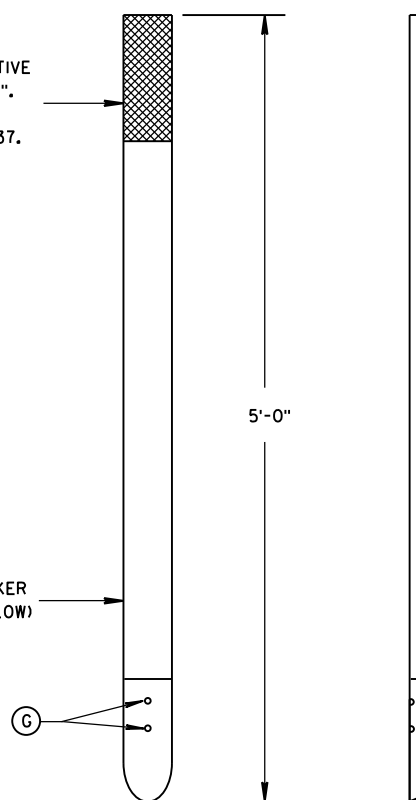
TOP VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**



WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

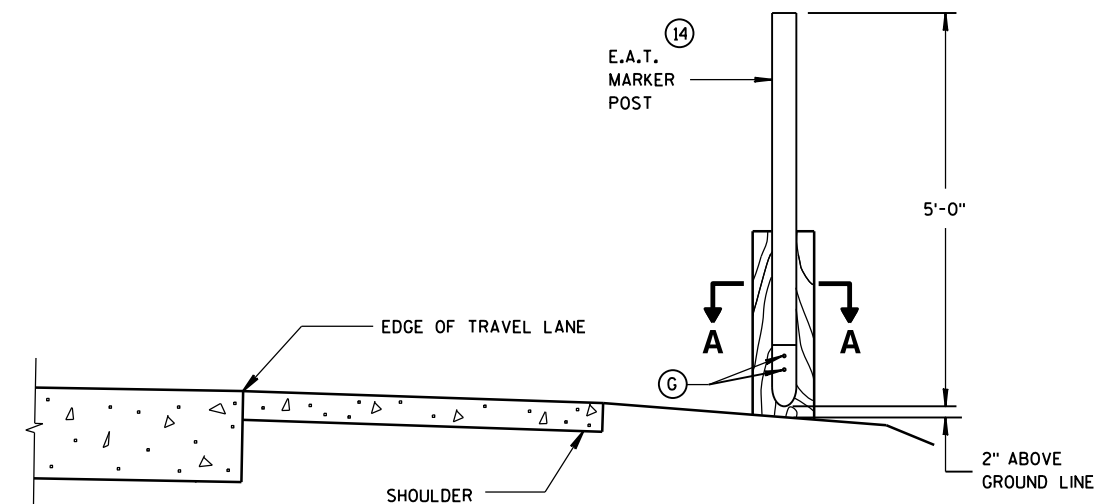
TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.



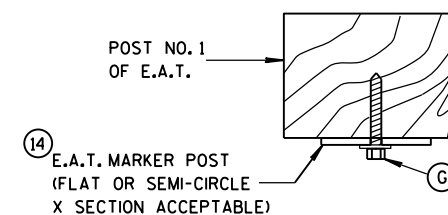
FRONT VIEW

SIDE VIEW

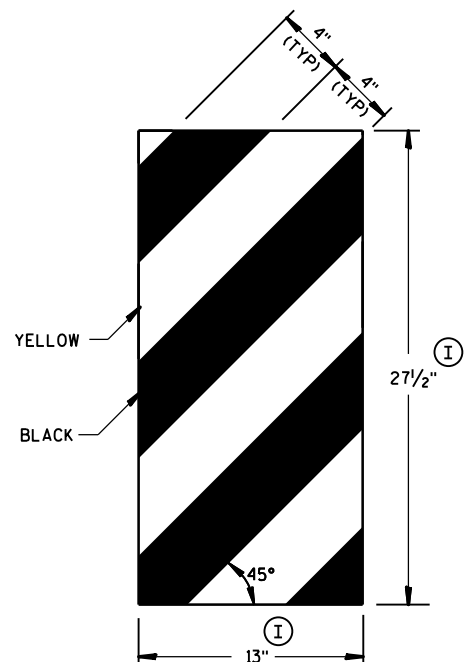
E.A.T. MARKER POST ⑭



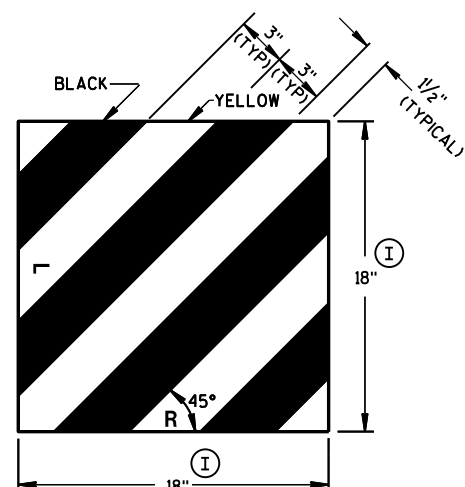
**TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1**
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A



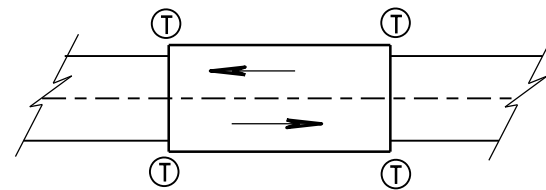
GENERIC REFLECTIVE SHEETING ⑬ ①



**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

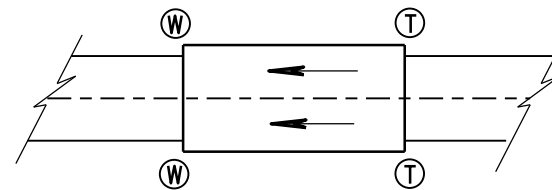
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
June 2014 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS 272 ENT
FHWA ENGINEER



TWO WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION



ONE WAY TRAFFIC

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

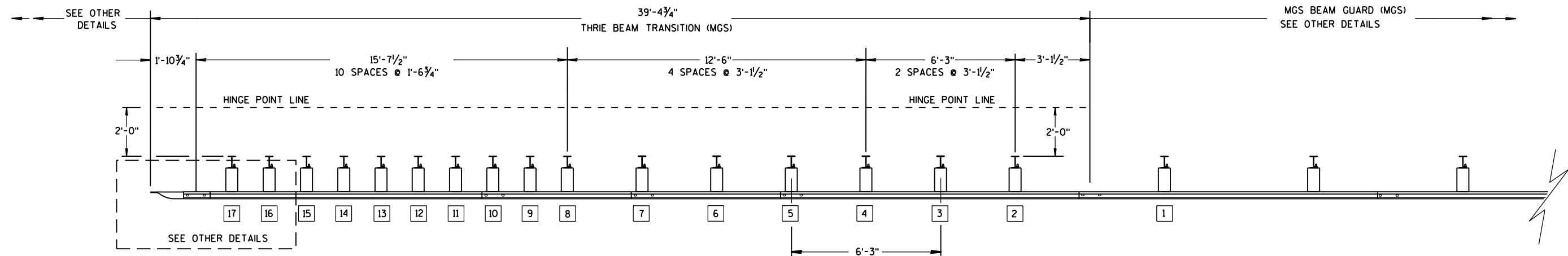
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

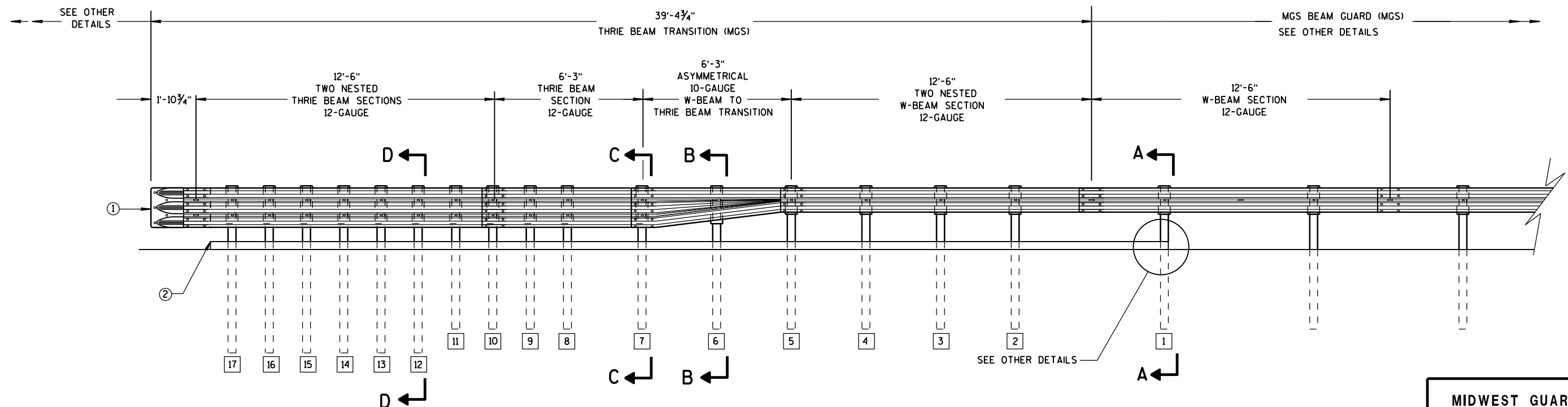
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



PLAN VIEW



ELEVATION VIEW

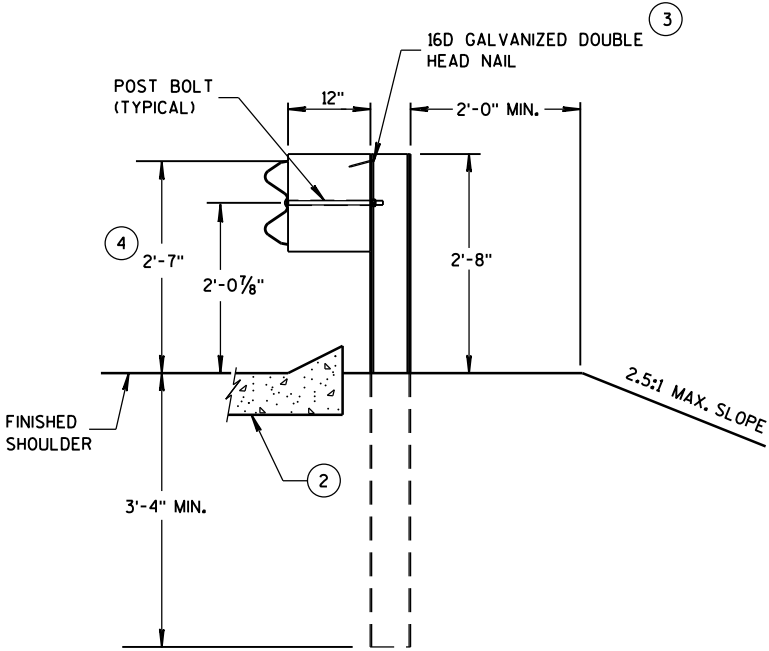
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

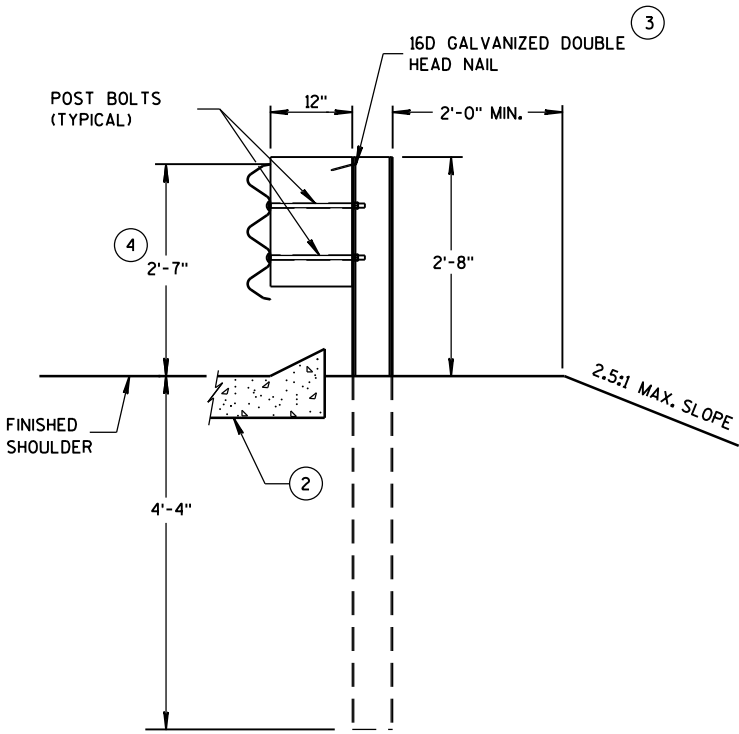
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 273

GENERAL NOTES

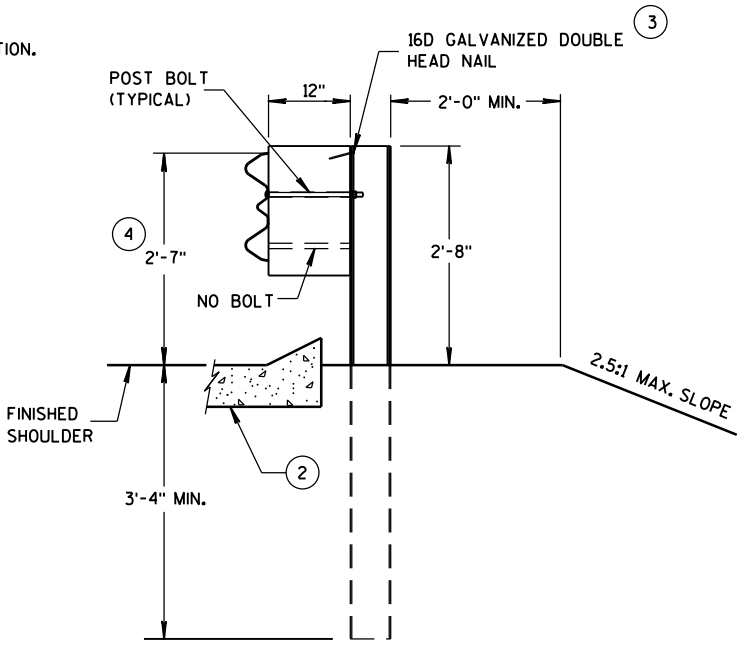
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.



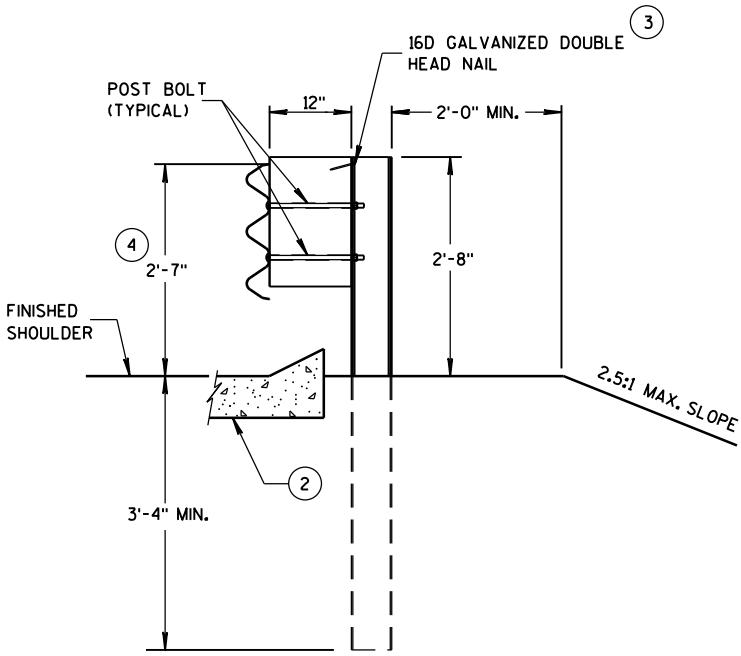
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

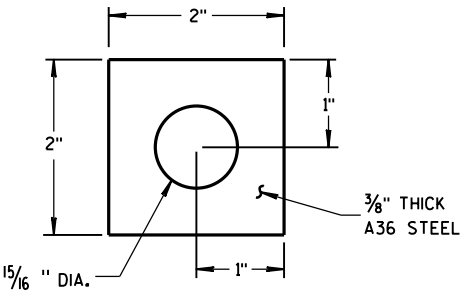
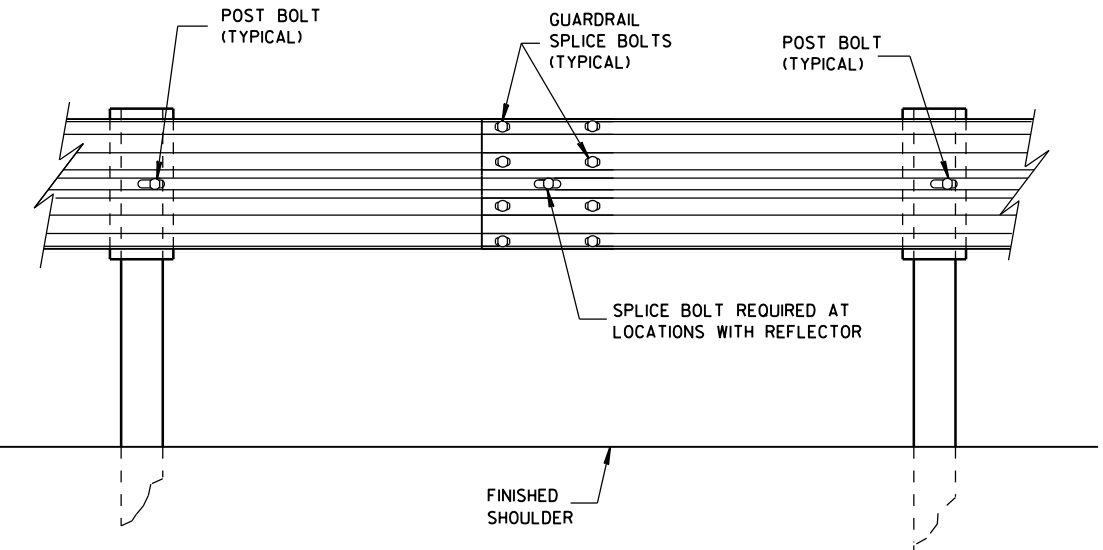
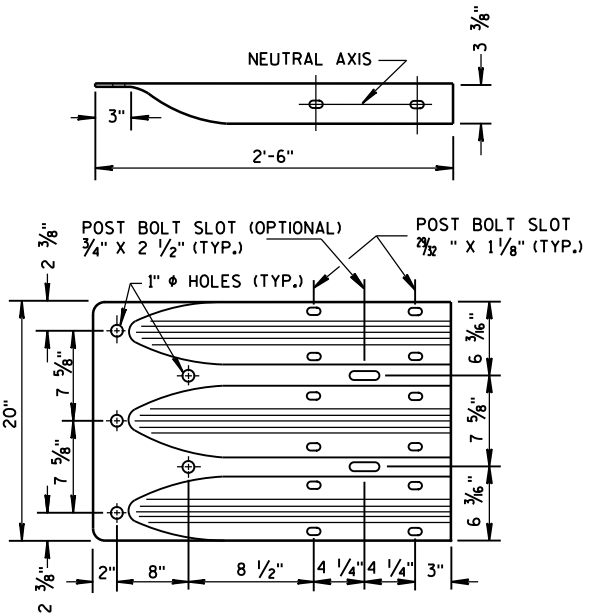


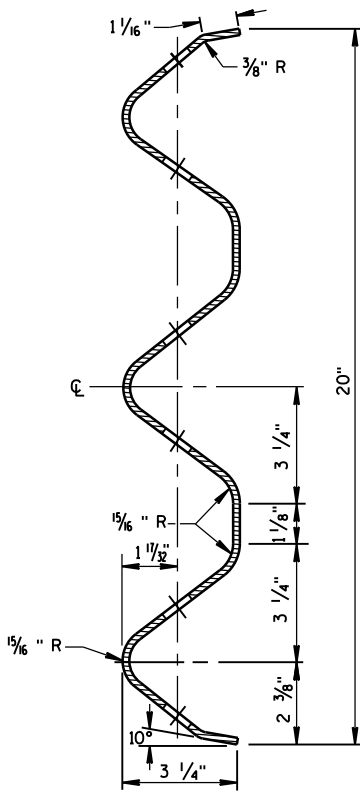
PLATE WASHER DETAIL



SPlice DETAIL



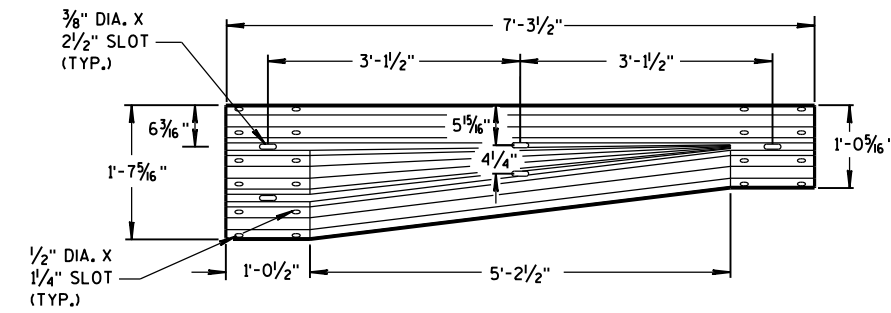
THRIE BEAM
TERMINAL CONNECTOR



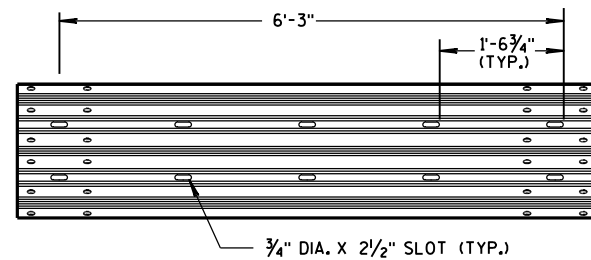
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

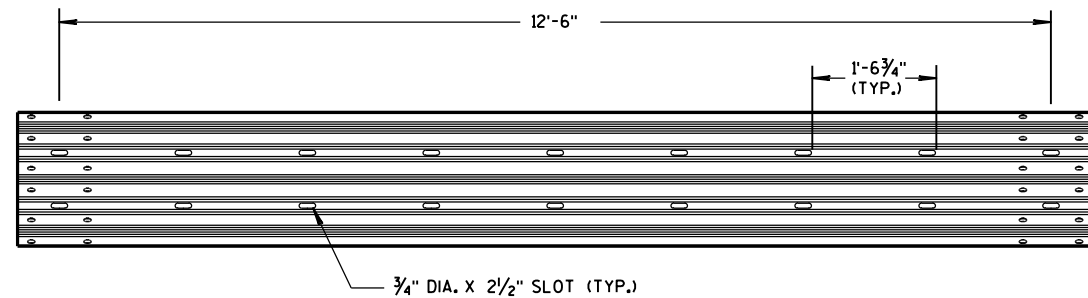
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 274



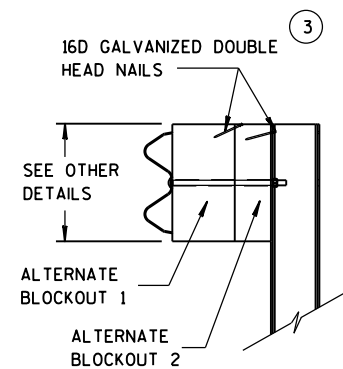
W-BEAM TO THRIE BEAM TRANSITION SECTION



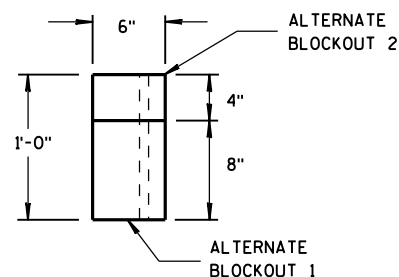
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

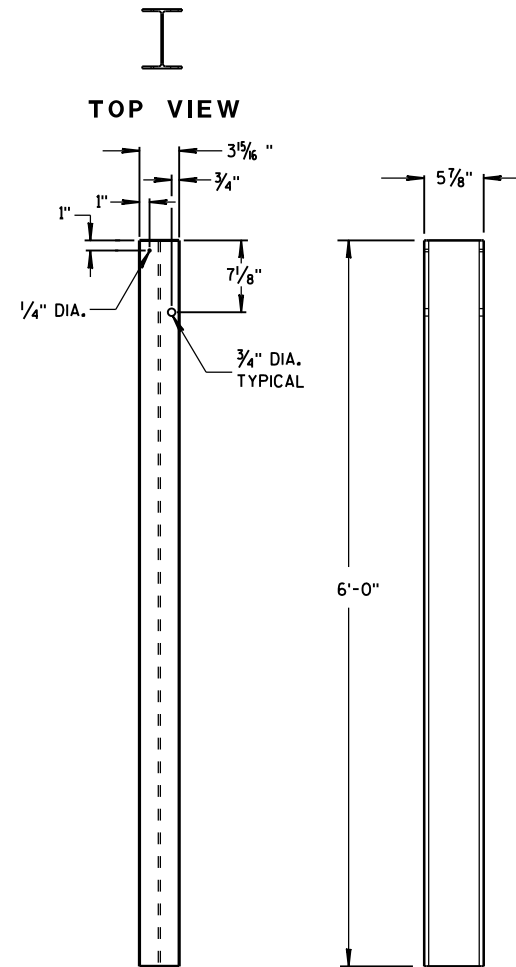


SIDE VIEW



TOP VIEW

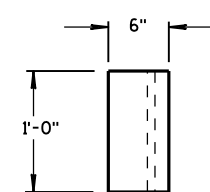
ALTERNATE WOOD BLOCKOUT DETAIL



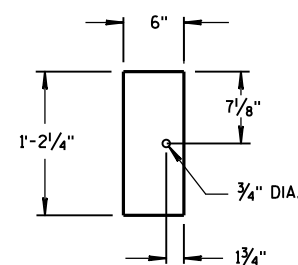
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

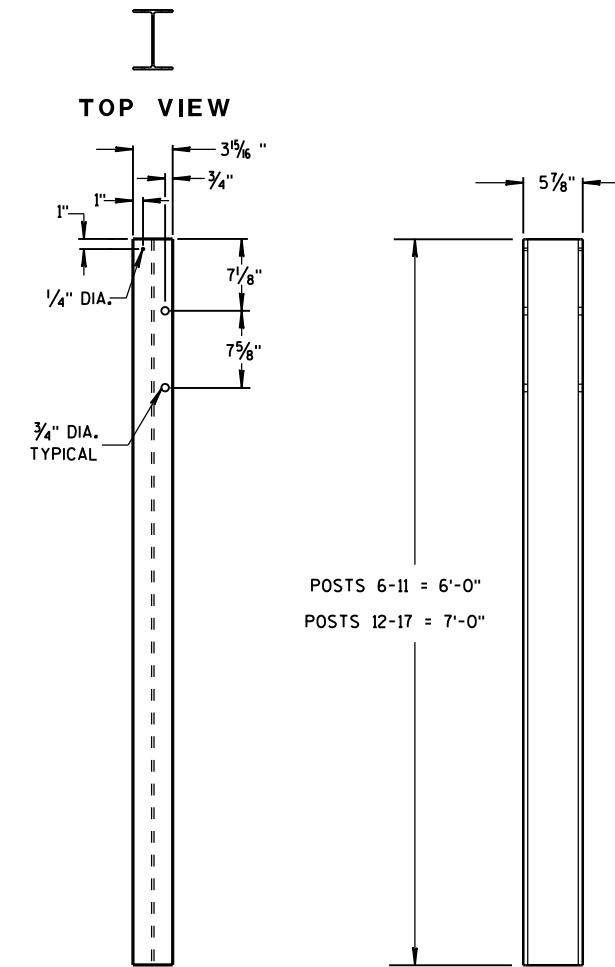


TOP VIEW



FRONT VIEW

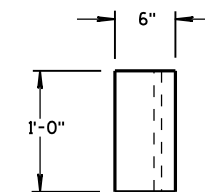
BLOCKOUT
POSTS 1-5



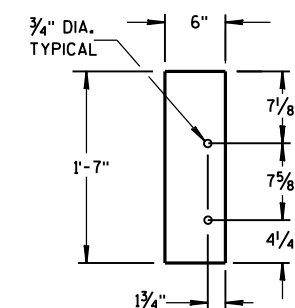
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT
POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

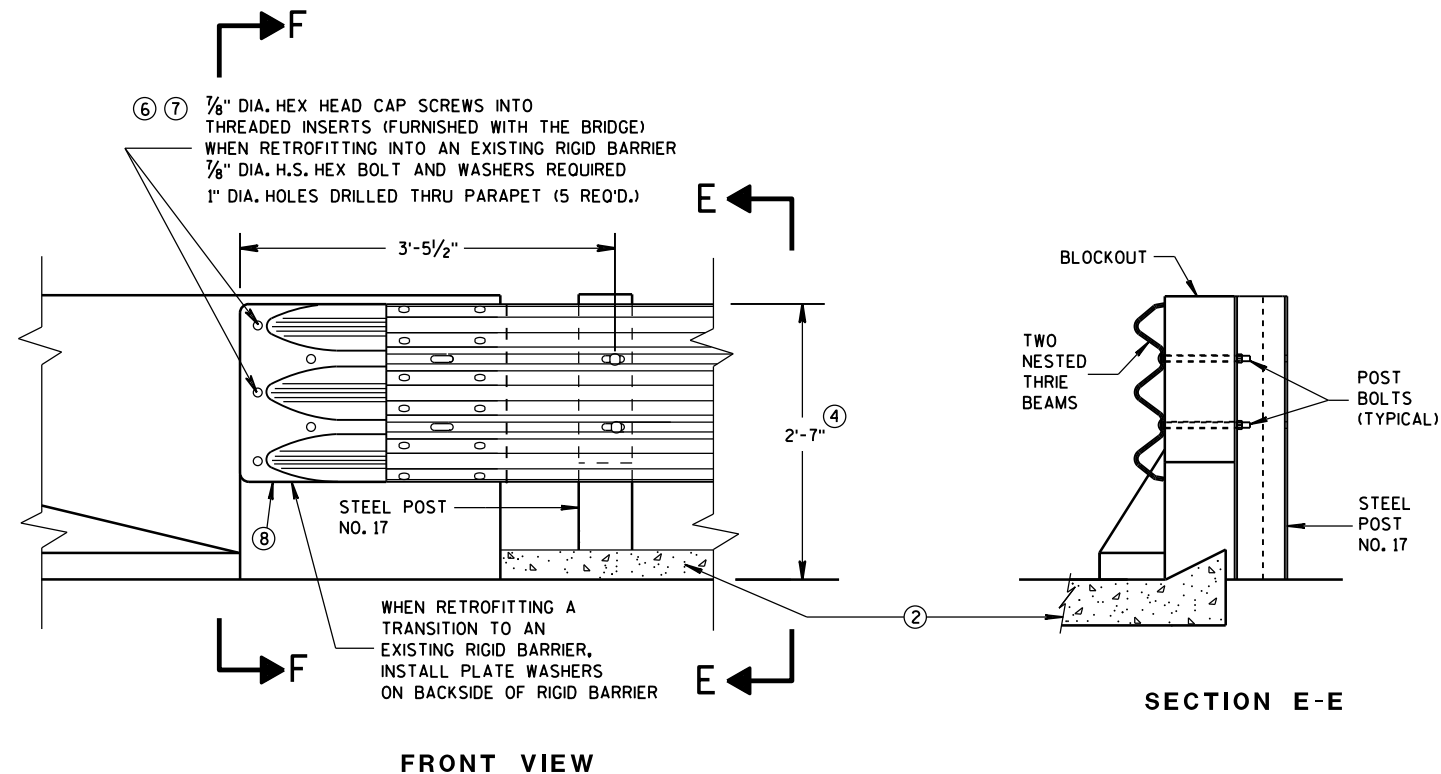
BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

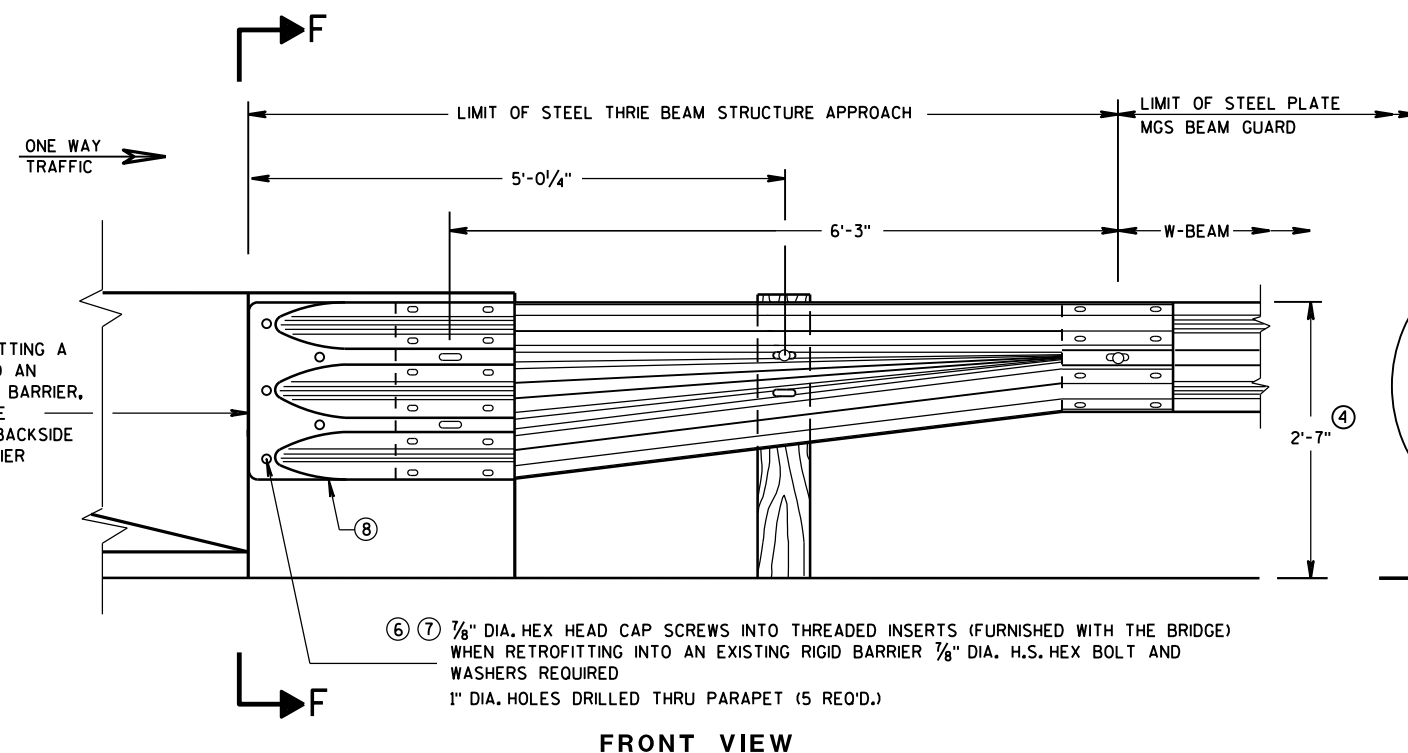
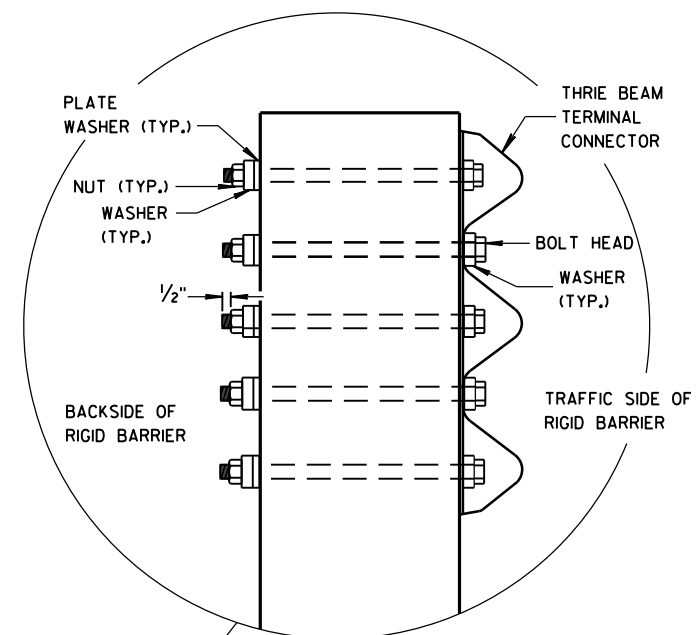
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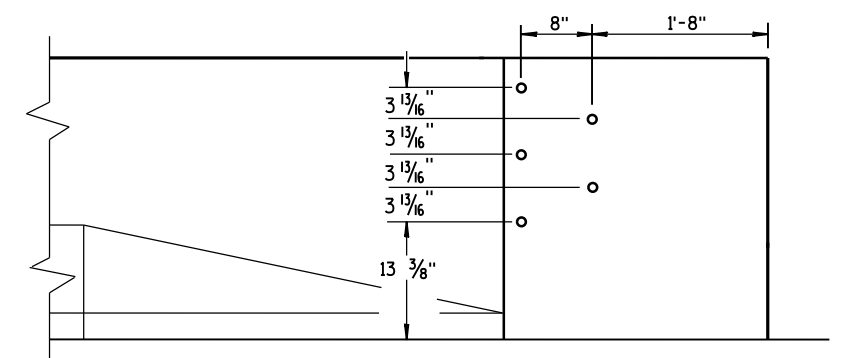
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



SECTION F-F



DRILL HOLE LOCATION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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/S/ Jerry H. Zogg

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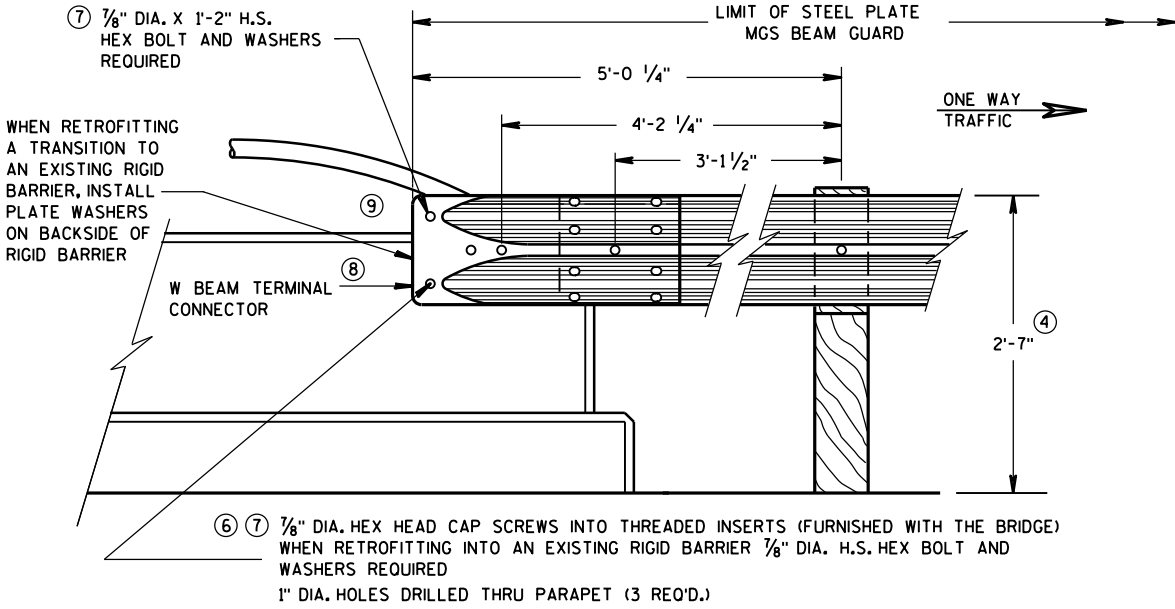
ENGINEER

NT

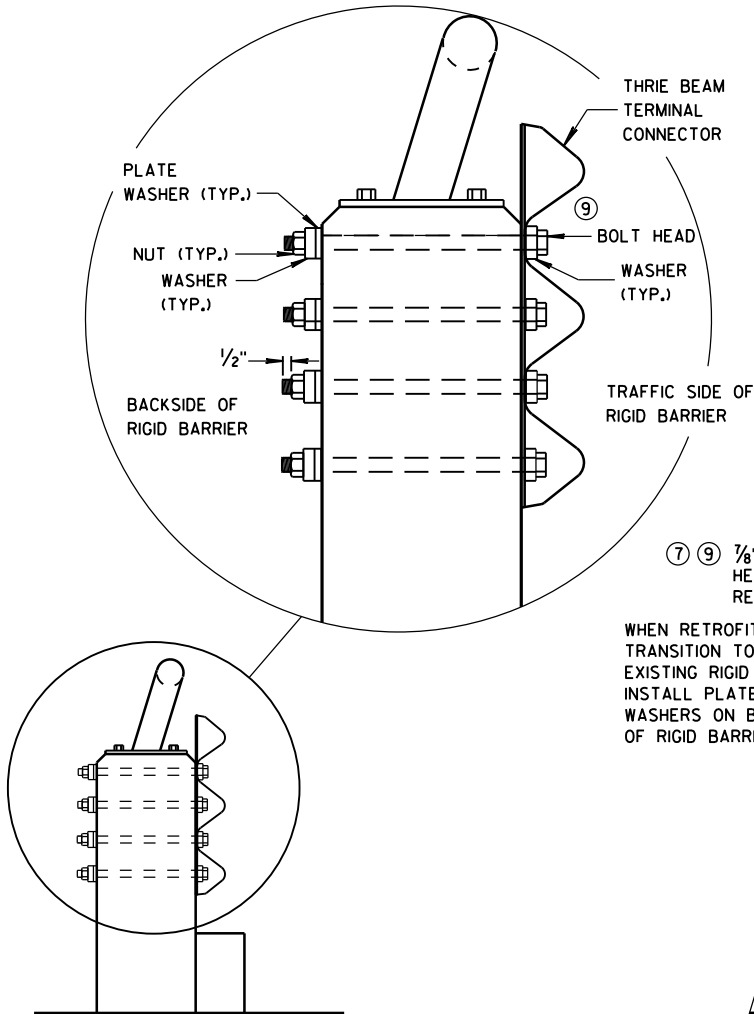
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

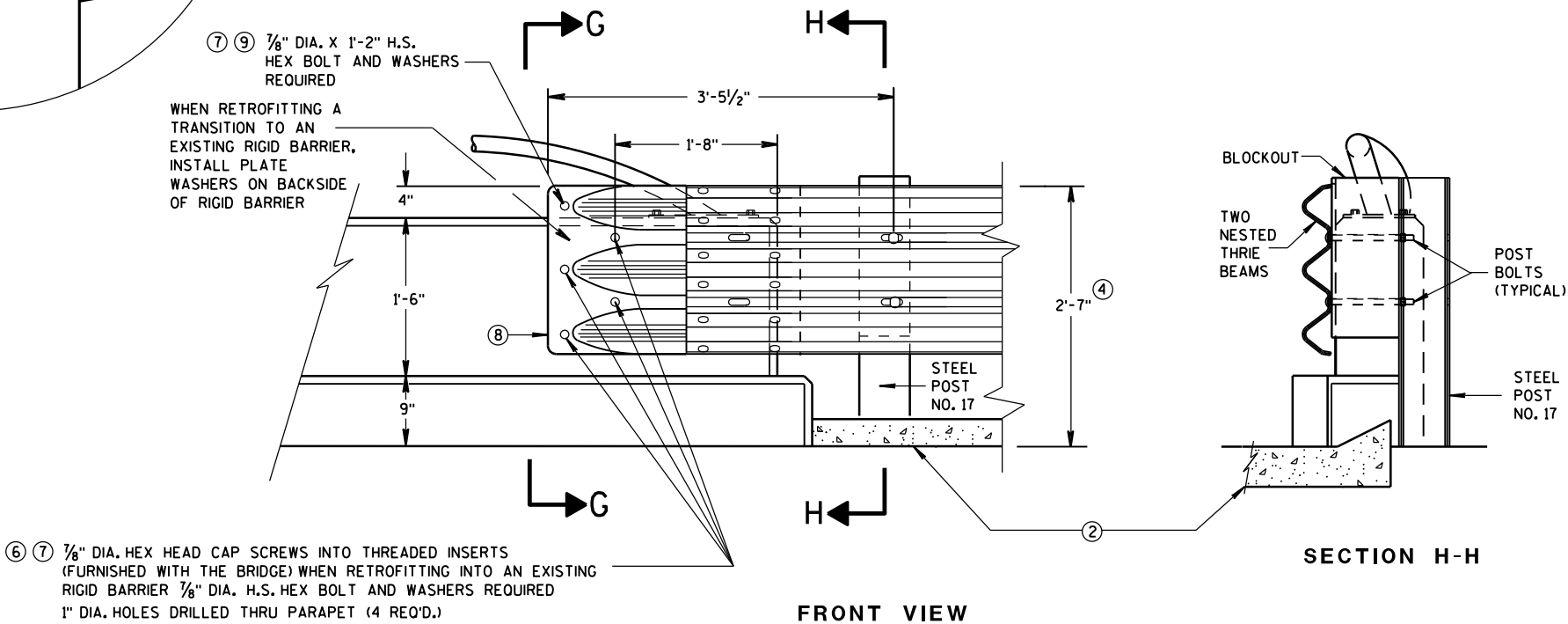
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
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- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}"$.
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



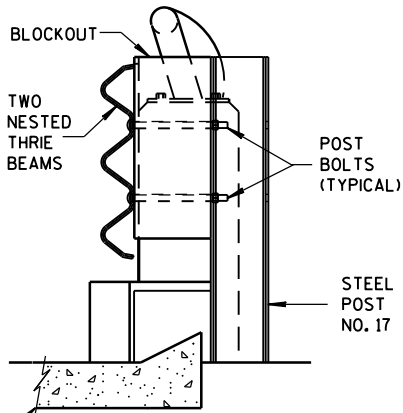
FRONT VIEW
W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

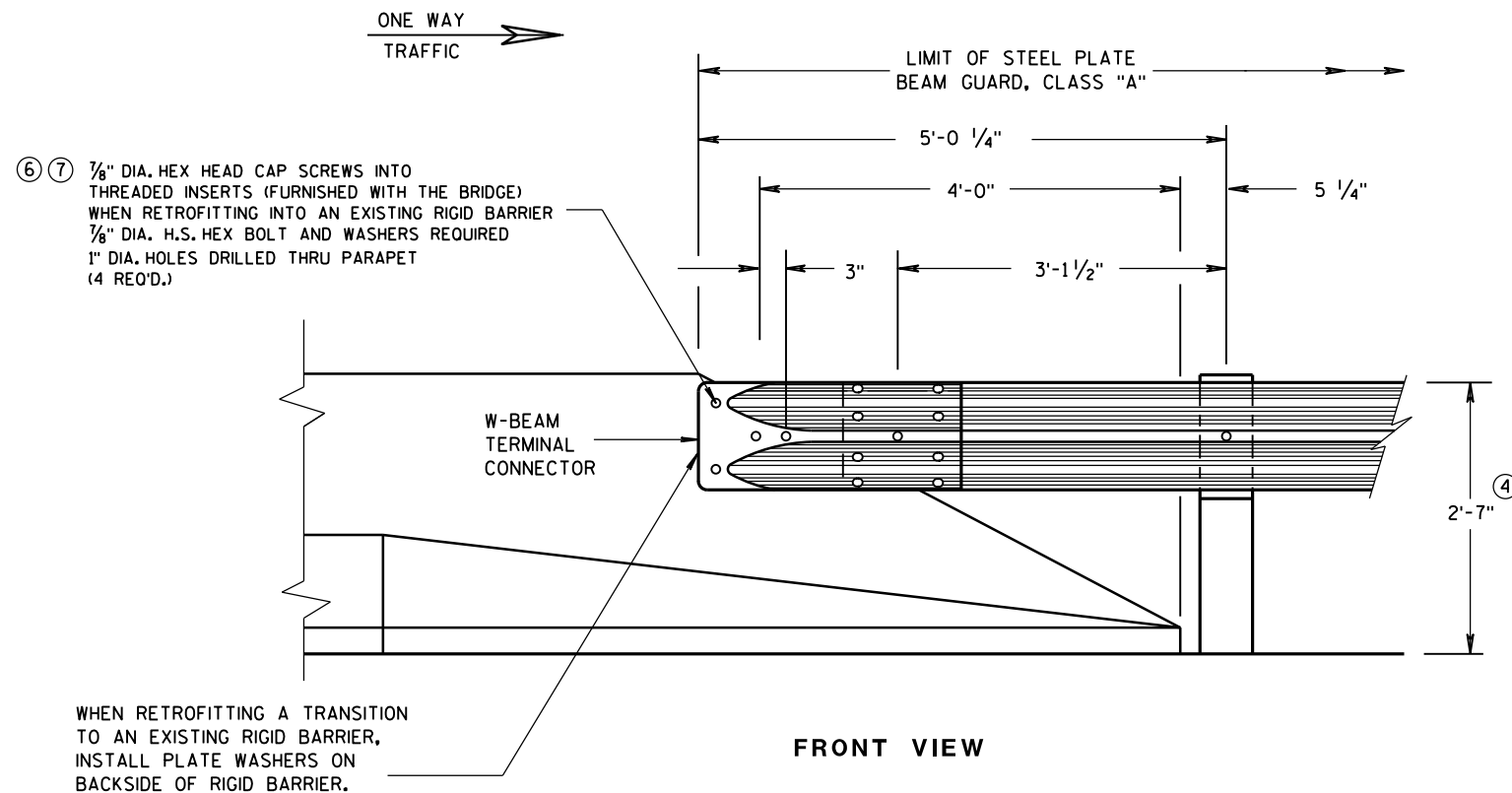


SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

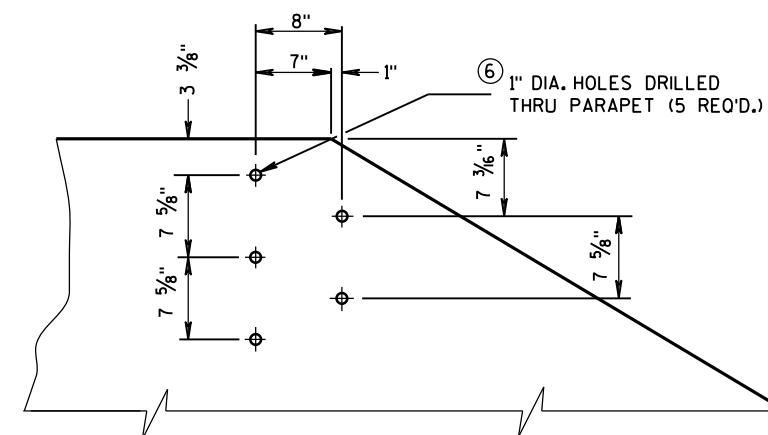
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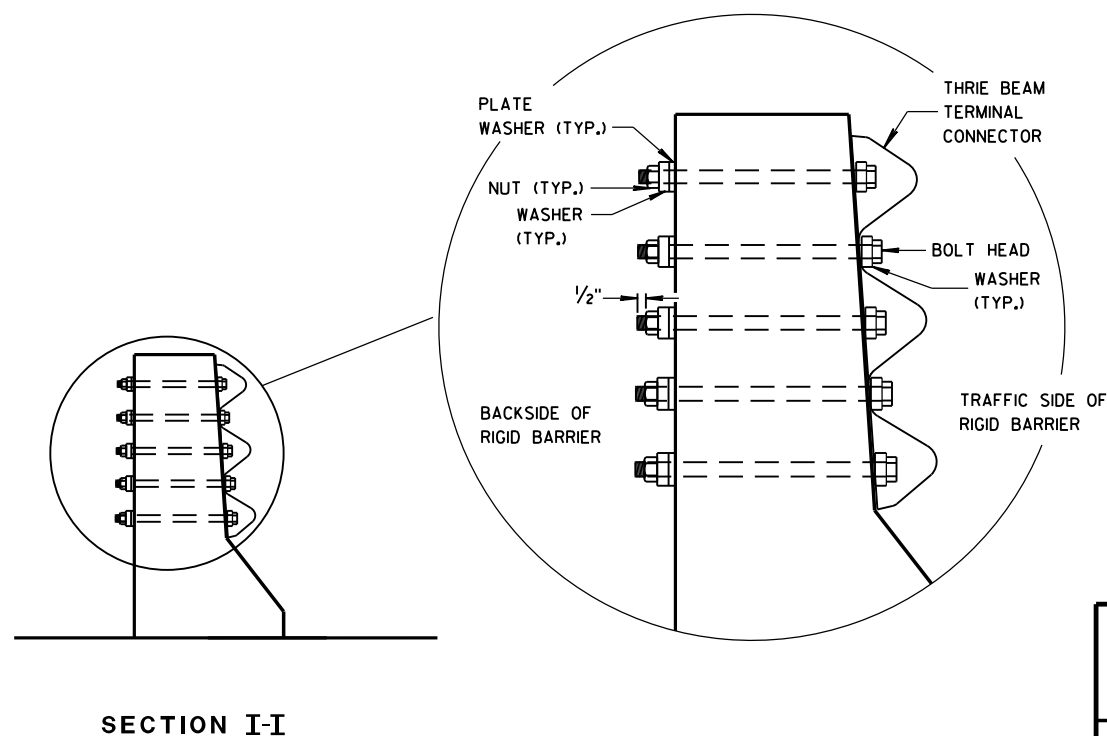
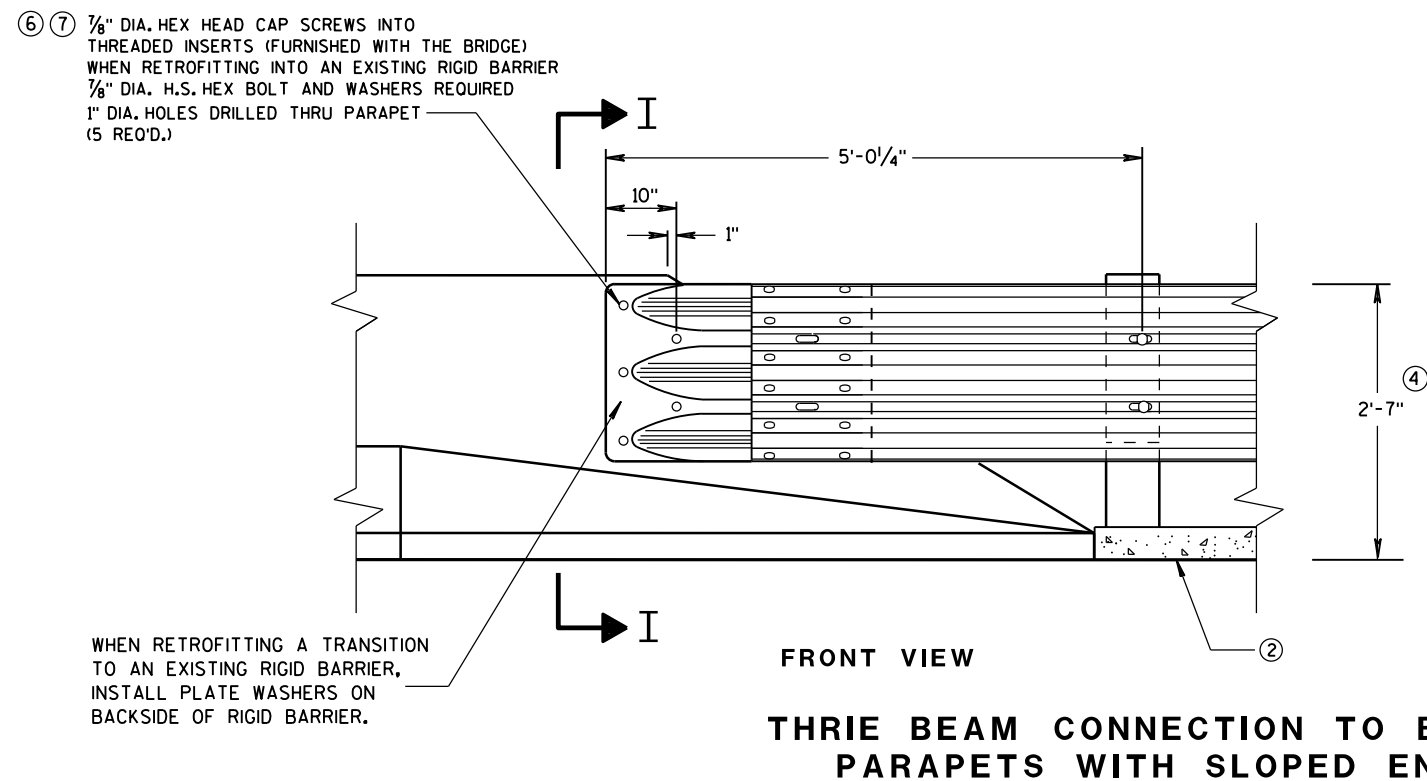


GENERAL NOTES

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



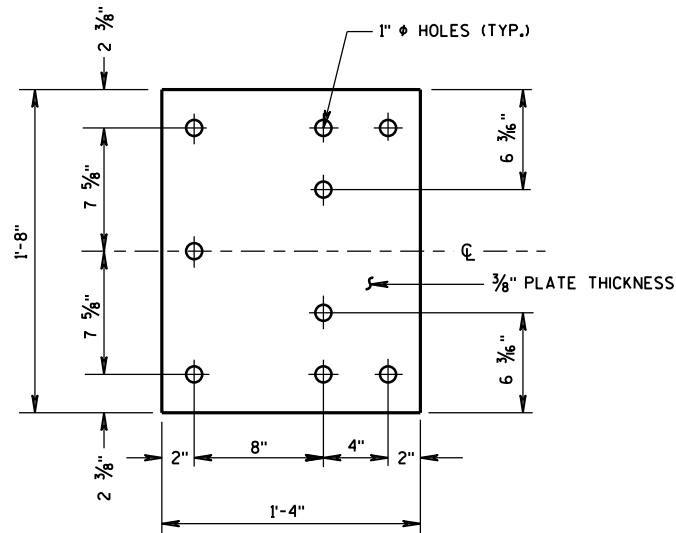
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



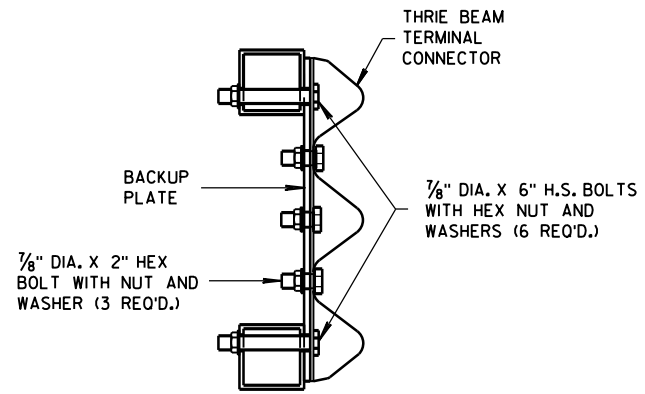
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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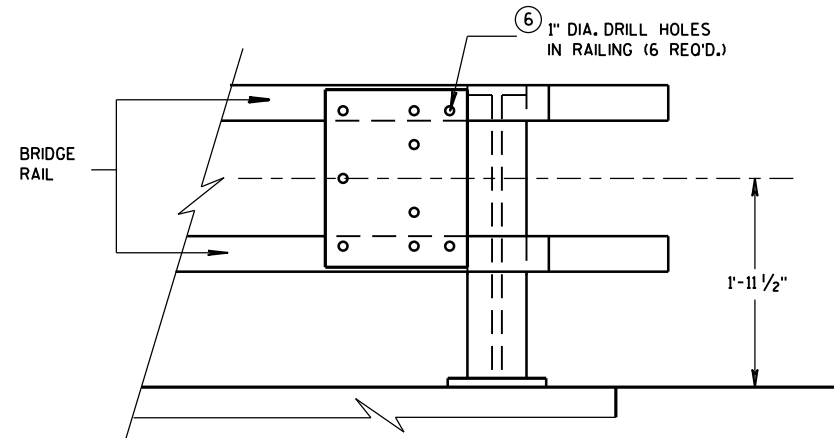
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FHWA



BACK-UP PLATE DETAIL



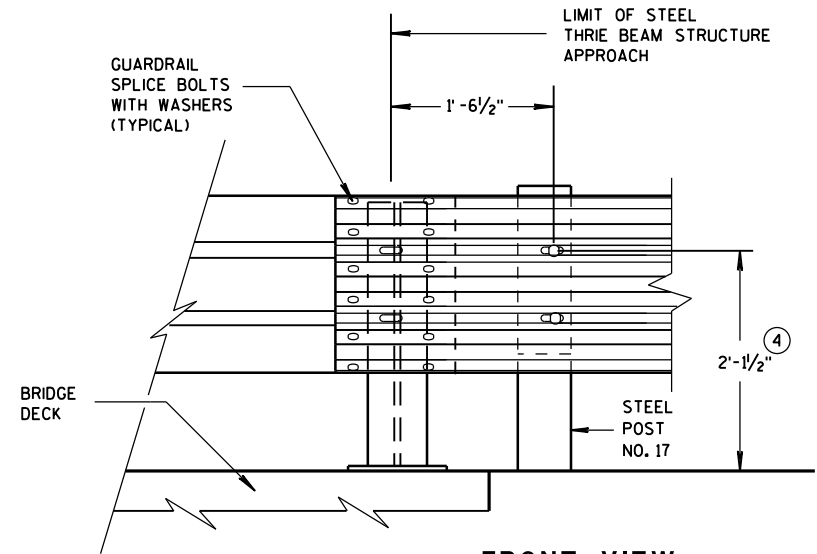
SECTION J-J



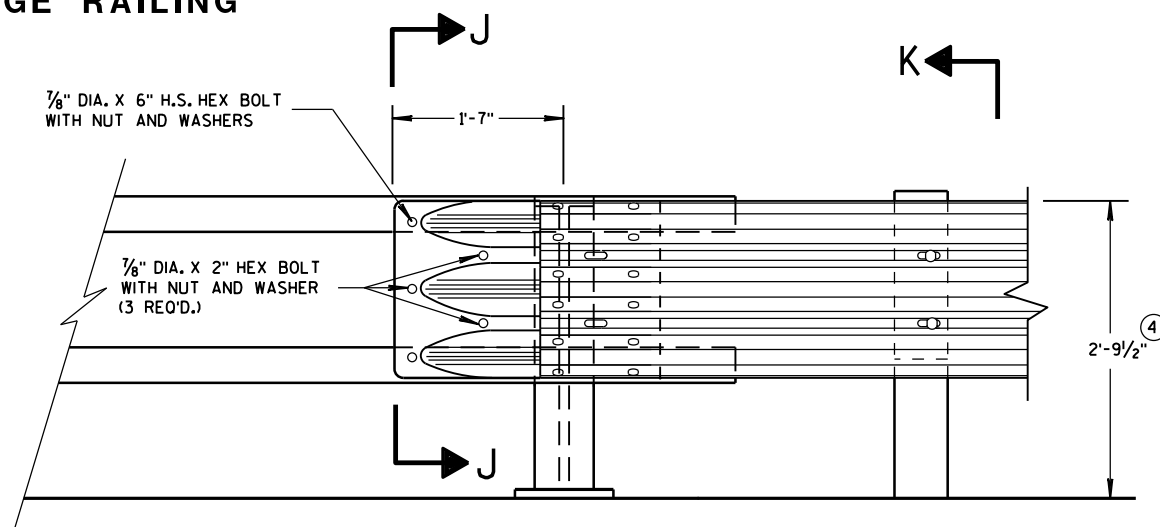
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

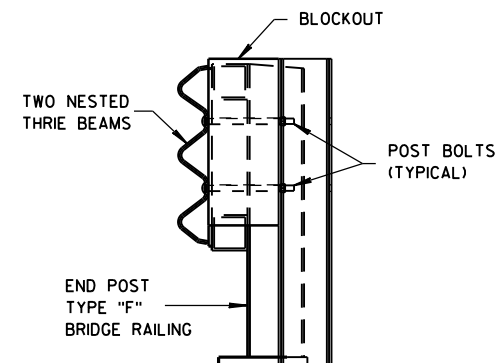


FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"



FRONT VIEW

THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"



SECTION K-K

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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6

- S.D.D. 14 B 45-4h**



S.D.D. 14 B 45-4h



S.D.D. 14 B 45-4h



S.D.D. 14 B 45-4h

S.D.D. 14 B 45-4h



S.D.D. 14 B 45-4h



S.D.D. 14 B 45-4h



S.D.D. 14 B 45-4h

S.D.D. 14 B 45-4h



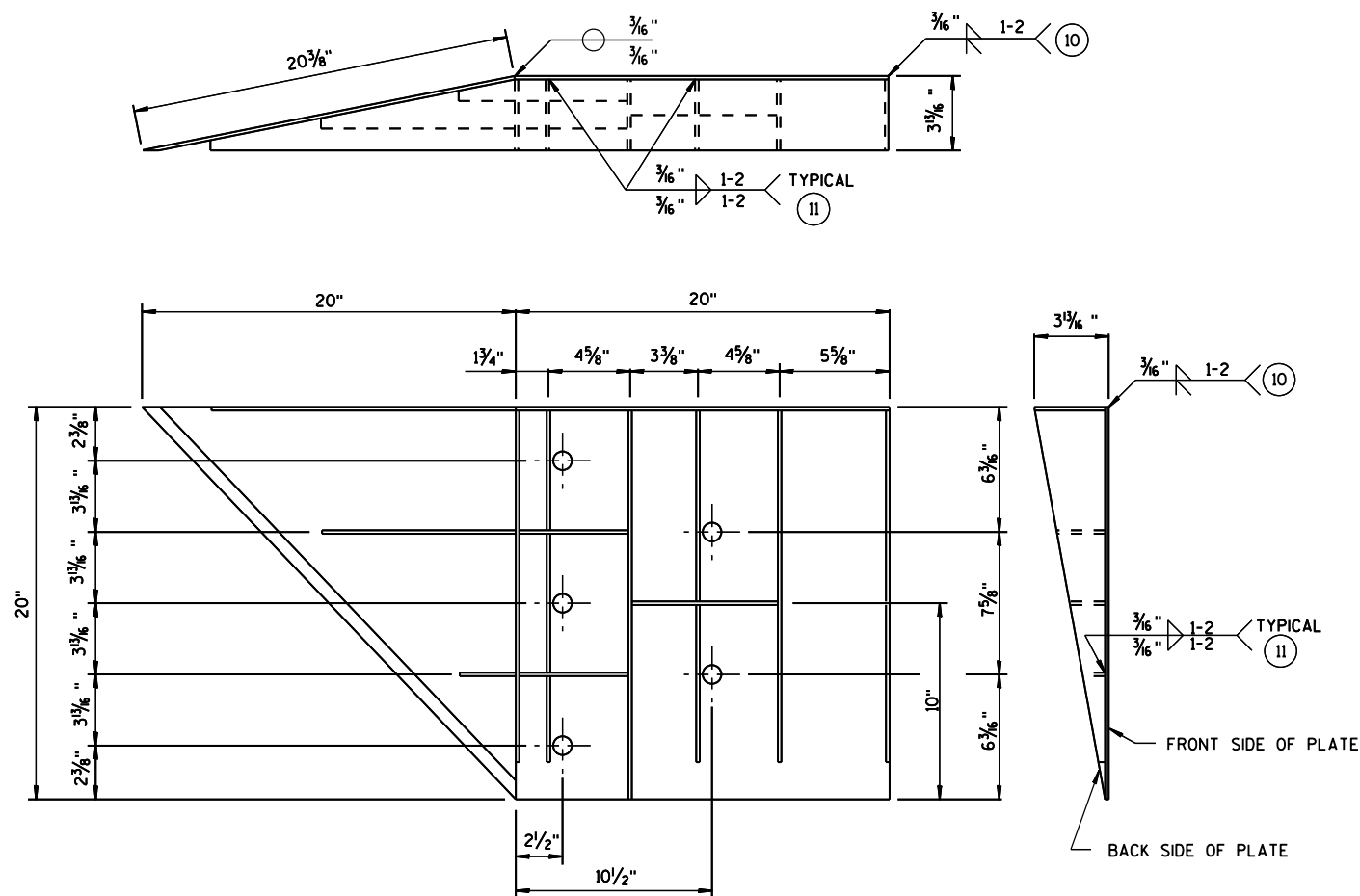
S.D.D. 14 B 45-4h



S.D.D. 14 B 45-4h

S.D.D. 14 B 45-4h

6



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 1/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 1/8"	1/4"
S8	1		1 1/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 1/8" x 9 7/8" x 3 5/8" x 9 1/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 1/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- 10 STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- 11 STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

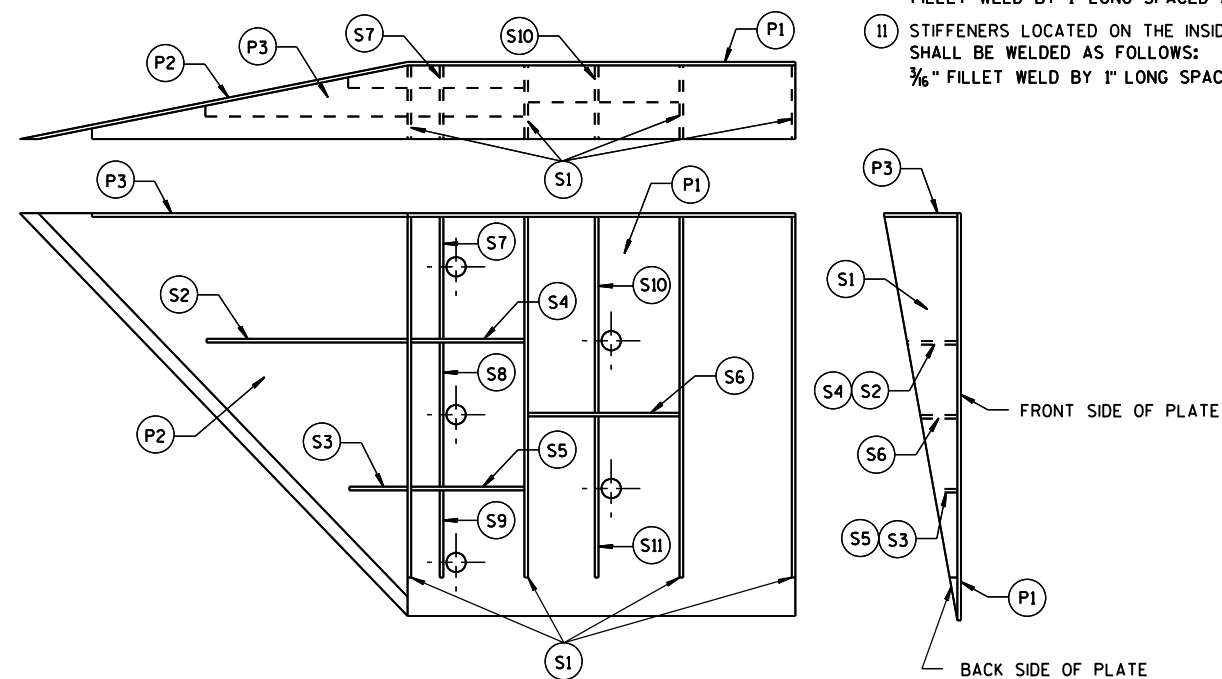


PLATE AND STIFFENER IDENTIFICATION

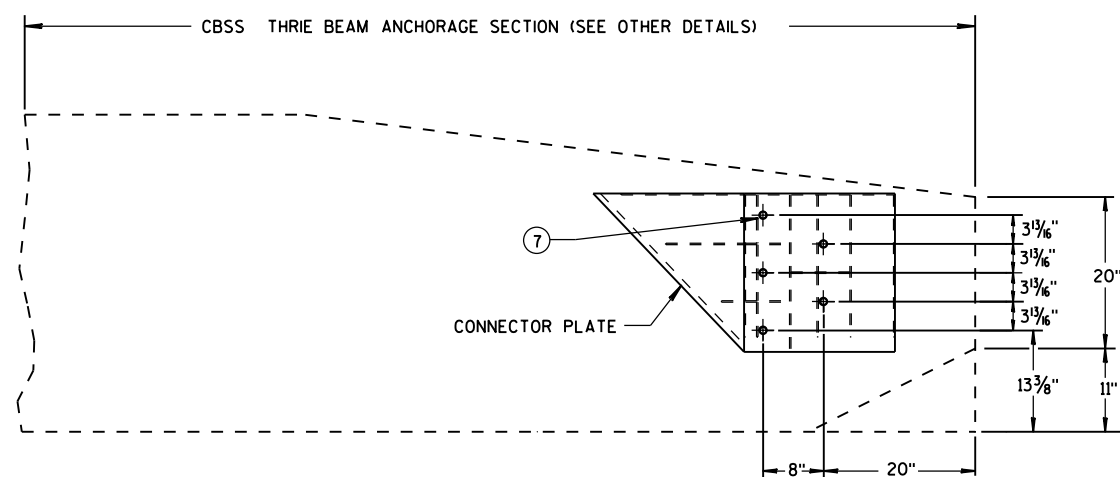
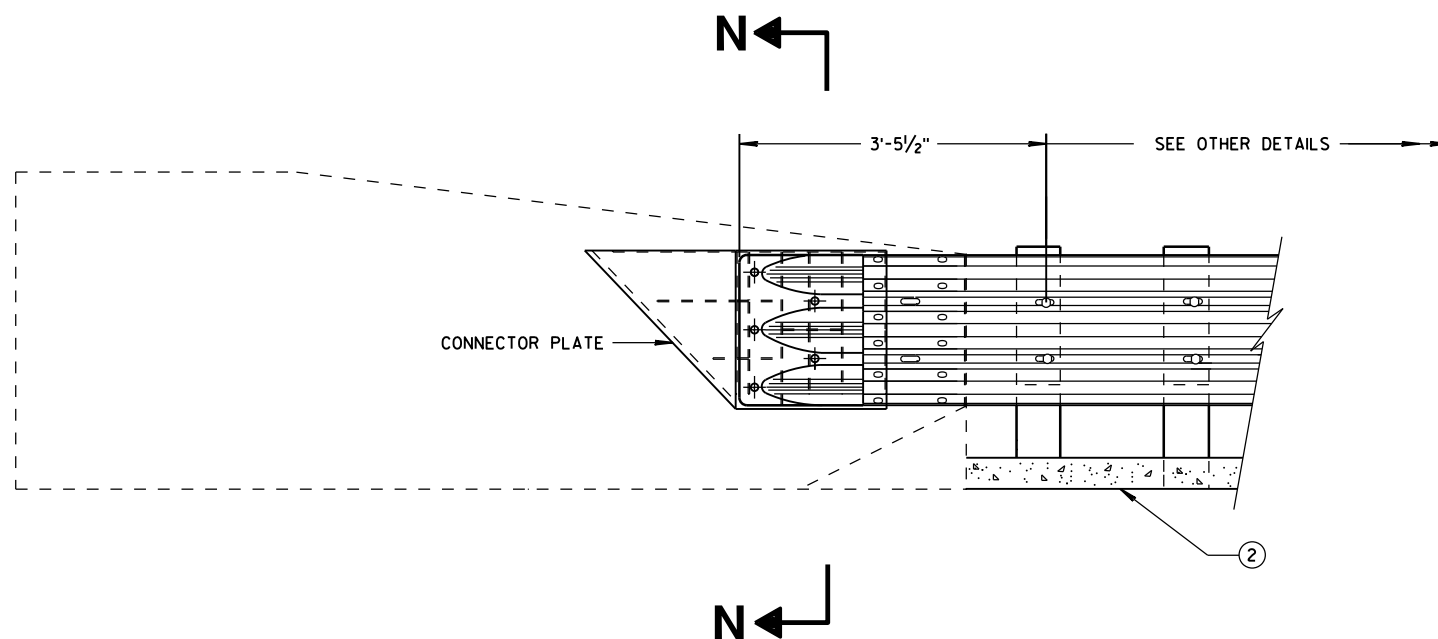
(VIEWED FROM BACK SIDE OF PLATE)

MIDWEST GUARDRAIL SYSTEM
THREE BEAM TRANSITION (MGS)

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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



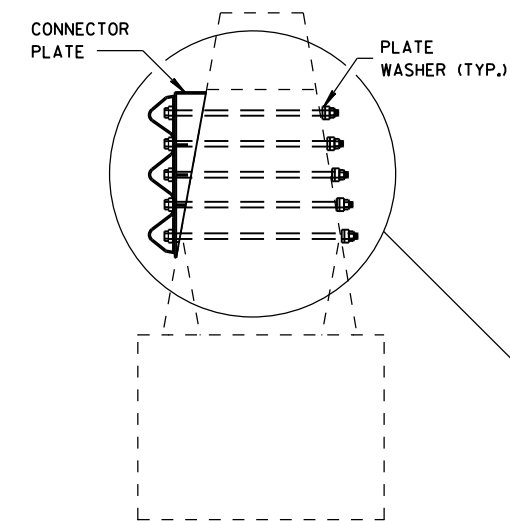
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

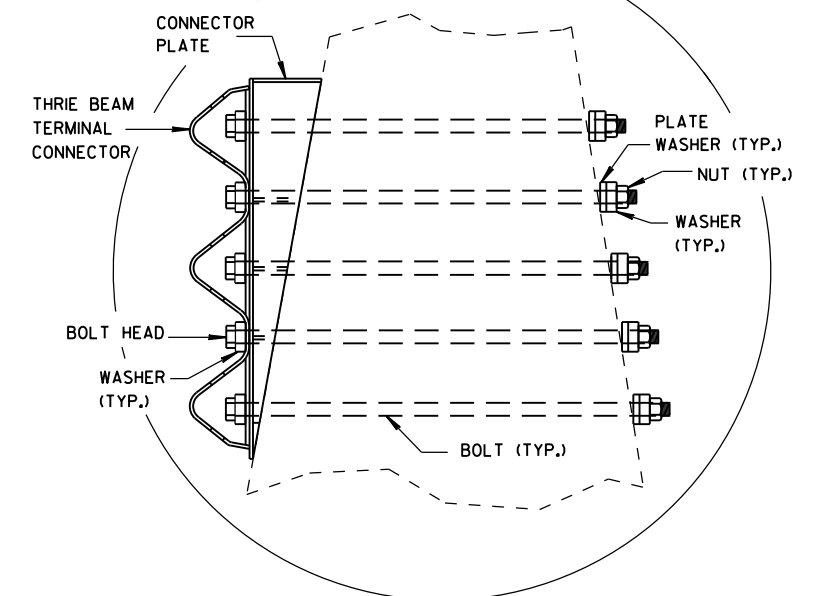
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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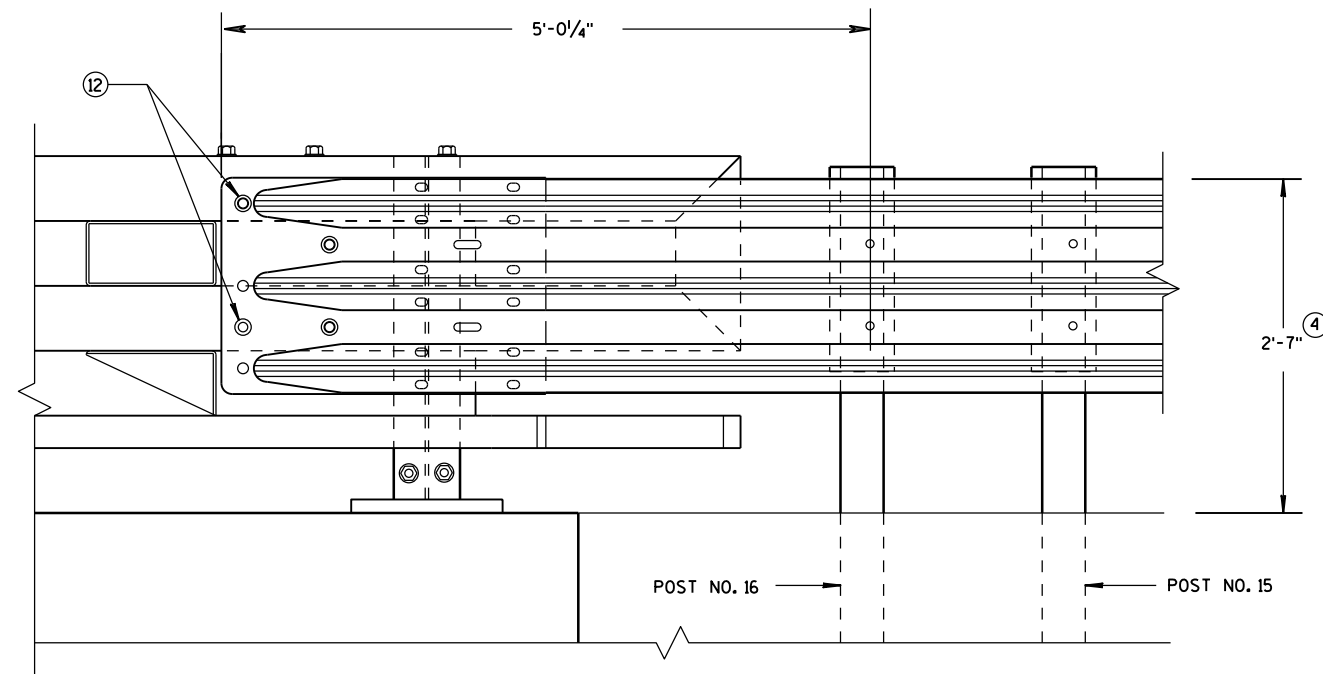
ENGINEER

NT

GENERAL NOTES

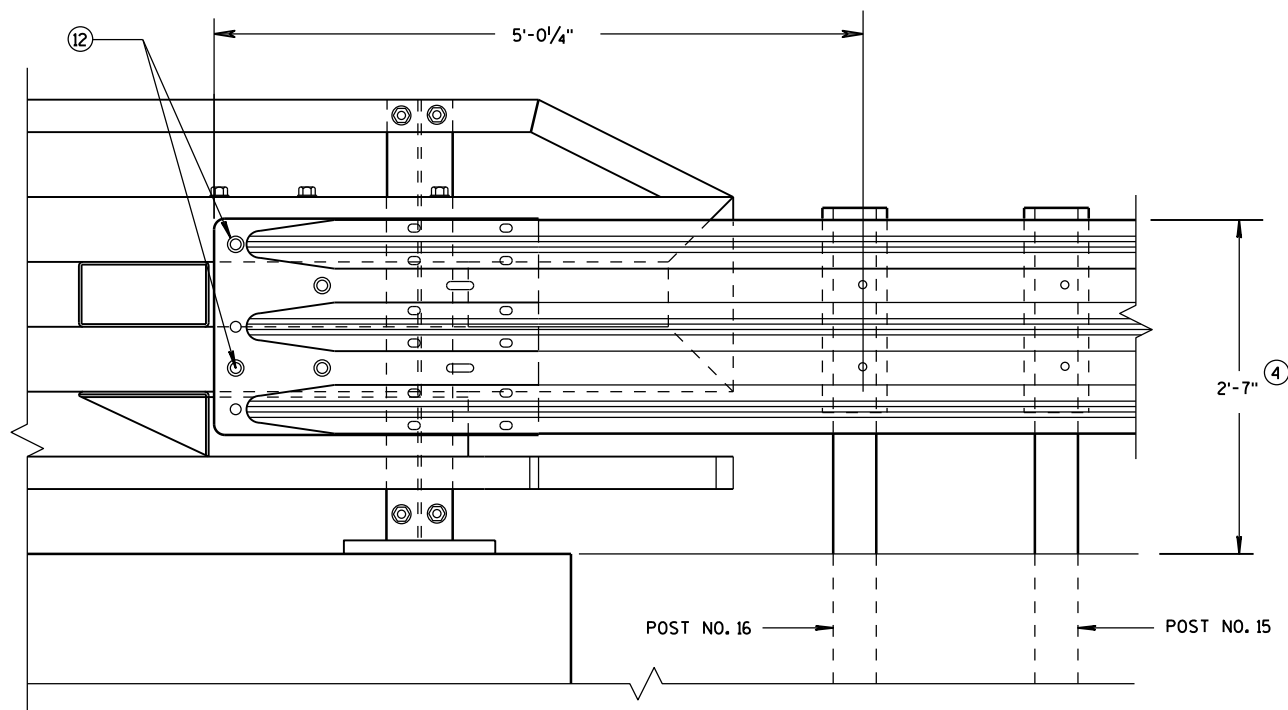
④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.

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ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



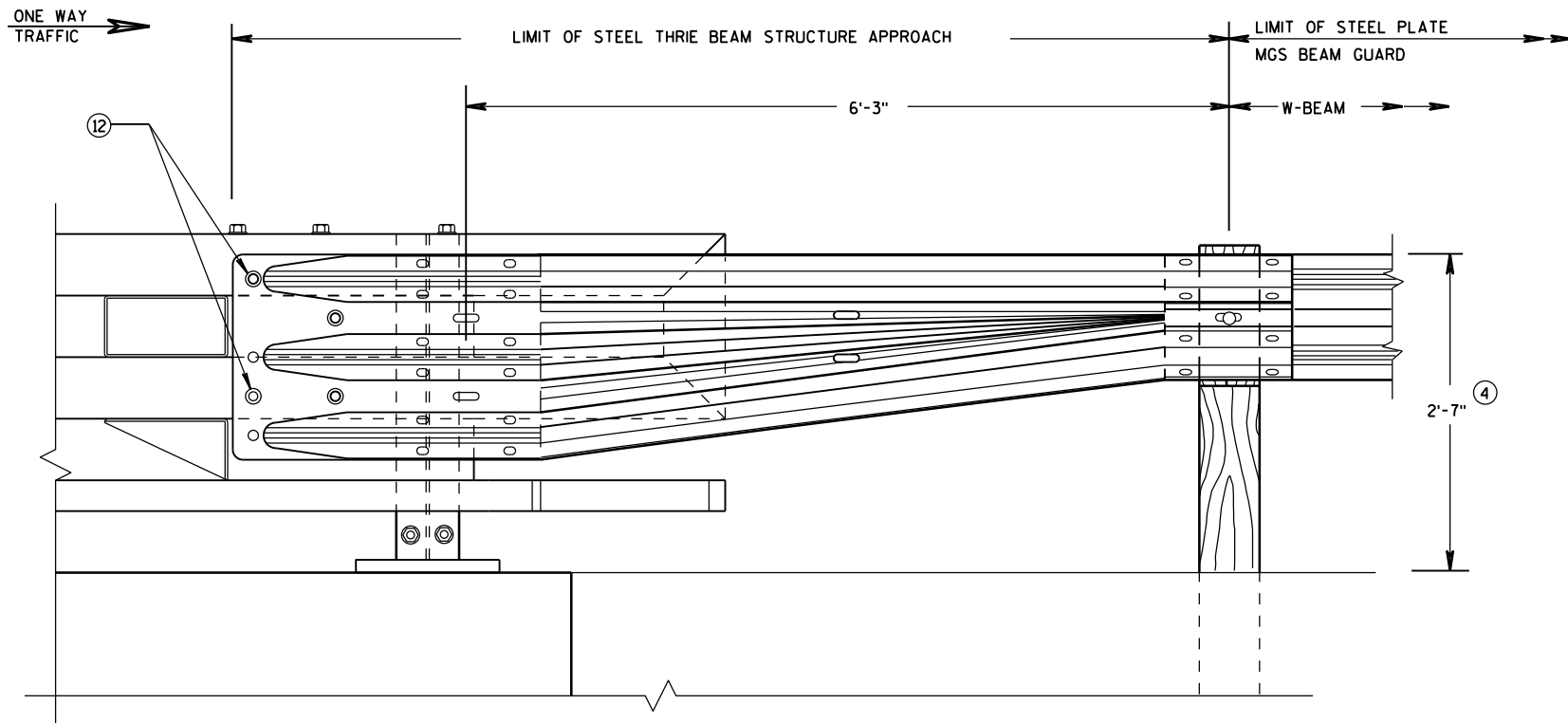
ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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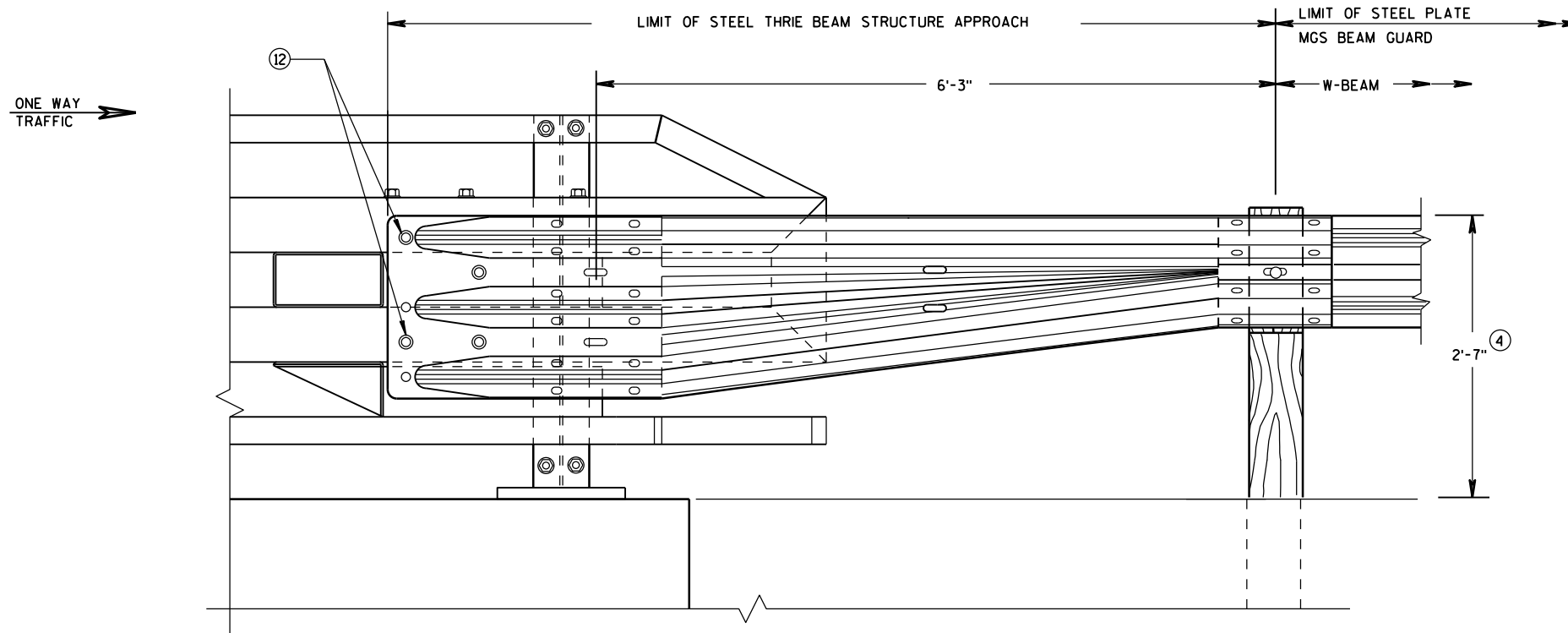


FRONT VIEW

**W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"**
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.



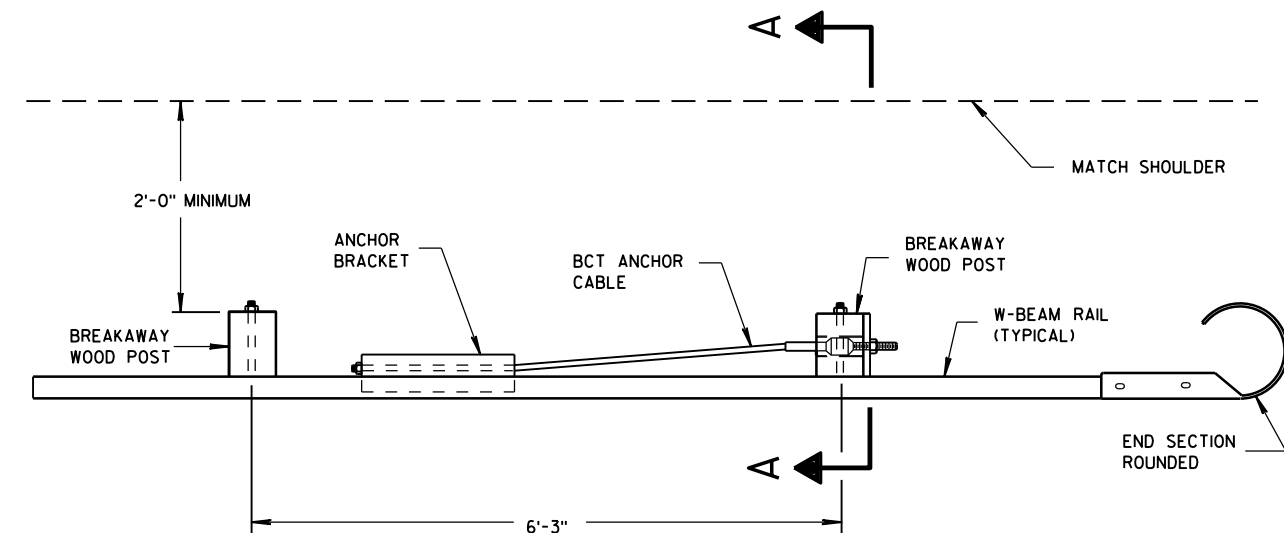
FRONT VIEW

**W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"**
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

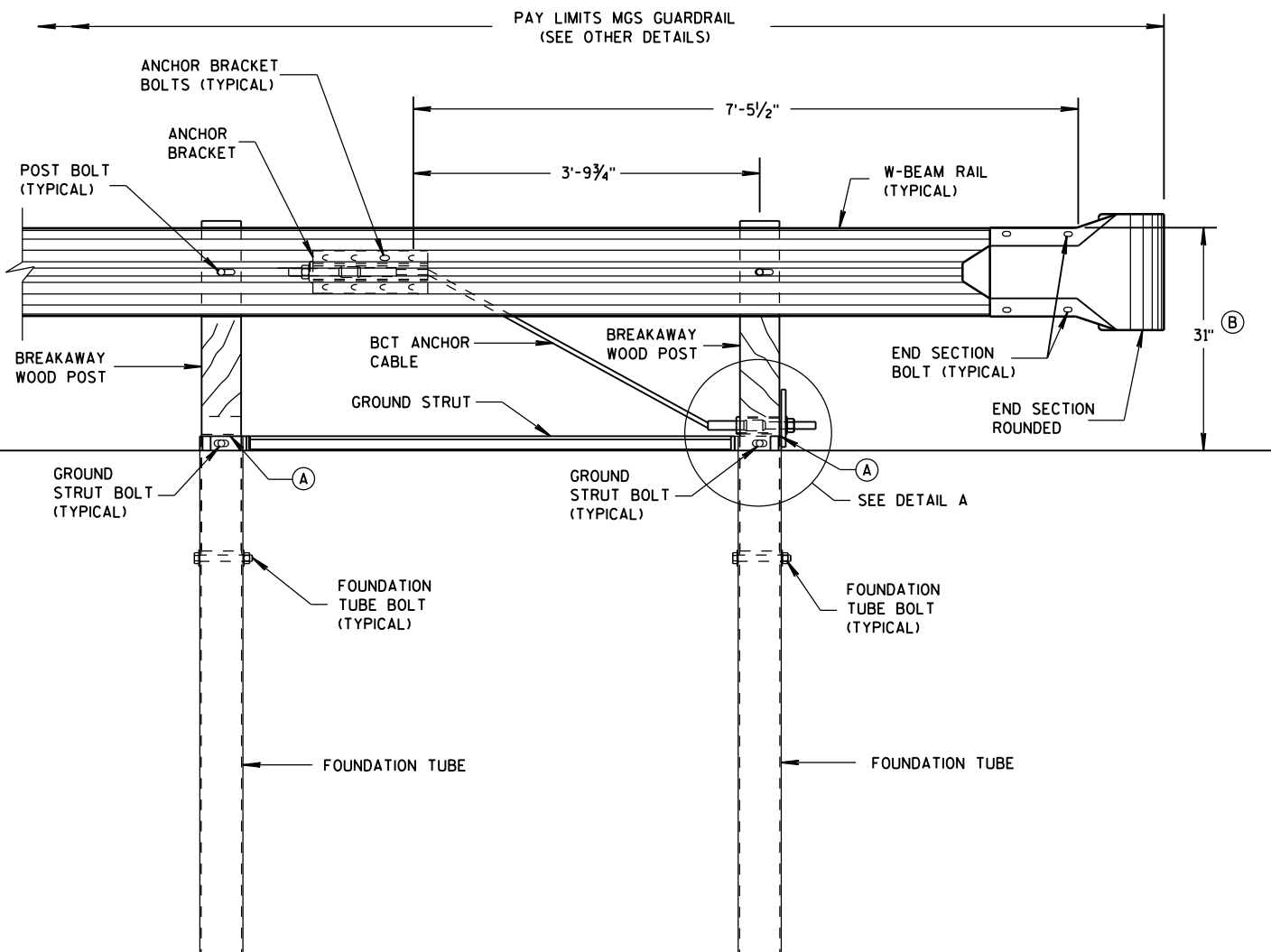
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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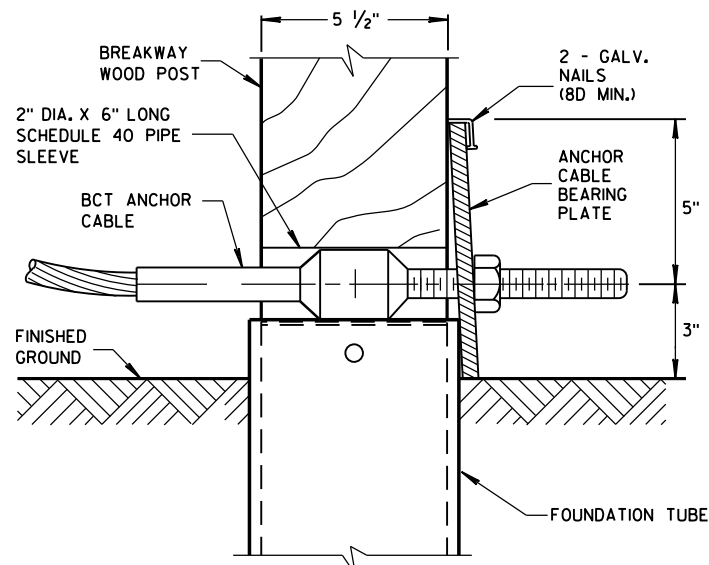


PLAN VIEW



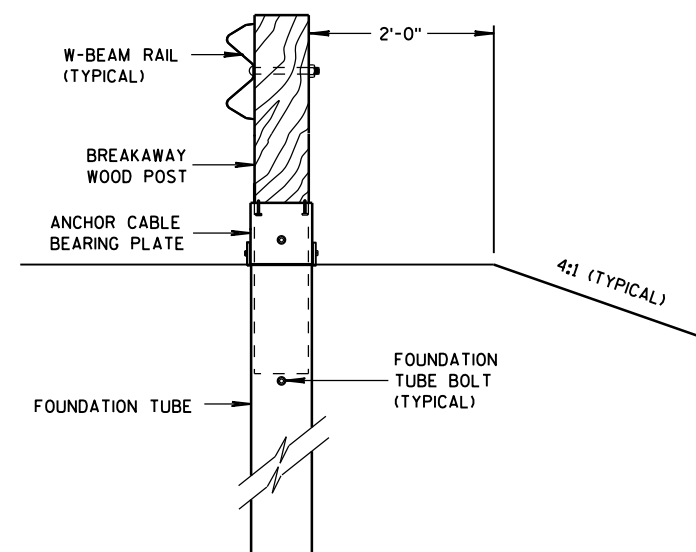
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

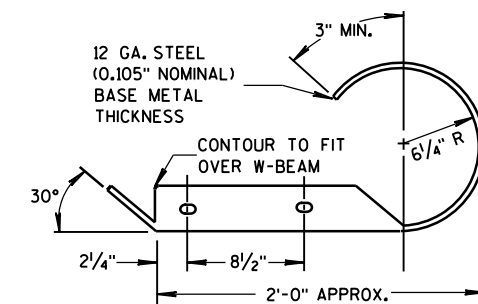
END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

FOUNDATION TUBE BOLTS ARE $\frac{7}{8}$ " DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 $\frac{7}{8}$ " DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

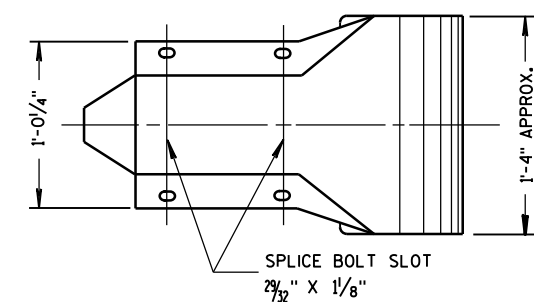
ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 $\frac{5}{8}$ " DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

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 $31" \pm 1"$.
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN $27\frac{3}{4}"$ TO $32" \pm 1"$.



PLAN VIEW

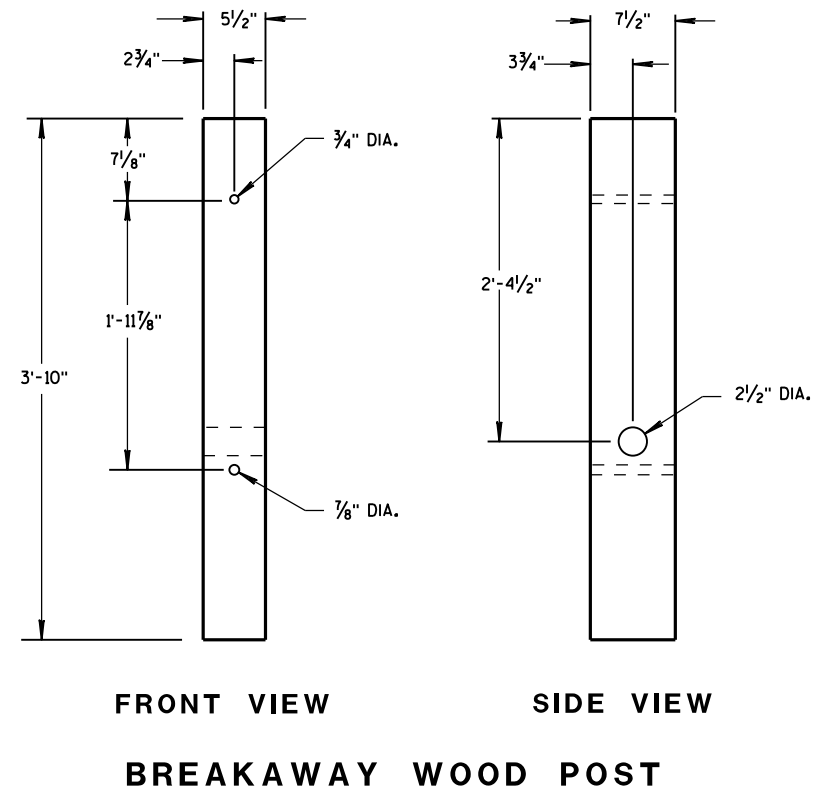
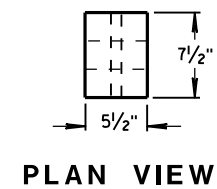
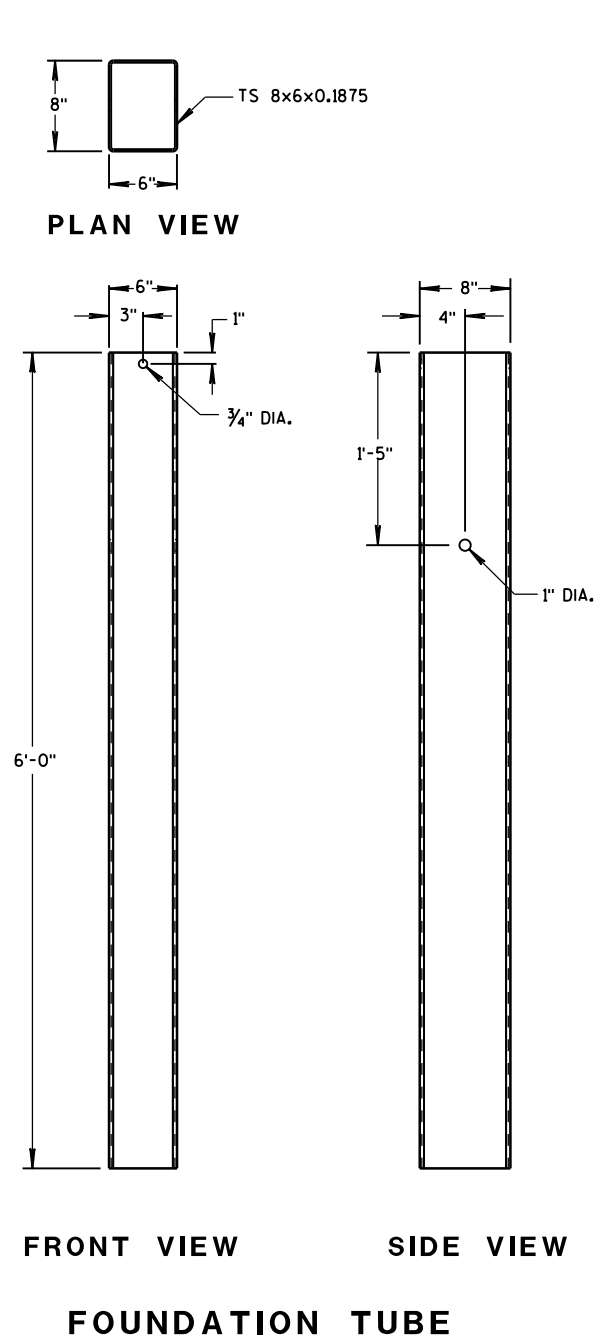


FRONT VIEW

W BEAM END
SECTION ROUNDED

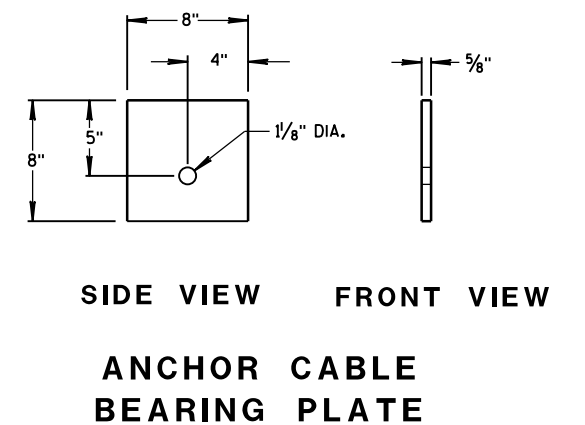
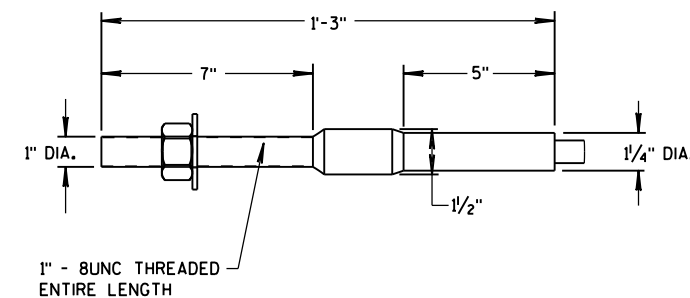
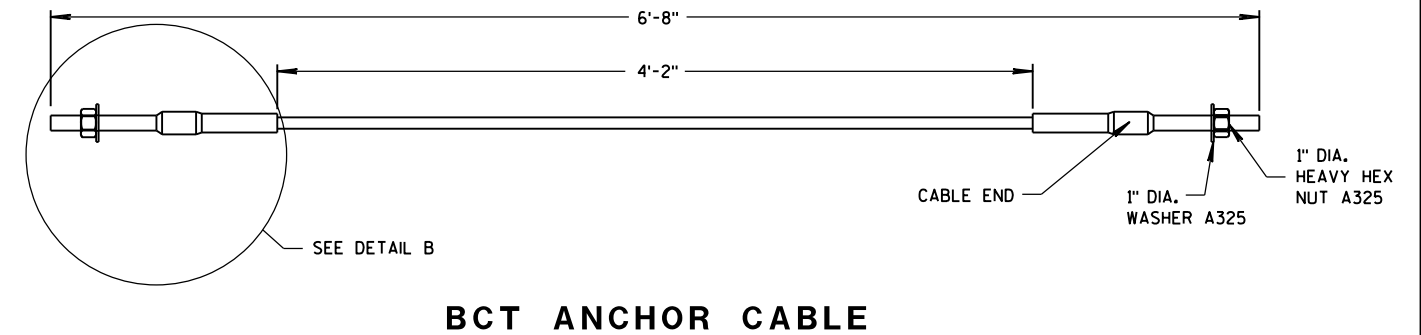
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



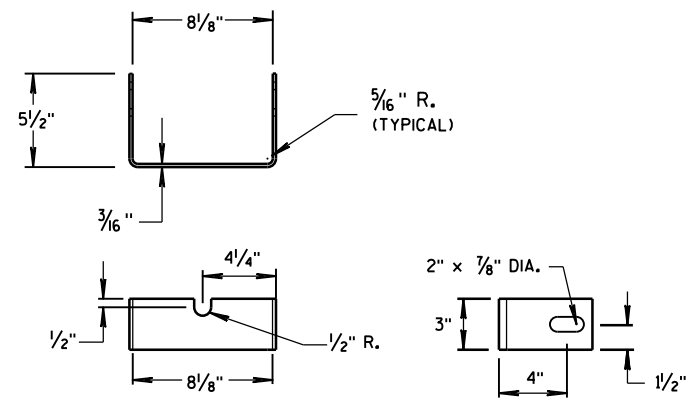
GENERAL NOTES

BCT ANCHOR CABLE IS A $\frac{3}{4}$ " 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.

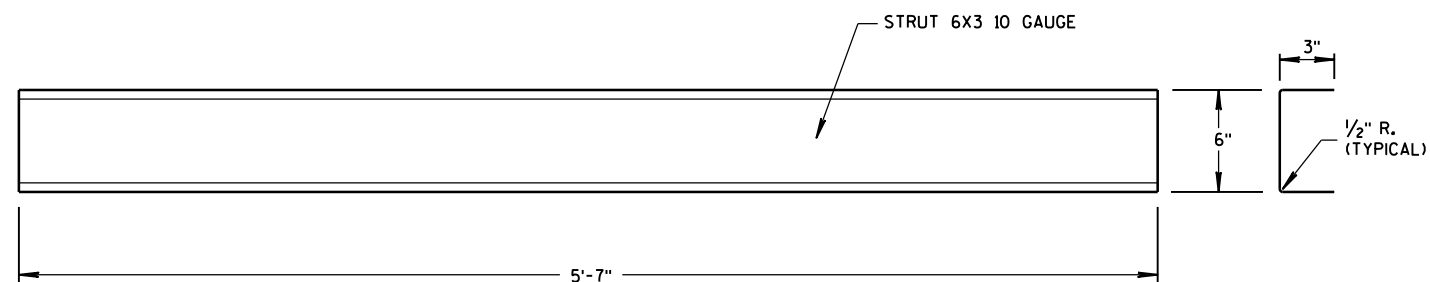


MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

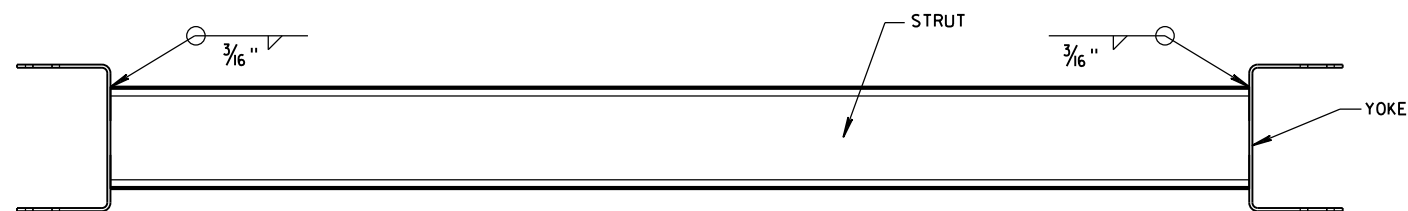
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



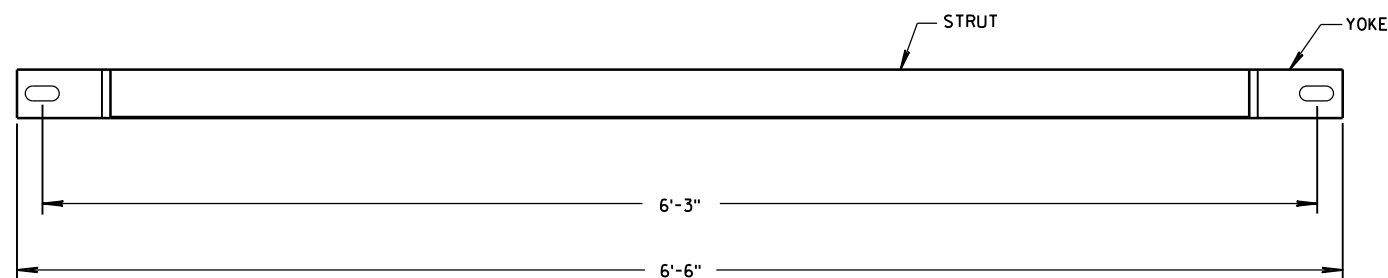
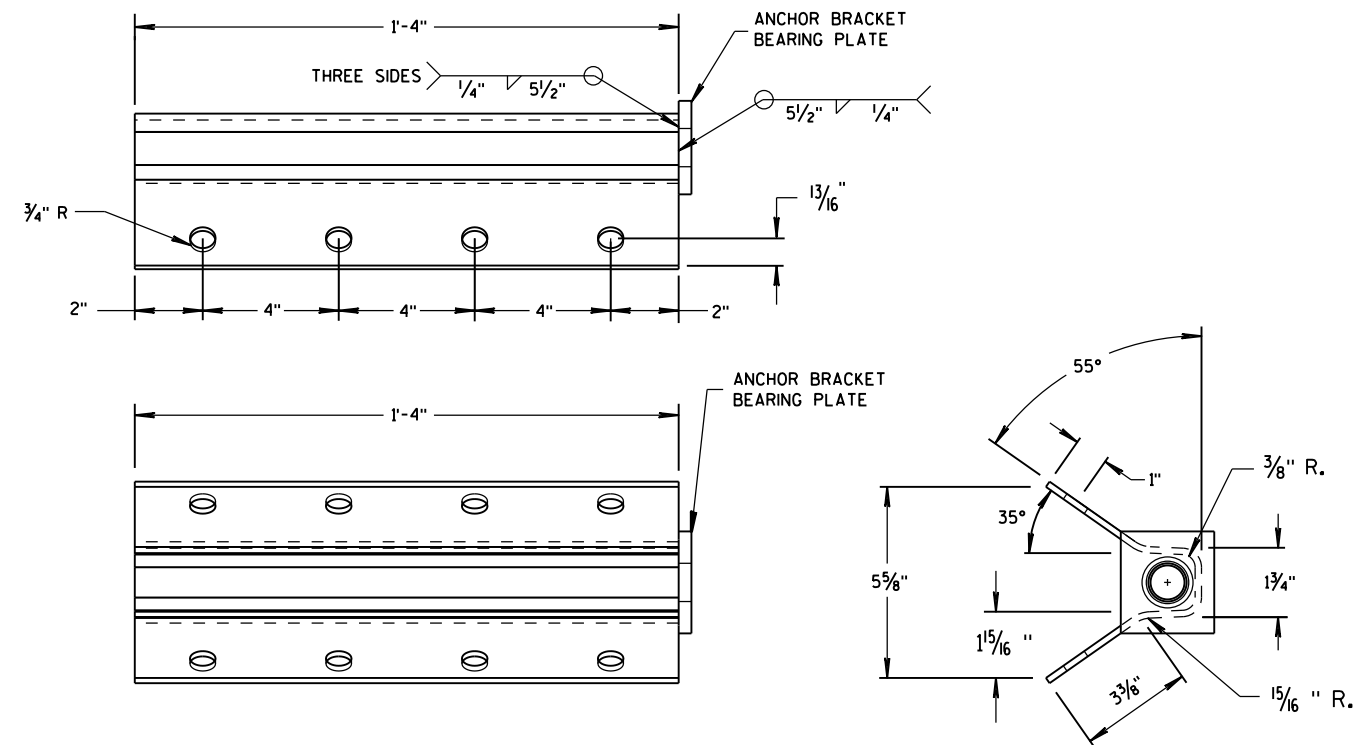
YOKE DETAIL



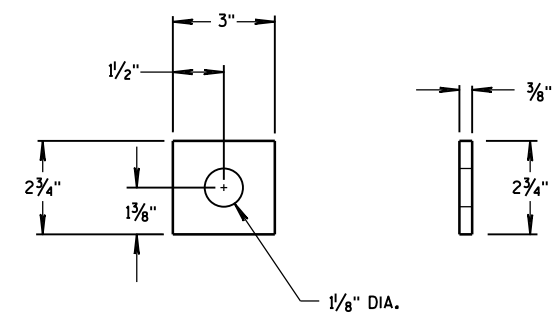
STRUT DETAIL



PLAN VIEW

FRONT VIEW
GROUND STRUT DETAIL

ANCHOR BRACKET

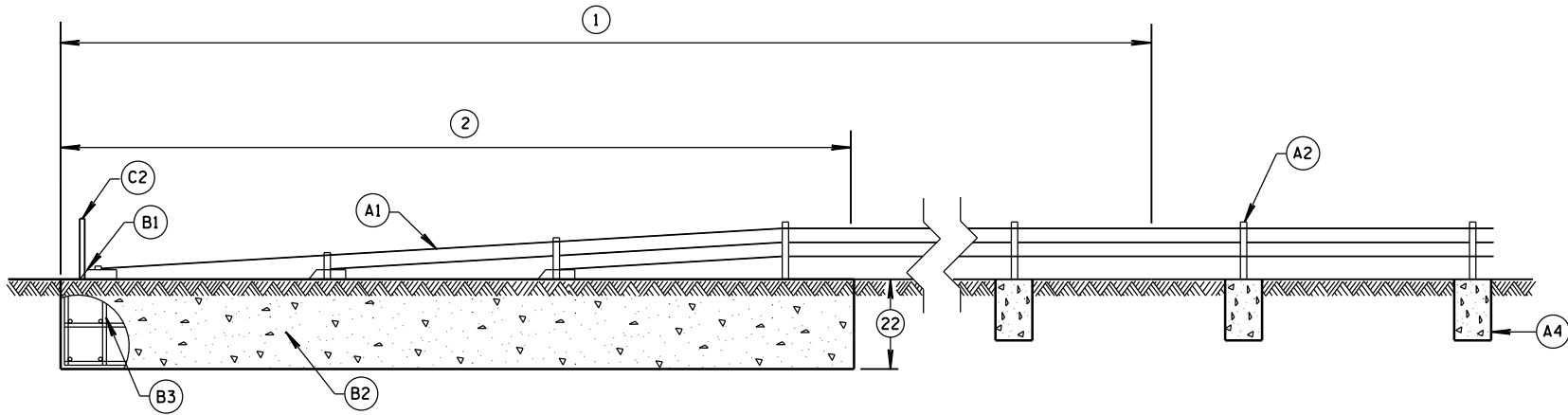
ANCHOR BRACKET
BEARING PLATEMIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINALSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

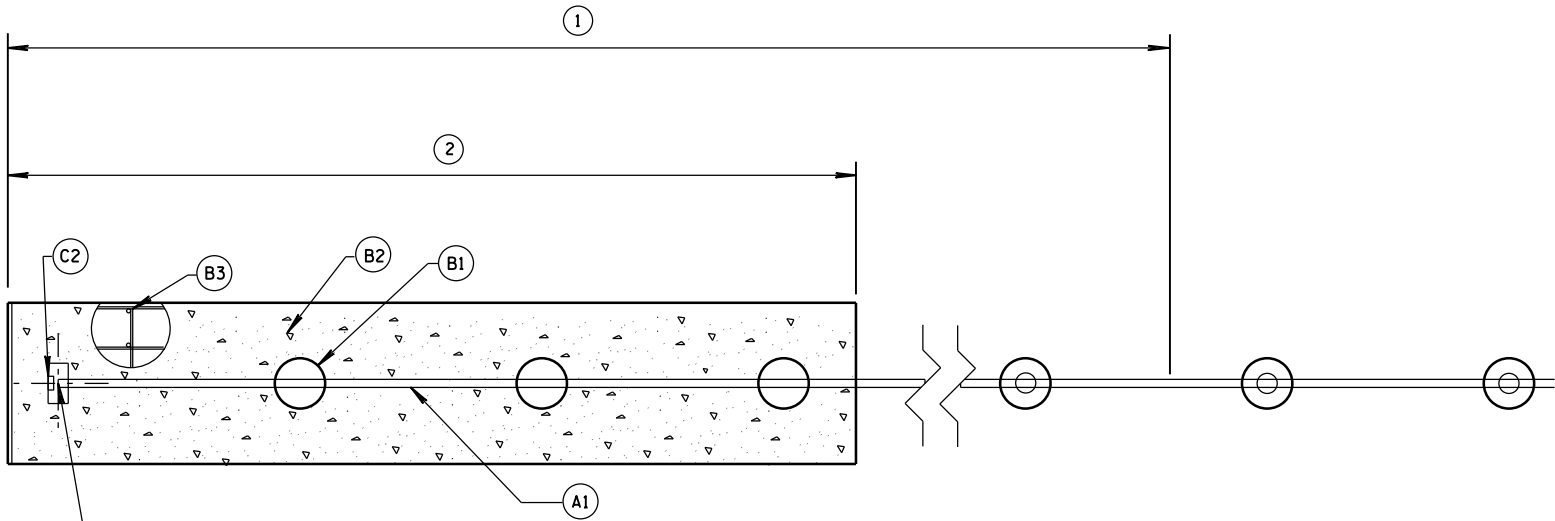
June 2014
DATE/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

287 ENT

FHWA

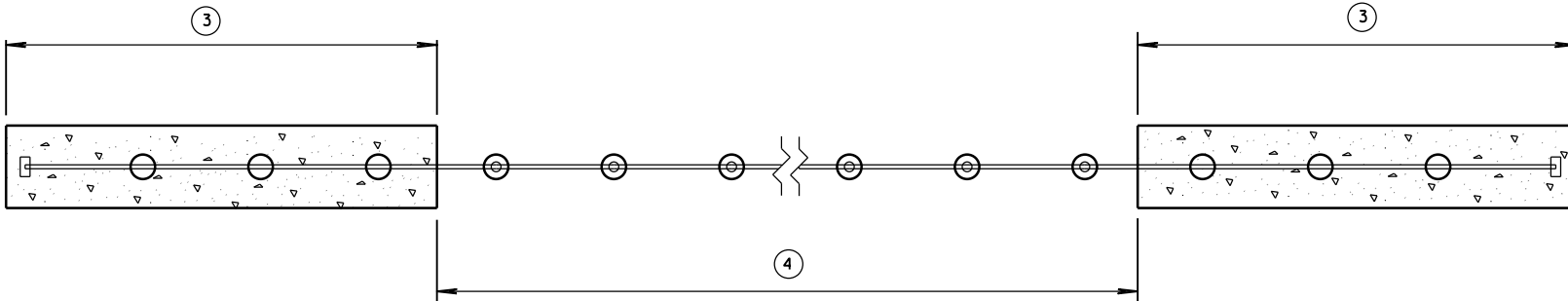


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER
TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

- DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.
- PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.
- INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.
- PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.
- PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.
- PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.
- PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.
- DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

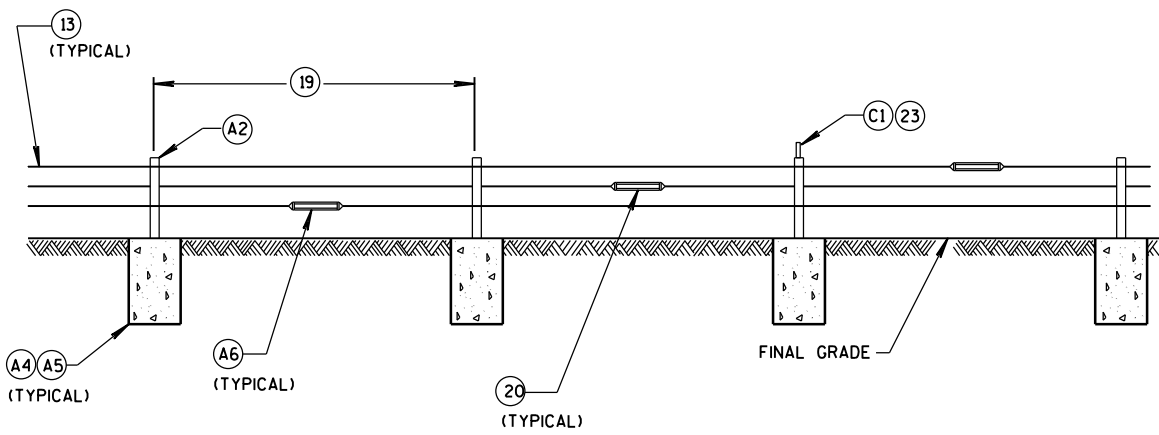
BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
A1	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS. AASHTO M30 TYPE 1 CLASS A (GALVANATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
A2	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
A3	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
A4	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES. STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE. SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
A5	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
A6	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS. MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE. TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
B1	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
B2	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2. STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
B3	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
C1	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
C2	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

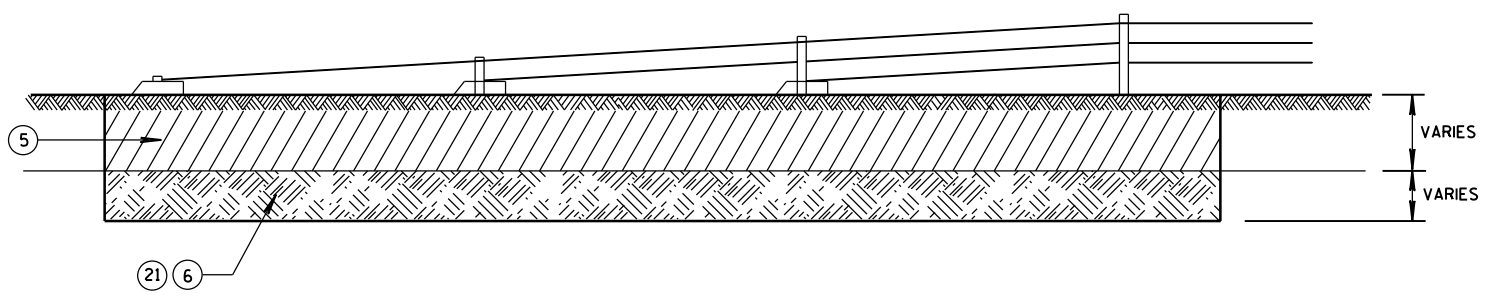
- 1 LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 2 PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 3 CABLE BARRIER END TERMINAL
- 4 CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1
LAYOUT

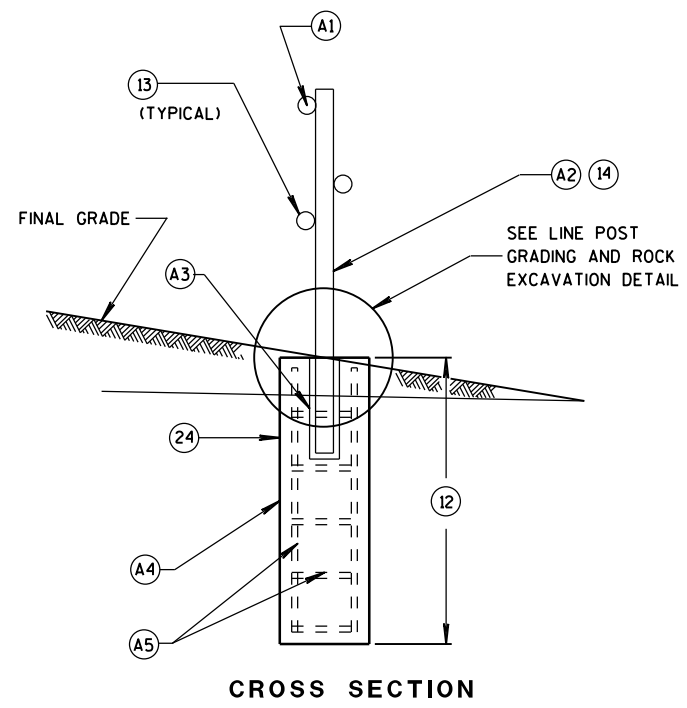
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



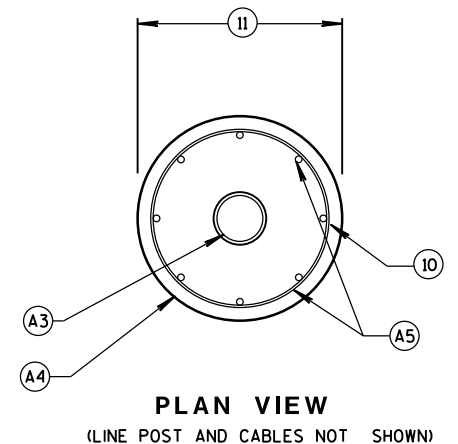
PROFILE VIEW
LINE POST INSTALLATION



CABLE BARRIER END
TERMINAL ROCK EXCAVATION DETAIL



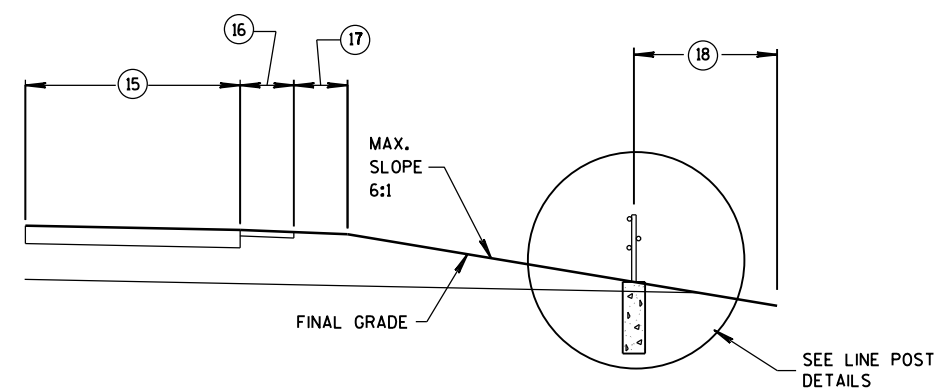
CROSS SECTION



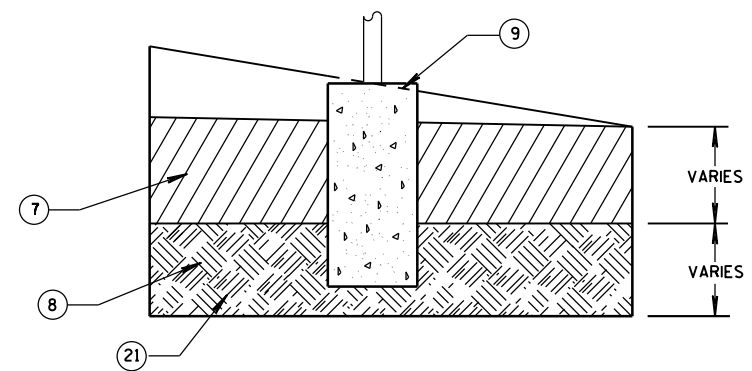
PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS

- ⑤ SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).
- ⑥ ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).
- ⑦ SOIL TO BE EXCAVATED FOR LINE POST (VARIES).
- ⑧ ROCK TO BE EXCAVATED FOR LINE POST (VARIES).
- ⑨ EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.
- ⑩ 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.
- ⑪ DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.
- ⑫ MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- ⑬ NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.
- ⑭ LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.
- ⑮ LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.
- ⑯ PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- ⑰ GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- ⑱ CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.
- ⑲ MAXIMUM POST SPACING IS 15 FEET.
- ⑳ STAGGER TURNBUCKLES (TYPICAL).
- ㉑ SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.
- ㉒ IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.
- ㉓ LINE POST DELINEATOR SPACING IS 100 FEET.
- ㉔ LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

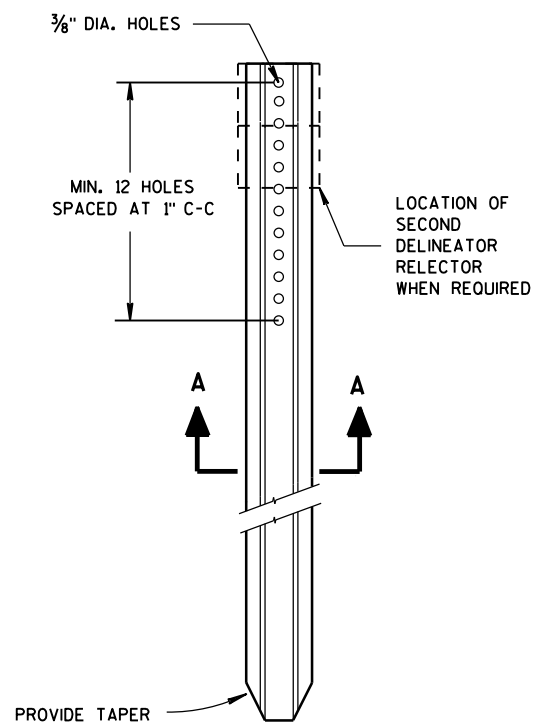


CABLE BARRIER OFFSET FROM DITCH LINE

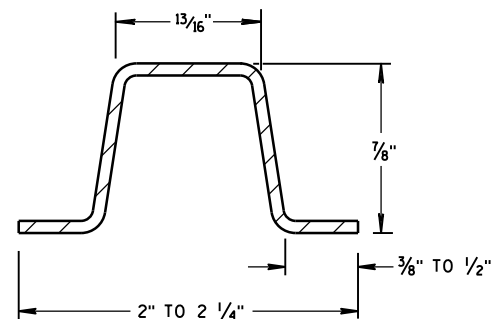
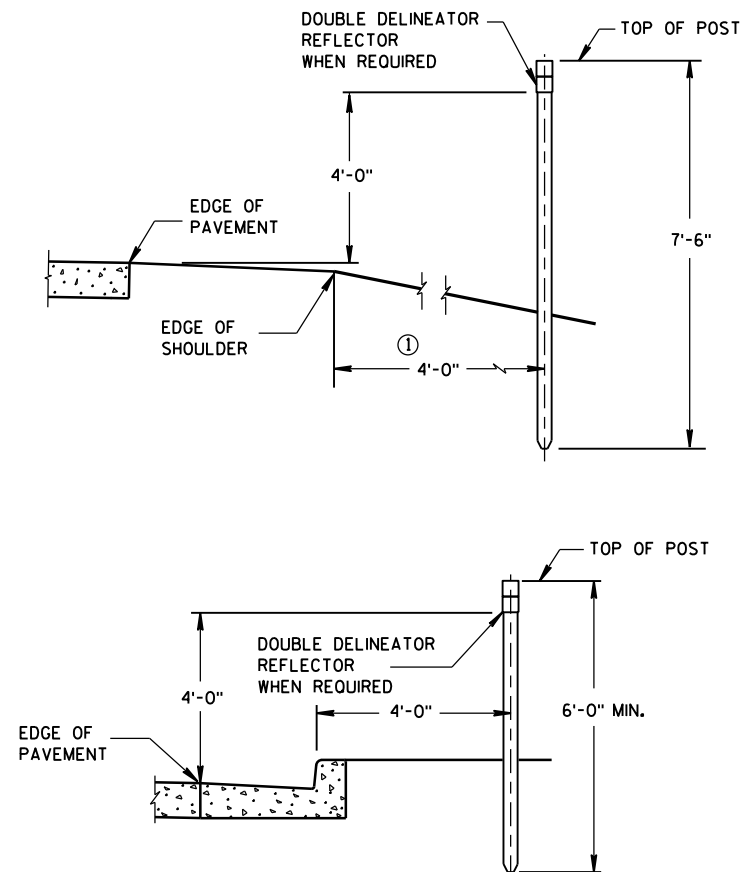


LINE POST GRADING
AND ROCK EXCAVATION DETAIL

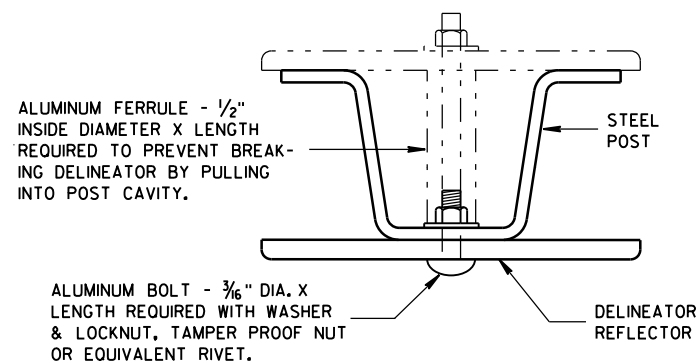
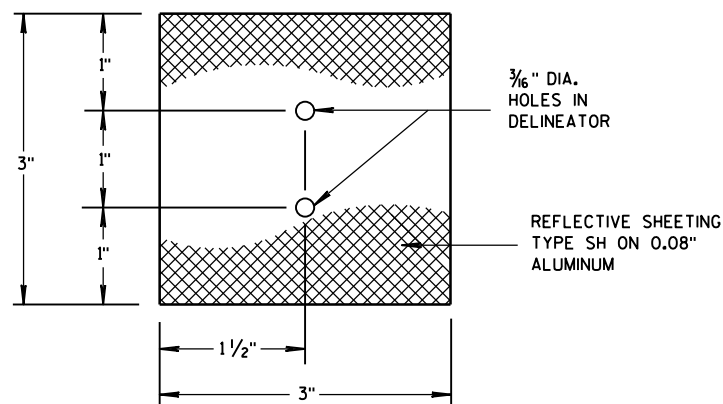
CABLE BARRIER TYPE 1 LAYOUT			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED June, 2015 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER	289	ENT
FHWA			



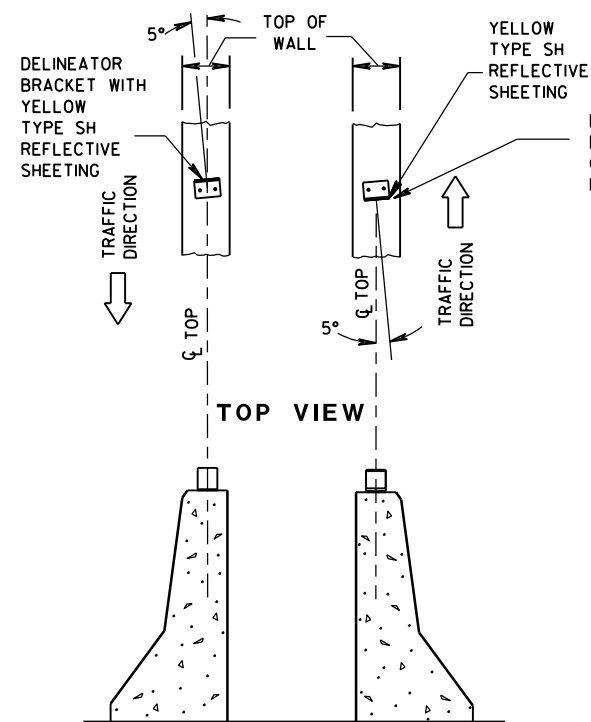
DELINEATOR POST

SECTION A-A
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

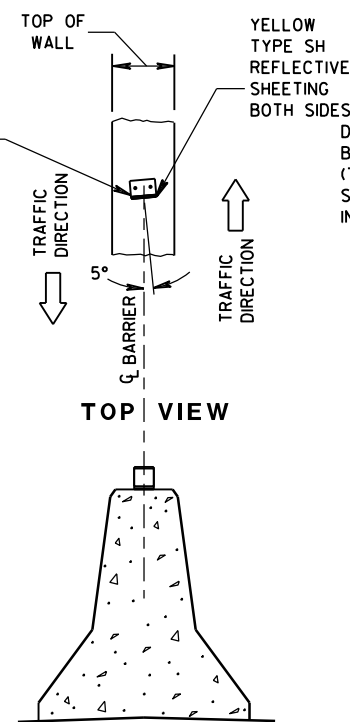
TYPICAL INSTALLATIONS OF DELINEATOR POSTS

MOUNTING DETAIL
FOR DELINEATOR REFLECTOR

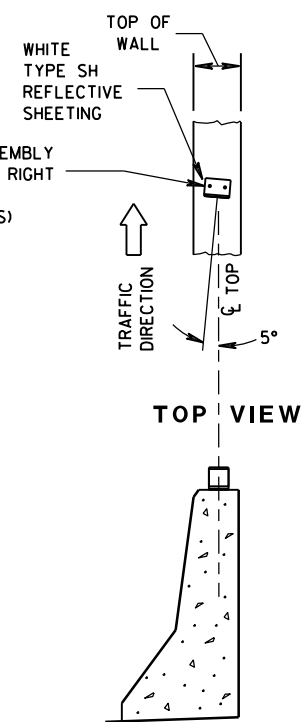
3" x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER

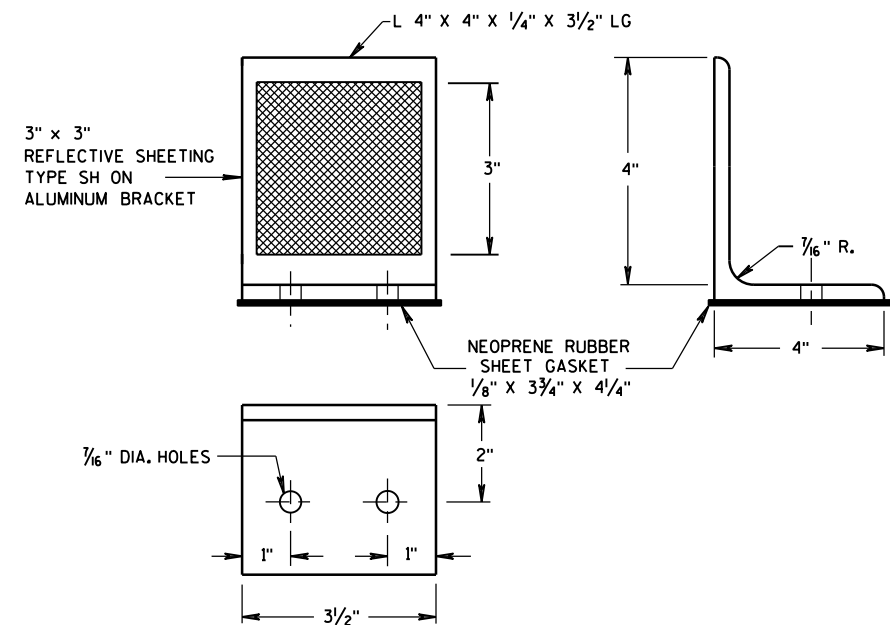
BARRIER LOCATED
TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS

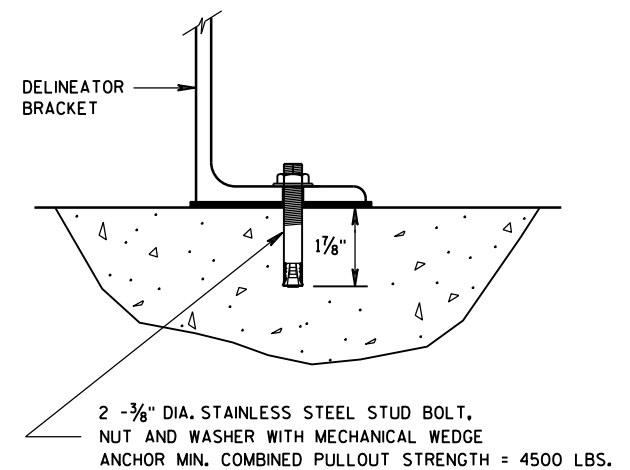
GENERAL NOTES

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

- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



DELINEATOR BRACKET

DELINEATOR BRACKET
MOUNTING DETAIL

DELINEATOR POST,
DELINEATOR REFLECTOR AND
DELINEATOR BRACKET
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16

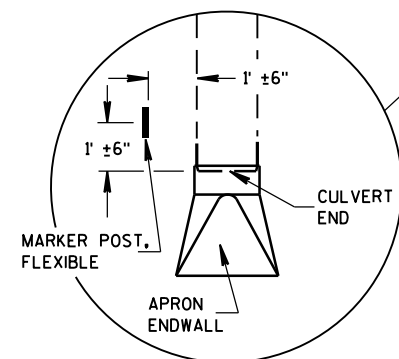
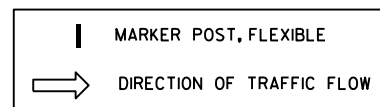
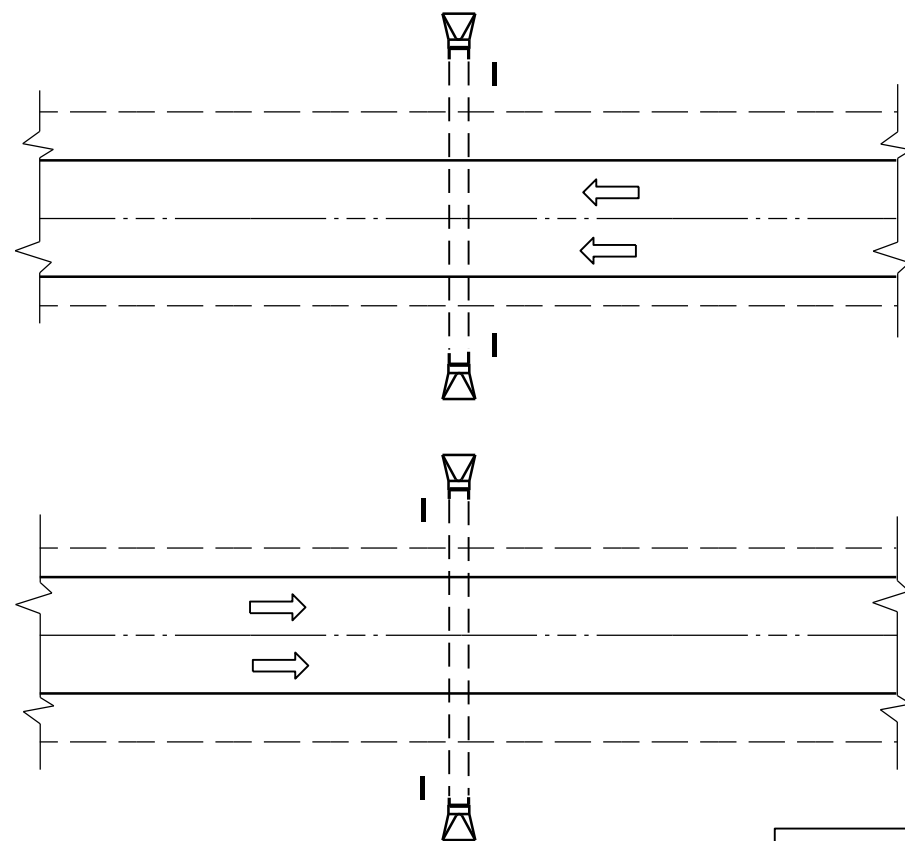
DATE

/S/ Matthew R. Rauch

STATE SIGNING AND MAINTENANCE ENGINEER

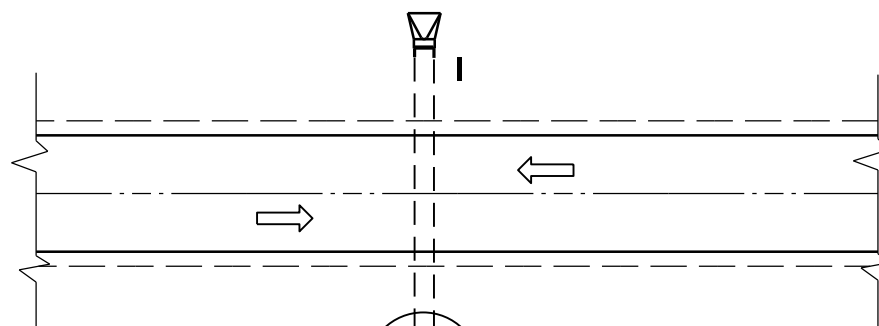
FHWA

PLAN VIEW
DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

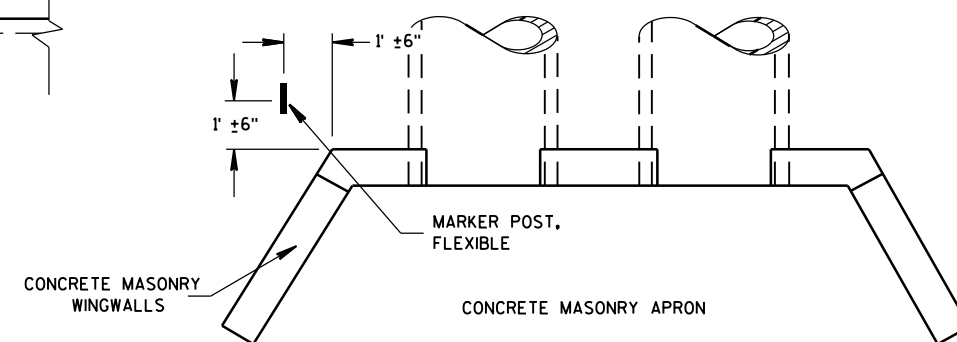
PLAN VIEW
UNDIVIDED HIGHWAY



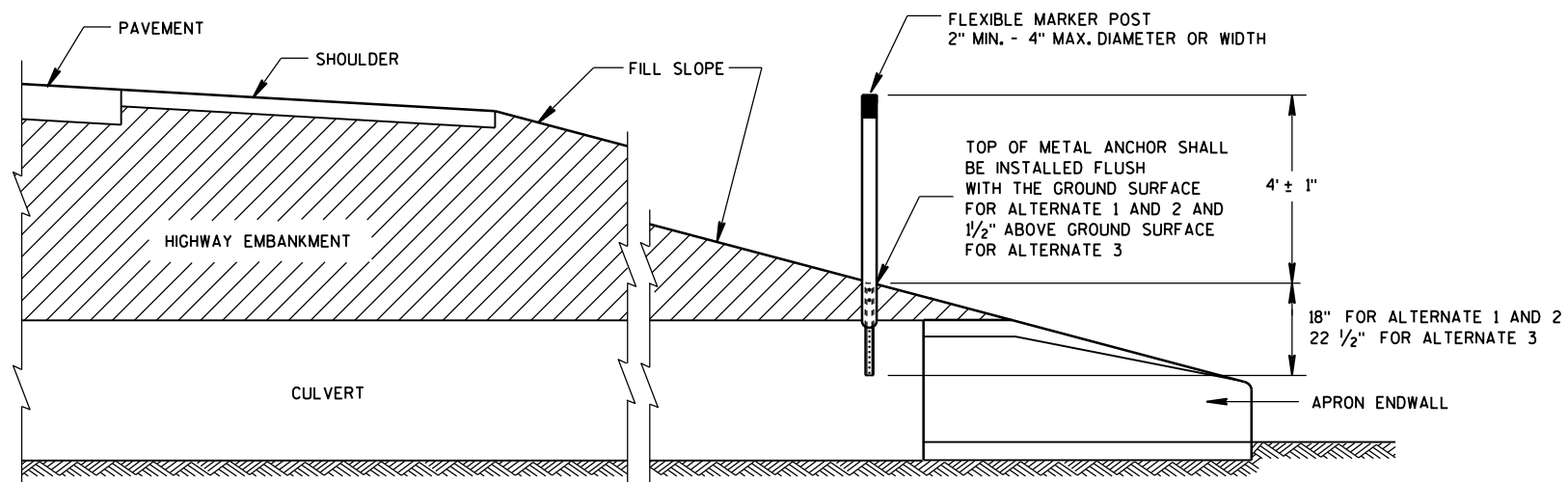
FLEXIBLE MARKER POST LOCATION

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.



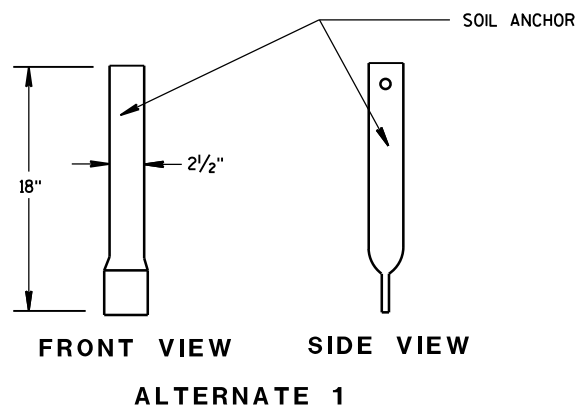
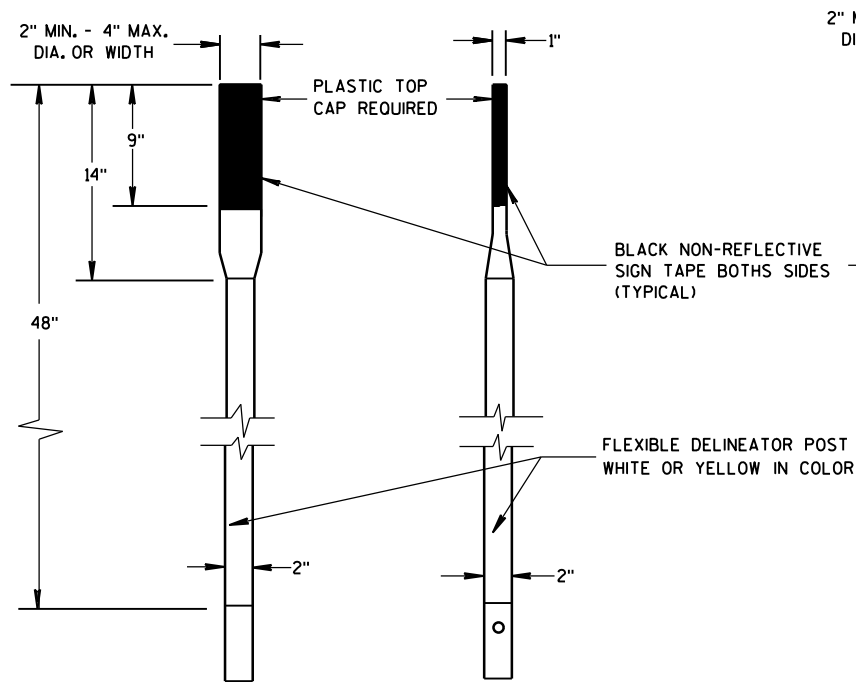
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



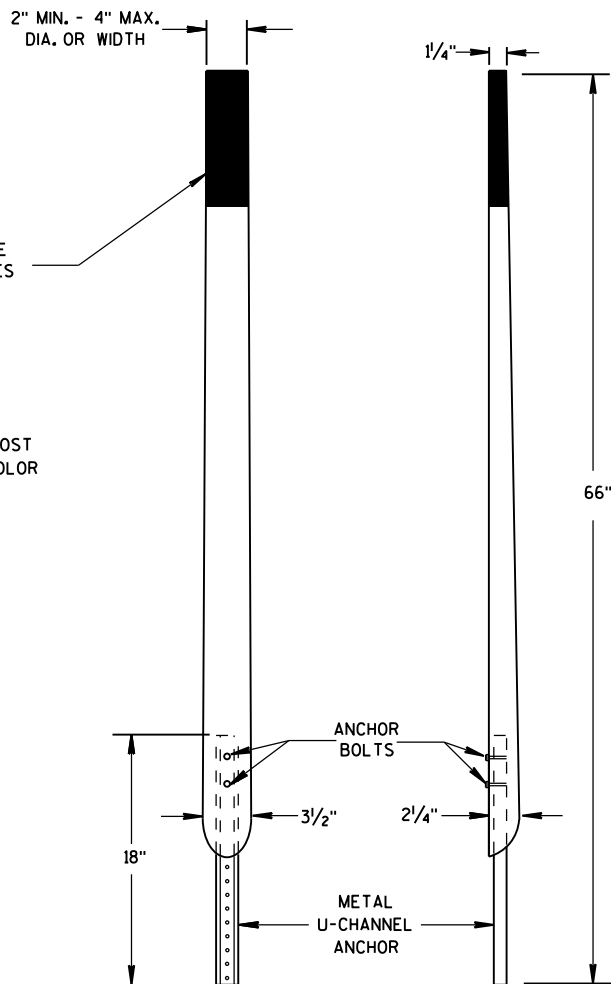
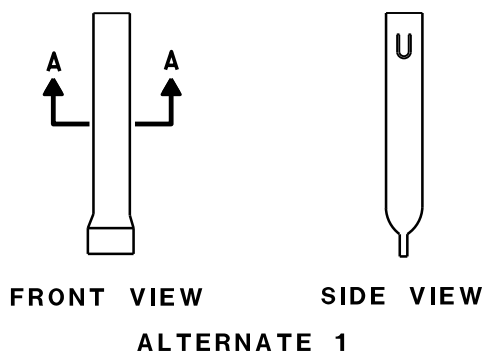
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

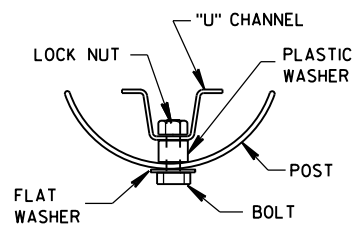


SECTION A-A

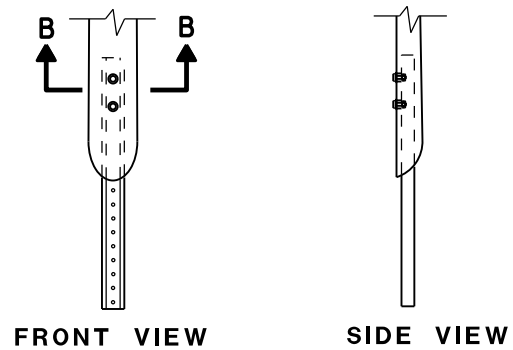


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POSTS

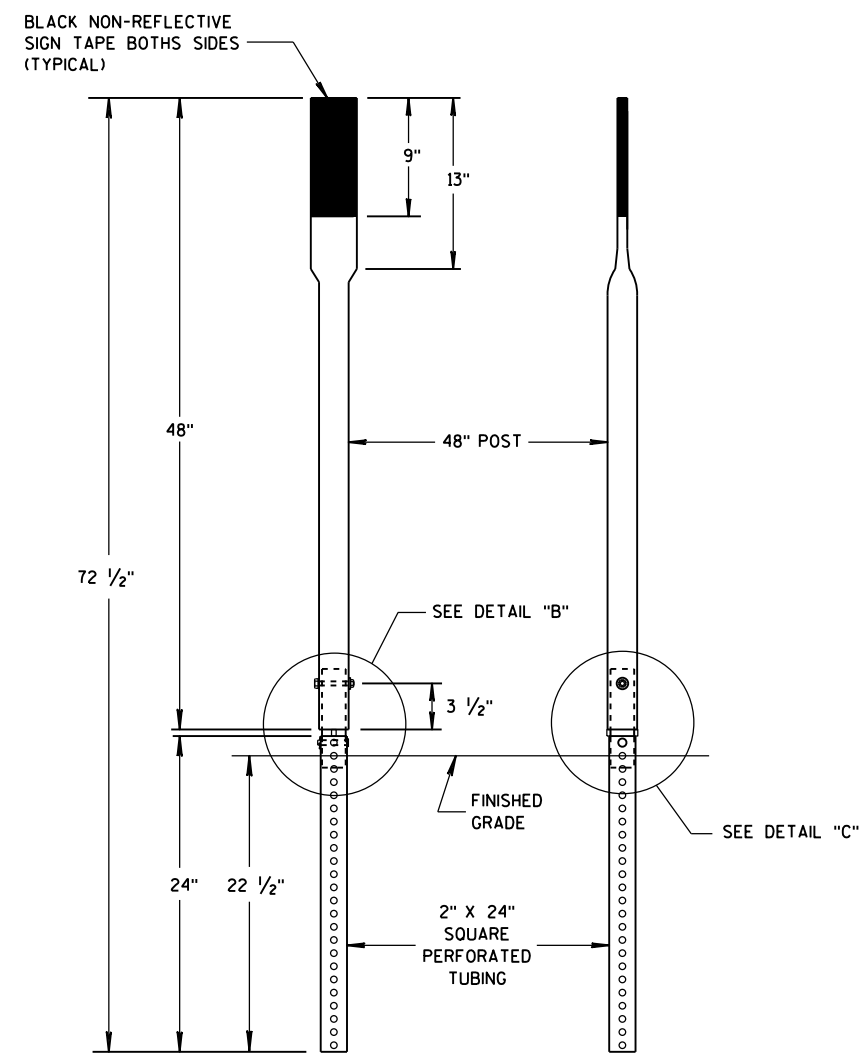


SECTION B-B

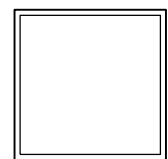


FRONT VIEW SIDE VIEW
ALTERNATE 2

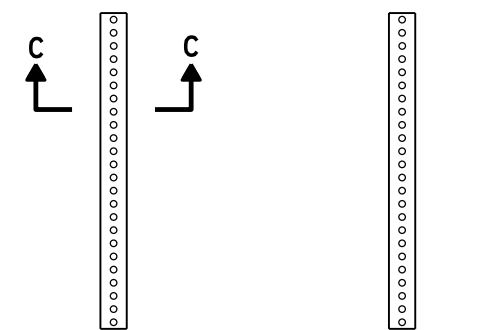
FLEXIBLE MARKER POST ANCHORS



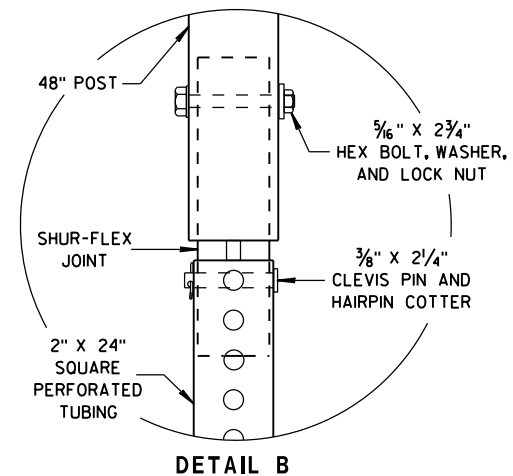
FRONT VIEW SIDE VIEW
ALTERNATE 3



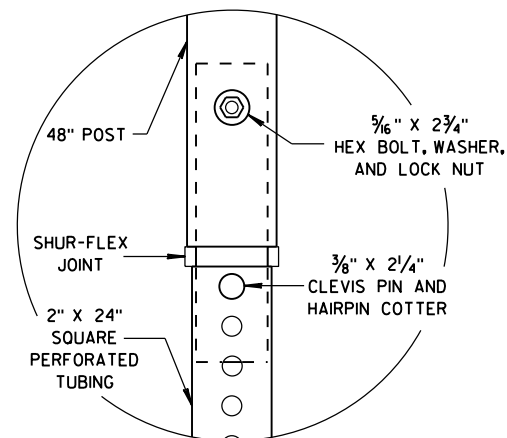
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/1/2012

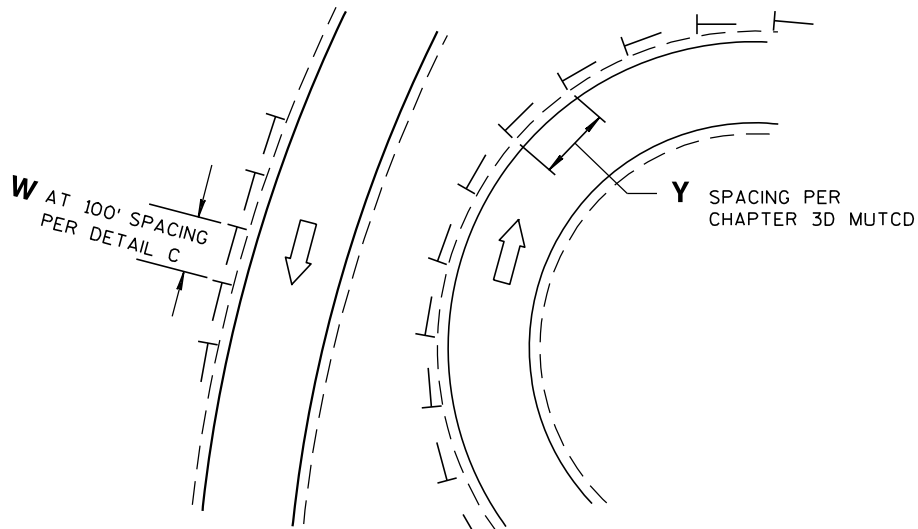
DATE

FHWA

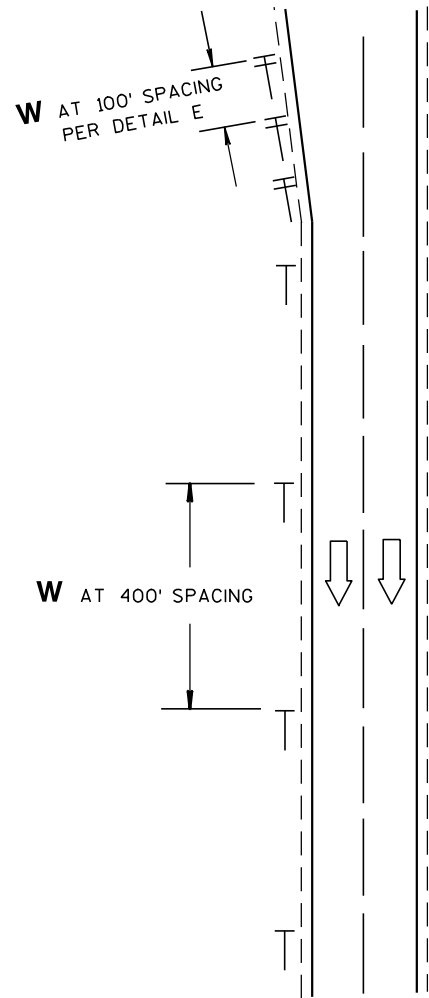
/S/ Travis Feltes

STATE TRAFFIC ENGINEER 292

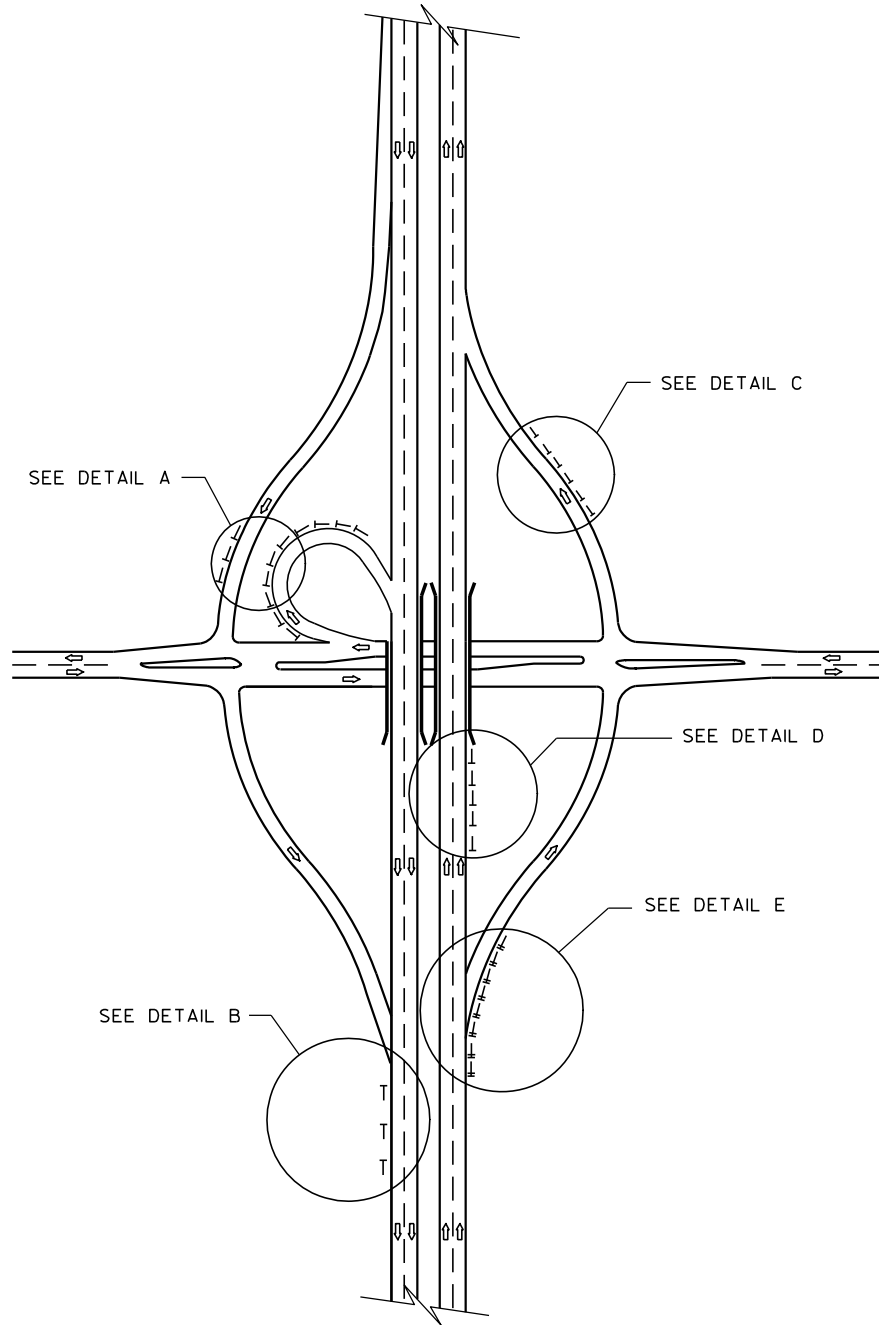
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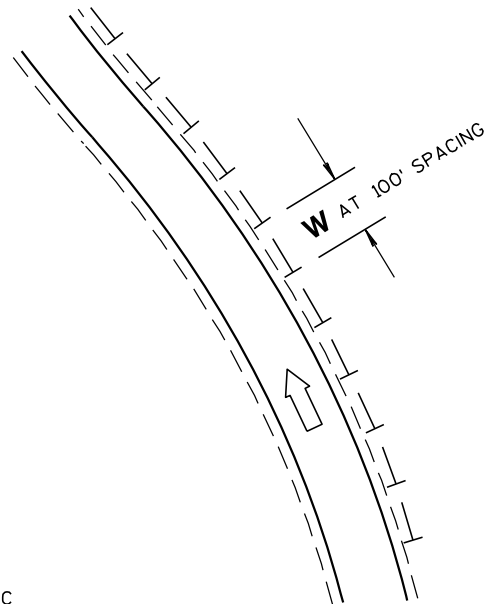
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



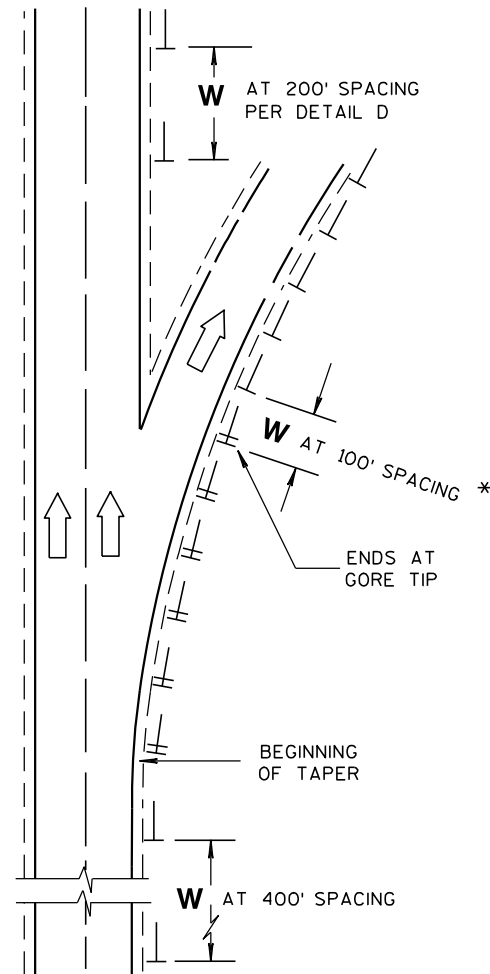
DETAIL B
DELINEATOR LAYOUT
ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL C
DELINEATOR LAYOUT ALONG RAMP



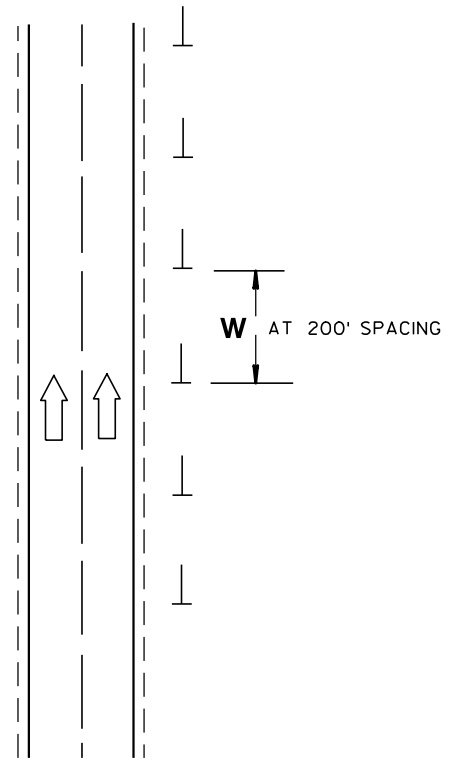
DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION
- DECELERATION LANES AND TAPERS AT RAMPS

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS.
USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.

LEGEND

- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W** WHITE
- Y** YELLOW



DETAIL D
DELINEATOR LAYOUT
BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 /S/ Thomas N. Nothmann
DATE STATE TRAFFIC ENGINEER 293 SIGN
FHWA

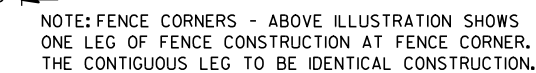
ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



"X ϕ " = DIAMETER OF THE POST PLUS 12".

DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

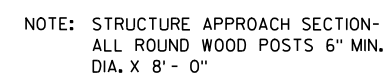
FENCE SHALL BE LOCATED 3'-0" INSIDE
THE RIGHT OF WAY LINE UNLESS
OTHERWISE INDICATED ON THE PLANS.



END OR CORNER POSTS ASSEMBLY



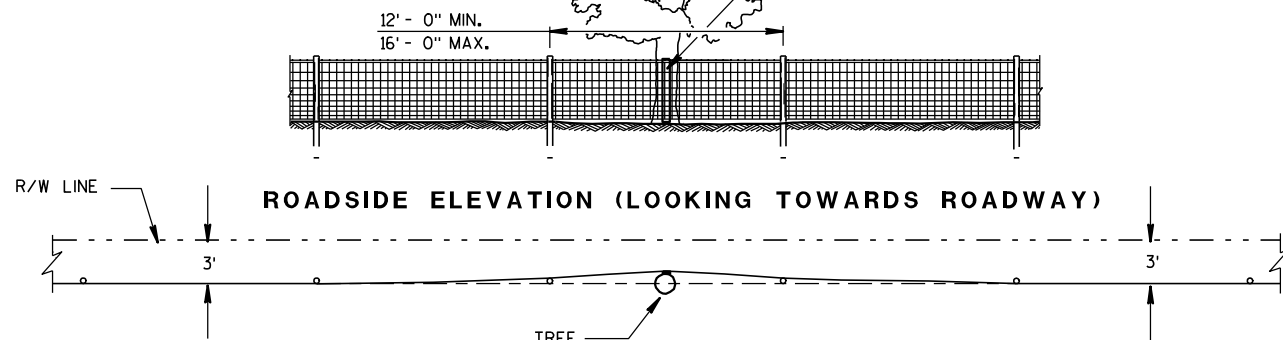
GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



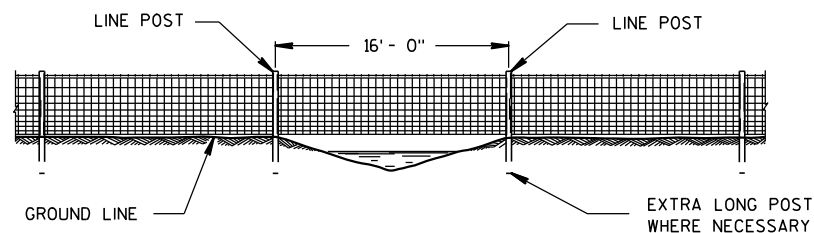
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

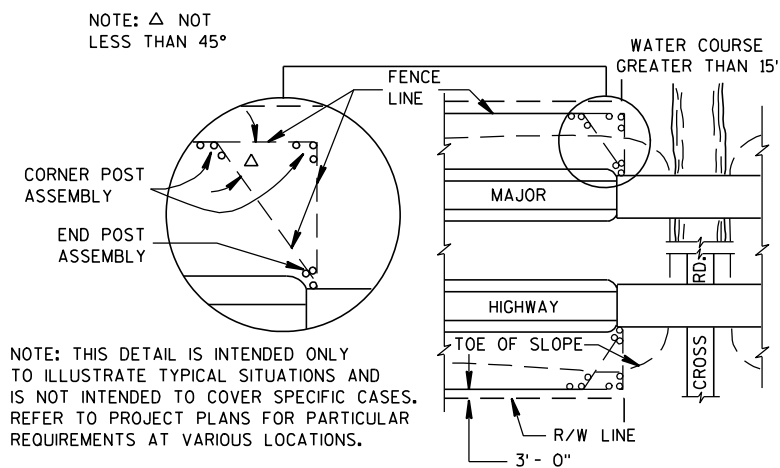
2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.



PLAN VIEW
FENCE DESIGN AT TREES REMAINING
IN NORMAL FENCE LINE

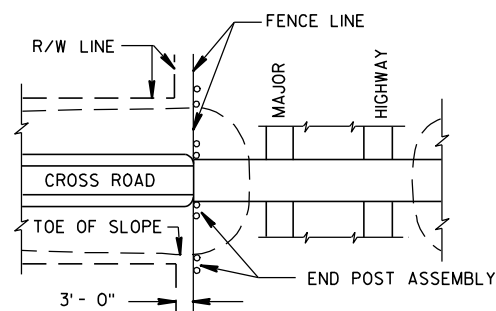


FENCE CONSTRUCTION OVER STREAM
COURSES OF 15 FT. OR LESS IN WIDTH

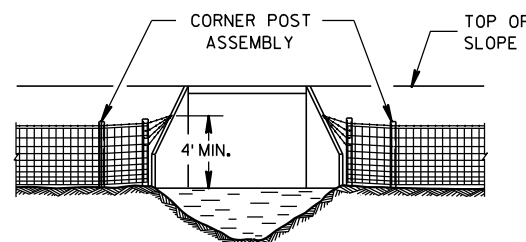


PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE
CROSSING OF GREATER THAN 15 FT. IN WIDTH

FENCE LOCATION AT STRUCTURES

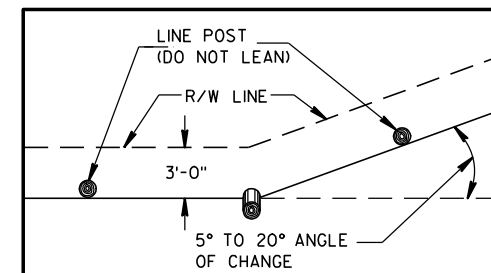
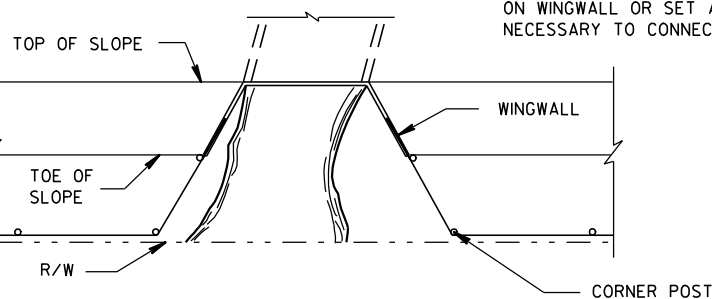


PLAN VIEW
MAJOR HIGHWAY UNDERPASS

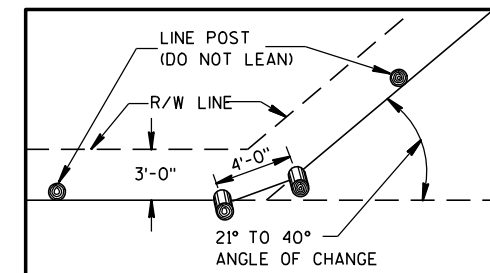


FENCE INSTALLATION TO WINGWALLS

NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



PLAN VIEW
SINGLE POST CORNER

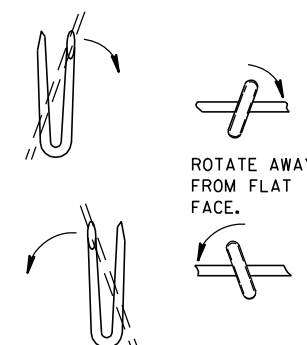


PLAN VIEW
DOUBLE POST CORNER

RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



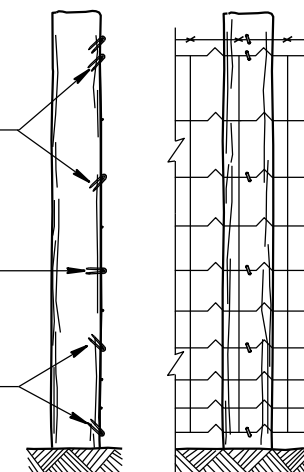
LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

STAPLES SLOPED DOWNWARD FOR SUSTAINED GRADES AND OVER KNOLLS.

STAPLES LEVEL FOR LEVEL GROUND.

SLOPE UPWARDS WHEN FENCE TENDS TO LIFT.



END ELEVATION
FARM SIDE ELEVATION
FENCE MOUNTING DETAIL

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/4/2008

DATE

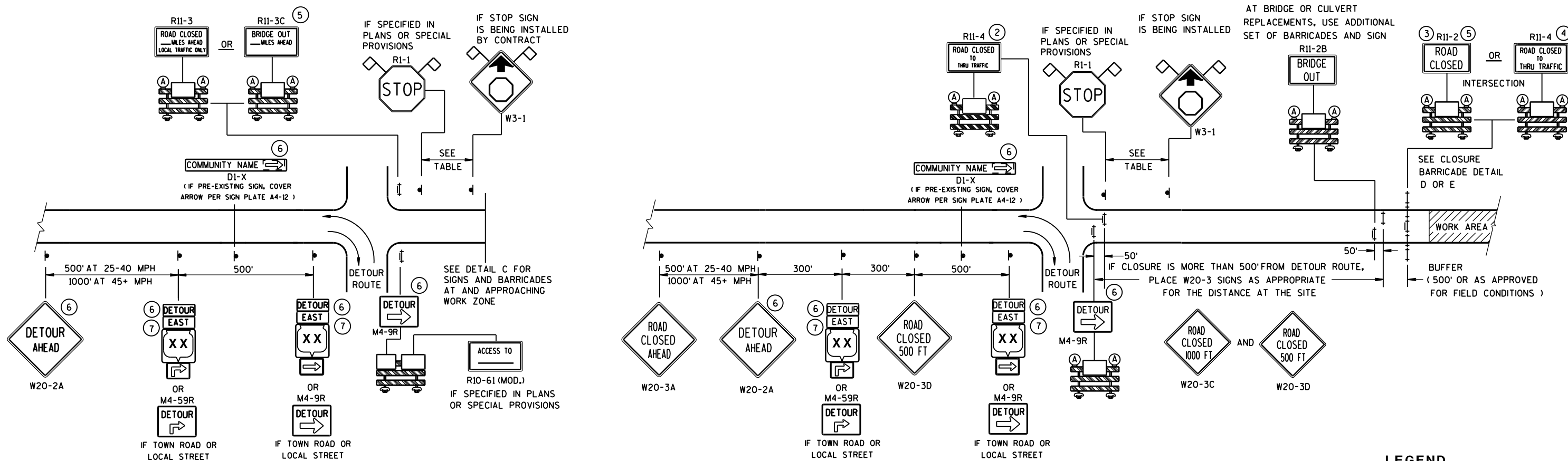
FHWA

/S/ Jerry H. 7

ROADWAY STANDARDS 295

ENGINEER

ENT



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

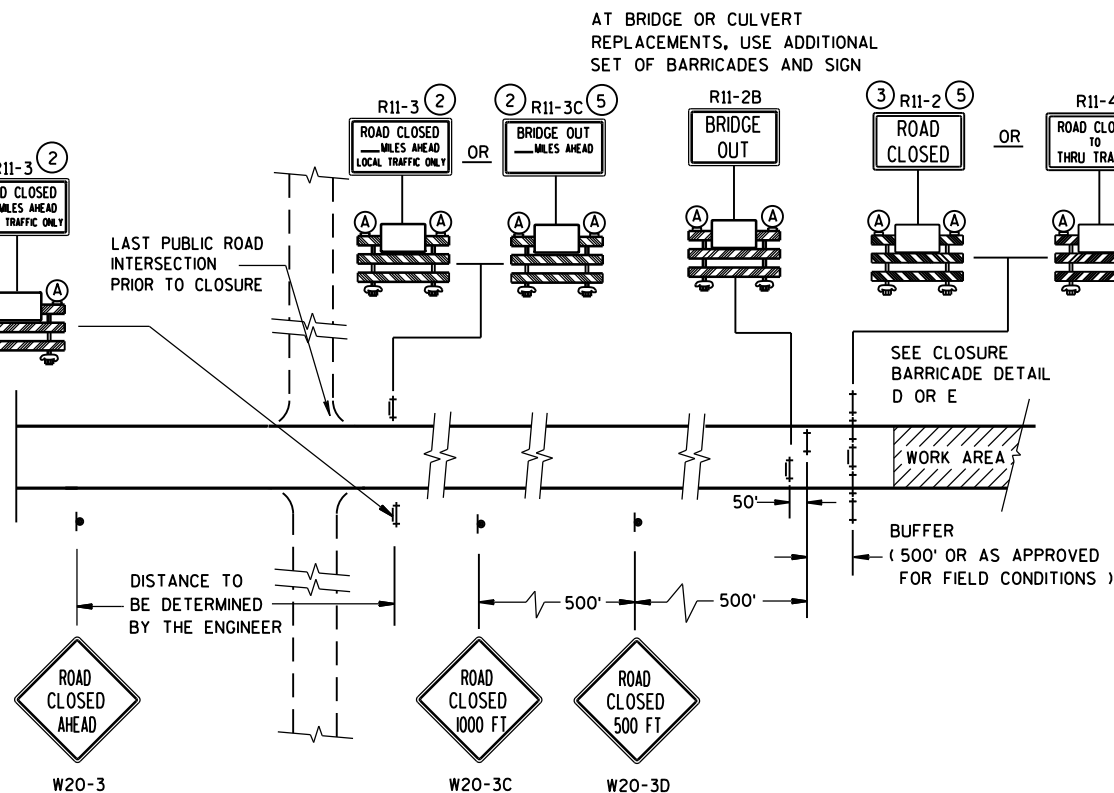
WORK AREA

DETOUR EAST
M4-8
M3-X
M1-4 OR M1-5A OR M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

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



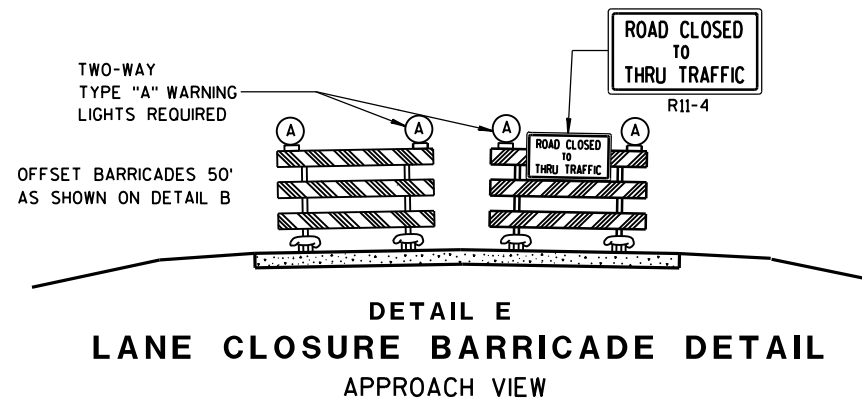
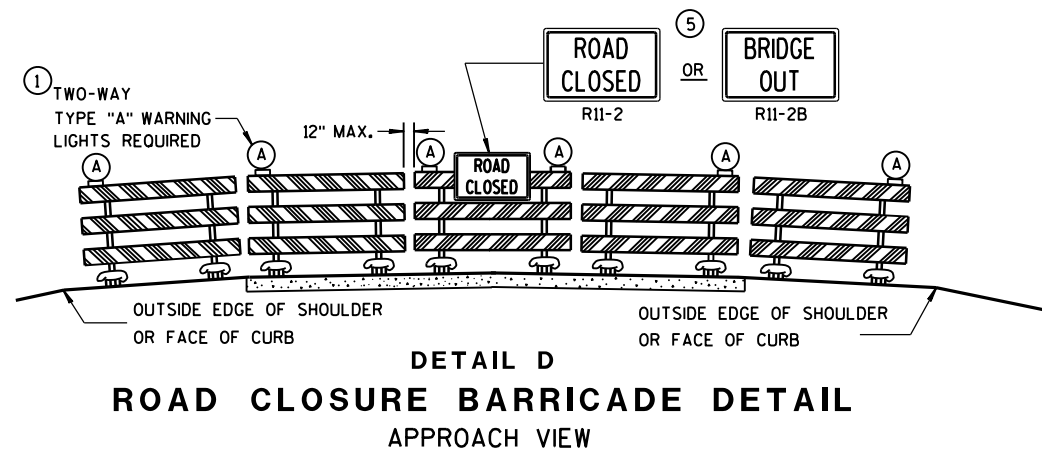
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA



SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

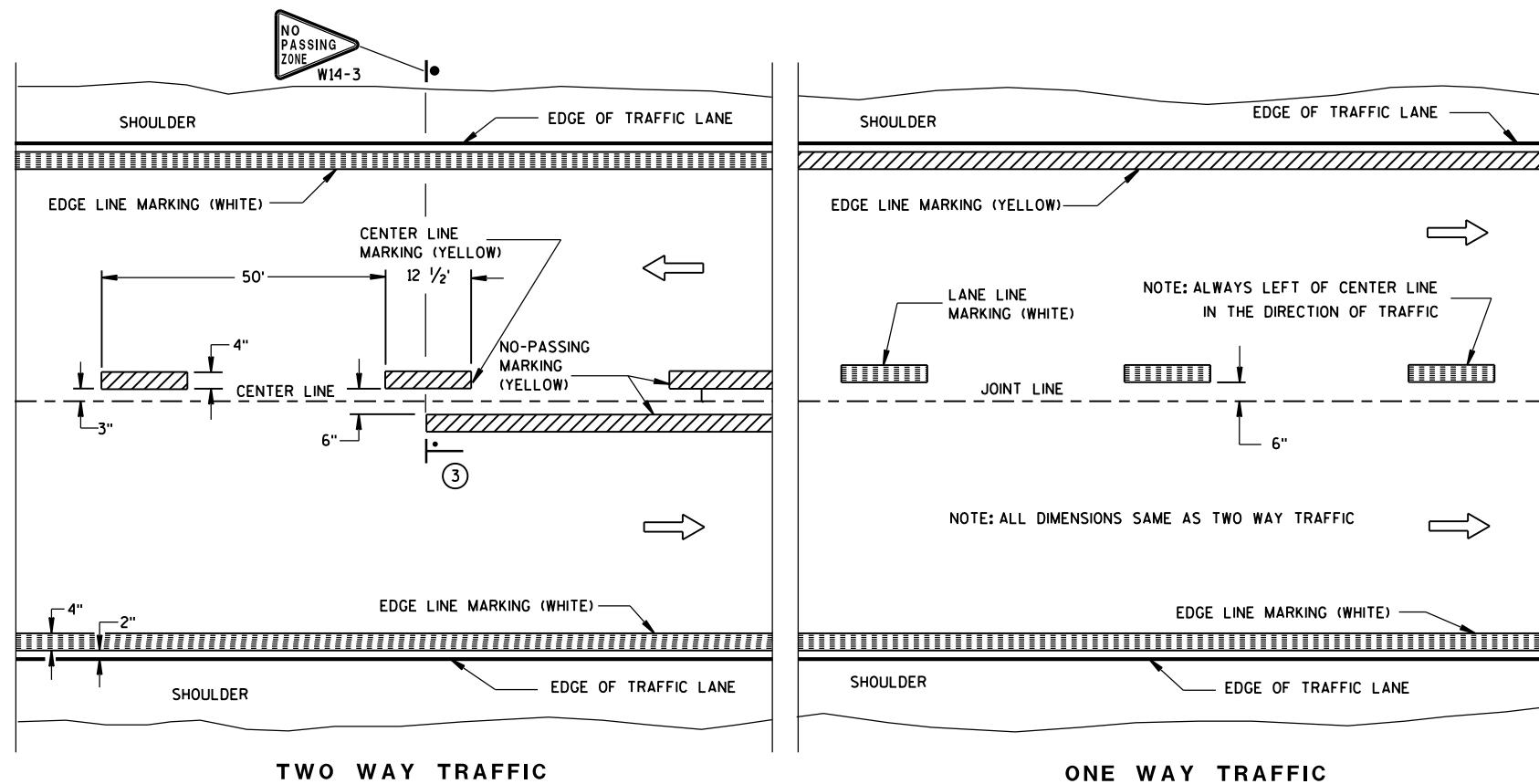
R1-1 SHALL BE 36" X 36".

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

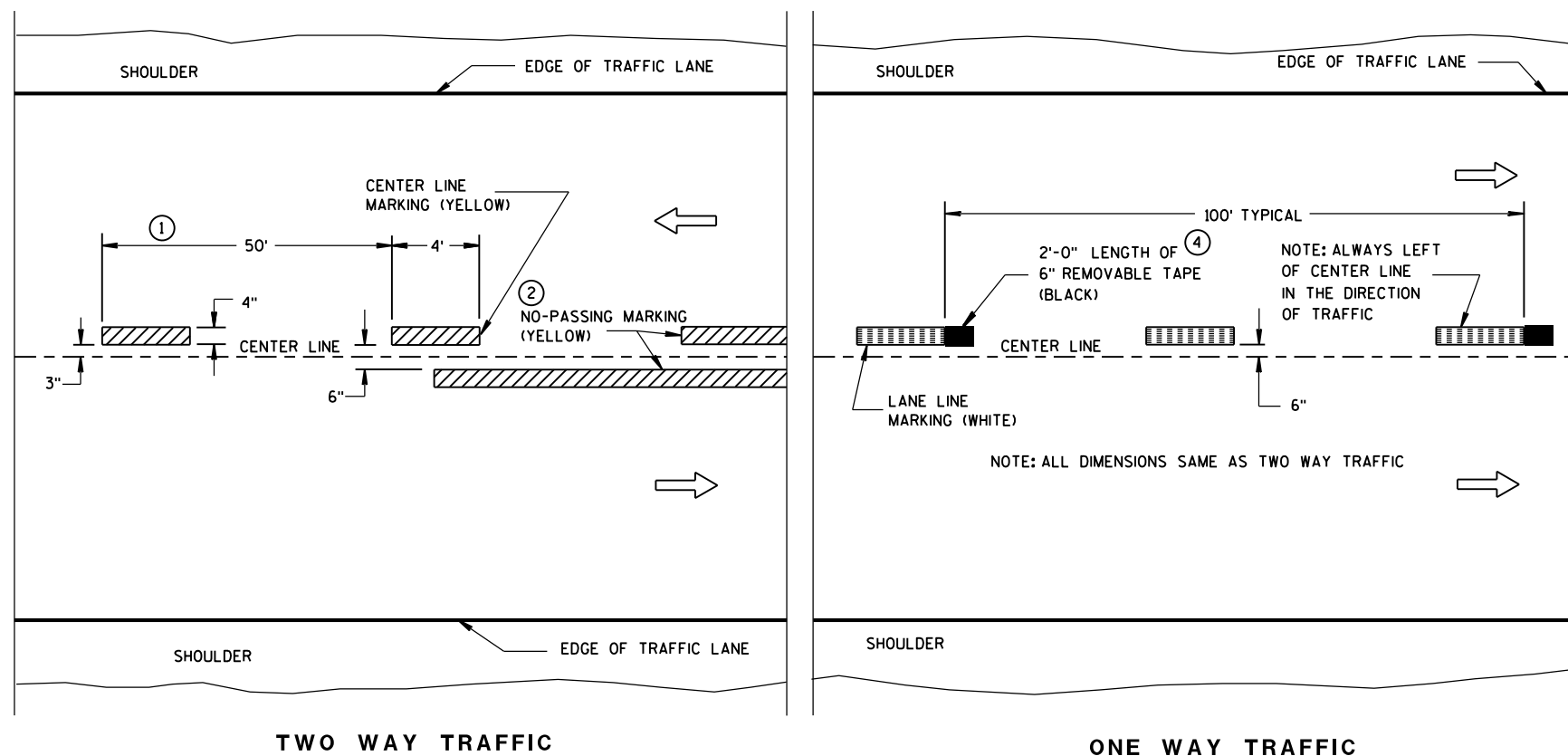
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA 297 FIC



PERMANENT PAVEMENT MARKING



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

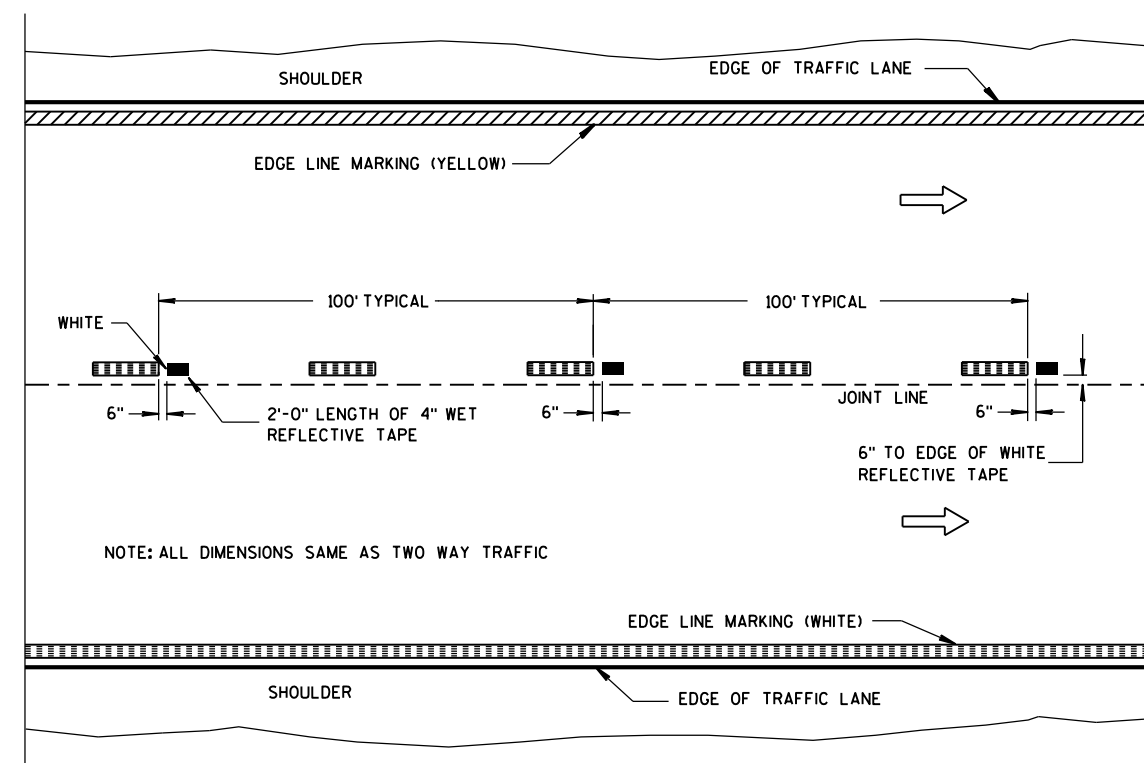
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



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

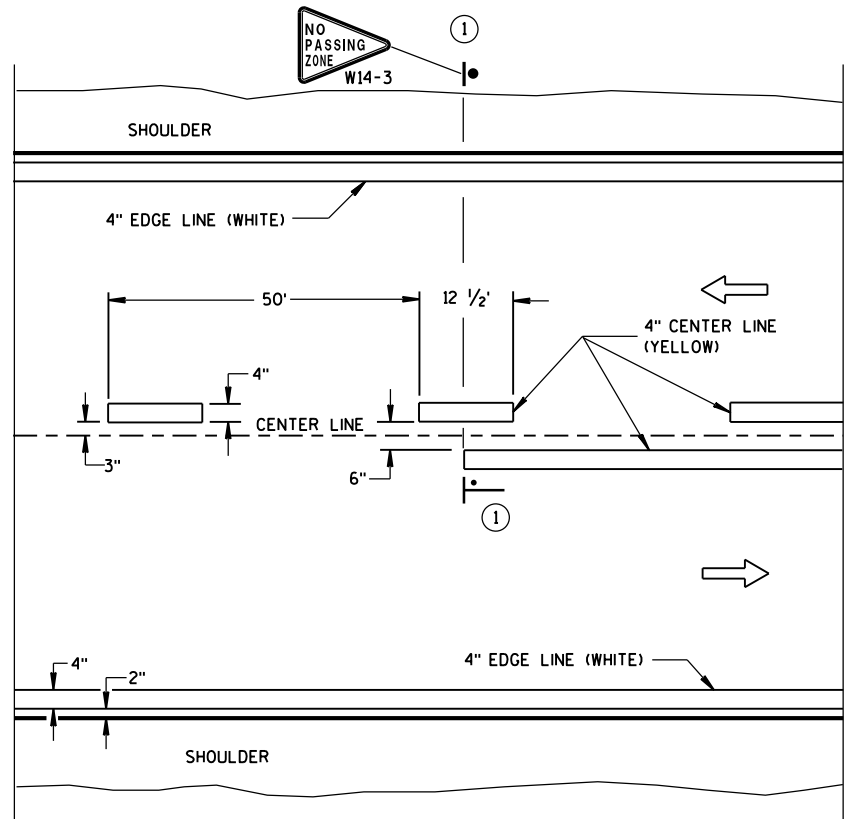
LEGEND

-  "T" MARKING
-  POST MOUNTED SIGN

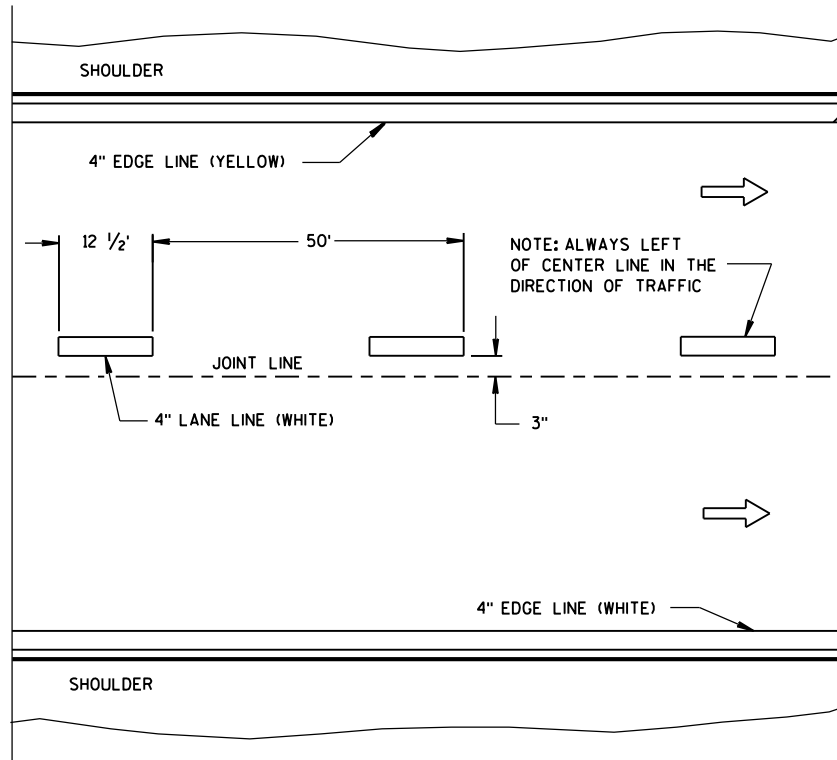
PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC E 298
FHWA

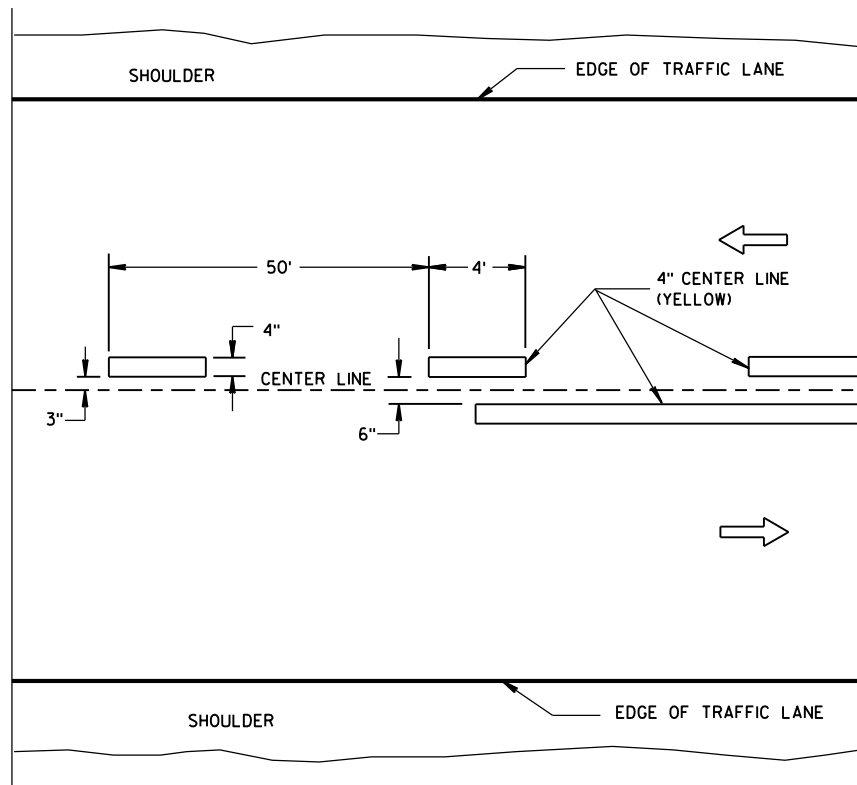


TWO WAY TRAFFIC

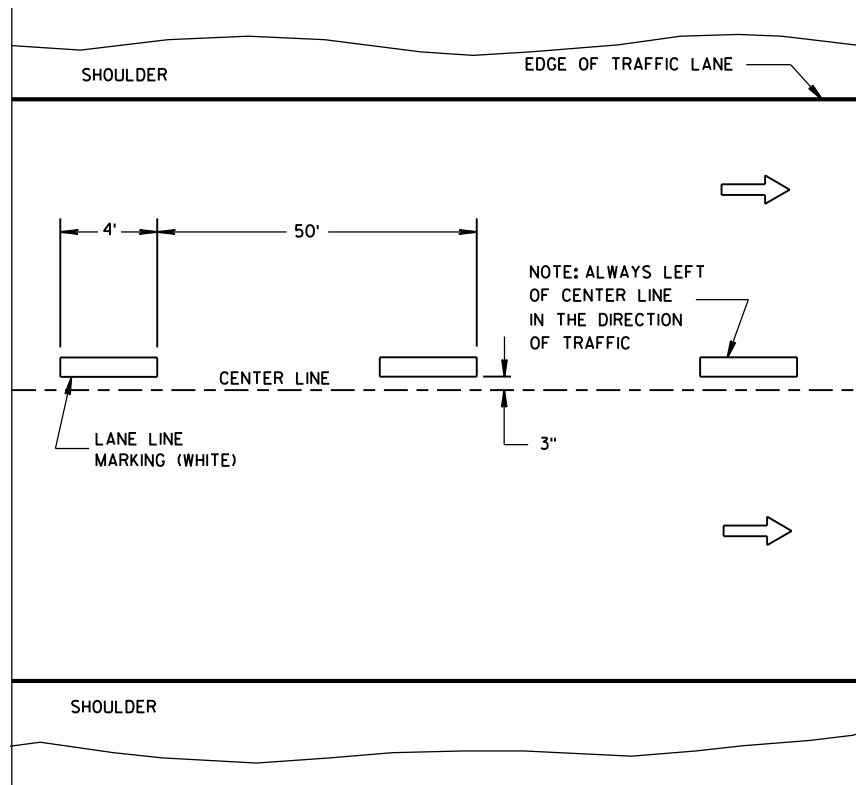


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

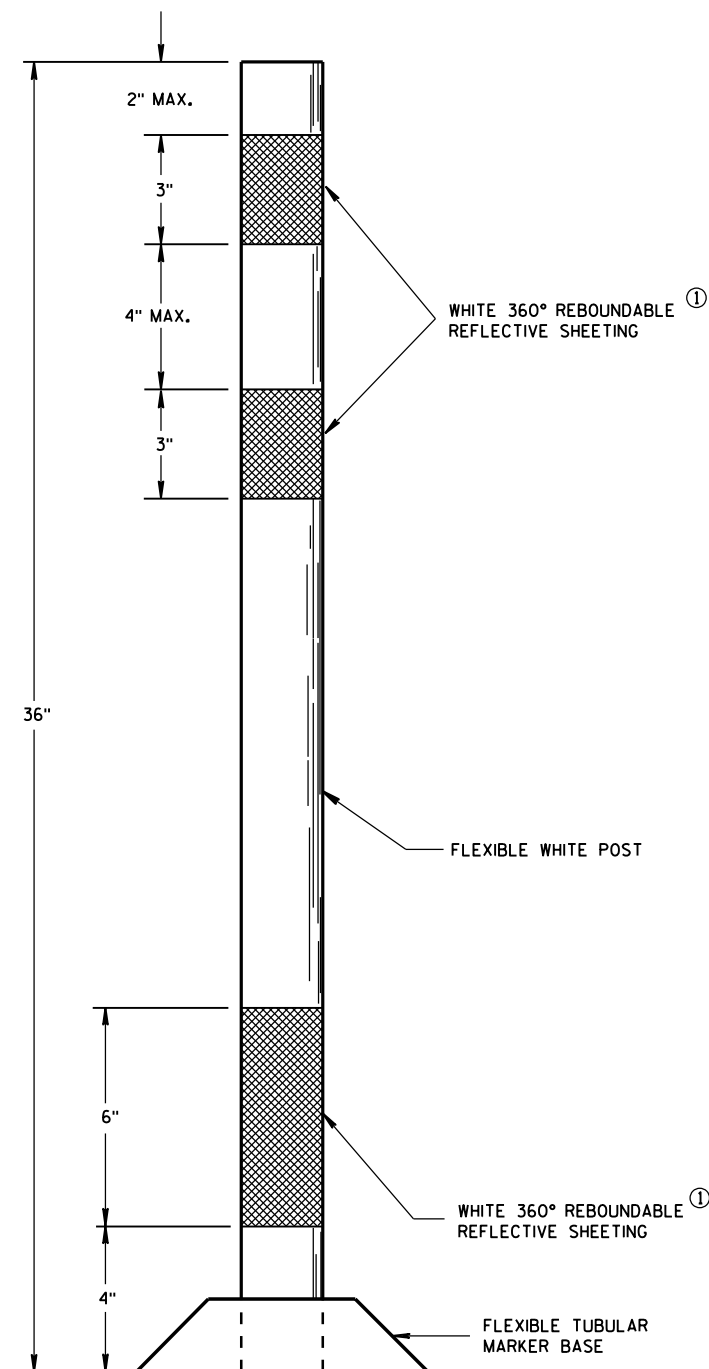
├── "T" MARKING

● POST MOUNTED SIGN

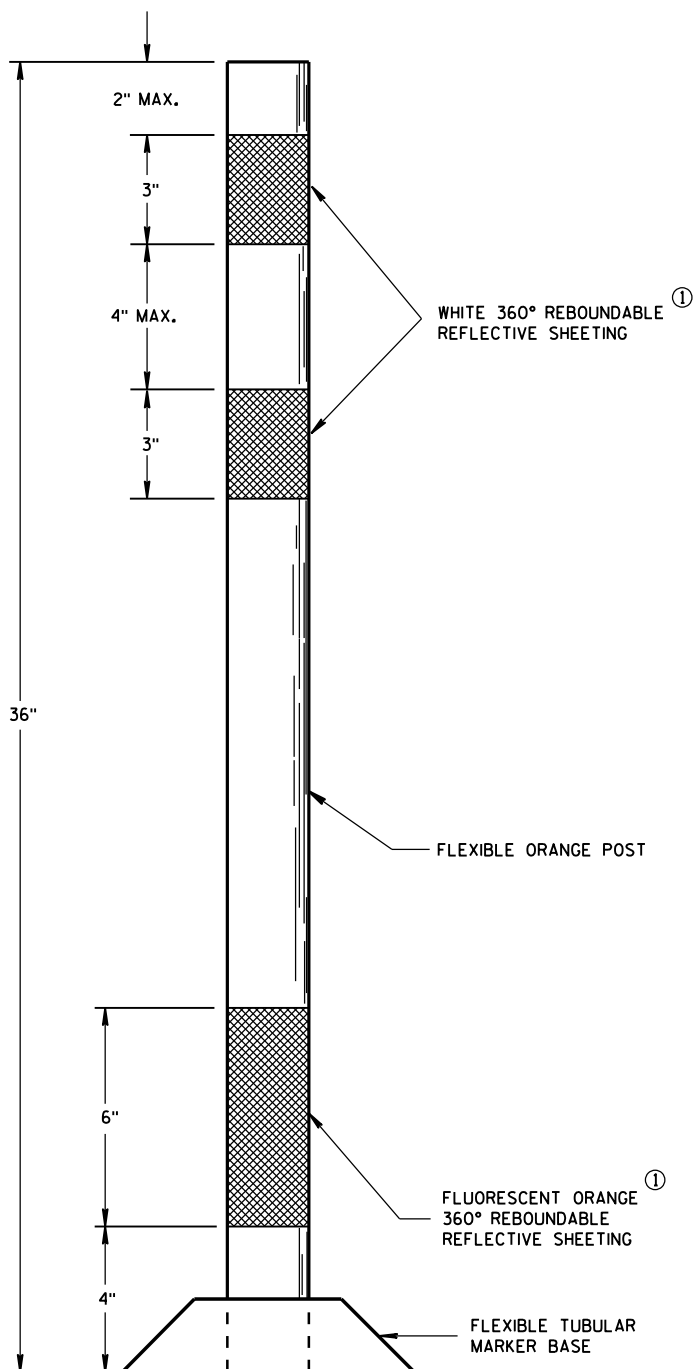
LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept., 2016 /S/ Matthew R. Rauch
STATE SIGNING AND MAP 299 ENGINEER
FHWA



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**FLEXIBLE TUBULAR MARKER
POST**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10-16-2015
DATE

FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE
SAFETY ENGINEER

LEGEND

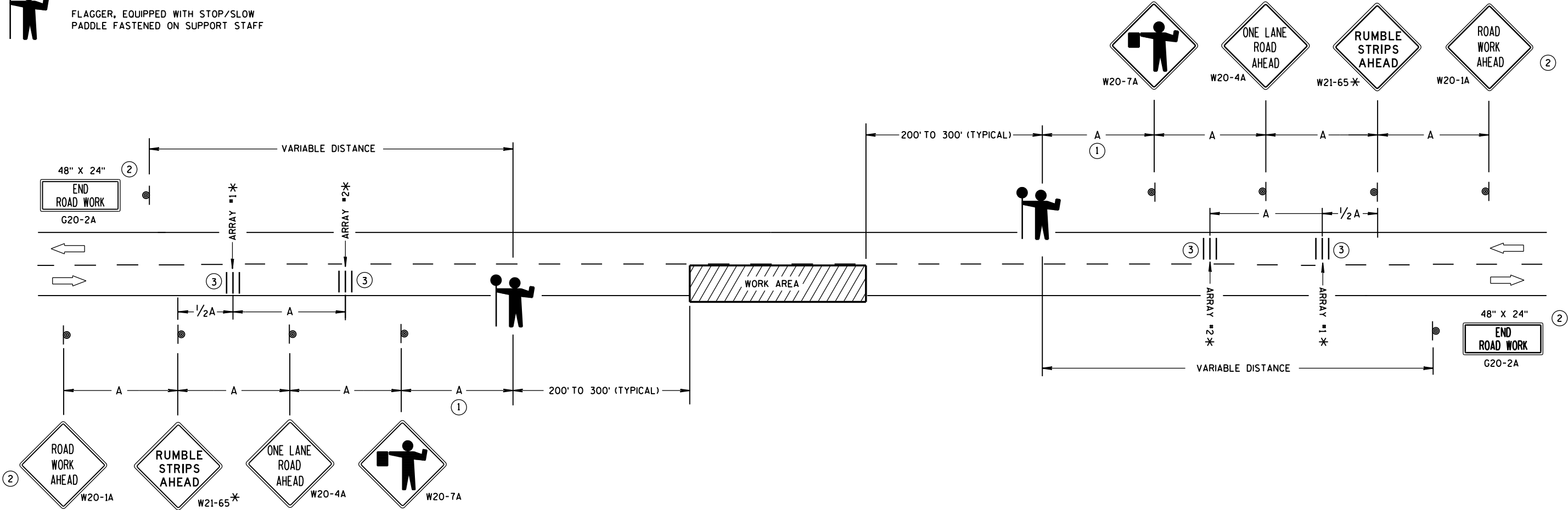
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

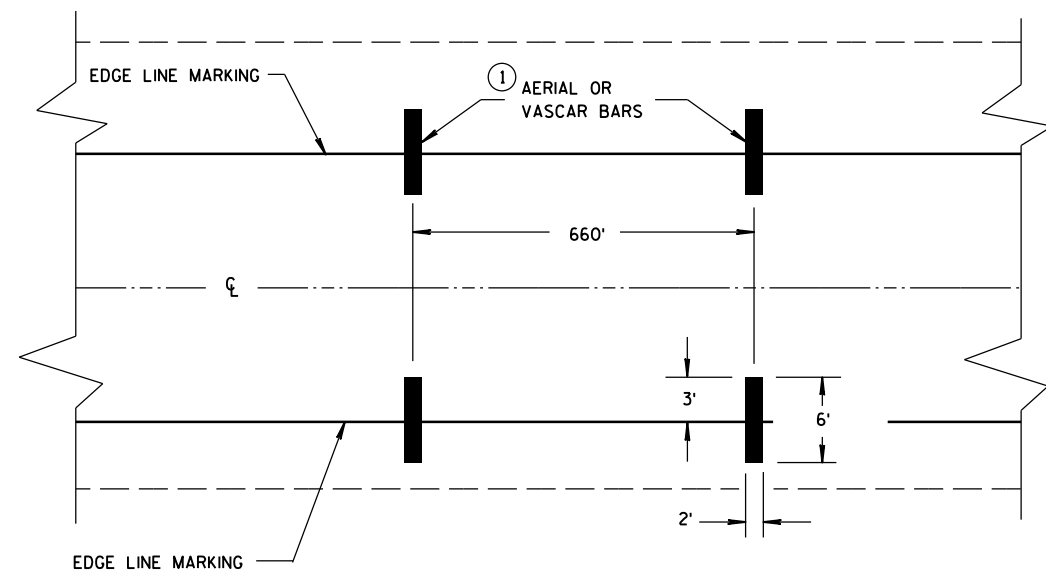
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- * UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.
- ① FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ③ EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

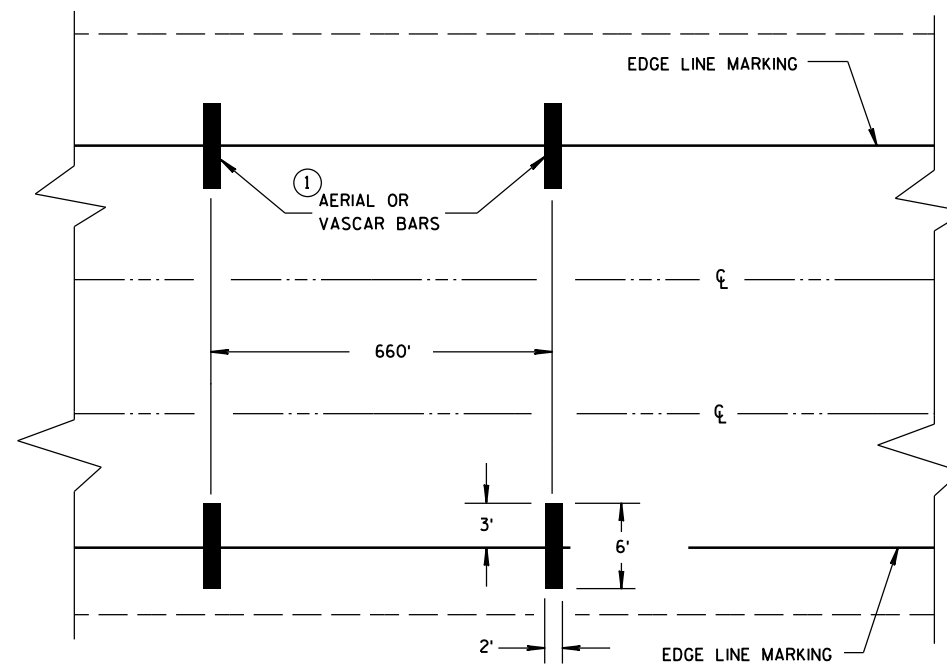
TRAFFIC CONTROL FOR
LANE CLOSURE WITH
FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 /S/ Andrew Heldtke
DATE WORK ZONE ENC 301
FHWA



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

GENERAL NOTES

- ① NUMBER OF VASCAR OR AERIAL BARS SHALL BE A MINIMUM OF 2 OR A MAXIMUM OF 5 AT 660' SPACING.

A CAR CAN BE PROVIDED BY THE WISCONSIN STATE PATROL FOR TRAFFIC CONTROL.

AERIAL ENFORCEMENT BARS
PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/18/2016

DATE

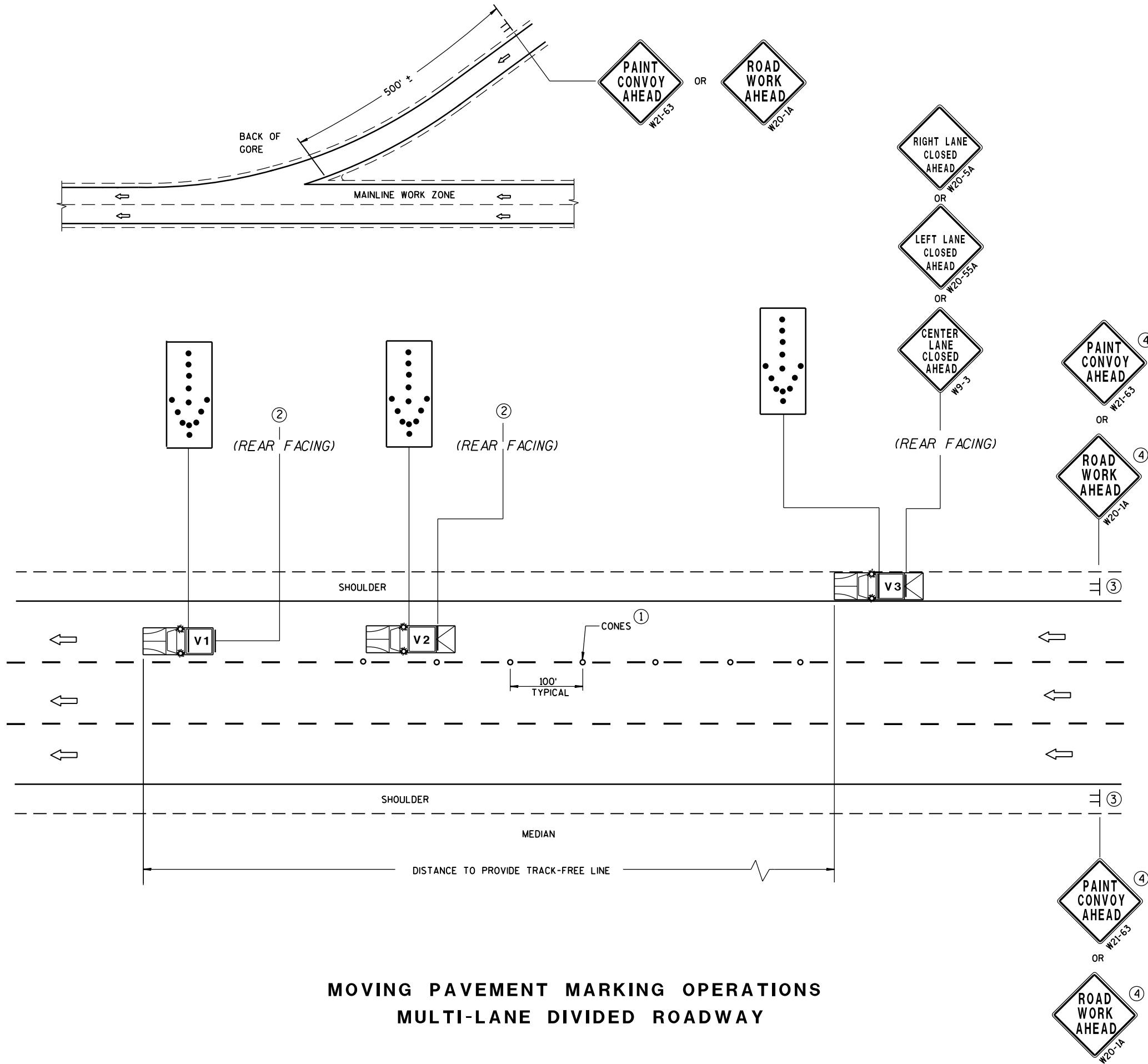
/S/ Matthew R. Rauch

STATE SIGNING AND MAP

302

ENGINEER

FHWA



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGE LINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGE LINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.
- ③ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.
- ④ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

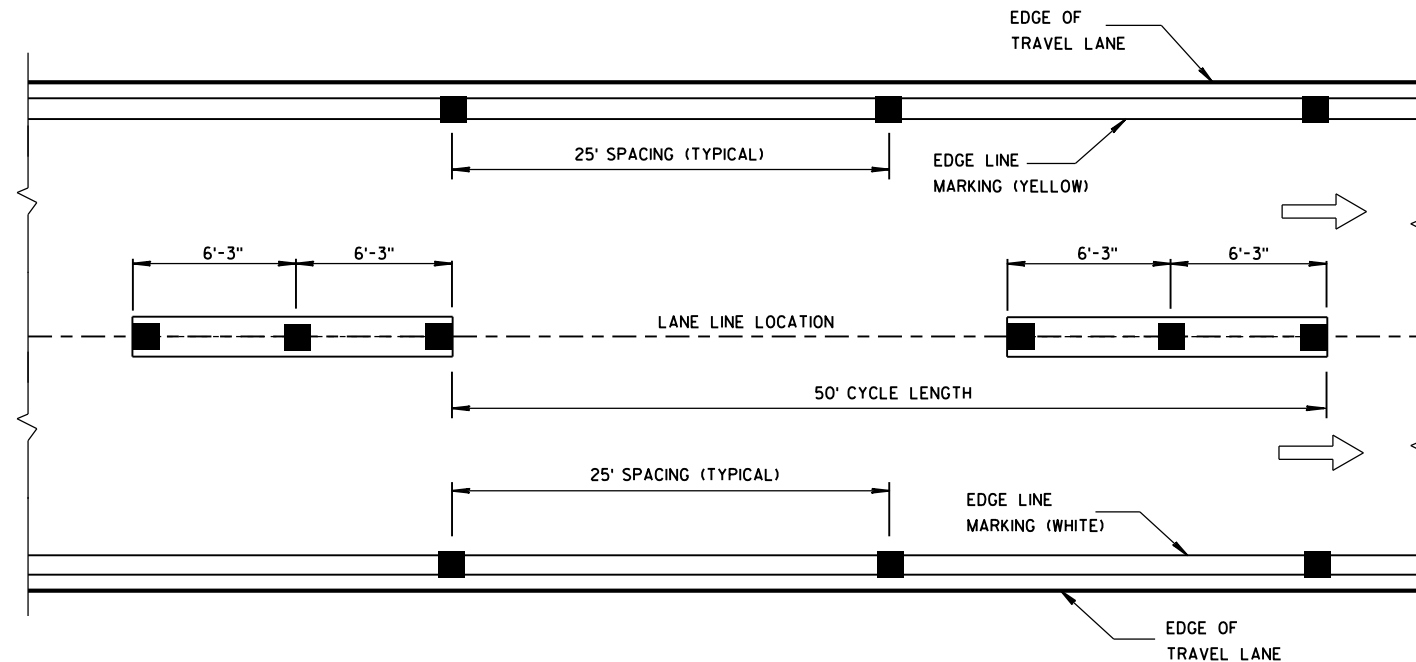
LEGEND

- V1 LEAD VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE WITH TMA
- TMA TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (MERGE)

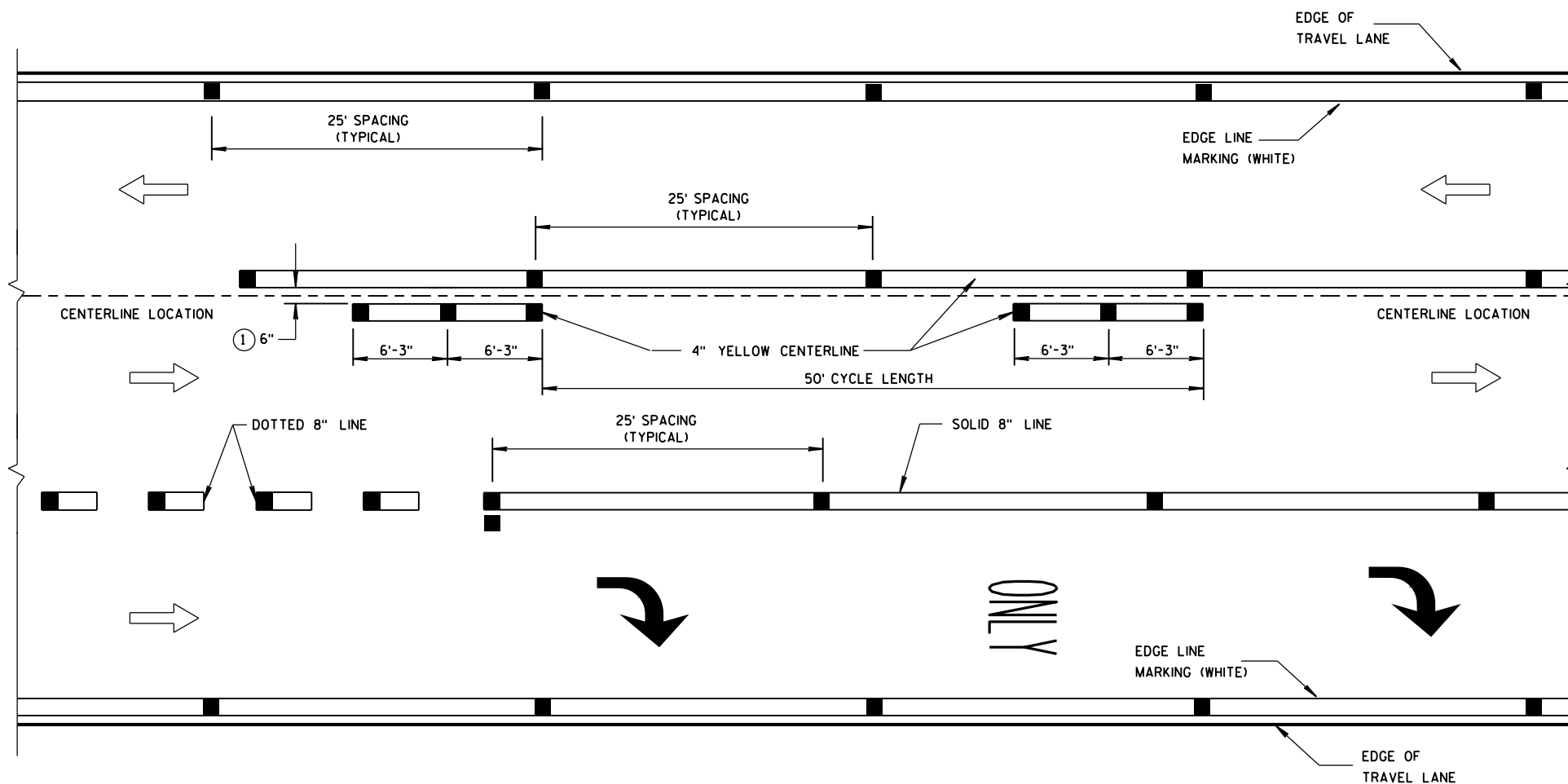
MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER 303
FHWA



**LONGITUDINAL PLACEMENT
LANE LINE**



**LONGITUDINAL PLACEMENT
CENTERLINE AND 8-INCH CHANNEL LINE**

GENERAL NOTES

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

COLOR OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II SHALL MATCH THE COLOR OF THE MARKING THEY SUPPLEMENT.

PLACE 3 TEMPORARY RAISED PAVEMENT MARKERS EVENLY SPACED ON EACH 12.5 FOOT LINE.

PROVIDE SINGLE OR MULTI-COVER TEMPORARY RAISED PAVEMENT MARKERS AS SHOWN ON PLAN.

PLACE TEMPORARY RAISED PAVEMENT MARKERS, TYPE II ON EDGELINE TAPER POINTS AND END POINTS.

MARK T's ON PAVEMENT FOR RE-ESTABLISHING NO PASSING ZONES.

SAME DAY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

IF SAME DAY PAVEMENT MARKING IS USED, ENSURE PROPOSED PAVEMENT MARKINGS ARE PLACED IN THE EXACT LOCATIONS AS THE EXISTING MARKINGS, USING A MINIMAL AMOUNT OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II OR OTHER METHODS AS APPROVED BY THE ENGINEER.

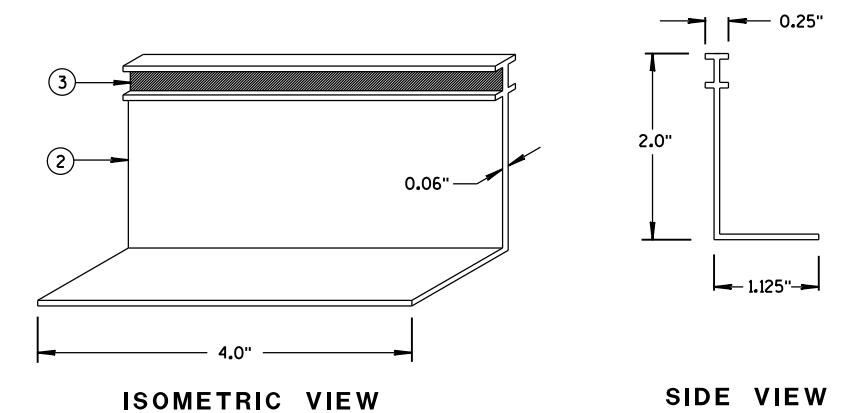
- ① FOR DOUBLE SOLID YELLOW, PLACE THE MARKERS DIRECTLY ACROSS FROM EACH OTHER, WITH A 6 INCH SPACE BETWEEN THEM.
- ② MARKERS SHALL BE OF POLYURETHANE MATERIAL.
- ③ MARKERS SHALL HAVE A MINIMUM SIZE REFLECTIVE SURFACE OF 4 INCH WIDTH X 0.25 INCH HEIGHT.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

■ TEMPORARY RAISED PAVEMENT MARKER, TYPE II



**TEMPORARY
RAISED PAVEMENT MARKER**

**STANDARD APPLICATION FOR
TEMPORARY RAISED PAVEMENT
MARKERS, TYPE II**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAP 304 ENGINEER
FHWA

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
- 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.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

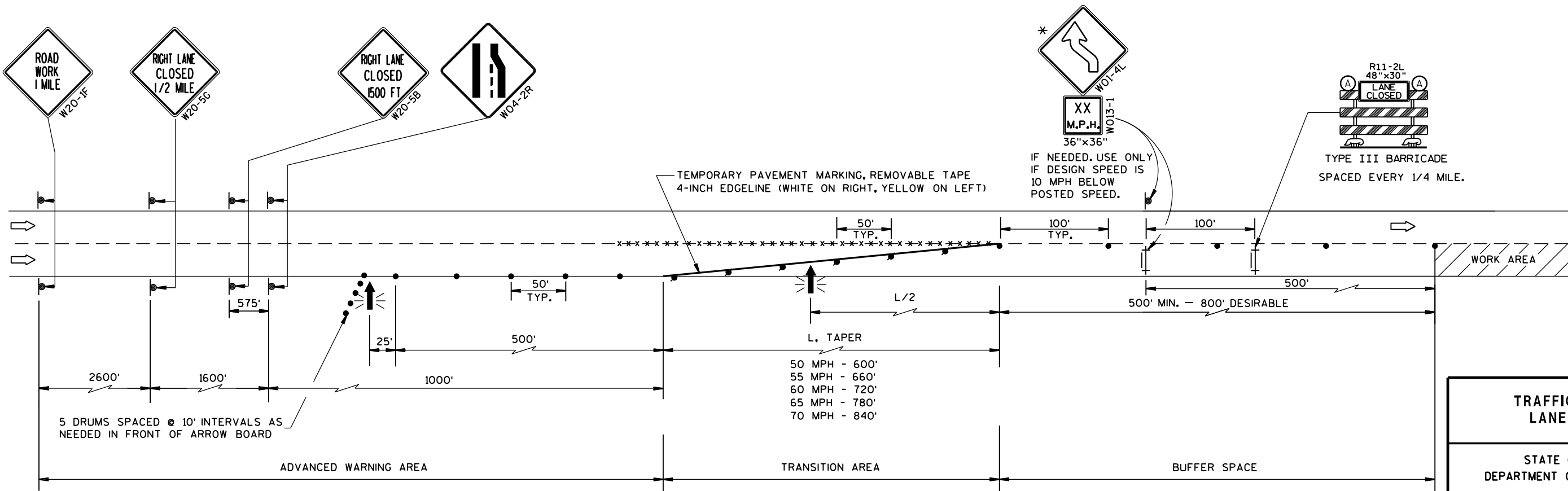
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

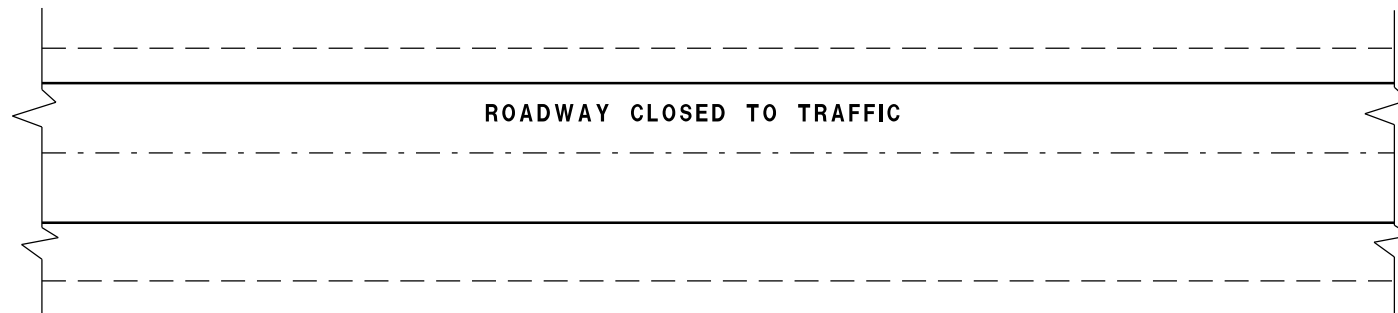
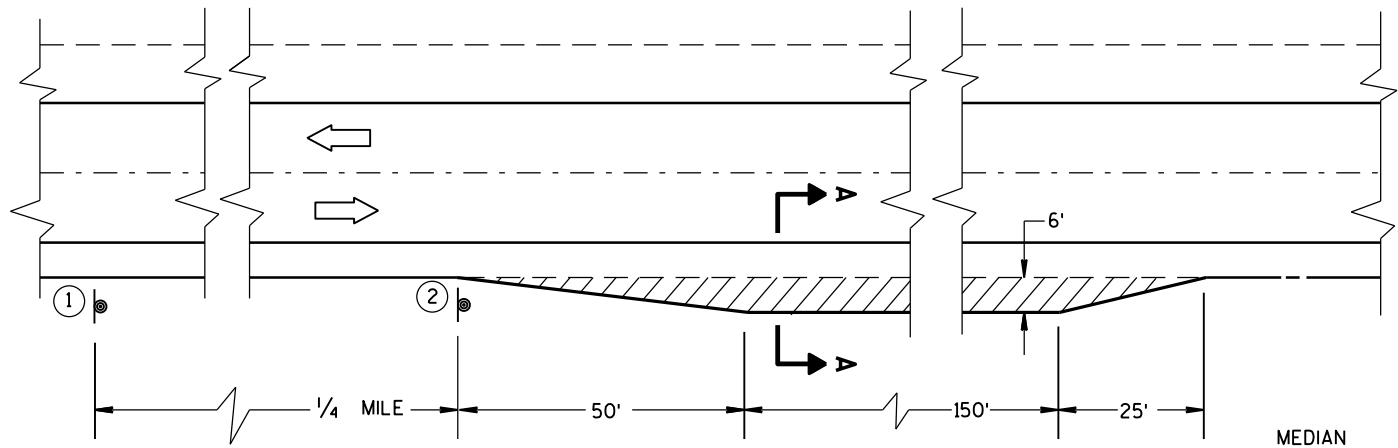
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

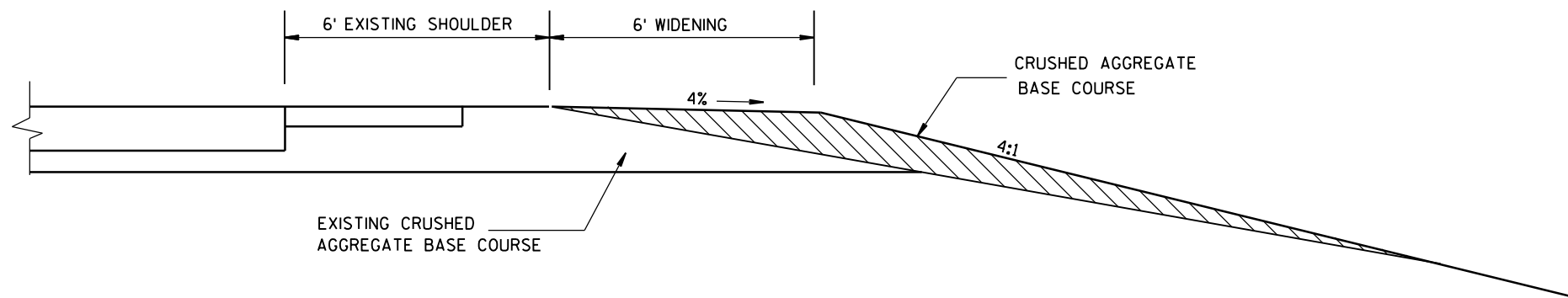
* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



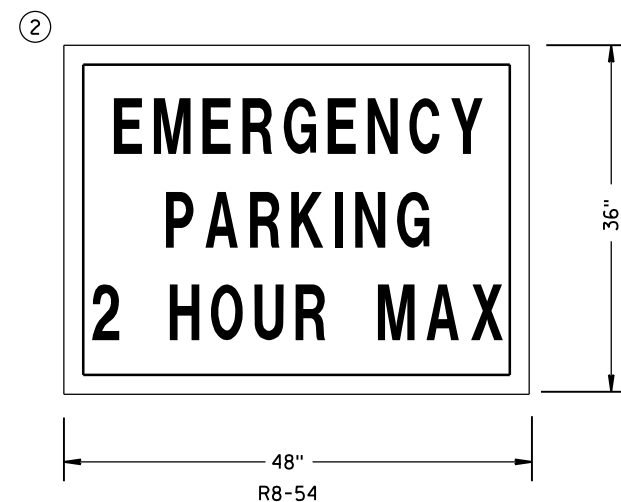
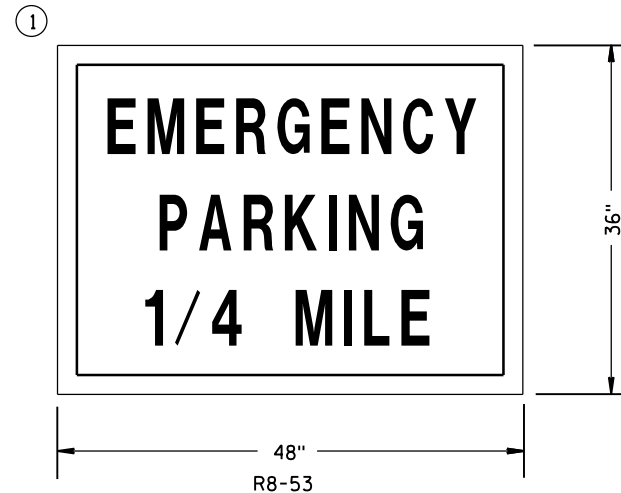
TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER 305
FHWA	



PLAN VIEW
TEMPORARY EMERGENCY PULLOUTS FOR DIVIDED HIGHWAYS



SECTION A-A



SIGNS TO BE BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

SIGNS FOR TEMPORARY
EMERGENCY PULLOUTS

GENERAL NOTES

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

TEMPORARY EMERGENCY PULLOUTS AND SIGNS SHALL BE REMOVED AND THE ROADWAY RESTORED TO ITS ORIGINAL CROSS SECTION AND CONDITION PRIOR TO REOPENING THE ROADWAY TO ONE WAY TRAFFIC.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC

TEMPORARY EMERGENCY PULLOUTS			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
8/2013	/S/ Travis Feltes		
DATE	STATE TRAFFIC ENGINEE 306 SIGN		
FHWA			

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

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

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

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

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

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

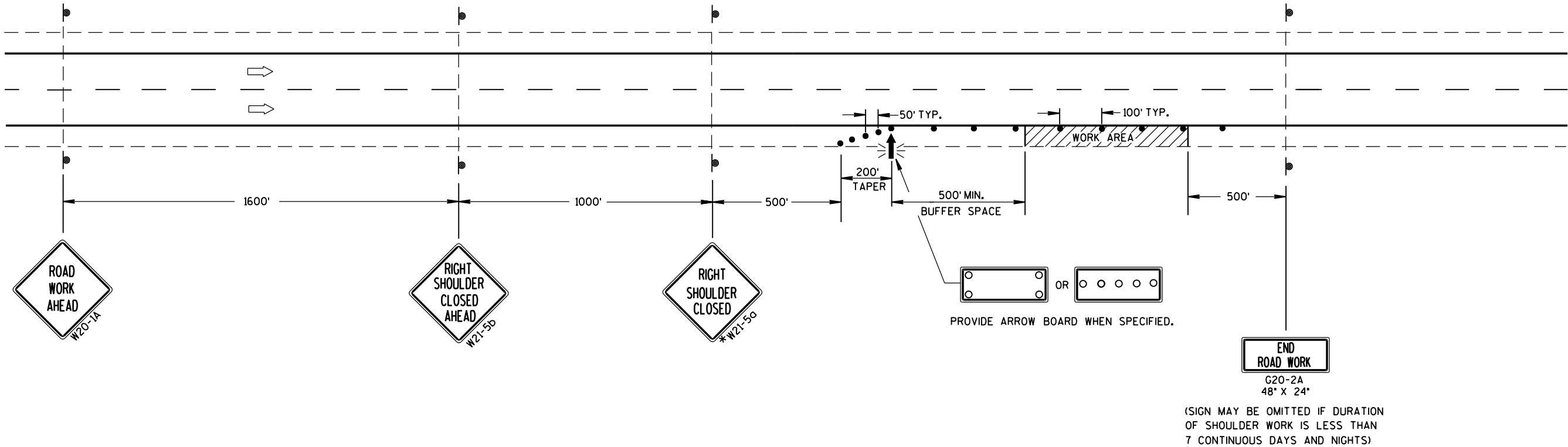
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

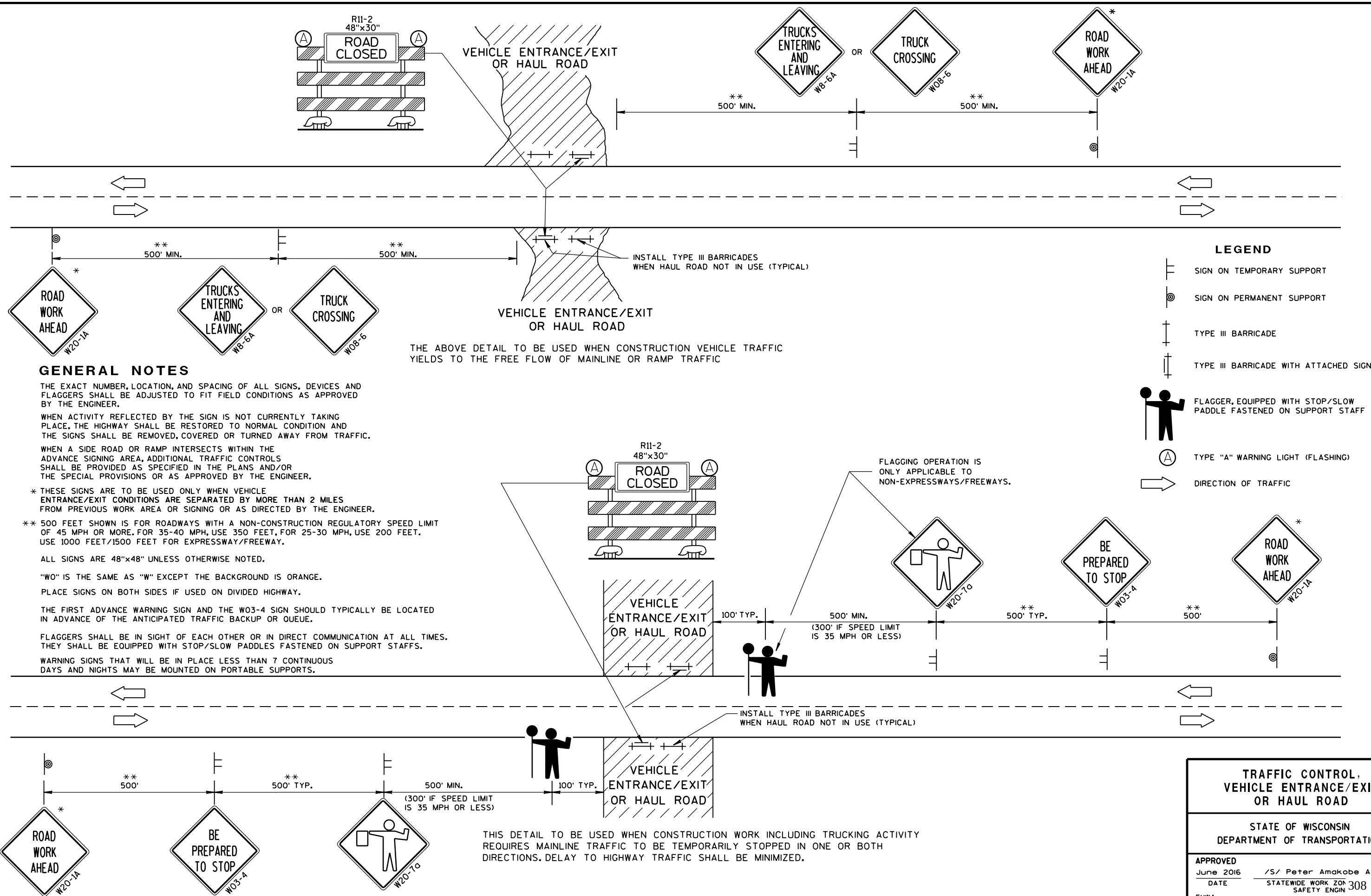
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.

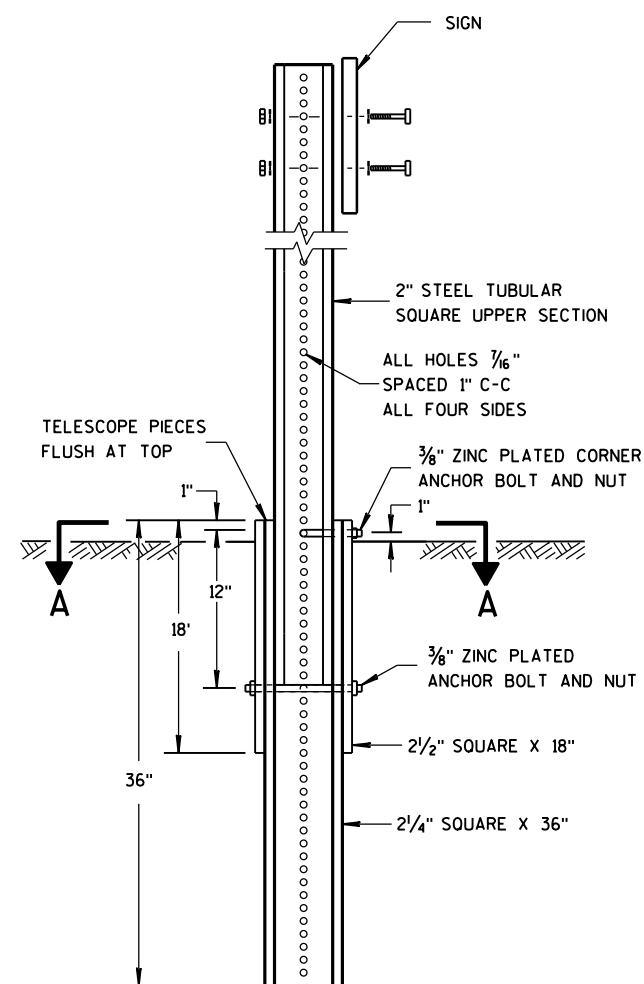


TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE 307
FHWA SAFETY ENGINEER





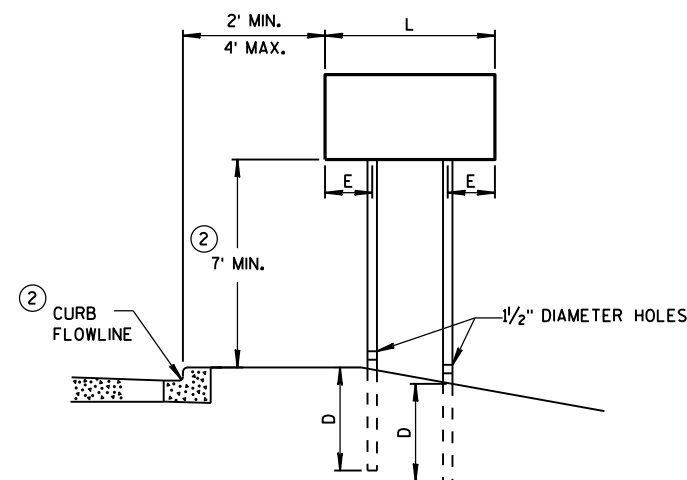
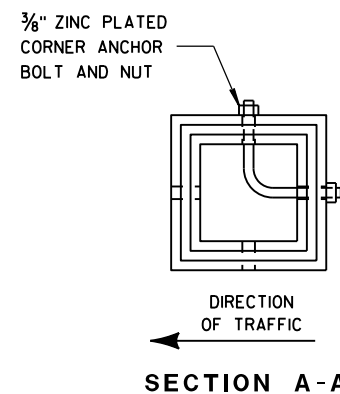
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ.FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

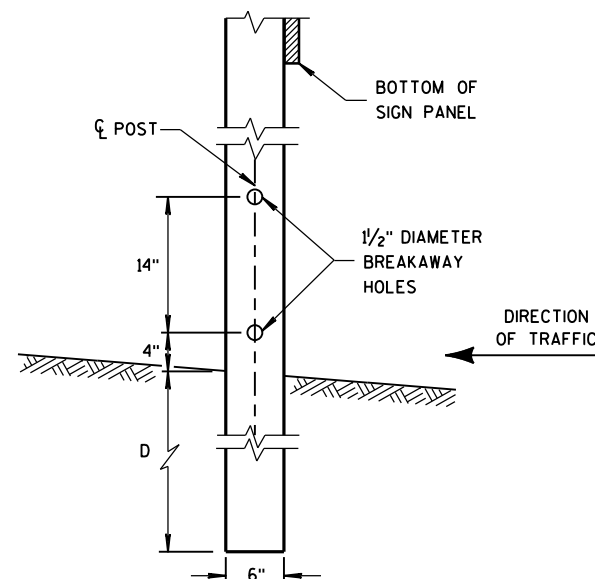


URBAN AREA

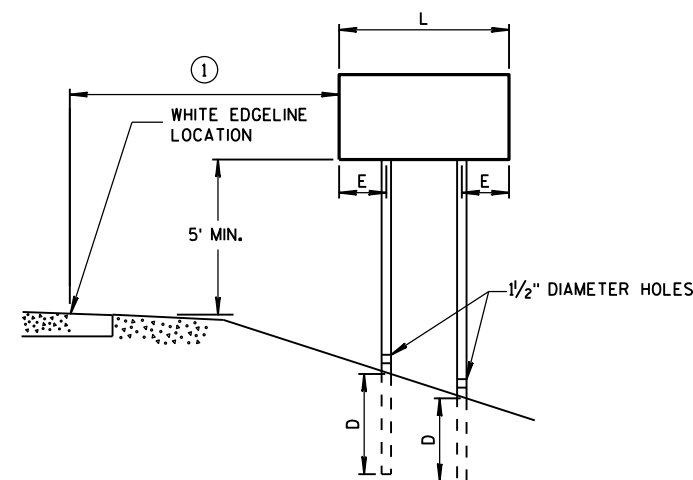
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

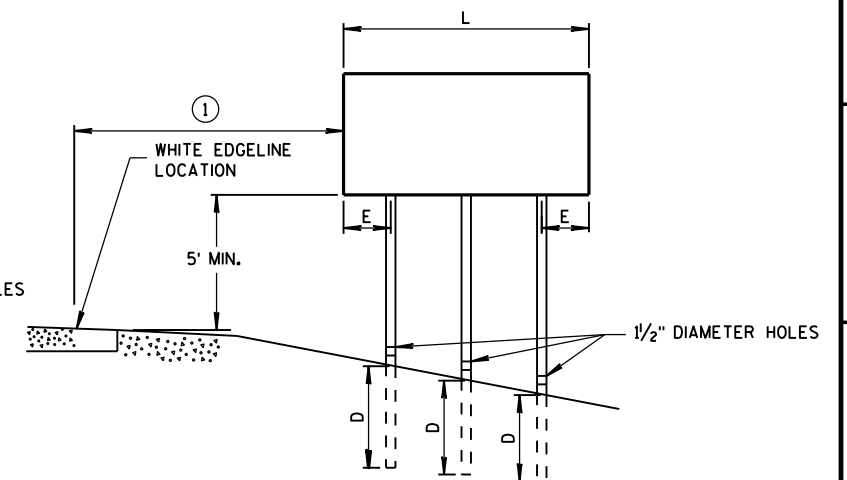
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4" x 6" WOOD POST MODIFICATION



RURAL AREA



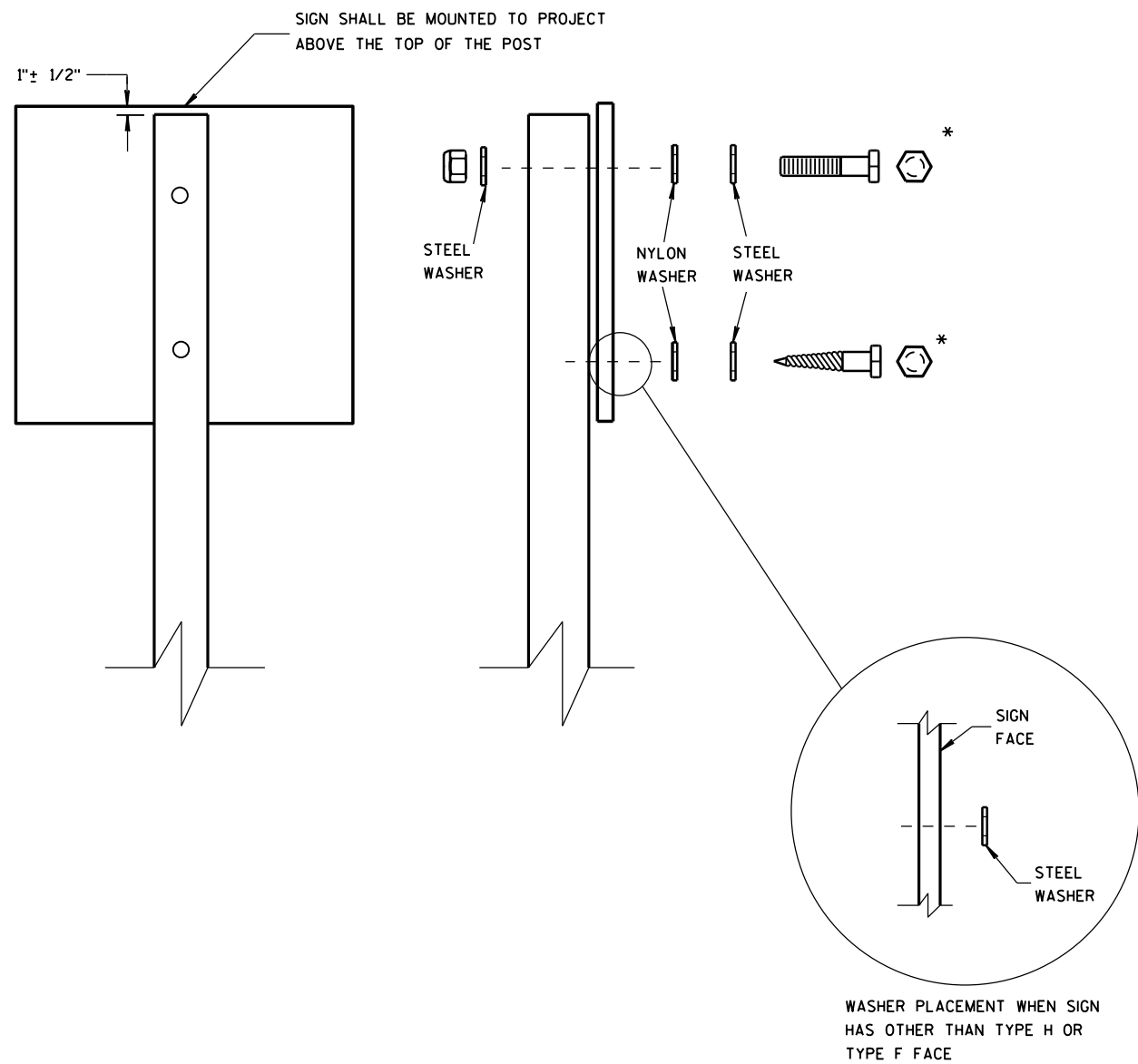
4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



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.

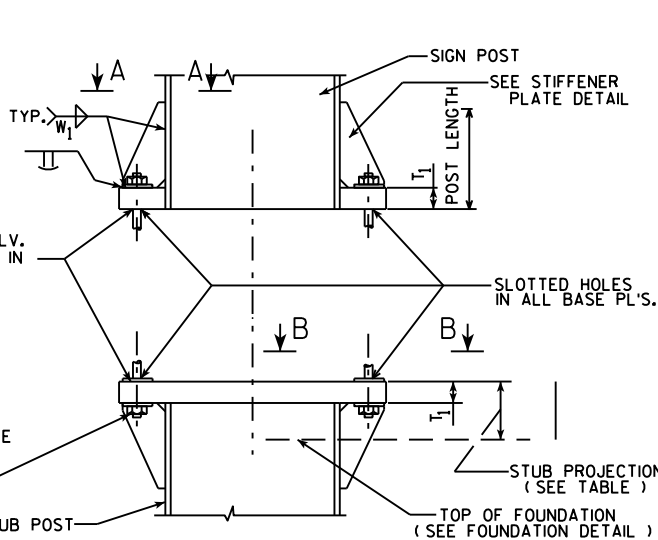
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

- 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

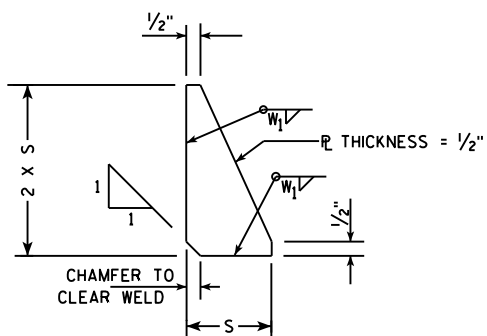
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* 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.

ATTACHMENT OF SIGNS TO POSTS		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED Feb. 2015	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINE	310 SIGN
FHWA		

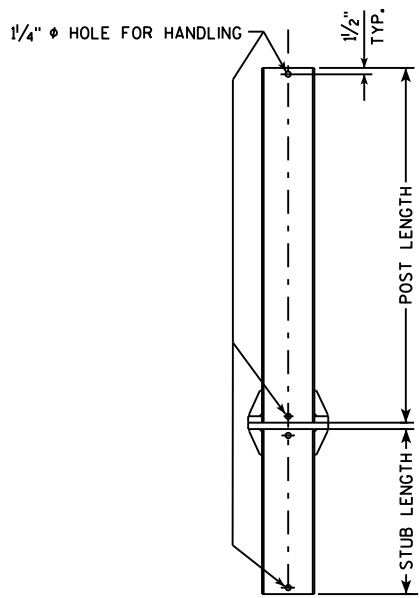


SIGN POST AND STUB POST ELEVATION

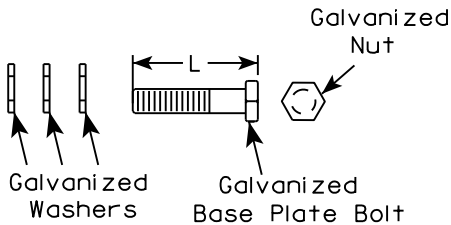


STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



POST DETAIL



SHIM DETAIL

FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M. - B36.

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

⑦

		TYPE	#3	#4
⑦	REINF.	A	8 @ 4'-5	5 @ 6'-3
		B	8 @ 6'-5	7 @ 6'-3
		C	8 @ 6'-11	7 @ 6'-3
		D	8 @ 7'-5	8 @ 6'-3
		E	8 @ 7'-11	9 @ 6'-3

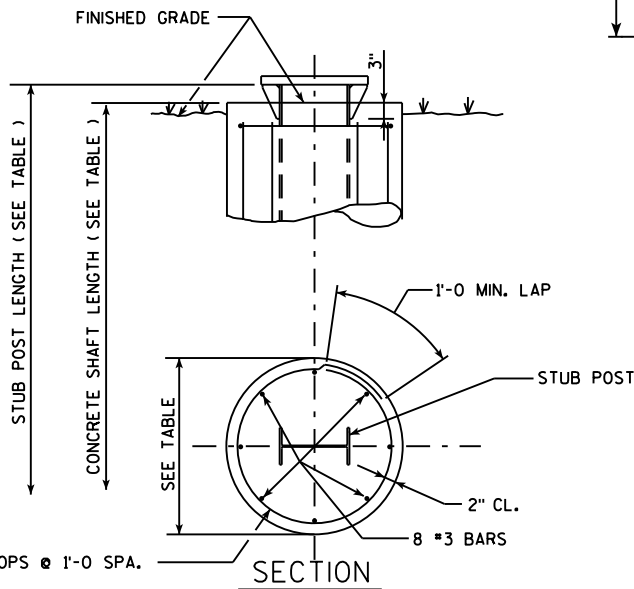
⑦

				BASE CONNECTION DATA TABLE											FOUNDATION DATA				②
L	X	TYPE	DIMENSION POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T ₁	T ₄	W ₁	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
3 ¾	④	A	W10"x12.0 #/FT.	¾" φ @ 75"-FT.	5/4"	1'-0 ⅜	⅞"	3 ½"	⅞"	1"	⅜"	⅝"	1 ⅝"	2 ⅞"	3'-6	3"	2'-0 φ	5'-0	76.0*
4 ¾	④	B	W12"x16.0 #/FT.	⅞" φ @ 85"-FT.	5/2"	1'-4 ¼"	1"	3 ½"	1"	1 ¼"	¼"	⅜"	1 ⅝"	3"	5'-6	3"	2'-0 φ	7'-0	146.5*
5		C	W12"x19.0 #/FT.	⅞" φ @ 85"-FT.	5/2"	1'-4 ¼"	1"	3 ½"	1"	1 ½"	⅝"	⅝"	1 ⅝"	3"	6'-0	3"	2'-0 φ	7'-6	182.1*
5		D	W12"x22.0 #/FT.	⅞" φ @ 85"-FT.	5/2"	1'-4 ¼"	1"	3 ½"	1"	1 ½"	⅜"	⅝"	1 ⅝"	3"	6'-6	3"	2'-0 φ	8'-0	210.5*
5	③	E	W12"x26.0 #/FT.	1" φ @ 90"-FT.	7"	1'-4 ¼"	1 ¼"	4"	1 ½"	1 ½"	⅜"	⅝"	1 ⅝"	3"	7'-0	3"	2'-0 φ	8'-6	293.0*

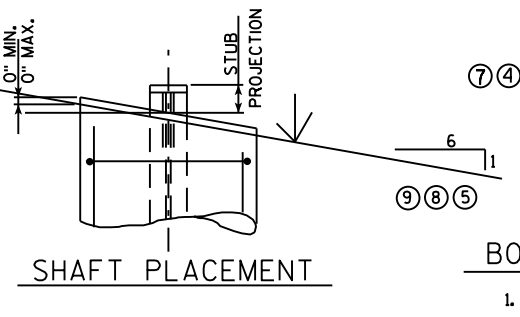
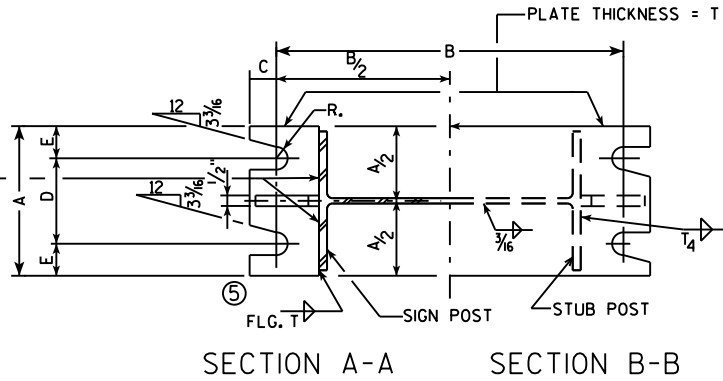
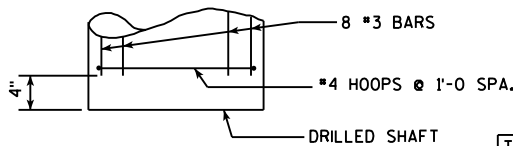
① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1POST) = K + (POST LENGTH X POST WT.)
"K" INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

FTG. T + 1/16
FTG. T + 1/16



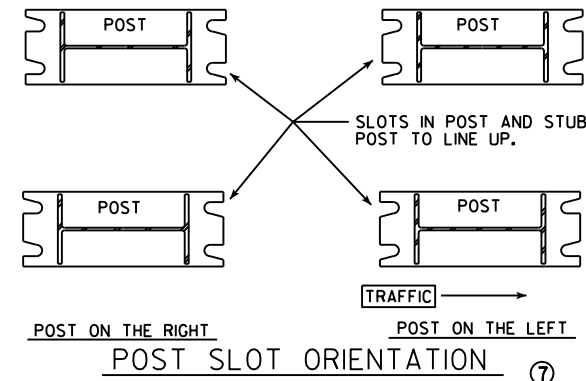
FOUNDATION DETAIL



BOLTING PROCEDURE - BASE CONNECTION

- ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
- SHIM AS REQ'D. TO PLUMB POST.
- PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
- TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
- BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



POST SLOT ORIENTATION ⑦

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.
GROUP LOADS PERCENT OF ALLOWABLE STRESS
1. DEAD 100
2. DEAD & WIND 140
3. DEAD, ICE & 1/2 WIND 140 Δ25 P.S.F. MIN.
ALLOWABLE SOIL PRESSURE = 1/2 T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE R WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
③	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T ₁ · T ₂ & W ₁

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC. 2011 DRAWN BY JPH PLANS CKD.

FTG. & SIGN SUPPORT DETAILS
GROUND MOUNT
BREAK-AWAY SIGNS

311

PROJECT NO:

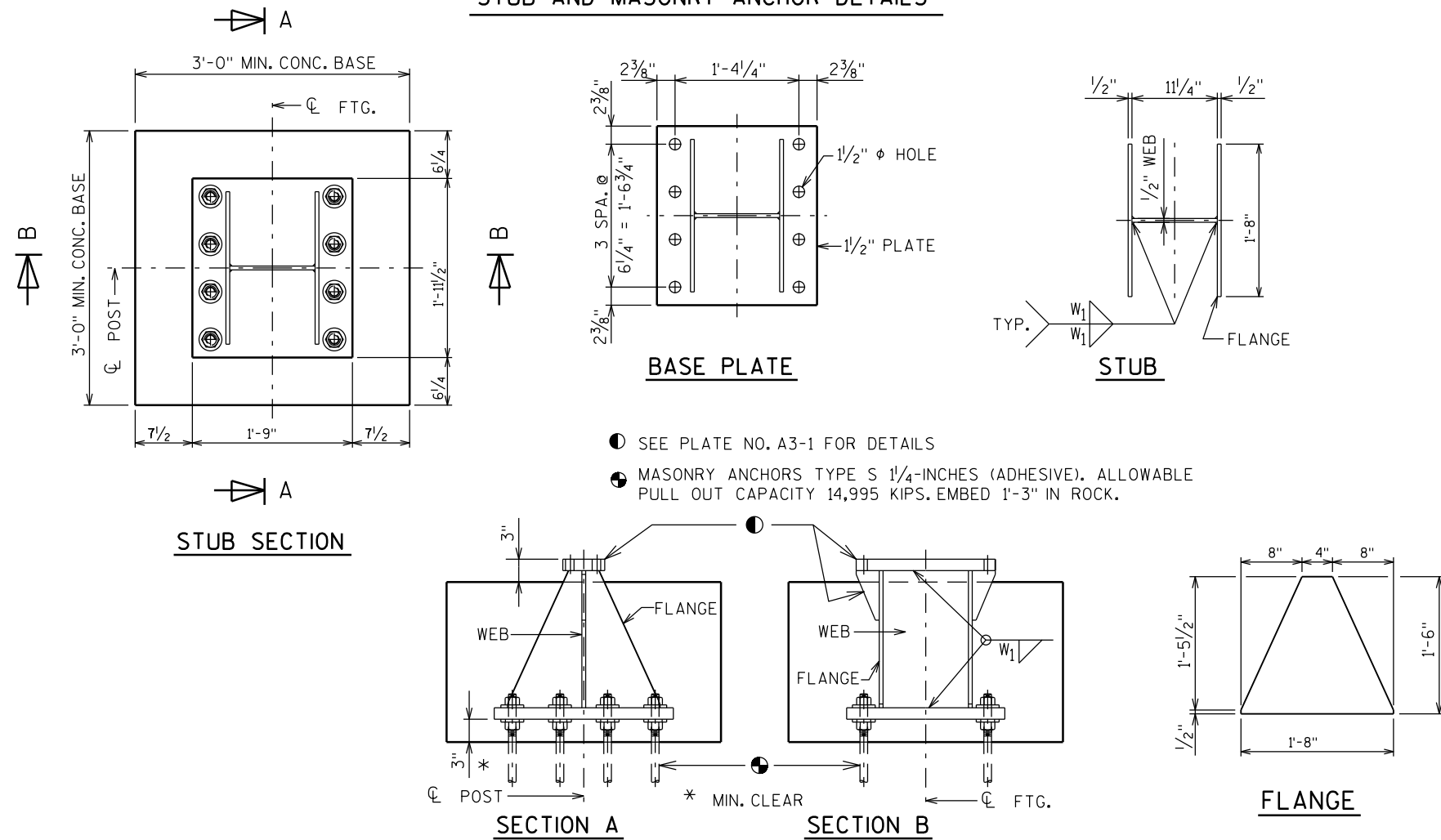
HWY:

COUNTY:

SHEET NO:

E

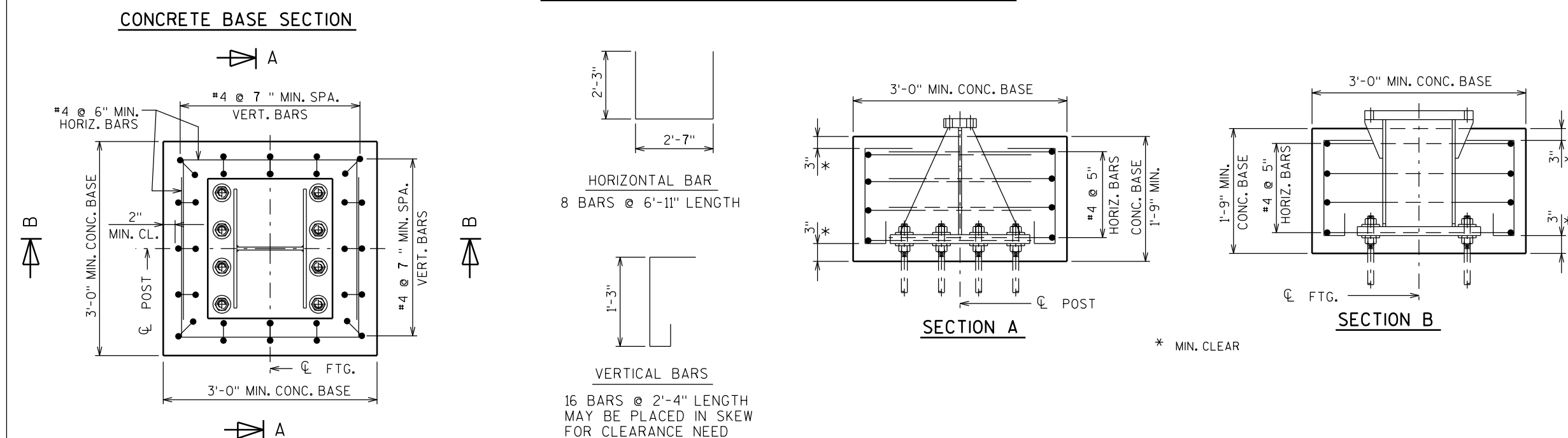
STUB AND MASONRY ANCHOR DETAILS



GENERAL NOTES

- Quantities per Base:
 - REINFORCING BAR STEEL = 62 LBS
 - CONCRETE = 0.6 C.Y.
 - STEEL WEIGHT = 335 LBS
- All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
- If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS



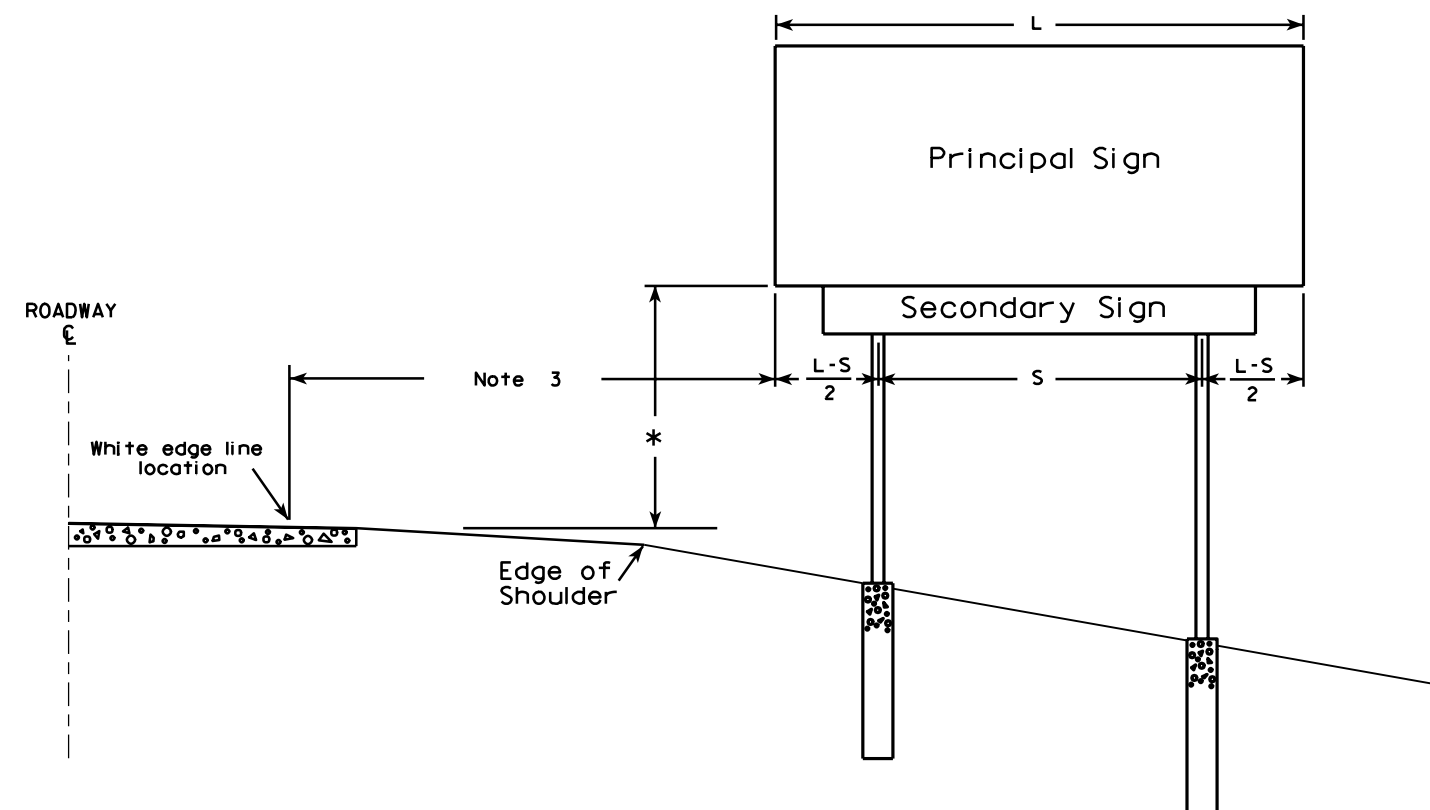
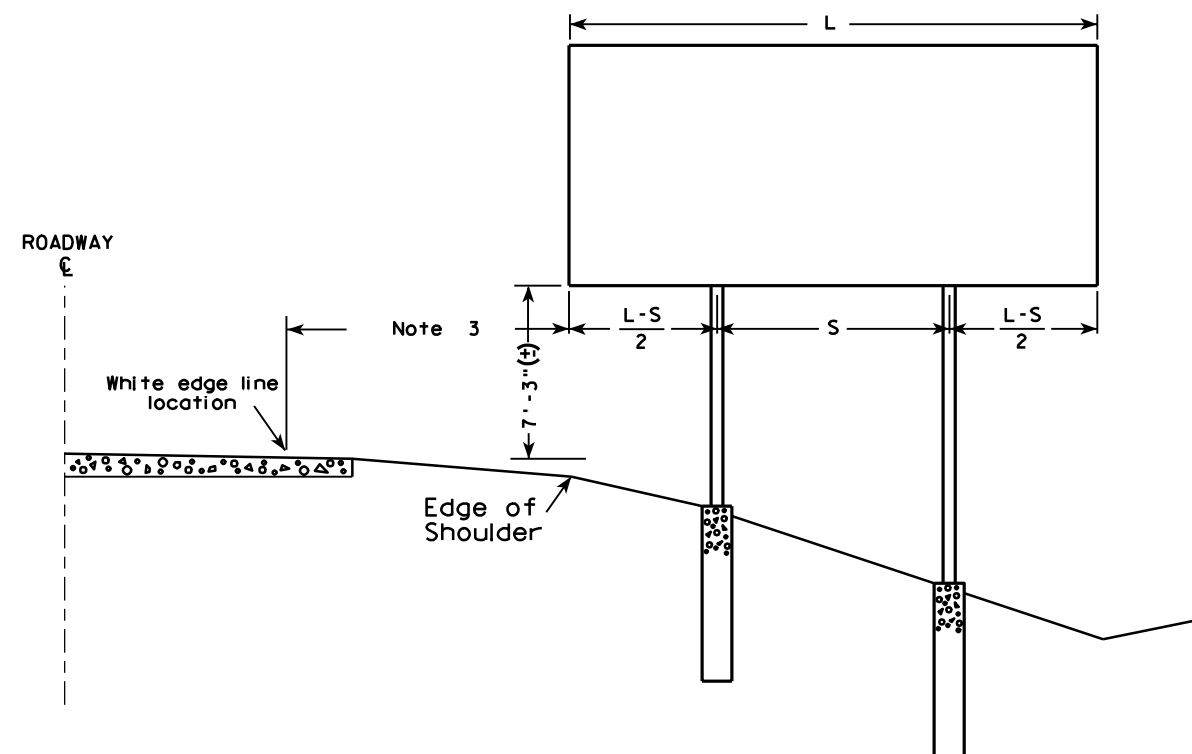
ALTERNATE BREAK-AWAY
BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 2/06/2014 PL 312 A3-1M.1



GENERAL NOTES

1. For a 2 post installation, S equals $3L/5$, but shall not be less than 9 ft.
2. For a 3 post installation, S equals $5L/7$, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3" (±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 4/02/08

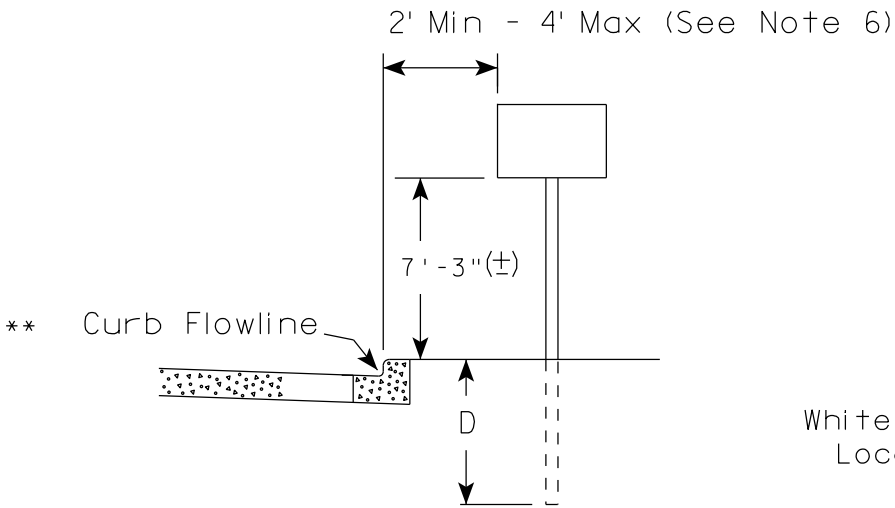
PLATE NO. A4-1.9

PROJECT NO:

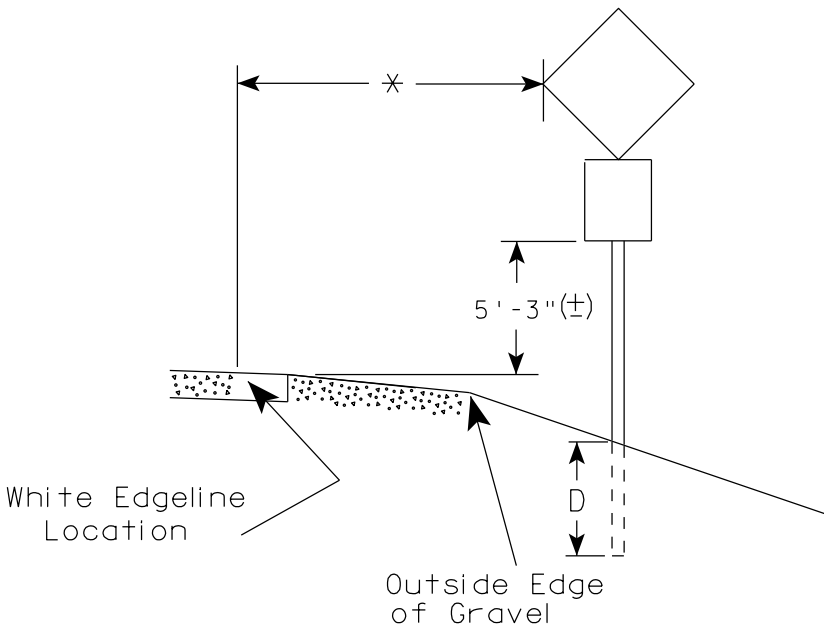
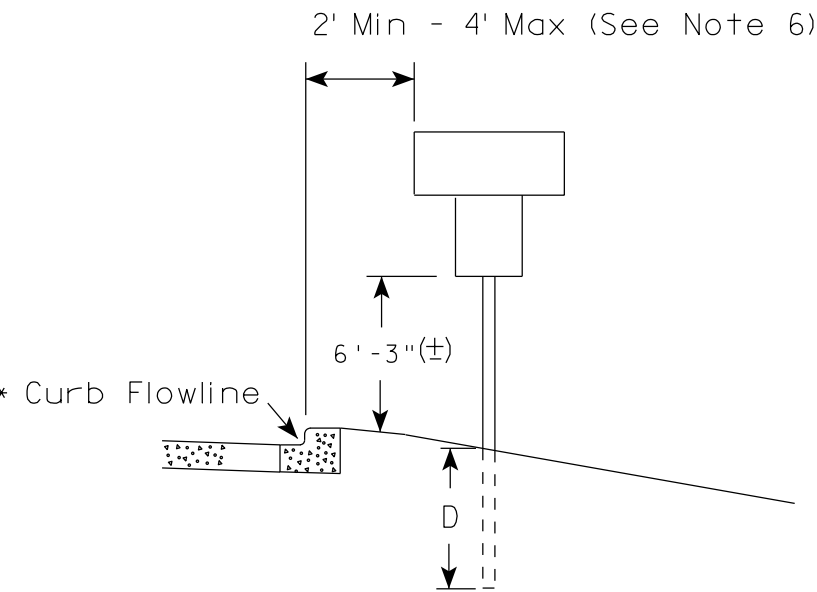
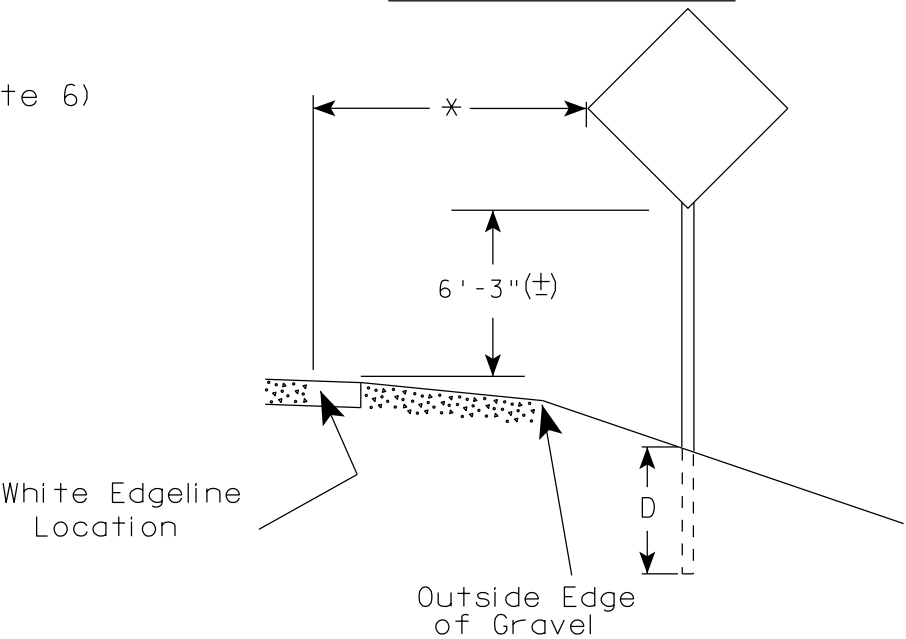
SHEET NO: 313

E

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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

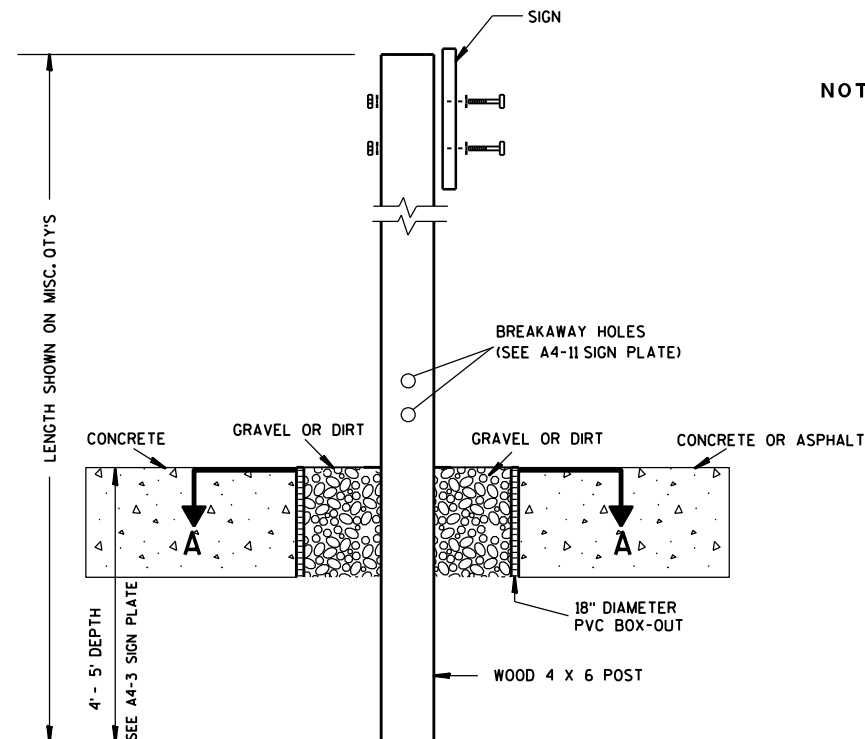
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

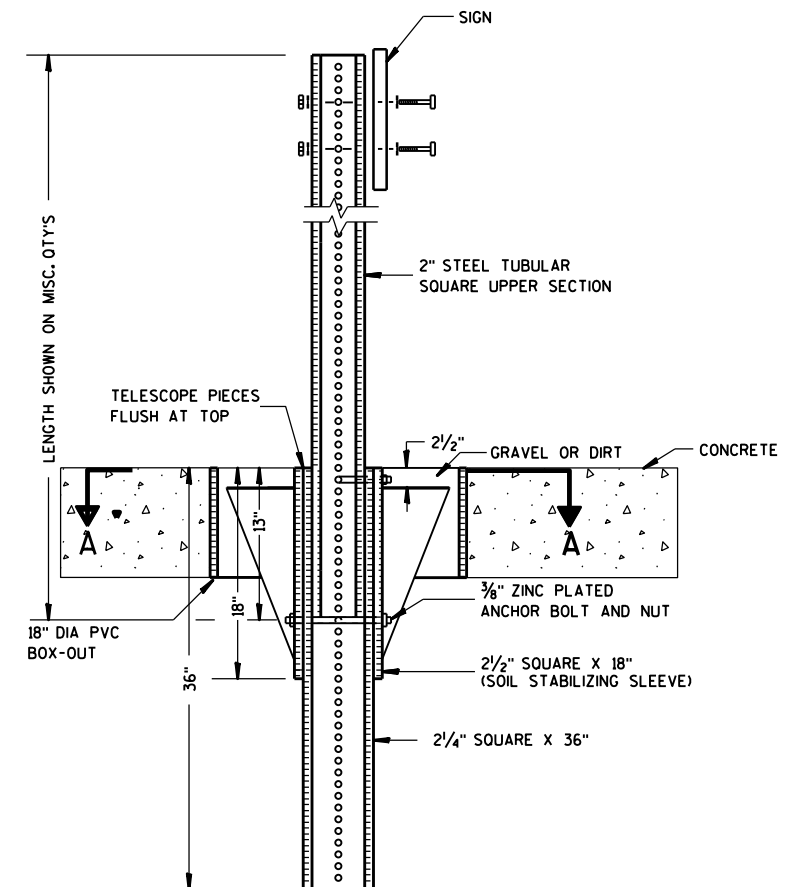
DATE 7/23/15 PLATE NO. A4-3.20
314



ELEVATION VIEW

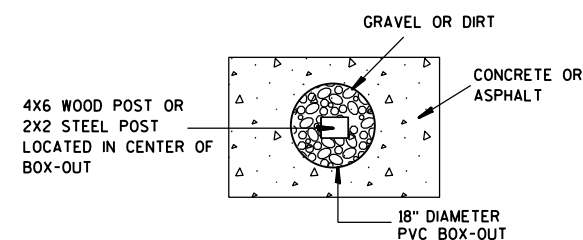
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 315 A4-3B.1

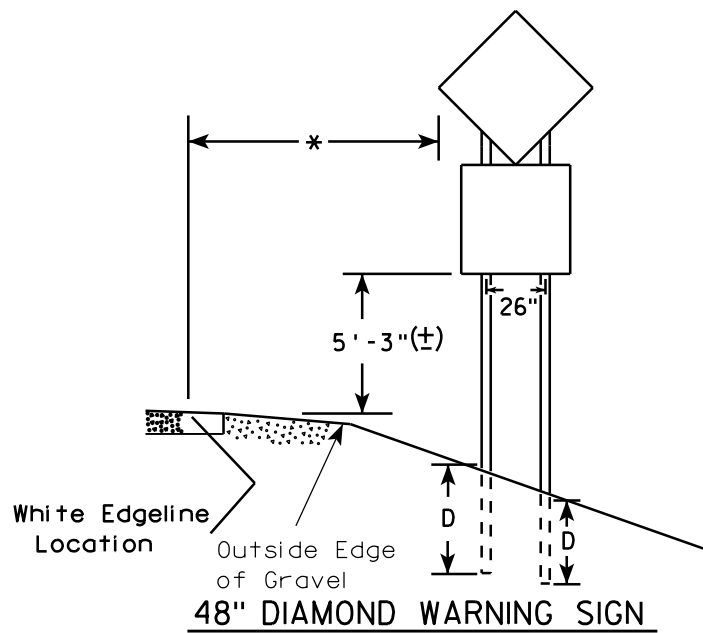
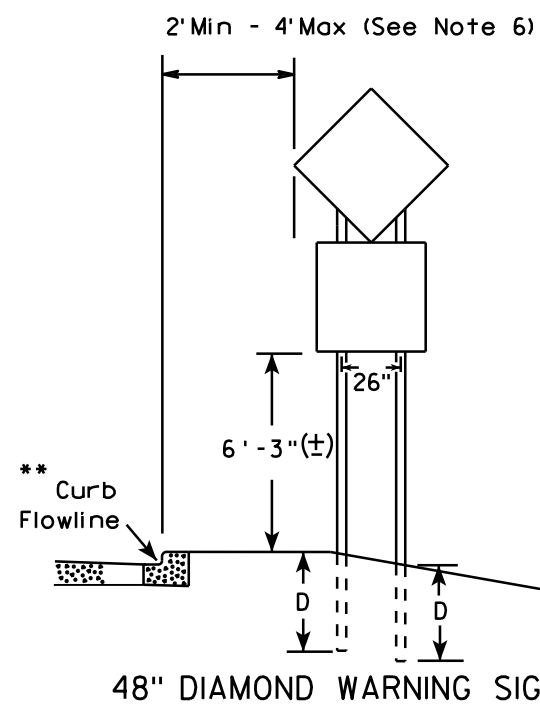
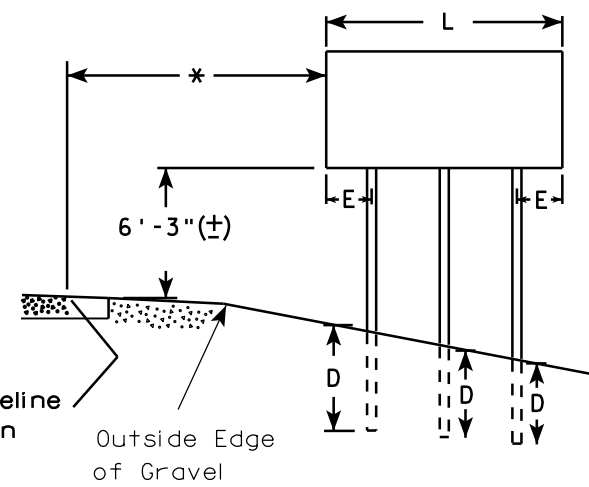
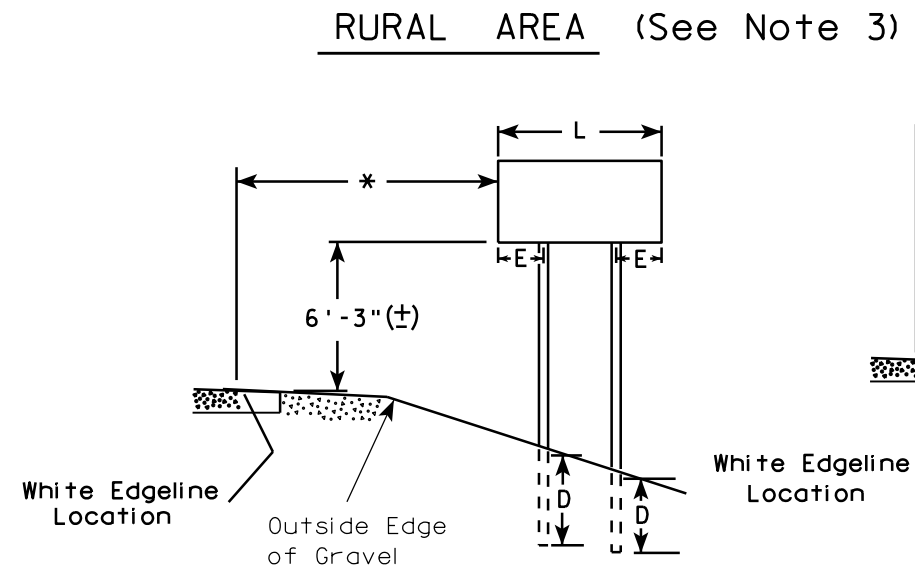
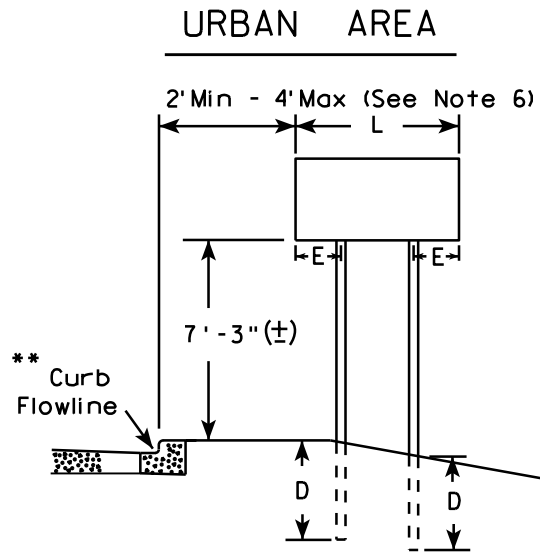
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

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

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

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

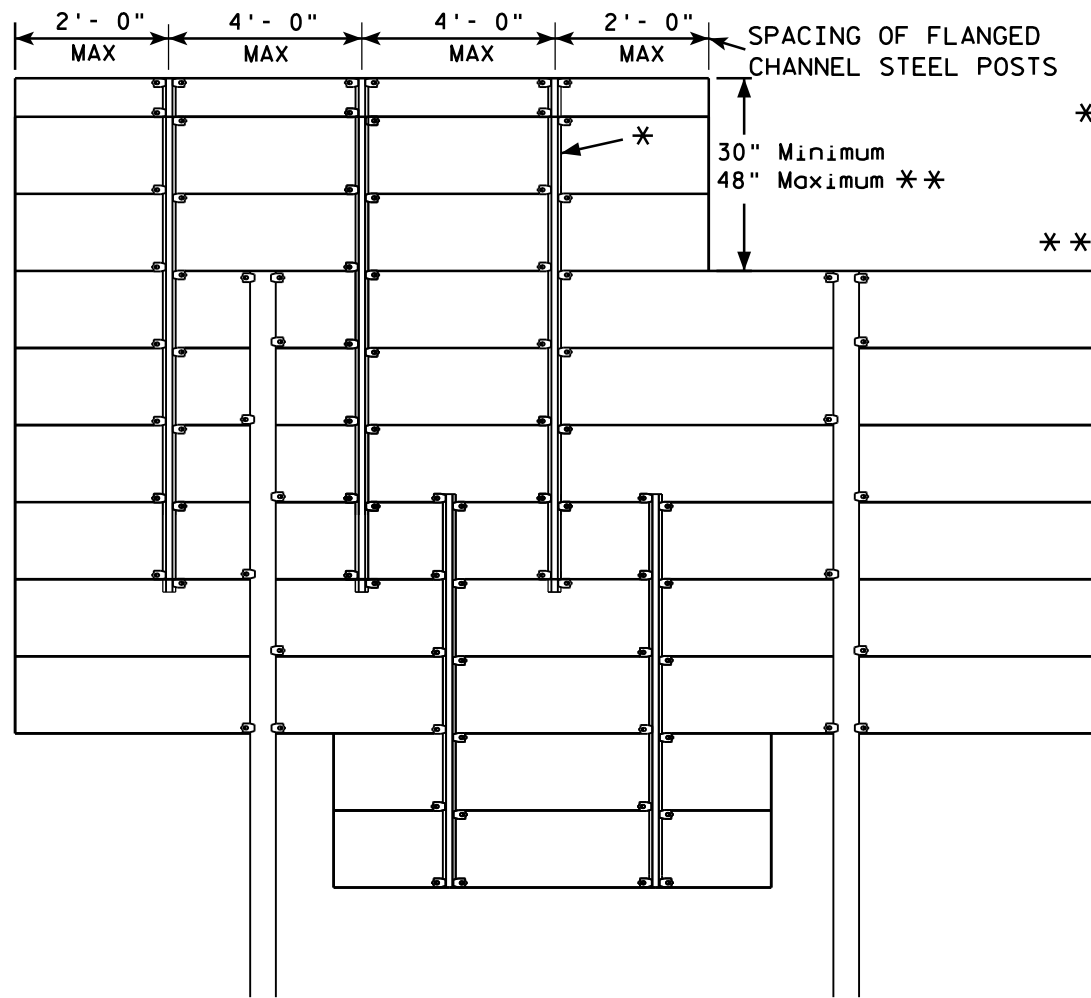
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

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

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/23/15	PLATE NO. ^{AA-A} 14 316

GROUND MOUNTED SIGN

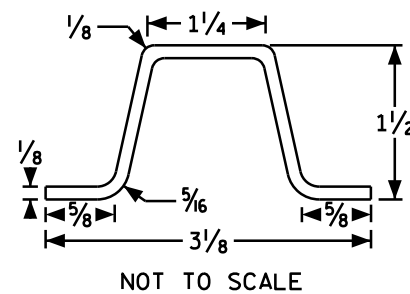


* = 2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

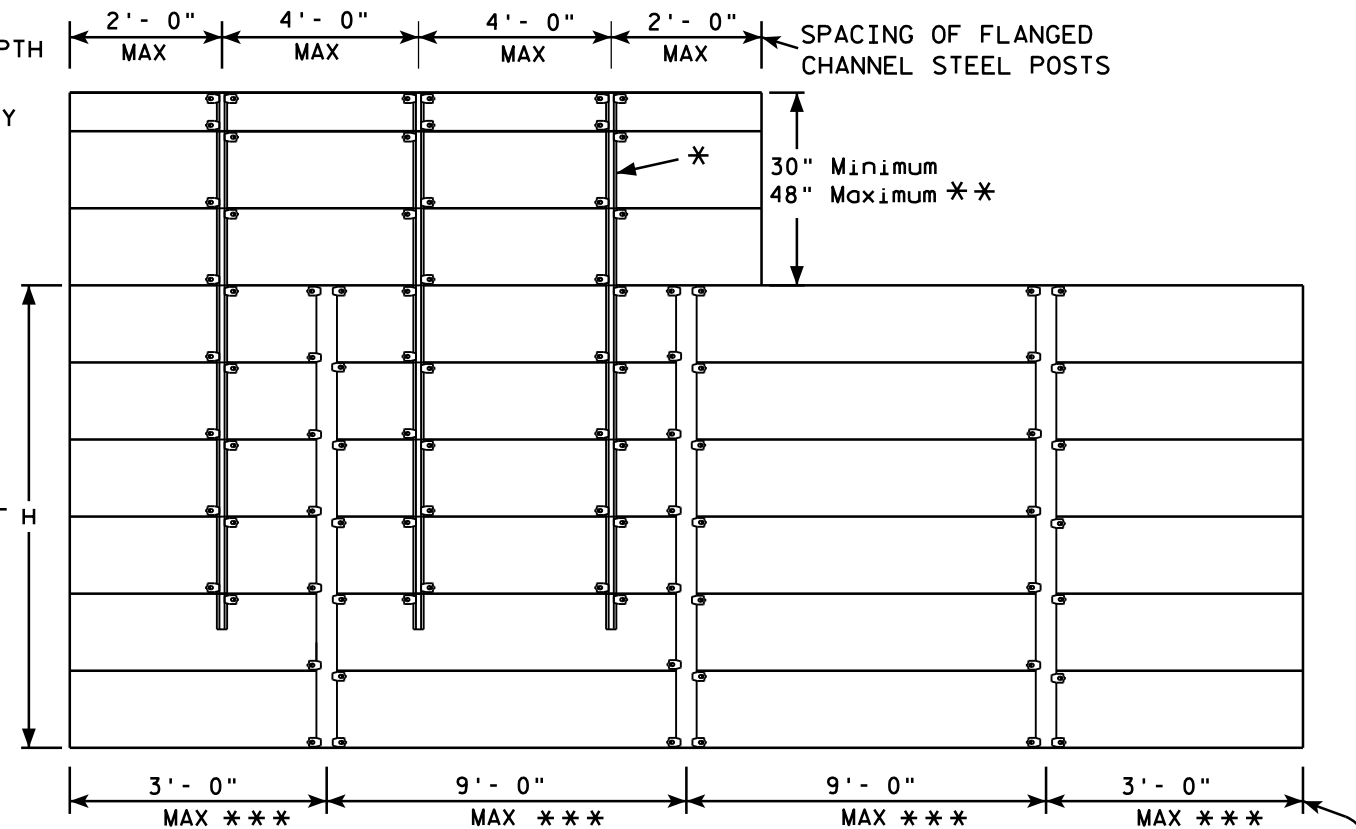
** = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS 5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:
PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
PANEL LENGTH 9'-0" - 12'-0" = 3 CHANNELS
PANEL LENGTH 13'-0" OR MORE = 4 CHANNELS
If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

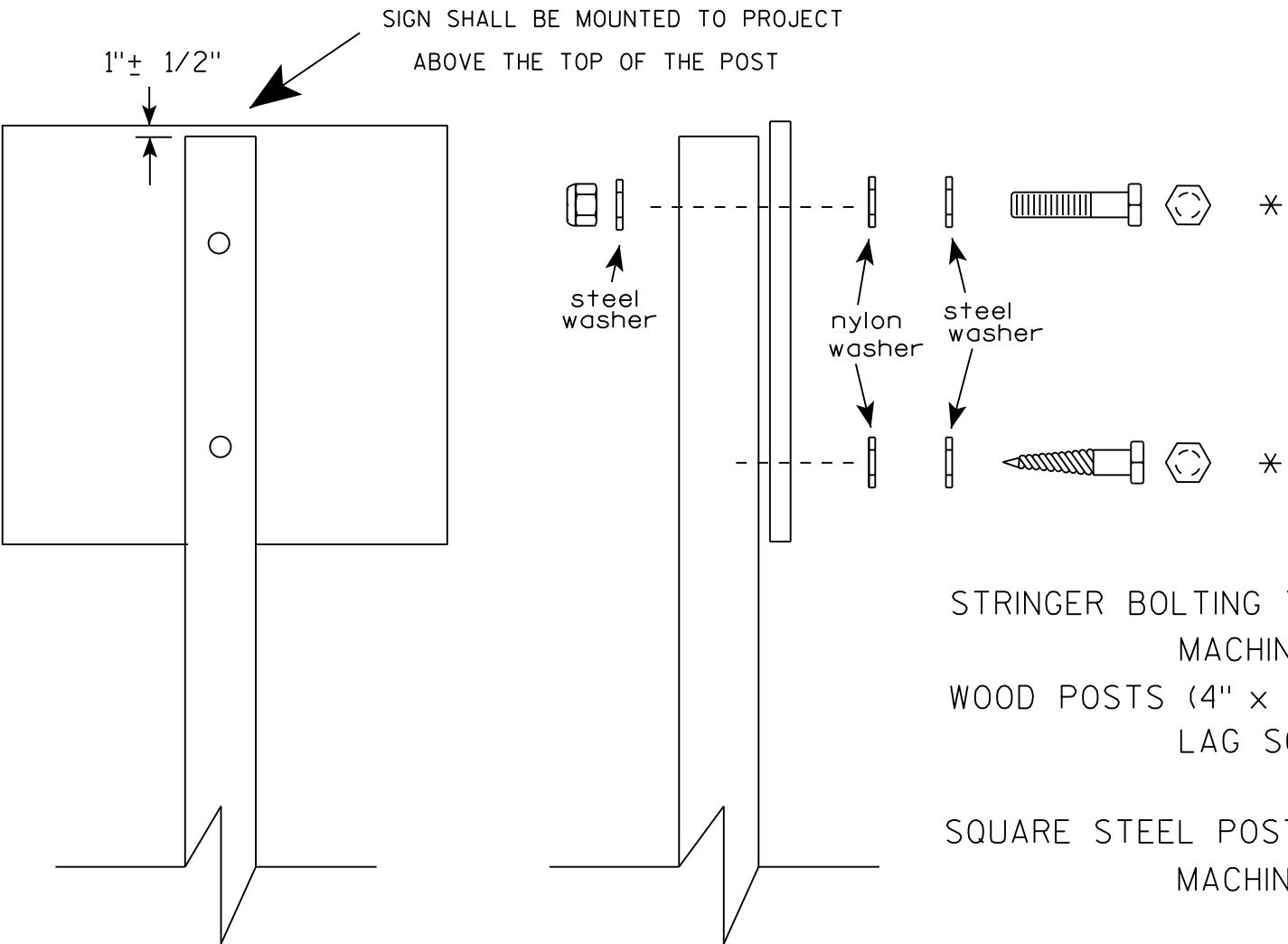
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/05/13 PLAT 317 ^4-6.12



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

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

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

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

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

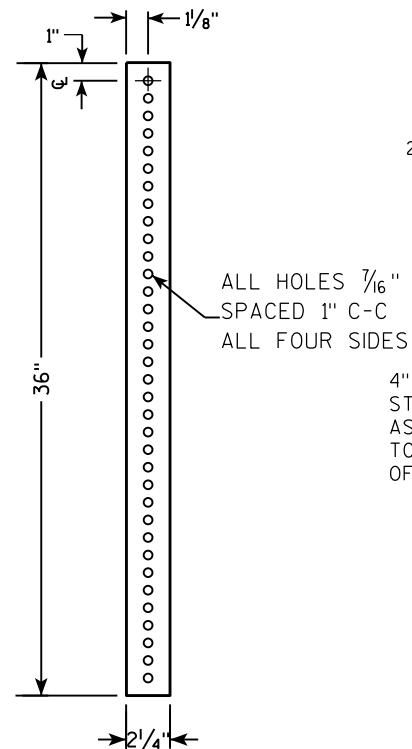
ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

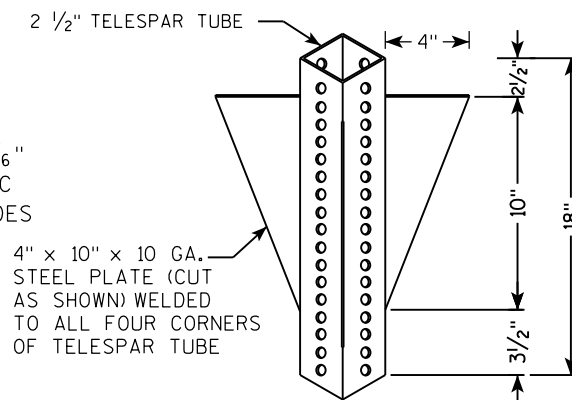
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8
318

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



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



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

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

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

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

1"

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

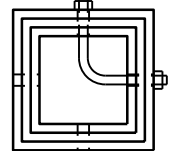
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

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

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 2/05/15 PLAT 319 14-9.9

SHEET NO:		E
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PROJECT NO:	HWY:	COUNTY:	SHEET NO:
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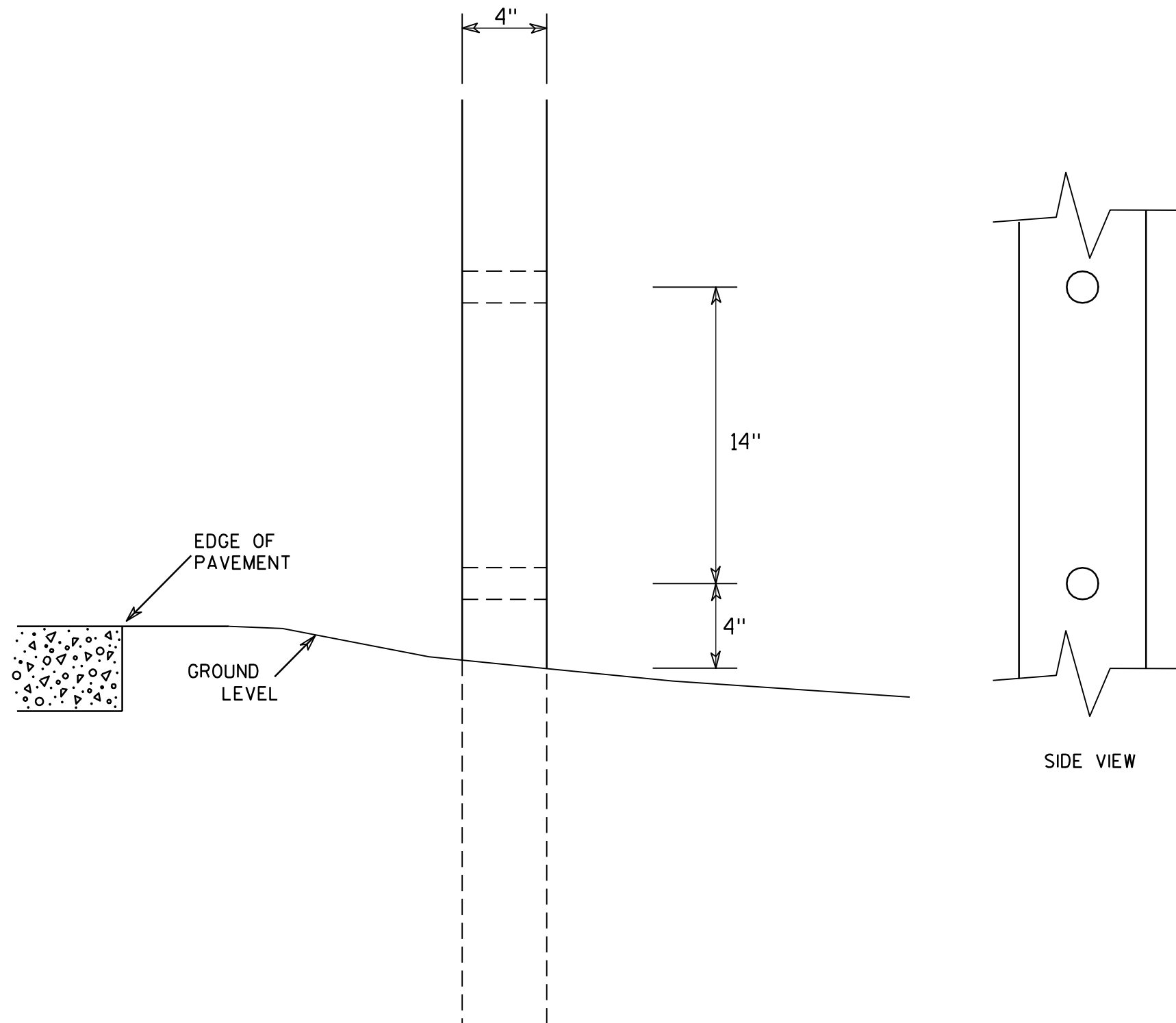
PLOT DATE : 05-FEB-2015 17:09

PLOT BY : mscs_ja

PLOT NAME :

PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 320

E

7

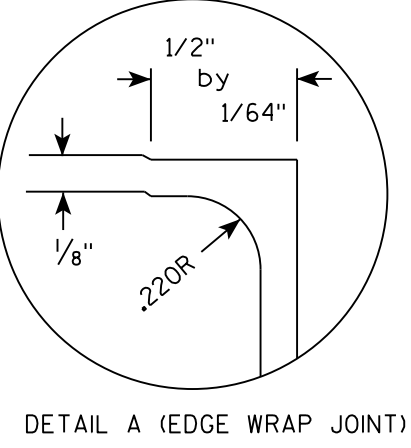


Punch 7/16" x 7/8" ovalholes beginning 6" in from end
of extrusion 12" CC on both edges of 6" and 12" panels.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions $1/2"$ by $1/64"$ and $1/8"$. A note $.220R$ indicates a radius or fillet at the corner of the joint.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions $1/2"$ by $1/64"$ and $1/8"$. A note $.220R$ indicates a radius or fillet at the corner of the joint.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions $1/2"$ by $1/64"$ and $1/8"$. A note $.220R$ indicates a radius or fillet at the corner of the joint.



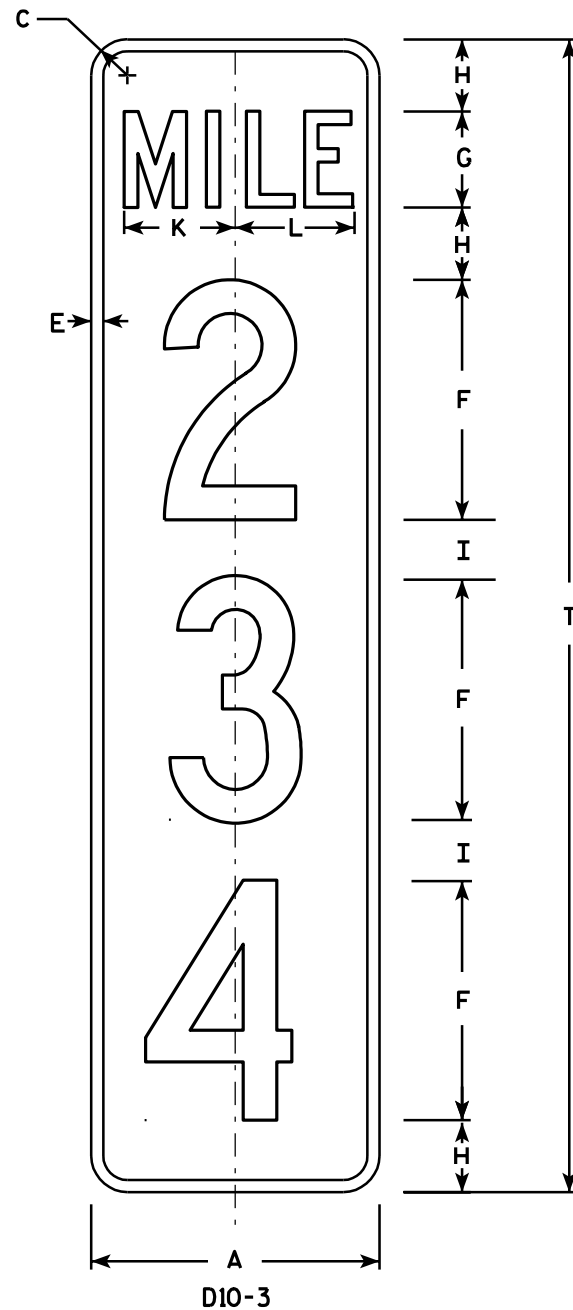
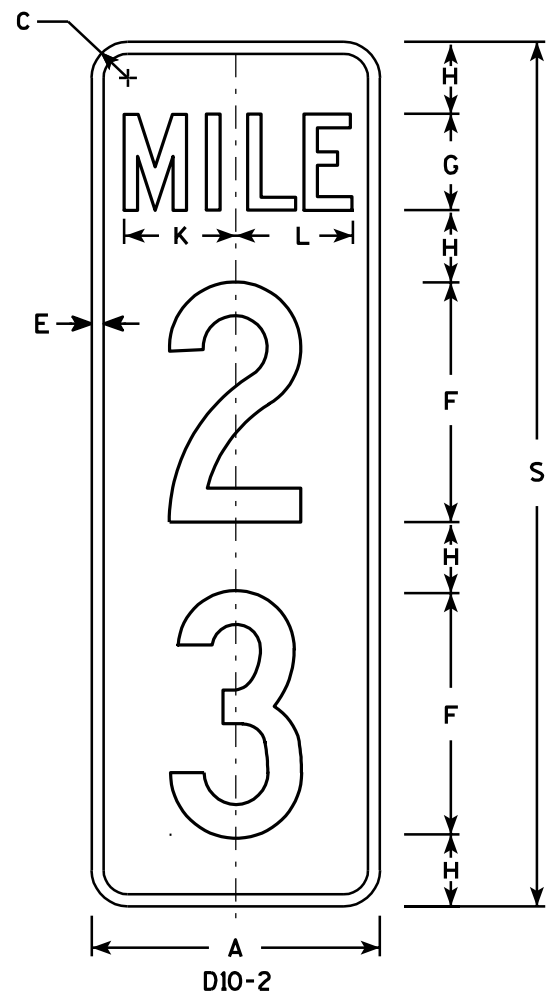
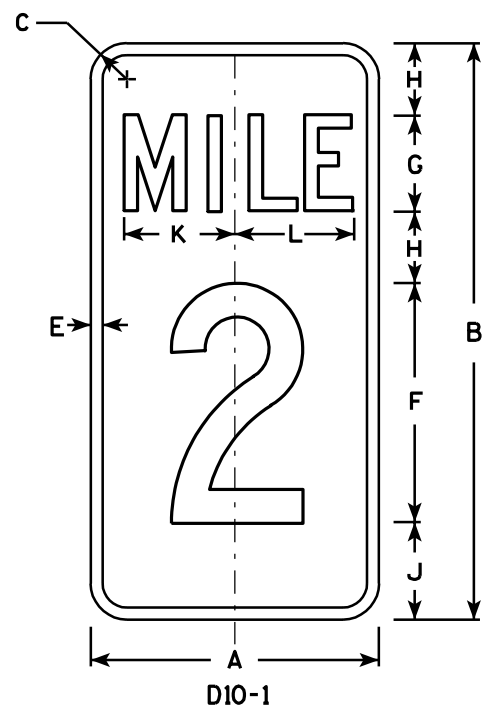
POST CLIP, POST CLIP BOLT, WASHER & NUT

POST CLIP, POST CLIP BOLT, WASHER & NUT



1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE <u>11/30/16</u>	PLATE NO. <u>A5-2.10</u>



NOTES

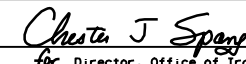
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

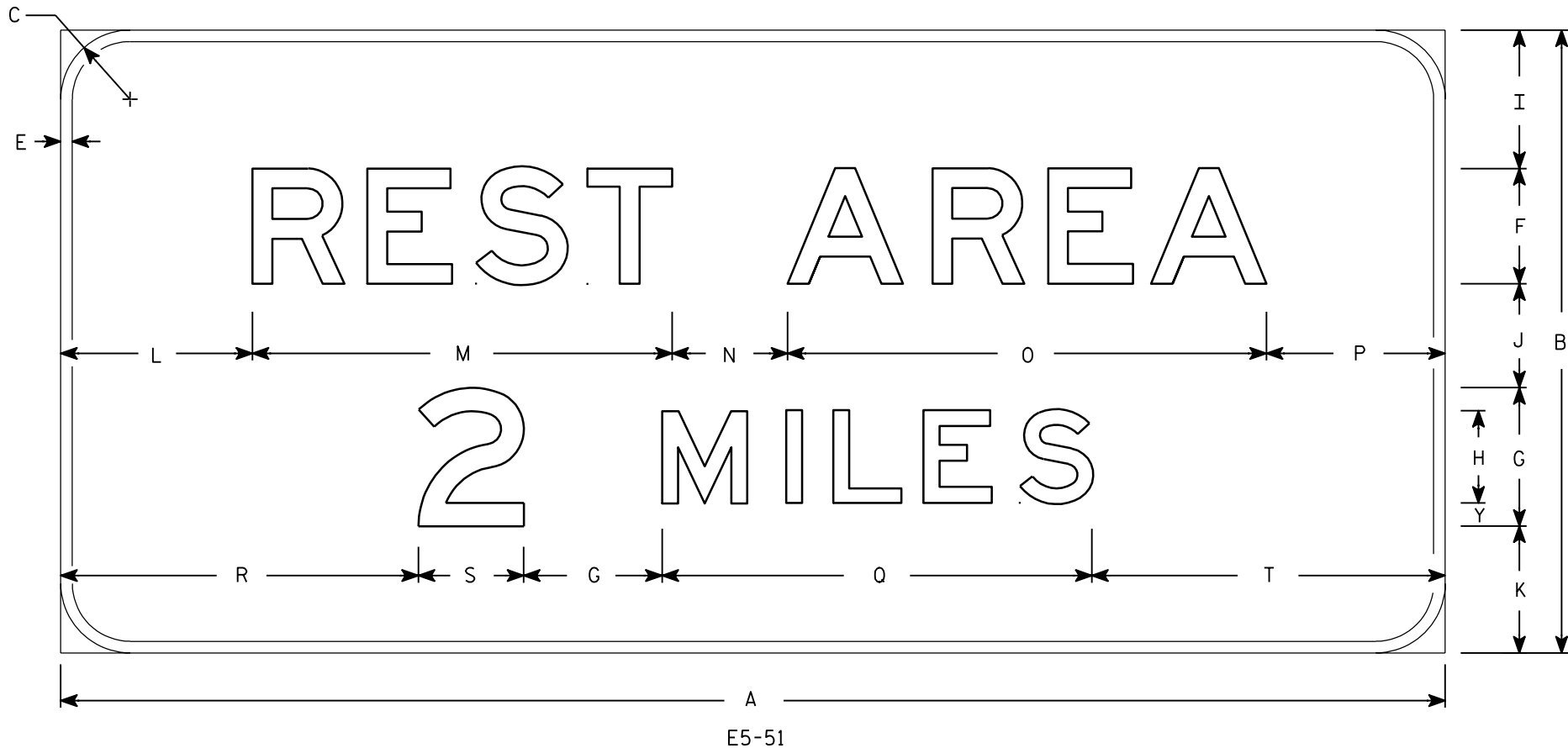
Metric equivalent
for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						
5	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

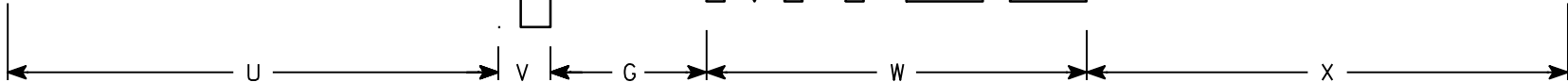
STANDARD SIGN D10-1 , D10-2 & D10-3	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED  for Director, Office of Traffic	
DATE 1/16/02	PLATE NO. D10-3.2



NOTES

- 1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Blue
 - Message - White
- 3. Message Series - E
- 4. Substitute appropriate numeral and adjust spacing to achieve proper balance.

1 MILE



Metric equivalent
for this sign is:

SIZE	
1	
2	
3	
4	3000 mm X 1350 mm
5	3600 mm X 1500 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2																												
3																												
4	120	54	6		1	10	12	8	12	9	11	16 5⁄8	36 3⁄8	10	41 1⁄2	15 1⁄2	37 1⁄4	31	9 1⁄8	30 5⁄8	37 3⁄4	4	29 1⁄4	37	2		45.0	4.05
5	144	60	6		2	12	15	10	12	10	11	19 3⁄4	44 3⁄4	12	49 1⁄2	18	46 1⁄4	36	11	35 3⁄4	44	4 7⁄8	36 1⁄4	43 7⁄8	2 1⁄2		60.0	5.40

STANDARD SIGN
E5-51

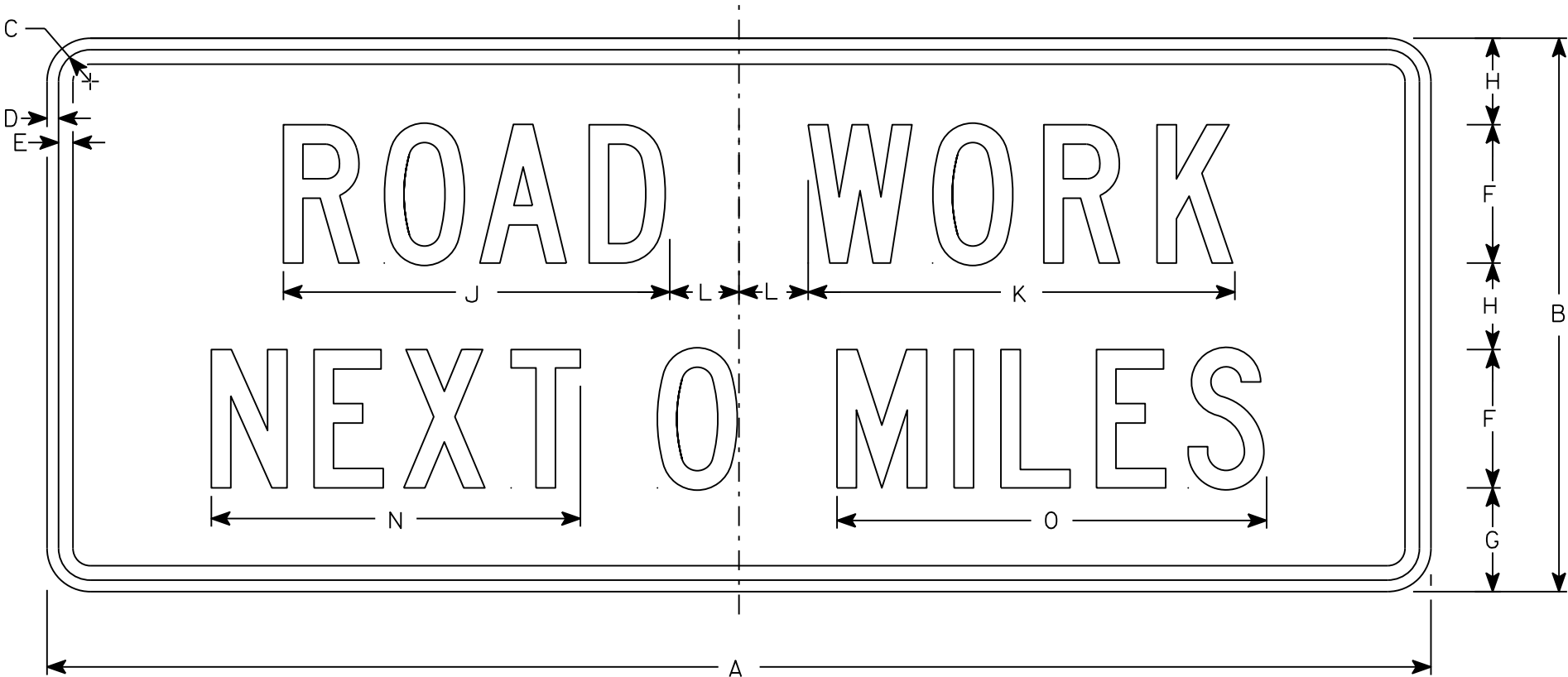
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 12/8/08 PLATE NO. E5-51.8

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4		16 3⁄4	18 1⁄2	3		16	18 5⁄8												10
3																											
4	60	24	1 3⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4		16 3⁄4	18 1⁄2	3		16	18 5⁄8												10
5																											

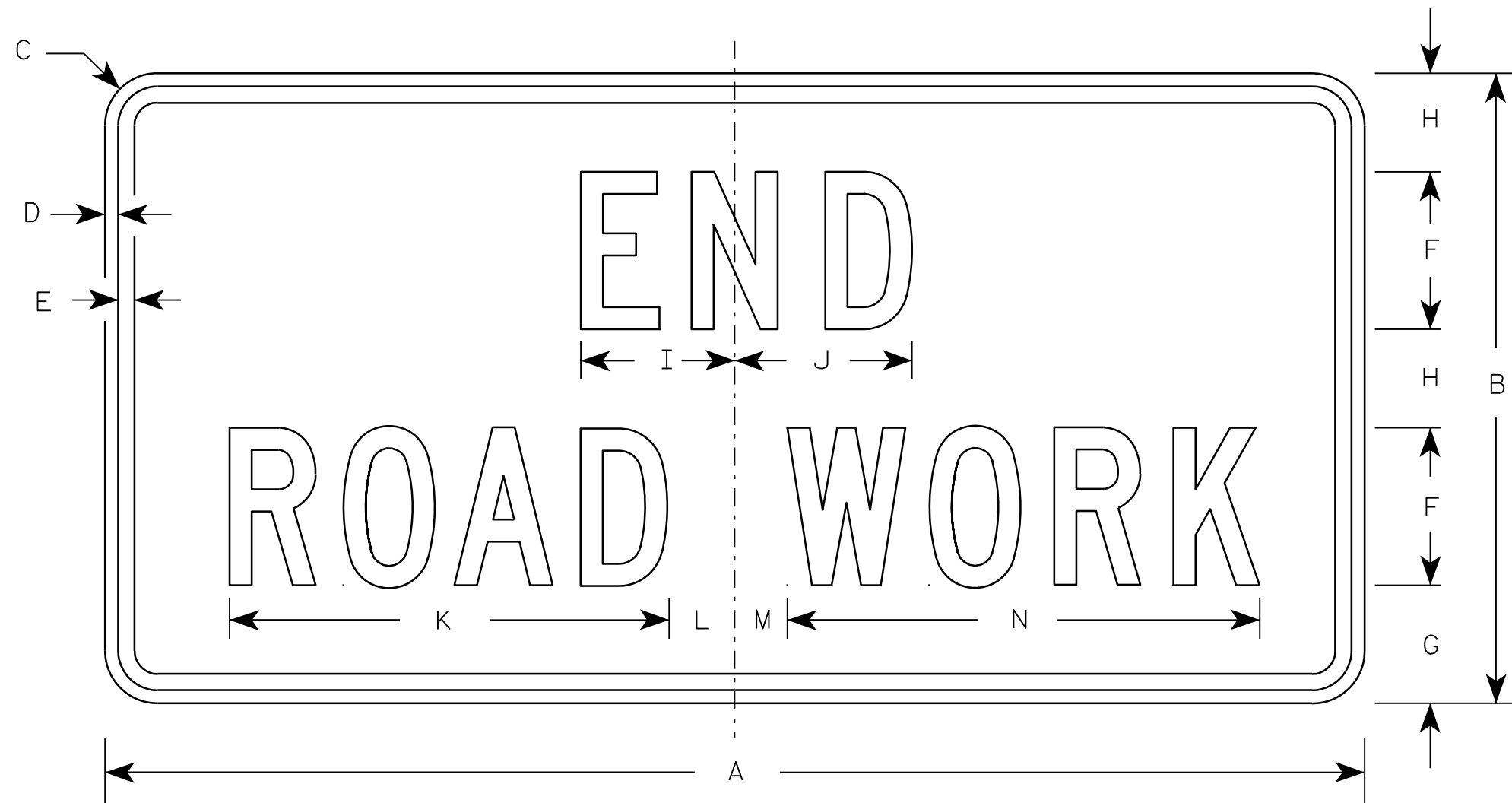
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

7



G20-2A

NOTES

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

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

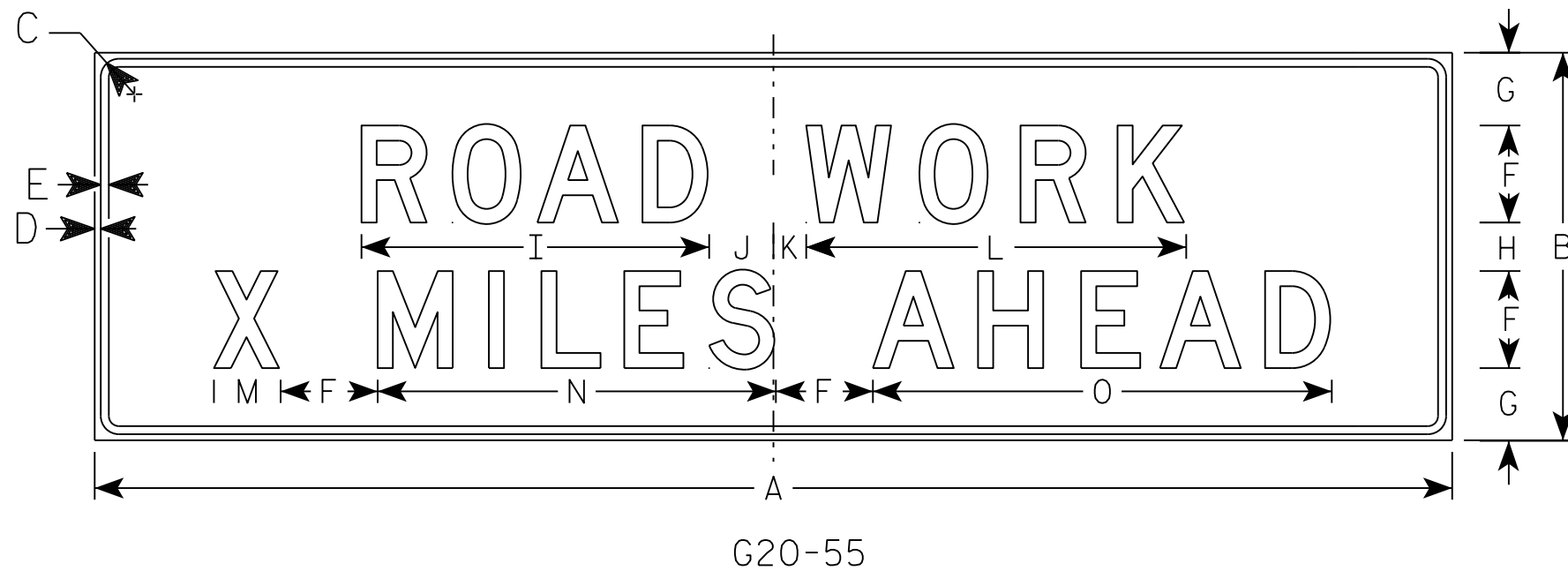
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numeral and adjust spacing to achieve proper balance.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	84	24	1 1/8	3/8	1/2	6	4 1/2	3	21 1/2	4	2	23 1/2	4 1/8	24 5/8	28 3/8												25.5
5																											

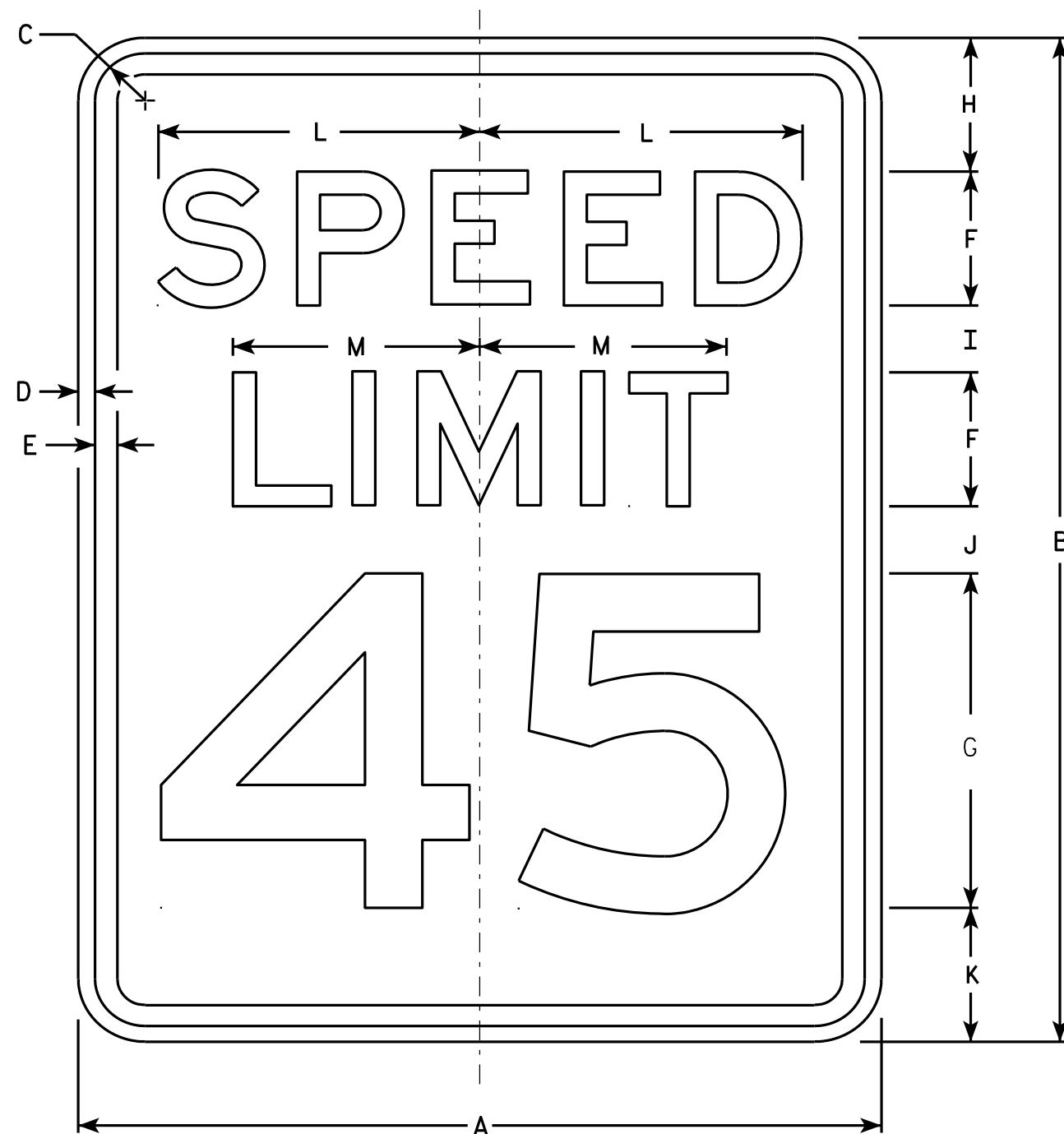
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 326		E
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STANDARD SIGN
G20-55

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-55.3



R2-1

NOTES

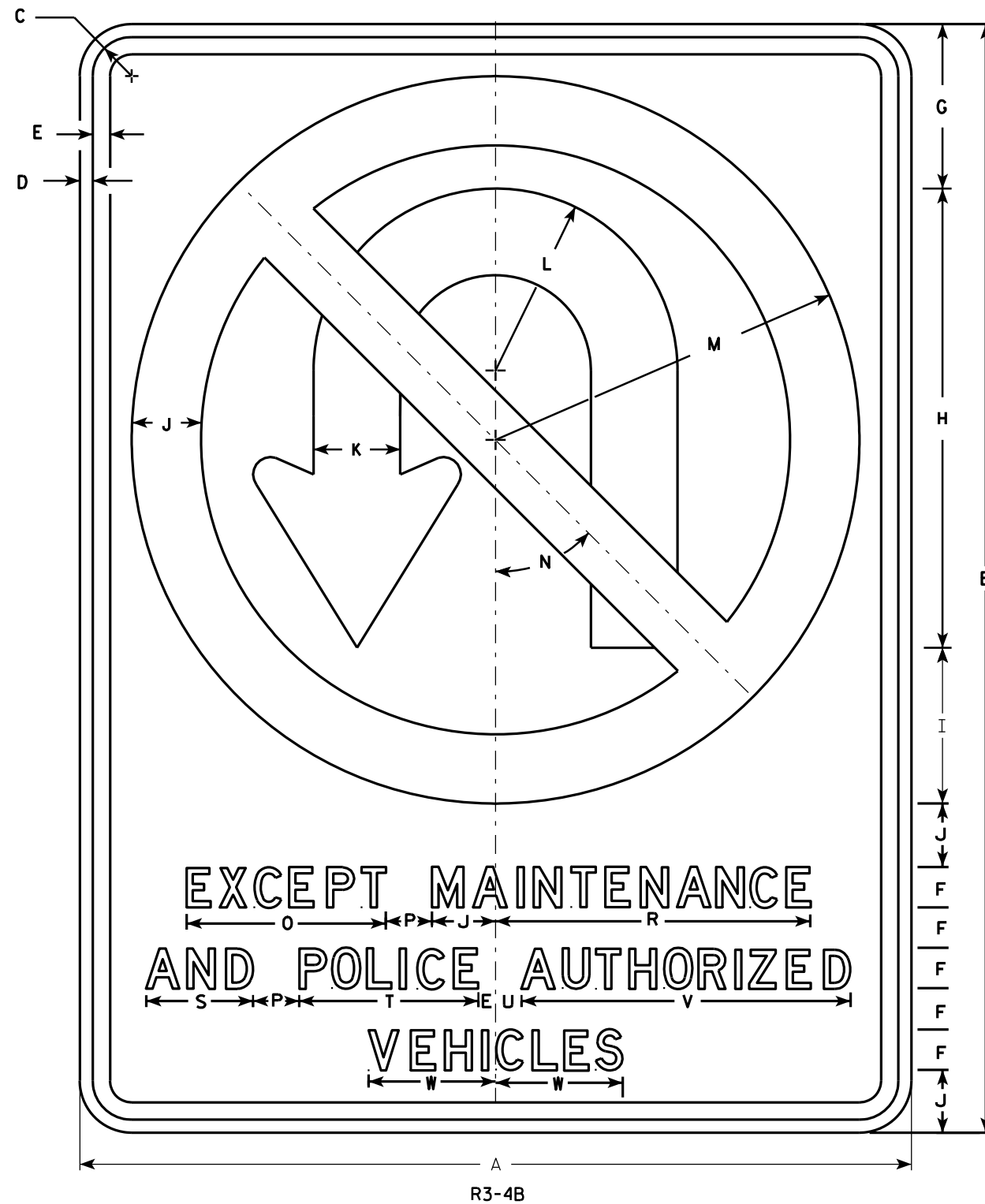
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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

STANDARD SIGN
R2-1

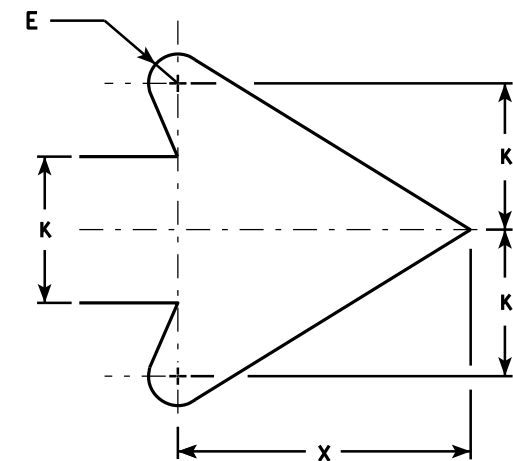
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: 327 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5⁄8	5⁄8	3⁄4	1 3⁄4	7 1⁄8	19 7⁄8	6 3⁄4	2 3⁄4	3 3⁄4	7 7⁄8	15 3⁄4	45°	8 5⁄8	2		13 5⁄8	4 5⁄8	7 3⁄4	1 1⁄8	14 1⁄4	5 1⁄2	7 5⁄8			12.0
5	36	48	1 5⁄8	5⁄8	3⁄4	1 3⁄4	7 1⁄8	19 7⁄8	6 3⁄4	2 3⁄4	3 3⁄4	7 7⁄8	15 3⁄4	45°	8 5⁄8	2		13 5⁄8	4 5⁄8	7 3⁄4	1 1⁄8	14 1⁄4	5 1⁄2	7 5⁄8			12.0

STANDARD SIGN R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO: HWY: COUNTY: SHEET NO: 328 E



R4-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN R4-3

WISCONSIN DEPT OF TRANSPORTATION

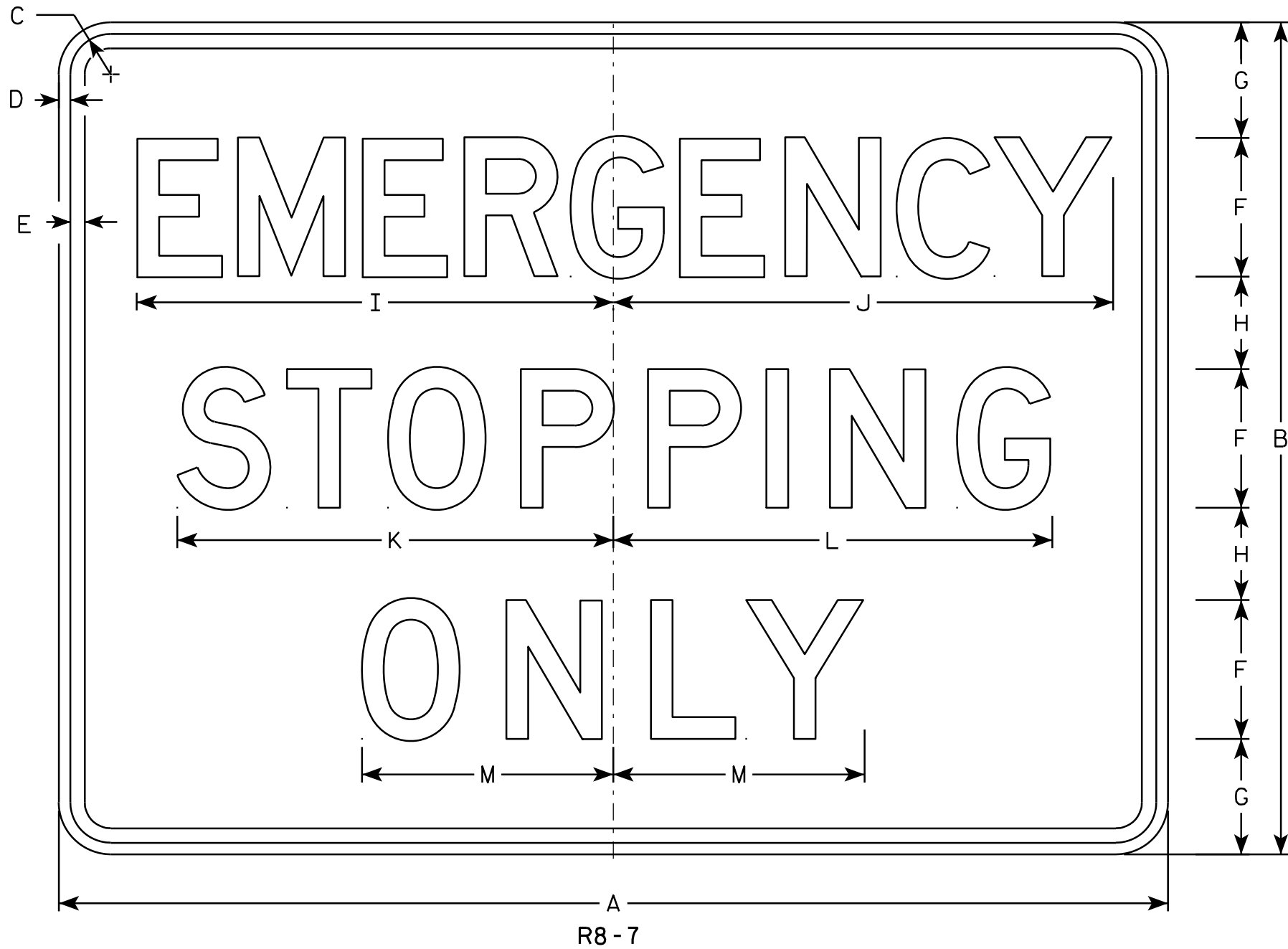
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

SHEET NO: 329

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	48	36	1 ¾	½	⅝	6	5	4	20 ⅝	21 ⅝	18 ⅞	19	10 ⅞														12.0
5	48	36	1 ¾	½	⅝	6	5	4	20 ⅝	21 ⅝	18 ⅞	19	10 ⅞														12.0

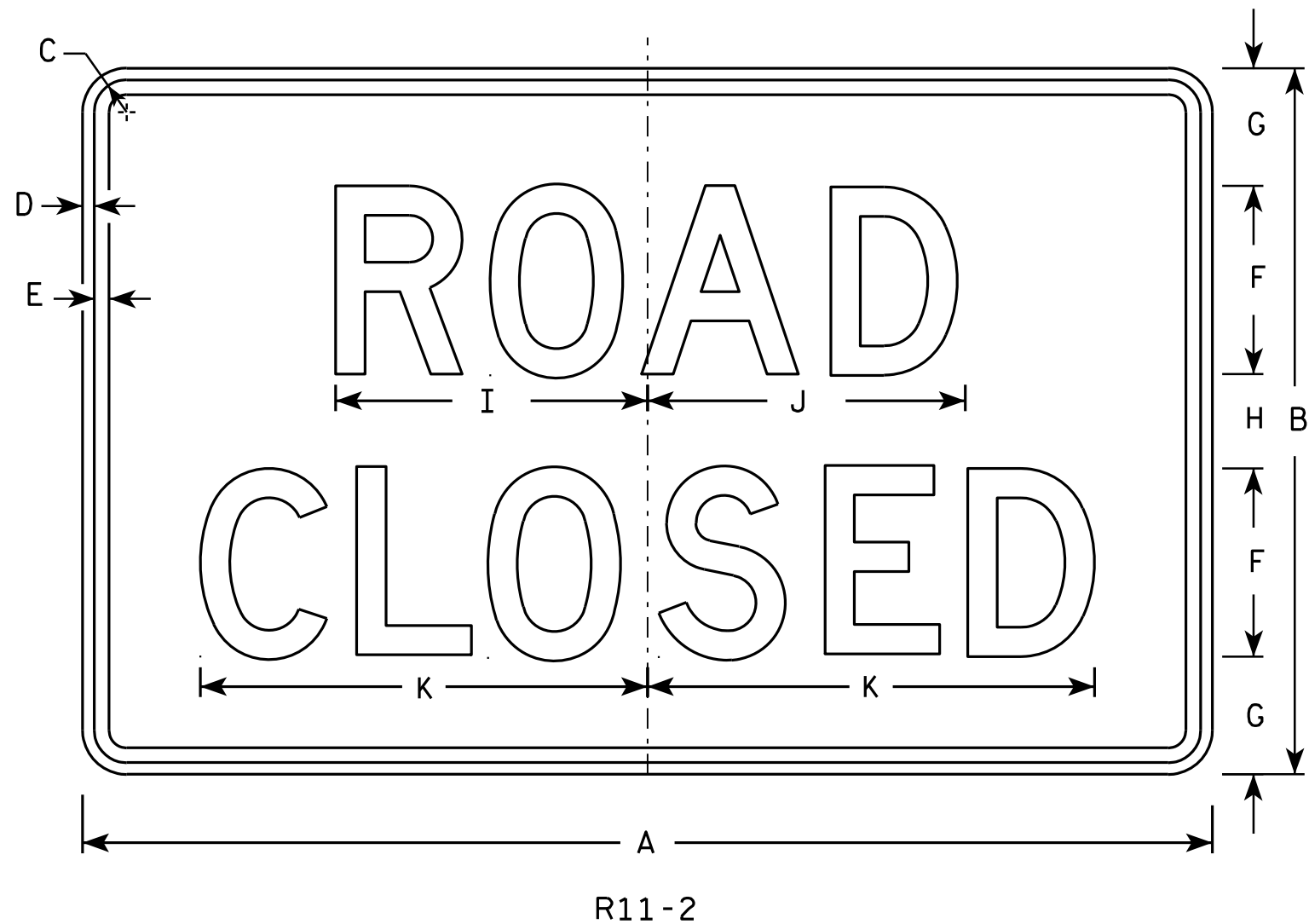
STANDARD SIGN
R8-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

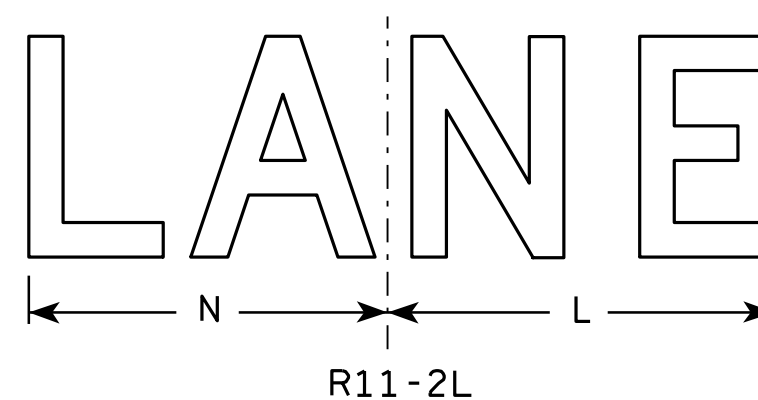
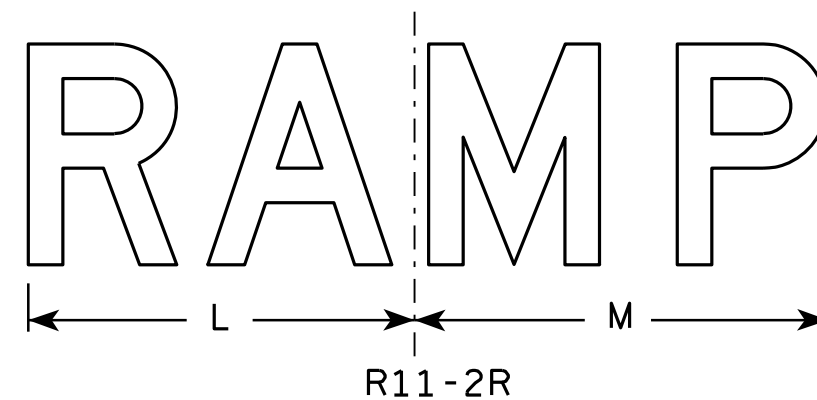
DATE 3/31/2011 PLATE NO. R8-7.6

PROJECT NO: HWY: COUNTY: SHEET NO: 330 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



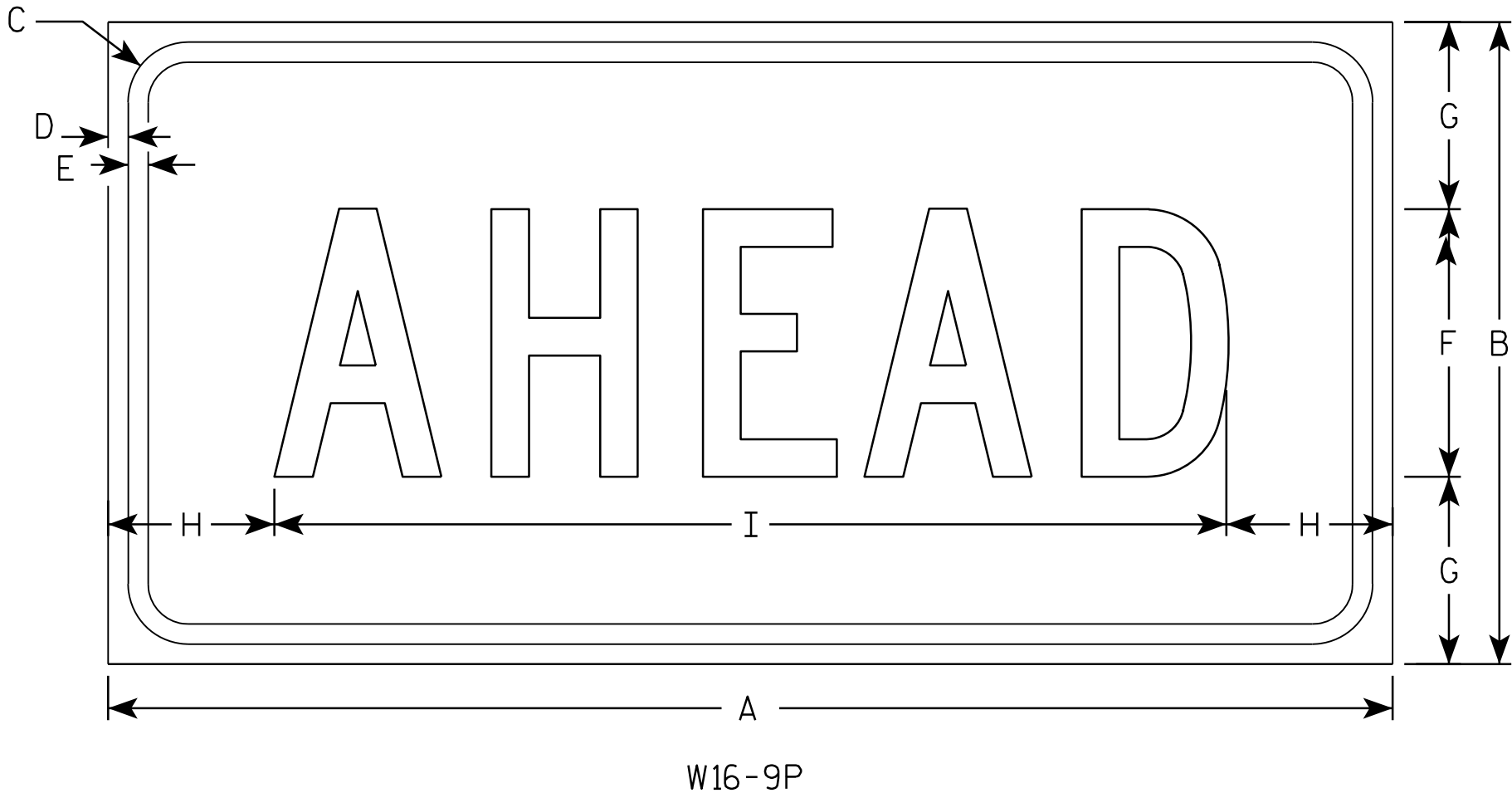
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13				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

STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: HWY: COUNTY: SHEET NO: 331 E

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

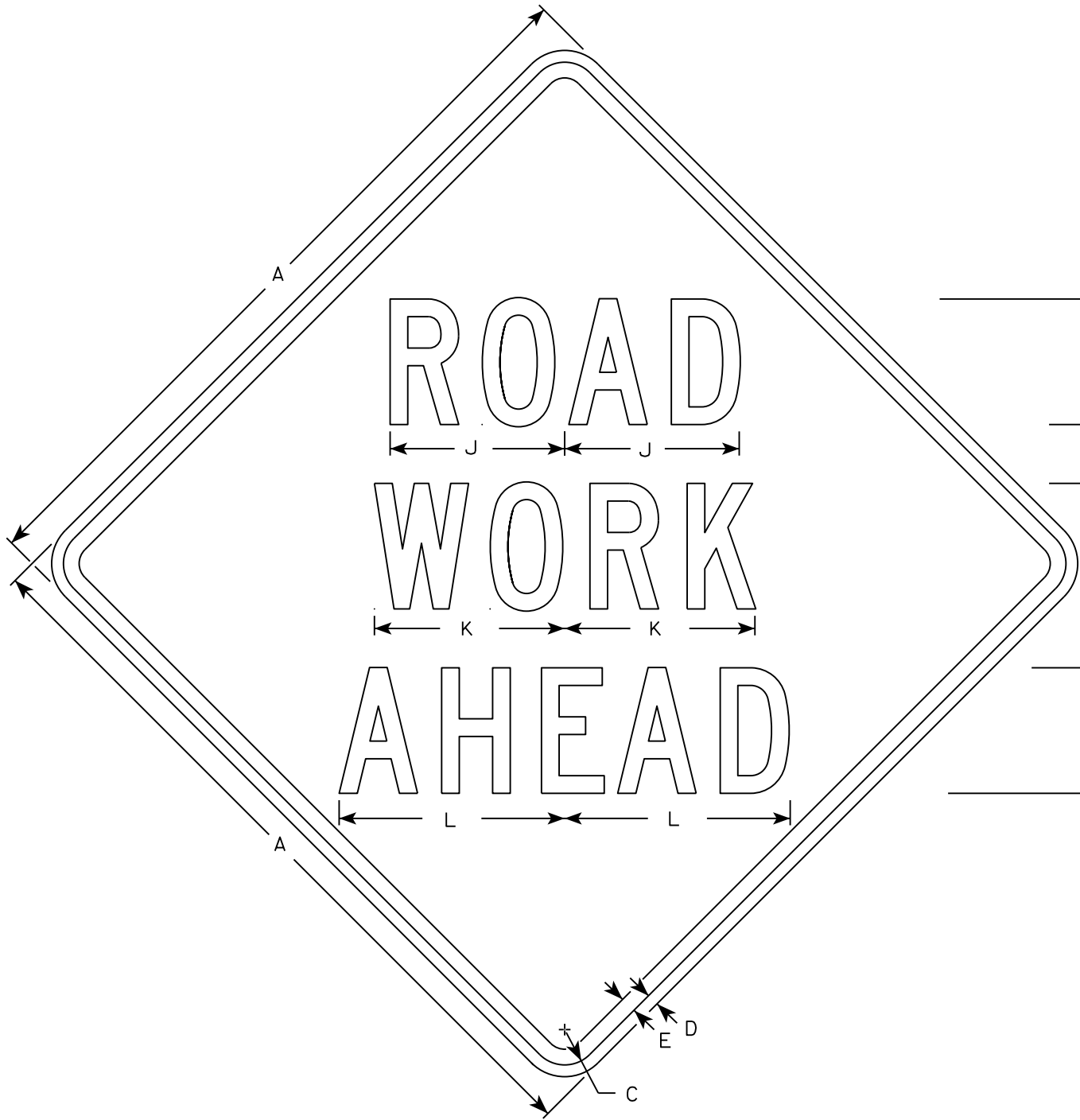
STANDARD SIGN

W16-9P

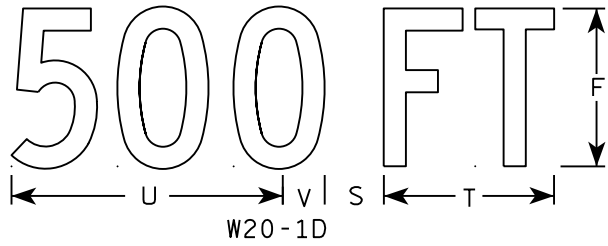
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

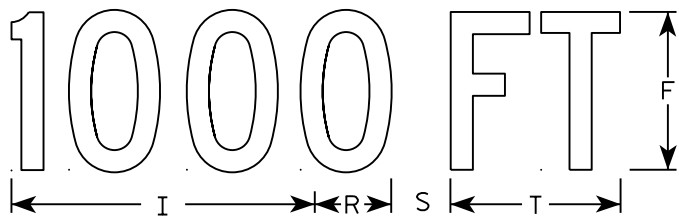
DATE 12/28/10 PLATE NO. W16-9P.6



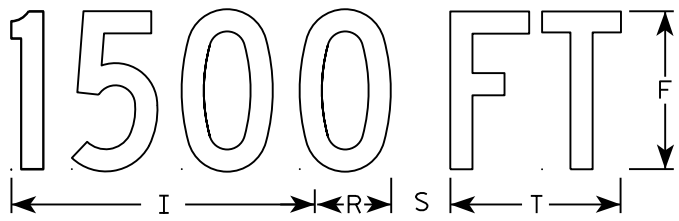
W20-1A



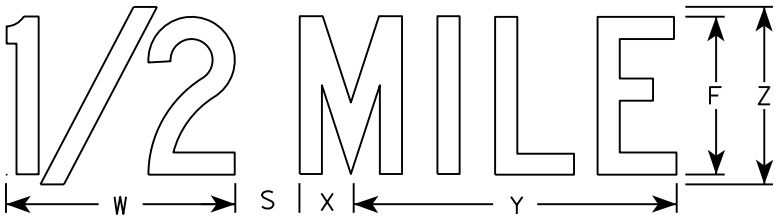
W20-1D



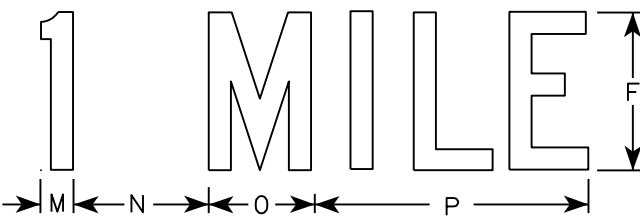
W20-1C



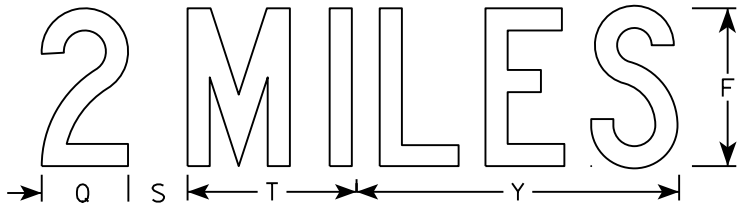
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

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

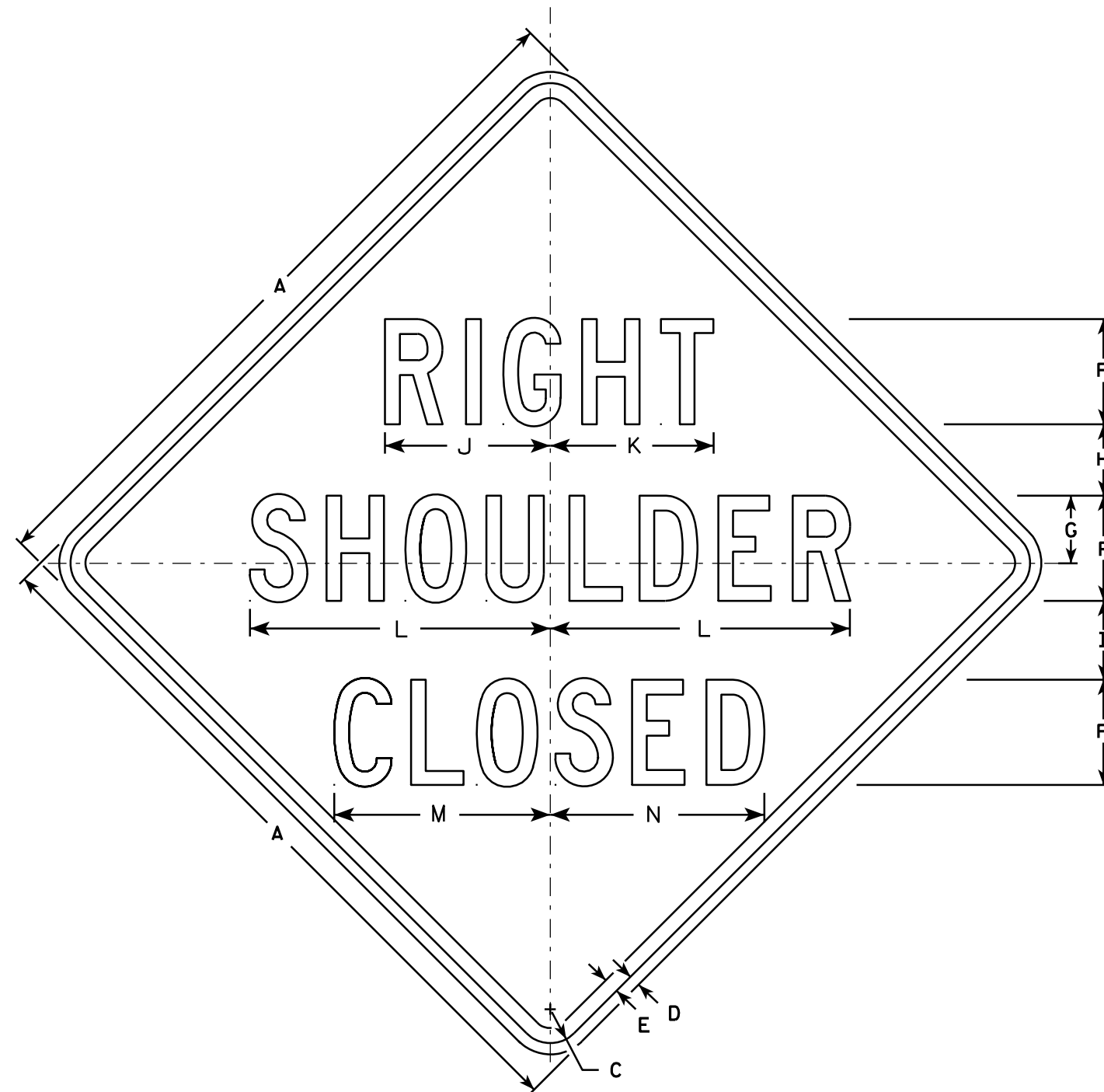
STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

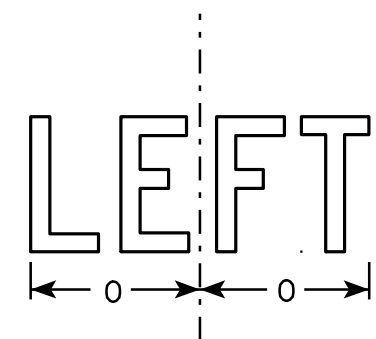
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

333



W21-5A



W21-5AL

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	4	7 7/8	7 3/4	14 1/4	10 1/4	10 1/8	6 1/4												9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0

STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5A.3

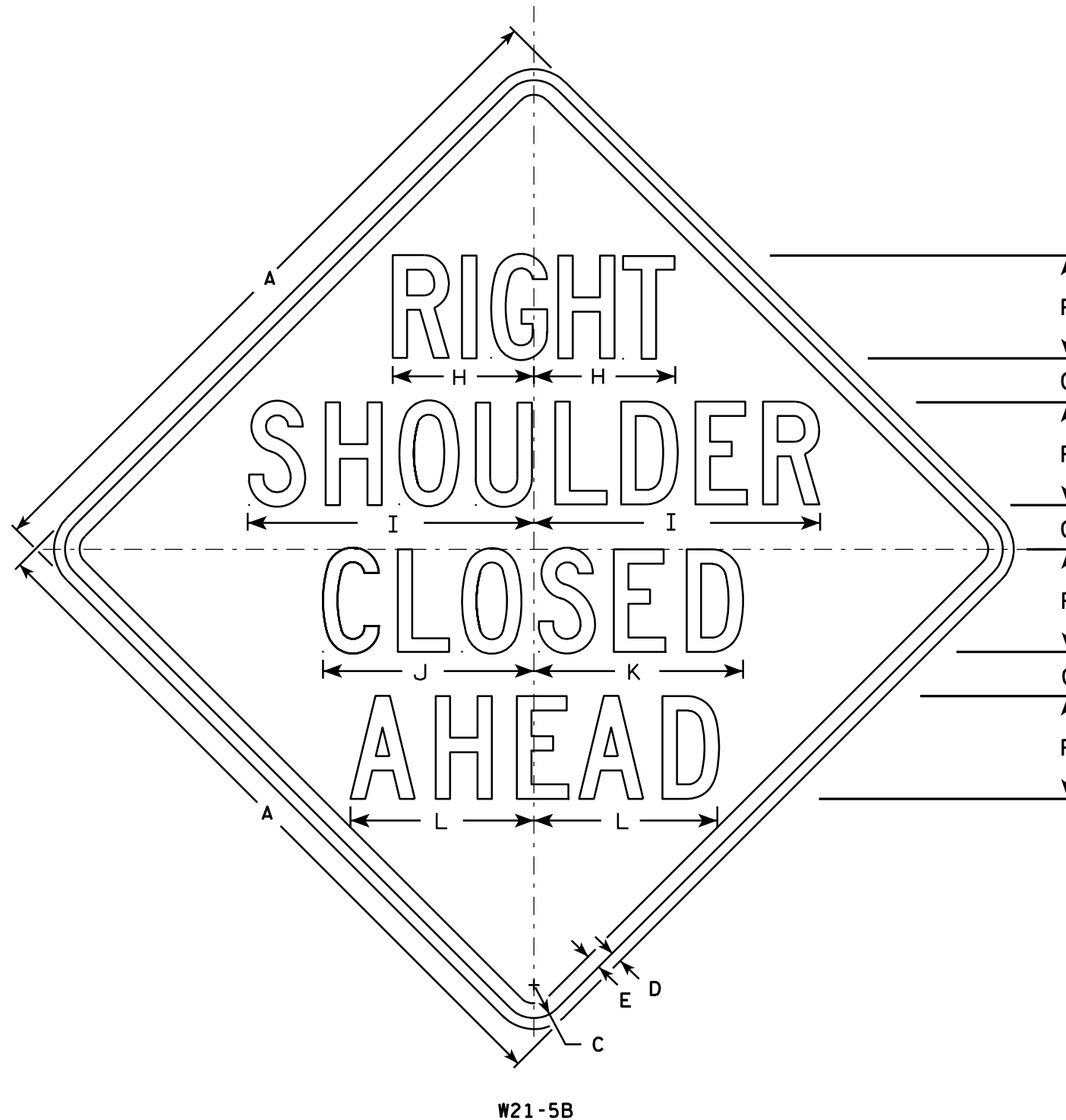
PROJECT NO:

HWY:

COUNTY:

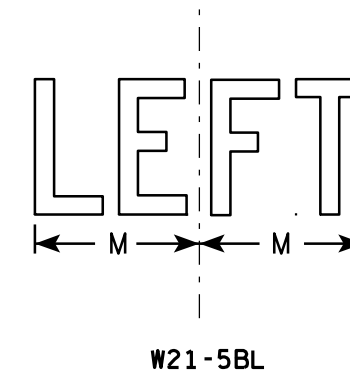
SHEET NO: 334

E



NOTES

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



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

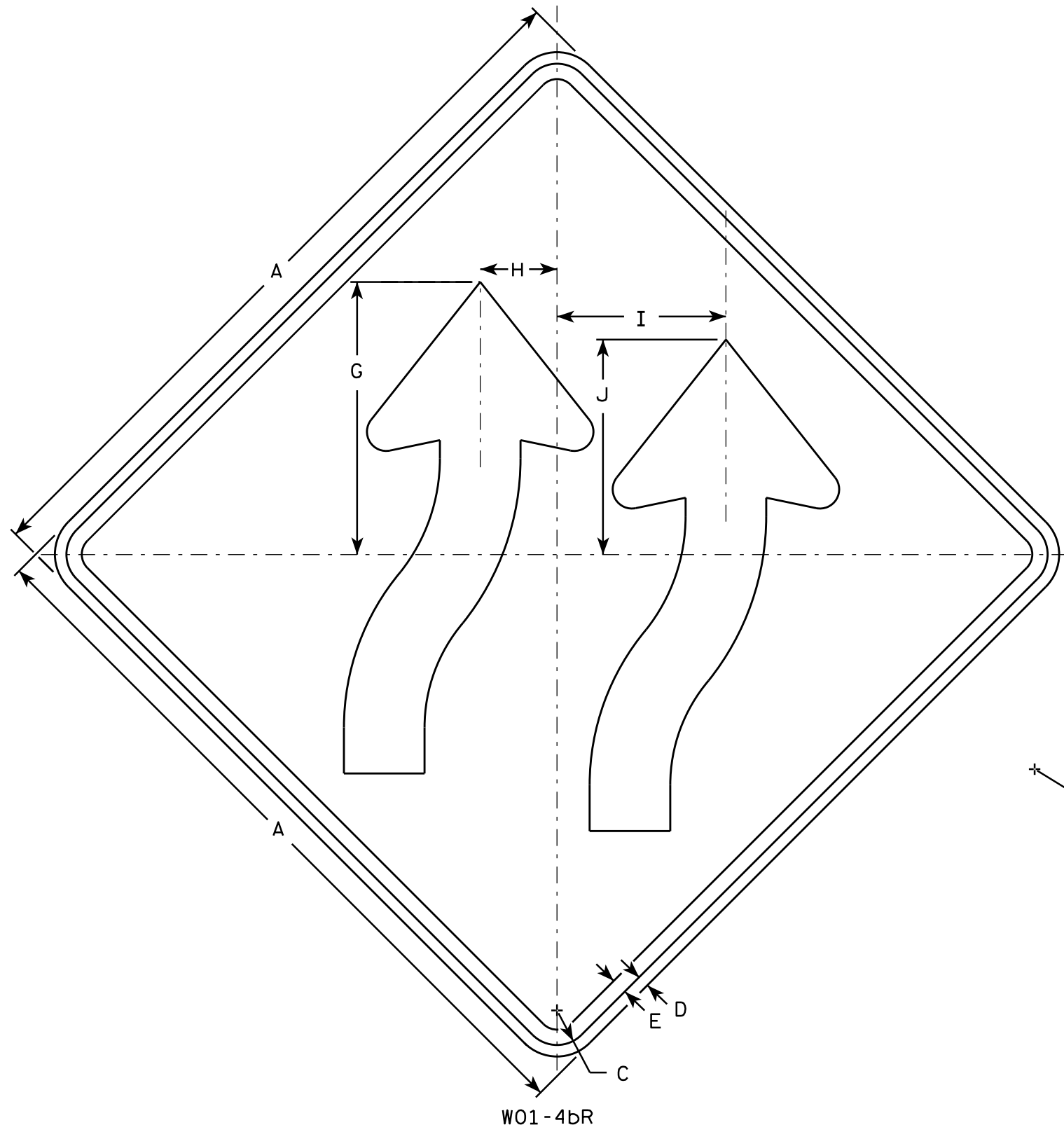
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

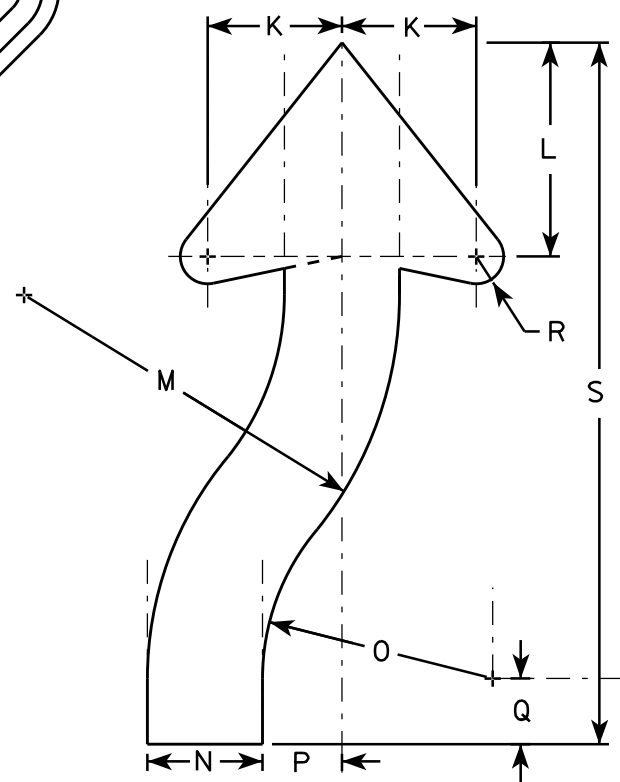
DATE 3/21/11 PLATE NO. W21-5B.3

PROJECT NO: HWY: COUNTY: SHEET NO: 335 E



W01-4bR

- NOTES**
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Orange
Message - Black
 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN

W01-4b

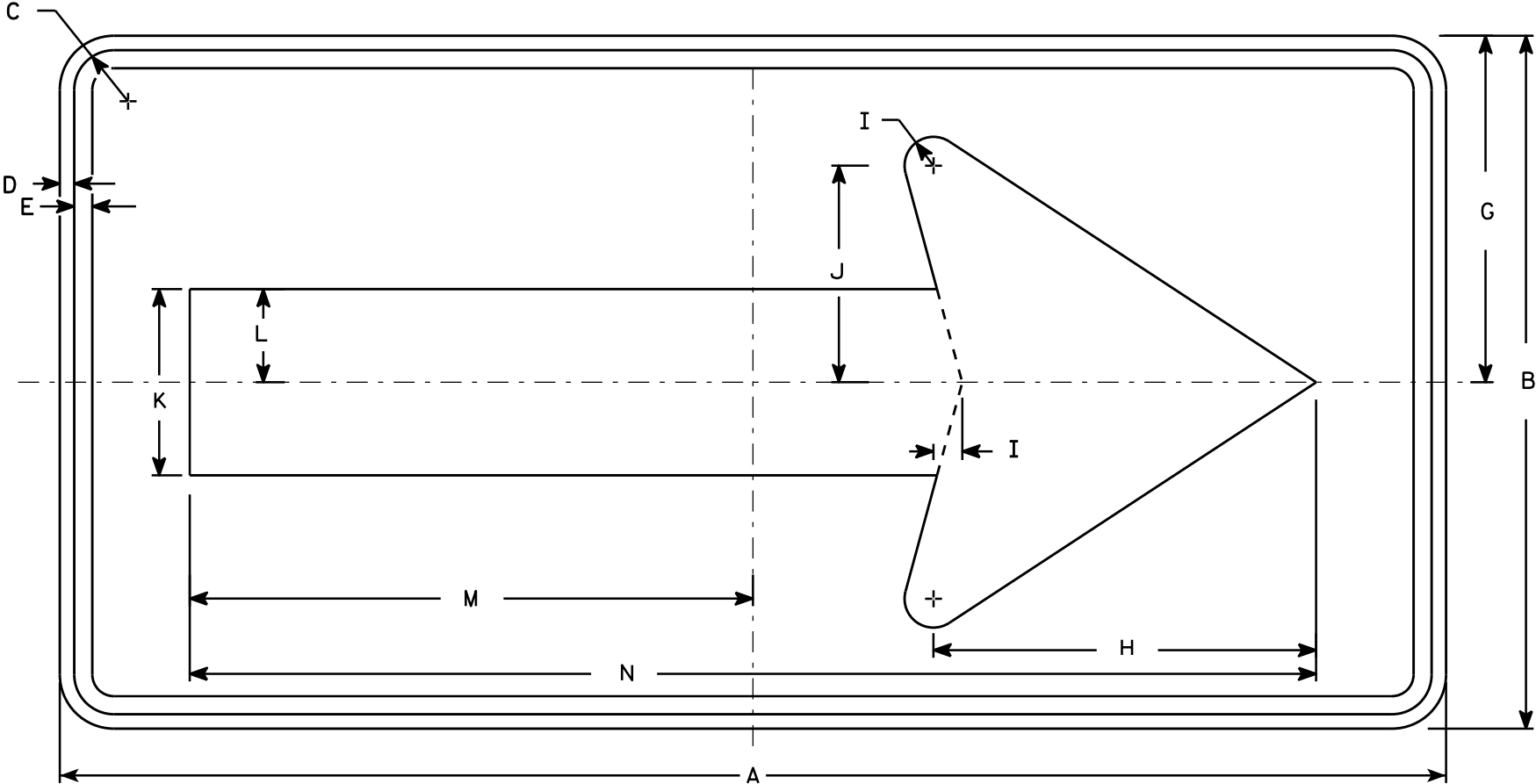
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE 336 W01-4b.1

NOTES

1. Sign is Type II - Type F Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.



W01-6

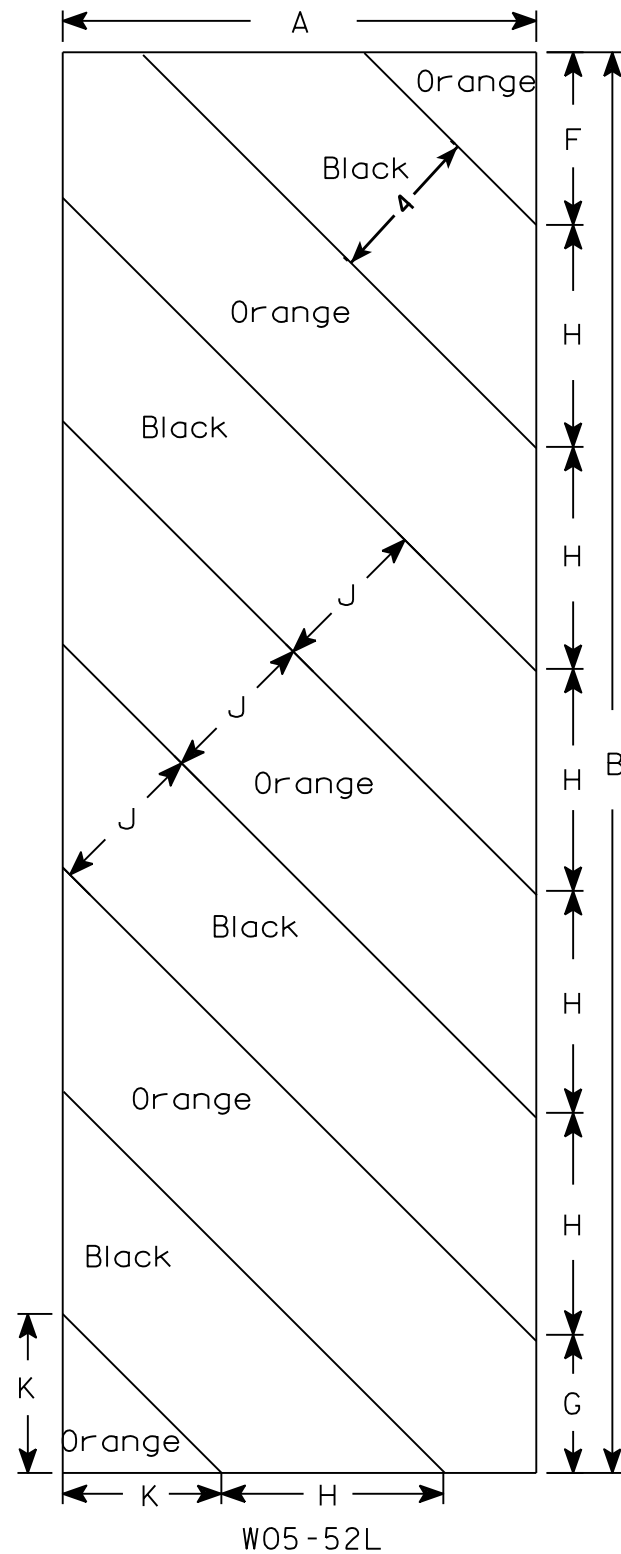
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

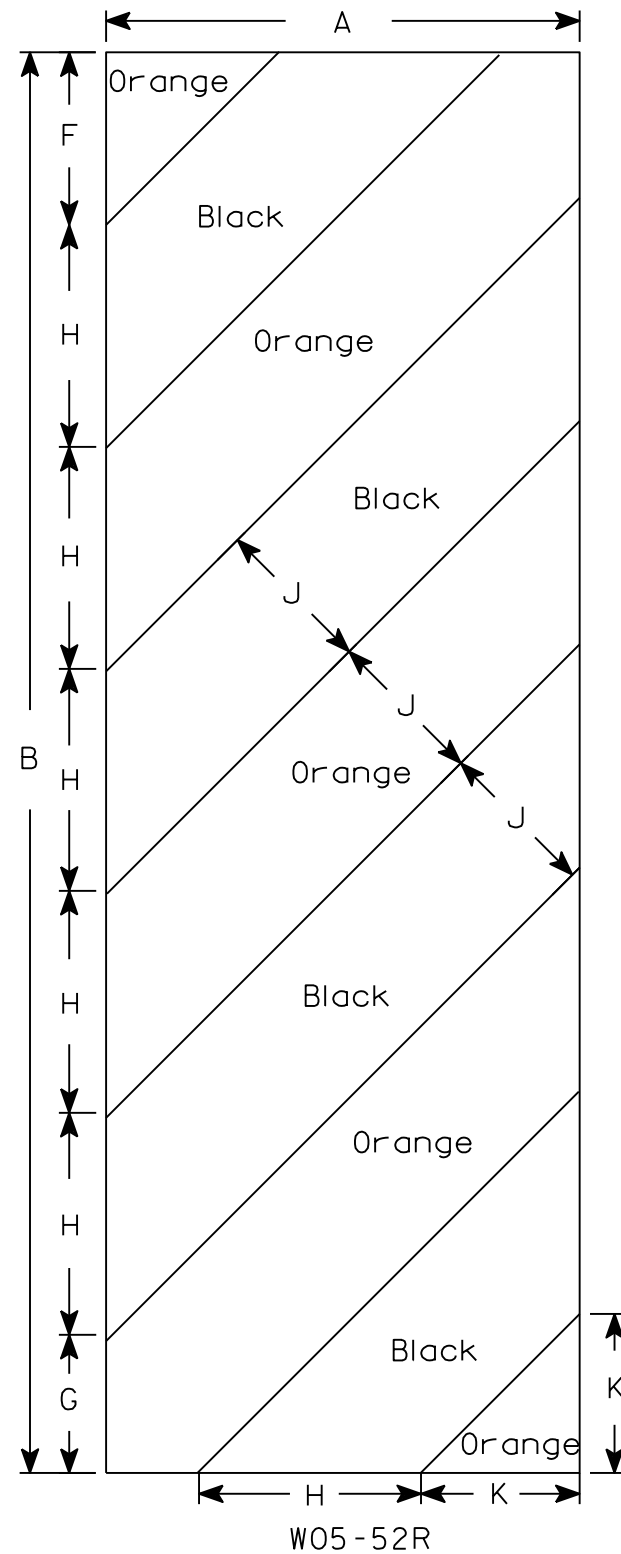
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. 337 W01-6.1



W05-52L



W05-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 9⁄16																6.75
4																											
5																											

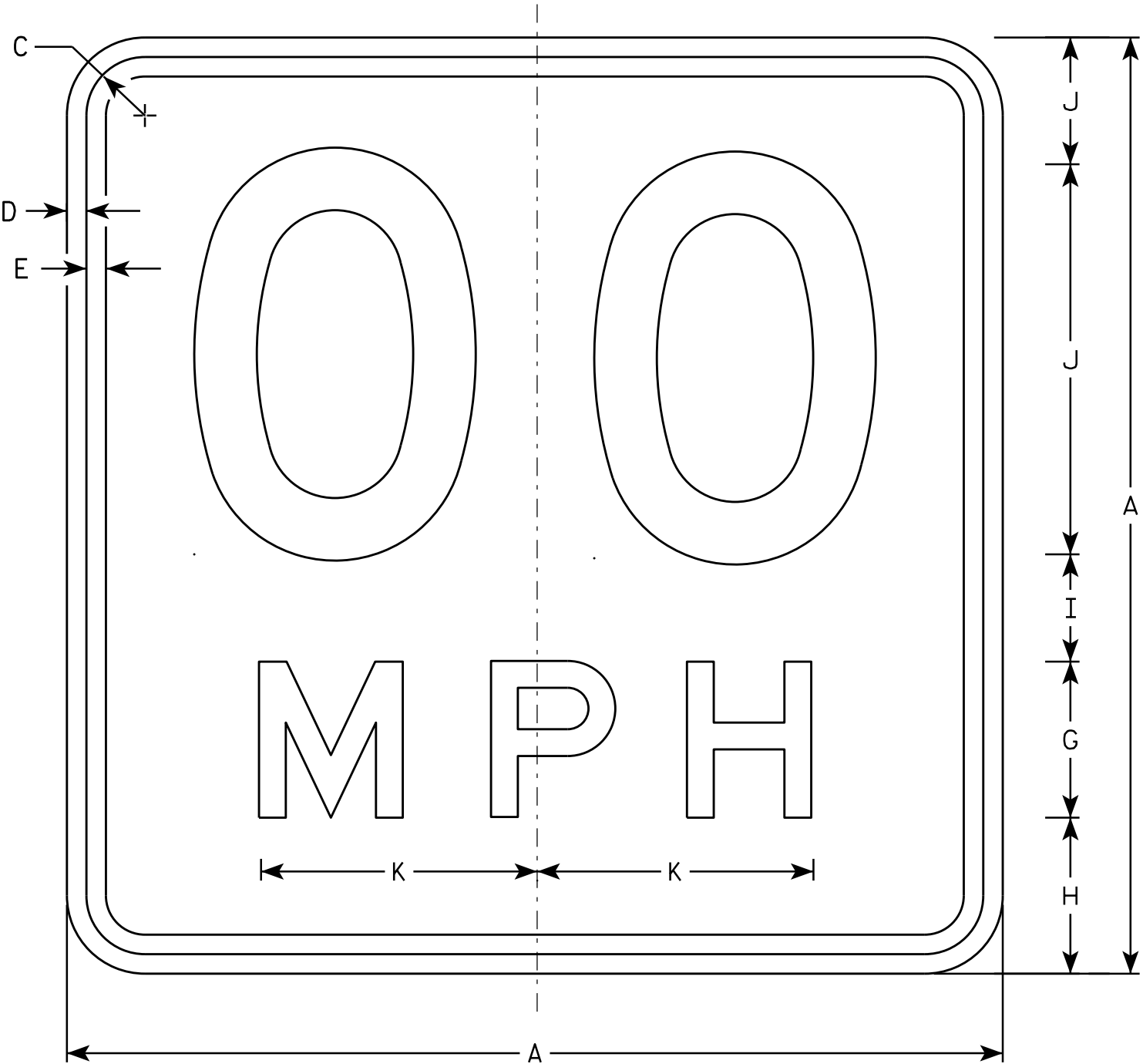
STANDARD SIGN

W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/20/13 PLATE 338 W05-52.1



W013-1

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - See Note 6
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
- 6. Line 1 is Series D
Line 2 is Series E

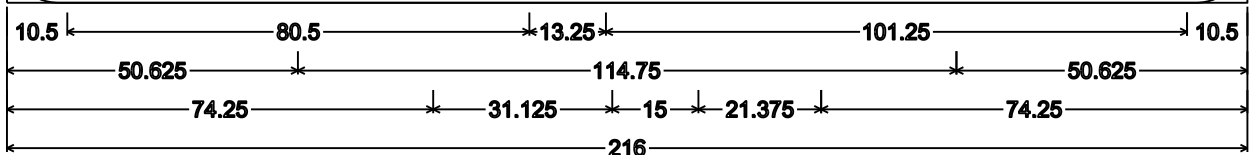
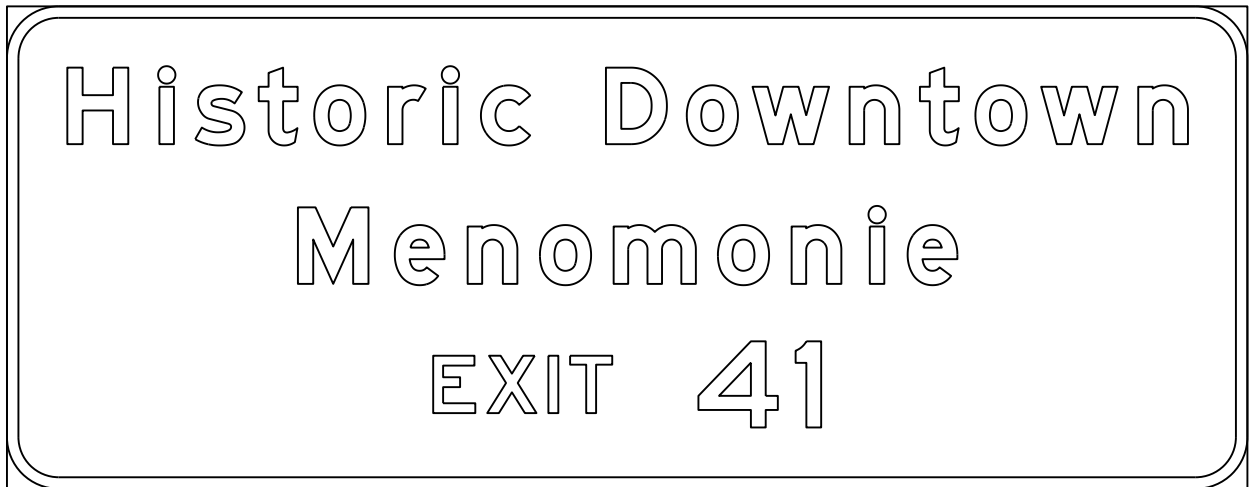
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

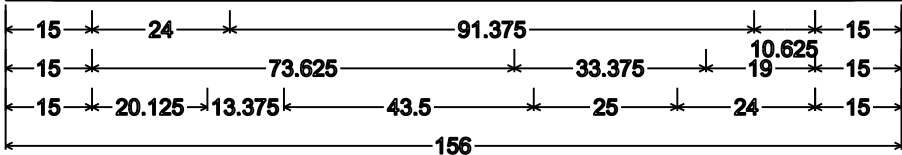
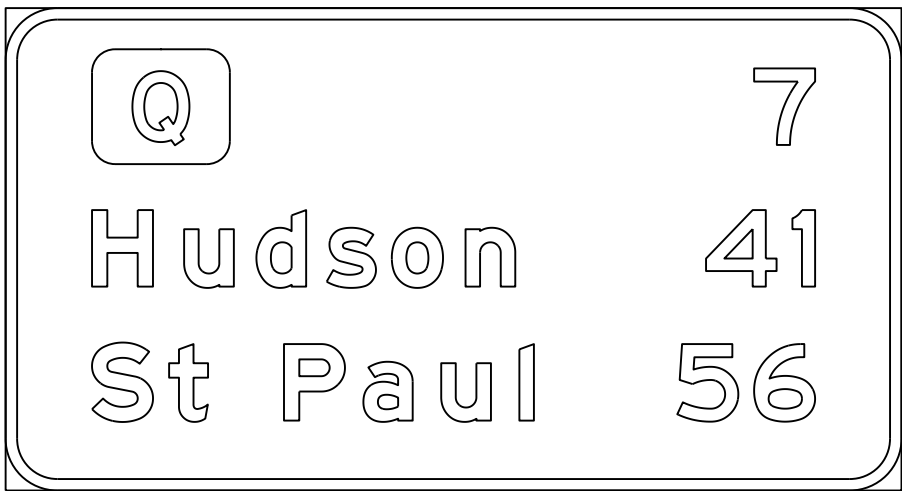
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

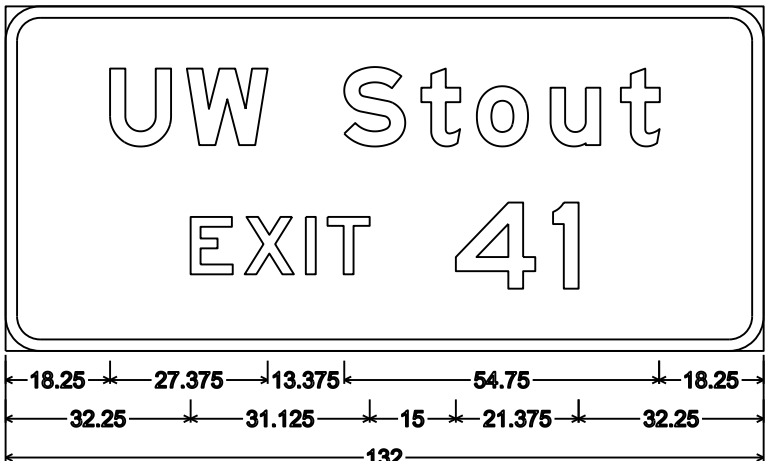
DATE 11/21/13 PLATE 339 W013-1.1



E3-1; 9.000" Radius, 2.000" Border, White on Brown



D2-3; 9.000" Radius, 2.000" Border



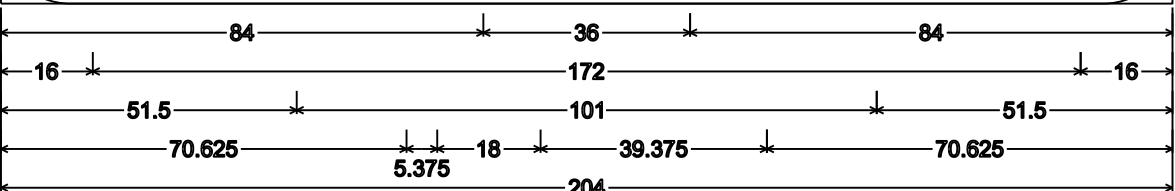
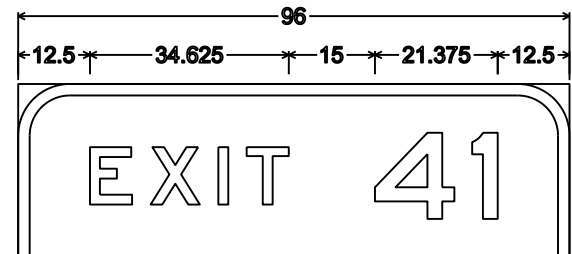
E3-1; 6.000" Radius, 2.000" Border



6.000" Radius, 1.000" Border, White on Blue

NOTES

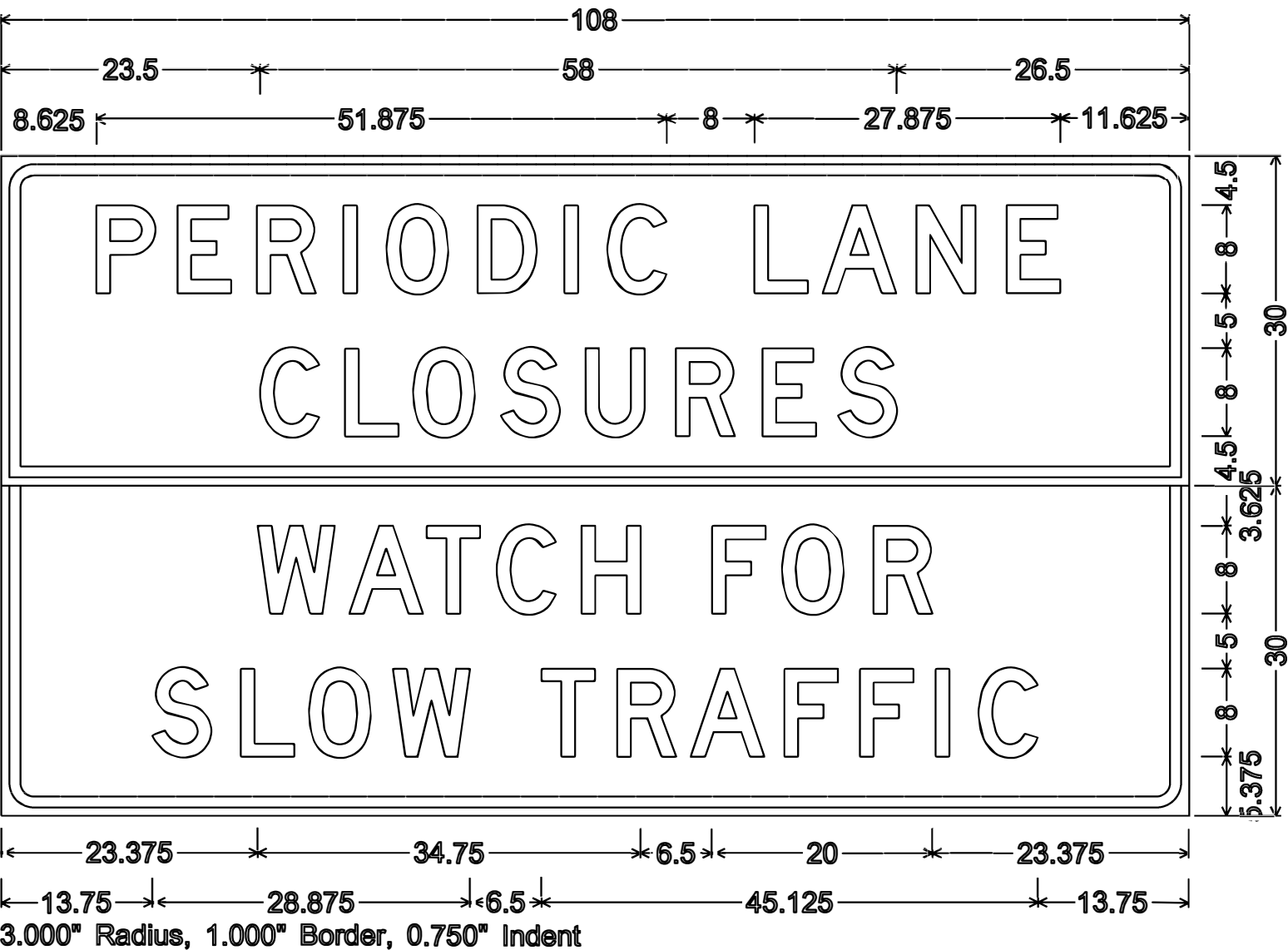
1. Sign is Type I - Type SH Reflective
2. Color:
Background - Green except as noted
Message - White
3. Message Series - E Modified except all Cap Words Series E.



E1-5P; 9.000" Radius, 2.000" Border,
E1-1A; 12.000" Radius, 3.000" Border

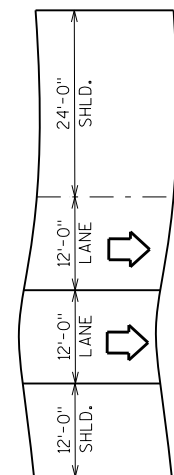
NOTES

- 1. All Signs are Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - D



* PROVIDE FOR THREE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

INDICATES WING NUMBER



NAME PLATE-FOR LOCATION SEE "SINGLE SLOPE PARAPET 32SS" SHEET.

BENCH MARK CAP (IF SUPPLIED): FOR LOCATION SEE "SINGLE SLOPE PARAPET 32SS" SHEET.

TEMPORARY STRUCTURE BID ITEM INCLUDED IN B-17-217 PLANS

TEMPORARY STRUCTURE SHALL BE SYMMETRICAL ABOUT THE CL OF THE TEMPORARY STRUCTURE

TEMPORARY STRUCTURE

CONCRETE BARRIER

4'-0" FROM EDGE OF TEMPORARY STRUCTURE

CL BRG. WEST ABUT. STA. 698+18.50 EB
END OF SLAB STA. 698+17.92 EB

CL IH 94 EB

END OF WEST STRUCTURAL APPROACH SLAB STA. 697+97.92 EB

6°31'56" SKEW (TYP.)

CL PIER 1 STA. 698+55.50 EB

CL PIER 2 STA. 699+15.50 EB

B-17-217

CL BRG. EAST ABUT. STA. 699+46.50 EB

END OF SLAB STA. 699+47.09 EB

CL IH 94 EB

END OF EAST STRUCTURAL APPROACH SLAB STA. 699+67.09 EB

STA. 698+85.50 EB IH 94 EB= STA. 4+24.51 250TH ST.

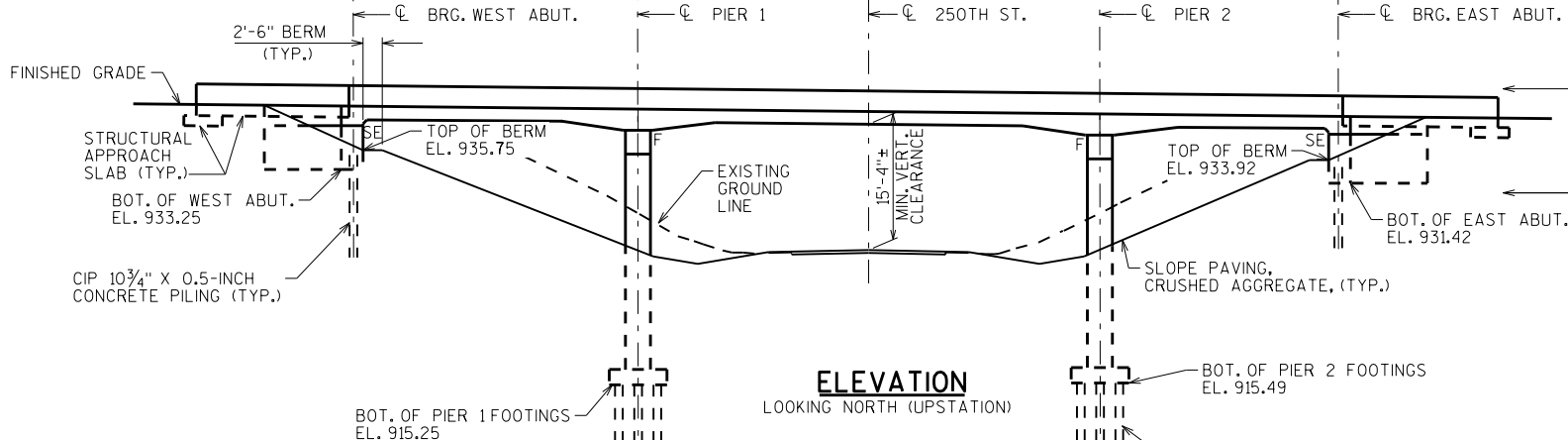
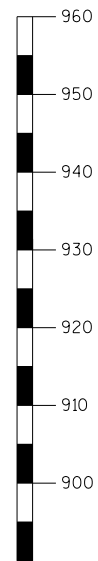
REMOVE EXISTING STRUCTURE B-17-21(3) SPAN - CONCRETE HAUNCHED SLAB ON CONCRETE ABUTMENTS AND PIERS

SLOPE PAVING, CRUSHED AGGREGATE, (TYP.) SEE "SLOPE PAVING" SHEET FOR DETAILS.

3'-0" SHLD., 10'-0" LANE, 10'-0" LANE, 3'-0" SHLD.

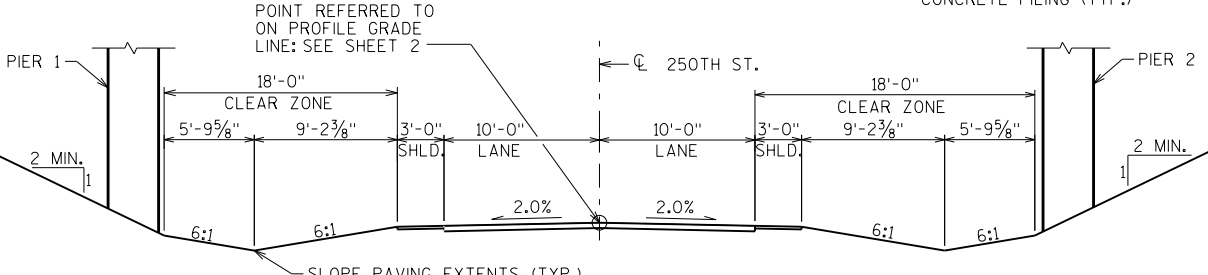
PLAN

THREE SPAN - CONCRETE HAUNCHED SLAB



ELEVATION

LOOKING NORTH (UPSTATION)



TYPICAL SECTION THRU 250TH ST.
NORMAL TO 250TH ST. - LOOKING NORTH (UPSTATION)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.12
OPERATING RATING FACTOR: RF = 1.46
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — $f'_c = 4,000$ P.S.I.
ALL OTHER — $f'_c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:

GRADE 60 — $f_y = 60,000$ P.S.I.
STAINLESS, GRADE 60 — $f_y = 60,000$ P.S.I.

FOUNDATION DATA

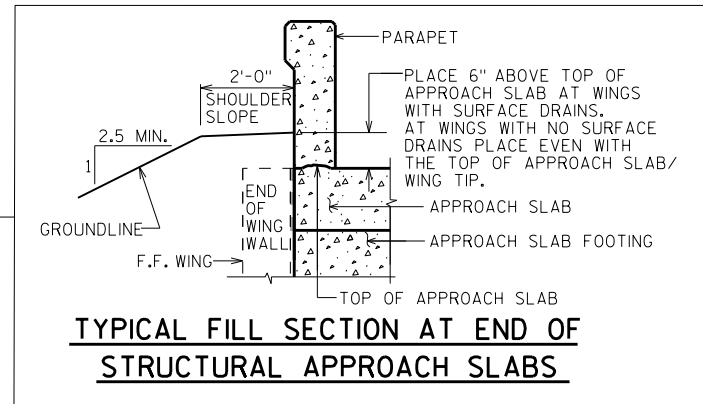
ABUTMENTS TO BE SUPPORTED ON 10 $\frac{3}{4}$ " X 0.5-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 50'-0" LONG PILES AT WEST ABUTMENT.
ESTIMATED 50'-0" LONG PILES AT EAST ABUTMENT WITH PILE POINTS REQUIRED.

PIERS TO BE SUPPORTED ON 10 $\frac{3}{4}$ " X 0.5-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 30'-0" LONG PILES AT BOTH PIERS.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH 94 250TH ST.
A.D.T.=42,600 (2038) A.D.T.=60 (2038)
R.D.S.=75 M.P.H. R.D.S.=60 M.P.H.



TYPICAL FILL SECTION AT END OF
STRUCTURAL APPROACH SLABS

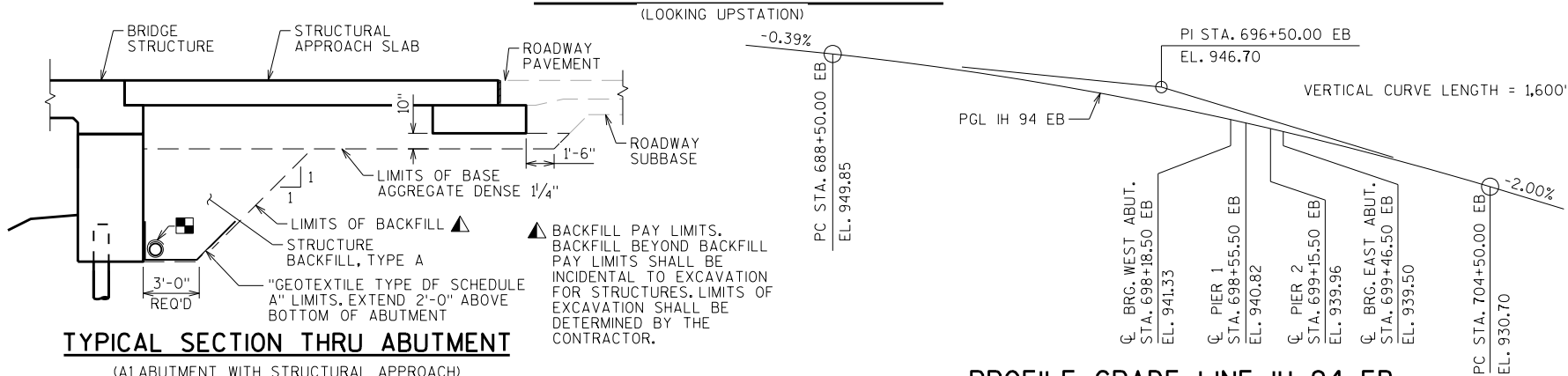
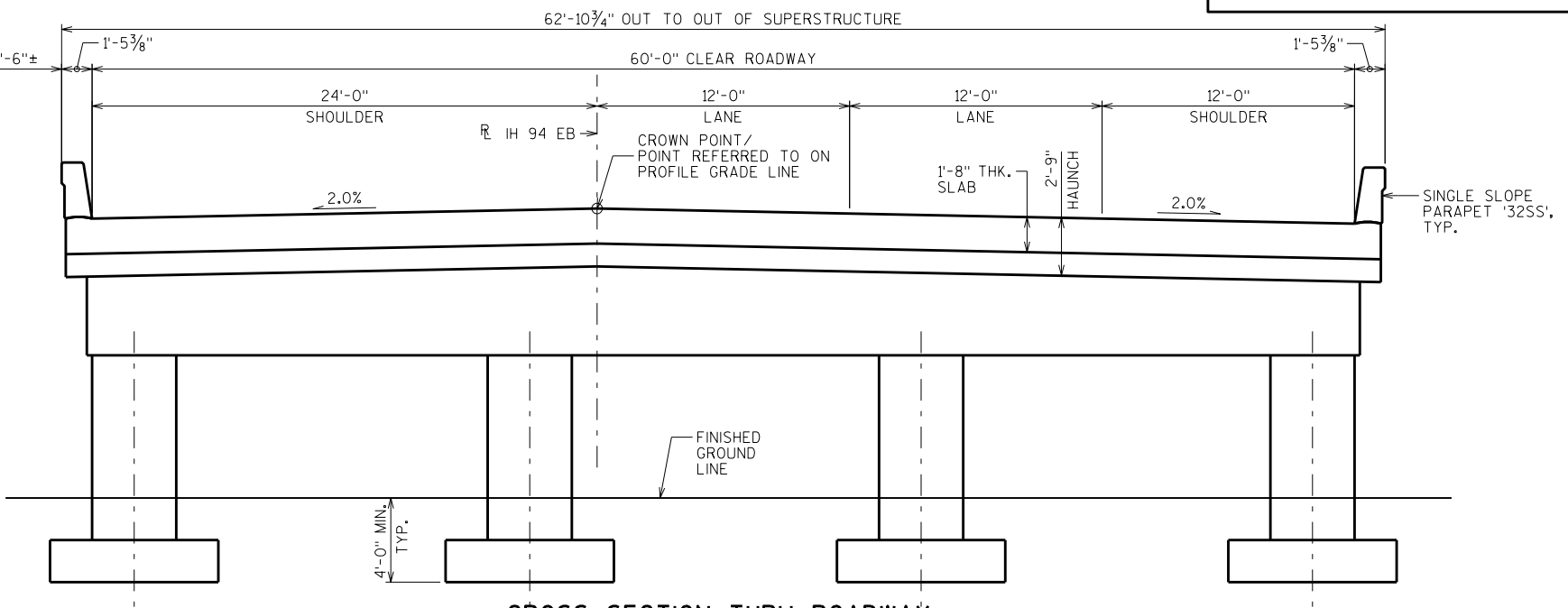
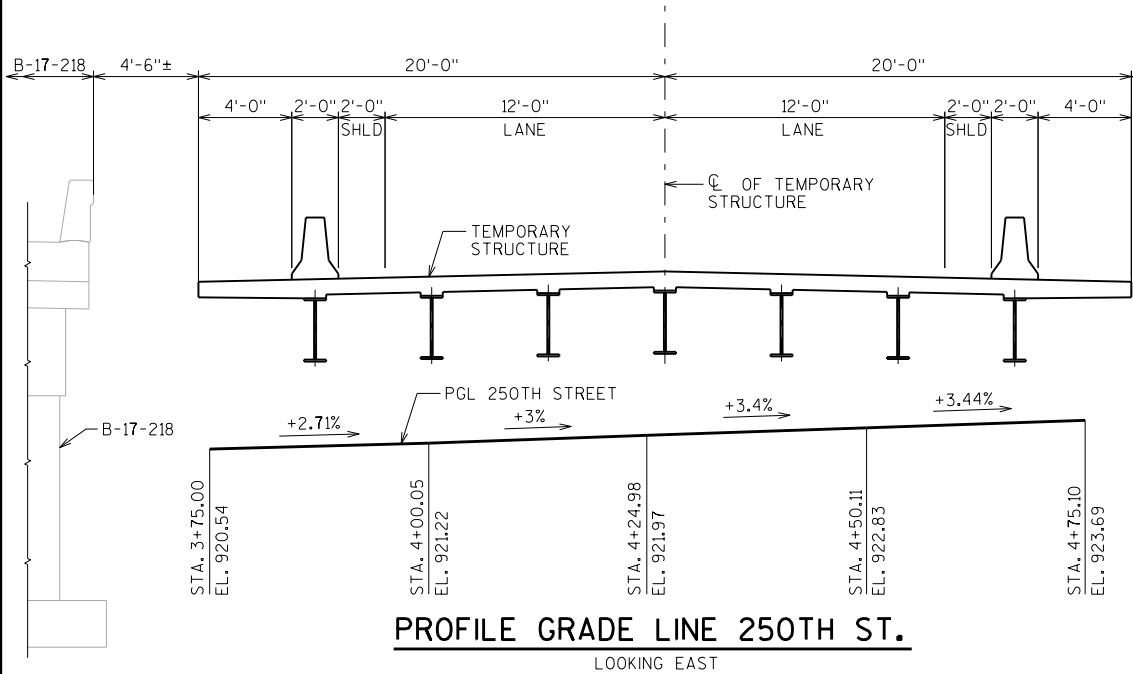
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. SUPERSTRUCTURE CROSS SECTIONS 1
13. SUPERSTRUCTURE CROSS SECTIONS 2
14. SUPERSTRUCTURE PLAN
15. SUPERSTRUCTURE LONGITUDINAL SECTIONS
16. SUPERSTRUCTURE DETAILS
17. SUPERSTRUCTURE DATA
18. SUPERSTRUCTURE BAR DETAILS
19. STRUCTURAL APPROACH SLABS
20. STRUCTURAL APPROACH SLAB & BAR DETAILS
21. SINGLE SLOPE PARAPET 32SS
22. SLOPE PAVING CRUSHED AGGREGATE
23. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

MATTHEW COUPAR (608) 266-5083
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY
ACCEPTED <i>William C. Dierker</i> 6/30/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-217			
IH 94 EB OVER 250TH ST.			
COUNTY	DUNN	TOWN	LUCAS
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	MSC	DESIGNED CKD.	WAH
DRAWN BY	JJS	PLANS CKD.	JLR
GENERAL PLAN			SHEET 1 OF 23
			342



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 698+81.25	LS	—	—	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-217	LS	—	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	167	—	—	166	—	333
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	180	—	—	—	—	180	360
502.0100	CONCRETE MASONRY BRIDGES	CY	605	84	52	98	96	52	84	1,071
502.3200	PROTECTIVE SURFACE TREATMENT	SY	894	133	—	—	—	—	133	1,160
502.3210	PIGMENTED SURFACE SEALER	SY	107	17	—	—	—	—	17	141
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	4,080	2,340	2,340	4,070	—	12,830
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	109,480	14,240	1,220	14,930	14,500	1210	14,240	169,820
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	550	—	—	—	—	—	—	550
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	15	—	—	15	—	30
526.0100	TEMPORARY STRUCTURE STA. 698+81.25	LS	—	—	—	—	—	—	—	1
550.0500	PILE POINTS	EACH	—	—	—	—	—	9	—	9
550.2108	PILING CIP CONCRETE 10 3/4 X 0.5-INCH	LF	—	—	450	960	960	450	—	2,820
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	—	—	352	—	—	304	—	656
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	130	—	—	130	—	260
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	74	—	—	74	—	148
	NON-BID ITEMS									
	FILLER	SIZE	—	—	—	—	—	—	—	1/2", 3/4", 1 1/2"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

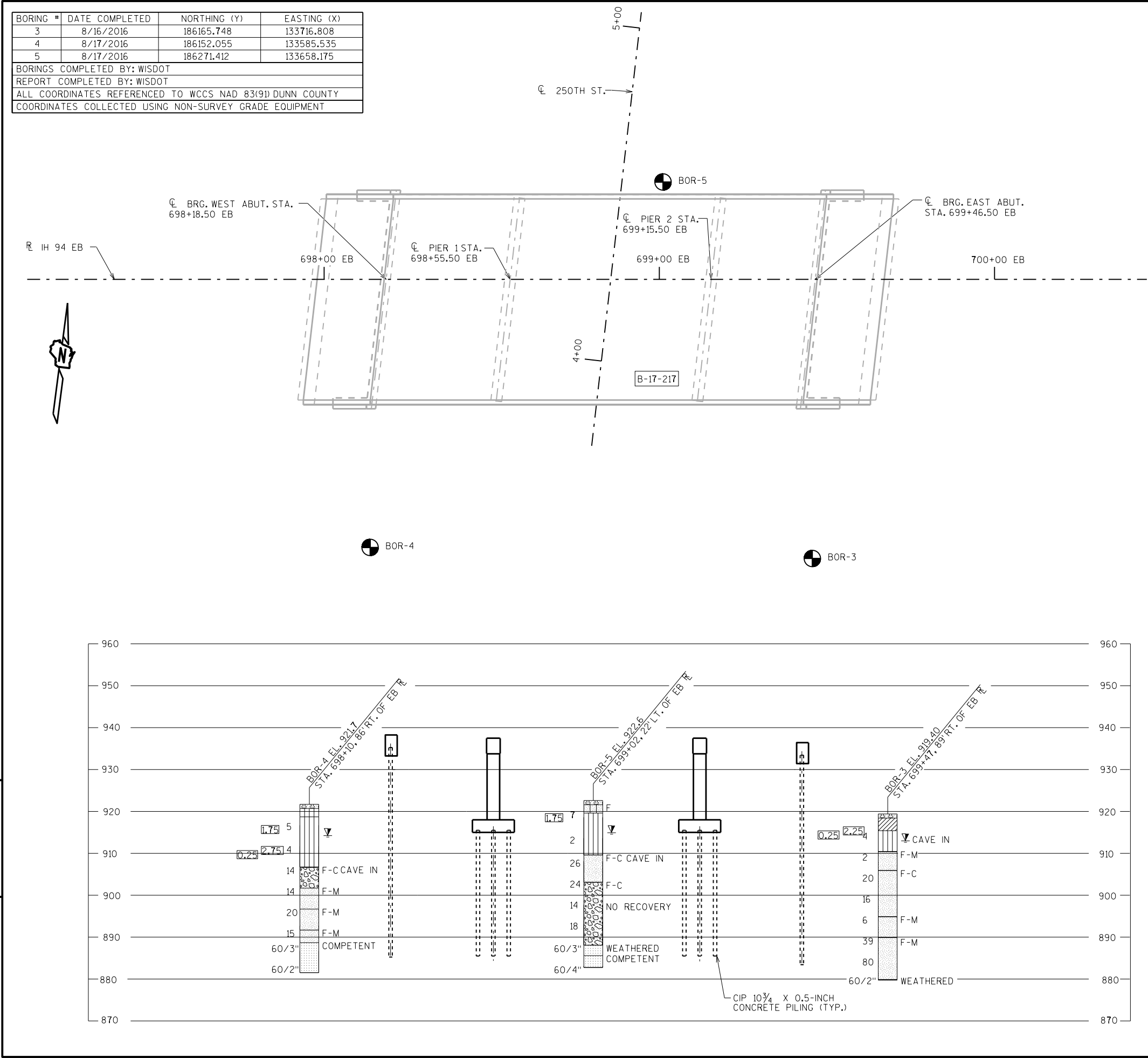
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

TEMPORARY SHORING IS INCLUDED IN BID ITEM "TEMPORARY STRUCTURE STA. 698+81.25".

