

**VERTICAL VENTURES III
DEVELOPMENT
New Local Road**

PARKVILLE, MISSOURI

CROSS SECTIONS
STA. 0+00 TO 2+50

PROFESSIONAL ENGINEER

DATE:

TERRADYNE, LTD.
 18203 N.W. 4th HIGHWAY
 KANSAS CITY, MO 64116
 FOR USE, MAIL ONLY: P.O. BOX 190, WALDRON, MO 64692

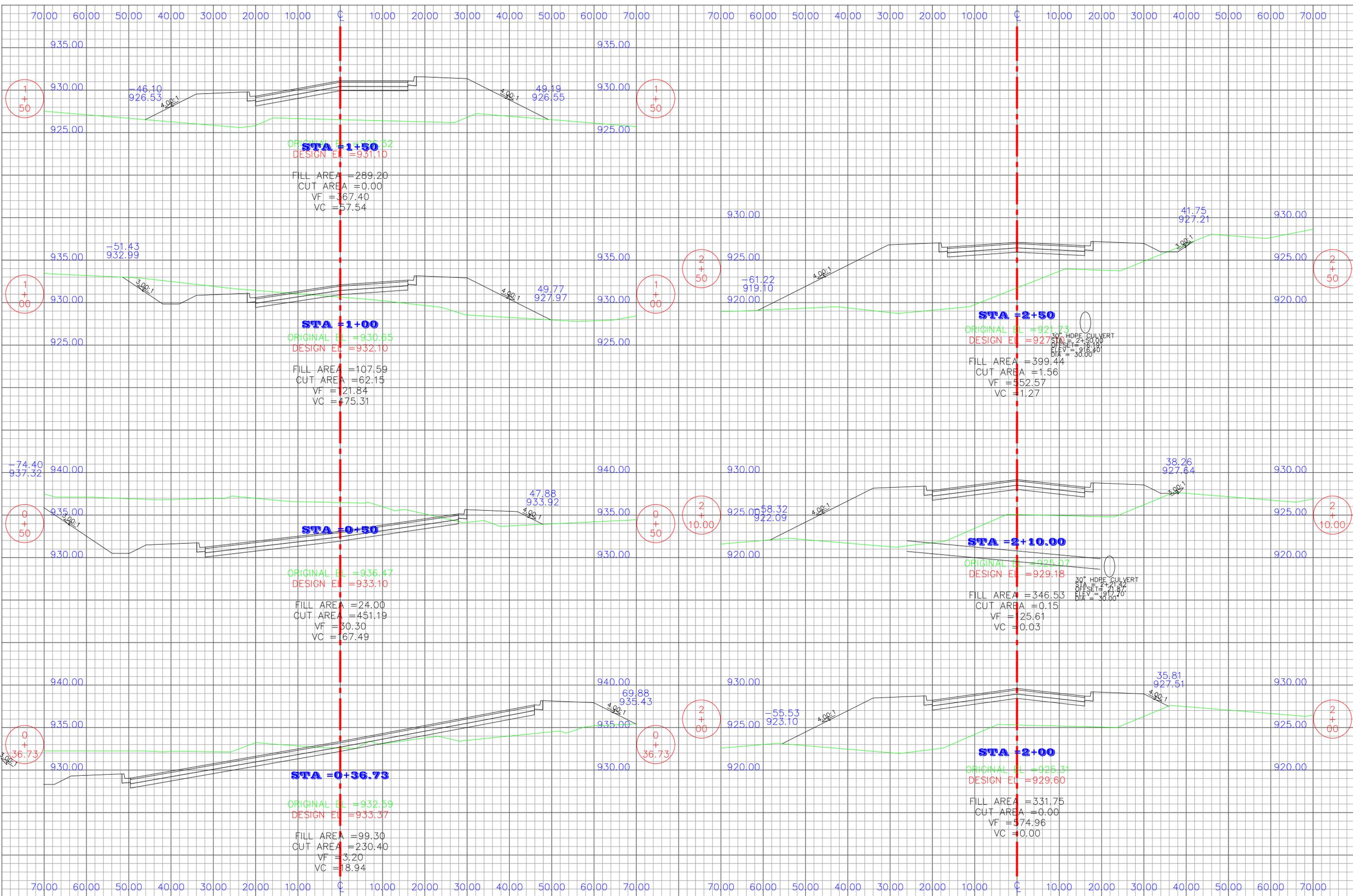
ENGINEERING + PROPERTY DEVELOPMENT + GENERAL CONSTRUCTION

MISSOURI PROFESSIONAL ENGINEERING CORPORATION LICENSE NO. E-1472-D

REV.	DATE	DESCRIPTION
1	12/25/08	ORIGINAL ISSUE
2	7/11/09	REVISED X-SLOPES & EMBANKMENTS
3	8/5/09	CHGD. HORIZ. CURVE RADIUS TO 206.031'
4	10/8/09	UPDATE TO AS-BUILT ISSUE