PROFILE GRADE LINE IH 94 EB

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
		DRAWN BY JJS	PLANS CR'D. JLR
CROSS SECTION & QUANTITIES		SHEET 2	
		343	



STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

ASPHALT

CONCRETE

SAND

BOULDERS OR COBBLES

SHALE

TOPSOIL

FILL

CLAY

LIMESTONE

SANDSTONE

PEAT

GRAVEL

SILT

BEDROCK (UNKNOWN)

IGNEOUS/META

LEGEND OF BORING

BORING #/EL. STA./OFF-SET

ST (1) (2) 0.25 17

F-C

COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29' REC=80%, ROD=72%

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

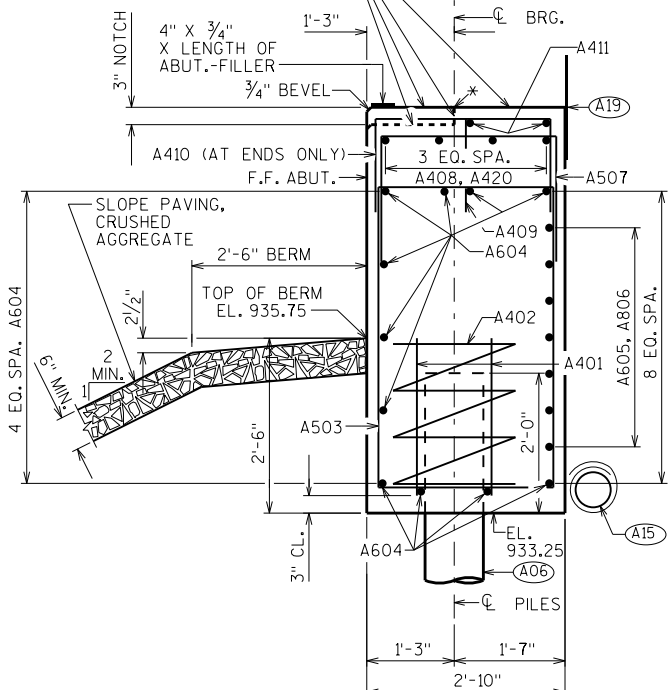
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY TLP/JJS		PLANS CKD. JLR	
SUBSURFACE EXPLORATION		SHEET 3	
		344	

SCALE = 15.00

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.



SECTION THRU BODY

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" X 8", 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON CIP 10 3/4" X 0.5-INCH THK. CONCRETE PILING, ESTIMATED 50 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

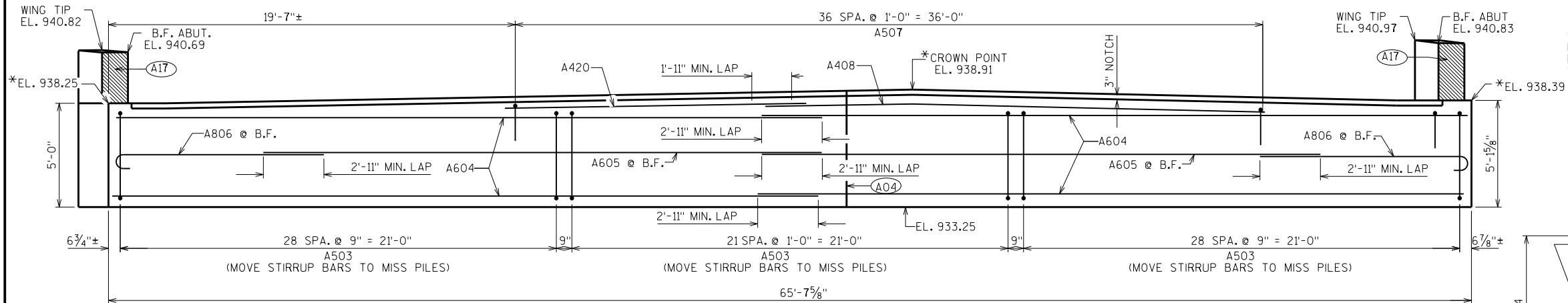
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-217

DRAWN BY JJS PLANS CK'D. JLR

WEST ABUTMENT SHEET 4

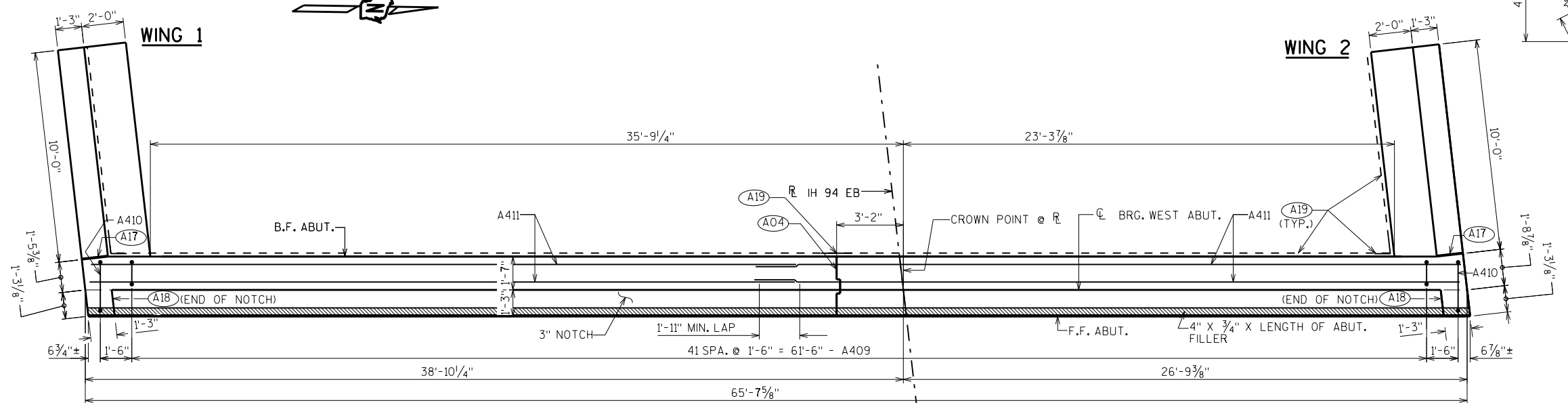
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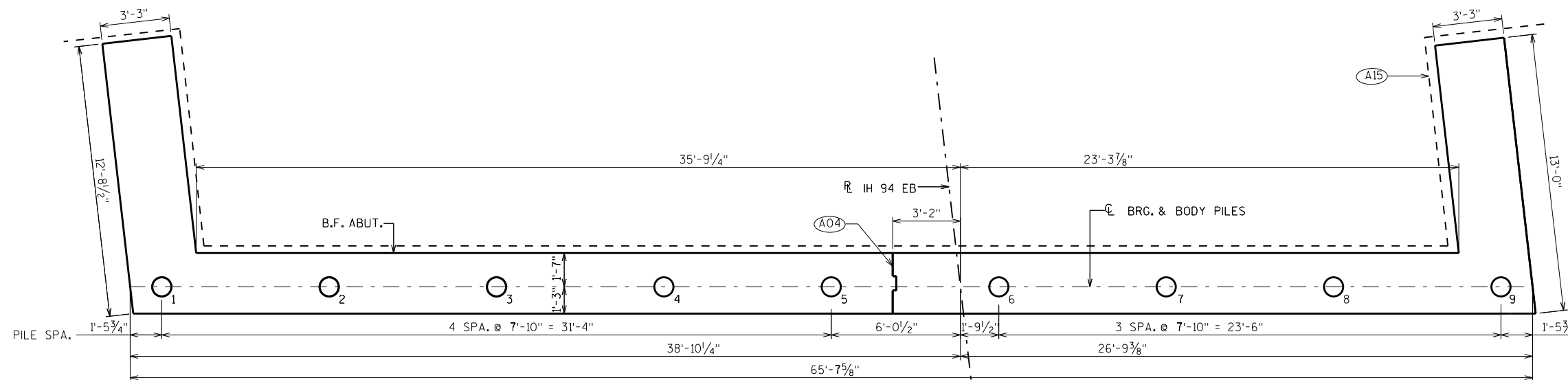
ELEVATION

(LOOKING WEST)

*TOP OF ABUT. ELEVATIONS ARE GIVEN HERE AT C. BRG. WEST ABUT.



PLAN

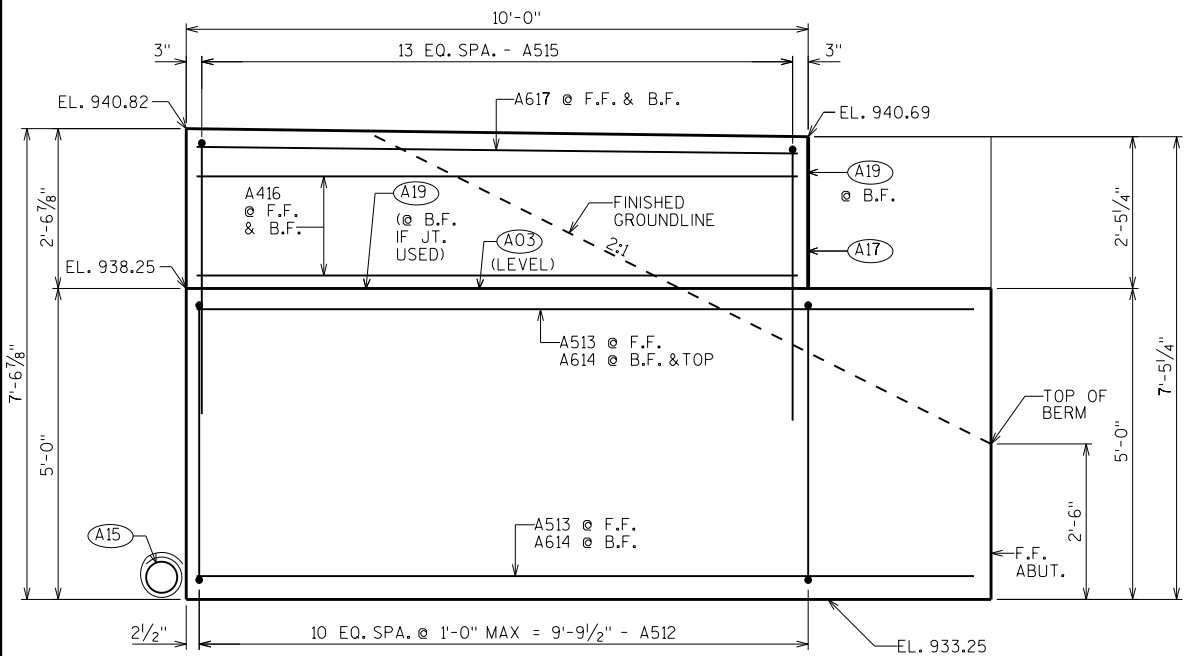


PILE PLAN

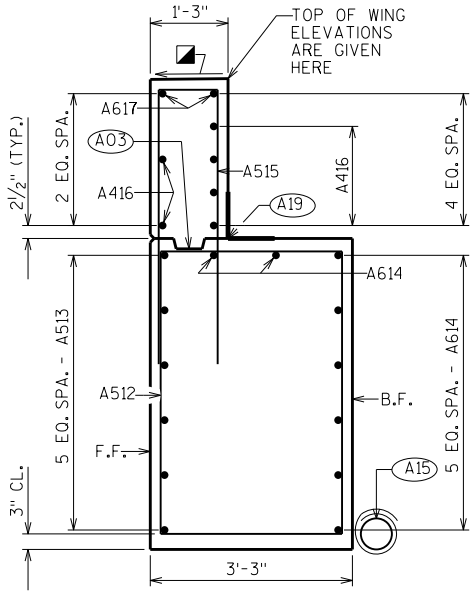
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

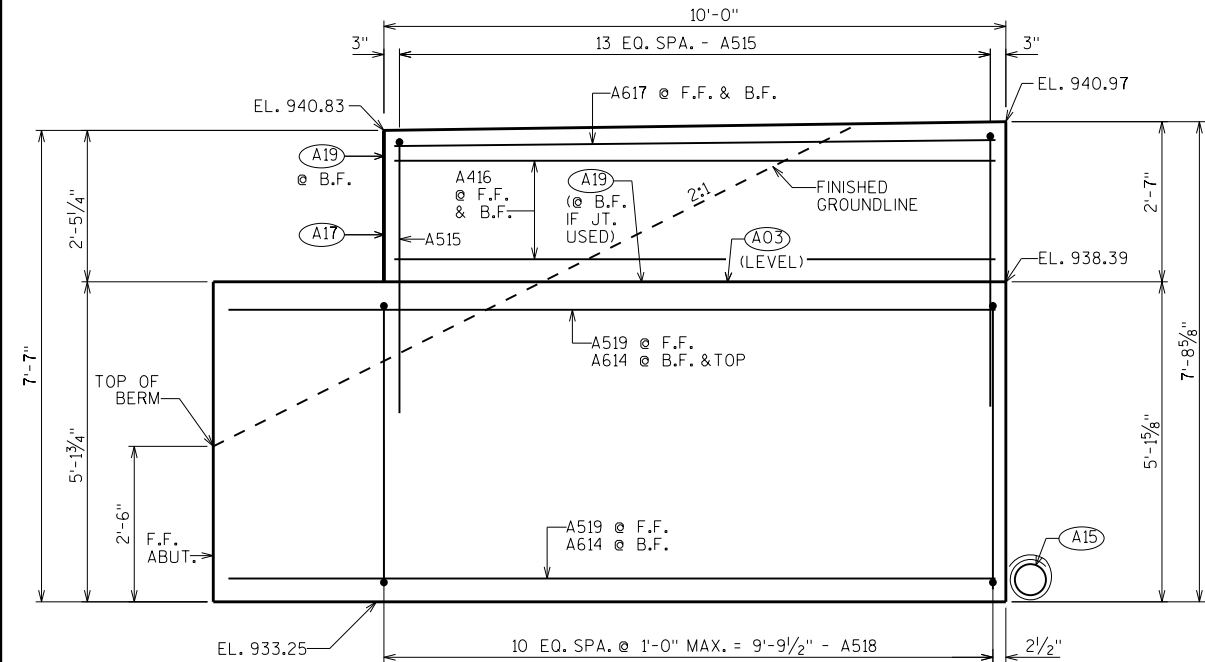
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
A402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A503		80	14'-10"	X	BODY-STIRRUPS-VERT.
A604		22	34'-2"		BODY-HORIZONTAL-END TO END
A605		14	27'-1"		BODY-HORIZONTAL-B.F.-AT CENTER
A806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
A507		37	5'-9"	X	BODY-TOP-VERT.-UNDER NOTCH
A408		4	24'-0"		BODY-TOP-HORIZ.-UNDER NOTCH
A409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
A410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
A411		4	33'-10"		BODY-TOP-HORIZ.-END TO END
A512	X	11	15'-8"	X	WING 1-BOT.-STIRRUP-VERT.
A513	X	6	11'-6"		WING 1-BOT.-HORIZONTAL-F.F.
A614	X	16	12'-3"		WINGS 1&2-BOT.-HORIZONTAL-B.F. & CENTER
A515	X	28	9'-10"	X	WINGS 1&2-TOP-VERTICAL
A416	X	12	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A617	X	4	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A518	X	11	15'-10"	X	WING 2-BOT.-STIRRUP-VERT.
A519	X	6	11'-10"		WING 2-BOT.-HORIZONTAL-F.F.
A420		4	17'-9"		BODY-TOP-HORIZ.-UNDER NOTCH



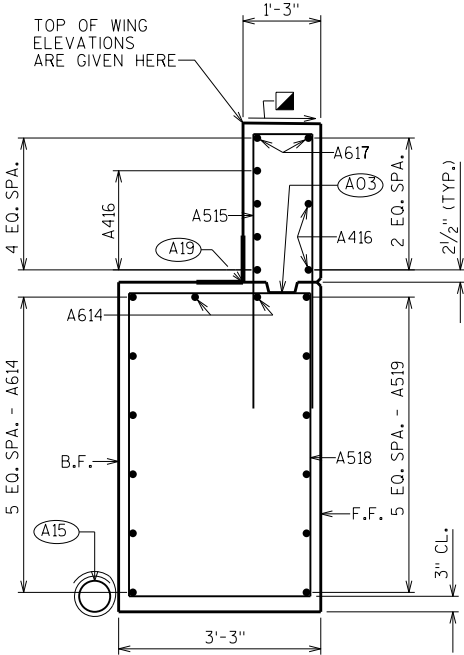
WING 1 ELEVATION



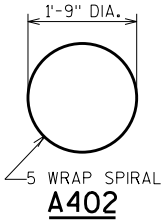
WING 1 SECTION



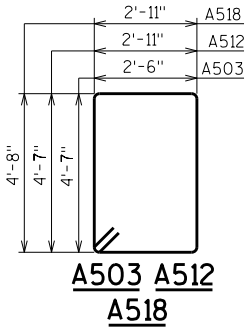
WING 2 ELEVATION



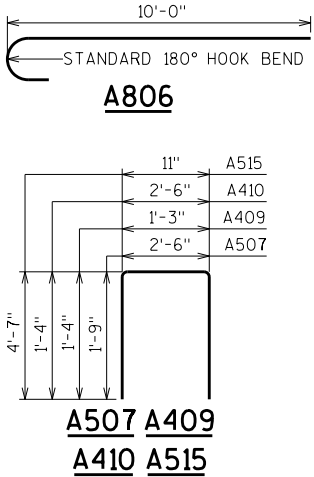
WING 2 SECTION



A402



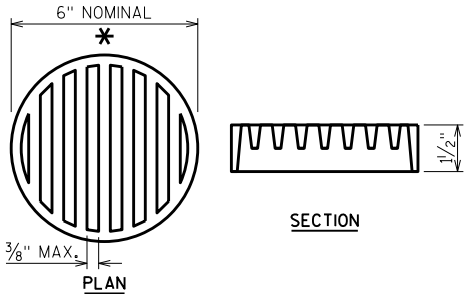
A503 A512
A518



A806

A507 A409
A410 A515

FINISH SMOOTH - SLOPE TO DRAIN

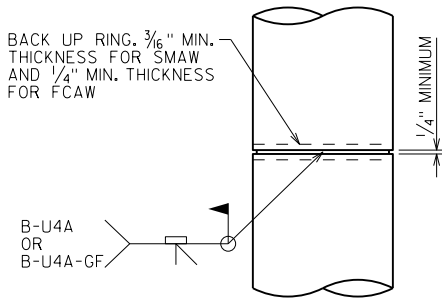


RODENT SHIELD DETAIL

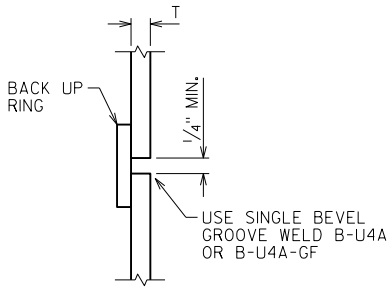
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS



(LOOKING EAST)

WING 3



WING 4



PLAN



PILE PLAN

[illegible]

SECTION THRU BODY

- | | | | |
|---|------|-----------------|--------------------|
| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION | | | |
| STRUCTURE B-17-217 | | | |
| | | DRAWN
BY JJS | PLANS
CK'D. JLR |
| EAST ABUTMENT | | SHEET 6 | |
| | | 347 | |

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
B402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
B503		80	14'-10"	X	BODY-STIRRUPS-VERT.
B604		22	34'-2"		BODY-HORIZONTAL-END TO END
B605		14	27'-1"		BODY-HORIZONTAL-B.F.-AT CENTER
B806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
B507		37	5'-9"	X	BODY-TOP-VERT.-UNDER NOTCH
B408		4	24'-7"		BODY-TOP-HORIZ.-UNDER NOTCH
B409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
B410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
B411		4	33'-10"		BODY-TOP-HORIZ.-END TO END
B512	X	11	15'-10"	X	WING 3-BOT.-STIRRUP-VERT.
B513	X	6	11'-6"		WING 3-BOT.-HORIZONTAL-F.F.
B614	X	16	12'-3"		WINGS 3&4-BOT.-HORIZONTAL-B.F. & CENTER
B515	X	28	9'-10"	X	WINGS 3&4-TOP-VERTICAL
B416	X	10	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B617	X	4	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B518	X	11	15'-8"	X	WING 4-BOT.-STIRRUP-VERT.
B519	X	6	11'-8"		WING 4-BOT.-HORIZONTAL-F.F.
B420		4	14'-5"		BODY-TOP-HORIZ.-UNDER NOTCH

WING 3 ELEVATION

WING 3 SECTION

WING 4 ELEVATION

WING 4 SECTION

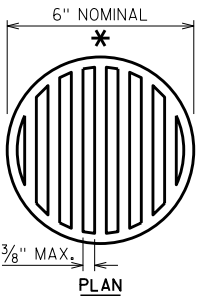
B402

B503 B512
B518

B806

B507 B409
B410 B515

— FINISH SMOOTH - SLOPE TO DRAIN



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

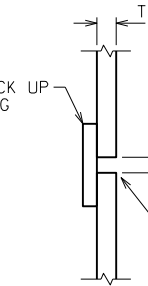
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

BACK UP RING. 3/16" MIN. THICKNESS FOR SMAW AND 1/4" MIN. THICKNESS FOR FCAW

B-U4A
OR
B-U4A-GF

CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

USE SINGLE BEVEL GROOVE WELD B-U4A OR B-U4A-GF

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

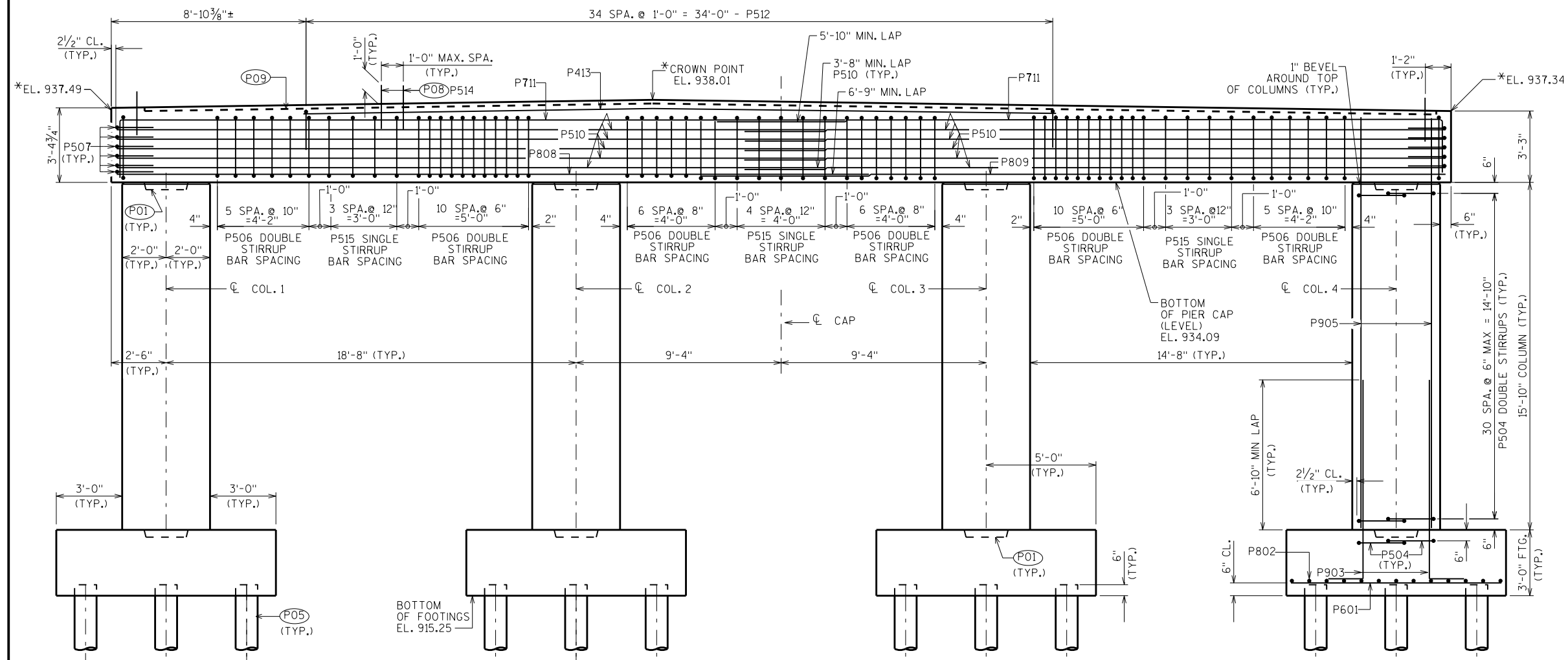
STRUCTURE B-17-217

DRAWN BY JJS PLANS CK'D. JLR

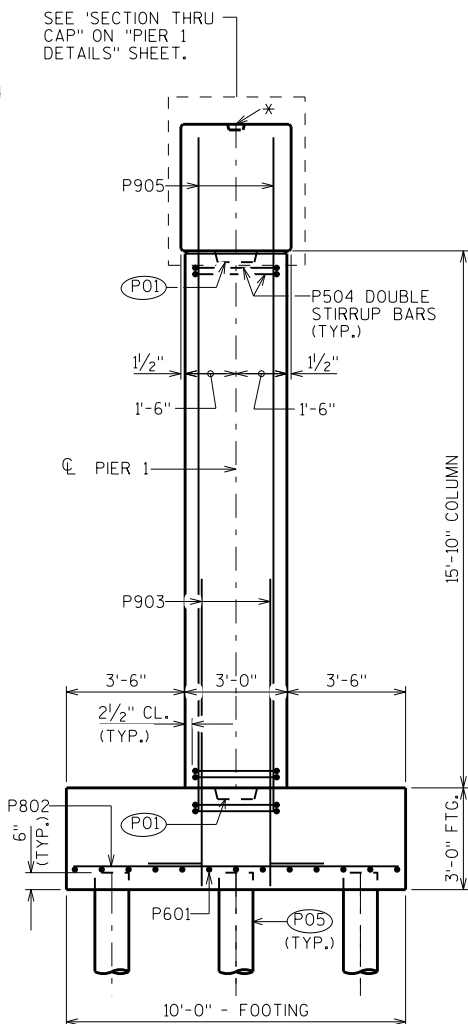
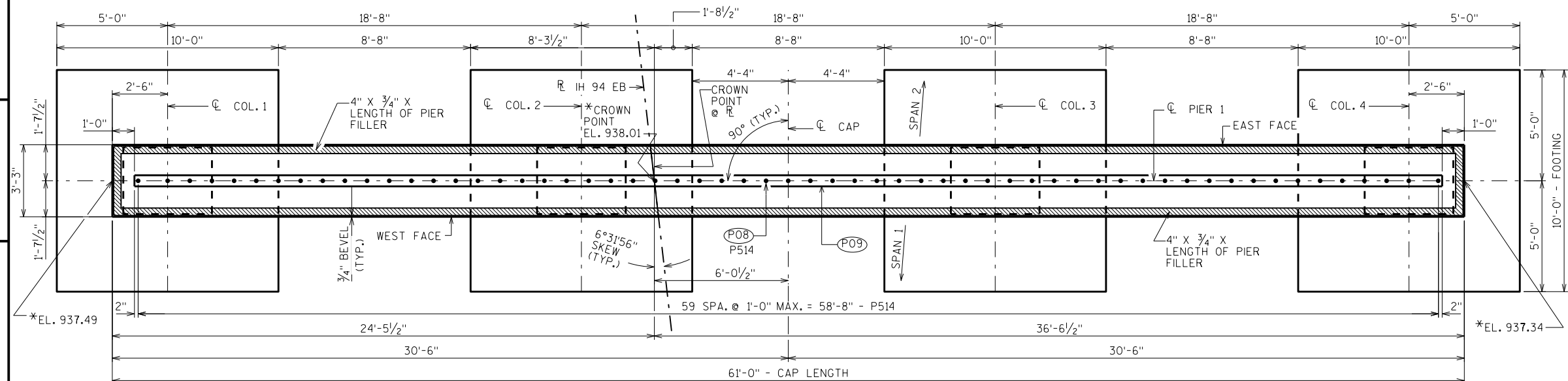
EAST ABUTMENT
DETAILS

SHEET 7

348

**ELEVATION**

(LOOKING EAST)

*TOP OF PIER CAP ELEVATIONS ARE GIVEN HERE AT THE ϕ PIER 1**END VIEW****PLAN**

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P05) SUPPORT PIER ON 10 3/4" x 0.5-INCH THK. CONC. PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.

(P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

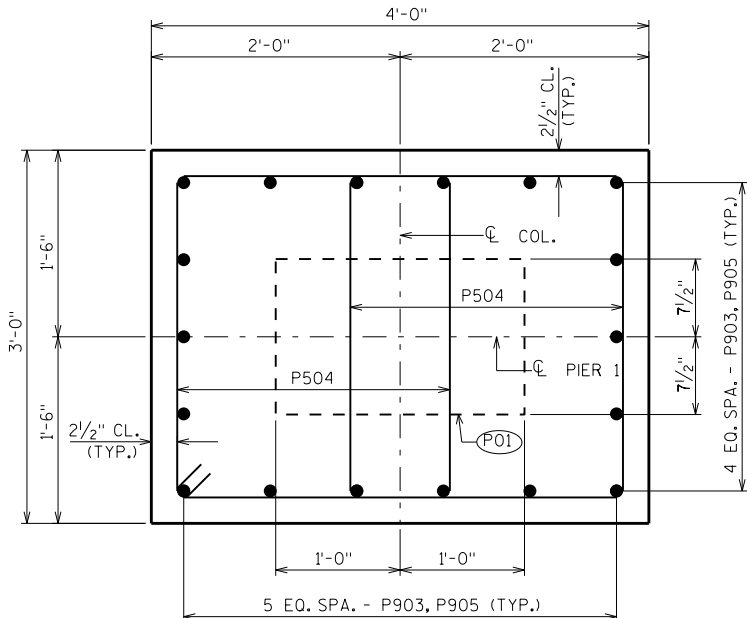
(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
PIER 1		SHEET 8	
		349	

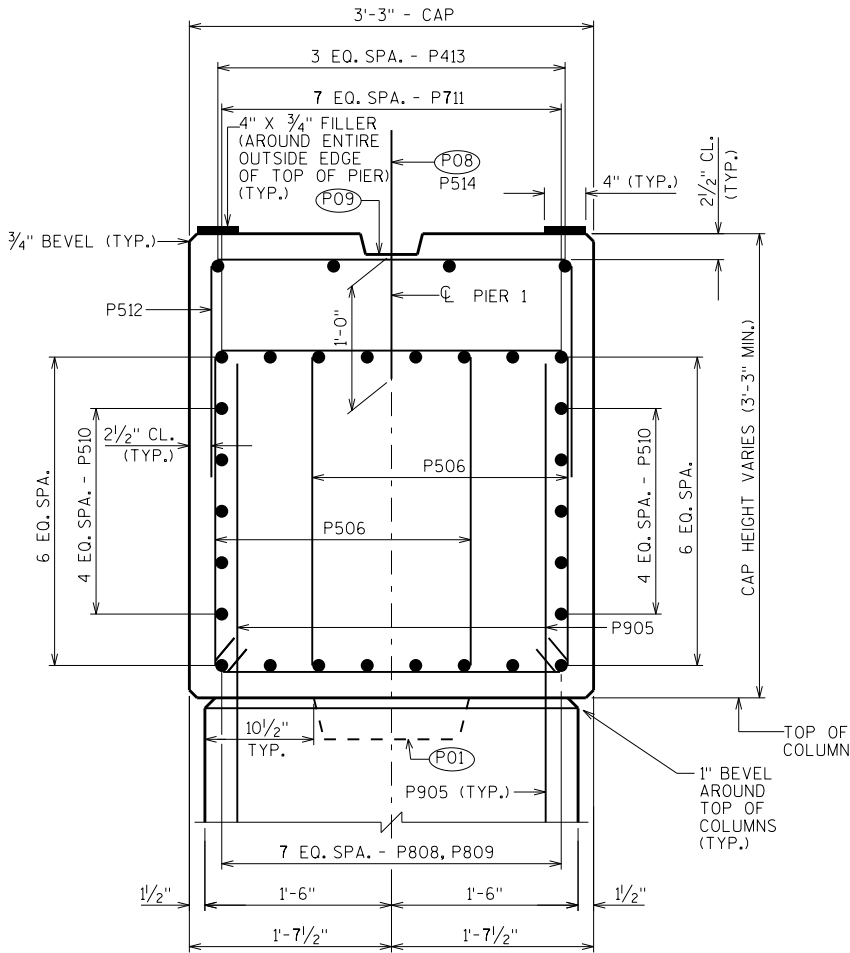
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

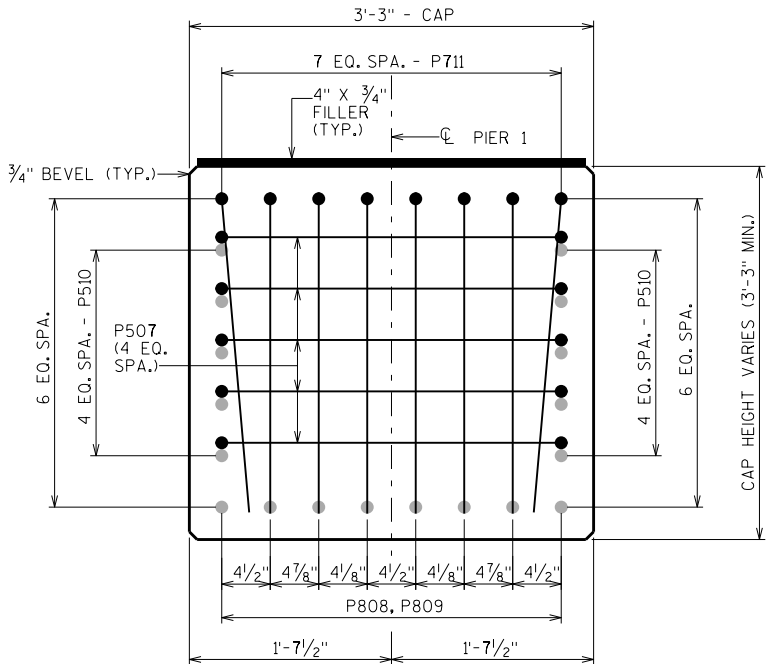
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P601		76	9'-8"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
P802		48	9'-8"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
P903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P504	X	256	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	72	18'-8"		COLUMNS/CAP-VERTICAL-ALL FACES
P506	X	96	10'-1"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
P507	X	10	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
P808	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
P809	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
P510	X	20	32'-2"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
P711	X	16	35'-7"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
P512	X	35	6'-1"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 2-3
P413	X	4	34'-4"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 2-3
P514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER
P515	X	13	11'-6"	X	CAP-VERTICAL-TRANSVERSE-SINGLE STIRRUPS-BTWN. COLUMNS



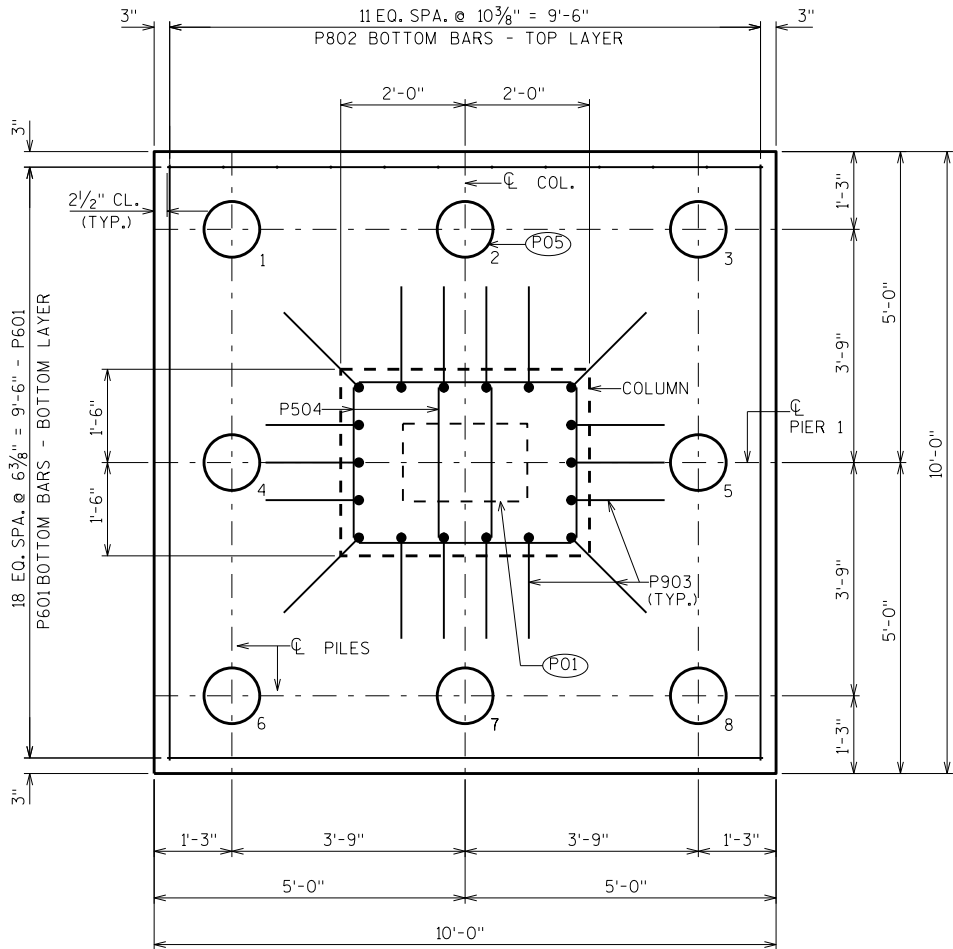
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



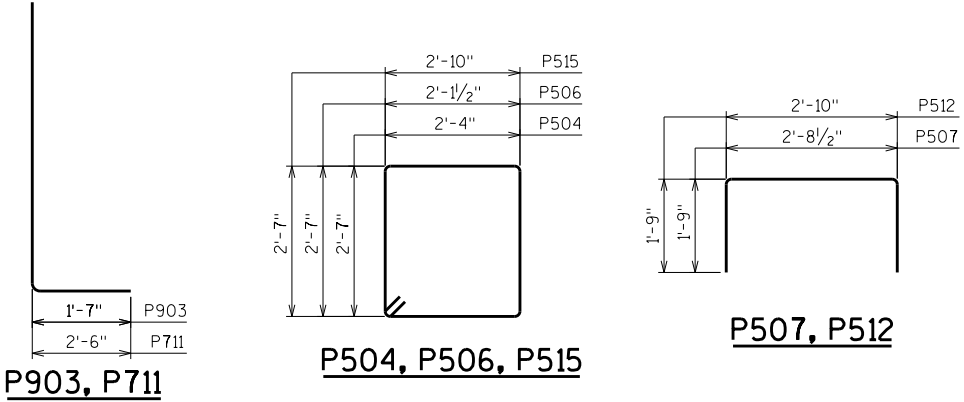
SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP AT ENDS



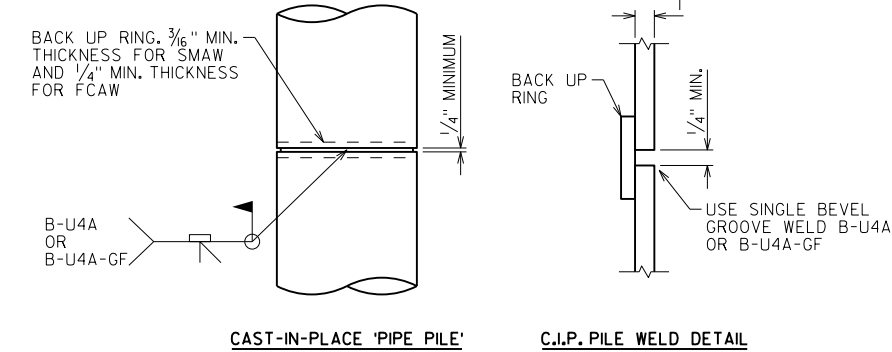
TYPICAL FOOTING/PILE PLAN



P903, P711

P504, P506, P515

P507, P512



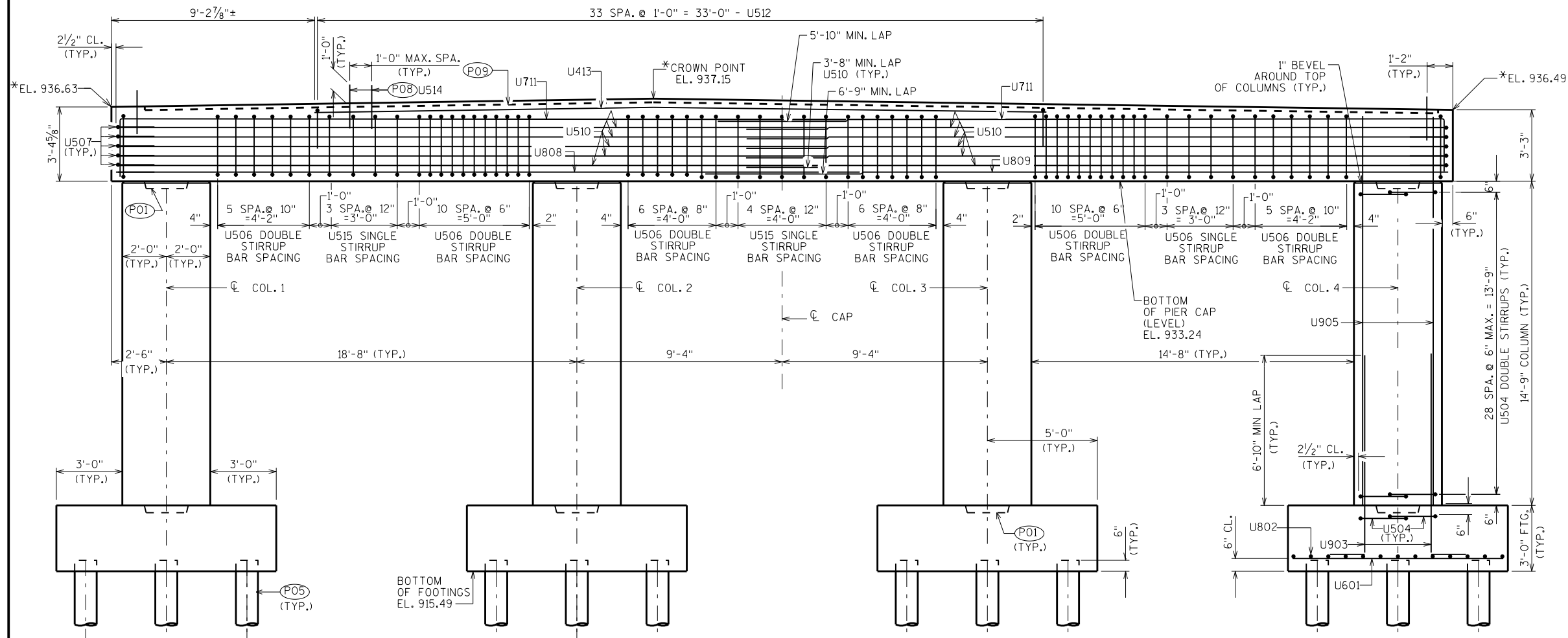
CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

PILE DETAILS

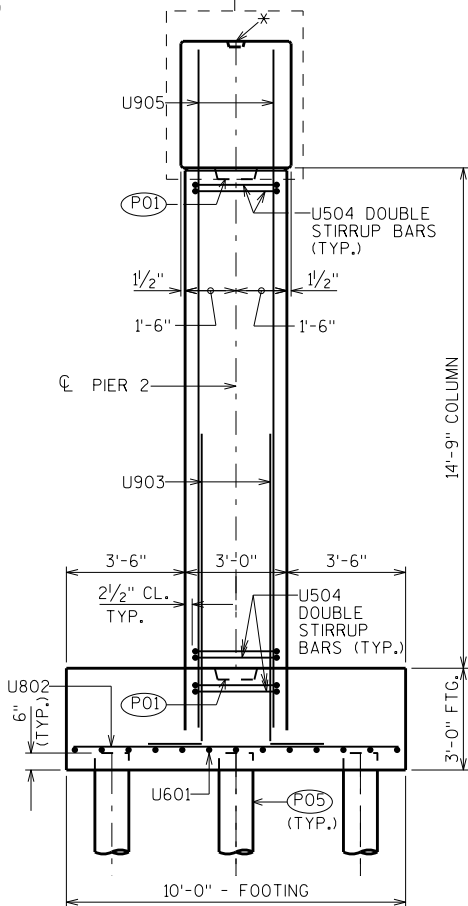
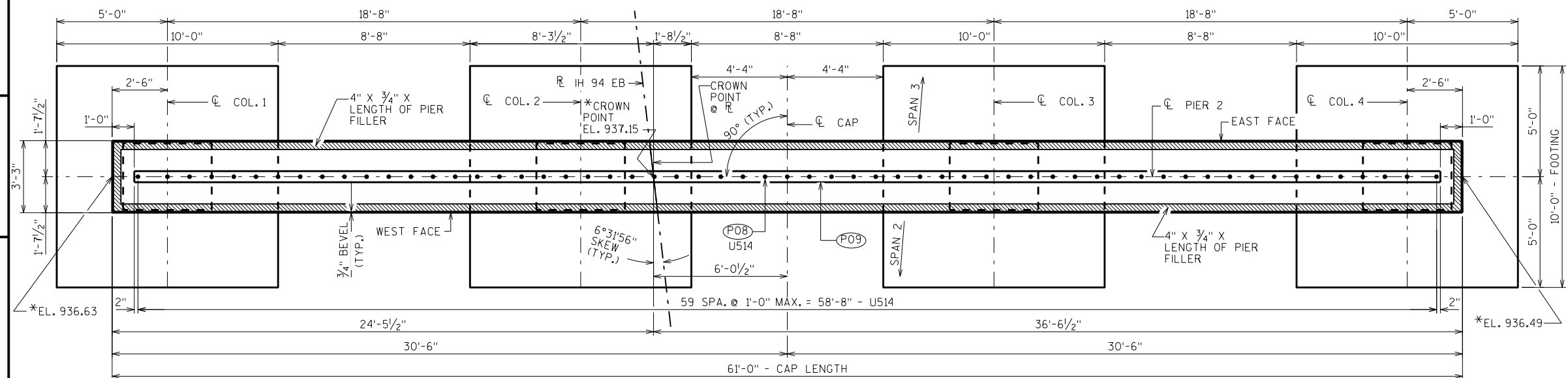
- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" X 0.5- INCH CONCRETE PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
PIER 1 DETAILS		SHEET 9	
		350	

SEE 'SECTION THRU
CAP' ON 'PIER 2
DETAILS' SHEET.**ELEVATION**

(LOOKING EAST)

*TOP OF PIER CAP ELEVATIONS ARE GIVEN HERE AT THE CL PIER 2

**END VIEW****PLAN**

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P05) SUPPORT PIER ON 10 3/4" x 0.5-INCH THK. CONC. PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.

(P08) U514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

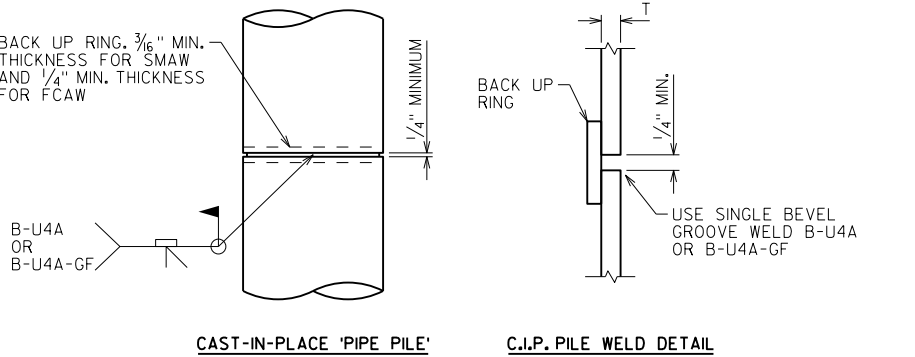
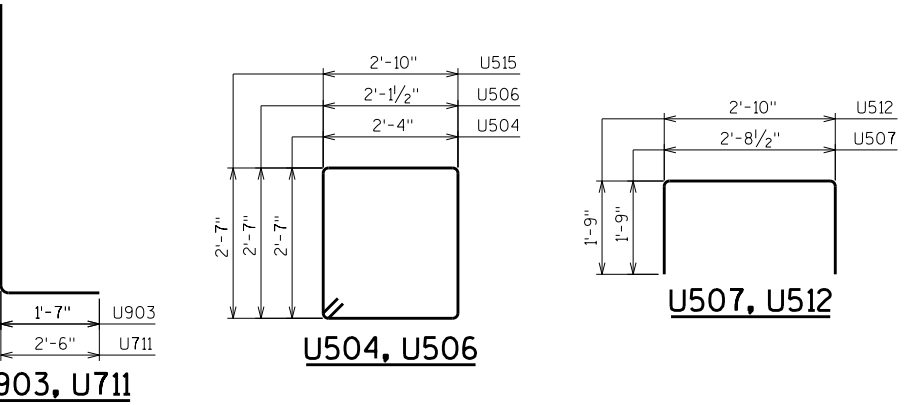
(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
PIER 2		SHEET 10	
		351	

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

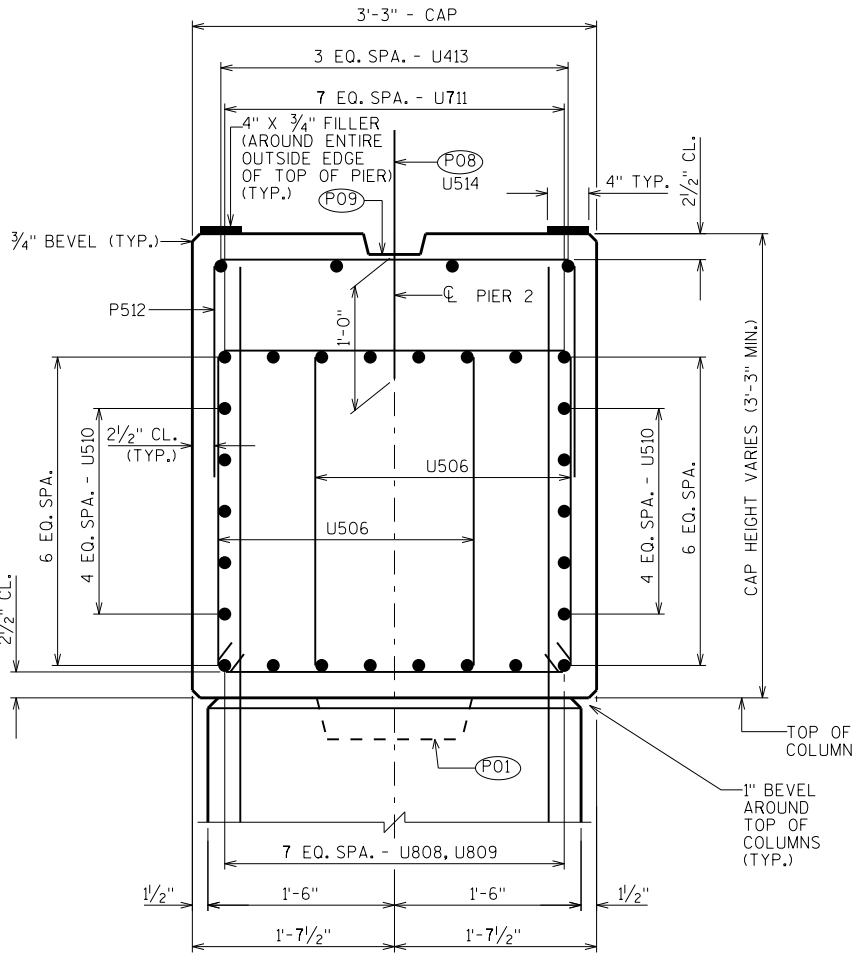
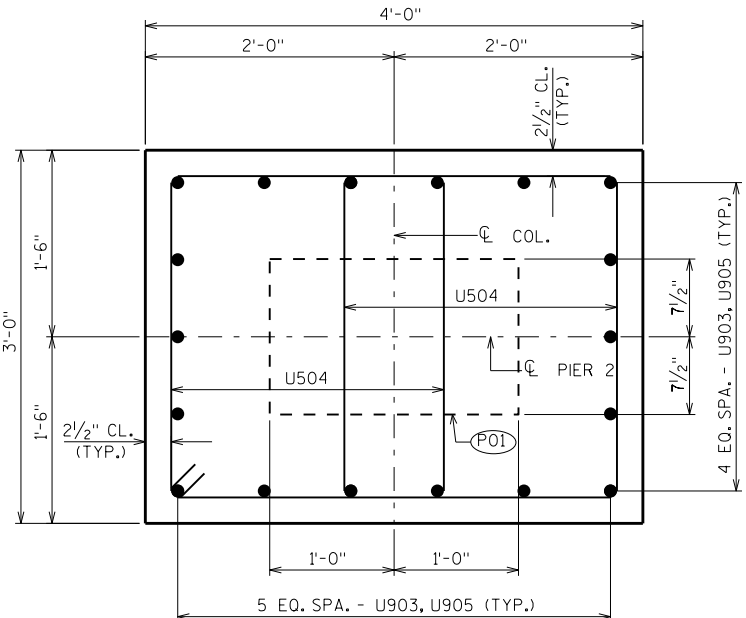
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
U601		76	9'-8"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
U802		48	9'-8"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
U903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
U504	X	240	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
U905	X	72	17'-8"		COLUMNS/CAP-VERTICAL-ALL FACES
U506	X	96	10'-1"	X	CAP-BOT.-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
U507	X	10	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
U808	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
U809	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
U510	X	20	32'-2"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
U711	X	16	35'-7"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
U512	X	34	6'-1"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 2-3
U413	X	4	33'-4		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 2-3
U514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER
U515	X	13	11'-6"	X	CAP-BOT.-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS



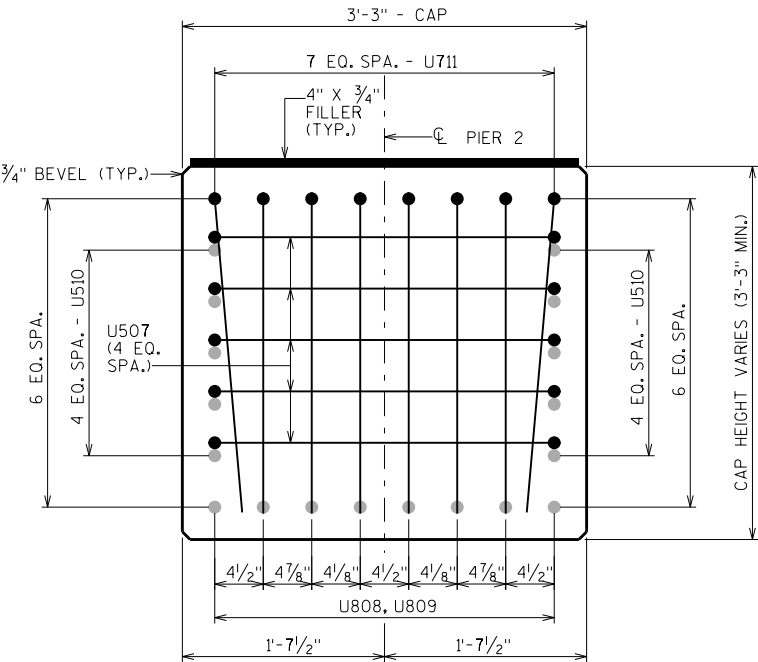
PILE DETAILS

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" X 0.5- INCH THK. CONCRETE PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) U514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

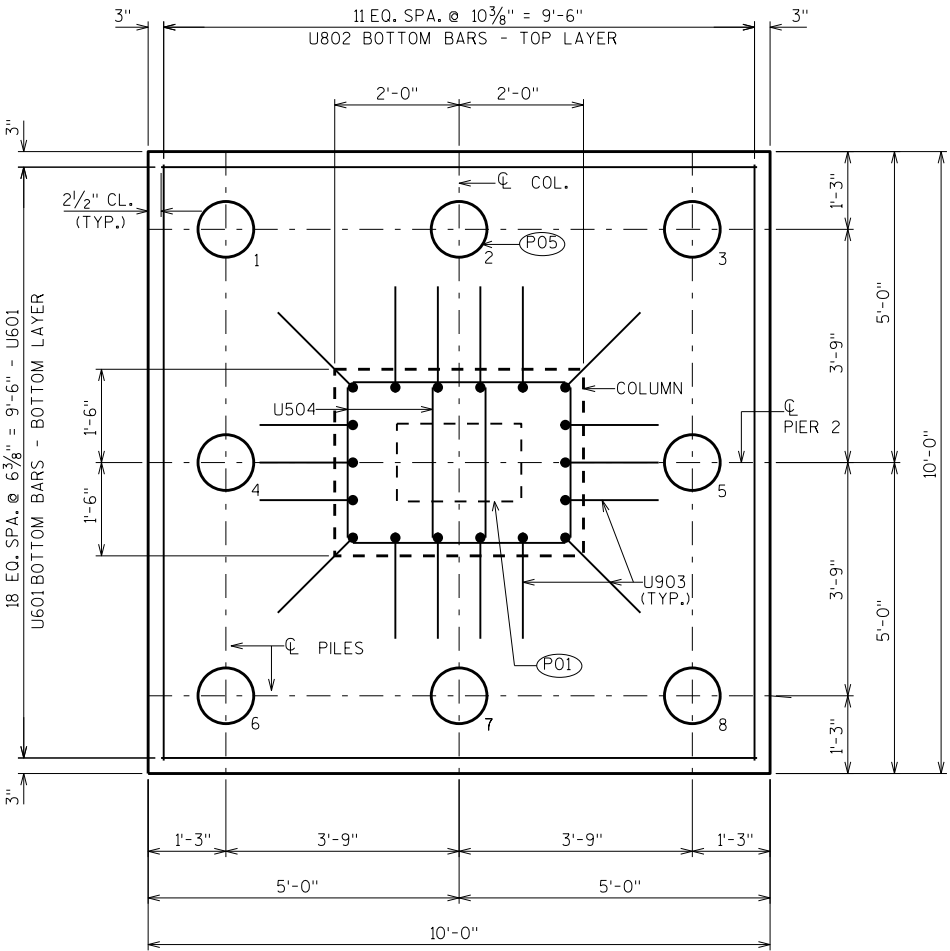
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
PIER 2 DETAILS		SHEET 11	
		352	



SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)

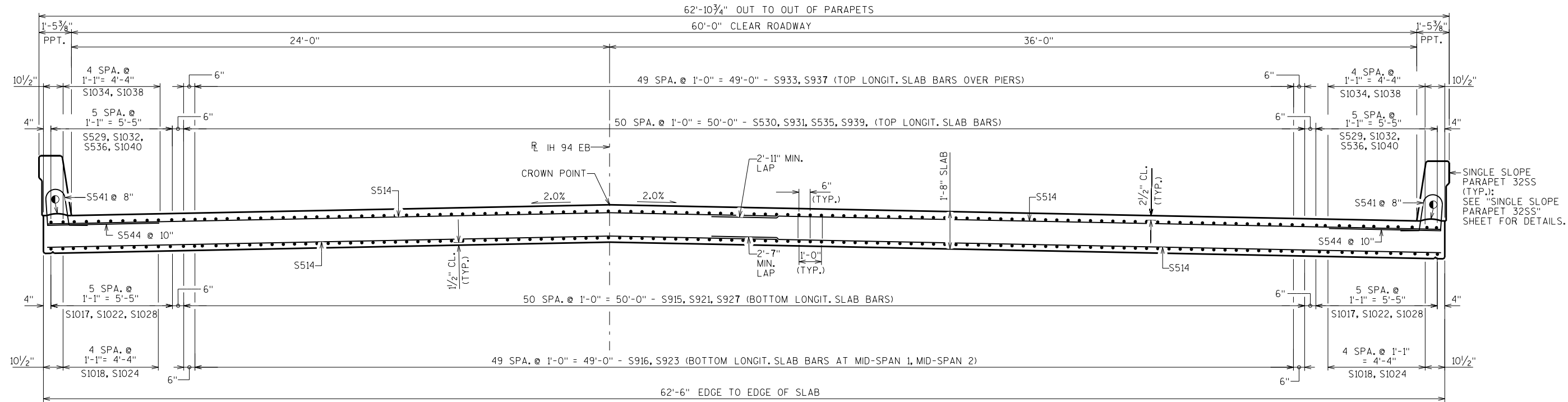


SECTION THRU CAP AT ENDS

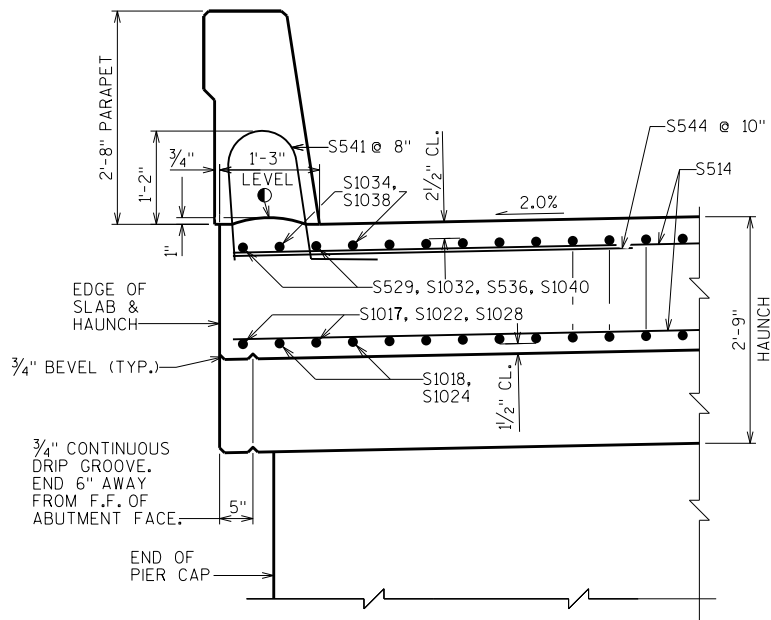


TYPICAL FOOTING/PILE PLAN

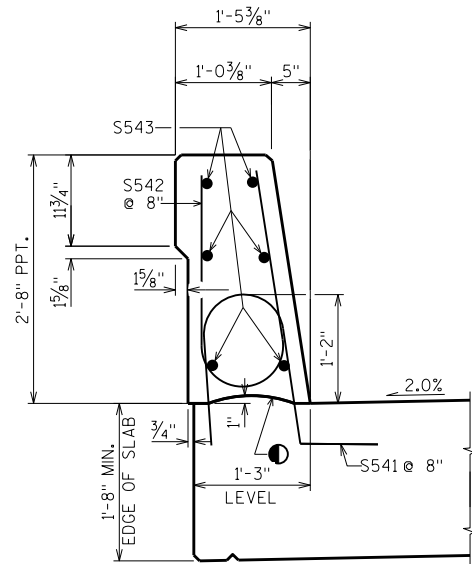




TYPICAL CROSS SECTION THRU BRIDGE
(LOOKING EAST, SHOWING SLAB REINFORCEMENT)



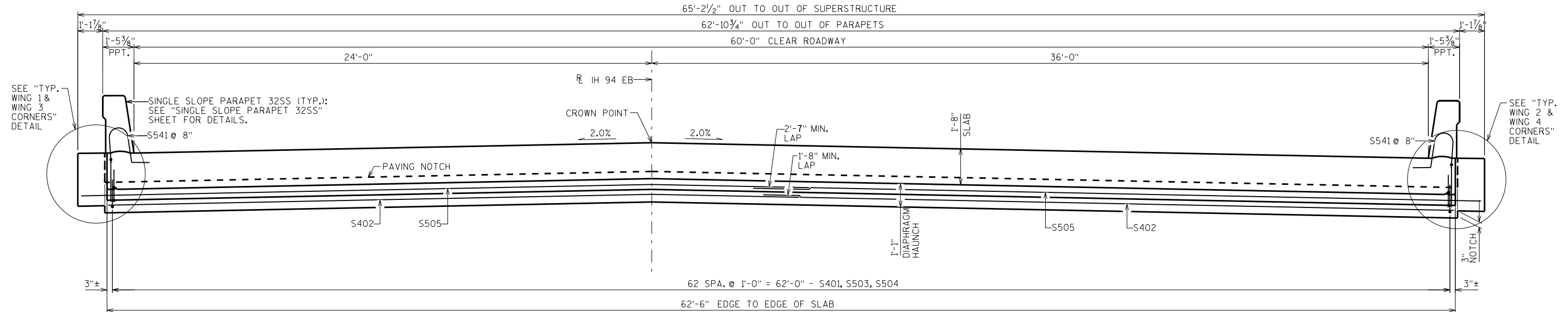
EDGE OF SLAB DETAIL
(TYP. @ BOTH SIDES)



AT SLAB

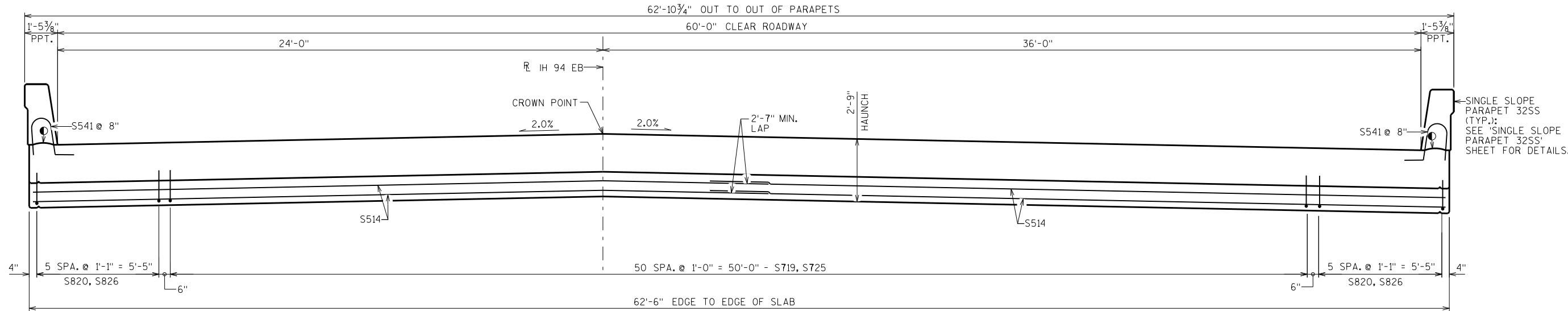
- NOTES:
- FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS AND PIERS SEE "SUPERSTRUCTURE DETAILS" SHEET.
 - SEE "SUPERSTRUCTURE DETAILS" SHEET FOR ABUTMENT DIAPHRAGM CORNER DETAILS.
 - HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTIONS 1			SHEET 12
			353



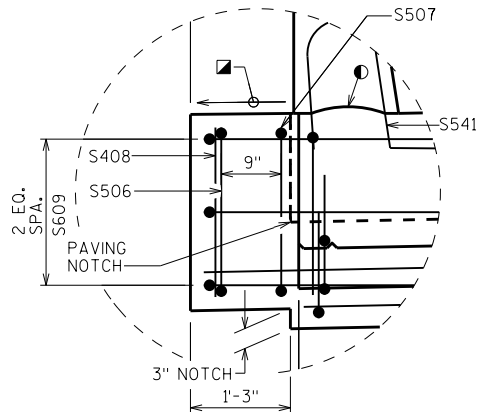
CROSS SECTION THRU BRIDGE AT ABUTMENTS

(LOOKING EAST)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR - SLAB REINFORCEMENT NOT SHOWN)

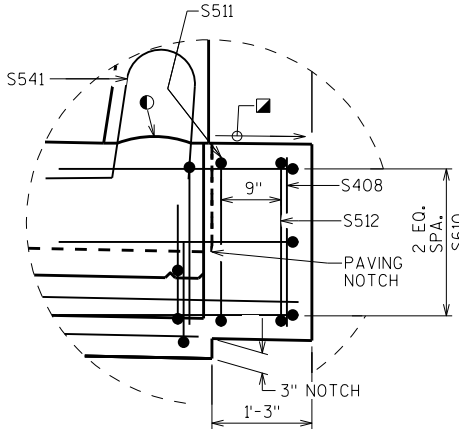


CROSS SECTION THRU BRIDGE AT PIERS

(LOOKING EAST)
(SLAB REINFORCEMENT NOT SHOWN)



TYP. WING 1 & WING 3 CORNERS

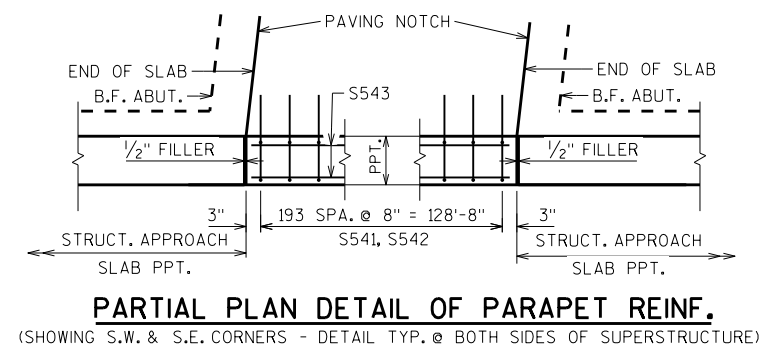


TYP. WING 2 & WING 4 CORNERS

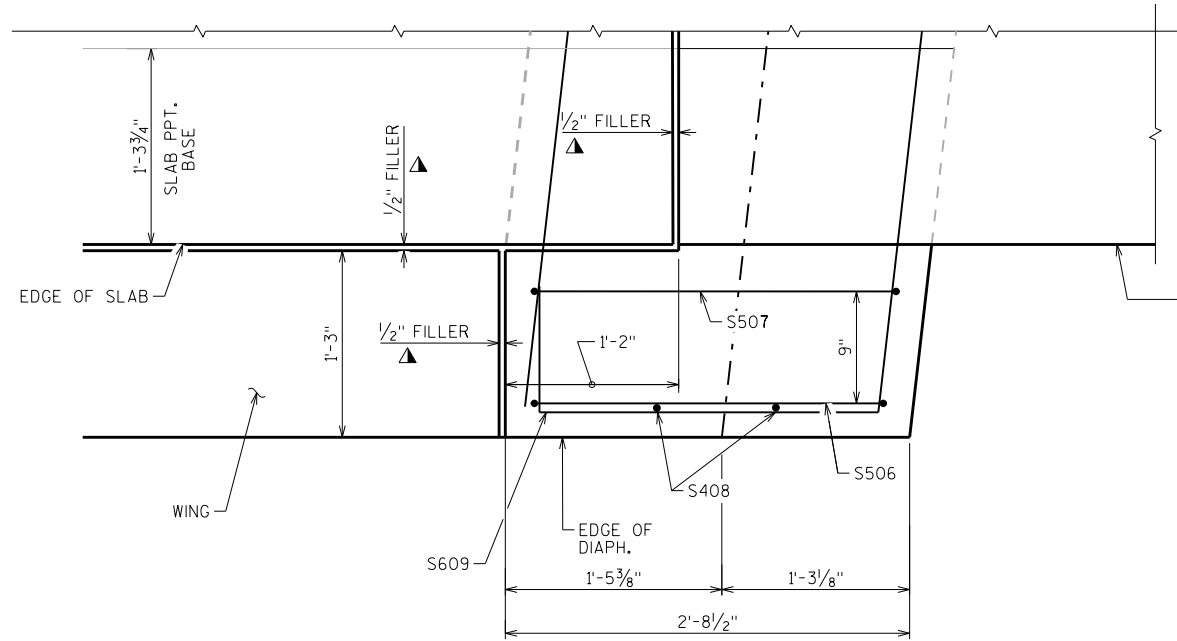
■ FINISH SMOOTH - SLOPE TO DRAIN

● HORIZ. CONST. JOINT:
STRIKE OFF AND LEAVE
ROUGH AS SHOWN

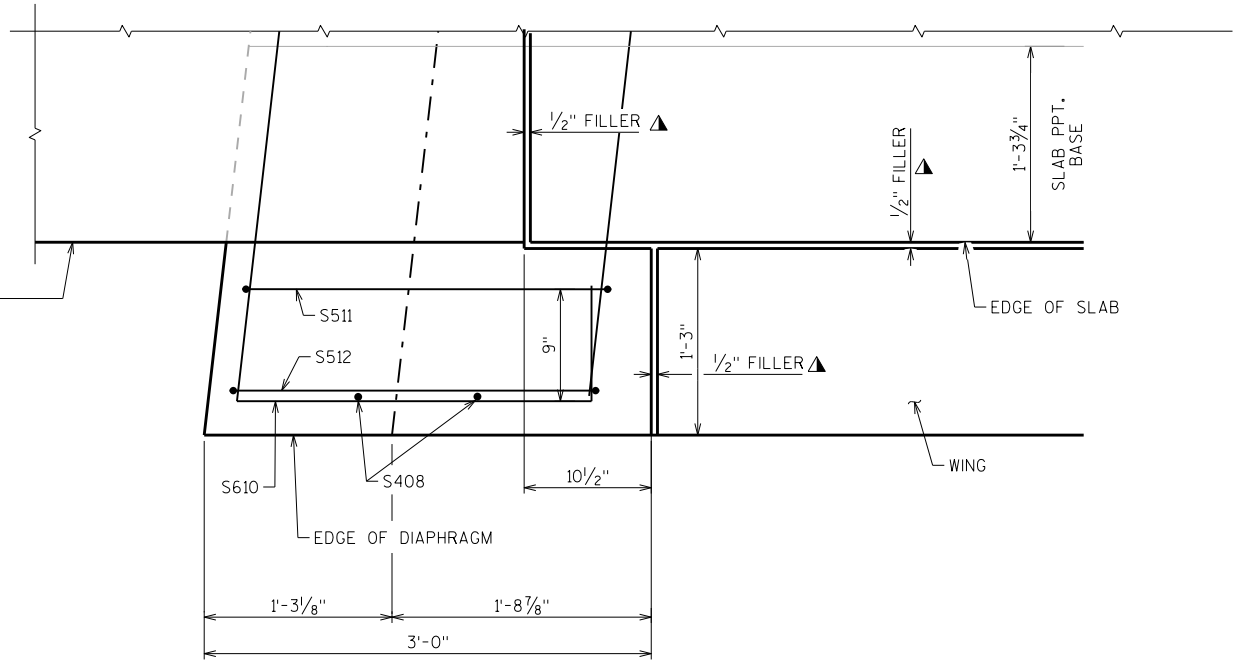
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTIONS 2			SHEET 13
			354



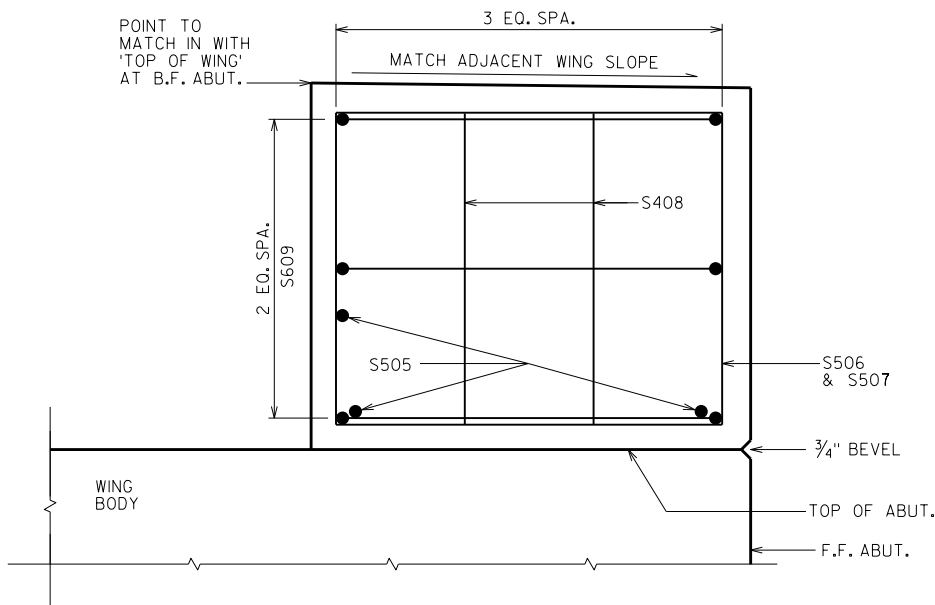
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY		JJS	PLANS CK'D. JLR
SUPERSTRUCTURE PLAN		SHEET 14	
		355	



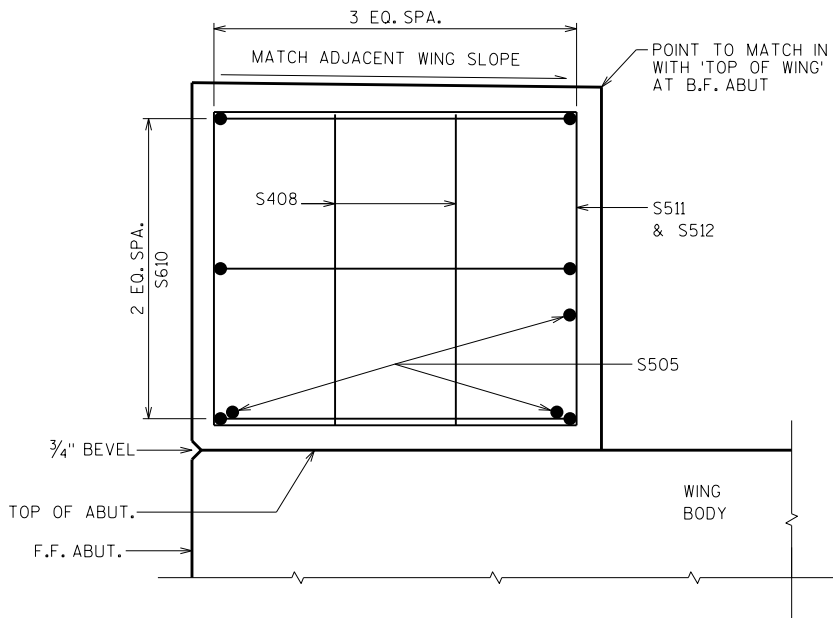
TYPICAL CORNER DETAIL
AT WINGS 1 & 3 (PLAN VIEW)



TYPICAL CORNER DETAIL AT
WINGS 2 & 4 (PLAN VIEW)



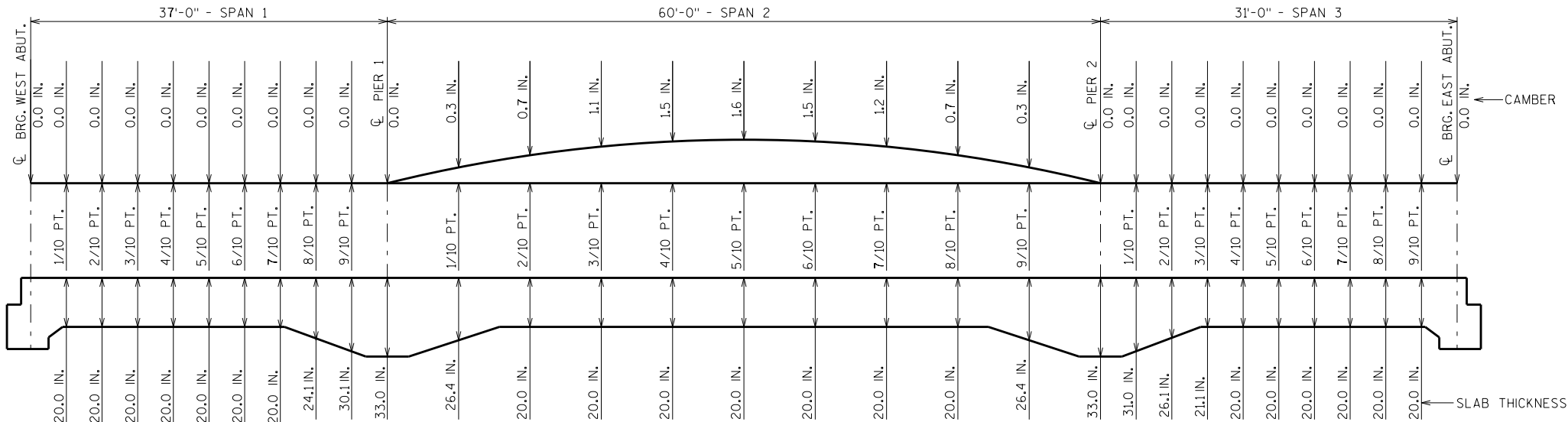
TYPICAL CORNER DETAIL AT WINGS 1 & 3
(ELEVATION VIEW LOOKING AT F.F. WING)



TYPICAL CORNER DETAIL AT WINGS 2 & 4
(ELEVATION VIEW LOOKING AT F.F. WING)

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE DETAILS		SHEET 16	
		357	



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS =TOP OF SLAB FALSEWORK ELEVATION.

TOP OF SLAB ELEVATIONS

	CL BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL BRG. E. ABUT.
NORTH GUTTERLINE & EDGE OF SLAB	940.81	940.76	940.71	940.66	940.61	940.55	940.50	940.45	940.40	940.35	940.30	940.21	940.13	940.04	939.96	939.87	939.78	939.70	939.61	939.52	939.43	939.39	939.34	939.30	939.25	939.21	939.16	939.11	939.07	939.02	938.97
CL IH 94 EB/CROWN POINT	941.33	941.28	941.23	941.18	941.13	941.07	941.02	940.97	940.92	940.87	940.82	940.73	940.65	940.56	940.48	940.39	940.30	940.22	940.13	940.04	939.96	939.91	939.87	939.82	939.77	939.73	939.68	939.64	939.59	939.54	939.50
SOUTH GUTTERLINE & EDGE OF SLAB	940.67	940.62	940.57	940.52	940.46	940.41	940.36	940.31	940.26	940.21	940.16	940.07	939.99	939.90	939.82	939.73	939.65	939.56	939.47	939.39	939.30	939.25	939.21	939.16	939.12	939.07	939.03	938.98	938.93	938.89	938.84

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

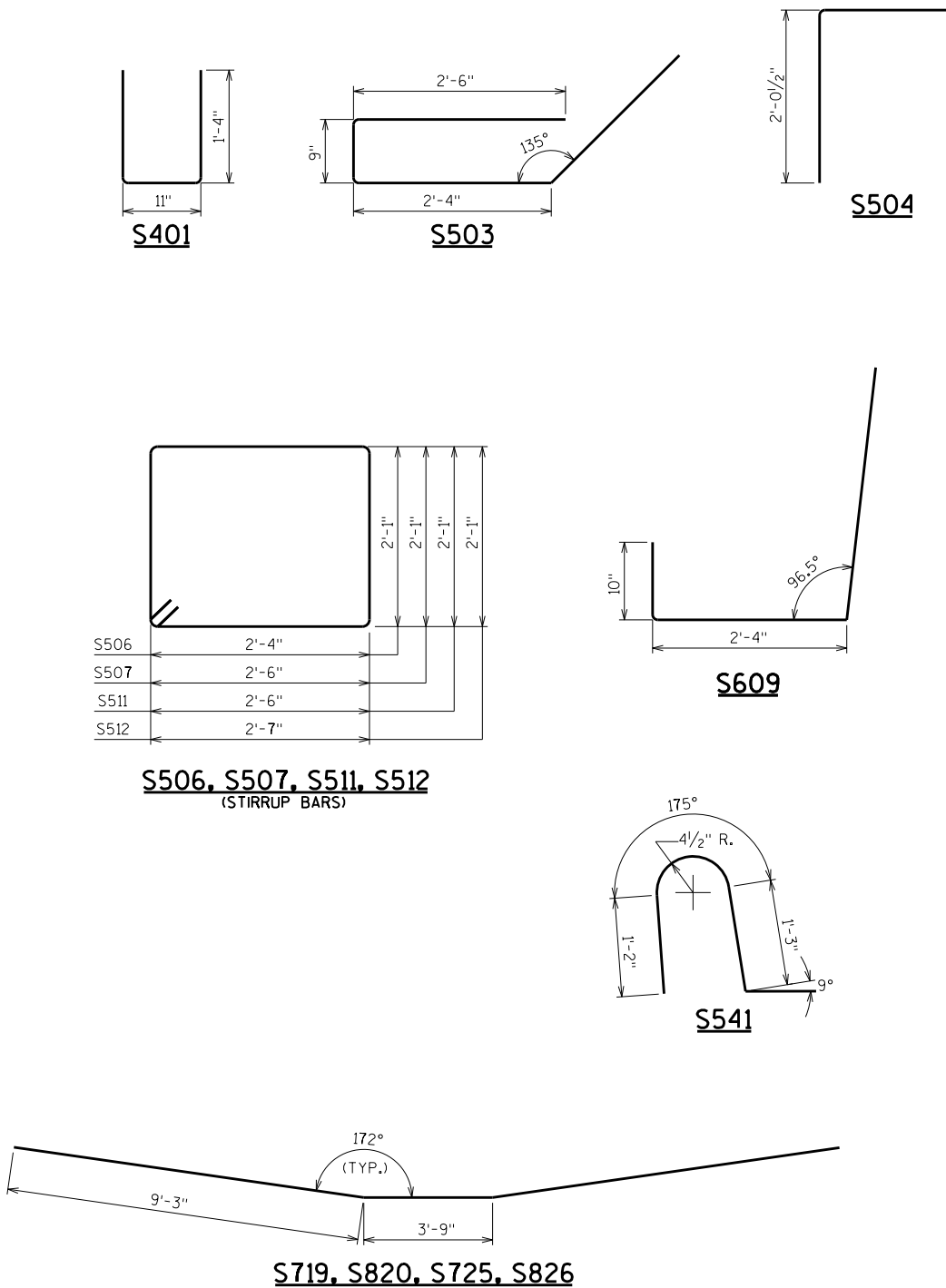
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. WEST ABUTMENT	5/10 PT.	CL PIER 1	5/10 PT.	CL PIER 2	5/10 PT.	CL BRG. EAST ABUTMENT
NORTH GUTTERLINE & EDGE OF SLAB							
CL IH 94 EB/CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, THE CL OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTERLINES AND CROWN POINT. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE DATA			SHEET 17
			358

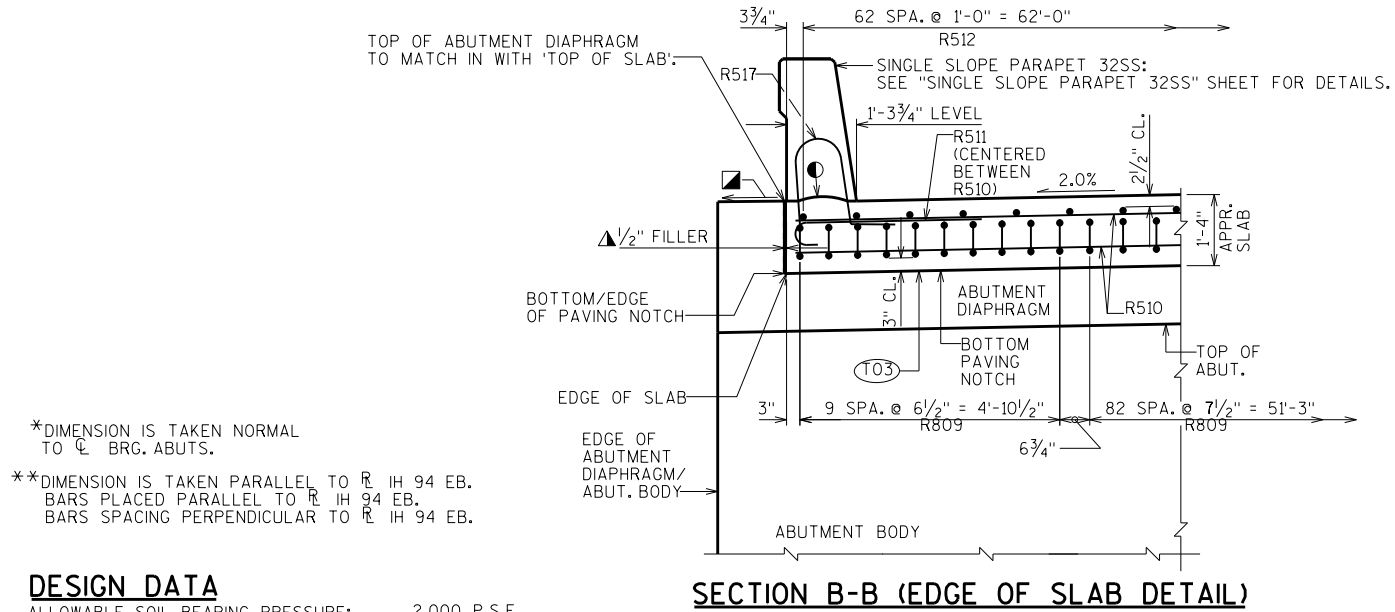
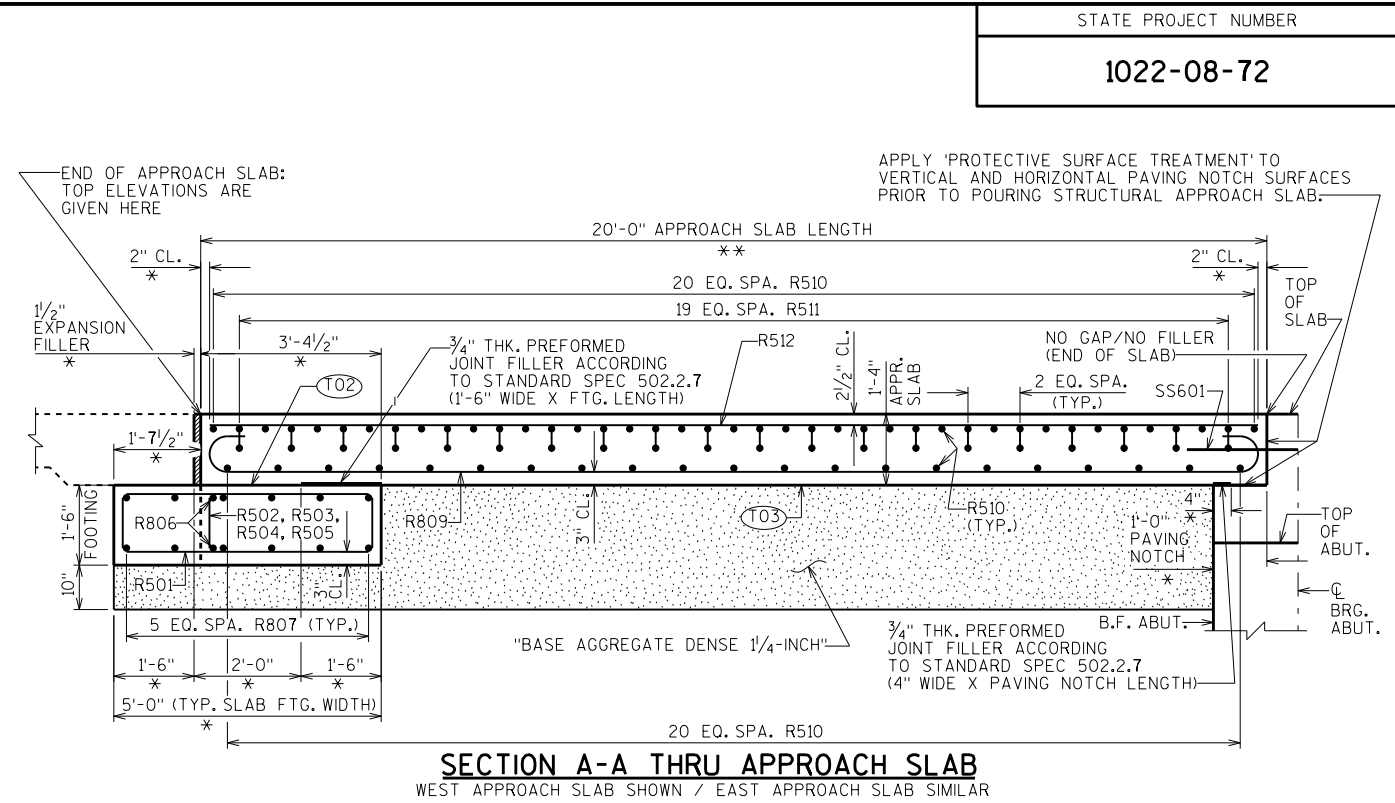
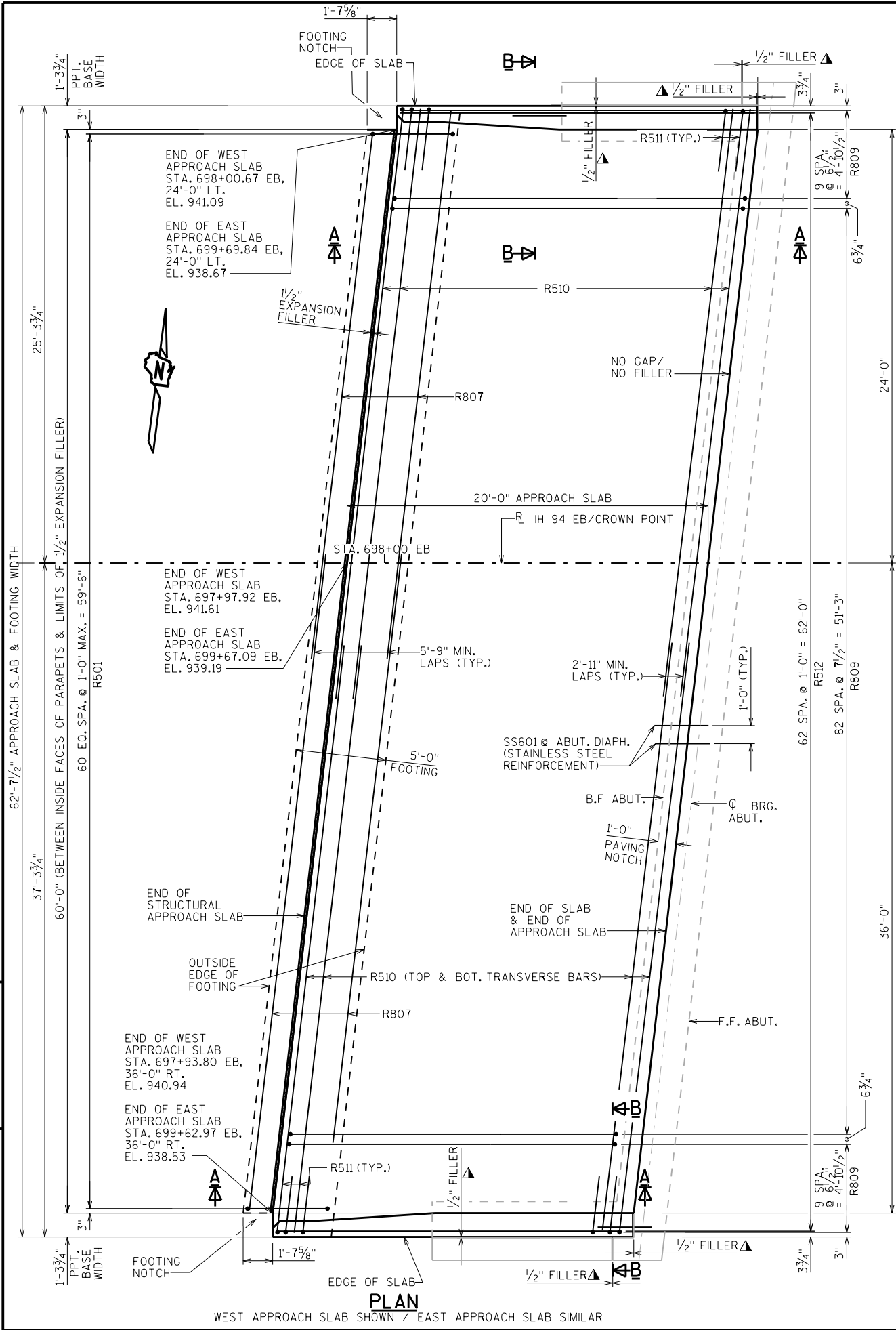


BILL OF BARS					LOCATION
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	
S401	X	126	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-LONGIT.-AT 3" NOTCHES
S402	X	8	32'-4"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-TRANS.-AT 3" NOTCHES
S503	X	126	7'-5"	X	ABUT. DIAPHS./SLAB-BOT.-VERT.-LONGIT.-UNDER PAVING NOTCHES
S504	X	126	3'-5"	X	ABUT. DIAPHS./SLAB-VERT.-LONGIT.-ALONG PAVING NOTCHES
S505	X	12	34'-0"		ABUT. DIAPHS.-BOT.-HORIZ.-TRANSVERSE
S506	X	2	9'-6"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1 & 3 CORNERS ONLY
S507	X	2	9'-10"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1 & 3 CORNERS ONLY
S408	X	8	2'-1"		ABUT. DIAPHS.-OUTSIDE FACES-VERT.-AT ALL FOUR WING CORNERS
S609	X	6	6'-0"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 1 & 3 CORNERS ONLY
S610	X	6	6'-0"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 2 & 4 CORNERS ONLY
S511	X	2	9'-10"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2 & 4 CORNERS ONLY
S512	X	2	10'-0"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2 & 4 CORNERS ONLY
NOT USED					
S514	X	590	32'-10"		SLAB-TOP & BOT.-HORIZ.-TRANSVERSE
S915	X	51	31'-2"		SLAB- BOT.-HORIZ.-LONGIT. WEST END INT.
S916	X	50	15'-6"		SLAB- BOT.-HORIZ.-LONGIT. WEST END INT. SHORT BAR.
S1017	X	12	32'-4"		SLAB- BOT.-LONGIT. EXT.
S1018	X	10	14'-0"		SLAB-BOT.-LONGIT. EXT.
S719	X	51	22'-1"	X	SLAB-BOT.-HORIZ. LONGIT. OVER PIER 1-INT.
S820	X	12	21'-1"	X	SLAB-BOT.-HORIZ.- LONGIT. OVER PIER 1-EXT.
S921	X	51	47'-6"		SLAB-BOT.-HORIZ.-LONGIT. SPAN 2 (LONG) INT.
S1022	X	12	49'-8"		SLAB-BOT.-HORIZ.- LONGIT. SPAN 2 (LONG) EXT.
S923	X	50	32'-6"		SLAB-BOT.-HORIZ.- LONGIT. SPAN 2 (SHORT) INT.
S1024	X	10	32'-6"		SLAB-BOT.-HORIZ.-LONGIT.SPAN 2 (SHORT) EXT.
S725	X	51	22'-1"	X	SLAB-BOT.-HORIZ.- LONGIT OVER PIER 2-INT.
S826	X	12	22'-1"	X	SLAB-BOT.-HORIZ.-LONGIT. OVER PIER 2-EXT.
S927	X	51	25'-2"		SLAB-BOT.-HORIZ.- LONGIT. EAST END-INT.
S1028	X	12	26'-4"		SLAB-BOT.-HORIZ.- LONGIT. EAST END-EXT.
S529	X	12	5'-4"		SLAB-TOP-HORIZ.- LONGIT. WEST END (SHORT)-EXT.
S530	X	51	5'-10"		SLAB-TOP-HORIZ.- LONGIT. WEST END. (SHORT)-INT.
S931	X	51	60'-0"		SLAB-TOP-HORIZ.-LONGIT. SPAN 1 AND OVER PIER 1-INT.
S1032	X	12	60'-0"		SLAB-TOP-HORIZ.- LONGIT. SPAN 1 AND OVER PIER 1-EXT.
S933	X	50	31'-0"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 1-INT.
S1034	X	10	30'-6"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 1-EXT.
S535	X	51	18'-4"		SLAB-TOP-HORIZ.- LONGIT. SPAN 2-INT.
S536	X	12	19'-4"		SLAB-TOP-HORIZ.- LONGIT. SPAN 2-EXT.
S937	X	50	29'-0"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 2-INT.
S1038	X	10	30'-6"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 2-EXT.
S939	X	51	53'-5"		SLAB-TOP-HORIZ.- LONGIT. EAST END-INT.
S1040	X	12	52'-11		SLAB-TOP-HORIZ.- LONGIT. EAST END-EXT.
S541	X	388	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT BOTH SIDES
S542	X	388	5'-0"	X	PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES
S543	X	36	44'-9"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES
S544	X	310	5'-0"		SLAB-TOP HORIZ. TRANSVERSE AT BOTH SIDES

SS601		122	3'-0"		HAUNCHED SLAB/APPROACH SLAB-HORIZ.-LONGIT.-AT PAVING NOTCHES
-------	--	-----	-------	--	--

↑ STAINLESS STEEL REINFORCEMENT

NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-217				
DRAWN BY		JJS	PLANS CK'D.	JLR
SUPERSTRUCTURE BAR DETAILS			SHEET 18	
			359	



DESIGN DATA
ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.
THE EXISTING SOIL MAY REMAIN IN PLACE IF THE REGION SOILS ENGINEER DETERMINES THAT THE EXISTING SOIL BEARING PRESSURE MEETS THE REQUIREMENT ABOVE.

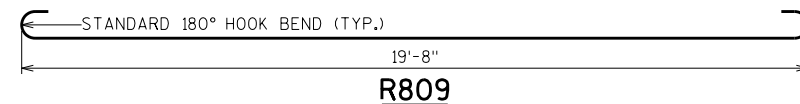
- FINISH SMOOTH, SLOPE TO DRAIN
- HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2\"/>

- T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03\"/>
- T03 PLACE MULTIPLE LAYERS (0.03\"/>

STATE PROJECT NUMBER			
1022-08-72			
APPLY 'PROTECTIVE SURFACE TREATMENT' TO VERTICAL AND HORIZONTAL PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.			
20'-0" APPROACH SLAB LENGTH			
20 EQ. SPA. R510			
19 EQ. SPA. R511			
NO GAP/NO FILLER (END OF SLAB)			
2 EQ. SPA. (TYP.)			
SS601			
TOP OF SLAB			
TOP OF ABUT.			
B.F. ABUT.			
1'-0" PAVING NOTCH			
3/4" THK. PREFORMED JOINT FILLER ACCORDING TO STANDARD SPEC 502.2.7 (4" WIDE X PAVING NOTCH LENGTH)			
20 EQ. SPA. R510			
"BASE AGGREGATE DENSE 1/4"-INCH"			
5 EQ. SPA. R807 (TYP.)			
1'-6" 2'-0" 1'-6"			
5'-0" (TYP. SLAB FTG. WIDTH)			
SECTION A-A THRU APPROACH SLAB			
WEST APPROACH SLAB SHOWN / EAST APPROACH SLAB SIMILAR			

62 SPA. @ 1'-0" = 62'-0"			
R512			
SINGLE SLOPE PARAPET 32SS: SEE "SINGLE SLOPE PARAPET 32SS" SHEET FOR DETAILS.			
1'-3 3/4" LEVEL			
R511 (CENTERED BETWEEN R510)			
2.0%			
2'-0" CL.			
1'-4" APPR. SLAB			
TOP OF ABUT.			
ABUTMENT DIAPHRAGM			
BOTTOM PAVING NOTCH			
9 SPA. @ 6 1/2" = 4'-10 1/2"			
82 SPA. @ 7 1/2" = 51'-3"			
6 3/4"			
ABUTMENT BODY			
SECTION B-B (EDGE OF SLAB DETAIL)			

STATE OF WISCONSIN			
DEPARTMENT OF TRANSPORTATION			
STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY		PLANS CK'D.	
JJS		JLR	
STRUCTURAL APPROACH SLABS		SHEET 19	
		360	

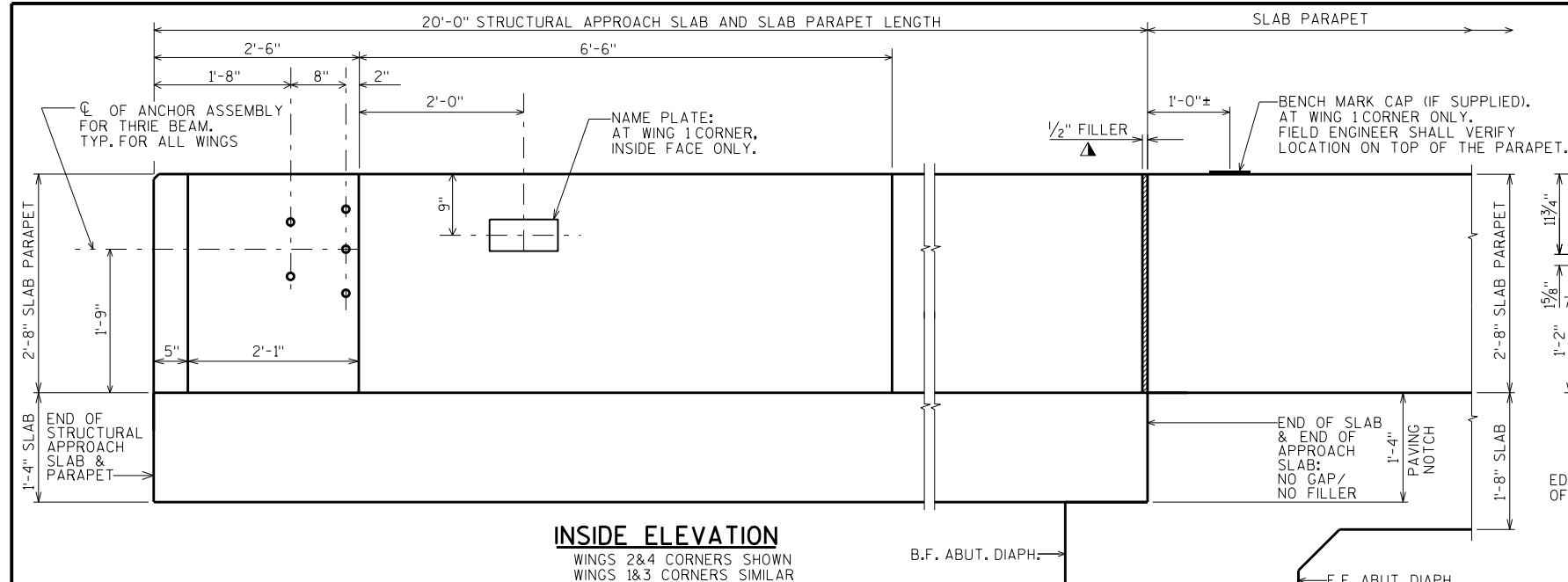


NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

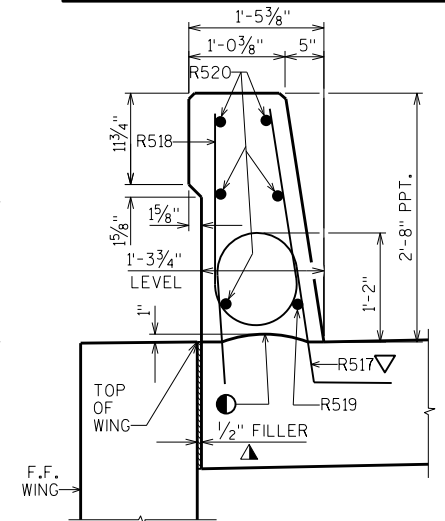
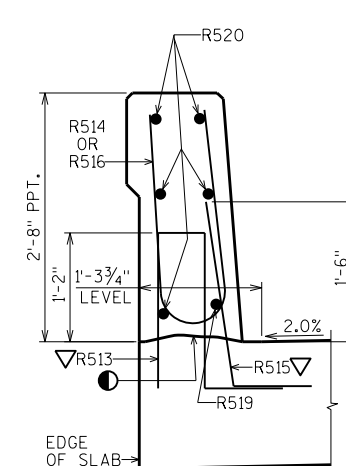
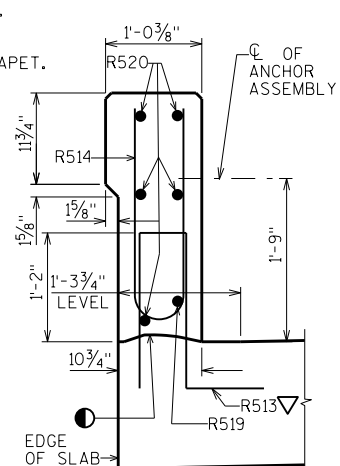
102 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

103 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

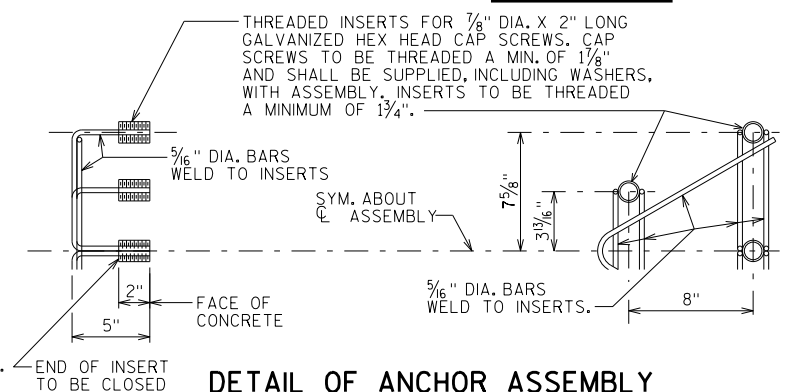
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



NOTES:
SEE THE 'STRUCTURAL APPROACH SLAB & BAR DETAILS' SHEET FOR THE
BILL OF BARS AND BAR DETAILS FOR THE SLAB PARAPET R-BARS.
SEE THE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE BILL OF
BARS AND BAR DETAILS FOR THE SLAB PARAPET S-BARS.



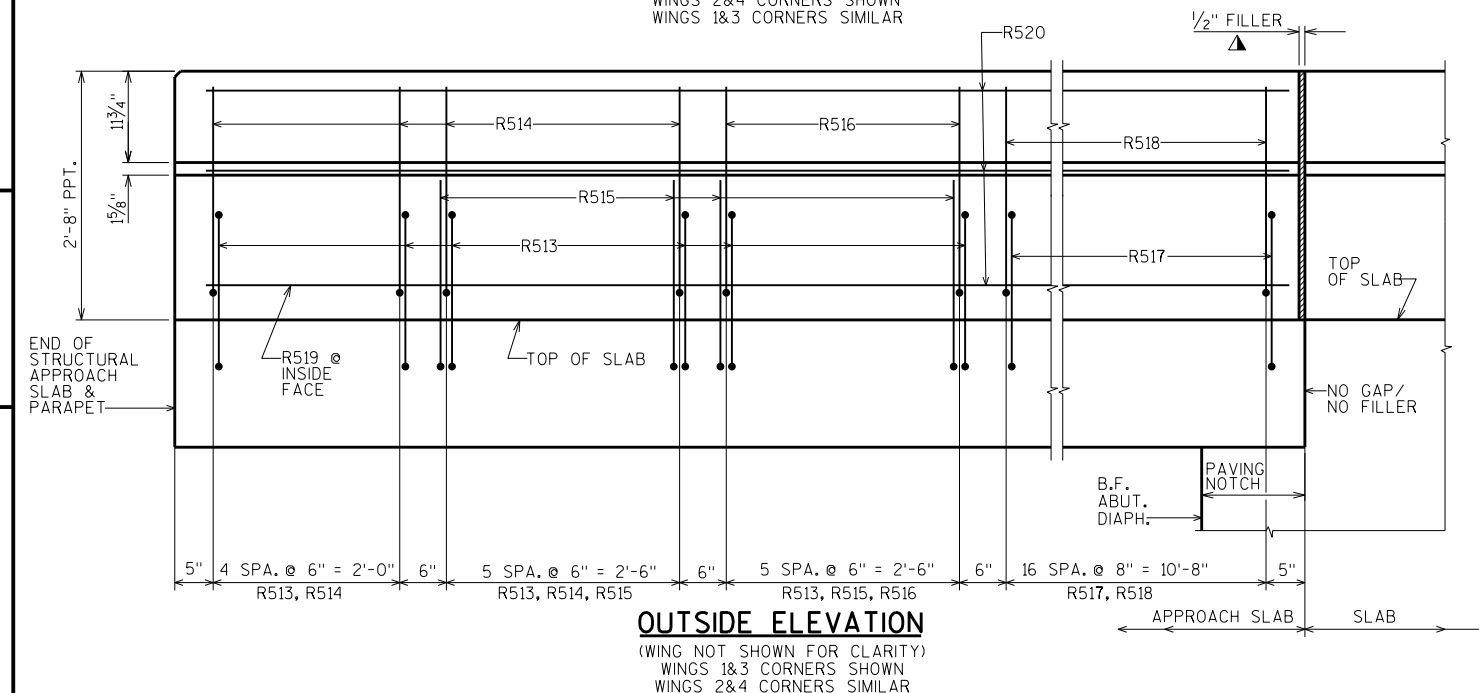
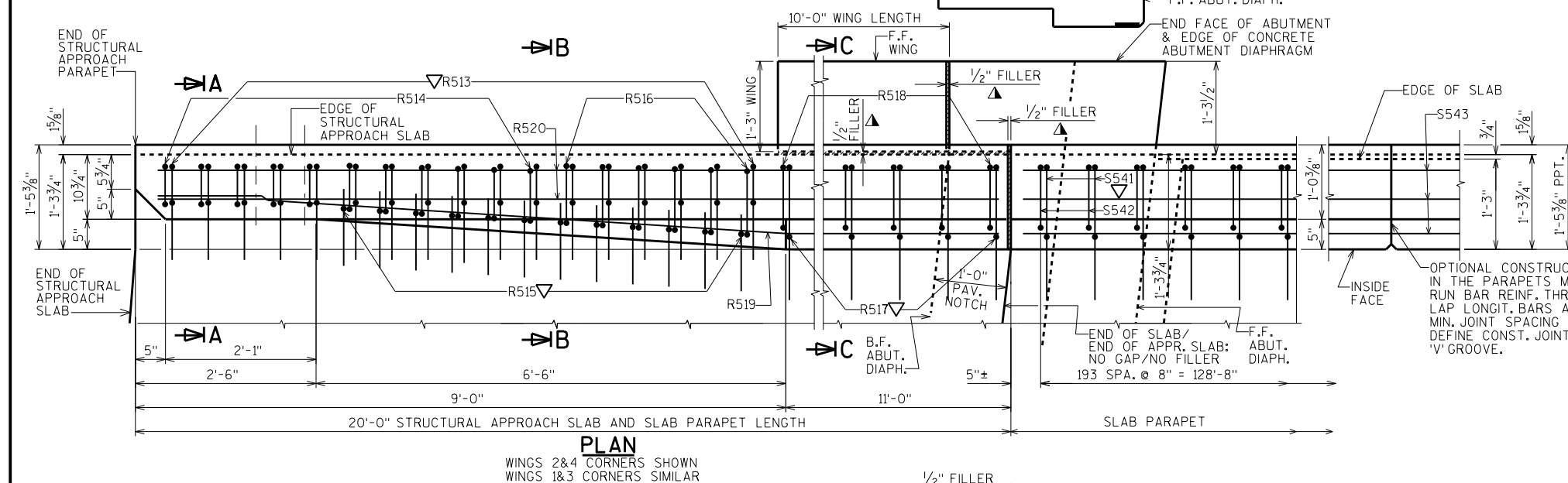
SECTION C-C



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED
IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



FINISH SMOOTH - SLOPE TO DRAIN

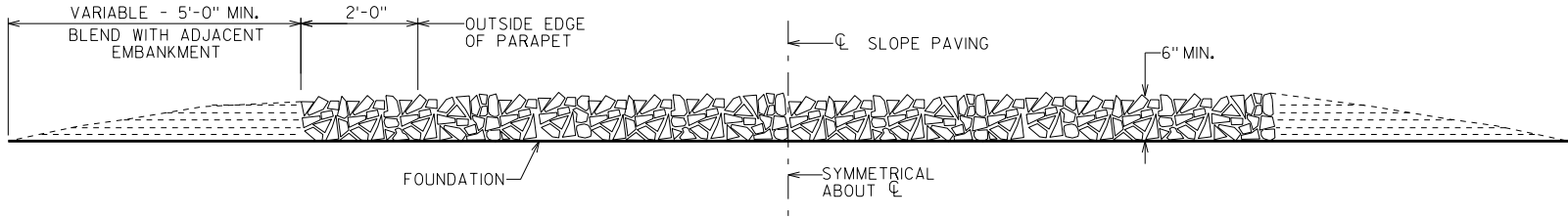
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

● HORIZ. CONST. JOINT - STRIKE OFF
AS SHOWN AND LEAVE ROUGH.

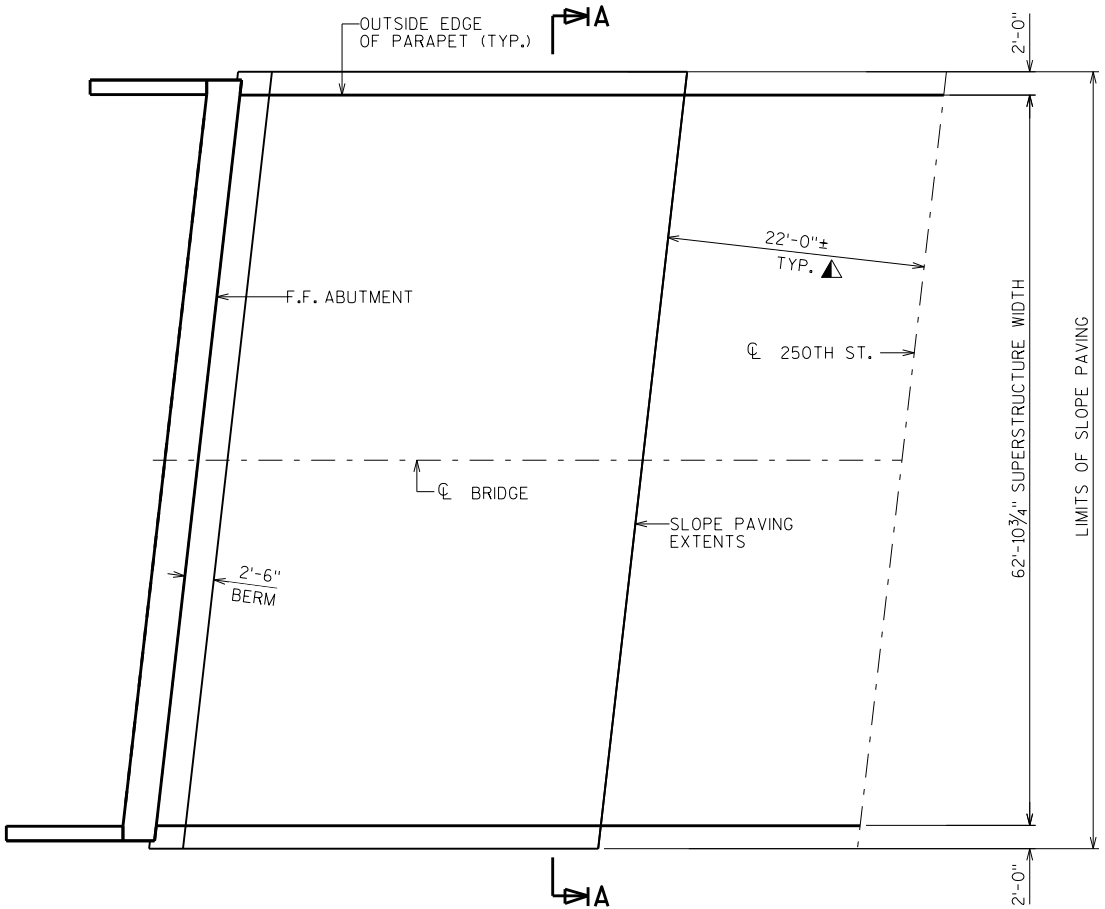
▽ R513, R515, R517 & S541 PARAPET BARS TO BE TIED TO SLAB OR SLAB STEEL BEFORE SLAB OR SLAB IS POURED. USE CARE TO PLACE R515 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

UNCLASSIFIED//FOR OFFICIAL USE ONLY			
NO.		REVISION	
DATE		BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY		JJS	PLANS CK'D. JLR
SINGLE SLOPE PARAPET 32SS		SHEET 21	
		362	

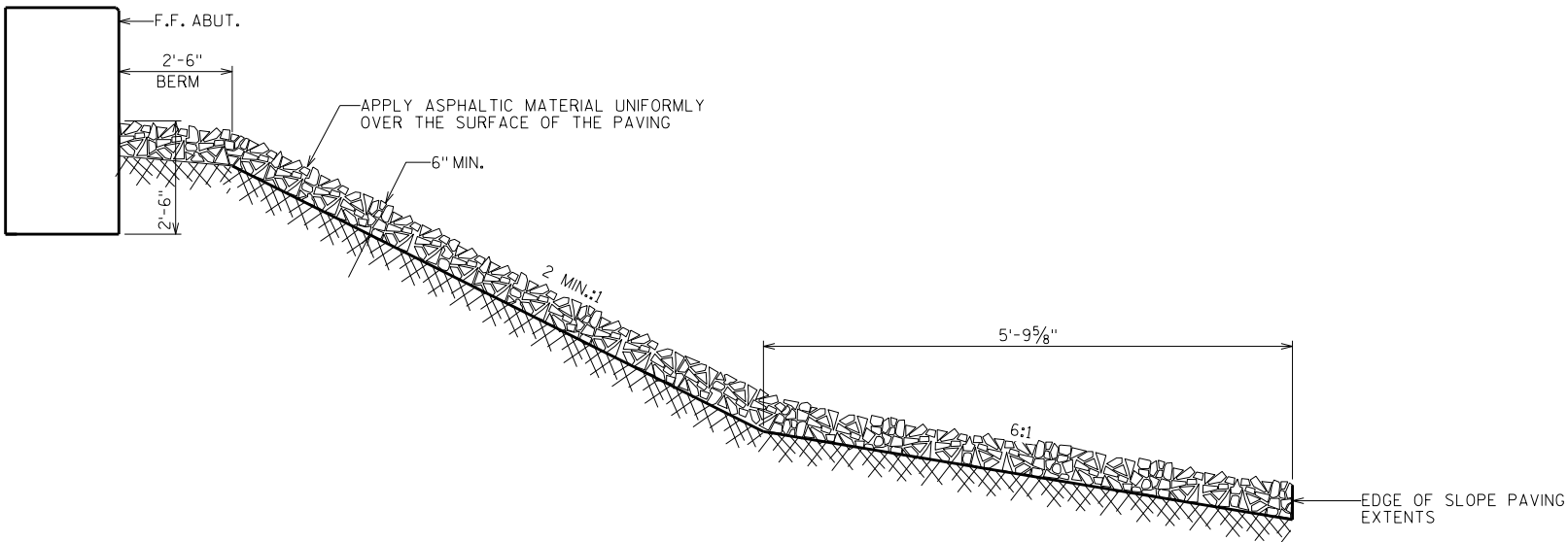
SCALE = 1.00



SECTION A-A



PLAN



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE

ROUND STONE WILL NOT BE ACCEPTED

▲ MEASURED PERPENDICULAR TO CL 250TH ST.

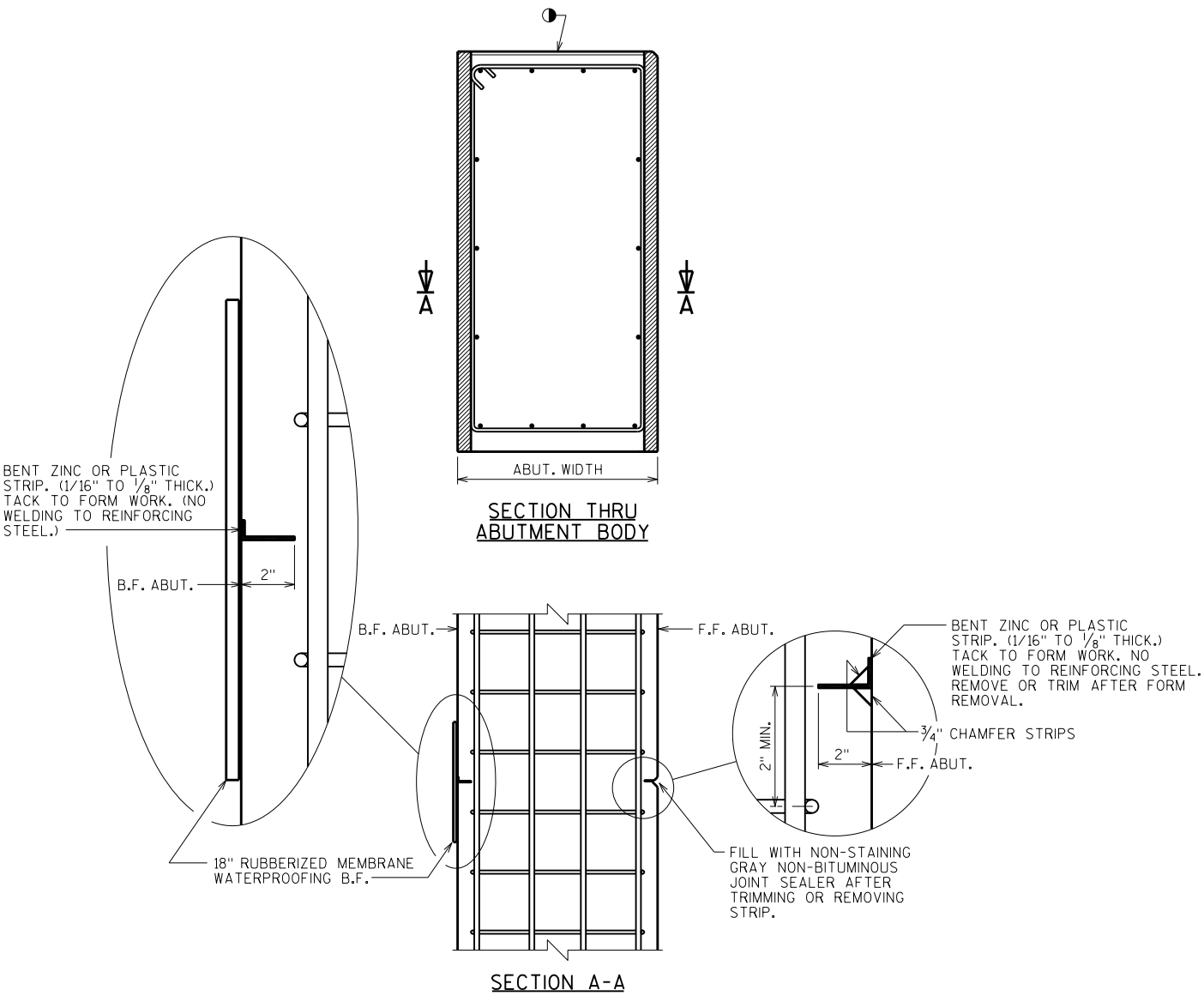
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
SLOPE PAVING CRUSHED AGGREGATE			SHEET 22
			363

SCALE = 1:00



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

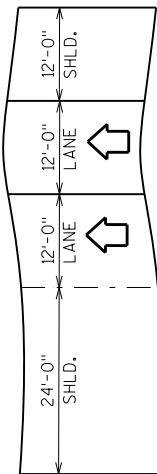
SAW CUTTING JOINT IS NOT ALLOWED

● USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-217			
DRAWN BY JJS		PLANS CK'D. JLR	
ALTERNATE CONSTRUCTION JOINT			SHEET 23
			364

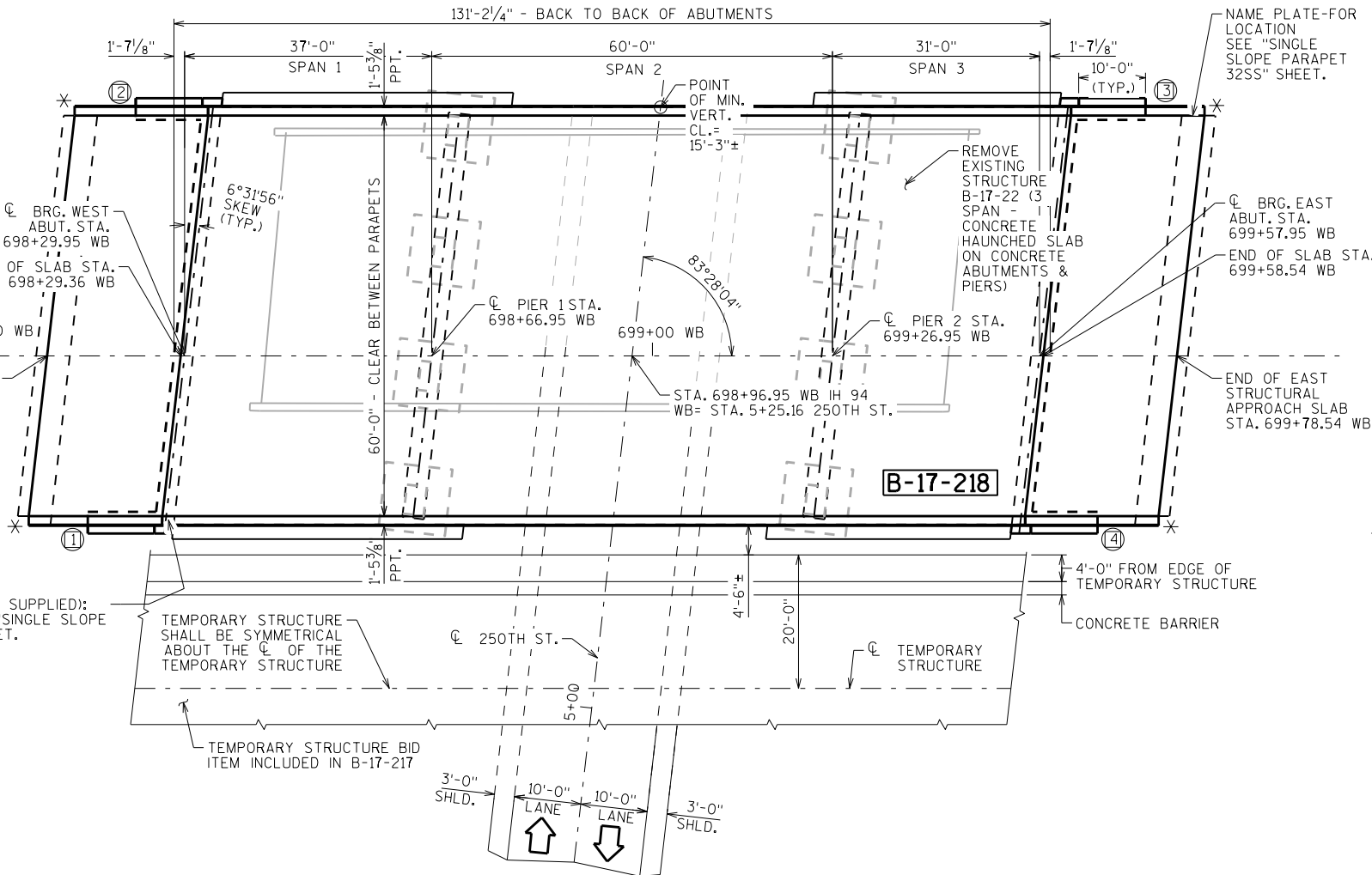
* PROVIDE FOR THREE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

① INDICATES WING NUMBER



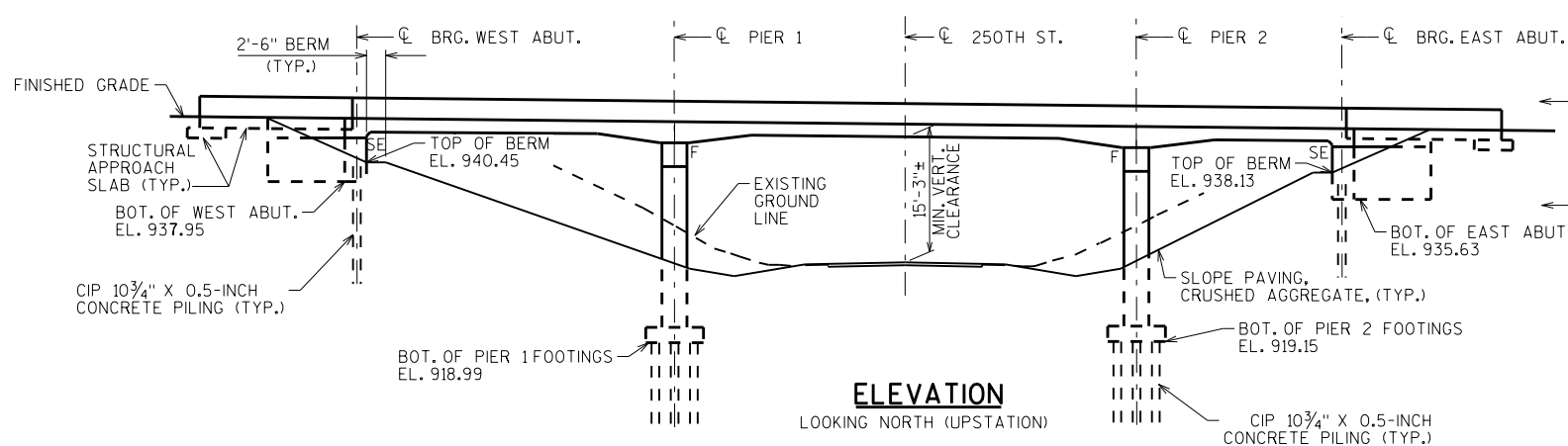
END OF WEST STRUCTURAL APPROACH SLAB STA. 698+09.36 WB

BENCH MARK CAP (IF SUPPLIED): FOR LOCATION SEE "SINGLE SLOPE PARAPET 32SS" SHEET.



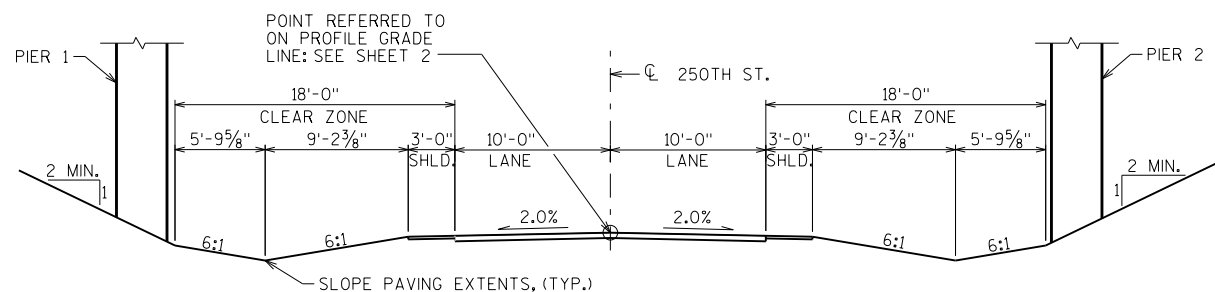
PLAN

THREE SPAN - CONCRETE HAUNCHED SLAB



ELEVATION

LOOKING NORTH (UPSTATION)



TYPICAL SECTION THRU 250TH ST.

NORMAL TO 250TH ST. - LOOKING NORTH (UPSTATION)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.12
OPERATING RATING FACTOR: RF = 1.46
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB $f'_c = 4,000$ P.S.I.
ALL OTHER $f'_c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:

GRADE 60 $f_y = 60,000$ P.S.I.
STAINLESS, GRADE 60 $f_y = 60,000$ P.S.I.

FOUNDATION DATA

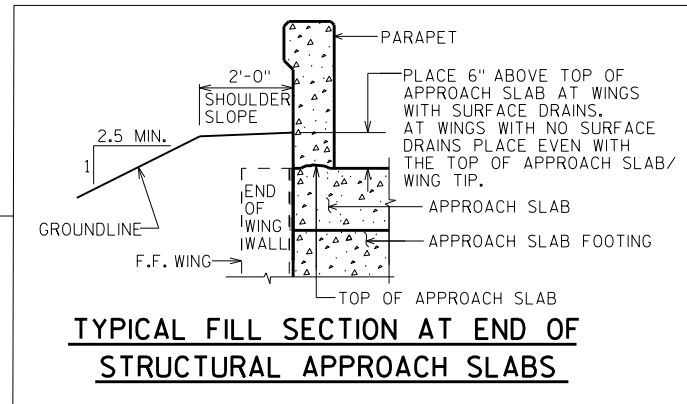
ABUTMENTS TO BE SUPPORTED ON 10 3/4" X 0.5"-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 45'-0" LONG PILES AT WEST ABUTMENT. ESTIMATED 25'-0" LONG PILES AT EAST ABUTMENT.

PIERS TO BE SUPPORTED ON 10 3/4" X 0.5"-INCH CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG PILES AT BOTH PIERS.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH 94 **250TH ST.**
A.D.T.=42,600 (2038) A.D.T.=60 (2038)
R.D.S.=75 M.P.H. R.D.S.=60 M.P.H.



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

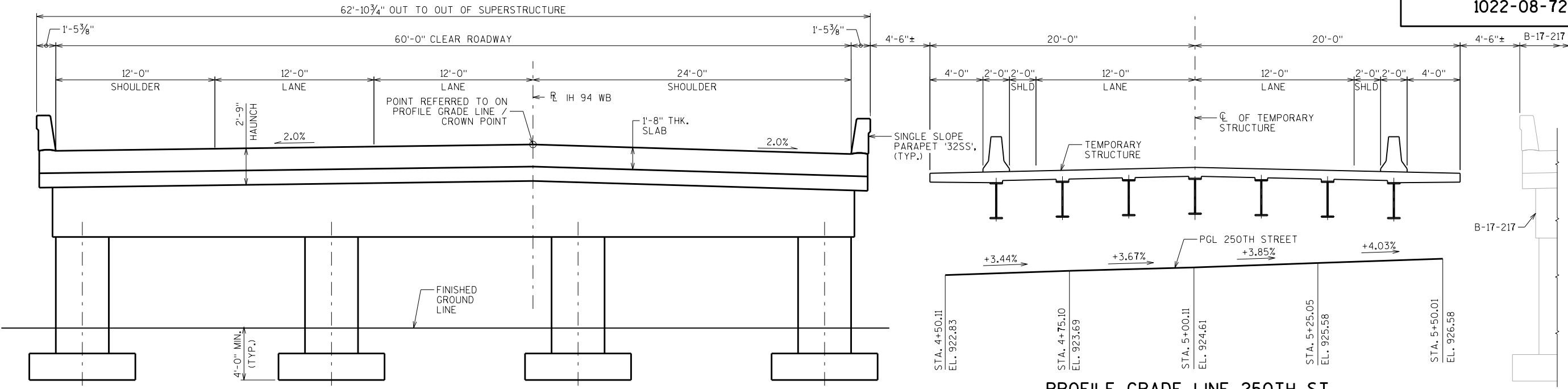
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. SUPERSTRUCTURE CROSS SECTIONS 1
13. SUPERSTRUCTURE CROSS SECTIONS 2
14. SUPERSTRUCTURE PLAN
15. SUPERSTRUCTURE LONGITUDINAL SECTIONS
16. SUPERSTRUCTURE DETAILS
17. SUPERSTRUCTURE DATA
18. SUPERSTRUCTURE BAR DETAILS
19. STRUCTURAL APPROACH SLABS
20. STRUCTURAL APPROACH SLAB & BAR DETAILS
21. SINGLE SLOPE PARAPET 32SS
22. SLOPE PAVING, CRUSHED AGGREGATE
23. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

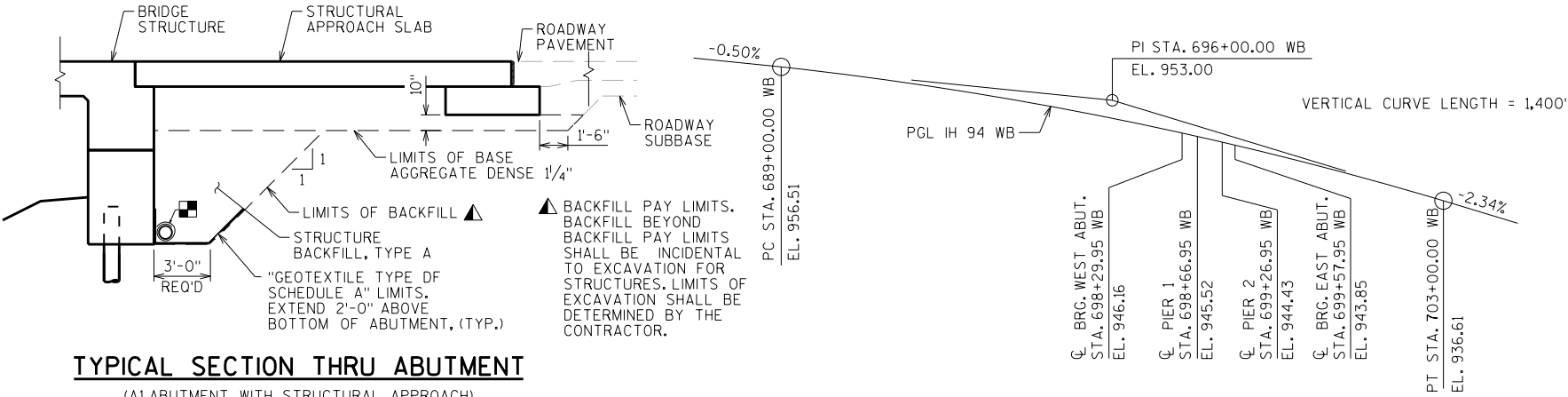
MATTHEW COUPAR (608) 266-5083
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY
BUREAU OF STRUCTURES			
ACCEPTED <i>William C. Dickson</i> 6/30/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-218			
IH 94 WB OVER 250TH ST.			
COUNTY	DUNN	TOWN	LUCAS
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	MSC	DESIGNED CK'D.	WAH
DRAWN BY	JJS	PLANS CK'D.	JLR
GENERAL PLAN			SHEET 1 OF 23
			365



CROSS SECTION THRU ROADWAY
(LOOKING UPSTATION)

PROFILE GRADE LINE 250TH ST.
LOOKING EAST



TYPICAL SECTION THRU ABUTMENT
(A1 ABUTMENT WITH STRUCTURAL APPROACH)

PROFILE GRADE LINE IH 94 WB

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. (SEE DETAIL ON "ABUTMENT DETAILS" SHEETS)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 698+81.25	LS	—	—	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-218	LS	—	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	172	—	—	171	—	343
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	180	—	—	—	—	180	360
502.0100	CONCRETE MASONRY BRIDGES	CY	605	84	52	102	100	52	84	1,079
502.3200	PROTECTIVE SURFACE TREATMENT	SY	894	135	—	—	—	—	133	1,162
502.3210	PIGMENTED SURFACE SEALER	SY	107	17	—	—	—	—	17	141
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	4,210	2,340	2,340	4,200	—	13,090
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	109,530	14,240	1,220	15,470	14,820	1,210	14,240	170,730
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	550	—	—	—	—	—	—	550
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	15	—	—	15	—	30
550.2108	PILING CIP CONCRETE 10 3/4 X 0.5-INCH	LF	—	—	405	960	960	225	—	2,550
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	—	—	352	—	—	304	—	656
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	130	—	—	130	—	260
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	74	—	—	74	—	148
	NON-BID ITEMS									
	FILLER	SIZE	—	—	—	—	—	—	—	1/2", 3/4", 1/2"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL, ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

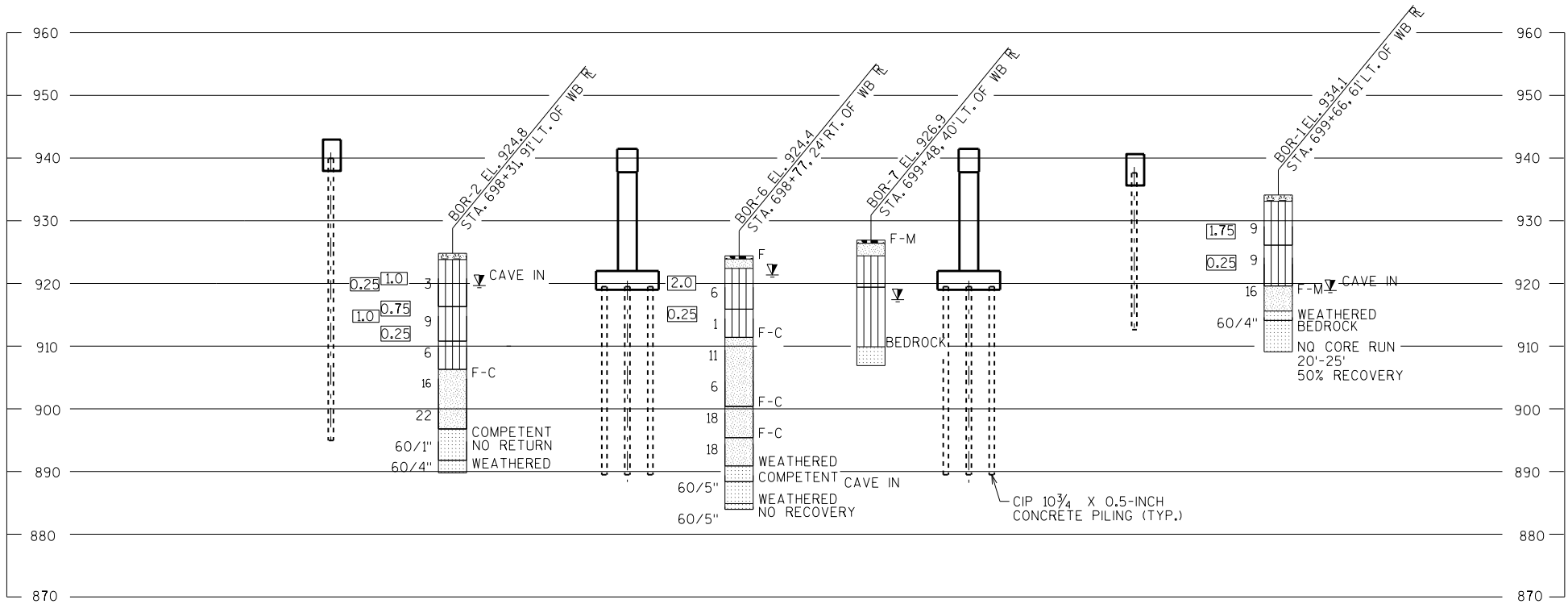
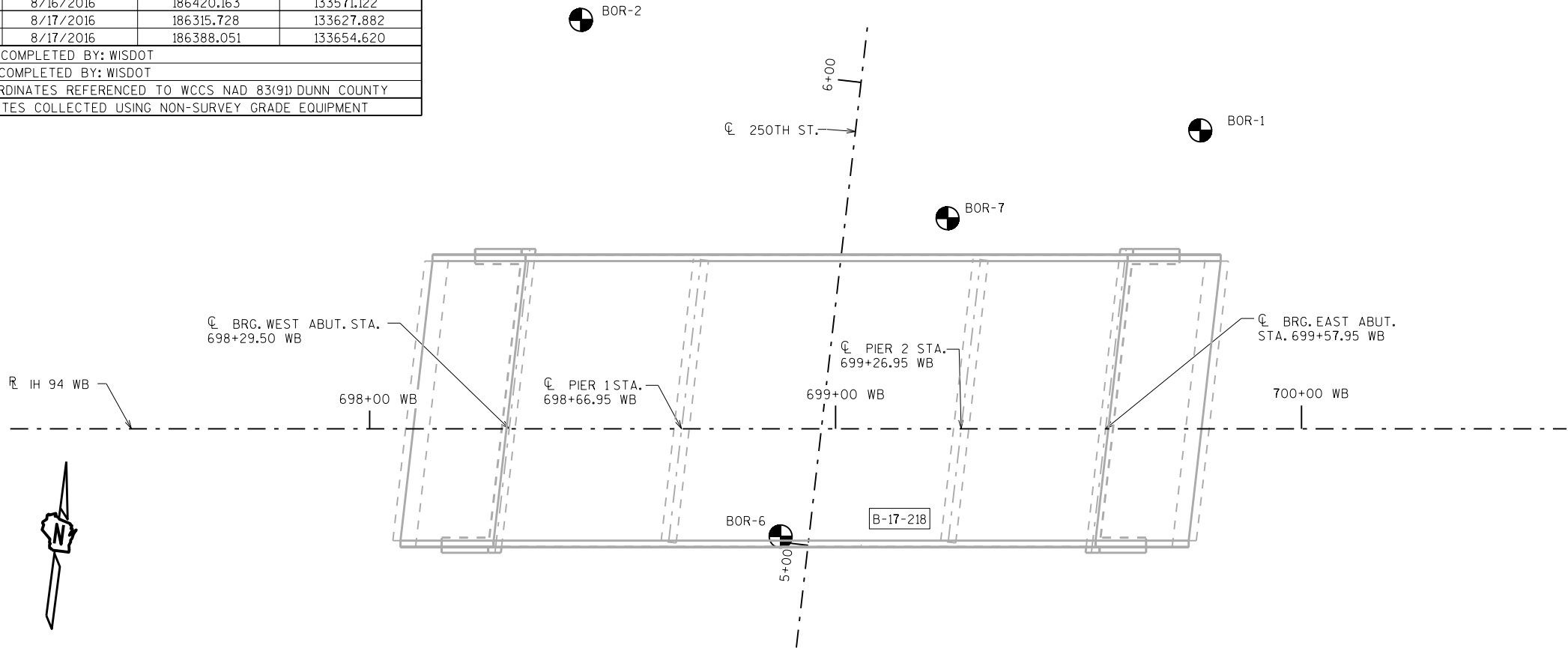
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

TEMPORARY STRUCTURE BID ITEM IS LOCATED ON B-17-217 STRUCTURES PLAN SET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
		DRAWN BY JJS	PLANS CKD. JLR
CROSS SECTION & QUANTITIES			SHEET 2
			366

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/16/2016	186413.744	133705.993
2	8/16/2016	186420.163	133571.122
6	8/17/2016	186315.728	133627.882
7	8/17/2016	186388.051	133654.620
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



STATE PROJECT NUMBER		
1022-08-72		
MATERIAL SYMBOLS		
ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

BORING #/EL. STA./OFF-SET

ST (1) (2) 0.25 17

F-C COBBLE OR BOULDER WEATHERED LIMESTONE

CORE RUN #1 - 24'-29' REC=80%, ROD=72%

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

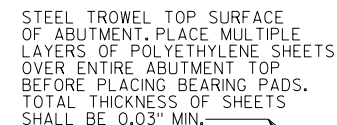
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY TLP/JJS		PLANS CKD. JLR	
SUBSURFACE EXPLORATION		SHEET 3	
		367	

SCALE = 15:625



*TOP OF ABUT. ELEVATIONS ARE GIVEN HERE AT C. BRG. WEST ABUT.



- (A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8", $\frac{3}{4}$ " "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A06) SUPPORT ABUTMENT ON CIP 10 $\frac{3}{4}$ " X 0.5-INCH THK. CONCRETE PILING, ESTIMATED 45 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) $\frac{1}{2}$ " FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF $\frac{1}{2}$ " FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD $\frac{1}{8}$ " BELOW SURFACE OF CONCRETE), EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) $\frac{3}{4}$ " CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

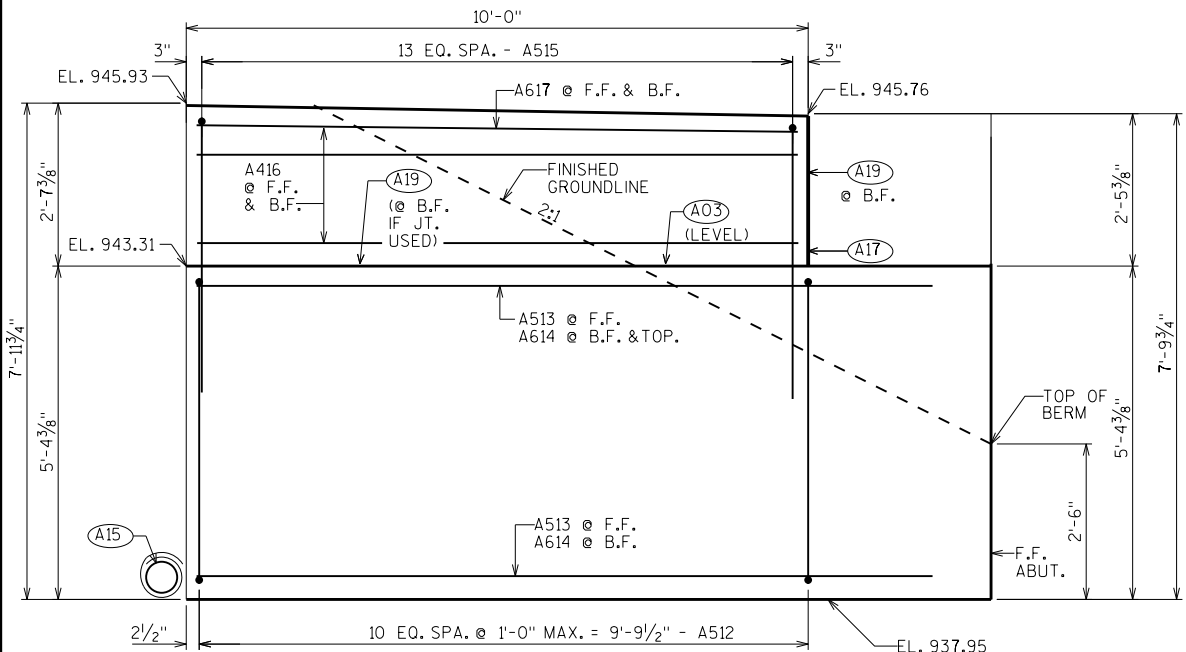


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-28			
DRAWN BY		JJS	PLANS CK'D. JLR
WEST ABUTMENT		SHEET 4	
		368	

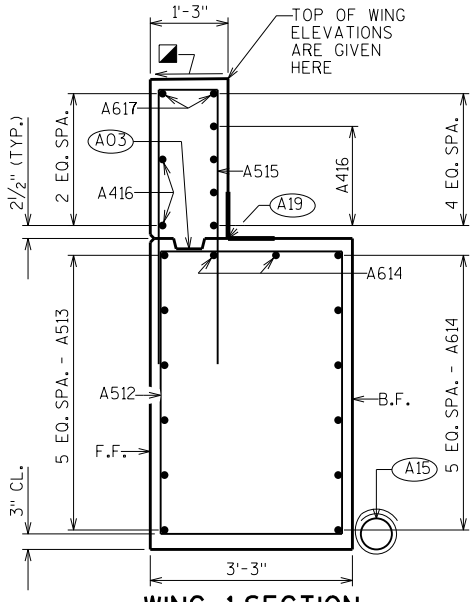
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

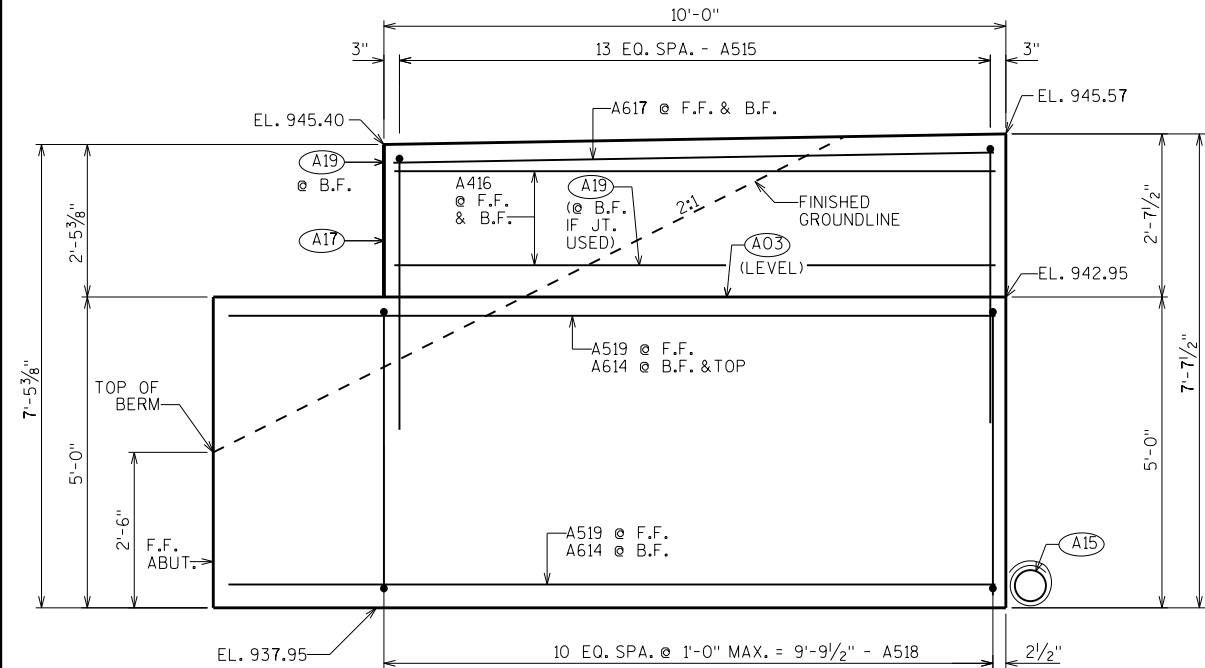
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
A402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A503		80	14'-10"	X	BODY-STIRRUPS-VERT.
A604		22	34'-2"		BODY-HORIZONTAL-END TO END
A605		14	27'-1"		BODY-HORIZONTAL-B.F.-AT CENTER
A806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
A507		49	6'-5"	X	BODY-TOP-VERT.-UNDER NOTCH
A408		4	33'-6"		BODY-TOP-HORIZ.-UNDER NOTCH
A409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
A410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
A411		4	33'-10"		BODY-TOP-HORIZ.-END TO END
A512	X	11	16'-4"	X	WING 1-BOT.-STIRRUP-VERT.
A513	X	6	11'-6"		WING 1-BOT.-HORIZONTAL-F.F.
A614	X	16	12'-2"		WINGS 1&2-BOT.-HORIZONTAL-B.F. & CENTER
A515	X	28	9'-8"	X	WINGS 1&2-TOP-VERTICAL
A416	X	12	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A617	X	4	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A518	X	11	15'-8"	X	WING 2-BOT.-STIRRUP-VERT.
A519	X	6	11'-6"		WING 2-BOT.-HORIZONTAL-F.F.
A420		4	17'-4"		BODY-TOP-HORIZ.-UNDER NOTCH



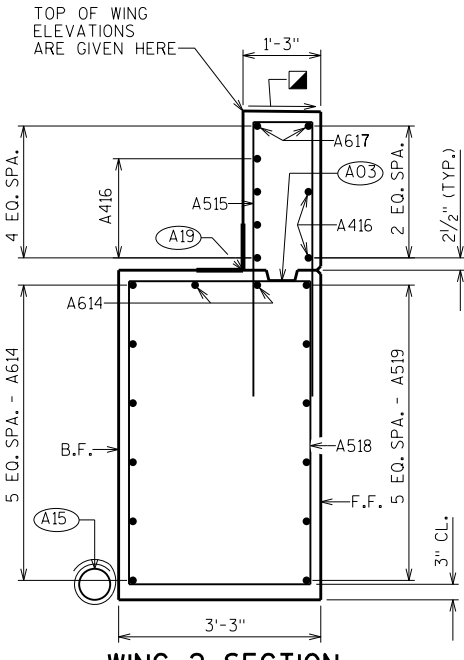
WING 1 ELEVATION



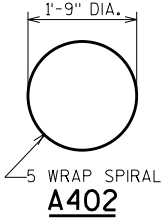
WING 1 SECTION



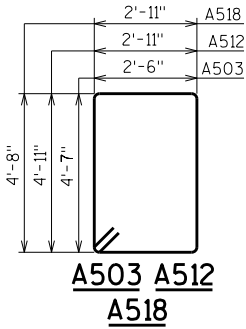
WING 2 ELEVATION



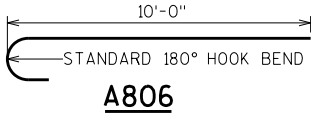
WING 2 SECTION



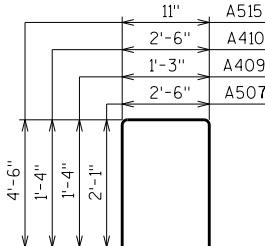
A402



A503 A512 A518

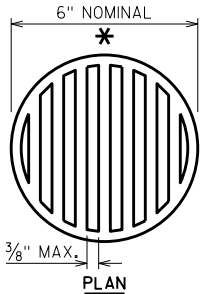


A806

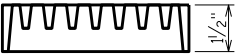


A507 A409 A410 A515

FINISH SMOOTH - SLOPE TO DRAIN

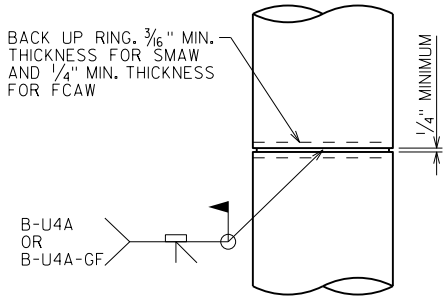


RODENT SHIELD DETAIL

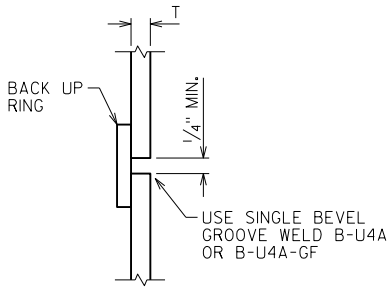


SECTION

- A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

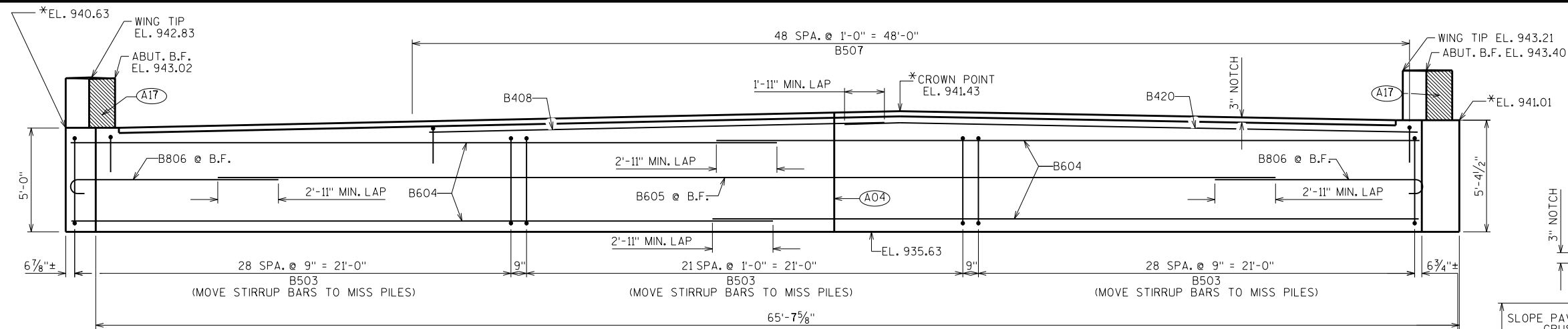
PILE DETAILS

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

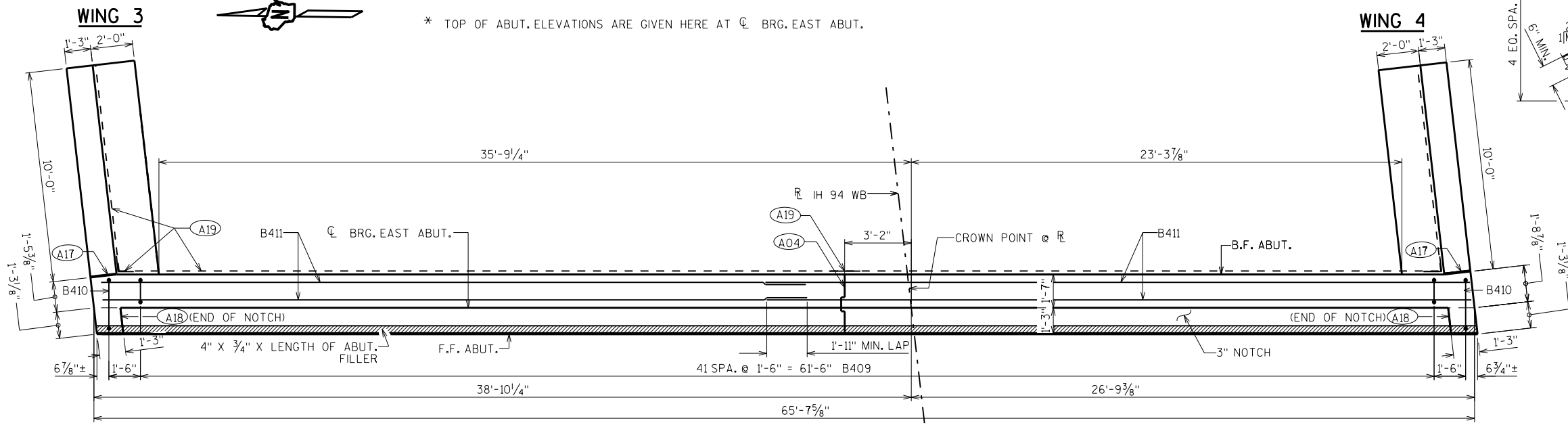
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
WEST ABUTMENT DETAILS		SHEET 5	
		369	

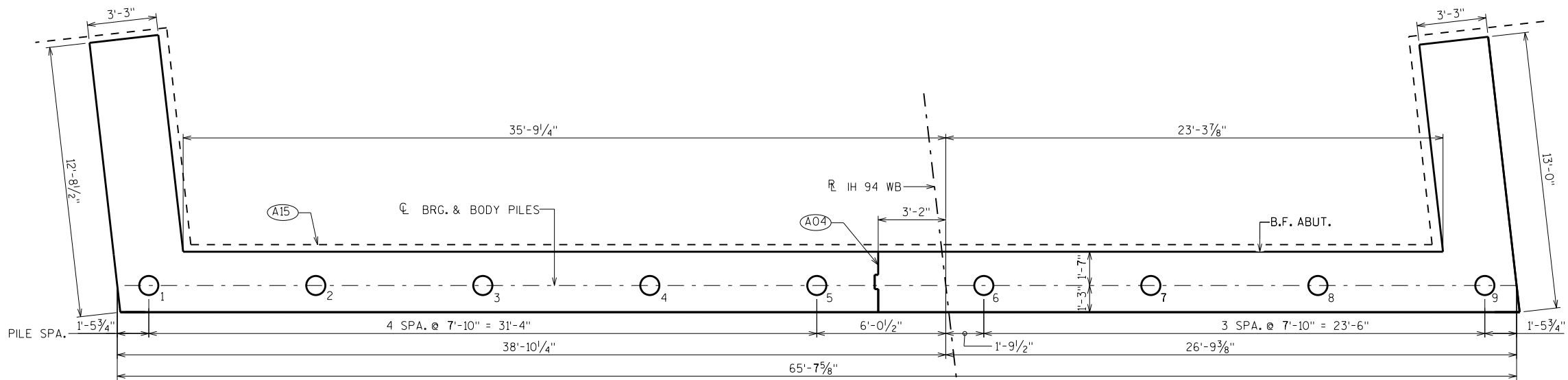


ELEVATION
(LOOKING EAST)

* TOP OF ABUT. ELEVATIONS ARE GIVEN HERE AT CL BRG. EAST ABUT.

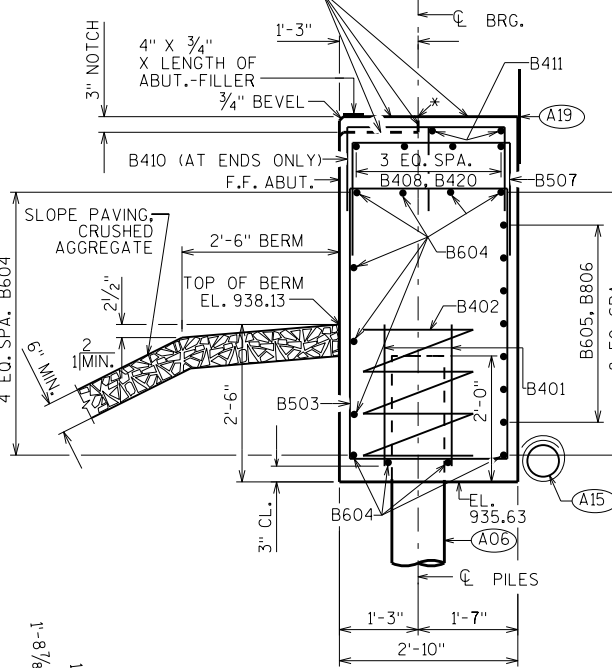


PLAN



PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.



SECTION THRU BODY

- A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8" 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- A06 SUPPORT ABUTMENT ON CIP 10 3/4" X 0.5-INCH THK. CONCRETE PILING, ESTIMATED 25 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-218

DRAWN BY JJS PLANS CK'D. JLR

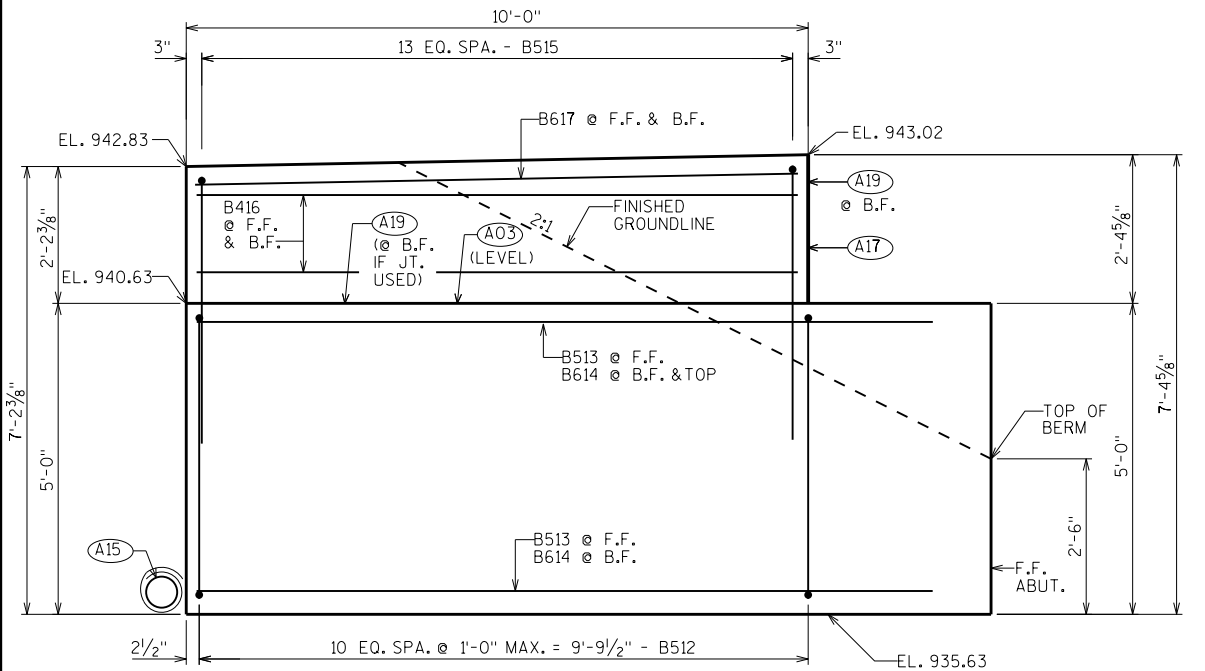
EAST ABUTMENT SHEET 6

370

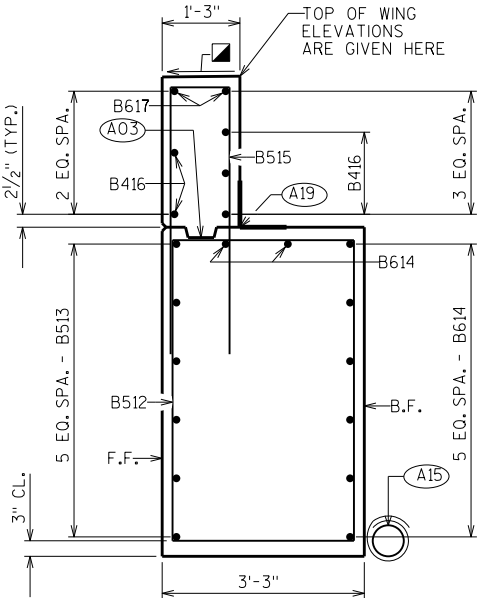
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

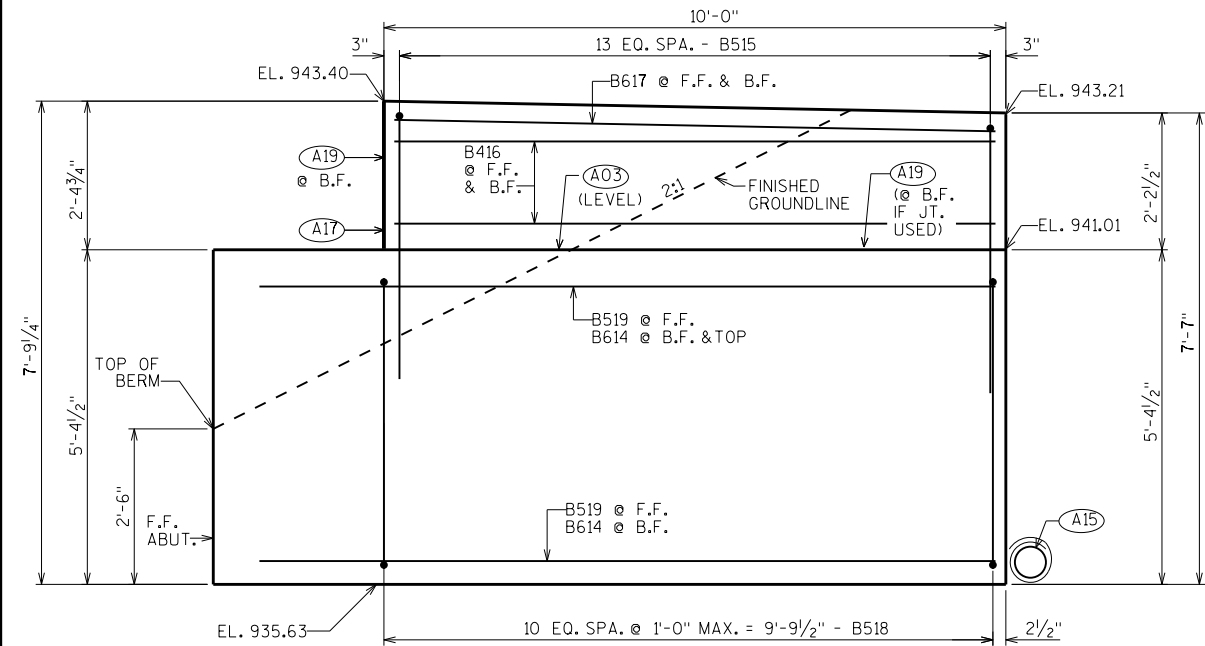
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
B402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
B503		80	14'-10"	X	BODY-STIRRUPS-VERT.
B604		22	34'-2"		BODY-HORIZONTAL-END TO END
B605		14	27'-1"		BODY-HORIZONTAL-B.F.-AT CENTER
B806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
B507		49	6'-5"	X	BODY-TOP-VERT.-UNDER NOTCH
B408		4	21'-11"		BODY-TOP-HORIZ.-UNDER NOTCH
B409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
B410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
B411		4	33'-10"		BODY-TOP-HORIZ.-END TO END
B512	X	11	15'-8"	X	WING 3-BOT.-STIRRUP-VERT.
B513	X	6	11'-6"		WING 3-BOT.-HORIZONTAL-F.F.
B614	X	16	12'-2"		WINGS 3&4-BOT.-HORIZONTAL-B.F. & CENTER
B515	X	28	9'-10"	X	WINGS 3&4-TOP-VERTICAL
B416	X	10	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B617	X	4	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B518	X	11	16'-4"	X	WING 4-BOT.-STIRRUP-VERT.
B519	X	6	11'-6"		WING 4-BOT.-HORIZONTAL-F.F.
B420		4	28'-3"		BODY-TOP-HORIZ.-UNDER NOTCH



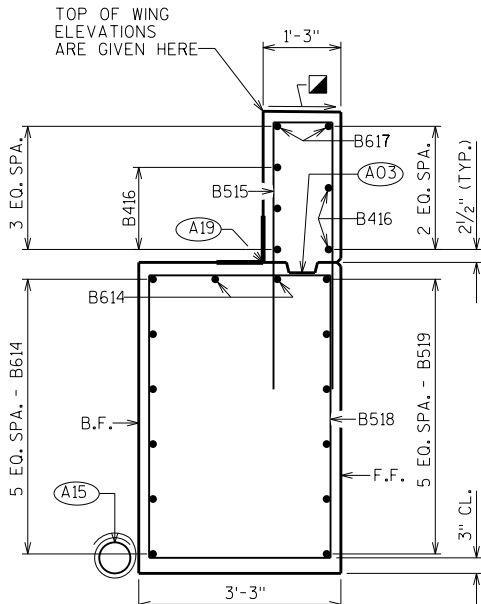
WING 3 ELEVATION



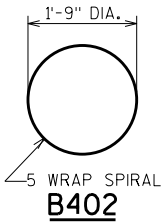
WING 3 SECTION



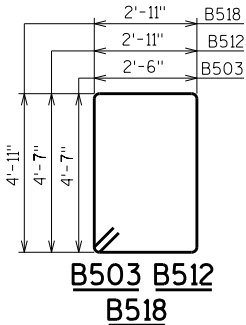
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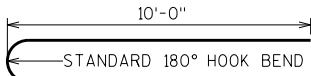
WING 4 SECTION



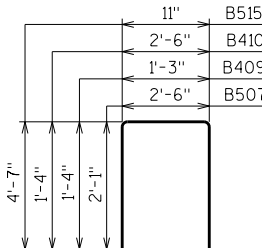
B402



B503 B512 B518

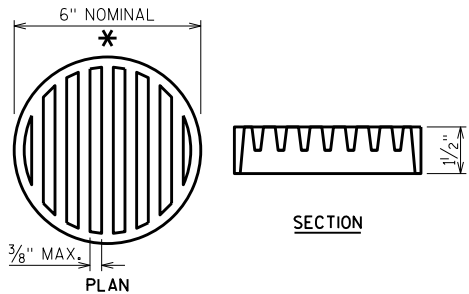


B806



B507 B409 B410 B515

FINISH SMOOTH - SLOPE TO DRAIN

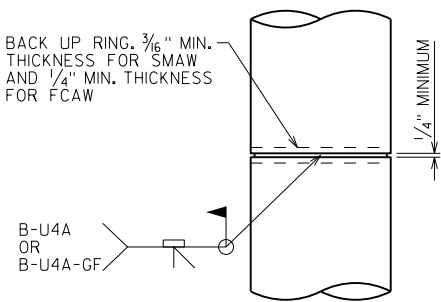


RODENT SHIELD DETAIL

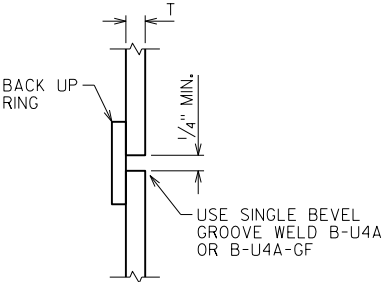
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



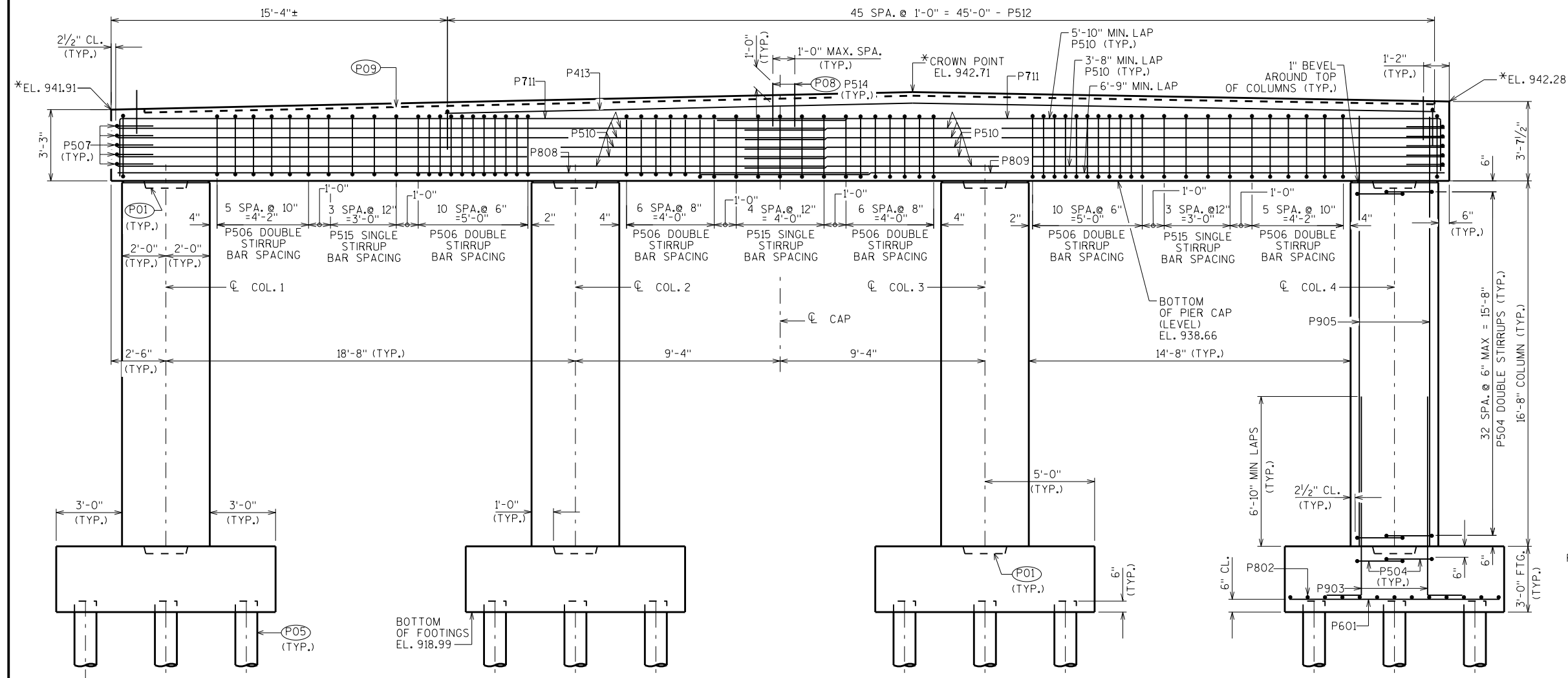
CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

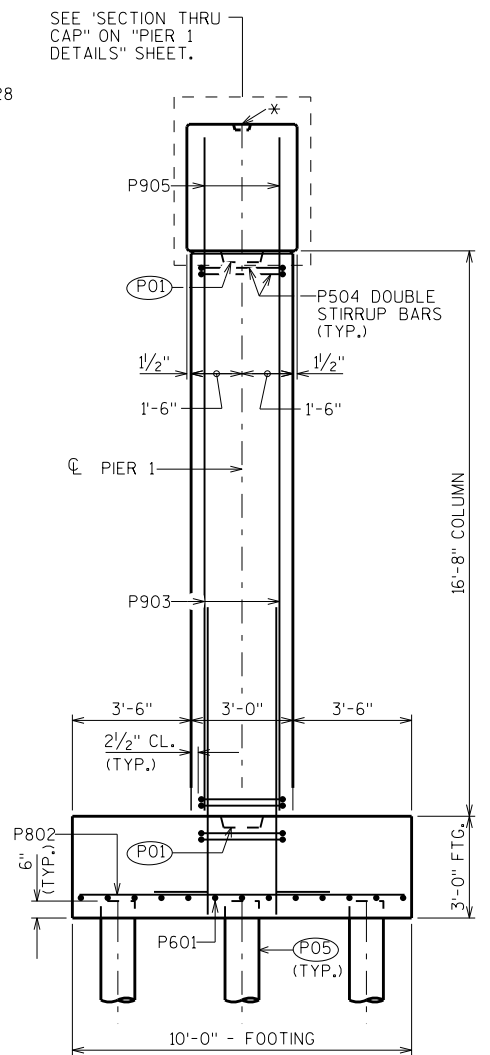
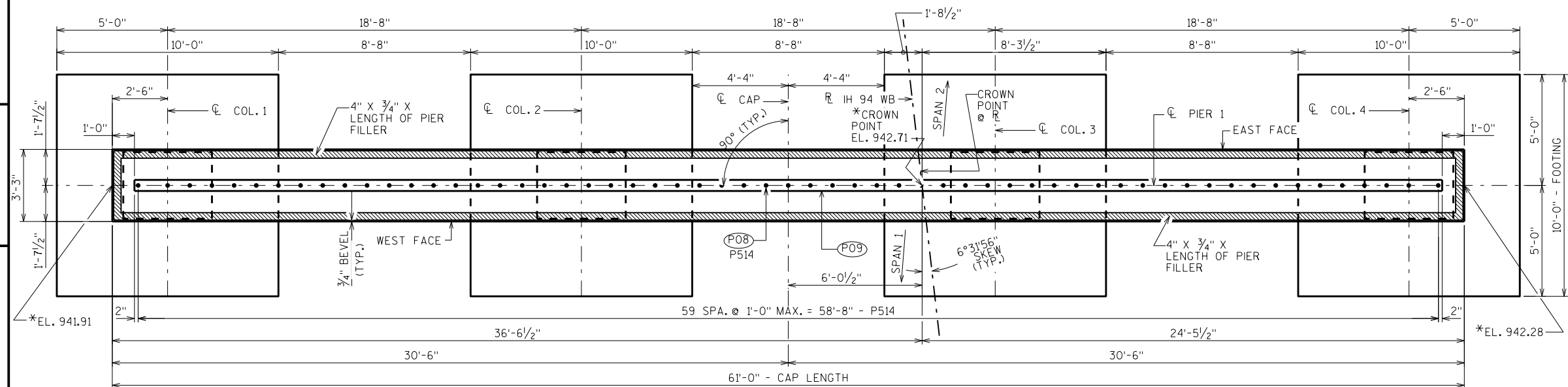
PILE DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CKD. JLR	
EAST ABUTMENT DETAILS		SHEET 7	
		371	

**ELEVATION**

(LOOKING EAST)

*TOP OF PIER CAP ELEVATIONS ARE GIVEN HERE AT THE C. PIER 1

**END VIEW****PLAN**

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P05) SUPPORT PIER ON 10 3/4" x 0.5-INCH THK. CONC. PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.

(P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

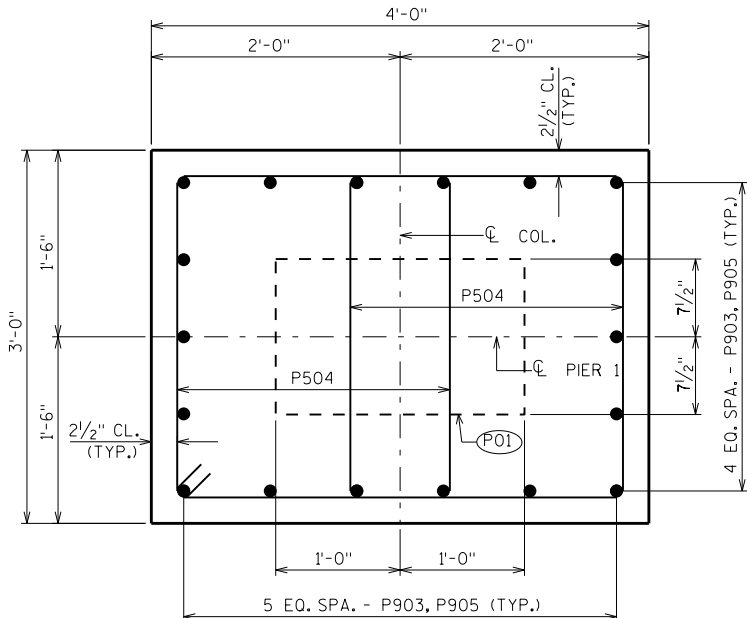
(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
PIER 1		SHEET 8	
		372	

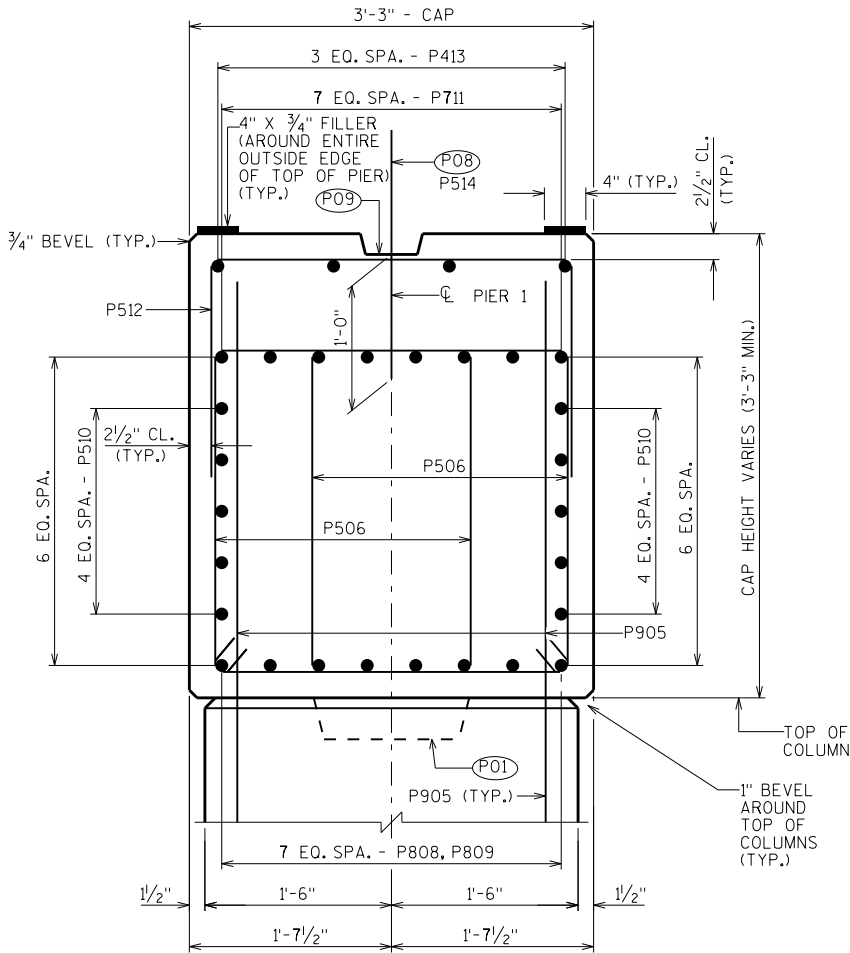
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

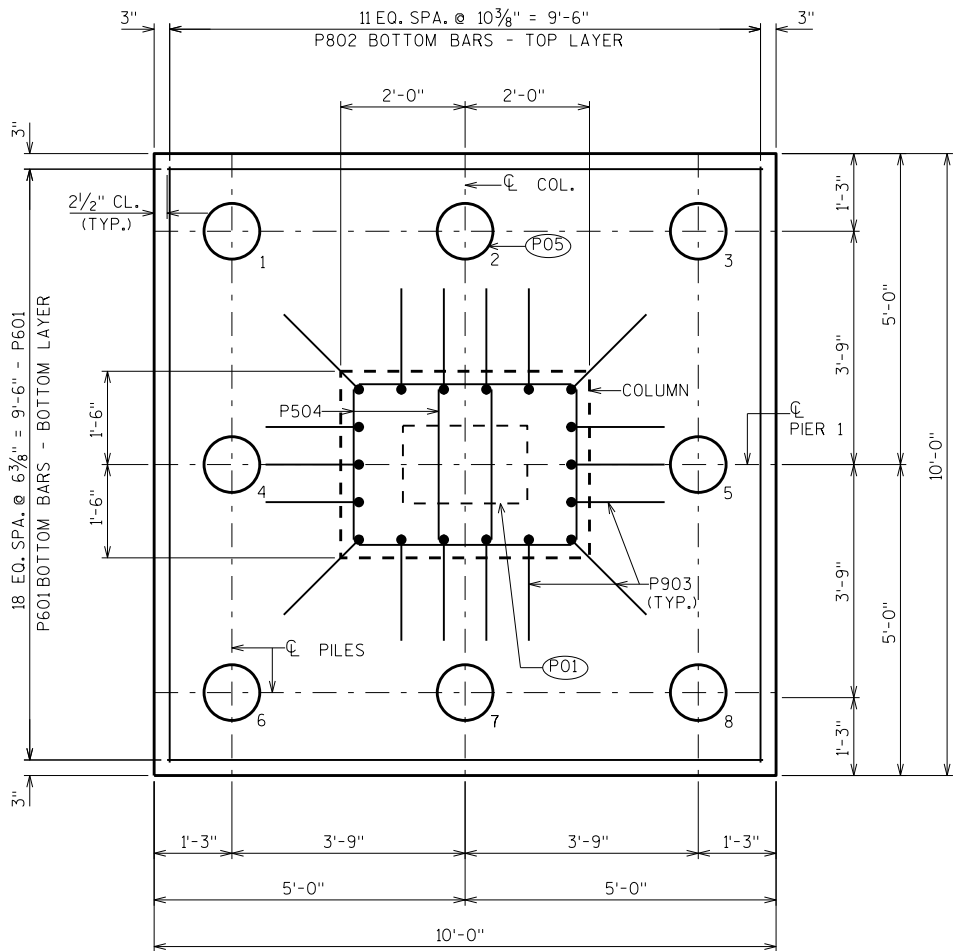
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P601		76	9'-8"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
P802		48	9'-8"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
P903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P504	X	272	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	72	19'-9"		COLUMNS/CAP-VERTICAL-ALL FACES
P506	X	96	10'-1"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
P507	X	10	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
P808	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
P809	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
P510	X	20	32'-2"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
P711	X	16	35'-7"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
P512	X	46	6'-1"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 2-4
P413	X	4	45'-4"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 2-4
P514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER
P515	X	13	11'-6"	X	CAP-VERTICAL-TRANSVERSE-SINGLE STIRRUPS-BTWN. COLUMNS



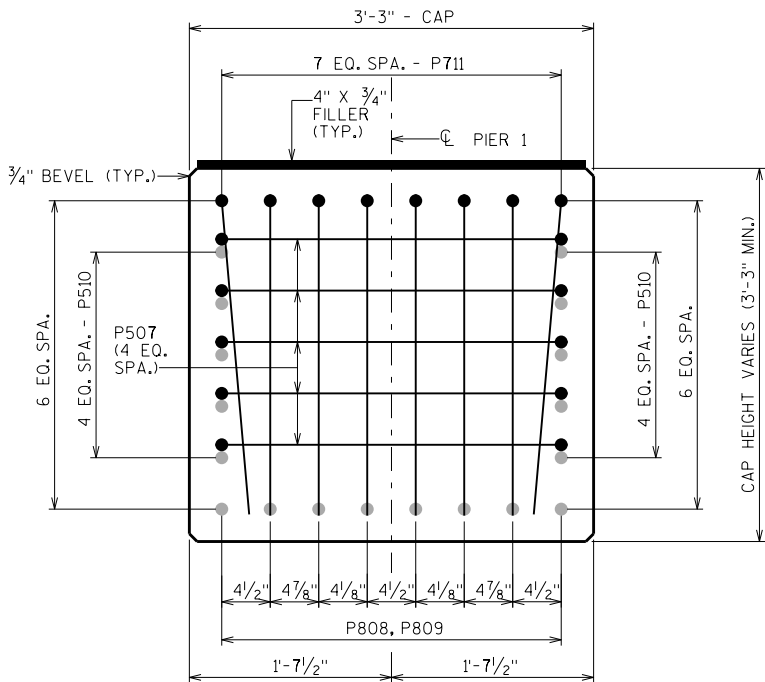
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



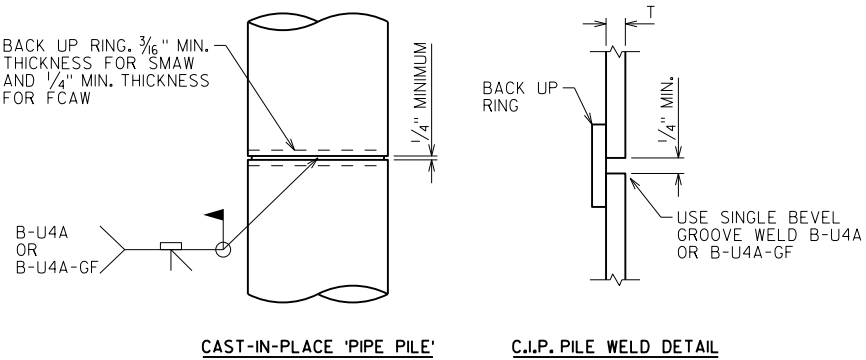
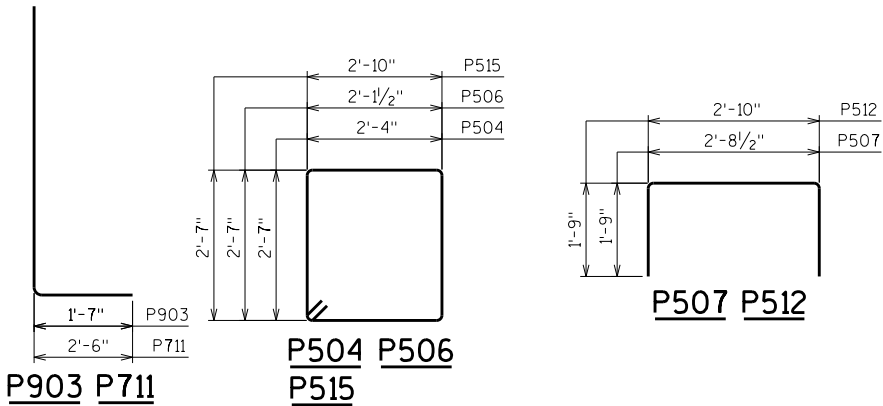
SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)



TYPICAL FOOTING/PILE PLAN



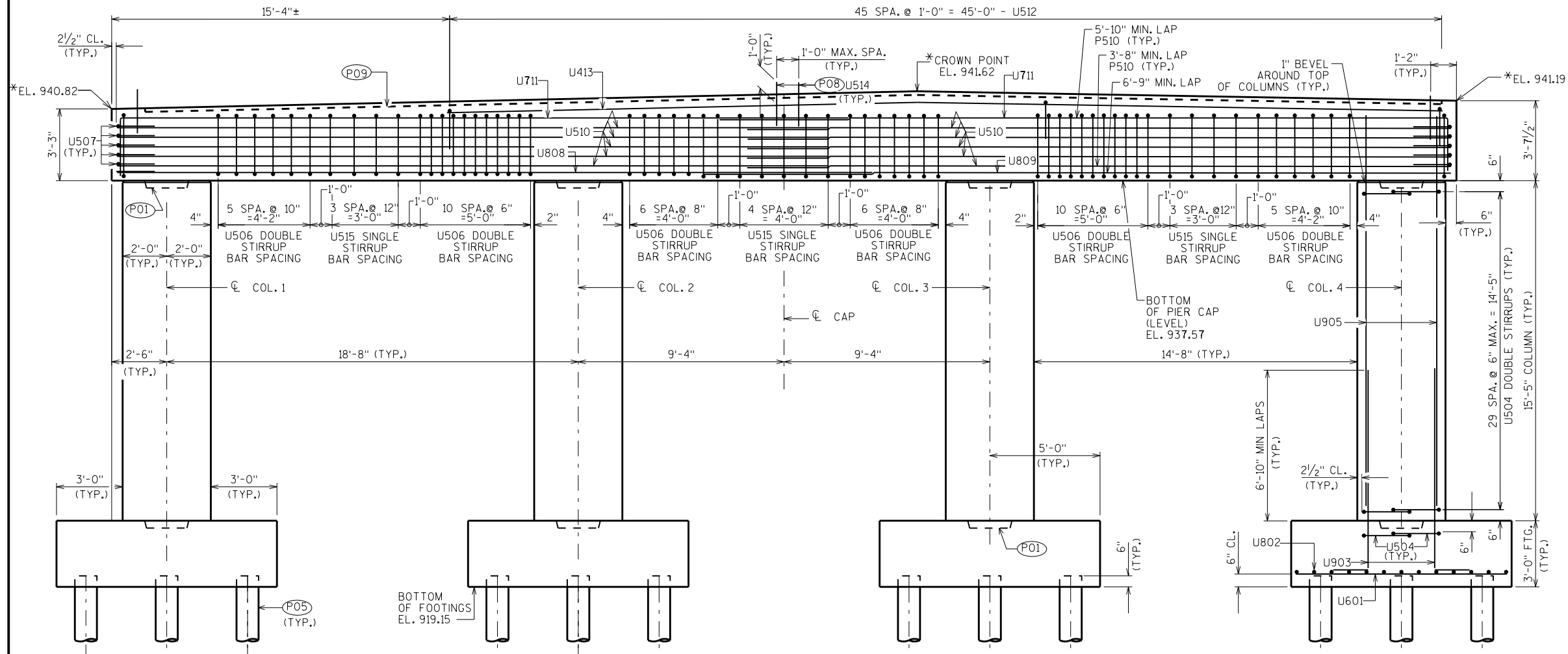
SECTION THRU CAP AT ENDS



PILE DETAILS

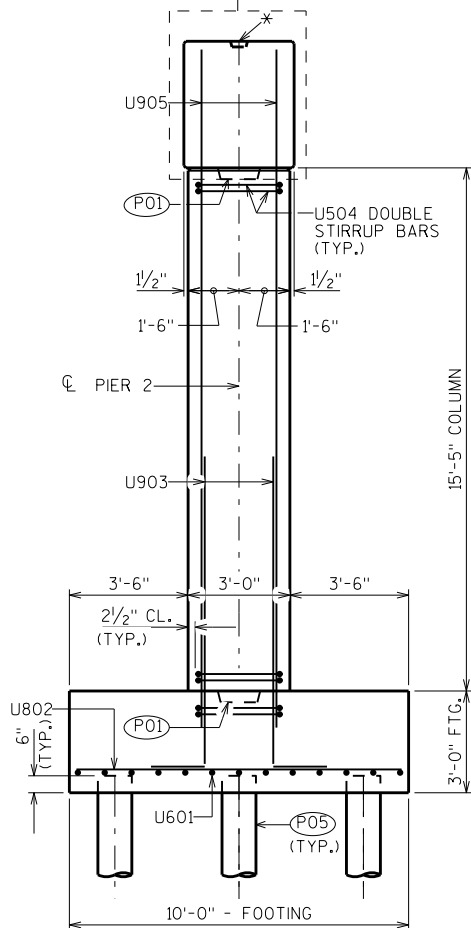
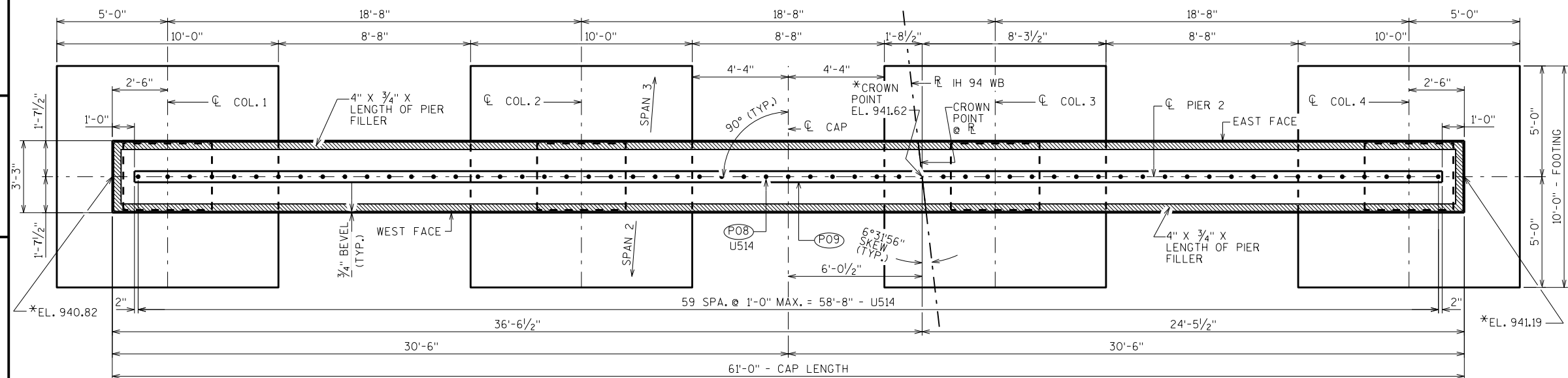
- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" X 0.5-INCH THK. CONC. PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
PIER 1 DETAILS		SHEET 9	
		373	

SEE 'SECTION THRU
CAP' ON 'PIER 2
DETAILS' SHEET.**ELEVATION**

(LOOKING EAST)

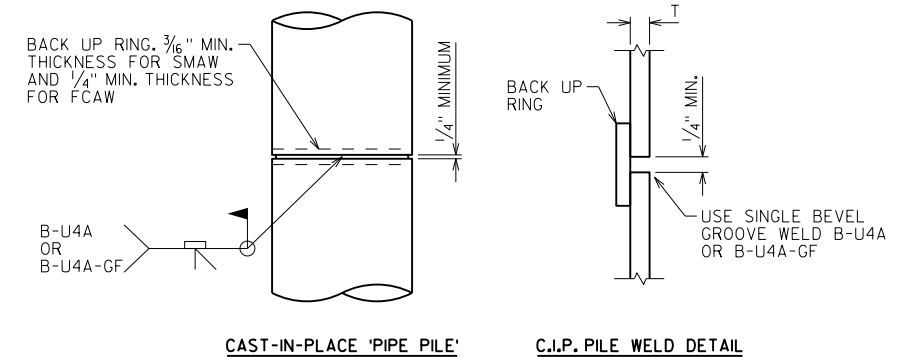
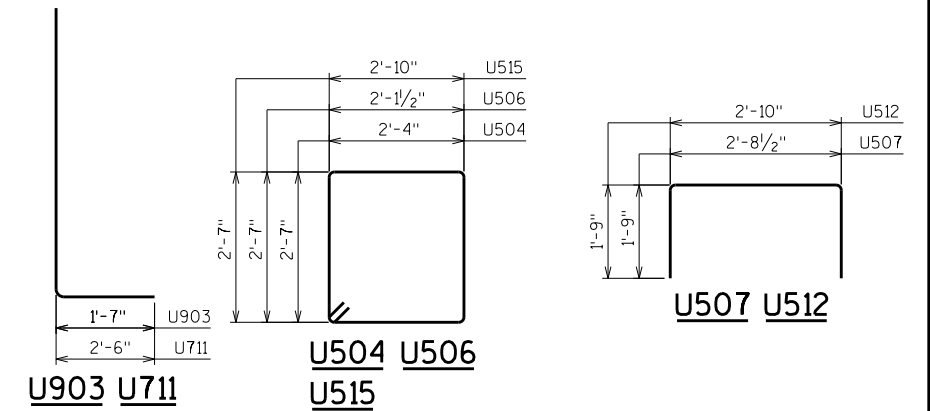
*TOP OF PIER CAP ELEVATIONS ARE GIVEN HERE AT THE CL PIER 2

**END VIEW****PLAN**(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION
JOINT FORMED BY BEVELED KEYWAY.(P05) SUPPORT PIER ON 10 3/4" x 0.5-INCH THK. CONC.
PILING, ESTIMATED 30 FEET LONG
WITH A REQUIRED DRIVING RESISTANCE
OF 150 TONS PER PILE. SEE "PILE DETAILS" ON
NEXT SHEET.(P08) U514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP.
MAY BE PLACED AFTER CONCRETE IS POURED
BUT BEFORE INITIAL SET HAS TAKEN PLACE.
(EMBED 1'-0" INTO CONC.)(P09) KEYED CONSTRUCTION JOINT-FORMED BY
BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CKD. JLR	
PIER 2		SHEET 10	
		374	

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
U601		76	9'-8"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
U802		48	9'-8"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
U903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
U504	X	248	10'-6"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
U905	X	72	18'-2"		COLUMNS/CAP-VERTICAL-ALL FACES
U506	X	96	10'-1"	X	CAP-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
U507	X	10	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
U808	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
U809	X	8	33'-9"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
U510	X	20	32'-2"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
U711	X	16	35'-7"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
U512	X	46	6'-1"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 2-4
U413	X	4	45'-4"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 2-4
U514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER
U515	X	13	11'-6"	X	CAP-VERTICAL-TRANSVERSE-STIRRUPS-BTWN. COLUMNS

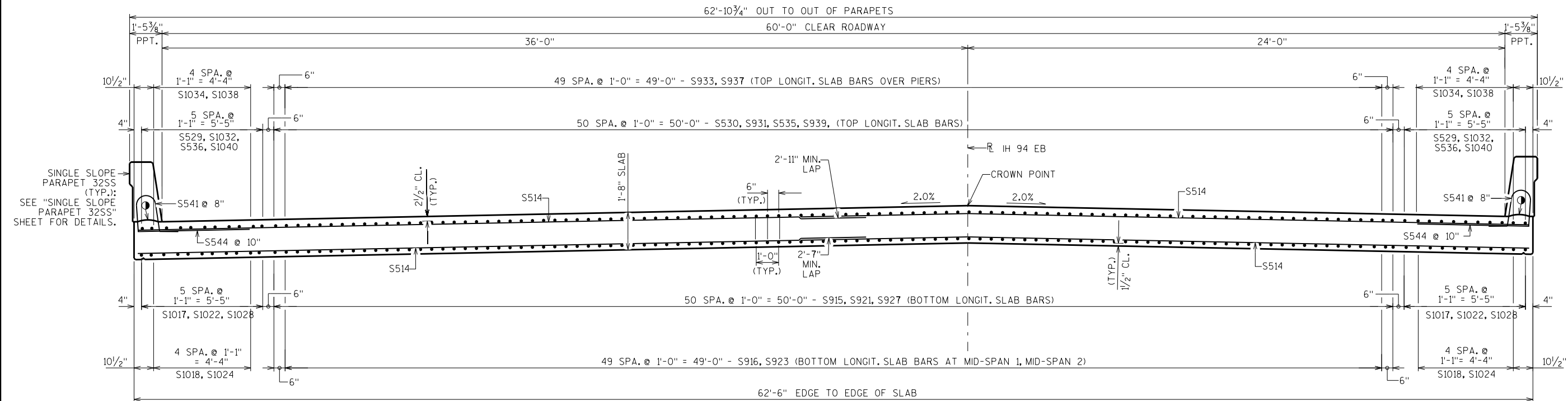


8

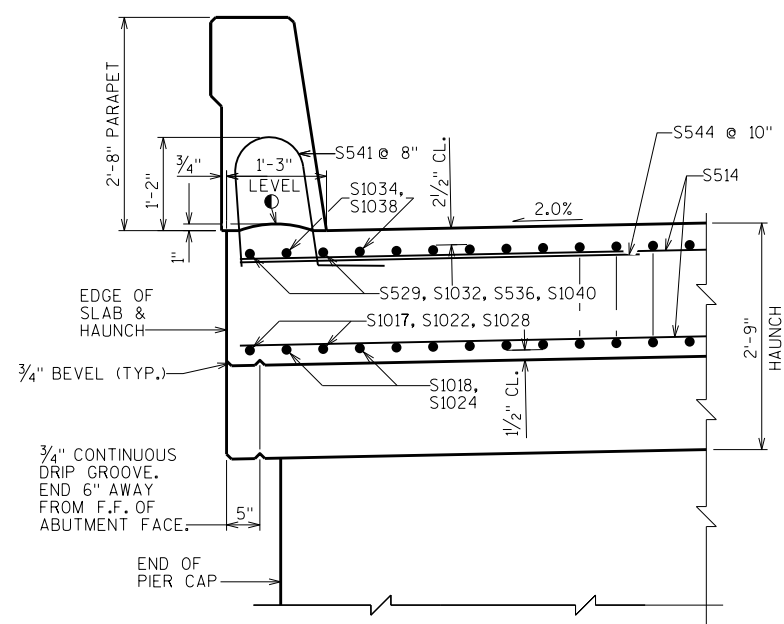


- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 $\frac{3}{4}$ " X 0.5- INCH THK. CONCRETE PILING, ESTIMATED 30 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) U514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

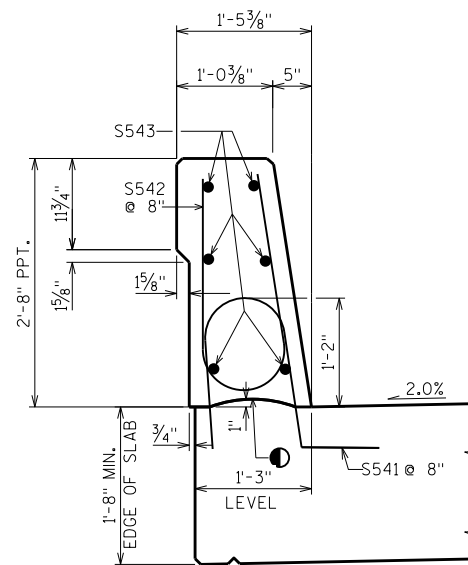
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
		DRAWN BY JJS	PLANS CK'D. JLR
PIER 2 DETAILS		SHEET 11	
		375	



TYPICAL CROSS SECTION THRU BRIDGE
(LOOKING EAST, SHOWING SLAB REINFORCEMENT)



EDGE OF SLAB DETAIL
(TYP. @ BOTH SIDES)

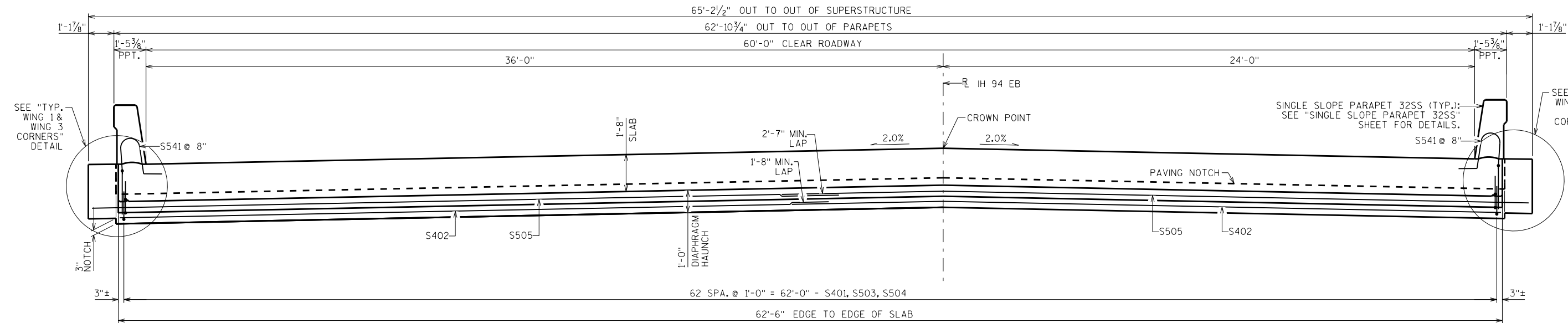


AT SLAB

NOTES:
FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS AND PIERS SEE "SUPERSTRUCTURE CROSS SECTIONS 2" SHEET.
SEE "SUPERSTRUCTURE DETAILS" SHEET FOR ABUTMENT DIAPHRAGM CORNER DETAILS.

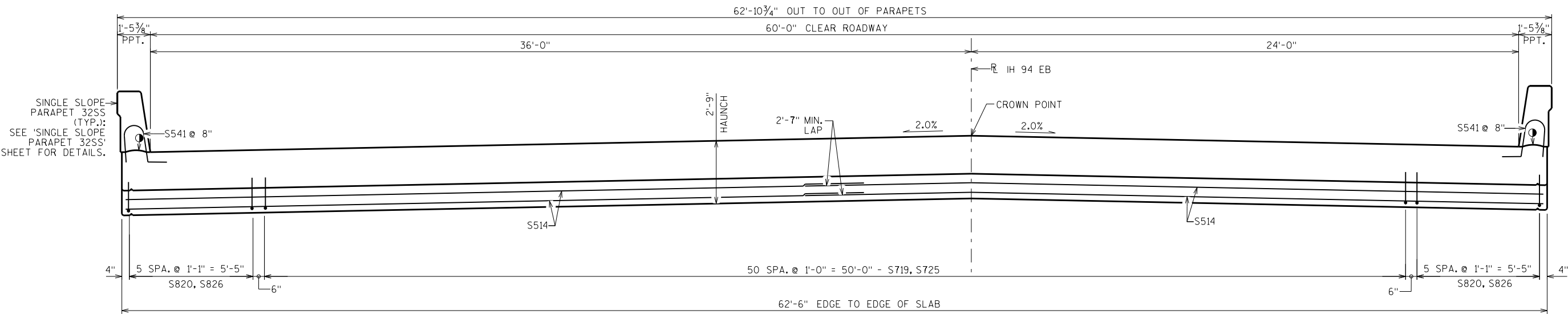
● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTIONS 1			SHEET 12
			376



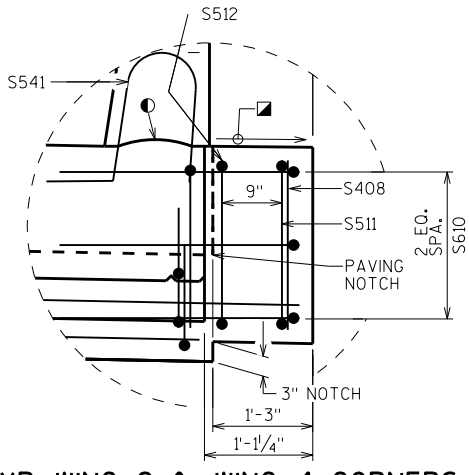
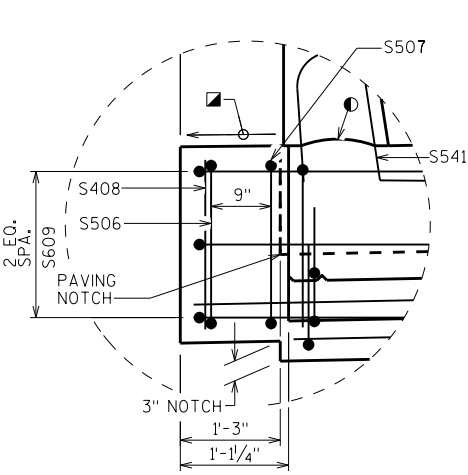
CROSS SECTION THRU BRIDGE AT ABUTMENTS

(LOOKING EAST)
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR - SLAB REINFORCEMENT NOT SHOWN)



CROSS SECTION THRU BRIDGE AT PIERS

(LOOKING EAST)
(SLAB REINFORCEMENT NOT SHOWN)



NOTE:

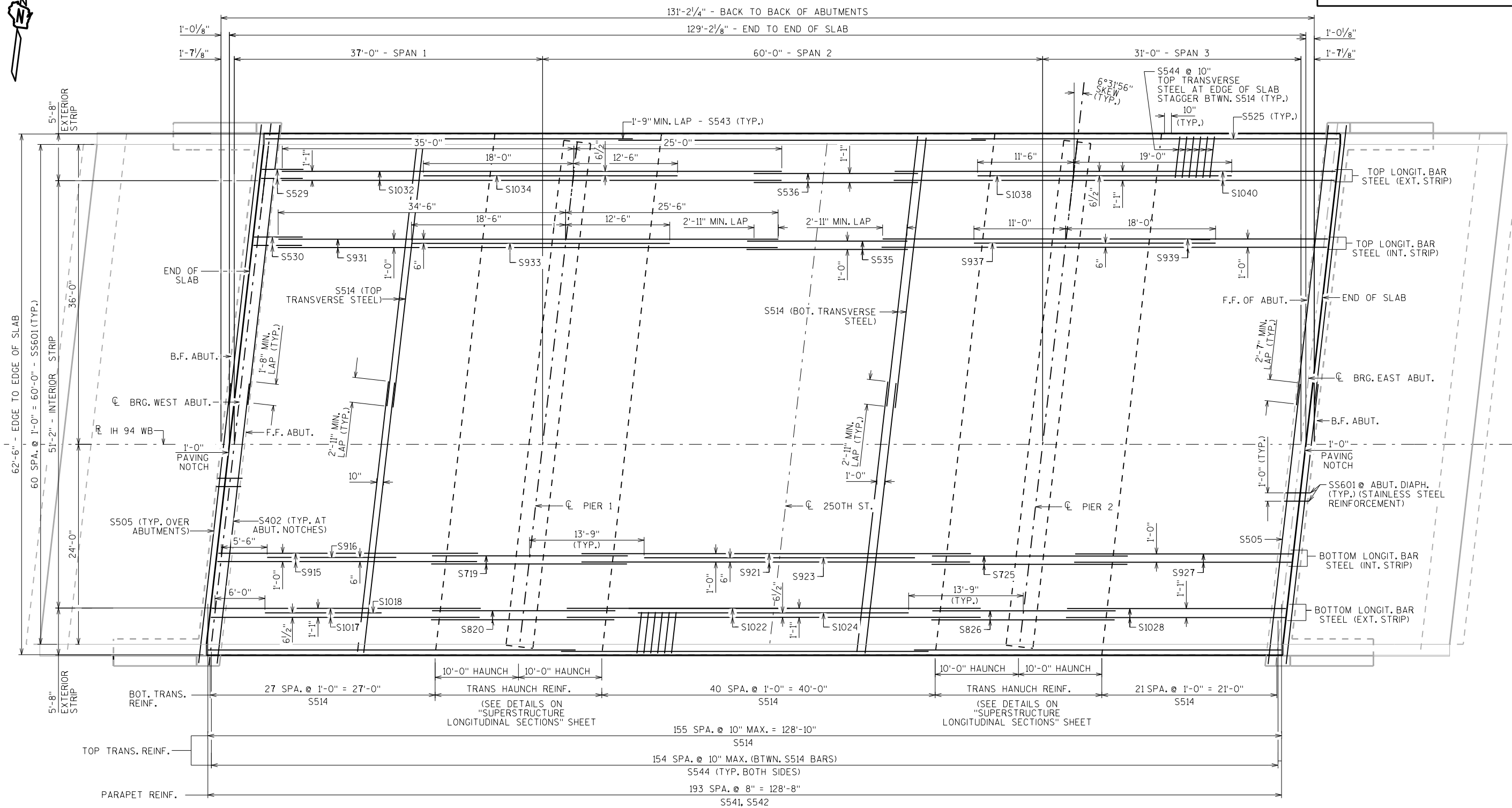
FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS AND SECTION THRU THE PIER DIAPHRAGM SEE THE "SUPERSTRUCTURE LONGITUDINAL SECTIONS" SHEET.

FOR THE ABUTMENT DIAPHRAGM CORNER DETAILS SEE THE "SUPERSTRUCTURE DETAILS" SHEET.

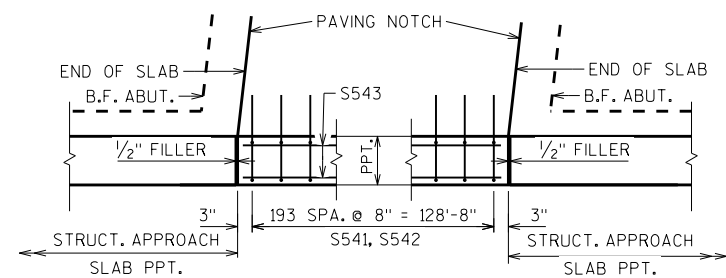
FINISH SMOOTH - SLOPE TO DRAIN

HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

NO.		DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-17-218					
			DRAWN BY	JJS	PLANS CK'D. JLR
SUPERSTRUCTURE CROSS SECTIONS 2				SHEET 13	
				377	



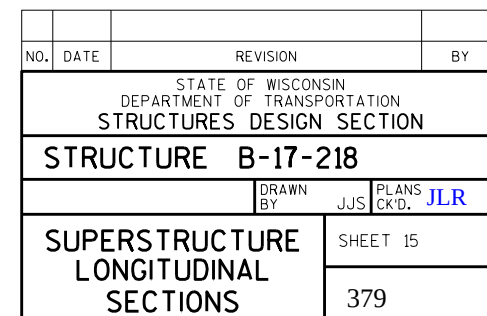
PLAN

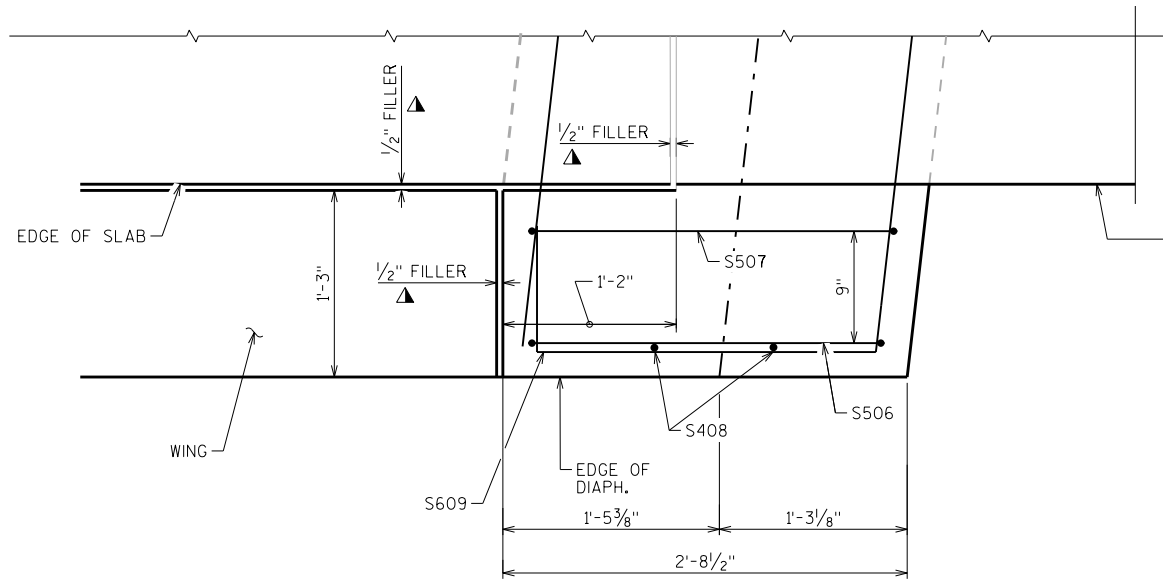


PARTIAL PLAN DETAIL OF PARAPET REINF.

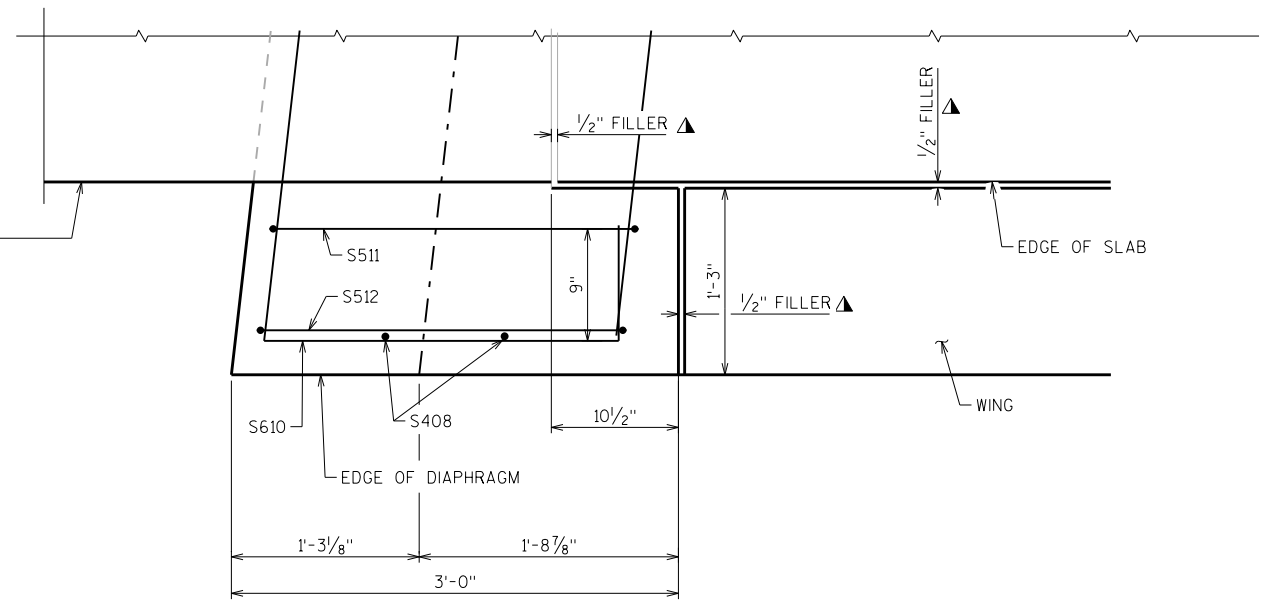
(SHOWING S.W. & S.E. CORNERS - DETAIL TYP. @ BOTH SIDES OF SUPERSTRUCTURE)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE PLAN		SHEET 14	
		378	

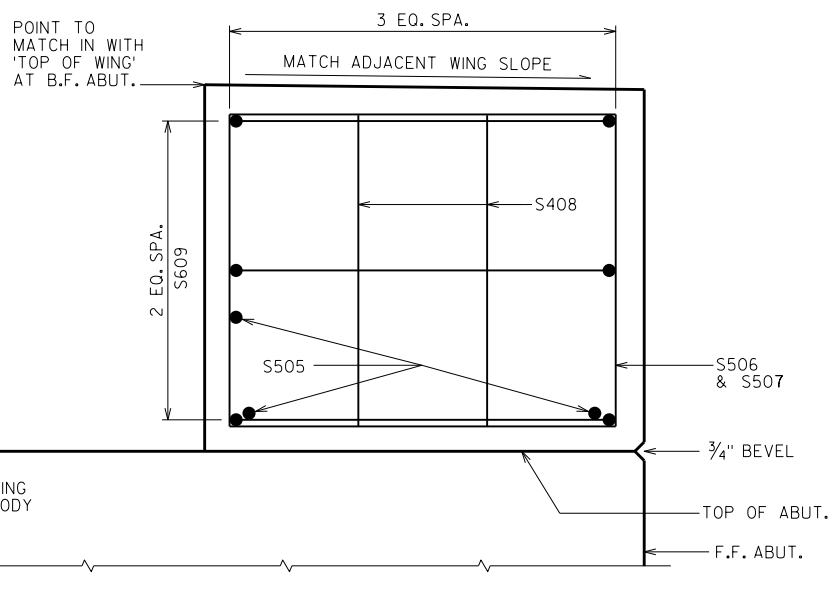




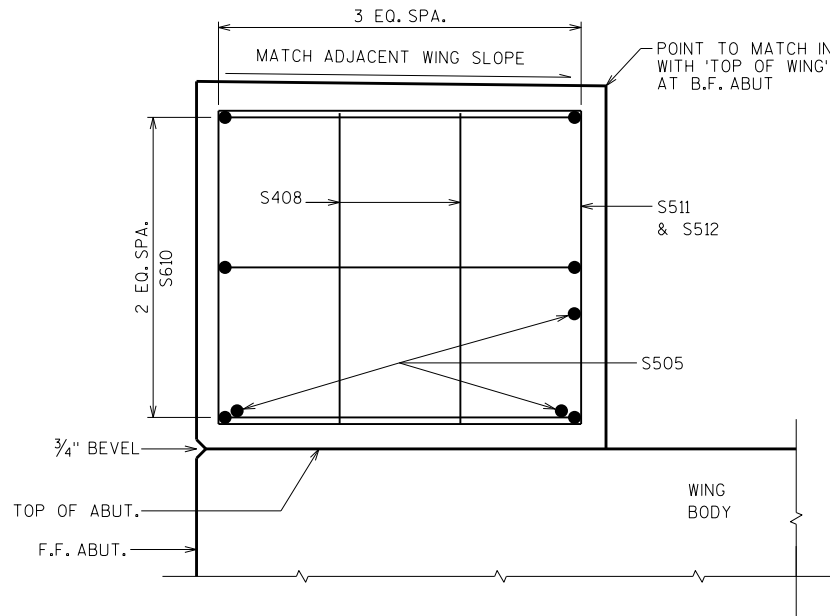
TYPICAL CORNER DETAIL
AT WINGS 1 & 3 (PLAN VIEW)



TYPICAL CORNER DETAIL AT
WINGS 2 & 4 (PLAN VIEW)



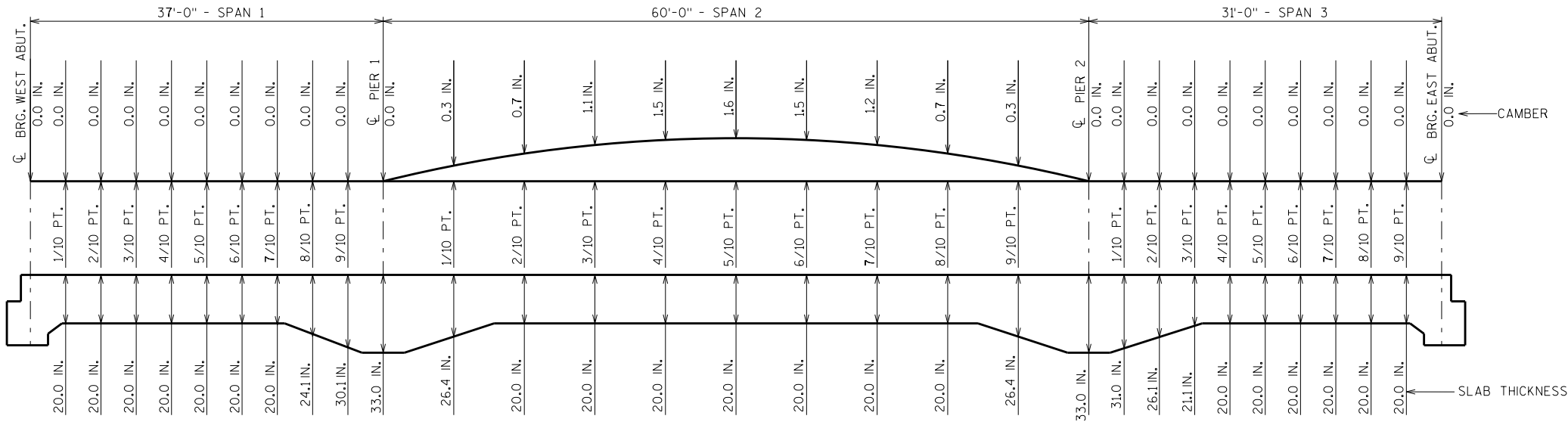
TYPICAL CORNER DETAIL AT WINGS 1 & 3
(ELEVATION VIEW LOOKING AT F.F. WING)



TYPICAL CORNER DETAIL AT WINGS 2 & 4
(ELEVATION VIEW LOOKING AT F.F. WING)

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE DETAILS		SHEET 16	
		380	



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS = TOP OF SLAB FALSEWORK ELEVATION.

TOP OF SLAB ELEVATIONS

	CL BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL BRG. E. ABUT.
NORTH GUTTERLINE & EDGE OF SLAB	945.37	945.31	945.24	945.18	945.11	945.05	944.98	944.92	944.85	944.79	944.72	944.62	944.51	944.40	944.29	944.18	944.07	943.96	943.85	943.74	943.63	943.57	943.52	943.46	943.40	943.34	943.28	943.23	943.17	943.11	943.05
CL IH 94 WB/CROWN POINT	946.16	946.10	946.04	945.97	945.91	945.84	945.78	945.71	945.65	945.58	945.52	945.41	945.30	945.20	945.09	944.98	944.87	944.76	944.65	944.54	944.43	944.37	944.32	944.26	944.20	944.14	944.09	944.03	943.97	943.91	943.85
SOUTH GUTTERLINE & EDGE OF SLAB	945.73	945.67	945.61	945.54	945.48	945.41	945.35	945.28	945.22	945.15	945.09	944.98	944.88	944.77	944.66	944.55	944.44	944.34	944.23	944.12	944.01	943.95	943.89	943.83	943.78	943.72	943.66	943.60	943.54	943.48	943.43

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. WEST ABUTMENT	5/10 PT.	CL PIER 1	5/10 PT.	CL PIER 2	5/10 PT.	CL BRG. EAST ABUTMENT
NORTH GUTTERLINE & EDGE OF SLAB							
CL IH 94 WB/CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, THE CL OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTERLINES AND CROWN POINT. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE DATA			SHEET 17
			381

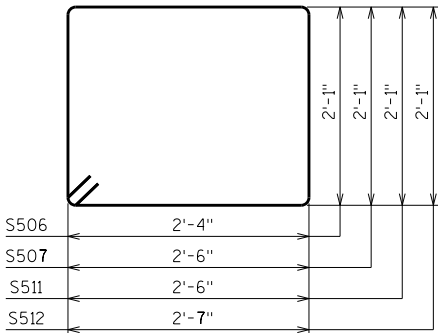
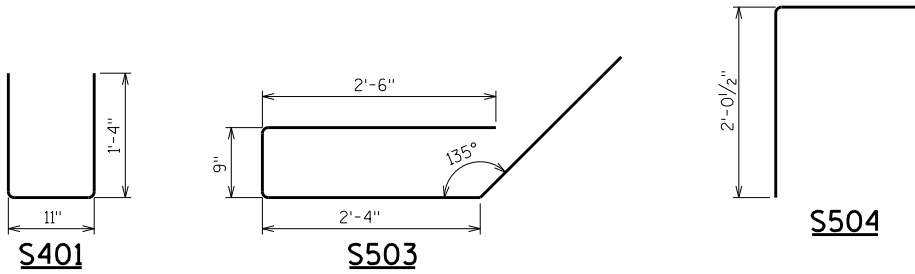
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

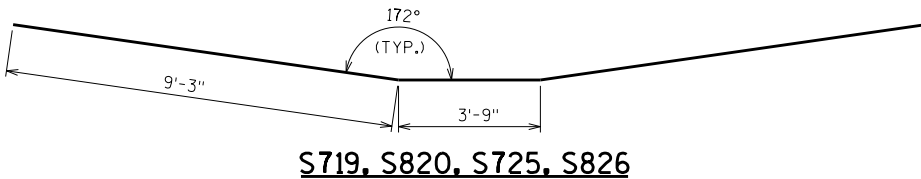
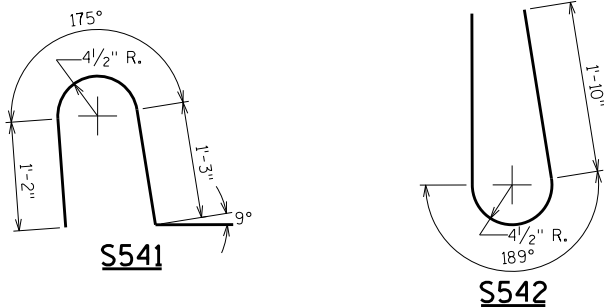
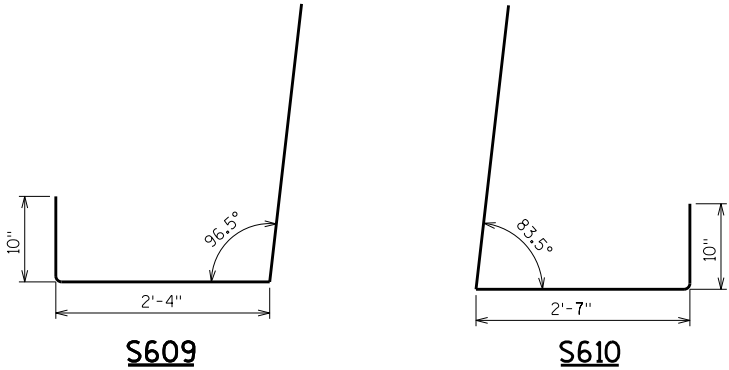
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	126	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-LONGIT.-AT 3" NOTCHES
S402	X	8	32'-4"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-TRANS.-AT 3" NOTCHES
S503	X	126	7'-5"	X	ABUT. DIAPHS./SLAB-BOT.-VERT.-LONGIT.-UNDER PAVING NOTCHES
S504	X	126	3'-5"	X	ABUT. DIAPHS./SLAB-VERT.-LONGIT.-ALONG PAVING NOTCHES
S505	X	12	34'-0"		ABUT. DIAPHS.-BOT.-HORIZ.-TRANSVERSE
S506	X	2	9'-6"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1&3 CORNERS ONLY
S507	X	2	9'-10"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1&3 CORNERS ONLY
S408	X	8	2'-1"		ABUT. DIAPHS.-OUTSIDE FACES-VERT.-AT ALL FOUR WING CORNERS
S609	X	6	6'-0"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 1&3 CORNERS ONLY
S610	X	6	6'-2"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 2&4 CORNERS ONLY
S511	X	2	9'-10"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2&4 CORNERS ONLY
S512	X	2	10'-0"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2&4 CORNERS ONLY
NOT USED					
S514	X	590	32'-10"		SLAB-TOP & BOT.-HORIZ.-TRANSVERSE
S915	X	51	31'-2"		SLAB- BOT.-HORIZ.-LONGIT. WEST END INT.
S916	X	50	15'-6"		SLAB- BOT.-HORIZ.-LONGIT. WEST END INT. SHORT BAR.
S1017	X	12	32'-4"		SLAB- BOT.-HORIZ. LONGIT.-EXT.
S1018	X	10	14'-0"		SLAB-BOT.-HORIZ. LONGIT.-EXT.
S719	X	51	22'-1"	X	SLAB-BOT.-HORIZ. LONGIT. OVER PIER 1-INT.
S820	X	12	22'-1"	X	SLAB-BOT.-HORIZ.- LONGIT. OVER PIER 1-EXT.
S921	X	51	47'-6"		SLAB-BOT.-HORIZ.-LONGIT. SPAN 2 (LONG)-INT.
S1022	X	12	49'-8"		SLAB-BOT.-HORIZ.- LONGIT. SPAN 2 (LONG)-EXT.
S923	X	50	32'-6"		SLAB-BOT.-HORIZ.- LONGIT. SPAN 2 (SHORT)-INT.
S1024	X	10	32'-6"		SLAB-BOT.-HORIZ.-LONGIT.SPAN 2 (SHORT)-EXT.
S725	X	51	22'-1"	X	SLAB-BOT.-HORIZ.- LONGIT OVER PIER 2-INT.
S826	X	12	22'-1"	X	SLAB-BOT.-HORIZ.-LONGIT. OVER PIER 2-EXT.
S927	X	51	25'-2"		SLAB-BOT.-HORIZ.- LONGIT. EAST END-INT.
S1028	X	12	26'-6"		SLAB-BOT.-HORIZ.- LONGIT. EAST END-EXT.
S529	X	12	5'-4"		SLAB-TOP-HORIZ.- LONGIT. WEST END (SHORT)-EXT.
S530	X	51	5'-10"		SLAB-TOP-HORIZ.- LONGIT. WEST END. (SHORT)-INT.
S931	X	51	60'-0"		SLAB-TOP-HORIZ.-LONGIT. SPAN 1 AND OVER PIER 1-INT.
S1032	X	12	60'-0"		SLAB-TOP-HORIZ.- LONGIT. SPAN 1 AND OVER PIER 1-EXT.
S933	X	50	31'-0"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 1-INT.
S1034	X	10	30'-6"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 1-EXT.
S535	X	51	18'-4"		SLAB-TOP-HORIZ.- LONGIT. SPAN 2-INT.
S536	X	12	19'-4"		SLAB-TOP-HORIZ.- LONGIT. SPAN 2-EXT.
S937	X	50	29'-0"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 2-INT.
S1038	X	10	30'-6"		SLAB-TOP-HORIZ.- LONGIT. OVER PIER 2-EXT.
S939	X	51	53'-5"		SLAB-TOP-HORIZ.- LONGIT. EAST END-INT.
S1040	X	12	52'-11		SLAB-TOP-HORIZ.- LONGIT. EAST END-EXT.
S541	X	388	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT BOTH SIDES
S542	X	388	5'-0"	X	PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES
S543	X	36	44'-9"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES
S544	X	310	5'-0"		SLAB-TOP HORIZ. TRANSVERSE AT BOTH SIDES

SS601		122	3'-0"		HAUNCHED SLAB/APPROACH SLAB-HORIZ.-LONGIT.-AT PAVING NOTCHES
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↑
STAINLESS STEEL REINFORCEMENT

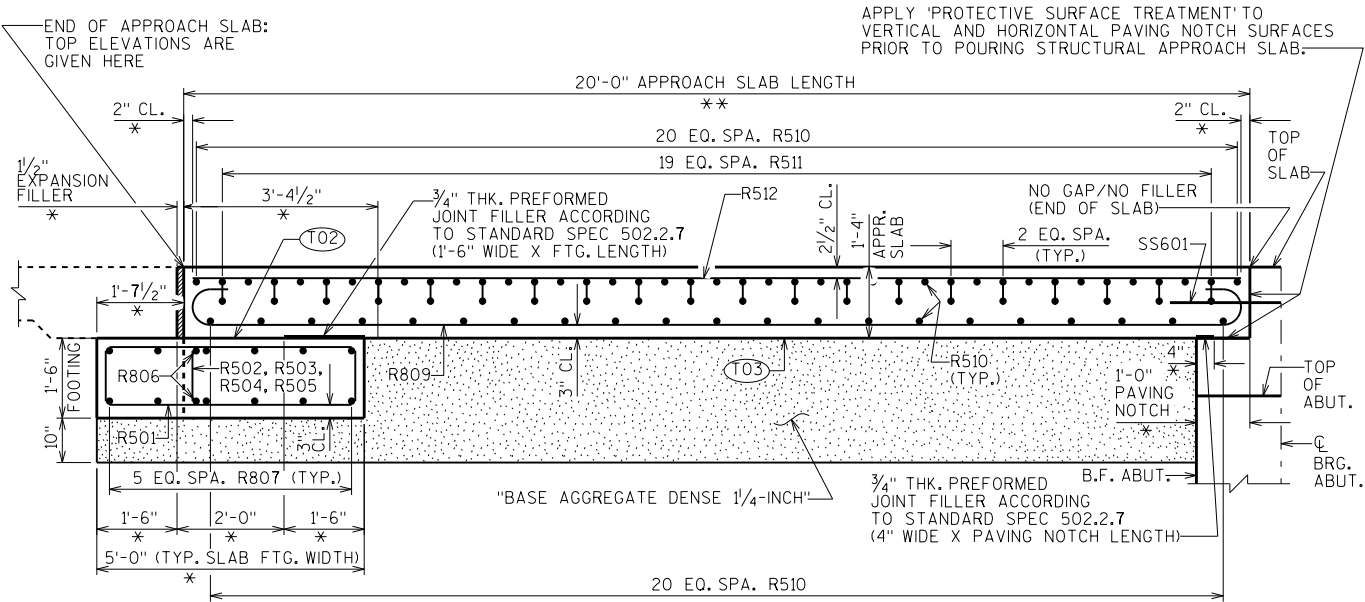


S506, S507, S511, S512
(STIRRUP BARS)



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
SUPERSTRUCTURE BAR DETAILS			SHEET 18
			382

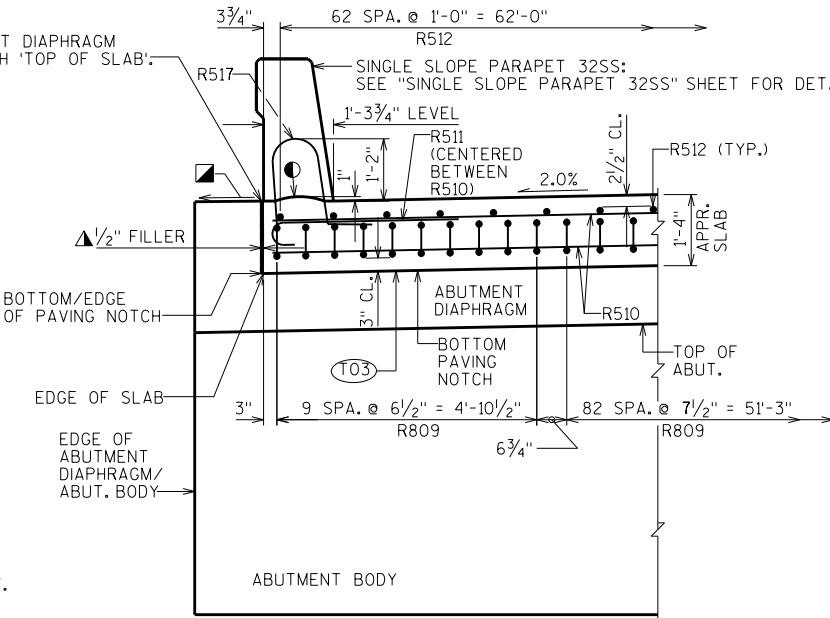
APPLY 'PROTECTIVE SURFACE TREATMENT' TO VERTICAL AND HORIZONTAL PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.



SECTION A-A THRU APPROACH SLAB

WEST APPROACH SLAB SHOWN / EAST APPROACH SLAB SIMILAR

TOP OF ABUTMENT DIAPHRAGM TO MATCH IN WITH 'TOP OF SLAB'. SINGLE SLOPE PARAPET 32SS: SEE "SINGLE SLOPE PARAPET 32SS" SHEET FOR DETAILS.



*DIMENSION IS TAKEN NORMAL TO C.BRG. ABUTS.

**DIMENSION IS TAKEN PARALLEL TO R IH 94 WB. BARS PLACED PARALLEL TO R IH 94 WB. BARS SPACING PERPENDICULAR TO R IH 94 WB.

DESIGN DATA

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE IF THE REGION SOILS ENGINEER DETERMINES THAT THE EXISTING SOIL BEARING PRESSURE MEETS THE REQUIREMENT ABOVE.

FINISH SMOOTH - SLOPE TO DRAIN

HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

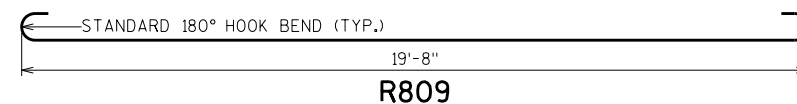
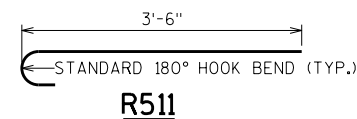
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY		JJS	PLANS CK'D. JLR
STRUCTURAL APPROACH SLABS		SHEET 19	
		383	

SCALE = 3.50



NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

R513

R514

R515

R516

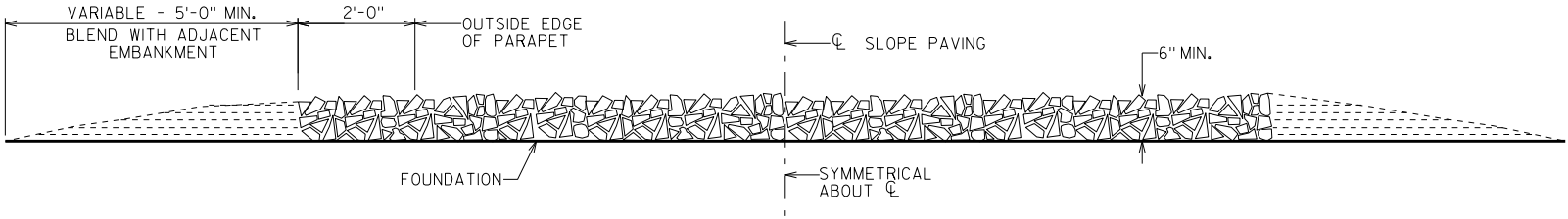
R517

R518

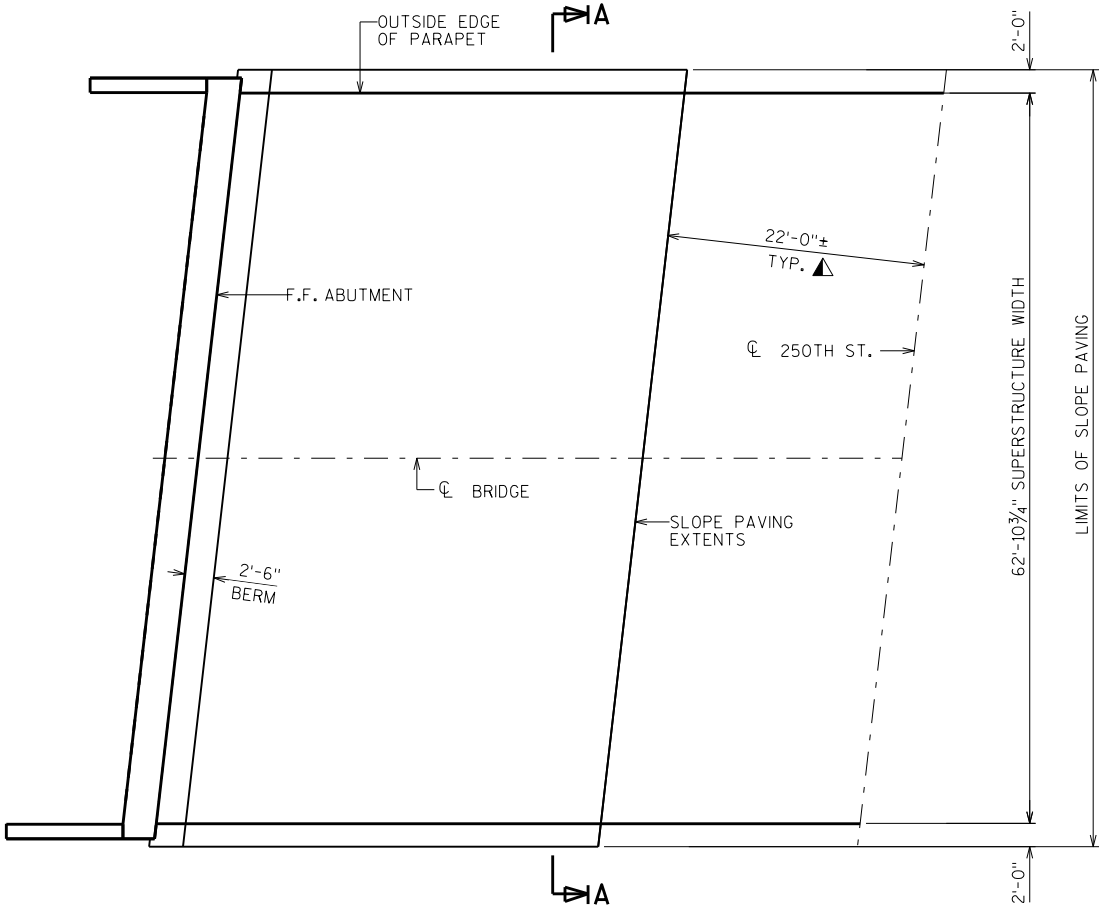
R519

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

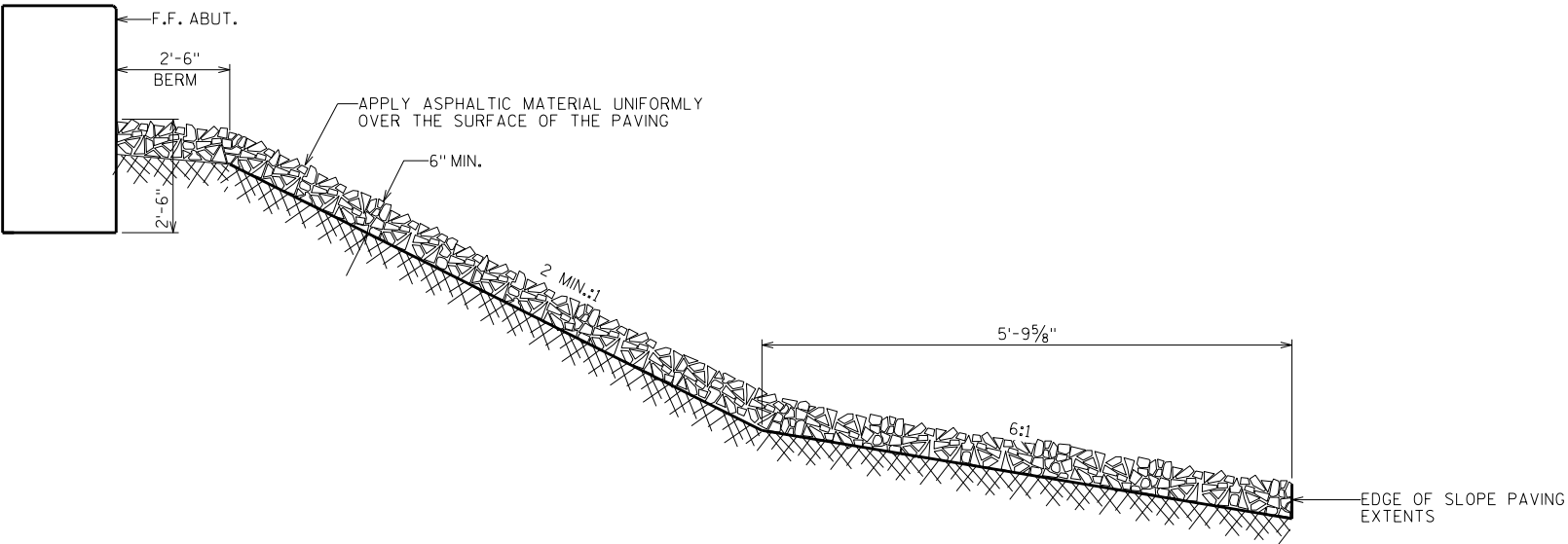
SCALE = 2.33



SECTION A-A



PLAN



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE

ROUND STONE WILL NOT BE ACCEPTED

▲ MEASURED PERPENDICULAR TO CL 250TH ST.

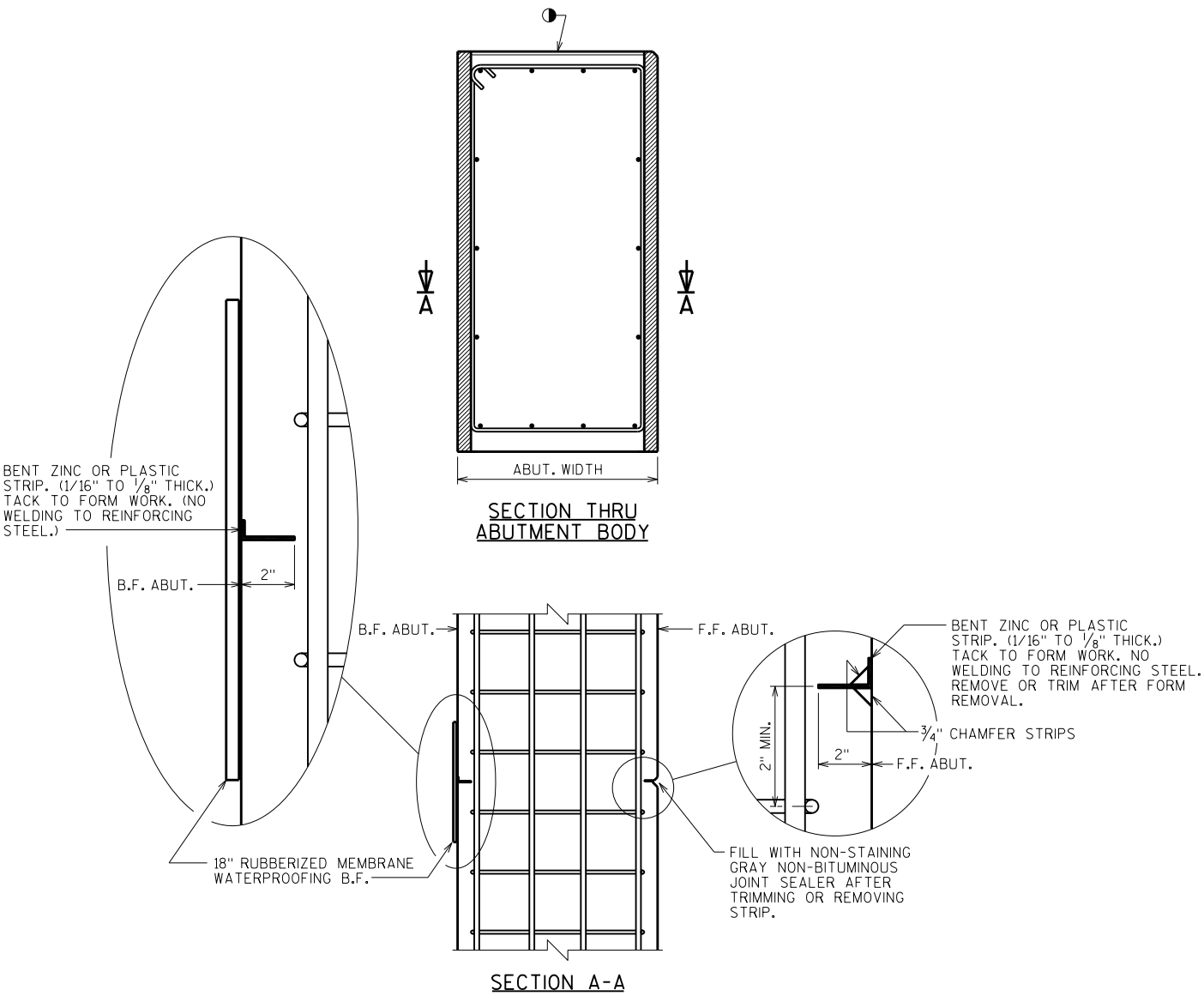
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
DRAWN BY JJS		PLANS CK'D. JLR	
SLOPE PAVING, CRUSHED AGGREGATE			SHEET 22
			386

SCALE = 1:00



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED

● USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-218			
		DRAWN BY JJS	PLANS CK'D. JLR
ALTERNATE CONSTRUCTION JOINT		SHEET 23	
		387	

SCALE = 1:100

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.17
OPERATING RATING FACTOR: RF=1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON CIP 10.75" X 0.5" PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS - WEST ABUT. AND 110 TONS - EAST ABUT. PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50' LONG - WEST ABUT. AND 25' LONG - EAST ABUT.

PIERS TO BE SUPPORTED ON CIP 10.75" X 0.5" PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 45' LONG.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

DIM. A	
WEST ABUT.	EAST ABUT.
0'-5 1/8"	0'-4 3/4"

TRAFFIC VOLUME

IH 94 EB A.D.T.=42600 (2038) R.D.S.=75 M.P.H.
CTH K A.D.T.=300 (2038) R.D.S.=60 M.P.H.

CURVE DATA

IH 94 EB
P.I. = 749+70.41 EB
Δ = 30°38'43.35"
D = 0°59'47.21"
T = 1575.47'
L = 3075.46'
R = 5750.00'
S.E. = 3.8%
P.C. = 733+94.94 EB
P.T. = 764+99.23 EB

TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

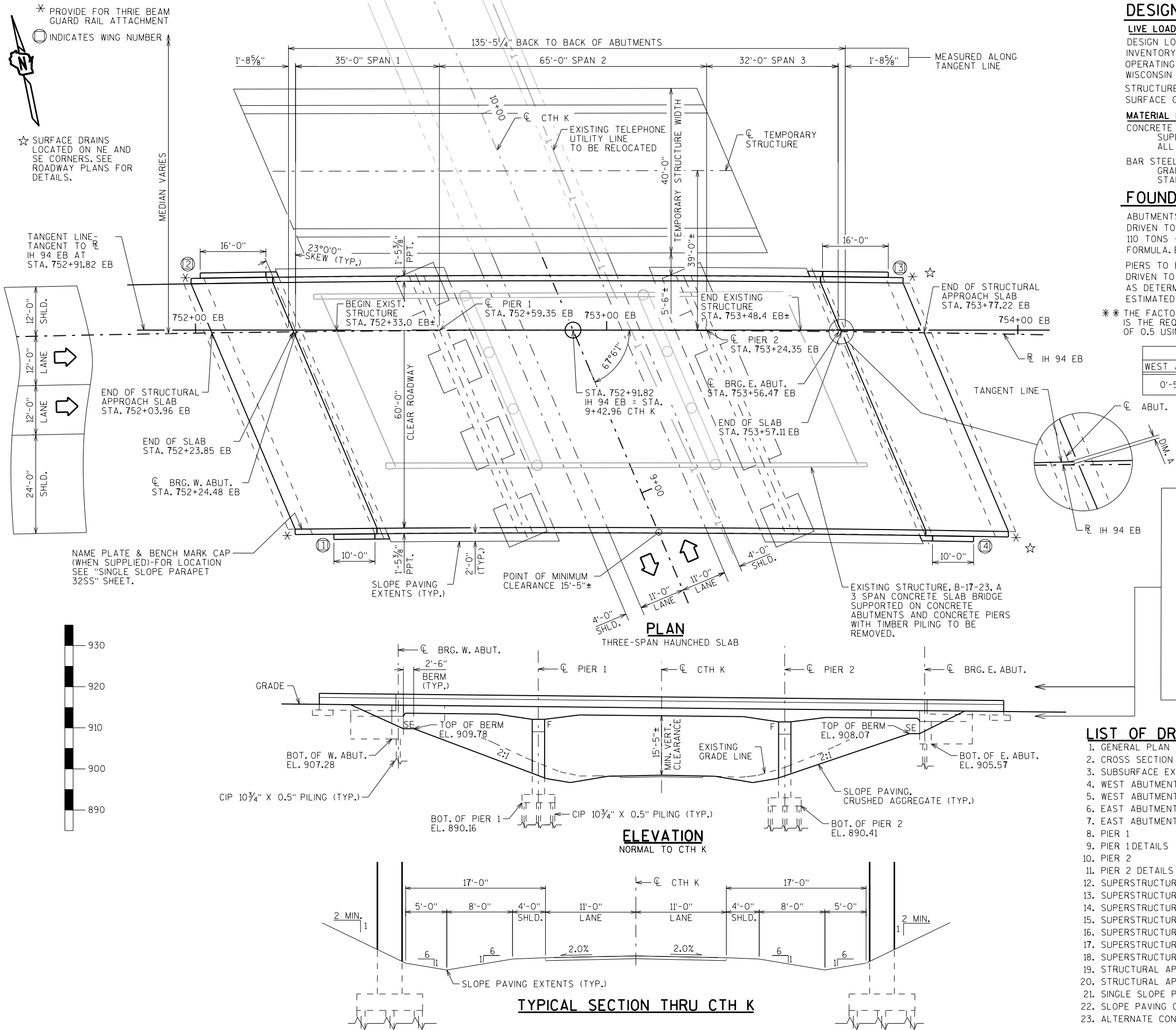
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. SUPERSTRUCTURE CROSS SECTION 1
13. SUPERSTRUCTURE CROSS SECTION 2
14. SUPERSTRUCTURE 1
15. SUPERSTRUCTURE 2
16. SUPERSTRUCTURE DETAILS 1
17. SUPERSTRUCTURE DETAILS 2
18. SUPERSTRUCTURE DETAILS 3
19. STRUCTURAL APPROACH SLAB 1
20. STRUCTURAL APPROACH SLAB 2
21. SINGLE SLOPE PARAPET 32SS
22. SLOPE PAVING CRUSHED AGG.
23. ALTERNATE CONSTR. JOINT

STRUCTURE DESIGN CONTACTS:

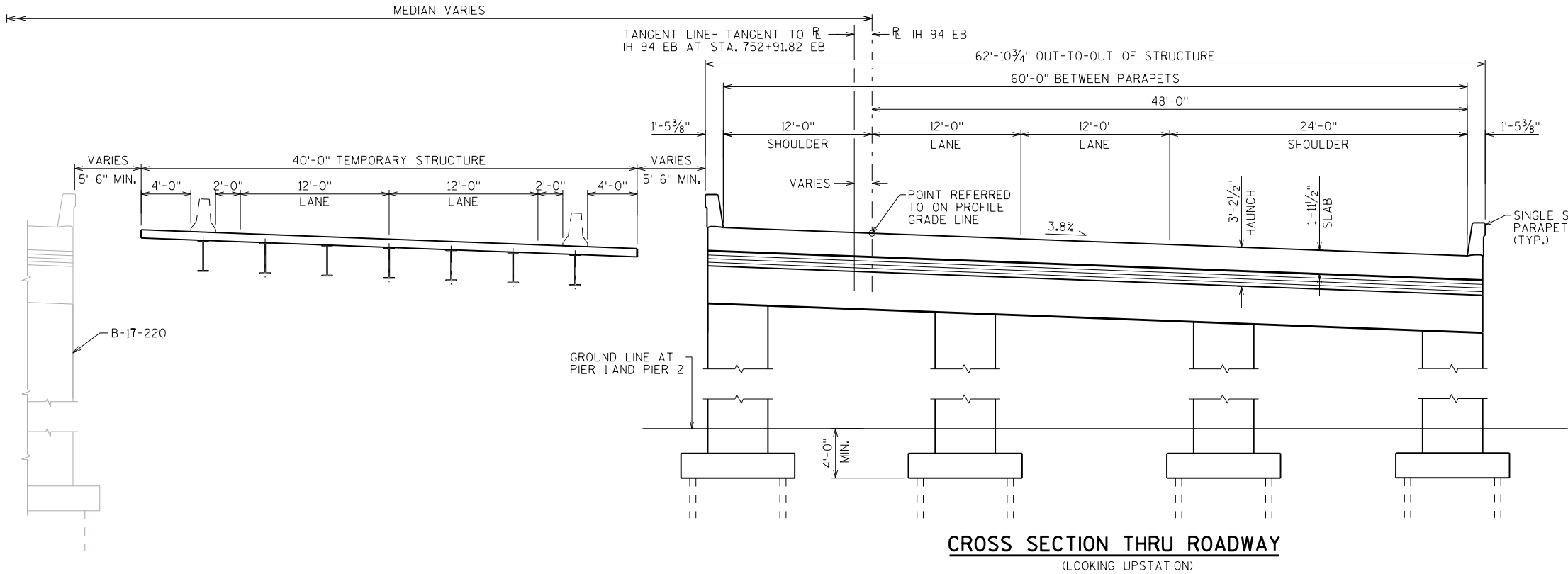
DANIEL MONROE (608) 266-8490
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY
			
ACCEPTED <i>William C. Decher</i> 7/14/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-219			
IH 94 OVER CTH K			
COUNTY	DUNN	TOWN/CITY/VILLAGE	LUCAS & MENOMONIE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DLM	DESIGNED CK'D.	WAH
DRAWN BY	JDM	PLANS CK'D.	JLR
GENERAL PLAN			SHEET 1 OF 23
			388



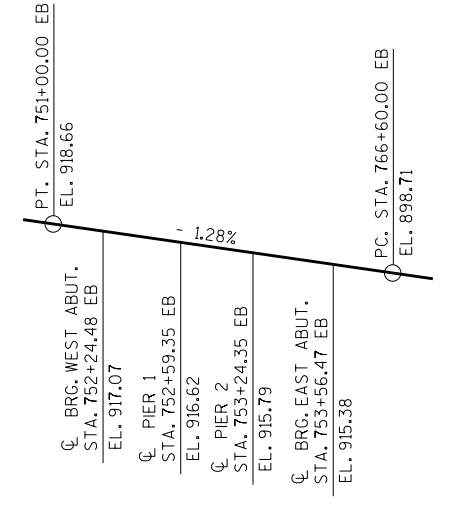
GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.
- AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.
- THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.
- THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
- TEMPORARY SHORING IS INCLUDED IN BID ITEM "TEMPORARY STRUCTURE STA. 753+03.93 EB"

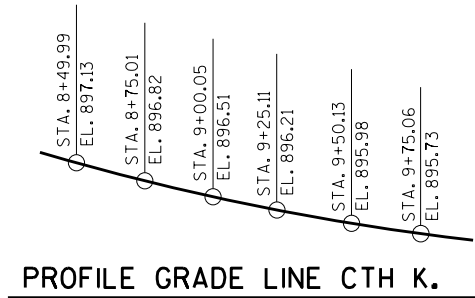


TOTAL ESTIMATED QUANTITIES

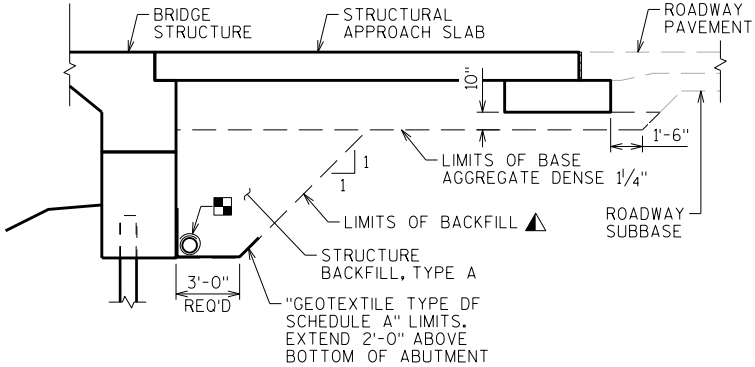
BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 752+91.82	LS	—	—	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-219	LS	—	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	195	—	—	195	—	390
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	192	—	—	—	—	192	384
502.0100	CONCRETE MASONRY BRIDGES	CY	719	85	65	98	96	65	86	1,214
502.3200	PROTECTIVE SURFACE TREATMENT	SY	924	150	—	—	—	—	150	1,224
502.3210	PIGMENTED SURFACE SEALER	SY	111	17	—	—	—	—	17	145
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	4,820	2,680	2,680	4,840	—	15,020
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	116,000	13,790	1,580	16,040	15,600	1,540	13,790	178,340
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	560	—	—	—	—	—	—	560
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	17	—	—	17	—	34
526.0100	TEMPORARY STRUCTURE STA. 753+03.93 EB	LS	—	—	—	—	—	—	—	1
550.2108	PILING CIP CONCRETE 10 3/4 X 0.50-INCH	LF	—	—	550	1,530	1,530	275	—	3,885
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	—	—	320	—	—	315	—	635
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	125	—	—	125	—	250
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	75	—	—	75	—	150
	NON-BID ITEMS									
	FILLER	SIZE	—	—	—	—	—	—	—	1/2", 3/4", 1 1/2"



PROFILE GRADE LINE IH 94 EB



PROFILE GRADE LINE CTH K.



TYPICAL SECTION THRU ABUTMENT

(A1 ABUTMENT WITH STRUCTURAL APPROACH)

- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

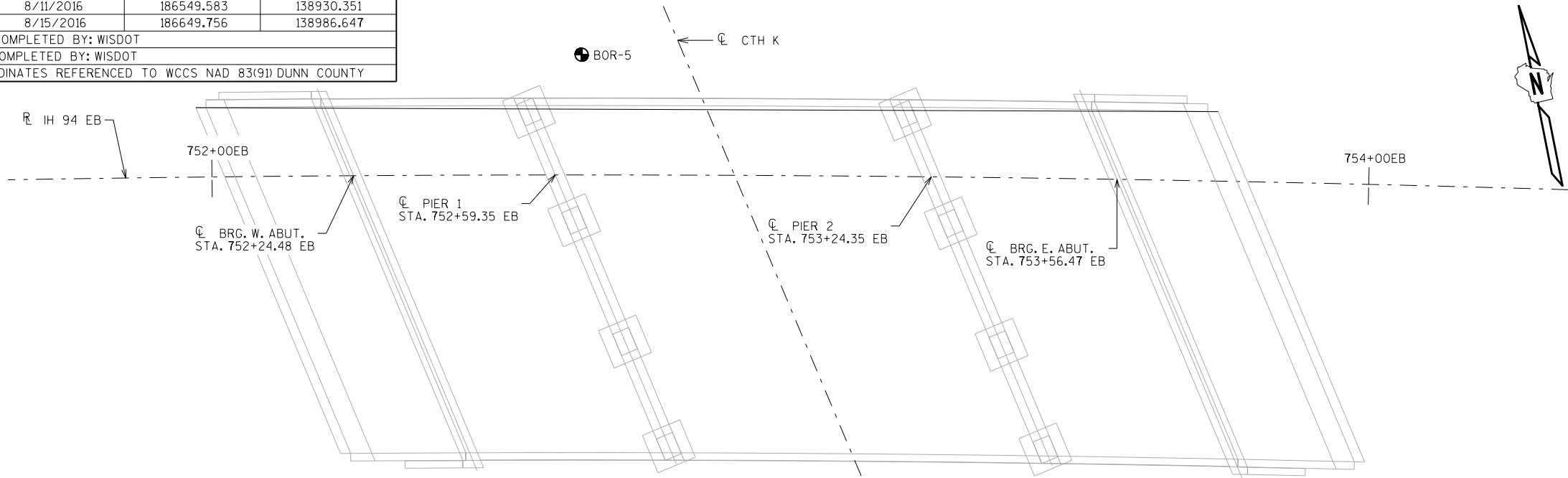
NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION	
		STRUCTURE B-17-219	
		DRAWN BY JDM	PLANS CKD. JLR
		CROSS SECTION & QUANTITIES	SHEET 2
			389

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	8/10/2016	186537.756	139093.924
4	8/11/2016	186549.583	138930.351
5	8/15/2016	186649.756	138986.647

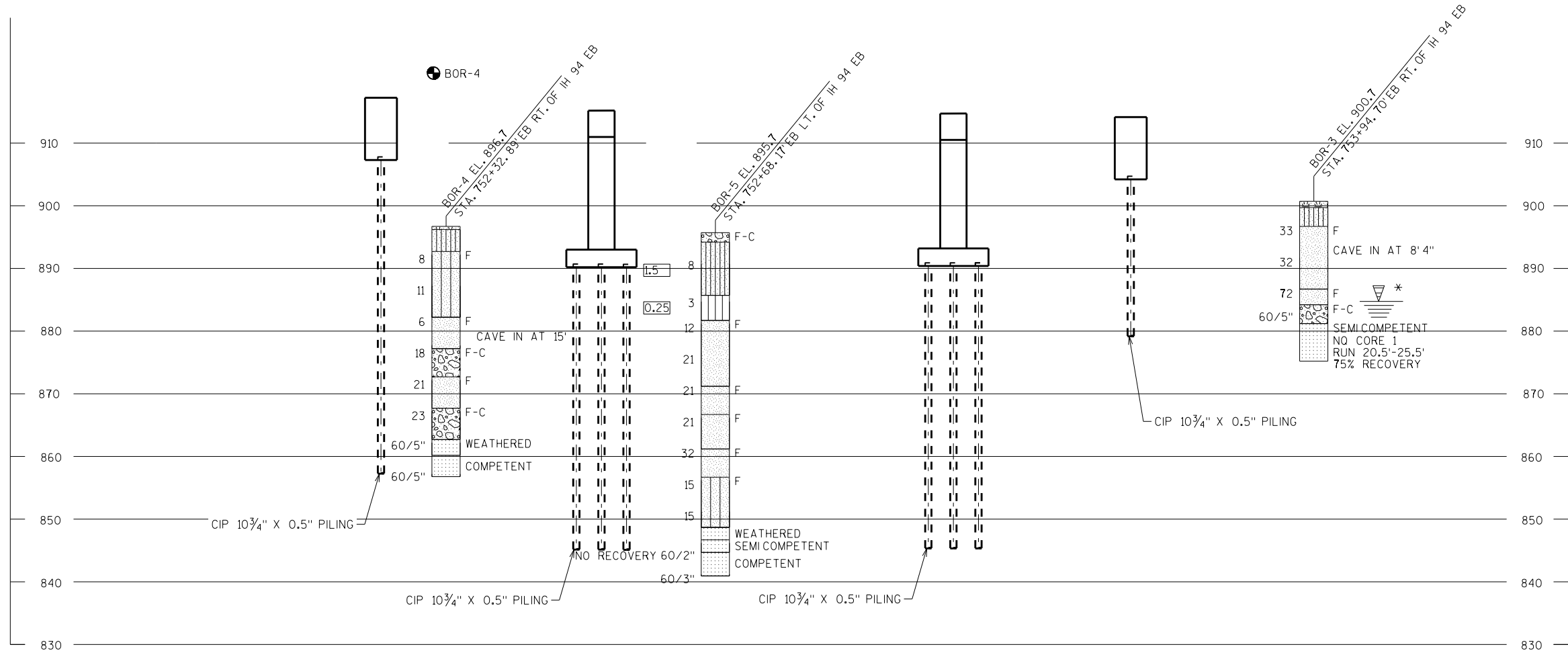
BORINGS COMPLETED BY: WISDOT

REPORT COMPLETED BY: WISDOT

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY



B-17-220



STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY TLP/JDM		PLANS CKD. JLR	
SUBSURFACE EXPLORATION		SHEET 3	
		390	

8

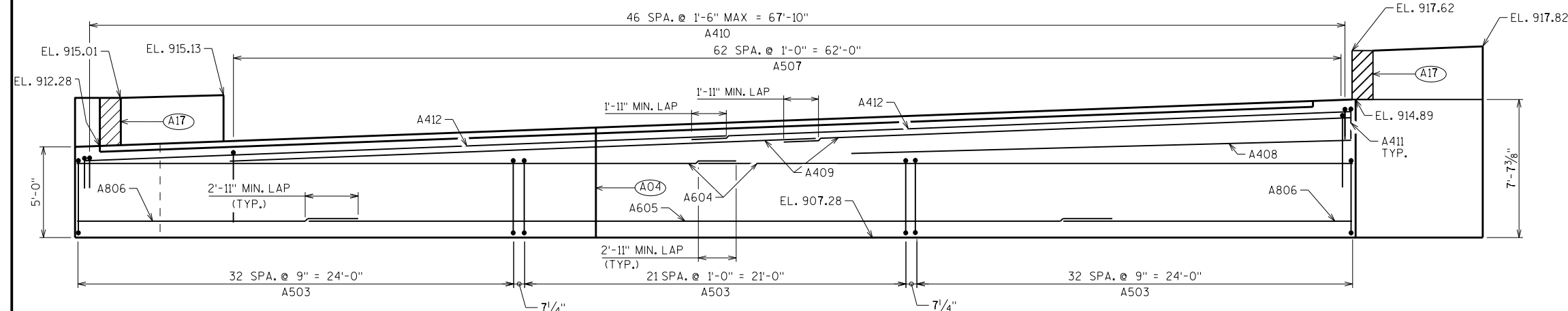
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SECTION THRU BODY

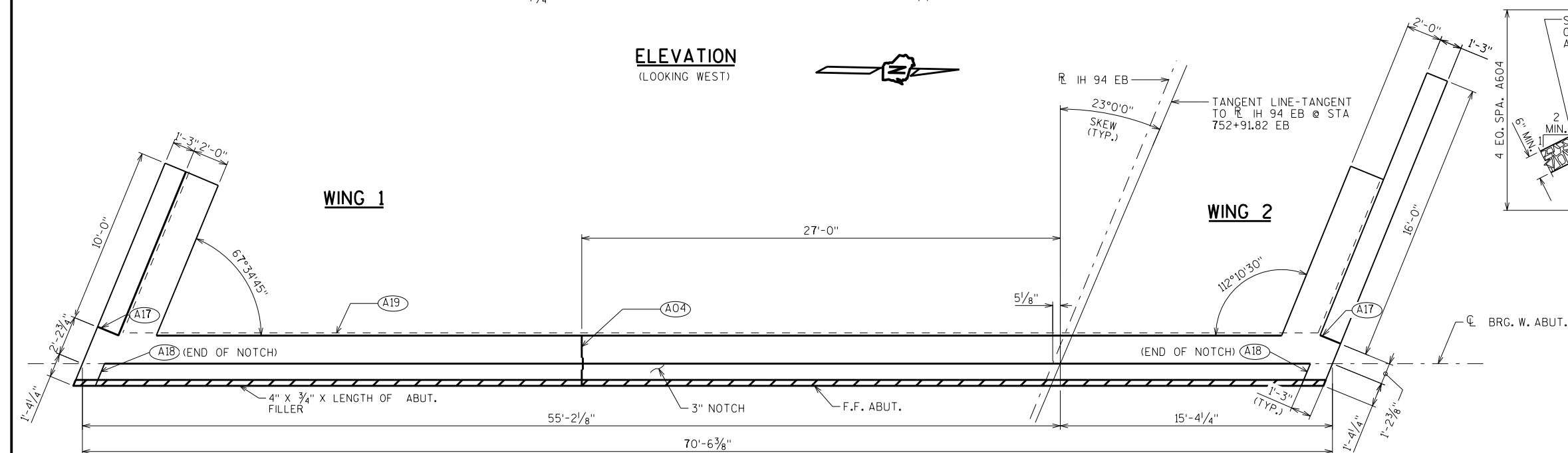
- (A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2×8 . $3/4"$ "V" GROOVE @ THE FRONT FACE AND $18"$ RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A09) SUPPORT ABUTMENT ON CIP $10.75" \times 0.5"$ CONCRETE PILING, ESTIMATED 50° - 0° LONG WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. (SEE "WEST ABUTMENT DETAILS" SHEET FOR DETAILS.)
- (A17) $1/2"$ FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF $1/2"$ FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD $1/8"$ BELOW SURFACE OF CONCRETE). EXTEND SEALER $3"$ BELOW GUTTER LINE AT INSIDE FACE.
- (A18) $3/4"$ CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH "R" IN 94 EB.
- (A19) $18"$ (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY		JDM	PLANS CK'D. JLR
WEST ABUTMENT		SHEET 4	
		391	

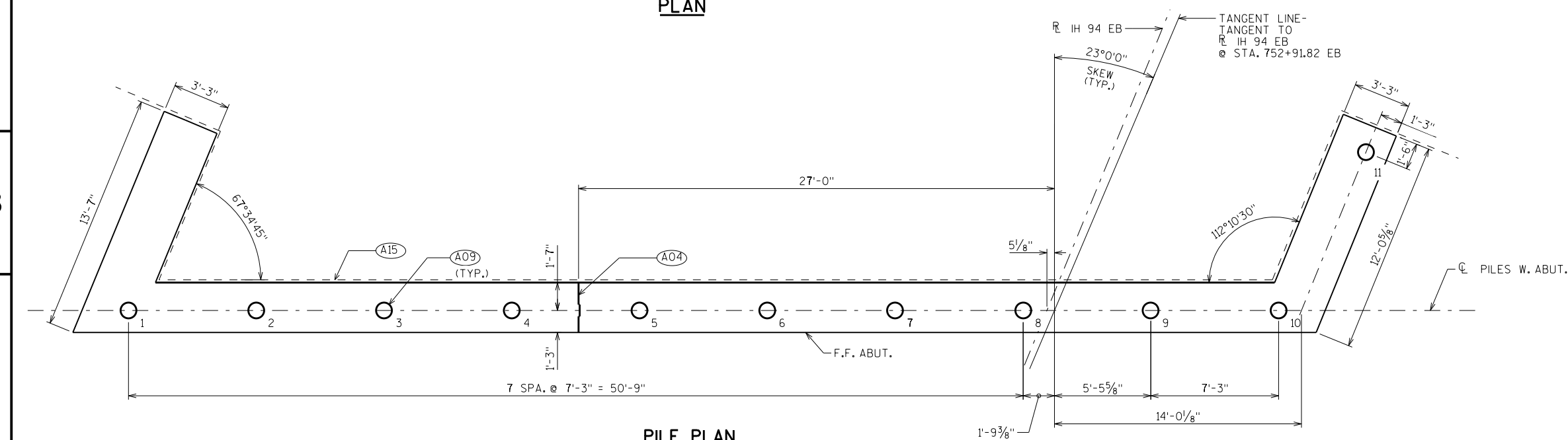
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ELEVATION
(LOOKING WEST)



PLAN



PILE PLAN

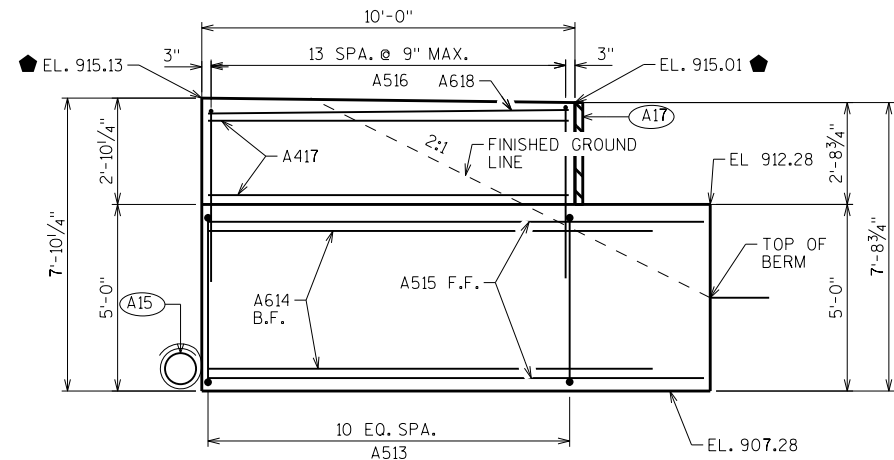
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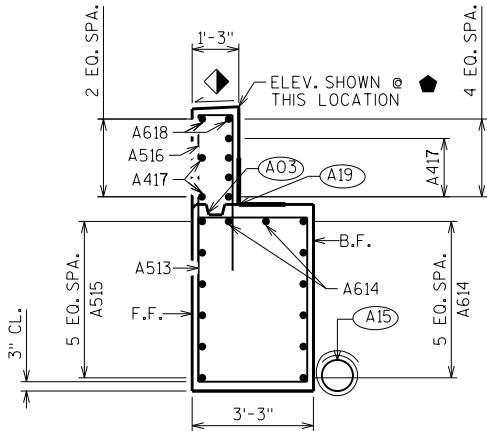
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

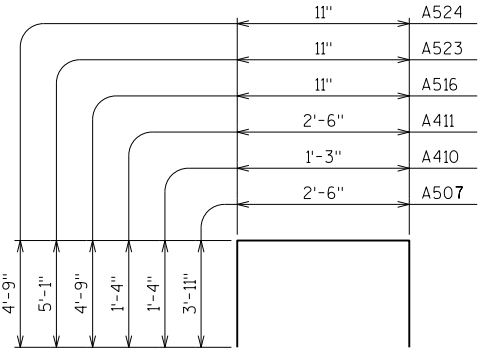
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		20	2'-3"			BODY-VERT.-2 PER BODY PILE
A402		10	28'-0"	X		BODY-VERT.-1 PER BODY PILE
A503		88	14'-4"	X		BODY-VERT.-STIRRUPS
A604		20	36'-7"			BODY-HORIZ.
A605		7	44'-1"			BODY-HORIZ.-B.F.-AT CENTER
A806		14	16'-11"	X		BODY-HORIZ.-B.F.- AT BOTH ENDS
A507		63	10'-1"	X		BODY-TOP-VERT.-UNDER NOTCH
A408		2	25'-0"			BODY-TOP-HORIZ.
A409		8	32'-8"			BODY-TOP-HORIZ.-UNDER NOTCH
A410		47	3'-9"	X		BODY-TOP-VERT.-ALONG NOTCH
A411		2	5'-0"	X		BODY-TOP-VERT.-AT ENDS ONLY
A412		4	36'-1"			BODY-TOP-HORIZ.-END TO END
A513	X	11	15'-8"	X		WING 1-BOT.-VERT.-STIRRUP
A614	X	8	11'-2"			WING 1-BOT.-HORIZ.-B.F. & CENTER
A515	X	6	13'-3"			WING 1-BOT.-HORIZ.-F.F.
A516	X	14	10'-5"	X		WING 1-TOP-VERT.
A417	X	6	9'-8"			WING 1-TOP-HORIZ.-B.F. & F.F.
A618	X	2	9'-8"			WING 1-TOP-HORIZ.-B.F. & F.F.
A519	X	10	20'-10"	X		WING 2-BOT.-VERT.-STIRRUP
A520	X	9	11'-8"			WING 2-BOT.-HORIZ.-F.F.
A721	X	9	12'-11"			WING 2-BOT.-HORIZ.-B.F. & CENTER
A422	X	10	7'-9"			WING 2-HORIZ.-F.F & B.F.
A523	X	9	10'-10"	X		WING 2-TOP-VERT.
A524	X	13	10'-2"	X		WING 2-TOP-VERT.
A425	X	6	15'-8"			WING 2-TOP-HORIZ.-B.F. & F.F.
A626	X	2	15'-8"			WING 2-TOP-HORIZ.-B.F. & F.F.



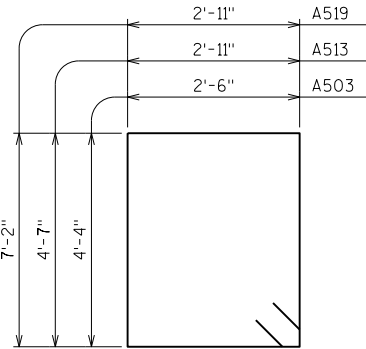
WING 1 ELEVATION



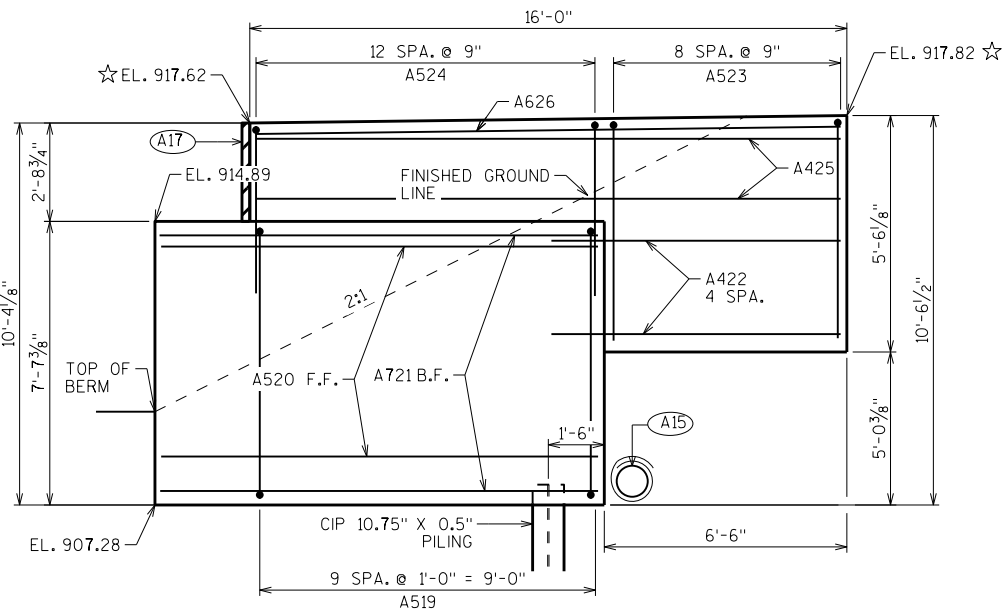
WING 1 SECTION



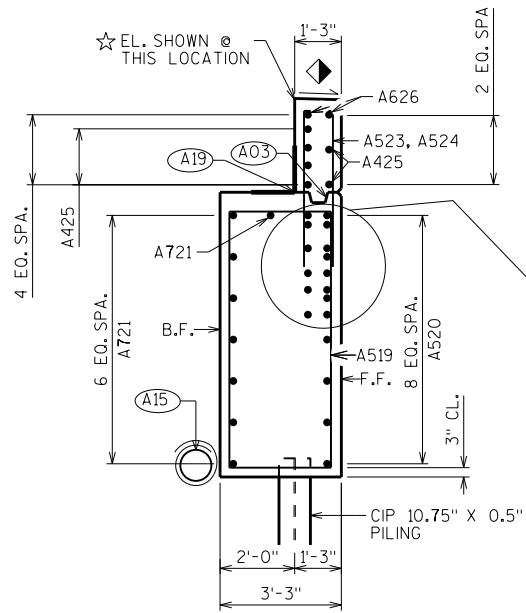
A507, A410, A411, A516, A523, A524



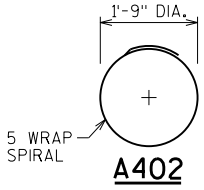
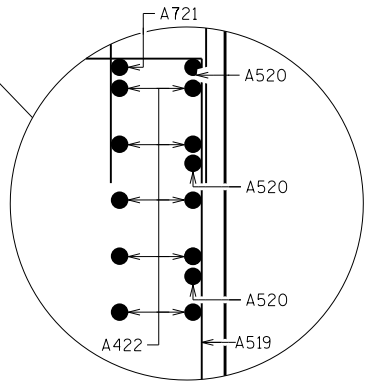
A503, A513, A519



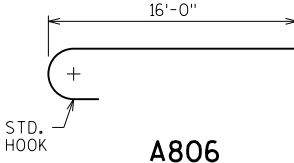
WING 2 ELEVATION



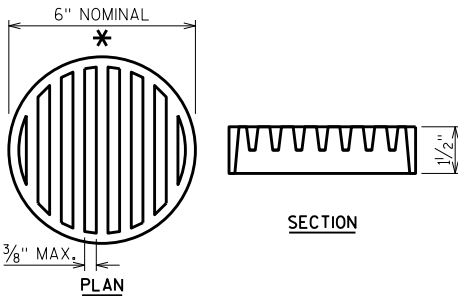
WING 2 SECTION



A402



A806

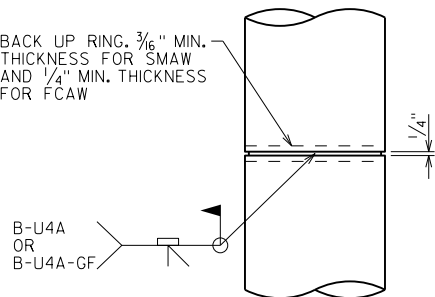


RODENT SHIELD DETAIL

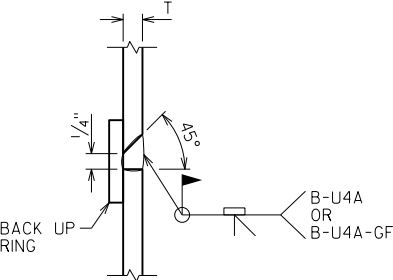
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



CAST-IN-PLACE 'PIPE PILE'



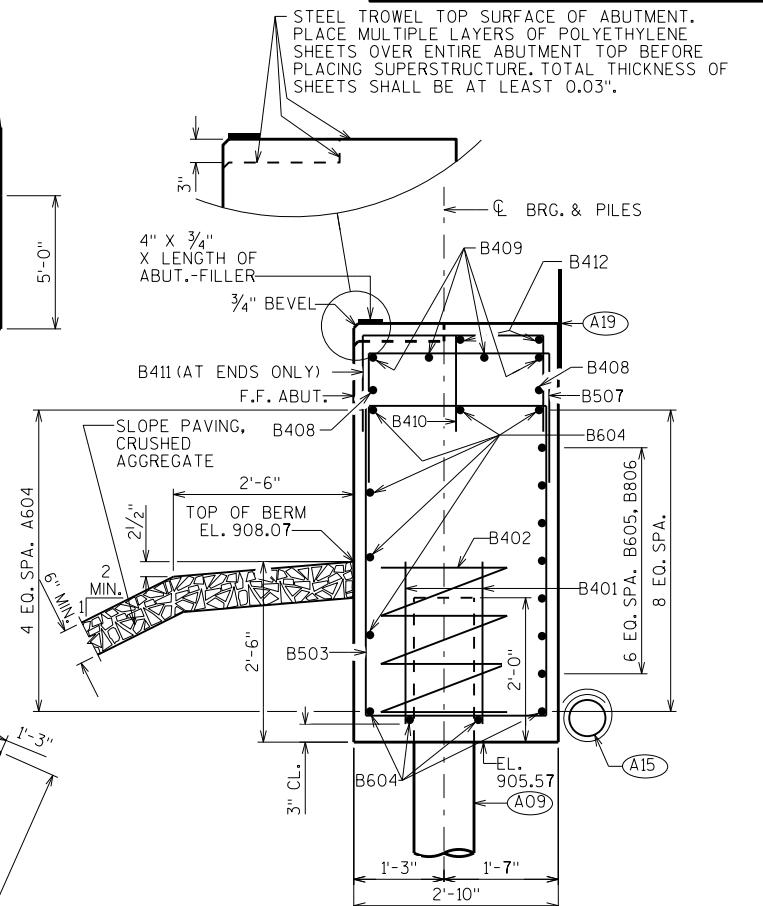
C.I.P. PILE WELD DETAIL

PILE DETAILS

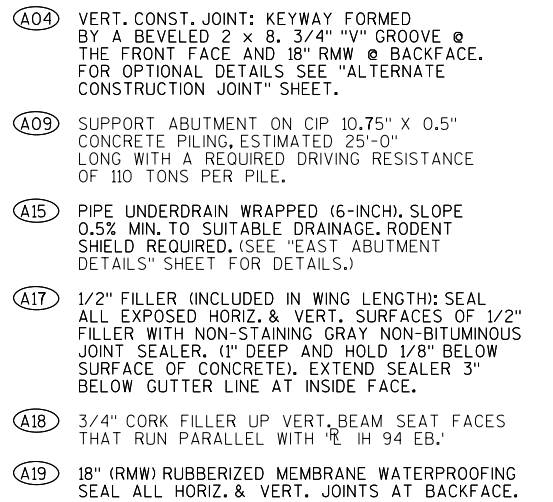
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	AY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN AY		JDM	PLANS CK'D. JLR
WEST ABUTMENT DETAILS		SHEET 5	
		392	

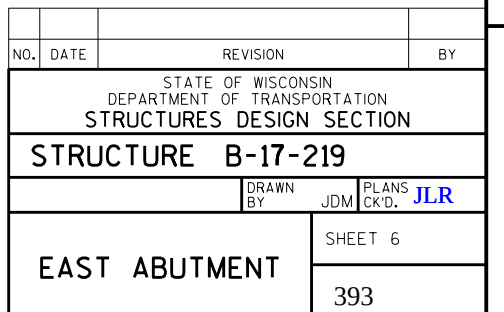
SLOPE TO DRAIN



SECTION THRU BODY



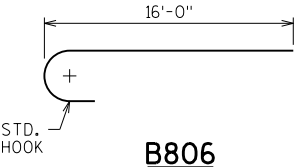
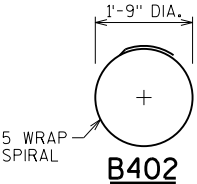
PLAN



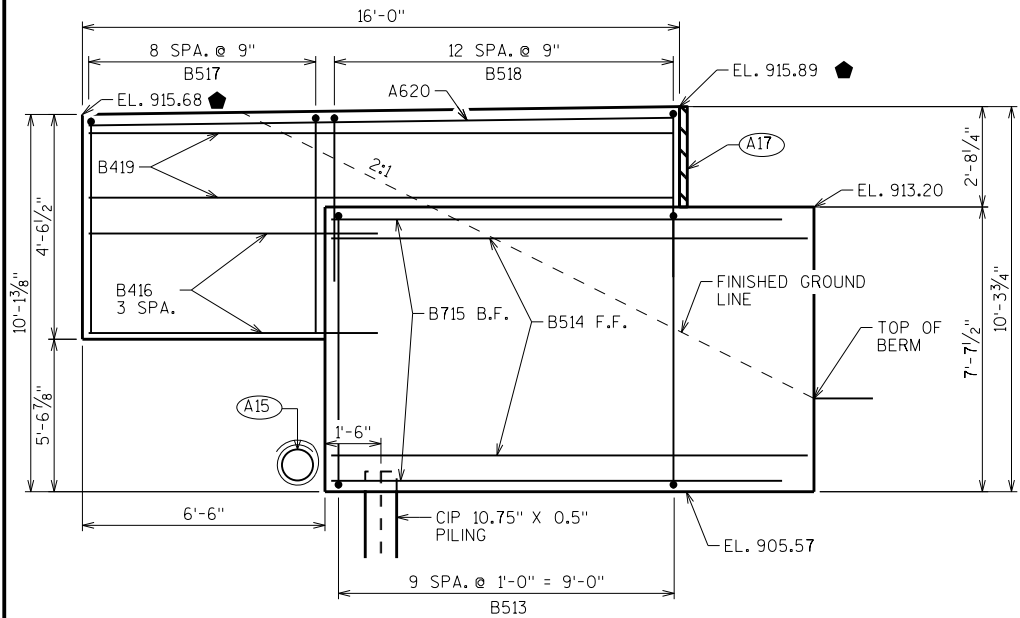
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

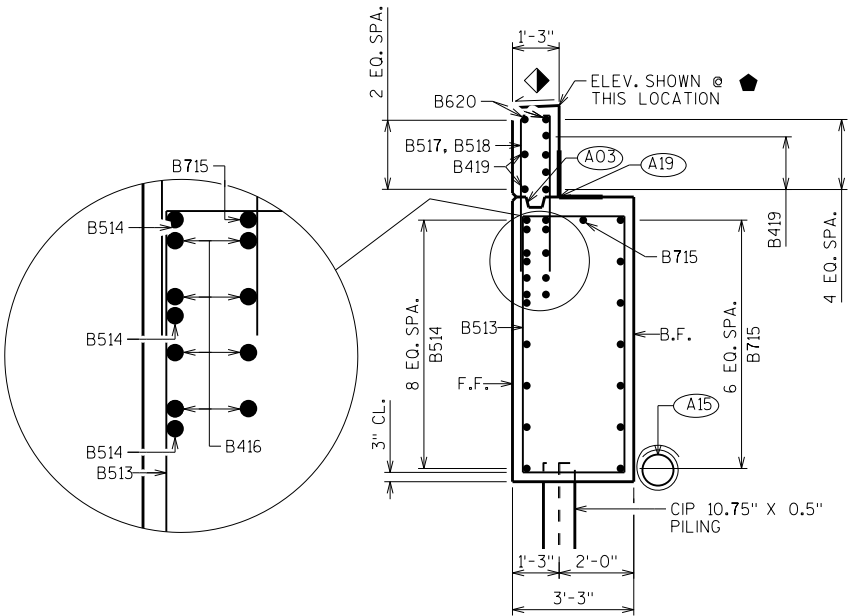
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		20	2'-3"			BODY-VERT.-2 PER BODY PILE
B402		10	28'-0"	X		BODY-VERT.-1 PER BODY PILE
B503		89	14'-4"	X		BODY-VERT.-STIRRUPS
B604		20	36'-6"			BODY-HORIZ.
B605		7	45'-0"			BODY-HORIZ.-B.F.-AT CENTER
B806		14	16'-11"	X		BODY-HORIZ.-B.F.- AT BOTH ENDS
B507		63	10'-1"	X		BODY-TOP-VERT.-UNDER NOTCH
B408		2	25'-0"			BODY-TOP-HORIZ.
B409		8	33'-0"			BODY-TOP-HORIZ.-UNDER NOTCH
B410		47	3'-9"	X		BODY-TOP-VERT.-ALONG NOTCH
B411		2	5'-0"	X		BODY-TOP-VERT.-AT ENDS ONLY
B412		4	36'-6"			BODY-TOP-HORIZ.-END TO END
B513	X	10	20'-10"	X		WING 3-BOT.-VERT.-STIRRUP
B514	X	9	12'-9"			WING 3-BOT.-HORIZ.-F.F.
B715	X	9	11'-3"			WING 3-BOT.-HORIZ.-B.F. & CENTER
B416	X	8	7'-9"			WING 3-HORIZ.-F.F & B.F.
B517	X	9	8'-10"	X		WING 3-TOP-VERT.
B518	X	13	10'-2"	X		WING 3-TOP-VERT.
B419	X	6	15'-8"			WING 3-TOP-HORIZ.-B.F. & F.F.
B620	X	2	15'-8"			WING 3-TOP-HORIZ.-B.F. & F.F.
B521	X	11	15'-8"	X		WING 4-BOT.-VERT.-STIRRUP
B622	X	8	12'-10"			WING 4-BOT.-HORIZ.-B.F. & CENTER
B523	X	6	12'-2"			WING 4-BOT.-HORIZ.-F.F.
B524	X	14	9'-10"	X		WING 4-TOP-VERT.
B425	X	6	9'-8"			WING 4-TOP-HORIZ.-B.F. & F.F.
B626	X	2	9'-8"			WING 4-TOP-HORIZ.-B.F. & F.F.



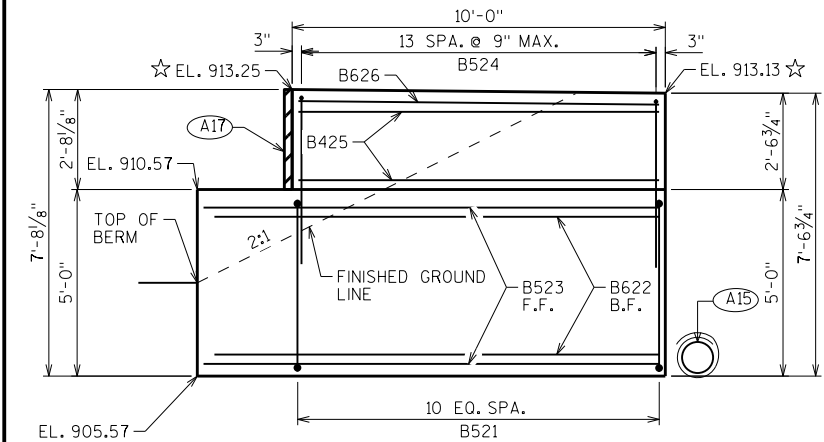
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



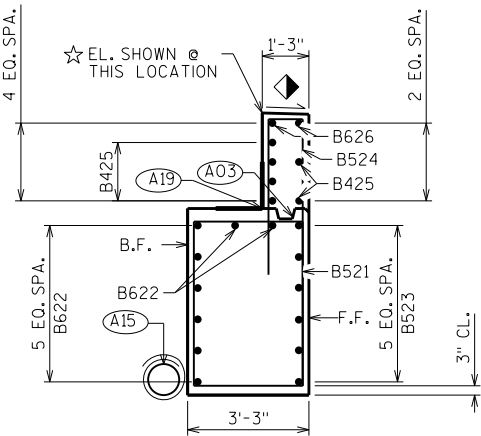
WING 3 ELEVATION



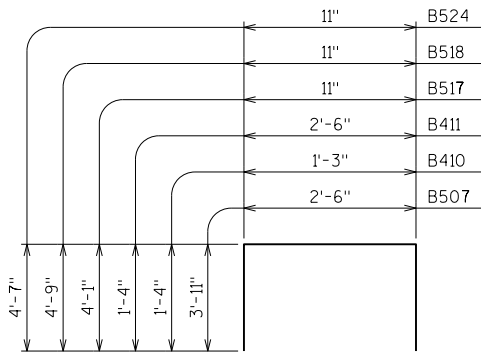
WING 3 SECTION



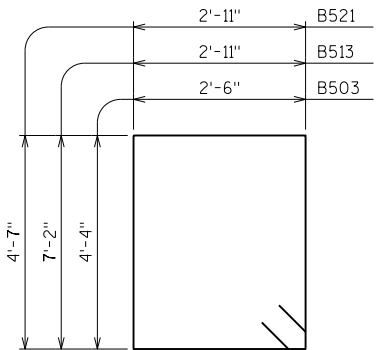
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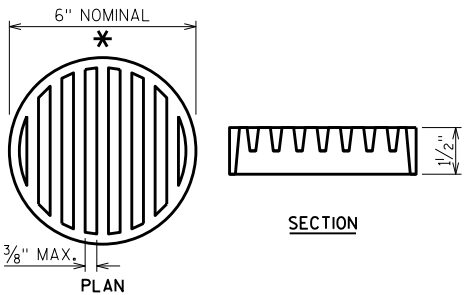
WING 4 SECTION



B507, B410, B411, B517, B518, B524



B503, B513, B521

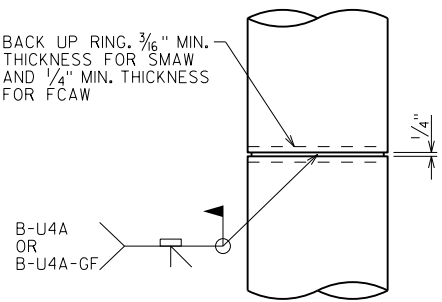


RODENT SHIELD DETAIL

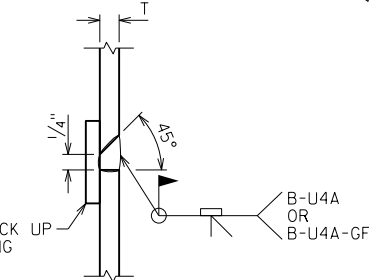
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER, A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



CAST-IN-PLACE 'PIPE PILE'

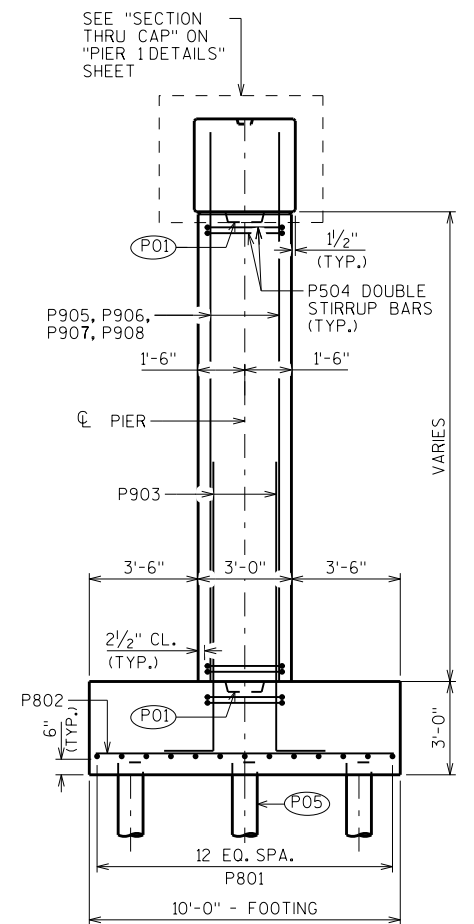


C.I.P. PILE WELD DETAIL

PILE DETAILS



NO.	DBTE	REVISION	BY
STBTE OF WISCONSIN DEBTRTMENT OF TRBNSPORTBTION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRBWN BY		JDM	PLBNS CK'D. JLR
EAST ABUTMENT DETAILS			SHEET 7
			394



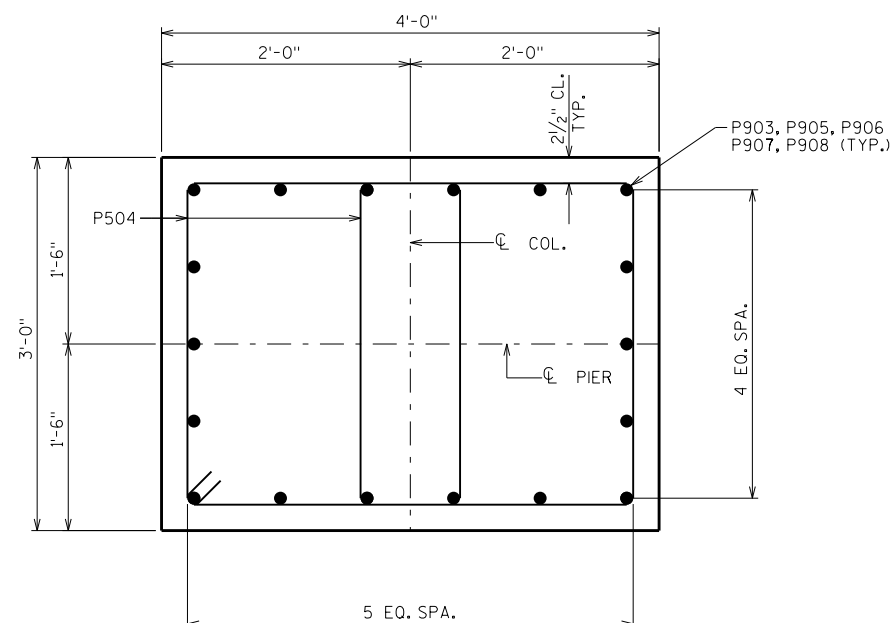
SECTION THRU PIER

** ELEVATIONS ARE GIVEN
AT C OF PIER

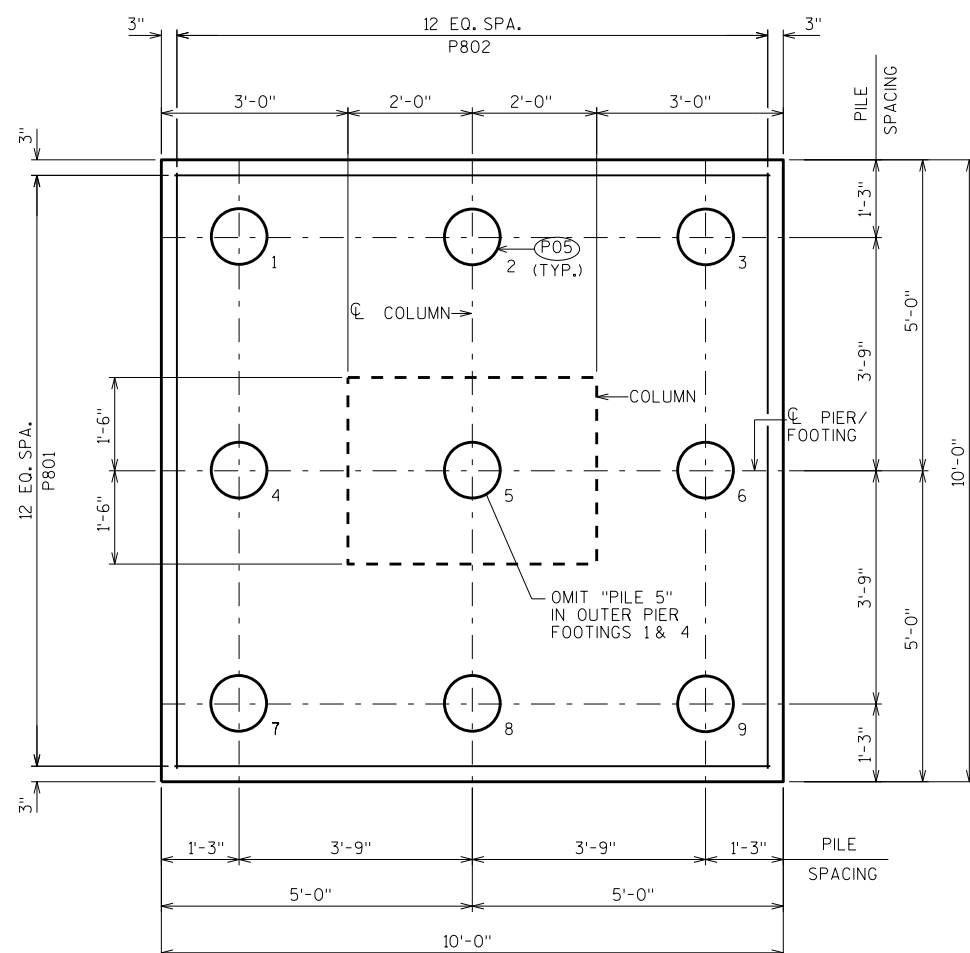
- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" DIA. X .5" CIP CONCRETE PILING, ESTIMATED 45'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) P515 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.



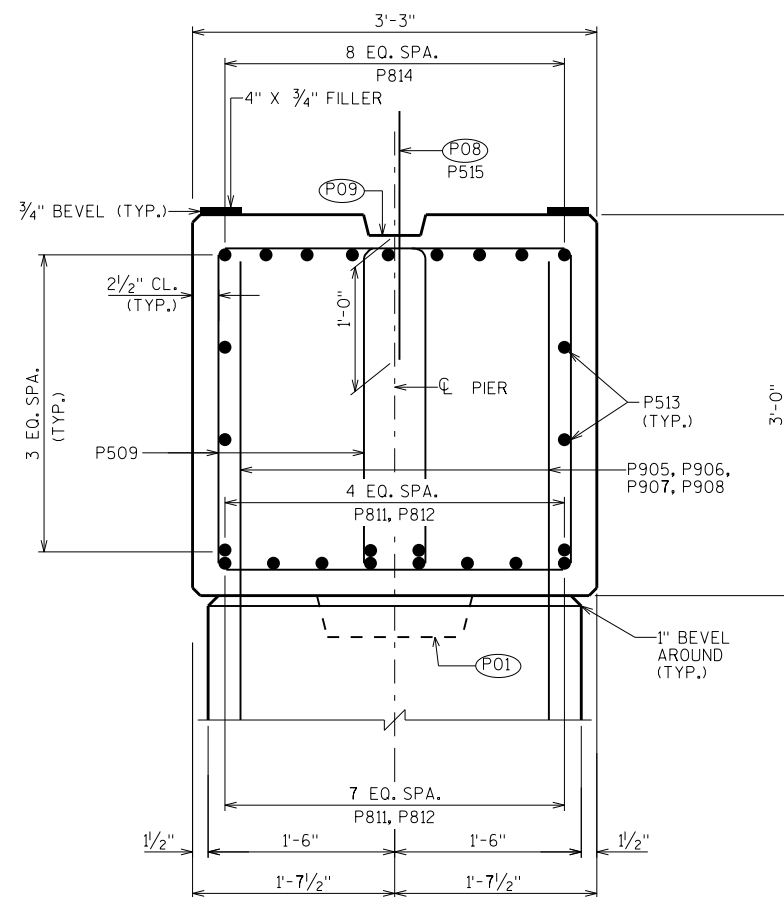
NO.		DATE		REVISION		BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION							
STRUCTURE B-17-219							
DRAWN BY				JDM		PLANS CK'D. JLR	
PIER 1						SHEET 8	
						395	



TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



FOOTING/PILE PLAN



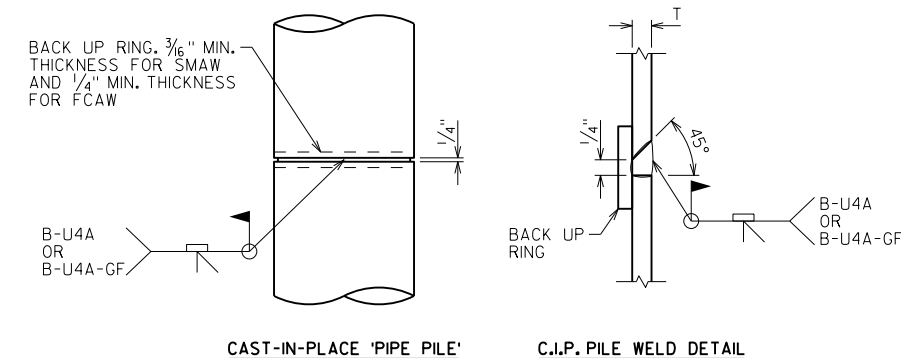
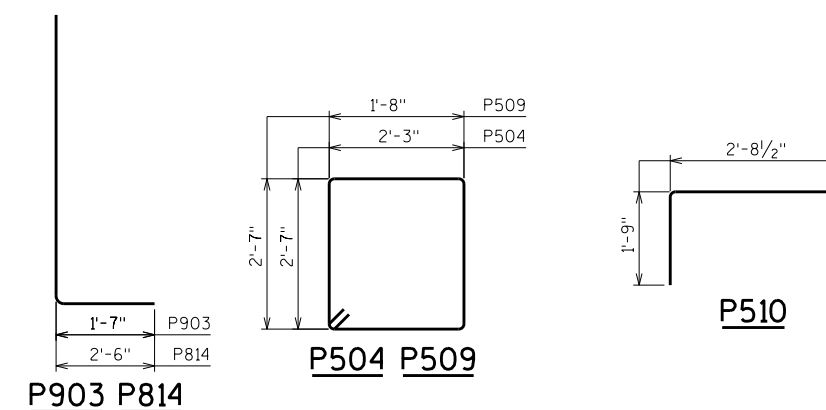
SECTION THRU CAP



BUNDLING DETAIL

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

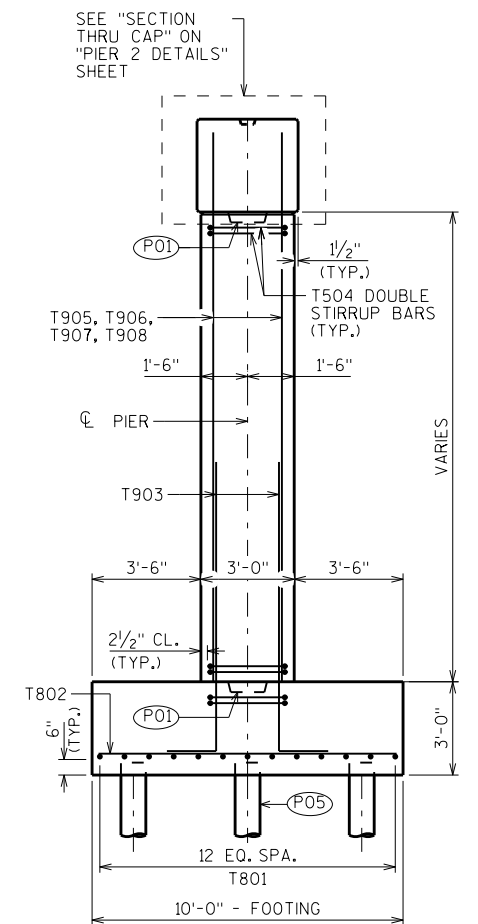
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P801		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
P802		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
P903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERT.-ALL FACES
P504	X	266	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	18	20'-2"		COLUMN 1/CAP-VERT.-ALL FACES
P906	X	18	19'-4"		COLUMN 2/CAP-VERT.-ALL FACES
P907	X	18	18'-6"		COLUMN 3/CAP-VERT.-ALL FACES
P908	X	18	17'-9"		COLUMN 4/CAP-VERT.-ALL FACES
P509	X	130	9'-2"	X	CAP-VERT.-DOUBLE STIRRUPS-BTWN. COLUMNS
P510	X	4	6'-0"	X	CAP-HORIZ.-ENDS ONLY
P811	X	12	34'-9"		CAP-BOT.-HORIZ.
P812	X	12	37'-1"		CAP-BOT.-HORIZ.
P513	X	8	34'-5"		CAP-HORIZ.
P814	X	18	40'-3"	X	CAP-TOP-HORIZ.
P515	X	64	2'-0"		CAP-TOP-VERTICAL-DOWELS



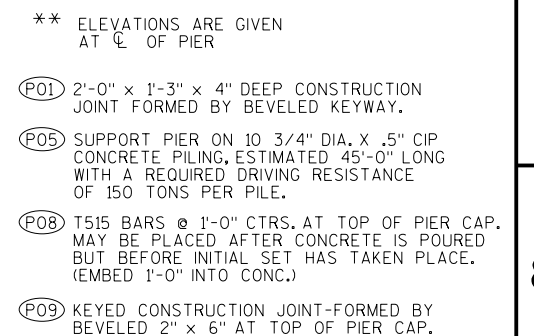
PILE DETAILS

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" DIA. X 0.5" CIP CONCRETE PILING, ESTIMATED 45'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) P515 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY		JDM	PLANS CK'D. JLR
PIER 1 DETAILS		SHEET 9	
		396	



SECTION THRU PIER



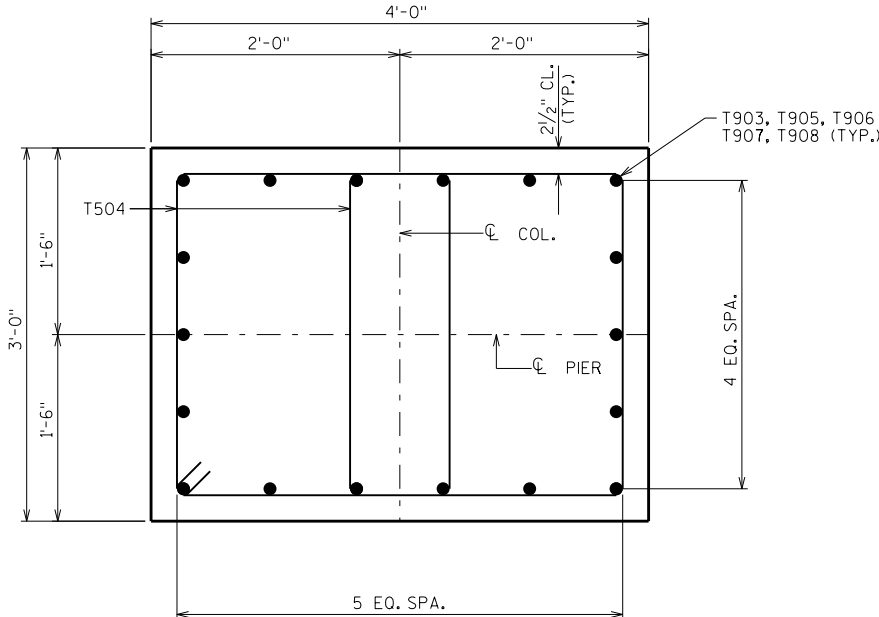
PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
		DRAWN BY	JDM PLANS CK'D. JLR
PIER 2		SHEET 10	
		397	

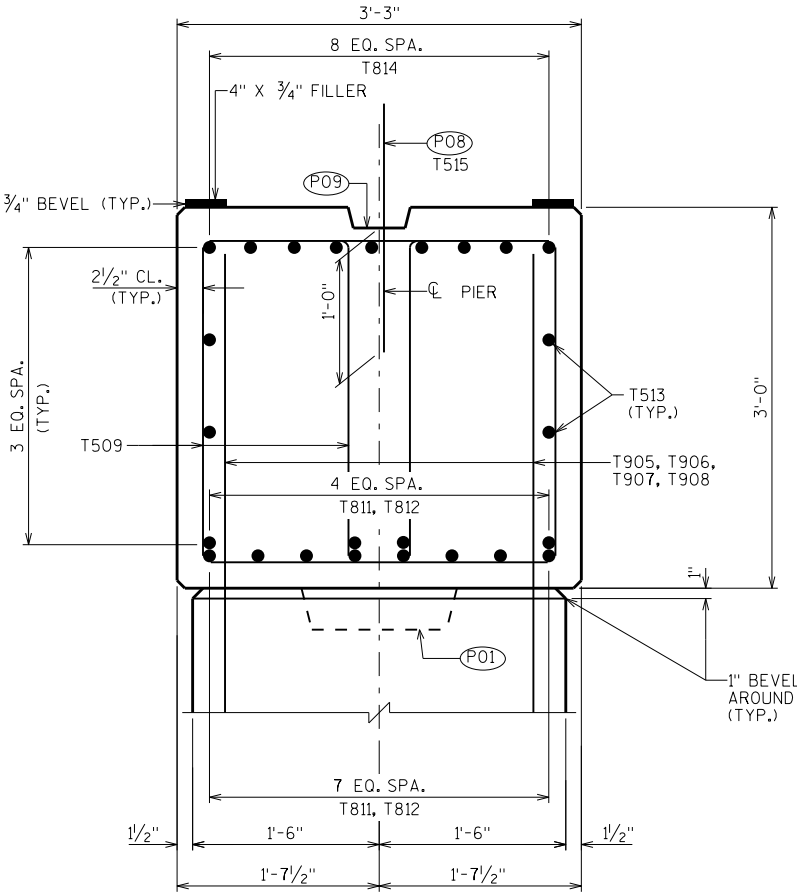
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T801		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
T802		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
T903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERT.-ALL FACES
T504	X	250	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T905	X	18	19'-1"		COLUMN 1/CAP-VERT.-ALL FACES
T906	X	18	18'-3"		COLUMN 2/CAP-VERT.-ALL FACES
T907	X	18	17'-5"		COLUMN 3/CAP-VERT.-ALL FACES
T908	X	18	16'-7"		COLUMN 4/CAP-VERT.-ALL FACES
T509	X	130	9'-2"	X	CAP-VERT.-DOUBLE STIRRUPS-BTWN. COLUMNS
T510	X	4	6'-0"	X	CAP-HORIZ.-ENDS ONLY
T811	X	12	34'-9"		CAP-BOT.-HORIZ.
T812	X	12	37'-1"		CAP-BOT.-HORIZ.
T513	X	8	34'-5"		CAP-HORIZ.
T814	X	18	40'-3"	X	CAP-TOP-HORIZ.
T515	X	64	2'-0"		CAP-TOP-VERTICAL-DOWELS



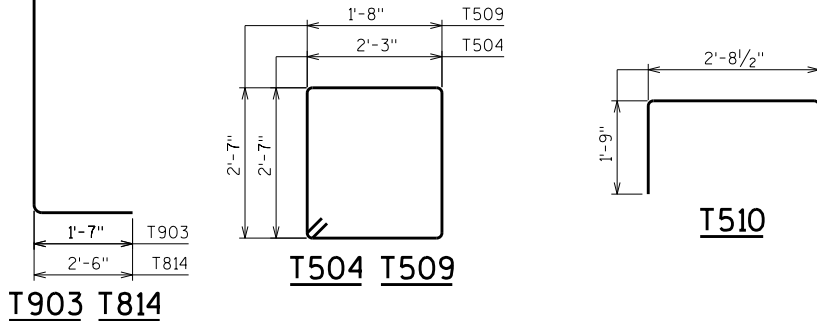
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP



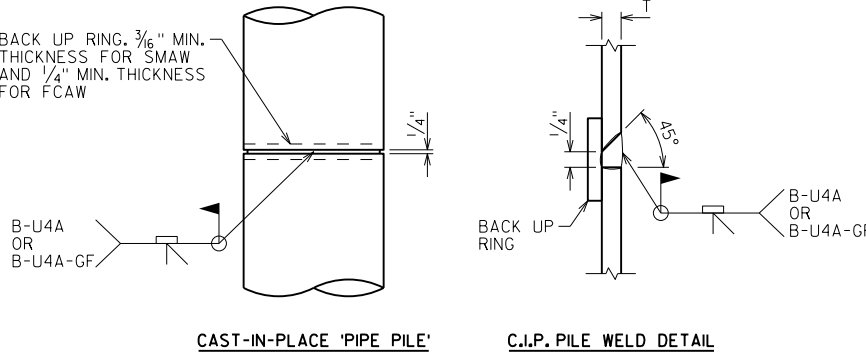
BUNDLING DETAIL



T903 T814

T504 T509

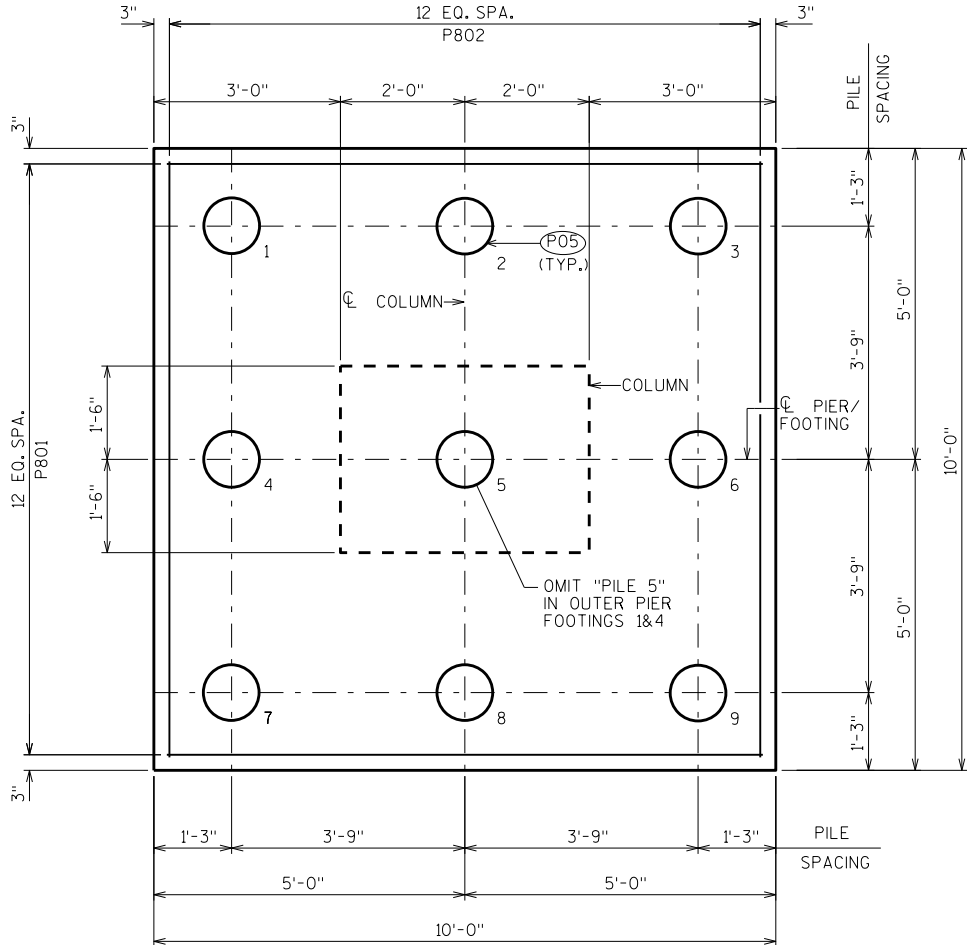
T510



CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

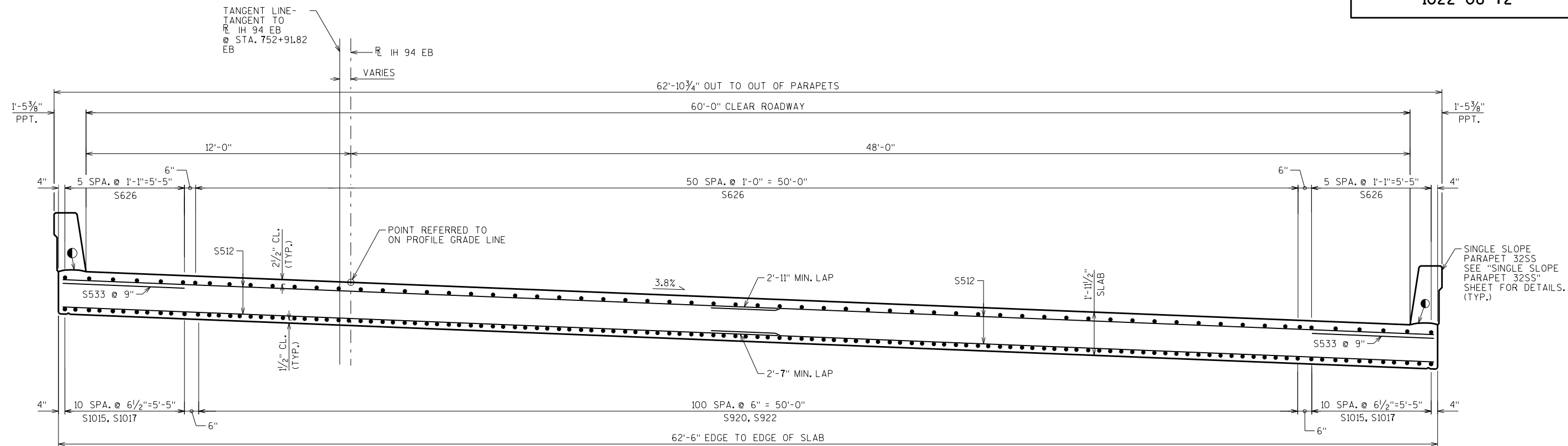
PILE DETAILS



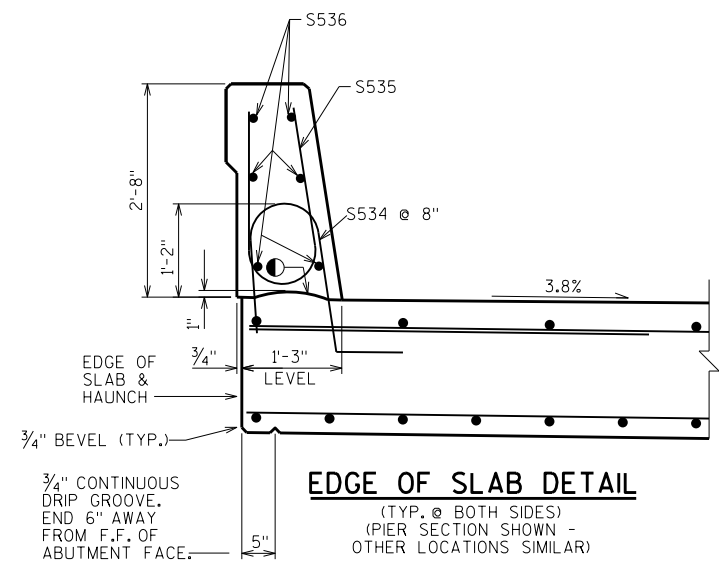
FOOTING/PILE PLAN

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" DIA. X 0.5" CIP CONCRETE PILING, ESTIMATED 45'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) T515 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY JDM		PLANS CK'D. JLR	
PIER 2 DETAILS		SHEET 11	
		398	

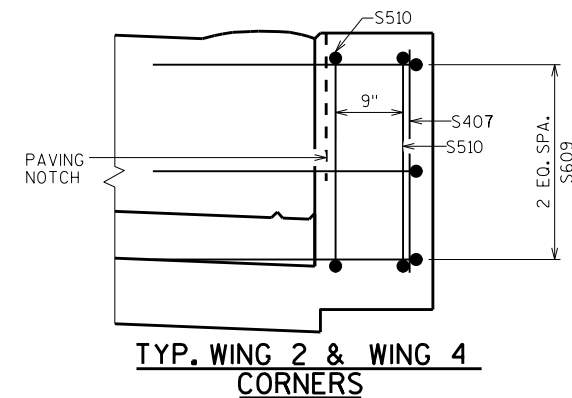
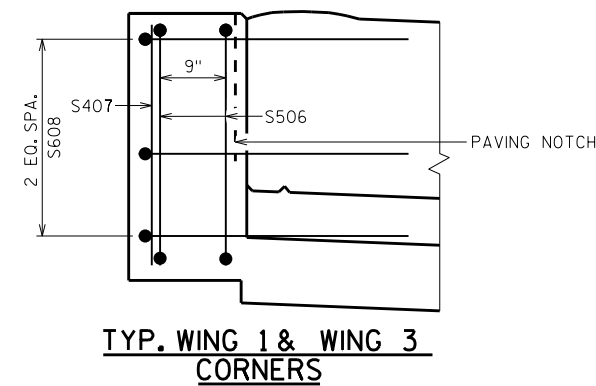
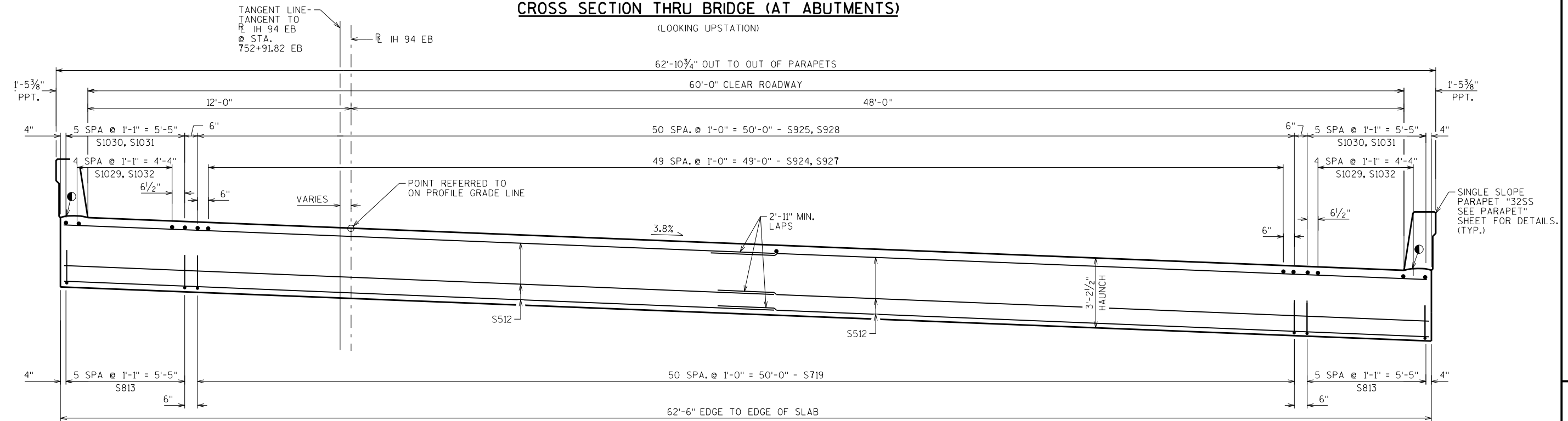
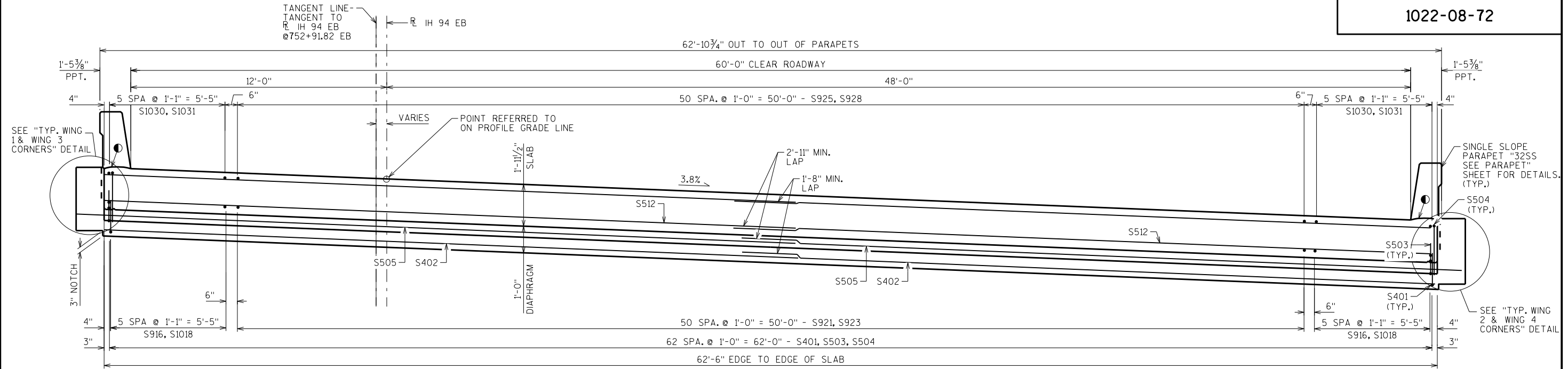


CROSS SECTION THRU ROADWAY
(LOOKING UPSTATION)



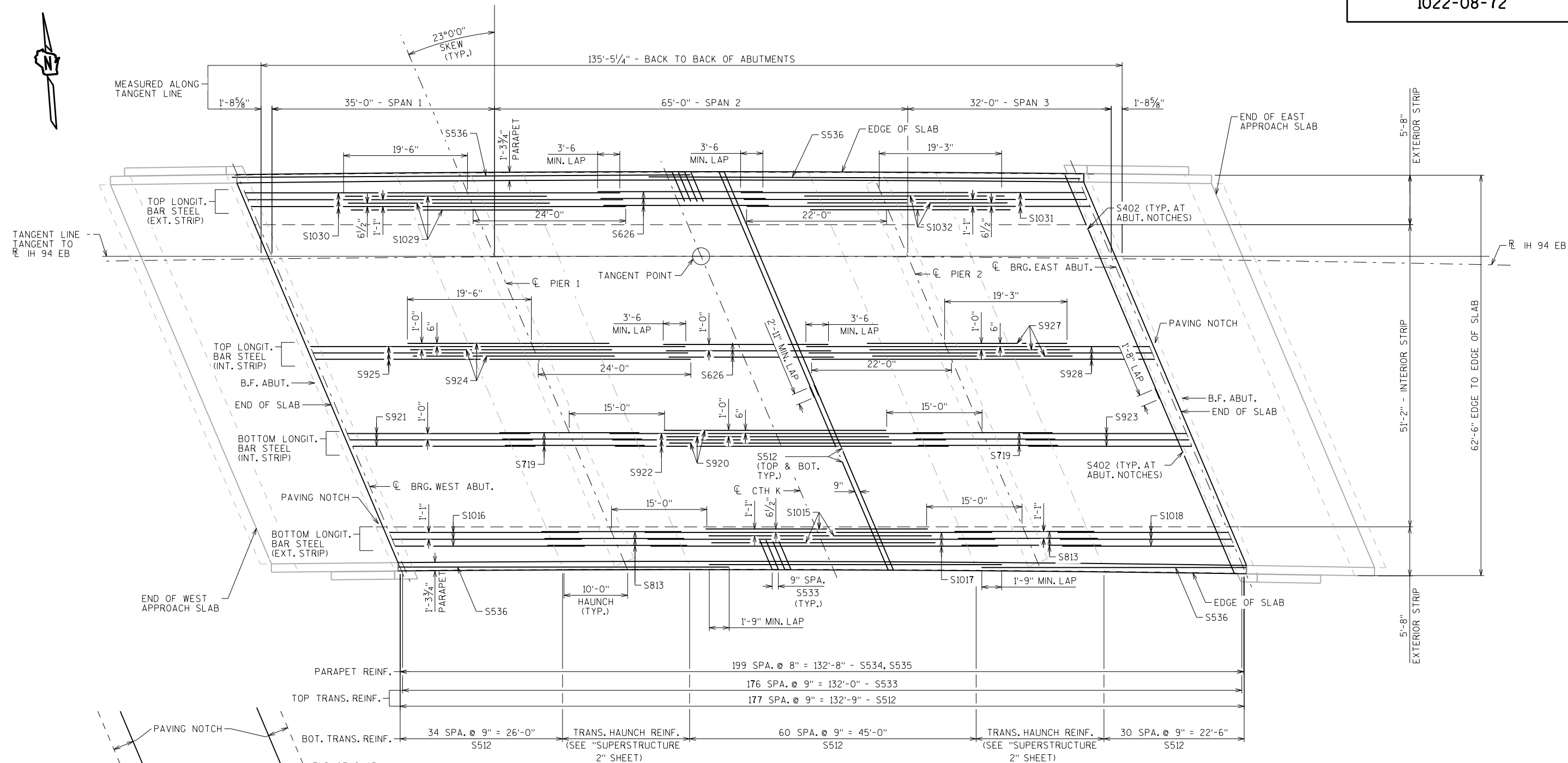
● HORIZ. CONST. JOINT:
STRIKE OFF AND LEAVE
ROUGH AS SHOWN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTION 1			SHEET 12
			399



CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTION 2			SHEET 13
			400

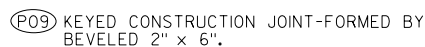


PLAN

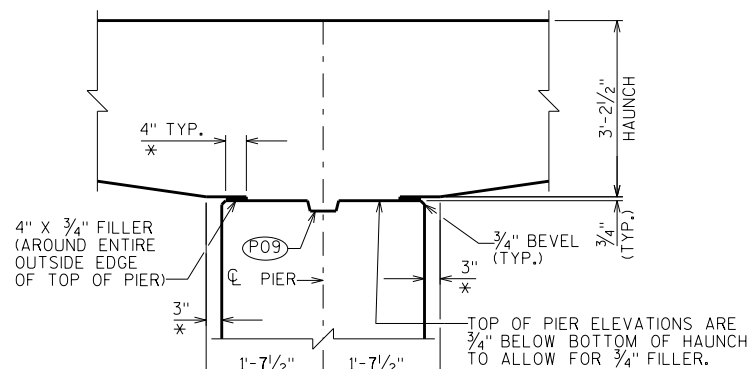
PARTIAL PLAN DETAIL OF PARAPET REINF.

(SHOWING S.W. & S.E. CORNERS - DETAIL
TYP. @ BOTH SIDES OF SUPERSTRUCTURE)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE 1		SHEET 14	
		401	



(LOOKING NORTH)

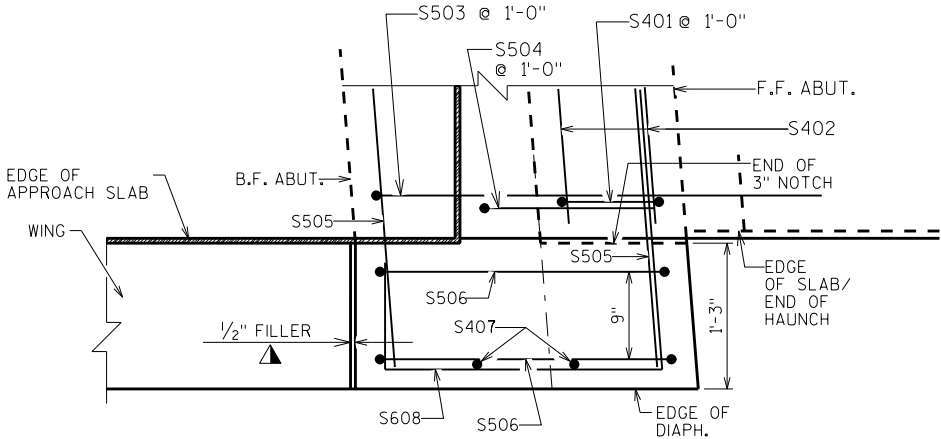


DETAIL AT PIER

☆ BARS PLACED PARALLEL
TO "TANGENT LINE" AND
SPACED PERPENDICULAR
TO "TANGENT LINE".

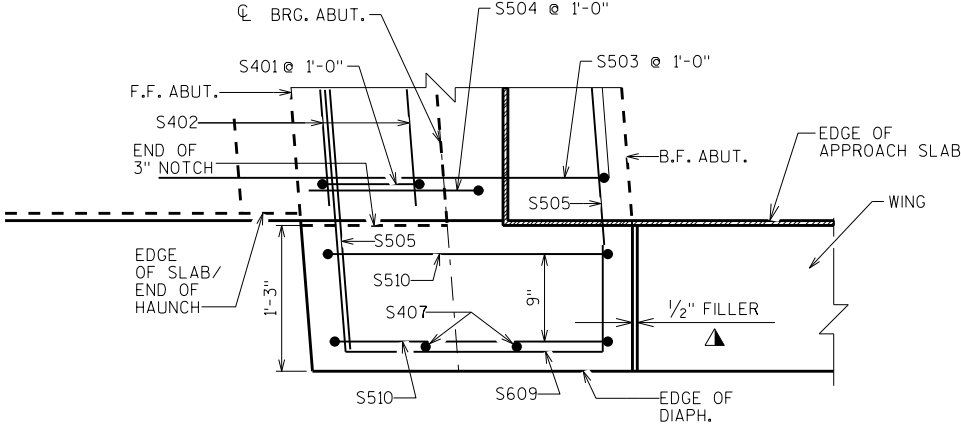
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C OF ABUTMENTS, THE C OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG CUTTER LINES AND R IH 94 EB

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY		JDM	PLANS CK'D. JLR
SUPERSTRUCTURE 2		SHEET 15	
		402	



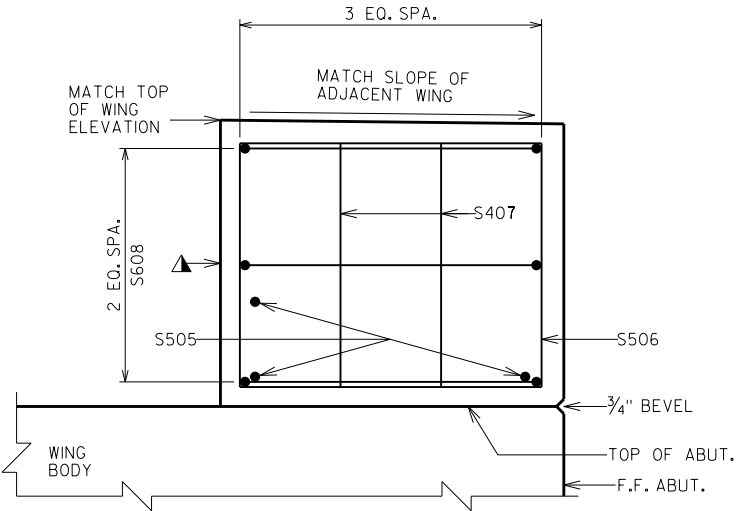
**CORNER DETAIL
AT WINGS 1 & 3**

(PLAN VIEW)



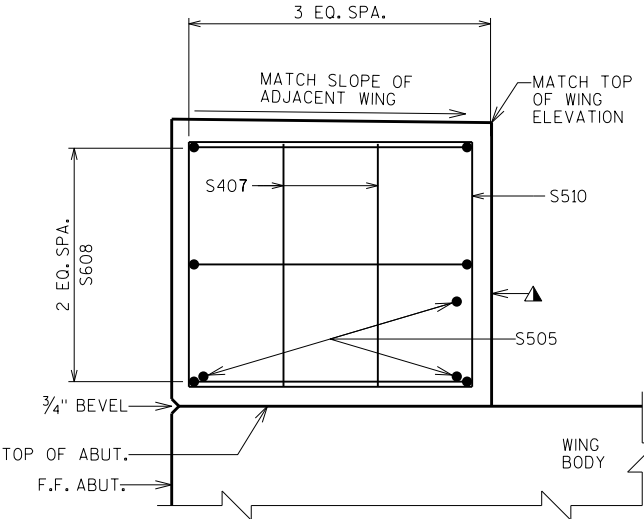
**CORNER DETAIL
AT WINGS 2 & 4**

(PLAN VIEW)



CORNER DETAIL AT WINGS 1 & 3

(ELEVATION VIEW)

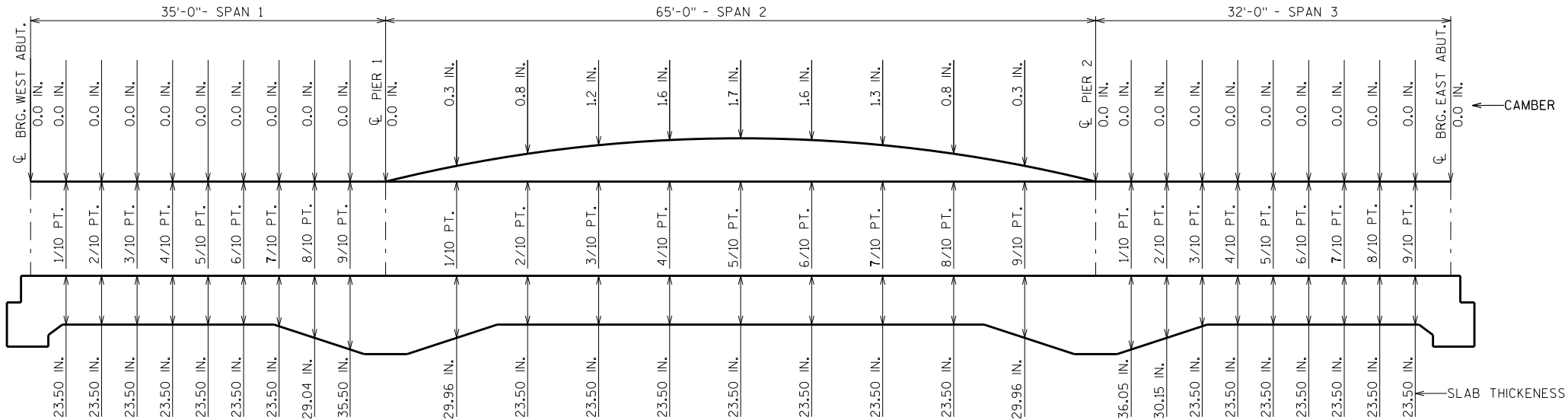


CORNER DETAIL AT WINGS 2 & 4

(ELEVATION VIEW)

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-219				
DRAWN BY		JDM	PLANS CK'D.	JLR
SUPERSTRUCTURE DETAILS 1				SHEET 16
				403



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS = TOP OF SLAB FALSEWORK ELEVATION.

TOP OF SLAB ELEVATIONS

	CL BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	CL BRG. PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	CL BRG. PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	CL BRG. E. ABUT.
N. EOD	917.59	917.55	917.50	917.46	917.42	917.37	917.33	917.28	917.24	917.19	917.15	917.07	916.98	916.90	916.82	916.73	916.65	916.57	916.49	916.40	916.32	916.28	916.24	916.20	916.16	916.11	916.07	916.03	915.99	915.95	915.91
R IH 94 EB	917.07	917.02	916.98	916.93	916.89	916.84	916.80	916.76	916.71	916.67	916.62	916.54	916.46	916.37	916.29	916.21	916.12	916.04	915.96	915.87	915.79	915.75	915.71	915.67	915.63	915.59	915.54	915.50	915.46	915.42	915.38
S. EOD	914.98	914.94	914.89	914.85	914.80	914.76	914.71	914.67	914.62	914.58	914.53	914.45	914.36	914.28	914.20	914.11	914.03	913.94	913.86	913.78	913.69	913.65	913.61	913.57	913.53	913.48	913.44	913.40	913.36	913.32	913.28

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. WEST ABUTMENT	5/10 PT.	CL PIER 1	5/10 PT.	CL PIER 2	5/10 PT.	CL BRG. EAST ABUTMENT
NORTH GUTTERLINE & EDGE OF SLAB							
R IH 94 EB/ CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, THE CL OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTERLINES AND CROWN POINT. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE DETAILS 2		SHEET 17	
		404	

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	CONT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	126	3'-5"	X		ABUT. DIAPHS.-VERT.-LONGIT.
S402	X	8	34'-7"			ABUT. DIAPHS.-HORIZ.-TRANS.
S503	X	126	7'-8"	X		ABUT. DIAPHS./-VERT.
S504	X	126	3'-7"	X		ABUT. DIAPHS.-VERT.
S505	X	12	34'-2"			ABUT. DIAPHS.-HORIZ.
S506	X	4	11'-3"	X	▲	ABUT. DIAPHS.-VERT.-AT WINGS 1 & 3-STIRRUPS
S407	X	8	2'-4"			ABUT. DIAPHS.-VERT.- ALL FOUR WINGS
S608	X	6	7'-0"	X		ABUT. DIAPHS.-HORIZ.-WINGS 1 & 3
S609	X	6	6'-1"	X		ABUT. DIAPHS.-HORIZ.-WINGS 2 & 4
S510	X	4	10'-3"	X	▲	ABUT. DIAPHS.-VERT.-AT WINGS 2 & 4
		NOT USED				
S512	X	714	35'-3"			SLAB-TOP & BOT.-TRANSVERSE
S813	X	24	22'-4"	X		SLAB-BOT.-LONGIT.-HAUNCH
		NOT USED				
S1015	X	10	35'-0"			SLAB-BOT.-LONGIT.
S1016	X	12	30'-4"			SLAB-BOT.-LONGIT.
S1017	X	12	54'-8"			SLAB-BOT.-LONGIT.
S1018	X	12	27'-4"			SLAB-BOT.-LONGIT.
S719	X	102	22'-3"	X		SLAB-BOT.-LONGIT.-HAUNCH
S920	X	50	35'-0"			SLAB-BOT.-LONGIT.
S921	X	51	29'-3"			SLAB-BOT.-LONGIT.
S922	X	51	52'-6"			SLAB-BOT.-LONGIT.
S923	X	51	26'-3"			SLAB-BOT.-LONGIT.
S924	X	50	31'-9"			SLAB-TOP-LONGIT.-HAUNCH
S925	X	51	59'-6"			SLAB-TOP-LONGIT.
S626	X	63	26'-0"			SLAB-TOP-LONGIT.
S927	X	50	31'-6"			SLAB-TOP-LONGIT.-HAUNCH
S928	X	51	54'-6"			SLAB-TOP-LONGIT.
S1029	X	10	31'-9"			SLAB-TOP-LONGIT.
S1030	X	12	59'-6"			SLAB-TOP-LONGIT.
S1031	X	12	54'-6"			SLAB-TOP-LONGIT.
S1032	X	10	31'-6"			SLAB-TOP-LONGIT.-HAUNCH
S533	X	354	5'-0"			SLAB-TOP-TRANS.-ENDS
S534	X	400	4'-5"	X		PARAPETS/SLAB-VERT.
S535	X	400	5'-0"	X		PARAPETS-VERT.
S536	X	36	46'-1"			PARAPETS-LONGIT.-HORIZ.

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

☆	SS601	124	3'-0"		ABUT. DIAPH. TO APPROACH SLAB
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└─STAINLESS STEEL REINFORCEMENT

☆SEE "SUPERSTRUCTURE LONGITUDINAL SECTIONS" AND "STRUCTURAL APPROACH SLABS" SHEETS FOR STAINLESS STEEL REBAR LOCATIONS.

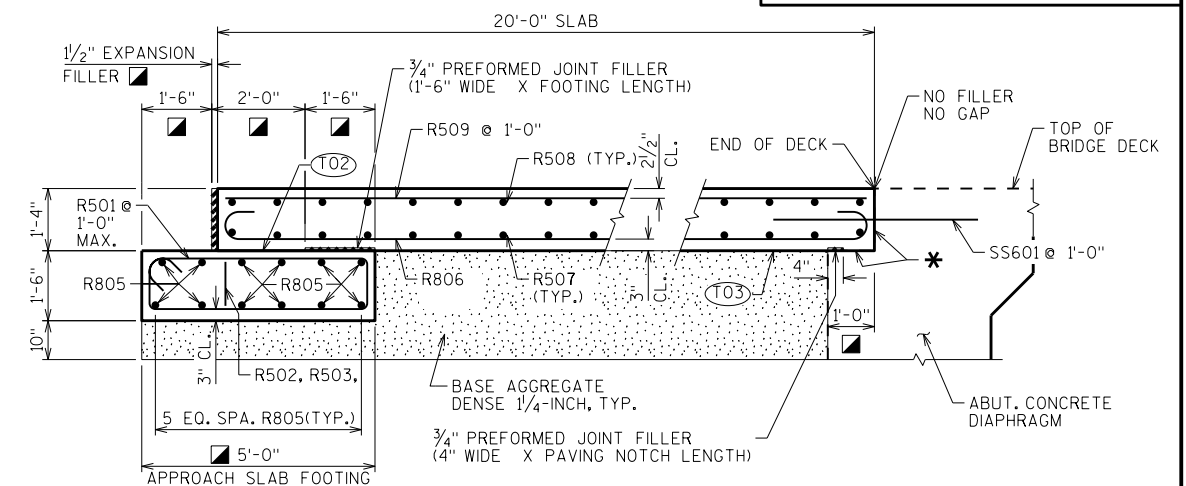
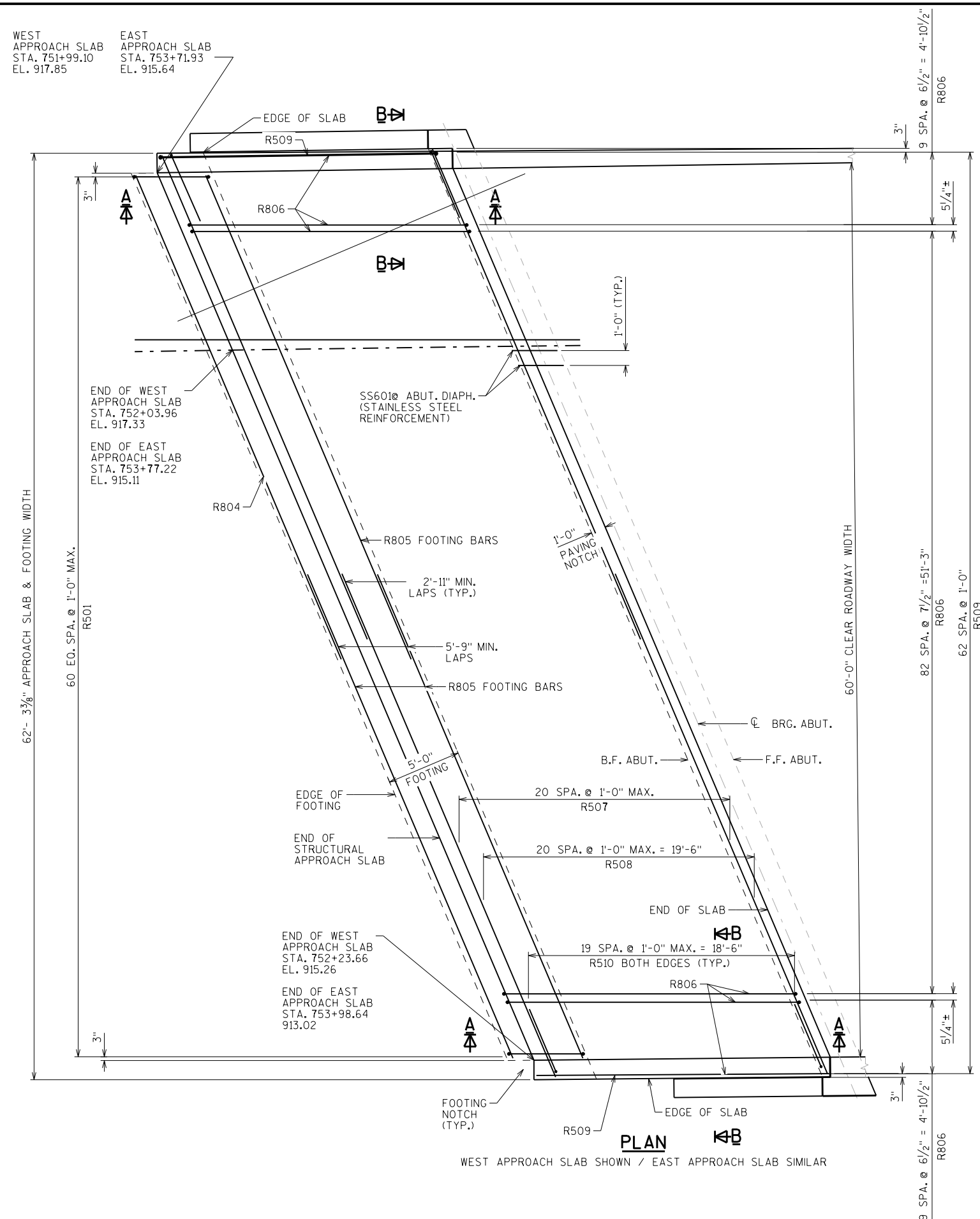
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S506	2 SERIES OF 2	10'-10" TO 11'-8"
S510	2 SERIES OF 2	9'-10" TO 10'-8"

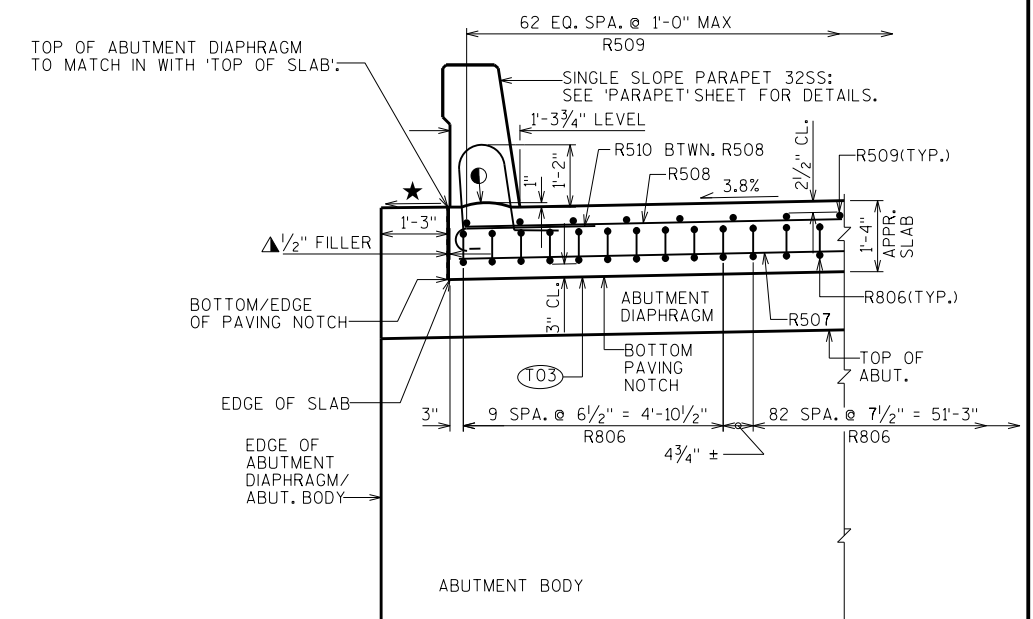
BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
		DRAWN BY JDM	PLANS CK'D. JLR
SUPERSTRUCTURE DETAILS 3			SHEET 18
			405

SCALE = 1:00



SECTION A-A THRU APPROACH SLAB



SECTION B-B (EDGE OF SLAB DETAIL)

DESIGN DATA

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE
IF THE REGION SOILS ENGINEER DETERMINES
THAT THE EXISTING SOIL BEARING PRESSURE
MEETS THE REQUIREMENT ABOVE.

★FINISH SMOOTH - SLOPE TO DRAIN

● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING
AND PLACE MULTIPLE LAYERS (0.03" MIN.
TOTAL THK.) OF POLYETHYLENE SHEETS
OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

* APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

MEASURED NORMAL TO ABUTMENT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
DRAWN BY		JDM	PLANS CK'D. JLR
STRUCTURAL APPROACH SLAB 1		SHEET 19	
		406	

SCALE = 4.00

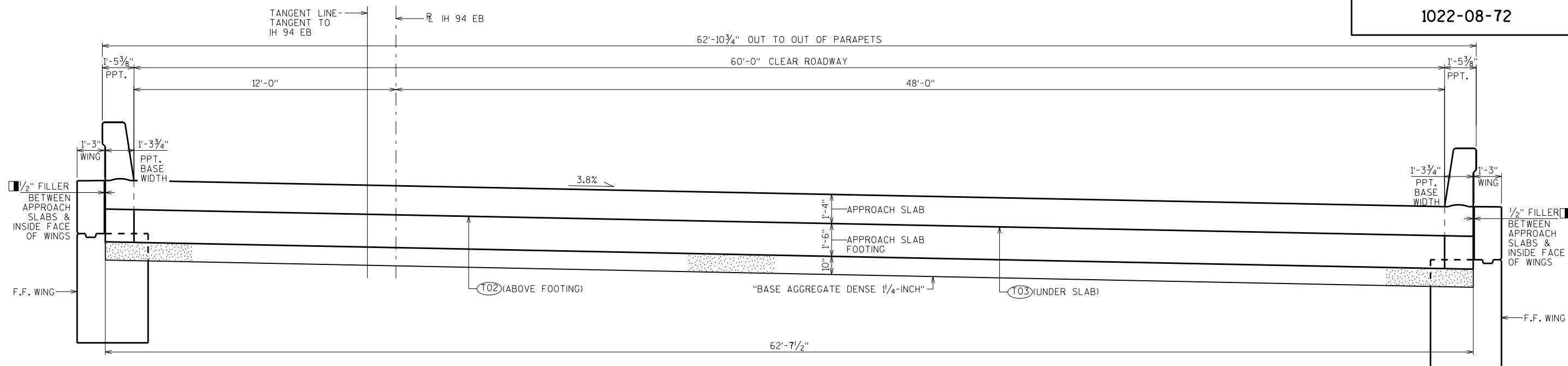


Diagram illustrating the elevation view of a footing and slab assembly. The footing has a width of 1'-9" and a height of 3". The slab has a thickness of 3" and a width of 5'-5 5/8". The reinforcement details include:

- FOOTING NOTCH: Indicated by a line pointing to the top edge of the footing.
- EDGE OF SLAB & FOOTING: Indicated by a line pointing to the top edge of the slab.
- R502: Top reinforcement bars in the footing.
- 90°: Bend angle for the reinforcement bars.
- TWO R804: Two bars of size R804 in the slab.
- R501: Bottom reinforcement bars in the slab.
- R805: Bottom reinforcement bars in the footing.
- 5 EQ. SPA.: Five equal spacing for the bottom reinforcement bars in the footing.
- 2 EQ. SPA.: Two equal spacing for the bottom reinforcement bars in the slab.
- 1'-0" (TYP.): Typical spacing for the bottom reinforcement bars in the slab.
- 1'-33/4": Vertical dimension for the footing notch.
- 3": Thickness of the footing.
- 3": Thickness of the slab.

Diagram of a rectangular panel with dimensions and labels:

- Top horizontal dimension: 3'-5" TO 3'-9" (labeled R503)
- Middle horizontal dimension: 2'-9" TO 3'-1" (labeled R502)
- Bottom horizontal dimension: 5'-1" (labeled R501)
- Left vertical dimension: 1'-1" (labeled R501 R502 R503)

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.		LENGTH	BENT	BAR SERIES	LOCATION
		WEST SLAB	EAST SLAB				
R501	X	61	61	13'-0"	X		FOOTING-STIRRUP
R502	X	2	2	8'-8"	X		FOOTING-STIRRUP
R503	X	2	2	10'-0"	X		FOOTING-STIRRUP
R804	X	4	4	2'-0"			FOOTING-HORIZONTAL
R805	X	16	16	36'-7"			FOOTING-HORIZONTAL
R806	X	103	103	21'-6"	X		SLAB-BOTTOM-LONGITUDINAL
R507	X	42	42	35'-4"			SLAB-BOTTOM-TRANSVERSE
R508	X	42	42	35'-4"			SLAB-TOP-TRANSVERSE
R509	X	63	63	19'-8"			SLAB-TOP-LONGITUDINAL
R510	X	20	20	4'-1"	X		SLAB-TOP-TRANSVERSE-EDGES

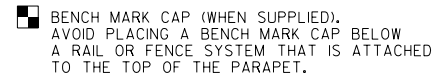
BAR MARK	NO. REQ'D.	LENGTH
R502	2 SERIES OF 2	8'-4" TO 9'-0"
R503	2 SERIES OF 2	9'-8" TO 10'-4"

STANDARD 180° HOOK (TYP.)

19'-8"

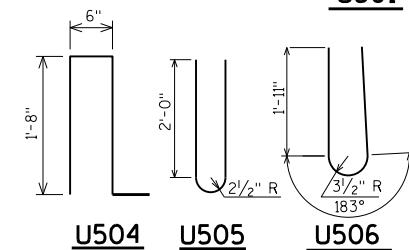
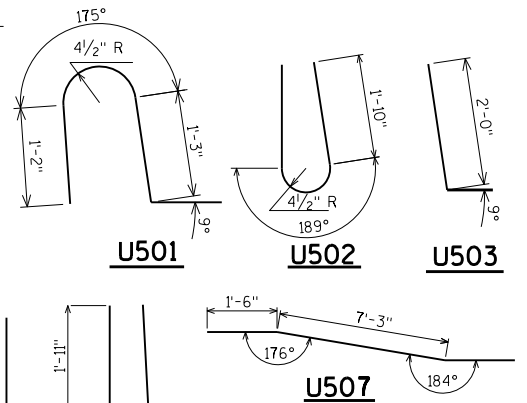
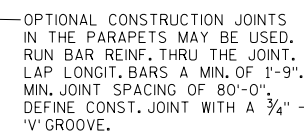
R806

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-17-219					
DRAWN BY			JDM	PLANS CK'D.	JLR
STRUCTURAL APPROACH SLAB 2				SHEET 20	
				407	

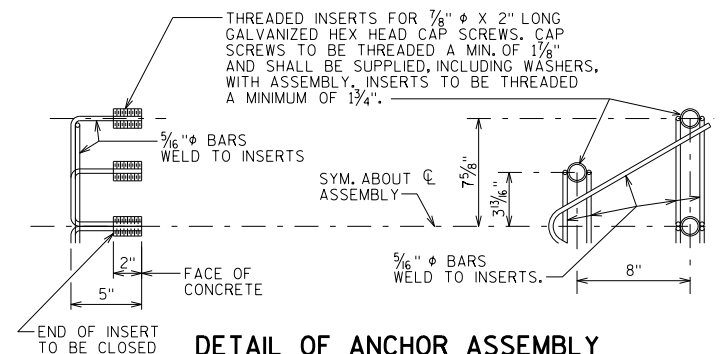


FOR STRUCTURAL APPROACH SLAB PARAPETS

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
U501	X	32	32	4'-5"	X		PARAPET VERT.
U502	X	32	32	5'-0"	X		PARAPET VERT.
U503	X	24	24	2'-9"	X		PARAPET VERT.
U504	X	34	34	4'-4"	X		PARAPET VERT.
U505	X	22	22	4'-9"	X		PARAPET VERT.
U506	X	12	12	4'-10"	X		PARAPET VERT.
U507	X	2	2	19'-6"	X		PARAPET HORIZ.
U508	X	10	10	19'-6"			PARAPET HORIZ.



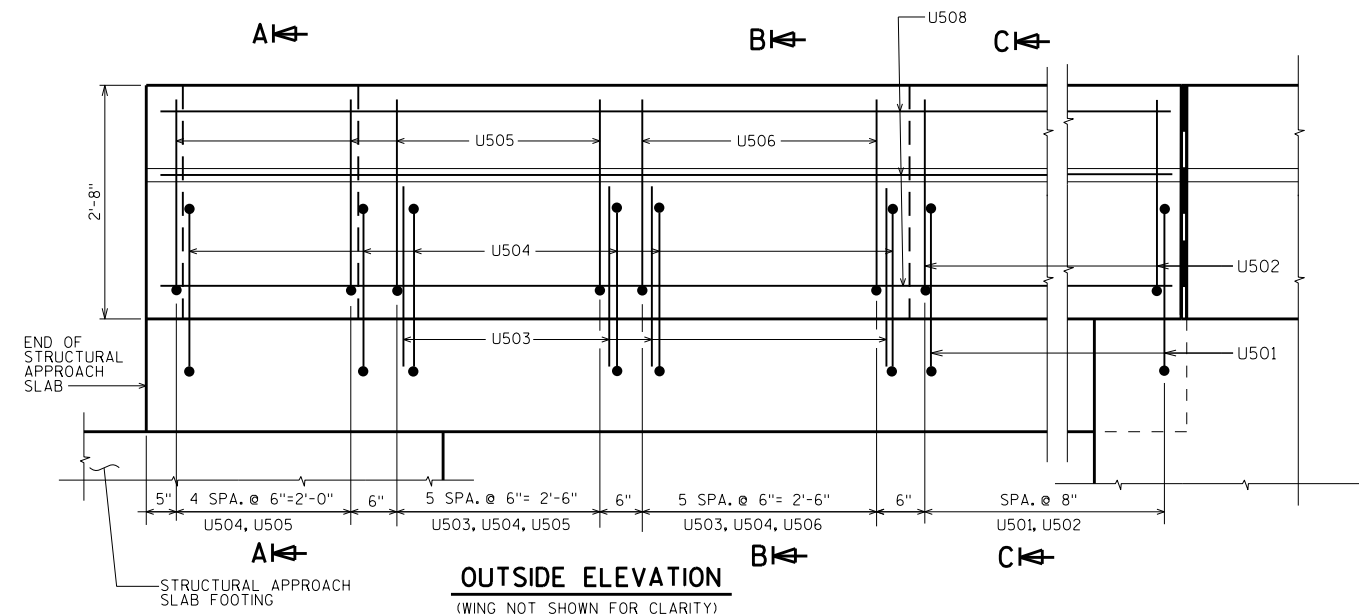
THREADED INSERTS FOR $\frac{7}{8}$ " ϕ X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF $\frac{1}{8}$ " AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF $\frac{1}{4}$ ".



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED
IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

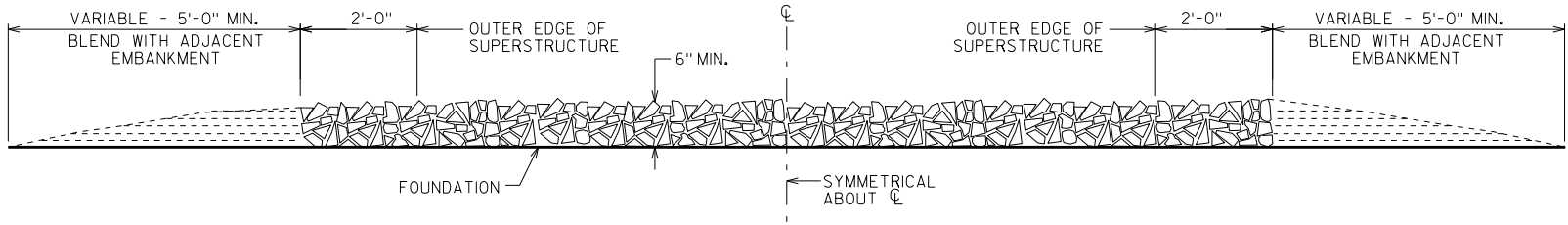


 SLOPE FOR DRAINAGE

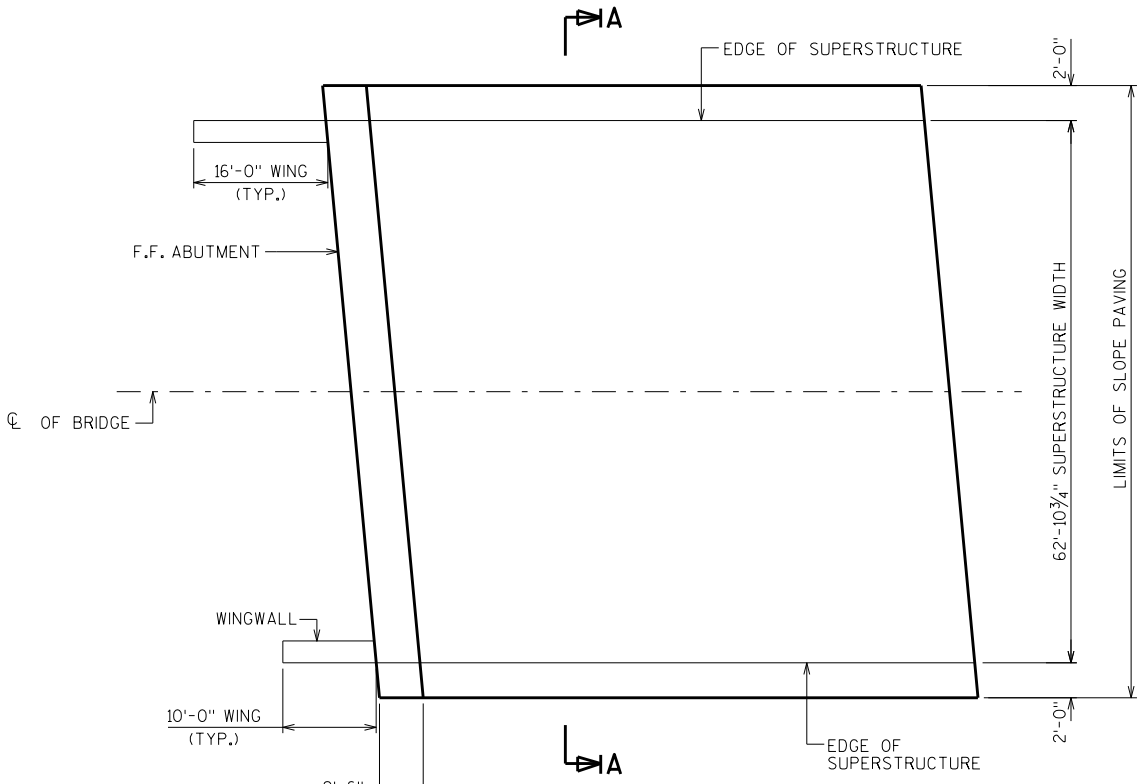
● CONST. JOINT - STRIKE OFF AS SHOWN.

▽ U501, U503, AND U504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

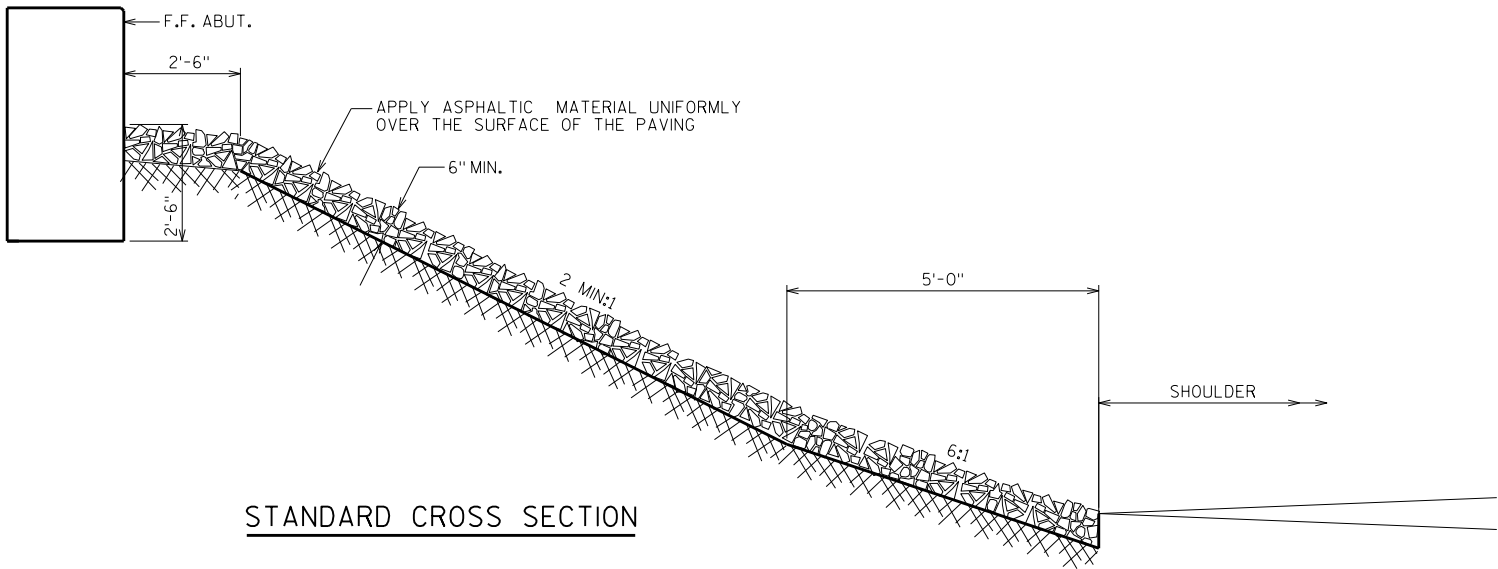
DATE		DRAWN BY		JLM	
NO.		REVISION		CK'D. JLR	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-17-219					
SINGLE SLOPE PARAPET 32SS			SHEET 21 408		



SECTION A-A



PLAN



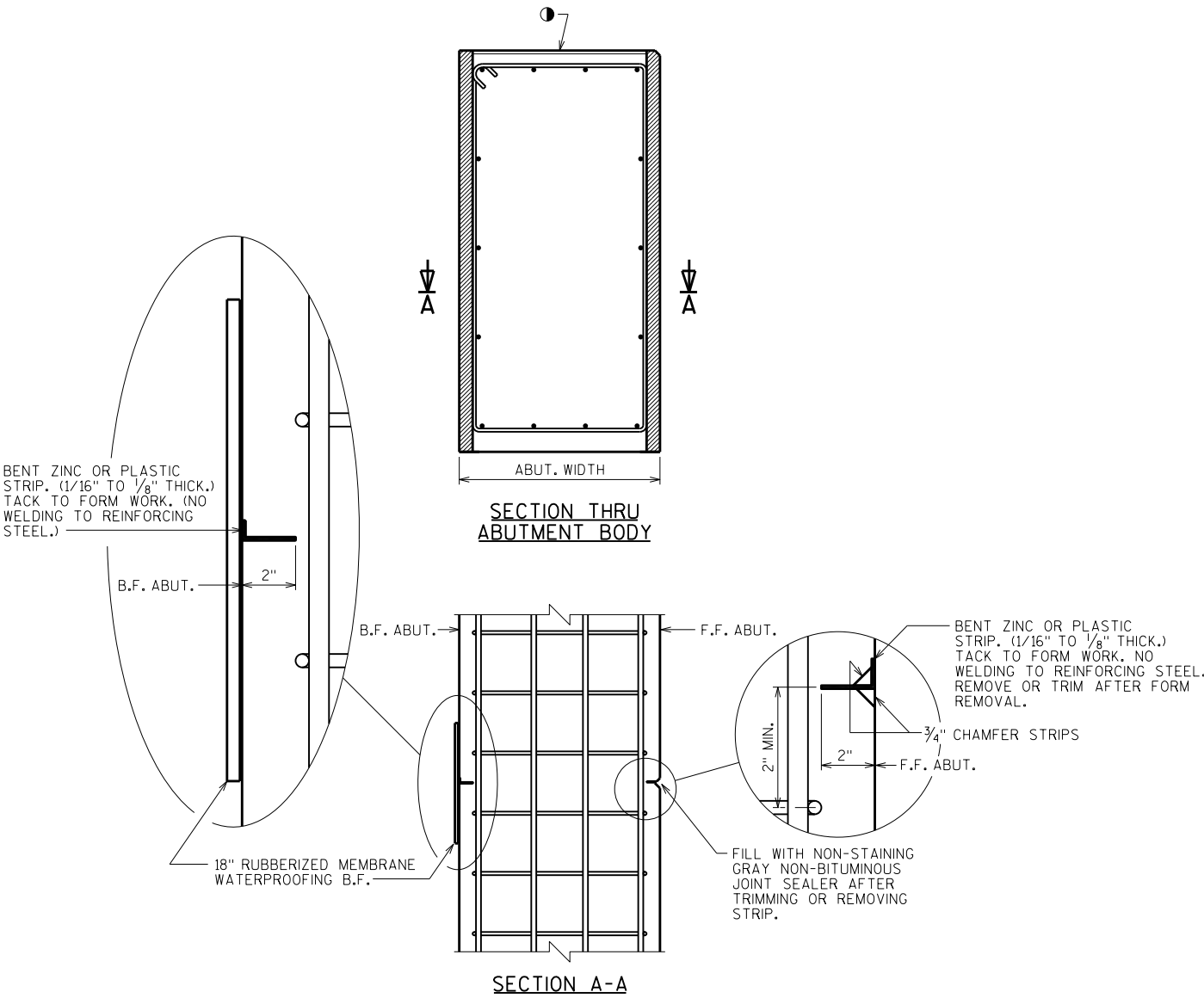
STANDARD CROSS SECTION

GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-219			
		DRAWN BY JDM	PLANS CK'D. JLR
SLOPE PAVING CRUSHED AGG.		SHEET 22	
		409	



NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

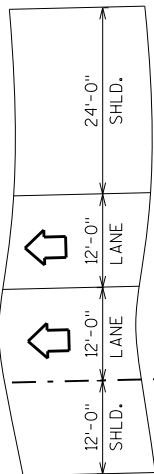
SAW CUTTING JOINT IS NOT ALLOWED.

● USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-219				
DRAWN BY		JDM	PLANS CK'D.	JLR
ALTERNATE CONSTR. JOINT			SHEET 23	
			410	

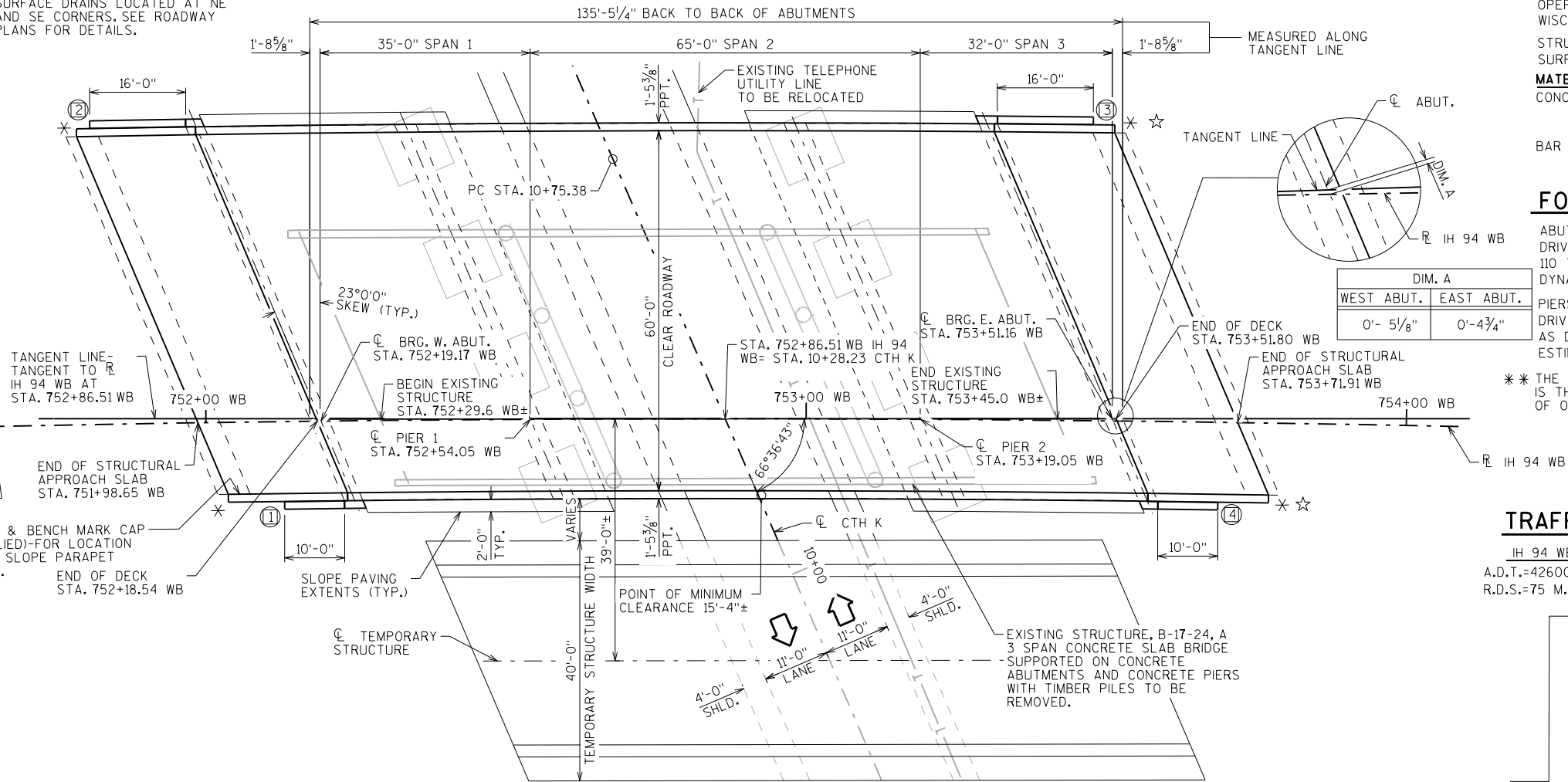


- * PROVIDE FOR THRE BEAM GUARD RAIL ATTACHMENT
- INDICATES WING NUMBER
- ☆ SURFACE DRAINS LOCATED AT NE AND SE CORNERS. SEE ROADWAY PLANS FOR DETAILS.

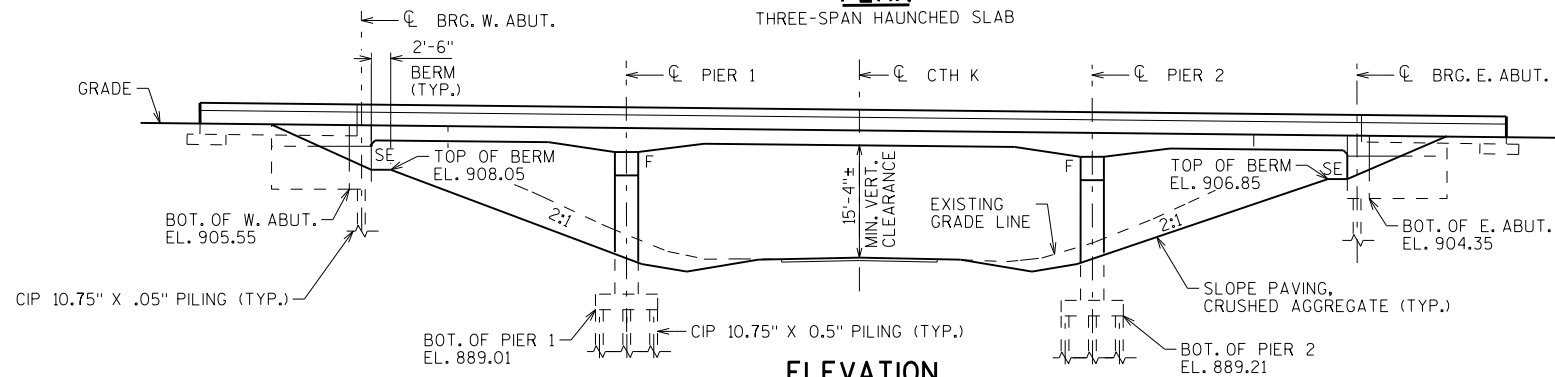
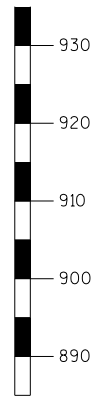


NAME PLATE & BENCH MARK CAP (WHEN SUPPLIED)-FOR LOCATION SEE "SINGLE SLOPE PARAPET 32SS" SHEET.

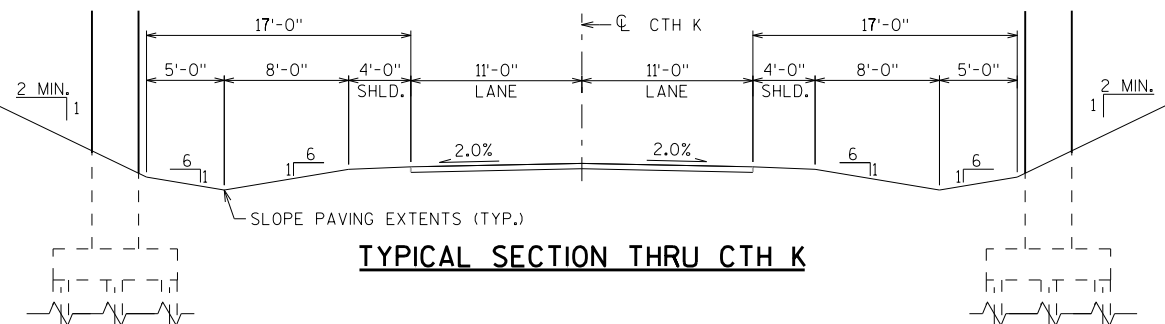
END OF DECK STA. 752+18.54 WB



PLAN
THREE-SPAN HAUNCHED SLAB



ELEVATION
NORMAL TO CTH K



TYPICAL SECTION THRU CTH K

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.17
OPERATING RATING FACTOR: RF=1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB $f'_c = 4,000$ P.S.I.
ALL OTHER $f'_c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:

GRADE 60 $f_y = 60,000$ P.S.I.
STAINLESS, GRADE 60 $f_y = 60,000$ P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON CIP 10.75" X 0.5" PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS -WEST ABUT. AND 110 TONS - EAST ABUT. PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 65' LONG - WEST ABUT. AND 60' LONG - EAST ABUT.

PIERS TO BE SUPPORTED ON CIP 10.75" X 0.5" PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50' LONG.

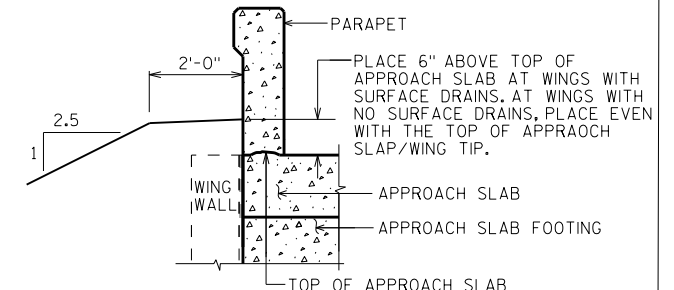
** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

CURVE DATA

CTH K	IH 94 WB
P.L. = 12+22.59	P.L. = 749+17.39 WB
$\Delta = 11^\circ 44' 7.88''$	$\Delta = 30^\circ 38' 43.35''$
D = 4°0'0"	D = 0°59'59.73"
T = 147.209'	T = 1569.99'
L = 293.388	L = 3064.76
R = 1432.395'	R = 5730.00'
S.E. = NORMAL CROWN	S.E. = 3.8%
P.C. = 10+75.38	P.C. = 733+47.40 WB
P.T. = 13+68.76	P.T. = 763+98.84 WB

TRAFFIC VOLUME

IH 94 WB	CTH K
A.D.T.=42600 (2038)	A.D.T.=300 (2038)
R.D.S.=75 M.P.H.	R.D.S.=60 M.P.H.



TYPICAL FILL SECTION AT END OF
STRUCTURAL APPROACH SLABS

STRUCTURE DESIGN CONTACTS:

DANIEL MONROE (608) 266-8490
LAURA SHADEWALD (608) 267-9592

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. SUPERSTRUCTURE CROSS SECTION 1
13. SUPERSTRUCTURE CROSS SECTION 2
14. SUPERSTRUCTURE 1
15. SUPERSTRUCTURE 2
16. SUPERSTRUCTURE DETAILS 1
17. SUPERSTRUCTURE DETAILS 2
18. SUPERSTRUCTURE DETAILS 3
19. STRUCTURAL APPROACH SLAB 1
20. STRUCTURAL APPROACH SLAB 2
21. SINGLE SLOPE PARAPET 32SS
22. SLOPE PAVING CRUSHED AGG.
23. ALTERNATE CONSTR. JOINT

NO.	DATE	REVISION	BY
ACCEPTED <i>William C. Decker</i> 7/14/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-220			
IH 94 WB OVER CTH K			
COUNTY	DUNN	TOWN/CITY/VILLAGE	LUCAS & MENOMONIE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DLM	DESIGNED CKD.	WAH
DRAWN BY	JDM	PLANS CKD.	JLR
GENERAL PLAN			SHEET 1 OF 23
			411

I.D. 1022-08-02D

DATE: JULY 2017

SCALE = 12:00

DRAWINGS SHALL NOT BE SCALED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 11/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.

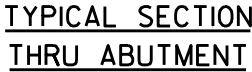
THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED
BASED ON THE DETAIL SHOWN IN THE PLANS.

TEMPORARY STRUCTURE BID ITEM IS INCLUDED IN B-17-219 PLANS.

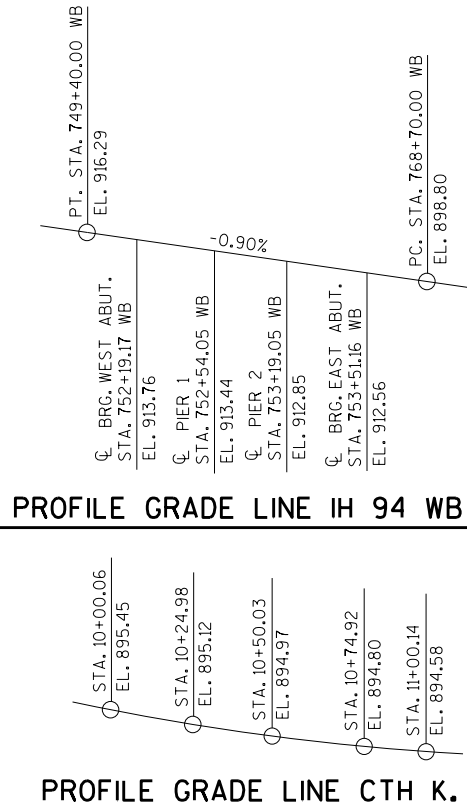
TEMPORARY SHORING IS INCLUDED IN BID ITEM "TEMPORARY
STRUCTURE STA. 753+03.93 EB" ON B-17-219 PLANS.

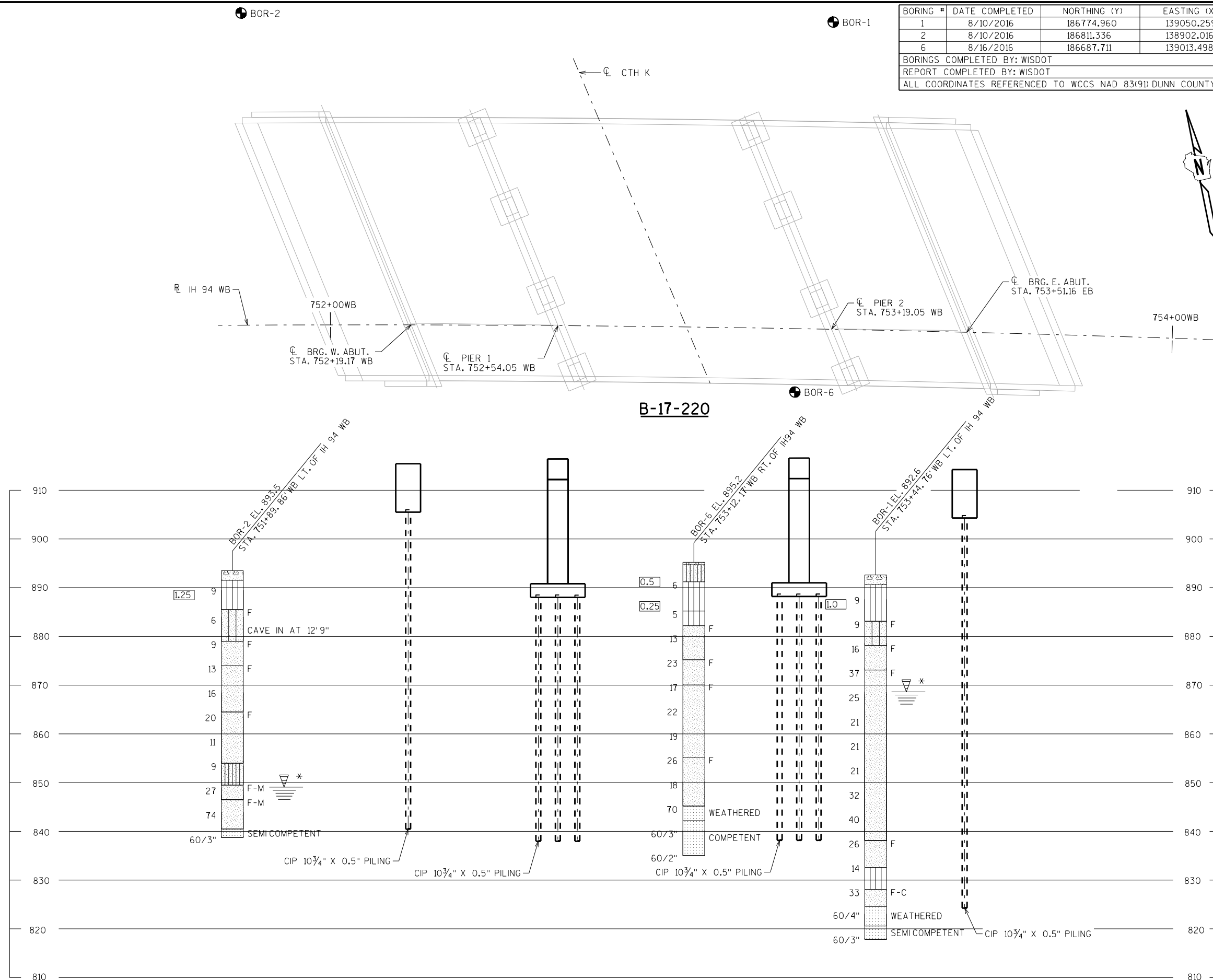


(A1 ABUTMENT WITH STRUCTURAL APPROACH)

- ▲ BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
		DRAWN BY JDM	PLANS CK'D. JLR
CROSS SECTION & QUANTITIES		SHEET 2	
		412	

[illegible]



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8/10/2016	186774.960	139050.259
2	8/10/2016	186811.336	138902.016
6	8/16/2016	186687.711	139013.498
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			

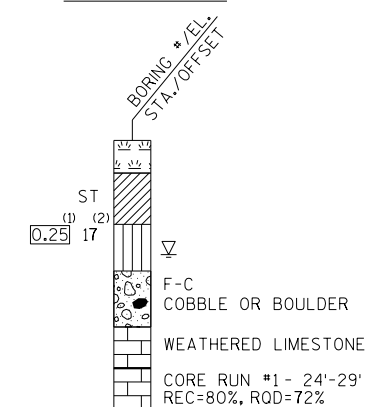
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

	ASPHALT		TOPSOIL		PEAT
	CONCRETE		FILL		GRAVEL
	SAND		CLAY		SILT
	BOULDERS OR COBBLES		LIMESTONE		BEDROCK (UNKNOWN)
	SHALE		SANDSTONE		IGNEOUS/ MFTA

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▼ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION
DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY		TLP/JDM	PLANS CK'D. JLR
SUBSURFACE EXPLORATION		SHEET 3	
		413	

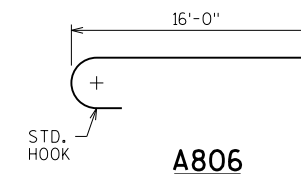
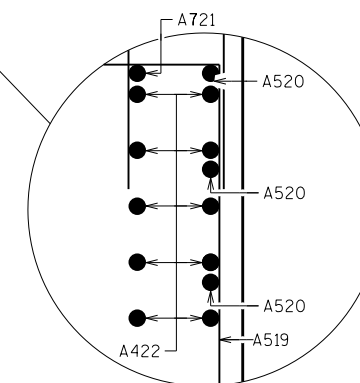
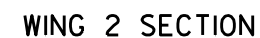
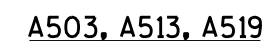
SCALE =



- | | | | |
|---|------|--------------|-----------------|
| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION | | | |
| STRUCTURE B-17-220 | | | |
| | | DRAWN BY JDM | PLANS CK'D. JLR |
| WEST ABUTMENT | | SHEET 4 | |
| | | 414 | |

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		20	2'-3"			BODY-VERT.-2 PER BODY PILE
A402		10	28'-0"	X		BODY-VERT.-1 PER BODY PILE
A503		88	14'-4"	X		BODY-VERT.-STIRRUPS
A604		20	36'-7"			BODY-HORIZ.
A605		7	44'-0"			BODY-HORIZ.-B.F.-AT CENTER
A806		14	16'-11"	X		BODY-HORIZ.-B.F.- AT BOTH ENDS
A507		63	10'-3"	X		BODY-TOP-VERT.-UNDER NOTCH
A408		2	25'-0"			BODY-TOP-HORIZ.
A409		8	32'-2"			BODY-TOP-HORIZ.-UNDER NOTCH
A410		47	3'-9"	X		BODY-TOP-VERT.-ALONG NOTCH
A411		2	5'-0"	X		BODY-TOP-VERT.-AT ENDS ONLY
A412		4	36'-1"			BODY-TOP-HORIZ.-END TO END
A513	X	11	15'-8"	X		WING 1-BOT.-VERT.-STIRRUP
A614	X	8	11'-2"			WING 1-BOT.-HORIZ.-B.F. & CENTER
A515	X	6	13'-3"			WING 1-BOT.-HORIZ.-F.F.
A516	X	14	10'-0"	X		WING 1-TOP-VERT.
A417	X	6	9'-8"			WINGS 1-TOP-HORIZ.-B.F. & F.F.
A618	X	2	9'-8"			WINGS 1-TOP-HORIZ.-B.F. & F.F.
A519	X	10	20'-8"	X		WING 2-BOT.-VERT.-STIRRUP
A520	X	9	11'-8"			WING 2-BOT.-HORIZ.-F.F.
A721	X	9	12'-11"			WING 2-BOT.-HORIZ.-B.F. & CENTER
A422	X	10	7'-9"			WING 2-HORIZ.-F.F & B.F.
A523	X	9	10'-4"	X		WING 2-TOP-VERT.
A524	X	13	10'-0"	X		WING 2-TOP-VERT.
A425	X	6	15'-8"			WINGS 2-TOP-HORIZ.-B.F. & F.F.
A626	X	2	15'-8"			WINGS 2-TOP-HORIZ.-B.F. & F.F.



THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

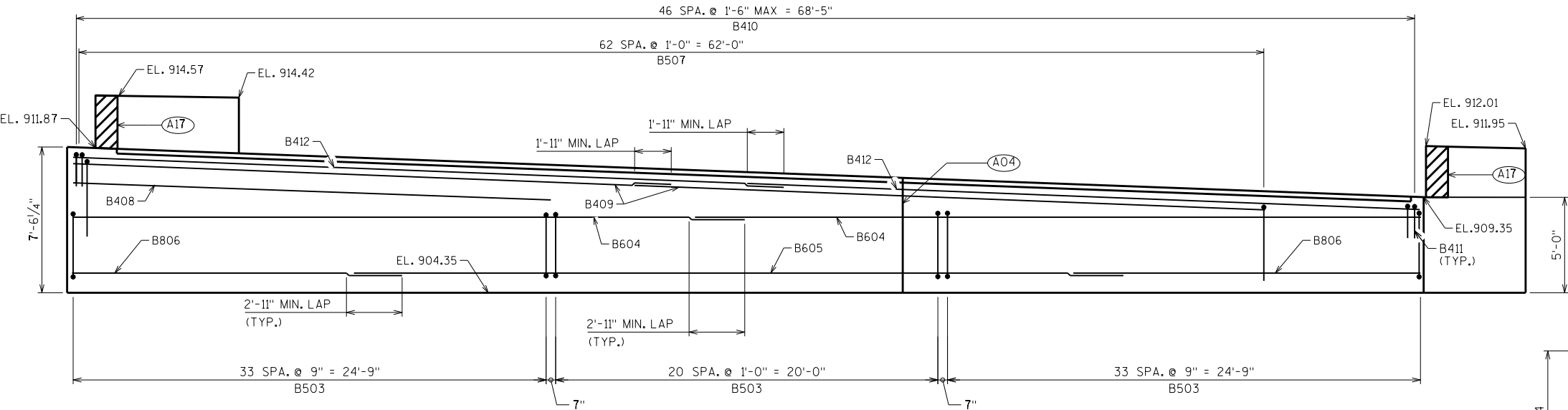


PILE DETAILS

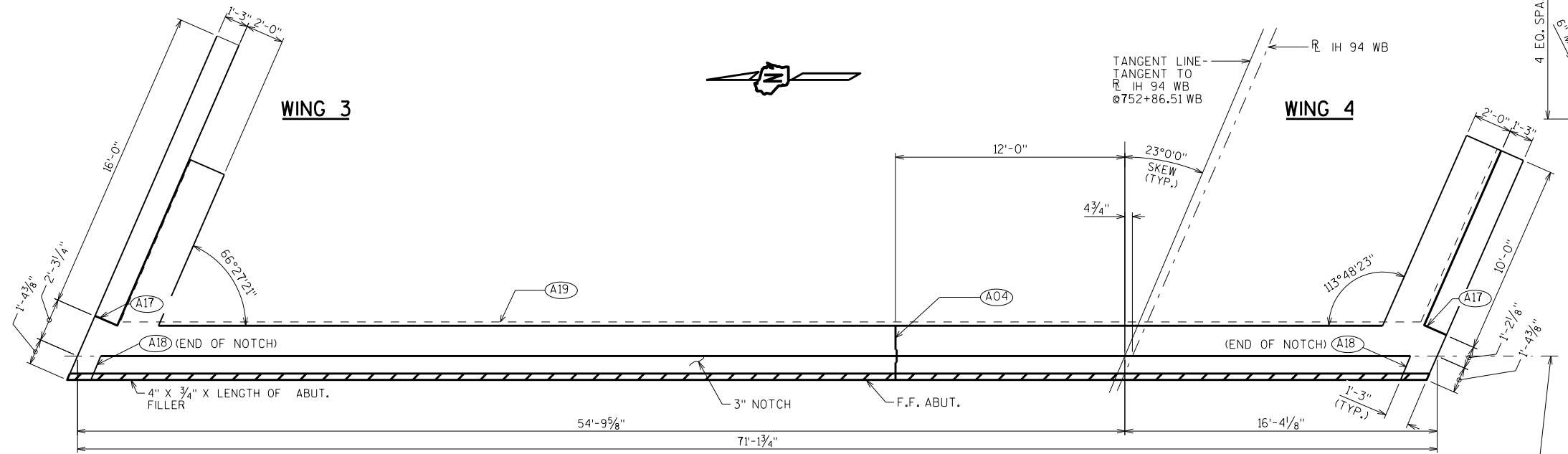
 SLOPE TO
DRAIN

NO.	DATE	REVISION			AY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-17-220					
			DRAWN AY	JDM	PLANS CK'D. JLR
WEST ABUTMENT DETAILS				SHEET 5	
				415	

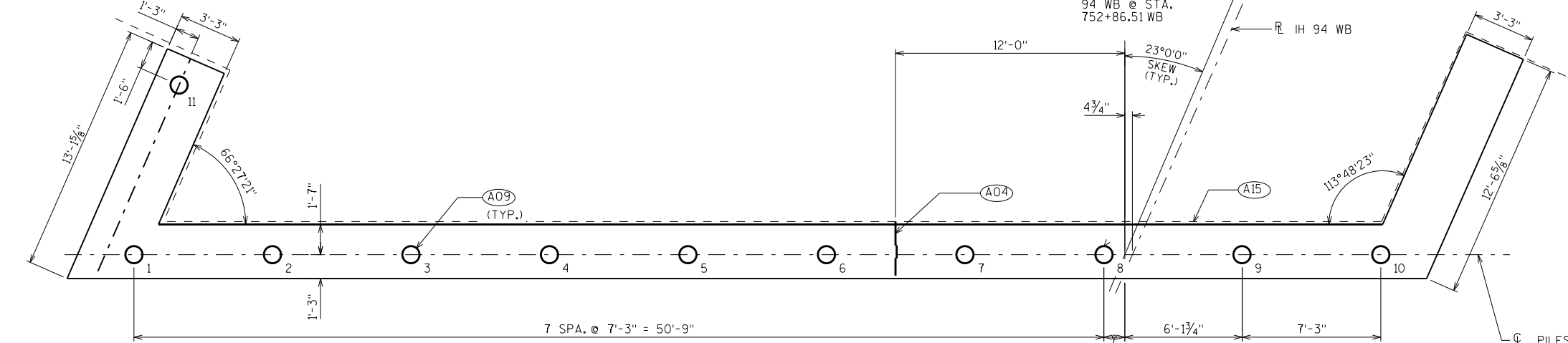
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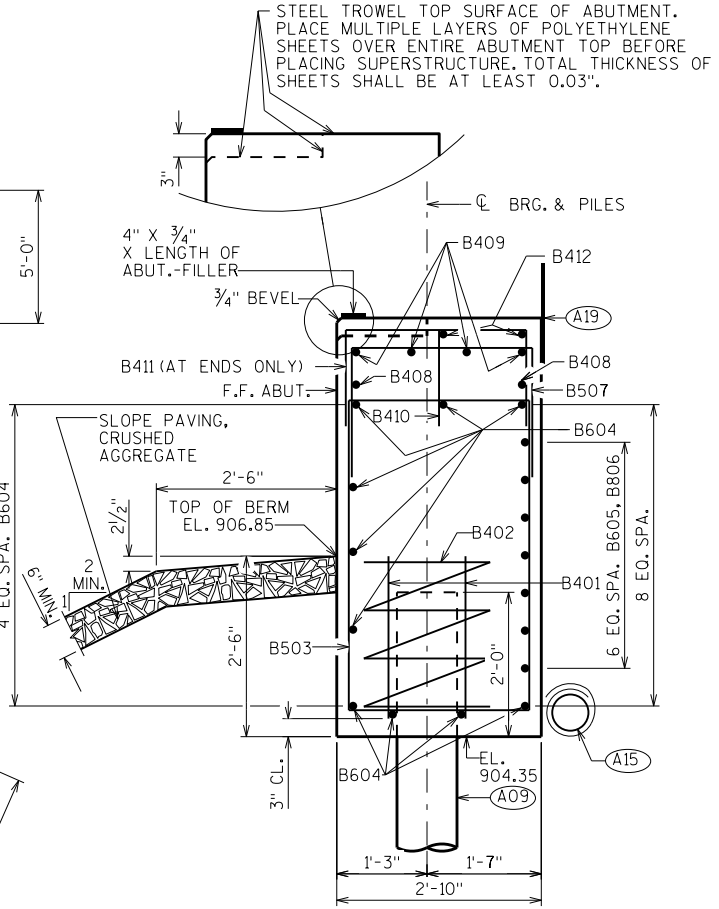
ELEVATION
(LOOKING EAST)



PLAN



PILE PLAN



SECTION THRU BODY

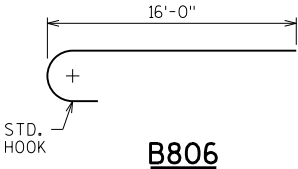
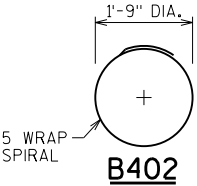
- (A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A09) SUPPORT ABUTMENT ON CIP 10.75" X 0.5" CONCRETE PILING, ESTIMATED 60'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. (SEE "EAST ABUTMENT DETAILS" SHEET FOR DETAILS.)
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY		JDM	PLANS CK'D. JLR
EAST ABUTMENT		SHEET 6	
		416	

BILL OF BARS

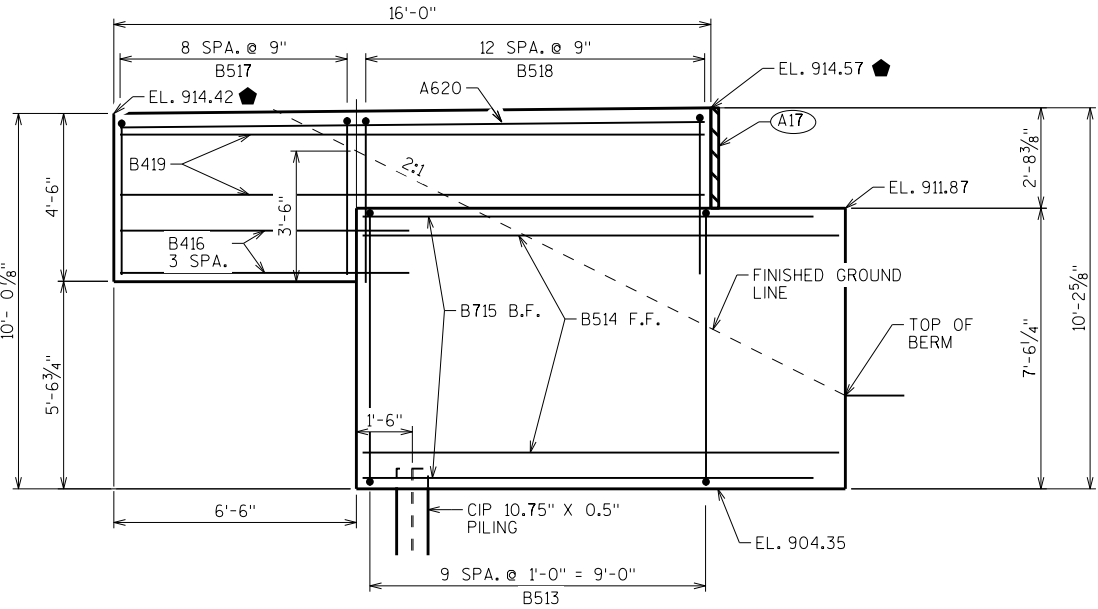
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		20	2'-3"			BODY-VERT.-2 PER BODY PILE
B402		10	28'-0"	X		BODY-VERT.-1 PER BODY PILE
B503		89	14'-4"	X		BODY-VERT.-STIRRUPS
B604		20	36'-11"			BODY-HORIZ.
B605		7	45'-0"			BODY-HORIZ.-B.F.-AT CENTER
B806		14	16'-11"	X		BODY-HORIZ.-B.F.- AT BOTH ENDS
B507		63	10'-1"	X		BODY-TOP-VERT.-UNDER NOTCH
B408		2	25'-0"			BODY-TOP-HORIZ.
B409		8	32'-2"			BODY-TOP-HORIZ.-UNDER NOTCH
B410		47	3'-9"	X		BODY-TOP-VERT.-ALONG NOTCH
B411		2	5'-0"	X		BODY-TOP-VERT.-AT ENDS ONLY
B412		4	36'-7"			BODY-TOP-HORIZ.-END TO END
B513	X	10	20'-8"	X		WING 3-BOT.-VERT.-STIRRUP
B514	X	9	12'-9"			WING 3-BOT.-HORIZ.-F.F.
B715	X	9	11'-3"			WING 3-BOT.-HORIZ.-B.F. & CENTER
B416	X	8	7'-9"			WING 3-HORIZ.-F.F & B.F.
B517	X	9	8'-10"	X		WING 3-TOP-VERT.
B518	X	13	9'-8"	X		WING 3-TOP-VERT.
B419	X	6	15'-8"			WING 3-TOP-HORIZ.-B.F. & F.F.
B620	X	2	15'-8"			WING 3-TOP-HORIZ.-B.F. & F.F.
B521	X	11	15'-8"	X		WING 4-BOT.-VERT.-STIRRUP
B622	X	8	12'-9"			WING 4-BOT.-HORIZ.-B.F. & CENTER
B523	X	6	12'-2"			WING 4-BOT.-HORIZ.-F.F.
B524	X	14	9'-10"	X		WING 4-TOP-VERT.
B425	X	6	9'-8"			WING 4-TOP-HORIZ.-B.F. & F.F.
B626	X	2	9'-8"			WING 4-TOP-HORIZ.-B.F. & F.F.

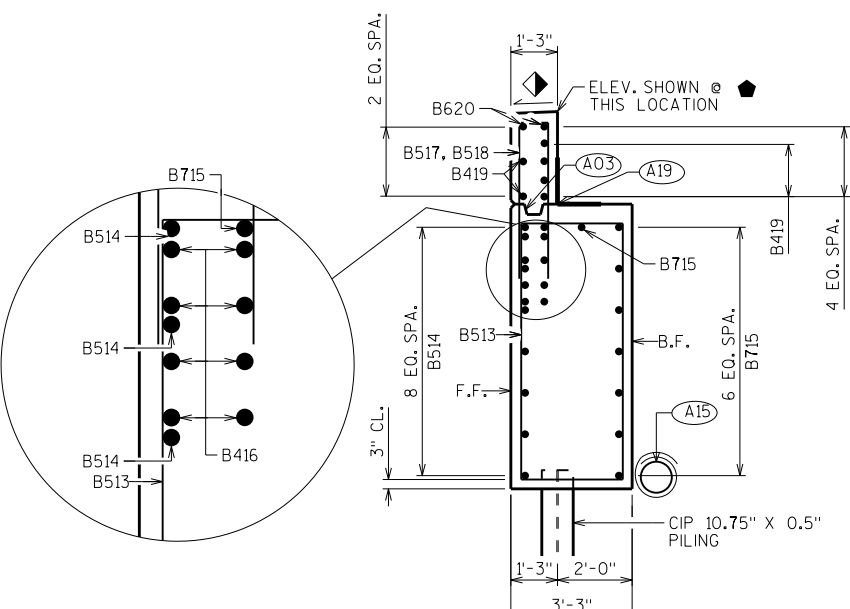


- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

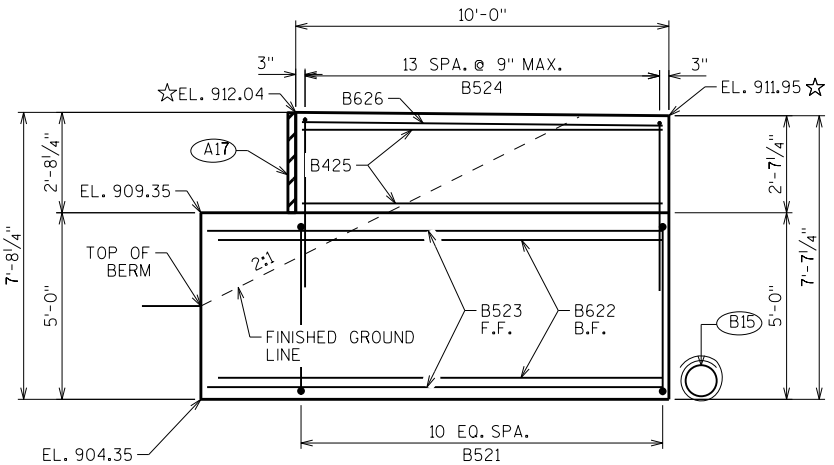
NO.	DBTE	REVISION	BY
STBTE OF WISCONSIN DEPBRTMENT OF TRBNSPORTBTION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRBWN BY		JDM	PLBNS CK'D. JLR
EAST ABUTMENT DETAILS			SHEET 7
			417



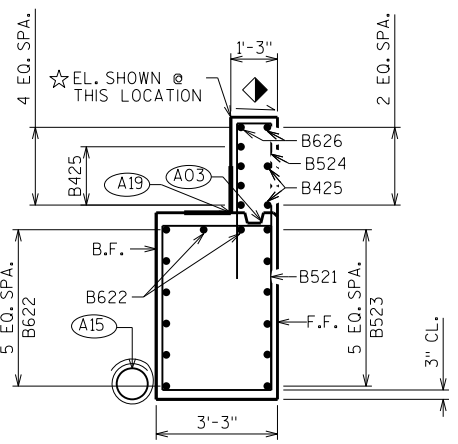
WING 3 ELEVATION



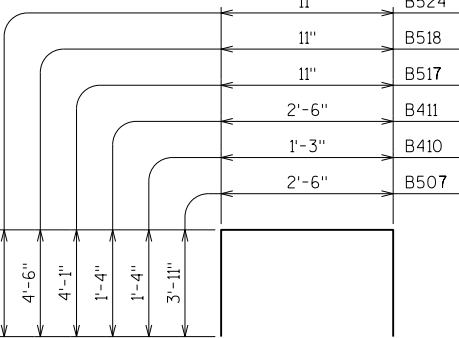
WING 3 SECTION



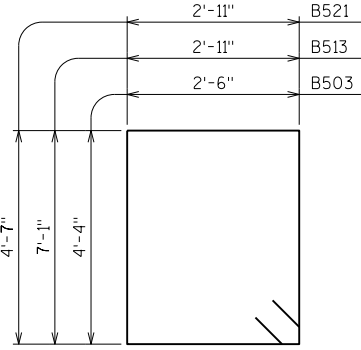
WING 4 ELEVATION



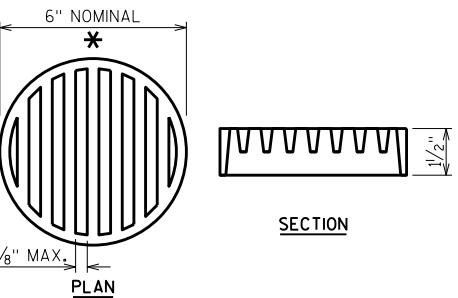
WING 4 SECTION



B507, B410, B411, B517, B518, B524



B503, B513, B521

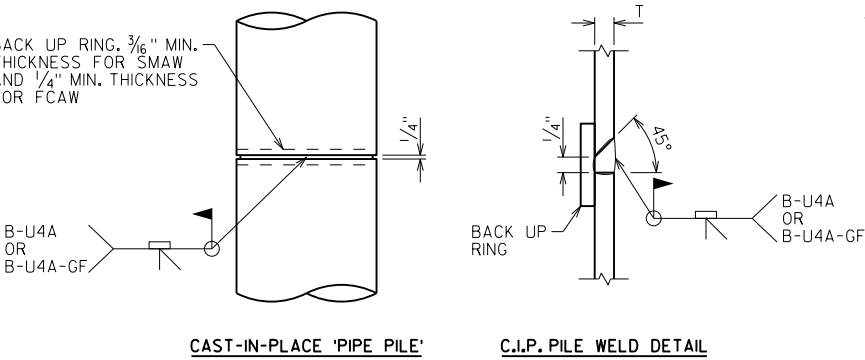


RODENT SHIELD DETAIL

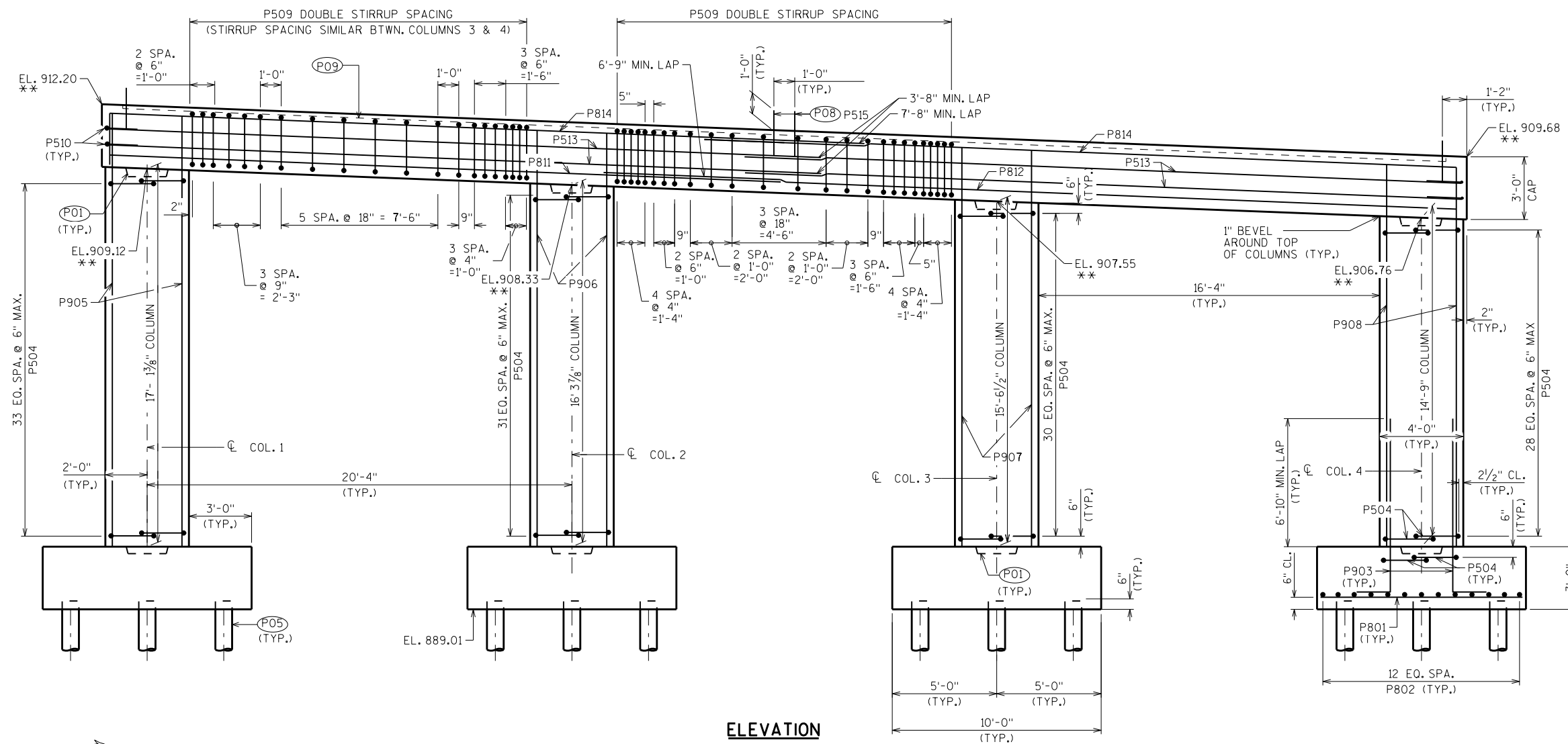
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



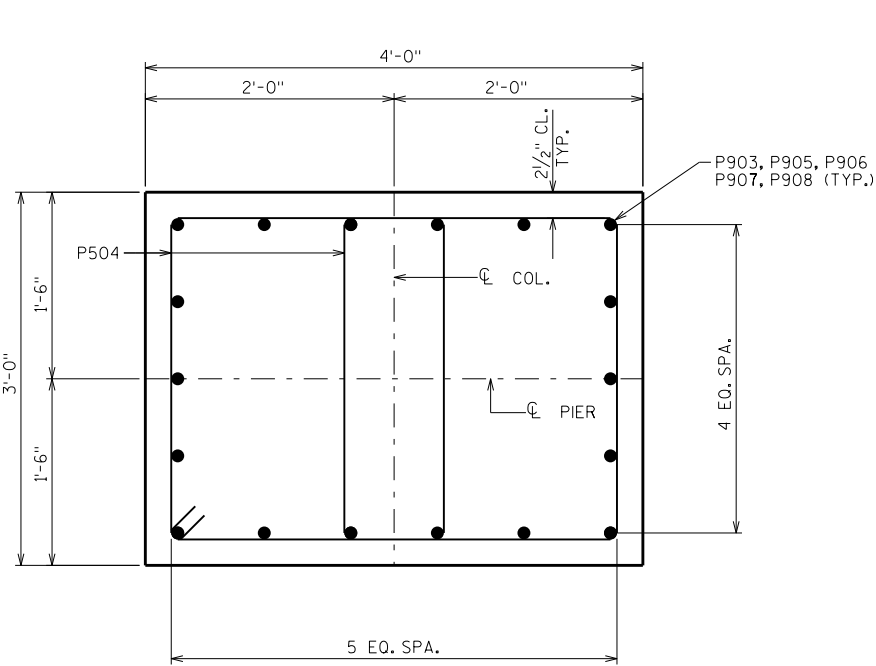
PILE DETAILS



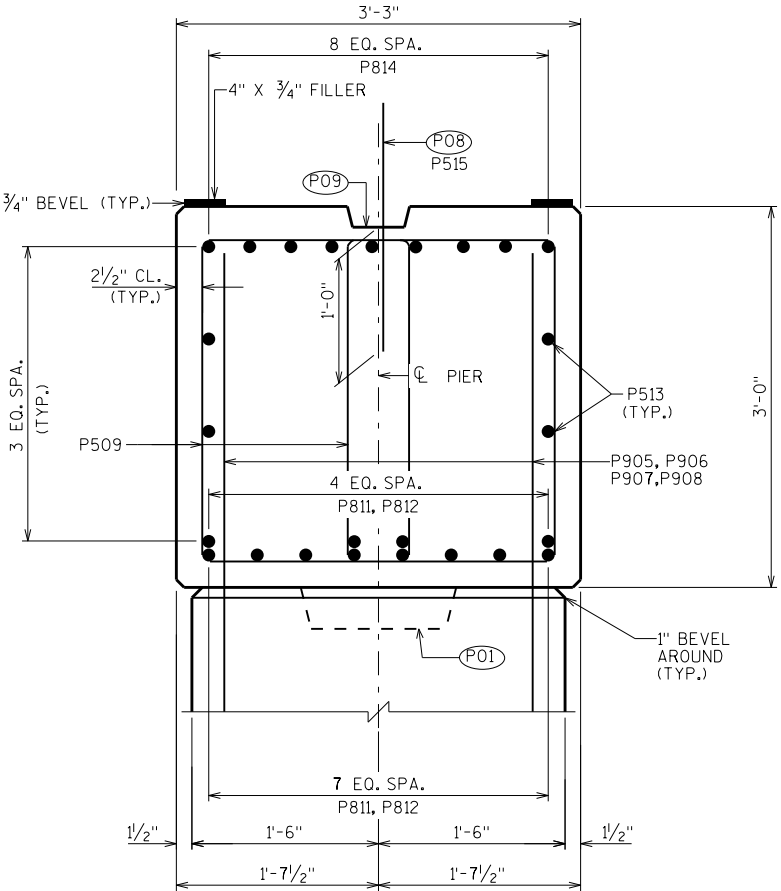
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

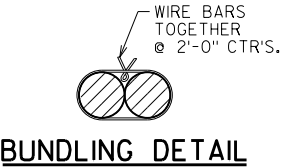
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P801		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
P802		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
P903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERT.-ALL FACES
P504	X	260	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	18	22'-7"		COLUMN 1/CAP-VERT.-ALL FACES
P906	X	18	21'-9"		COLUMN 2/CAP-VERT.-ALL FACES
P907	X	18	21'-0"		COLUMN 3/CAP-VERT.-ALL FACES
P908	X	18	20'-3"		COLUMN 4/CAP-VERT.-ALL FACES
P509	X	130	9'-2"	X	CAP-VERT.-DOUBLE STIRRUPS-BTWN. COLUMNS
P510	X	4	6'-0"	X	CAP-HORIZ.-ENDS ONLY
P811	X	12	34'-9"		CAP-BOT.-HORIZ.
P812	X	12	37'-1"		CAP-BOT.-HORIZ.
P513	X	8	34'-5"		CAP-HORIZ.
P814	X	18	40'-3"	X	CAP-TOP-HORIZ.
P515	X	64	2'-0"		CAP-TOP-VERTICAL-DOWELS



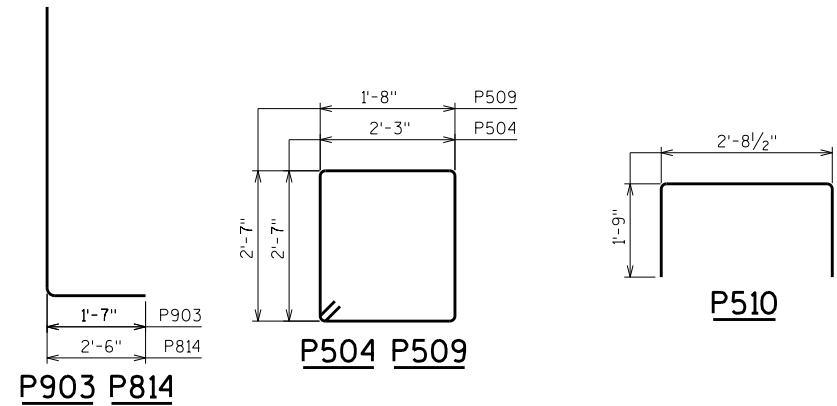
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP



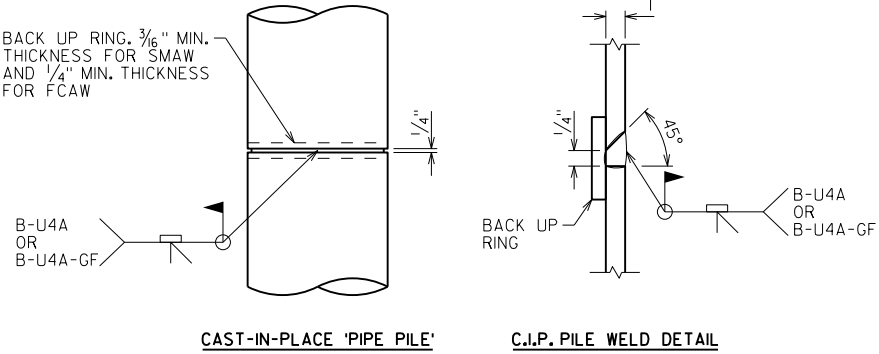
BUNDLING DETAIL



P903 P814

P504 P509

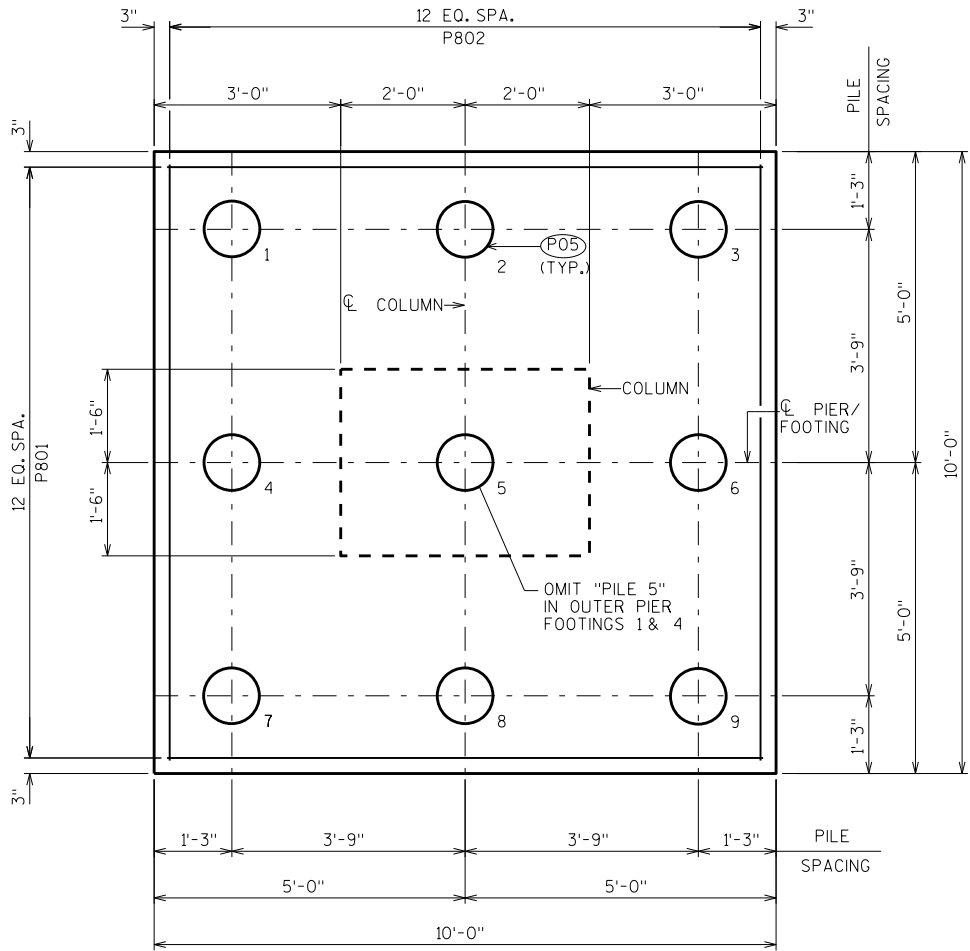
P510



CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

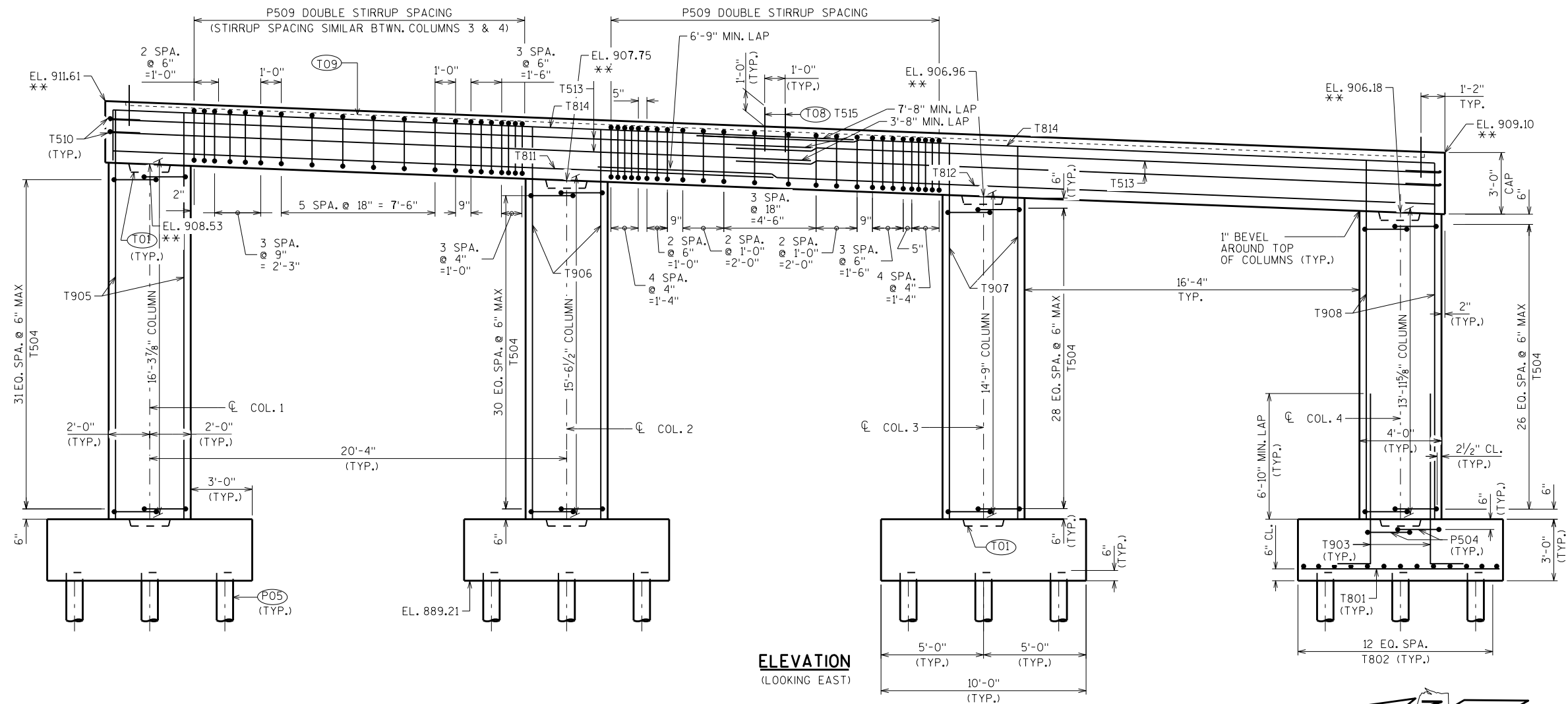
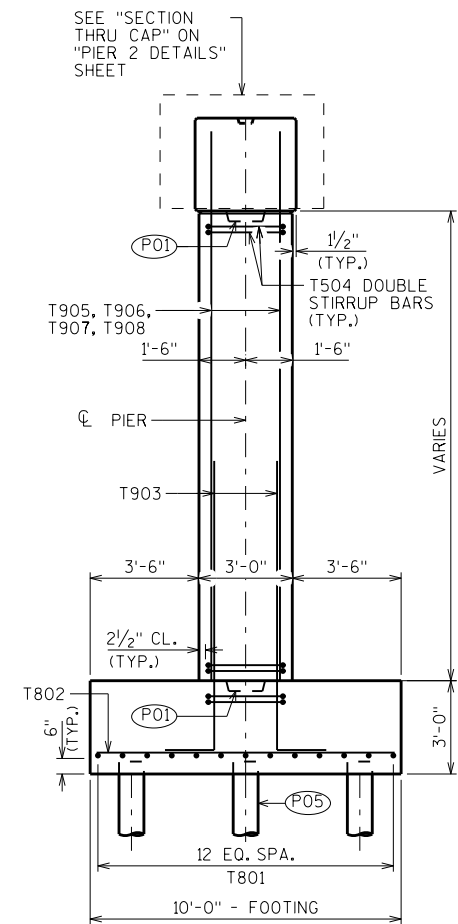
PILE DETAILS



FOOTING/PILE PLAN

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" DIA. X 0.5" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) P515 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

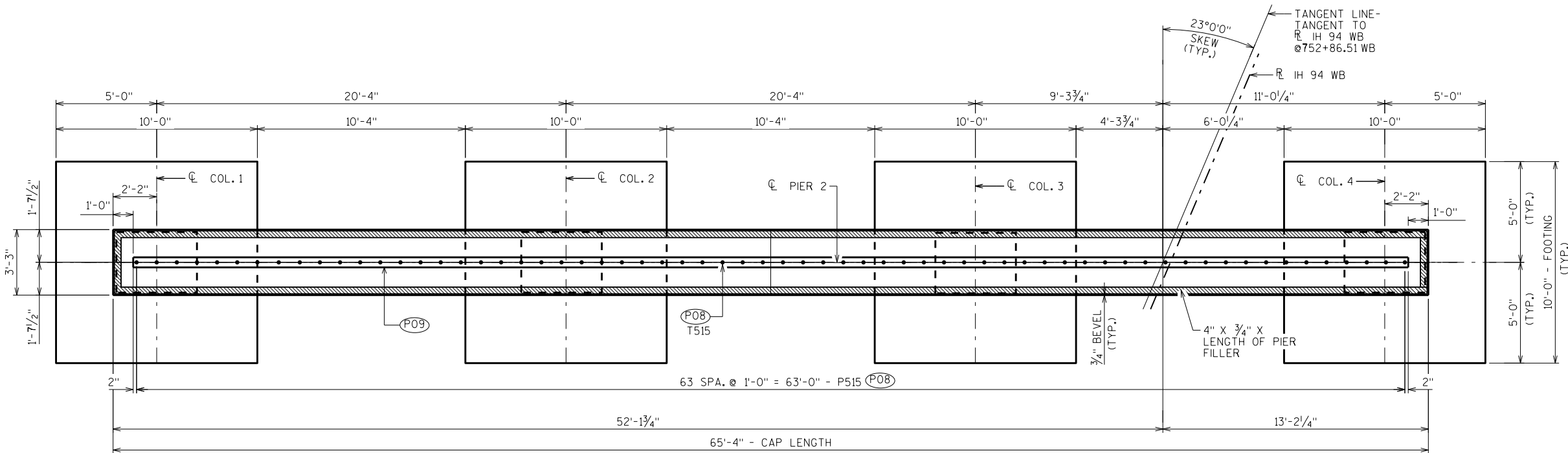
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY JDM		PLANS CK'D. JLR	
PIER 1 DETAILS		SHEET 9	
		419	

ELEVATION
(LOOKING EAST)

SECTION THRU PIER

** ELEVATIONS ARE GIVEN
AT ϕ OF PIER

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" DIA. X 0.5" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) T515 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.



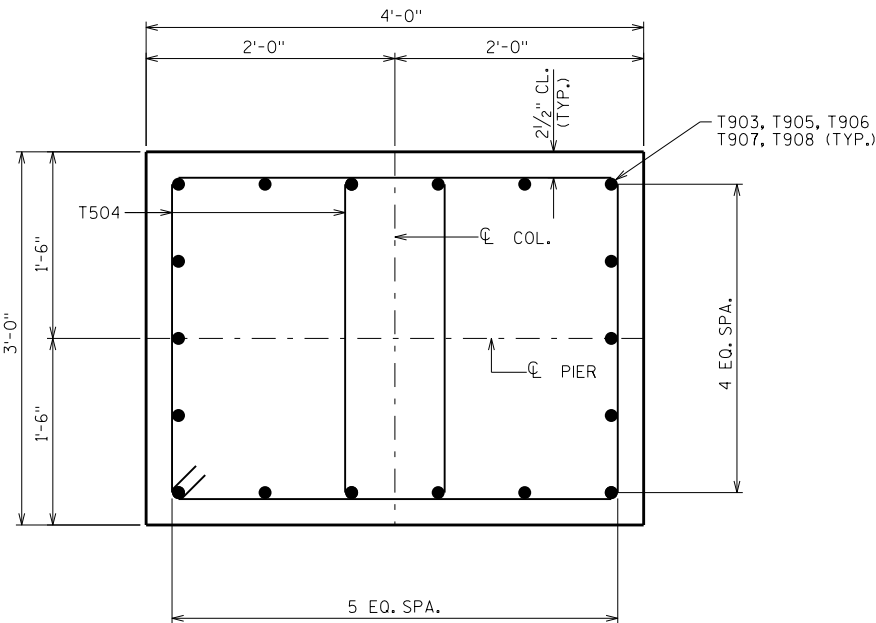
PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY		JDM	TLANS CK'D. JLR
PIER 2		SHEET 10	
		420	

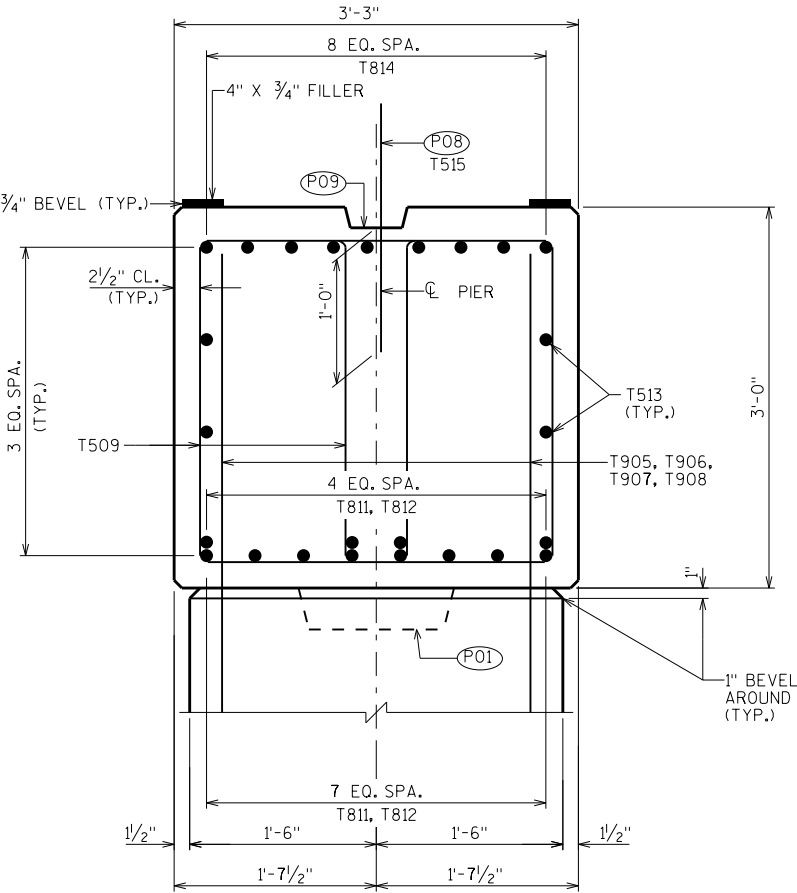
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

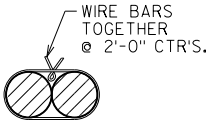
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T801		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
T802		52	9'-8"		FOOTINGS-BOT.-MAT-HORIZ.
T903	X	72	10'-8"	X	FOOTINGS/COLUMNS-VERT.-ALL FACES
T504	X	246	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T905	X	18	21'-9"		COLUMN 1/CAP-VERT.-ALL FACES
T906	X	18	21'-0"		COLUMN 2/CAP-VERT.-ALL FACES
T907	X	18	20'-3"		COLUMN 3/CAP-VERT.-ALL FACES
T908	X	18	19'-5"		COLUMN 4/CAP-VERT.-ALL FACES
T509	X	130	9'-2"	X	CAP-VERT.-DOUBLE STIRRUPS-BTWN. COLUMNS
T510	X	4	6'-0"	X	CAP-HORIZ.-ENDS ONLY
T811	X	12	34'-9"		CAP-BOT.-HORIZ.
T812	X	12	37'-1"		CAP-BOT.-HORIZ.
T513	X	8	34'-5"		CAP-HORIZ.
T814	X	18	40'-3"	X	CAP-TOP-HORIZ.
T515	X	64	2'-0"		CAP-TOP-VERTICAL-DOWELS



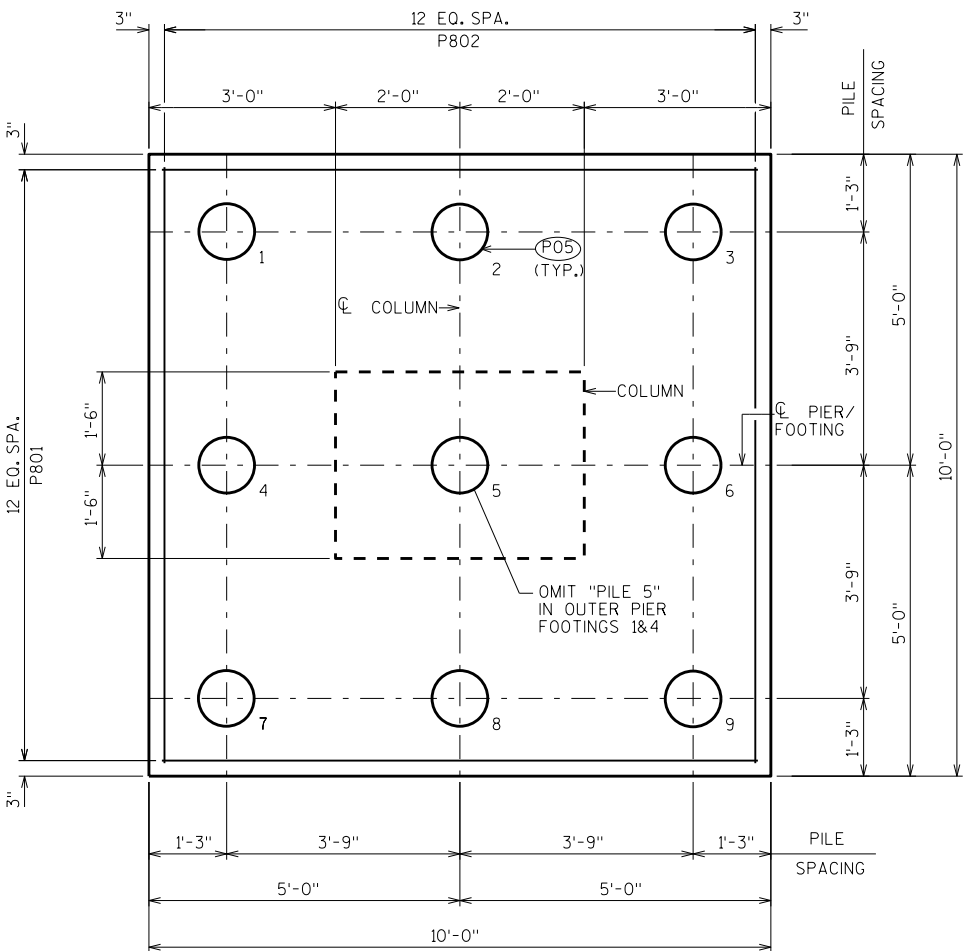
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



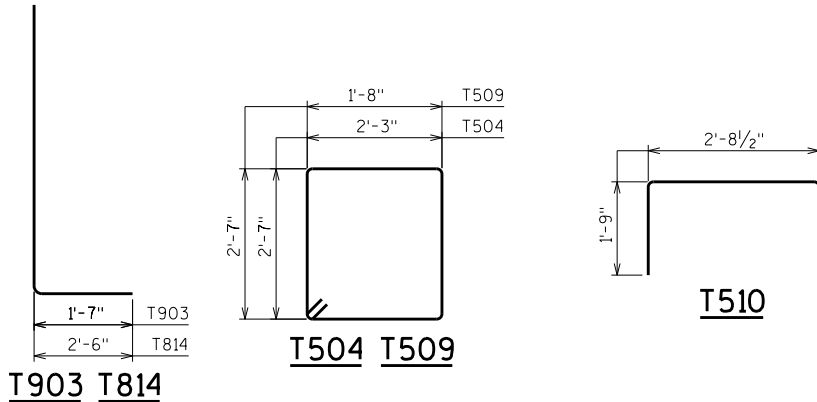
SECTION THRU CAP



BUNDLING DETAIL



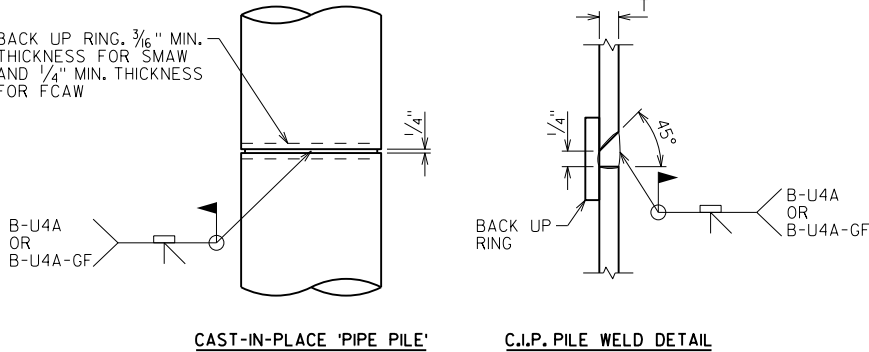
FOOTING/PILE PLAN



T903 T814

T504 T509

T510



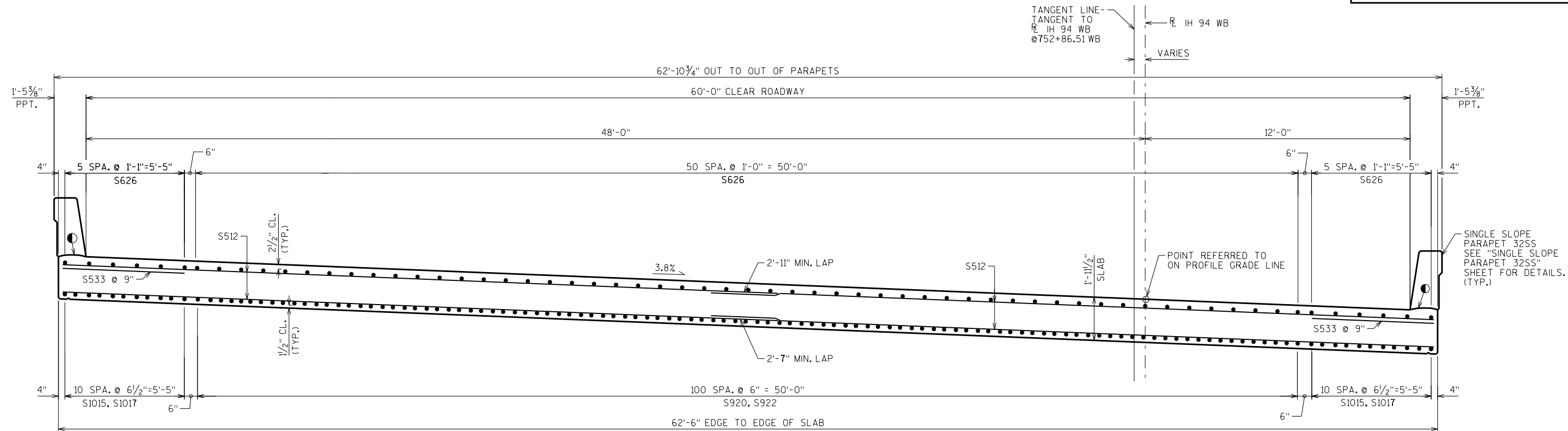
CAST-IN-PLACE 'PIPE PILE'

C.I.P. PILE WELD DETAIL

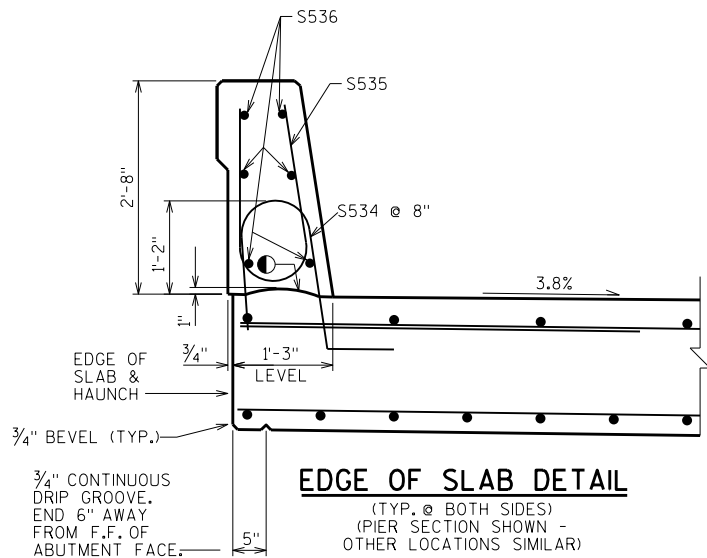
PILE DETAILS

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P05) SUPPORT PIER ON 10 3/4" DIA. X 0.5" CIP CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- (P08) T515 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY JDM		TLANS CK'D. JLR	
PIER 2 DETAILS		SHEET 11	
		421	

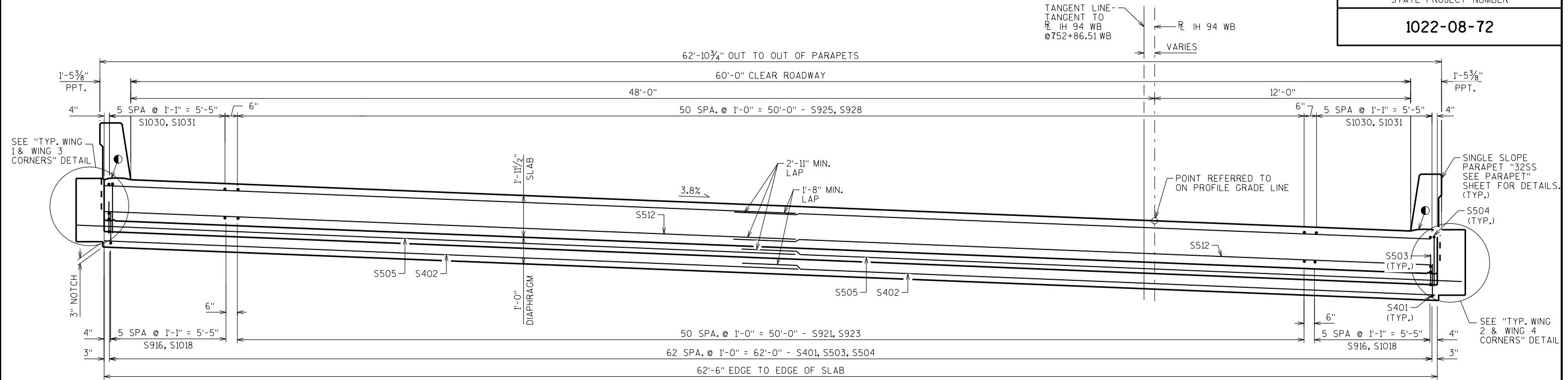


CROSS SECTION THRU ROADWAY
(LOOKING UPSTATION)



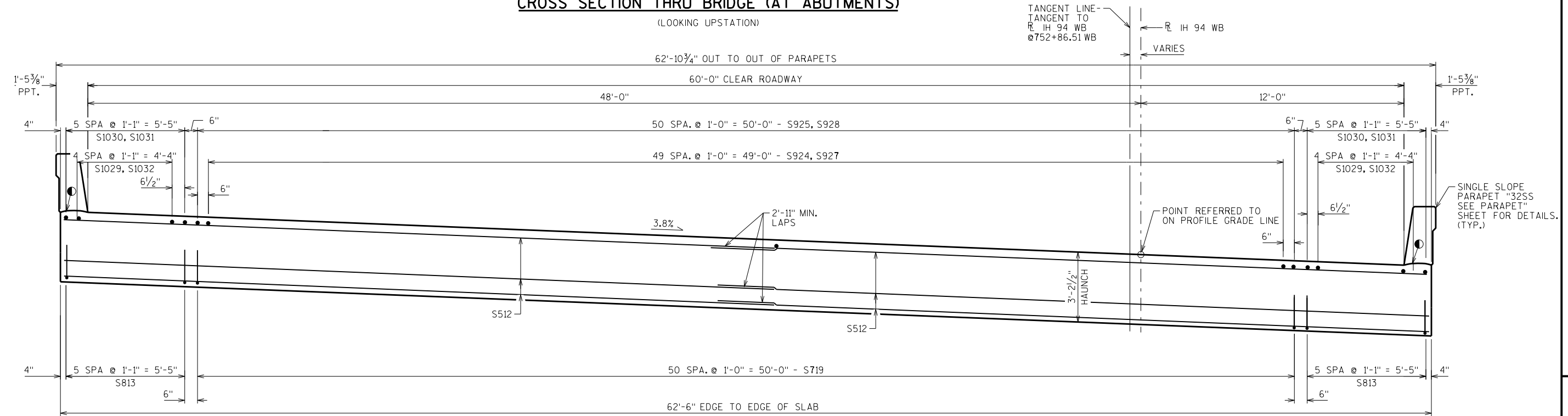
EDGE OF SLAB DETAIL
(TYP. @ BOTH SIDES)
(PIER SECTION SHOWN -
OTHER LOCATIONS SIMILAR)

NO. DATE REVISION BY			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTION 1		SHEET 12	
		422	



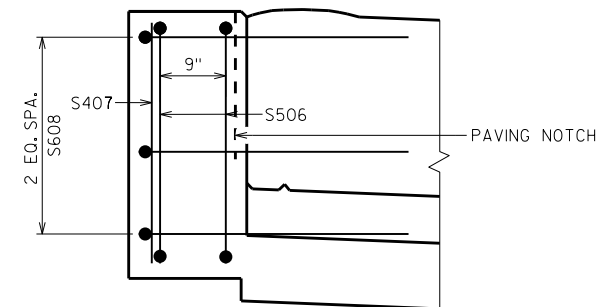
CROSS SECTION THRU BRIDGE (AT ABUTMENTS)

(LOOKING UPSTATION)

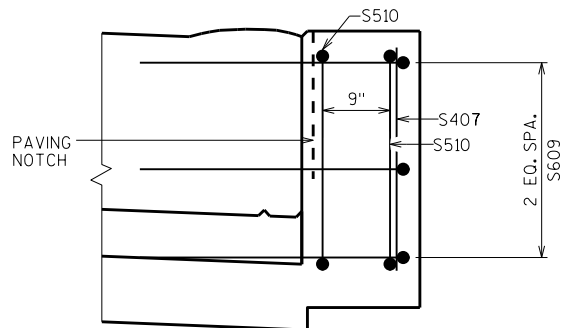


CROSS SECTION THRU BRIDGE (AT PIERS)

(LOOKING UPSTATION)



TYP. WING 1 & WING 3 CORNERS



TYP. WING 2 & WING 4 CORNERS

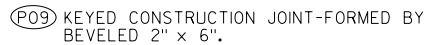
CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE CROSS SECTION 2			SHEET 13
			423

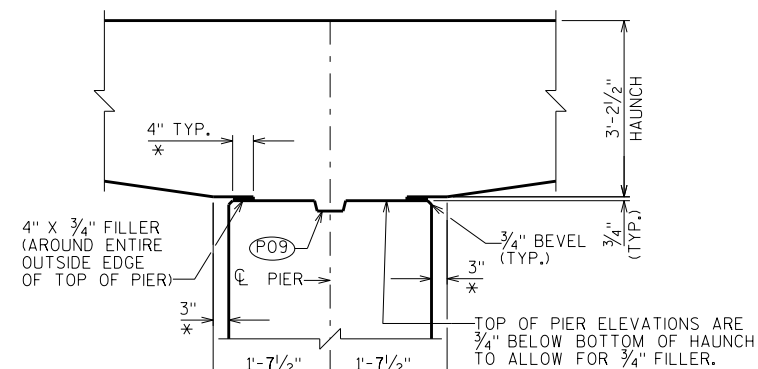


(SHOWING S.W. & S.E. CORNERS - DETAIL
TYP. @ BOTH SIDES OF SUPERSTRUCTURE)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY		JDM	PLANS CK'D. JLR
SUPERSTRUCTURE 1		SHEET 14	
		424	



(LOOKING NORTH)

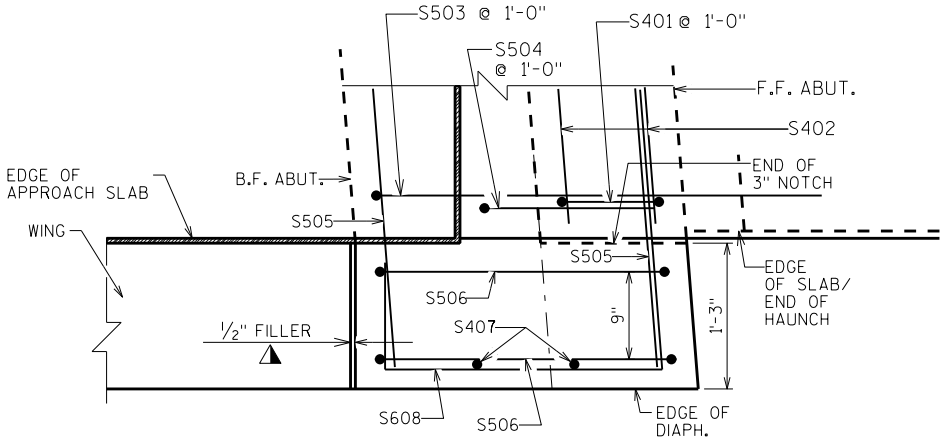


DETAIL AT PIER

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C OF ABUTMENTS, THE C OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND R IH 94 WB

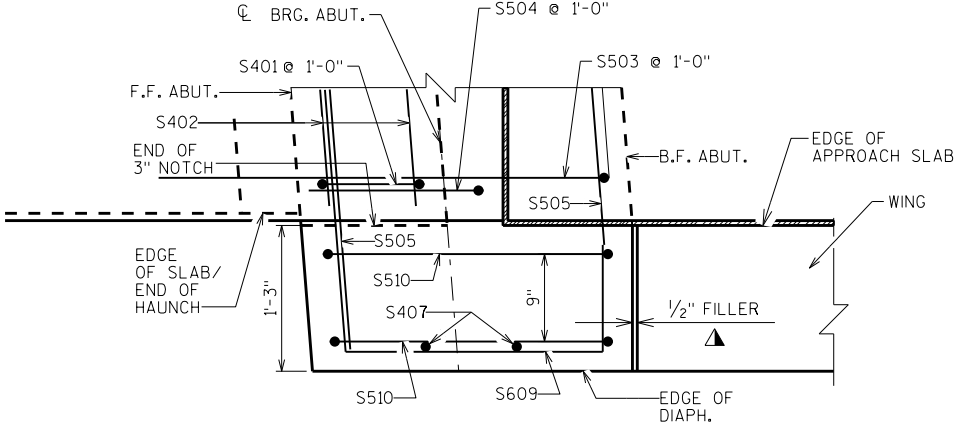
☆ BARS PLACED PARALLEL TO "TANGENT LINE" AND SPACED PERPENDICULAR TO "TANGENT LINE".

SCALE = 2.25



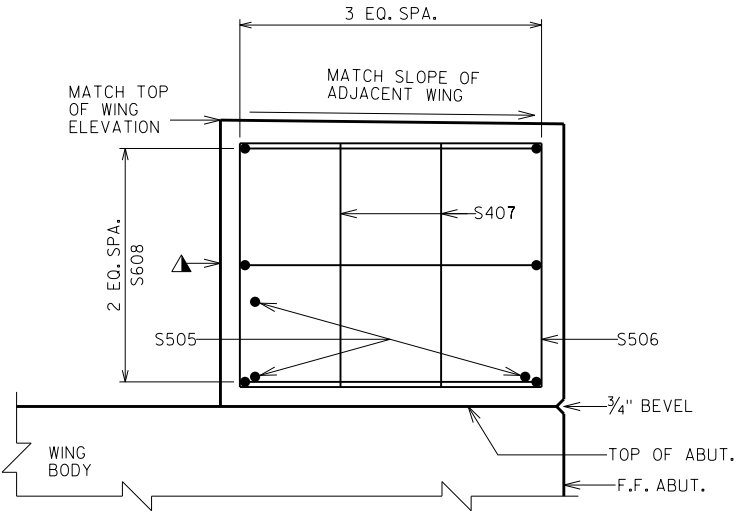
**CORNER DETAIL
AT WINGS 1 & 3**

(PLAN VIEW)



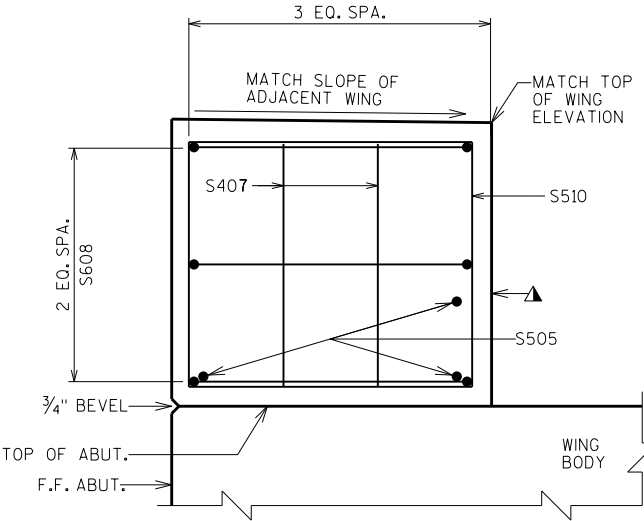
**CORNER DETAIL
AT WINGS 2 & 4**

(PLAN VIEW)



CORNER DETAIL AT WINGS 1 & 3

(ELEVATION VIEW)

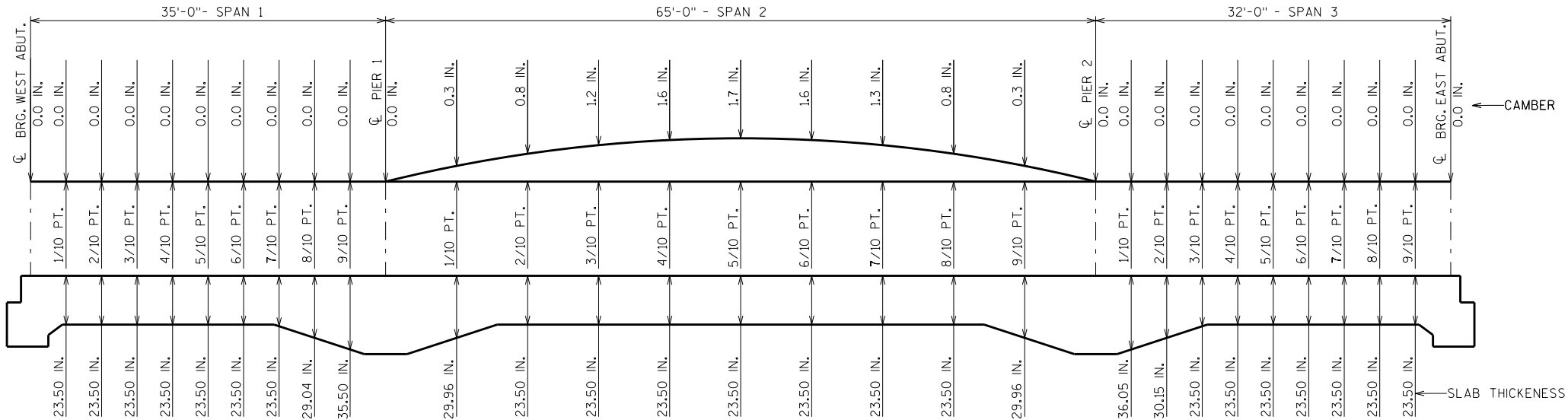


CORNER DETAIL AT WINGS 2 & 4

(ELEVATION VIEW)

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-17-220					
			DRAWN BY	JDM	PLANS CK'D. JLR
SUPERSTRUCTURE DETAILS 1				SHEET 16	
				426	



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS = TOP OF SLAB FALSEWORK ELEVATION.

TOP OF DECK ELEVATIONS

	CL BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	CL BRG. PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	CL BRG. PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	CL BRG. E. ABUT.
N. EOD	915.77	915.73	915.70	915.67	915.64	915.61	915.58	915.55	915.52	915.49	915.46	915.40	915.34	915.28	915.22	915.16	915.10	915.05	914.99	914.93	914.87	914.84	914.81	914.78	914.75	914.73	914.70	914.67	914.64	914.61	914.58
RL IH 94	913.76	913.73	913.70	913.67	913.63	913.60	913.57	913.54	913.51	913.48	913.44	913.39	913.33	913.27	913.21	913.15	913.09	913.03	912.97	912.91	912.85	912.83	912.80	912.77	912.74	912.71	912.68	912.65	912.62	912.59	912.56
S. EOD	913.25	913.22	913.19	913.16	913.13	913.10	913.06	913.03	913.00	912.97	912.94	912.88	912.82	912.76	912.70	912.64	912.58	912.52	912.47	912.41	912.35	912.32	912.29	912.26	912.23	912.20	912.17	912.14	912.11	912.08	912.06

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. WEST ABUTMENT	5/10 PT.	CL PIER 1	5/10 PT.	CL PIER 2	5/10 PT.	CL BRG. EAST ABUTMENT
NORTH GUTTERLINE & EDGE OF SLAB							
RL IH 94 EB/ CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, THE CL OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTERLINES AND CROWN POINT. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY JDM		PLANS CK'D. JLR	
SUPERSTRUCTURE DETAILS 2		SHEET 17	
		427	

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	CONT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	126	3'-5"	X		ABUT. DIAPHS.-VERT.-LONGIT.
S402	X	8	34'-7"			ABUT. DIAPHS.-HORIZ.-TRANS.
S503	X	126	7'-8"	X		ABUT. DIAPHS./-VERT.
S504	X	126	3'-7"	X		ABUT. DIAPHS.-VERT.
S505	X	12	34'-2"			ABUT. DIAPHS.-HORIZ.
S506	X	4	11'-3"	X	▲	ABUT. DIAPHS.-VERT.-AT WINGS 1 & 3-STIRRUPS
S407	X	8	2'-4"			ABUT. DIAPHS.-VERT.- ALL FOUR WINGS
S608	X	6	7'-0"	X		ABUT. DIAPHS.-HORIZ.-WINGS 1 & 3
S609	X	6	6'-1"	X		ABUT. DIAPHS.-HORIZ.-WINGS 2 & 4
S510	X	4	10'-3"	X	▲	ABUT. DIAPHS.-VERT.-AT WINGS 2 & 4
		NOT USED				
S512	X	714	35'-3"			SLAB-TOP & BOT.-TRANSVERSE
S813	X	24	22'-4"	X		SLAB-BOT.-LONGIT.-HAUNCH
		NOT USED				
S1015	X	10	35'-0"			SLAB-BOT.-LONGIT.
S1016	X	12	30'-4"			SLAB-BOT.-LONGIT.
S1017	X	12	54'-8"			SLAB-BOT.-LONGIT.
S1018	X	12	27'-4"			SLAB-BOT.-LONGIT.
S719	X	102	22'-3"	X		SLAB-BOT.-LONGIT.-HAUNCH
S920	X	50	35'-0"			SLAB-BOT.-LONGIT.
S921	X	51	29'-3"			SLAB-BOT.-LONGIT.
S922	X	51	52'-6"			SLAB-BOT.-LONGIT.
S923	X	51	26'-3"			SLAB-BOT.-LONGIT.
S924	X	50	31'-9"			SLAB-TOP-LONGIT.-HAUNCH
S925	X	51	59'-6"			SLAB-TOP-LONGIT.
S626	X	63	26'-0"			SLAB-TOP-LONGIT.
S927	X	50	31'-6"			SLAB-TOP-LONGIT.-HAUNCH
S928	X	51	54'-6"			SLAB-TOP-LONGIT.
S1029	X	10	31'-9"			SLAB-TOP-LONGIT.
S1030	X	12	59'-6"			SLAB-TOP-LONGIT.
S1031	X	12	54'-6"			SLAB-TOP-LONGIT.
S1032	X	10	31'-6"			SLAB-TOP-LONGIT.-HAUNCH
S533	X	354	5'-0"			SLAB-TOP-TRANS.-ENDS
S534	X	400	4'-5"	X		PARAPETS/SLAB-VERT.
S535	X	400	5'-0"	X		PARAPETS-VERT.
S536	X	36	46'-1"			PARAPETS-LONGIT.-HORIZ.

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

☆	SS601	124	3'-0"		ABUT. DIAPH. TO APPROACH SLAB
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└─STAINLESS STEEL REINFORCEMENT

☆SEE "SUPERSTRUCTURE LONGITUDINAL SECTIONS" AND "STRUCTURAL APPROACH SLABS" SHEETS FOR STAINLESS STEEL REBAR LOCATIONS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S506	2 SERIES OF 2	10'-10" TO 11'-8"
S510	2 SERIES OF 2	9'-10" TO 10'-8"

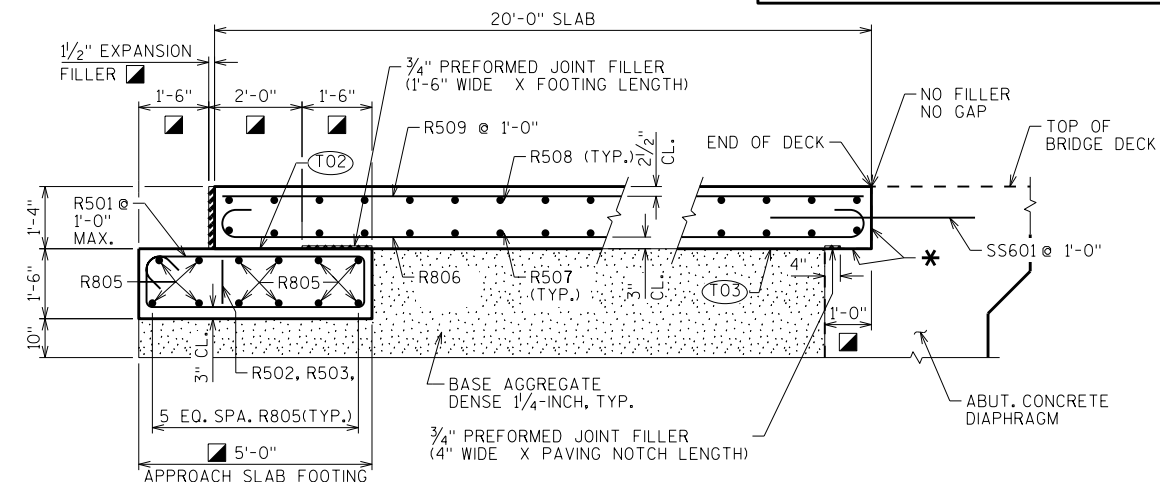
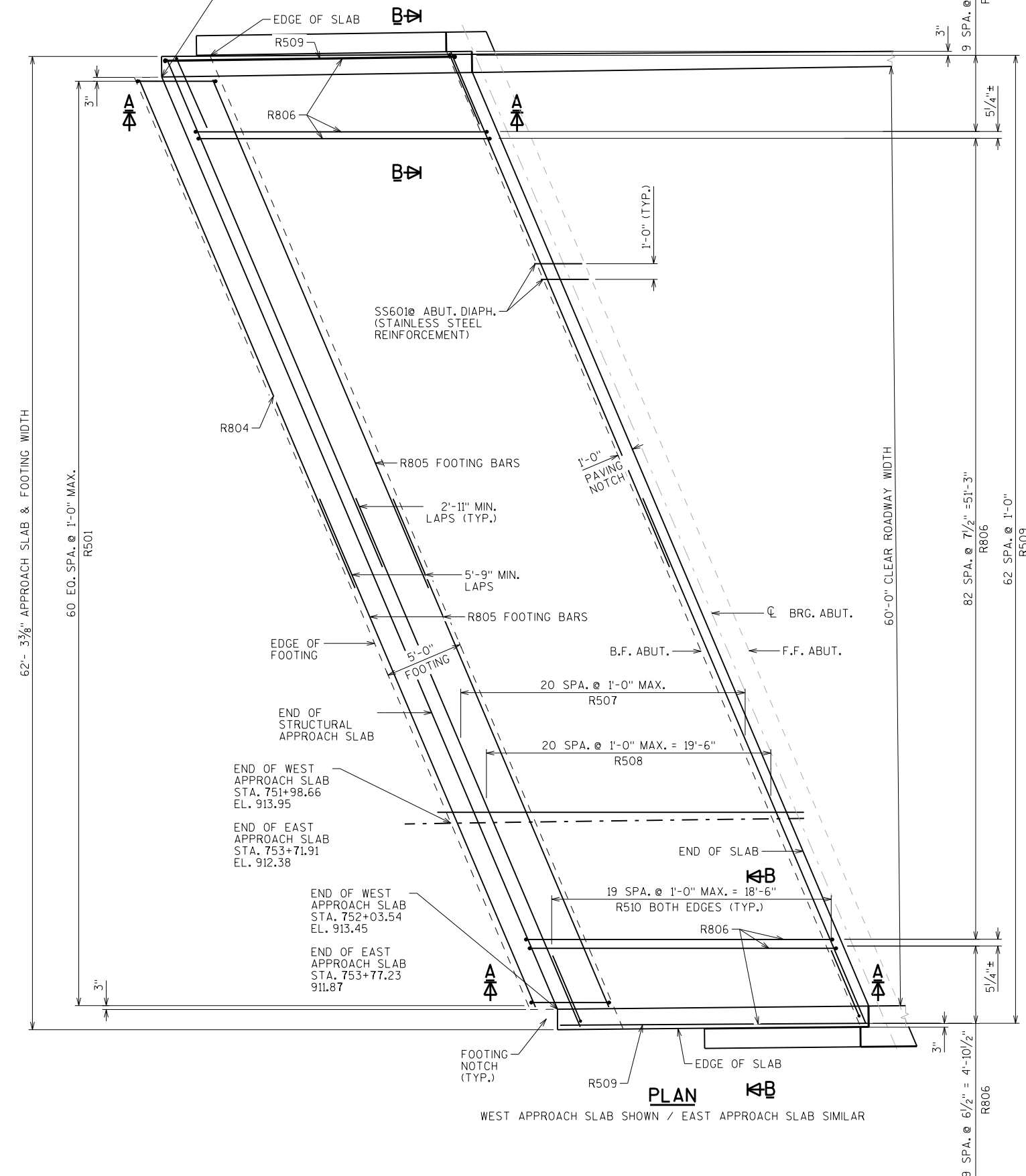
BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
		DRAWN BY JDM	PLANS CK'D. JLR
SUPERSTRUCTURE DETAILS 3			SHEET 18
			428

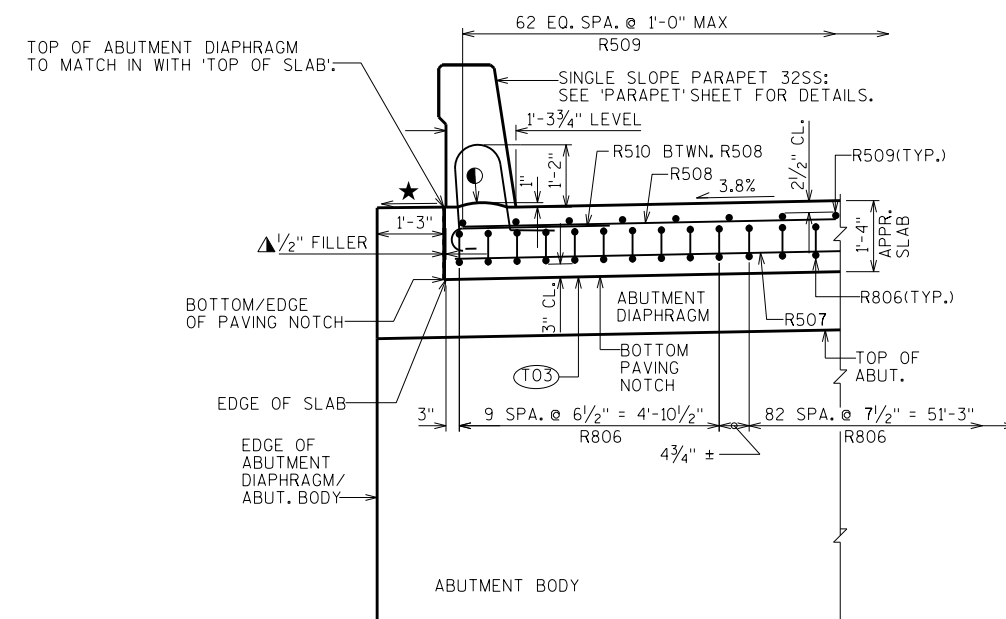
SCALE = 1:00

WEST
APPROACH SLAB
STA. 751+79.32
EL. 915.95

EAST
APPROACH SLAB
STA. 753+50.88
EL. 914.39



SECTION A-A THRU APPROACH SLAB



SECTION B-B (EDGE OF SLAB DETAIL)

DESIGN DATA

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE IF THE REGION SOILS ENGINEER DETERMINES THAT THE EXISTING SOIL BEARING PRESSURE MEETS THE REQUIREMENT ABOVE.

★ FINISH SMOOTH - SLOPE TO DRAIN

● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD 1/4" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

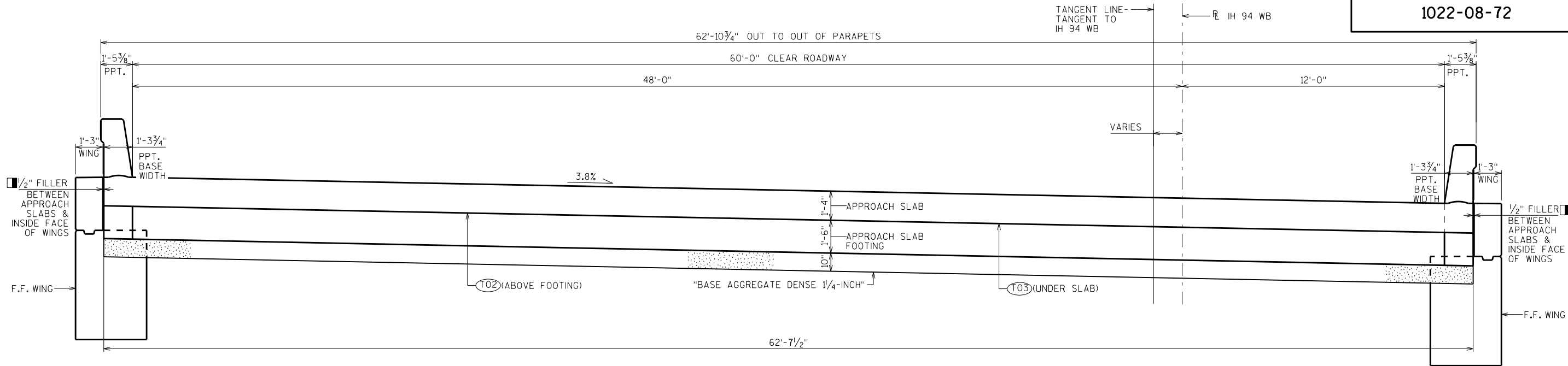
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

★ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

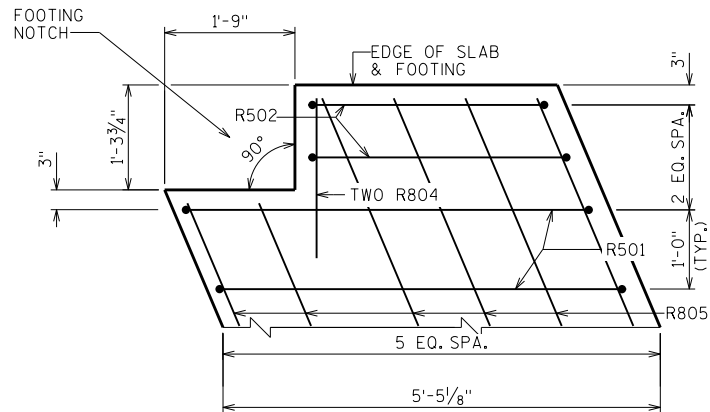
■ MEASURED NORMAL TO ABUTMENT

STATE PROJECT NUMBER			
1022-08-72			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY		JDM	PLANS CK'D. JLR
STRUCTURAL APPROACH SLAB 1			SHEET 19
			429

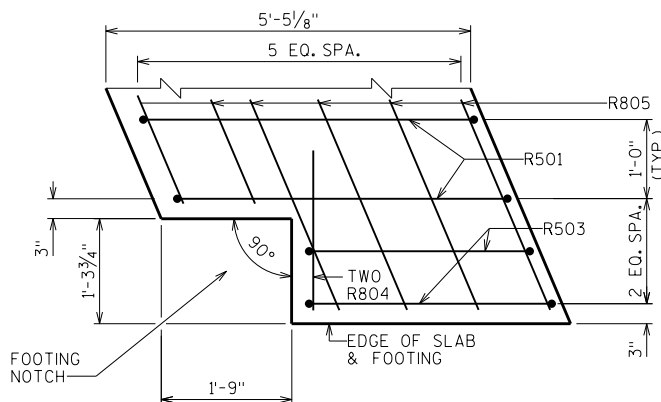
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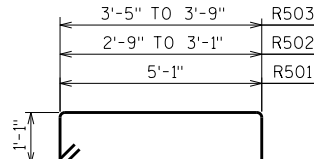
CROSS SECTION THRU APPROACH SLABS
(LOOKING UPSTATION)



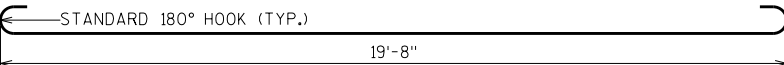
SLAB FOOTING PLAN DETAIL @ NW & SE CORNERS



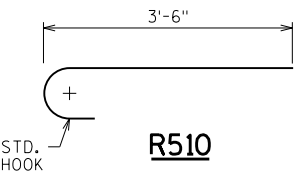
SLAB FOOTING PLAN DETAIL @ SW & NE CORNERS



R501 R502 R503



R806



R510

- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE), EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.		LENGTH	BENT	BAR SERIES	LOCATION
		WEST SLAB	EAST SLAB				
R501	X	61	61	13'-0"	X		FOOTING-STIRRUP
R502	X	2	2	8'-8"	X	▲	FOOTING-STIRRUP
R503	X	2	2	10'-0"	X	▲	FOOTING-STIRRUP
R804	X	4	4	2'-0"			FOOTING-HORIZONTAL
R805	X	16	16	36'-7"			FOOTING-HORIZONTAL
R806	X	103	103	21'-6"	X		SLAB-BOTTOM-LONGITUDINAL
R507	X	42	42	35'-4"			SLAB-BOTTOM-TRANSVERSE
R508	X	42	42	35'-4"			SLAB-TOP-TRANSVERSE
R509	X	63	63	19'-8"			SLAB-TOP-LONGITUDINAL
R510	X	20	20	4'-1"	X		SLAB-TOP-TRANSVERSE-EDGES

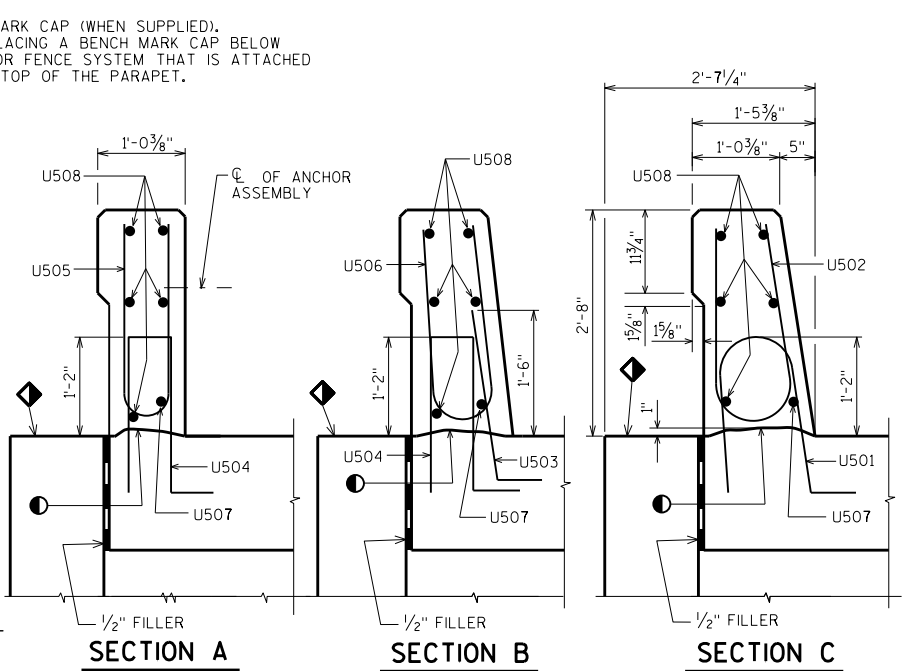
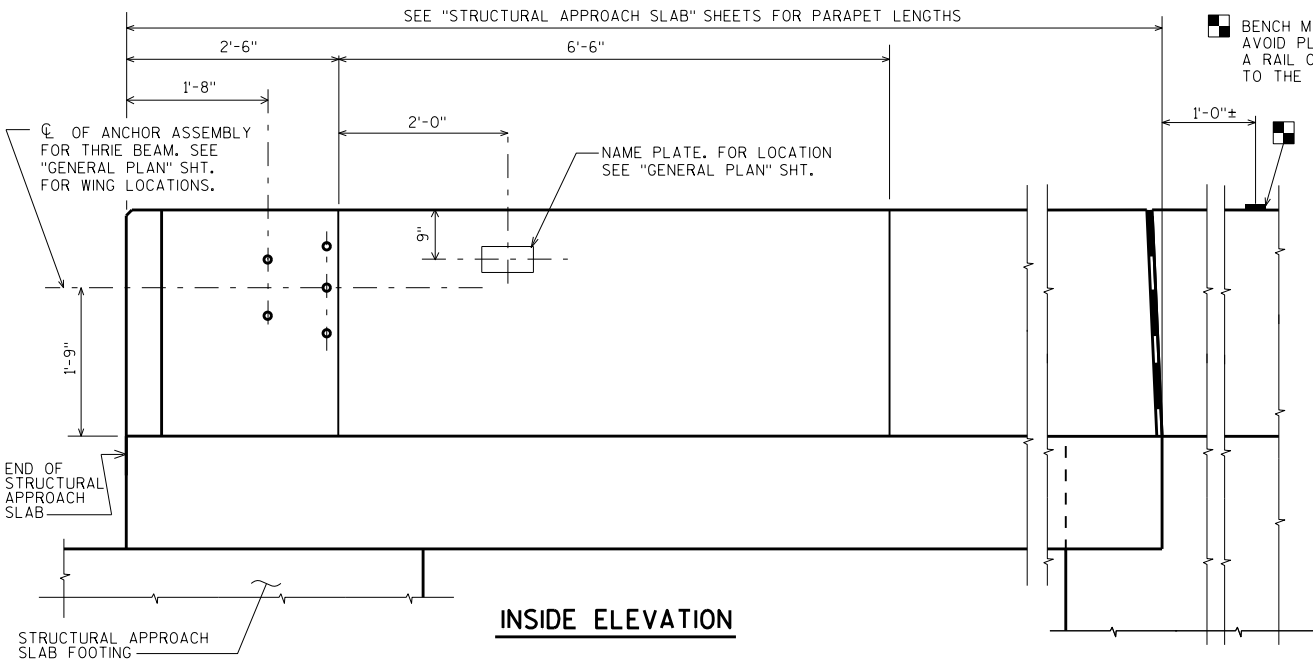
NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
R502	2 SERIES OF 2	8'-4" TO 9'-0"
R503	2 SERIES OF 2	9'-8" TO 10'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

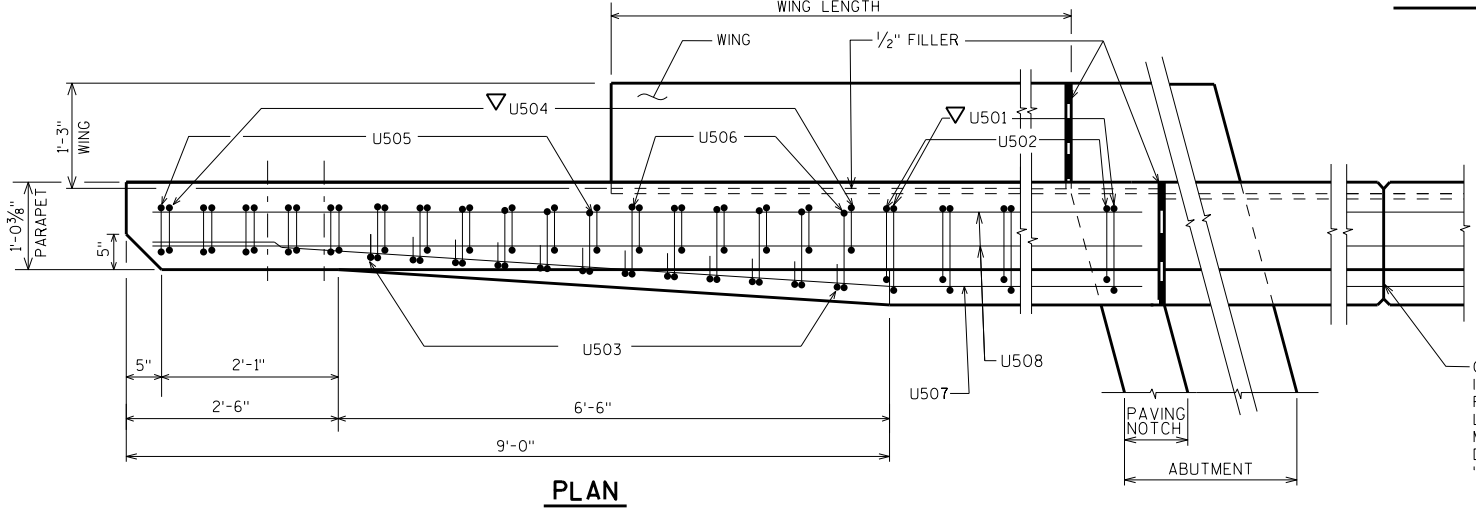
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
		DRAWN BY	JDM PLANS CK'D. JLR
STRUCTURAL APPROACH SLAB 2			SHEET 20
			430



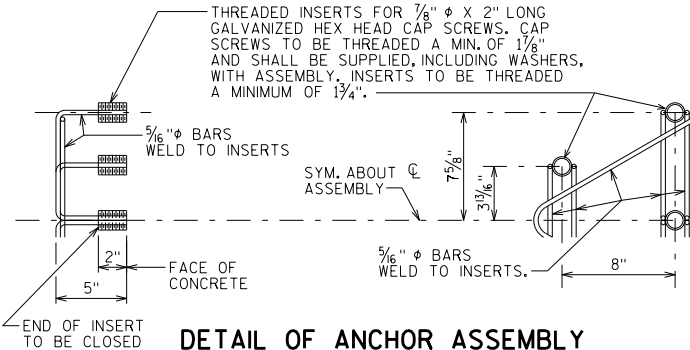
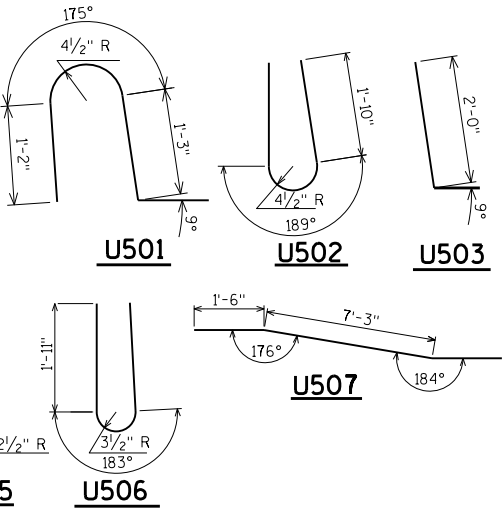
BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
U501	X	32	32	4'-5"	X		PARAPET VERT.
U502	X	32	32	5'-0"	X		PARAPET VERT.
U503	X	24	24	2'-9"	X		PARAPET VERT.
U504	X	34	34	4'-4"	X		PARAPET VERT.
U505	X	22	22	4'-9"	X		PARAPET VERT.
U506	X	12	12	4'-10"	X		PARAPET VERT.
U507	X	2	2	19'-6"	X		PARAPET HORIZ.
U508	X	10	10	19'-6"			PARAPET HORIZ.

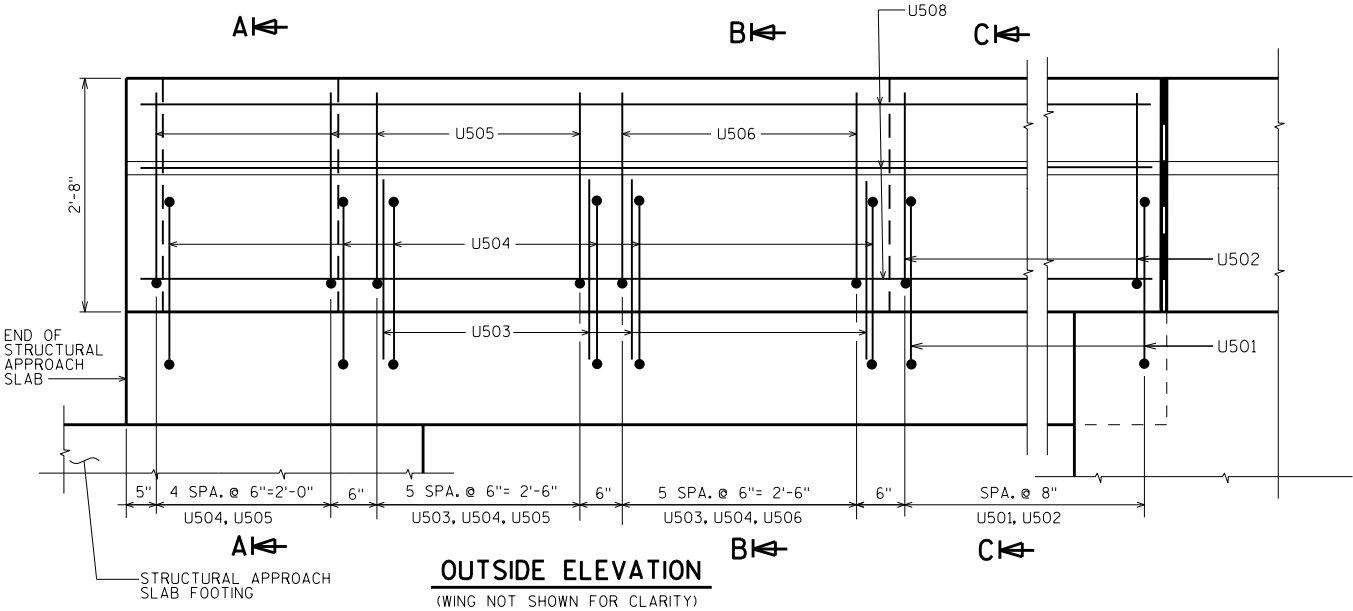


OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - "V" GROOVE.



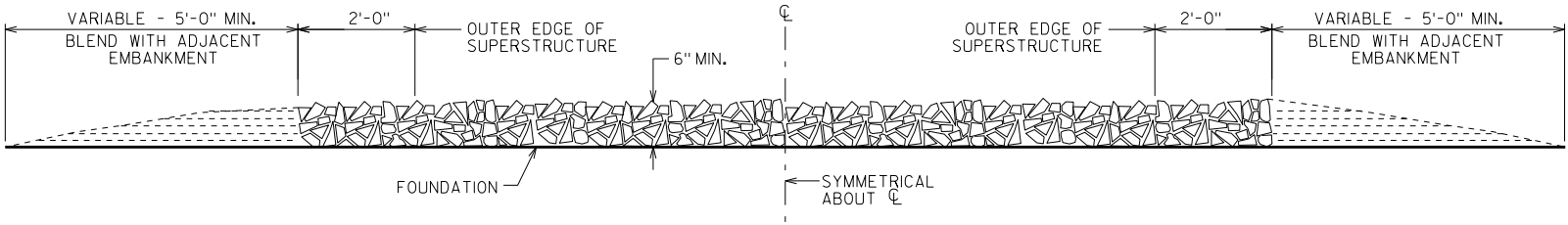
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

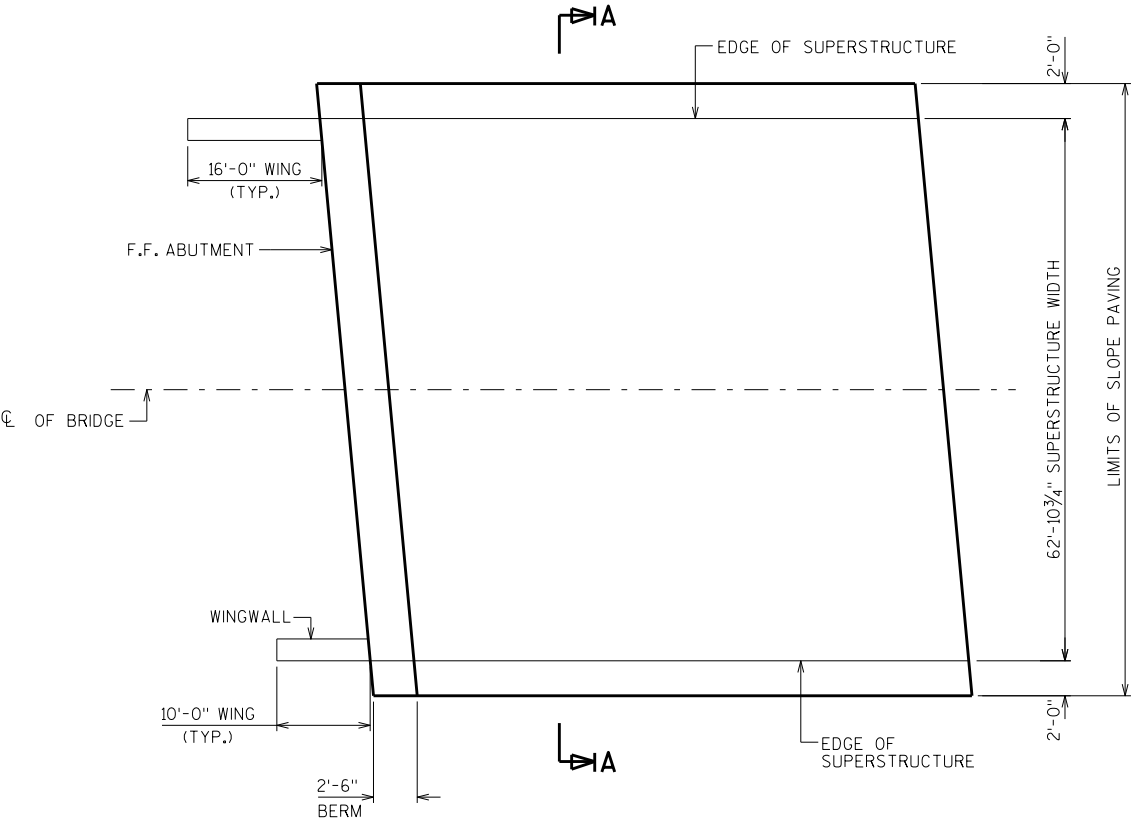


- ◊ SLOPE FOR DRAINAGE
- CONST. JOINT - STRIKE OFF AS SHOWN.
- ▽ U501, U503, AND U504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

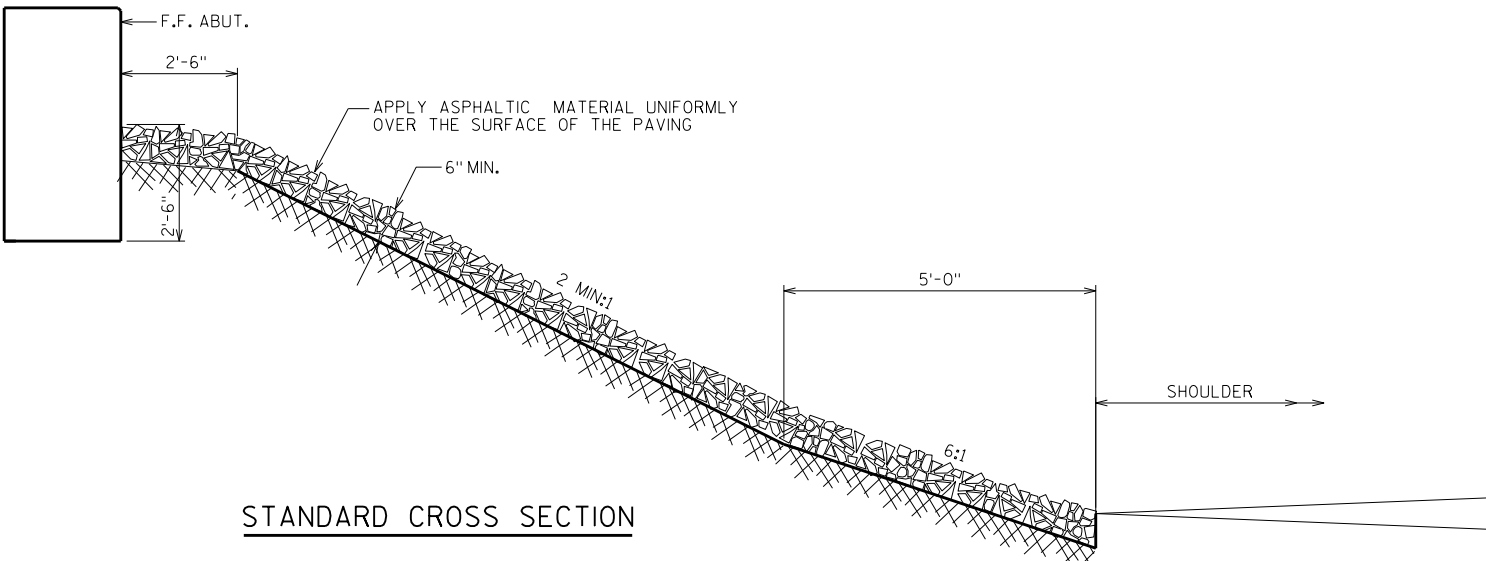
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
DRAWN BY JDM		PLANS CK'D. JLR	
SINGLE SLOPE PARAPET 32SS		SHEET 21	
		431	



SECTION A-A



PLAN



STANDARD CROSS SECTION

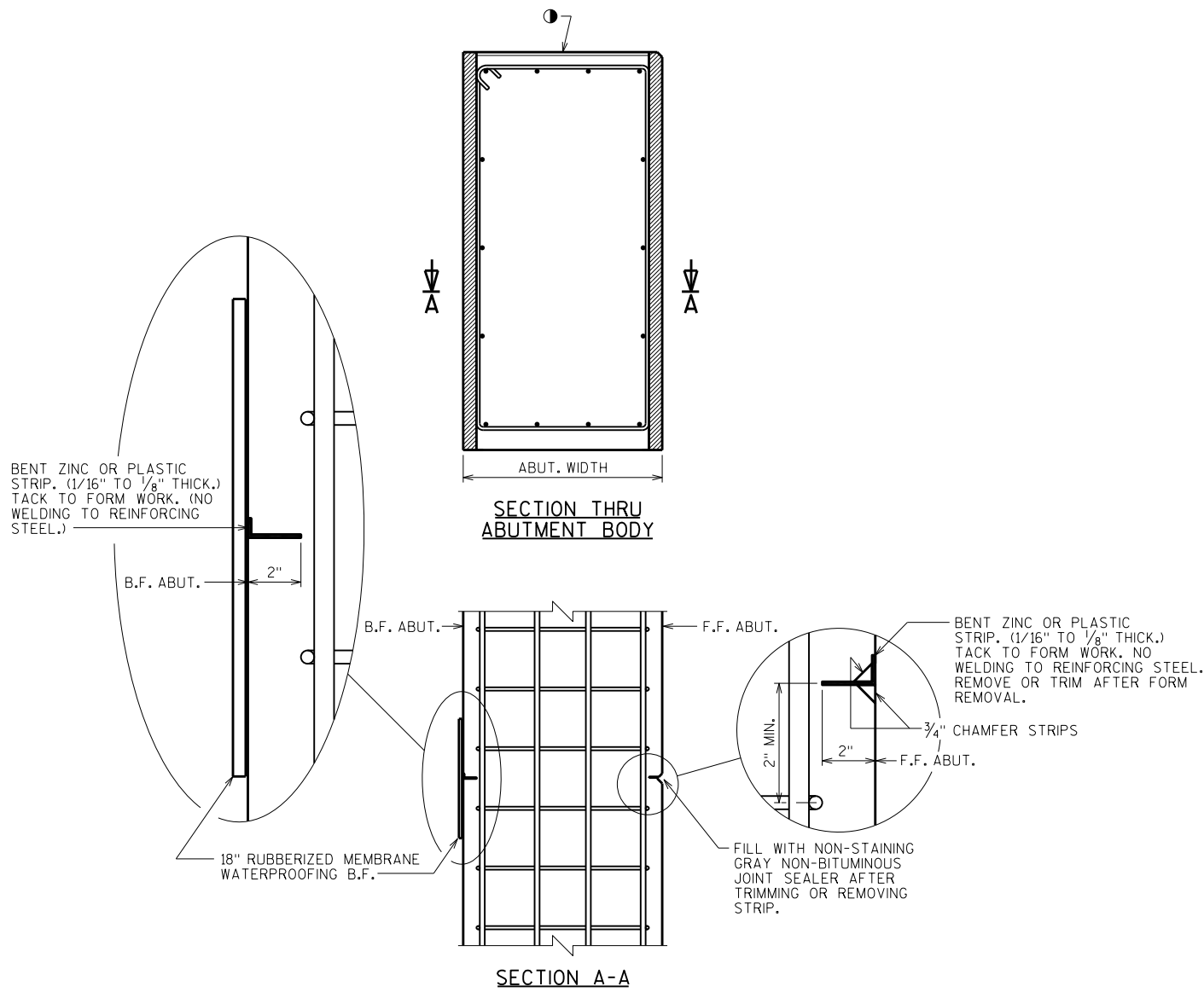
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
		DRAWN BY JDM	PLANS CK'D. JLR
SLOPE PAVING CRUSHED AGG.		SHEET 22	
		432	

SCALE = 1:100



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES
PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

1 USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-220			
		DRAWN BY JDM	PLANS CK'D. JLR
ALTERNATE CONSTR. JOINT		SHEET 23	
		433	

SCALE = 1:100

* PROVIDE FOR THREE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

INDICATES WING NUMBER

TEMPORARY STRUCTURE BID ITEM INCLUDED IN B-17-222 PLANS

★ SURFACE DRAINS LOCATED IN NE AND SE CORNERS. SEE ROADWAY PLANS FOR DETAILS.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.06
OPERATING RATING FACTOR: RF=1.38
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — $f'_c = 4,000$ P.S.I.
ALL OTHER — $f'_c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — $f_y = 60,000$ P.S.I.
STAINLESS, GRADE 60 — $f_y = 60,000$ P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 25'-0" LONG PILES AT WEST ABUTMENT. ESTIMATED 15'-0" LONG PILES AT EAST ABUTMENT WITH PILE POINTS REQUIRED.

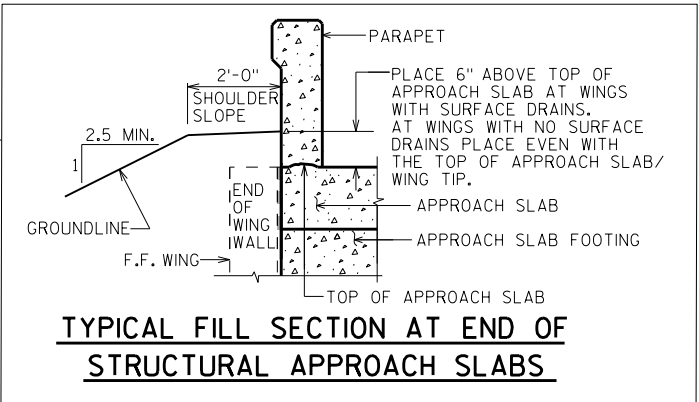
PIER TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 10'-0" LONG PILES AT BOTH PIERS WITH PILE POINTS REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH 94
A.D.T.=42,600 (2038)
R.D.S.=75 M.P.H.

650TH AVE.
A.D.T.=90 (2038)
R.D.S.=60 M.P.H.



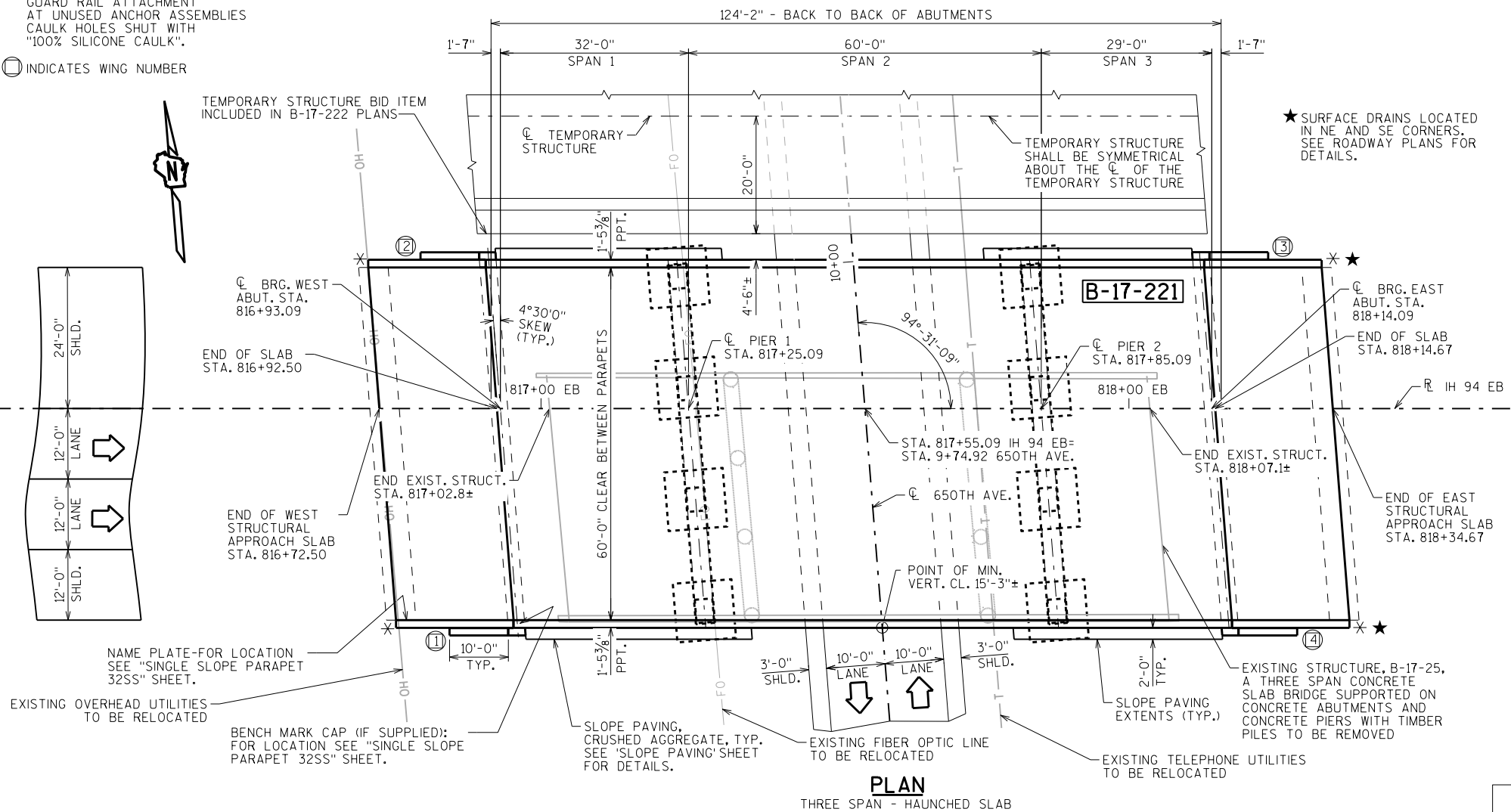
STRUCTURE DESIGN CONTACTS:

DANIEL MONROE (608) 266-8490
LAURA SHADEWALD (608) 267-9592

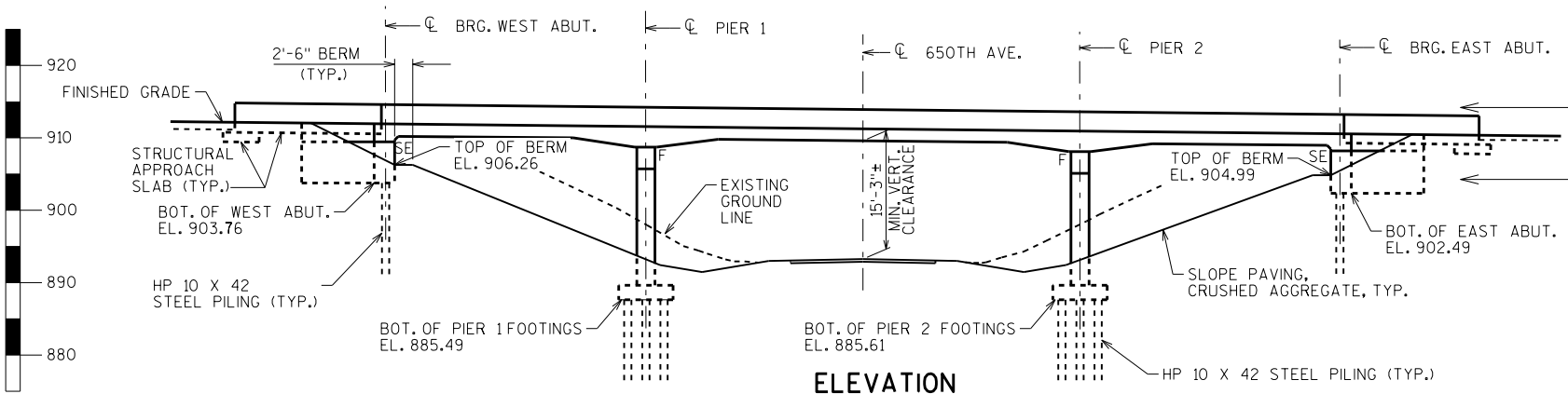
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER 1
9. PIER 1 DETAILS
10. PIER 2
11. PIER 2 DETAILS
12. SUPERSTRUCTURE CROSS SECTIONS 1
13. SUPERSTRUCTURE CROSS SECTIONS 2
14. SUPERSTRUCTURE PLAN
15. SUPERSTRUCTURE LONGITUDINAL SECTIONS
16. SUPERSTRUCTURE DETAILS
17. SUPERSTRUCTURE DATA
18. SUPERSTRUCTURE BAR DETAILS
19. STRUCTURAL APPROACH SLABS
20. STRUCTURAL APPROACH SLAB & BAR DETAILS
21. SINGLE SLOPE PARAPET 32SS
22. SLOPE PAVING CRUSHED AGGREGATE
23. ALTERNATE CONSTRUCTION JOINT

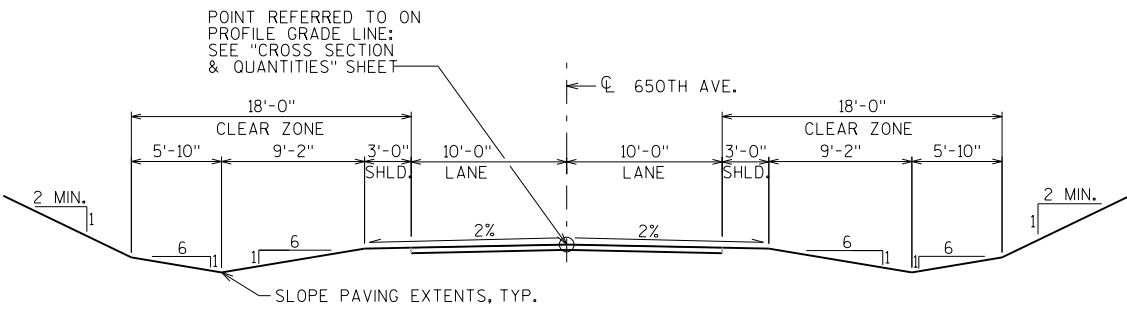
NO.	DATE	REVISION	BY
ACCEPTED <i>William C. Dreher</i> 7/14/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-221			
IH 94 EB OVER 650TH AVENUE			
COUNTY	DUNN	TOWN	MENOMONIE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
DLM	WAH	JPH	DLM
GENERAL PLAN			SHEET 1 OF 23
			434



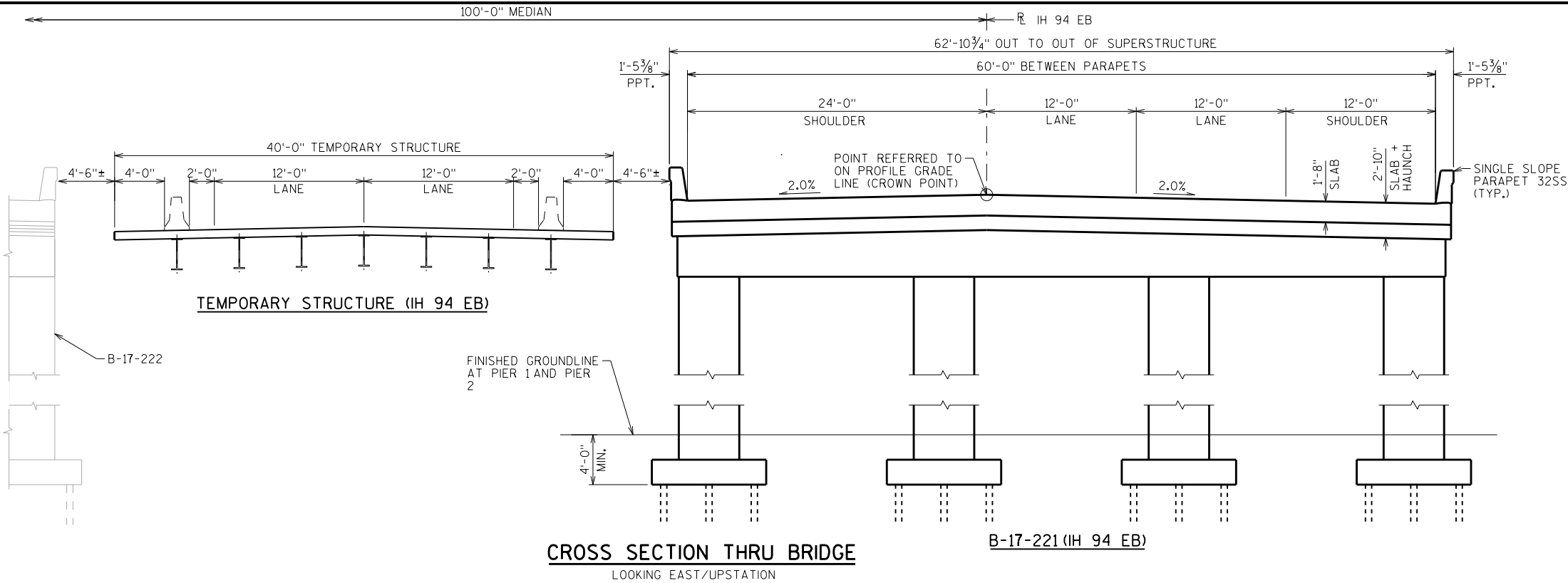
PLAN
THREE SPAN - HAUNCHED SLAB



ELEVATION
LOOKING NORTH (UPSTATION)



TYPICAL SECTION THRU 650TH AVE.
NORMAL TO 650TH AVE. - LOOKING NORTH (UPSTATION)



GENERAL NOTES

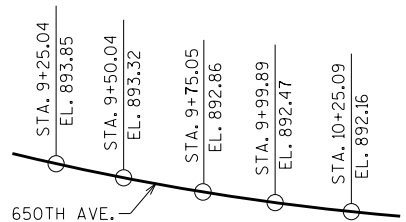
- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL ALL EXPOSED EDGES OF CONCRETE $\frac{3}{4}$ " UNLESS NOTED OTHERWISE.
- AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.
- THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF HAUNCHED SLAB & APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON STRUCTURAL APPROACH SLABS.
- THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.
- TEMPORARY SHORING IS INCLUDED IN BID ITEM "TEMPORARY STRUCTURE STA. 817+55.09 EB"

STATE PROJECT NUMBER
1022-08-72

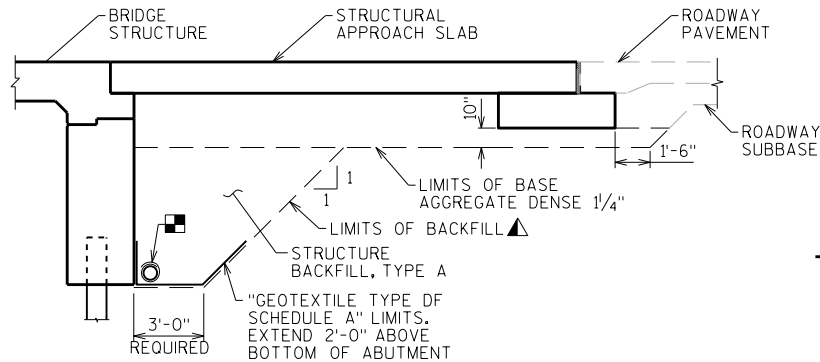
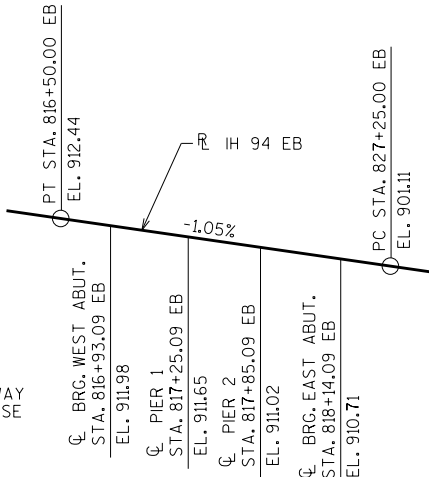
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 817+02.8 EB	LS	—	—	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-221	LS	—	—	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	175	—	—	175	—	350
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	200	—	—	—	—	200	400
502.0100	CONCRETE MASONRY BRIDGES	CY	580	83	51	99	98	51	83	1,045
502.3200	PROTECTIVE SURFACE TREATMENT	SY	850	135	—	—	—	—	135	1,120
502.3210	PIGMENTED SURFACE SEALER	SY	101	17	—	—	—	—	17	135
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	3,910	2,350	2,350	3,910	—	12,520
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	102,890	14,240	1,220	16,050	15,780	1,200	14,240	165,620
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	570	—	—	—	—	—	—	570
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	16	—	—	16	—	32
526.0100	TEMPORARY STRUCTURE STA. 817+55.09 EB	LS	—	—	—	—	—	—	—	1
550.0500	PILE POINTS	EACH	—	—	—	26	26	9	—	61
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	—	—	225	260	260	135	—	880
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	—	—	310	—	—	285	—	595
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	135	—	—	135	—	270
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	70	—	—	70	—	140
	NON-BID ITEMS									
	FILLER	SIZE	—	—	—	—	—	—	—	1/2", 3/4", 1/2"

PROFILE GRADE LINE 650TH AVE.



PROFILE GRADE LINE IH 94 EB



TYPICAL SECTION THRU ABUTMENT

- NOTES:
- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-17-221" SHALL BE THE EXISTING GROUNDLINE.
- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
CROSS SECTION & QUANTITIES		SHEET 2	
		435	

SCALE = 8.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/19/2016	184412.908	144991.023
3	7/20/2016	184413.315	145082.709
5	7/20/2016	184500.267	145042.914
7	8/09/2016	184434.700	145063.276
8	8/09/2016	184432.075	145034.984
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			

⊙ INDICATES WING NUMBER



END OF WEST
APPROACH SLAB
STA. 816+72.50

STA. 817+55.09 IH 94 EB =
STA. 9+74.92 650TH AVE.

CL PIER 1
STA. 817+25.09

STA. 817+00 EB

CL BRG.
WEST ABUT.
STA. 816+93.09

B-17-221

STA. 10+00

94°-31'-09"

CL IH 94 EB

CL PIER 2
STA. 817+85.09

CL 650TH AVE.

4°-30'
SKEW
(TYP.)

CL BRG.
EAST ABUT.
STA. 818+14.09

STA. 818+00 EB

END OF EAST
APPROACH SLAB
STA. 818+34.67

PLAN

STATE PROJECT NUMBER
1022-08-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

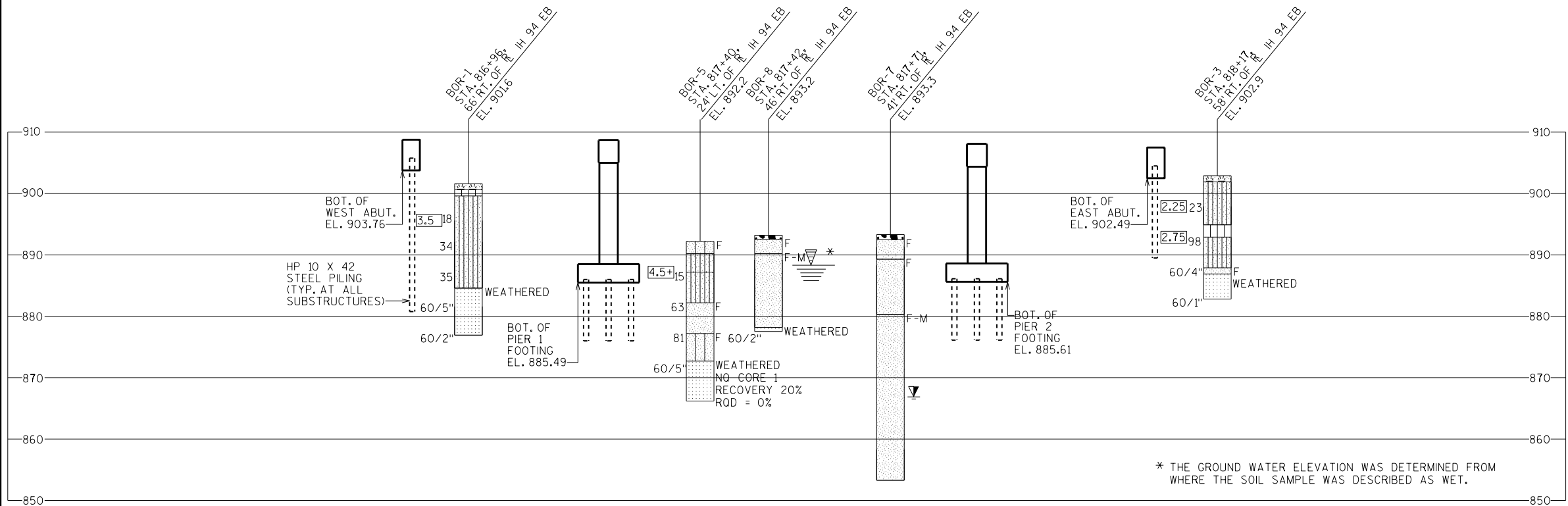
▽ AT TIME OF DRILLING

▽ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

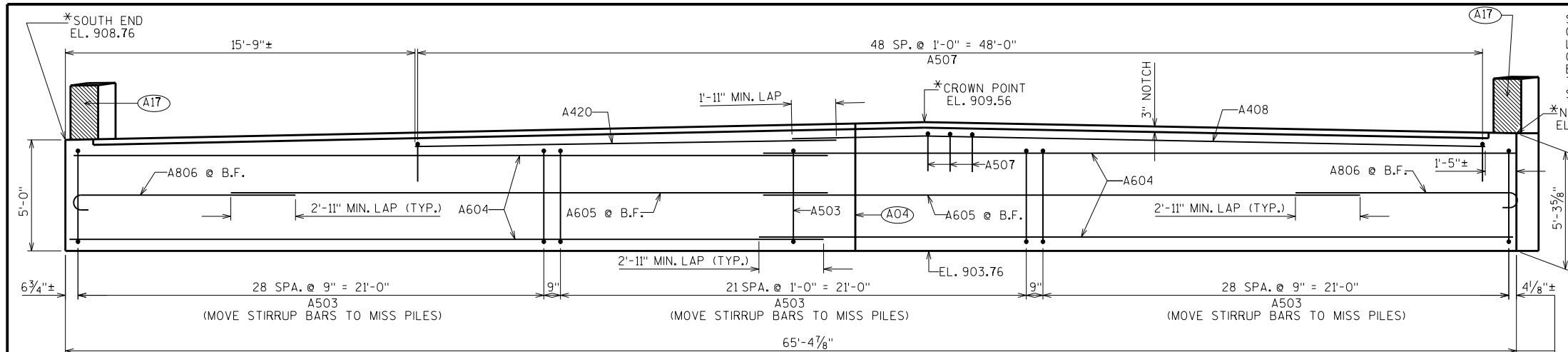
NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
STRUCTURE B-17-221

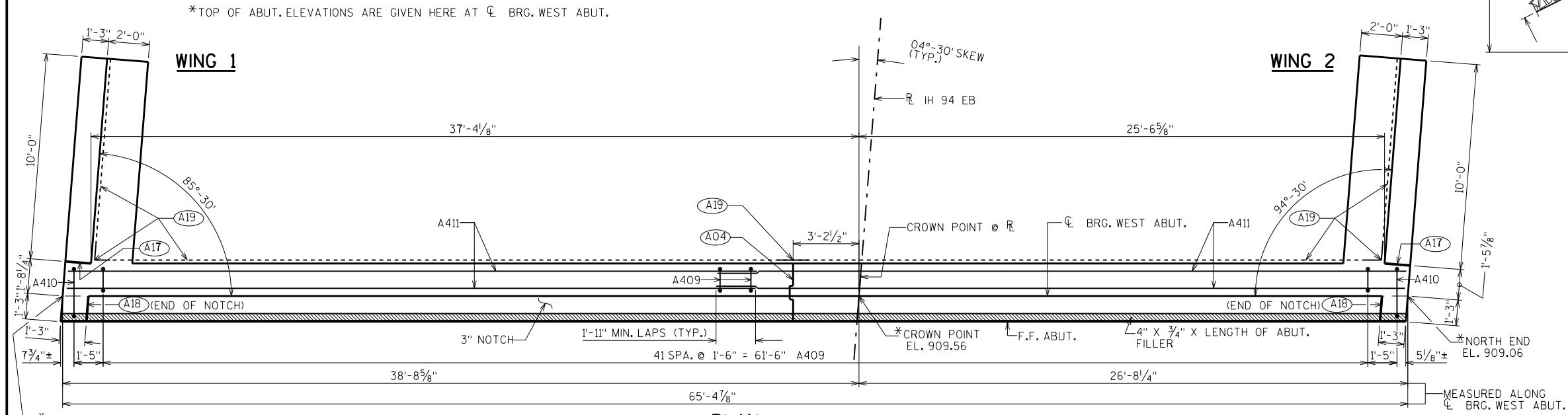
DRAWN BY JPH	PLANS CK'D. DLM
SHEET 3	
436	

SUBSURFACE EXPLORATION

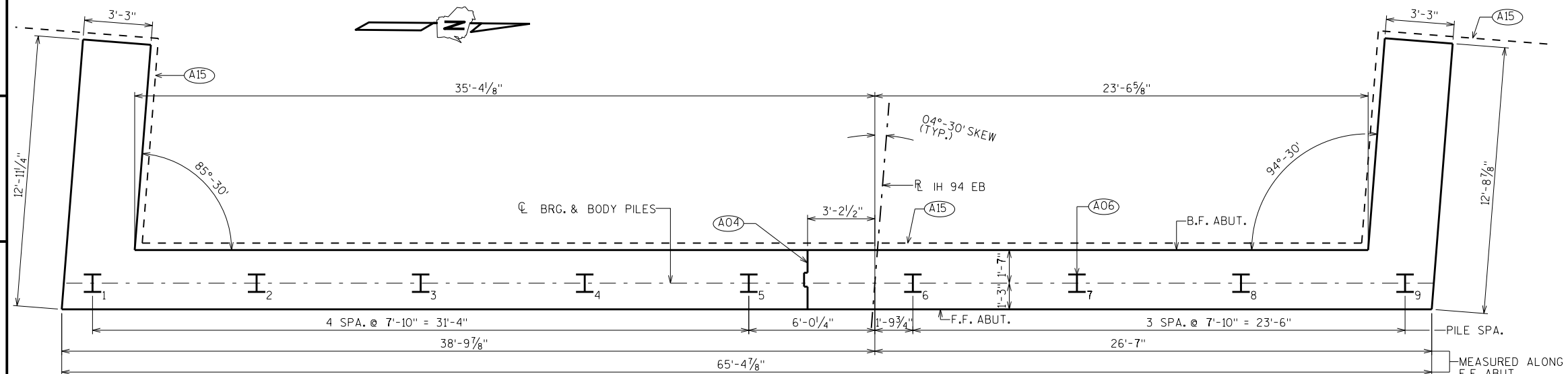
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ELEVATION LOOKING WEST @ F.F. ABUT.



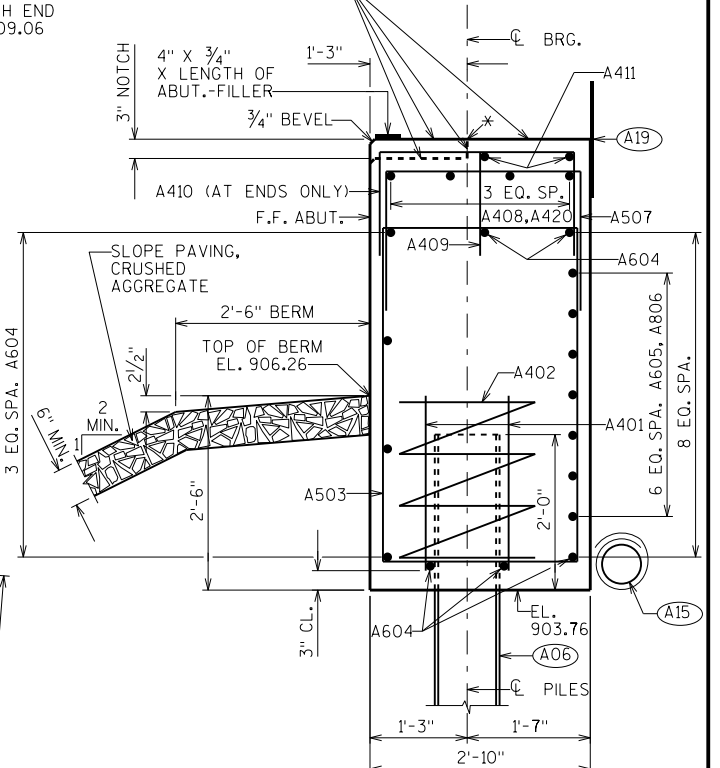
PLAN



PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.

STATE PROJECT NUMBER
1022-08-72



SECTION THRU BODY

- A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8" 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 25 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A18 3/4" CORK FILLER UP VERT. NOTCH FACES THAT RUN PARALLEL WITH "R IH 94 EB".
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

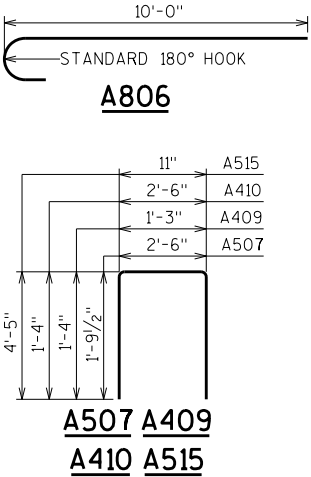
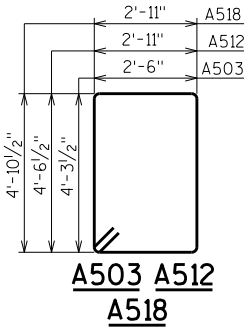
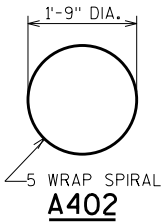
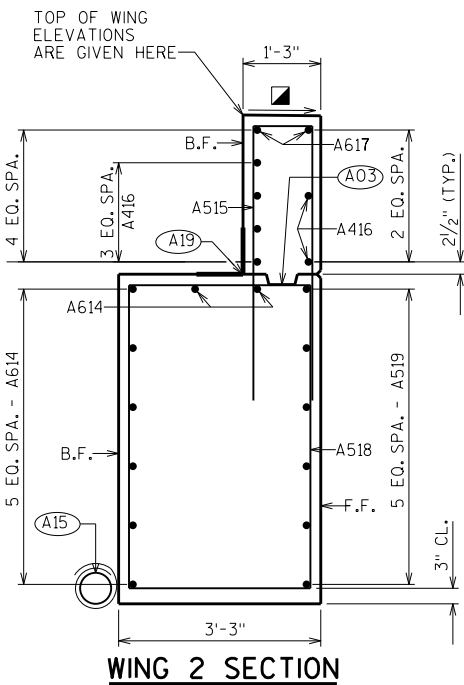
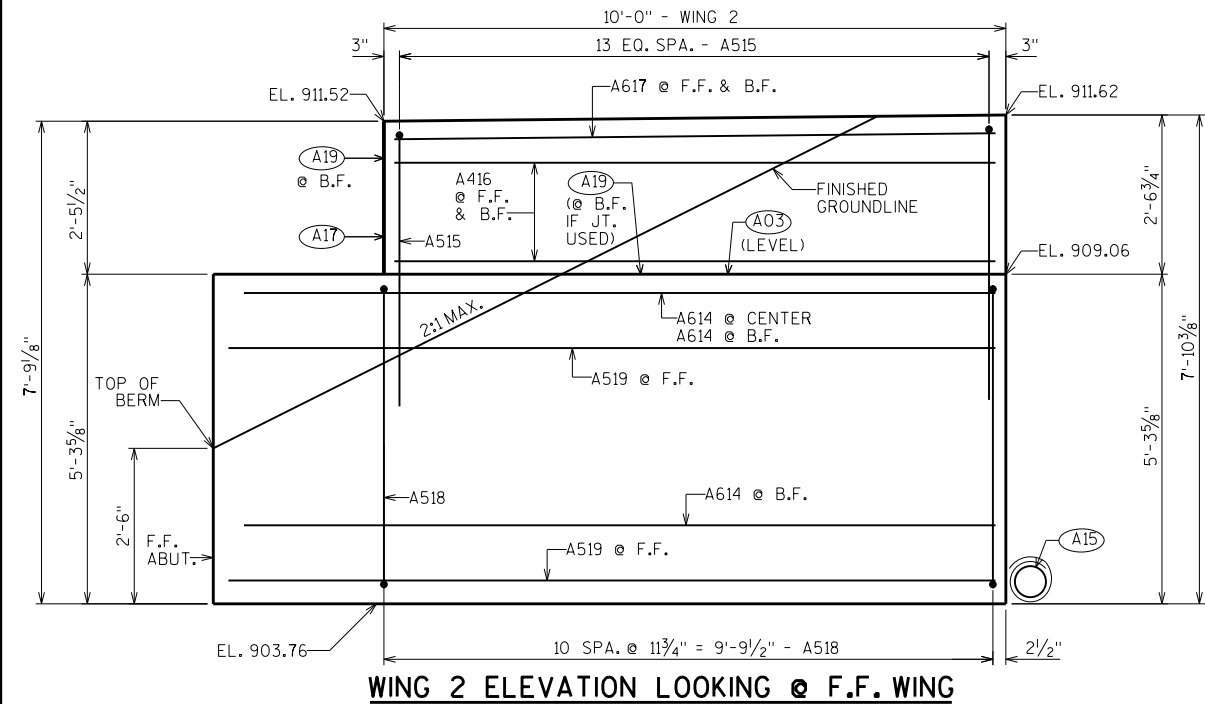
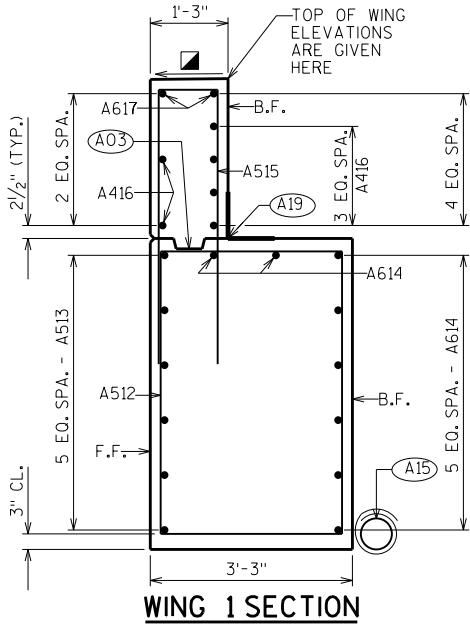
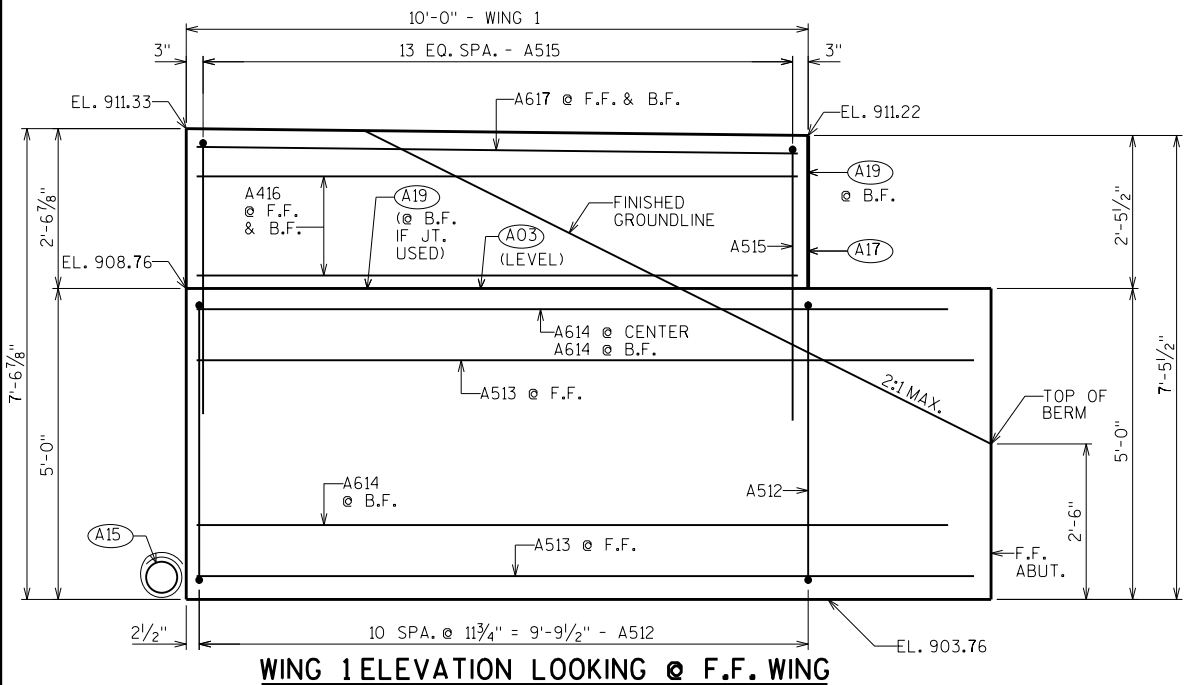
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CKD. DLM	
WEST ABUTMENT		SHEET 4	
		437	

SCALE = 3:00

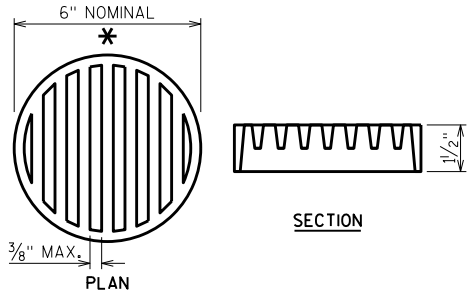
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
A402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A503		80	14'-3"	X	BODY-STIRRUPS-VERT.
A604		18	34'-0"		BODY-HORIZONTAL-END TO END
A605		14	27'-0"		BODY-HORIZONTAL-B.F.-AT CENTER
A806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
A507		49	5'-10"	X	BODY-TOP-VERT.-UNDER NOTCH
A408		4	31'-3"		BODY-TOP-HORIZ.-UNDER NOTCH-NORTH END
A409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
A410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
A411		4	33'-6"		BODY-TOP-HORIZ.-END TO END
A512	X	11	15'-7"	X	WING 1-BOT.-STIRRUP-VERT.
A513	X	6	12'-6"		WING 1-BOT.-HORIZONTAL-F.F.
A614	X	16	12'-1"		WINGS 1&2-BOT.-HORIZONTAL-B.F. & CENTER
A515	X	28	9'-6"	X	WINGS 1&2-TOP-VERTICAL
A416	X	12	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A617	X	4	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A518	X	11	16'-3"	X	WING 2-BOT.-STIRRUP-VERT.
A519	X	6	12'-4"		WING 2-BOT.-HORIZONTAL-F.F.
A420		4	19'-0"		BODY-TOP-HORIZ.-UNDER NOTCH-SOUTH END



FINISH SMOOTH - SLOPE TO DRAIN

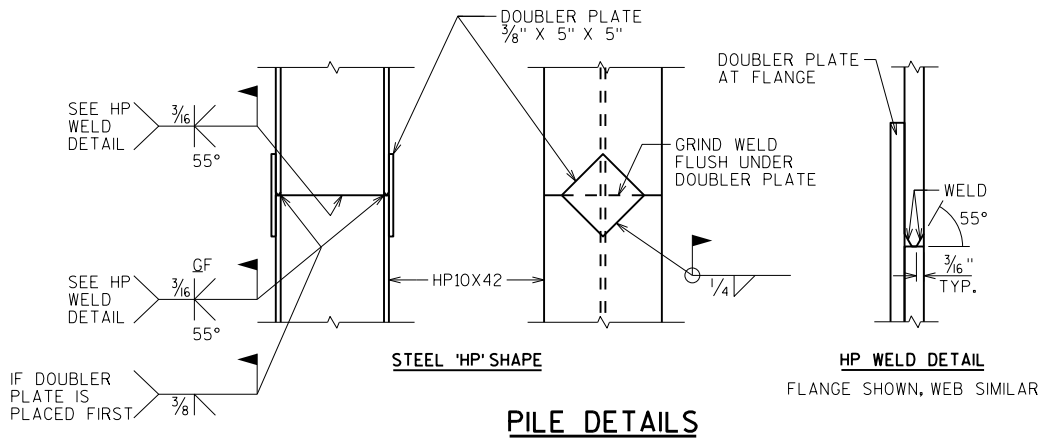


RODENT SHIELD DETAIL

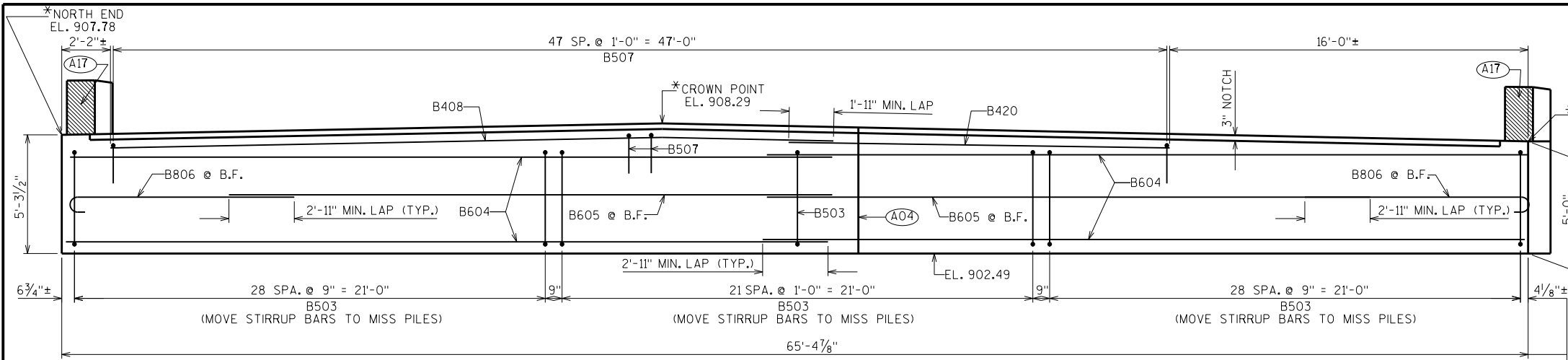
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

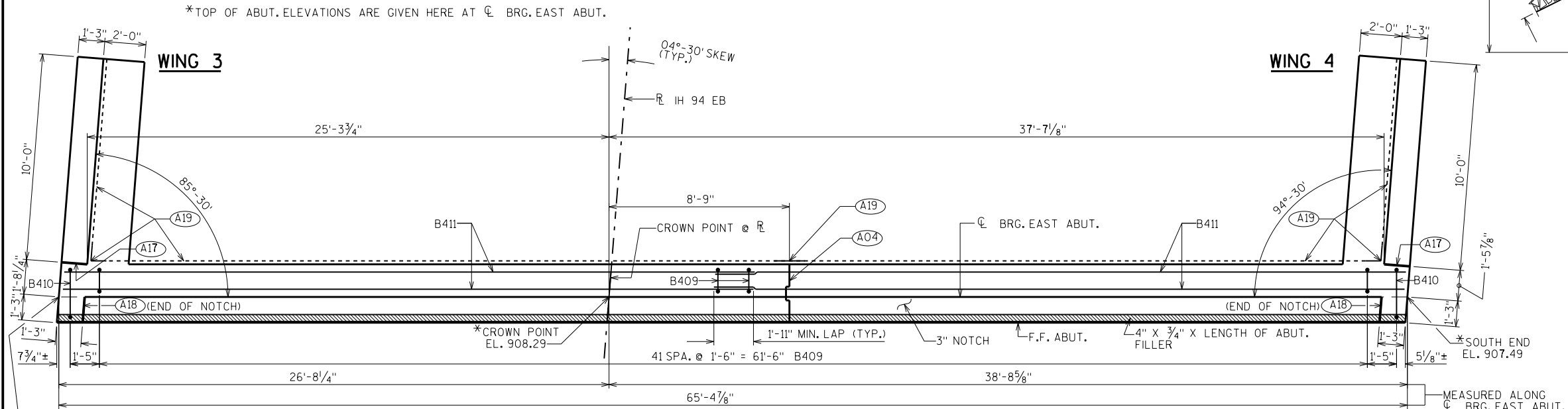
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



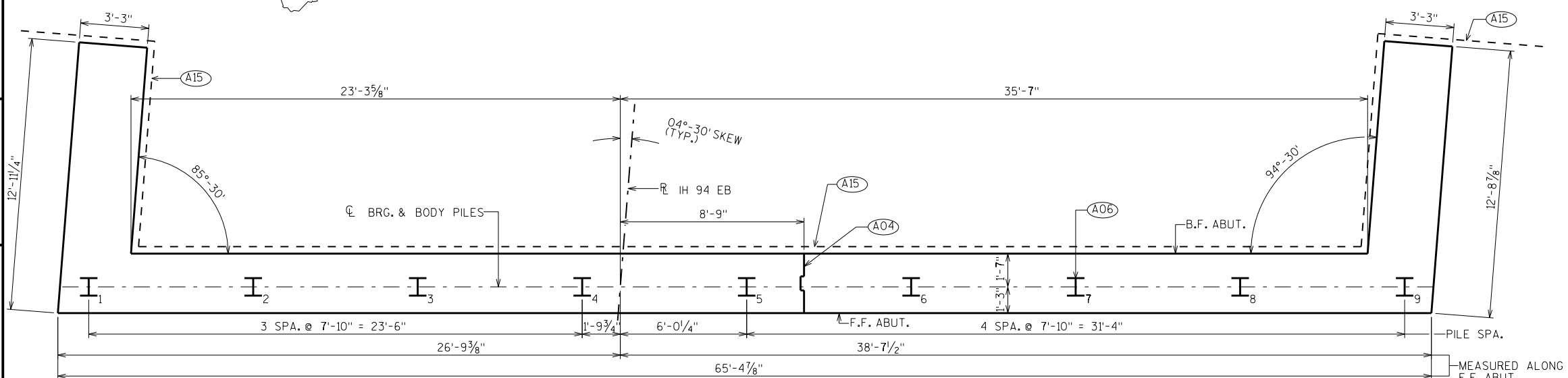
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
WEST ABUTMENT DETAILS		SHEET 5	
		438	



ELEVATION LOOKING EAST @ F.F. ABUT.

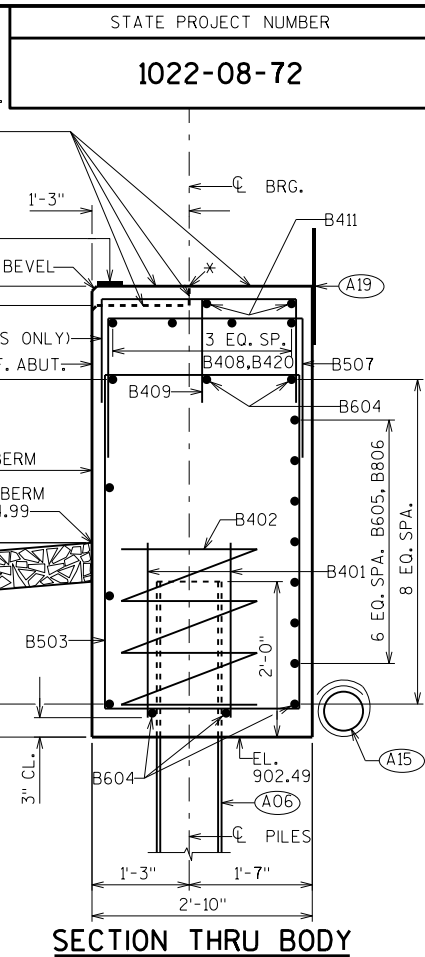


PLAN



PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.



- A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8" 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 15 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED AT ALL PILES. SEE "PILE DETAILS" ON NEXT SHEET.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A18 3/4" CORK FILLER UP VERT. NOTCH FACES THAT RUN PARALLEL WITH "R IH 94 EB".
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE PROJECT NUMBER			
1022-08-72			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY		JPH	PLANS CK'D. DLM
EAST ABUTMENT		SHEET 6	
		439	

SCALE = 3.00

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
B402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
B503		80	14'-3"	X	BODY-STIRRUPS-VERT.
B604		18	34'-0"		BODY-HORIZONTAL-END TO END
B605		14	27'-0"		BODY-HORIZONTAL-B.F.-AT CENTER
B806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
B507		48	5'-10"	X	BODY-TOP-VERT.-UNDER NOTCH
B408		4	32'-3"		BODY-TOP-HORIZ.-UNDER NOTCH-NORTH END
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B411		4	33'-6"		BODY-TOP-HORIZ.-END TO END
B512	X	11	16'-2"	X	WING 3-BOT.-STIRRUP-VERT.
B513	X	6	12'-6"		WING 3-BOT.-HORIZONTAL-F.F.
B614	X	16	12'-1"		WINGS 3&4-BOT.-HORIZONTAL-B.F. & CENTER
B515	X	28	9'-3"	X	WINGS 3&4-TOP-VERTICAL
B416	X	10	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B617	X	4	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B518	X	11	15'-7"	X	WING 4-BOT.-STIRRUP-VERT.
B519	X	6	12'-4"		WING 4-BOT.-HORIZONTAL-F.F.
B420		4	17'-0"		BODY-TOP-HORIZ.-UNDER NOTCH-SOUTH END

WING 3 ELEVATION LOOKING @ F.F. WING

WING 3 SECTION

WING 4 ELEVATION LOOKING @ F.F. WING

WING 4 SECTION

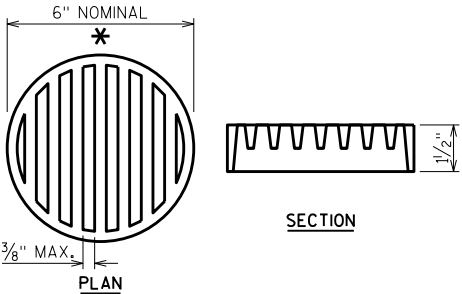
B402

B503 B512
B518

B806

B507 B409
B410 B515

FINISH SMOOTH - SLOPE TO DRAIN



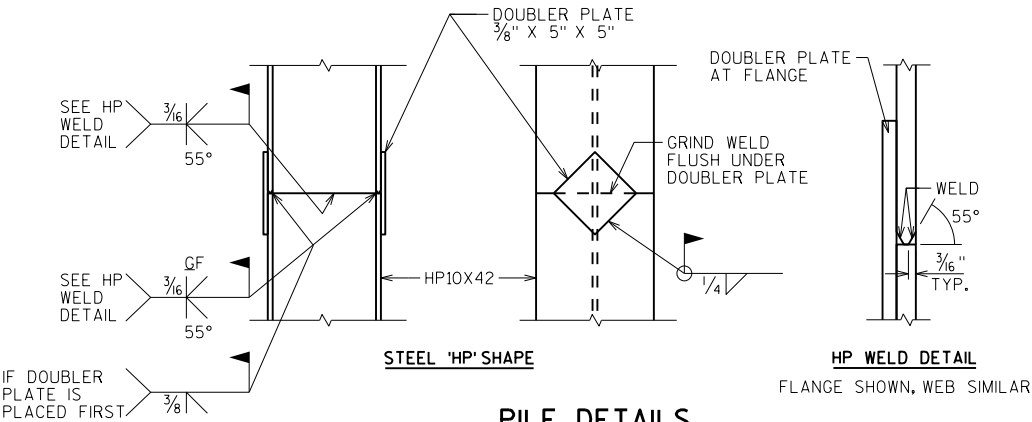
RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

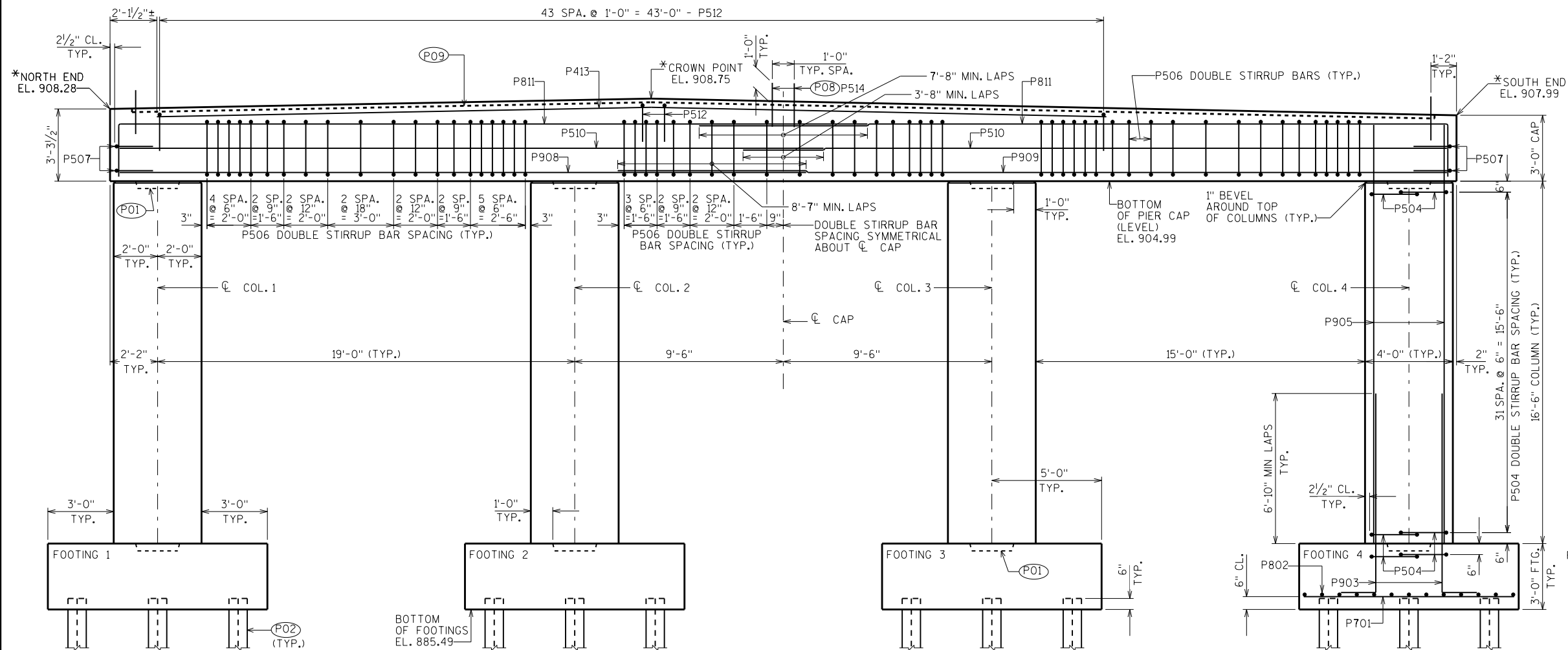
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

PILE DETAILS

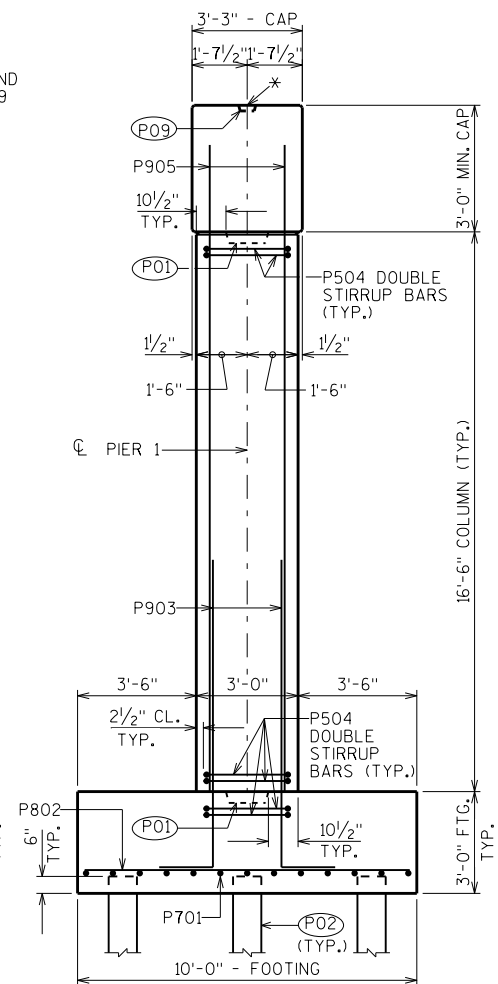


NO.	DATE	REVISION	BY
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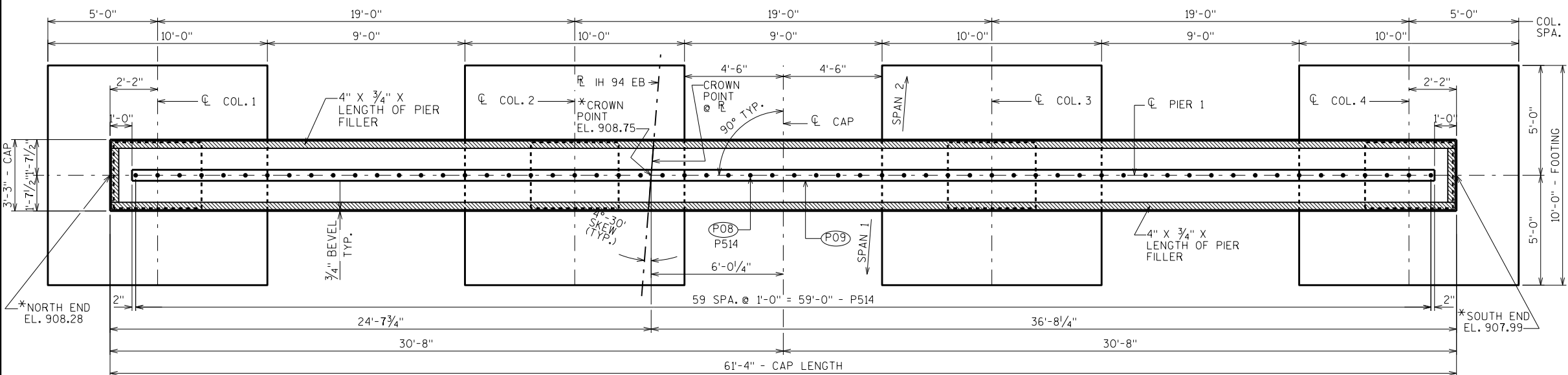
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
EAST ABUTMENT DETAILS		SHEET 7	
		440	



ELEVATION LOOKING EAST

*TOP OF PIER CAP ELEVATIONS ARE GIVEN HERE AT THE ϕ PIER 1

END VIEW



PLAN

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 10 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED. SEE "PILE DETAILS" ON NEXT SHEET.

(P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-221

DRAWN BY JPH PLANS CK'D. DLM

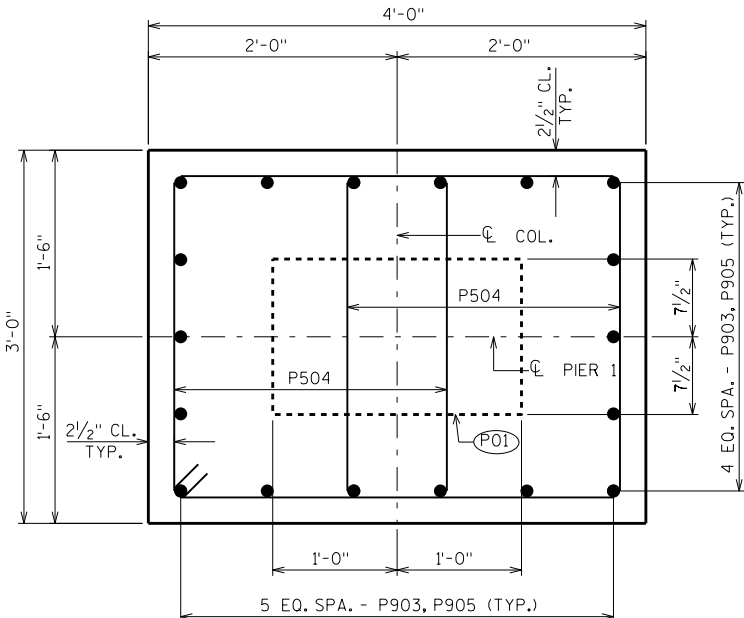
SHEET 8

PIER 1 441

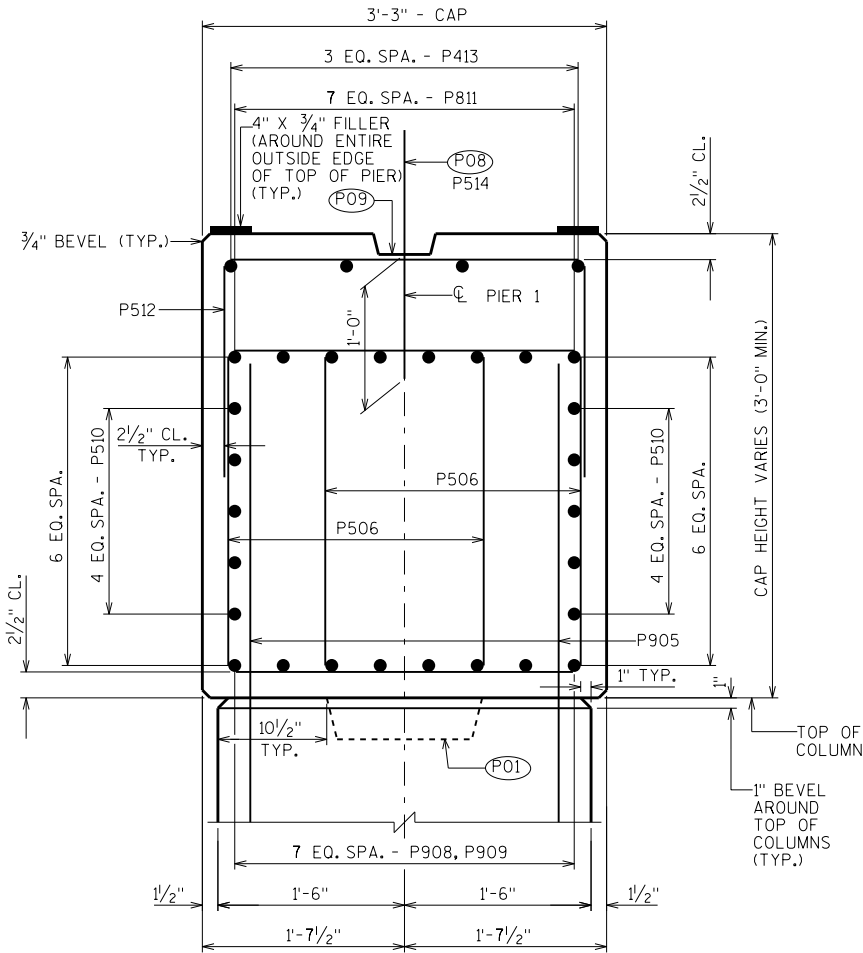
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

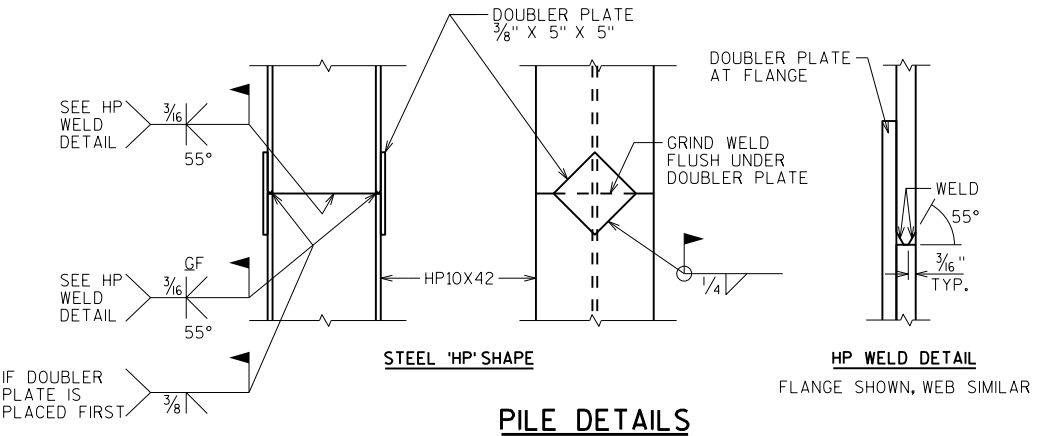
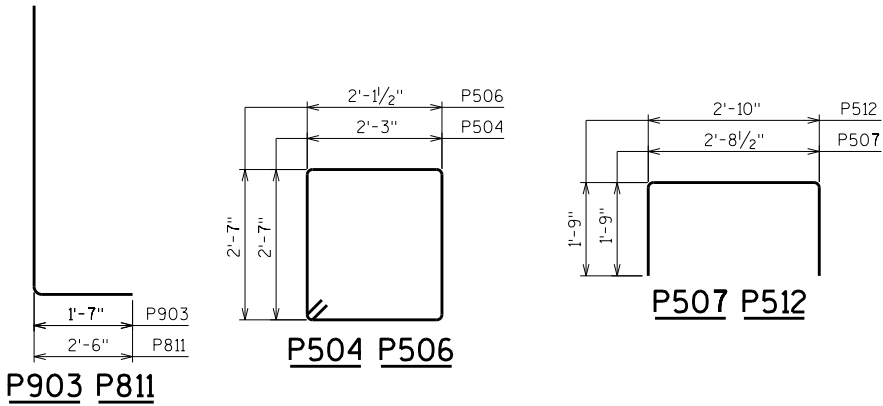
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P701		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
P802		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
P903	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P504	X	264	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	72	19'-1"		COLUMNS/CAP-VERTICAL-ALL FACES
P506	X	116	10'-1"	X	CAP-BOT.-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
P507	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
P908	X	8	31'-6"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
P909	X	8	38'-0"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
P510	X	20	32'-4"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
P811	X	16	36'-8"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
P512	X	44	6'-1"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 1-3
P413	X	4	43'-3"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 1-3
P514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER



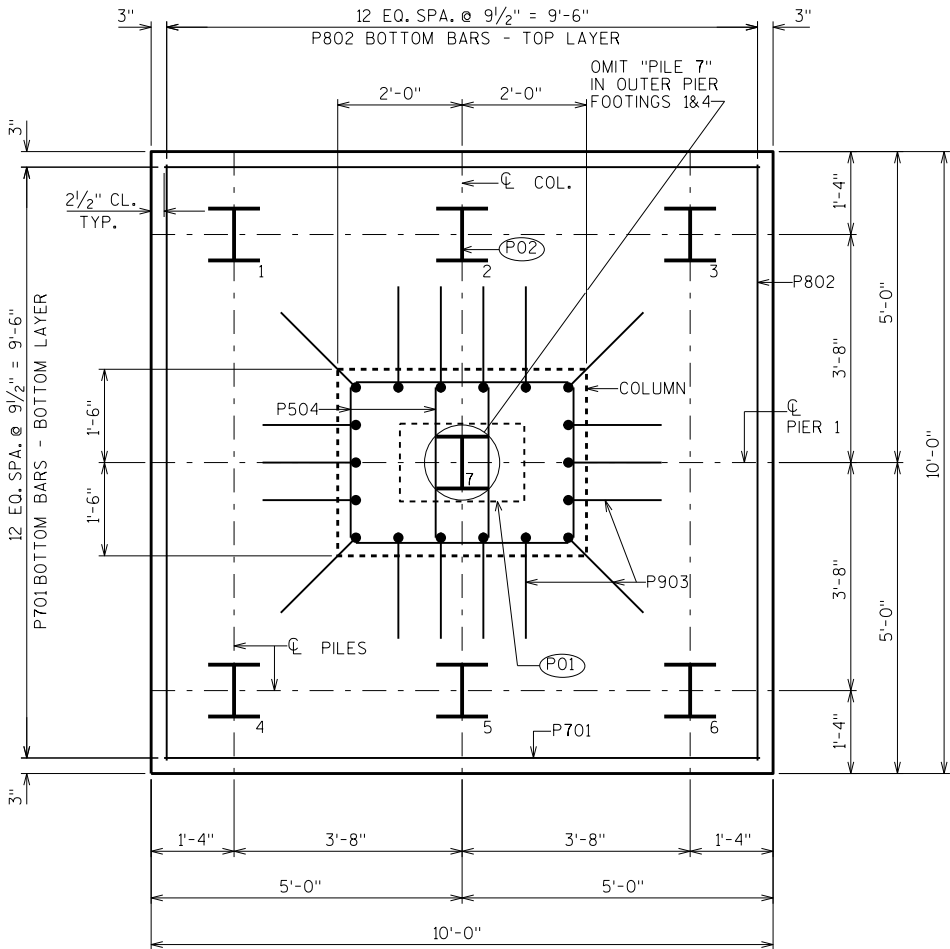
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



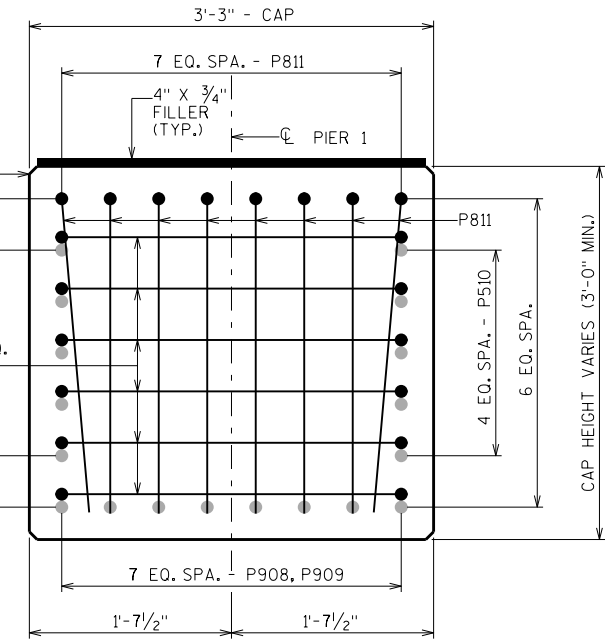
SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)



PILE DETAILS



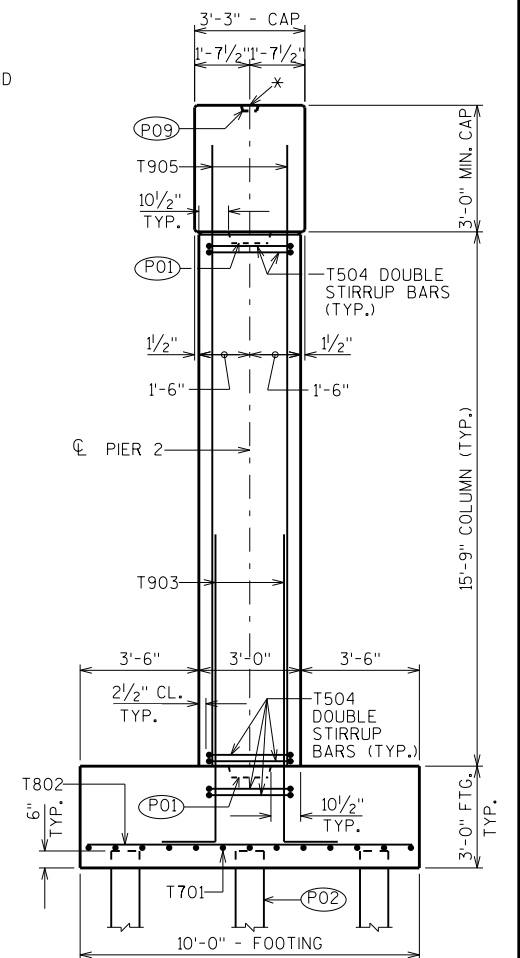
TYPICAL FOOTING/PILE PLAN



SECTION THRU CAP AT ENDS

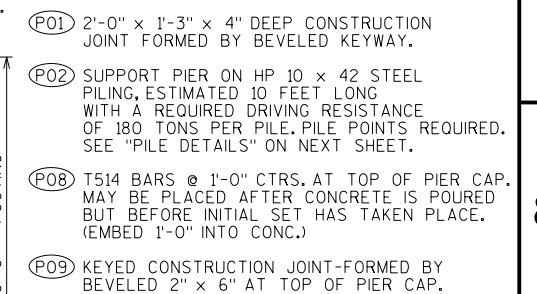
- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 10 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED.
- (P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
PIER 1 DETAILS		SHEET 9	
		442	



END VIEW

8

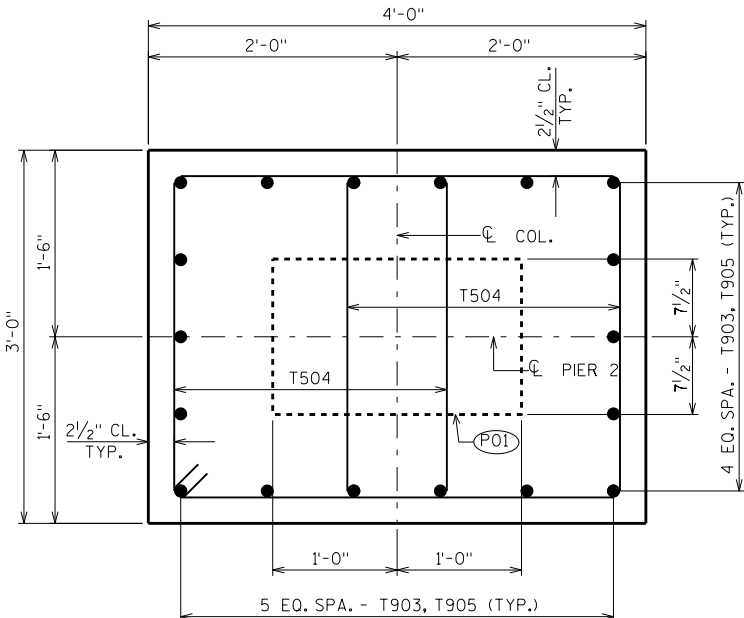


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
		DRAWN BY	PLANS CK'D. DLM
PIER 2		SHEET 10	
		443	

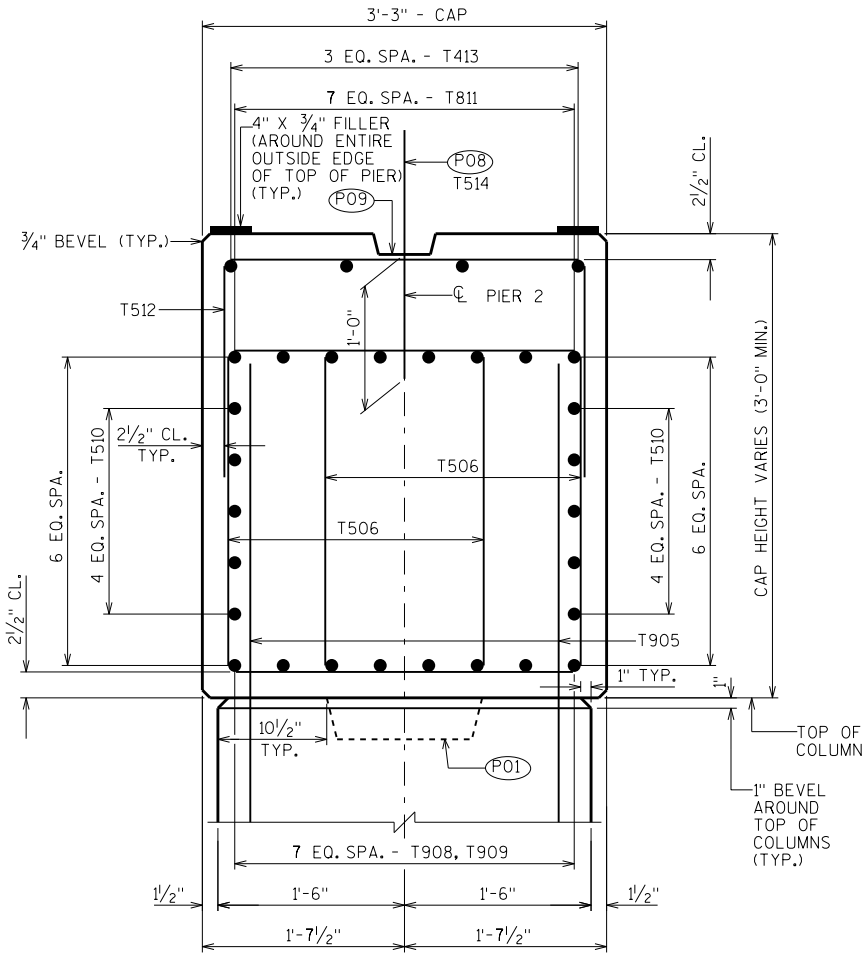
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

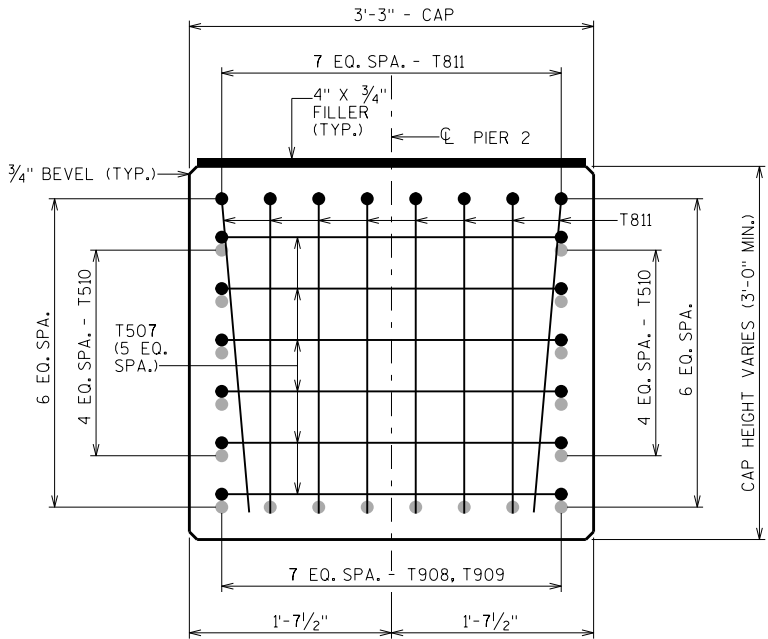
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T701		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
T802		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
T903	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
T504	X	256	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T905	X	72	18'-4"		COLUMNS/CAP-VERTICAL-ALL FACES
T506	X	116	10'-1"	X	CAP-BOT.-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
T507	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
T908	X	8	31'-6"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
T909	X	8	38'-0"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
T510	X	20	32'-4"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
T811	X	16	36'-8"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
T512	X	44	6'-1"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 1-3
T413	X	4	43'-3"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 1-3
T514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER



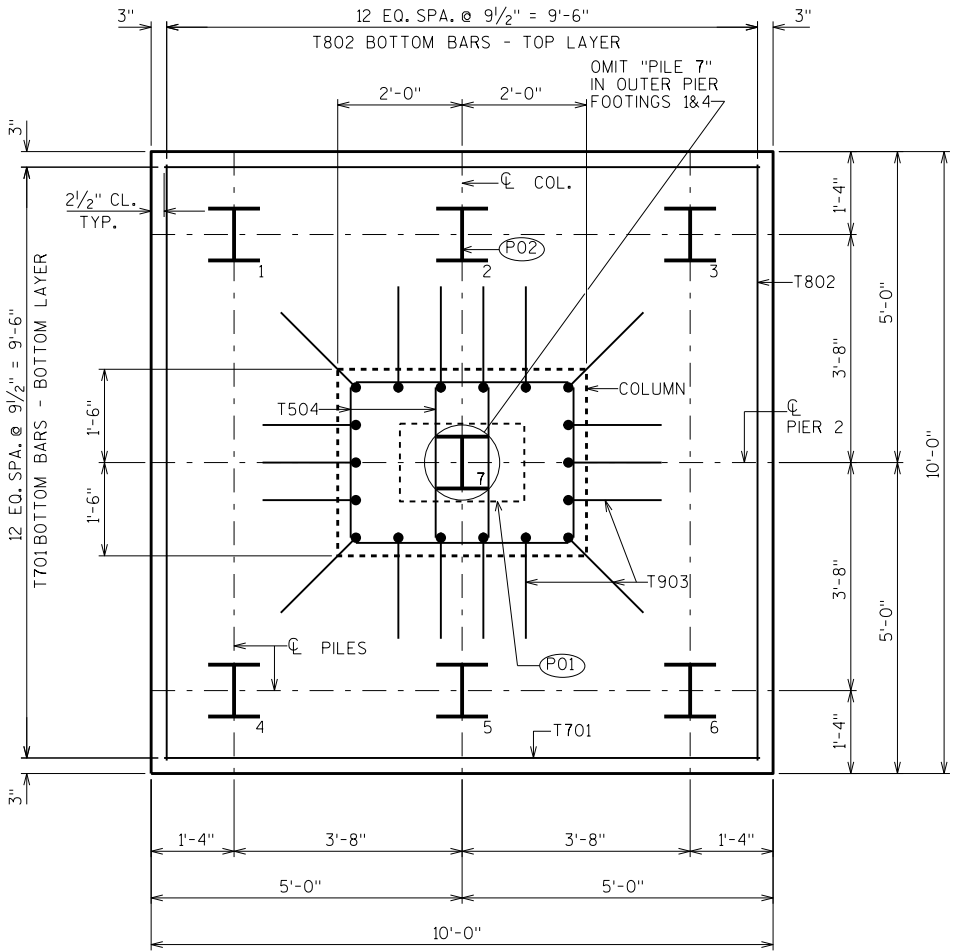
TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



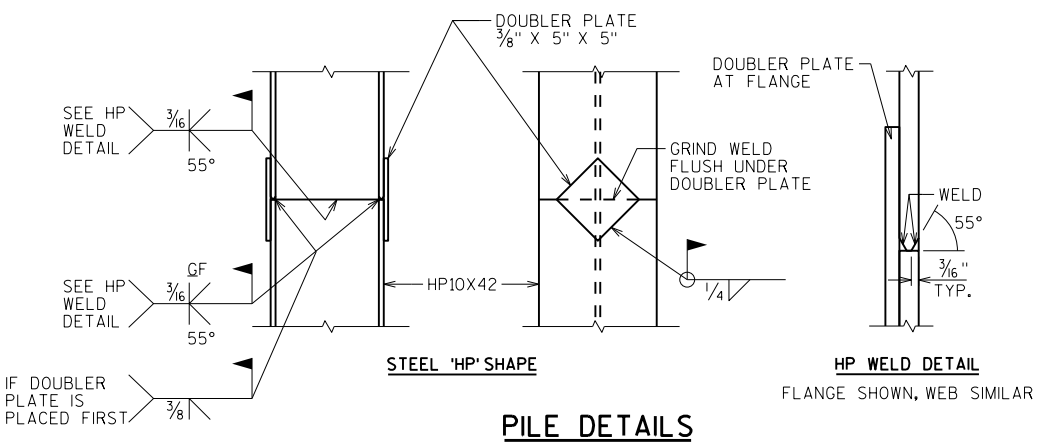
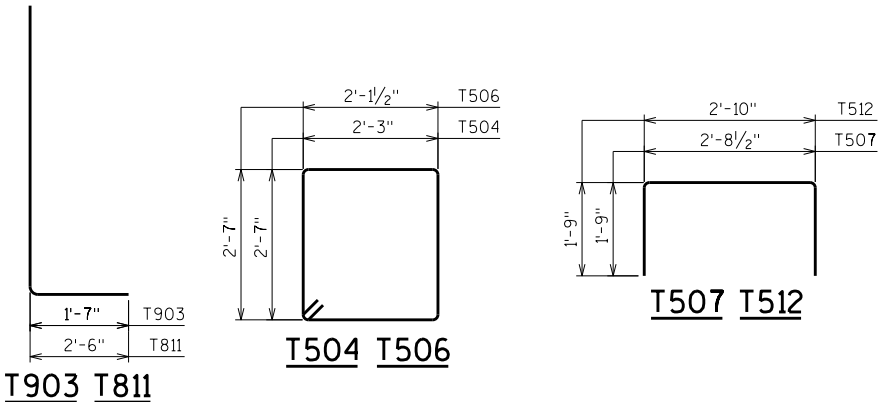
SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)



SECTION THRU CAP AT ENDS

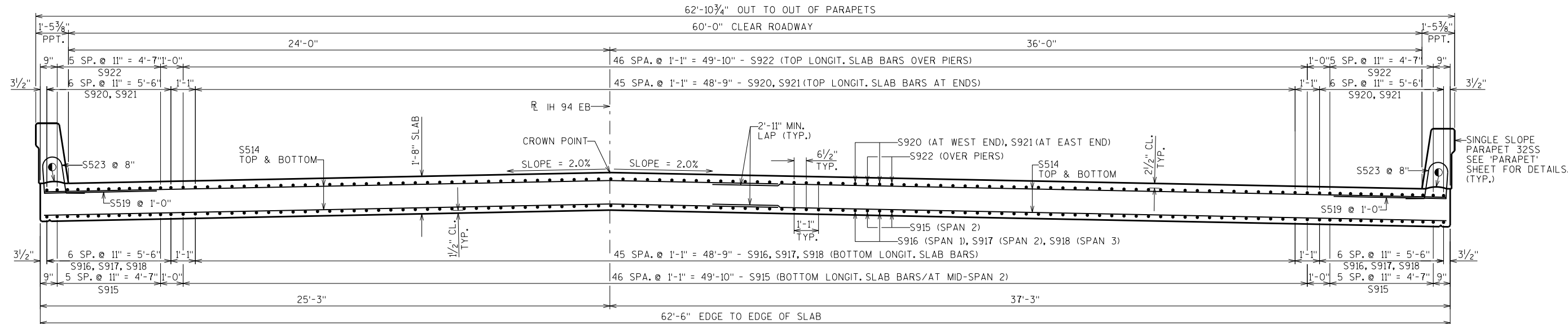


TYPICAL FOOTING/PILE PLAN

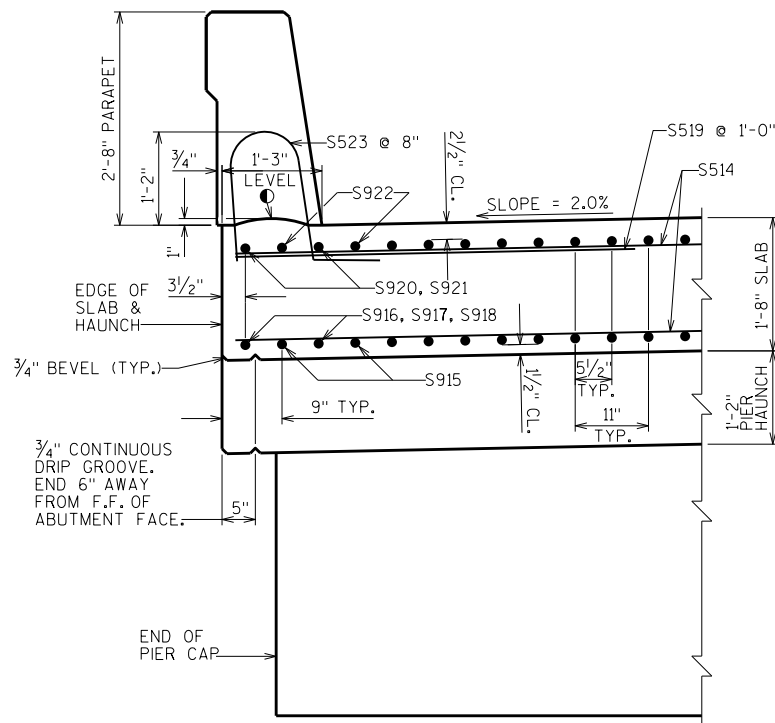


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- (P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 10 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQUIRED.
- (P08) T514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
PIER 2 DETAILS		SHEET 11	
		444	



TYPICAL CROSS SECTION THRU BRIDGE LOOKING EAST
(SHOWING SLAB REINFORCEMENT)

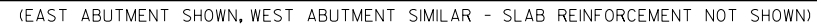


EDGE OF SLAB DETAIL
(TYP. @ BOTH SIDES)
(PIER SECTION SHOWN -
OTHER LOCATIONS SIMILAR)

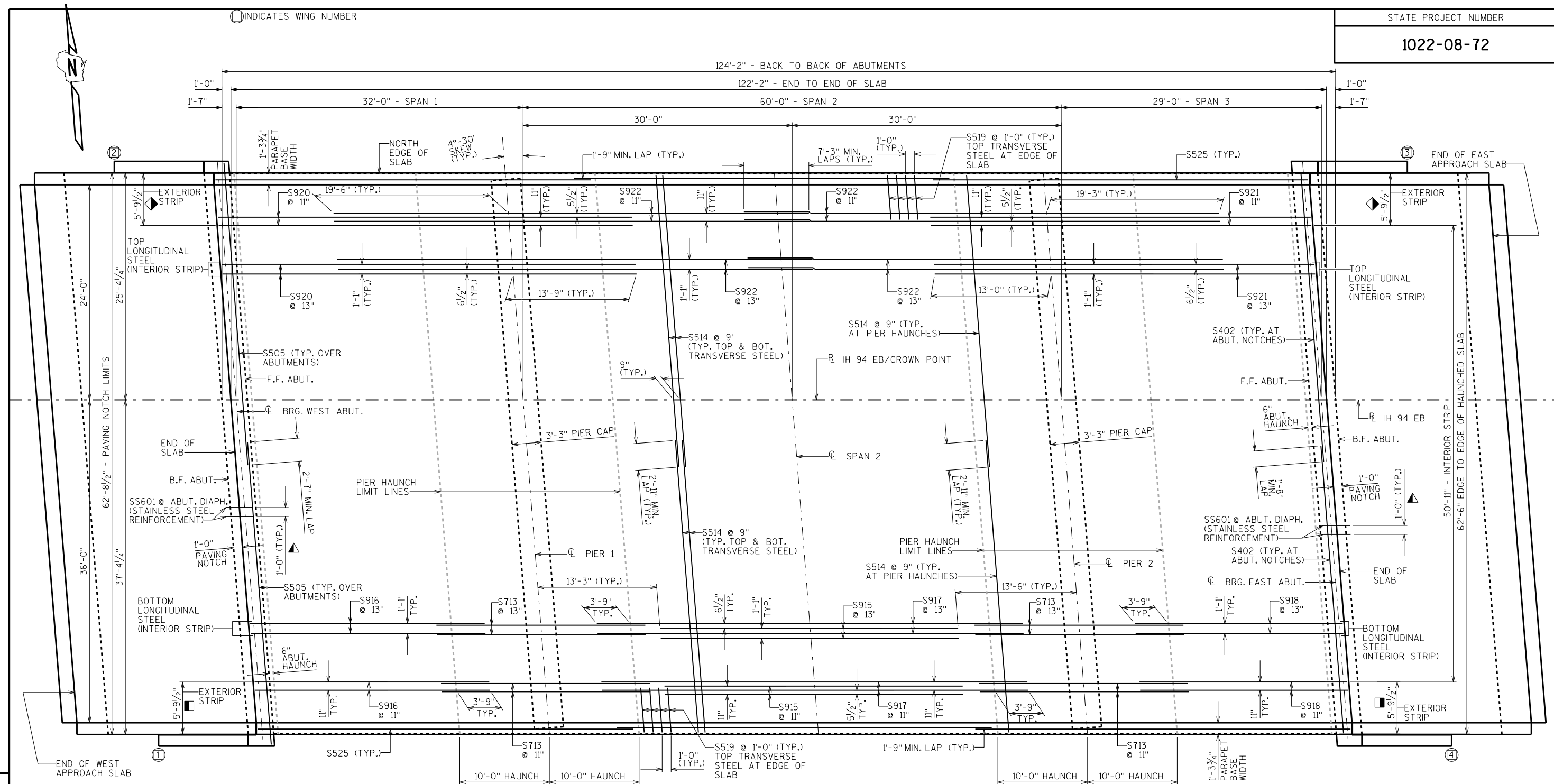
NOTE:
FOR THE SECTIONS THRU
THE ABUTMENT DIAPHRAGMS
AND SECTION THRU THE
PIER DIAPHRAGM SEE THE
"SUPERSTRUCTURE LONGITUDINAL
SECTIONS" SHEET.
FOR THE ABUTMENT DIAPHRAGM
CORNER DETAILS SEE THE
"SUPERSTRUCTURE DETAILS" SHEET.

● HORIZ. CONST. JOINT:
STRIKE OFF AND LEAVE
ROUGH AS SHOWN

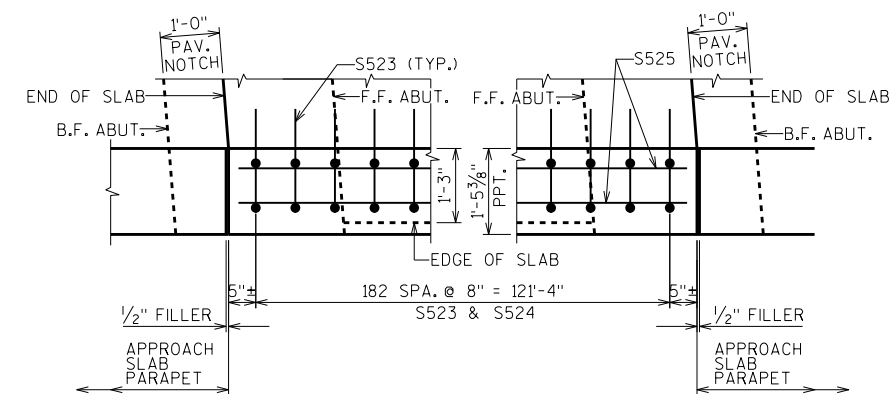
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
SUPERSTRUCTURE CROSS SECTIONS 1		SHEET 12	
		445	



SCALE = 2.33



PLAN



PARTIAL PLAN OF PARAPET REINFORCEMENT
(TYP. @ BOTH SIDES)

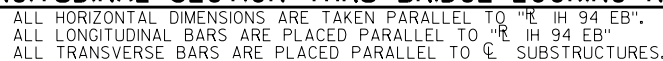
◆ TYPICAL TOP MAT OF LONGITUDINAL REINFORCEMENT AT BOTH (5'-9 1/2") EXTERIOR STRIPS OF SLAB ONLY

■ TYPICAL BOTTOM MAT OF LONGITUDINAL REINFORCEMENT AT BOTH (5'-9 1/2") EXTERIOR STRIPS OF SLAB ONLY

▲ SEE "STRUCTURAL APPROACH SLABS" SHEET FOR SS601 BAR SPACING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
SUPERSTRUCTURE PLAN		SHEET 14	
		447	

SCALE = 5.50

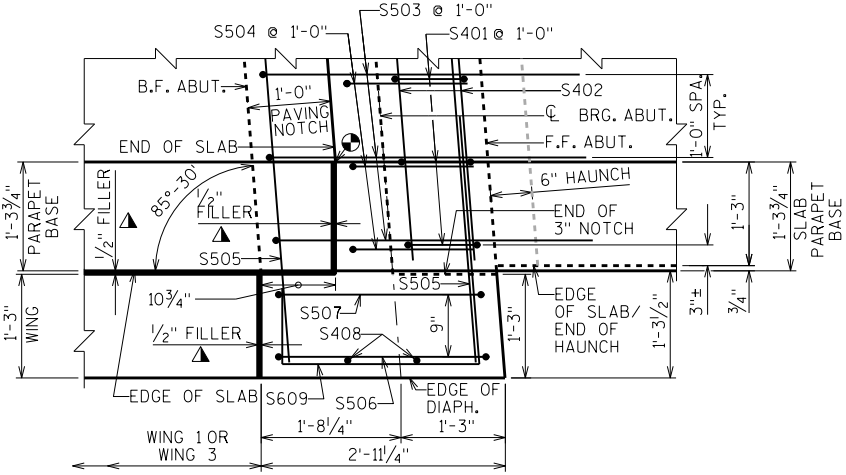


** DIMENSION IS TAKEN
 PARALLEL TO "R IH 94 EB".
 BARS PLACED PARALLEL
 TO "R IH 94 EB" AND
 SPACED PERPENDICULAR
 TO "R IH 94 EB".

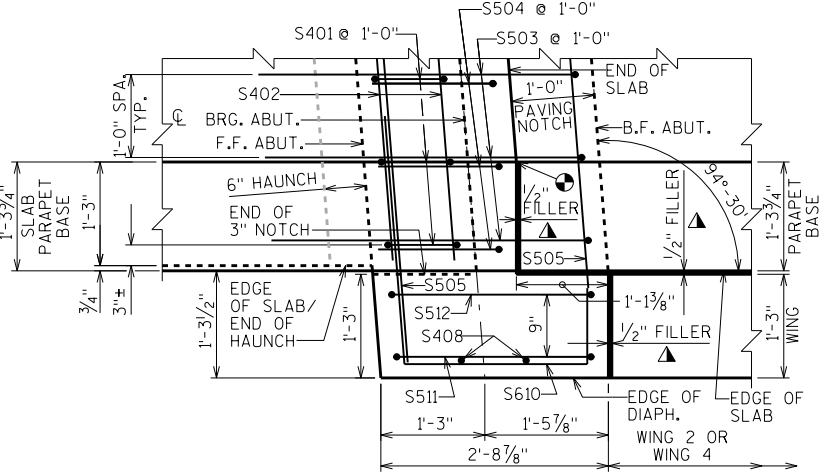


PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C OF ABUTMENTS, THE C OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND R/H 94 EB/CROWN POINT.

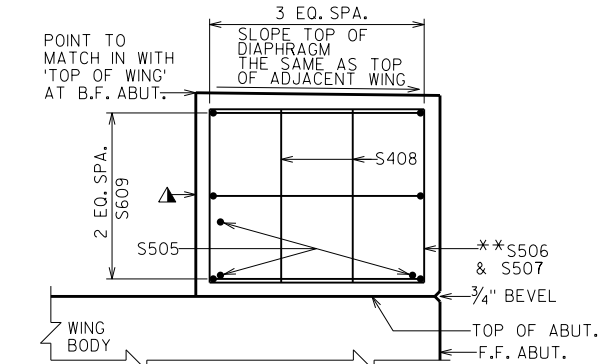
SCALE = 2.25



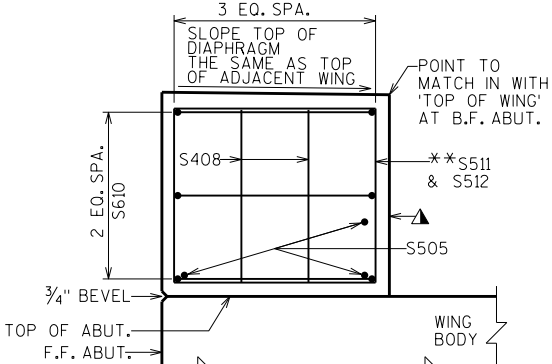
TYPICAL CORNER DETAIL
AT WINGS 1&3 (PLAN VIEW)



TYPICAL CORNER DETAIL
AT WINGS 2&4 (PLAN VIEW)



TYPICAL CORNER DETAIL AT WINGS 1&3
(ELEVATION VIEW LOOKING AT F.F. WING)



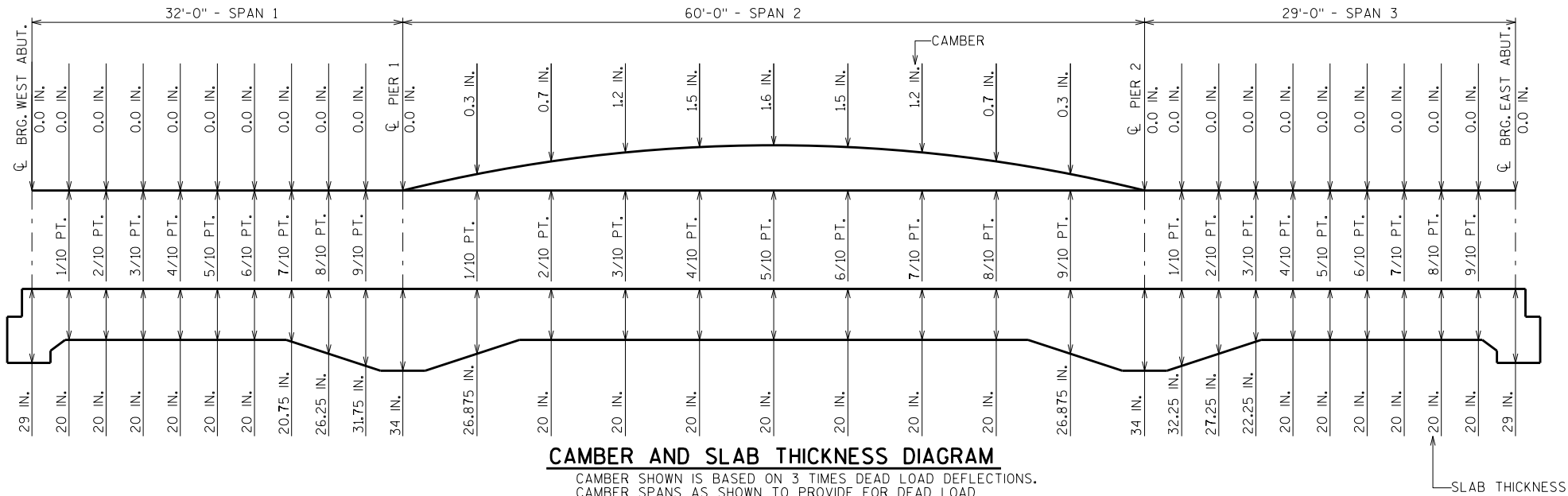
TYPICAL CORNER DETAIL AT WINGS 2&4
(ELEVATION VIEW LOOKING AT F.F. WING)

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

◼ SQUARE OFF ENDS OF PAVING NOTCH AT INSIDE FACE OF PARAPET

** DIMENSION IS TAKEN PARALLEL TO "R" IH 94 EB". BARS PLACED PARALLEL TO "R" IH 94 EB" AND SPACED PERPENDICULAR TO "R" IH 94 EB".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
SUPERSTRUCTURE DETAILS		SHEET 16	
		449	



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS =TOP OF SLAB FALSEWORK ELEVATION.

TOP OF SLAB ELEVATIONS

	CL BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL BRG. E. ABUT.
NORTH GUTTERLINE & EDGE OF SLAB	911.53	911.49	911.46	911.42	911.39	911.36	911.32	911.29	911.26	911.22	911.19	911.13	911.06	911.00	910.94	910.87	910.81	910.75	910.68	910.62	910.56	910.53	910.49	910.46	910.43	910.40	910.37	910.34	910.31	910.28	910.25
CL IH 94 EB/CROWN POINT	911.98	911.95	911.92	911.88	911.85	911.82	911.78	911.75	911.72	911.68	911.65	911.58	911.52	911.46	911.39	911.33	911.27	911.20	911.14	911.08	911.02	910.98	910.95	910.92	910.89	910.86	910.83	910.80	910.77	910.74	910.71
SOUTH GUTTERLINE & EDGE OF SLAB	911.23	911.20	911.17	911.13	911.10	911.07	911.03	911.00	910.96	910.93	910.90	910.83	910.77	910.71	910.64	910.58	910.52	910.45	910.39	910.33	910.26	910.23	910.20	910.17	910.14	910.11	910.08	910.05	910.02	909.99	909.96

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. WEST ABUTMENT	5/10 PT.	CL PIER 1	5/10 PT.	CL PIER 2	5/10 PT.	CL BRG. EAST ABUTMENT
NORTH GUTTERLINE & EDGE OF SLAB							
CL IH 94 EB/CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, THE CL OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTERLINES AND CROWN POINT. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
		DRAWN BY JPH	PLANS CK'D. DLM
SUPERSTRUCTURE DATA			SHEET 17
			450

BILL OF BARS

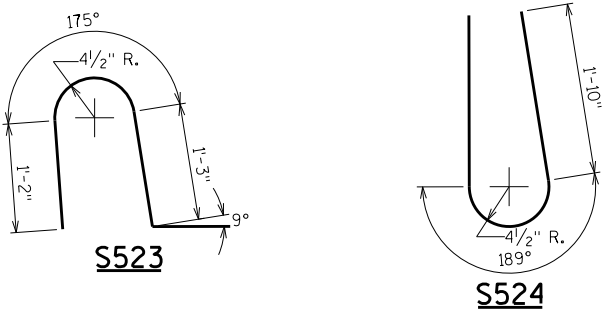
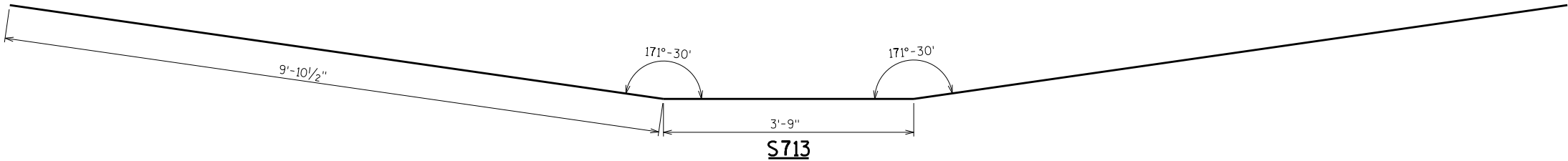
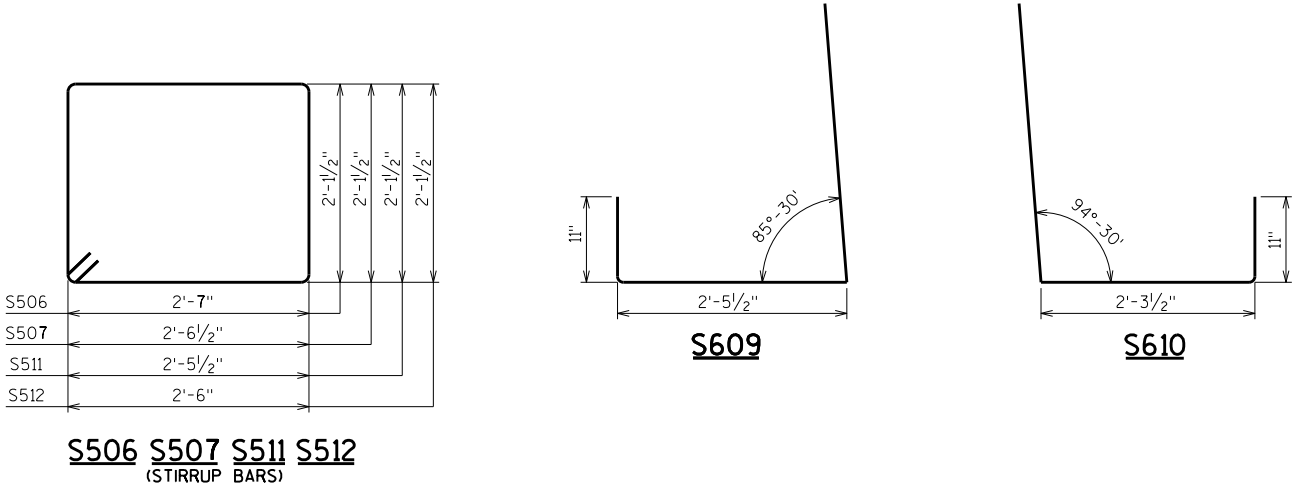
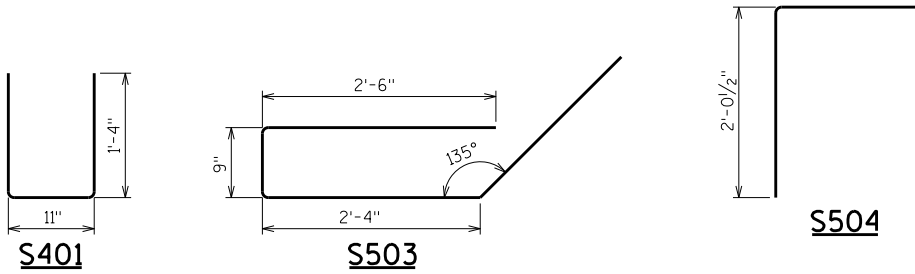
NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	126	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-LONGIT.-AT 3" NOTCHES
S402	X	8	32'-2"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-TRANS.-AT 3" NOTCHES
S503	X	126	7'-5"	X	ABUT. DIAPHS./SLAB-BOT.-VERT.-LONGIT.-UNDER PAVING NOTCHES
S504	X	126	3'-5"	X	ABUT. DIAPHS./SLAB-VERT.-LONGIT.-ALONG PAVING NOTCHES
S505	X	12	33'-10"		ABUT. DIAPHS.-BOT.-HORIZ.-TRANSVERSE
S506	X	2	10'-1"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1&3 CORNERS ONLY
S507	X	2	10'-0"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1&3 CORNERS ONLY
S408	X	8	2'-1"		ABUT. DIAPHS.-OUTSIDE FACES-VERT.-AT ALL FOUR WING CORNERS
S609	X	6	6'-0"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 1&3 CORNERS ONLY
S610	X	6	5'-10"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 2&4 CORNERS ONLY
S511	X	2	9'-10"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2&4 CORNERS ONLY
S512	X	2	9'-11"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2&4 CORNERS ONLY
S713	X	120	23'-6"	X	PIER HAUNCHES-BOT.-VERT.-LONGIT.
S514	X	658	32'-8"		SLAB-TOP & BOT.-HORIZ.-TRANSVERSE
S915	X	59	33'-3"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 2
S916	X	60	26'-2"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 1
S917	X	60	47'-6"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 2
S918	X	60	23'-2"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 3
S519	X	244	5'-0"		SLAB-TOP-HORIZ.-TRANSVERSE-AT BOTH EDGES
S920	X	60	46'-2"		SLAB-TOP-HORIZ.-LONGIT.-AT WEST END
S921	X	60	42'-5"		SLAB-TOP-HORIZ.-LONGIT.-AT EAST END
S922	X	118	53'-0"		SLAB-TOP-HORIZ.-LONGIT.-OVER PIERS 1&2
S523	X	366	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT BOTH SIDES
S524	X	366	5'-0"	X	PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES
S525	X	36	41'-10"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES

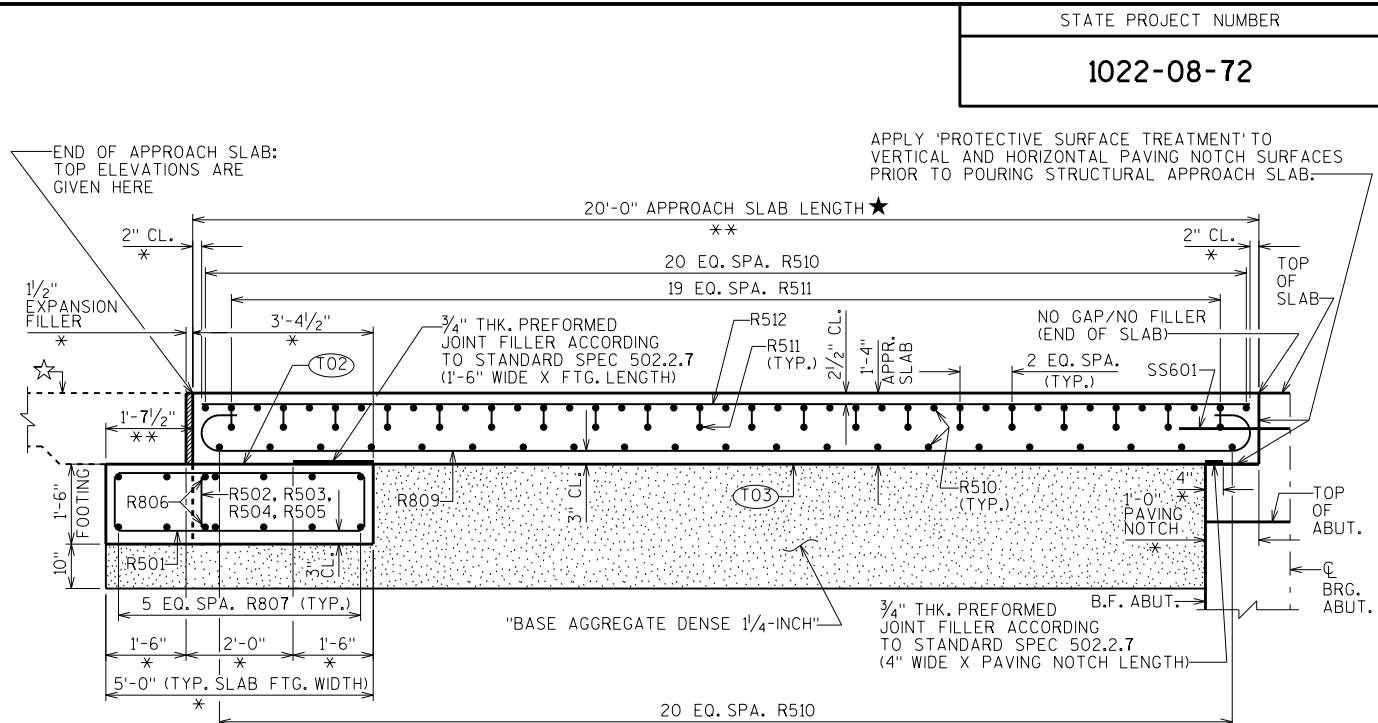
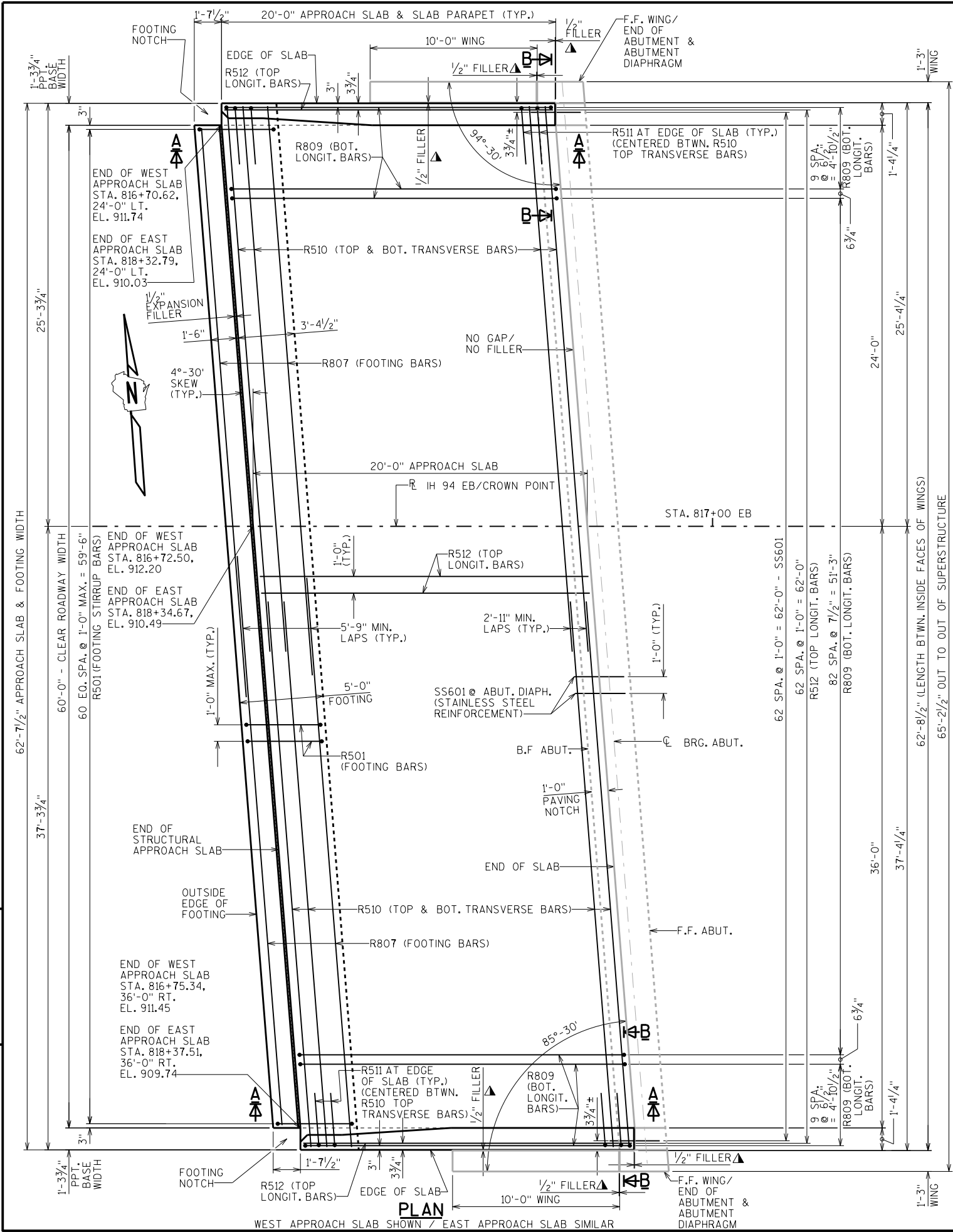
☆	SS601	126	3'-0"		STRUCTURE SLAB TO APPROACH SLAB
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STAINLESS STEEL REINFORCEMENT

☆SEE "SUPERSTRUCTURE LONGITUDINAL SECTIONS"
AND "STRUCTURAL APPROACH SLABS" SHEETS
FOR STAINLESS STEEL REBAR LOCATIONS.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
SUPERSTRUCTURE BAR DETAILS		SHEET 18	
		451	



SECTION A-A THRU APPROACH SLAB
WEST APPROACH SLAB SHOWN / EAST APPROACH SLAB SIMILAR

- FINISH SMOOTH - SLOPE TO DRAIN
- ★ TRANSVERSE BARS SHALL BE PLACED PARALLEL TO SUBSTRUCTURES AND SPACED ALONG "R IH 94 EB".
- LONGITUDINAL BARS SHALL BE PLACED PARALLEL TO "R IH 94 EB".
- * DIMENSION IS TAKEN NORMAL TO BRG. ABUTS.
- ** DIMENSION IS TAKEN PARALLEL TO R IH 94 EB.

NOTES:

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE IF THE REGION SOILS ENGINEER DETERMINES THAT THE EXISTING SOIL BEARING PRESSURE MEETS THE REQUIREMENT ABOVE.

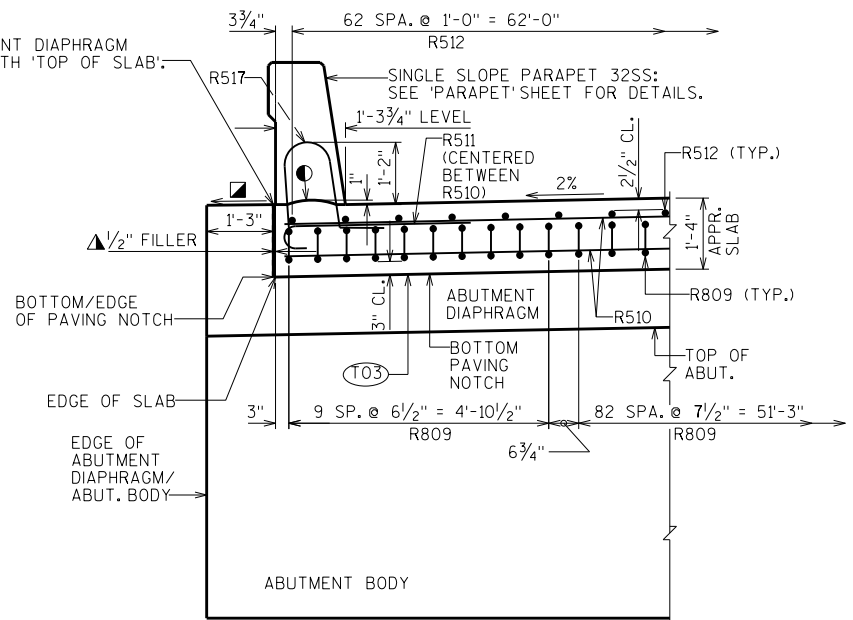
★ FOLLOW FDM 14-10-15 REQUIREMENTS FOR ROADWAY APPROACH PAVEMENT.

● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

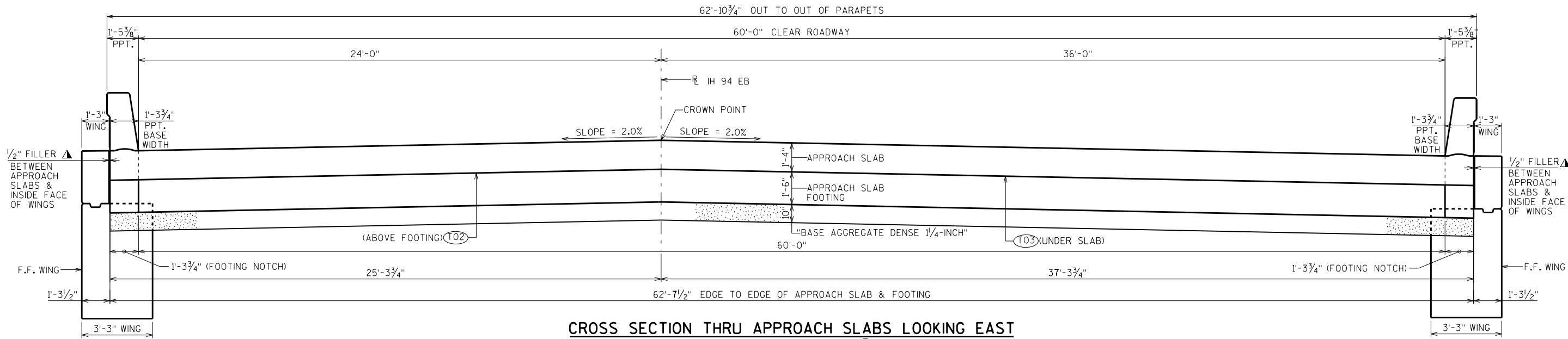
T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

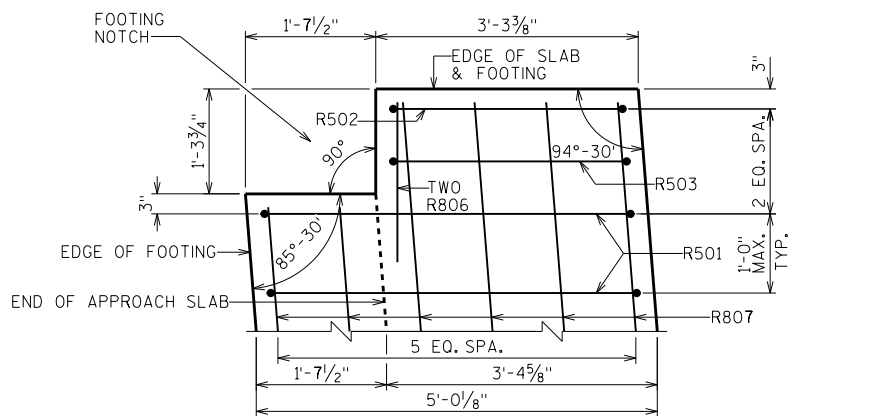


SECTION B-B (EDGE OF SLAB DETAIL)

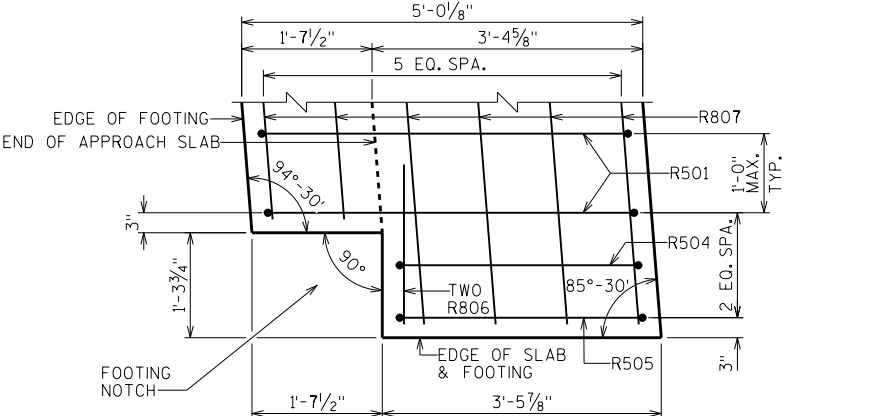
STATE PROJECT NUMBER			
1022-08-72			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY		JPH	PLANS CK'D. DLM
STRUCTURAL APPROACH SLABS			SHEET 19
			452



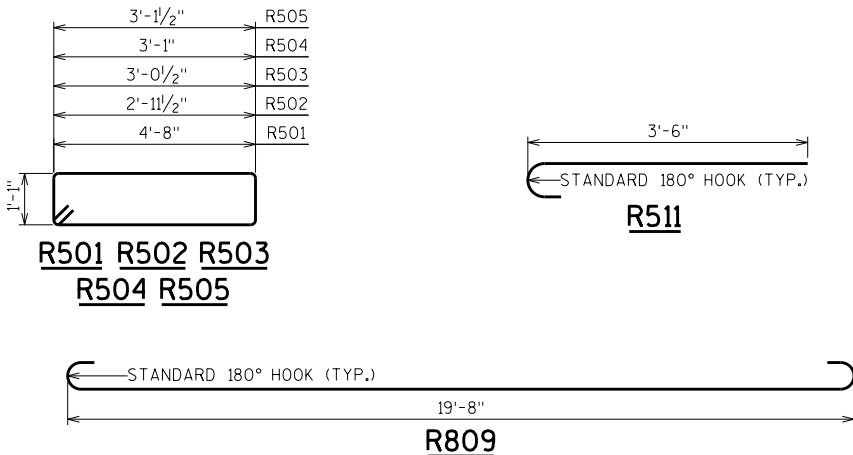
CROSS SECTION THRU APPROACH SLABS LOOKING EAST
(CROSS SECTION PERPENDICULAR TO CL IH 94 EB)



SLAB FOOTING PLAN DETAIL @ NW & SE CORNERS



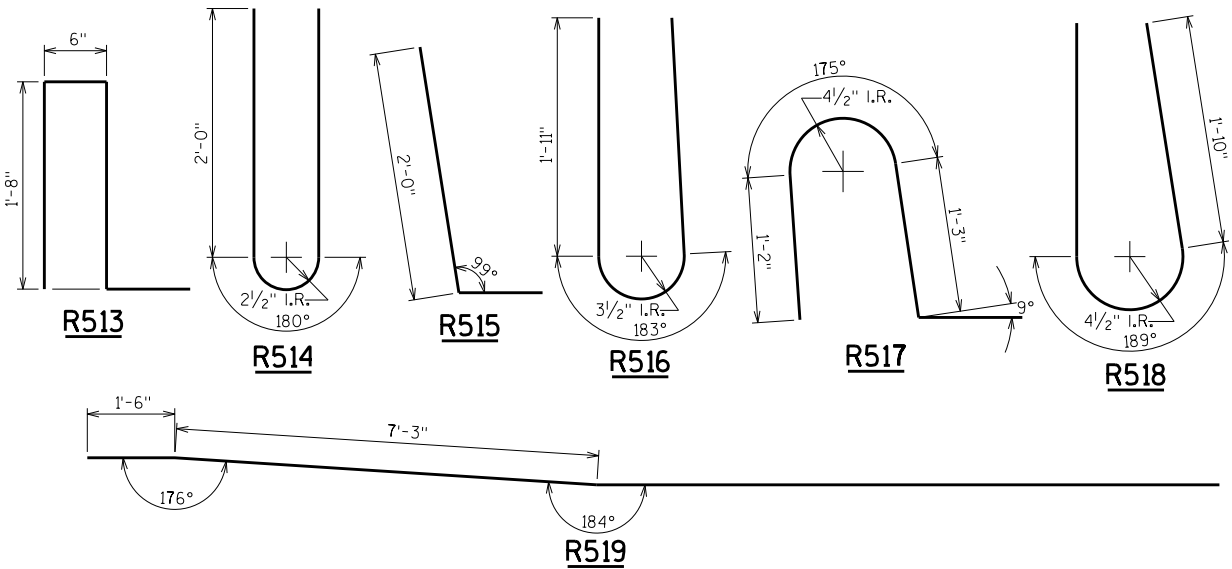
SLAB FOOTING PLAN DETAIL @ SW & NE CORNERS



BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQUIRED. WEST SLAB	NO. REQUIRED. EAST SLAB	LENGTH	BENT	LOCATION
R501	X	61	61	12'-2"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT CENTER
R502	X	1	1	8'-9"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R503	X	1	1	8'-11"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R504	X	1	1	9'-0"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R505	X	1	1	9'-1"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R806	X	4	4	2'-0"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT ENDS ONLY
R807	X	24	24	34'-2"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R808	X	--	--	--		NOT USED
R809	X	103	103	21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL
R510	X	84	84	32'-9"		SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R511	X	40	40	4'-1"	X	SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R512	X	63	63	19'-8"		SLAB-TOP-HORIZONTAL-LONGITUDINAL
R513	X	34	34	4'-4"	X	PARAPETS 32SS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	22	22	4'-9"	X	PARAPET 32SS-END-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	24	24	2'-9"	X	PARAPETS 32SS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R516	X	12	12	4'-10"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R517	X	34	34	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R518	X	34	34	5'-0"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	2	2	19'-5"	X	PARAPET 32SS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R520	X	10	10	19'-5"		PARAPET 32SS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS

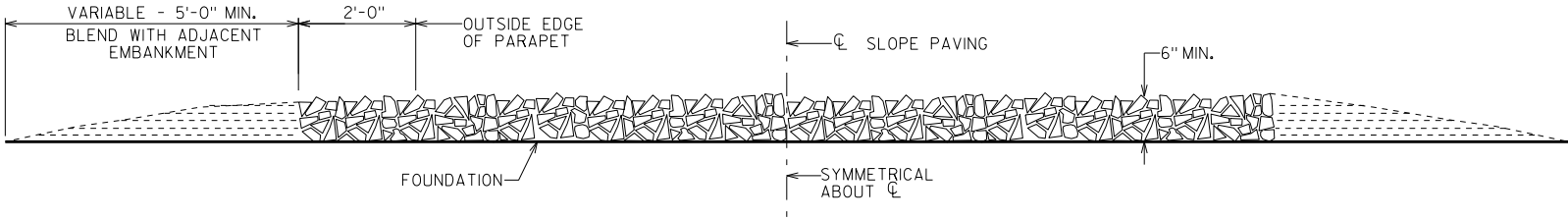


(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

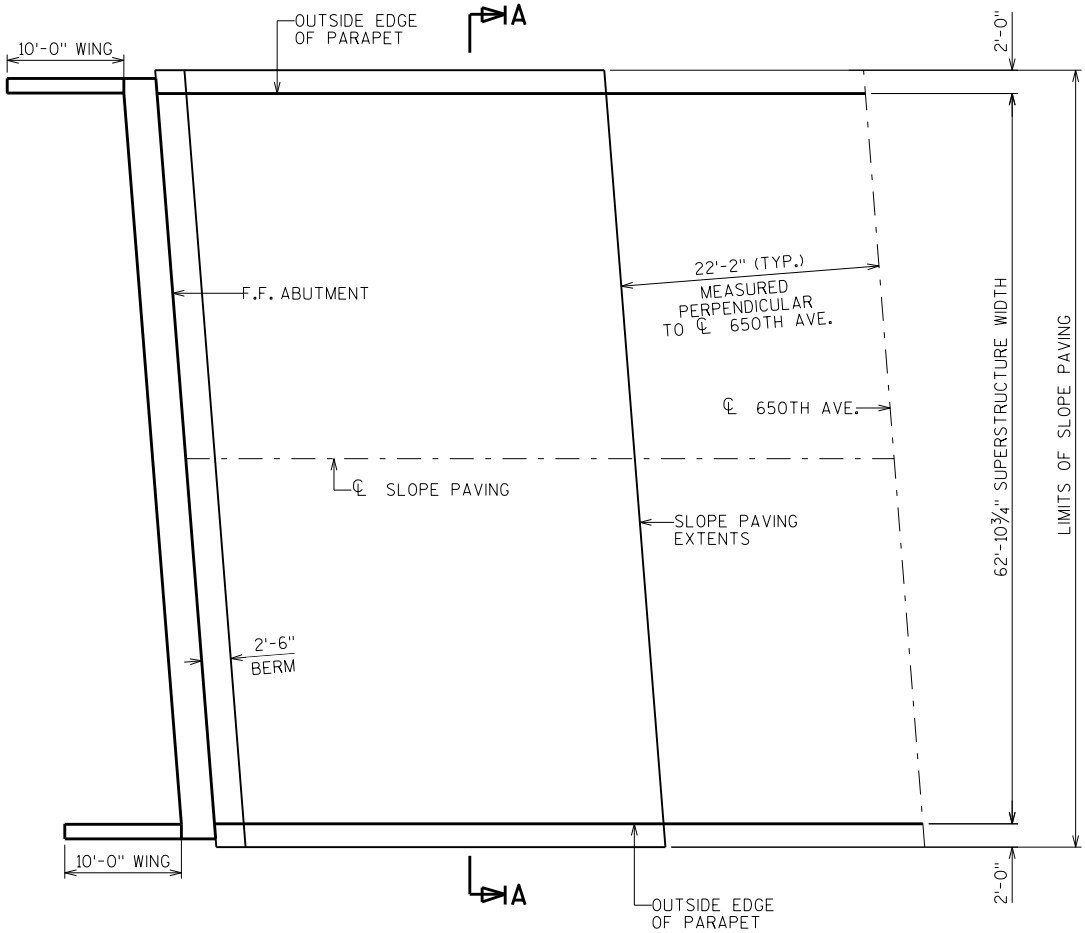
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

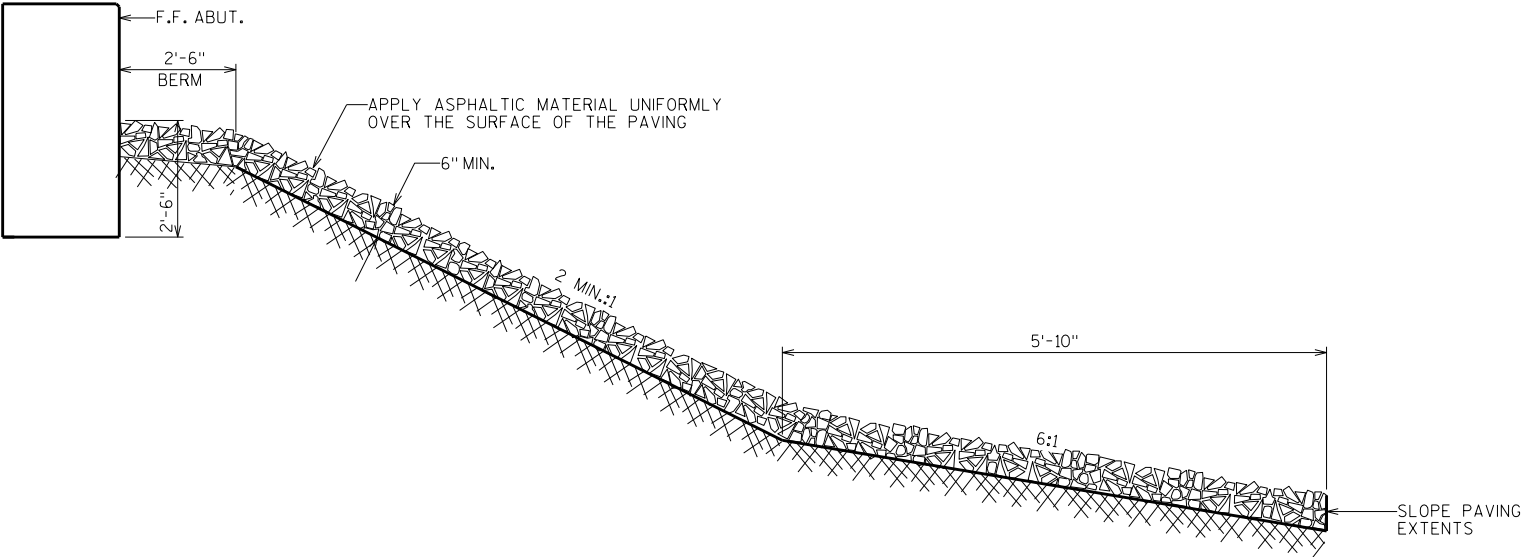
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
STRUCTURAL APPROACH SLAB & BAR DETAILS			SHEET 20
			453



SECTION A-A



PLAN



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE AT ABUTMENTS

ROUND STONE WILL NOT BE ACCEPTED

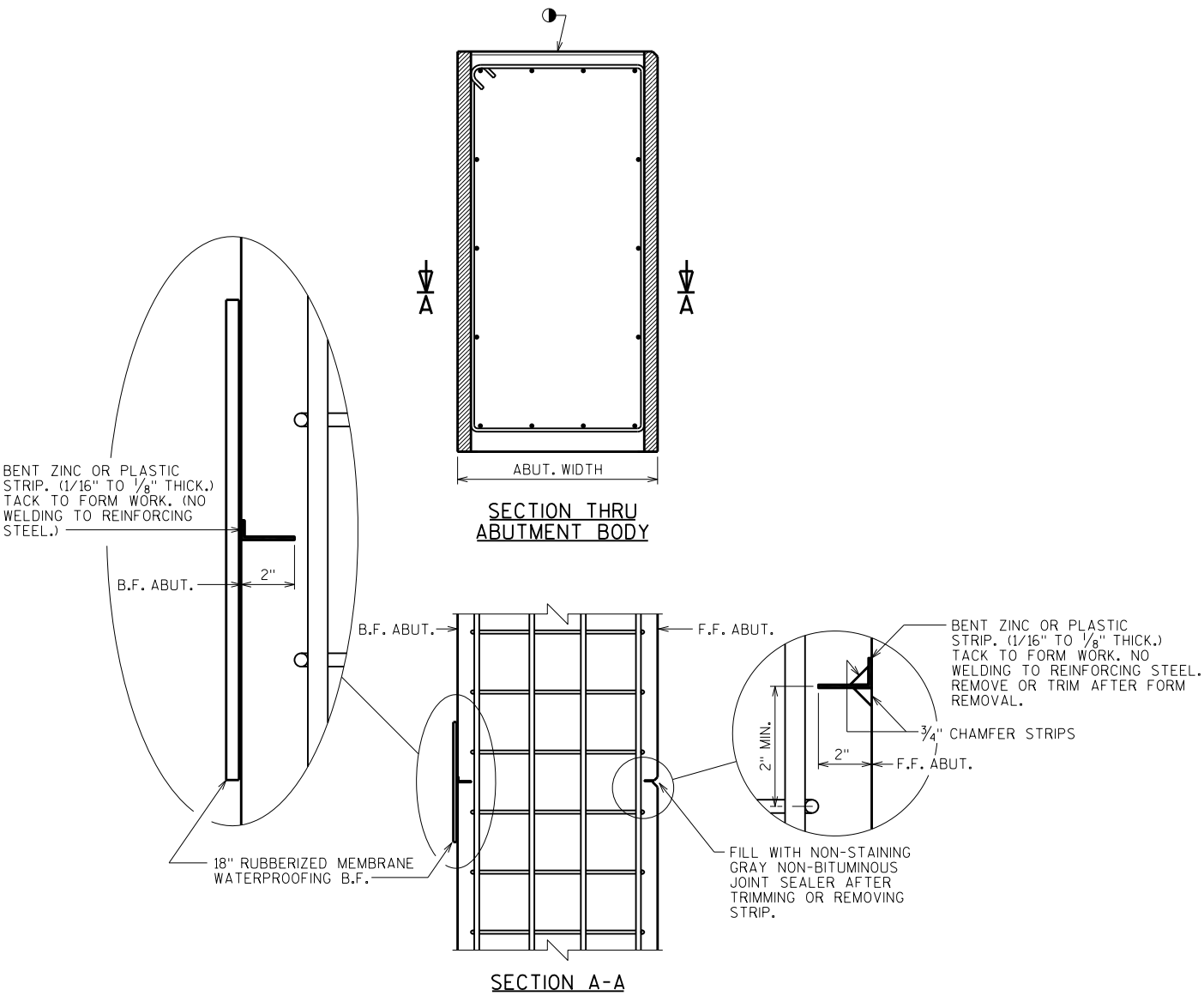
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
SLOPE PAVING CRUSHED AGGREGATE		SHEET 22	
		455	

SCALE = 1:00



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED

● USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

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STRUCTURE B-17-221			
DRAWN BY JPH		PLANS CK'D. DLM	
ALTERNATE CONSTRUCTION JOINT		SHEET 23	
		456	

SCALE = 1:100

TEMPORARY SHORING IS INCLUDED IN BID ITEM "TEMPORARY
STRUCTURE STA. 816+91.8 WB" ON B-17-221 PLANS.

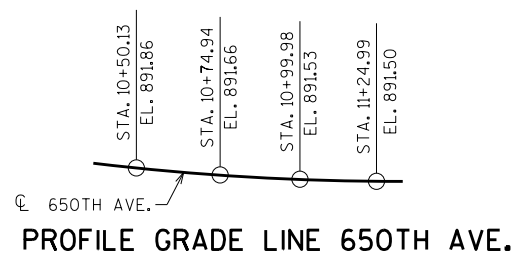
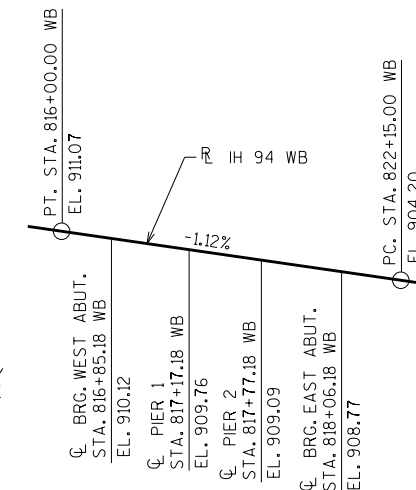


Diagram illustrating the cross-section of a bridge structure, showing the following components and dimensions:

- BRIDGE STRUCTURE
- STRUCTURAL APPROACH SLAB
- ROADWAY PAVEMENT
- ROADWAY SUBBASE
- 10"
- 1'-6"
- LIMITS OF BASE AGGREGATE DENSE 1/4"
- LIMITS OF BACKFILL
- STRUCTURE BACKFILL, TYPE A
- "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS, EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT
- 3'-0" REQUIRED

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY		DLM	PLANS CK'D. DLM
CROSS SECTION & QUANTITIES		SHEET 2	
		458	

INDICATES WING NUMBER

BOR-4

BOR-2

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
2	7/20/2016	184643.454	145112.283
4	7/20/2016	184652.442	144991.696
6	7/21/2016	184552.615	145063.341

BORINGS COMPLETED BY: WISDOT
REPORT COMPLETED BY: WISDOT
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY

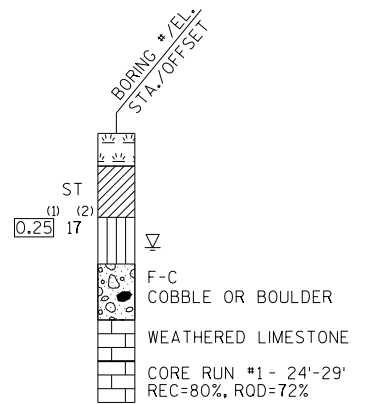
STATE PROJECT NUMBER

1022-08-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

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STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
SUBSURFACE EXPLORATION		SHEET 3	
		459	

* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

PLAN

STA. 817+47.18 IH 94 WB =
STA. 10+75.23 650TH AVE.

B-17-222

CL PIER 1
STA. 817+17.18

STA. 817+00 WB

CL BRG.
WEST ABUT.
STA. 816+85.18

STA. 11+00

CL 650TH AVE.

94°-31'-09"

CL IH 94 WB

CL PIER 2
STA. 817+77.18

CL BRG.
EAST ABUT.
STA. 818+06.18

STA. 818+00 WB

END OF EAST
APPROACH SLAB
STA. 818+26.77

END OF WEST
APPROACH SLAB
STA. 816+64.60

BOR-4
STA. 816+82
7'4" LT. OF R. IH 94 WB
EL. 893.2

BOR-6
STA. 817+59
24' RT. OF R. IH 94 WB
EL. 891.5

BOR-2
STA. 818+03
14' LT. OF R. IH 94 WB
EL. 892.0

BOT. OF
WEST ABUT.
EL. 901.96

BOT. OF
PIER 1
FOOTING
EL. 884.67

HP 10 X 42
STEEL PILING
(TYP. AT ALL
SUBSTRUCTURES)

BOT. OF
WEST ABUT.
EL. 900.61

BOT. OF
PIER 2
FOOTING
EL. 884.75

BOT. OF
EAST ABUT.
EL. 900.61

* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

8

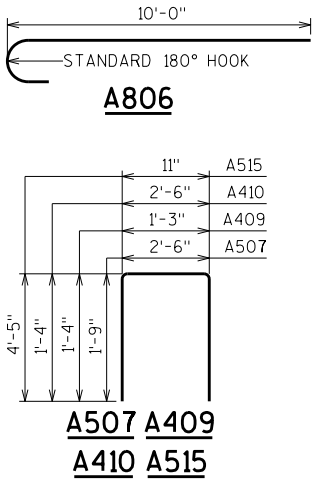
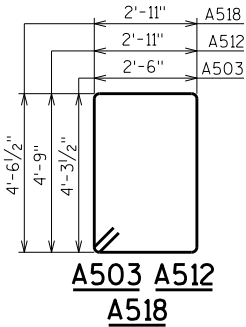
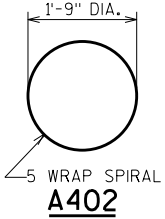
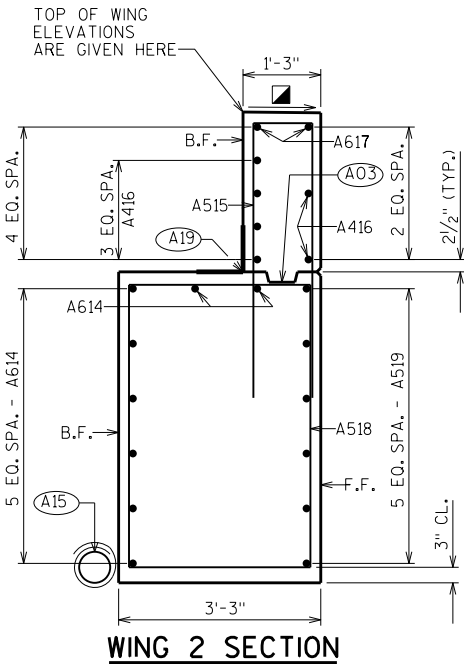
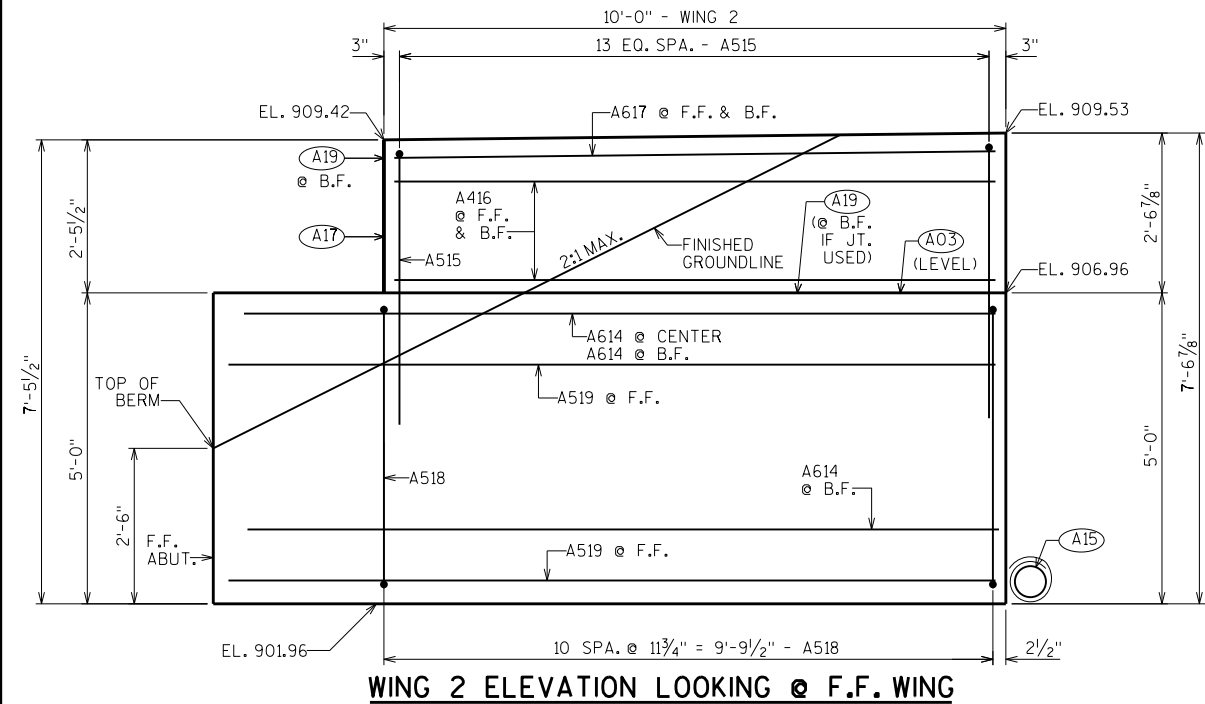
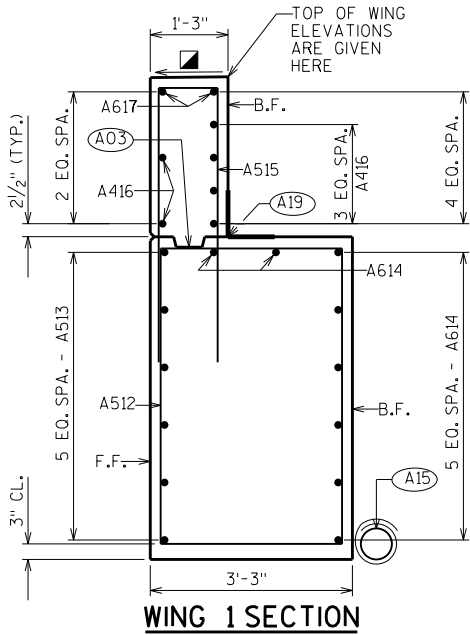
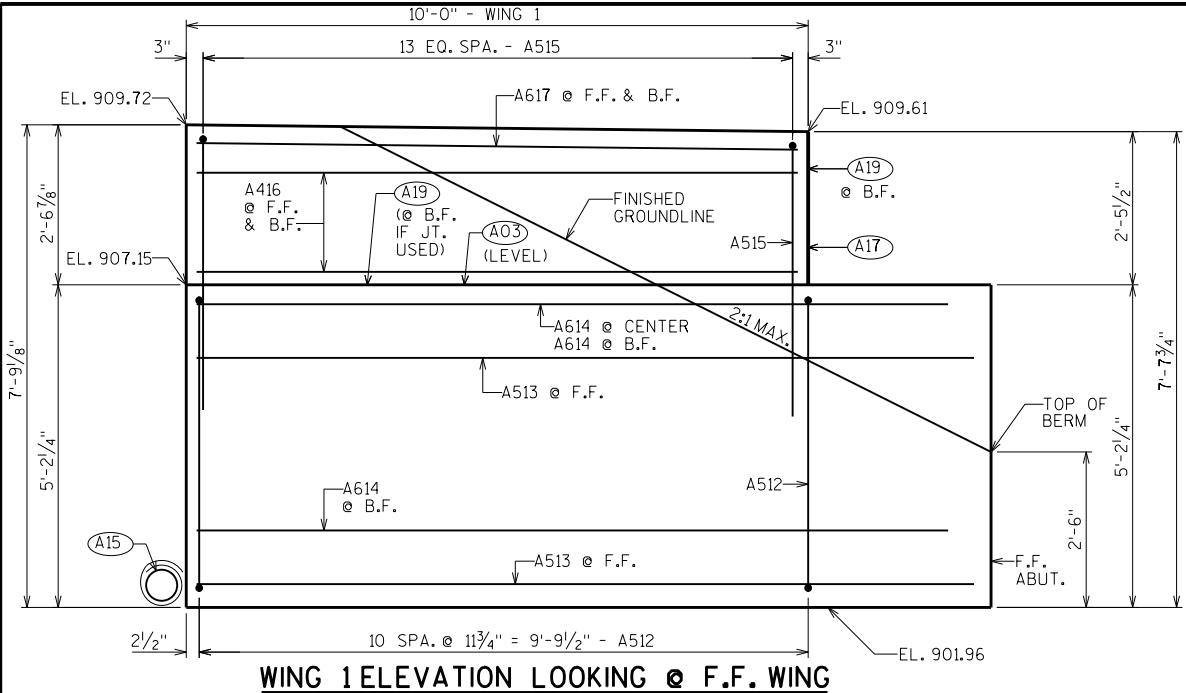
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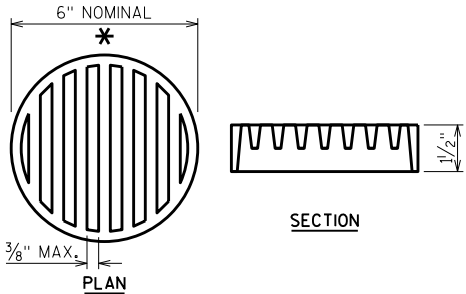
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		18	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
A402		9	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A503		80	14'-3"	X	BODY-STIRRUPS-VERT.
A604		18	34'-0"		BODY-HORIZONTAL-END TO END
A605		14	27'-0"		BODY-HORIZONTAL-B.F.-AT CENTER
A806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
A507		42	5'-9"	X	BODY-TOP-VERT.-UNDER NOTCH
A408		4	16'-0"		BODY-TOP-HORIZ.-UNDER NOTCH-NORTH END
A409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
A410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
A411		4	33'-6"		BODY-TOP-HORIZ.-END TO END
A512	X	11	16'-0"	X	WING 1-BOT.-STIRRUP-VERT.
A513	X	6	12'-6"		WING 1-BOT.-HORIZONTAL-F.F.
A614	X	16	12'-1"		WINGS 1&2-BOT.-HORIZONTAL-B.F. & CENTER
A515	X	28	9'-6"	X	WINGS 1&2-TOP-VERTICAL
A416	X	12	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A617	X	4	9'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A518	X	11	15'-7"	X	WING 2-BOT.-STIRRUP-VERT.
A519	X	6	12'-4"		WING 2-BOT.-HORIZONTAL-F.F.
A420		4	27'-3"		BODY-TOP-HORIZ.-UNDER NOTCH-SOUTH END



FINISH SMOOTH - SLOPE TO DRAIN

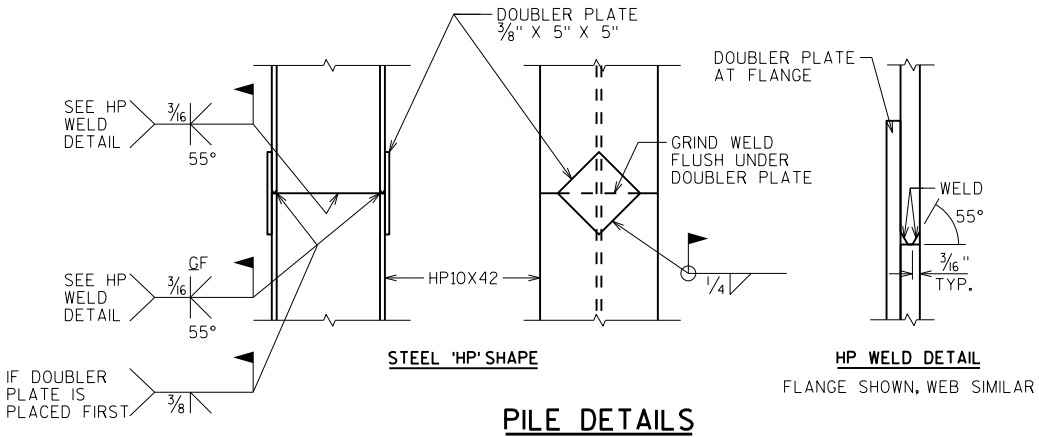


RODENT SHIELD DETAIL

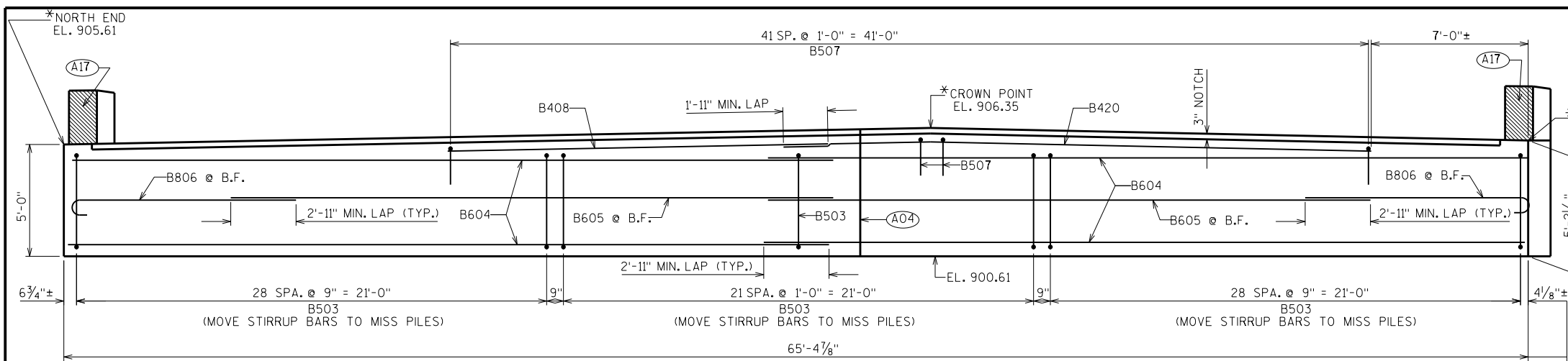
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

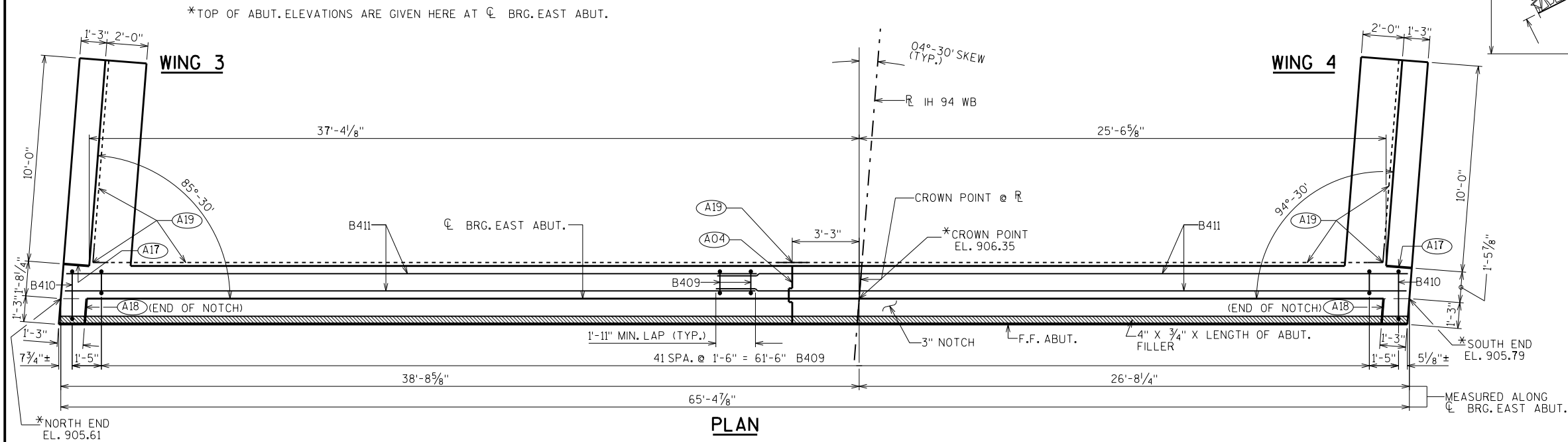
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



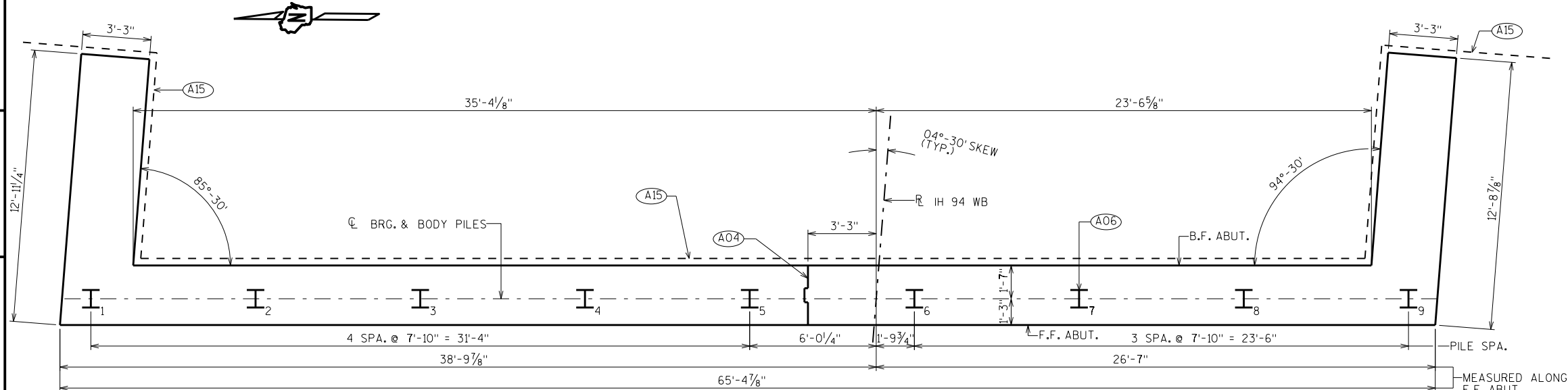
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
WEST ABUTMENT DETAILS		SHEET 5	
		461	



ELEVATION LOOKING EAST @ F.F. ABUT.



PLAN

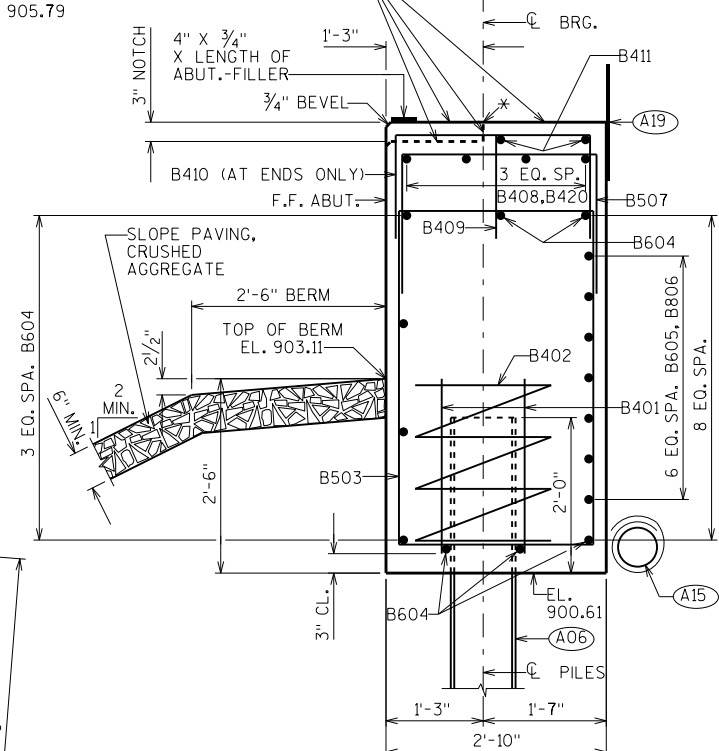


PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.

STATE PROJECT NUMBER

1022-08-72



SECTION THRU BODY

- (A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" x 8", 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 50 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. NOTCH FACES THAT RUN PARALLEL WITH "R" IH 94 WB.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

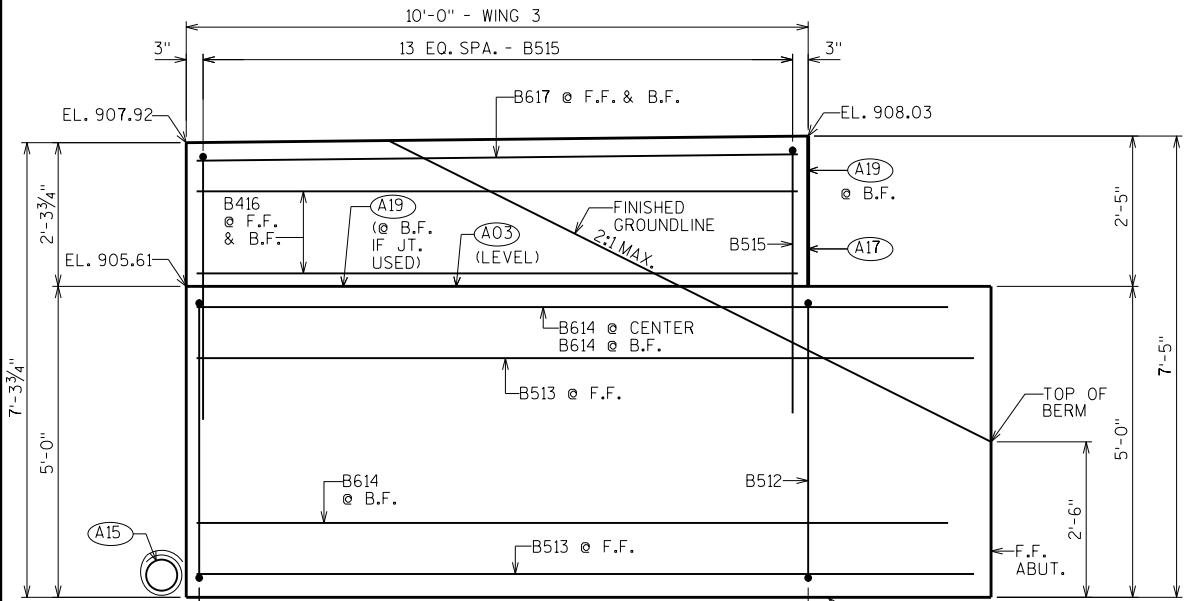
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
EAST ABUTMENT			SHEET 6
			462

SCALE = 3.00

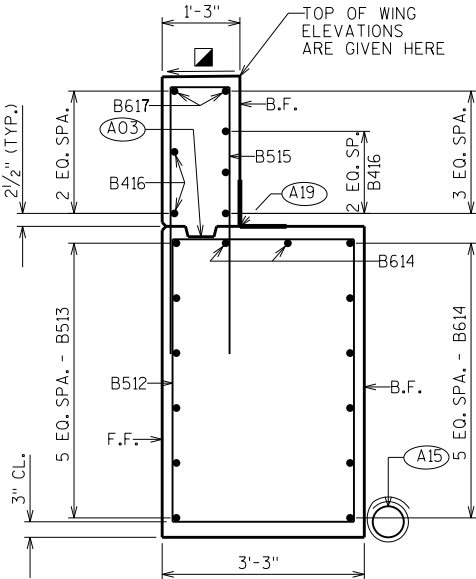
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

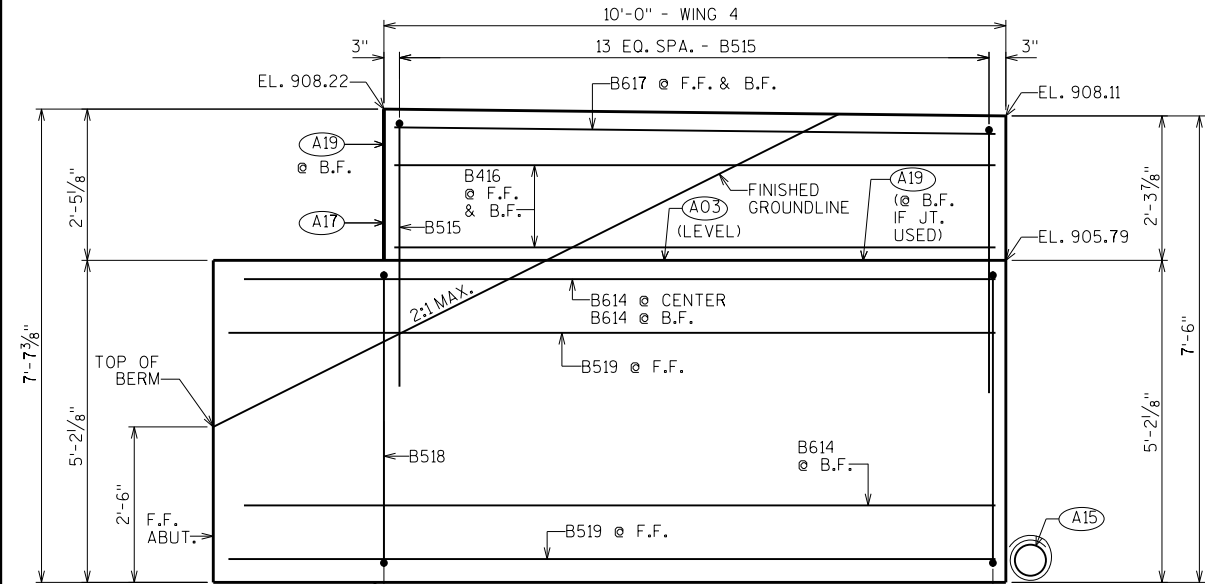
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
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B503		80	14'-3"	X	BODY-STIRRUPS-VERT.
B604		18	34'-0"		BODY-HORIZONTAL-END TO END
B605		14	27'-0"		BODY-HORIZONTAL-B.F.-AT CENTER
B806		14	10'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
B507		42	5'-8"	X	BODY-TOP-VERT.-UNDER NOTCH
B408		4	17'-0"		BODY-TOP-HORIZ.-UNDER NOTCH-NORTH END
B409		42	3'-9"	X	BODY-TOP-VERT.-ALONG NOTCH
B410		2	5'-0"	X	BODY-TOP-VERT.-AT ENDS ONLY
B411		4	33'-6"		BODY-TOP-HORIZ.-END TO END
B512		X	15'-7"	X	WING 3-BOT.-STIRRUP-VERT.
B513	X	6	12'-6"		WING 3-BOT.-HORIZONTAL-F.F.
B614	X	16	12'-1"		WINGS 3&4-BOT.-HORIZONTAL-B.F. & CENTER
B515	X	28	9'-3"	X	WINGS 3&4-TOP-VERTICAL
B416	X	10	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B617	X	4	9'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B518	X	11	16'-0"	X	WING 4-BOT.-STIRRUP-VERT.
B519	X	6	12'-4"		WING 4-BOT.-HORIZONTAL-F.F.
B420		4	26'-3"		BODY-TOP-HORIZ.-UNDER NOTCH-SOUTH END



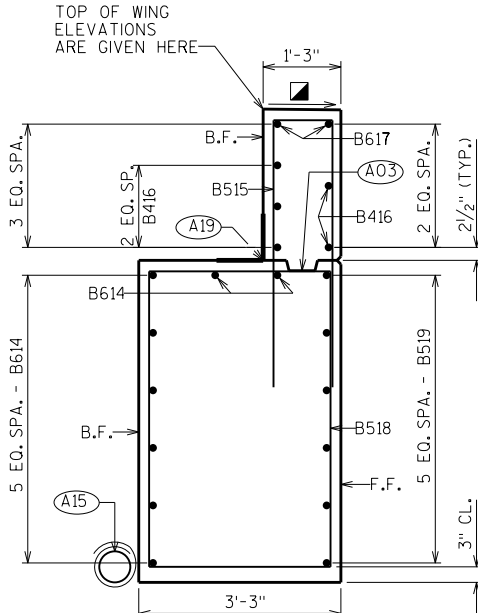
WING 3 ELEVATION LOOKING @ F.F. WING



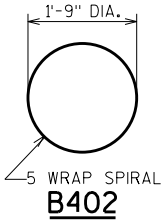
WING 3 SECTION



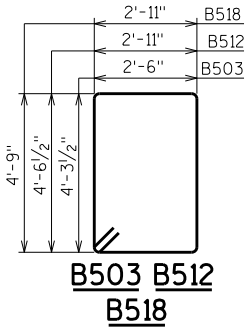
WING 4 ELEVATION LOOKING @ F.F. WING



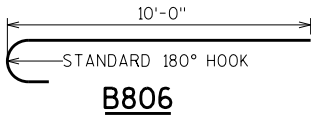
WING 4 SECTION



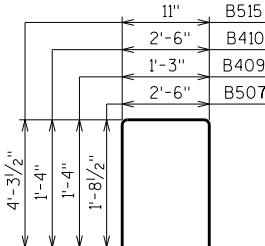
B402



B503 B512
B518

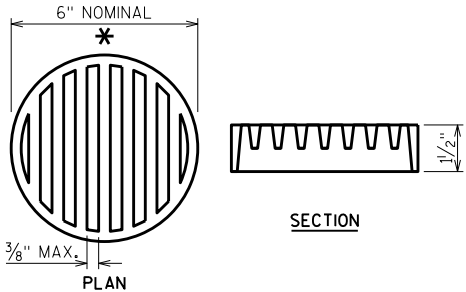


B806



B507 B409
B410 B515

FINISH SMOOTH - SLOPE TO DRAIN

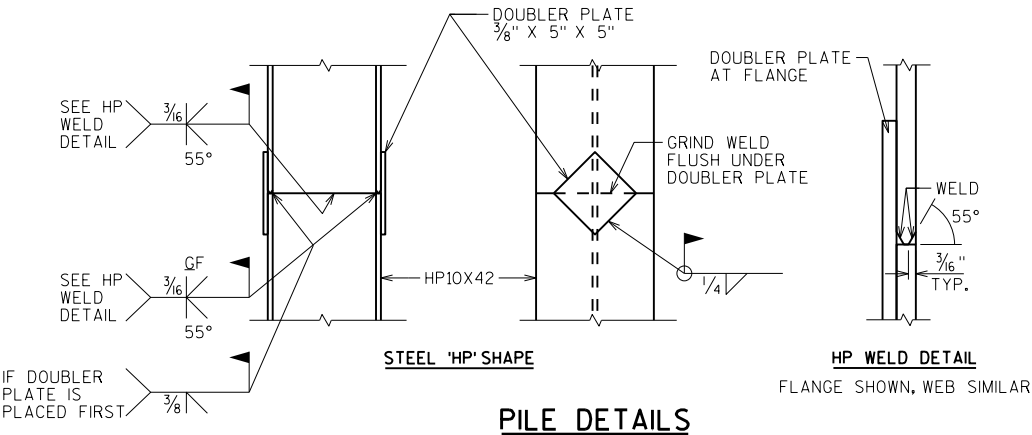


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

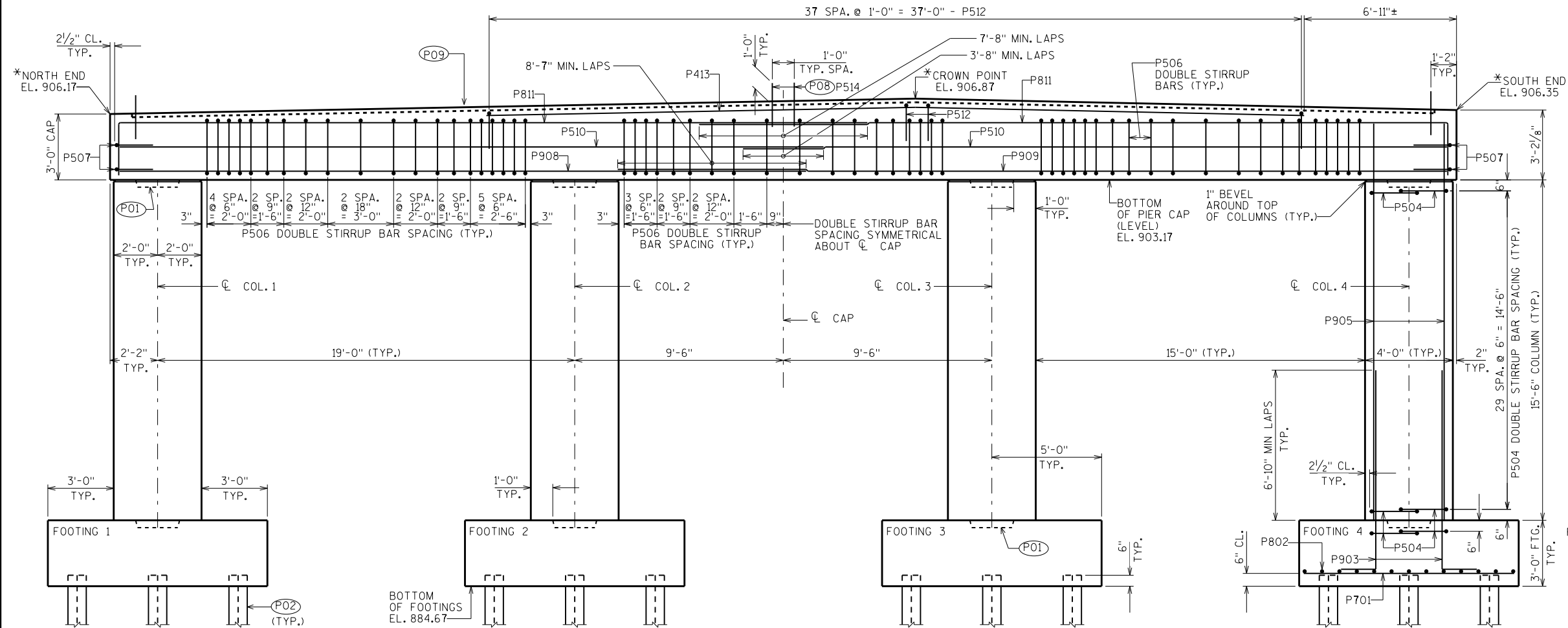
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

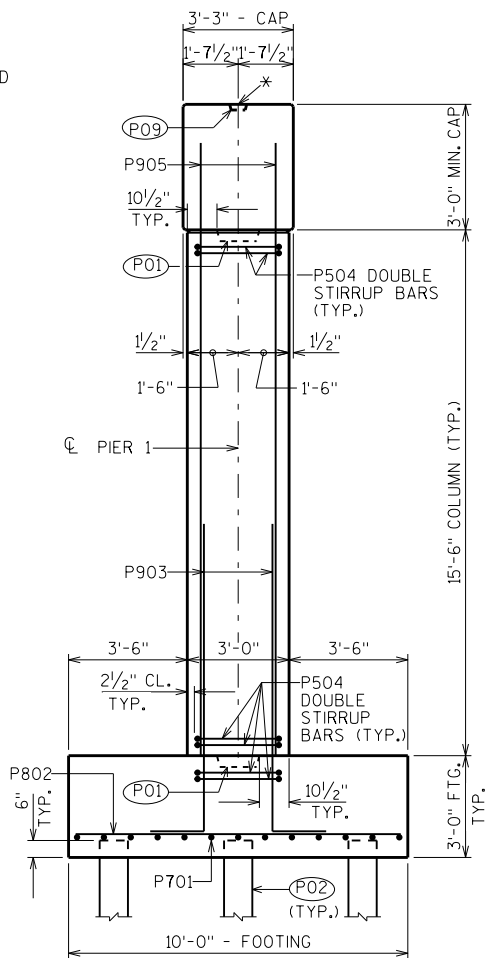


PILE DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
EAST ABUTMENT DETAILS		SHEET 7	
		463	

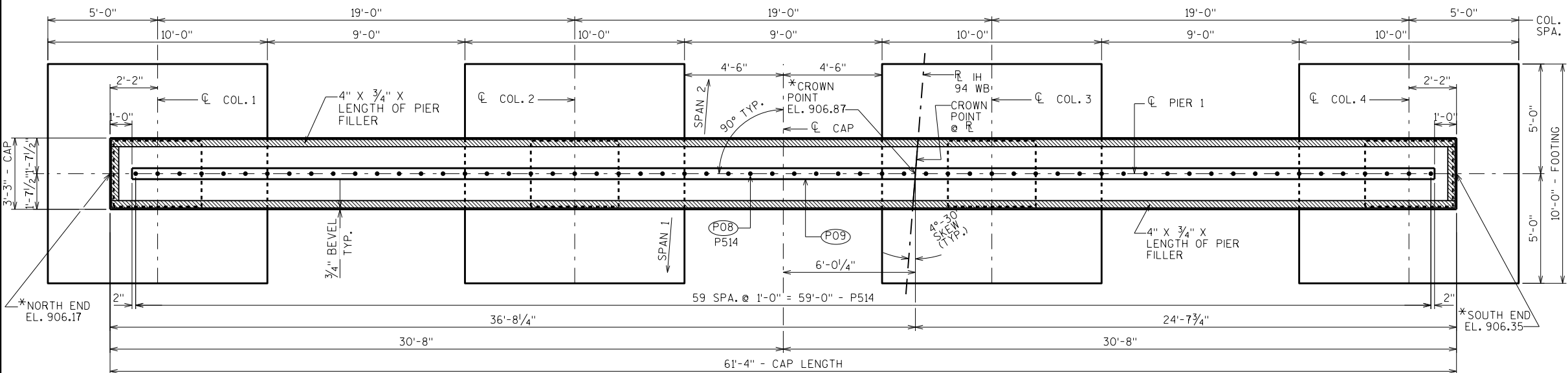


ELEVATION LOOKING EAST



END VIEW

*TOP OF PIER CAP ELEVATIONS ARE GIVEN HERE AT THE CL PIER 1



PLAN

(P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 10 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. SEE "PILE DETAILS" ON NEXT SHEET.

(P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-222

DRAWN BY JPH PLANS CK'D. DLM

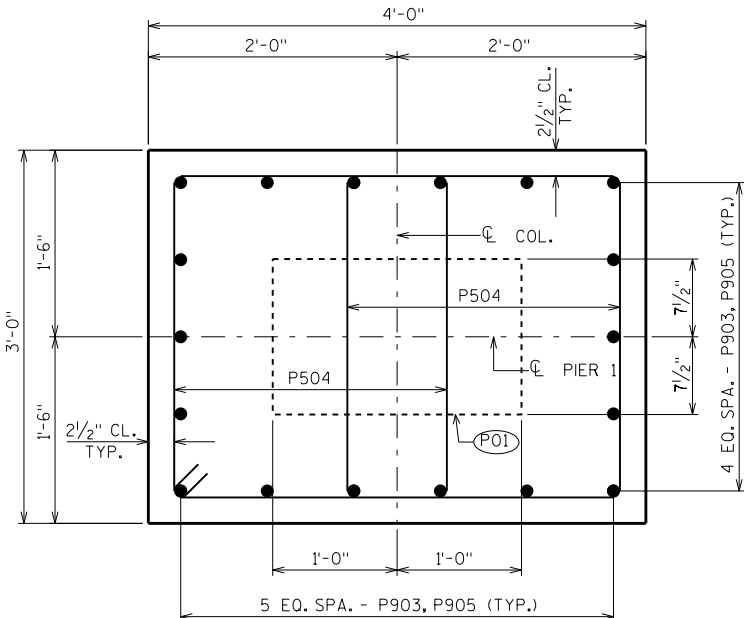
PIER 1 SHEET 8

464

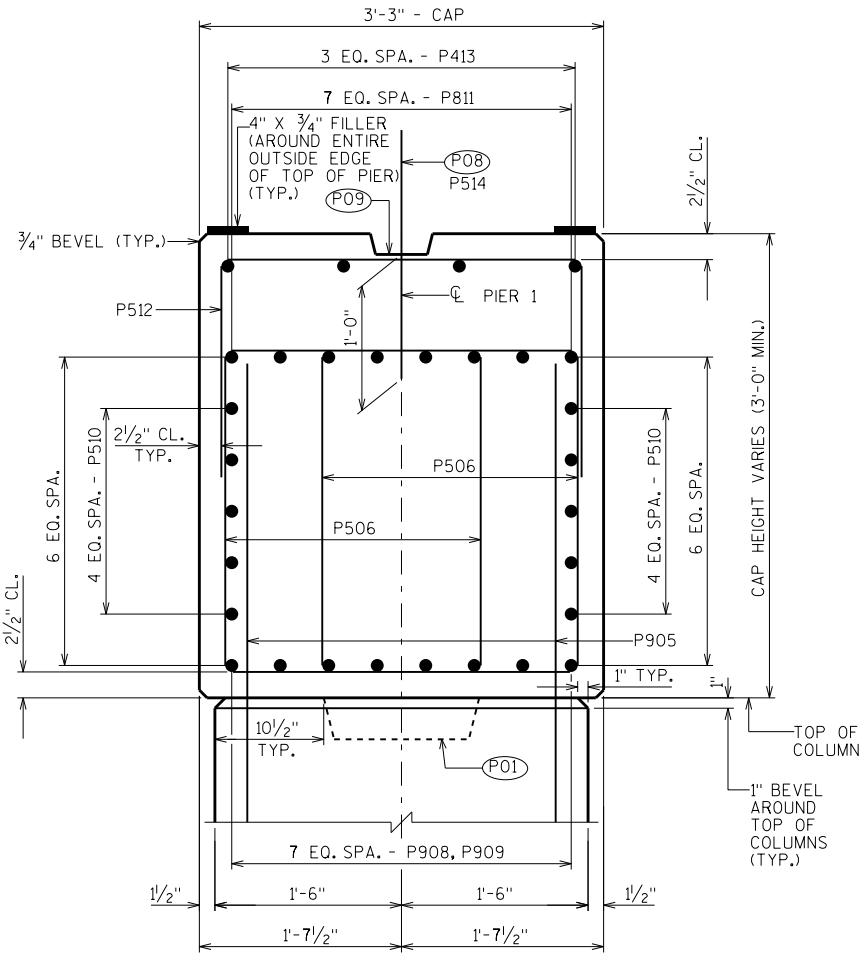
BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

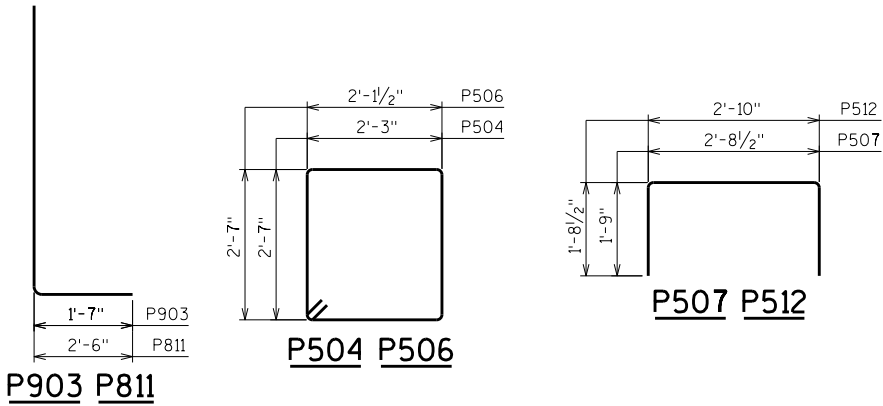
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P701		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
P802		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
P903	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
P504	X	248	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
P905	X	72	18'-1"		COLUMNS/CAP-VERTICAL-ALL FACES
P506	X	116	10'-1"	X	CAP-BOT.-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMNS
P507	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
P908	X	8	31'-6"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
P909	X	8	38'-0"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
P510	X	20	32'-4"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
P811	X	16	36'-8"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
P512	X	38	6'-0"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 2-3
P413	X	4	37'-3"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 2-3
P514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER



TYPICAL SECTION THRU COLUMNS
(SHOWING DOUBLE STIRRUPS)



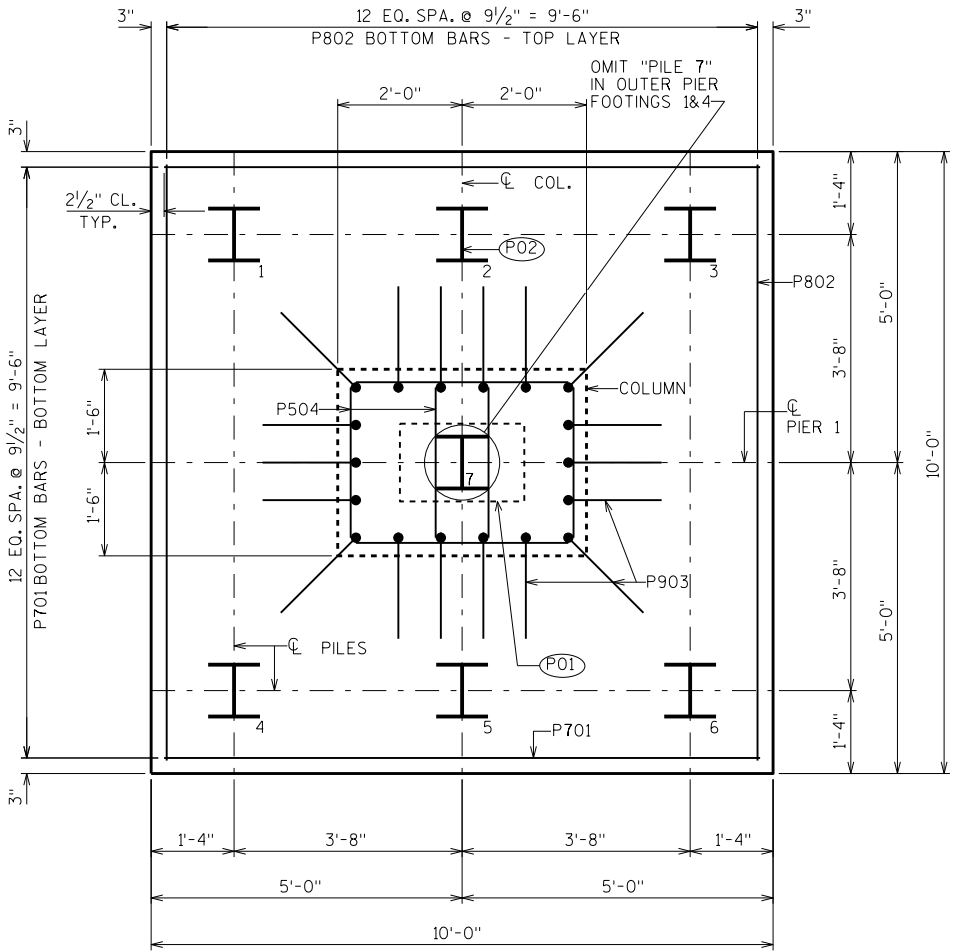
SECTION THRU CAP
(SHOWING DOUBLE STIRRUPS)



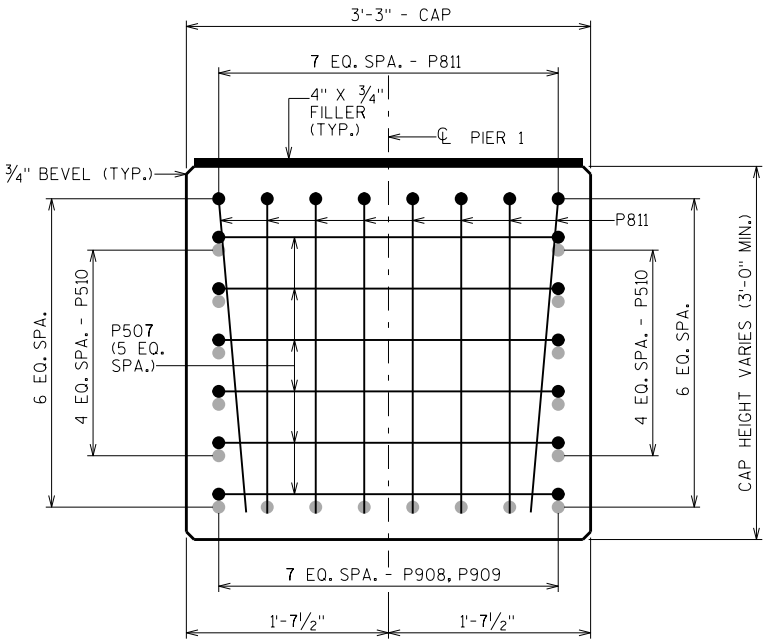
P903 P811

P504 P506

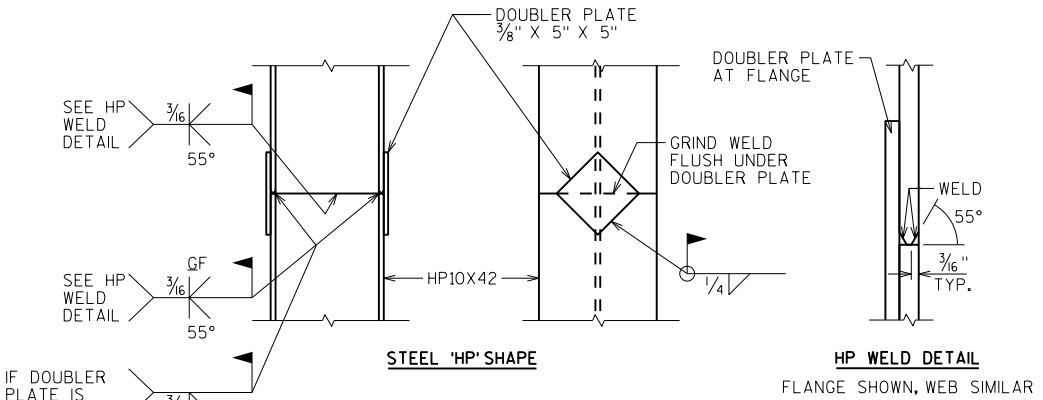
P507 P512



TYPICAL FOOTING/PILE PLAN



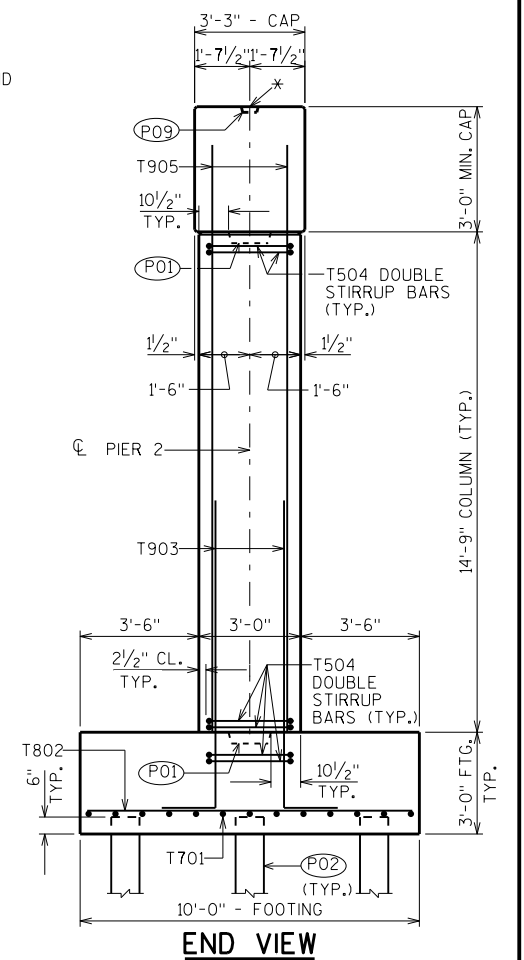
SECTION THRU CAP AT ENDS



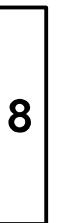
PILE DETAILS

- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 10 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (P08) P514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
PIER 1 DETAILS		SHEET 9	
		465	



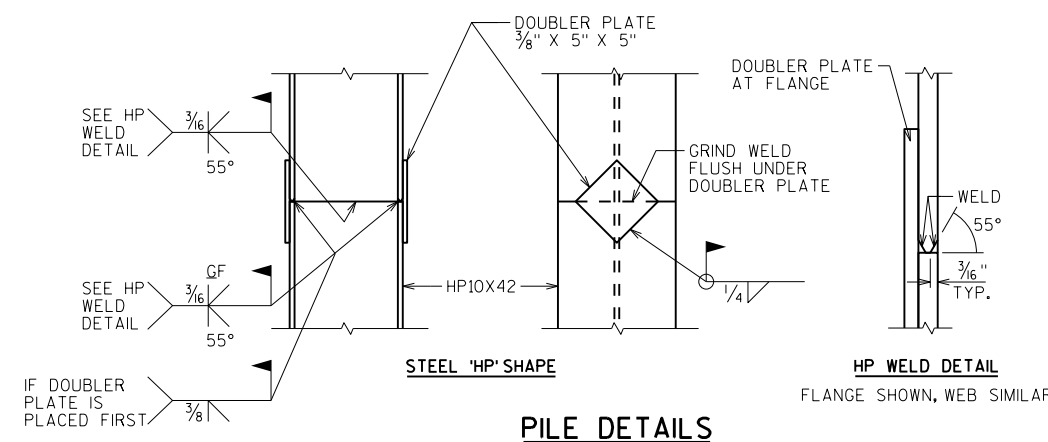
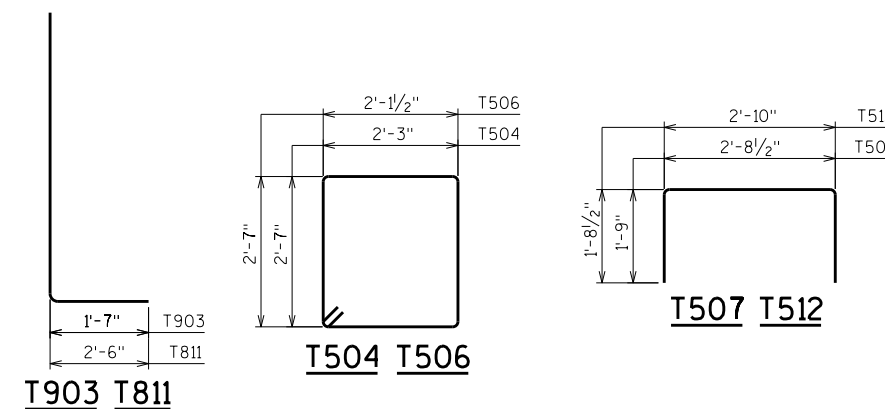
8



- | | | | |
|---|------|-----------------|---------------------------|
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION | | | |
| STRUCTURE B-17-222 | | | |
| | | DRAWN
BY JPH | PLANS
CK'D. DLM |
| PIER 2 | | SHEET 10 | |
| | | 466 | |

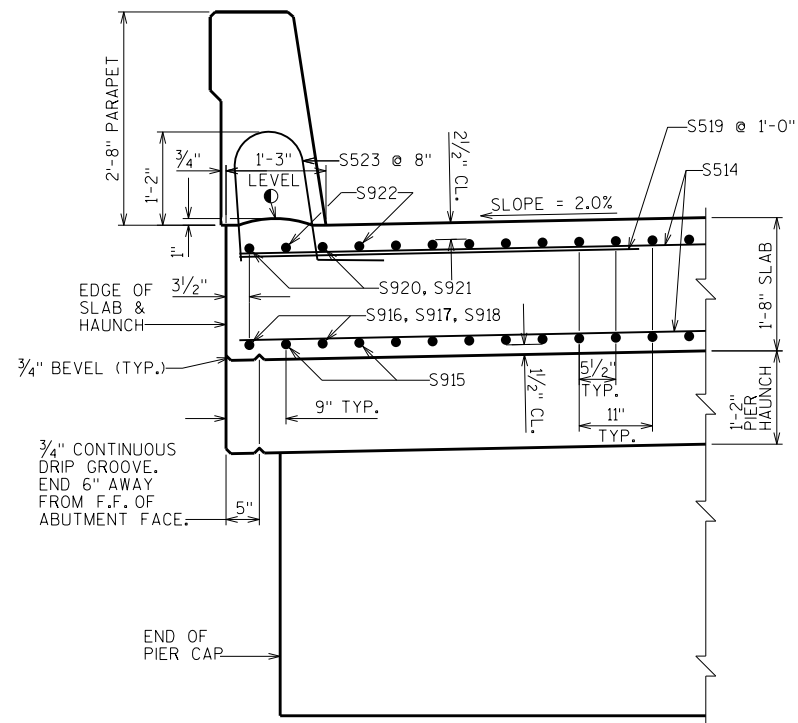
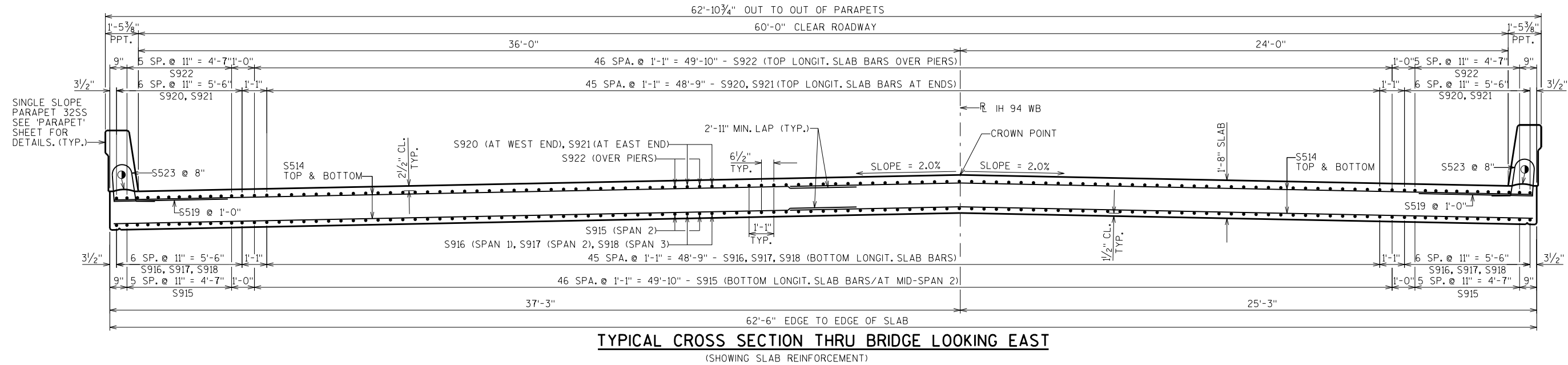
NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
T701		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-LONGIT.-BOT. LAYER
T802		52	9'-7"		FOOTINGS-BOTTOM-HORIZ.-TRANS.-TOP LAYER
T903	X	72	10'-7"	X	FOOTINGS/COLUMNS-VERTICAL-ALL FACES
T504	X	240	10'-4"	X	FOOTINGS & COLUMNS-HORIZ.-DOUBLE STIRRUPS
T905	X	72	17'-4"		COLUMNS/CAP-VERTICAL-ALL FACES
T506	X	116	10'-1"	X	CAP-BOT.-VERTICAL-TRANSVERSE-DOUBLE STIRRUPS-BTWN. COLUMN
T507	X	12	6'-0"	X	CAP-HORIZ.-BOTH ENDS ONLY
T908	X	8	31'-6"		CAP-BOT.-HORIZ.-LONGIT.-AT NORTH END ONLY
T909	X	8	38'-0"		CAP-BOT.-HORIZ.-LONGIT.-AT SOUTH END ONLY
T510	X	20	32'-4"		CAP-HORIZ.-LONGIT.-BOTH FACES-BOTH ENDS
T811	X	16	36'-8"	X	CAP-TOP-HORIZ. & VERT.-LONGIT.-BOTH ENDS
T512	X	37	6'-0"	X	CAP-TOP-VERTICAL-TRANSVERSE- ABOVE COLS. 2-3
T413	X	4	36'-3"		CAP-TOP-HORIZ.-LONGIT.-ABOVE COLS. 2-3
T514	X	60	2'-0"		CAP-TOP-VERTICAL-TRANSVERSE-CENTER



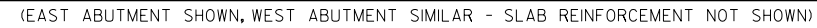
- (P01) 2'-0" x 1'-3" x 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.
- (P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 10 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (P08) T514 BARS @ 1'-0" CTRS. AT TOP OF PIER CAP. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" x 6" AT TOP OF PIER CAP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
		DRAW BY	PLANS CK'D. DLM
PIER 2 DETAILS		SHEET 11	
		467	

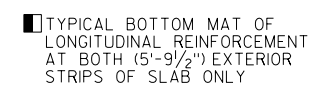
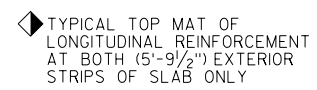


NOTE:
FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS AND SECTION THRU THE PIER DIAPHRAGM SEE THE "SUPERSTRUCTURE LONGITUDINAL SECTIONS" SHEET.
FOR THE ABUTMENT DIAPHRAGM CORNER DETAILS SEE THE "SUPERSTRUCTURE DETAILS" SHEET.
● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-222				
DRAWN BY		JPH	PLANS CK'D.	DLM
SUPERSTRUCTURE CROSS SECTIONS 1			SHEET 12	
			468	

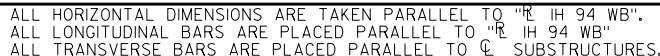


SCALE = 2.33



▲ SEE "STRUCTURAL APPROACH SLABS"
SHEET FOR SS601 BAR SPACING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY		JPH	PLANS CK'D. DLM
SUPERSTRUCTURE PLAN		SHEET 14	
		470	

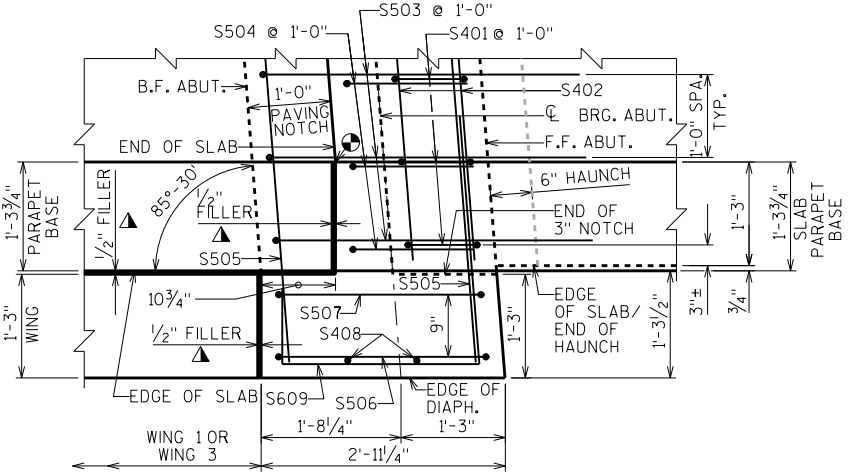


* * DIMENSION IS TAKEN
PARALLEL TO "R IH 94 WB".
BARS PLACED PARALLEL
TO "R IH 94 WB" AND
SPACED PERPENDICULAR
TO "R IH 94 WB".

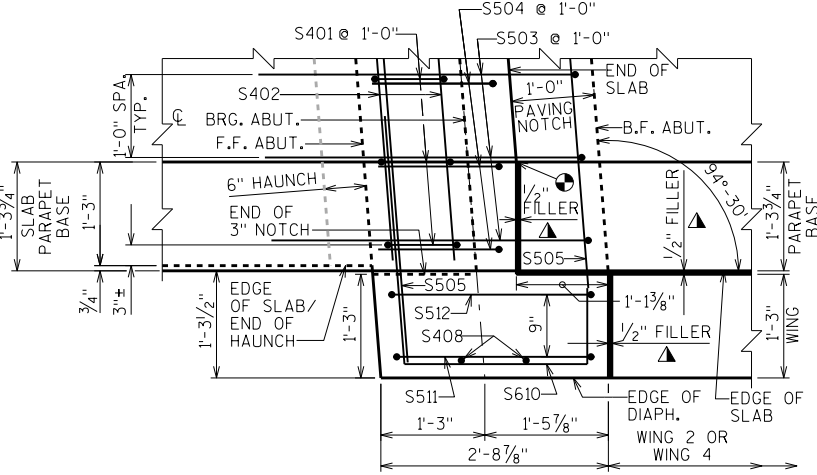


PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C OF ABUTMENTS, THE C OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND R 14 94 WB/CROWN POINT.

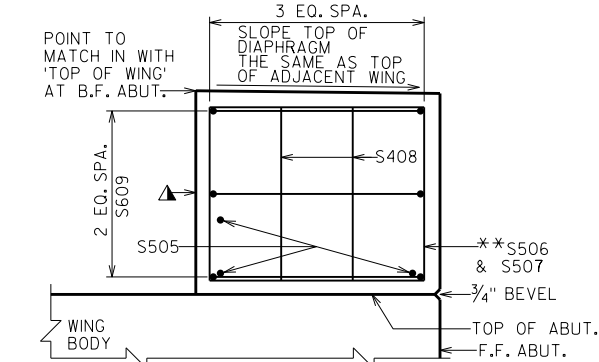
SCALE - 225



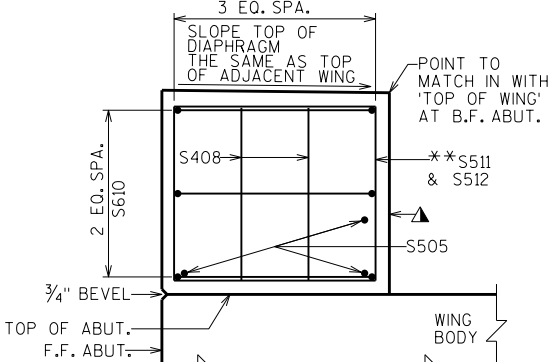
TYPICAL CORNER DETAIL
AT WINGS 1&3 (PLAN VIEW)



TYPICAL CORNER DETAIL
AT WINGS 2&4 (PLAN VIEW)



TYPICAL CORNER DETAIL AT WINGS 1&3
(ELEVATION VIEW LOOKING AT F.F. WING)



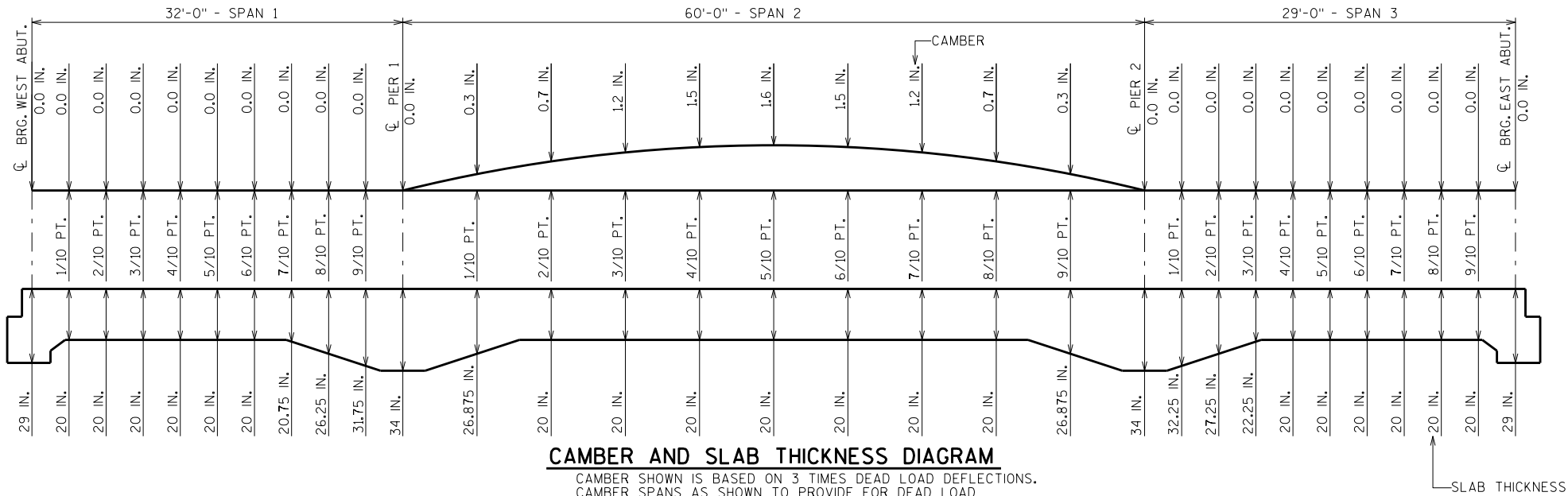
TYPICAL CORNER DETAIL AT WINGS 2&4
(ELEVATION VIEW LOOKING AT F.F. WING)

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

◻ SQUARE OFF ENDS OF PAVING NOTCH AT INSIDE FACE OF PARAPET

** DIMENSION IS TAKEN PARALLEL TO "R" IH 94 WB". BARS PLACED PARALLEL TO "R" IH 94 WB" AND SPACED PERPENDICULAR TO "R" IH 94 WB".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
SUPERSTRUCTURE DETAILS		SHEET 16	
		472	



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
LESS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS = TOP OF SLAB FALSEWORK ELEVATION.

TOP OF SLAB ELEVATIONS

	CL BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL BRG. E. ABUT.
NORTH GUTTERLINE & EDGE OF SLAB	909.41	909.38	909.34	909.30	909.27	909.23	909.20	909.16	909.12	909.09	909.05	908.99	908.92	908.85	908.79	908.72	908.65	908.58	908.52	908.45	908.38	908.35	908.32	908.29	908.25	908.22	908.19	908.16	908.12	908.09	908.06
CL IH 94 WB/CROWN POINT	910.12	910.09	910.05	910.02	909.98	909.94	909.91	909.87	909.84	909.80	909.76	909.70	909.63	909.56	909.50	909.43	909.36	909.30	909.23	909.16	909.09	909.06	909.03	909.00	908.97	908.93	908.90	908.87	908.84	908.80	908.77
SOUTH GUTTERLINE & EDGE OF SLAB	909.60	909.56	909.52	909.49	909.45	909.42	909.38	909.35	909.31	909.27	909.24	909.17	909.10	909.04	908.97	908.90	908.84	908.77	908.70	908.64	908.57	908.54	908.50	908.47	908.44	908.41	908.37	908.34	908.31	908.28	908.24

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. WEST ABUTMENT	5/10 PT.	CL PIER 1	5/10 PT.	CL PIER 2	5/10 PT.	CL BRG. EAST ABUTMENT
NORTH GUTTERLINE & EDGE OF SLAB							
CL IH 94 WB/CROWN POINT							
SOUTH GUTTERLINE & EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, THE CL OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTERLINES AND CROWN POINT. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
		DRAWN BY JPH	PLANS CK'D. DLM
SUPERSTRUCTURE DATA		SHEET 17	
		473	

BILL OF BARS

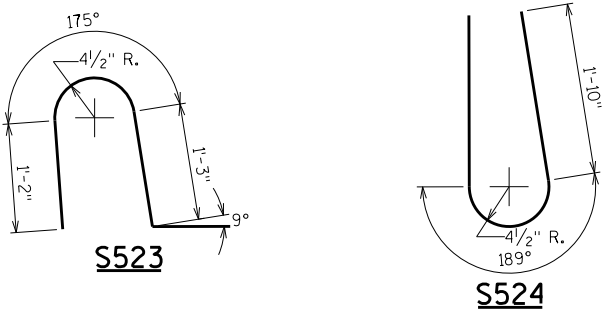
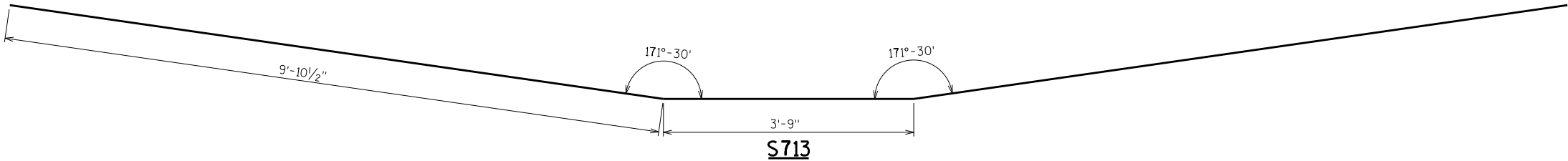
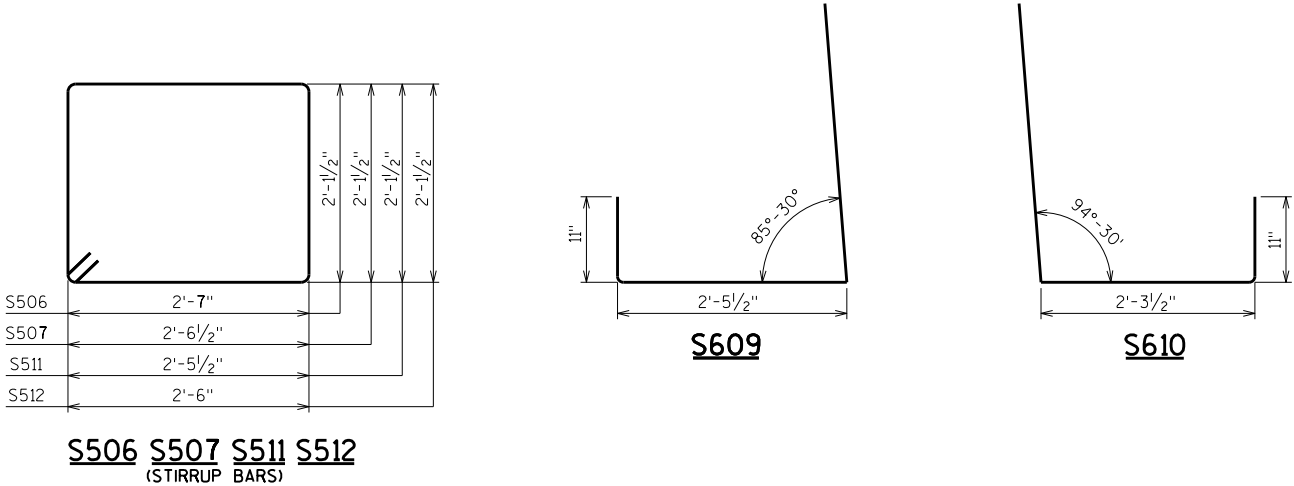
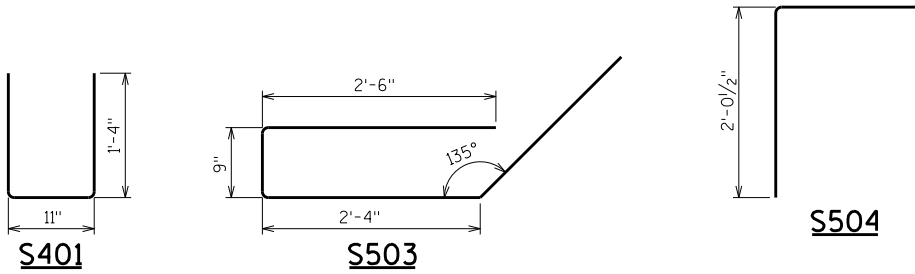
NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	126	3'-5"	X	ABUT. DIAPHS.-F.F.-BOT.-VERT.-LONGIT.-AT 3" NOTCHES
S402	X	8	32'-2"		ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-TRANS.-AT 3" NOTCHES
S503	X	126	7'-5"	X	ABUT. DIAPHS./SLAB-BOT.-VERT.-LONGIT.-UNDER PAVING NOTCHES
S504	X	126	3'-5"	X	ABUT. DIAPHS./SLAB-VERT.-LONGIT.-ALONG PAVING NOTCHES
S505	X	12	33'-10"		ABUT. DIAPHS.-BOT.-HORIZ.-TRANSVERSE
S506	X	2	10'-1"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1&3 CORNERS ONLY
S507	X	2	10'-0"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 1&3 CORNERS ONLY
S408	X	8	2'-1"		ABUT. DIAPHS.-OUTSIDE FACES-VERT.-AT ALL FOUR WING CORNERS
S609	X	6	6'-0"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 1&3 CORNERS ONLY
S610	X	6	5'-10"	X	ABUT. DIAPHS.-HORIZ.-TRANS.-AT WINGS 2&4 CORNERS ONLY
S511	X	2	9'-10"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2&4 CORNERS ONLY
S512	X	2	9'-11"	X	ABUT. DIAPHS.-VERTICAL-LONGIT.-AT WINGS 2&4 CORNERS ONLY
S713	X	120	23'-6"	X	PIER HAUNCHES-BOT.-VERT.-LONGIT.
S514	X	658	32'-8"		SLAB-TOP & BOT.-HORIZ.-TRANSVERSE
S915	X	59	33'-3"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 2
S916	X	60	26'-2"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 1
S917	X	60	47'-6"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 2
S918	X	60	23'-2"		SLAB-BOTTOM-HORIZ.-LONGIT.-AT SPAN 3
S519	X	244	5'-0"		SLAB-TOP-HORIZ.-TRANSVERSE-AT BOTH EDGES
S920	X	60	46'-2"		SLAB-TOP-HORIZ.-LONGIT.-AT WEST END
S921	X	60	42'-5"		SLAB-TOP-HORIZ.-LONGIT.-AT EAST END
S922	X	118	53'-0"		SLAB-TOP-HORIZ.-LONGIT.-OVER PIERS 1&2
S523	X	366	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT BOTH SIDES
S524	X	366	5'-0"	X	PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES
S525	X	36	41'-10"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES

☆	SS601	126	3'-0"		STRUCTURE SLAB TO APPROACH SLAB
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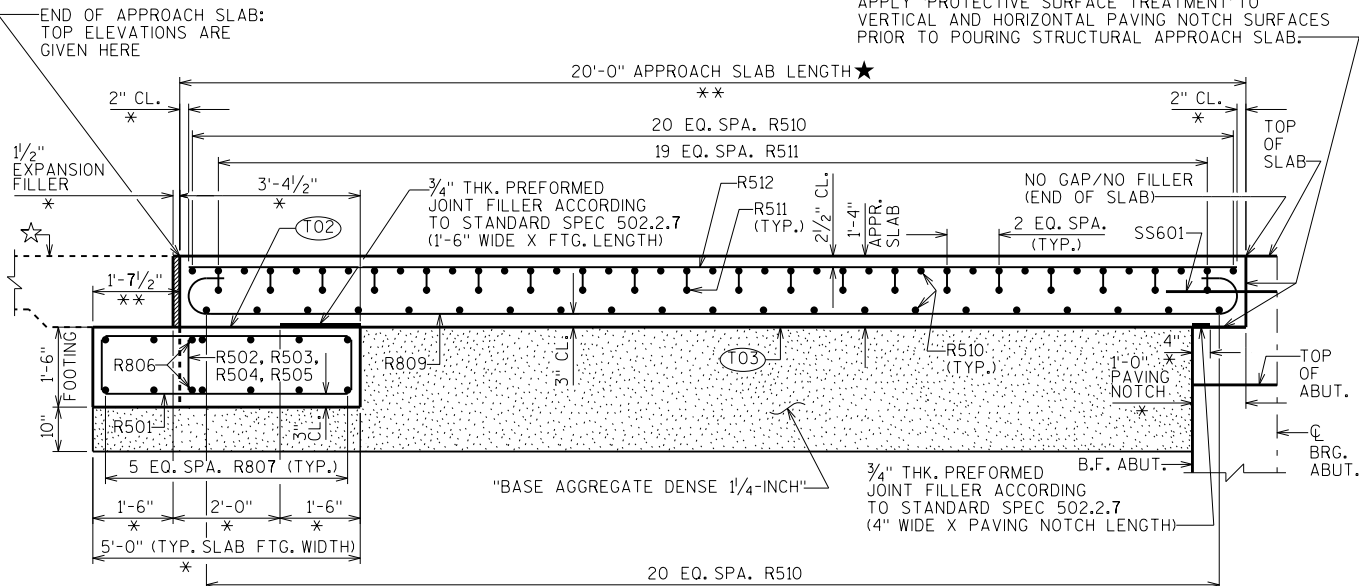
STAINLESS STEEL REINFORCEMENT

☆SEE "SUPERSTRUCTURE LONGITUDINAL SECTIONS"
AND "STRUCTURAL APPROACH SLABS" SHEETS
FOR STAINLESS STEEL REBAR LOCATIONS.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
SUPERSTRUCTURE BAR DETAILS		SHEET 18	
		474	

APPLY 'PROTECTIVE SURFACE TREATMENT' TO VERTICAL AND HORIZONTAL PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.



SECTION A-A THRU APPROACH SLAB
WEST APPROACH SLAB SHOWN / EAST APPROACH SLAB SIMILAR

■ FINISH SMOOTH - SLOPE TO DRAIN

★ TRANSVERSE BARS SHALL BE PLACED PARALLEL TO SUBSTRUCTURES AND SPACED ALONG "R IH 94 WB".

LONGITUDINAL BARS SHALL BE PLACED PARALLEL TO "R IH 94 WB".

* DIMENSION IS TAKEN NORMAL TO B.R.G. ABUTS.

** DIMENSION IS TAKEN PARALLEL TO R IH 94 WB.

NOTES:

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE IF THE REGION SOILS ENGINEER DETERMINES THAT THE EXISTING SOIL BEARING PRESSURE MEETS THE REQUIREMENT ABOVE.

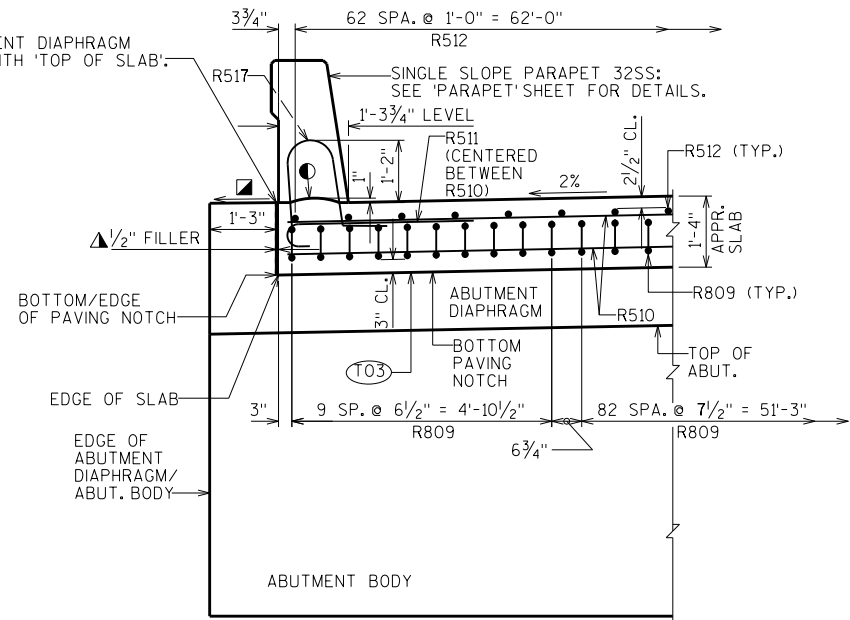
☆ FOLLOW FDM 14-10-15 REQUIREMENTS FOR ROADWAY APPROACH PAVEMENT.

● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

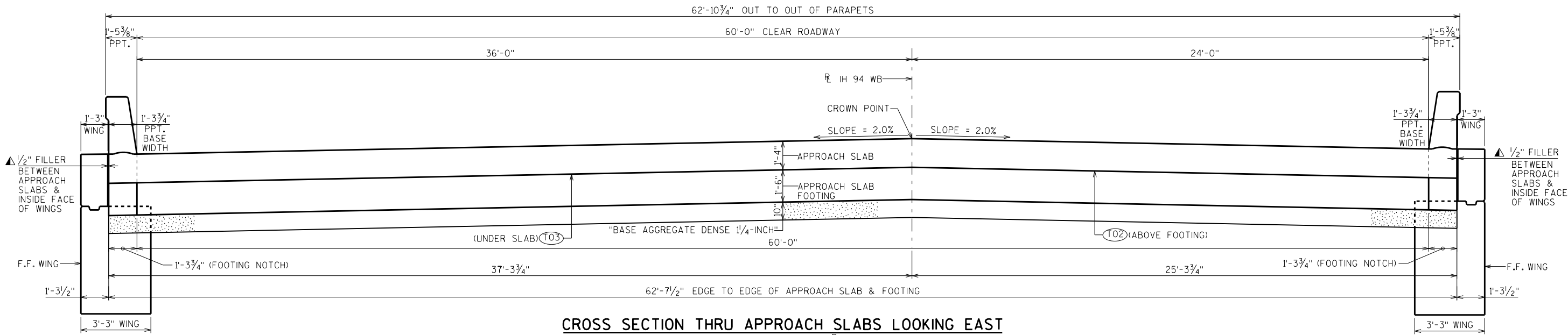
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.



SECTION B-B (EDGE OF SLAB DETAIL)

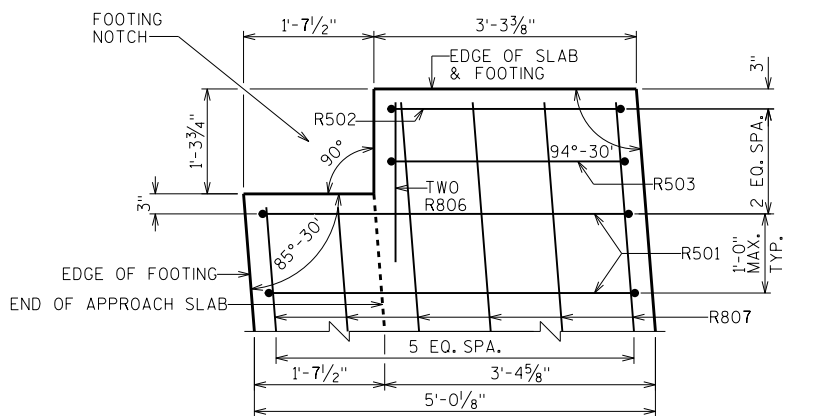
REVISION			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
STRUCTURAL APPROACH SLAB			SHEET 19
			475

SCALE = 3/8" = 1'-0"

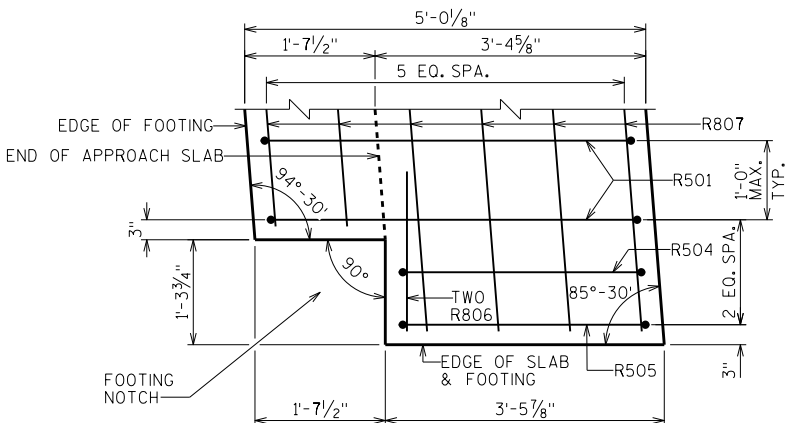


CROSS SECTION THRU APPROACH SLABS LOOKING EAST

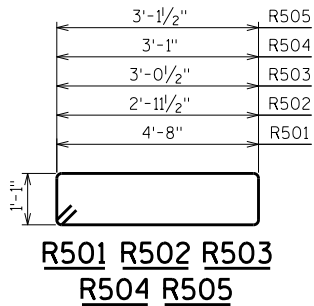
(CROSS SECTION PERPENDICULAR TO R IH 94 WB)



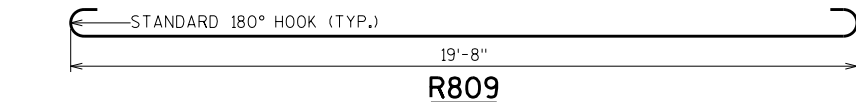
SLAB FOOTING PLAN DETAIL @ NW & SE CORNERS



SLAB FOOTING PLAN DETAIL @ SW & NE CORNERS



R501 R502 R503
R504 R505

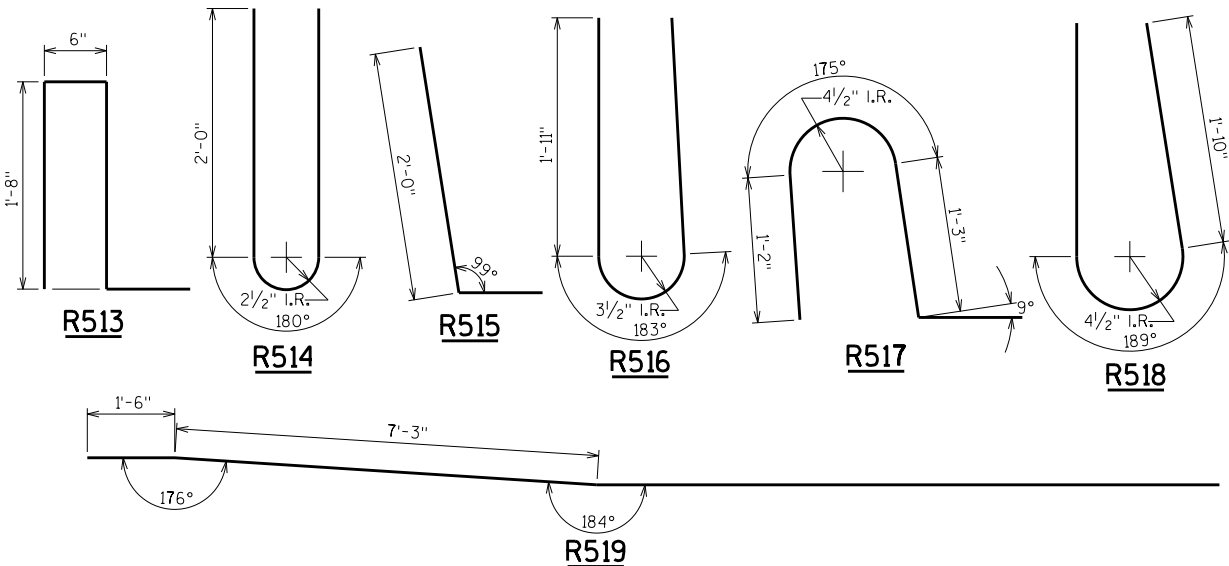


R809

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQUIRED.	WEST SLAB	EAST SLAB	LENGTH	BENT	LOCATION
R501	X	61	61		12'-2"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT CENTER
R502	X	1	1		8'-9"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R503	X	1	1		8'-11"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R504	X	1	1		9'-0"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R505	X	1	1		9'-1"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R806	X	4	4		2'-0"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT ENDS ONLY
R807	X	24	24		34'-2"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R808	X	--	--		--		NOT USED
R809	X	103	103		21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL
R510	X	84	84		32'-9"		SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R511	X	40	40		4'-1"	X	SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R512	X	63	63		19'-8"		SLAB-TOP-HORIZONTAL-LONGITUDINAL
R513	X	34	34		4'-4"	X	PARAPETS 32SS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	22	22		4'-9"	X	PARAPET 32SS-END-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	24	24		2'-9"	X	PARAPETS 32SS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R516	X	12	12		4'-10"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R517	X	34	34		4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R518	X	34	34		5'-0"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	2	2		19'-5"	X	PARAPET 32SS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R520	X	10	10		19'-5"		PARAPET 32SS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS

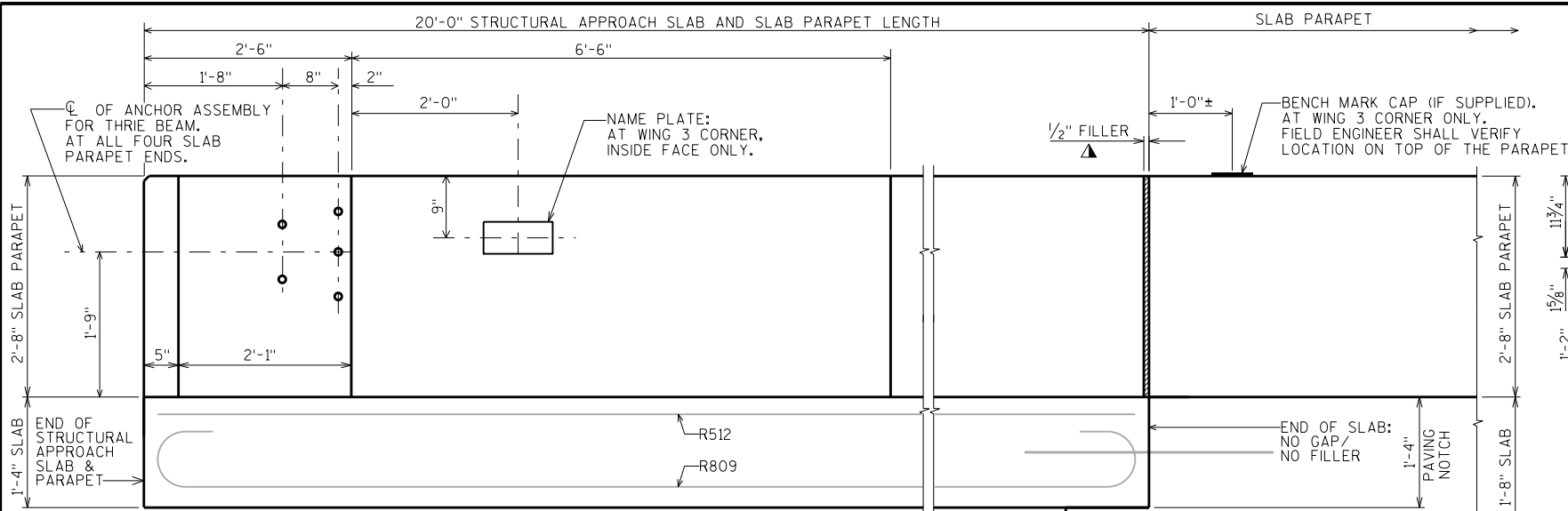


(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

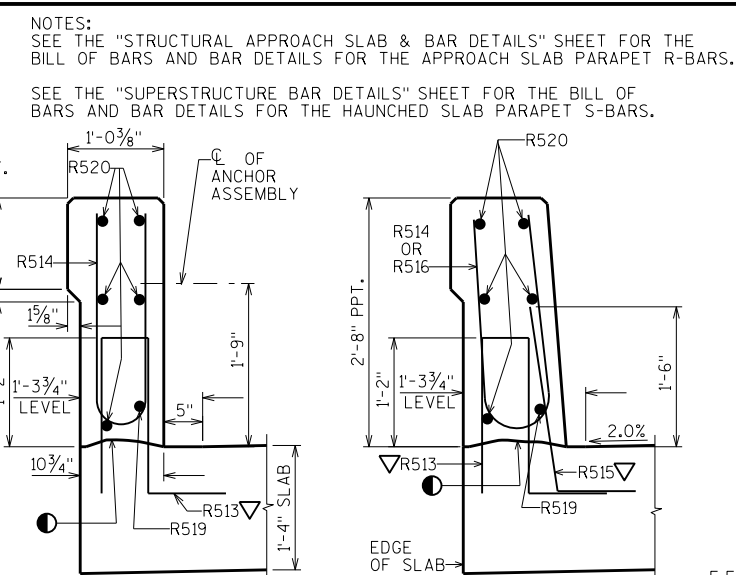
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
STRUCTURAL APPROACH SLAB & BAR DETAILS			SHEET 20
			476

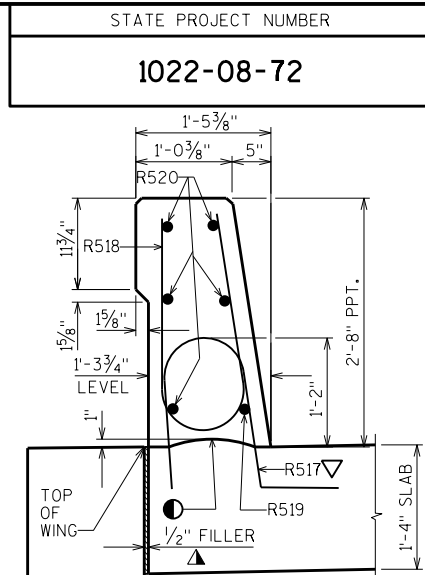


INSIDE ELEVATION
WINGS 2&4 CORNERS SHOWN
WINGS 1&3 CORNERS SIMILAR

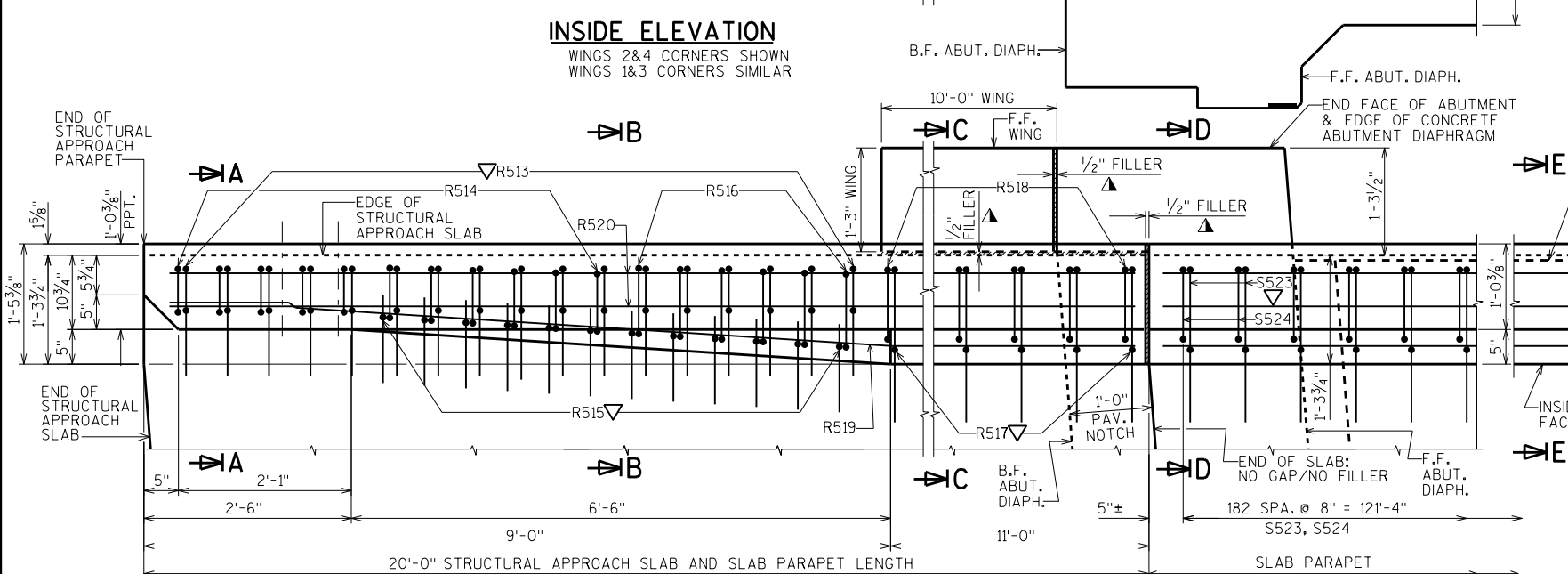


SECTION A-A

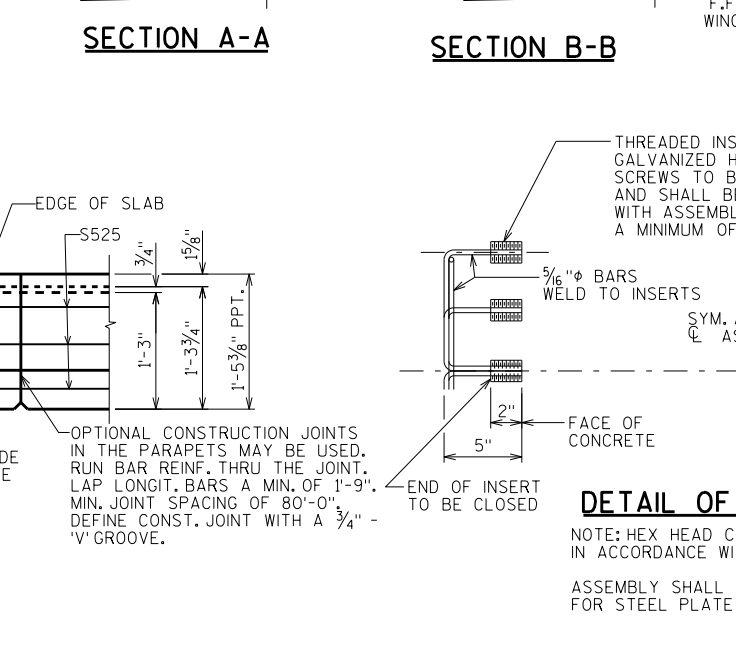
SECTION B-B



SECTION C-C

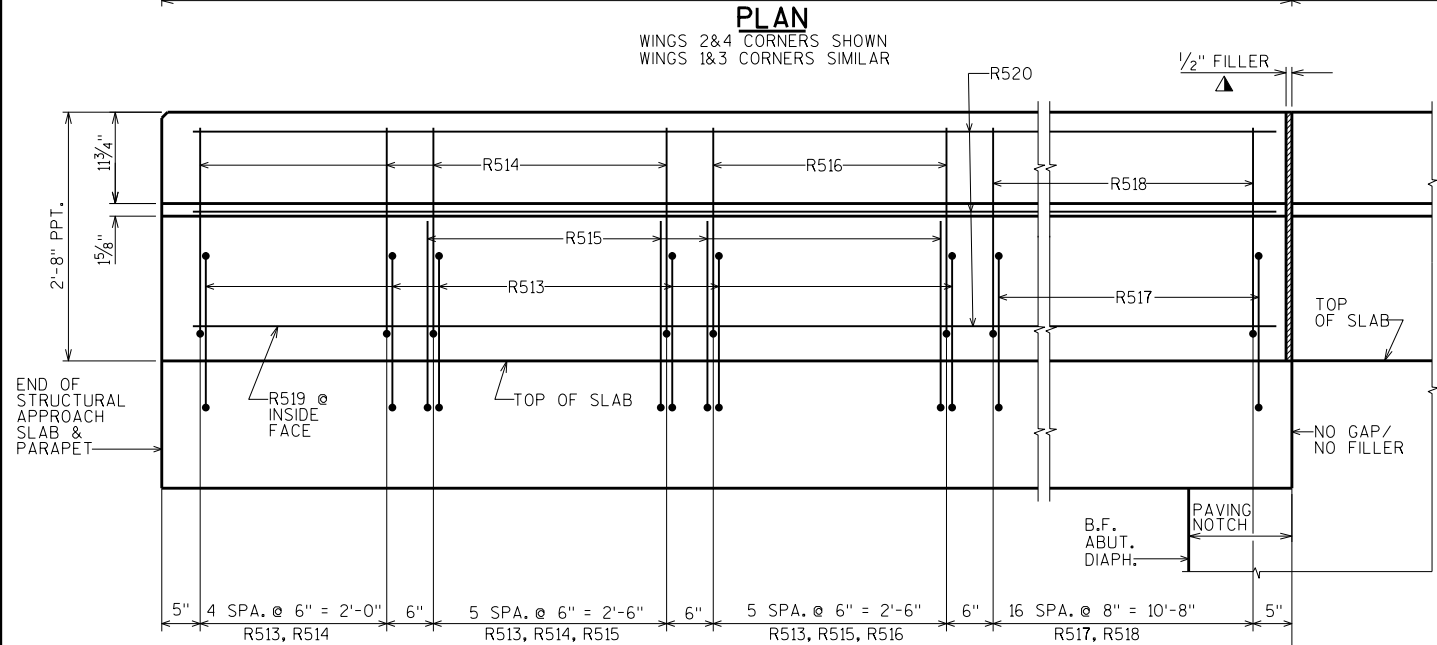


PLAN
WINGS 2&4 CORNERS SHOWN
WINGS 1&3 CORNERS SIMILAR

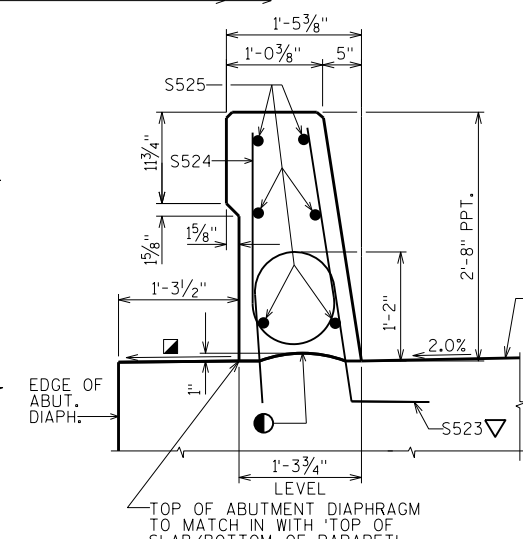


DETAIL OF ANCHOR ASSEMBLY

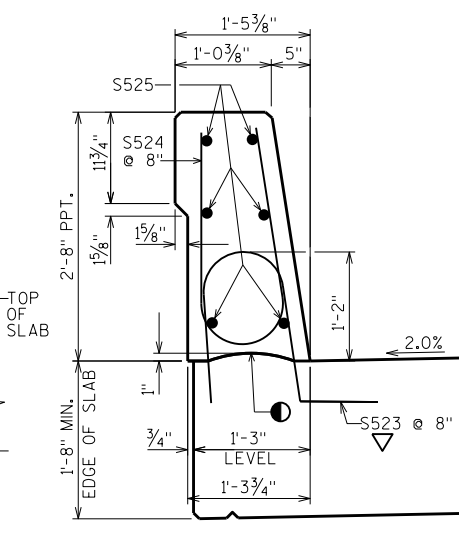
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



OUTSIDE ELEVATION
(WING NOT SHOWN FOR CLARITY)
WINGS 1&3 CORNERS SHOWN
WINGS 2&4 CORNERS SIMILAR



**SECTION D-D
(OVER ABUT.
DIAPHRAGM)**

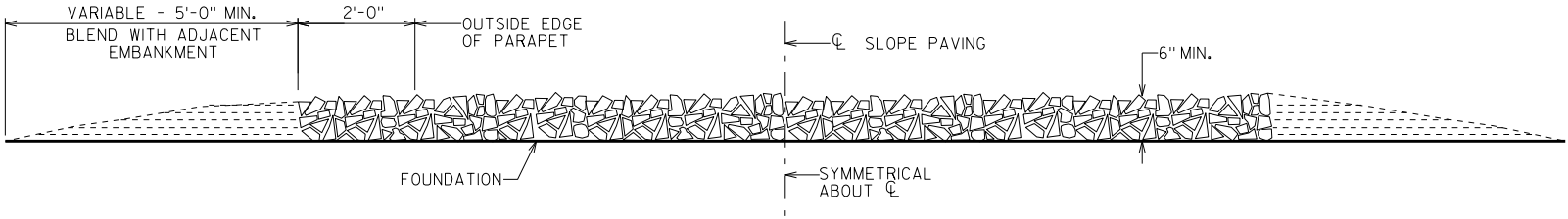


**SECTION E-E
(AT SLAB)**

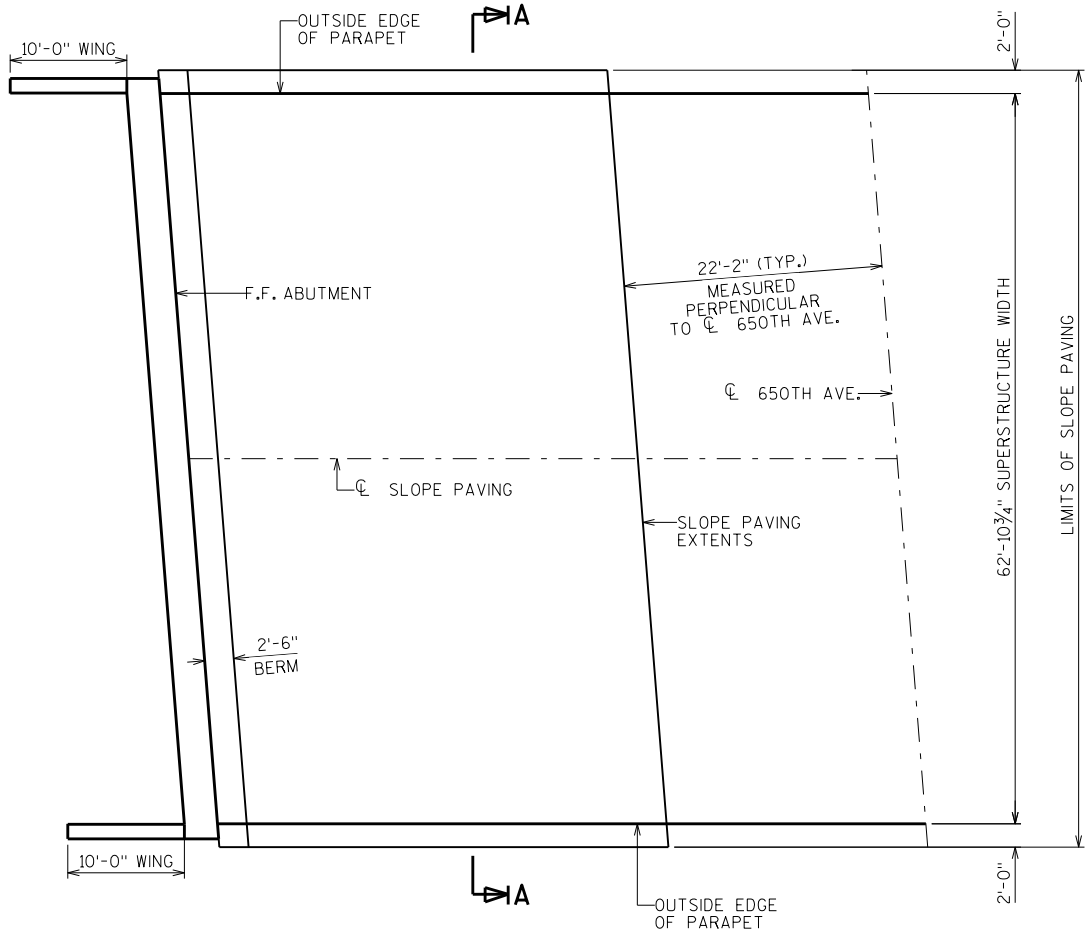
- FINISH SMOOTH - SLOPE TO DRAIN
- ▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ▽ R513, R515, R517 & S523 PARAPET BARS TO BE TIED TO SLAB OR SLAB STEEL BEFORE SLAB OR SLAB IS POURED. USE CARE TO PLACE R515 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CKD. DLM	
SINGLE SLOPE PARAPET 32SS		SHEET 21	
		477	

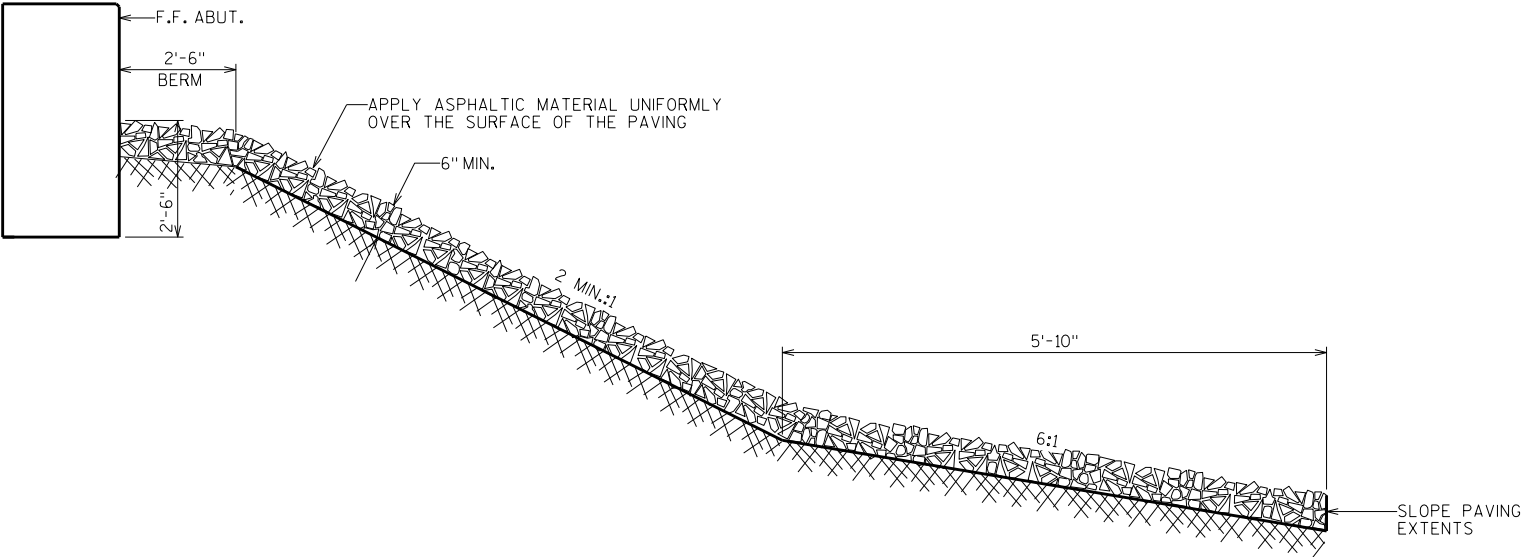
SCALE = 1/8" = 1'-0"



SECTION A-A



PLAN



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE AT ABUTMENTS

ROUND STONE WILL NOT BE ACCEPTED

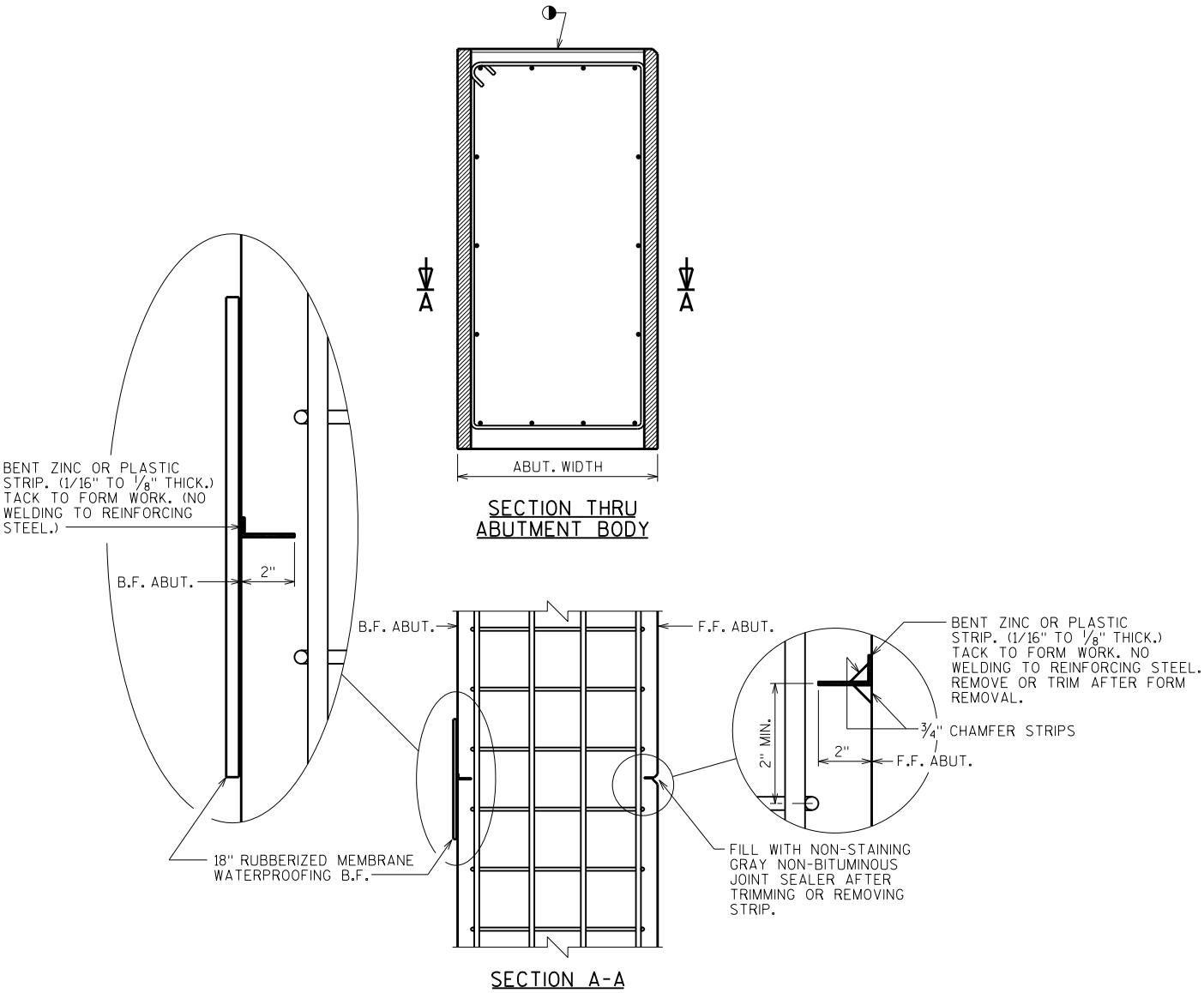
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
DRAWN BY JPH		PLANS CK'D. DLM	
SLOPE PAVING CRUSHED AGGREGATE		SHEET 22	
		478	

SCALE = 1:00



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

- NOTES**
- PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.
- CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.
- SAW CUTTING JOINT IS NOT ALLOWED
- USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-222			
		DRAWN BY	PLANS CK'D. DLM
ALTERNATE CONSTRUCTION JOINT		SHEET 23	
		479	

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.16
OPERATING RATING FACTOR: RF=1.70
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — $f'_c = 4,000$ P.S.I.
ALL OTHER — $f'_c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — $f_y = 60,000$ P.S.I.
STAINLESS, GRADE 60 — $f_y = 60,000$ P.S.I.

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — $f'_c = 8,000$ P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

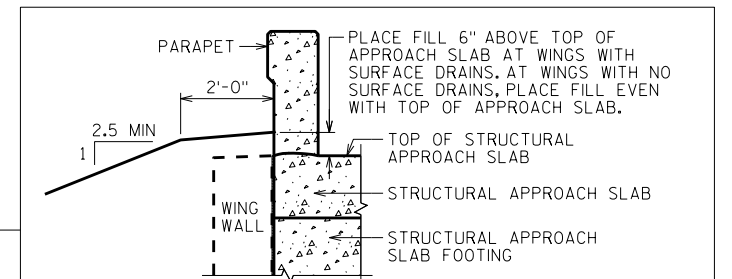
FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 55'-0" LONG AT THE WEST ABUTMENT.
ESTIMATED 50'-0" LONG AT THE EAST ABUTMENT.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH 94 EB	390TH ST.
A.D.T.=42,600 (2038)	A.D.T.=650 (2038)
R.D.S.=75 M.P.H.	R.D.S.=60 M.P.H.



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

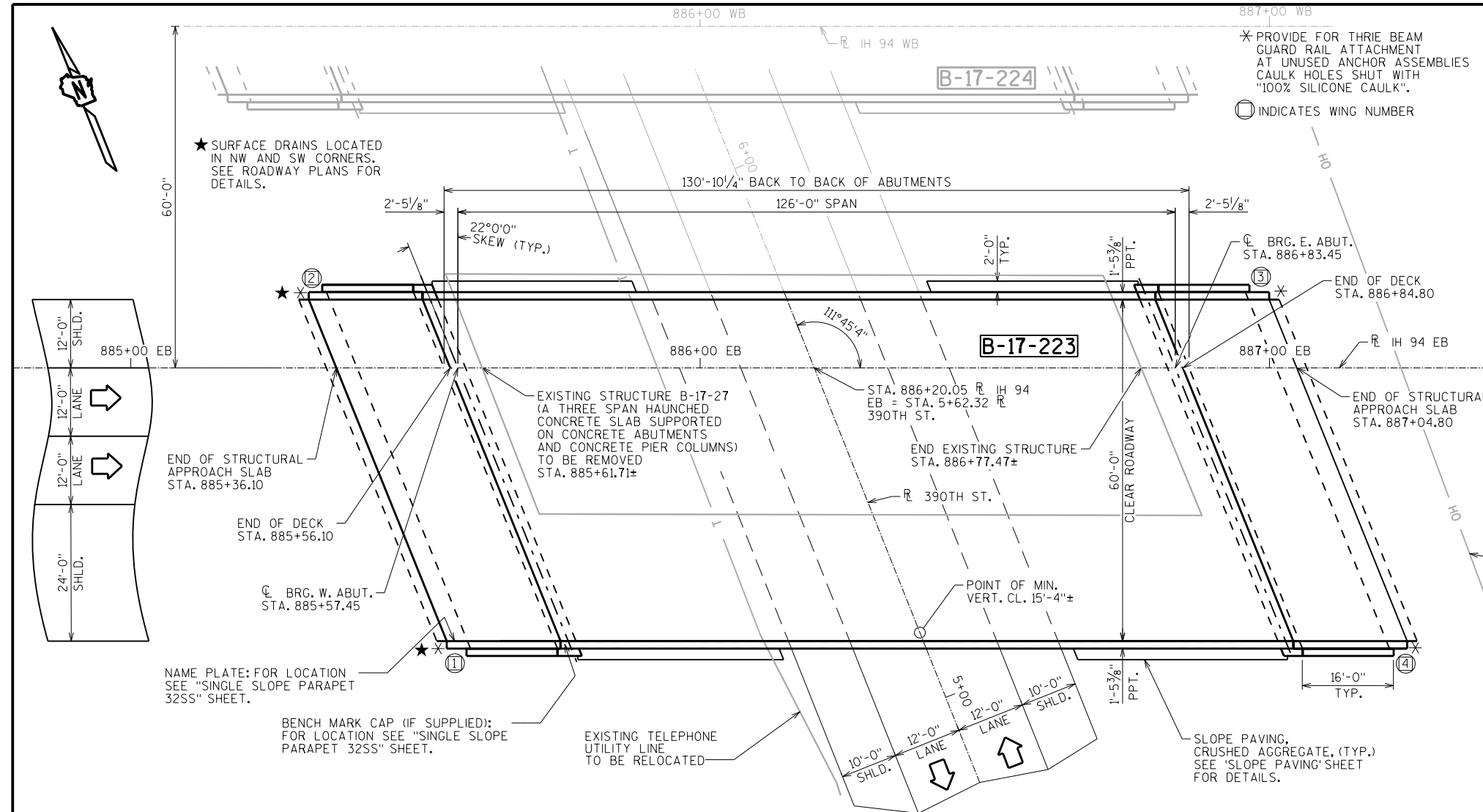
STRUCTURE DESIGN CONTACTS:

DANIEL MONROE (608) 266-8490
LAURA SHADEWALD (608) 267-9592

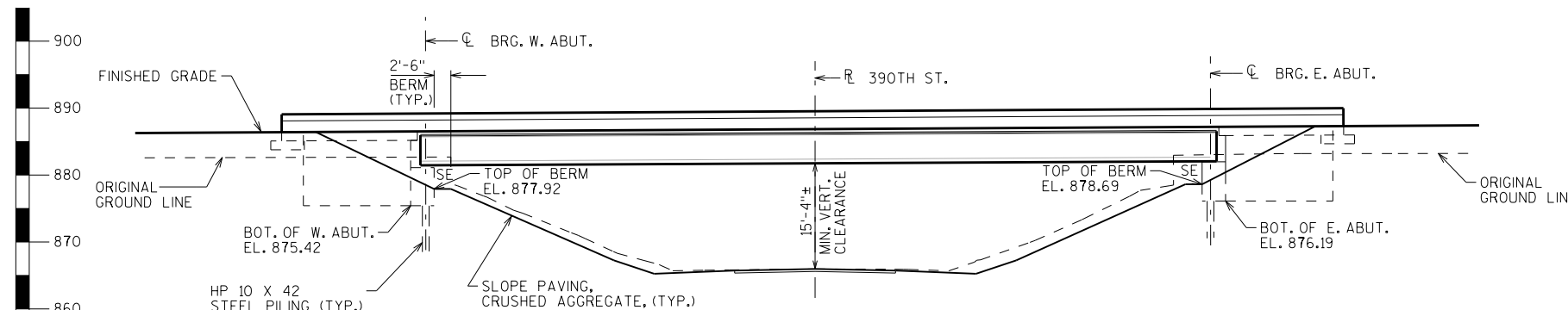
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. EAST ABUTMENT
8. EAST ABUTMENT DETAILS
9. 54W" PRESTRESSED GIRDER DETAILS 1
10. 54W" PRESTRESSED GIRDER DETAILS 2
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE CROSS SECTIONS
13. ABUTMENT DIAPHRAGMS
14. SUPERSTRUCTURE PLAN
15. DECK (BOTTOM STEEL)
16. DECK (TOP STEEL)
17. STRUCTURAL APPROACH SLABS
18. STRUCTURAL APPROACH SLAB & BAR DETAILS
19. SINGLE SLOPE PARAPET 32SS
20. SUPERSTRUCTURE BAR DETAILS
21. SLOPE PAVING CRUSHED AGGREGATE
22. ALTERNATE CONSTRUCTION JOINT

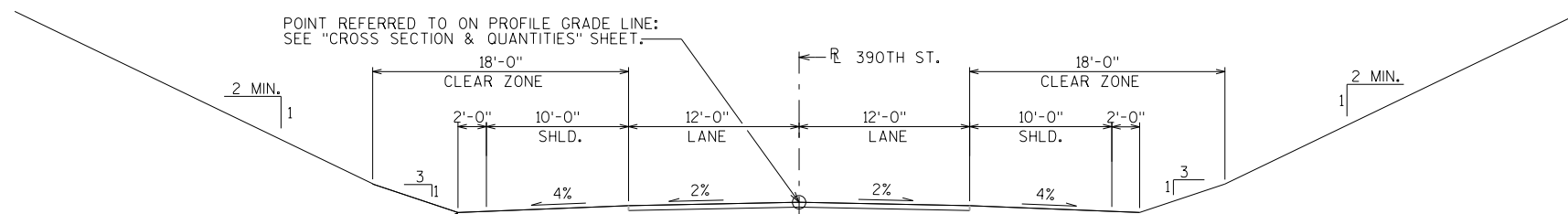
NO.	DATE	REVISION	BY
BUREAU OF STRUCTURES			
ACCEPTED <i>William C. Dehner</i> 7/18/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-223			
IH 94 EB OVER 390TH ST.			
COUNTY	DUNN	TOWN	MENOMONIE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DLM	DESIGNED CK'D.	MSC
DRAWN BY	JPH	PLANS CK'D.	SEW
GENERAL PLAN			SHEET 1 OF 22
			480



PLAN
SINGLE SPAN - 54W" PRESTRESSED GIRDERS



ELEVATION
NORMAL TO 390TH ST. - LOOKING NORTH (UPSTATION)



TYPICAL SECTION THRU 390TH STREET
NORMAL TO 390TH ST. - LOOKING NORTH (UPSTATION)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK & APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

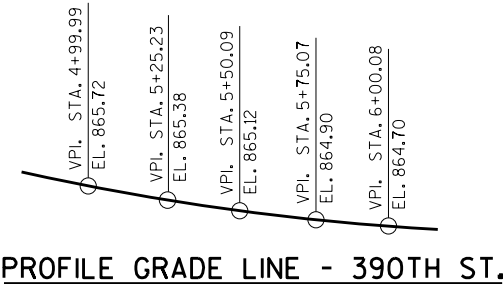
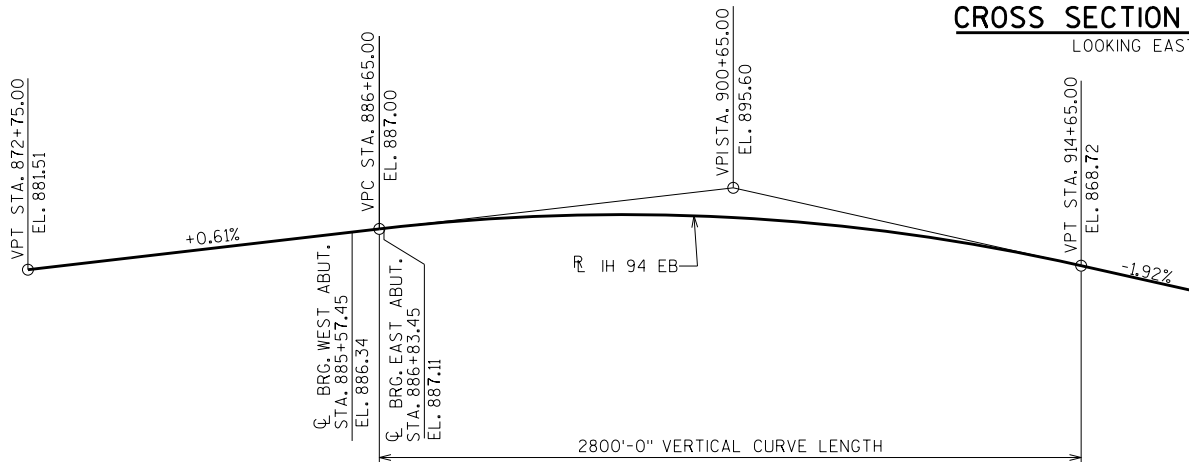
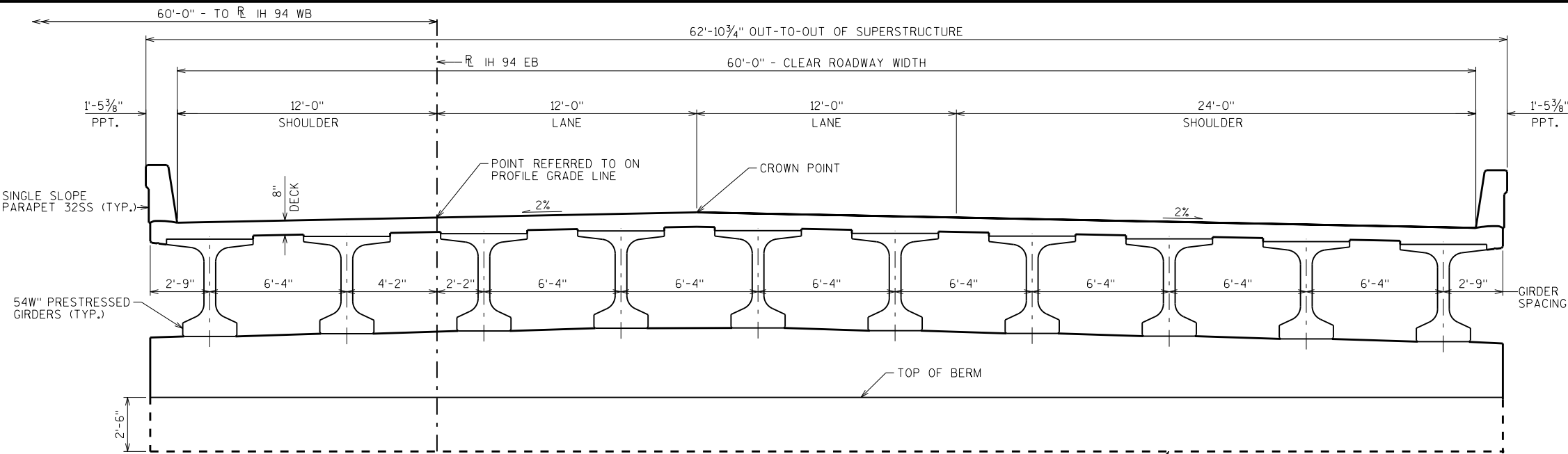
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE 'GIRDER DETAILS 2' SHEET.

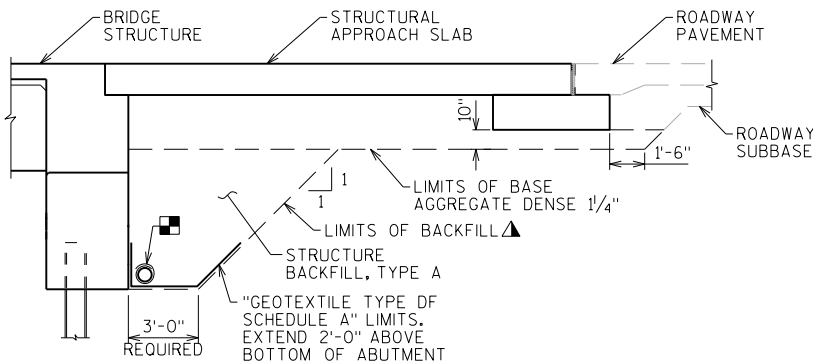
TEMPORARY STRUCTURE LOCATION IS SHOWN ON B-17-224 PLANS AND "STAGING DETAILS" SHEET.

TEMPORARY SHORING INCLUDED IN BID ITEM "TEMPORARY STRUCTURE STA. 885+75 WB"



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 885+61.71 EB	LS	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-223	LS	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	360	360	—	720
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	194	—	—	194	388
502.0100	CONCRETE MASONRY BRIDGES	CY	362	85	69	69	85	670
502.3200	PROTECTIVE SURFACE TREATMENT	SY	895	135	—	—	135	1,165
502.3210	PIGMENTED SURFACE SEALER	SY	106	17	—	—	17	140
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	4,560	4,560	—	9,120
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	49,225	14,635	2,015	2,015	14,635	82,525
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,110	—	—	—	—	2,110
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	20	—	—	—	—	20
506.4000	STEEL DIAPHRAGMS B-17-223	EACH	18	—	—	—	—	18
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	18	18	—	36
526.0100	TEMPORARY STRUCTURE STA. 885+75 WB	LS	—	—	—	—	—	1
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	—	—	1,045	950	—	1,995
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	—	—	286	294	—	580
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	142	142	—	284
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	77	77	—	154
SPV.0090	PRESTRESSED GIRDER TYPE 154W-INCH-SELF CONSOLIDATING CONCRETE	LF	1,270	—	—	—	—	1,270
	NON-BID ITEMS							
	FILLER	SIZE	—	—	—	—	—	1/2", 3/4", 1 1/2"



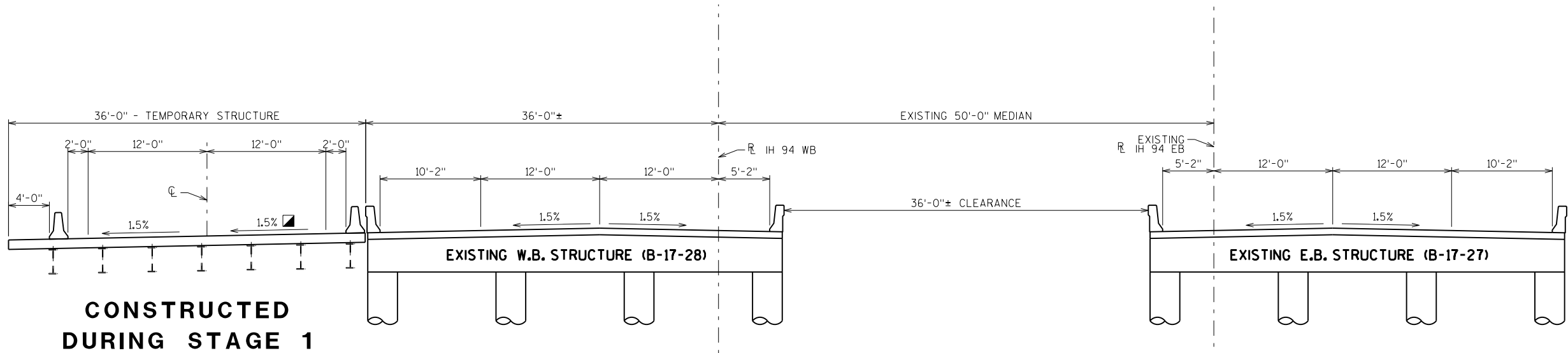
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-17-223" SHALL BE THE EXISTING GROUNDLINE.

BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

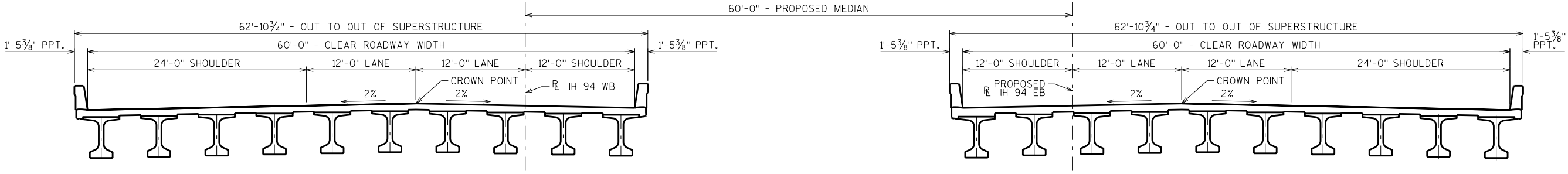
PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
		DRAWN BY JPH	PLANS CK'D. SEW
CROSS SECTION & QUANTITIES		SHEET 2	
		481	



CONSTRUCTED
DURING STAGE 1

EXISTING TYPICAL SECTION
SHOWING PROPOSED TEMPORARY STRUCTURE
IH 94 OVER 390TH ST. (LOOKING EAST)



B-17-224

B-17-223

PROPOSED CROSS SECTION THRU ROADWAY - IH 94 OVER 390TH ST. (LOOKING EAST)

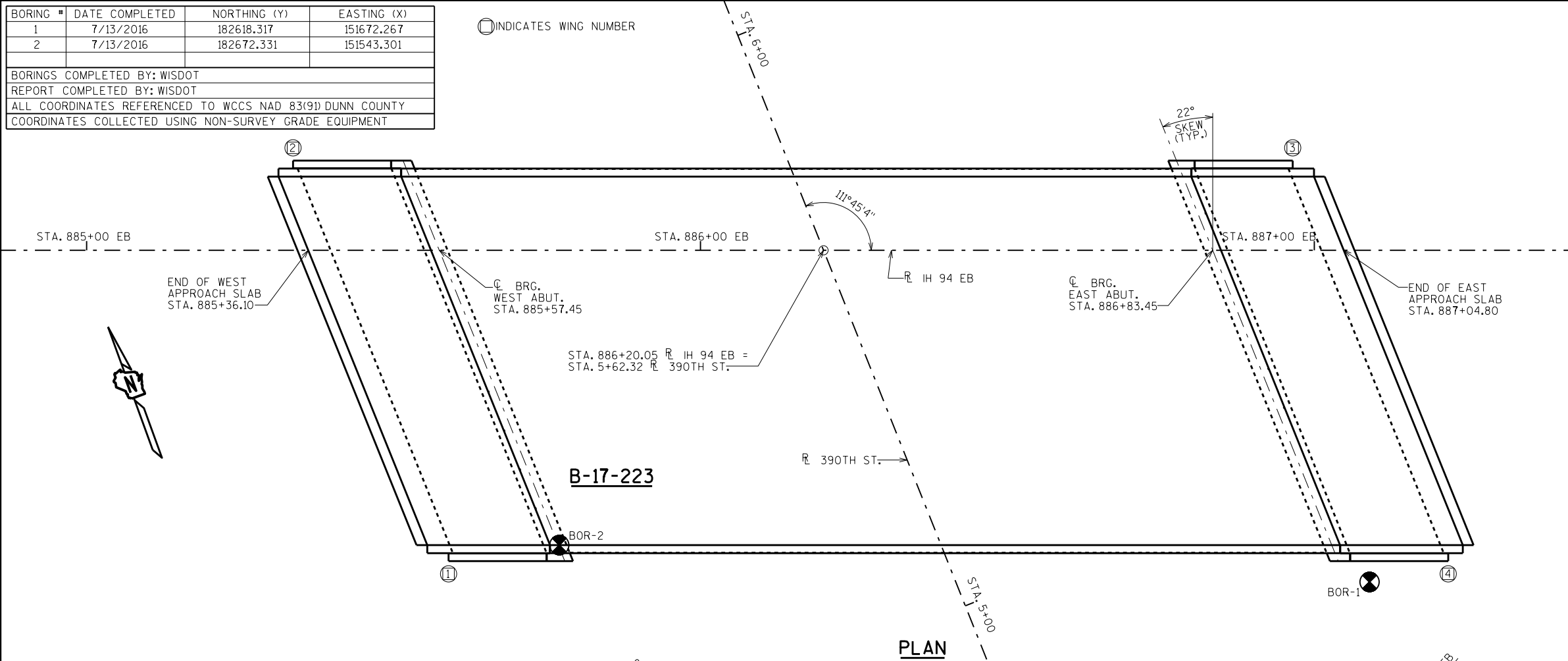
GRADE SET BY EXTENDING
CROSS SLOPE FROM
EXISTING W.B. STRUCTURE

NOTE:
SEE ROADWAY PLANS FOR
FULL STAGING DETAILS

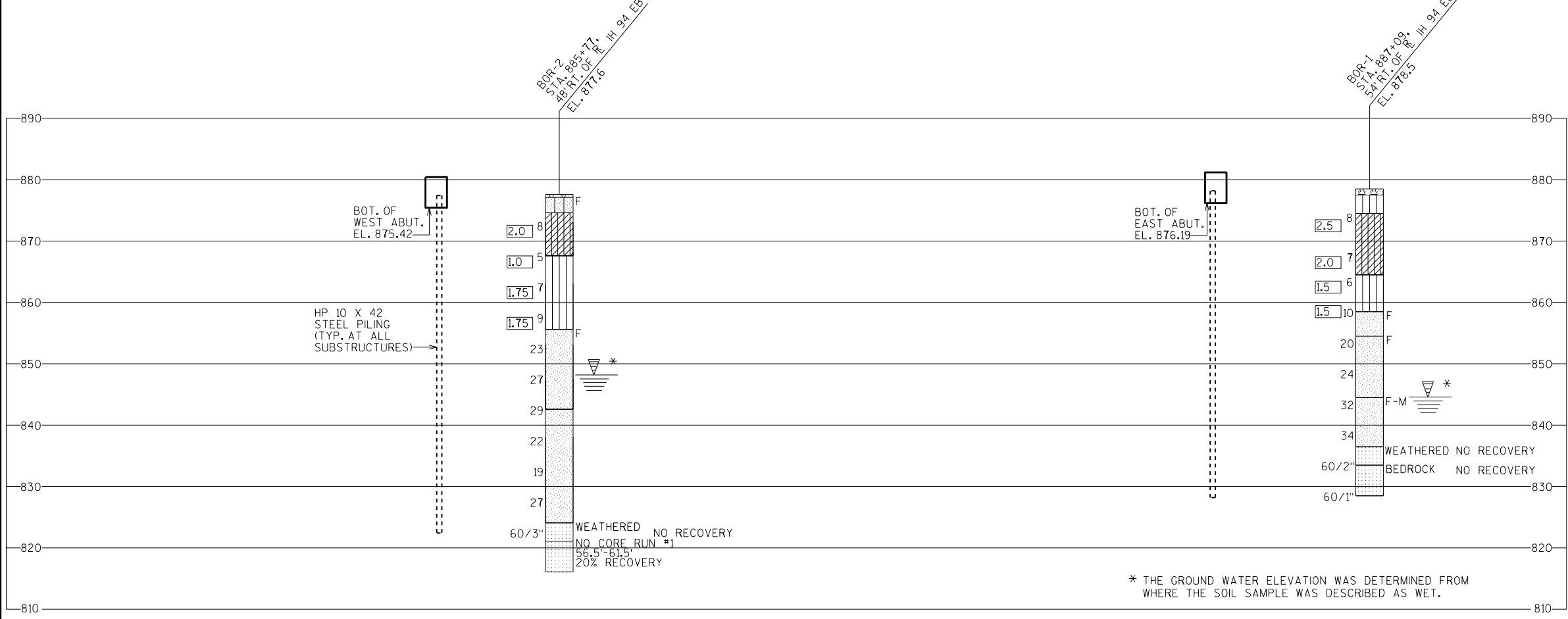
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
SHEET 3			
STAGING DETAILS		482	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/13/2016	182618.317	151672.267
2	7/13/2016	182672.331	151543.301
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

INDICATES WING NUMBER



PLAN



STATE PROJECT NUMBER		
1022-08-72		
MATERIAL SYMBOLS		
ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING	
BORING #/EL. STA./OFF-SET	
ST (1) (2)	
0.25 17	
F-C	COBBLE OR BOULDER
	WEATHERED LIMESTONE
	CORE RUN #1 - 24'-29'
	REC=80%, ROD=72%

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION	
▽	AT TIME OF DRILLING
▽	END OF DRILLING
▽	AFTER DRILLING
ABBREVIATIONS	
F-FINE	M-MEDIUM
C-COARSE	ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
SUBSURFACE EXPLORATION		SHEET 4	
		483	

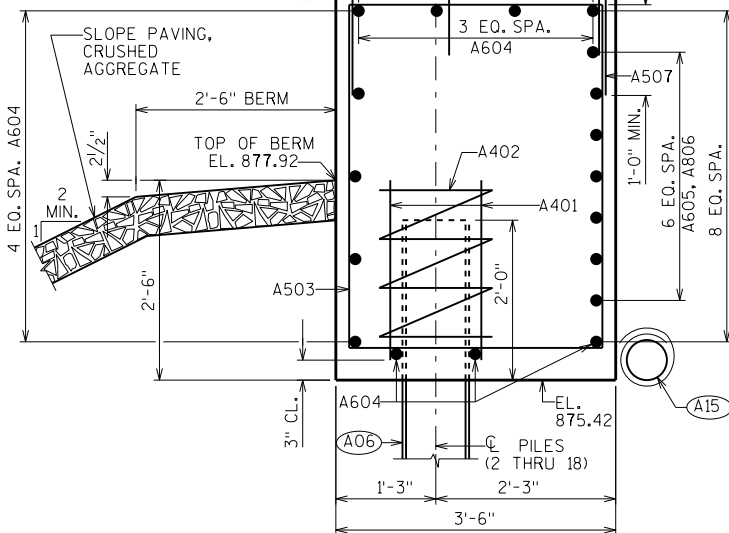
* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

SCALE = 10.00

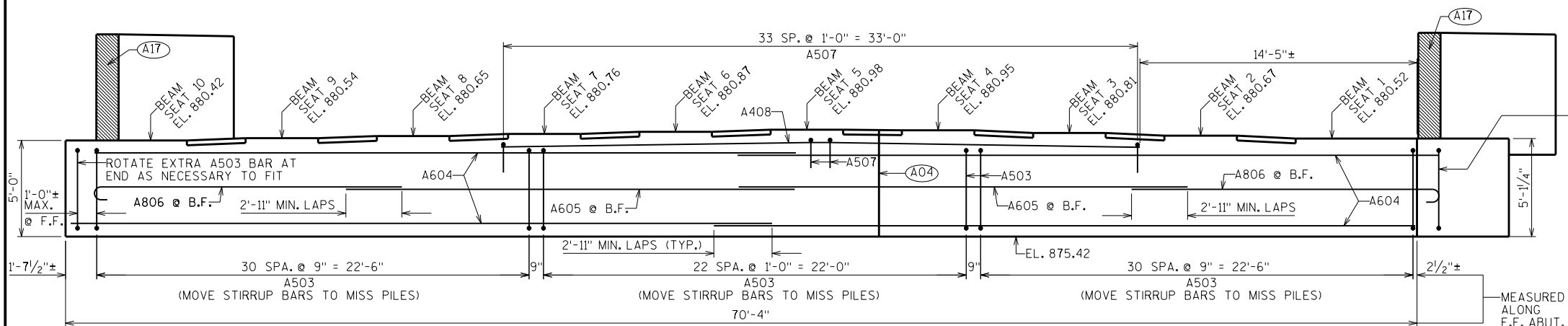
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.

ROTATE EXTRA A503 BAR AT END AS NECESSARY TO FIT

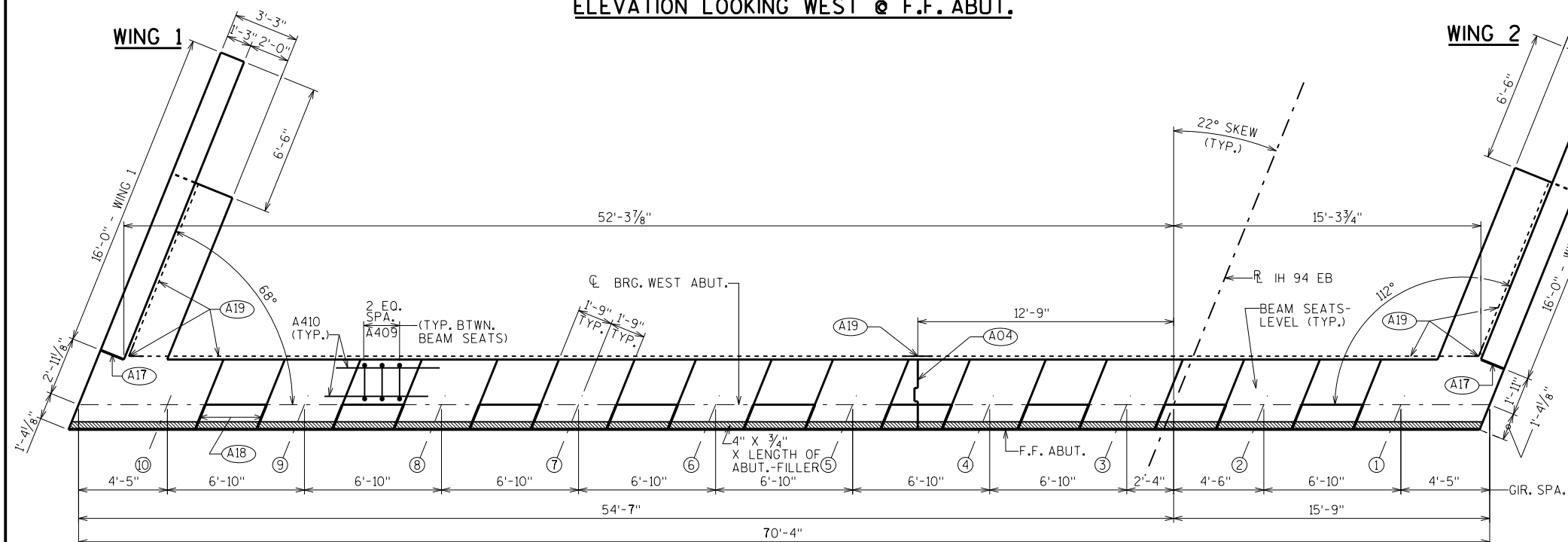
4" X 3/4" X LENGTH OF ABUT.-FILLER
3/4" BEVEL



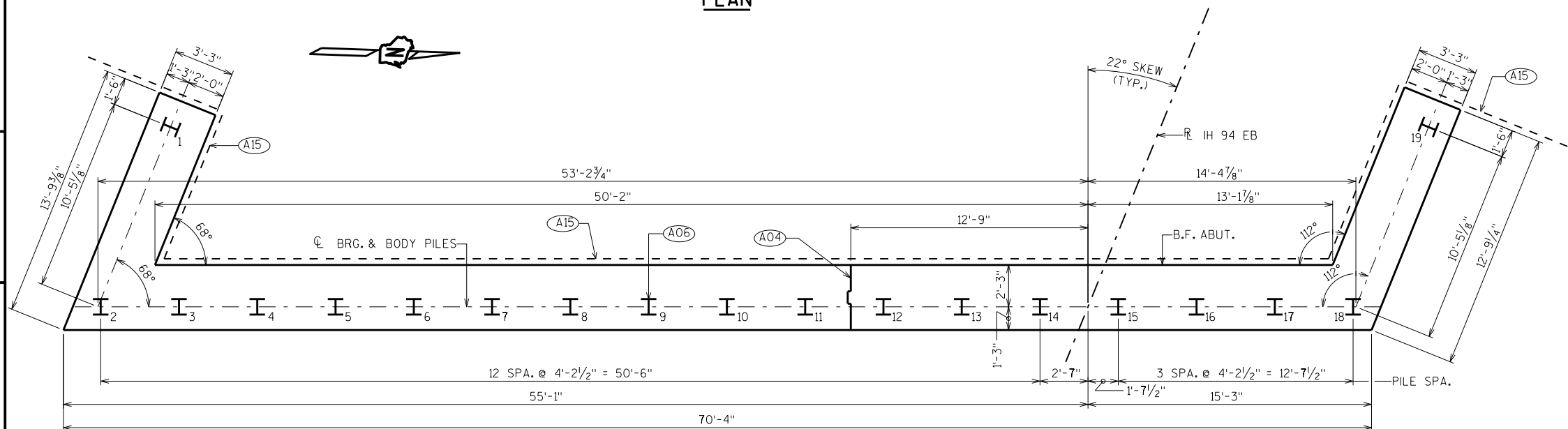
SECTION THRU BODY



ELEVATION LOOKING WEST @ F.F. ABUT.



PLAN



PILE PLAN

(A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" X 8", 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS - SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 55 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-223

DRAWN BY JPH PLANS CKD. SEW

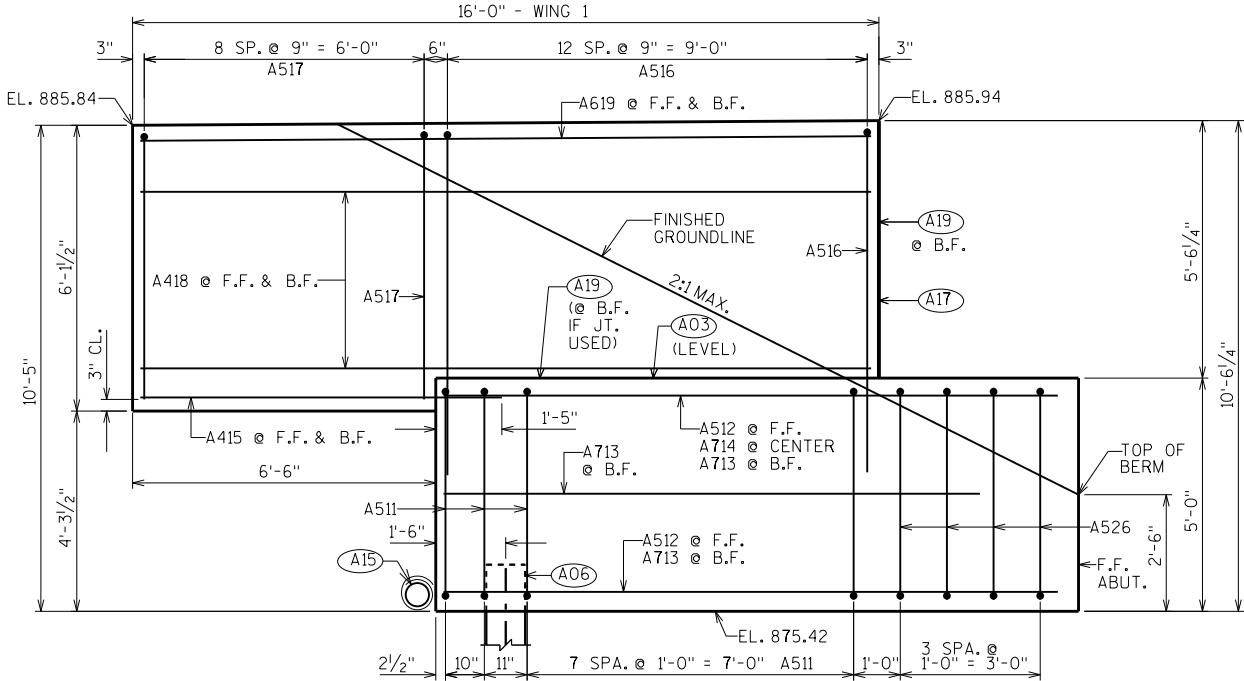
WEST ABUTMENT SHEET 5

484

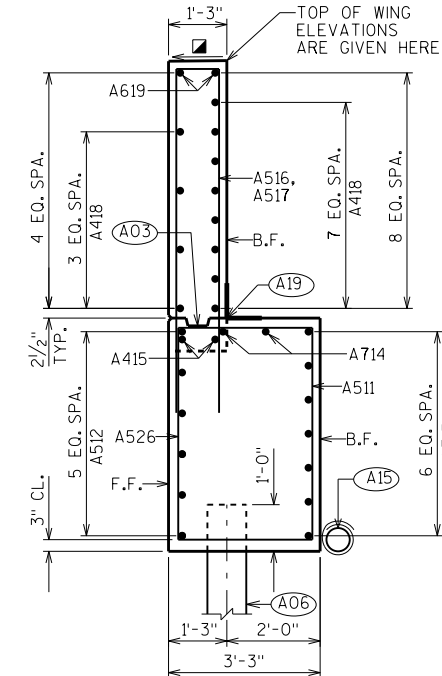
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

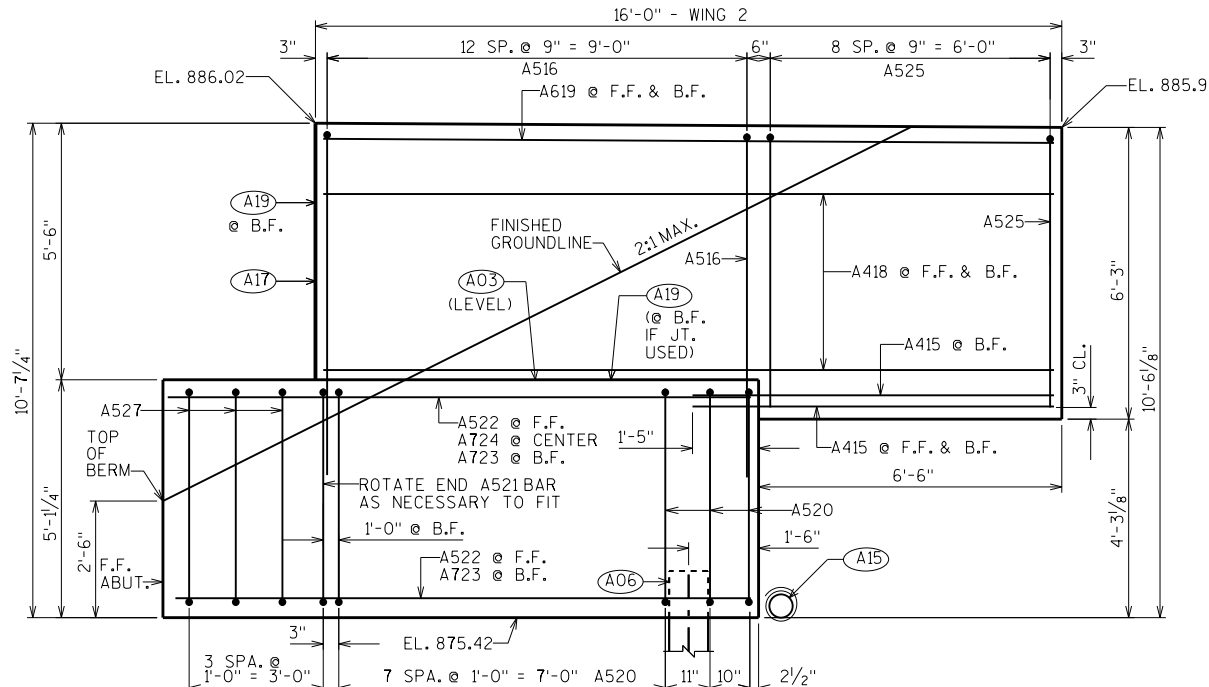
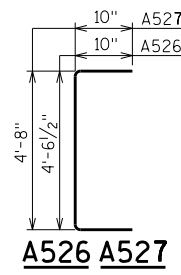
BAR MARK	COA7	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		34	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
A402		17	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A503		87	15'-7"	X	BODY-STIRRUPS-VERT.
A604		22	36'-6"		BODY-HORIZONTAL
A605		14	23'-5"		BODY-HORIZONTAL-B.F.-AT CENTER
A806		14	16'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
A507		34	6'-1"	X	BODY-TOP-VERT.-UNDER BEAM SEATS 3-7
A408		4	33'-3"		BODY-TOP-HORIZ.-UNDER BEAM SEATS 3-7
A409		27	4'-5"	X	BODY-TOP-VERT.-BETWEEN BEAM SEATS
A410		18	5'-2"		BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
A511	X	10	15'-7"	X	WING 1-BOT.-STIRRUP-VERT.
A512	X	6	13'-2"		WING 1-BOT.-HORIZONTAL-F.F.
A713	X	7	11'-6"		WING 1-BOT.-HORIZONTAL-B.F.
A714	X	2	12'-2"		WING 1-BOT.-HORIZONTAL-CENTER
A415	X	5	7'-9"		WINGS 1&2-HORIZONTAL-BOT.-B.F. & F.F.
A516	X	26	15'-5"	X	WINGS 1&2-TOP-VERTICAL
A517	X	9	12'-1"	X	WING 1-TOP-VERTICAL-AT END
A418	X	24	15'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A619	X	4	15'-8"		WINGS 1&2-TOP-HORIZONTAL-B.F. & F.F.
A520	X	10	15'-10"	X	WING 2-BOT.-STIRRUP-VERT.
A521	X	1	16'-0"	X	WING 2-BOT.-STIRRUP-VERT.-AT B.F. ABUT
A522	X	6	12'-4"		WING 2-BOT.-HORIZONTAL-F.F.
A723	X	7	12'-10"		WING 2-BOT.-HORIZONTAL-B.F.
A724	X	2	12'-6"		WING 2-BOT.-HORIZONTAL-CENTER
A525	X	9	12'-4"	X	WING 2-TOP-VERTICAL-AT END
A526	X	4	6'-0"	X	WING 1/BODY END-BOT.-VERT.-F.F.
A527	X	3	6'-1"	X	WING 2/BODY END-BOT.-VERT.-F.F.



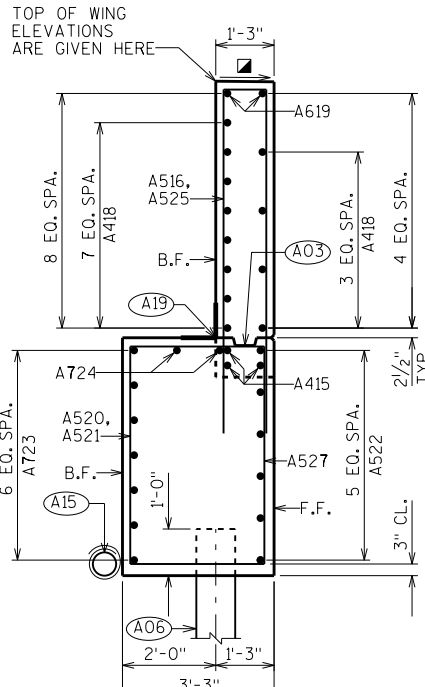
WING 1 ELEVATION LOOKING @ F.F. WING



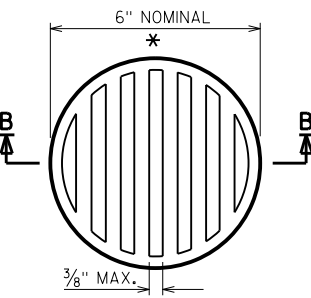
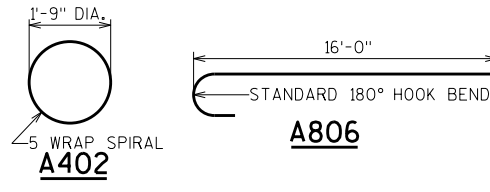
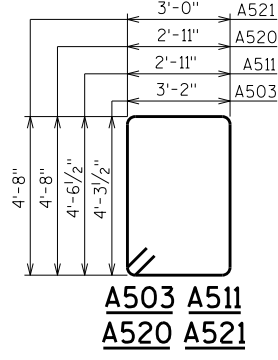
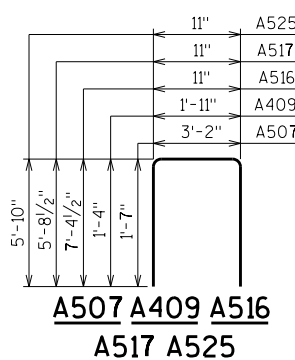
WING 1 SECTION



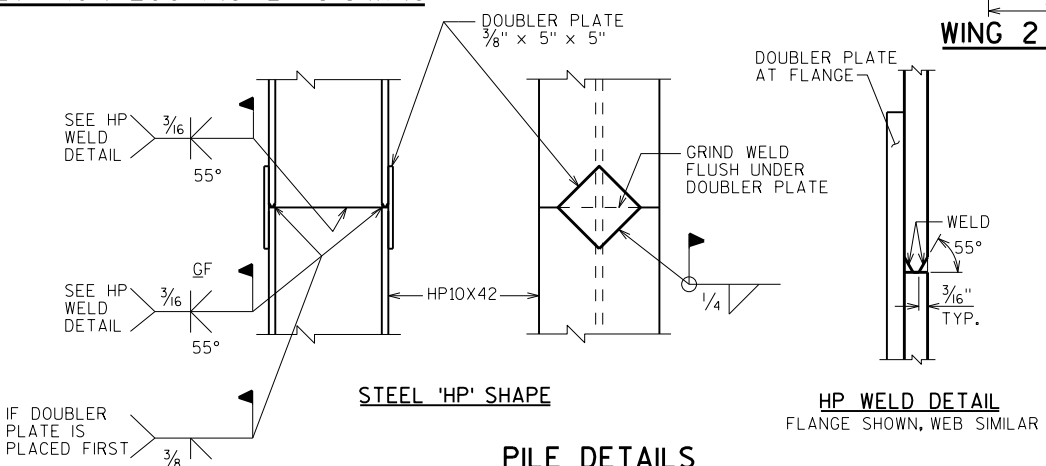
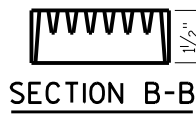
WING 2 ELEVATION LOOKING @ F.F. WING



WING 2 SECTION



RODENT SCREEN DETAIL



PILE DETAILS

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
WEST ABUTMENT DETAILS		SHEET 6	
		485	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		34	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
B402		17	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
B503		87	15'-7"	X	BODY-STIRRUPS-VERT.
B604		22	36'-6"		BODY-HORIZONTAL
B605		14	23'-5"		BODY-HORIZONTAL-B.F.-AT CENTER
B806		14	16'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
B507		34	6'-1"	X	BODY-TOP-VERT.-UNDER BEAM SEATS 3-7
B408		4	33'-3"		BODY-TOP-HORIZ.-UNDER BEAM SEATS 3-7
B409		27	4'-5"	X	BODY-TOP-VERT.-BETWEEN BEAM SEATS
B410		18	5'-2"		BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
B511	X	10	15'-10"	X	WING 3-BOT.-STIRRUP-VERT.
B512	X	6	13'-2"		WING 3-BOT.-HORIZONTAL-F.F.
B713	X	7	11'-6"		WING 3-BOT.-HORIZONTAL-B.F.
B714	X	2	12'-2"		WING 3-BOT.-HORIZONTAL-CENTER
B415	X	4	7'-9"		WINGS 3&4-HORIZONTAL-BOT.-B.F. & F.F.
B516	X	26	15'-7"	X	WINGS 3&4-TOP-VERTICAL
B517	X	18	12'-4"	X	WINGS 3&4-TOP-VERTICAL-AT END
B418	X	24	15'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B619	X	4	15'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B520	X	10	15'-7"	X	WING 4-BOT.-STIRRUP-VERT.
B521	X	1	15'-9"	X	WING 4-BOT.-STIRRUP-VERT.-AT B.F. ABUT
B522	X	6	12'-4"		WING 4-BOT.-HORIZONTAL-F.F.
B723	X	7	12'-10"		WING 4-BOT.-HORIZONTAL-B.F.
B724	X	2	12'-6"		WING 4-BOT.-HORIZONTAL-CENTER
B525	X	4	6'-1"	X	WING 3/BODY END-BOT.-VERT.-F.F.
B526	X	3	6'-0"	X	WING 4/BODY END-BOT.-VERT.-F.F.

WING 3 ELEVATION LOOKING @ F.F. WING

WING 3 SECTION

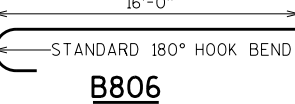
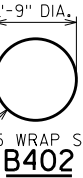
WING 4 ELEVATION LOOKING @ F.F. WING

WING 4 SECTION

B525 B526

B507 B409
B516 B517

B503 B511
B520 B521



FINISH SMOOTH - SLOPE TO DRAIN

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6", (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 50 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
-----	------	----------	----

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-223

DRAWN BY JPH PLANS CK'D. SEW

EAST ABUTMENT
DETAILS

SHEET 8

487

GIRDER	"C"	"D"	"E"	"F"	"G"
1	43'-7 $\frac{3}{8}$ "	---	42'-4"	---	41'-0 $\frac{5}{8}$ "
2-9	41'-0 $\frac{5}{8}$ "	2'-6 $\frac{3}{4}$ "	39'-9 $\frac{1}{4}$ "	2'-6 $\frac{3}{4}$ "	41'-0 $\frac{5}{8}$ "
10	41'-0 $\frac{5}{8}$ "	---	42'-4"	---	43'-7 $\frac{3}{8}$ "

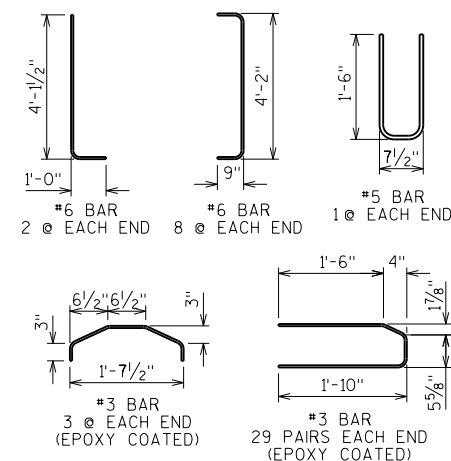


⑧ SIX #4 BARS @ FULL LENGTH WITH 1'-11" MIN. LAPS

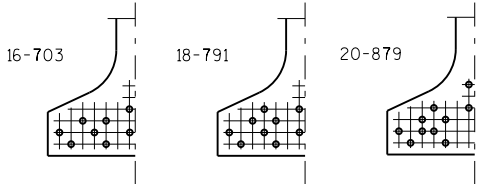
* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

[illegible]

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE
"STEEL DIAPHRAGM" SHEET.

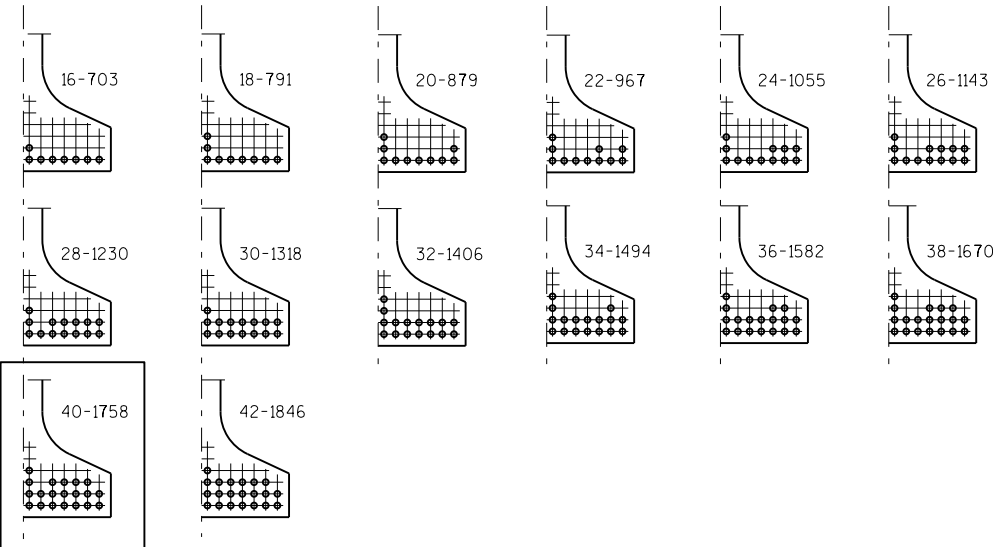


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
		DRAWN BY	PLANS CK'D. SEW
54W"		SHEET 9	
PRESTRESSED GIRDER DETAILS 1		488	



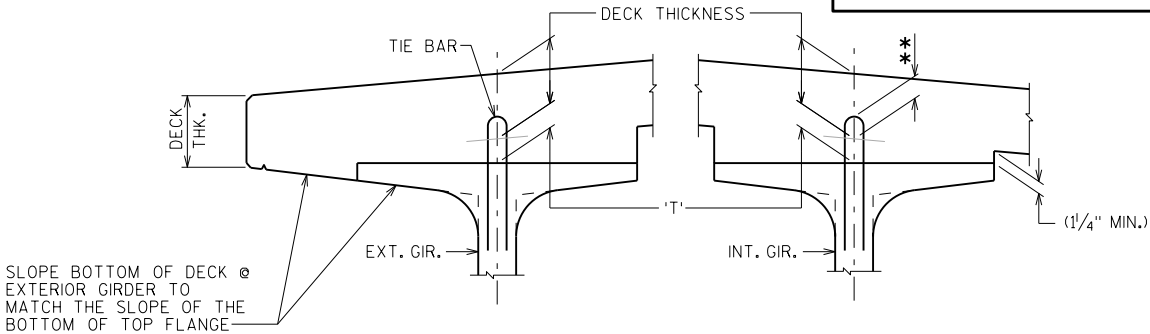
**STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS**

0.6" ϕ STRANDS



ARRANGEMENT AT ϕ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" ϕ STRANDS



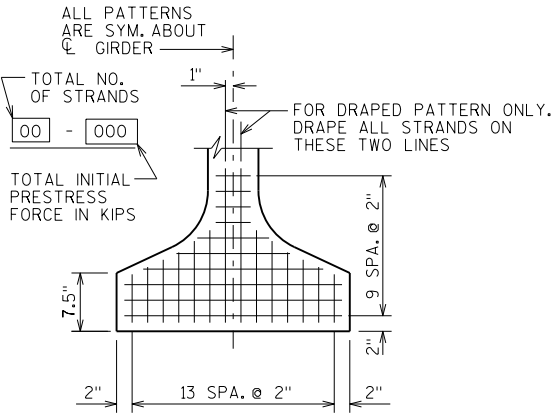
DECK HAUNCH DETAIL

IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

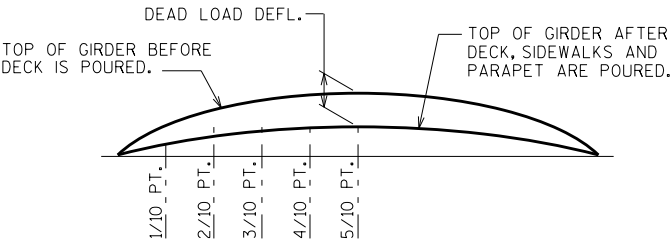
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ϕ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

- TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
- + DEAD LOAD DEFLECTION
- DECK THICKNESS
- = HAUNCH HEIGHT 'T'

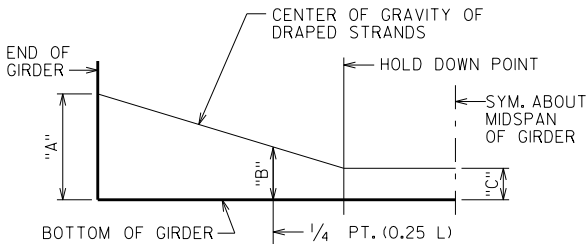
NOTE:
AN AVERAGE HAUNCH ('T') OF 3.4" WAS USED FOR COMPUTING THE SUPERSTRUCTURE QUANTITY "CONCRETE MASONRY BRIDGES".



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4.28

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
54W" PRESTRESSED GIRDER DETAILS 2		SHEET 10	
		489	

NOTES

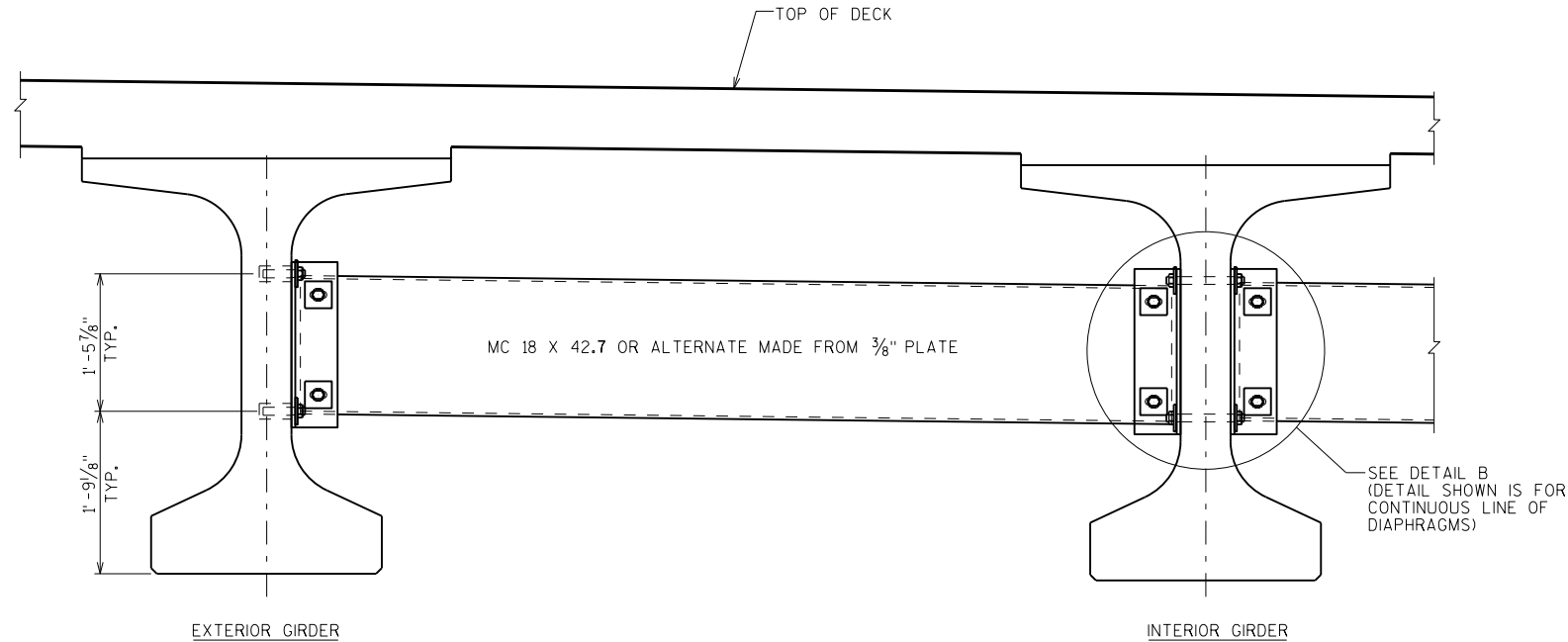
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-17-223", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

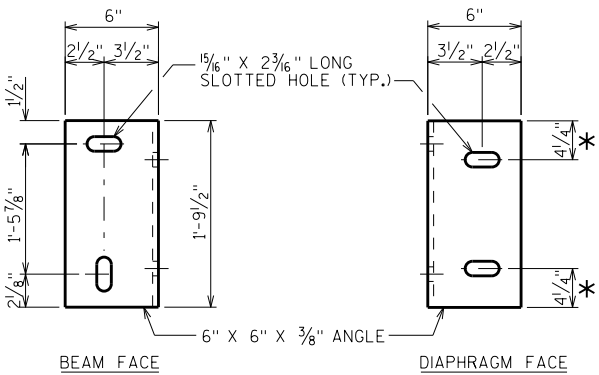
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

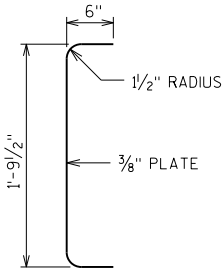


PART TRANSVERSE SECTION AT DIAPHRAGM

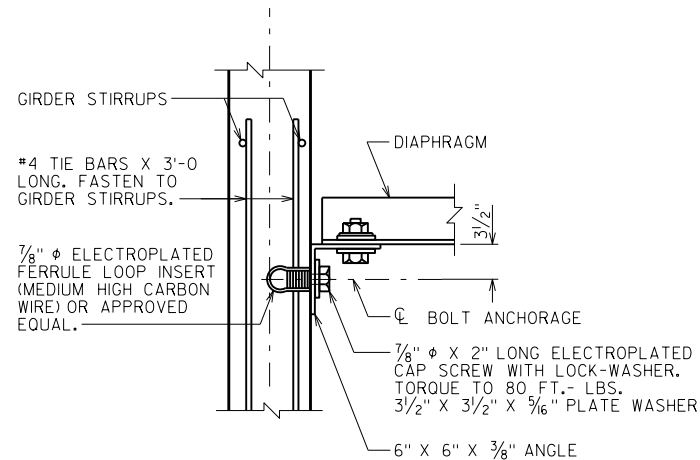


DIAPHRAGM SUPPORT

* 2 1/2\"

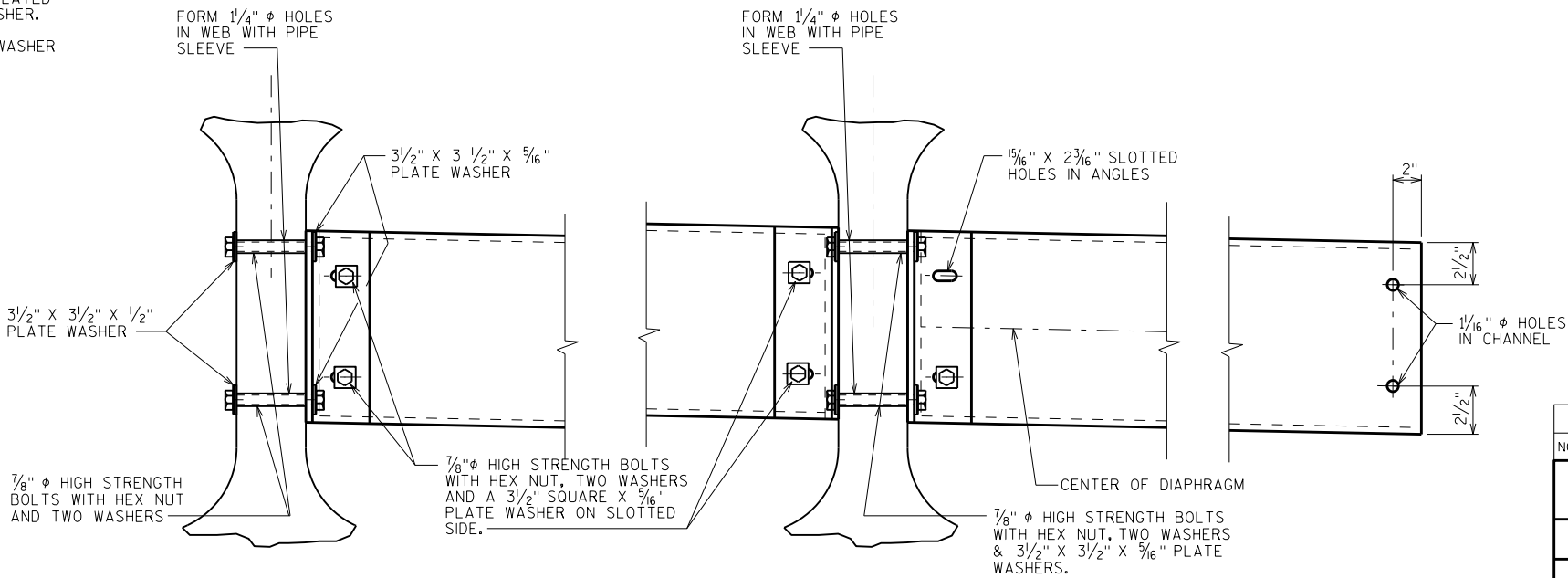


SECTION THRU ALTERNATE DIAPHRAGM



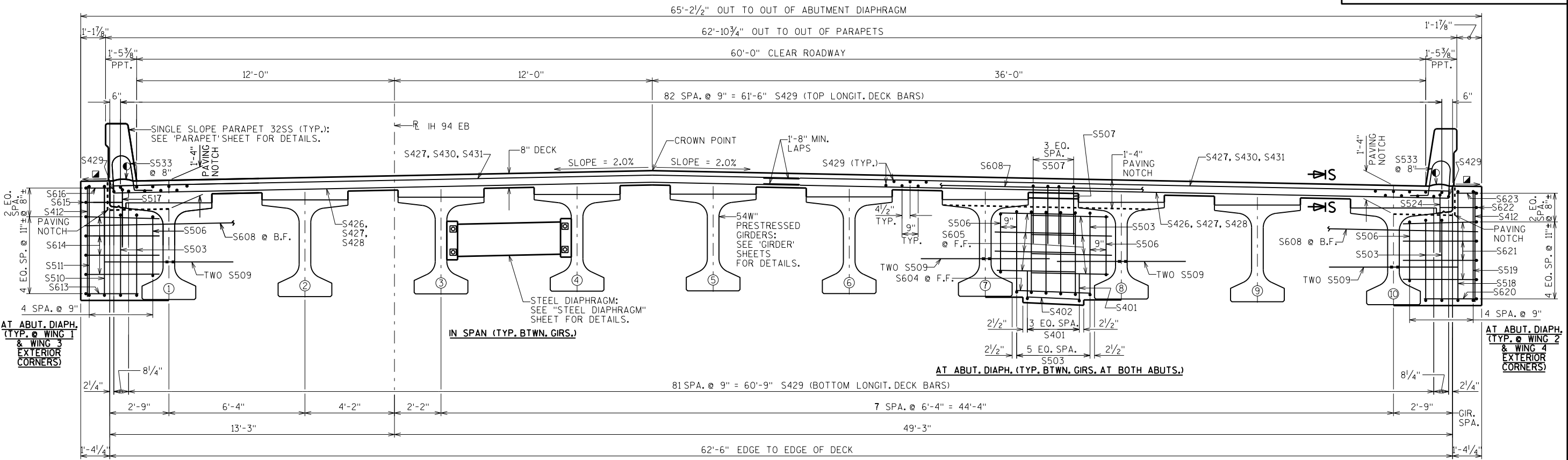
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

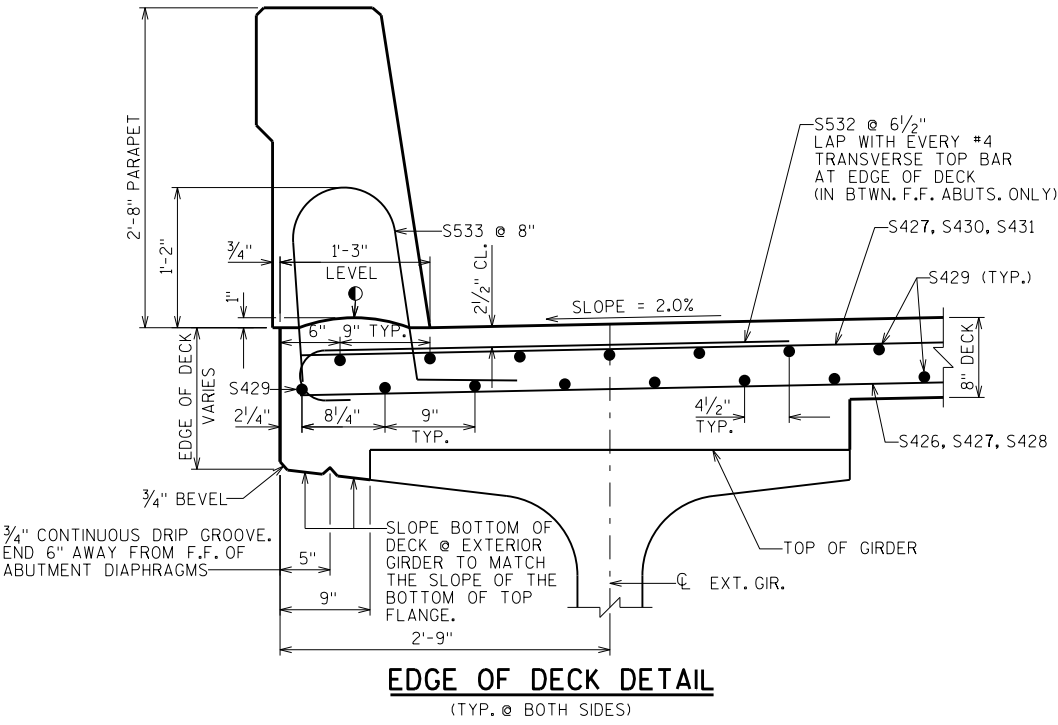


DETAIL B

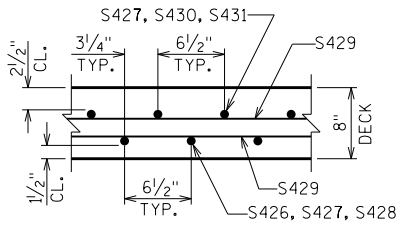
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
STEEL DIAPHRAGM		SHEET 11	
		490	



CROSS SECTION THRU BRIDGE LOOKING EAST
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)



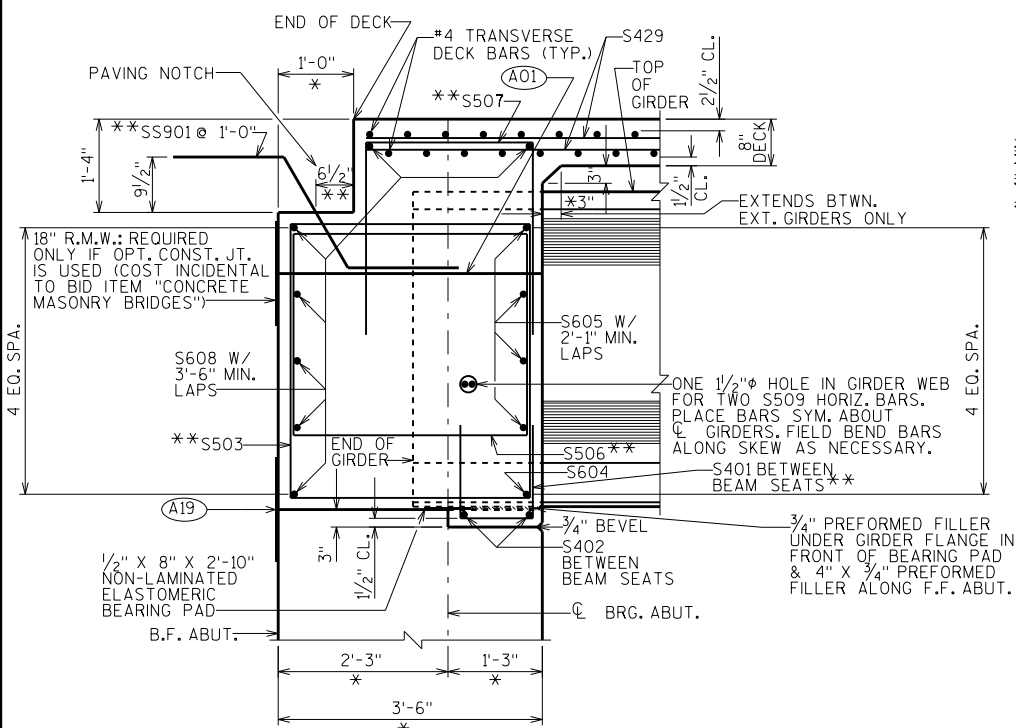
EDGE OF DECK DETAIL
(TYP. @ BOTH SIDES)



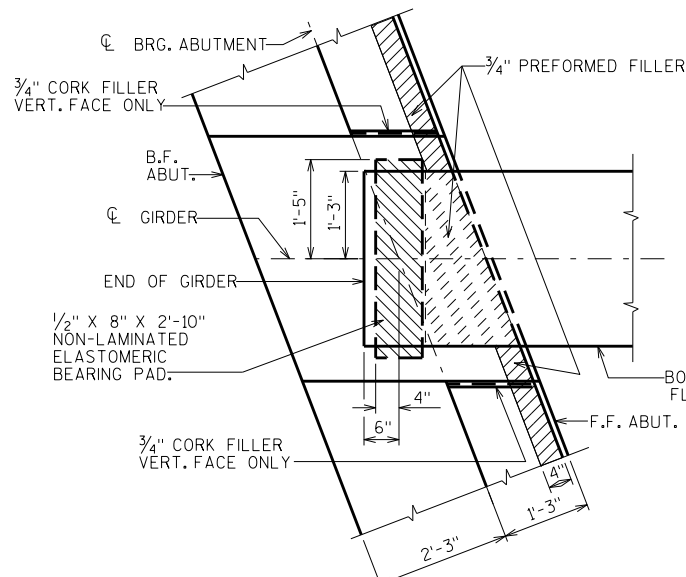
SECTION S-S

- NOTES:
- FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS SEE "ABUTMENT DIAPHRAGMS" SHEET.
- SEE "ABUTMENT DIAPHRAGMS" SHEET FOR ABUTMENT DIAPHRAGM CORNER DETAILS.
- ⦿ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN
- FINISH SMOOTH - SLOPE TO DRAIN

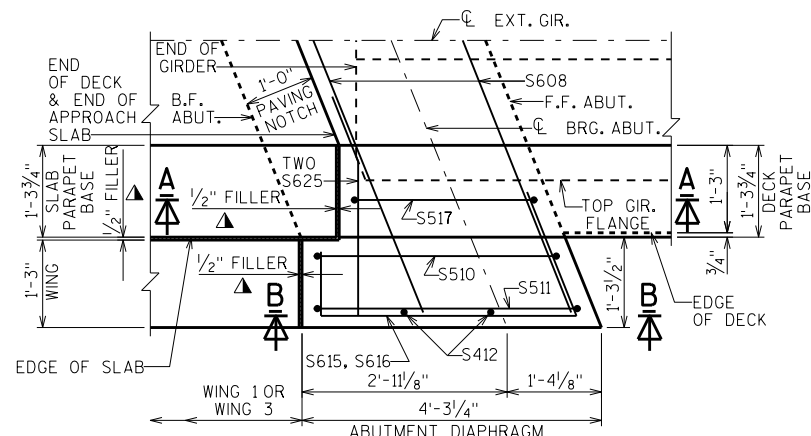
NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-223				
DRAWN BY		JPH	PLANS CKD.	SEW
SUPERSTRUCTURE CROSS SECTIONS				SHEET 12
				491



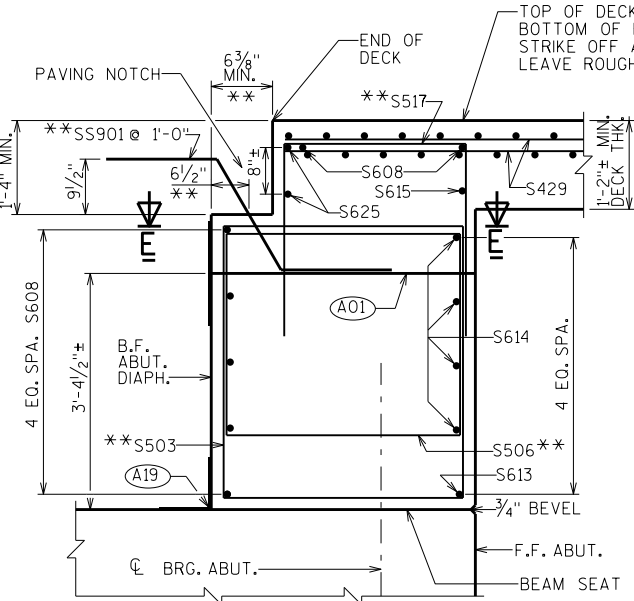
CROSS SECTION THRU ABUTMENT DIAPHRAGMS
BETWEEN EXTERIOR GIRDERS



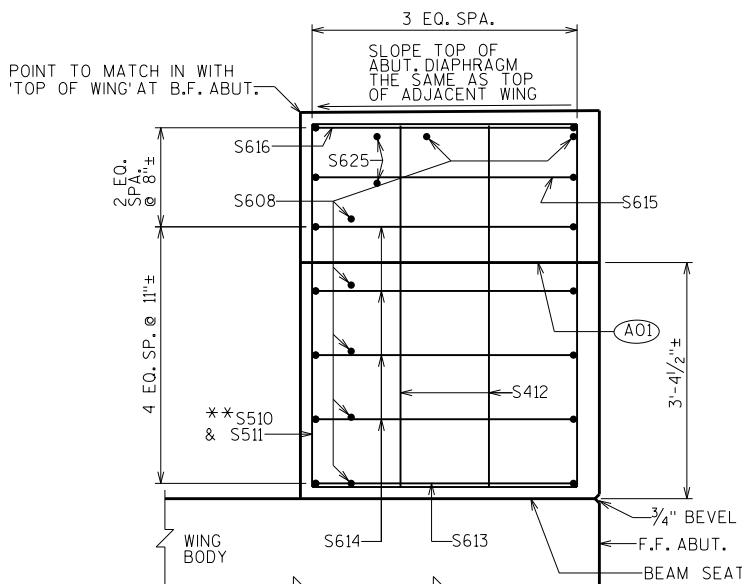
PLAN VIEW AT ABUTMENTS



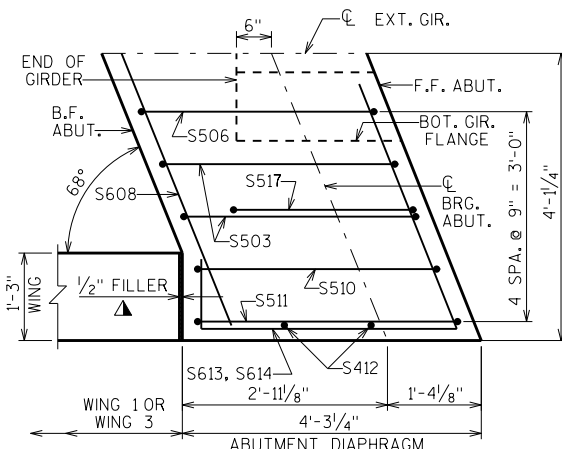
TYPICAL DIAPHRAGM CORNER DETAIL
AT WINGS 1&3 (PLAN VIEW)



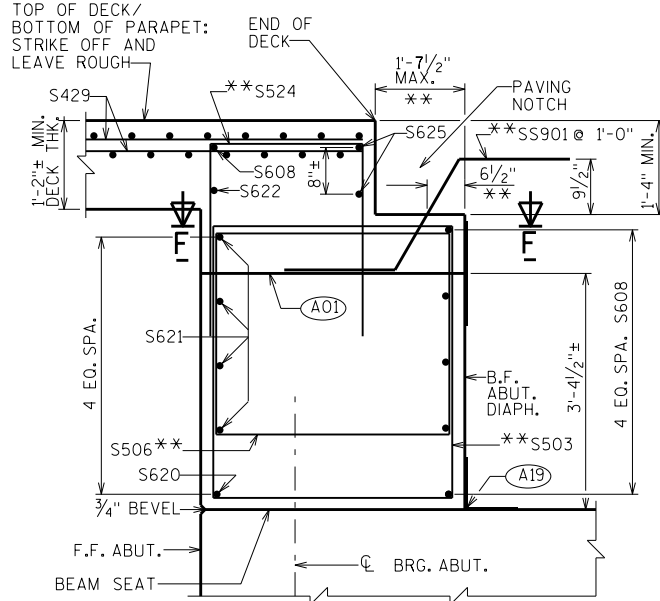
SECTION A-A
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 1&3,
AT GIRDER EXTERIORS (UNDER DECK)



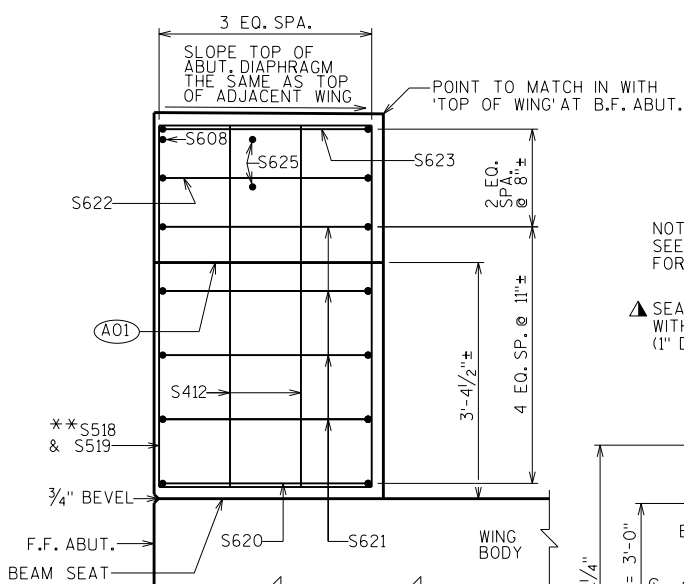
SECTION B-B
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 1&3,
AT GIRDER EXTERIORS (OUTSIDE 'EDGE OF DECK')



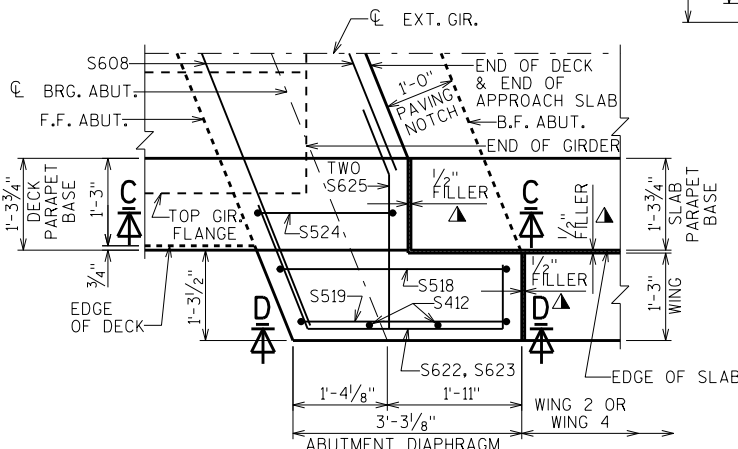
SECTION E-E
TYPICAL DIAPHRAGM CORNER DETAIL AT
WINGS 1&3 (SECTION BELOW PAVING NOTCH)



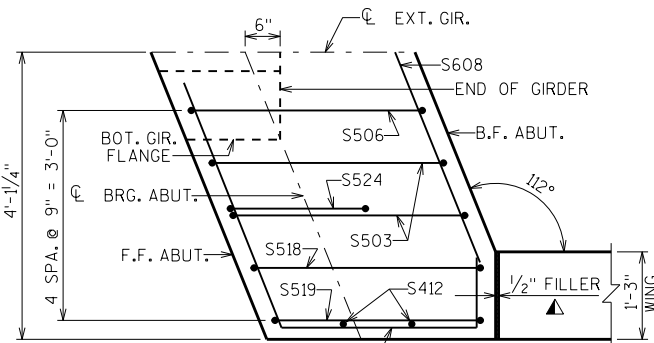
SECTION C-C
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 2&4,
AT GIRDER EXTERIORS (UNDER DECK)



SECTION D-D
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 2&4,
AT GIRDER EXTERIORS (OUTSIDE 'EDGE OF DECK')



TYPICAL DIAPHRAGM CORNER DETAIL
AT WINGS 2&4 (PLAN VIEW)



SECTION F-F
TYPICAL DIAPHRAGM CORNER DETAIL AT
WINGS 2&4 (SECTION BELOW PAVING NOTCH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
ABUTMENT DIAPHRAGMS		SHEET 13	
		492	

*DIMENSION IS
TAKEN PERPENDICULAR
TO CL BRG ABUTMENTS.