PROJECT NO.
95-008

SHEET NO.
R1A-1

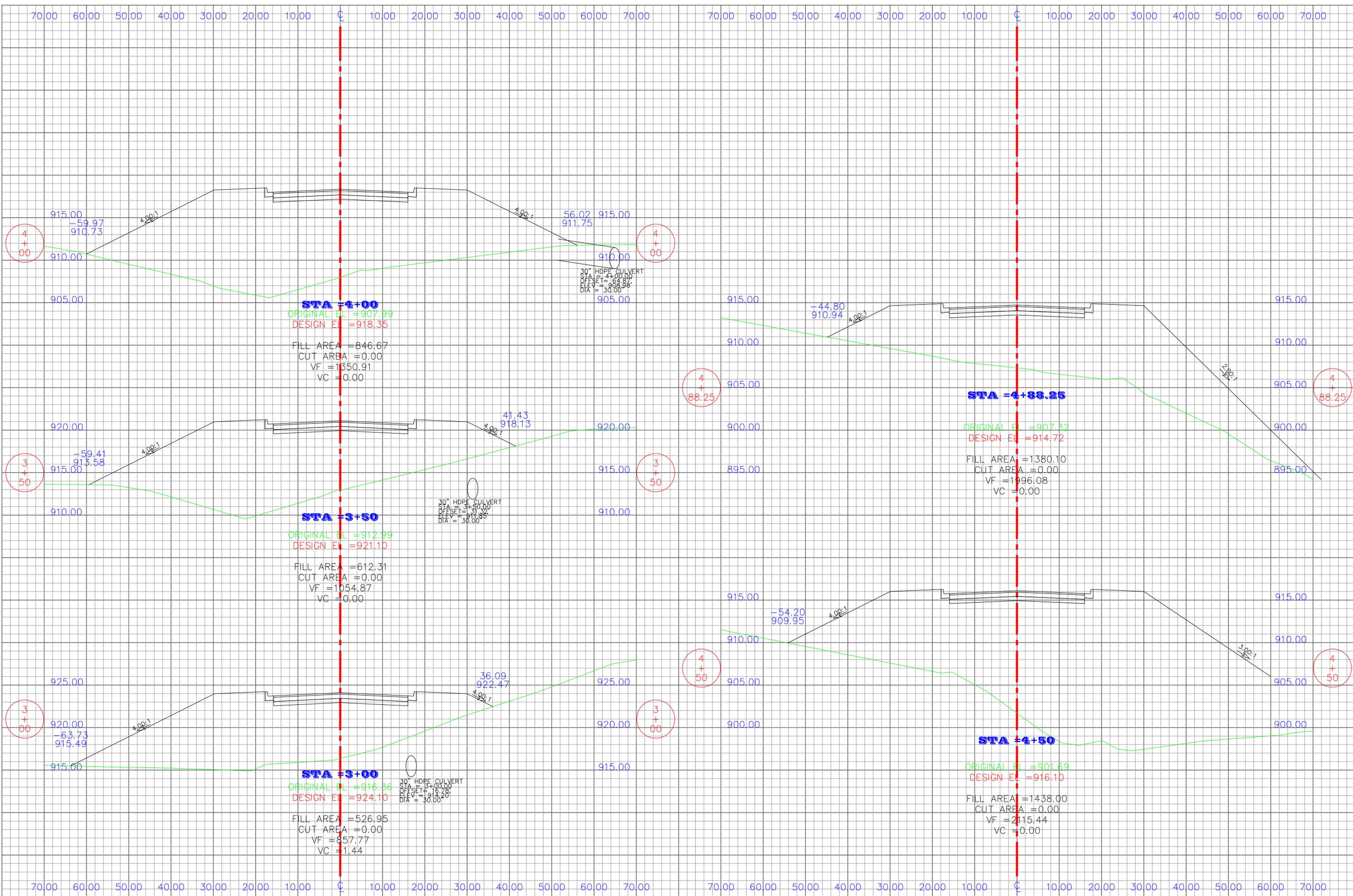


TERRADYNE, LTD.
18203 N.W. 45th HIGHWAY
KANSAS CITY, MO 64182
FOR USE, MAIL ONLY: P.O. BOX 190, WALDRON, MO 64682

ENGINEERING + PROPERTY DEVELOPMENT + GENERAL CONSTRUCTION