**DIMENSION IS TAKEN PARALLEL TO CL GIRDERS.
BARS PLACED PARALLEL TO CL GIRDERS AND
SPACED PERPENDICULAR TO CL GIRDERS

(A01) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW
TOP OF GIRDER. IF USED, DECK POUR
MUST BE WITHIN 2 WEEKS FROM THE TIME
OF THE DIAPHRAGM POUR.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET
FOR THE 'BILL OF BARS' AND BAR DETAILS.

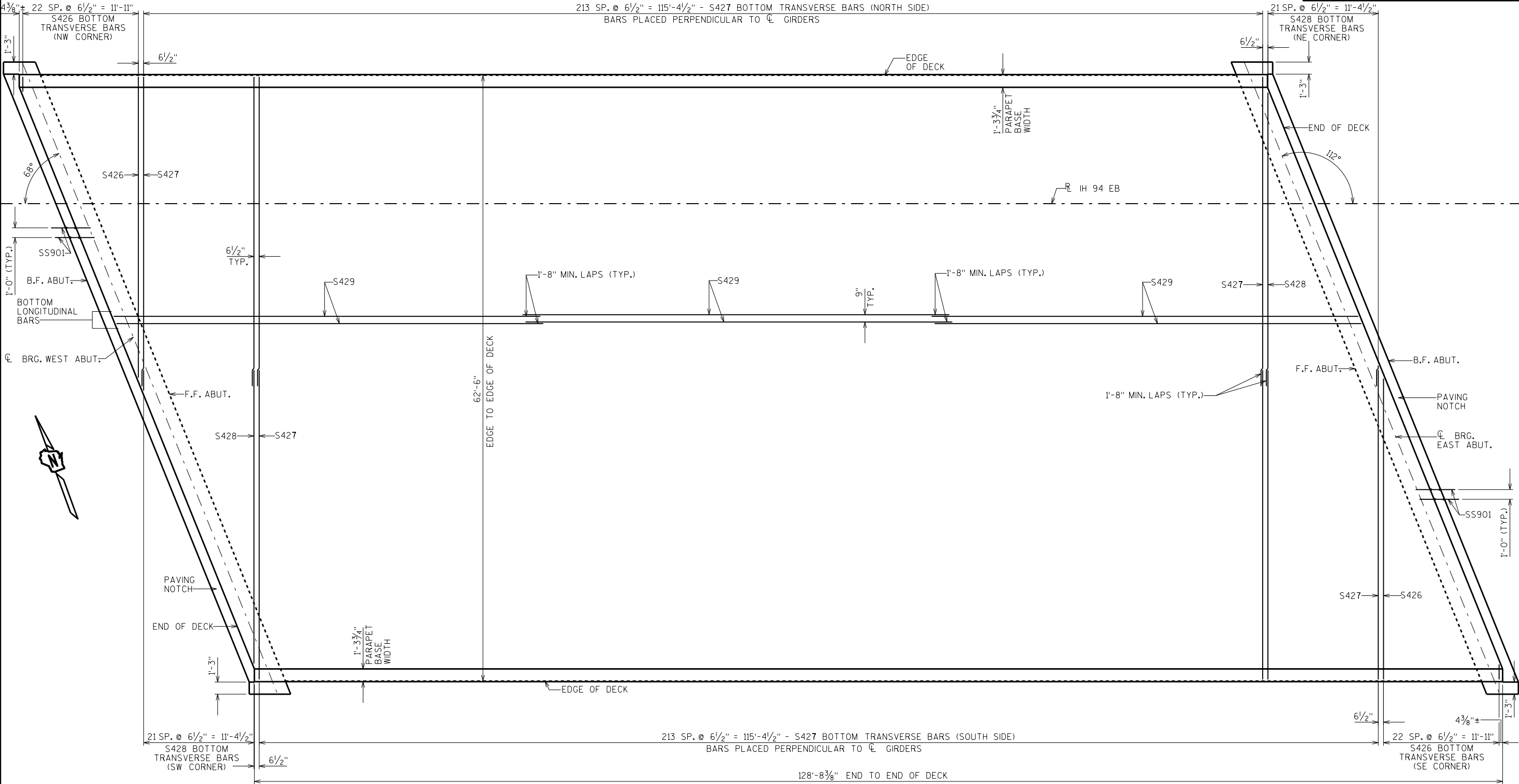
▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER
WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER.
(1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).



EOD = EDGE OF DECK

	℄ BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. E. ABUT.	
LEFT EOD	886.07	886.15	886.23	886.30	886.38	886.46	886.53	886.61	886.69	886.77	886.84	LEFT EOD
℄ GIRDER 1	886.11	886.18	886.26	886.34	886.42	886.49	886.57	886.65	886.73	886.80	886.88	℄ GIRDER 1
℄ GIRDER 2	886.25	886.33	886.40	886.48	886.56	886.64	886.71	886.79	886.87	886.95	887.02	℄ GIRDER 2
℄ GIRDER 3	886.39	886.47	886.55	886.62	886.70	886.78	886.86	886.93	887.01	887.09	887.16	℄ GIRDER 3
℄ GIRDER 4	886.53	886.61	886.69	886.77	886.84	886.92	887.00	887.08	887.15	887.23	887.31	℄ GIRDER 4
CROWN PT.	886.61	886.69	886.77	886.85	886.92	887.00	887.08	887.15	887.23	887.31	887.38	CROWN PT.
℄ GIRDER 5	886.56	886.64	886.72	886.80	886.87	886.95	887.03	887.11	887.18	887.26	887.33	℄ GIRDER 5
℄ GIRDER 6	886.45	886.53	886.61	886.68	886.76	886.84	886.92	886.99	887.07	887.15	887.22	℄ GIRDER 6
℄ GIRDER 7	886.34	886.42	886.50	886.57	886.65	886.73	886.81	886.88	886.96	887.04	887.11	℄ GIRDER 7
℄ GIRDER 8	886.23	886.31	886.39	886.46	886.54	886.62	886.70	886.77	886.85	886.93	887.00	℄ GIRDER 8
℄ GIRDER 9	886.12	886.20	886.27	886.35	886.43	886.51	886.58	886.66	886.74	886.81	886.89	℄ GIRDER 9
℄ GIRDER 10	886.01	886.09	886.16	886.24	886.32	886.40	886.47	886.55	886.63	886.70	886.78	℄ GIRDER 10
RIGHT EOD	885.99	886.06	886.14	886.22	886.30	886.37	886.45	886.53	886.60	886.68	886.75	RIGHT EOD

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
		DRAWN BY	PLANS C'D. SEW
SUPERSTRUCTURE PLAN		SHEET 14	
		493	



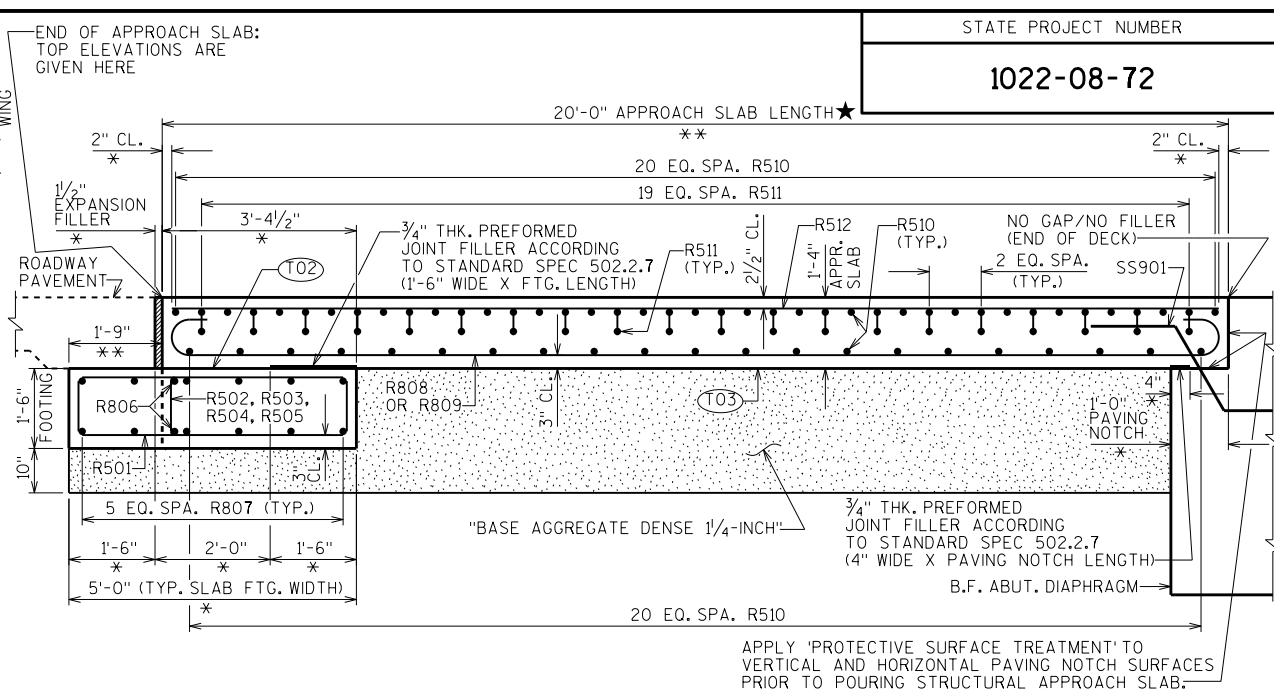
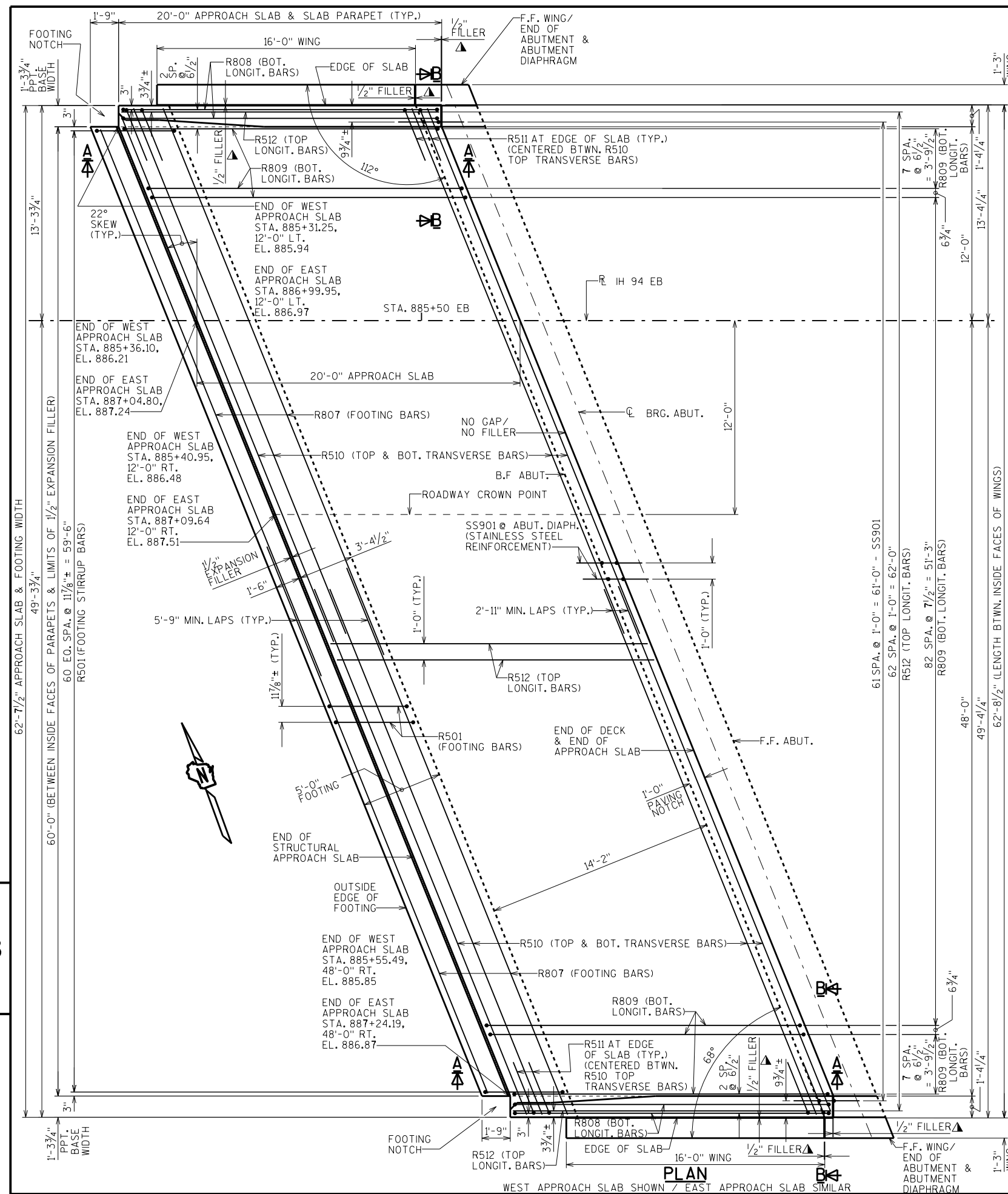
PLAN

NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-223				
DRAWN BY		JPH	PLANS CK'D.	SEW
DECK (BOTTOM STEEL)		SHEET 15		
		494		

SCALE = 5.00

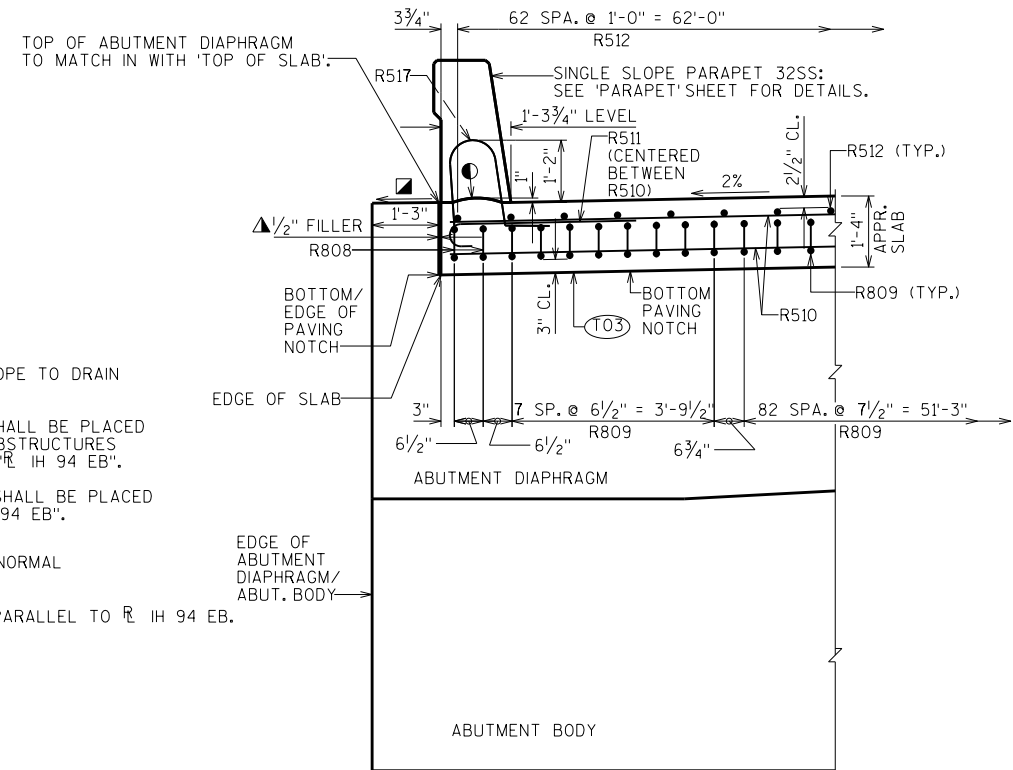


PARTIAL PLAN OF PARAPET REINFORCEMENT
(TYP. @ BOTH SIDES)



SECTION A-A THRU APPROACH SLAB

WEST APPROACH SLAB SHOWN / EAST APPROACH SLAB SIMILAR



SECTION B-B (EDGE OF SLAB DETAIL)

NOTES

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE
IF THE REGION SOILS ENGINEER DETERMINES
THAT THE EXISTING SOIL BEARING PRESSURE
MEETS THE REQUIREMENT ABOVE.

LONGITUDINAL BARS SHALL BE PLACED
PARALLEL TO "R 1H 94 EB".

*DIMENSION IS TAKEN NORMAL
TO $\odot$ BRG. ABUTS.

**DIMENSION IS TAKEN PARALLEL TO R IH 94 EB.

● HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

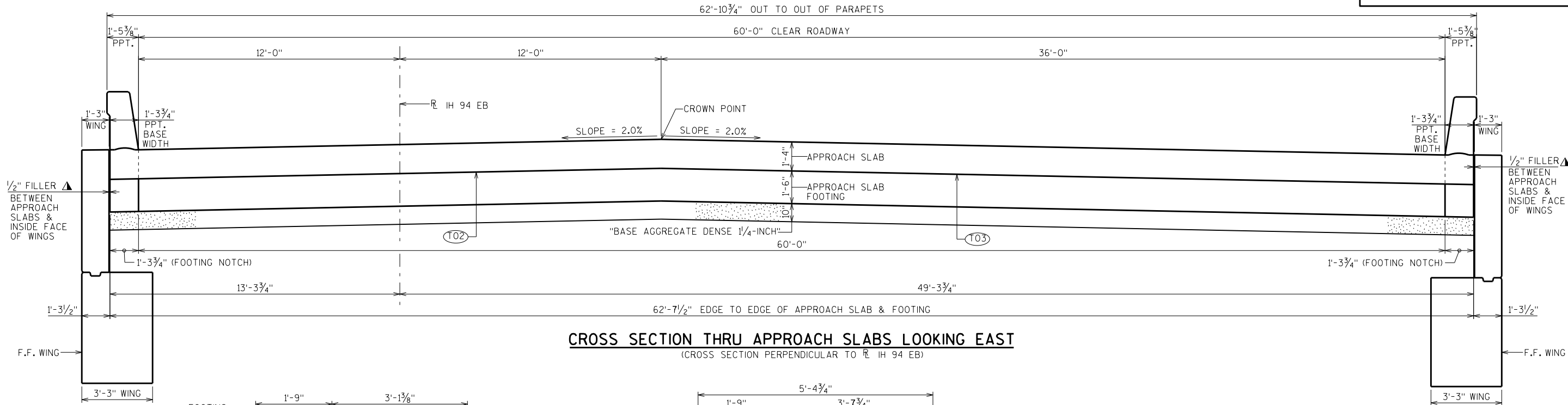
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING
AND PLACE MULTIPLE LAYERS (0.03" MIN.
TOTAL THK.) OF POLYETHYLENE SHEETS
OVER THE ENTIRE TOP OF FOOTING.

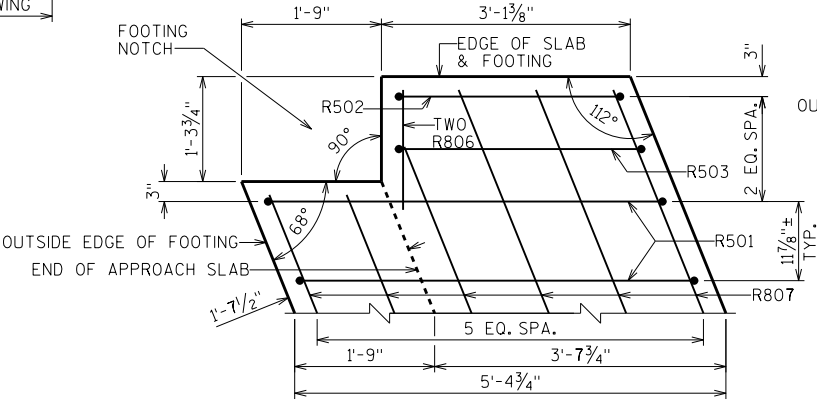
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
		DRAWN BY JPH	PLANS CK'D. SEW
STRUCTURAL APPROACH SLABS		SHEET 17	
		496	

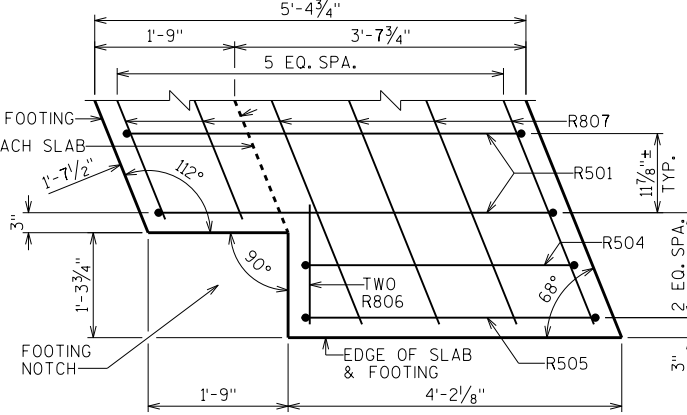
SCALE = 3.50



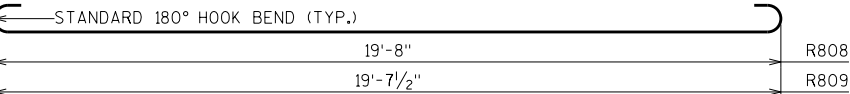
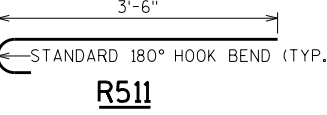
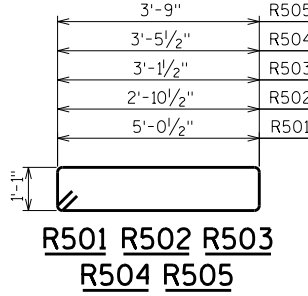
CROSS SECTION THRU APPROACH SLABS LOOKING EAST
(CROSS SECTION PERPENDICULAR TO IH 94 EB)



SLAB FOOTING PLAN DETAIL @ NW & SE CORNERS



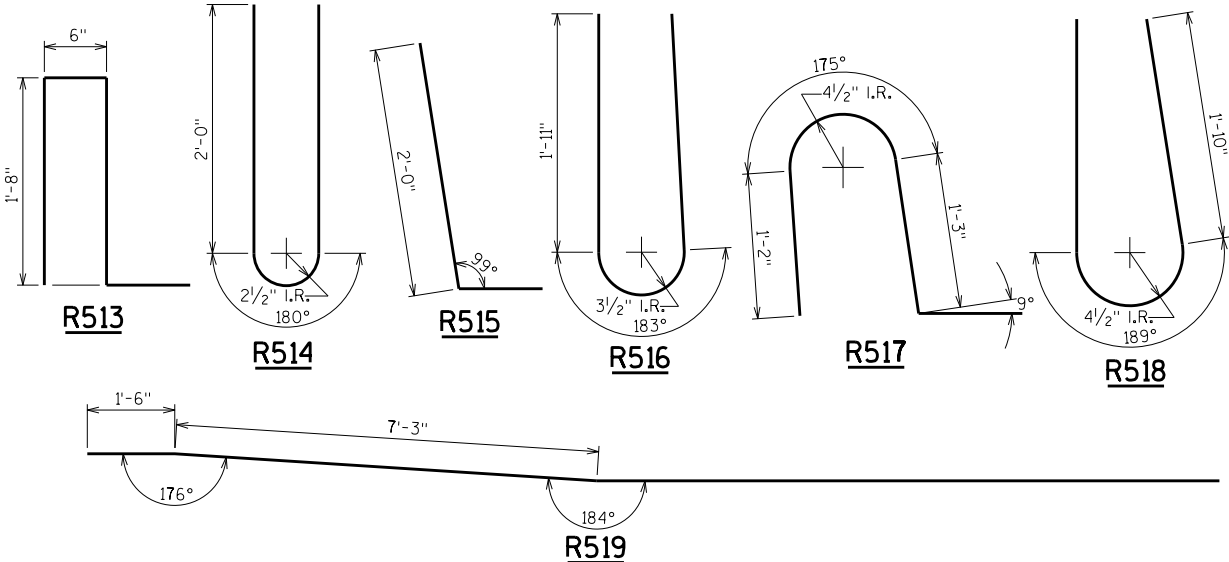
SLAB FOOTING PLAN DETAIL @ SW & NE CORNERS



BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQUIRED.	WEST SLAB	EAST SLAB	LENGTH	BENT	LOCATION
R501	X	61	61		12'-11"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT CENTER
R502	X	1	1		8'-7"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R503	X	1	1		9'-1"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R504	X	1	1		9'-9"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R505	X	1	1		10'-4"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R806	X	4	4		1'-6"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT ENDS ONLY
R807	X	24	24		36'-6"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R808	X	4	4		21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL-UNDER PARAPETS ONLY
R809	X	99	99		21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL-BETWEEN PARAPETS ONLY
R510	X	84	84		35'-1"		SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R511	X	40	40		4'-1"	X	SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R512	X	63	63		19'-8"		SLAB-TOP-HORIZONTAL-LONGITUDINAL
R513	X	34	34		4'-4"	X	PARAPETS 32SS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	22	22		4'-9"	X	PARAPET 32SS-END-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	24	24		2'-9"	X	PARAPETS 32SS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R516	X	12	12		4'-10"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R517	X	34	34		4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R518	X	34	34		5'-0"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	2	2		19'-5"	X	PARAPET 32SS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL--AT ALL FOUR PPT. ENDS
R520	X	10	10		19'-5"		PARAPET 32SS-BOTH FACES-HORIZONTAL-LONGITUDINAL--AT ALL FOUR PPT. ENDS

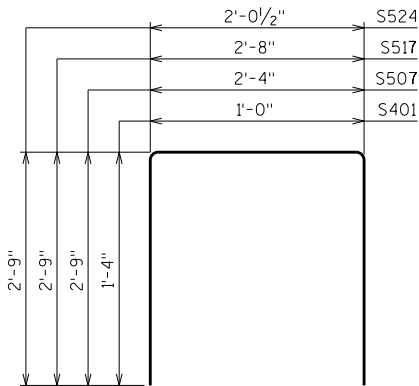


T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

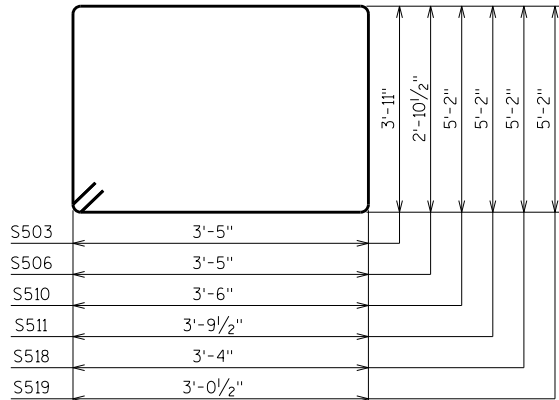
T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

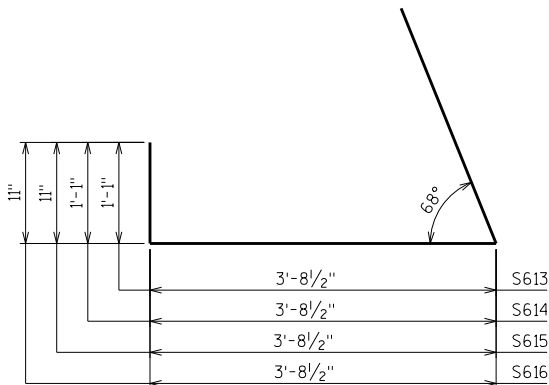
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
STRUCTURAL APPROACH SLAB & BAR DETAILS			SHEET 18
			497



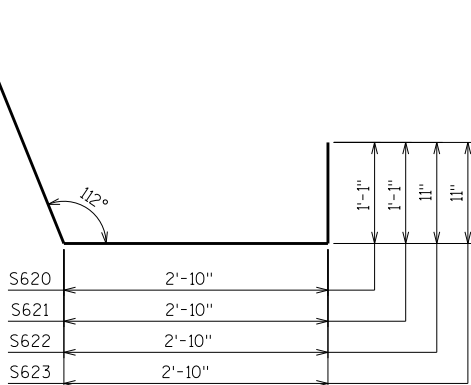
S401 S507 S517 S524



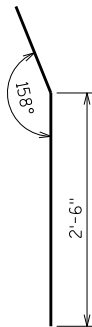
S503 S506 S510 S511 S518 S519
(STIRRUP BARS)



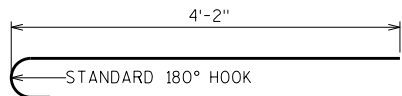
S613 S614 S615 S616



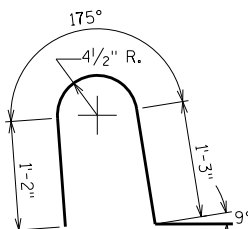
S620 S621 S622 S623



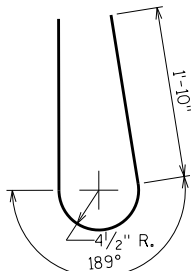
S625



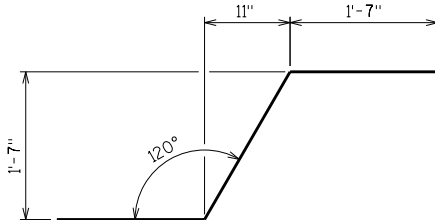
S532



S533



S534



SS901

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	72	3'-6"	X		ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	36	2'-8"			ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S503	X	116	15'-4"	X		ABUT. DIAPHS.-VERTICAL-UNDER PAVING NOTCHES
S604	X	18	3'-9"			ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. GIR. ONLY
S605	X	144	4'-2"			ABUT. DIAPHS.-F.F.-HORIZ.-BTWN. GIR. ONLY
S506	X	40	13'-3"	X		ABUT. DIAPHS.-VERT.-UNDER GIR. TOP FLANGES
S507	X	72	7'-7"	X		ABUT. DIAPHS./DECK-VERT.-BETWEEN EXT. GIRDERS ONLY
S608	X	28	36'-9"			ABUT. DIAPHS. B.F. & DECK-HORIZ.
S509	X	40	6'-0"			ABUT. DIAPHS.-HORIZ.-THRU GIRDERS
S510	X	2	18'-0"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S511	X	2	18'-7"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S412	X	8	5'-2"			ABUT. DIAPH.-VERT.-AT ALL FOUR GIR. EXTERIOR CORNERS
S613	X	2	7'-2"	X		ABUT. DIAPHS.-BOT.-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S614	X	8	8'-3"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S615	X	2	6'-3"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S616	X	2	5'-9"	X		ABUT. DIAPHS.-TOP-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S517	X	2	7'-11"	X		ABUT. DIAPHS./DECK-VERT.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S518	X	2	17'-8"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S519	X	2	17'-1"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S620	X	2	6'-4"	X		ABUT. DIAPHS.-BOT.-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S621	X	8	7'-4"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S622	X	2	5'-5"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S623	X	2	4'-11"	X		ABUT. DIAPHS.-TOP-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S524	X	2	7'-4"	X		ABUT. DIAPHS./DECK-VERT.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S625	X	8	3'-6"	X		ABUT. DIAPHS./DECK-TOP-HORIZ.-AT ALL FOUR GIR. EXTERIOR CORNERS
▲ S426	X	46	16'-3"		X	DECK-BOTTOM-HORIZONTAL-TRANSVERSE-AT NW & SE CORNERS ONLY
S427	X	856	32'-0"			DECK-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT BOTH EDGES
▲ S428	X	44	16'-3"		X	DECK-BOTTOM-HORIZONTAL-TRANSVERSE-AT SW & NE CORNERS ONLY
S429	X	501	44'-0"			DECK-TOP & BOTTOM-HORIZONTAL-LONGITUDINAL
▲ S430	X	46	16'-11"		X	DECK-TOP-HORIZONTAL-TRANSVERSE-AT NW & SE CORNERS ONLY
▲ S431	X	42	16'-3"		X	DECK-TOP-HORIZONTAL-TRANSVERSE-AT SW & NE CORNERS ONLY
S532	X	454	4'-9"	X		DECK-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES OF DECK
S533	X	386	4'-5"	X		PARAPETS/DECK-VERTICAL-TRANSVERSE-AT BOTH SIDES
S534	X	386	5'-0"	X		PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES
S535	X	36	44'-0"			PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES

SS901		124	5'-0"	X		APPROACH SLAB/ABUT. DIAPH.-VERT.-AT PAVING NOTCHES
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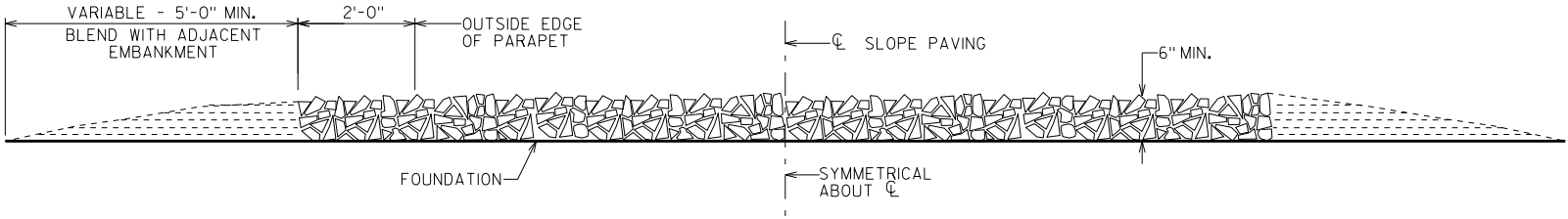
▲ STAINLESS STEEL REINFORCEMENT
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY
BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE
FOR ACTUAL LENGTHS.

BAR SERIES TABLE

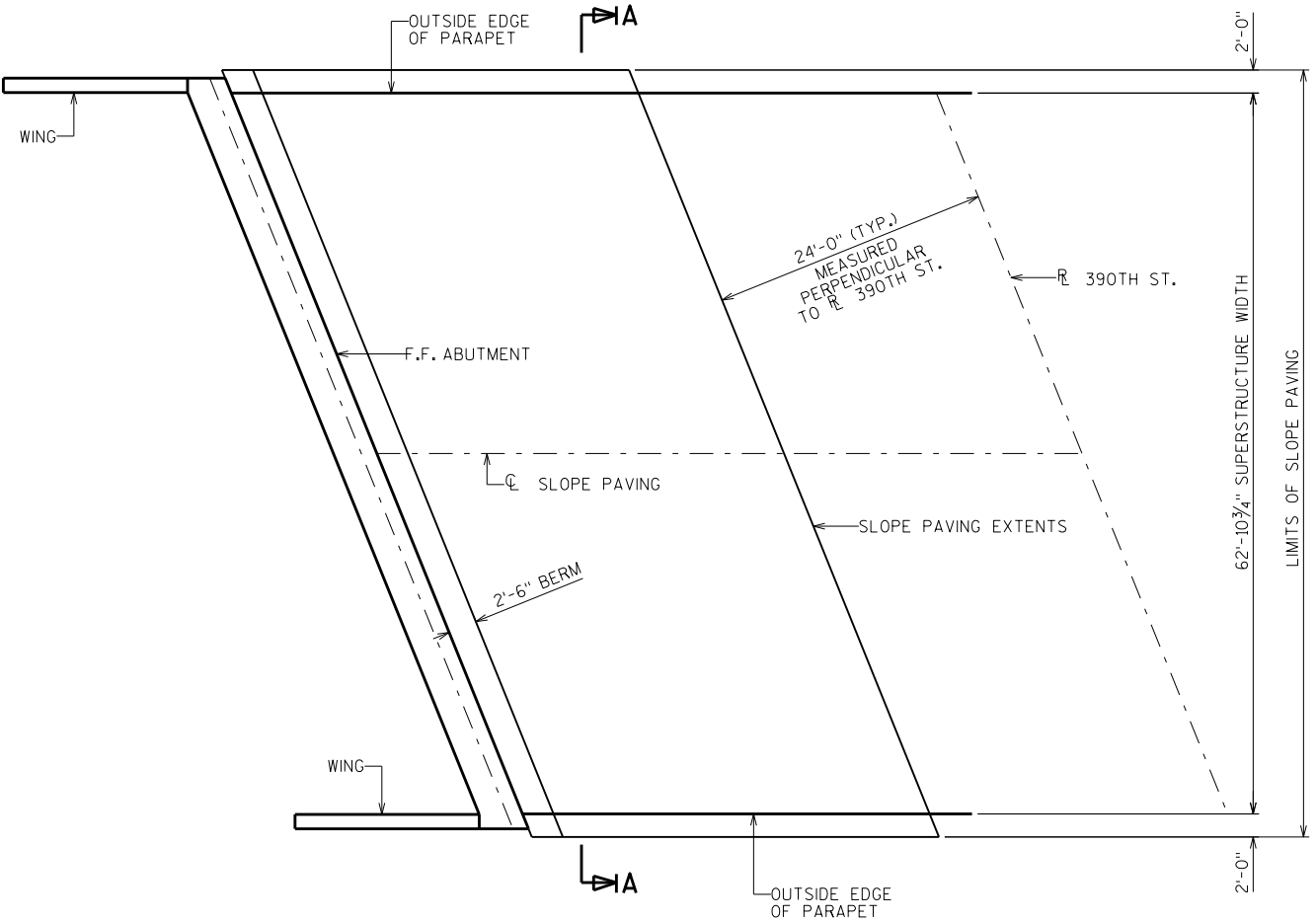
BAR MARK	NUMBER REQUIRED	LENGTH
S426	2 SERIES OF 23 BARS	1'-6" TO 31'-0"
S428	2 SERIES OF 22 BARS	2'-2" TO 30'-4"
S430	2 SERIES OF 23 BARS	2'-2" TO 31'-8"
S431	2 SERIES OF 21 BARS	2'-10" TO 29'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

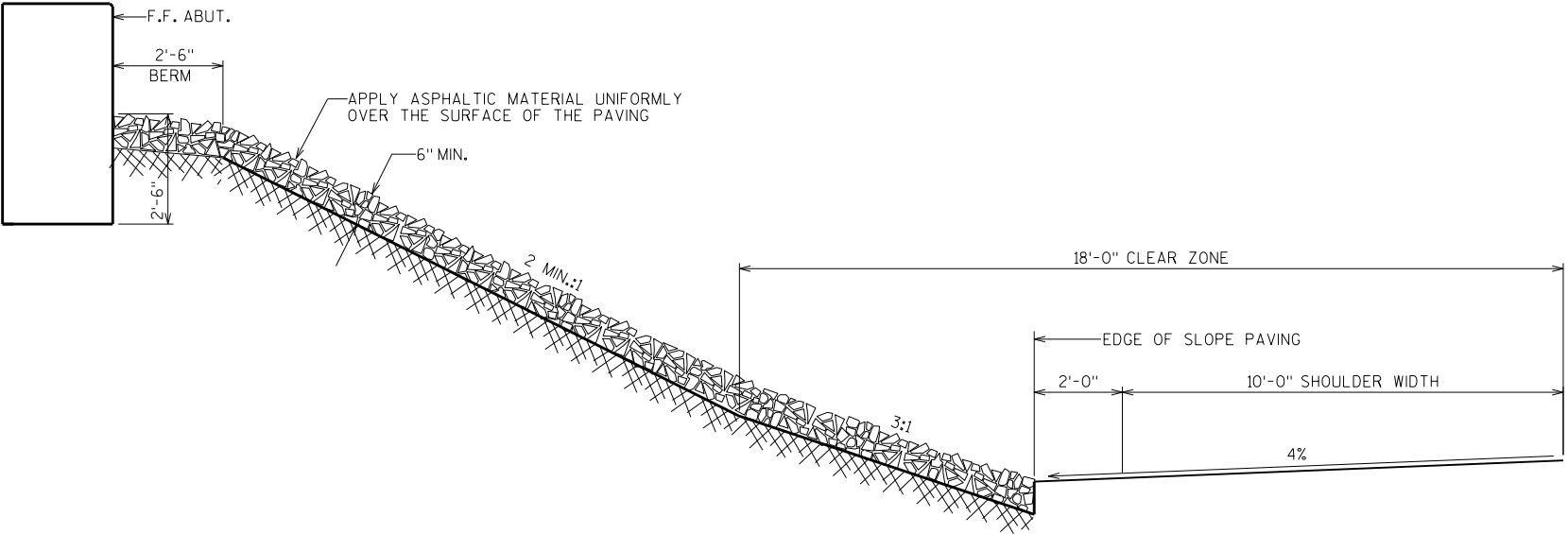
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
SUPERSTRUCTURE BAR DETAILS			SHEET 20
			499



SECTION A-A



PLAN



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE AT ABUTMENTS

ROUND STONE WILL NOT BE ACCEPTED

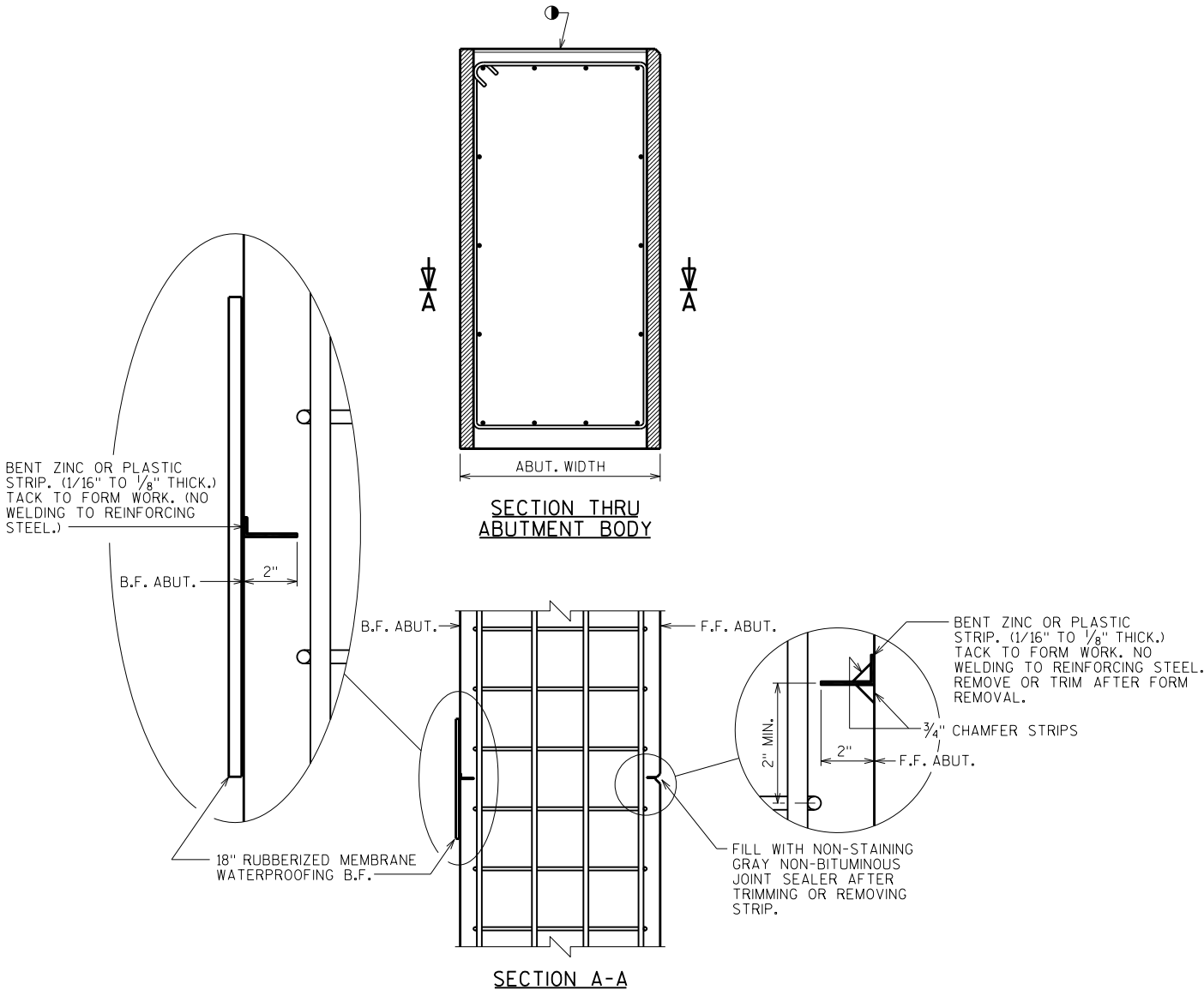
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
SLOPE PAVING CRUSHED AGGREGATE			SHEET 21
			500

SCALE = 1:00



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

- NOTES**
- PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.
- CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.
- SAW CUTTING JOINT IS NOT ALLOWED
- USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-223			
DRAWN BY JPH		PLANS CK'D. SEW	
ALTERNATE CONSTRUCTION JOINT		SHEET 22	
		501	

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.16
OPERATING RATING FACTOR: RF=1.70
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)
STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY: _____
 SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — $f'c$ = 4,000 P.S.I.
 ALL OTHER _____ $f'c$ = 3,500 P.S.I.

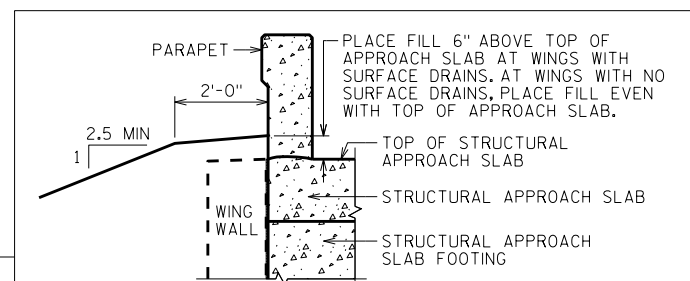
BAR STEEL REINFORCEMENT: _____
 GRADE 60 _____ f_y = 60,000 P.S.I.
 STAINLESS, GRADE 60 _____ f_y = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS: _____
 CONCRETE MASONRY _____ $f'c$ = 8,000 P.S.I.
 STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER PILE
AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 65'-0" LONG AT THE WEST ABUTMENT.
ESTIMATED 50'-0" LONG AT THE EAST ABUTMENT.

* * THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

<u>IH 94 WB</u>	<u>390TH ST.</u>
D.T.=42,600 (2038)	A.D.T.=650 (2038)
D.S.=75 M.P.H.	R.D.S.=60 M.P.H.



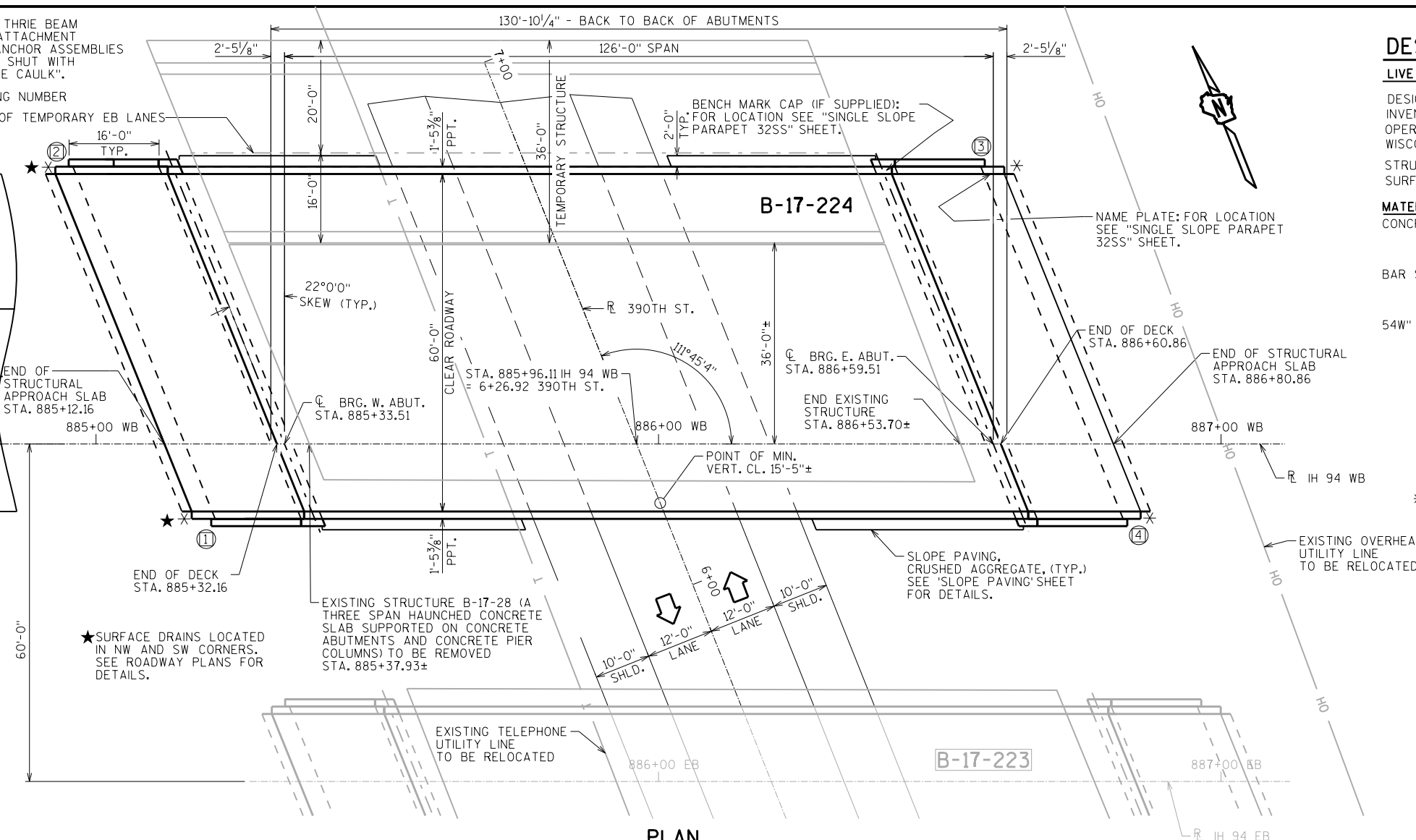
TYPICAL FILL SECTION AT END OF
STRUCTURAL APPROACH SLABS

STRUCTURE DESIGN CONTACTS:

DANIEL MONROE (608) 266-8490
LAURA SHADEWALD (608) 267-9592

LIST OF DRAWINGS

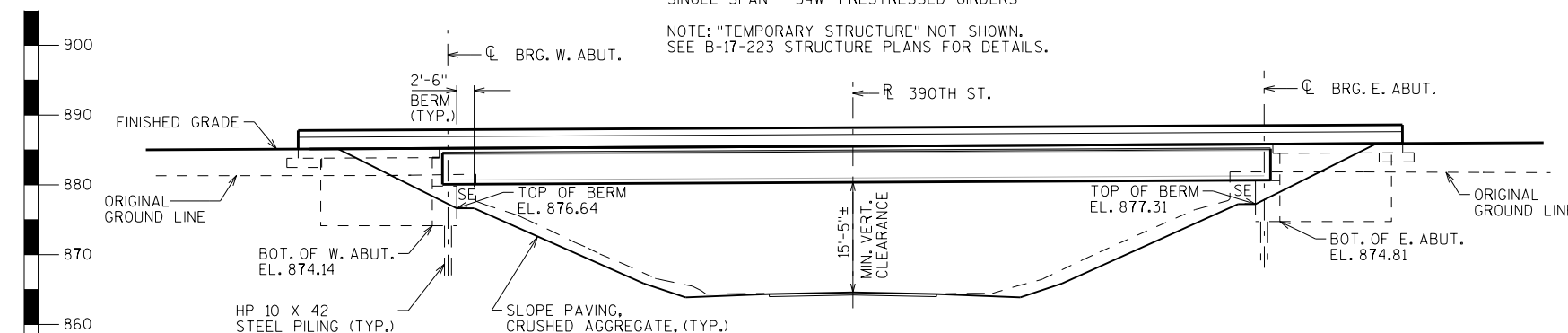
1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT DETAILS
7. EAST ABUTMENT
8. EAST ABUTMENT DETAILS
9. 54W" PRESTRESSED GIRDER DETAILS 1
10. 54W" PRESTRESSED GIRDER DETAILS 2
11. STEEL DIAPHRAGM
12. SUPERSTRUCTURE CROSS SECTIONS
13. ABUTMENT DIAPHRAGMS
14. SUPERSTRUCTURE PLAN
15. DECK (BOTTOM STEEL)
16. DECK (TOP STEEL)
17. STRUCTURAL APPROACH SLABS
18. STRUCTURAL APPROACH SLAB & BAR DETAILS
19. SINGLE SLOPE PARAPET 32SS
20. SUPERSTRUCTURE BAR DETAILS
21. SLOPE PAVING CRUSHED AGGREGATE
22. ALTERNATE CONSTRUCTION JOINT



PLAN

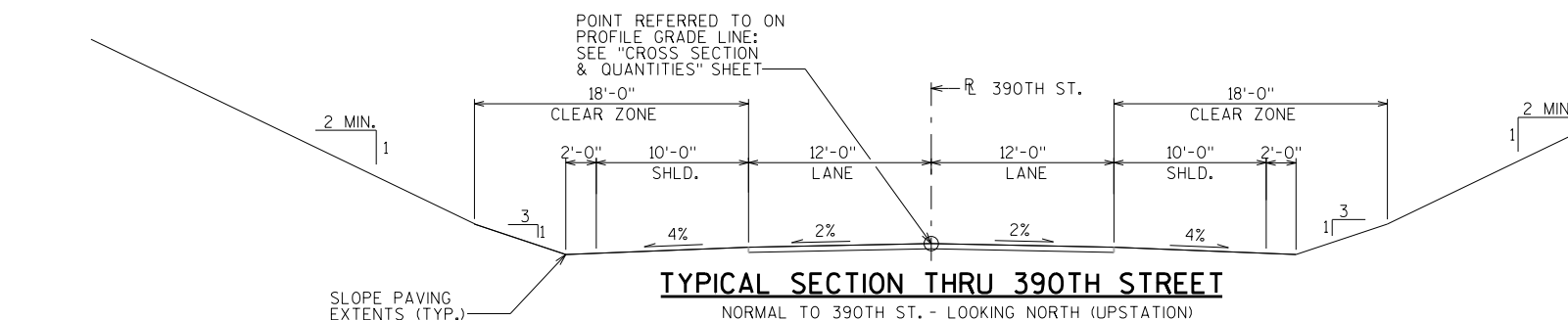
PLAN
SINGLE SPAN - 54W" PRESTRESSED GIRDERS

NOTE: "TEMPORARY STRUCTURE" NOT SHOWN.
SEE B-17-223 STRUCTURE PLANS FOR DETAILS.



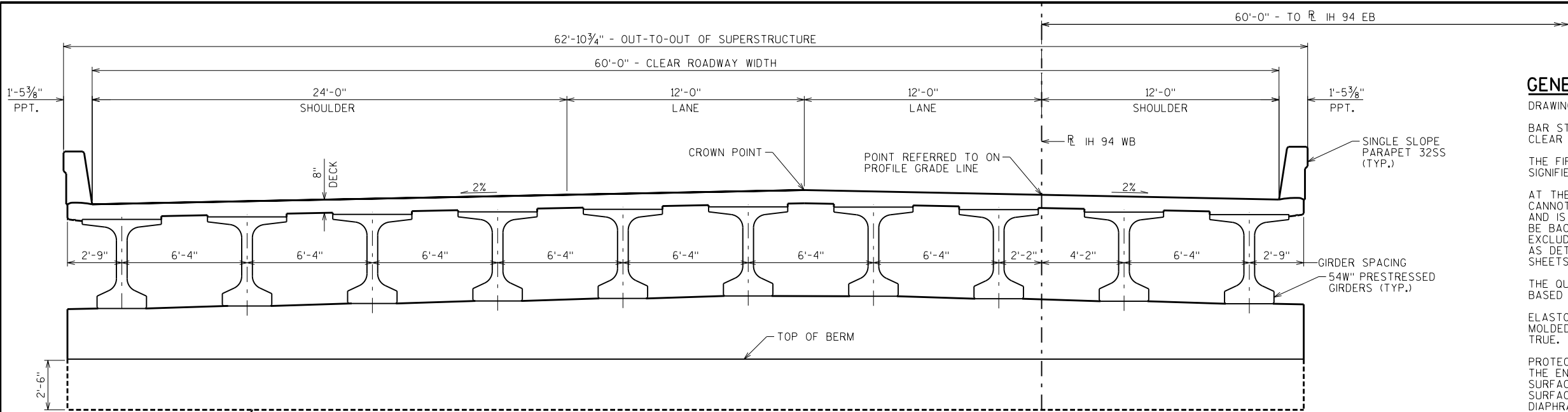
ELEVATION

NORMAL TO 390TH ST. - LOOKING NORTH (UPSTATION)

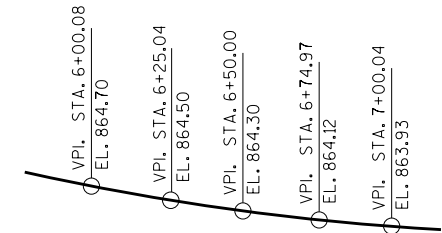
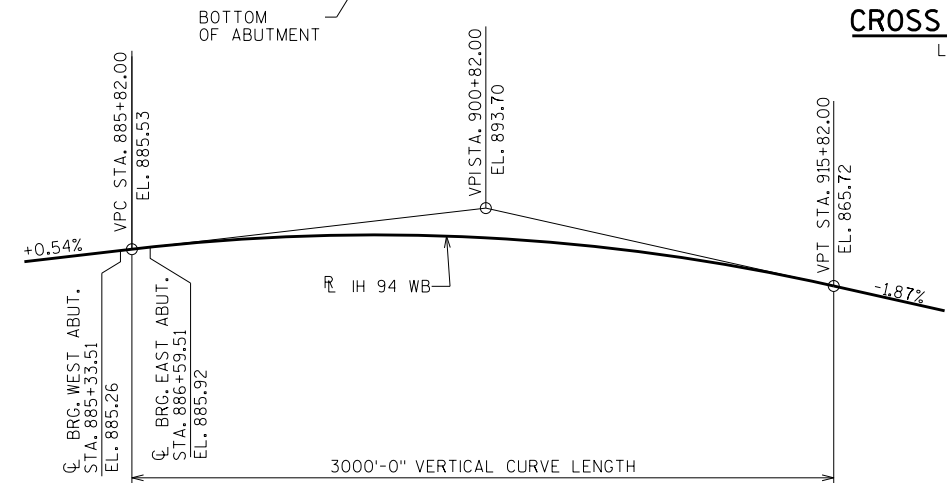


TYPICAL SECTION THRU 390TH STREET

NORMAL TO 390TH ST. - LOOKING NORTH (UPSTATION)



CROSS SECTION THRU ROADWAY
LOOKING EAST (UPSTATION)



PROFILE GRADE LINE - 390TH ST.

PROFILE GRADE LINE - IH 94 WB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH	WEST ABUT.	EAST ABUT.	EAST APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 885+37.93 WB	LS	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-17-224	LS	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	370	370	—	740
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	194	—	—	194	388
502.0100	CONCRETE MASONRY BRIDGES	CY	362	85	70	70	85	672
502.3200	PROTECTIVE SURFACE TREATMENT	SY	895	135	—	—	135	1,165
502.3210	PIGMENTED SURFACE SEALER	SY	106	17	—	—	17	140
503.0155	PRESTRESSED GIRDER TYPE 154W-INCH	LF	1,270	—	—	—	—	1,270
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	4,730	4,730	—	9,460
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	49,220	14,635	2,015	2,025	14,635	82,530
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,110	—	—	—	—	2,110
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	20	—	—	—	—	20
506.4000	STEEL DIAPHRAGMS B-17-224	EACH	18	—	—	—	—	18
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	18	18	—	36
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	—	—	1,235	950	—	2,185
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	—	—	284	292	—	576
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	142	142	—	284
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	77	77	—	154
	NON-BID ITEMS							
	FILLER	SIZE	—	—	—	—	—	1/2", 3/4", 1 1/2"

☆ GIRDERS MAY BE FURNISHED USING SELF-CONSOLIDATING CONCRETE OR STANDARD CONCRETE MIX, AT CONTRACTOR'S CHOICE.

STATE PROJECT NUMBER

1022-08-72

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK & APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

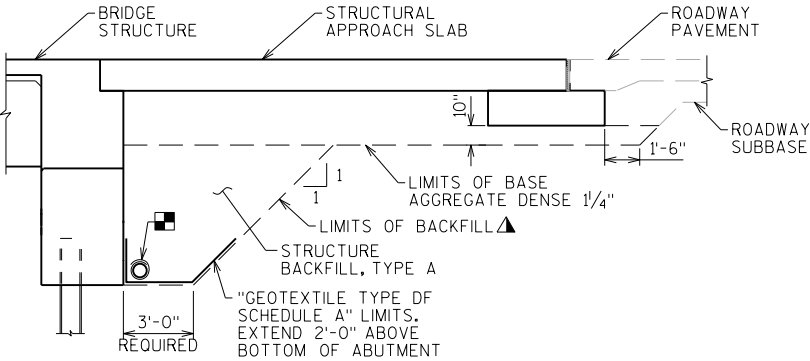
BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE 'GIRDER DETAILS 2' SHEET.

TEMPORARY STRUCTURE BID ITEM IS SHOWN ON B-17-223 PLANS.

TEMPORARY SHORING INCLUDED IN BID ITEM "TEMPORARY STRUCTURE STA. 885+75 WB". BID ITEM IS INCLUDED ON B-17-223 PLANS.

THE CONTRACTOR MAY FURNISH PRECAST GIRDERS USING SELF CONSOLIDATING CONCRETE. SEE "54W" PRESTRESSED GIRDER DETAILS 1" SHEET FOR DETAILS.



TYPICAL SECTION THRU ABUTMENT

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-17-224" SHALL BE THE EXISTING GROUNDLINE.

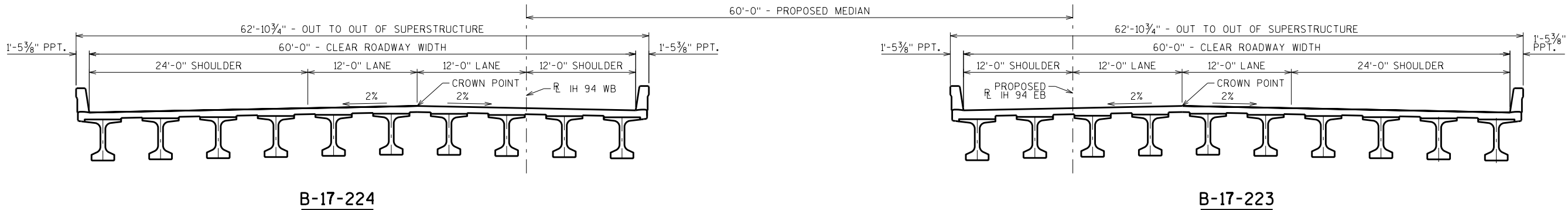
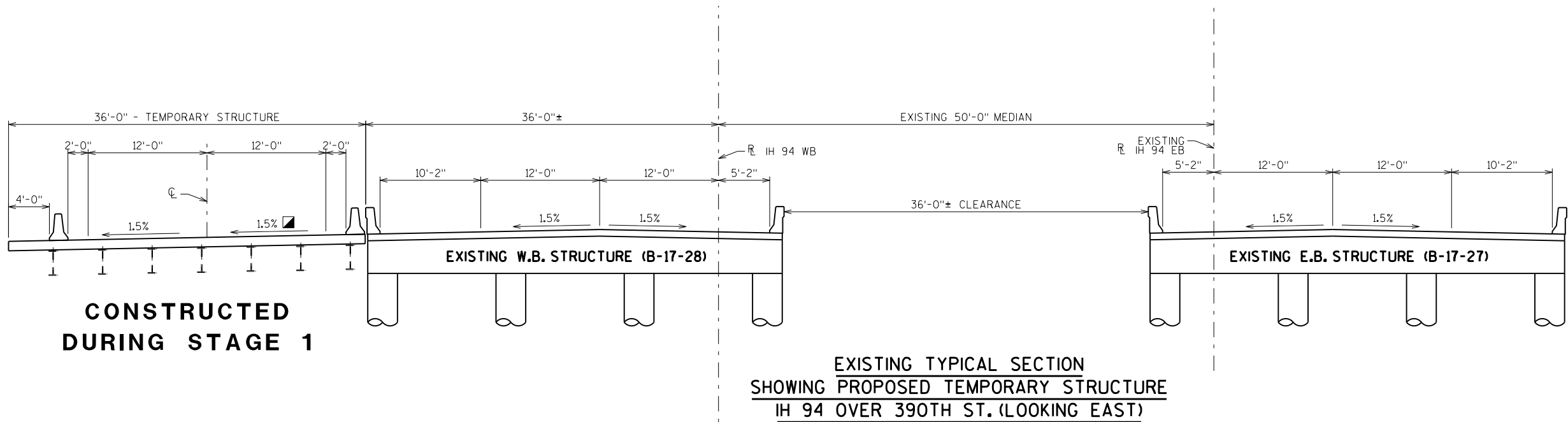
▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

■ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
		DRAWN BY JPH	PLANS CK'D. SEW
CROSS SECTION & QUANTITIES		SHEET 2	
		503	

SCALE = 3:00

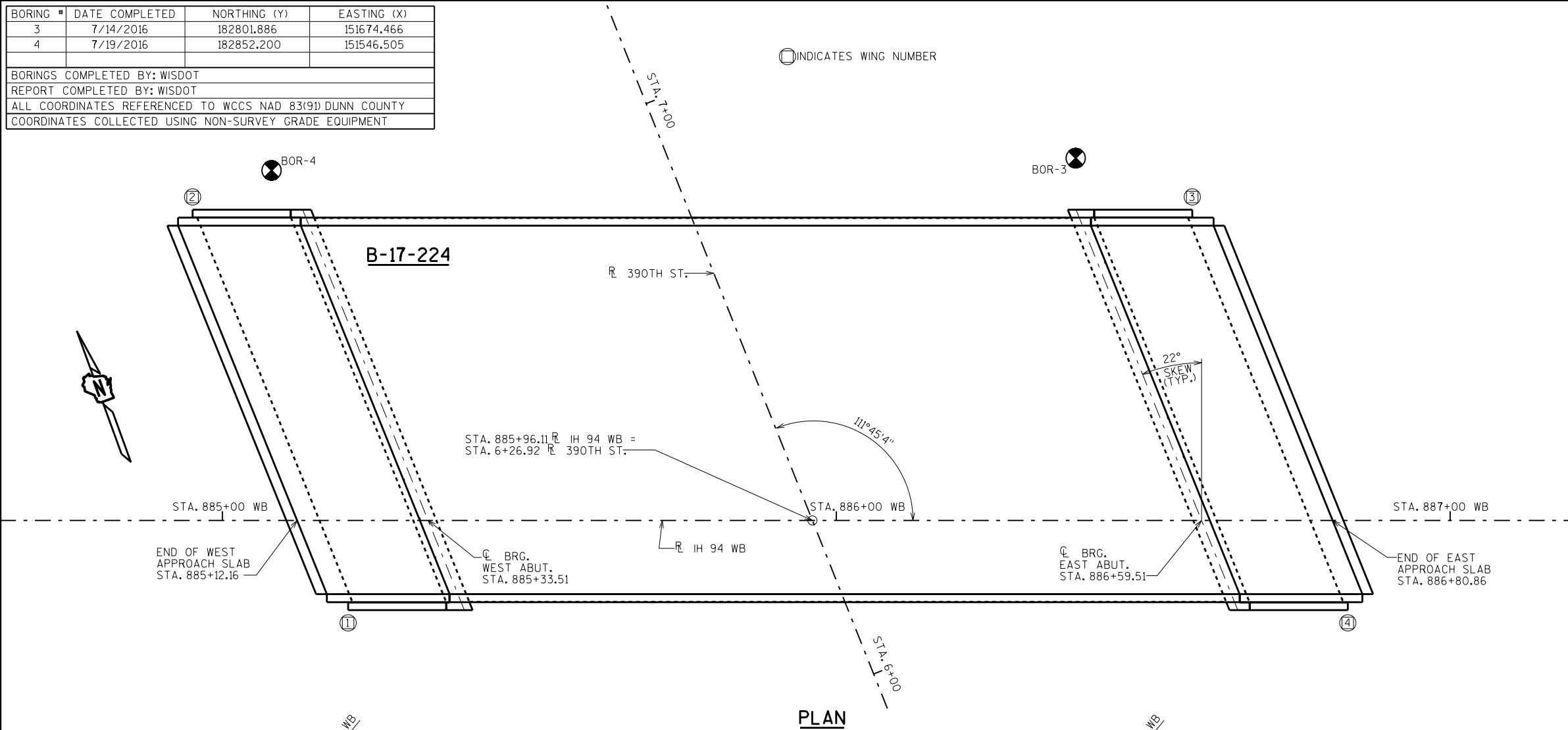


GRADE SET BY EXTENDING CROSS SLOPE FROM EXISTING W.B. STRUCTURE

NOTE: SEE ROADWAY PLANS FOR FULL STAGING DETAILS

NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-224				
DRAWN BY		JPH	PLANS CK'D.	SEW
STAGING DETAILS				SHEET 3
				504

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	7/14/2016	182801.886	151674.466
4	7/19/2016	182852.200	151546.505
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DUNN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



STATE PROJECT NUMBER		
1022-08-72		
MATERIAL SYMBOLS		
ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

BORING # / EL. STA. / OFF-SET

ST (1) (2) 0.25 17

F-C COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29' REC=80%, ROD=72%

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

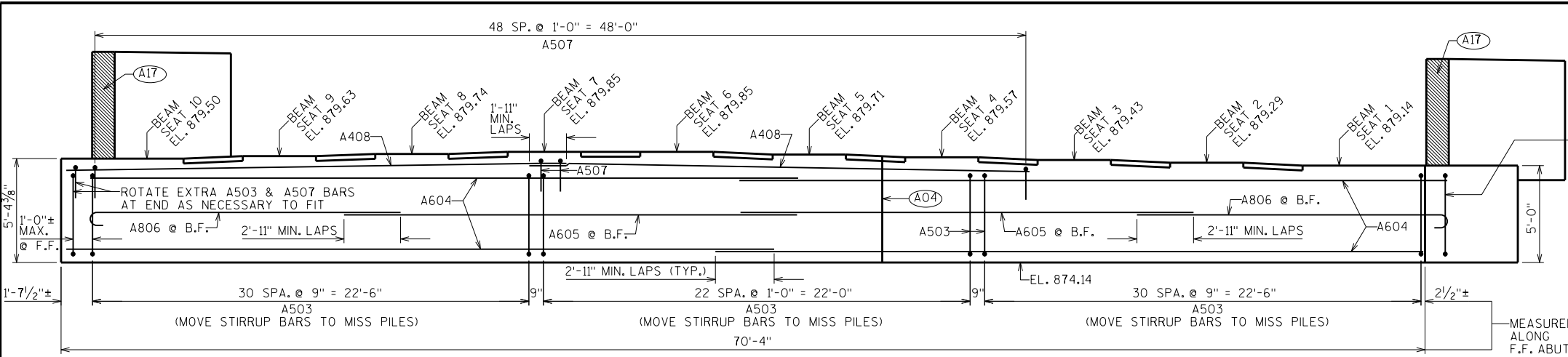
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

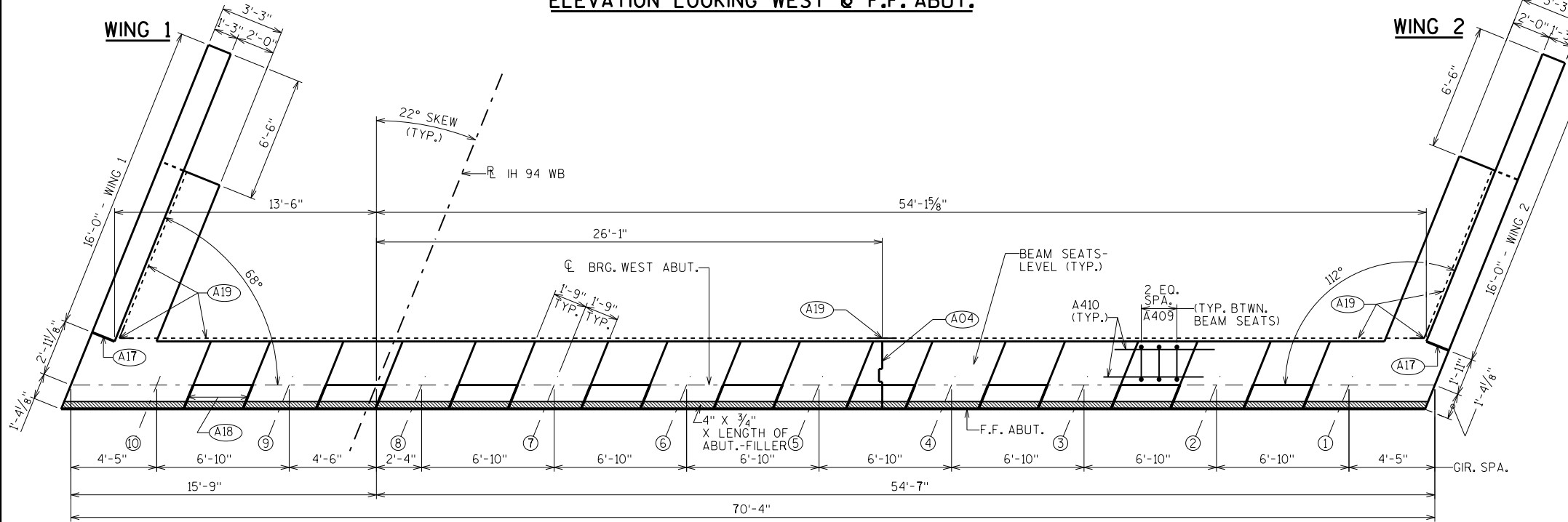
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
SUBSURFACE EXPLORATION		SHEET 4	
		505	

* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

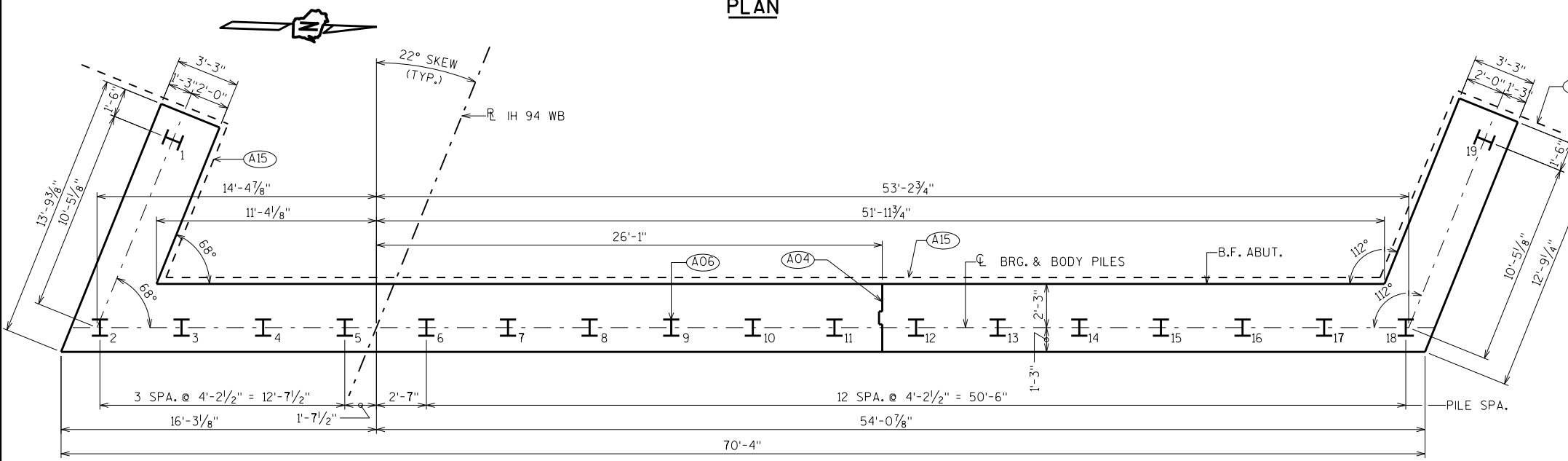
SCALE = 10.00



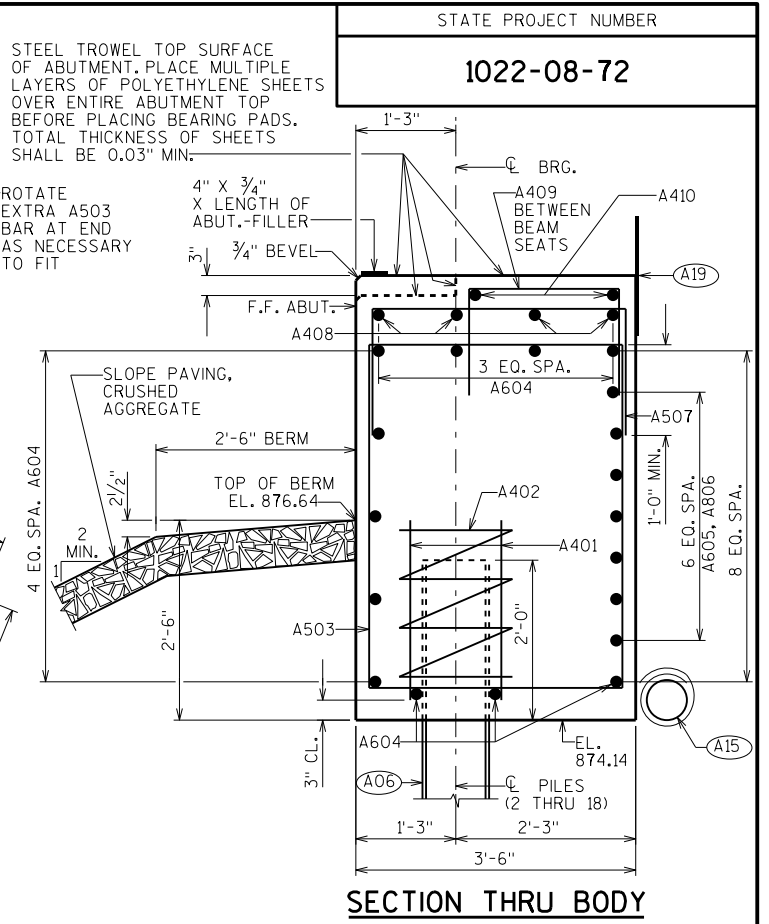
ELEVATION LOOKING WEST @ F.F. ABUT.



PLAN



PILE PLAN



SECTION THRU BODY

- (A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 8", 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS - SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 65 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE PROJECT NUMBER			
1022-08-72			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CKD. SEW	
WEST ABUTMENT		SHEET 5	
		506	

SCALE = 3/50

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

16'-0"

STANDARD 180° HOOK BEND

A806

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & $\frac{3}{4}$ " "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42
STEEL PILING, ESTIMATED 65 FEET LONG
WITH A REQUIRED DRIVING RESISTANCE OF
180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-17-224

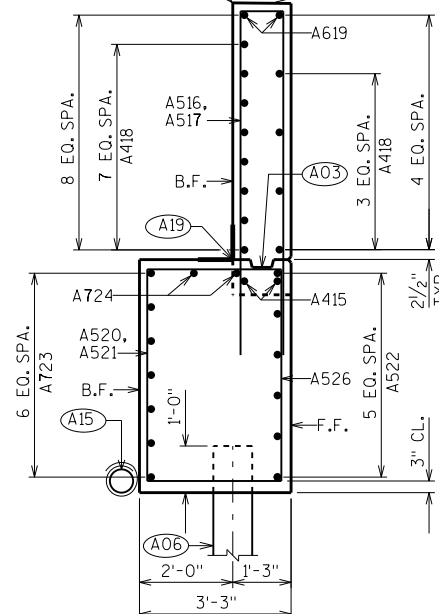
WEST ABUTMENT DETAILS

SHEET 6

507



TOP OF WING
ELEVATIONS
ARE GIVEN HERE-



SECTION B-B

RODENT SCREEN DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO.10 X 1-INCH SHEET METAL SCREWS.

DOUBLER PLATE
3/8" x 5" x 5"

DOUBLER
AT FLAN

SEE HP
WELD
DETAIL

3/16"

55°

GRIND WELD
FLUSH UNDER
DOUBLER PLATE

HP10X42

1/4"

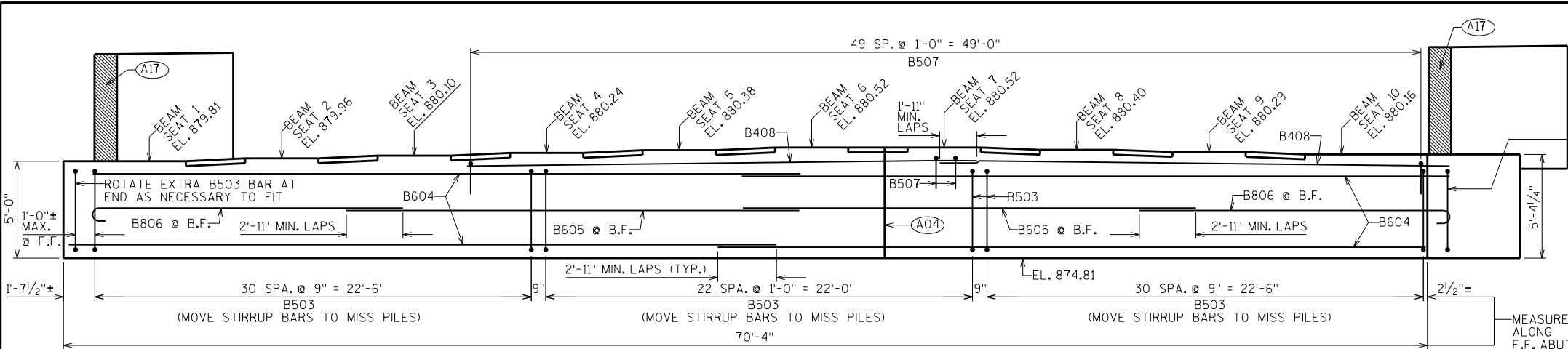
STEEL 'HP' SHAPE

DOUBLER
E IS
ED FIRST

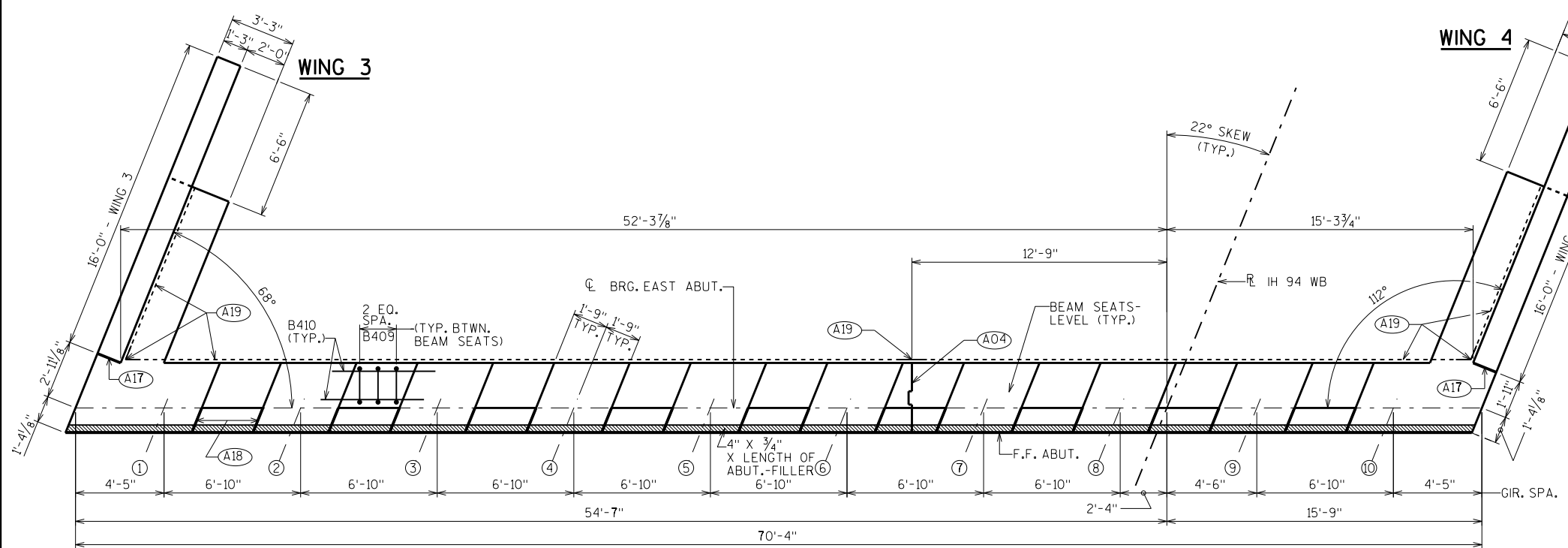
3/8"

PILE DETAILS

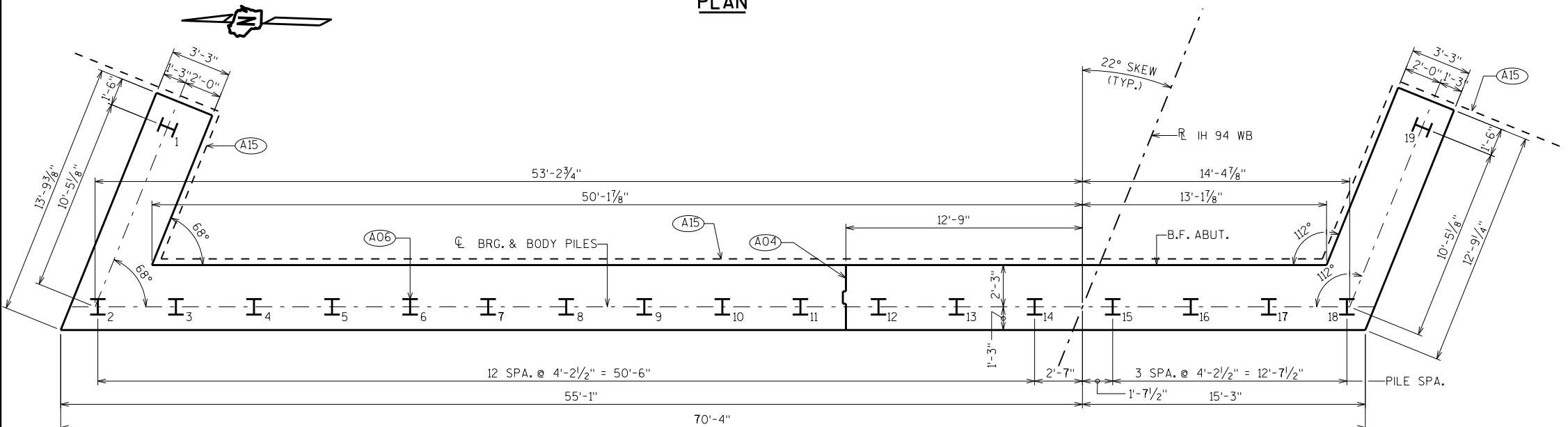
HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



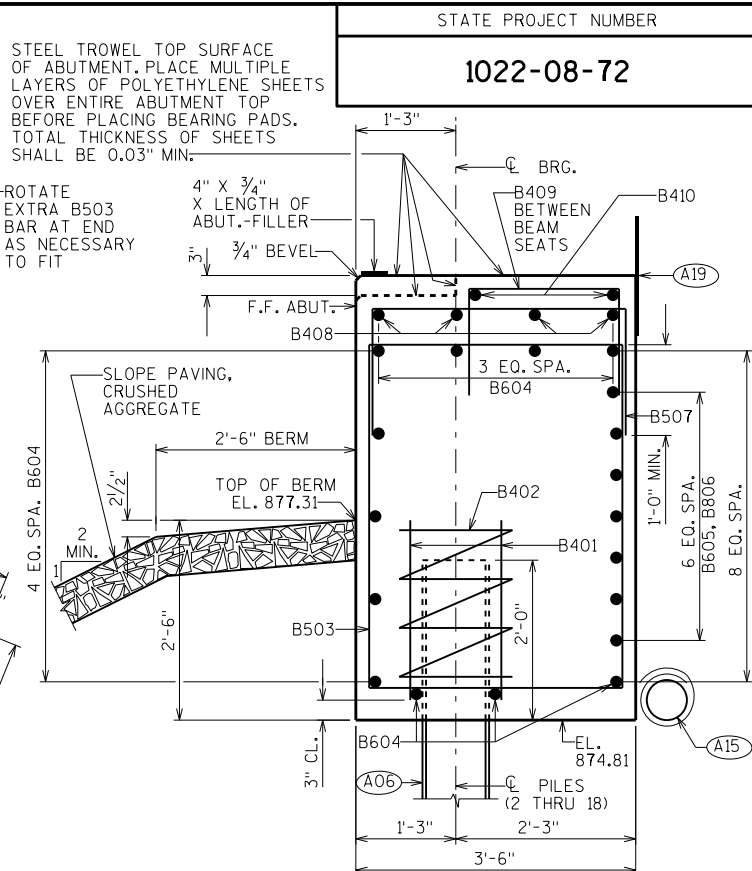
ELEVATION LOOKING EAST @ F.F. ABUT.



PLAN



PILE PLAN



SECTION THRU BODY

- (A04) VERTICAL CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 8", 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS - SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 50 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE PROJECT NUMBER			
1022-08-72			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CKD. SEW	
EAST ABUTMENT		SHEET 7	
		508	

SCALE = 3:50

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		34	2'-3"		BODY-BOT.-2 PER BODY PILE-VERT.
B402		17	28'-0"	X	BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
B503		87	15'-7"	X	BODY-STIRRUPS-VERT.
B604		22	36'-6"		BODY-HORIZONTAL
B605		14	23'-5"		BODY-HORIZONTAL-B.F.-AT CENTER
B806		14	16'-11"	X	BODY-HORIZONTAL-B.F.-AT BOTH ENDS
B507		50	6'-5"	X	BODY-TOP-VERT.-UNDER BEAM SEATS 4-10
B408		8	26'-4"		BODY-TOP-HORIZ.-UNDER BEAM SEATS 4-10-AT SOUTH END
B409		27	4'-5"	X	BODY-TOP-VERT.-BETWEEN BEAM SEATS
B410		18	5'-2"		BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
B511	X	10	15'-7"	X	WING 3-BOT.-STIRRUP-VERT.
B512	X	6	13'-2"		WING 3-BOT.-HORIZONTAL-F.F.
B713	X	7	11'-6"		WING 3-BOT.-HORIZONTAL-B.F.
B714	X	2	12'-2"		WING 3-BOT.-HORIZONTAL-CENTER
B415	X	4	7'-9"		WINGS 3&4-HORIZONTAL-BOT.-B.F. & F.F.
B516	X	26	15'-6"	X	WINGS 3&4-TOP-VERTICAL
B517	X	9	12'-4"	X	WING 3-TOP-VERTICAL-AT END
B418	X	24	15'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B619	X	4	15'-8"		WINGS 3&4-TOP-HORIZONTAL-B.F. & F.F.
B520	X	10	16'-4"	X	WING 4-BOT.-STIRRUP-VERT.
B521	X	1	16'-6"	X	WING 4-BOT.-STIRRUP-VERT.-AT B.F. ABUT
B522	X	6	12'-4"		WING 4-BOT.-HORIZONTAL-F.F.
B723	X	7	12'-10"		WING 4-BOT.-HORIZONTAL-B.F.
B724	X	2	12'-6"		WING 4-BOT.-HORIZONTAL-CENTER
B525	X	9	12'-6"	X	WING 4-TOP-VERTICAL-AT END
B526	X	4	6'-0"	X	WING 3/BODY END-BOT.-VERT.-F.F.
B527	X	3	6'-4"	X	WING 4/BODY END-BOT.-VERT.-F.F.

WING 3 ELEVATION LOOKING @ F.F. WING

WING 4 ELEVATION LOOKING @ F.F. WING

WING 3 SECTION

WING 4 SECTION

B526 B527

B507 B409
B516 B517
B525

B503 B511
B520 B521

B402

B806

SECTION B-B

RODENT SCREEN DETAIL

PILE DETAILS

STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

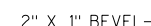
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
EAST ABUTMENT DETAILS		SHEET 8	
		509	

GIRDER	"C"	"D"	"E"	"F"	"G"
1	43'-7 $\frac{3}{8}$ "	---	42'-4"	---	41'-0 $\frac{5}{8}$ "
2-9	41'-0 $\frac{5}{8}$ "	2'-6 $\frac{3}{4}$ "	39'-9 $\frac{1}{4}$ "	2'-6 $\frac{3}{4}$ "	41'-0 $\frac{5}{8}$ "
10	41'-0 $\frac{5}{8}$ "	---	42'-4"	---	43'-7 $\frac{3}{8}$ "



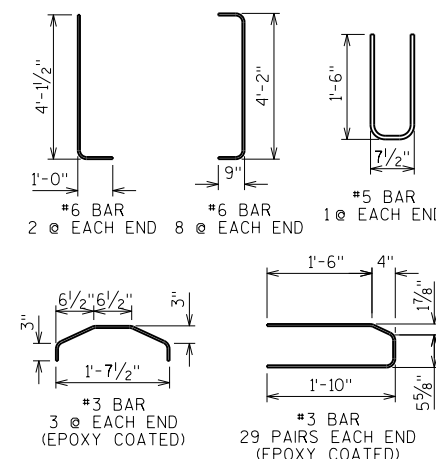
(A) DETAIL TYP. AT EACH END

(B) SIX #4 BARS @ FULL LENGTH WITH 1'-11" MIN. LAPS

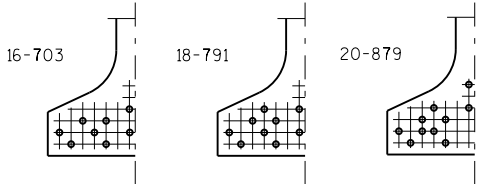
GIRDER DATA

[illegible]

THE CONTRACTOR MAY FURNISH 503.0155 "PRESTRESSED GIRDER TYPE 164W-INCH" USING SELF-CONSOLIDATING CONCRETE CONFORMING TO SP-18. PRESTRESSED GIRDER TYPE I 54W-INCH SELF CONSOLIDATING CONCRETE IN LIEU OF THE STANDARD CONCRETE MIX FOR PRESTRESSED GIRDERS. PAYMENT FOR THE GIRDERS, REGARDLESS OF MIX DESIGN, SHALL BE PAID FOR AS 503.0155 "PRESTRESSED GIRDER TYPE 154W-INCH".

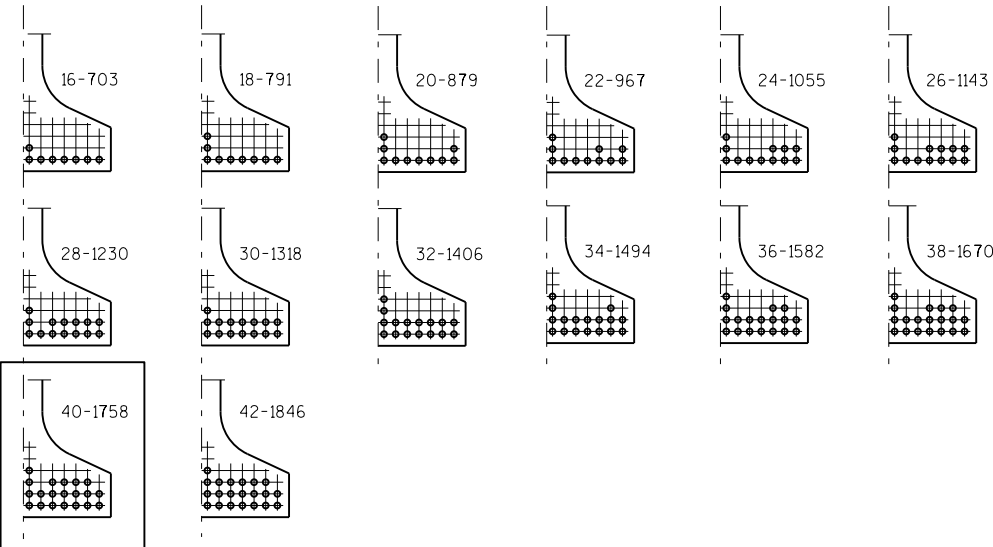


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY		JPH	PLANS CK'D. SEW
54W"		SHEET 9	510
PRESTRESSED GIRDER DETAILS 1			



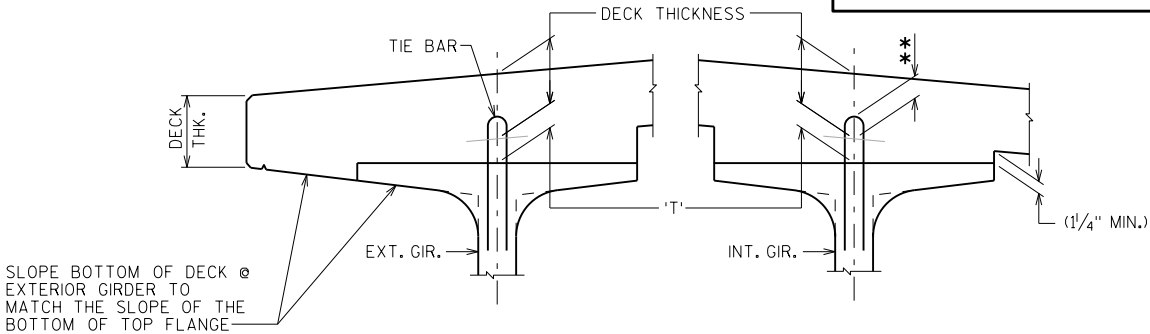
**STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS**

0.6" ϕ STRANDS



ARRANGEMENT AT ϕ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" ϕ STRANDS



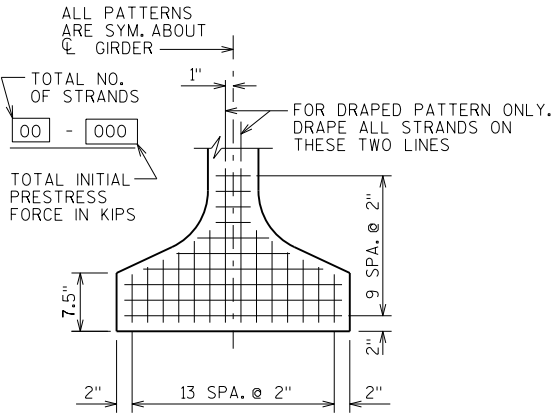
DECK HAUNCH DETAIL

IF 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, ** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

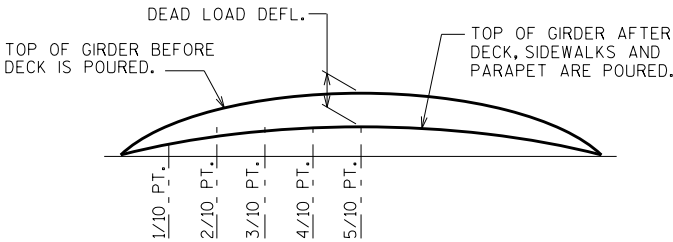
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ϕ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

- TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
- + DEAD LOAD DEFLECTION
- DECK THICKNESS
- = HAUNCH HEIGHT 'T'

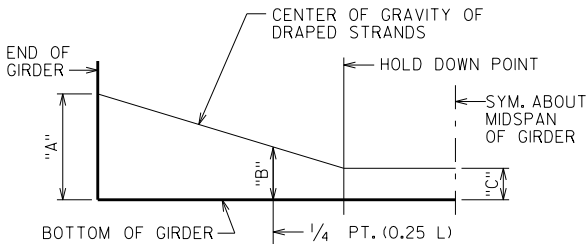
NOTE:
AN AVERAGE HAUNCH ('T') OF 3.4" WAS USED FOR COMPUTING THE SUPERSTRUCTURE QUANTITY "CONCRETE MASONRY BRIDGES".



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4.28

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
54W" PRESTRESSED GIRDER DETAILS 2		SHEET 10	
		511	

NOTES

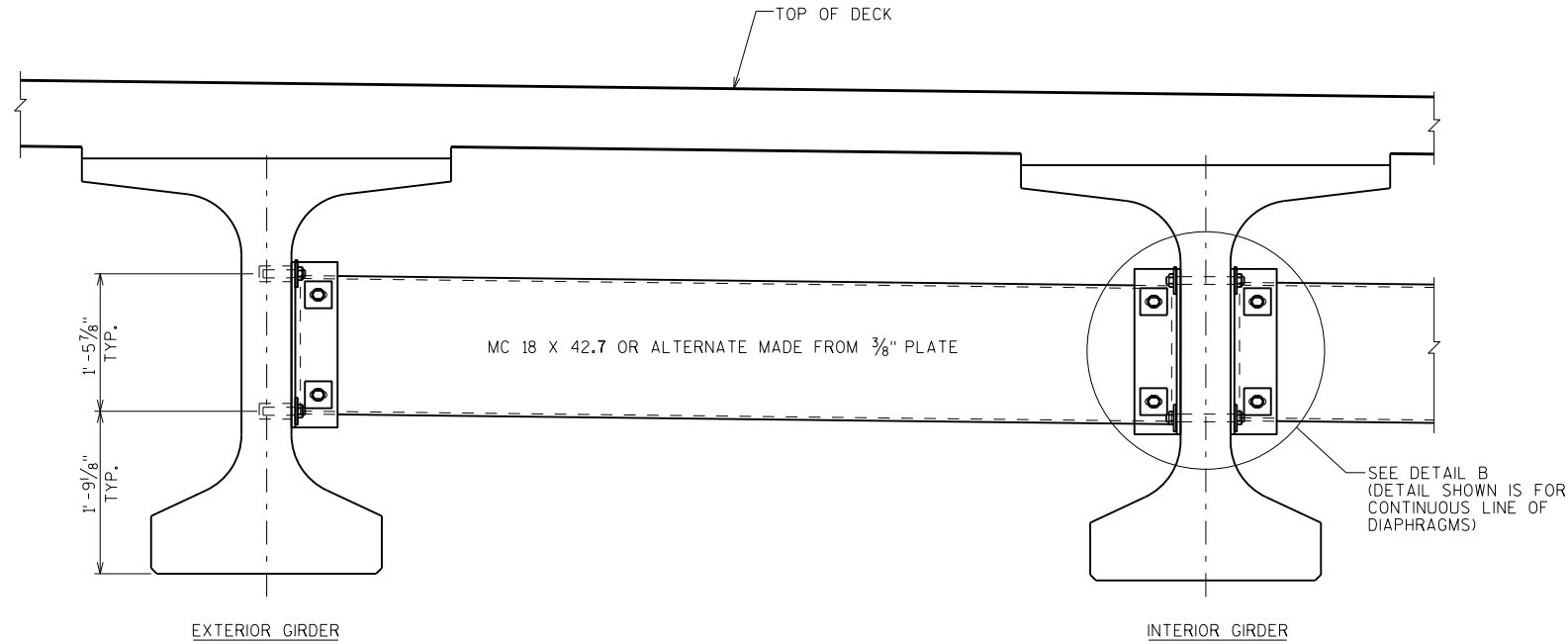
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-17-224", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

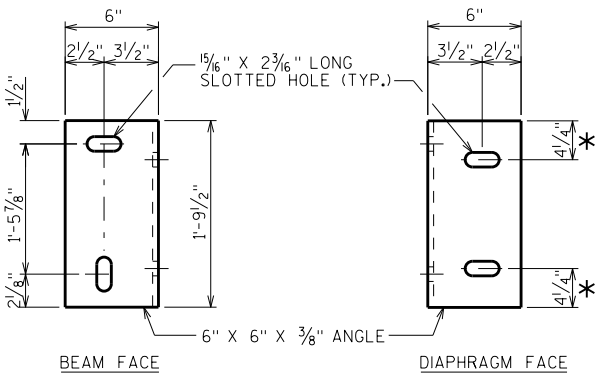
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

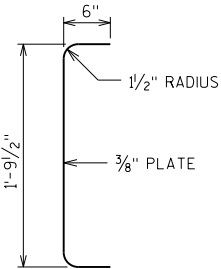


PART TRANSVERSE SECTION AT DIAPHRAGM

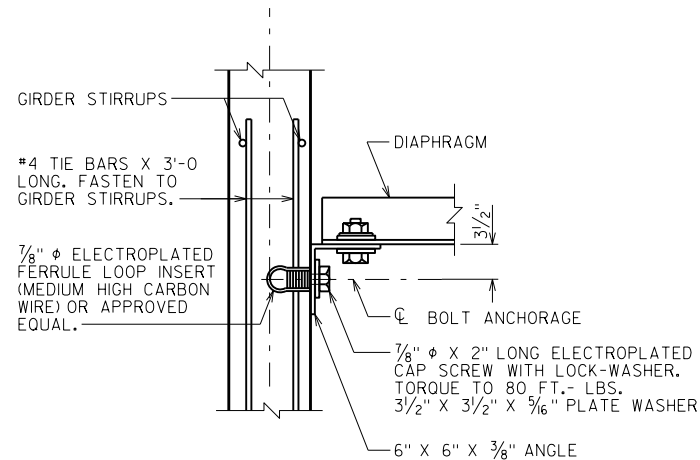


DIAPHRAGM SUPPORT

* 2 1/2\"

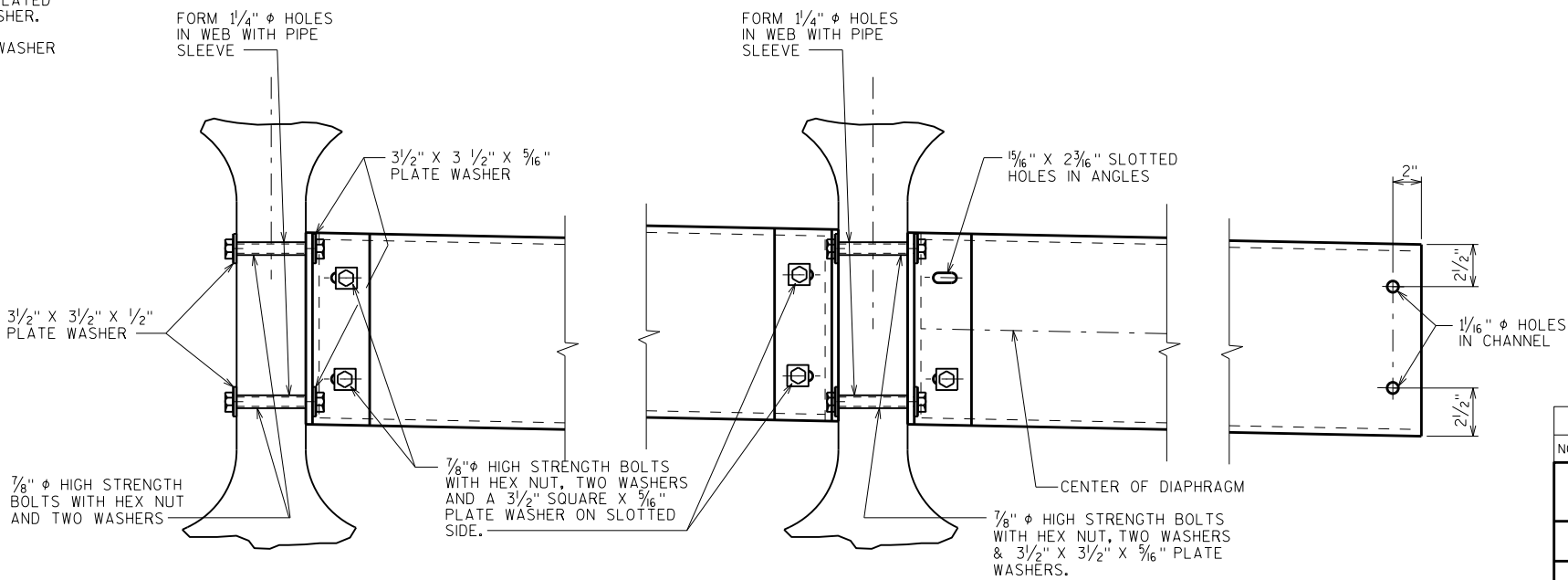


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

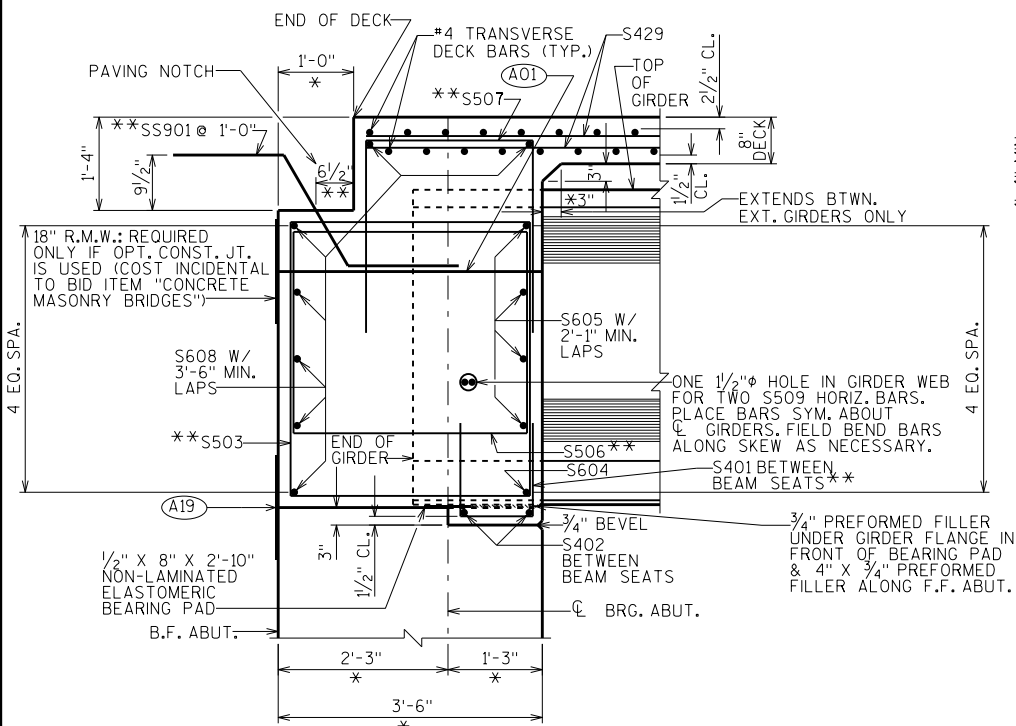


DETAIL B

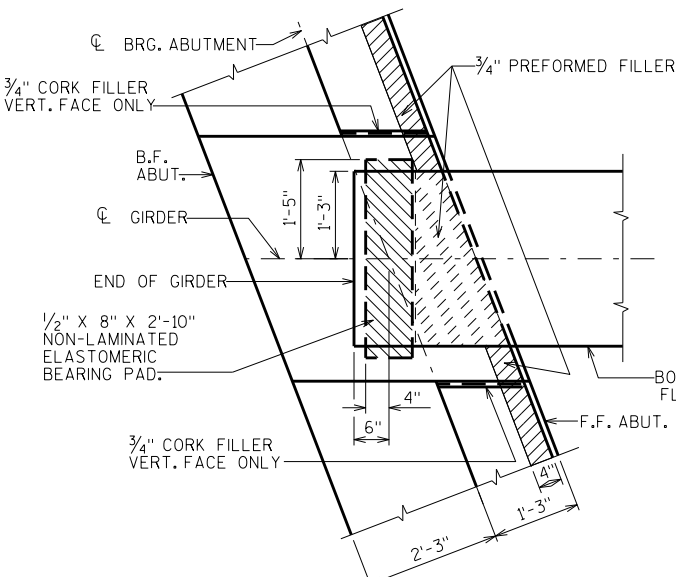
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
STEEL DIAPHRAGM		SHEET 11	
		512	



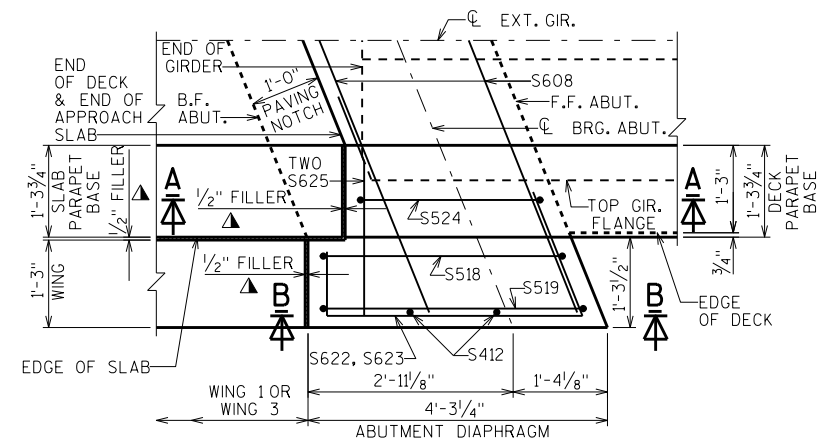
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY		JPH	PLANS CK'D. SEW
SUPERSTRUCTURE CROSS SECTIONS		SHEET 12	
		513	



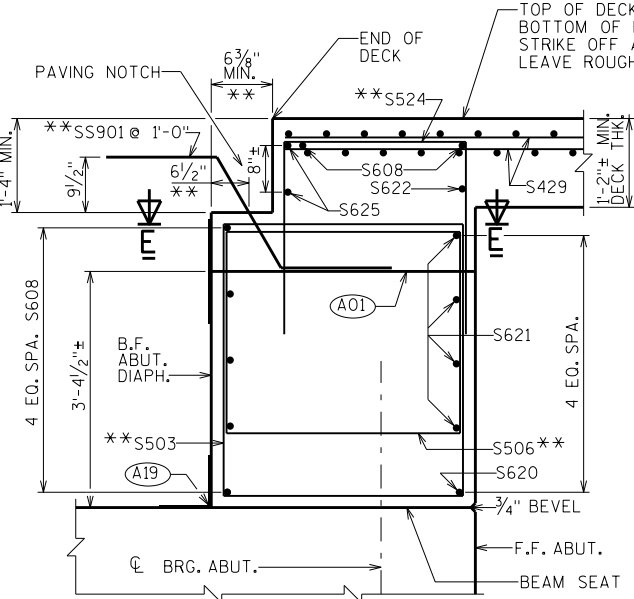
CROSS SECTION THRU ABUTMENT DIAPHRAGMS
BETWEEN EXTERIOR GIRDERS



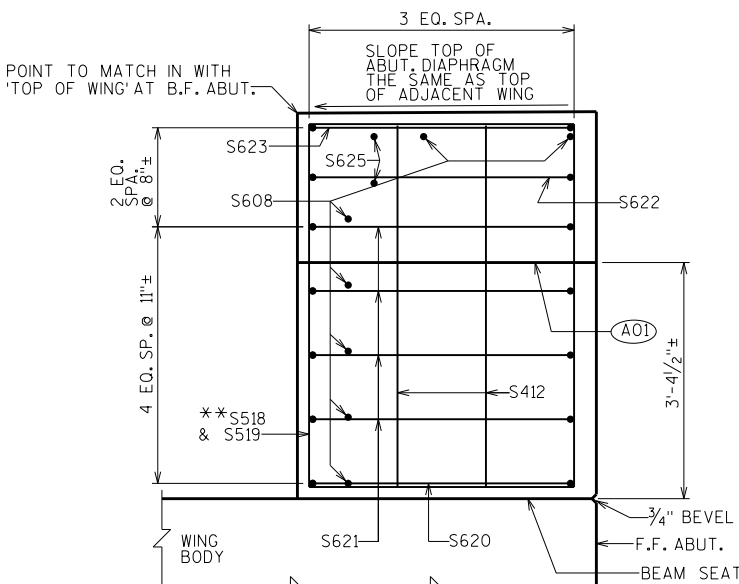
PLAN VIEW AT ABUTMENTS



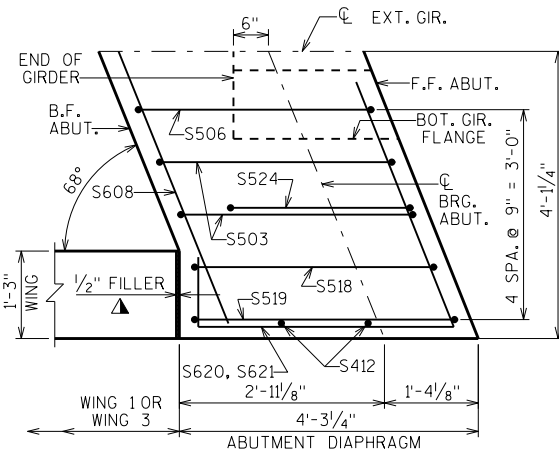
TYPICAL DIAPHRAGM CORNER DETAIL
AT WINGS 1&3 (PLAN VIEW)



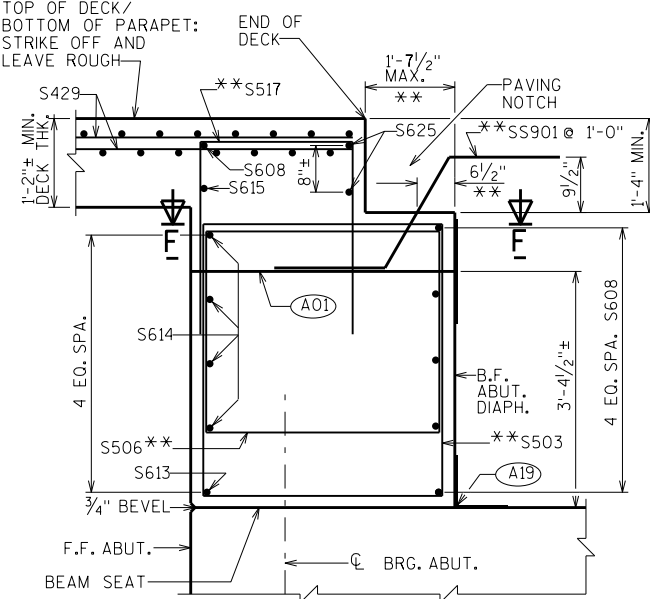
SECTION A-A
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 1&3,
AT GIRDER EXTERIORS (UNDER DECK)



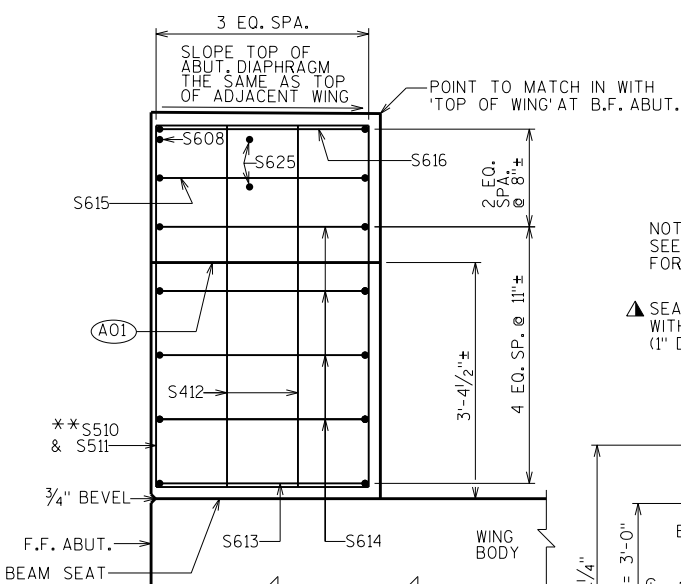
SECTION B-B
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 1&3,
AT GIRDER EXTERIORS (OUTSIDE 'EDGE OF DECK')



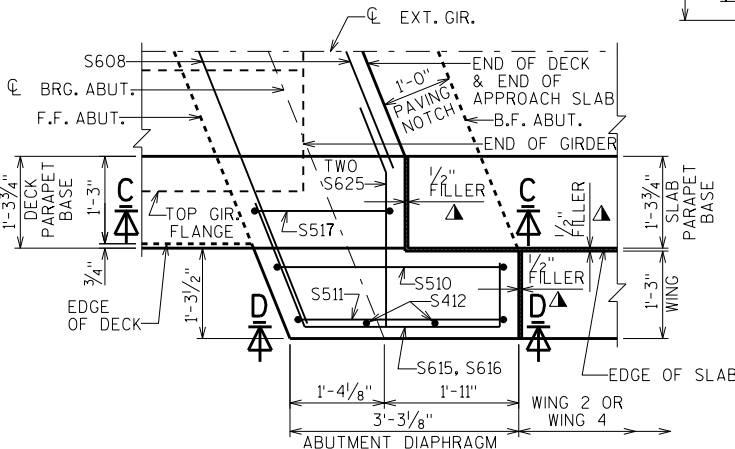
SECTION E-E
TYPICAL DIAPHRAGM CORNER DETAIL AT
WINGS 1&3 (SECTION BELOW PAVING NOTCH)



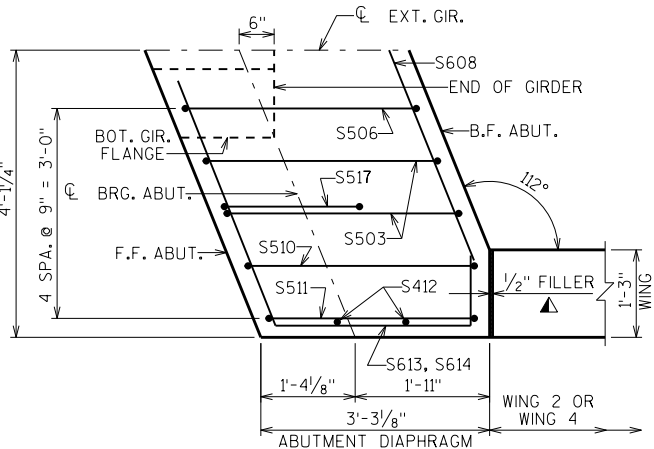
SECTION C-C
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 2&4,
AT GIRDER EXTERIORS (UNDER DECK)



SECTION D-D
SECTION THRU ABUTMENT DIAPHRAGMS AT WINGS 2&4,
AT GIRDER EXTERIORS (OUTSIDE 'EDGE OF DECK')



TYPICAL DIAPHRAGM CORNER DETAIL
AT WINGS 2&4 (PLAN VIEW)



SECTION F-F
TYPICAL DIAPHRAGM CORNER DETAIL AT
WINGS 2&4 (SECTION BELOW PAVING NOTCH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
ABUTMENT DIAPHRAGMS		SHEET 13	
		514	

*DIMENSION IS
TAKEN PERPENDICULAR
TO CL BRG ABUTMENTS.

**DIMENSION IS TAKEN PARALLEL TO CL GIRDERS.
BARS PLACED PARALLEL TO CL GIRDERS AND
SPACED PERPENDICULAR TO CL GIRDERS

(A01) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW
TOP OF GIRDER. IF USED, DECK POUR
MUST BE WITHIN 2 WEEKS FROM THE TIME
OF THE DIAPHRAGM POUR.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

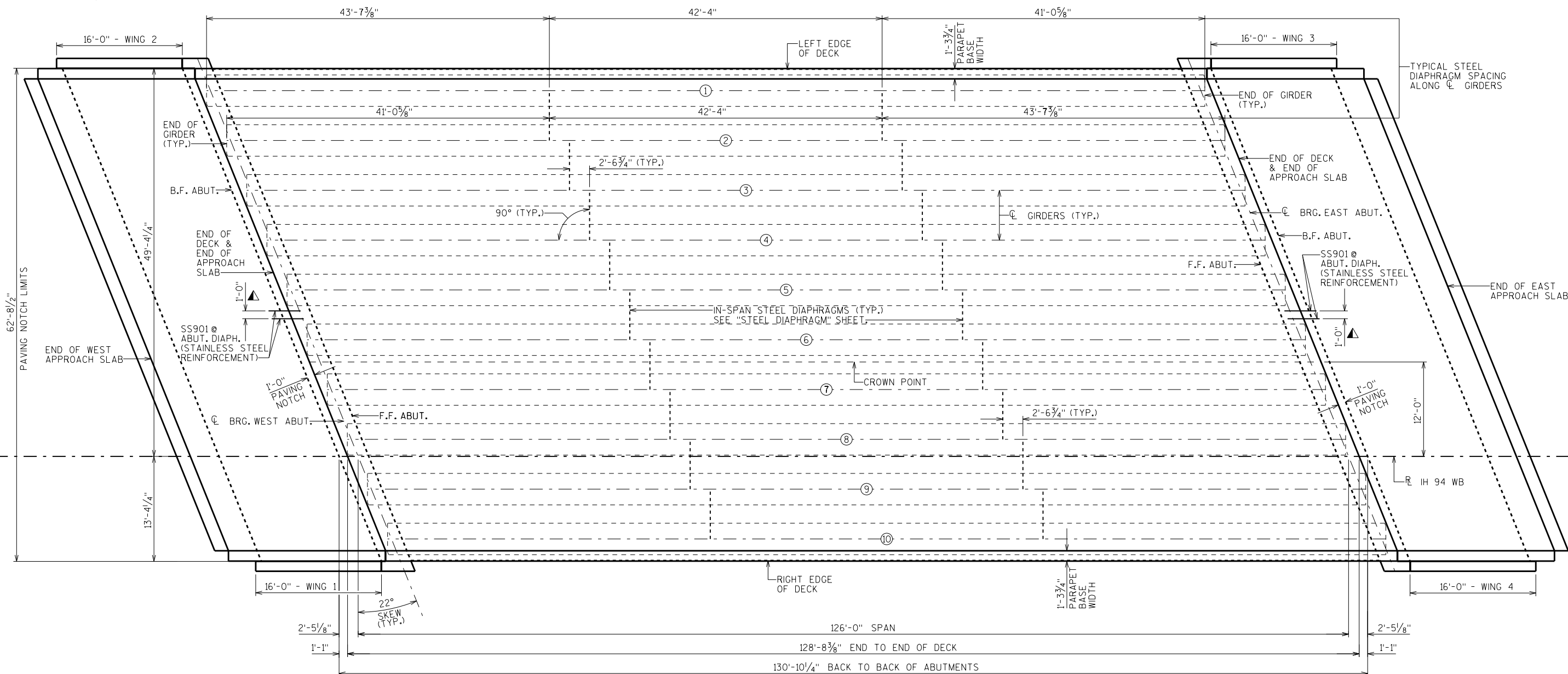
NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET
FOR THE 'BILL OF BARS' AND BAR DETAILS.

▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER
WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER.
(1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

○ INDICATES GIRDER NUMBER

STATE PROJECT NUMBER

1022-08-72



PLAN

8

TOP OF DECK ELEVATIONS

EOD = EDGE OF DECK

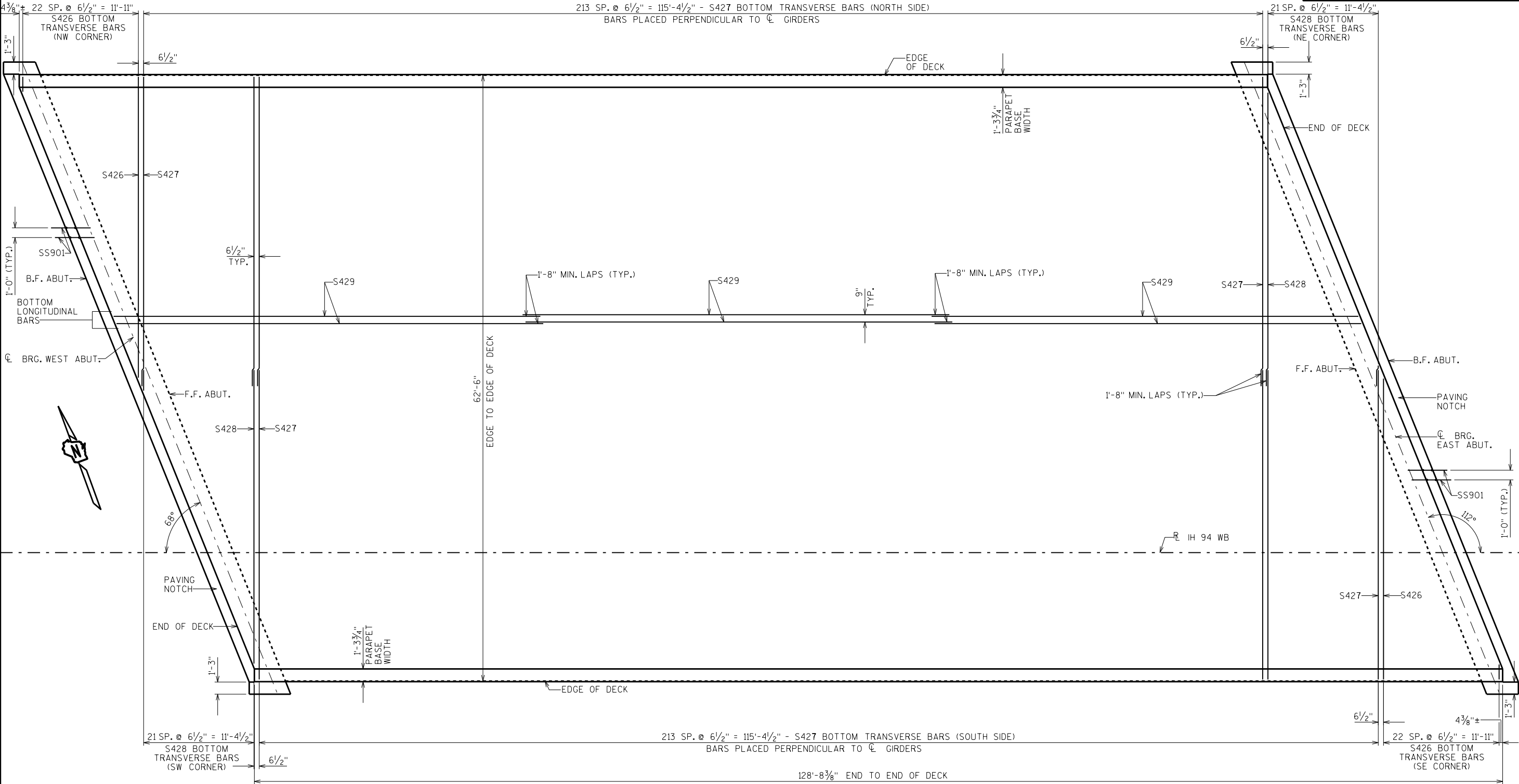
	CL BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL BRG. E. ABUT.	
LEFT EOD	884.67	884.74	884.81	884.88	884.95	885.02	885.08	885.15	885.22	885.28	885.35	LEFT EOD
CL GIRDER 1	884.71	884.78	884.85	884.91	884.98	885.05	885.12	885.19	885.25	885.32	885.38	CL GIRDER 1
CL GIRDER 2	884.85	884.92	884.99	885.05	885.12	885.19	885.26	885.33	885.39	885.46	885.52	CL GIRDER 2
CL GIRDER 3	884.99	885.06	885.13	885.20	885.26	885.33	885.40	885.47	885.53	885.60	885.66	CL GIRDER 3
CL GIRDER 4	885.13	885.20	885.27	885.34	885.40	885.47	885.54	885.61	885.67	885.74	885.80	CL GIRDER 4
CL GIRDER 5	885.27	885.34	885.41	885.48	885.55	885.61	885.68	885.75	885.81	885.88	885.94	CL GIRDER 5
CL GIRDER 6	885.41	885.48	885.55	885.62	885.69	885.75	885.82	885.89	885.95	886.02	886.08	CL GIRDER 6
CROWN PT.	885.47	885.54	885.61	885.68	885.75	885.82	885.88	885.95	886.01	886.08	886.14	CROWN PT.
CL GIRDER 7	885.41	885.48	885.55	885.62	885.69	885.75	885.82	885.89	885.95	886.01	886.08	CL GIRDER 7
CL GIRDER 8	885.30	885.37	885.44	885.51	885.57	885.64	885.71	885.77	885.84	885.90	885.96	CL GIRDER 8
CL GIRDER 9	885.19	885.26	885.32	885.39	885.46	885.53	885.60	885.66	885.72	885.79	885.85	CL GIRDER 9
CL GIRDER 10	885.07	885.14	885.21	885.28	885.35	885.42	885.48	885.55	885.61	885.67	885.73	CL GIRDER 10
RIGHT EOD	885.05	885.12	885.19	885.26	885.32	885.39	885.46	885.52	885.59	885.65	885.71	RIGHT EOD

▲ SEE "STRUCTURAL APPROACH SLABS" SHEET FOR SS901 BAR SPACING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
SUPERSTRUCTURE PLAN		SHEET 14	
		515	

SCALE = 6.50

8



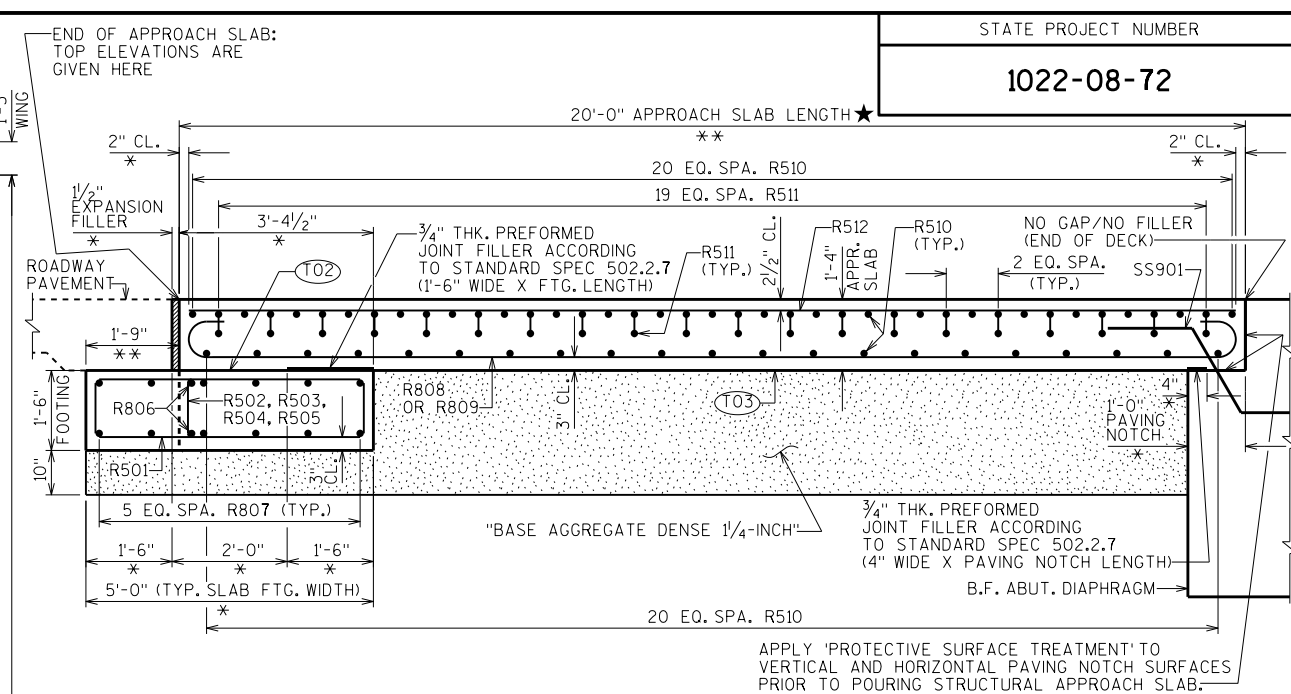
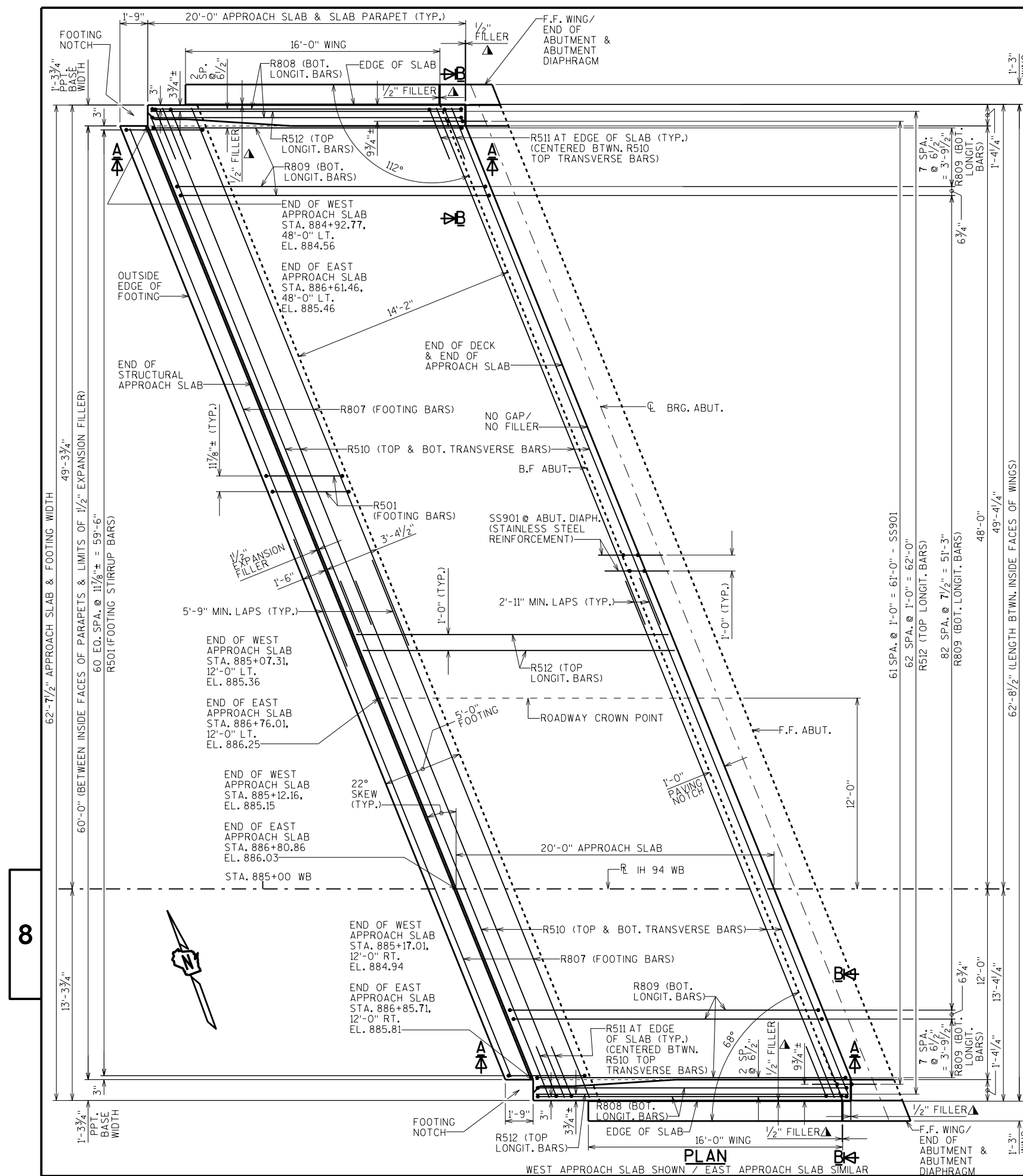
PLAN

NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-17-224				
DRAWN BY		JPH	PLANS CK'D. SEW	
DECK (BOTTOM STEEL)		SHEET 15		
		516		

SCALE = 5.00

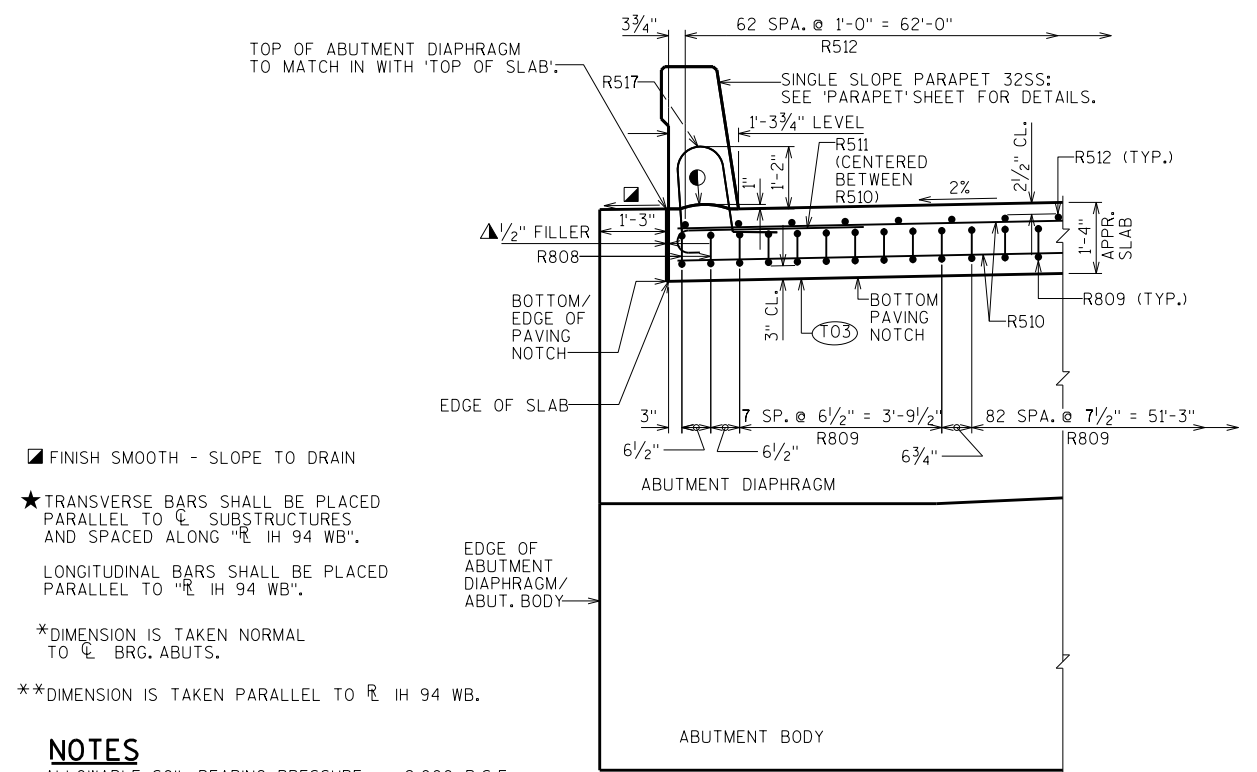


PARTIAL PLAN OF PARAPET REINFORCEMENT
(TYP. @ BOTH SIDES)



SECTION A-A THRU APPROACH SLAB

WEST APPROACH SLAB SHOWN / EAST APPROACH SLAB SIMILAR



SECTION B-B (EDGE OF SLAB DETAIL)

■ FINISH SMOOTH - SLOPE TO DRAIN

★ TRANSVERSE BARS SHALL BE PLACED
PARALLEL TO C SUBSTRUCTURES
AND SPACED ALONG "R 1H 94 WB".

LONGITUDINAL BARS SHALL BE PLACED
PARALLEL TO "R IH 94 WB".

*DIMENSION IS TAKEN NORMAL
TO $\odot$ BRG. ABUTS.

**DIMENSION IS TAKEN PARALLEL TO R IH 94 WB.

NOTES

ALLOWABLE SOIL BEARING PRESSURE: 2,000 P.S.F.

THE EXISTING SOIL MAY REMAIN IN PLACE
IF THE REGION SOILS ENGINEER DETERMINES
THAT THE EXISTING SOIL BEARING PRESSURE
MEETS THE REQUIREMENT ABOVE.

●HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

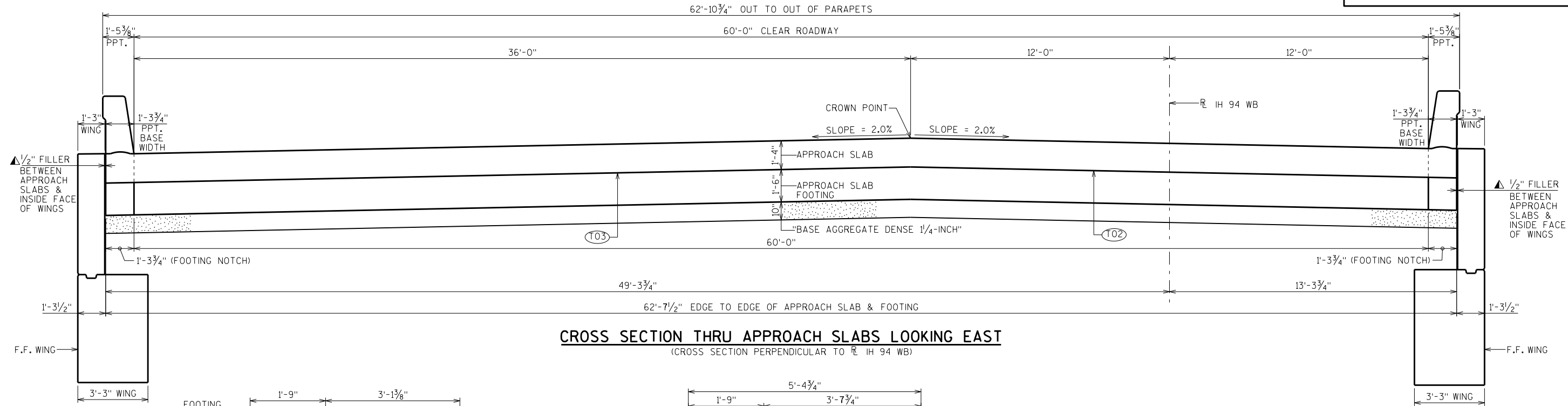
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING
AND PLACE MULTIPLE LAYERS (0.03" MIN.
TOTAL THK.) OF POLYETHYLENE SHEETS
OVER THE ENTIRE TOP OF FOOTING.

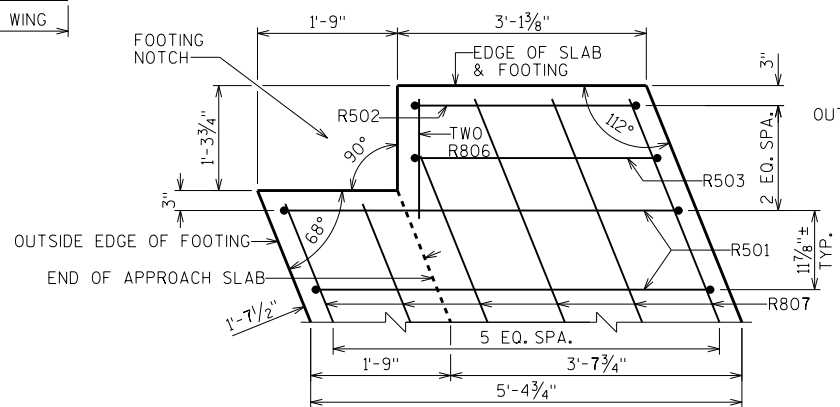
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
		DRAWN BY	PLANS CK'D. SEW
STRUCTURAL APPROACH SLABS		SHEET 17	
		518	

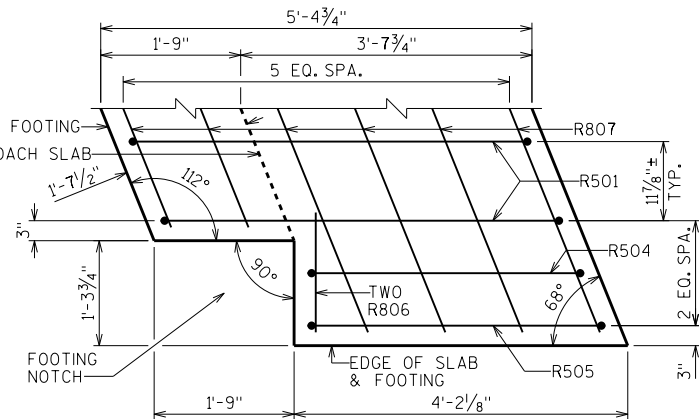
SCALE = 3.50



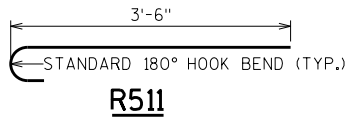
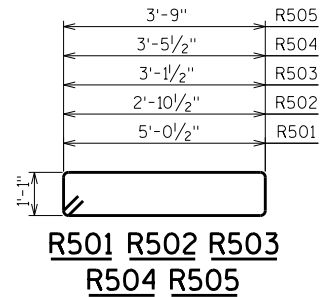
CROSS SECTION THRU APPROACH SLABS LOOKING EAST
(CROSS SECTION PERPENDICULAR TO R IH 94 WB)



SLAB FOOTING PLAN DETAIL @ NW & SE CORNERS



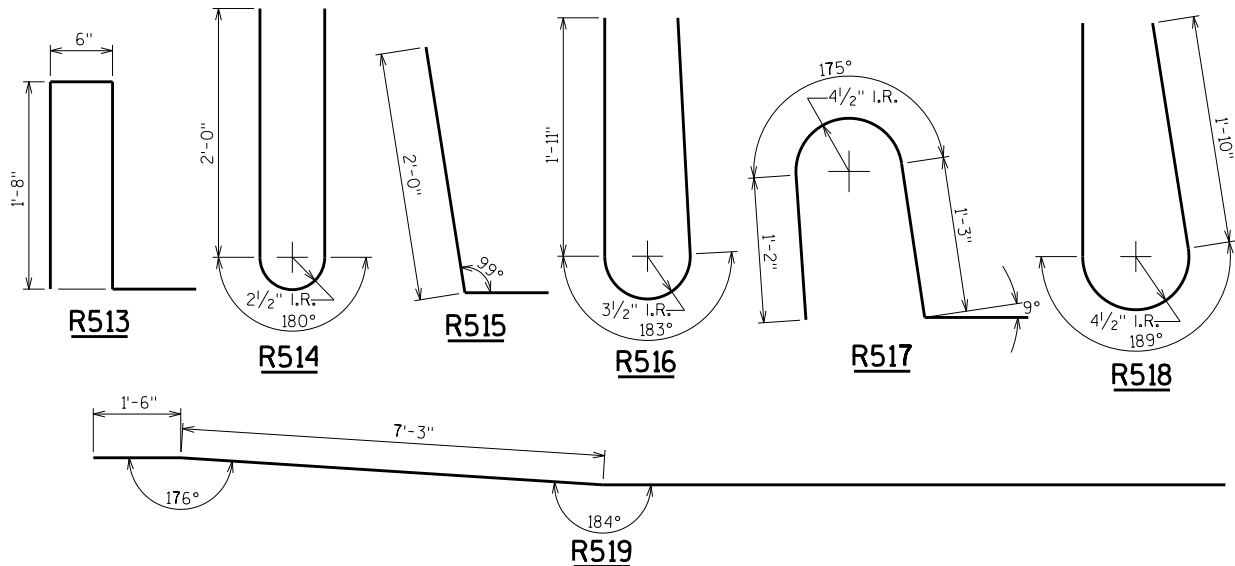
SLAB FOOTING PLAN DETAIL @ SW & NE CORNERS



BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF
THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQUIRED. WEST SLAB	NO. REQUIRED. EAST SLAB	LENGTH	BENT	LOCATION
R501	X	61	61	12'-11"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT CENTER
R502	X	1	1	8'-7"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R503	X	1	1	9'-1"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 2&4 ENDS ONLY
R504	X	1	1	9'-9"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R505	X	1	1	10'-4"	X	FOOTING-VERTICAL-LONGITUDINAL-STIRRUP BAR-AT WING 1&3 ENDS ONLY
R806	X	4	4	1'-6"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT ENDS ONLY
R807	X	24	24	36'-6"		FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R808	X	4	4	21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL-UNDER PARAPETS ONLY
R809	X	99	99	21'-6"	X	SLAB-BOTTOM-VERTICAL-LONGITUDINAL-BETWEEN PARAPETS ONLY
R510	X	84	84	35'-1"		SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R511	X	40	40	4'-1"	X	SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R512	X	63	63	19'-8"		SLAB-TOP-HORIZONTAL-LONGITUDINAL
R513	X	34	34	4'-4"	X	PARAPETS 32SS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	22	22	4'-9"	X	PARAPET 32SS-END-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	24	24	2'-9"	X	PARAPETS 32SS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R516	X	12	12	4'-10"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R517	X	34	34	4'-5"	X	PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R518	X	34	34	5'-0"	X	PARAPET 32SS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	2	2	19'-5"	X	PARAPET 32SS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL--AT ALL FOUR PPT. ENDS
R520	X	10	10	19'-5"		PARAPET 32SS-BOTH FACES-HORIZONTAL-LONGITUDINAL--AT ALL FOUR PPT. ENDS

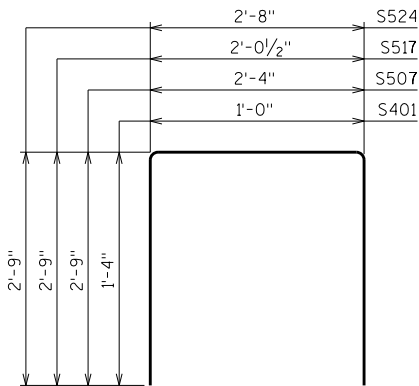


T02 STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

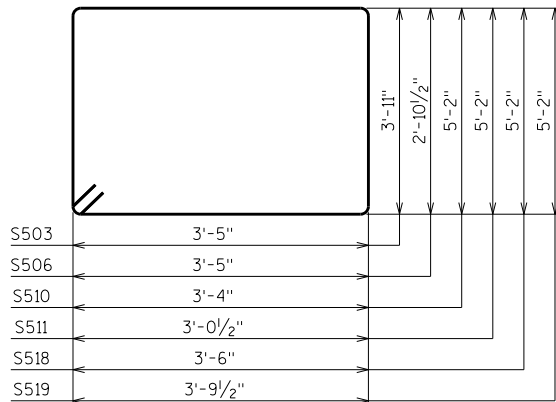
T03 PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

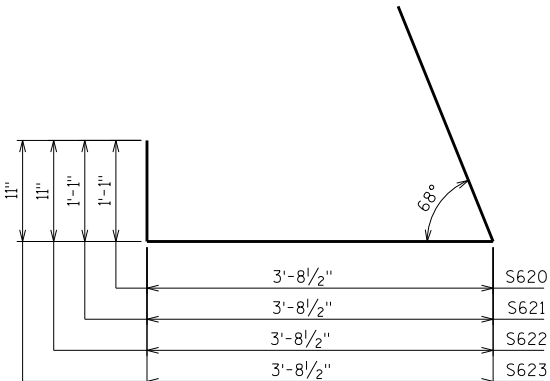
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
STRUCTURAL APPROACH SLAB & BAR DETAILS		SHEET 18 519	



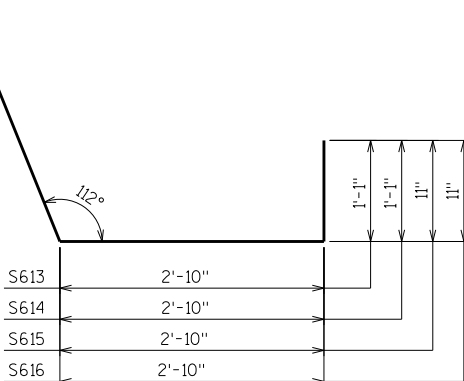
S401 S507 S517 S524



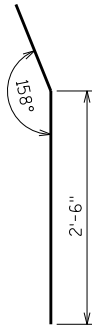
S503 S506 S510 S511 S518 S519
(STIRRUP BARS)



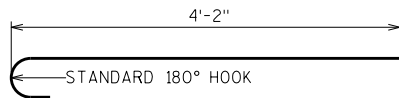
S620 S621 S622 S623



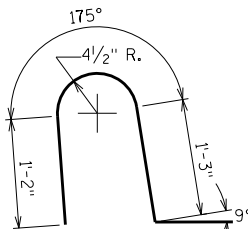
S613 S614 S615 S616



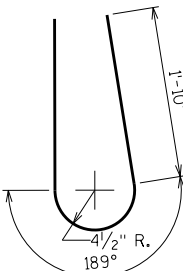
S625



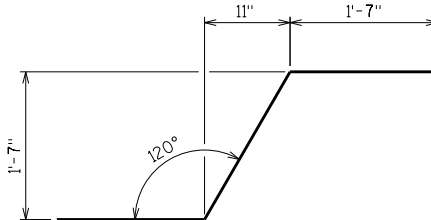
S532



S533



S534



SS901

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	72	3'-6"	X		ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	36	2'-8"			ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S503	X	116	15'-4"	X		ABUT. DIAPHS.-VERTICAL-UNDER PAVING NOTCHES
S604	X	18	3'-9"			ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. GIRS ONLY
S605	X	144	4'-2"			ABUT. DIAPHS.-F.F.-HORIZ.-BTWN. GIRS ONLY
S506	X	40	13'-3"	X		ABUT. DIAPHS.-VERT.-UNDER GIR. TOP FLANGES
S507	X	72	7'-7"	X		ABUT. DIAPHS./DECK-VERT.-BETWEEN EXT. GIRDERS ONLY
S608	X	28	36'-9"			ABUT. DIAPHS. B.F. & DECK-HORIZ.
S509	X	40	6'-0"			ABUT. DIAPHS.-HORIZ.-THRU GIRDERS
S510	X	2	17'-8"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S511	X	2	17'-1"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S412	X	8	5'-2"			ABUT. DIAPH.-VERT.-AT ALL FOUR GIR. EXTERIOR CORNERS
S613	X	2	6'-4"	X		ABUT. DIAPHS.-BOT.-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S614	X	8	7'-4"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S615	X	2	5'-5"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S616	X	2	4'-11"	X		ABUT. DIAPHS.-TOP-HORIZ.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S517	X	2	7'-4"	X		ABUT. DIAPHS./DECK-VERT.-AT WINGS 2&4 GIR. EXTERIOR CORNERS ONLY
S518	X	2	18'-0"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S519	X	2	18'-7"	X		ABUT. DIAPHS.-VERTICAL-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S620	X	2	7'-2"	X		ABUT. DIAPHS.-BOT.-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S621	X	8	8'-3"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S622	X	2	6'-3"	X		ABUT. DIAPHS.-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S623	X	2	5'-9"	X		ABUT. DIAPHS.-TOP-HORIZ.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S524	X	2	7'-11"	X		ABUT. DIAPHS./DECK-VERT.-AT WINGS 1&3 GIR. EXTERIOR CORNERS ONLY
S625	X	8	3'-6"	X		ABUT. DIAPHS./DECK-TOP-HORIZ.-AT ALL FOUR GIR. EXTERIOR CORNERS
▲ S426	X	46	16'-3"		X	DECK-BOTTOM-HORIZONTAL-TRANSVERSE-AT NW & SE CORNERS ONLY
S427	X	856	32'-0"			DECK-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT BOTH EDGES
▲ S428	X	44	16'-3"		X	DECK-BOTTOM-HORIZONTAL-TRANSVERSE-AT SW & NE CORNERS ONLY
S429	X	501	44'-0"			DECK-TOP & BOTTOM-HORIZONTAL-LONGITUDINAL
▲ S430	X	46	16'-11"		X	DECK-TOP-HORIZONTAL-TRANSVERSE-AT NW & SE CORNERS ONLY
▲ S431	X	42	16'-3"		X	DECK-TOP-HORIZONTAL-TRANSVERSE-AT SW & NE CORNERS ONLY
S532	X	454	4'-9"	X		DECK-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES OF DECK
S533	X	386	4'-5"	X		PARAPETS/DECK-VERTICAL-TRANSVERSE-AT BOTH SIDES
S534	X	386	5'-0"	X		PARAPETS-VERTICAL-TRANSVERSE-AT BOTH SIDES
S535	X	36	44'-0"			PARAPETS-BOTH FACES-HORIZ.-LONGIT.-AT BOTH SIDES

SS901		124	5'-0"	X		APPROACH SLAB/ABUT. DIAPH.-VERT.-AT PAVING NOTCHES
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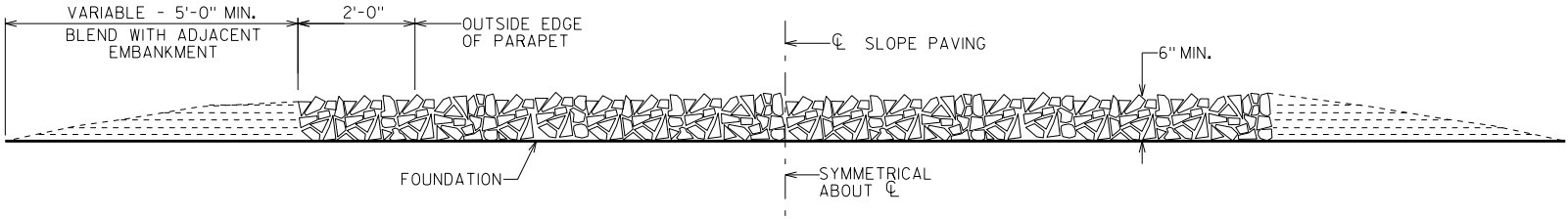
▲ STAINLESS STEEL REINFORCEMENT
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY
BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE
FOR ACTUAL LENGTHS.

BAR SERIES TABLE

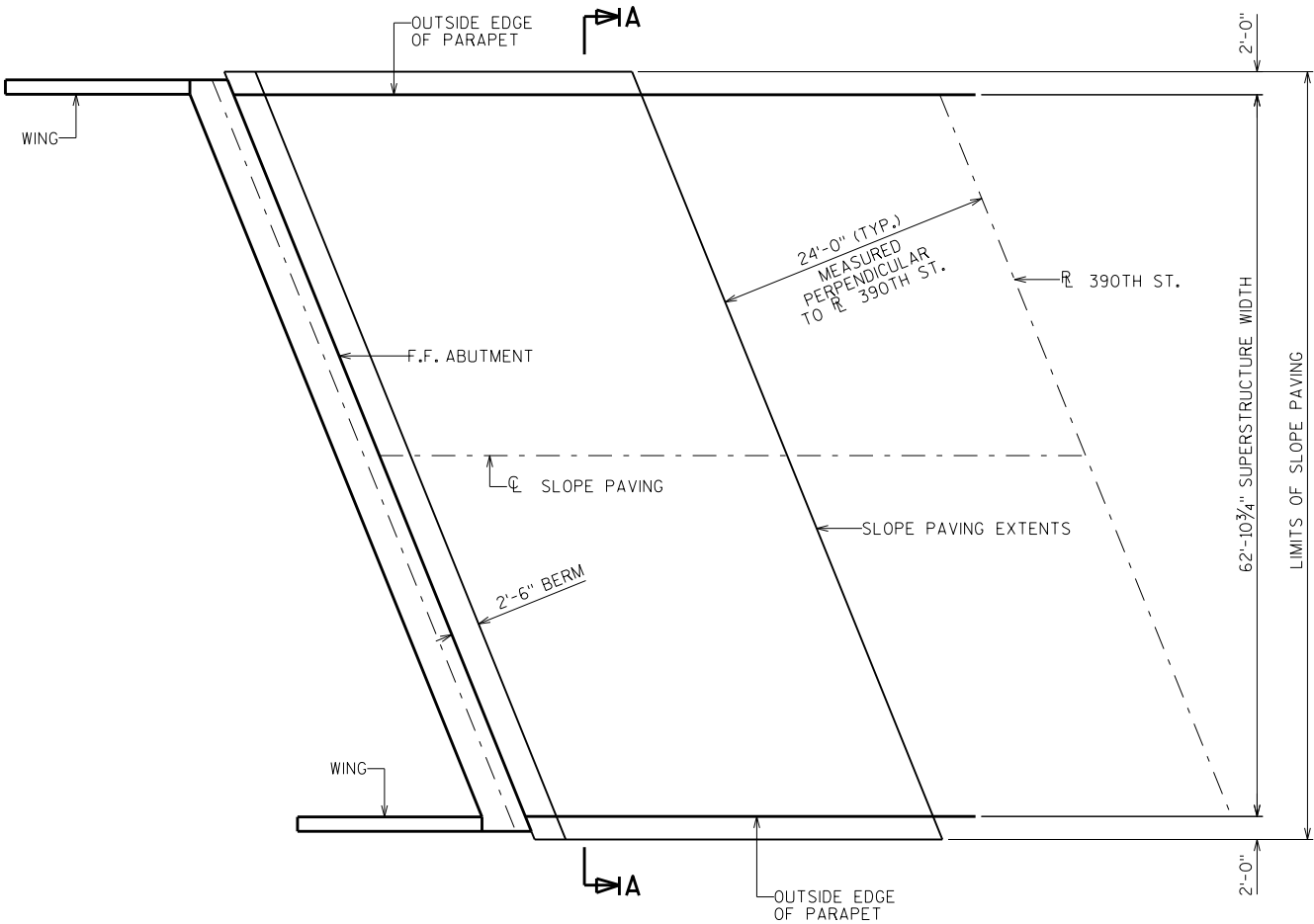
BAR MARK	NUMBER REQUIRED	LENGTH
S426	2 SERIES OF 23 BARS	1'-6" TO 31'-0"
S428	2 SERIES OF 22 BARS	2'-2" TO 30'-4"
S430	2 SERIES OF 23 BARS	2'-2" TO 31'-8"
S431	2 SERIES OF 21 BARS	2'-10" TO 29'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

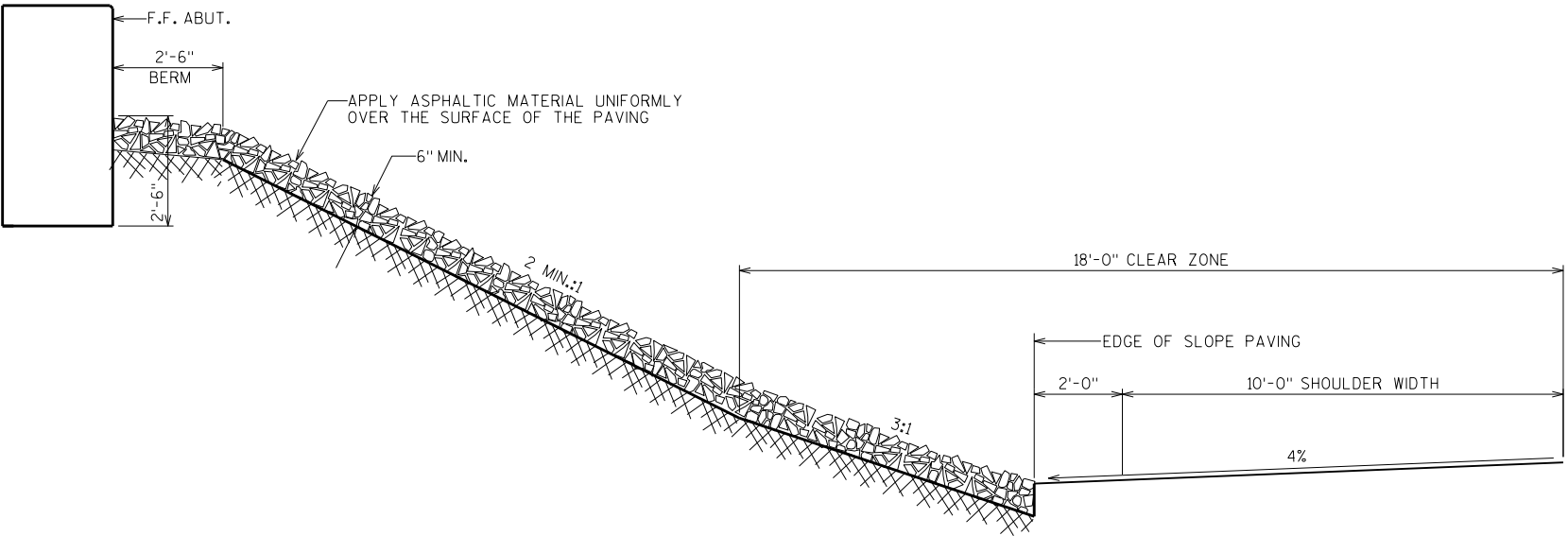
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
SUPERSTRUCTURE BAR DETAILS			SHEET 20
			521



SECTION A-A



PLAN



STANDARD CROSS SECTION THRU CRUSHED AGGREGATE AT ABUTMENTS

ROUND STONE WILL NOT BE ACCEPTED

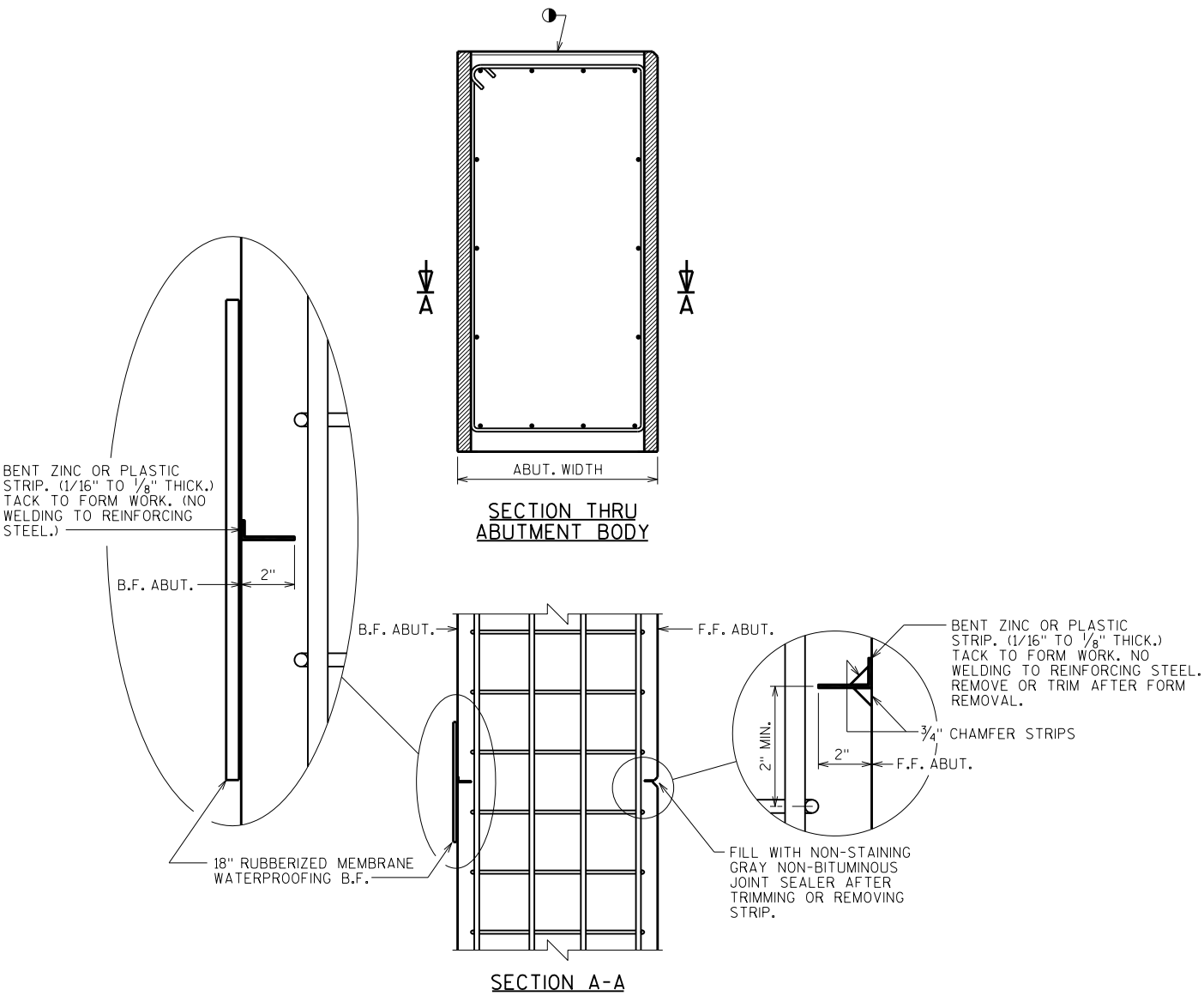
GENERAL NOTES

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

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
SLOPE PAVING CRUSHED AGGREGATE			SHEET 21
			522

SCALE = 1:00



ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

- NOTES**
- PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.
- CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.
- SAW CUTTING JOINT IS NOT ALLOWED
- USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-17-224			
DRAWN BY JPH		PLANS CK'D. SEW	
ALTERNATE CONSTRUCTION JOINT		SHEET 22	
		523	

STAGE 1B

Alignment: IH 94 WB Ref Line
Start Sta: 872+49.995
End Sta: 885+49.764

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
872+49.995	20	0	0	1	0	0	0	0	0
873+00.000	19	36	36	3	6	36	36	6	30
873+50.000	20	36	36	4	9	72	72	15	57
874+00.000	21	38	38	5	11	110	110	26	85
874+50.000	20	37	37	8	17	147	147	42	105
875+00.000	22	39	39	12	25	186	186	67	118
875+50.000	25	44	44	16	35	230	230	102	128
876+00.000	38	58	58	18	42	288	288	144	144
876+50.000	38	71	71	21	48	359	359	192	166
877+00.000	37	69	69	25	56	428	428	248	180
877+50.000	40	71	71	25	62	499	499	309	190
878+00.000	39	74	74	29	66	573	573	376	197
878+50.000	39	72	72	31	74	645	645	449	196
879+00.000	38	71	71	39	86	716	716	536	180
879+50.000	43	74	74	45	103	790	790	639	152
880+00.000	50	86	86	62	132	876	876	770	106
880+50.000	21	66	66	242	375	942	942	1145	-203
881+00.000	19	37	37	500	914	979	979	2059	-1080
881+50.000	18	34	34	559	1305	1013	1013	3363	-2350
882+00.000	18	33	33	248	994	1047	1047	4357	-3310
882+50.000	23	38	38	99	427	1085	1085	4784	-3699
883+00.000	22	42	42	94	238	1127	1127	5022	-3895
883+50.000	19	38	38	99	238	1165	1165	5260	-4096
884+00.000	19	36	36	99	245	1200	1200	5505	-4305
884+50.000	22	39	39	99	245	1239	1239	5750	-4511
885+00.000	24	43	43	123	274	1282	1282	6024	-4742
885+00.964	24	1	1	125	6	1283	1283	6030	-4748
885+04.964	7	2	2	79	20	1285	1285	6050	-4765
885+49.764	0	6	6	525	666	1291	1291	6716	-5425

STAGE 1B

Alignment: IH 94 WB Ref Line
Start Sta: 886+09.964
End Sta: 898+24.995

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
886+09.964	0	0	0	501	0	0	0	0	0
886+39.964	3	1	1	99	443	1	1	443	-441
886+44.764	24	2	2	148	29	4	4	472	-468
886+50.000	24	5	5	144	38	8	8	510	-501
887+00.000	23	44	44	123	328	52	52	838	-785
887+50.000	22	42	42	81	250	94	94	1088	-994
888+00.000	21	39	39	44	153	133	133	1240	-1107
888+50.000	20	38	38	26	85	171	171	1326	-1155
889+00.000	22	39	39	26	64	211	211	1390	-1179
889+50.000	18	37	37	40	82	248	248	1471	-1223
890+00.000	18	33	33	54	116	281	281	1587	-1306
890+50.000	18	33	33	62	143	315	315	1730	-1415
891+00.000	17	32	32	135	244	347	347	1973	-1627
891+50.000	18	32	32	71	255	379	379	2228	-1849
892+00.000	17	33	33	73	178	412	412	2406	-1994
892+50.000	17	32	32	72	179	443	443	2585	-2142
893+00.000	18	33	33	69	175	476	476	2760	-2283
893+50.000	18	33	33	62	162	510	510	2922	-2412
894+00.000	18	33	33	32	116	543	543	3038	-2495
894+50.000	18	33	33	16	59	576	576	3097	-2520
895+00.000	17	32	32	11	32	609	609	3129	-2520
895+50.000	20	34	34	4	17	643	643	3147	-2504
896+00.000	19	36	36	3	8	679	679	3154	-2475
896+50.000	17	34	34	3	7	713	713	3161	-2448
897+00.000	16	31	31	2	6	744	744	3167	-2422
897+50.000	18	32	32	2	5	776	776	3172	-2395
898+00.000	17	33	33	2	5	809	809	3176	-2367
898+24.995	19	17	17	1	2	826	826	3178	-2352
Stage 1B Total						2117		9894	

STAGE 2G

Alignment: IH 94 EB Ref Line
Start Sta: 668+50.000
End Sta: 680+30.998

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
668+50.000	12	0	0	4	0	0	0	0	0
669+00.000	14	24	24	1	5	24	24	5	18
669+50.000	14	25	25	0	1	49	49	7	43
670+00.000	12	24	24	8	10	73	73	16	56
670+50.000	13	23	23	8	19	96	96	36	61
671+00.000	13	24	24	15	28	121	121	64	57
671+50.000	14	25	25	21	44	145	145	108	38
672+00.000	12	24	24	21	51	169	169	159	10
672+50.000	11	21	21	29	62	190	190	221	-30
673+00.000	10	19	19	35	78	209	209	299	-90
673+50.000	11	19	19	31	81	228	228	380	-152
674+00.000	10	20	20	33	79	248	248	459	-211
674+50.000	9	18	18	36	84	266	266	543	-277
675+00.000	10	18	18	38	90	285	285	633	-349
675+50.000	11	20	20	23	74	305	305	708	-403
676+00.000	11	20	20	18	50	325	325	758	-433
676+00.000	11	5	5	22	13	330	330	770	-441
676+50.000	11	20	20	26	59	350	350	829	-479
677+00.000	12	22	22	29	68	371	371	897	-526
677+50.000	13	23	23	33	76	395	395	974	-579
678+00.000	14	25	25	38	87	420	420	1061	-641
678+50.000	12	25	25	46	103	445	445	1164	-720
679+00.000	13	23	23	52	121	468	468	1285	-817
679+50.000	13	24	24	67	146	492	492	1431	-939
680+00.000	12	23	23	83	184	515	515	1616	-1101
680+30.998	12	13	13	92	133	528	528	1749	-1220

STAGE 2G

Alignment: east-2017-Stage-3-EB-centerline
Start Sta: 35+25.000
End Sta: 53+53.440

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
35+25.000	13	0	0	88	0	0	0	0	0
35+50.000	5	8	8	95	113	8	8	113	-105
36+00.000	3	8	8	113	257	16	16	370	-353
36+18.829	10	5	5	122	109	21	21	479	-458
36+50.000	12	13	13	131	194	34	34	673	-639
37+00.000	8	18	18	152	349	52	52	1022	-970
37+50.000	12	18	18	180	410	70	70	1432	-1362
38+00.000	14	24	24	201	469	94	94	1901	-1807
38+50.000	19	30	30	214	511	125	125	2412	-2288
39+00.000	23	39	39	215	529	164	164	2941	-2777
39+50.000	25	45	45	245	567	208	208	3508	-3299
40+00.000	24	45	45	242	601	253	253	4108	-3855
40+50.000	25	45	45	246	602	298	298	4710	-4412
41+00.000	26	47	47	247	608	346	346	5318	-4972
41+50.000	30	52	52	243	604	397	397	5921	-5524
42+00.000	42	66	66	224	575	464	464	6497	-6033
42+50.000	39	75	75	213	538	538	538	7035	-6496
43+00.000	46	79	79	206	515	617	617	7550	-6933
43+50.000	39	79	79	190	487	696	696	8037	-7342
44+00.000	48	81	81	168	440	777	777	8478	-7701
44+50.000	60	100	100	156	399	876	876	8877	-8000
45+00.000	53	104	104	149	376	980	980	9253	-8272
45+50.000	53	98	98	144	360	1078	1078	9613	-8535
46+00.000	48	94	94	151	363	1172	1172	9976	-8804
46+50.000	45	86	86	157	379	1258	1258	10355	-9097
47+00.000	50	88	88	157	386	1346	1346	10741	-9395
47+50.000	45	88	88	171	403	1434	1434	11144	-9710
48+00.000	41	80	80	186	440	1514	1514	11584	-10071
48+50.000	34	70	70	194	469	1584	1584	12053	-10469
49+00.000	26	56	56	218	508	1640	1640	12561	-10921
49+50.000	33	55	55	248	574	1694	1694	13135	-11440
50+00.000	22	51	51	265	632	1745	1745	13767	-12021
50+50.000	13	33	33	280	672	1778	1778	14438	-12660
51+00.000	16	27	27	285	697	1805	1805	15135	-13330
51+50.000	12	26	26	299	719	1831	1831	15855	-14023
52+00.000	11	21	21	306	745	1853	1853	16600	-14747
52+50.000	0	11	11	273	714	1863	1863	17314	-15451
53+00.000	0	0	0	191	571	1863	1863	17885	-16022
53+30.000	0	0	0	113	224	1863	1863	18109	-16246
53+35.000	0	0	0	175	35	1863	1863	18145	-16282
53+50.000	0	0	0	510	253	1863	1863	18398	-16535
53+53.440	0	0	0	577	92	1863	1863	18490	-16627

STAGE 2G

Alignment: east-2017-Stage-3-EB-centerline
Start Sta: 54+13.440
End Sta: 107+48.750

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
54+13.440	0	0	0	461	0	0	0	0	0
54+30.000	0	0	0	91	225	0	0	225	-225
54+35.000	0	0	0	100	24	0	0	249	-249
54+50.000	0	0	0	271	137	0	0	386	-386
55+00.000	0	0	0	339	751	0	0	1137	-1137
55+50.000	0	0	0	343	840	0	0	1977	-1977
56+00.000	0	0	0	356	862	0	0	2839	-2839
56+50.000	0	0	0	342	860	0	0	3699	-3699
57+00.000	0	0	0	339	839	0	0	4538	-4538
57+50.000	0	0	0	335	831	0	0	5369	-5369
58+00.000	0	0	0	319	806	0	0	6174	-6174
58+50.000	0	0	0	304	768	0	0	6942	-6942
59+00.000	0	0	0	298	742	0	0	7684	-7684
59+50.000	0	0	0	288	722	0	0	8406	-8406
60+00.000	0	0	0	288	710	0	0	9115	-9115
60+50.000	0	0	0	278	698	0	0	9813	-9813
61+00.000	0	0	0	271	676	0	0	10490	-10490
61+50.000	0	0	0	272	668	0	0	11158	-11158
62+00.000	0	0	0	263	658	0	0	11816	-11816
62+50.000	0	0	0	261	646	0	0	12462	-12462
63+00.000	0	0	0	265	648	0	0	13110	-13110
63+50.000	0	0	0	257	643	0	0	13753	-13753
64+00.000	0	0	0	260	637	0	0	14390	-14390
64+50.000	0	0	0	249	627	0	0	15017	-15017
65+00.000	0	0	0	236	597	0	0	15614	-15614
65+50.000	0	0	0	233	577	0	0	16191	-16191
66+00.000	0	0	0	174	501	0	0	16692	-16692
66+50.000	111	103	103	0	214	103	103	16906	-16804
67+00.000	123	216	216	0	0	319	319	16906	-16587
67+50.000	3	117	117	123	151	436	436	17057	-16621
68+00.000	3	6	6	194	389	442	442	17447	-17005
68+50.000	4	6	6	182	463	448	448	17909	-17461
69+00.000	3	6	6	175	440	455	455	18350	-17895
69+50.000	3	6	6	171	427	461	461	18777	-18316
70+00.000	3	6	6	154	401	466	466	19177	-18711
70+50.000	3	5	5	162	390	472	472	19567	-19095
71+00.000	9	11	11	155	391	483	483	19958	-19475
71+50.000	21	28	28	138	362	511	511	20319	-19808
72+00.000	20	39	39	127	327	550	550	20646	-20096
72+50.000	22	40	40	123	307	589	589	20953	-20364
73+00.000	20	40	40	133	315	629	629	21268	-20639
73+50.000	20	38	38	128	322	667	667	21590	-20924
74+00.000	23	40	40	131	319	707	707	21909	-21203
74+50.000	25	45	45	140	334	751	751	22243	-21492
75+00.000	35	56	56	145	351	807	807	22595	-21787
75+50.000	28	59	59	145	357	866	866	22952	-22086
76+00.000	34	57	57	143	355	923	923	23306	-22383

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76+00.000	34	57	57	143	355	923	923	23306	-22383
76+50.000	38	67	67	148	358	990	990	23665	-22674
77+00.000	39	72	72	148	364	1062	1062	24029	-22967
77+50.000	38	71	71	143	358	1133	1133	24387	-23254
78+00.000	38	70	70	133	339	1203	1203	24726	-23523
78+50.000	41	73	73	124	316	1276	1276	25042	-23766
79+00.000	37	72	72	147	334	1348	1348	25376	-24028
79+50.000	32	64	64	161	380	1412	1412	25756	-24344
80+00.000	29	57	57	166	403	1469	1469	26159	-24690
80+50.000	31	56	56	162	404	1524	1524	26562	-25038
81+00.000	31	57	57	159	394	1581	1581	26956	-25375
81+50.000	18	46	46	153	384	1627	1627	27340	-25714
82+00.000	20	35	35	153	378	1662	1662	27718	-26056
82+50.000	28	44	44	144	366	1707	1707	28084	-26378
83+00.000	31	54	54	155	368	1761	1761	28452	-26691
83+50.000	30	57	57	174	406	1818	1818	28858	-27040
84+00.000	28	54	54	174	429	1872	1872	29286	-27415
84+50.000	32	55	55	173	427	1927	1927	29713	-27787
85+00.000	30	57	57	166	418	1984	1984	30131	-28147
85+50.000	28	54	54	163	405	2038	2038	30536	-28498
86+00.000	32	55	55	160	397	2093	2093	30933	-28839
86+50.000	32	58	58	164	399	2152	2152	31331	-29180
87+00.000	26	54	54	157	395	2206	2206	31727	-29521
87+50.000	23	45	45	159	389	2251	2251	32115	-29864
88+00.000	20	40	40	128	353	2290	2290	32468	-30178
88+50.000	22	39	39	165	360	2329	2329	32828	-30499
89+00.000	25	43	43	176	420	2372	2372	33248	-30876
89+50.000	27	48	48	188	449	2420	2420	33697	-31277
90+00.000	23	46	46	205	484	2466	2466	34181	-31715
90+50.000	21	40	40	217	520	2507	2507	34701	-32194
91+00.000	16	34	34	219	537	2541	2541	35238	-32697
91+50.000	17	31	31	216	535	2571	2571	35773	-33202
92+00.000	20	34	34	217	533	2606	2606	36306	-33701
92+50.000	17	34	34	222	541	2639	2639	36848	-34208
93+00.000	18	32	32	232	559	2671	2671	37406	-34736
93+50.000	16	31	31	228	566	2702	2702	37972	-35271
94+00.000	14	28	28	224	556	2729	2729	38529	-35800
94+50.000	16	27	27	227	555	2757	2757	39084	-36328
95+00.000	14	27	27	224	556	2784	2784	39640	-36857
95+50.000	12	24	24	225	553	2808	2808	40194	-37386
96+00.000	15	26	26	226	555	2833	2833	40749	-37916
96+50.000	16	29	29	230	561	2863	2863	41310	-38447
97+00.000	15	29	29	233	569	2892	2892	41879	-38987
97+50.000	15	28	28	231	571	2920	2920	42450	-39530
98+00.000	17	30	30	231	569	2950	2950	43019	-40069
98+50.000	21	35	35	222	557	2985	2985	43576	-40591
99+00.000	12	30	30	211	533	3015	3015	44109	-41094
99+50.000	15	24	24	198	504	3039	3039	44612	-41573
100+00.000	18	30	30	178	463	3070	3070	45075	-42005

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100+50.000	17	33	33	190	452	3103	3103	45527	-42424
101+00.000	17	32	32	194	472	3135	3135	45999	-42865
101+50.000	14	28	28	206	491	3163	3163	46491	-43328
102+00.000	20	31	31	202	501	3194	3194	46992	-43798
102+50.000	30	46	46	191	484	3240	3240	47476	-44235
103+00.000	30	55	55	195	475	3296	3296	47951	-44655
103+50.000	7	34	34	229	521	3330	3330	48472	-45142
104+00.000	7	13	13	237	574	3343	3343	49046	-45703
104+50.000	5	11	11	236	583	3354	3354	49629	-46275
105+00.000	6	11	11	229	574	3365	3365	50202	-46838
105+50.000	8	13	13	234	570	3378	3378	50773	-47395
106+00.000	8	15	15	225	565	3393	3393	51338	-47945
106+50.000	5	12	12	222	551	3405	3405	51889	-48483
106+91.175	4	7	7	221	450	3412	3412	52339	-48926
107+00.000	0	1	1	227	97	3413	3413	52436	-49023
107+05.000	0	0	0	218	55	3413	3413	52491	-49078
107+10.000	0	0	0	193	51	3413	3413	52542	-49129
107+48.750	0	0	0	604	760	3413	3413	53302	-49889

STAGE 2G

Alignment: east-2017-Stage-3-EB-centerline
Start Sta: 108+08.750
End Sta: 172+09.440

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
108+08.750	0	0	0	576	0	0	0	0	0
108+40.000	0	0	0	132	545	0	0	545	-545
108+45.000	0	0	0	175	38	0	0	583	-583
108+50.000	0	0	0	184	44	0	0	627	-627
109+00.000	1	1	1	192	464	1	1	1091	-1090
109+50.000	3	4	4	185	465	6	6	1556	-1550
110+00.000	4	7	7	170	437	13	13	1993	-1980
110+50.000	7	10	10	160	406	23	23	2399	-2376
111+00.000	12	17	17	131	358	40	40	2757	-2717
111+50.000	13	23	23	115	303	63	63	3060	-2997
112+00.000	15	26	26	103	268	88	88	3327	-3239
112+50.000	18	30	30	81	226	118	118	3553	-3435
113+00.000	21	36	36	61	174	154	154	3727	-3573
113+50.000	27	45	45	41	125	199	199	3852	-3653
114+00.000	27	50	50	37	95	249	249	3947	-3698
114+50.000	23	46	46	39	93	295	295	4040	-3746
115+00.000	17	37	37	43	101	332	332	4142	-3810
115+50.000	25	39	39	43	106	371	371	4248	-3877
116+00.000	25	46	46	43	106	417	417	4354	-3937
116+50.000	23	44	44	35	96	461	461	4450	-3989
117+00.000	21	41	41	31	82	502	502	4531	-4030
117+50.000	26	44	44	30	75	546	546	4607	-4061
118+00.000	25	47	47	15	56	593	593	4662	-4069
118+50.000	20	41	41	35	62	635	635	4724	-4089
119+00.000	18	34	34	38	91	669	669	4815	-4146
119+50.000	16	31	31	40	97	700	700	4911	-4211
120+00.000	16	29	29	39	98	729	729	5009	-4280
120+50.000	17	30	30	47	106	760	760	5116	-4356
121+00.000	19	33	33	44	112	793	793	5228	-4435
121+50.000	20	36	36	45	110	829	829	5338	-4509
122+00.000	18	36	36	51	119	865	865	5457	-4592
122+50.000	16	32	32	51	126	896	896	5582	-4686
123+00.000	16	29	29	47	121	926	926	5703	-4777
123+50.000	17	30	30	44	112	956	956	5815	-4860
124+00.000	17	31	31	50	116	987	987	5931	-4944
124+50.000	17	31	31	50	123	1018	1018	6054	-5036
125+00.000	15	30	30	48	121	1048	1048	6176	-5128
125+50.000	18	30	30	48	119	1078	1078	6295	-5216
126+00.000	18	33	33	50	120	1112	1112	6415	-5303
126+50.000	18	33	33	50	122	1145	1145	6537	-5392
127+00.000	18	33	33	49	122	1178	1178	6660	-5482
127+50.000	17	32	32	49	121	1210	1210	6781	-5571
128+00.000	19	33	33	51	124	1243	1243	6904	-5661
128+50.000	18	34	34	52	127	1277	1277	7032	-5755
129+00.000	19	35	35	51	127	1312	1312	7159	-5847
129+50.000	18	34	34	49	124	1346	1346	7283	-5937

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130+00.000	17	32	32	45	117	1378	1378	7399	-6022
130+50.000	18	32	32	46	112	1410	1410	7512	-6102
131+00.000	17	33	33	48	115	1443	1443	7627	-6184
131+50.000	19	34	34	47	116	1477	1477	7743	-6266
132+00.000	20	36	36	43	111	1514	1514	7854	-6340
132+50.000	20	37	37	45	109	1551	1551	7962	-6412
133+00.000	23	40	40	43	108	1591	1591	8070	-6479
133+50.000	24	43	43	42	104	1634	1634	8175	-6540
134+00.000	22	43	43	33	93	1677	1677	8267	-6590
134+50.000	23	41	41	28	75	1718	1718	8343	-6624
135+00.000	26	45	45	24	64	1763	1763	8407	-6643
135+50.000	26	48	48	24	58	1812	1812	8465	-6653
136+00.000	27	49	49	26	61	1861	1861	8526	-6665
136+50.000	25	48	48	26	64	1909	1909	8590	-6680
137+00.000	23	44	44	29	68	1954	1954	8657	-6704
137+50.000	24	44	44	32	76	1998	1998	8733	-6736
138+00.000	25	45	45	31	77	2043	2043	8811	-6768
138+50.000	28	49	49	26	69	2092	2092	8880	-6788
139+00.000	27	51	51	22	59	2144	2144	8939	-6796
139+50.000	23	46	46	24	57	2190	2190	8996	-6806
140+00.000	22	42	42	27	62	2232	2232	9058	-6827
140+50.000	21	40	40	30	69	2272	2272	9128	-6856
141+00.000	22	40	40	28	71	2312	2312	9198	-6886
141+50.000	24	43	43	25	65	2355	2355	9263	-6908
142+00.000	25	45	45	24	60	2400	2400	9323	-6923
142+50.000	25	46	46	24	58	2446	2446	9381	-6935
143+00.000	28	49	49	20	54	2495	2495	9435	-6940
143+50.000	27	50	50	15	43	2546	2546	9479	-6933
144+00.000	28	50	50	17	39	2596	2596	9518	-6922
144+50.000	29	53	53	21	47	2649	2649	9565	-6916
145+00.000	25	50	50	23	55	2699	2699	9619	-6920
145+50.000	28	49	49	23	56	2748	2748	9676	-6928
146+00.000	29	53	53	22	55	2800	2800	9730	-6930
146+50.000	30	55	55	22	54	2855	2855	9784	-6929
147+00.000	28	53	53	21	53	2908	2908	9837	-6929
147+50.000	25	49	49	20	51	2957	2957	9888	-6931
148+00.000	27	48	48	19	49	3005	3005	9937	-6932
148+50.000	27	51	51	21	49	3056	3056	9986	-6930
149+00.000	29	52	52	17	46	3108	3108	10032	-6924
149+50.000	30	55	55	16	40	3163	3163	10072	-6909
150+00.000	31	56	56	17	40	3219	3219	10112	-6893
150+50.000	33	59	59	13	38	3279	3279	10150	-6871
151+00.000	34	62	62	13	32	3341	3341	10182	-6841
151+50.000	35	64	64	13	33	3405	3405	10214	-6810
152+00.000	35	65	65	9	28	3470	3470	10242	-6773
152+50.000	36	66	66	9	23	3536	3536	10265	-6729
153+00.000	34	65	65	11	25	3601	3601	10290	-6689
153+50.000	33	62	62	13	30	3663	3663	10319	-6656
154+00.000	30	58	58	12	31	3720	3720	10350	-6630
154+50.000	34	60	60	0	15	3780	3780	10366	-6586
155+00.000	60	88	88	0	0	3868	3868	10366	-6498
155+50.000	28	82	82	8	10	3949	3949	10376	-6427

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156+00.000	18	43	43	45	65	3992	3992	10441	-6448
156+50.000	14	30	30	61	130	4022	4022	10571	-6548
157+00.000	14	26	26	66	157	4048	4048	10727	-6679
157+50.000	17	27	27	74	162	4076	4076	10889	-6813
158+00.000	16	31	31	86	198	4106	4106	11087	-6981
158+50.000	18	31	31	97	225	4137	4137	11312	-7175
159+00.000	18	33	33	104	247	4171	4171	11559	-7389
159+50.000	11	27	27	116	271	4197	4197	11830	-7633
160+00.000	7	16	16	130	303	4214	4214	12134	-7920
160+50.000	3	10	10	145	339	4224	4224	12472	-8249
161+00.000	3	6	6	164	380	4229	4229	12853	-8623
161+50.000	3	5	5	177	421	4235	4235	13273	-9039
162+00.000	2	5	5	186	447	4239	4239	13720	-9481
162+50.000	5	6	6	191	464	4245	4245	14184	-9939
163+00.000	4	7	7	193	472	4253	4253	14656	-10403
163+50.000	3	6	6	197	480	4259	4259	15137	-10877
164+00.000	7	9	9	189	476	4269	4269	15612	-11344
164+50.000	7	13	13	173	446	4281	4281	16059	-11777
165+00.000	12	17	17	168	420	4299	4299	16479	-12180
165+50.000	18	27	27	162	407	4326	4326	16886	-12560
166+00.000	14	29	29	163	400	4355	4355	17286	-12931
166+50.000	9	21	21	179	421	4376	4376	17707	-13331
167+00.000	3	11	11	190	454	4388	4388	18162	-13774
167+50.000	3	6	6	219	503	4393	4393	18665	-14271
168+00.000	0	3	3	243	569	4396	4396	19234	-14837
168+50.000	0	0	0	261	621	4396	4396	19855	-15459
169+00.000	0	0	0	305	698	4396	4396	20552	-16156
169+50.000	0	0	0	350	807	4396	4396	21359	-16963
170+00.000	0	0	0	363	877	4396	4396	22236	-17840
170+50.000	0	0	0	338	863	4396	4396	23100	-18704
171+00.000	0	0	0	315	804	4396	4396	23904	-19508
171+50.000	0	0	0	287	741	4396	4396	24645	-20249
171+80.000	0	0	0	134	311	4396	4396	24956	-20560
171+85.000	0	0	0	175	38	4396	4396	24994	-20598
172+00.000	0	0	0	460	234	4396	4396	25229	-20833
172+09.440	0	0	0	640	256	4396	4396	25484	-21088

STAGE 2G

Alignment: east-2017-Stage-3-EB-centerline
Start Sta: 172+69.440
End Sta: 201+60.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
172+69.440	0	0	0	312	0	0	0	0	0
172+83.000	0	0	0	100	138	0	0	138	-138
172+90.000	0	0	0	196	51	0	0	189	-189
173+50.000	0	0	0	324	768	0	0	956	-956
174+00.000	0	0	0	326	801	0	0	1757	-1757
174+50.000	0	0	0	313	787	0	0	2544	-2544
175+00.000	0	0	0	294	747	0	0	3292	-3292
175+50.000	3	3	3	268	691	3	3	3983	-3980
176+00.000	3	6	6	233	617	9	9	4600	-4591
176+50.000	6	9	9	225	564	18	18	5164	-5146
177+00.000	6	12	12	202	525	30	30	5689	-5659
177+50.000	9	14	14	176	465	44	44	6154	-6110
178+00.000	11	18	18	151	402	62	62	6556	-6494
178+50.000	15	24	24	137	355	86	86	6911	-6825
179+00.000	21	33	33	122	319	119	119	7230	-7110
179+50.000	13	32	32	111	287	151	151	7517	-7365
180+00.000	21	32	32	46	193	184	184	7710	-7526
180+50.000	31	49	49	85	161	233	233	7871	-7638
181+00.000	38	64	64	72	193	296	296	8064	-7767
181+50.000	48	80	80	58	160	376	376	8224	-7848
182+00.000	37	79	79	60	146	455	455	8370	-7914
182+50.000	28	60	60	63	152	516	516	8521	-8006
183+00.000	24	48	48	60	152	564	564	8673	-8109
183+50.000	23	43	43	60	148	607	607	8821	-8214
184+00.000	24	43	43	60	149	650	650	8969	-8320
184+50.000	21	42	42	62	151	691	691	9120	-8428
185+00.000	18	37	37	70	163	728	728	9283	-8555
185+50.000	17	33	33	82	188	761	761	9471	-8709
186+00.000	30	44	44	14	118	805	805	9589	-8784
186+50.000	17	44	44	86	123	849	849	9712	-8864
187+00.000	28	42	42	92	218	891	891	9931	-9040
187+50.000	30	55	55	90	224	946	946	10155	-9209
188+00.000	36	62	62	90	222	1008	1008	10376	-9369
188+50.000	33	64	64	98	232	1072	1072	10608	-9536
189+00.000	29	57	57	102	247	1129	1129	10855	-9726
189+50.000	26	51	51	108	259	1180	1180	11114	-9934
190+00.000	24	47	47	117	278	1227	1227	11392	-10165
190+50.000	24	44	44	130	304	1271	1271	11695	-10424
191+00.000	27	47	47	132	323	1318	1318	12018	-10700
191+50.000	29	52	52	133	327	1370	1370	12345	-10975
192+00.000	34	59	59	131	325	1428	1428	12669	-11241
192+50.000	40	69	69	137	330	1497	1497	12999	-11502
193+00.000	37	71	71	149	353	1569	1569	13352	-11784
193+50.000	39	70	70	151	370	1638	1638	13722	-12084
194+00.000	37	70	70	153	375	1708	1708	14098	-12389
194+50.000	38	69	69	154	378	1777	1777	14476	-12698

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195+00.000	40	72	72	155	381	1850	1850	14856	-13007
195+50.000	38	72	72	156	383	1922	1922	15240	-13318
196+00.000	30	63	63	134	357	1984	1984	15597	-13612
196+50.000	27	52	52	114	305	2037	2037	15902	-13865
197+00.000	33	55	55	94	257	2092	2092	16158	-14066
197+50.000	31	59	59	84	220	2151	2151	16378	-14227
198+00.000	32	59	59	72	193	2210	2210	16571	-14361
198+50.000	34	62	62	60	162	2272	2272	16733	-14461
199+00.000	34	64	64	49	134	2335	2335	16867	-14532
199+50.000	32	62	62	40	110	2397	2397	16977	-14580
200+00.000	36	63	63	32	89	2460	2460	17066	-14606
200+50.000	38	68	68	25	70	2528	2528	17136	-14608
201+00.000	31	63	63	22	57	2592	2592	17193	-14601
201+50.000	26	52	52	19	50	2644	2644	17243	-14600
201+60.000	26	10	10	19	9	2653	2653	17253	-14600

STAGE 2G

Alignment: IH 94 WB Ref Line
Start Sta: 846+86.027
End Sta: 885+24.995

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
846+86.027	26	0	0	19	0	0	0	0	0
846+95.000	34	10	10	18	8	10	10	8	2
847+50.000	33	68	68	22	55	78	78	63	16
848+00.000	32	60	60	25	59	139	139	121	17
848+50.000	35	62	62	22	58	200	200	179	21
849+00.000	34	64	64	21	52	264	264	232	32
849+50.000	36	65	65	19	49	329	329	281	48
850+00.000	36	67	67	18	46	396	396	327	69
850+50.000	38	68	68	16	42	464	464	369	95
851+00.000	36	68	68	17	41	532	532	410	122
851+50.000	28	72	72	25	63	604	604	474	130
852+00.000	26	50	50	28	66	654	654	539	115
852+50.000	18	41	41	31	73	695	695	612	83
853+00.000	19	35	35	27	71	730	730	684	46
853+50.000	25	41	41	22	60	771	771	743	28
854+00.000	22	44	44	28	61	815	815	805	10
854+50.000	26	45	45	21	60	860	860	865	-5
855+00.000	25	47	47	28	61	907	907	925	-19
855+50.000	23	44	44	30	72	951	951	997	-46
856+00.000	29	48	48	22	65	999	999	1062	-63
856+50.000	27	52	52	23	56	1050	1050	1117	-67
857+00.000	25	49	49	24	57	1099	1099	1175	-76
857+50.000	28	50	50	22	56	1149	1149	1231	-82
858+00.000	24	49	49	28	61	1197	1197	1292	-95
858+50.000	23	44	44	27	68	1241	1241	1360	-119
859+00.000	23	43	43	28	69	1284	1284	1429	-144
859+50.000	24	44	44	29	70	1328	1328	1499	-171
860+00.000	24	45	45	27	69	1373	1373	1568	-195
860+50.000	29	49	49	9	45	1422	1422	1613	-191
861+00.000	26	51	51	21	38	1473	1473	1650	-177
861+50.000	30	53	53	20	51	1526	1526	1701	-175
862+00.000	33	59	59	19	48	1584	1584	1749	-165
862+50.000	38	65	65	14	40	1650	1650	1790	-140
863+00.000	32	64	64	17	38	1714	1714	1827	-113
863+50.000	31	58	58	17	41	1772	1772	1868	-96
864+00.000	34	60	60	12	36	1832	1832	1904	-72
864+50.000	31	60	60	11	28	1892	1892	1932	-40
865+00.000	36	62	62	7	22	1954	1954	1955	0
865+50.000	38	68	68	8	18	2022	2022	1973	49
866+00.000	38	71	71	10	22	2093	2093	1995	98
866+50.000	41	73	73	6	19	2166	2166	2014	152
867+00.000	41	76	76	4	12	2242	2242	2026	216
867+50.000	49	84	84	1	7	2326	2326	2033	293
868+00.000	56	97	97	0	2	2423	2423	2035	389
868+50.000	76	123	123	0	0	2546	2546	2035	511

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869+00.000	77	142	142	0	0	2688	2688	2035	653
869+50.000	85	151	151	0	0	2839	2839	2035	804
870+00.000	74	148	148	0	0	2986	2986	2035	952
870+50.000	66	130	130	0	0	3117	3117	2035	1082
871+00.000	58	115	115	0	0	3232	3232	2035	1197
871+50.000	46	96	96	0	0	3328	3328	2035	1294
872+00.000	36	76	76	2	2	3404	3404	2037	1368
872+50.000	37	68	68	1	3	3472	3472	2040	1432
873+00.000	40	72	72	1	2	3544	3544	2042	1502
873+50.000	43	77	77	2	3	3621	3621	2045	1576
874+00.000	44	80	80	5	8	3701	3701	2053	1648
874+50.000	35	73	73	7	14	3773	3773	2067	1706
875+00.000	27	58	58	10	20	3831	3831	2087	1744
875+50.000	27	50	50	9	24	3881	3881	2111	1770
876+00.000	22	45	45	18	33	3926	3926	2144	1781
876+50.000	24	42	42	8	32	3968	3968	2176	1792
877+00.000	33	53	53	1	11	4021	4021	2187	1834
877+50.000	41	68	68	0	1	4089	4089	2188	1901
878+00.000	47	82	82	0	0	4170	4170	2188	1982
878+50.000	37	78	78	0	0	4248	4248	2188	2060
879+00.000	24	56	56	0	0	4305	4305	2188	2116
879+50.000	19	40	40	0	0	4345	4345	2189	2156
880+00.000	16	33	33	1	1	4378	4378	2190	2188
880+50.000	17	30	30	0	2	4408	4408	2192	2216
881+00.000	15	30	30	1	2	4437	4437	2194	2244
881+50.000	14	27	27	3	5	4464	4464	2199	2265
882+00.000	13	25	25	1	5	4489	4489	2204	2285
882+50.000	14	25	25	1	2	4514	4514	2206	2308
883+00.000	14	25	25	3	4	4540	4540	2210	2329
883+50.000	14	25	25	1	4	4565	4565	2215	2350
883+70.152	13	10	10	0	1	4575	4575	2215	2360
884+00.000	13	15	15	0	0	4590	4590	2215	2374
884+50.000	15	26	26	0	0	4616	4616	2216	2400
885+00.000	17	30	30	0	0	4645	4645	2216	2429
885+24.995	22	18	18	0	0	4663	4663	2216	2447

STAGE 2G

Alignment: IH 94 WB Ref Line
Start Sta: 886+57.995
End Sta: 19+07.800

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
886+57.995	12	0	0	10	0	0	0	0	0
887+00.000	14	21	21	5	15	21	21	15	5
887+50.000	14	26	26	1	7	47	47	23	24
888+00.000	15	27	27	0	2	74	74	25	49
888+50.000	15	28	28	2	3	102	102	28	74
889+00.000	15	28	28	3	6	129	129	34	95
889+50.000	17	30	30	1	4	160	160	38	121
890+00.000	18	32	32	0	1	192	192	40	152
890+50.000	15	30	30	1	2	222	222	41	181
891+00.000	14	27	27	3	5	249	249	46	203
891+50.000	15	27	27	3	7	276	276	53	222
892+00.000	14	27	27	6	12	303	303	65	237
892+50.000	12	25	25	9	19	327	327	85	243
893+00.000	12	22	22	13	28	350	350	112	237
893+50.000	13	23	23	17	37	372	372	149	223
894+00.000	13	24	24	20	45	397	397	194	202
894+50.000	15	26	26	17	45	423	423	240	183
895+00.000	13	26	26	18	43	449	449	283	166
895+50.000	12	23	23	17	43	472	472	326	146
896+00.000	13	24	24	18	43	496	496	369	127
896+50.000	14	26	26	24	52	522	522	421	101
897+00.000	15	28	28	30	67	549	549	489	61
897+50.000	15	28	28	43	91	577	577	579	-2
898+00.000	15	27	27	57	124	605	605	703	-99
898+50.000	17	30	30	64	149	635	635	853	-218
899+00.000	19	33	33	72	168	668	668	1020	-353
899+50.000	14	30	30	76	183	698	698	1203	-505
900+00.000	15	26	26	77	188	725	725	1392	-667
900+50.000	14	27	27	76	188	752	752	1580	-828
901+00.000	15	27	27	74	184	778	778	1764	-986
901+50.000	14	27	27	73	181	805	805	1945	-1140
902+00.000	15	27	27	71	178	832	832	2123	-1291
902+50.000	14	27	27	70	174	859	859	2297	-1438
903+00.000	14	27	27	71	174	886	886	2471	-1585
903+50.000	14	26	26	70	174	912	912	2644	-1733
904+00.000	16	28	28	68	169	940	940	2814	-1874
904+50.000	18	31	31	71	170	971	971	2984	-2013
905+00.000	16	32	32	71	175	1003	1003	3159	-2156
905+50.000	17	31	31	72	177	1033	1033	3336	-2303
906+00.000	16	30	30	72	177	1063	1063	3513	-2450
906+50.000	16	30	30	71	176	1093	1093	3689	-2596
907+00.000	16	30	30	69	173	1122	1122	3862	-2739
907+50.000	14	28	28	74	176	1150	1150	4038	-2887
908+00.000	15	27	27	73	180	1178	1178	4218	-3040
908+50.000	16	29	29	70	175	1206	1206	4393	-3187
909+00.000	15	28	28	71	173	1234	1234	4566	-3332
909+50.000	16	28	28	68	172	1263	1263	4738	-3475

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910+00.000	17	30	30	65	165	1293	1293	4903	-3610
910+50.000	16	30	30	66	161	1323	1323	5064	-3741
911+00.000	15	29	29	68	165	1352	1352	5229	-3877
911+50.000	16	29	29	70	171	1381	1381	5399	-4019
912+00.000	14	28	28	61	161	1409	1409	5561	-4152
912+50.000	15	27	27	56	143	1436	1436	5704	-4268
913+00.000	14	27	27	55	136	1463	1463	5840	-4377
913+50.000	16	28	28	46	124	1491	1491	5964	-4473
914+00.000	15	29	29	51	119	1520	1520	6083	-4563
914+50.000	15	28	28	57	133	1548	1548	6216	-4668
915+00.000	20	32	32	48	130	1581	1581	6346	-4766
915+50.000	19	36	36	52	123	1616	1616	6469	-4853
916+00.000	20	36	36	53	130	1652	1652	6599	-4947
916+50.000	17	34	34	52	130	1686	1686	6729	-5043
917+00.000	20	34	34	45	120	1720	1720	6849	-5129
14+50.000	23	35	35	35	89	1755	1755	6938	-5183
15+00.000	21	40	40	29	80	1796	1796	7018	-5222
15+50.000	22	39	39	26	69	1835	1835	7086	-5251
16+00.000	26	44	44	18	55	1879	1879	7141	-5262
16+50.000	28	51	51	12	37	1930	1930	7178	-5248
17+00.000	31	55	55	6	22	1984	1984	7200	-5216
17+50.000	34	60	60	8	18	2045	2045	7218	-5173
18+00.000	50	78	78	0	10	2123	2123	7228	-5105
18+50.000	19	64	64	14	18	2187	2187	7246	-5059
19+00.000	21	37	37	7	27	2223	2223	7272	-5049
19+07.800	17	5	5	7	3	2229	2229	7275	-5047

STAGE 2G

Alignment: IH 94 EB Ref Line
Start Sta: 19+07.806
End Sta: 23+24.996

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
19+07.806	16	0	0	7	0	0	0	0	0
19+49.996	19	27	27	8	16	27	27	16	11
20+00.000	17	33	33	14	27	60	60	43	17
20+50.000	18	32	32	12	32	92	92	74	18
21+00.000	19	34	34	9	26	127	127	101	26
21+50.000	21	37	37	5	18	163	163	119	44
22+00.000	18	36	36	3	11	200	200	130	70
22+20.496	20	14	14	1	2	214	214	132	82
22+50.000	20	22	22	1	1	236	236	133	102
23+00.000	22	40	40	0	1	275	275	134	141
23+24.996	25	22	22	0	0	297	297	135	163
Stage 2G Total						20043		125904	

STAGE 3

Alignment: IH 94 EB Ref Line
Start Sta: 685+00.000
End Sta: 697+93.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
685+00.000	71	0	0	0	0	0	0	0	0
685+08.476	69	22	22	0	0	22	22	0	22
685+50.000	65	103	103	48	49	125	125	49	76
686+00.000	59	114	114	55	128	240	240	177	63
686+37.072	57	80	80	58	104	319	319	280	39
686+50.000	56	27	27	2	19	347	347	300	47
686+57.791	56	16	16	2	1	363	363	300	62
686+97.072	55	80	80	2	4	443	443	304	139
687+00.000	55	6	6	2	0	449	449	305	145
687+07.791	54	16	16	1	1	465	465	305	160
687+50.000	53	83	83	1	2	548	548	307	241
688+00.000	45	91	91	2	3	639	639	310	329
688+50.000	41	80	80	2	4	719	719	314	405
689+00.000	41	76	76	4	7	795	795	321	474
689+07.791	41	12	12	50	10	807	807	331	475
689+50.000	37	61	61	66	120	867	867	451	416
690+00.000	36	67	67	81	181	935	935	632	302
690+50.000	28	59	59	117	244	994	994	876	117
691+00.000	30	54	54	119	290	1047	1047	1167	-119
691+50.000	31	57	57	105	275	1104	1104	1441	-338
692+00.000	31	58	58	91	240	1162	1162	1682	-520
692+50.000	30	57	57	65	191	1219	1219	1873	-654
693+00.000	31	57	57	53	145	1275	1275	2019	-743
693+50.000	36	62	62	29	101	1337	1337	2120	-783
694+00.000	36	67	67	16	55	1404	1404	2175	-771
694+07.791	36	10	10	13	6	1414	1414	2180	-766
694+50.000	34	54	54	2	15	1468	1468	2195	-727
695+00.000	31	60	60	3	5	1528	1528	2201	-673
695+50.000	34	60	60	2	5	1588	1588	2206	-618
696+00.000	40	68	68	1	3	1656	1656	2209	-553
696+07.791	41	12	12	1	0	1668	1668	2209	-541
696+50.000	47	69	69	5	6	1736	1736	2215	-479
696+57.791	48	14	14	6	2	1750	1750	2217	-467
697+00.000	48	75	75	43	51	1825	1825	2268	-443
697+25.000	46	44	44	66	67	1869	1869	2336	-467
697+50.000	48	44	44	94	99	1913	1913	2434	-521
697+57.791	57	15	15	91	36	1928	1928	2470	-542
697+75.000	60	37	37	8	42	1965	1965	2512	-546
697+93.500	59	41	41	7	7	2006	2006	2519	-513

STAGE 3

Alignment: IH 94 EB Ref Line
Start Sta: 699+70.000
End Sta: 751+99.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
699+70.000	63	0	0	77	0	0	0	0	0
700+00.000	63	70	70	55	98	70	70	98	-28
700+07.791	65	19	19	51	20	89	89	118	-29
700+15.970	65	20	20	44	19	108	108	137	-29
700+22.880	72	18	18	35	13	126	126	151	-25
700+50.000	69	71	71	4	26	197	197	177	20
700+57.791	70	20	20	2	1	217	217	178	39
700+65.970	69	21	21	1	1	238	238	178	60
701+00.000	71	89	89	4	5	326	326	183	144
701+07.791	70	20	20	1	1	347	347	184	163
701+20.970	69	34	34	1	1	381	381	185	196
701+50.000	73	76	76	1	2	457	457	186	271
702+00.000	78	139	139	0	2	597	597	188	408
702+50.000	72	139	139	0	0	735	735	189	546
703+00.000	78	139	139	0	0	874	874	189	685
703+50.000	83	149	149	0	0	1023	1023	189	834
704+00.000	81	151	151	0	0	1174	1174	189	985
704+50.000	86	154	154	0	0	1328	1328	189	1140
705+00.000	89	163	163	0	0	1491	1491	189	1302
705+50.000	91	167	167	0	0	1658	1658	189	1469
705+87.840	89	126	126	0	0	1784	1784	189	1596
706+00.000	89	40	40	0	0	1824	1824	189	1636
706+07.791	89	26	26	0	0	1850	1850	189	1661
706+50.000	85	136	136	36	38	1986	1986	227	1759
707+00.000	86	158	158	67	127	2144	2144	354	1790
707+50.000	90	163	163	24	111	2307	2307	465	1841
708+00.000	77	155	155	33	69	2462	2462	534	1927
708+50.000	82	147	147	39	88	2609	2609	622	1986
709+00.000	81	150	150	26	80	2759	2759	703	2057
709+07.791	80	23	23	22	9	2782	2782	712	2070
709+50.000	78	124	124	4	28	2906	2906	740	2167
709+57.791	79	23	23	4	2	2929	2929	741	2188
710+00.000	87	129	129	0	4	3058	3058	745	2313
710+50.000	87	161	161	0	0	3219	3219	746	2473
711+00.000	89	162	162	0	0	3381	3381	746	2636
711+50.000	112	186	186	0	0	3567	3567	746	2822
712+00.000	119	214	214	0	0	3782	3782	746	3036
712+50.000	100	203	203	0	0	3985	3985	746	3239
712+57.791	99	29	29	0	0	4014	4014	746	3268
713+00.000	96	153	153	11	11	4166	4166	757	3410
713+50.000	97	179	179	4	18	4345	4345	774	3571
714+00.000	100	183	183	0	5	4528	4528	779	3749
714+50.000	102	187	187	0	0	4715	4715	779	3936
715+00.000	107	194	194	0	0	4909	4909	779	4130
715+07.791	109	31	31	0	0	4940	4940	779	4161
715+50.000	113	173	173	0	0	5113	5113	779	4334
715+57.791	106	32	32	0	0	5145	5145	779	4366

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716+00.000	109	168	168	0	0	5313	5313	779	4534
716+07.791	107	31	31	0	0	5344	5344	779	4565
716+50.000	106	166	166	0	0	5511	5511	779	4732
717+00.000	105	195	195	0	0	5705	5705	779	4926
717+50.000	103	192	192	0	0	5897	5897	779	5118
718+00.000	99	187	187	0	0	6084	6084	779	5305
718+50.000	96	180	180	0	1	6264	6264	780	5484
718+90.159	89	138	138	0	1	6402	6402	781	5621
719+00.000	89	33	33	1	0	6434	6434	781	5653
719+50.000	91	166	166	1	2	6600	6600	783	5818
719+70.031	87	66	66	1	1	6666	6666	784	5882
720+00.000	86	96	96	1	1	6762	6762	785	5977
720+07.791	86	25	25	2	1	6787	6787	786	6001
720+50.000	90	138	138	0	2	6924	6924	787	6137
721+00.000	95	172	172	0	0	7096	7096	787	6308
721+50.000	91	172	172	0	0	7268	7268	787	6481
722+00.000	90	168	168	0	0	7436	7436	788	6648
722+50.000	90	166	166	1	1	7602	7602	788	6814
723+00.000	89	166	166	2	3	7768	7768	791	6977
723+50.000	96	171	171	0	2	7939	7939	793	7146
724+00.000	84	166	166	1	1	8105	8105	794	7311
724+50.000	90	161	161	1	2	8266	8266	797	7470
725+00.000	91	167	167	0	1	8433	8433	798	7636
725+50.000	87	165	165	0	0	8598	8598	798	7800
726+00.000	87	161	161	0	0	8759	8759	798	7962
726+50.000	88	163	163	0	1	8922	8922	798	8124
726+57.791	89	26	26	1	0	8948	8948	799	8149
727+00.000	86	137	137	10	11	9084	9084	810	8274
727+50.000	85	158	158	0	12	9242	9242	822	8420
728+00.000	81	154	154	0	0	9396	9396	822	8574
728+50.000	80	149	149	0	0	9545	9545	822	8723
729+00.000	73	142	142	0	0	9687	9687	822	8864
729+50.000	75	137	137	0	0	9824	9824	822	9002
730+00.000	75	139	139	0	0	9963	9963	822	9141
730+50.000	72	136	136	0	0	10098	10098	822	9276
731+00.000	73	134	134	0	0	10233	10233	823	9410
731+50.000	68	131	131	0	0	10364	10364	823	9541
732+00.000	70	128	128	0	0	10492	10492	823	9669
732+50.000	75	135	135	0	0	10627	10627	823	9804
733+00.000	84	147	147	0	0	10774	10774	823	9951
733+50.000	83	154	154	0	0	10928	10928	823	10105
734+00.000	82	141	141	10	12	11069	11069	835	10234
734+50.000	89	158	158	1	13	11227	11227	848	10379
735+00.000	88	164	164	0	1	11391	11391	849	10542
735+50.000	74	150	150	0	0	11540	11540	849	10691
736+00.000	68	132	132	0	0	11672	11672	849	10822
736+50.000	69	127	127	0	0	11799	11799	850	10949
737+00.000	64	123	123	0	0	11922	11922	850	11072
737+50.000	59	113	113	1	1	12035	12035	851	11184
738+00.000	52	103	103	4	6	12138	12138	857	11281
738+50.000	47	92	92	10	17	12230	12230	873	11357
739+00.000	41	82	82	9	23	12311	12311	896	11415
739+50.000	35	70	70	10	23	12382	12382	920	11462

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740+00.000	30	60	60	13	28	12441	12441	948	11494
740+50.000	25	51	51	18	38	12492	12492	986	11506
741+00.000	17	39	39	13	38	12530	12530	1024	11506
741+50.000	16	30	30	8	26	12560	12560	1050	11510
742+00.000	8	22	22	5	15	12582	12582	1066	11517
742+50.000	5	12	12	8	16	12594	12594	1081	11513
743+00.000	0	5	5	18	32	12600	12600	1113	11487
743+50.000	0	0	0	32	62	12600	12600	1175	11425
744+00.000	2	2	2	39	88	12602	12602	1264	11338
744+50.000	2	4	4	44	103	12606	12606	1366	11239
745+00.000	1	2	2	67	136	12608	12608	1502	11106
745+39.100	11	9	9	87	147	12617	12617	1650	10967
745+50.000	14	5	5	95	49	12622	12622	1699	10923
746+00.000	20	31	31	126	271	12652	12652	1970	10683
746+50.000	13	30	30	173	368	12682	12682	2338	10344
747+00.000	16	27	27	214	477	12709	12709	2815	9895
747+50.000	29	42	42	226	542	12752	12752	3357	9395
748+00.000	16	42	42	215	543	12794	12794	3900	8894
748+14.660	4	5	5	211	154	12799	12799	4054	8745
748+50.000	3	4	4	227	382	12804	12804	4435	8368
749+00.000	0	3	3	238	573	12806	12806	5008	7798
749+50.000	0	0	0	274	630	12806	12806	5638	7168
750+00.000	0	0	0	321	733	12806	12806	6371	6436
750+50.000	0	0	0	376	859	12806	12806	7229	5577
751+00.000	0	0	0	431	995	12806	12806	8224	4582
751+50.000	0	0	0	455	1091	12806	12806	9316	3491
751+90.000	0	0	0	485	926	12806	12806	10241	2565
751+99.000	0	0	0	483	215	12806	12806	10456	2350

STAGE 3

Alignment: IH 94 EB Ref Line
Start Sta: 753+99.000
End Sta: 816+70.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
753+99.000	22	0	0	254	0	0	0	0	0
754+40.000	7	22	22	205	464	22	22	464	-442
754+50.000	1	2	2	201	100	24	24	564	-540
755+00.000	2	3	3	165	451	26	26	1015	-988
755+50.000	1	3	3	127	360	29	29	1374	-1345
756+00.000	1	3	3	86	262	32	32	1637	-1605
756+50.000	1	2	2	54	172	34	34	1809	-1775
757+00.000	1	2	2	34	108	36	36	1917	-1881
757+50.000	4	5	5	18	64	41	41	1981	-1940
758+00.000	4	8	8	15	41	48	48	2021	-1973
758+50.000	6	9	9	29	55	58	58	2076	-2018
759+00.000	14	18	18	46	93	76	76	2169	-2093
759+50.000	16	28	28	65	137	104	104	2305	-2201
760+00.000	20	34	34	71	167	138	138	2472	-2334
760+50.000	27	43	43	67	169	181	181	2641	-2460
761+00.000	25	48	48	63	160	229	229	2801	-2571
761+50.000	34	55	55	51	141	284	284	2942	-2658
762+00.000	37	66	66	45	118	350	350	3060	-2710
762+50.000	43	74	74	45	110	424	424	3170	-2746
763+00.000	49	85	85	38	102	509	509	3272	-2763
763+50.000	57	98	98	23	75	607	607	3347	-2740
764+00.000	64	111	111	13	44	719	719	3391	-2672
764+50.000	65	119	119	6	23	838	838	3414	-2576
765+00.000	64	51	51	6	6	889	889	3420	-2531
765+50.000	65	120	120	7	15	1009	1009	3435	-2426
766+00.000	60	116	116	6	16	1124	1124	3450	-2326
766+50.000	58	109	109	4	13	1234	1234	3463	-2230
767+00.000	62	111	111	3	9	1345	1345	3473	-2128
767+50.000	60	113	113	5	10	1458	1458	3483	-2025
768+00.000	68	118	118	2	9	1576	1576	3492	-1916
768+50.000	70	127	127	1	5	1703	1703	3496	-1793
769+00.000	69	128	128	2	4	1831	1831	3501	-1670
769+50.000	69	128	128	2	5	1959	1959	3505	-1546
770+00.000	74	133	133	2	5	2091	2091	3510	-1419
770+50.000	76	139	139	4	8	2230	2230	3518	-1288
771+00.000	75	139	139	9	17	2369	2369	3535	-1166
771+50.000	80	143	143	9	22	2512	2512	3557	-1045
772+00.000	82	149	149	8	21	2662	2662	3578	-916
772+50.000	86	155	155	6	18	2817	2817	3596	-779
773+00.000	90	163	163	10	20	2980	2980	3616	-636
773+50.000	91	167	167	23	41	3147	3147	3657	-510
774+00.000	90	168	168	13	44	3315	3315	3701	-386
774+50.000	91	168	168	4	21	3483	3483	3721	-239
775+00.000	93	170	170	1	7	3653	3653	3729	-75
775+50.000	89	168	168	0	2	3822	3822	3730	91

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776+00.000	80	157	157	2	2	3978	3978	3732	246
776+50.000	81	149	149	3	6	4127	4127	3738	389
777+00.000	84	152	152	3	7	4279	4279	3745	534
777+50.000	82	154	154	12	18	4433	4433	3762	671
778+00.000	85	155	155	7	23	4588	4588	3786	803
778+50.000	84	157	157	9	20	4745	4745	3806	940
778+75.000	84	78	78	0	5	4823	4823	3811	1012
779+00.000	87	79	79	0	0	4902	4902	3811	1091
779+50.000	85	159	159	0	0	5061	5061	3811	1250
780+00.000	83	155	155	1	1	5216	5216	3813	1403
780+50.000	80	151	151	2	4	5367	5367	3816	1550
781+00.000	80	148	148	2	5	5515	5515	3822	1694
781+50.000	88	155	155	4	7	5671	5671	3829	1842
782+00.000	86	161	161	3	9	5832	5832	3837	1994
782+50.000	85	158	158	2	6	5990	5990	3843	2147
783+00.000	82	154	154	2	5	6144	6144	3847	2297
783+50.000	81	151	151	2	5	6295	6295	3852	2443
784+00.000	80	149	149	2	4	6444	6444	3856	2588
784+50.000	87	154	154	1	4	6599	6599	3860	2739
785+00.000	86	160	160	1	3	6758	6758	3863	2895
785+50.000	77	150	150	2	4	6909	6909	3867	3042
786+00.000	77	143	143	1	3	7051	7051	3870	3181
786+50.000	82	147	147	0	1	7198	7198	3871	3327
787+00.000	83	153	153	0	0	7351	7351	3871	3480
787+50.000	90	160	160	0	0	7511	7511	3872	3640
788+00.000	88	165	165	2	2	7676	7676	3874	3802
788+50.000	90	164	164	1	4	7840	7840	3877	3963
789+00.000	93	169	169	3	5	8009	8009	3883	4127
789+50.000	92	171	171	1	4	8180	8180	3887	4293
790+00.000	91	169	169	2	3	8349	8349	3890	4460
790+50.000	91	168	168	1	4	8518	8518	3893	4624
791+00.000	91	169	169	0	2	8687	8687	3895	4791
791+50.000	92	170	170	1	1	8857	8857	3897	4960
792+00.000	97	175	175	0	1	9032	9032	3897	5135
792+25.000	96	89	89	0	0	9121	9121	3898	5223
792+50.000	97	89	89	0	0	9210	9210	3898	5313
792+75.000	100	91	91	0	0	9302	9302	3898	5404
793+00.000	102	94	94	0	0	9395	9395	3898	5498
793+25.000	107	97	97	0	0	9492	9492	3898	5594
793+50.000	109	100	100	0	0	9592	9592	3898	5694
794+00.000	99	192	192	0	0	9784	9784	3898	5886
794+50.000	83	168	168	2	2	9952	9952	3900	6053
795+00.000	80	150	150	2	5	10103	10103	3905	6198
795+50.000	81	148	148	4	9	10251	10251	3913	6338
795+75.000	80	74	74	3	5	10326	10326	3918	6408
796+00.000	78	73	73	2	3	10399	10399	3921	6478
796+50.000	79	145	145	2	5	10544	10544	3925	6619
796+76.510	79	77	77	2	2	10621	10621	3928	6694
797+00.000	81	70	70	4	4	10691	10691	3931	6760
797+50.000	189	251	251	7	14	10942	10942	3945	6997
798+00.000	230	389	389	9	19	11330	11330	3964	7367
798+50.000	190	389	389	9	22	11719	11719	3985	7733

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799+00.000	177	340	340	10	24	12059	12059	4010	8049
799+09.351	170	60	60	10	5	12119	12119	4014	8104
799+50.000	93	198	198	9	19	12316	12316	4033	8283
800+00.000	77	158	158	3	14	12474	12474	4047	8427
800+50.000	82	147	147	0	3	12621	12621	4050	8571
801+00.000	77	148	148	14	17	12769	12769	4067	8702
801+05.200	77	15	15	19	4	12784	12784	4072	8712
801+50.000	77	128	128	7	29	12912	12912	4101	8811
801+58.680	77	25	25	8	3	12936	12936	4104	8832
802+00.000	74	116	116	2	10	13052	13052	4114	8938
802+50.000	63	127	127	19	26	13179	13179	4140	9039
803+00.000	56	111	111	40	73	13290	13290	4213	9077
803+12.200	54	25	25	55	29	13315	13315	4242	9073
803+50.000	54	75	75	87	133	13390	13390	4374	9015
804+00.000	53	99	99	125	262	13489	13489	4637	8852
804+50.000	52	97	97	165	357	13586	13586	4994	8592
805+00.000	51	95	95	178	422	13681	13681	5415	8265
805+50.000	47	91	91	192	455	13771	13771	5871	7901
806+00.000	41	81	81	195	476	13853	13853	6347	7506
806+50.000	38	73	73	235	529	13925	13925	6876	7050
807+00.000	30	63	63	202	537	13989	13989	7413	6575
807+50.000	27	54	54	194	487	14042	14042	7900	6142
808+00.000	26	50	50	165	442	14092	14092	8342	5750
808+50.000	18	41	41	149	387	14133	14133	8729	5404
809+00.000	13	29	29	140	356	14162	14162	9085	5077
809+50.000	9	20	20	122	322	14182	14182	9407	4775
810+00.000	6	14	14	121	298	14195	14195	9705	4490
810+50.000	6	10	10	100	272	14206	14206	9977	4229
811+00.000	3	8	8	91	235	14214	14214	10212	4002
811+50.000	0	3	3	95	228	14216	14216	10440	3776
812+00.000	0	0	0	85	221	14216	14216	10662	3555
812+50.000	0	0	0	75	197	14216	14216	10858	3358
813+00.000	0	0	0	73	182	14216	14216	11040	3176
813+50.000	0	0	0	91	202	14216	14216	11241	2975
814+00.000	3	3	3	142	287	14219	14219	11529	2691
814+50.000	0	3	3	178	395	14222	14222	11923	2299
815+00.000	0	0	0	166	518	14222	14222	12442	1781
815+50.000	0	0	0	109	339	14222	14222	12780	1442
816+00.000	0	0	0	102	260	14222	14222	13040	1182
816+50.000	0	0	0	102	252	14223	14223	13292	930
816+70.500	1	0	0	90	97	14223	14223	13389	834

STAGE 3

Alignment: IH 94 EB Ref Line
Start Sta: 818+38.000
End Sta: 885+31.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
818+38.000	12	0	0	61	0	0	0	0	0
819+00.000	22	39	39	25	132	39	39	132	-93
819+50.000	24	42	42	12	46	82	82	178	-96
820+00.000	24	44	44	7	23	126	126	201	-75
820+50.000	21	41	41	22	36	167	167	237	-71
821+00.000	22	40	40	22	55	206	206	293	-86
821+50.000	14	34	34	29	64	240	240	356	-116
822+00.000	21	33	33	32	75	273	273	431	-159
822+50.000	25	43	43	30	77	315	315	508	-193
823+00.000	27	49	49	36	82	364	364	590	-226
823+50.000	30	53	53	52	109	417	417	699	-282
824+00.000	37	62	62	64	143	478	478	841	-363
824+50.000	38	69	69	56	148	547	547	990	-442
825+00.000	42	74	74	56	138	622	622	1128	-506
825+18.695	47	31	31	50	49	653	653	1176	-524
825+50.000	63	64	64	43	72	717	717	1248	-531
826+00.000	38	94	94	6	61	811	811	1308	-497
826+50.000	42	74	74	5	13	885	885	1322	-436
827+00.000	51	86	86	2	7	971	971	1329	-358
827+50.000	57	100	100	1	3	1071	1071	1332	-260
828+00.000	67	115	115	2	3	1187	1187	1335	-148
828+20.520	68	52	52	6	4	1238	1238	1339	-100
828+50.000	71	76	76	1	5	1314	1314	1344	-29
829+00.000	75	135	135	0	2	1449	1449	1345	104
829+50.000	76	139	139	0	0	1589	1589	1345	244
830+00.000	73	137	137	0	0	1726	1726	1346	381
830+50.000	76	138	138	0	0	1864	1864	1346	518
831+00.000	81	146	146	0	0	2010	2010	1346	664
831+50.000	78	147	147	0	0	2157	2157	1346	811
832+00.000	72	139	139	0	0	2296	2296	1346	950
832+50.000	70	132	132	0	0	2428	2428	1346	1082
833+00.000	71	131	131	0	0	2559	2559	1346	1213
833+50.000	73	133	133	0	0	2692	2692	1346	1346
834+00.000	76	138	138	1	1	2830	2830	1347	1483
834+50.000	77	142	142	0	1	2972	2972	1348	1623
834+80.000	79	87	87	0	0	3059	3059	1349	1710
835+00.000	79	59	59	1	0	3117	3117	1349	1768
835+50.000	84	152	152	7	9	3269	3269	1358	1910
835+69.886	85	62	62	11	9	3331	3331	1367	1964
836+00.000	90	97	97	11	16	3429	3429	1383	2045
836+50.000	100	176	176	0	14	3605	3605	1397	2208
837+00.000	97	183	183	0	1	3787	3787	1398	2390
837+50.000	104	185	185	0	1	3973	3973	1398	2574
838+00.000	108	196	196	0	0	4169	4169	1399	2770
838+50.000	102	194	194	1	1	4363	4363	1400	2963

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839+00.000	97	184	184	3	4	4547	4547	1404	3142
839+50.000	98	180	180	3	8	4727	4727	1412	3315
840+00.000	95	179	179	4	9	4905	4905	1421	3484
840+14.942	98	53	53	3	2	4959	4959	1423	3535
840+50.000	98	127	127	3	5	5086	5086	1428	3658
841+00.000	101	185	185	1	5	5271	5271	1433	3838
841+14.113	104	54	54	1	1	5324	5324	1433	3891
841+50.000	109	142	142	0	1	5466	5466	1434	4032
841+63.700	115	57	57	0	0	5523	5523	1434	4089
842+00.000	114	154	154	2	1	5677	5677	1435	4242
842+50.000	105	203	203	2	5	5880	5880	1440	4440
843+00.000	105	194	194	2	6	6074	6074	1445	4629
843+50.000	107	196	196	3	6	6270	6270	1452	4819
843+86.864	108	147	147	3	5	6417	6417	1457	4960
844+00.000	105	52	52	3	2	6469	6469	1459	5010
844+50.000	108	197	197	3	8	6666	6666	1467	5199
845+00.000	110	202	202	4	9	6868	6868	1476	5392
845+50.000	103	197	197	4	9	7064	7064	1485	5579
845+60.474	103	40	40	4	2	7104	7104	1487	5617
846+00.000	103	151	151	2	6	7255	7255	1493	5762
846+50.000	105	193	193	1	4	7448	7448	1497	5951
846+77.417	106	107	107	0	1	7556	7556	1498	6058
847+00.000	106	89	89	1	1	7644	7644	1498	6146
847+50.000	104	194	194	1	2	7838	7838	1500	6338
848+00.000	105	193	193	1	2	8032	8032	1503	6529
848+50.000	101	191	191	1	3	8223	8223	1506	6717
849+00.000	107	192	192	1	3	8415	8415	1509	6906
849+50.000	103	194	194	2	4	8609	8609	1513	7096
850+00.000	108	195	195	2	5	8804	8804	1518	7287
850+50.000	109	201	201	2	5	9006	9006	1523	7483
851+00.000	118	210	210	2	4	9216	9216	1527	7689
851+50.000	118	219	219	1	3	9435	9435	1531	7904
852+00.000	117	217	217	1	3	9652	9652	1533	8119
852+50.000	126	225	225	0	1	9877	9877	1534	8342
852+53.301	125	15	15	0	0	9892	9892	1534	8358
853+08.530	105	185	185	0	0	10078	10078	1534	8543
853+50.000	94	153	153	0	0	10230	10230	1535	8695
854+00.000	92	173	173	0	1	10403	10403	1536	8867
854+50.000	91	170	170	2	2	10573	10573	1538	9035
855+00.000	85	163	163	1	4	10735	10735	1542	9194
855+50.000	92	164	164	1	3	10899	10899	1545	9354
856+00.000	90	168	168	2	4	11068	11068	1549	9519
856+50.000	94	170	170	5	8	11238	11238	1557	9680
857+00.000	93	173	173	11	20	11411	11411	1577	9834
857+50.000	86	166	166	2	16	11577	11577	1593	9984
858+00.000	95	168	168	1	4	11745	11745	1597	10148
858+50.000	98	179	179	3	5	11924	11924	1602	10322
859+00.000	101	184	184	3	7	12108	12108	1609	10499
859+50.000	95	181	181	4	8	12289	12289	1617	10672
860+00.000	86	167	167	1	6	12457	12457	1623	10833
860+50.000	99	171	171	4	7	12628	12628	1630	10998

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861+00.000	93	178	178	12	20	12806	12806	1651	11155
861+50.000	76	157	157	2	17	12963	12963	1667	11295
862+00.000	84	148	148	1	4	13111	13111	1671	11440
862+50.000	93	164	164	1	3	13275	13275	1674	11601
862+56.000	93	21	21	1	0	13296	13296	1674	11621
862+75.000	97	67	67	1	1	13363	13363	1675	11687
863+00.000	84	84	84	1	1	13447	13447	1676	11771
863+50.000	77	150	150	1	2	13596	13596	1678	11918
864+00.000	81	147	147	1	2	13743	13743	1680	12063
864+50.000	81	151	151	1	2	13893	13893	1682	12212
865+00.000	81	150	150	1	2	14043	14043	1684	12359
865+50.000	82	151	151	1	2	14195	14195	1686	12508
865+75.004	79	75	75	1	1	14269	14269	1688	12582
866+00.000	78	73	73	1	1	14342	14342	1689	12653
866+50.000	82	148	148	1	2	14490	14490	1690	12799
867+00.000	88	157	157	0	1	14647	14647	1691	12955
867+50.000	88	163	163	0	1	14810	14810	1692	13118
868+00.000	87	162	162	1	1	14972	14972	1693	13278
868+50.000	96	169	169	2	4	15141	15141	1698	13443
869+00.000	114	194	194	3	7	15335	15335	1705	13630
869+50.000	118	214	214	3	8	15549	15549	1713	13837
870+00.000	110	211	211	5	10	15760	15760	1723	14037
870+50.000	112	206	206	7	16	15966	15966	1738	14227
871+00.000	116	211	211	7	18	16177	16177	1756	14421
871+50.000	108	207	207	10	21	16385	16385	1777	14607
872+00.000	112	203	203	11	26	16588	16588	1804	14785
872+50.000	129	223	223	13	30	16811	16811	1834	14978
873+00.000	131	241	241	14	34	17052	17052	1868	15185
873+50.000	151	262	262	18	40	17314	17314	1907	15407
874+00.000	164	292	292	25	53	17606	17606	1961	15645
874+15.500	164	94	94	28	20	17700	17700	1981	15719
874+50.000	135	191	191	29	48	17891	17891	2029	15862
875+00.000	99	216	216	30	72	18107	18107	2101	16006
875+12.711	97	46	46	31	19	18154	18154	2120	16034
875+50.000	88	128	128	36	62	18282	18282	2182	16100
876+00.000	134	205	205	53	110	18487	18487	2292	16196
876+50.000	124	238	238	50	127	18725	18725	2418	16307
877+00.000	101	208	208	39	110	18933	18933	2528	16405
877+50.000	93	179	179	63	126	19113	19113	2654	16459
878+00.000	85	165	165	81	177	19278	19278	2831	16447
878+50.000	74	147	147	104	228	19425	19425	3059	16366
879+00.000	40	106	106	130	289	19530	19530	3348	16182
879+41.293	14	41	41	163	299	19572	19572	3647	15925
879+50.000	12	4	4	177	73	19576	19576	3720	15856
880+00.000	9	20	20	338	635	19596	19596	4355	15241
880+50.000	2	11	11	564	1111	19607	19607	5466	14141
881+00.000	0	2	2	739	1605	19609	19609	7071	12538
881+50.000	1	1	1	836	1939	19610	19610	9010	10600
882+00.000	4	4	4	360	1472	19614	19614	10482	9132
882+50.000	0	4	4	267	772	19618	19618	11255	8363
883+00.000	0	0	0	275	668	19618	19618	11923	7695
883+50.000	0	0	0	291	697	19618	19618	12620	6998

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884+00.000	0	0	0	325	758	19618	19618	13378	6240
884+50.000	0	0	0	358	841	19618	19618	14219	5399
885+00.000	0	0	0	385	915	19618	19618	15134	4484
885+31.000	0	0	0	389	591	19618	19618	15725	3893

STAGE 3

Alignment: IH 94 EB Ref Line
Start Sta: 887+24.500
End Sta: 18+20.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
887+24.500	0	0	0	471	0	0	0	0	0
887+50.000	0	0	0	487	602	0	0	602	-602
888+00.000	0	0	0	498	1213	0	0	1815	-1815
888+50.000	0	0	0	505	1235	0	0	3051	-3051
889+00.000	0	0	0	508	1248	0	0	4298	-4298
889+50.000	0	0	0	520	1266	0	0	5564	-5564
890+00.000	0	0	0	518	1278	0	0	6842	-6842
890+17.940	0	0	0	516	457	0	0	7299	-7299
890+50.000	19	11	11	521	819	11	11	8118	-8107
891+00.000	20	36	36	535	1300	48	48	9418	-9370
891+50.000	16	33	33	527	1308	81	81	10726	-10645
892+00.000	0	15	15	511	1279	96	96	12004	-11908
892+50.000	0	0	0	499	1244	96	96	13249	-13152
893+00.000	0	0	0	481	1207	96	96	14456	-14360
893+50.000	0	0	0	473	1175	96	96	15631	-15535
894+00.000	0	0	0	453	1140	96	96	16771	-16675
894+50.000	0	0	0	445	1106	96	96	17877	-17780
895+00.000	0	0	0	433	1082	96	96	18959	-18863
895+50.000	0	0	0	416	1046	96	96	20005	-19908
896+00.000	0	0	0	383	984	96	96	20989	-20893
896+50.000	0	0	0	369	927	97	97	21916	-21820
897+00.000	0	1	1	363	902	97	97	22818	-22720
897+50.000	0	1	1	341	867	98	98	23684	-23586
898+00.000	0	0	0	323	819	98	98	24503	-24405
898+50.000	0	0	0	335	811	98	98	25314	-25216
898+63.926	7	2	2	342	232	100	100	25547	-25447
899+00.000	6	9	9	324	592	109	109	26138	-26029
899+50.000	5	11	11	282	746	120	120	26884	-26764
900+00.000	0	5	5	248	652	125	125	27536	-27411
900+50.000	0	0	0	228	587	126	126	28123	-27997
901+00.000	0	0	0	216	546	126	126	28669	-28543
901+50.000	0	1	1	210	524	127	127	29193	-29067
902+00.000	13	12	12	209	516	139	139	29710	-29571
902+50.000	8	19	19	211	518	158	158	30227	-30069
903+00.000	12	19	19	137	429	177	177	30656	-30479
903+50.000	1	12	12	109	304	189	189	30960	-30771
904+00.000	1	1	1	99	257	190	190	31216	-31026
904+50.000	1	1	1	83	224	191	191	31440	-31249
905+00.000	1	1	1	73	192	192	192	31632	-31440
905+50.000	1	1	1	62	166	194	194	31798	-31605
906+00.000	1	1	1	59	149	195	195	31948	-31753
906+50.000	1	2	2	49	133	197	197	32080	-31883
907+00.000	4	4	4	41	111	201	201	32191	-31989
907+50.000	7	10	10	38	98	211	211	32289	-32078
908+00.000	11	16	16	33	88	227	227	32377	-32150
908+50.000	16	25	25	30	77	251	251	32454	-32203

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909+00.000	23	36	36	27	70	287	287	32524	-32236
909+50.000	25	44	44	23	61	332	332	32585	-32253
910+00.000	30	51	51	22	56	383	383	32641	-32258
910+50.000	33	59	59	20	52	441	441	32693	-32252
911+00.000	38	66	66	16	44	507	507	32737	-32230
911+50.000	41	73	73	11	33	580	580	32771	-32191
911+76.000	44	41	41	11	14	621	621	32785	-32164
912+00.000	45	39	39	4	9	660	660	32793	-32133
912+50.000	49	86	86	11	18	747	747	32811	-32065
913+00.000	50	91	91	8	23	837	837	32834	-31997
913+50.000	53	95	95	5	15	933	933	32849	-31917
914+00.000	56	101	101	5	12	1033	1033	32861	-31828
914+23.235	56	48	48	5	6	1082	1082	32867	-31786
914+50.000	59	57	57	3	5	1139	1139	32872	-31734
915+00.000	60	110	110	3	7	1248	1248	32879	-31631
915+50.000	66	116	116	1	5	1364	1364	32884	-31519
916+00.000	65	121	121	1	3	1486	1486	32886	-31401
916+50.000	69	124	124	2	4	1610	1610	32890	-31281
916+76.591	75	71	71	0	1	1680	1680	32892	-31211
917+00.000	74	64	64	0	0	1745	1745	32892	-31147
917+06.682	74	18	18	0	0	1763	1763	32892	-31128
917+27.254	76	57	57	0	0	1821	1821	32892	-31071
917+29.659	76	7	7	0	0	1827	1827	32892	-31064
14+26.826	80	57	57	0	0	1884	1884	32892	-31008
14+50.000	85	71	71	0	0	1955	1955	32892	-30936
14+55.317	86	17	17	0	0	1972	1972	32892	-30919
14+74.833	96	66	66	0	0	2038	2038	32892	-30854
15+00.000	110	96	96	0	0	2134	2134	32892	-30758
15+50.000	120	212	212	0	0	2346	2346	32892	-30546
16+00.000	133	234	234	0	0	2579	2579	32892	-30312
16+50.000	129	242	242	0	0	2821	2821	32892	-30070
16+54.833	122	22	22	0	0	2844	2844	32892	-30048
17+00.000	72	162	162	0	0	3006	3006	32892	-29885
17+50.000	69	130	130	0	0	3137	3137	32892	-29755
18+00.000	67	125	125	0	0	3262	3262	32892	-29629
18+20.000	69	50	50	0	0	3313	3313	32892	-29579
Stage 3 Total						51966		74980	

STAGE 4C

Alignment: IH 94 WB Ref Line
Start Sta: 672+63.894
End Sta: 682+99.996

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
672+63.894	0	0	0	0	0	0	0	0	0
673+50.000	15	23	23	2	5	23	23	5	19
674+00.000	12	25	25	6	10	48	48	14	34
674+50.000	12	22	22	3	11	70	70	25	44
675+00.000	12	22	22	5	10	92	92	35	56
675+50.000	12	23	23	10	18	115	115	54	61
676+00.000	11	22	22	15	31	137	137	85	52
676+25.160	13	12	12	32	29	148	148	114	34
676+40.126	14	8	8	42	27	156	156	142	14
676+45.103	14	3	3	51	11	159	159	153	6
676+50.000	14	3	3	54	13	161	161	166	-5
677+00.000	27	38	38	63	145	199	199	310	-111
677+50.000	46	68	68	61	152	267	267	462	-195
678+00.000	56	95	95	91	186	362	362	649	-287
678+50.000	66	113	113	114	252	475	475	901	-425
679+00.000	72	109	109	131	257	584	584	1158	-574
679+50.000	75	136	136	138	331	720	720	1489	-770
680+00.000	80	144	144	151	355	864	864	1845	-981
680+50.000	83	151	151	160	383	1015	1015	2228	-1212
681+00.000	75	147	147	166	402	1162	1162	2630	-1468
681+50.000	70	134	134	172	417	1296	1296	3047	-1750
682+00.000	62	122	122	166	417	1418	1418	3464	-2046
682+50.000	61	114	114	163	405	1532	1532	3869	-2337
682+99.996	57	110	110	156	392	1641	1641	4261	-2620

STAGE 4C

Alignment: east-2017-Stage-5-WB-centerline
Start Sta: 37+95.700
End Sta: 47+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
37+95.700	46	0	0	156	0	0	0	0	0
38+00.000	44	7	7	156	33	7	7	33	-26
38+50.000	34	72	72	149	376	79	79	409	-329
39+00.000	26	55	55	140	356	134	134	765	-631
39+50.000	9	32	32	136	340	167	167	1105	-939
39+58.473	6	2	2	135	57	169	169	1162	-993
40+00.000	0	5	5	140	282	174	174	1444	-1270
40+50.000	0	0	0	145	351	174	174	1795	-1621
41+00.000	0	0	0	133	342	174	174	2137	-1963
41+50.000	0	0	0	117	308	174	174	2445	-2271
42+00.000	0	0	0	102	270	174	174	2715	-2541
42+50.000	0	0	0	84	229	174	174	2944	-2770
43+00.000	1	1	1	62	179	175	175	3123	-2948
43+50.000	7	7	7	42	128	181	181	3250	-3069
44+00.000	16	21	21	26	83	202	202	3334	-3131
44+50.000	27	40	40	14	49	242	242	3383	-3141
45+00.000	37	59	59	7	26	302	302	3409	-3107
45+50.000	44	75	75	4	13	376	376	3422	-3046
46+00.000	49	86	86	2	8	462	462	3430	-2968
46+50.000	53	95	95	1	4	557	557	3434	-2877
47+00.000	56	101	101	0	1	659	659	3436	-2777

STAGE 4C

Alignment: east-2017-Stage-5-WB-centerline
Start Sta: 109+00.000
End Sta: 115+50.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
109+00.000	54	0	0	0	0	0	0	0	0
109+50.000	55	101	101	1	1	101	101	1	100
110+00.000	57	104	104	1	2	204	204	3	201
110+50.000	58	107	107	1	3	311	311	6	305
111+00.000	50	100	100	3	5	411	411	11	400
111+50.000	34	78	78	5	9	489	489	20	469
112+00.000	10	41	41	10	19	530	530	39	491
112+50.000	6	15	15	40	61	544	544	100	445
113+00.000	5	10	10	67	132	554	554	232	322
113+50.000	5	9	9	85	188	563	563	419	144
114+00.000	7	12	12	93	220	575	575	639	-64
114+50.000	10	16	16	92	229	590	590	868	-277
115+00.000	15	22	22	82	215	613	613	1083	-470
115+50.000	18	31	31	70	187	643	643	1270	-627

STAGE 4C

Alignment: IH 94 EB Ref Line
Start Sta: 760+44.000
End Sta: 805+69.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
760+44.000	24	0	0	68	0	0	0	0	0
760+50.000	27	6	6	66	20	6	6	20	-14
761+00.000	29	52	52	54	147	58	58	167	-109
761+50.000	27	52	52	46	123	109	109	290	-180
762+00.000	28	51	51	39	105	160	160	395	-234
762+50.000	32	56	56	31	86	217	217	481	-265
763+00.000	34	62	62	23	66	278	278	547	-269
763+50.000	42	71	71	14	46	349	349	593	-244
764+00.000	46	82	82	11	32	431	431	625	-194
764+50.000	57	95	95	9	26	526	526	651	-125
765+00.000	60	46	46	9	9	571	571	660	-88
765+50.000	71	122	122	7	19	693	693	679	14
766+00.000	79	139	139	6	16	832	832	695	137
766+50.000	88	154	154	5	13	986	986	708	278
767+00.000	98	172	172	3	9	1159	1159	718	441
767+50.000	106	189	189	2	5	1348	1348	723	625
768+00.000	109	199	199	1	3	1547	1547	726	821
768+50.000	111	204	204	1	3	1751	1751	729	1022
769+00.000	113	207	207	1	2	1958	1958	731	1227
769+50.000	112	208	208	1	2	2166	2166	733	1433
770+00.000	111	207	207	1	2	2373	2373	736	1638
770+50.000	113	207	207	1	2	2581	2581	738	1843
771+00.000	110	206	206	1	2	2787	2787	740	2047
771+50.000	108	202	202	1	3	2989	2989	743	2246
772+00.000	109	201	201	1	3	3190	3190	746	2444
772+50.000	111	203	203	1	3	3394	3394	749	2644
773+00.000	106	200	200	2	3	3594	3594	753	2841
773+50.000	105	195	195	2	4	3789	3789	757	3033
774+00.000	103	193	193	2	4	3982	3982	761	3221
774+50.000	99	188	188	3	5	4170	4170	767	3404
775+00.000	97	182	182	2	5	4352	4352	772	3581
775+50.000	94	176	176	2	4	4529	4529	776	3752
776+00.000	86	167	167	3	7	4695	4695	783	3912
776+50.000	85	158	158	4	9	4853	4853	791	4062
777+00.000	84	156	156	5	11	5010	5010	802	4208
777+50.000	81	153	153	6	13	5163	5163	815	4348
778+00.000	79	149	149	6	14	5312	5312	829	4482
778+50.000	76	143	143	7	16	5455	5455	845	4610
779+00.000	69	134	134	7	17	5589	5589	862	4727
779+50.000	69	128	128	7	17	5717	5717	879	4839
780+00.000	64	124	124	8	18	5841	5841	897	4944
780+50.000	60	115	115	10	22	5956	5956	919	5037
781+00.000	60	111	111	11	25	6068	6068	944	5124
781+50.000	56	107	107	10	25	6175	6175	969	5205
782+00.000	55	102	102	12	27	6277	6277	996	5281
782+50.000	53	99	99	13	30	6376	6376	1026	5350

~continue~										
783+00.000	55	100	100	14	33	6476	6476	1060	5416	
783+50.000	50	98	98	17	38	6574	6574	1098	5476	
784+00.000	48	91	91	18	42	6665	6665	1140	5525	
784+50.000	46	87	87	16	41	6752	6752	1181	5571	
785+00.000	49	87	87	15	38	6840	6840	1219	5621	
785+50.000	44	85	85	17	39	6925	6925	1258	5667	
786+00.000	42	79	79	18	43	7004	7004	1301	5703	
786+50.000	42	78	78	18	44	7083	7083	1345	5737	
787+00.000	43	79	79	18	43	7161	7161	1389	5773	
787+50.000	42	79	79	18	44	7240	7240	1432	5808	
788+00.000	40	76	76	19	46	7316	7316	1478	5838	
788+50.000	42	76	76	18	46	7392	7392	1524	5868	
789+00.000	44	80	80	17	43	7471	7471	1566	5905	
789+50.000	40	78	78	19	44	7549	7549	1610	5939	
790+00.000	41	75	75	19	46	7625	7625	1656	5968	
790+50.000	41	76	76	18	45	7701	7701	1702	5999	
791+00.000	42	77	77	18	45	7778	7778	1746	6032	
791+50.000	41	77	77	18	45	7855	7855	1791	6064	
792+00.000	41	76	76	19	46	7931	7931	1837	6094	
792+50.000	39	74	74	19	47	8005	8005	1884	6121	
793+00.000	38	72	72	20	49	8077	8077	1932	6145	
793+50.000	39	71	71	20	49	8148	8148	1981	6167	
794+00.000	38	71	71	20	49	8219	8219	2031	6188	
794+50.000	35	68	68	22	52	8287	8287	2082	6204	
795+00.000	36	66	66	21	53	8353	8353	2135	6218	
795+50.000	34	66	66	22	54	8419	8419	2189	6230	
796+00.000	38	67	67	24	57	8486	8486	2246	6239	
796+50.000	38	70	70	24	59	8556	8556	2305	6251	
797+00.000	36	69	69	25	60	8625	8625	2366	6259	
797+50.000	36	67	67	25	62	8692	8692	2428	6264	
798+00.000	37	68	68	25	61	8759	8759	2489	6270	
798+50.000	34	66	66	26	63	8825	8825	2552	6273	
799+00.000	38	67	67	22	60	8892	8892	2612	6280	
799+50.000	45	77	77	17	49	8969	8969	2661	6308	
800+00.000	50	88	88	16	40	9057	9057	2701	6355	
800+50.000	56	98	98	12	34	9155	9155	2735	6420	
801+00.000	64	111	111	10	27	9266	9266	2762	6504	
801+50.000	72	126	126	7	21	9392	9392	2783	6608	
802+00.000	67	129	129	7	17	9520	9520	2800	6720	
802+50.000	80	136	136	7	17	9657	9657	2817	6840	
803+00.000	99	165	165	5	15	9822	9822	2832	6990	
803+50.000	107	190	190	7	15	10012	10012	2847	7165	
804+00.000	109	199	199	7	17	10212	10212	2864	7347	
804+50.000	116	208	208	7	18	10420	10420	2882	7538	
805+00.000	130	228	228	8	19	10648	10648	2901	7747	
805+50.000	132	243	243	7	19	10891	10891	2920	7971	
805+69.000	133	93	93	7	7	10984	10984	2927	8057	

STAGE 4C

Alignment: east-2017-Stage-5-WB-centerline
Start Sta: 160+50.000
End Sta: 171+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
160+50.000	125	0	0	7	0	0	0	0	0
161+00.000	124	230	230	8	18	230	230	18	212
161+50.000	122	228	228	10	22	457	457	40	417
162+00.000	117	222	222	11	25	679	679	65	614
162+50.000	119	219	219	10	26	898	898	91	807
163+00.000	114	216	216	10	25	1114	1114	116	997
163+50.000	109	206	206	11	27	1320	1320	143	1177
164+00.000	104	197	197	10	26	1517	1517	169	1348
164+50.000	102	190	190	8	21	1708	1708	191	1517
165+00.000	101	187	187	7	18	1895	1895	208	1687
165+50.000	102	187	187	5	15	2082	2082	223	1859
166+00.000	96	183	183	6	13	2265	2265	236	2029
166+50.000	89	171	171	5	13	2437	2437	250	2187
167+00.000	79	156	156	6	13	2592	2592	263	2329
167+50.000	71	139	139	5	14	2731	2731	277	2454
167+82.550	67	83	83	5	8	2814	2814	285	2530
168+00.000	64	42	42	3	3	2857	2857	288	2569
168+28.545	60	65	65	1	3	2922	2922	291	2631
168+50.000	59	47	47	1	1	2969	2969	292	2677
169+00.000	63	112	112	3	5	3081	3081	297	2784
169+50.000	67	120	120	1	5	3201	3201	302	2899
170+00.000	66	123	123	0	2	3324	3324	304	3020
170+50.000	61	118	118	0	0	3442	3442	304	3138
171+00.000	57	109	109	0	0	3550	3550	304	3247

STAGE 4C

Alignment: east-2017-Stage-5-WB-centerline
Start Sta: 188+00.000
End Sta: 201+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
188+00.000	57	0	0	0	0	0	0	0	0
188+50.000	54	103	103	1	2	103	103	2	101
189+00.000	51	97	97	3	5	200	200	7	193
189+50.000	51	94	94	4	9	294	294	16	278
190+00.000	55	98	98	3	8	392	392	24	368
190+50.000	56	102	102	0	3	494	494	27	467
191+00.000	58	105	105	2	2	599	599	29	570
191+50.000	59	108	108	4	7	707	707	36	671
192+00.000	60	110	110	5	11	818	818	47	770
192+50.000	61	113	113	7	15	930	930	63	868
193+00.000	63	116	116	8	19	1046	1046	82	964
193+50.000	64	118	118	10	23	1164	1164	104	1059
194+00.000	59	113	113	12	28	1277	1277	132	1145
194+50.000	51	102	102	15	34	1379	1379	166	1213
195+00.000	42	87	87	19	42	1465	1465	208	1257
195+50.000	28	66	66	27	57	1531	1531	266	1265
196+00.000	19	44	44	29	69	1574	1574	335	1239
196+50.000	14	30	30	36	80	1605	1605	415	1190
197+00.000	13	25	25	49	105	1630	1630	520	1110
197+50.000	11	22	22	60	134	1652	1652	654	998
198+00.000	10	20	20	70	160	1672	1672	813	858
198+50.000	12	20	20	77	181	1691	1691	994	698
199+00.000	12	22	22	81	194	1713	1713	1188	525
199+50.000	12	22	22	82	200	1736	1736	1388	348
200+00.000	12	22	22	80	199	1758	1758	1587	171
200+50.000	15	25	25	77	194	1783	1783	1781	2
201+00.000	19	31	31	71	182	1813	1813	1963	-149

STAGE 4C

Alignment: IH 94 EB Ref Line
Start Sta: 846+13.000
End Sta: 885+31.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
846+13.000	28	0	0	71	0	0	0	0	0
846+50.000	30	40	40	66	125	40	40	125	-85
847+00.000	27	52	52	62	158	92	92	283	-191
847+50.000	26	49	49	56	145	141	141	428	-286
848+00.000	25	48	48	52	133	189	189	561	-372
848+50.000	25	46	46	48	124	235	235	684	-449
849+00.000	24	45	45	43	113	280	280	797	-517
849+50.000	24	44	44	40	102	325	325	899	-575
850+00.000	23	43	43	37	95	368	368	994	-626
850+50.000	23	42	42	33	86	410	410	1080	-671
851+00.000	23	42	42	26	73	452	452	1153	-702
851+50.000	23	43	43	19	55	494	494	1209	-714
852+00.000	27	47	47	17	44	541	541	1253	-712
852+50.000	32	55	55	13	37	596	596	1289	-694
853+50.000	38	115	115	14	59	711	711	1349	-638
854+00.000	49	81	81	12	32	791	791	1381	-590
854+50.000	47	89	89	12	30	880	880	1411	-531
855+00.000	54	94	94	11	29	974	974	1441	-466
855+50.000	56	102	102	11	27	1076	1076	1467	-391
856+00.000	51	99	99	13	29	1175	1175	1496	-321
856+50.000	52	95	95	12	31	1270	1270	1527	-256
857+00.000	53	97	97	12	29	1368	1368	1556	-189
857+50.000	51	96	96	13	30	1464	1464	1586	-122
858+00.000	55	98	98	11	29	1562	1562	1615	-54
858+50.000	57	103	103	10	27	1665	1665	1642	23
859+00.000	57	105	105	10	26	1770	1770	1668	102
859+50.000	56	105	105	11	26	1874	1874	1693	181
860+00.000	57	105	105	10	26	1979	1979	1719	260
860+50.000	56	105	105	11	25	2084	2084	1744	340
861+00.000	57	105	105	10	26	2189	2189	1770	419
861+50.000	55	103	103	11	27	2292	2292	1797	495
862+00.000	57	103	103	10	26	2395	2395	1823	572
862+50.000	57	105	105	10	25	2501	2501	1848	652
863+00.000	59	107	107	9	24	2608	2608	1872	736
863+50.000	58	108	108	9	21	2716	2716	1893	823
864+00.000	56	106	106	9	22	2822	2822	1915	906
864+50.000	58	105	105	9	22	2927	2927	1937	989
865+00.000	55	104	104	10	22	3031	3031	1960	1071
865+50.000	56	103	103	10	24	3134	3134	1983	1151
866+00.000	56	104	104	10	24	3238	3238	2008	1230
866+50.000	55	103	103	10	25	3340	3340	2033	1307
867+00.000	55	102	102	10	26	3442	3442	2059	1384
867+50.000	53	100	100	11	27	3542	3542	2085	1457
868+00.000	53	98	98	11	28	3640	3640	2113	1527
868+50.000	52	97	97	13	30	3737	3737	2143	1594

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869+00.000	51	95	95	13	32	3832	3832	2175	1657
869+50.000	51	95	95	13	32	3927	3927	2207	1720
870+00.000	50	94	94	15	34	4021	4021	2242	1779
870+50.000	55	97	97	14	35	4118	4118	2277	1841
871+00.000	56	102	102	14	35	4220	4220	2312	1909
871+50.000	57	104	104	14	35	4325	4325	2347	1978
872+00.000	56	105	105	14	34	4430	4430	2381	2049
872+50.000	54	102	102	15	35	4532	4532	2416	2116
873+00.000	52	98	98	15	37	4630	4630	2453	2176
873+50.000	50	94	94	16	39	4724	4724	2492	2231
874+00.000	50	92	92	20	44	4815	4815	2536	2279
874+50.000	49	91	91	21	50	4906	4906	2587	2319
875+00.000	47	89	89	22	53	4995	4995	2640	2355
875+50.000	42	82	82	25	58	5077	5077	2699	2379
876+00.000	41	77	77	26	64	5154	5154	2762	2392
876+50.000	38	73	73	27	66	5227	5227	2828	2400
877+00.000	34	67	67	27	67	5294	5294	2895	2399
877+50.000	30	59	59	28	68	5353	5353	2962	2390
878+00.000	23	48	48	30	71	5401	5401	3033	2368
878+50.000	22	41	41	26	68	5442	5442	3101	2341
879+00.000	23	41	41	18	54	5483	5483	3155	2329
879+50.000	14	34	34	18	45	5518	5518	3199	2318
880+00.000	14	26	26	19	46	5544	5544	3245	2299
880+50.000	14	26	26	15	42	5570	5570	3287	2283
881+00.000	14	26	26	21	44	5597	5597	3332	2265
881+50.000	14	26	26	22	53	5623	5623	3384	2239
882+00.000	14	26	26	18	49	5649	5649	3434	2216
882+50.000	14	26	26	16	42	5676	5676	3476	2200
883+00.000	14	26	26	26	52	5702	5702	3528	2174
883+50.000	16	28	28	24	61	5730	5730	3589	2141
884+00.000	18	31	31	15	47	5761	5761	3636	2125
884+50.000	20	36	36	5	24	5797	5797	3660	2136
885+00.000	21	39	39	0	6	5835	5835	3666	2169
885+31.000	21	25	25	0	0	5860	5860	3666	2193

STAGE 4C

Alignment: IH 94 EB Ref Line
Start Sta: 887+24.500
End Sta: 19+07.800

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
887+24.500	21	0	0	0	0	0	0	0	0
887+50.000	21	20	20	0	0	20	20	0	20
888+00.000	19	38	38	13	16	58	58	16	42
888+50.000	17	33	33	26	48	91	91	65	27
889+00.000	14	29	29	41	83	120	120	148	-27
889+50.000	14	27	27	41	101	147	147	249	-102
890+00.000	12	24	24	59	123	171	171	372	-201
890+50.000	12	22	22	64	152	192	192	523	-331
891+00.000	12	22	22	70	165	214	214	689	-474
891+26.500	12	11	11	73	93	226	226	782	-556
891+50.000	22	15	15	75	86	240	240	867	-627
892+00.000	27	45	45	81	192	286	286	1060	-774
892+50.000	32	54	54	87	206	340	340	1266	-926
893+00.000	36	63	63	94	223	403	403	1489	-1086
893+50.000	38	69	69	92	229	472	472	1717	-1246
894+00.000	39	71	71	91	225	543	543	1942	-1399
894+50.000	39	72	72	91	224	615	615	2167	-1552
895+00.000	41	74	74	89	222	689	689	2389	-1700
895+50.000	42	77	77	87	218	766	766	2606	-1841
896+00.000	42	78	78	85	213	844	844	2819	-1975
896+50.000	45	80	80	80	203	924	924	3022	-2098
897+00.000	48	86	86	76	192	1010	1010	3214	-2204
897+50.000	52	92	92	69	179	1102	1102	3393	-2291
898+00.000	60	103	103	59	158	1205	1205	3551	-2346
898+50.000	65	116	116	53	138	1321	1321	3688	-2368
899+00.000	74	129	129	51	129	1449	1449	3817	-2368
899+50.000	75	138	138	38	110	1587	1587	3927	-2340
900+00.000	75	139	139	31	85	1727	1727	4013	-2286
900+50.000	75	139	139	29	74	1866	1866	4086	-2221
901+00.000	77	141	141	25	66	2006	2006	4153	-2146
901+50.000	78	144	144	22	59	2150	2150	4211	-2061
902+00.000	79	146	146	20	53	2296	2296	4264	-1968
902+50.000	79	147	147	18	47	2443	2443	4311	-1869
903+00.000	80	148	148	17	43	2590	2590	4354	-1764
903+50.000	80	148	148	15	39	2738	2738	4393	-1655
904+00.000	81	149	149	14	36	2888	2888	4429	-1541
904+50.000	83	152	152	13	34	3039	3039	4463	-1423
905+00.000	86	156	156	12	31	3196	3196	4493	-1298
905+50.000	86	160	160	10	27	3355	3355	4521	-1165
906+00.000	88	161	161	9	24	3517	3517	4545	-1028
906+50.000	93	168	168	8	21	3685	3685	4566	-881
907+00.000	95	174	174	7	18	3858	3858	4584	-725
907+50.000	101	182	182	5	15	4040	4040	4598	-558
908+00.000	102	188	188	5	12	4228	4228	4611	-383
908+50.000	104	190	190	4	11	4418	4418	4622	-204
909+00.000	109	197	197	3	9	4615	4615	4631	-16
909+50.000	108	201	201	3	7	4816	4816	4638	178

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910+00.000	109	201	201	2	6	5017	5017	4644	373
910+50.000	113	206	206	2	5	5223	5223	4649	574
911+00.000	112	208	208	2	4	5430	5430	4653	777
911+50.000	111	206	206	2	5	5636	5636	4658	978
912+00.000	112	207	207	3	7	5843	5843	4665	1178
912+50.000	116	211	211	2	7	6054	6054	4672	1383
913+00.000	117	216	216	2	5	6270	6270	4677	1593
913+50.000	119	219	219	2	4	6489	6489	4681	1808
914+00.000	118	220	220	2	4	6708	6708	4685	2023
914+50.000	120	220	220	2	4	6929	6929	4689	2239
915+00.000	114	217	217	2	4	7145	7145	4693	2452
915+50.000	116	213	213	2	4	7358	7358	4698	2661
916+00.000	115	214	214	2	4	7572	7572	4702	2871
916+50.000	116	214	214	2	4	7787	7787	4706	3081
917+00.000	107	207	207	2	4	7993	7993	4710	3284
14+50.000	81	252	252	3	8	8245	8245	4718	3527
15+00.000	71	141	141	4	9	8386	8386	4727	3659
15+50.000	66	127	127	5	12	8513	8513	4739	3774
16+00.000	58	115	115	7	15	8628	8628	4754	3874
16+50.000	54	104	104	9	19	8732	8732	4773	3959
17+00.000	54	100	100	7	20	8832	8832	4793	4038
17+50.000	46	93	93	2	11	8924	8924	4804	4120
18+00.000	51	90	90	0	2	9015	9015	4807	4208
18+50.000	57	100	100	0	0	9115	9115	4807	4308
19+00.000	63	110	110	0	0	9225	9225	4807	4418
19+07.800	57	17	17	0	0	9242	9242	4807	4435

STAGE 4C

Alignment: IH 94 WB Ref Line
Start Sta: 19+07.810
End Sta: 23+00.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
19+07.810	60	0	0	0	0	0	0	0	0
19+50.000	68	101	101	0	0	101	101	0	101
20+00.000	63	122	122	0	0	223	223	0	223
20+50.000	50	105	105	1	1	328	328	1	327
21+00.000	41	84	84	3	4	412	412	5	407
21+50.000	40	74	74	4	9	486	486	13	473
22+00.000	35	69	69	4	10	555	555	23	532
22+20.500	30	25	25	5	4	580	580	28	552
22+50.000	18	26	26	3	6	606	606	34	572
23+00.000	22	37	37	0	4	643	643	37	605
23+00.000	22	0	0	0	0	643	643	37	605

Stage 4C Total3503622671

STAGE 5

Alignment: IH 94 WB Ref Line
Start Sta: 685+00.000
End Sta: 698+06.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
685+00.000	75	0	0	1	0	0	0	0	0
685+09.302	73	26	26	5	1	26	26	1	24
685+50.000	66	105	105	19	23	131	131	25	106
685+66.638	64	40	40	30	20	171	171	45	127
686+00.000	64	79	79	49	65	250	250	110	140
686+50.000	56	112	112	46	118	362	362	228	135
686+58.776	55	18	18	51	21	380	380	249	132
687+00.000	50	80	80	37	89	461	461	338	123
687+50.000	47	90	90	37	91	551	551	428	123
687+58.299	47	14	14	40	16	565	565	444	121
688+00.000	40	67	67	33	76	632	632	520	112
688+50.000	36	70	70	29	76	702	702	596	106
689+00.000	31	62	62	14	53	764	764	649	115
689+33.748	28	37	37	17	25	801	801	674	127
689+50.000	27	16	16	17	13	817	817	687	130
689+57.786	27	8	8	17	6	825	825	694	131
690+00.000	21	37	37	7	25	862	862	719	144
690+50.000	20	38	38	8	19	900	900	737	163
691+00.000	17	35	35	10	22	935	935	759	176
691+50.000	11	26	26	12	27	961	961	787	174
692+00.000	8	17	17	25	45	978	978	832	147
692+50.000	4	11	11	20	55	990	990	887	103
693+00.000	3	7	7	16	44	996	996	931	65
693+50.000	2	4	4	26	52	1001	1001	983	18
694+00.000	1	2	2	24	61	1003	1003	1044	-42
694+50.000	1	1	1	25	60	1004	1004	1104	-101
695+00.000	0	1	1	26	63	1004	1004	1167	-163
695+50.000	0	0	0	29	68	1004	1004	1235	-230
696+00.000	1	1	1	82	136	1005	1005	1370	-365
696+50.000	3	4	4	182	325	1009	1009	1695	-686
697+00.000	6	9	9	180	445	1018	1018	2140	-1123
697+10.490	5	2	2	180	93	1020	1020	2233	-1213
697+50.000	0	4	4	269	437	1024	1024	2670	-1647
698+00.000	0	1	1	278	674	1024	1024	3345	-2320
698+06.500	0	0	0	278	89	1024	1024	3434	-2409

STAGE 5

Alignment: IH 94 WB Ref Line
Start Sta: 699+83.000
End Sta: 751+79.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
699+83.000	4	0	0	89	0	0	0	0	0
700+00.000	5	3	3	84	73	3	3	73	-70
700+50.000	12	15	15	23	132	18	18	204	-186
700+57.786	12	3	3	19	8	22	22	212	-191
700+91.660	18	19	19	9	23	40	40	235	-195
701+00.000	19	6	6	10	4	46	46	239	-193
701+50.000	20	36	36	12	27	82	82	266	-184
702+00.000	15	33	33	10	27	115	115	293	-179
702+50.000	21	34	34	11	25	148	148	319	-170
703+00.000	25	43	43	15	31	191	191	350	-159
703+50.000	40	60	60	7	26	251	251	376	-125
704+00.000	53	86	86	8	18	337	337	394	-57
704+50.000	54	99	99	10	23	436	436	417	19
705+00.000	58	103	103	10	25	539	539	442	97
705+50.000	57	106	106	9	23	645	645	465	180
706+00.000	61	109	109	11	25	754	754	489	265
706+50.000	61	113	113	7	22	867	867	512	355
707+00.000	65	116	116	4	14	983	983	526	457
707+10.790	66	26	26	3	2	1009	1009	528	481
707+50.000	65	94	94	6	8	1104	1104	536	567
708+00.000	63	118	118	7	16	1221	1221	552	669
708+50.000	66	119	119	9	20	1340	1340	572	768
709+00.000	76	132	132	5	17	1472	1472	589	883
709+07.786	77	22	22	4	2	1494	1494	591	903
709+50.000	80	123	123	5	9	1617	1617	600	1017
710+00.000	84	152	152	4	11	1769	1769	611	1159
710+50.000	90	161	161	8	14	1930	1930	625	1305
710+69.660	92	66	66	7	7	1996	1996	632	1364
711+00.000	90	102	102	1	6	2098	2098	639	1459
711+07.786	89	26	26	2	1	2124	2124	639	1485
711+50.000	101	148	148	6	8	2272	2272	648	1624
711+94.660	105	171	171	3	10	2443	2443	658	1785
712+00.000	105	21	21	4	1	2463	2463	658	1805
712+19.660	98	74	74	7	5	2537	2537	663	1874
712+50.000	77	99	99	5	9	2636	2636	672	1964
712+57.786	78	22	22	4	2	2658	2658	674	1984
713+00.000	71	116	116	12	16	2775	2775	690	2084
713+07.786	70	20	20	12	5	2795	2795	695	2100
713+50.000	67	107	107	17	30	2902	2902	725	2178
714+00.000	63	121	121	2	23	3023	3023	748	2275
714+50.000	65	118	118	1	4	3141	3141	751	2390
714+57.786	66	19	19	1	0	3160	3160	751	2408
715+00.000	59	97	97	1	2	3257	3257	753	2504
715+50.000	49	100	100	3	5	3357	3357	759	2598

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716+00.000	47	89	89	6	11	3446	3446	770	2676
716+22.660	45	39	39	10	9	3485	3485	779	2706
716+50.000	38	42	42	11	14	3527	3527	793	2734
717+00.000	34	66	66	9	24	3593	3593	817	2776
717+50.000	35	64	64	4	17	3657	3657	833	2824
718+00.000	33	64	64	2	7	3721	3721	841	2880
718+50.000	38	66	66	2	5	3787	3787	846	2941
719+00.000	34	67	67	4	8	3854	3854	854	3000
719+50.000	33	62	62	3	9	3915	3915	862	3053
719+70.026	35	25	25	2	3	3940	3940	865	3076
720+00.000	34	38	38	6	6	3979	3979	871	3108
720+07.786	35	10	10	7	2	3989	3989	873	3115
720+50.000	35	55	55	29	37	4043	4043	911	3133
721+00.000	36	66	66	24	65	4109	4109	975	3134
721+50.000	38	69	69	24	58	4178	4178	1034	3144
722+00.000	39	71	71	26	61	4249	4249	1095	3154
722+50.000	36	69	69	17	53	4318	4318	1148	3170
723+00.000	37	68	68	10	34	4386	4386	1182	3204
723+50.000	40	72	72	16	33	4458	4458	1215	3243
723+57.786	40	12	12	17	6	4469	4469	1221	3248
724+00.000	35	59	59	5	23	4528	4528	1244	3284
724+50.000	34	65	65	3	10	4593	4593	1253	3339
725+00.000	33	62	62	4	8	4655	4655	1262	3393
725+50.000	32	60	60	7	13	4715	4715	1275	3440
726+00.000	32	59	59	7	17	4774	4774	1292	3482
726+50.000	29	56	56	8	19	4831	4831	1311	3520
726+57.786	28	8	8	8	3	4839	4839	1314	3525
727+00.000	30	45	45	9	17	4884	4884	1331	3553
727+07.786	30	9	9	8	3	4892	4892	1334	3558
727+50.000	30	47	47	15	25	4939	4939	1359	3580
727+57.786	30	9	9	18	6	4948	4948	1365	3582
728+00.000	29	46	46	11	31	4994	4994	1396	3597
728+07.786	29	8	8	11	4	5002	5002	1401	3601
728+50.000	29	45	45	17	29	5047	5047	1430	3617
729+00.000	32	56	56	10	33	5103	5103	1463	3640
729+50.000	40	66	66	5	19	5169	5169	1482	3687
730+00.000	38	72	72	4	12	5241	5241	1494	3747
730+07.786	39	11	11	5	2	5252	5252	1496	3757
730+50.000	43	64	64	4	9	5316	5316	1505	3811
731+00.000	46	82	82	2	8	5398	5398	1513	3885
731+50.000	45	84	84	3	6	5483	5483	1519	3963
732+00.000	55	92	92	3	8	5575	5575	1527	4048
732+07.786	55	16	16	3	1	5591	5591	1528	4063
732+50.000	52	84	84	10	14	5674	5674	1542	4132
733+00.000	51	96	96	6	20	5770	5770	1562	4209
733+07.786	52	15	15	7	2	5785	5785	1564	4221
733+33.501	52	49	49	6	8	5834	5834	1572	4262
733+50.000	51	28	28	14	7	5862	5862	1579	4283
734+00.000	44	88	88	24	47	5951	5951	1626	4325
734+50.000	46	83	83	13	45	6034	6034	1671	4363
735+00.000	41	81	81	17	36	6114	6114	1707	4407
735+50.000	35	71	71	24	50	6185	6185	1757	4429
735+61.415	35	15	15	22	13	6200	6200	1770	4430

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736+00.000	37	52	52	20	40	6252	6252	1810	4442
736+50.000	40	72	72	18	47	6324	6324	1856	4467
737+00.000	40	74	74	35	66	6398	6398	1922	4476
737+50.000	40	74	74	36	88	6472	6472	2010	4462
738+00.000	35	70	70	33	85	6542	6542	2095	4448
738+50.000	34	65	65	31	78	6607	6607	2173	4434
739+00.000	35	64	64	33	79	6671	6671	2252	4419
739+50.000	32	62	62	37	86	6732	6732	2338	4394
739+96.320	35	58	58	88	142	6790	6790	2480	4310
740+00.000	35	5	5	84	16	6795	6795	2496	4299
740+50.000	30	60	60	27	137	6855	6855	2633	4223
740+65.631	30	17	17	19	18	6873	6873	2650	4222
741+00.000	30	38	38	16	29	6911	6911	2680	4231
741+50.000	27	53	53	26	52	6964	6964	2732	4233
742+00.000	24	47	47	63	110	7011	7011	2841	4170
742+50.000	19	39	39	108	211	7051	7051	3052	3999
743+00.000	20	35	35	179	354	7086	7086	3405	3681
743+50.000	12	30	30	198	464	7116	7116	3869	3247
744+00.000	10	21	21	172	455	7137	7137	4325	2812
744+50.000	7	16	16	105	341	7153	7153	4666	2487
745+00.000	1	8	8	76	223	7161	7161	4889	2272
745+50.000	0	1	1	141	267	7162	7162	5156	2006
746+00.000	0	0	0	195	413	7162	7162	5569	1593
746+50.000	0	0	0	224	516	7162	7162	6085	1077
747+00.000	0	0	0	240	571	7162	7162	6656	506
747+50.000	0	0	0	237	587	7162	7162	7243	-81
747+76.320	0	0	0	219	295	7162	7162	7538	-376
748+00.000	0	0	0	234	264	7162	7162	7803	-640
748+50.000	0	0	0	244	589	7162	7162	8392	-1230
749+00.000	0	0	0	254	614	7162	7162	9006	-1844
749+50.000	0	0	0	265	639	7162	7162	9645	-2483
750+00.000	0	0	0	384	799	7162	7162	10444	-3282
750+50.000	0	0	0	466	1047	7162	7162	11491	-4329
751+00.000	0	0	0	546	1246	7162	7162	12737	-5575
751+50.000	0	0	0	593	1403	7162	7162	14140	-6978
751+79.000	0	0	0	592	846	7162	7162	14987	-7824

STAGE 5

Alignment: IH 94 WB Ref Line
Start Sta: 753+77.500
End Sta: 816+61.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
753+77.500	6	0	0	577	0	0	0	0	0
754+00.000	5	5	5	574	638	5	5	638	-633
754+25.976	7	6	6	528	705	11	11	1342	-1332
754+50.000	8	7	7	492	603	17	17	1946	-1929
755+00.000	11	17	17	417	1120	34	34	3065	-3031
755+50.000	17	25	25	343	936	59	59	4002	-3942
756+00.000	16	30	30	279	766	90	90	4768	-4678
756+50.000	19	32	32	209	601	121	121	5368	-5247
757+00.000	21	36	36	190	491	158	158	5860	-5702
757+50.000	23	40	40	182	459	198	198	6319	-6121
758+00.000	27	46	46	181	448	244	244	6766	-6523
758+50.000	24	47	47	174	438	291	291	7204	-6914
759+00.000	27	47	47	177	433	338	338	7637	-7299
759+50.000	28	51	51	170	427	389	389	8064	-7675
760+00.000	27	51	51	178	428	440	440	8492	-8052
760+50.000	30	53	53	163	419	493	493	8911	-8418
761+00.000	34	59	59	152	387	553	553	9298	-8746
761+50.000	40	68	68	134	352	621	621	9650	-9030
762+00.000	42	76	76	96	283	697	697	9933	-9236
762+39.514	43	63	63	54	145	759	759	10078	-9319
762+50.000	45	17	17	47	26	776	776	10104	-9328
762+72.524	47	38	38	39	48	815	815	10152	-9337
763+00.000	54	51	51	23	42	866	866	10194	-9328
763+50.000	59	104	104	25	58	970	970	10252	-9282
764+00.000	68	118	118	21	57	1088	1088	10309	-9220
764+00.000	71	34	34	19	13	1123	1123	10322	-9199
764+10.845	74	29	29	17	10	1152	1152	10332	-9180
764+50.000	75	108	108	60	75	1260	1260	10406	-9146
765+00.000	71	135	135	36	119	1395	1395	10525	-9130
765+50.000	74	134	134	24	75	1530	1530	10600	-9070
765+90.845	104	135	135	15	39	1664	1664	10639	-8974
766+00.000	103	35	35	13	6	1699	1699	10645	-8946
766+50.000	147	232	232	9	28	1931	1931	10673	-8742
767+00.000	176	299	299	10	24	2230	2230	10697	-8467
767+50.000	218	365	365	11	27	2595	2595	10724	-8129
768+00.000	260	443	443	7	22	3038	3038	10746	-7709
768+50.000	280	500	500	1	9	3538	3538	10755	-7217
769+00.000	310	546	546	1	2	4084	4084	10757	-6673
769+50.000	275	542	542	1	2	4626	4626	10759	-6133
770+00.000	163	406	406	1	3	5032	5032	10762	-5730
770+50.000	105	248	248	1	3	5280	5280	10765	-5485
771+00.000	95	185	185	1	3	5465	5465	10768	-5303
771+50.000	96	177	177	4	7	5642	5642	10774	-5132
772+00.000	97	179	179	9	17	5821	5821	10791	-4970
772+50.000	97	180	180	11	26	6000	6000	10817	-4816
773+00.000	98	180	180	13	30	6181	6181	10847	-4666
773+50.000	99	182	182	14	33	6363	6363	10881	-4517

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774+00.000	101	186	186	14	33	6549	6549	10914	-4365
774+50.000	99	186	186	18	38	6735	6735	10952	-4218
775+00.000	101	185	185	28	56	6920	6920	11008	-4088
775+50.000	100	186	186	6	41	7106	7106	11049	-3943
776+00.000	98	183	183	2	9	7289	7289	11058	-3769
776+50.000	98	181	181	2	4	7471	7471	11063	-3592
777+00.000	91	175	175	4	8	7645	7645	11070	-3425
777+50.000	90	167	167	96	124	7813	7813	11194	-3381
778+00.000	90	166	166	51	182	7979	7979	11375	-3396
778+50.000	98	174	174	11	77	8153	8153	11452	-3300
779+00.000	95	178	178	9	25	8331	8331	11477	-3147
779+50.000	100	181	181	25	42	8511	8511	11520	-3009
780+00.000	130	213	213	28	66	8725	8725	11586	-2861
780+50.000	180	288	288	23	63	9012	9012	11649	-2637
781+00.000	238	388	388	14	45	9400	9400	11694	-2294
781+50.000	267	468	468	8	27	9868	9868	11721	-1852
782+00.000	254	483	483	6	16	10352	10352	11737	-1385
782+50.000	269	485	485	10	19	10836	10836	11756	-920
783+00.000	354	576	576	8	22	11413	11413	11778	-365
783+50.000	375	675	675	4	15	12088	12088	11793	295
784+00.000	347	669	669	2	7	12757	12757	11800	957
784+50.000	330	627	627	1	3	13383	13383	11803	1581
785+00.000	366	644	644	2	3	14027	14027	11805	2222
785+50.000	385	695	695	3	6	14723	14723	11811	2911
786+00.000	361	691	691	4	9	15413	15413	11820	3593
786+50.000	263	577	577	7	14	15990	15990	11834	4156
787+00.000	191	420	420	10	22	16410	16410	11856	4554
787+50.000	179	343	343	14	30	16753	16753	11886	4867
788+00.000	132	288	288	20	41	17041	17041	11927	5114
788+50.000	147	259	259	28	58	17300	17300	11985	5314
789+00.000	176	299	299	35	78	17599	17599	12063	5536
789+50.000	130	283	283	27	77	17882	17882	12140	5741
790+00.000	118	230	230	20	58	18111	18111	12198	5913
790+50.000	131	231	231	17	45	18342	18342	12243	6099
791+00.000	150	260	260	15	39	18602	18602	12282	6320
791+50.000	223	345	345	15	37	18947	18947	12319	6628
792+00.000	318	501	501	12	33	19448	19448	12352	7096
792+50.000	367	634	634	12	30	20082	20082	12382	7700
793+00.000	330	645	645	12	30	20727	20727	12411	8316
793+50.000	243	531	531	10	26	21258	21258	12438	8820
794+00.000	158	371	371	13	29	21629	21629	12466	9163
794+50.000	150	285	285	18	39	21915	21915	12505	9410
795+00.000	159	287	287	18	44	22201	22201	12549	9652
795+50.000	278	405	405	20	47	22606	22606	12596	10010
796+00.000	339	571	571	19	48	23178	23178	12645	10533
796+50.000	356	643	643	17	45	23821	23821	12690	11131
797+00.000	339	643	643	15	40	24465	24465	12730	11735
797+50.000	318	608	608	15	37	25073	25073	12767	12305
798+00.000	356	624	624	16	38	25697	25697	12805	12891
798+50.000	383	684	684	17	41	26381	26381	12846	13535

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799+00.000	346	675	675	19	44	27056	27056	12891	14165
799+50.000	316	613	613	17	43	27668	27668	12934	14734
799+66.214	287	181	181	16	13	27849	27849	12947	14902
800+00.000	54	213	213	14	25	28063	28063	12972	15091
800+50.000	56	102	102	14	34	28165	28165	13006	15158
801+00.000	61	108	108	11	30	28273	28273	13037	15236
801+50.000	66	117	117	6	20	28390	28390	13057	15333
802+00.000	71	127	127	3	10	28517	28517	13067	15450
802+50.000	72	133	133	4	8	28649	28649	13075	15574
803+00.000	72	133	133	3	8	28783	28783	13084	15699
803+23.760	72	63	63	4	4	28846	28846	13088	15759
803+50.000	73	71	71	8	7	28917	28917	13095	15822
804+00.000	71	134	134	10	22	29051	29051	13117	15934
804+50.000	71	132	132	10	25	29182	29182	13142	16041
805+00.000	56	118	118	5	18	29300	29300	13159	16141
805+50.000	56	104	104	5	12	29404	29404	13171	16233
805+63.996	57	29	29	4	3	29433	29433	13174	16259
806+00.000	55	75	75	18	20	29508	29508	13194	16314
806+50.000	51	99	99	45	77	29606	29606	13271	16335
807+00.000	47	91	91	66	137	29697	29697	13408	16290
807+23.127	47	40	40	69	77	29737	29737	13484	16253
807+50.000	45	46	46	78	97	29783	29783	13581	16202
808+00.000	46	84	84	60	170	29867	29867	13751	16116
808+50.000	41	80	80	55	142	29948	29948	13893	16055
809+00.000	41	77	77	38	114	30024	30024	14007	16017
809+50.000	44	79	79	21	72	30103	30103	14079	16024
810+00.000	37	74	74	41	76	30177	30177	14155	16022
810+50.000	34	65	65	35	93	30243	30243	14249	15994
811+00.000	34	63	63	27	75	30306	30306	14324	15982
811+50.000	31	60	60	28	67	30366	30366	14391	15975
812+00.000	30	57	57	30	71	30422	30422	14462	15961
812+50.000	31	57	57	39	85	30480	30480	14547	15933
813+00.000	26	53	53	51	111	30533	30533	14657	15875
814+00.000	13	60	60	97	311	30593	30593	14968	15624
814+50.000	10	21	21	95	237	30614	30614	15206	15408
815+00.000	13	21	21	89	227	30636	30636	15433	15202
815+50.000	13	24	24	80	209	30660	30660	15642	15018
816+00.000	12	23	23	106	229	30683	30683	15871	14812
816+50.000	14	24	24	130	290	30707	30707	16161	14545
816+61.500	15	6	6	127	73	30713	30713	16234	14479

STAGE 5

Alignment: IH 94 WB Ref Line
Start Sta: 818+29.000
End Sta: 884+92.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
818+29.000	26	0	0	102	0	0	0	0	0
819+00.000	34	79	79	63	289	79	79	289	-210
819+50.000	36	65	65	37	124	144	144	412	-268
820+00.000	38	69	69	41	96	213	213	508	-296
820+50.000	39	71	71	33	91	284	284	599	-316
821+00.000	48	80	80	32	80	364	364	679	-315
821+50.000	53	93	93	21	65	457	457	744	-287
822+00.000	47	93	93	24	56	550	550	800	-250
822+50.000	53	93	93	18	52	643	643	852	-208
823+00.000	60	105	105	35	66	748	748	917	-169
823+50.000	61	112	112	48	102	860	860	1019	-159
824+00.000	68	119	119	48	118	979	979	1137	-157
824+50.000	70	127	127	0	59	1107	1107	1196	-89
825+00.000	66	125	125	0	0	1232	1232	1196	36
825+50.000	66	122	122	0	0	1355	1355	1196	158
826+00.000	62	119	119	1	1	1473	1473	1197	276
826+50.000	61	114	114	1	2	1587	1587	1200	388
827+00.000	61	113	113	0	2	1701	1701	1201	499
827+28.660	60	64	64	0	0	1765	1765	1202	563
827+50.000	61	48	48	2	1	1813	1813	1203	609
827+72.019	59	49	49	7	5	1862	1862	1208	653
828+00.000	56	59	59	9	11	1921	1921	1219	702
828+50.000	57	105	105	16	30	2026	2026	1249	777
829+00.000	58	107	107	17	40	2133	2133	1290	843
829+50.000	58	107	107	26	54	2240	2240	1343	897
830+00.000	59	108	108	31	71	2348	2348	1415	933
830+50.000	56	107	107	37	84	2454	2454	1499	955
830+68.691	59	40	40	9	21	2494	2494	1520	974
831+00.000	62	70	70	16	19	2565	2565	1539	1026
831+50.000	64	116	116	34	62	2681	2681	1600	1081
832+00.000	67	121	121	25	73	2802	2802	1673	1129
832+50.000	70	127	127	7	40	2929	2929	1713	1216
833+00.000	68	128	128	1	10	3057	3057	1723	1334
833+50.000	64	122	122	0	1	3179	3179	1724	1455
834+00.000	64	119	119	0	0	3298	3298	1724	1574
834+50.000	62	117	117	0	0	3415	3415	1724	1691
835+00.000	59	112	112	2	2	3527	3527	1726	1801
835+50.000	58	109	109	1	3	3636	3636	1730	1906
836+00.000	55	105	105	3	5	3741	3741	1734	2007
836+50.000	53	100	100	3	8	3842	3842	1742	2100
837+00.000	51	96	96	3	8	3938	3938	1750	2188
837+50.000	52	95	95	3	7	4033	4033	1757	2276
838+00.000	52	96	96	6	11	4129	4129	1768	2361
838+50.000	50	94	94	3	11	4223	4223	1779	2444
838+95.000	48	81	81	18	23	4304	4304	1802	2502

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839+00.000	48	9	9	17	4	4313	4313	1806	2507
839+22.654	50	41	41	13	16	4353	4353	1823	2531
839+50.000	51	51	51	4	12	4404	4404	1834	2570
839+73.175	52	44	44	2	3	4449	4449	1838	2611
840+00.000	50	50	50	2	3	4499	4499	1840	2659
840+50.000	47	89	89	3	7	4588	4588	1847	2741
841+00.000	47	86	86	3	7	4674	4674	1854	2820
841+50.000	49	88	88	2	6	4763	4763	1860	2903
842+00.000	48	89	89	3	6	4852	4852	1866	2986
842+50.000	46	86	86	3	8	4938	4938	1874	3065
843+00.000	47	86	86	3	8	5024	5024	1881	3142
843+50.000	47	87	87	2	6	5111	5111	1888	3224
844+00.000	44	84	84	13	19	5196	5196	1907	3289
844+50.000	45	82	82	9	27	5278	5278	1934	3344
845+00.000	46	84	84	10	24	5362	5362	1958	3405
845+50.000	44	83	83	8	23	5446	5446	1981	3465
846+00.000	43	80	80	8	20	5526	5526	2001	3525
846+50.000	40	76	76	17	31	5603	5603	2032	3570
847+00.000	42	75	75	3	25	5678	5678	2057	3621
847+16.707	44	26	26	1	2	5704	5704	2059	3646
847+50.000	46	55	55	0	1	5759	5759	2060	3700
848+00.000	51	90	90	0	0	5849	5849	2060	3789
848+50.000	46	90	90	0	0	5939	5939	2060	3880
849+00.000	57	95	95	0	0	6034	6034	2060	3974
849+50.000	56	104	104	0	0	6139	6139	2060	4079
850+00.000	58	106	106	0	0	6244	6244	2060	4184
850+50.000	60	109	109	0	0	6354	6354	2060	4294
851+00.000	59	110	110	0	0	6464	6464	2060	4404
851+50.000	68	144	144	0	0	6608	6608	2060	4548
852+00.000	81	138	138	0	0	6746	6746	2060	4686
852+50.000	90	158	158	0	0	6904	6904	2060	4844
853+00.000	88	165	165	0	0	7068	7068	2060	5008
853+50.000	71	147	147	0	0	7216	7216	2060	5156
854+00.000	66	127	127	0	0	7342	7342	2060	5282
854+50.000	62	119	119	1	2	7461	7461	2062	5399
855+00.000	60	113	113	1	2	7574	7574	2064	5510
855+50.000	61	111	111	0	1	7686	7686	2065	5621
856+00.000	58	110	110	1	1	7795	7795	2065	5730
856+50.000	58	107	107	2	3	7902	7902	2068	5834
857+00.000	59	108	108	1	3	8011	8011	2071	5940
857+50.000	58	108	108	0	1	8119	8119	2072	6047
858+00.000	60	109	109	0	1	8228	8228	2073	6155
858+50.000	68	119	119	0	0	8347	8347	2073	6274
859+00.000	66	124	124	0	0	8470	8470	2073	6397
859+50.000	67	123	123	0	1	8593	8593	2074	6519
860+00.000	66	123	123	1	2	8716	8716	2076	6640
860+50.000	67	123	123	0	2	8839	8839	2078	6761
861+00.000	66	123	123	0	0	8962	8962	2078	6884
861+50.000	60	117	117	0	0	9080	9080	2078	7001
862+00.000	64	115	115	1	2	9195	9195	2080	7115
862+50.000	64	119	119	2	4	9314	9314	2084	7230

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863+00.000	69	124	124	1	4	9438	9438	2089	7349
863+50.000	72	131	131	1	2	9568	9568	2091	7478
864+00.000	70	131	131	2	3	9700	9700	2094	7606
864+36.777	72	96	96	1	2	9796	9796	2096	7700
864+50.000	72	35	35	3	1	9831	9831	2097	7734
864+69.873	71	52	52	6	5	9884	9884	2102	7782
865+00.000	67	77	77	4	7	9960	9960	2109	7852
865+50.000	66	123	123	2	7	10084	10084	2115	7968
866+00.000	63	119	119	5	9	10203	10203	2124	8079
866+50.000	63	117	117	11	20	10320	10320	2144	8177
867+00.000	66	120	120	16	33	10440	10440	2177	8264
867+50.000	66	123	123	8	29	10563	10563	2206	8357
868+00.000	70	126	126	2	12	10689	10689	2218	8471
868+50.000	67	126	126	1	4	10815	10815	2222	8593
869+00.000	67	124	124	1	3	10939	10939	2224	8714
869+50.000	68	125	125	1	3	11064	11064	2228	8836
870+00.000	65	123	123	1	3	11187	11187	2231	8956
870+50.000	66	122	122	1	3	11308	11308	2233	9075
871+00.000	64	120	120	1	2	11429	11429	2236	9193
871+50.000	64	118	118	1	2	11547	11547	2238	9309
872+00.000	66	120	120	0	1	11667	11667	2239	9428
872+50.000	77	132	132	0	0	11800	11800	2240	9560
873+00.000	84	150	150	0	0	11950	11950	2240	9710
873+50.000	87	159	159	0	0	12108	12108	2240	9869
874+00.000	90	164	164	0	0	12272	12272	2240	10032
874+50.000	94	170	170	0	0	12442	12442	2240	10203
875+00.000	95	175	175	0	0	12618	12618	2240	10378
875+50.000	95	176	176	0	0	12793	12793	2240	10553
876+00.000	90	171	171	0	0	12964	12964	2240	10725
876+50.000	91	168	168	0	0	13132	13132	2240	10892
877+00.000	94	171	171	0	0	13303	13303	2240	11063
877+50.000	86	167	167	0	0	13469	13469	2240	11230
878+00.000	71	146	146	0	0	13615	13615	2240	11376
878+50.000	59	120	120	0	0	13735	13735	2240	11496
879+00.000	56	106	106	0	0	13841	13841	2240	11602
879+50.000	51	99	99	0	1	13941	13941	2240	11700
880+00.000	54	97	97	12	15	14038	14038	2255	11782
880+50.000	102	145	145	27	48	14183	14183	2303	11880
881+00.000	96	184	184	37	78	14367	14367	2381	11985
881+50.000	90	172	172	53	111	14539	14539	2492	12046
882+00.000	83	160	160	71	153	14699	14699	2645	12053
882+50.000	27	102	102	111	224	14800	14800	2869	11931
883+00.000	24	46	46	125	291	14847	14847	3160	11686
883+50.000	24	44	44	153	343	14890	14890	3503	11387
884+00.000	20	40	40	182	413	14931	14931	3916	11015
884+50.000	15	32	32	213	486	14963	14963	4402	10561
884+92.500	21	28	28	224	458	14991	14991	4860	10131

STAGE 5

Alignment: IH 94 WB Ref Line
Start Sta: 886+86.000
End Sta: 18+20.000

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
886+86.000	17	0	0	286	0	0	0	0	0
887+50.000	14	38	38	282	895	38	38	895	-858
888+00.000	12	25	25	270	680	63	63	1575	-1513
888+50.000	9	20	20	259	651	82	82	2227	-2145
889+00.000	9	16	16	249	625	98	98	2852	-2753
889+50.000	10	17	17	240	602	116	116	3454	-3338
890+00.000	10	18	18	238	588	134	134	4042	-3908
890+50.000	13	21	21	231	577	155	155	4619	-4464
891+00.000	42	51	51	221	556	206	206	5175	-4969
891+50.000	14	52	52	233	558	258	258	5733	-5475
892+00.000	15	27	27	222	559	286	286	6293	-6007
892+50.000	3	17	17	242	571	303	303	6864	-6562
892+59.857	0	1	1	268	124	303	303	6988	-6685
893+00.000	0	0	0	276	538	303	303	7526	-7223
893+50.000	0	0	0	244	640	303	303	8166	-7863
894+00.000	0	0	0	230	583	303	303	8749	-8446
894+50.000	0	0	0	208	540	303	303	9289	-8986
895+00.000	0	0	0	176	473	303	303	9763	-9459
895+50.000	0	0	0	174	431	303	303	10194	-9891
896+00.000	0	0	0	145	393	303	303	10587	-10283
896+50.000	0	0	0	106	309	303	303	10895	-10592
897+00.000	0	0	0	77	226	303	303	11121	-10818
897+50.000	0	0	0	58	167	303	303	11288	-10985
898+00.000	0	0	0	39	119	303	303	11408	-11105
898+46.614	1	1	1	24	72	304	304	11480	-11176
898+50.000	2	0	0	24	4	305	305	11484	-11180
898+73.197	7	4	4	15	22	308	308	11506	-11198
898+93.834	12	7	7	10	13	315	315	11519	-11204
899+00.000	13	3	3	10	3	318	318	11522	-11204
899+50.000	24	34	34	4	17	352	352	11539	-11186
900+00.000	27	47	47	4	10	399	399	11549	-11150
900+50.000	36	59	59	3	9	458	458	11559	-11101
901+00.000	47	77	77	2	7	535	535	11566	-11031
901+50.000	56	95	95	8	13	630	630	11579	-10949
901+86.236	60	77	77	8	15	707	707	11594	-10887
902+00.000	62	31	31	18	9	738	738	11603	-10865
902+19.074	67	45	45	11	13	784	784	11616	-10833
902+36.608	71	45	45	1	5	828	828	11622	-10793
902+50.000	74	36	36	2	1	864	864	11623	-10759
903+00.000	81	143	143	1	3	1007	1007	11626	-10618
903+50.000	90	158	158	0	1	1165	1165	11627	-10461
904+00.000	98	175	175	0	1	1340	1340	11627	-10287
904+50.000	105	188	188	0	0	1528	1528	11627	-10099
905+00.000	114	203	203	0	0	1731	1731	11627	-9896
905+50.000	125	222	222	0	0	1953	1953	11627	-9675
906+00.000	130	236	236	0	0	2189	2189	11627	-9439
906+50.000	138	248	248	0	0	2437	2437	11627	-9190

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907+00.000	145	263	263	0	0	2700	2700	11627	-8928
907+50.000	152	275	275	0	0	2975	2975	11627	-8653
908+00.000	152	282	282	0	0	3256	3256	11627	-8371
908+50.000	158	287	287	0	0	3544	3544	11628	-8084
909+00.000	165	299	299	0	0	3843	3843	11628	-7785
909+50.000	164	305	305	0	0	4148	4148	11628	-7480
910+00.000	168	307	307	0	0	4454	4454	11628	-7173
910+50.000	158	302	302	0	0	4756	4756	11628	-6872
911+00.000	162	296	296	0	0	5052	5052	11628	-6575
911+11.427	164	69	69	0	0	5121	5121	11628	-6506
911+50.000	172	240	240	0	0	5361	5361	11628	-6266
911+83.979	169	214	214	0	0	5576	5576	11628	-6052
912+00.000	152	95	95	0	0	5671	5671	11628	-5957
912+50.000	161	290	290	0	0	5960	5960	11628	-5667
913+00.000	166	302	302	0	0	6263	6263	11628	-5365
913+27.622	167	170	170	0	0	6433	6433	11628	-5195
913+50.000	161	136	136	0	0	6568	6568	11628	-5059
914+00.000	143	281	281	1	1	6849	6849	11629	-4779
914+50.000	148	270	270	0	1	7119	7119	11630	-4511
915+00.000	137	264	264	0	0	7383	7383	11630	-4247
915+30.000	141	154	154	0	0	7538	7538	11630	-4092
915+50.000	149	107	107	0	0	7645	7645	11630	-3985
916+00.000	152	278	278	0	0	7923	7923	11630	-3707
916+38.268	144	210	210	0	0	8133	8133	11630	-3497
916+50.000	146	63	63	0	0	8196	8196	11630	-3434
917+00.000	134	259	259	0	0	8454	8454	11630	-3175
14+50.000	119	210	210	0	0	8664	8664	11630	-2965
15+00.000	118	219	219	0	0	8883	8883	11630	-2747
15+50.000	122	222	222	0	0	9105	9105	11630	-2525
15+64.837	121	67	67	0	0	9172	9172	11630	-2458
16+00.000	114	152	152	0	0	9324	9324	11630	-2306
16+50.000	86	185	185	0	1	9509	9509	11631	-2122
17+00.000	62	137	137	1	1	9646	9646	11632	-1986
17+50.000	59	112	112	0	1	9758	9758	11633	-1875
17+61.469	58	25	25	0	0	9783	9783	11633	-1850
18+00.000	64	87	87	0	0	9869	9869	11633	-1764
18+20.000	68	49	49	0	0	9918	9918	11633	-1715
Stage 5 Total						63809		51147	

STAGE 6C

Alignment: IH 94 EB Ref Line
Start Sta: 668+50.000
End Sta: 697+93.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
668+50.000	8	0	0	0	0	0	0	0	0
669+00.000	8	15	15	0	0	15	15	0	14
669+50.000	8	15	15	0	0	29	29	0	29
670+00.000	9	16	16	0	0	45	45	0	45
670+50.000	10	18	18	0	0	63	63	0	63
671+00.000	13	21	21	0	1	85	85	1	84
671+50.000	15	26	26	0	1	110	110	2	108
672+00.000	18	31	31	0	1	141	141	2	138
672+50.000	22	37	37	0	0	178	178	3	175
672+81.240	31	30	30	6	4	208	208	7	201
673+00.000	32	22	22	5	5	230	230	12	218
673+50.000	36	64	64	3	10	293	293	22	272
674+00.000	41	72	72	1	5	365	365	27	338
674+50.000	46	80	80	2	4	445	445	31	414
675+00.000	52	91	91	2	5	536	536	36	500
675+50.000	46	91	91	2	4	627	627	41	587
675+89.000	52	70	70	1	3	698	698	43	654
676+00.000	53	21	21	0	0	719	719	43	676
676+00.000	58	27	27	0	0	745	745	44	702
676+06.342	60	14	14	0	0	759	759	44	716
676+25.000	81	49	49	0	0	808	808	44	764
676+50.000	105	86	86	0	0	894	894	44	850
677+00.000	114	203	203	0	0	1097	1097	44	1053
677+50.000	117	214	214	0	0	1311	1311	44	1267
678+00.000	143	240	240	0	0	1551	1551	44	1507
678+50.000	179	298	298	0	0	1849	1849	44	1805
679+00.000	219	368	368	0	0	2218	2218	44	2174
679+50.000	252	435	435	0	0	2653	2653	44	2609
680+00.000	278	490	490	0	0	3143	3143	44	3099
680+50.000	302	537	537	0	0	3680	3680	44	3636
681+00.000	328	583	583	0	0	4263	4263	44	4219
681+50.000	358	636	636	0	0	4898	4898	44	4855
682+00.000	387	690	690	0	0	5588	5588	44	5544
682+50.000	402	731	731	0	0	6319	6319	44	6275
683+00.000	418	759	759	0	0	7078	7078	44	7034
683+50.000	445	799	799	0	0	7877	7877	44	7833
684+00.000	455	833	833	0	0	8710	8710	44	8666
684+50.000	471	857	857	3	3	9566	9566	48	9519
685+00.000	489	888	888	4	8	10455	10455	56	10399
685+50.000	493	909	909	7	14	11364	11364	69	11295
686+00.000	484	905	905	13	24	12269	12269	94	12176
686+50.000	464	877	877	19	39	13147	13147	133	13014
687+00.000	437	834	834	27	56	13981	13981	189	13792
687+50.000	404	779	779	32	72	14760	14760	261	14499
688+00.000	367	713	713	40	88	15473	15473	350	15124
688+50.000	324	639	639	43	102	16113	16113	452	15661
689+00.000	277	557	557	50	116	16669	16669	568	16102
689+50.000	236	475	475	57	132	17145	17145	700	16445

PROJECT NO: 1022-08-72

HWY: IH 94

COUNTY: DUNN

EARTHWORK TABULATIONS

SHEET: 575

E

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690+00.000	206	409	409	63	148	17554	17554	848	16706
690+50.000	190	366	366	68	161	17920	17920	1009	16911
691+00.000	187	349	349	69	169	18269	18269	1178	17091
691+50.000	192	351	351	68	169	18620	18620	1347	17274
692+00.000	187	351	351	73	173	18971	18971	1520	17452
692+50.000	156	318	318	88	198	19289	19289	1717	17572
693+00.000	168	300	300	81	208	19590	19590	1925	17665
693+50.000	181	323	323	74	191	19912	19912	2116	17797
694+00.000	178	332	332	79	189	20244	20244	2304	17940
694+50.000	208	357	357	85	202	20601	20601	2507	18094
695+00.000	242	416	416	85	209	21017	21017	2716	18302
695+50.000	225	433	433	87	212	21450	21450	2928	18522
696+00.000	207	400	400	88	216	21850	21850	3143	18707
696+50.000	195	372	372	84	212	22223	22223	3355	18868
697+00.000	187	354	354	81	204	22577	22577	3559	19018
697+50.000	194	353	353	32	139	22930	22930	3698	19231
697+93.500	211	326	326	7	41	23256	23256	3739	19516

STAGE 6C

Alignment: IH 94 EB Ref Line
Start Sta: 699+83.005
End Sta: 751+52.700

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
699+83.005	227	0	0	4	0	0	0	0	0
700+00.000	228	143	143	4	4	143	143	4	140
700+50.000	201	397	397	59	78	541	541	81	459
701+00.000	227	396	396	56	141	937	937	222	715
701+50.000	224	417	417	53	134	1354	1354	356	998
702+00.000	220	411	411	51	129	1765	1765	485	1281
702+50.000	219	406	406	49	124	2172	2172	608	1563
703+00.000	216	402	402	47	119	2574	2574	727	1847
703+50.000	207	392	392	40	108	2966	2966	835	2130
704+00.000	199	376	376	36	94	3342	3342	929	2413
704+50.000	207	376	376	34	86	3718	3718	1015	2702
705+00.000	209	385	385	34	83	4103	4103	1099	3004
705+50.000	202	380	380	37	87	4483	4483	1186	3297
706+00.000	188	361	361	41	96	4844	4844	1282	3562
706+50.000	193	353	353	39	99	5196	5196	1381	3816
707+00.000	194	359	359	36	93	5555	5555	1473	4082
707+50.000	192	358	358	37	91	5913	5913	1564	4348
708+00.000	188	352	352	40	95	6265	6265	1659	4605
708+50.000	185	346	346	40	98	6610	6610	1758	4853
709+00.000	181	338	338	42	101	6949	6949	1858	5090
709+50.000	178	332	332	43	104	7281	7281	1962	5319
710+00.000	175	327	327	41	102	7608	7608	2065	5543
710+50.000	173	322	322	40	99	7931	7931	2164	5767
711+00.000	170	318	318	34	91	8248	8248	2255	5993
711+50.000	168	313	313	28	77	8562	8562	2332	6230
712+00.000	166	309	309	28	69	8871	8871	2401	6470
712+50.000	163	305	305	39	83	9175	9175	2484	6691
713+00.000	161	301	301	44	102	9476	9476	2586	6890
713+50.000	159	297	297	45	109	9773	9773	2695	7077
714+00.000	157	293	293	44	110	10066	10066	2805	7261
714+50.000	155	290	290	47	113	10355	10355	2918	7438
715+00.000	154	286	286	47	116	10642	10642	3034	7608
715+50.000	152	283	283	49	118	10925	10925	3151	7774
716+00.000	150	280	280	53	125	11205	11205	3276	7928
716+50.000	149	277	277	59	137	11482	11482	3413	8069
717+00.000	148	275	275	59	144	11757	11757	3558	8199
717+50.000	147	272	272	59	146	12029	12029	3703	8326
718+00.000	145	270	270	60	147	12299	12299	3850	8450
718+50.000	145	269	269	60	147	12568	12568	3997	8572
719+00.000	144	267	267	60	148	12835	12835	4144	8691
719+50.000	157	279	279	60	148	13114	13114	4292	8822
720+00.000	173	305	305	63	151	13419	13419	4443	8977
720+50.000	173	320	320	62	153	13740	13740	4596	9143
721+00.000	174	321	321	60	150	14061	14061	4746	9315
721+50.000	175	323	323	60	148	14384	14384	4894	9490

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722+00.000	176	325	325	60	149	14709	14709	5043	9666
722+50.000	176	326	326	61	149	15035	15035	5192	9843
723+00.000	176	327	327	60	149	15361	15361	5341	10021
723+50.000	177	327	327	58	146	15688	15688	5487	10202
724+00.000	180	330	330	59	144	16018	16018	5631	10387
724+50.000	182	335	335	60	146	16354	16354	5777	10576
725+00.000	183	338	338	59	146	16692	16692	5924	10768
725+50.000	183	339	339	60	147	17031	17031	6071	10960
726+00.000	180	335	335	63	151	17366	17366	6222	11144
726+50.000	175	328	328	61	152	17695	17695	6374	11321
727+00.000	170	319	319	62	151	18014	18014	6524	11489
727+50.000	166	311	311	63	154	18325	18325	6679	11646
728+00.000	163	304	304	66	159	18629	18629	6837	11791
728+50.000	160	298	298	69	166	18927	18927	7004	11924
729+00.000	158	294	294	70	172	19221	19221	7176	12045
729+50.000	157	291	291	70	172	19512	19512	7348	12164
730+00.000	157	290	290	69	171	19802	19802	7519	12283
730+50.000	158	291	291	67	168	20093	20093	7687	12406
731+00.000	160	295	295	66	164	20388	20388	7851	12537
731+50.000	164	300	300	66	162	20688	20688	8013	12675
732+00.000	169	308	308	63	158	20996	20996	8171	12825
732+50.000	169	313	313	64	156	21310	21310	8327	12982
733+00.000	163	308	308	69	164	21618	21618	8491	13127
733+50.000	170	308	308	68	169	21926	21926	8660	13266
734+00.000	176	295	295	73	161	22221	22221	8820	13401
734+50.000	175	325	325	74	181	22546	22546	9002	13544
735+00.000	179	327	327	73	181	22873	22873	9183	13690
735+50.000	182	334	334	71	177	23207	23207	9360	13847
736+00.000	184	339	339	68	171	23546	23546	9531	14015
736+50.000	186	342	342	66	165	23888	23888	9696	14192
737+00.000	186	345	345	64	160	24233	24233	9856	14377
737+50.000	186	345	345	64	158	24578	24578	10014	14564
738+00.000	186	344	344	65	159	24922	24922	10173	14750
738+50.000	206	363	363	61	155	25285	25285	10328	14958
739+00.000	227	401	401	58	147	25686	25686	10474	15212
739+50.000	201	396	396	61	146	26082	26082	10620	15462
740+00.000	175	348	348	63	153	26431	26431	10773	15658
740+50.000	170	320	320	63	156	26751	26751	10929	15821
741+00.000	165	311	311	65	159	27061	27061	11088	15973
741+50.000	179	319	319	67	163	27380	27380	11251	16129
742+00.000	193	345	345	68	167	27725	27725	11418	16307
742+50.000	183	348	348	72	173	28073	28073	11591	16482
743+00.000	173	330	330	77	184	28403	28403	11774	16629
743+50.000	163	311	311	81	195	28714	28714	11969	16745
744+00.000	156	295	295	77	195	29009	29009	12164	16846
744+50.000	149	283	283	77	190	29292	29292	12354	16938
745+00.000	144	272	272	77	190	29564	29564	12544	17020
745+50.000	140	263	263	78	191	29827	29827	12735	17092
746+00.000	130	250	250	83	197	30077	30077	12933	17144
746+50.000	115	227	227	91	214	30304	30304	13146	17158
747+00.000	130	227	227	79	209	30531	30531	13355	17176
747+50.000	133	243	243	74	188	30774	30774	13544	17231

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748+00.000	134	247	247	72	181	31021	31021	13724	17297
748+50.000	138	252	252	70	175	31273	31273	13899	17374
749+00.000	147	264	264	64	164	31537	31537	14063	17474
749+50.000	159	284	284	57	149	31821	31821	14213	17608
750+00.000	168	304	304	53	135	32124	32124	14348	17776
750+50.000	184	326	326	50	126	32450	32450	14474	17976
751+00.000	194	350	350	49	121	32800	32800	14596	18205
751+50.000	170	337	337	45	115	33137	33137	14711	18427
751+51.066	170	7	7	44	2	33144	33144	14713	18431
751+52.700	0	5	5	0	2	33149	33149	14715	18434

STAGE 6C

Alignment: IH 94 EB Ref Line
Start Sta: 753+99.221
End Sta: 816+61.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
753+99.221	123	0	0	16	0	0	0	0	0
754+50.000	111	220	220	25	52	220	220	52	168
755+00.000	117	211	211	23	59	432	432	111	321
755+50.000	118	218	218	22	55	649	649	166	483
756+00.000	113	214	214	22	55	863	863	221	642
756+50.000	112	208	208	20	52	1071	1071	273	798
757+00.000	116	211	211	16	43	1282	1282	317	965
757+50.000	126	225	225	11	33	1507	1507	349	1157
758+00.000	135	242	242	7	23	1749	1749	372	1377
758+50.000	143	257	257	6	16	2006	2006	388	1618
759+00.000	146	267	267	7	15	2273	2273	404	1870
759+50.000	143	268	268	8	18	2541	2541	422	2119
760+00.000	137	260	260	10	22	2801	2801	443	2358
760+50.000	131	249	249	9	23	3049	3049	467	2583
761+00.000	129	240	240	9	22	3290	3290	489	2801
761+50.000	125	234	234	7	19	3524	3524	507	3017
762+00.000	118	225	225	7	17	3749	3749	524	3225
762+50.000	111	212	212	7	17	3961	3961	541	3420
763+00.000	98	194	194	6	16	4155	4155	558	3597
763+50.000	87	171	171	6	14	4326	4326	572	3754
764+00.000	77	152	152	5	13	4478	4478	585	3893
764+50.000	71	137	137	9	18	4615	4615	603	4012
765+00.000	67	54	54	10	10	4669	4669	613	4056
765+50.000	64	121	121	15	31	4790	4790	645	4146
766+00.000	59	114	114	21	44	4904	4904	689	4215
766+50.000	55	106	106	22	53	5010	5010	742	4268
767+00.000	52	99	99	25	58	5109	5109	800	4309
767+50.000	51	95	95	27	64	5204	5204	864	4340
768+00.000	50	94	94	28	68	5298	5298	932	4366
768+50.000	50	93	93	28	69	5390	5390	1002	4389
769+00.000	50	93	93	28	70	5483	5483	1071	4412
769+50.000	50	93	93	28	69	5576	5576	1141	4435
770+00.000	50	93	93	28	68	5669	5669	1209	4460
770+50.000	51	94	94	27	67	5763	5763	1276	4487
771+00.000	51	94	94	27	66	5857	5857	1343	4515
771+50.000	51	95	95	26	65	5952	5952	1407	4544
772+00.000	53	97	97	24	62	6048	6048	1469	4580
772+50.000	55	100	100	22	57	6149	6149	1525	4623
773+00.000	59	106	106	20	51	6255	6255	1577	4678
773+50.000	57	108	108	20	50	6363	6363	1626	4736
774+00.000	55	104	104	21	50	6467	6467	1677	4790
774+50.000	54	101	101	21	51	6568	6568	1728	4840
775+00.000	55	101	101	20	50	6669	6669	1778	4891
775+50.000	55	102	102	19	47	6771	6771	1825	4946
776+00.000	56	103	103	17	44	6874	6874	1870	5005
776+50.000	57	105	105	16	41	6979	6979	1911	5068

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777+00.000	58	106	106	15	38	7085	7085	1949	5136
777+50.000	59	108	108	14	35	7193	7193	1985	5208
778+00.000	59	109	109	12	32	7302	7302	2017	5285
778+50.000	60	111	111	11	29	7412	7412	2046	5366
779+00.000	61	112	112	10	26	7525	7525	2072	5453
779+50.000	61	113	113	9	23	7638	7638	2095	5544
780+00.000	62	114	114	7	19	7752	7752	2114	5638
780+50.000	63	116	116	6	16	7868	7868	2130	5738
781+00.000	65	119	119	5	13	7987	7987	2143	5844
781+50.000	66	122	122	4	10	8109	8109	2154	5955
782+00.000	67	123	123	4	10	8232	8232	2163	6069
782+50.000	68	124	124	3	9	8356	8356	2172	6184
783+00.000	67	125	125	5	10	8481	8481	2182	6299
783+50.000	68	125	125	4	12	8606	8606	2194	6412
784+00.000	68	126	126	4	10	8732	8732	2204	6528
784+50.000	68	126	126	3	9	8858	8858	2213	6646
785+00.000	68	127	127	3	8	8985	8985	2221	6764
785+50.000	68	127	127	3	8	9112	9112	2229	6882
786+00.000	68	127	127	3	8	9238	9238	2237	7001
786+50.000	68	127	127	3	8	9365	9365	2246	7119
787+00.000	68	126	126	4	9	9491	9491	2255	7237
787+50.000	68	126	126	4	10	9617	9617	2265	7353
788+00.000	68	125	125	5	11	9742	9742	2276	7467
788+50.000	67	125	125	5	12	9867	9867	2288	7579
789+00.000	66	123	123	6	13	9990	9990	2301	7689
789+50.000	66	122	122	6	14	10112	10112	2315	7797
790+00.000	67	123	123	6	15	10235	10235	2330	7905
790+50.000	67	123	123	6	16	10359	10359	2345	8013
791+00.000	66	123	123	7	16	10482	10482	2362	8120
791+50.000	66	123	123	7	17	10604	10604	2379	8226
792+00.000	66	123	123	7	17	10727	10727	2396	8331
792+50.000	66	122	122	7	18	10849	10849	2414	8436
793+00.000	66	122	122	7	18	10972	10972	2431	8540
793+50.000	66	122	122	7	18	11094	11094	2450	8644
794+00.000	66	122	122	7	18	11216	11216	2468	8748
794+50.000	66	122	122	7	18	11338	11338	2486	8852
795+00.000	66	122	122	7	18	11461	11461	2504	8957
795+50.000	66	122	122	7	18	11583	11583	2522	9061
796+00.000	66	123	123	10	21	11705	11705	2543	9162
796+50.000	66	123	123	10	25	11828	11828	2567	9261
797+00.000	66	123	123	10	24	11951	11951	2591	9360
797+50.000	67	123	123	9	23	12074	12074	2615	9459
798+00.000	67	124	124	9	23	12198	12198	2637	9560
798+50.000	67	124	124	9	22	12322	12322	2659	9663
799+00.000	67	124	124	9	22	12445	12445	2681	9764
799+50.000	66	123	123	11	25	12568	12568	2706	9862
800+00.000	65	122	122	12	29	12690	12690	2734	9956
800+50.000	65	121	121	13	32	12811	12811	2766	10045
801+00.000	64	120	120	14	34	12930	12930	2800	10130
801+50.000	65	119	119	16	37	13050	13050	2837	10213
802+00.000	67	122	122	13	35	13172	13172	2872	10300
802+50.000	70	127	127	16	35	13299	13299	2907	10392

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803+00.000	72	131	131	19	43	13430	13430	2950	10480
803+50.000	77	138	138	20	48	13568	13568	2998	10570
804+00.000	83	148	148	20	50	13717	13717	3048	10669
804+50.000	89	159	159	21	51	13876	13876	3099	10777
805+00.000	95	170	170	22	53	14046	14046	3152	10894
805+50.000	101	181	181	22	54	14227	14227	3207	11020
806+00.000	105	191	191	23	56	14418	14418	3263	11155
806+50.000	110	200	200	24	58	14618	14618	3320	11298
807+00.000	116	209	209	24	59	14827	14827	3379	11448
807+50.000	119	218	218	26	62	15045	15045	3441	11603
808+00.000	120	221	221	28	66	15266	15266	3507	11758
808+50.000	117	219	219	31	72	15485	15485	3579	11905
809+00.000	112	212	212	35	82	15697	15697	3661	12036
809+50.000	104	200	200	42	96	15898	15898	3757	12141
810+00.000	91	181	181	52	116	16079	16079	3873	12206
810+50.000	79	157	157	63	142	16236	16236	4015	12222
811+00.000	79	146	146	73	168	16383	16383	4183	12200
811+50.000	86	153	153	75	182	16536	16536	4364	12171
812+00.000	88	161	161	73	182	16696	16696	4546	12150
812+50.000	98	172	172	71	178	16868	16868	4724	12144
813+00.000	112	195	195	69	173	17063	17063	4896	12167
813+50.000	135	229	229	64	164	17292	17292	5060	12232
814+00.000	159	272	272	66	160	17564	17564	5220	12343
814+50.000	174	308	308	80	180	17872	17872	5400	12472
815+00.000	193	415	415	85	248	18287	18287	5648	12639
815+50.000	187	352	352	79	202	18639	18639	5850	12789
816+00.000	170	331	331	71	186	18970	18970	6036	12934
816+50.000	207	349	349	7	96	19319	19319	6132	13187
816+61.500	206	88	88	2	3	19407	19407	6134	13273

STAGE 6C

Alignment: IH 94 EB Ref Line
Start Sta: 818+38.004
End Sta: 884+92.500

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
818+38.004	201	0	0	1	0	0	0	0	0
819+00.000	152	405	405	47	72	405	405	72	333
819+50.000	151	280	280	54	124	685	685	197	489
820+00.000	154	282	282	57	137	967	967	334	633
820+50.000	156	287	287	61	146	1254	1254	479	774
821+00.000	160	293	293	57	146	1546	1546	625	921
821+50.000	165	300	300	56	138	1847	1847	763	1083
822+00.000	169	309	309	54	135	2156	2156	898	1258
822+50.000	171	315	315	53	131	2471	2471	1029	1441
823+00.000	168	313	313	52	129	2784	2784	1158	1626
823+50.000	163	306	306	54	130	3091	3091	1288	1803
824+00.000	148	288	288	62	142	3379	3379	1430	1949
824+50.000	150	276	276	61	151	3654	3654	1581	2073
825+00.000	153	281	281	60	149	3935	3935	1730	2205
825+50.000	132	265	265	70	160	4200	4200	1890	2309
826+00.000	120	233	233	79	183	4433	4433	2074	2360
826+50.000	113	215	215	84	200	4649	4649	2274	2375
827+00.000	113	209	209	79	201	4858	4858	2474	2383
827+50.000	119	215	215	69	183	5073	5073	2657	2416
828+00.000	125	226	226	64	164	5299	5299	2822	2477
828+50.000	123	229	229	61	154	5528	5528	2976	2552
829+00.000	128	232	232	58	147	5760	5760	3123	2637
829+50.000	132	241	241	55	139	6001	6001	3262	2739
830+00.000	136	249	249	53	132	6249	6249	3394	2855
830+50.000	139	255	255	51	127	6504	6504	3521	2982
831+00.000	153	271	271	50	124	6774	6774	3645	3129
831+50.000	142	273	273	49	121	7048	7048	3767	3281
832+00.000	143	264	264	56	130	7312	7312	3896	3415
832+50.000	147	269	269	60	143	7581	7581	4039	3542
833+00.000	153	278	278	59	146	7858	7858	4185	3673
833+50.000	155	285	285	58	144	8143	8143	4329	3814
834+00.000	164	295	295	56	140	8438	8438	4469	3968
834+50.000	166	305	305	56	139	8743	8743	4608	4135
835+00.000	165	306	306	56	138	9048	9048	4747	4302
835+50.000	163	303	303	56	137	9351	9351	4884	4467
836+00.000	157	296	296	57	138	9647	9647	5022	4625
836+50.000	150	284	284	58	141	9931	9931	5163	4768
837+00.000	146	274	274	57	141	10205	10205	5304	4902
837+50.000	141	266	266	56	139	10472	10472	5442	5029
838+00.000	137	258	258	53	135	10730	10730	5577	5153
838+50.000	133	251	251	52	129	10981	10981	5706	5274
839+00.000	132	246	246	47	122	11226	11226	5828	5398
839+50.000	137	249	249	41	109	11476	11476	5937	5538
840+00.000	152	268	268	36	95	11744	11744	6032	5711
840+50.000	171	299	299	29	80	12043	12043	6113	5930

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841+00.000	175	321	321	24	65	12363	12363	6178	6186
841+50.000	167	317	317	19	52	12680	12680	6229	6451
842+00.000	162	305	305	15	41	12985	12985	6270	6715
842+50.000	164	302	302	11	32	13287	13287	6302	6985
843+00.000	169	309	309	8	24	13596	13596	6326	7270
843+50.000	170	314	314	6	18	13910	13910	6343	7567
844+00.000	170	315	315	4	13	14226	14226	6356	7870
844+50.000	168	313	313	3	9	14539	14539	6365	8173
845+00.000	161	304	304	3	8	14843	14843	6373	8470
845+50.000	150	288	288	4	8	15132	15132	6381	8750
846+00.000	145	273	273	5	10	15405	15405	6392	9013
846+50.000	140	264	264	5	12	15669	15669	6404	9265
847+00.000	133	253	253	5	12	15923	15923	6416	9506
847+50.000	126	240	240	4	11	16163	16163	6427	9736
848+00.000	119	227	227	3	9	16390	16390	6435	9955
848+50.000	113	215	215	3	7	16605	16605	6442	10163
849+00.000	108	204	204	2	5	16809	16809	6448	10362
849+50.000	102	194	194	1	4	17004	17004	6452	10552
850+00.000	96	183	183	1	3	17187	17187	6455	10732
850+50.000	90	172	172	1	2	17359	17359	6457	10902
851+00.000	83	160	160	1	2	17519	17519	6459	11060
851+50.000	76	147	147	1	3	17666	17666	6462	11205
852+00.000	72	137	137	1	3	17804	17804	6465	11339
852+50.000	69	130	130	1	3	17934	17934	6468	11466
853+08.530	65	116	116	3	5	18050	18050	6473	11577
853+50.000	63	98	98	4	8	18149	18149	6481	11668
854+00.000	61	115	115	7	14	18264	18264	6495	11769
854+50.000	56	109	109	8	19	18373	18373	6513	11859
855+00.000	52	100	100	11	24	18472	18472	6537	11935
855+50.000	52	96	96	11	28	18568	18568	6565	12003
856+00.000	52	96	96	11	28	18664	18664	6593	12071
856+50.000	52	96	96	11	28	18759	18759	6621	12138
857+00.000	52	96	96	11	28	18855	18855	6649	12206
857+50.000	52	95	95	11	28	18950	18950	6677	12273
858+00.000	52	95	95	11	28	19046	19046	6705	12341
858+50.000	52	95	95	11	28	19141	19141	6733	12408
859+00.000	52	95	95	11	28	19236	19236	6761	12475
859+50.000	53	96	96	11	28	19333	19333	6789	12544
860+00.000	54	99	99	11	28	19432	19432	6817	12615
860+50.000	54	100	100	11	28	19532	19532	6845	12687
861+00.000	53	99	99	11	28	19631	19631	6873	12758
861+50.000	51	96	96	12	28	19727	19727	6901	12826
862+00.000	51	95	95	12	28	19822	19822	6929	12893
862+50.000	51	95	95	12	28	19918	19918	6958	12960
863+00.000	51	95	95	10	27	20013	20013	6985	13028
863+50.000	51	95	95	10	25	20108	20108	7010	13099
864+00.000	51	95	95	10	24	20203	20203	7033	13170
864+50.000	51	95	95	10	24	20299	20299	7057	13242
865+00.000	51	95	95	10	24	20394	20394	7081	13313
865+50.000	52	95	95	10	24	20489	20489	7104	13385

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866+00.000	52	96	96	10	24	20585	20585	7128	13457
866+50.000	52	96	96	10	24	20681	20681	7152	13529
867+00.000	53	97	97	10	24	20778	20778	7176	13602
867+50.000	54	99	99	9	23	20877	20877	7199	13679
868+00.000	55	101	101	9	21	20978	20978	7220	13758
868+50.000	55	102	102	9	21	21080	21080	7241	13839
869+00.000	56	103	103	9	21	21183	21183	7262	13921
869+50.000	56	104	104	9	21	21287	21287	7284	14003
870+00.000	57	105	105	9	21	21392	21392	7305	14087
870+50.000	57	106	106	9	22	21497	21497	7327	14170
871+00.000	58	106	106	10	24	21604	21604	7350	14253
871+50.000	58	107	107	10	24	21711	21711	7375	14336
872+00.000	59	108	108	10	24	21819	21819	7399	14420
872+50.000	59	109	109	10	24	21928	21928	7423	14505
873+00.000	60	110	110	9	24	22038	22038	7446	14592
873+50.000	60	111	111	9	23	22150	22150	7469	14680
874+00.000	61	113	113	9	22	22262	22262	7491	14771
874+50.000	62	114	114	9	21	22376	22376	7512	14864
875+00.000	62	115	115	9	22	22491	22491	7535	14956
875+50.000	61	114	114	9	22	22605	22605	7557	15048
876+00.000	61	113	113	9	23	22718	22718	7579	15139
876+50.000	59	110	110	10	23	22828	22828	7602	15226
877+00.000	56	106	106	10	24	22935	22935	7626	15308
877+50.000	53	101	101	11	26	23036	23036	7652	15384
878+00.000	49	94	94	13	29	23130	23130	7681	15449
878+50.000	41	83	83	15	34	23214	23214	7715	15499
879+00.000	36	72	72	20	43	23286	23286	7759	15527
879+50.000	39	69	69	21	51	23355	23355	7809	15546
880+00.000	35	68	68	34	67	23424	23424	7876	15548
880+50.000	34	64	64	34	83	23488	23488	7959	15528
881+00.000	33	61	61	44	96	23549	23549	8055	15494
881+50.000	31	59	59	48	113	23608	23608	8168	15441
882+00.000	30	57	57	51	122	23665	23665	8289	15376
882+50.000	30	56	56	49	123	23720	23720	8412	15308
883+00.000	29	55	55	48	118	23775	23775	8530	15245
883+50.000	30	55	55	43	112	23830	23830	8642	15188
884+00.000	32	57	57	40	103	23888	23888	8745	15142
884+50.000	34	61	61	39	97	23948	23948	8842	15106
884+92.500	35	54	54	39	81	24002	24002	8923	15079

STAGE 6C

Alignment: IH 94 EB Ref Line
Start Sta: 887+24.500
End Sta: 23+00.000

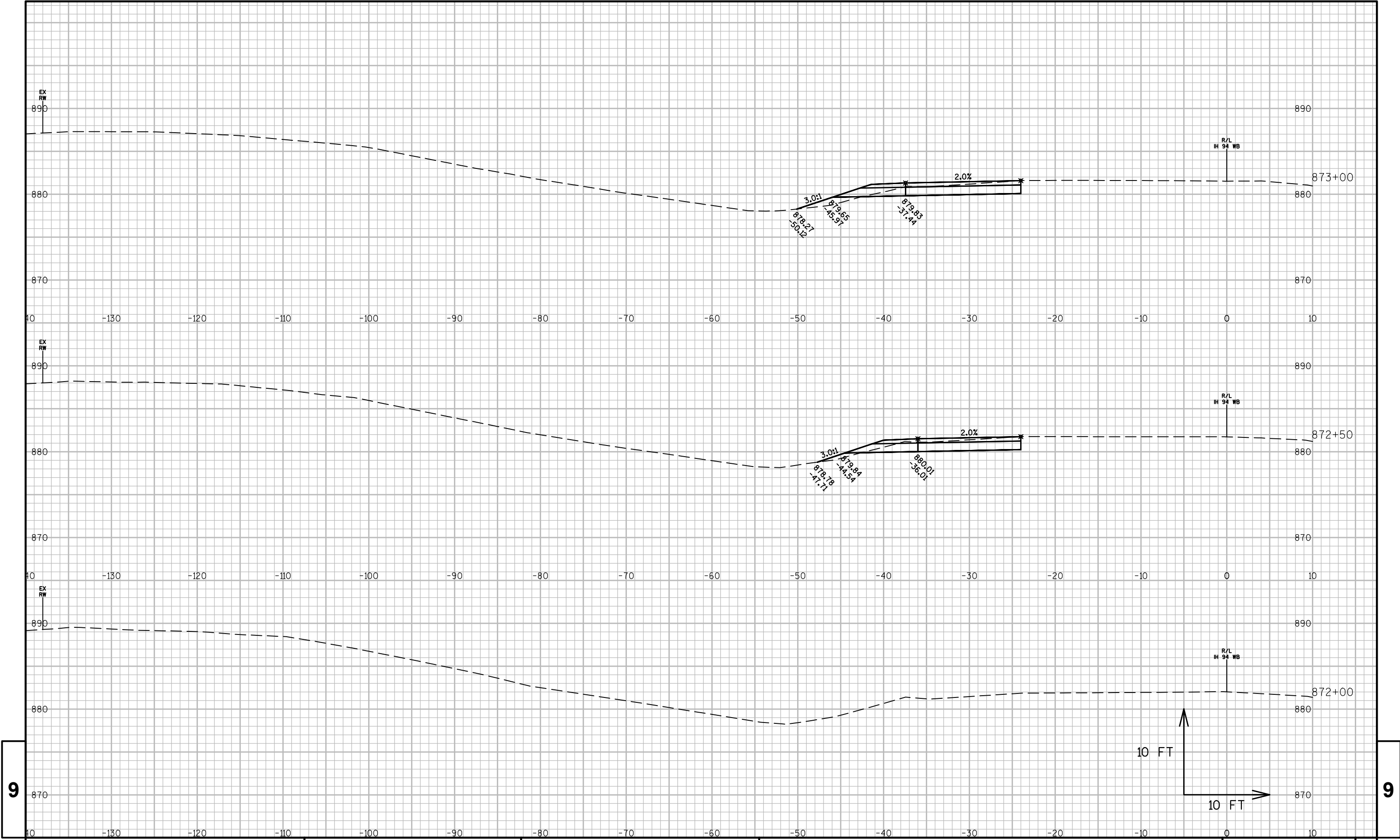
Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
887+24.500	0	0	0	0	0	0	0	0	0
887+50.000	34	16	16	19	12	16	16	12	4
888+00.000	31	61	61	21	49	77	77	61	16
888+50.000	30	57	57	25	56	133	133	117	16
889+00.000	28	54	54	31	69	187	187	187	1
889+50.000	27	52	52	36	83	239	239	270	-31
890+00.000	29	52	52	36	89	291	291	359	-68
890+50.000	30	55	55	33	86	345	345	444	-99
891+00.000	32	58	58	31	79	403	403	524	-121
891+50.000	34	61	61	29	74	464	464	598	-134
892+00.000	36	65	65	27	69	529	529	667	-139
892+50.000	38	69	69	26	66	597	597	733	-136
893+00.000	41	73	73	24	62	671	671	795	-124
893+50.000	42	76	76	24	59	747	747	854	-107
894+00.000	44	80	80	22	57	827	827	911	-84
894+50.000	49	87	87	19	51	914	914	962	-48
895+00.000	48	90	90	25	54	1004	1004	1016	-12
895+50.000	50	90	90	24	60	1094	1094	1076	18
896+00.000	52	94	94	22	56	1188	1188	1132	56
896+50.000	55	100	100	22	54	1288	1288	1186	102
897+00.000	58	105	105	23	55	1393	1393	1241	152
897+50.000	61	110	110	23	56	1504	1504	1297	207
898+00.000	61	113	113	24	58	1617	1617	1355	262
898+50.000	60	113	113	26	62	1730	1730	1416	313
899+00.000	58	109	109	37	77	1839	1839	1494	345
899+50.000	58	107	107	35	88	1946	1946	1582	364
900+00.000	58	107	107	33	83	2053	2053	1665	388
900+50.000	58	107	107	31	78	2160	2160	1743	417
901+00.000	57	107	107	29	73	2266	2266	1816	450
901+50.000	57	106	106	27	68	2373	2373	1884	488
902+00.000	57	106	106	25	64	2479	2479	1948	531
902+50.000	57	106	106	23	59	2584	2584	2007	577
903+00.000	57	105	105	22	55	2689	2689	2062	627
903+50.000	57	106	106	18	49	2795	2795	2111	684
904+00.000	57	106	106	18	44	2901	2901	2155	746
904+50.000	57	106	106	18	44	3007	3007	2199	808
905+00.000	57	106	106	18	44	3113	3113	2244	869
905+50.000	57	105	105	17	43	3218	3218	2287	931
906+00.000	56	104	104	17	42	3322	3322	2329	994
906+50.000	56	104	104	17	42	3426	3426	2371	1055
907+00.000	54	102	102	18	43	3528	3528	2414	1114
907+50.000	54	100	100	18	44	3629	3629	2458	1170
908+00.000	54	100	100	18	45	3728	3728	2504	1225
908+50.000	53	99	99	19	46	3827	3827	2550	1277
909+00.000	53	98	98	19	47	3925	3925	2596	1329
909+50.000	52	97	97	17	45	4023	4023	2641	1382

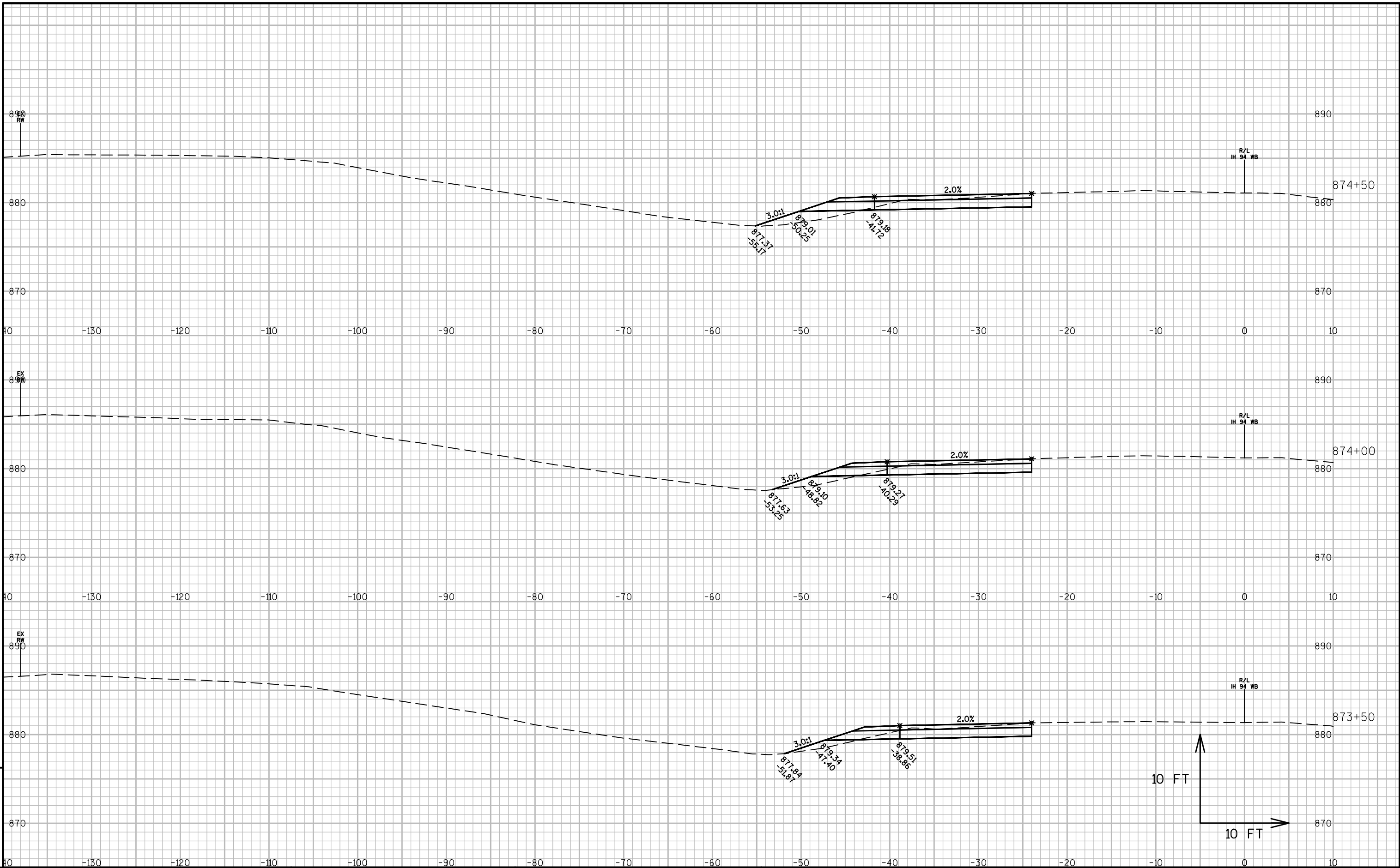
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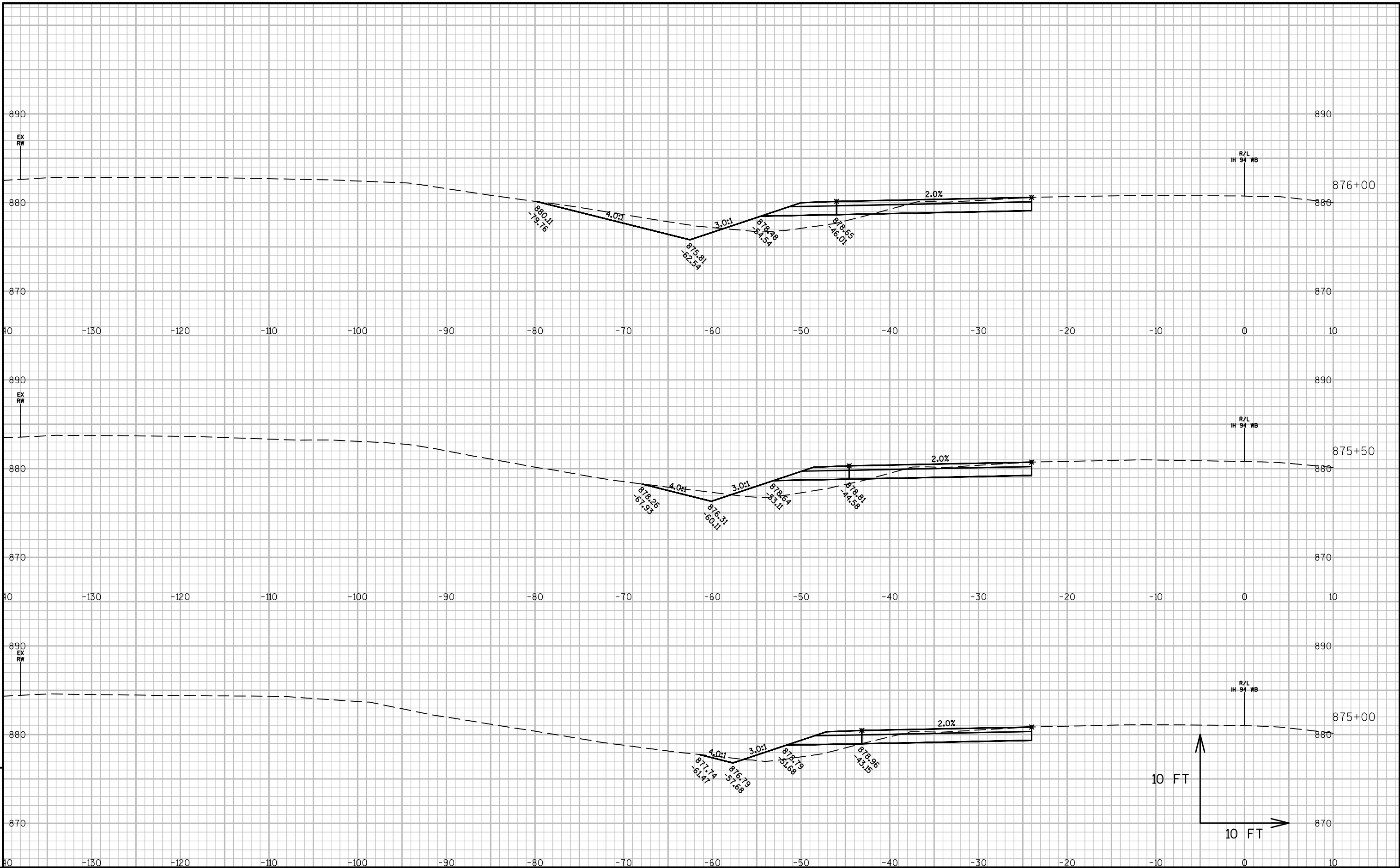
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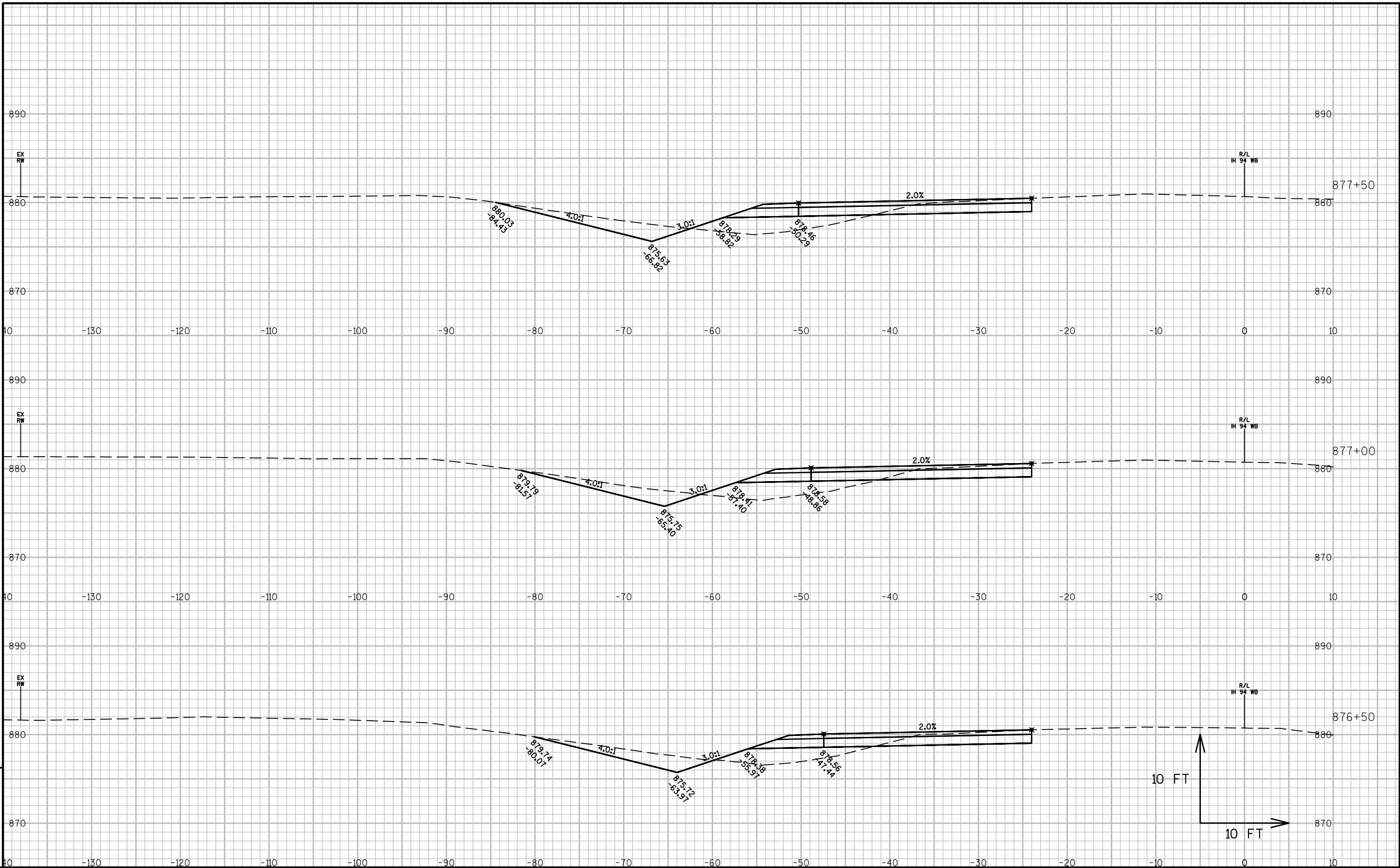
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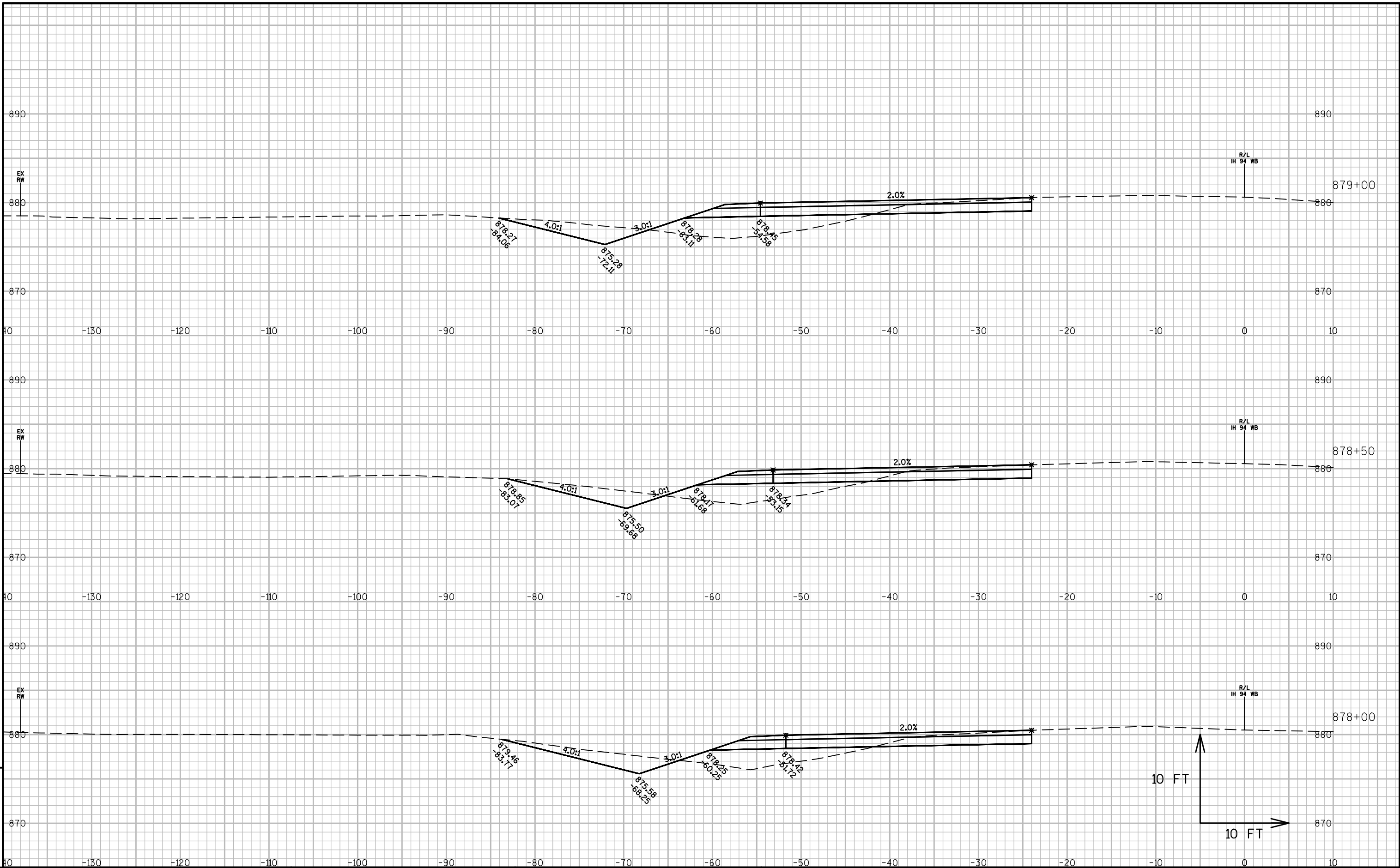
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910+50.000	51	96	96	18	44	4215	4215	2727	1488
911+00.000	51	95	95	17	42	4310	4310	2770	1541
911+50.000	51	95	95	16	40	4405	4405	2809	1596
912+00.000	50	93	93	16	38	4498	4498	2848	1650
912+50.000	51	93	93	17	40	4591	4591	2887	1703
913+00.000	50	93	93	17	42	4684	4684	2929	1755
913+50.000	49	92	92	18	43	4776	4776	2972	1804
914+00.000	49	91	91	17	43	4867	4867	3015	1852
914+50.000	48	90	90	18	44	4957	4957	3059	1898
915+00.000	47	88	88	18	44	5045	5045	3103	1942
915+50.000	47	87	87	18	45	5132	5132	3148	1984
916+00.000	46	86	86	18	44	5218	5218	3192	2026
916+50.000	46	85	85	18	44	5303	5303	3237	2066
917+00.000	47	86	86	15	41	5388	5388	3278	2111
917+29.659	48	52	52	13	21	5441	5441	3299	2142
14+50.000	50	78	78	11	26	5518	5518	3324	2194
15+00.000	50	93	93	10	26	5611	5611	3350	2261
15+50.000	52	94	94	9	23	5705	5705	3373	2332
16+00.000	54	98	98	7	20	5803	5803	3393	2410
16+50.000	57	102	102	8	18	5906	5906	3412	2494
17+00.000	58	106	106	9	21	6012	6012	3432	2580
17+50.000	62	111	111	3	15	6123	6123	3447	2676
18+00.000	64	117	117	1	5	6240	6240	3452	2788
18+50.000	69	123	123	0	1	6363	6363	3453	2910
19+00.000	73	132	132	0	0	6494	6494	3453	3042
19+50.000	67	130	130	0	0	6624	6624	3453	3171
20+00.000	64	121	121	0	1	6746	6746	3454	3292
20+50.000	63	118	118	1	1	6864	6864	3455	3409
21+00.000	61	115	115	1	2	6979	6979	3457	3523
21+50.000	54	106	106	2	3	7086	7086	3460	3626
22+00.000	44	91	91	3	6	7176	7176	3466	3710
22+50.000	40	78	78	2	6	7255	7255	3472	3783
23+00.000	0	37	37	0	2	7292	7292	3474	3818
Stage 6C Total						107106		36986	