MISSOURI PROFESSIONAL ENGINEERING CORPORATION LICENSE NO. E-1472-D

REV.	DATE	DESCRIPTION
1	5/22/95	ORIGINAL ISSUE
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3	8/5/95	CHGD. HORIZ. CURVE RADIUS TO 206.031'
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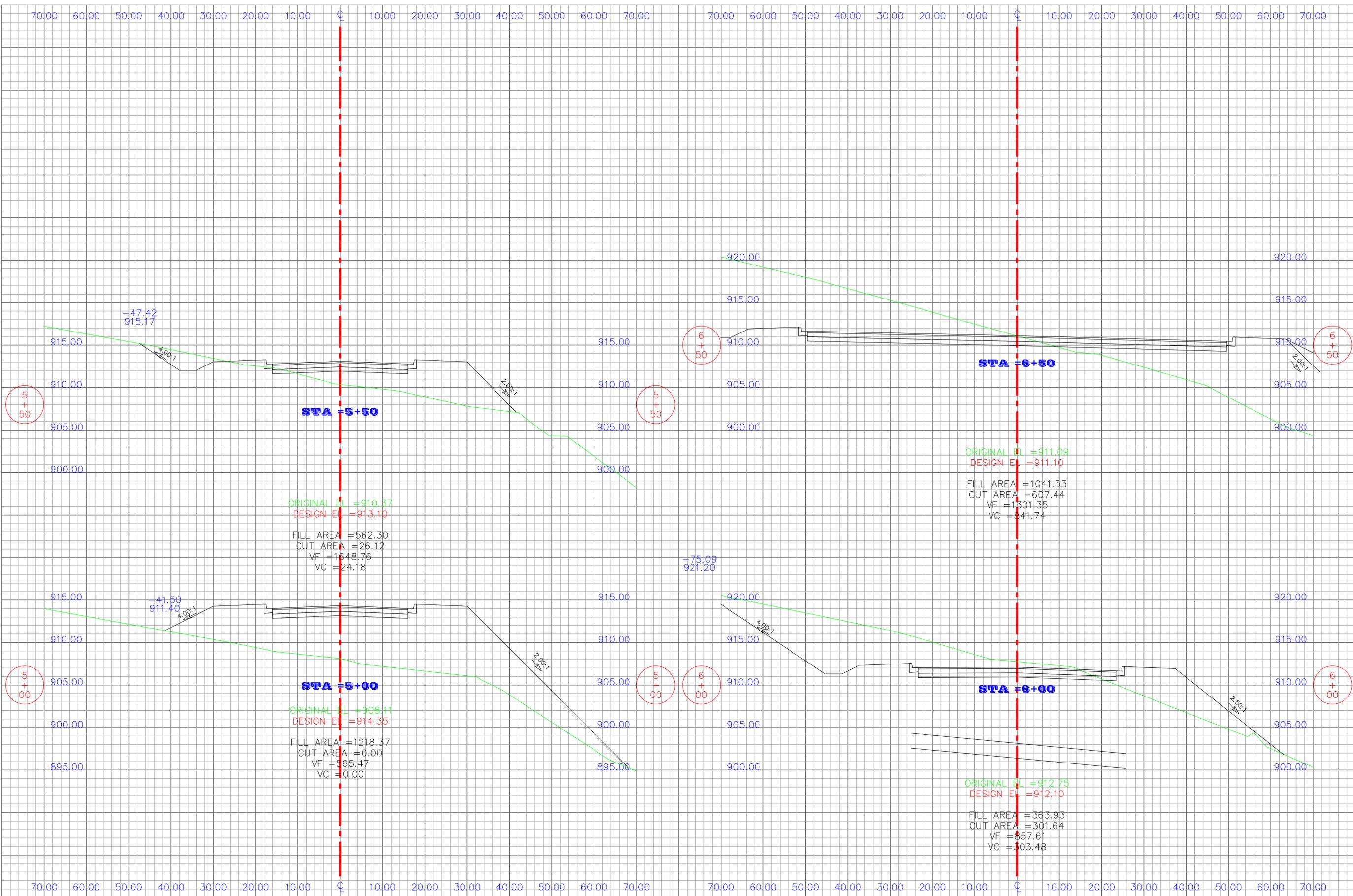