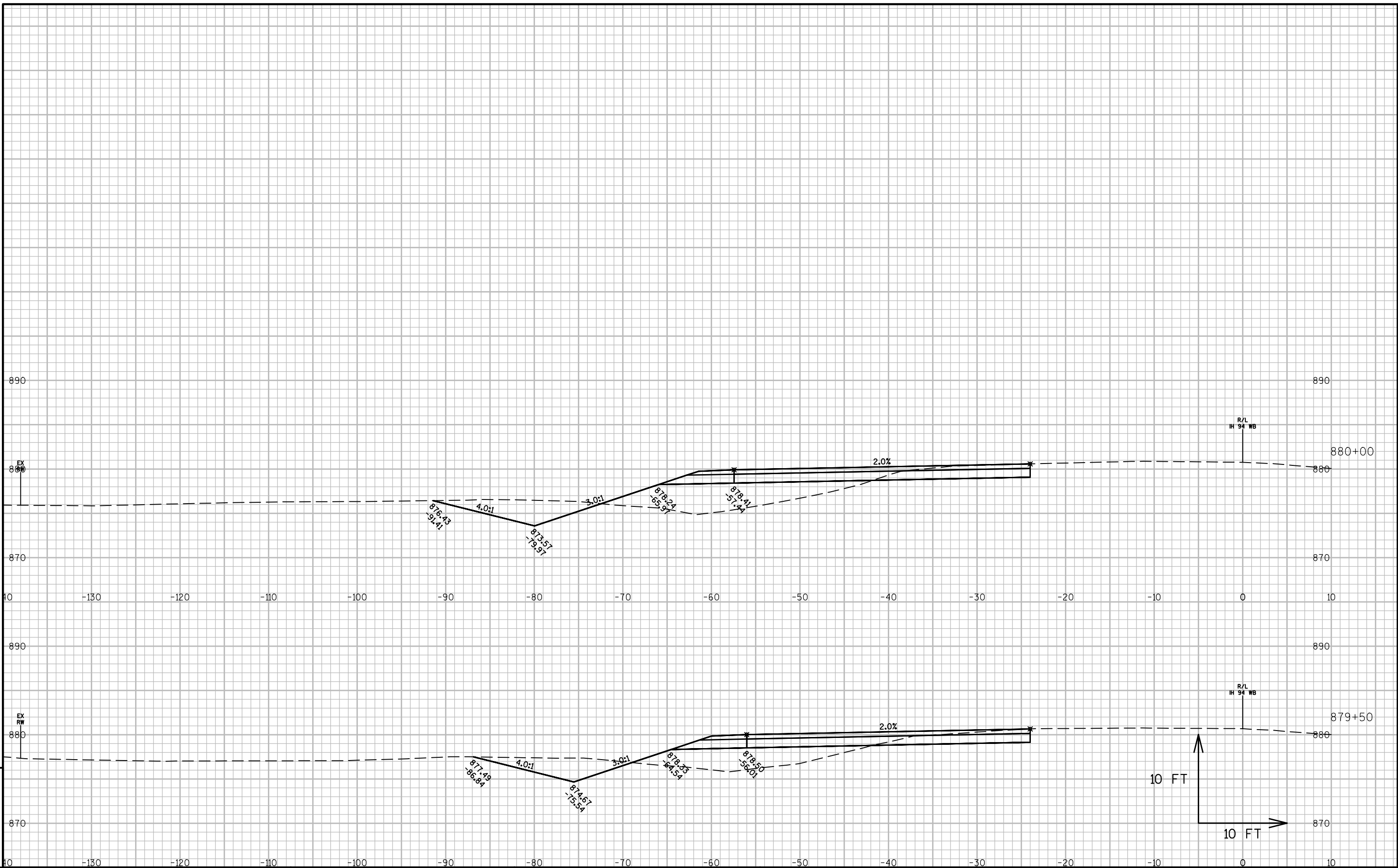


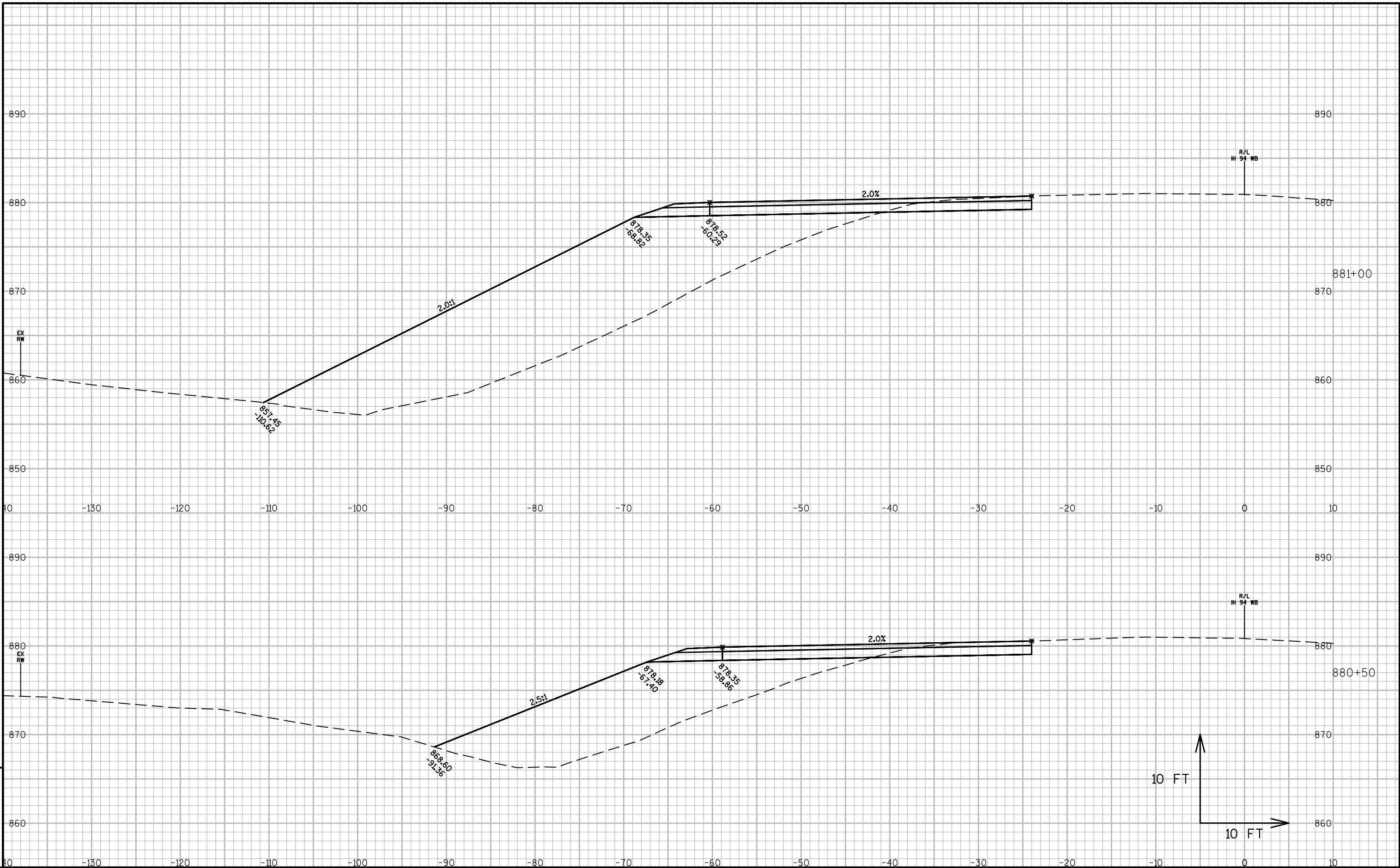


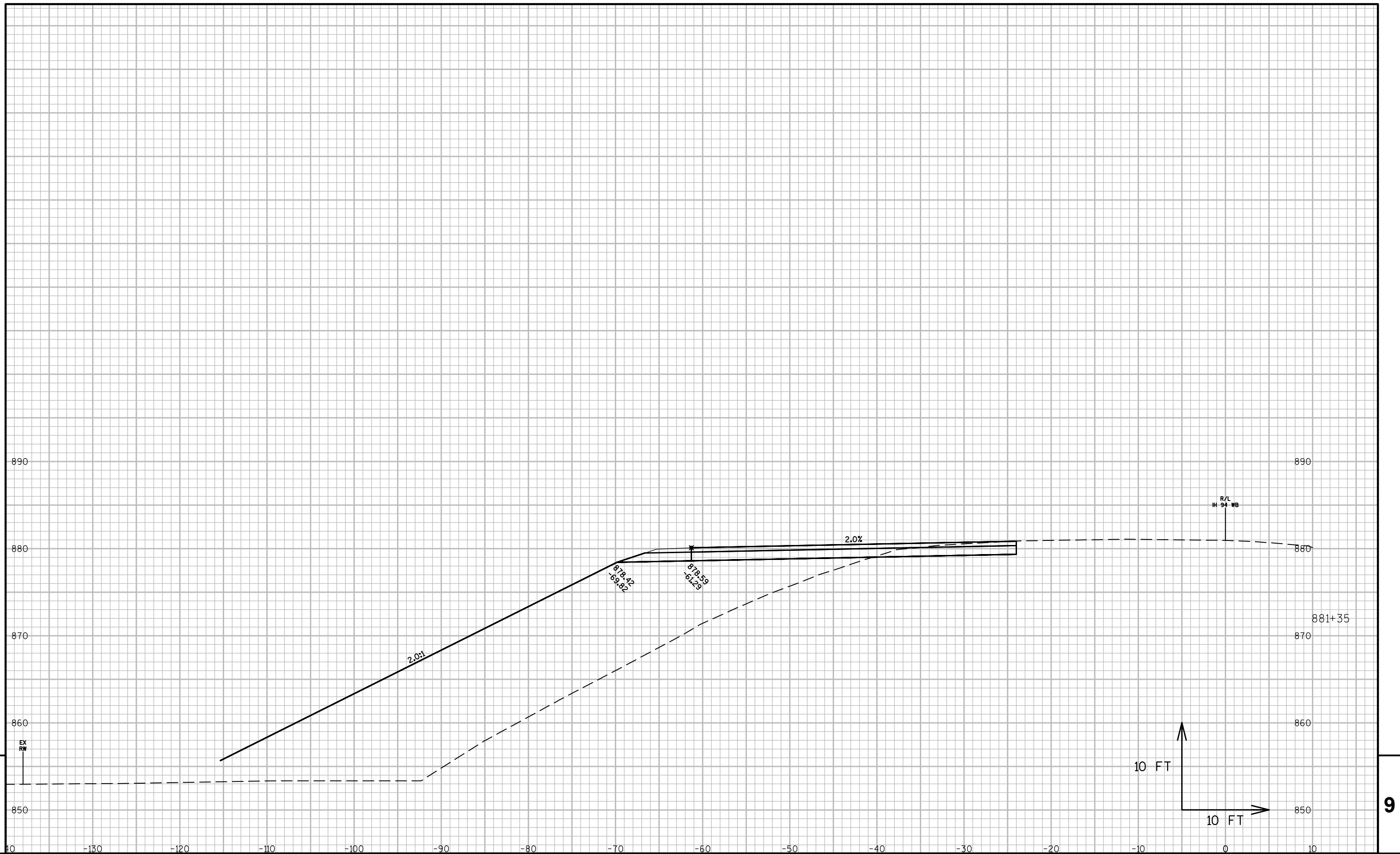


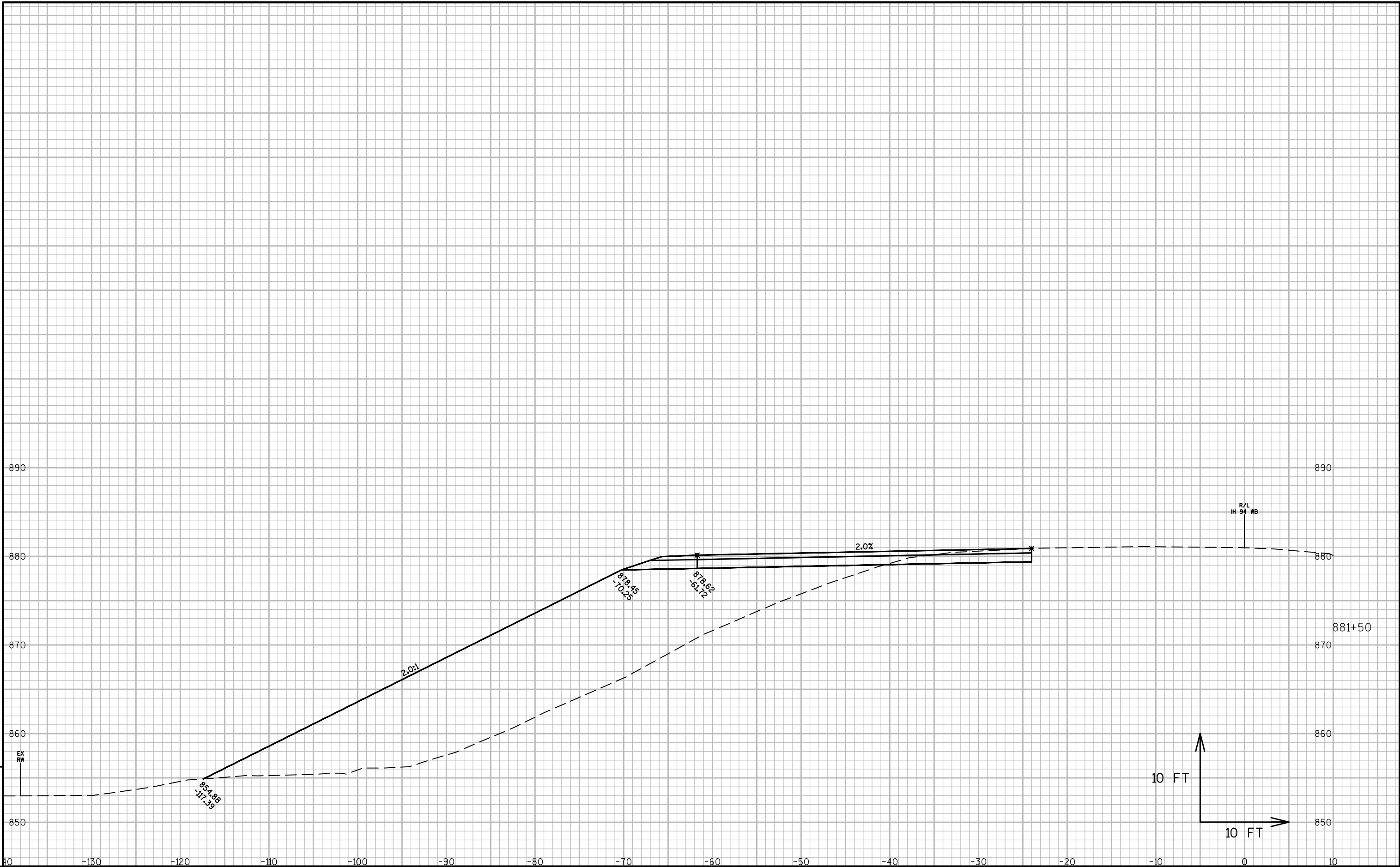


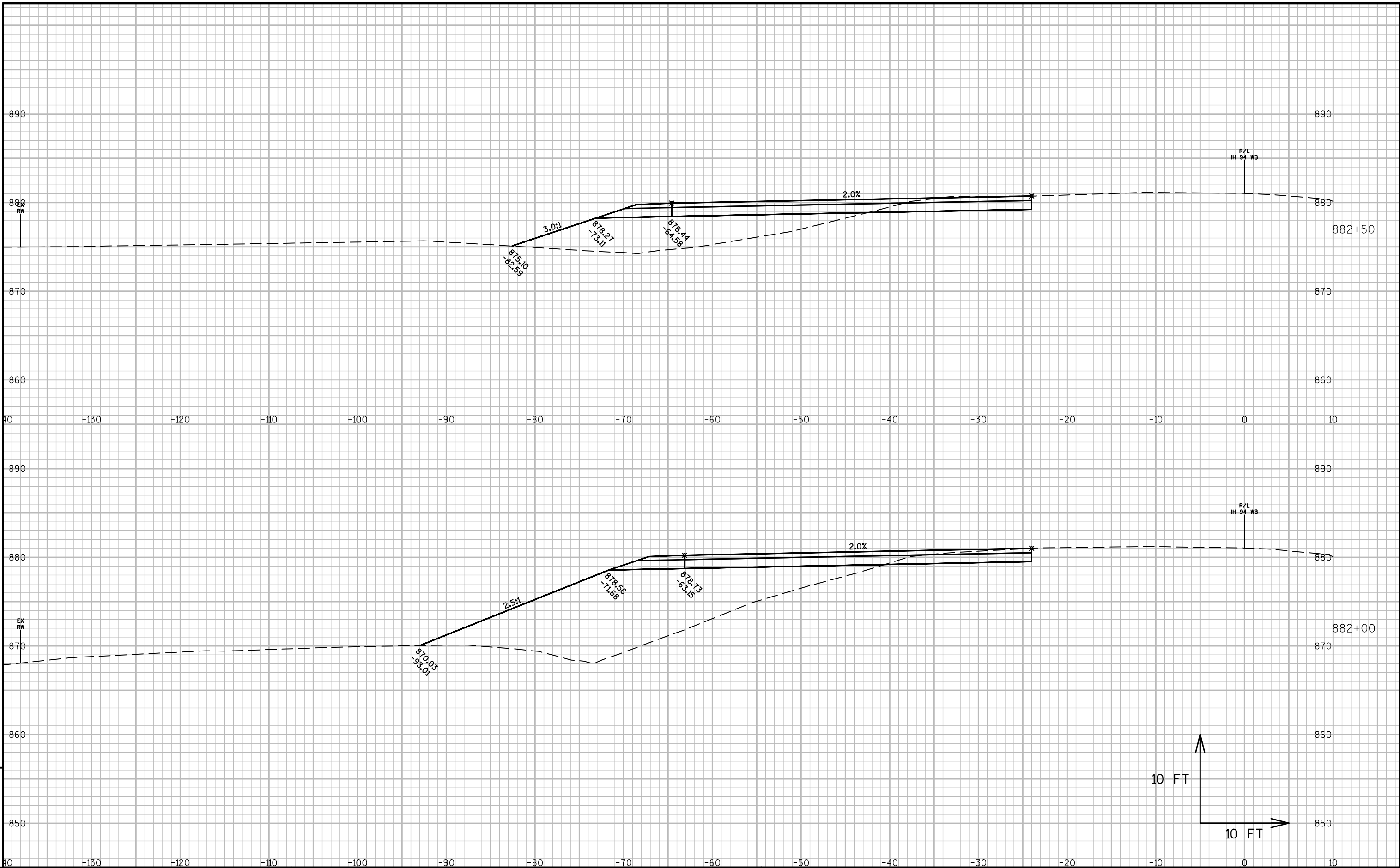


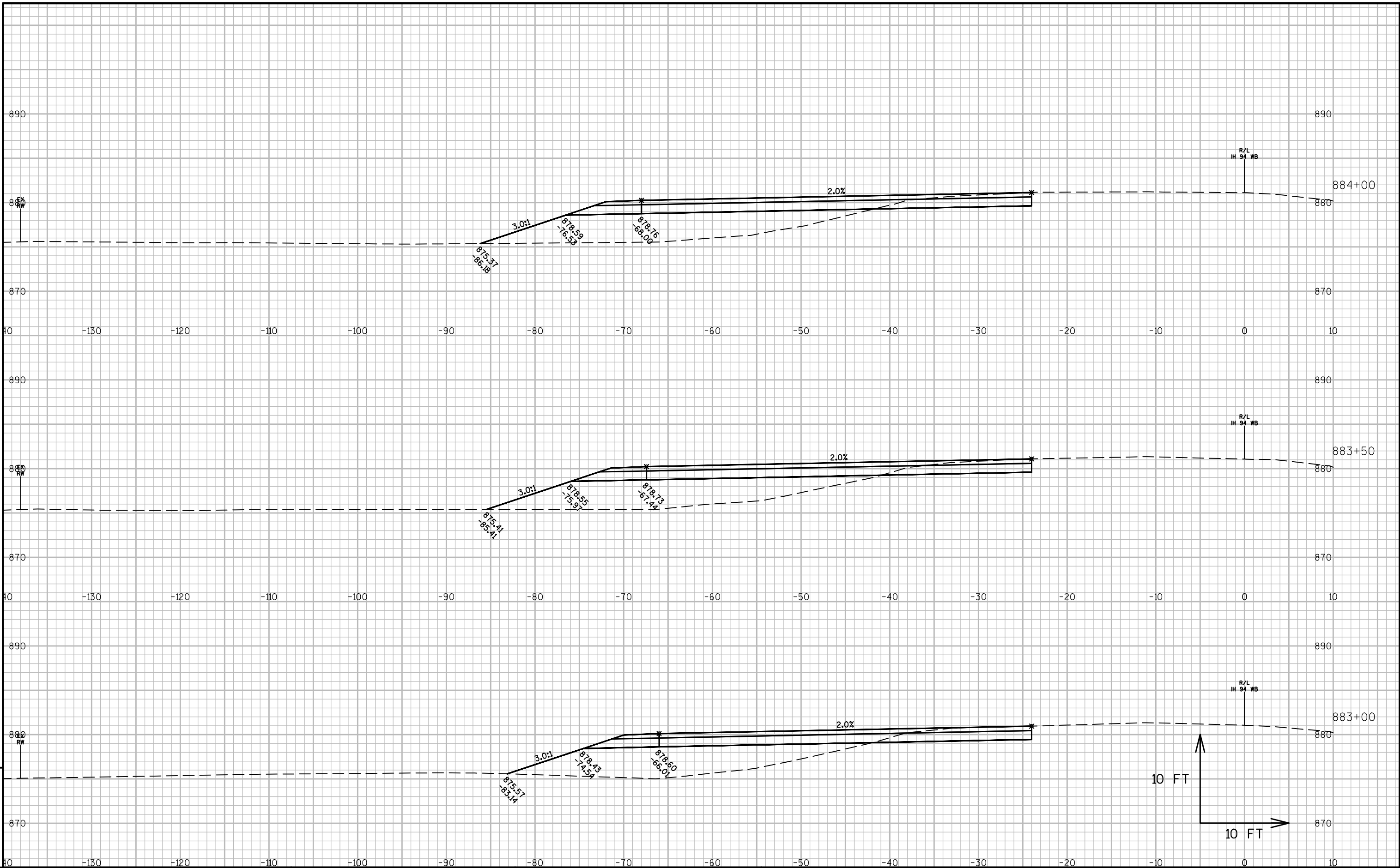


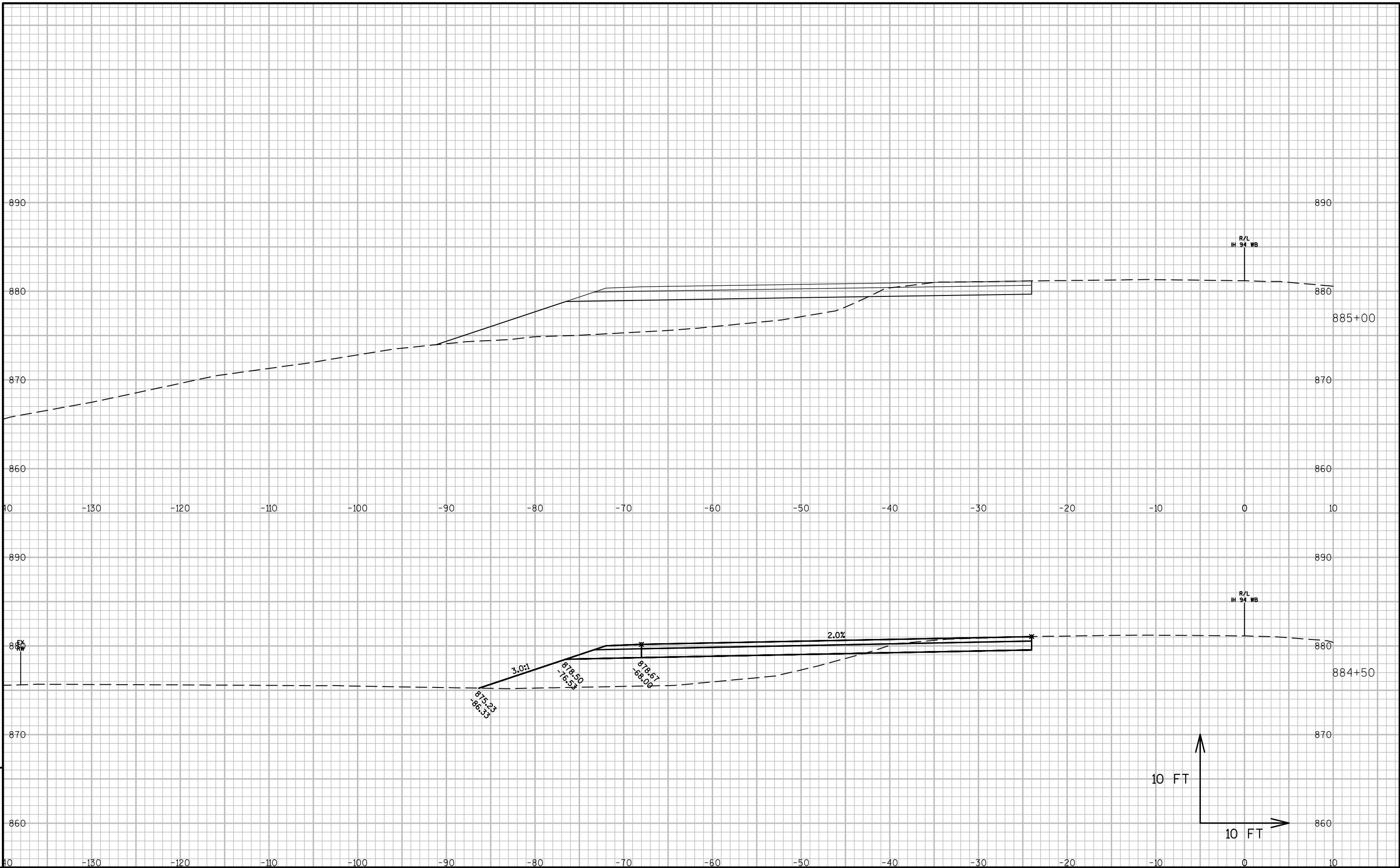


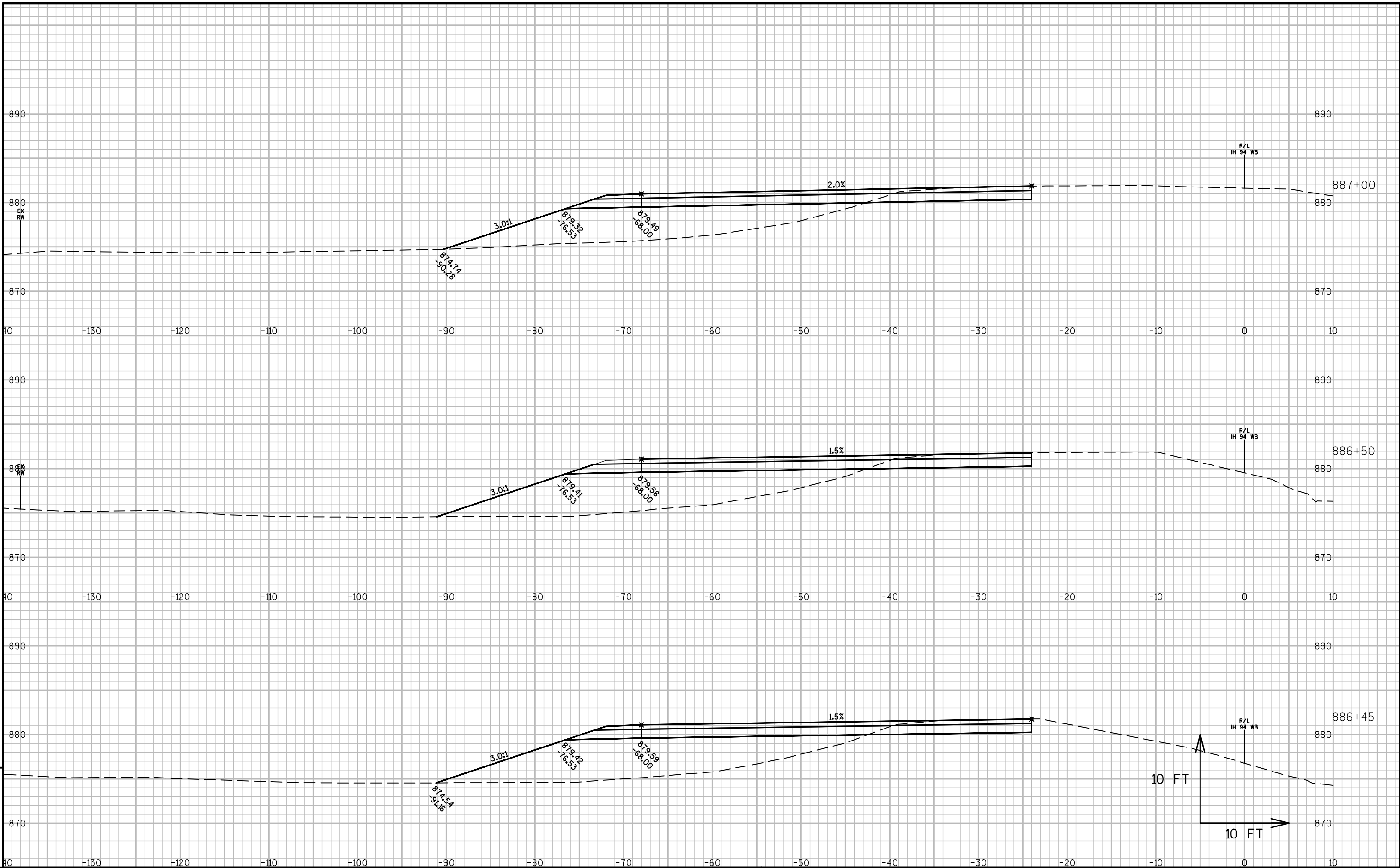


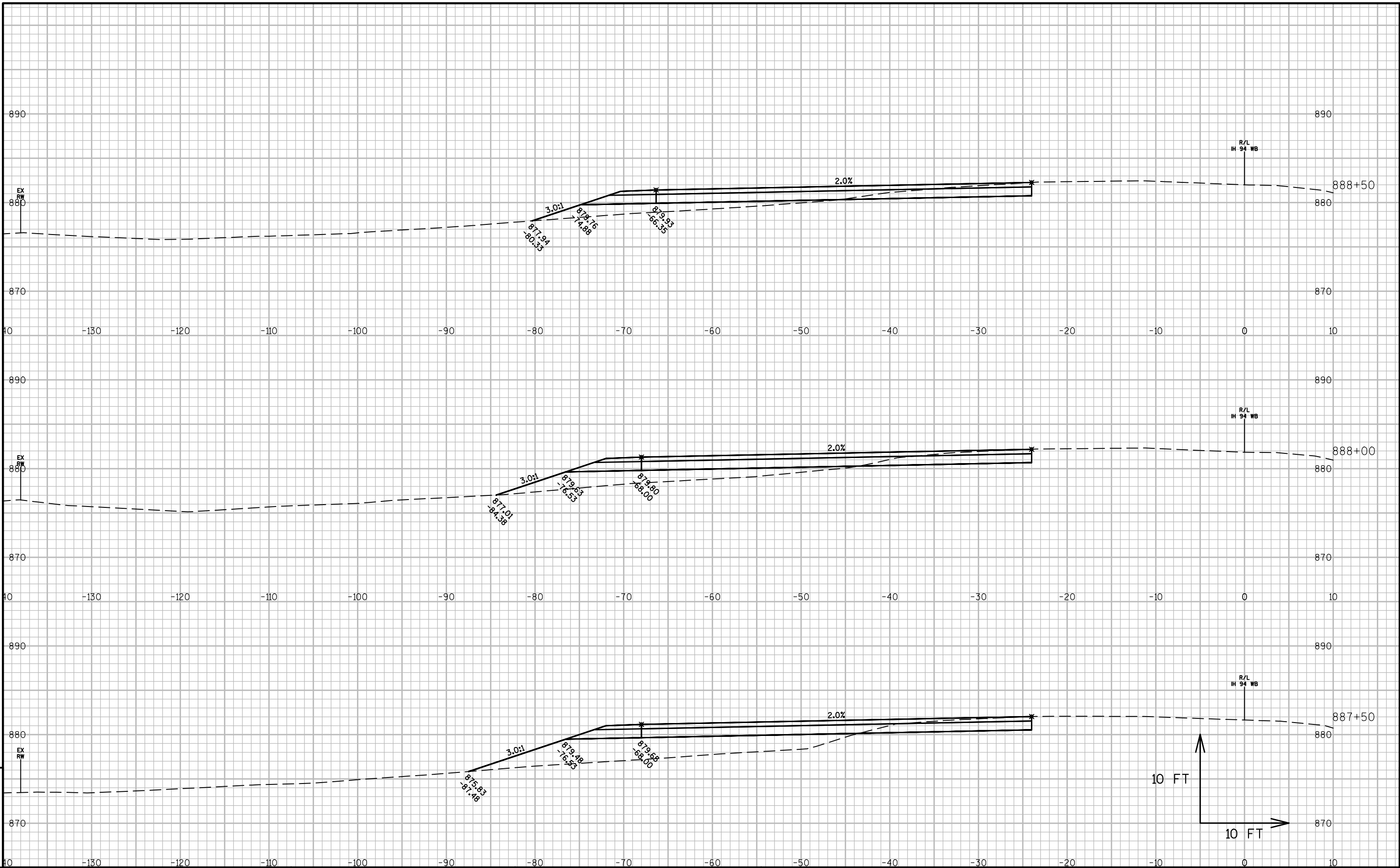


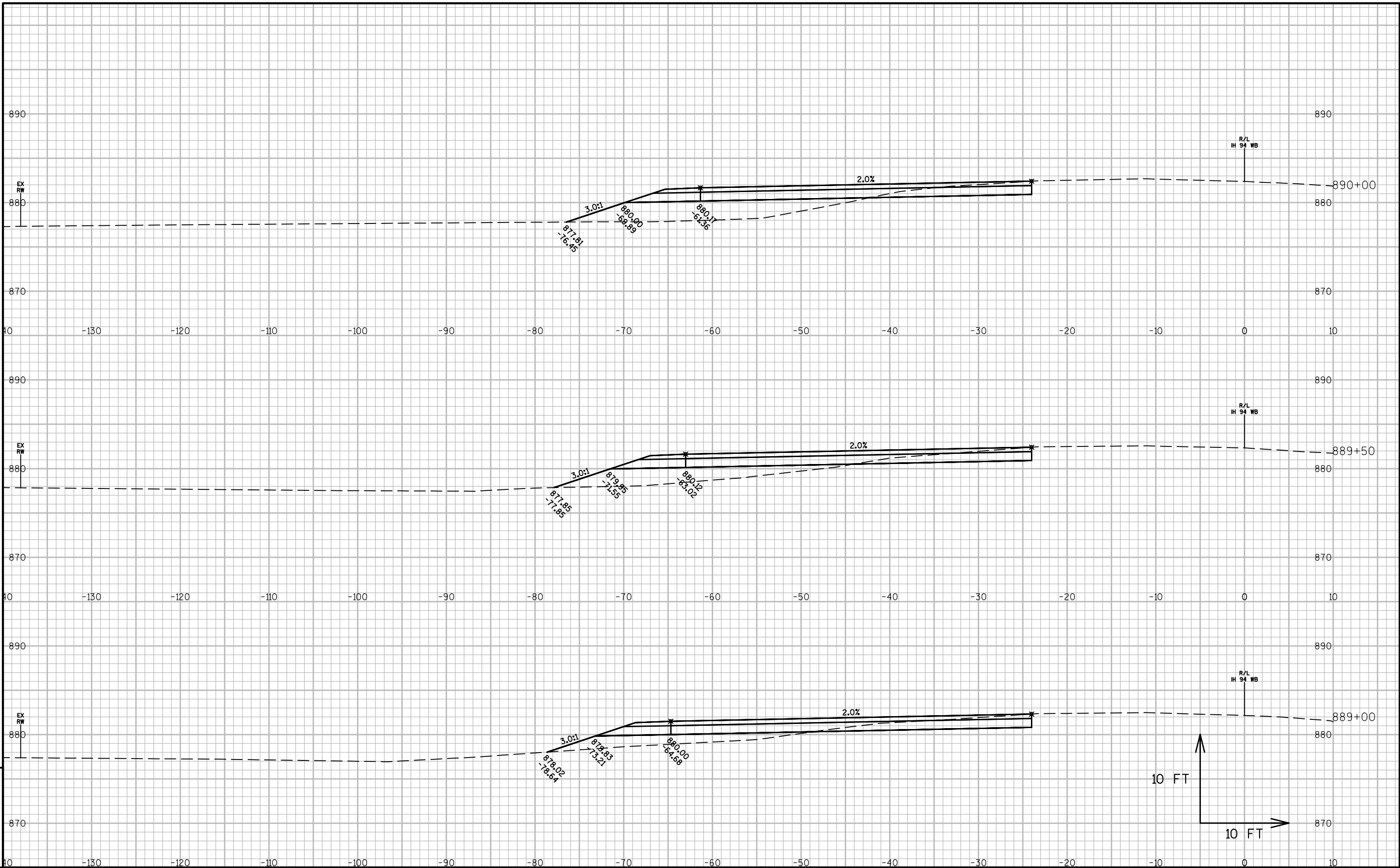


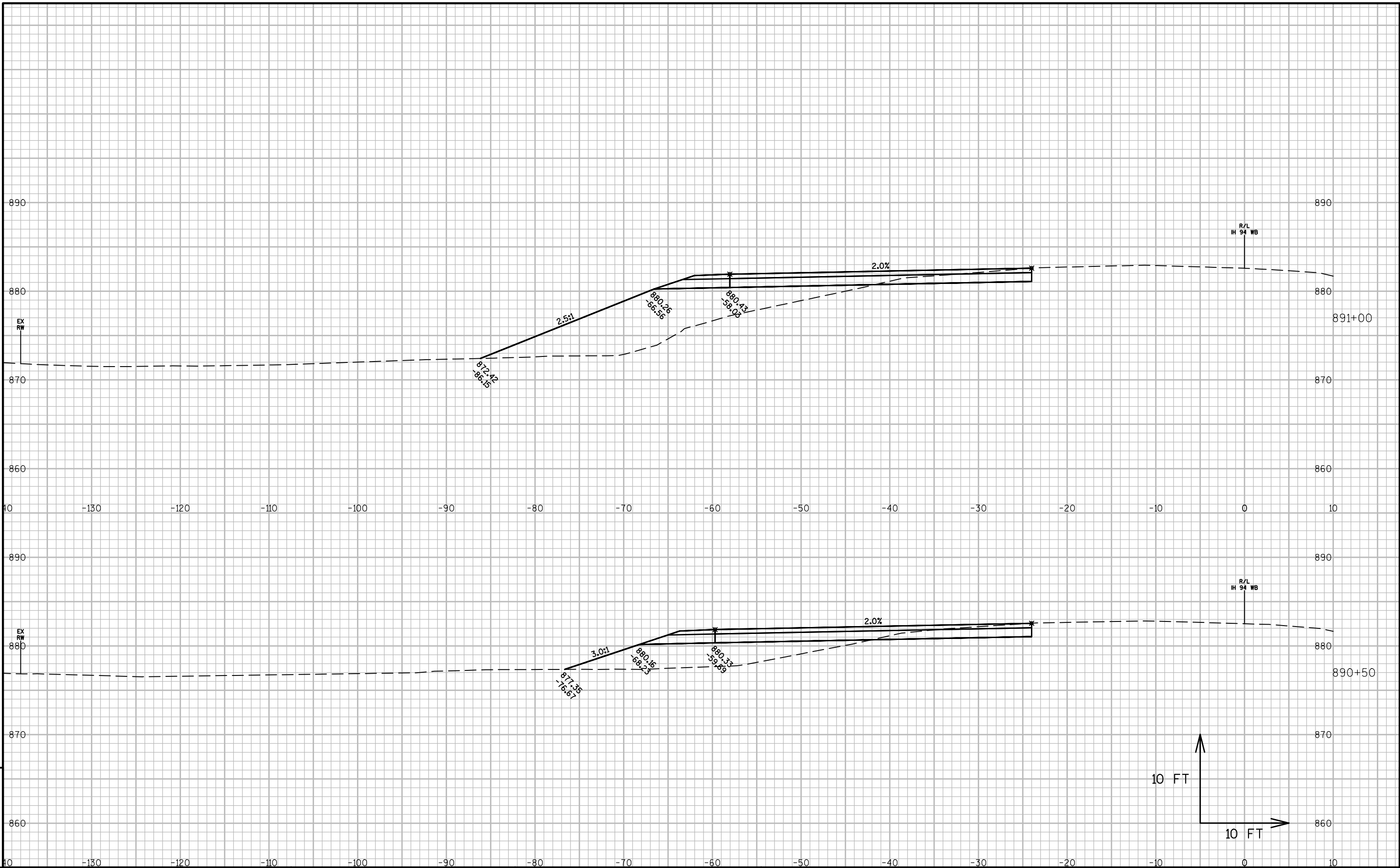


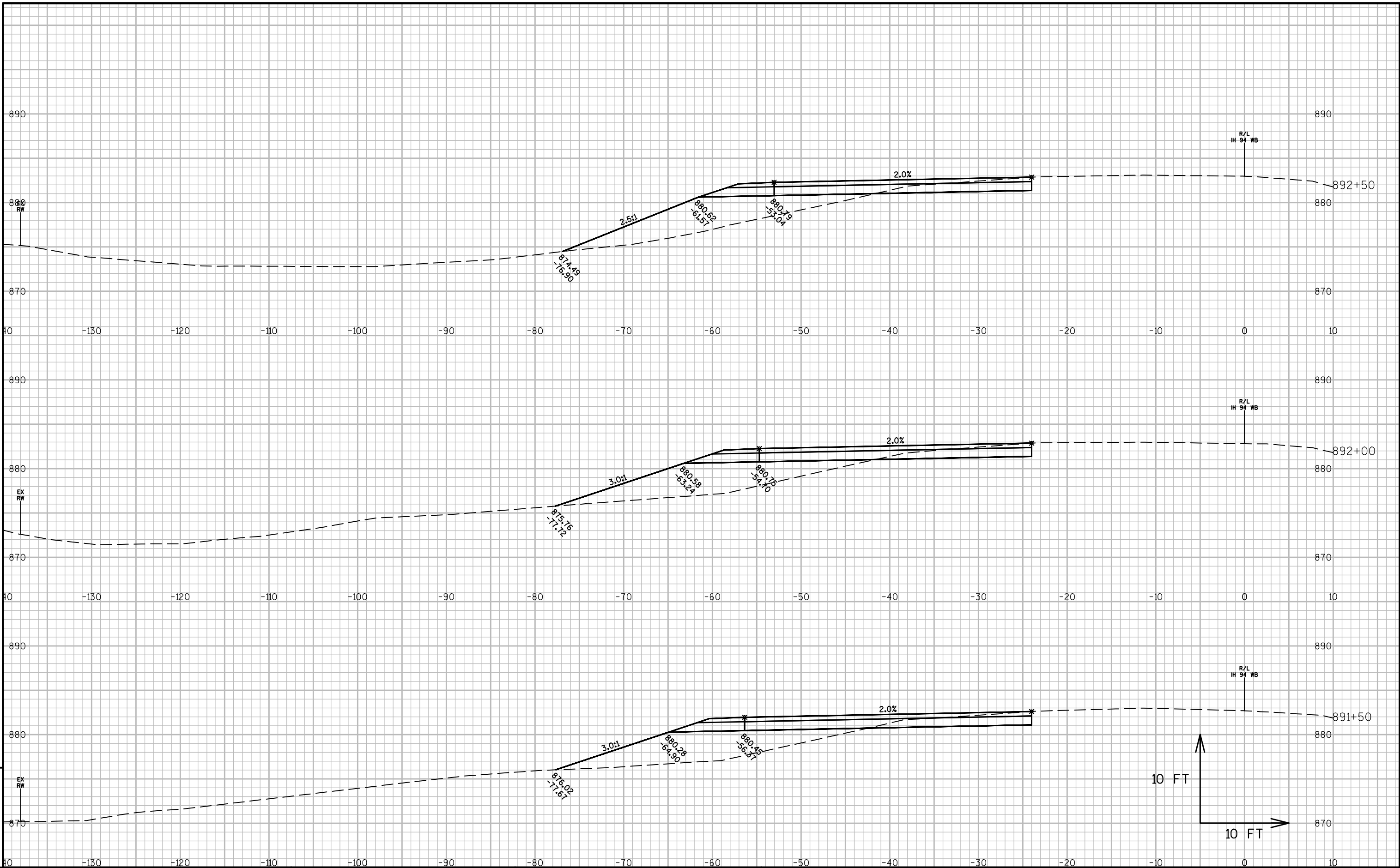


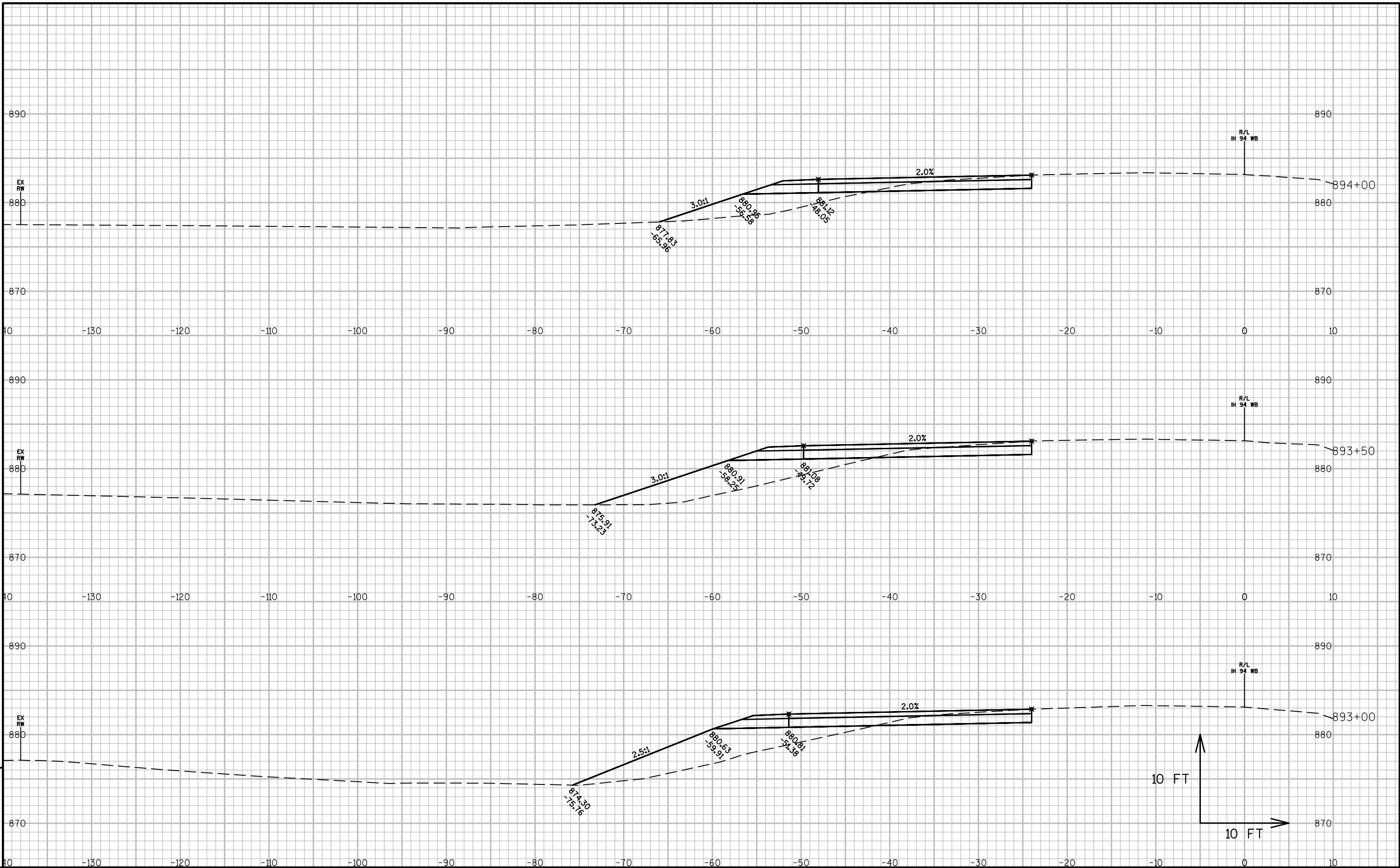


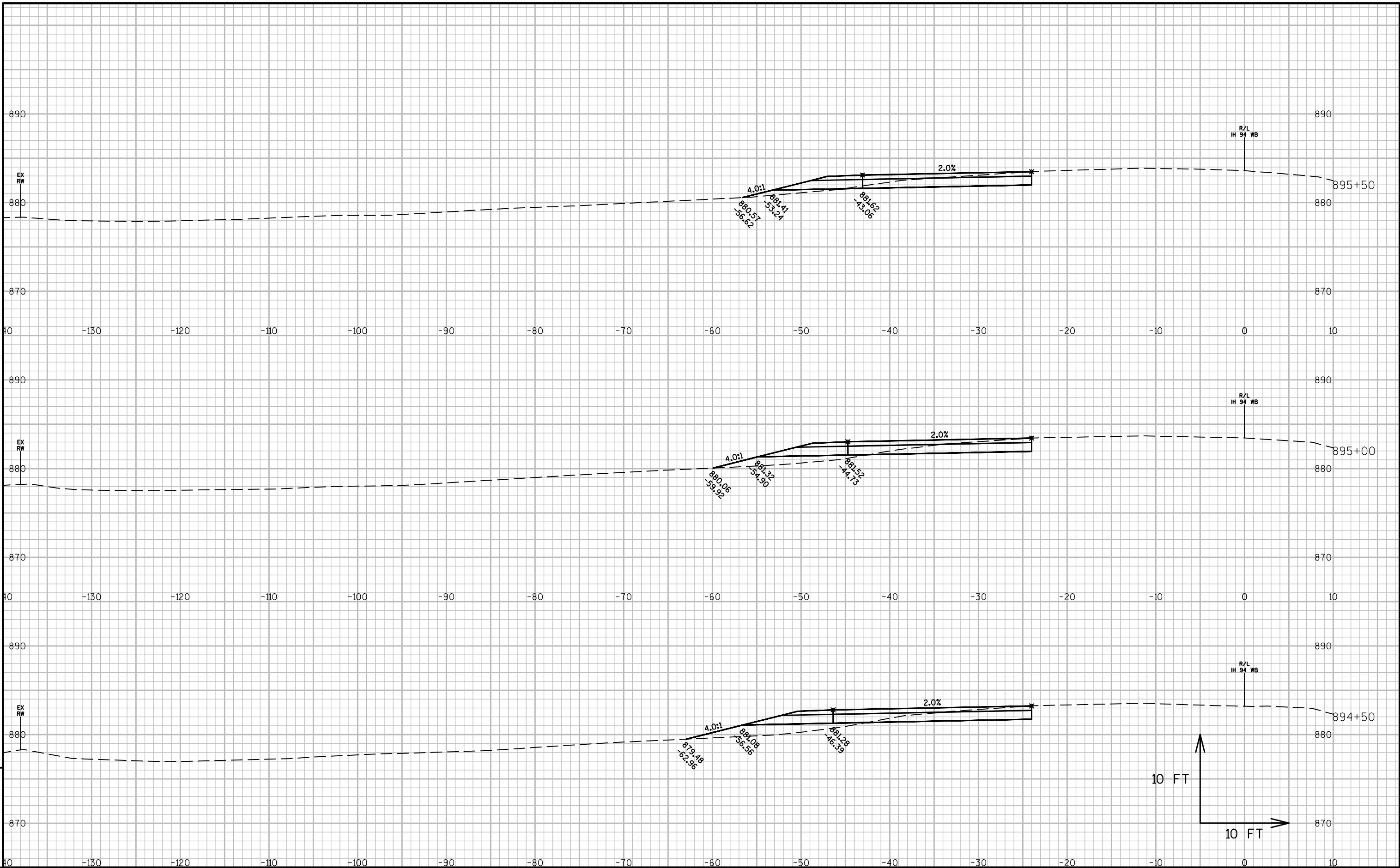


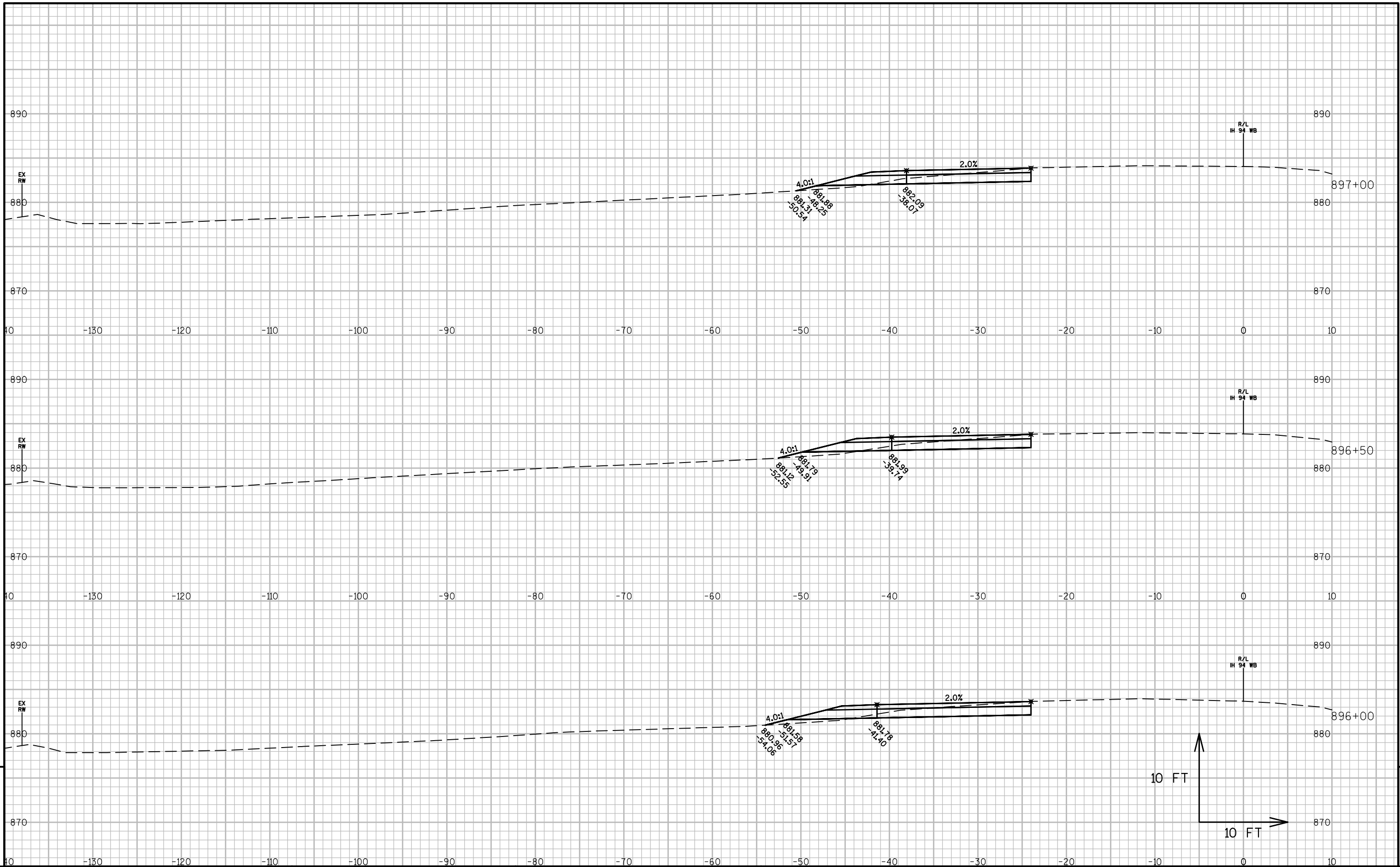


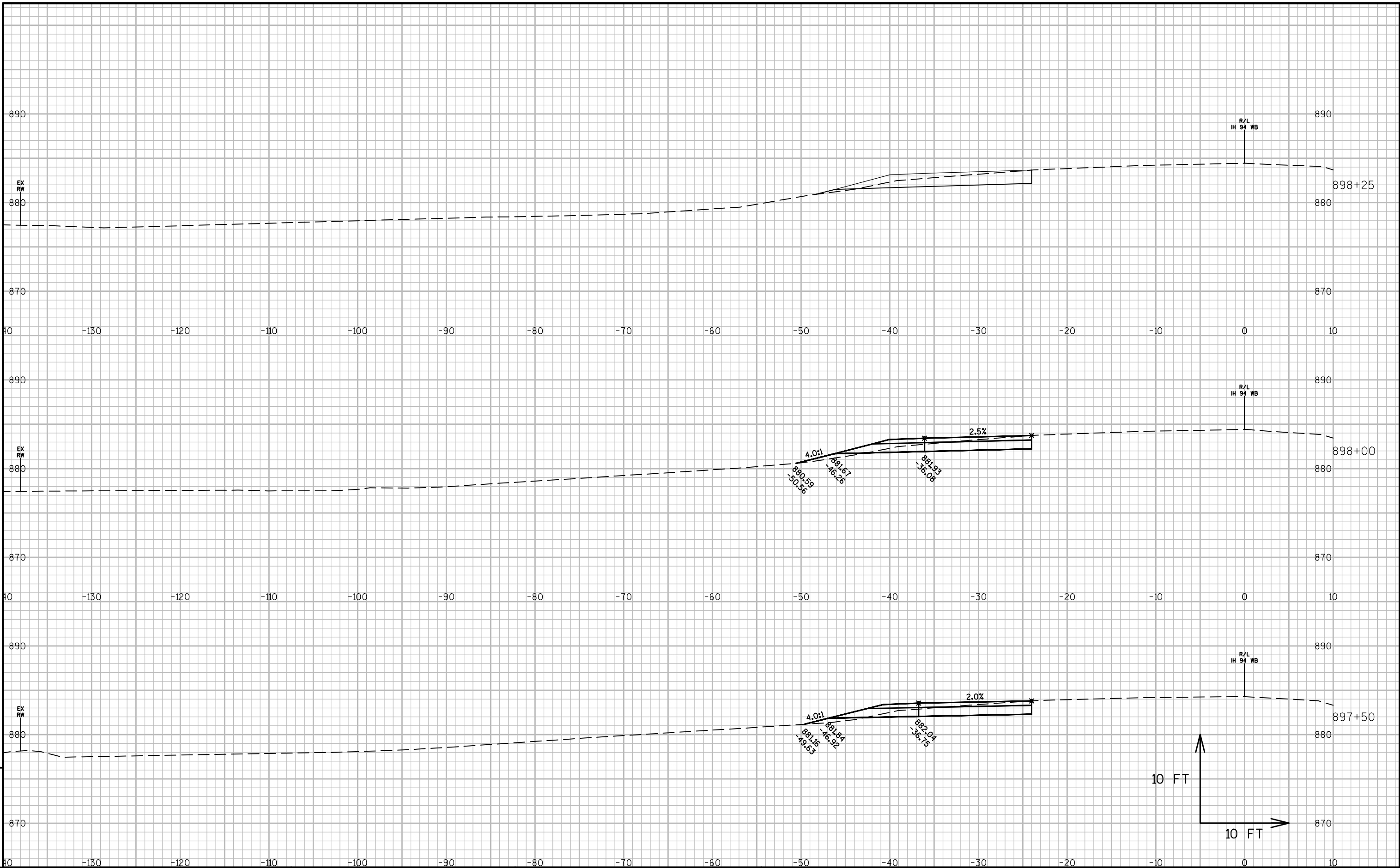


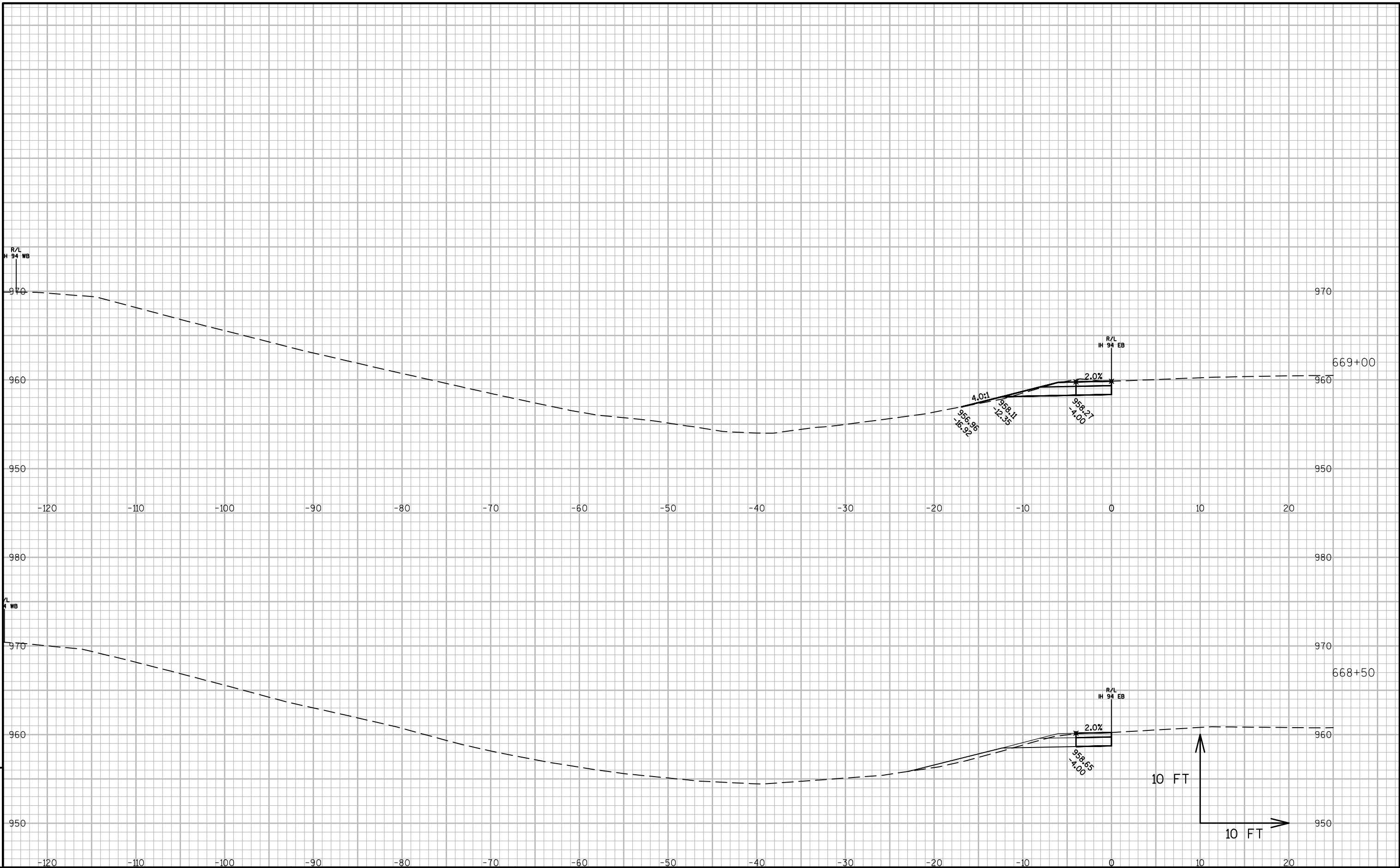


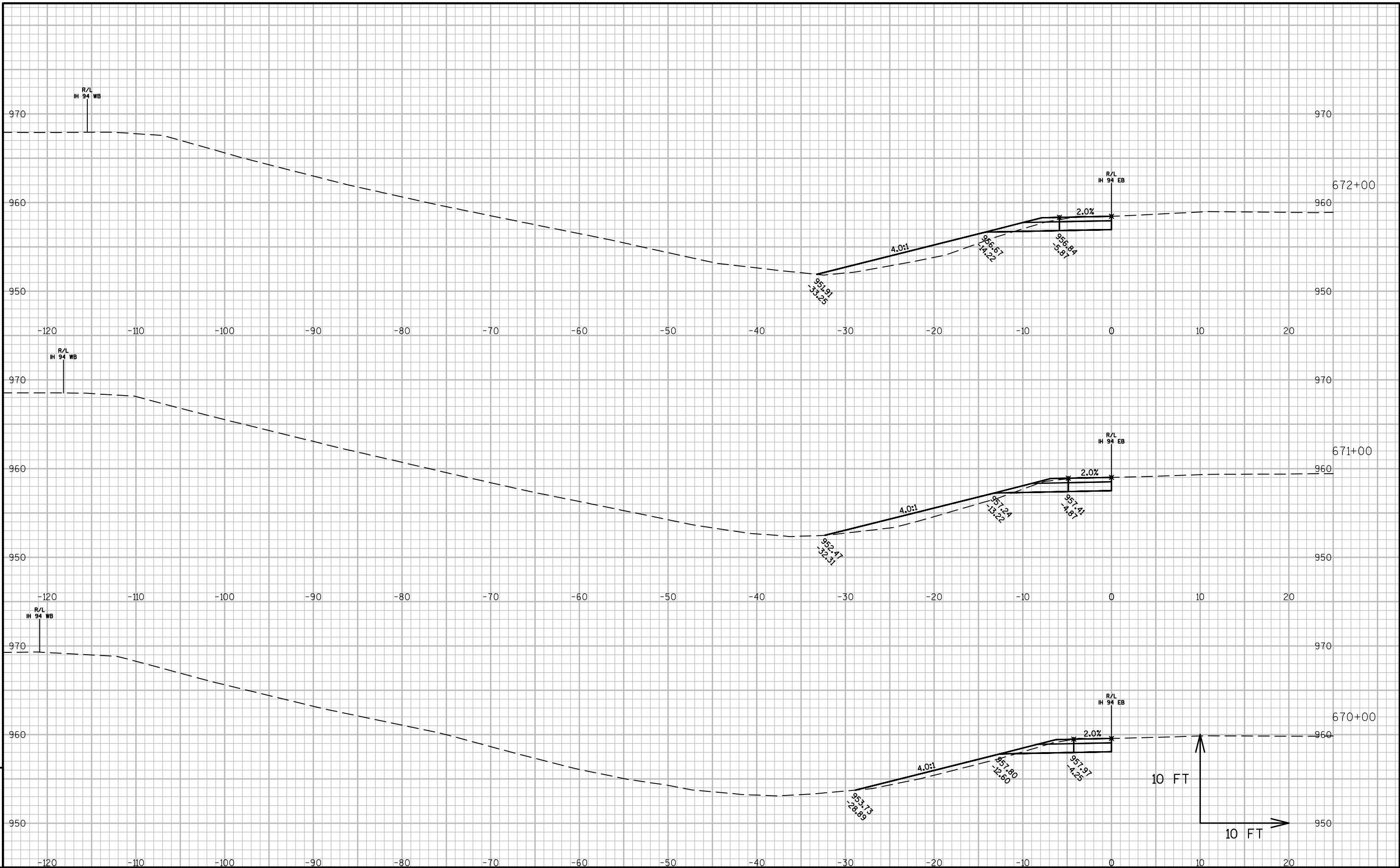


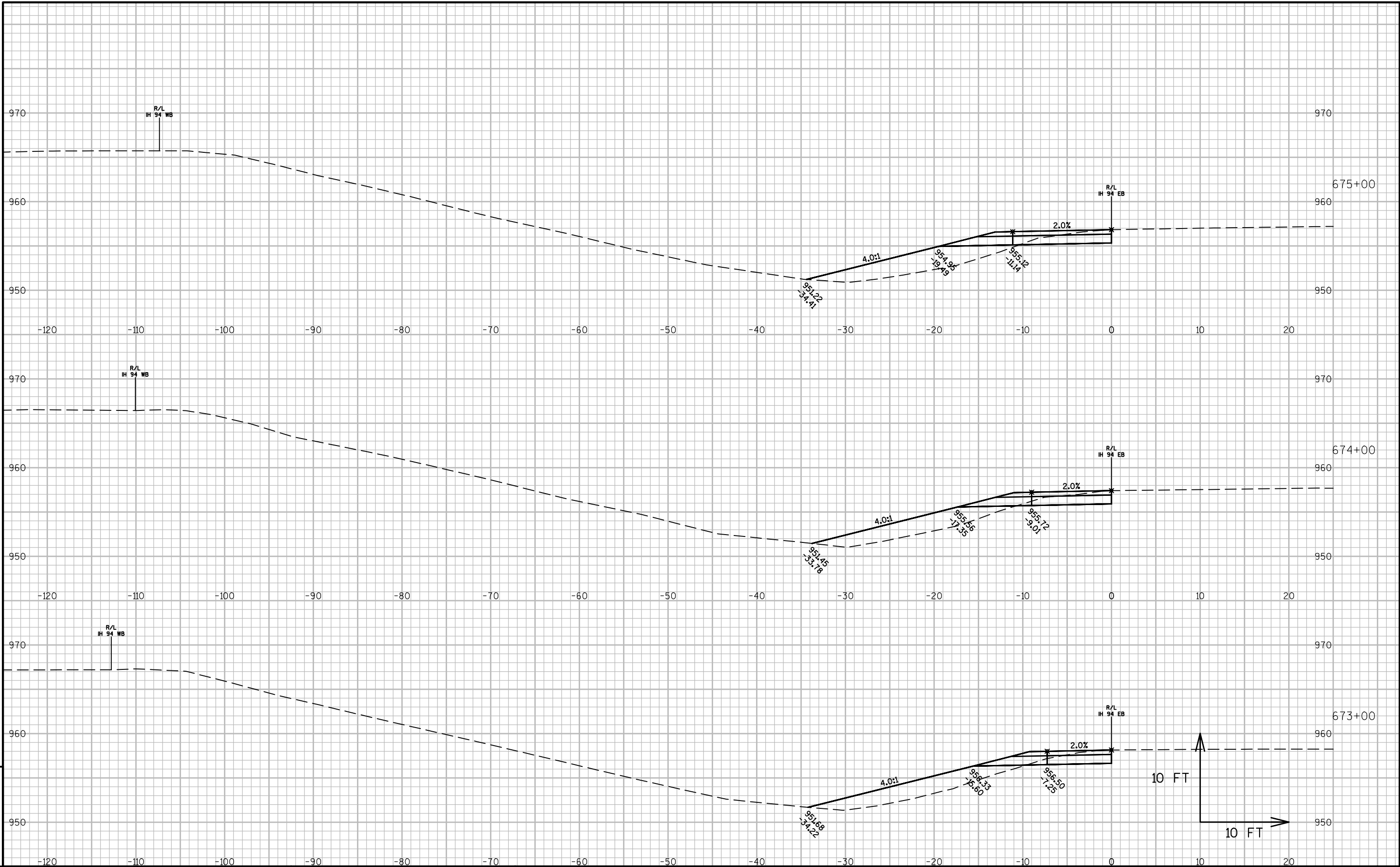


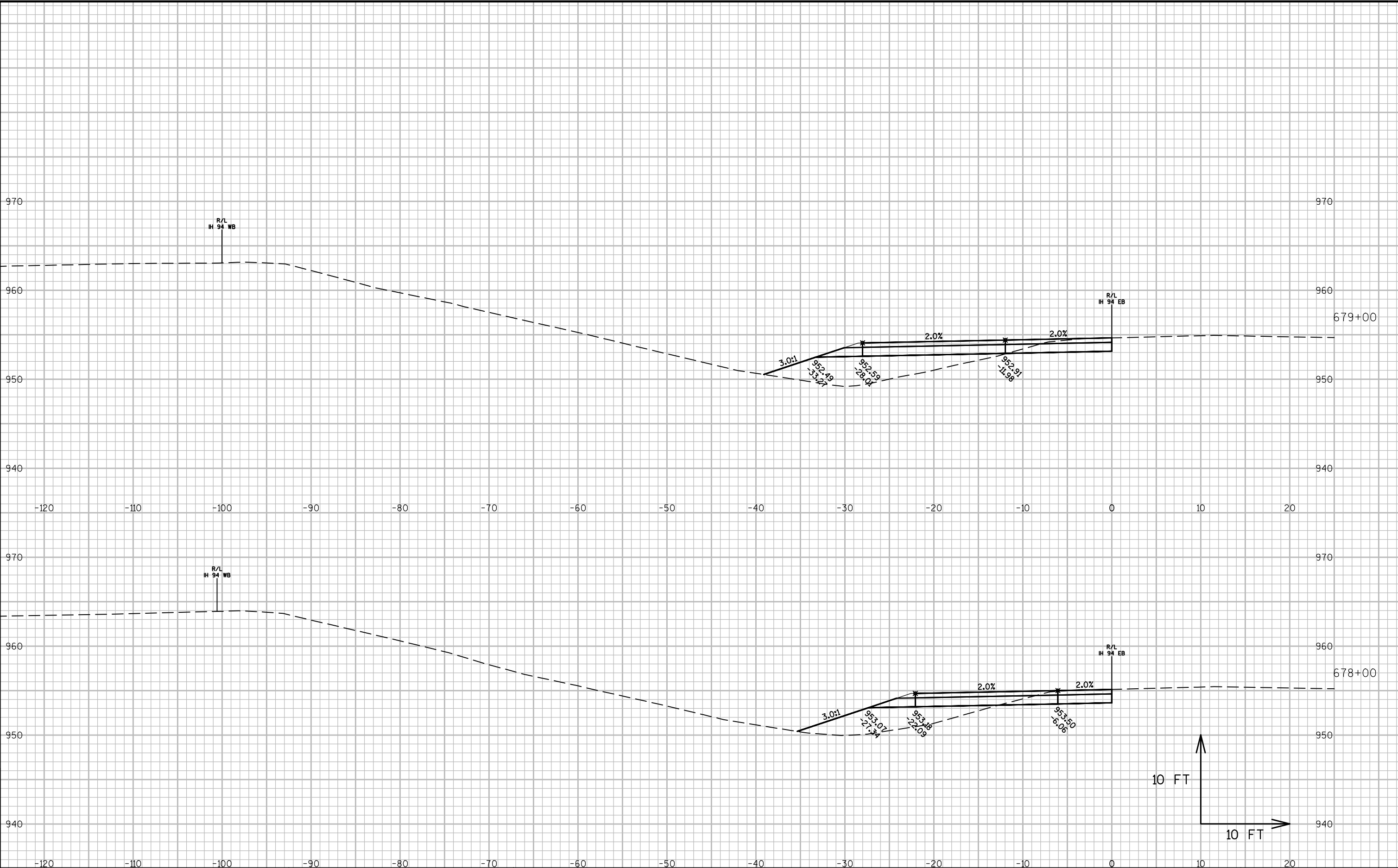


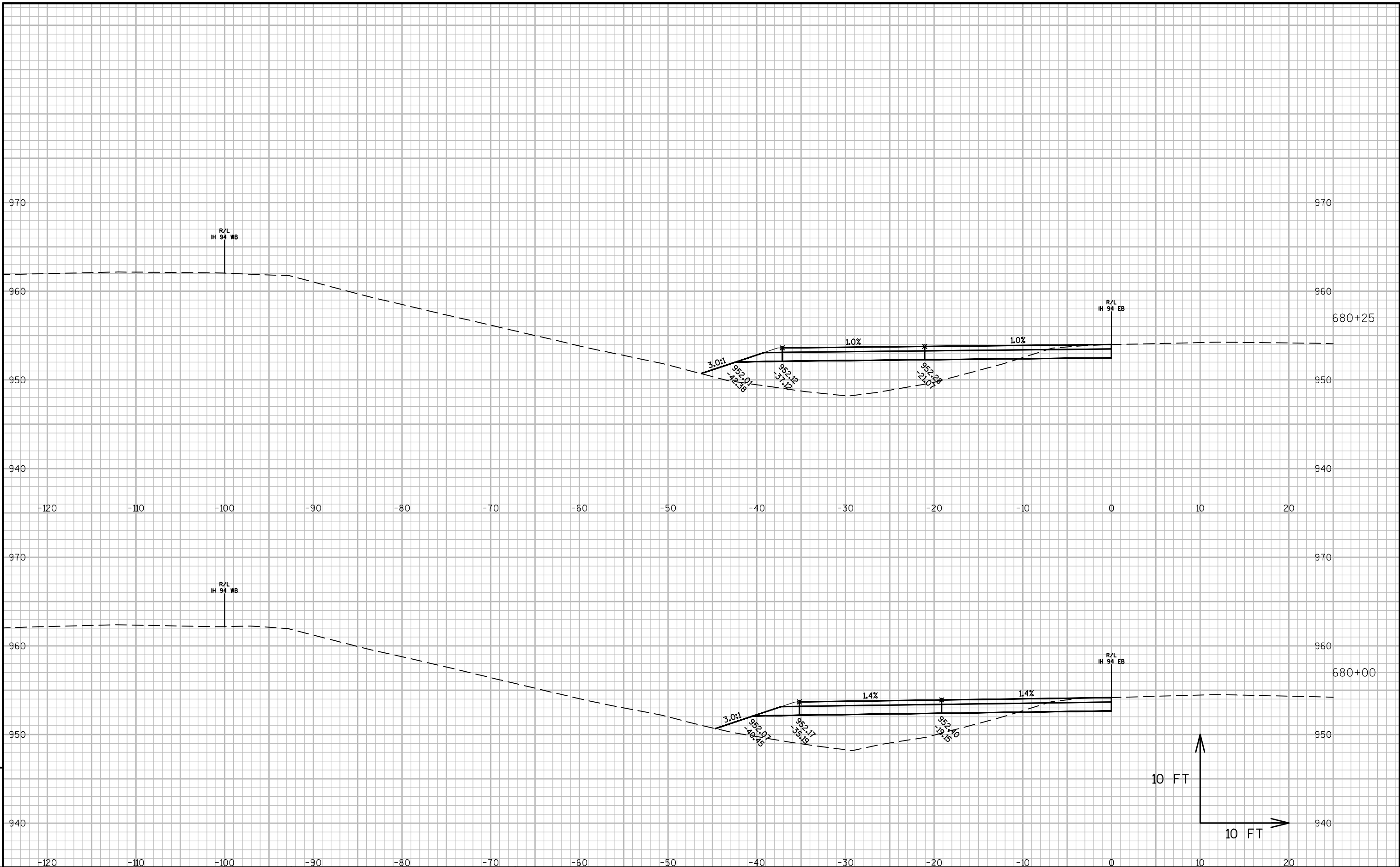


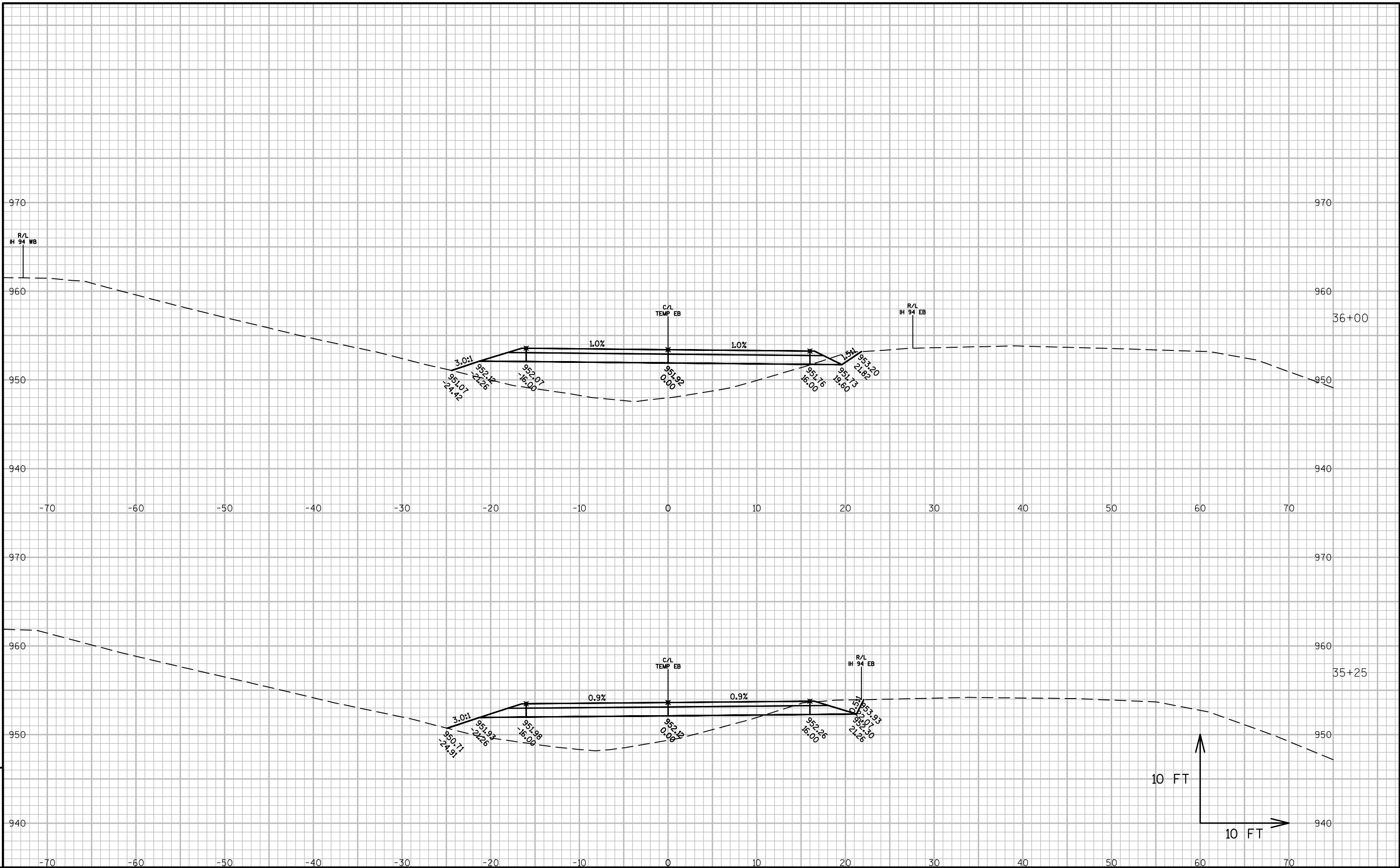


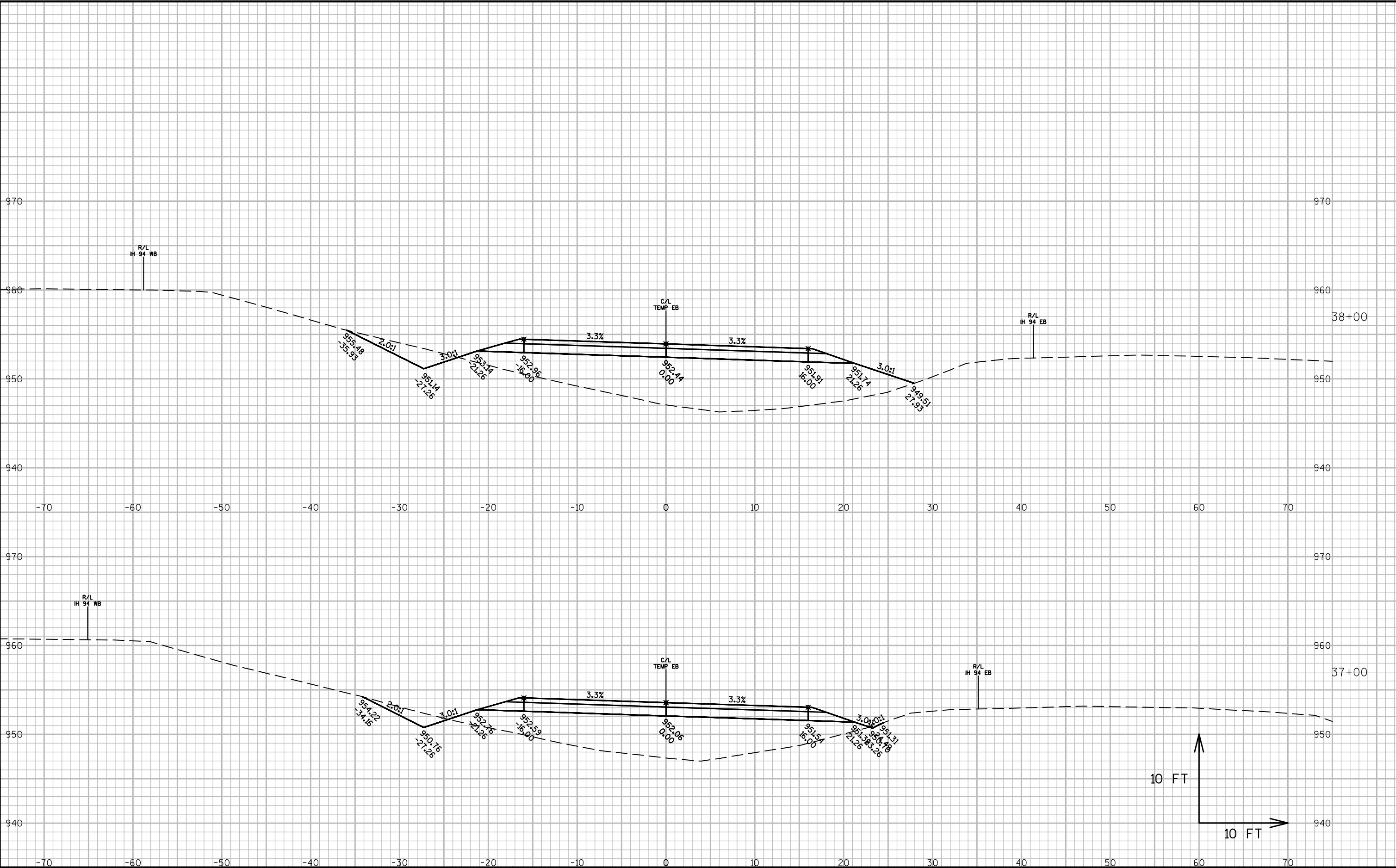


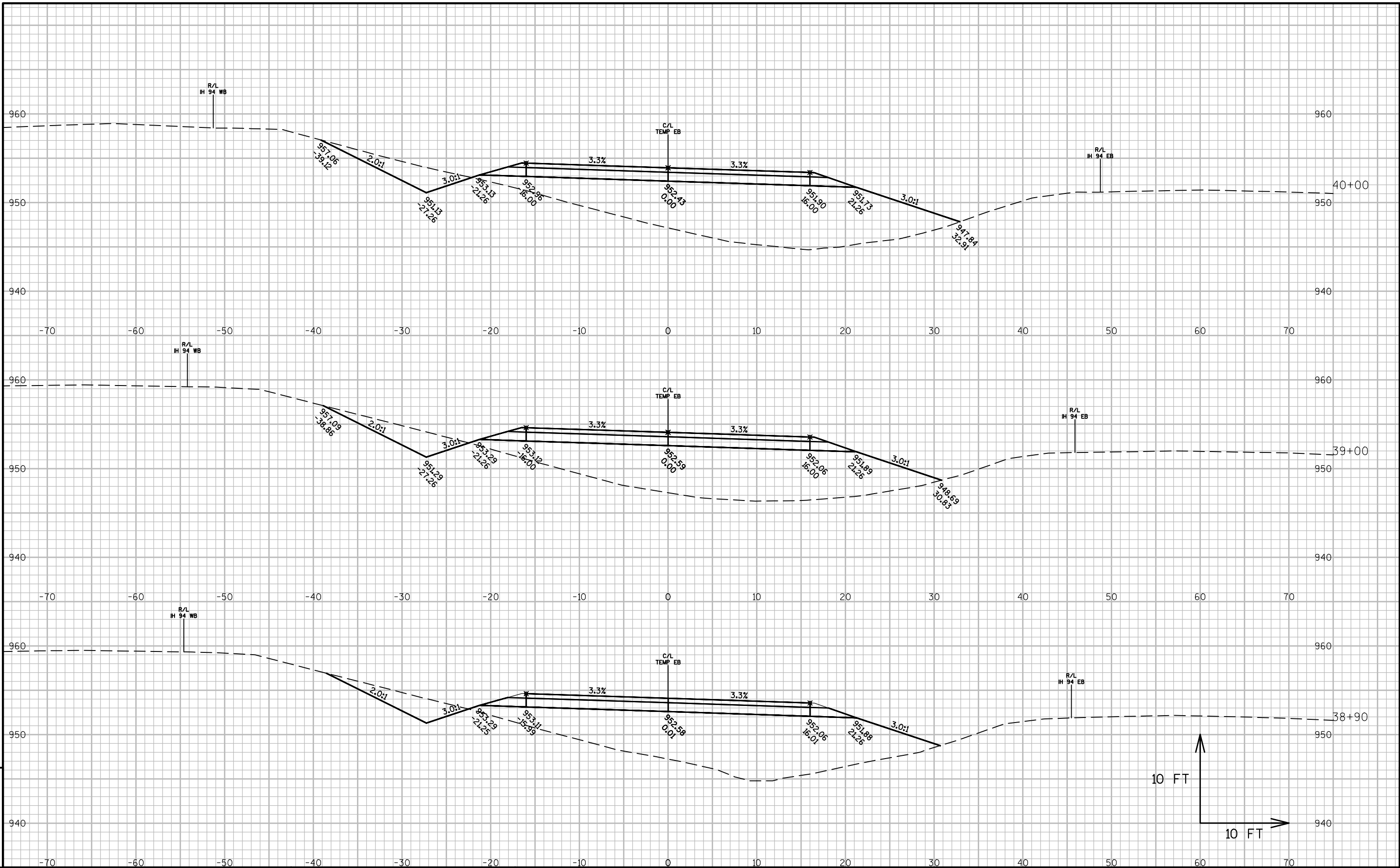


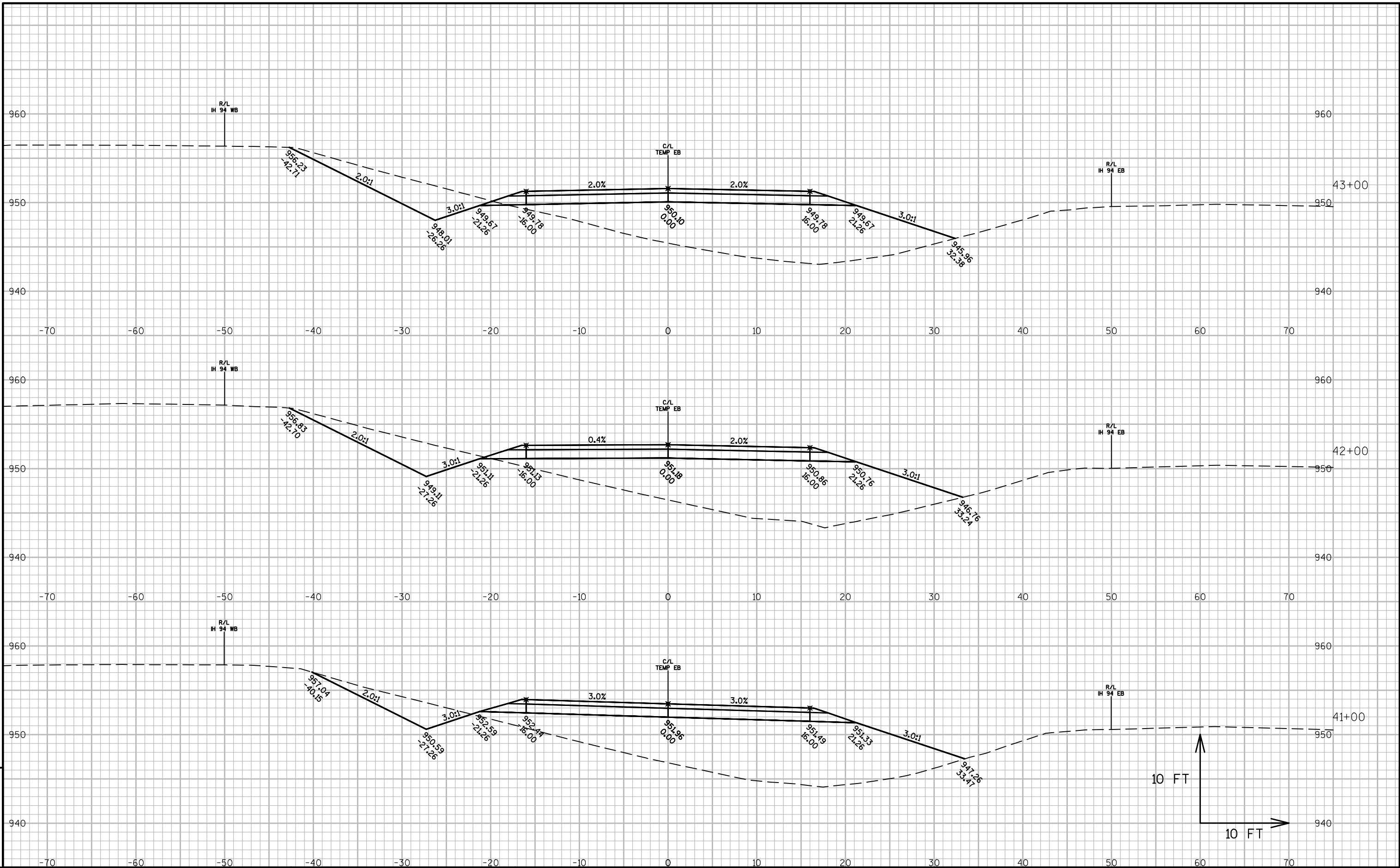


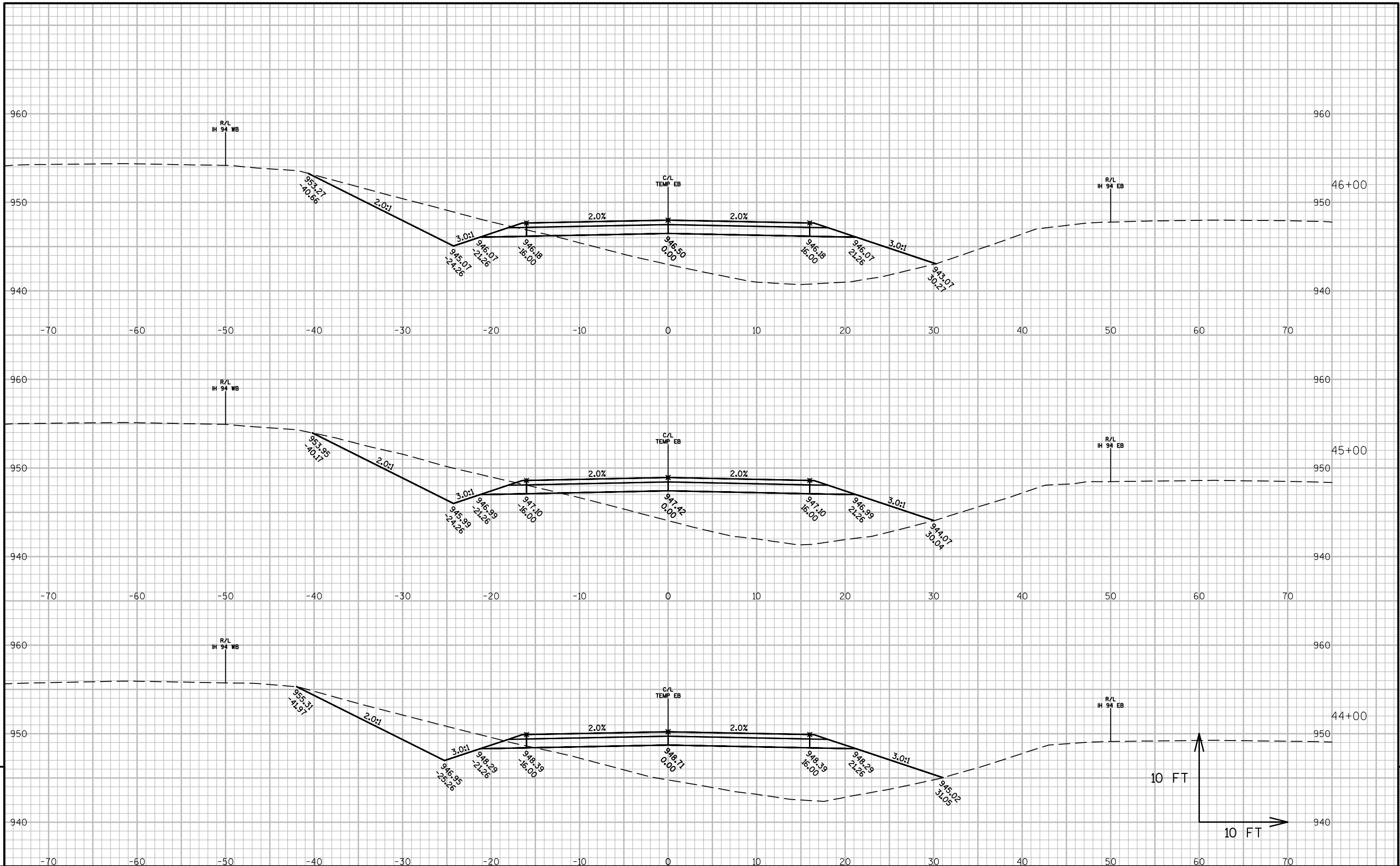


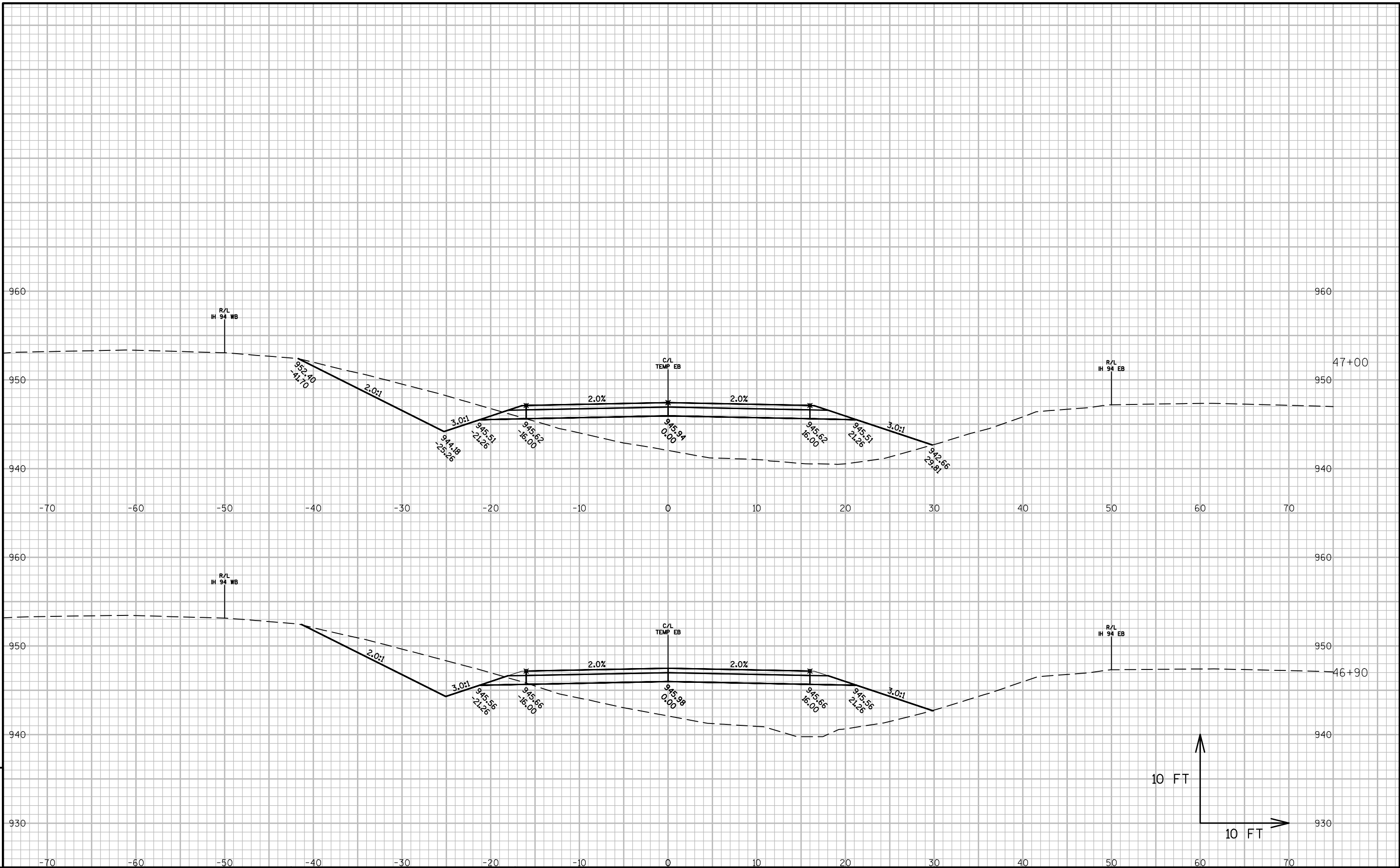


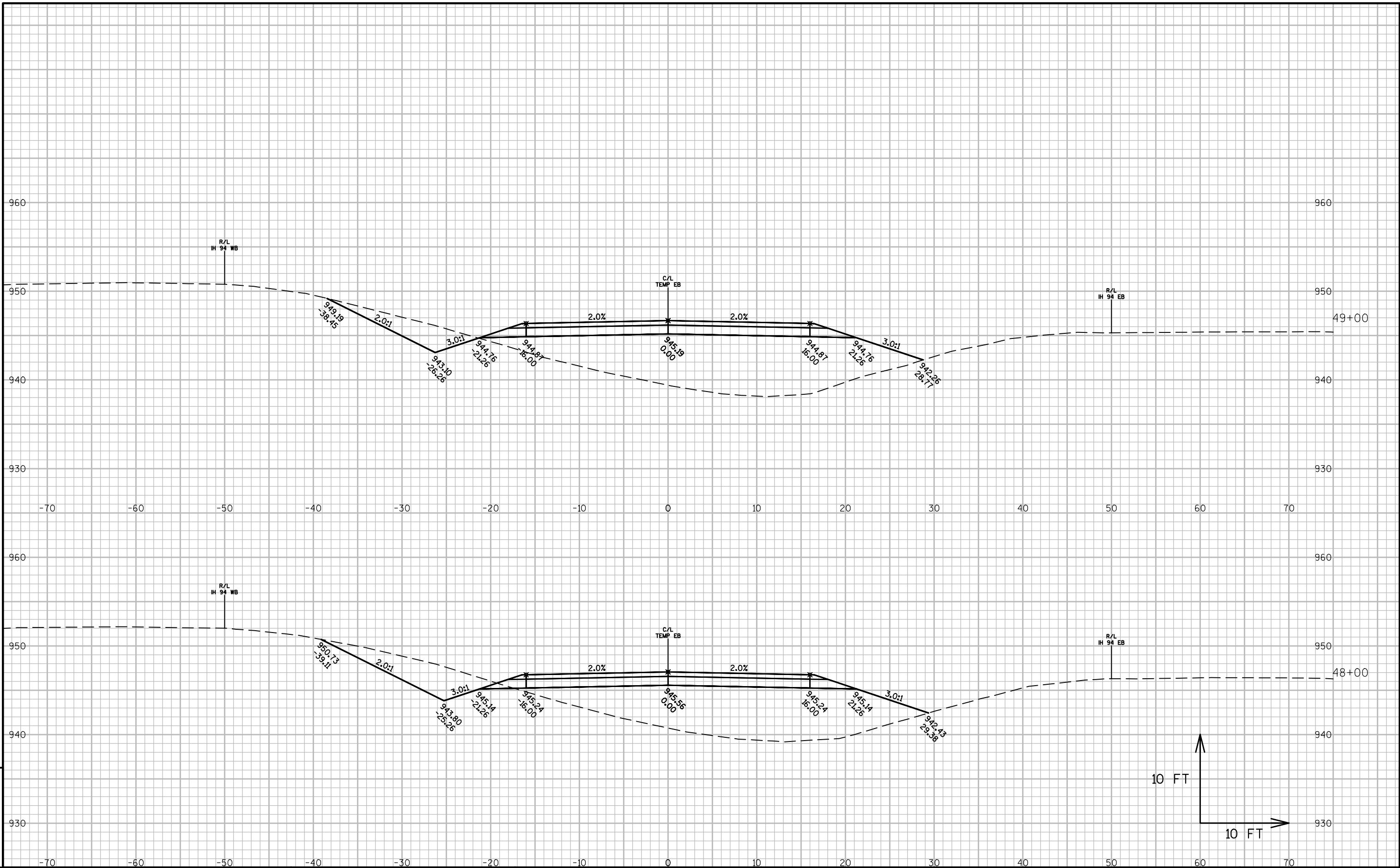


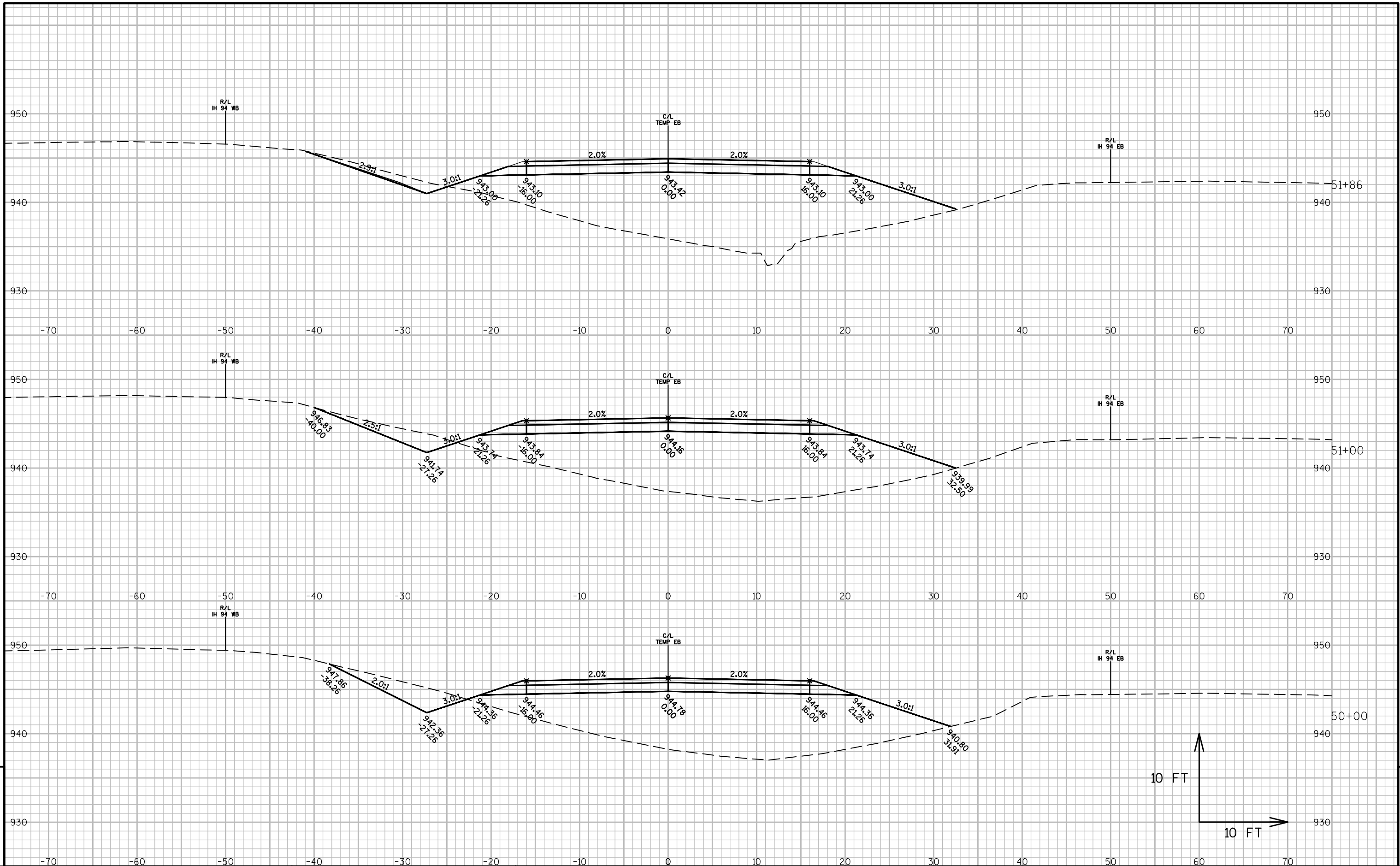


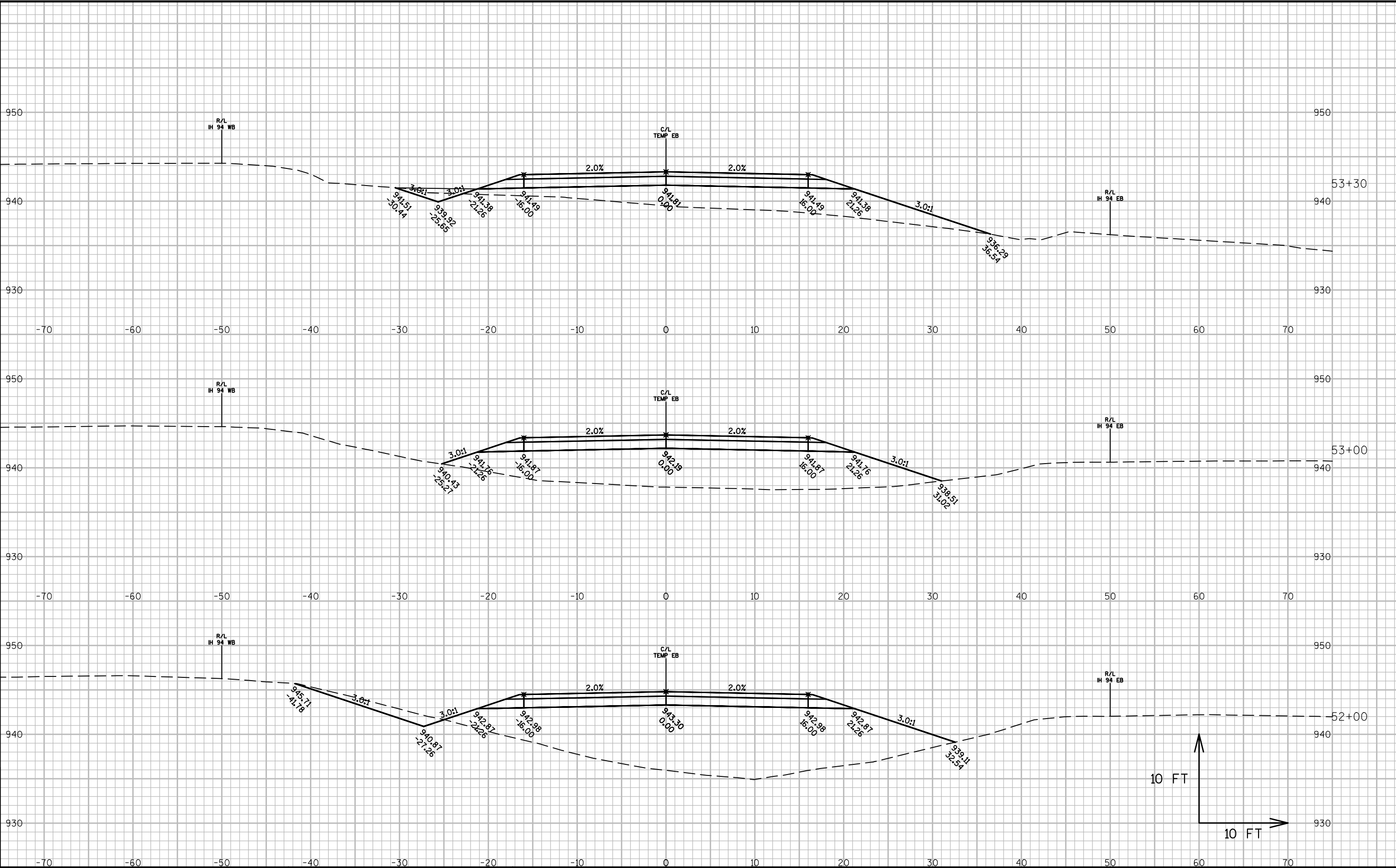


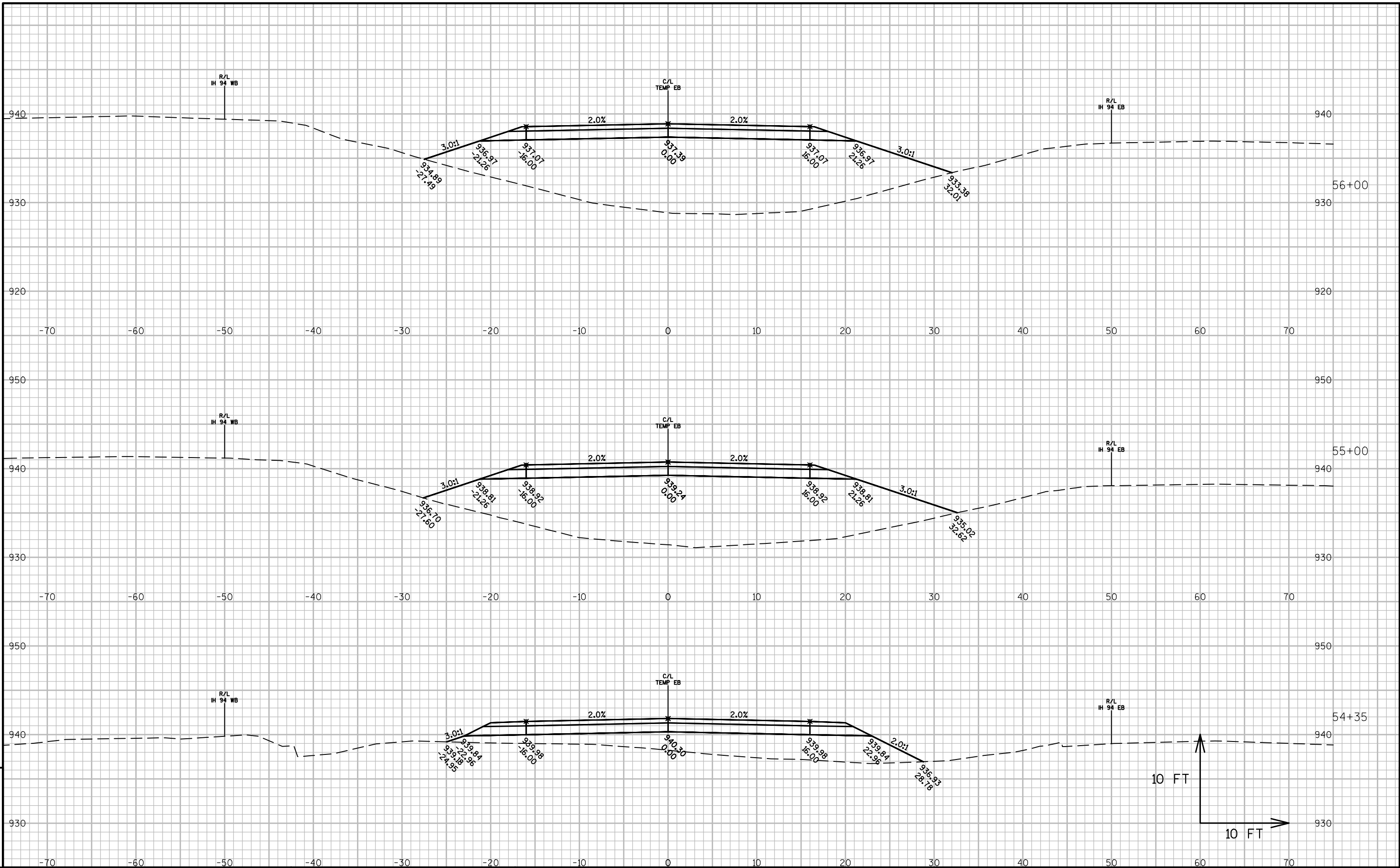


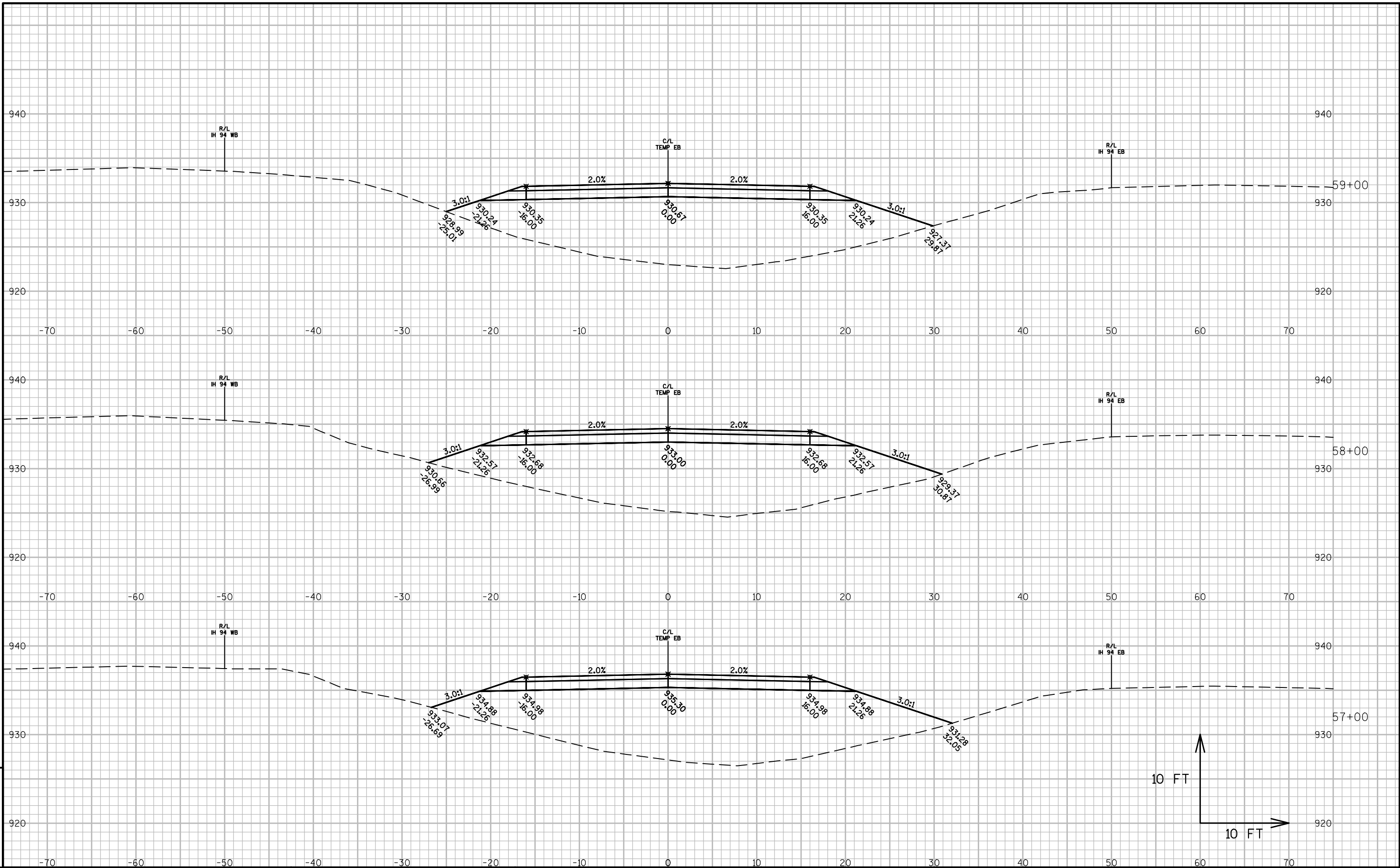


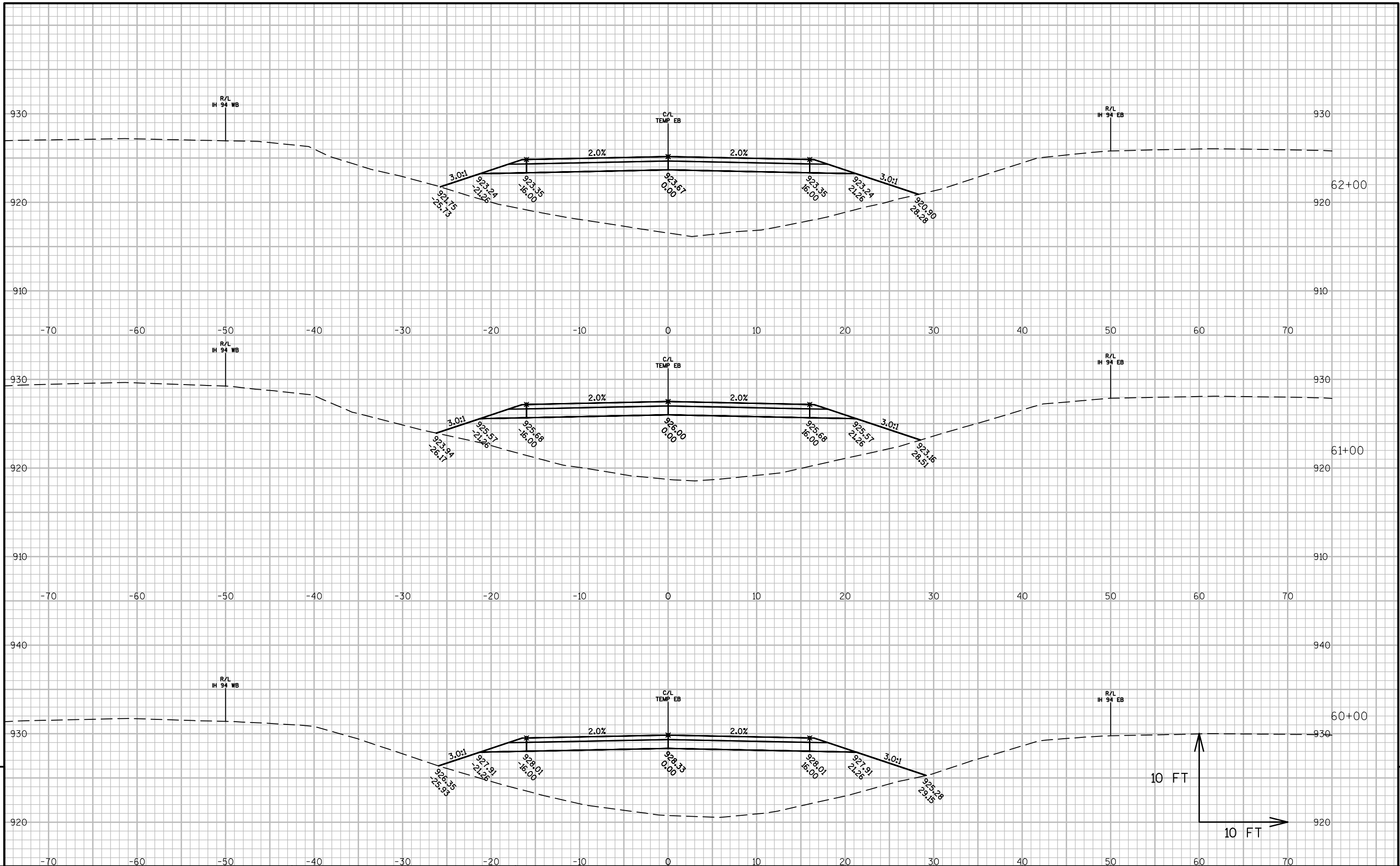


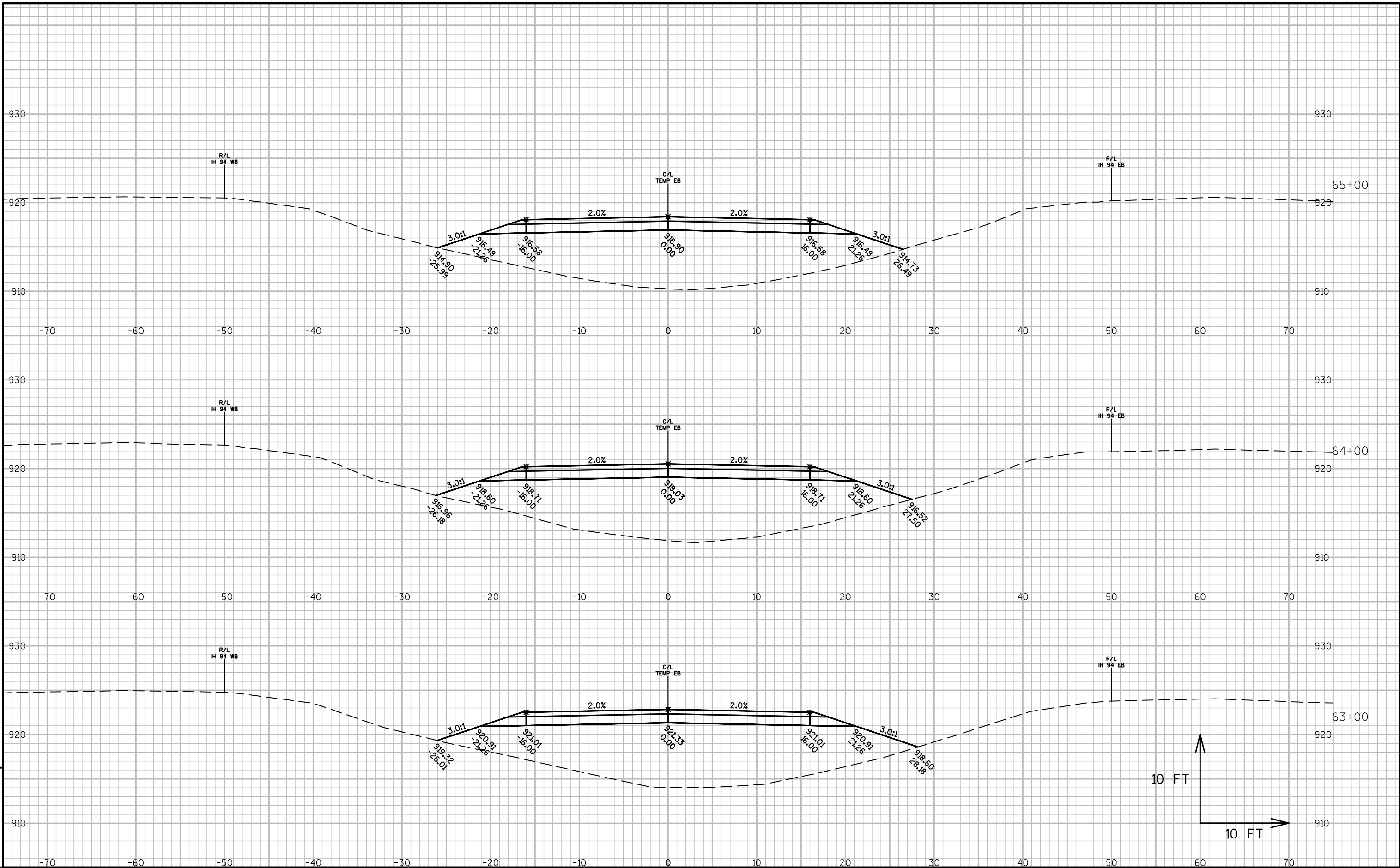


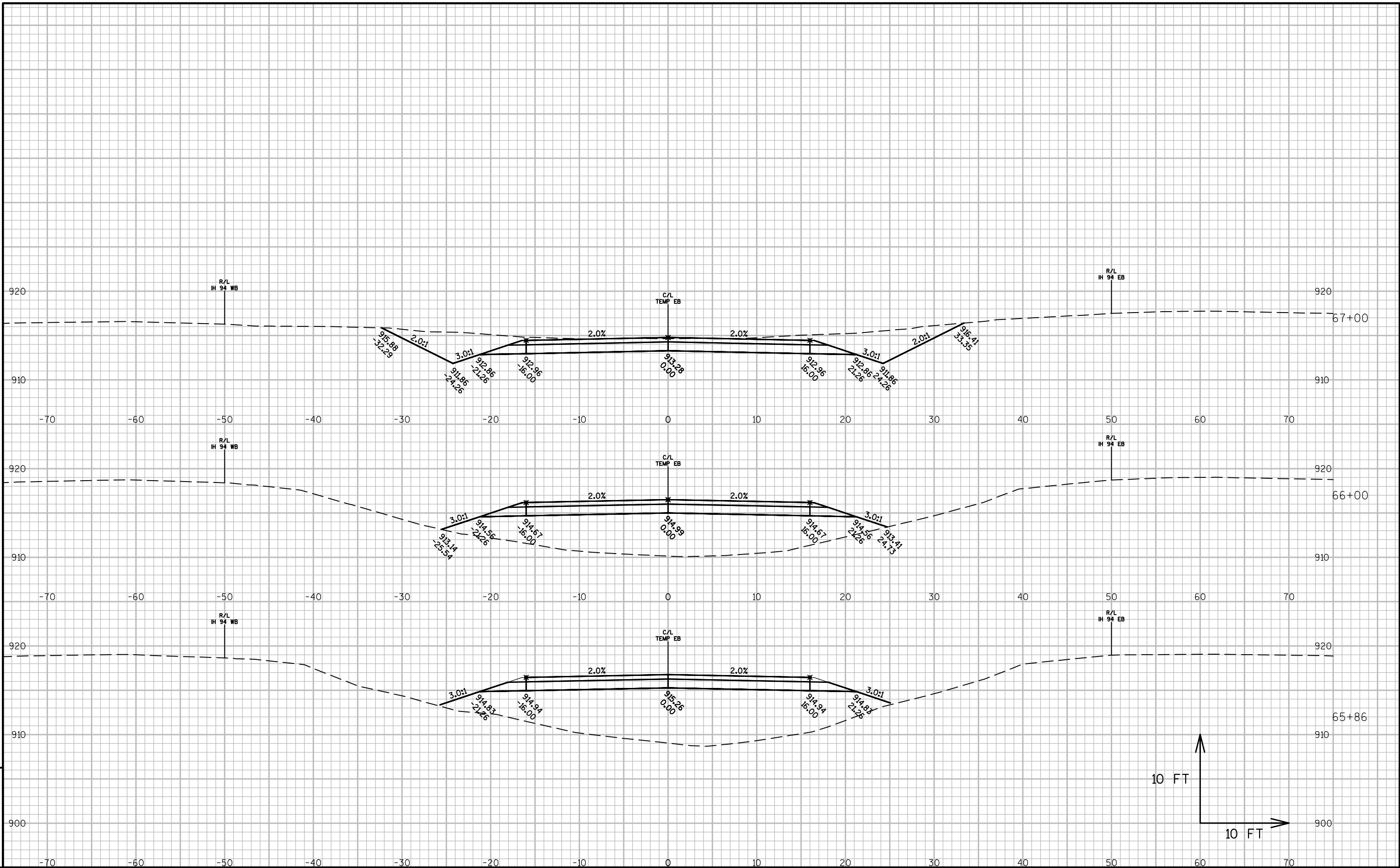


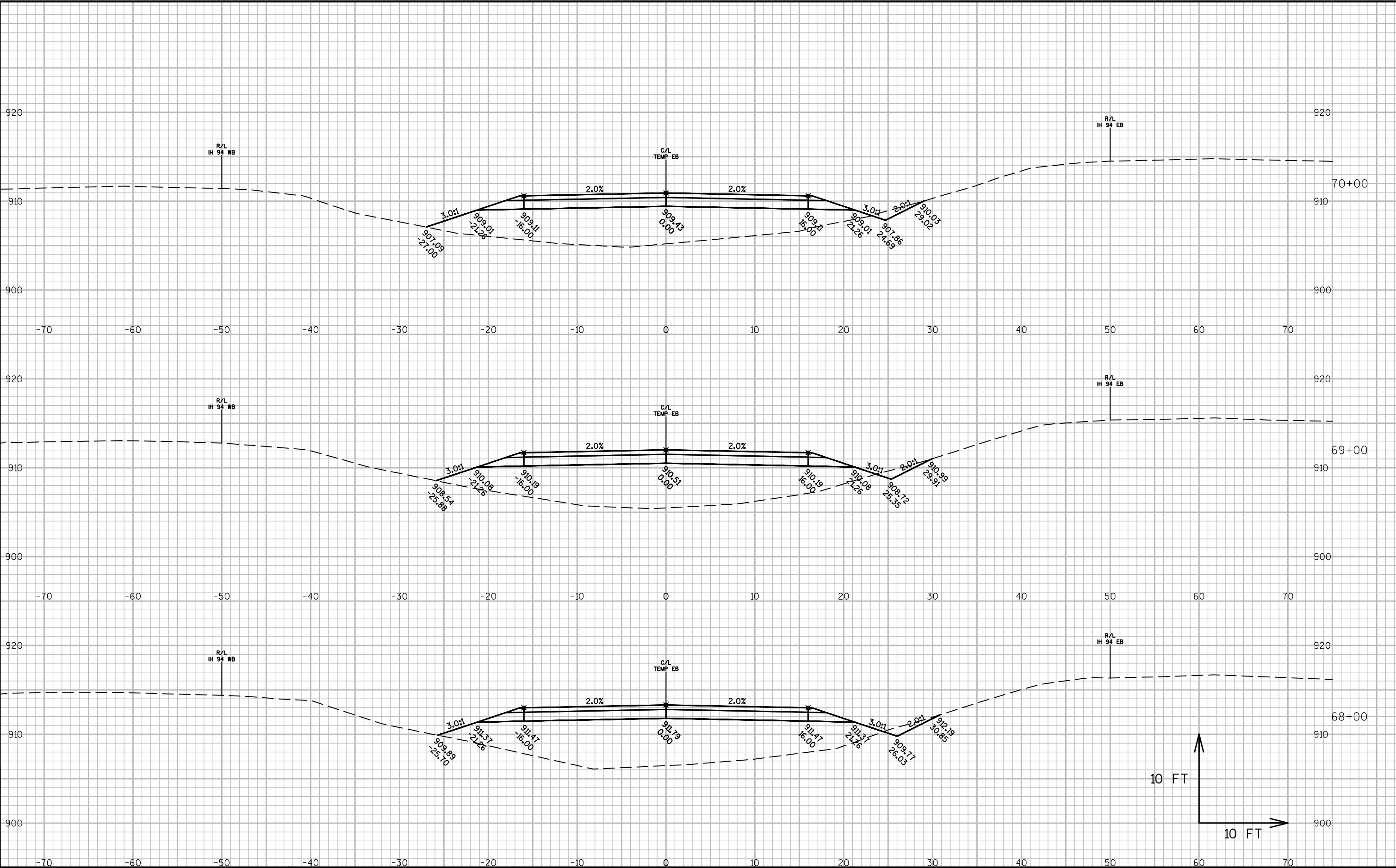


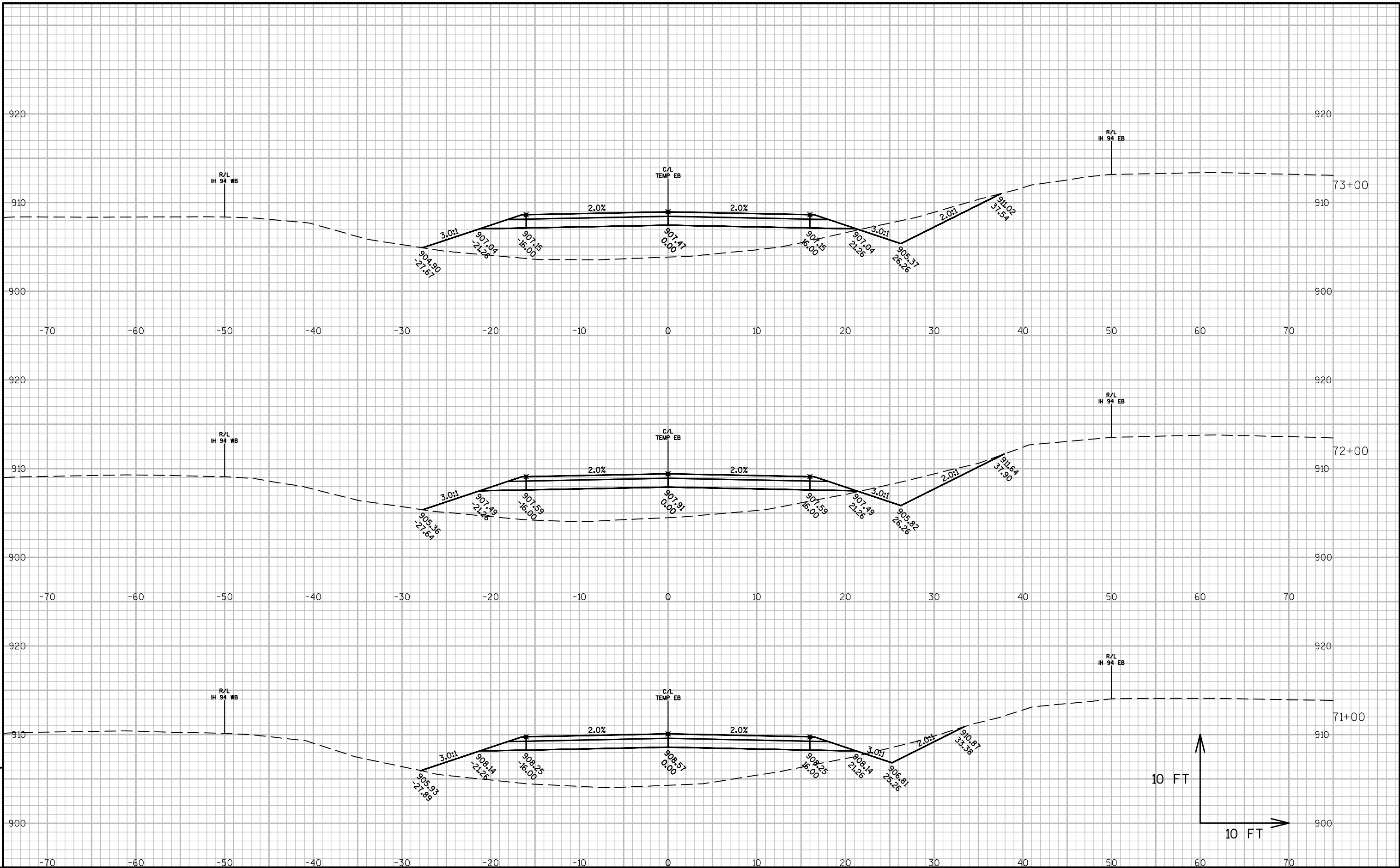


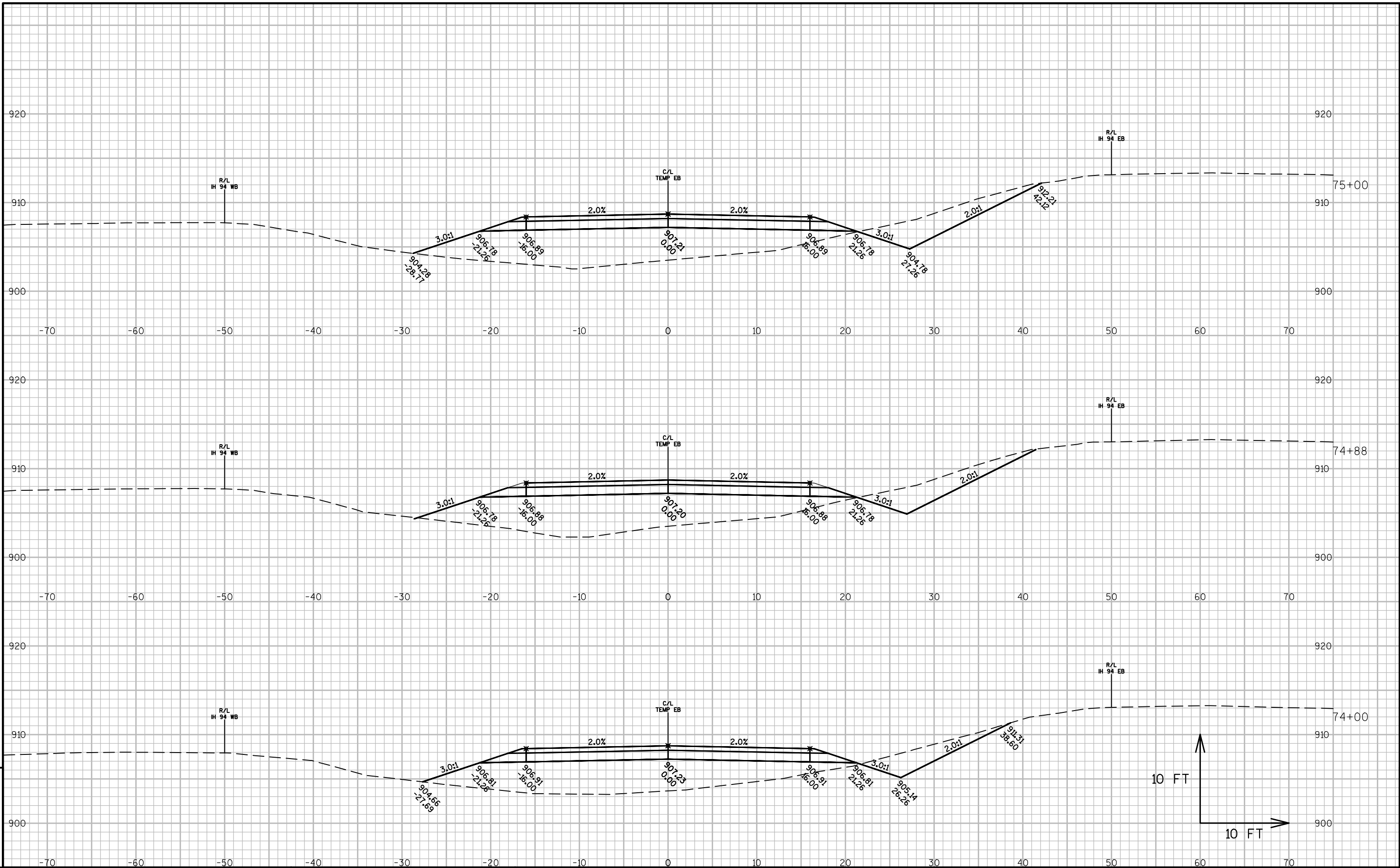


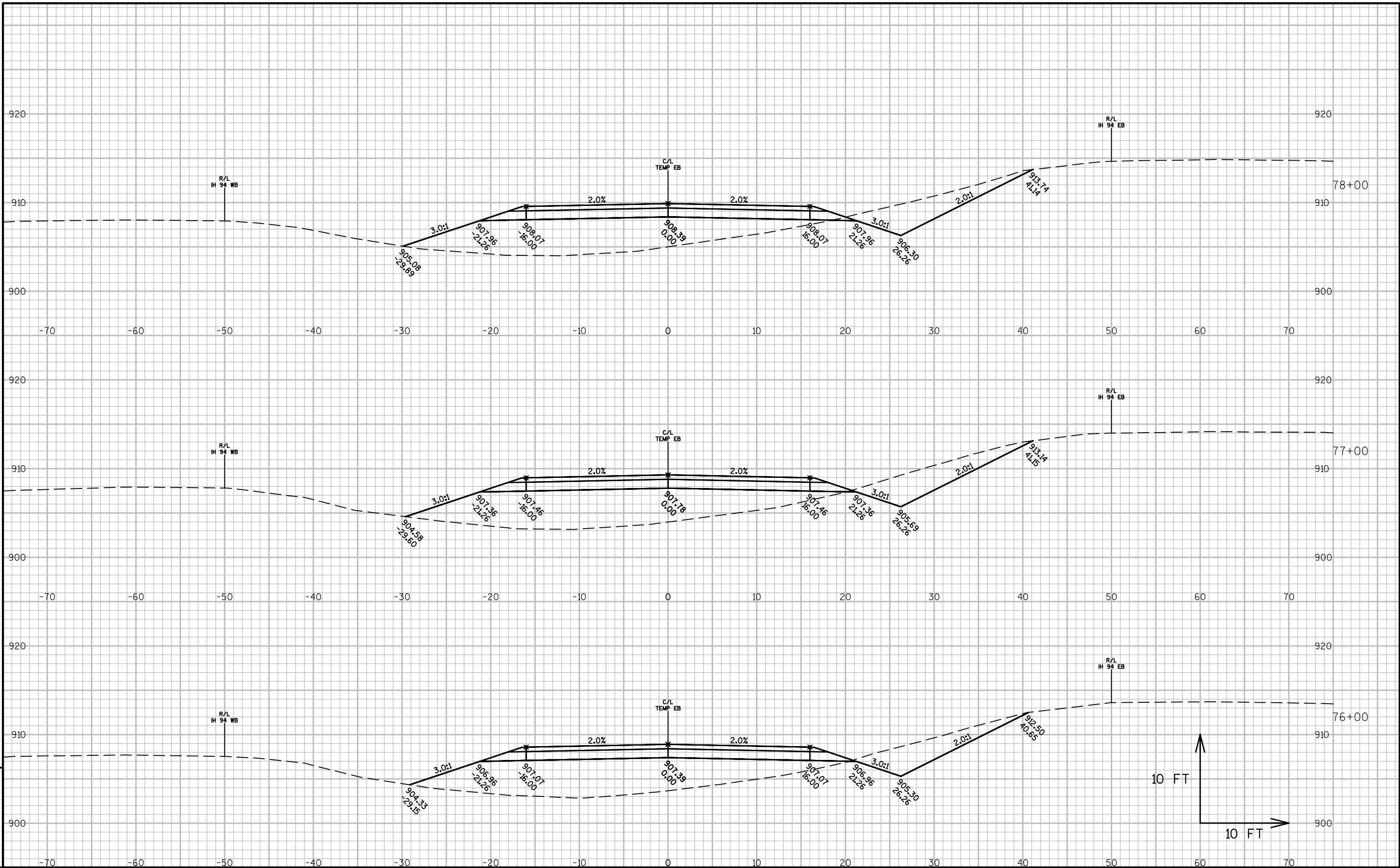


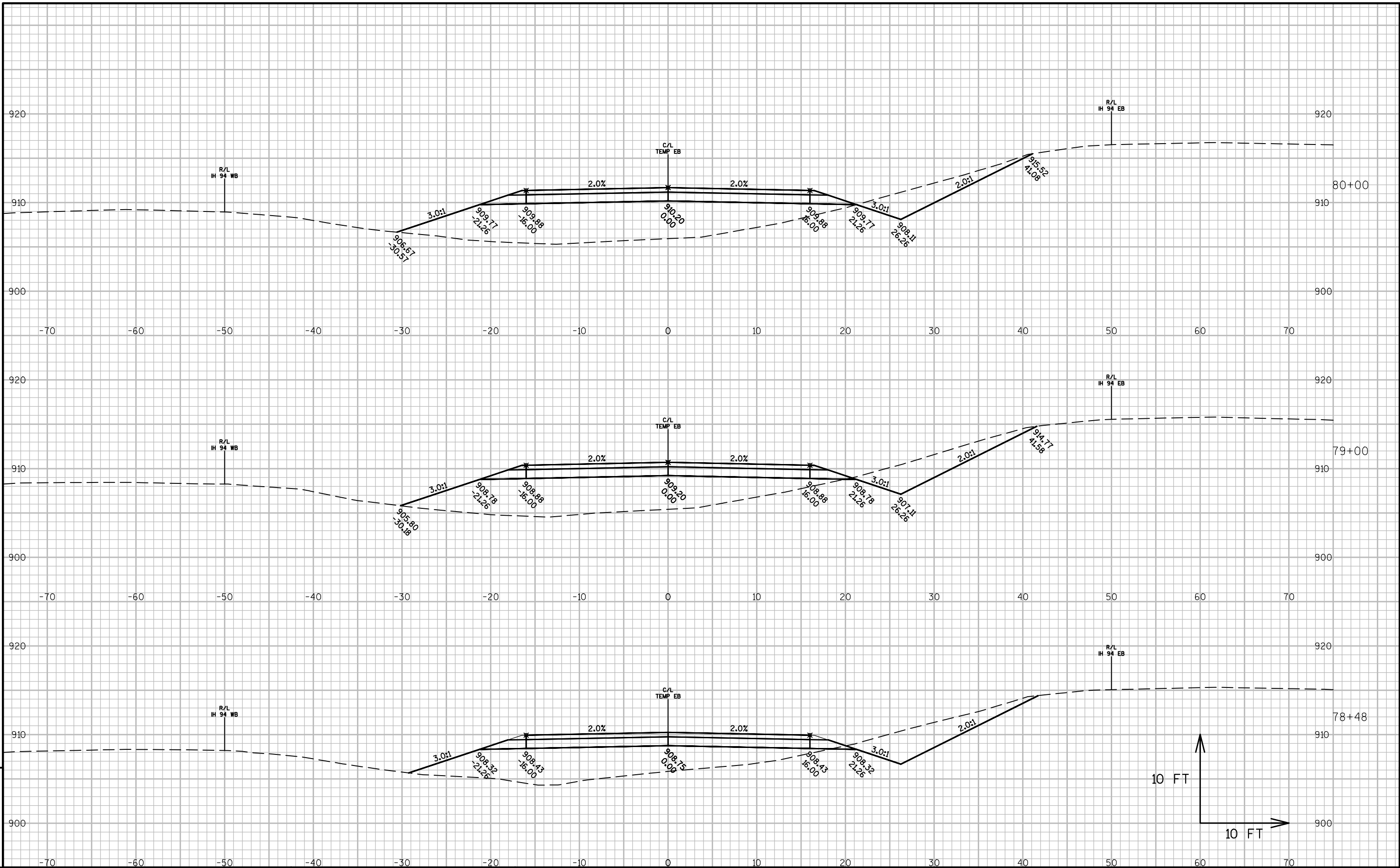


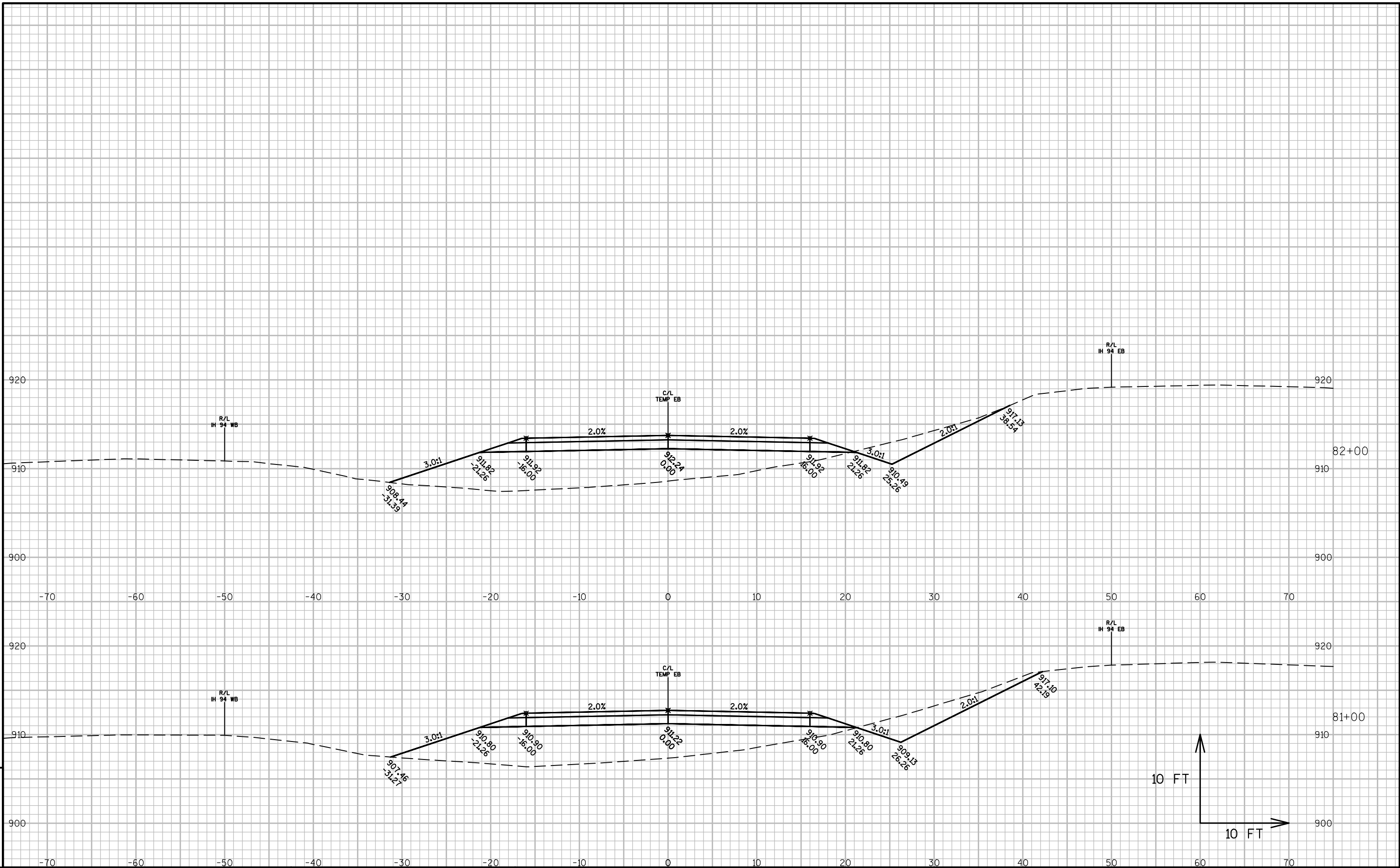


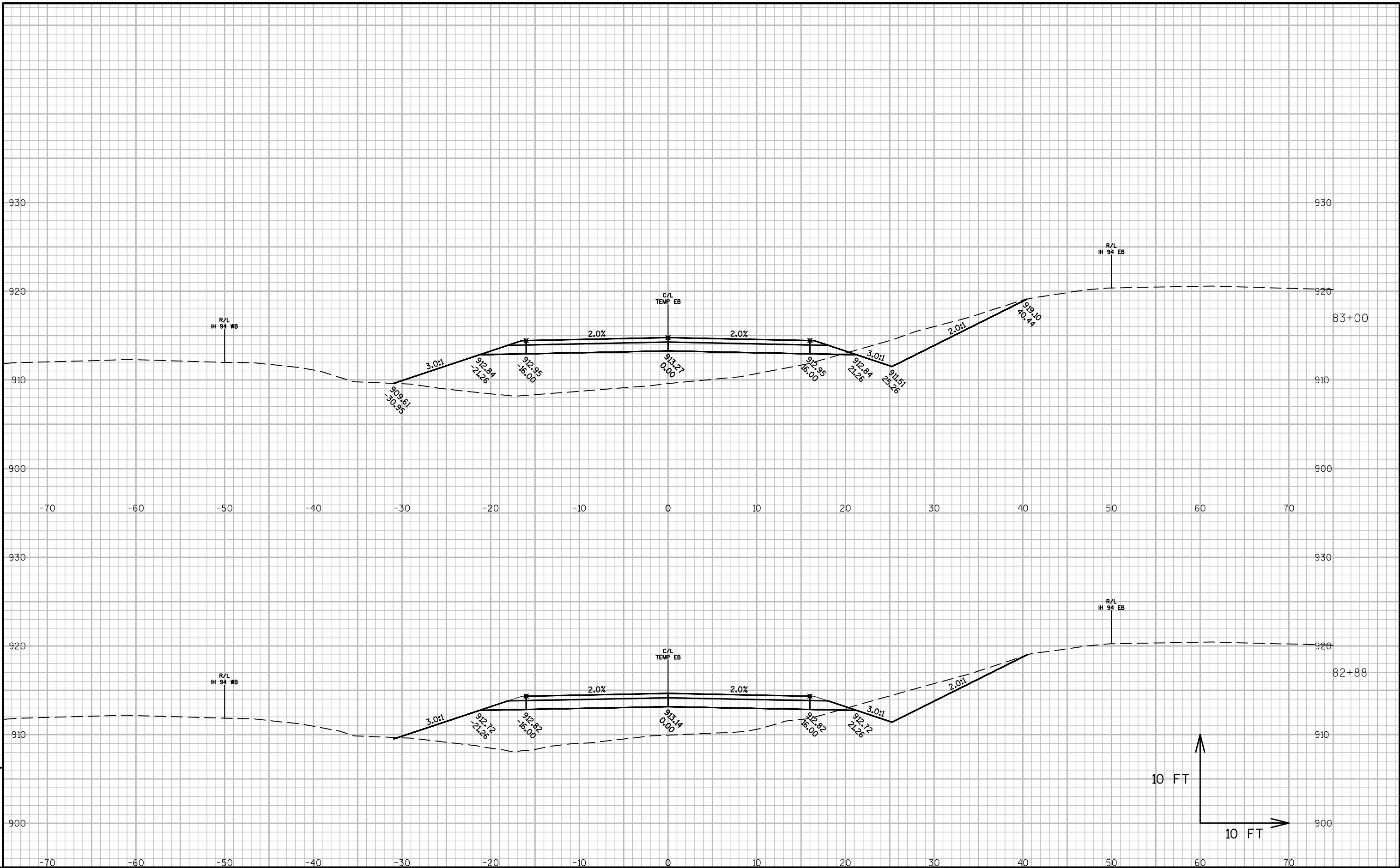


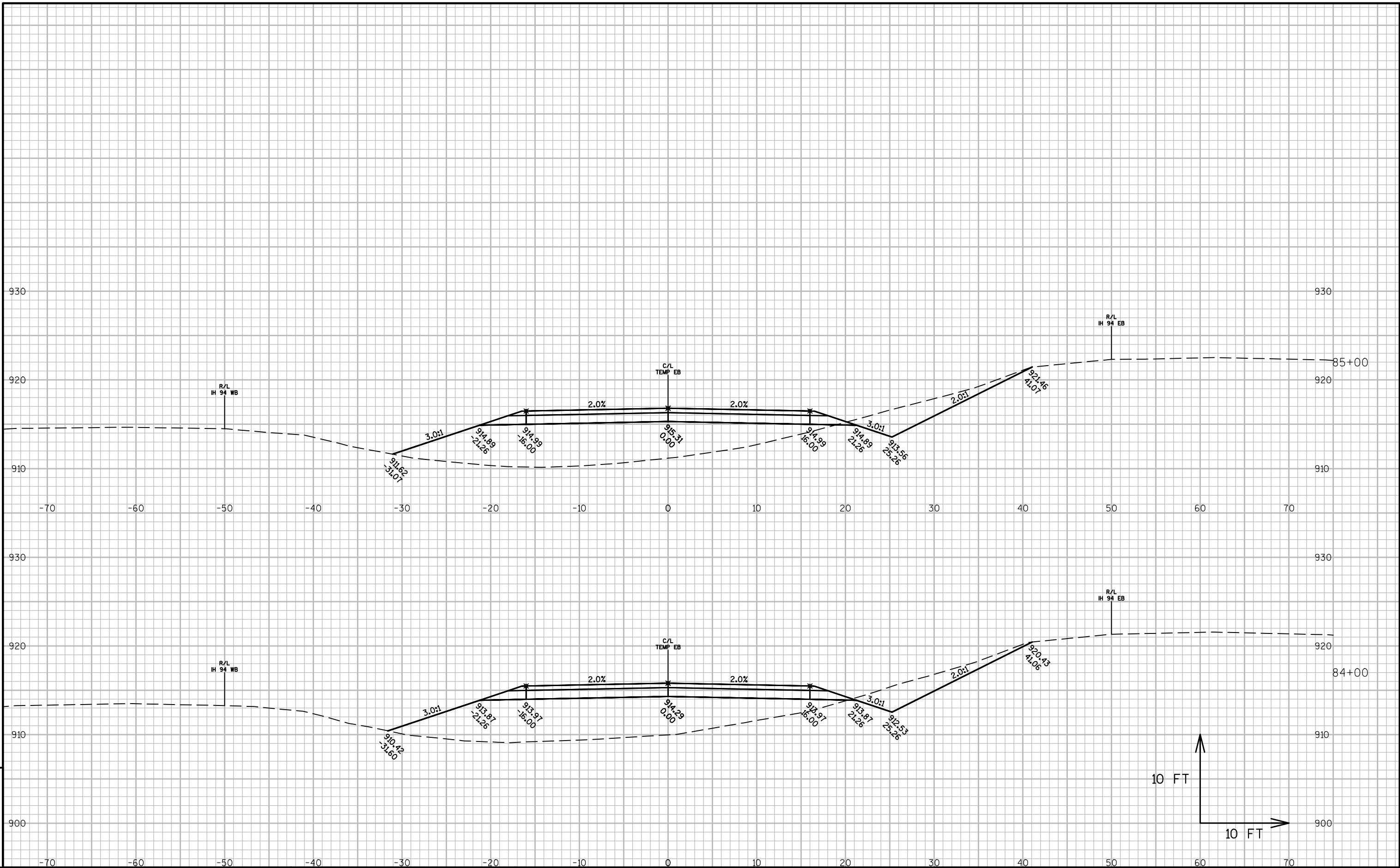


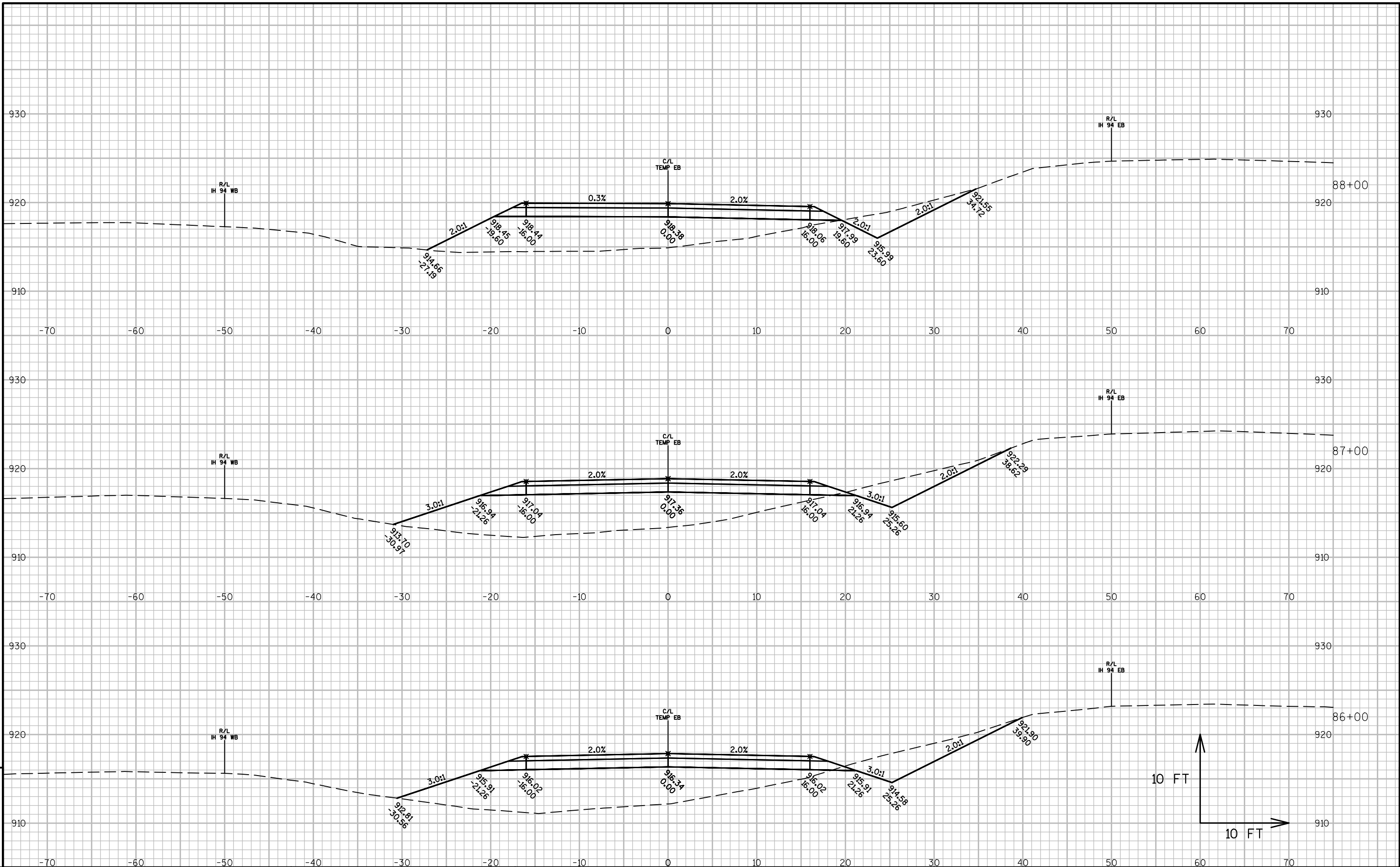


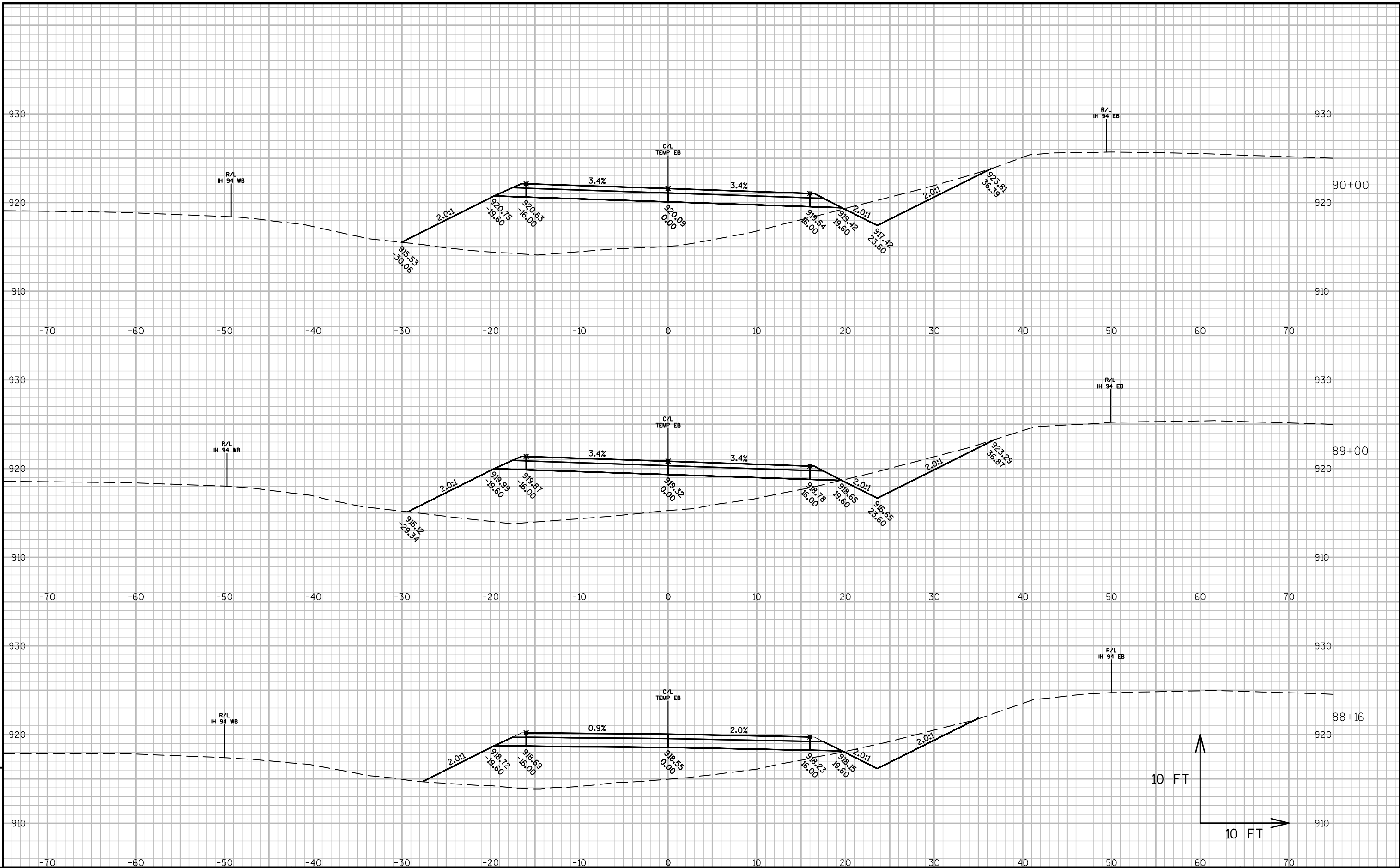


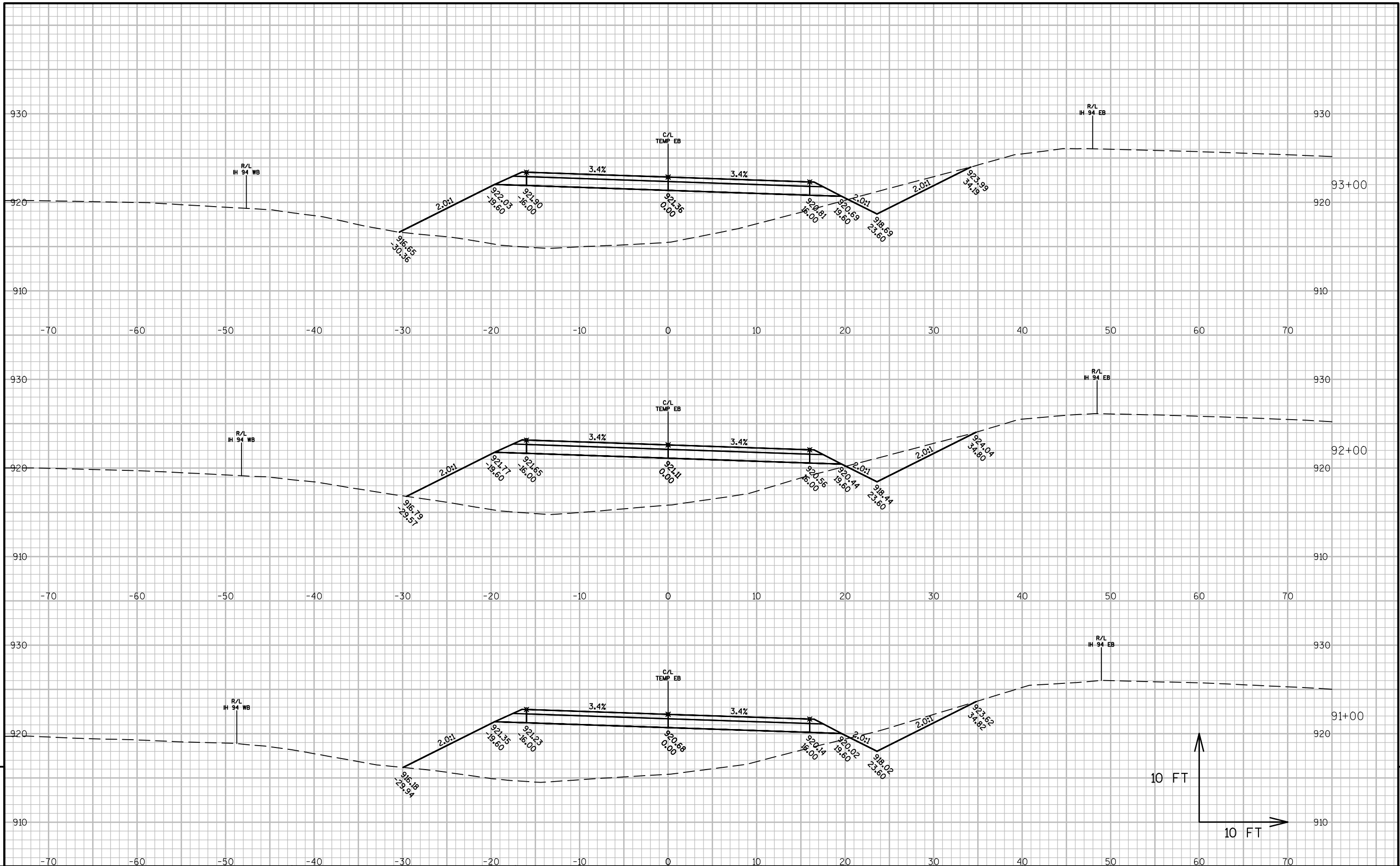


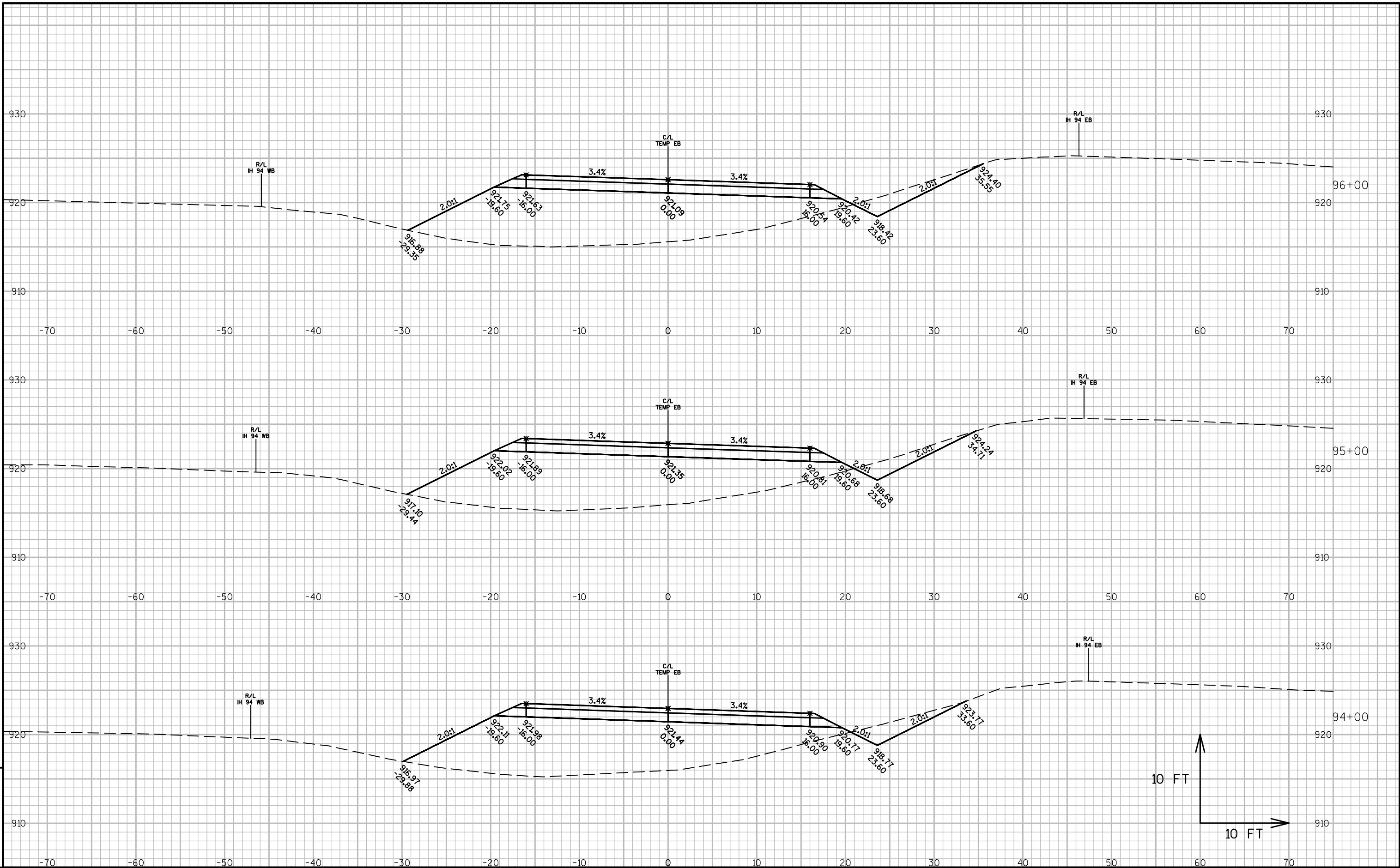


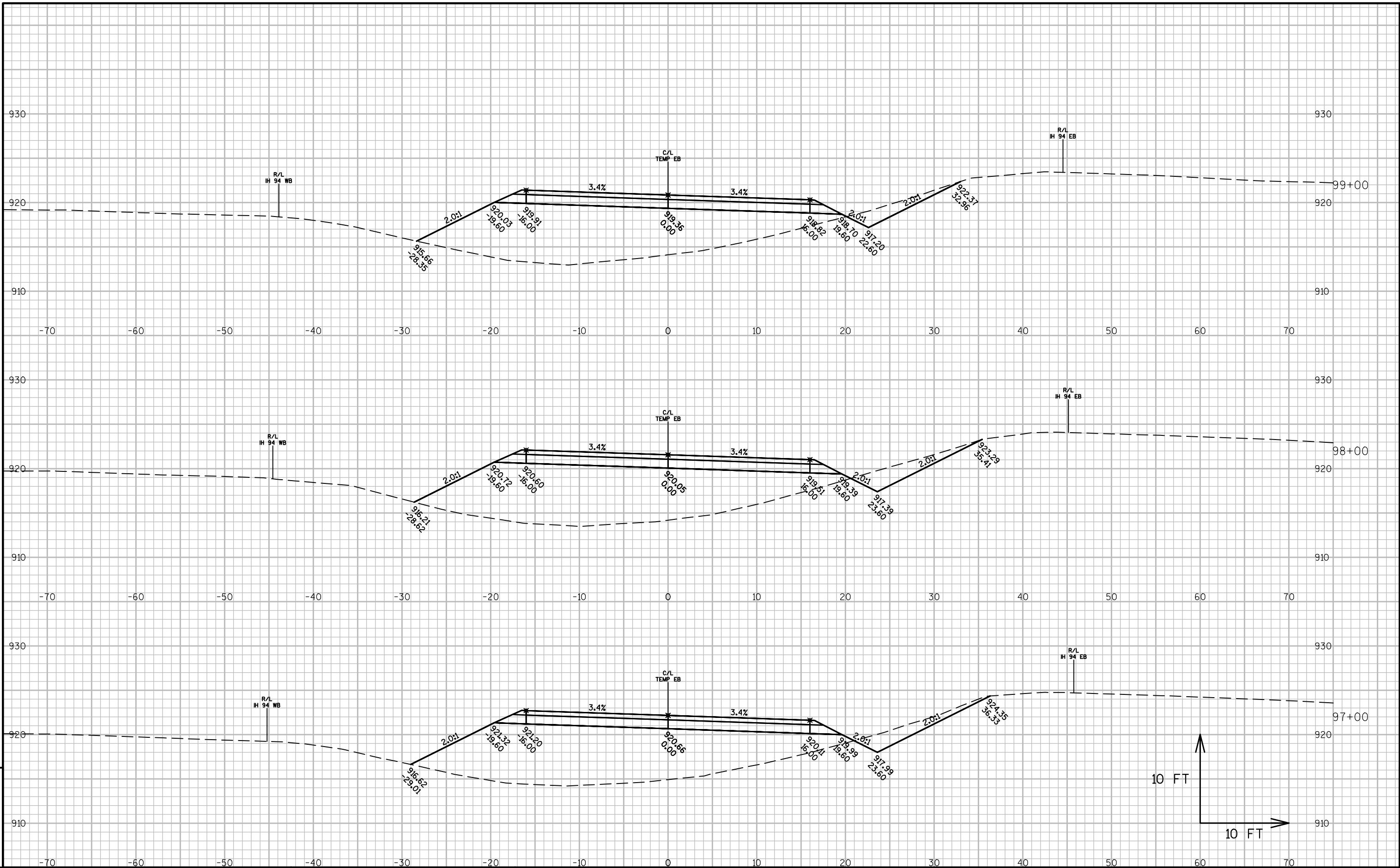


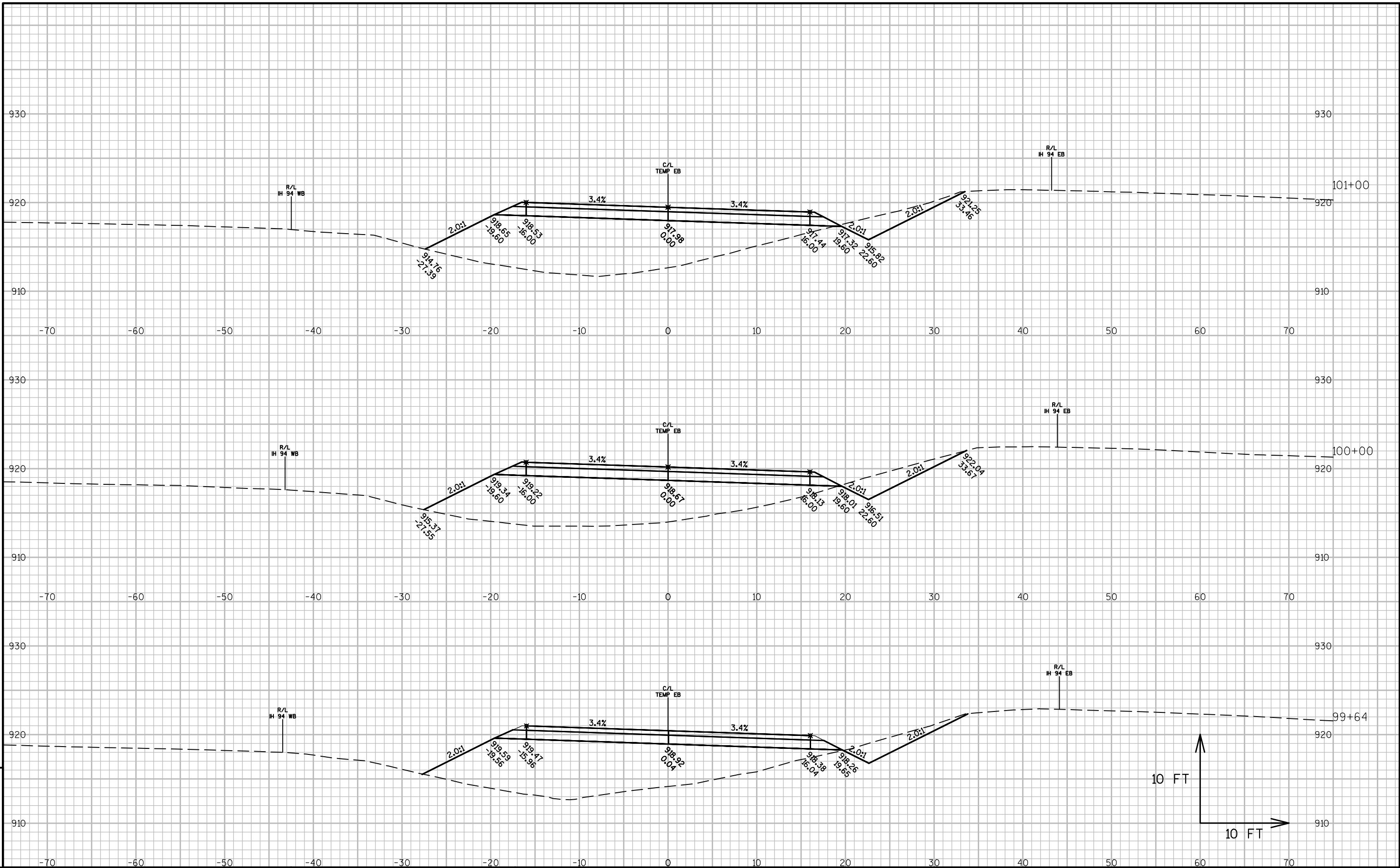


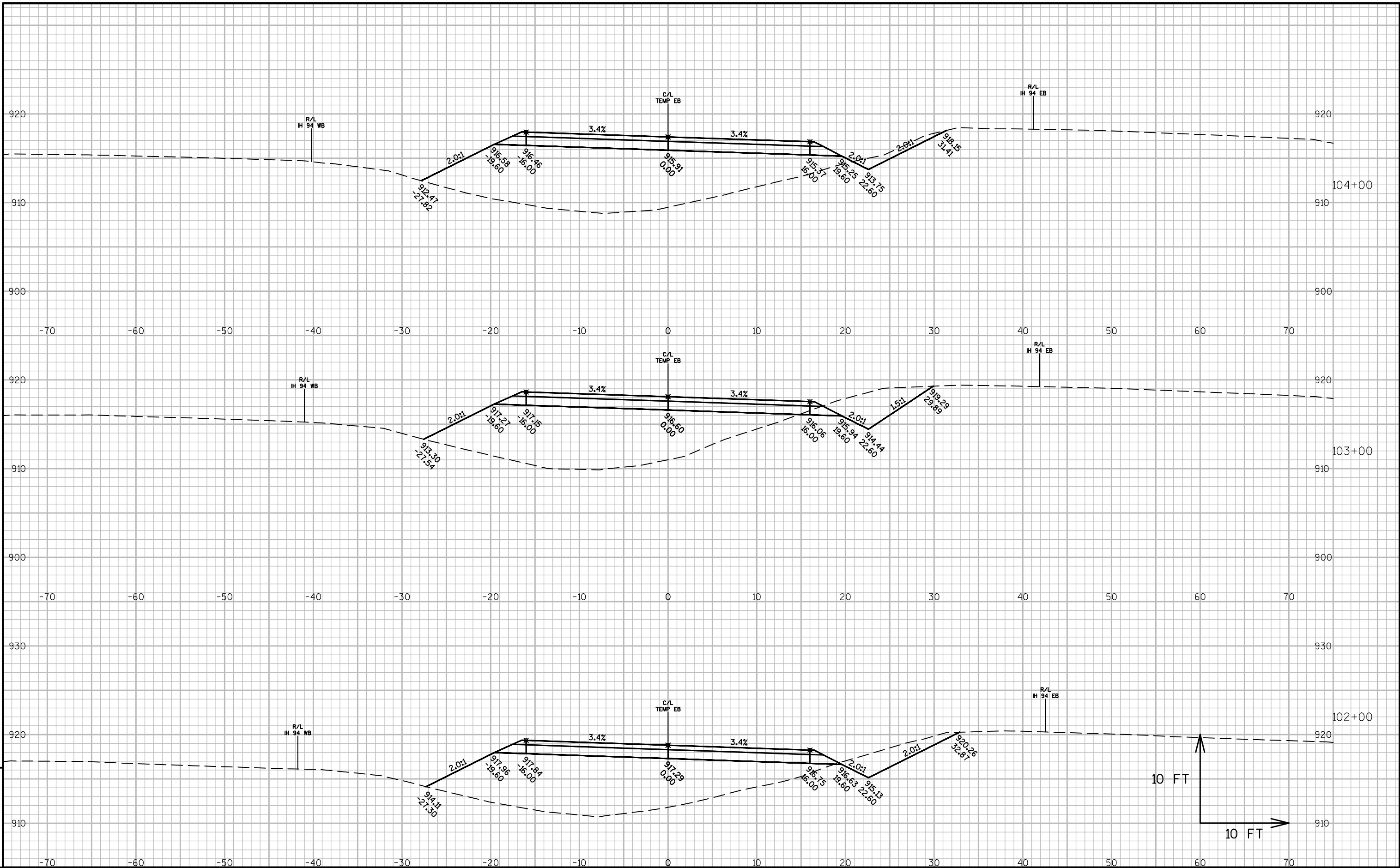


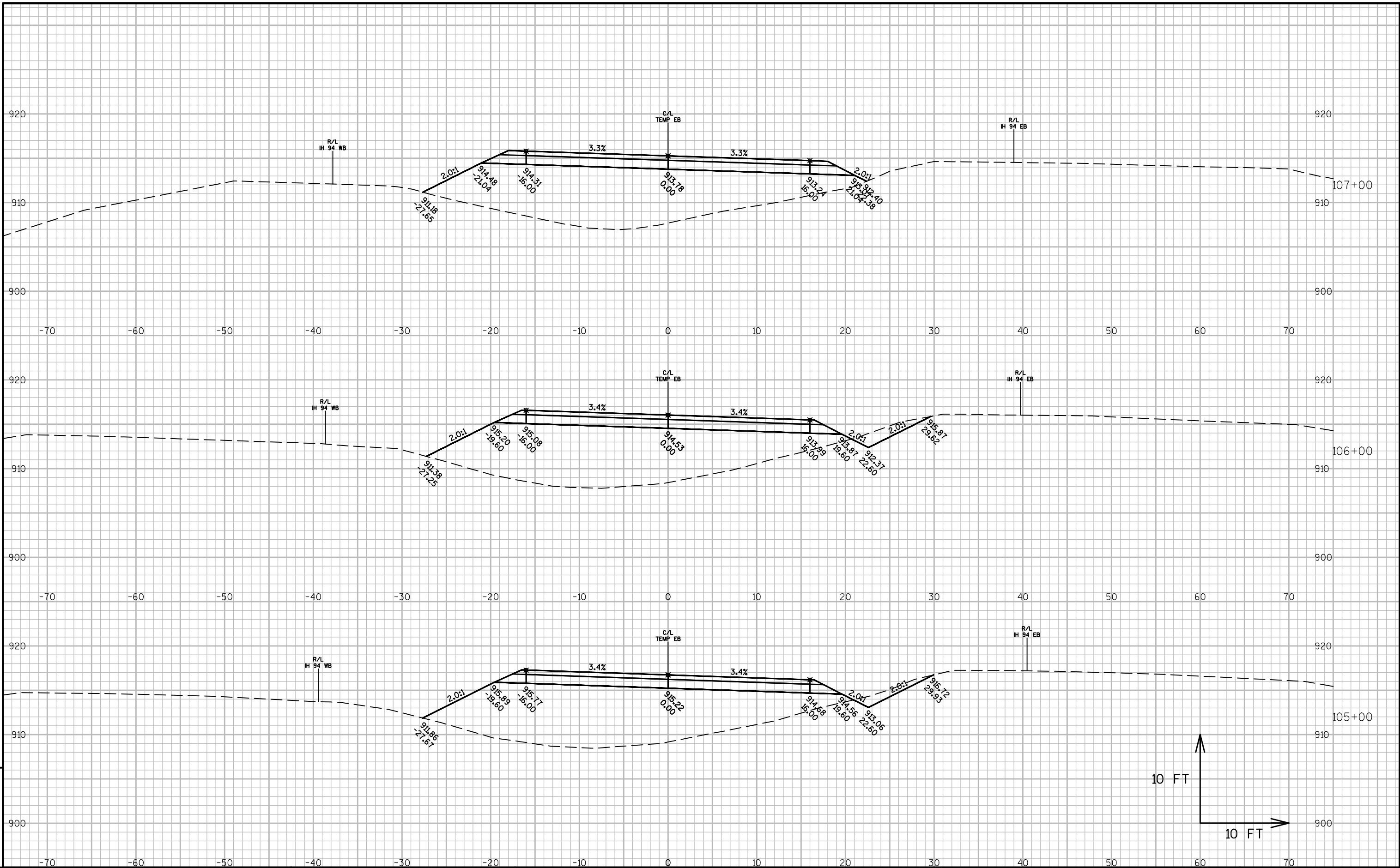


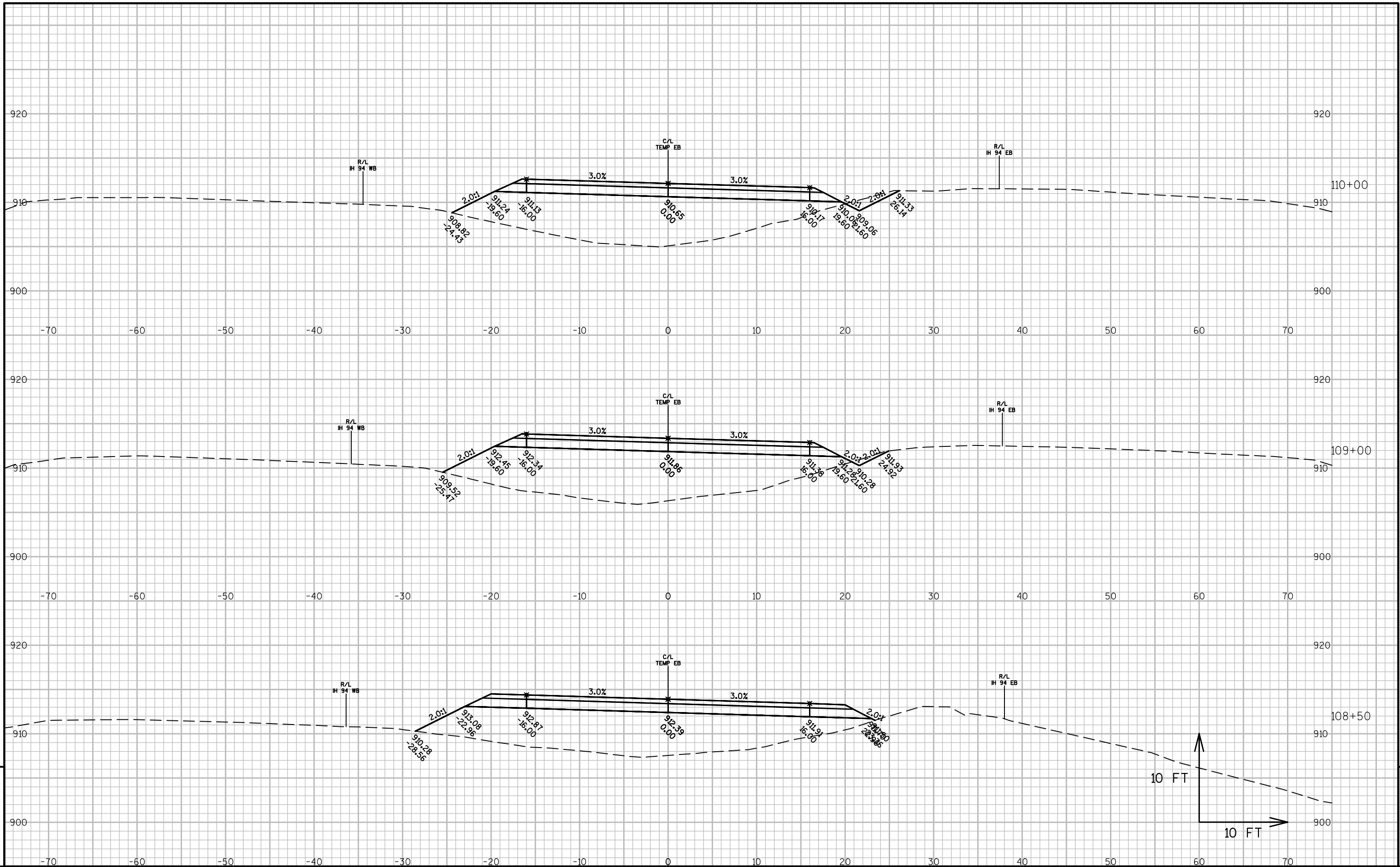


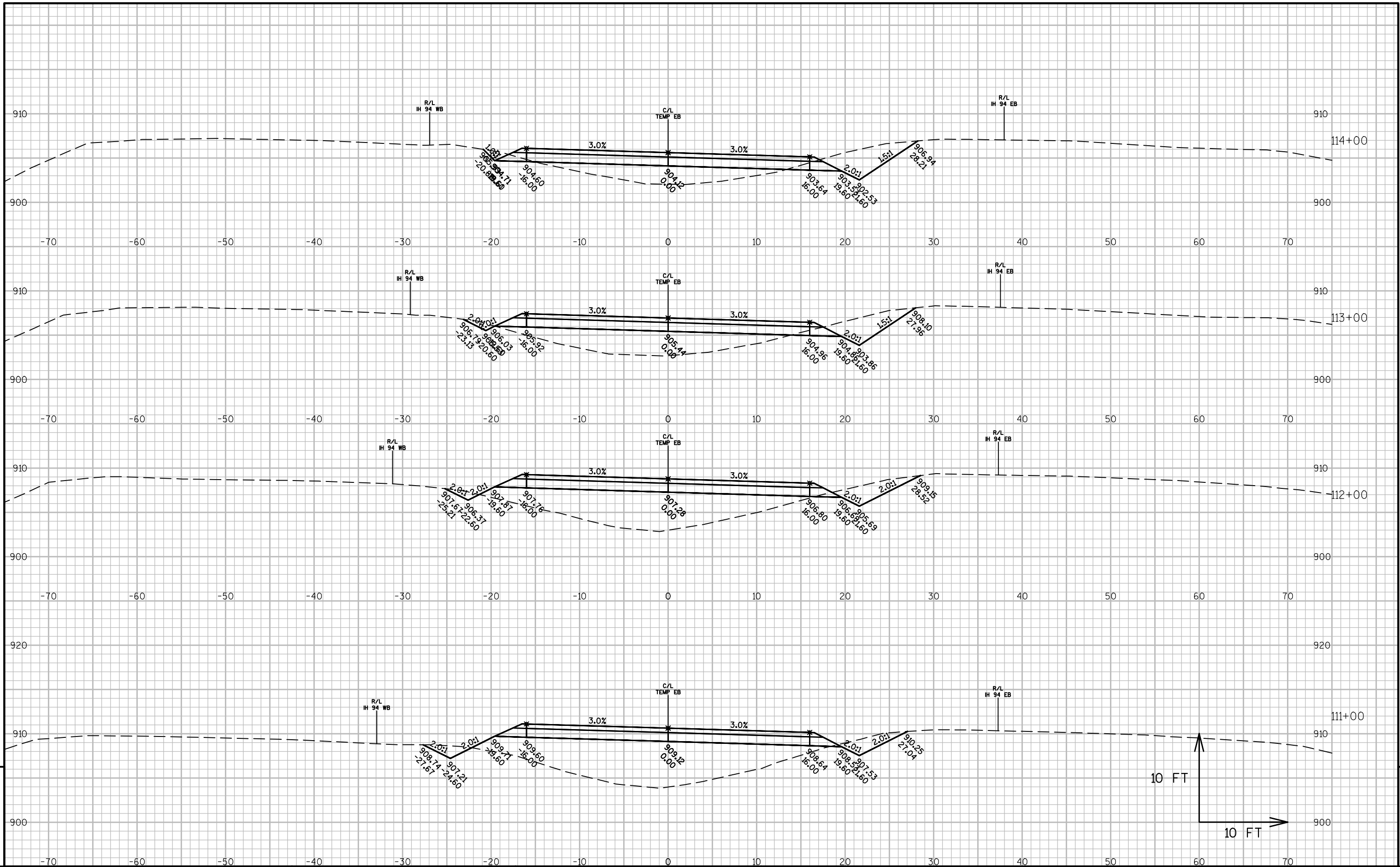




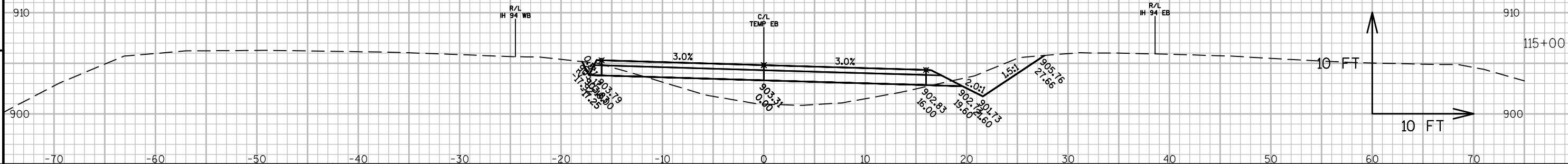




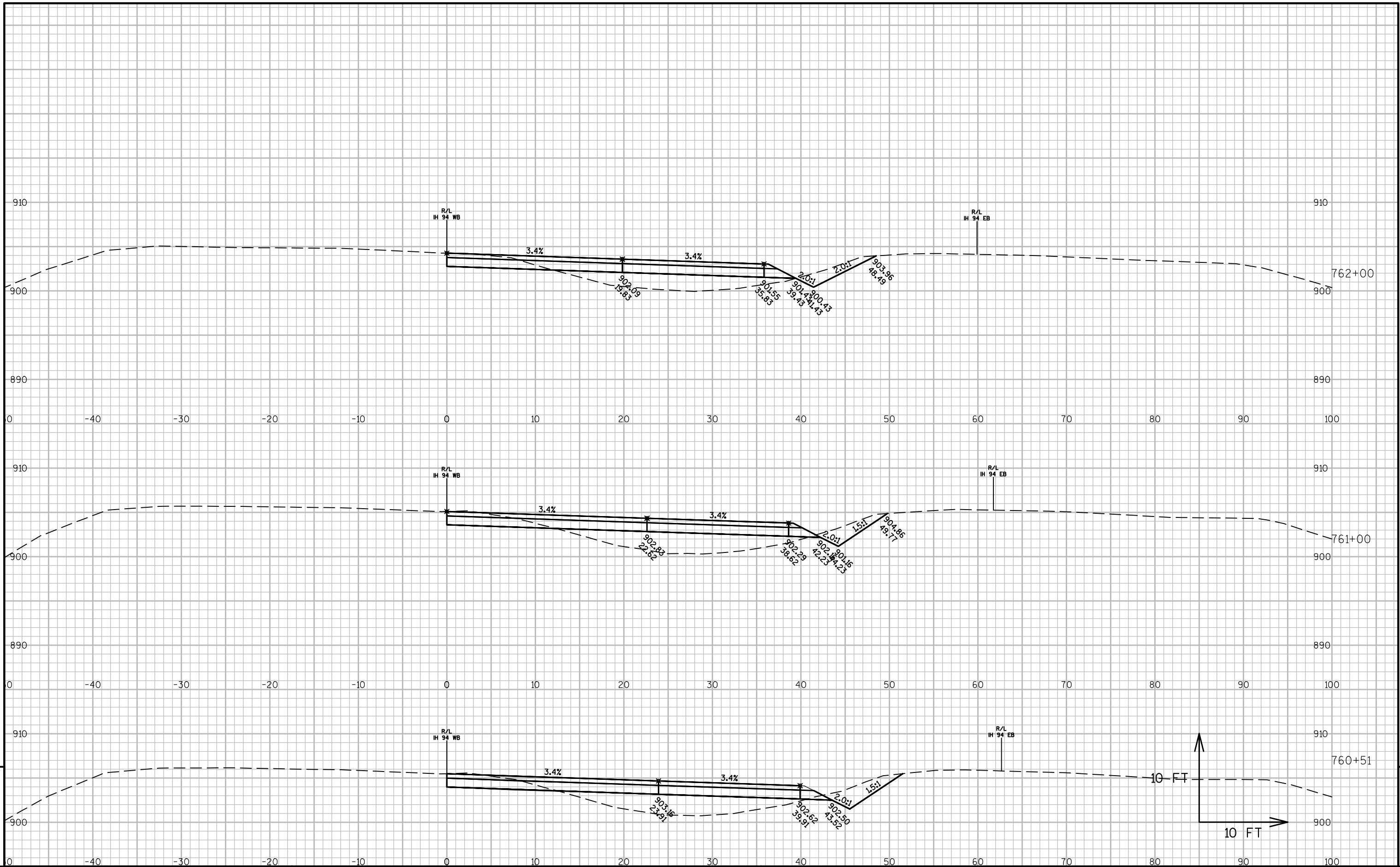


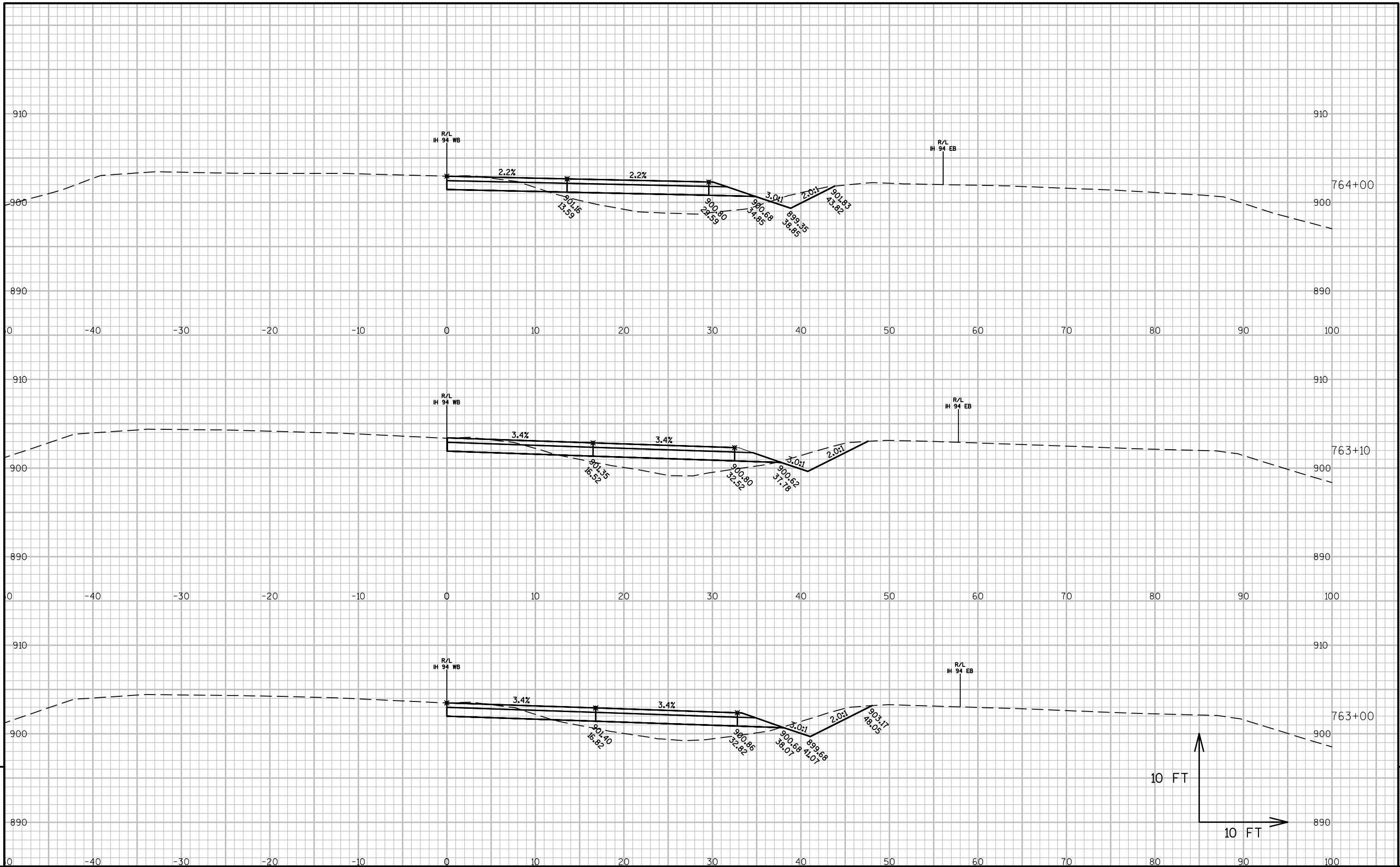


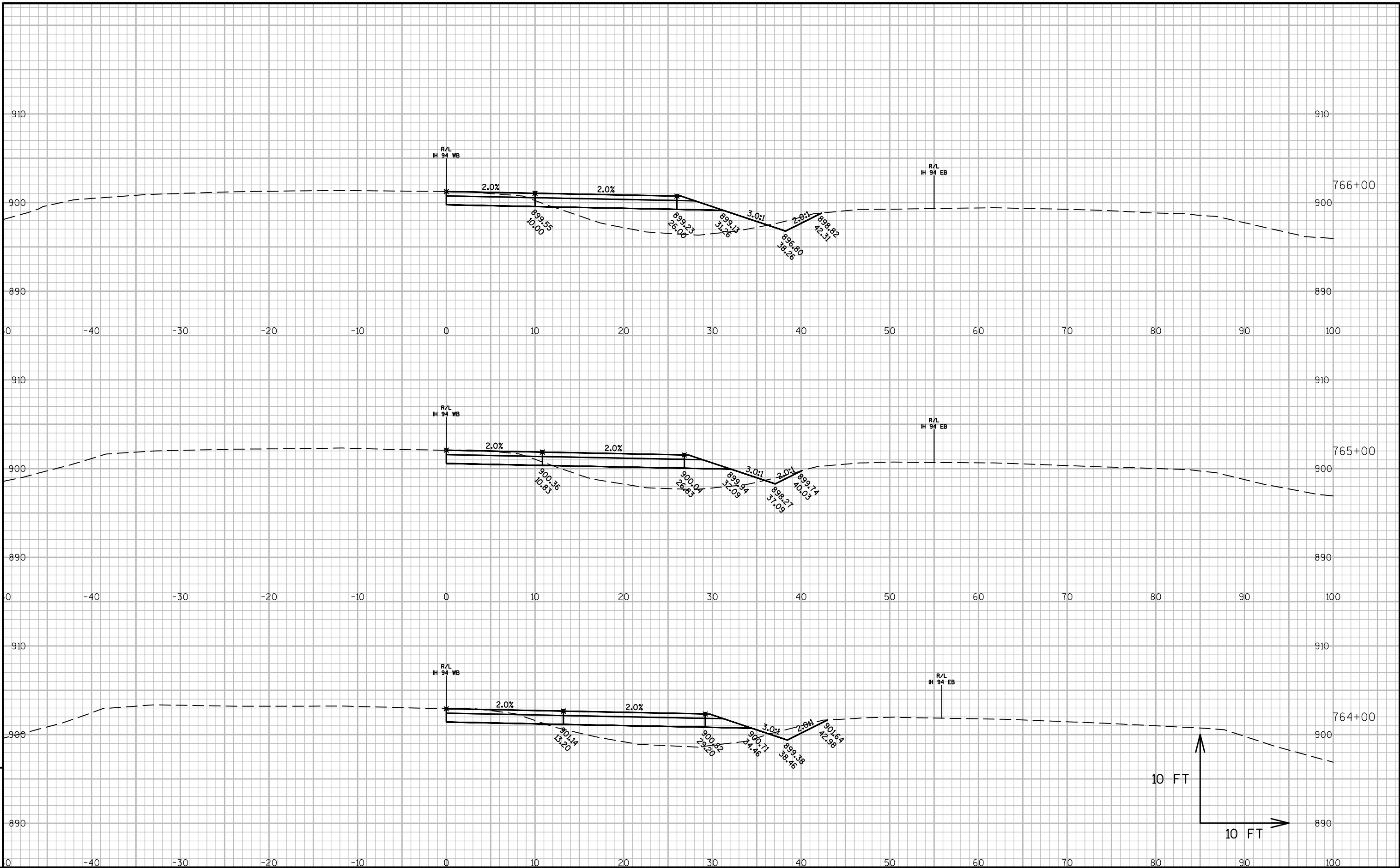
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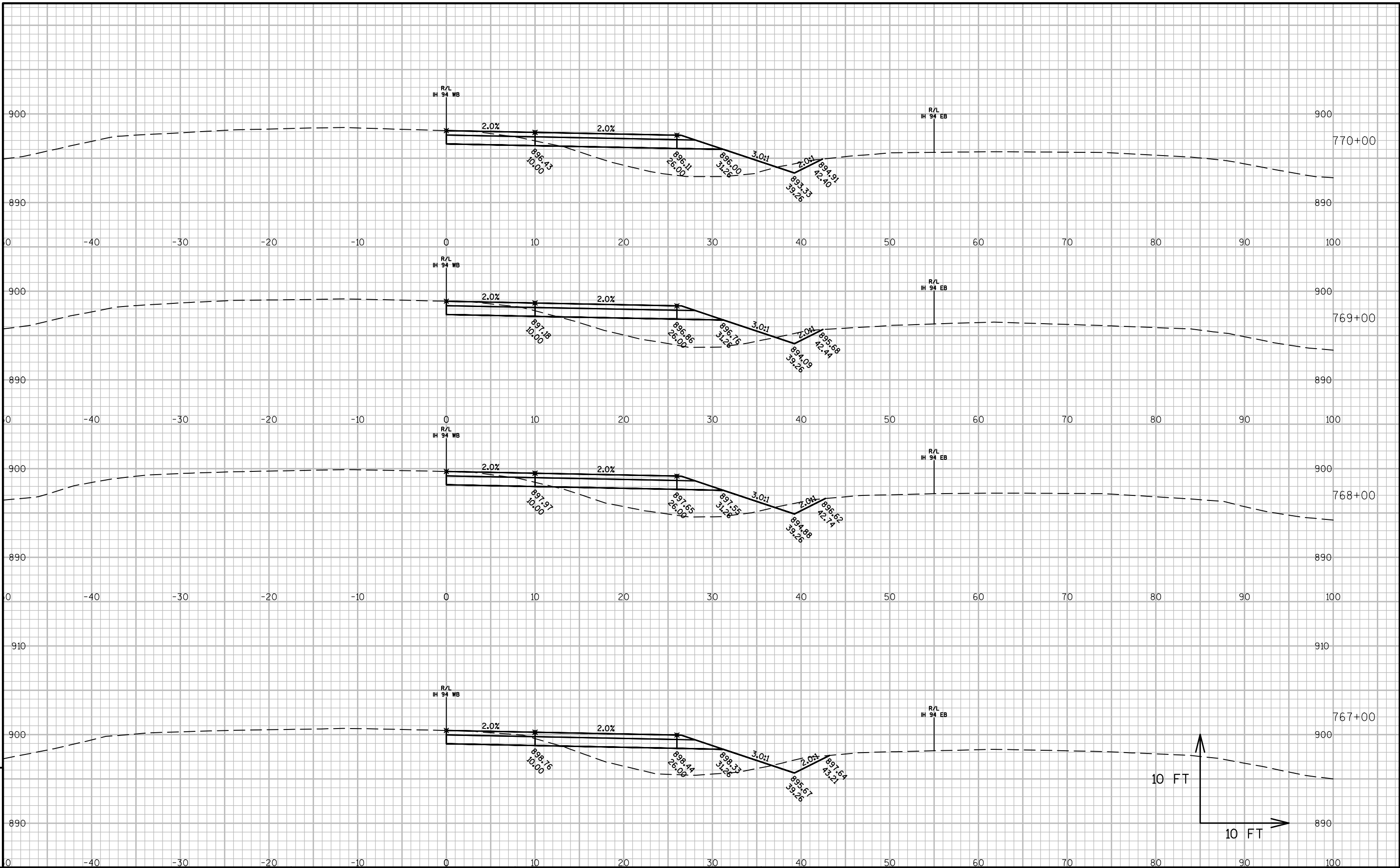


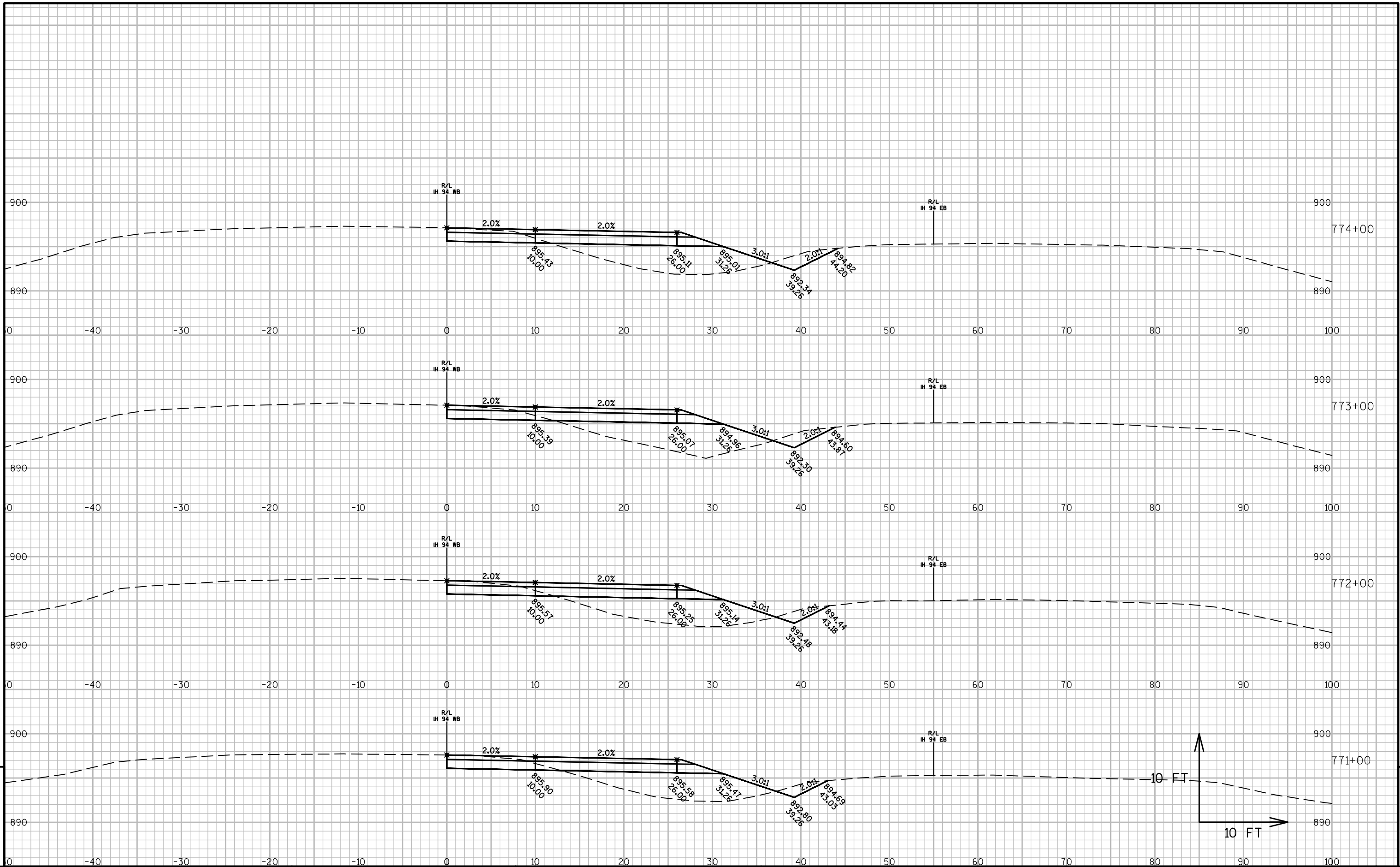
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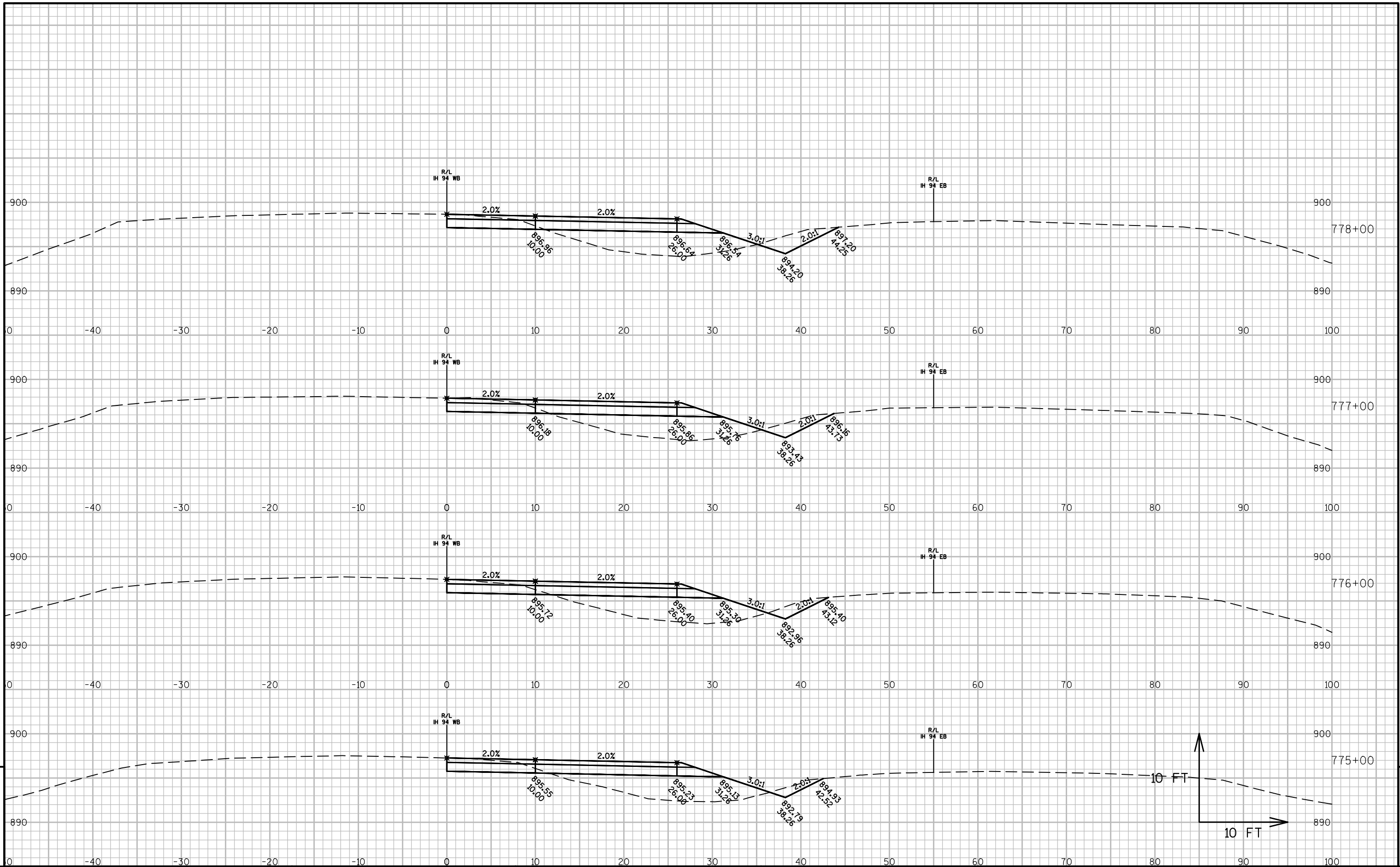


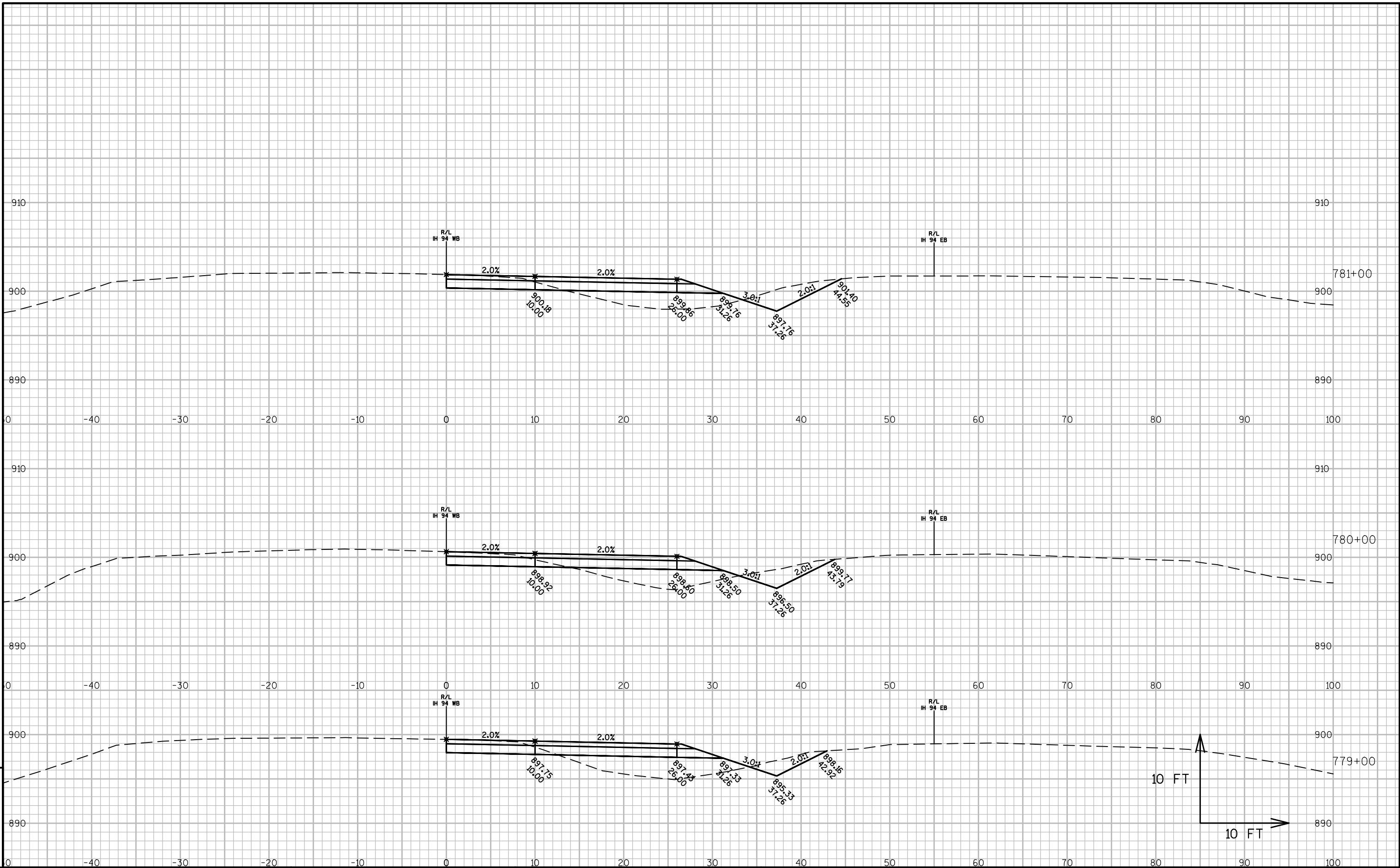


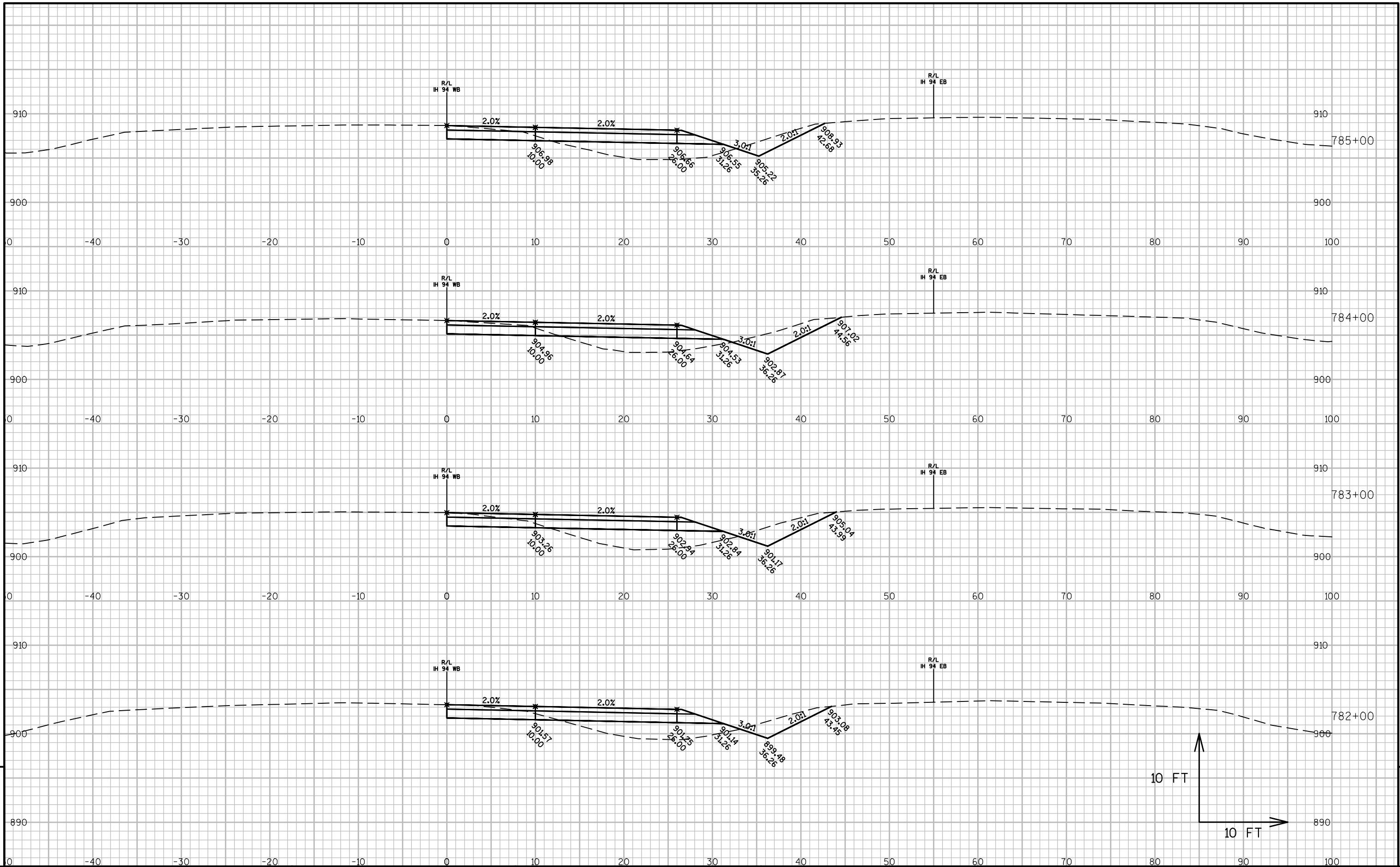


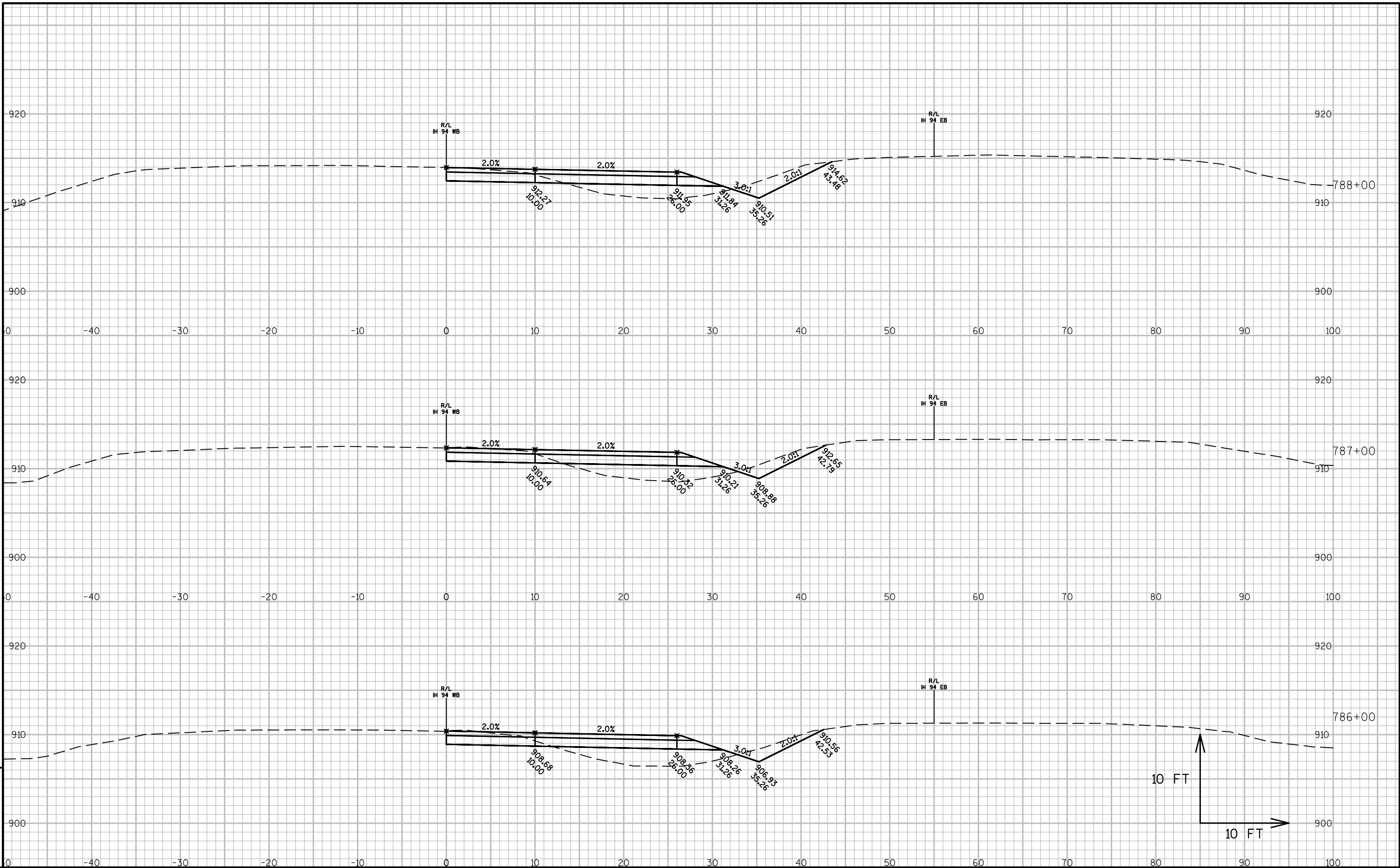


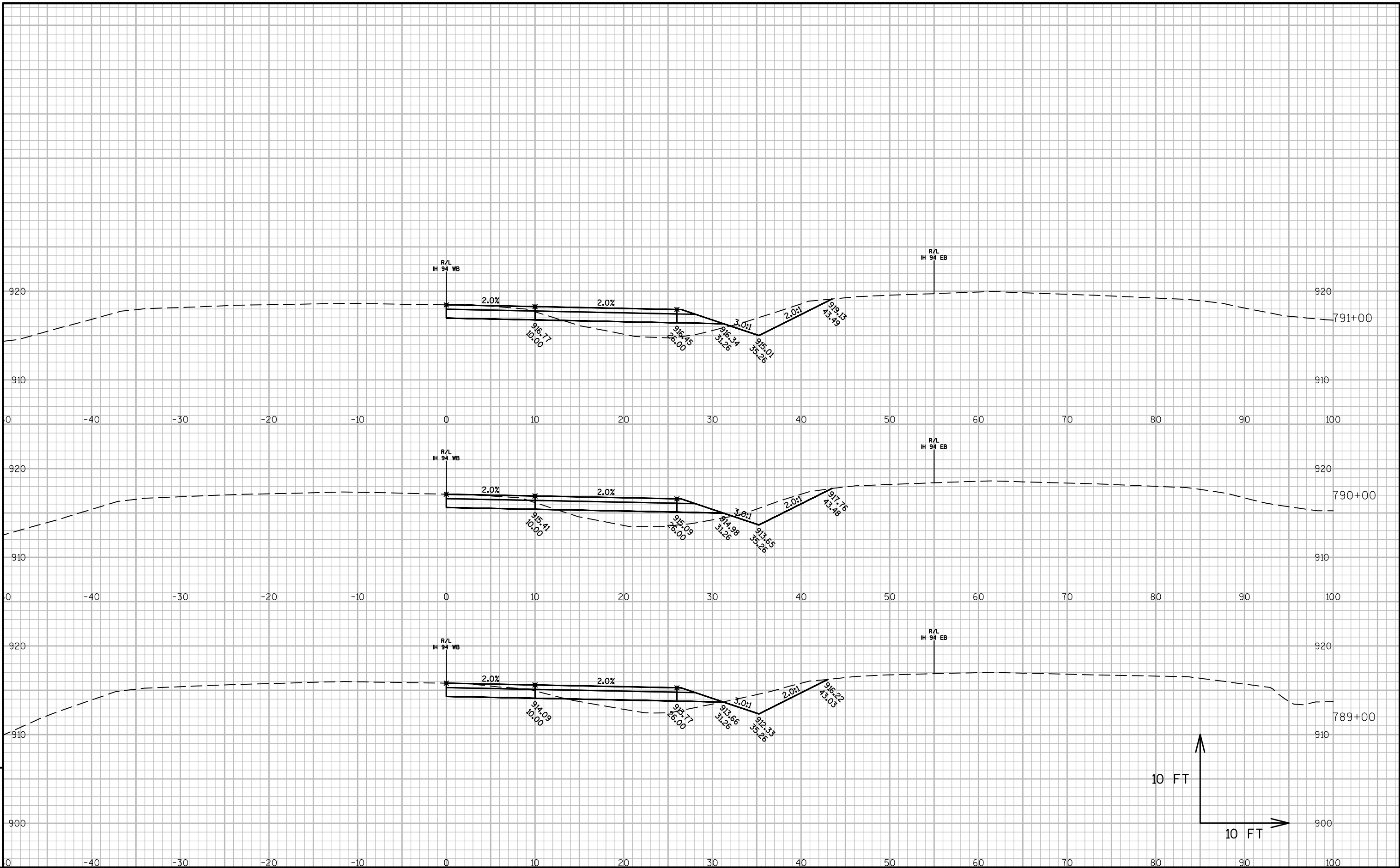


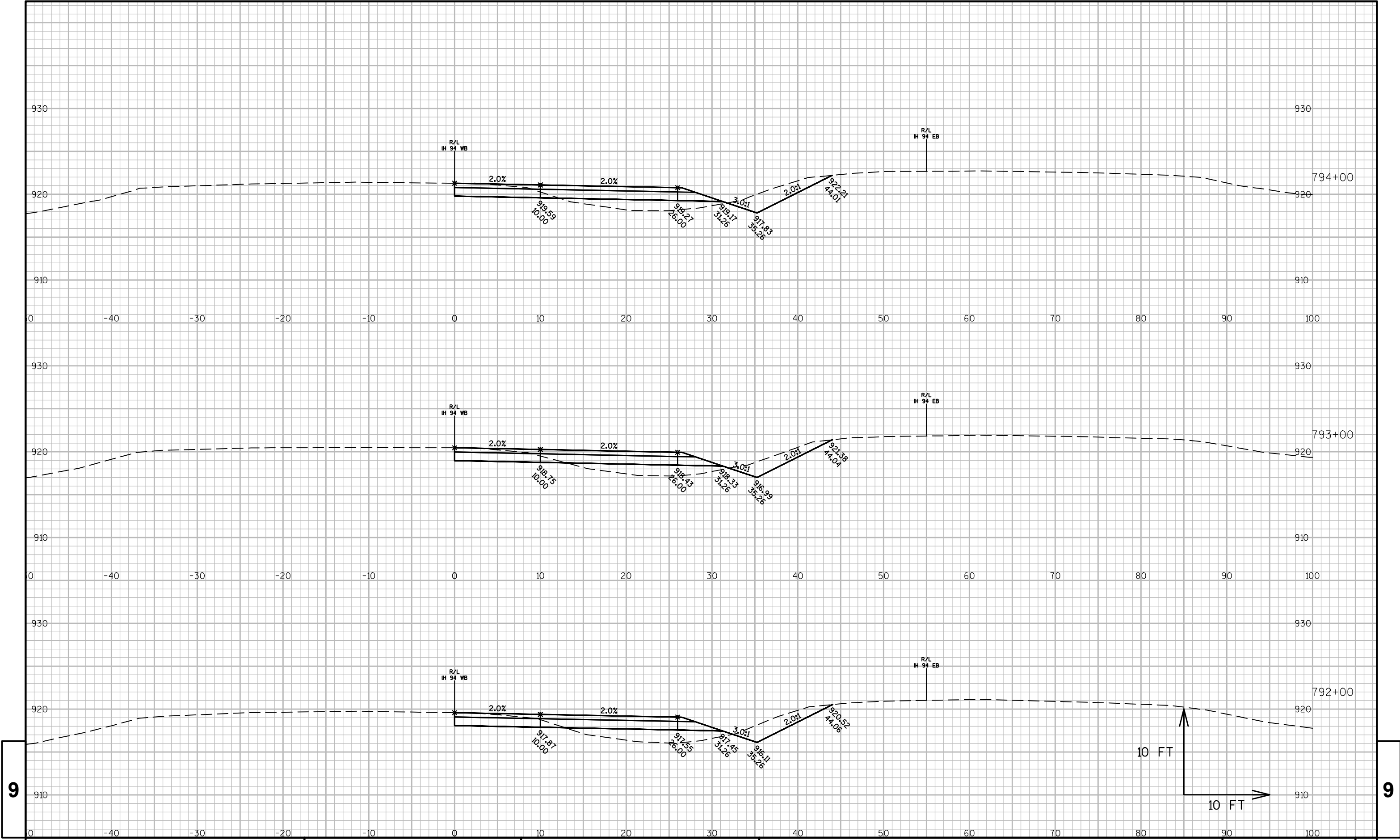


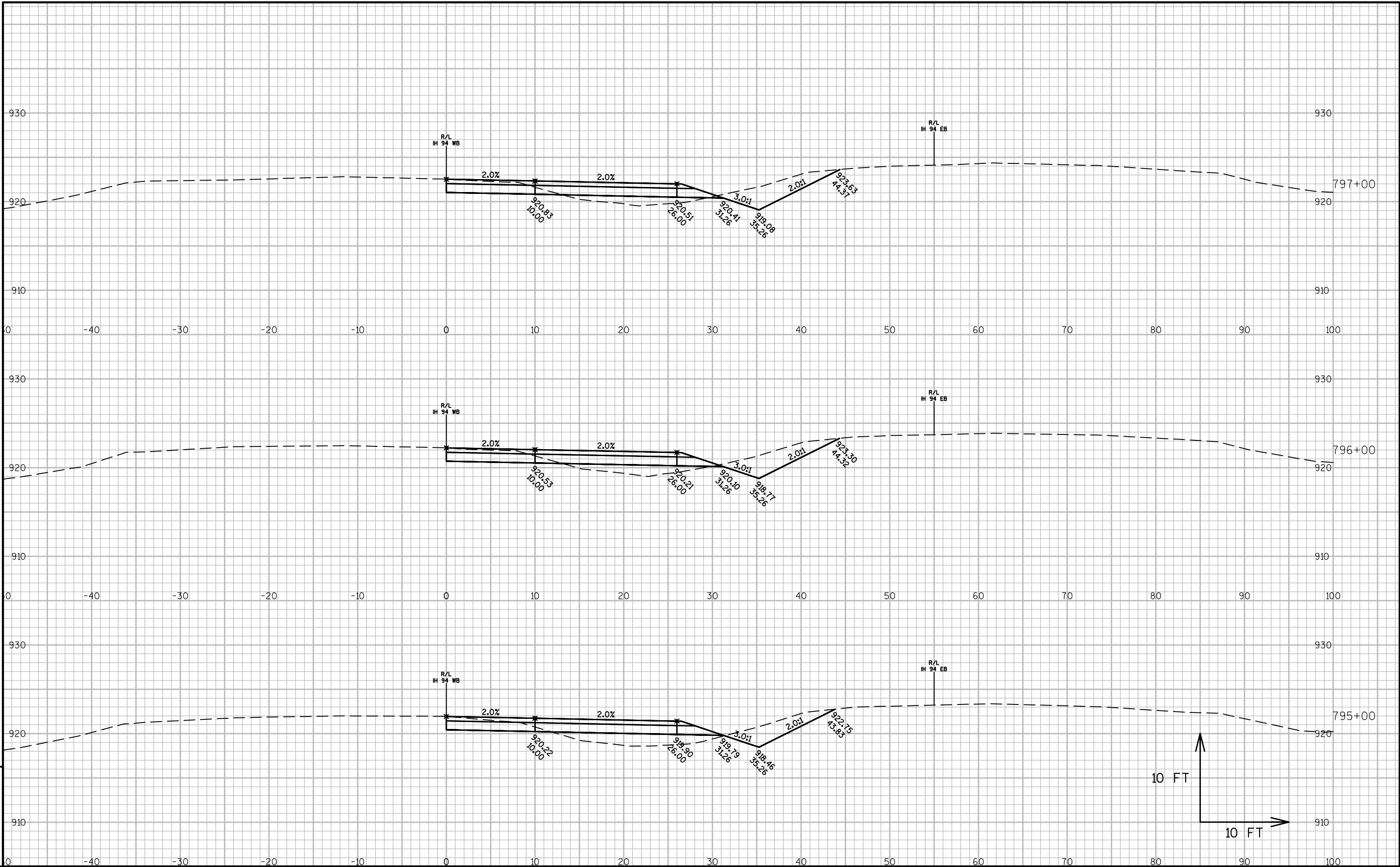


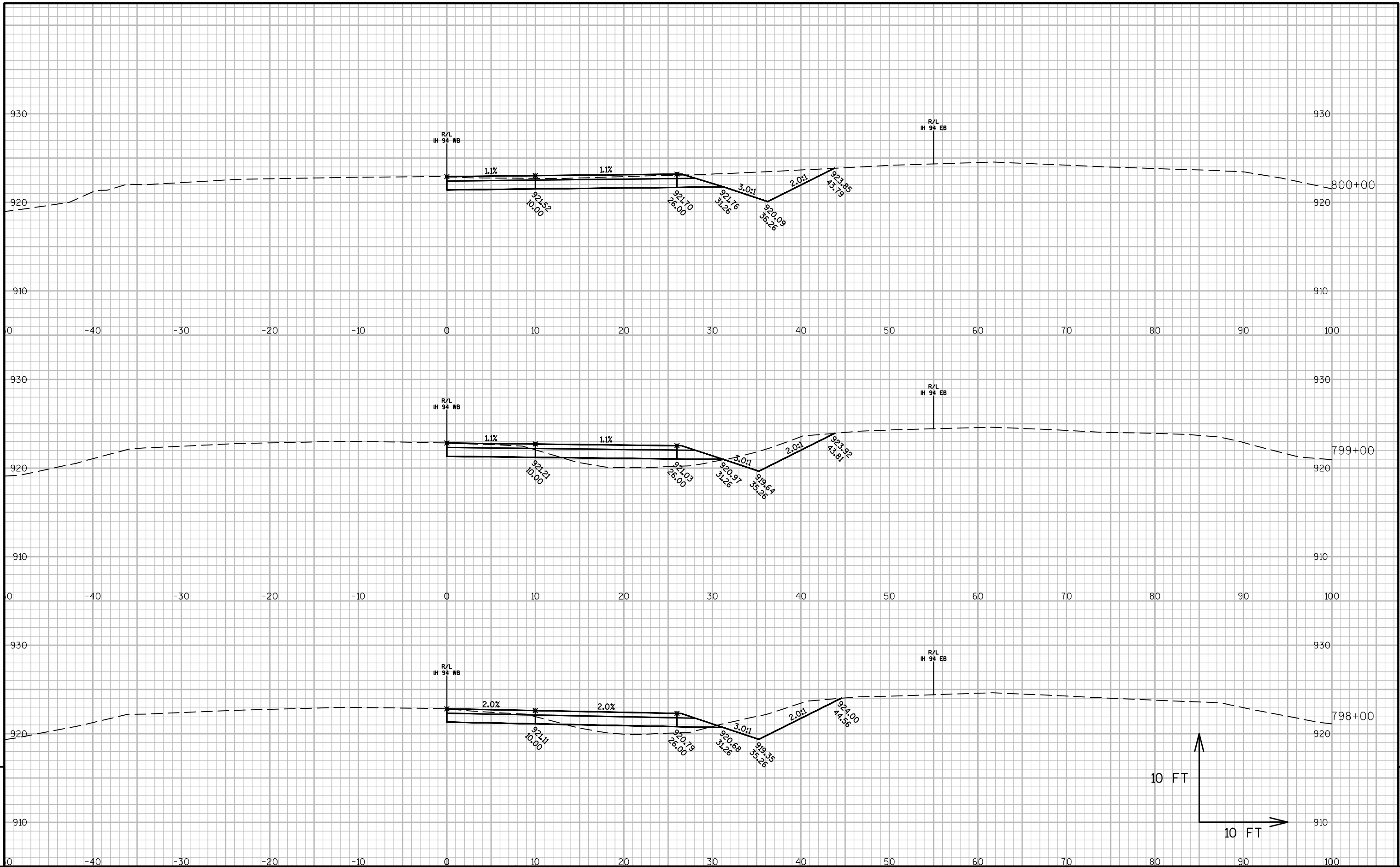


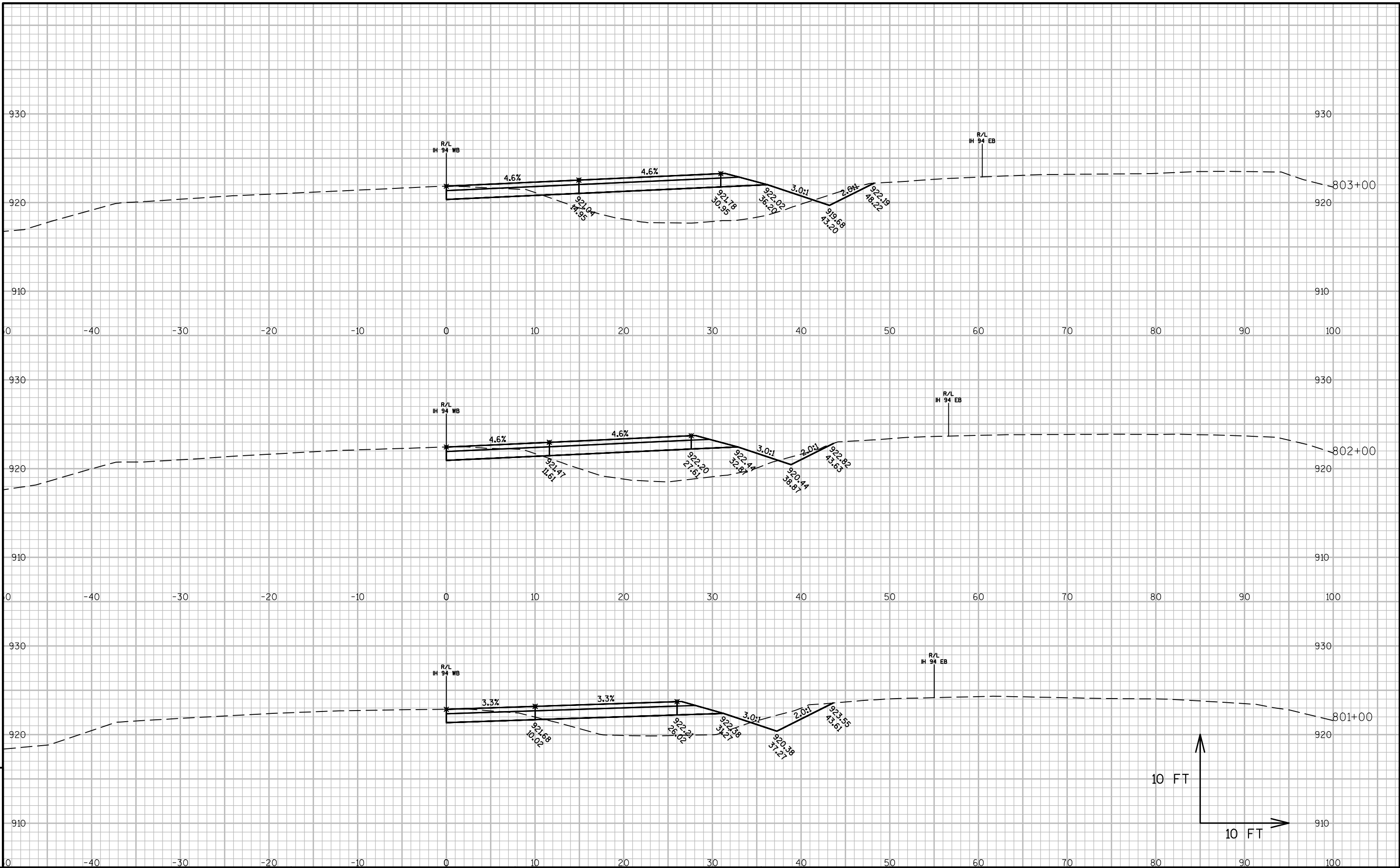


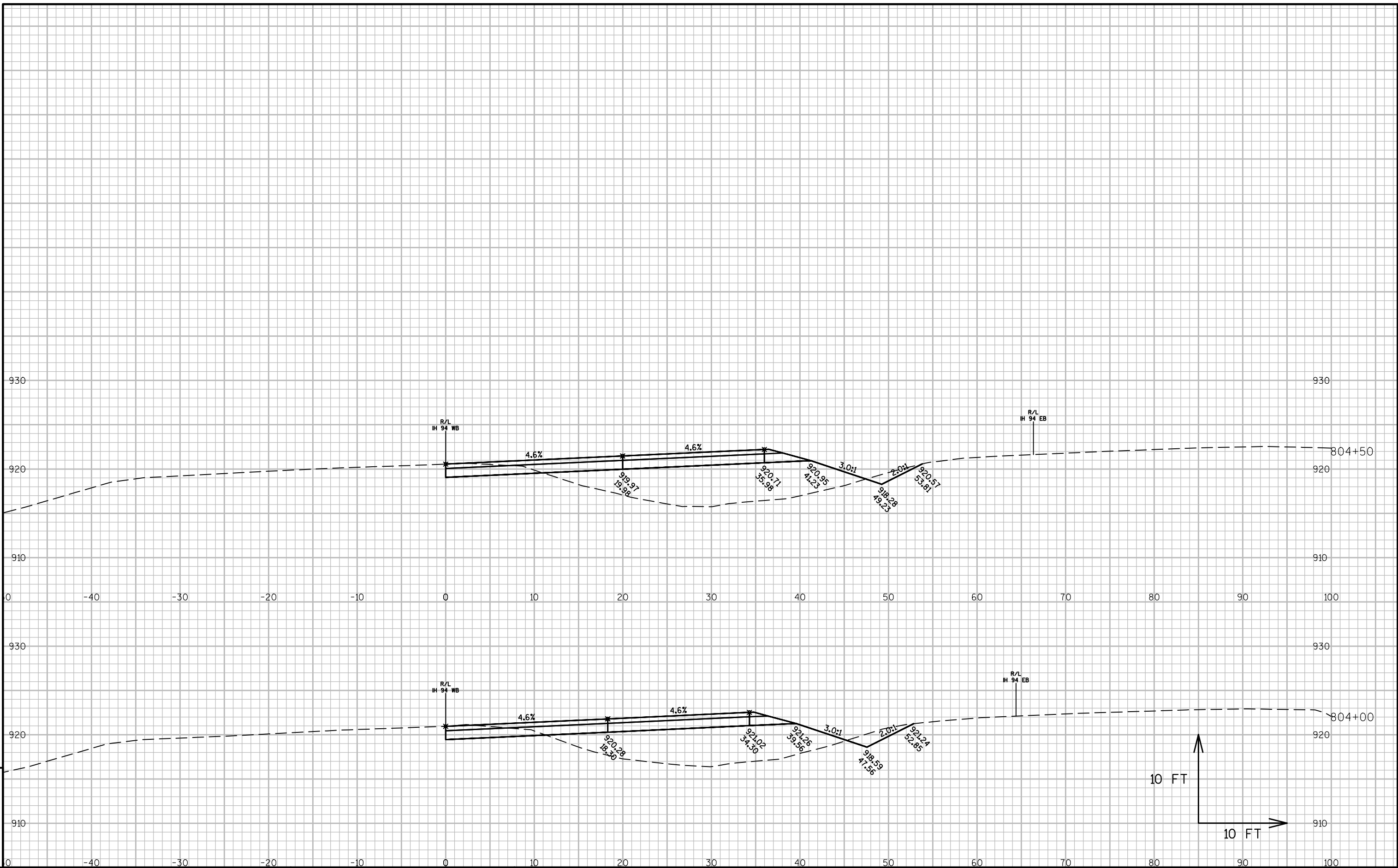


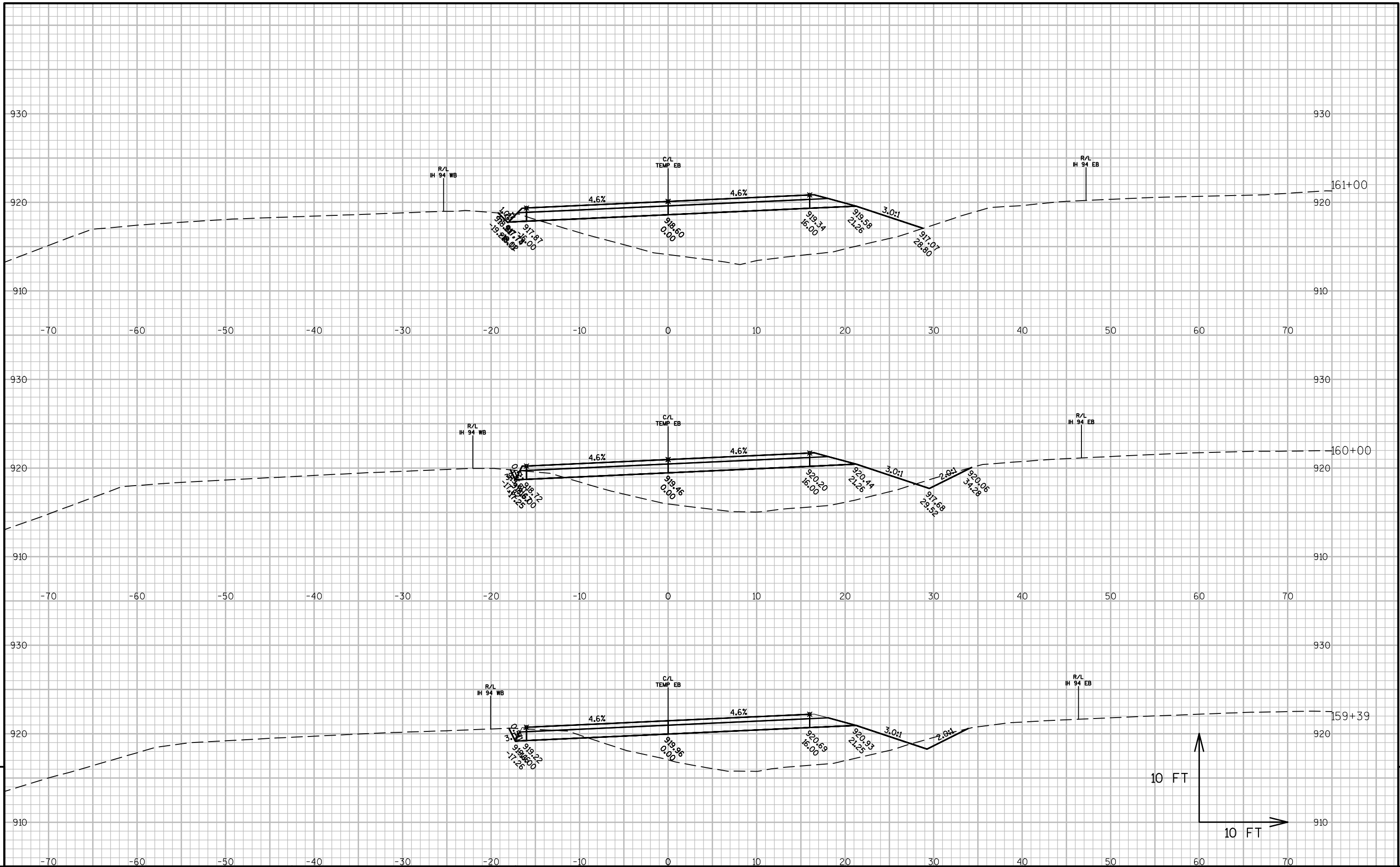


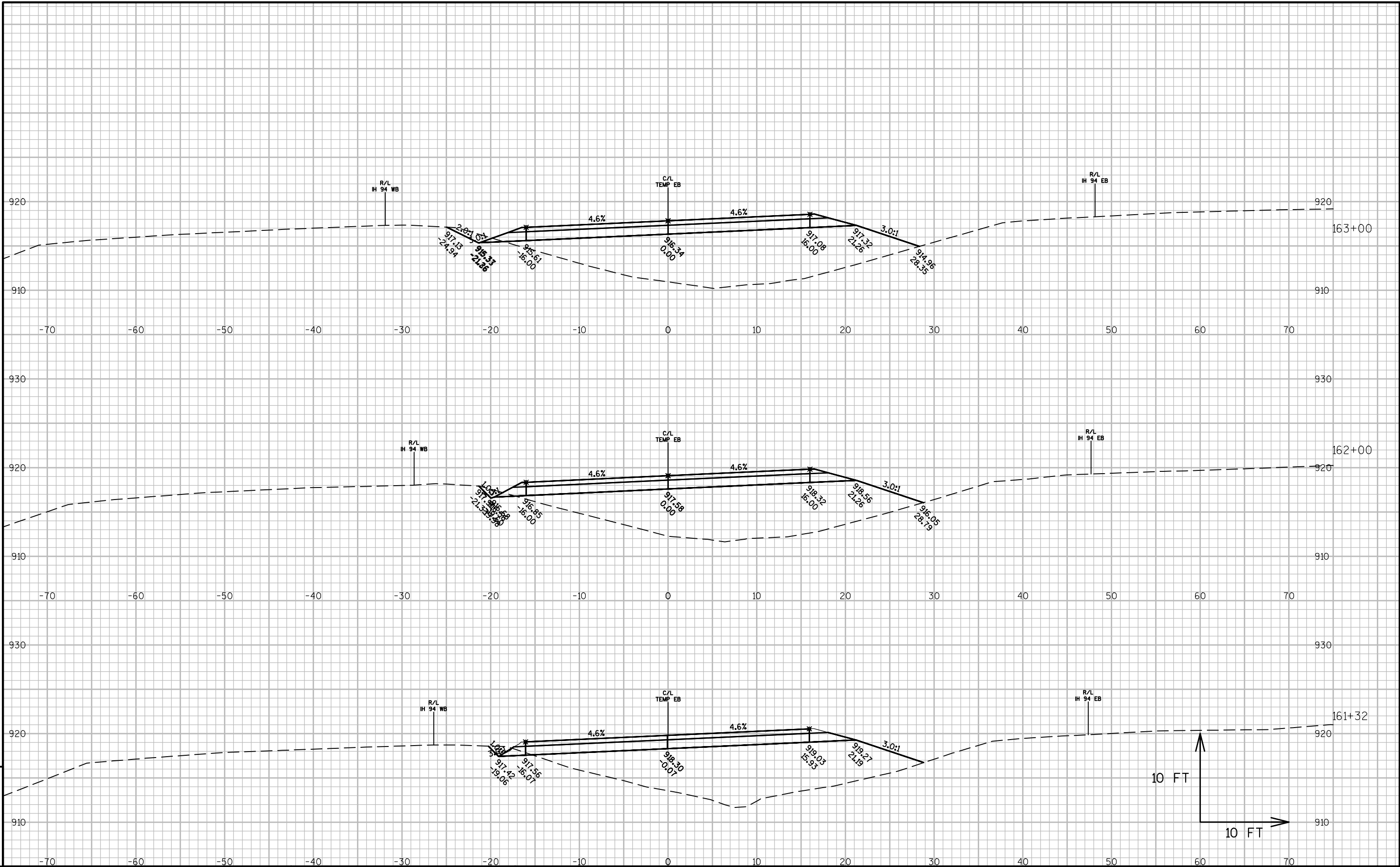


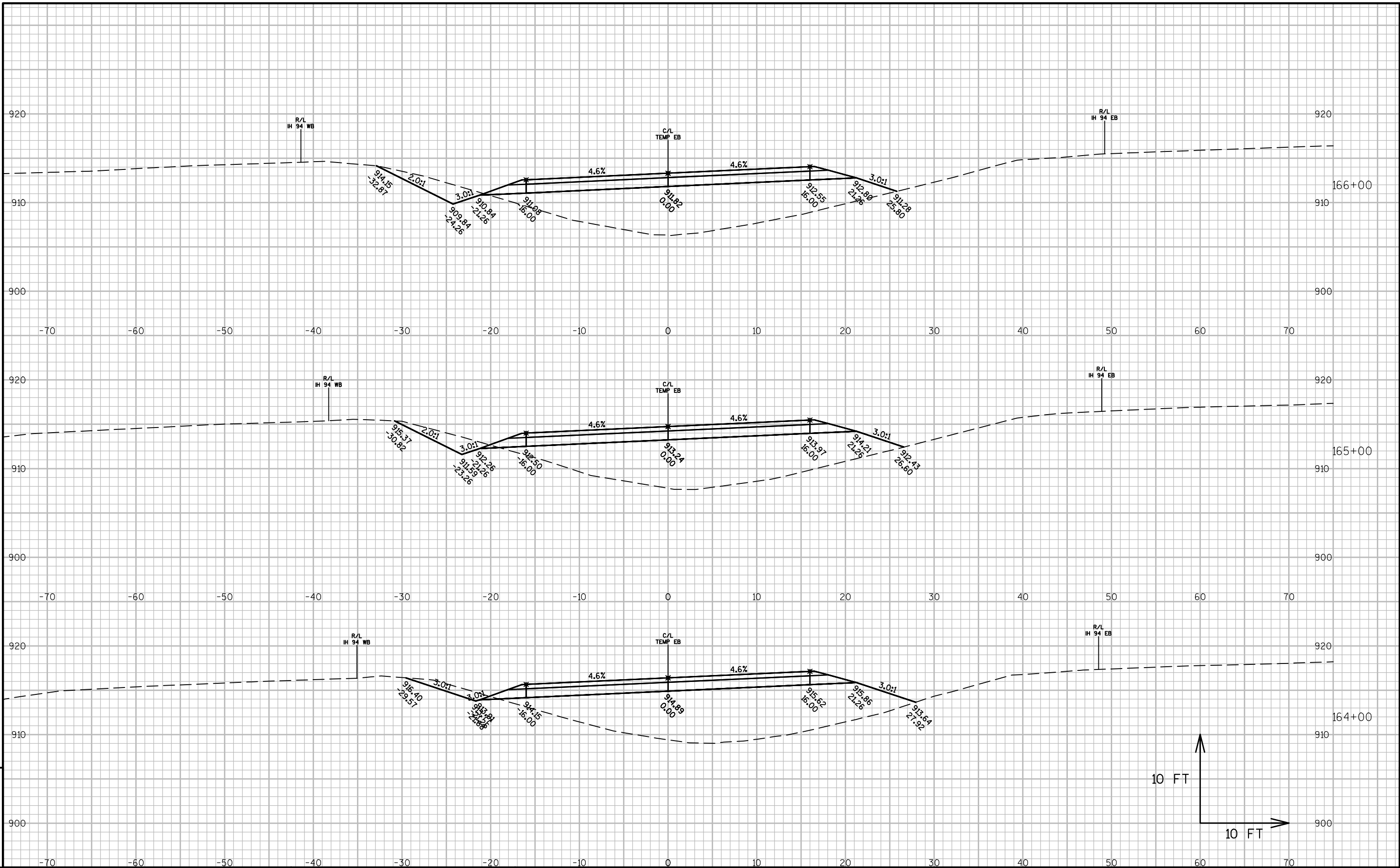


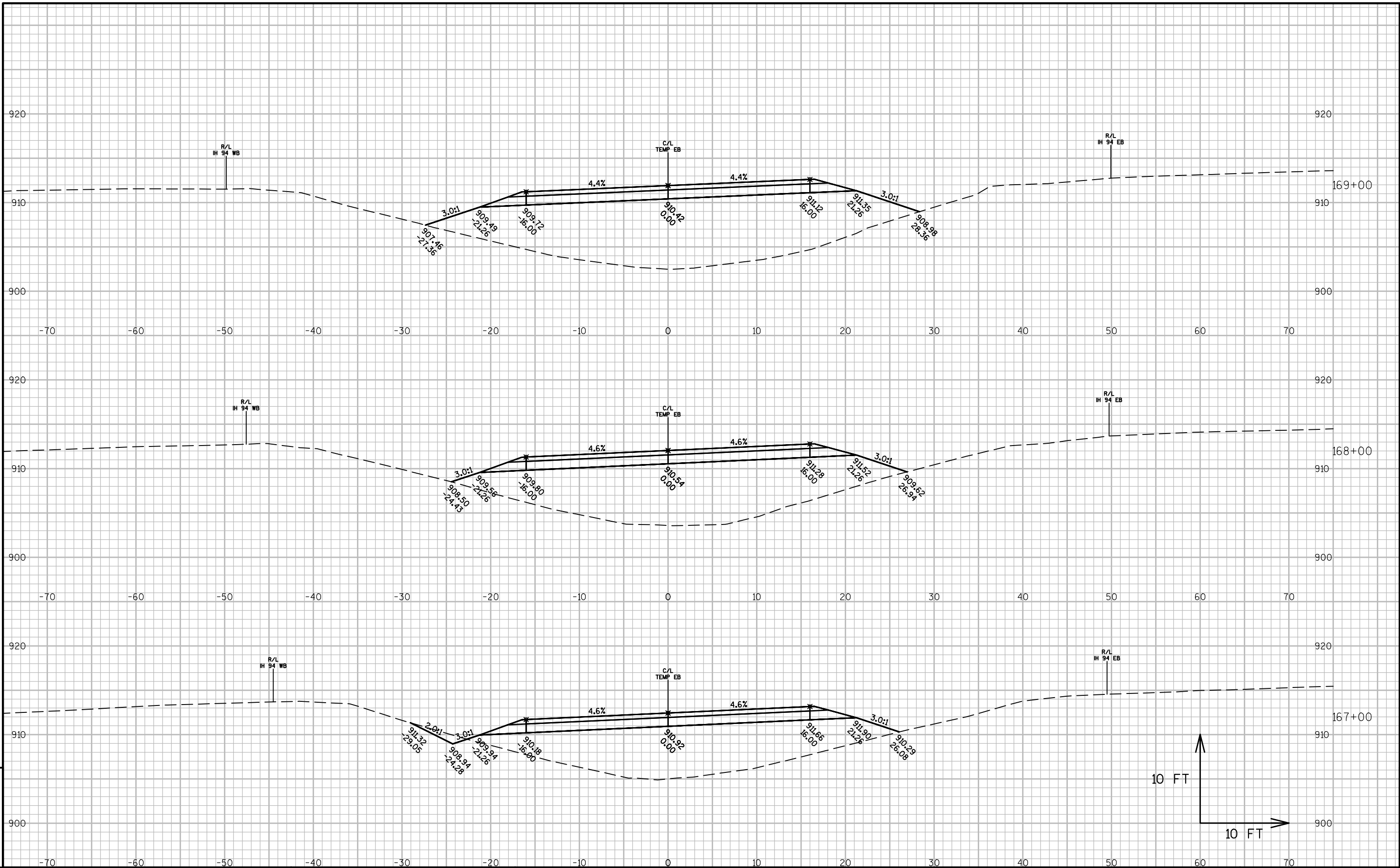


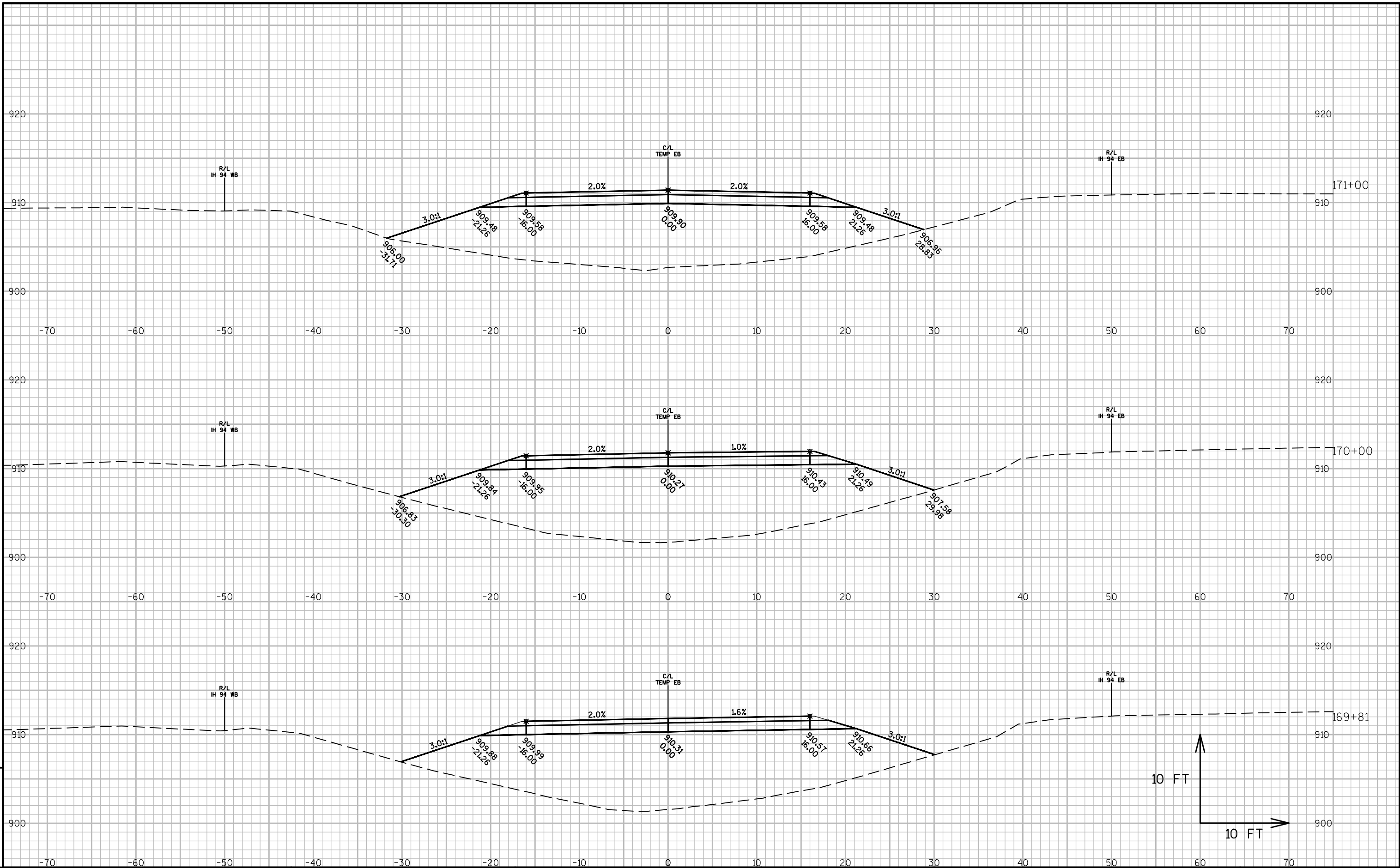


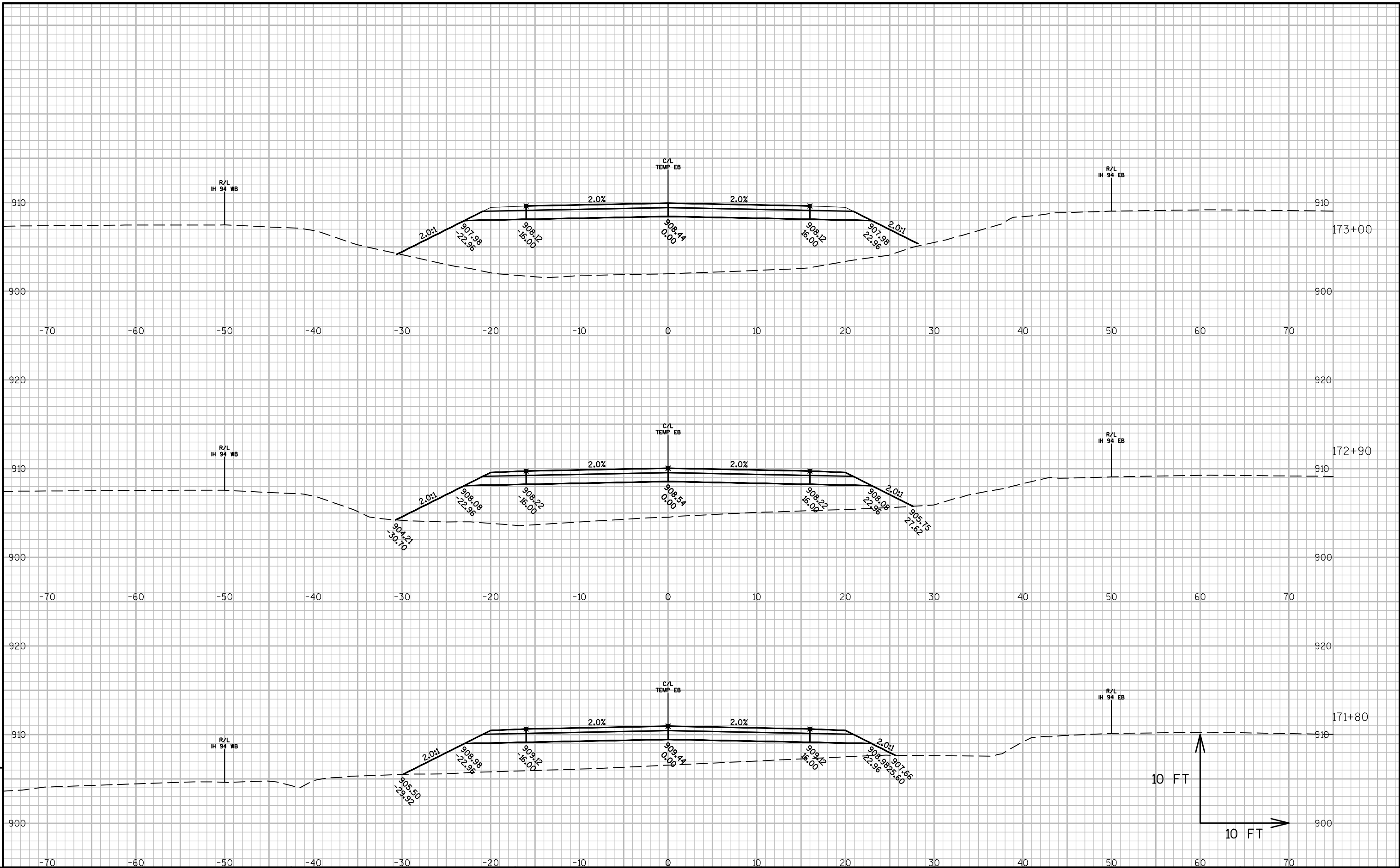


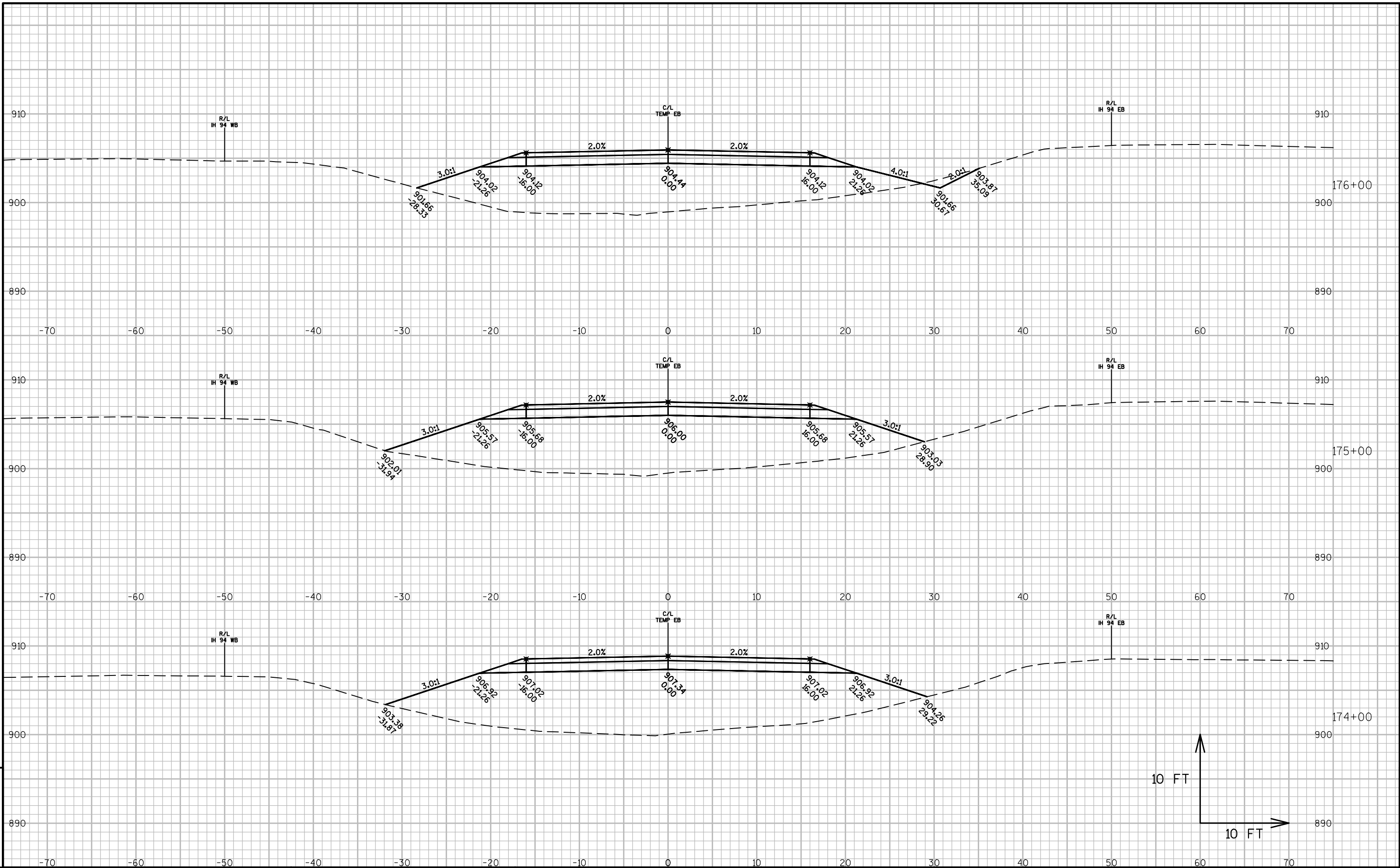


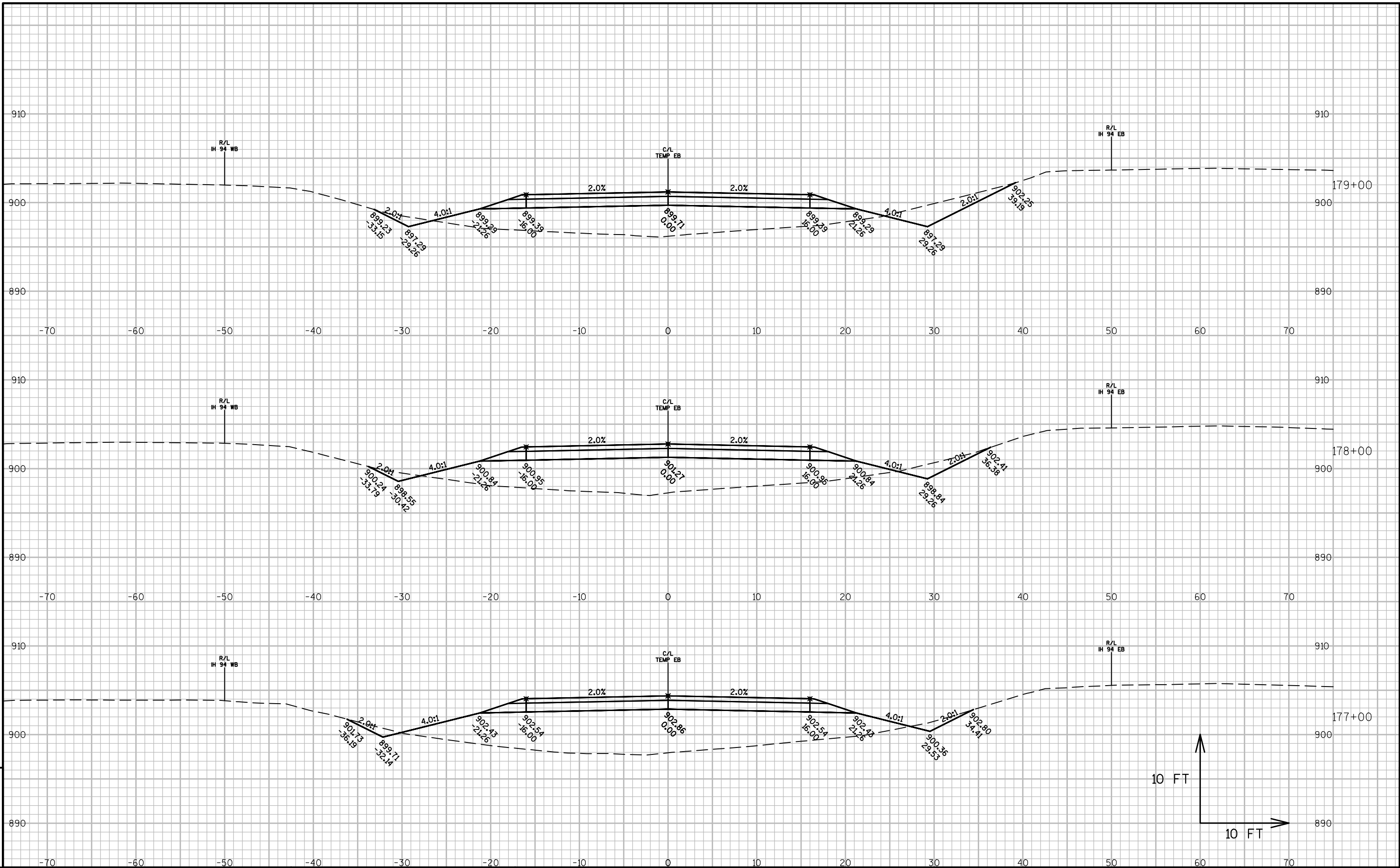


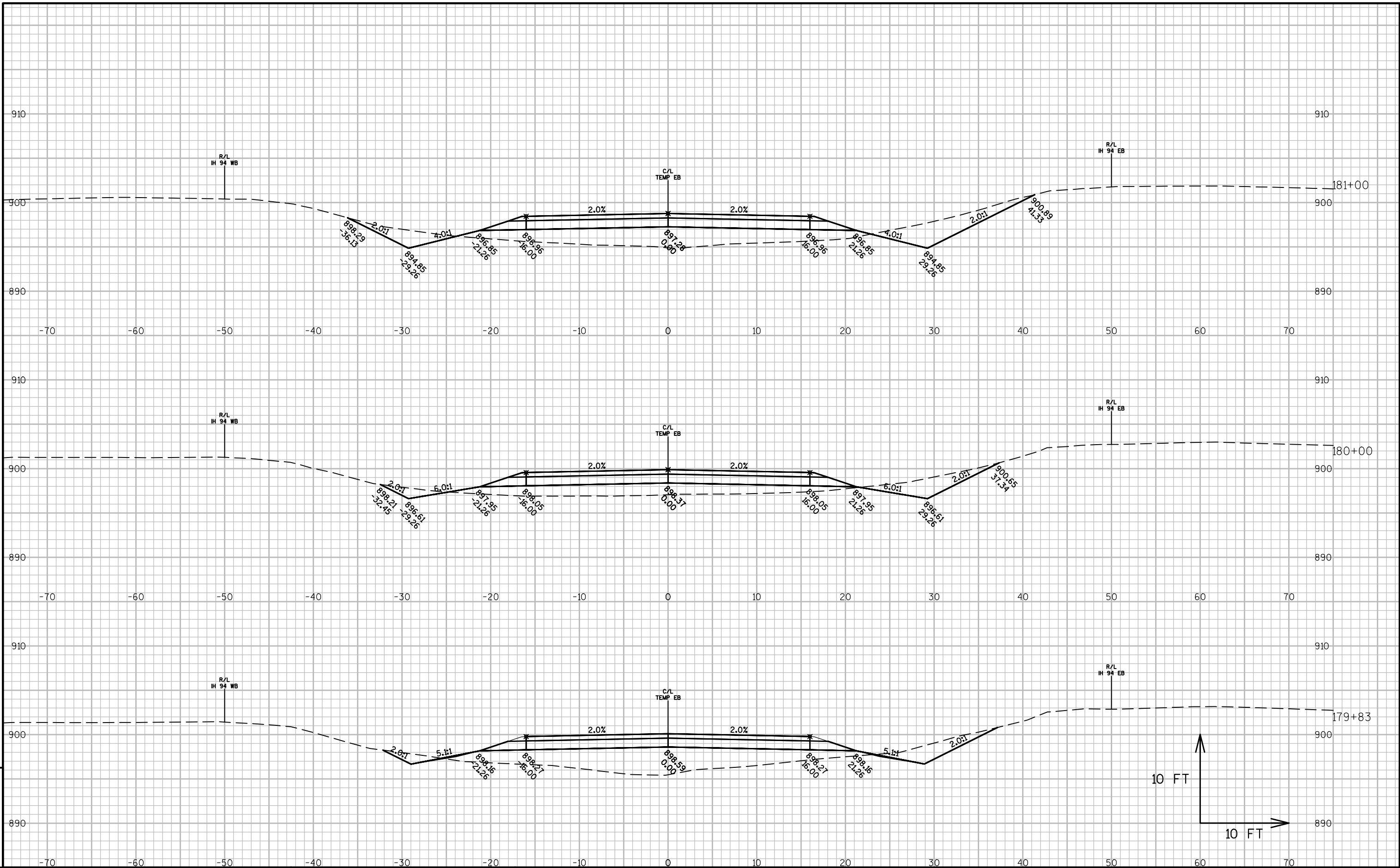


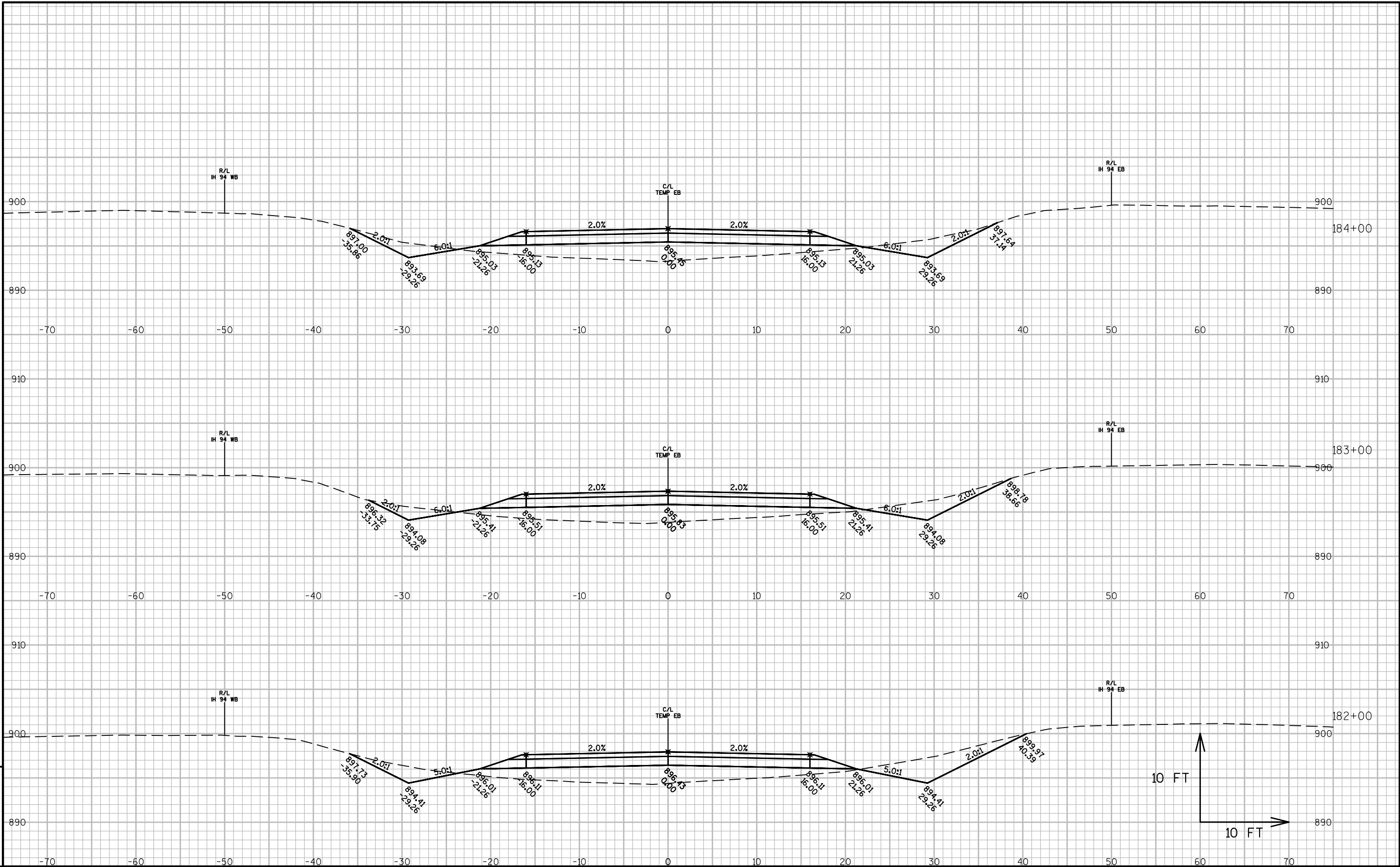


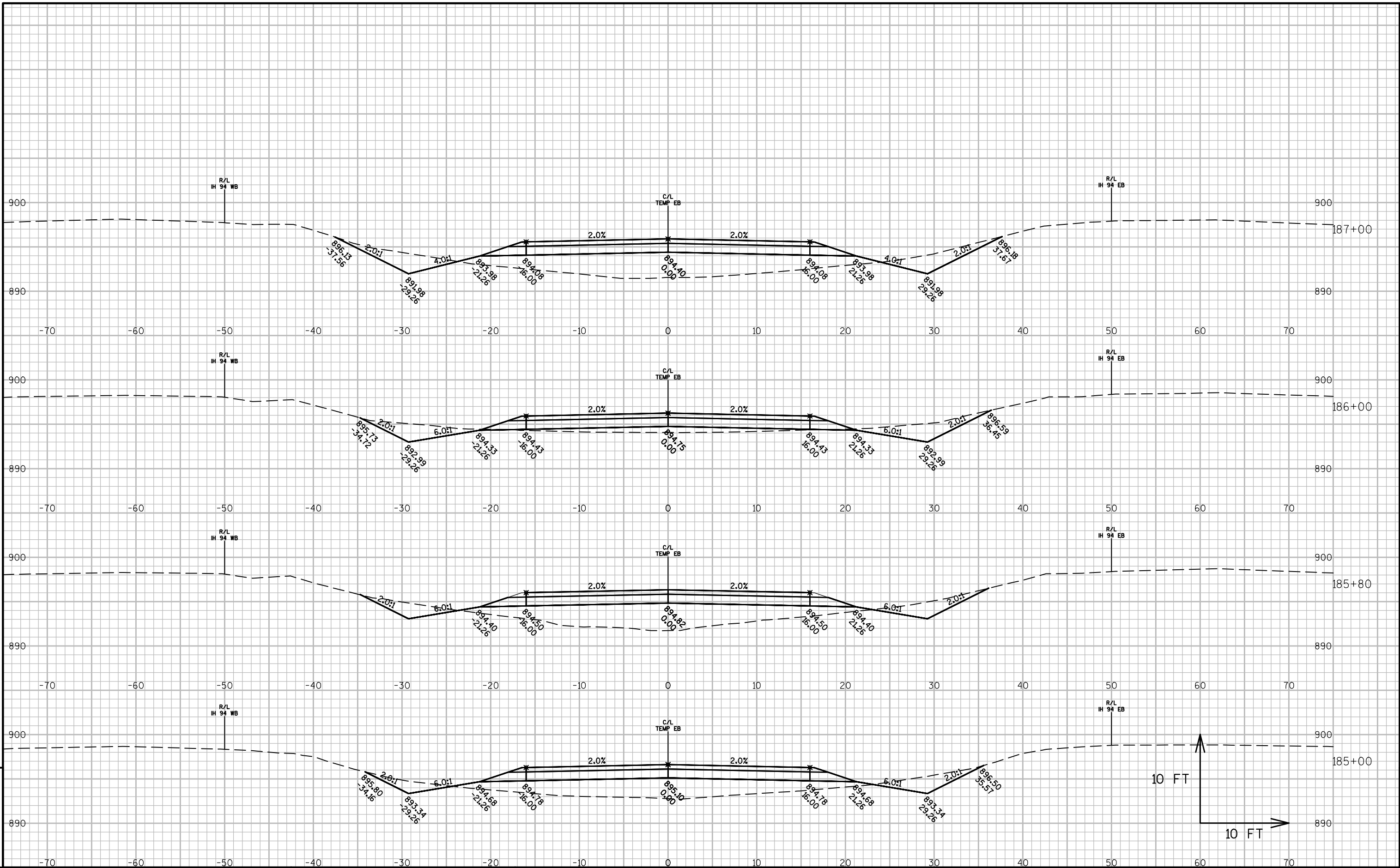


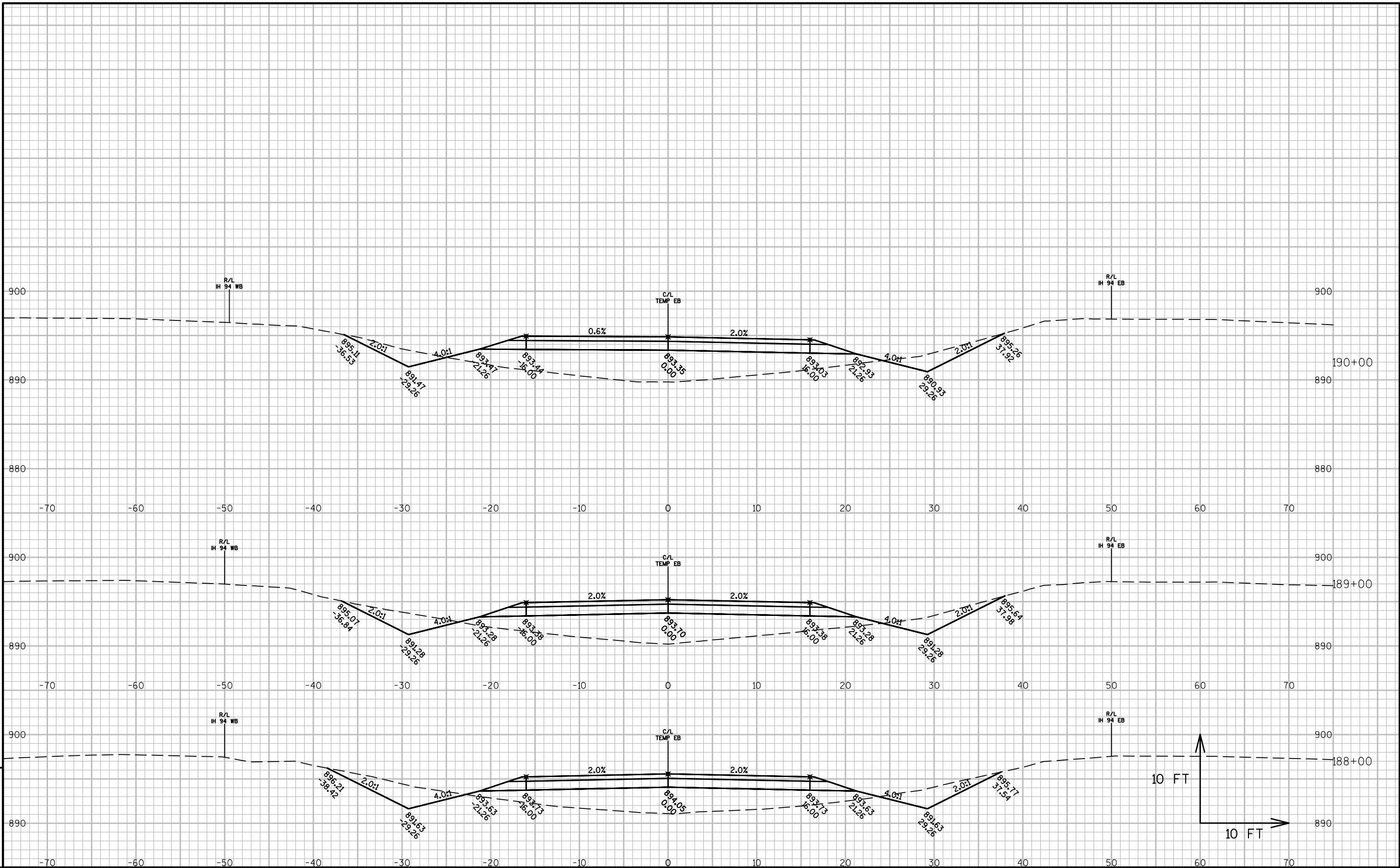


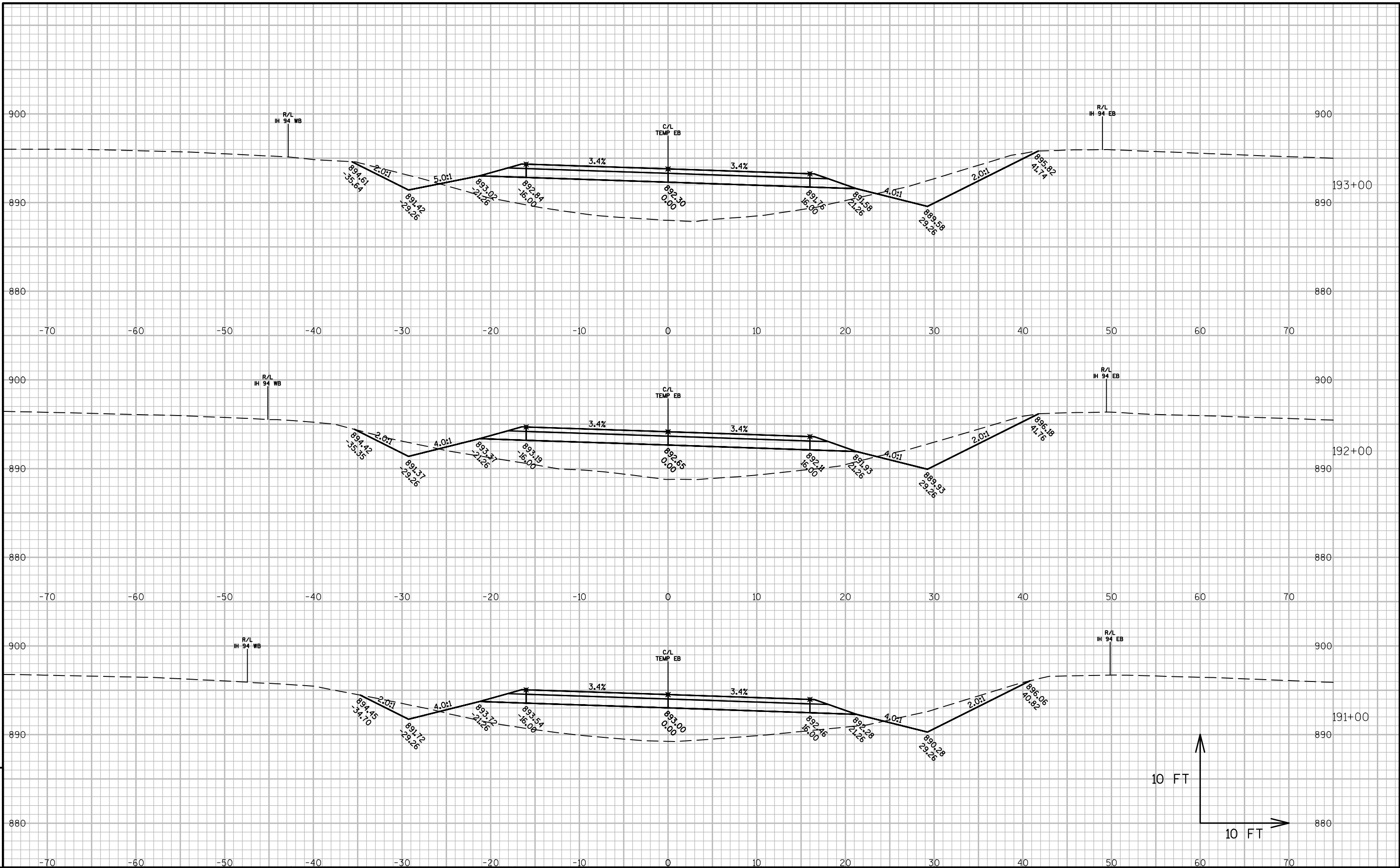


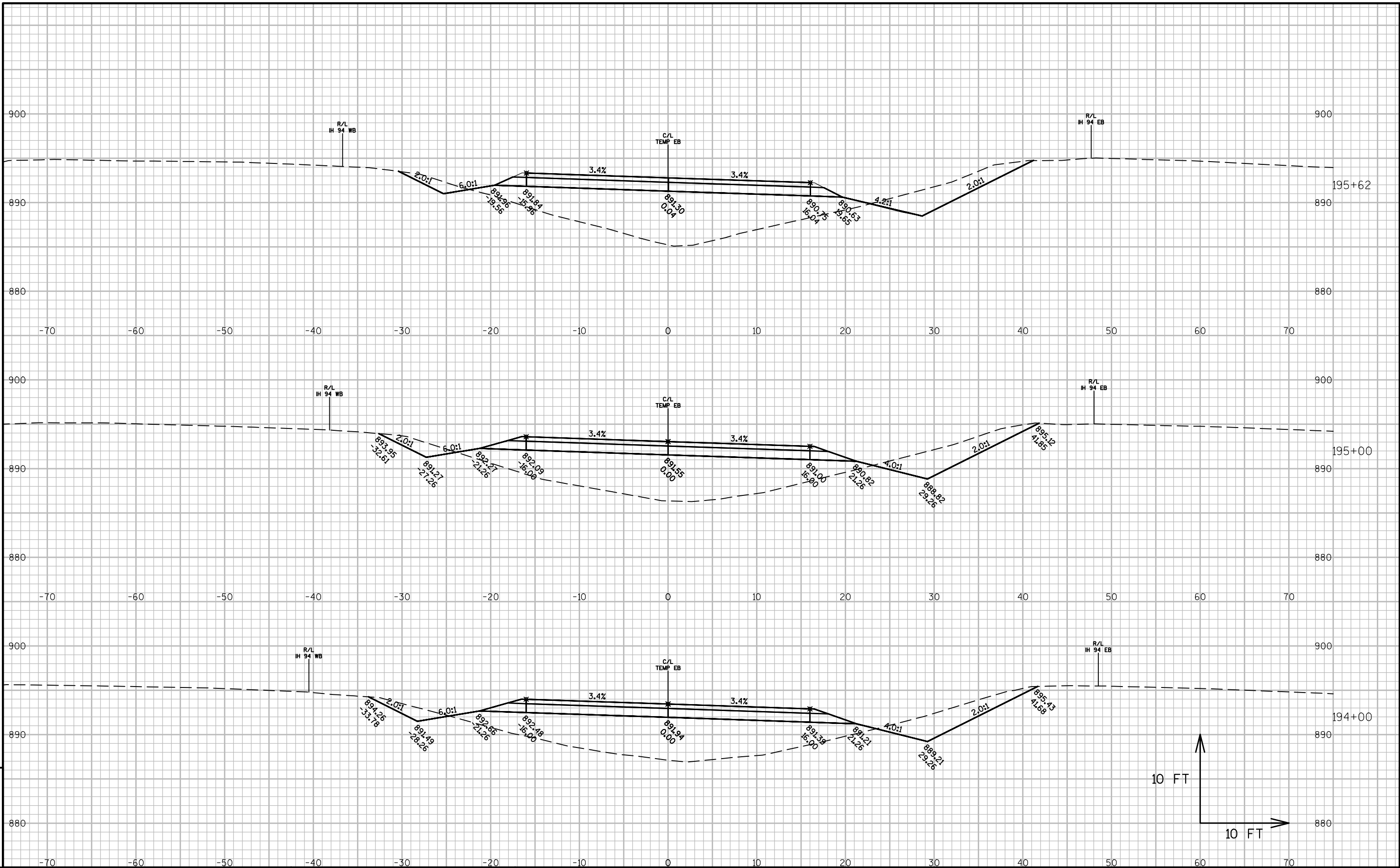


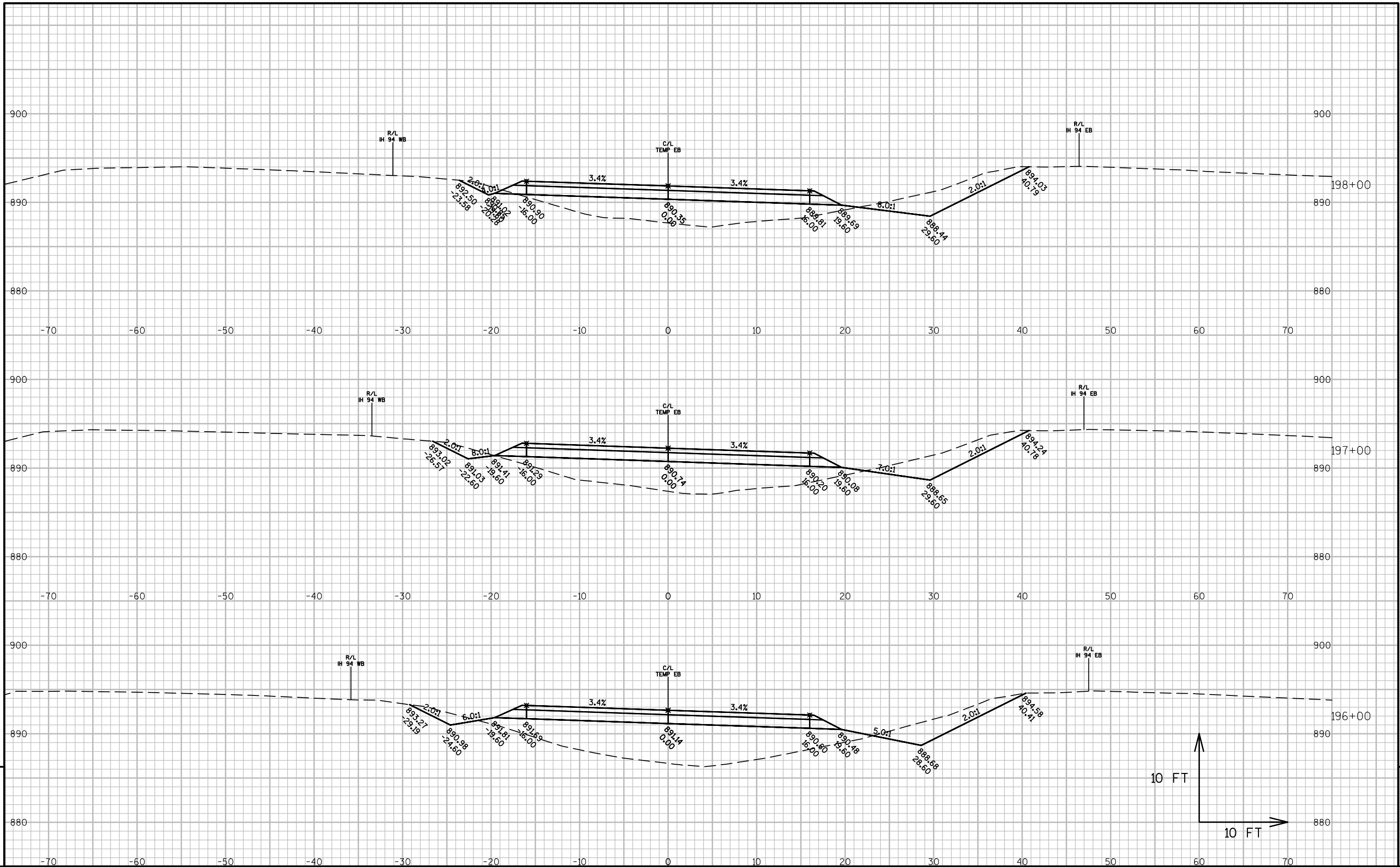


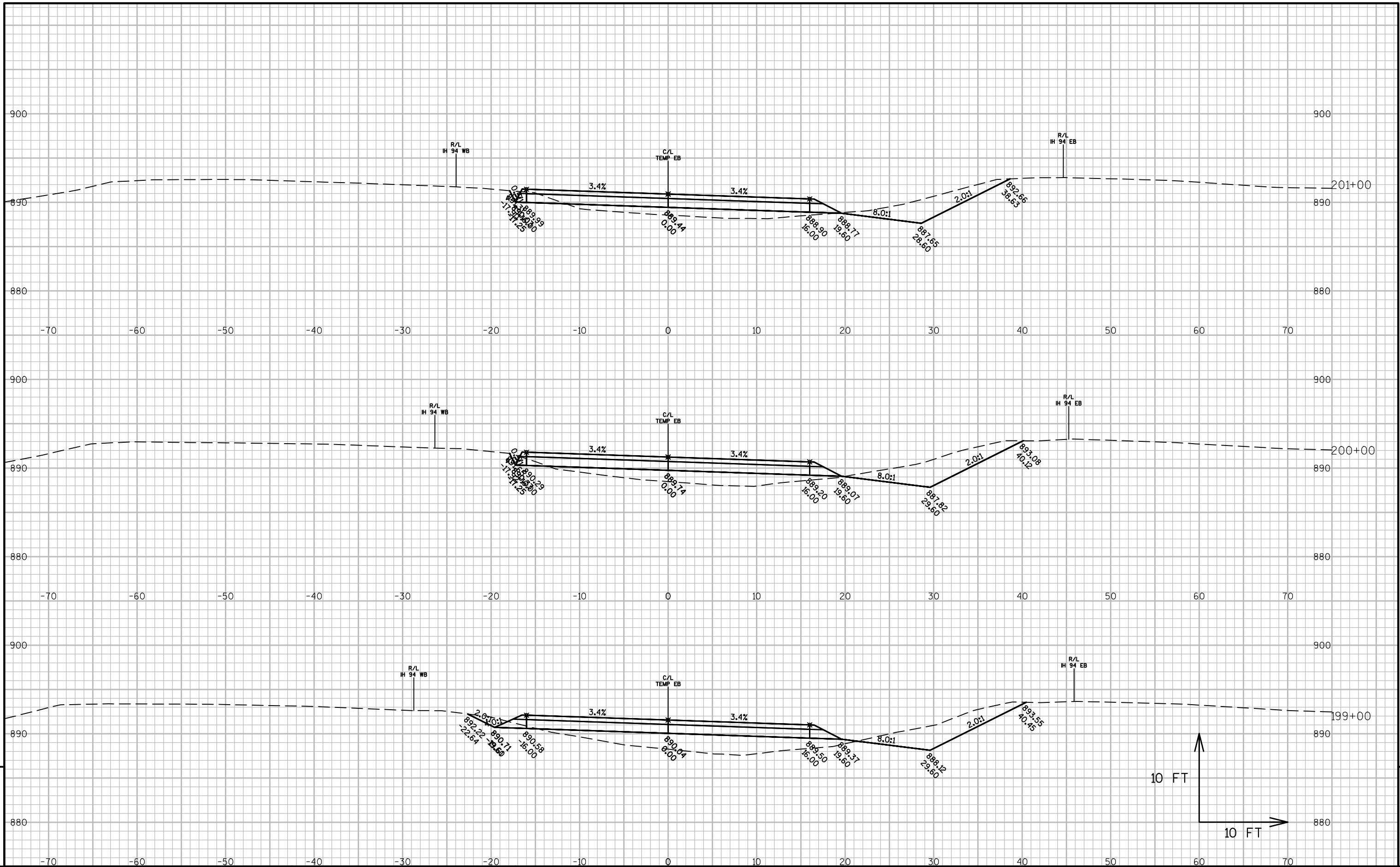


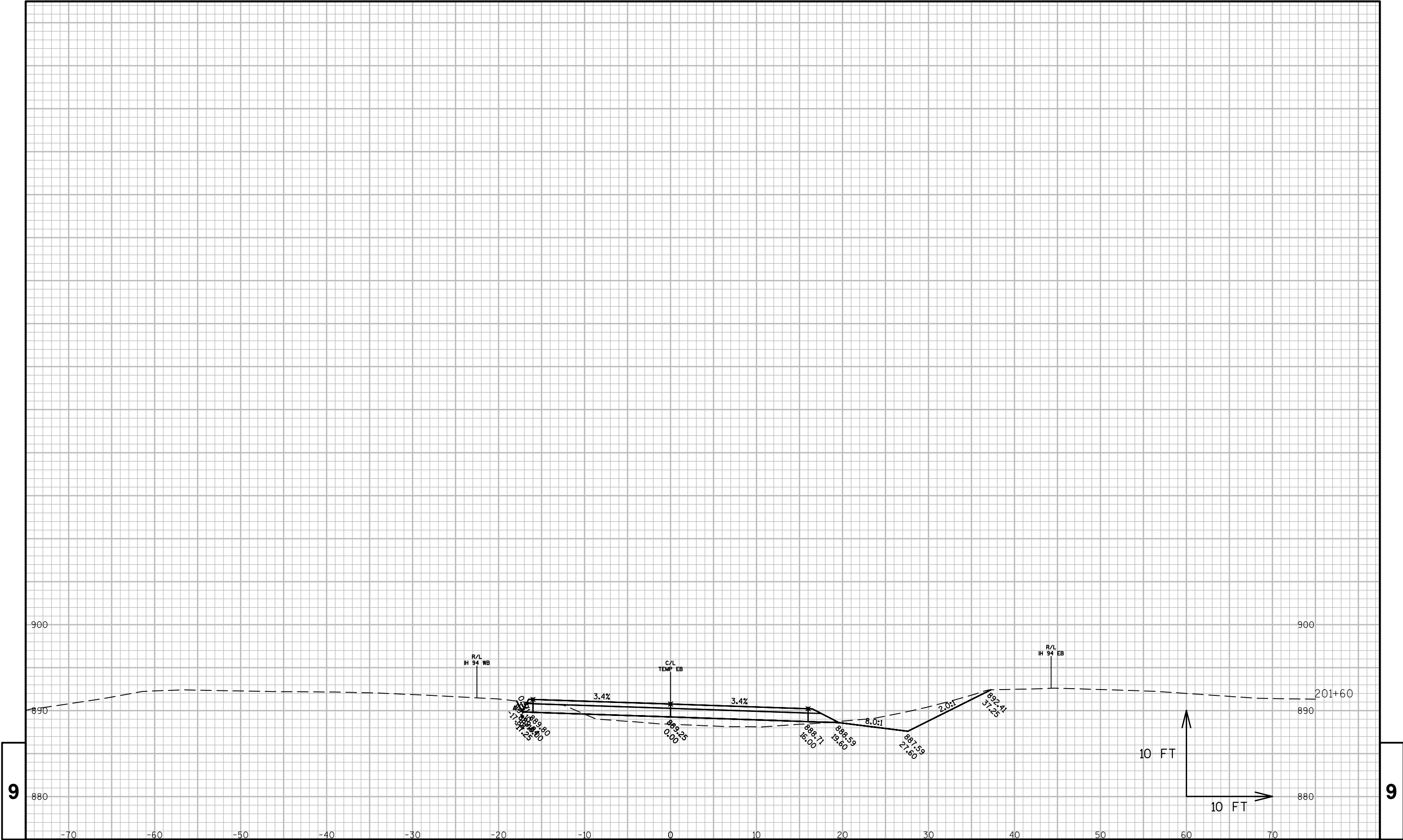












PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

CROSS SECTIONS: IH 94 MEDIAN STAGE 2G

SHEET 679

E

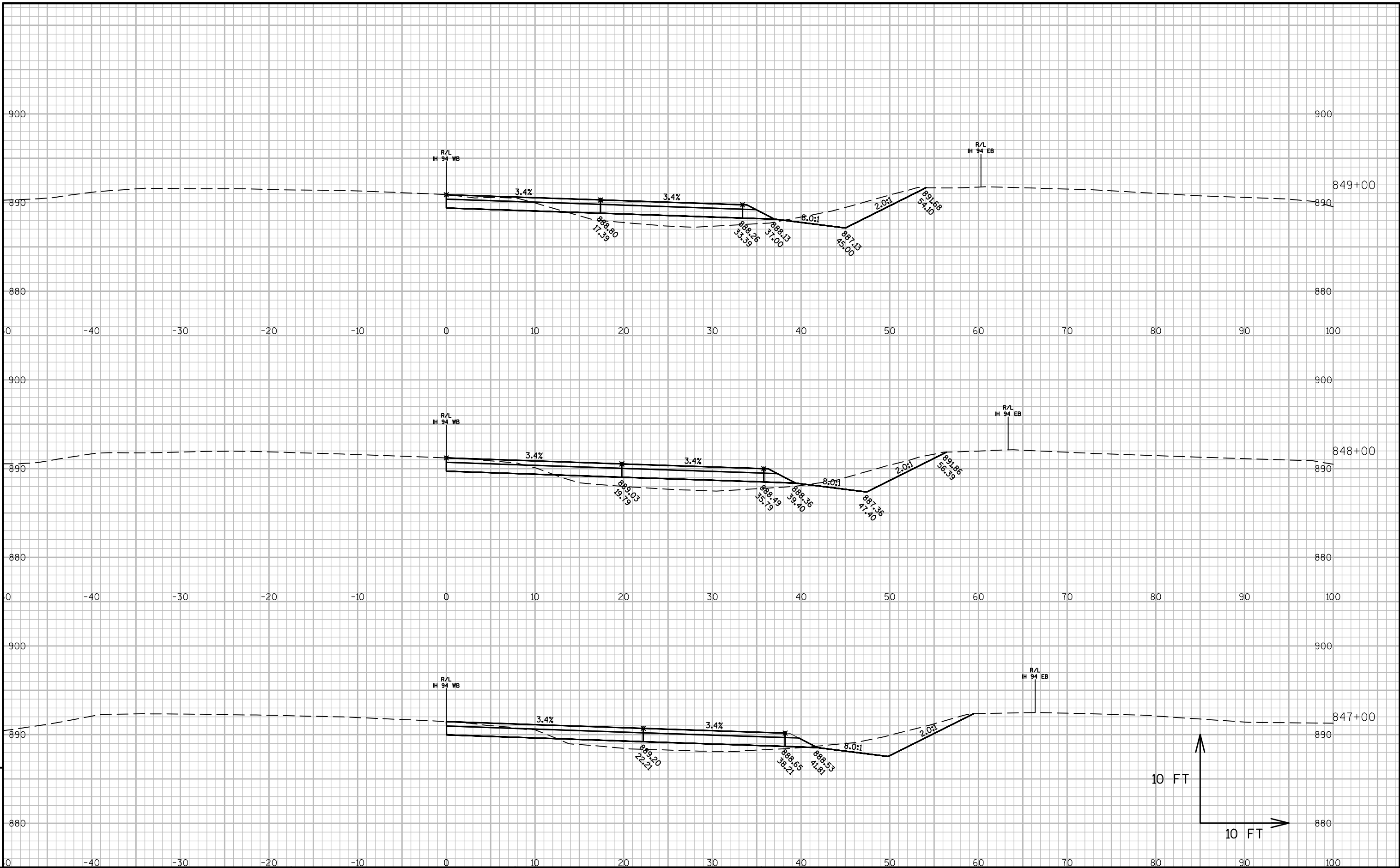
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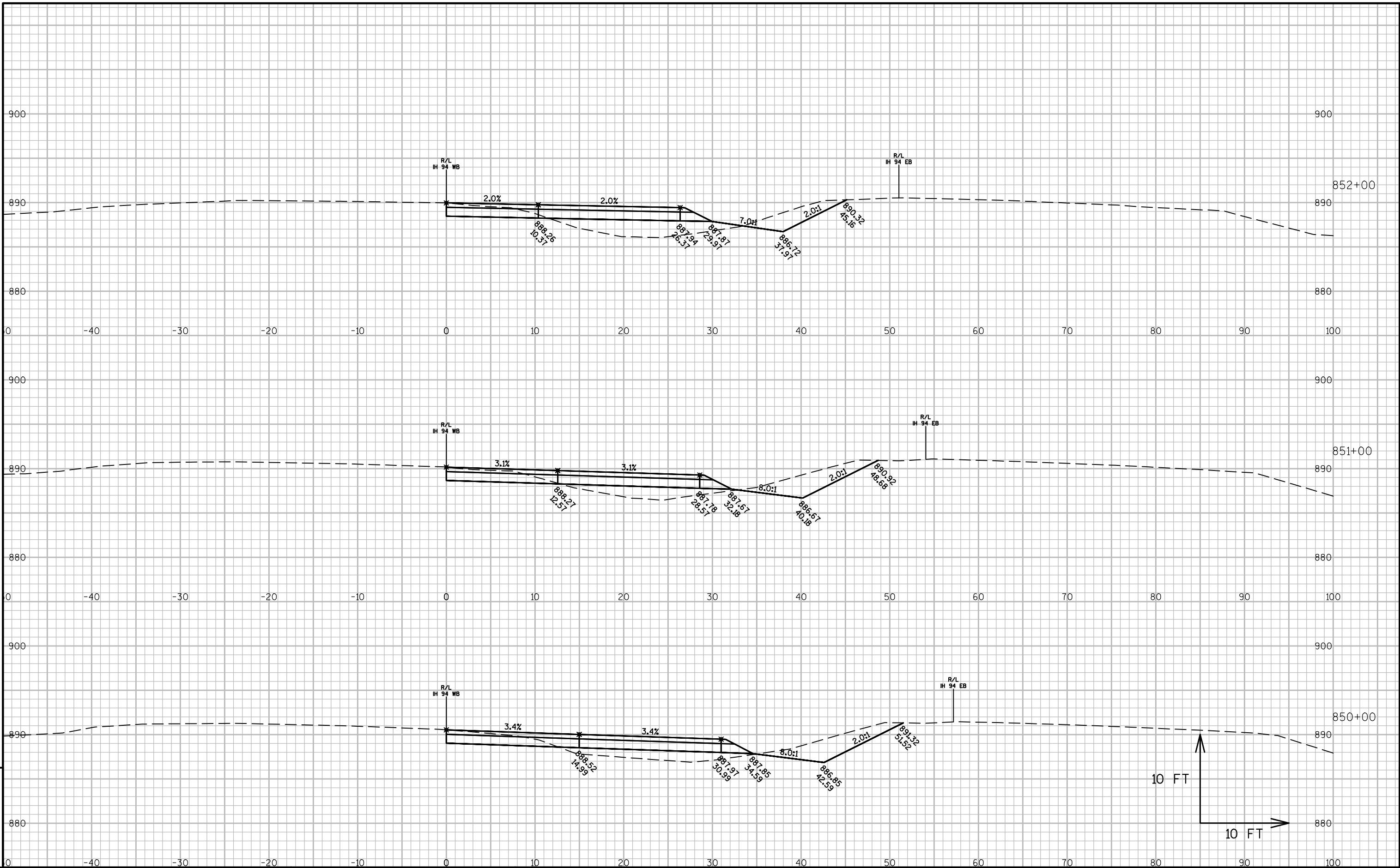
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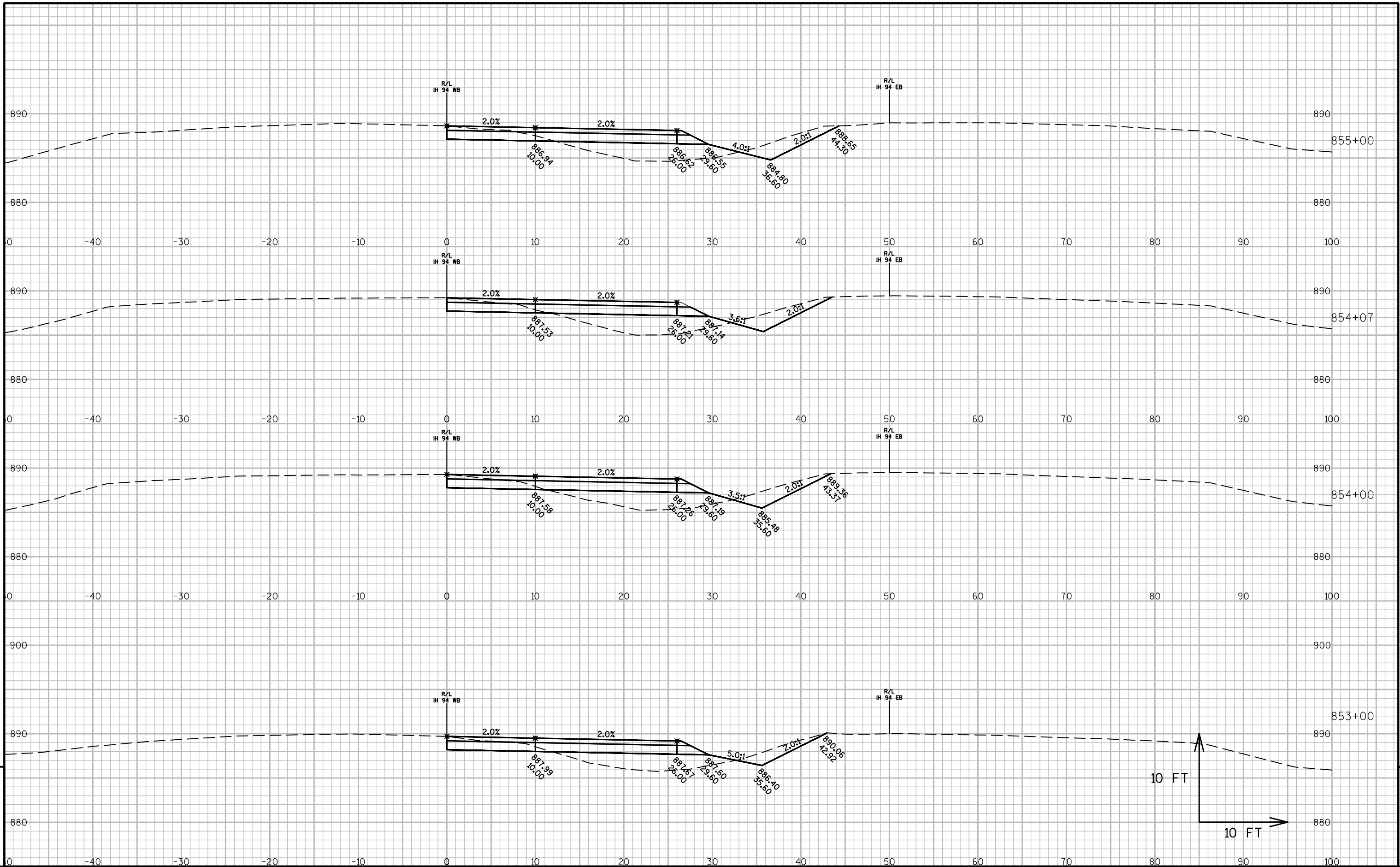
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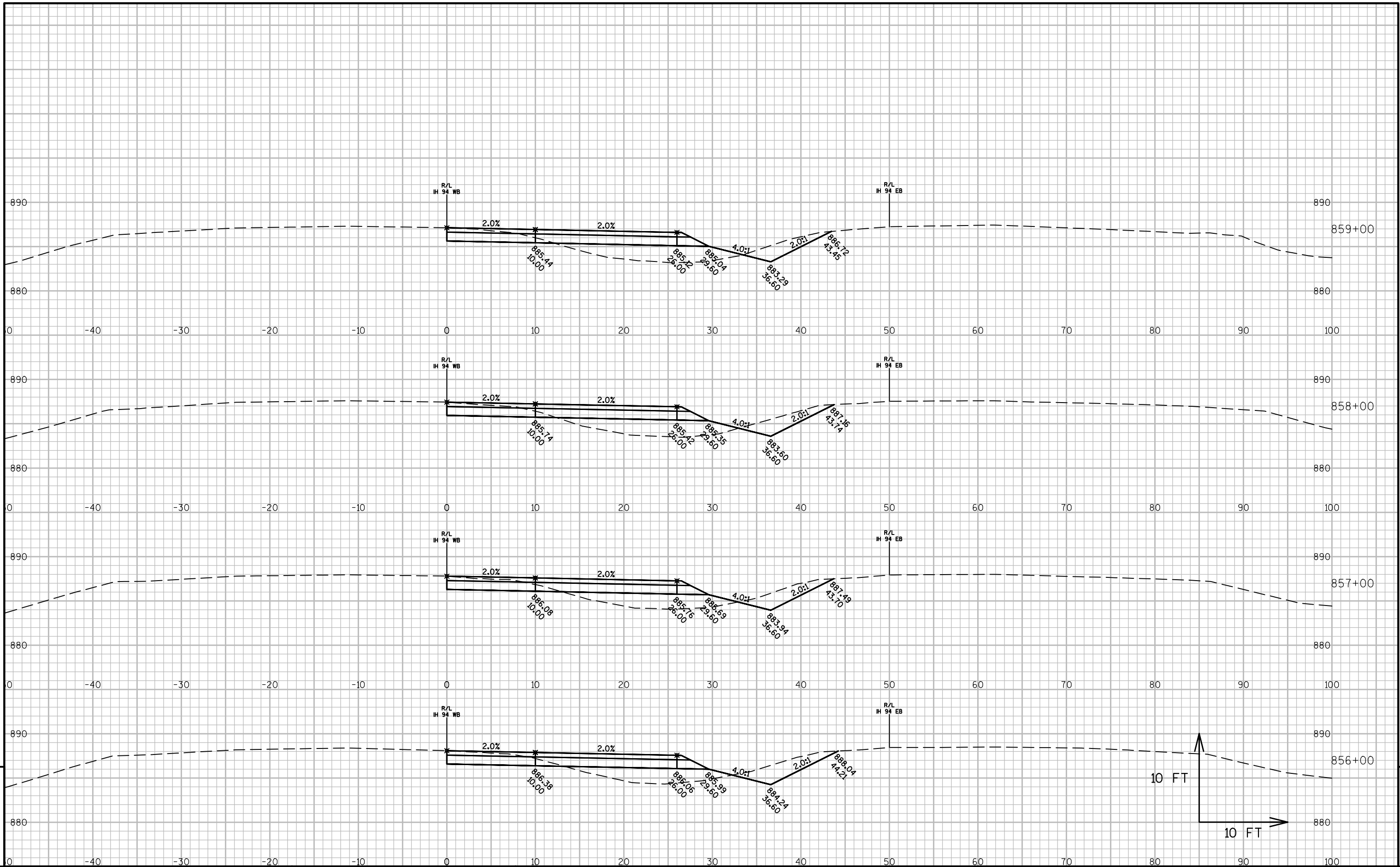
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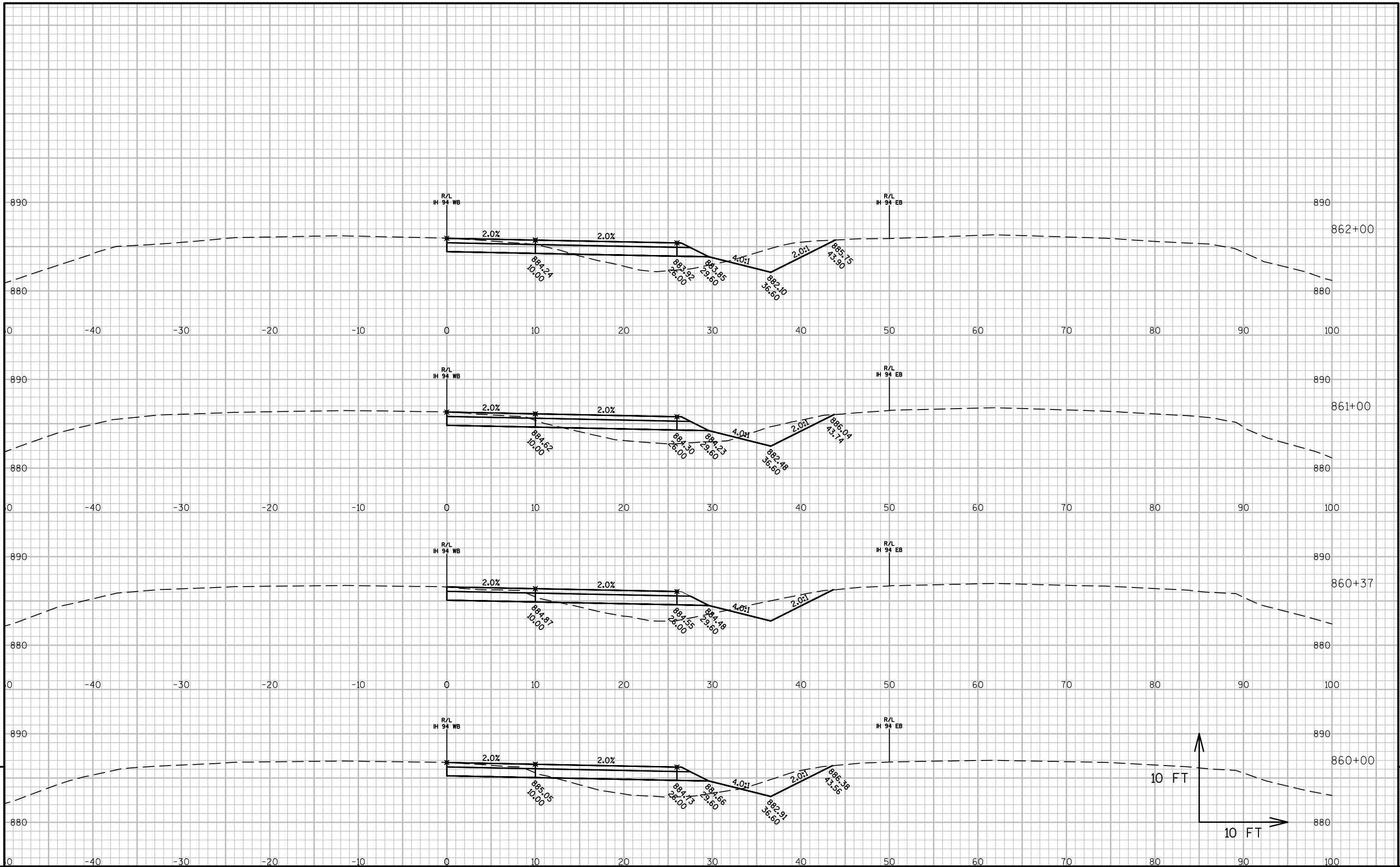
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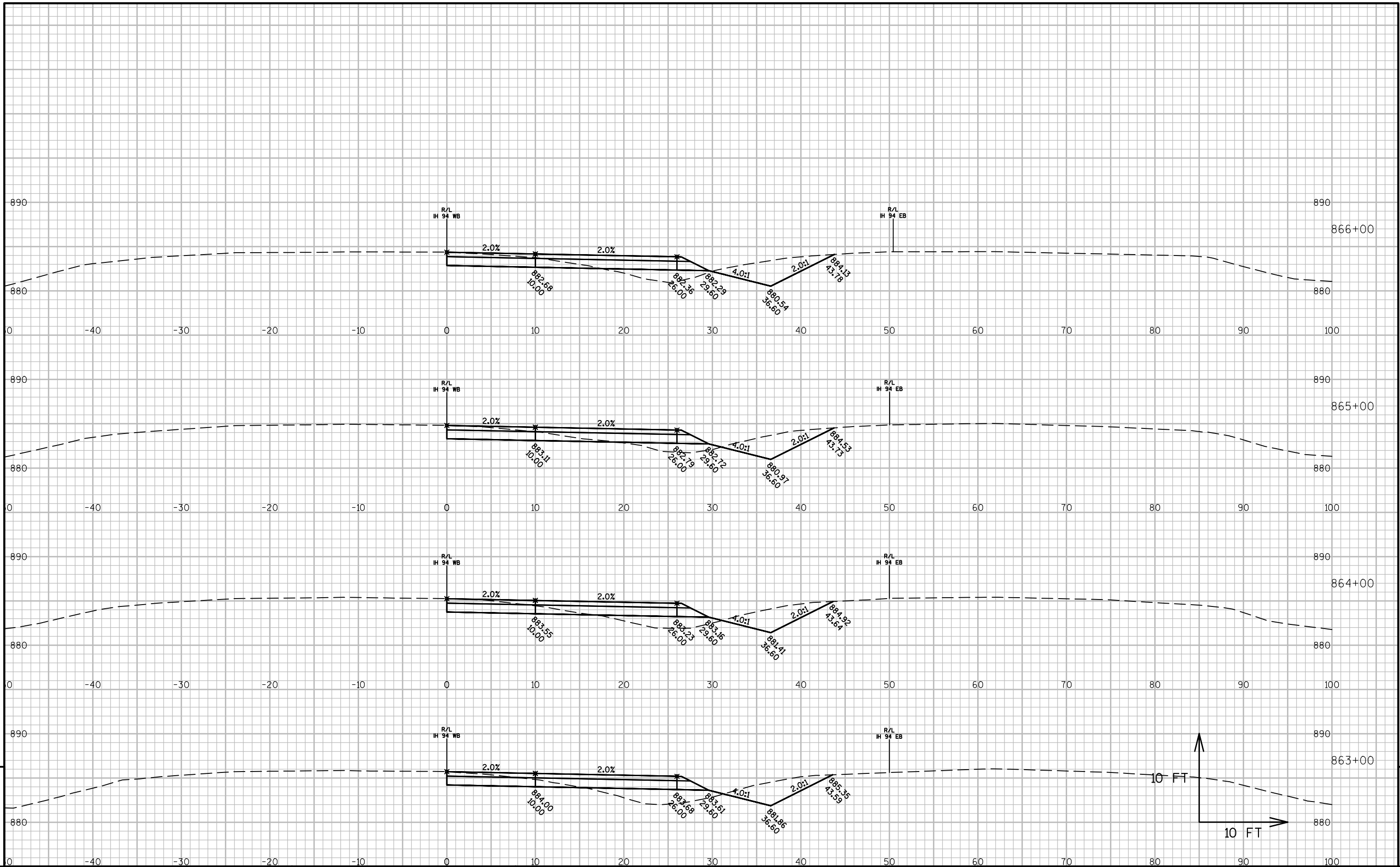


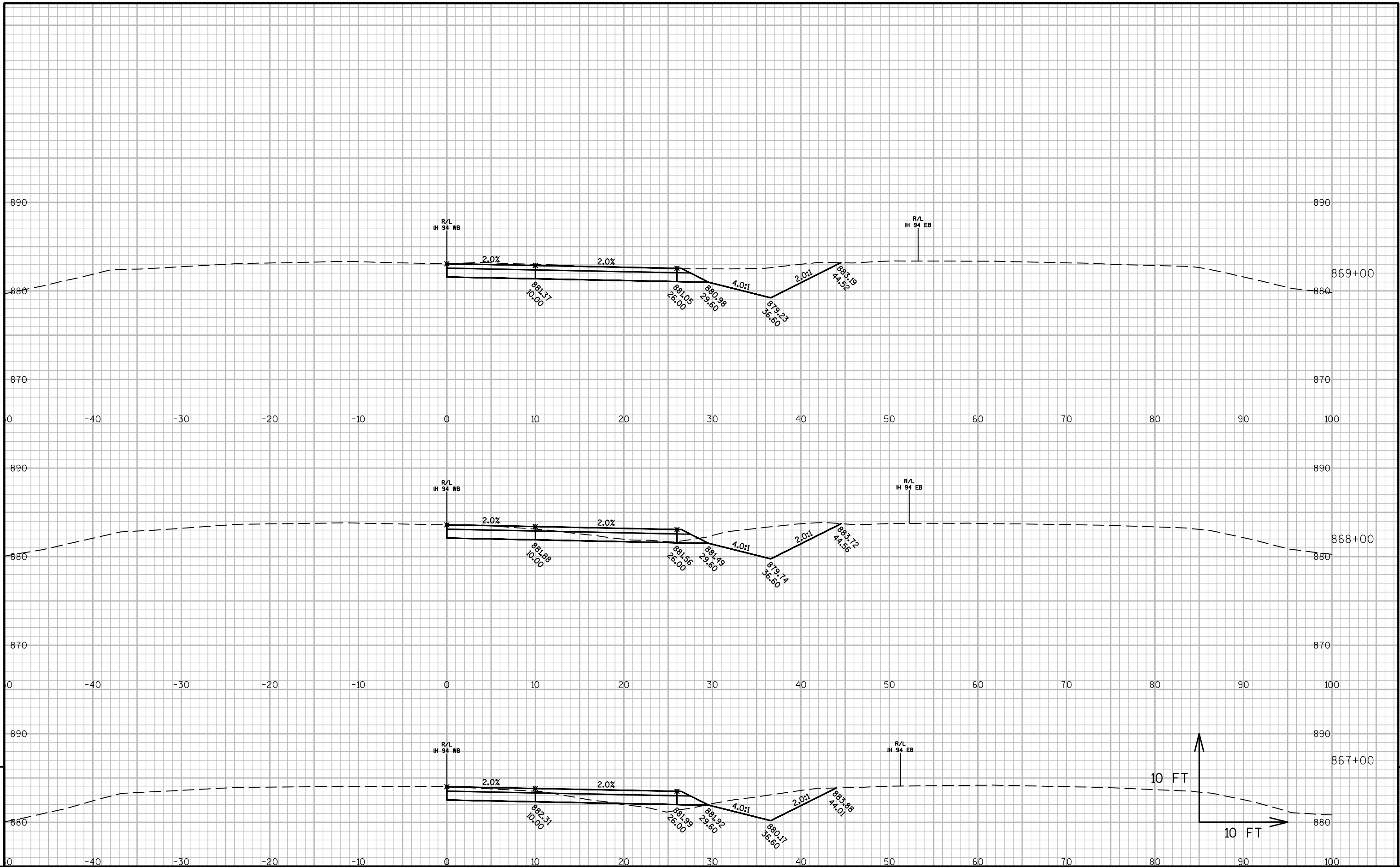


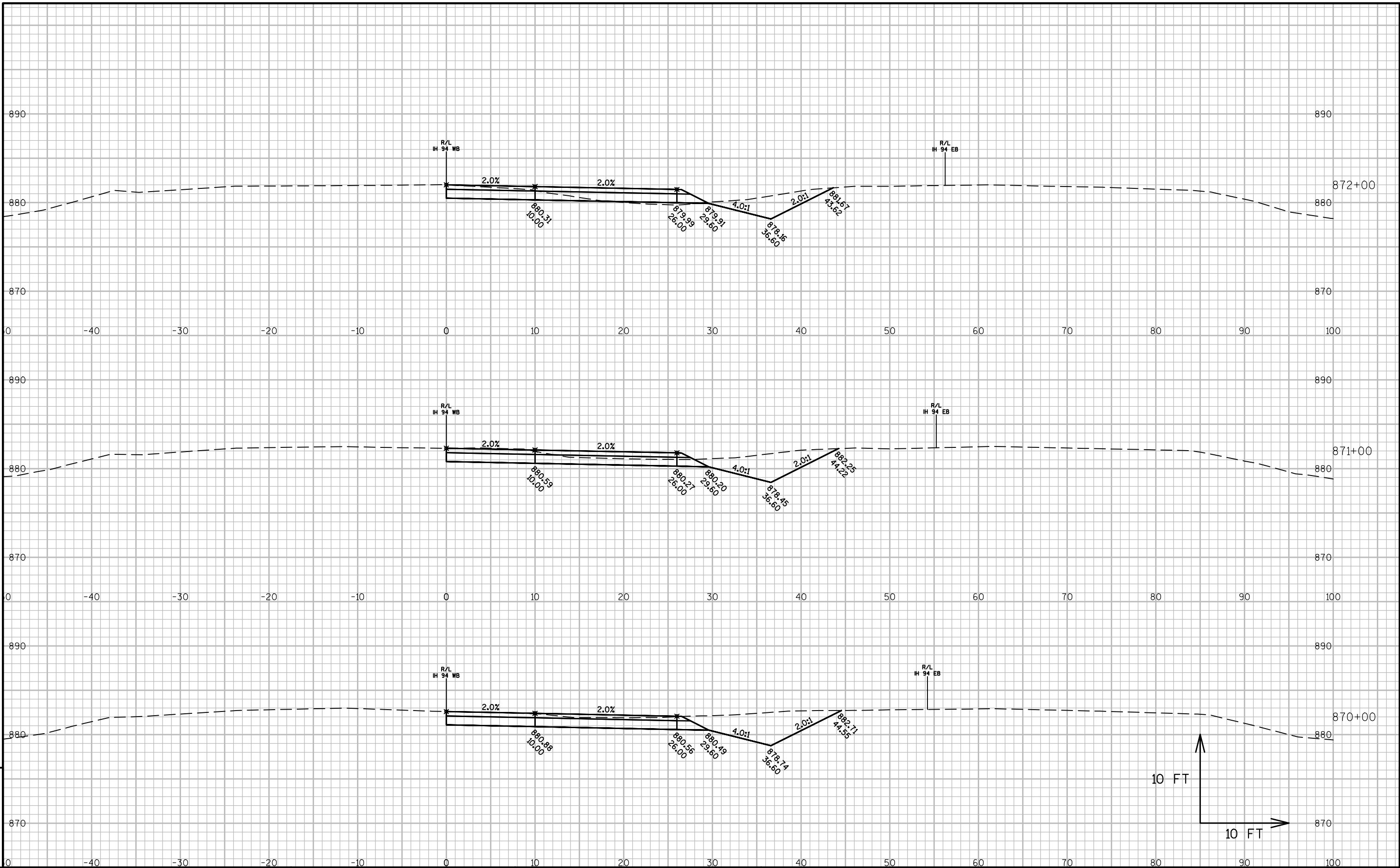


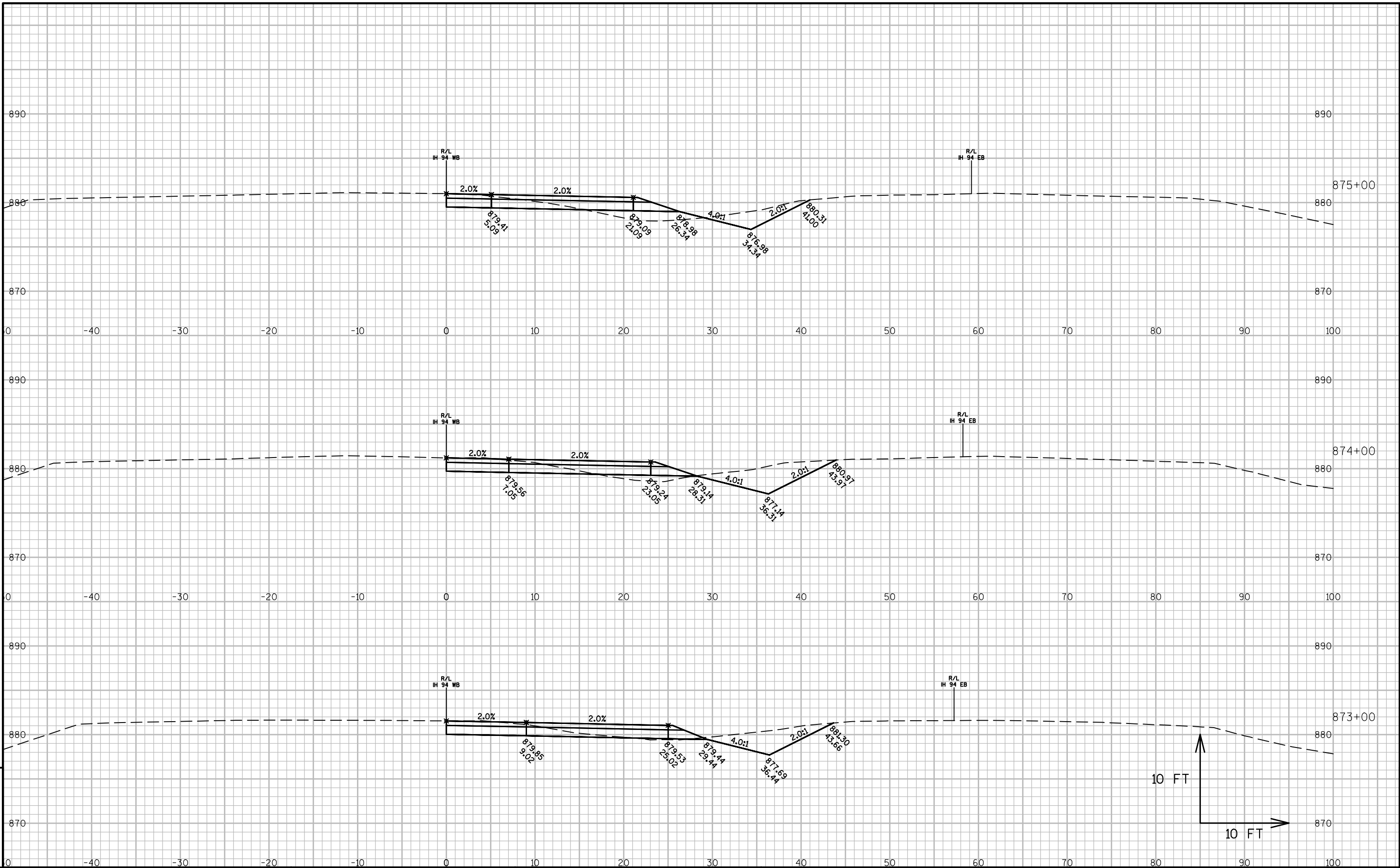


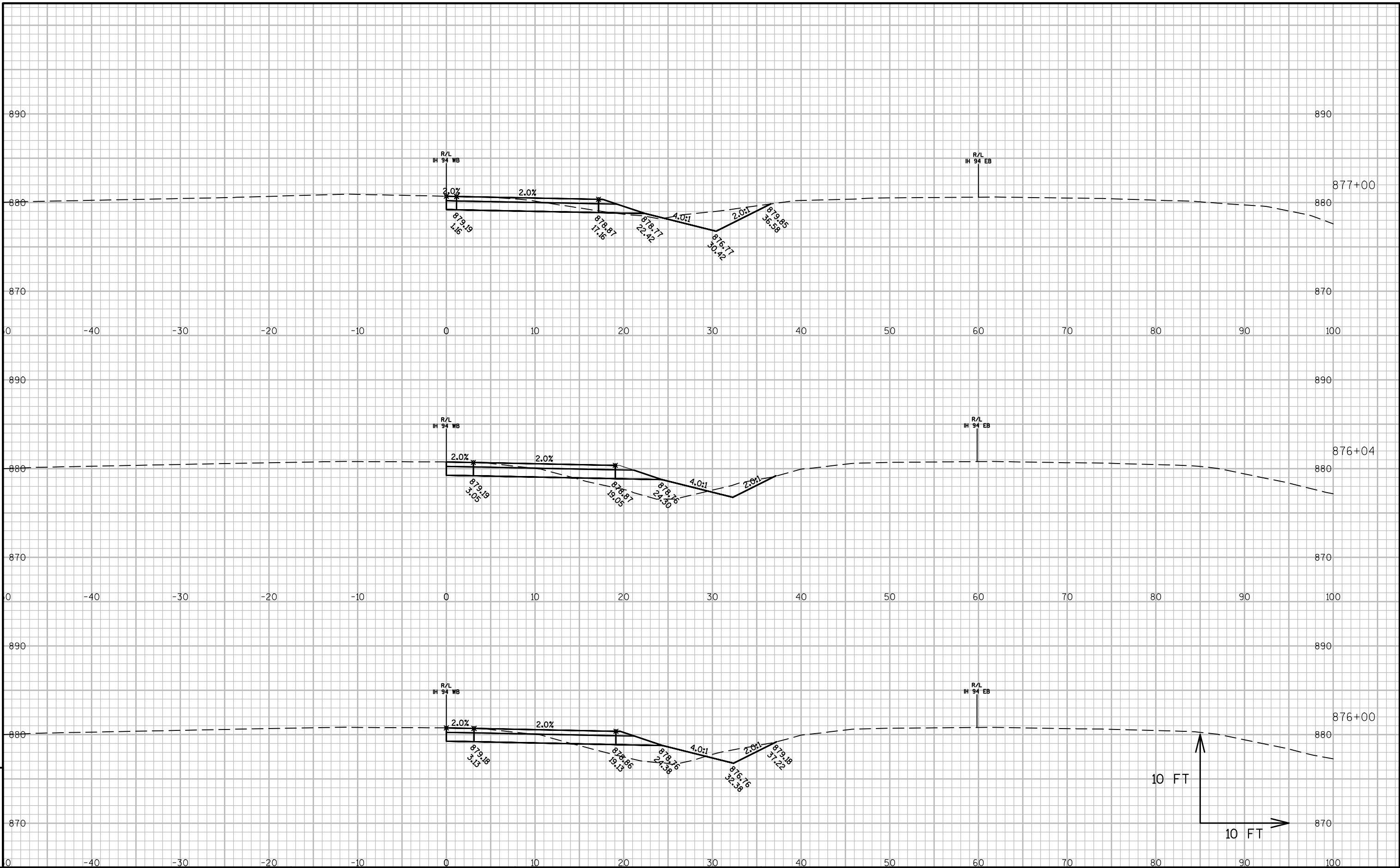


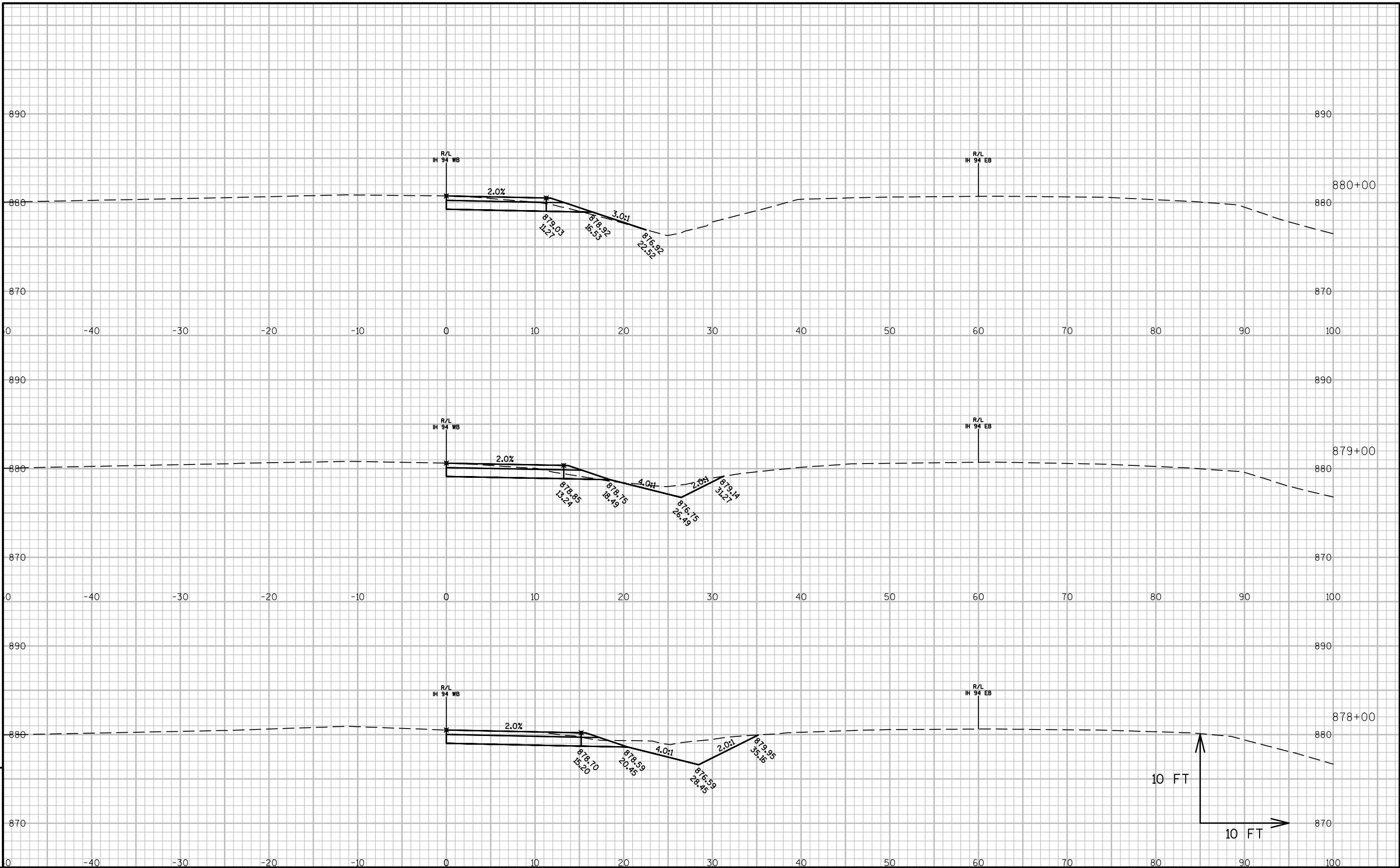


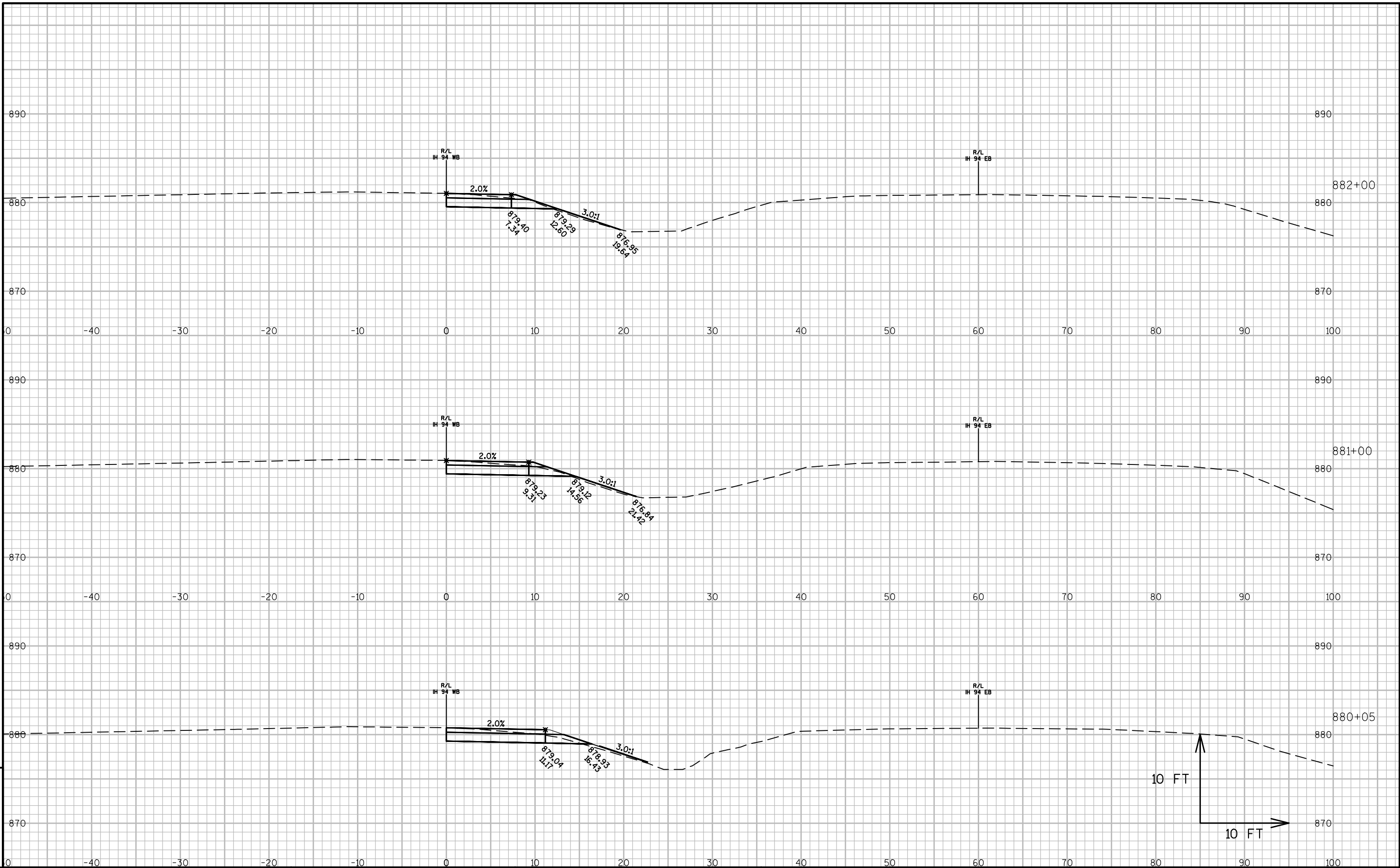


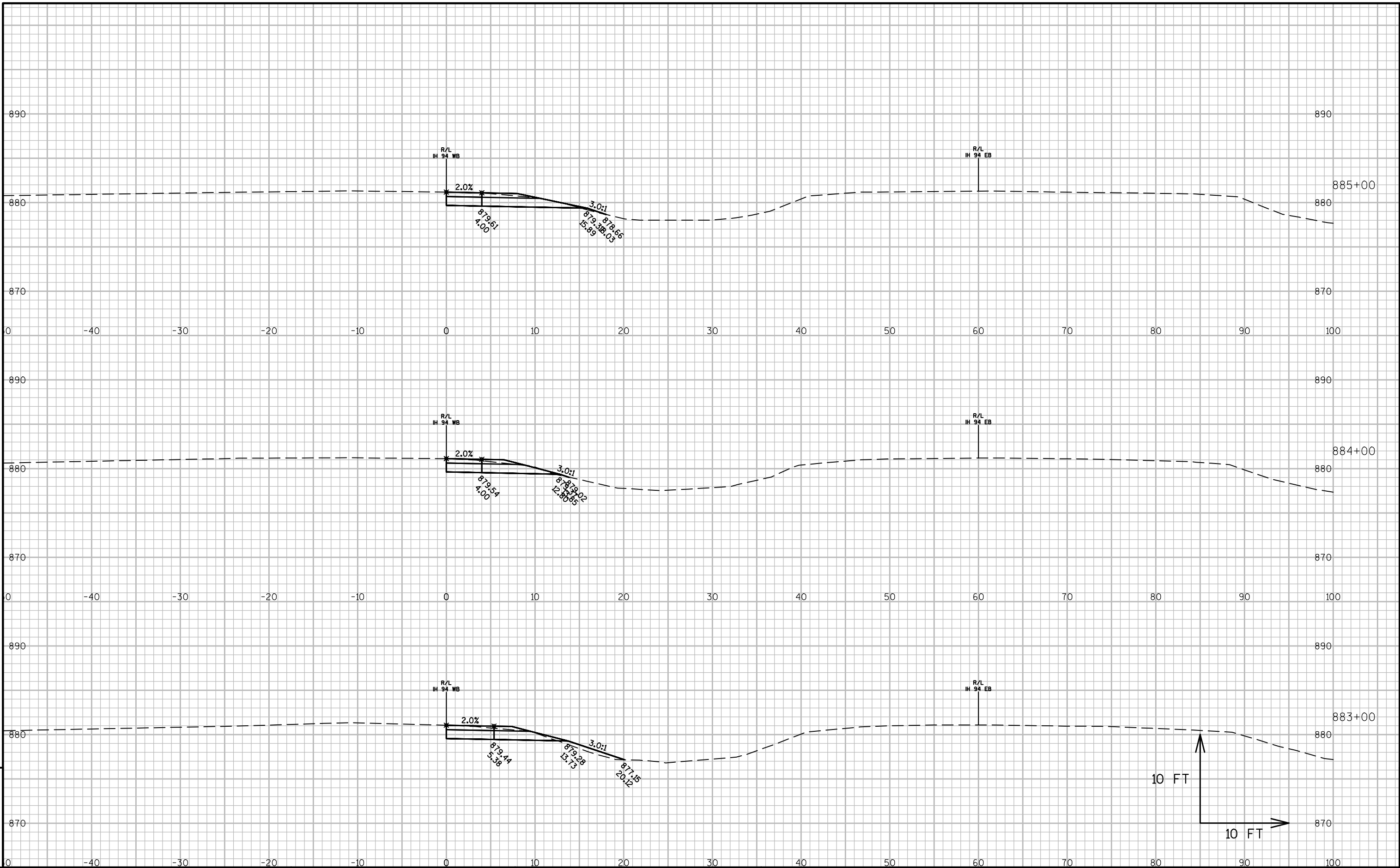


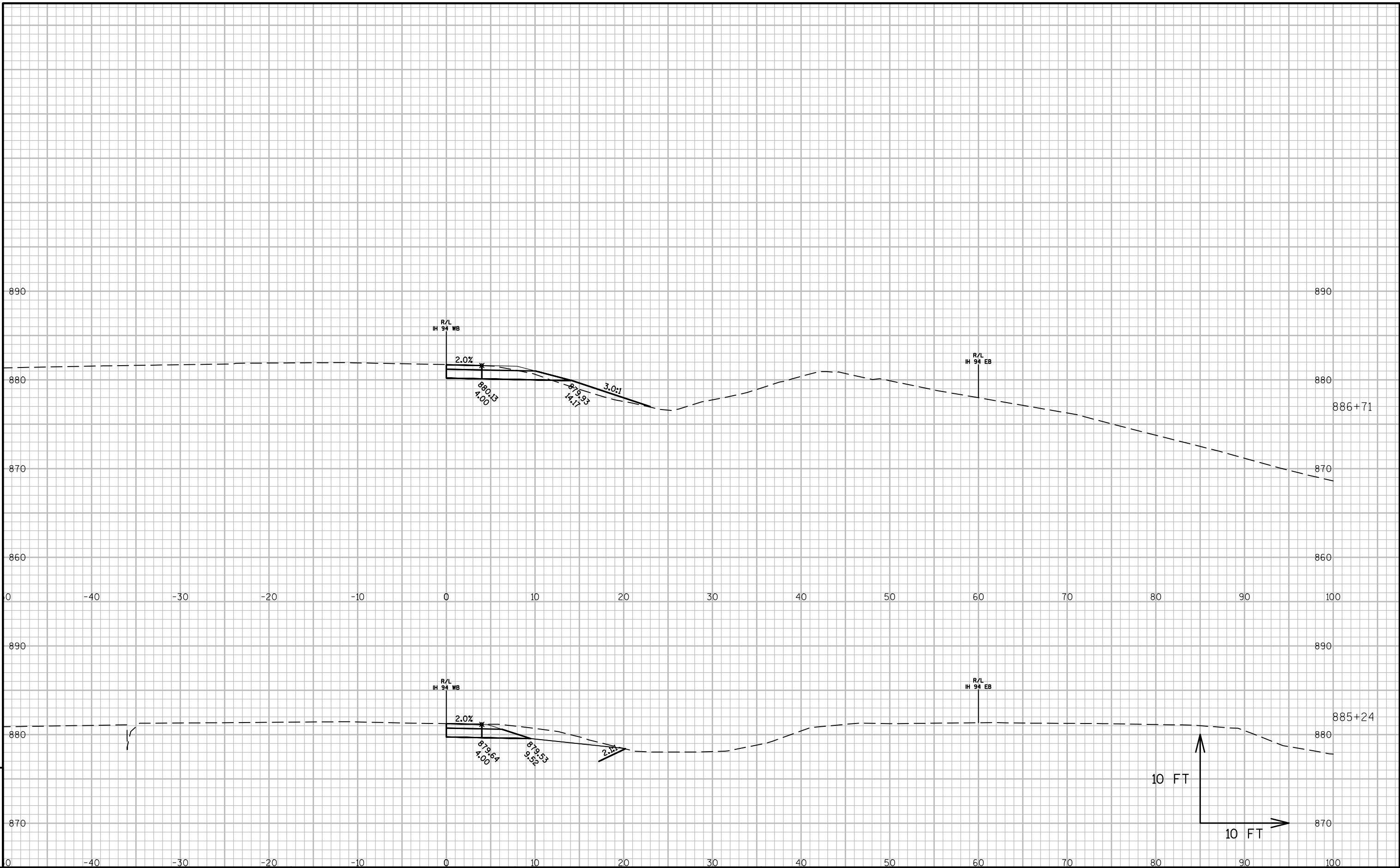


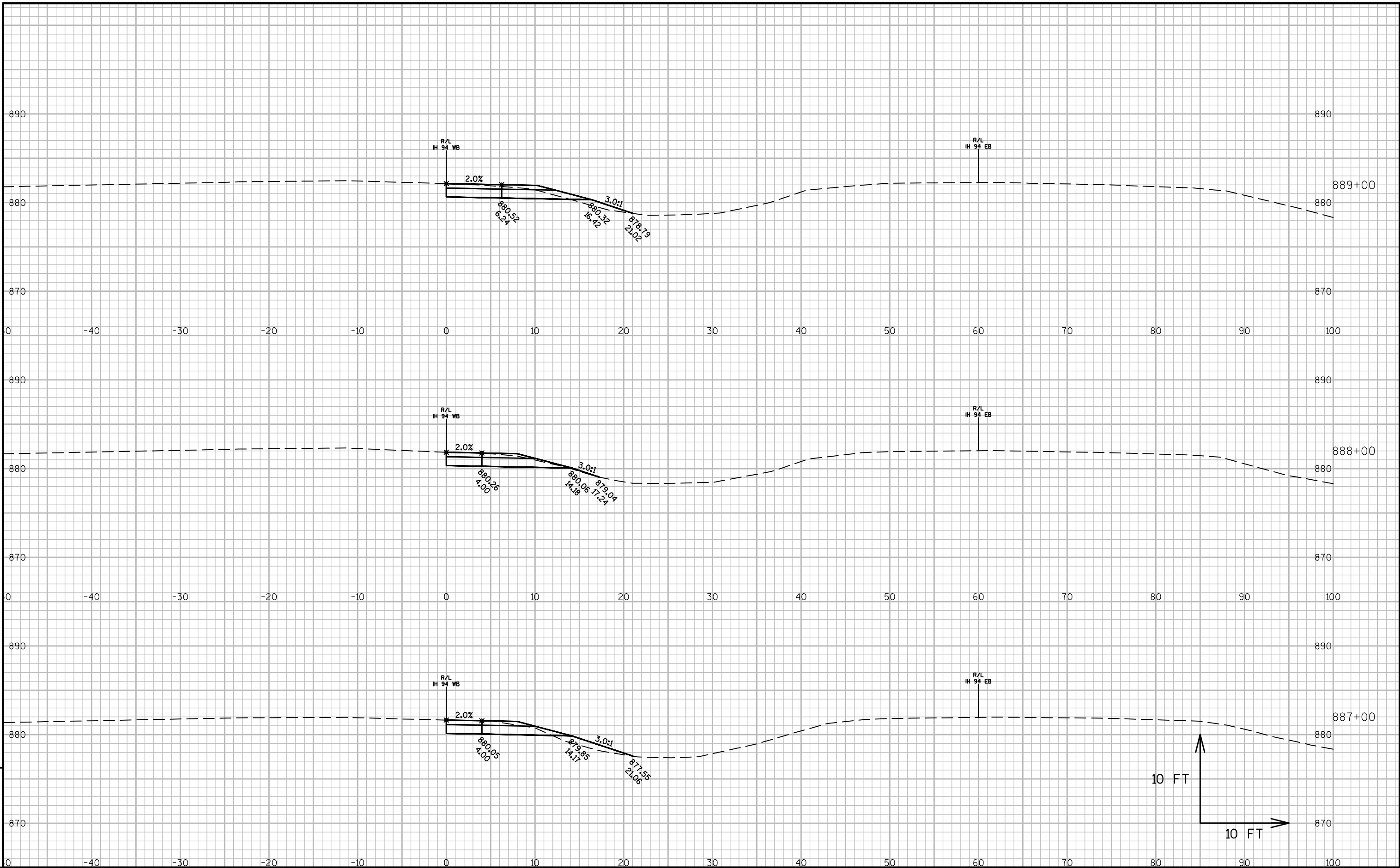


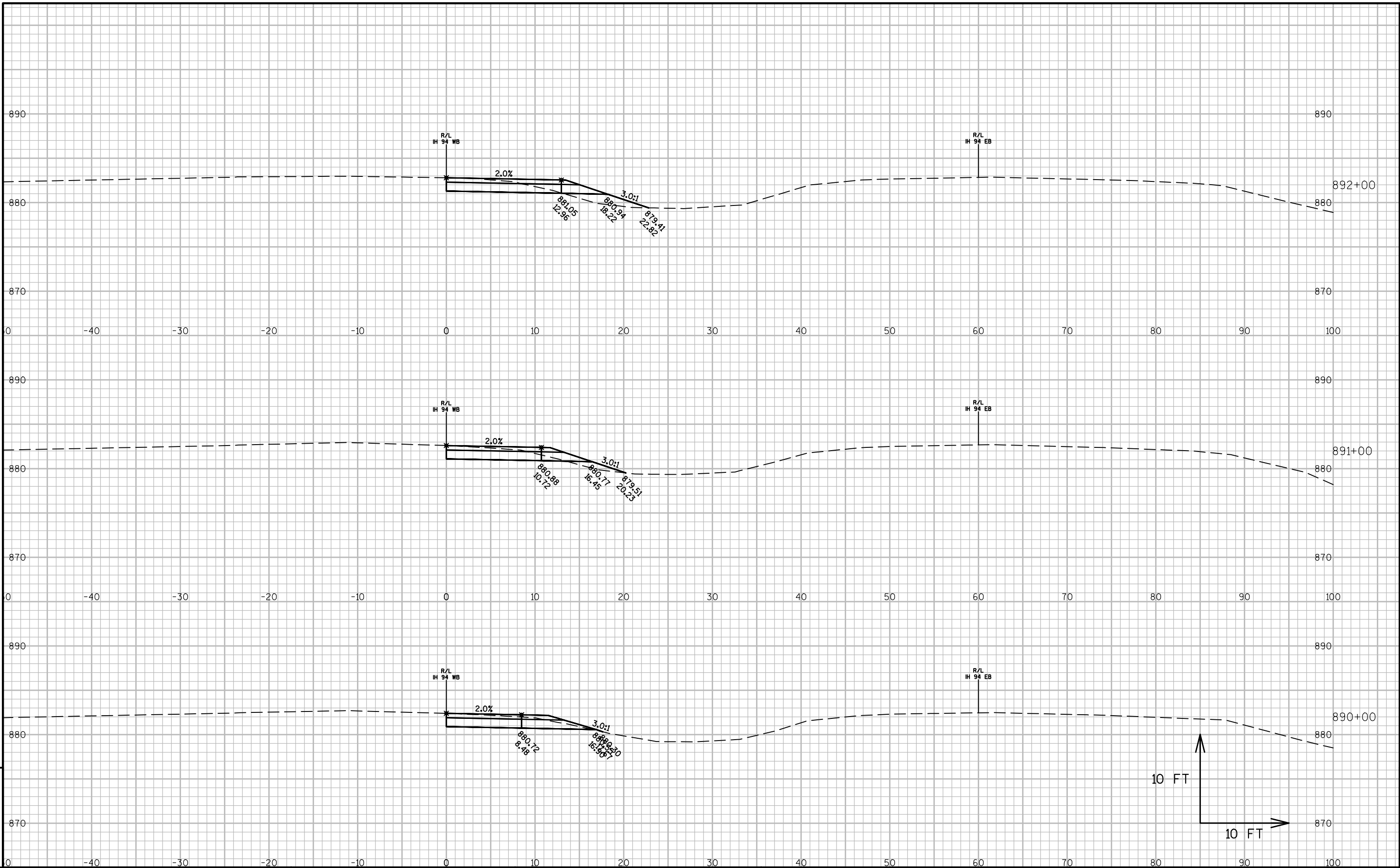


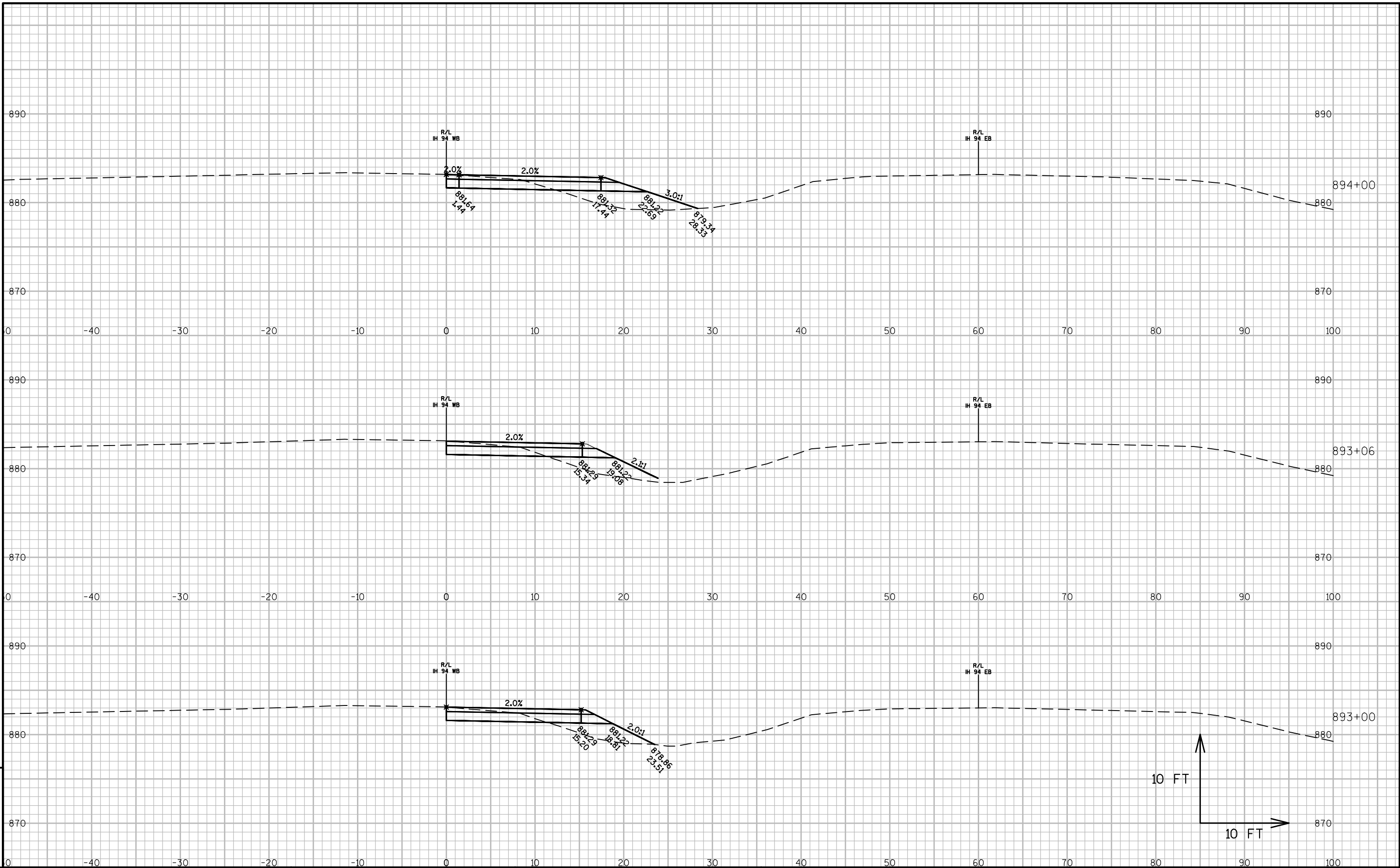


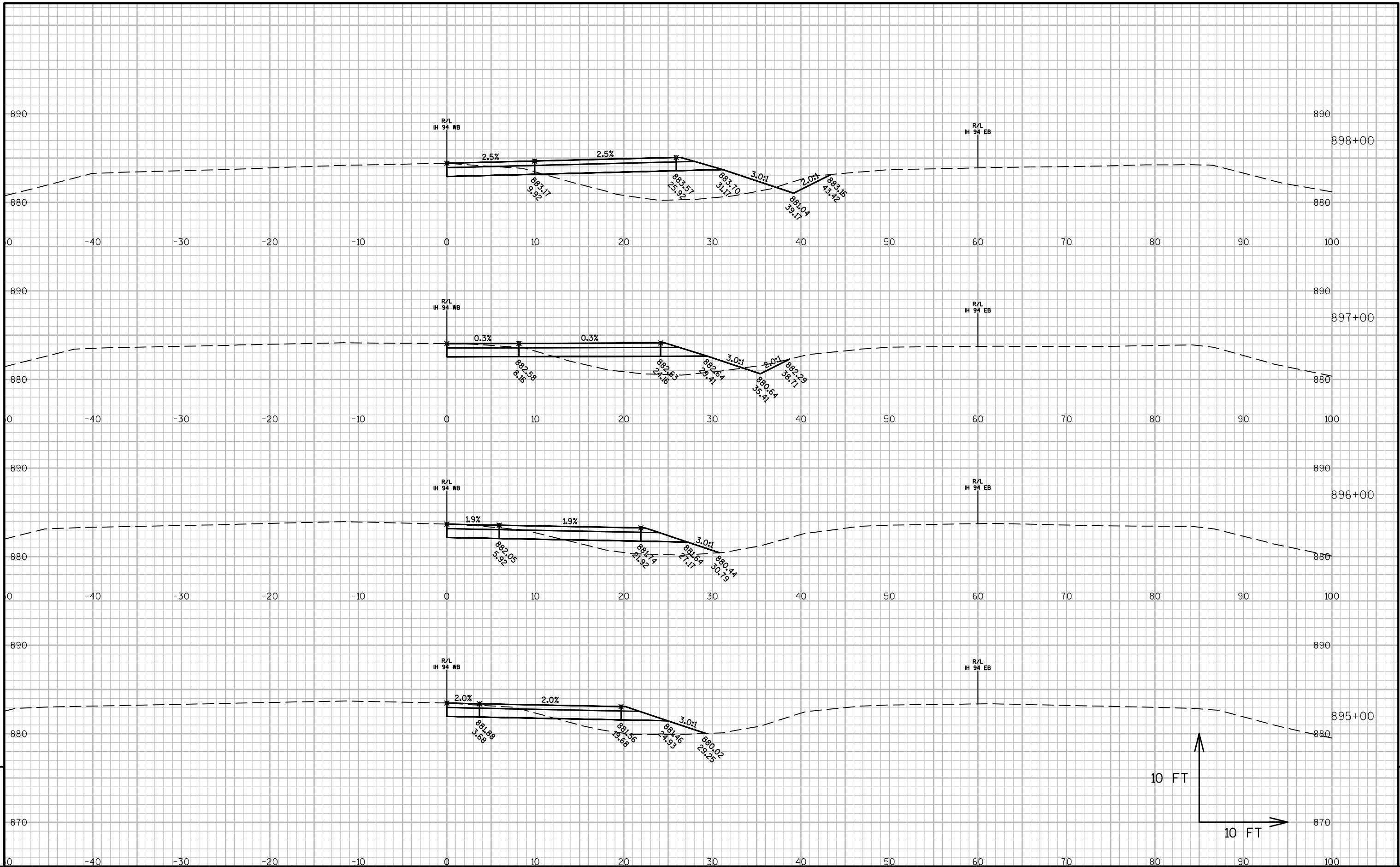


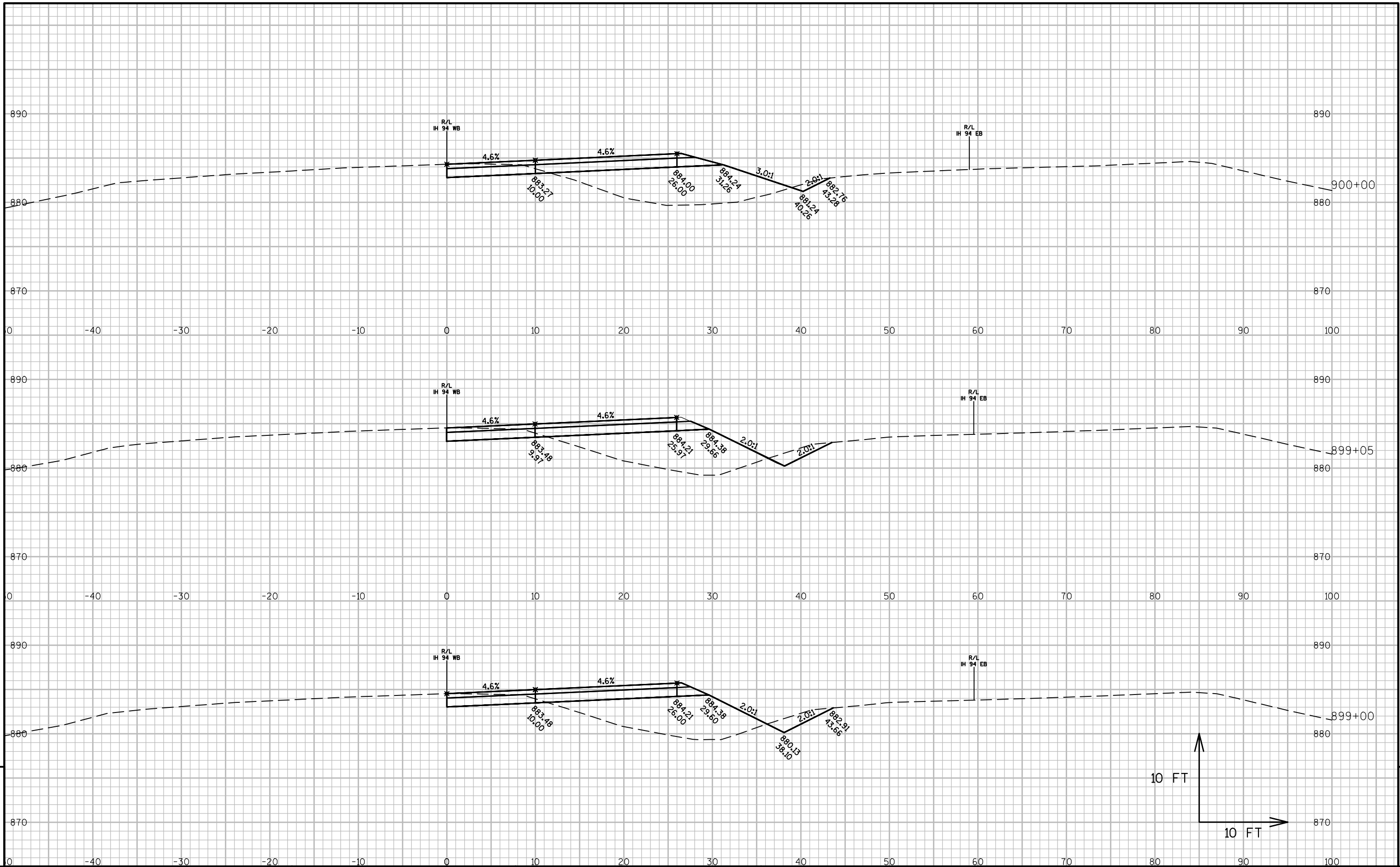


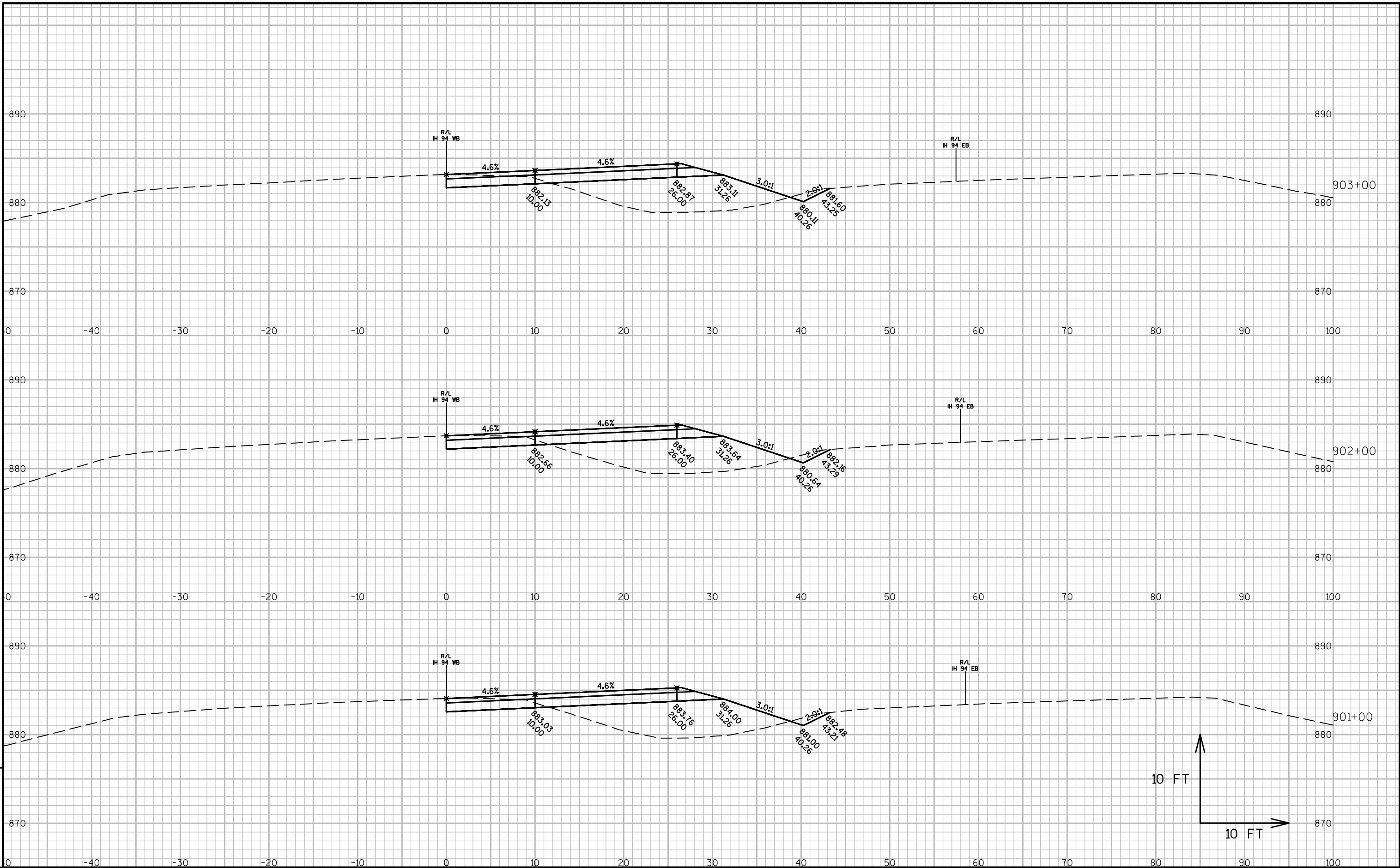


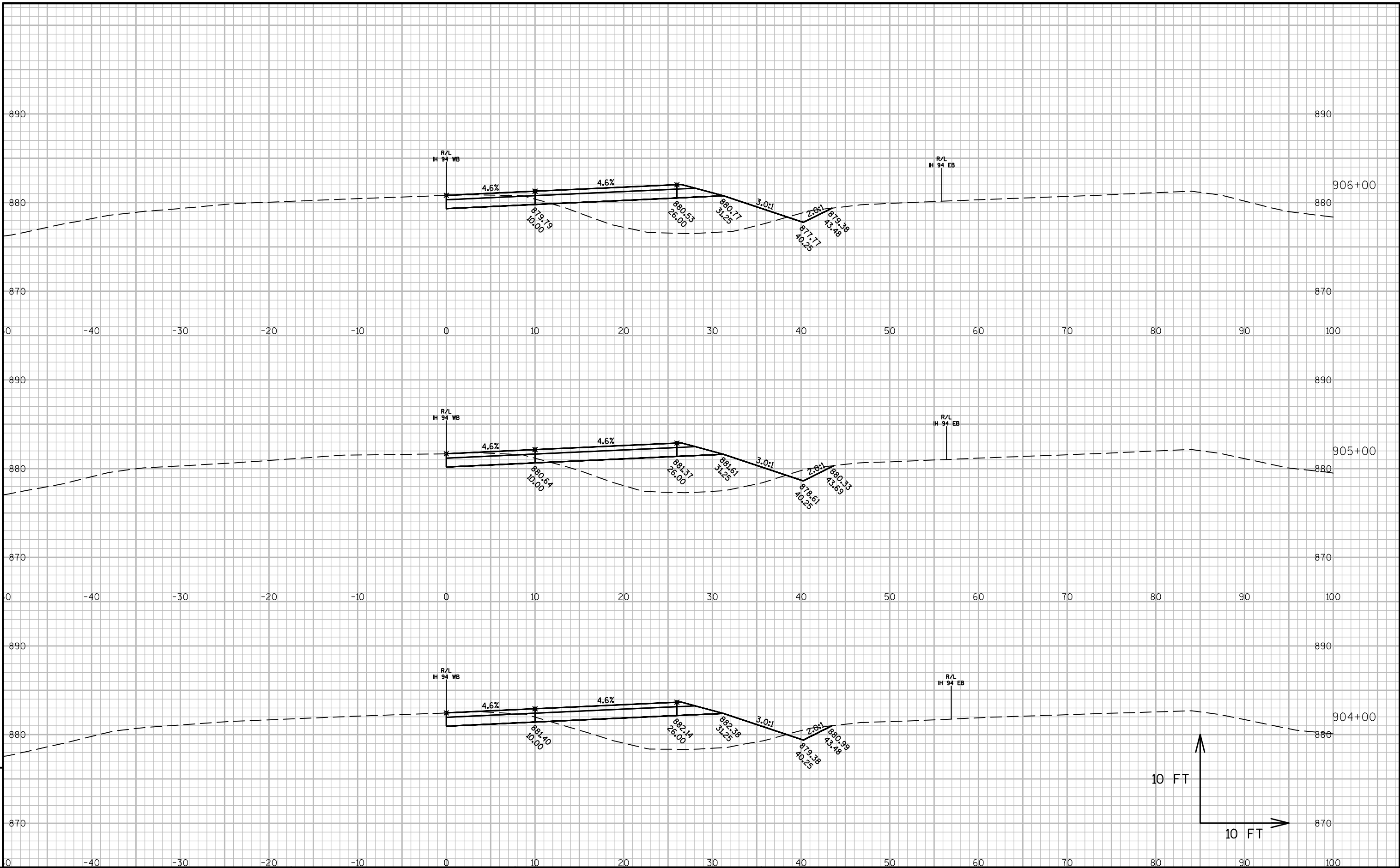


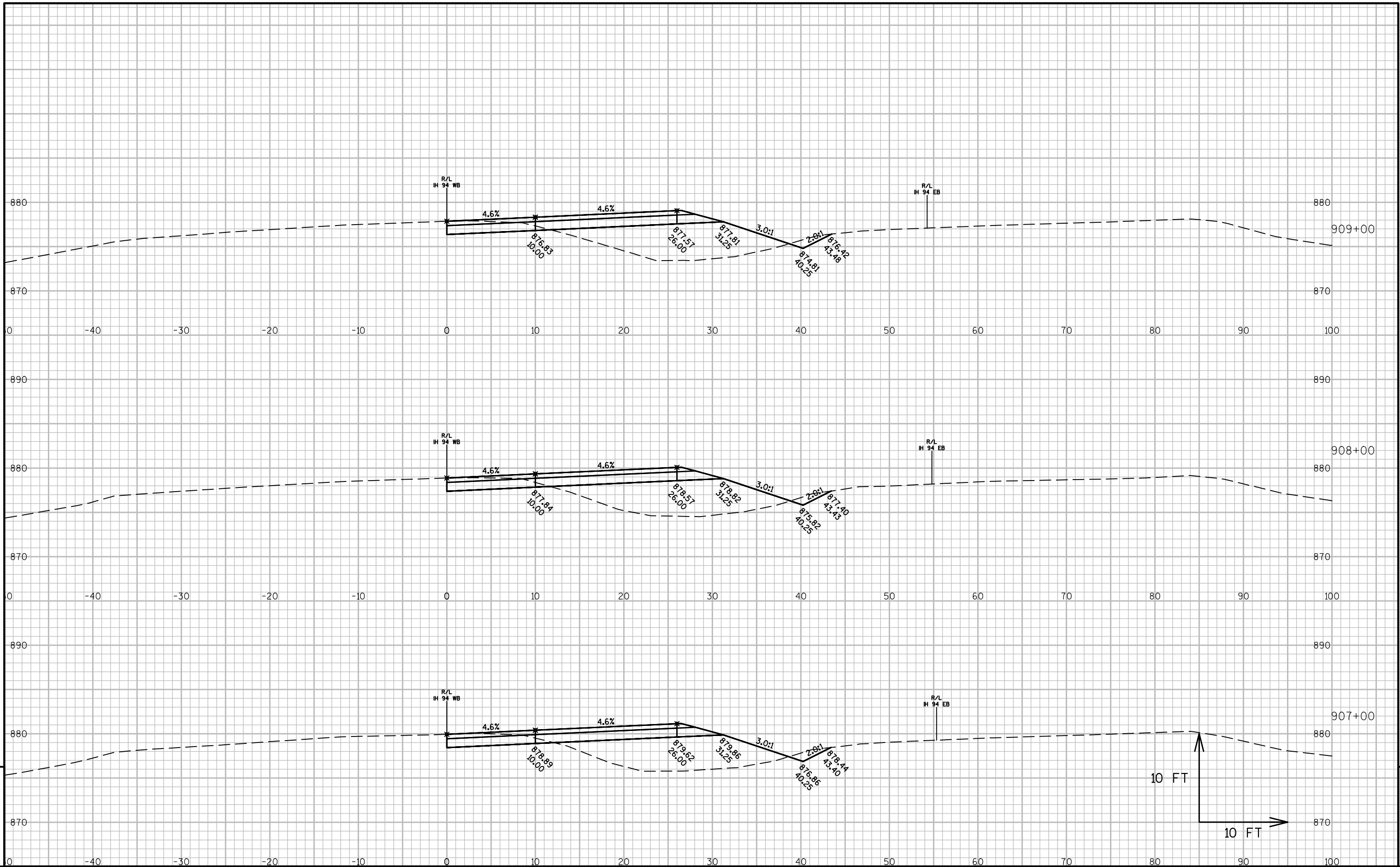


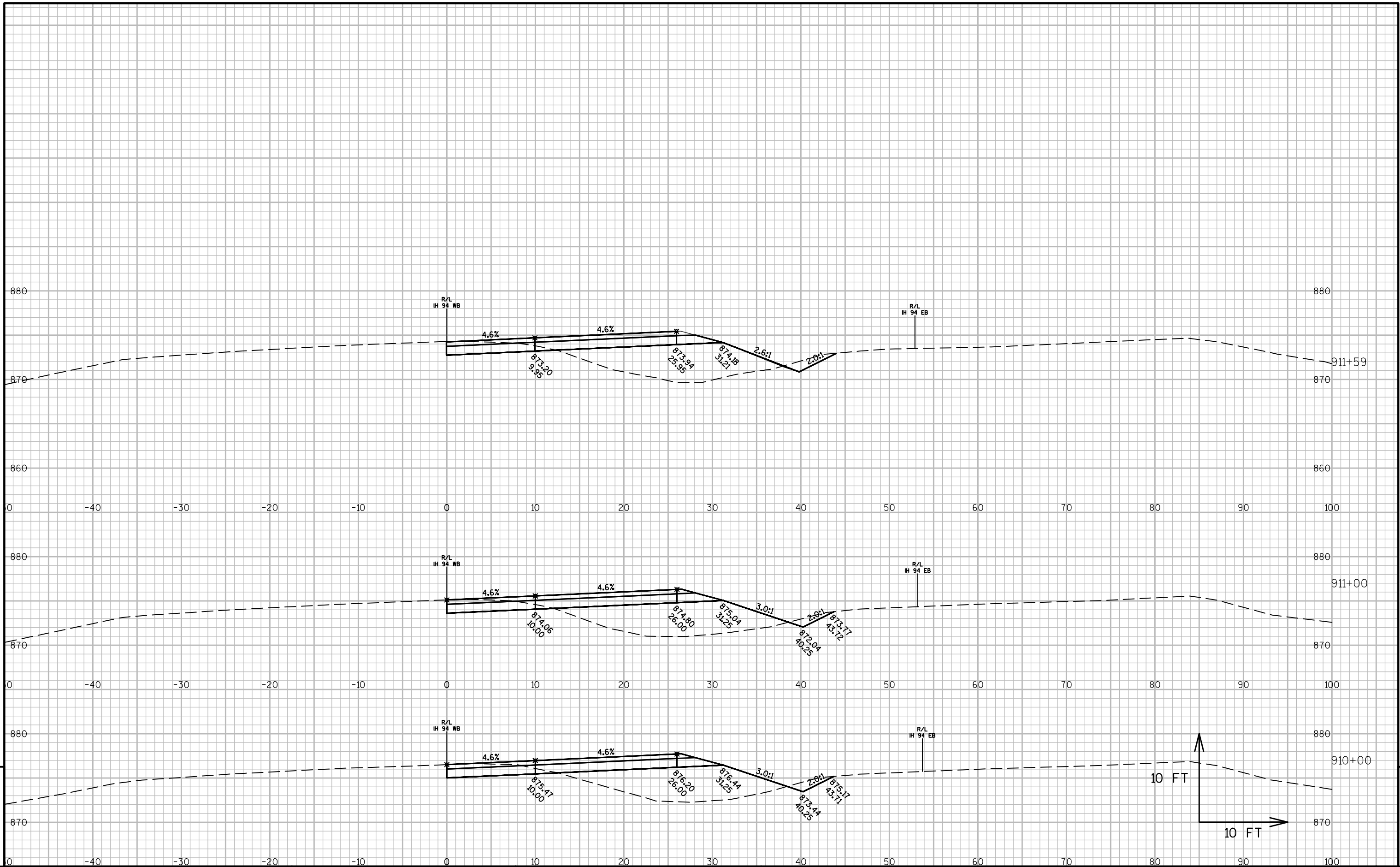


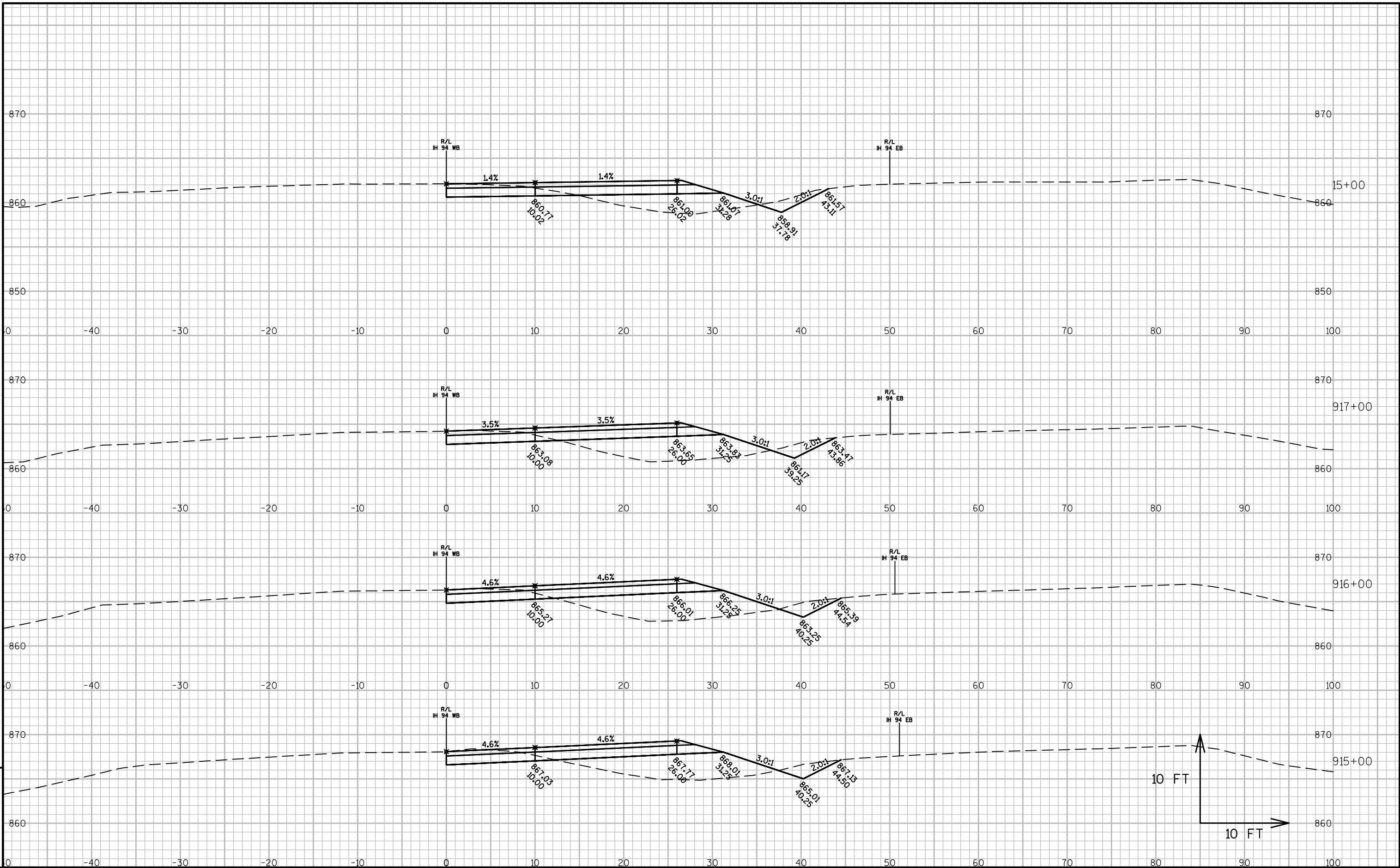


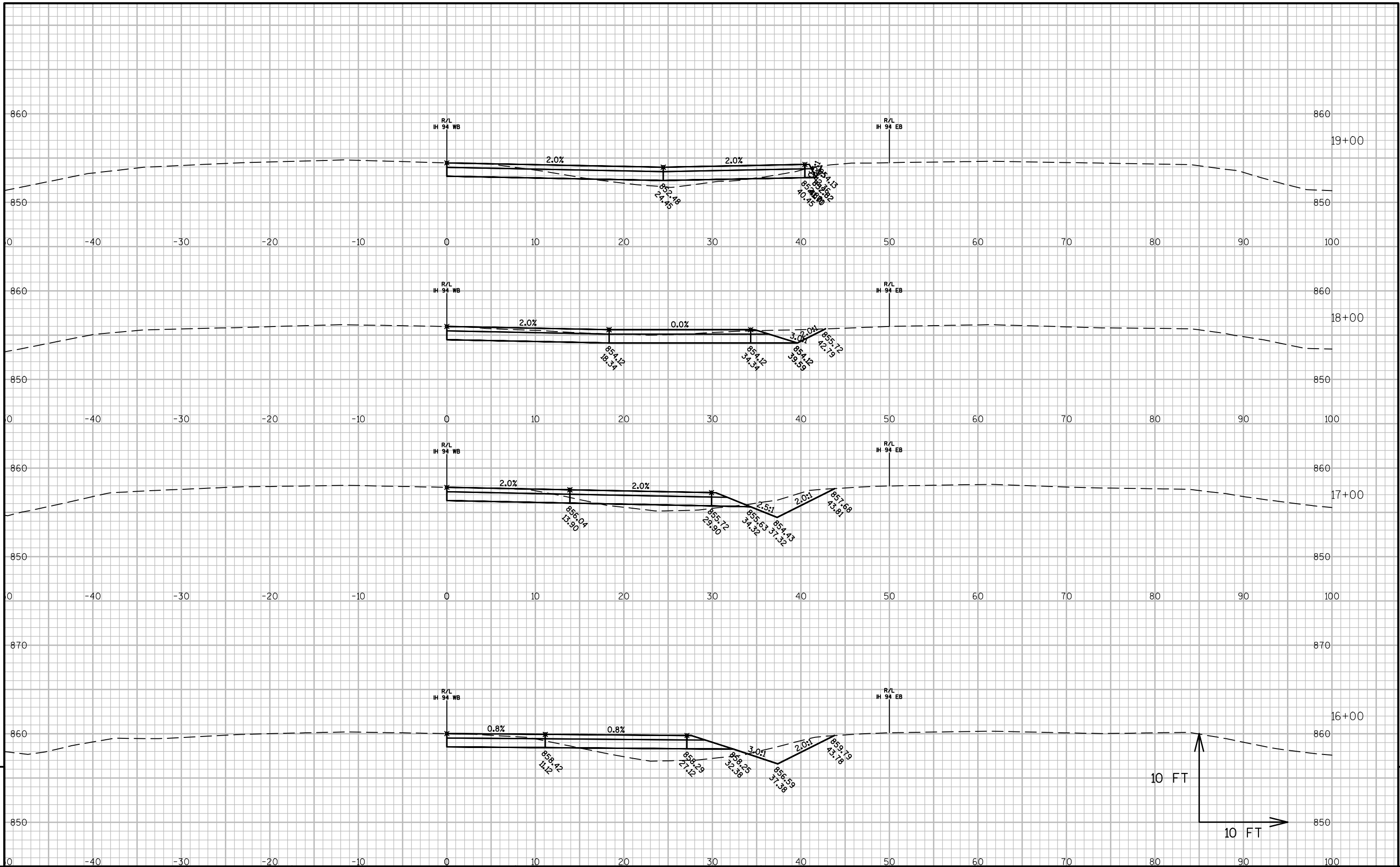


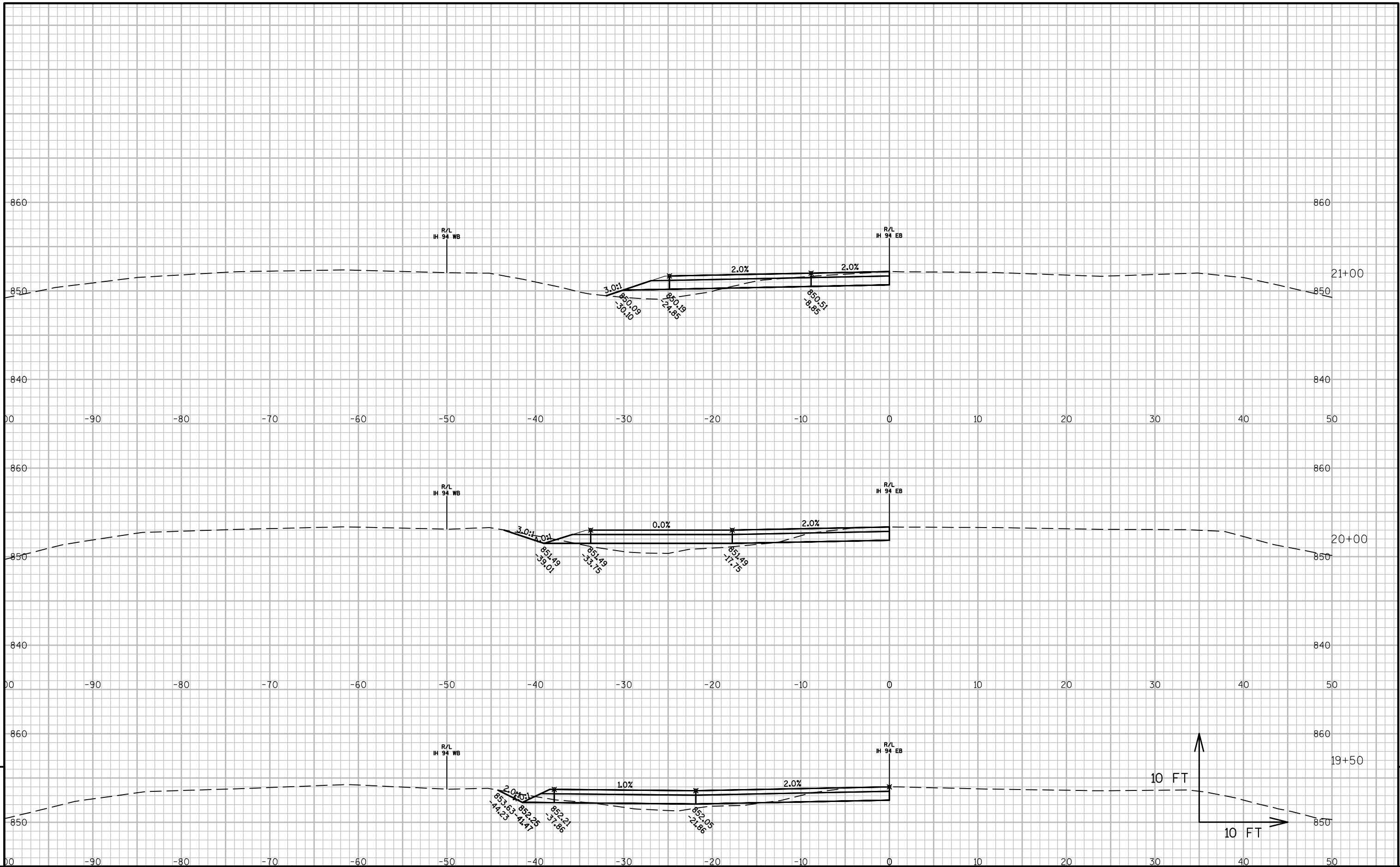


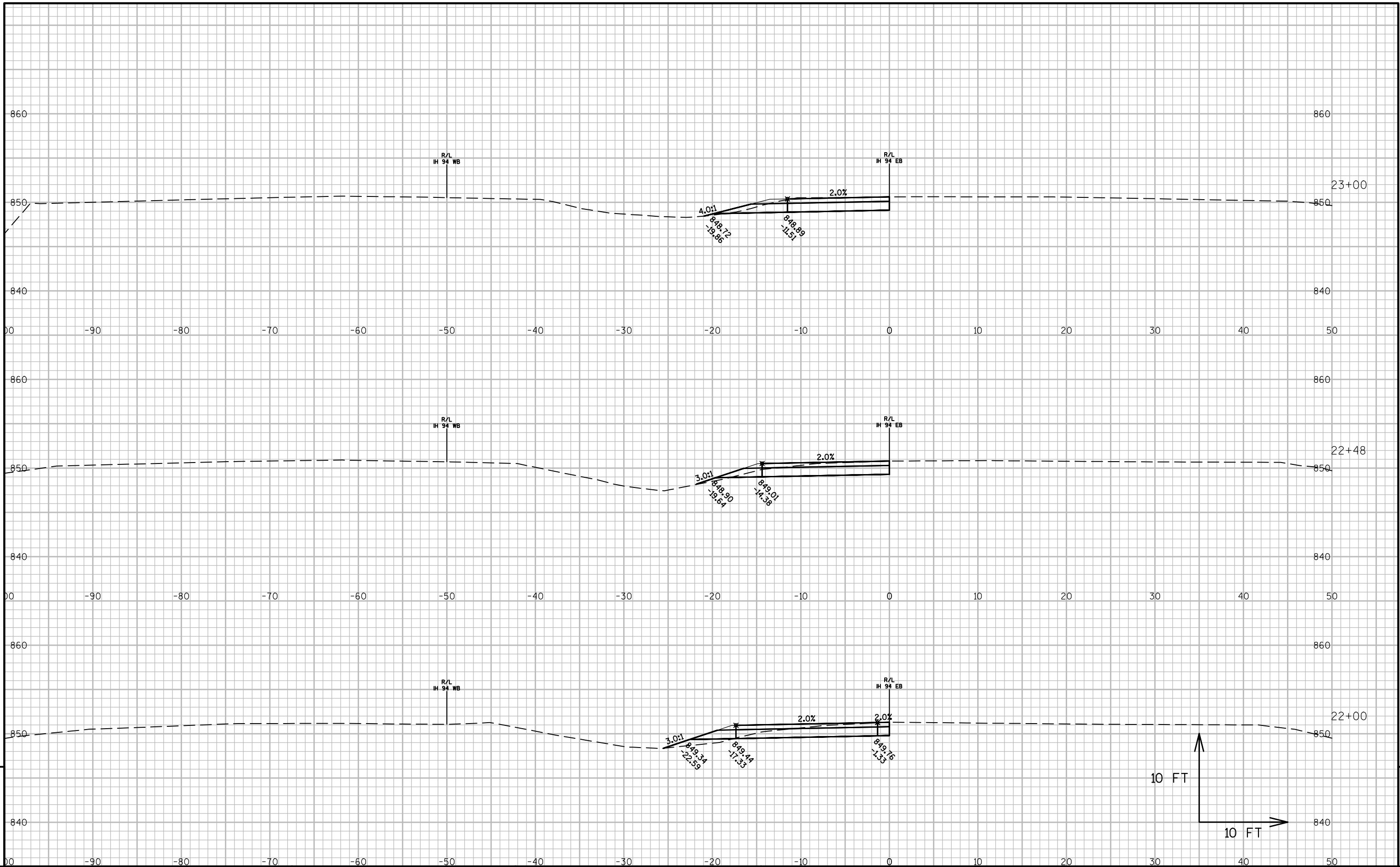


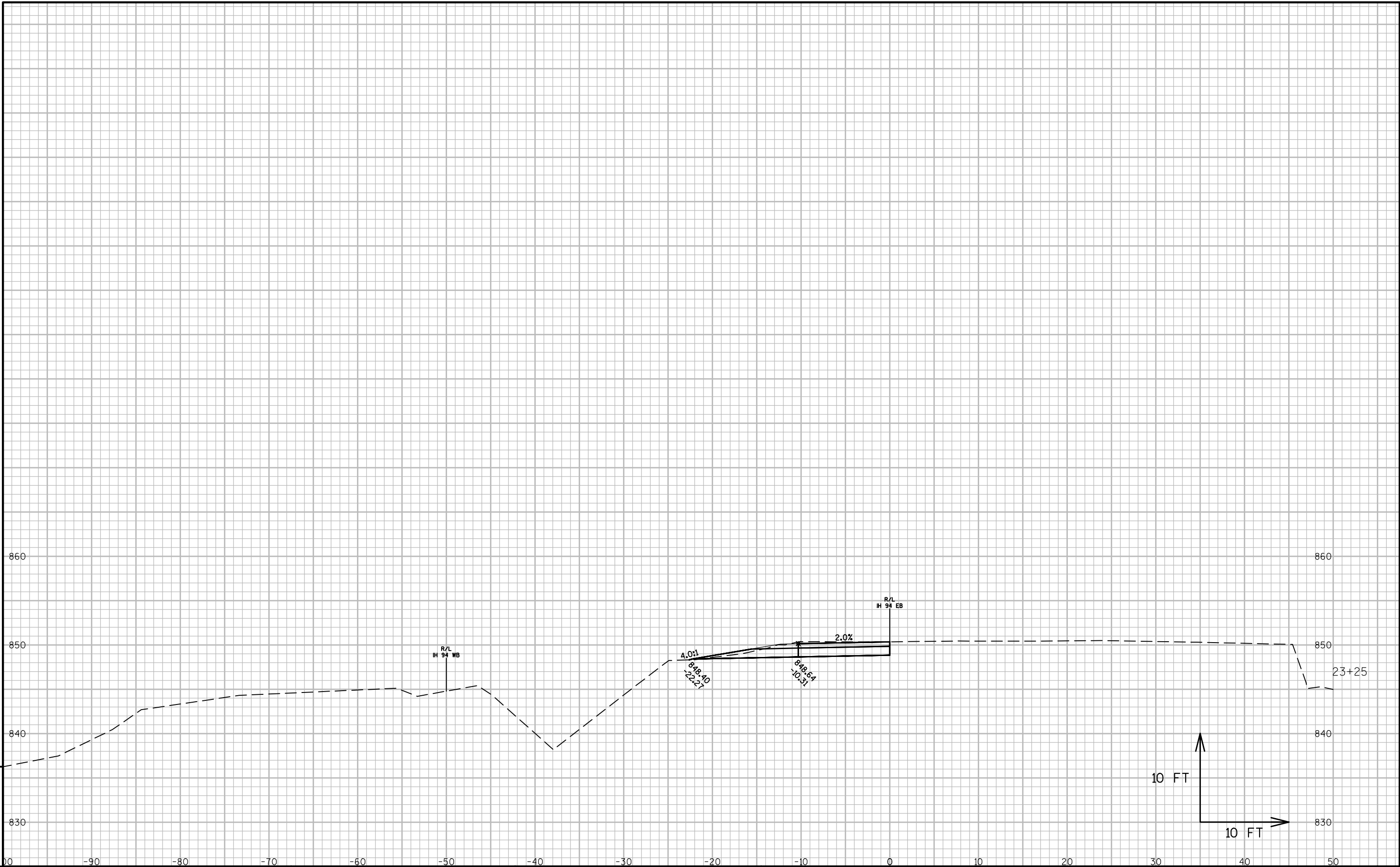


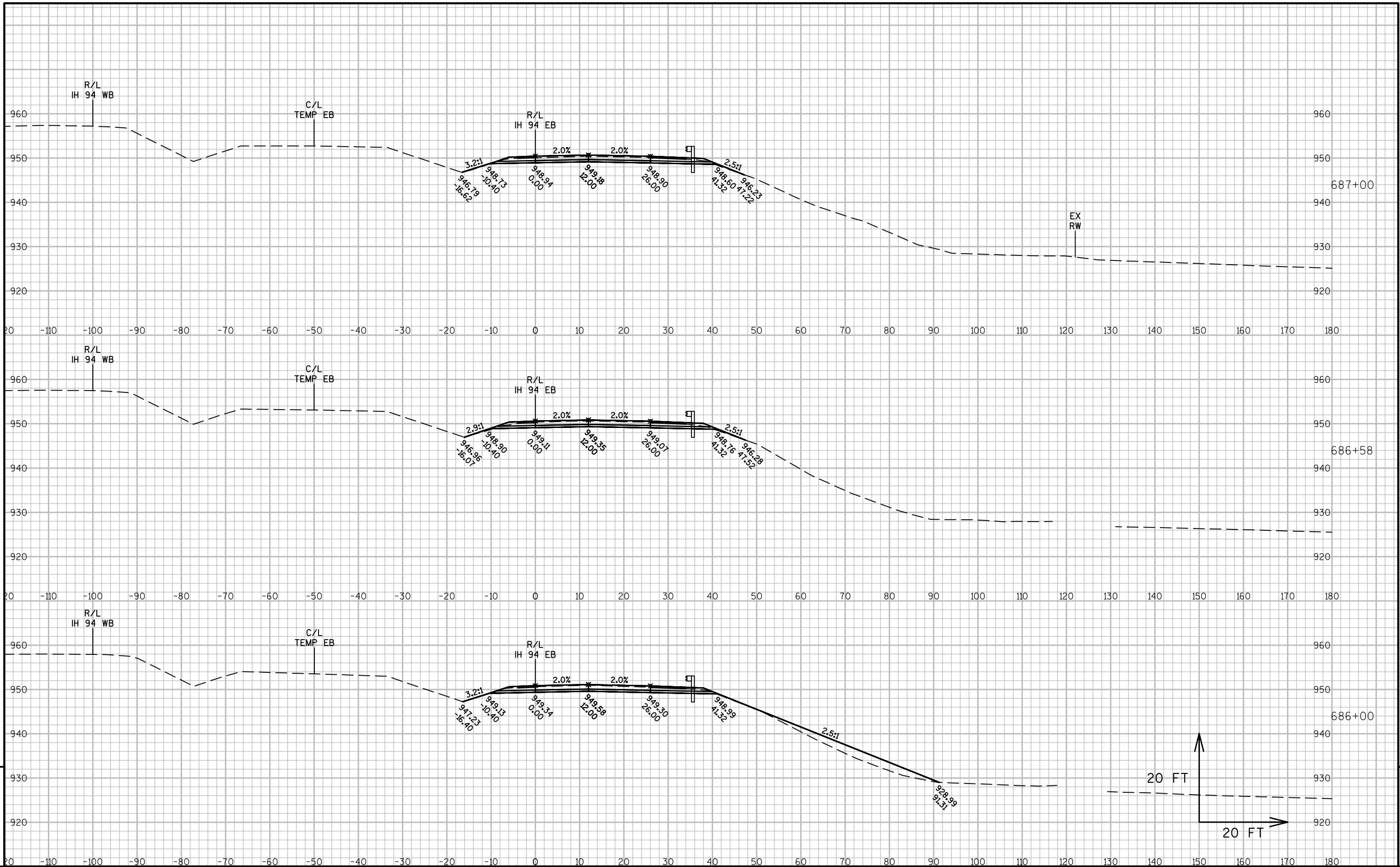












PROJECT NO:1022-08-72

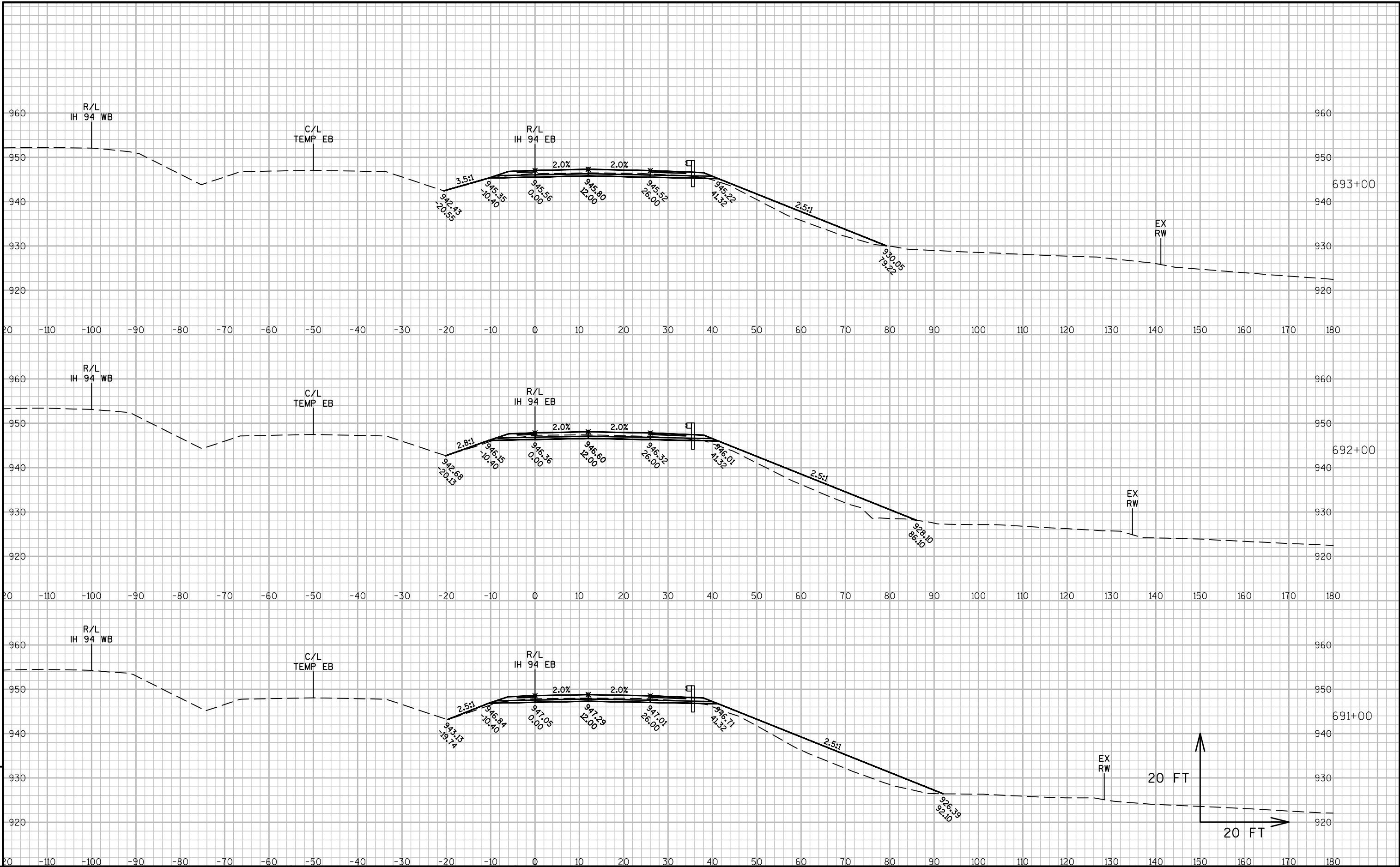
HWY: IH 94

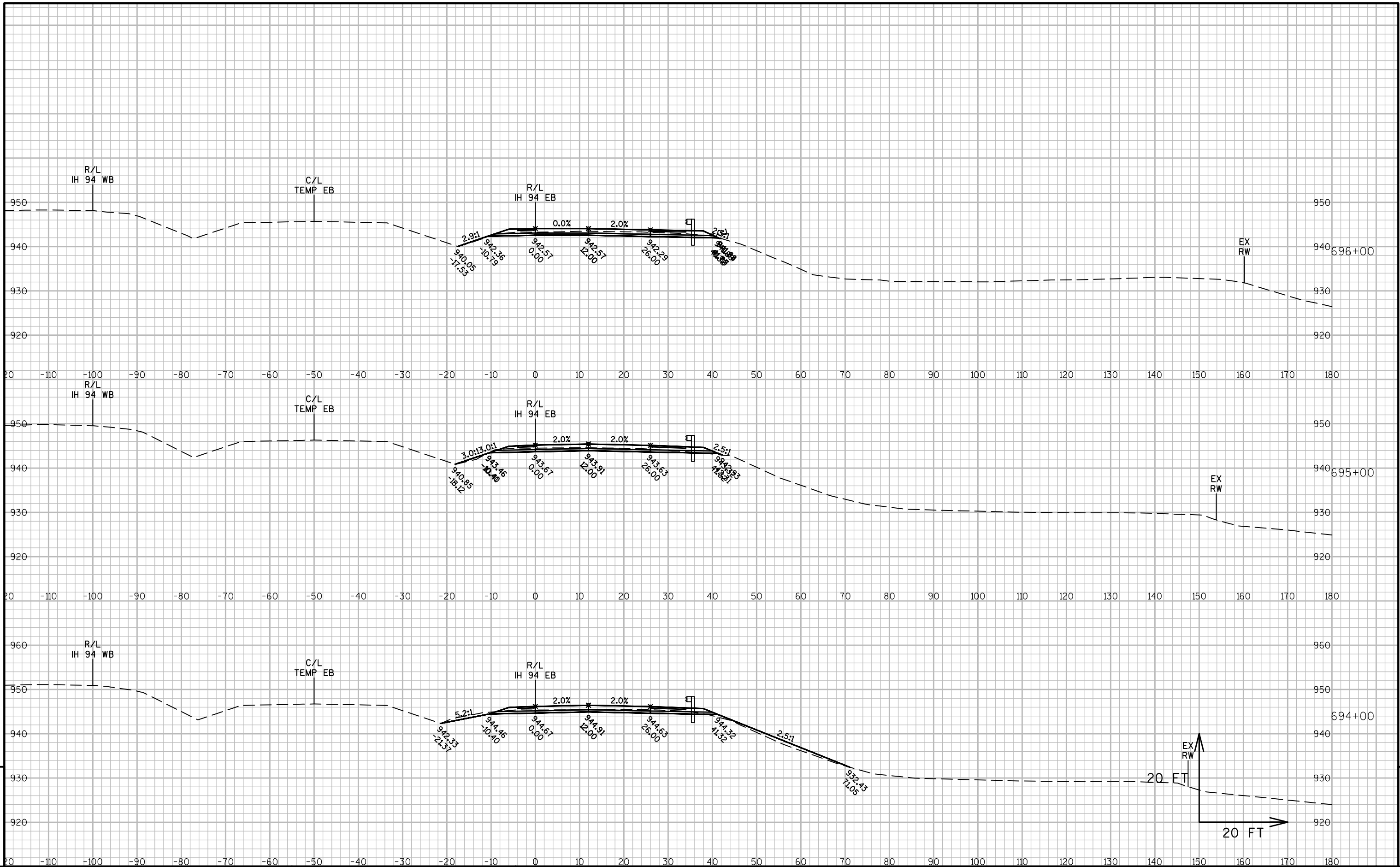
COUNTY: DUNN

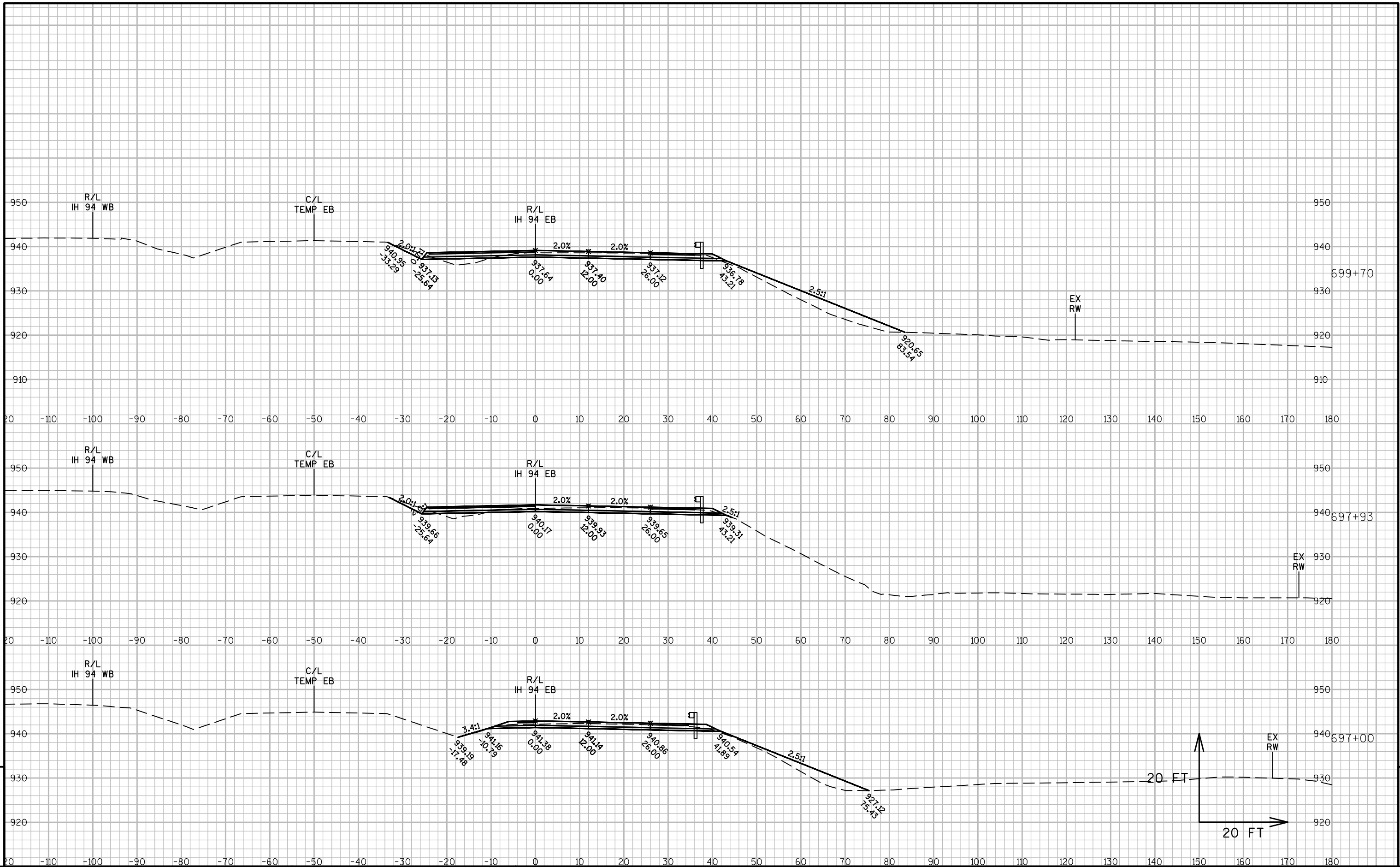
CROSS SECTIONS: IH 94 EB STAGE 3

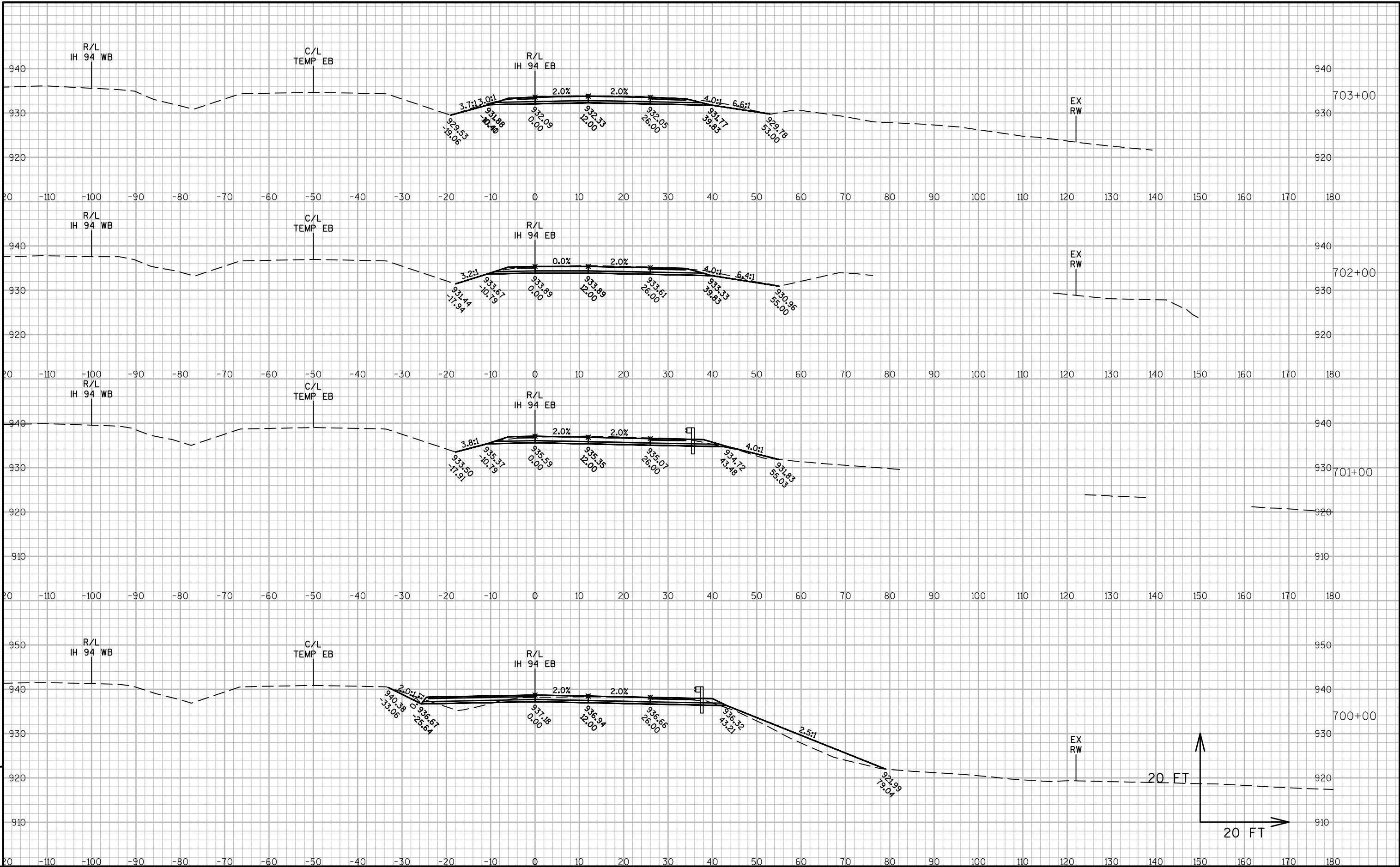
SHEET 709

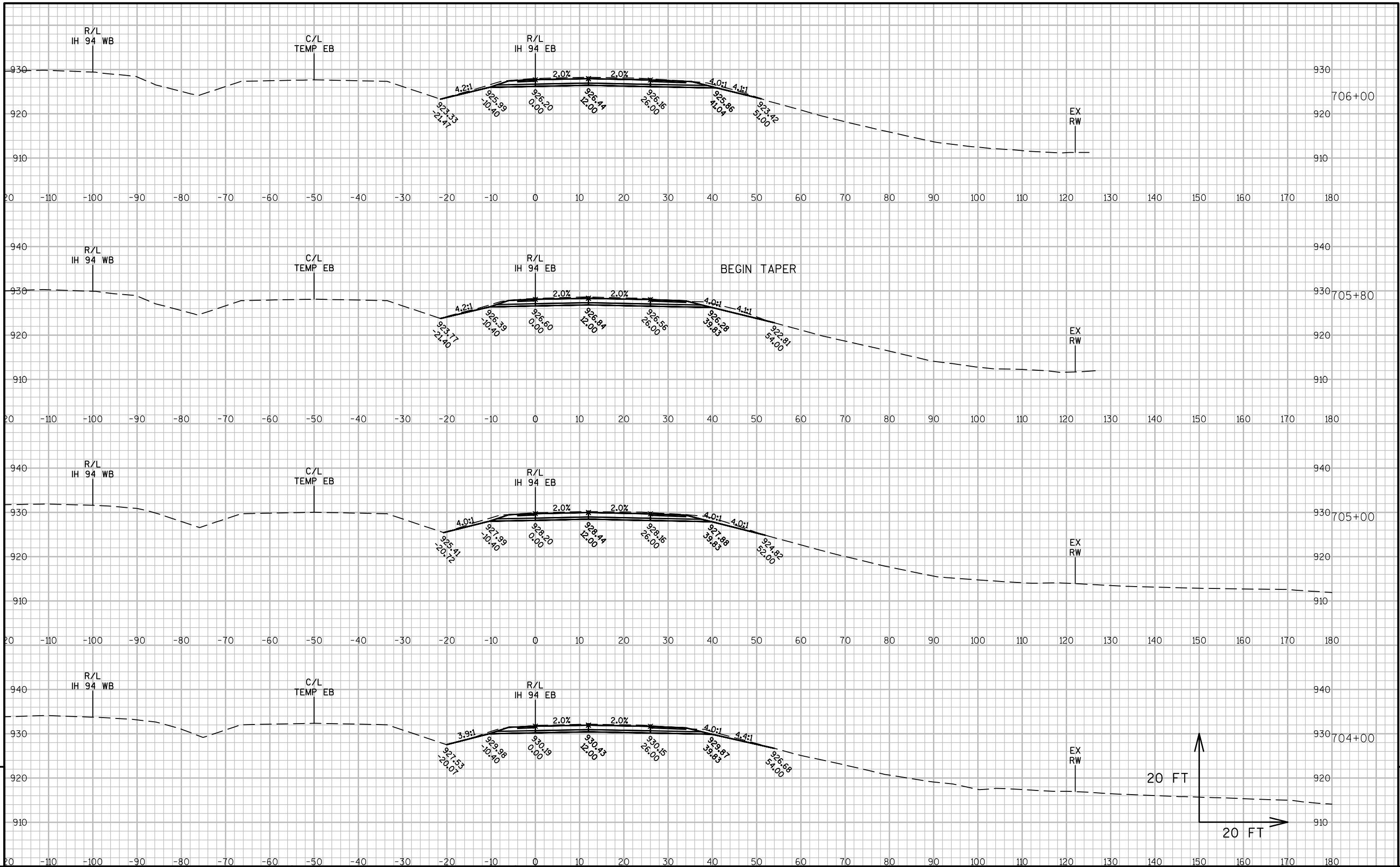
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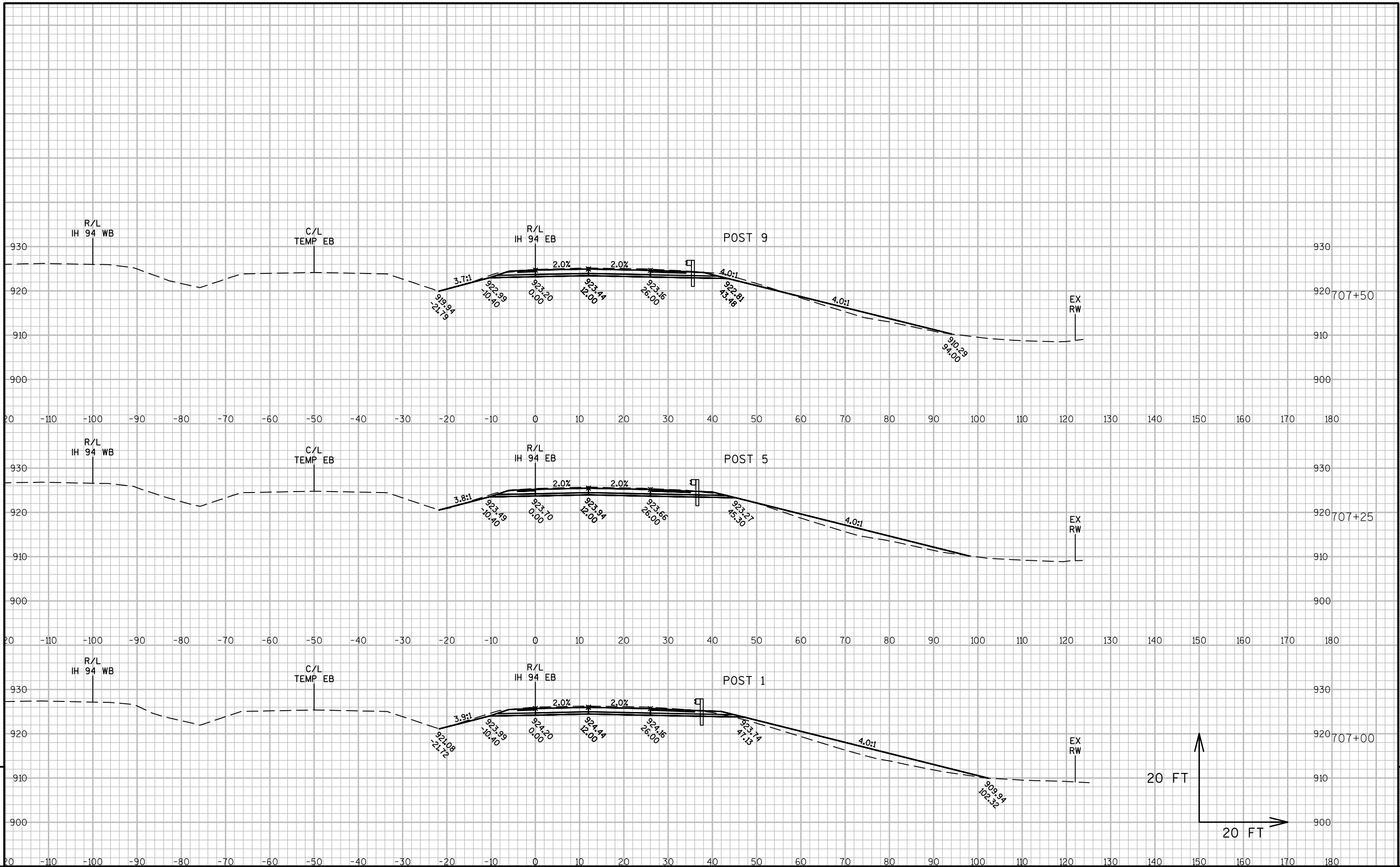


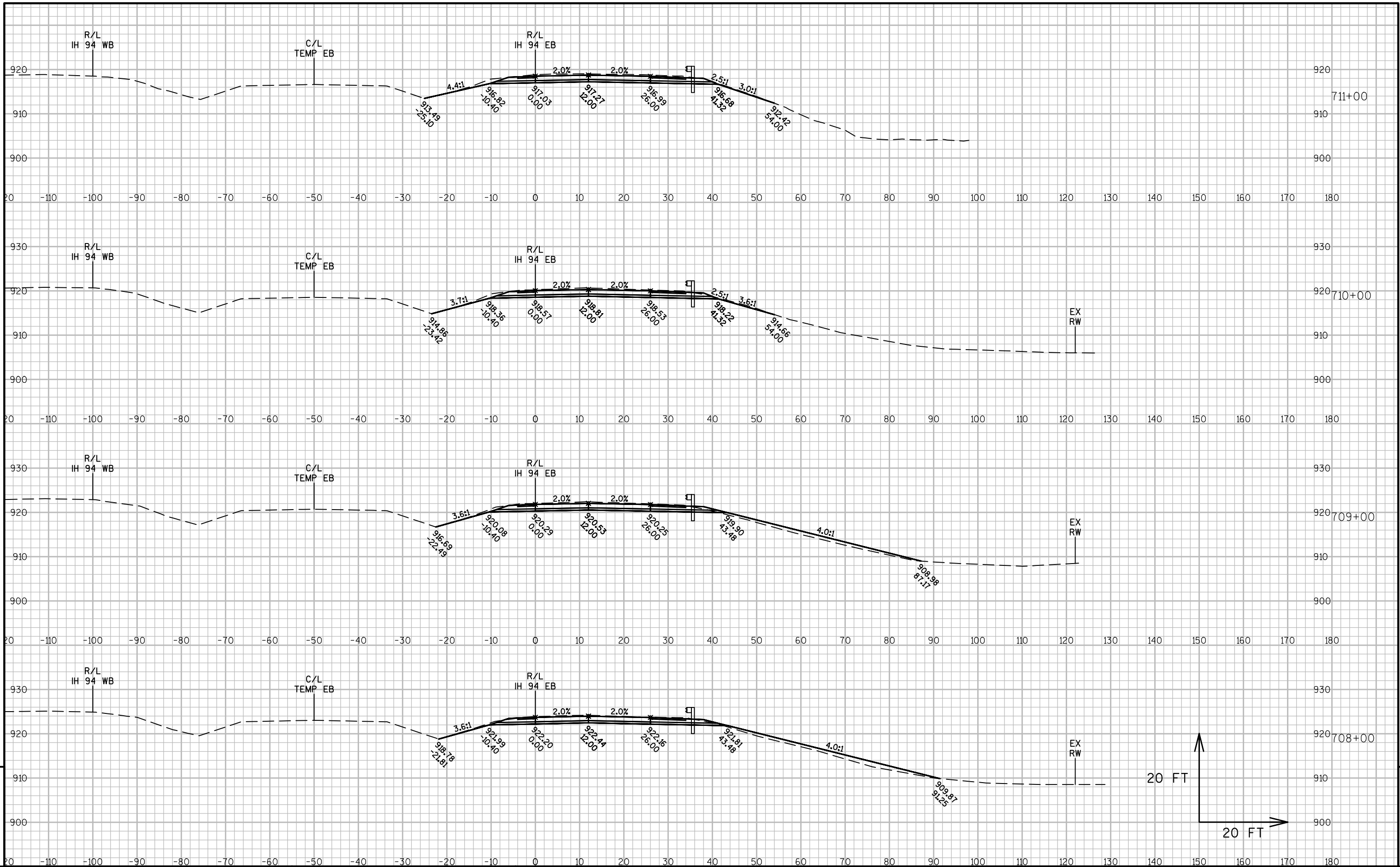


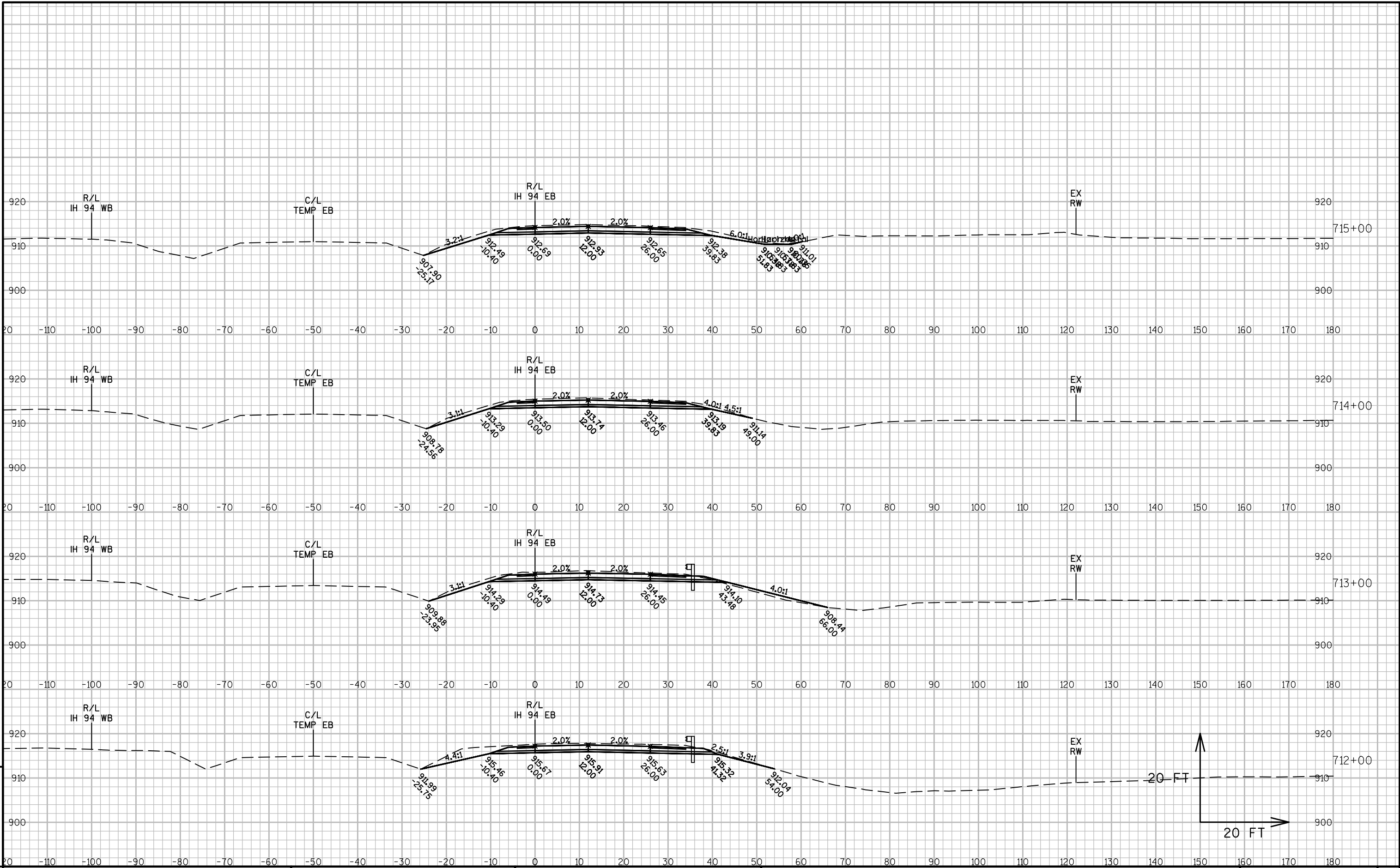


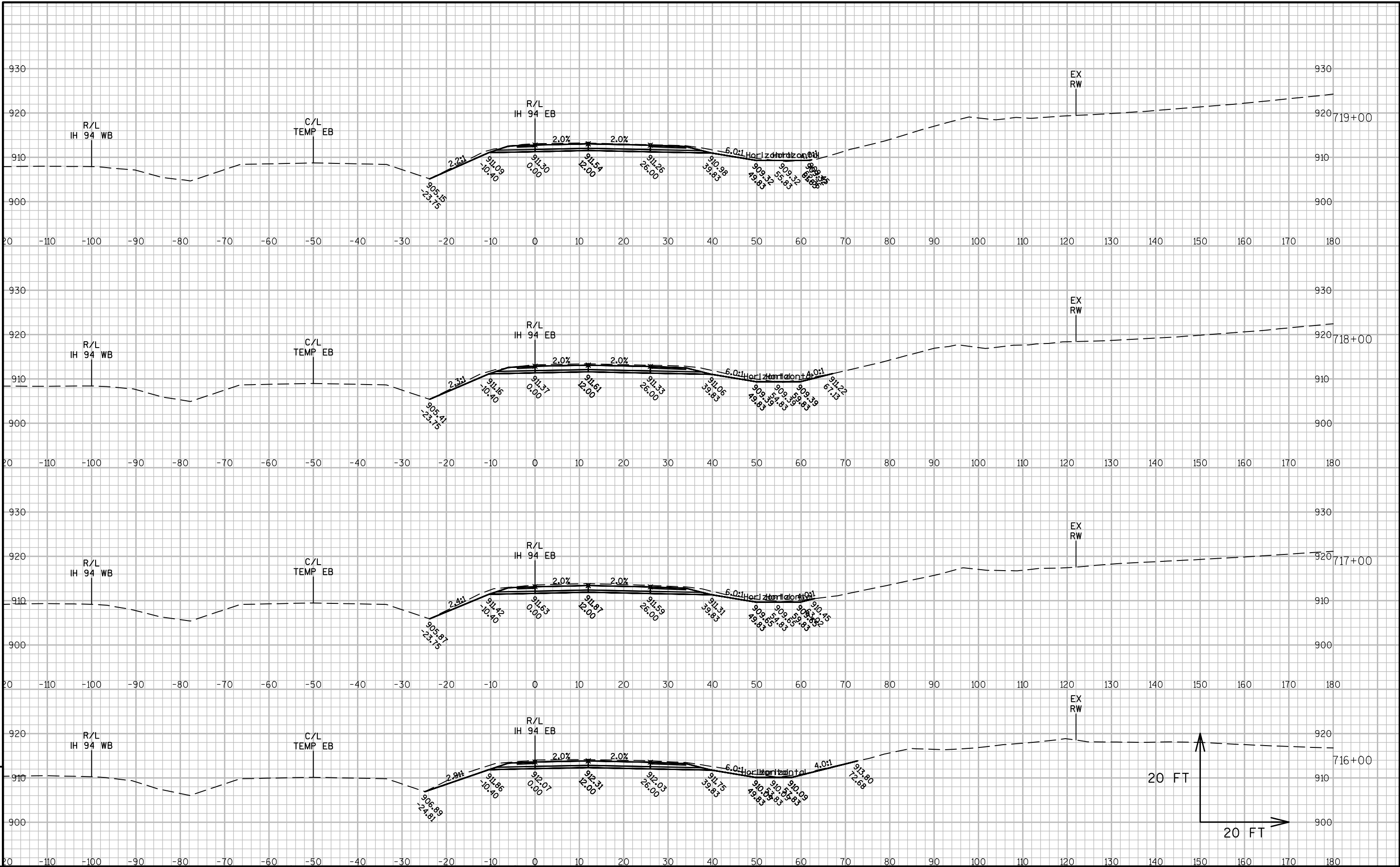


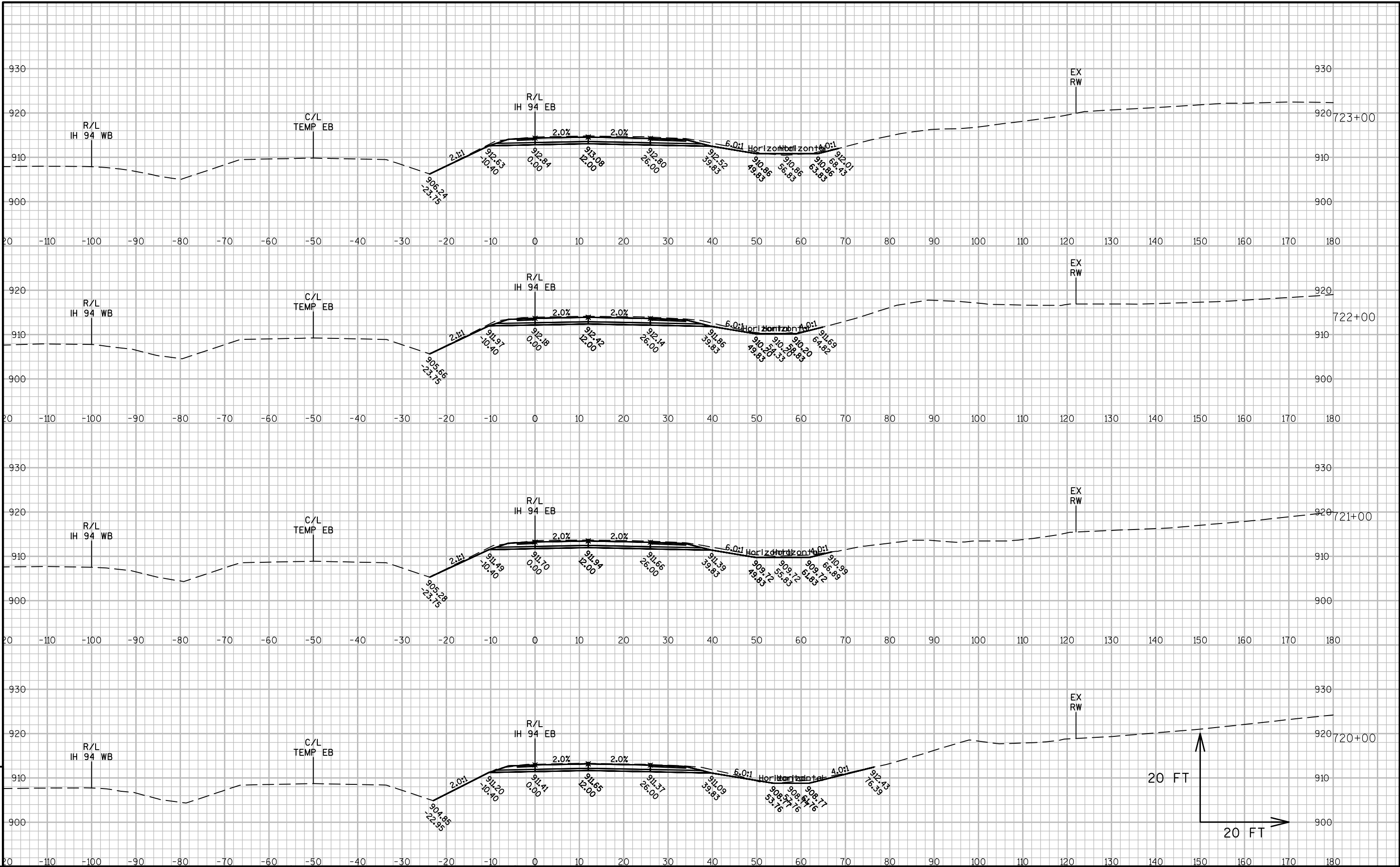


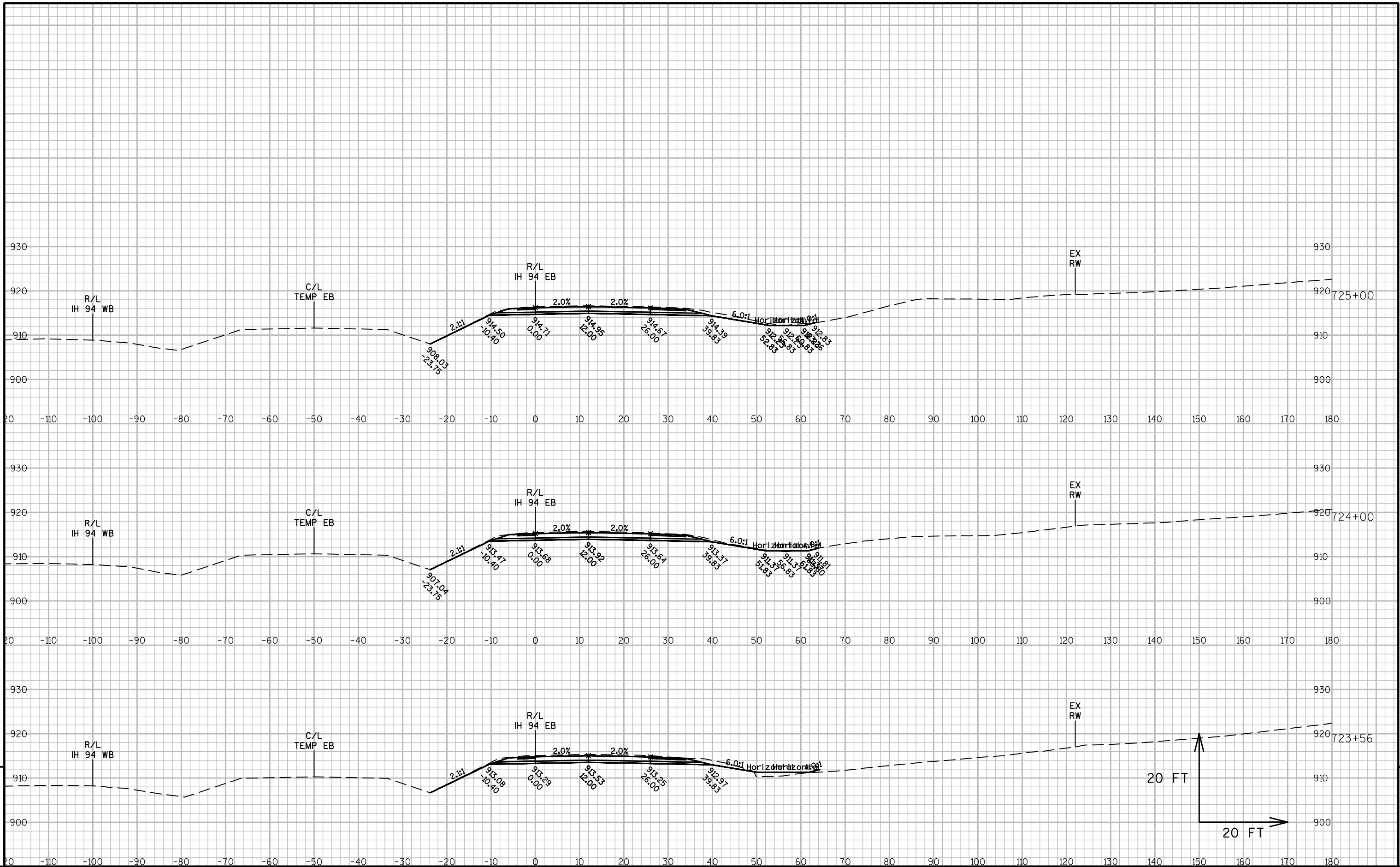


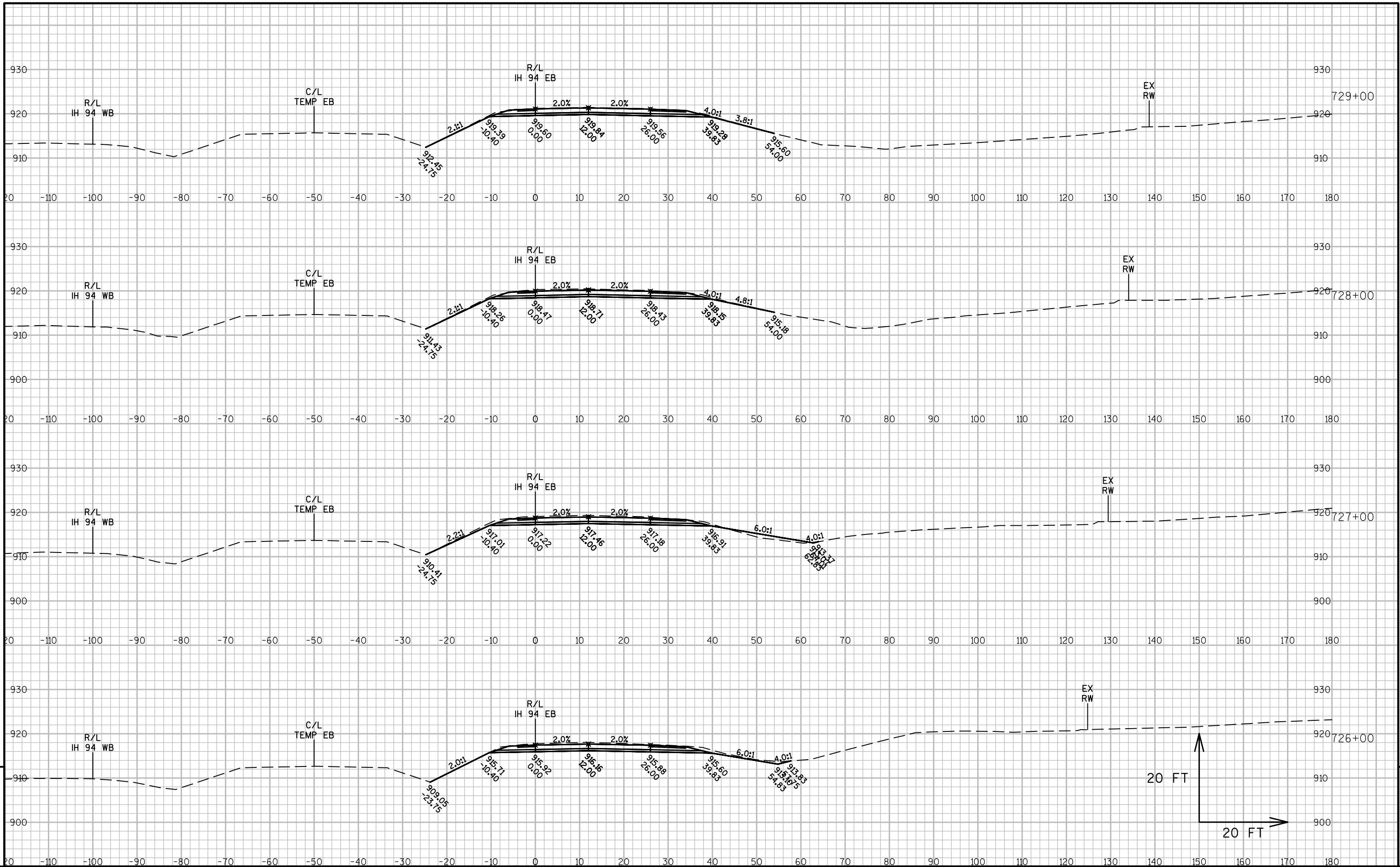


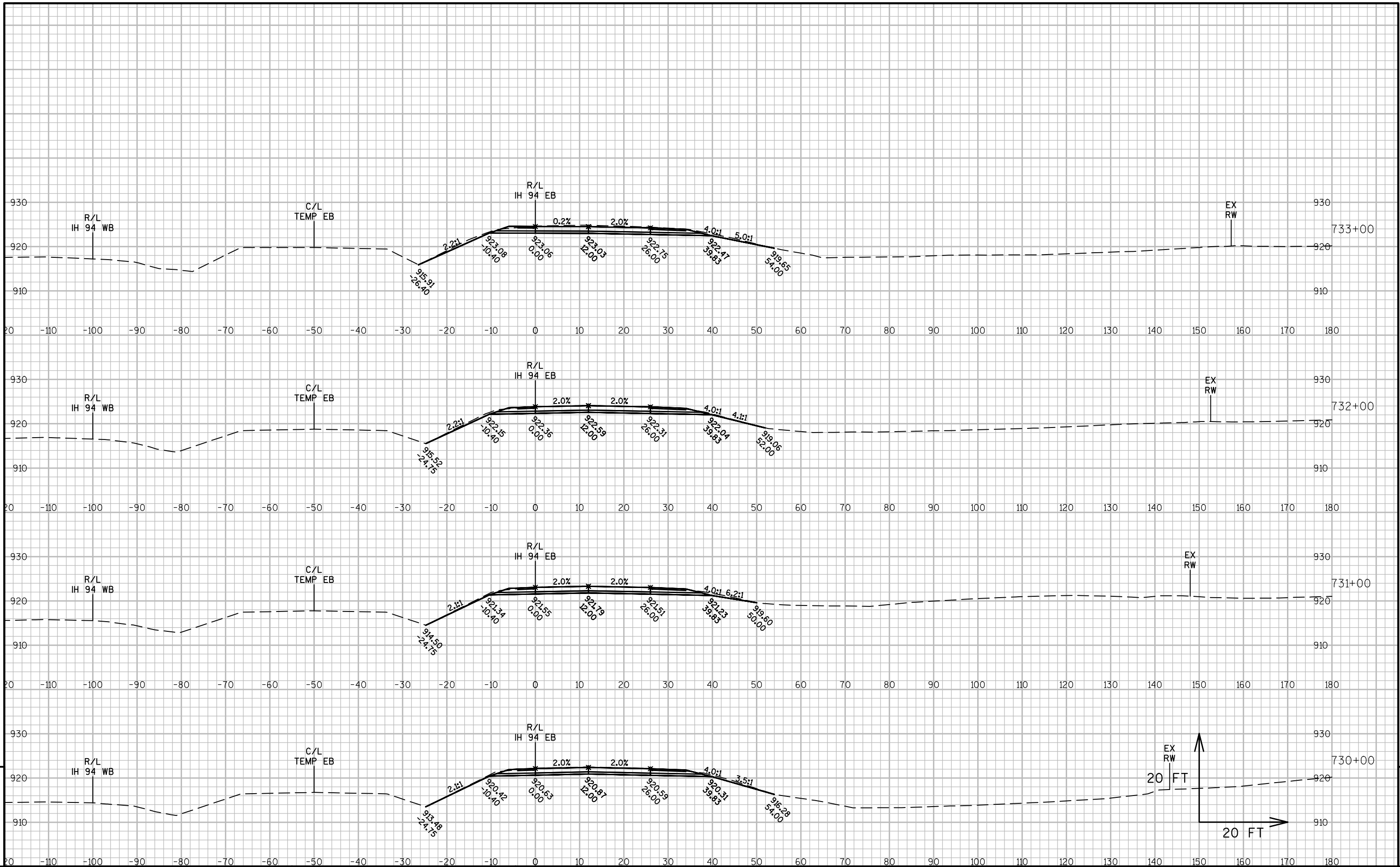


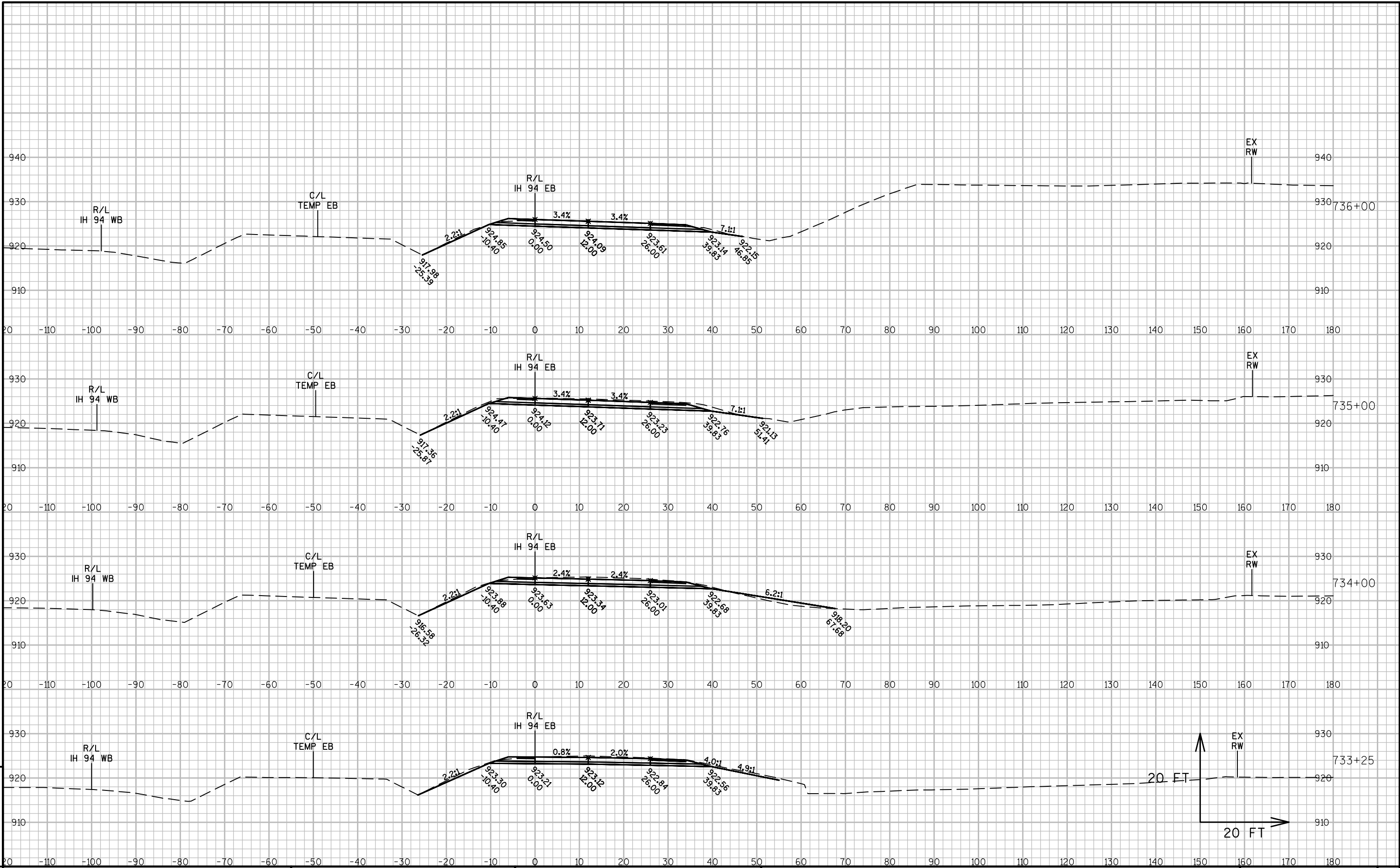


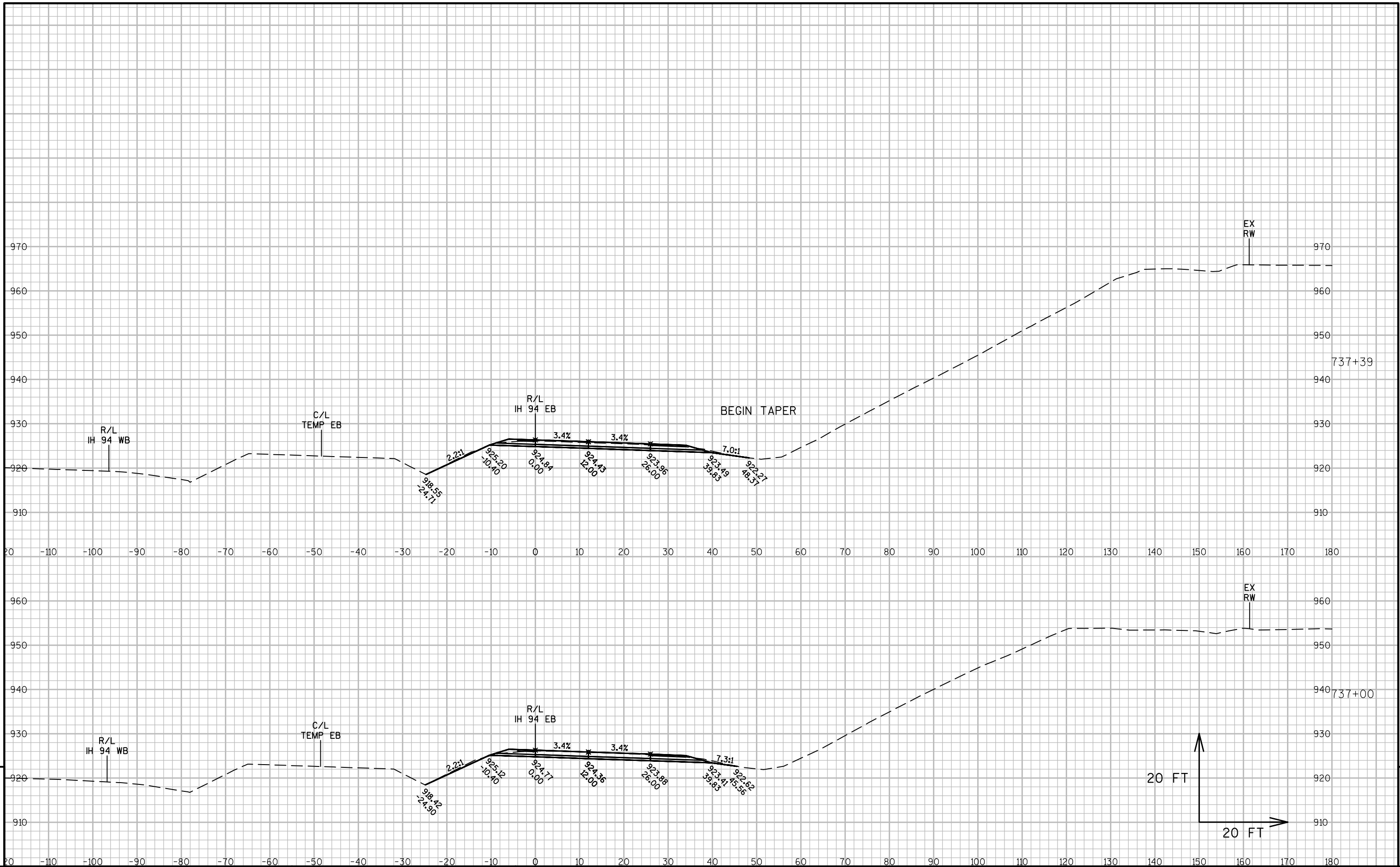


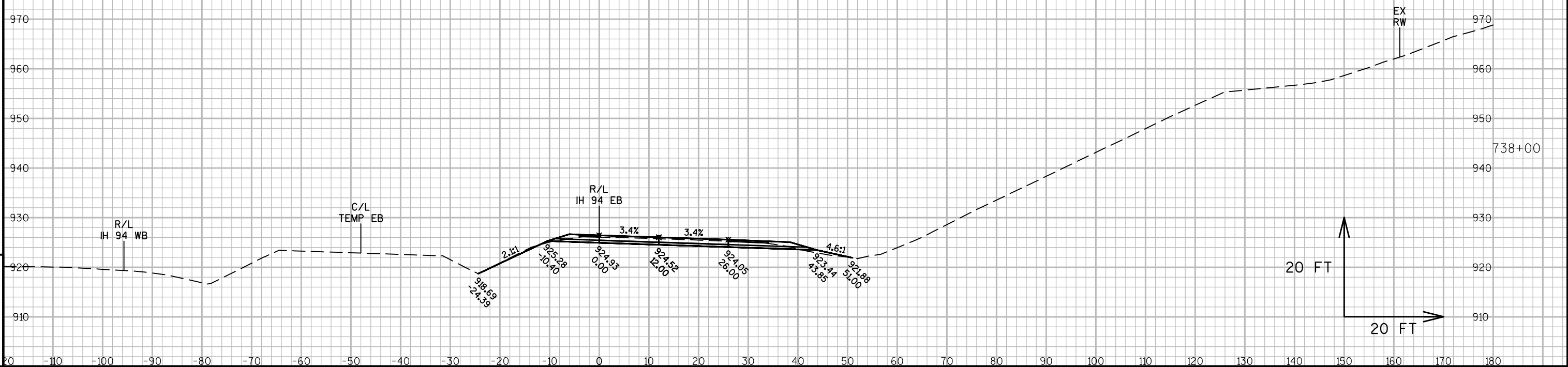
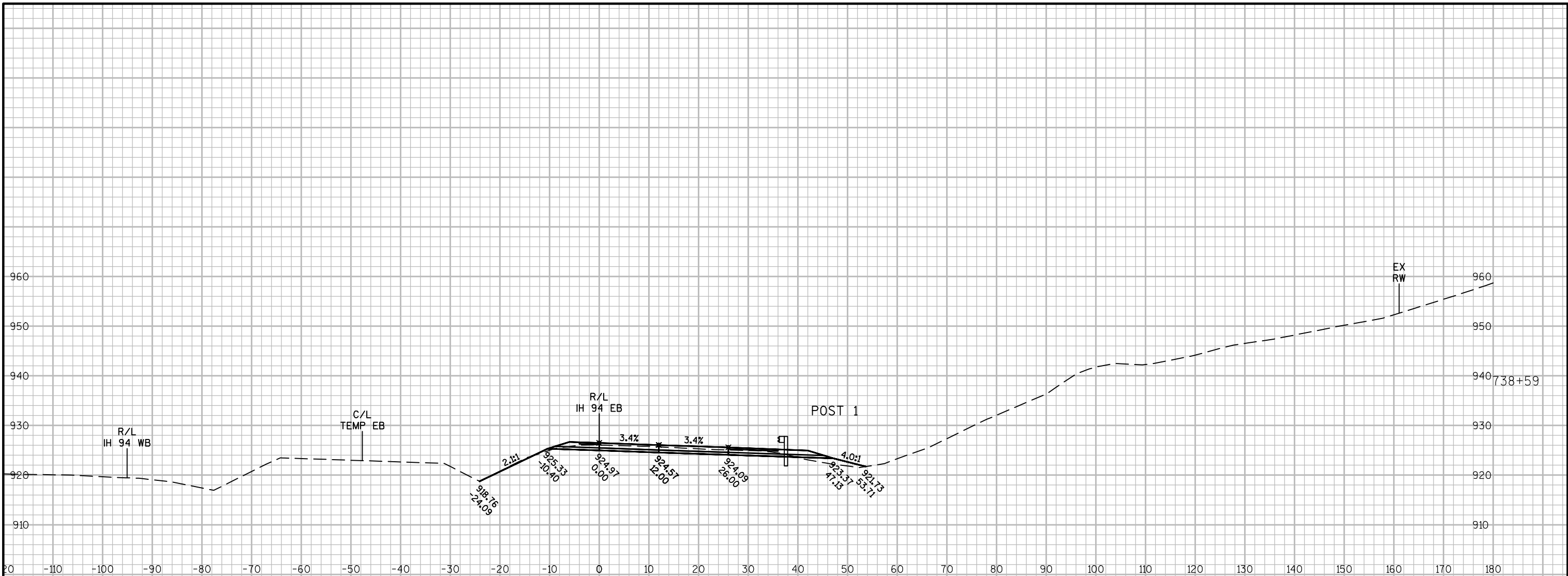


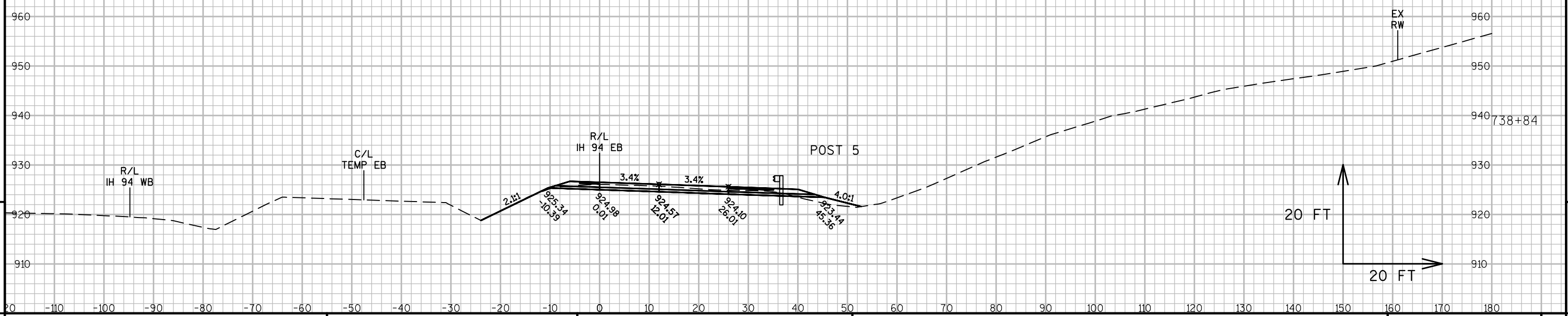
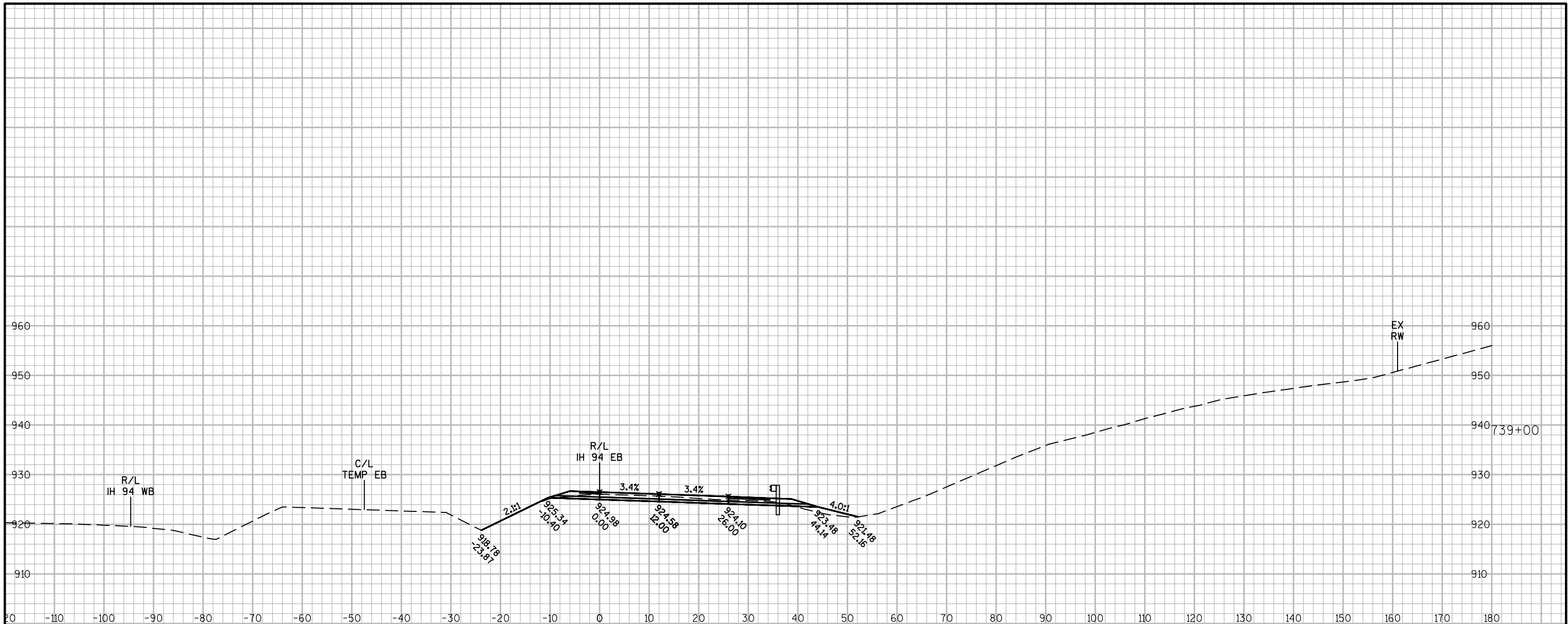




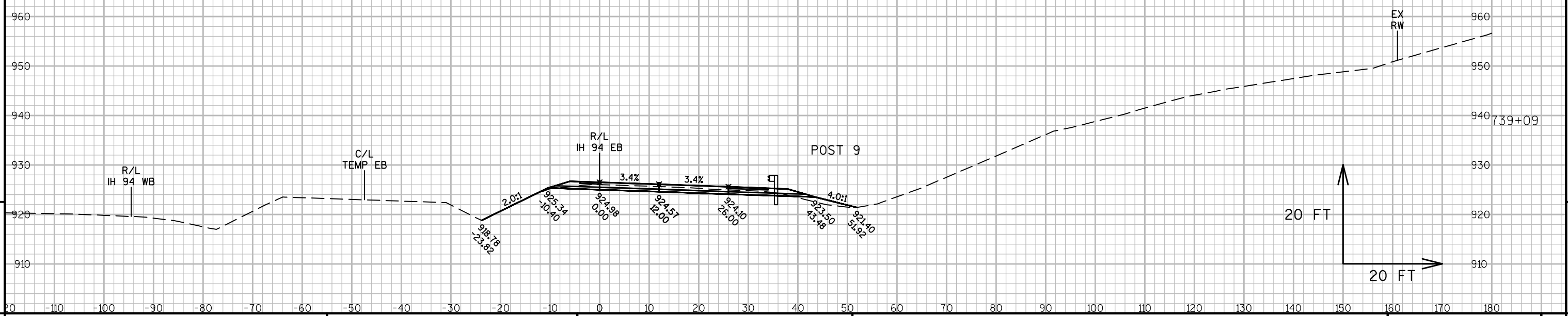
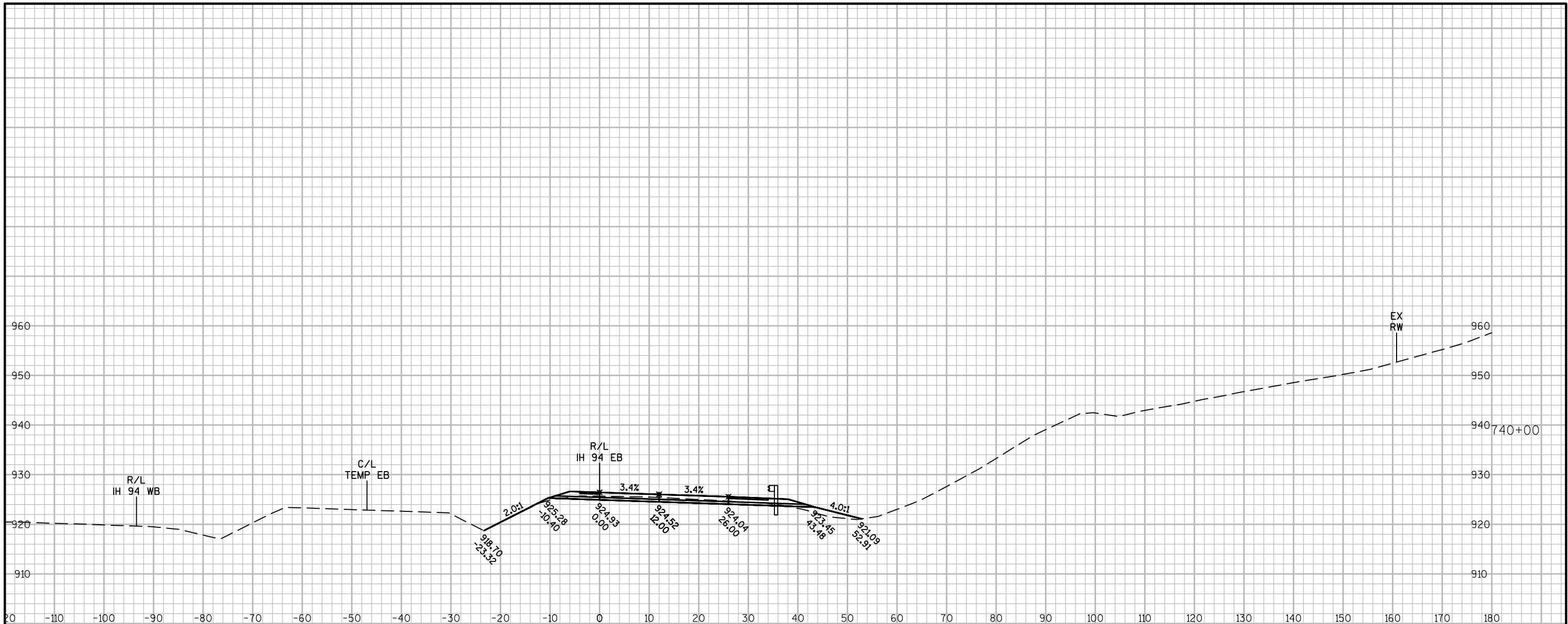