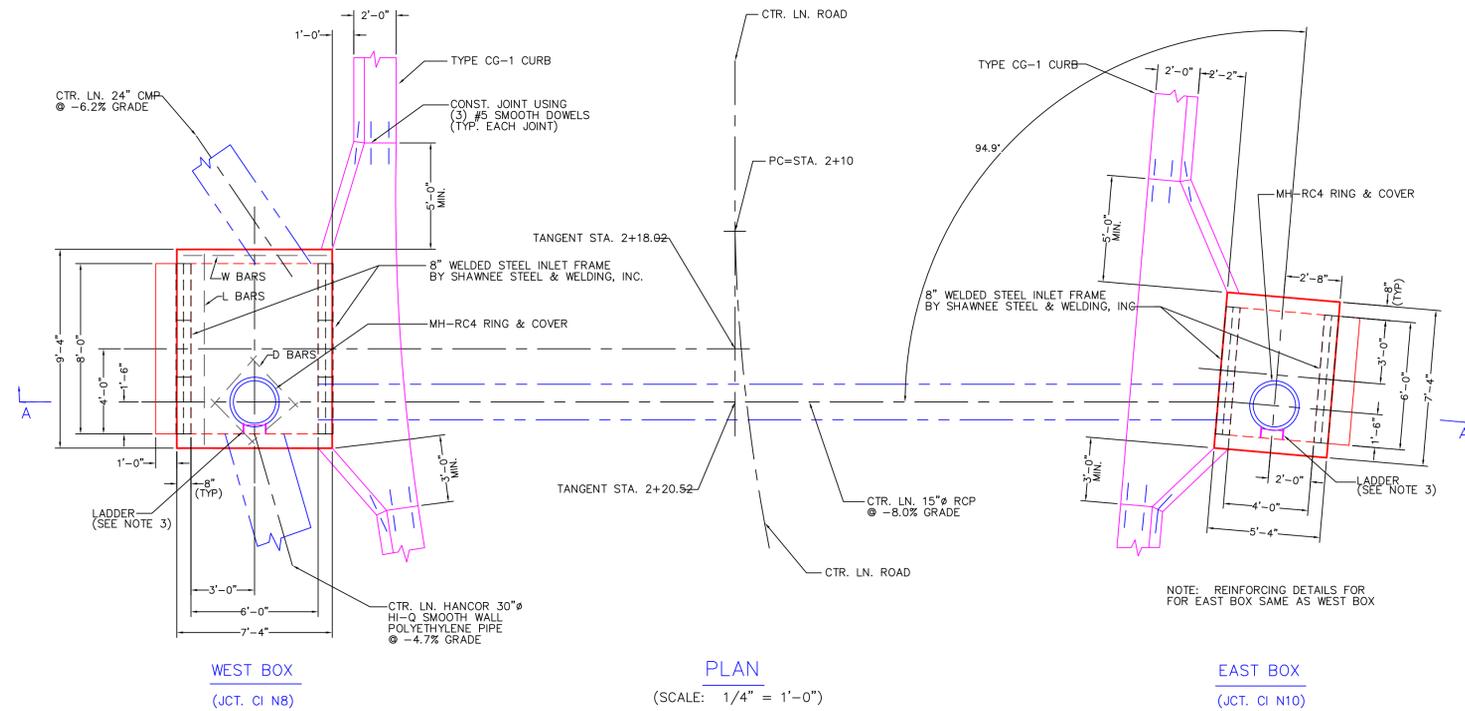
TERRADYNE, LTD.
18203 N.W. 45th HIGHWAY
KANSAS CITY, MO 64182
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ENGINEERING + PROPERTY DEVELOPMENT + GENERAL CONSTRUCTION

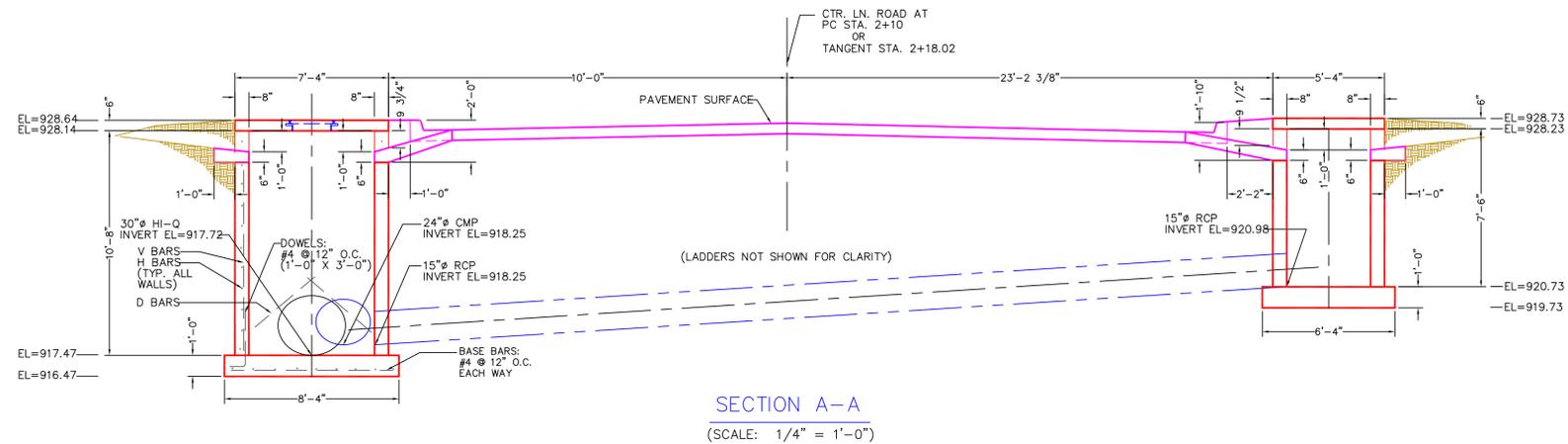
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NOTE: REINFORCING DETAILS FOR EAST BOX SAME AS WEST BOX



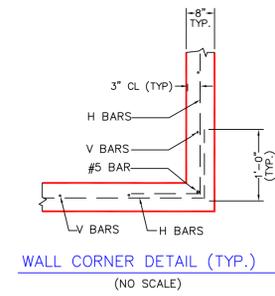
GENERAL NOTES:

- CONCRETE SHALL OBTAIN 3,000 PSI COMPRESSIVE STRENGTH IN 28 DAYS.
- REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 WITH 3" CLEAR COVER FROM INSIDE WALL FACES, 3" CLEAR COVER FROM SUBGRADE FOR SLAB BOTTOM, AND 1-1/2" CLEAR COVER FROM BOTTOM SURFACE OF TOP LID.
 - L & W BARS ARE #5 @ 6" O.C.
 - H & V BARS ARE #4 @ 12" O.C.
 - D BARS ARE #5 PLACED DIAGONALLY AROUND CAST-IN-PLACE OPENINGS WITH MIN. 1-1/2" CLEAR COVER FROM ANY OPENING EDGE.
 - H BARS AT INTERSECTING WALL CORNERS SHALL BE LAP SPLICED MIN. 12" IN EACH DIRECTION WITH #4 90° CORNER BARS.
 - L & W BARS IN BOX COVERS SHALL BE LAP SPLICED MIN. 12" IN EACH DIRECTION TO V BARS IN WALLS USING #4 90° CORNER BARS.
- LADDERS SHALL BE HOT-DIPPED GALVANIZED STEEL CONSISTING OF 1/4" X 2" BAR RAILS SPACED 12" APART WITH 5/8" RINGS @ 12" O.C. AND MOUNTED TO WALL WITH 6" STANDOFF "L" BRACKETS USING APPROPRIATE FASTENERS.
- CONSTRUCTION DETAILS SHALL CONFORM WITH APWA TYPE I CAST-IN-PLACE CURB INLET AS DETAILED ON STANDARD DWG. CI-1 AND APWA TYPE CG-1 CURB AND GUTTER AS DETAILED ON STANDARD DWG. C-1, UNLESS OTHERWISE NOTED ON THIS DRAWING.
- DEFLECTOR CHANNEL AT INLETS ARE NOT REQUIRED.

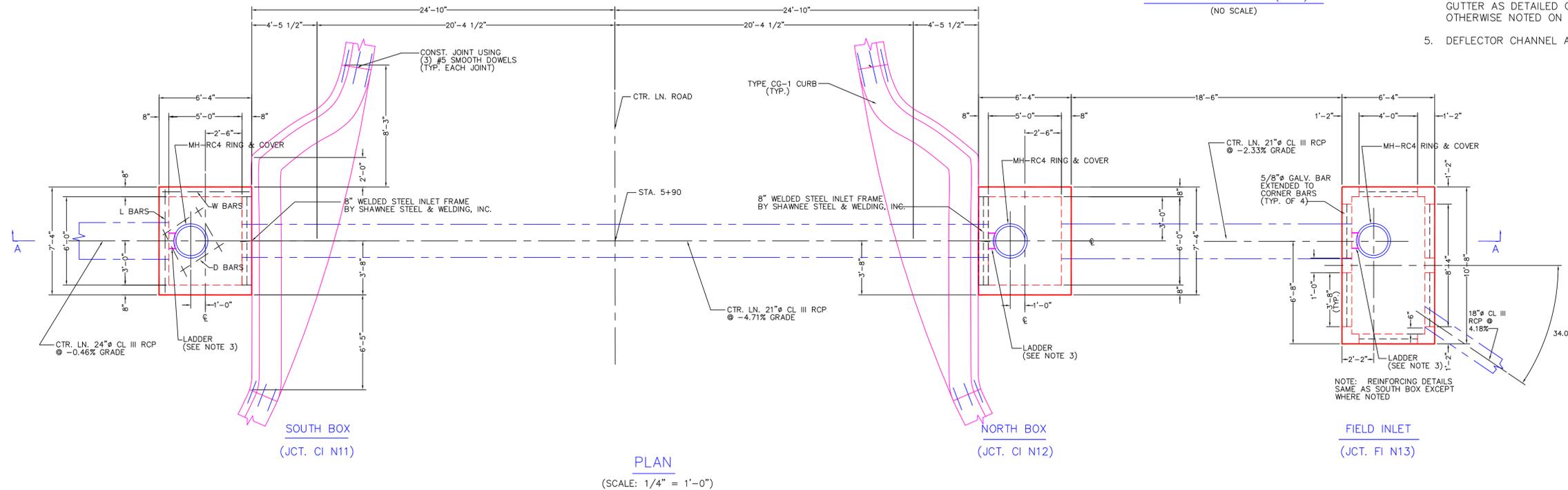
REV.	DATE	DESCRIPTION
1	10/9/09	ORIGINAL ISSUE
		UPDATE TO AS-BUILT ISSUE

GENERAL NOTES:

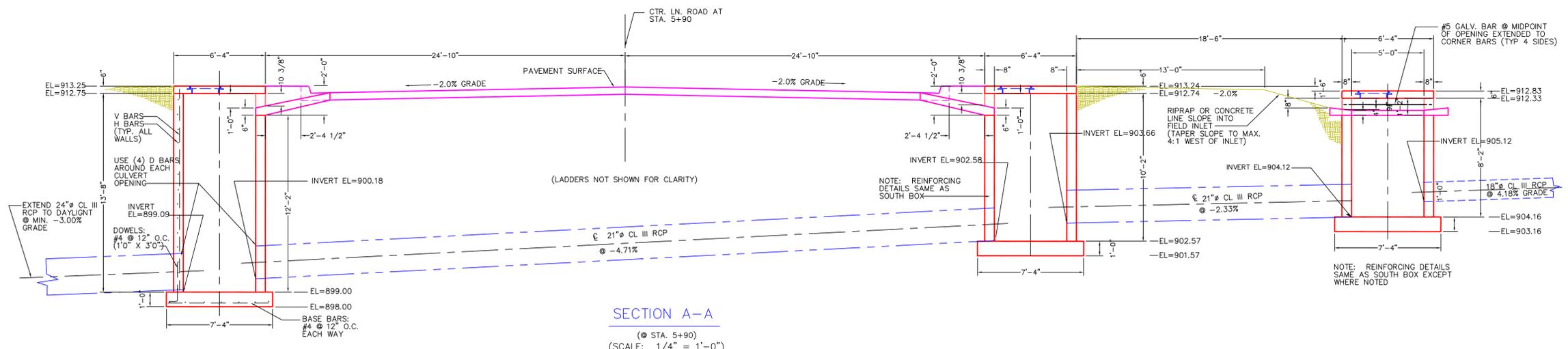
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2. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 WITH 3" CLEAR COVER FROM INSIDE WALL FACES, 3" CLEAR COVER FROM SUBGRADE FOR SLAB BOTTOM, AND 1-1/2" CLEAR COVER FROM BOTTOM SURFACE OF TOP LID.
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5. DEFLECTOR CHANNEL AT INLETS ARE NOT REQUIRED.



WALL CORNER DETAIL (TYP.)
(NO SCALE)



PLAN
(SCALE: 1/4" = 1'-0")



SECTION A-A
(@ STA. 5+90)
(SCALE: 1/4" = 1'-0")