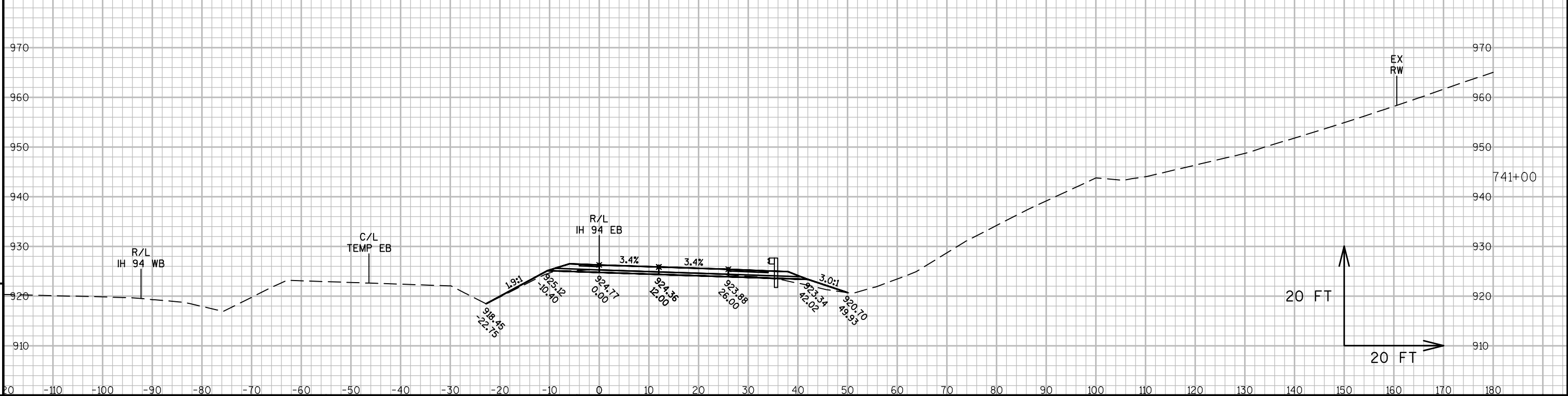
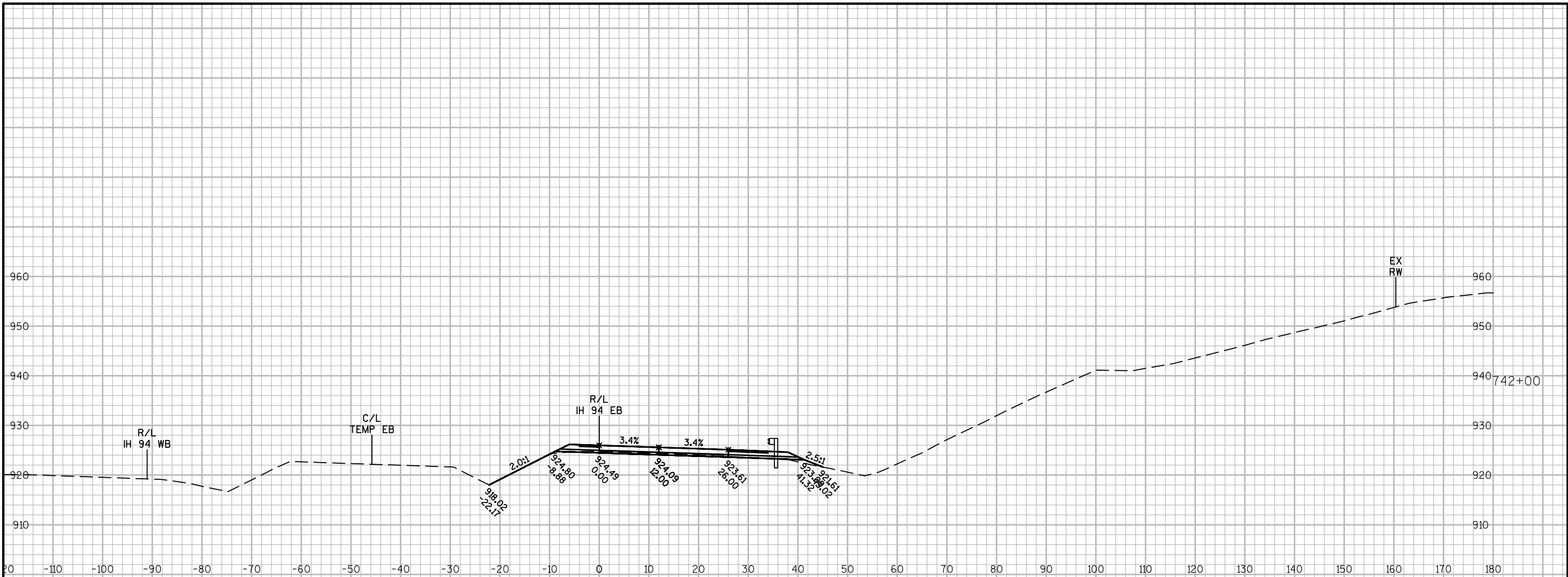


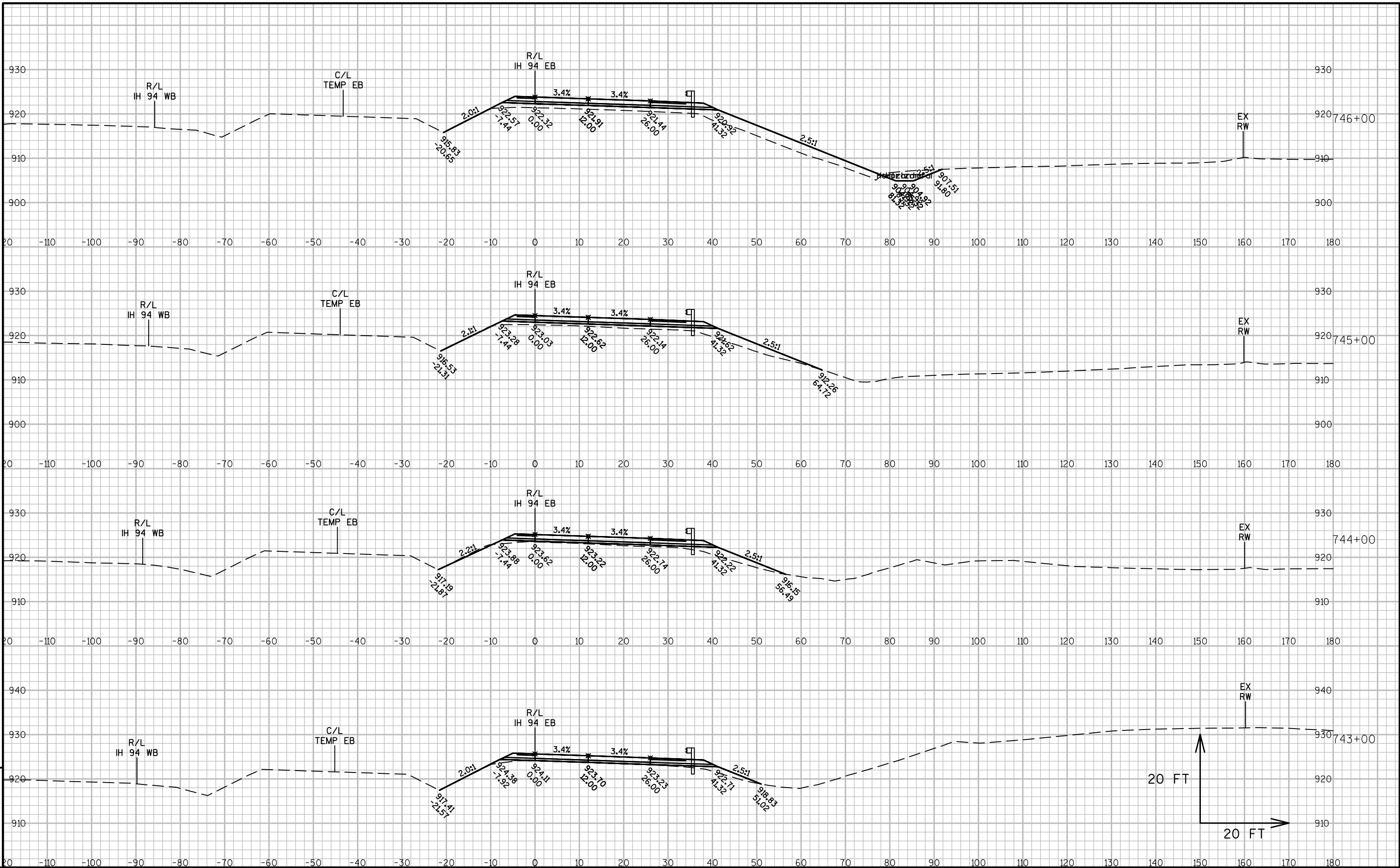


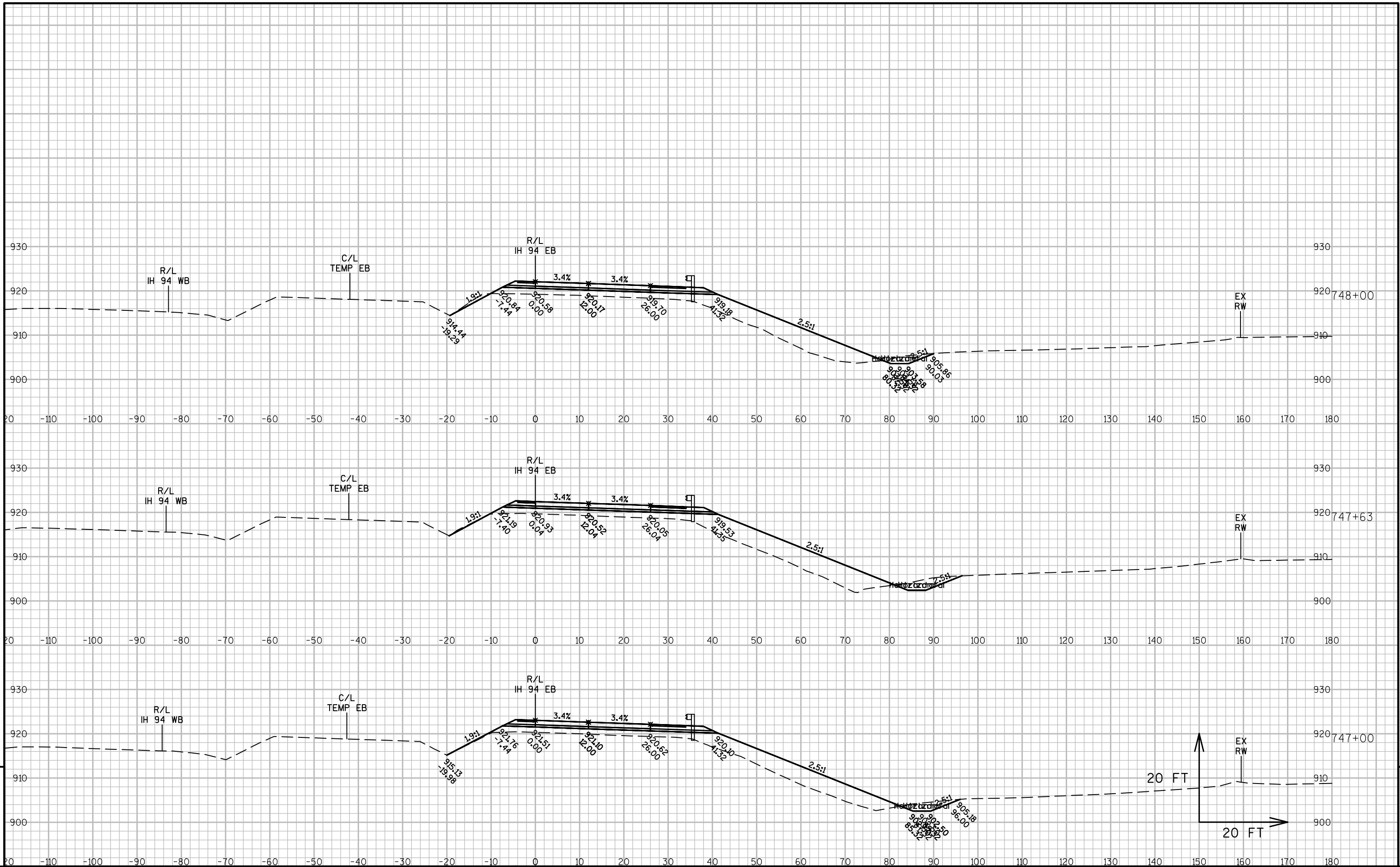
PROJECT NO:1022-08-72	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 EB STAGE 3	SHEET 727	E
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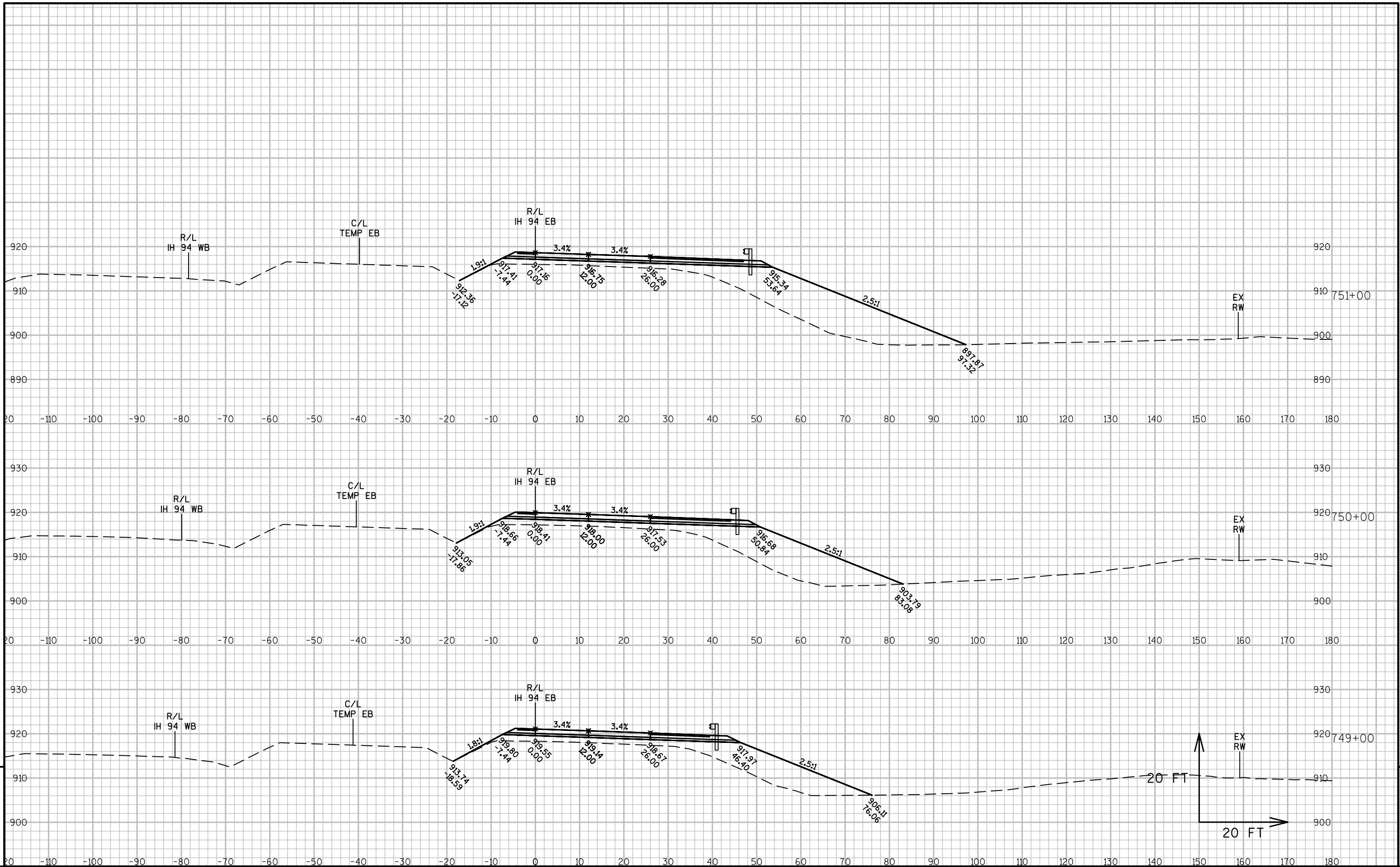


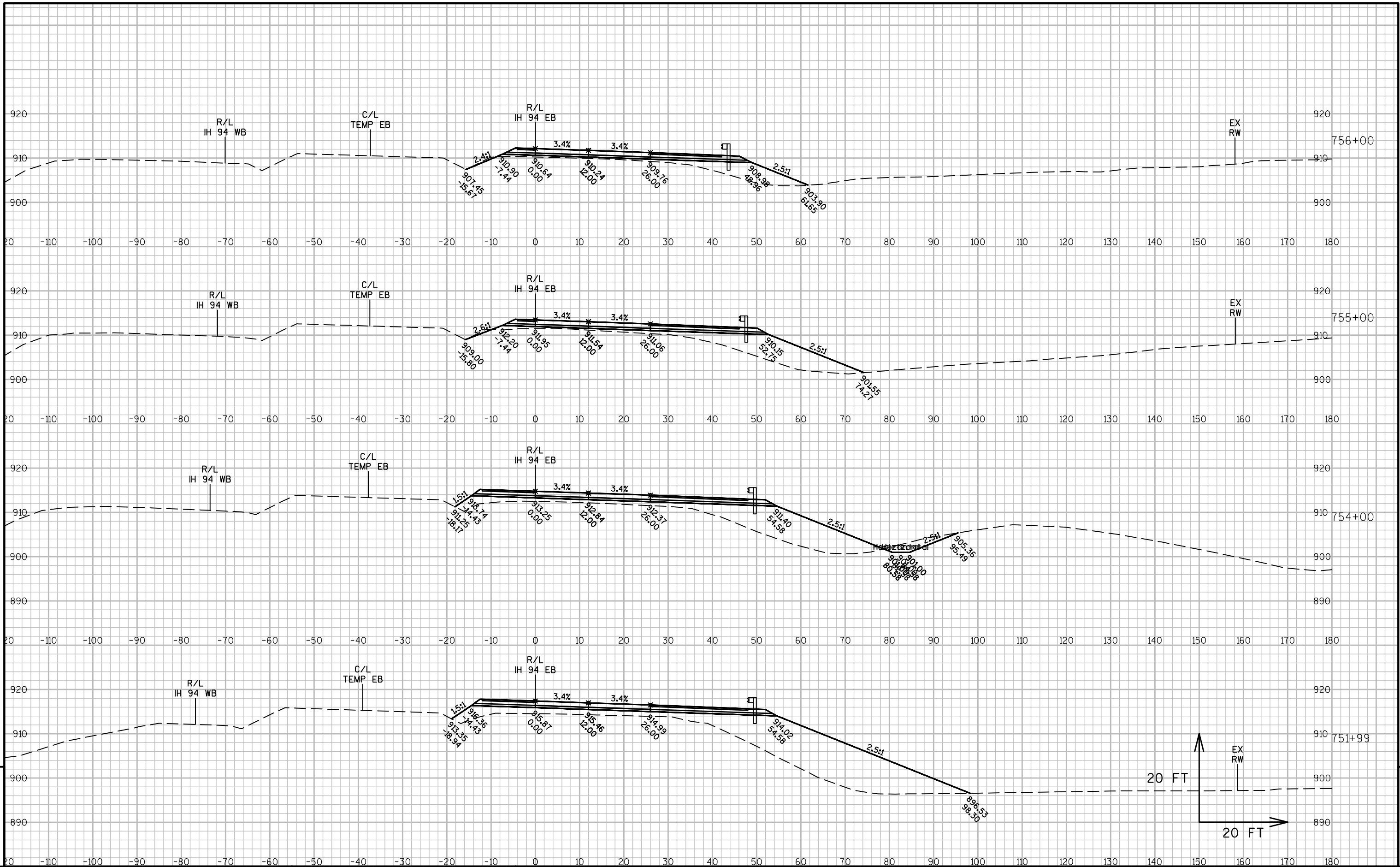
PROJECT NO:1022-08-72	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 EB STAGE 3	SHEET 728
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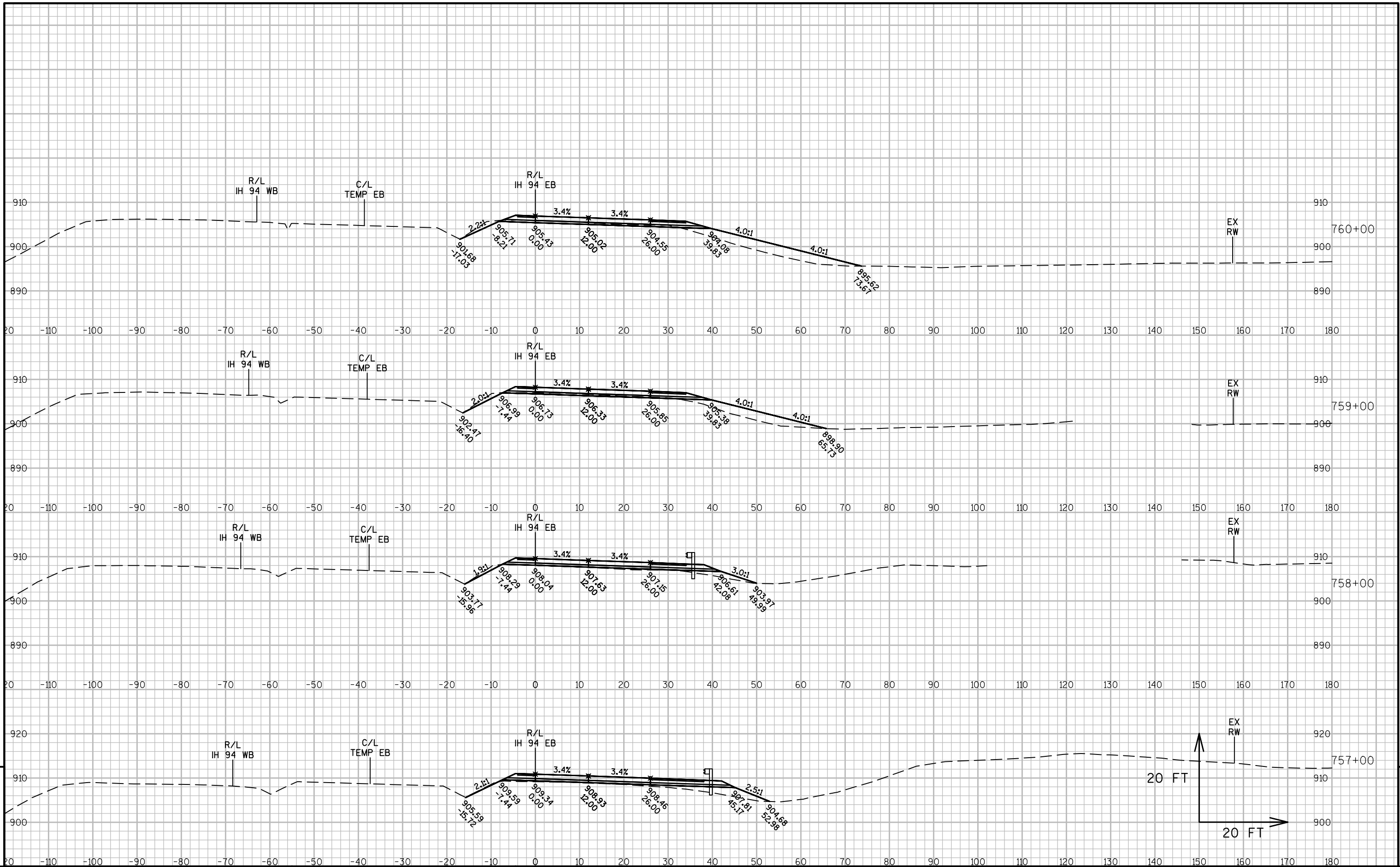


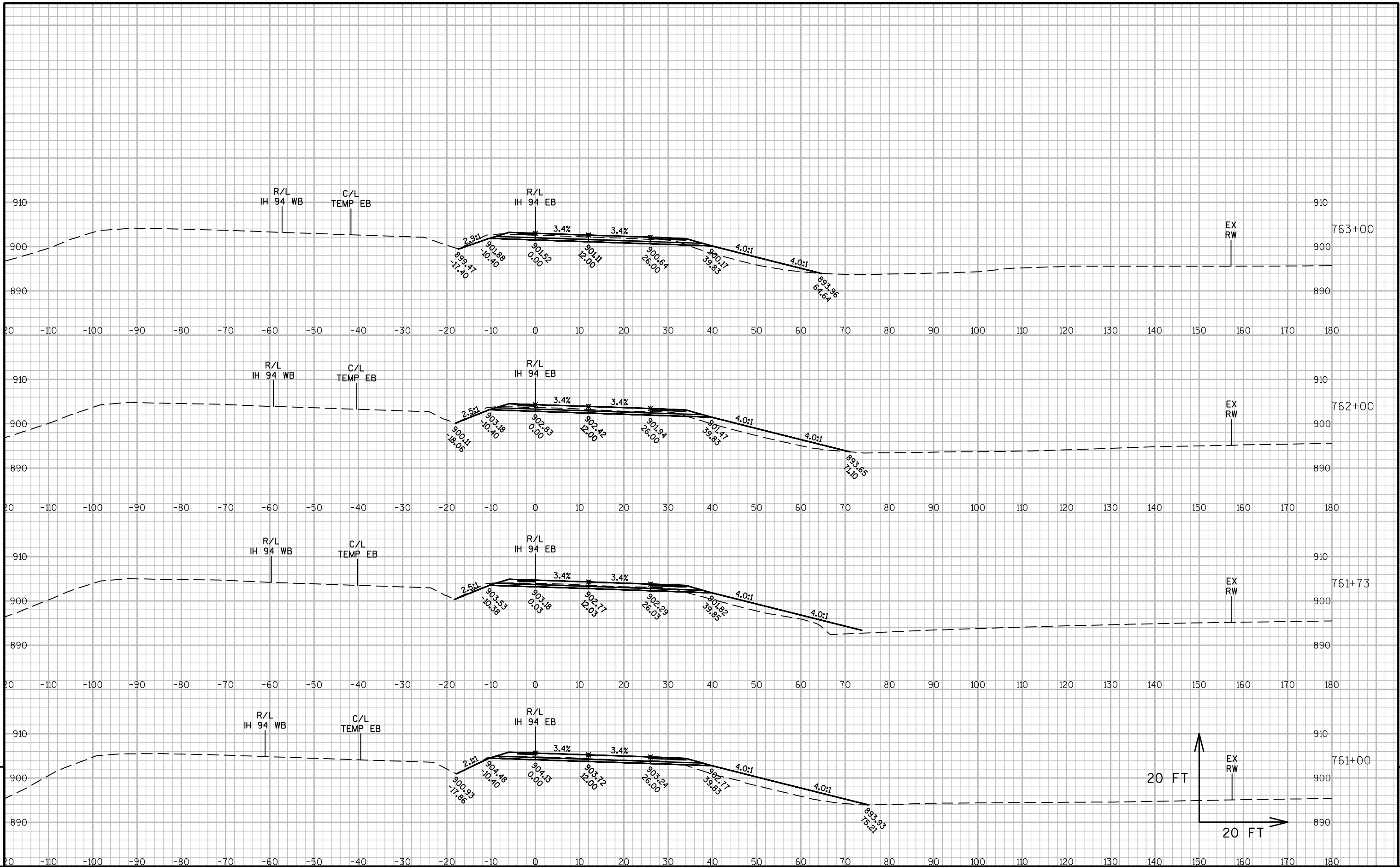


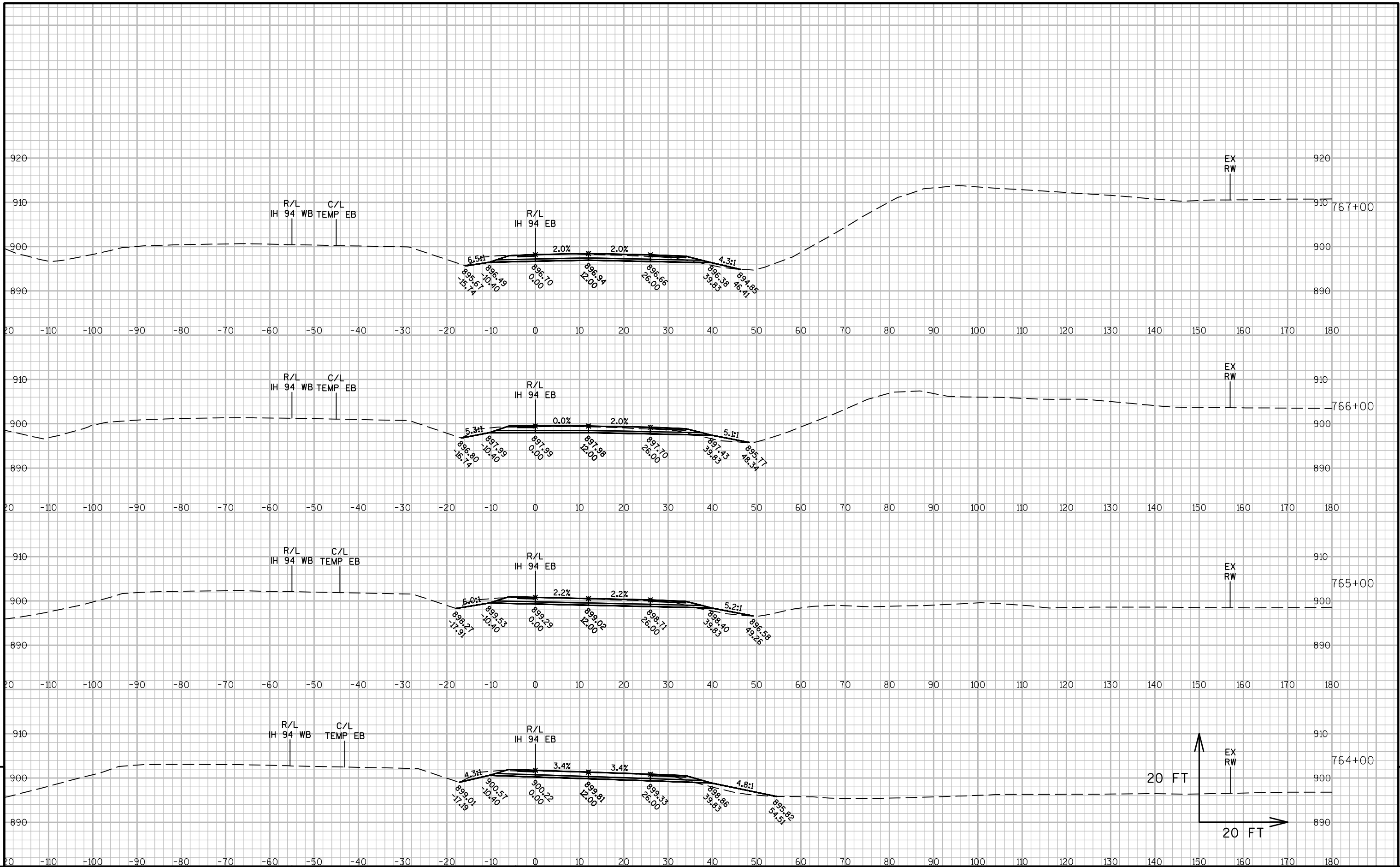


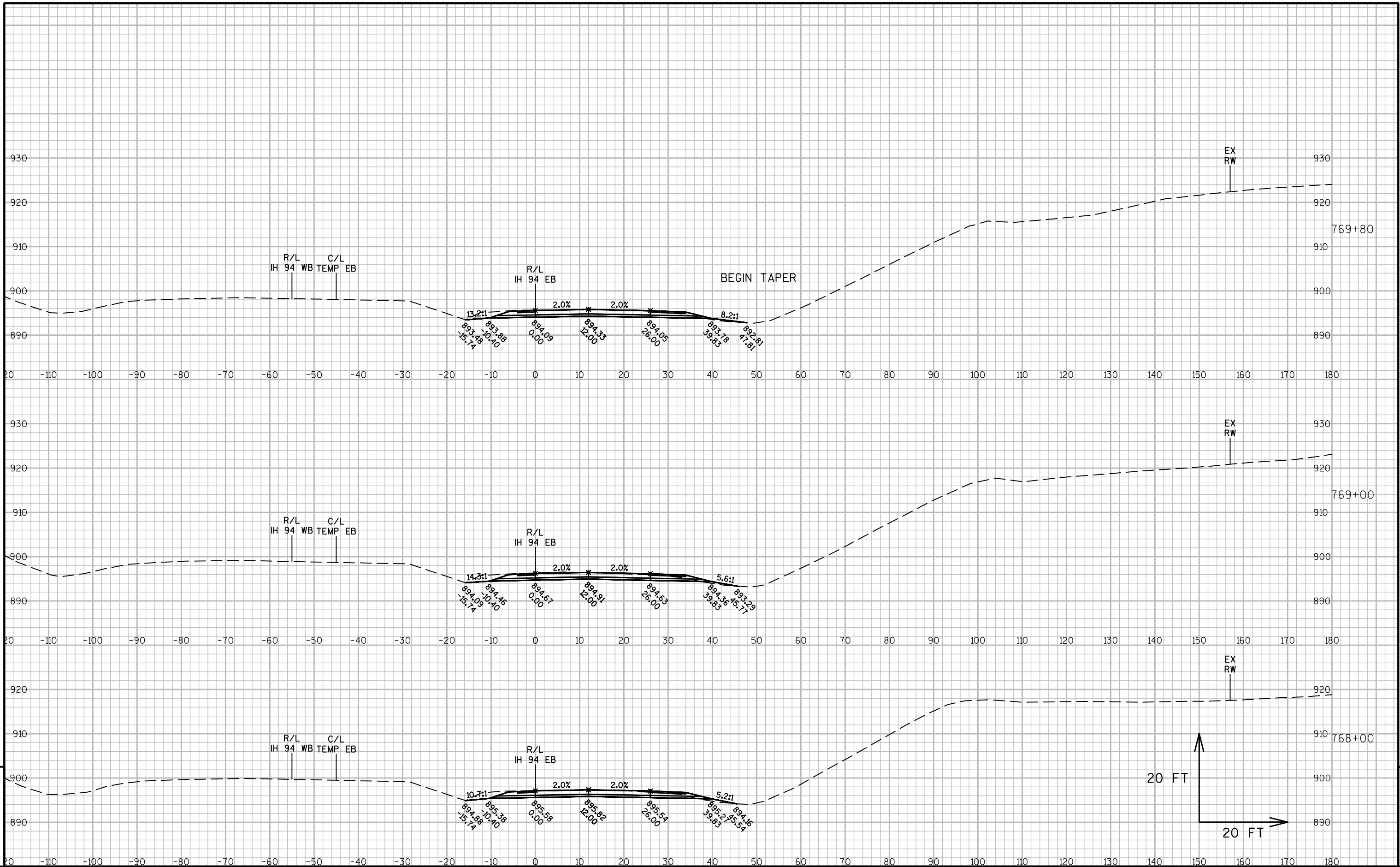


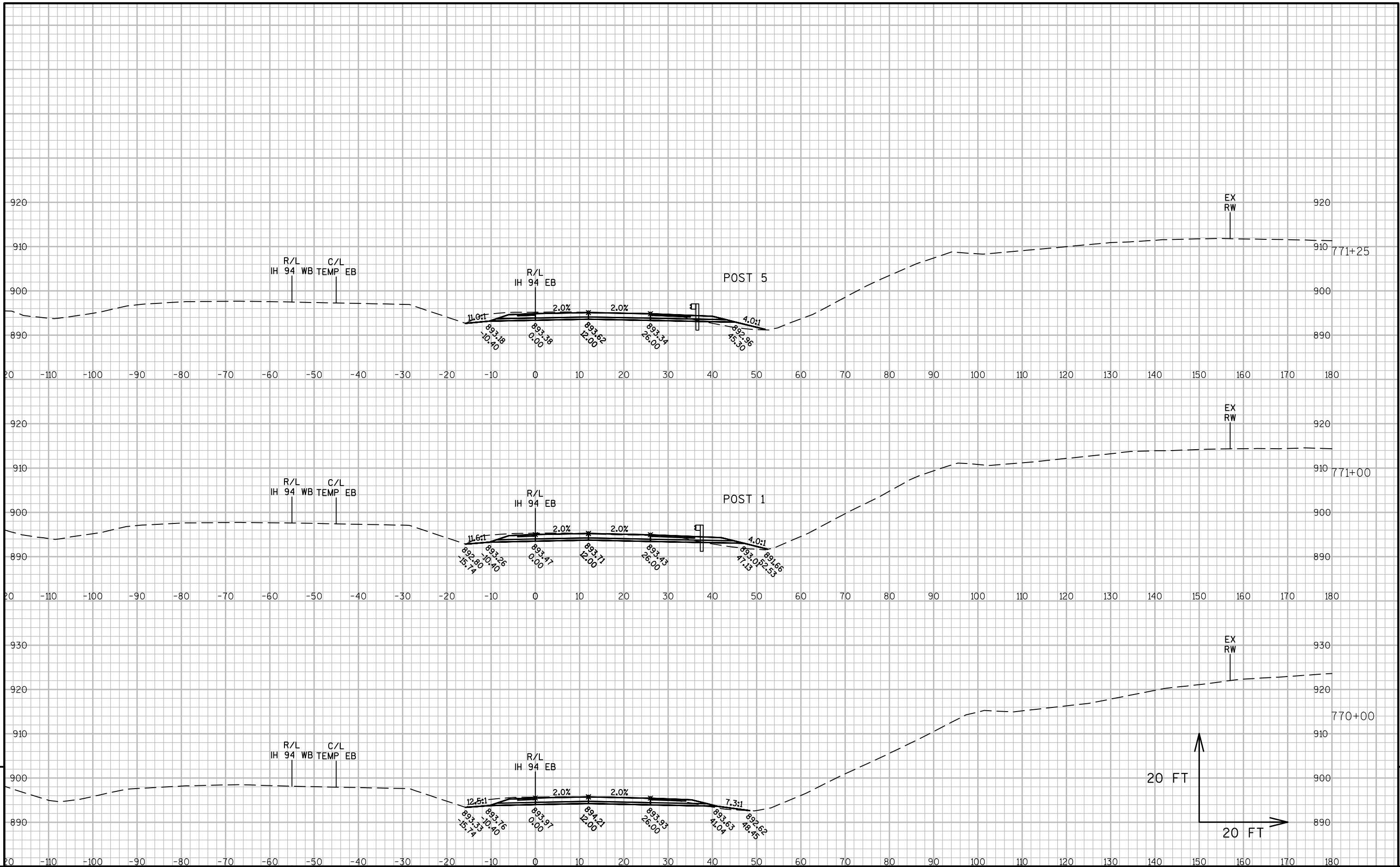


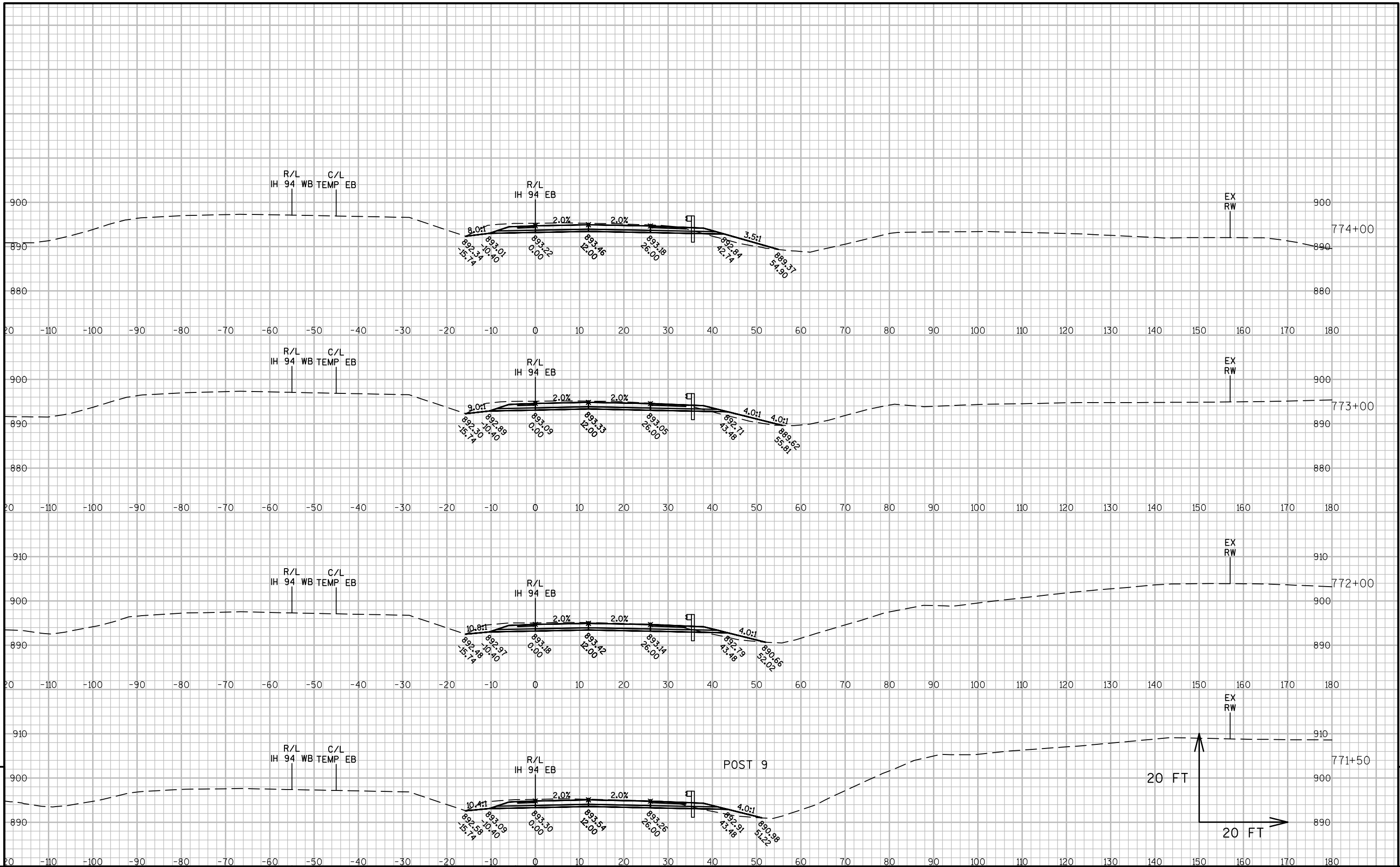


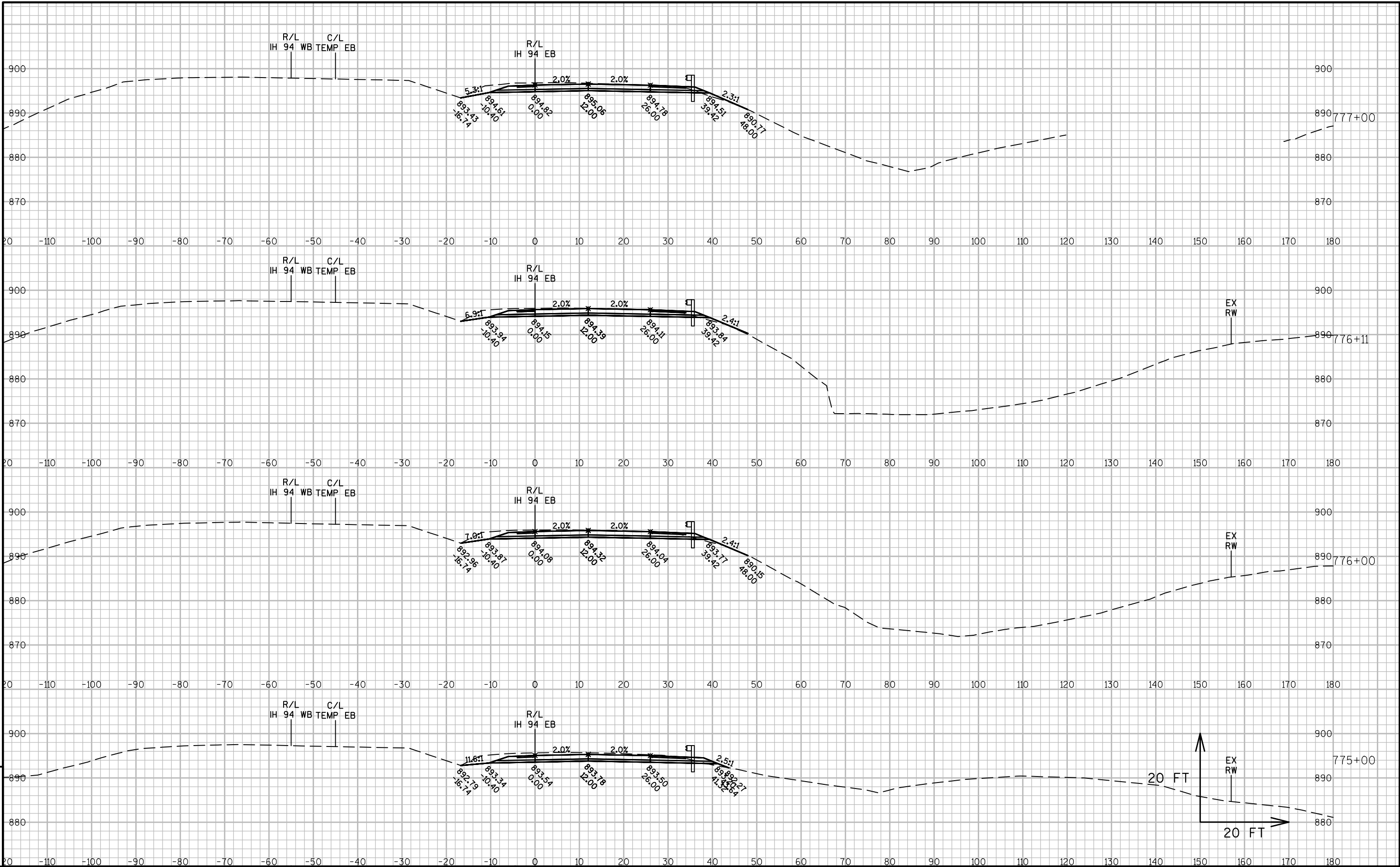


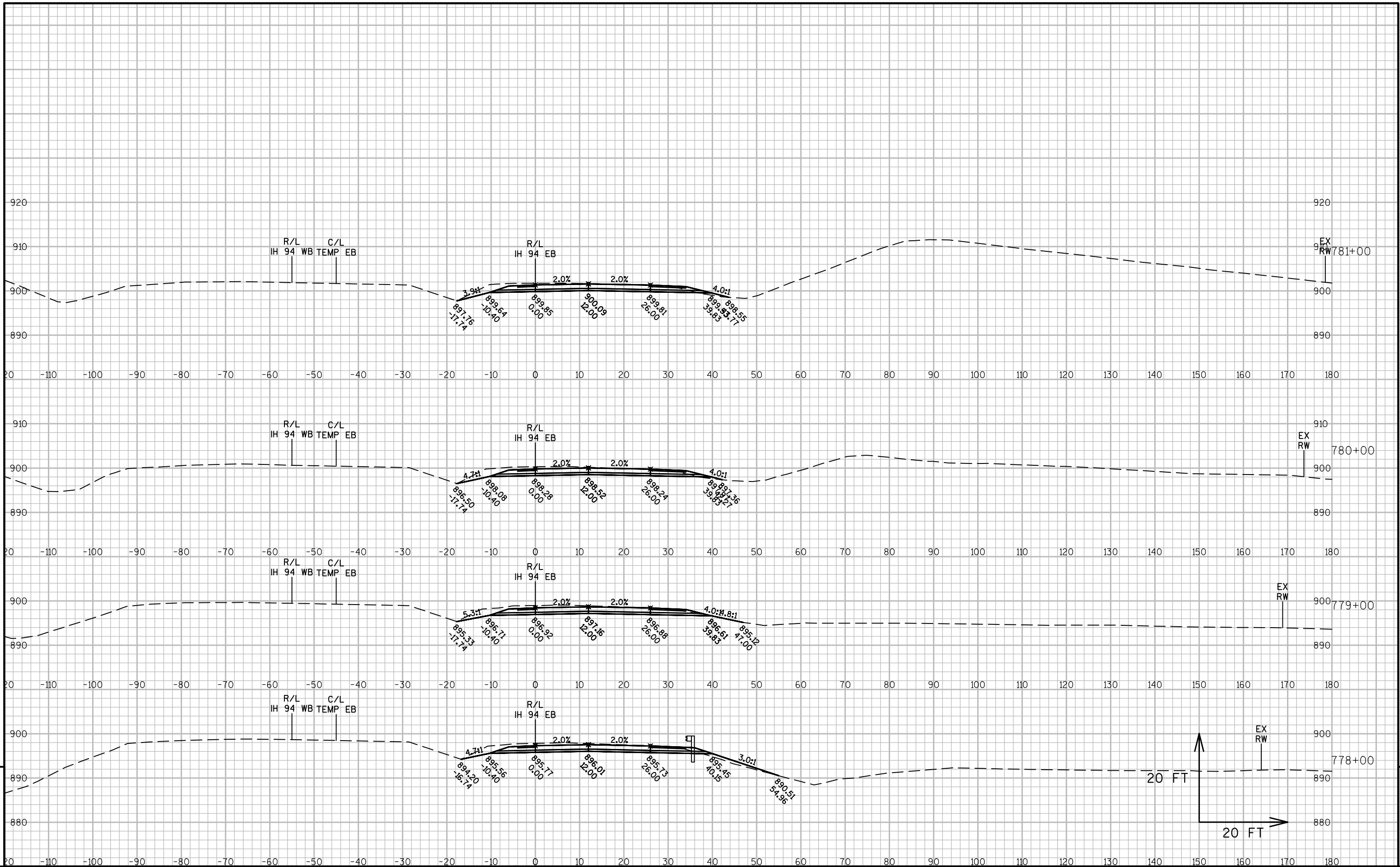


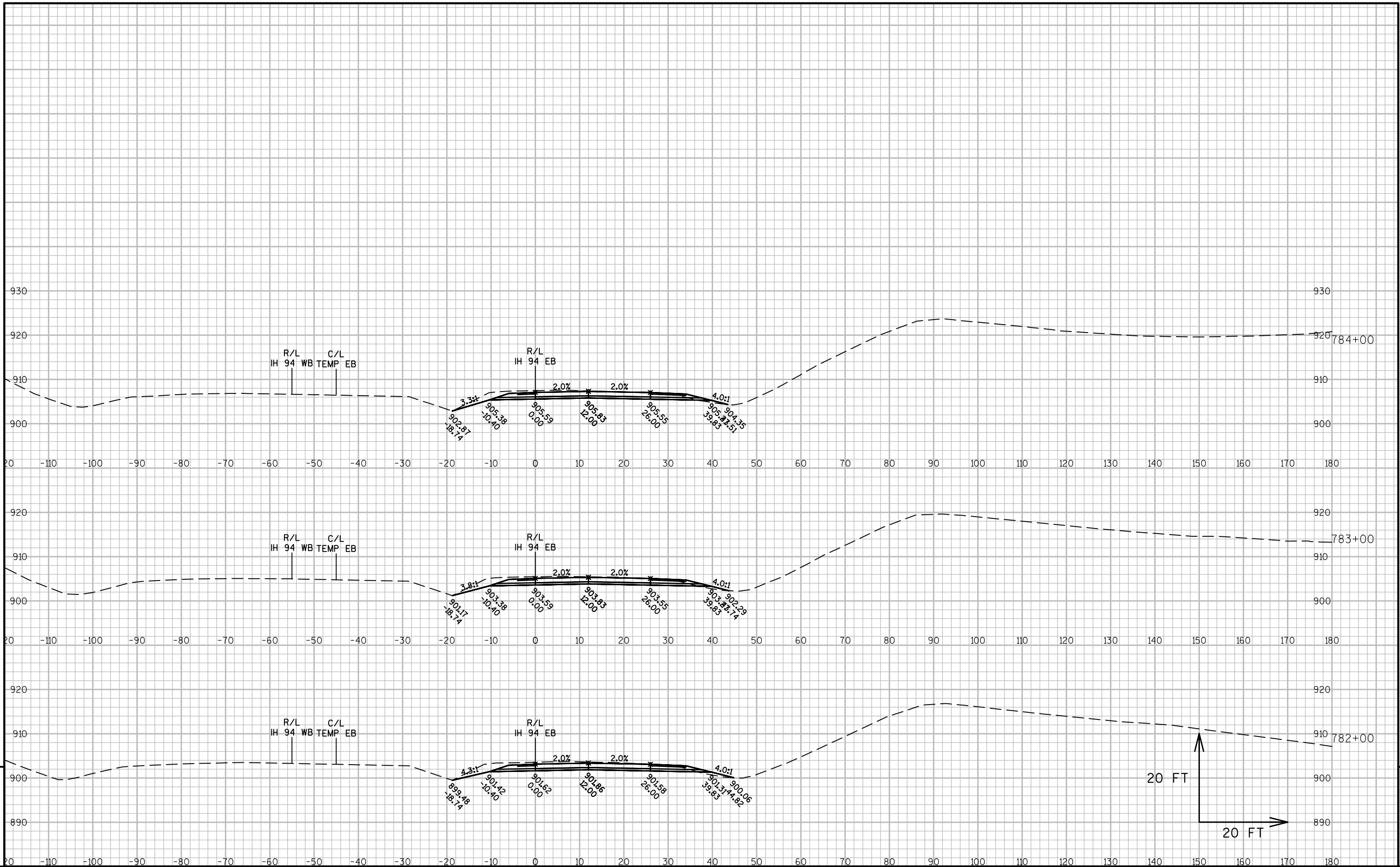


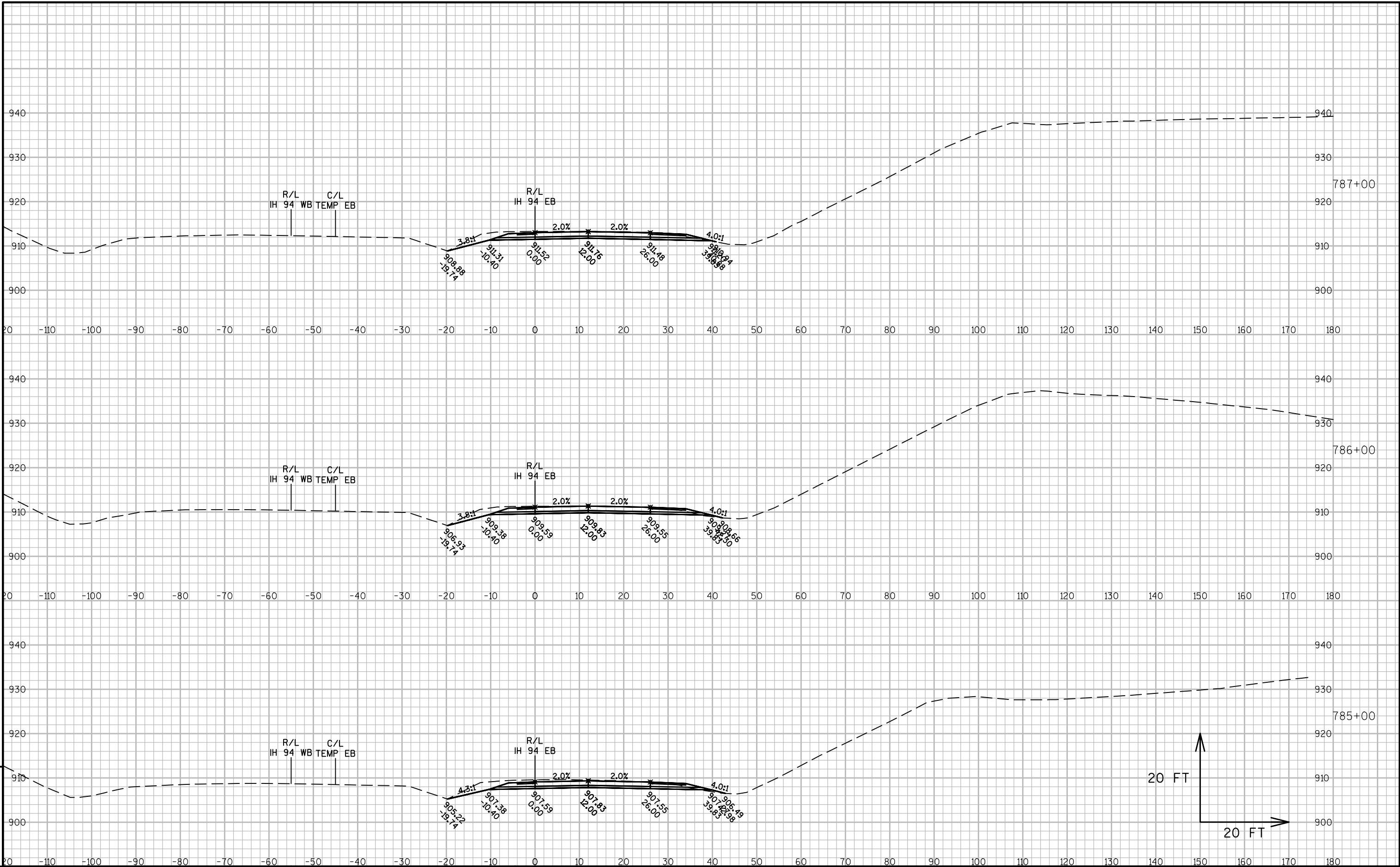


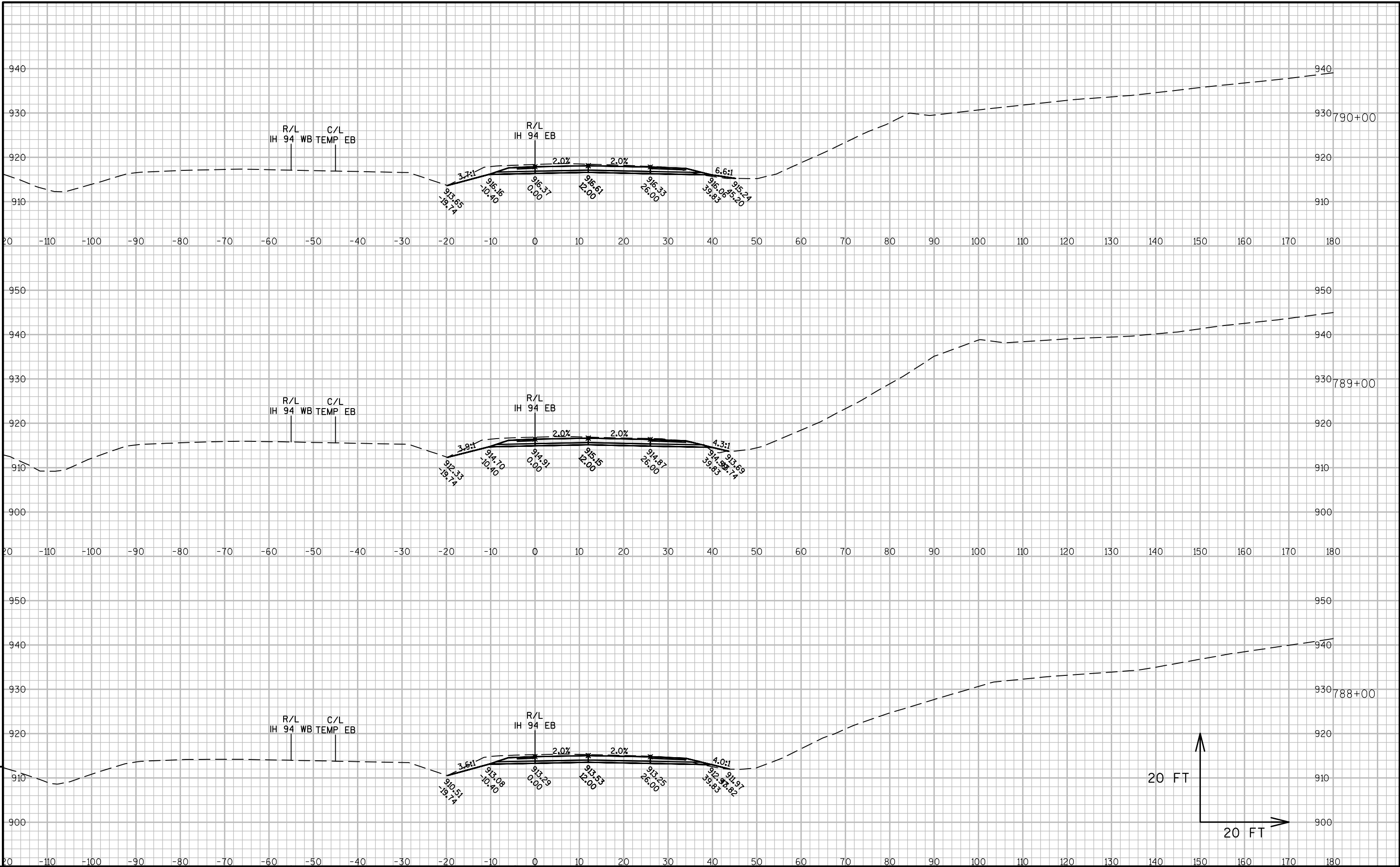


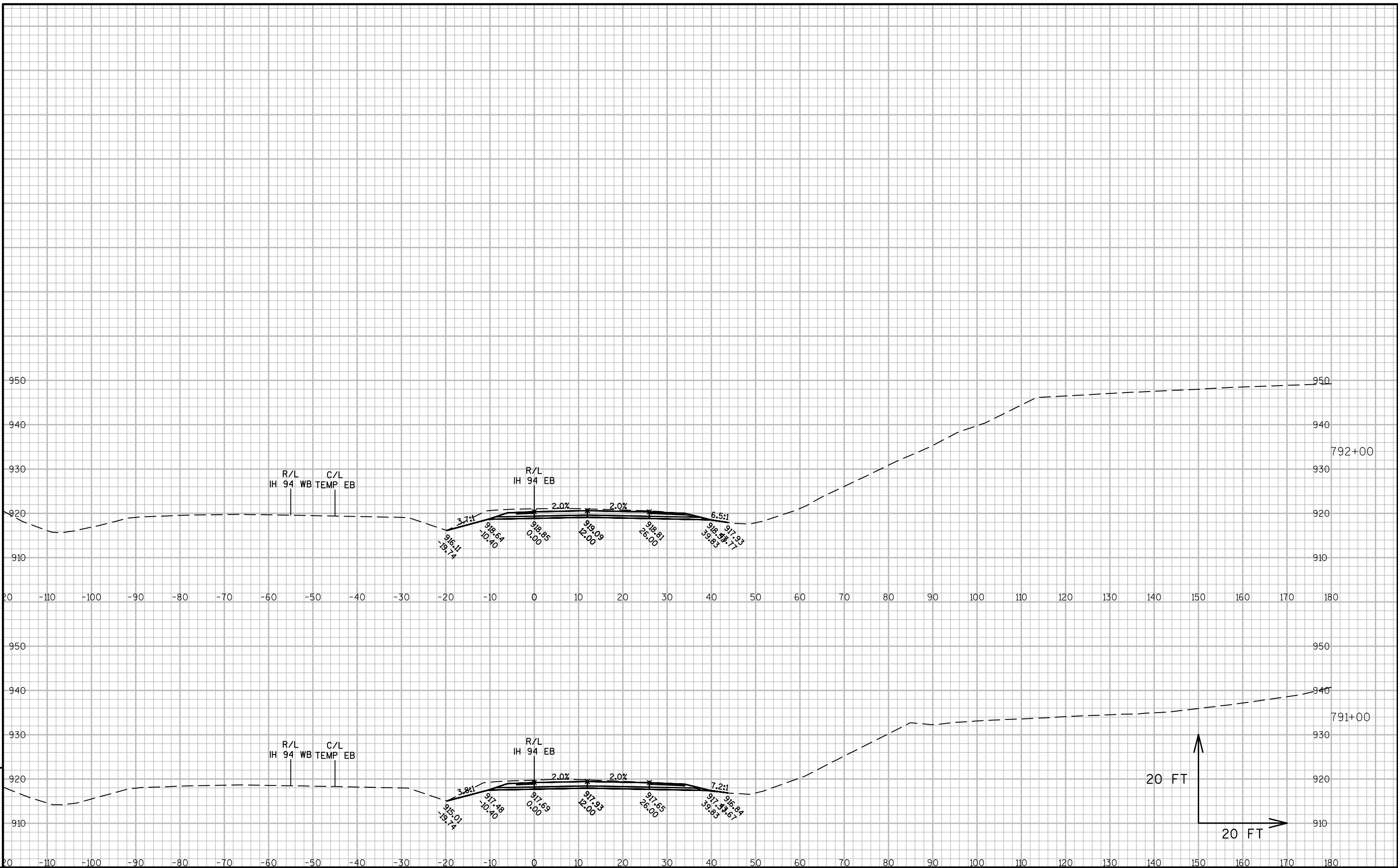


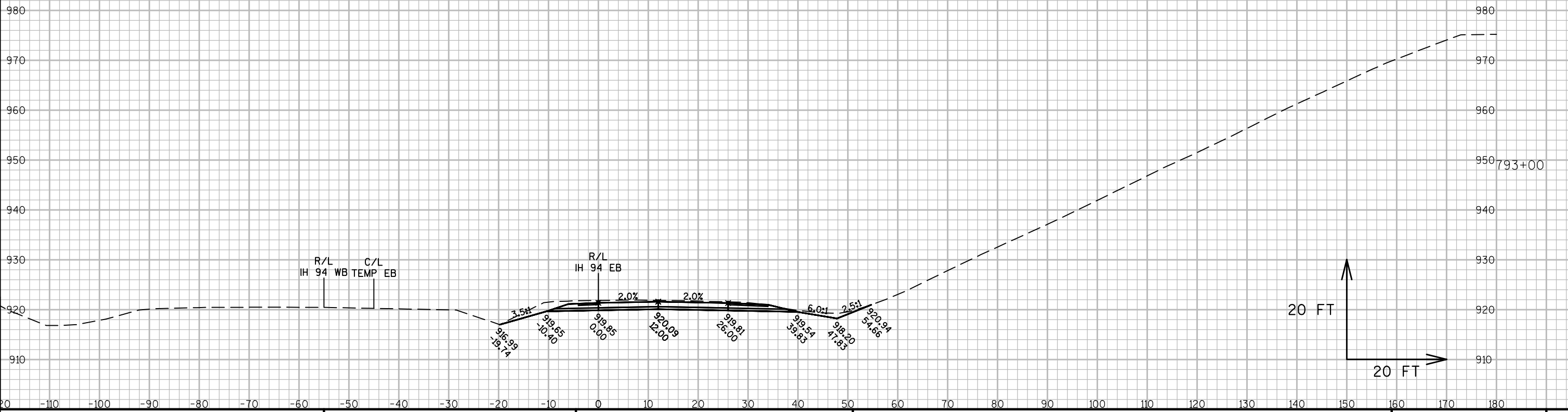
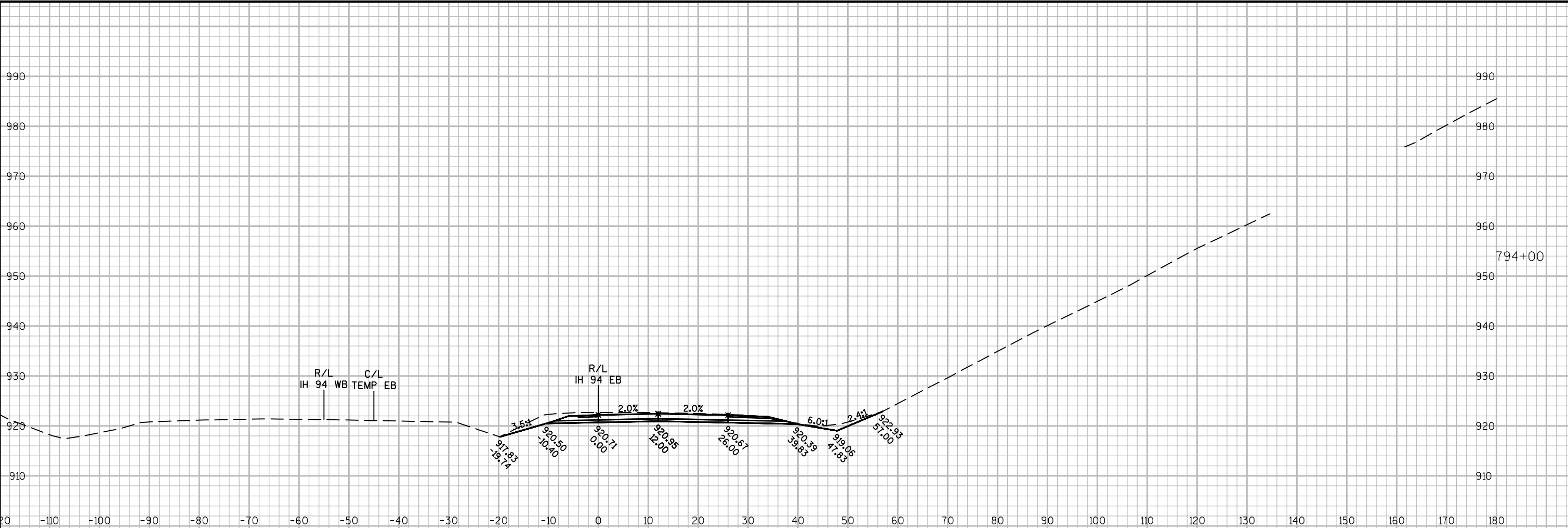


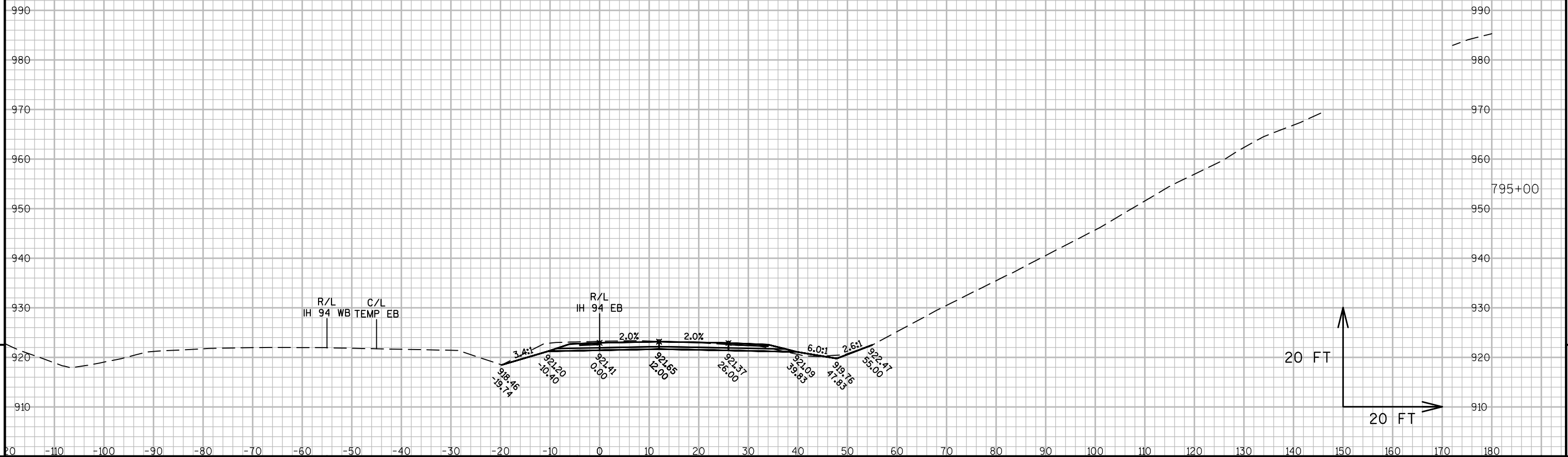
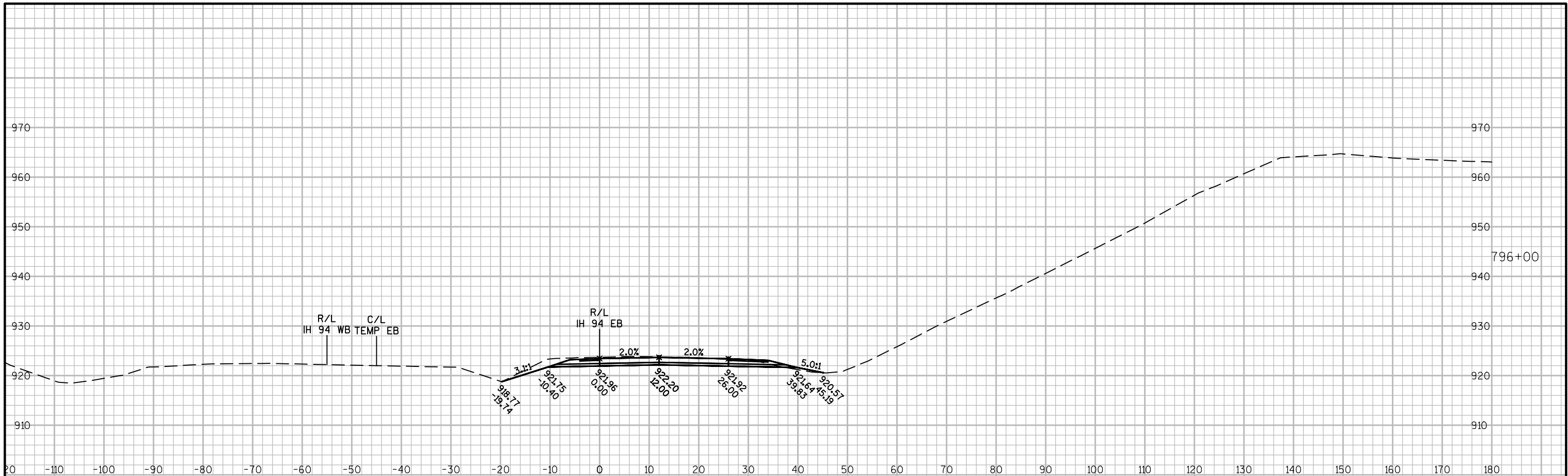




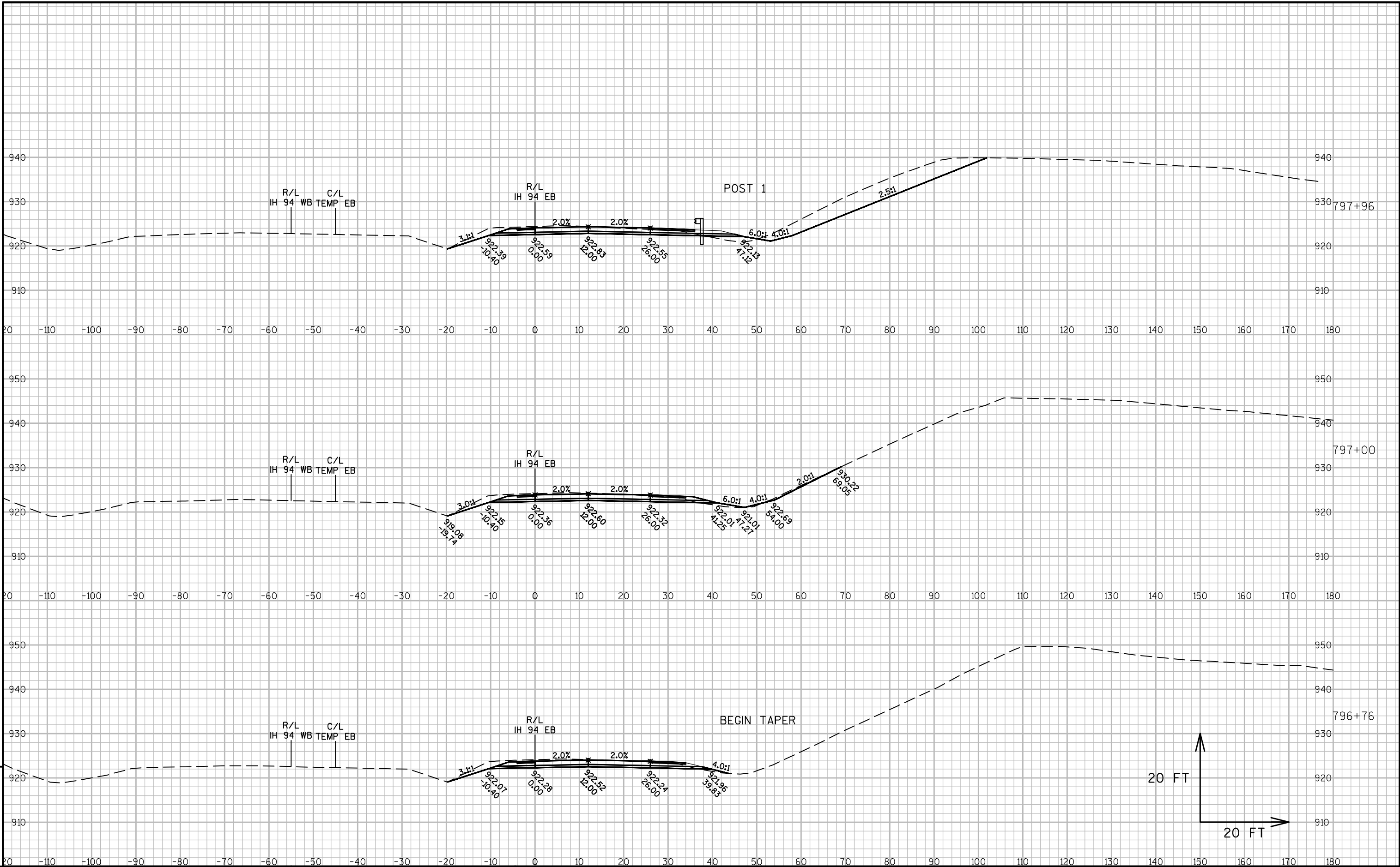


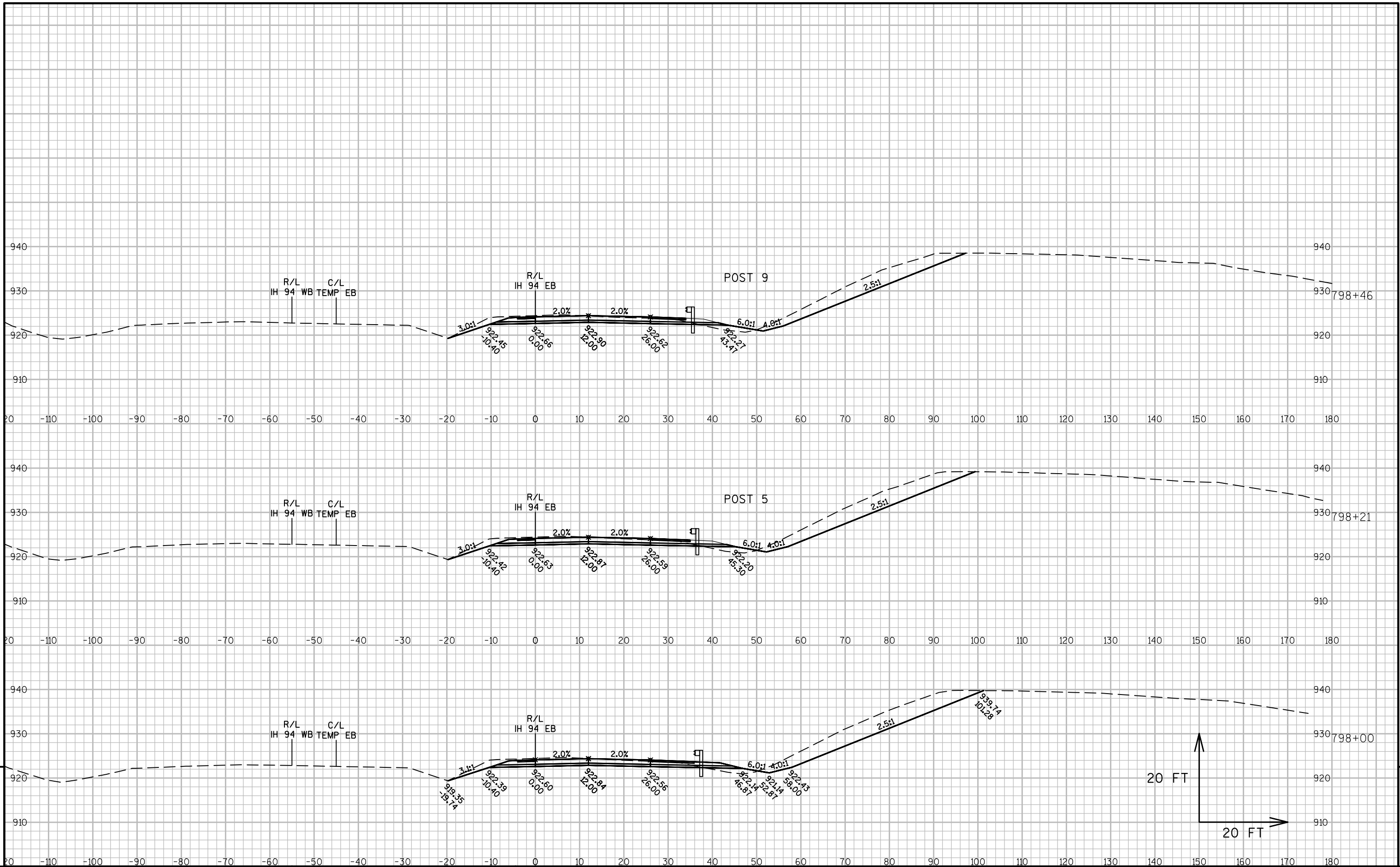


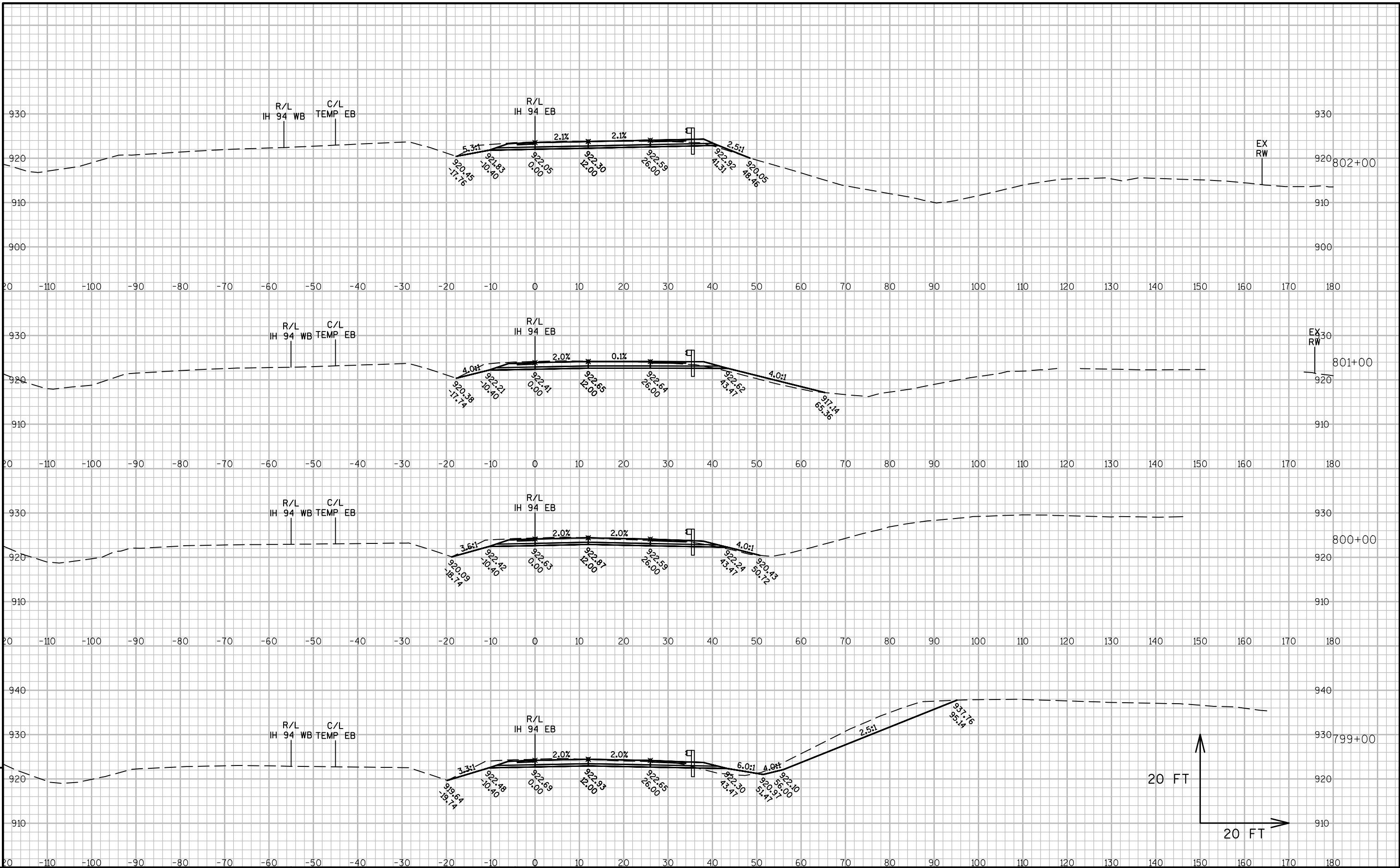


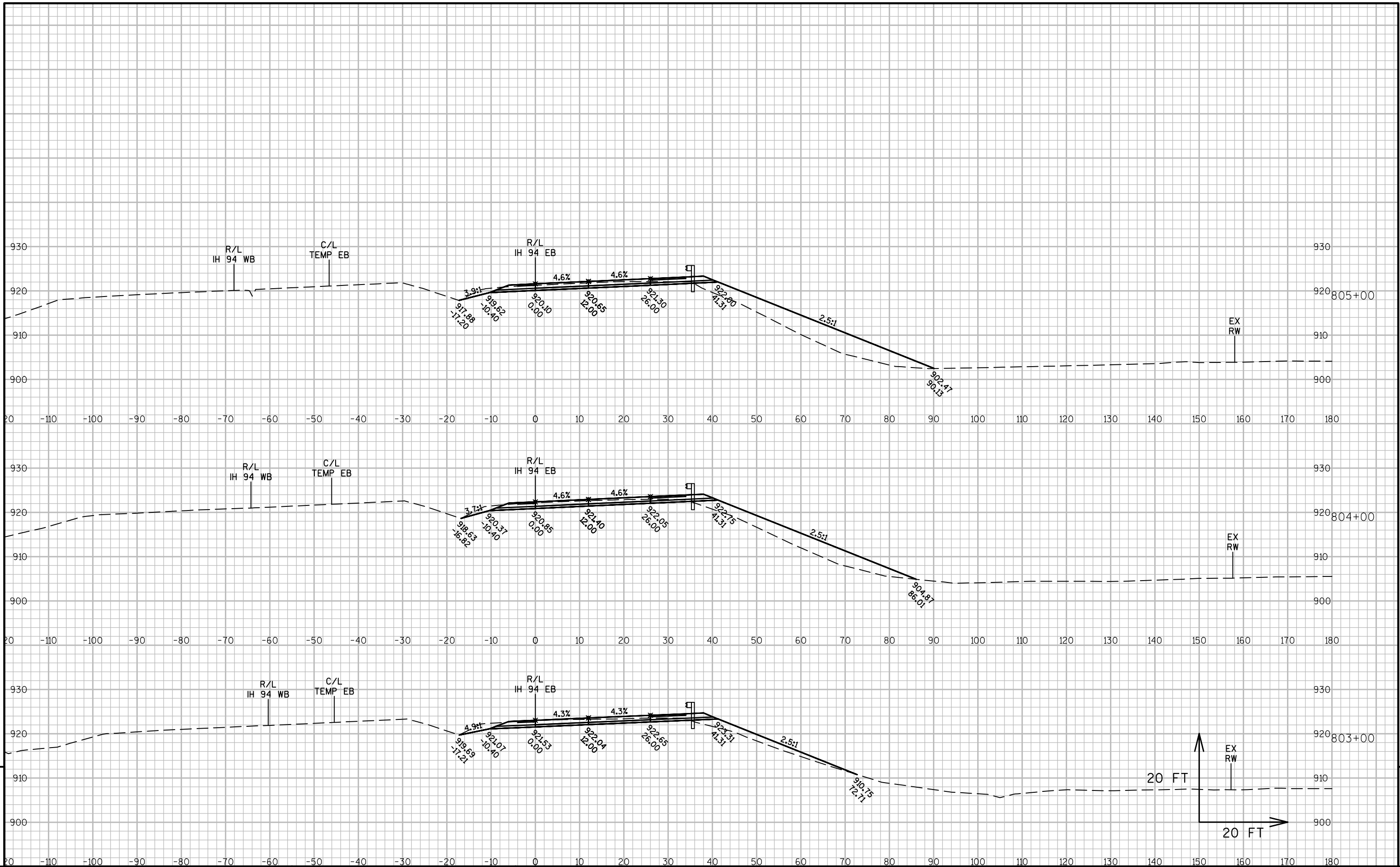


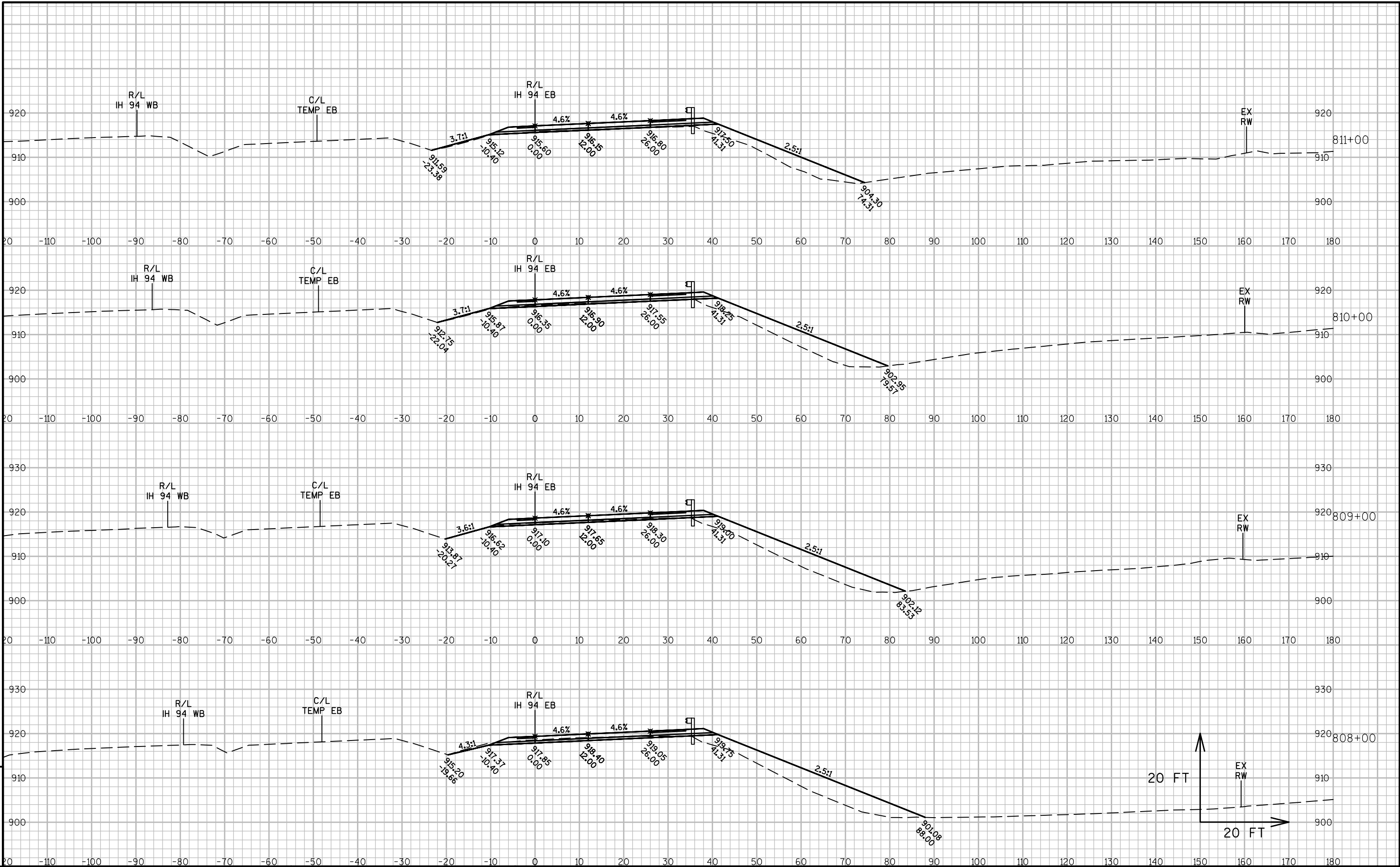
PROJECT NO:1022-08-72	HWY:IH 94	COUNTY:DUNN	CROSS SECTIONS: IH 94 EB STAGE 3	SHEET 747	E
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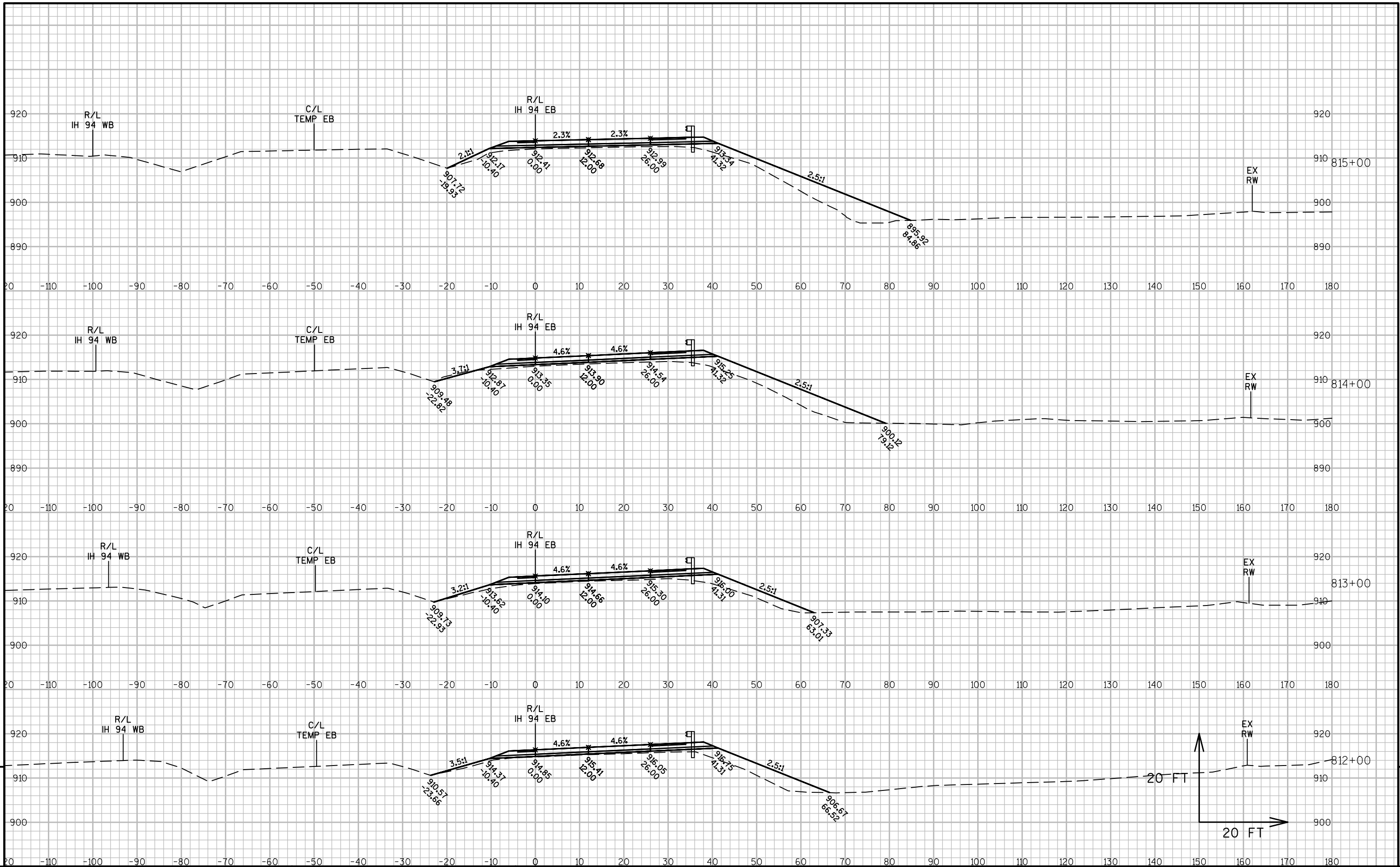


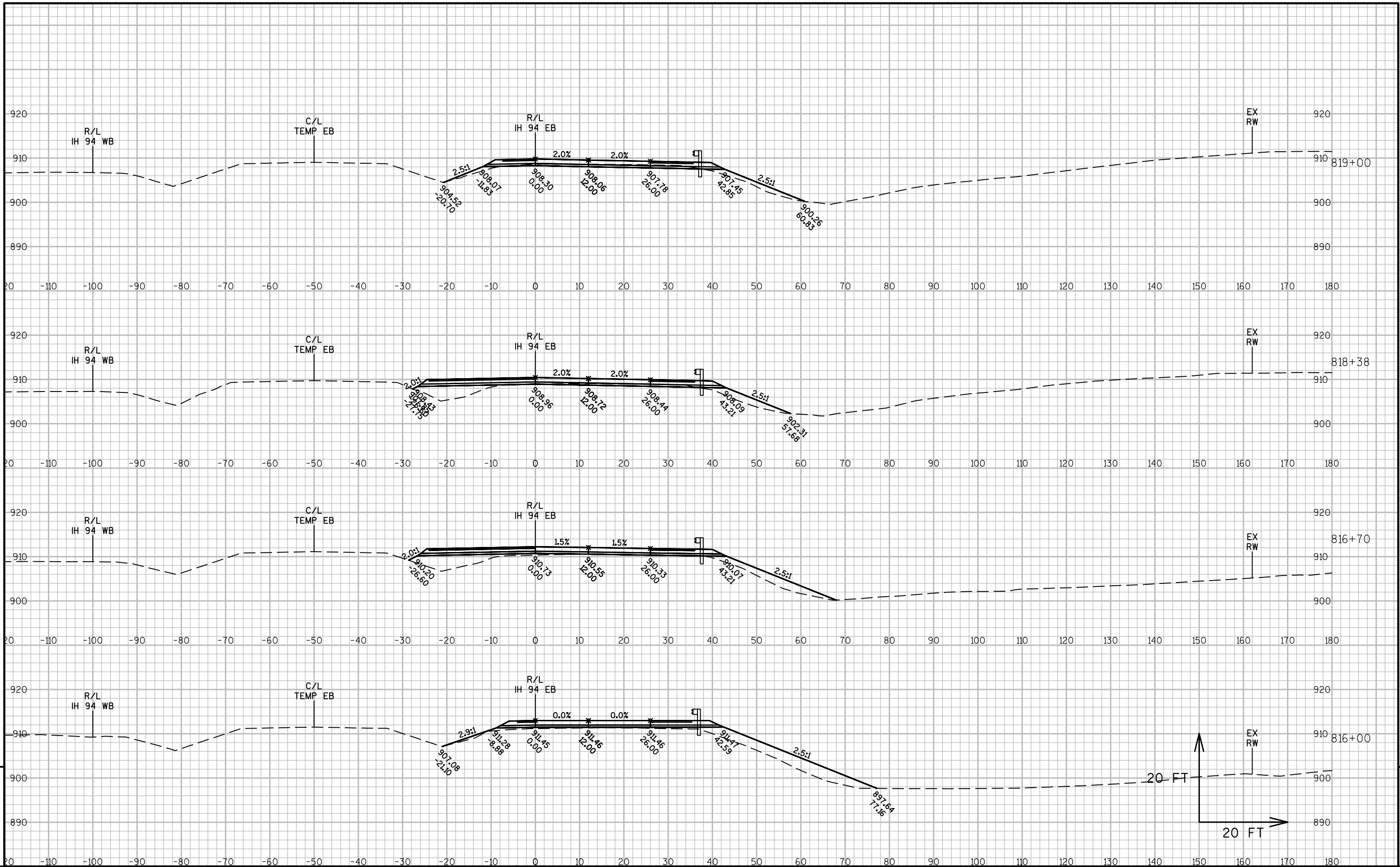


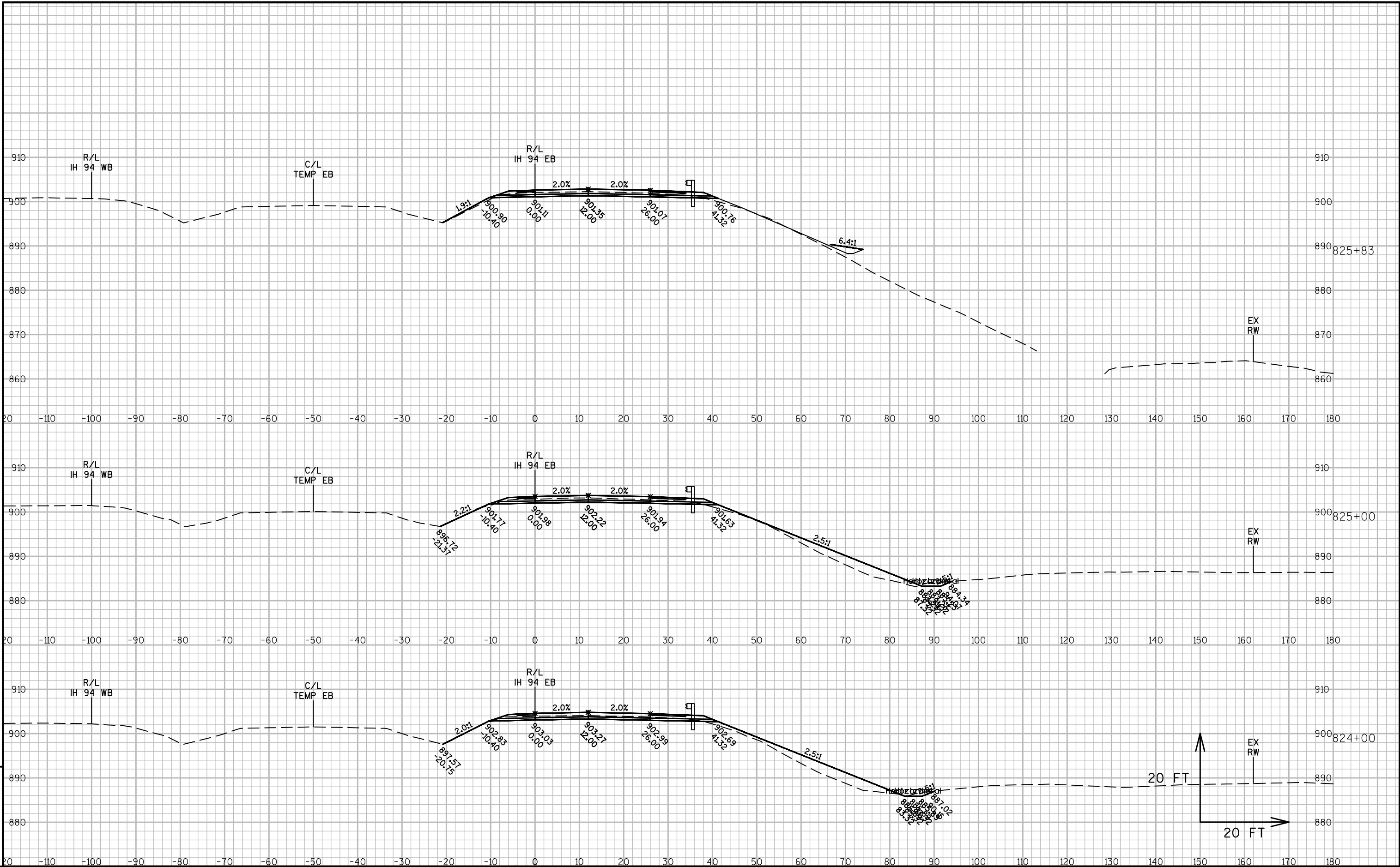


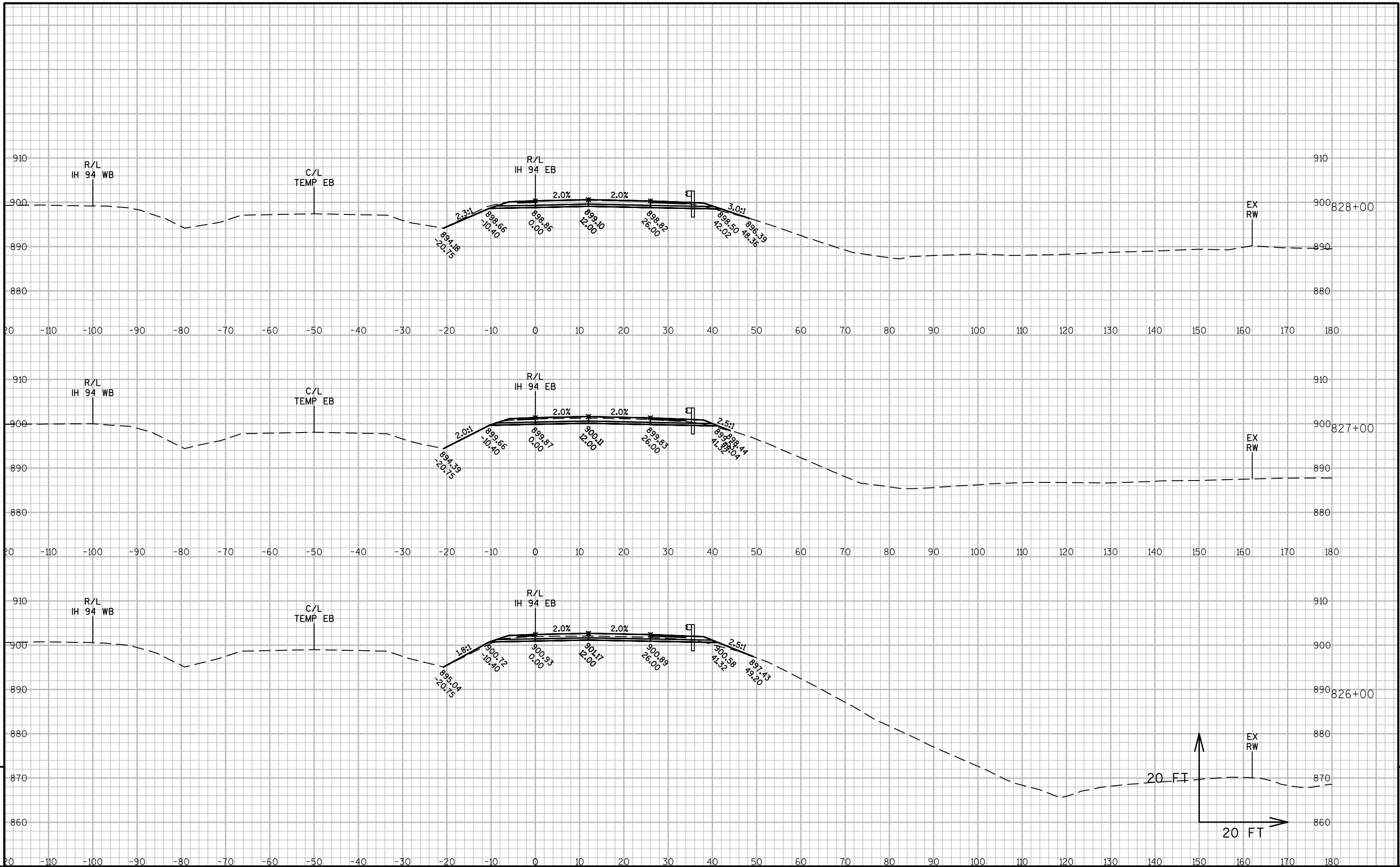


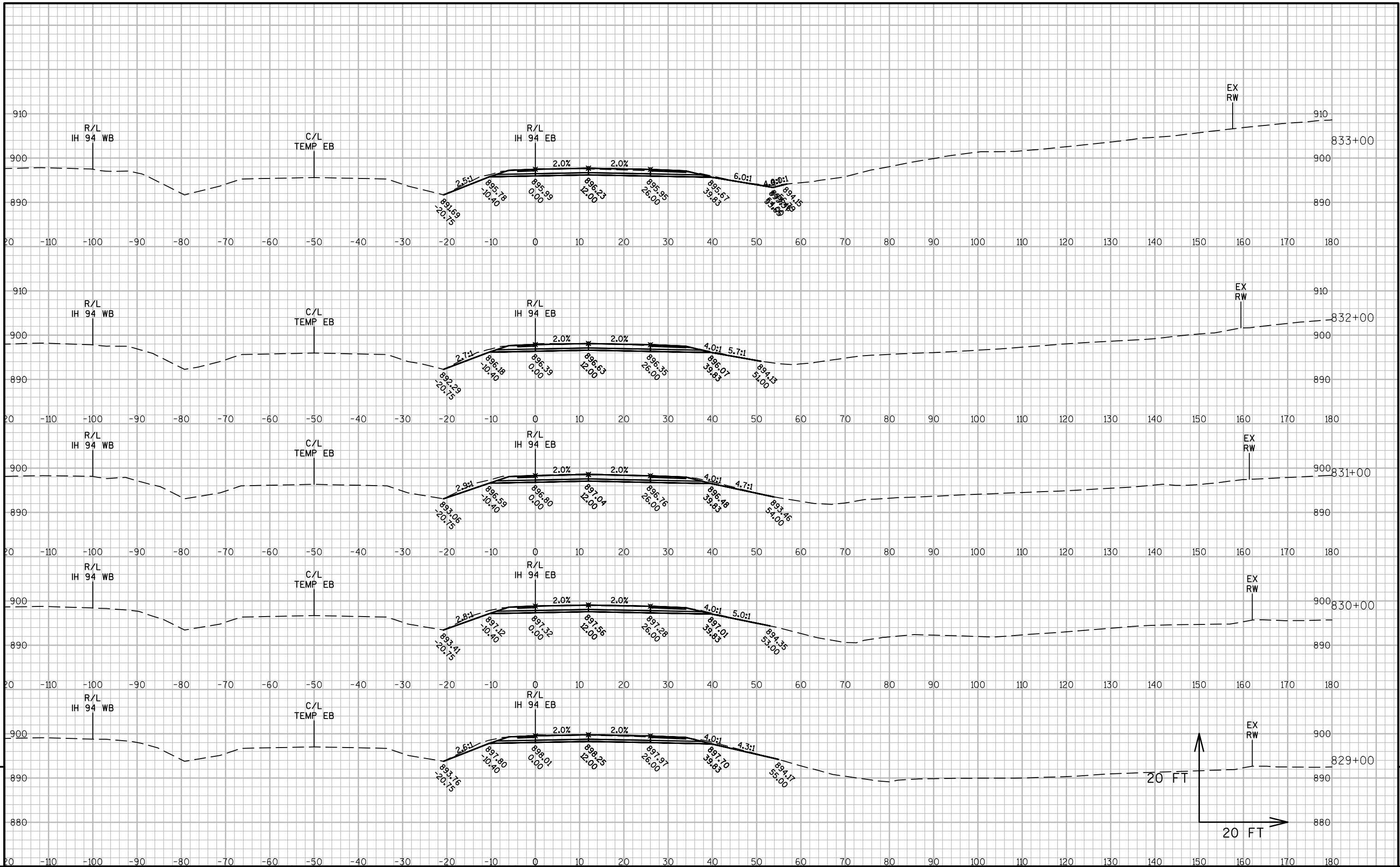


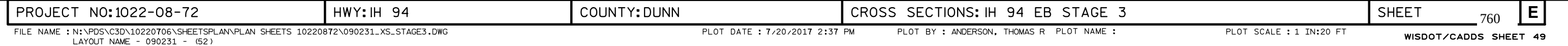
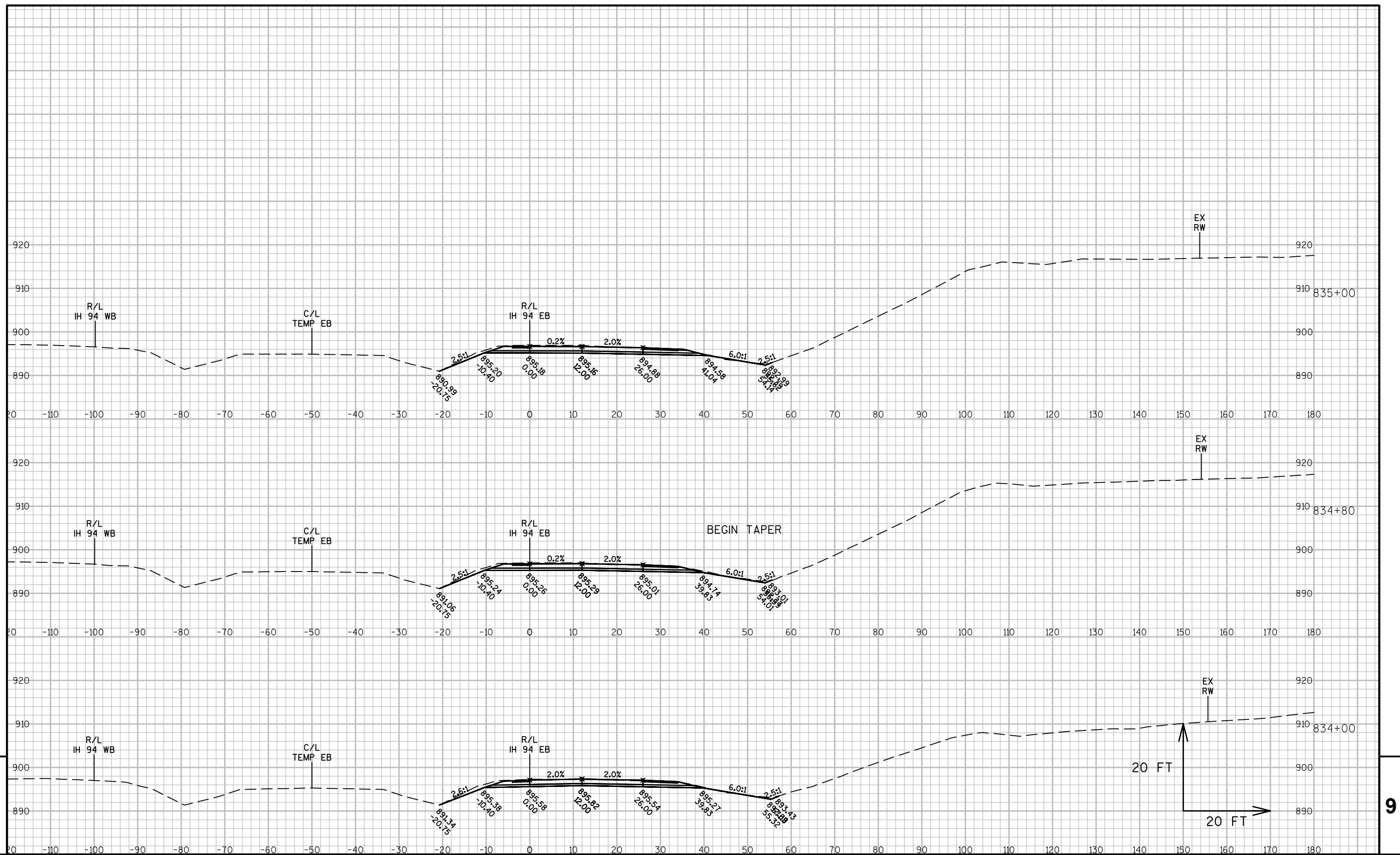


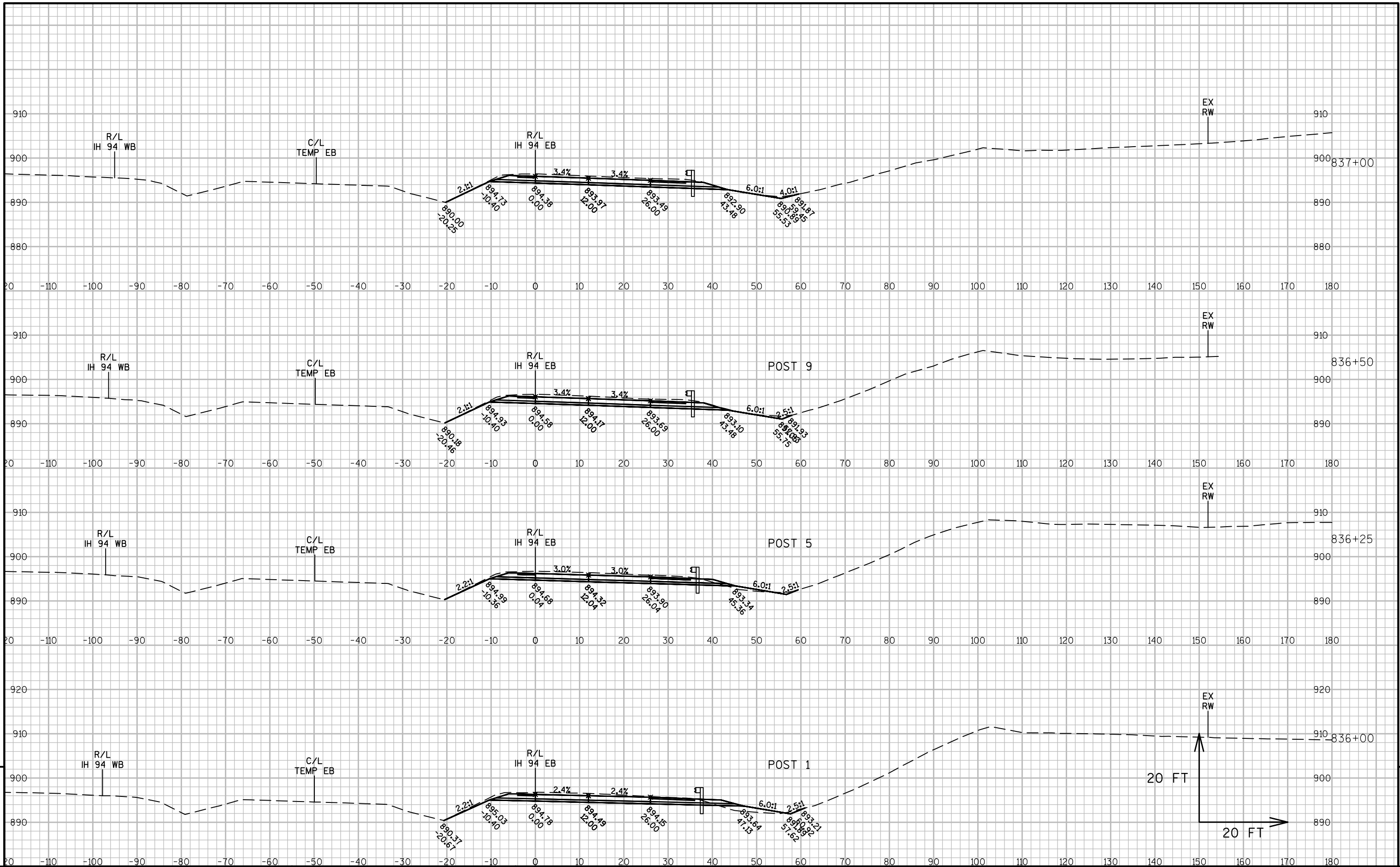


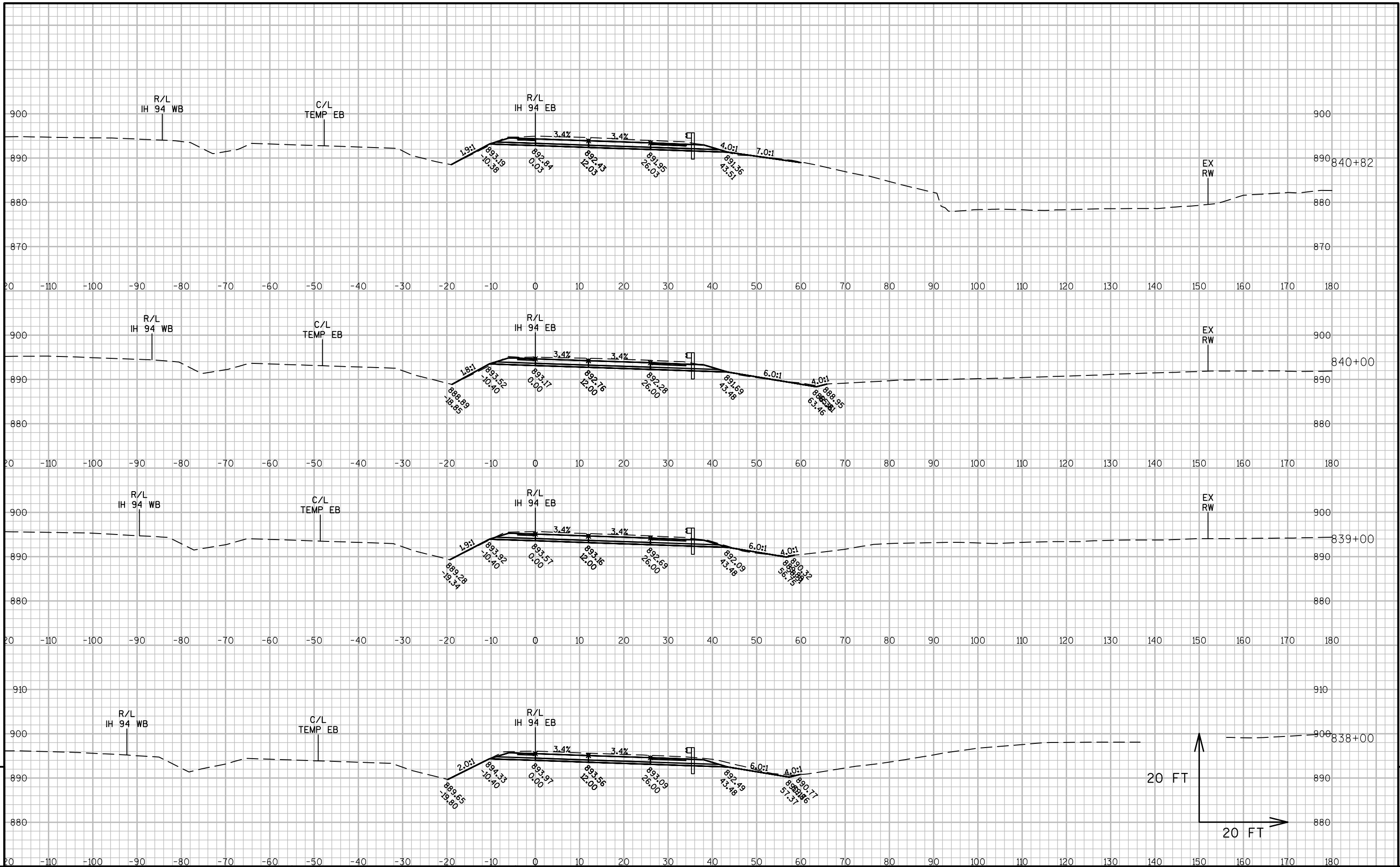


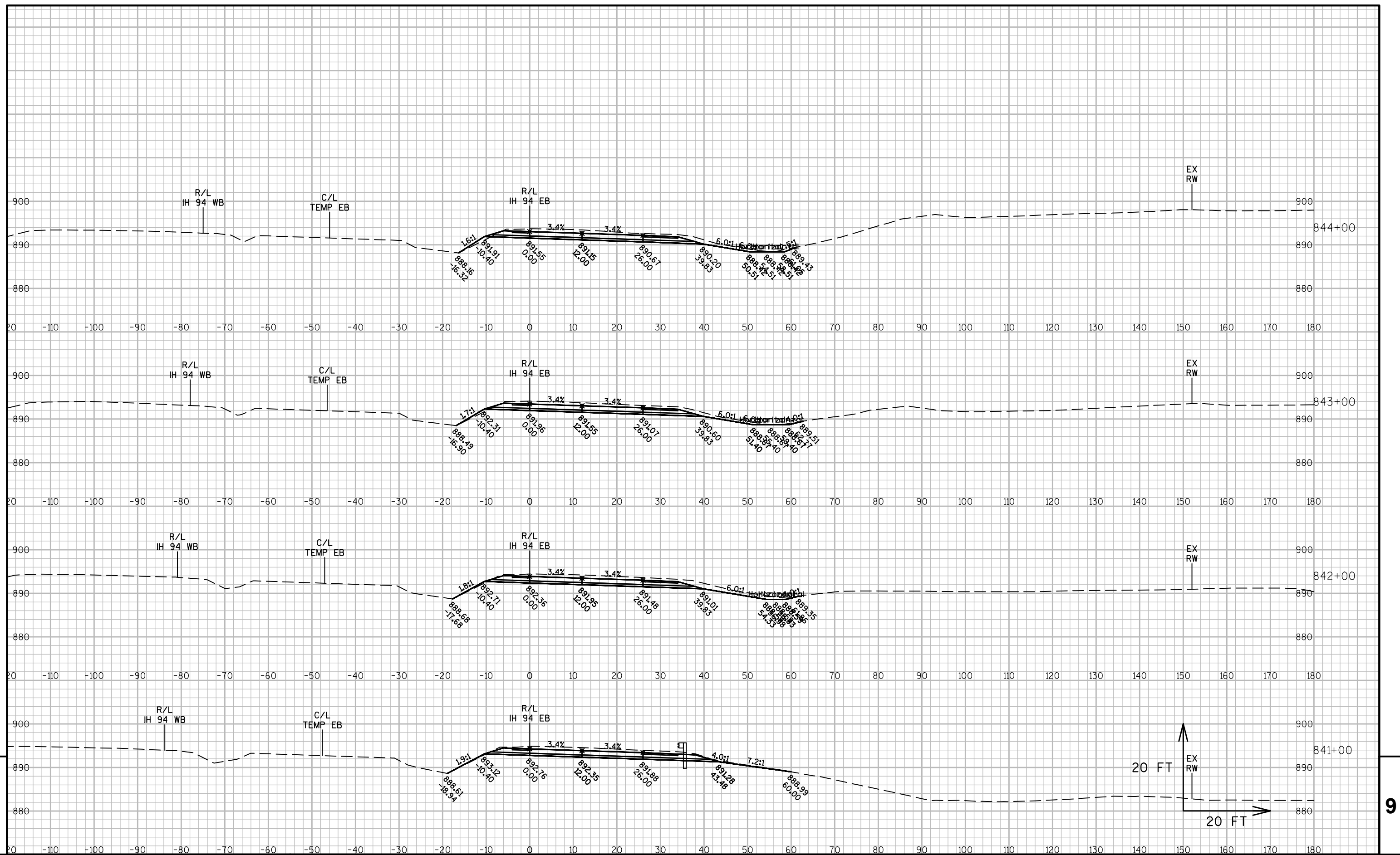


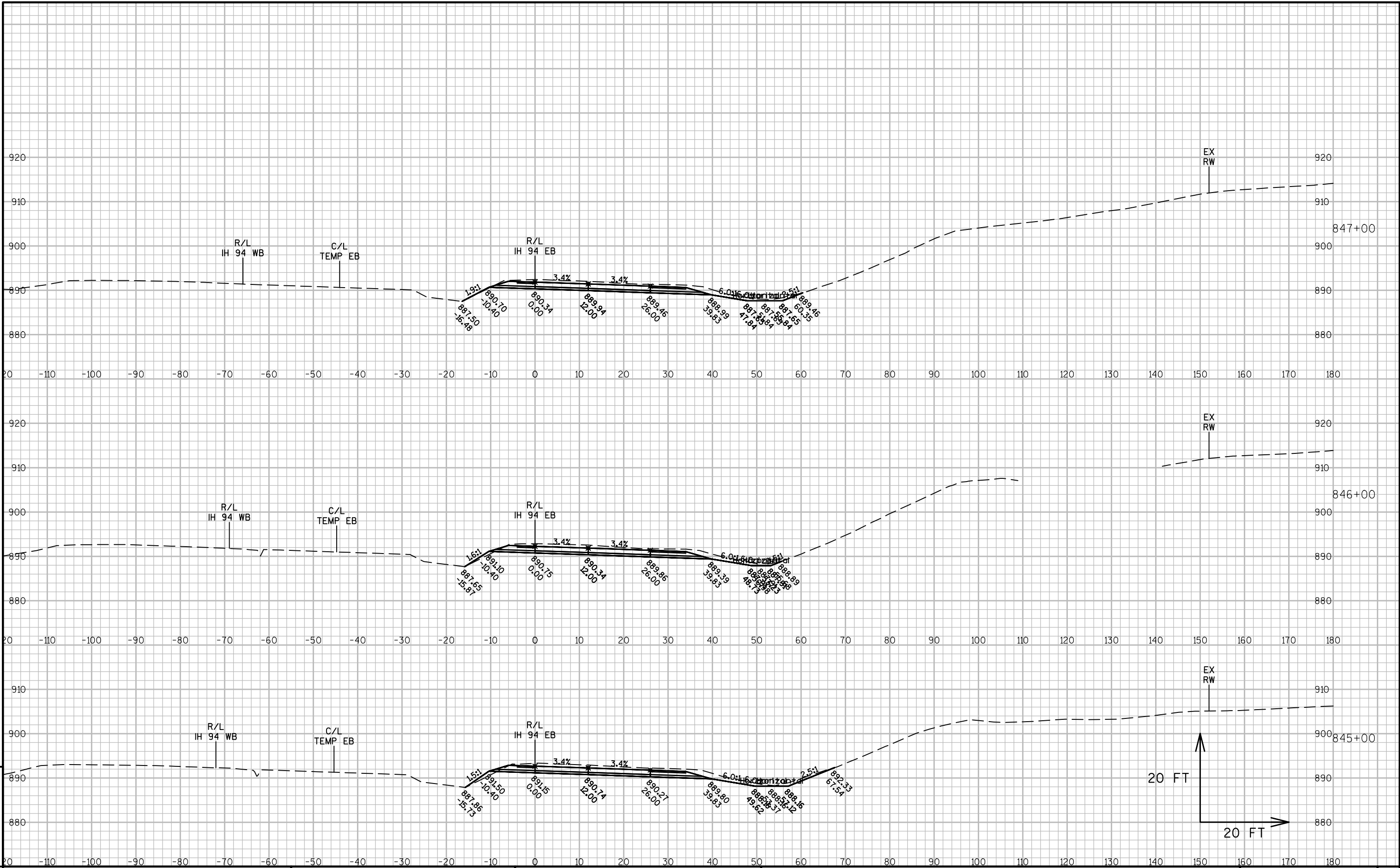


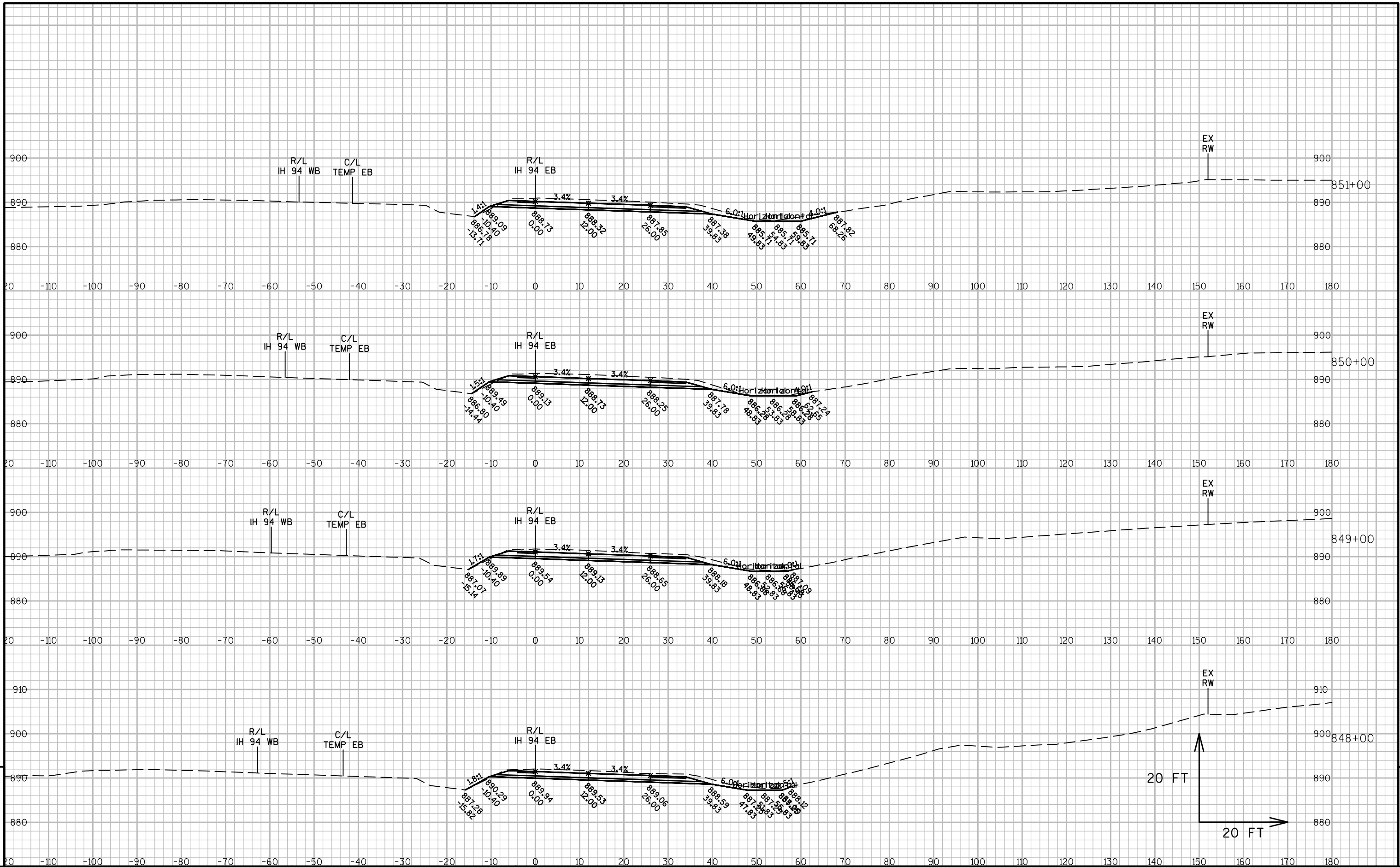


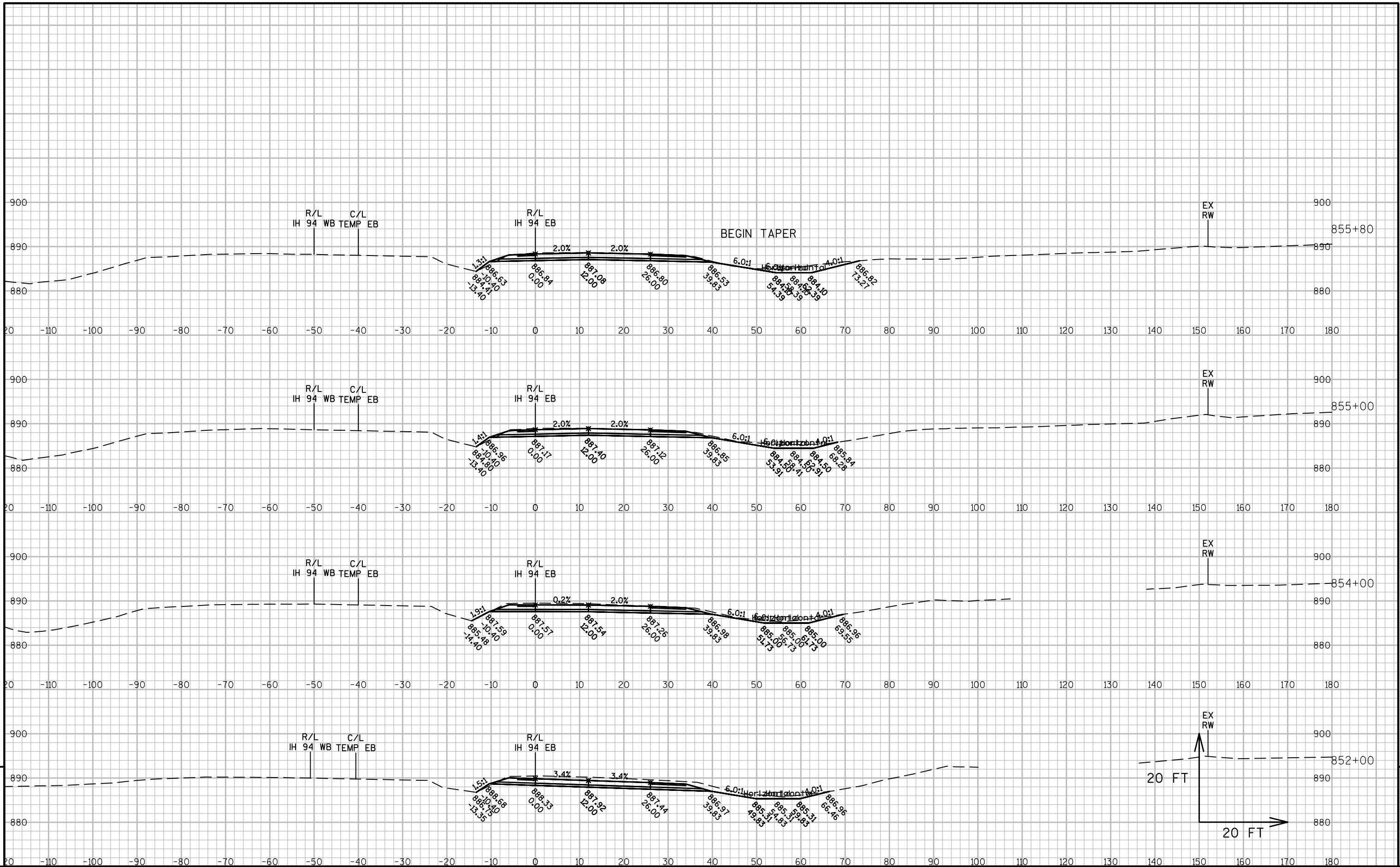


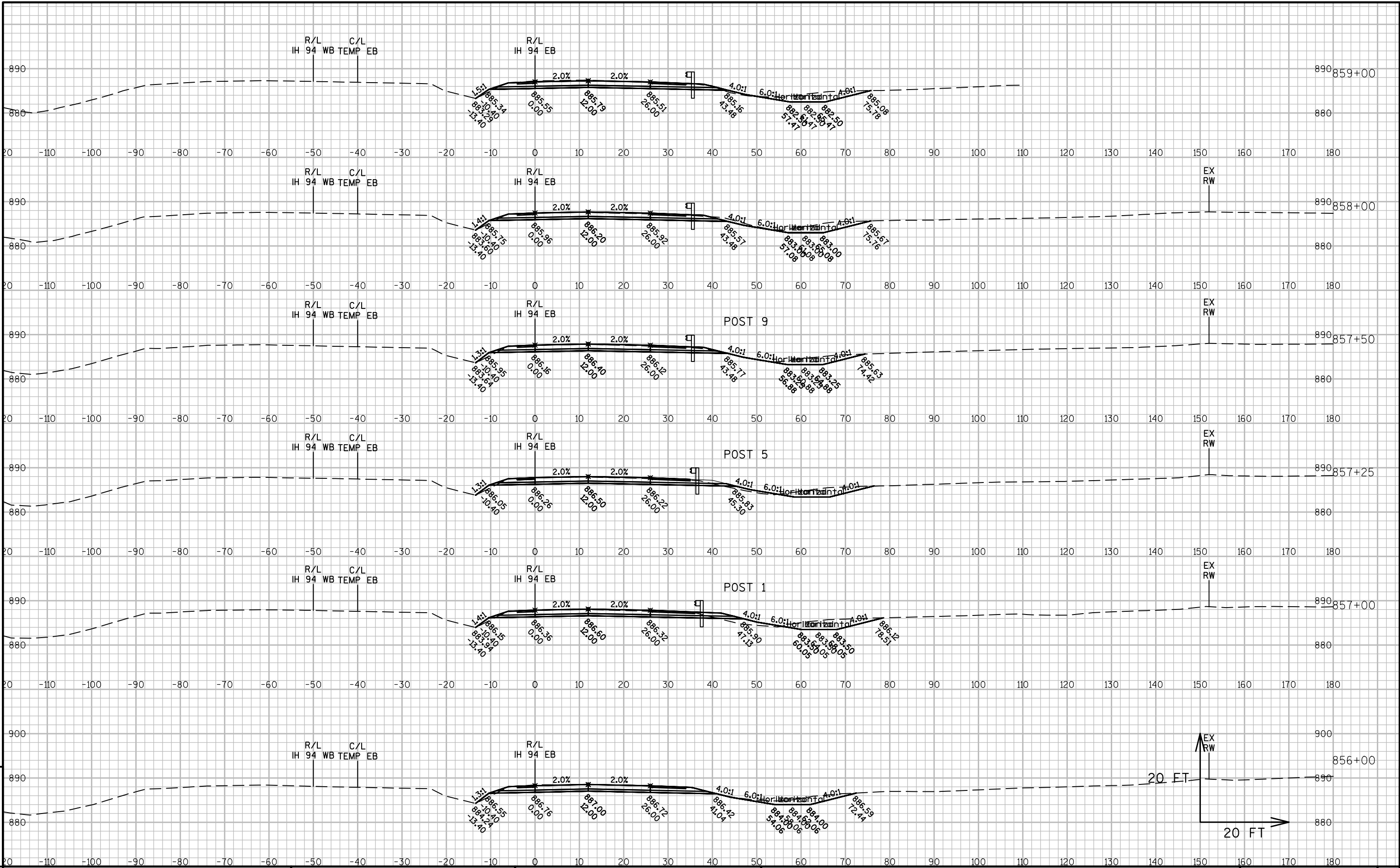


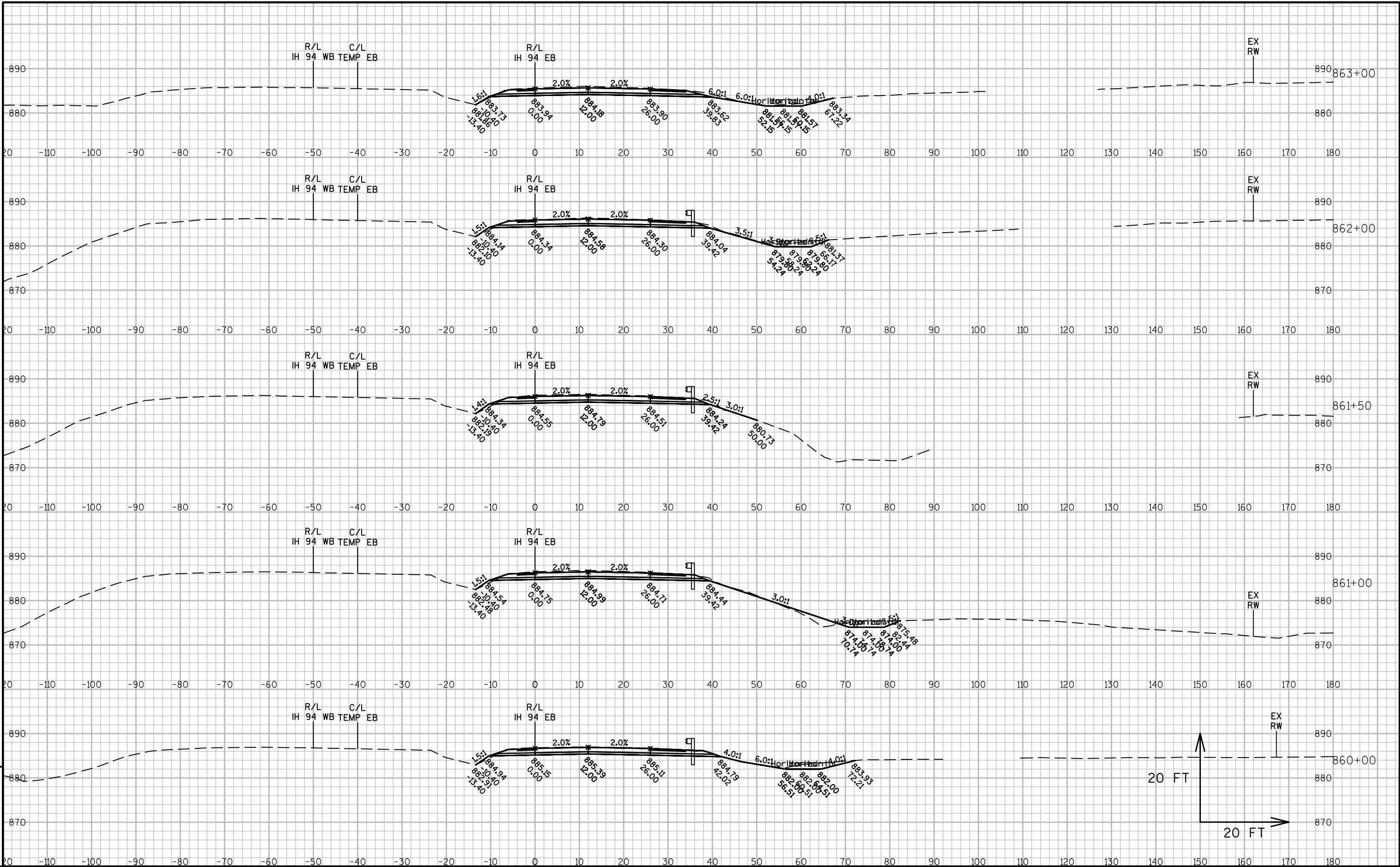


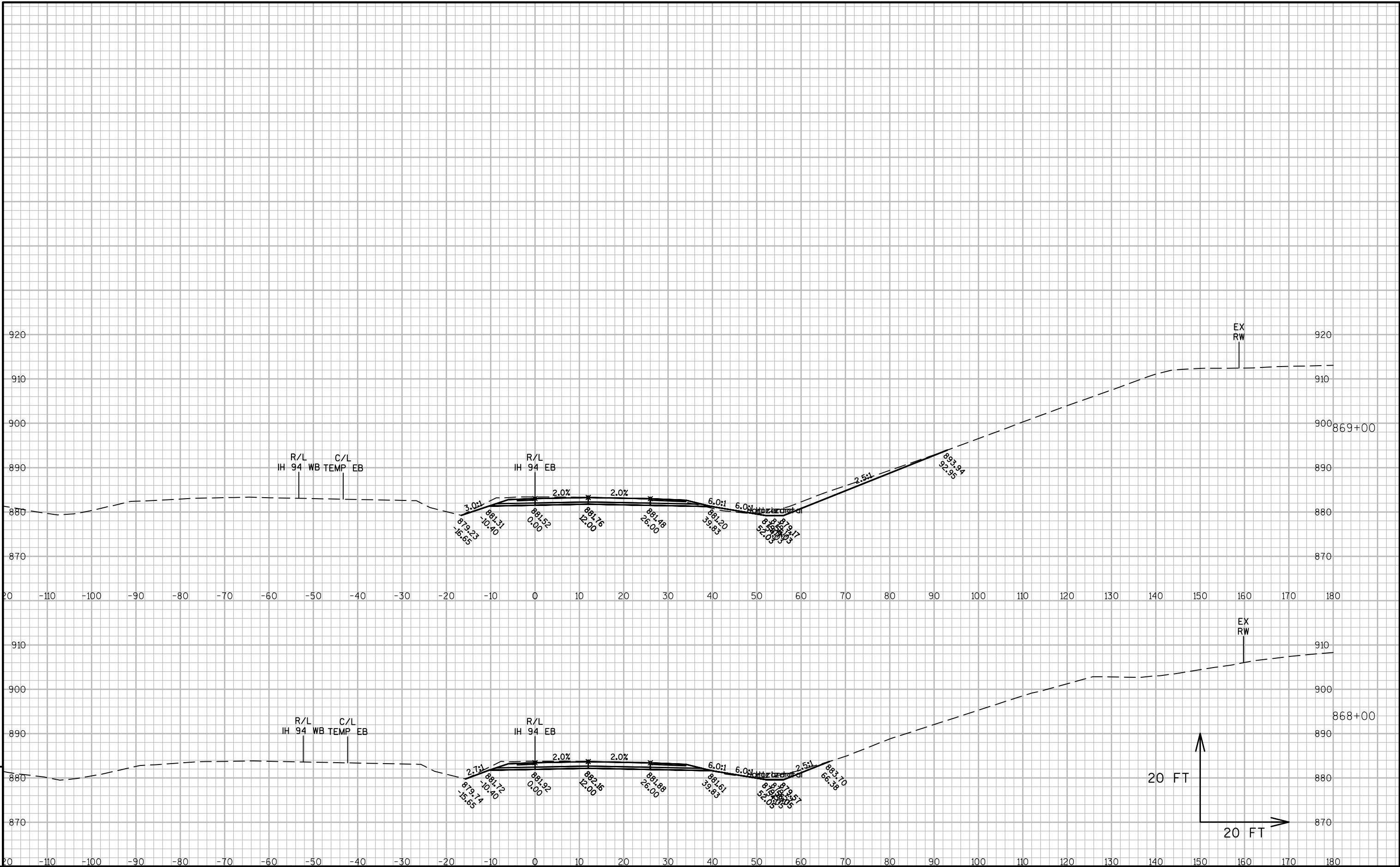


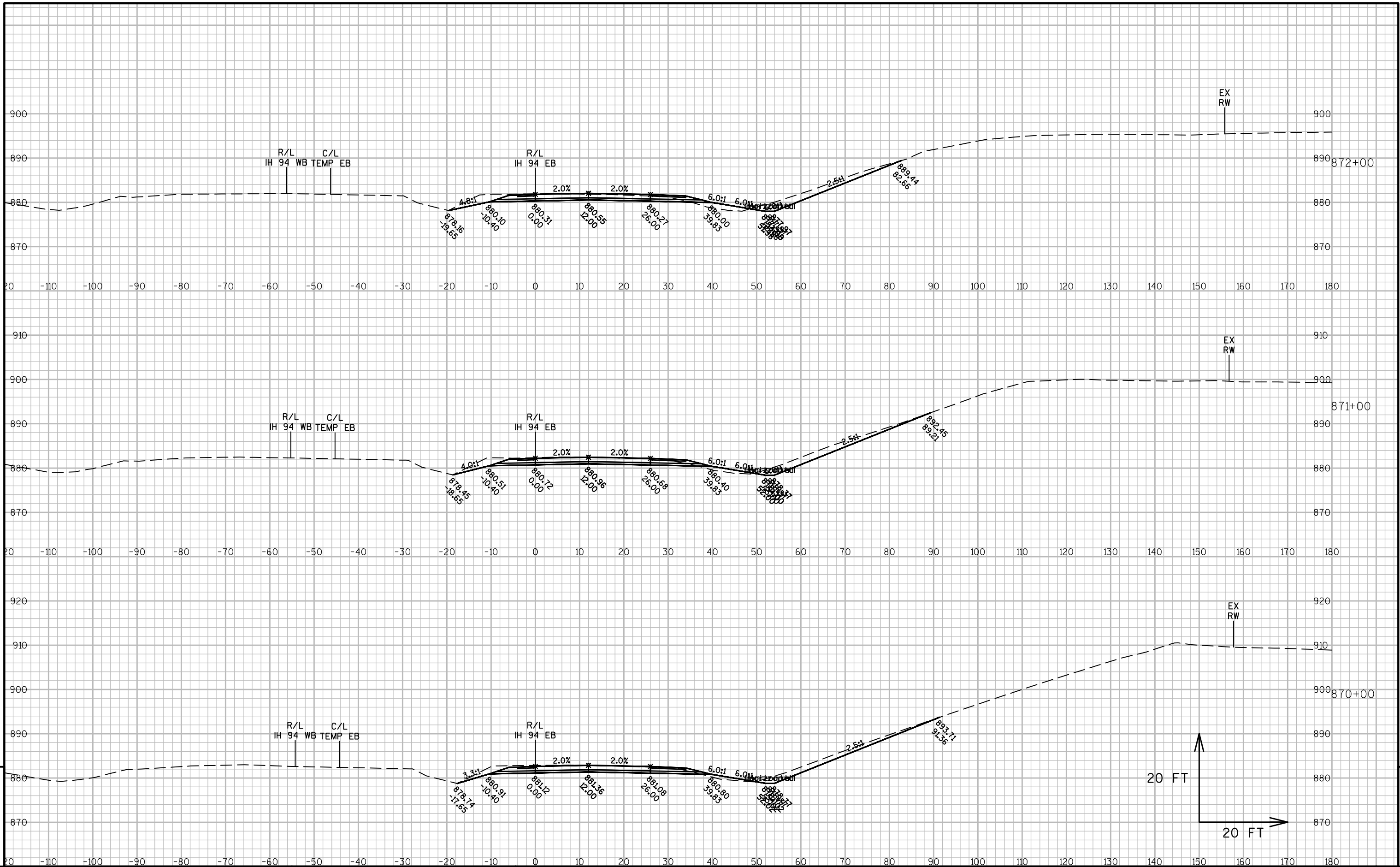


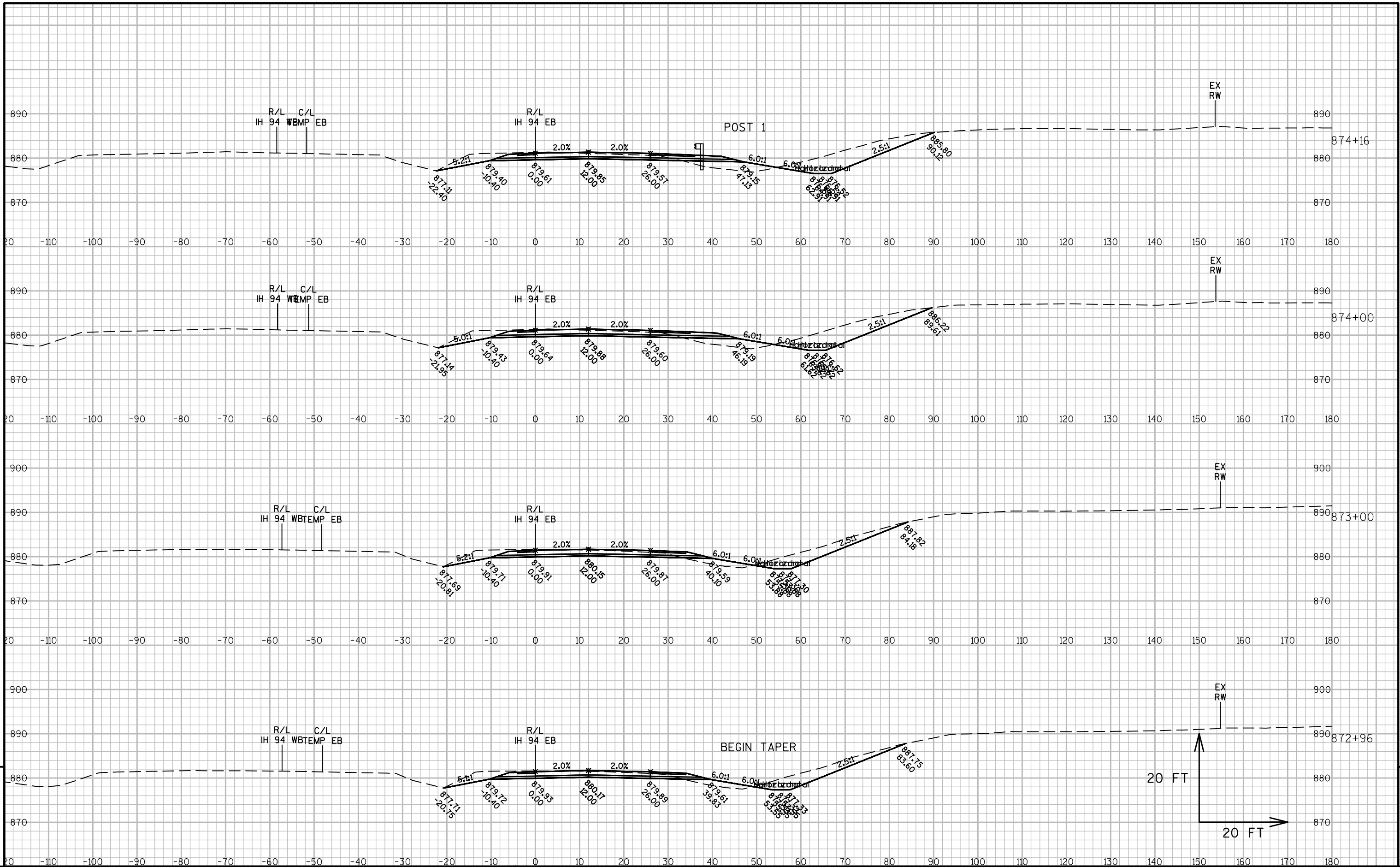


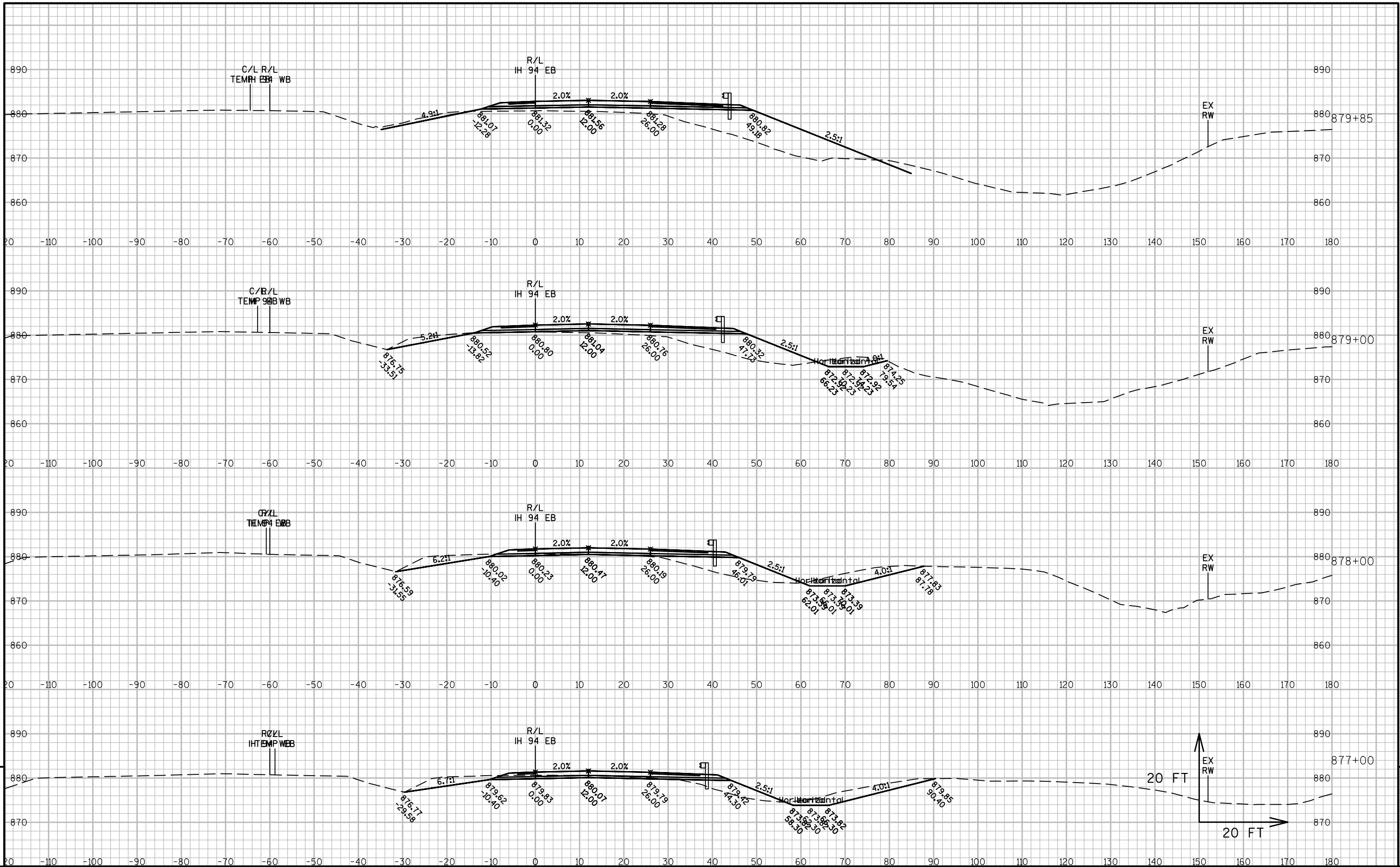


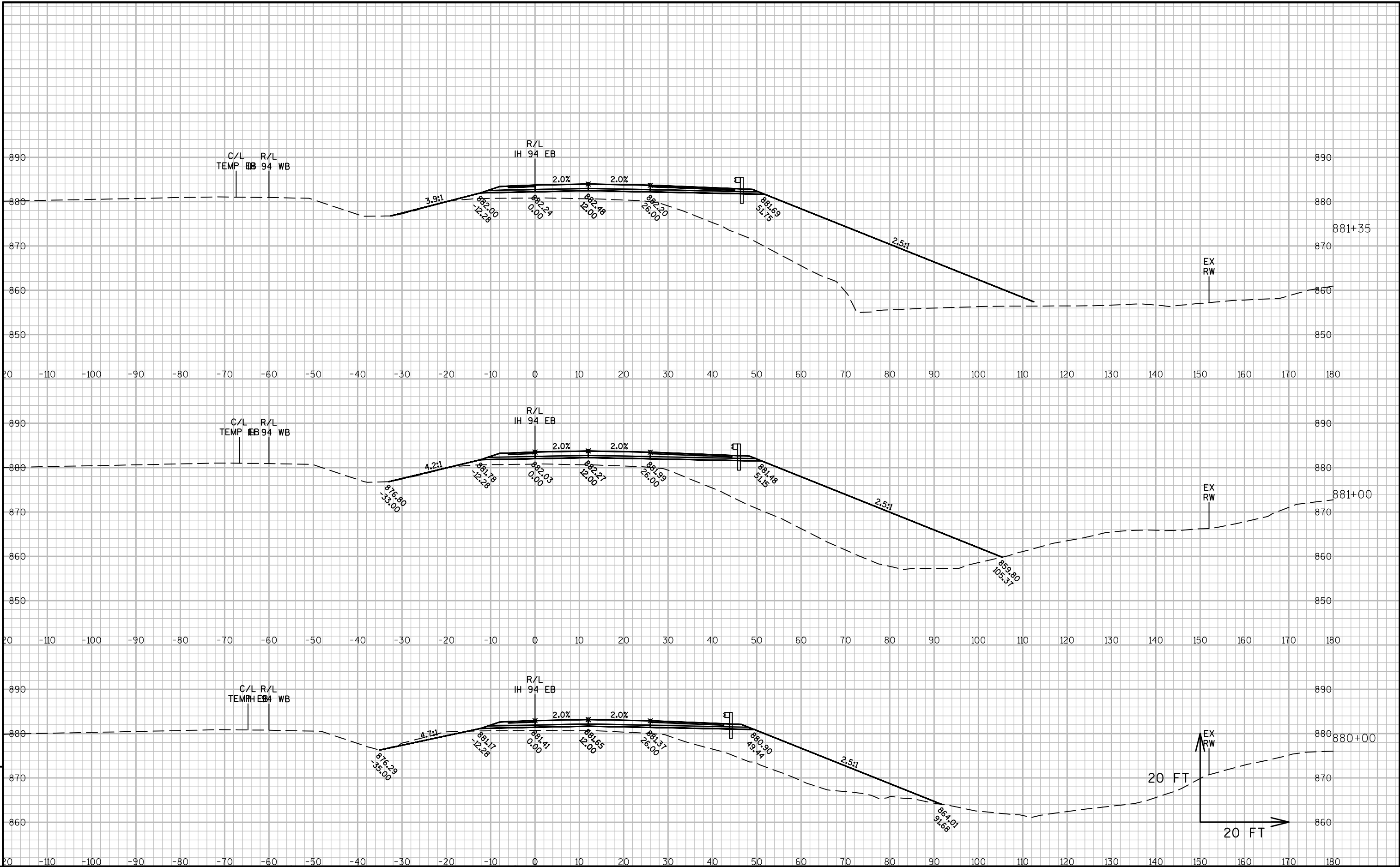


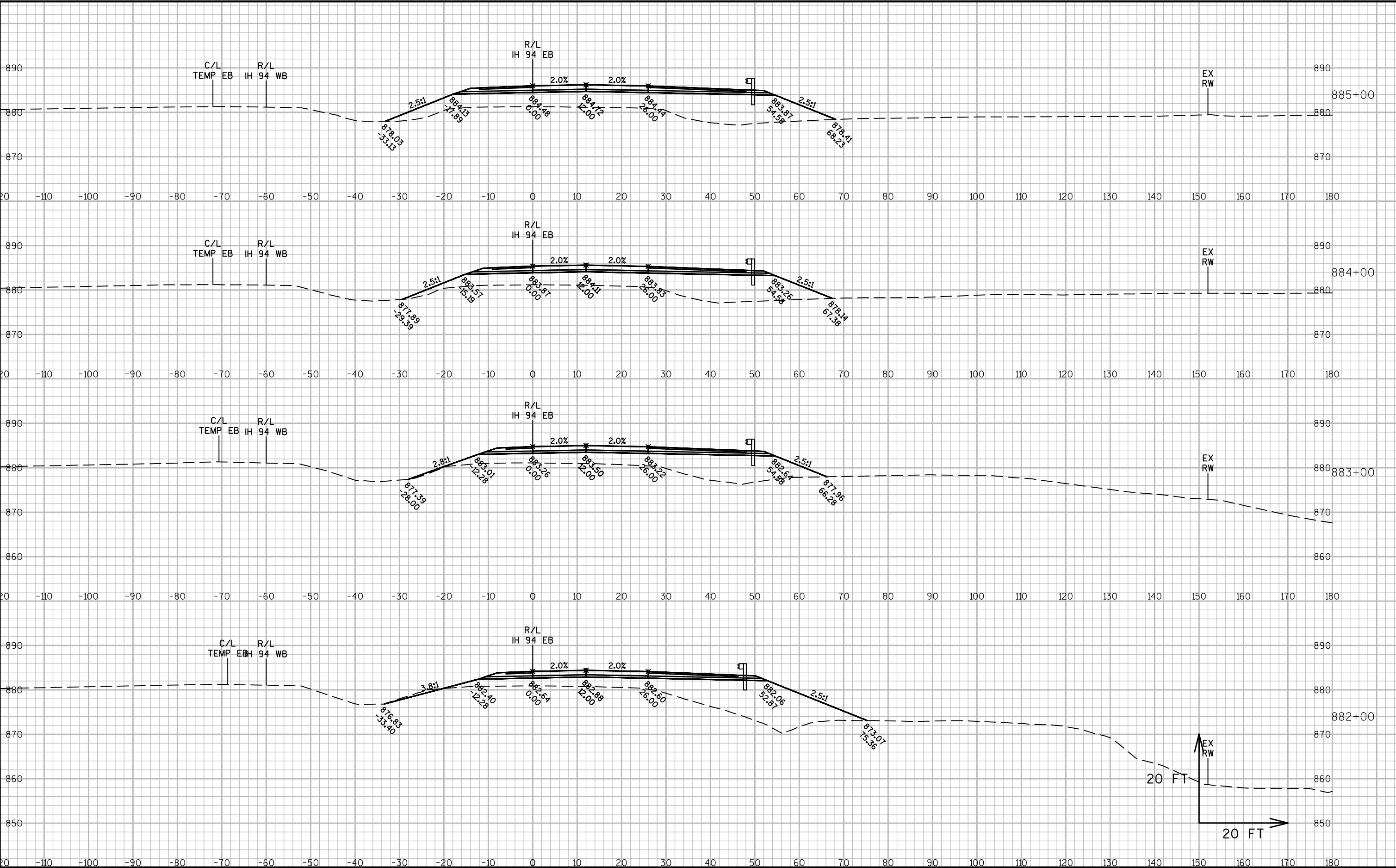


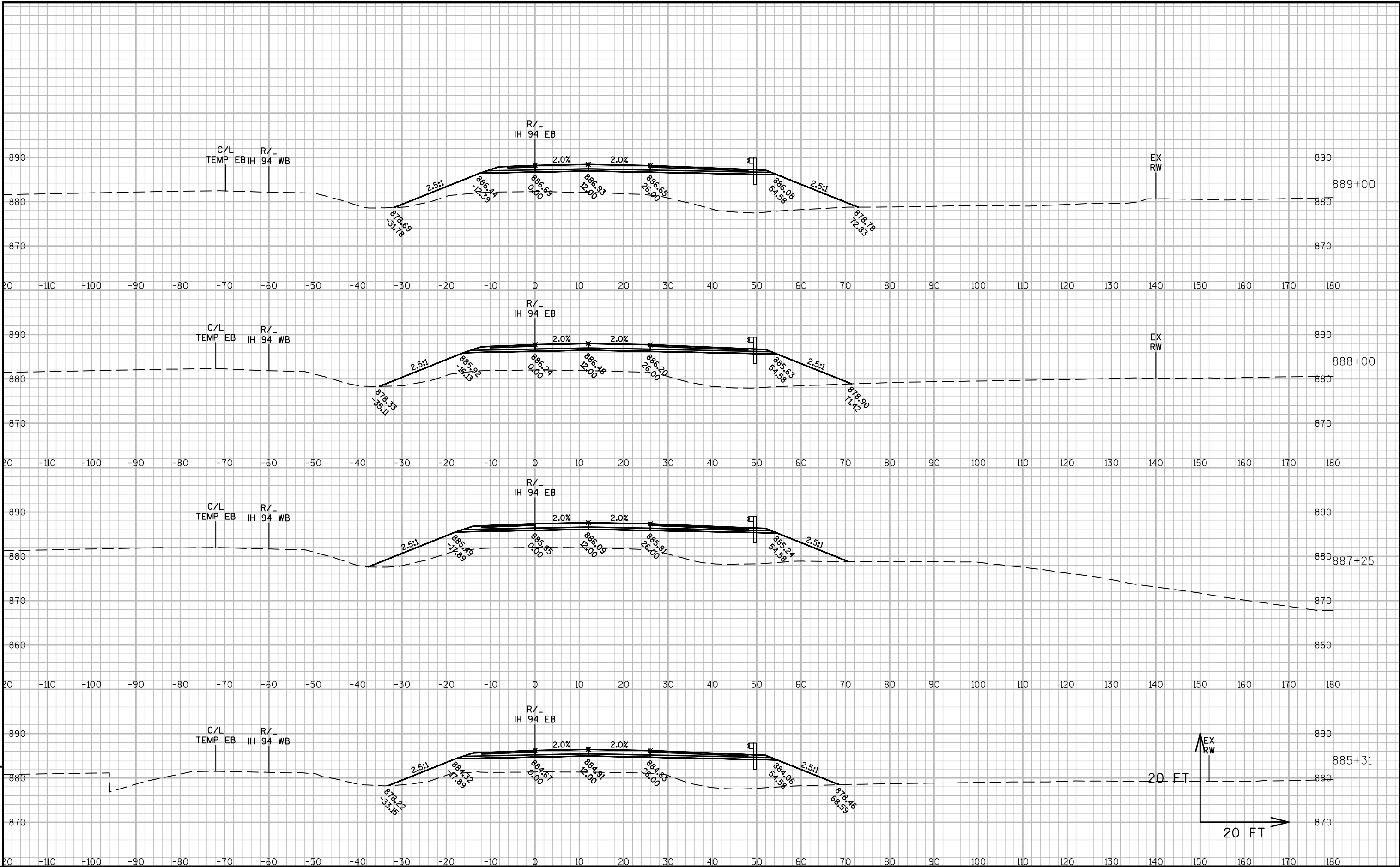


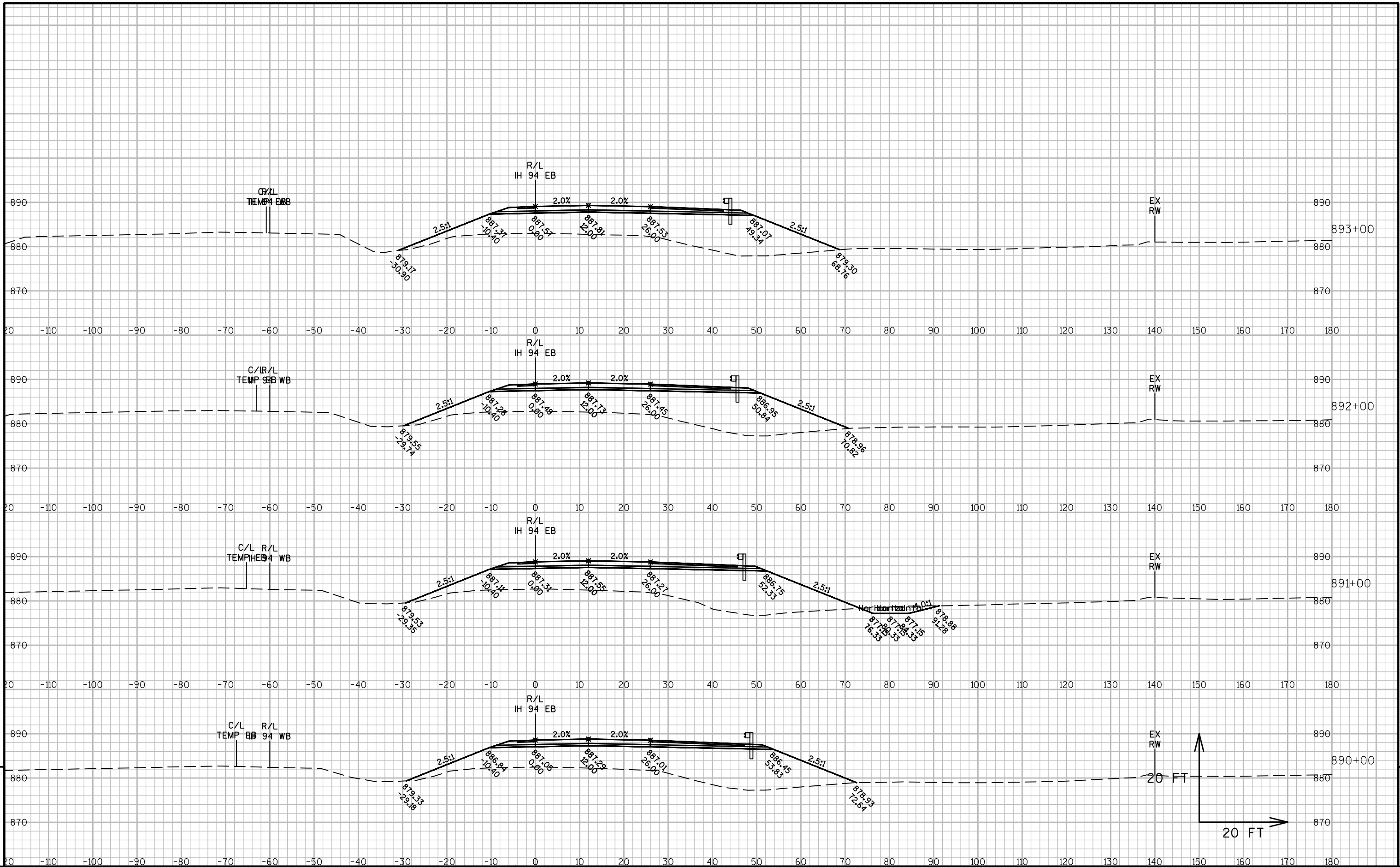


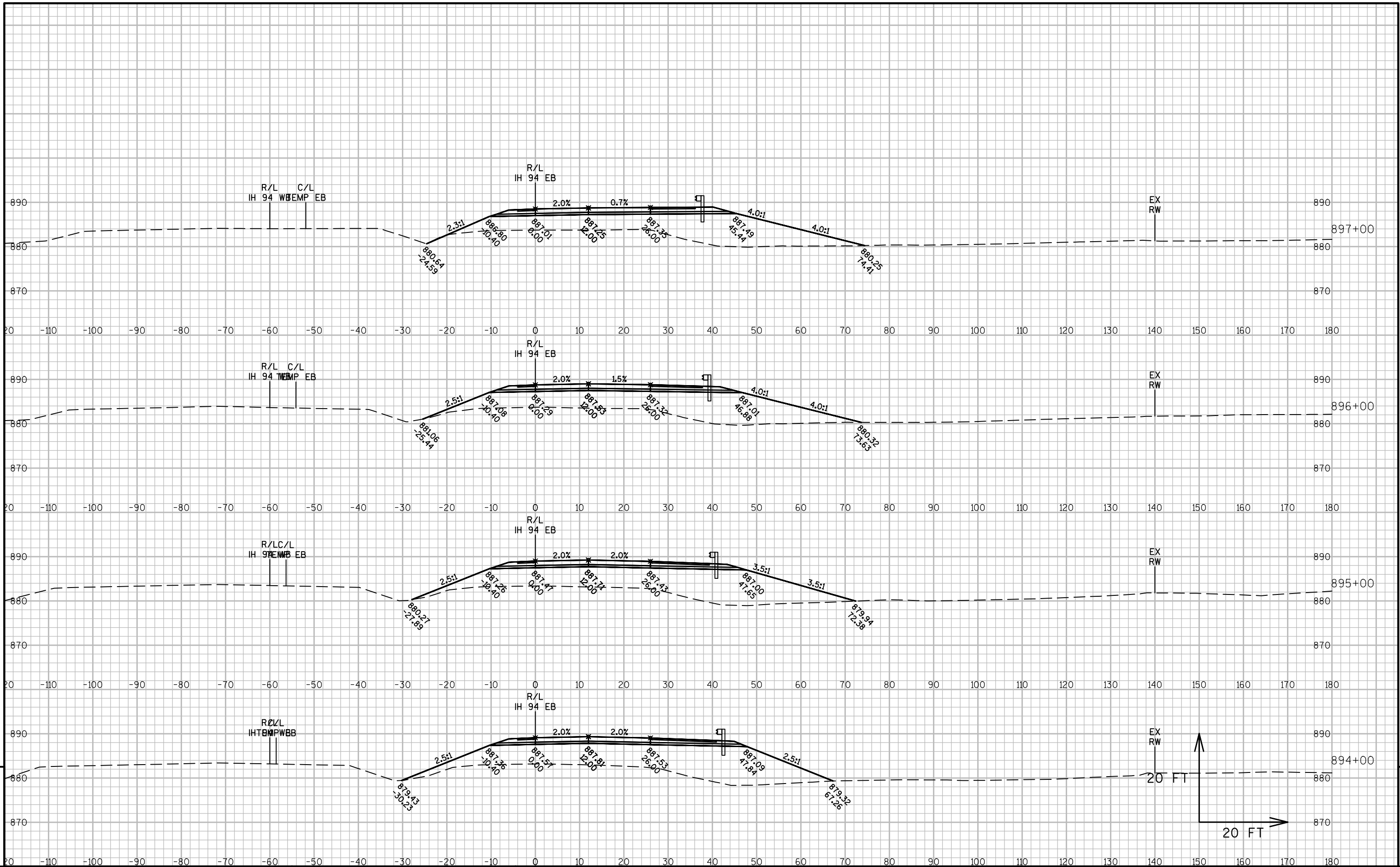


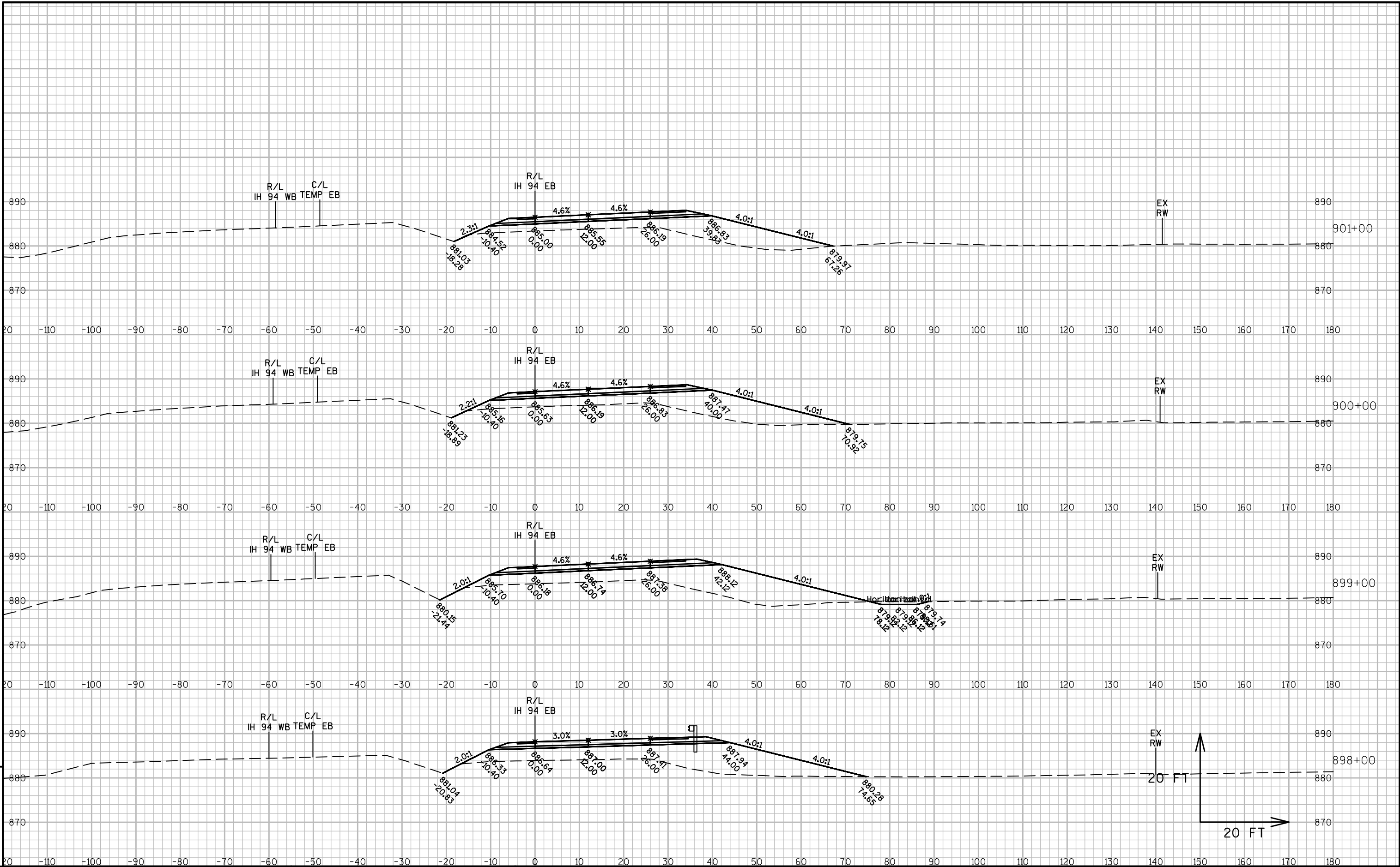


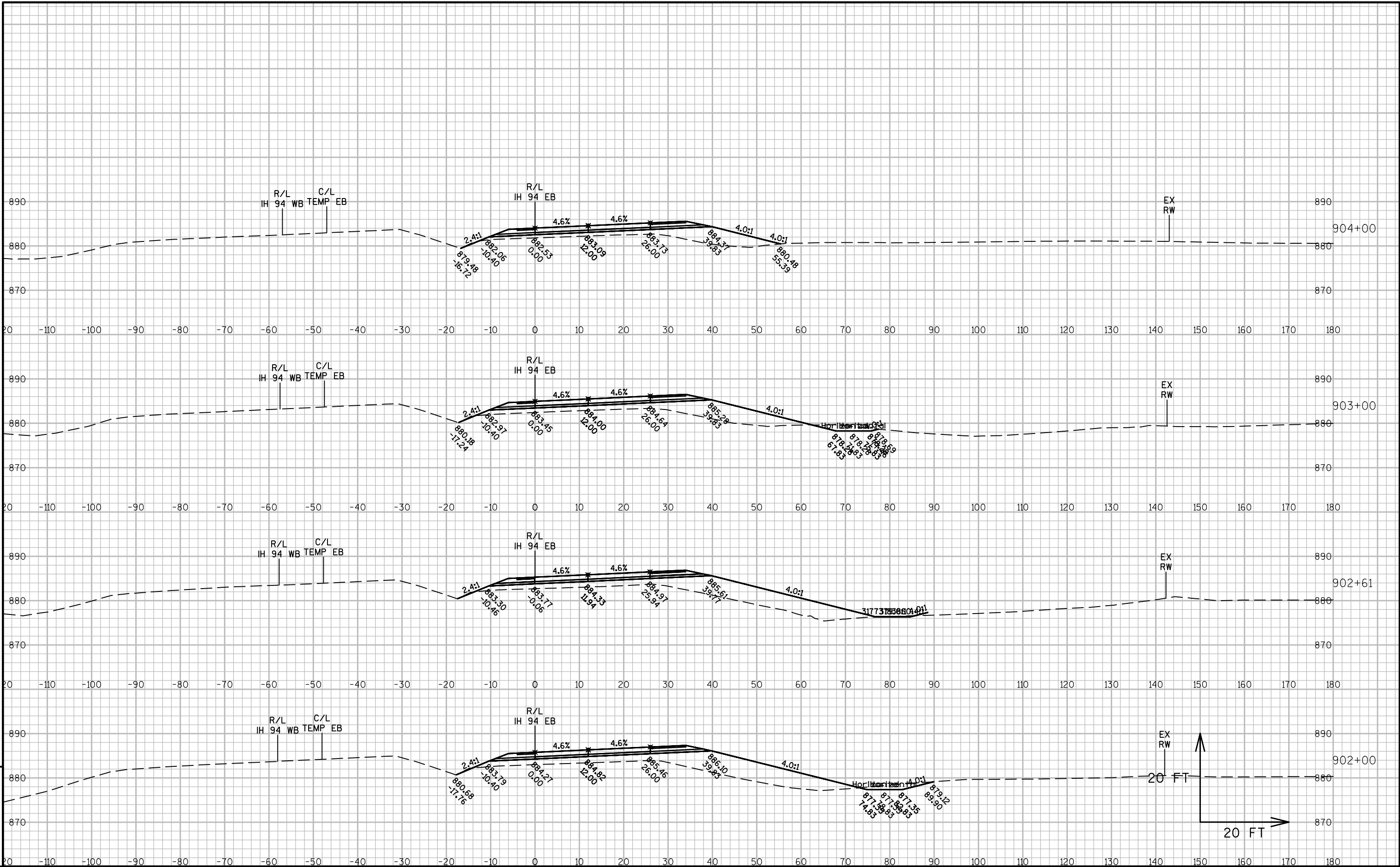


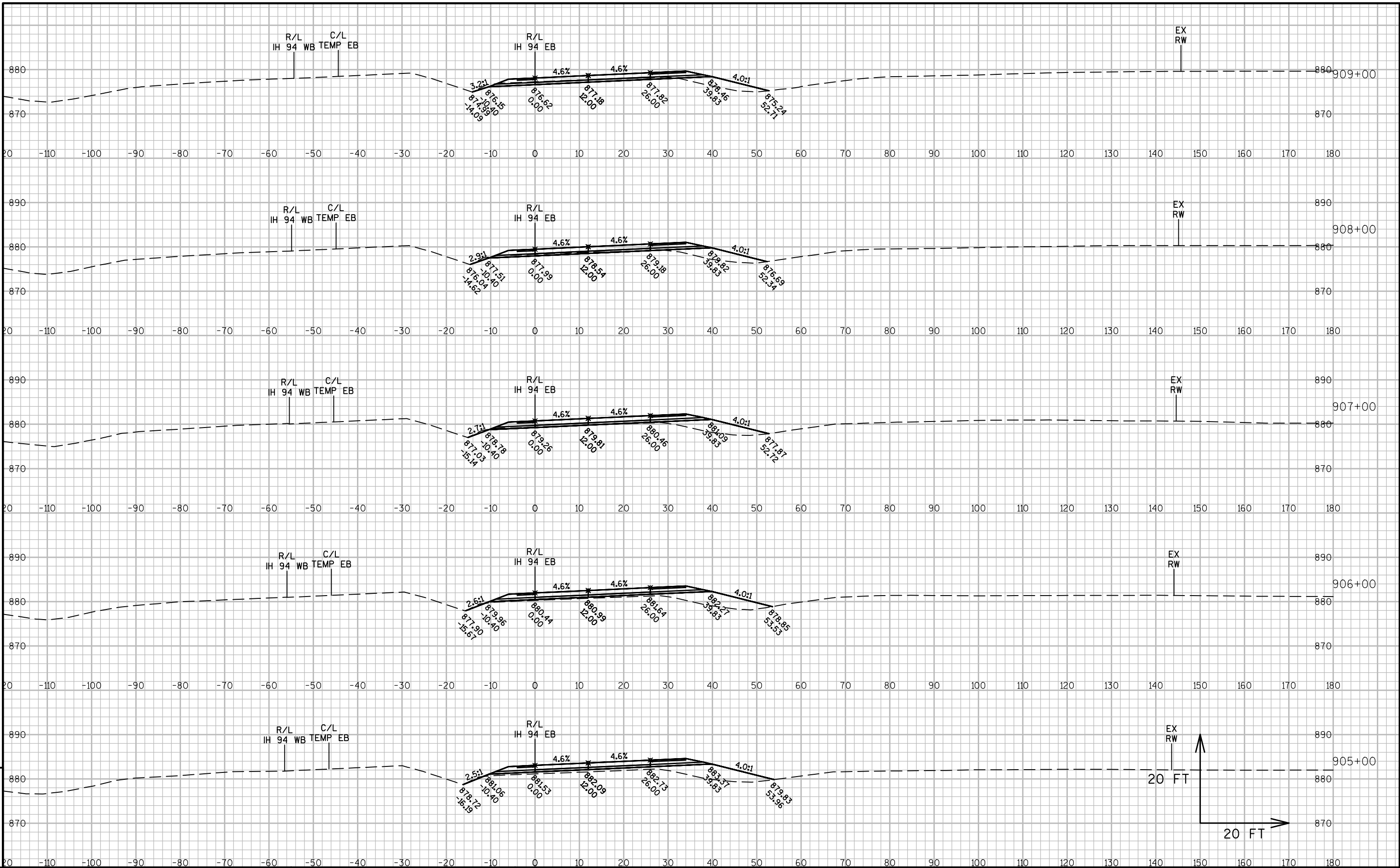


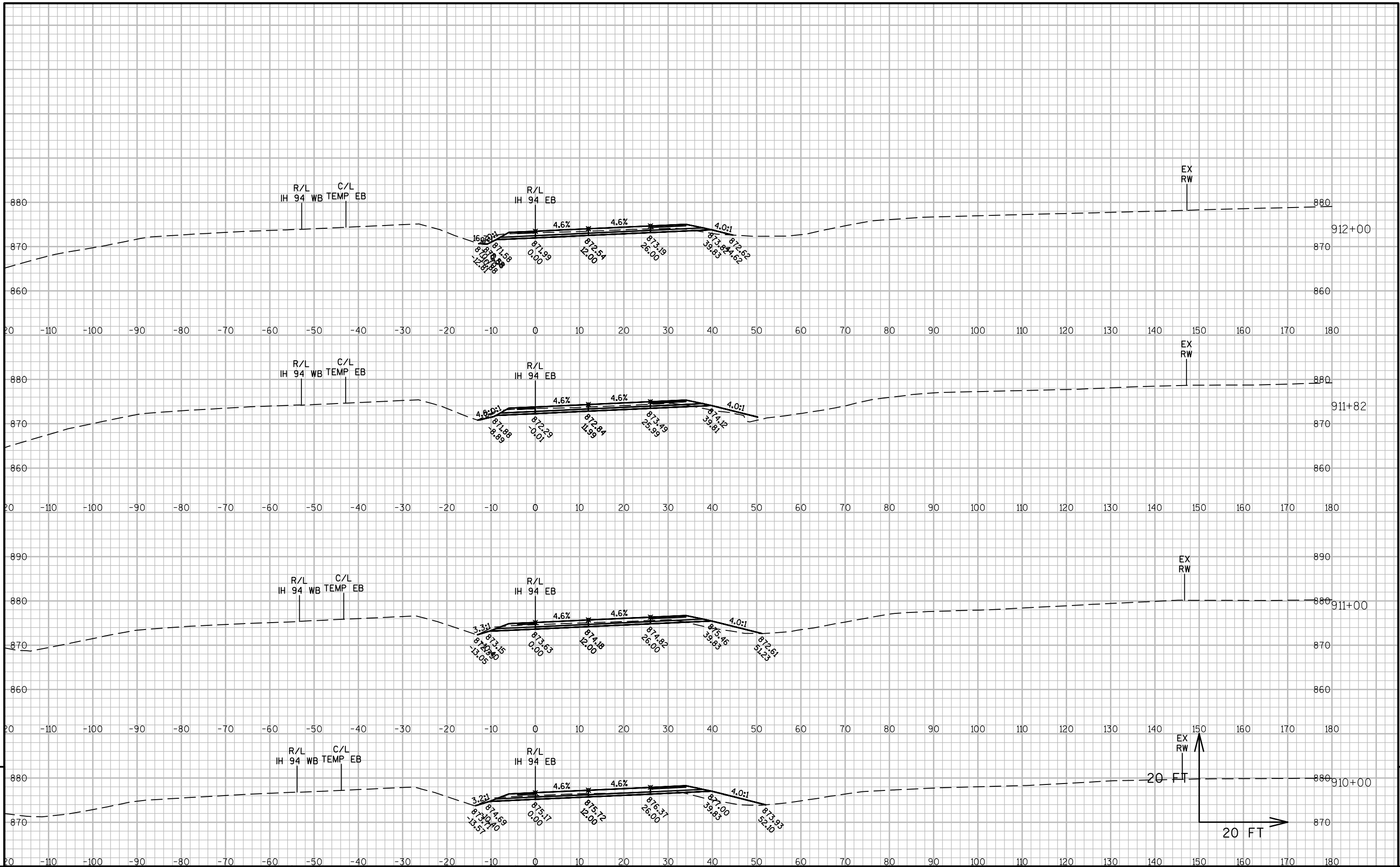


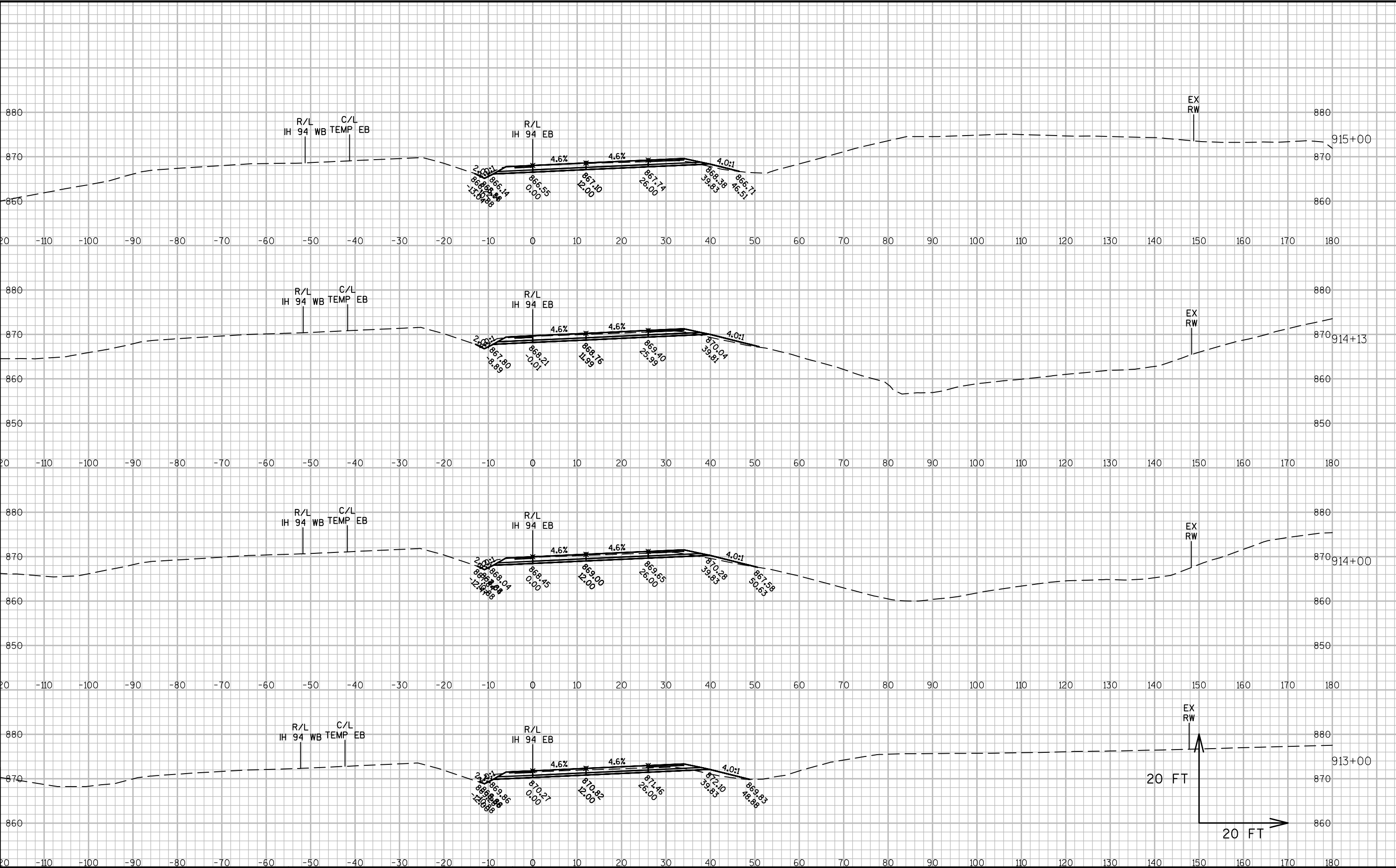


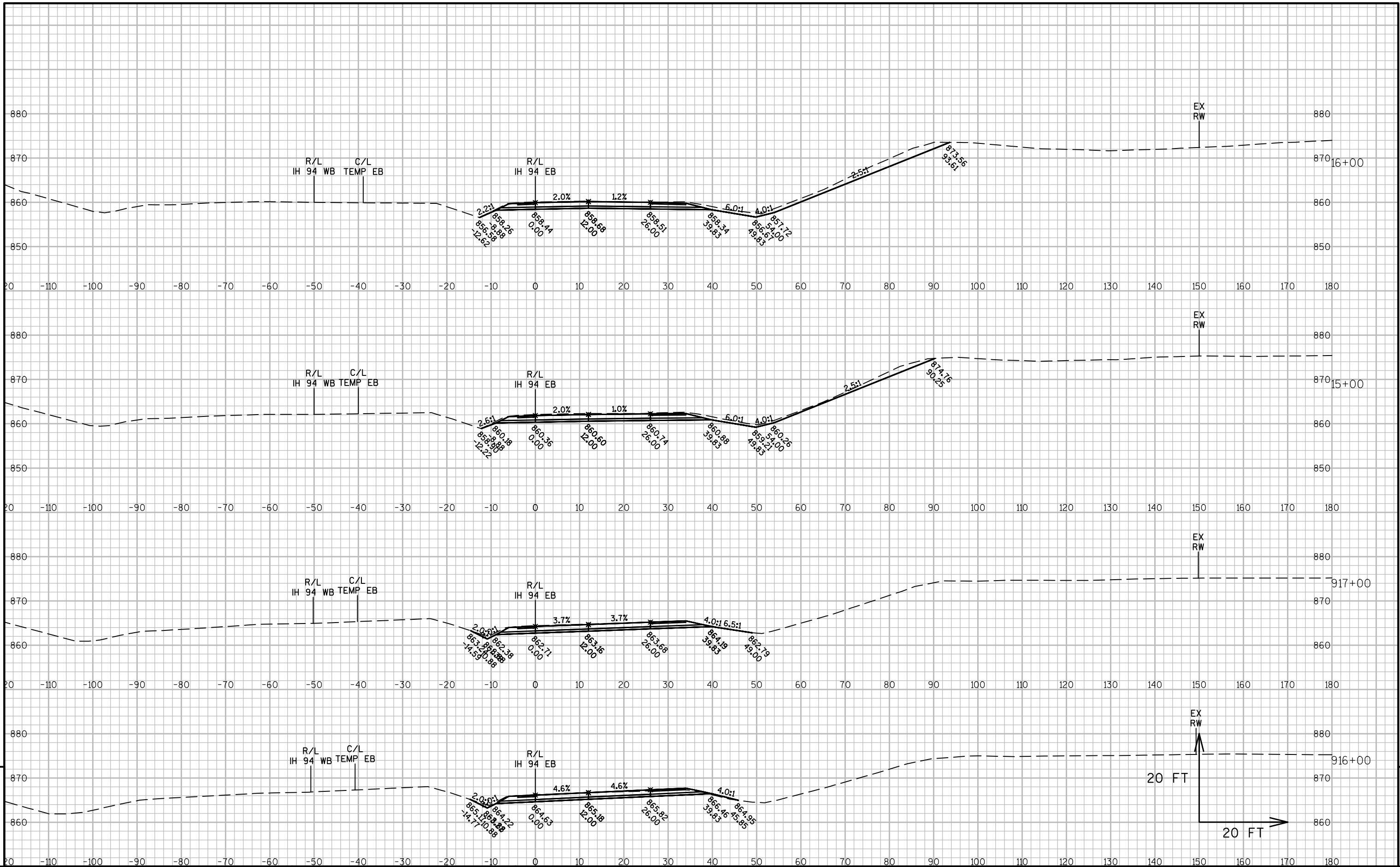


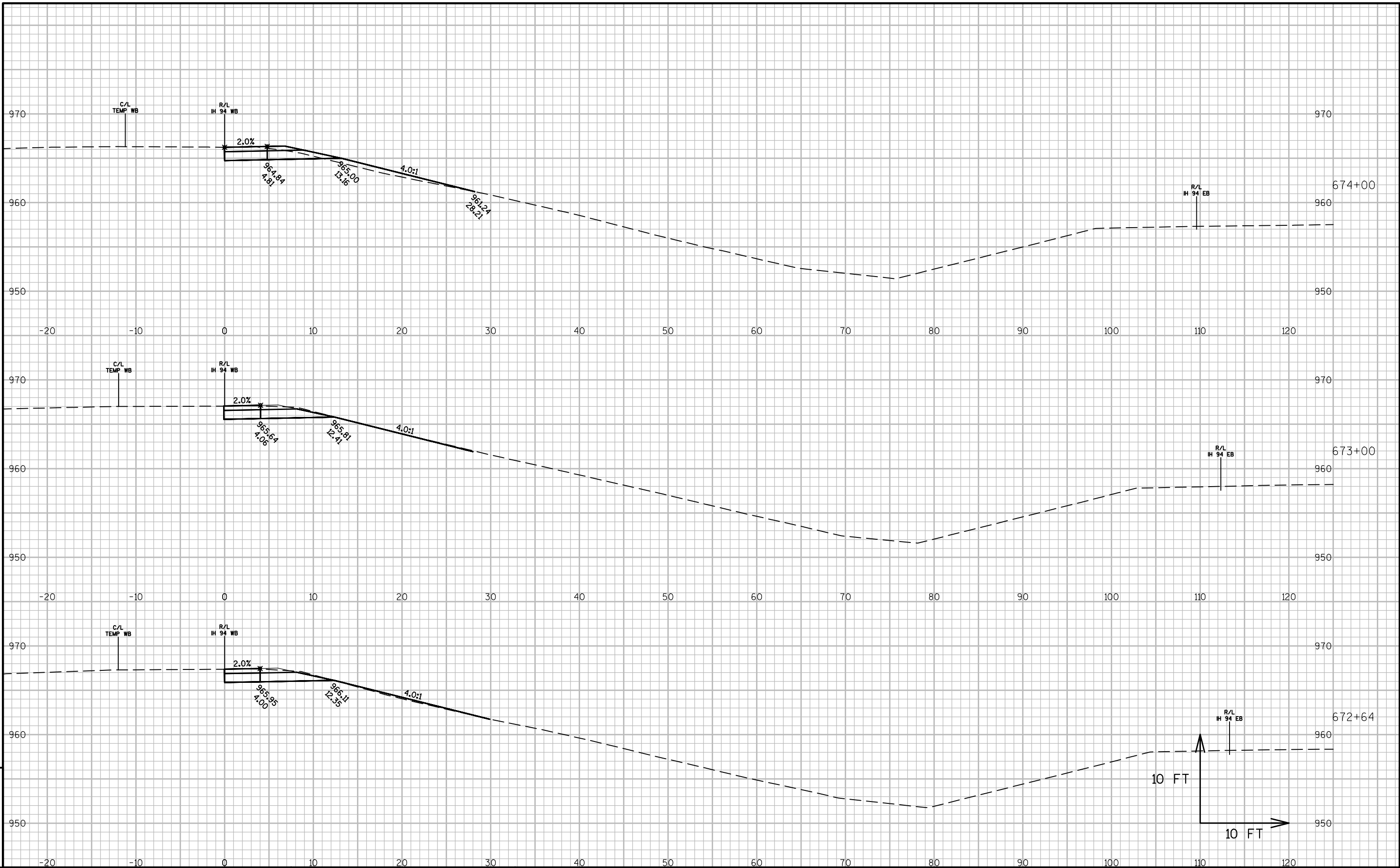


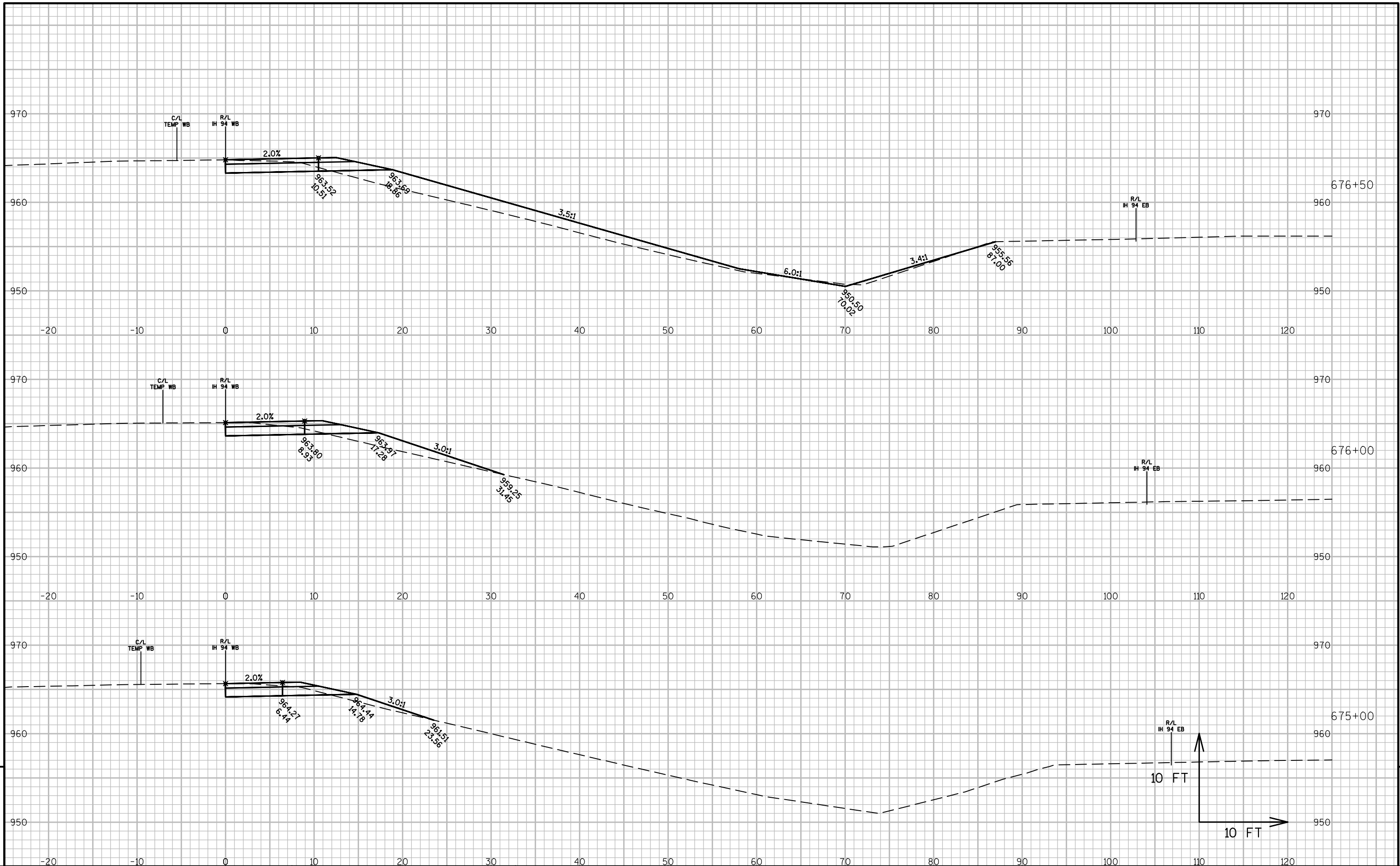


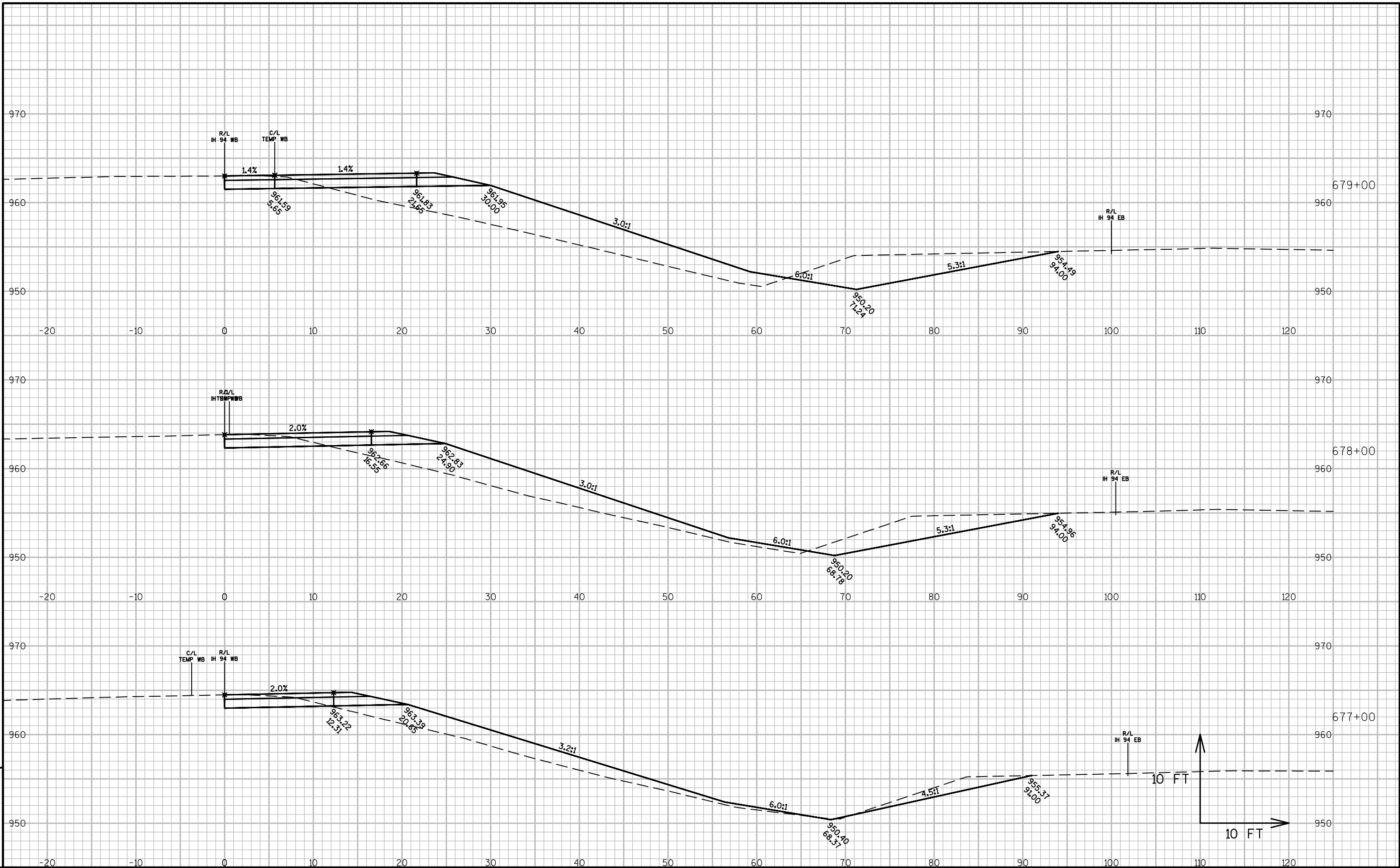


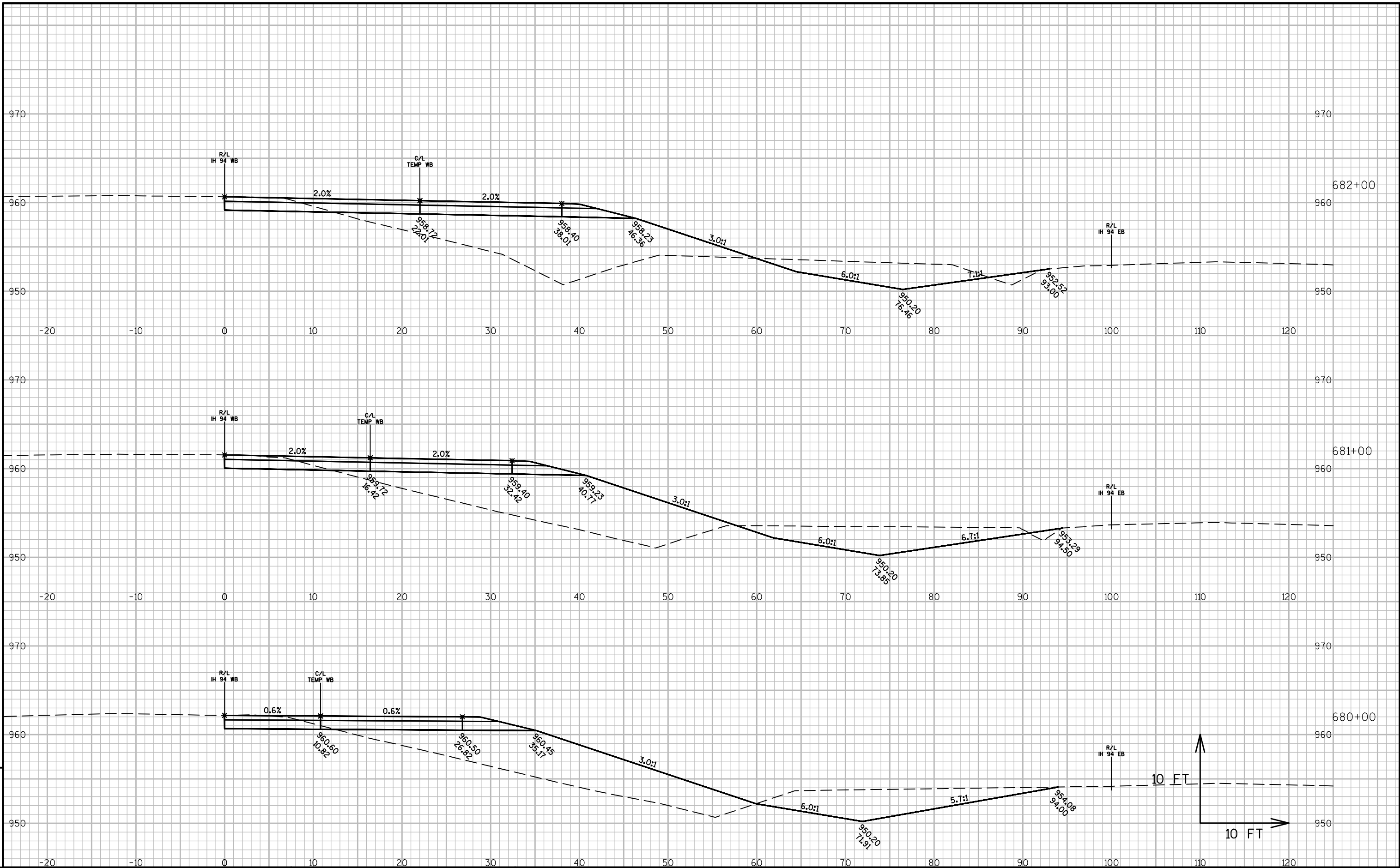


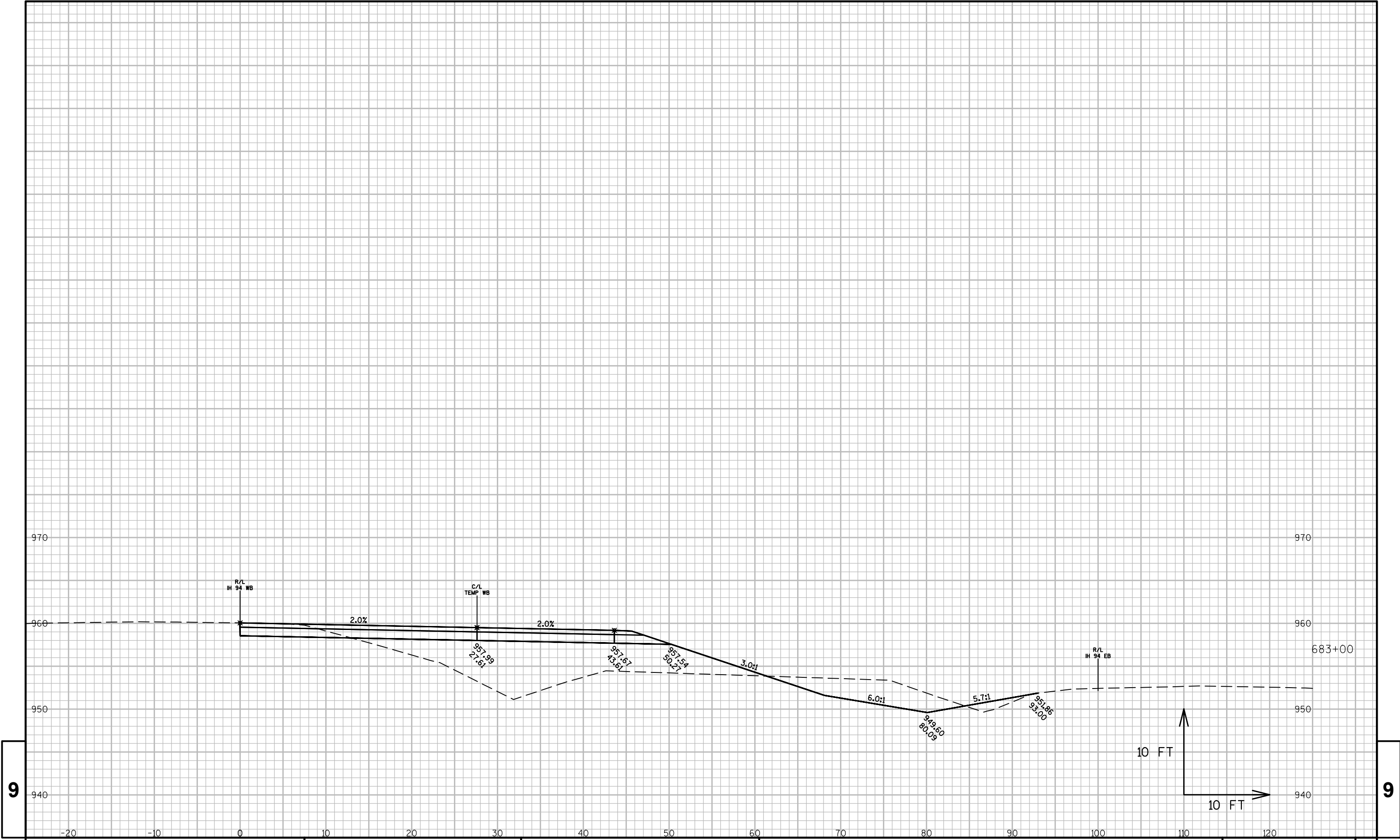






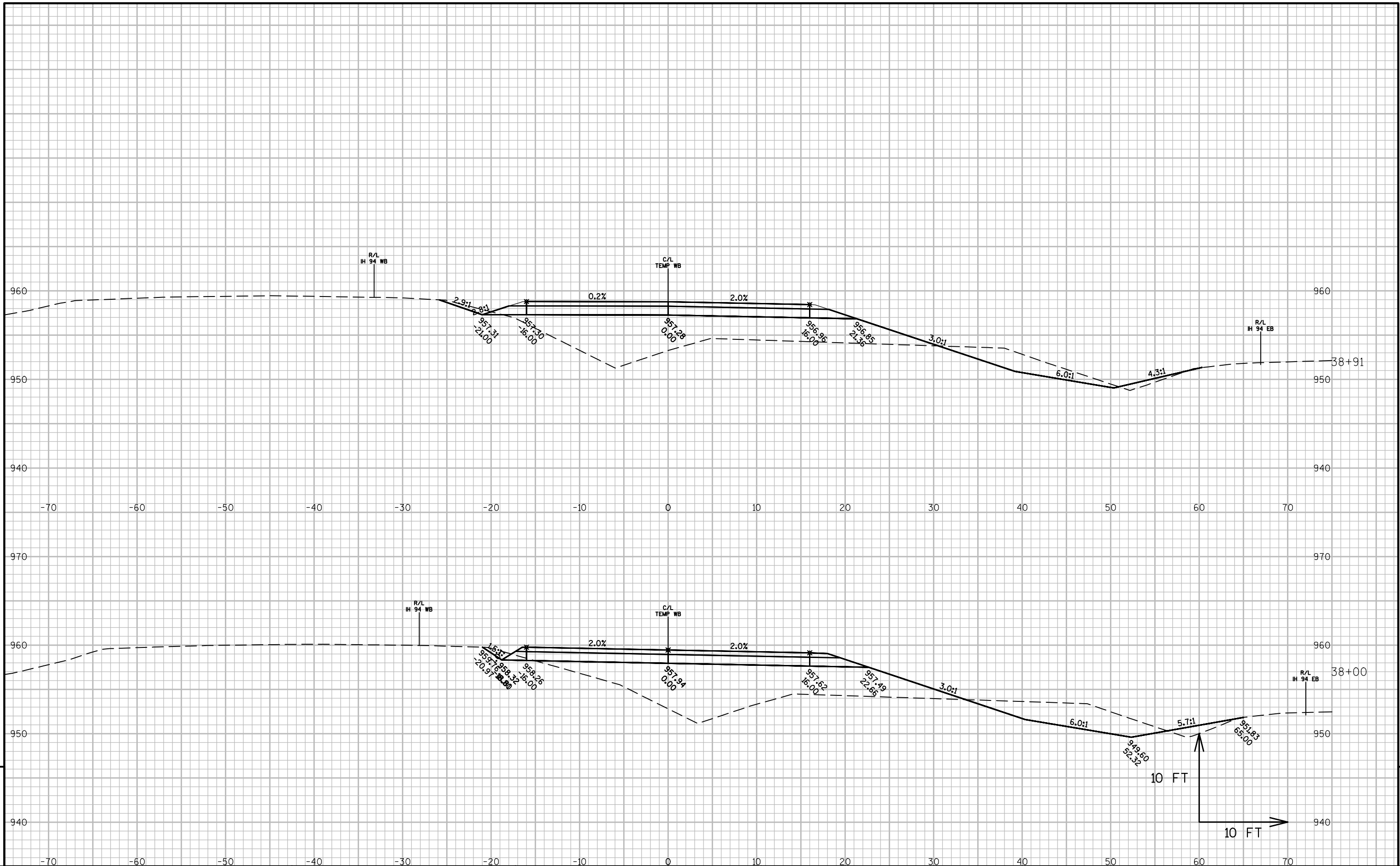


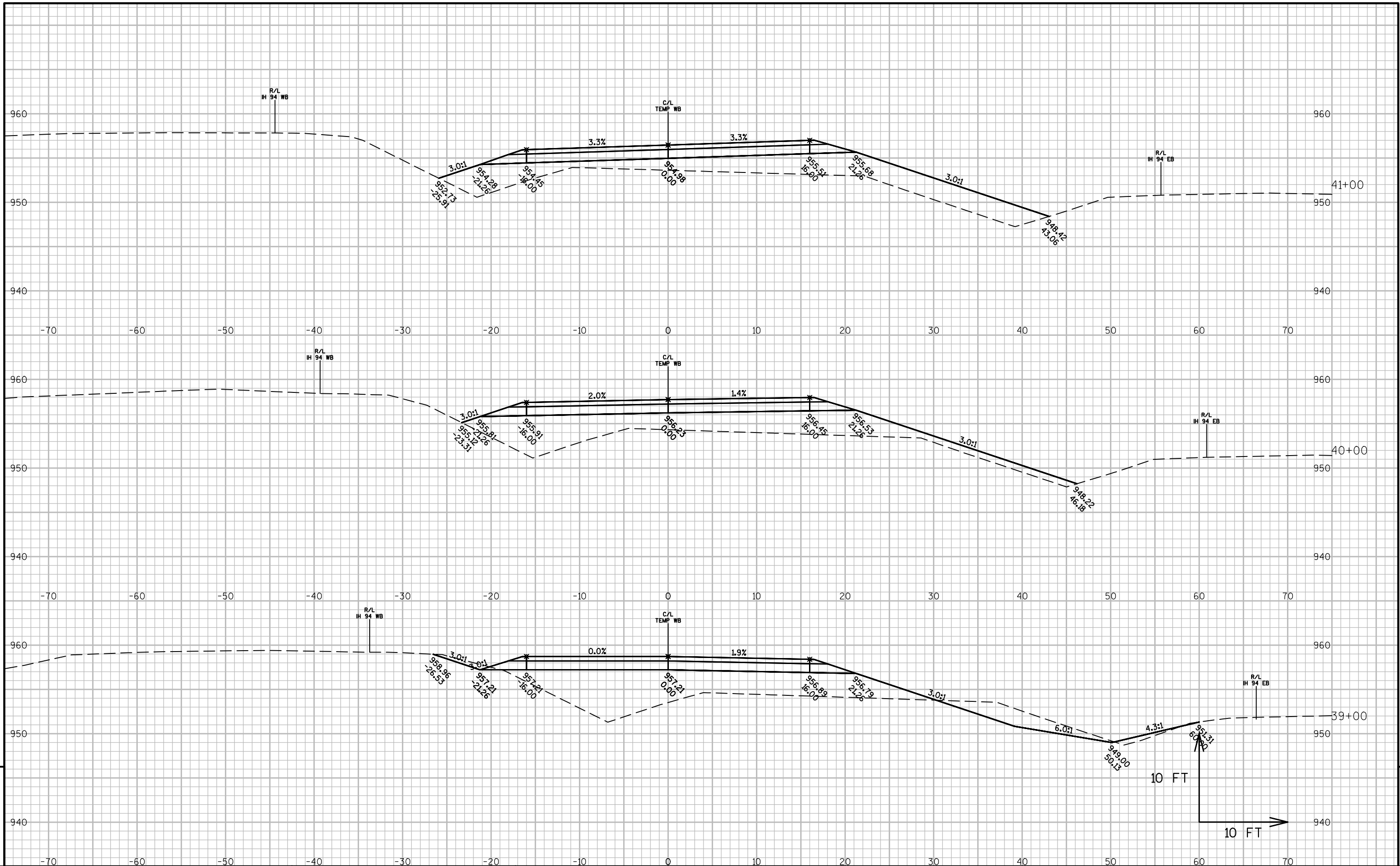


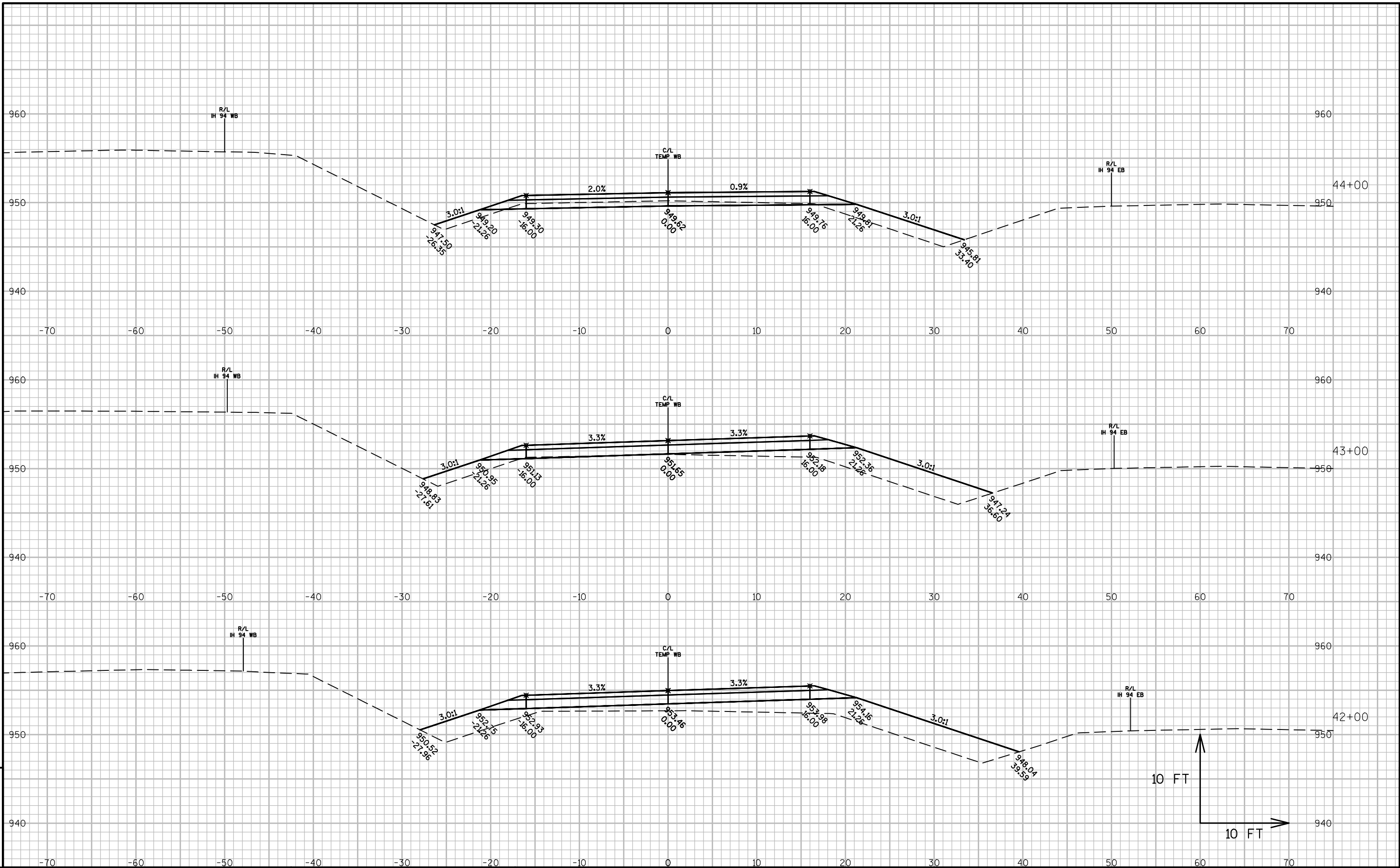


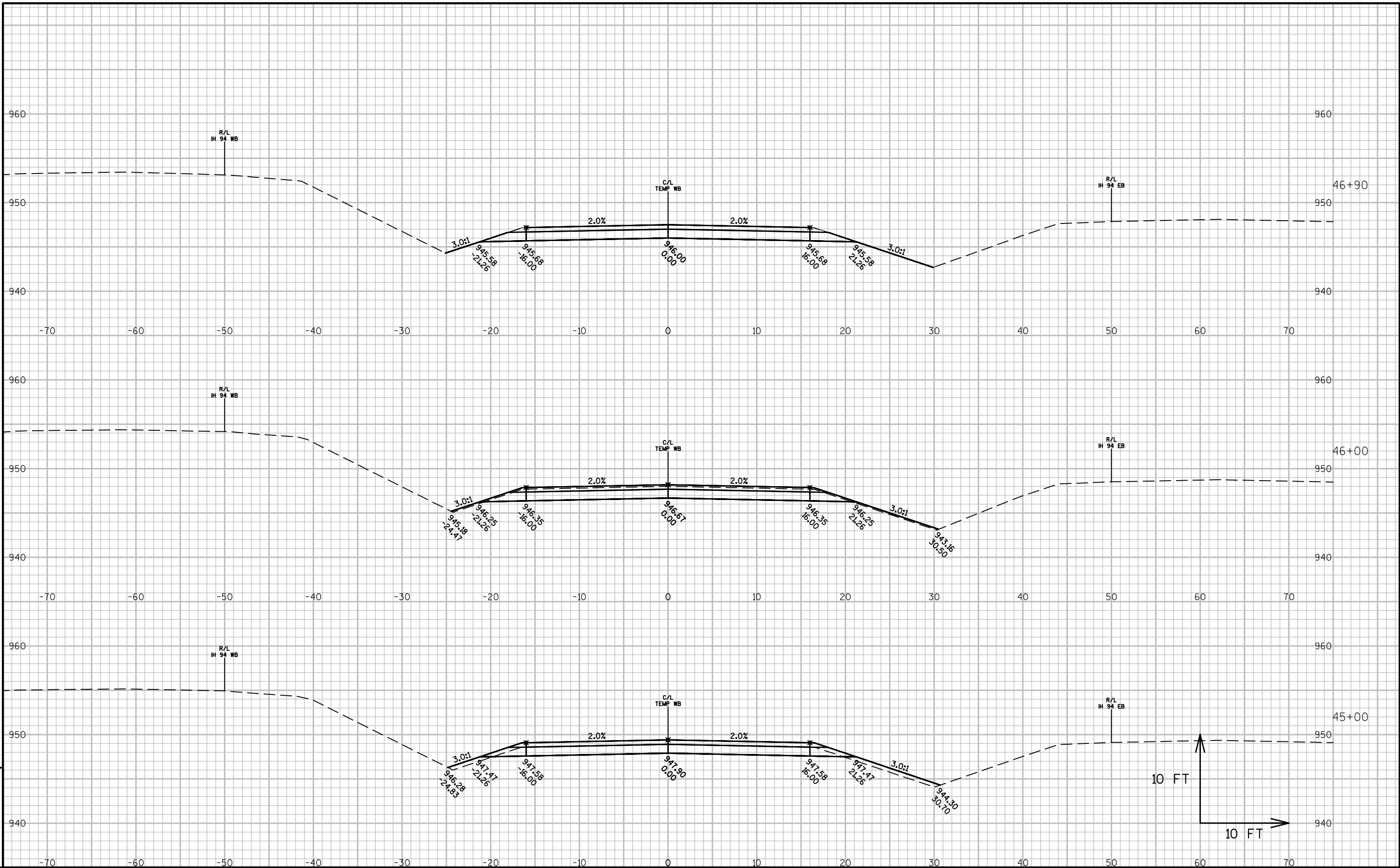
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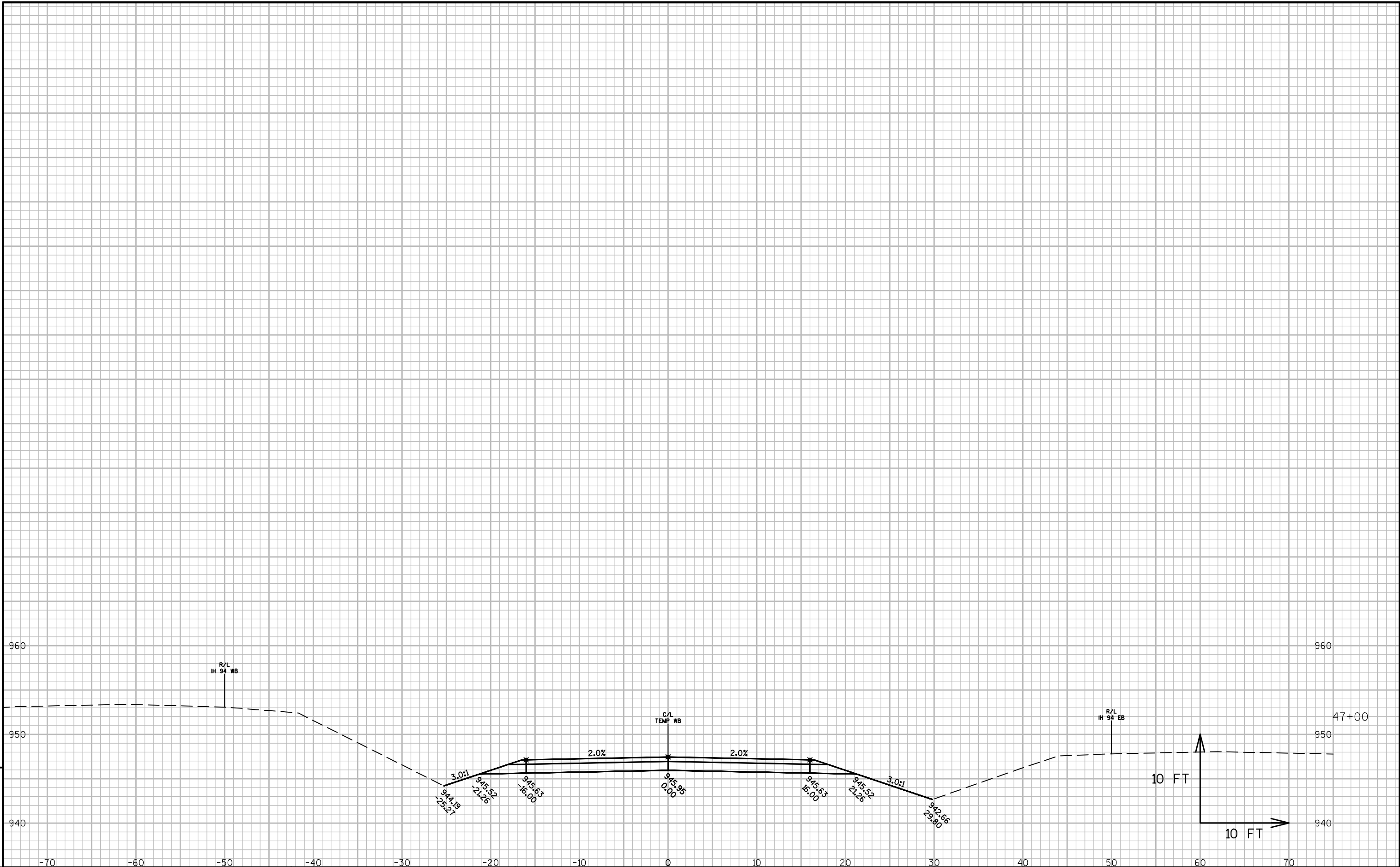




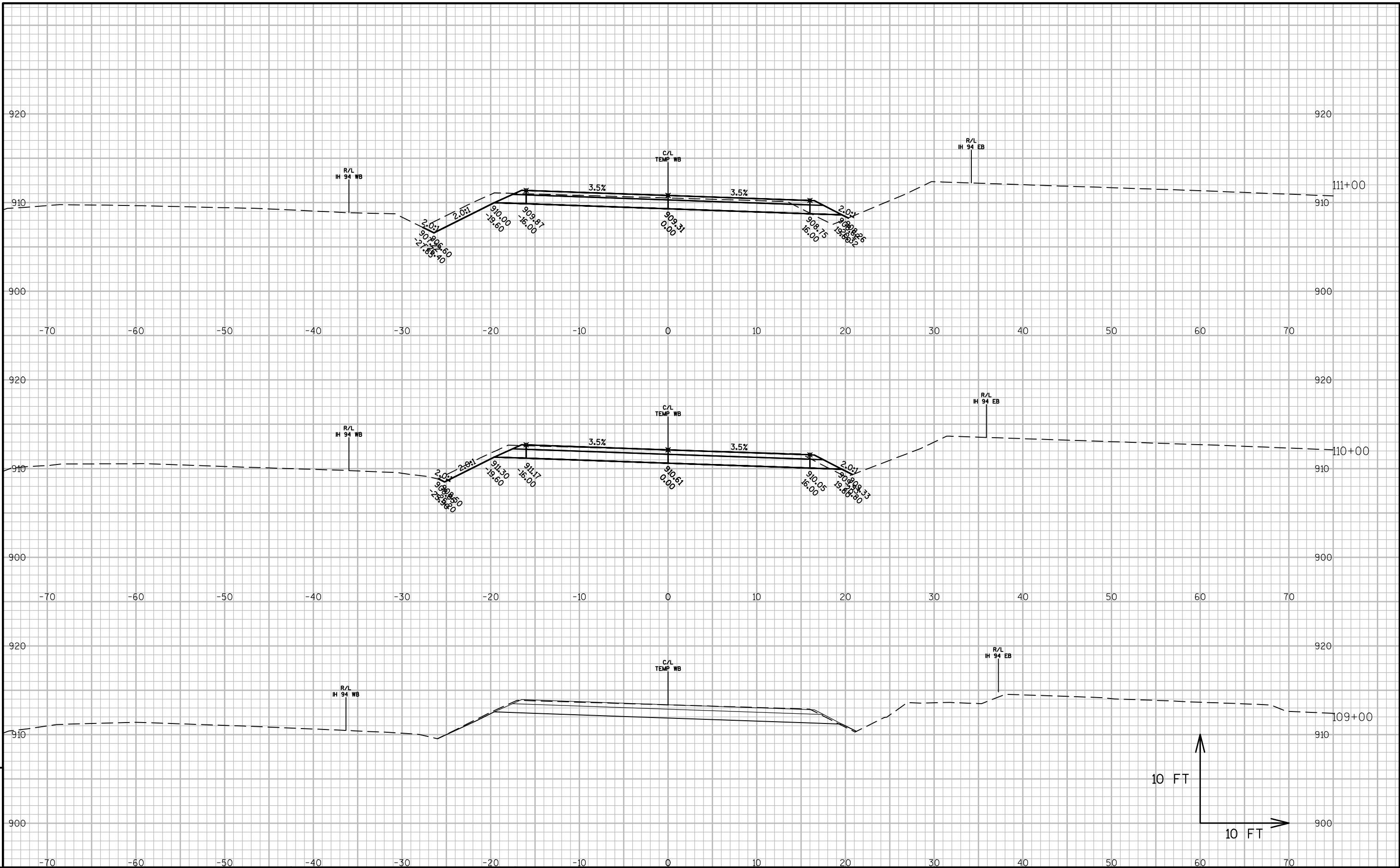


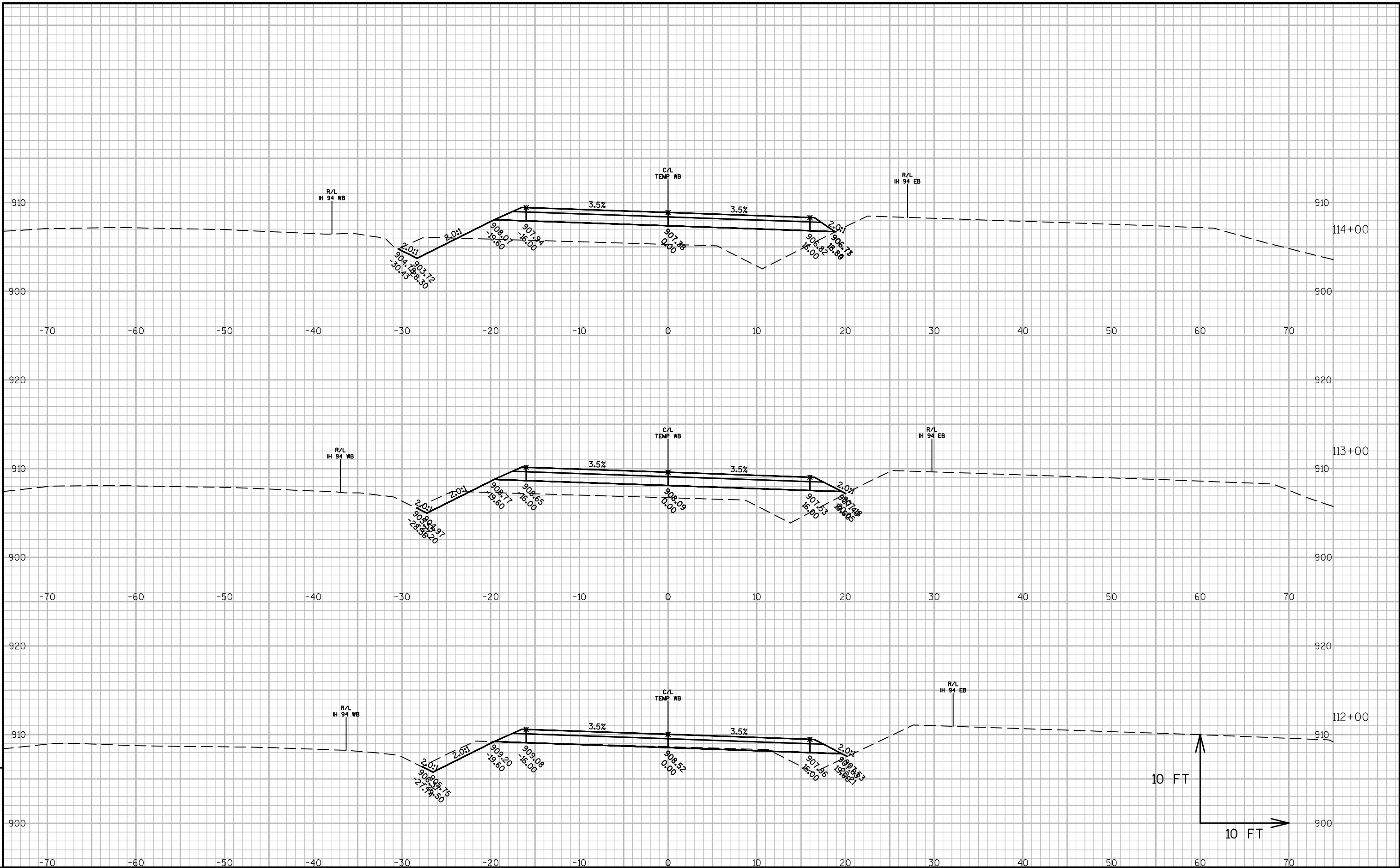


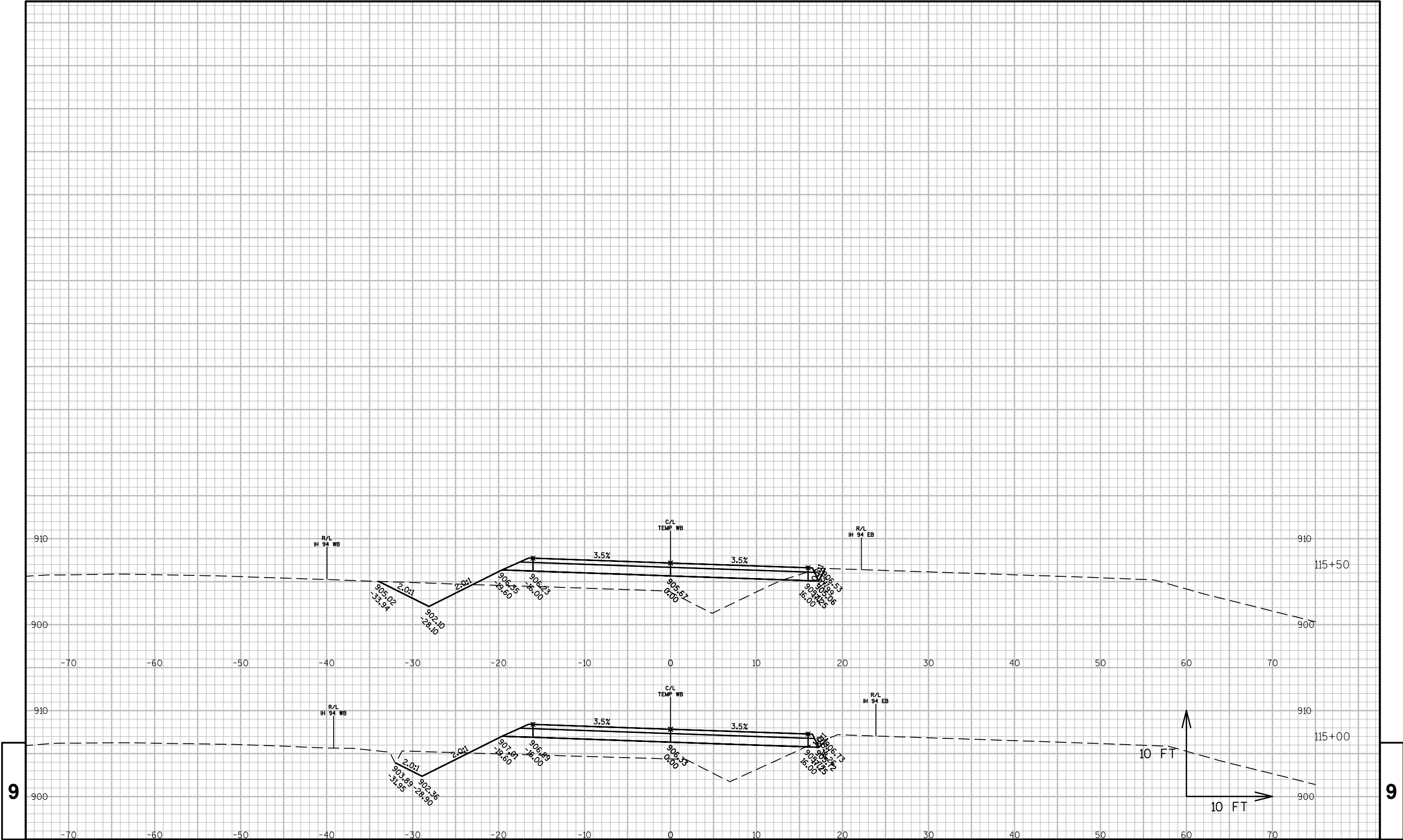
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PROJECT NO:1022-08-72

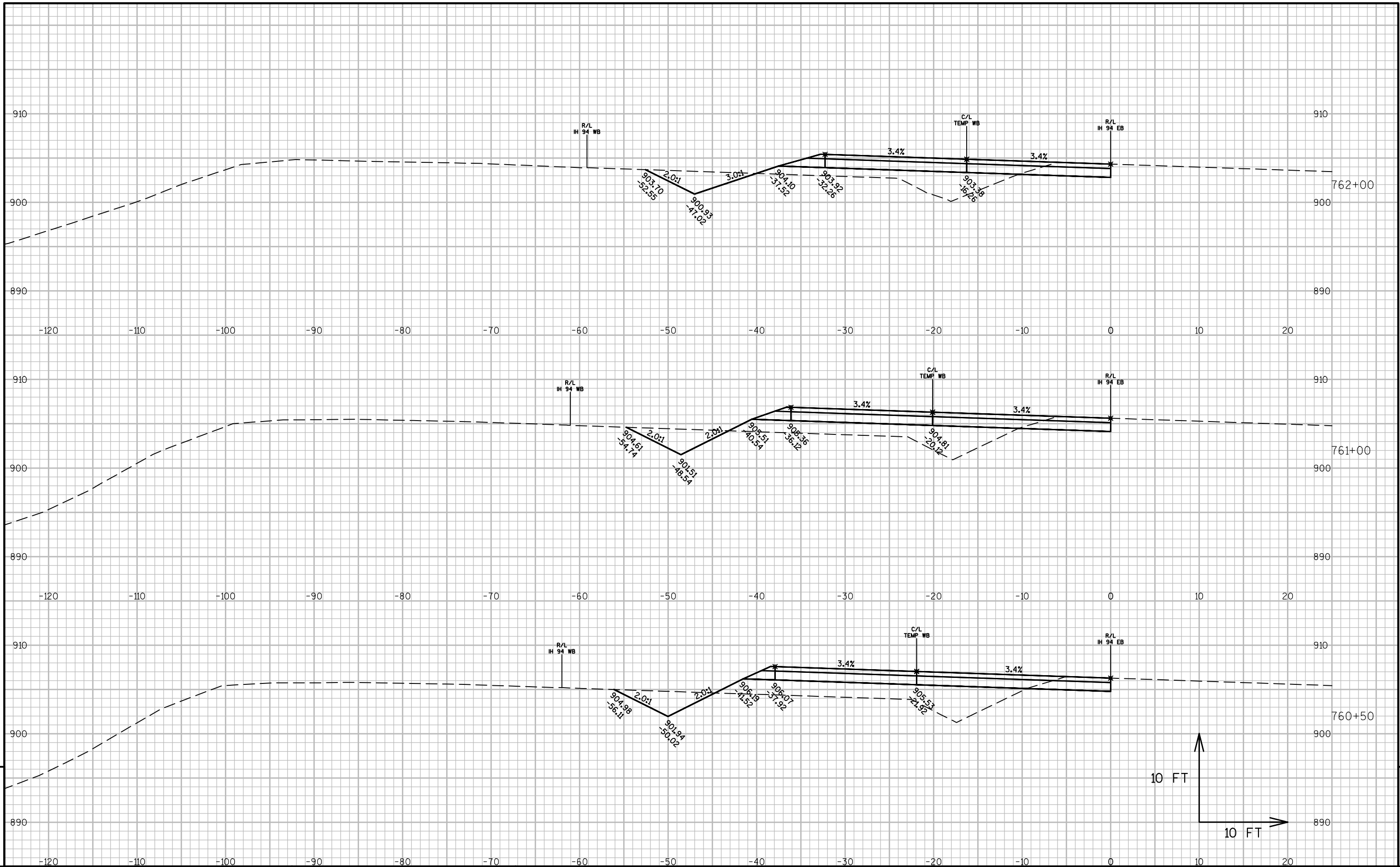
HWY: IH 94

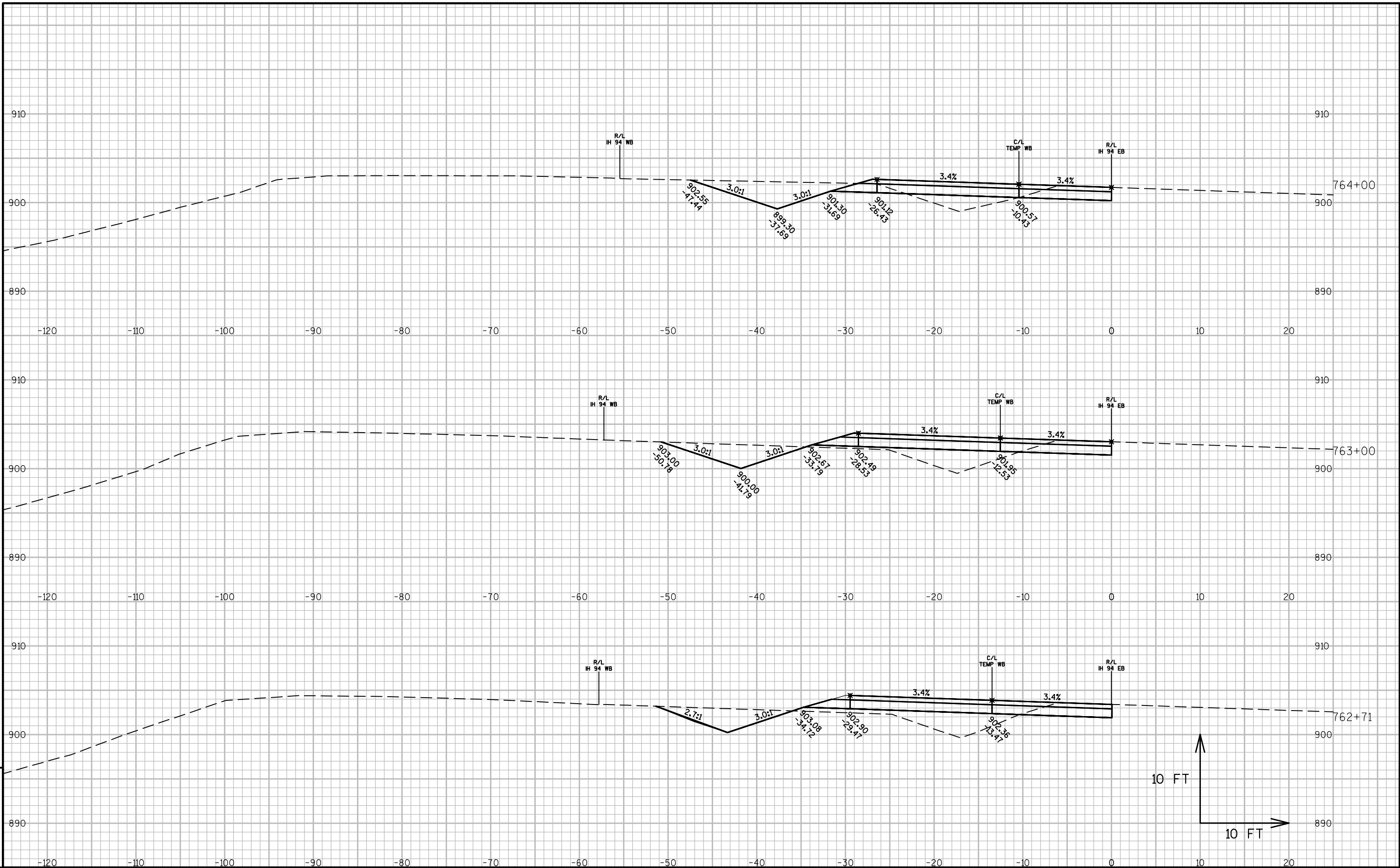
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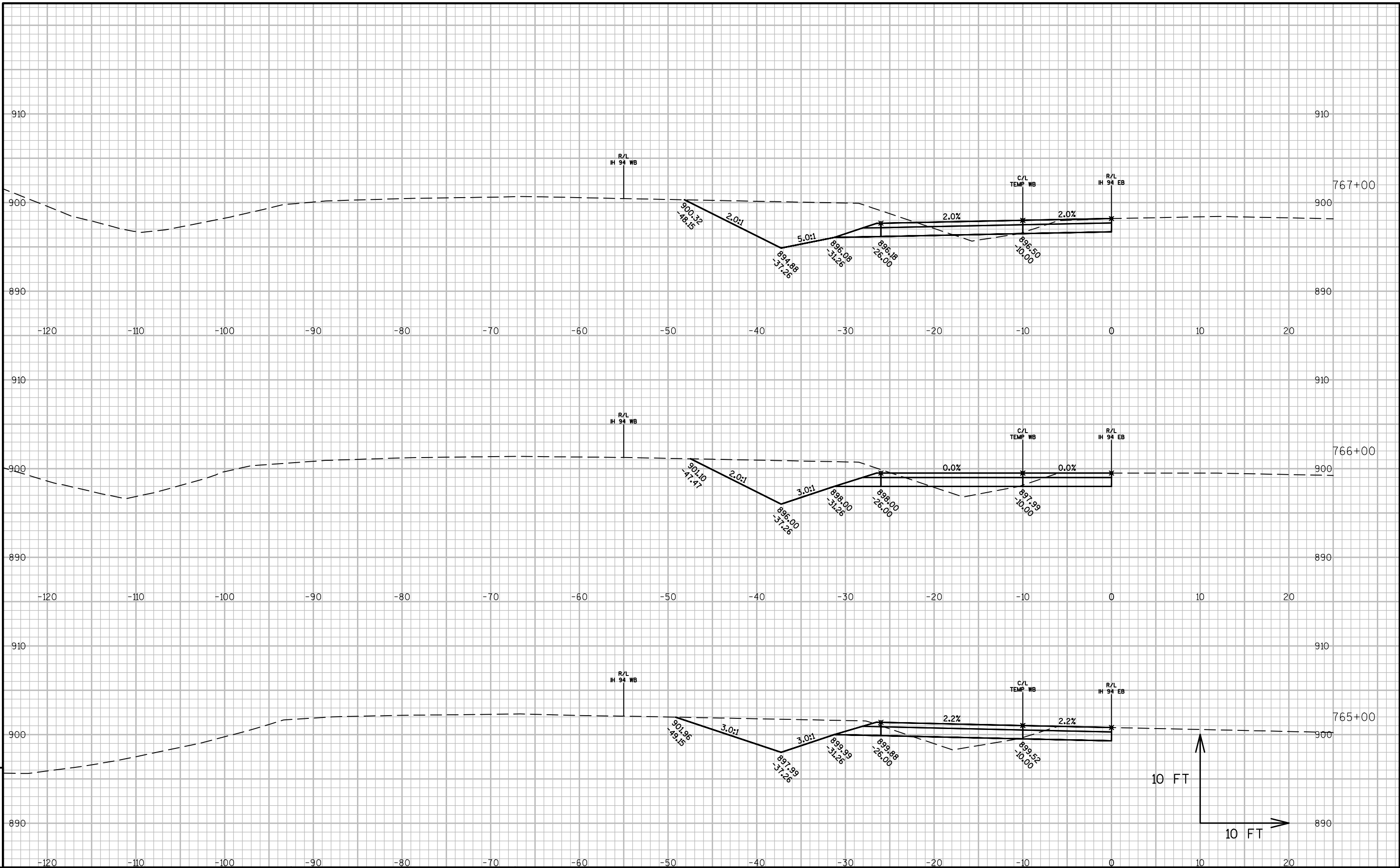
CROSS SECTIONS: IH 94 MEDIAN STAGE 4C

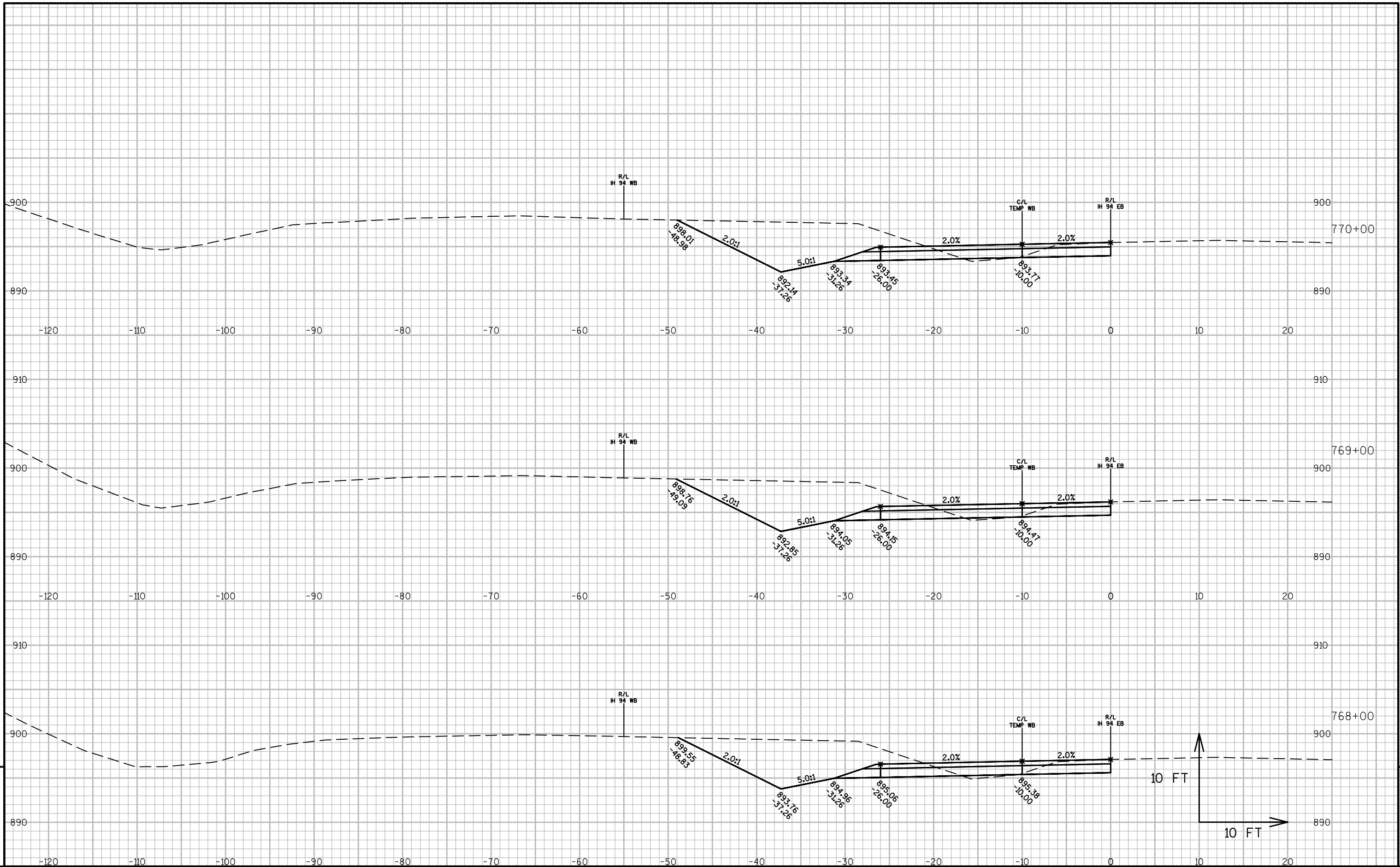
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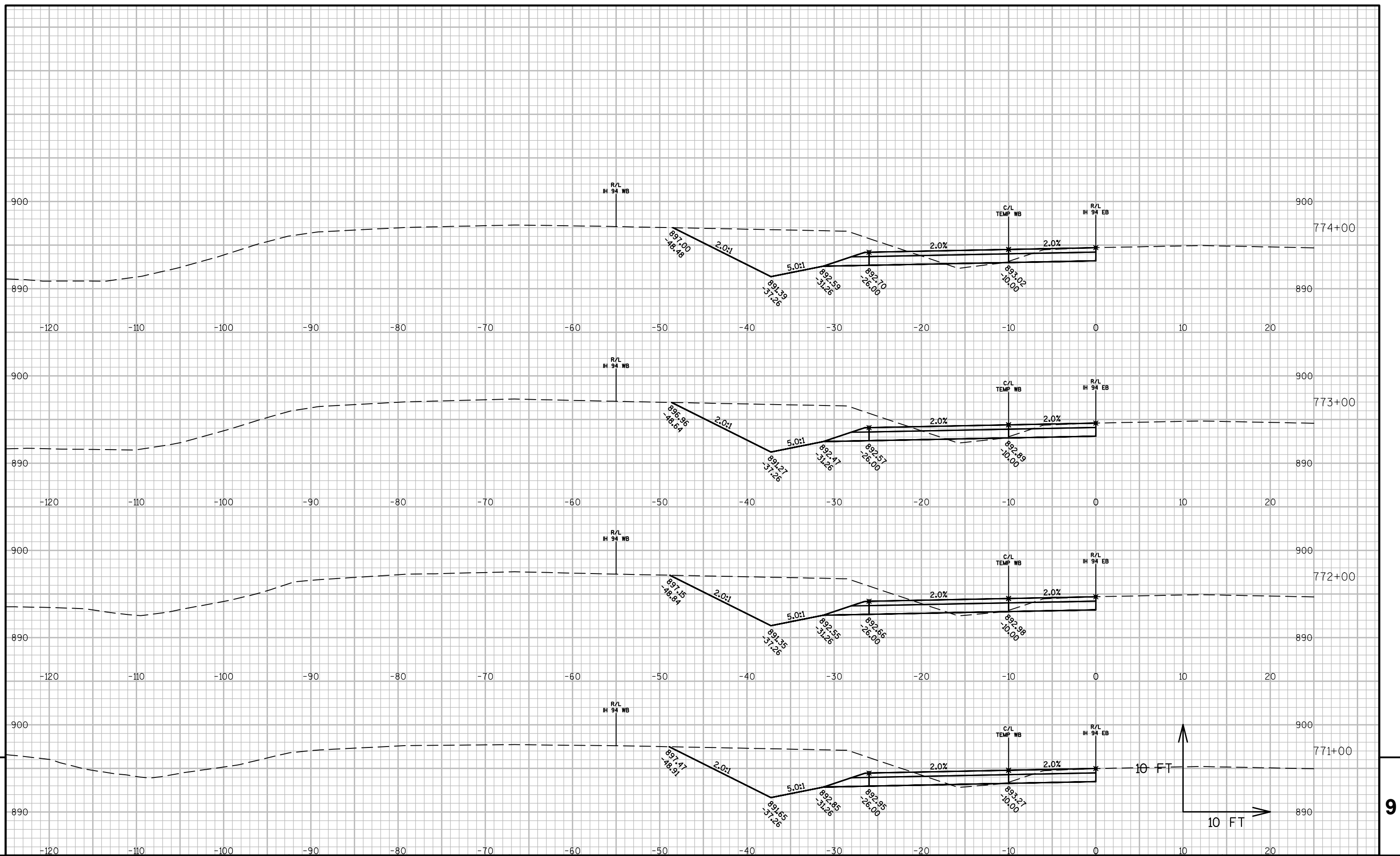
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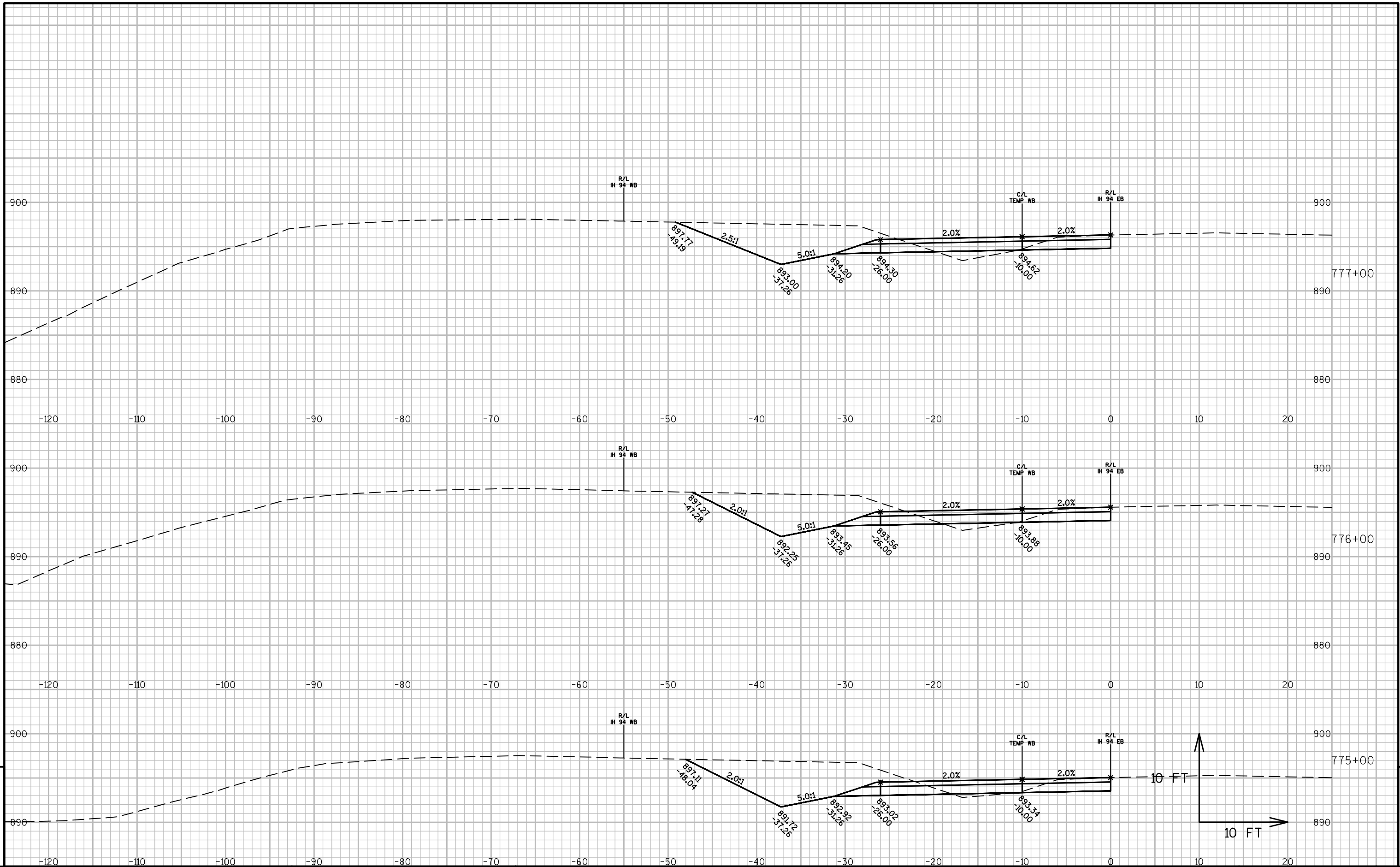


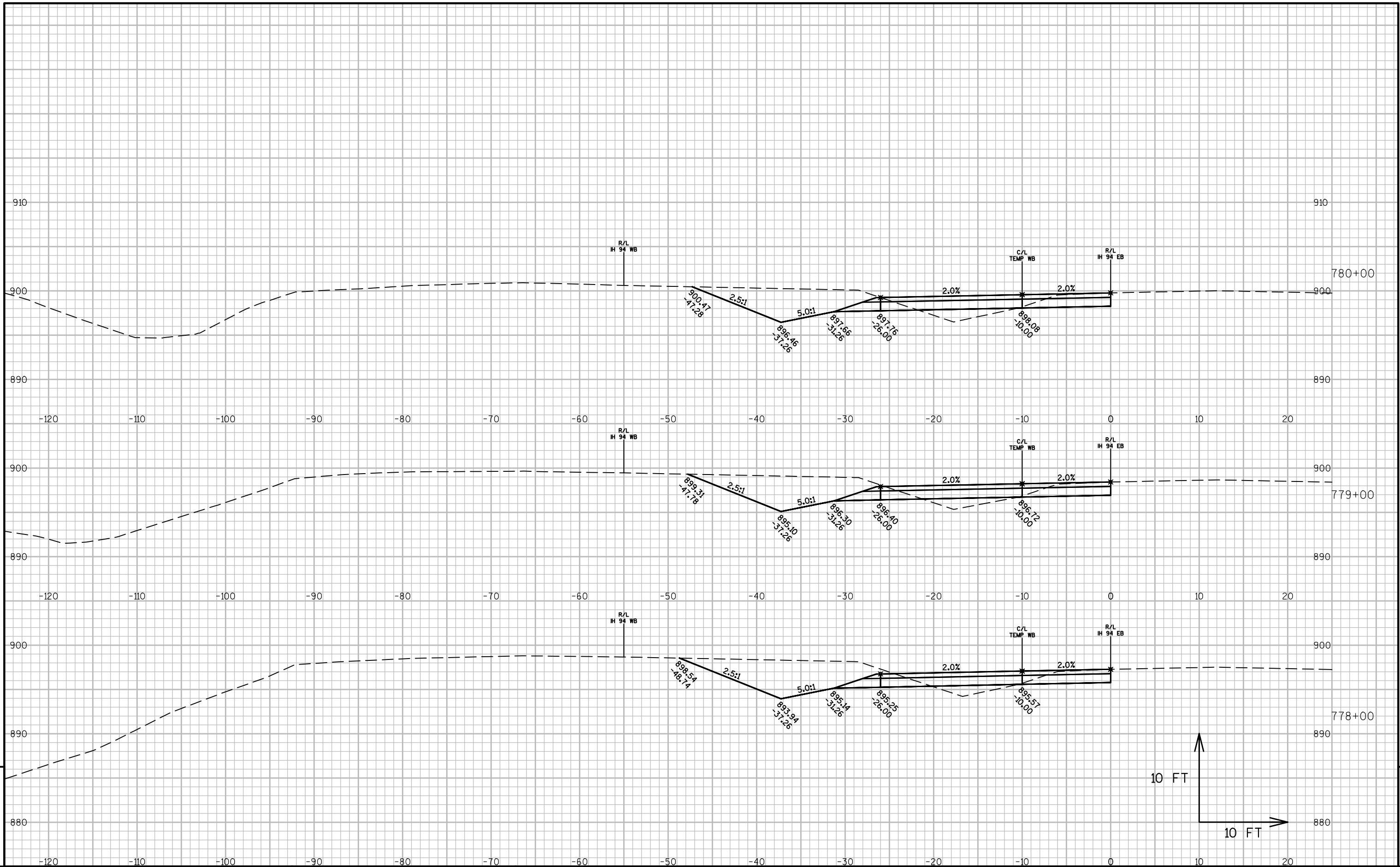


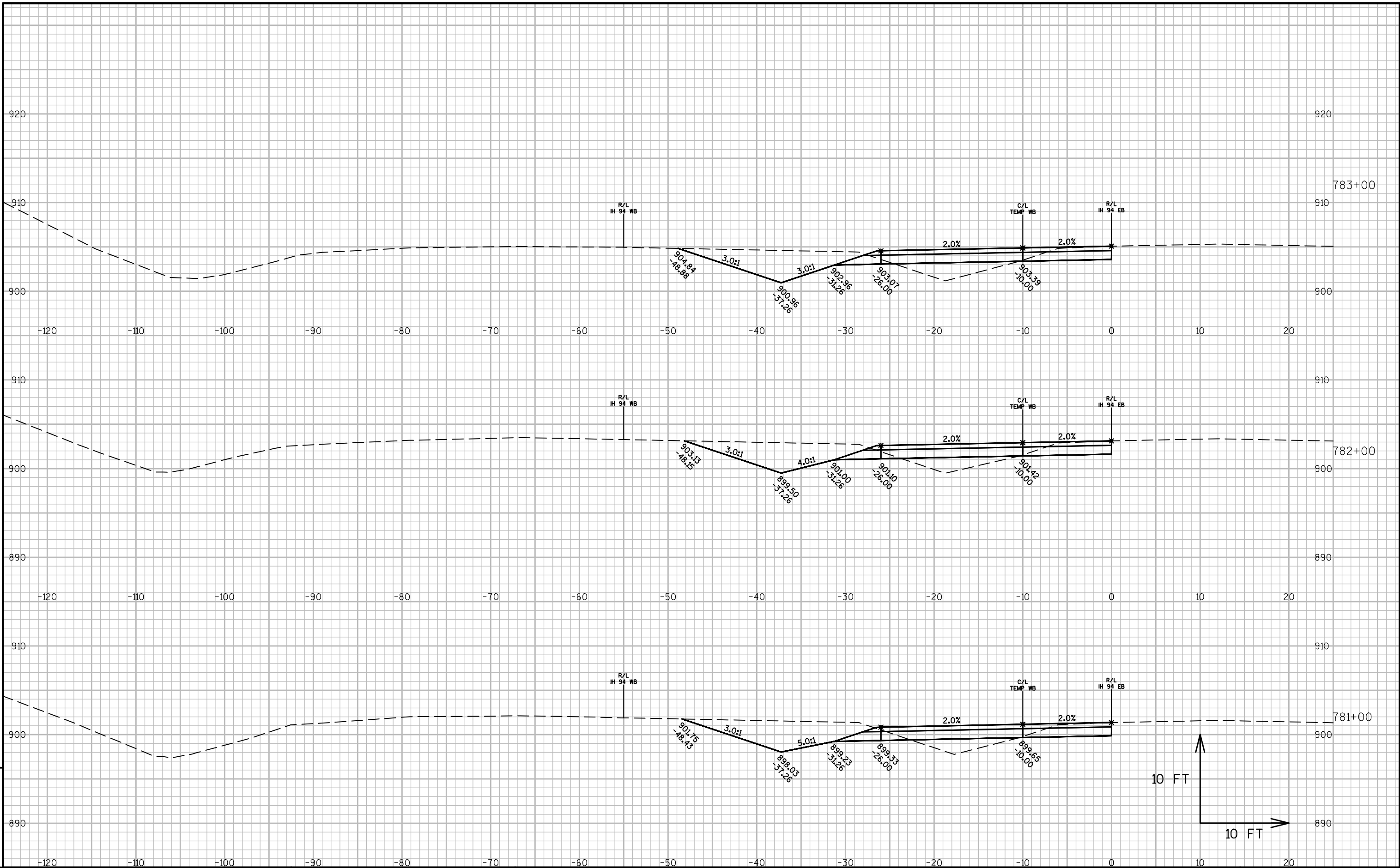


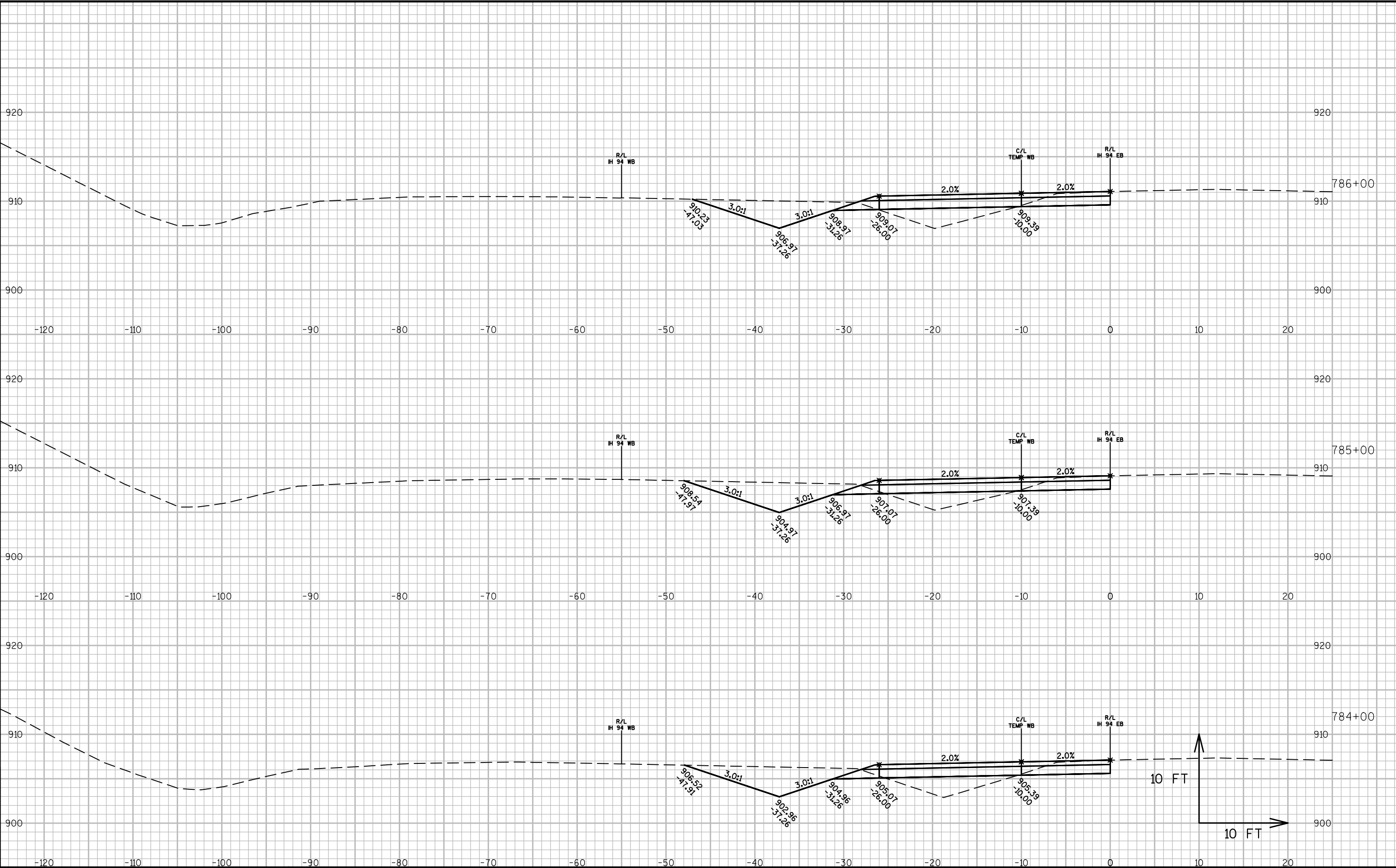
PROJECT NO:1022-08-72

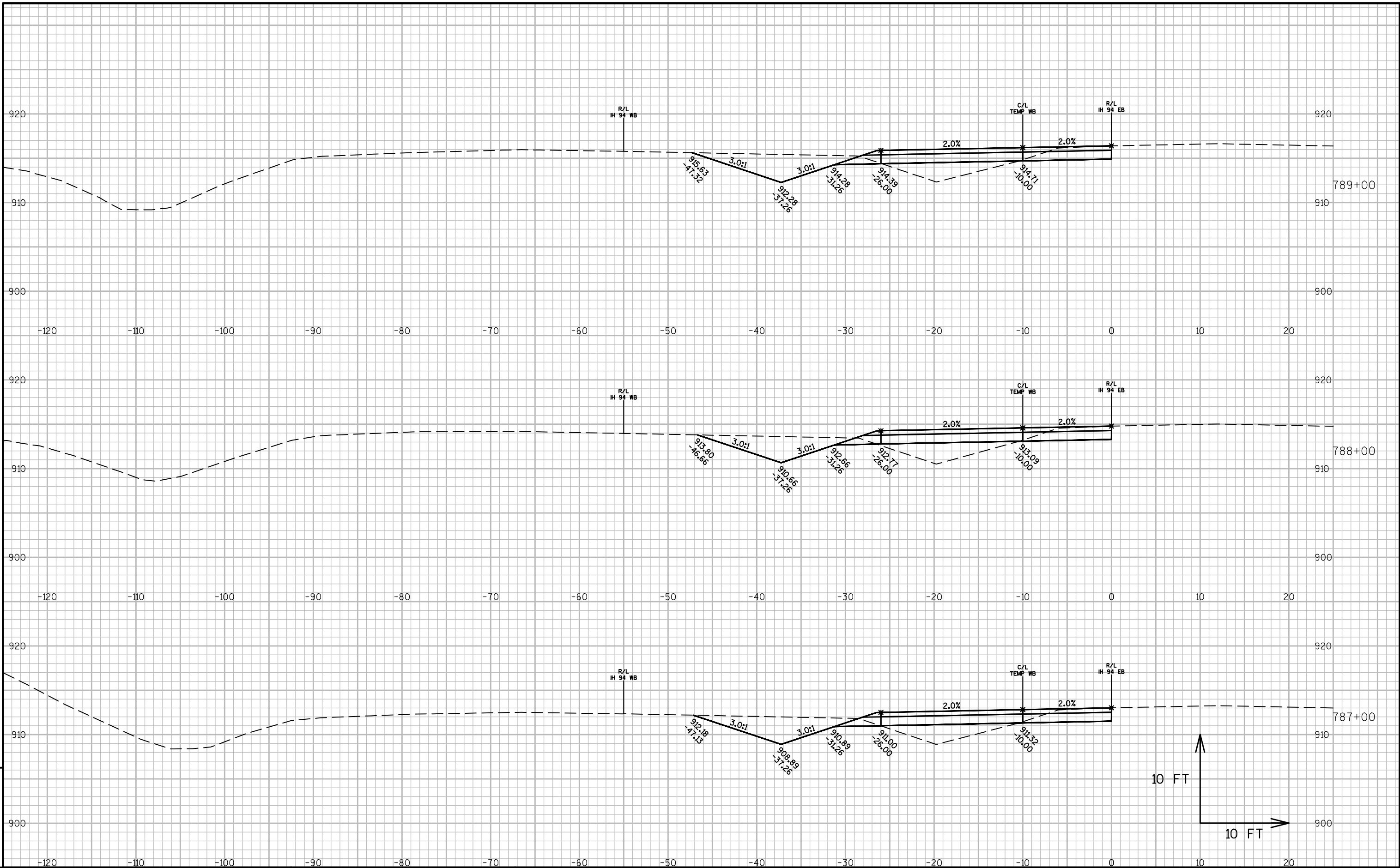
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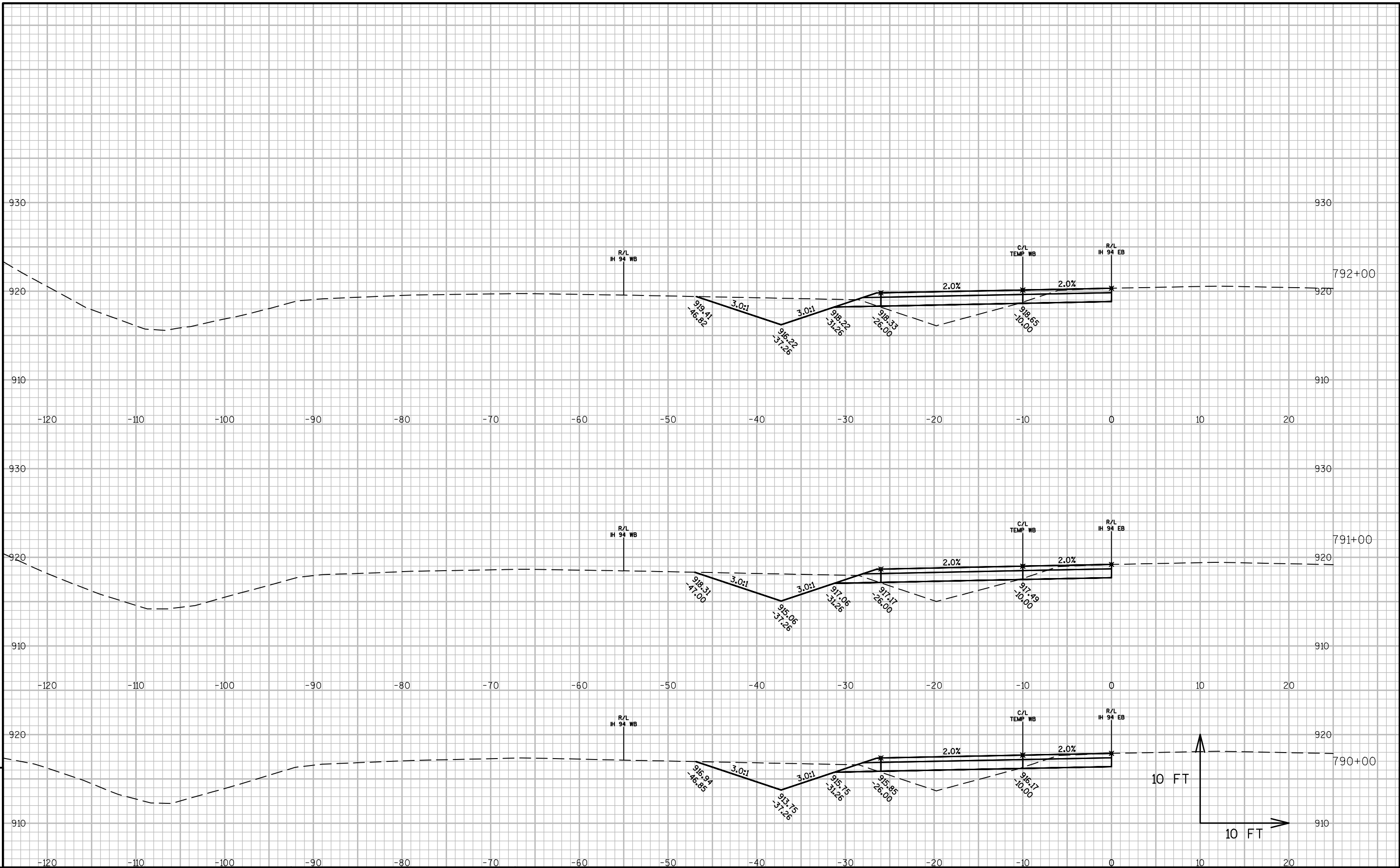


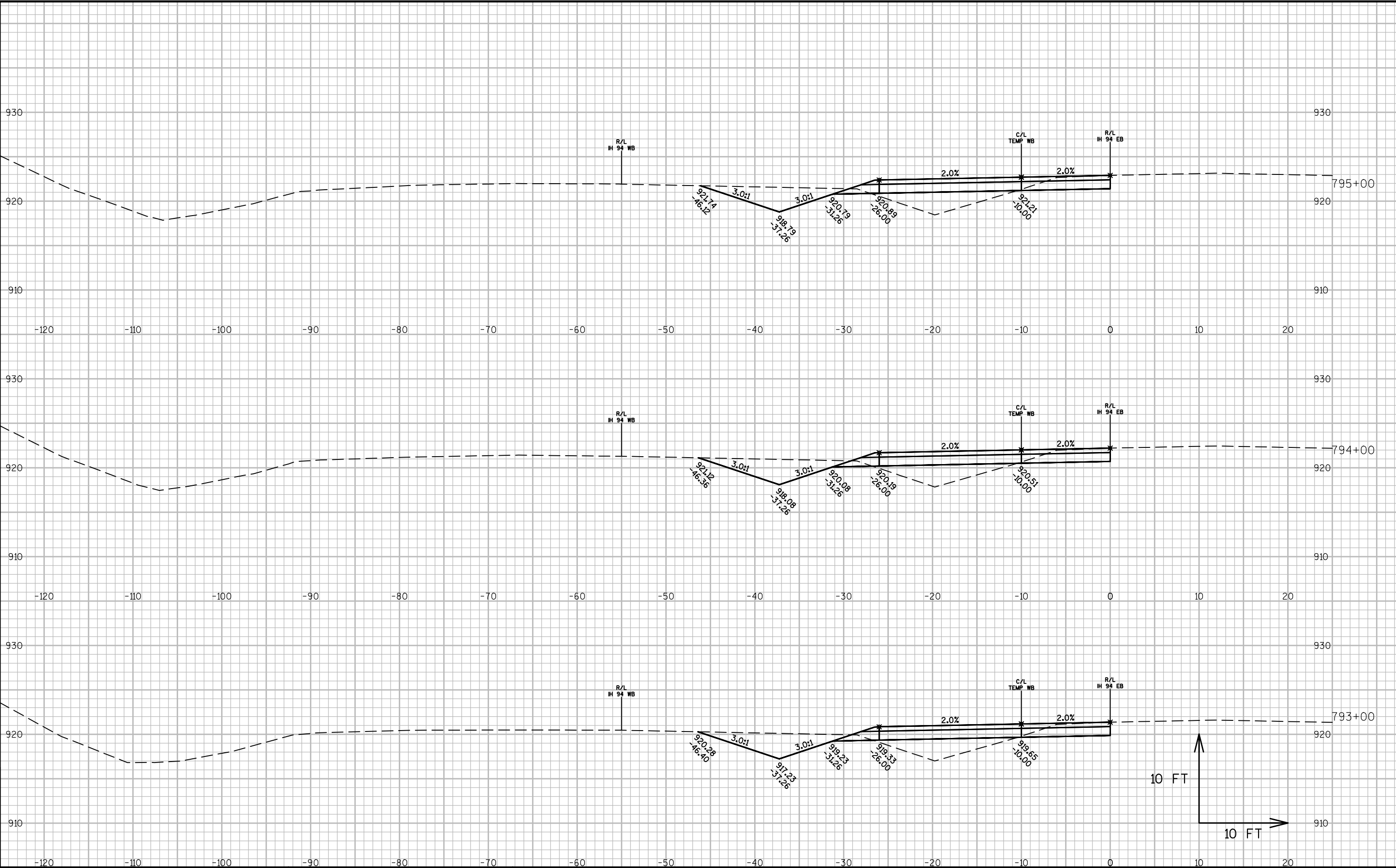


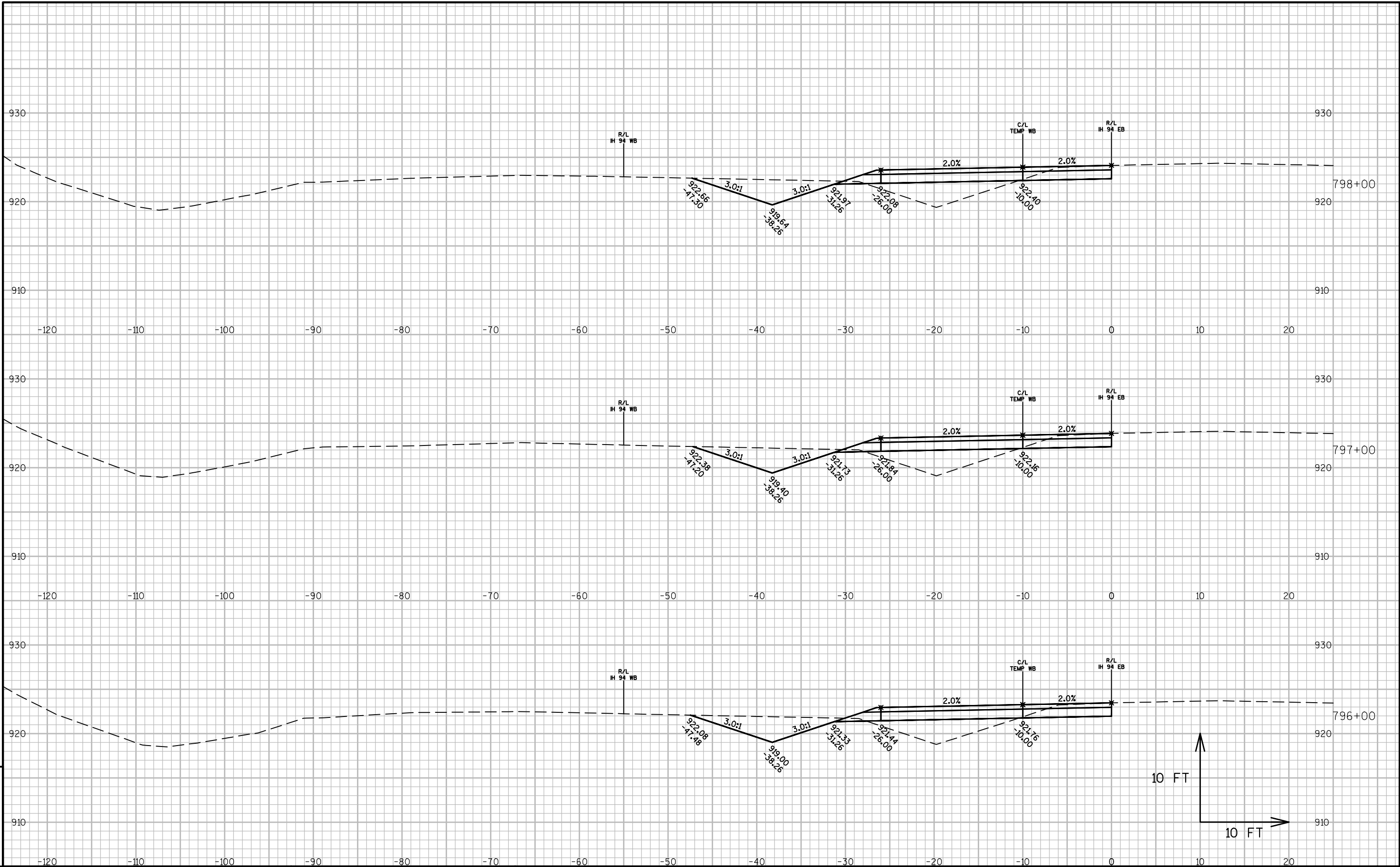


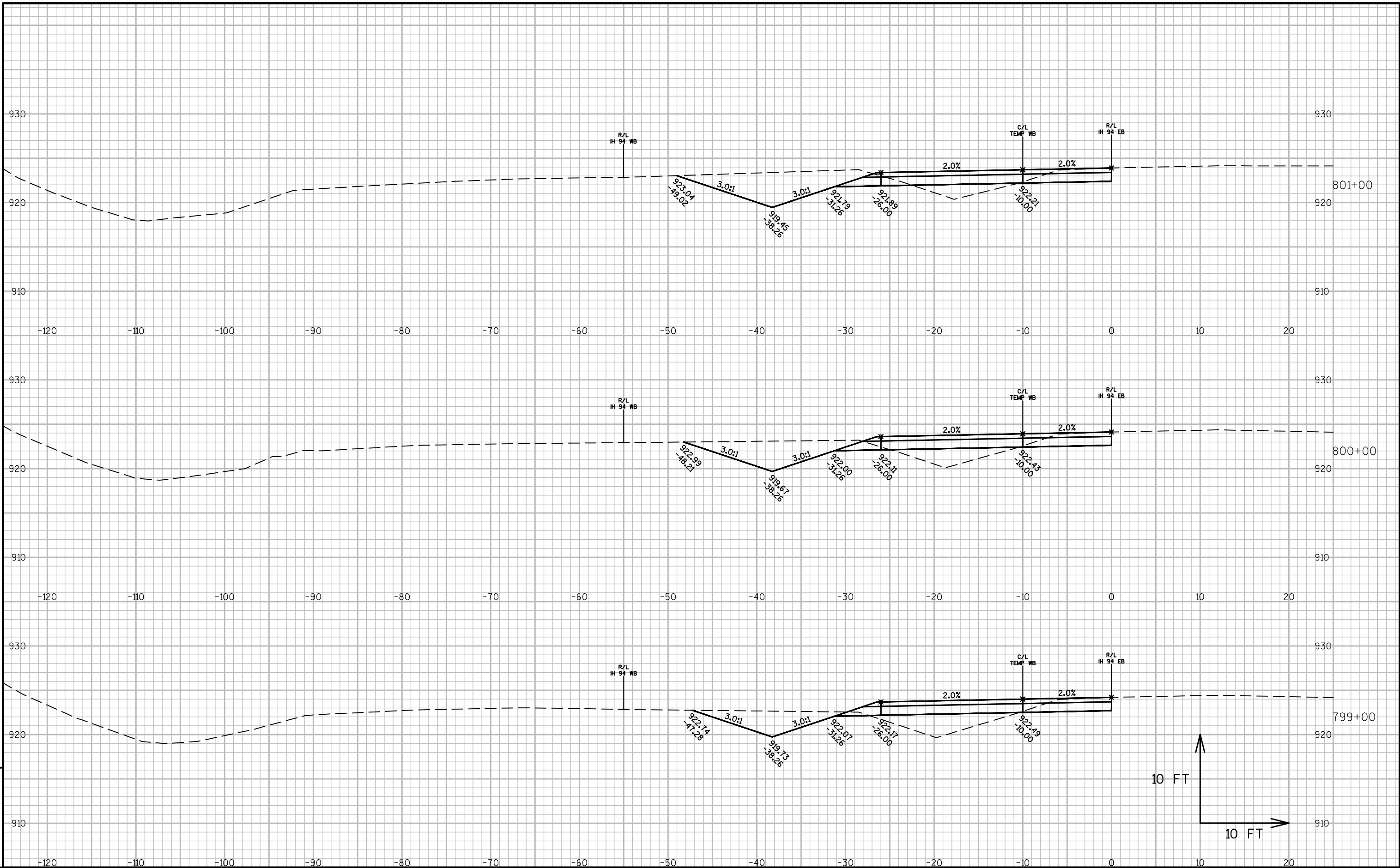


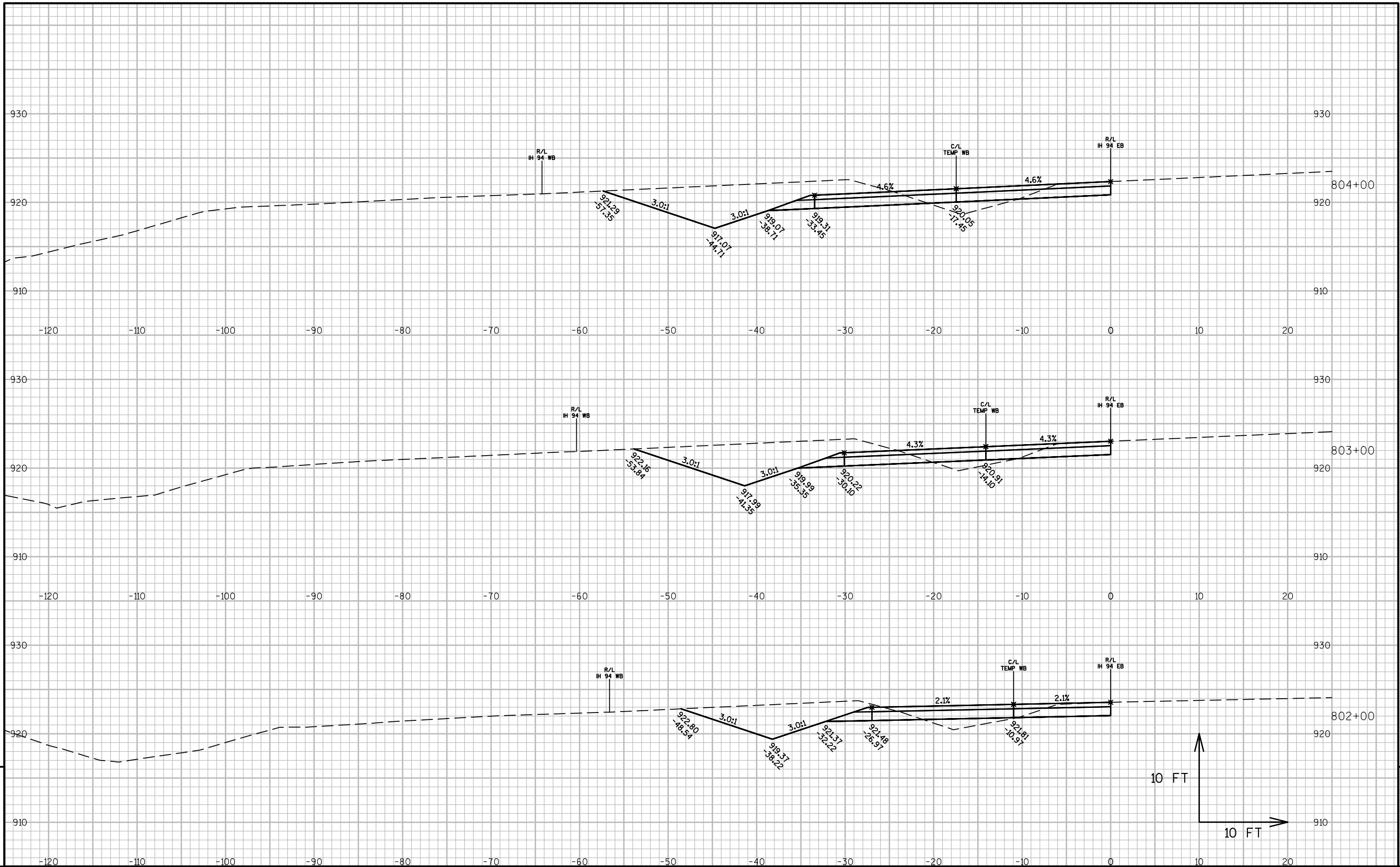


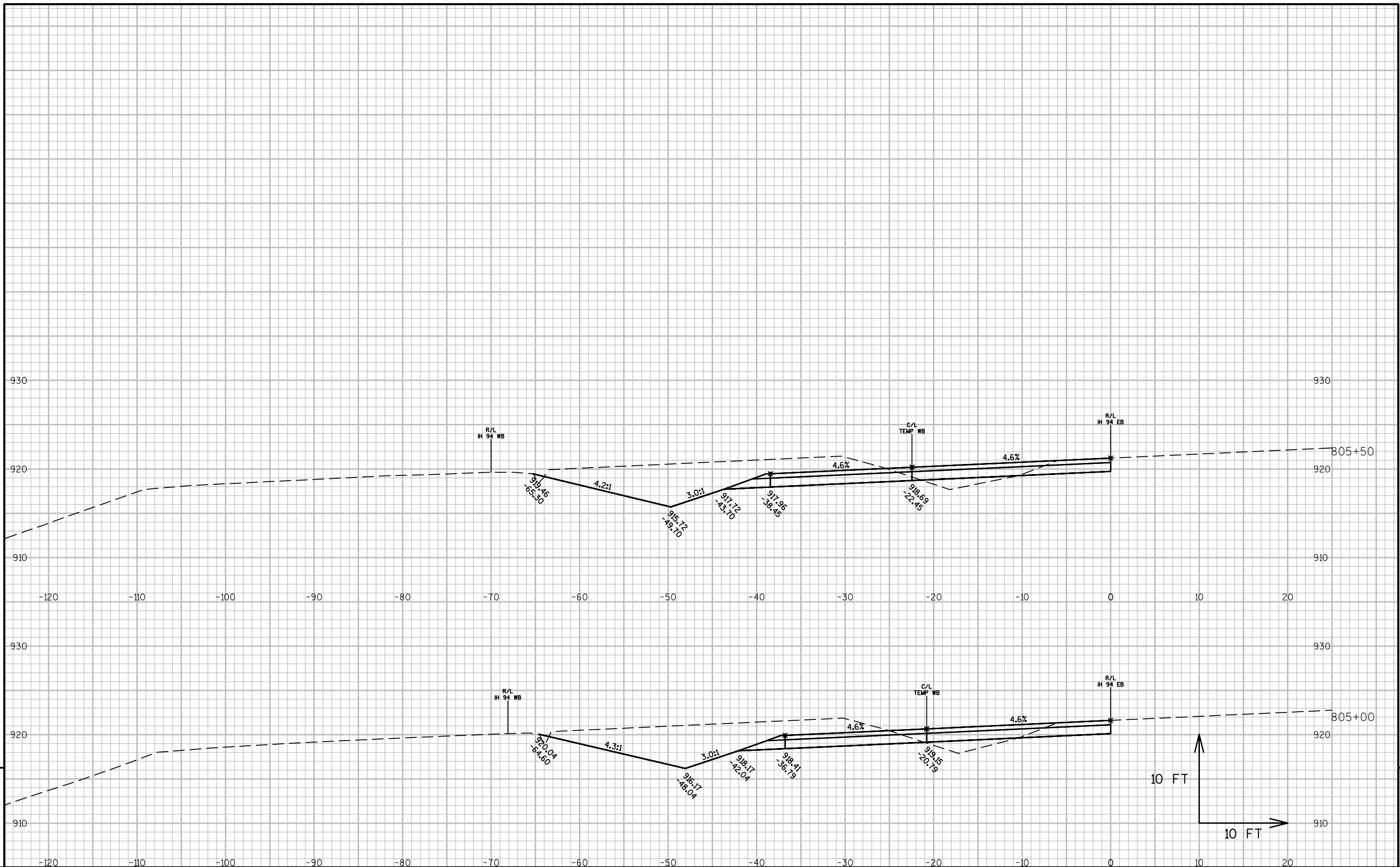


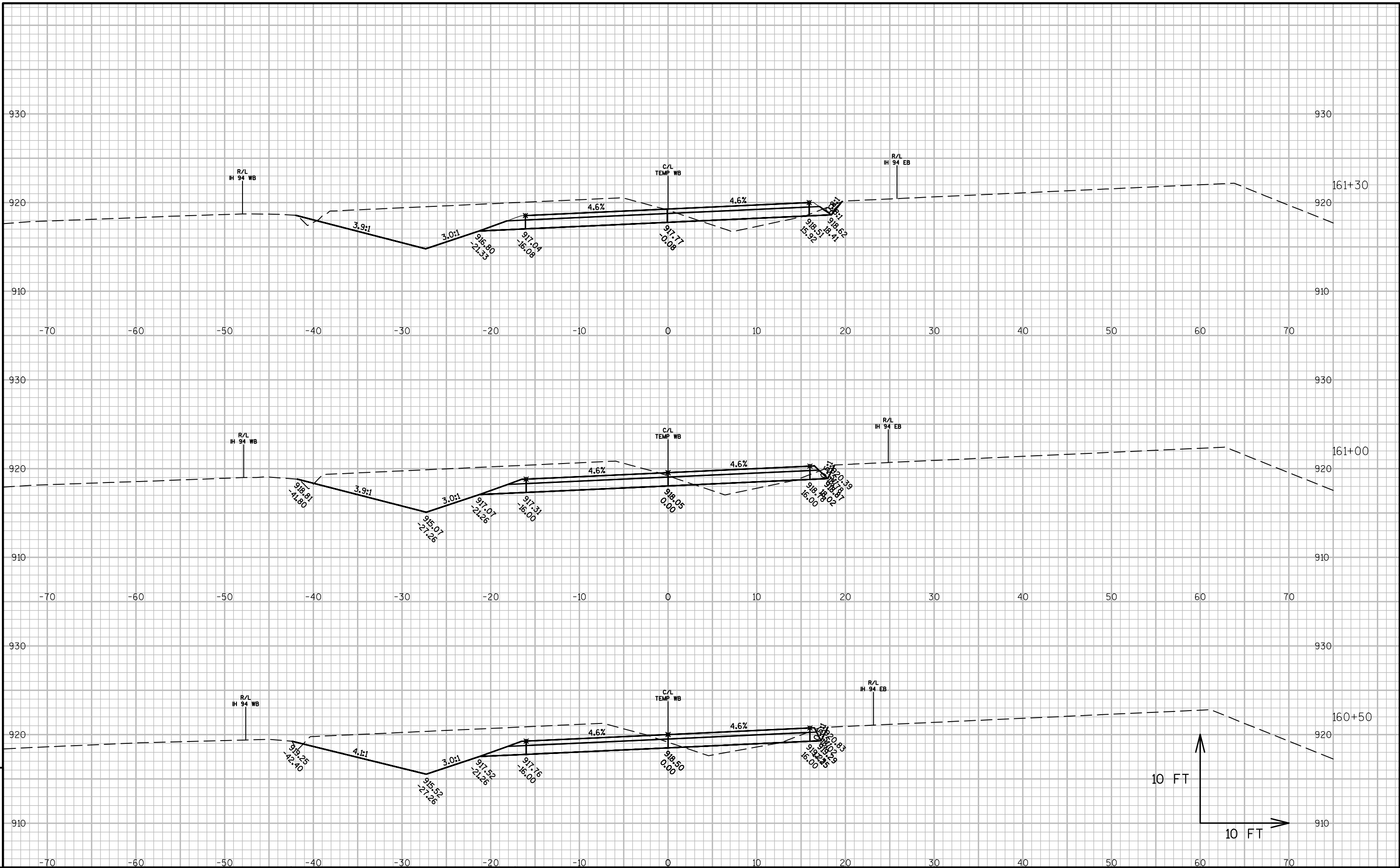


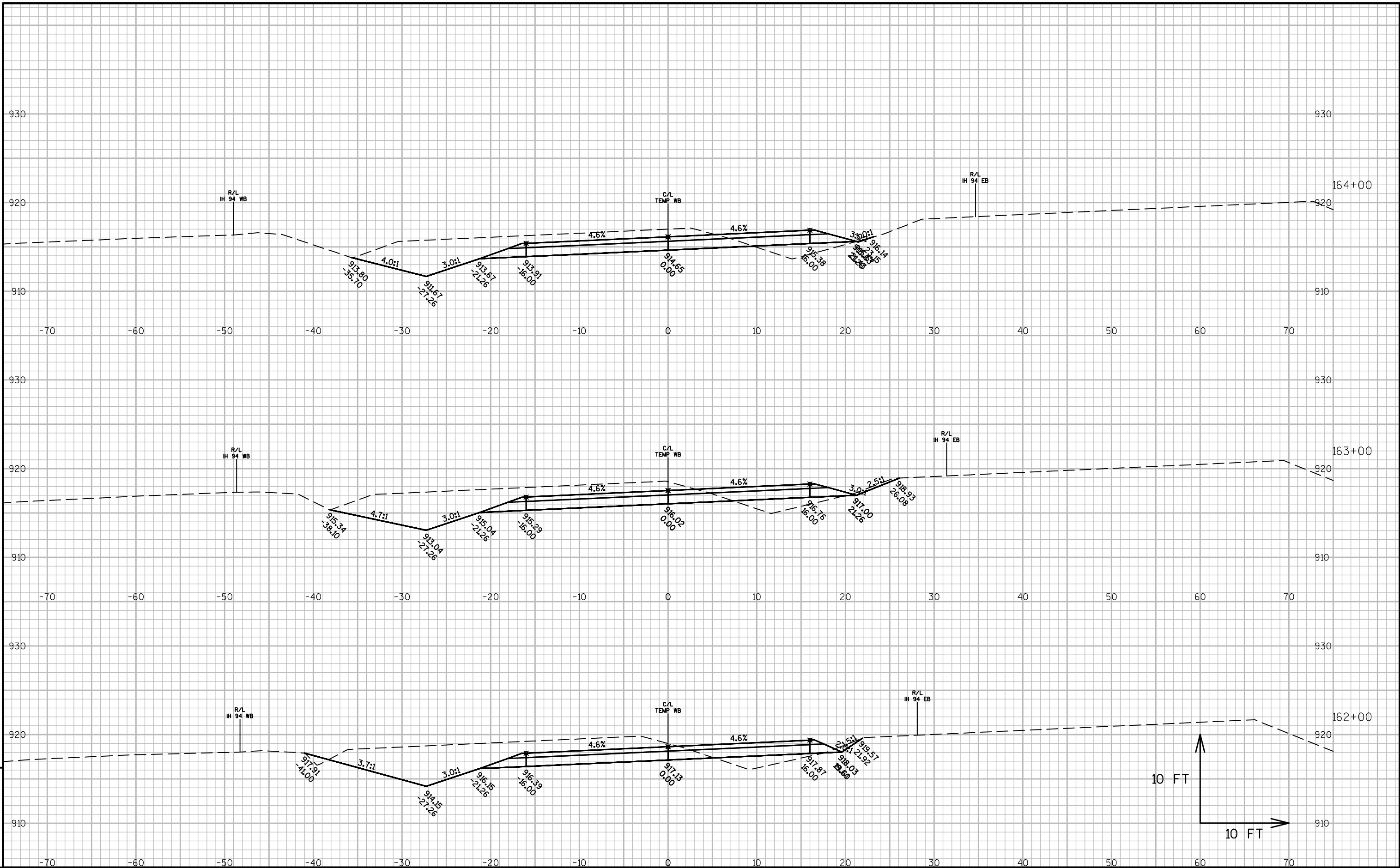


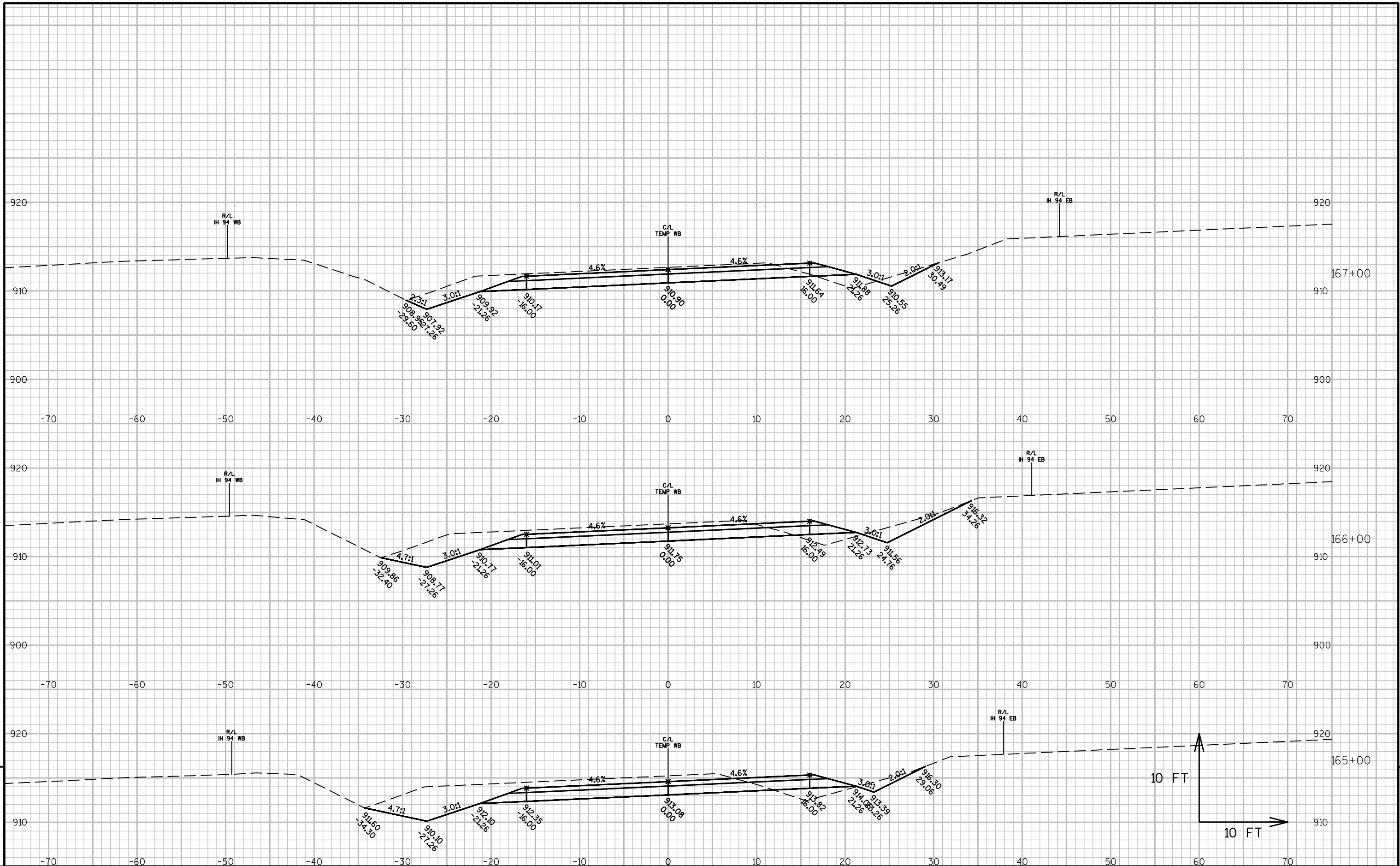


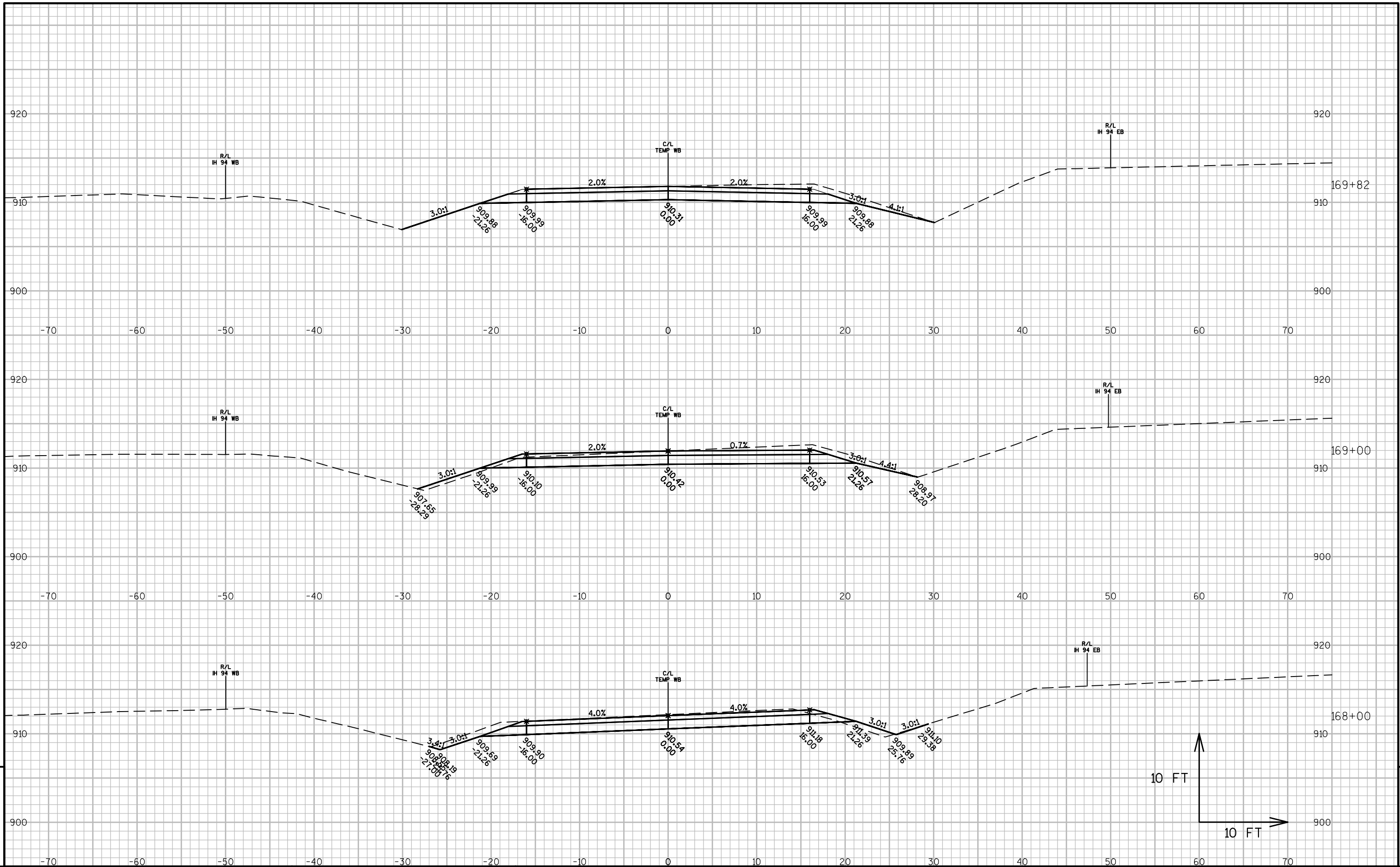


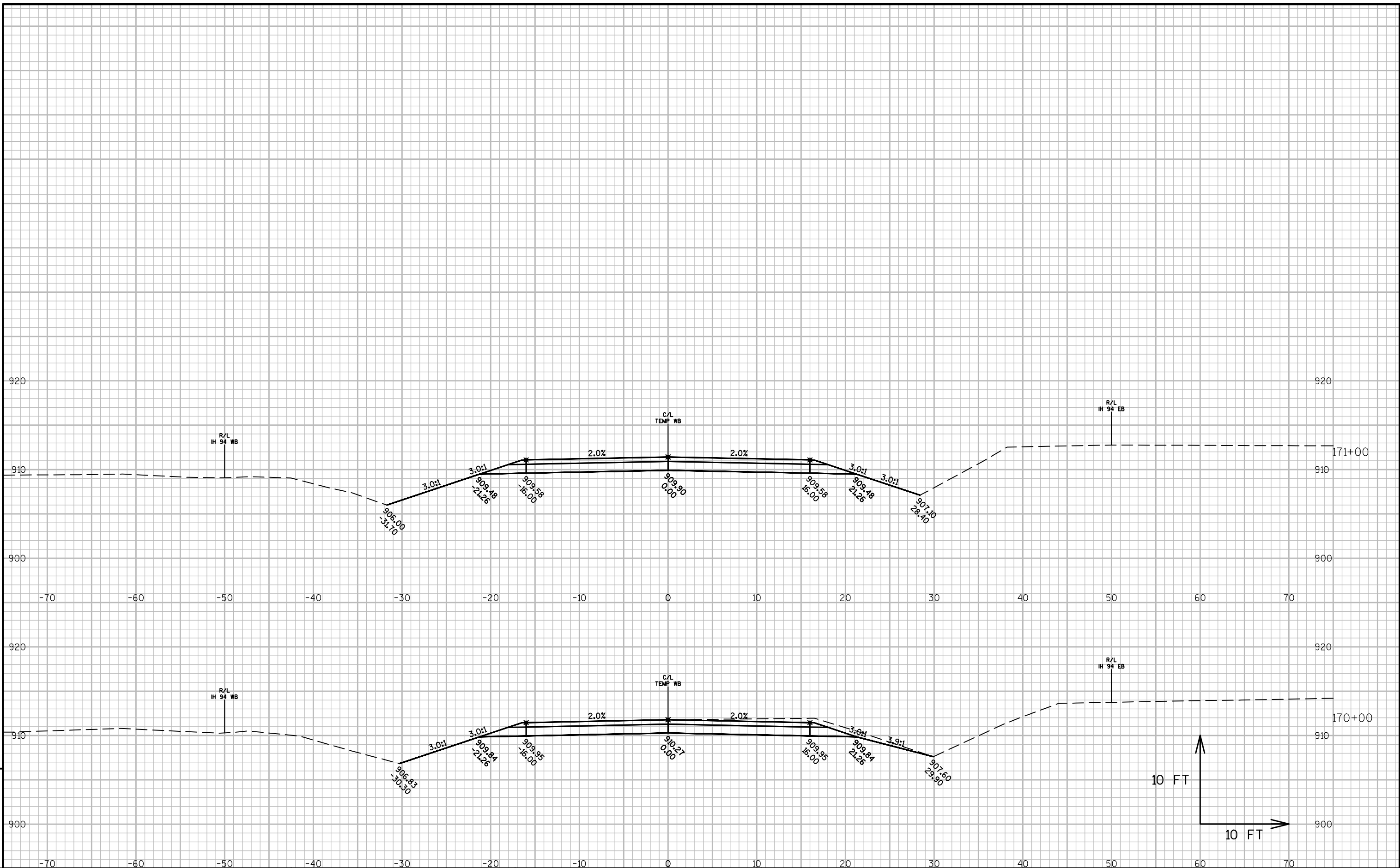


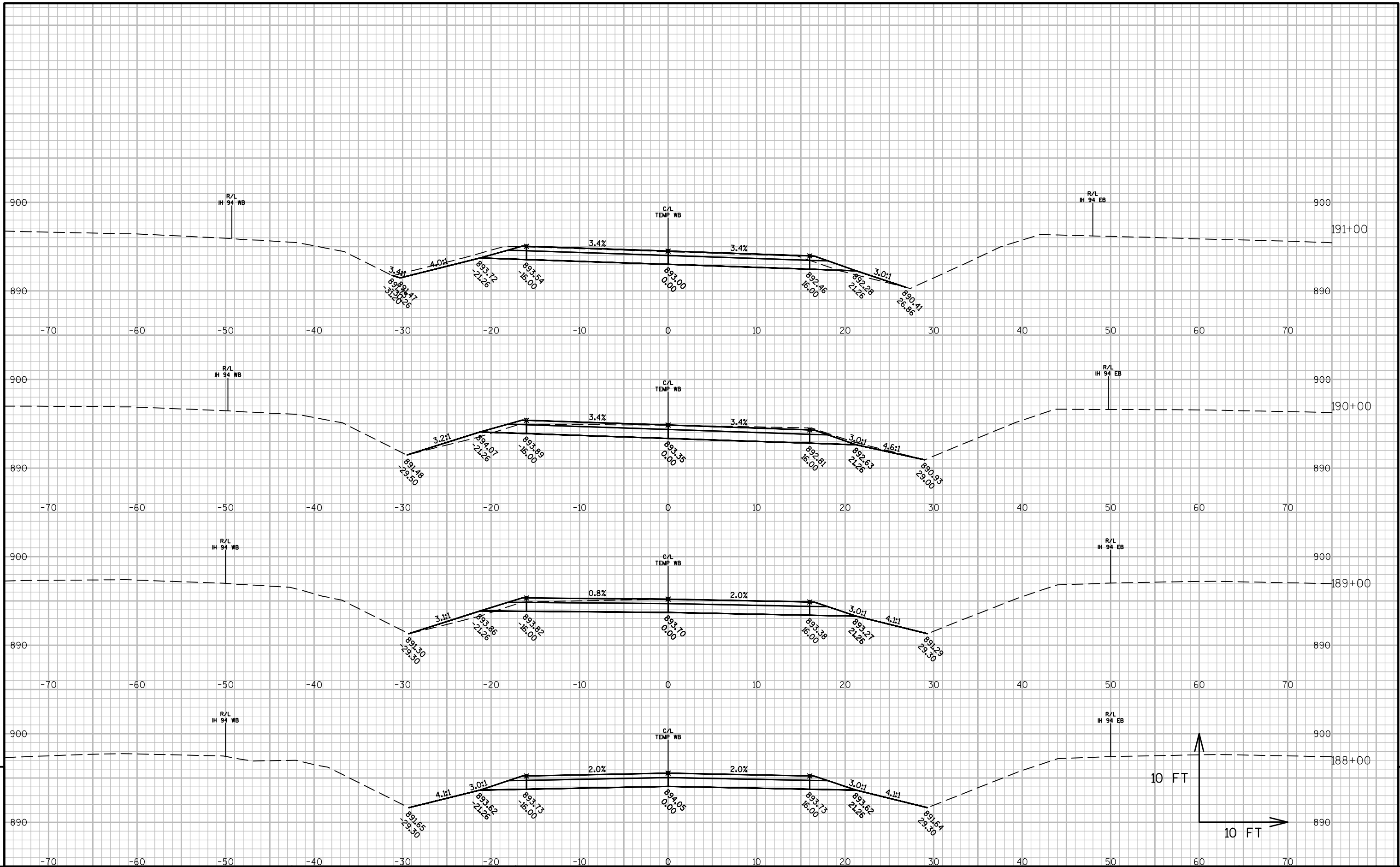


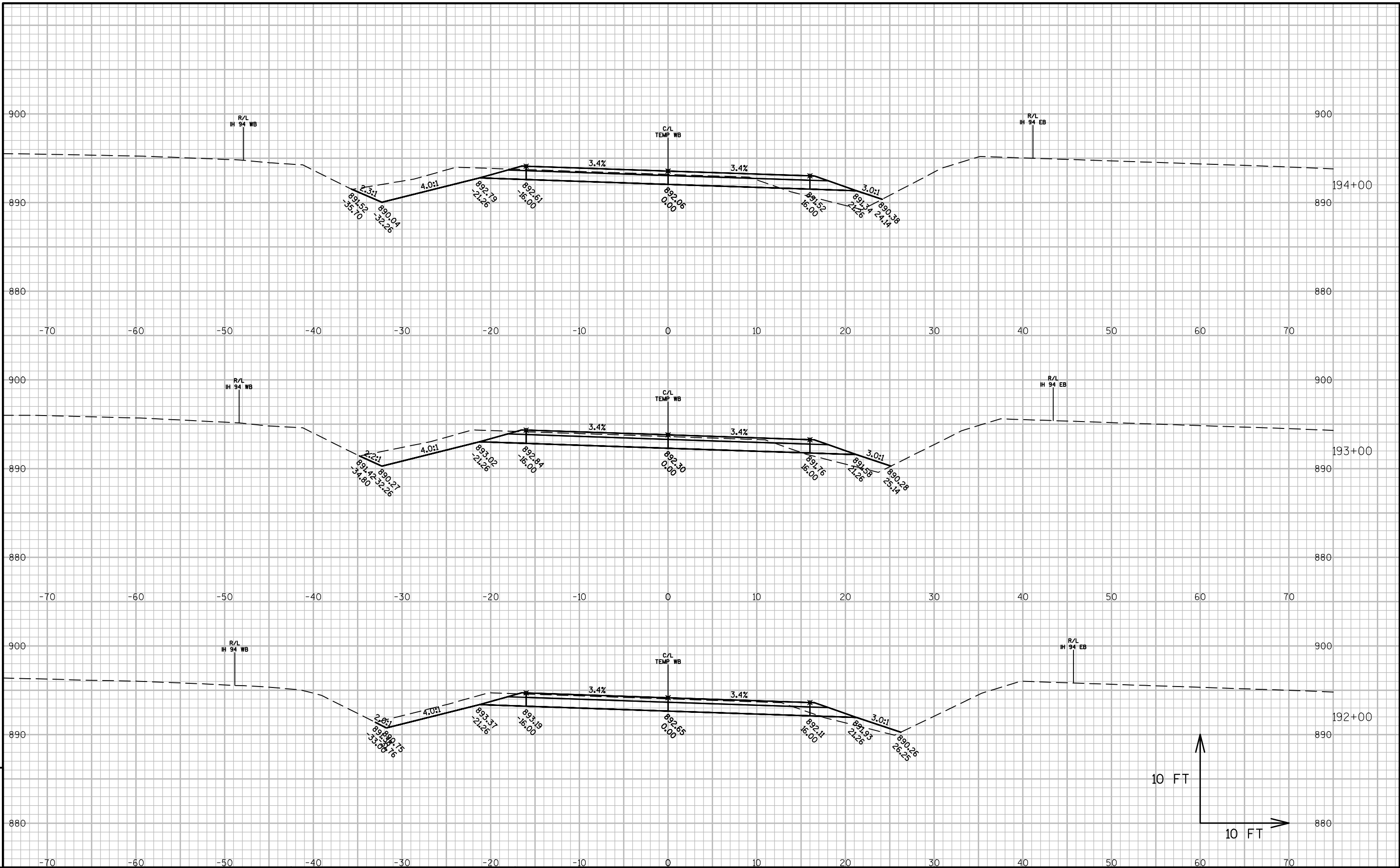


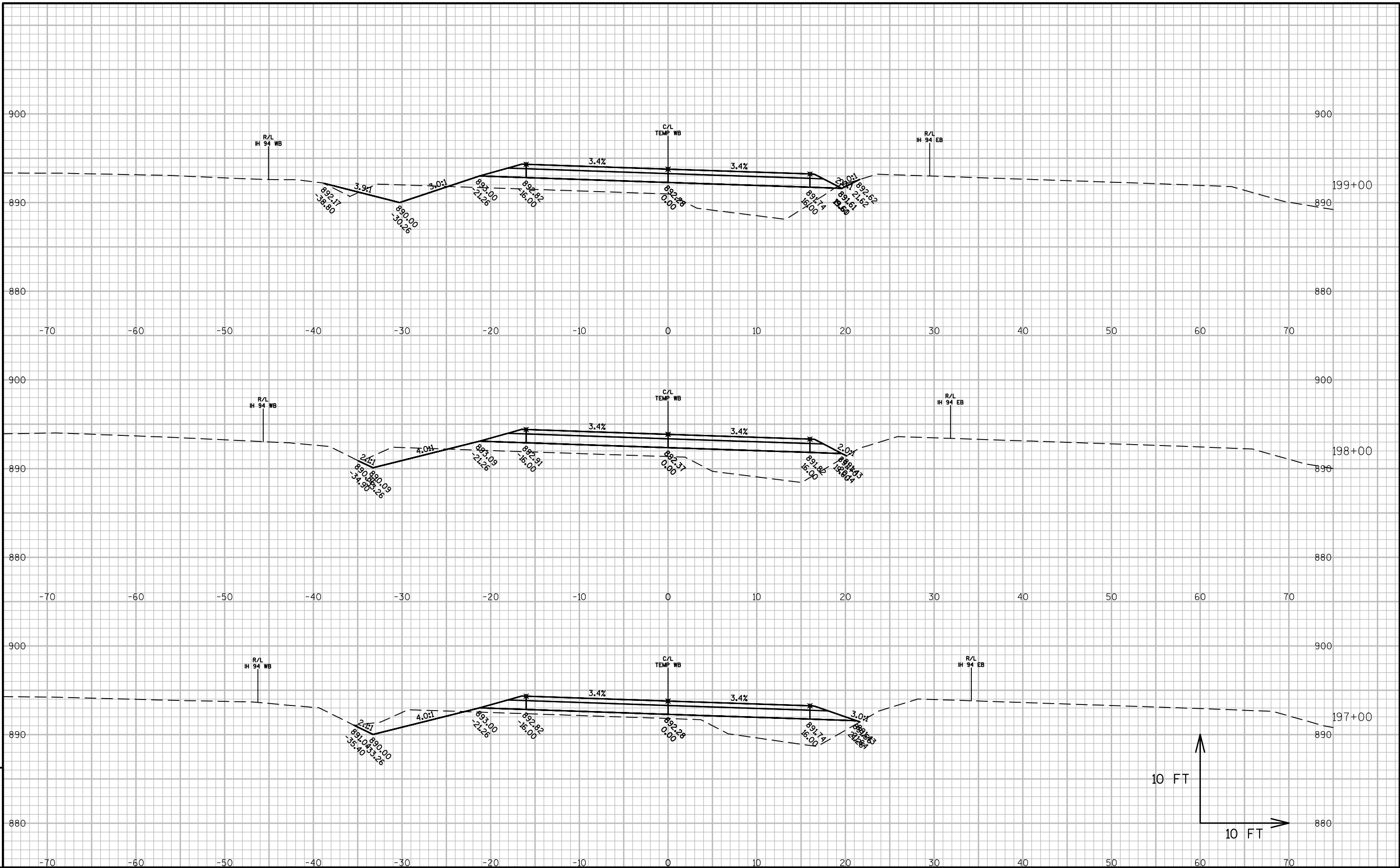


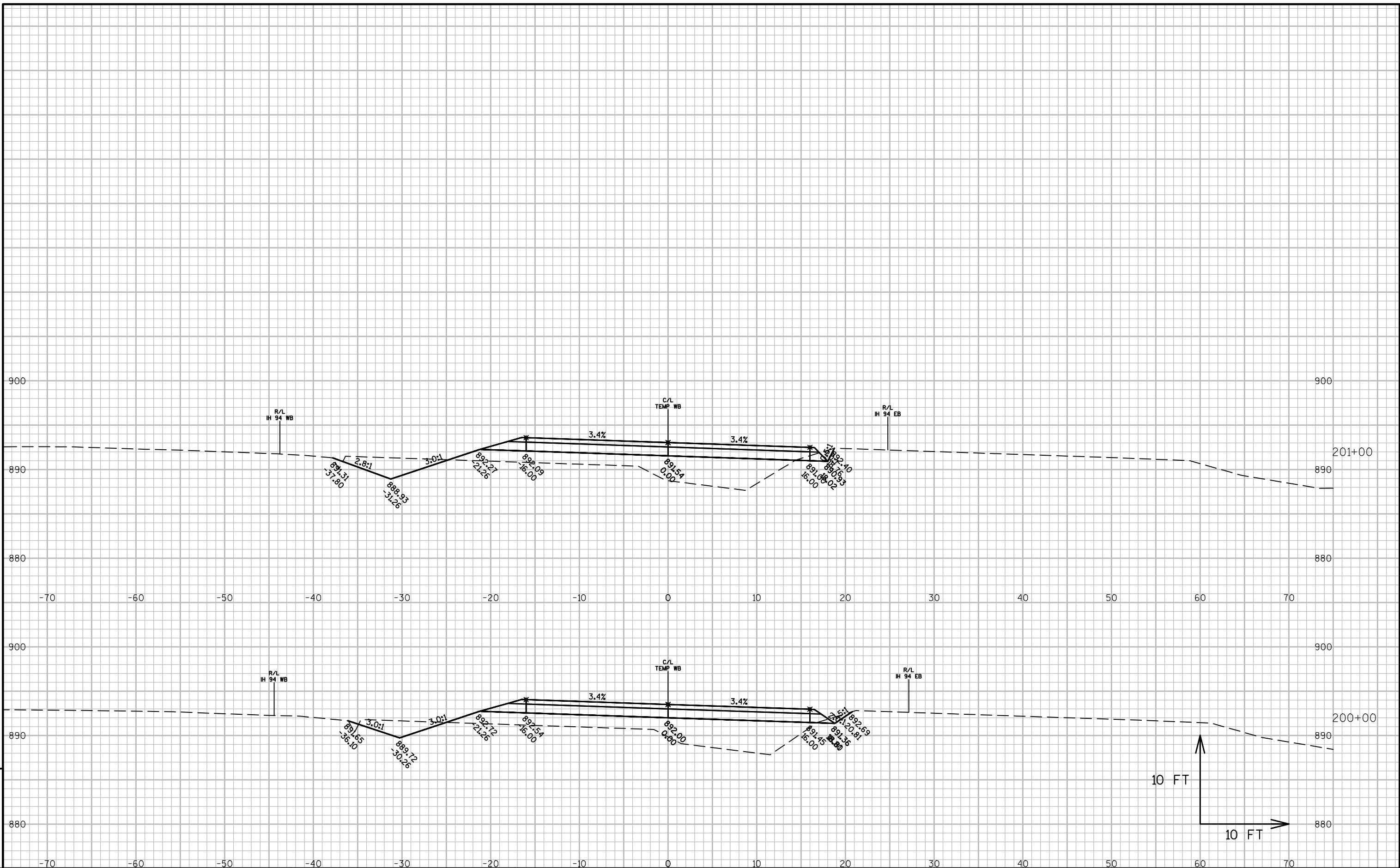


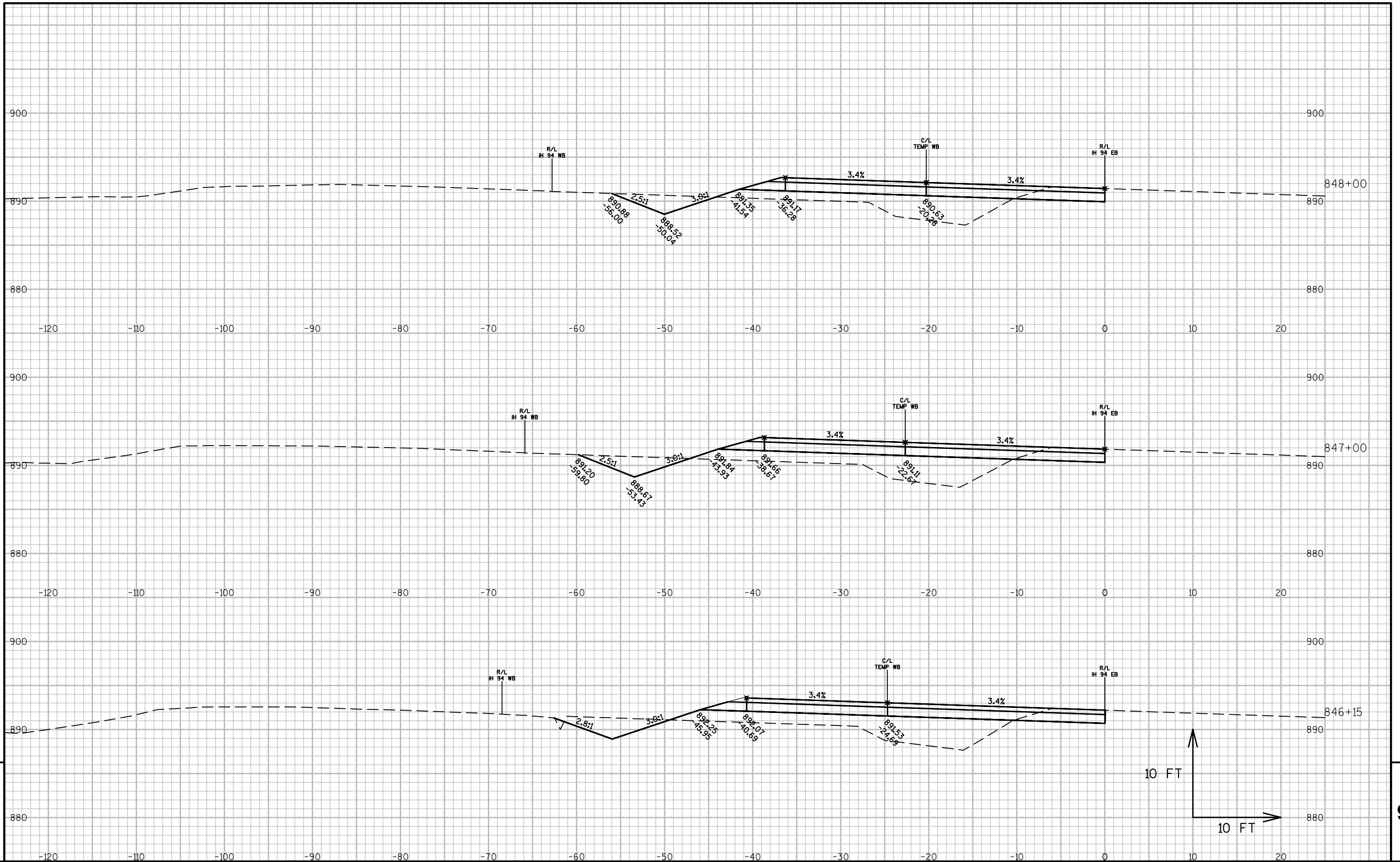


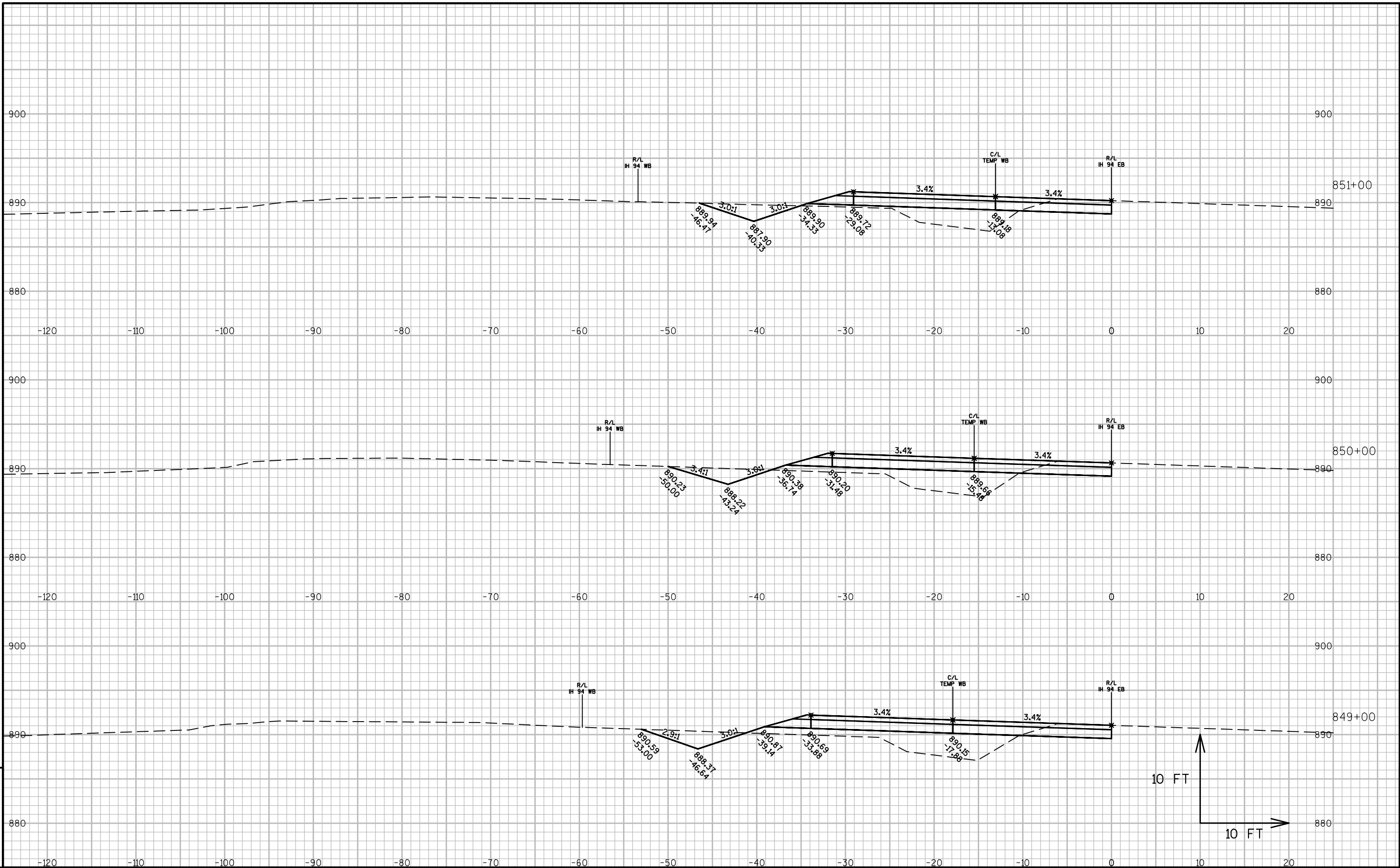


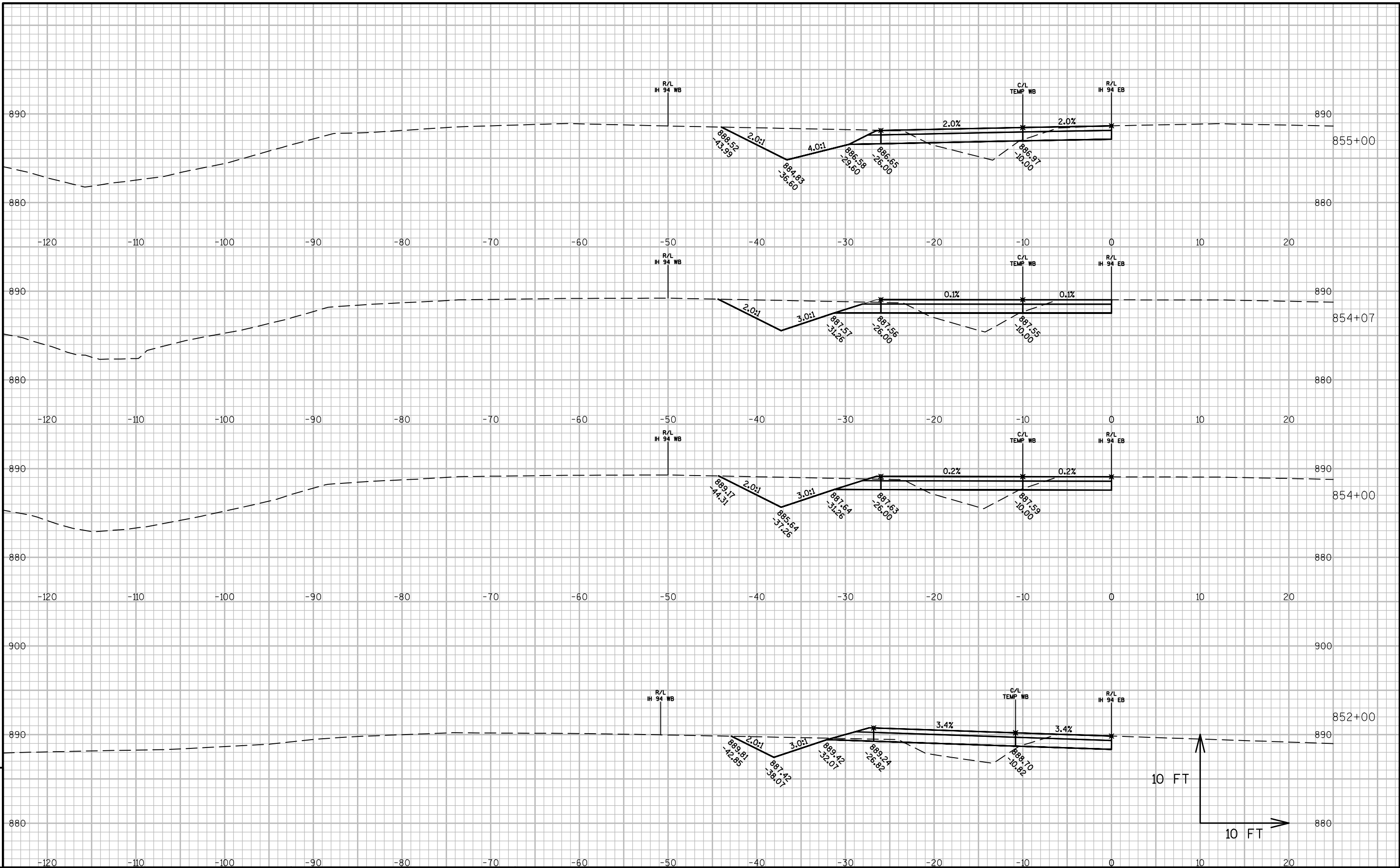


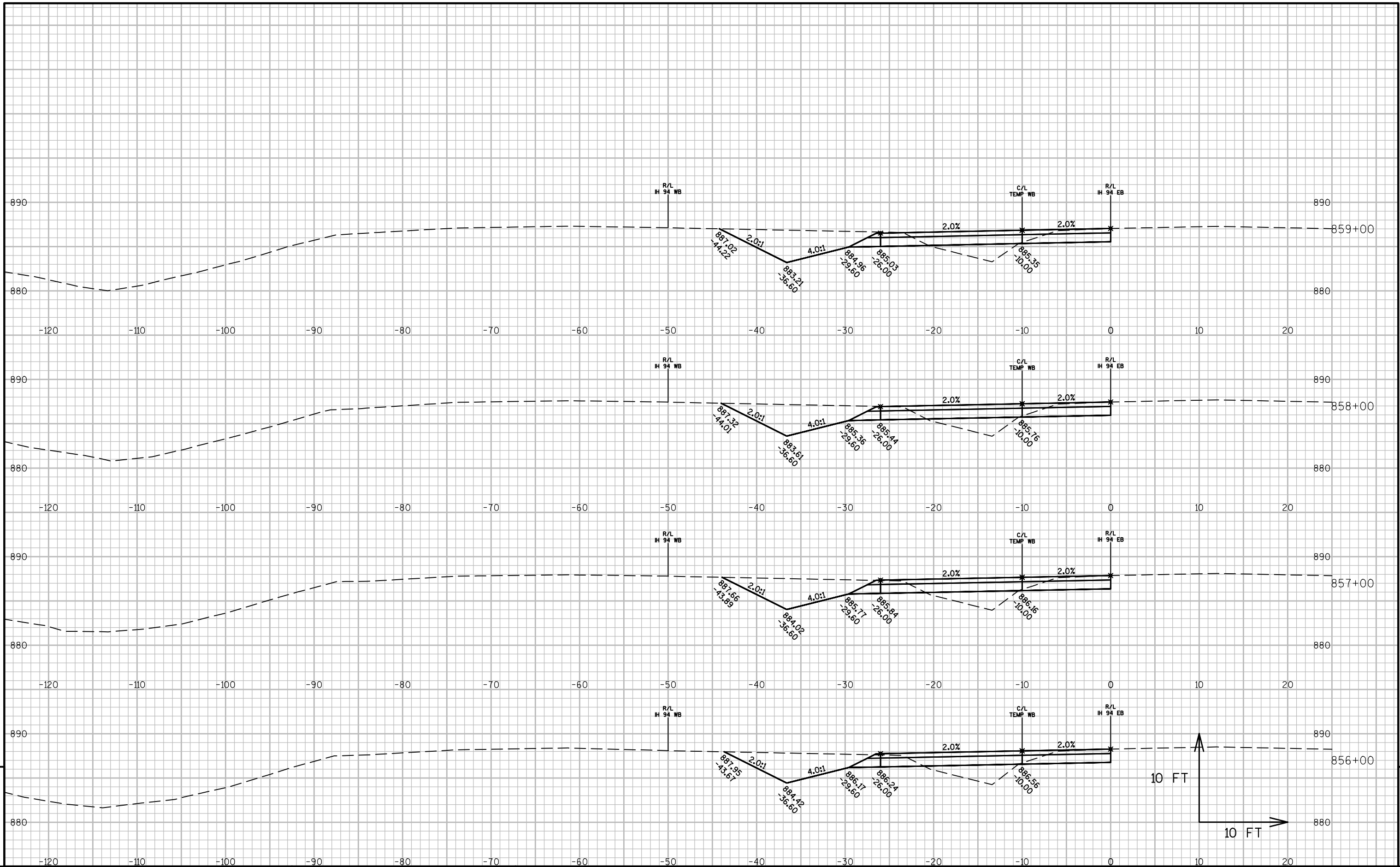


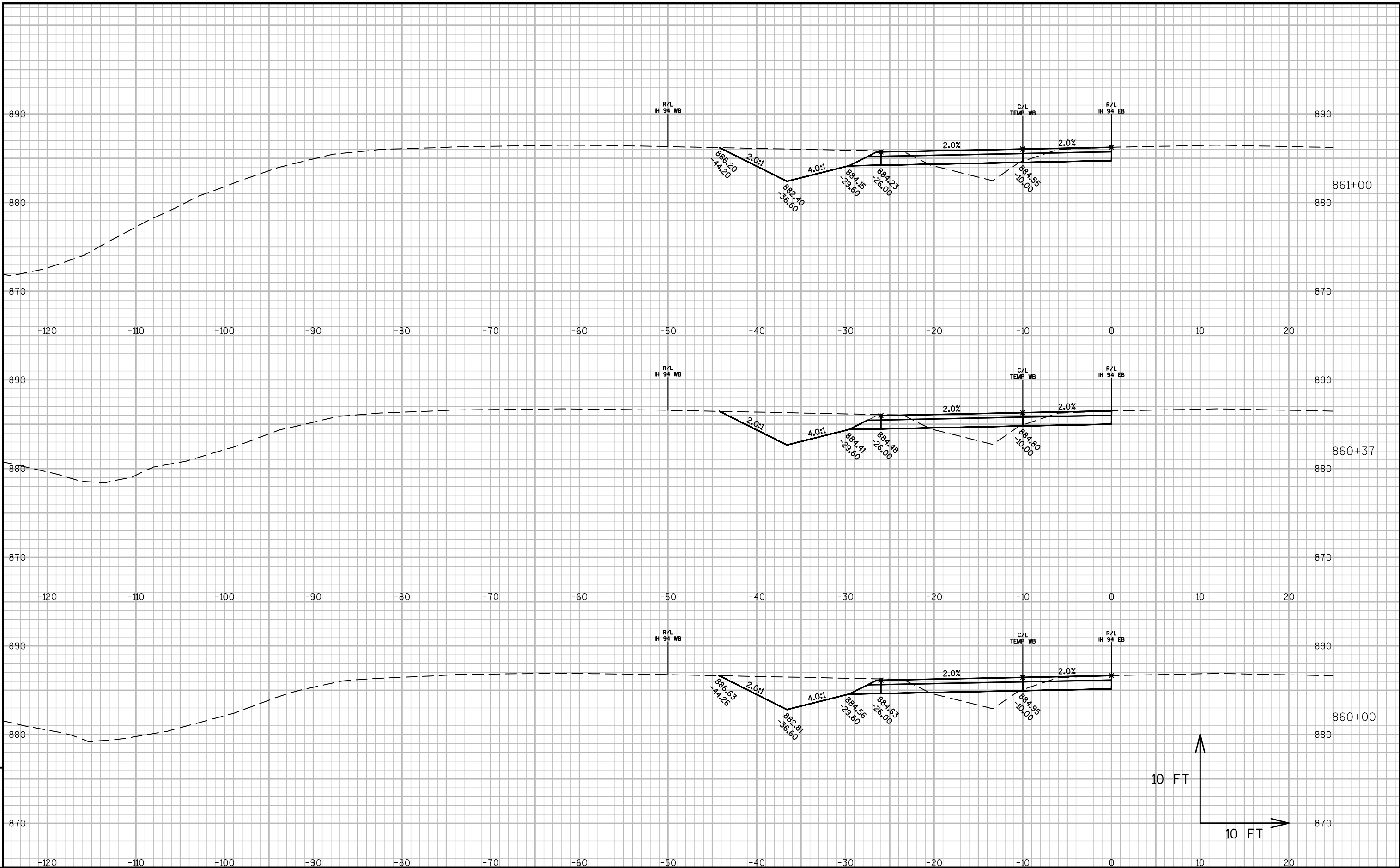


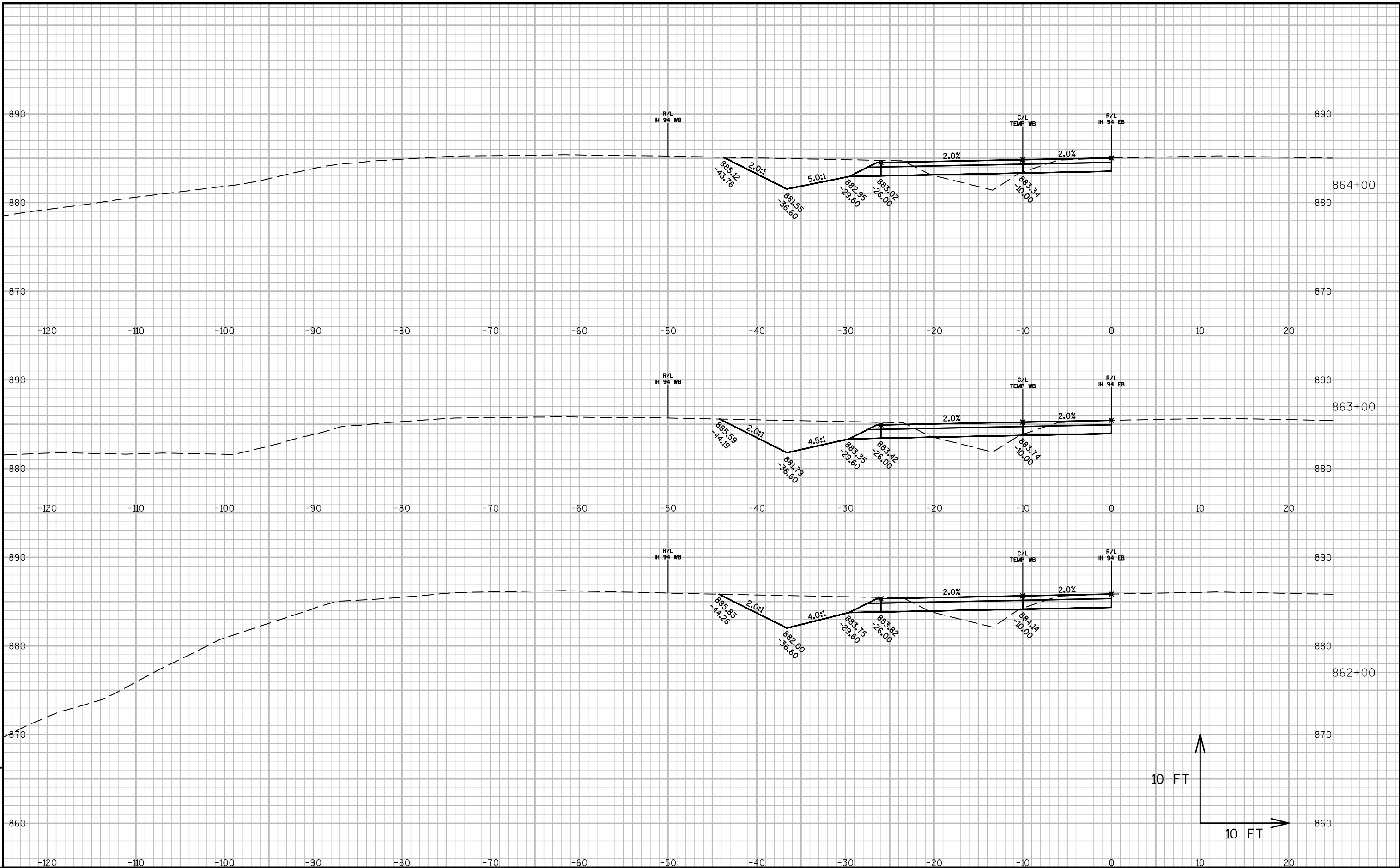


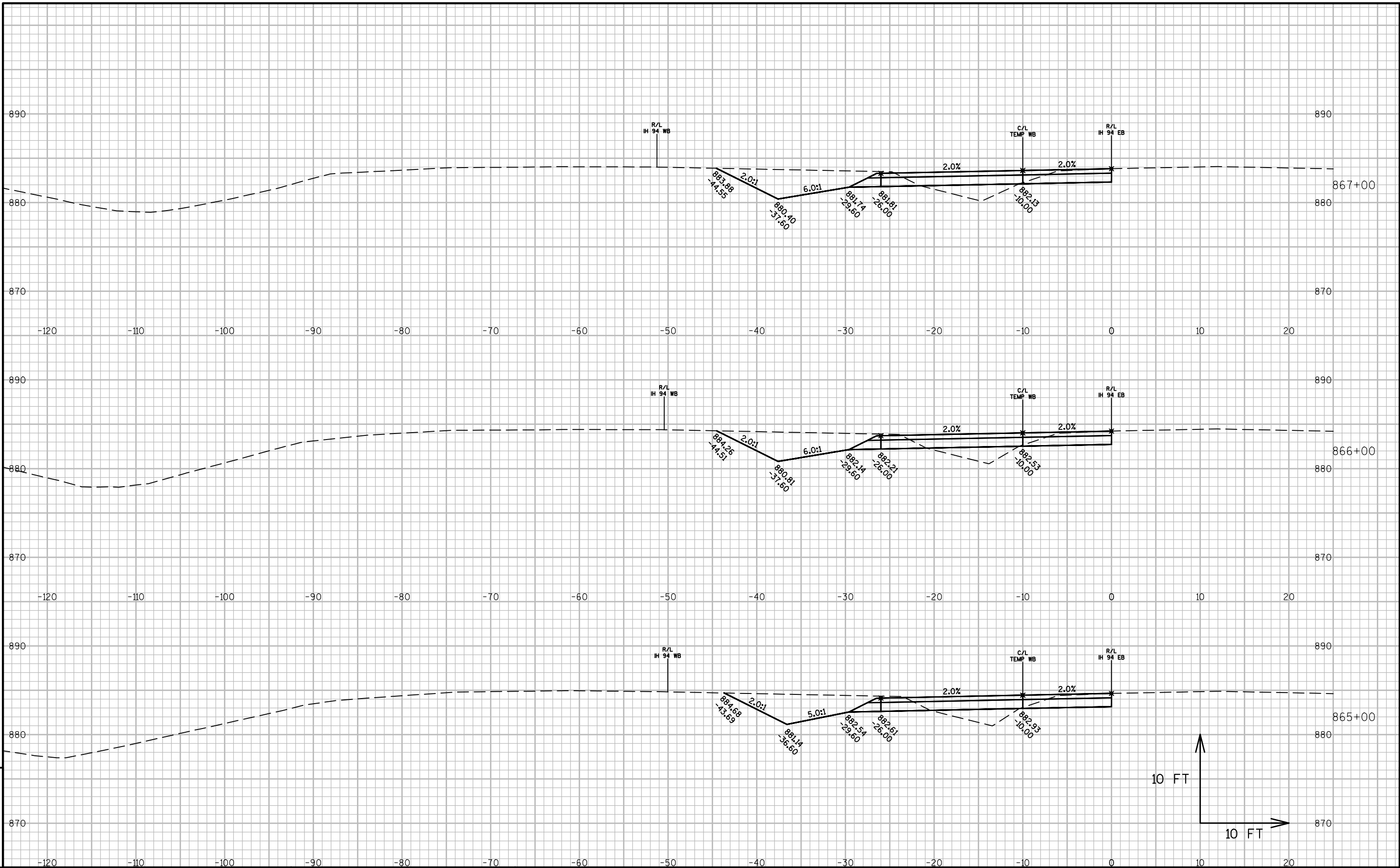


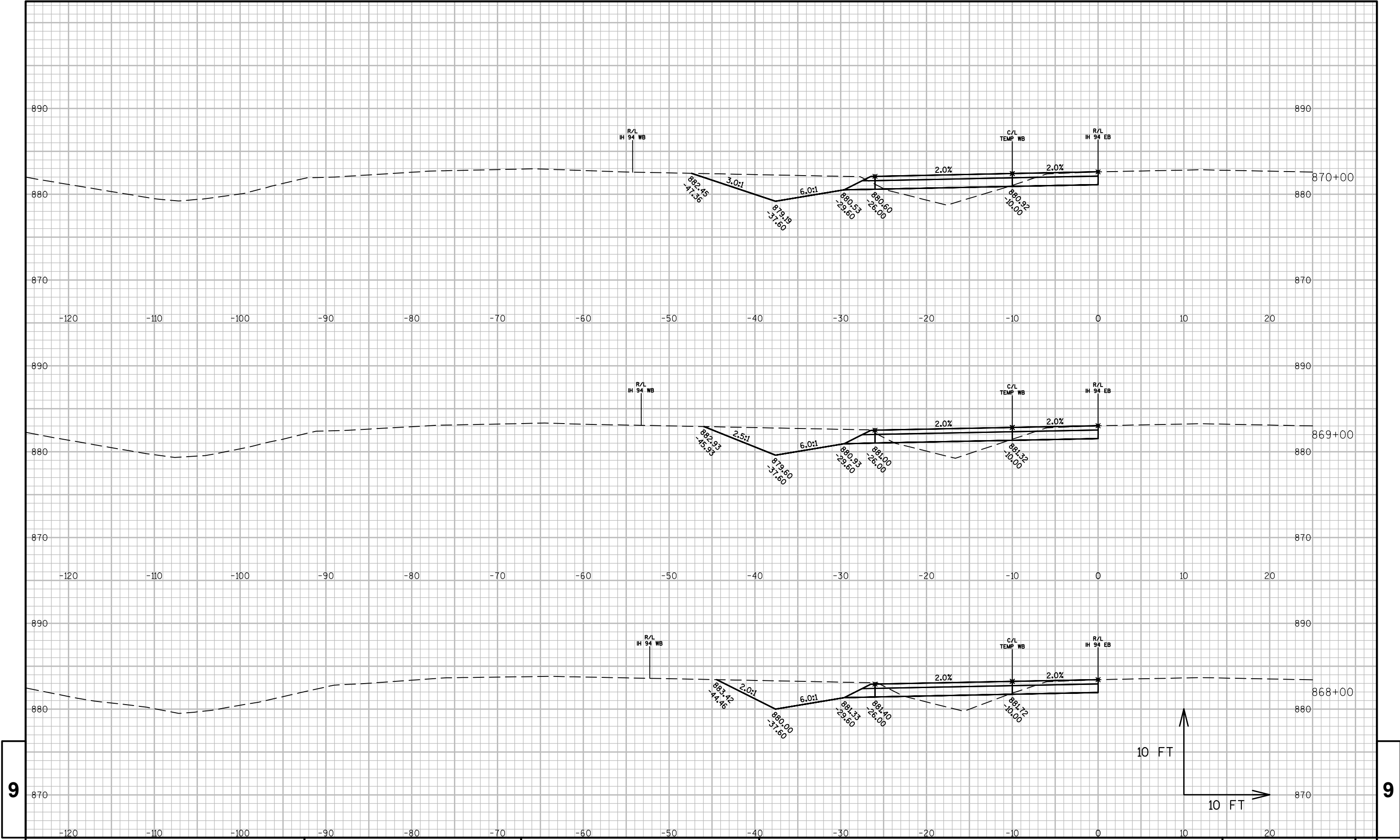


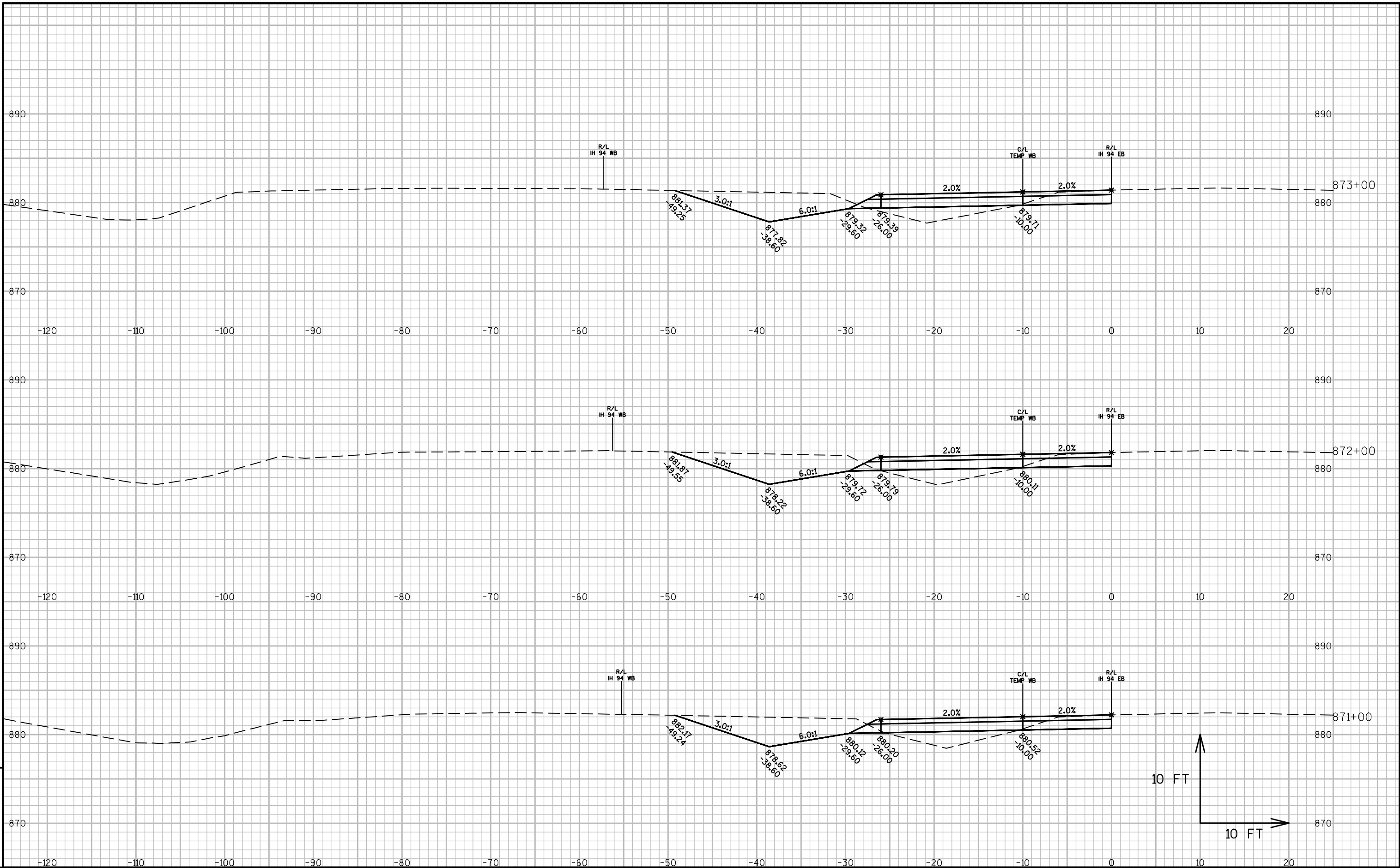


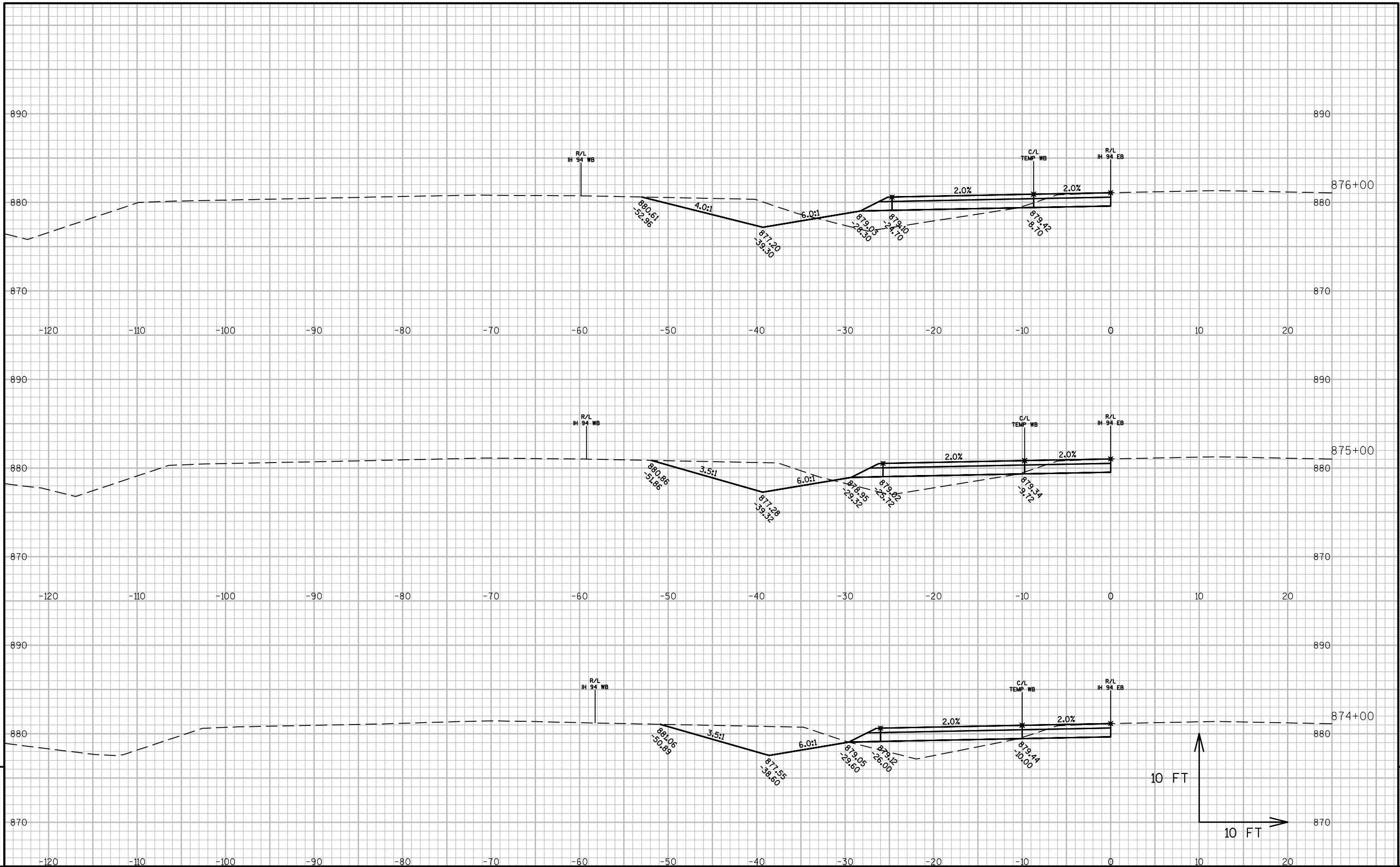


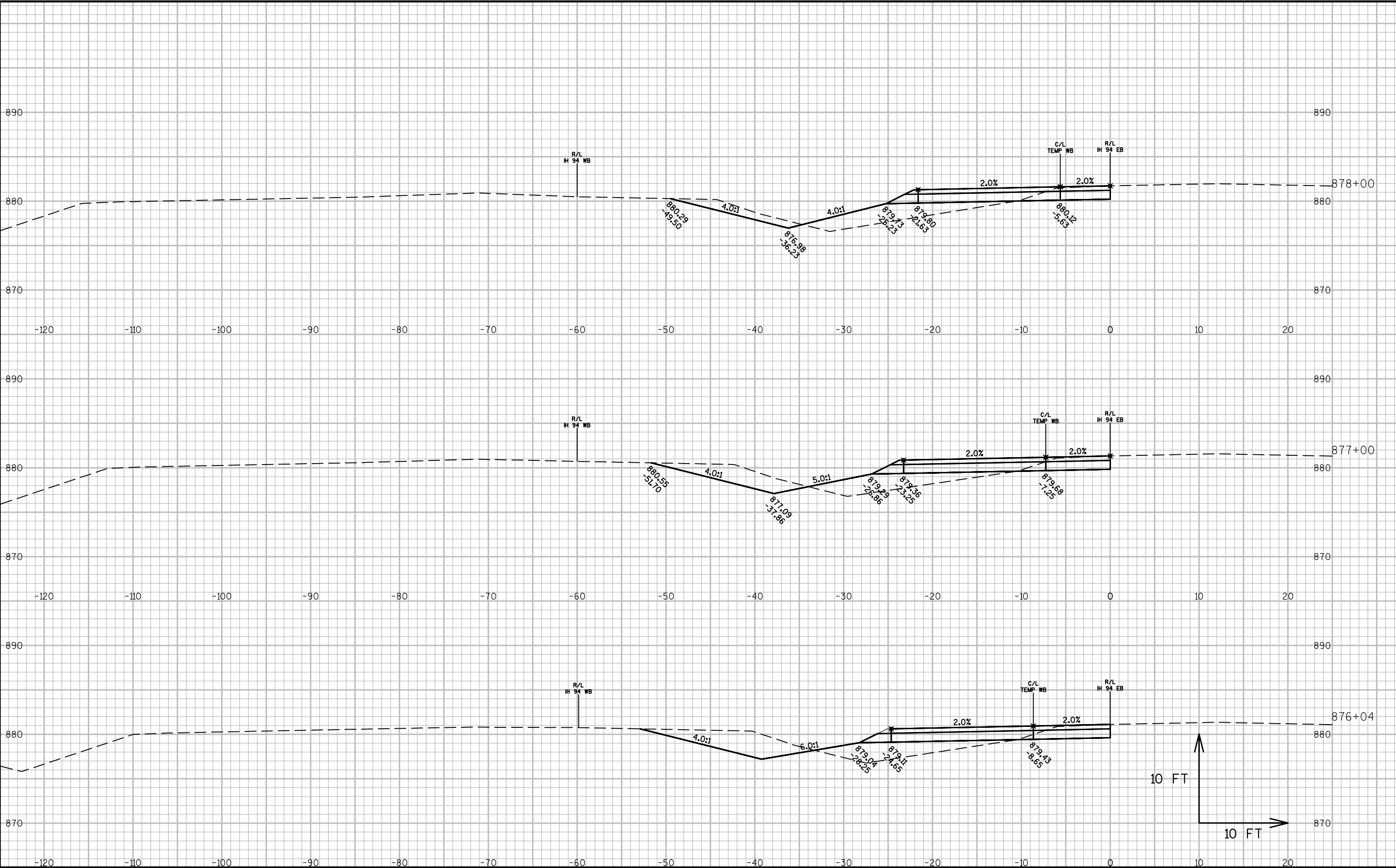


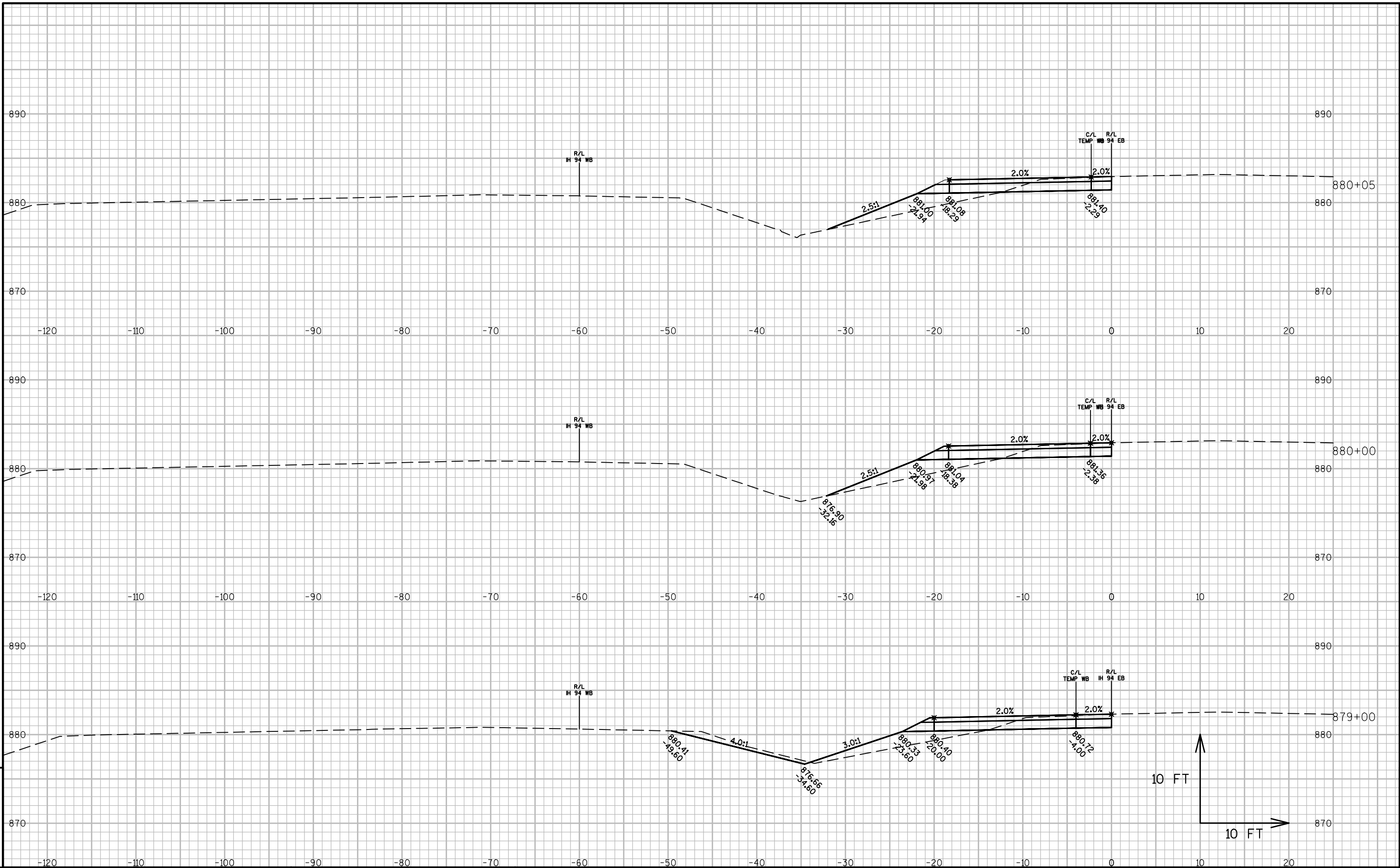


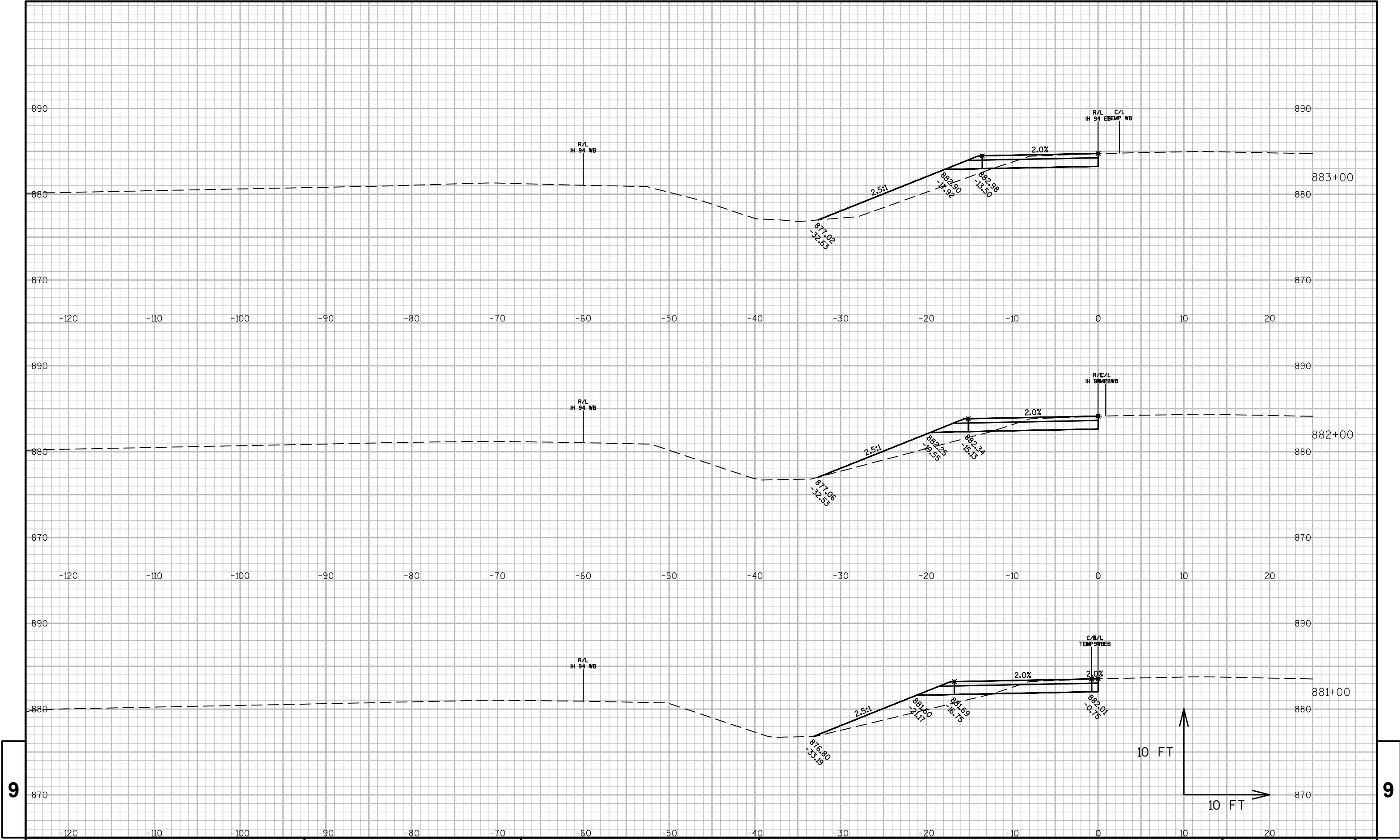


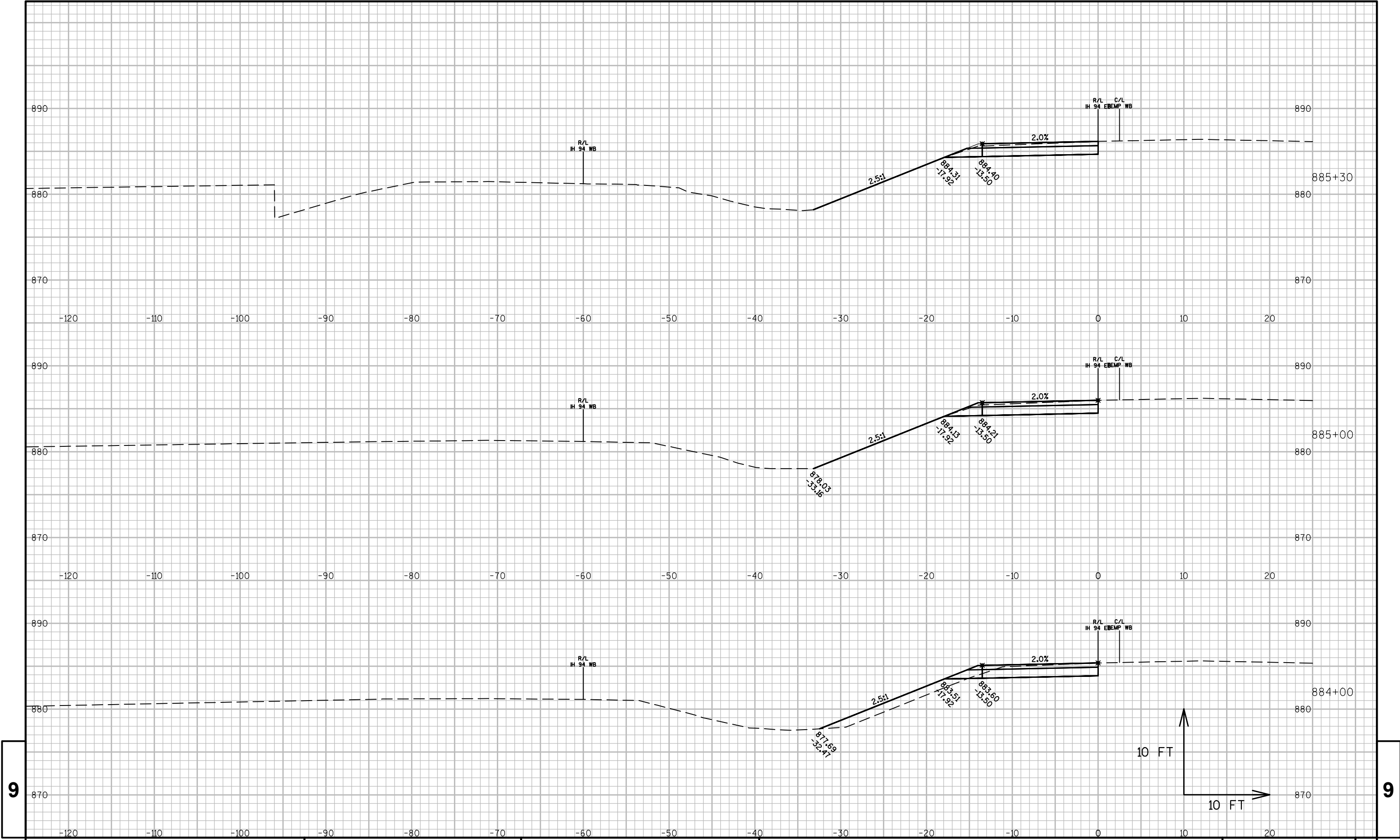


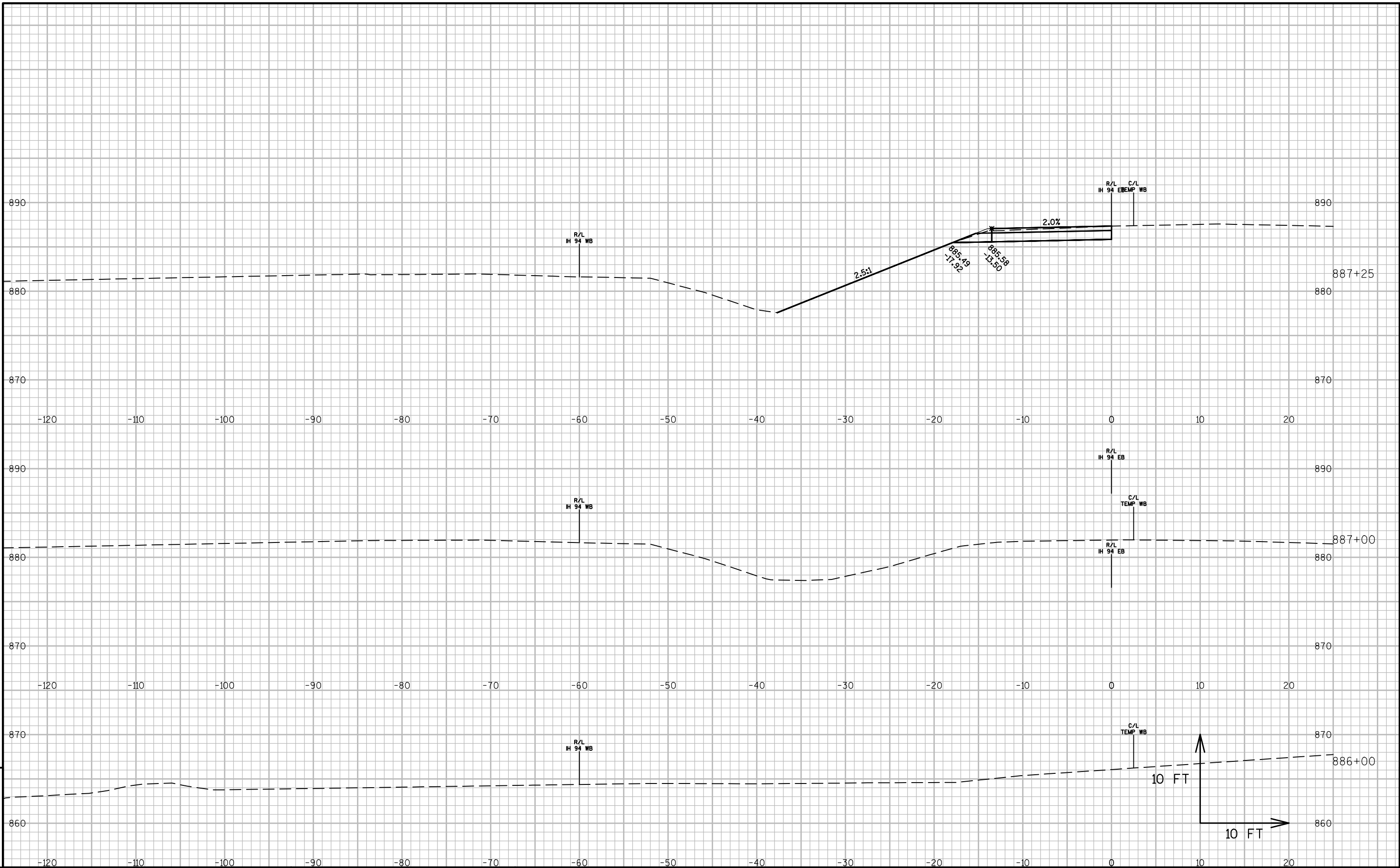


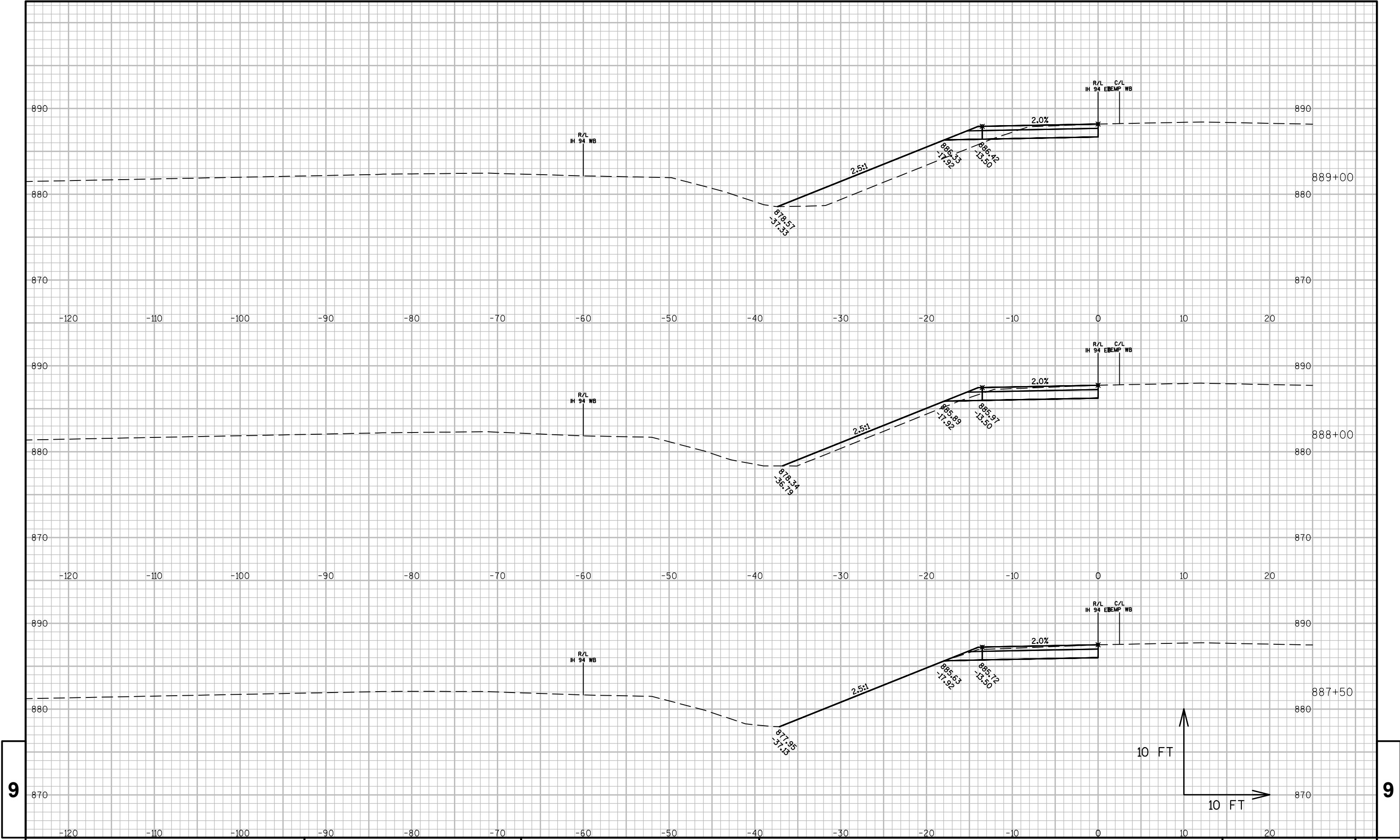


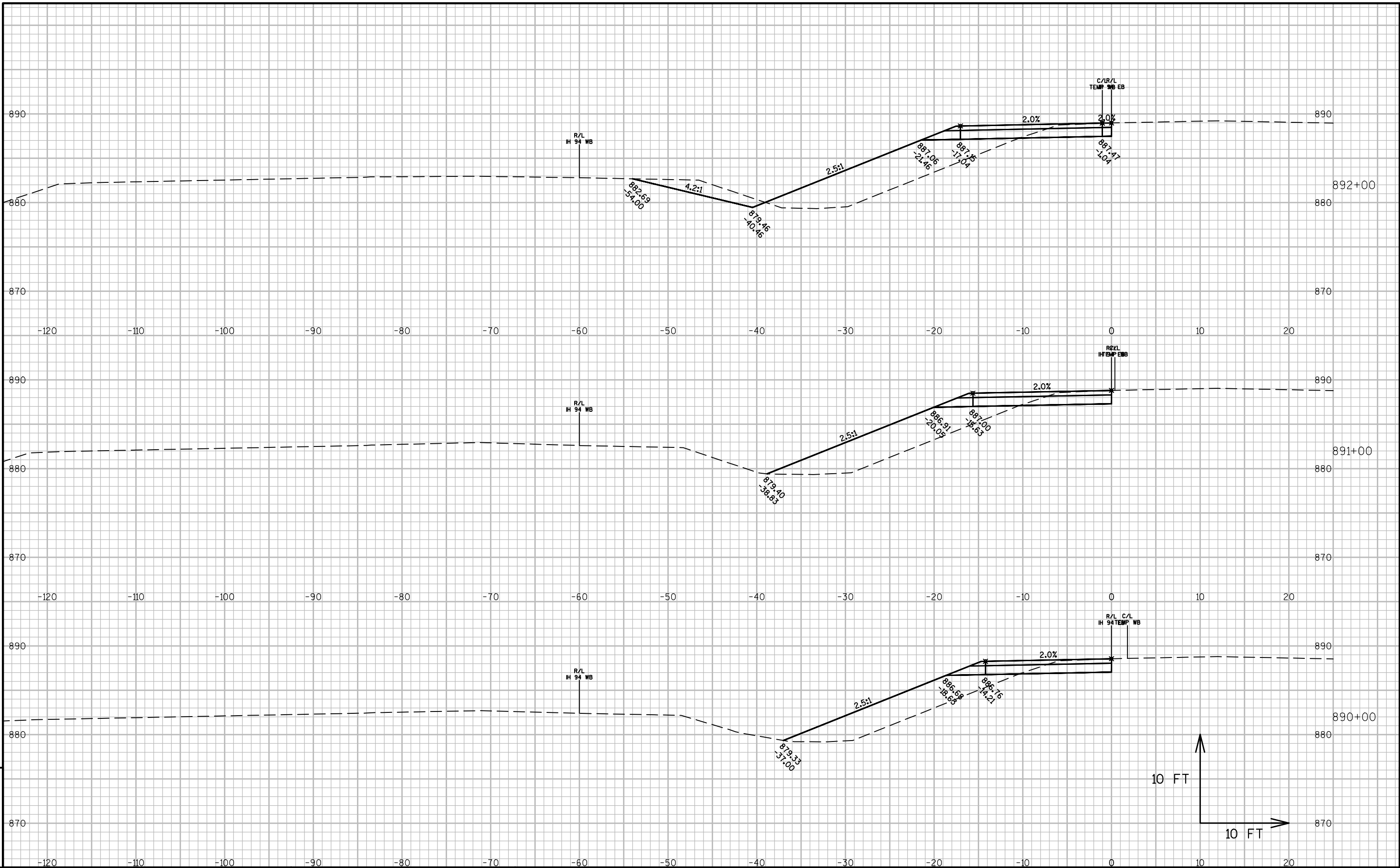


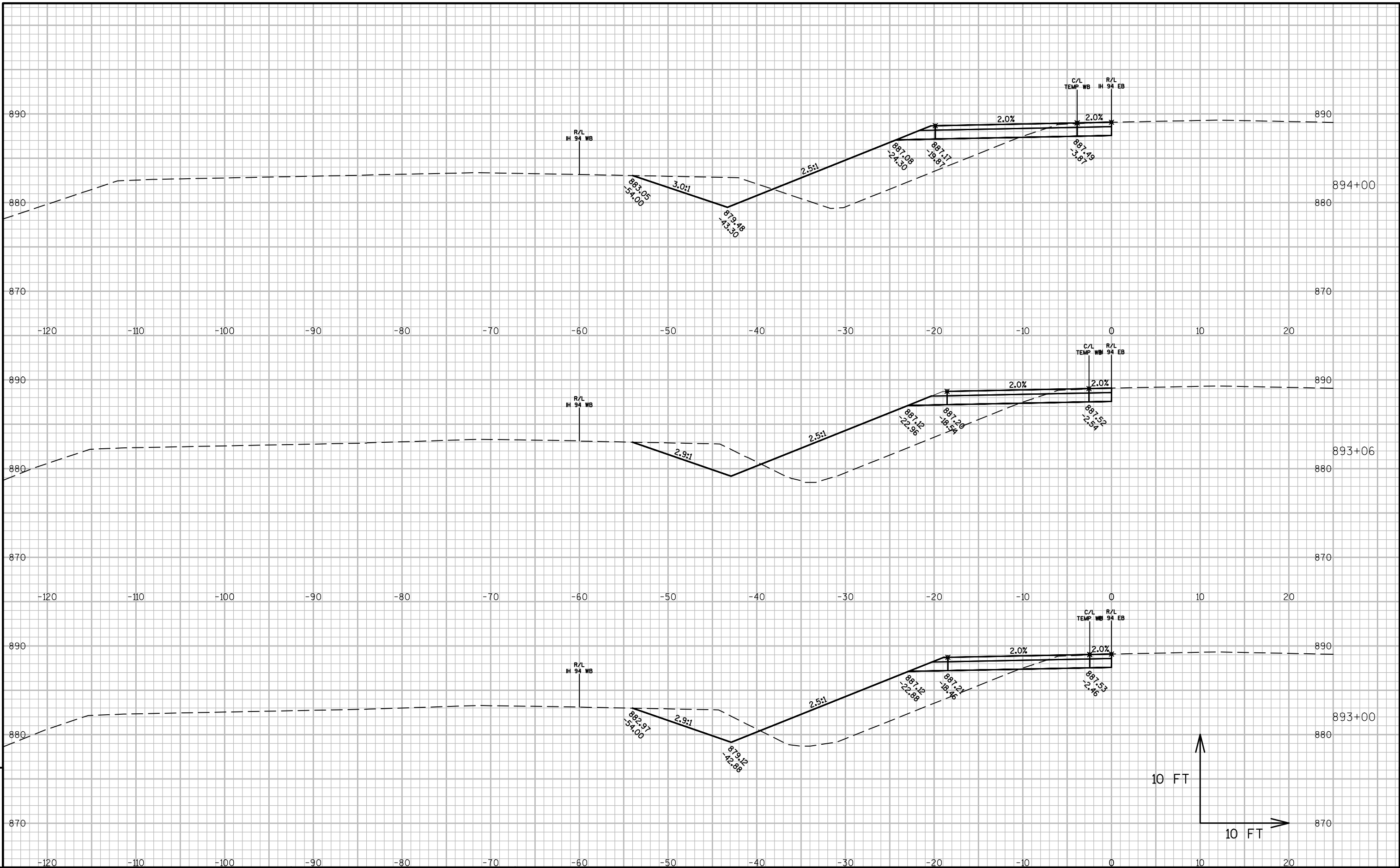


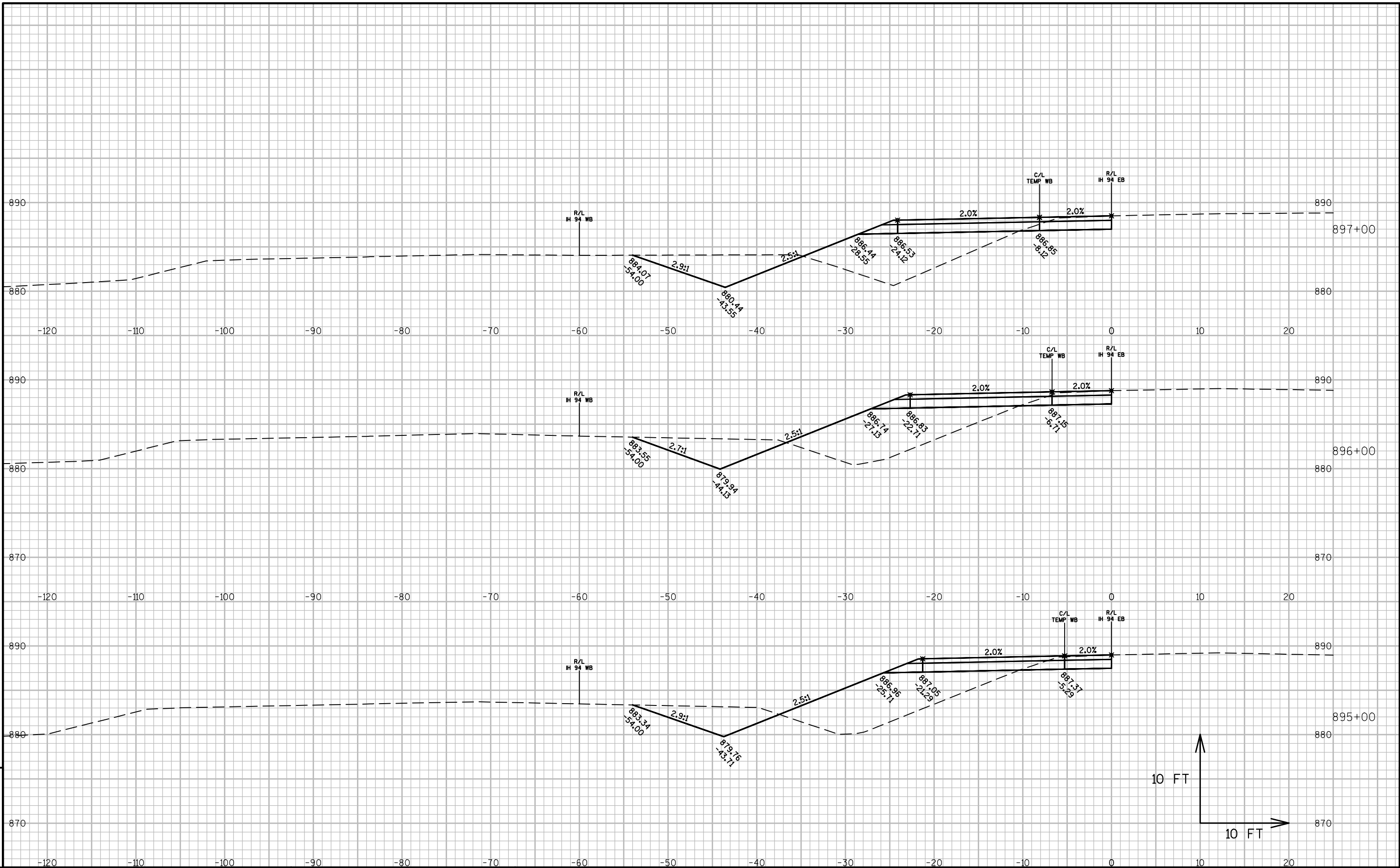


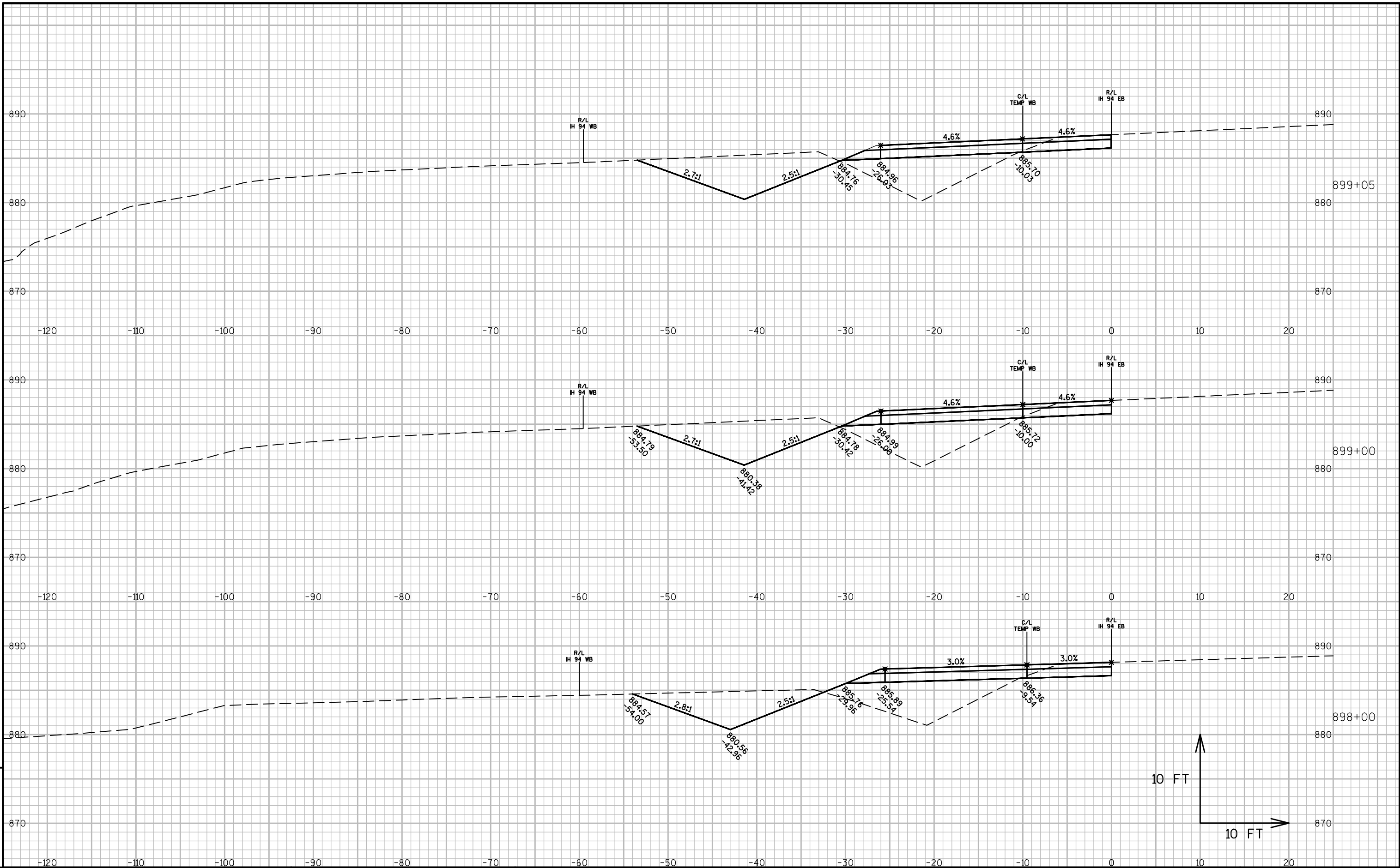


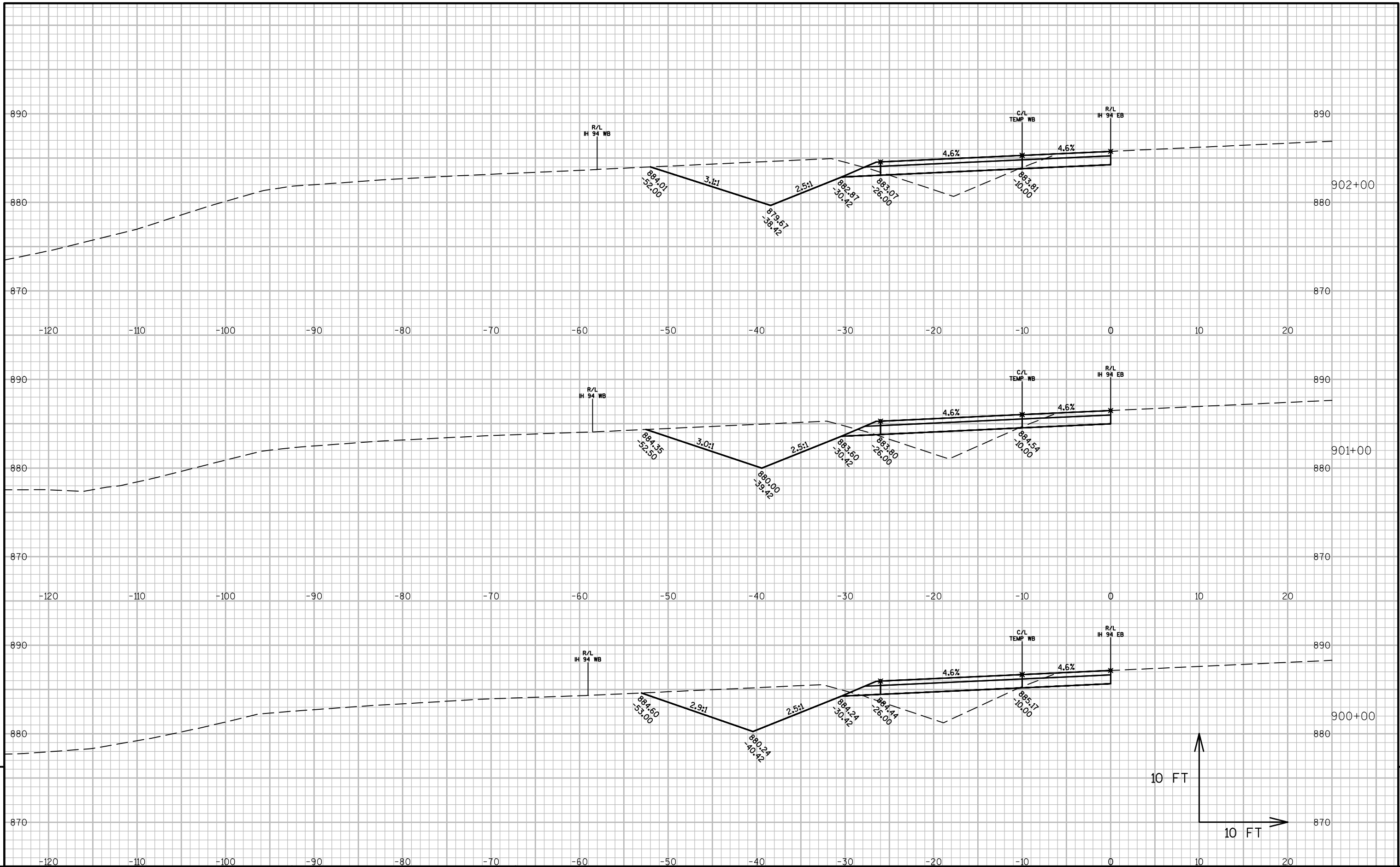


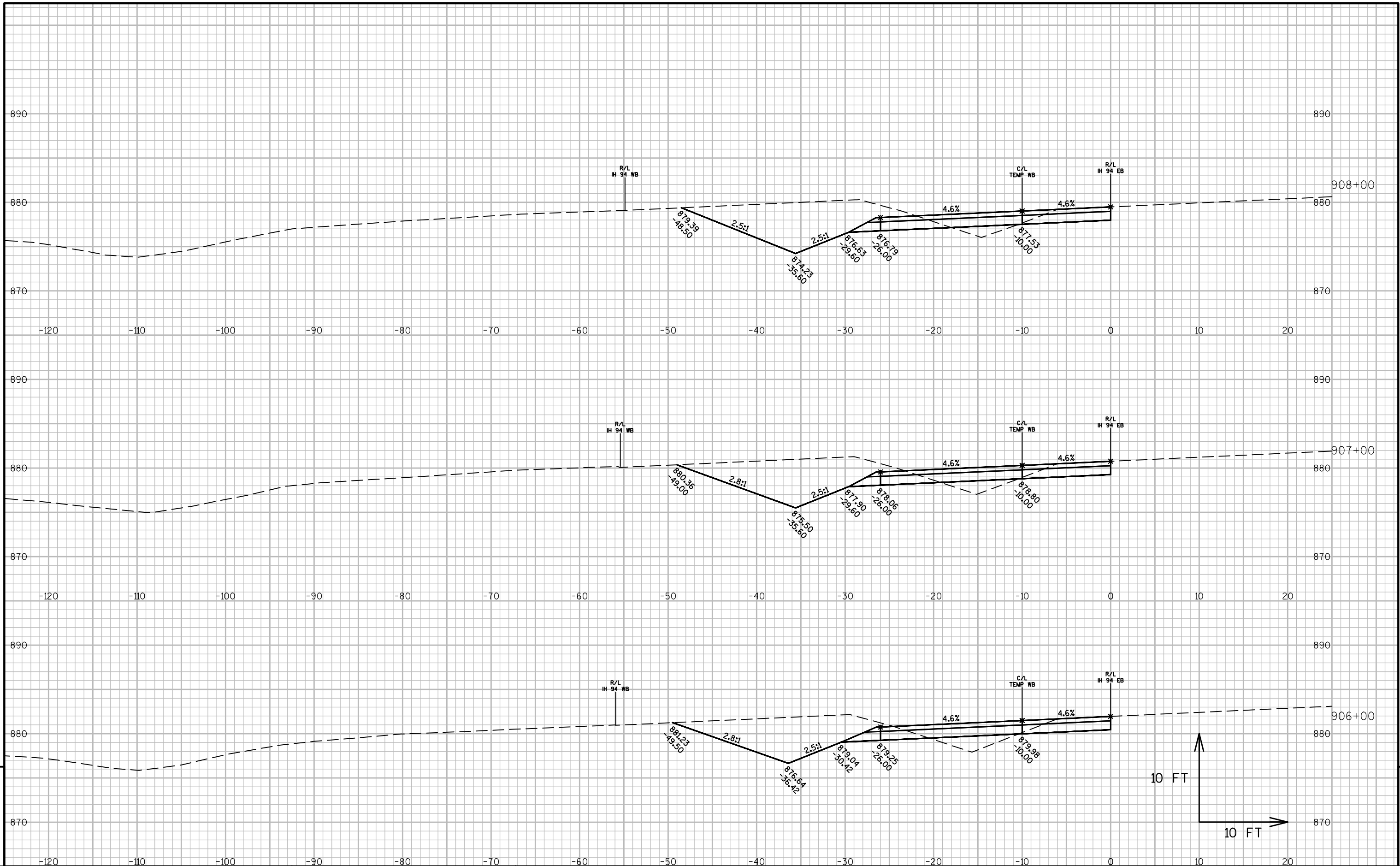


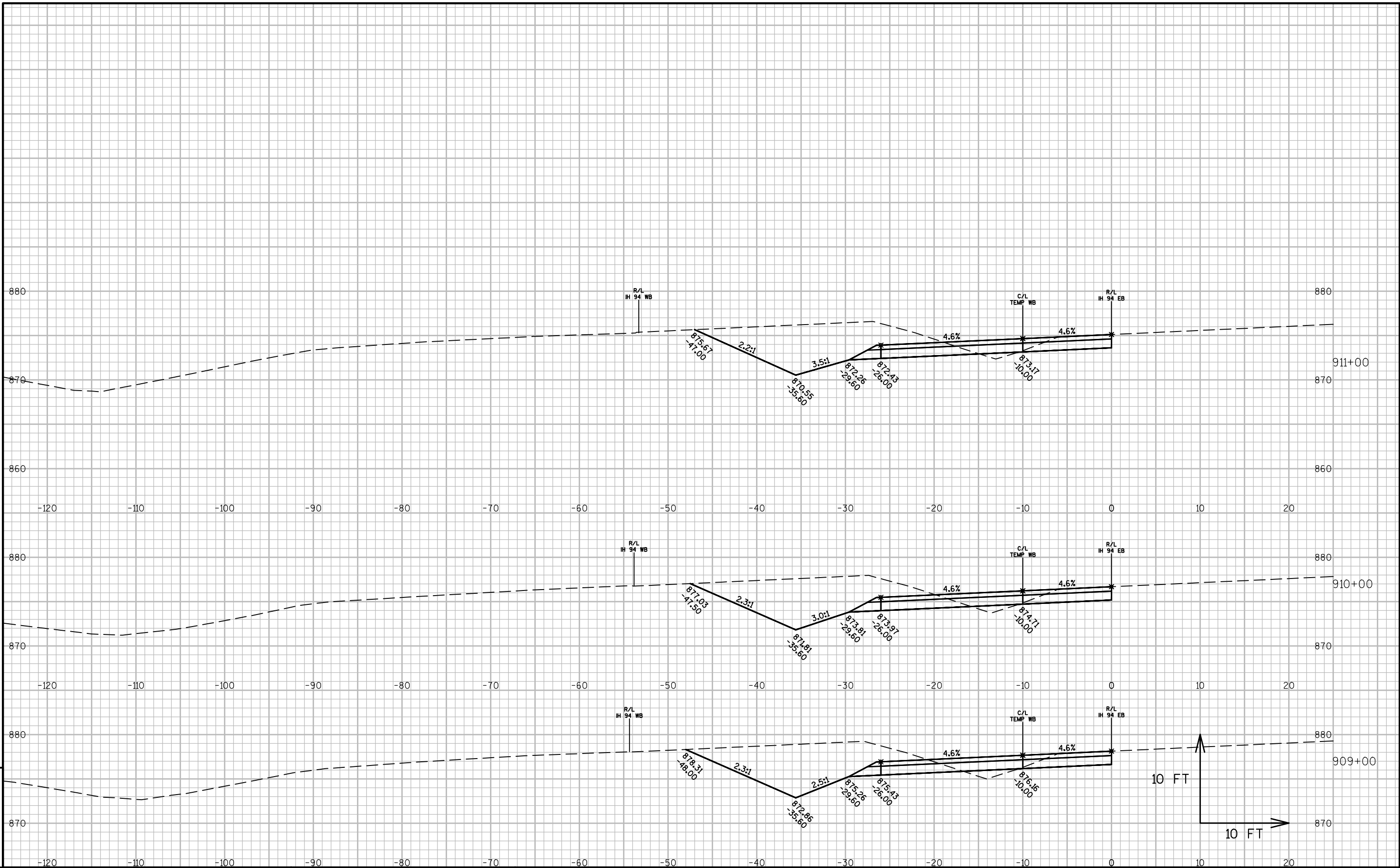


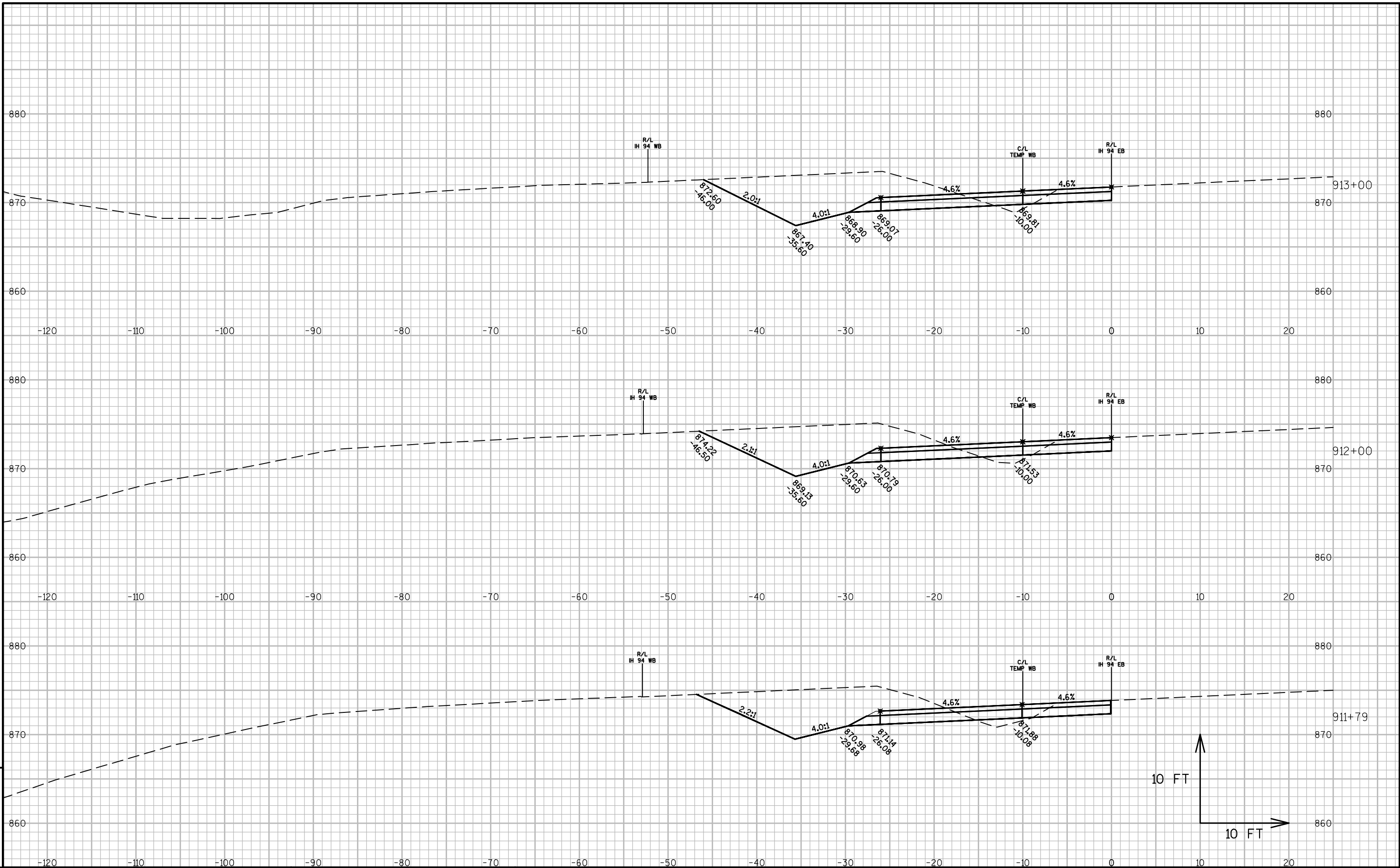


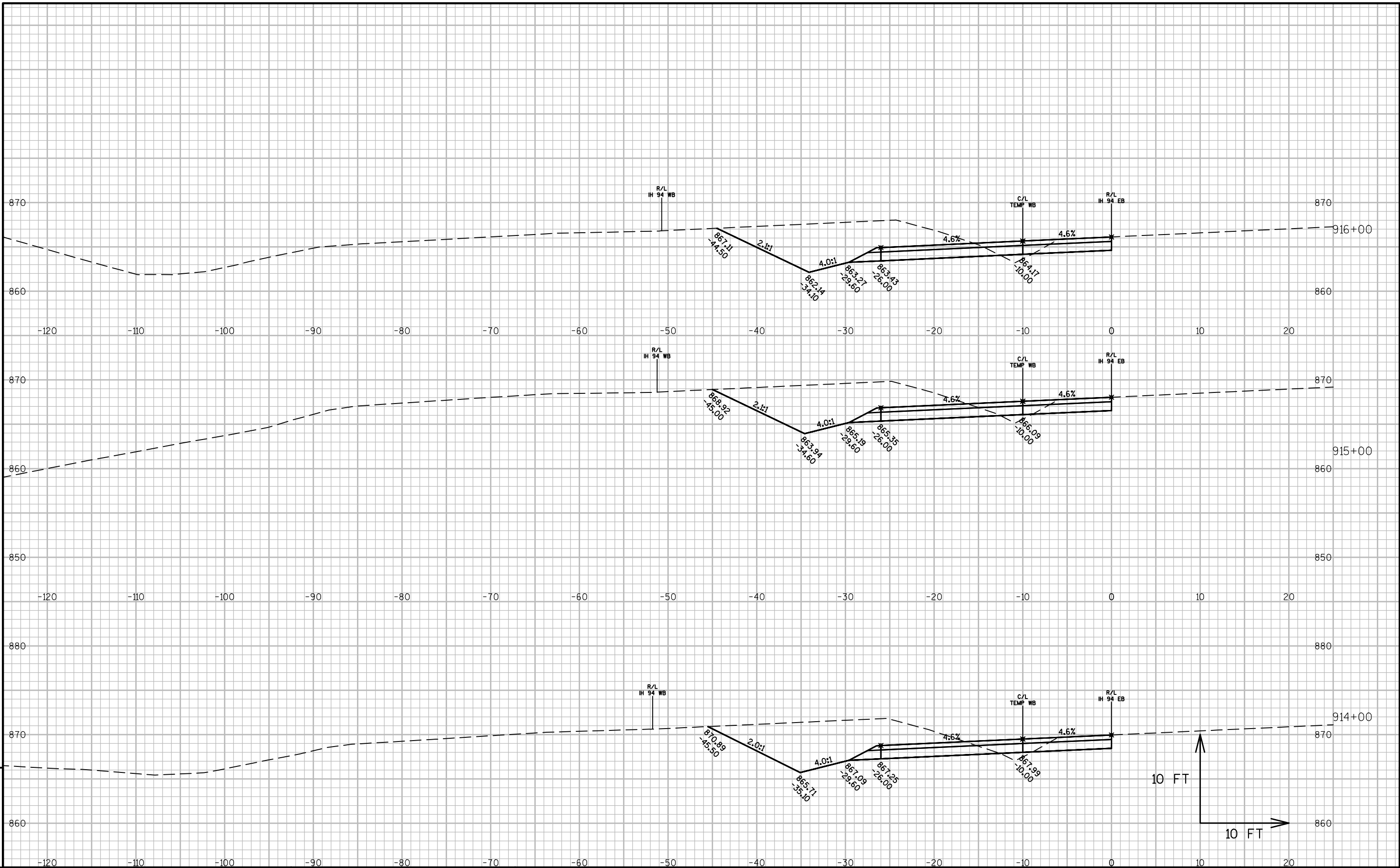


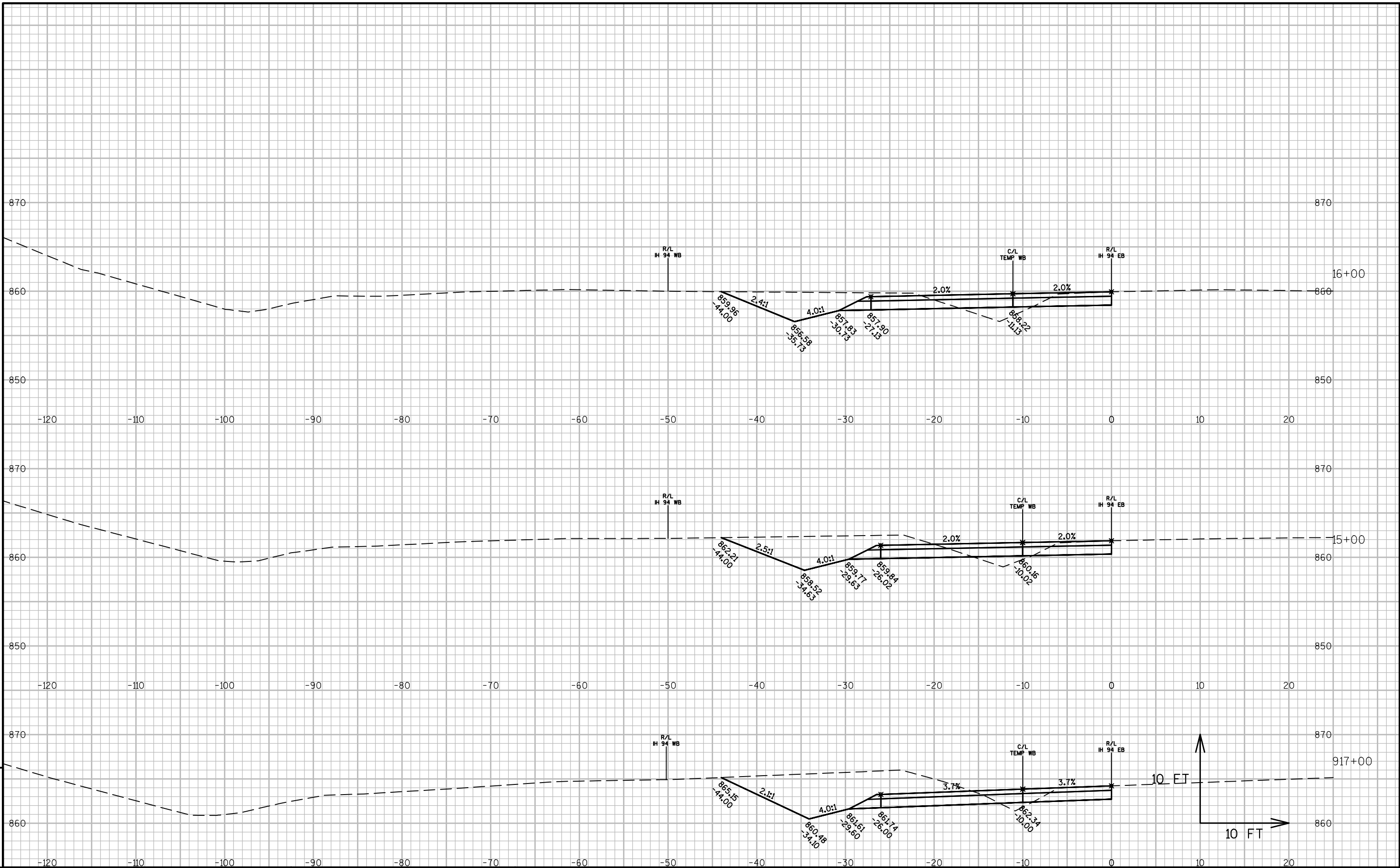


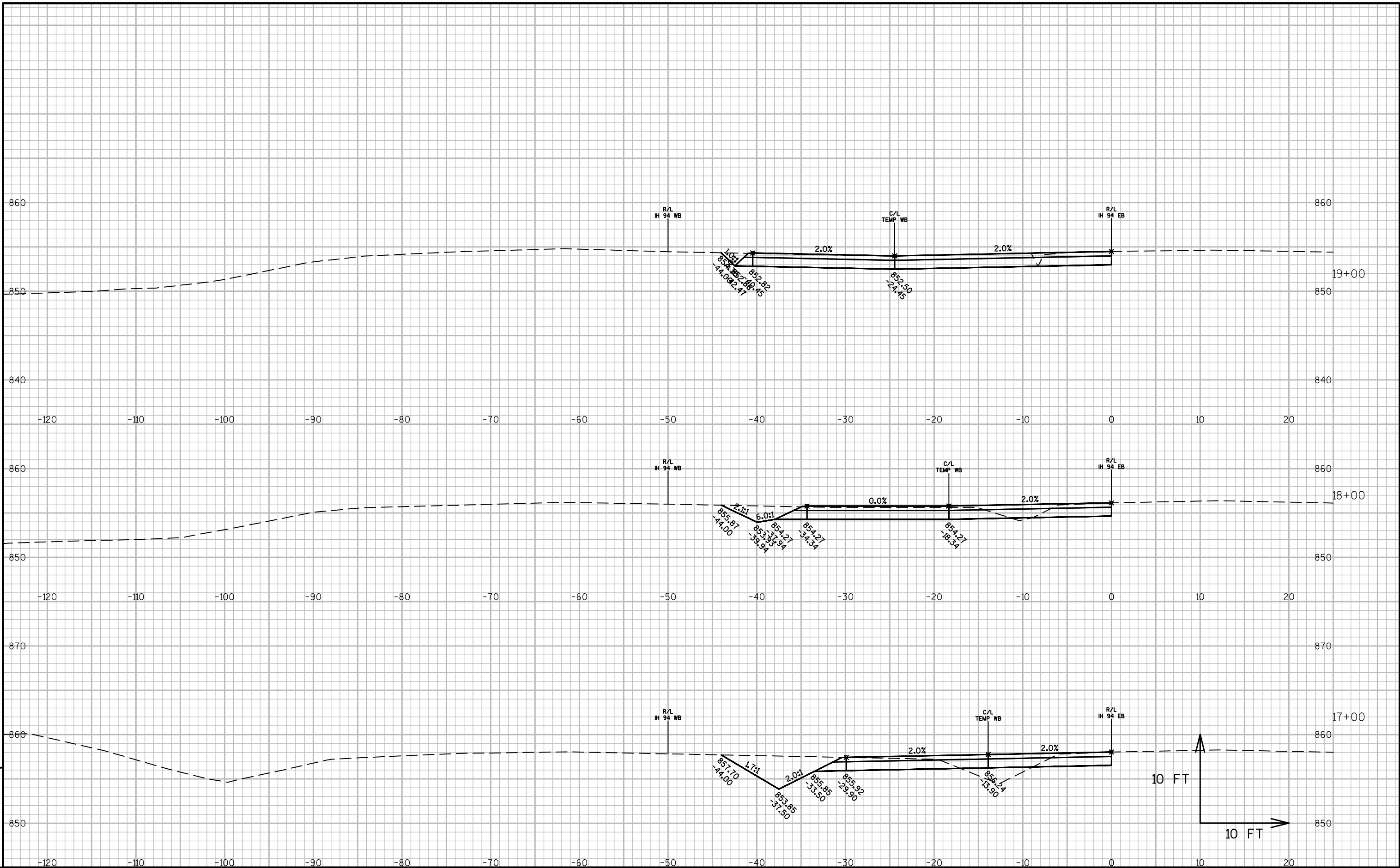


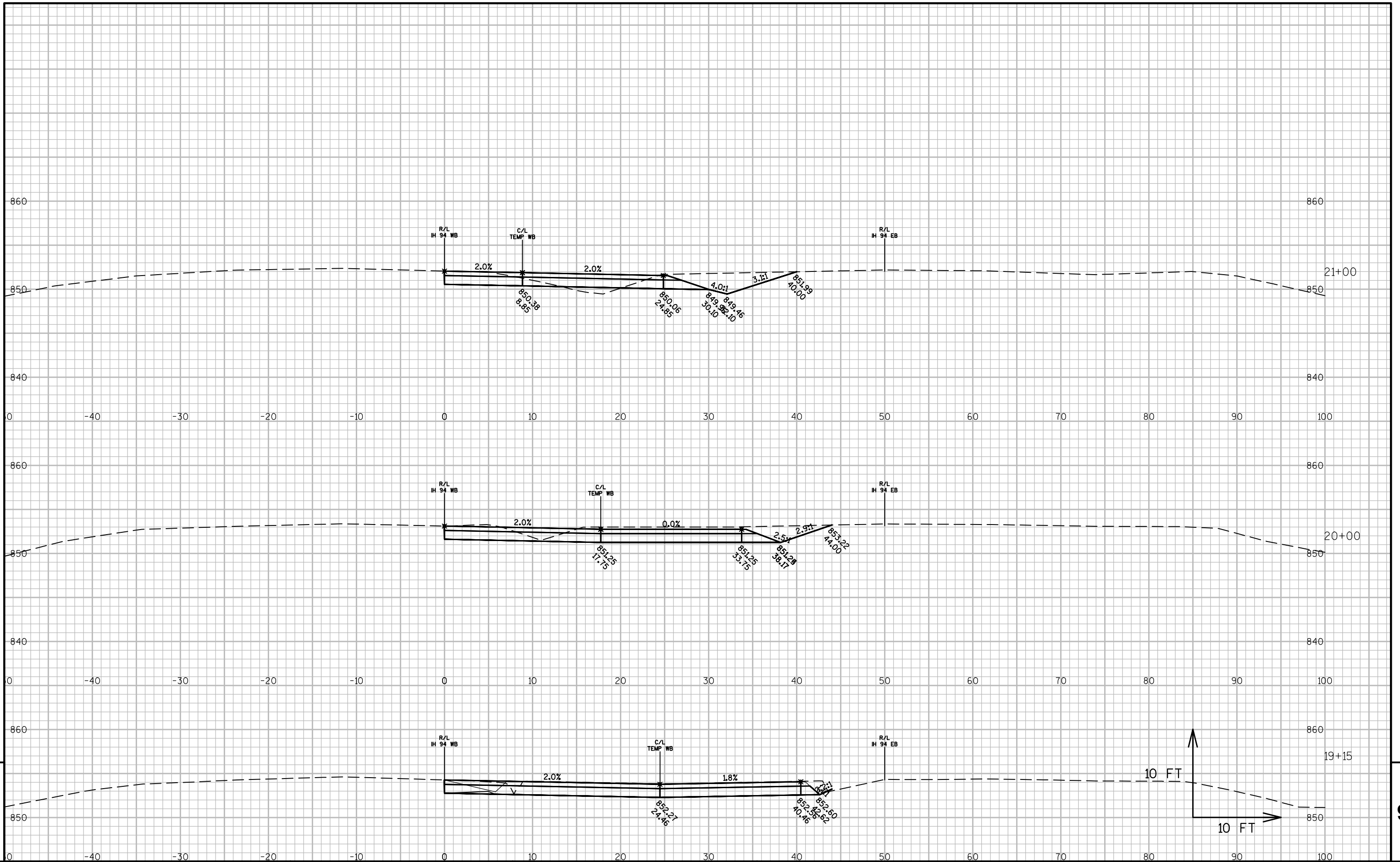


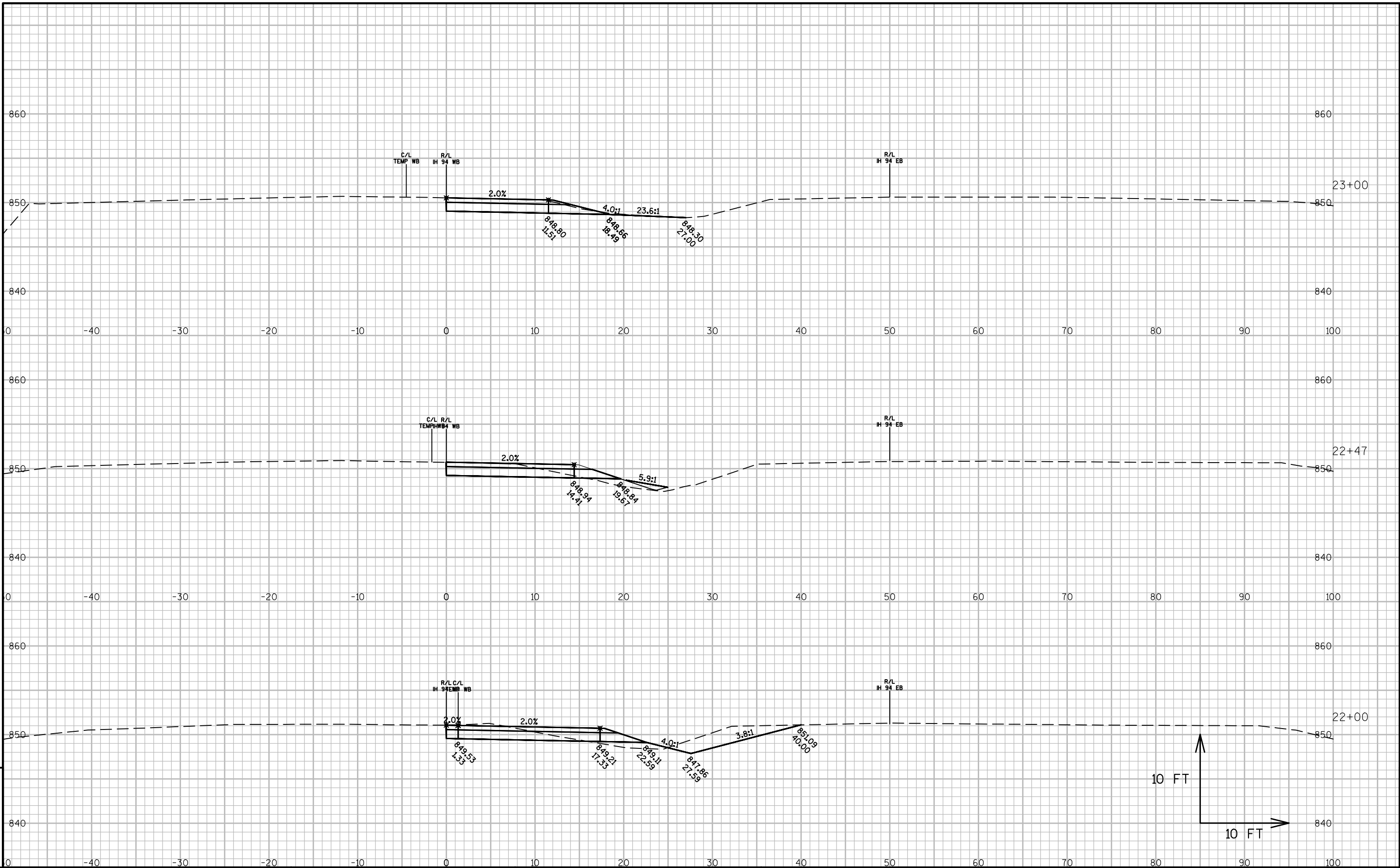


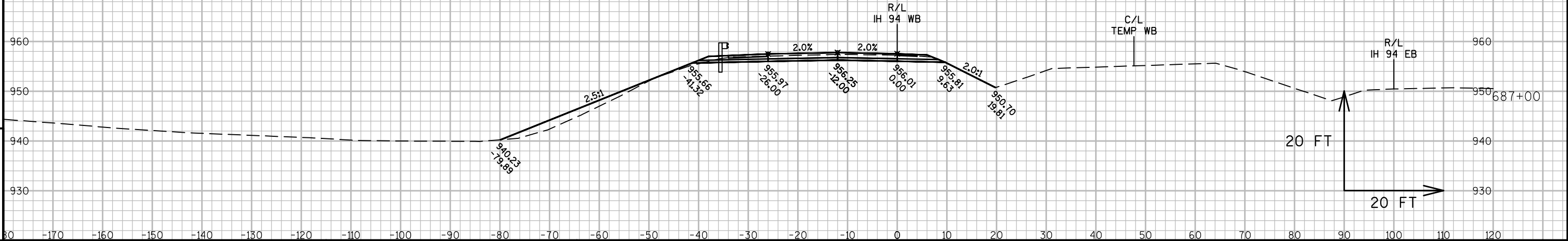
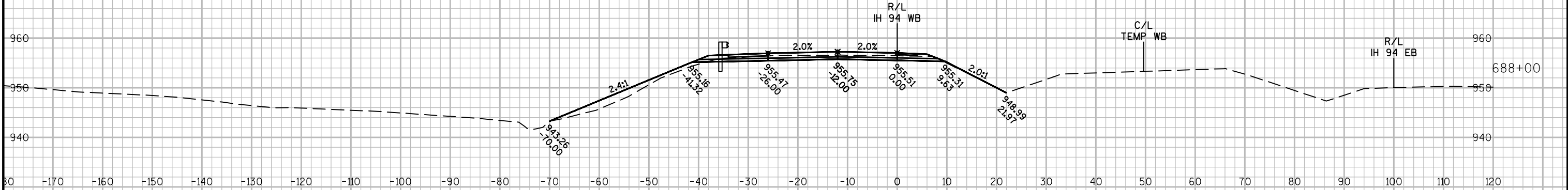
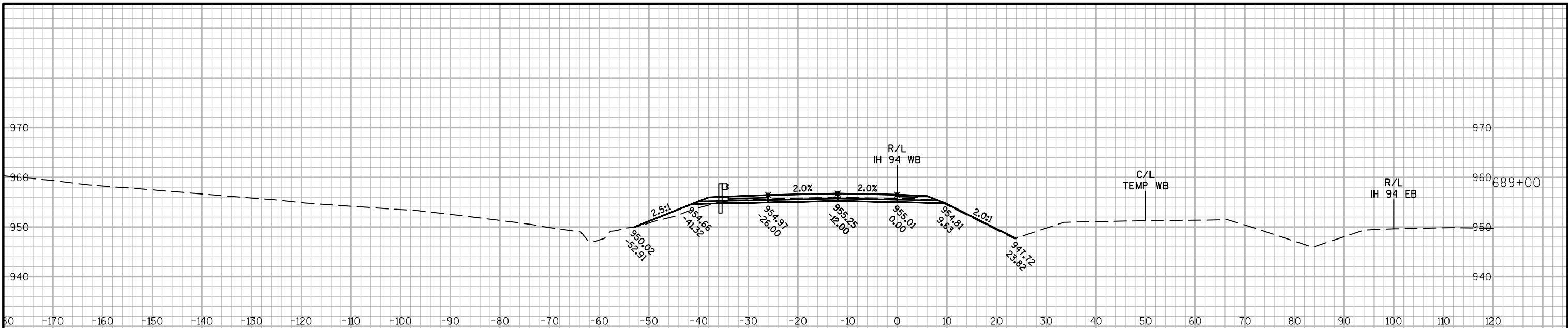