**VERTICAL VENTURES III
DEVELOPMENT**
New Local Road

PARKVILLE, MISSOURI

**STORM DRAINAGE
DETAILS AT
STA. 5+90**

PROFESSIONAL ENGINEER

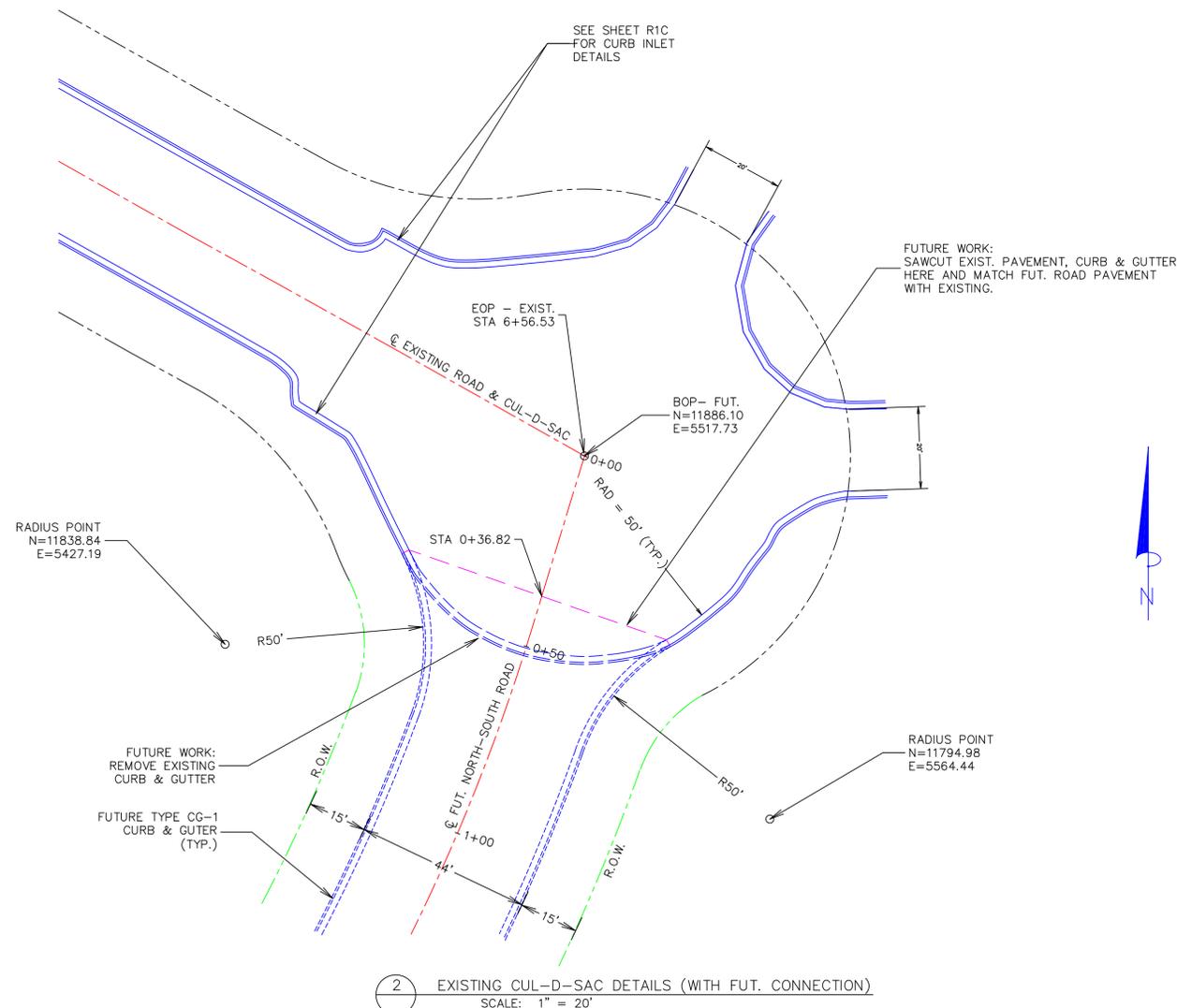
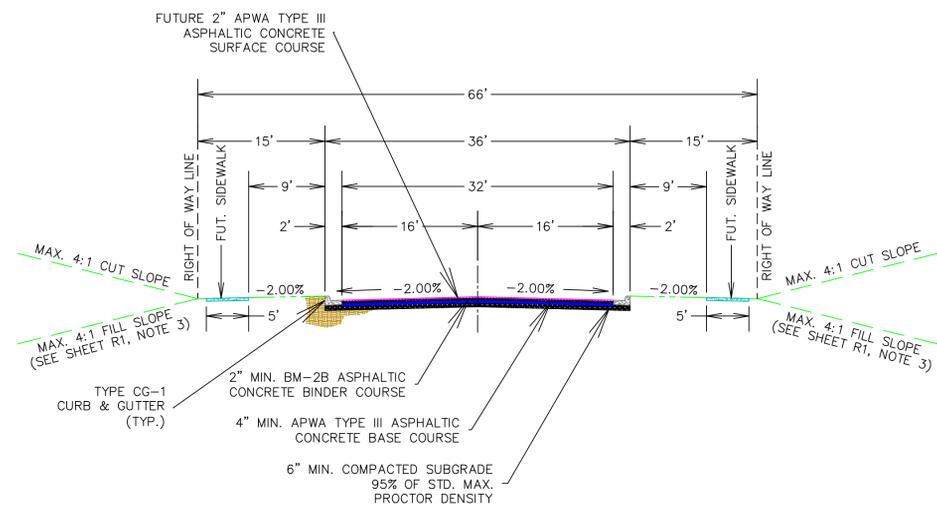
DATE:

TERRADYNE, LTD.
18800 N.W. 45 HIGHWAY
KANSAS CITY, MO 64156
FOR US, MAIL ONLY: P.O. BOX 190, WALDRON, MO 64688
PH: (816) 881-8800
FX: (816) 881-8888
FAX: (816) 881-8888
ENGINEERING + PROPERTY DEVELOPMENT + GENERAL CONSTRUCTION
MISSOURI PROFESSIONAL ENGINEERING CORPORATION LICENSE NO. E-1472-D

REV.	DATE	DESCRIPTION
1	12/6/95	ORIGINAL ISSUE
1	10/9/09	UPDATE TO AS-BUILT ISSUE

PROJECT NO.
95-008

SHEET NO.
R1C



CENTERLINE ALIGNMENT & PROFILE NUMERICAL DATA

STATION, COORDINATES & ELEVATIONS

Label	Station	Offset	Northing	Easting	Elevation
BOP	0+00.00	0.00	12408.52	5335.01	932.06
VPI	0+24.00	0.00	12385.53	5328.11	933.02
VPI	0+34.00	0.00	12375.96	5325.24	933.42
VPI	1+00.00	0.00	12312.74	5306.26	932.10
VPI	1+50.00	0.00	12264.86	5291.88	931.10
VPI	2+00.00	0.00	12216.97	5277.51	929.60
PC	2+10.00	0.00	12207.39	5274.63	929.18
VPT	2+50.00	0.00	12168.21	5266.91	927.10
VPC	3+00.00	0.00	12118.34	5268.10	924.10
VPC	3+50.00	0.00	12070.23	5281.23	921.10
VPC	4+00.00	0.00	12026.68	5305.54	918.35
PT	4+88.25	0.00	11968.53	5371.03	914.72
VPT	5+00.00	0.00	11962.77	5381.28	914.35
VPT	5+50.00	0.00	11938.28	5424.87	913.10
VPT	5+78.00	0.00	11924.56	5449.28	912.54
VPI	6+00.00	0.00	11913.79	5468.46	912.10
VPI	6+56.53	0.00	11886.10	5517.73	910.97
EOP	6+56.53	0.00	11886.10	5517.73	910.97

PI STATION & COORDINATES

PI #	STATION	NORTHING	EASTING	ANGLE	Distance
BOP	0+00.00	12408.52	5335.01	SW16.4240	375.00
1	3+75.00	12049.36	5227.18	SE60.4005	333.28
EOP	6+56.53	11886.10	5517.73		

HORIZONTAL CURVES & SUPERELEVATION

I = 77.2245 LEFT

CURVE # 1	CURVE DATA	SPIRAL IN	SPIRAL OUT
Ic	77.2245	Is = 0.0000	Is = 0.0000
Da	27.4834	L = 0.00	L = 0.00
Dc	28.0523	X = 0.00	X = 0.00
T	165.00	Y = 0.00	Y = 0.00
R	206.03	P = 0.00	P = 0.00
L	278.25	K = 0.00	K = 0.00
C	257.58	LT = 0.00	LT = 0.00
E	57.93	ST = 0.00	ST = 0.00
M	45.21	Ts = 0.00	Ts = 0.00

STATIONS AND COORDINATES

	STATION	NORTHING	EASTING
PC	2+10.00	12207.39	5274.63
PI	3+75.00	12049.36	5227.18
PT	4+88.25	11968.53	5371.03
RP	N/A	12148.15	5471.96

SUPERELEVATION DATA

MSE = 0.0000

VERTICAL CURVES

VERT.	STATION	Elevation	GRADE (%SLOPE)	DISTANCE
BOP	0.00	932.06	4.00	24.00
1	24.00	933.02	4.00	10.00
2	34.00	933.42	-2.00	116.00
3	150.00	931.10	-2.00	50.00
4	200.00	930.10	-6.00	250.00
5	450.00	915.10	-2.00	206.52
EOP	656.52	910.97		

CURVE NUMBER 4 CREST

L = 100.00
K = 25.00
E = -0.50

STATIONS AND ELEVATIONS

	STATION	ELEVATION ON CURVE	ELEVATION ON TANGENT
VPC	150.00	931.10	
VPI	200.00	929.60	930.10
VPT	250.00	927.10	
HIGH POINT	150.00		931.10
PASS-THROUGH POINT	200.00		929.60

SIGHT DISTANCE

STOPPING = 216.14
PASSING = 436.59

CURVE NUMBER 5 SAG

L = 200.00
K = 50.00
E = 1.00

STATIONS AND ELEVATIONS

	STATION	ELEVATION ON CURVE	ELEVATION ON TANGENT
VPC	350.00	921.10	
VPI	450.00	916.10	915.10
VPT	550.00	913.10	
LOW POINT	550.00		913.10
PASS-THROUGH POINT	450.02		916.10

SIGHT DISTANCE

HEADLIGHT = 264.72

VERTICAL VENTURES III
DEVELOPMENT
New Local Road

PARKVILLE, MISSOURI

MISCELLANEOUS DETAILS

PROFESSIONAL ENGINEER

DATE:

TERRADYNE, LTD.
18203 N.W. 25th HIGHWAY
KANSAS CITY, MO 64115
FOR U.S. MAIL ONLY: P.O. BOX 190, WALDRON, MO 64682

ENGINEERING + PROPERTY DEVELOPMENT + GENERAL CONSTRUCTION

MISSOURI PROFESSIONAL ENGINEERING CORPORATION LICENSE NO. E-1472-D

REV	DATE	DESCRIPTION	BY	JWS
	10/14/09	ORIGINAL & AS-BUILT ISSUE		

PROJECT NO. 95-008

SHEET NO. R1D