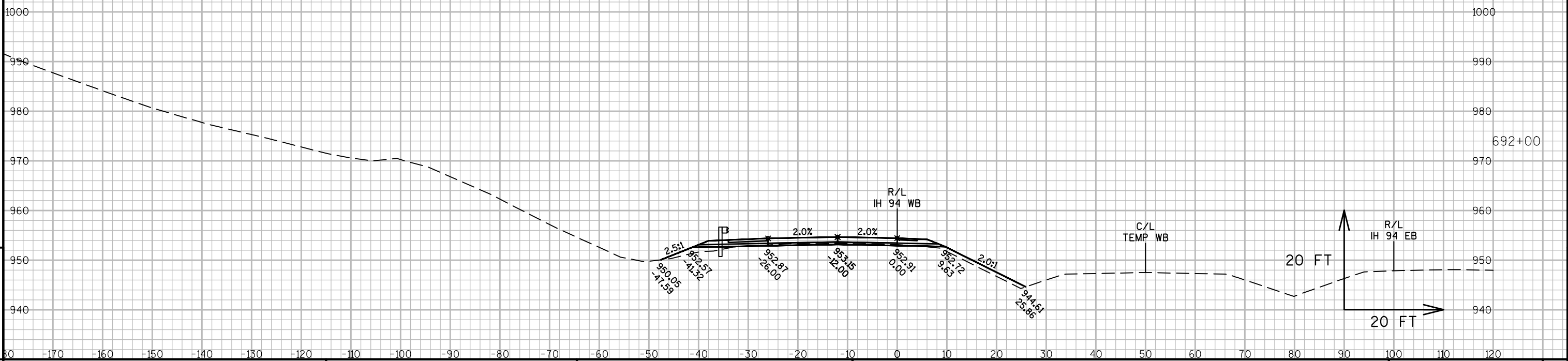
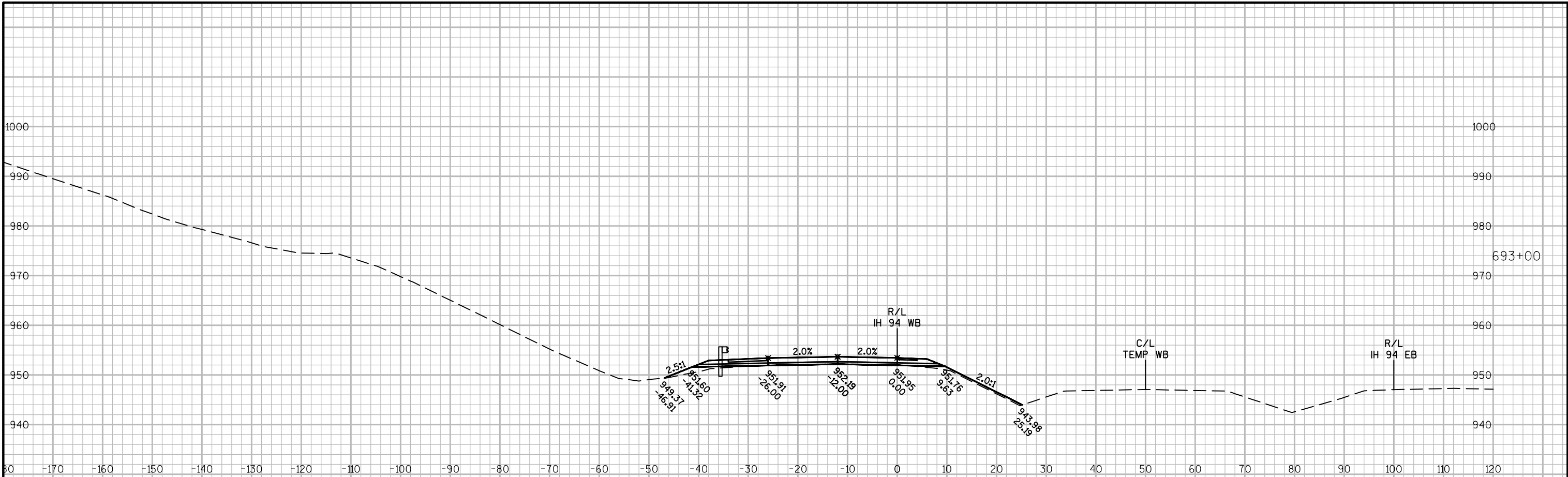






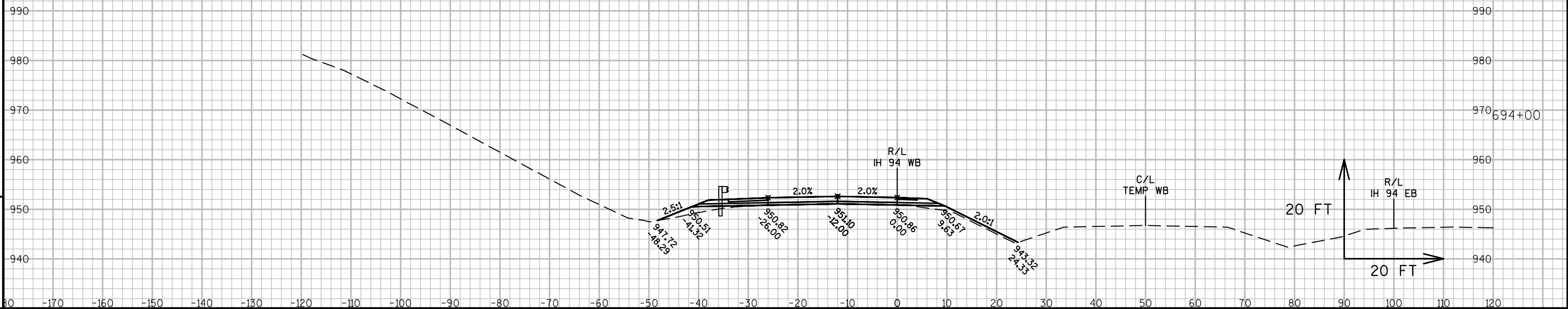
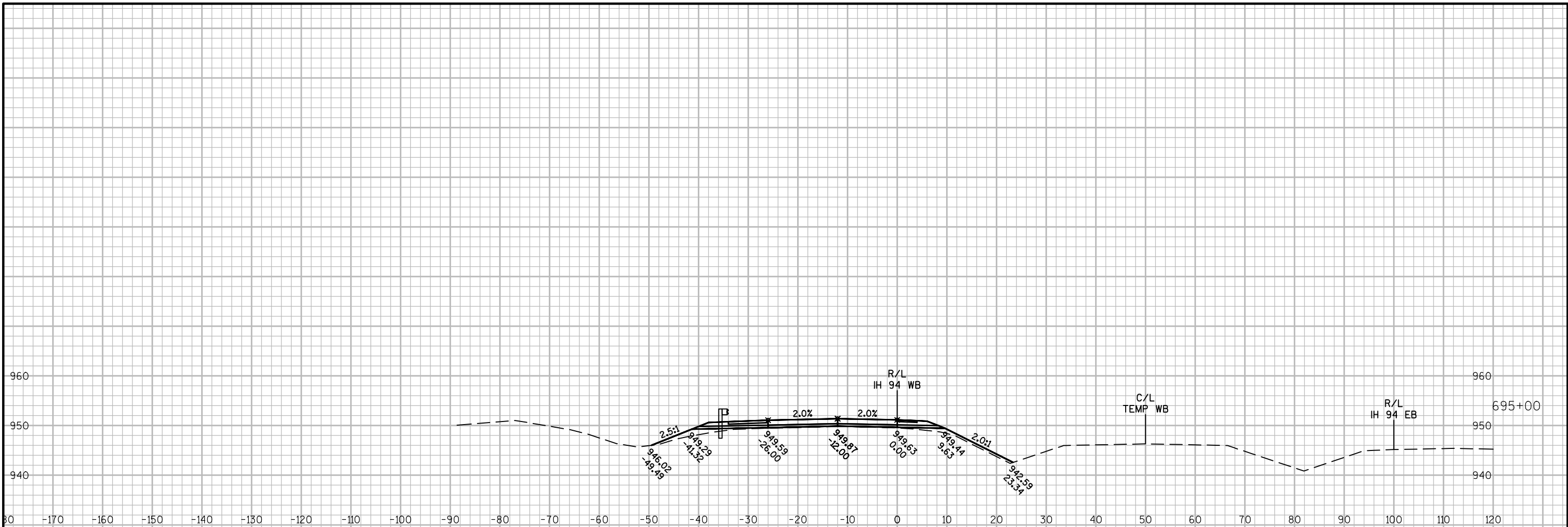


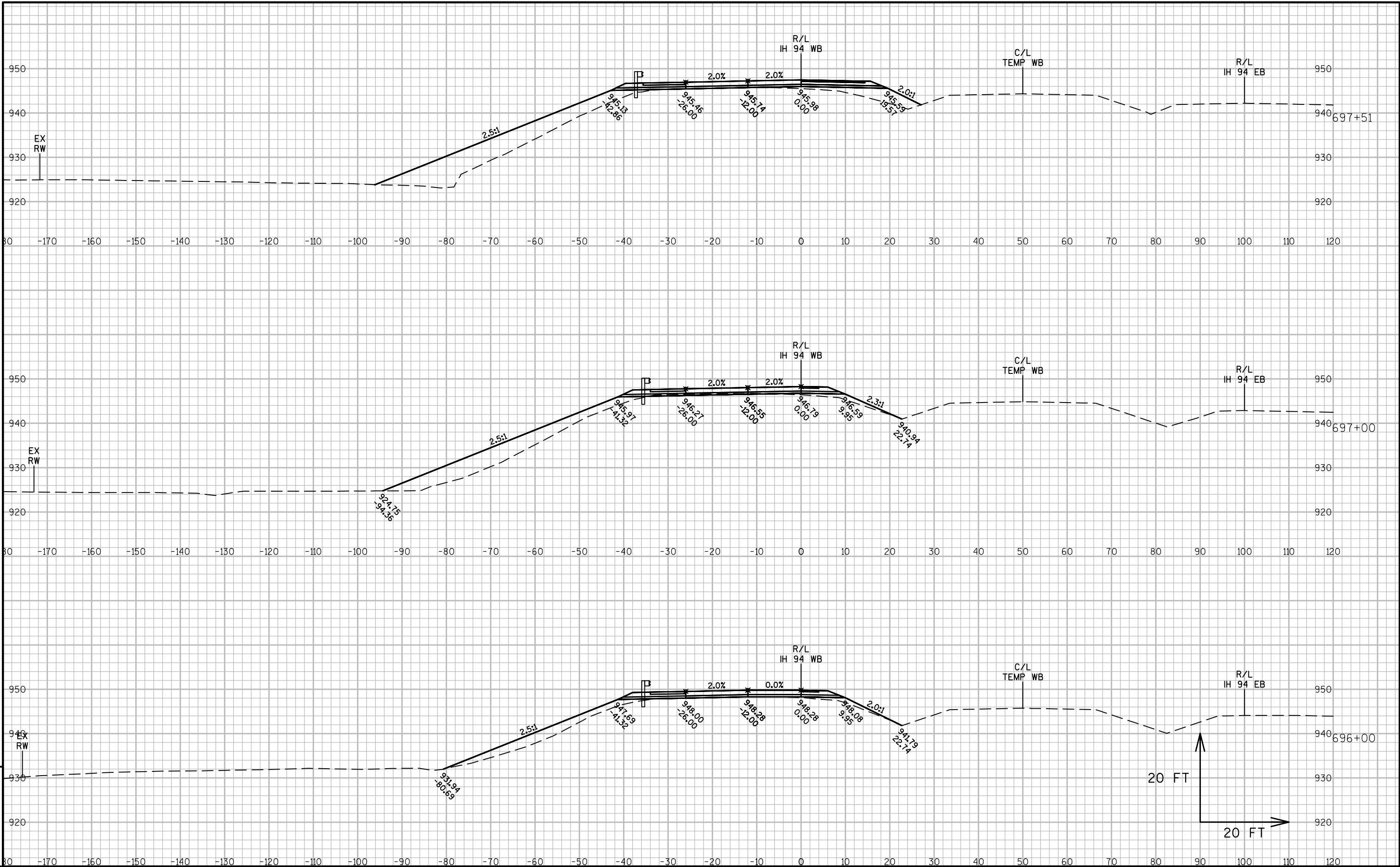


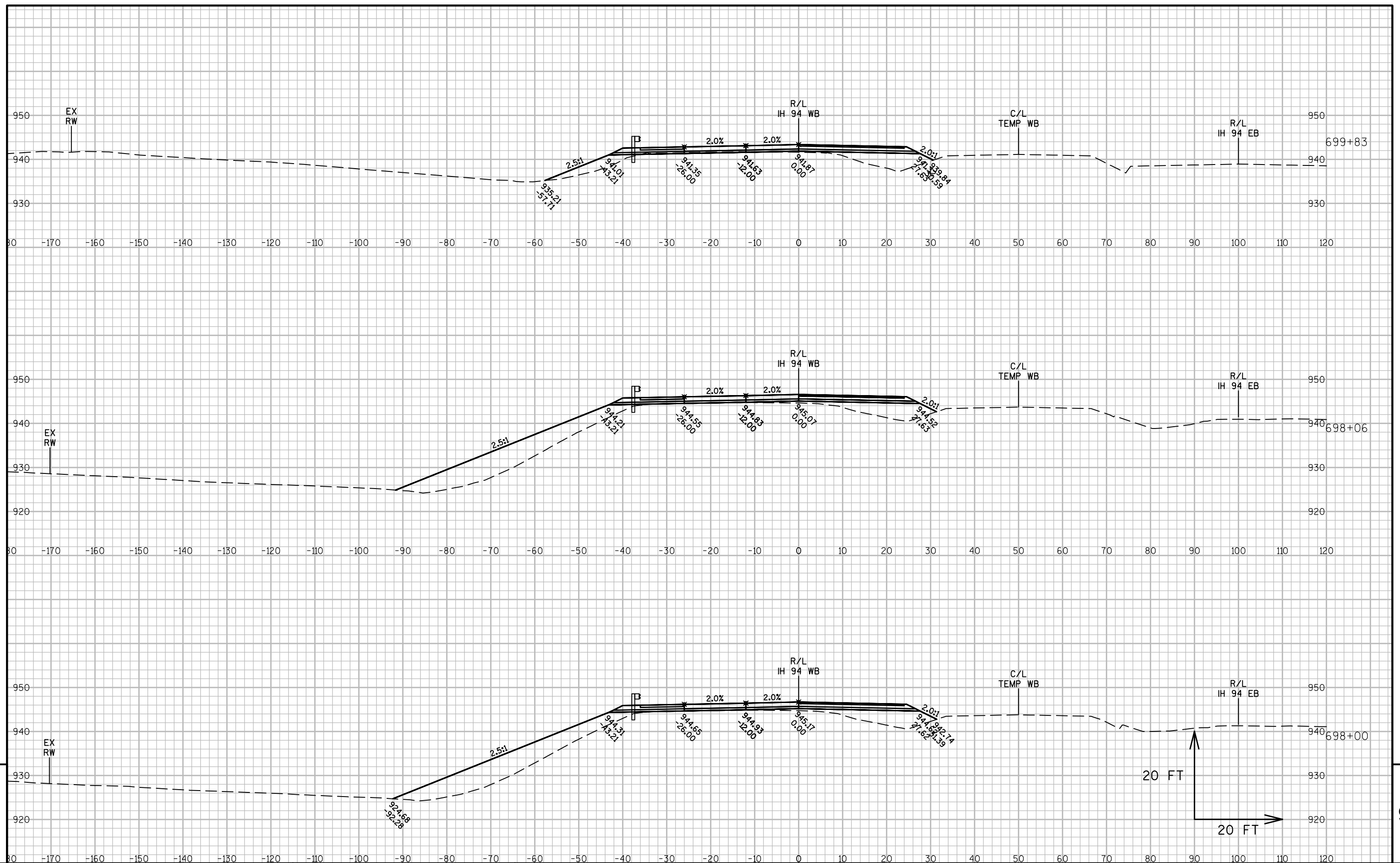


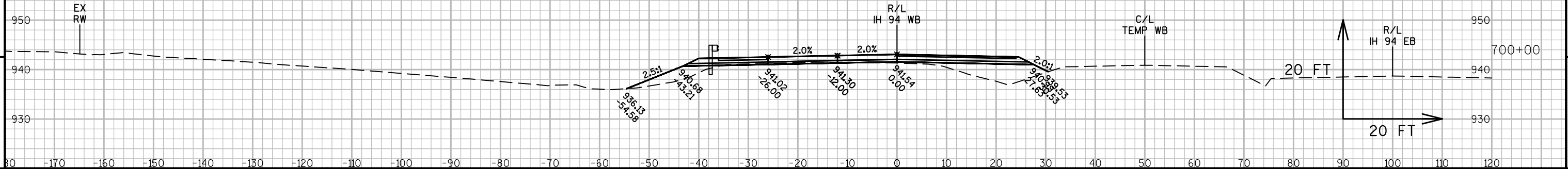
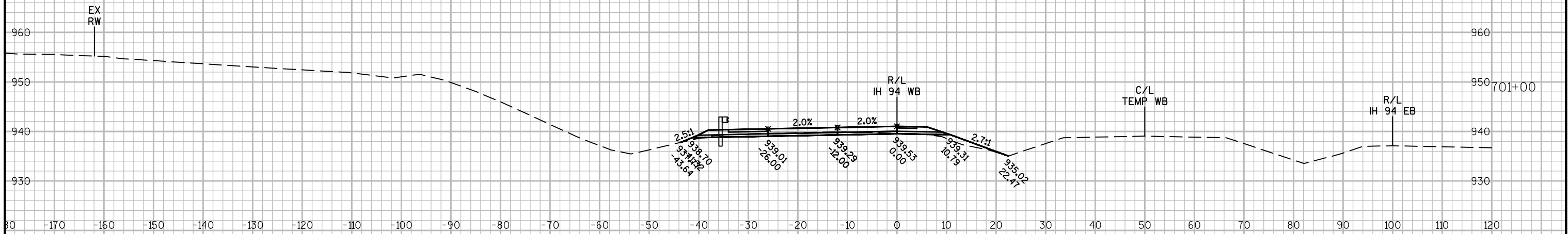
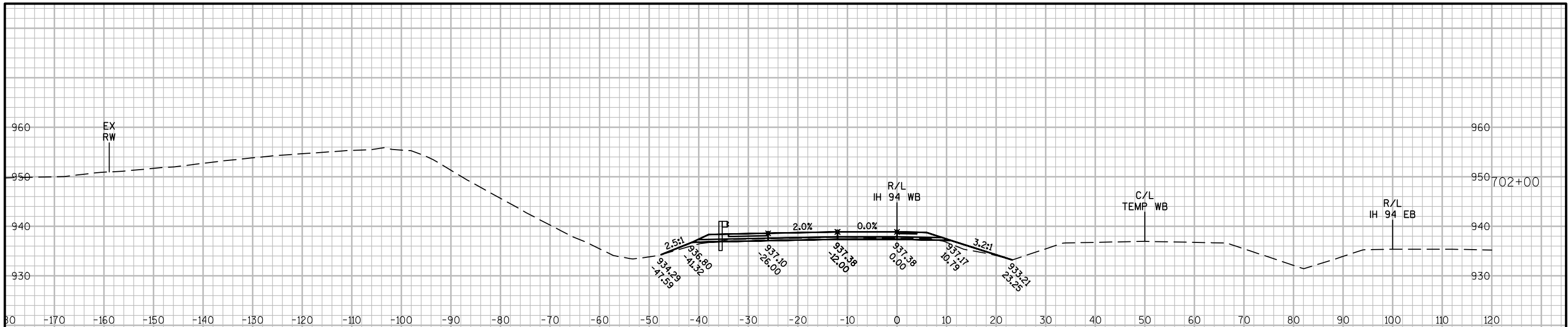
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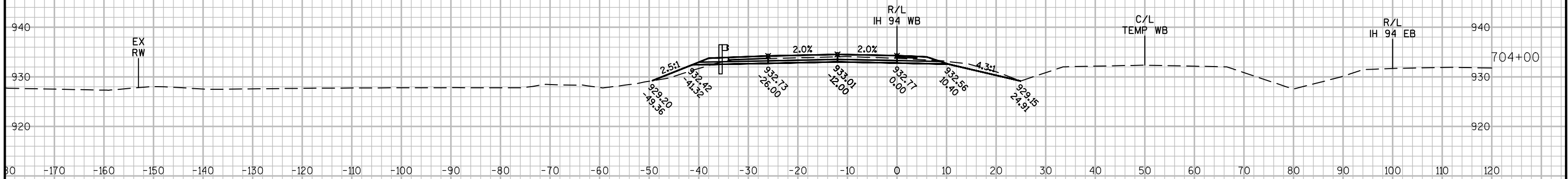
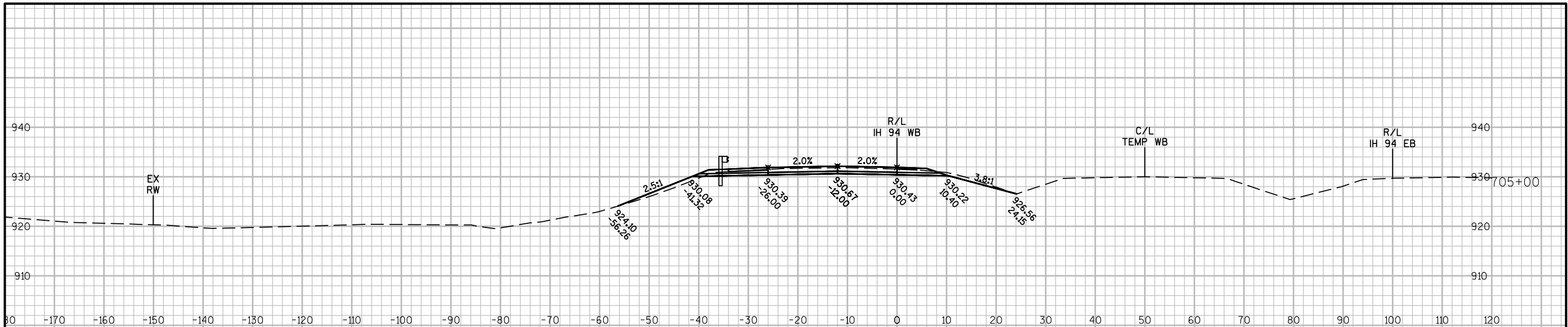
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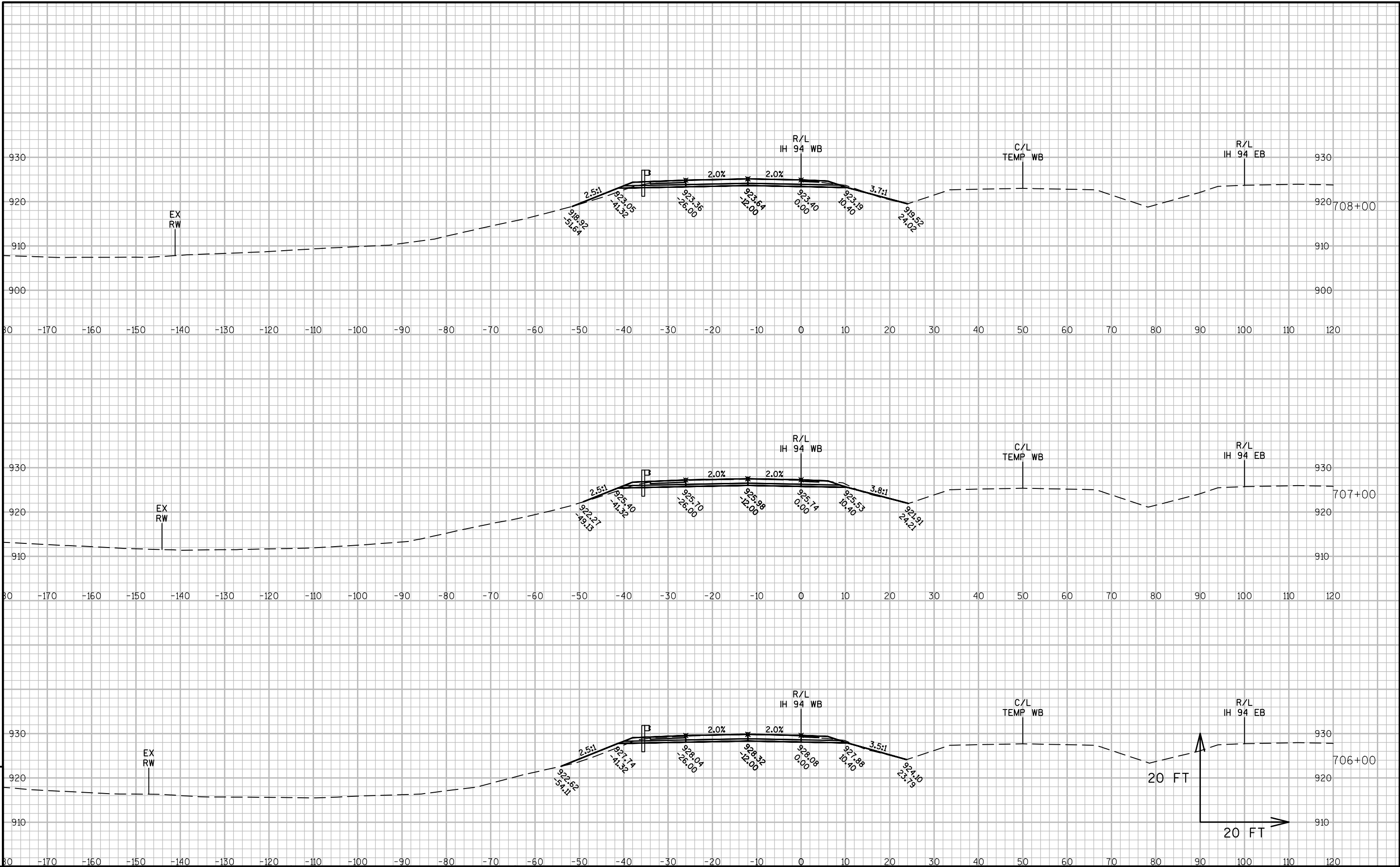


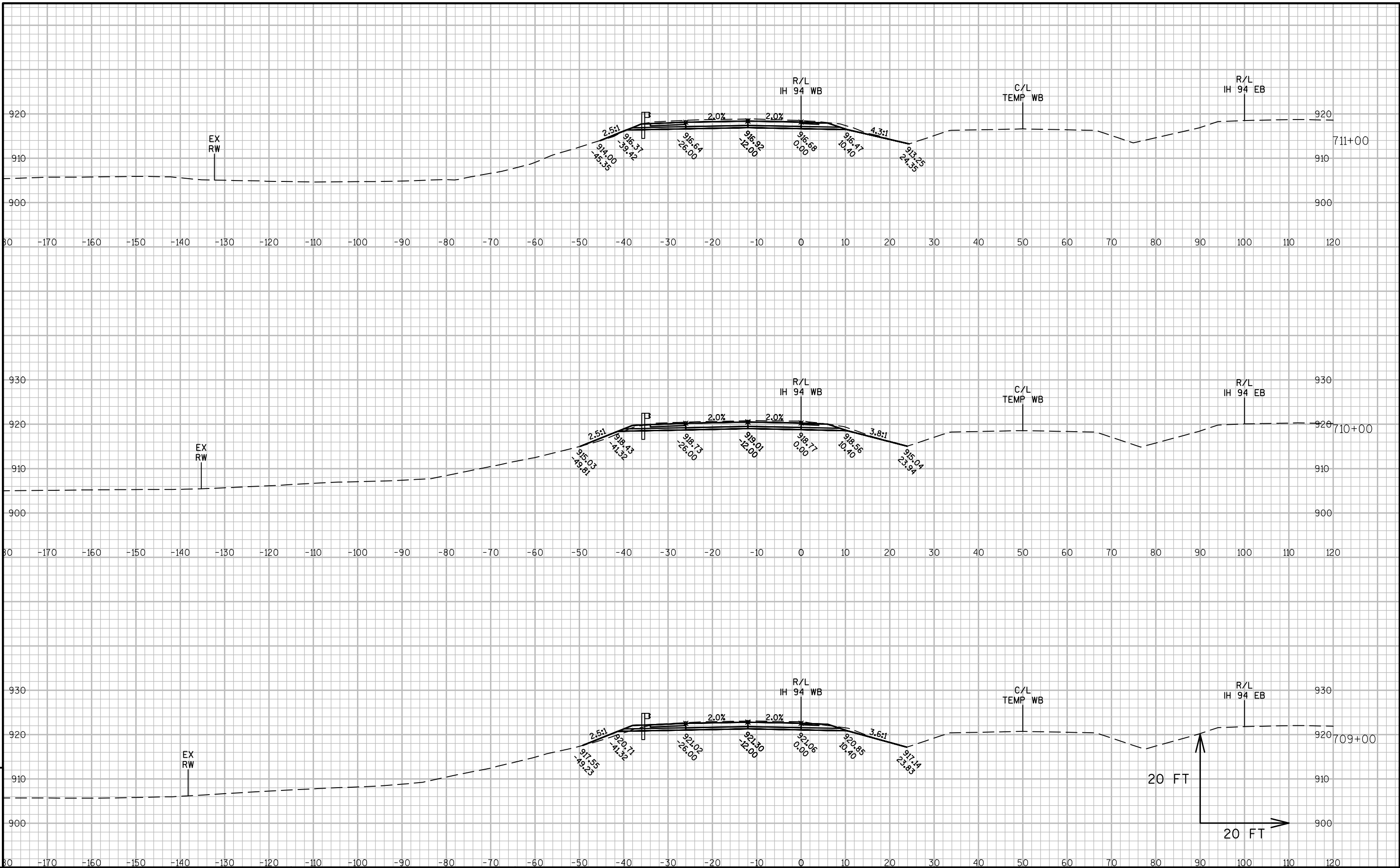


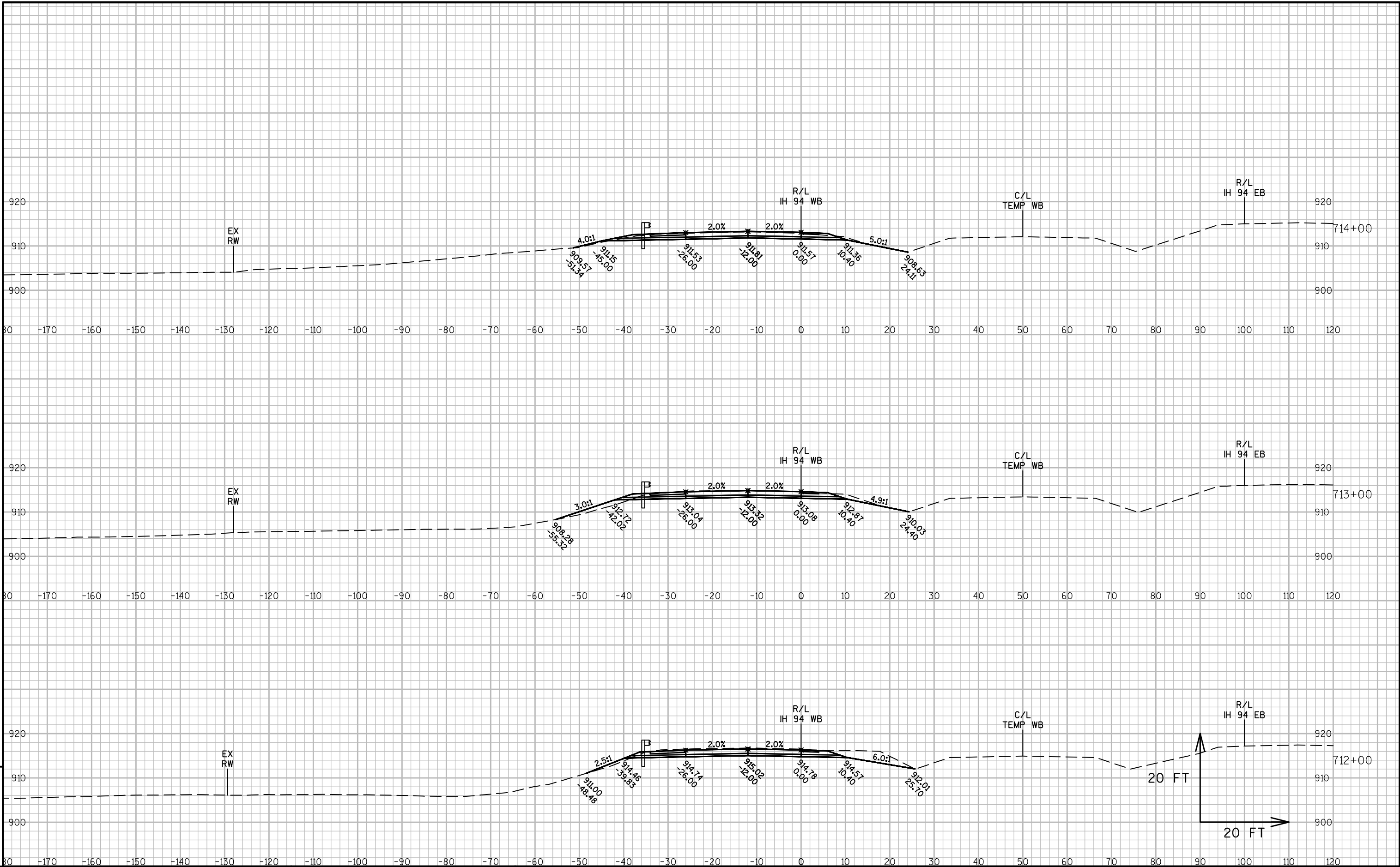


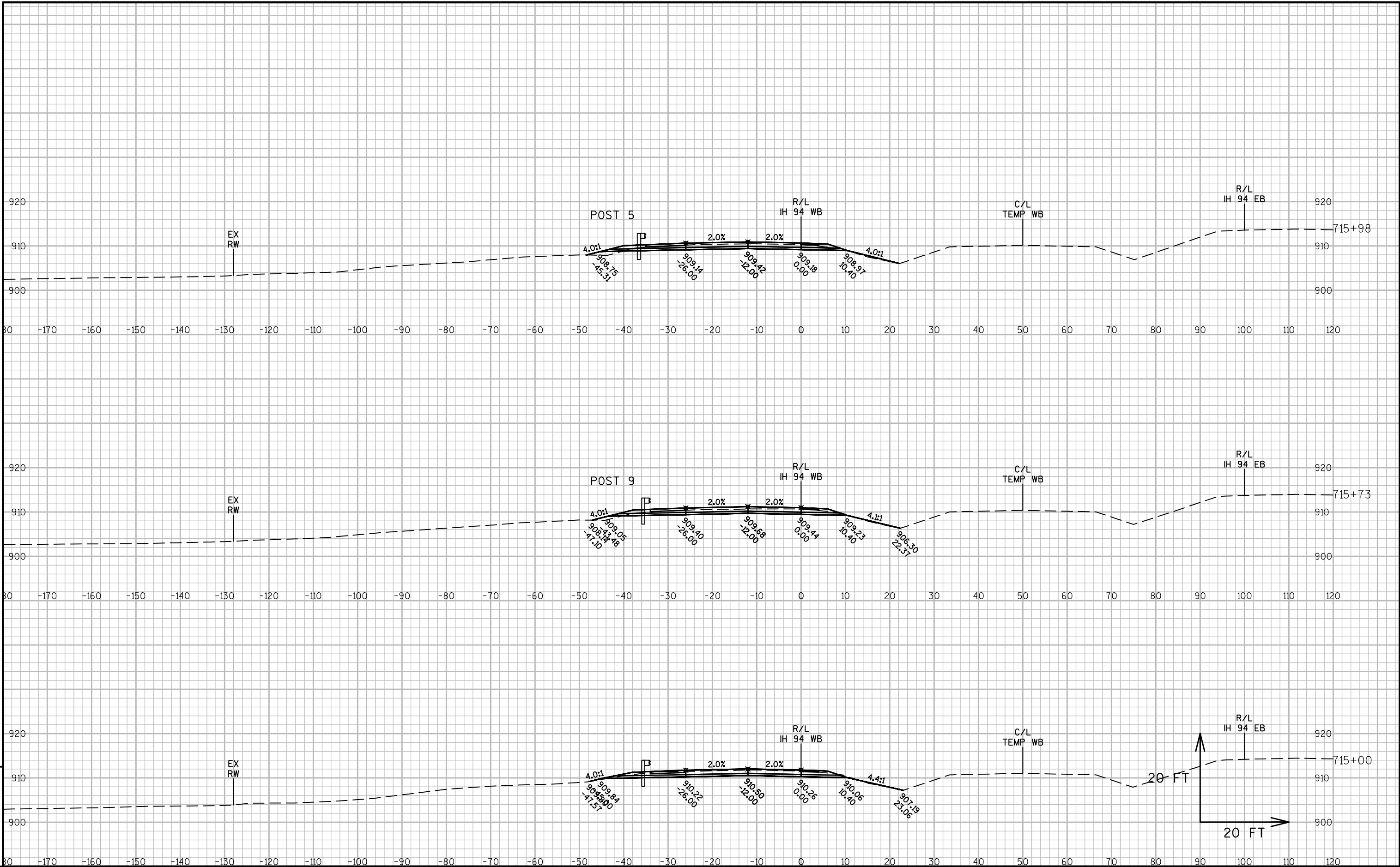


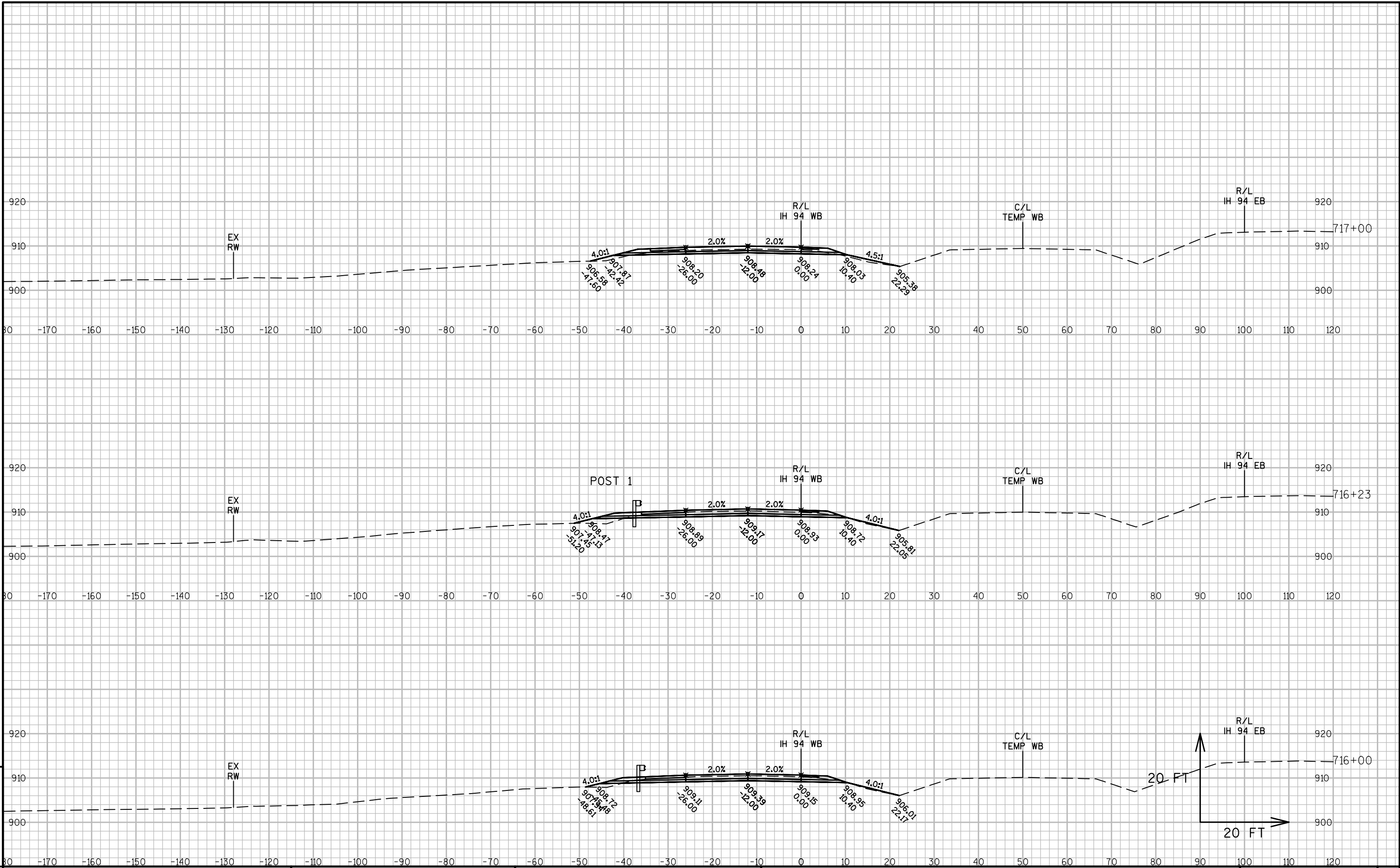


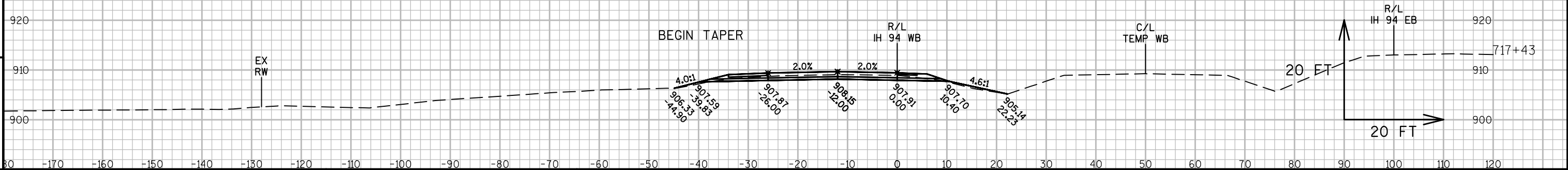
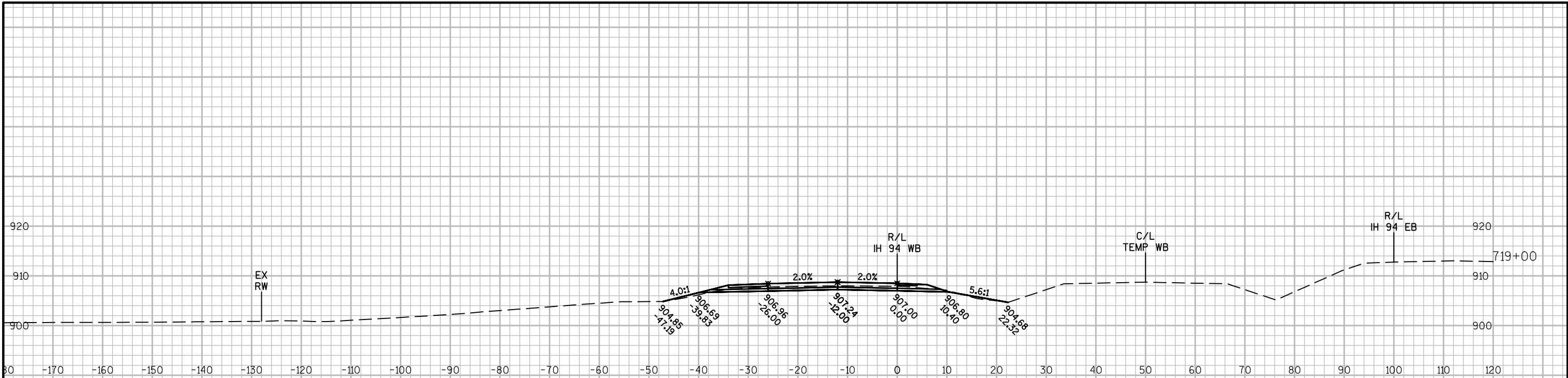


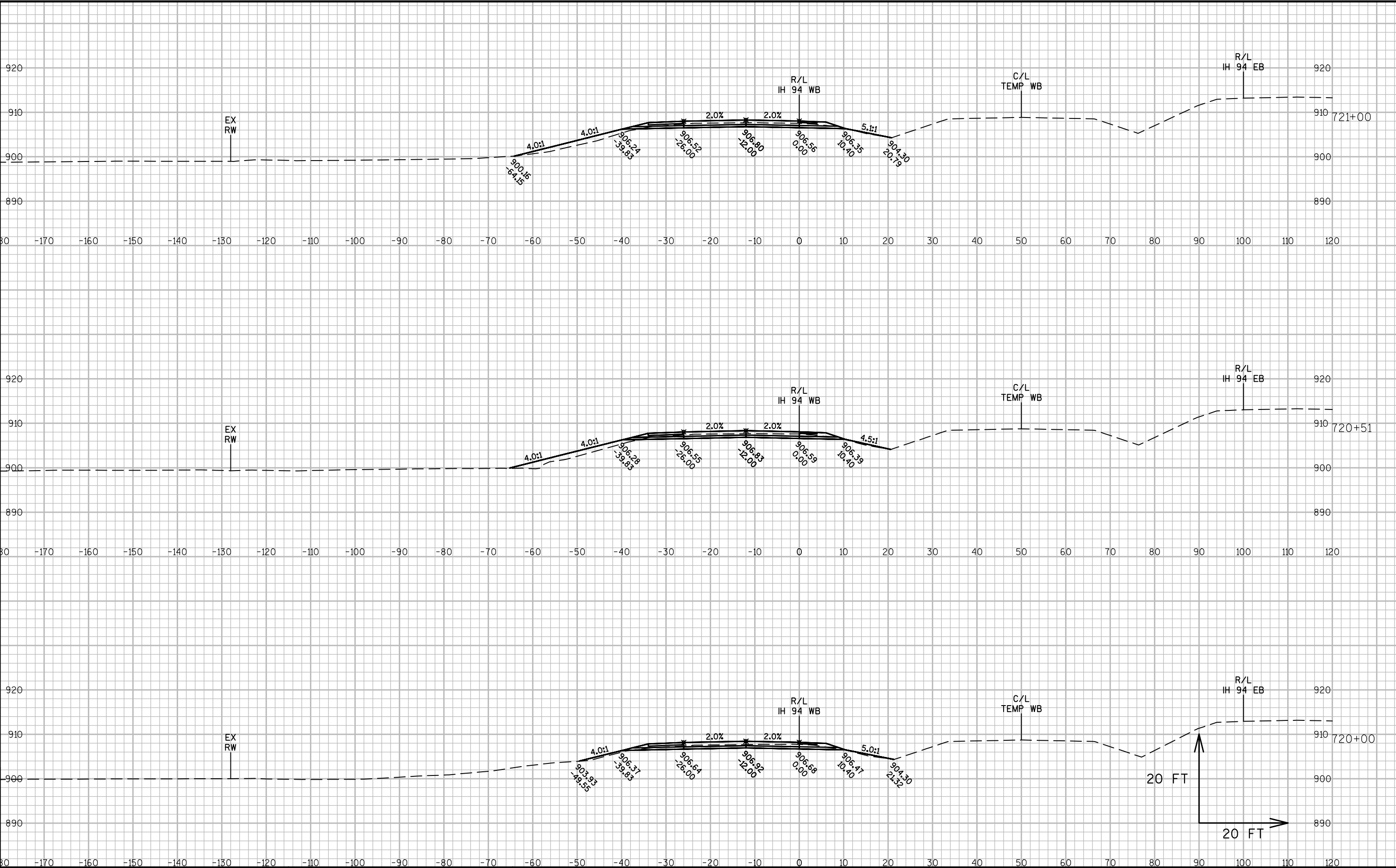


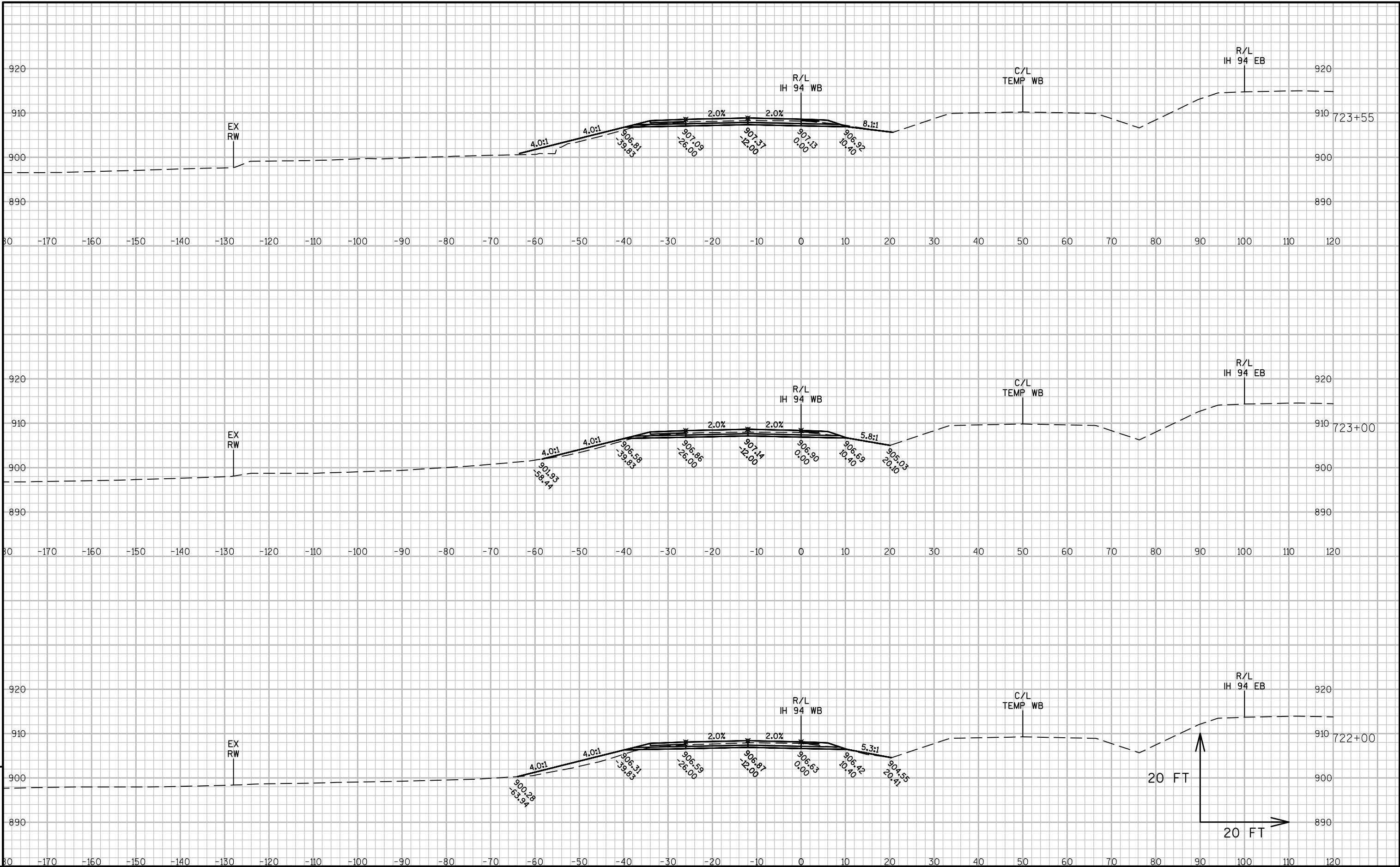


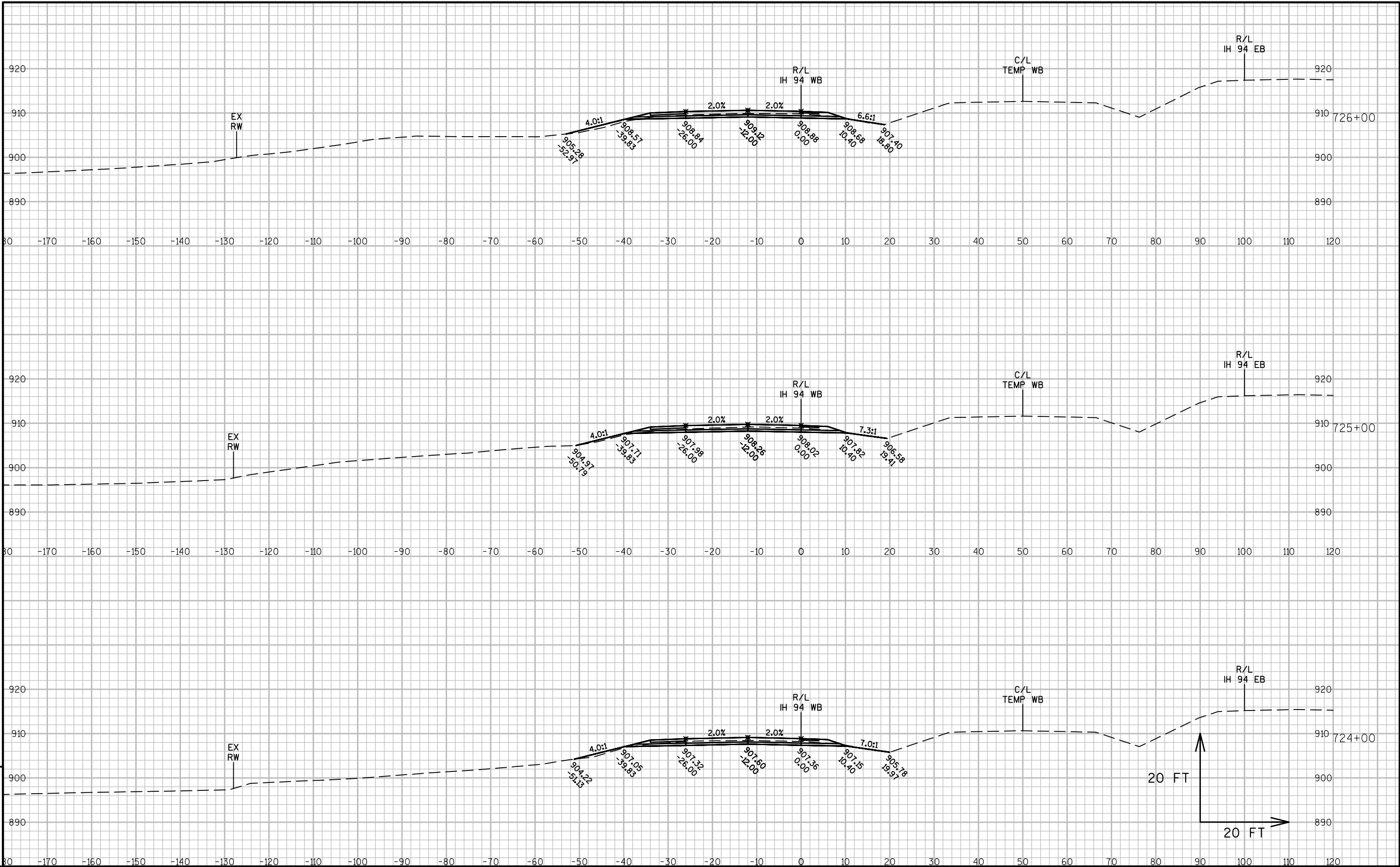


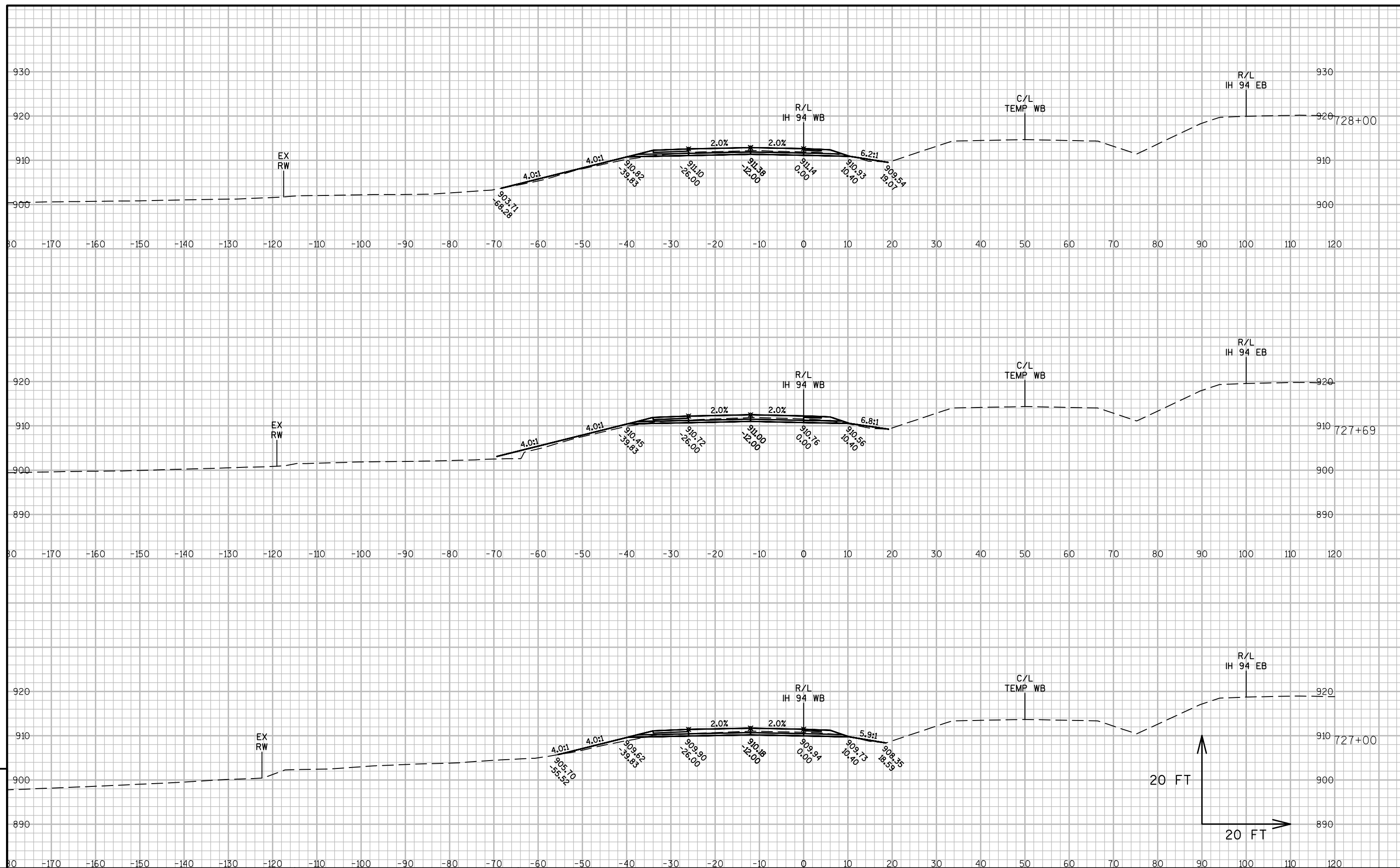


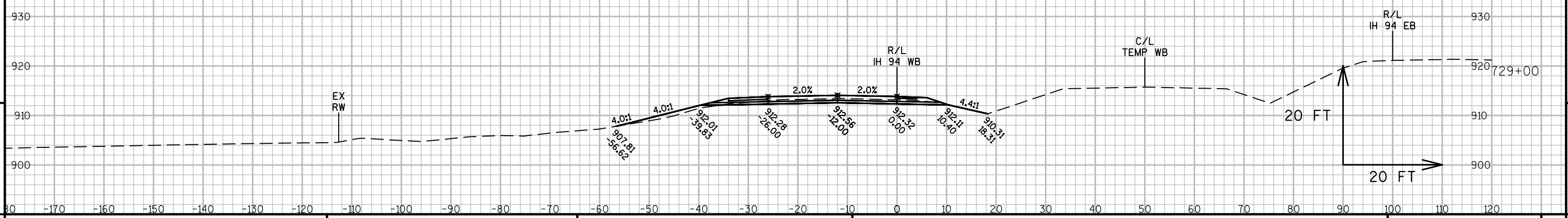
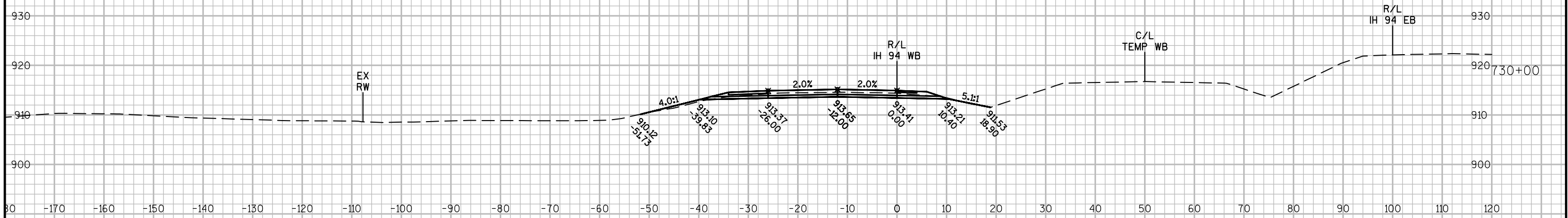
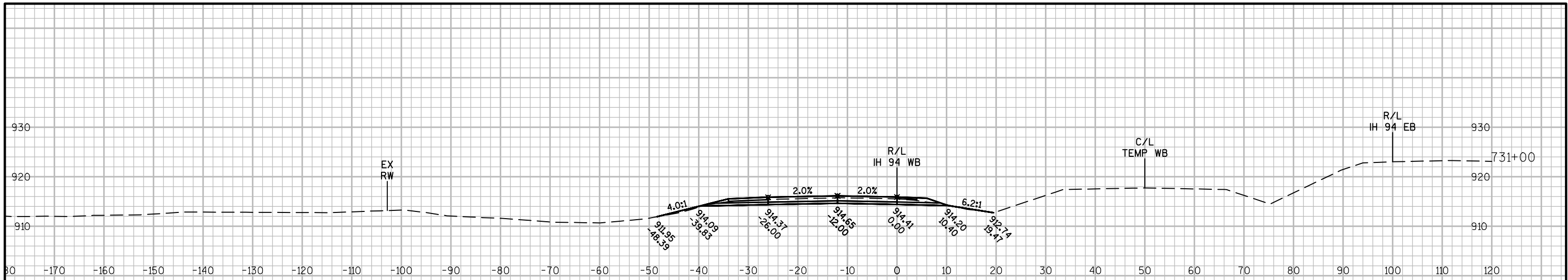


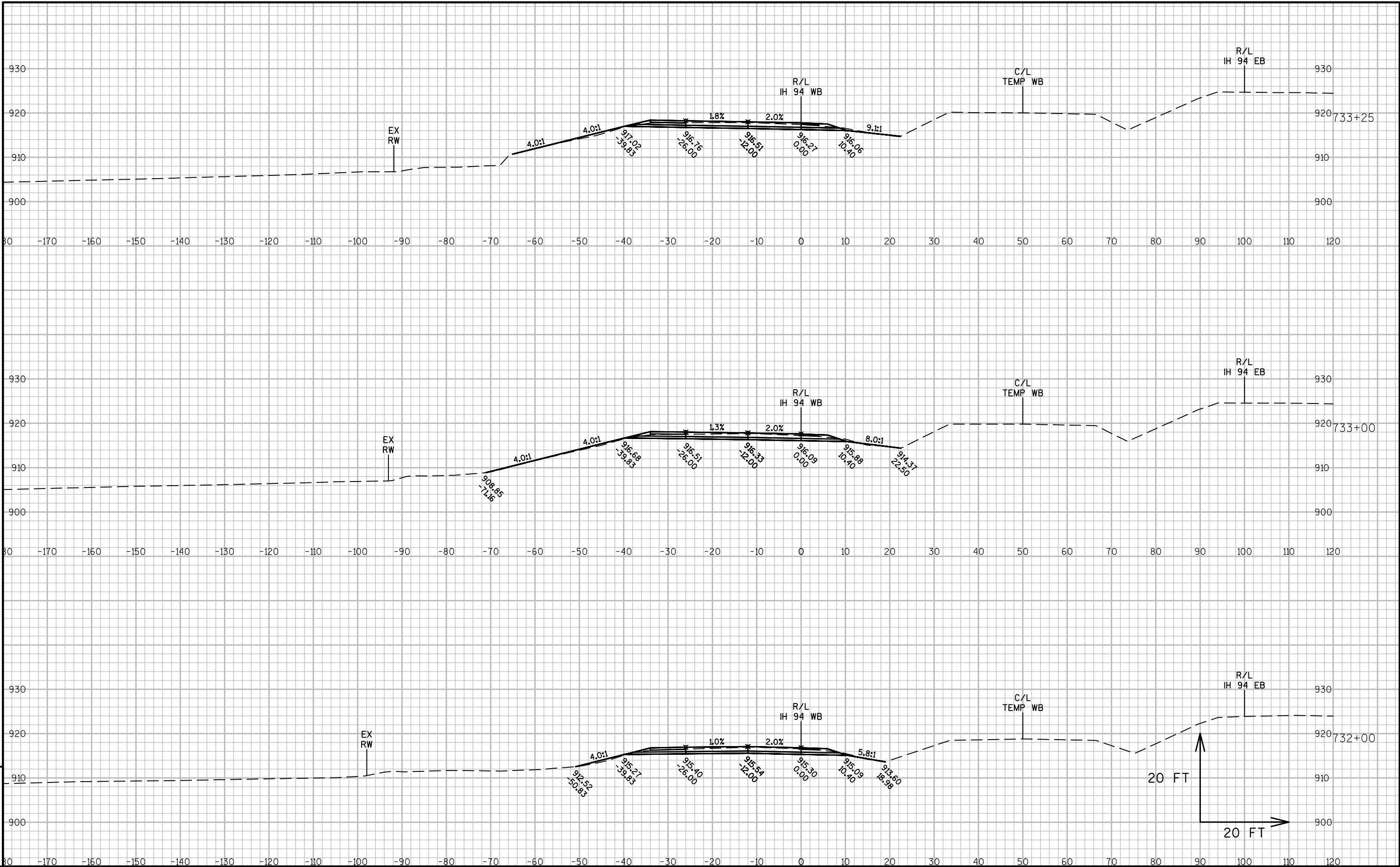


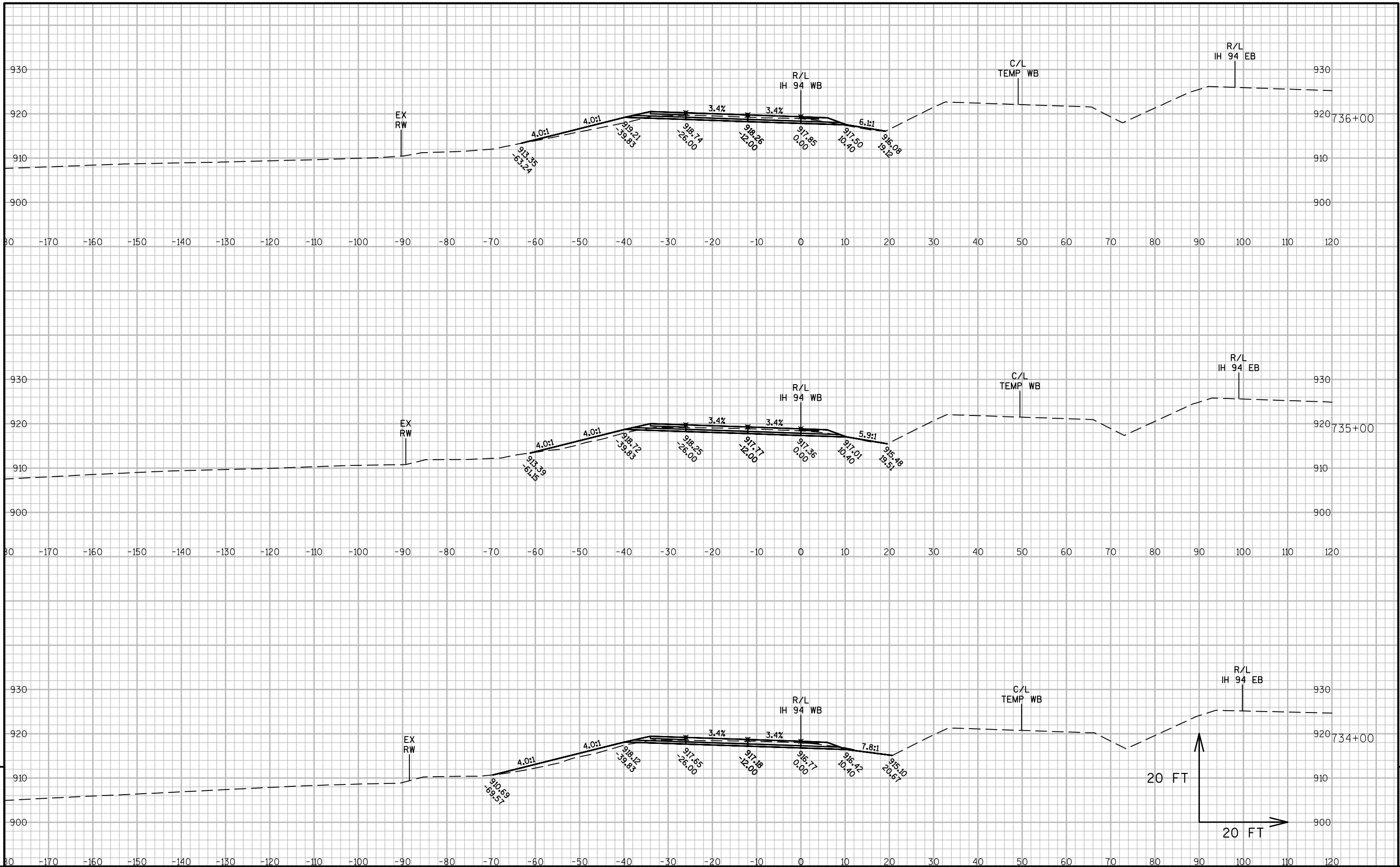


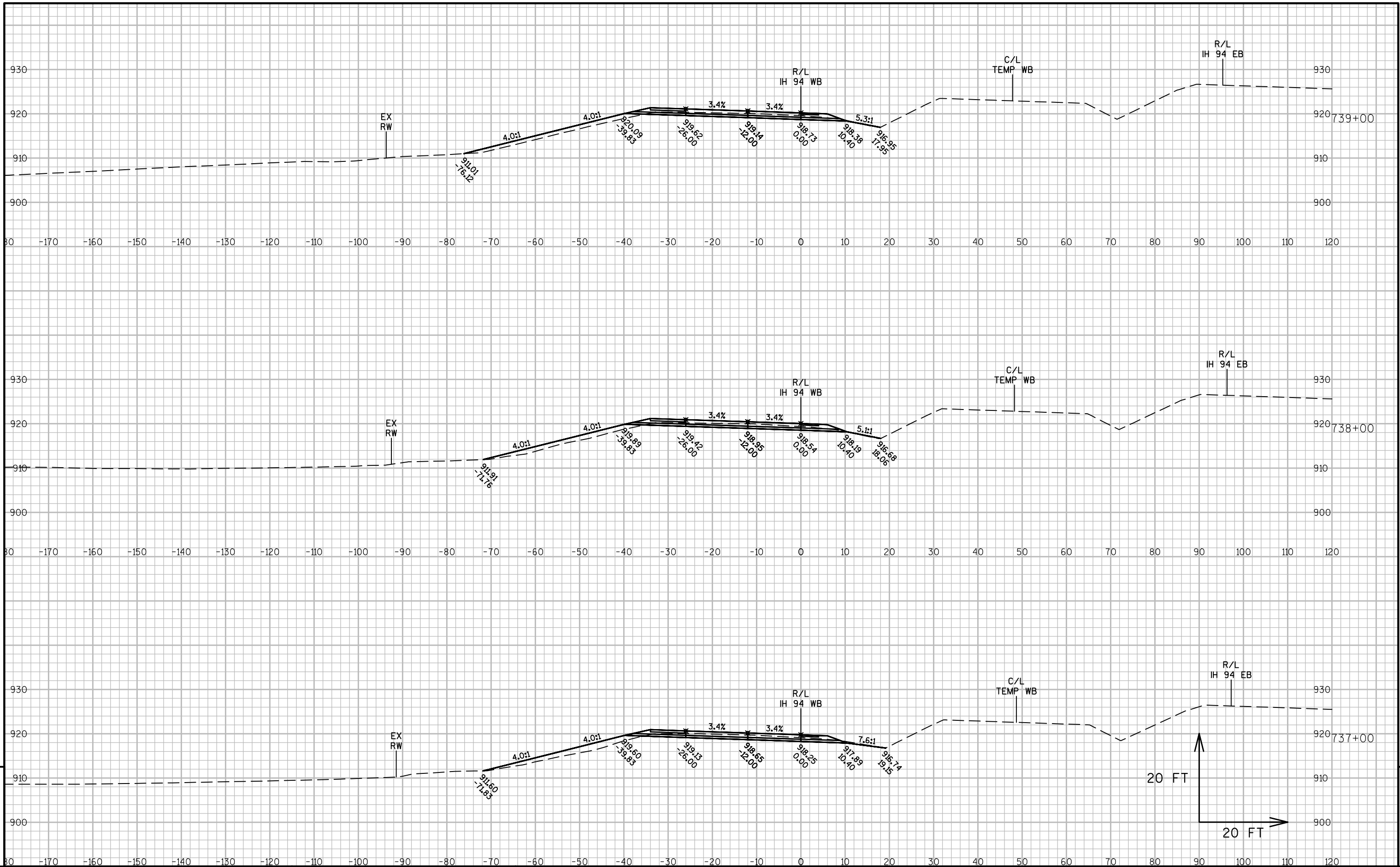


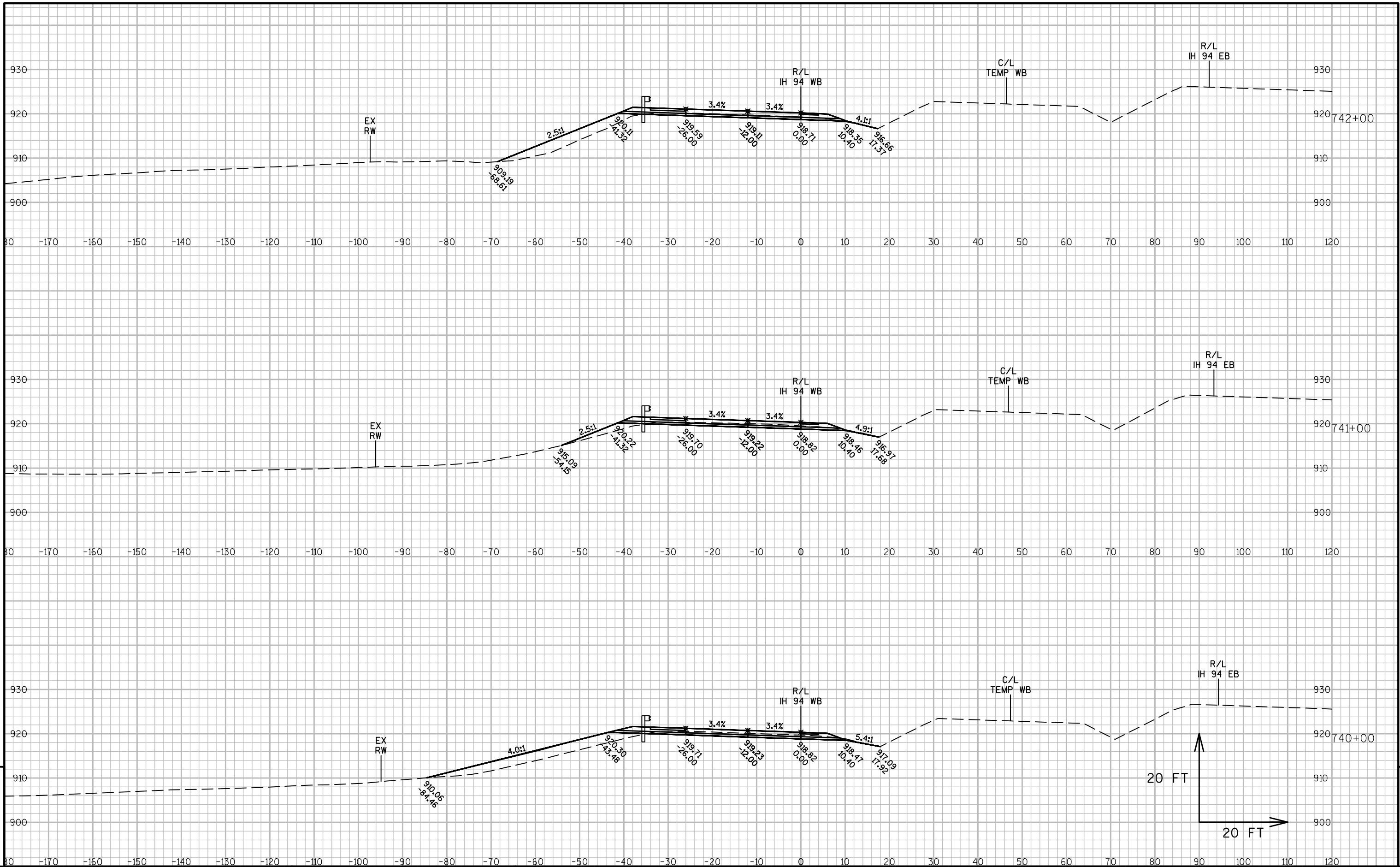


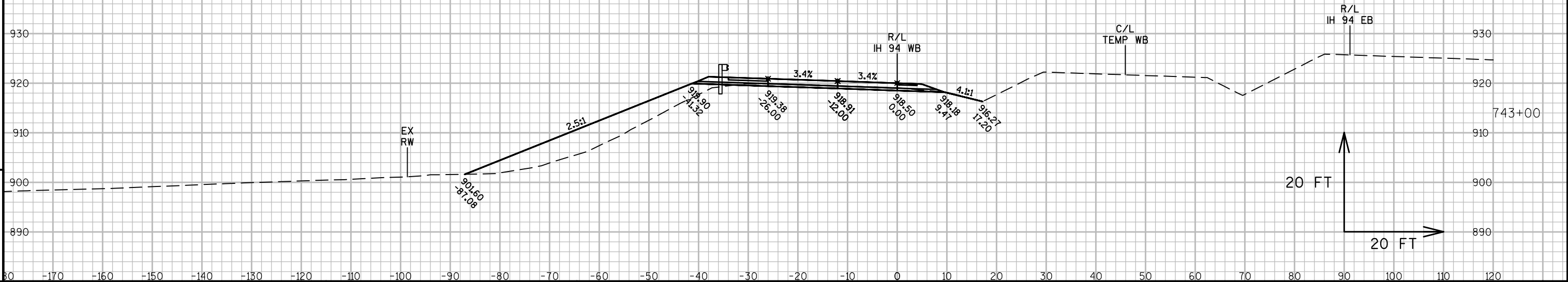
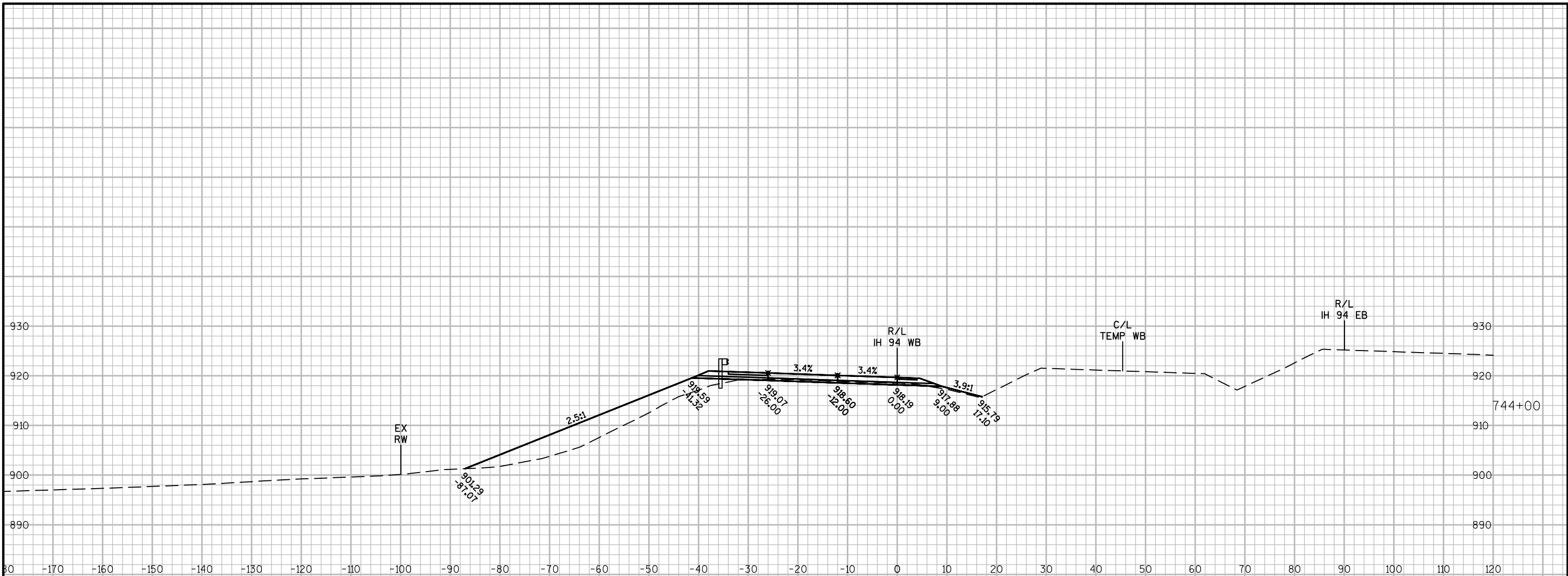


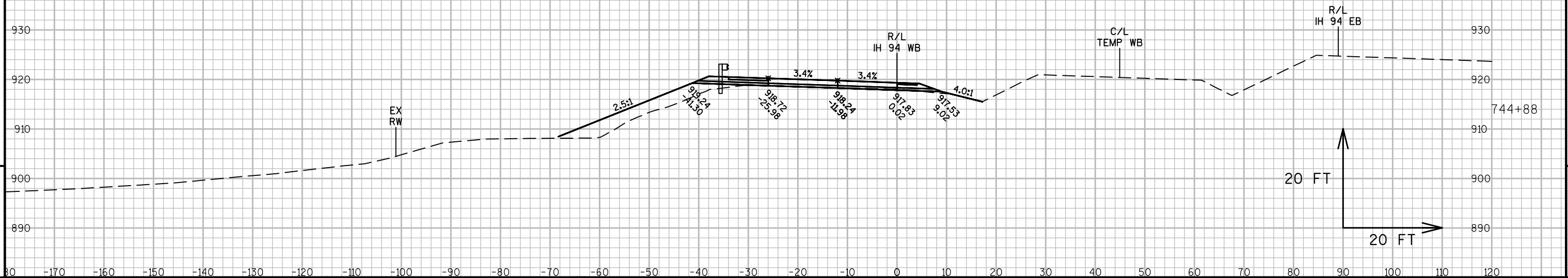
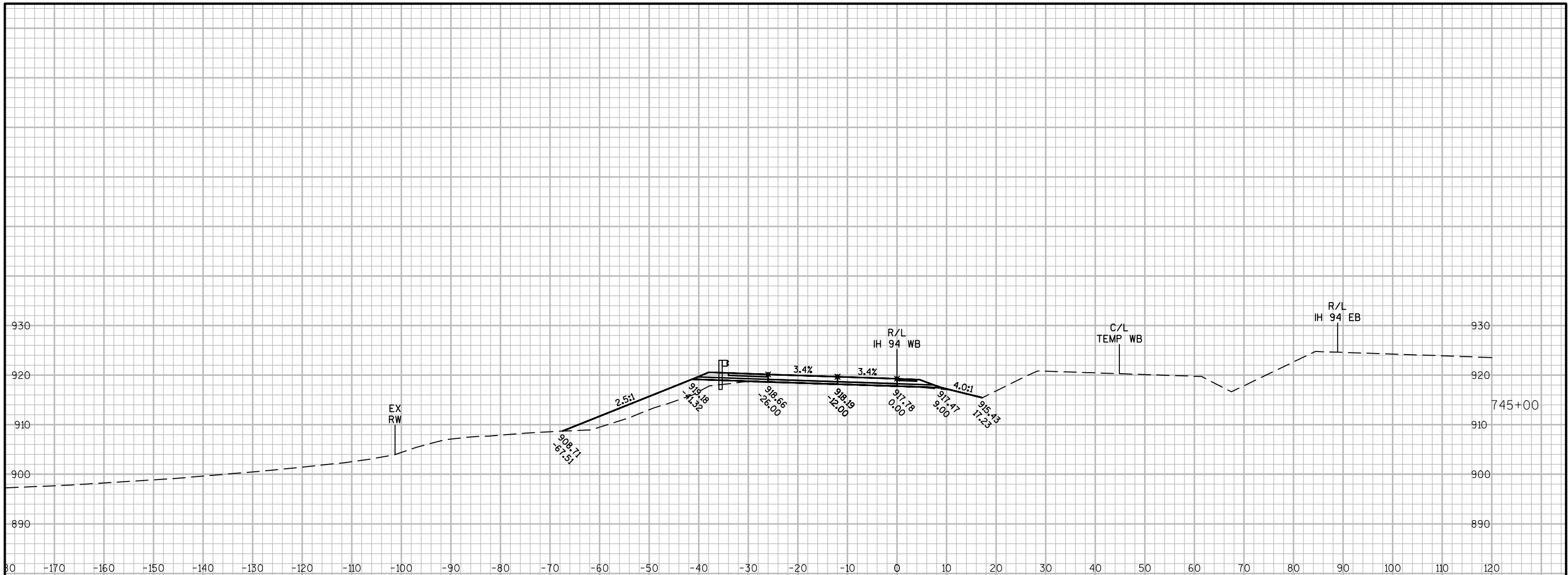


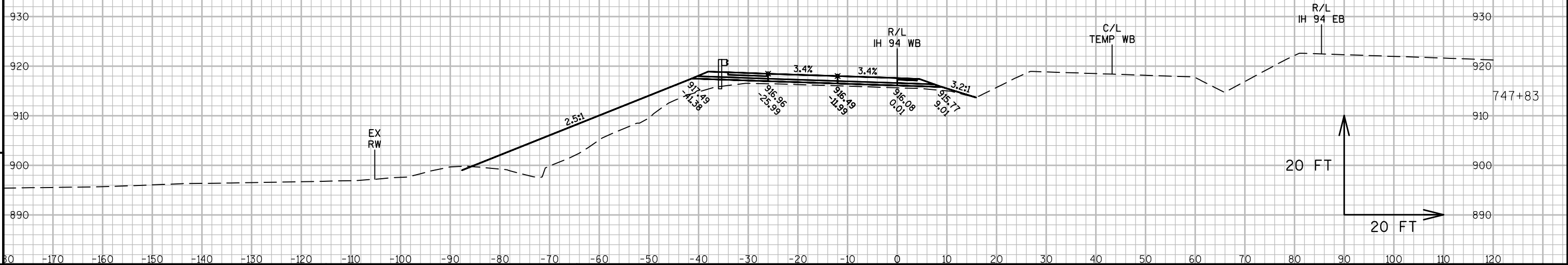
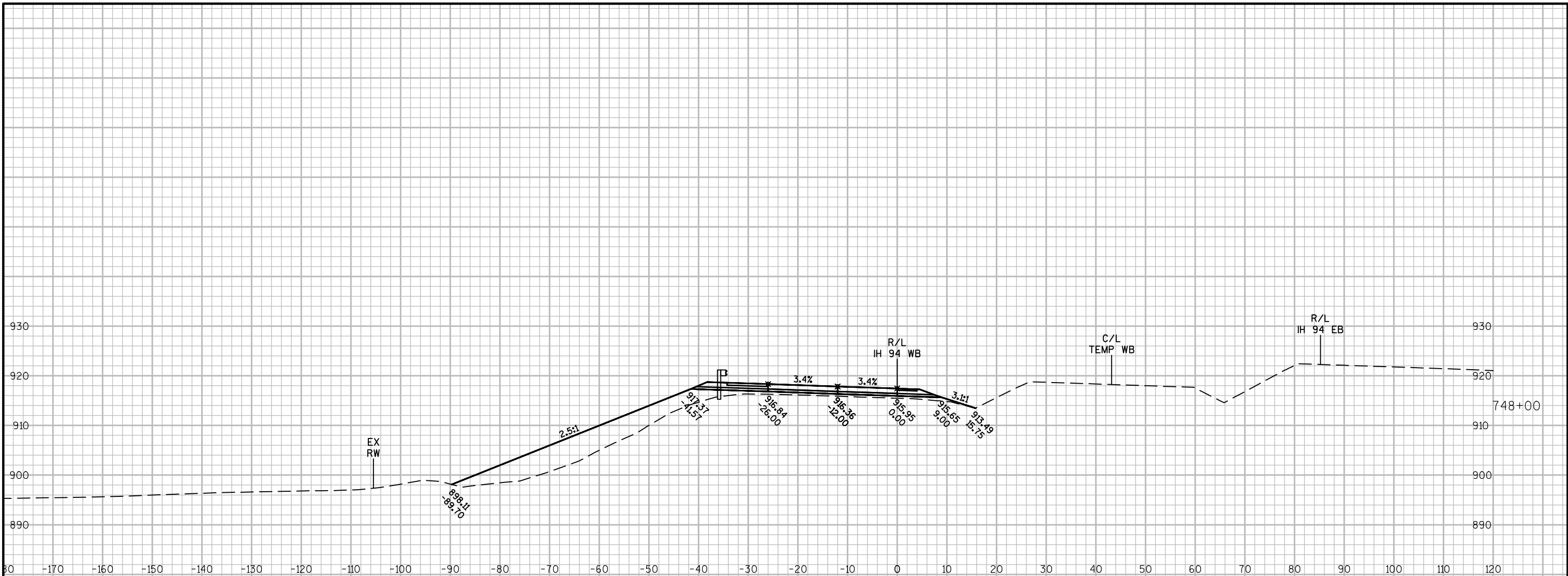


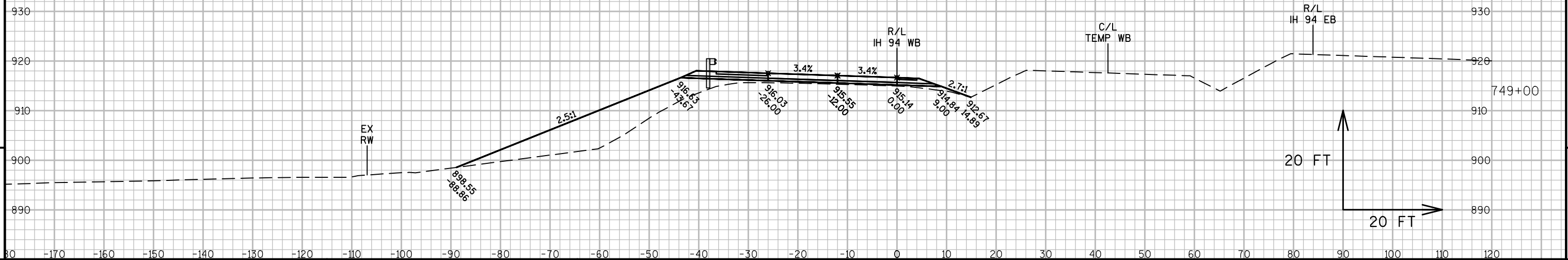
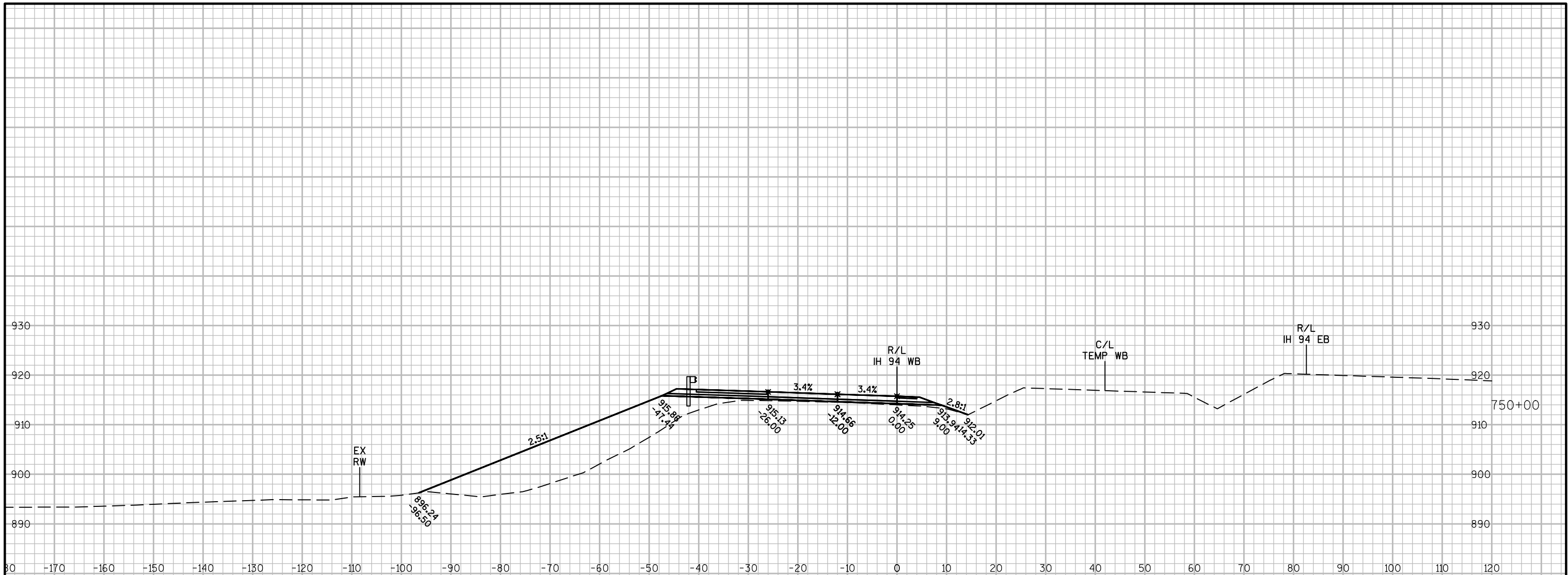


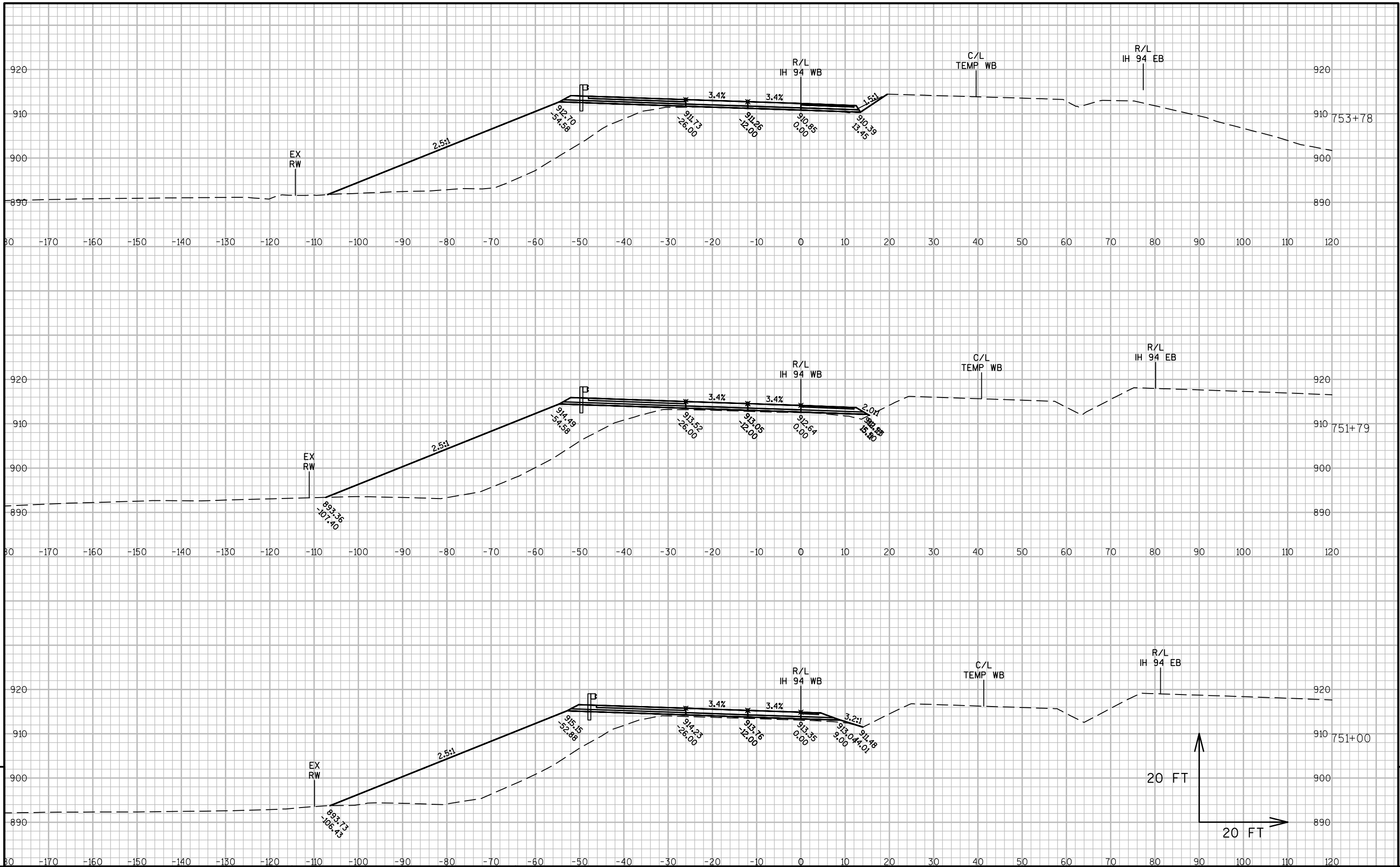


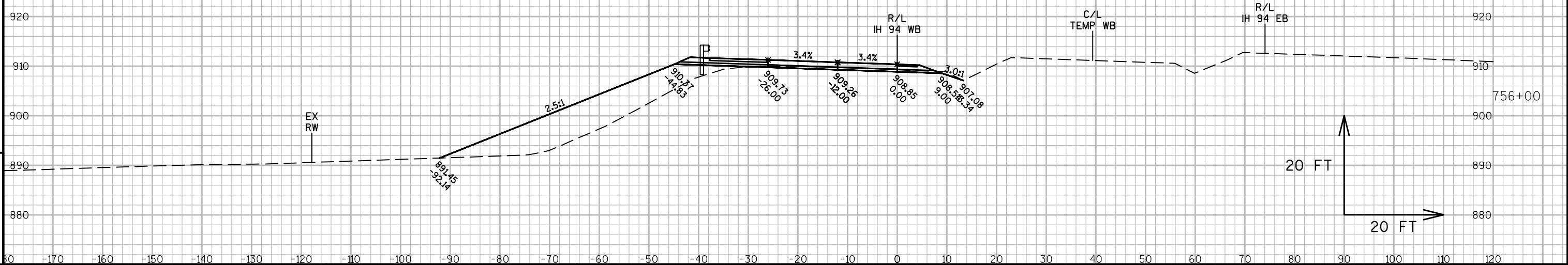
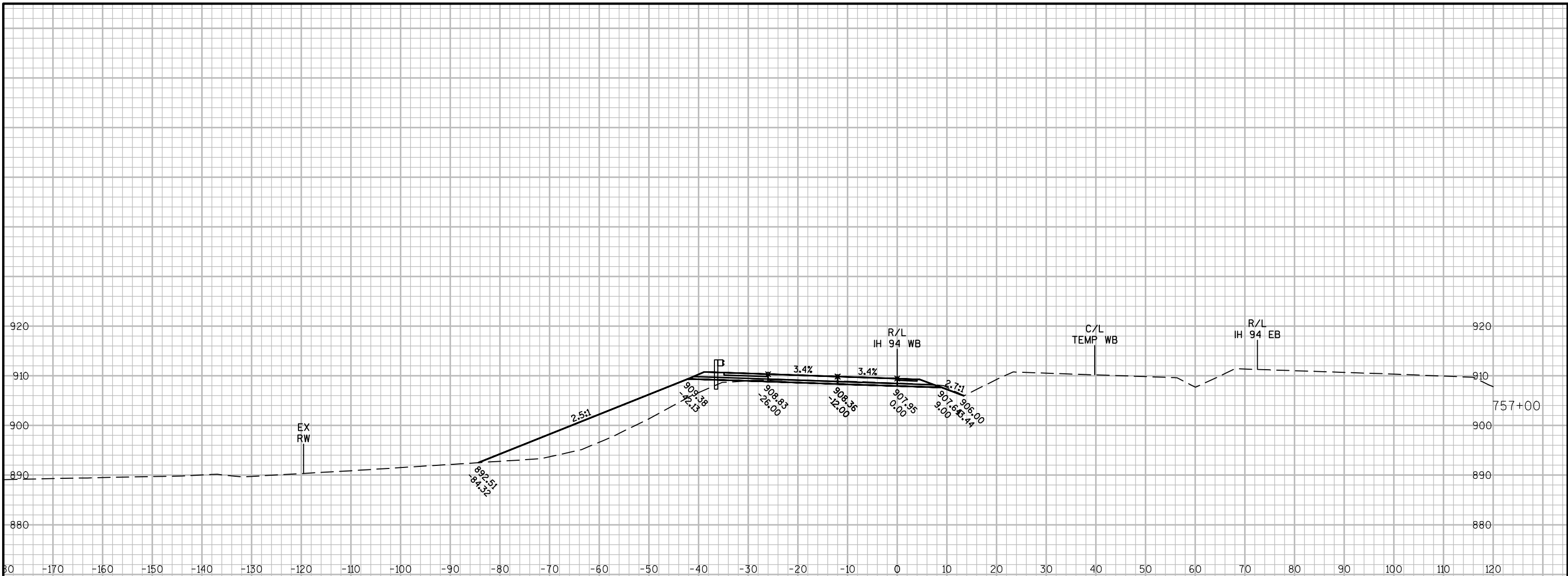


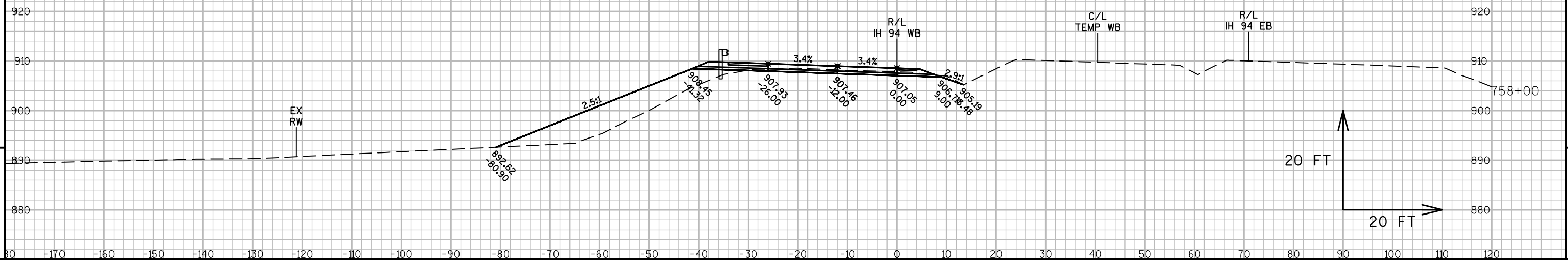
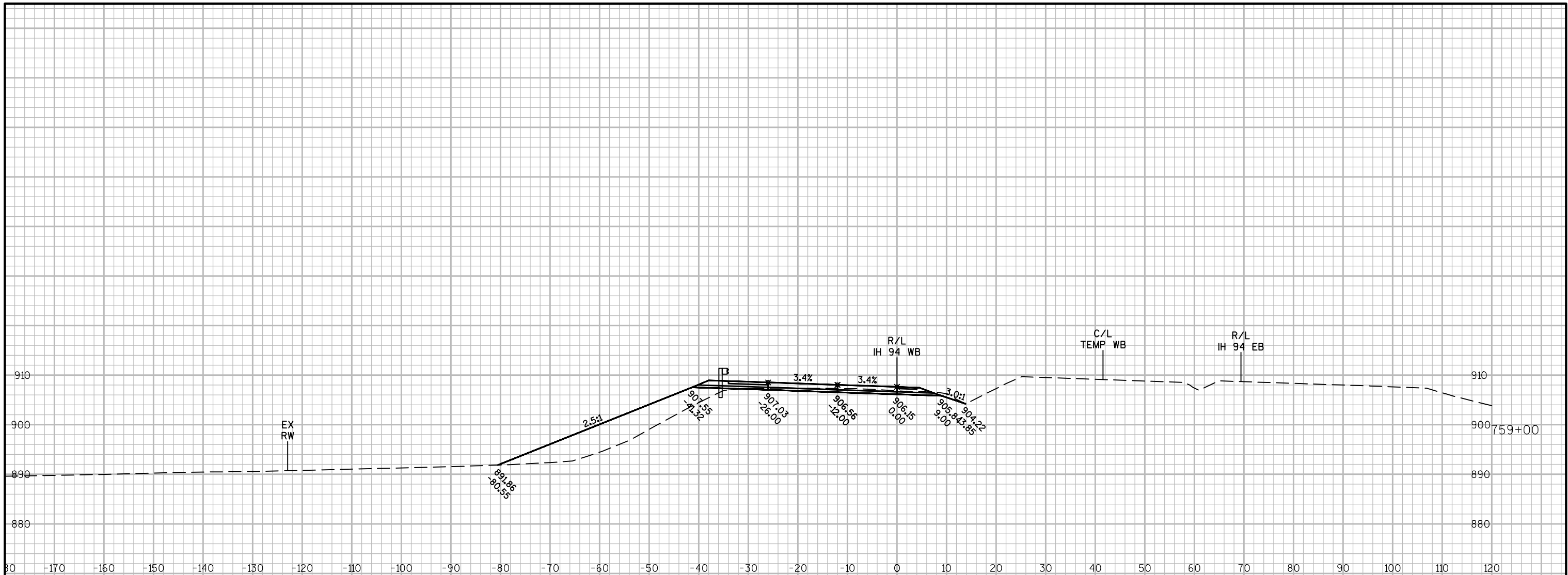


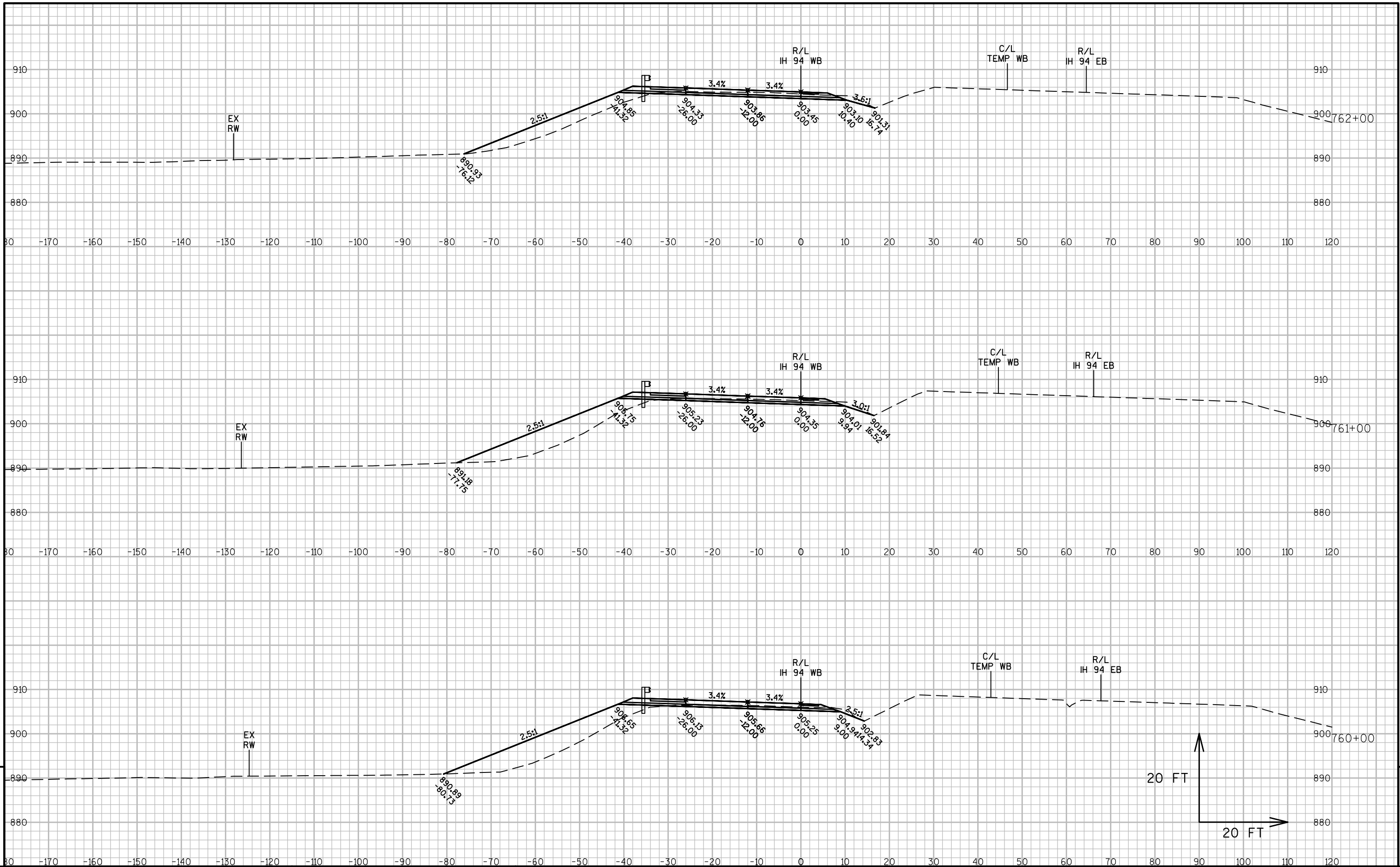


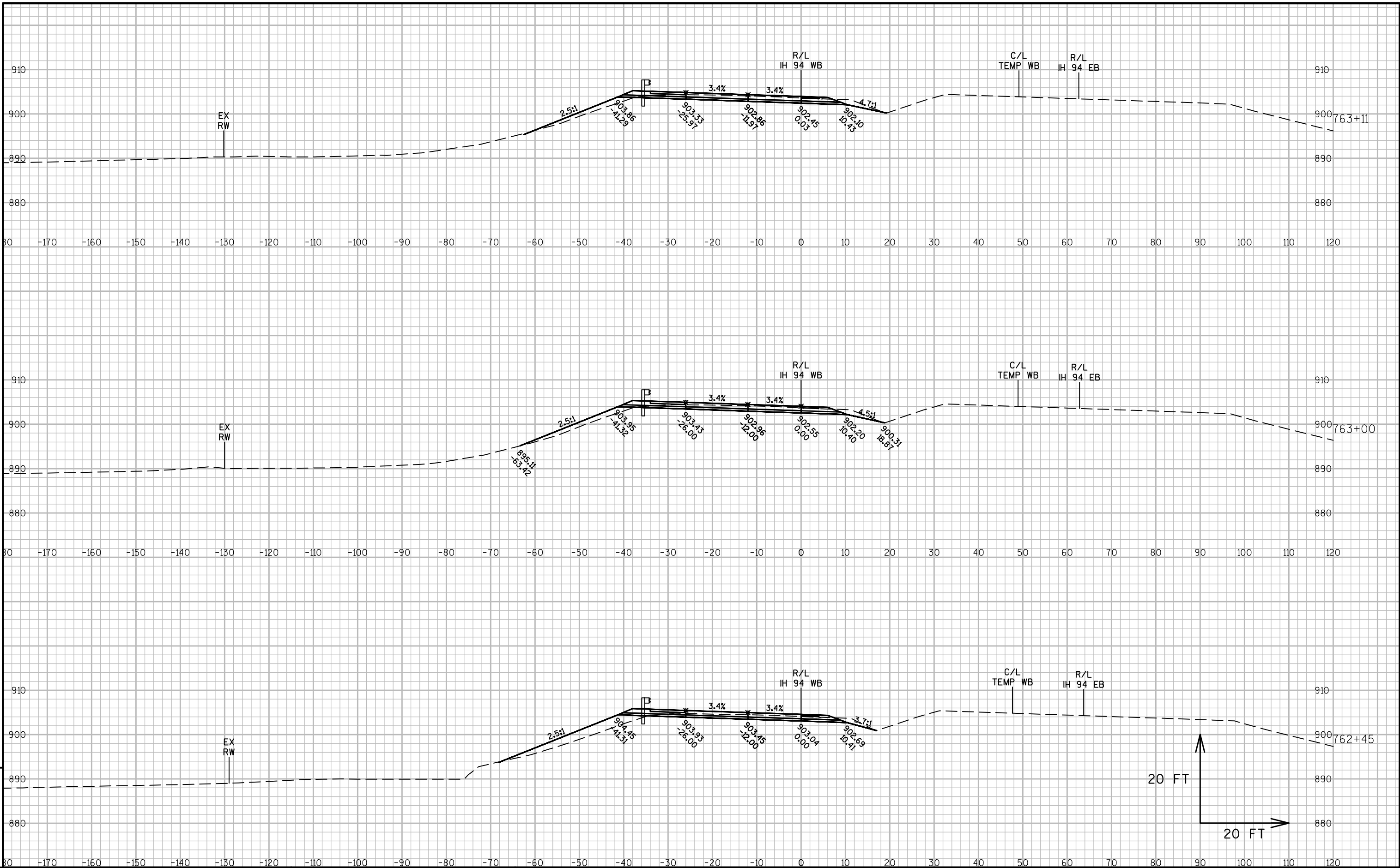


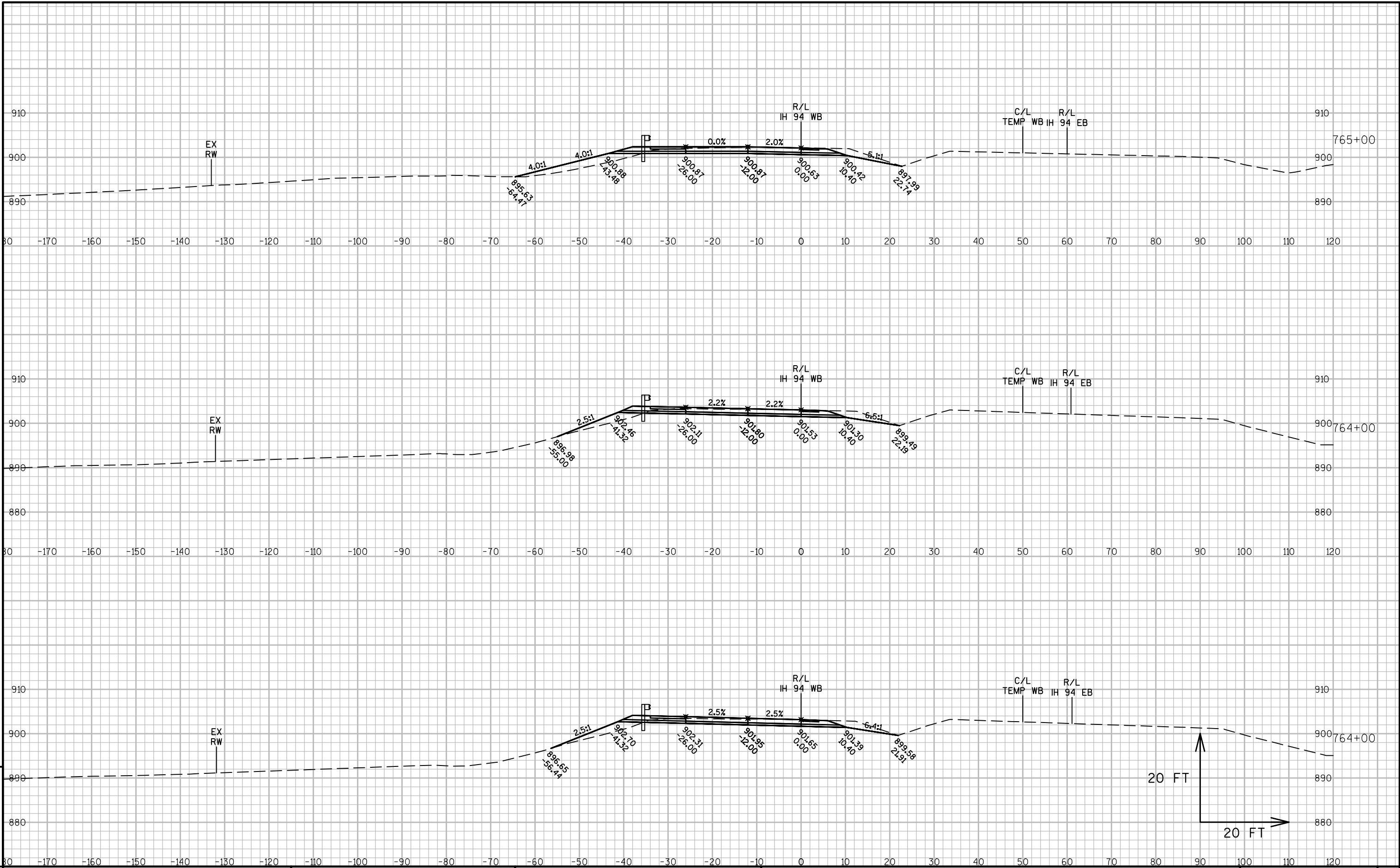


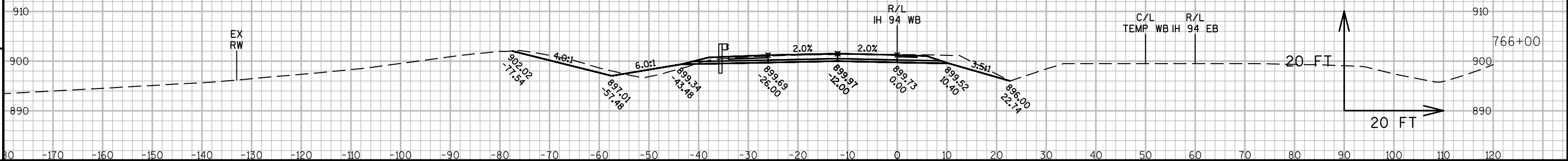
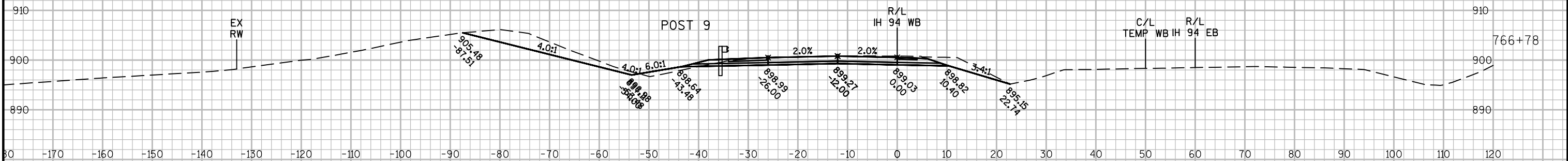
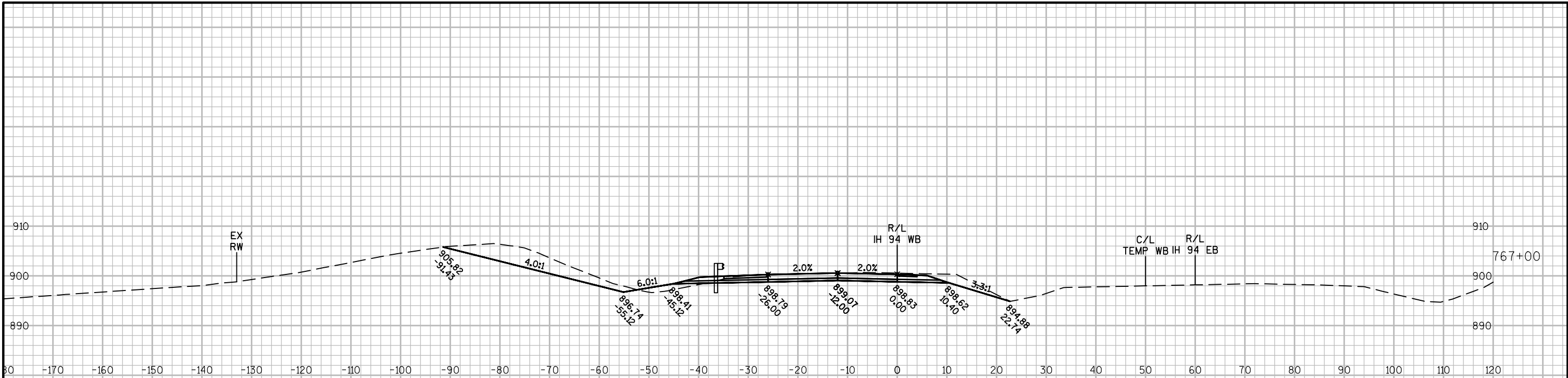


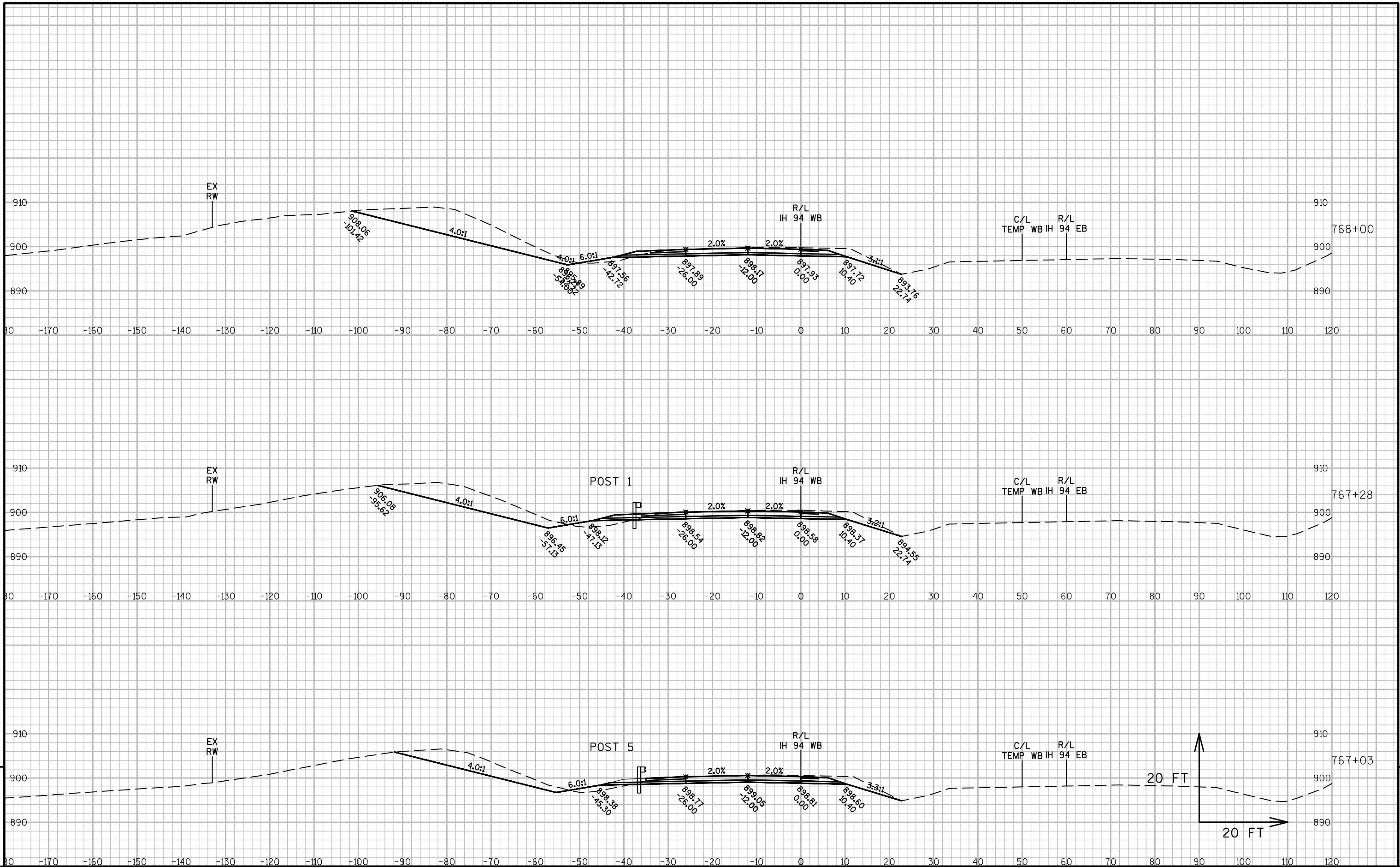


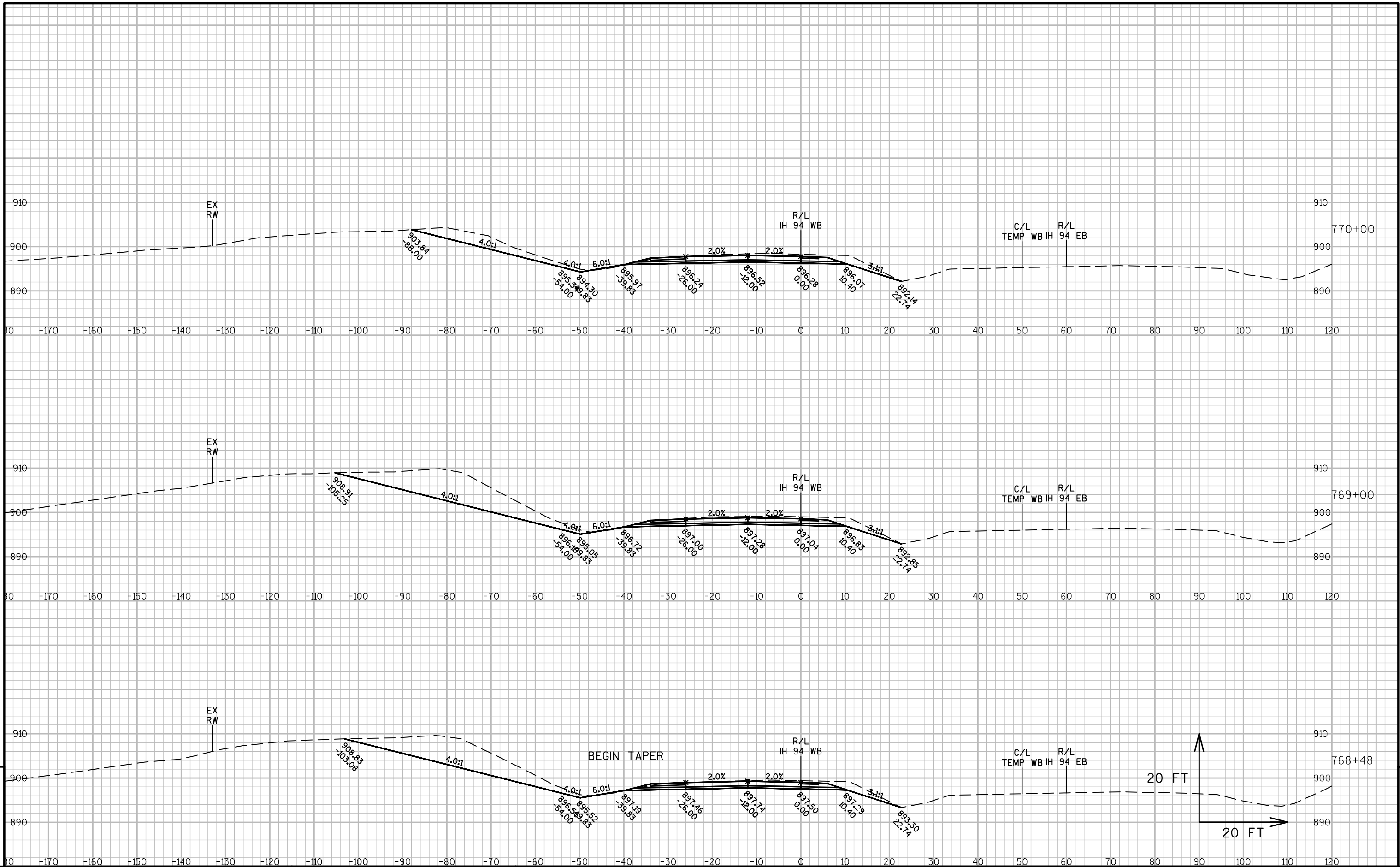


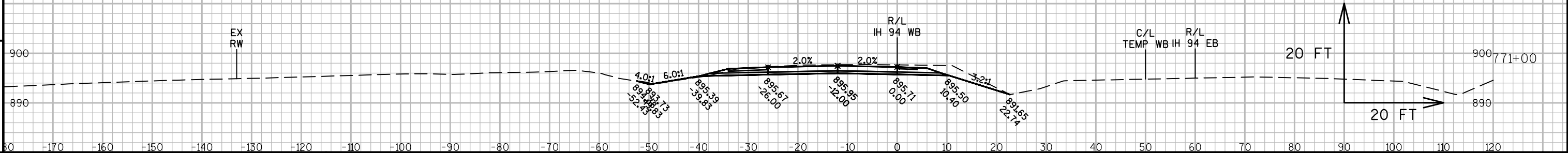
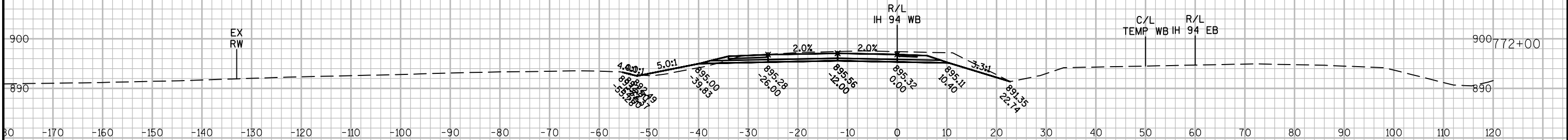
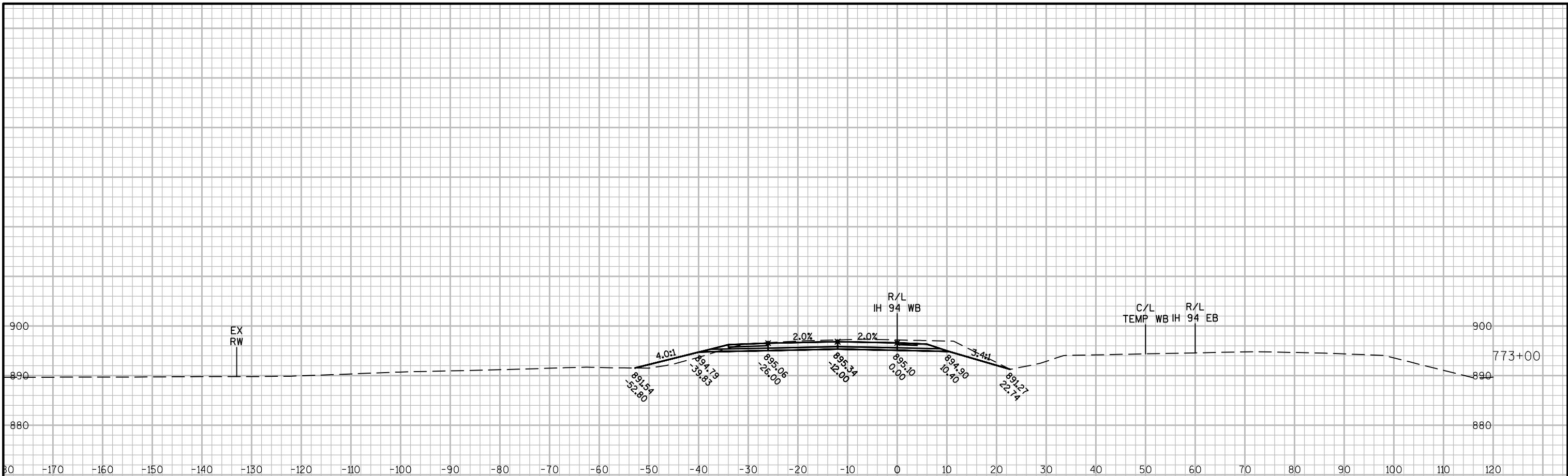


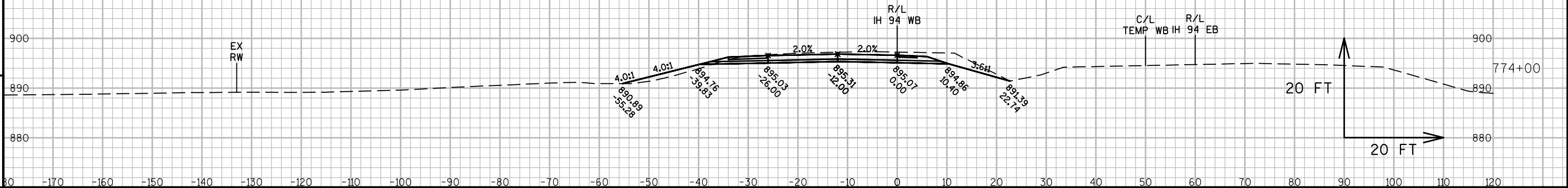
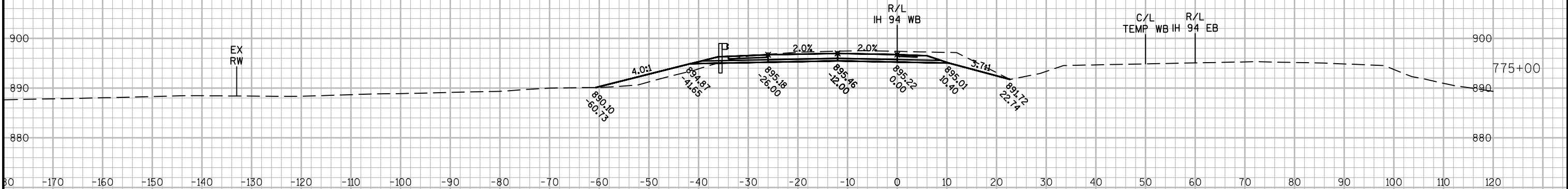
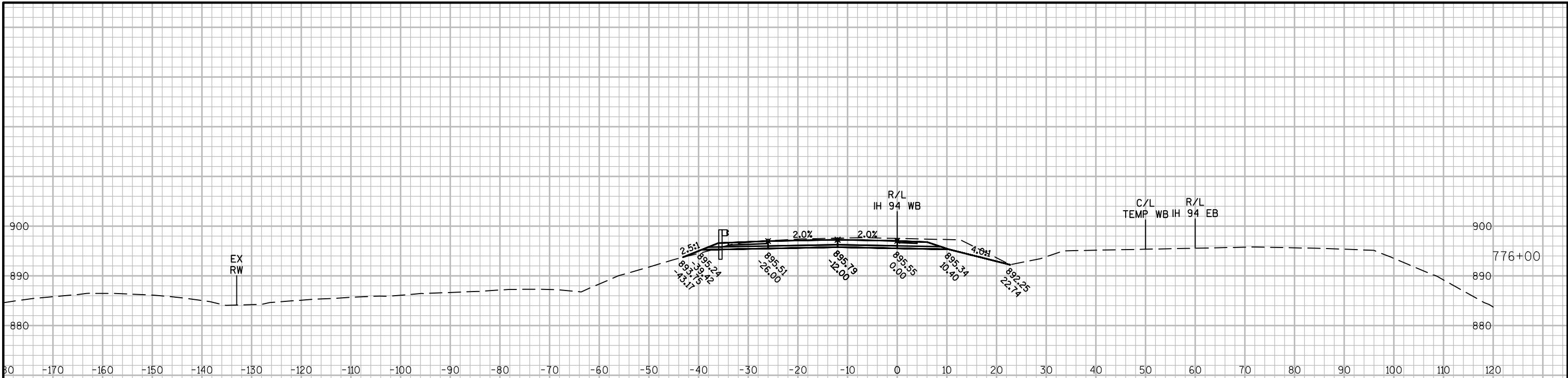


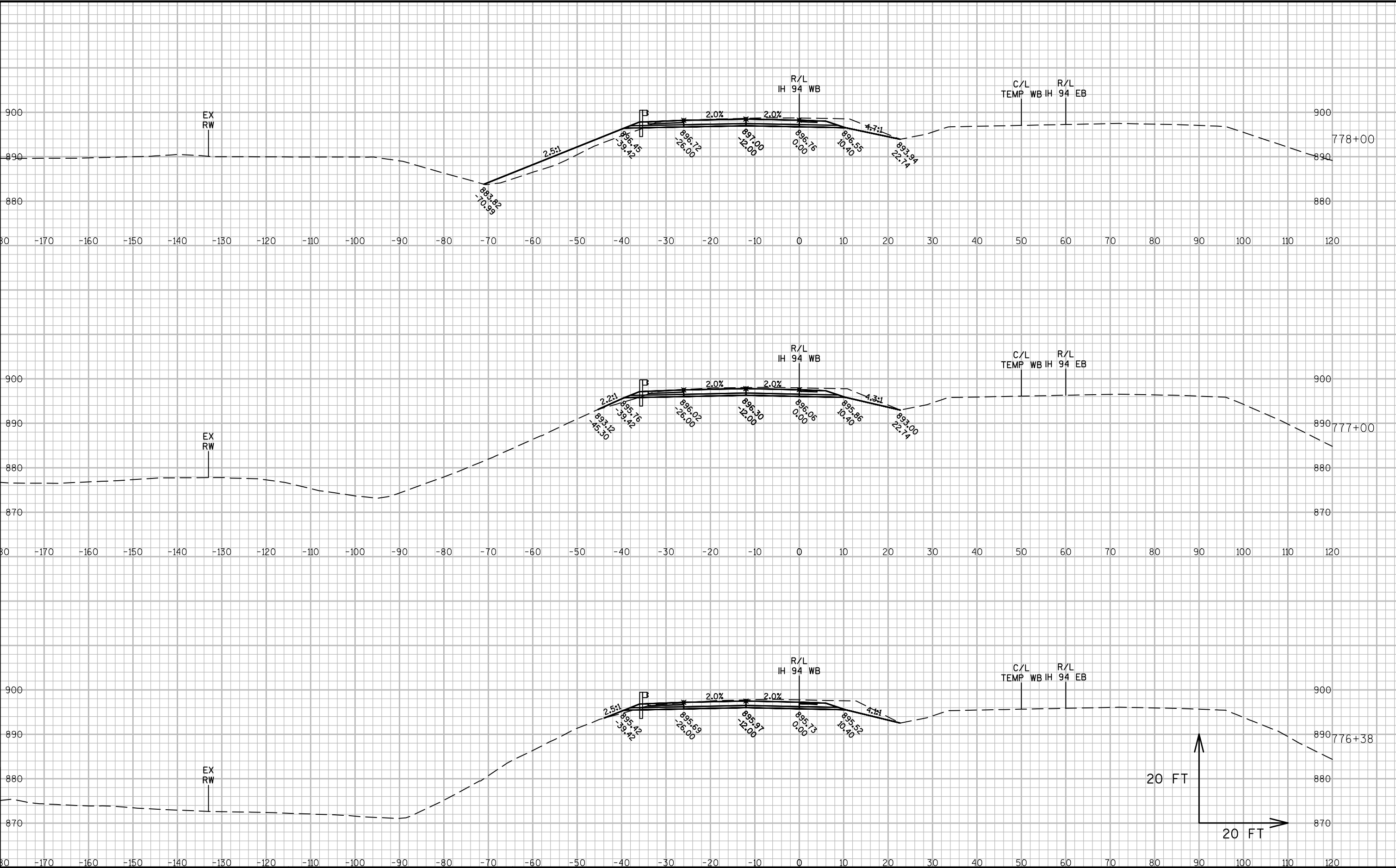


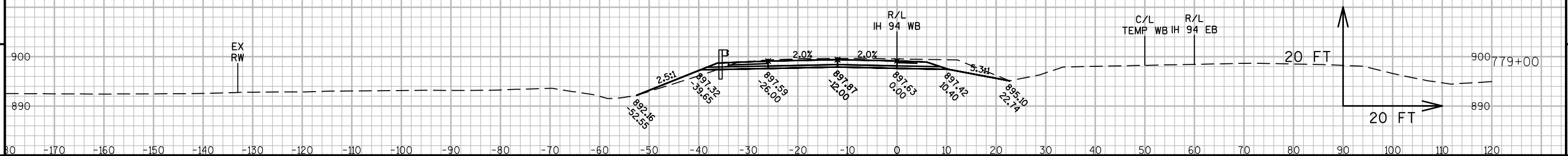
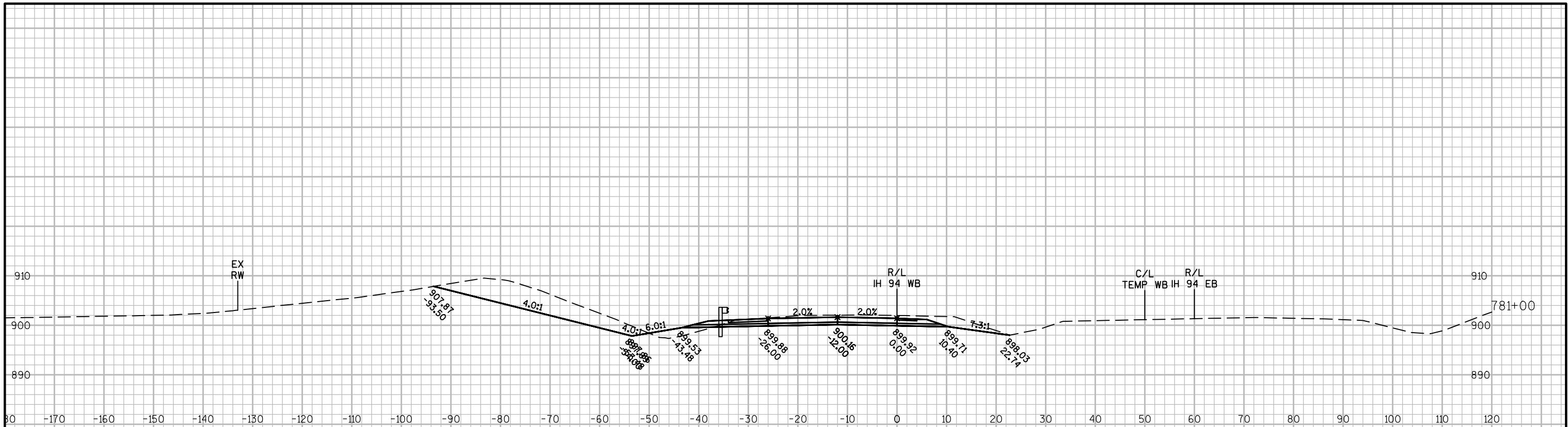


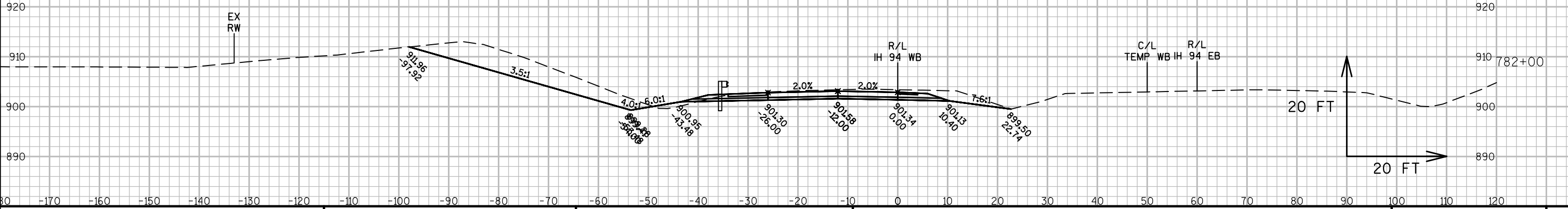
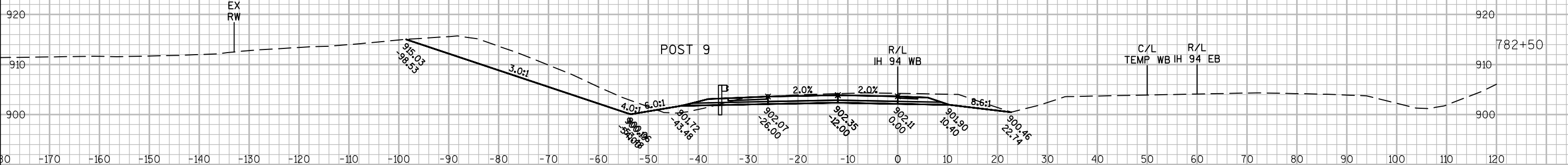
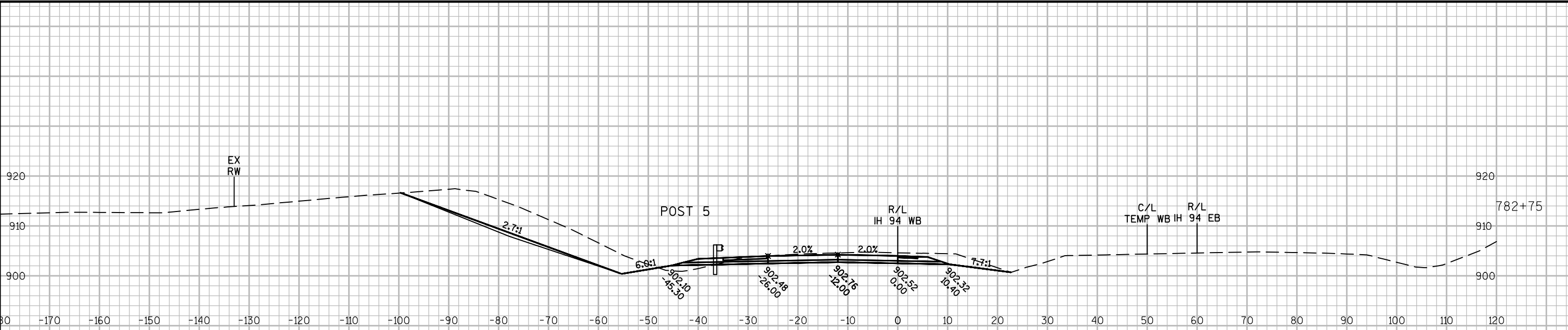


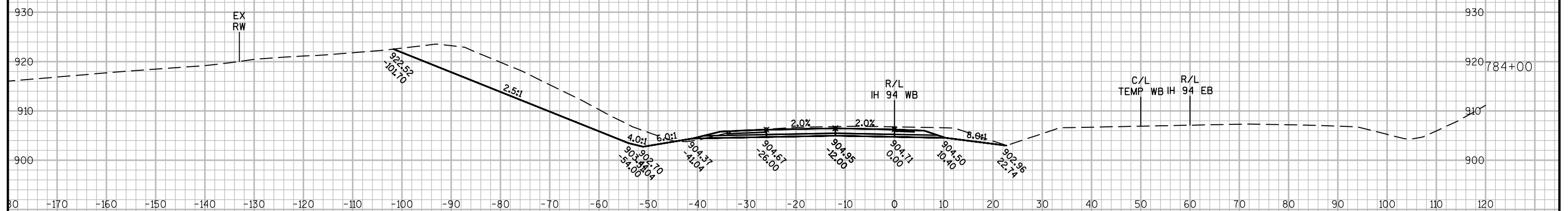
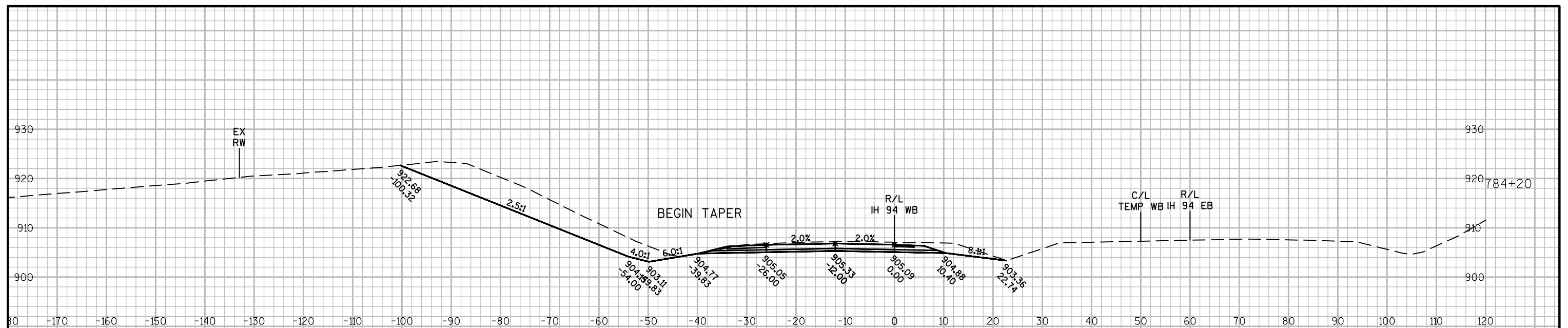












PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

CROSS SECTIONS: IH 94 WB STAGE 5

SHEET 900

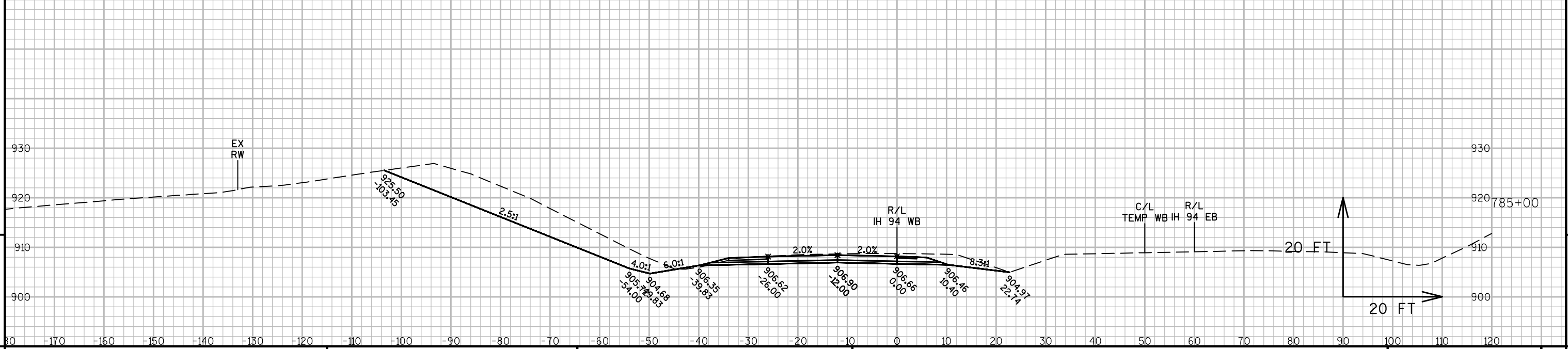
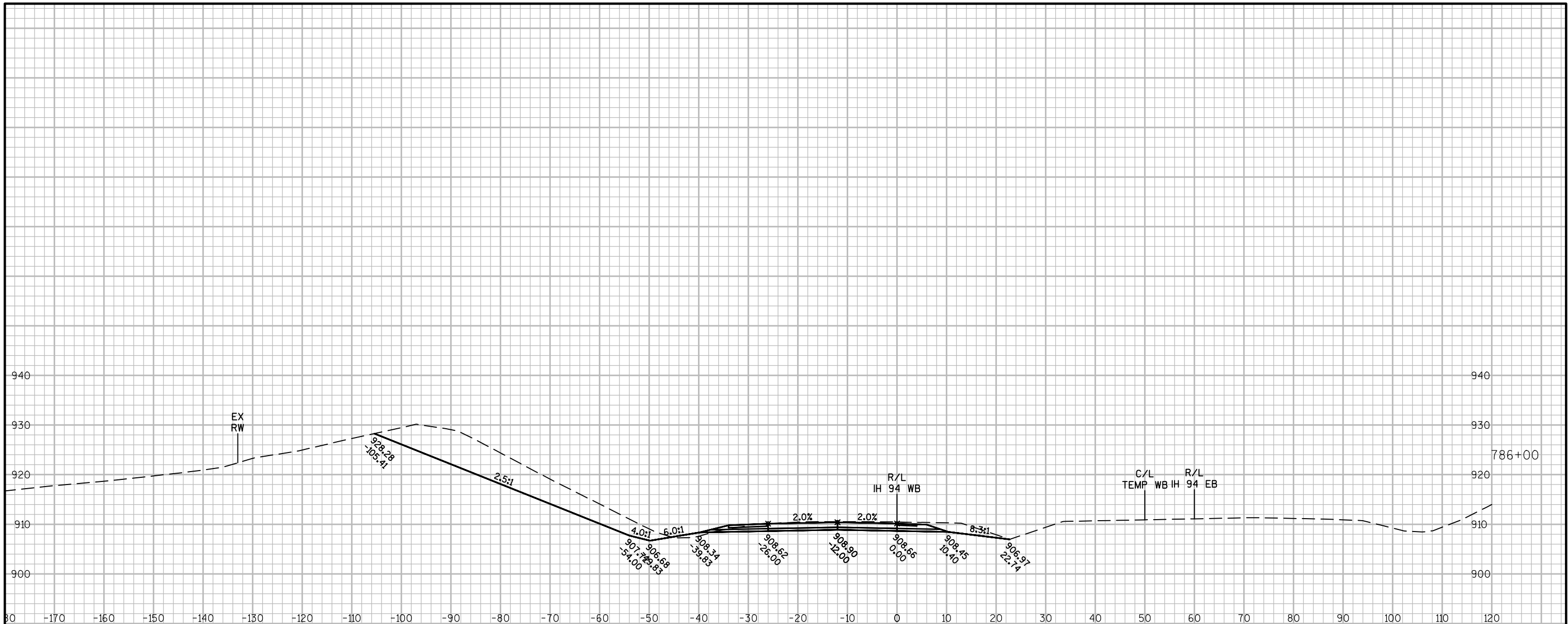
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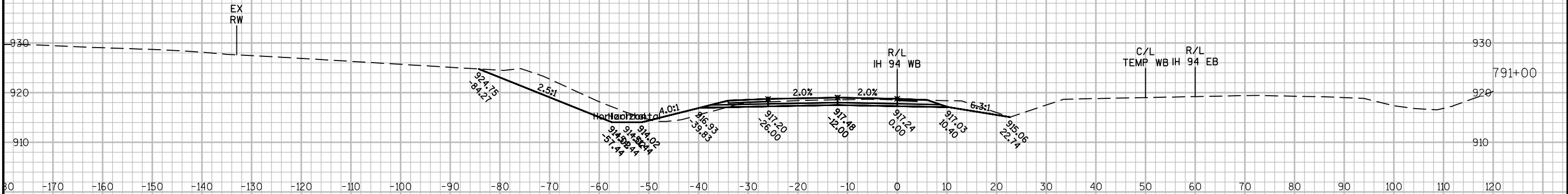
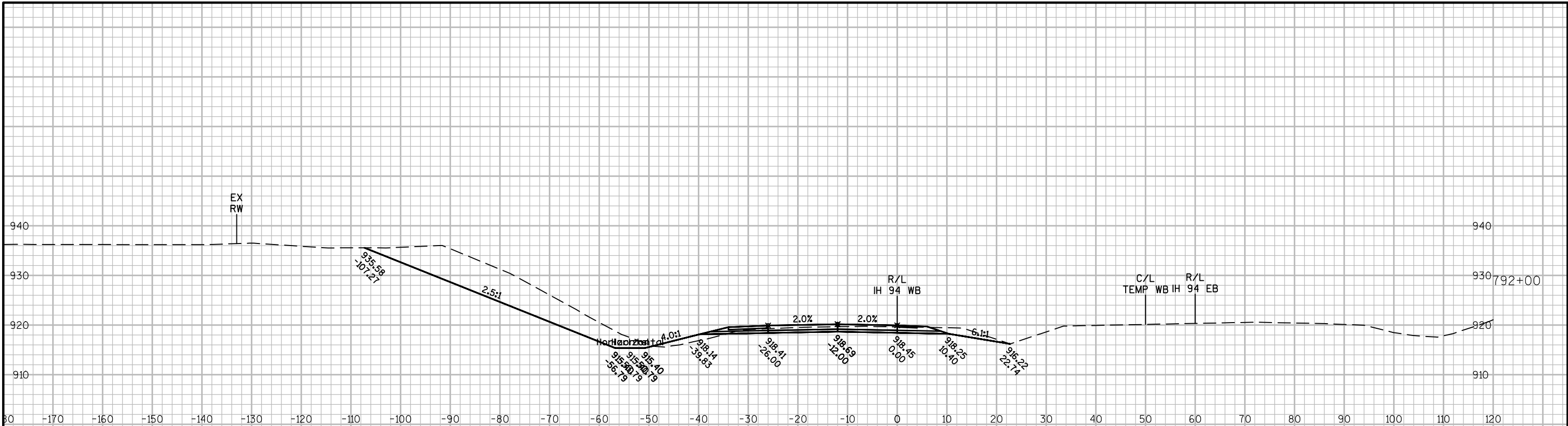
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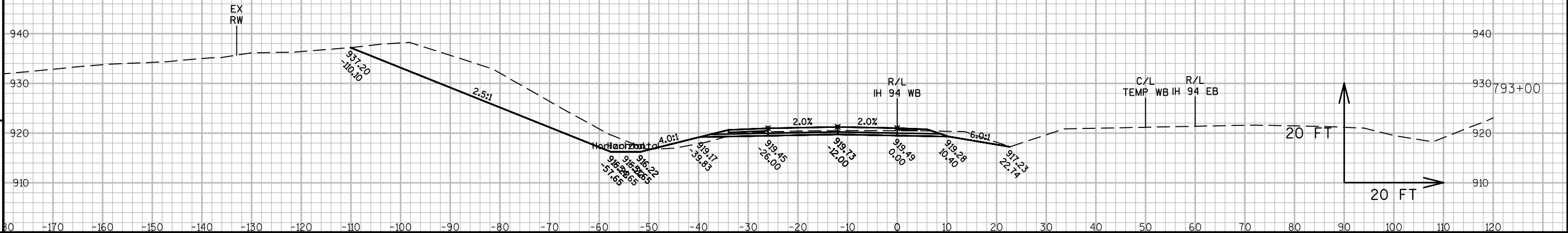
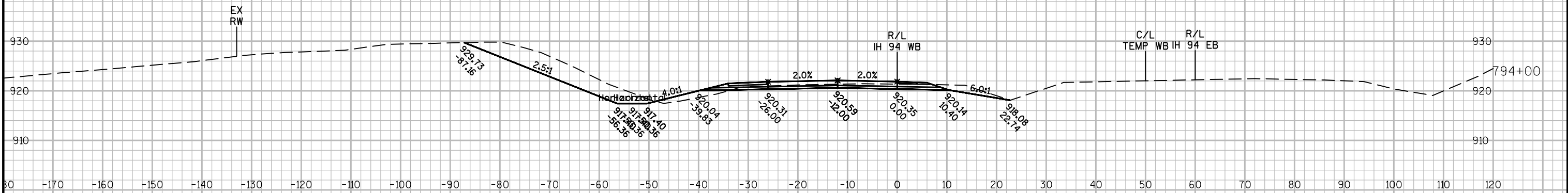
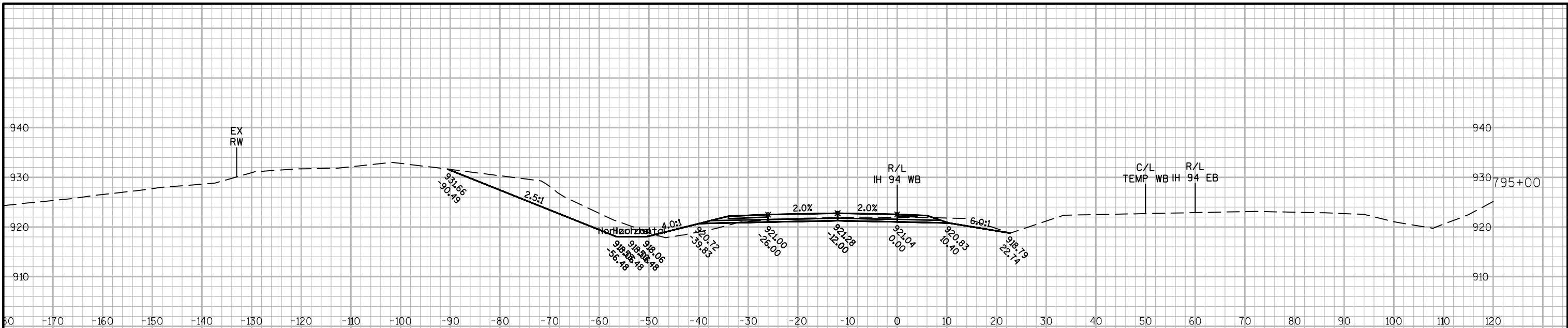
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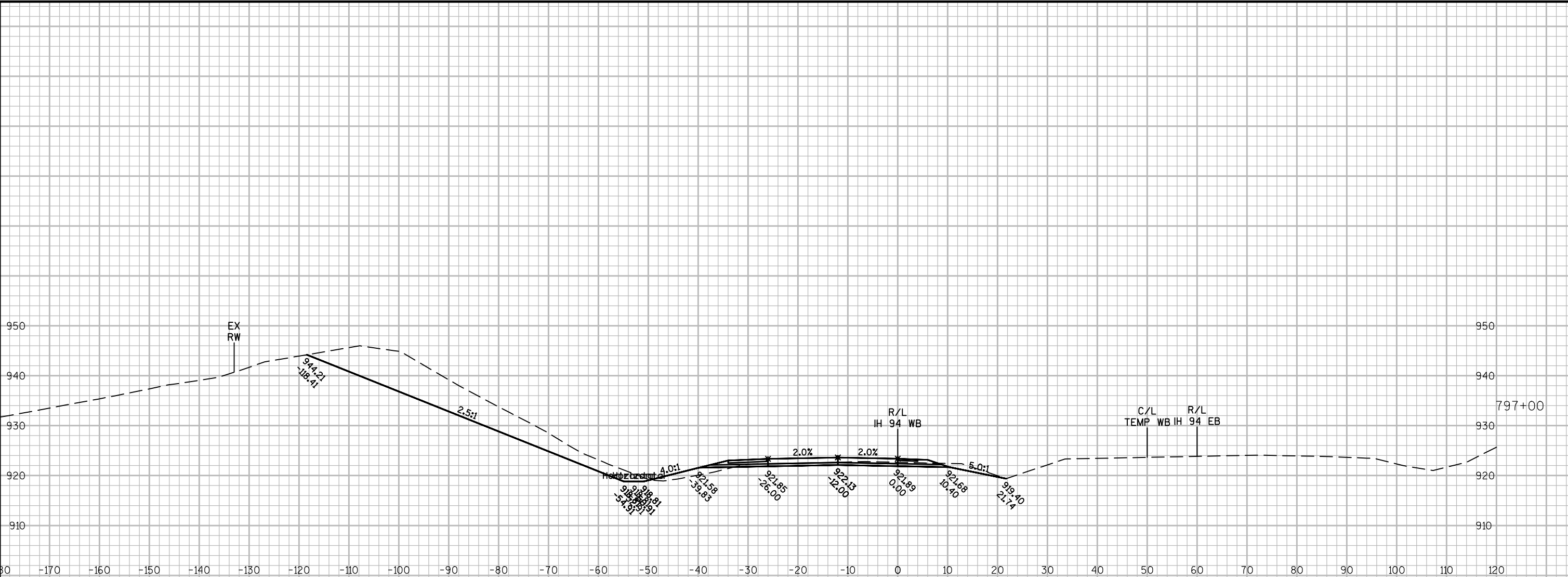
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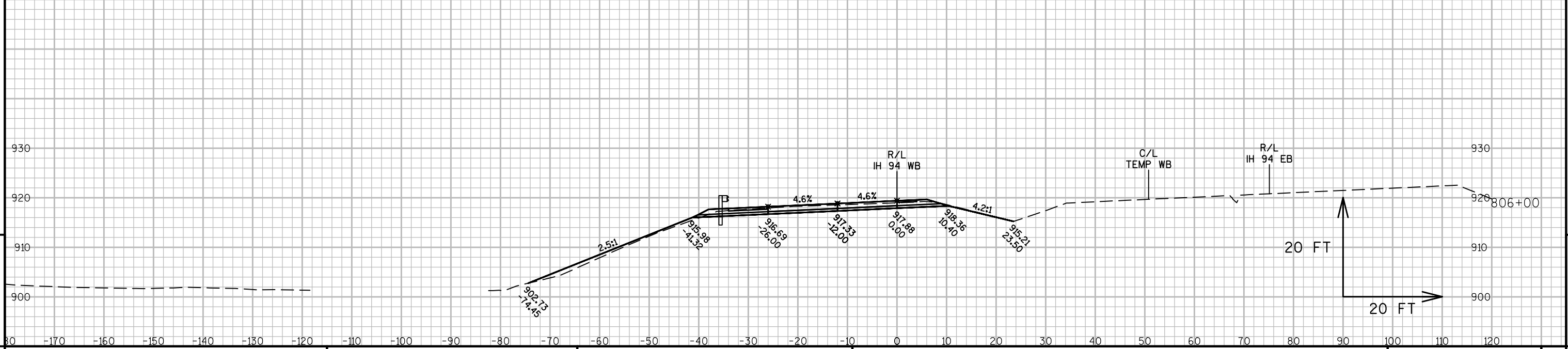
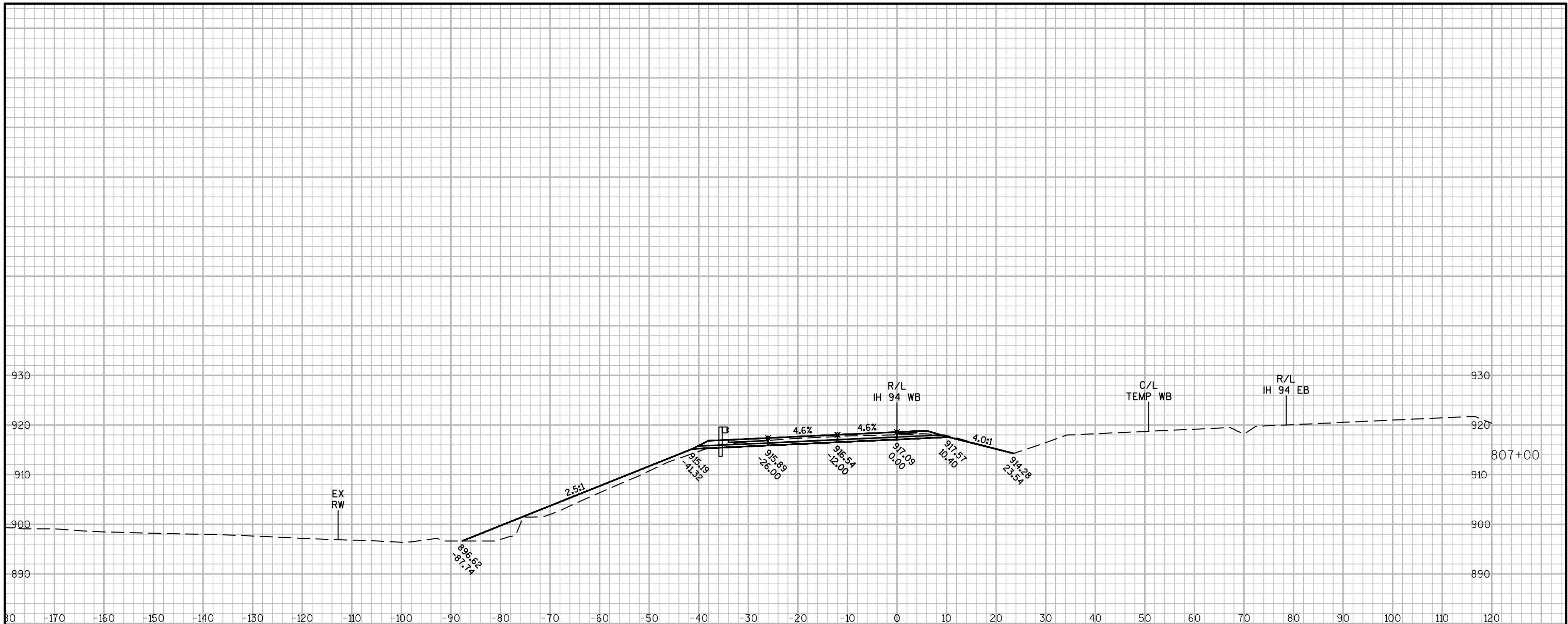
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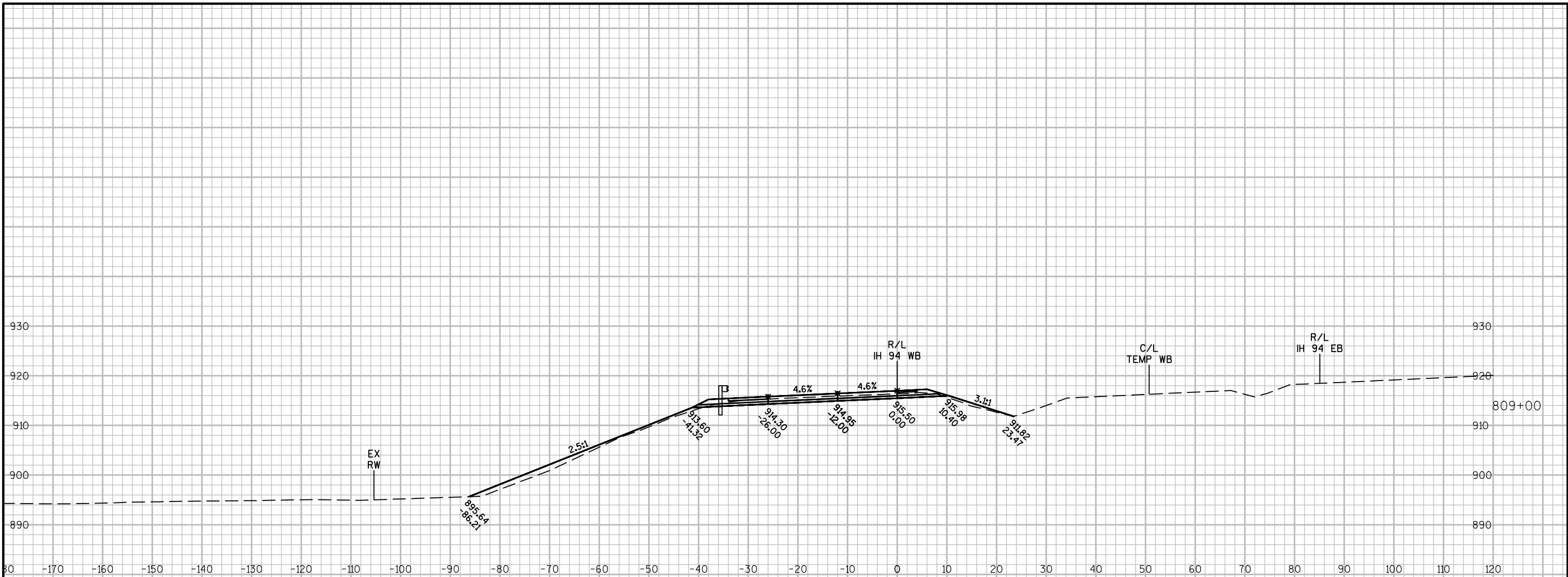


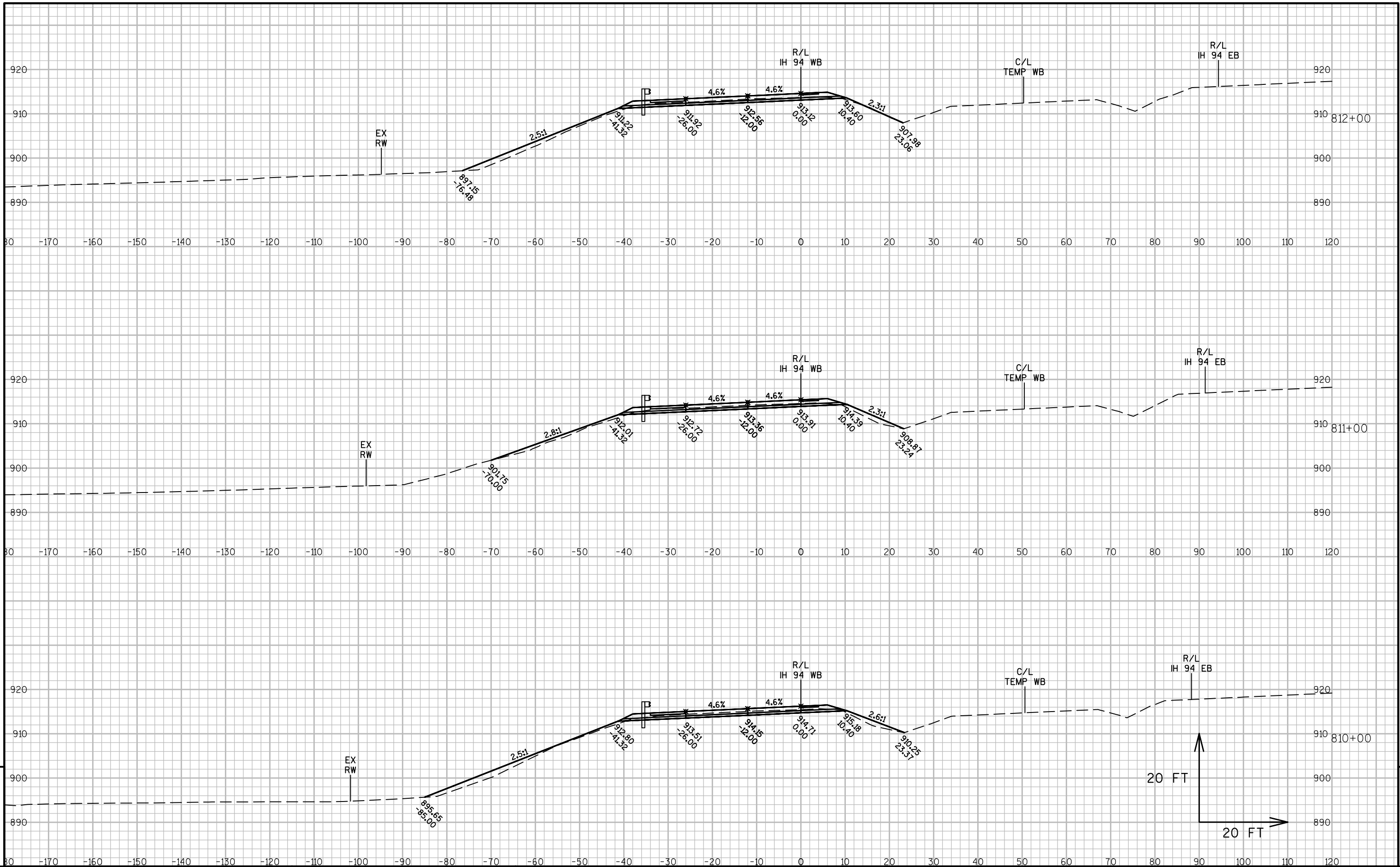


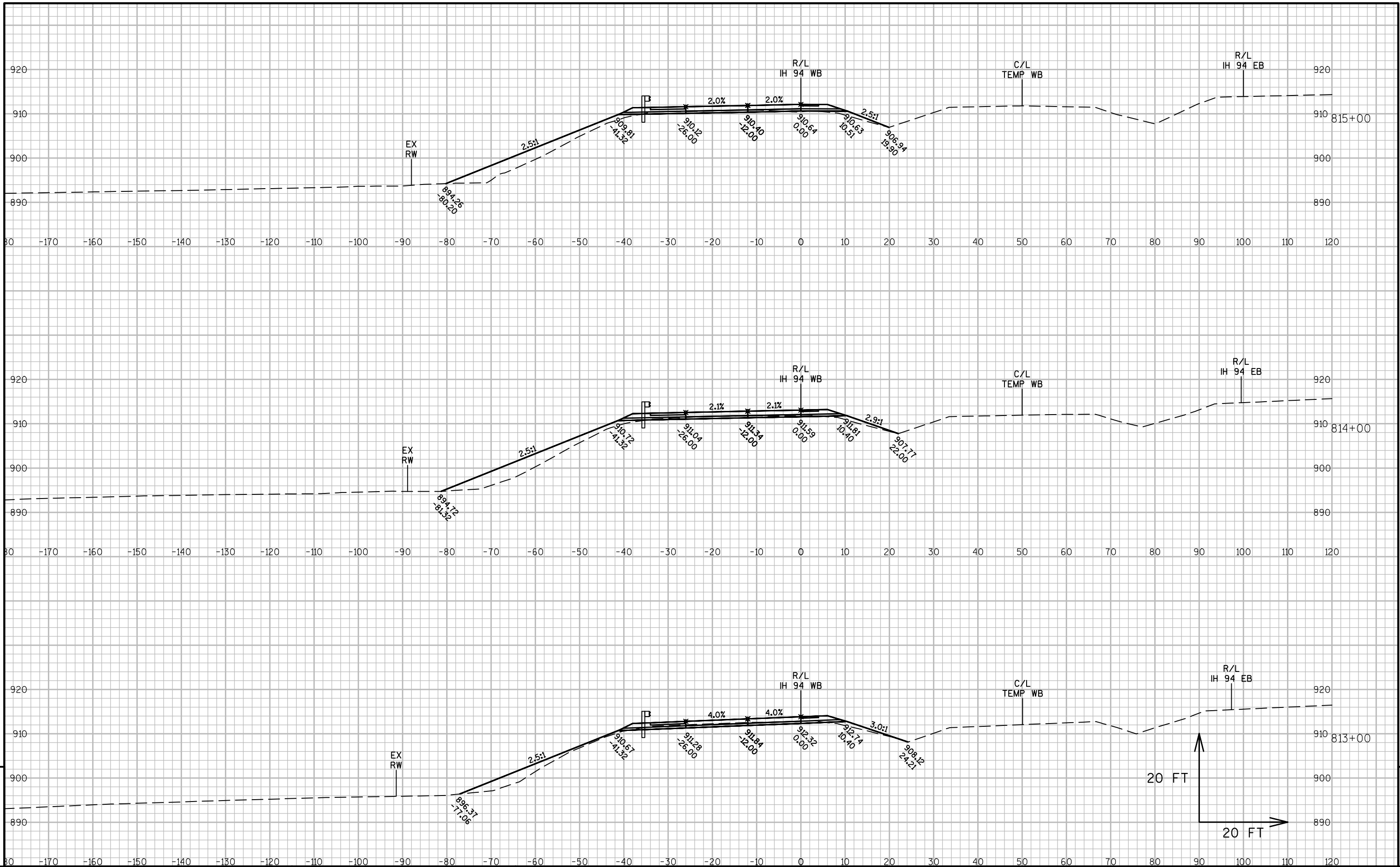


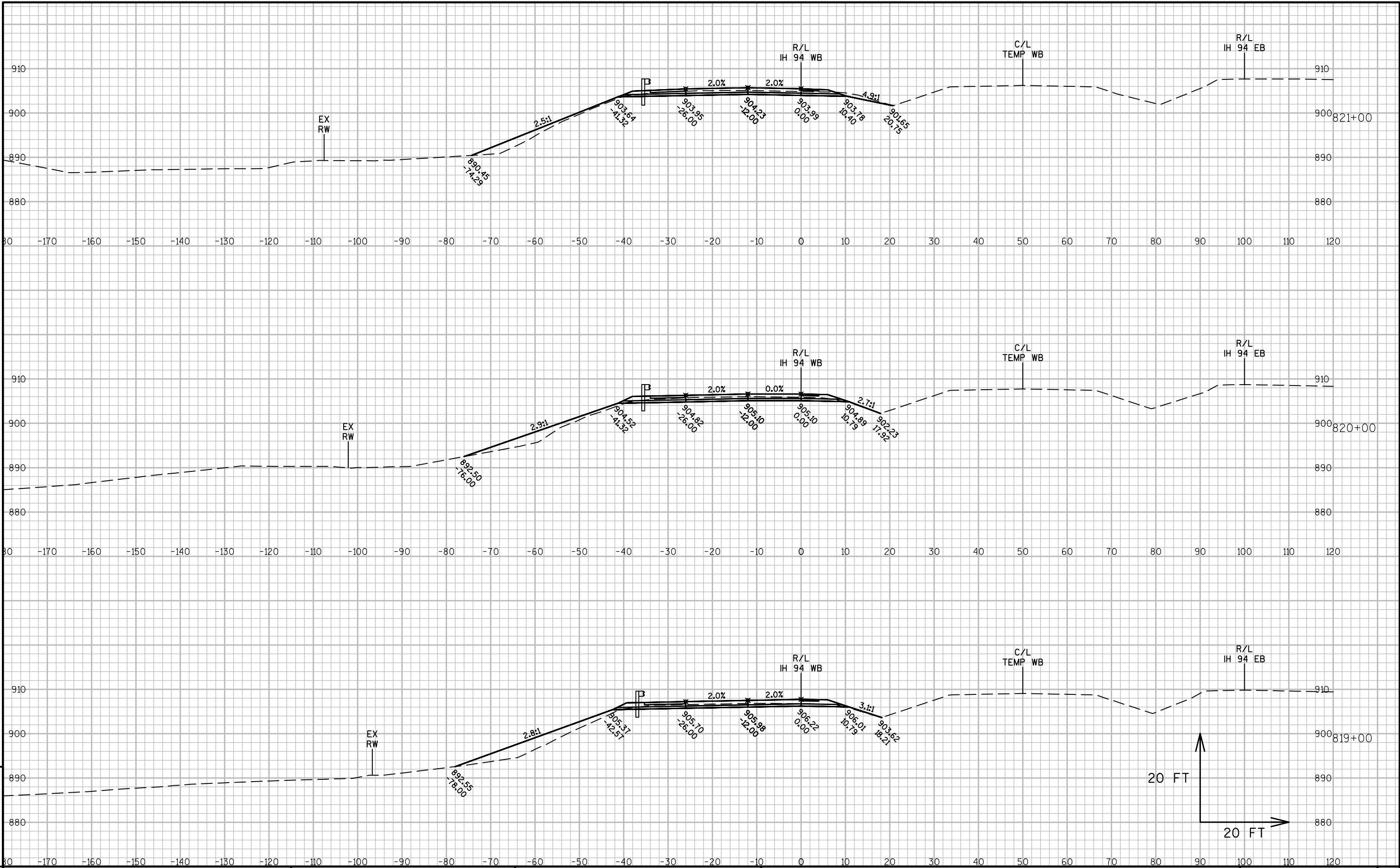


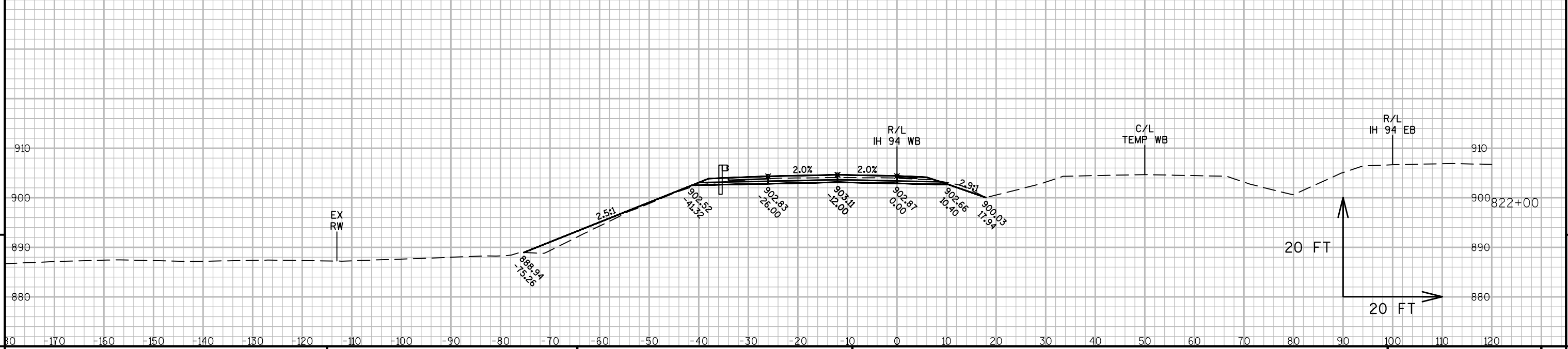
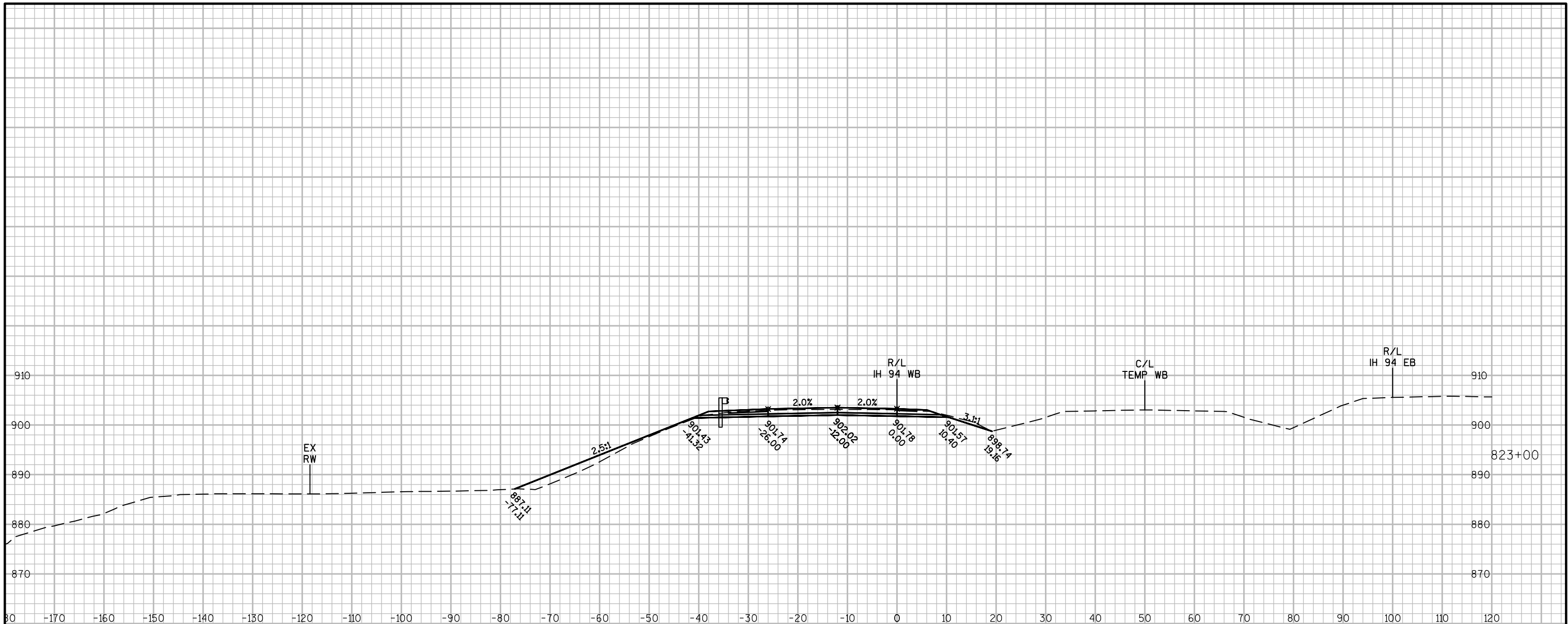




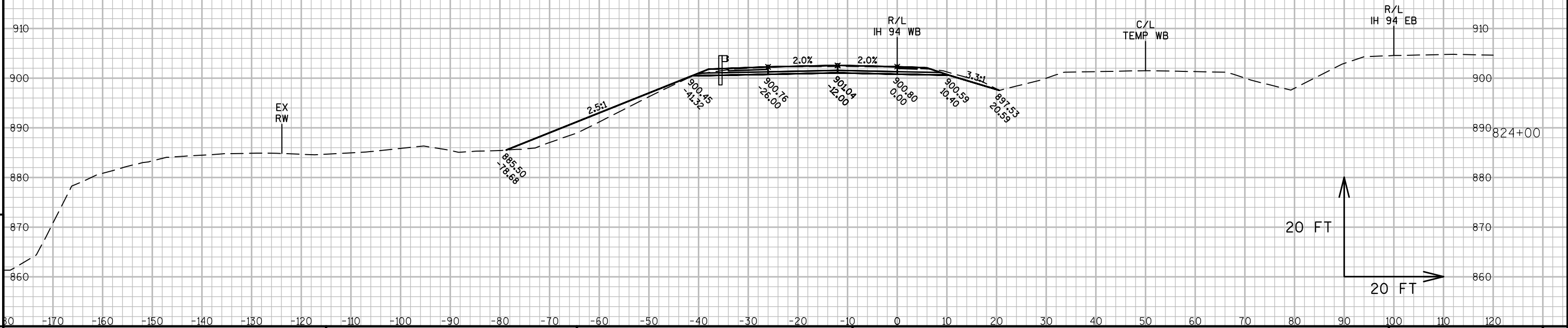
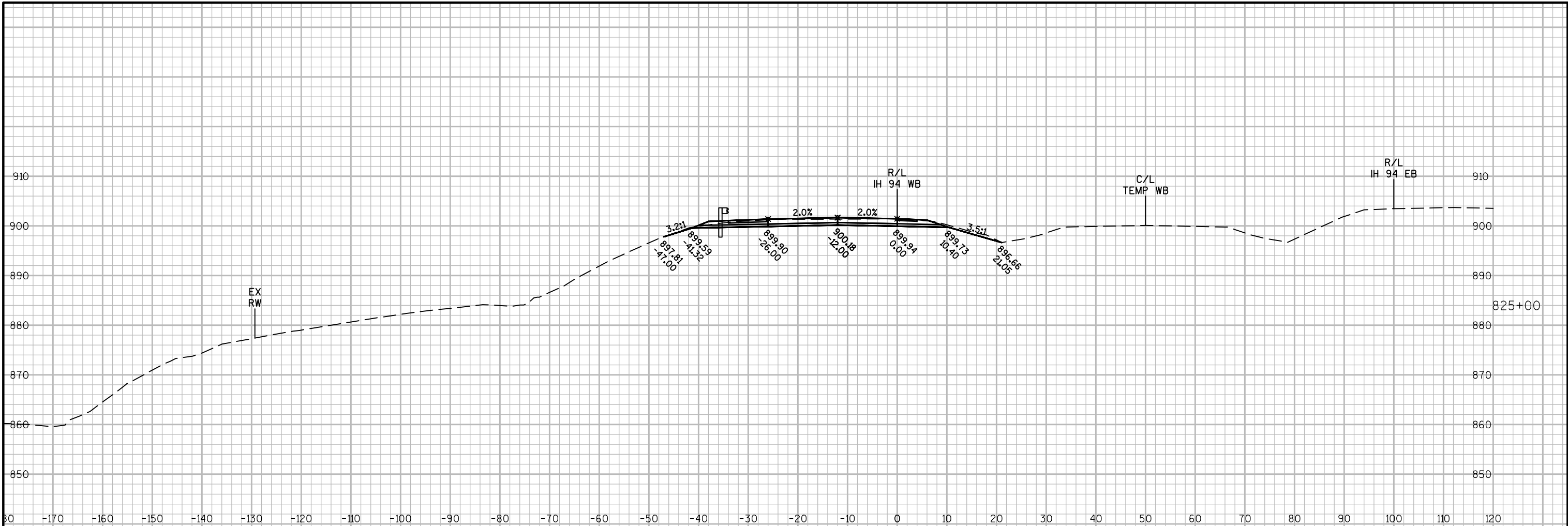


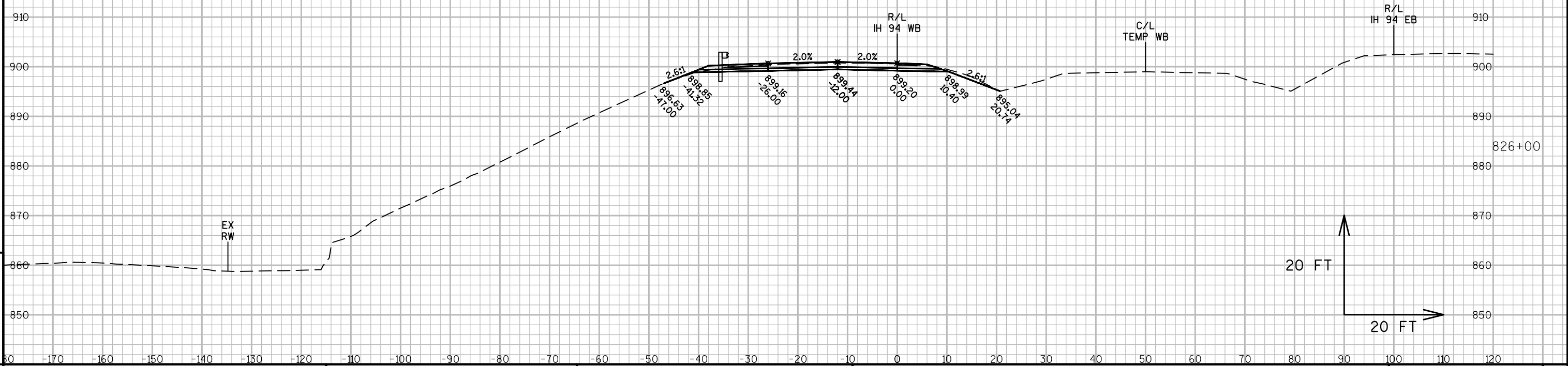
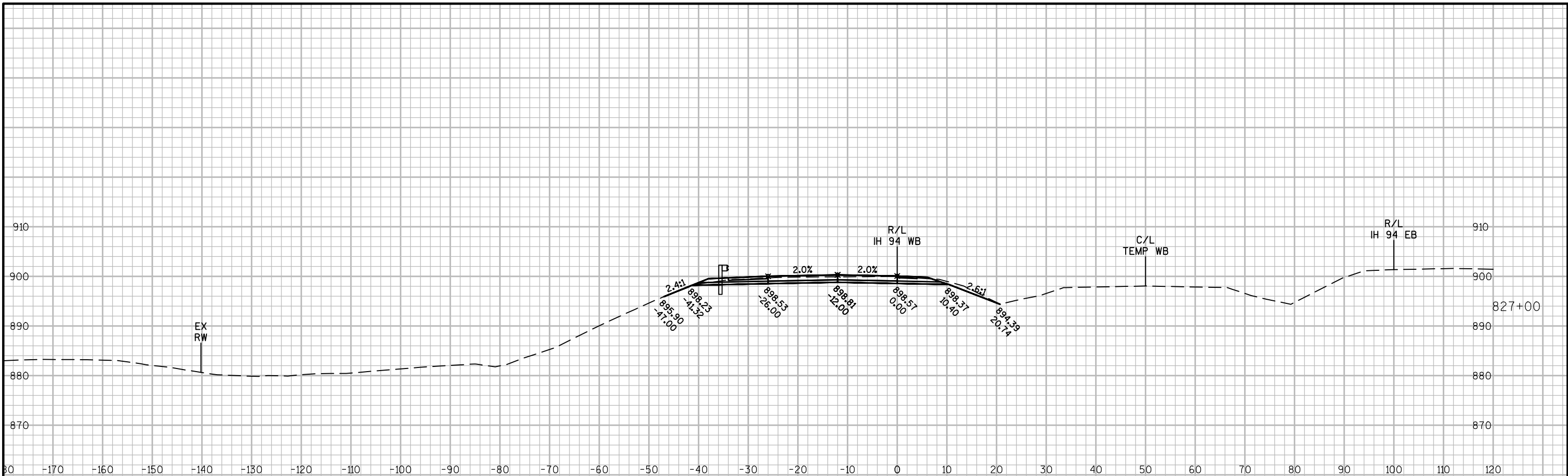


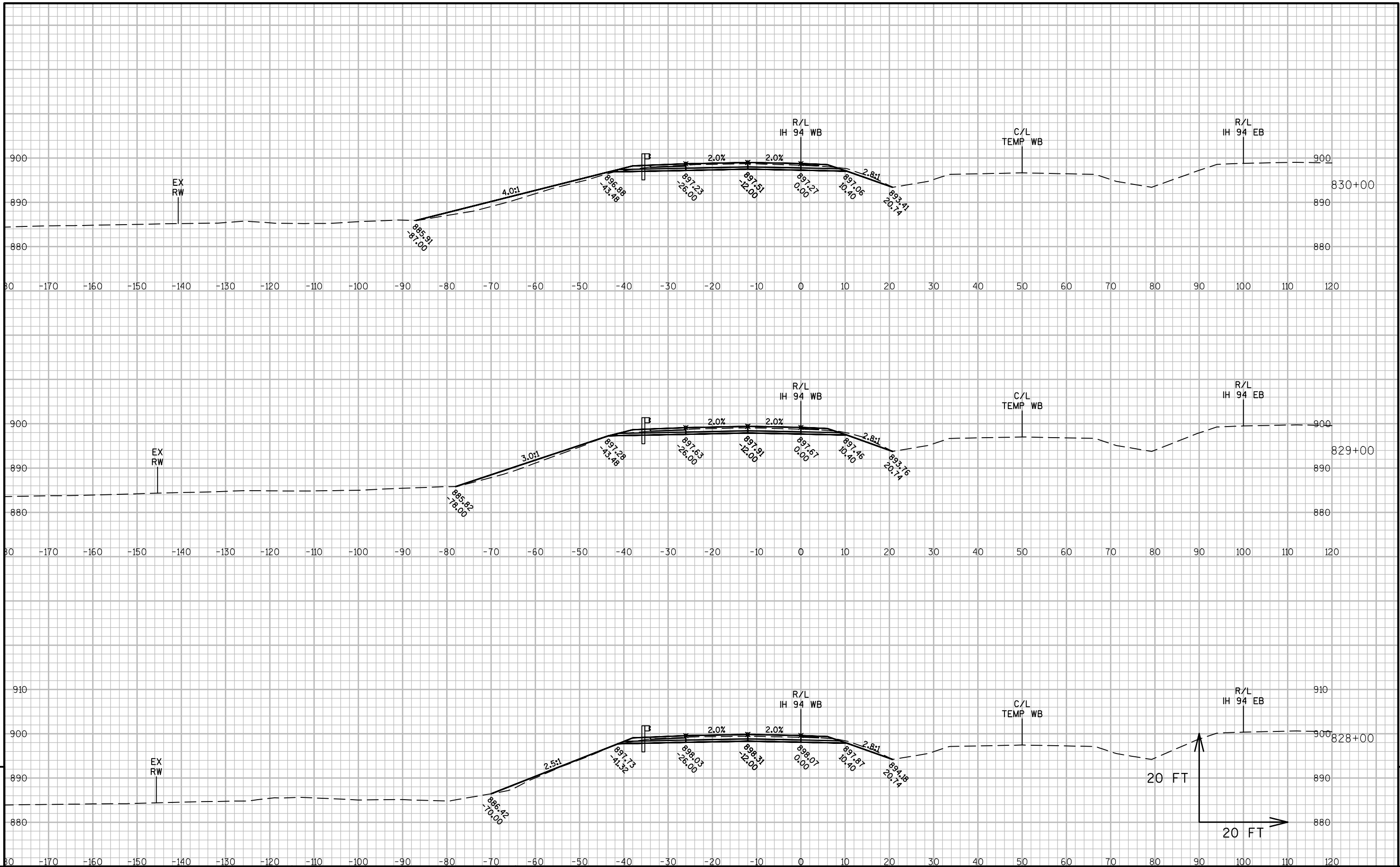


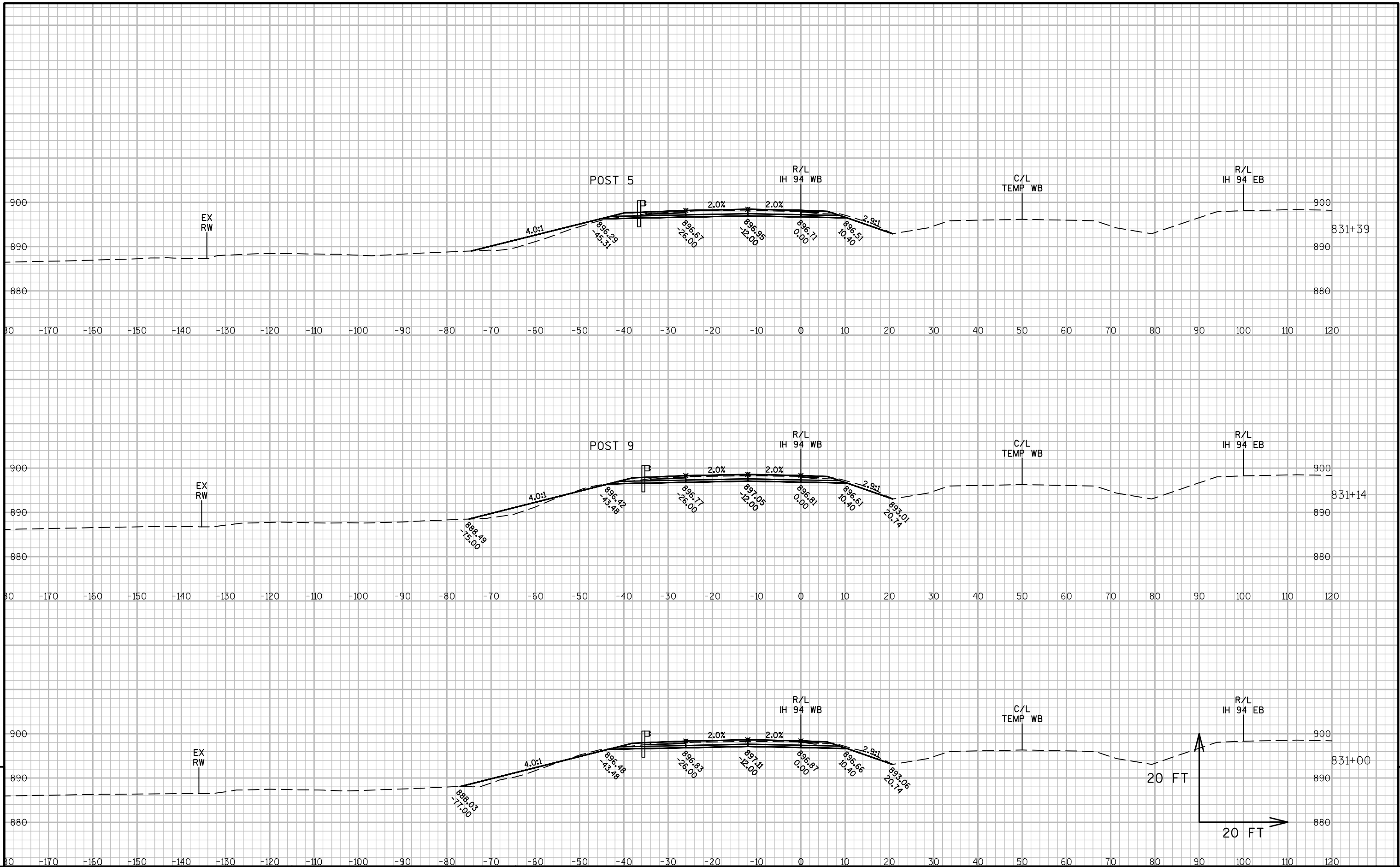


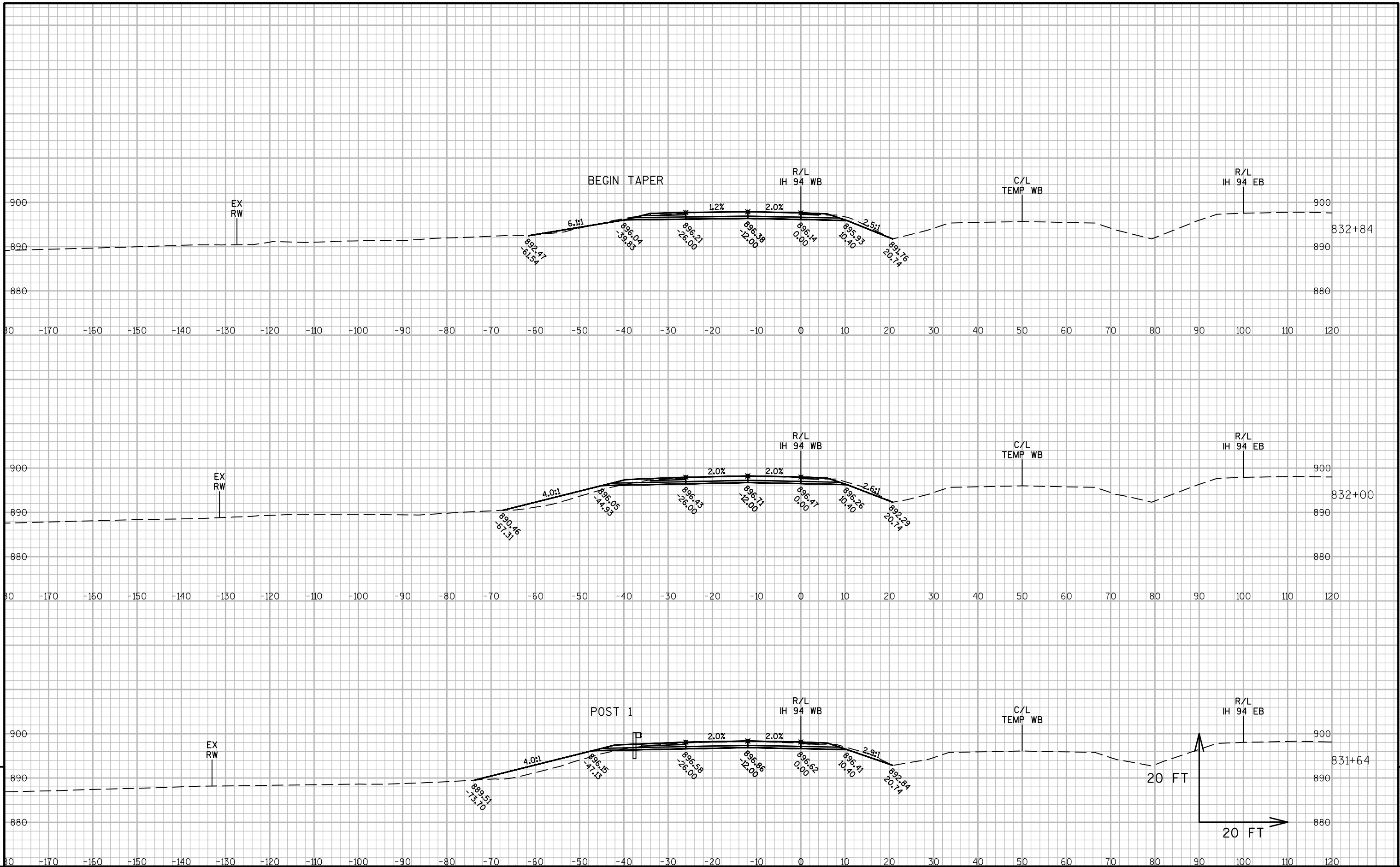
PROJECT NO:1022-08-72	HWY:IH 94	COUNTY:DUNN	CROSS SECTIONS: IH 94 WB STAGE 5	SHEET 915	E
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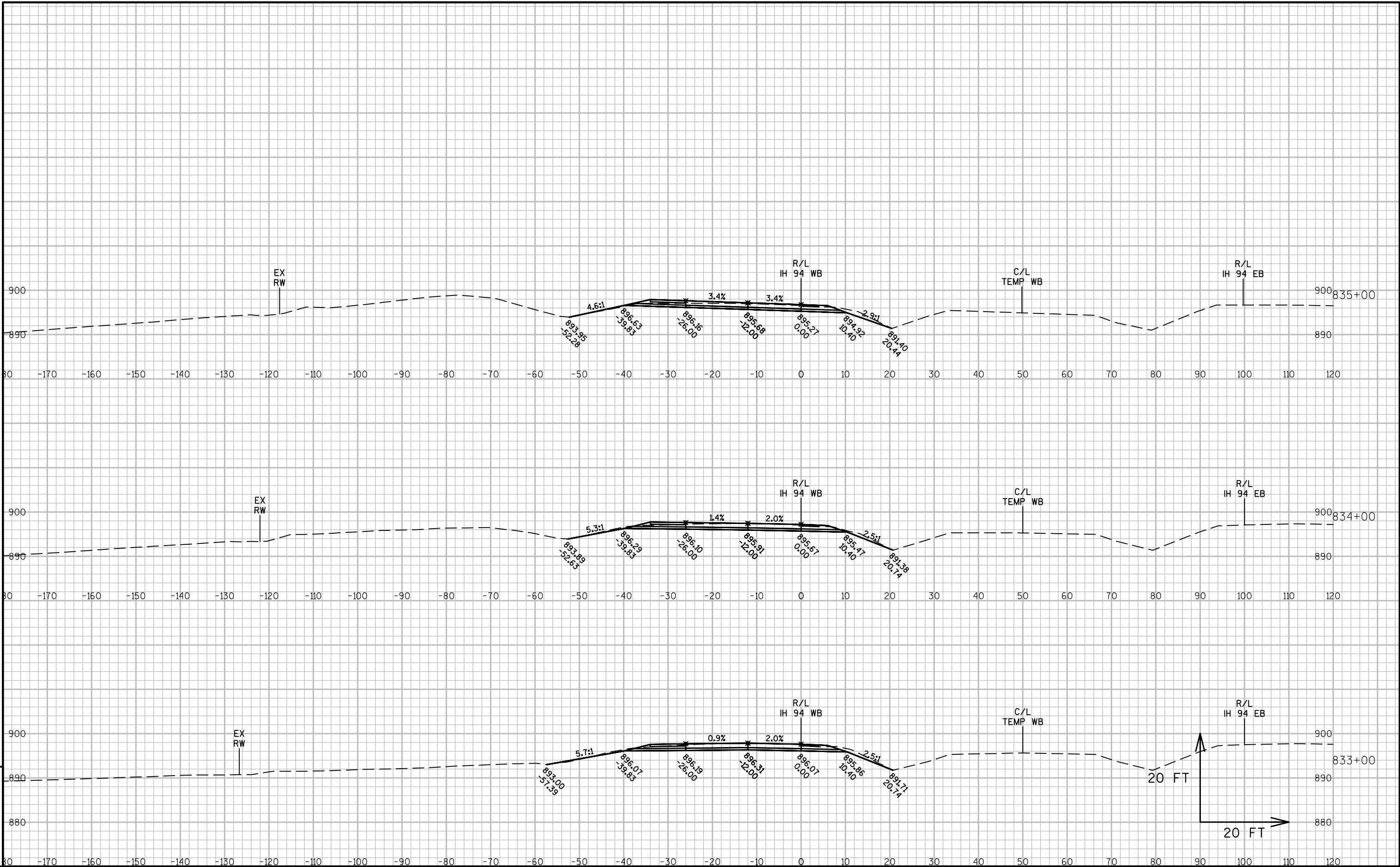


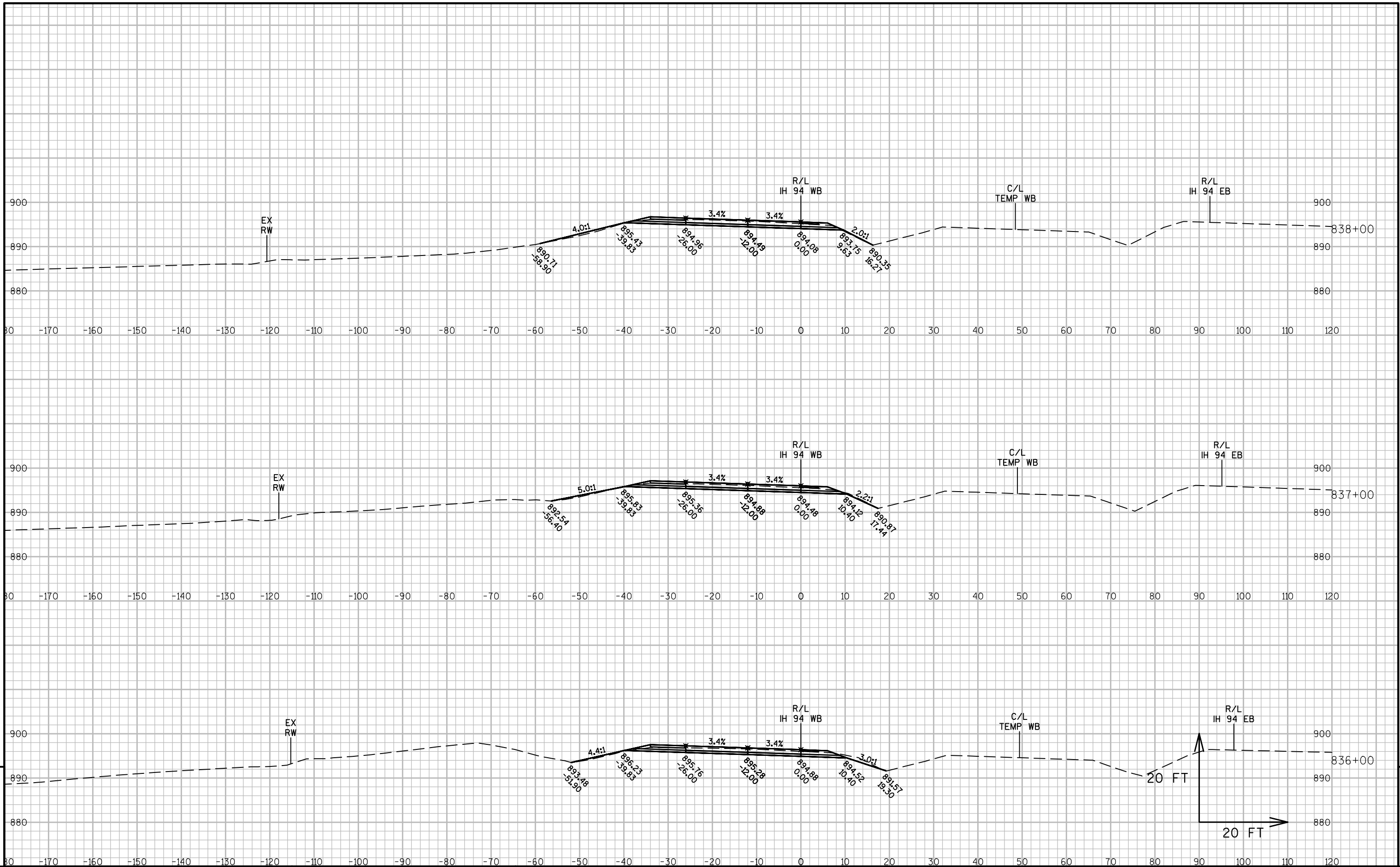


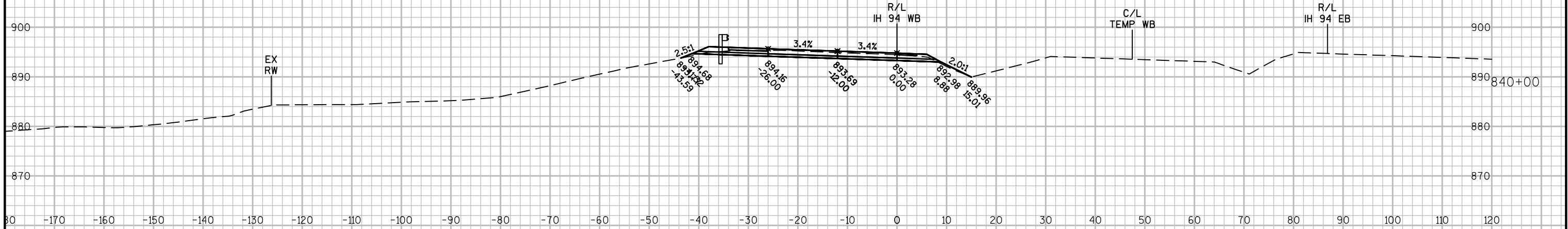
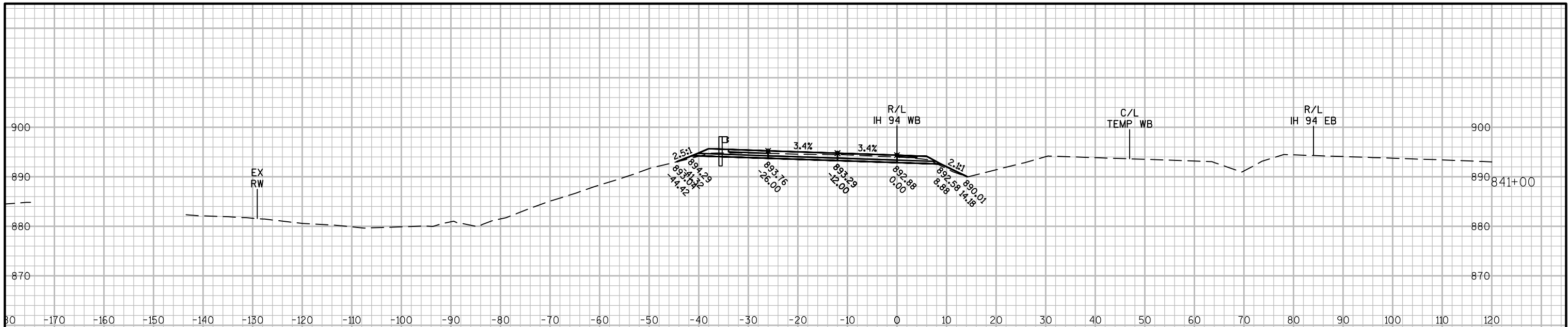


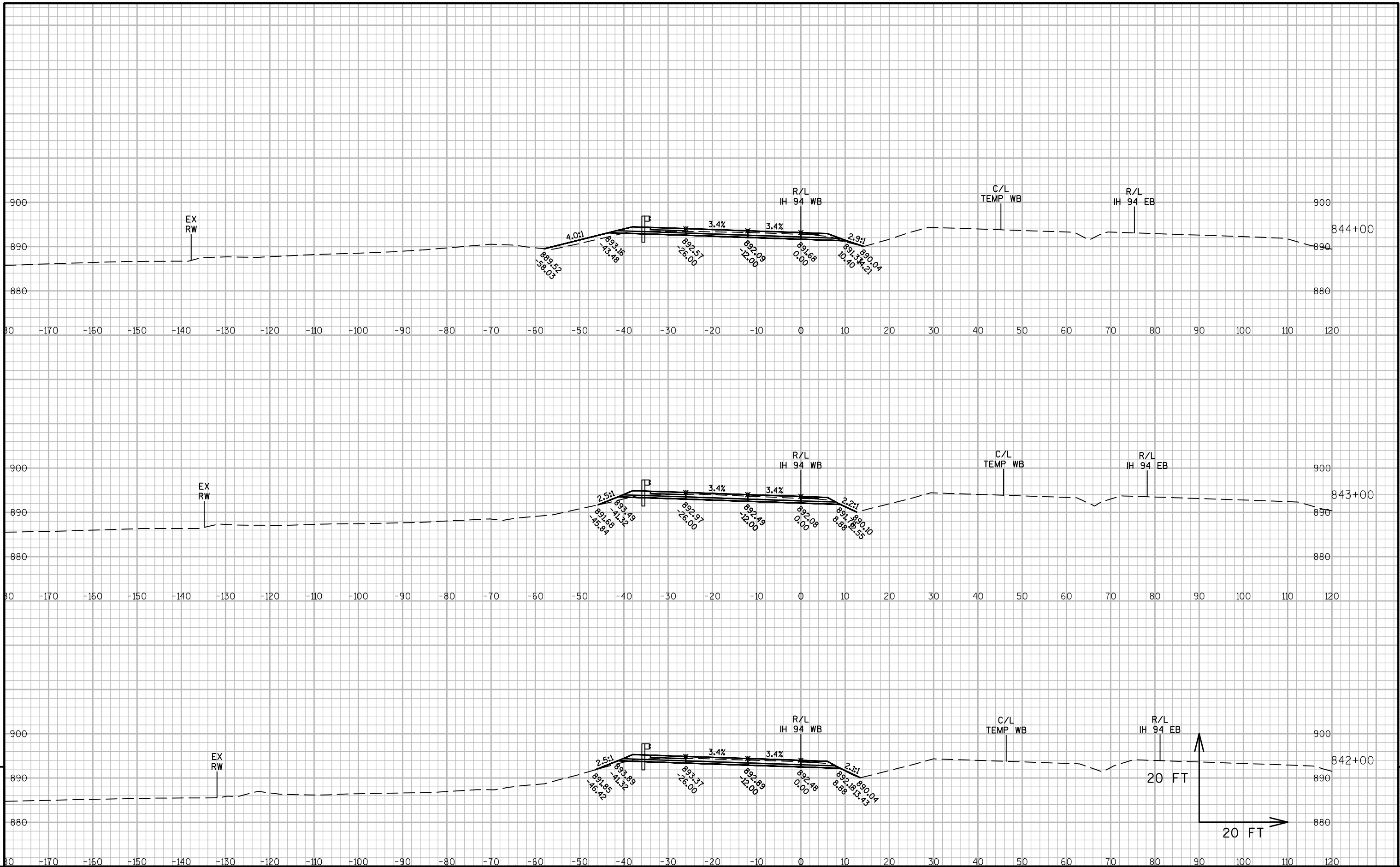


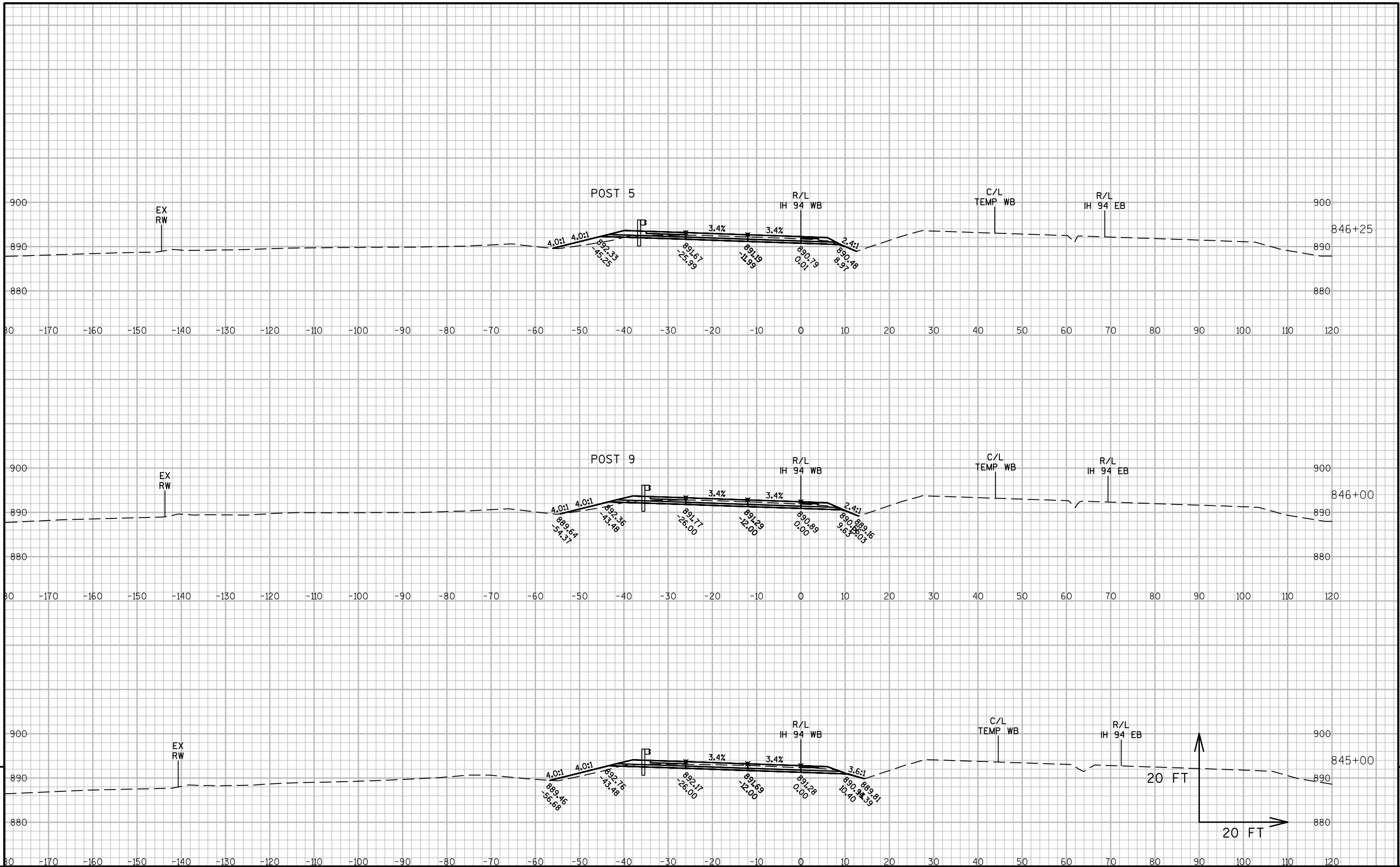


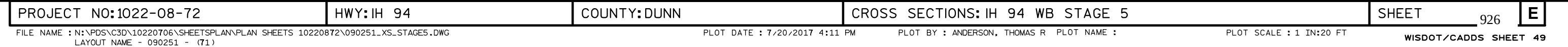
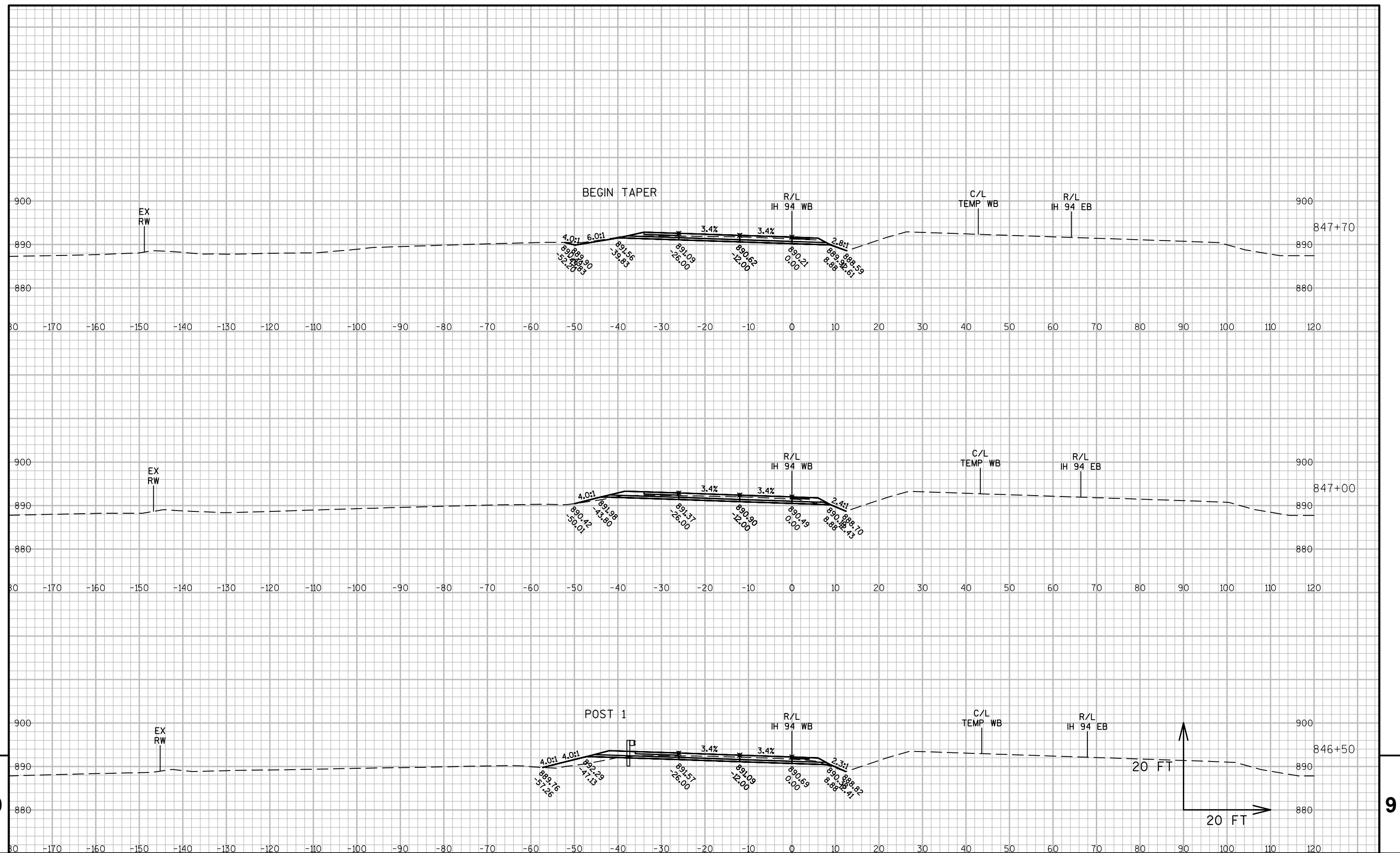


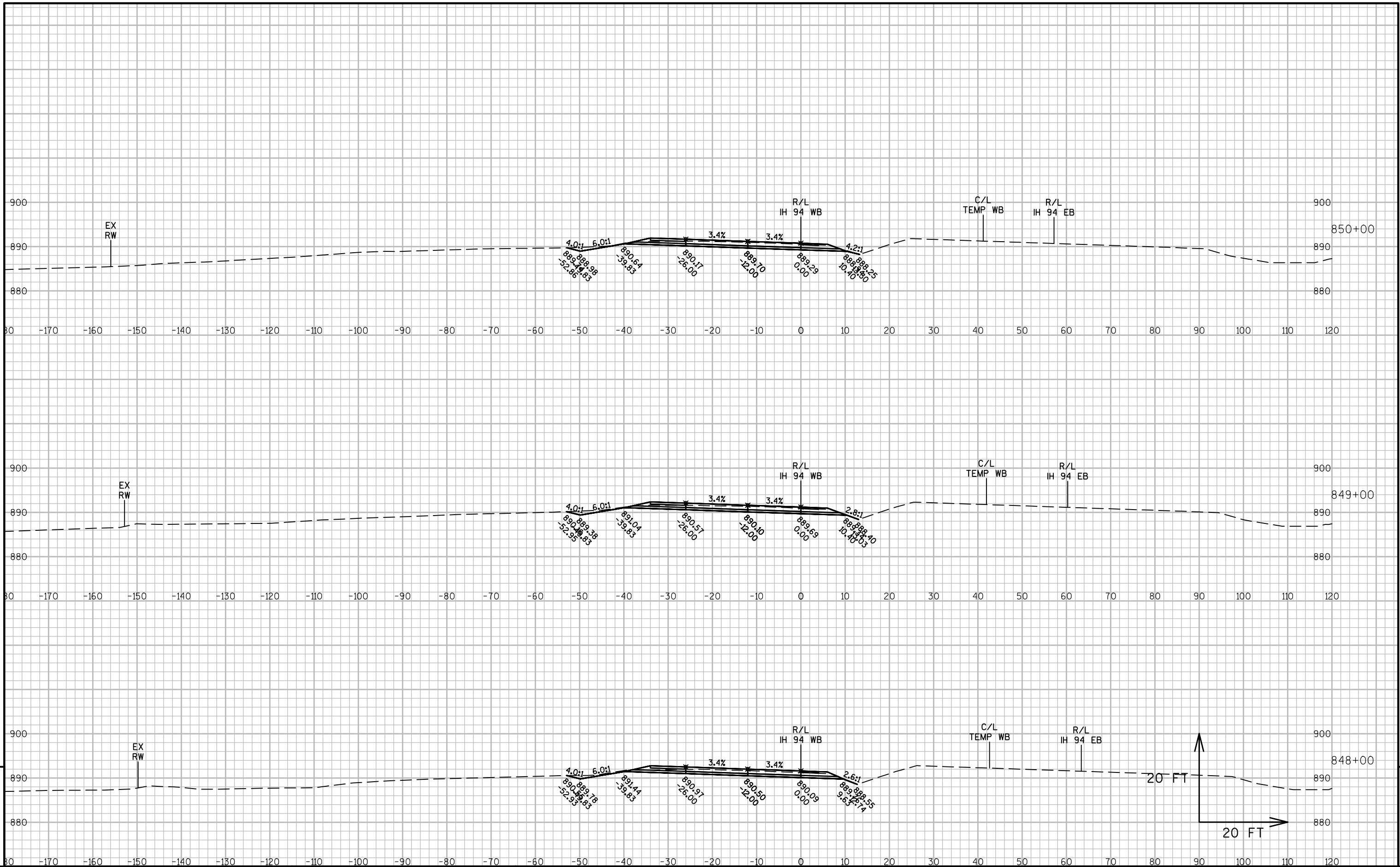


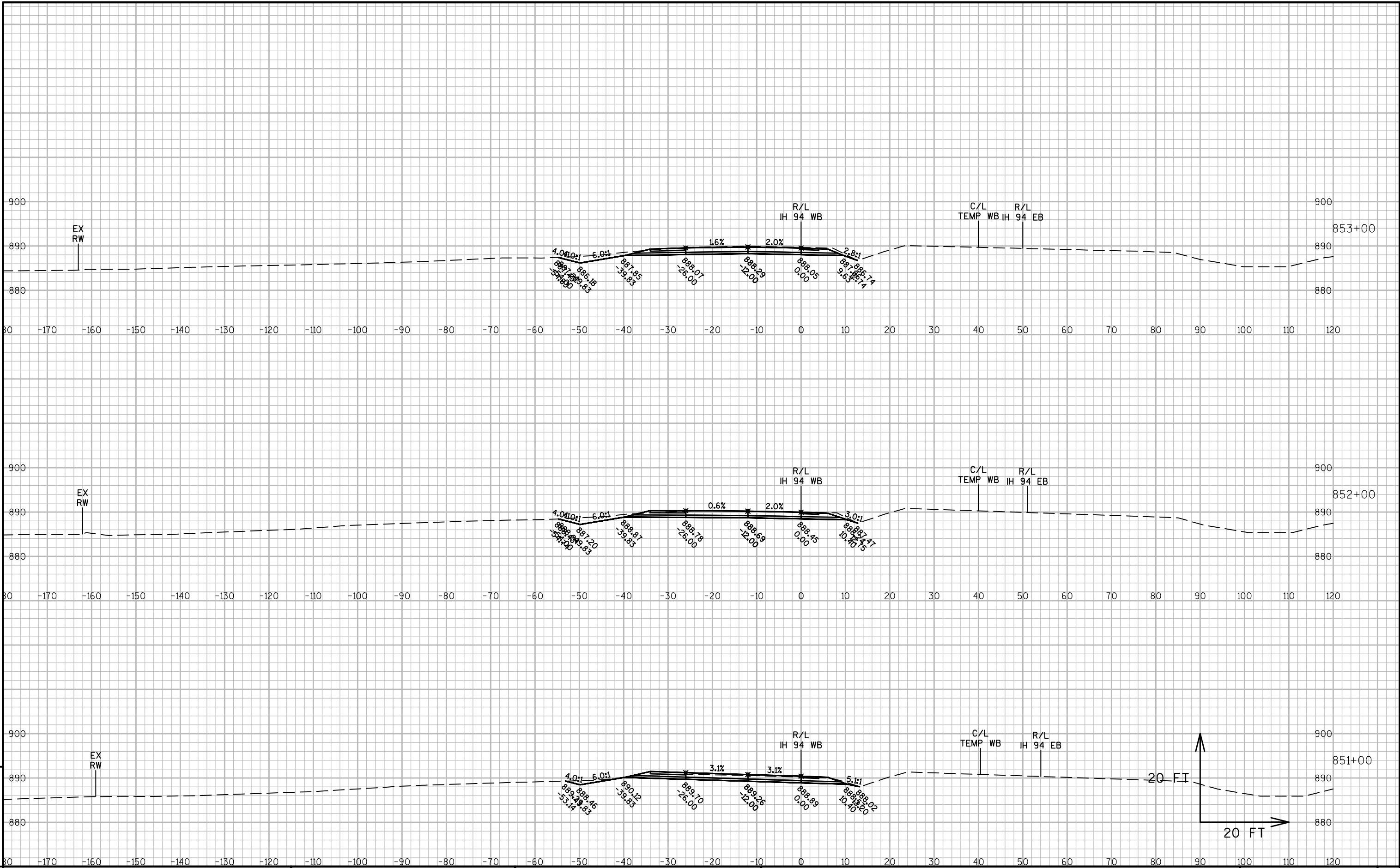


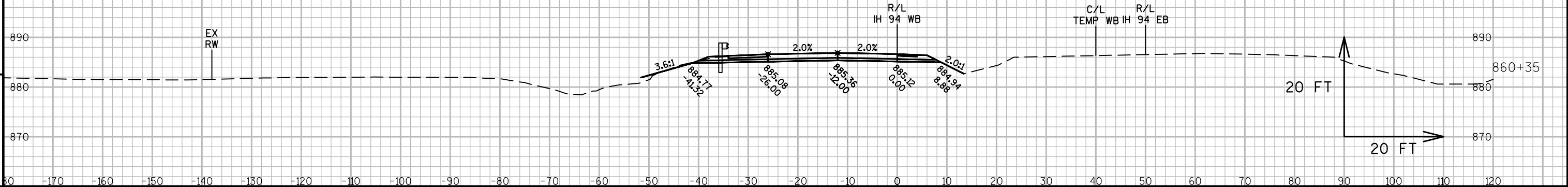
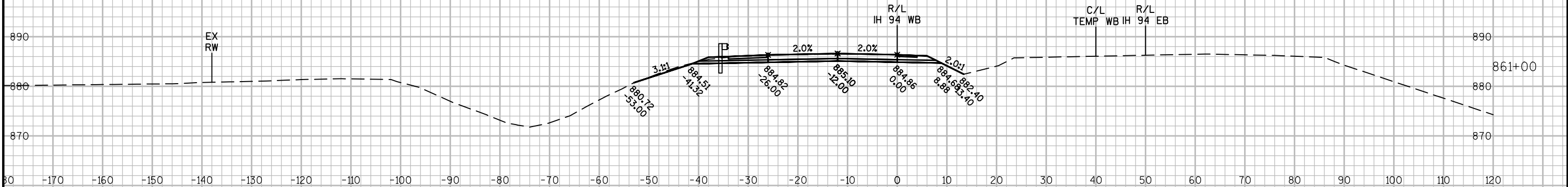
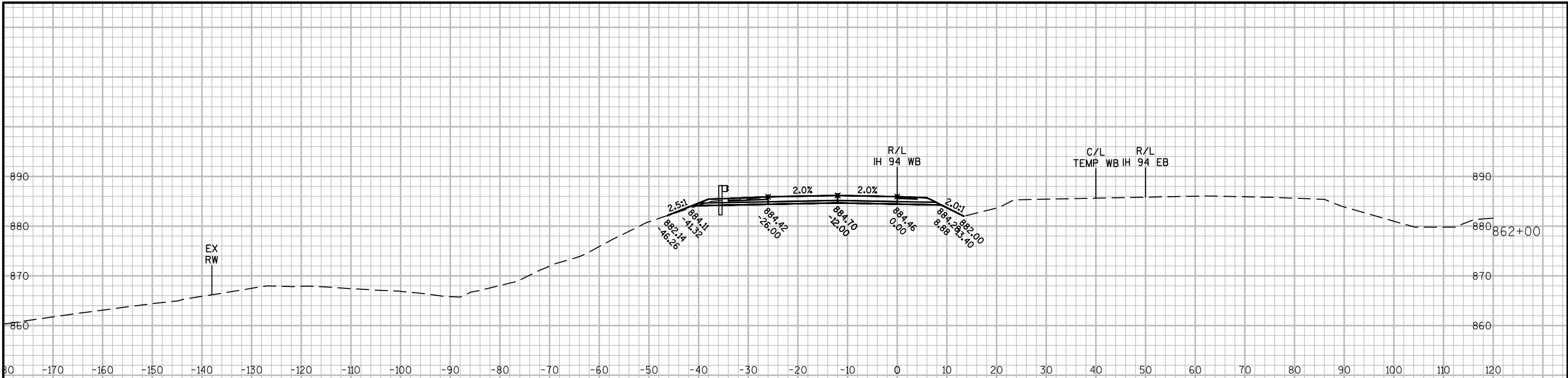


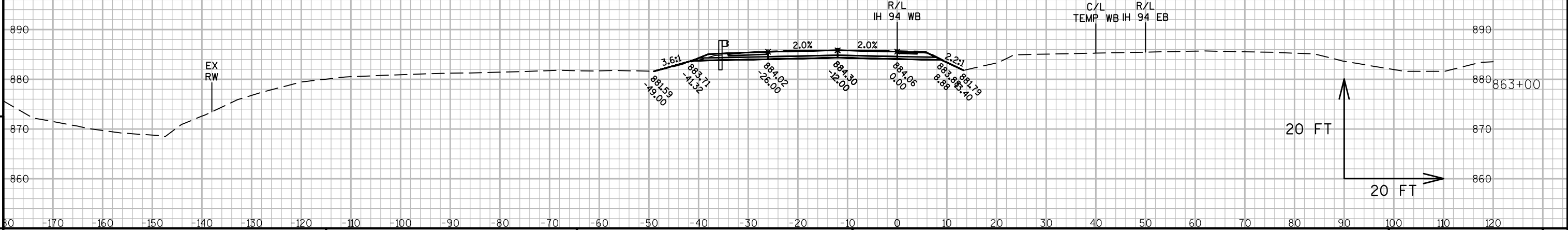
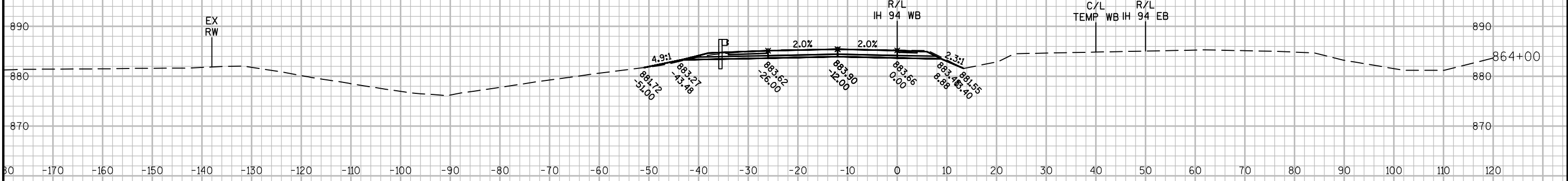
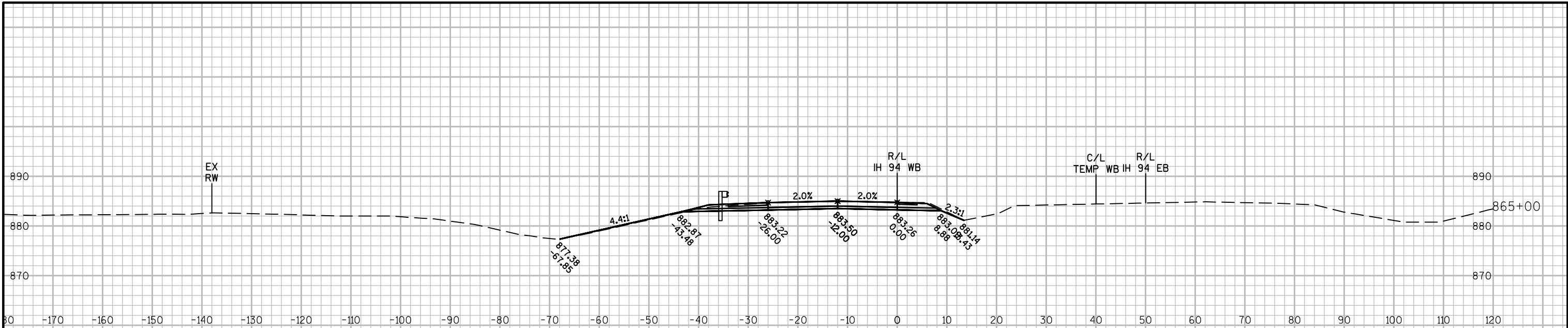


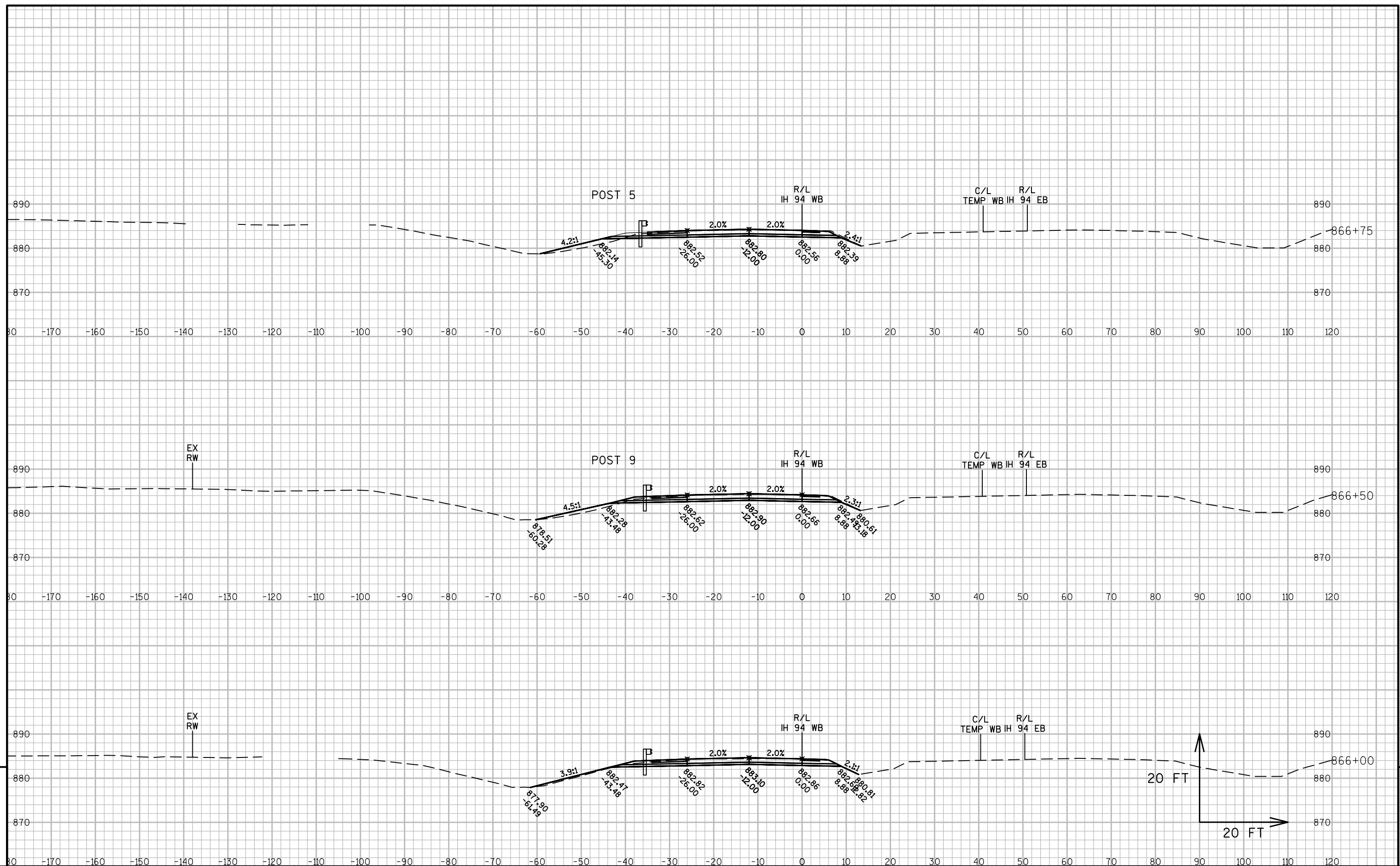












PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

CROSS SECTIONS: IH 94 WB STAGE 5

SHEET 933

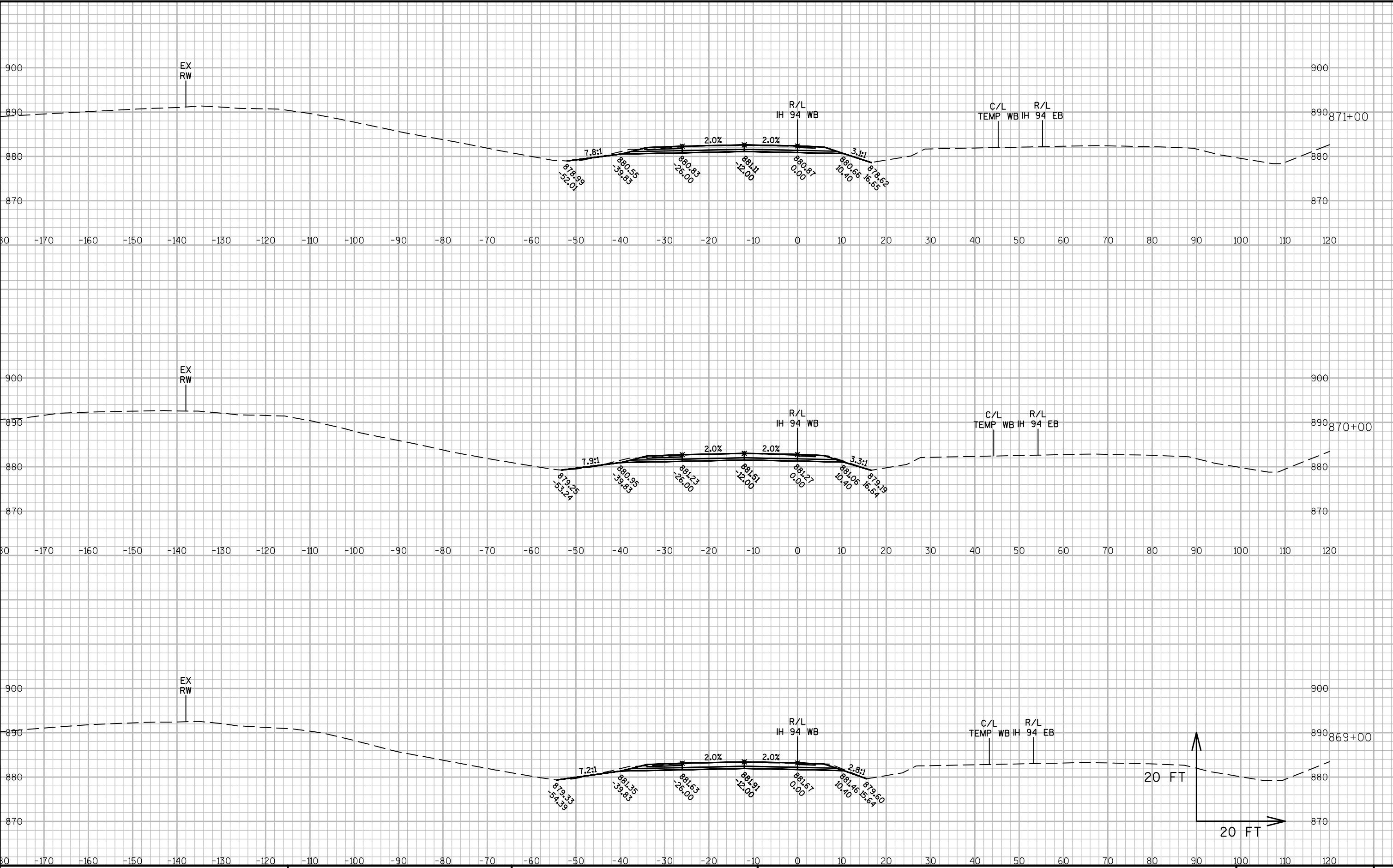
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LAYOUT NAME - 090251 - (78)

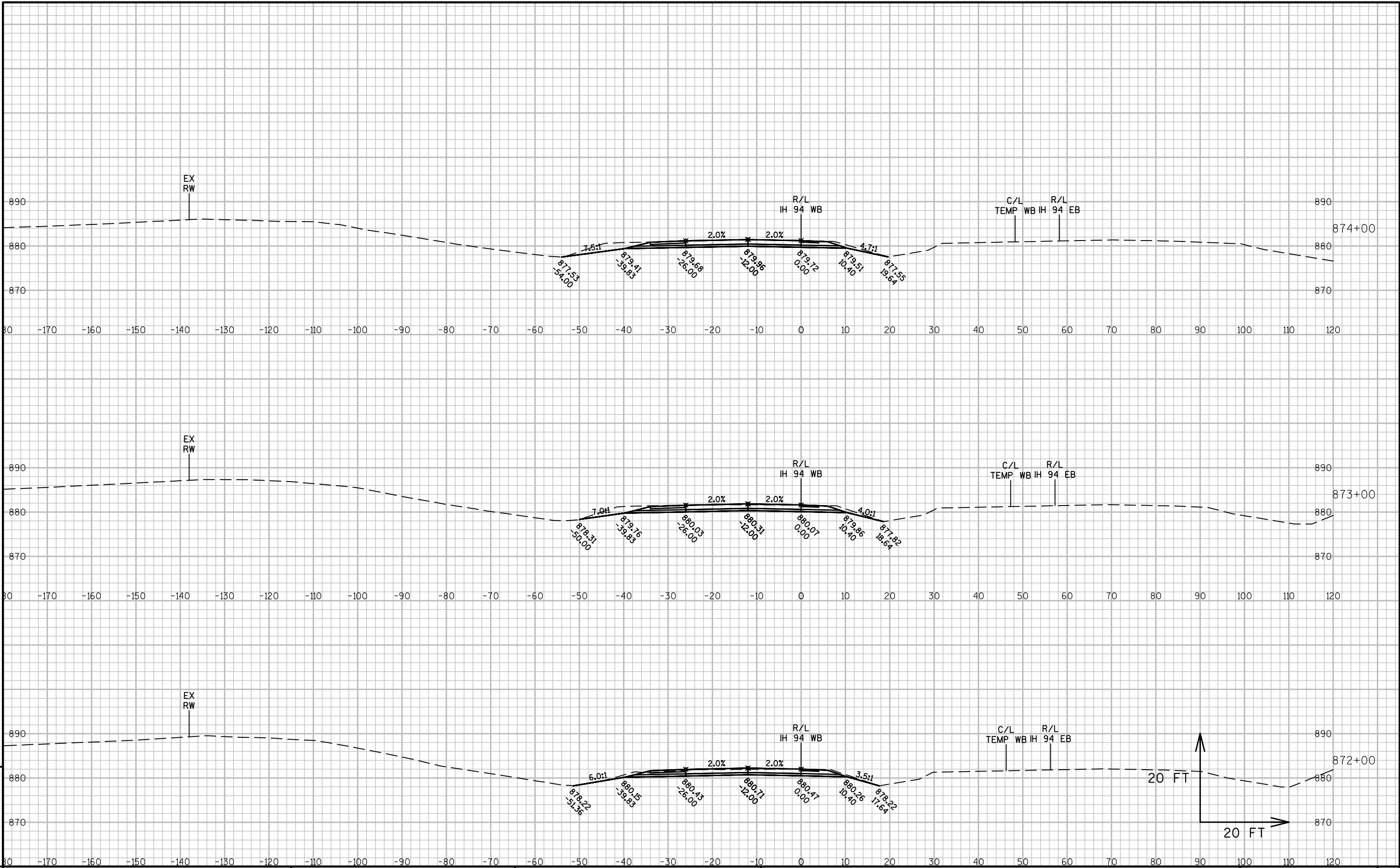
PLOT DATE : 7/20/2017 4:13 PM

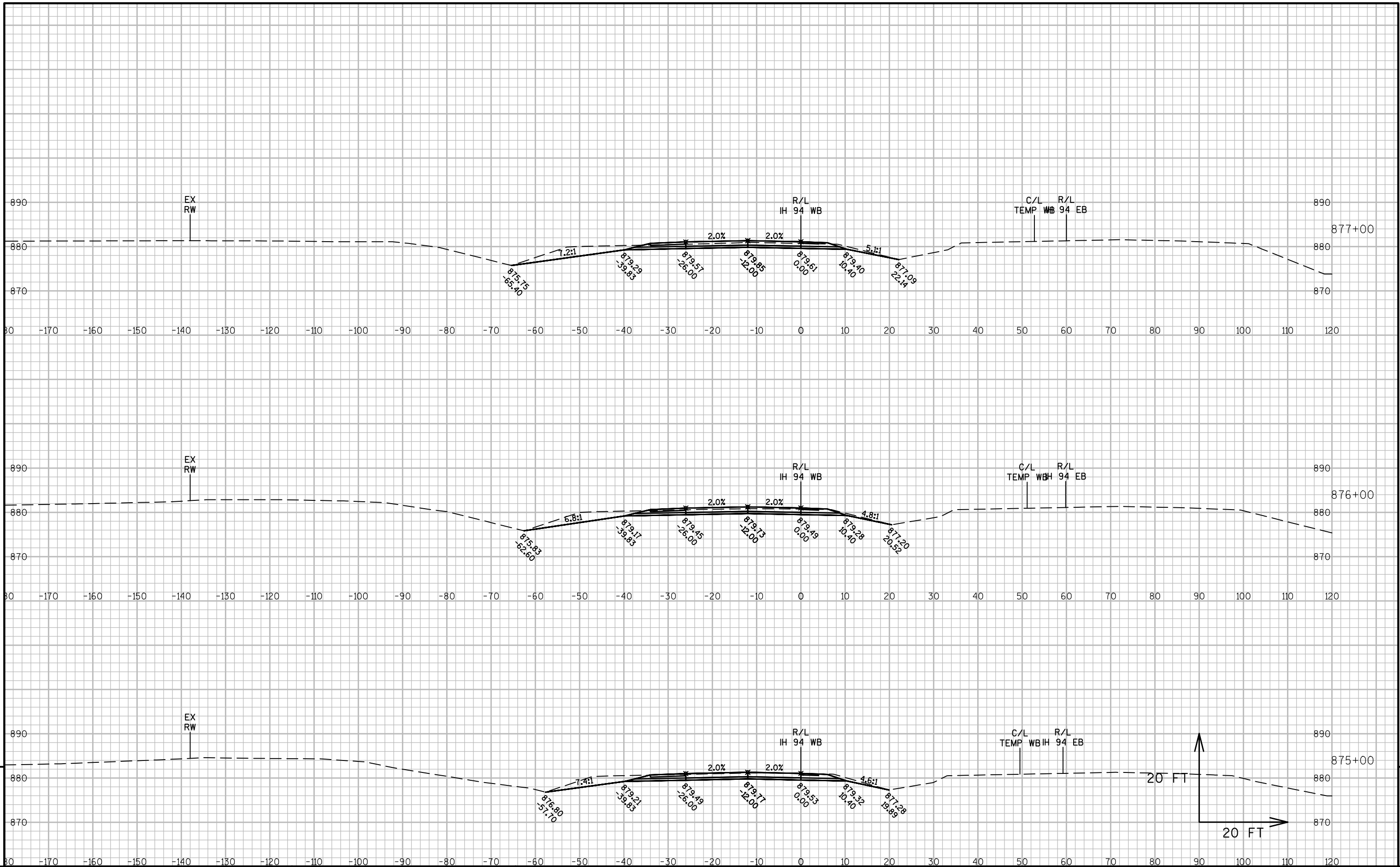
PLOT BY : ANDERSON, THOMAS R PLOT NAME :

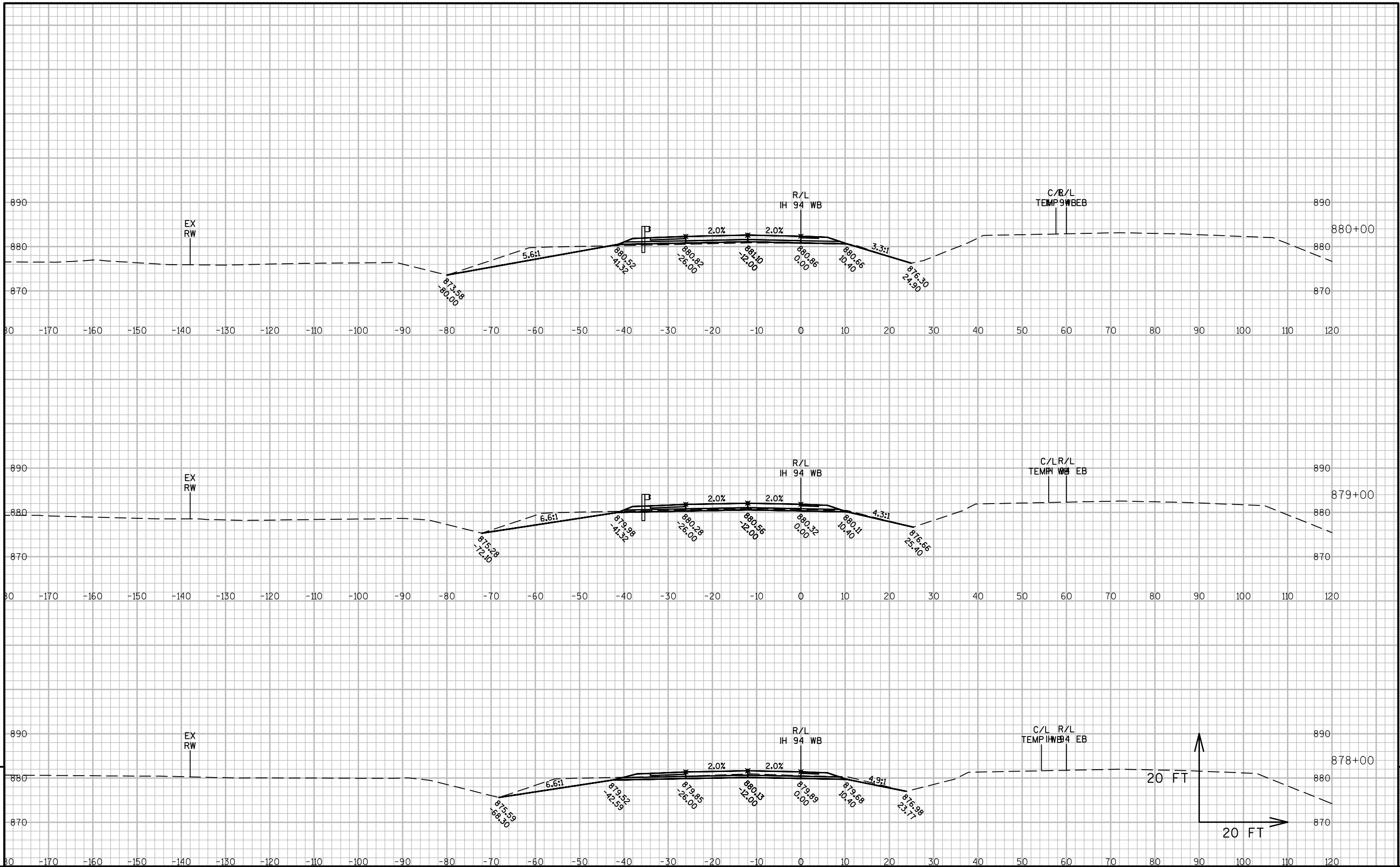
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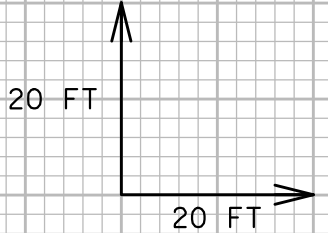
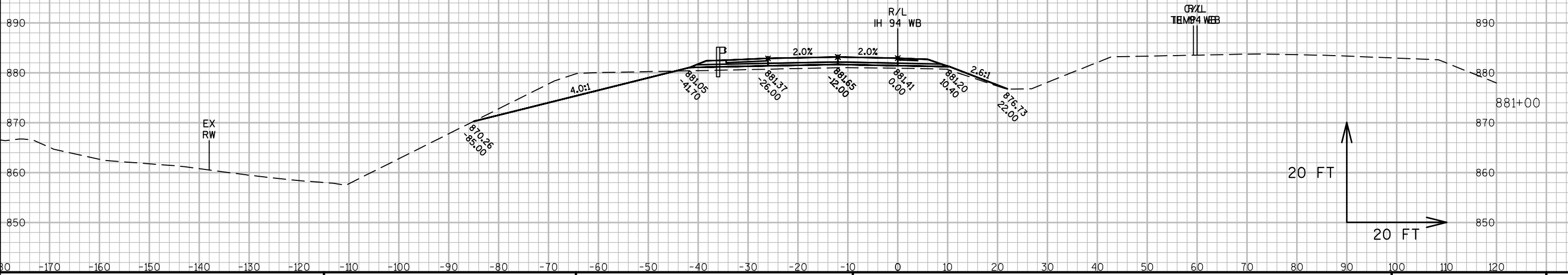
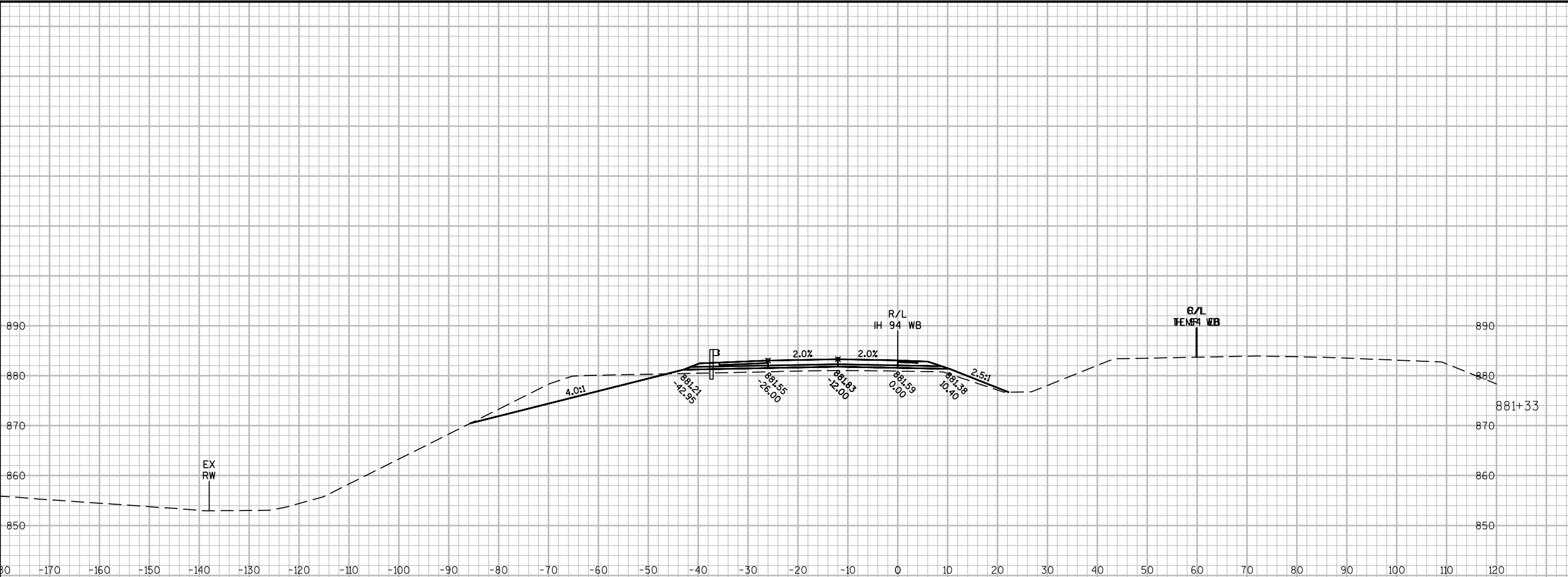
WISDOT/CADDS SHEET 49

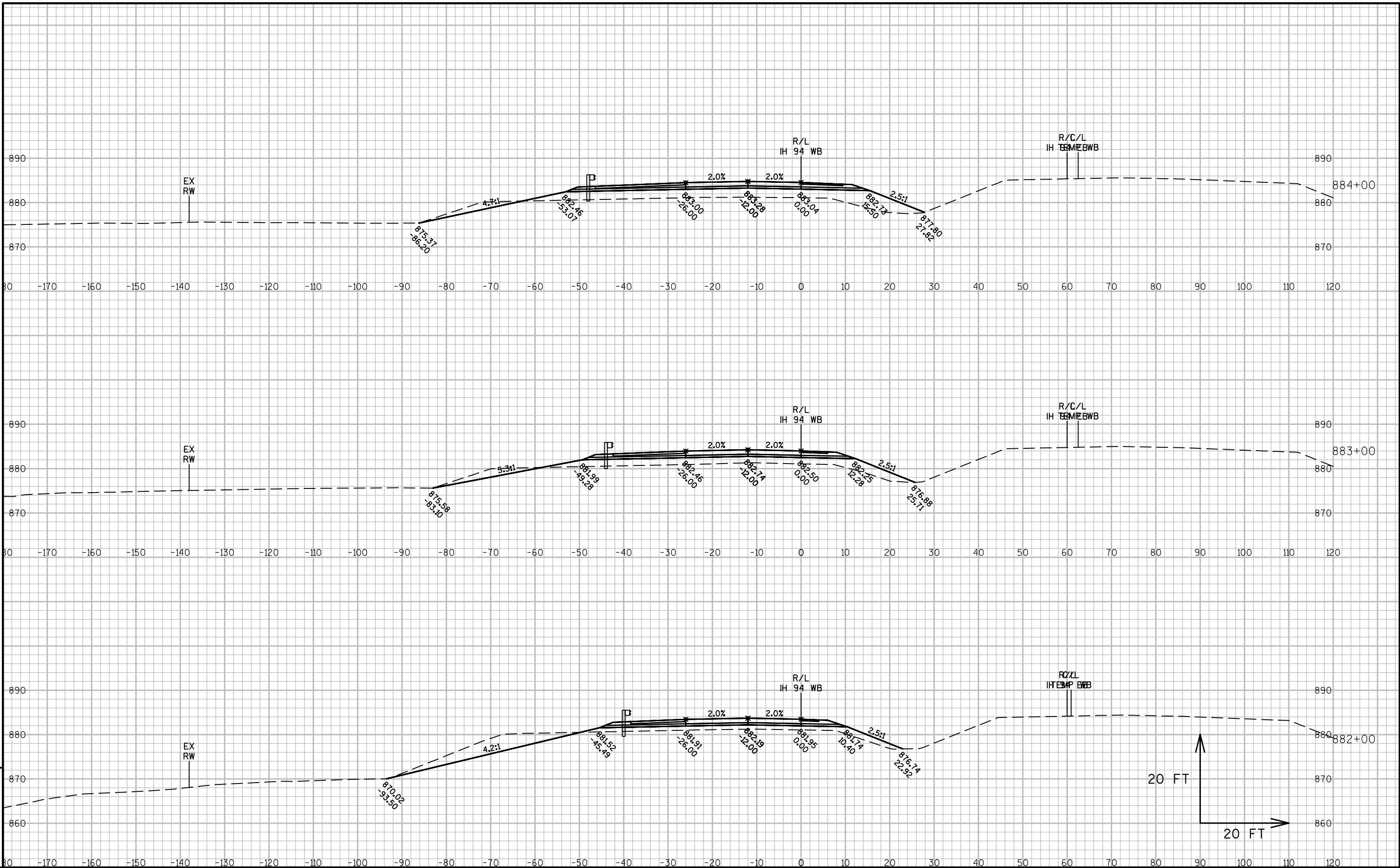


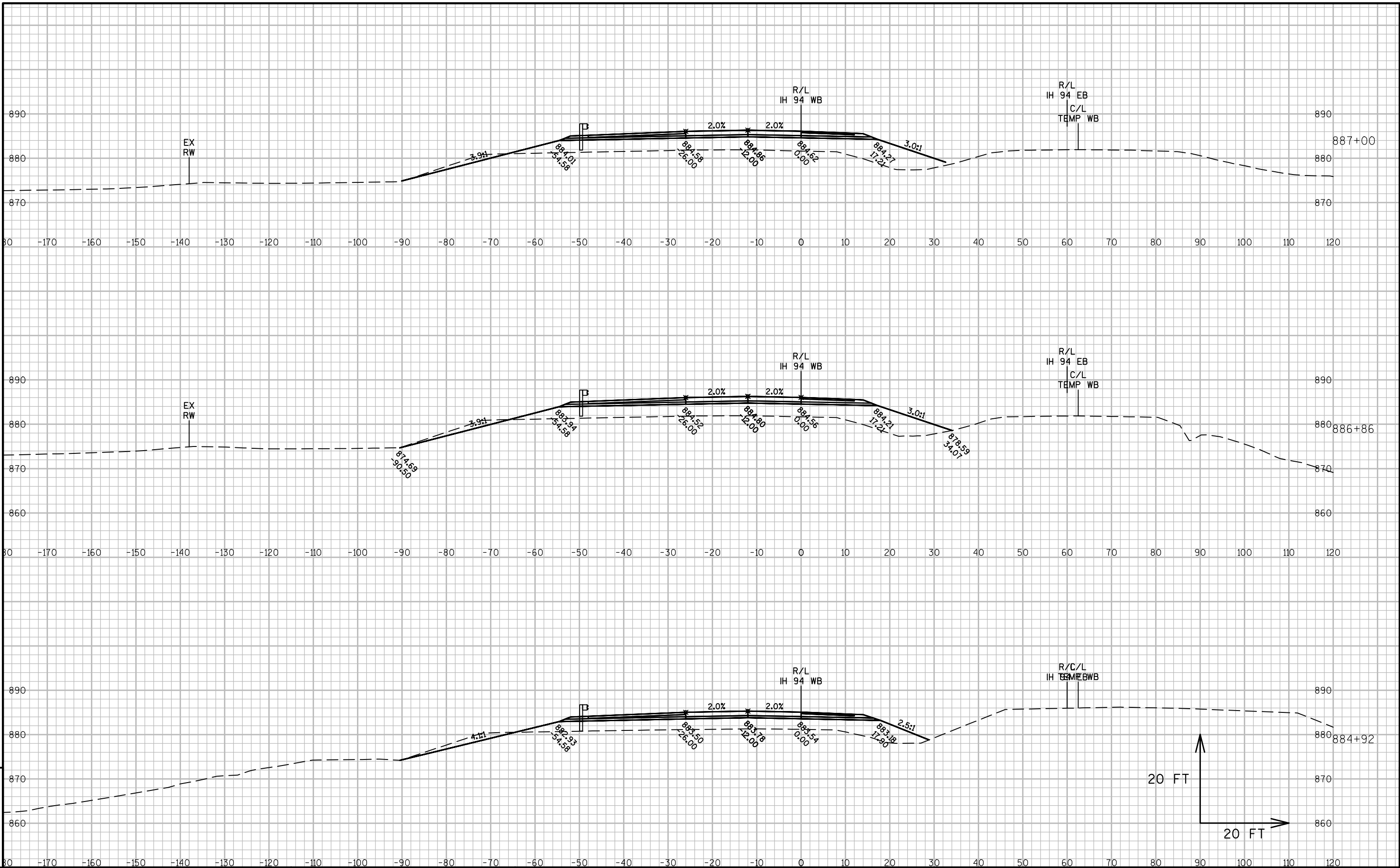


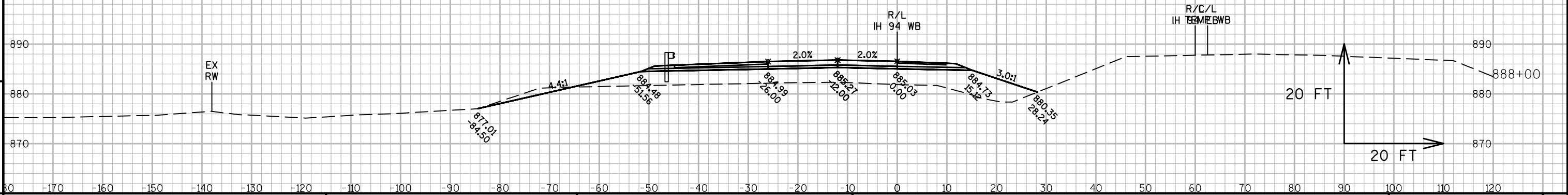
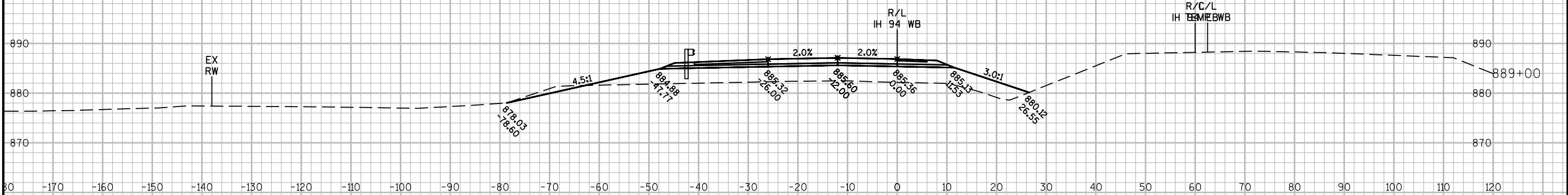
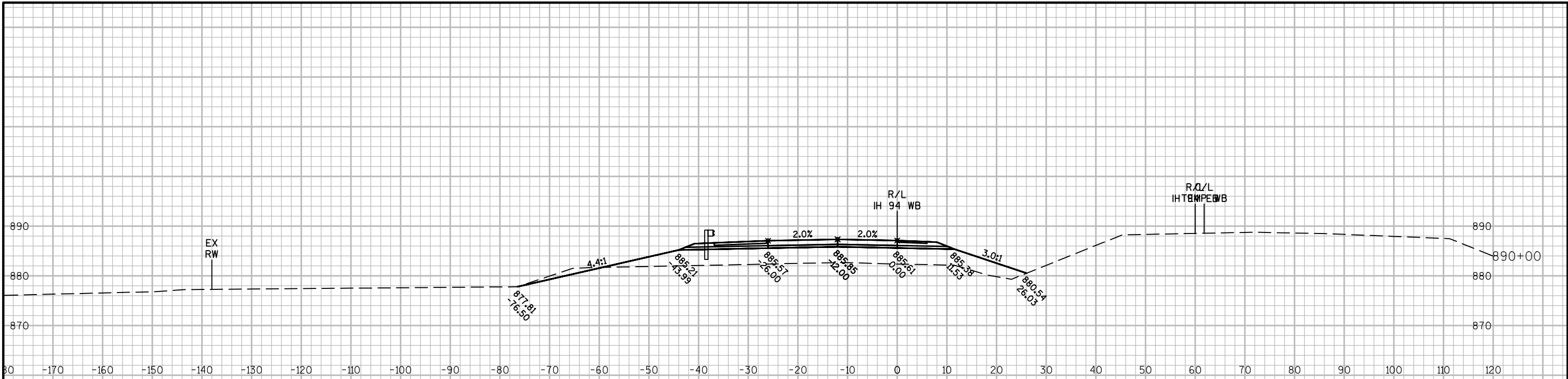


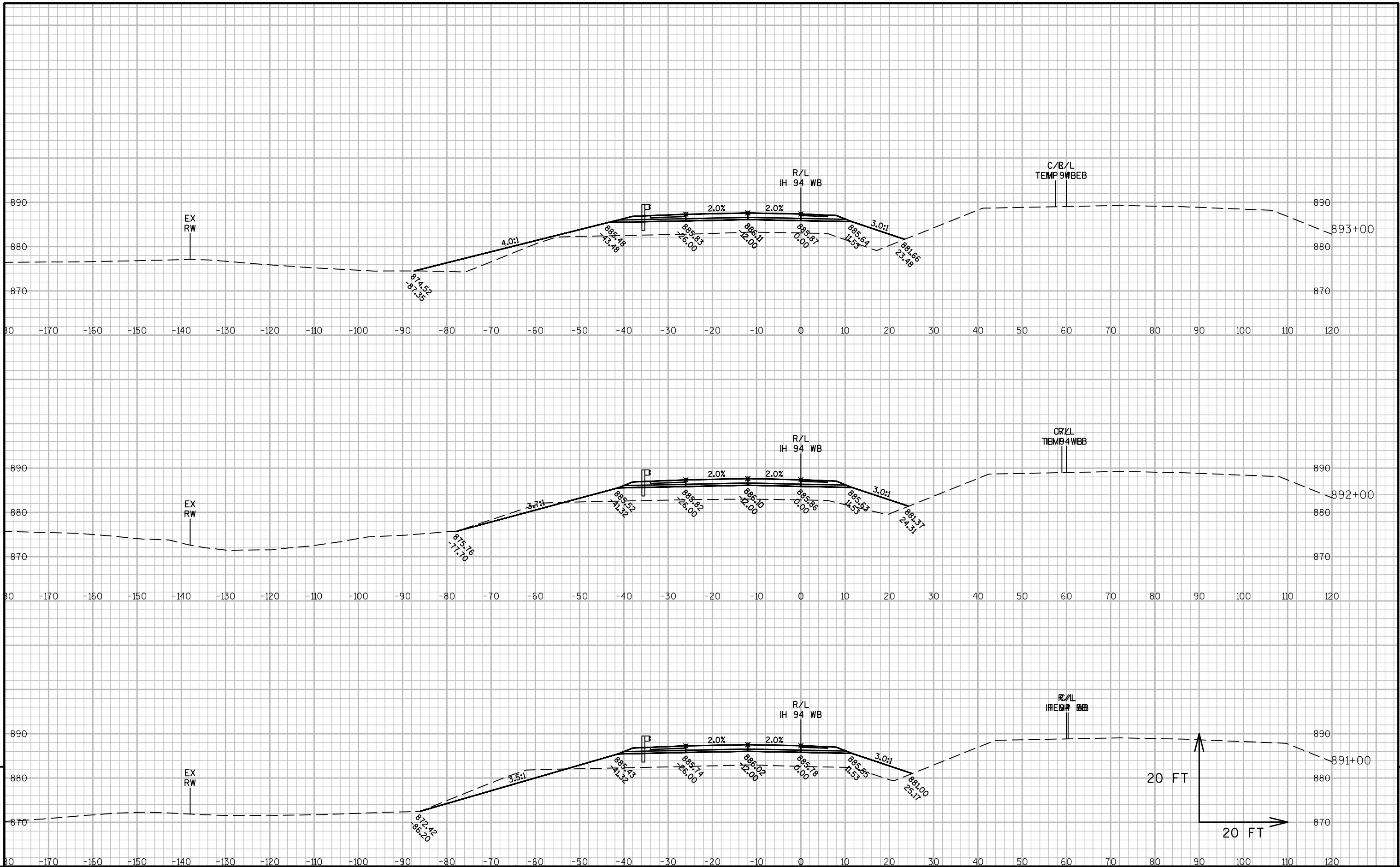


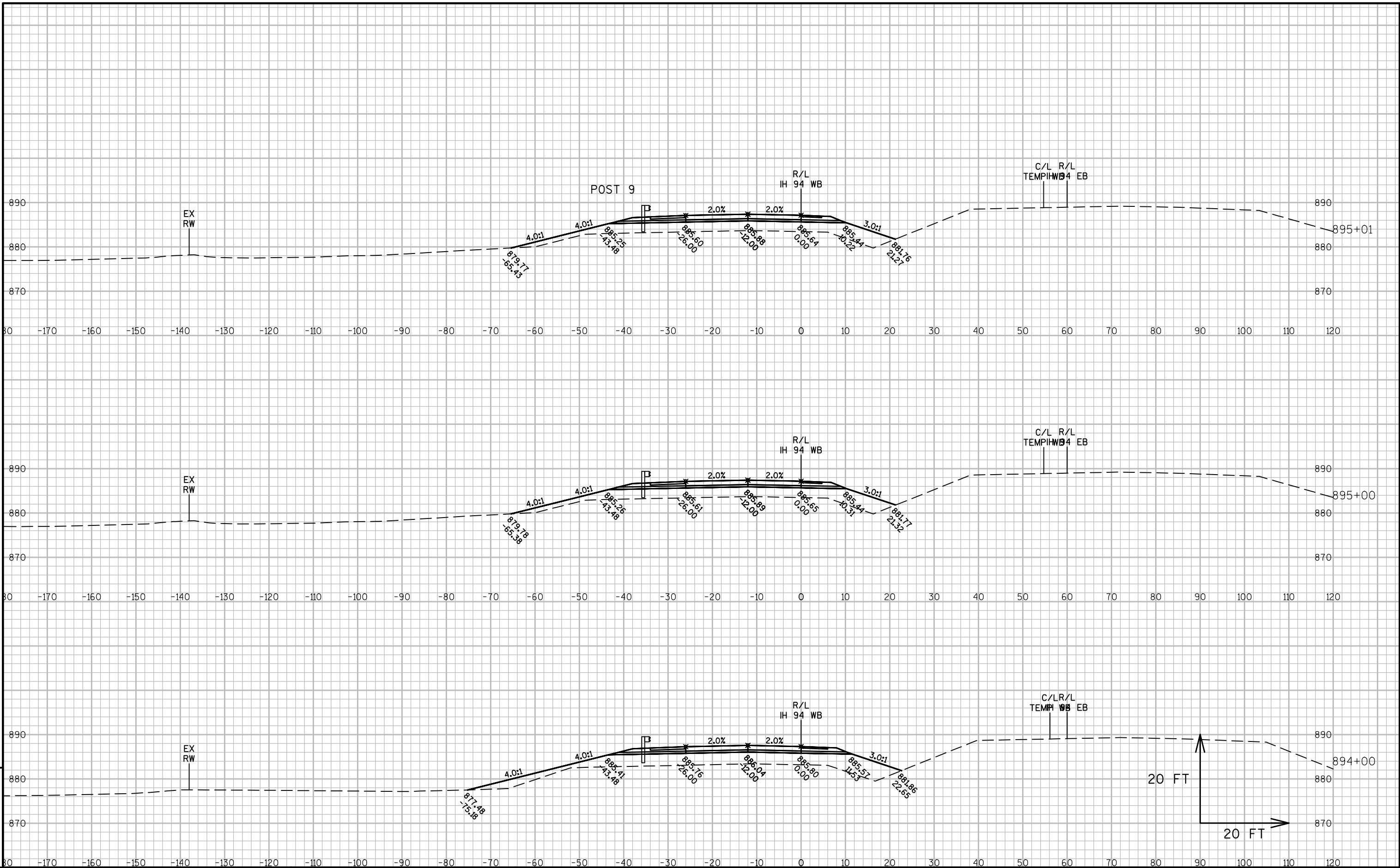


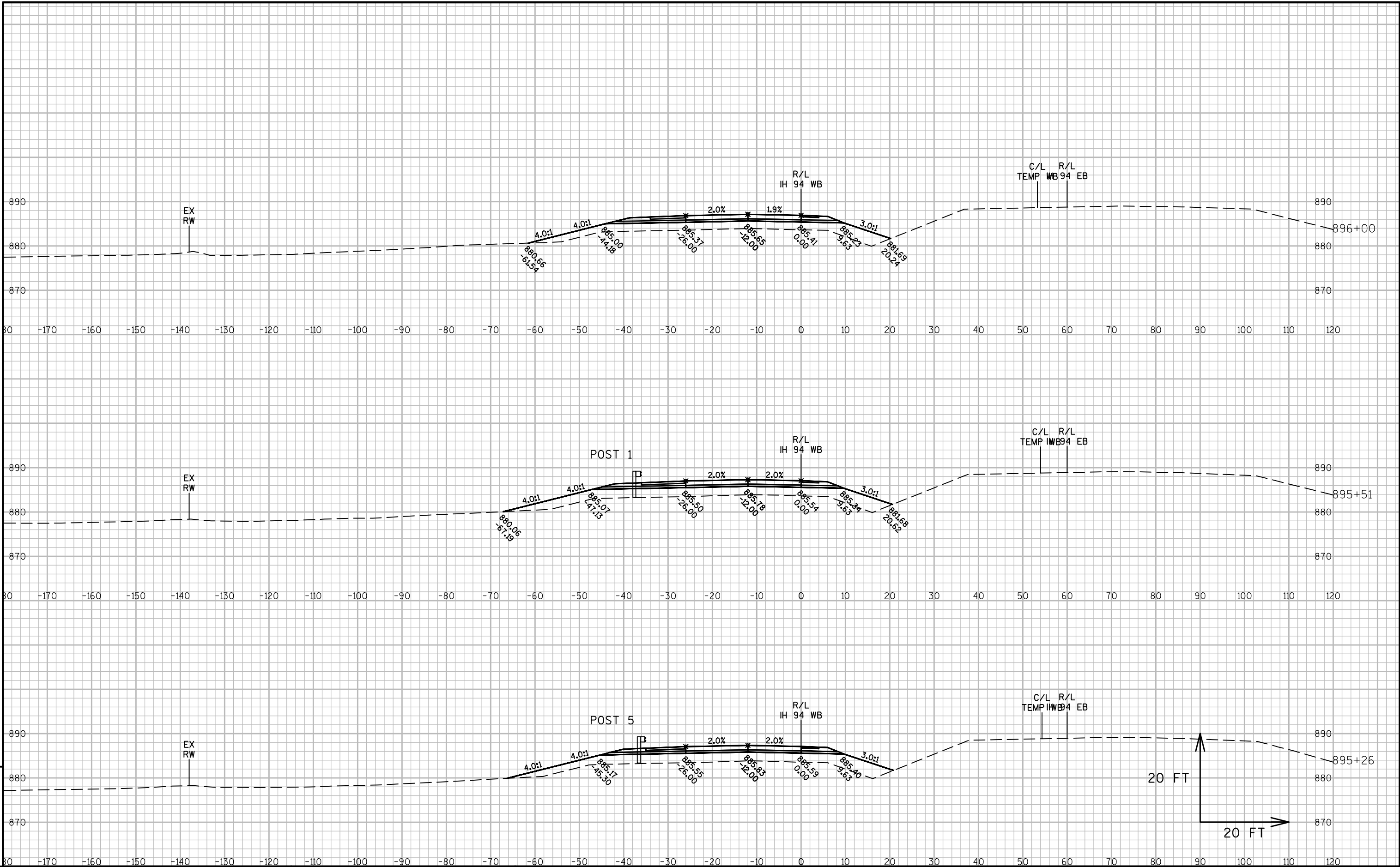


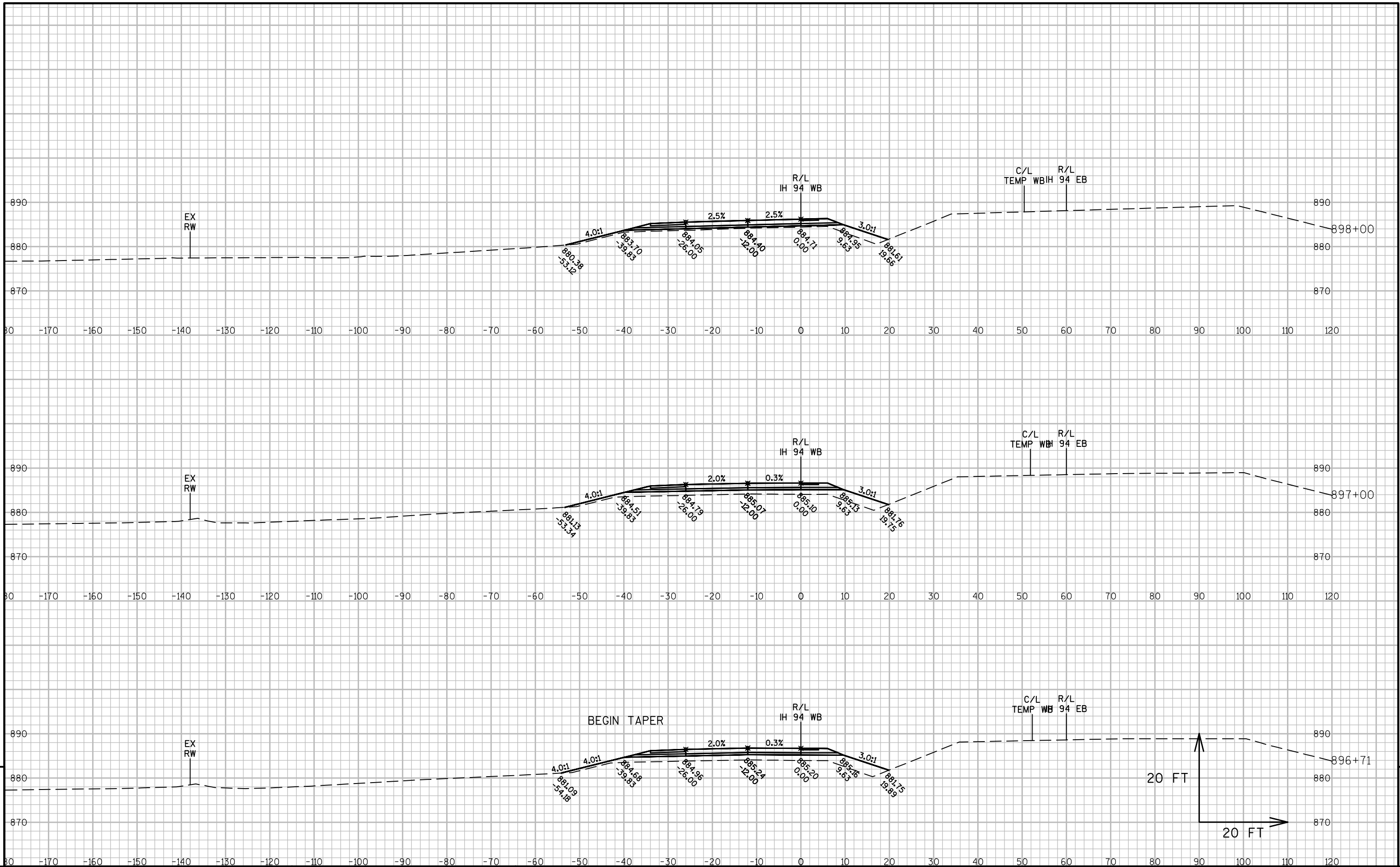


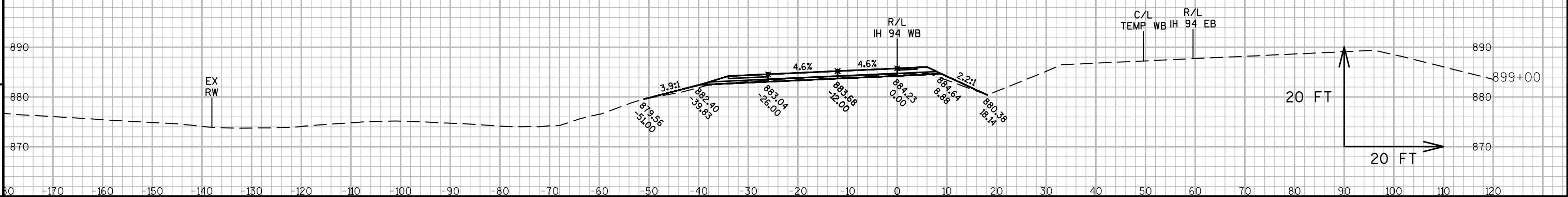
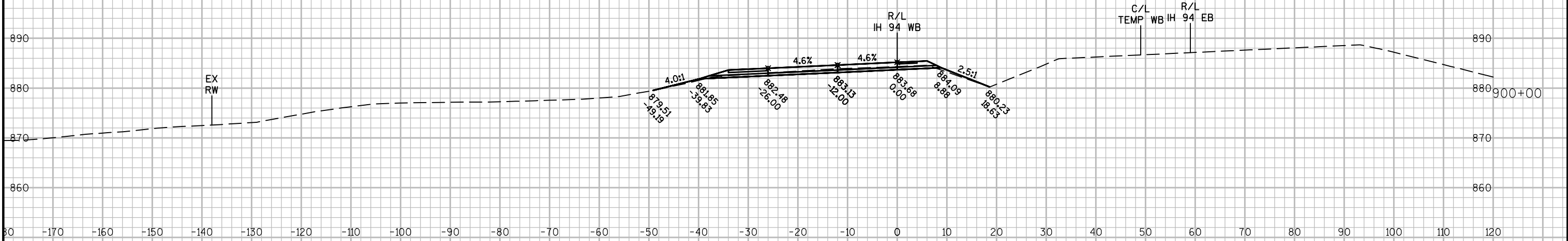
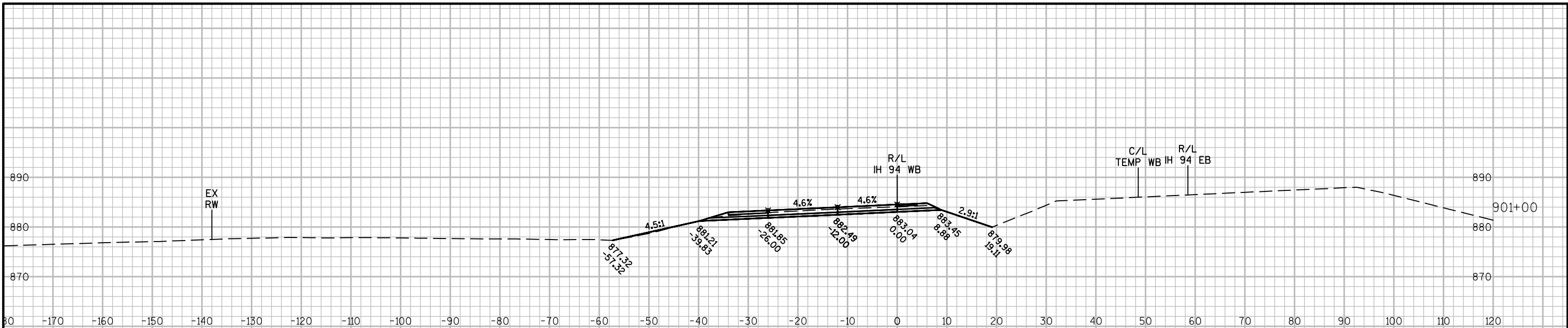


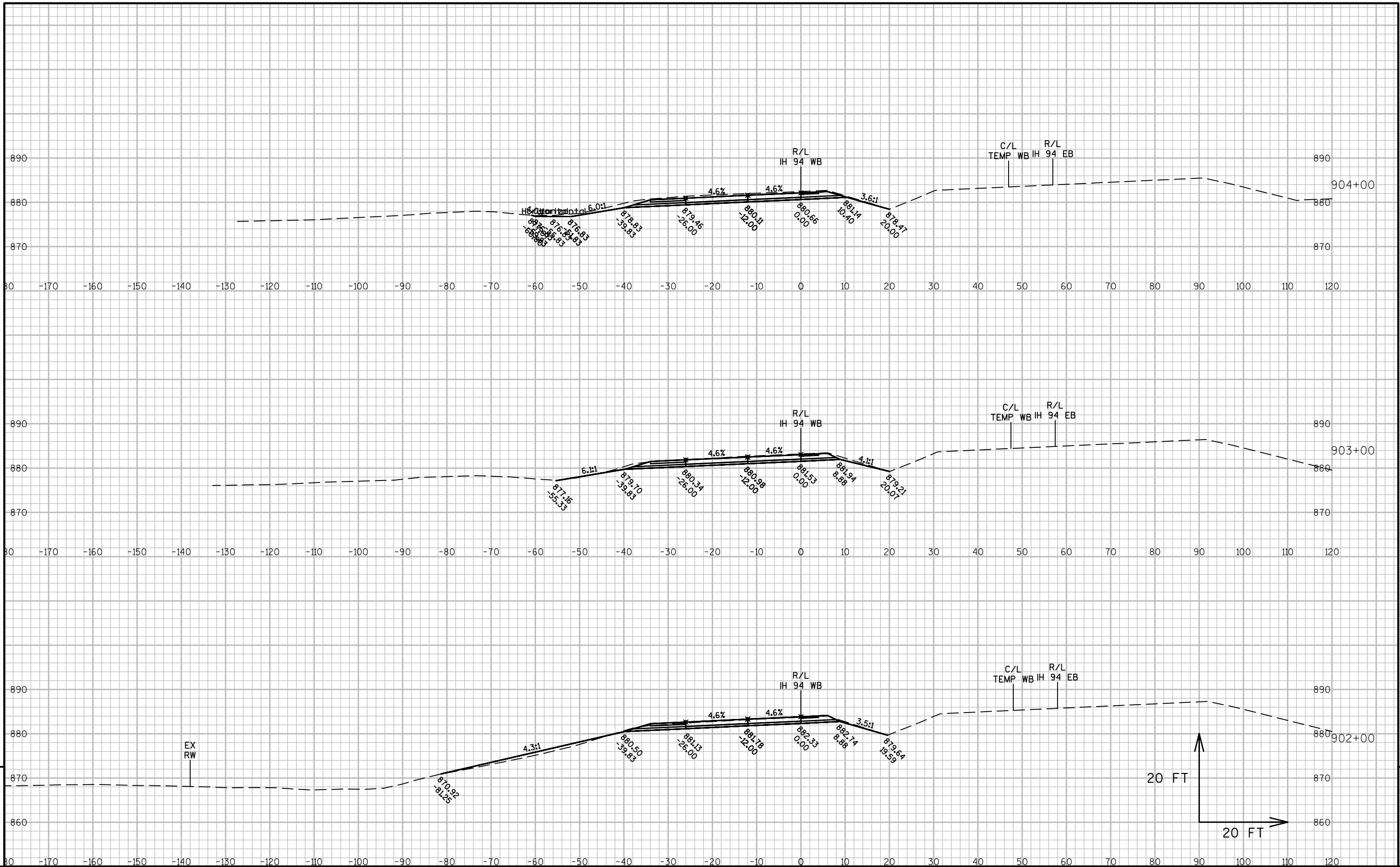


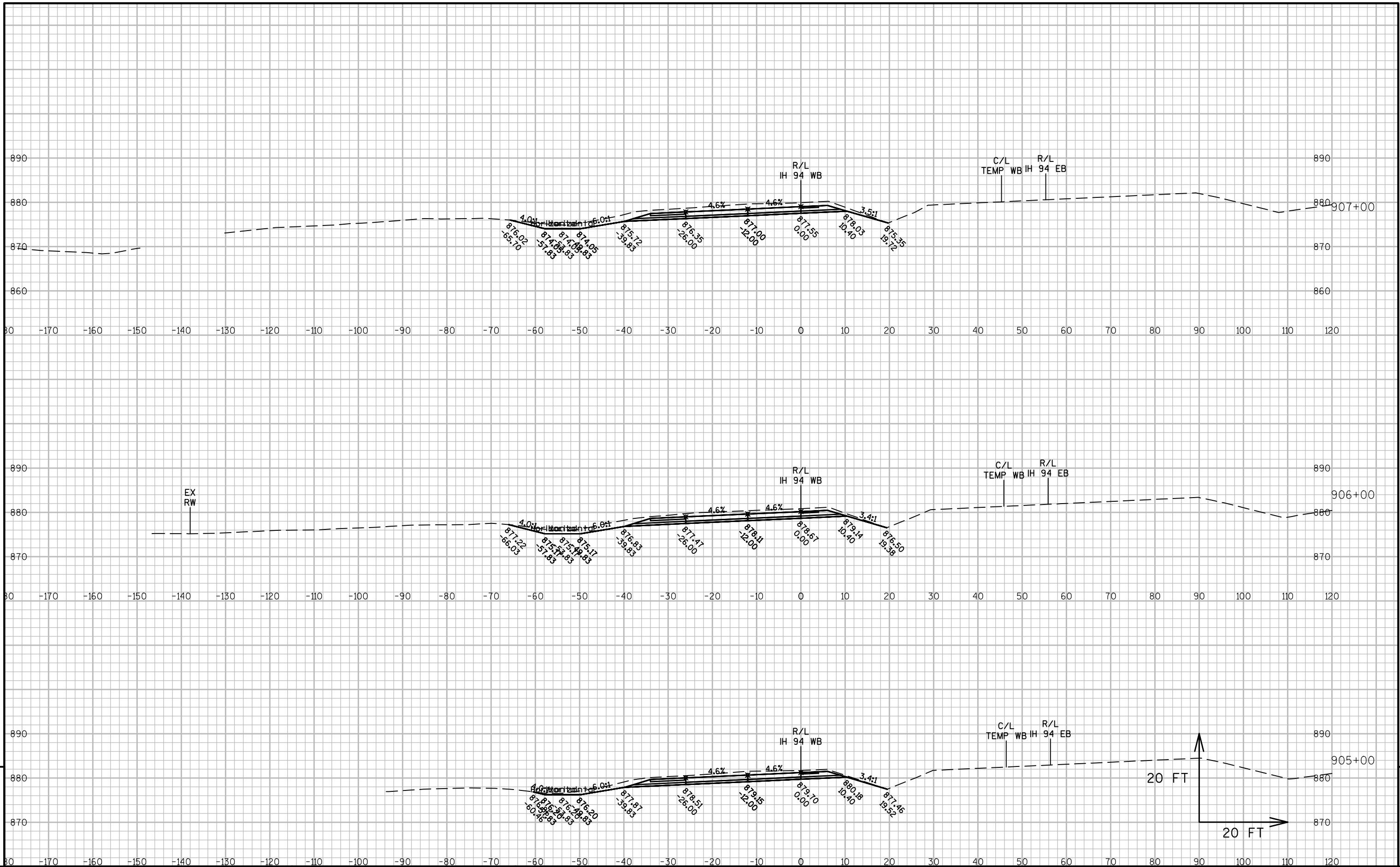


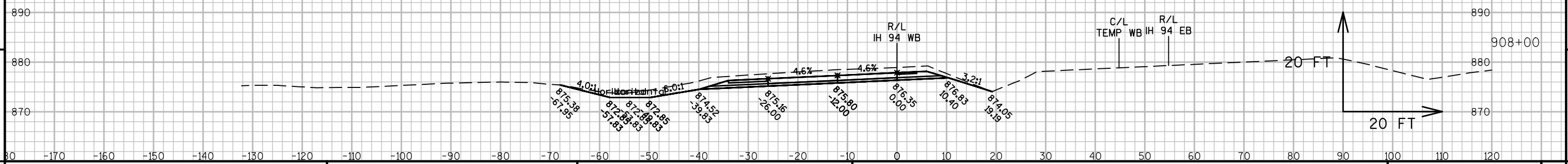
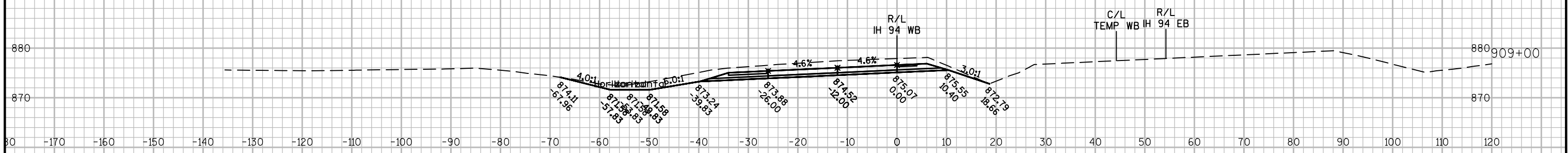
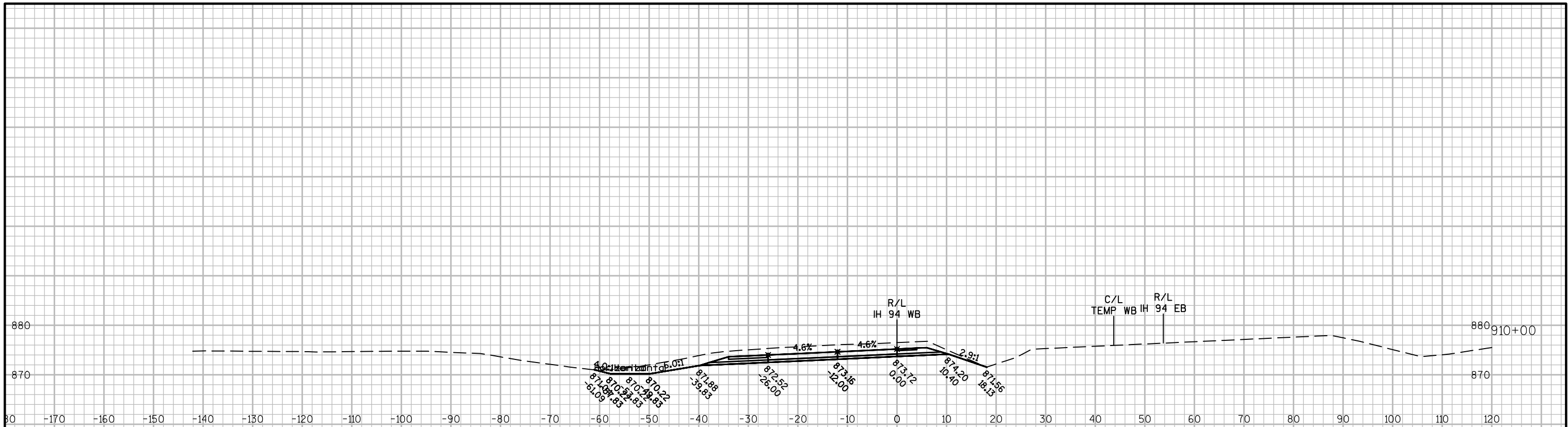


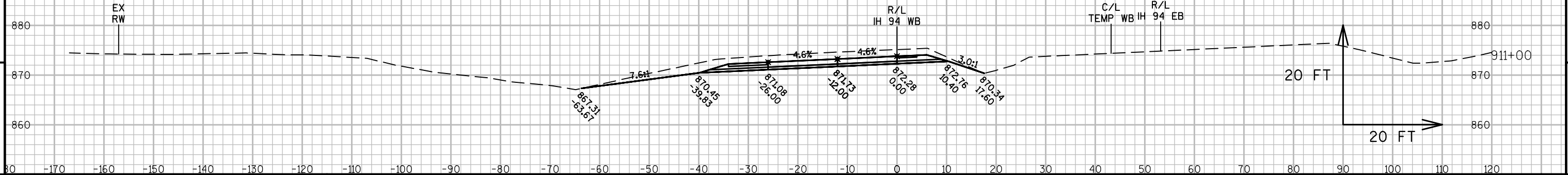
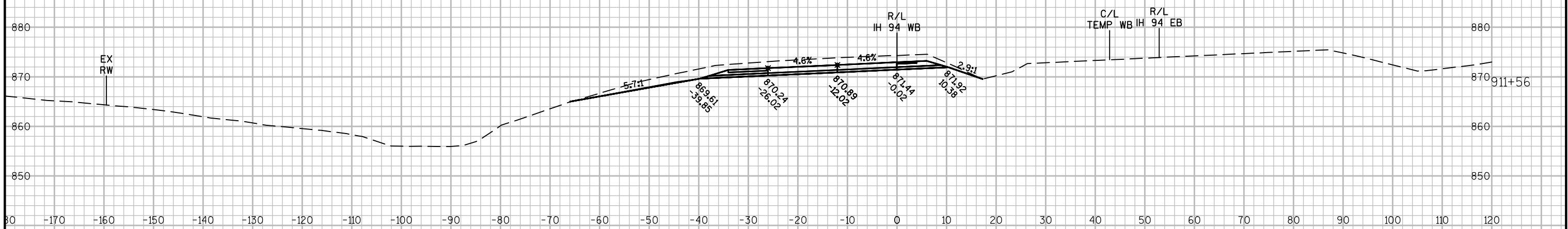
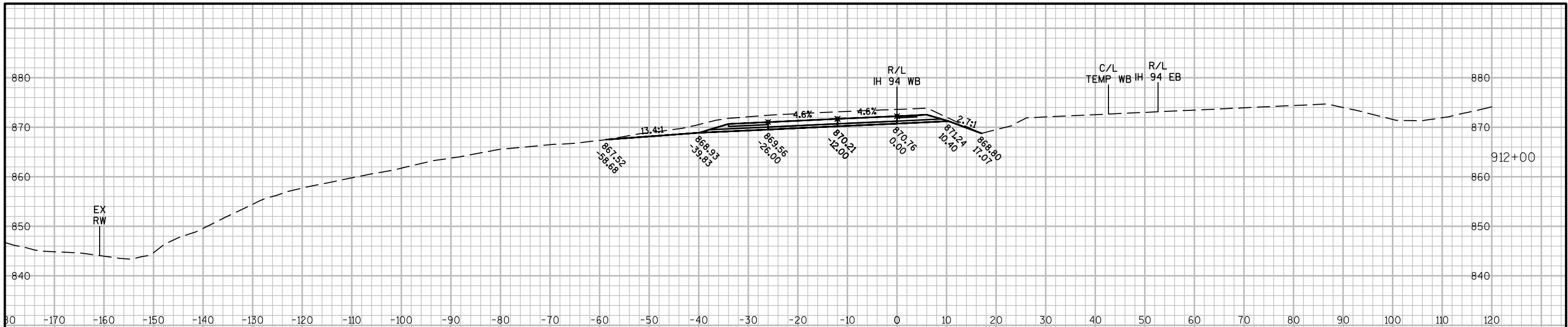


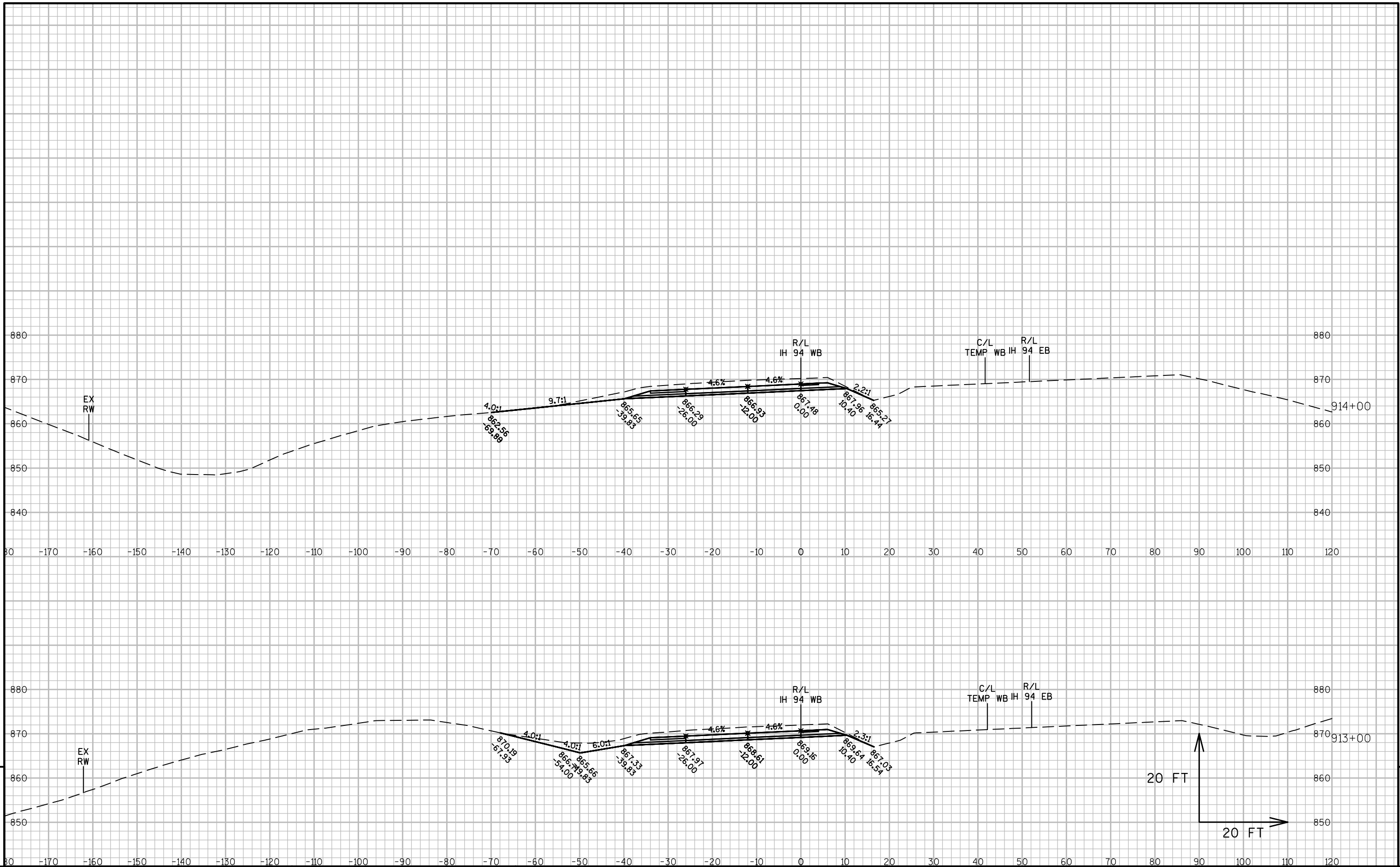


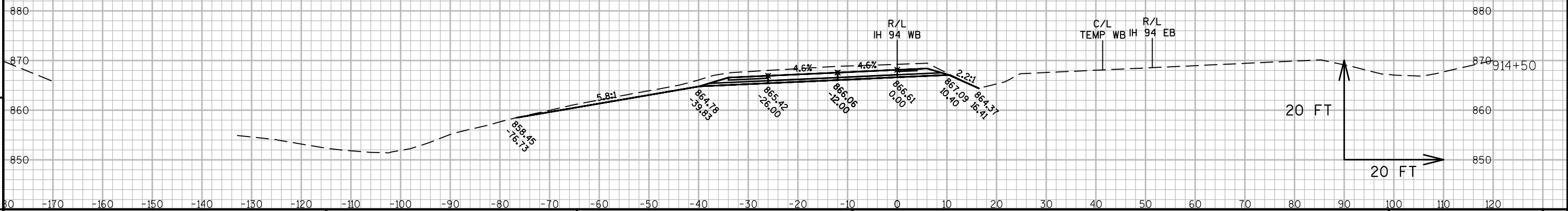
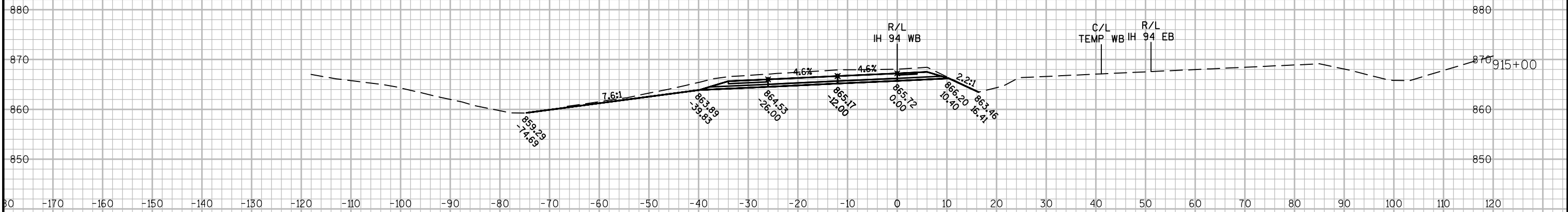
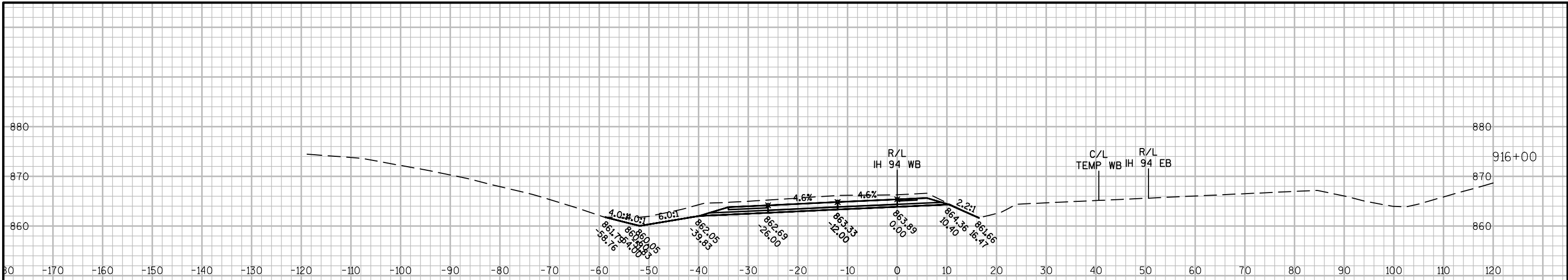


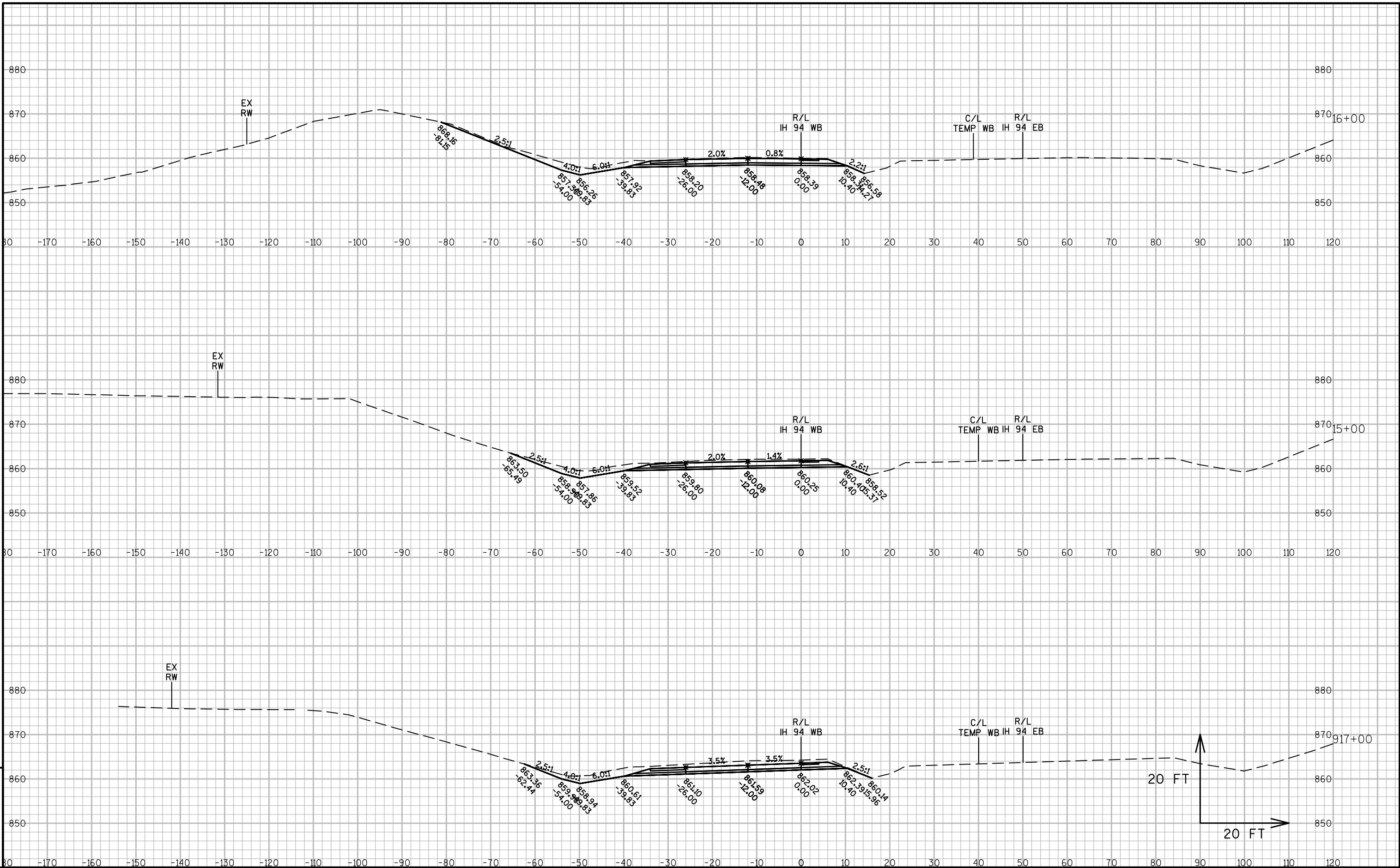


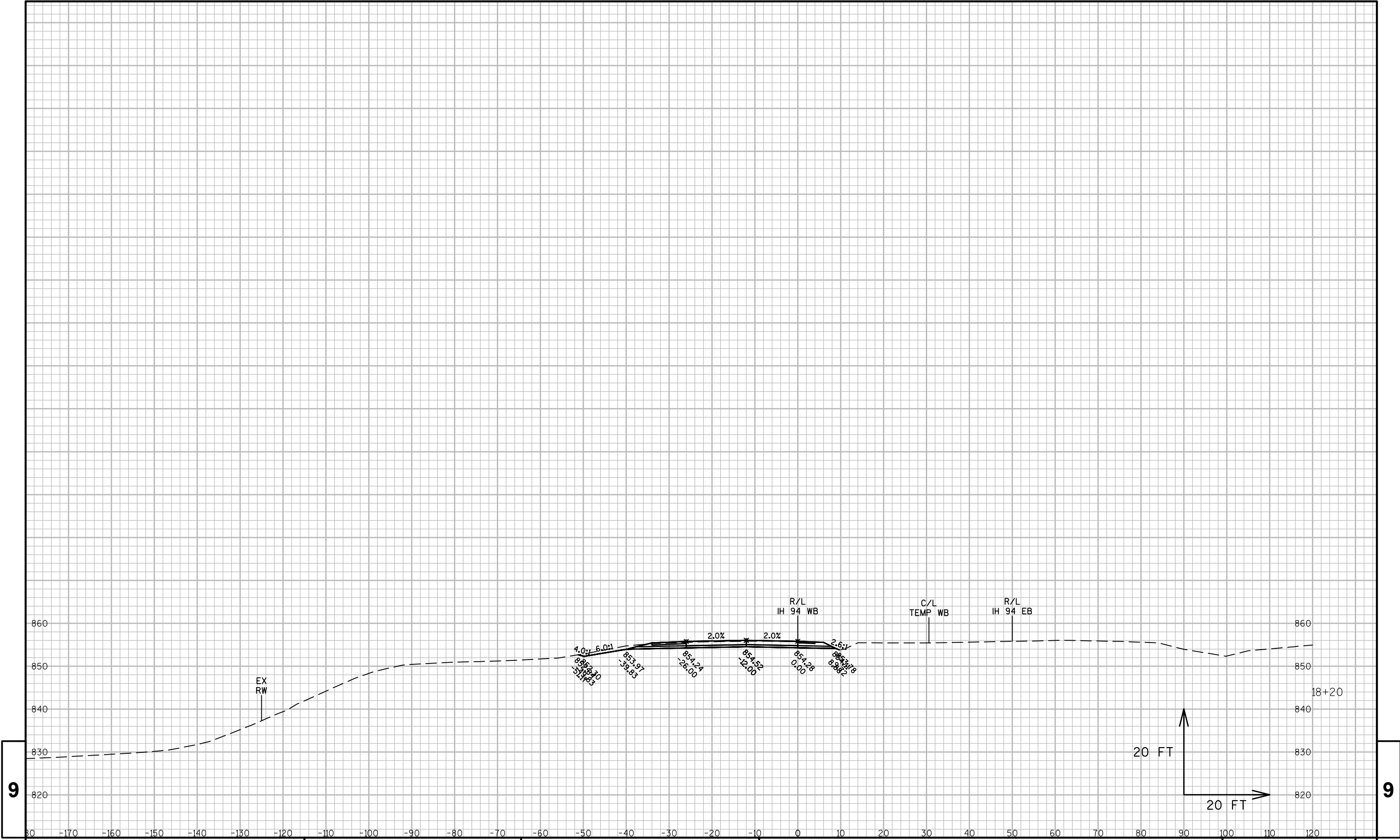






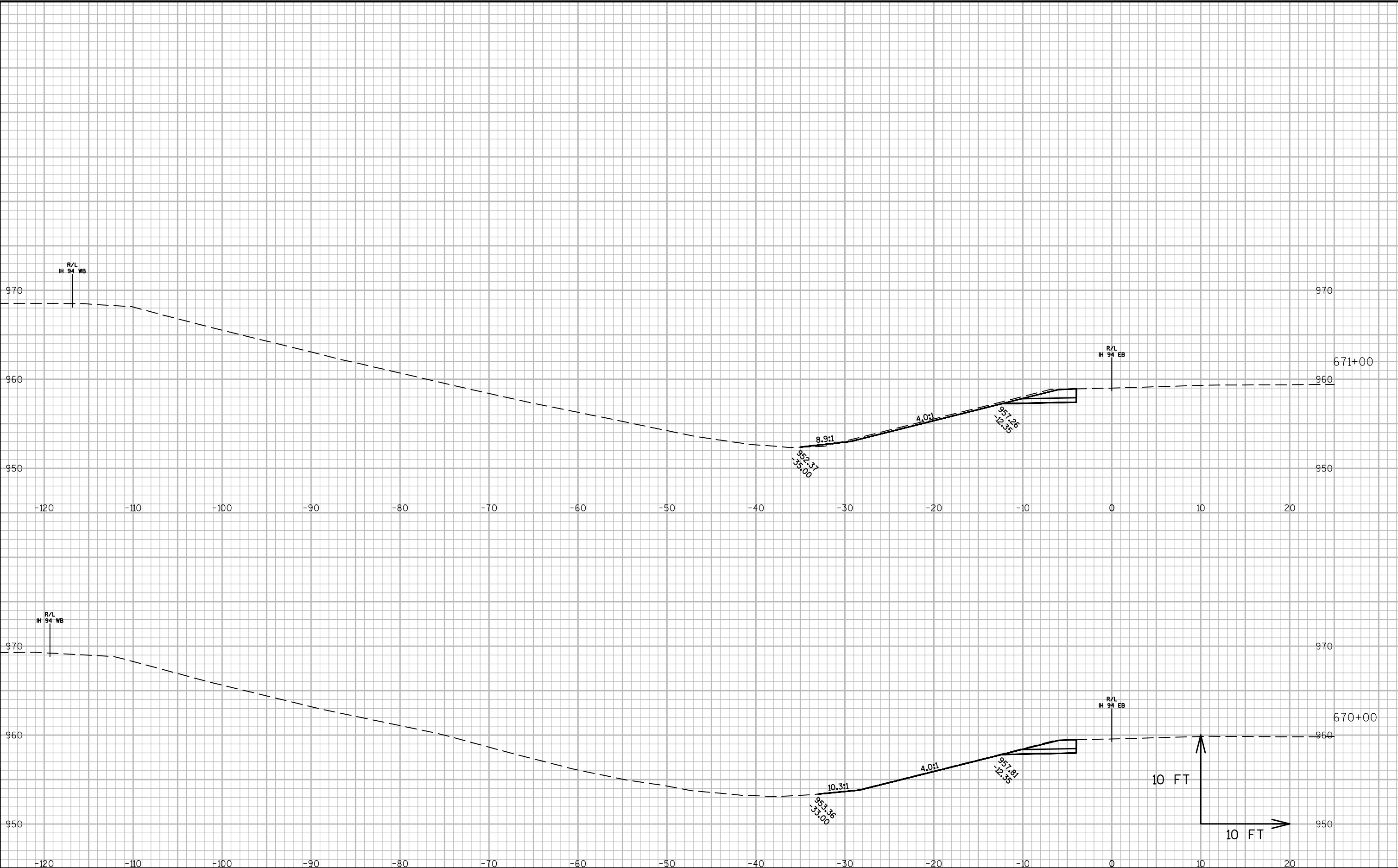


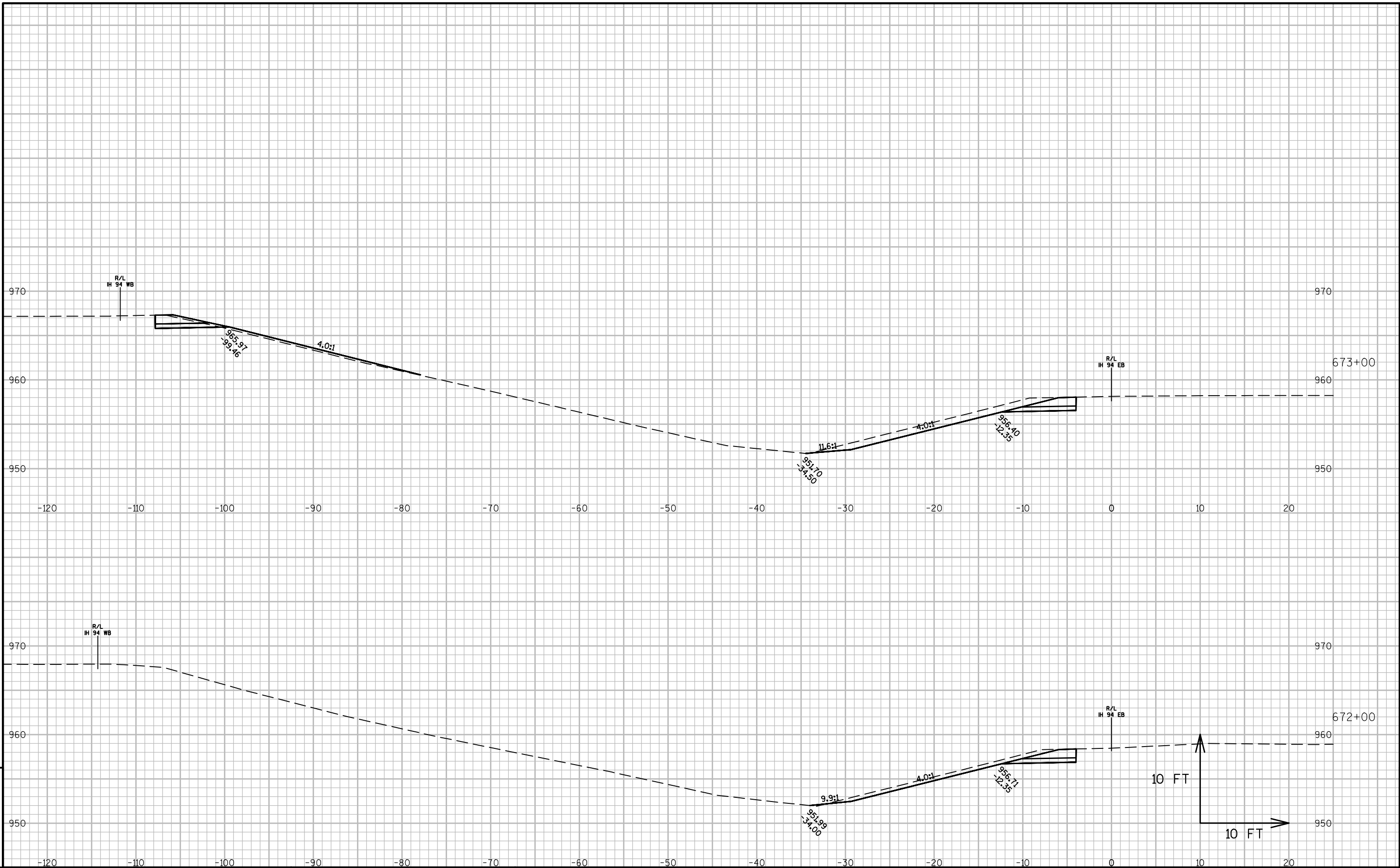


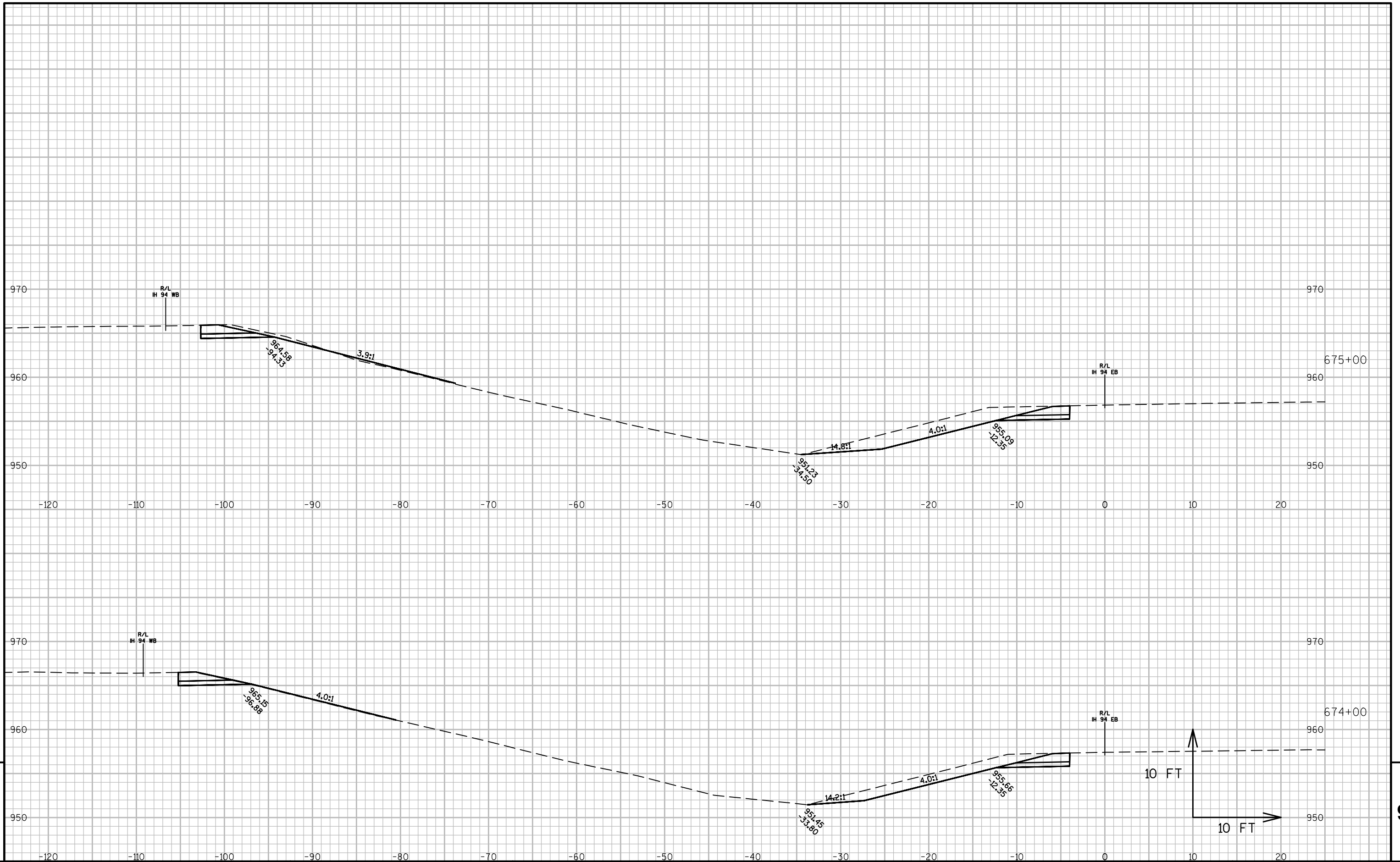


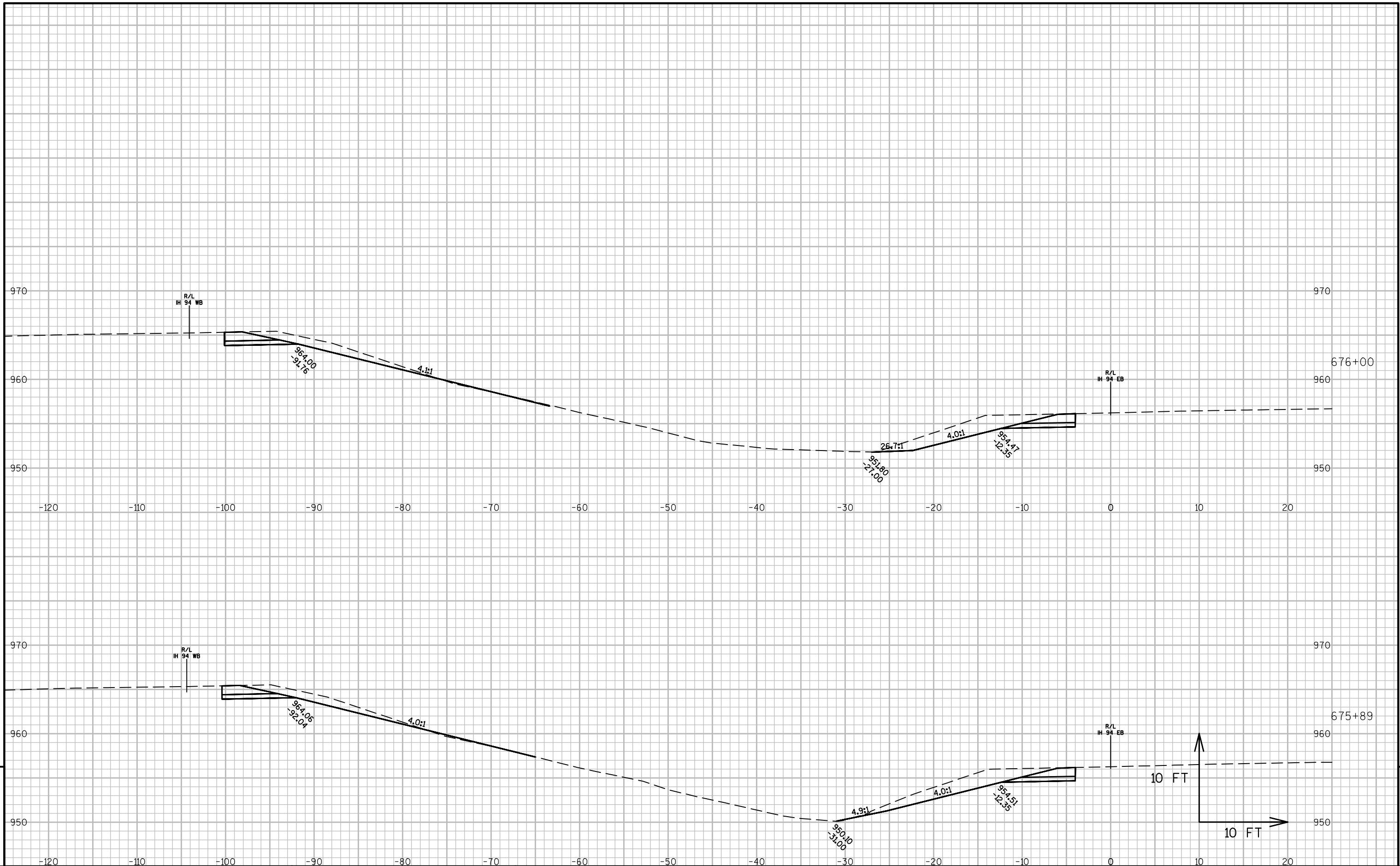
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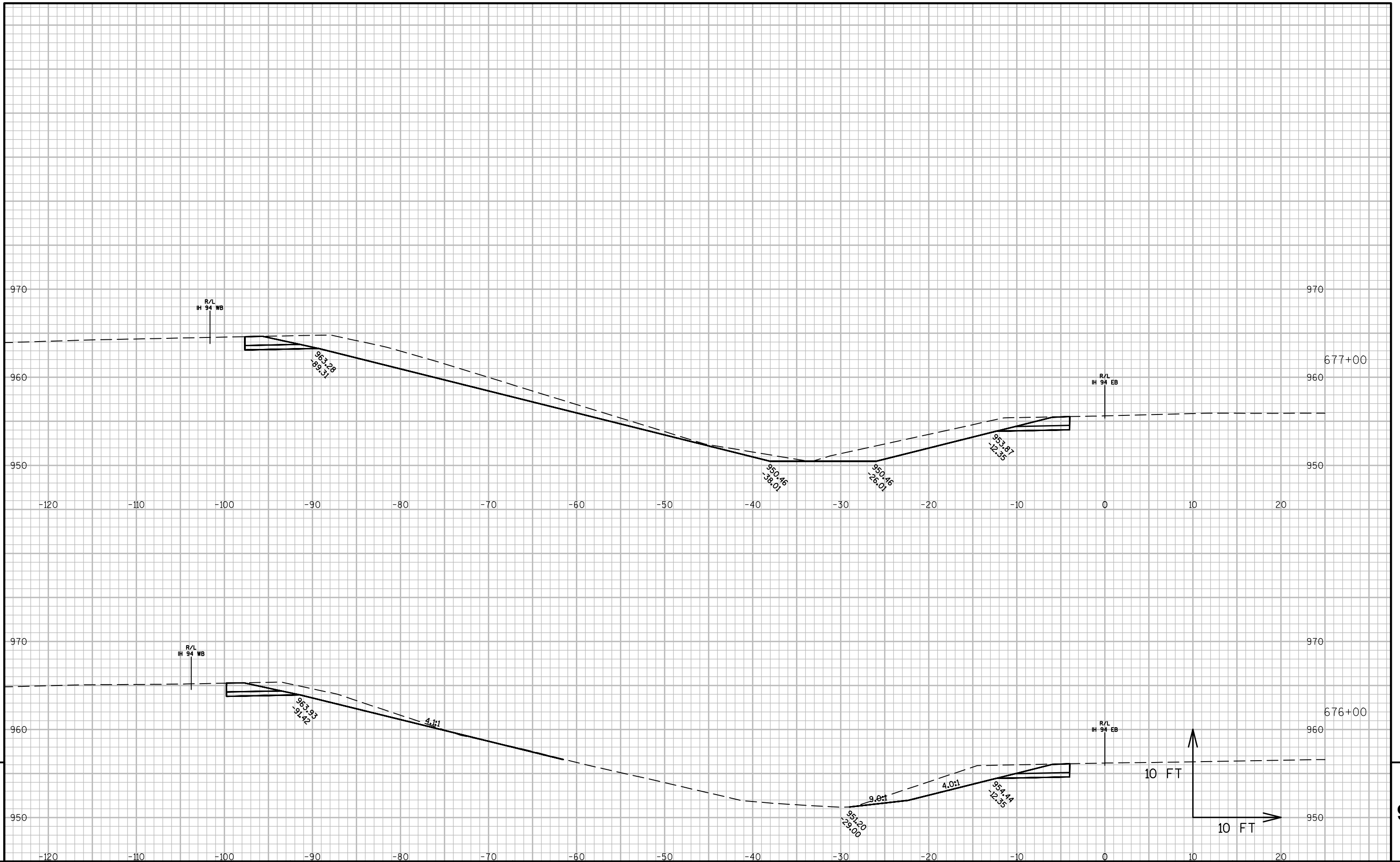
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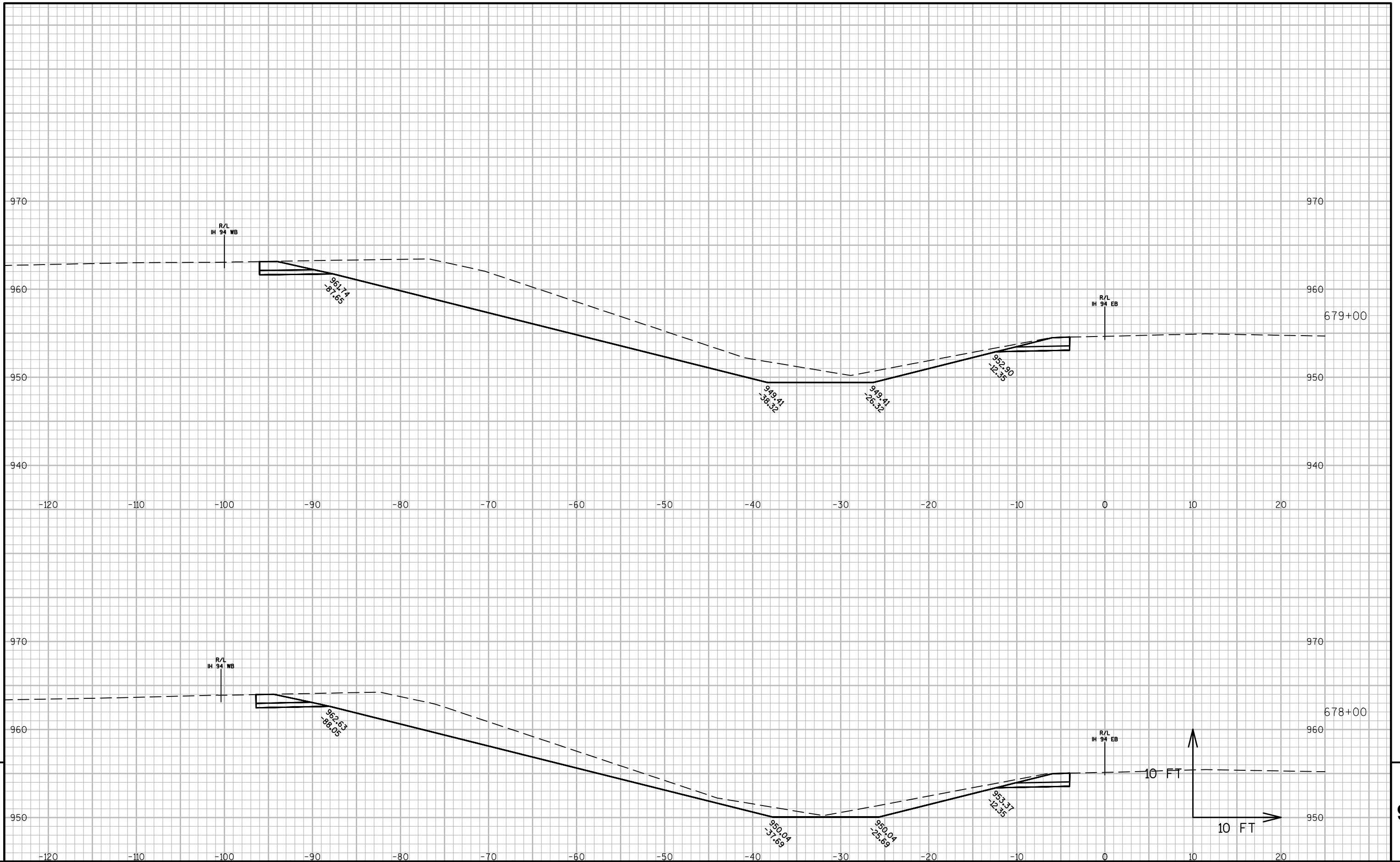


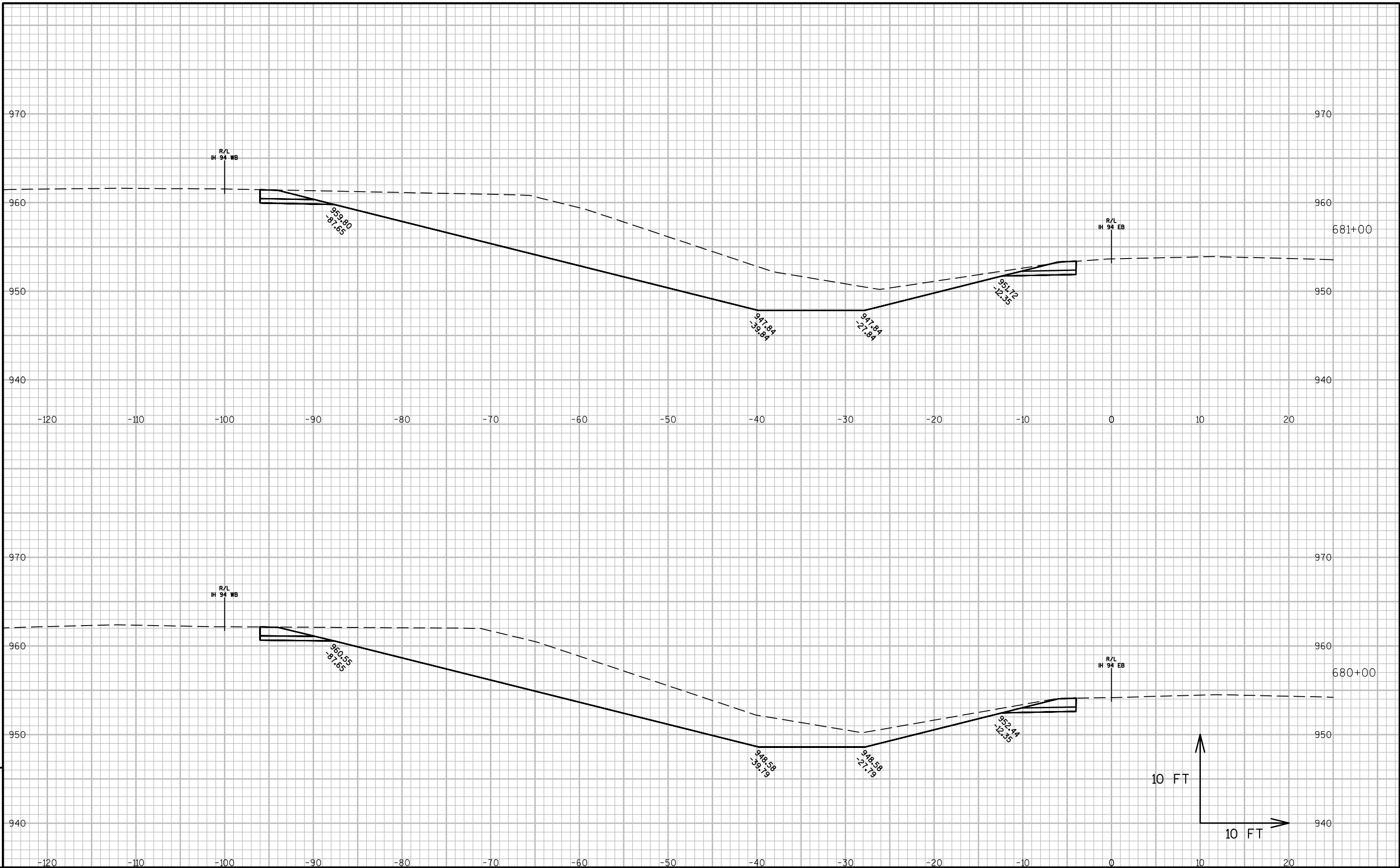


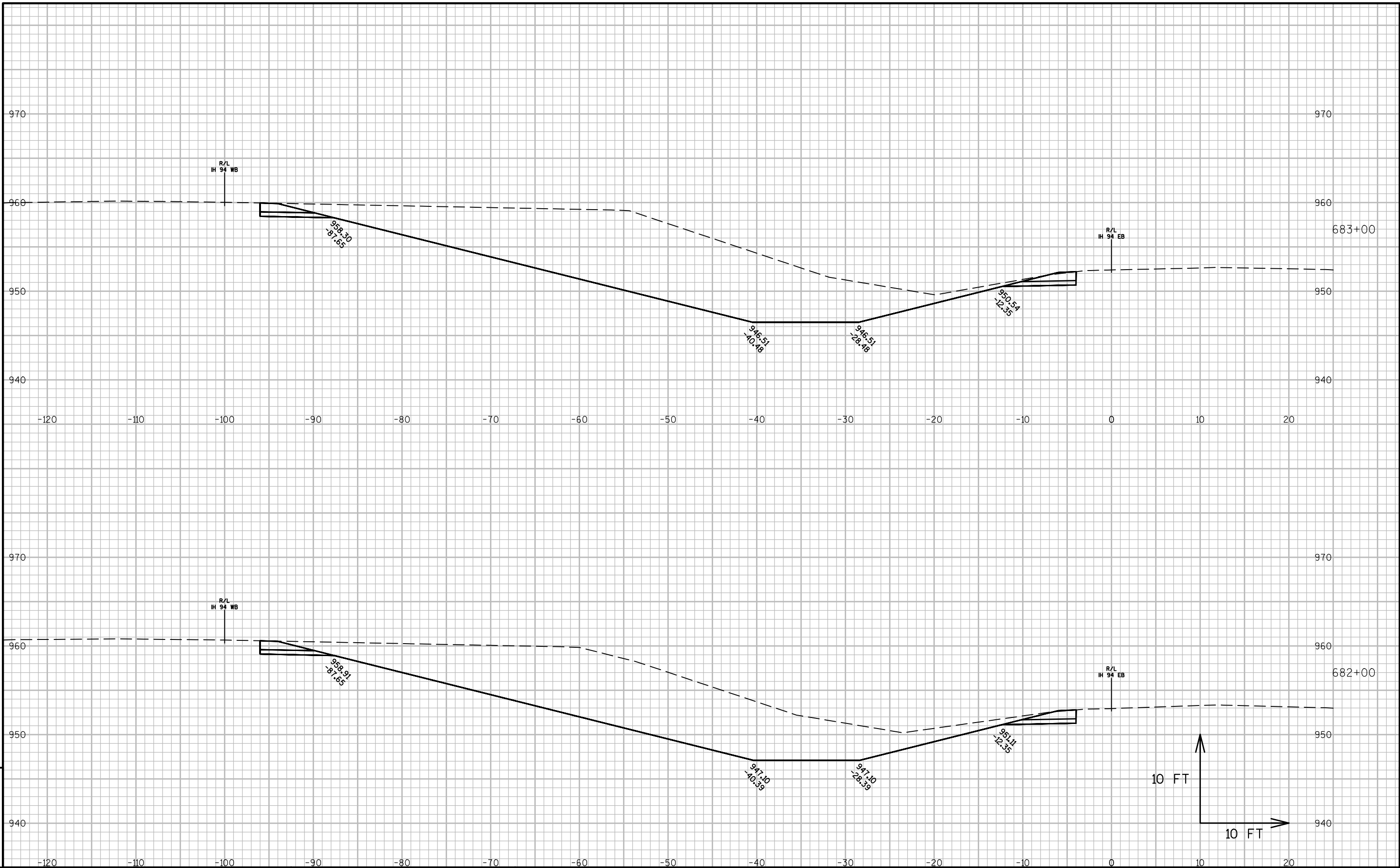


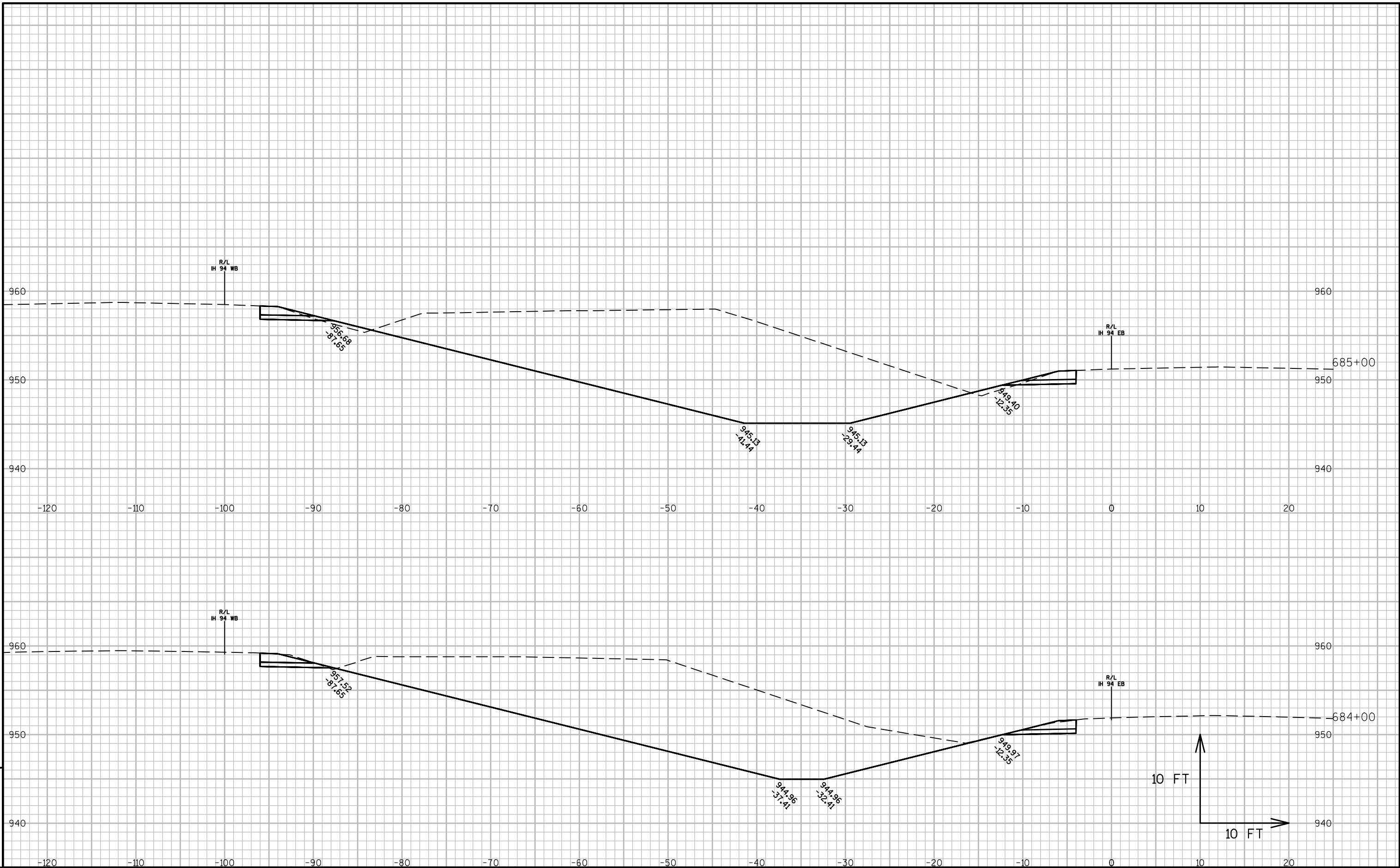


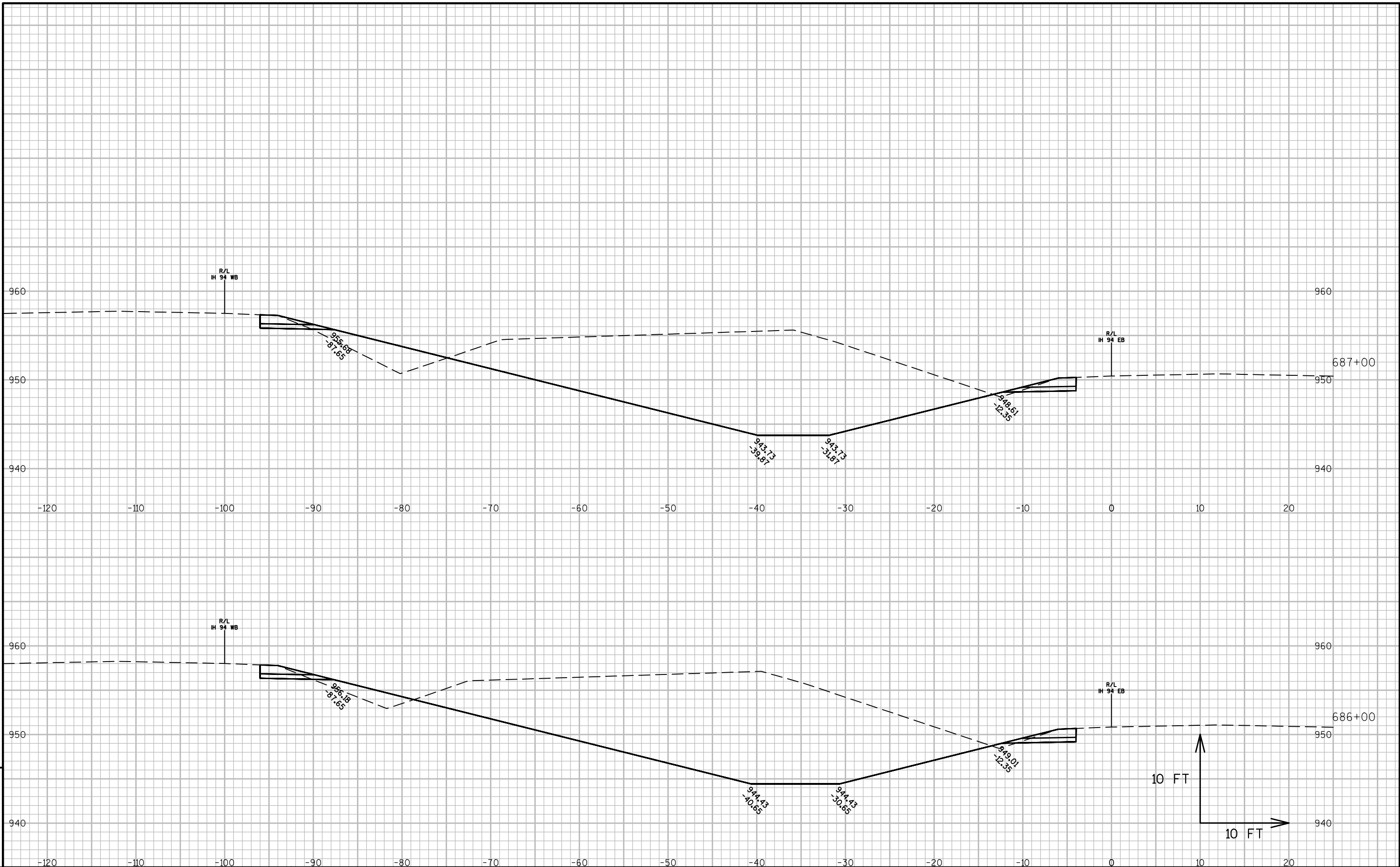


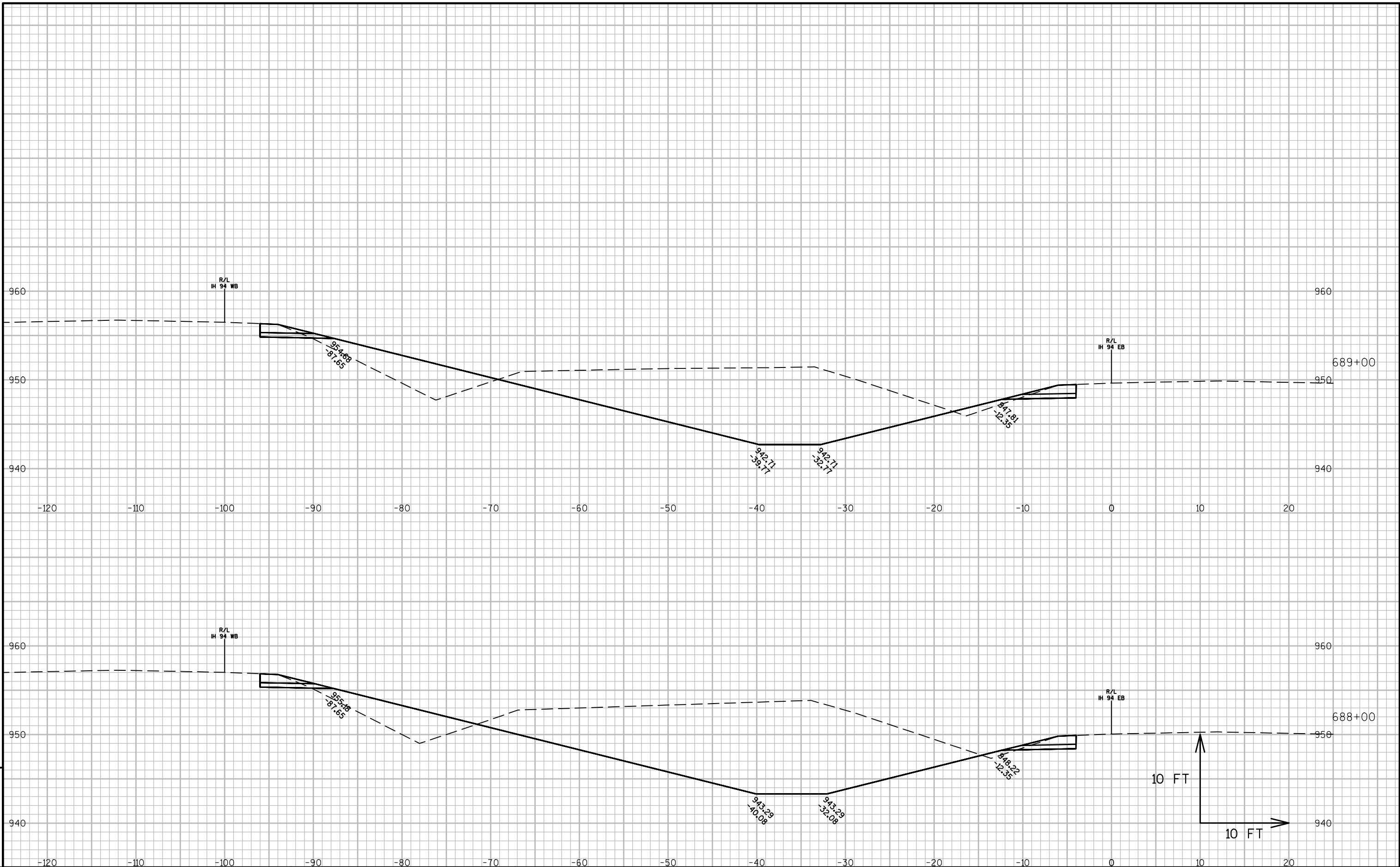


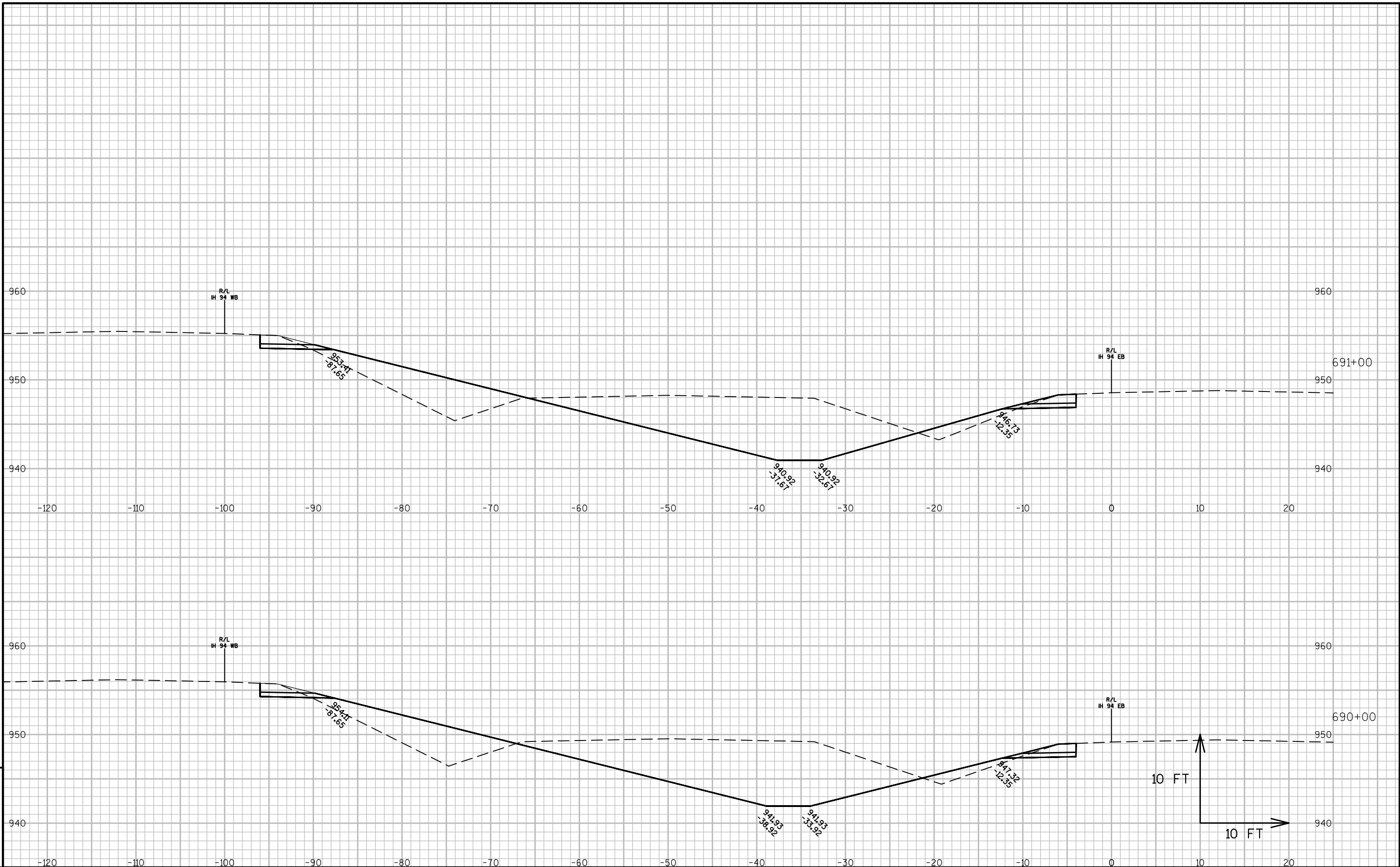


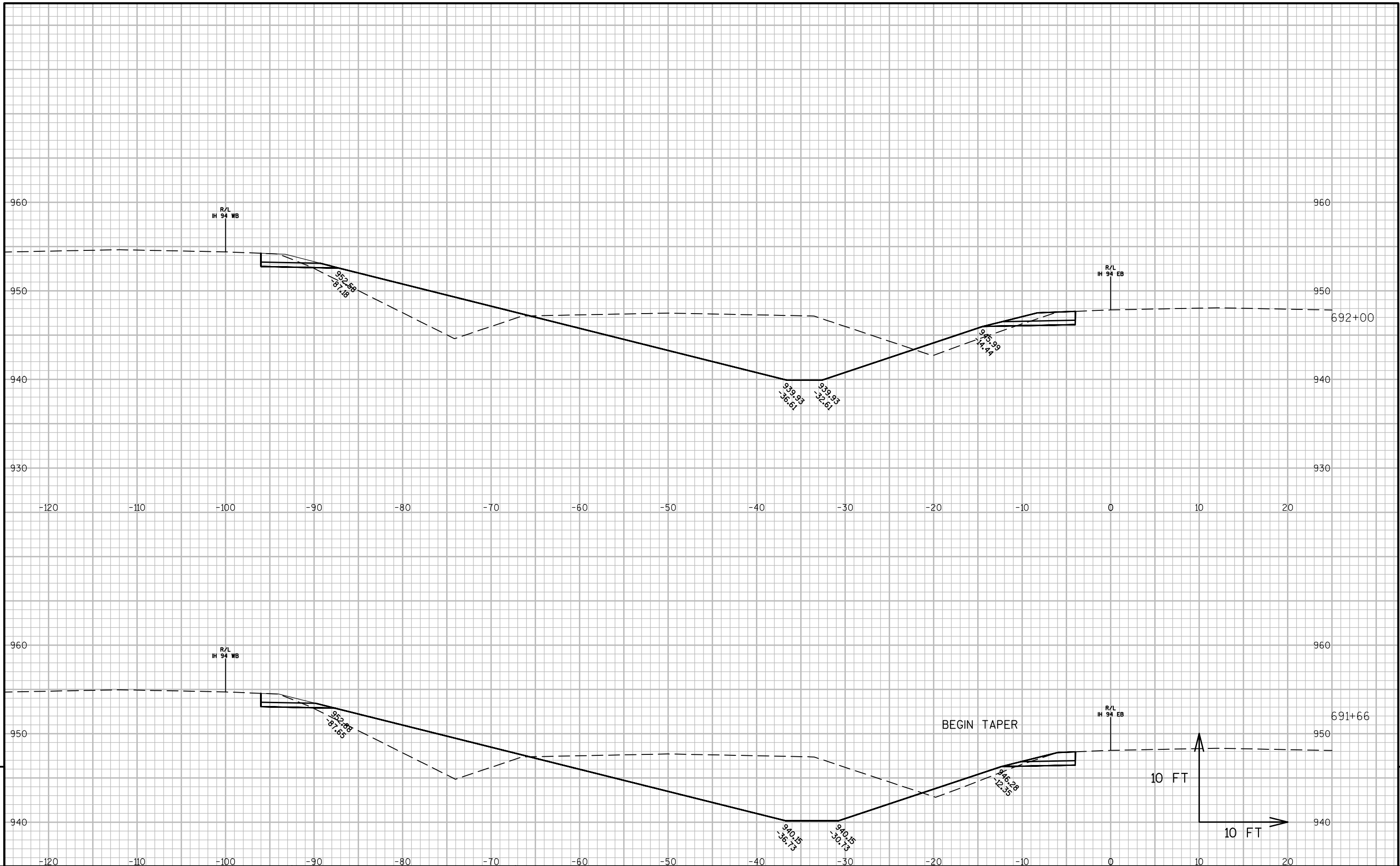


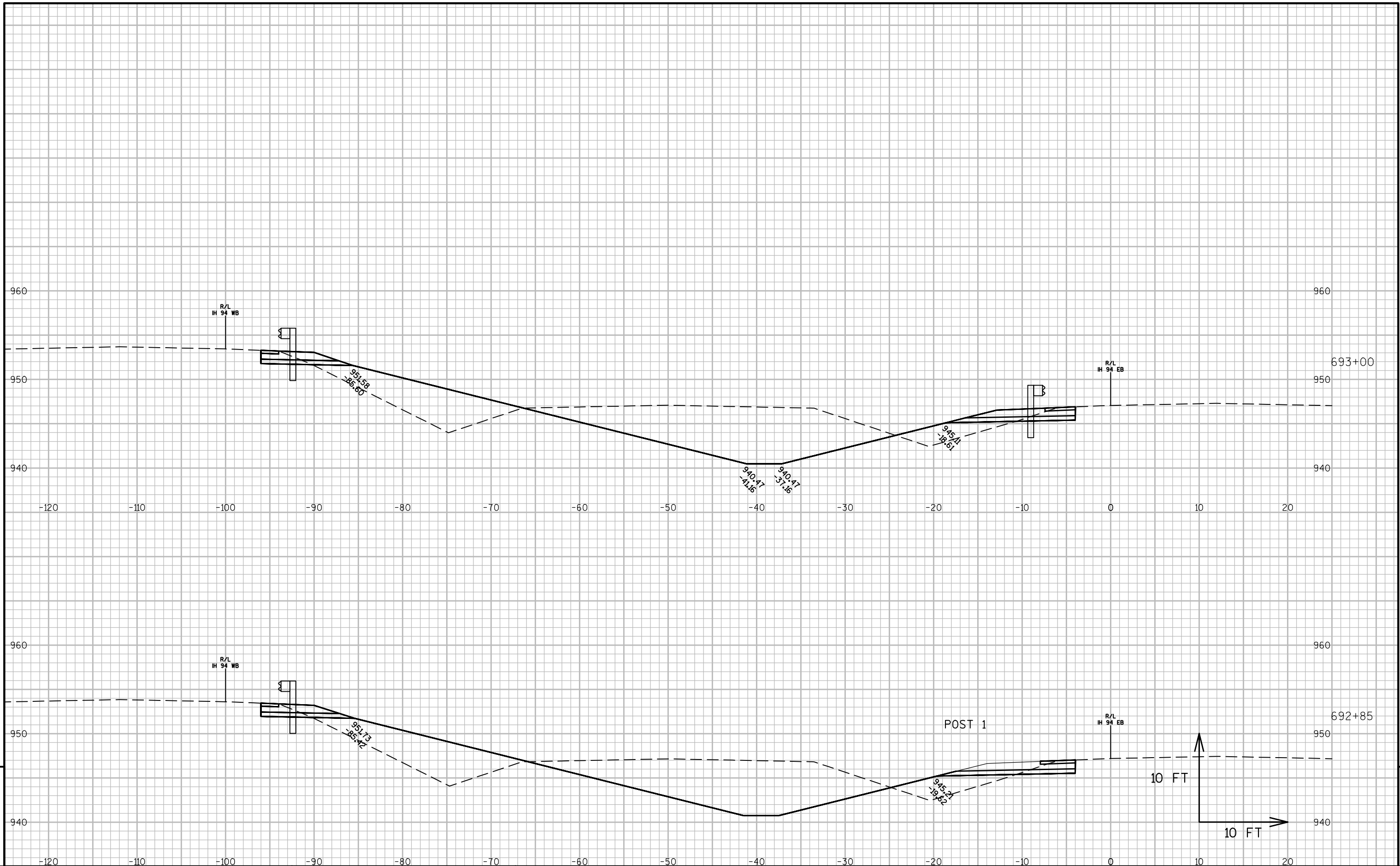


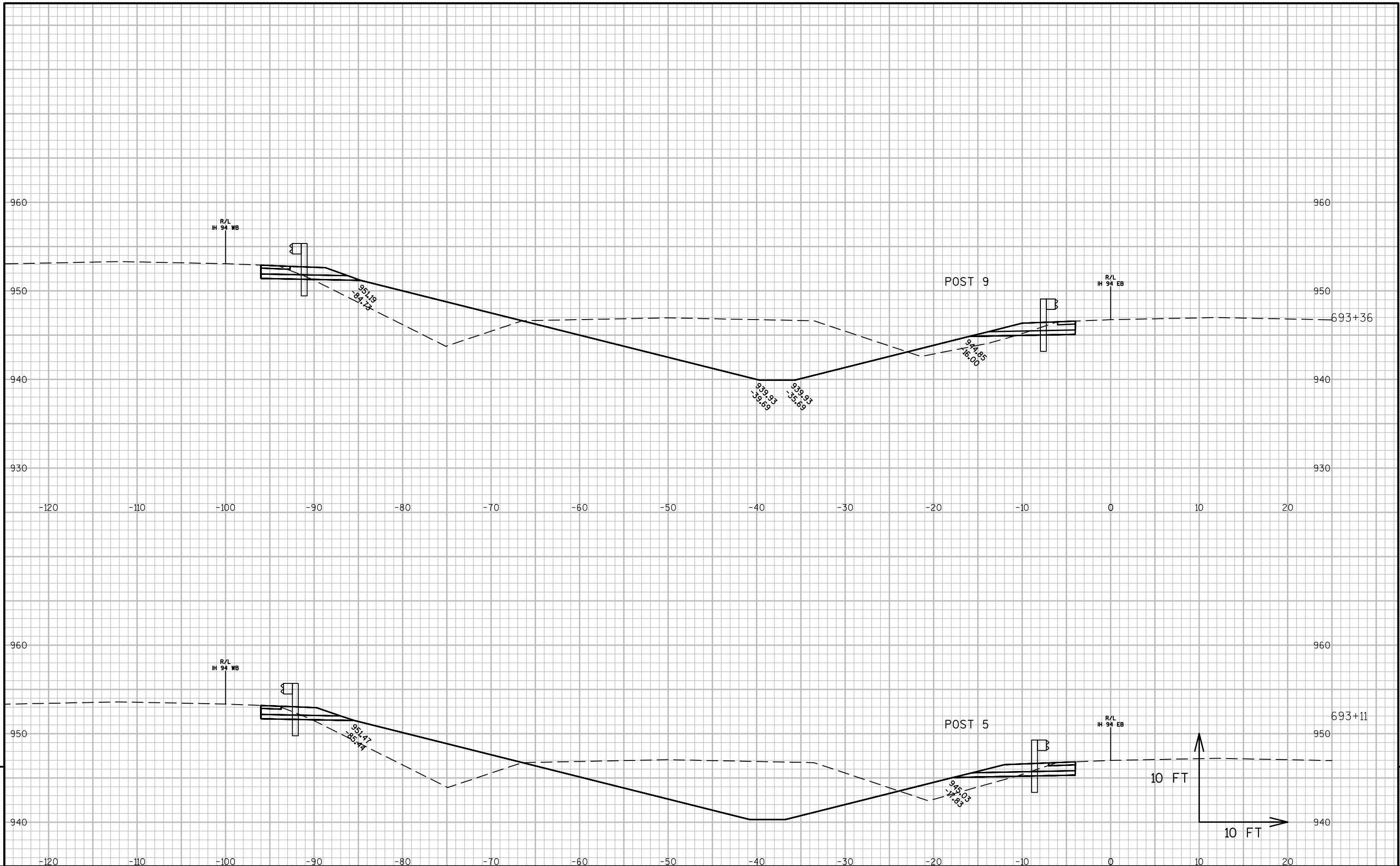


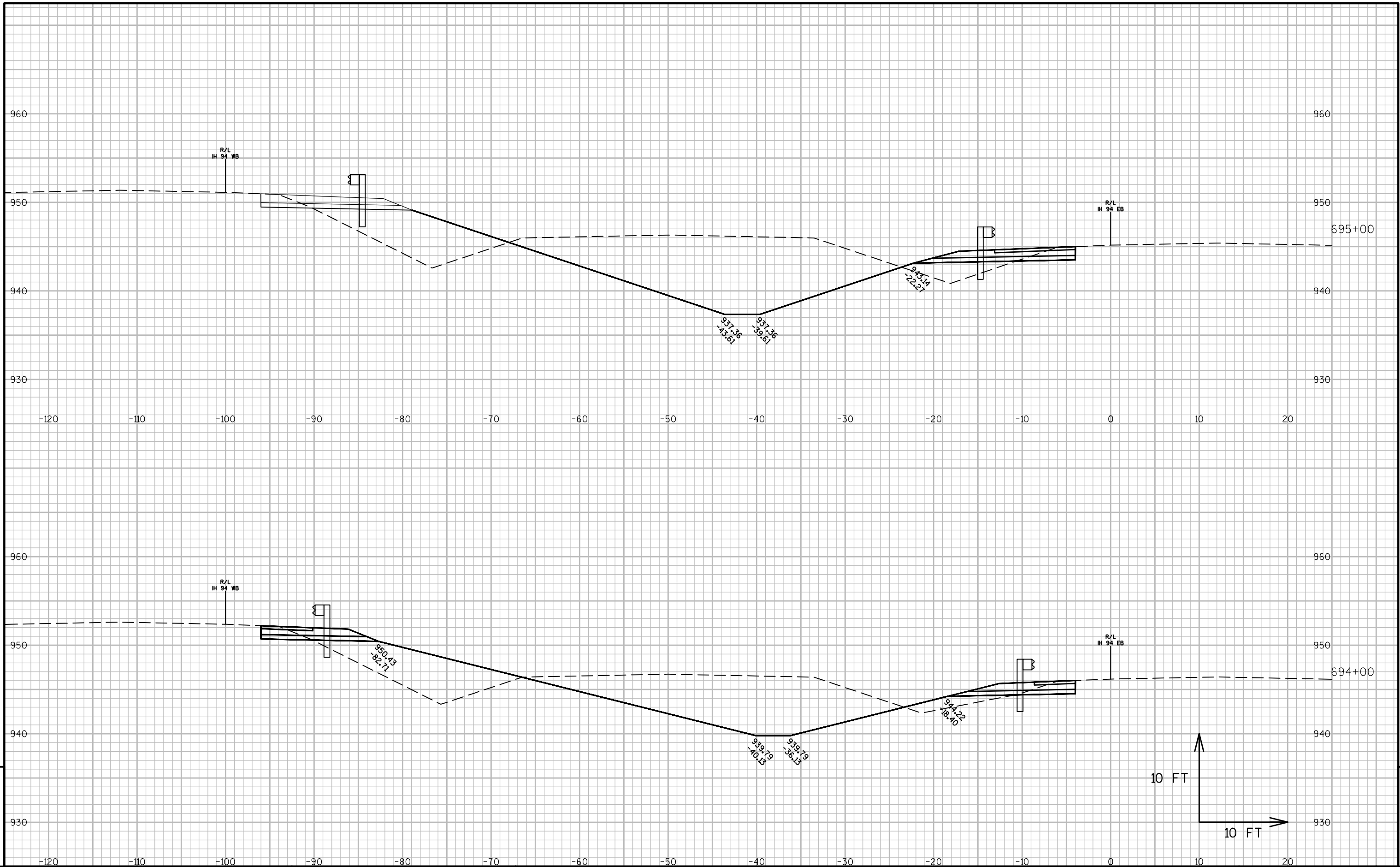


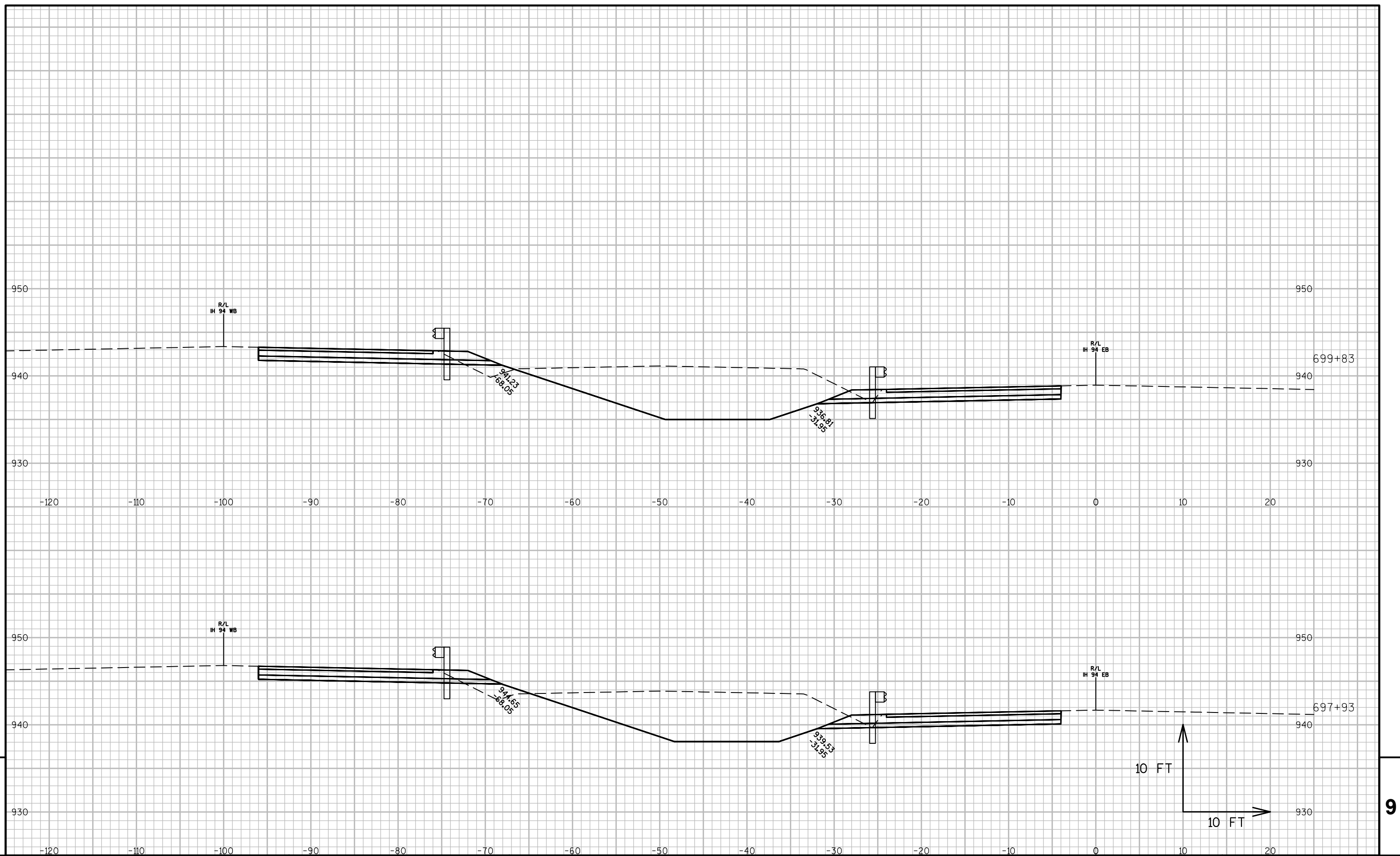
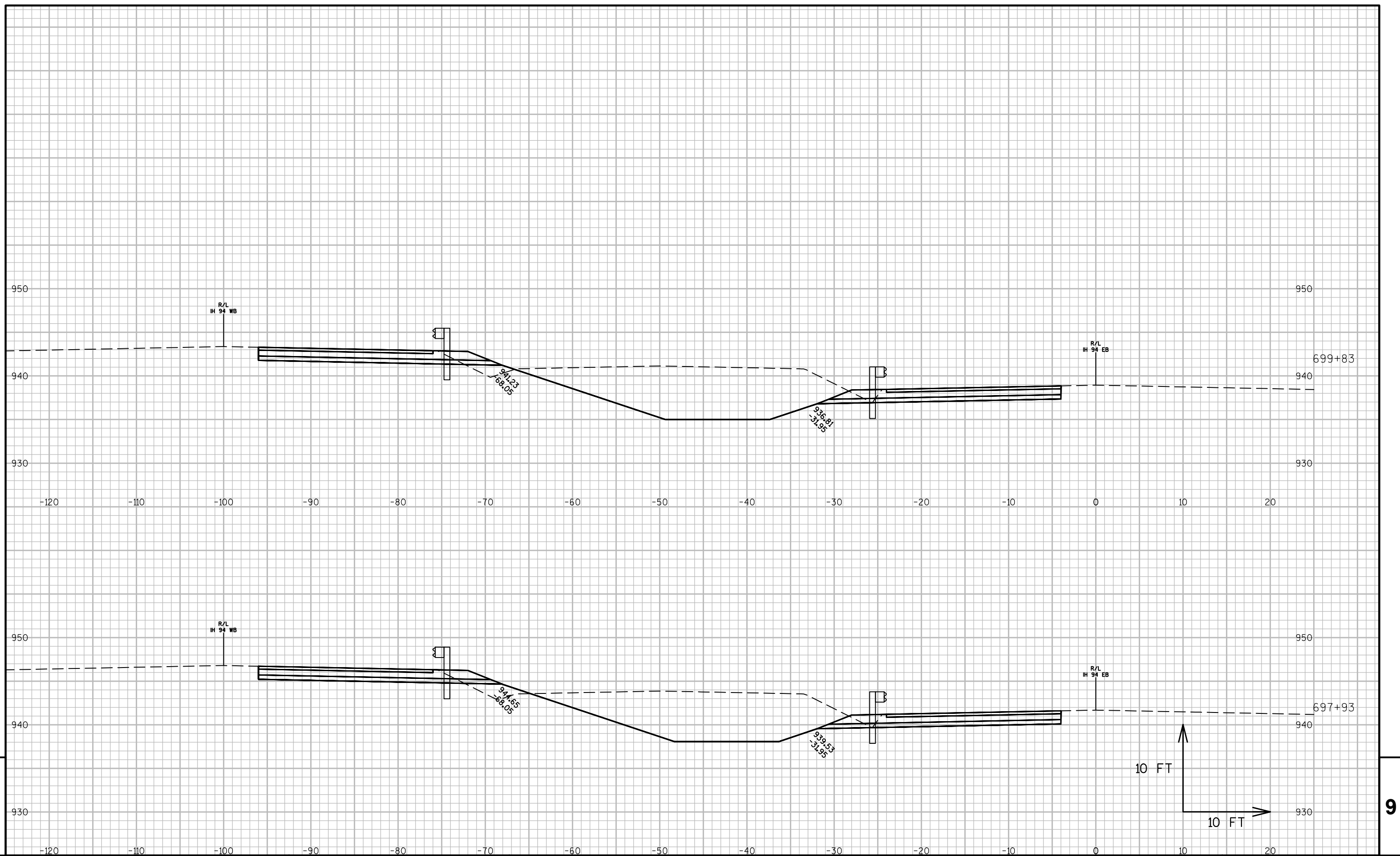












PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

CROSS SECTIONS: IH 94 MEDIAN STAGE 6C

SHEET	974
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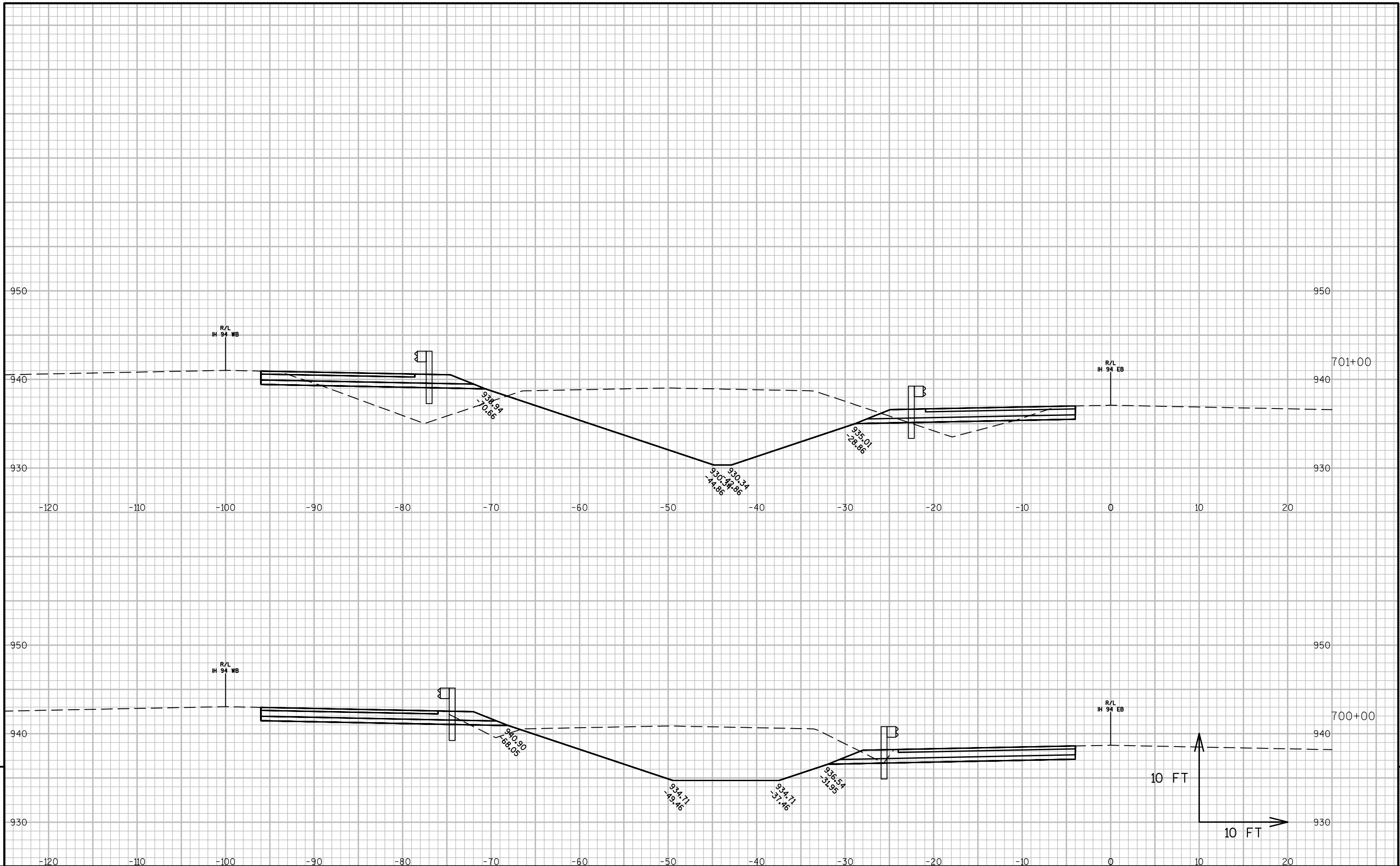
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LAYOUT NAME - 090261T - (18)

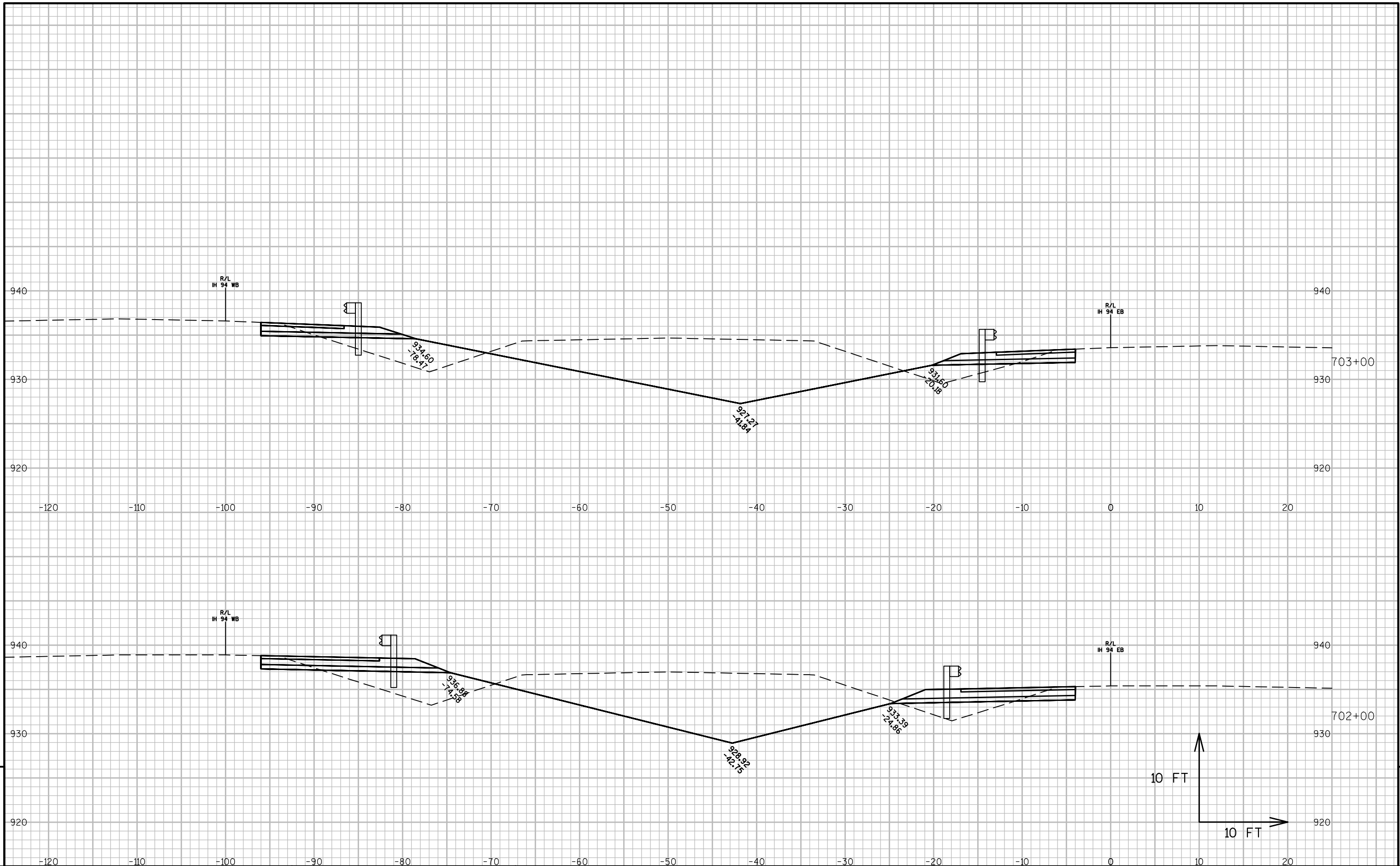
PLOT DATE : 7/21/2017 10:29 AM

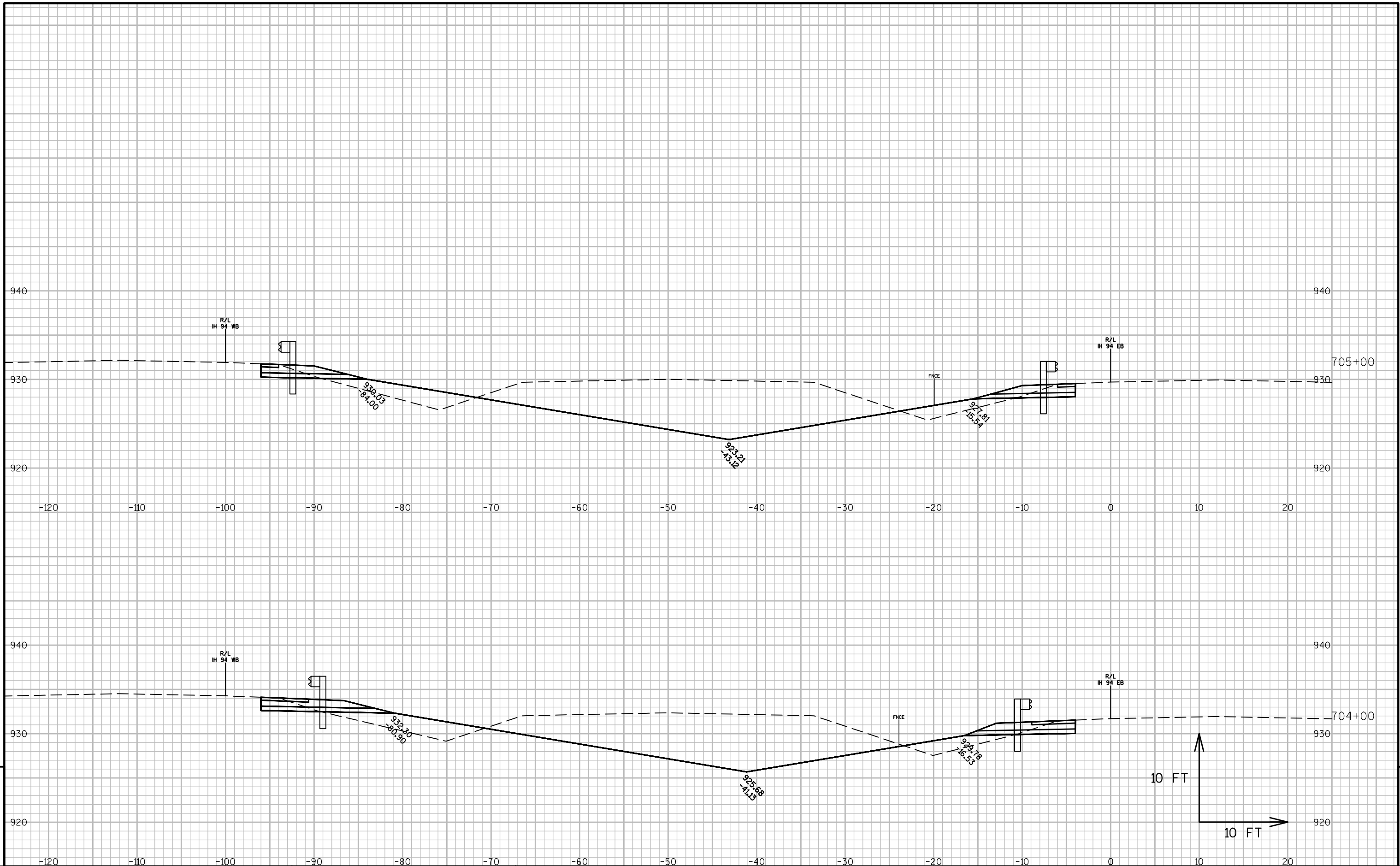
PLOT BY : ANDERSON, THOMAS R PLOT NAME :

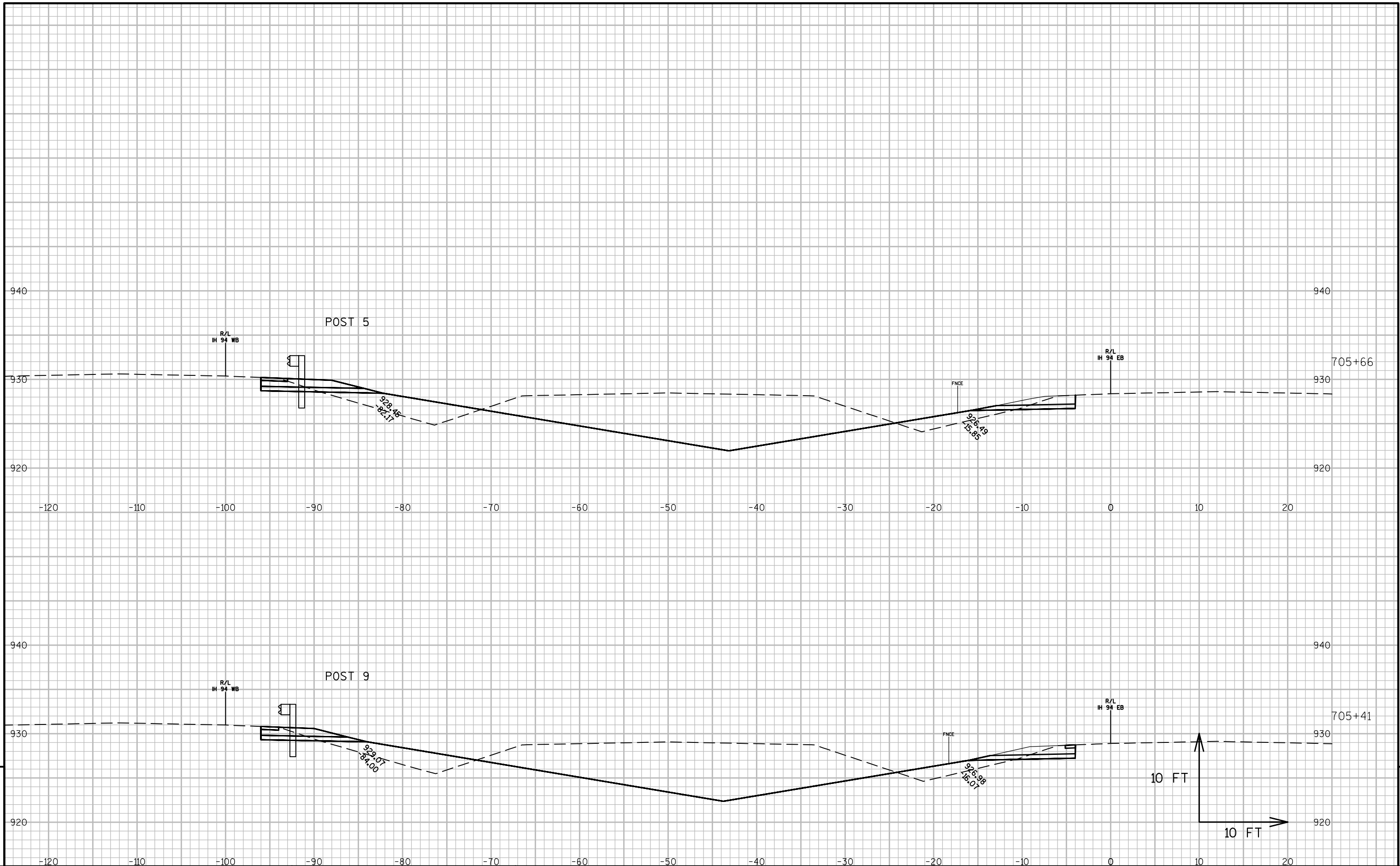
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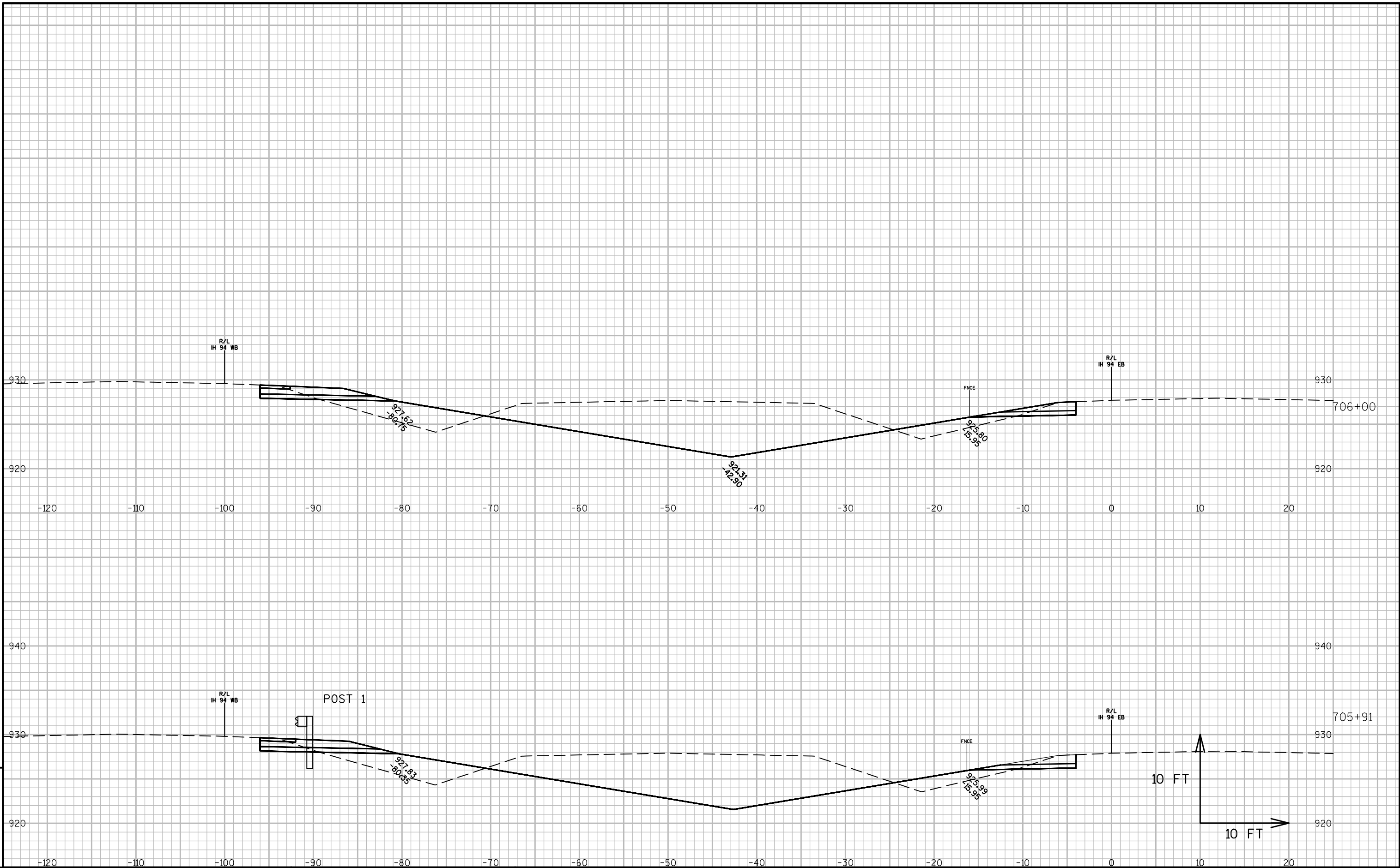
WISDOT/CADDS SHEET 49

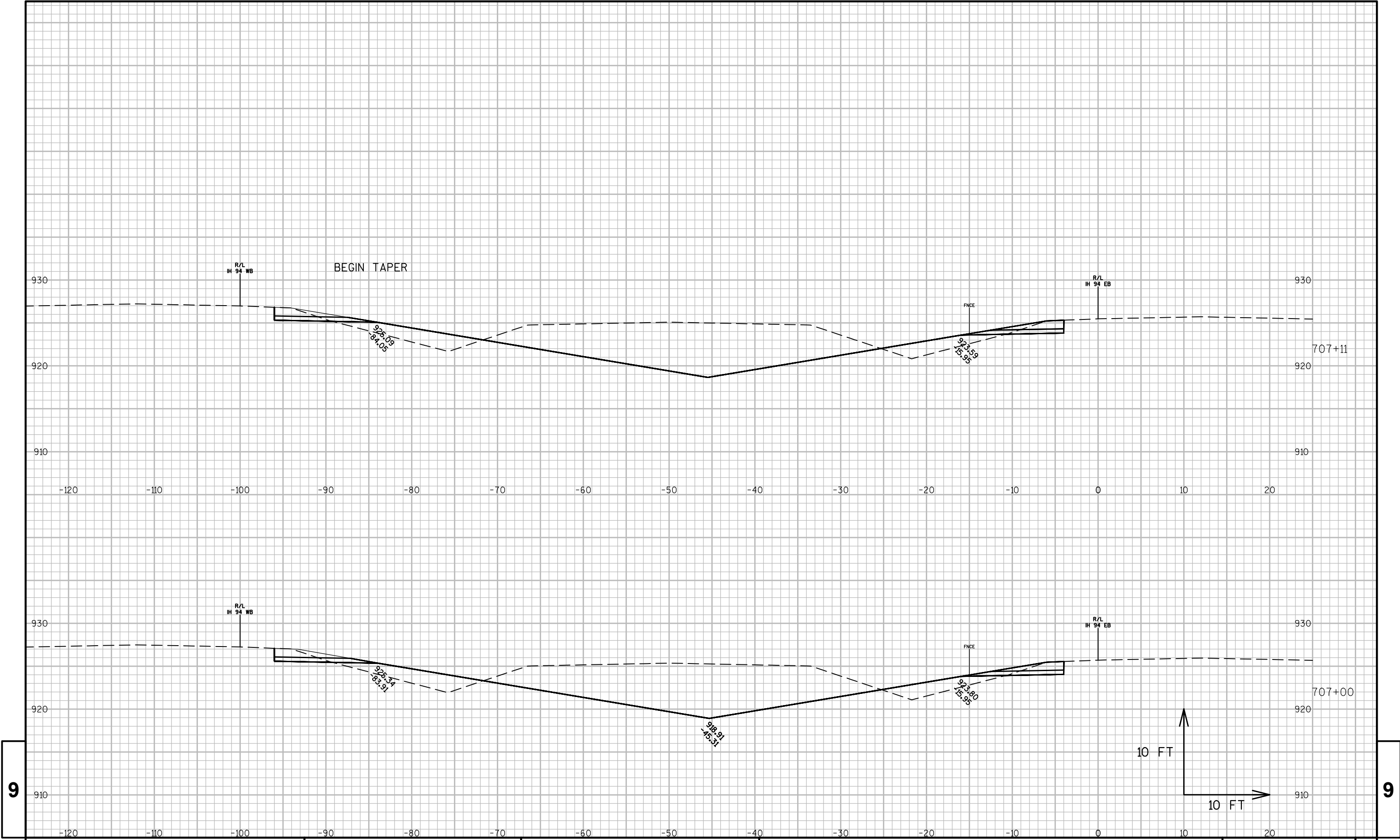






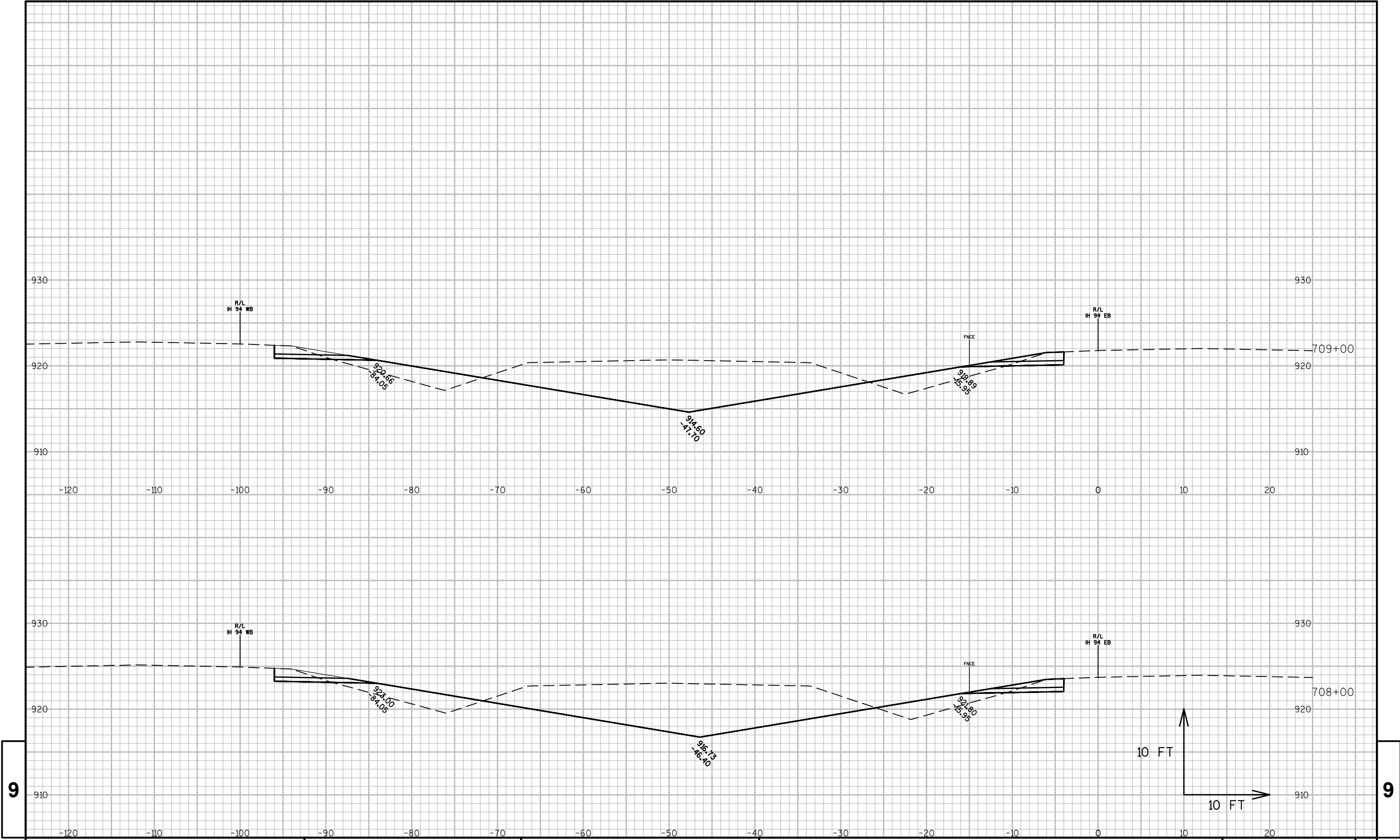






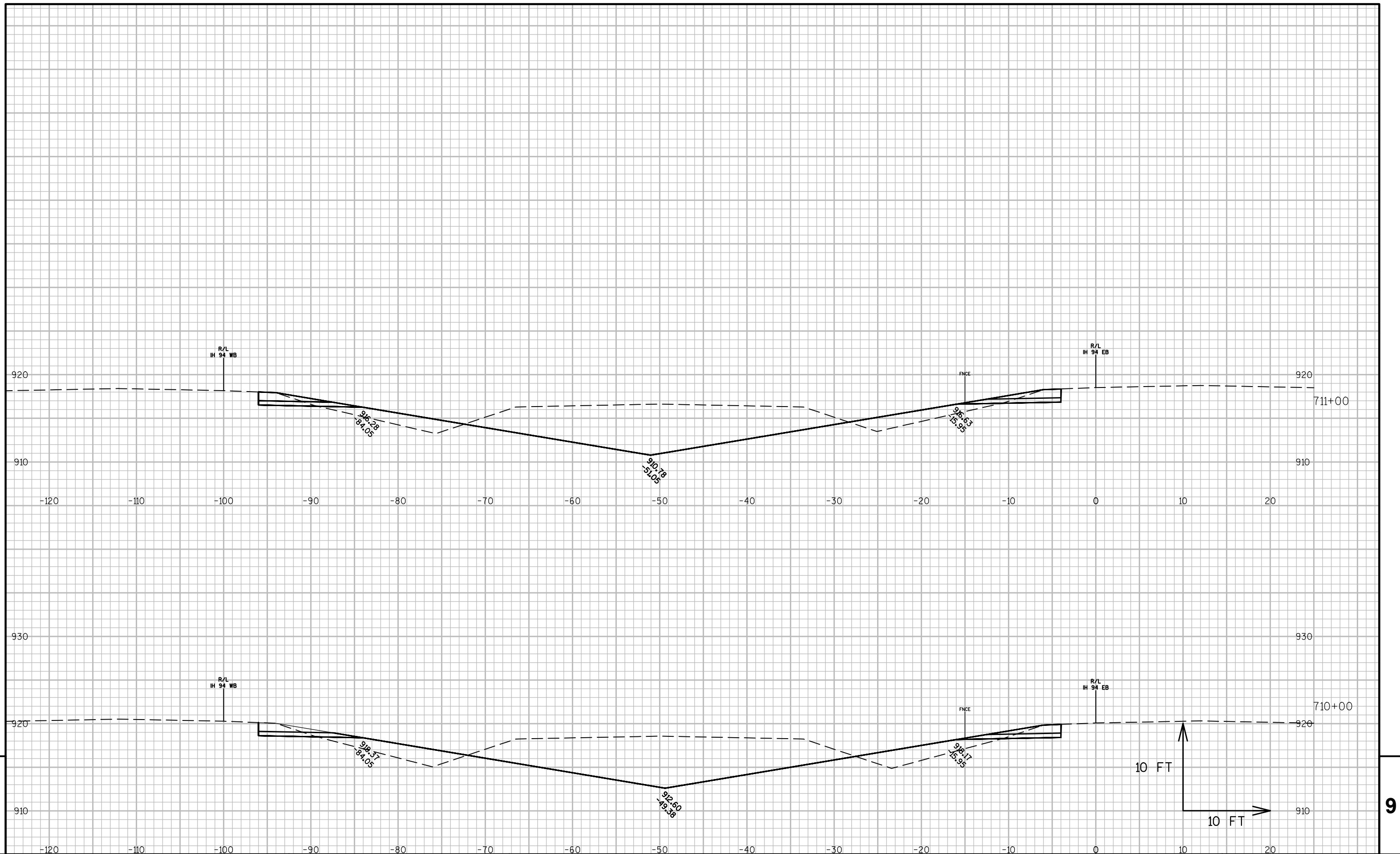
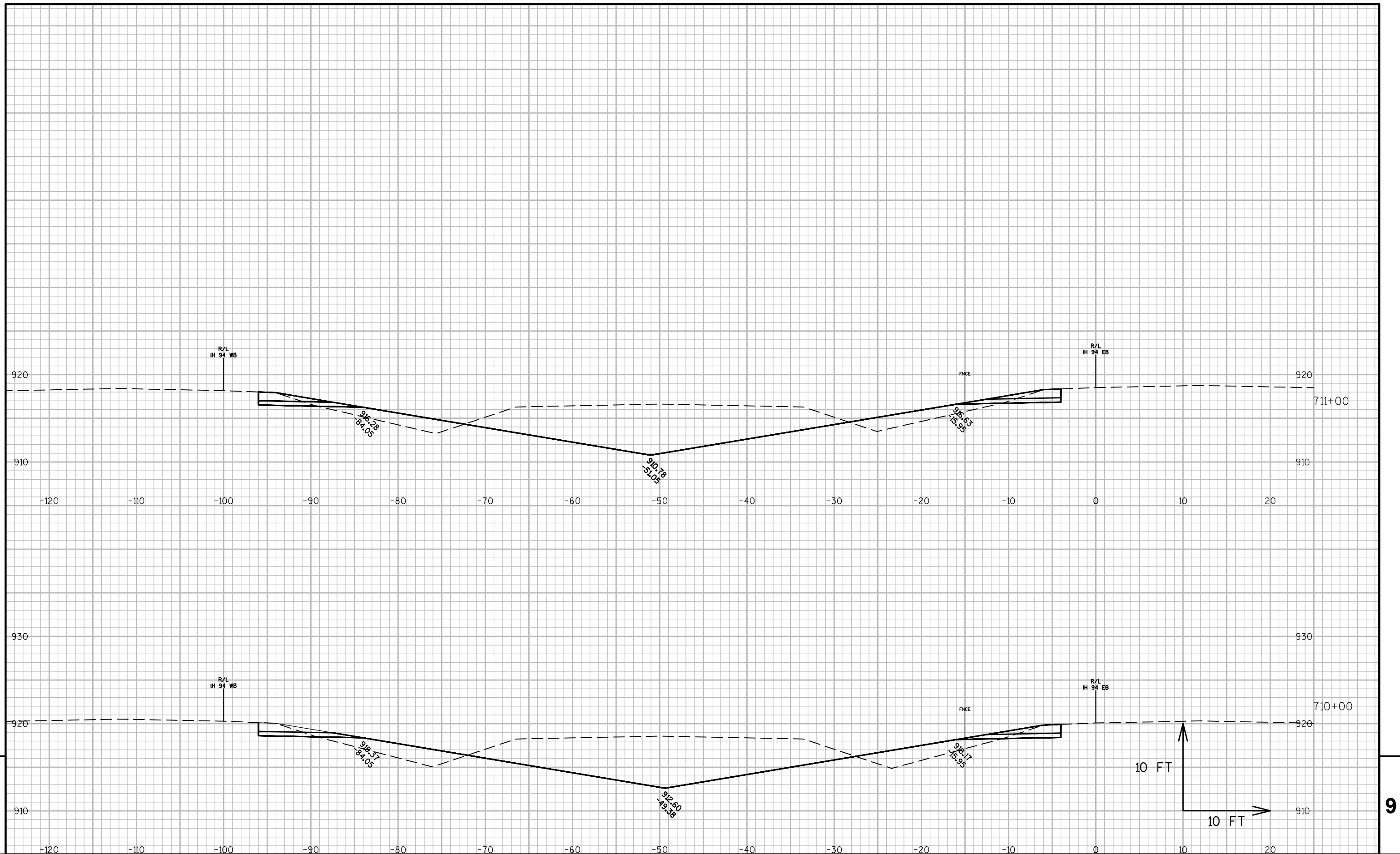
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PROJECT NO:1022-08-72	HWY:IH 94	COUNTY:DUNN	CROSS SECTIONS:IH 94 MEDIAN STAGE 6C	SHEET 982	E
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HWY: IH 94

COUNTY: DUNN

CROSS SECTIONS: IH 94 MEDIAN STAGE 6C

SHEET	982
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E	
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FILE NAME : N:\PDS\C3D\10220706\SHEETS\PLAN SHEETS 10220872\090261_XS_STAGE6C.DWG
LAYOUT NAME - 090261T - (26)

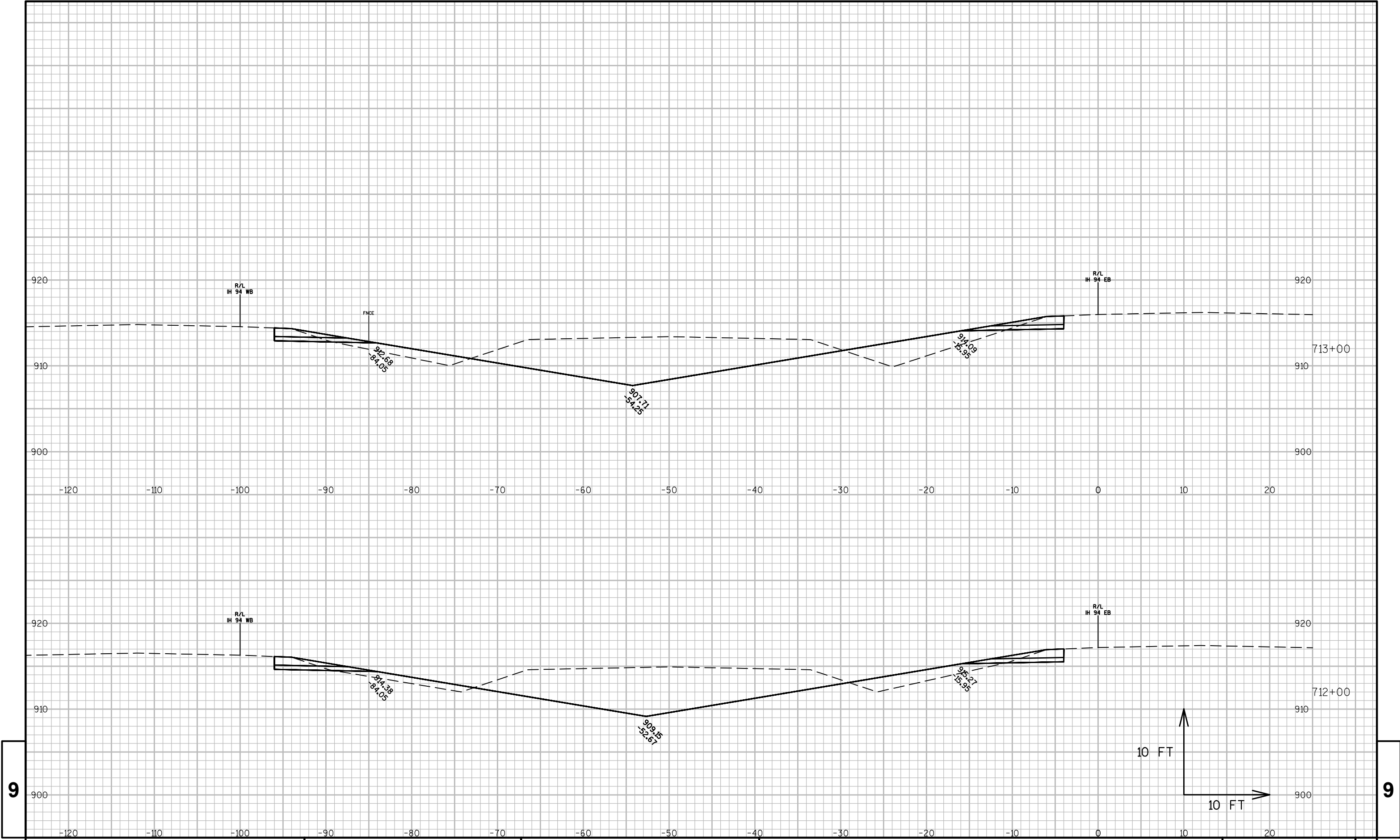
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PLOT DATE : 7/21/2017 10:30 AM

PLOT BY : ANDERSON, THOMAS R PLOT NAME :

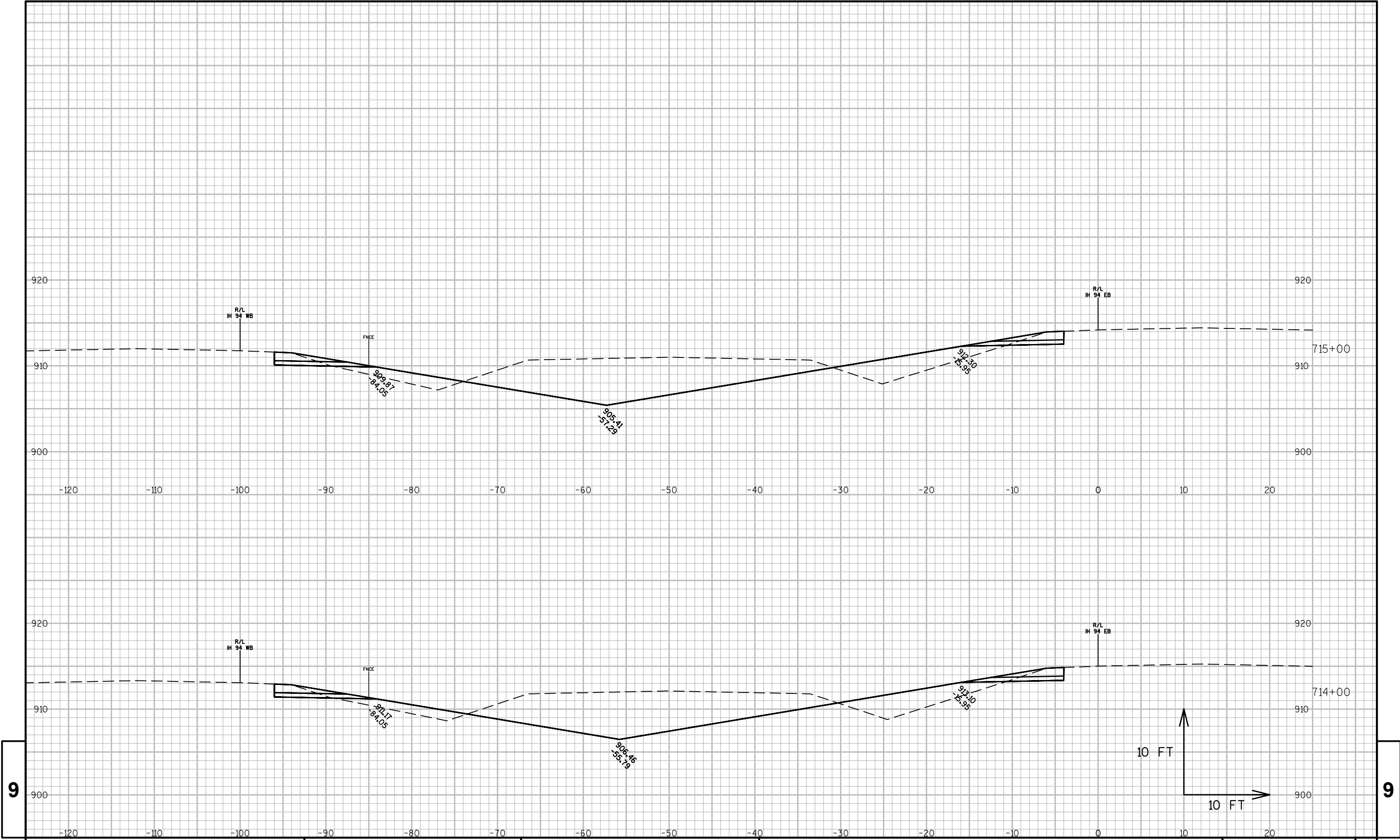
PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



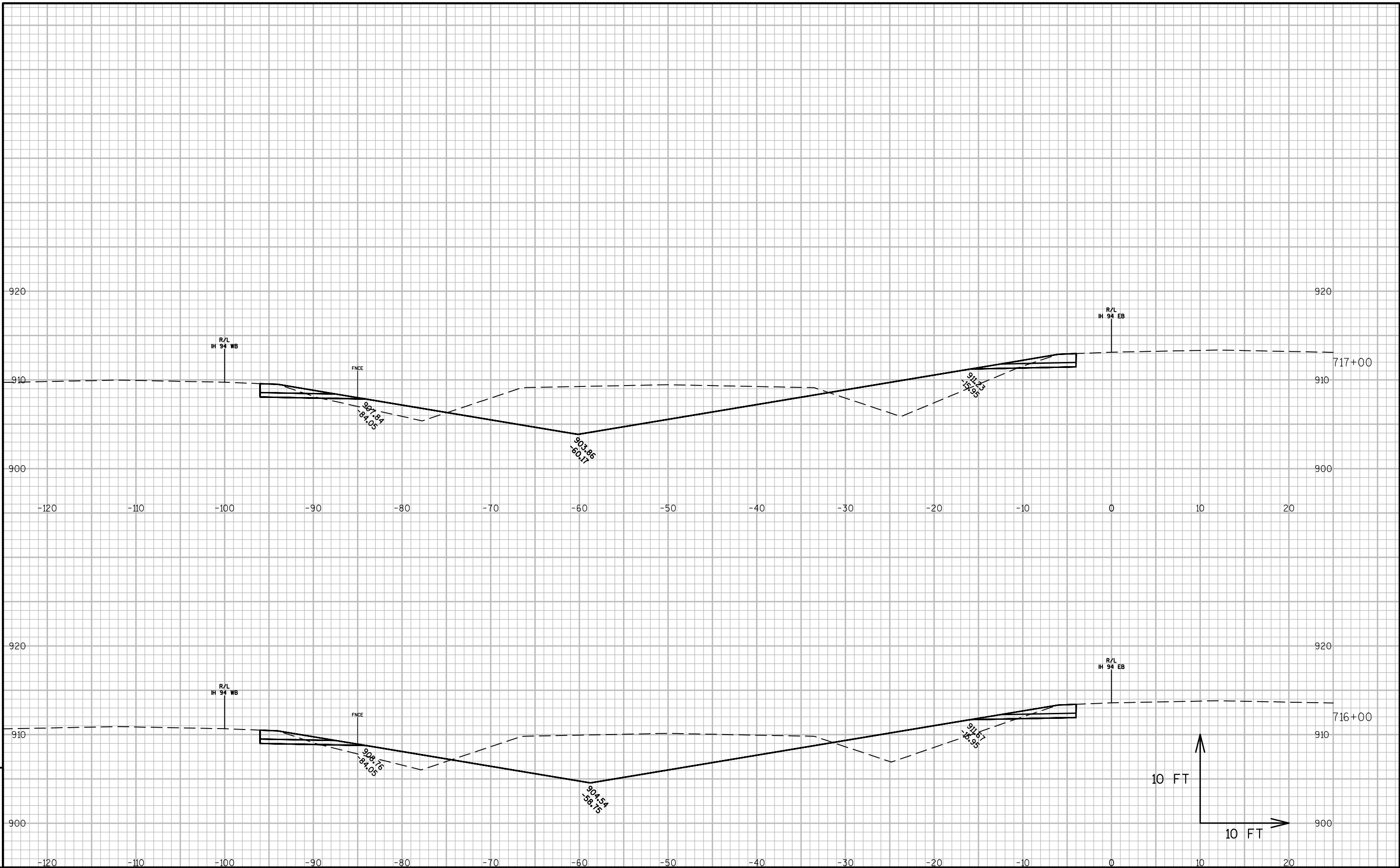
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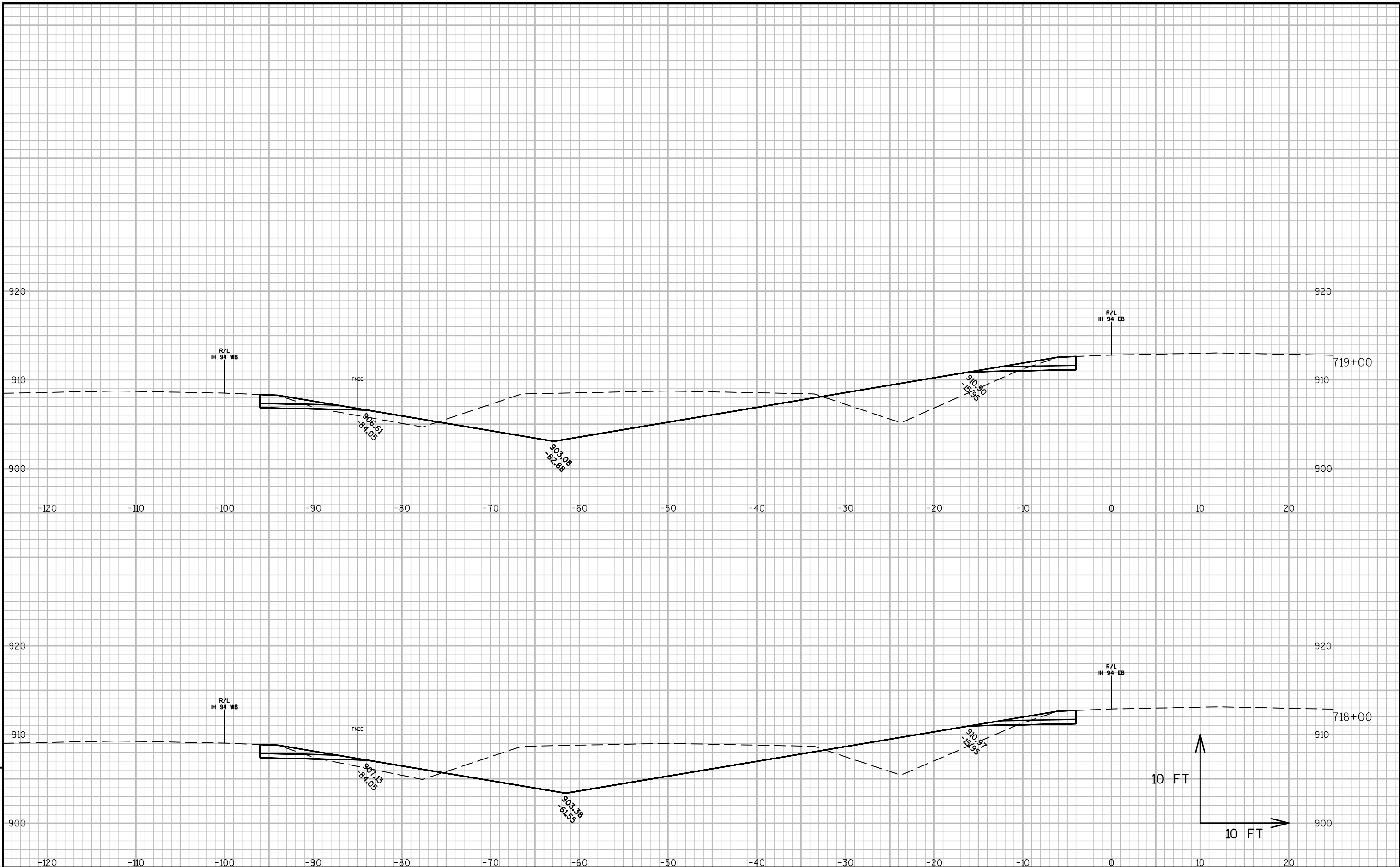
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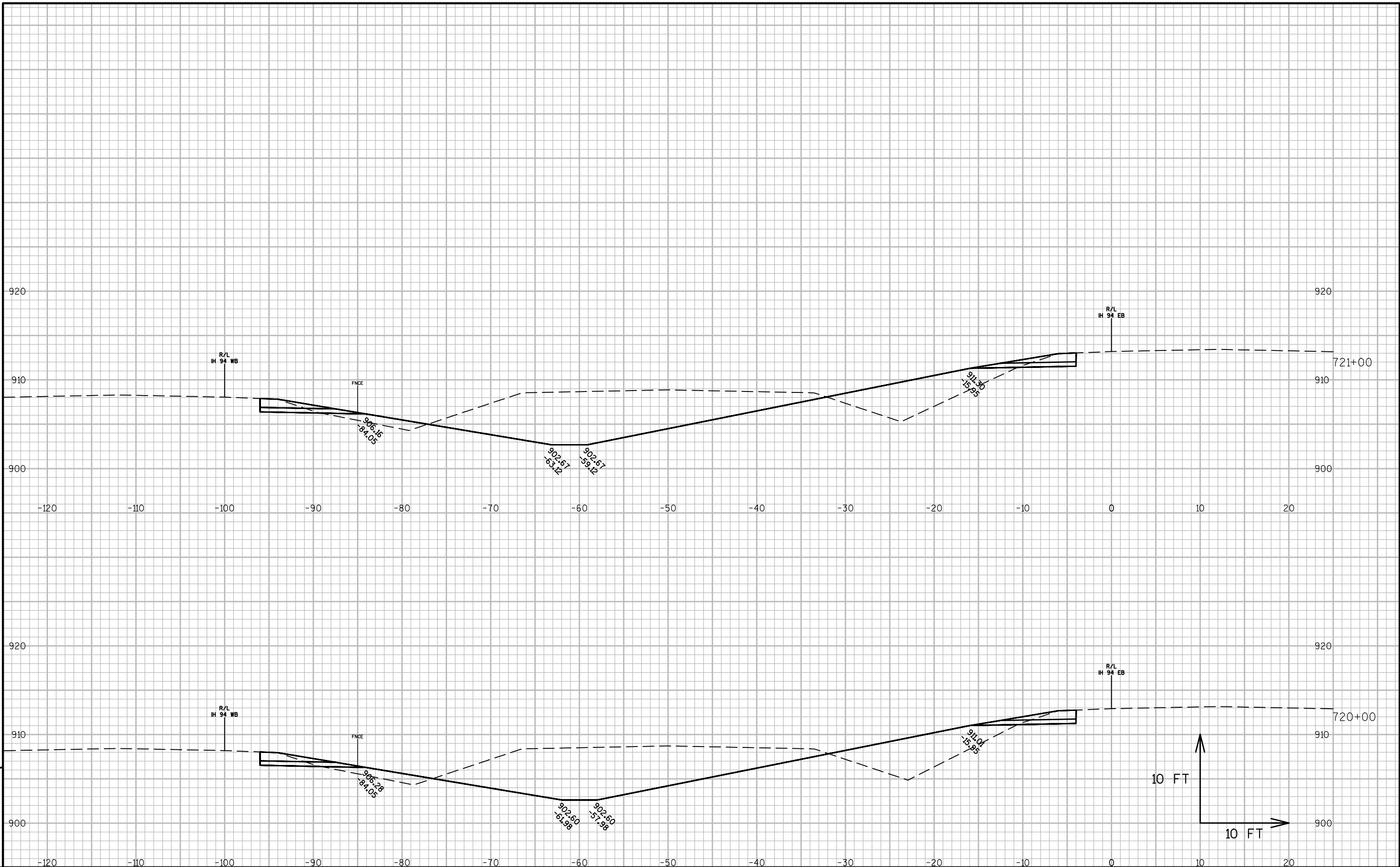


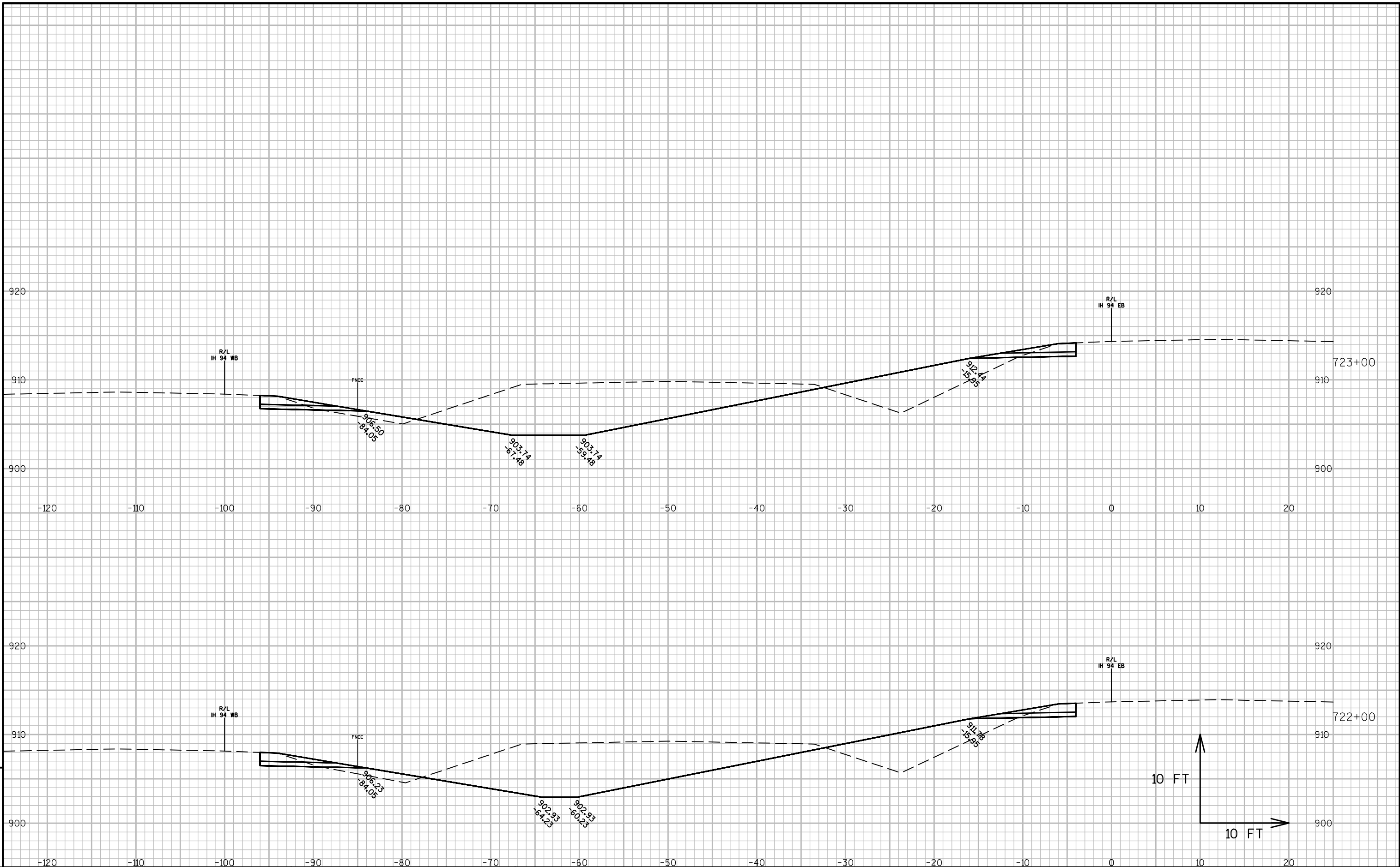
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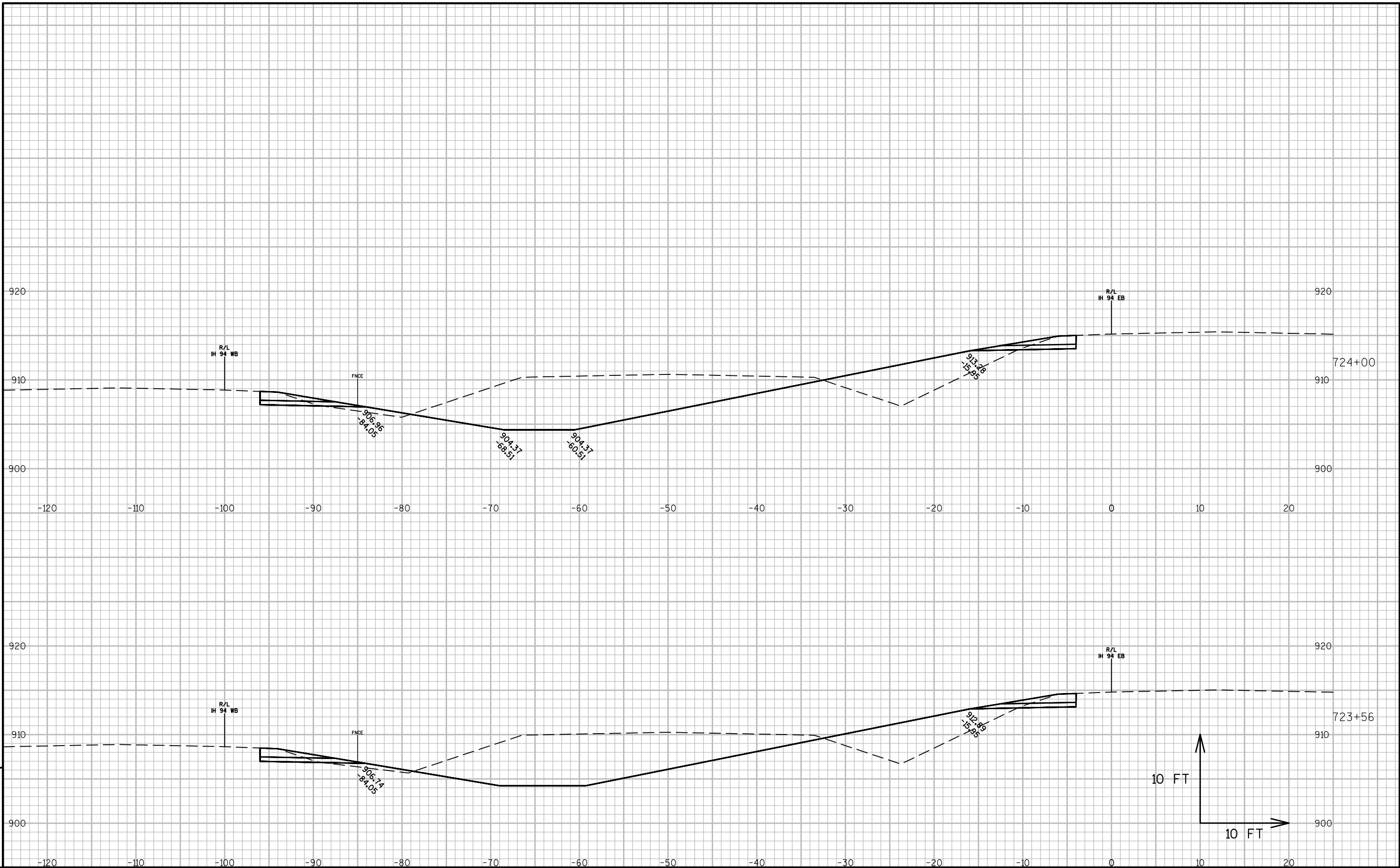
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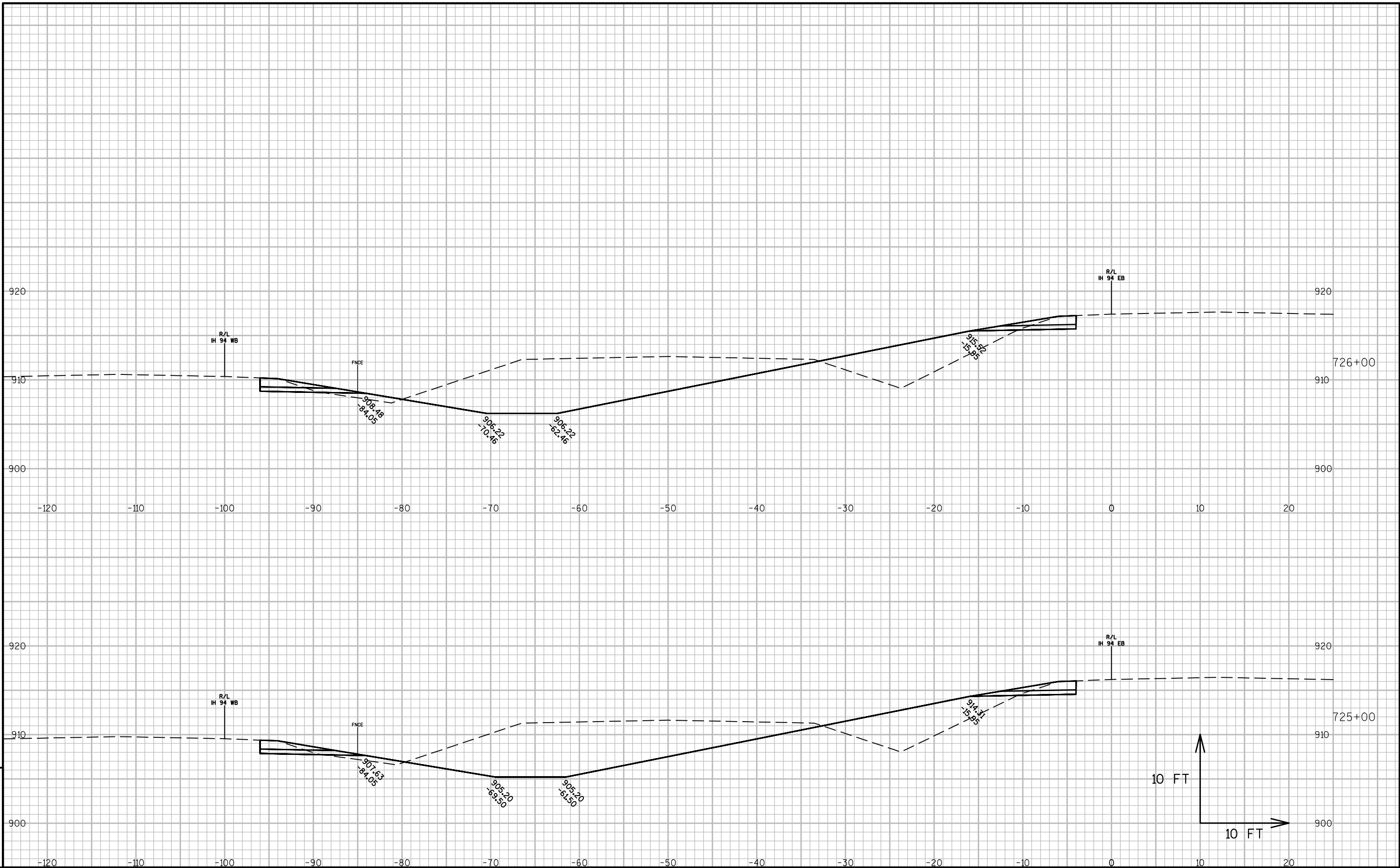


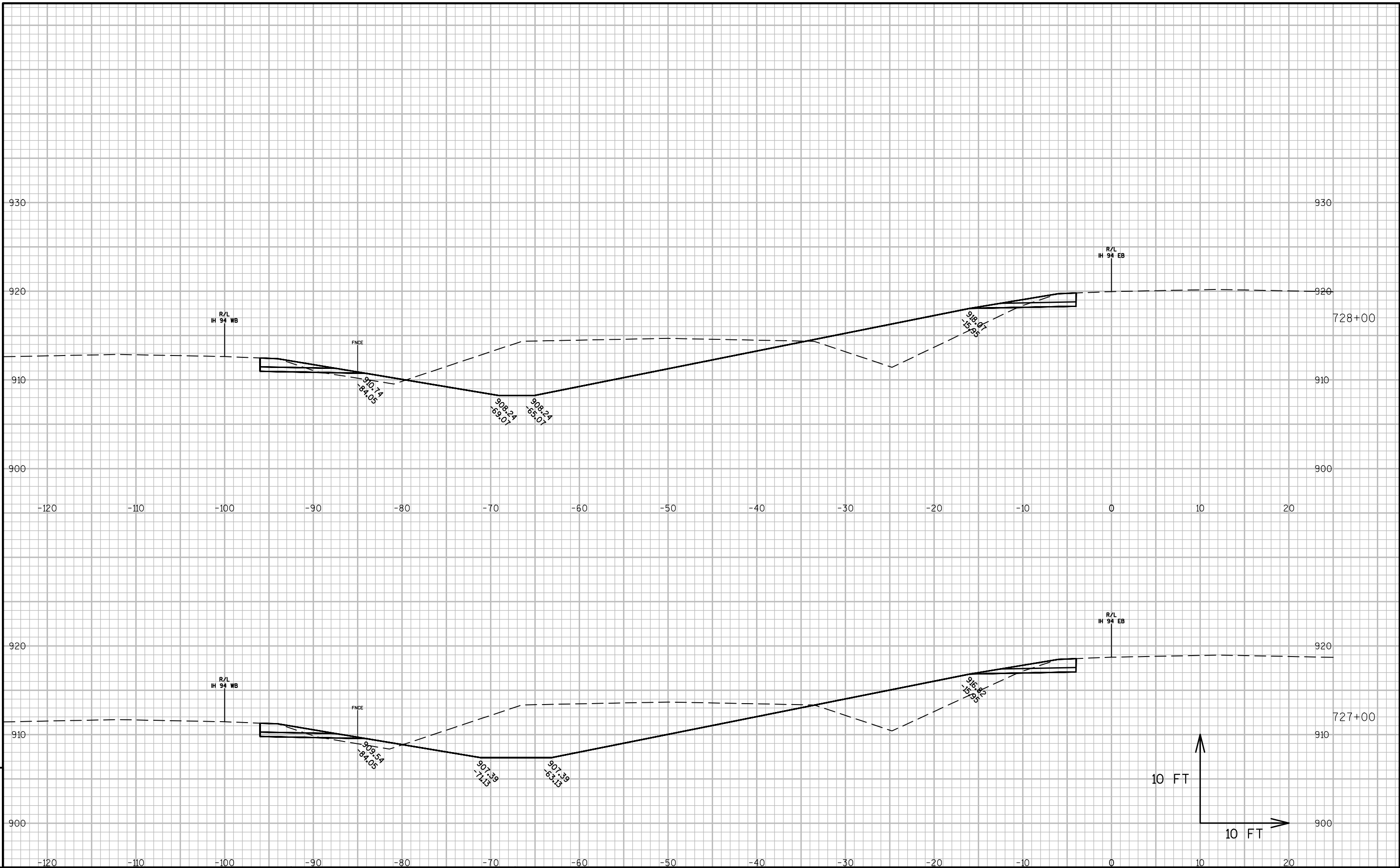


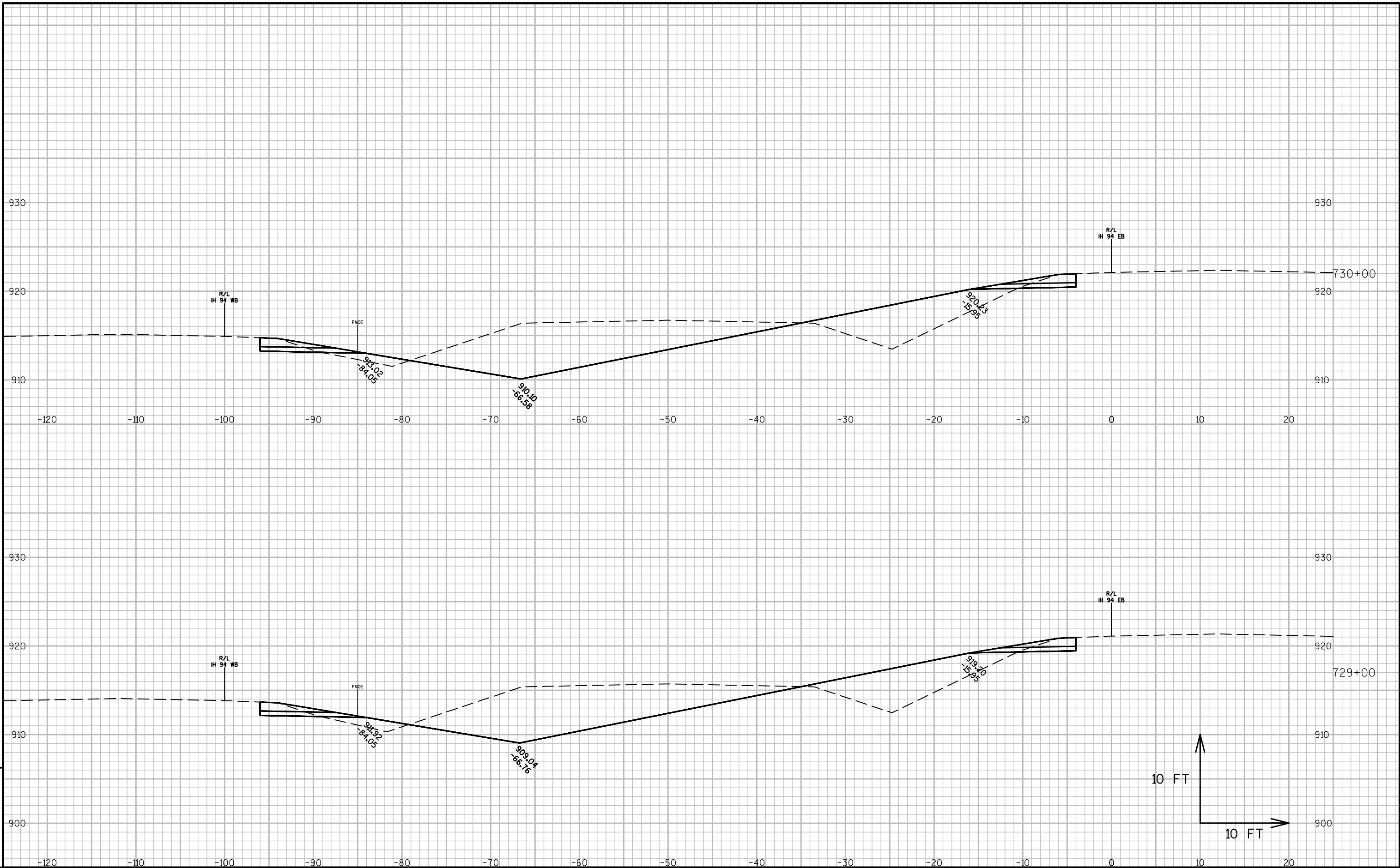


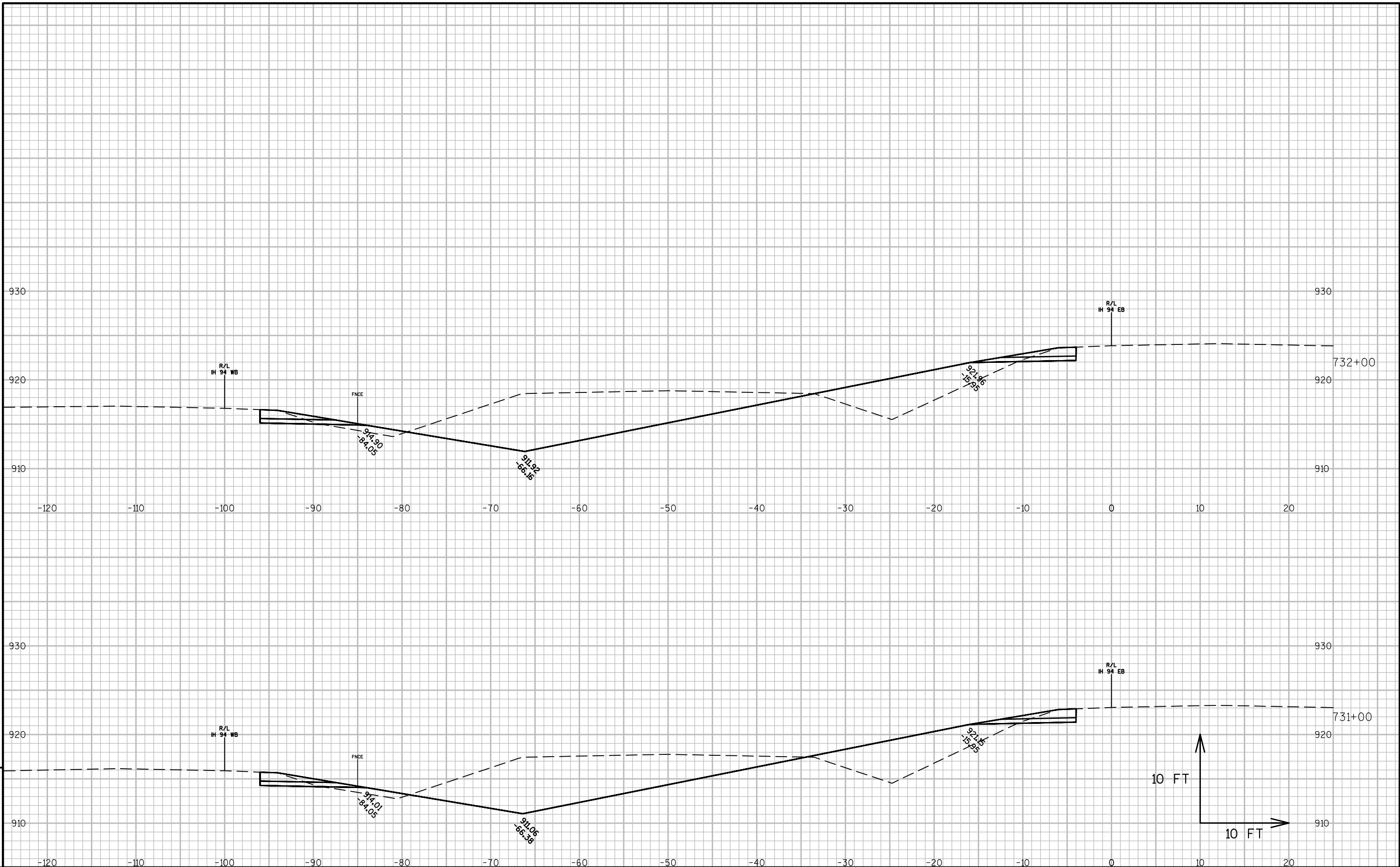


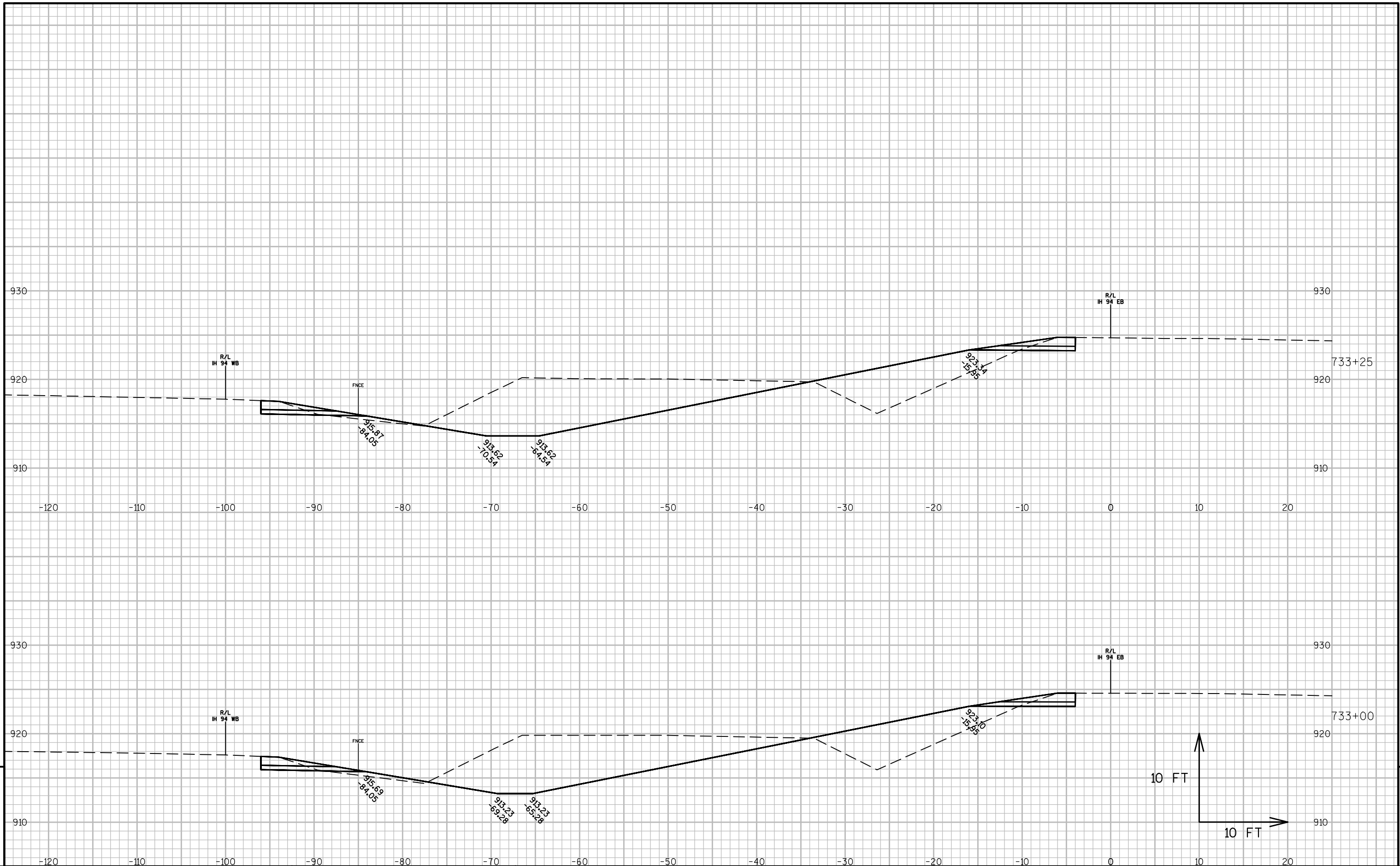


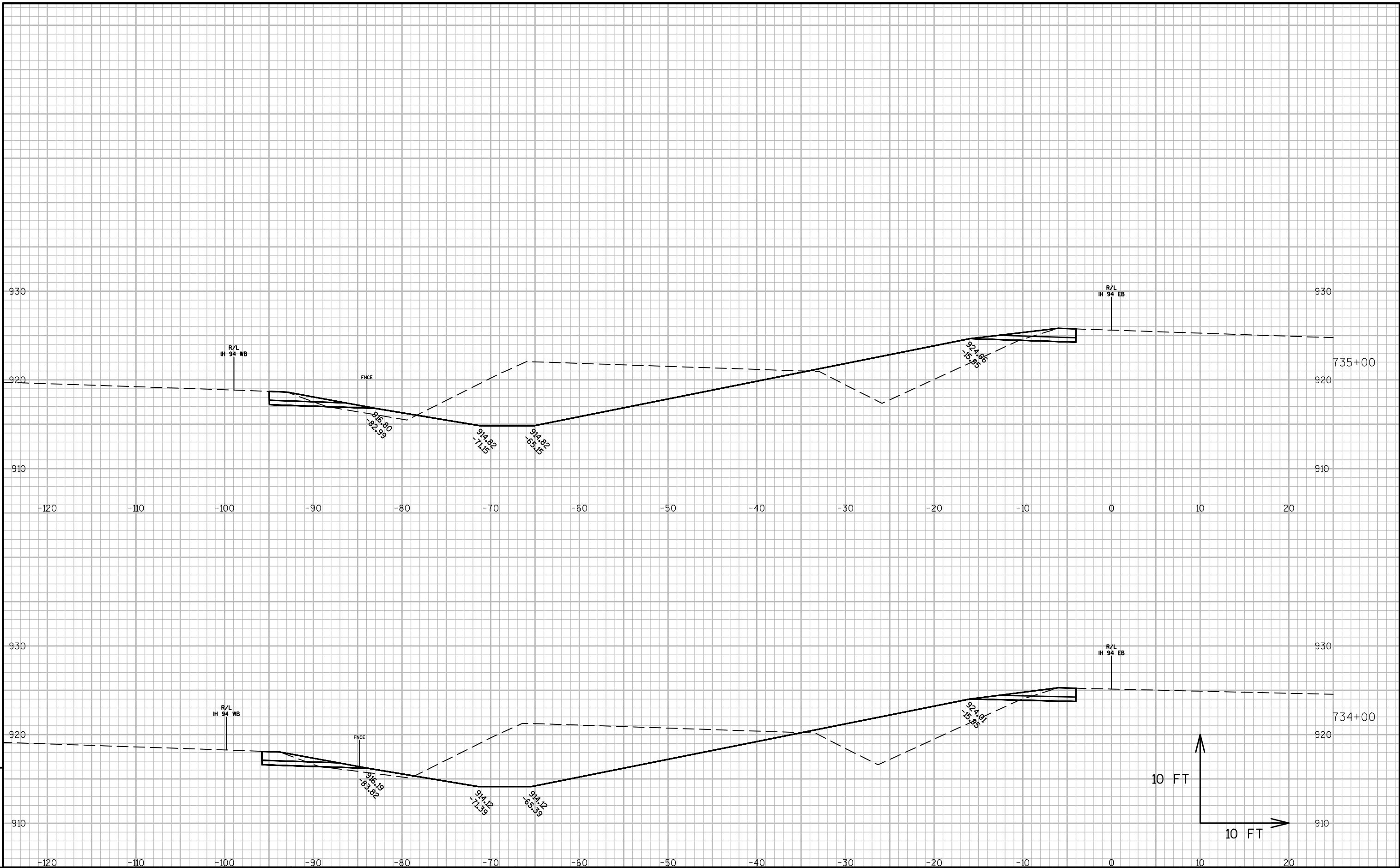


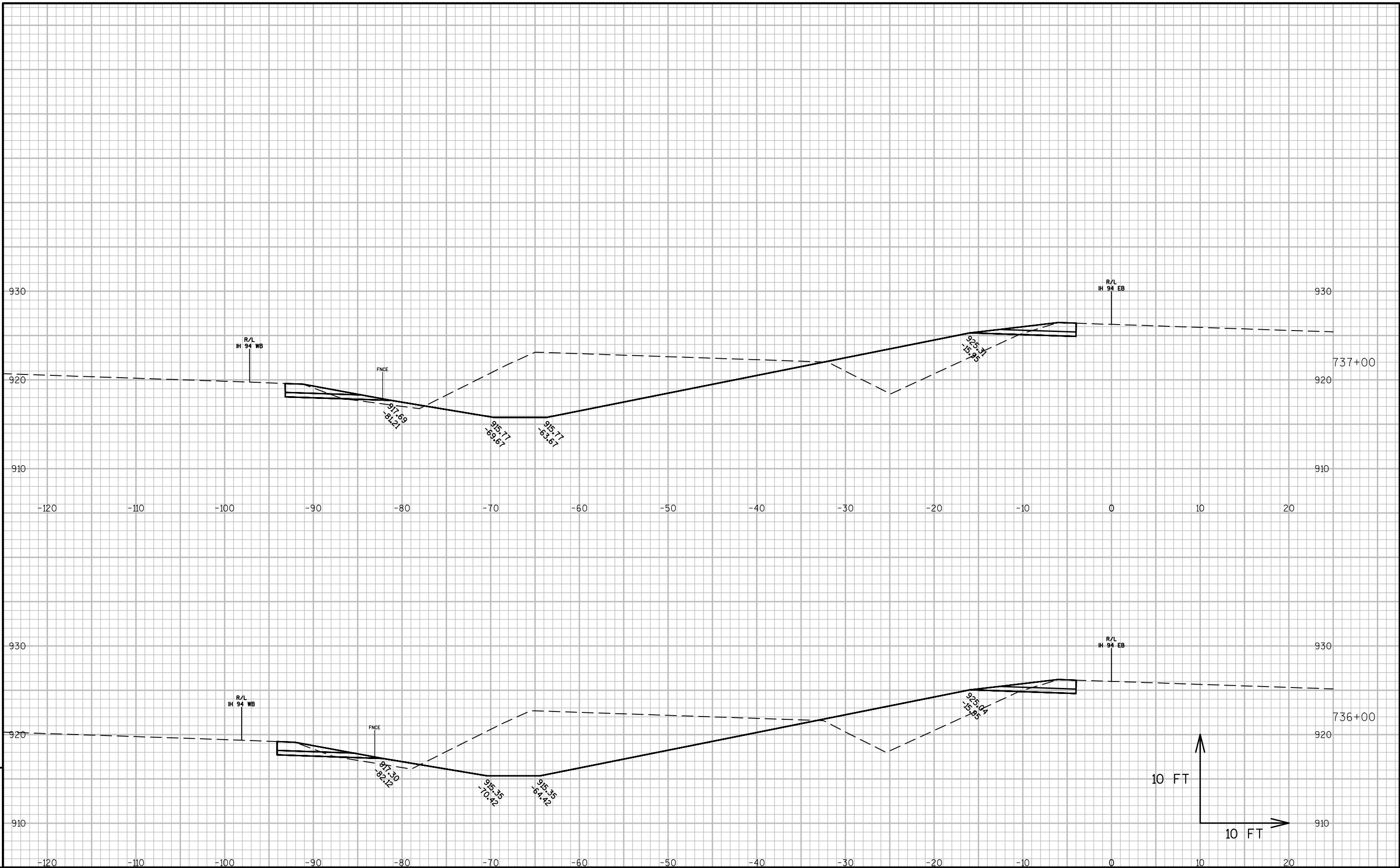


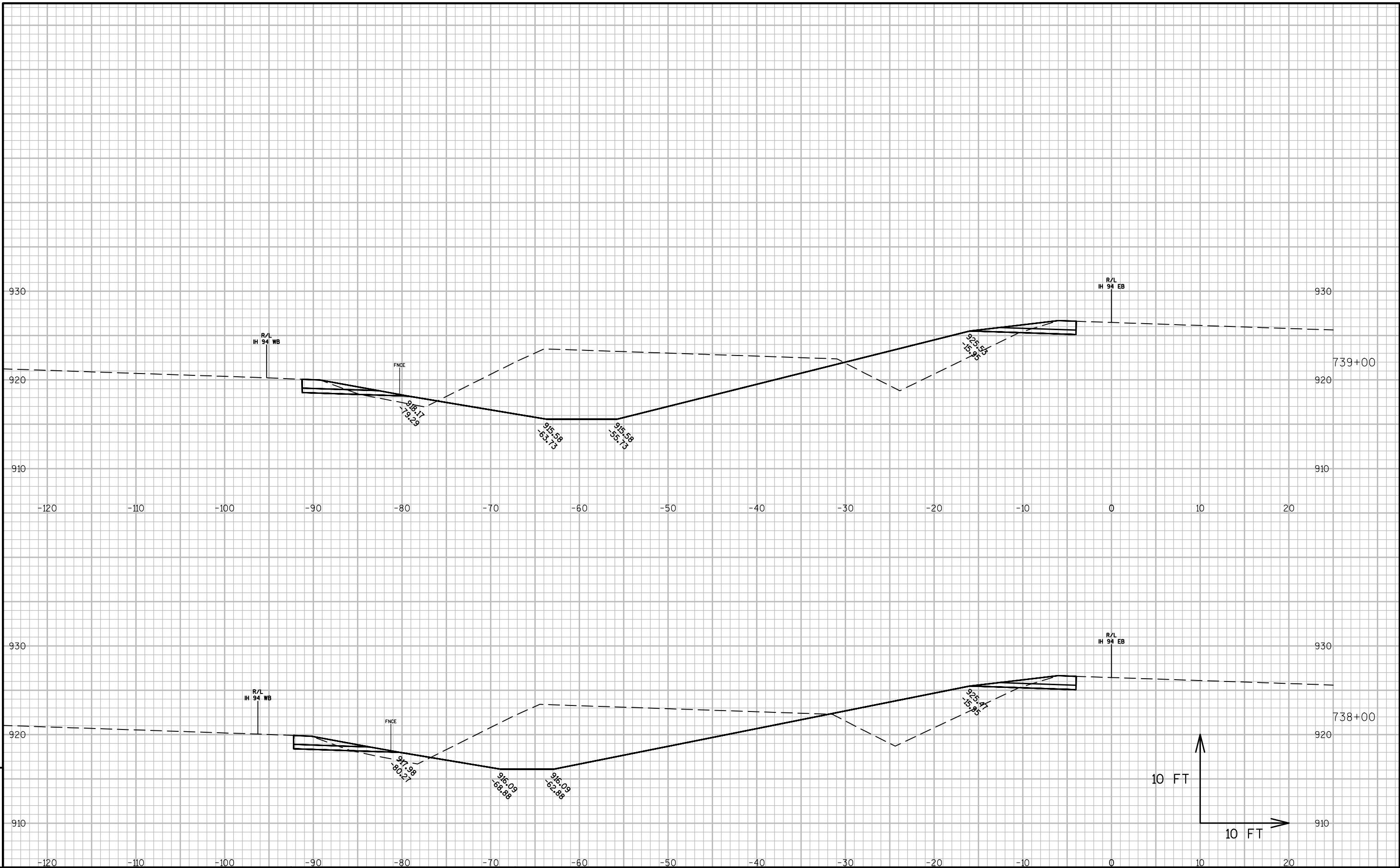


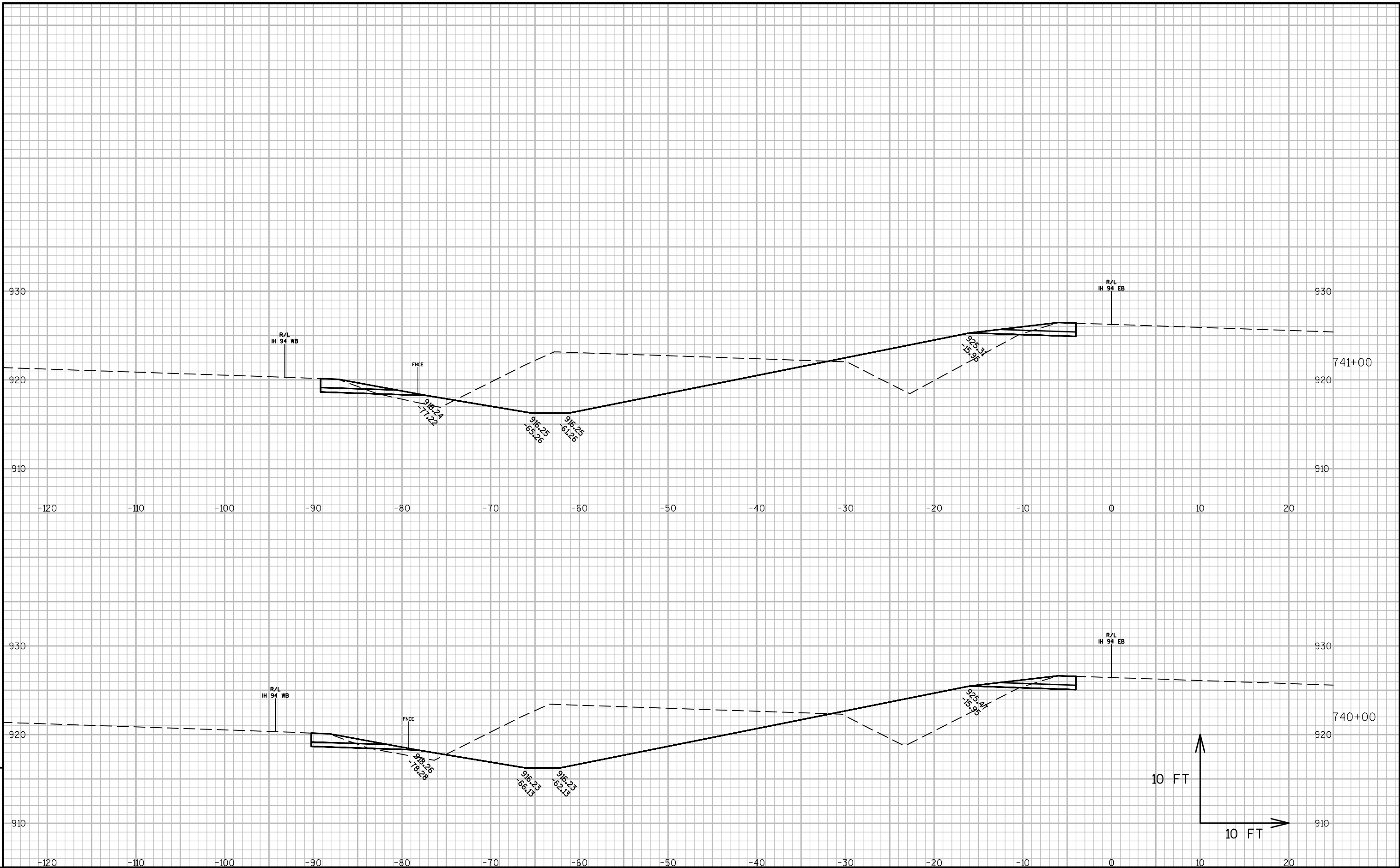


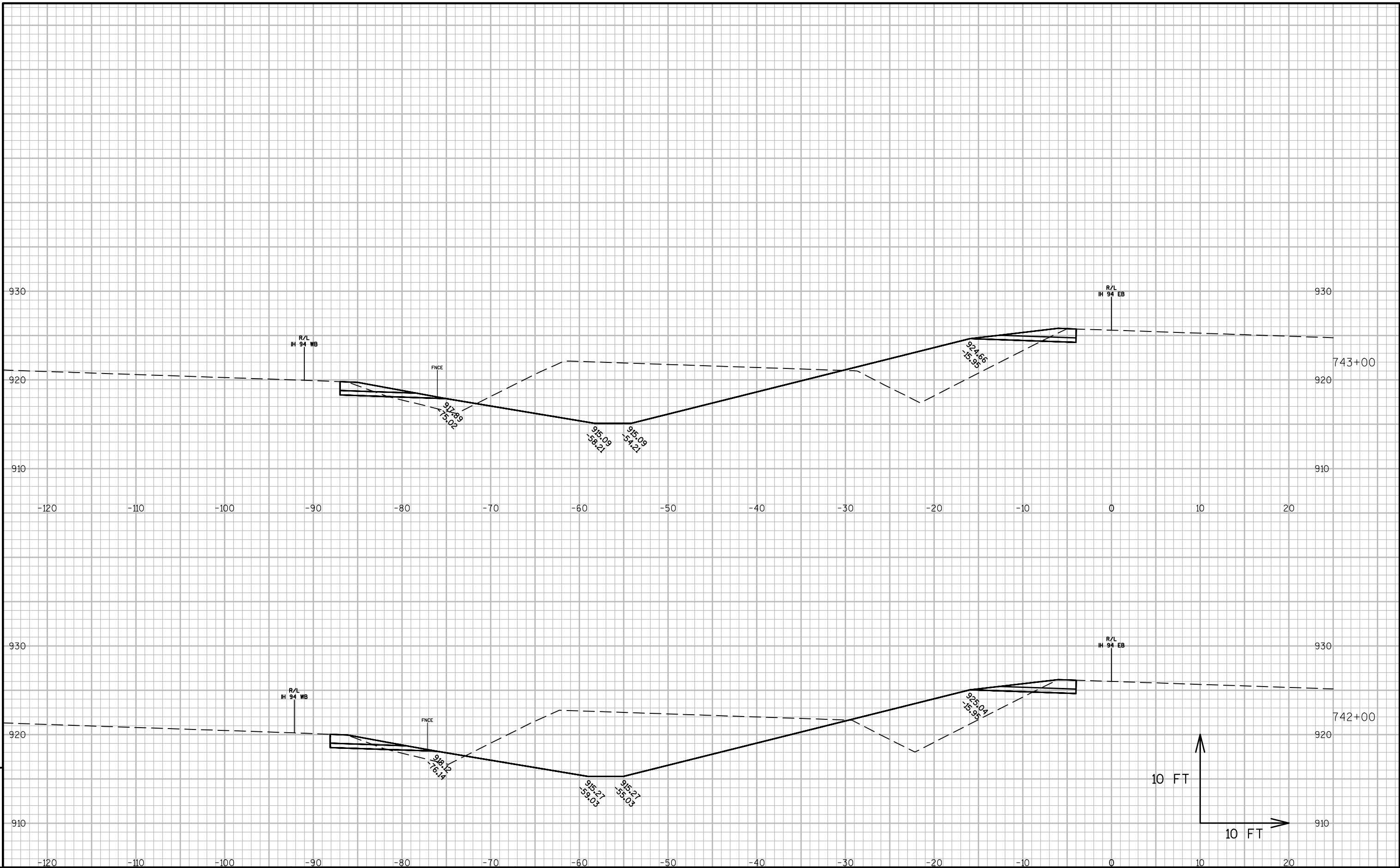


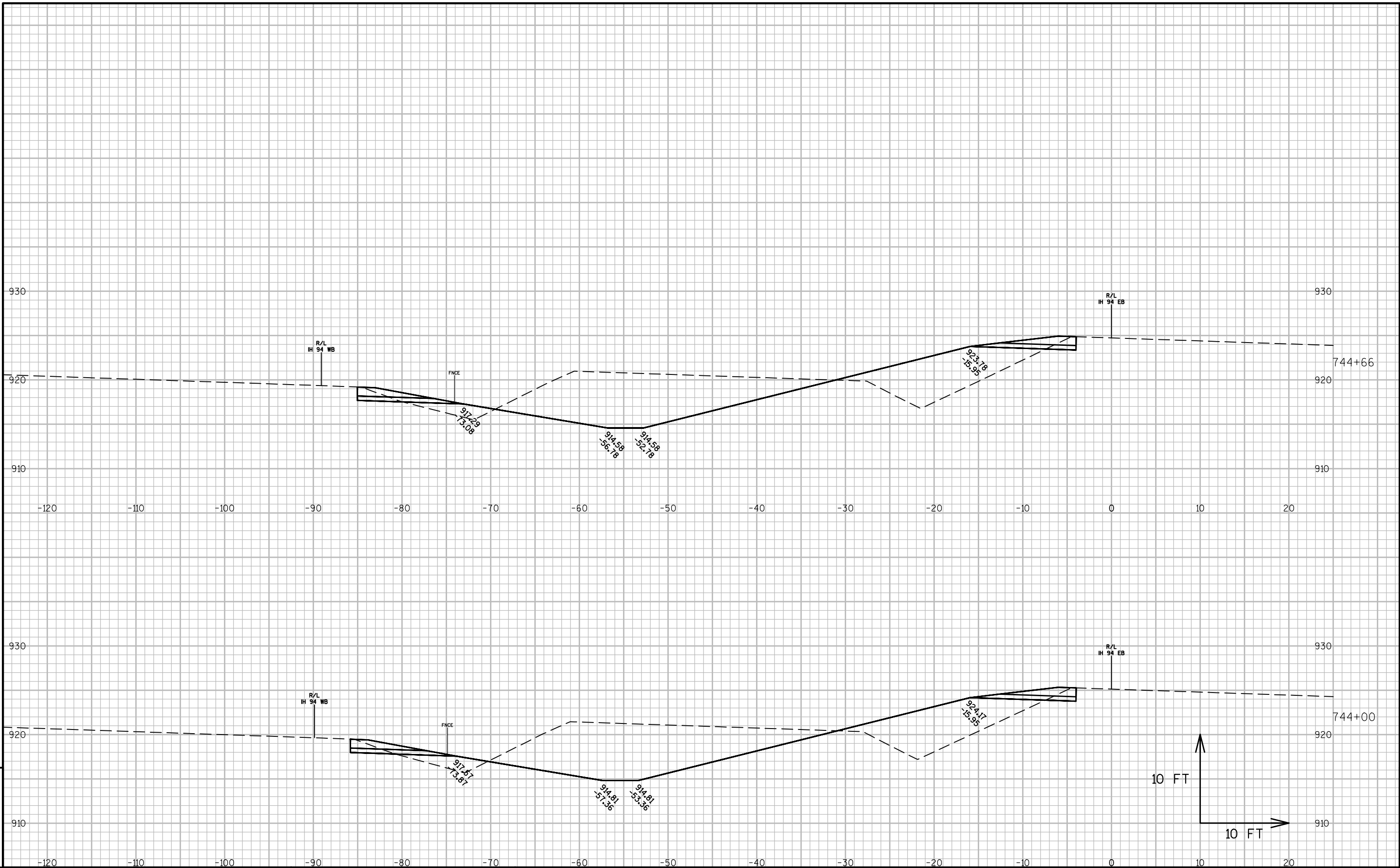


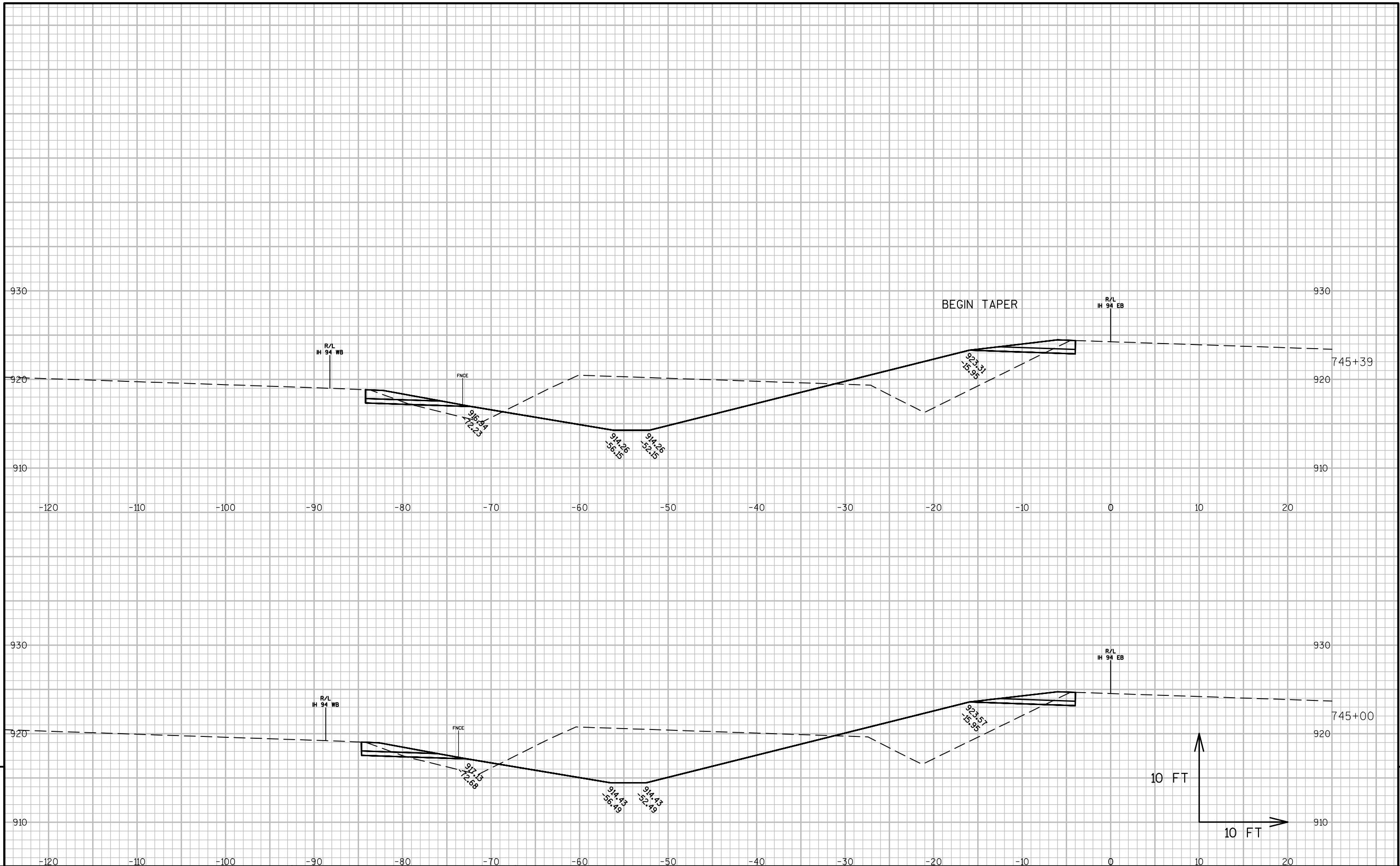


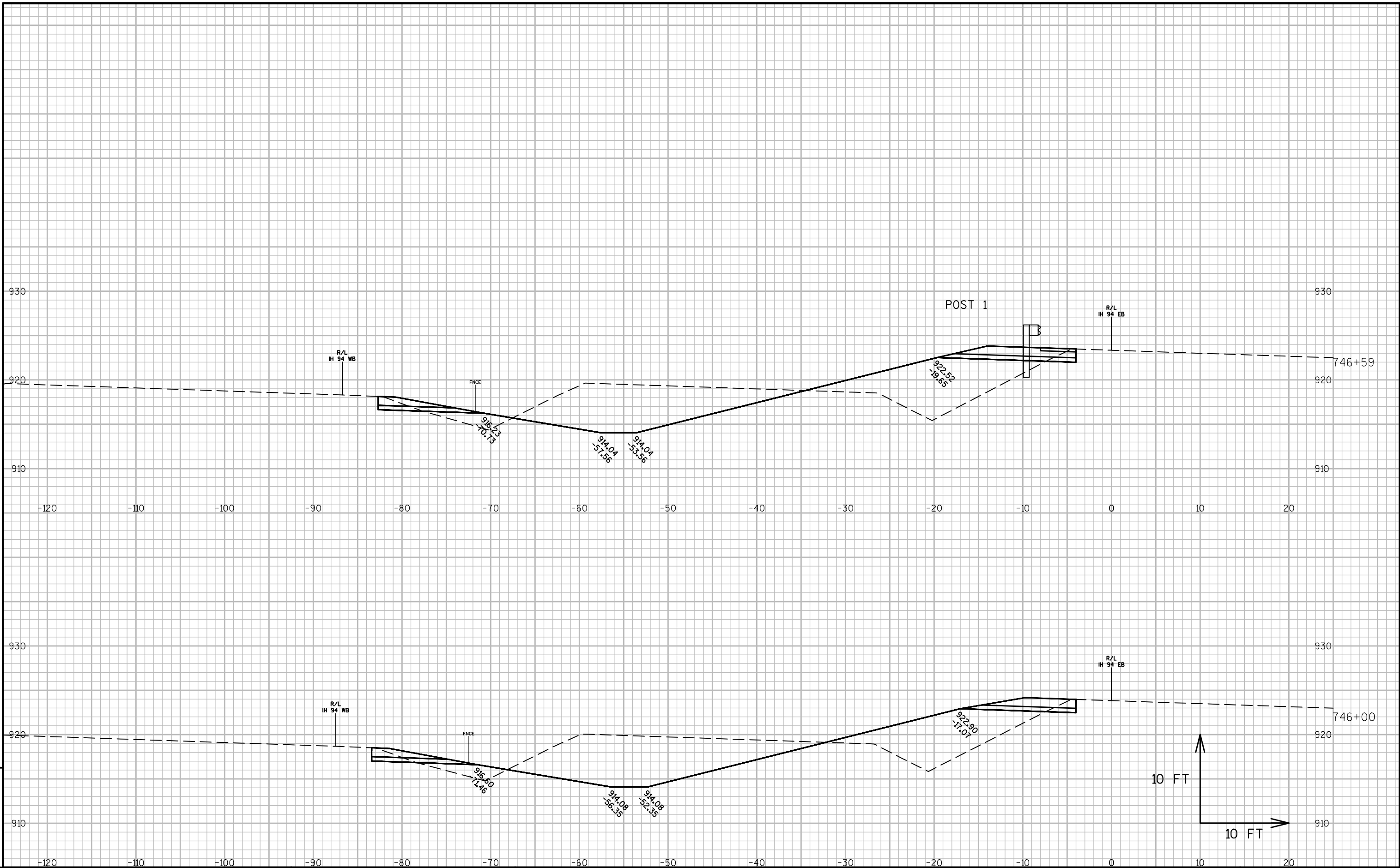


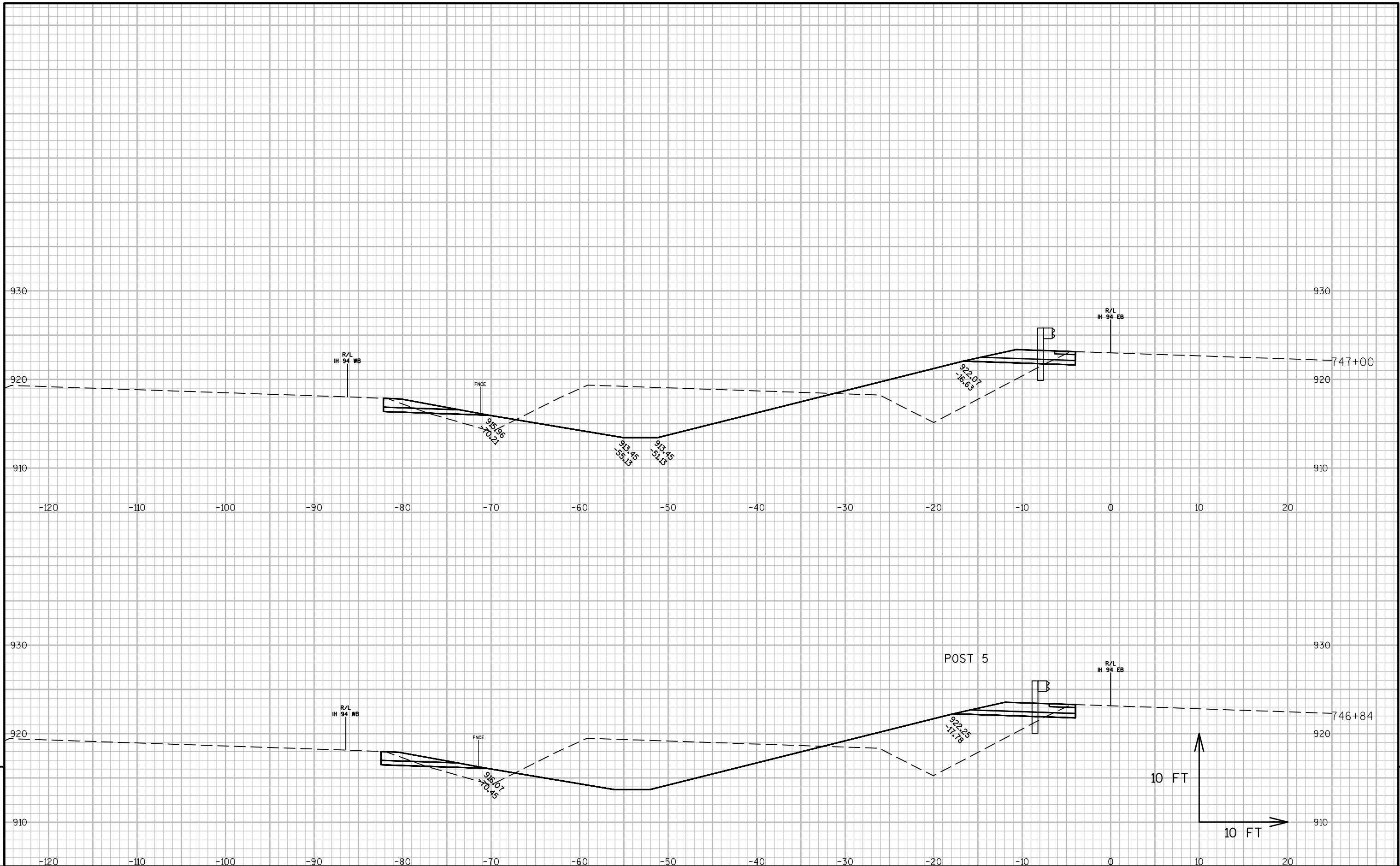


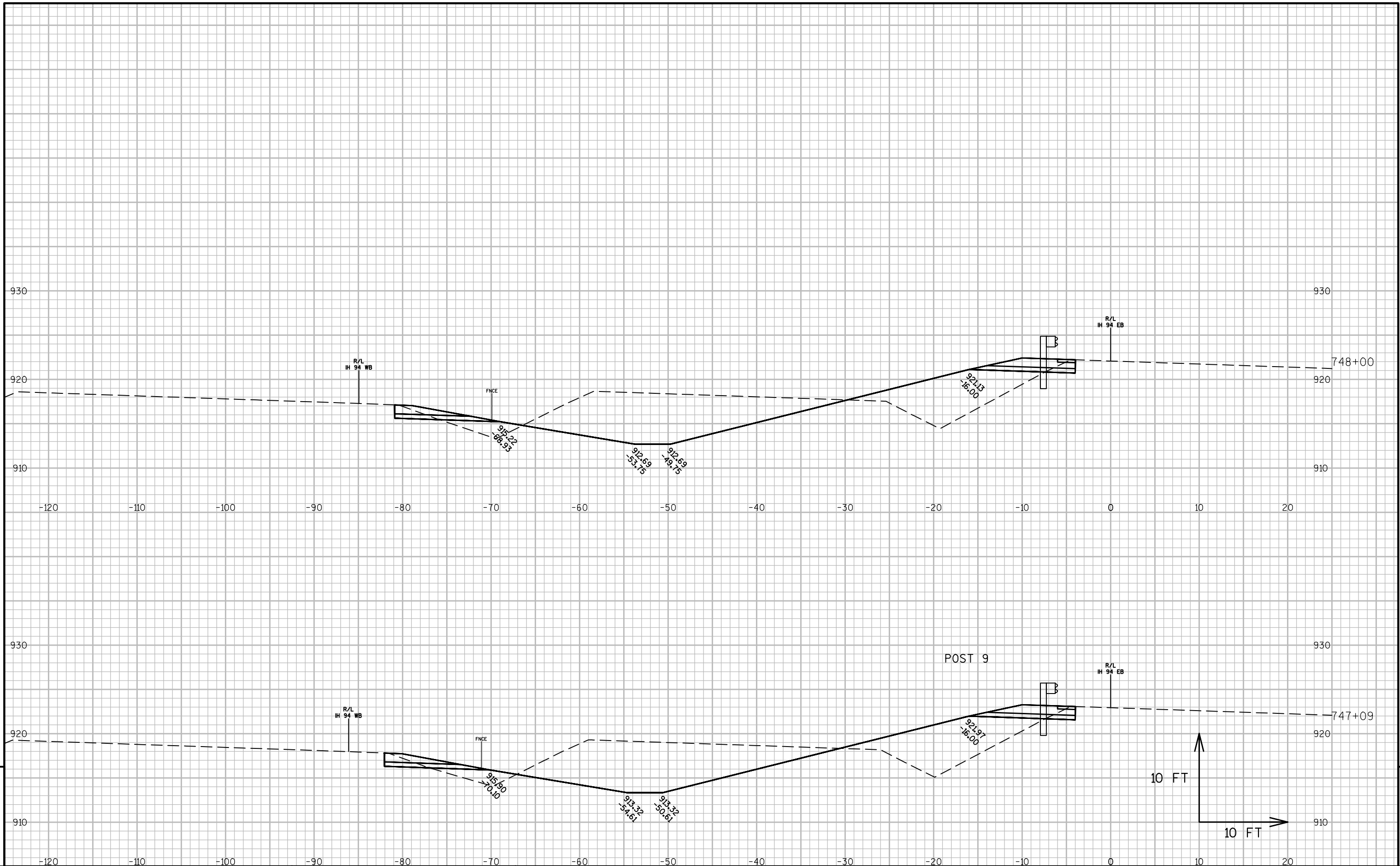


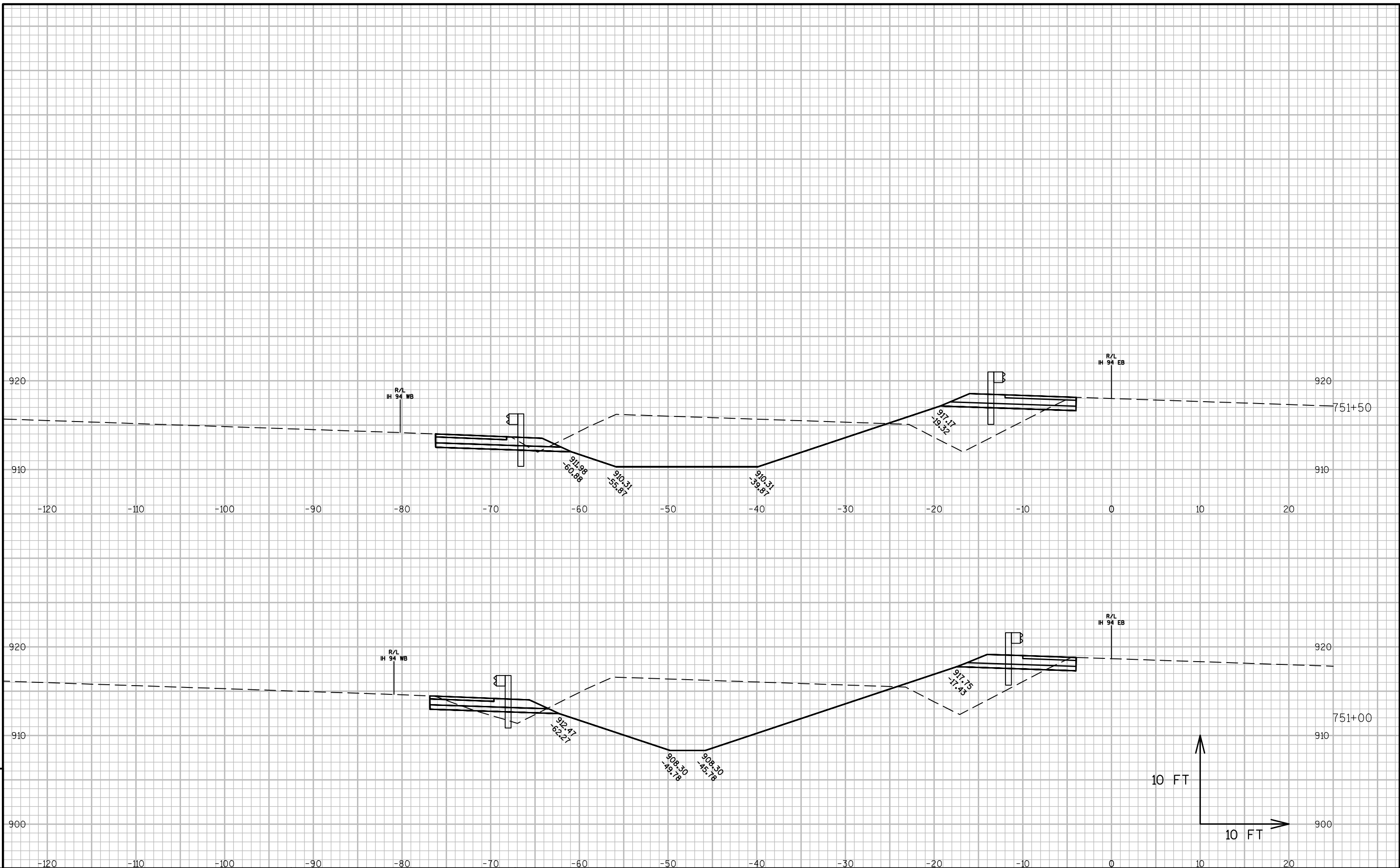


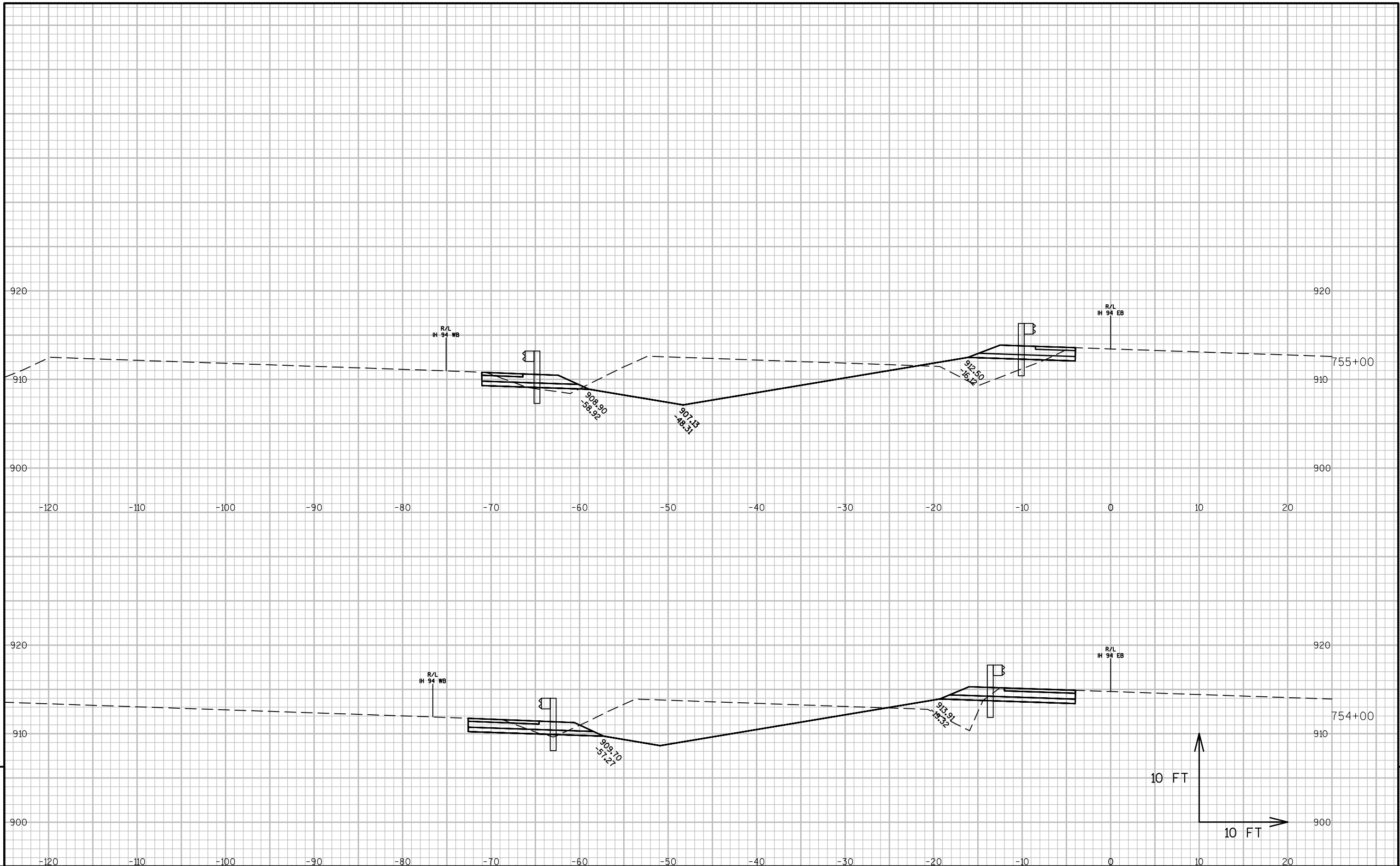


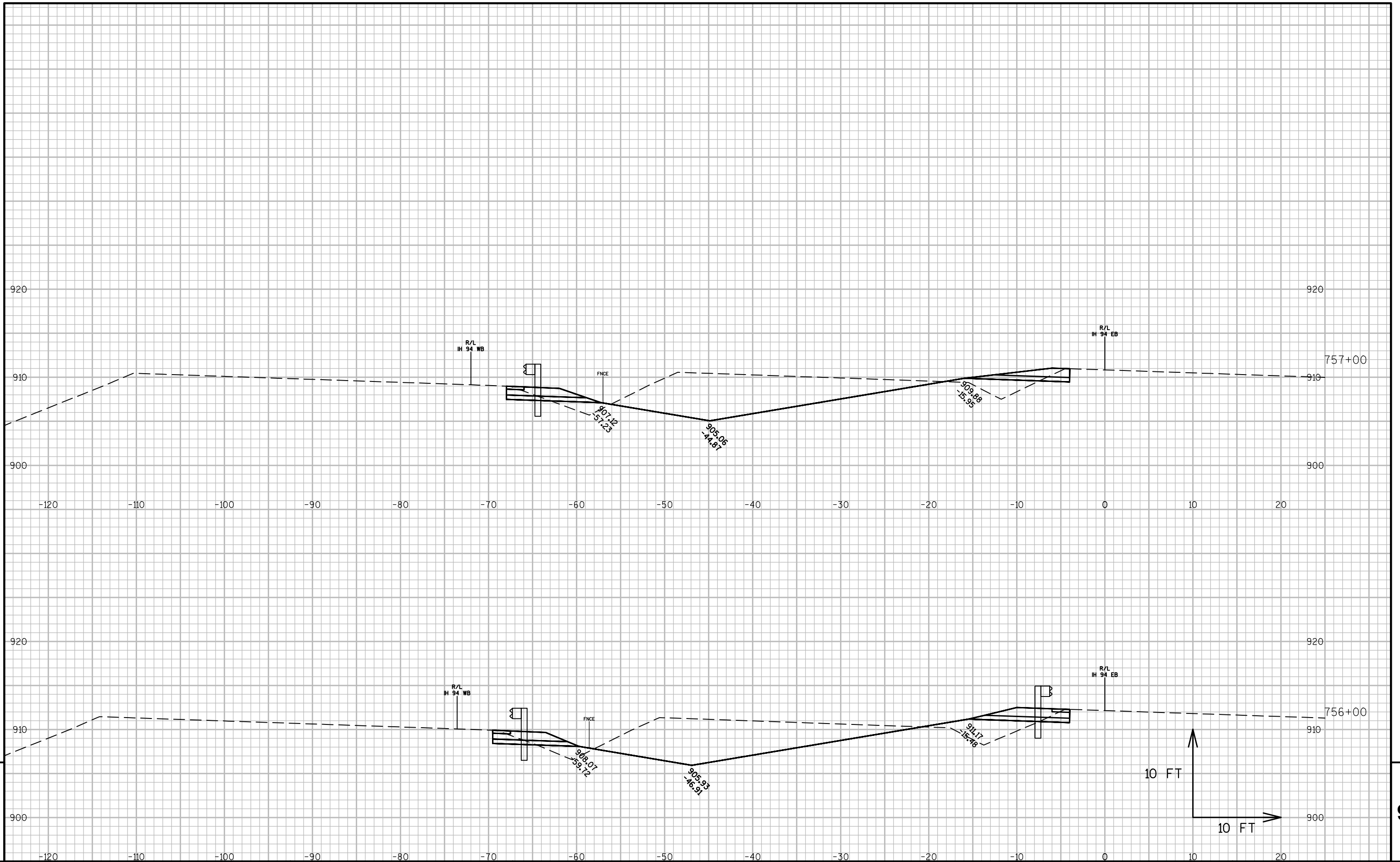


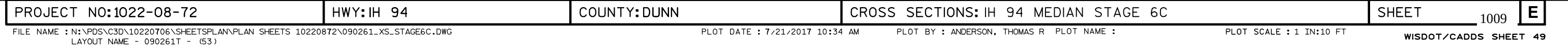
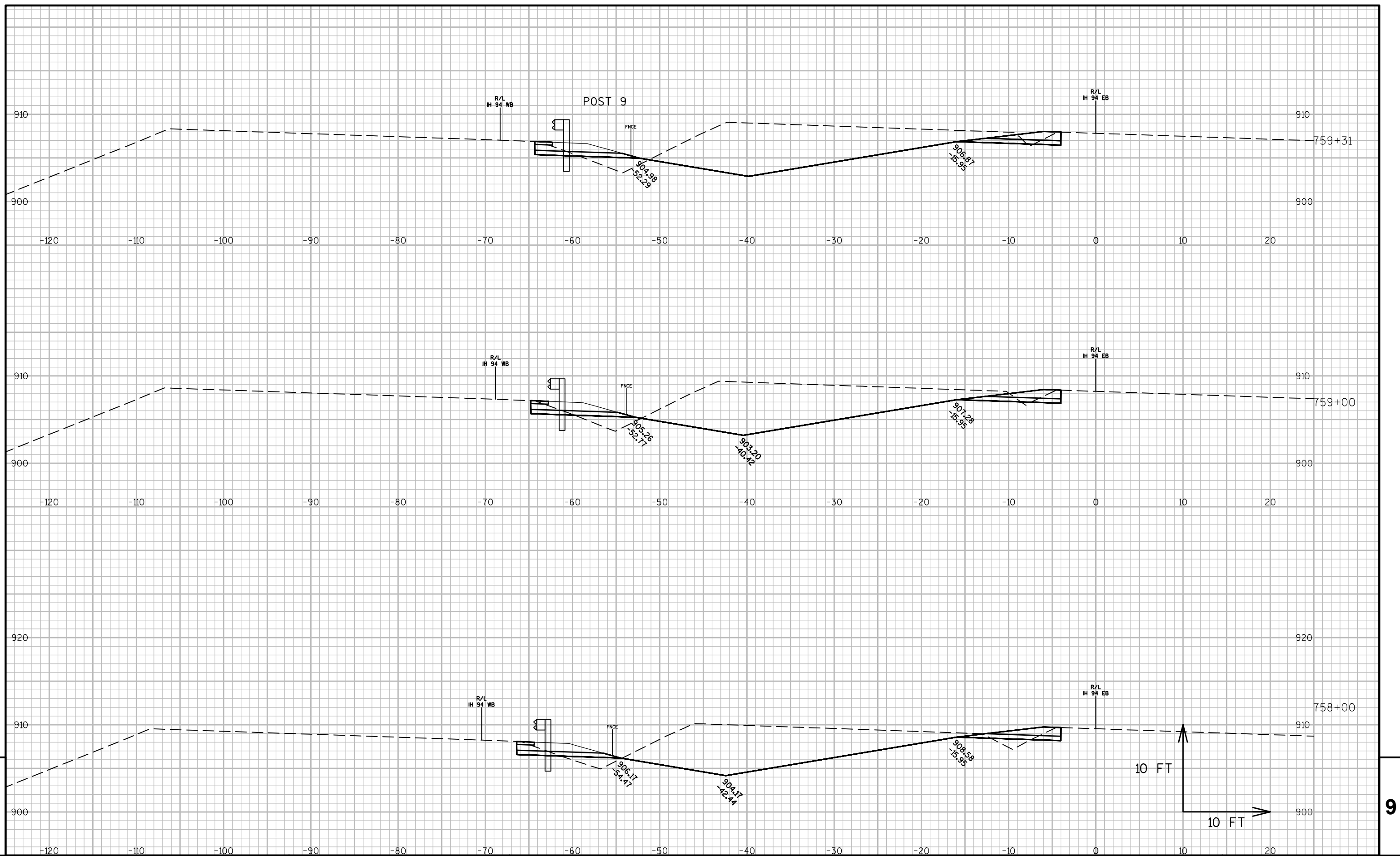


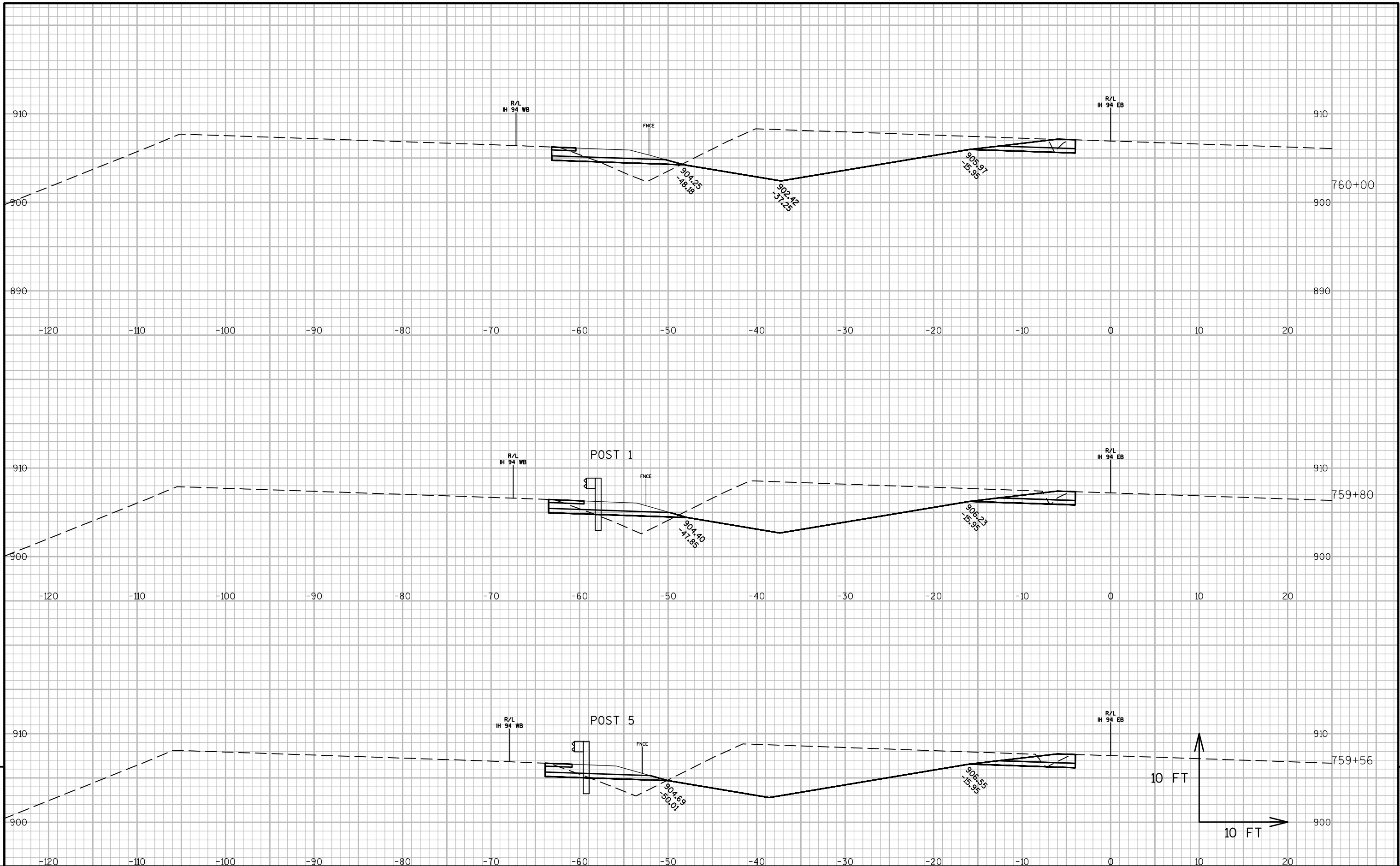


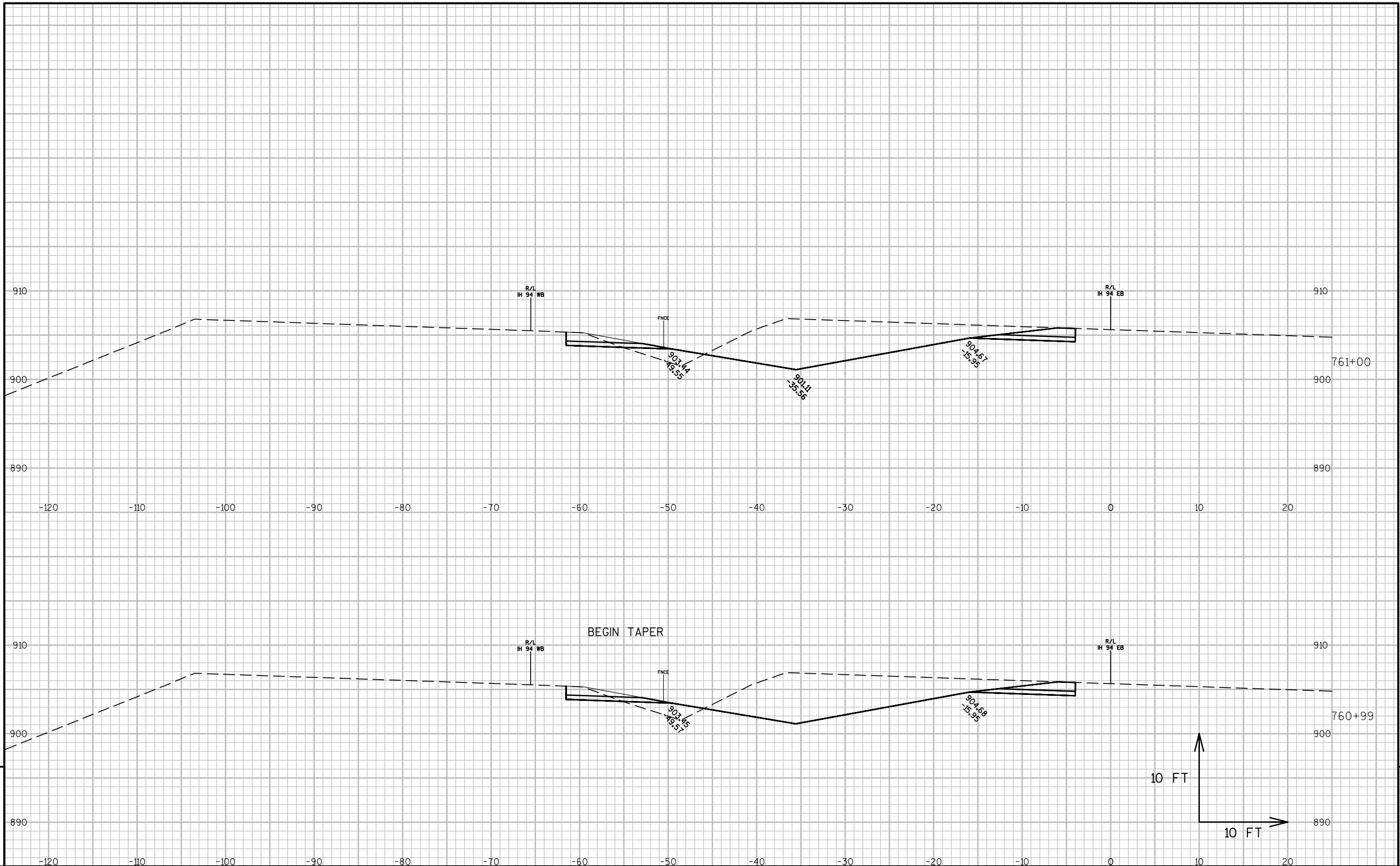


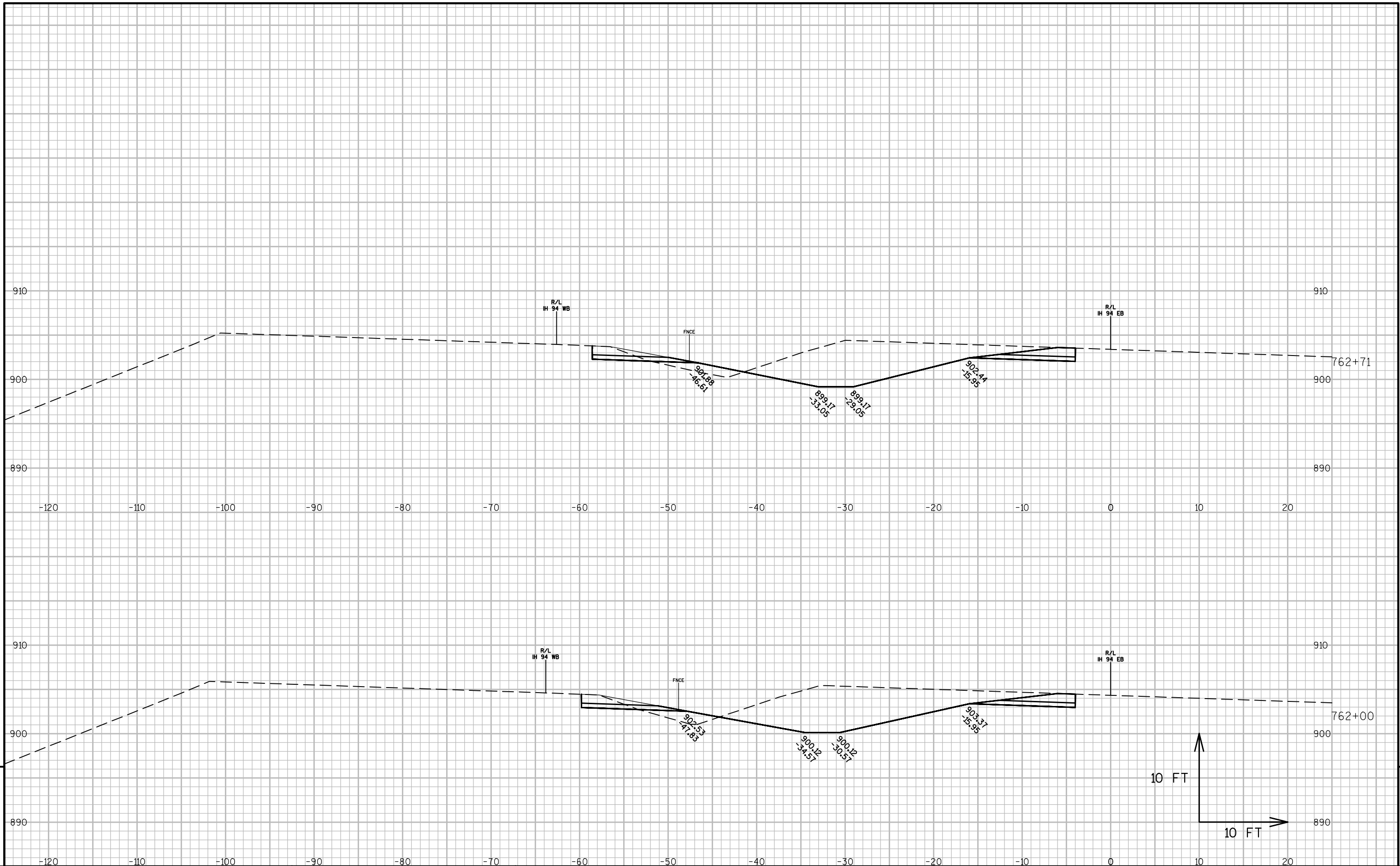


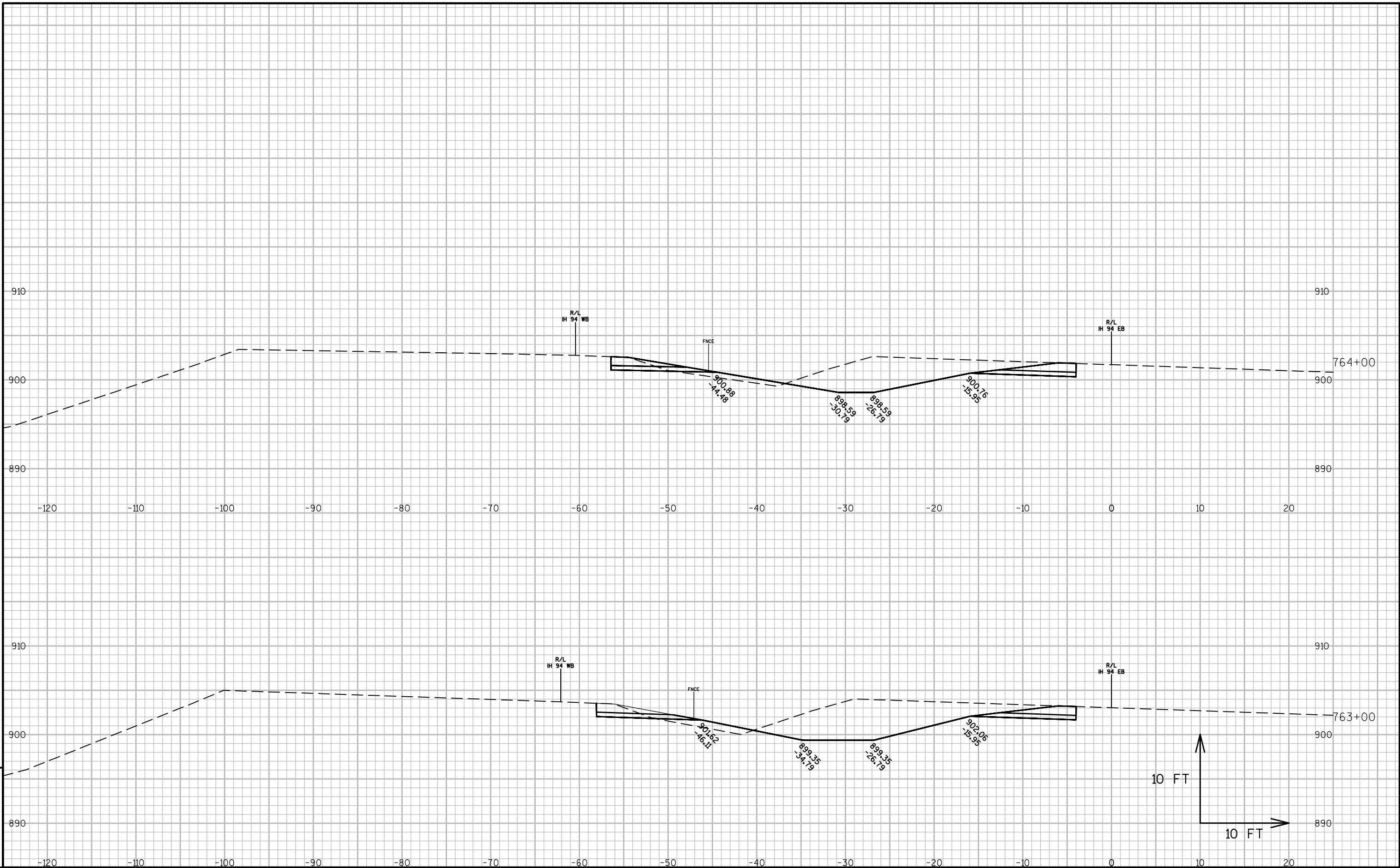


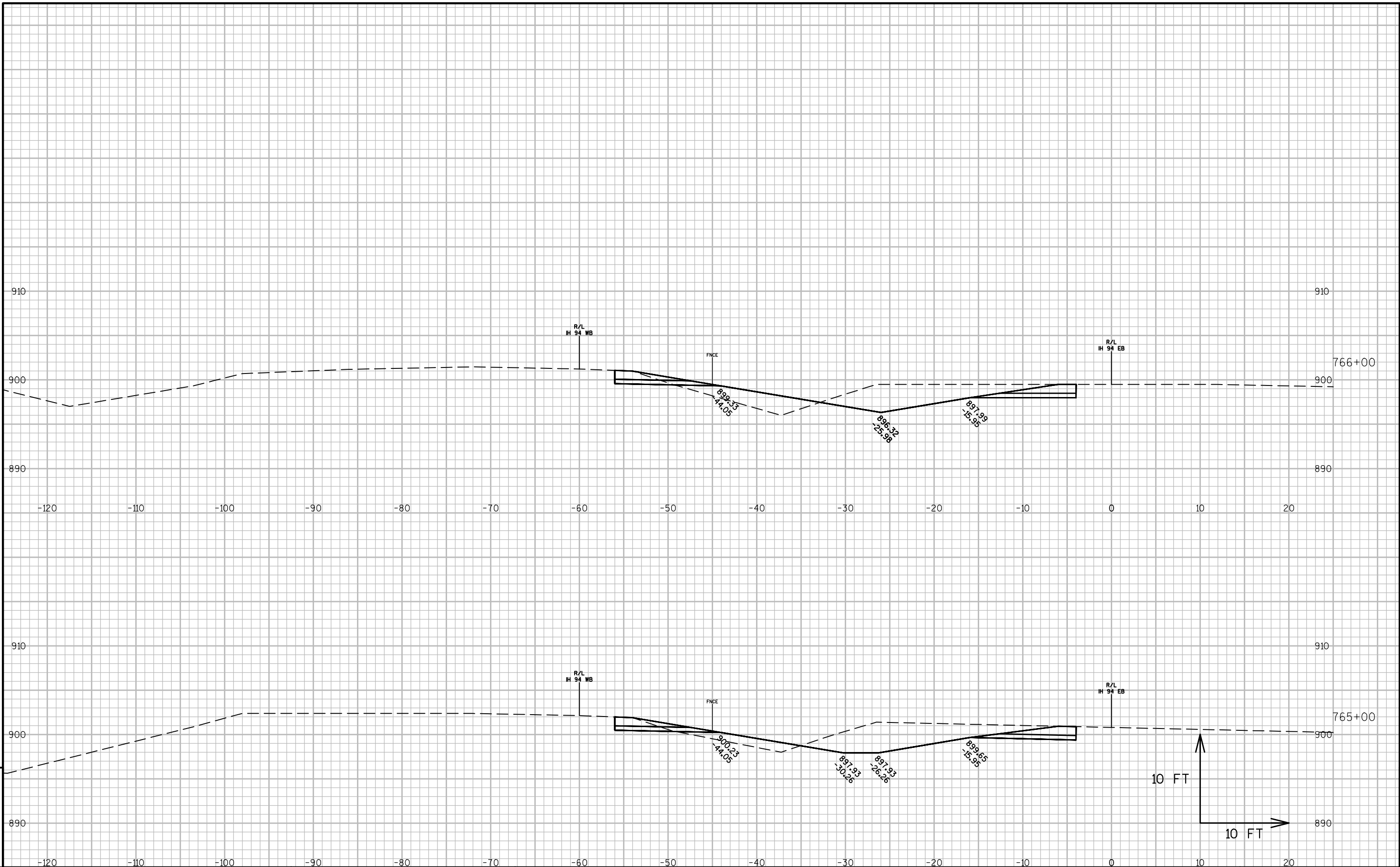


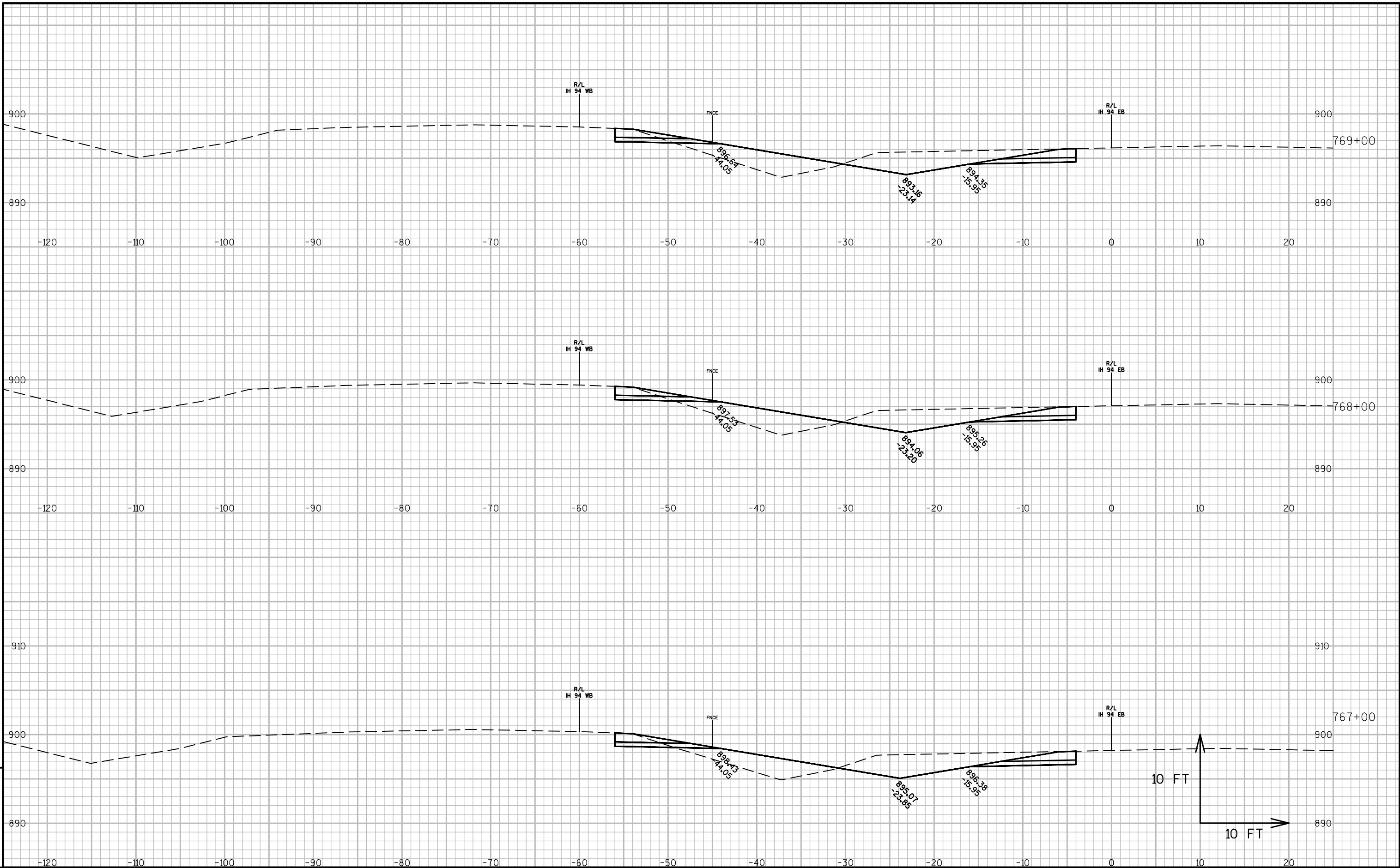


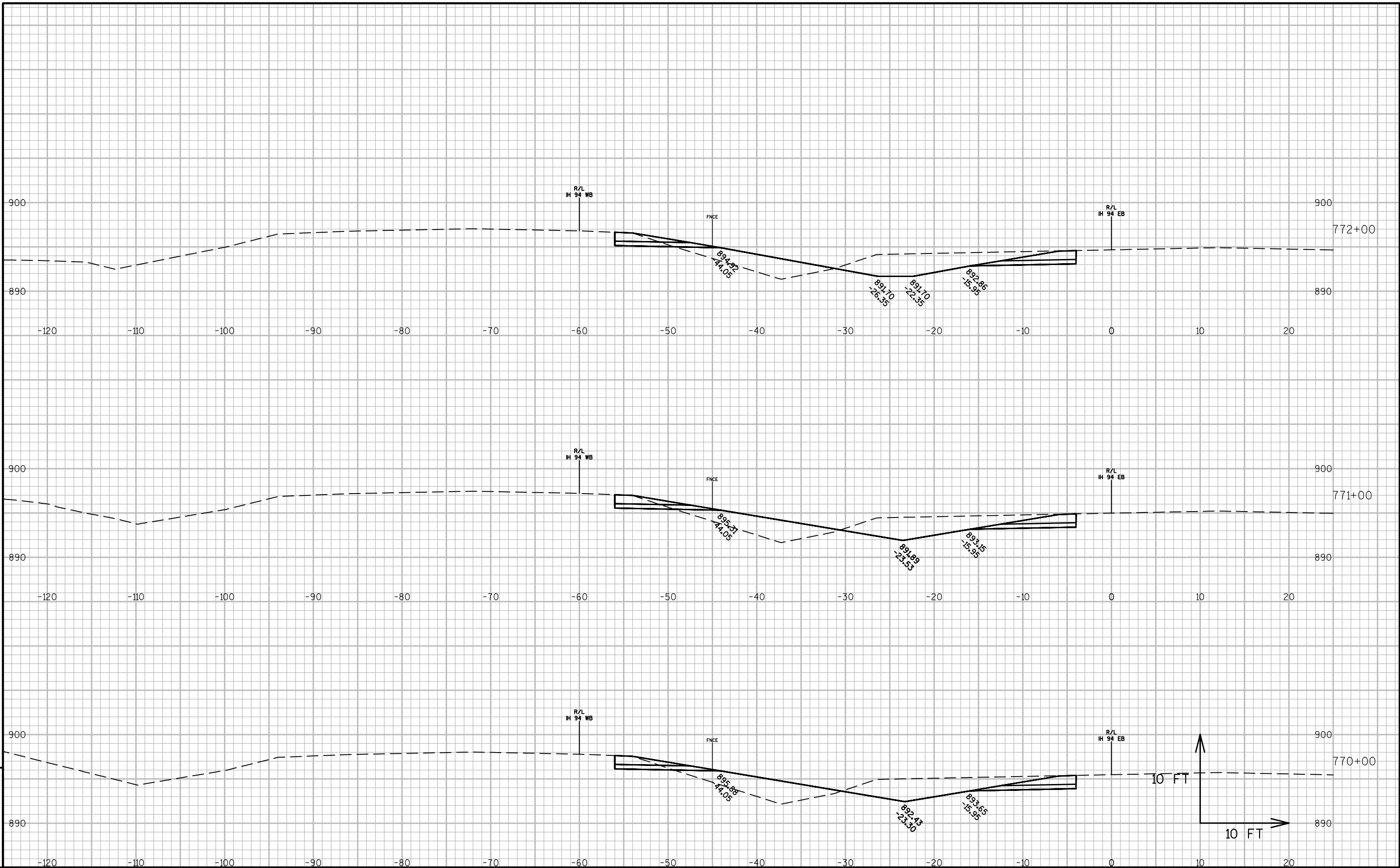


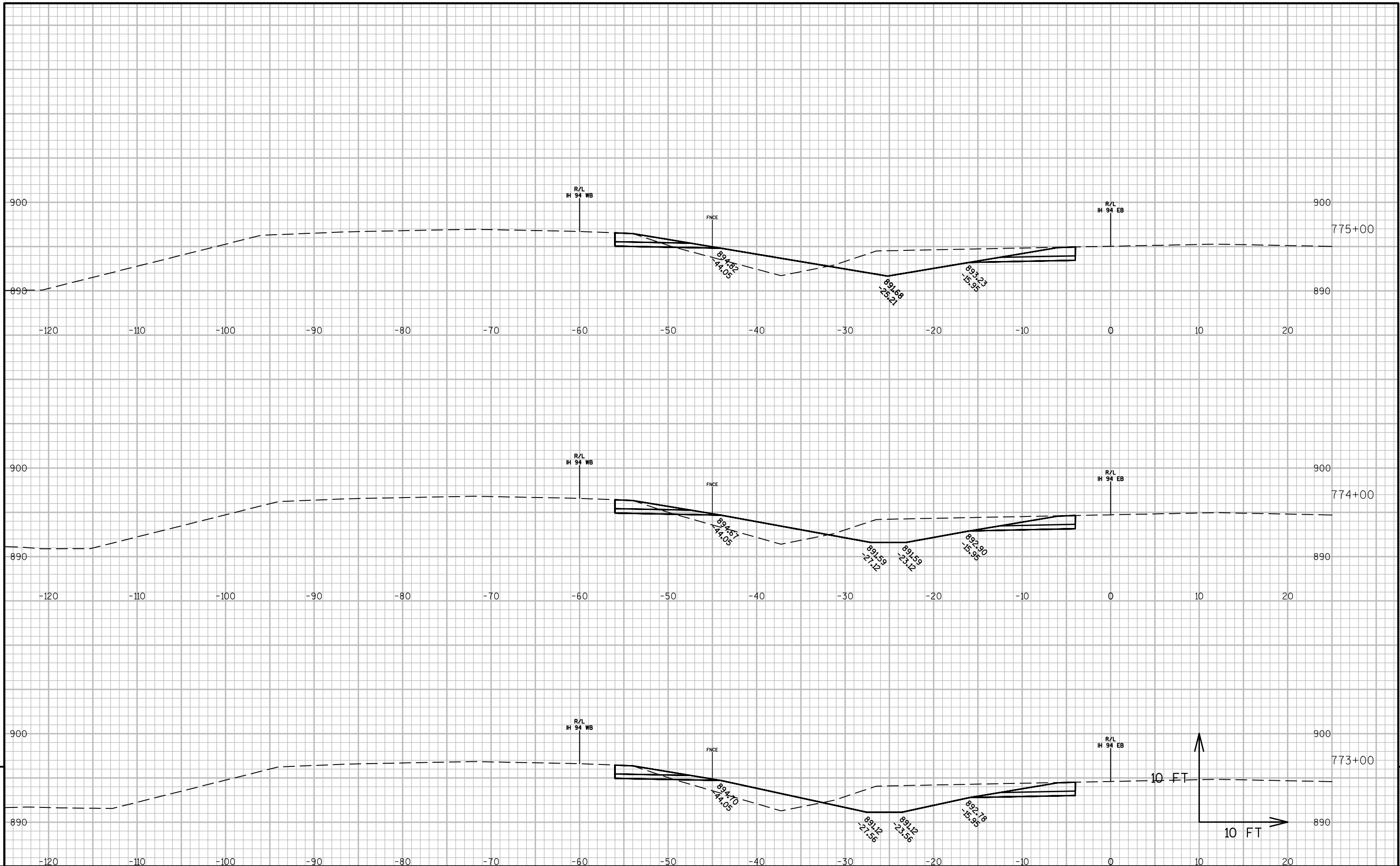


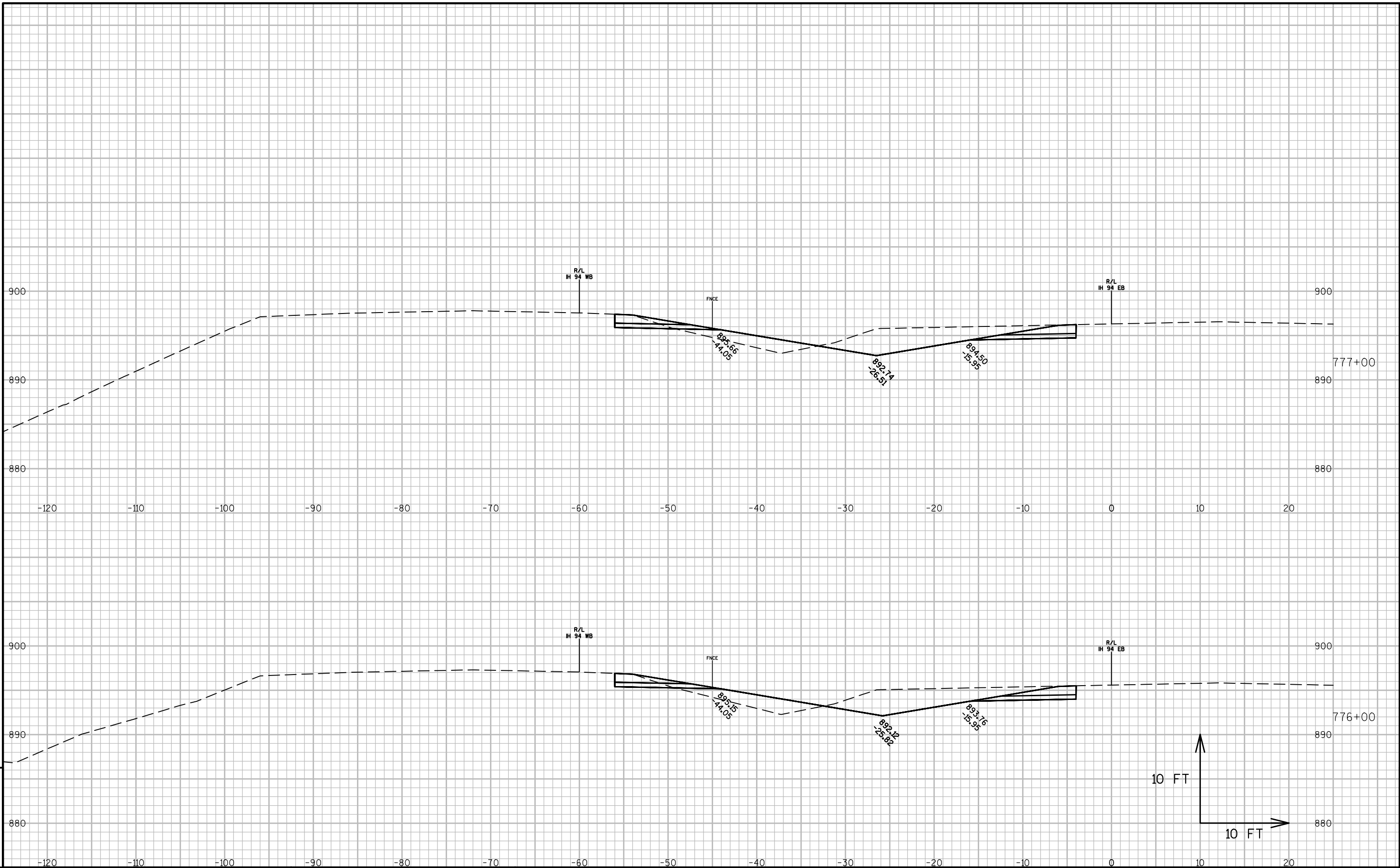


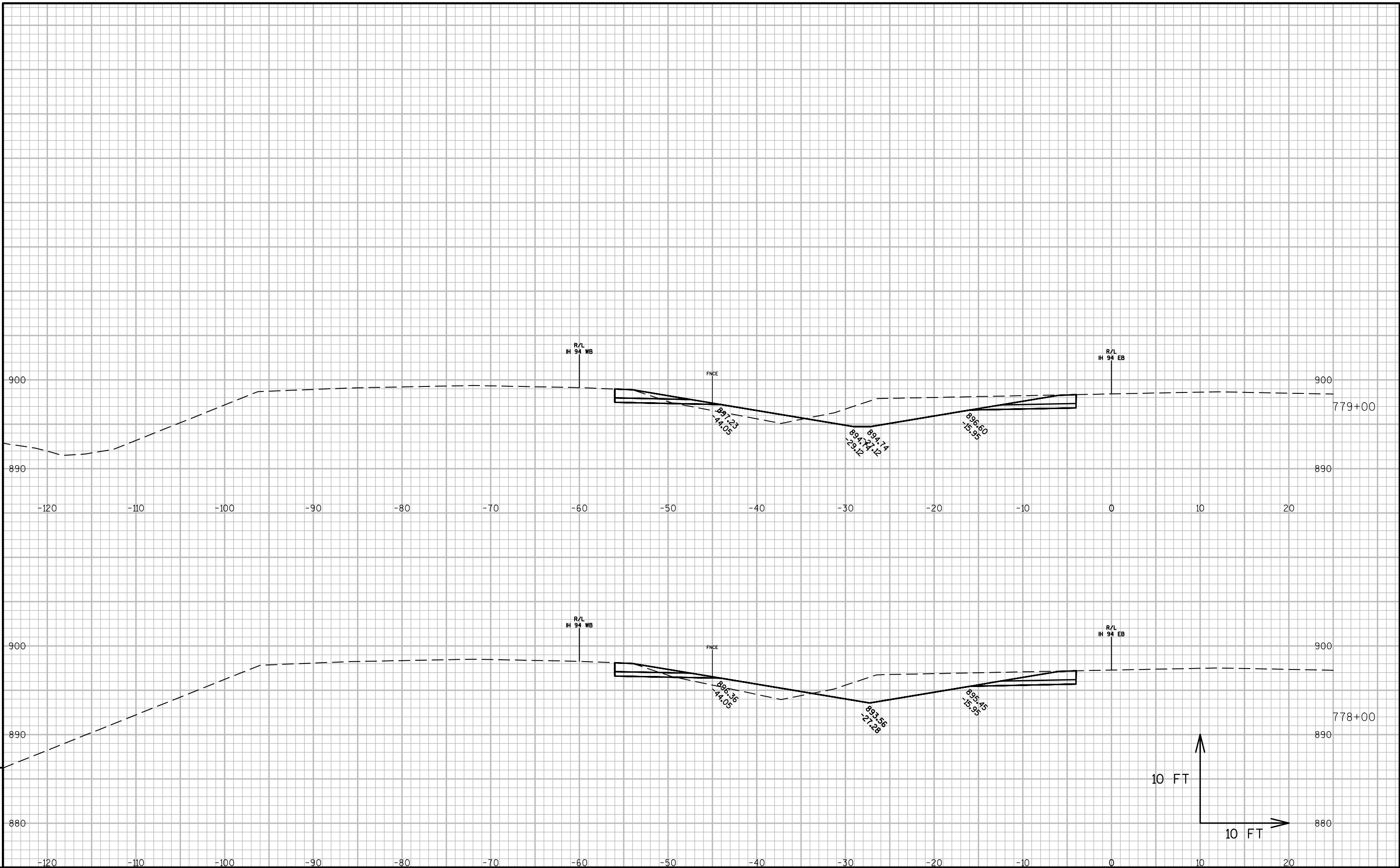


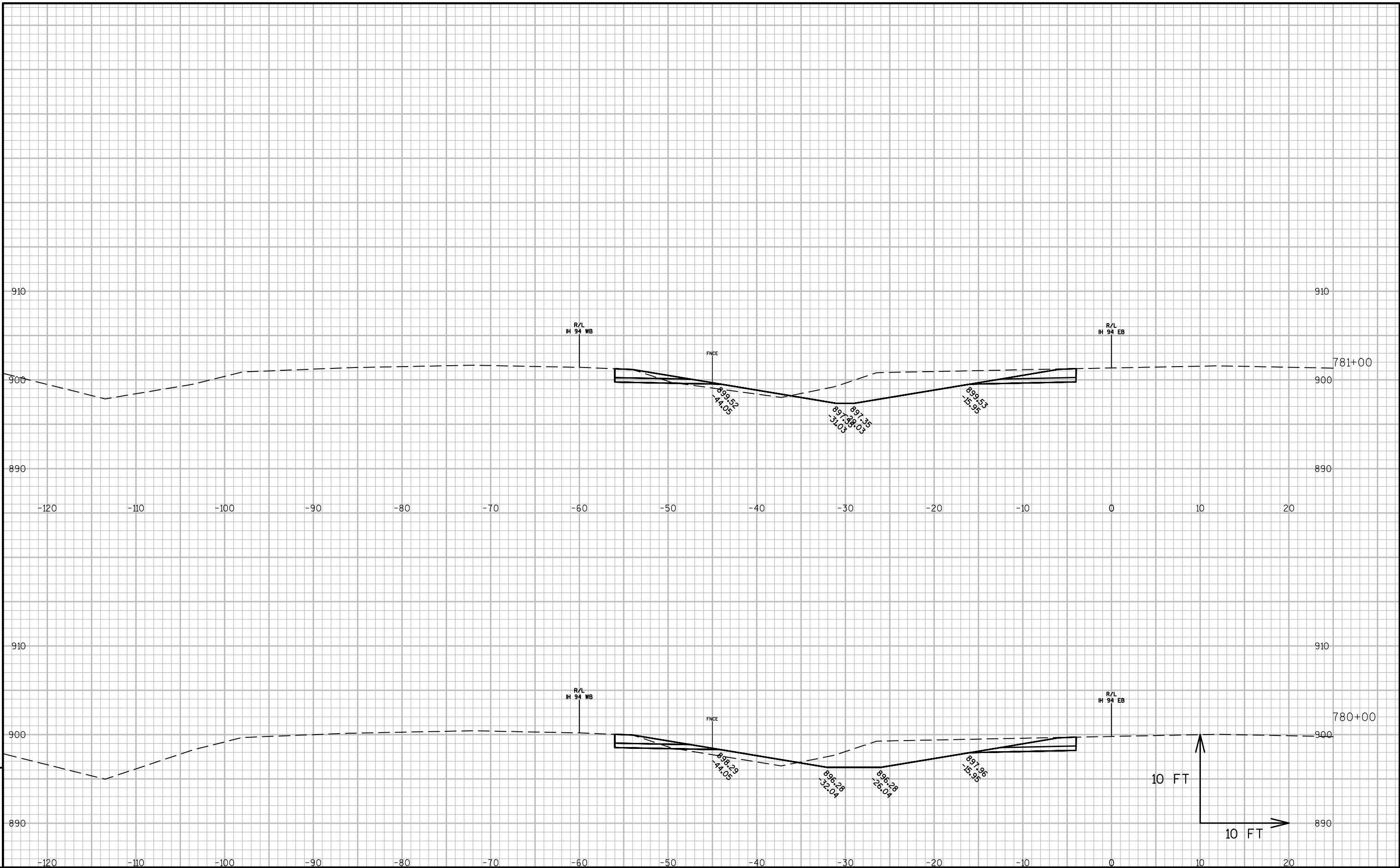


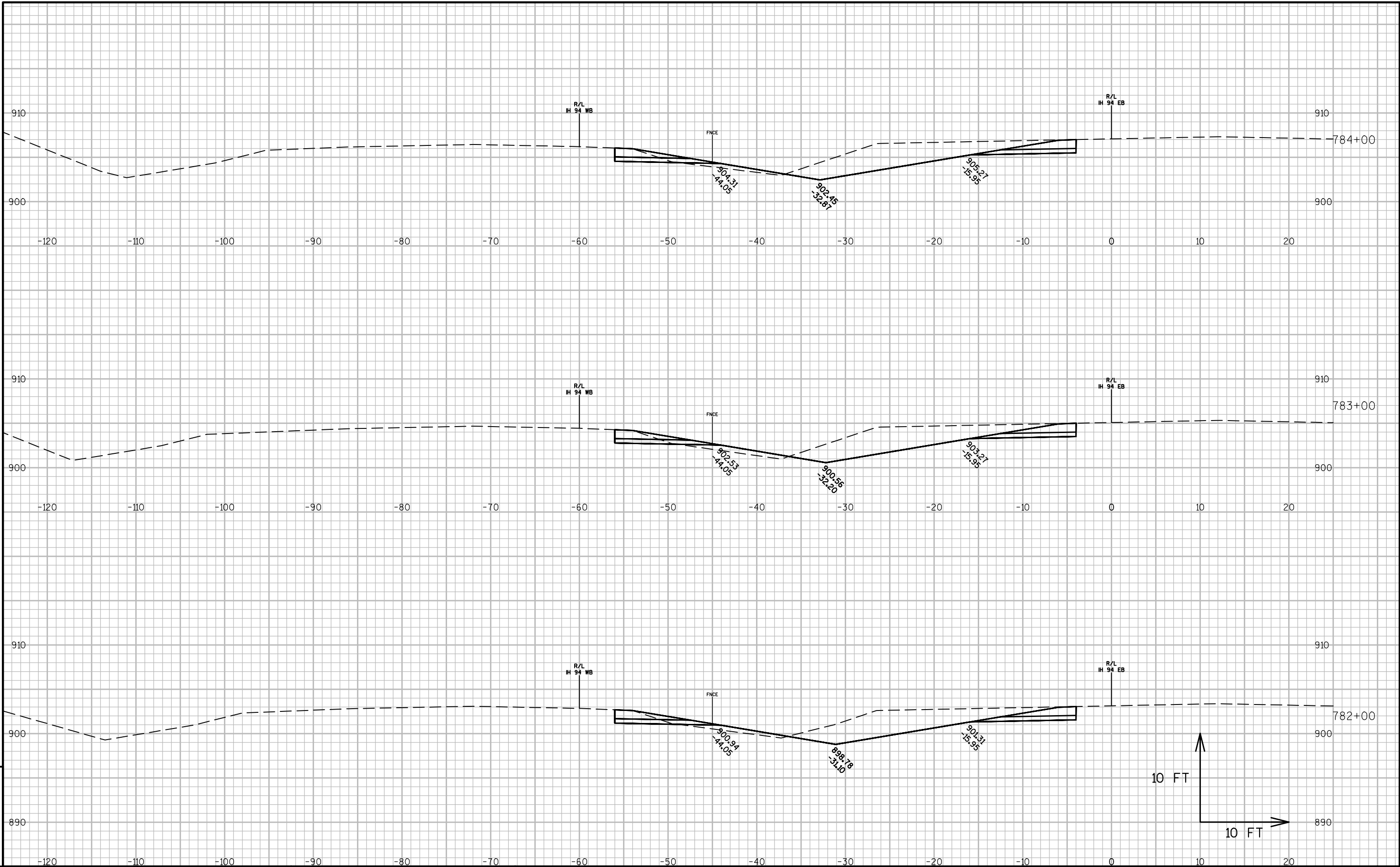


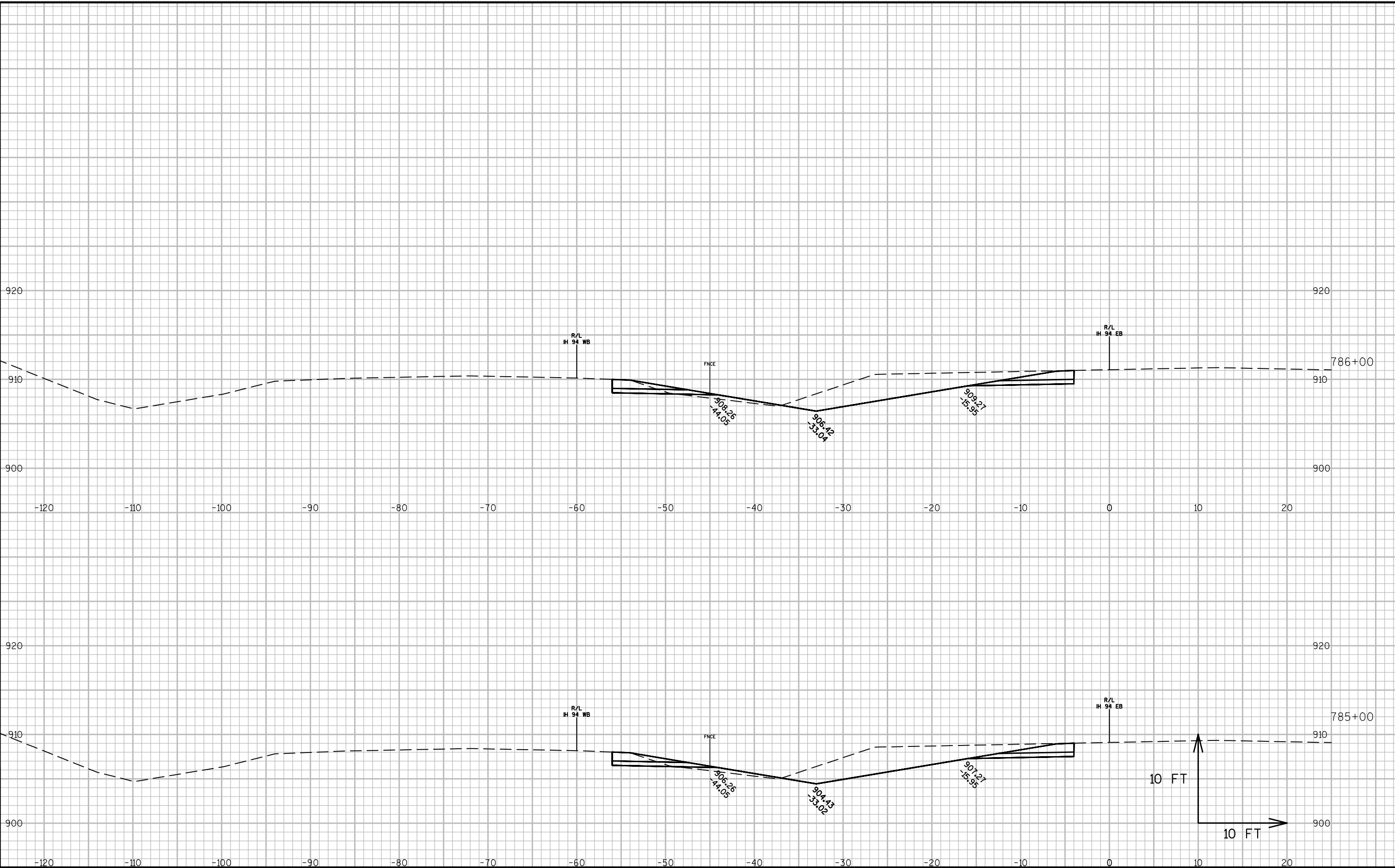


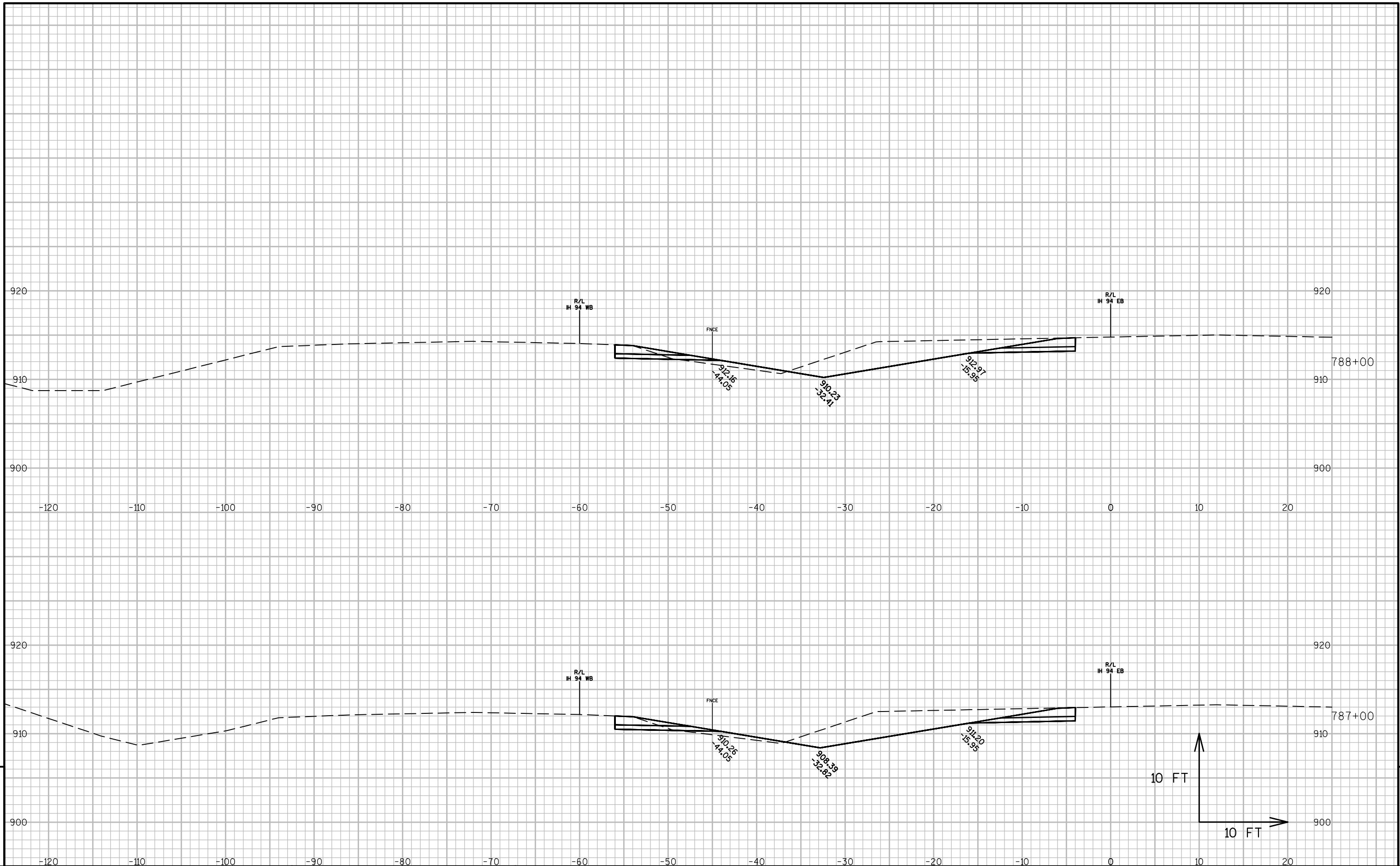


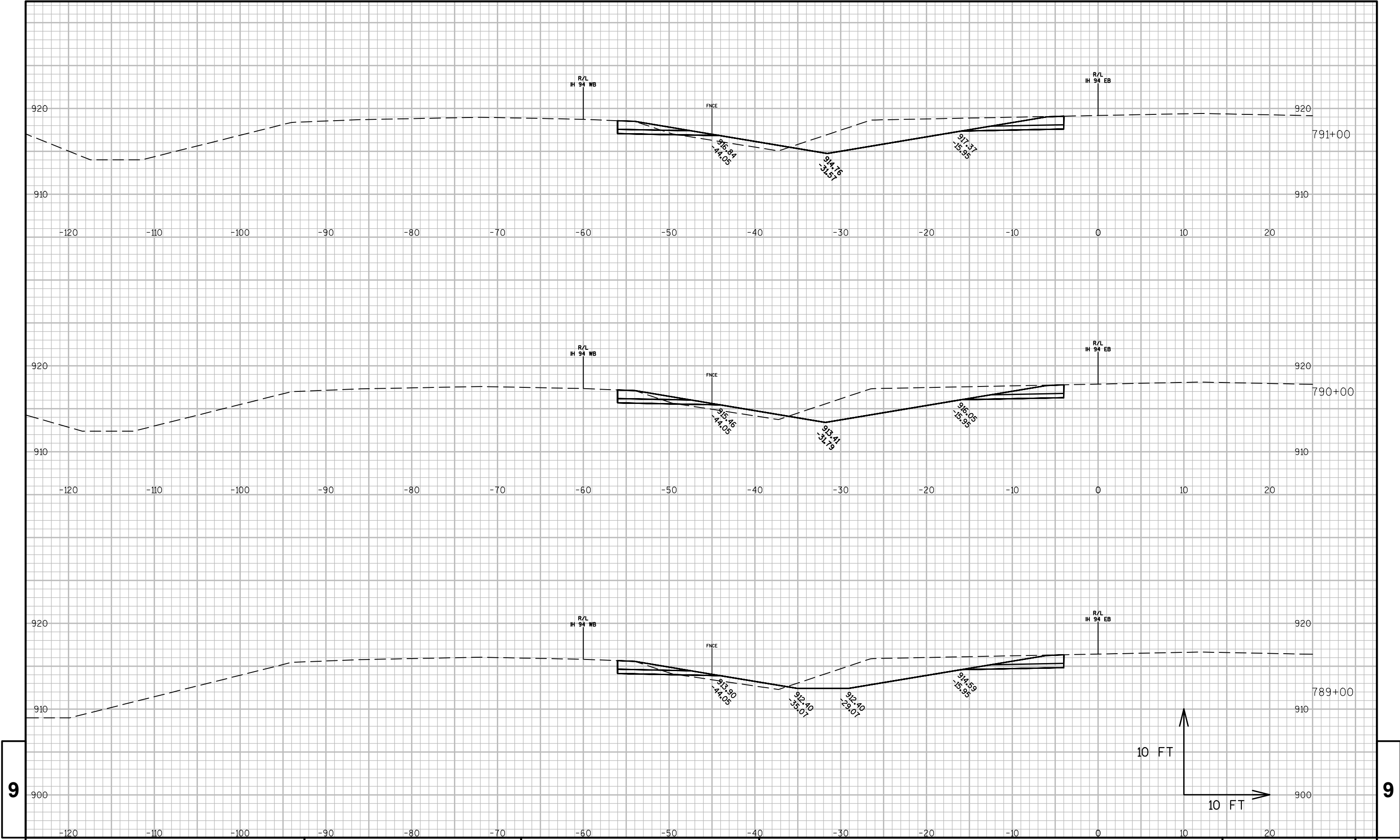


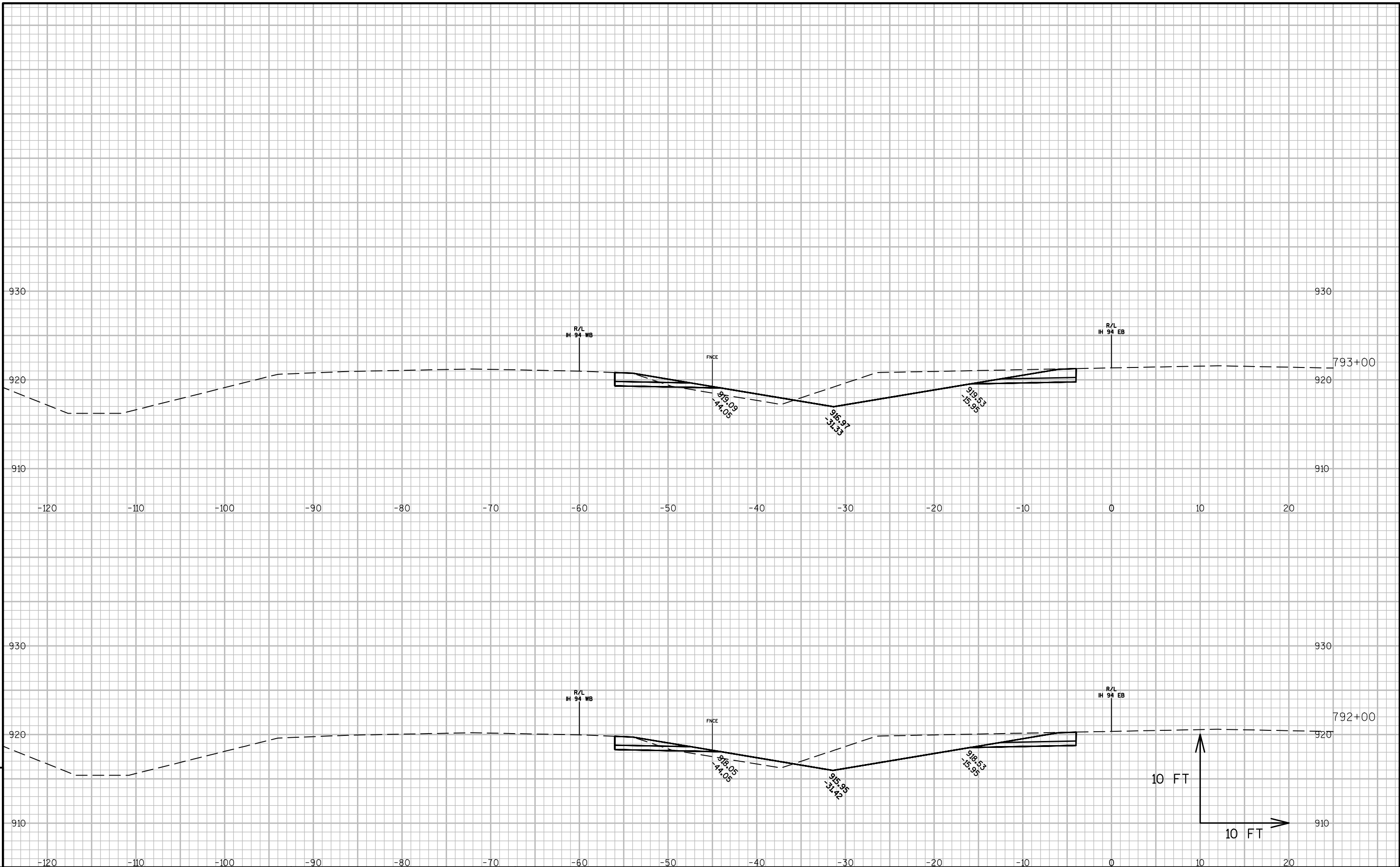


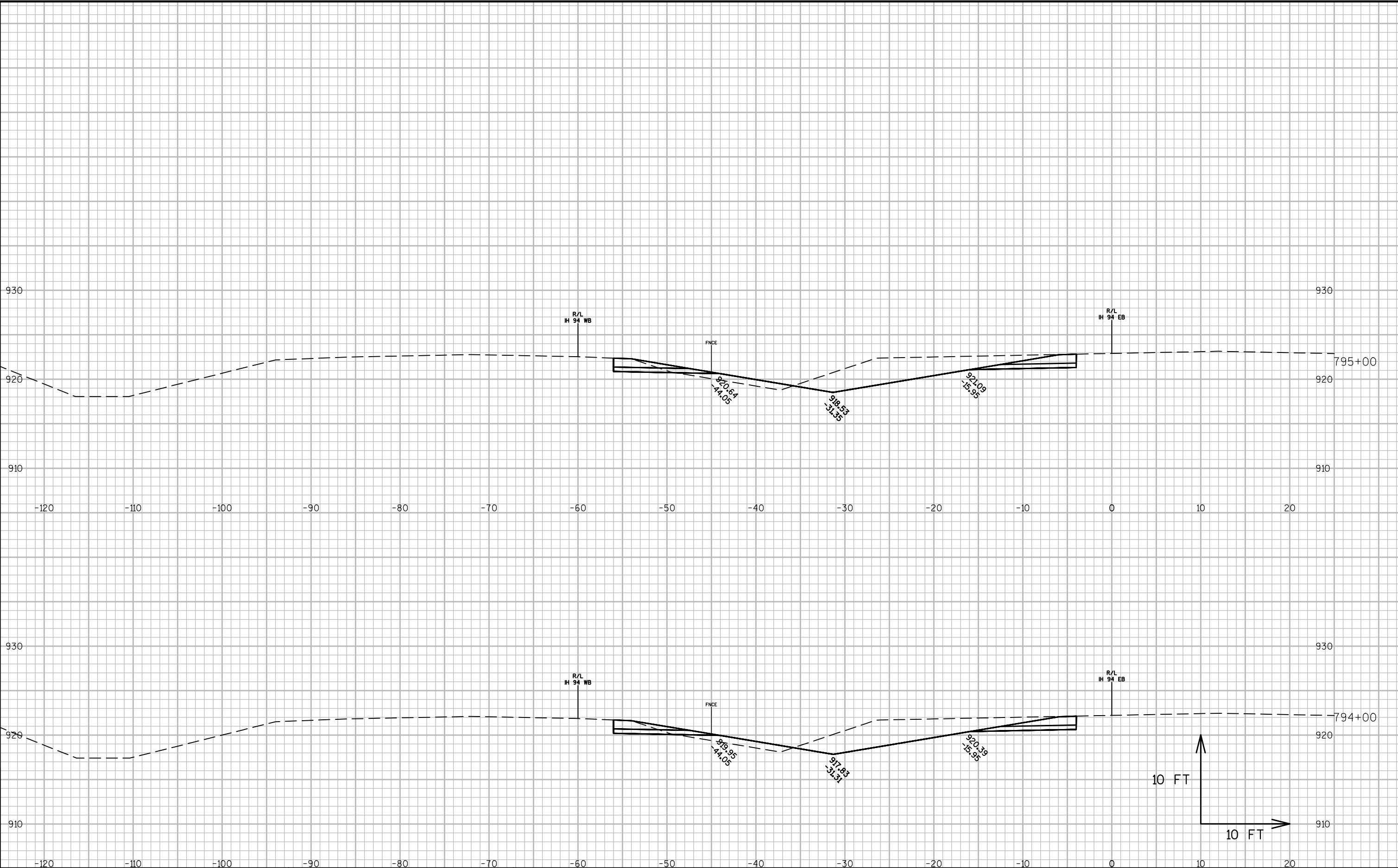


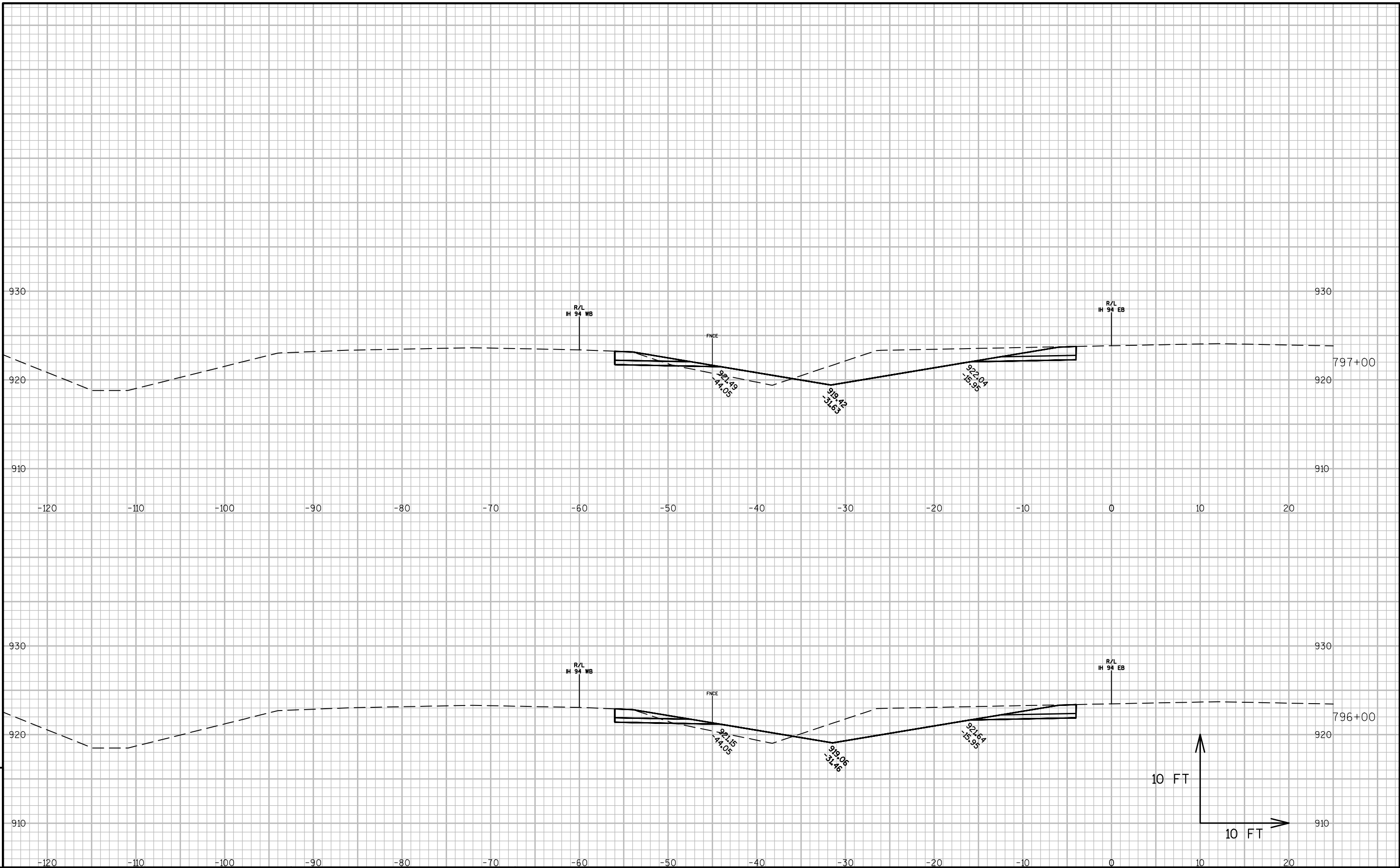


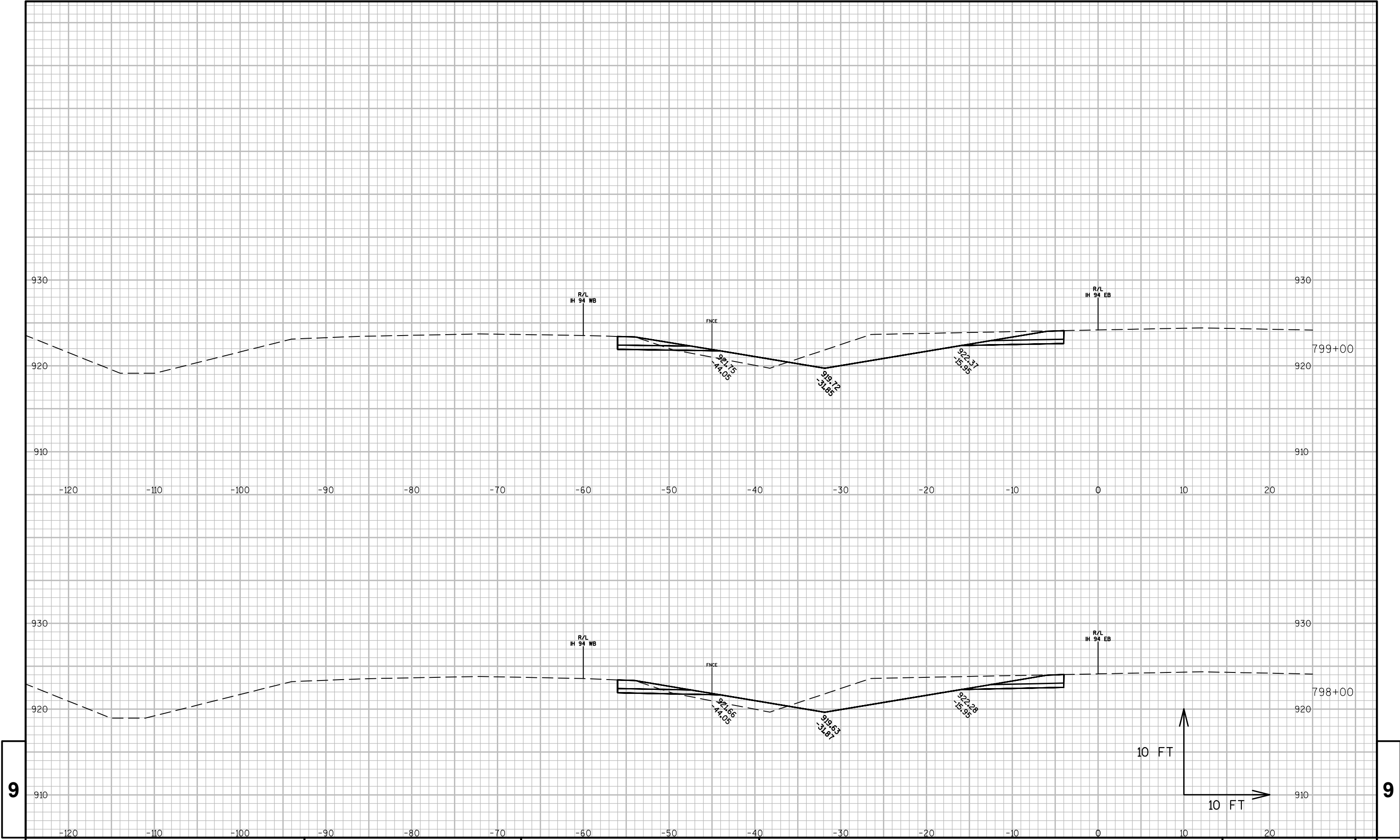






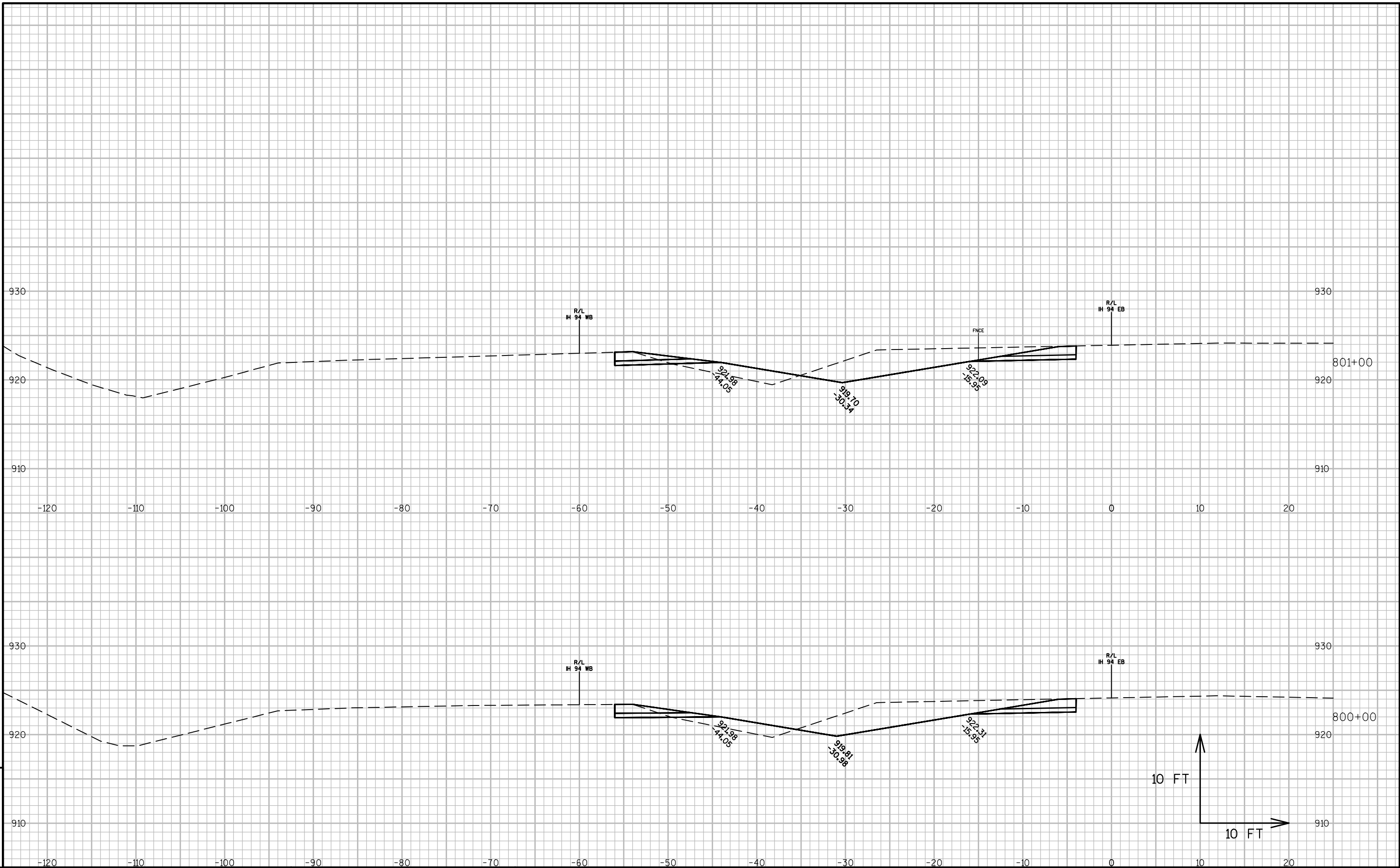


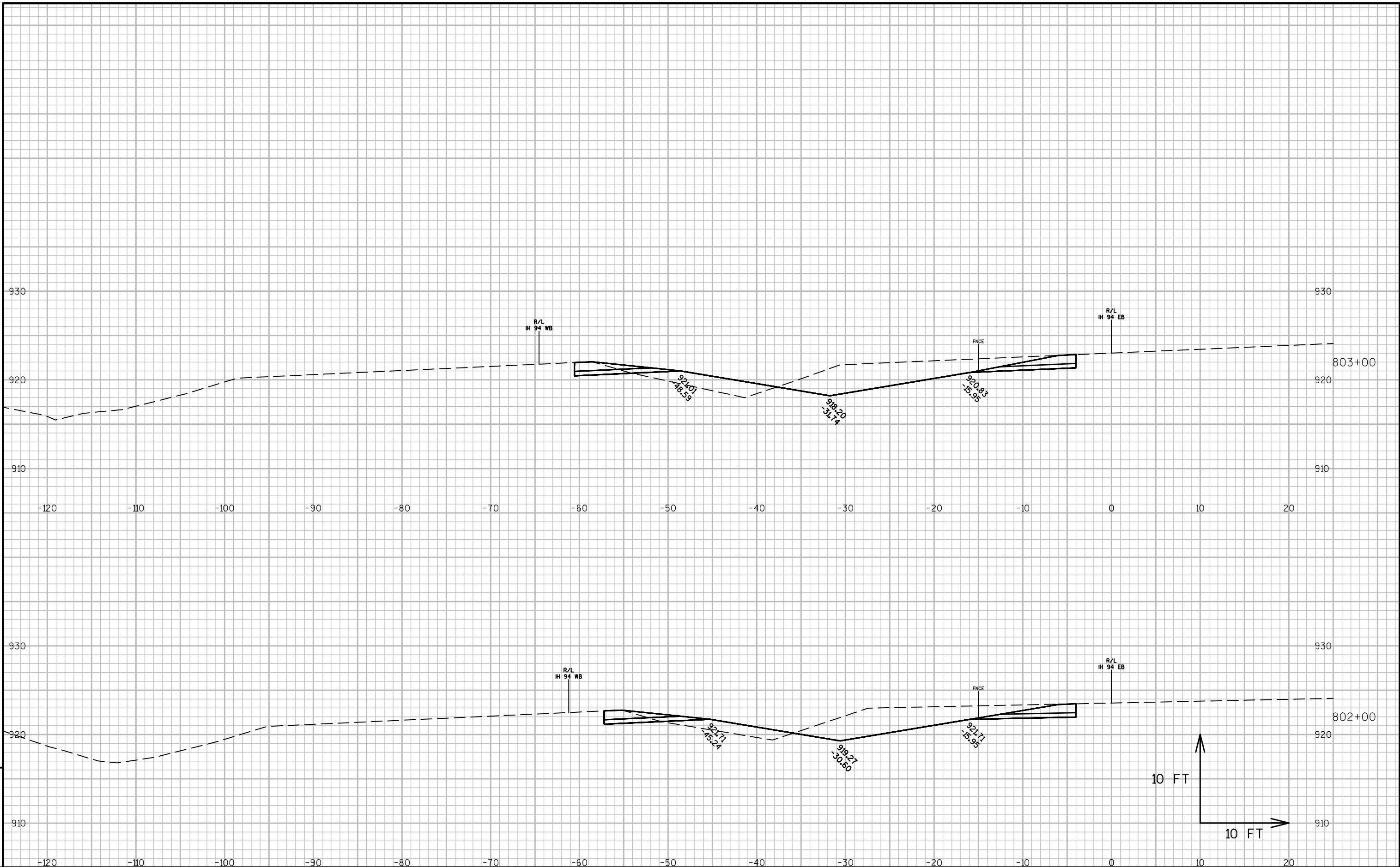


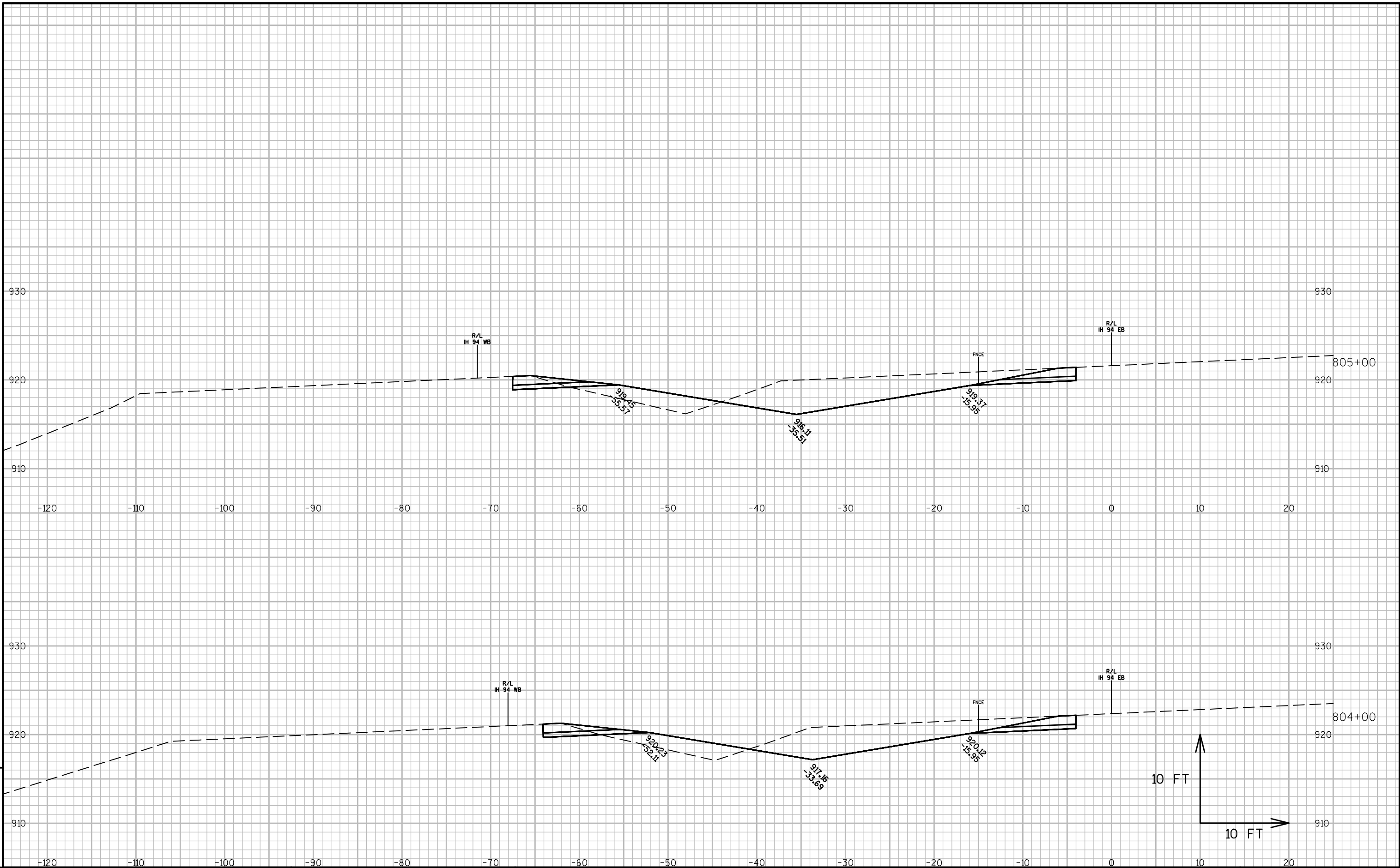


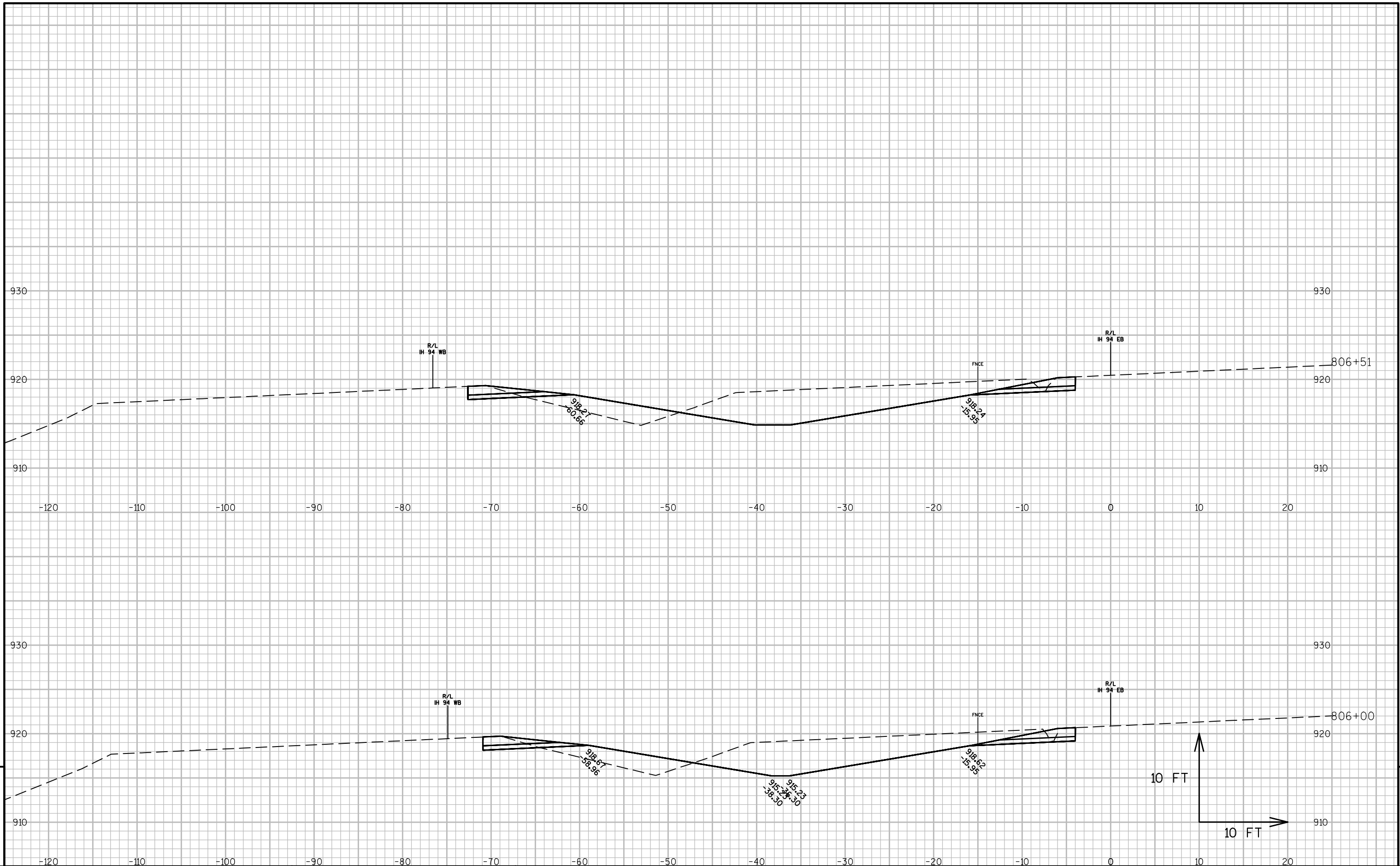
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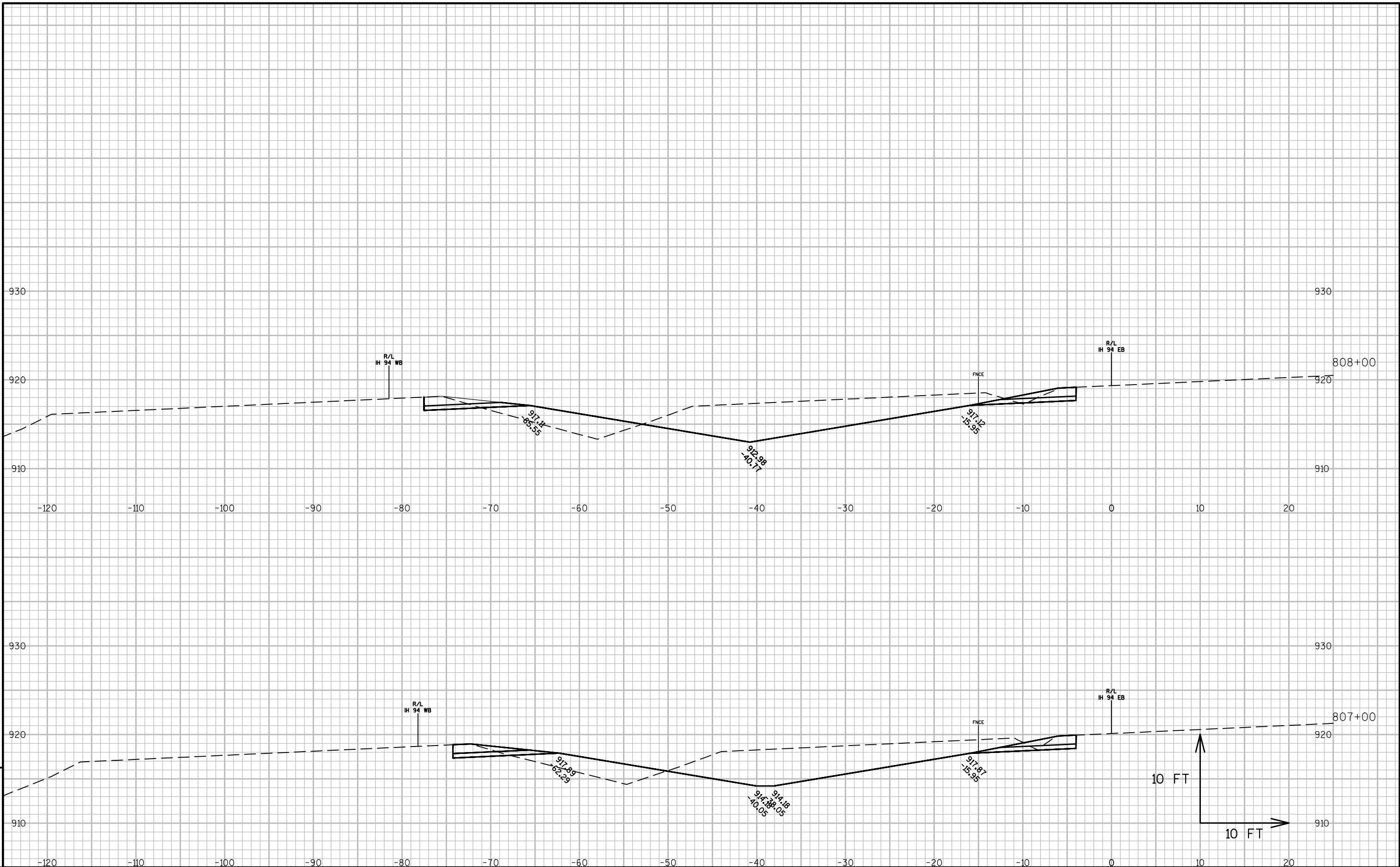
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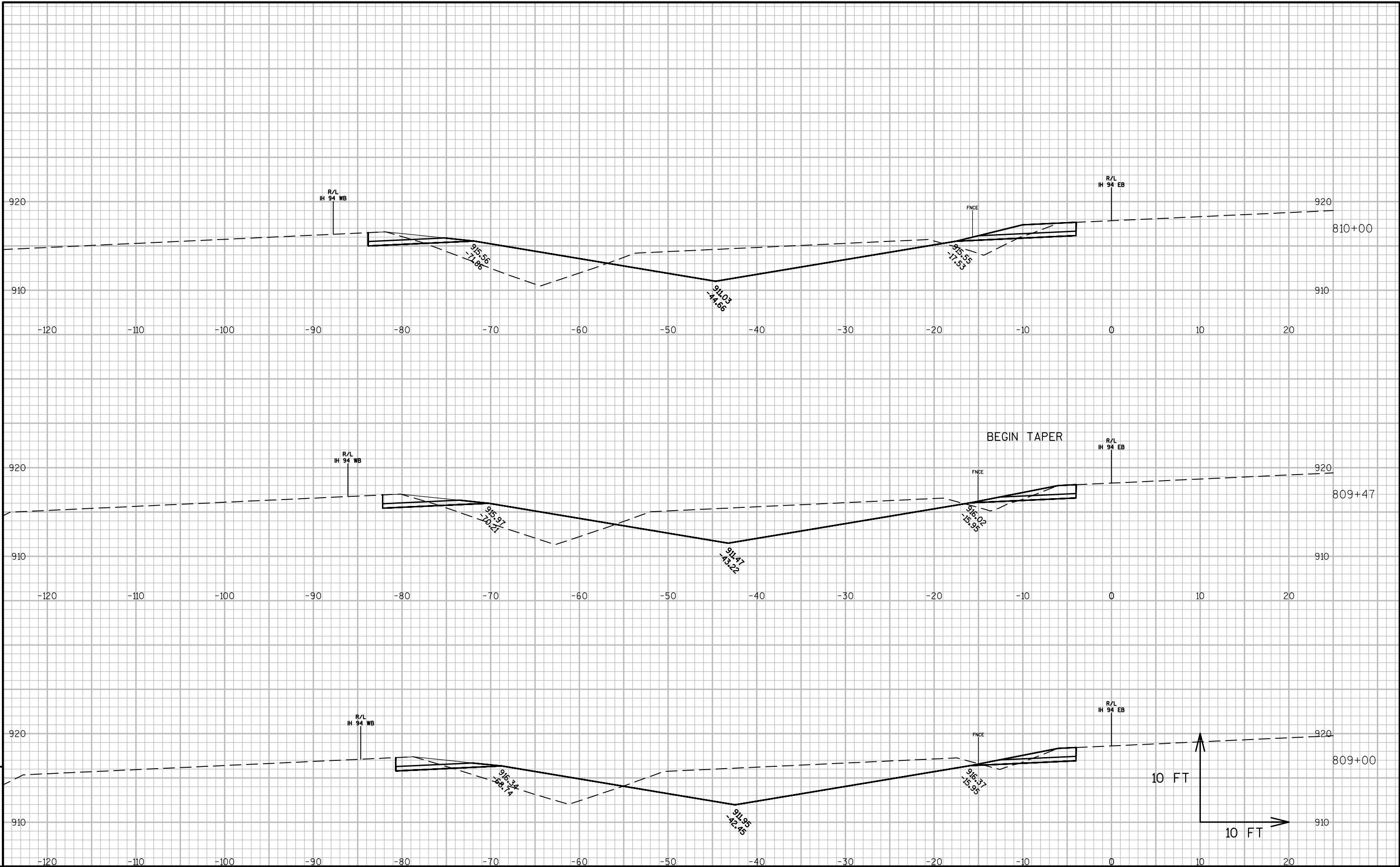


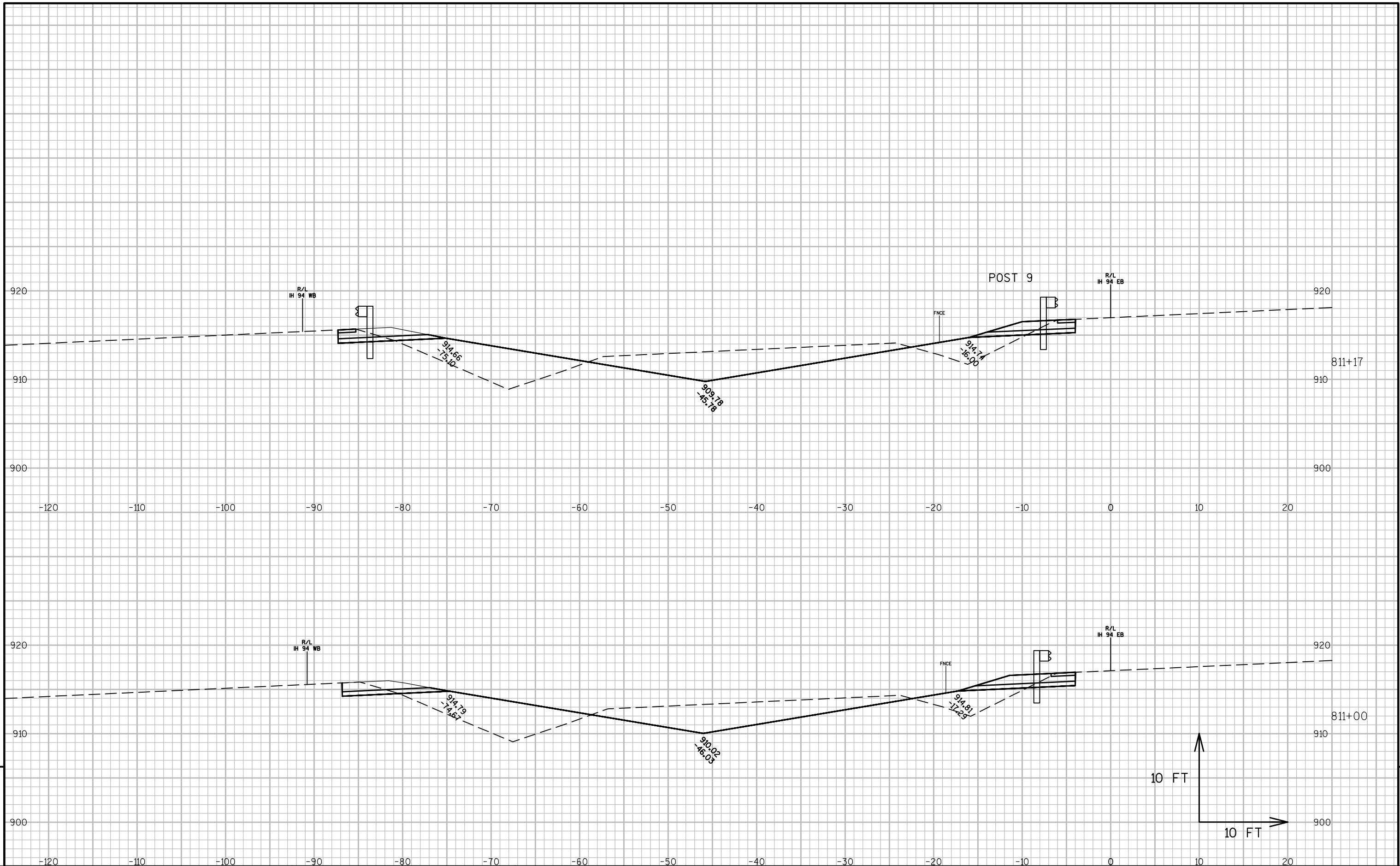


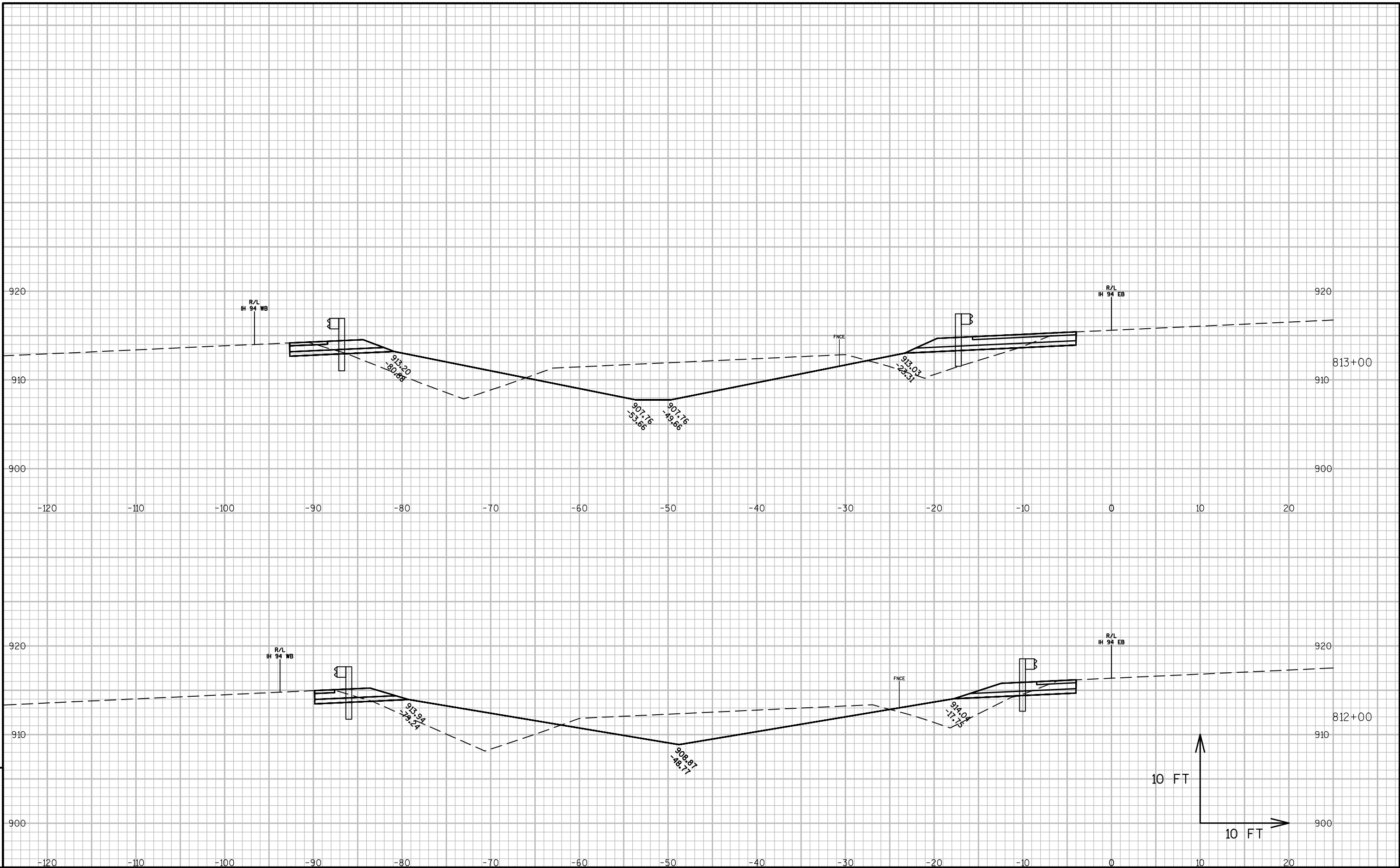


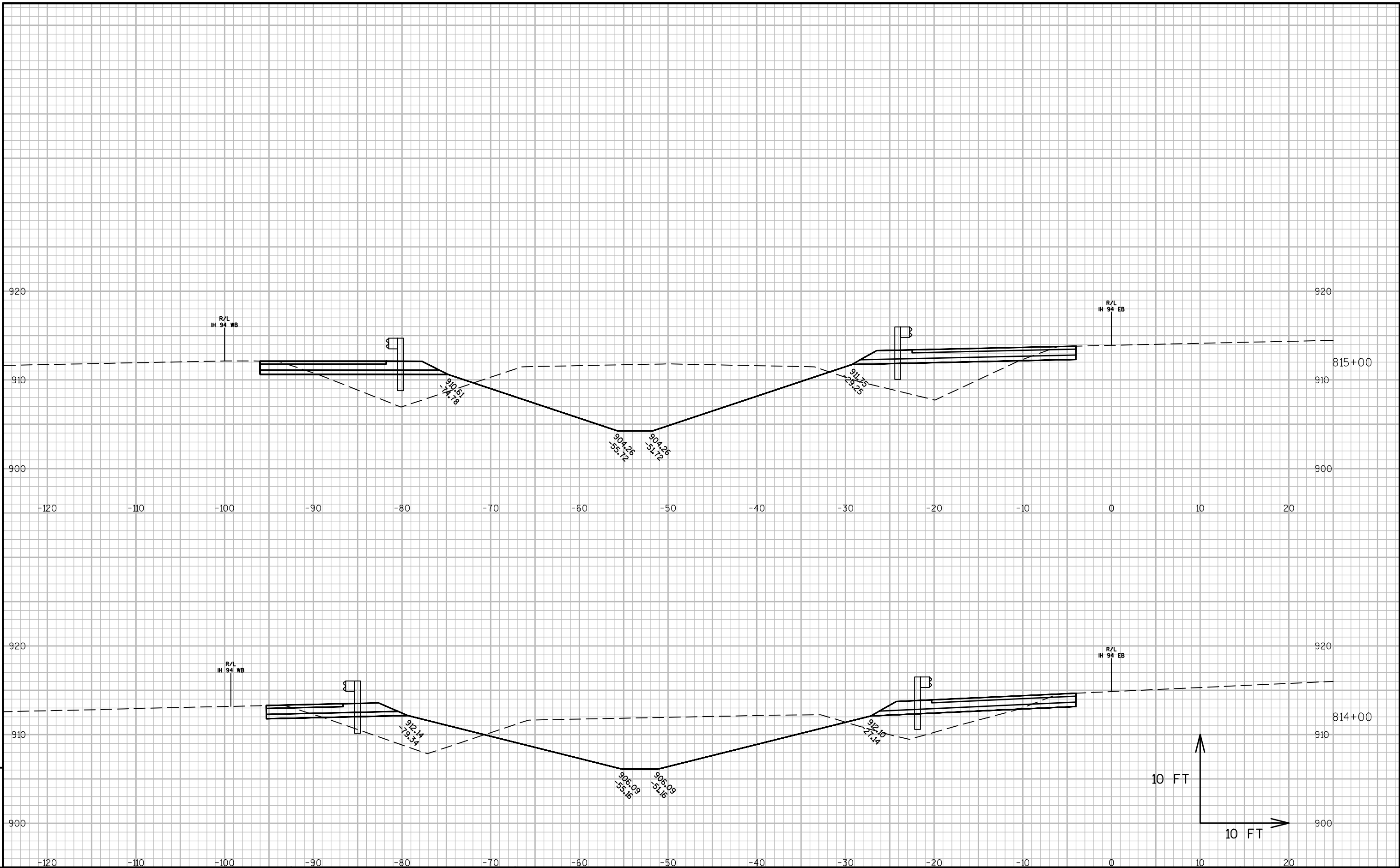


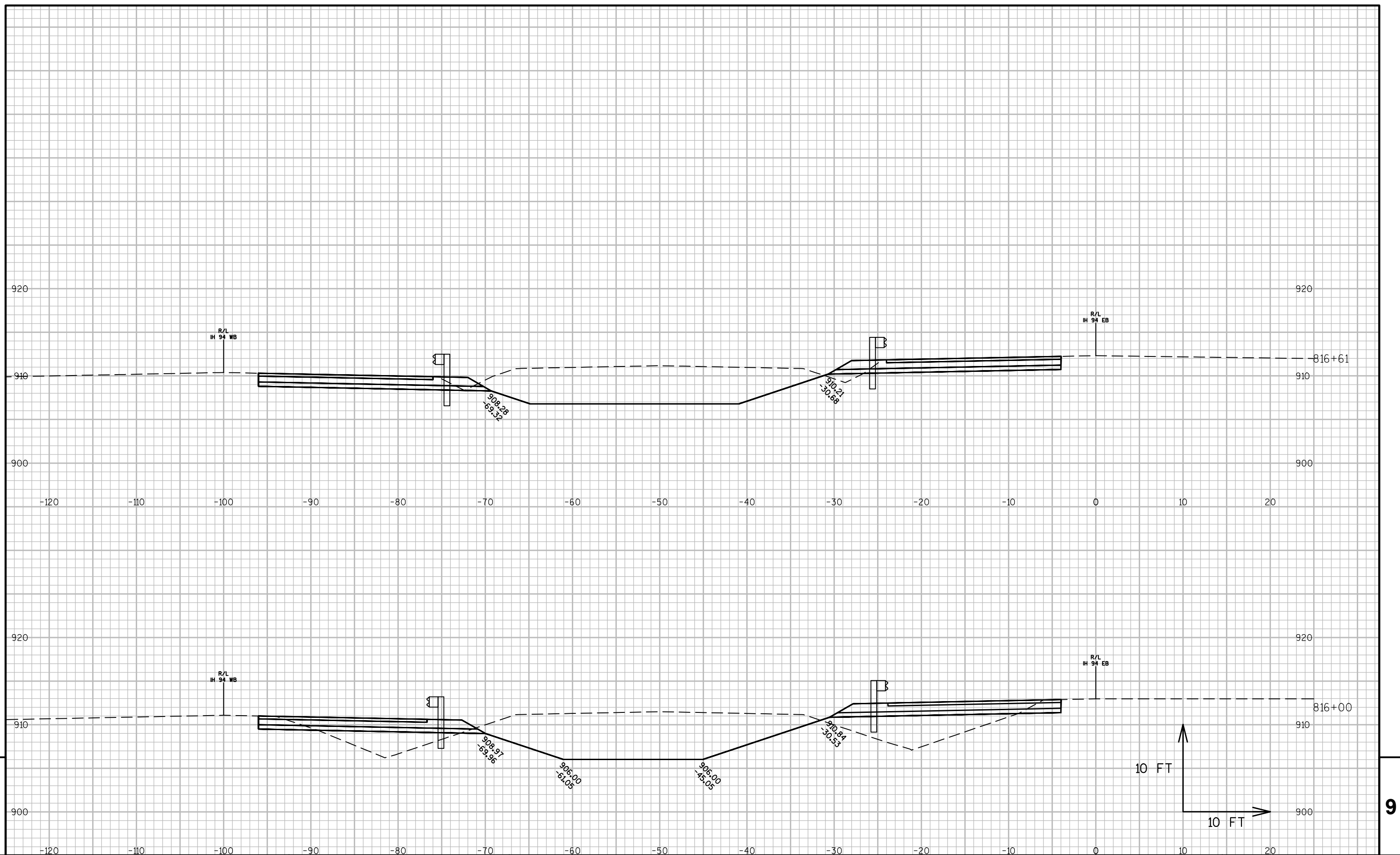


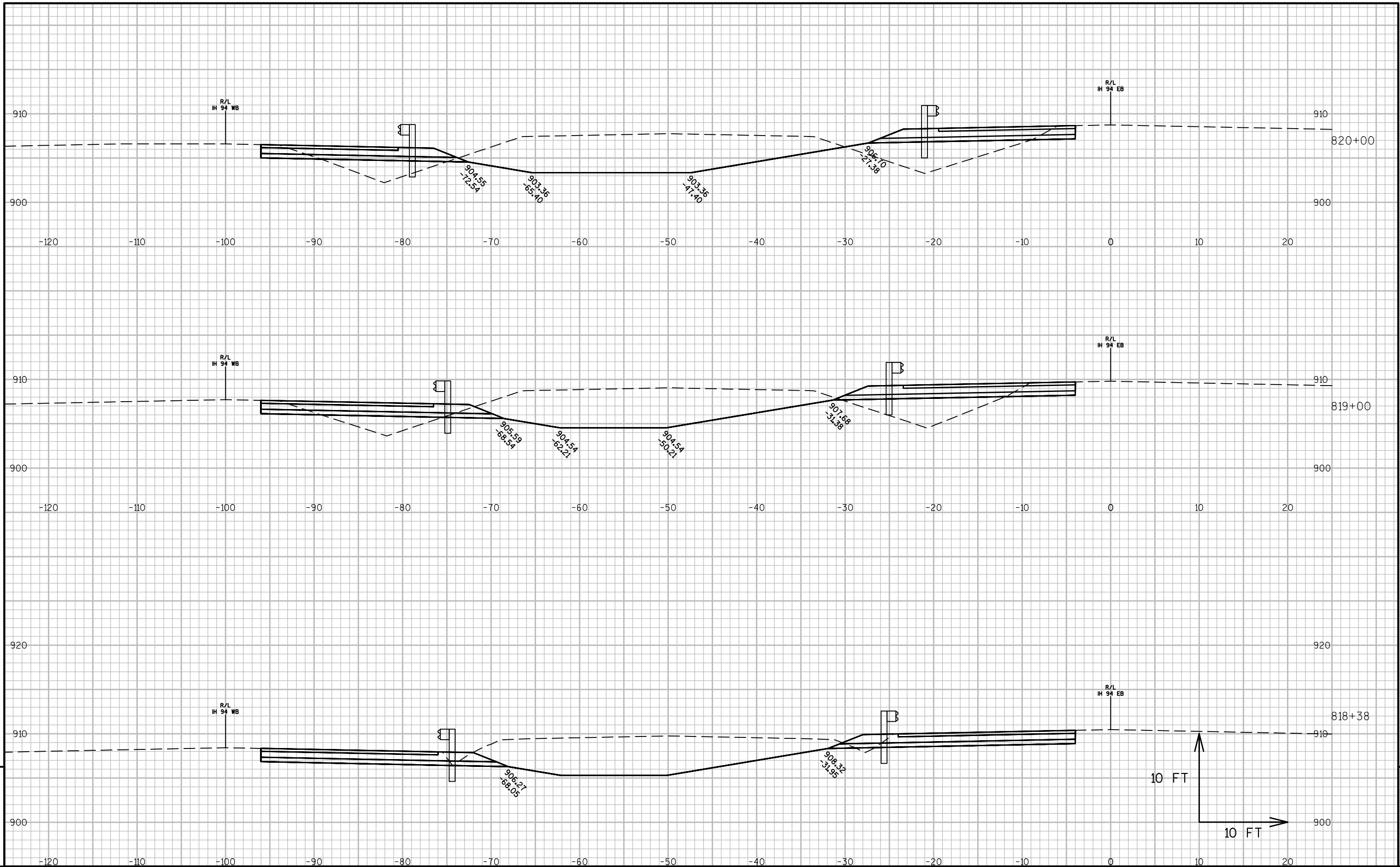


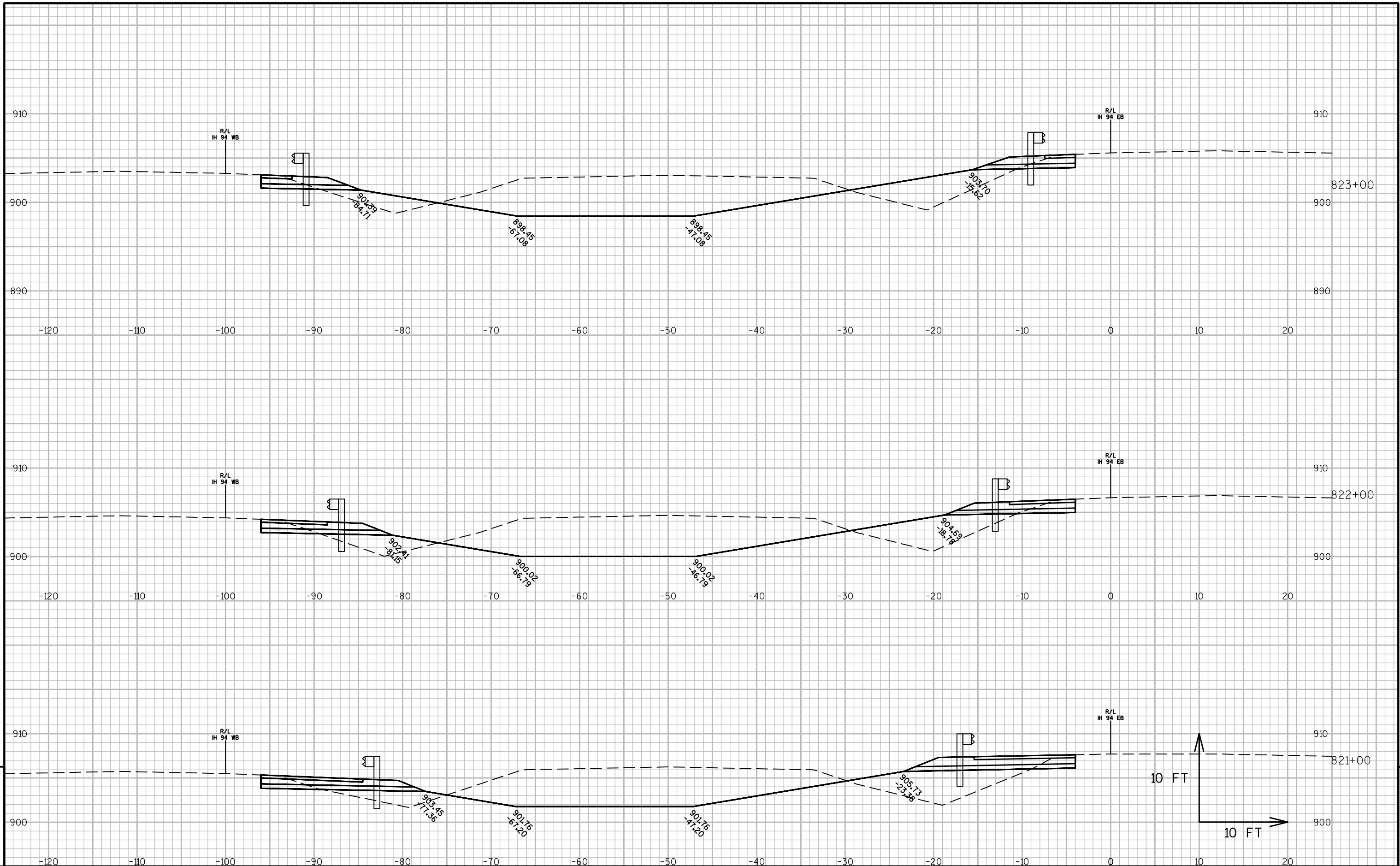


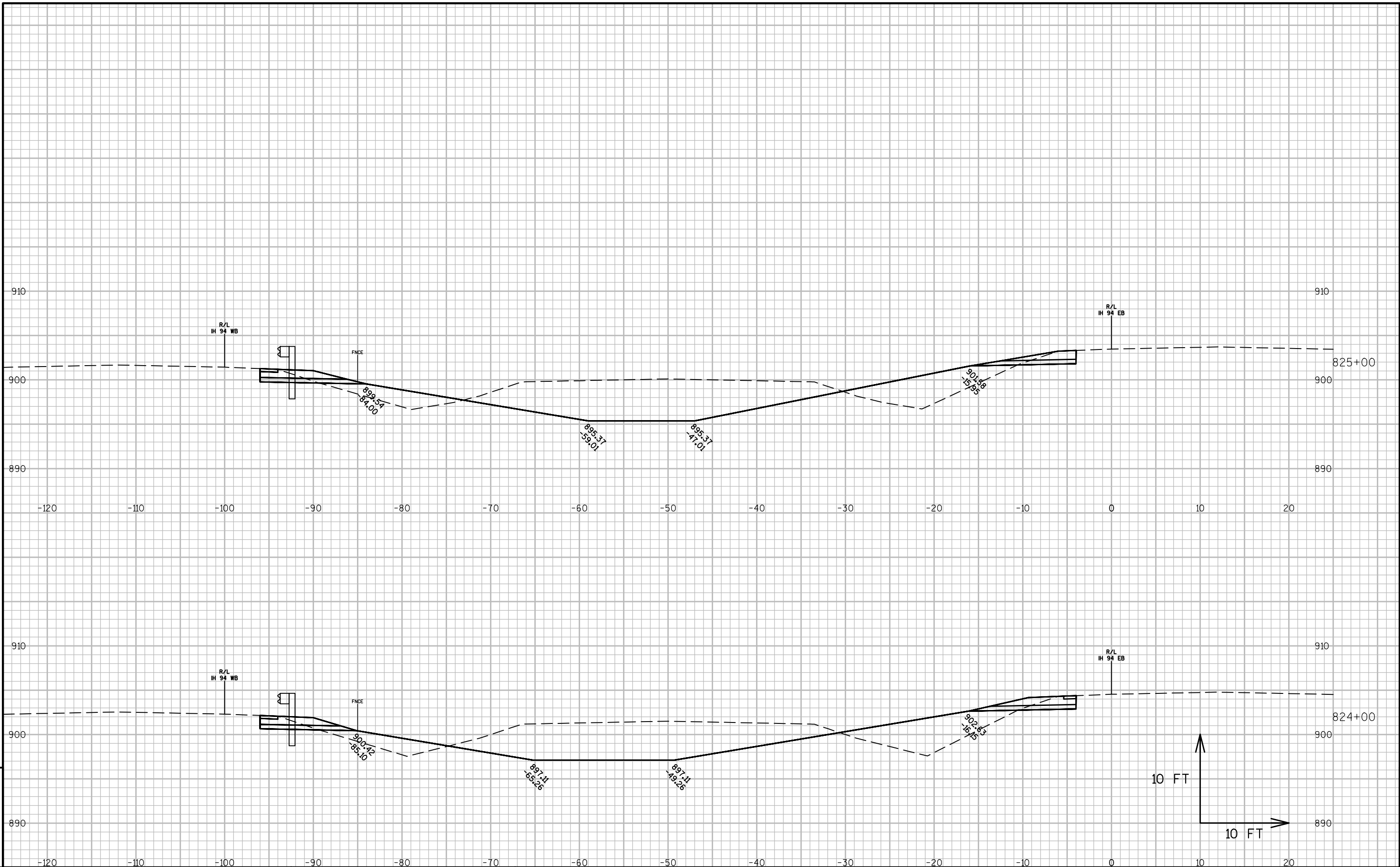


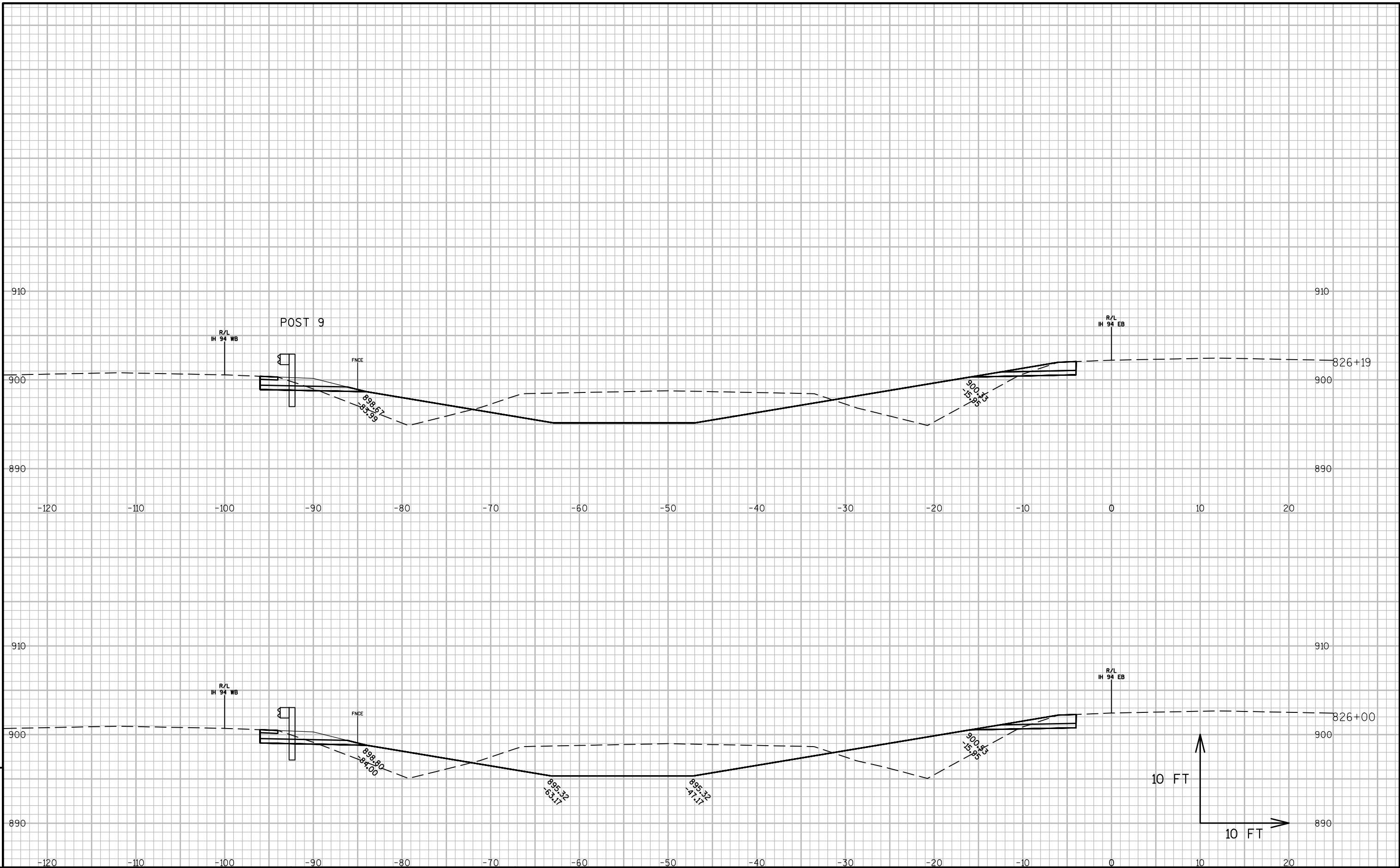


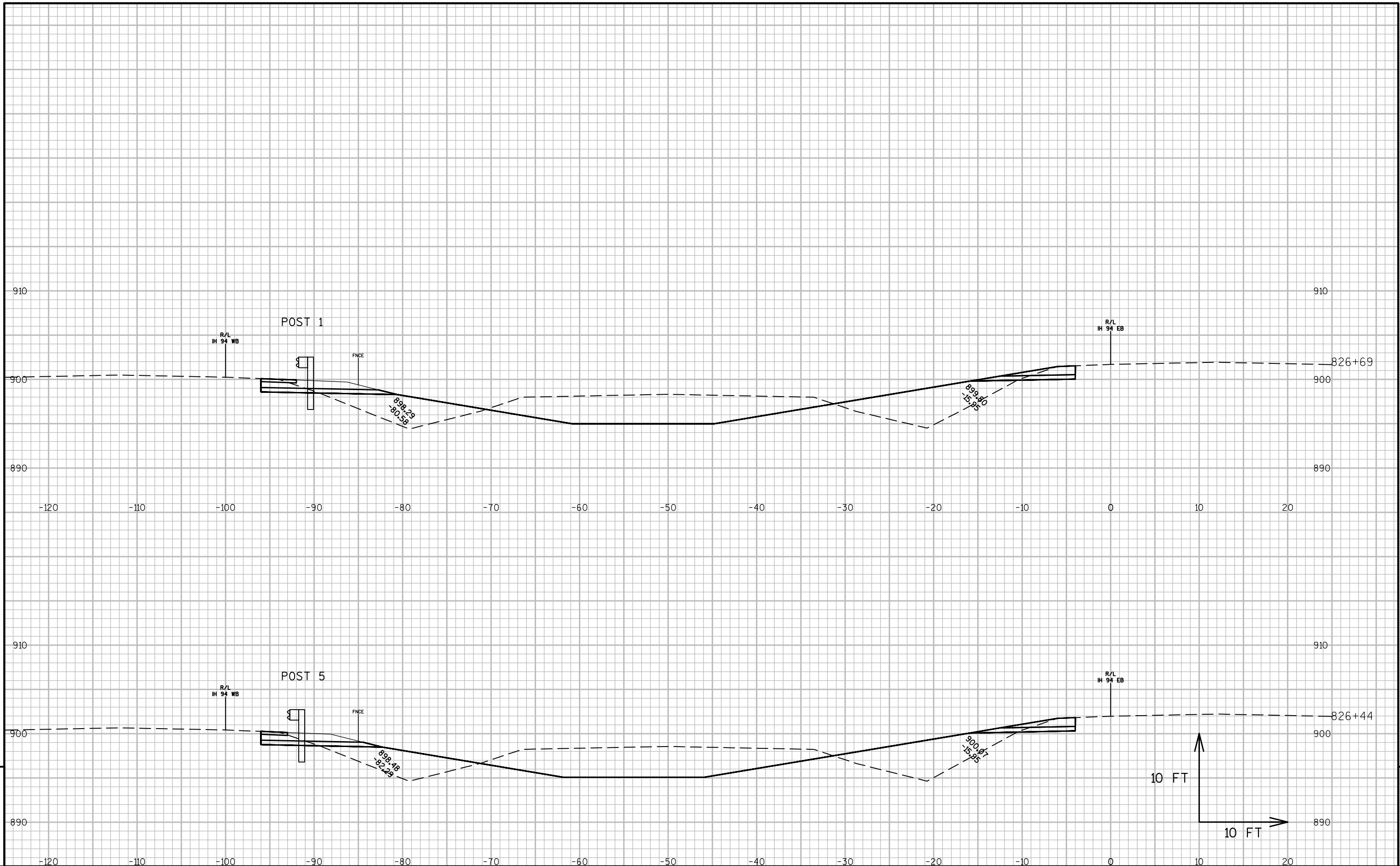


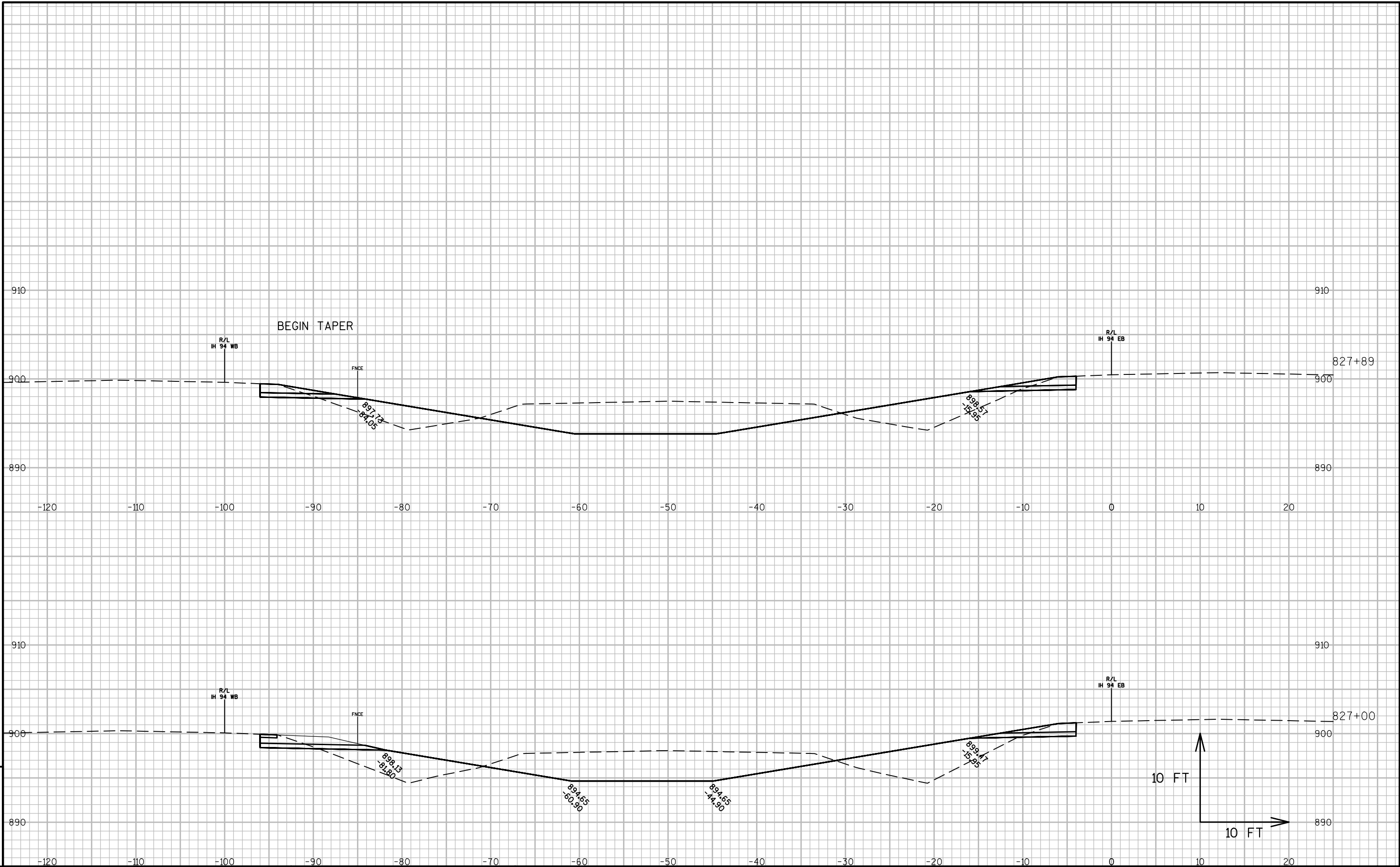


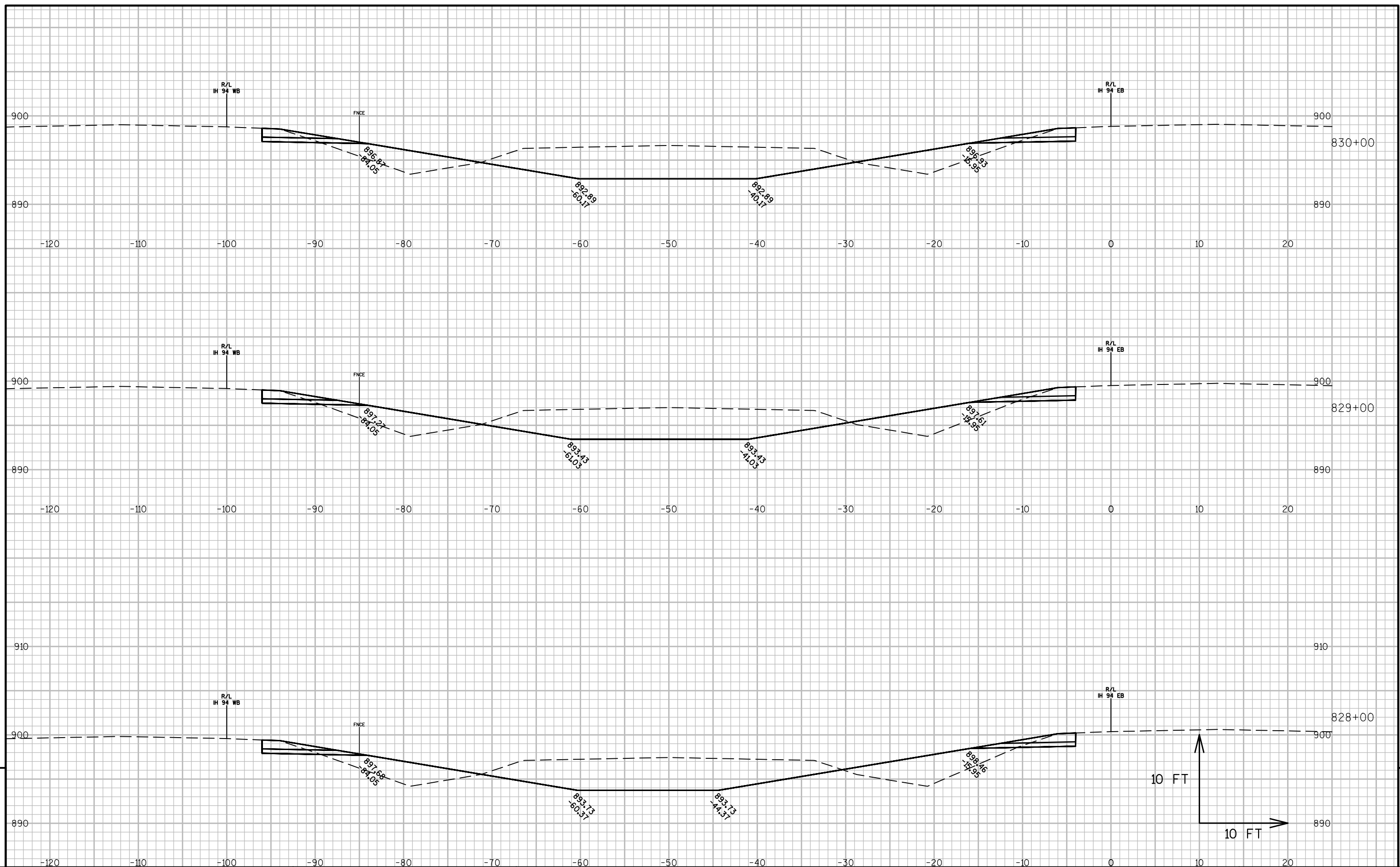


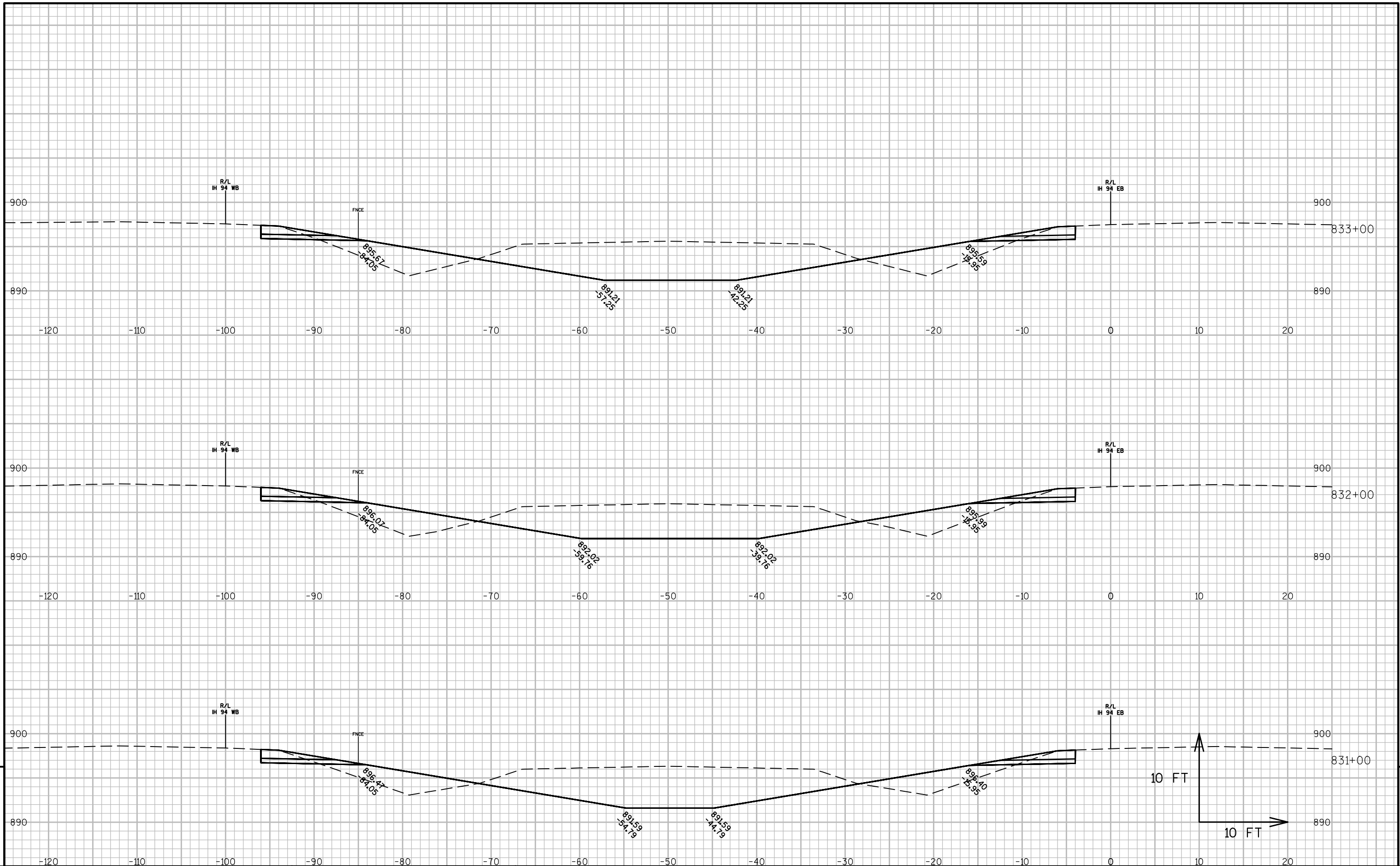


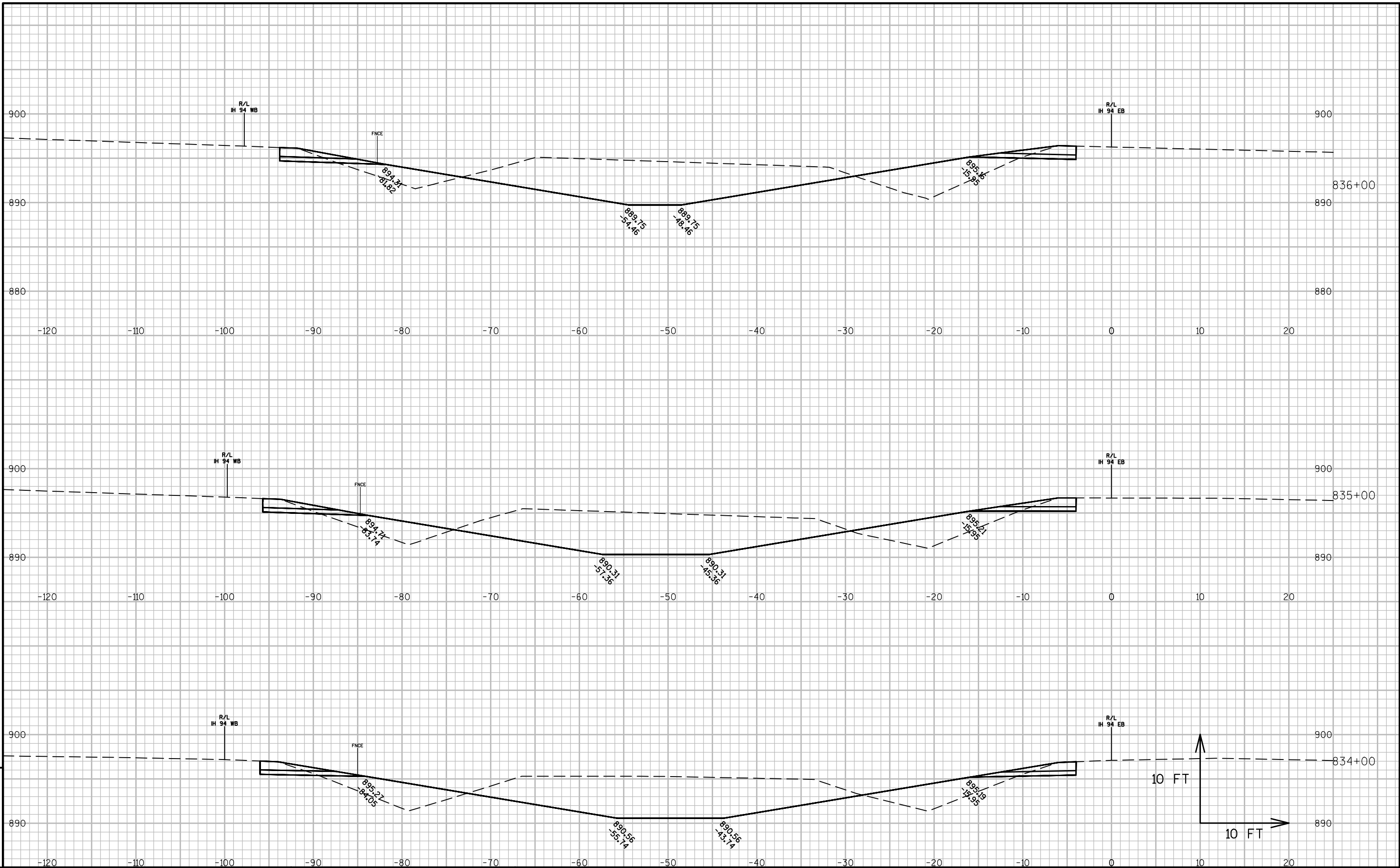


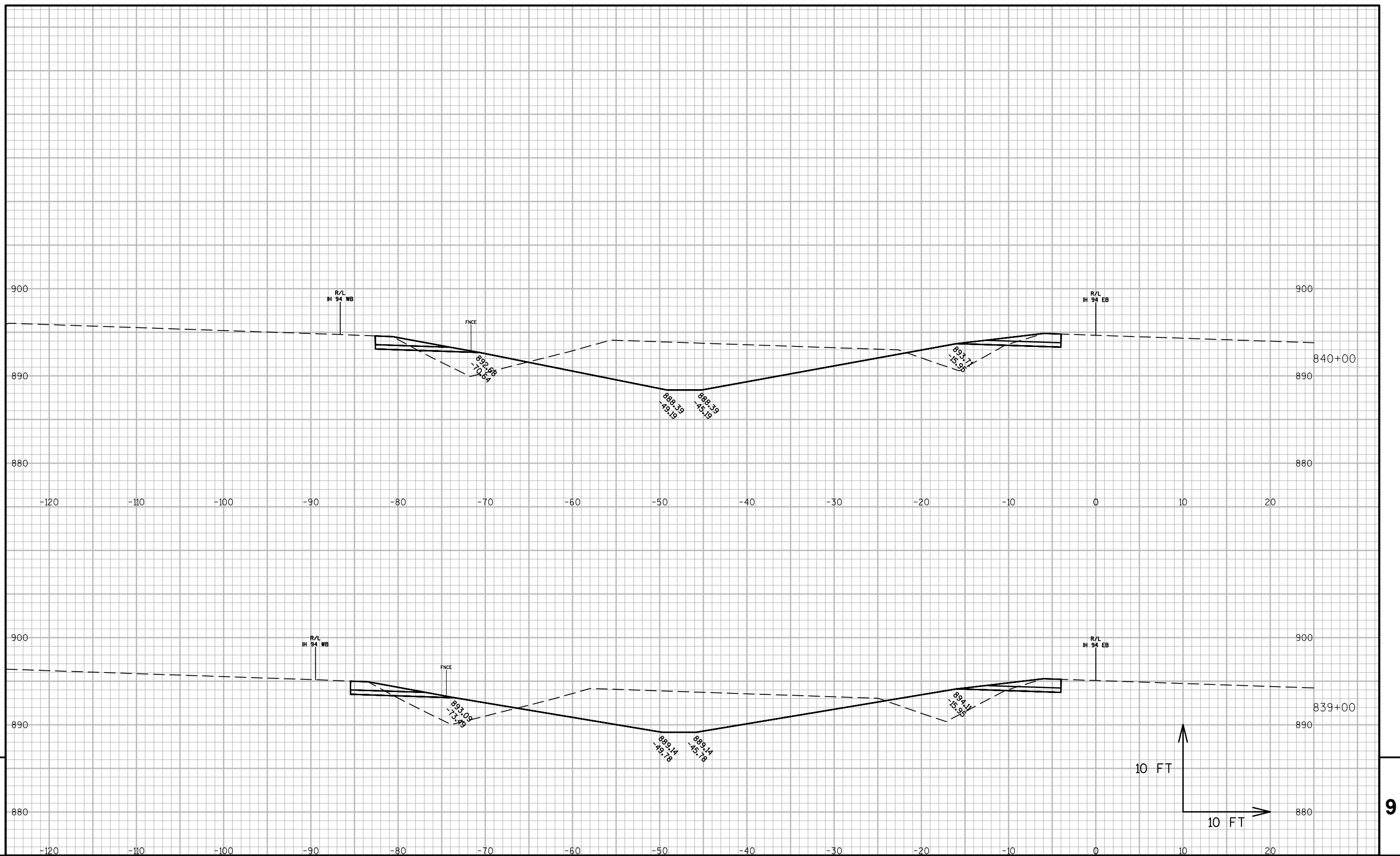


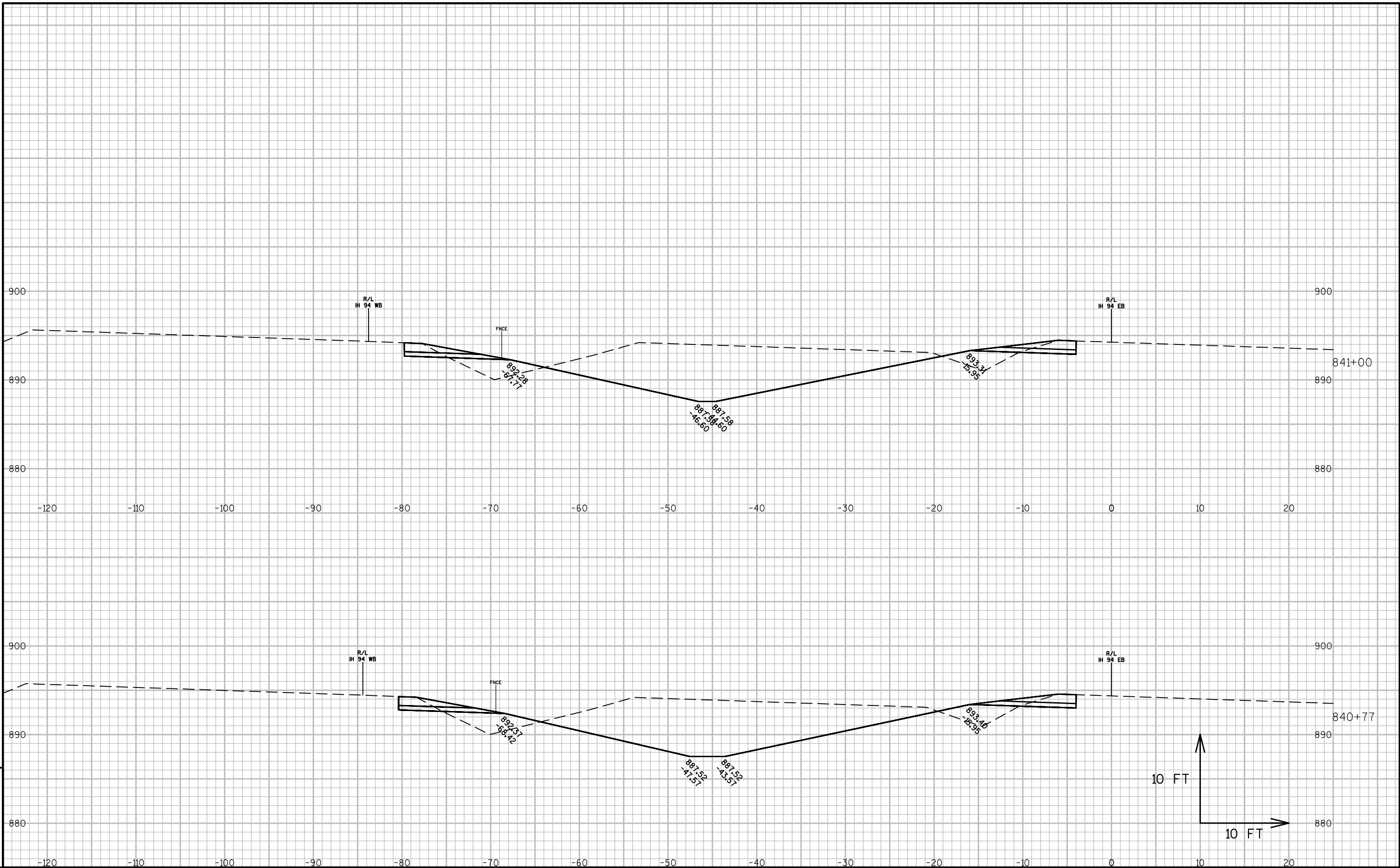


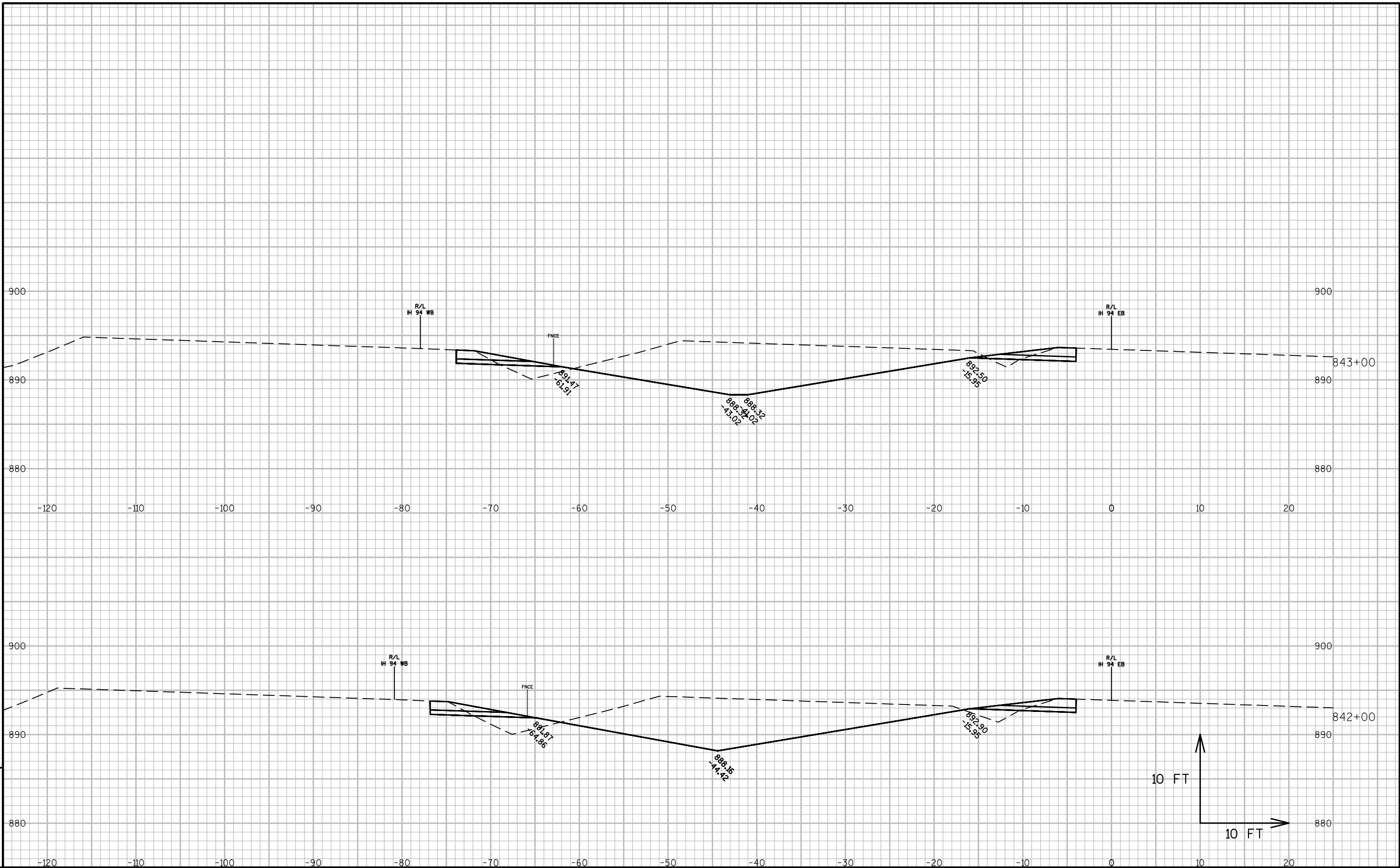


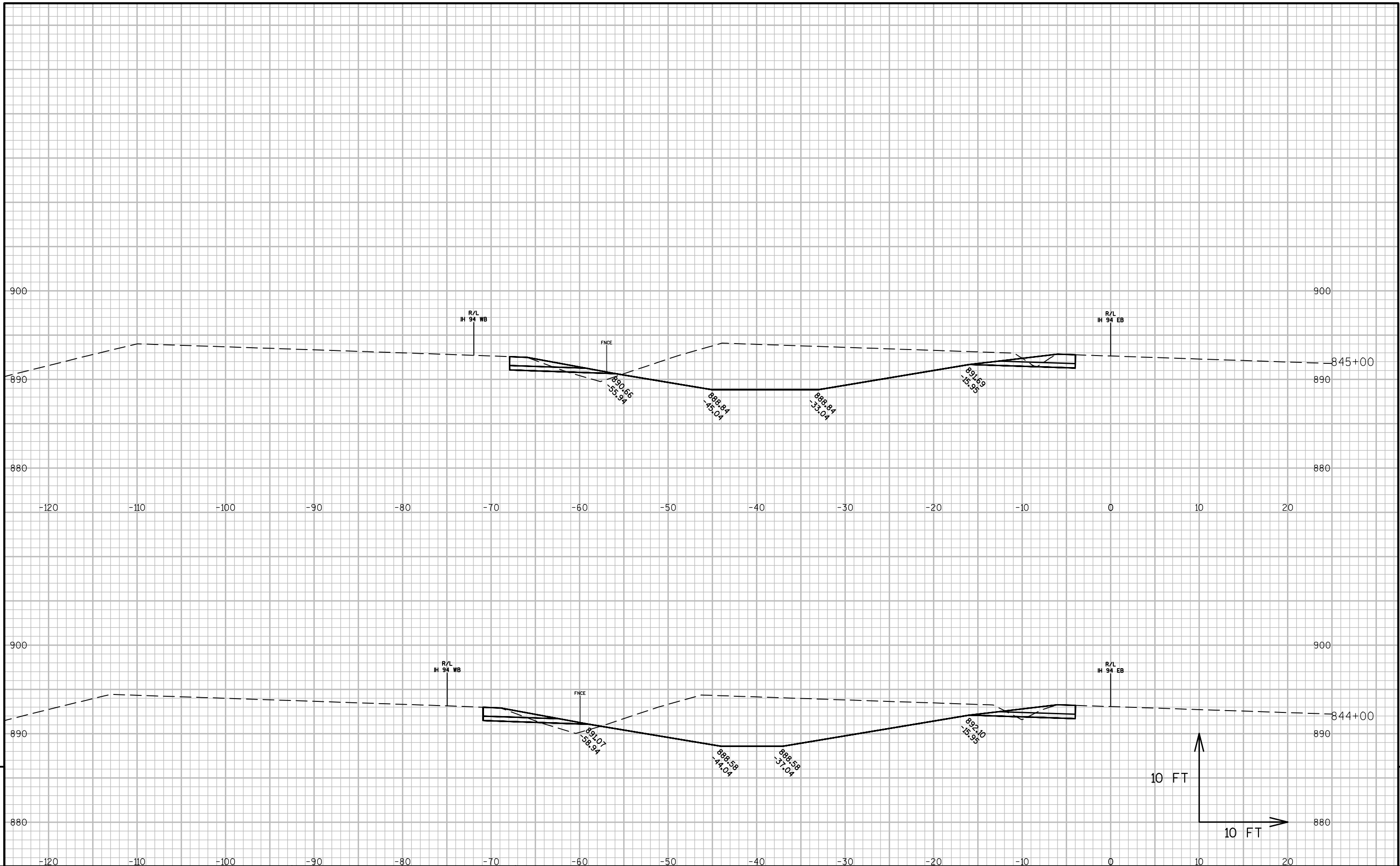


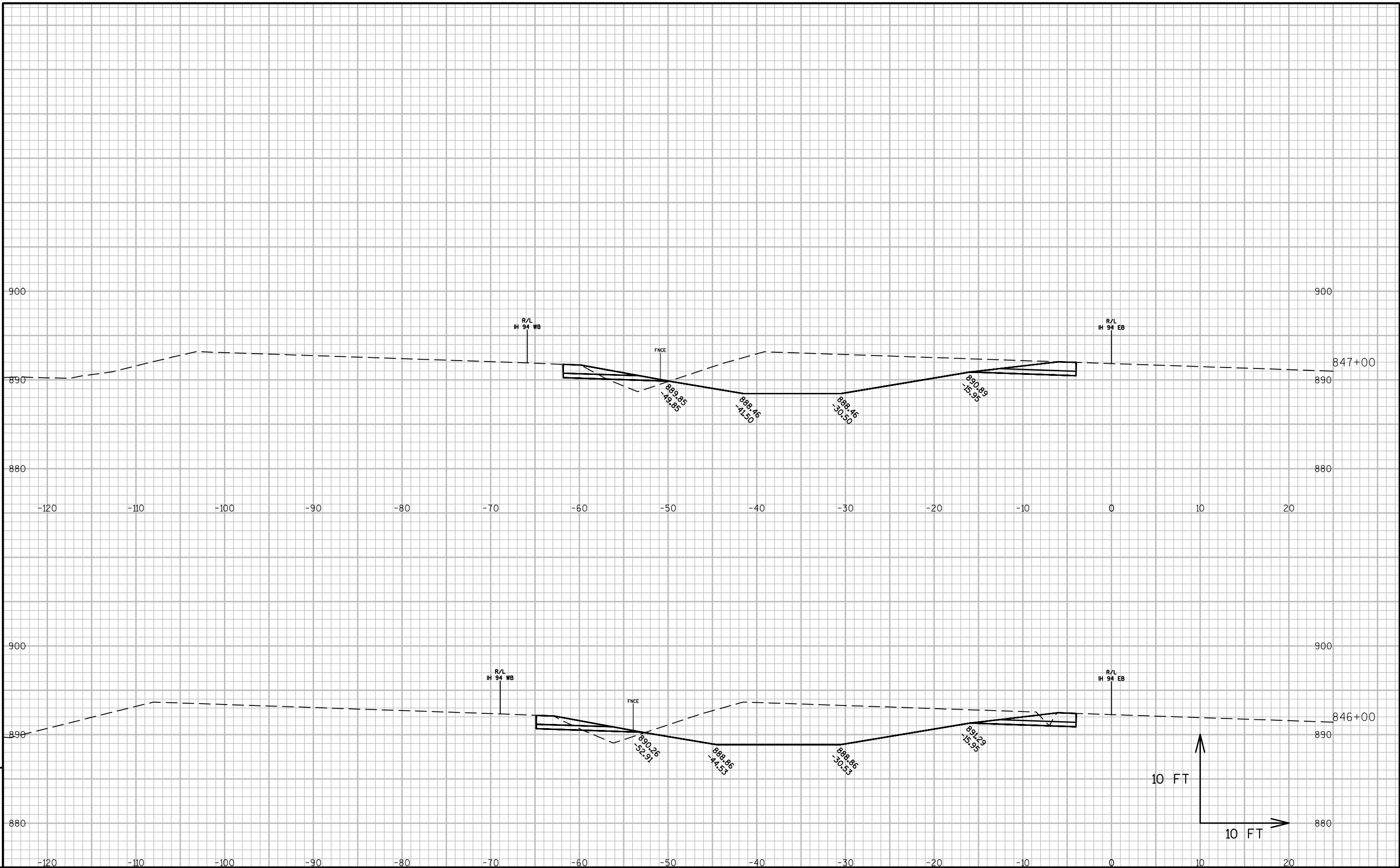


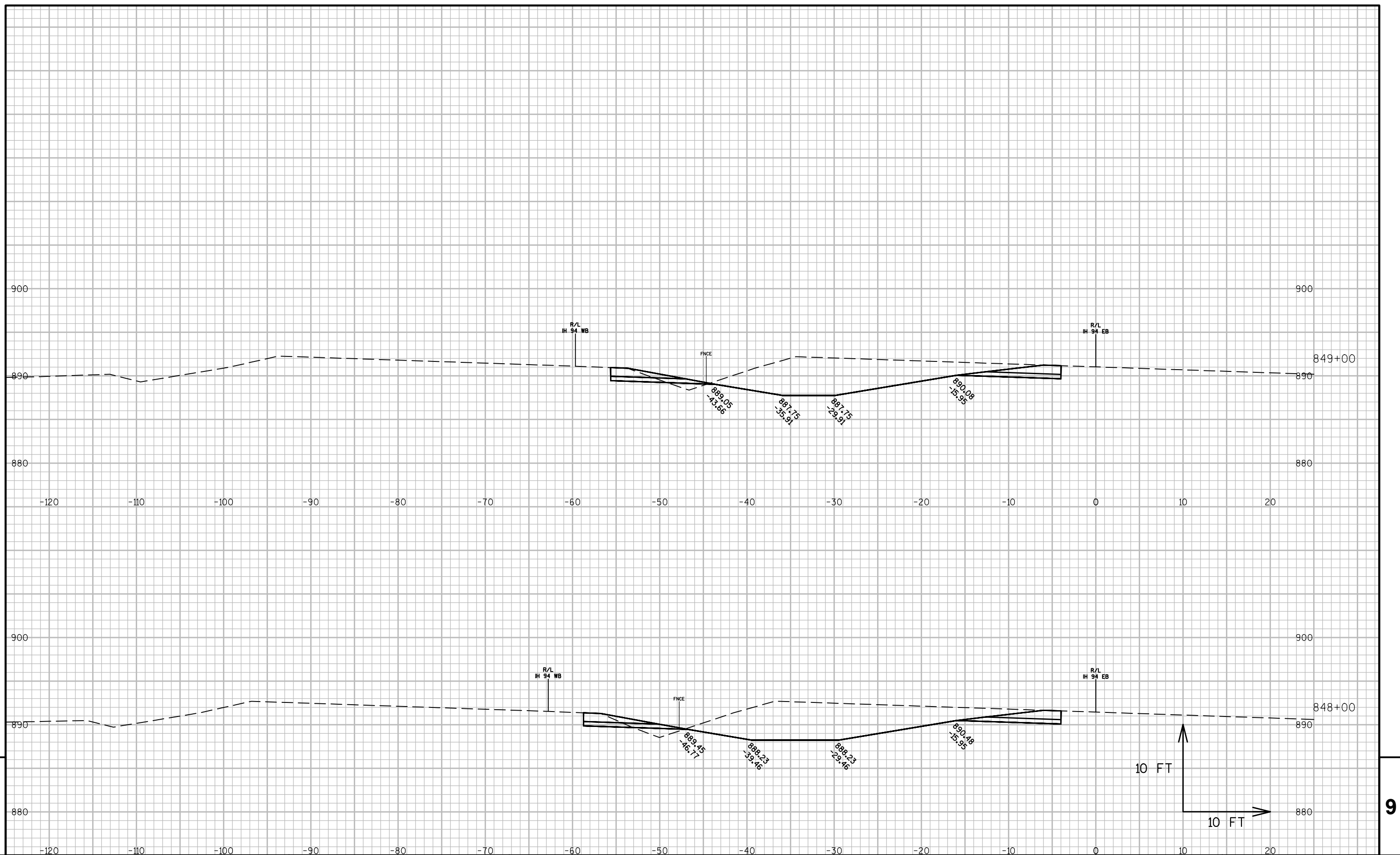


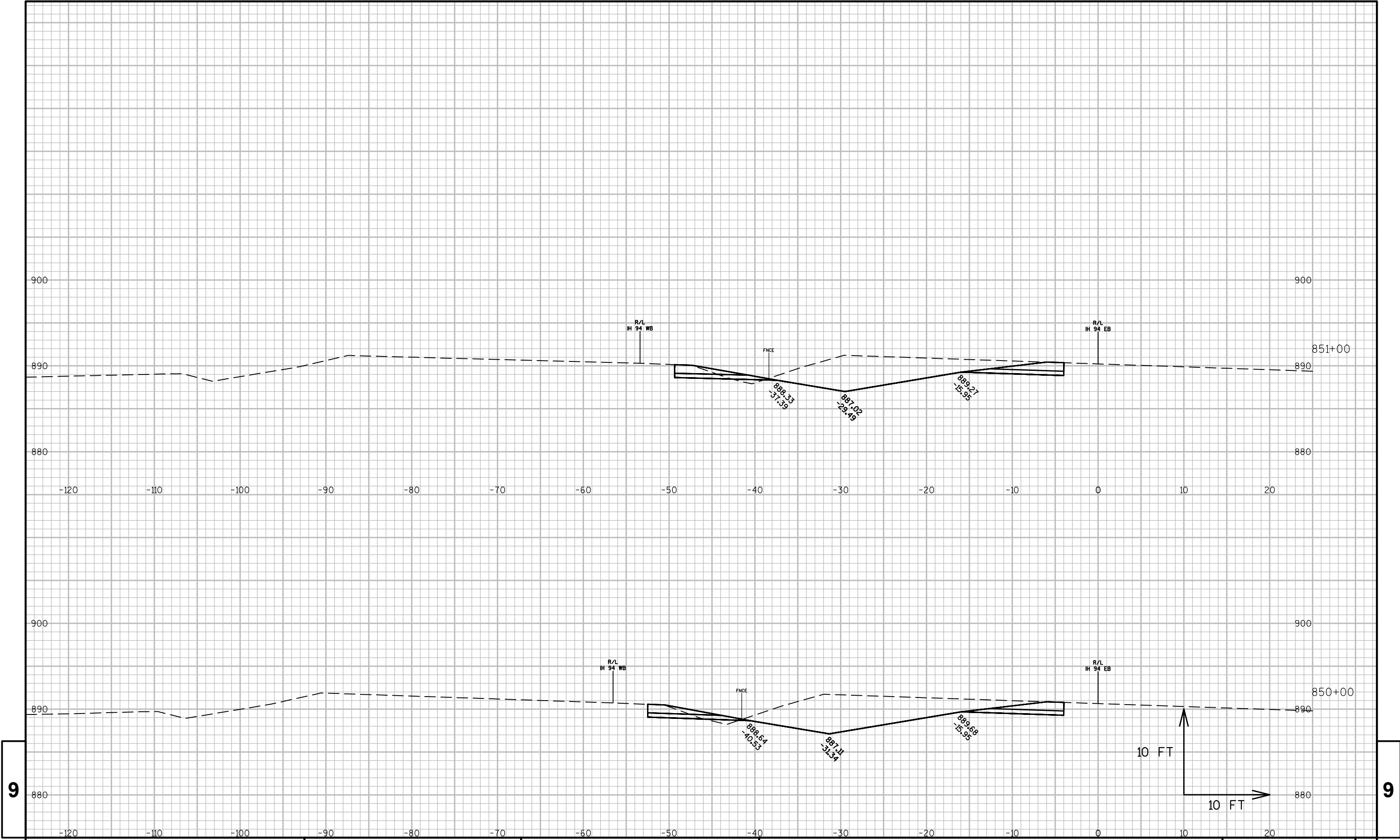


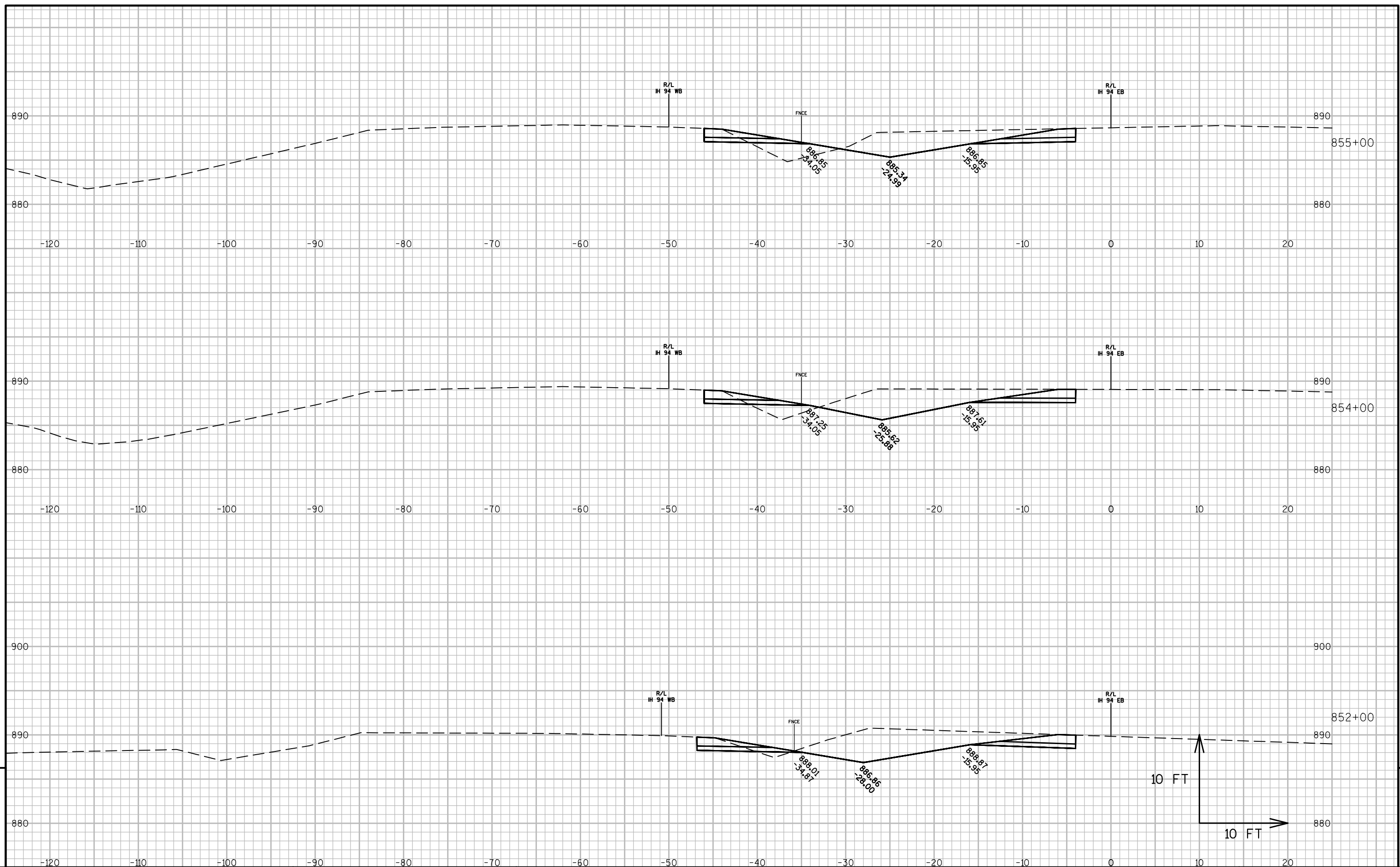


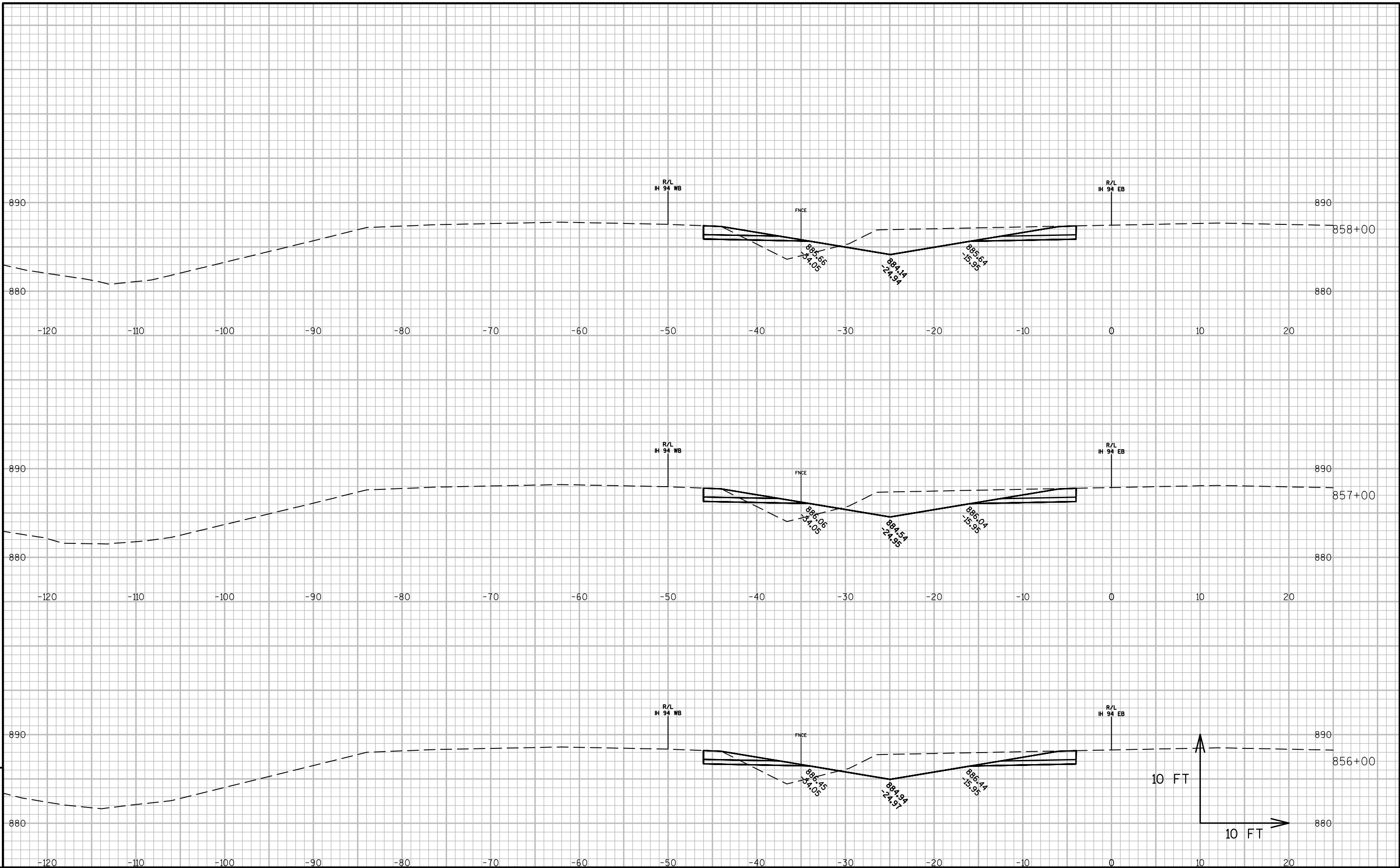


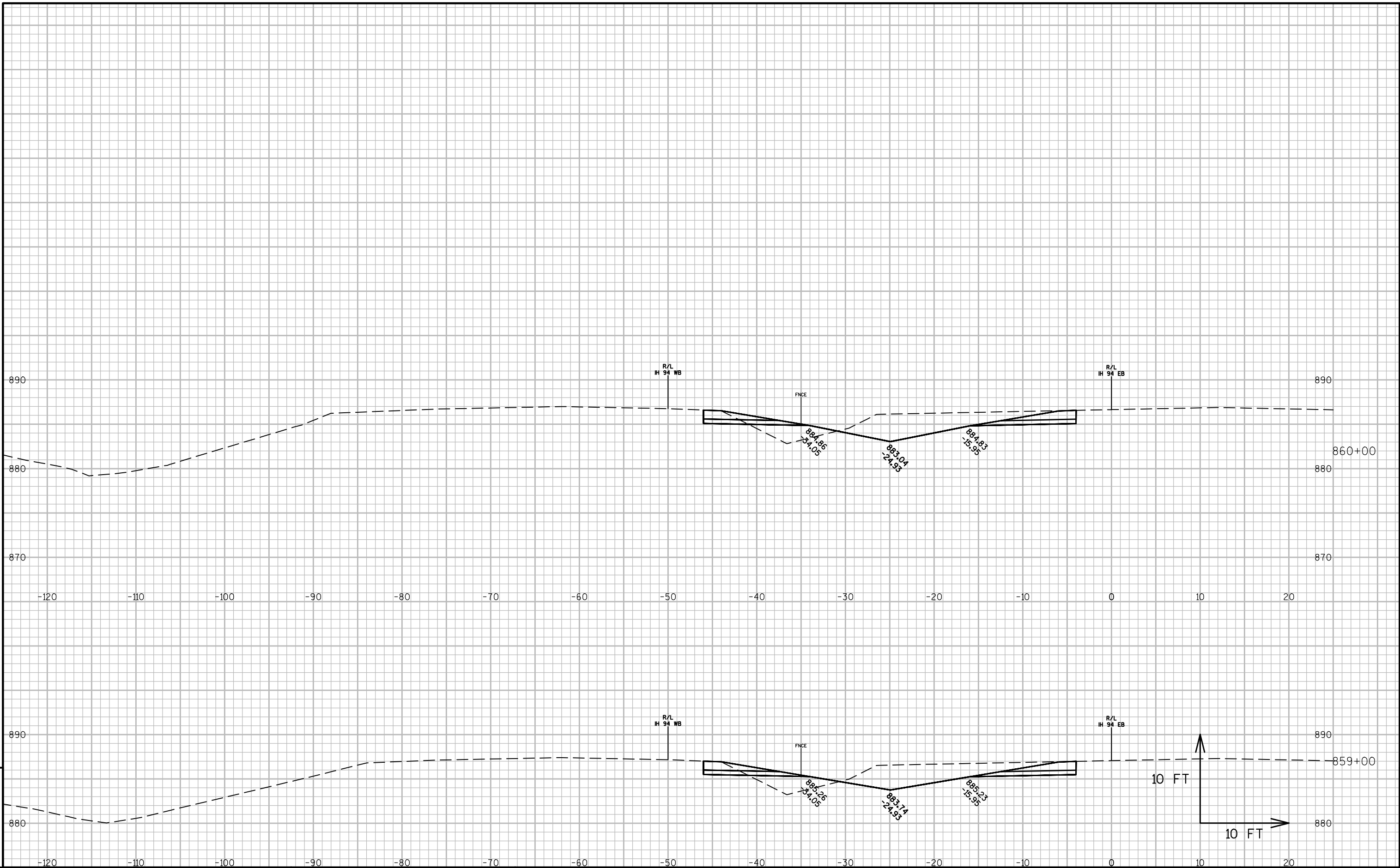


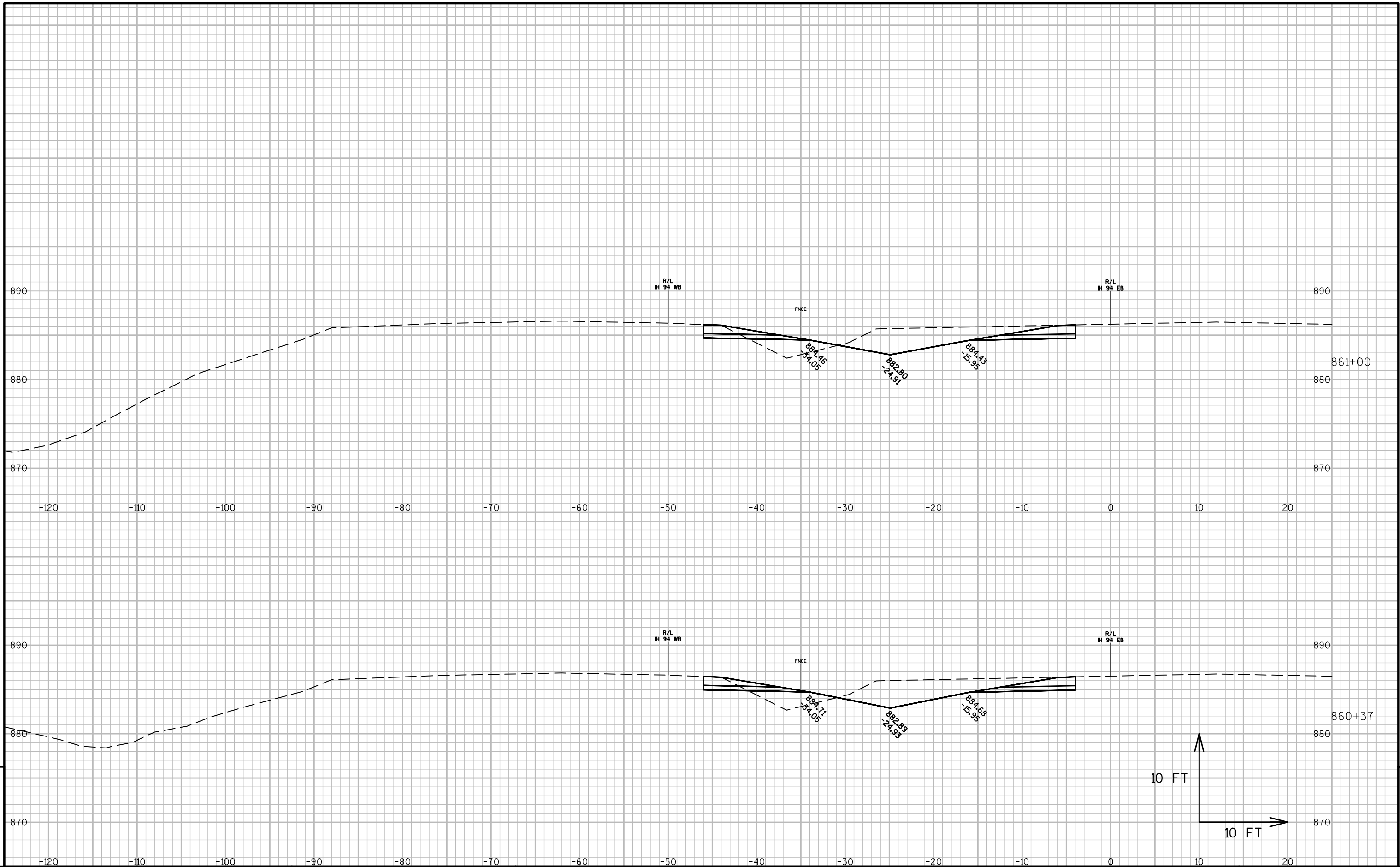


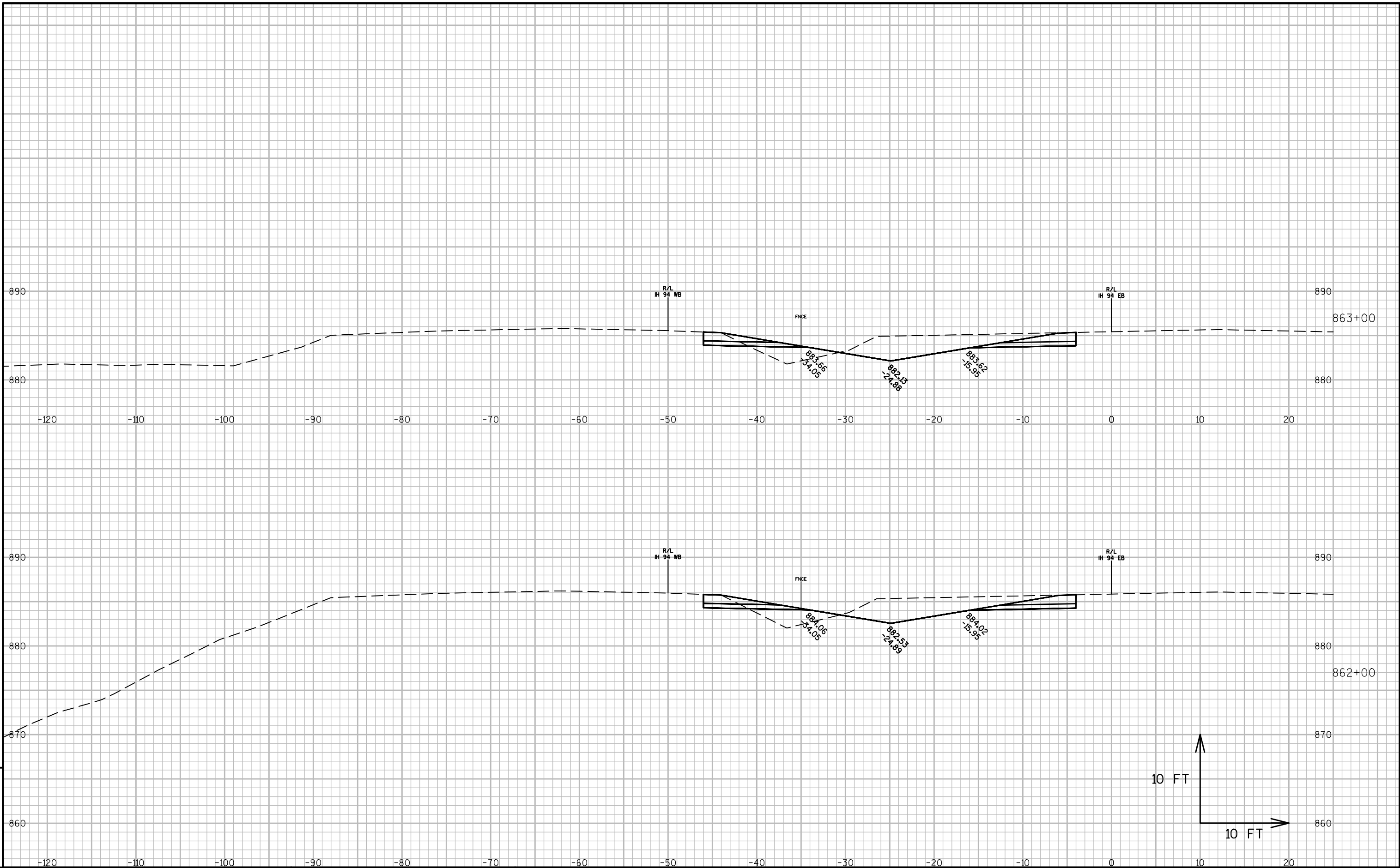


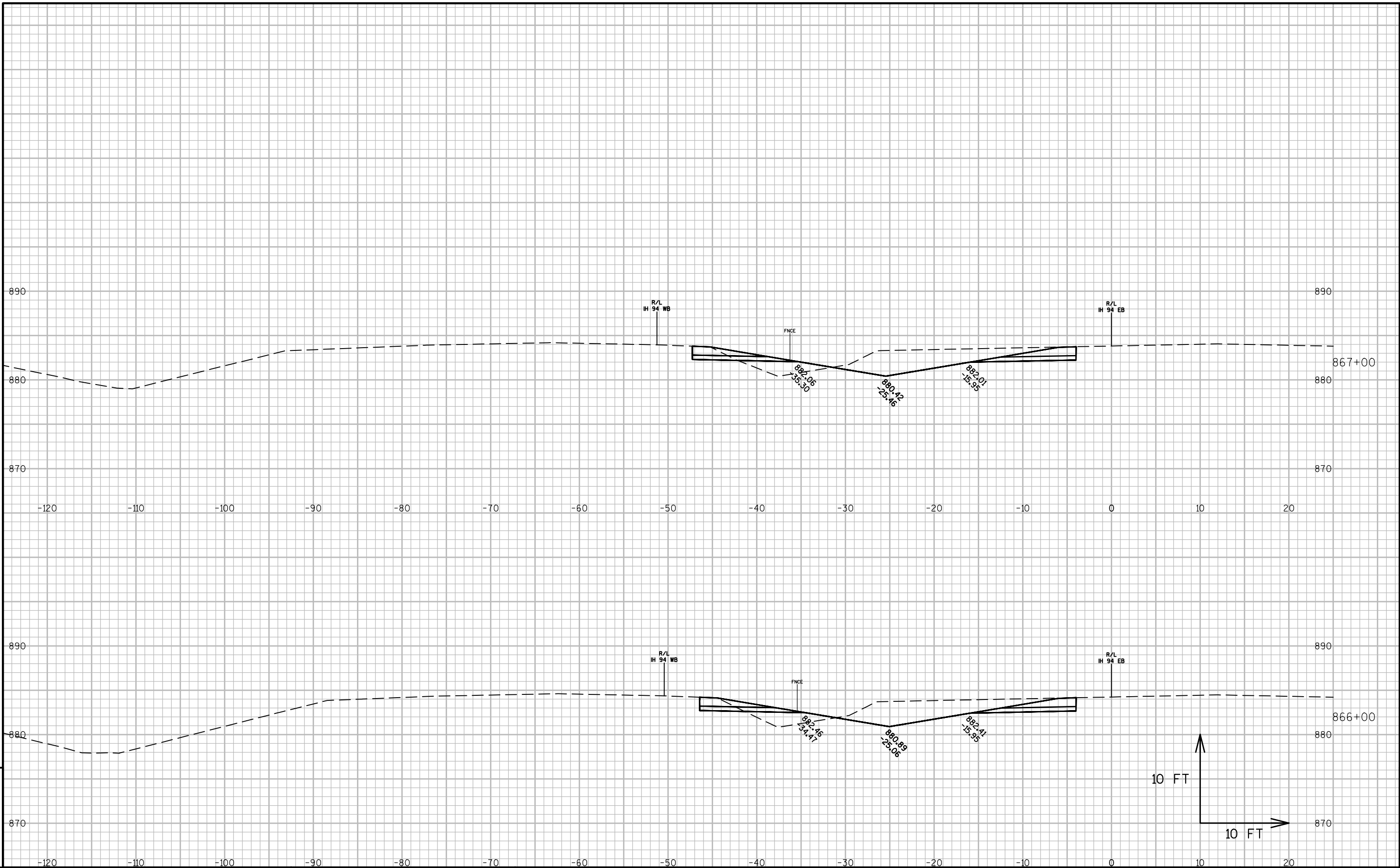


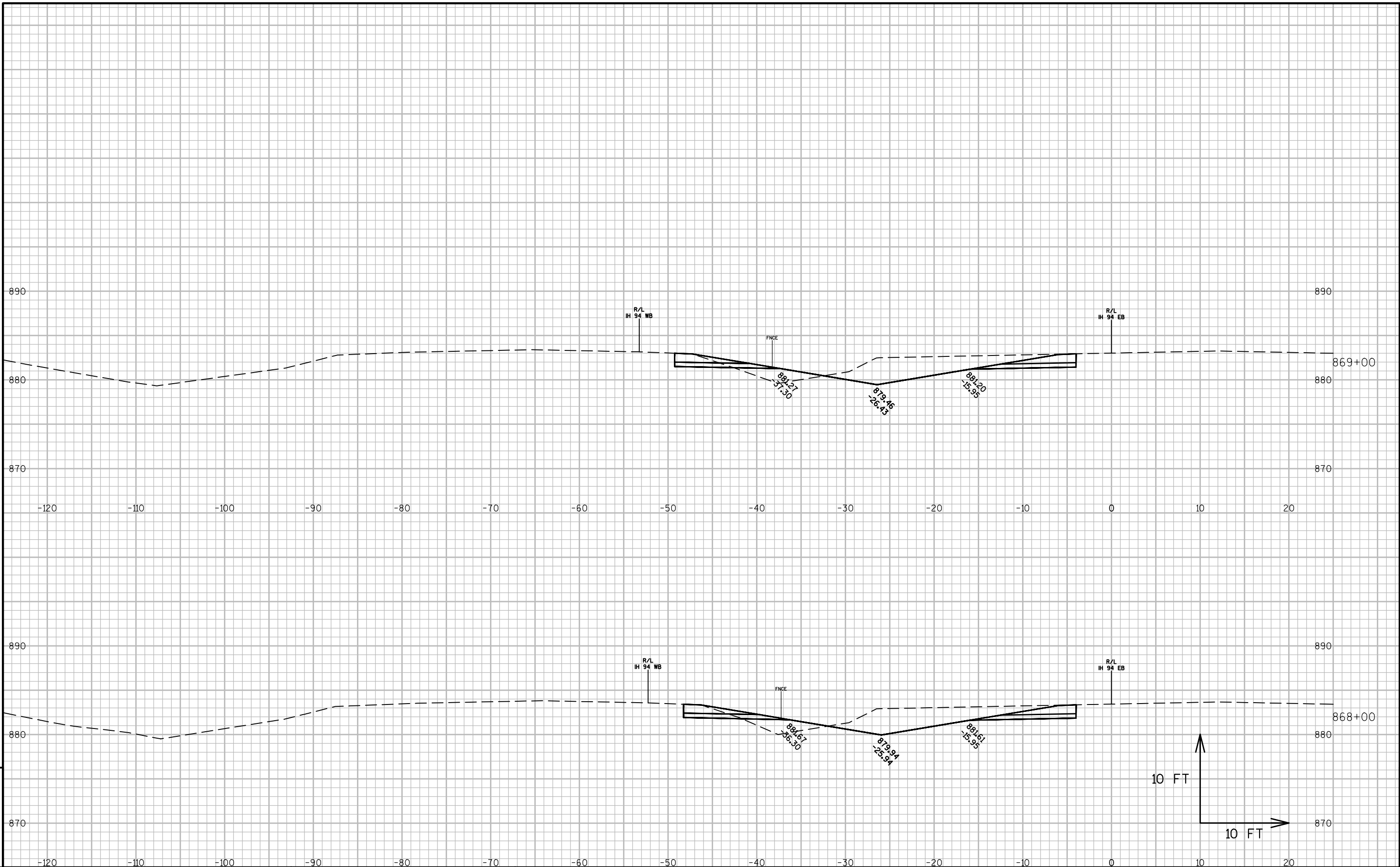


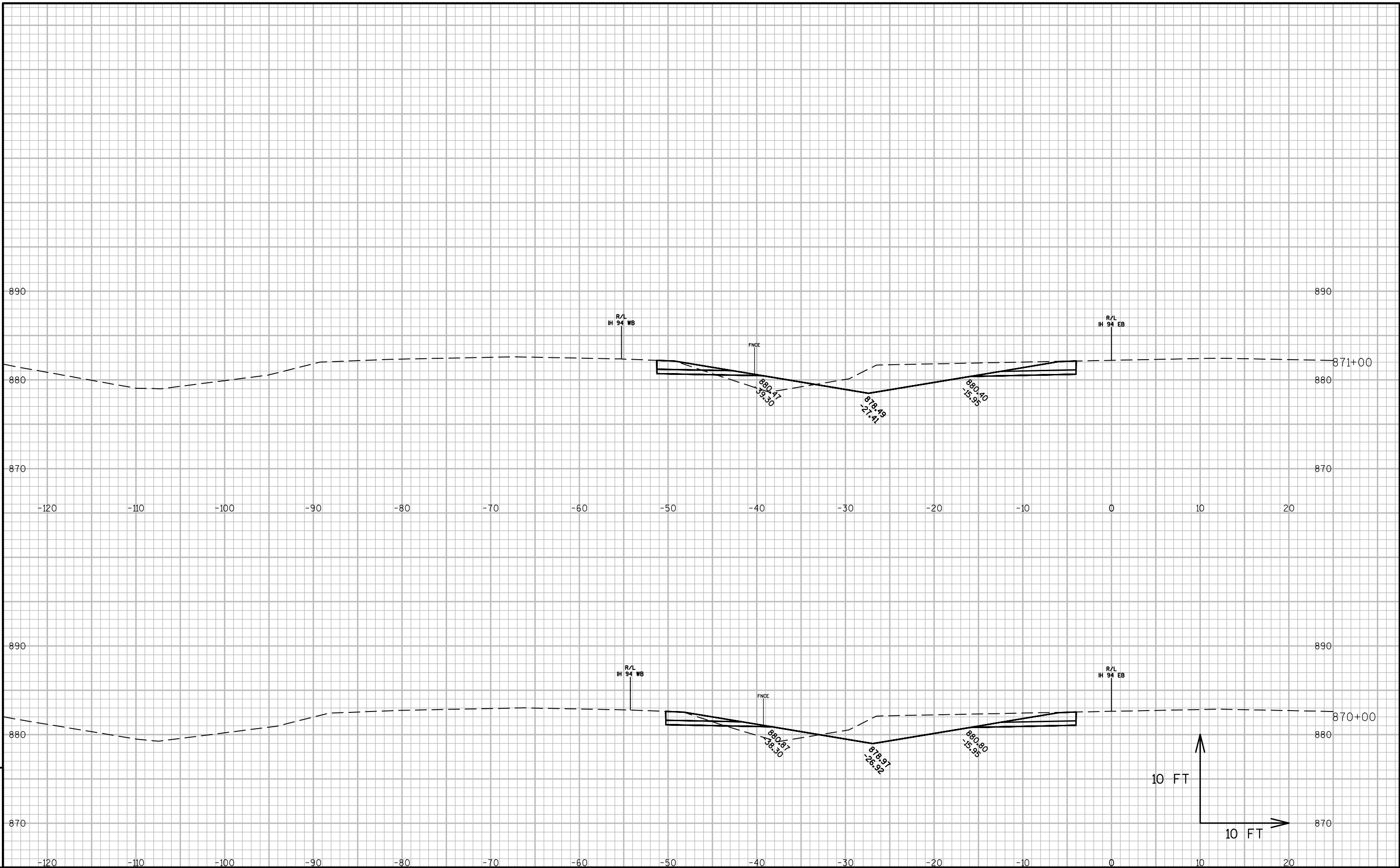


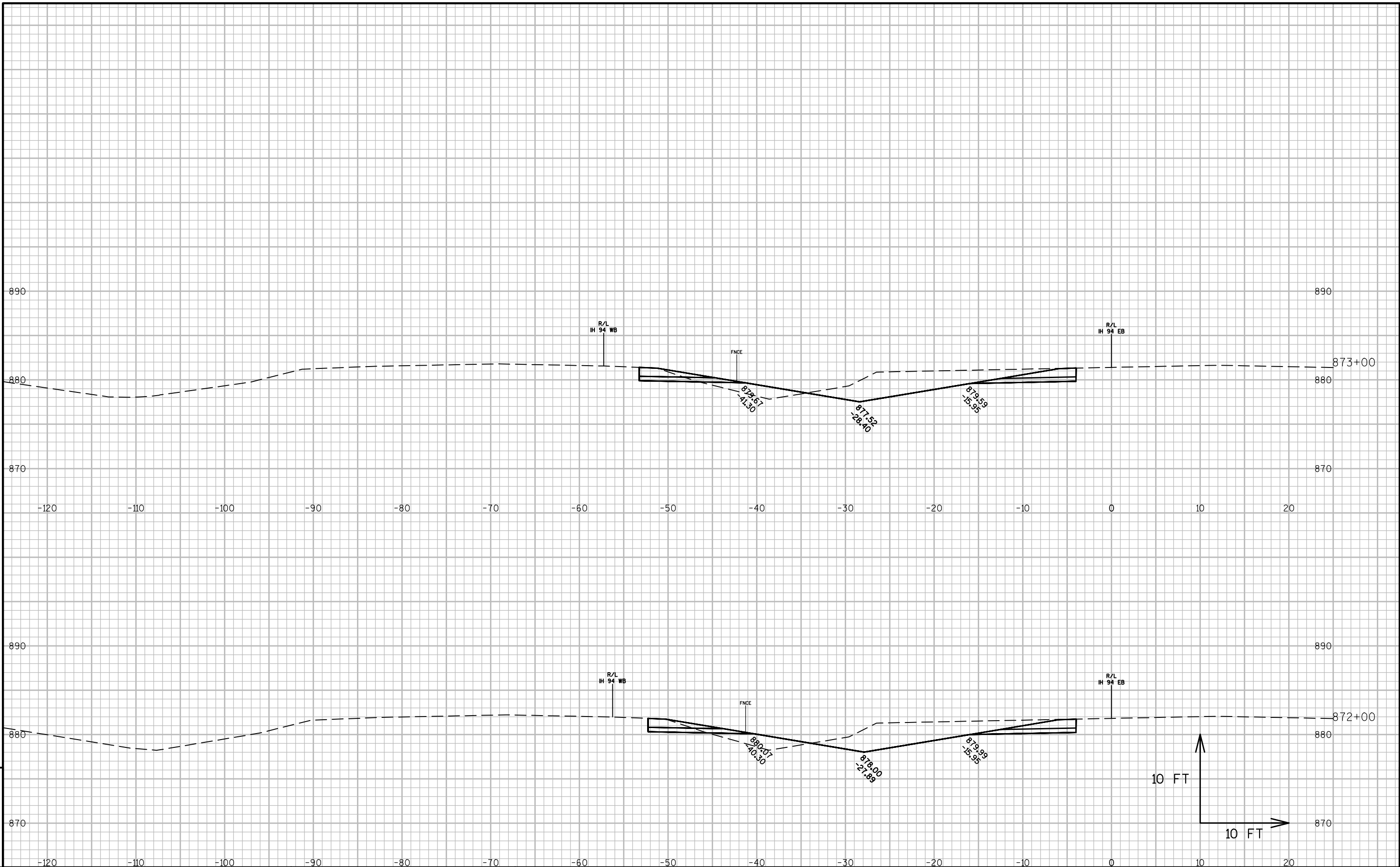


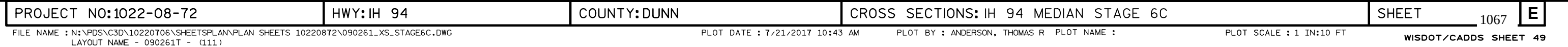
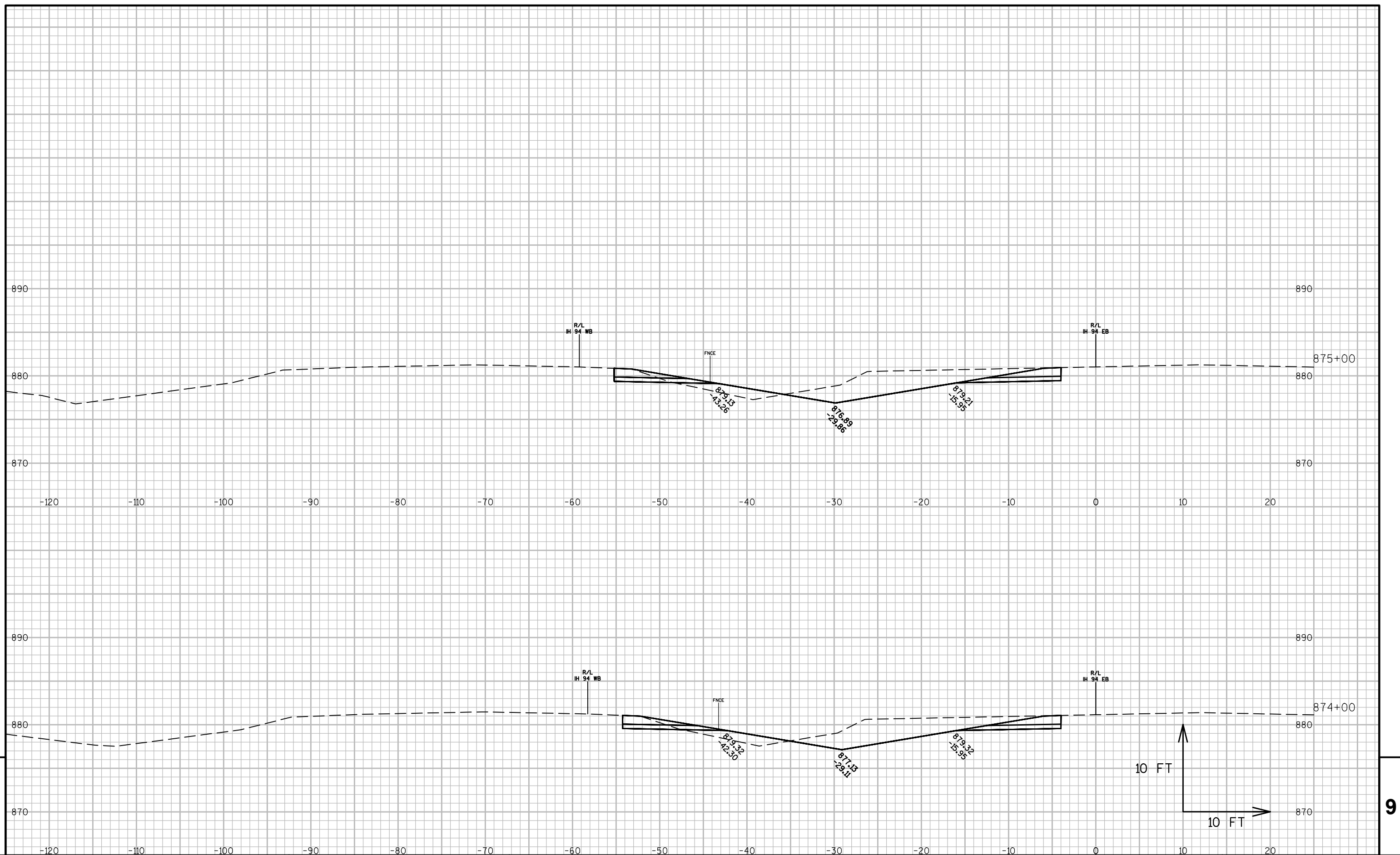


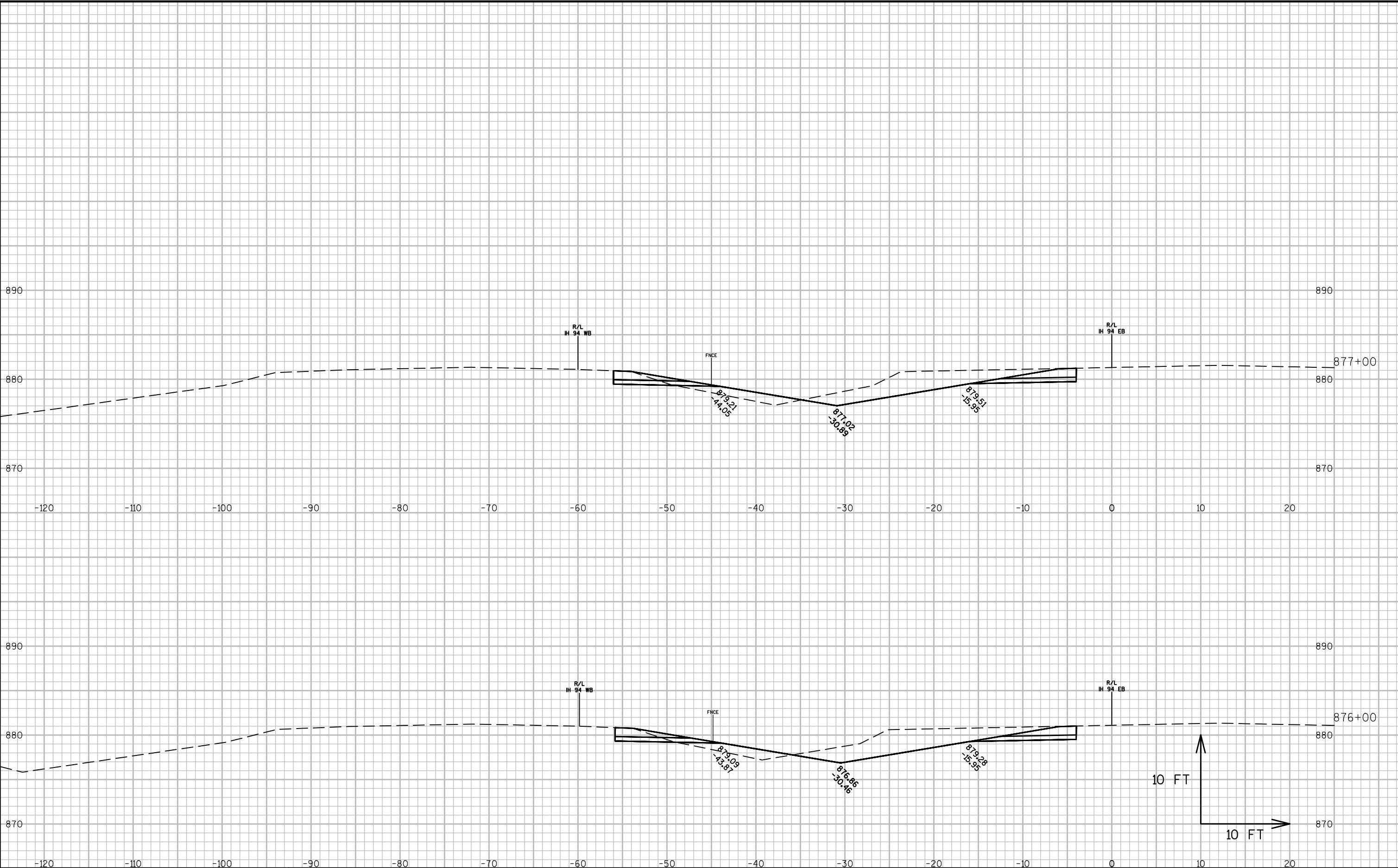


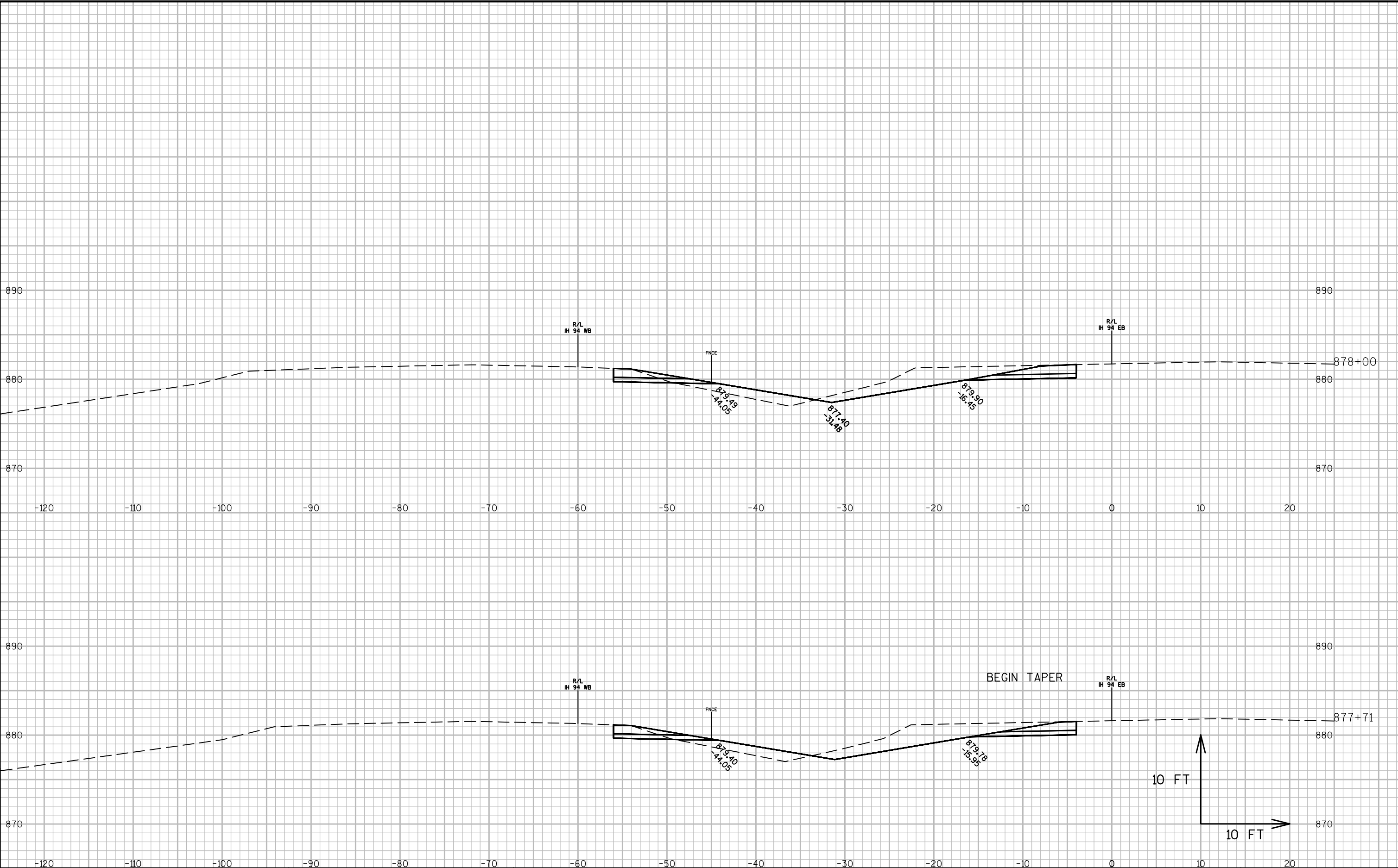


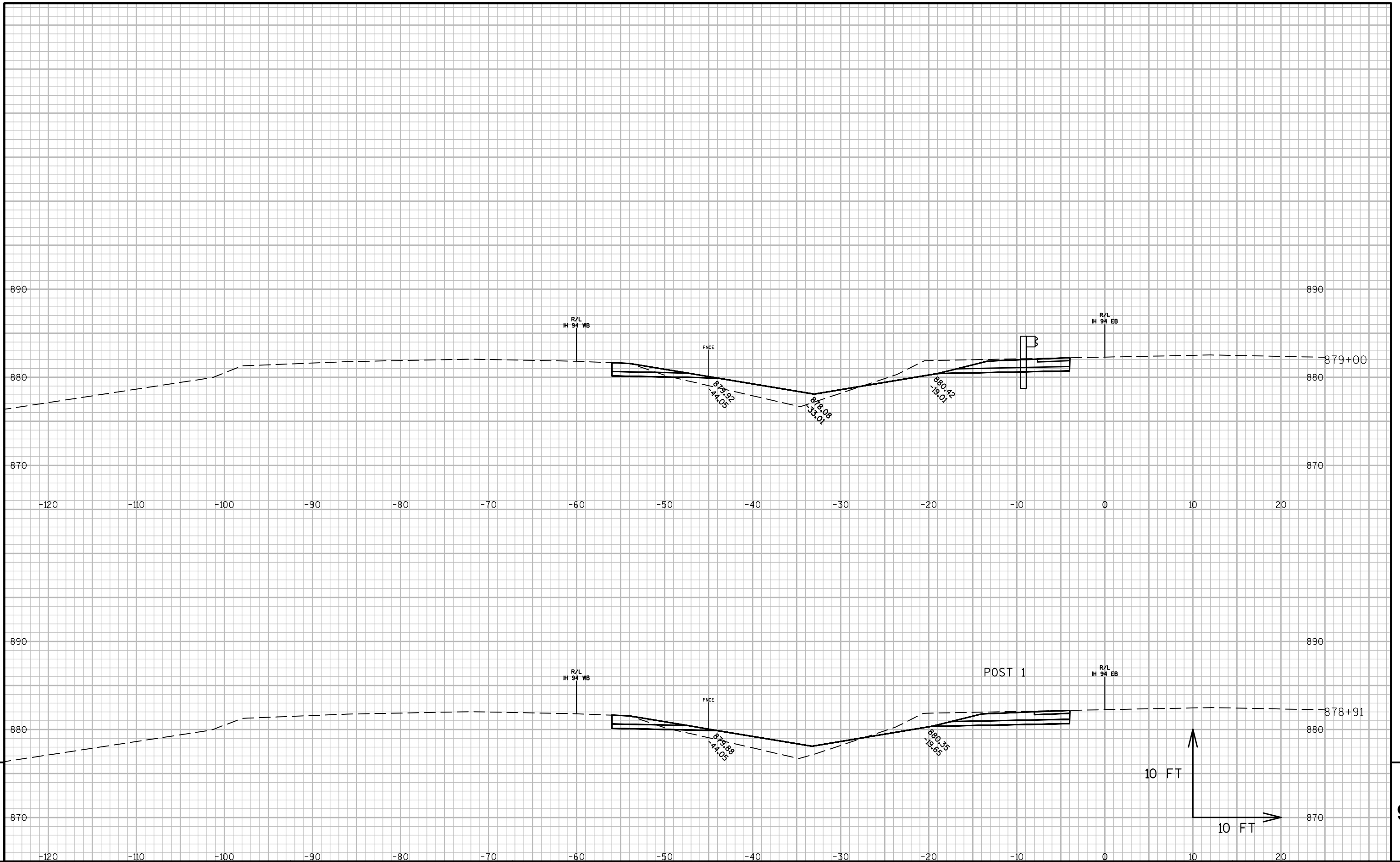


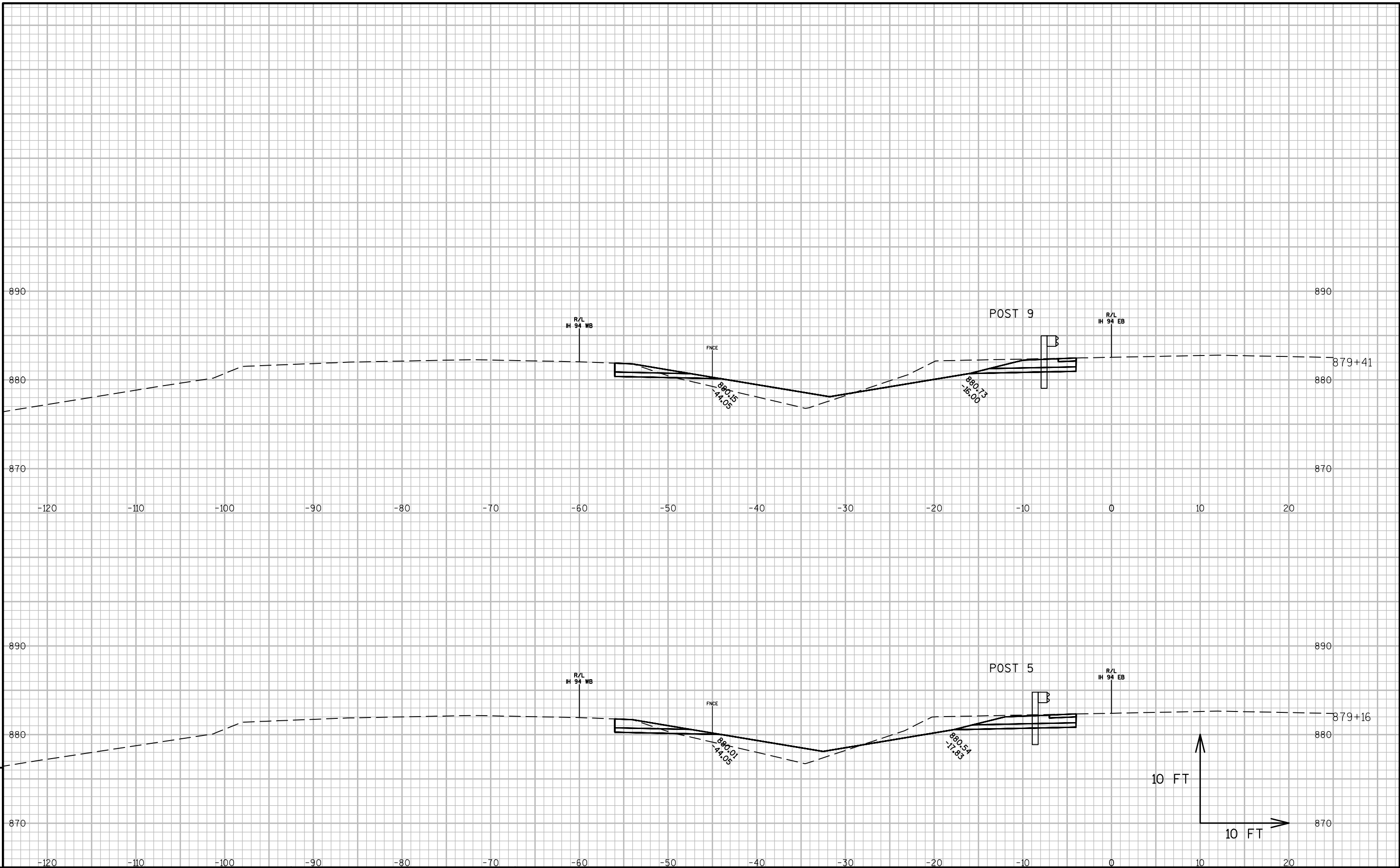


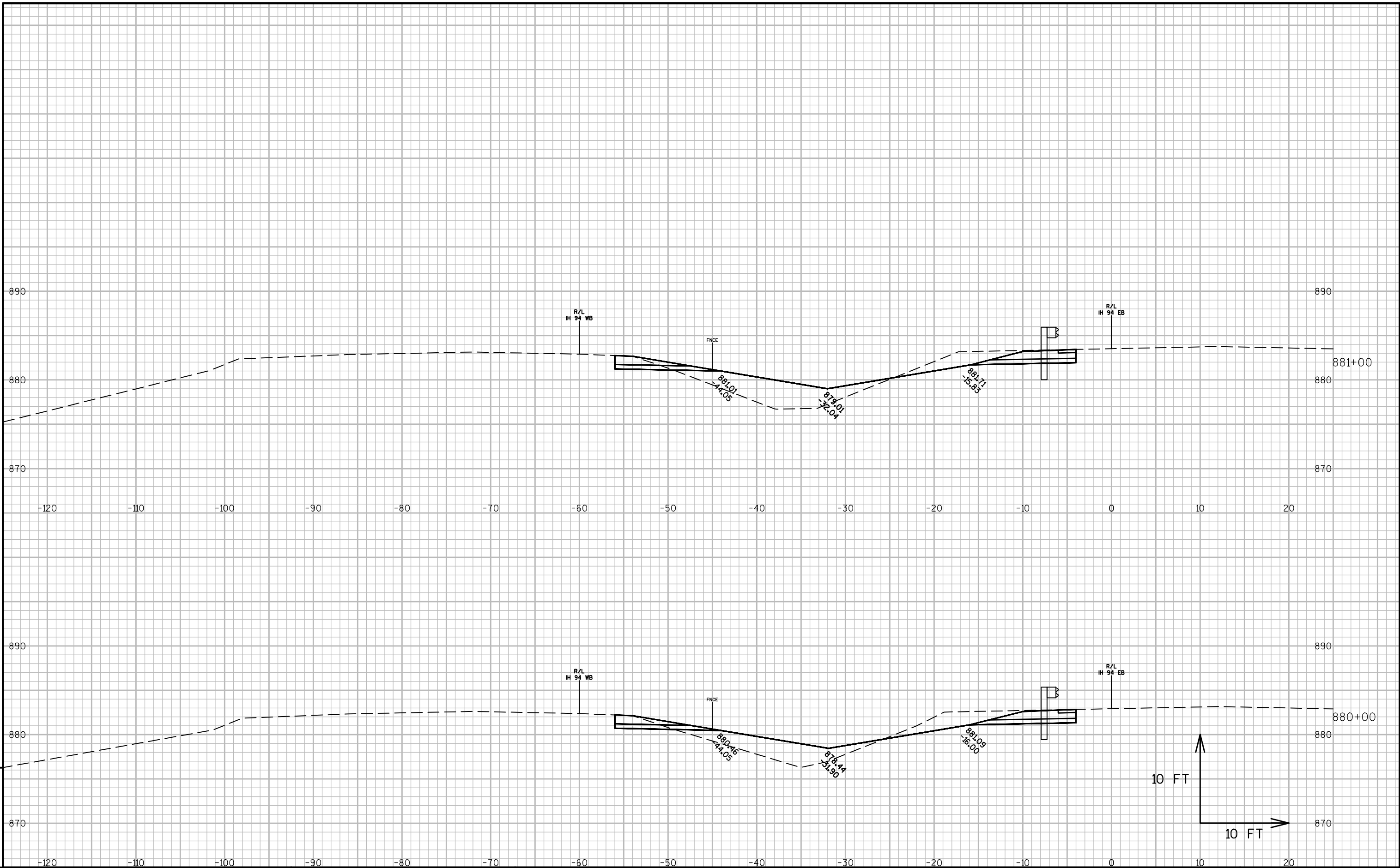


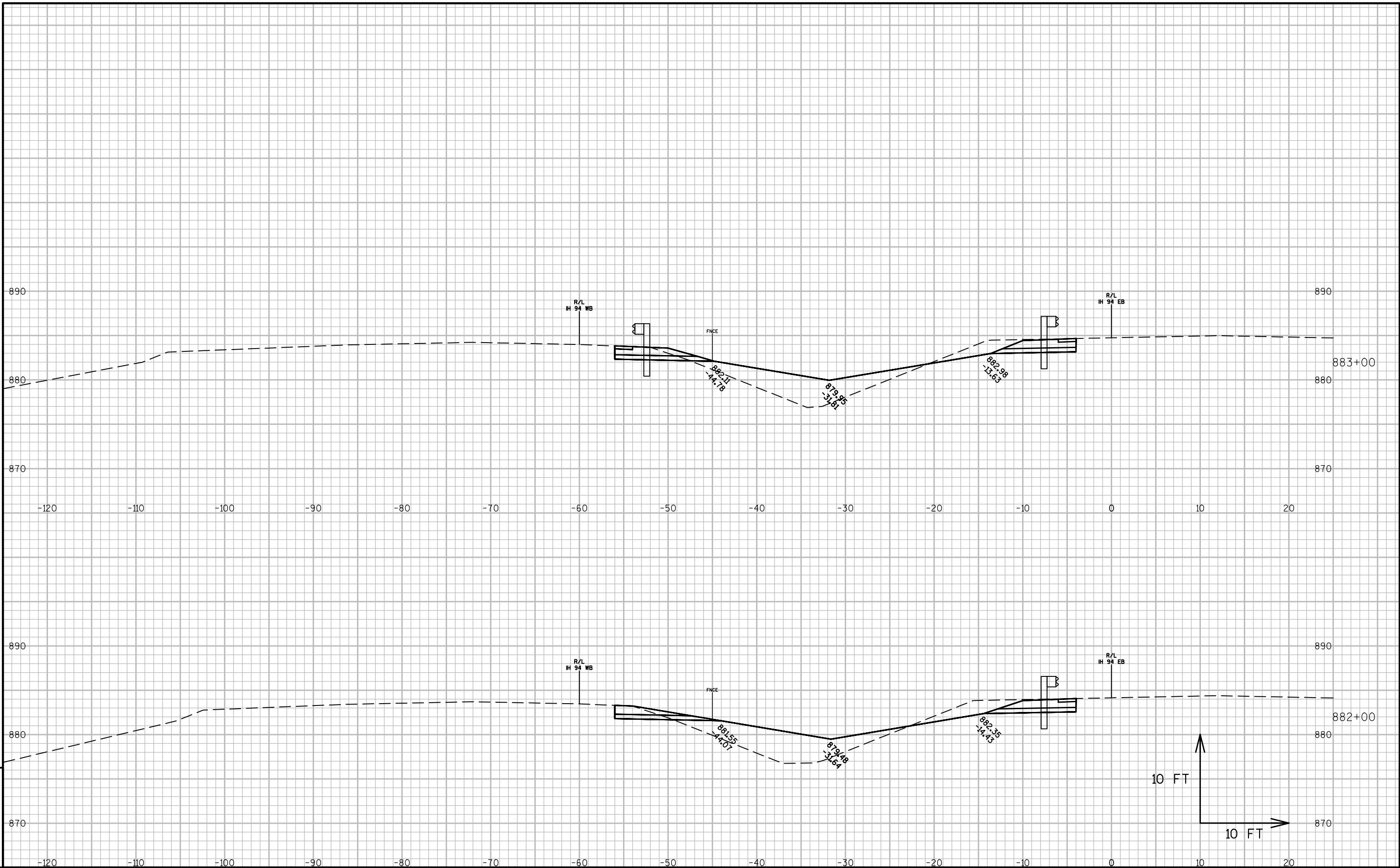


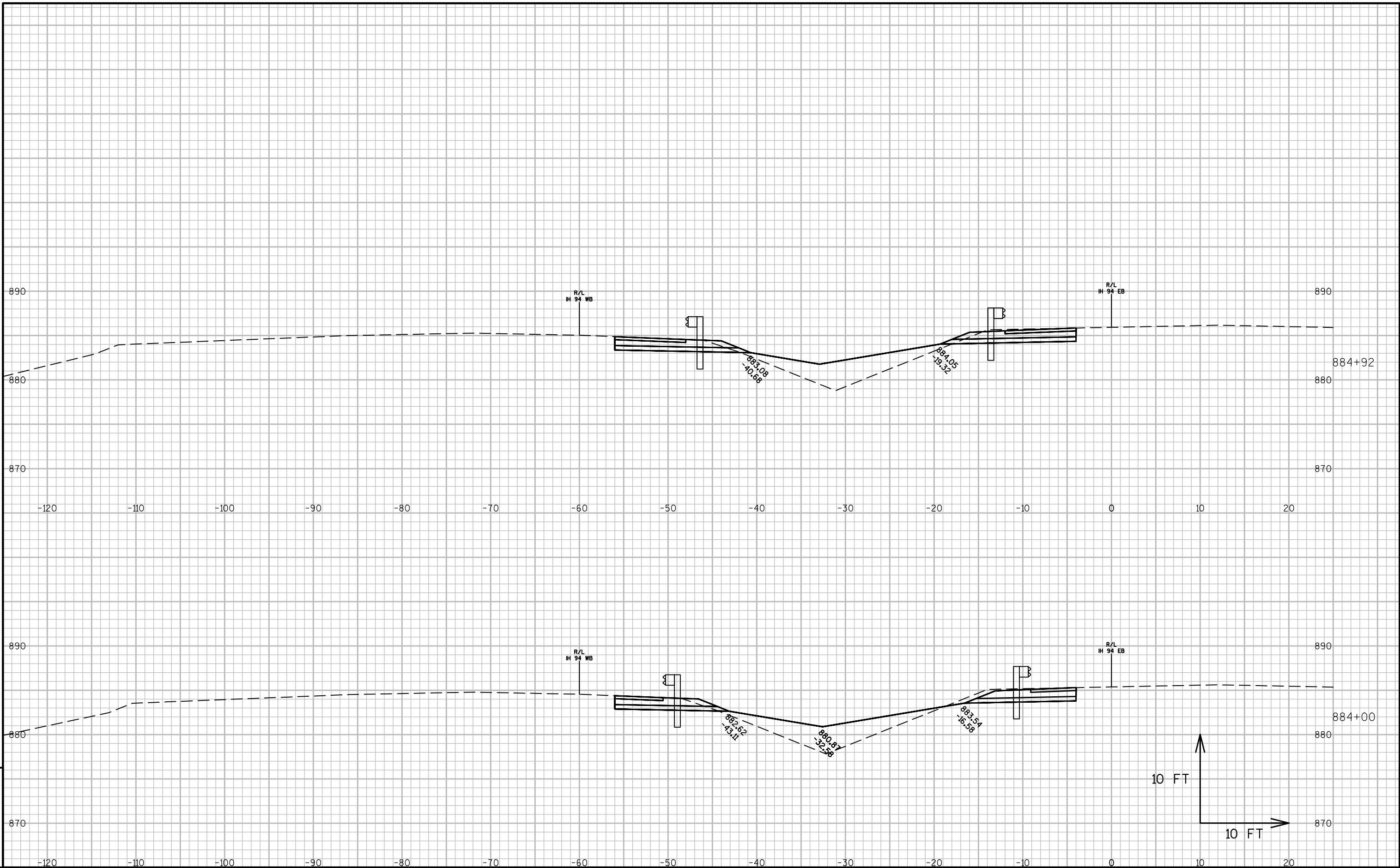


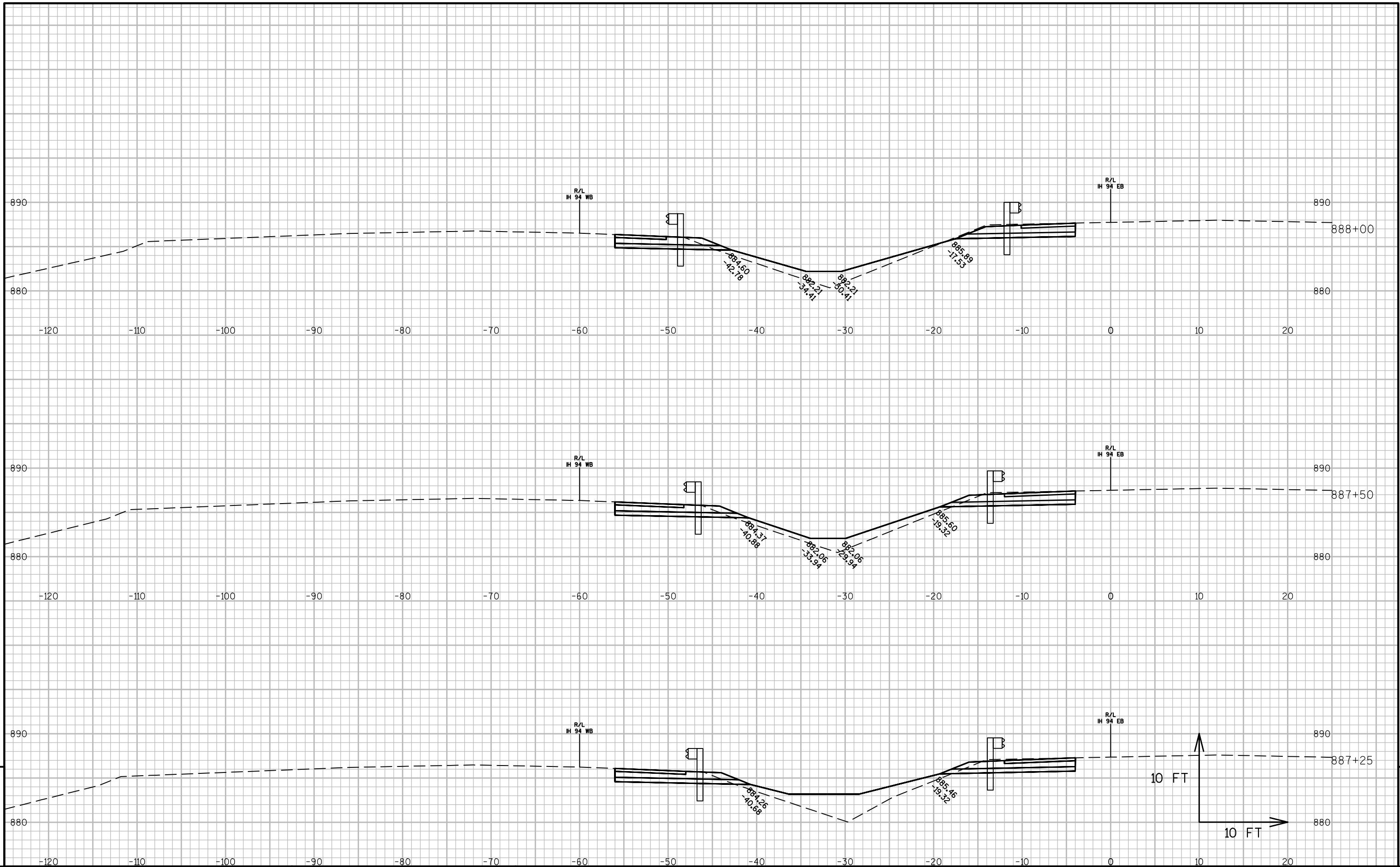


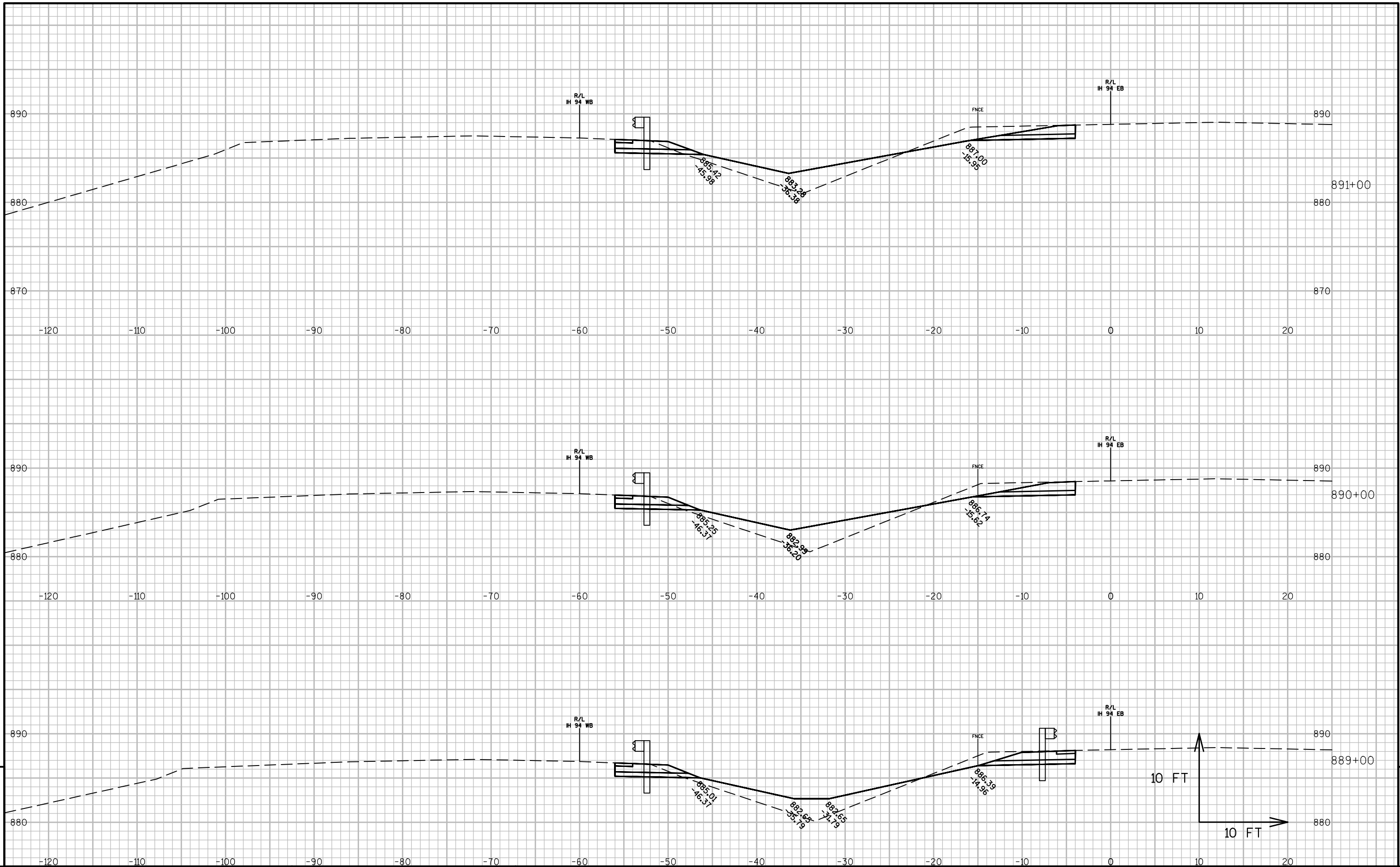


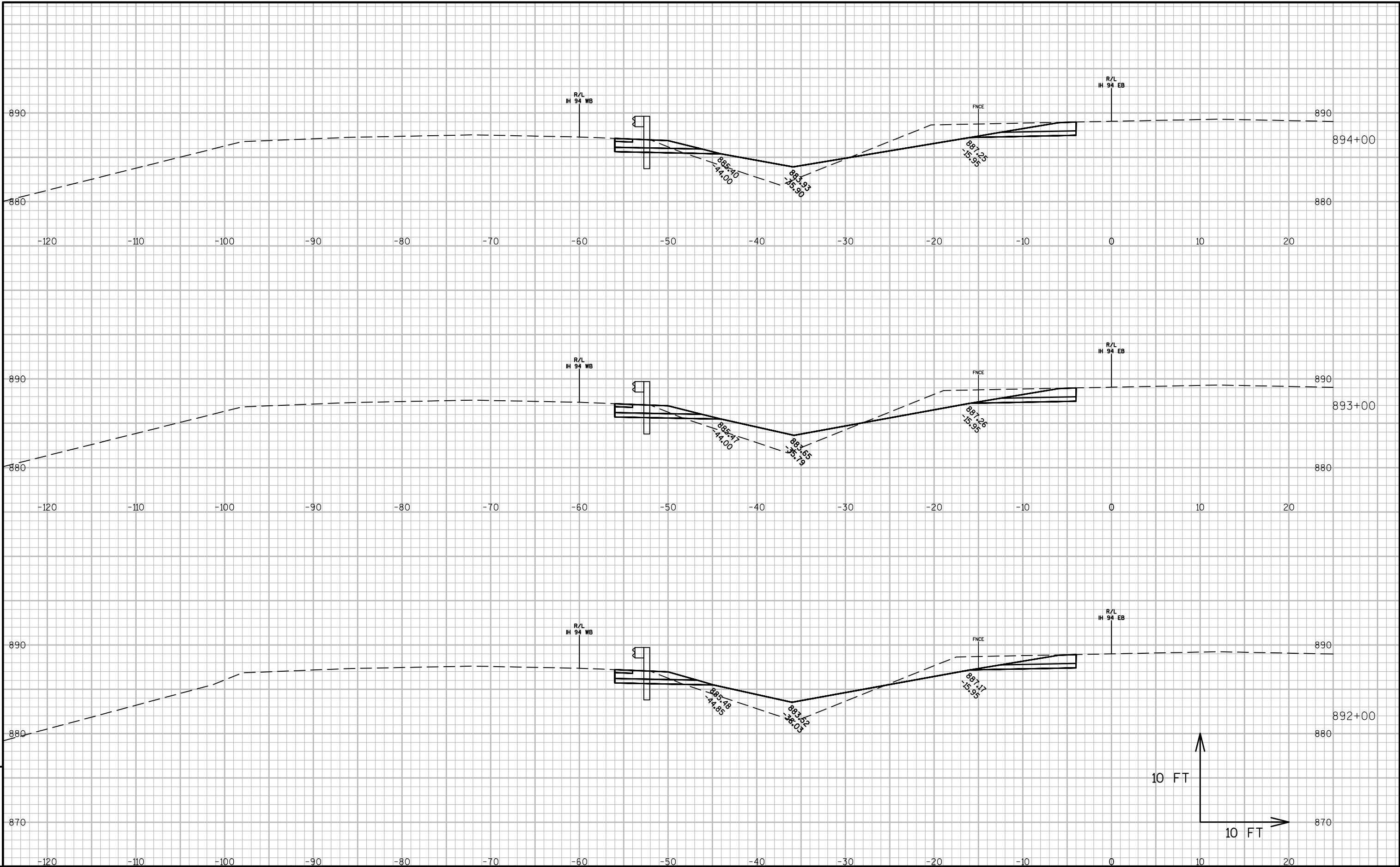


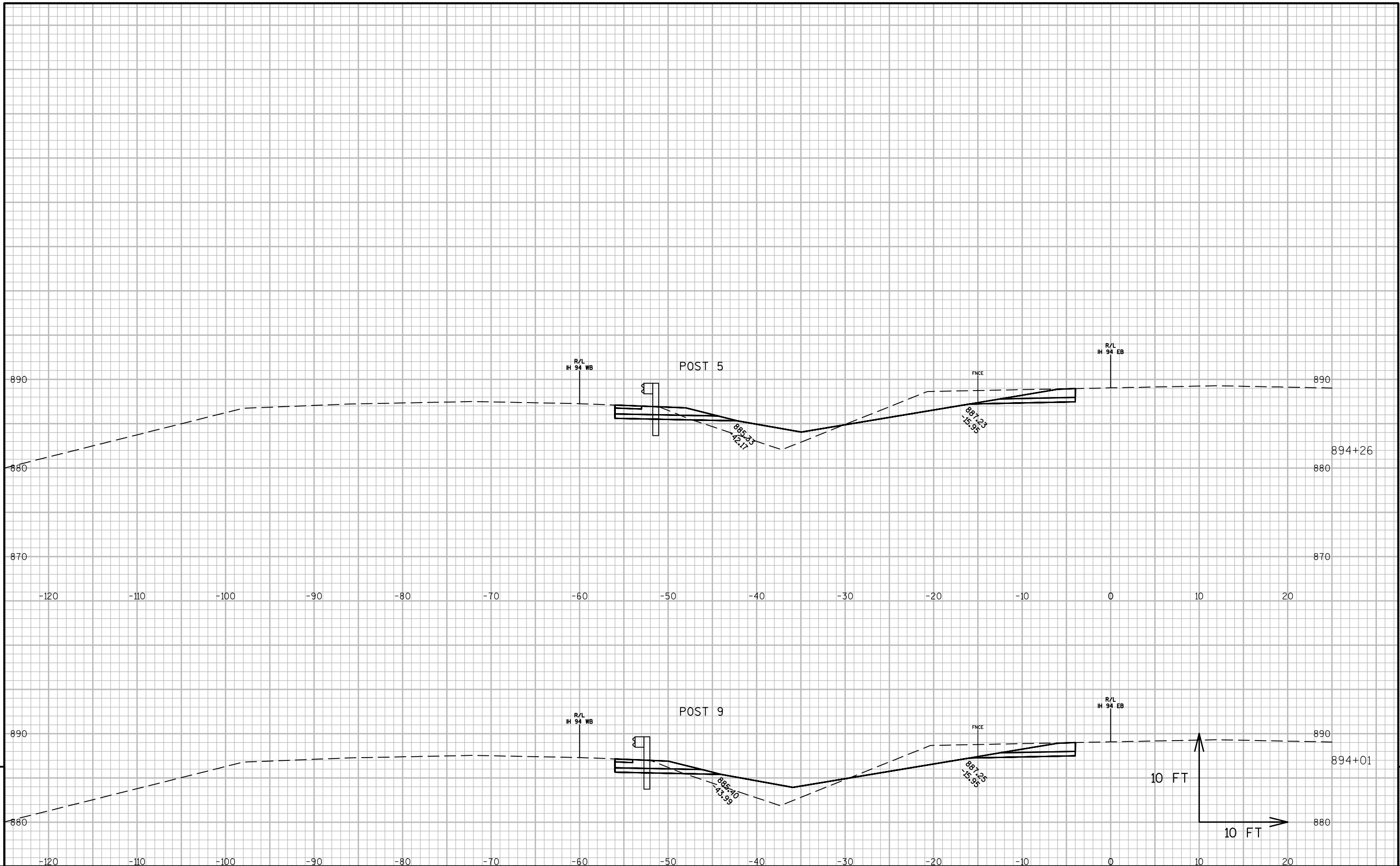


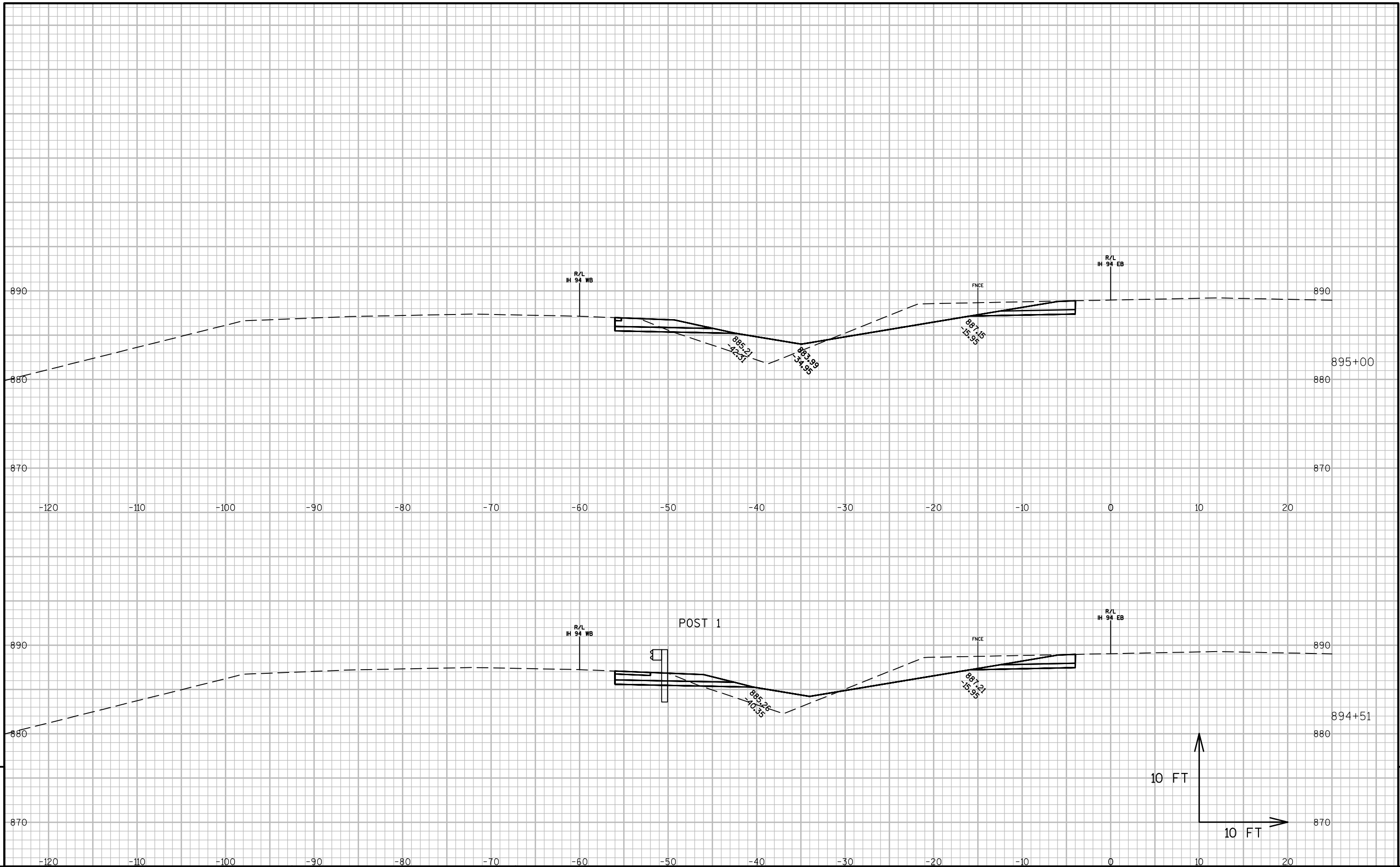


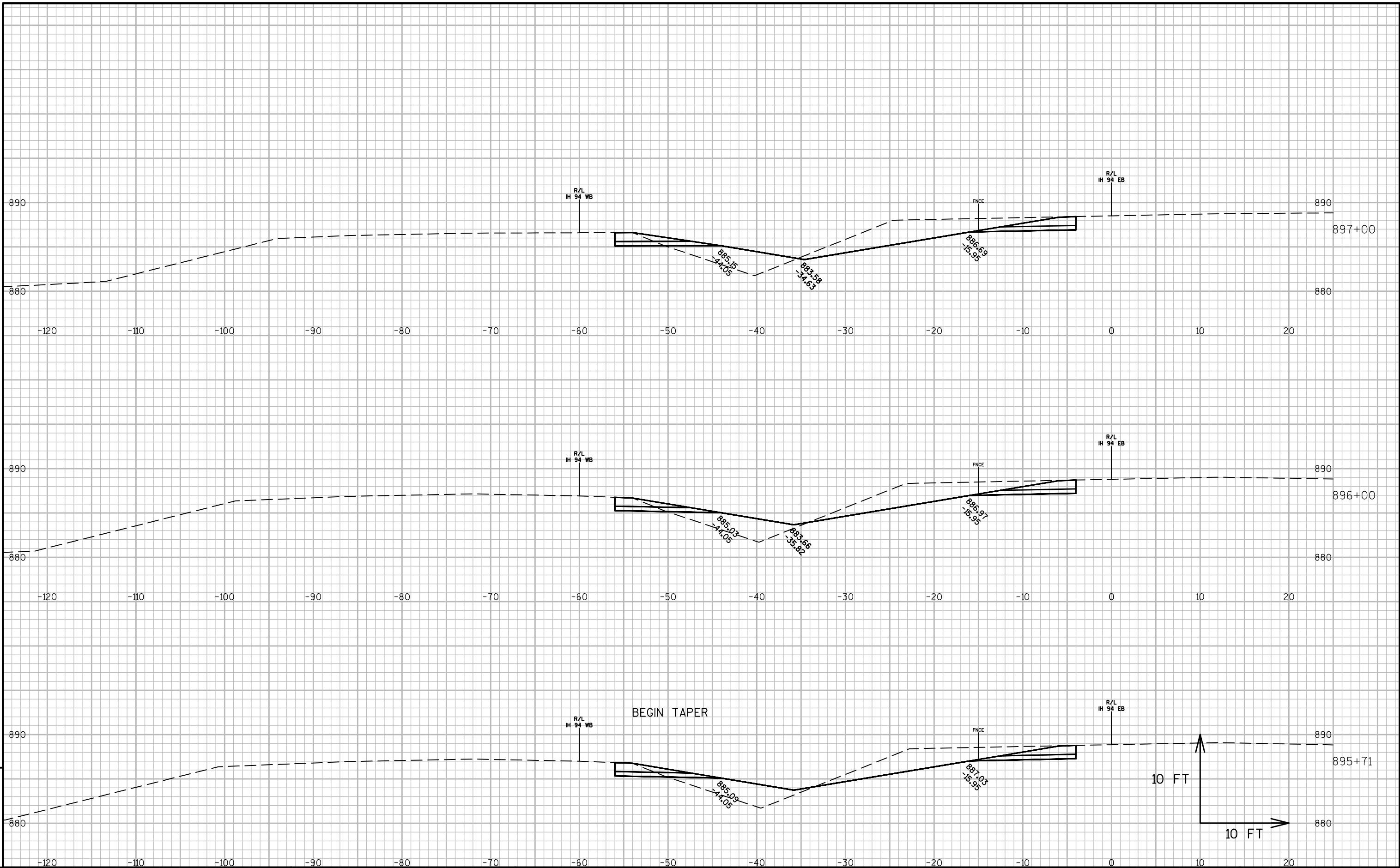


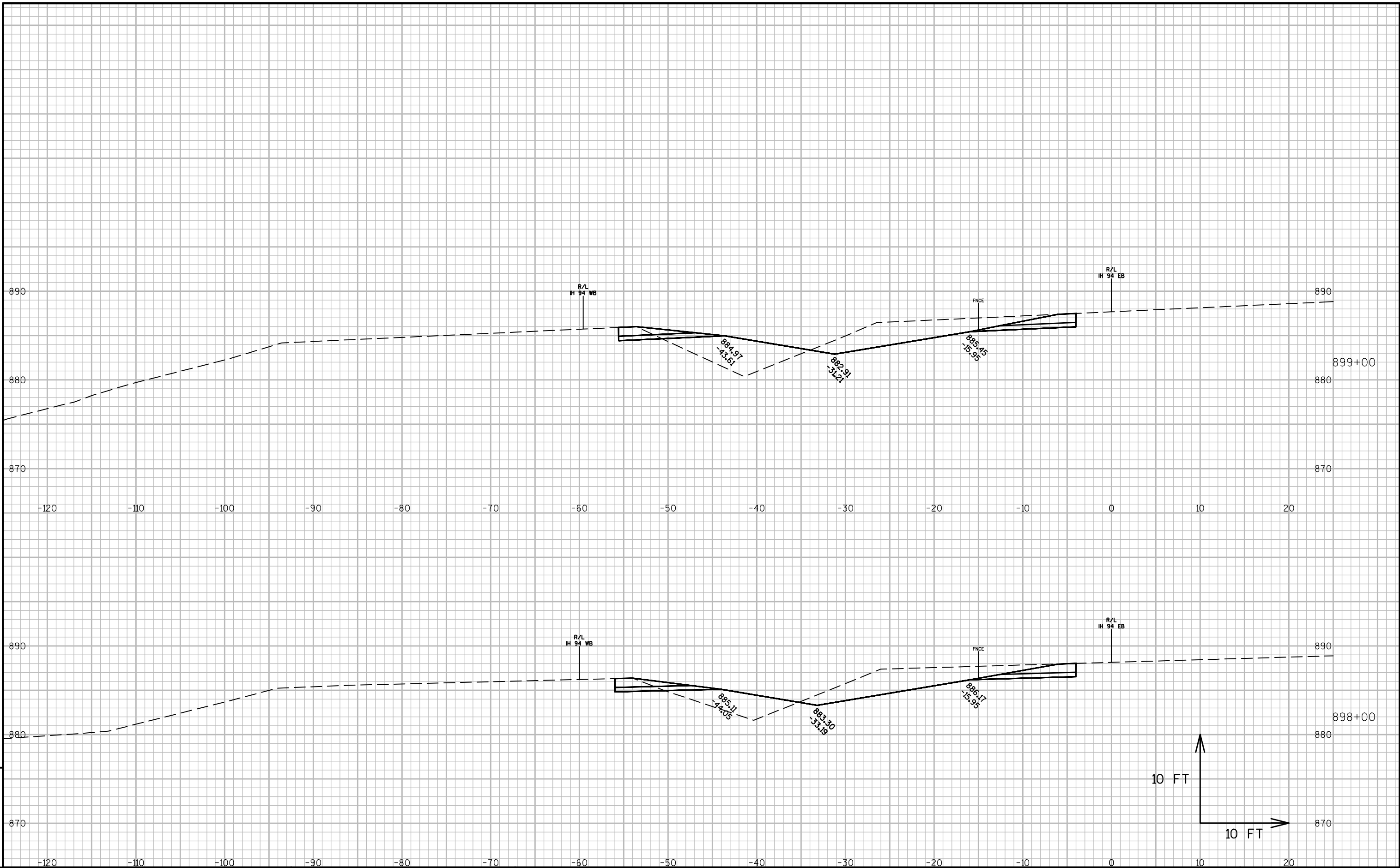


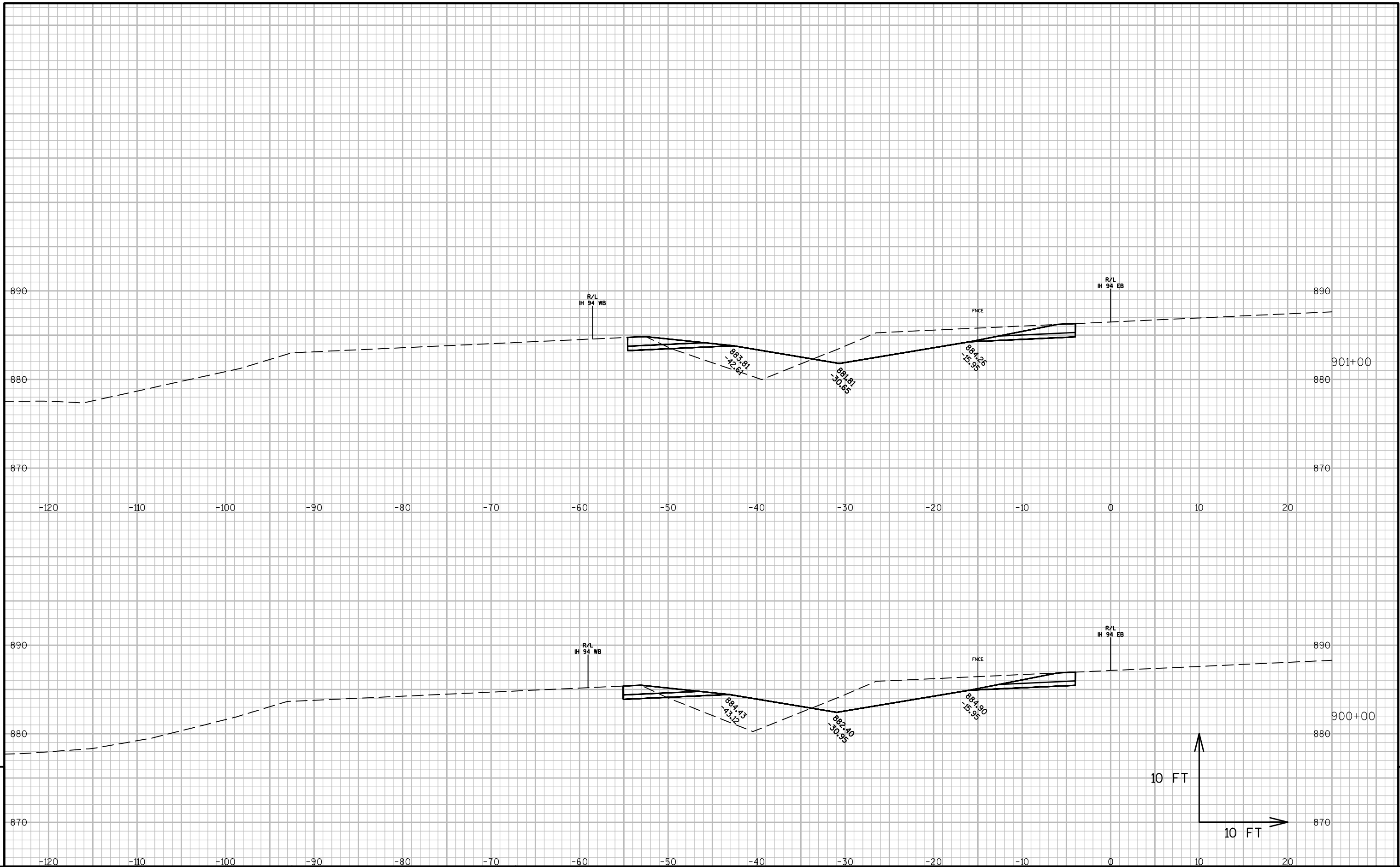


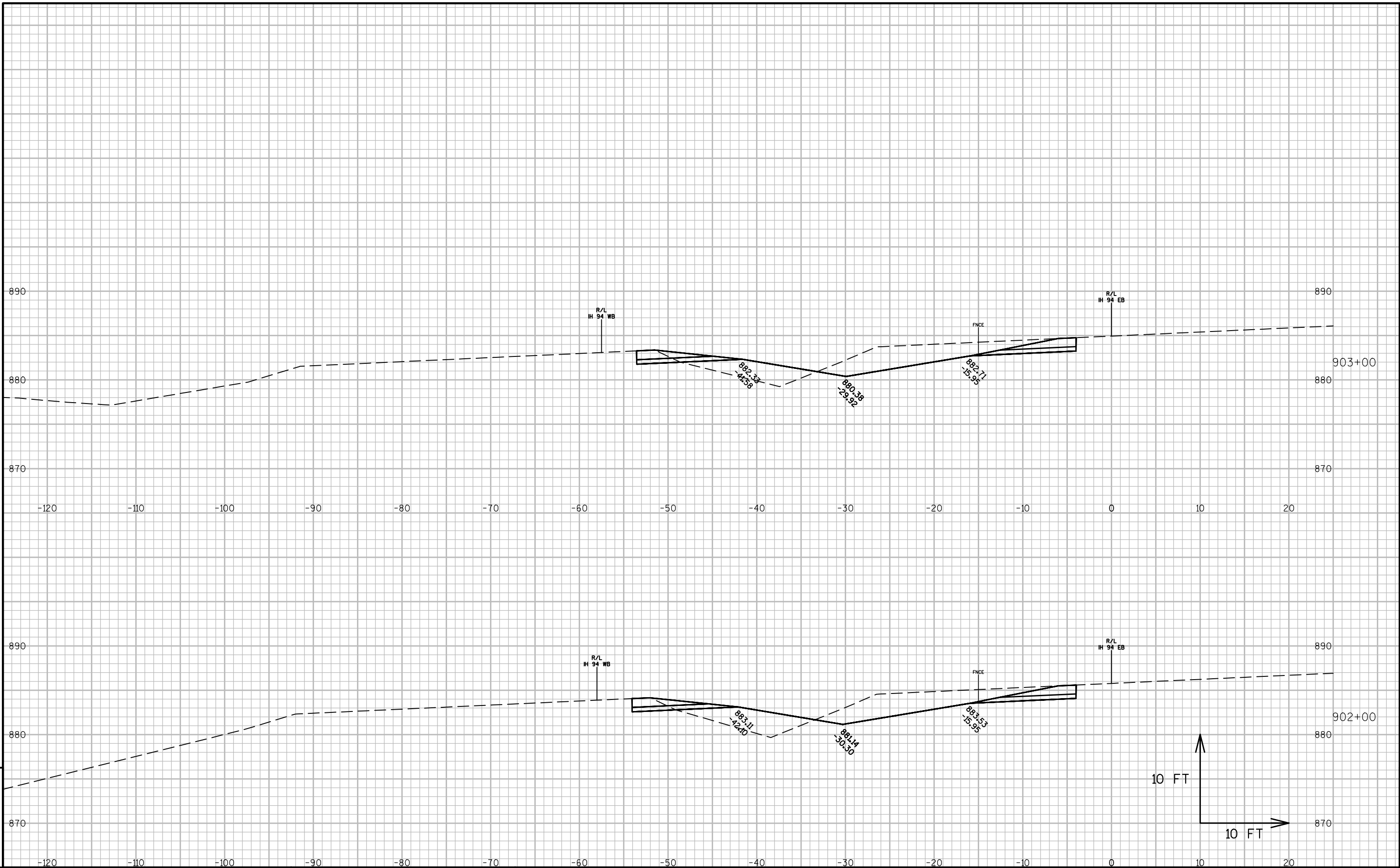


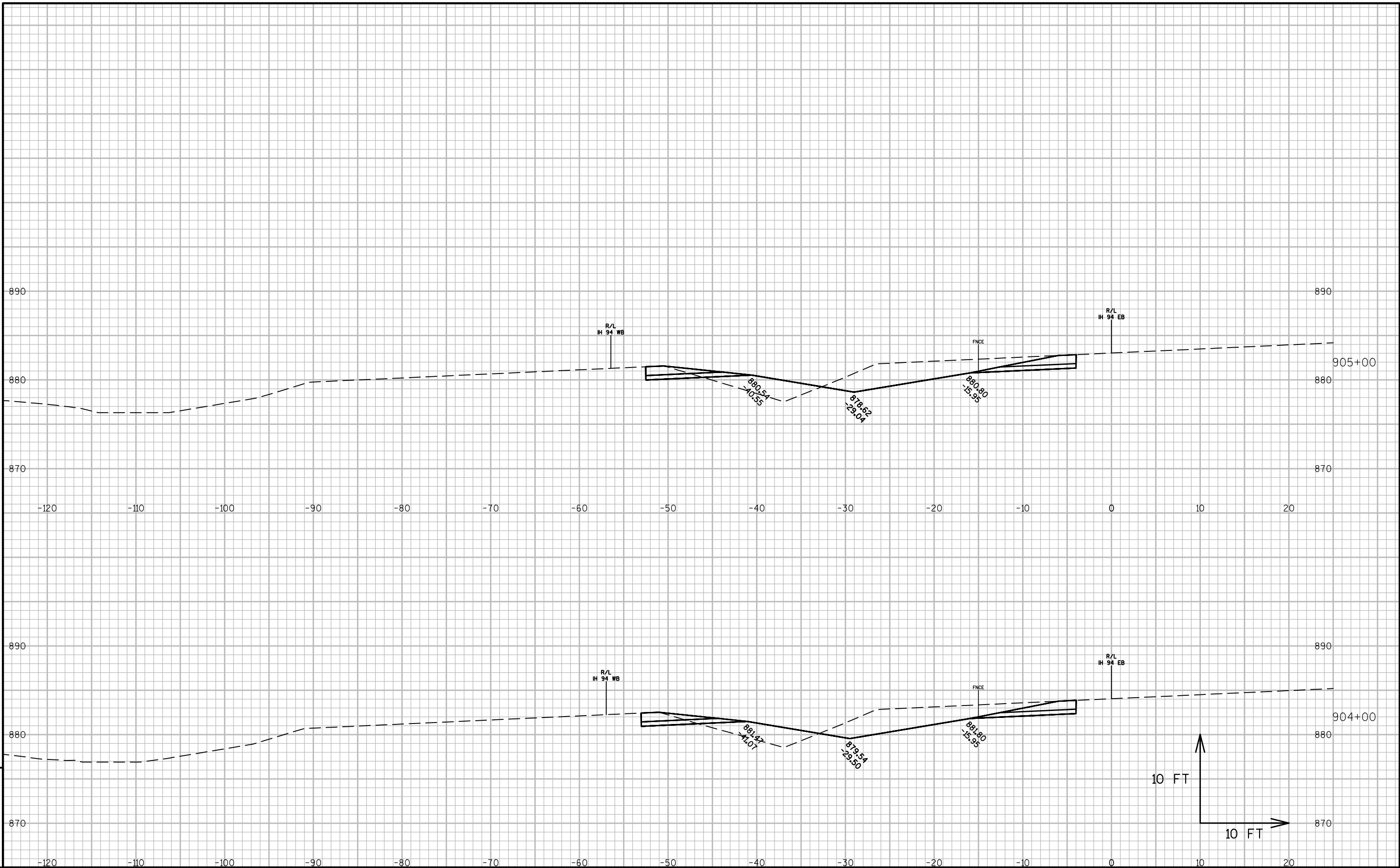


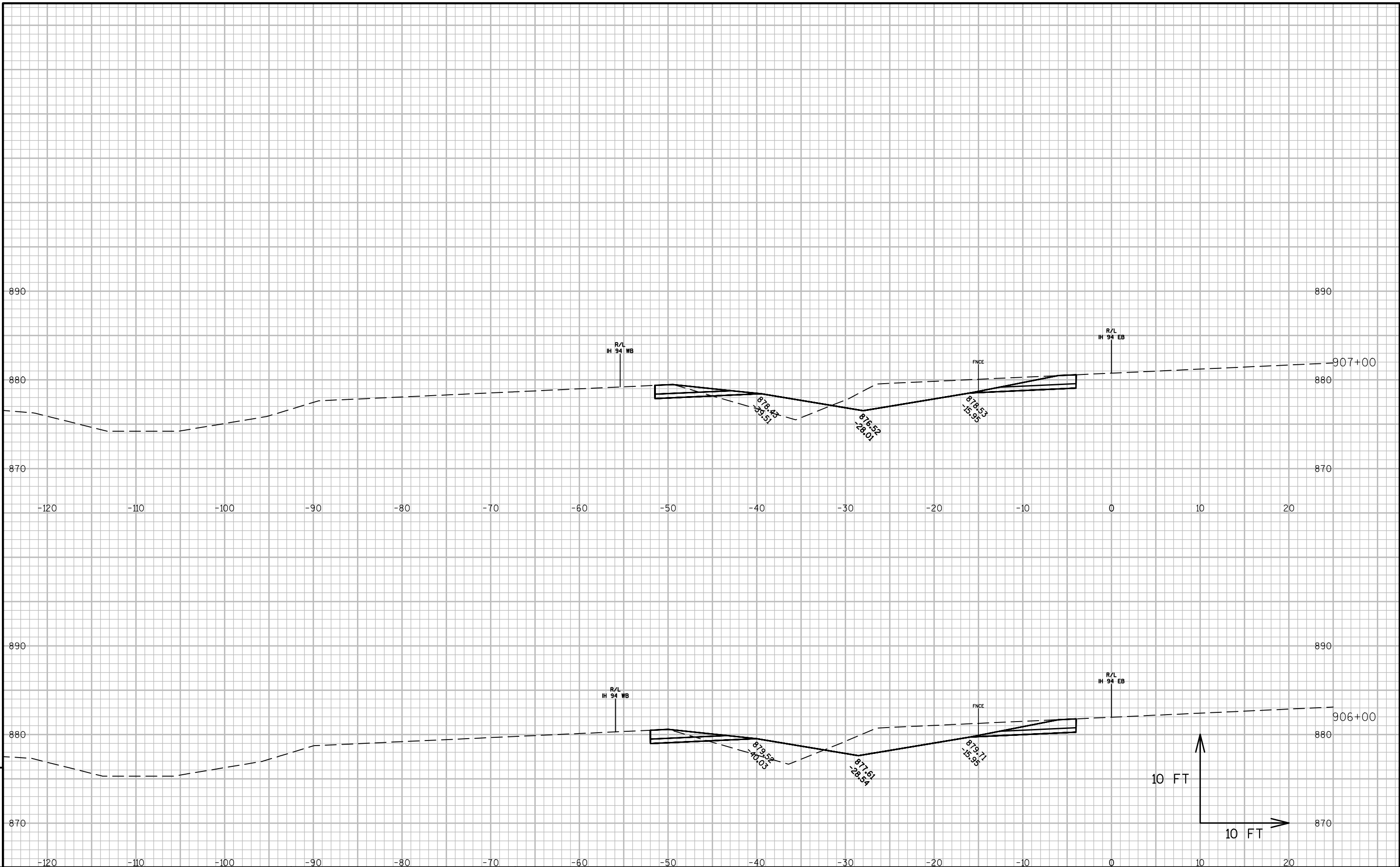


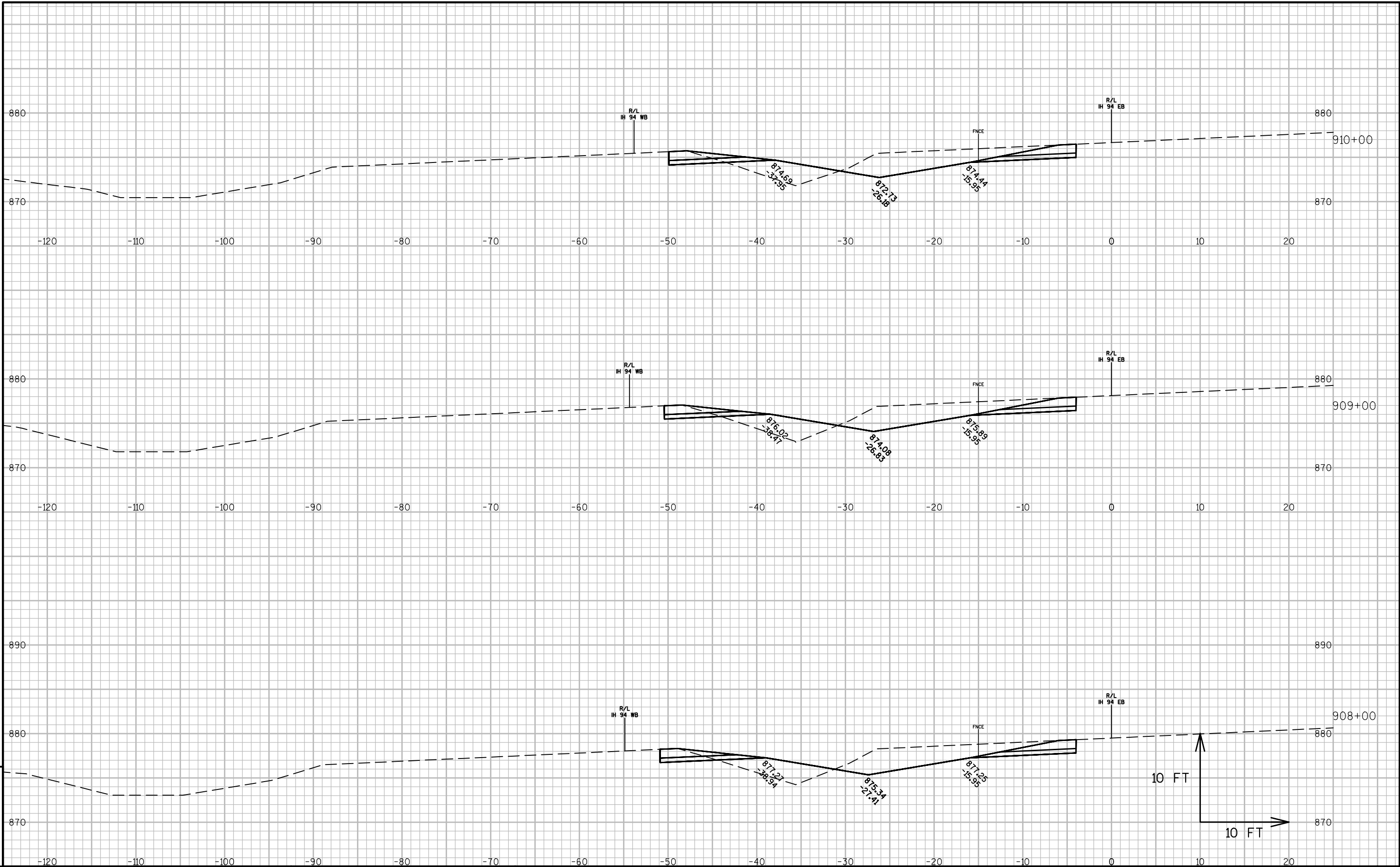


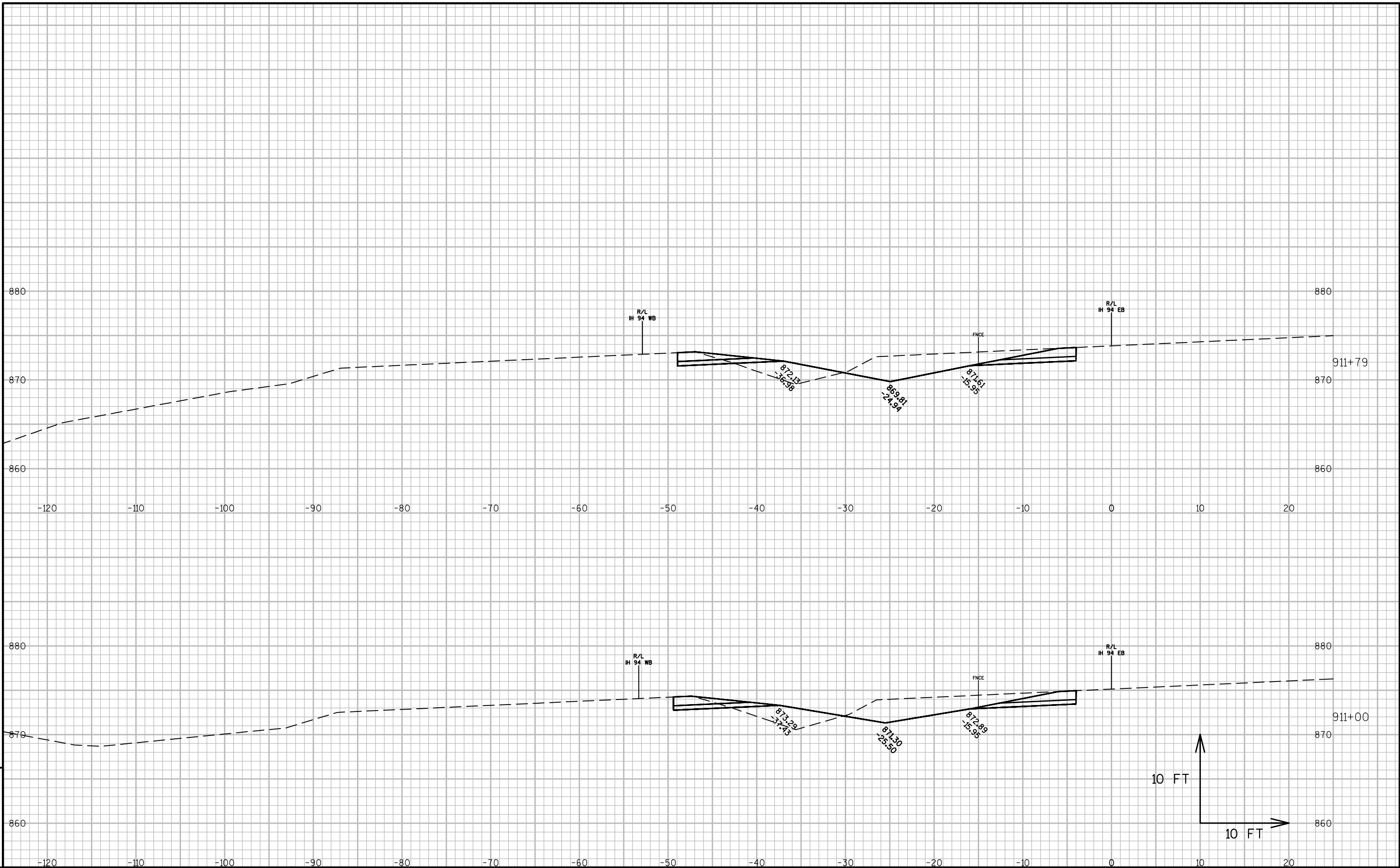


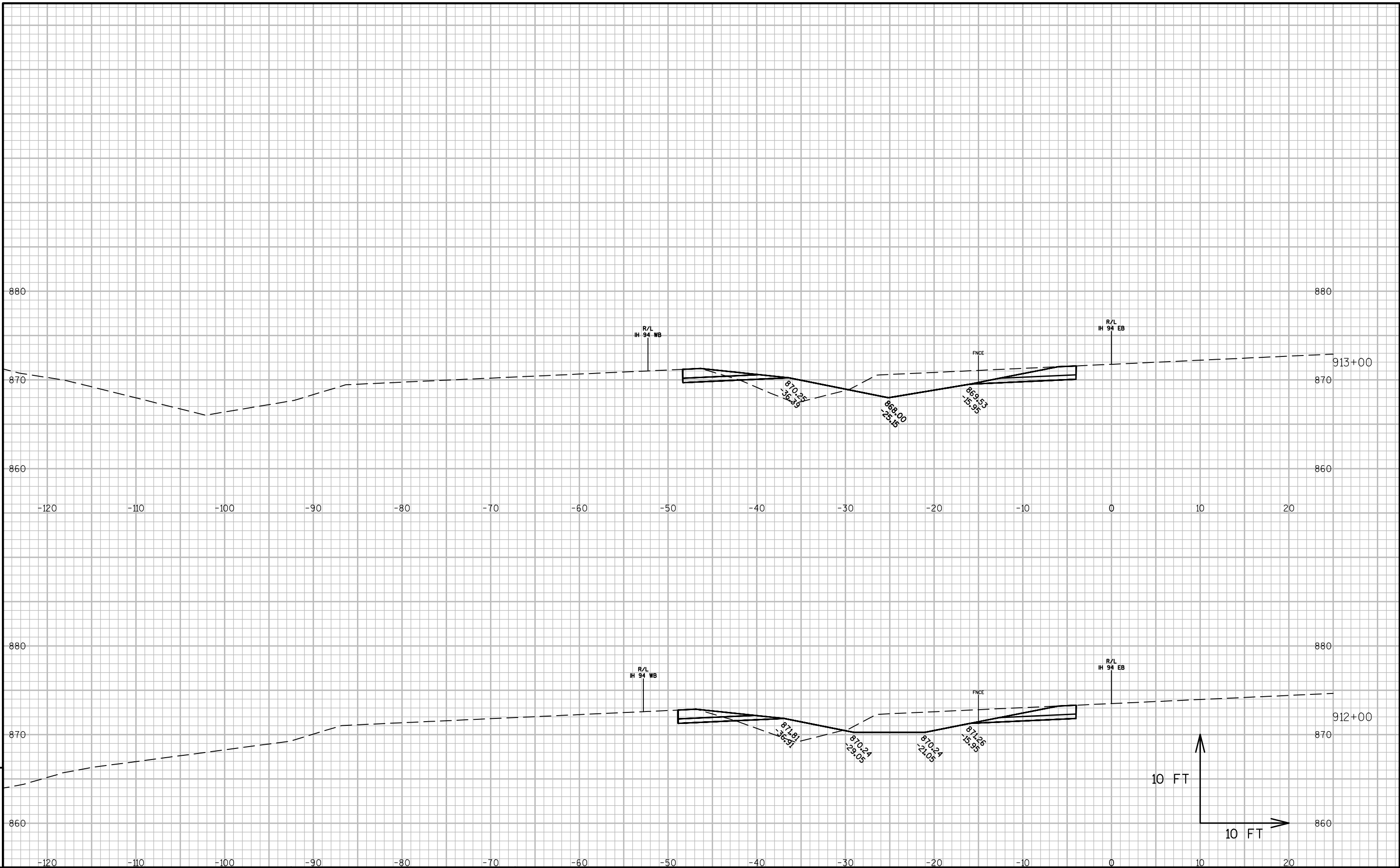


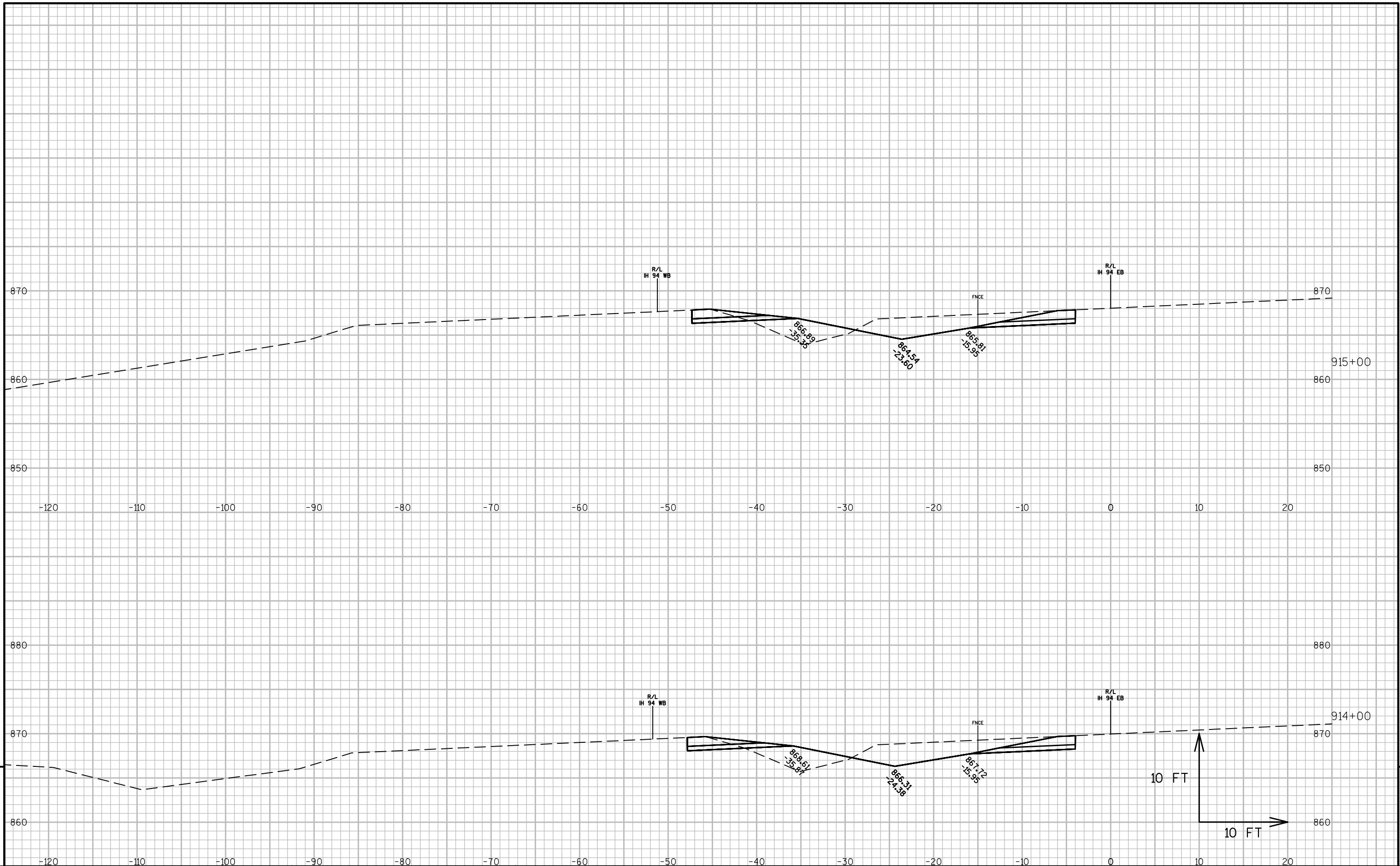


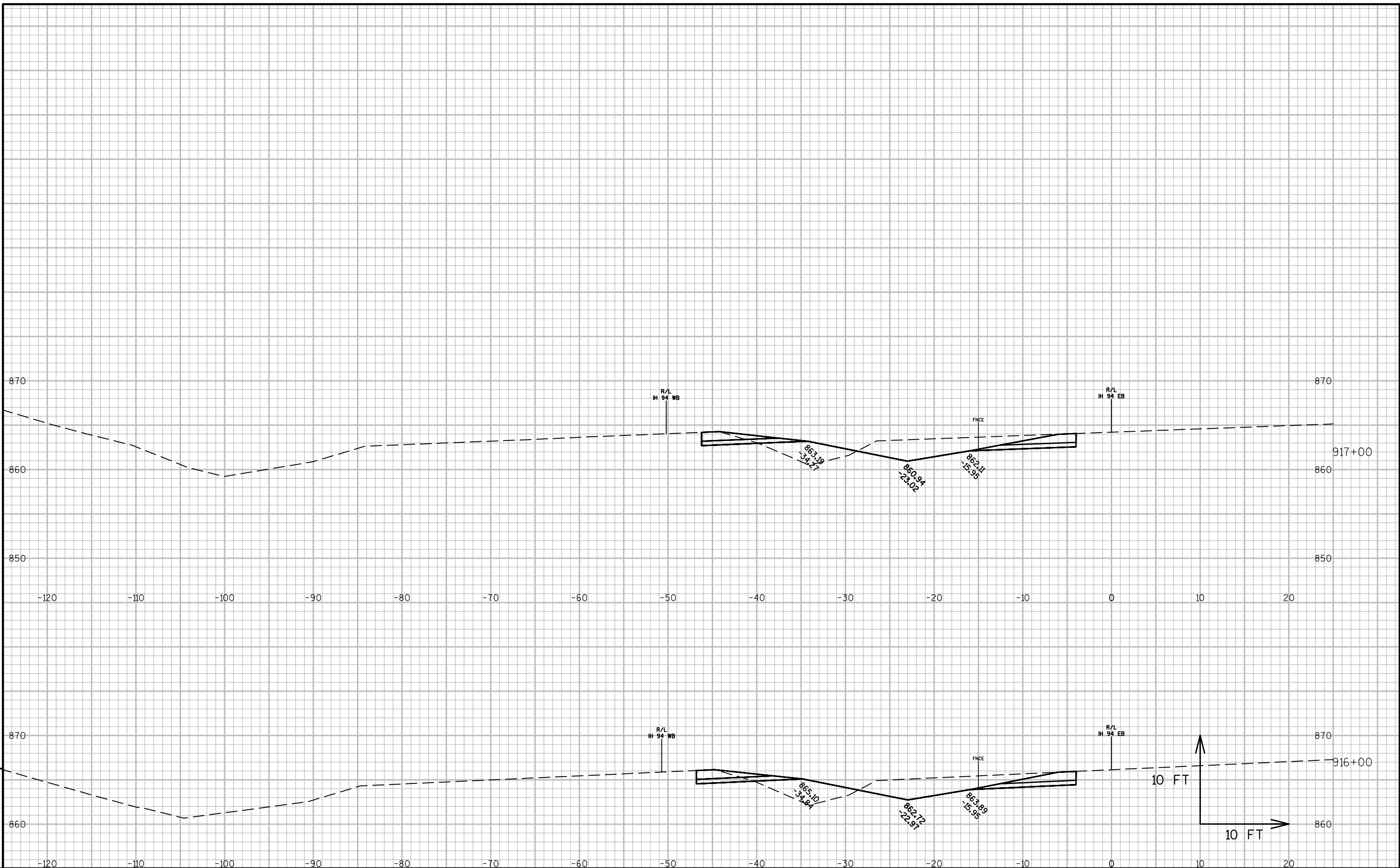


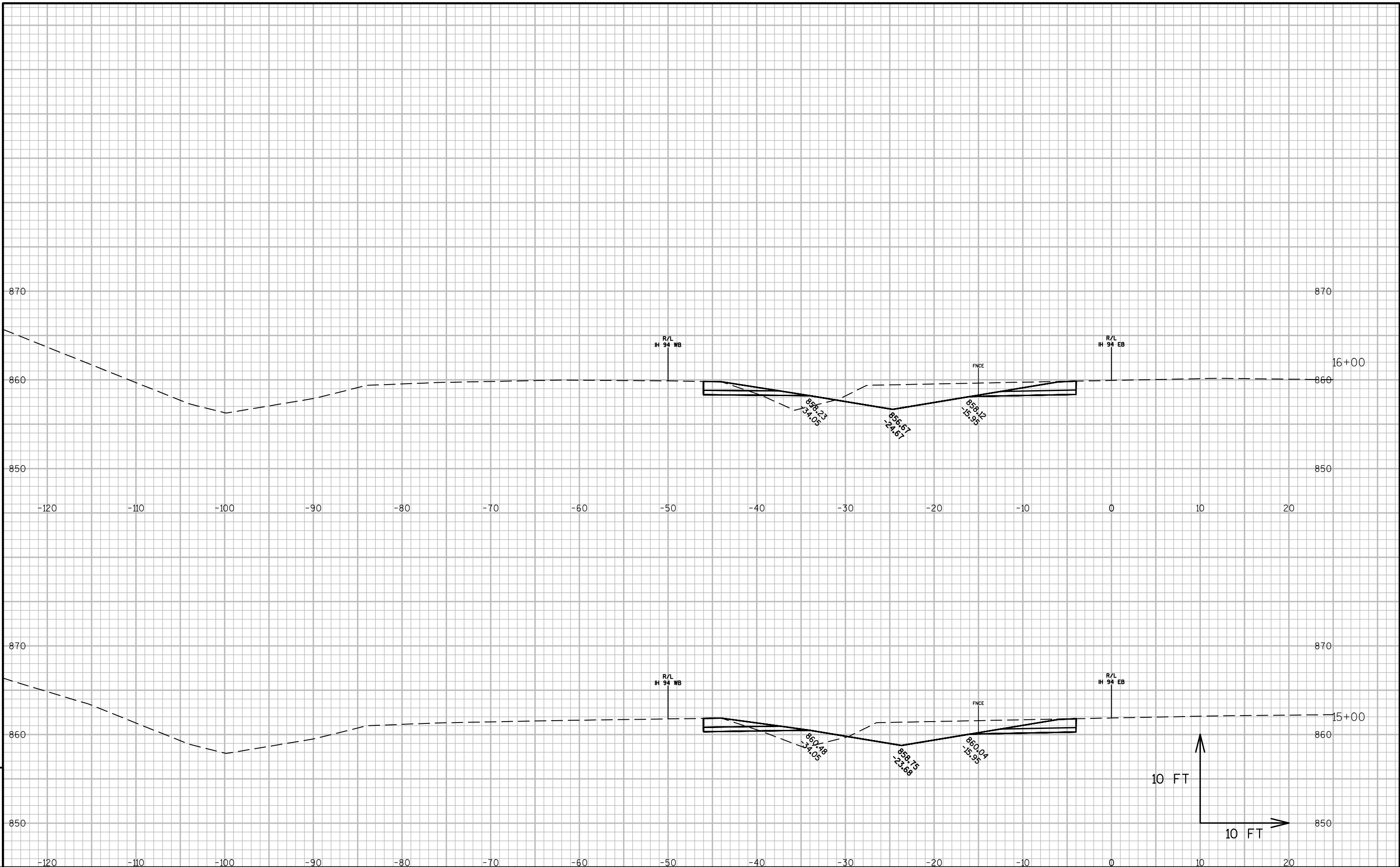


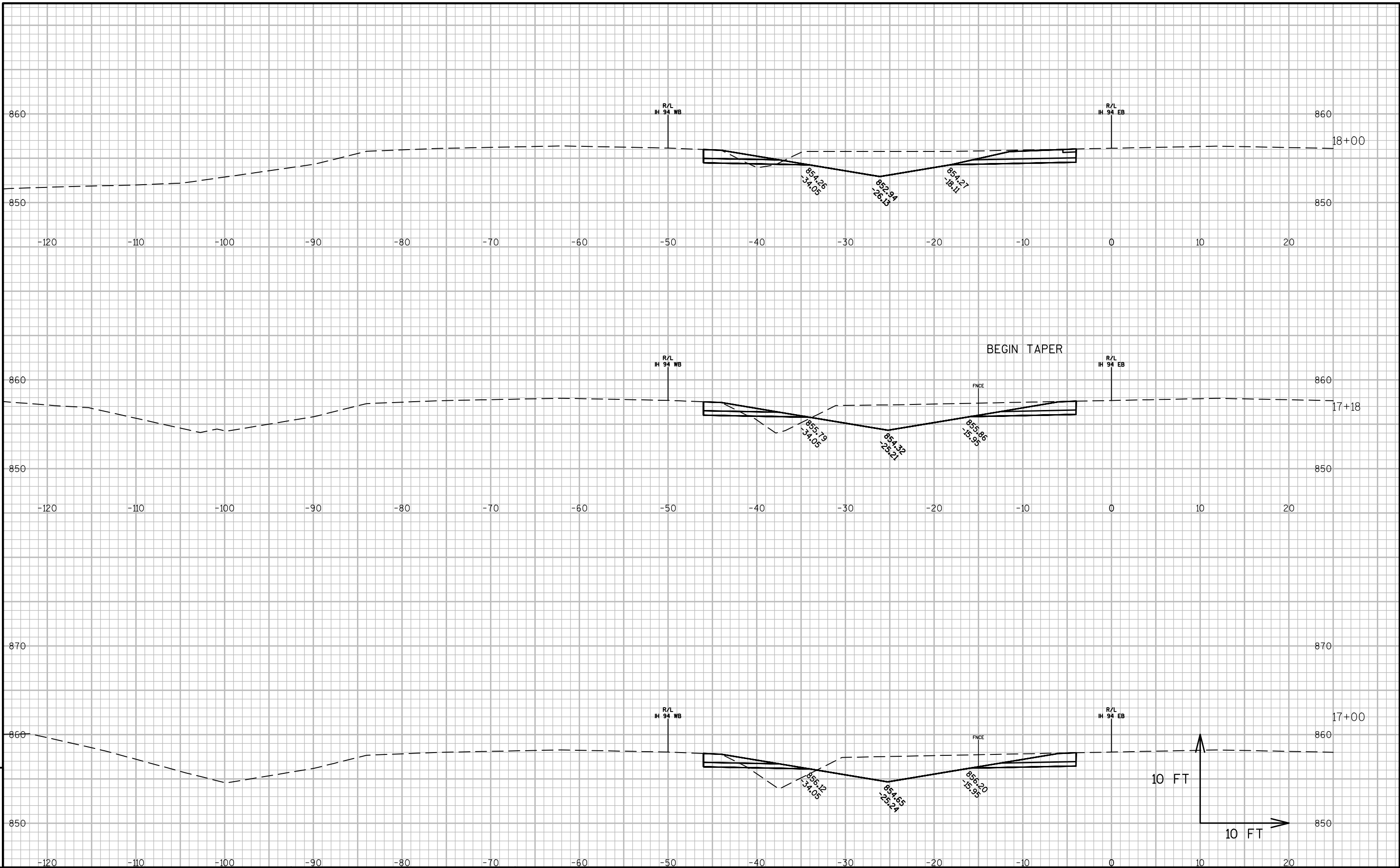


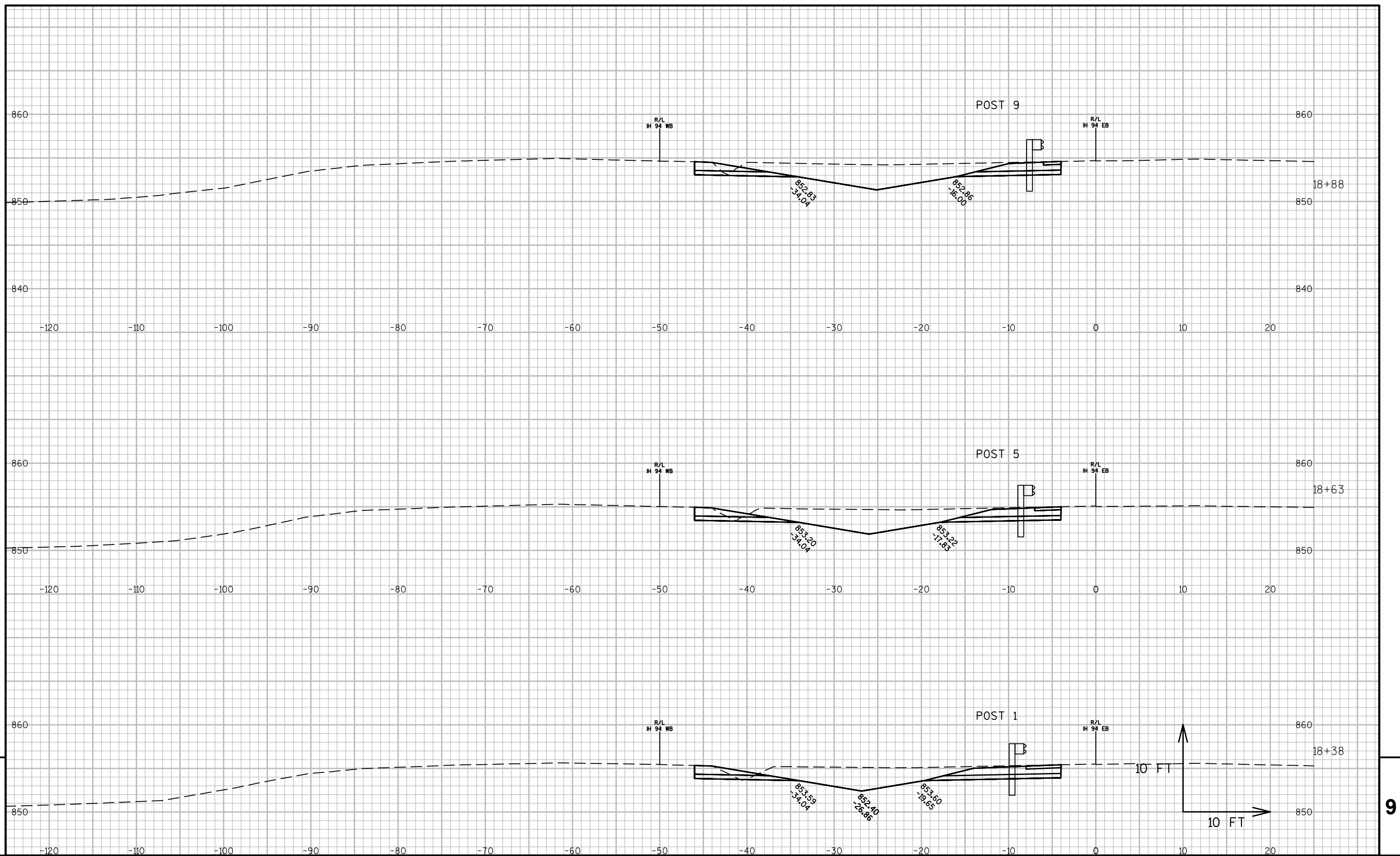
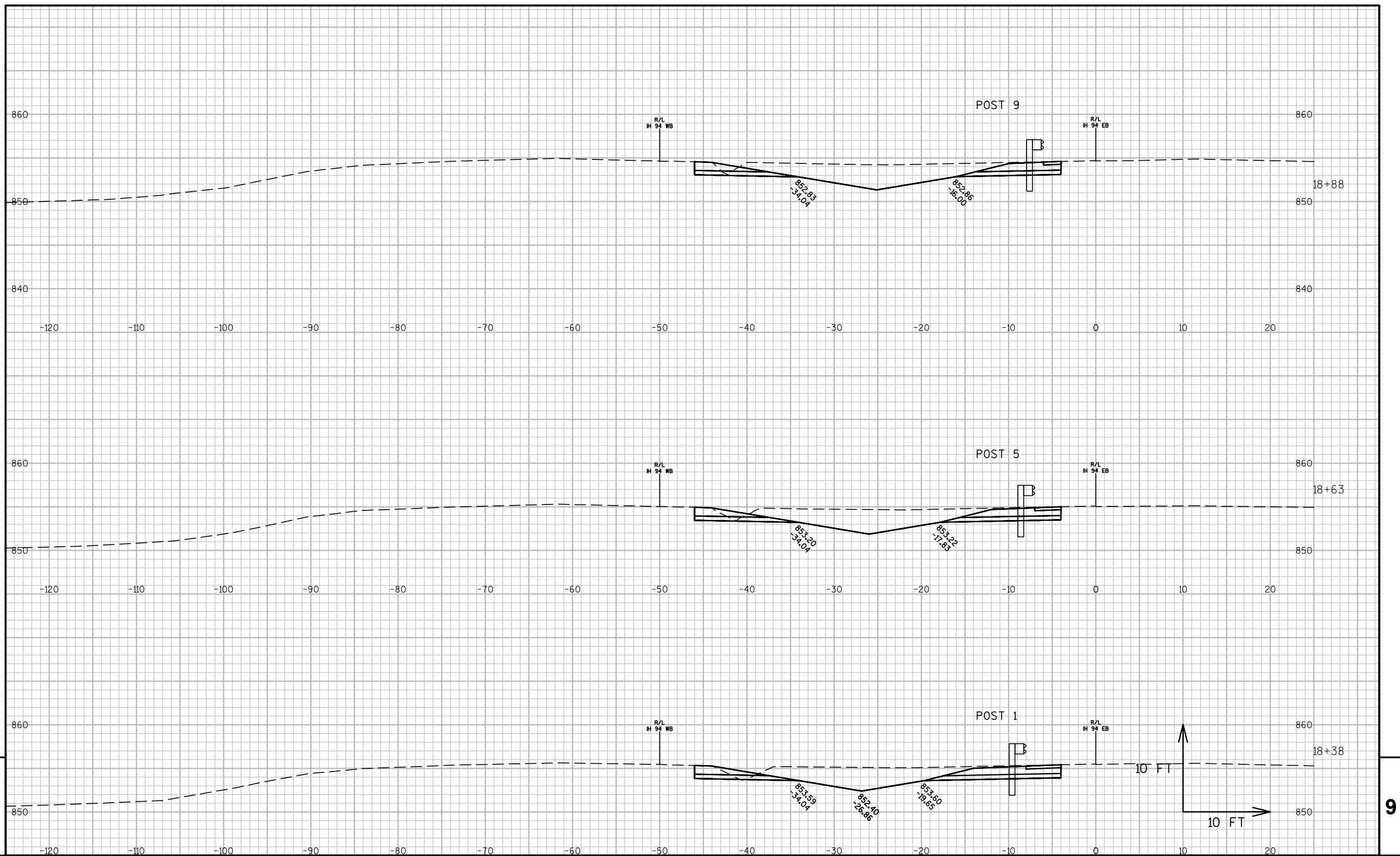












PROJECT NO:1022-08-72

HWY: IH 94

COUNTY: DUNN

CROSS SECTIONS: IH 94 MEDIAN STAGE 6C

SHEET	1093
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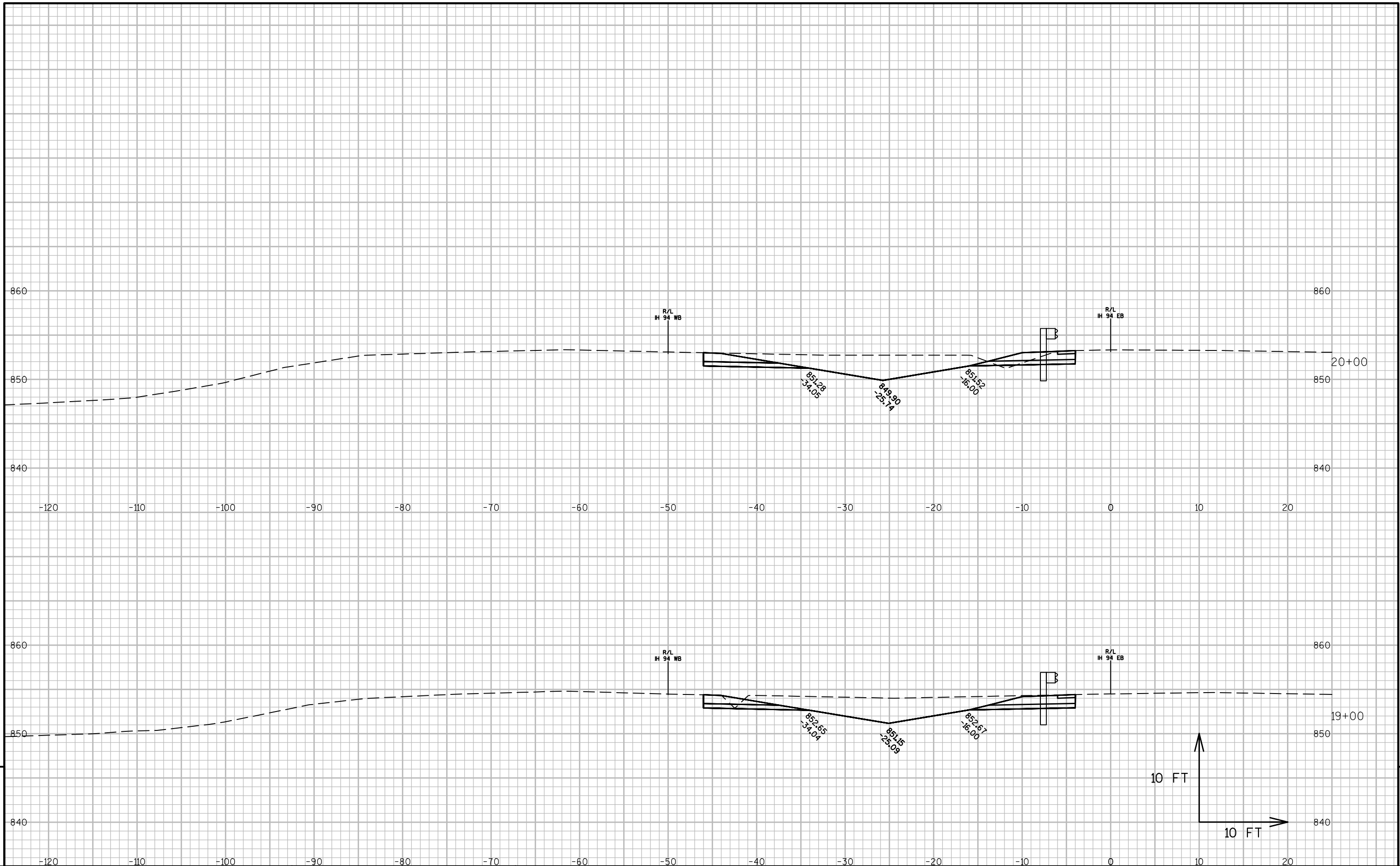
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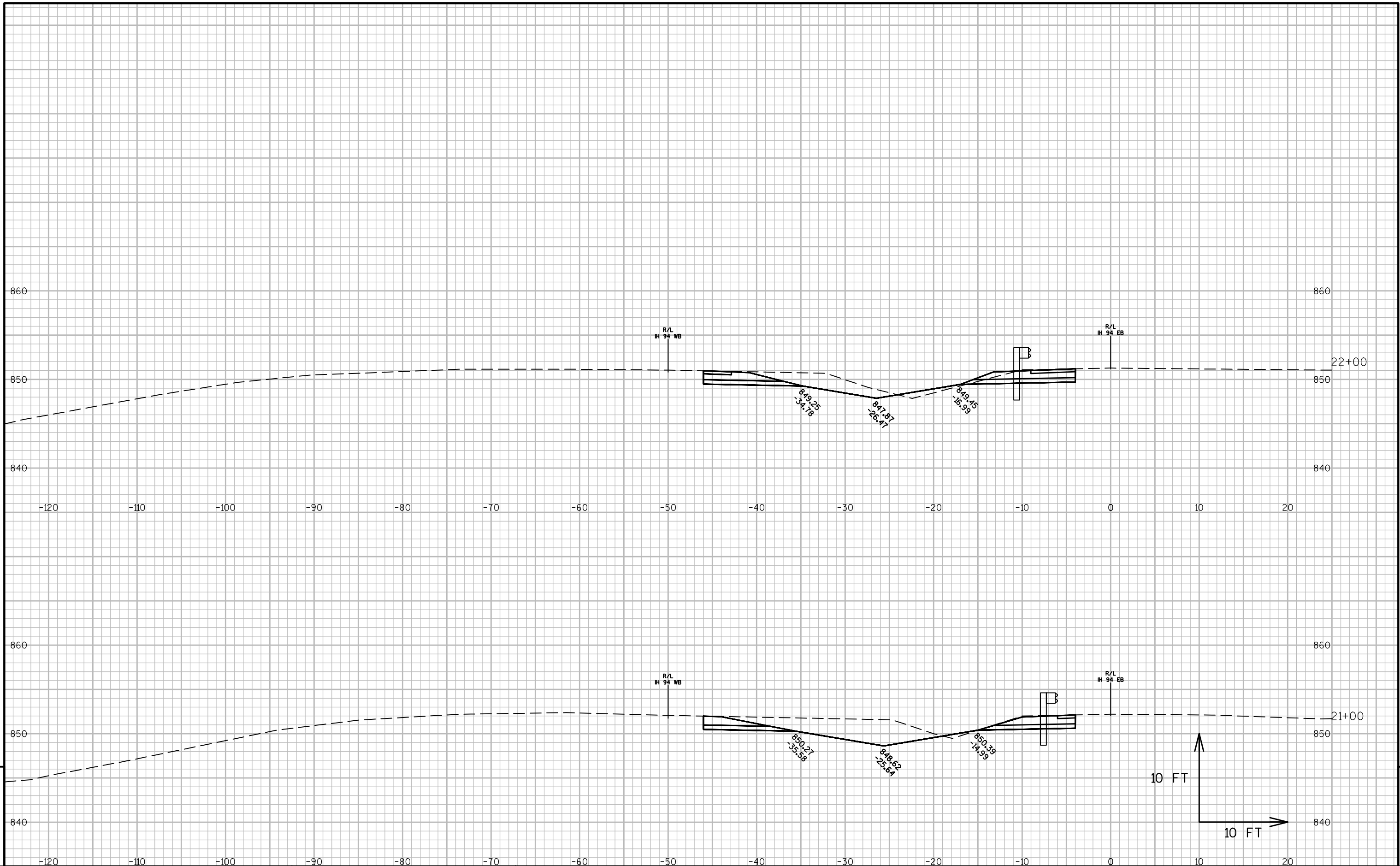
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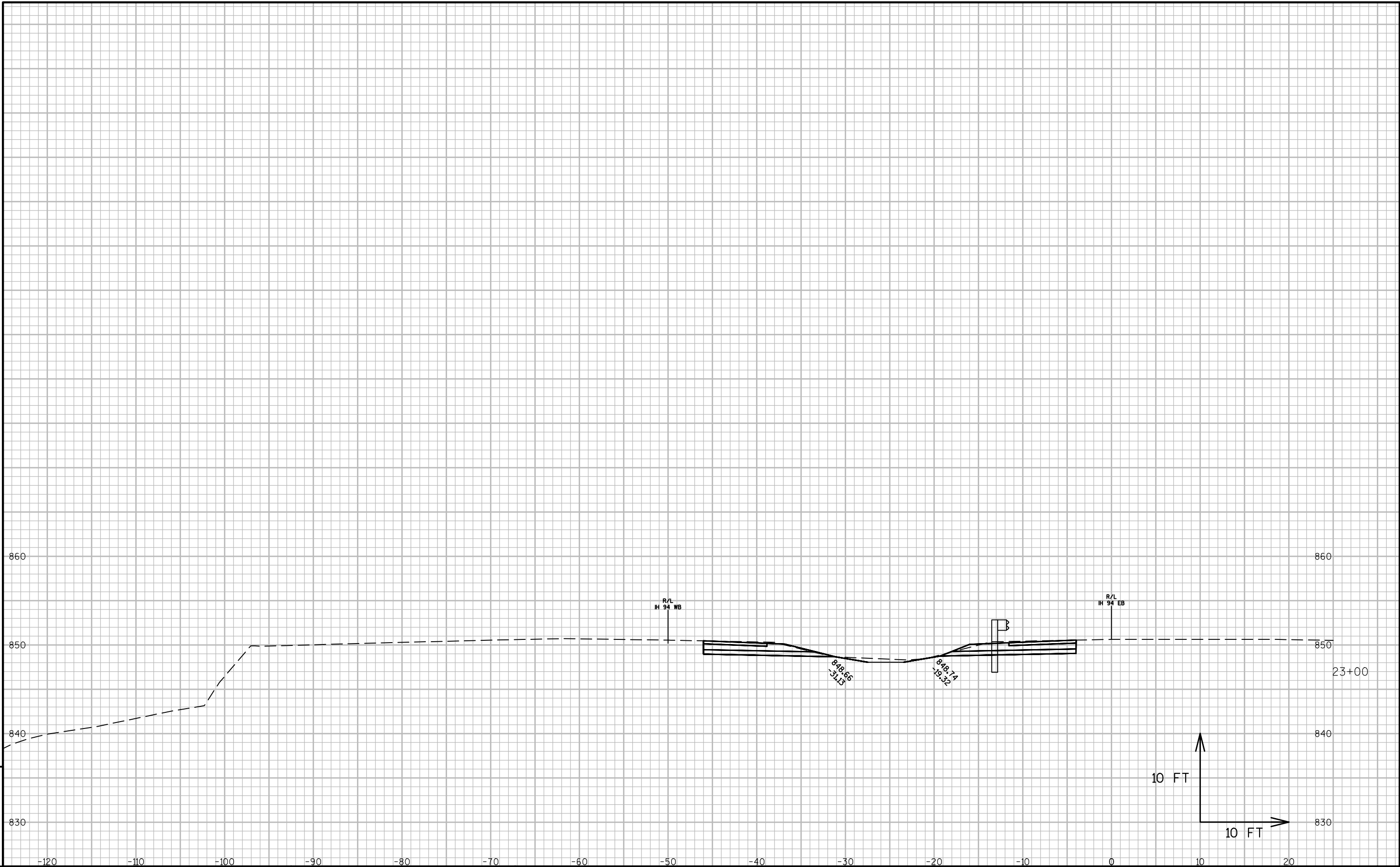
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PLOT SCALE : 1 IN:10 FT

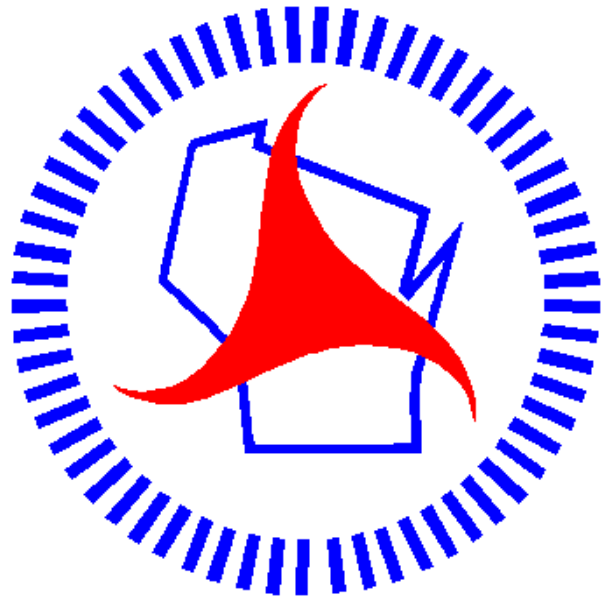
WISDOT/CADDS SHEET 49







Notes



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